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All data, including phase data, are available on CD-ROM/DVD-ROM
and from the internet - http://www.isc.ac.uk

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

IDC 01 00:08:07.8±16.0, 21°.21S×176°.86W, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.8/3, Error ellipse: s-maj=410.8km s-min=33.3km az=38.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.40	257	P	P	00 16 27.8	-0.7
	0.4nm,0.3s,baz=97,slow=7.0,SNR=4.3						
WRA	Warramunga Arr	45.56	262	P	P	00 16 30.4	+0.7
	1.6nm,0.3s,baz=96,slow=9.2,SNR=2.6						
VNDA	Vanda	57.30	185	P	P	00 17 56.8	-0.1
	0.3nm,0.7s,baz=7.3,slow=7.7,SNR=2.1						

IDC 01 00:12:38.4±9.3, 6°.08S×128°.36E, h135^{km}±101^{km}, mb3.0/1, mb1 3.5/3, mb1mx3.1/26, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=133.5km s-min=35.1km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.96	158	P	Pn	00 16 03.1	0.0
	0.3nm,0.3s,baz=336,slow=12,SNR=1.8						
ASAR	Alice Springs	18.29	164	P	P	00 16 42.0	0.0
	0.4nm,0.3s,baz=344,slow=11,SNR=8.9						
MKAR	Makanchi Array	66.57	327	P	P	00 23 14.0	0.0
	0.2nm,0.3s,baz=134,slow=6.9,SNR=2.9						

IDC 01 00:13:48.3±1.8, 2°.06N×127°.35E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.6/29, mbtmp3.7/4, Error ellipse: s-maj=180.5km s-min=15.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.92	163	P	P	00 18 54.0	-0.1
	1.6nm,0.5s,baz=342,slow=12,SNR=2.1						
ASAR	Alice Springs	26.36	166	P	P	00 19 26.6	+0.3
	0.2nm,0.4s,baz=344,slow=9.6,SNR=1.3						
STKA	Stephens Creek	36.36	159	P	P	00 20 54.1	-0.2
	4.3nm,1.0s,baz=338,slow=13,SNR=2.9						
MKAR	Makanchi Array	59.27	326	P	P	00 23 51.7	-0.1
	0.3nm,0.3s,baz=110,slow=7.5,SNR=4.4						

DRS 01 00:17:39.7±0.0, 41°.44N×48°.05E, h10^{km}, ML2.8/4

ISC 01 00:17:37.9±2.9, 41°.44N±0°.08×48°.4E±0°.1, h4^{km}±13^{km}, n16, σ1^{s}.07/29, 3C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMR	Kasumkent	0.29	305	*i* Pg	Pg	00 17 43.5	0.0
	708nm,0.1s						
KSMR				*e*Sg	Sg	00 17 45.5	-1.8
AKT	Akhty	0.54	274	*i* Pg	Pg	00 17 48.6	+0.3
	817nm,0.2s						
AKT				⇑*e*Sg	Sg	00 17 54.0	-1.2
	2µm,0.3s						
DRN	Derbent	0.59	352	*e*Pg	Pn	00 17 52.5	-0.7
	271nm,0.4s						
DRN				⇑*e*Sg	Sn	00 18 01.9	-1.4
	316nm,0.7s						
URKR	Urkarakh	0.94	320	*e*Pg	Pb	00 17 57.2	+0.3
URKR				*e*Sg	Sb	00 18 09.1	-0.8
KMKR	Kumukh	1.22	305	*e*Pg	Pg	00 18 00.0	-1.3
	70nm,0.2s						
KMKR				*i* Sg	Sg	00 18 16.0	-1.1
	149nm,0.3s						
GNBR	Gunib	1.45	311	*i* Pg	Pb	00 18 05.7	+0.1
GNBR				⇑*e*Sg	Sg	00 18 25.1	+0.4
	98nm,0.5s						
LGD	Lagodekhi	1.69	284	P	Pn	00 18 08.9	+0.6
XNZR	Khunzakh	1.70	311	*e*Pg	Pg	00 18 10.4	-0.1
XNZR				*e*Sg	Sb	00 18 31.5	-0.1
BUJR	Buynaksk	1.70	325	*e*Pg	Pg	00 18 11.3	+0.8
BUJR				*e*Sg	Sg	00 18 34.1	+1.4
DDFL	Dedoflistskaro	1.75	271	P	Pn	00 18 08.4	-0.6
UNCR	Uncukul	1.77	317	*e*Pg	Pg	00 18 12.5	+0.7
	42nm,0.0s						
UNCR				*e*Sg	Sg	00 18 35.5	+0.8
	126nm,0.7s						
KRNR	Karanay	1.79	321	*e*Pg	Pg	00 18 13.0	+0.7
KRNR				*e*Sg	Sg	00 18 37.6	+2.0
	55nm,0.4s						
DBC	Dubki	1.98	323	*i* Pg	Pb	00 18 14.9	+0.3
	38nm,0.4s						
DBC				*i* Sg	Sg	00 18 40.4	-1.2
	115nm,0.8s						
BTLR	Botlikh	2.06	307	*e*Pg	Pb	00 18 15.9	0.0
	9.0nm,0.7s						
BTLR				⇓*e*Sg	Sb	00 18 42.1	+0.3
	47nm,0.8s						
DLMR	Dylym	2.11	321	*e*Pg	Pg	00 18 18.0	-0.4
DLMR				*e*Sg	Sg	00 18 47.0	+1.2
	210nm,0.4s						
TBLG	Delisi	2.79	277	P	Pn	00 18 25.7	+2.3

MEX 01 00:18:02.7±0.4, 14°.28N×92°.33W, h50^{km}±10^{km}, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.63	6	*i* P	Pn	00 18 14.3	-1.3
THIG				*i* S	Sn	00 18 22.8	-2.1
CCIG	Comitan	2.00	5	*e*P	Pn	00 18 33.3	-0.9
CCIG				*i* S	Sn	00 18 55.9	-2.3
TGIG		2.60	343	*e*P	Pn	00 18 41.1	-1.2
TGIG				*i* S	Sn	00 19 11.1	-1.7
CMIG	Matias Romero	3.73	319	*e*P	Pn	00 18 56.6	-1.2
CMIG				*i* S	Sn	00 19 38.1	-2.3

IDC 01 00:19:10.1±25.0, 17°.96S×178°.15W, h555^{km}±308^{km}, mb3.0/6, mb1 3.2/6, mb1mx2.9/30, mbtmp4.0/6, Error ellipse: s-maj=93.4km s-min=85.5km az=21.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.68	261	P	P	00 25 06.5	+0.7
	1.3nm,0.3s,baz=72,slow=9.4,SNR=1.4						
STKA	Stephens Creek	38.82	241	P	P	00 25 47.5	-0.4
	1.0nm,0.3s,baz=97,slow=8.1,SNR=5.3						
WRA	Warramunga Arr	44.86	260	P	P	00 26 35.5	-0.3
	1.2nm,0.4s,baz=92,slow=7.8,SNR=2.0						
ASAR	Alice Springs	45.01	254	P	P	00 26 36.5	-0.4
	1.4nm,0.4s,baz=88,slow=8.3,SNR=18						
TXAR	Lajitas Array	85.82	58	P	P	00 30 51.4	-0.3
	0.3nm,0.8s,baz=202,slow=9.2,SNR=4.1						
ILAR	Eielson Array	85.88	13	P	P	00 30 51.3	+0.3
	0.2nm,0.4s,baz=212,slow=6.0,SNR=4.6						

RSNC 01 00:40:57.9±1.3, 6°.87N×73°.13W, h148^{km}±4^{km}, ML3.6, Mw3.9, 7C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GIRC	Giron, Santand	0.21	342	*e*P	Pn	00 41 17.9	-0.3
GIRC				*e*S	Sn	00 41 33.0	-0.6
BARC	Barichara	0.28	191	⇓*i*P	Pn	00 41 18.1	-0.4
BARC				*i*		00 41 18.5	
	comp=Z,423nm,0.3s						
BARC				*e*S	Sn	00 41 33.4	-0.8
BRRC	Barranca, Sant	0.63	292	⇑*i*P	Pn	00 41 19.7	0.0
BRRC				*i*		00 41 19.9	
	comp=Z,454nm,0.2s						
BRRC				*e*S	Sn	00 41 36.4	+0.1
PAMC	Pamplona, Colo	0.63	42	⇑*i*P	Pn	00 41 20.6	+0.2
PAMC				*i*		00 41 21.0	
	comp=Z,934nm,0.2s						
PAMC				*e*S	Sn	00 41 37.4	0.0
GRMC	Gramalote, San	0.90	21	⇑*i*P	Pn	00 41 23.3	+1.5
GRMC				*e*S	Sn	00 41 42.2	+2.0
RUSC	La Rusia	0.97	177	⇑*i*P	Pn	00 41 22.2	-0.7
RUSC				*e*S	Sn	00 41 40.5	-1.3
RUSC				*i*		00 41 43.0	
	comp=N,400nm,0.4s						
CAPV	Capacho	1.27	39	⇑*i*P	Pn	00 41 25.7	+0.4
CAPV				*e*S	Sn	00 41 45.0	-1.1
PTBC	PUERTO BERRIO,	1.36	256	⇑*i*P	Pn	00 41 24.7	-1.3
PTBC				*e*S	Sn	00 41 46.2	-1.1
PTBC				*i*		00 41 48.5	
	comp=E,424nm,0.5s						
OCAC	Ocana	1.37	352	*e*P	Pn	00 41 25.8	-0.4
OCAC				*e*S	Sn	00 41 47.3	-0.5
OCAC				*i*		00 41 49.9	
	comp=N,1µm,0.3s						
TAMC	Tame, Arauca	1.40	108	⇑*i*P	Pn	00 41 26.4	+0.2
TAMC				*e*S	Sn	00 41 47.4	-0.5
TAMC				*i*		00 41 49.4	
	comp=E,599nm,0.6s						
YOPC	Yopal, Colombi	1.66	155	*e*P	Pn	00 41 29.1	-0.1
YOPC				*e*S	Sn	00 41 52.8	-0.4
YOPC				*i*		00 41 55.7	
	comp=N,506nm,0.5s						
ZARC	Zaragoza, Cauc	1.82	290	*e*S	Sn	00 41 55.7	-0.5
SMLC	San Martn de	2.13	334	*e*P	Pn	00 41 33.9	-0.6
SMLC				*e*S	Sn	00 42 00.7	-2.0
NORC	Norcasia	2.17	233	*e*P	Pn	00 41 33.9	-1.0
NORC				*e*S	Sn	00 42 02.2	-1.3
NORC				*i*		00 42 08.4	
	comp=E,239nm,0.4s						
CHIC	Chingaza	2.31	195	*e*P	Pn	00 41 36.7	-0.3
CHIC				*e*S	Sn	00 42 06.2	-0.9
CHIC				*i*		00 42 09.2	
	comp=N,202nm,0.3s						
CROSA	EL ROSAL, CUND	2.34	211	*e*P	Pn	00 41 37.9	+0.5
CROSA				*e*S	Sn	00 42 07.5	-0.1
ROSC	El Rosal	2.34	211	*e*P	Pn	00 41 38.5	+1.1
ROSC				*e*S	Sn	00 42 07.1	-0.7
HELC	Santa Helena	2.48	254	*e*P	Pn	00 41 39.4	+0.3
HELC				*e*S	Sn	00 42 10.8	+0.1
HELC				*i*		00 42 18.8	
	comp=E,160nm,0.3s						
SOCV	Socops	2.65	58	*e*P	Pn	00 41 40.1	-0.8
GUY2C	Guyana, Caldas	2.76	234	*e*P	Pn	00 41 43.3	+0.6
GUY2C				*e*S	Sn	00 42 17.6	+0.4
GUY2C				*i*		00 42 23.6	
	comp=N,169nm,0.6s						
VILC	Villavicencio,	2.80	192	*e*P	Pn	00 41 41.9	-1.0
VILC				*e*S	Sn	00 42 16.8	-0.7
VILC				*i*		00 42 24.4	
	comp=N,400nm,0.4s						
RREF	El Recreo	2.95	229	*e*P	Pn	00 41 45.9	+0.7
RREF				*e*S	Sn	00 42 22.2	+0.6
RREF				*i*		00 42 27.9	
	comp=Z,114nm,0.3s						
CODC	Agustn Codazz	3.06	354	*e*P	Pn	00 41 45.0	-1.0
CODC				*e*S	Sn	00 42 20.6	-2.6
CODC				*i*		00 42 32.8	
	comp=E,44nm,0.5s						
DBBC	Dabeiba	3.06	273	*e*P	Pn	00 41 45.4	-0.7
SDV	Santo Domingo	3.18	51	*e*P	Pn	00 41 47.5	-0.2
SDV				*e*S	Sn	00 42 25.0	-1.1
PRAC	Prado	3.59	209	*e*P	Pn	00 41 52.1	-0.9
PRAC				*e*S	Sn	00 42 34.7	-0.9
PRAC				*i*		00 42 38.2	
	comp=E,151nm,0.4s						
ELOV	Elorza	3.62	88	*e*P	Pn	00 41 52.2	-1.0
ORTC	Ortega, Tolima	3.62	216	*e*P	Pn	00 41 53.0	-0.3
ORTC				*e*S	Sn	00 42 35.8	-0.4
VIRV	Villa del Rosa	3.68	11	⇓*i*P	Pn	00 41 52.2	-1.7
PLMC	San Jos del P	3.70	238	*e*P	Pn	00 41 54.3	0.0
PLMC				*e*S	Sn	00 42 37.2	-0.8
GUVC	San Jose del G	4.33	173	*e*P	Pn	00 42 01.7	-0.8
DABV	Dabajuro	4.72	31	*e*P	Pn	00 42 05.7	-1.8
MACC	Macarena, Meta	4.75	189	*e*P	Pn	00 42 05.7	-2.4
MARP	Paez Belalcaza	4.90	215	*e*P	Pn	00 42 09.9	-0.4
FLOC	Florencia	5.83	206	*e*P	Pn	00 42 21.3	-1.1

DDA 01 00:54:00.8, 41°.12N×33°.90E, h8^{km}±2^{km}, ML2.9

ISCJB 01 00:54:01.6±0.5, 41°.11N±0°.03×33°.92E±0°.03, h1^{km}±5^{km}, Error ellipse: s-maj=4.4km s-min=3.6km az=157.8

ISK 01 00:54:01.9, 41°.06N×33°.96E, h5^{km}, ML2.7/14

ISC 01 00:54:01.3±0.9, 41°.09N±0°.03×33°.91E±0°.02, h6^{km}±8^{km}, n30, σ0^{s}.88/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOS	Tosya	0.10	123	PG	Pg	00 54 03.5	-0.2
TOS				SG	Sg	00 54 04.9	-0.4
ILGA	Ilgaz	0.15	254	*i* P	Pg	00 54 04.7	+0.2
ILGA				*i* S	Sg	00 54 07.8	+1.2
ILGA				IAML_P			
	comp=Z,31µm,0.1s						
KAST	KASTAMONU	0.40	2	*i* P	Pg	00 54 08.9	-0.1
KAST				*i* S	Sg	00 54 14.2	-0.1
KAGI	orum-Kargı	0.43	84	*i* P	Pg	00 54 10.0	+0.2
KAGI				*i* S	Sb	00 54 17.2	-1.0
KAGI				IAML_P			
	comp=Z,5µm,0.1s						
CANT	Cankiri	0.53	204	PG	Pg	00 54 12.3	+0.7
CANT				SG	Sg	00 54 19.9	+1.3
ELDT	Eldivan	0.70	211	*i* P	Pg	00 54 15.0	+0.1
ELDT				*i* S	Sb	00 54 25.9	-0.2
ELDT				IAML_P			
	comp=Z,3µm,0.2s						
BZK	Bozkurt	0.87	5	PG	Pb	00 54 19.4	+0.6
CORM	Corum	1.07	149	PG	Pb	00 54 22.2	-0.1
DELI	KIRIKKALE	1.09	179	*i* P	Pg	00 54 22.3	0.0
DELI				IAML_P			
	comp=Z,2µm,0.1s						
DIKM	Dikmen	1.16	61	PN	Pn	00 54 23.8	-0.3
COAL	Corum-Alaca	1.17	135	*i* P	Pn	00 54 24.0	-0.3
COAL				*i* S	Sn	00 54 40.8	0.0
COAL				IAML_P			
	comp=Z,195nm,0.1s						
CMDR	Camlidere-ANKA	1.24	242	*i* P	Pg	00 54 25.3	+0.2
CMDR				IAML_P			
	comp=Z,1µm,0.2s						
SINO	SINOP_Merkez	1.34	46	*i* P	Pb	00 54 26.6	-0.2
SINO				IAML_P			
	comp=Z,1µm,0.2s						
HAVZ	Havza	1.37	90	*i* P	Pg	00 54 28.5	+0.9
HAVZ				IAML_P			
	comp=Z,1µm,0.3s						
BCAM	Yenicaga	1.42	259	*i* P	Pb	00 54 28.3	0.0
BCAM				*i* S	Sb	00 54 45.3	-1.4
BCAM				IAML_P			
	comp=Z,188nm,0.2s						
LOD	Lodumlu	1.49	216	PN	Pg	00 54 30.2	+0.4
CDAG	Cicekdag	1.51	166	*i* P	Pg	00 54 30.5	+0.2
CDAG				IAML_P			
	comp=Z,609nm,0.1s						
KVT	Kavak	1.62	90	PN	Pb	00 54 30.9	-0.7
KIBS	BOLU	1.70	247	*i* P	Pg	00 54 34.3	+0.4
KIBS				IAML_P			
	comp=Z,150nm,0.2s						
YOZ	Yozgat	1.81	143	PN	Pb	00 54 33.9	-1.0
YIGI	Dzce	1.86	267	*i* P	Pb	00 54 35.3	-0.5
YIGI				IAML_P			
	comp=Z,98nm,0.1s						
KIRS	Kırehir-Merke	1.96	180	*i* P	Pb	00 54 36.6	-0.9
KIRS				IAML_P			
	comp=Z,521nm,0.1s						
TOKT	Tokat	2.15	110	PN	Pn	00 54 38.6	+0.9
YAYX	Yaylak	2.15	182	PN	Pn	00 54 39.2	+1.3
SERE	Sereflikochisa	2.16	187	PN	Pb	00 54 39.8	-1.1
KULU	Kulu	2.16	199	PN	Pb	00 54 39.8	-1.1
SVSK	Karacayir	2.63	115	PN	Pn	00 54 45.4	+1.1
GULT	Gulveren	2.66	257	PN	Pb	00 54 47.6	-1.8
BNN	Bunyan	2.69	146	PN	Pn	00 54 46.9	+1.6
SRCK	Saricakaya, Es	2.71	248	PN	Pb	00 54 48.4	-1.8

IDC 01 01:33:13.9±1.4, 34°.95S×179°.43W, h0^{km}, mb4.3/3, mb1 4.4/4, mb1mx4.0/25, mbtmp4.2/4, ML3.7/1, Error ellipse: s-maj=46.1km s-min=34.2km az=141.0

ISCJB 01 01:33:17.5±2.9, 35°.3S±0°.2×179°.4W±0°.5, h43^{km}, mb4.2/3, Error ellipse: s-maj=69.3km s-min=13.4km az=29.1

ISC 01 01:33:19.9±1.4, 35°.2S±0°.2×179°.6W±0°.3, h43^{km}, n8, σ1^{s}.07/9, mb4.3/3, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	4.08	220	Pn	Pn	01 34 20.2	+0.3
	4.4nm,0.3s,baz=257,slow=4.0,SNR=103						
URZ				Sn	Sn	01 35 05.2	-1.2
	5.0nm,0.3s,baz=126,slow=22,SNR=7.0						
ASAR	Alice Springs	41.77	273	P	P	01 41 05.8	+0.5
	1.4nm,0.5s,baz=116,slow=7.2,SNR=9.8						
WRA	Warramunga Arr	43.19	278	P	P	01 41 17.9	+1.1
	2.7nm,0.5s,baz=121,slow=7.7,SNR=10						
PETK	Petropavlovsk-	90.09	347	P	P	01 46 13.7	-1.0
	1.8nm,0.8s,baz=134,slow=4.2,SNR=3.4						
KURBB	Kurchatov Arra	123.32	312	PKP	PKiKP	01 52 12.1	+0.3
	0.1nm,0.3s,baz=122,slow=2.1,SNR=3.2						
FINES	FINESS Array B	149.04	336	PKPbc	PKiKP	01 53 03.0	-0.7
	0.9nm,0.9s,baz=29,slow=4.4,SNR=7.1						
NOA	NORSAR Array B	153.18	348	PKPbc	PKPbc	01 53 11.7	-0.5
	0.5nm,0.8s,baz=27,slow=3.5,SNR=2.5						
TORD	Torodi Ar. Bea	158.06	183	PKPab	PKPab	01 53 47.5	+1.4
	7.5nm,0.5s,baz=157,slow=4.3,SNR=3.2						

IDC 01 01:35:17.0±81.0, 16°.88S×172°.59W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.7/32, mbtmp3.9/3, Error ellipse: s-maj=1568.0km s-min=148.4km az=82.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.99	241	P	P	01 43 26.1	-0.2
	0.9nm,0.4s,baz=56,slow=3.6,SNR=1.6						
WRA	Warramunga Arr	50.28	258	P	P	01 44 15.6	-0.1
	0.8nm,0.3s,baz=88,slow=6.7,SNR=1.7						
ASAR	Alice Springs	50.41	253	P	P	01 44 16.5	-0.1
	1.1nm,0.7s,baz=87,slow=8.2,SNR=5.8						

ISCJB 01 01:35:59.3±0.3, 38°.22N±0°.03×58°.45E±0°.04, h10^{km}, Error ellipse: s-maj=4.9km s-min=3.2km az=26.9

IDC 01 01:35:59.1±1.2, 38°.05N×58°.48E, h0^{km}, mb3.8/3, mb1 3.7/13, mb1mx3.5/52, mbtmp3.7/13, ML2.7/8, MS2.8/2, Ms1 2.8/2, ms1mx2.2/49, Error ellipse: s-maj=22.0km s-min=6.0km az=147.0

TEH 01 01:36:01.3, 38°.04N×58°.36E, h9^{km}, ML3.9

NNC 01 01:36:04.0±2.0, 38°.44N×58°.61E, h0^{km}, mb4.0, Error ellipse: s-maj=17.8km s-min=9.4km az=29.0

ISC 01 01:36:00.4±0.6, 38°.15N±0°.04×58°.38E±0°.04, h10^{km}, n42, σ1^{s}.65/48, 1C-8D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEYT	Alibeck	0.30	223	Pg	Pg	01 36 05.4	-1.0
	1µm,0.3s,baz=66,slow=14,SNR=6864						
GEYT				Lg	Lg	01 36 08.4	
	2µm,0.3s,baz=67,slow=20,SNR=185						
GEYT				LR	LR	01 36 32.1	
	comp=Z,719nm,21.7s,baz=70,slow=106						
IEMG	Emamgholi	0.77	163	*e*Pg	Pb	01 36 14.7	-1.3
IEMG				*e*Sg	Sb	01 36 25.0	-1.5
IEMG				IAMB	IAmb	01 36 26.9	
	comp=Z,51µm,0.3s						
ISFR	Sfrayin	1.13	195	*e*Pg	Pg	01 36 21.0	-1.2
ISFR				IAMB	IAmb	01 36 38.1	
	comp=Z,45µm,0.4s						
IKRD	Kardeh	1.38	175	*e*Pn	Pg	01 36 32.0	+5.2
IKRD				IAMB	IAmb	01 36 55.9	
	comp=Z,37µm,0.2s						
IAKL	Akhelmad	1.57	169	*e*Pg	Pg	01 36 29.6	-1.0
IAKL				IAMB	IAmb	01 36 52.9	
	comp=Z,18µm,0.2s						
IPAY	Payeh	1.77	164	*e*Pn	Pg	01 36 33.0	-1.3
IPAY				IAMB	IAmb	01 36 57.6	
	comp=Z,20µm,0.3s						
SBZV	Sabzevar	1.86	199	*e*Pn	Pb	01 36 33.8	-0.8
SBZV				IAMB	IAmb	01 36 35.4	
	comp=Z,0.0nm,0.4s						
IMOG	Moghan	2.18	159	*e*Pn	Pb	01 36 39.1	-1.0
IMOG				IAMB	IAmb	01 37 09.6	
	comp=Z,16µm,0.4s						
IMYA	Miami	2.27	142	*e*Pn	Pb	01 36 40.5	-1.1
IMYA				IAMB	IAmb	01 37 18.0	
	comp=Z,10µm,0.2s						
IMND	Minoodasht	2.52	250	*e*Pn	Pb	01 36 44.3	-1.4
JRKH	Jarkhoshk	2.74	144	*e*Pn	Pn	01 36 46.3	+1.8
JRKH				IAMB	IAmb	01 37 38.0	
	comp=Z,0.0nm,0.4s						
IKIA	Kiasar	4.22	244	*e*Pn	Pn	01 37 07.3	+2.3
IANJ	Anjilo	4.47	235	*e*Pn	Pn	01 37 11.4	+3.0
IANJ				IAMB	IAmb	01 38 43.5	
	comp=Z,332nm,0.9s						
TKDS	Koohdasht(Taba	4.64	193	*e*Pn	Pn	01 37 12.1	+1.4
ITEG	Tejag	5.25	177	*e*Pn	Pn	01 37 20.5	+1.4
ITEG				IAMB	IAmb	01 37 46.8	
	comp=Z,229nm,0.6s						
IDMV	Damavand	5.70	245	*e*Pn	Pn	01 37 28.3	+2.9
IKOO	Kooshah	5.74	175	*e*Pn	Pn	01 37 27.2	+1.4
KRSH	Karshahi	6.55	232	*e*Pn	Pn	01 37 38.0	+1.0
IBAF	Bafgh	6.94	200	*e*Pn	Pn	01 37 44.7	+2.4
IKLH	Kolahrood	7.33	231	*e*Pn	Pn	01 37 49.2	+1.4
IMEH	Mehriz	7.42	206	*e*Pn	Pn	01 37 50.8	+1.8
KK31	Karatay Array	10.46	58	⇓Pn	Pn	01 38 31.1	+0.6
	comp=Z,1.1nm,0.5s,baz=244,slow=16,SNR=14						
KK31				Sn	Sn	01 40 26.3	-1.4
	comp=Z,2.8nm,0.5s,baz=10,slow=56,SNR=6.1						
KK31	Karatay Array	10.46	58	*e*Pn	Pn	01 38 31.0	+0.6
GNI	Garni	10.78	285	Pn	Pn	01 38 40.6	+5.7
	comp=Z,0.3nm,0.3s,baz=42,slow=20,SNR=2.2						
AB31	Akbulak array	11.16	5	Pn	Pn	01 38 40.3	+0.4
	comp=Z,1.2nm,0.6s,baz=188,slow=13,SNR=20						
AB31				Sn	Sn	01 40 44.4	-0.3
	comp=Z,2.5nm,0.6s,baz=176,slow=25,SNR=4.1						
AB31	Akbulak array	11.16	5	*e*Pn	Pn	01 38 40.0	+0.1
AKTO	Aktyubinsk	12.29	359	Pn	Pn	01 38 56.1	+0.8
	comp=Z,0.8nm,0.3s,baz=172,slow=12,SNR=11						
AKTO				Sn	Sn	01 41 08.0	-4.3
	comp=Z,0.2nm,0.3s,baz=190,slow=19,SNR=1.9						
AKTO				LR	LR	01 44 24.5	
	comp=Z,29nm,19.6s,baz=145,slow=41						
AKTO	Aktyubinsk	12.29	359	⇓Pn	Pn	01 38 55.7	+0.4
	comp=Z,7.0nm,1.0s						
AKTO				⇓Sn	Sn	01 41 12.0	-0.3
	comp=Z,3.5nm,0.6s						
KBZ	Khabaz	12.96	300	Pn	Pn	01 39 06.0	+1.5
	comp=Z,0.1nm,0.3s,baz=90,slow=5.1,SNR=2.2						
AAK	Ala-Archa	13.07	65	Pn	Pn	01 39 02.5	-3.8
	comp=Z,0.3nm,0.3s,baz=258,slow=19,SNR=1.8						
AAK				LR	LR	01 44 16.3	
	comp=Z,50nm,19.6s,baz=204,slow=38						
AAK	Ala-Archa	13.07	65	⇑Pn	Pn	01 39 07.3	+1.0
	comp=Z,2.5nm,0.8s						
AAK				⇓Sn	Sn	01 41 32.4	+0.5
	comp=Z,2.1nm,0.7s						
KVAR	Kislovodsk Arr	13.17	301	Pn	Pn	01 39 08.0	+0.4
	baz=128,slow=17,SNR=2.5						
KVAR				Sn	Sn	01 41 28.7	-5.4
	baz=184,slow=2.7,SNR=3.4						
TKM2	Tokmak 2	13.93	65	⇓Pn	Pn	01 39 18.8	+0.8
	comp=Z,1.3nm,0.7s						
TKM2				⇓Sn	Sn	01 41 51.9	-0.9
	comp=Z,1.3nm,0.6s						
OTUK	Ortayu	14.31	41	⇓Pn	Pn	01 39 23.9	+0.8
	comp=Z,2.7nm,0.6s						
OTUK				⇓Sn	Sn	01 42 00.5	-1.2
	comp=Z,3.6nm,0.7s						
BVAR	Borovoye Array	17.05	25	P	Pn	01 39 59.7	+0.9
	comp=Z,1.1nm,0.3s,baz=217,slow=9.7,SNR=20						
ARU	Arti	18.29	0	P	P	01 40 14.9	+0.7
	comp=Z,0.0nm,0.3s,baz=172,slow=15,SNR=2.8						
KURBB	Kurchatov Arra	18.98	42	P	P	01 40 21.7	0.0
	comp=Z,0.0nm,0.3s,baz=241,slow=12,SNR=3.0						
BRTR	Keskin Array B	19.30	282	P	P	01 40 26.5	+0.9
	comp=Z,0.0nm,0.3s,baz=88,slow=10,SNR=2.7						
MKAR	Makanchi Array	19.58	56	P	P	01 40 29.6	+1.1
	comp=Z,0.0nm,0.3s,baz=246,slow=9.2,SNR=3.4						
ZALV	Zalesovo Beam	24.01	40	P	P	01 41 15.9	+0.8
	comp=Z,0.9nm,0.5s,baz=247,slow=11,SNR=2.6						
AKASG	Malin Array Be	24.13	311	P	P	01 41 17.1	+0.8
	comp=Z,0.3nm,0.4s,baz=103,slow=8.6,SNR=4.1						
IDI	Anoyia	26.91	274	P	P	01 41 42.9	+1.2
	comp=Z,8.0nm,0.8s,baz=32,slow=9.5,SNR=2.0						

IDC 01 01:36:54.3±3.7, 12°.55S×99°.58W, h0^{km}, mb3.7/2, mb1 4.1/2, mb1mx3.6/24, mbtmp3.7/2, Error ellipse: s-maj=325.5km s-min=94.2km az=85.0, Southwest of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	41.82	355	P	P	01 44 46.0	-0.1
	0.4nm,0.8s,baz=175,slow=12,SNR=4.7						
ILAR	Eielson Array	84.91	342	P	P	01 49 30.8	0.0
	1.1nm,1.0s,baz=149,slow=4.1,SNR=6.8						
KURBB	Kurchatov Arra	142.00	2	PKP	PKPdf	01 56 28.2	-0.1
	0.2nm,0.3s,baz=358,slow=3.0,SNR=2.3						

MKAR	**Makanchi Array** 0.5nm,0.7s,baz=26,slow=1.8,SNR=5.8	**145.83**	**358**	PKPbc	PKPdf	01 56 34.7	-0.5

JMA 01 01:38:55.9±0.2**, 27°.17N×127°.53E, h87**^{km}±2^{km}**, M3.5, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.41**	**109**	P	Pn	01 39 10.0	+0.4
JIH				S	Sn	01 39 20.0	+0.1
JAGN	**Aguni-jima**	**0.63**	**204**	P	Pn	01 39 11.6	+0.1
JAGN				S	Sn	01 39 23.2	+0.1
JOW	**Kunigami**	**0.74**	**117**	P	Pn	01 39 12.7	+0.1
JOW				S	Sn	01 39 24.7	-0.3
JNTH	**Nagotoyohara**	**0.78**	**146**	P	Pn	01 39 13.2	+0.2
JNTH				S	Sn	01 39 25.5	-0.2
JYRO	**Yoronjima**	**0.83**	**100**	P	Pn	01 39 13.6	+0.1
JYRO				S	Sn	01 39 26.0	-0.7
JOKE	**Okinoerabujima**	**0.95**	**78**	P	Pn	01 39 14.8	0.0
JOKE				S	Sn	01 39 28.4	-0.5
JJT3	**Tamagusuku3**	**1.05**	**167**	P	Pn	01 39 16.8	+0.8
JJT3				S	Sn	01 39 32.0	+1.0
JKE	**Kume jima 2**	**1.07**	**219**	P	Pn	01 39 16.3	+0.1
JKE				S	Sn	01 39 31.2	-0.3
JTK	**Tokunoshima**	**1.40**	**64**	P	Pn	01 39 20.4	+0.1
JTK				S	Sn	01 39 38.2	-0.5
JAMN	**Amaminishikomi**	**1.81**	**53**	P	Pn	01 39 25.2	-0.3
JAMN				*e*S	Sn	01 39 47.3	-0.7
JAM	**Amami Oshima**	**2.22**	**56**	P	Pn	01 39 31.0	+0.2
JAM				S	Sn	01 39 56.3	-1.3

MAN 01 01:45:12.5, 7°.37N×122°.25E, h1^{km}**, mb4.3, ML3.2, MS2.9, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.53**	**37**	*e*P	Pg	01 45 22.7	+0.1
IPIL				*e*S	Sg	01 45 30.3	+0.9
PAGZ	**Pagadian**	**1.22**	**67**	*e*P	Pb	01 45 36.2	-0.1
PAGZ				*e*S	Sn	01 45 53.9	+0.1
DCPH	**Dipolog City**	**1.63**	**42**	⇑*e*P	Pn	01 45 41.6	-0.7
DCPH				*e*S	Sg	01 46 04.7	-0.2

MEX 01 02:00:56.5±0.8**, 24°.54N×109°.51W, h16**^{km}±19^{km}**, MD3.5, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.84**	**239**	*e*P	Pb	02 01 10.3	-2.5
LPIG				*i* S	Sb	02 01 19.6	-4.3
SRIG	**Santa Rosalia**	**3.70**	**319**	*e*P	Pn	02 01 51.0	-2.0
SRIG				*i* S	Sn	02 02 32.7	-3.6

IDC ***01*** *02:03:34.0±2.2, 39°.58N×75°.43E, h0*^{km}*, mb3.7/2, mb1 3.5/6, mb1mx3.2/46, mbtmp3.4/6, ML3.1/4, MS3.0/2, Ms1 3.0/2, ms1mx2.4/37, Error ellipse: s-maj=36.1km s-min=21.8km az=109.0*
SOME ***01*** *02:03:36.2, 39°.98N×75°.48E, h0*^{km}
KRNET ***01*** *02:03:37.5±0.1, 39°.72N×75°.55E, mb3.8*
BJI ***01*** *02:03:38.9±0.0, 40°.02N×75°.60E, h8*^{km}*, ML3.1/4*
NNC ***01*** *02:03:40.3±1.3, 40°.04N×75°.59E, h0*^{km}*, mb4.2, mpv3.8, Error ellipse: s-maj=9.9km s-min=6.9km az=160.0*
ISC 01 02:03:38.5±1.5**, 40°.01N**±0°.04×**75°.57E**±0°.03**, h2**^{km}±11^{km}**, n90, σ1§97**/128**, mb3.6**/3**, 36C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.58**	**148**	Pg	**Pb**	**02 03 54.0**	**+2.5**
KSH				Sg	**Sn**	**02 04 05.5**	**+1.4**
ARLS	**Aral** baz=37	**2.08**	**333**	⇑*i*P	**Pb**	**02 04 17.7**	**+0.7**
ARLS	baz=37			⇑*i*S	**Sg**	**02 04 47.1**	**+1.9**
KZA	**Kyzart** baz=55	**2.08**	**353**	⇑*i*P	**Pb**	**02 04 18.1**	**+0.9**
KZA	baz=55			⇑*i*S	**Sg**	**02 04 47.7**	**+2.4**
KZA	**Kyzart** SNR=102	**2.08**	**353**	P	**Pb**	**02 04 18.1**	**+0.9**
ULHL	**Ulahol** baz=11	**2.29**	**13**	⇑*i*P	**Pb**	**02 04 21.0**	**+0.3**
ULHL	baz=11			⇑*i*S	**Sg**	**02 04 52.6**	**+0.5**
ULHL	**Ulahol** SNR=80	**2.29**	**13**	P	**Pb**	**02 04 22.3**	**+1.6**
UCH	**Uchtor** baz=43	**2.35**	**341**	⇑*i*P	**Pb**	**02 04 21.9**	**0.0**
UCH	baz=43			⇑*i*S	**Sg**	**02 04 54.1**	**0.0**
UCH	**Uchtor** SNR=157	**2.35**	**341**	P	**Pb**	**02 04 22.4**	**+0.5**
ARSB	**Arslanbob** baz=10.0	**2.37**	**305**	⇑*i*P	**Pn**	**02 04 20.7**	**+2.2**
ARSB	baz=10.0			⇑*i*S	**Sb**	**02 04 51.3**	**-0.3**
KDJ	**Kajisay** baz=27	**2.44**	**29**	⇑*i*P	**Pb**	**02 04 23.1**	**-0.2**
KDJ	baz=27			⇑*i*S	**Sg**	**02 04 55.9**	**-1.1**
BOOM	**Boomskoye usch** baz=6.0	**2.49**	**6**	⇓*i*P	**Pb**	**02 04 23.9**	**-0.2**
BOOM	baz=6.0			⇓*i*S	**Sg**	**02 04 57.6**	**-1.0**
KBK	**Karagaybulak** baz=51	**2.69**	**350**	⇑*i*P	**Pb**	**02 04 26.5**	**-0.9**
KBK	baz=51			⇑*i*S	**Sb**	**02 05 01.9**	**+1.1**
KBK	**Karagaybulak** SNR=98	**2.69**	**350**	P	**Pg**	**02 04 30.5**	**+0.6**
AAK	**Ala-Archa** 12nm,0.3s,baz=160,slow=15,SNR=41	**2.75**	**343**	Pn	**Pb**	**02 04 28.3**	**-0.2**
AAK	12nm,0.3s,baz=167,slow=15,SNR=41			Pg	**Pg**	**02 04 31.7**	**+0.6**
AAK	6.9nm,0.3s,baz=35,slow=18,SNR=7.8			Sn	**Sb**	**02 05 02.8**	**+0.2**
AAK	5.8nm,0.3s,baz=73,slow=24,SNR=2.9			Lg	Lg	02 05 08.6	
AAK	comp=Z,94nm,18.0s,baz=195,slow=43			LR	LR	02 05 48.9	
AAK	**Ala-Archa** 40nm,0.6s	**2.75**	**343**	⇓Pn	**Pb**	**02 04 28.2**	**-0.2**
AAK	98nm,0.7s			⇑Lg	Lg	02 05 05.2	
AAK	**Ala-Archa** baz=45	**2.75**	**343**	⇑*i*P	**Pb**	**02 04 27.3**	**-1.1**
AAK	baz=45			⇑*i*S	**Sb**	**02 05 03.1**	**+0.5**
AAK	**Ala-Archa** SNR=11	**2.75**	**343**	P	**Pb**	**02 04 28.2**	**-0.2**
FRU1	**Bishkek** baz=48	**2.88**	**346**	⇑*i*P	**Pb**	**02 04 29.1**	**-1.6**
FRU1	baz=48			⇑*i*S	**Sb**	**02 05 06.8**	**+0.3**
TKM2	**Tokmak 2** 16nm,0.4s	**2.91**	**0**	⇑Pn	**Pb**	**02 04 30.0**	**-1.2**
TKM2	102nm,0.7s			⇑Lg	Lg	02 05 12.8	
TKM2	**Tokmak 2** baz=1.0	**2.91**	**0**	⇑*i*P	**Pb**	**02 04 29.7**	**-1.5**
TKM2	baz=1.0			⇑*i*S	**Sb**	**02 05 07.4**	**+0.1**
TKM2	**Tokmak 2** SNR=11	**2.91**	**0**	P	**Pb**	**02 04 30.3**	**-0.9**
EKS2	**Erkin-Say** baz=36	**2.97**	**334**	⇑*i*P	**Pn**	**02 04 29.9**	**+3.1**
EKS2	baz=36			⇑*i*S	**Sb**	**02 05 08.1**	**-1.0**
EKS2	**Erkin-Say** SNR=15	**2.97**	**334**	P	**Pb**	**02 04 31.8**	**-0.4**
KST	**Kastek** 49nm,0.6s	**3.04**	**5**	Pg	**Pb**	**02 04 35.3**	**+1.8**
KST	72nm,0.6s			Lg	Lg	02 05 18.1	
KST	**Kastek** 49nm,0.6s	**3.04**	**5**	*e*P	**Pb**	**02 04 35.3**	**+1.8**
KST	72nm,0.6s			*e*S	**Sg**	**02 05 18.1**	**+1.8**
CHMS	**Chumysh** baz=50	**3.05**	**349**	⇓*i*P	**Pb**	**02 04 31.4**	**-2.1**
CHMS	baz=50			⇓*i*S	**Sb**	**02 05 10.6**	**-0.6**
CHMS	**Chumysh** SNR=9.3	**3.05**	**349**	P	**Pb**	**02 04 31.9**	**-1.6**
IZV	**Izvestkoviy** 77nm,0.6s	**3.12**	**14**	Pg	**Pb**	**02 04 37.1**	**+2.3**
IZV	82nm,0.6s			Lg	Lg	02 05 20.6	
IZV	**Izvestkoviy** 77nm,0.6s	**3.12**	**14**	*e*P	**Pb**	**02 04 37.1**	**+2.3**
IZV	82nm,0.6s			*e*S	**Sg**	**02 05 20.6**	**+1.8**
MTBS	**Maitube** 31nm,0.4s	**3.18**	**11**	Pg	**Pb**	**02 04 37.4**	**+1.6**
MTBS	47nm,0.4s			Lg	Lg	02 05 22.1	
MTBS	**Maitube** 31nm,0.4s	**3.18**	**11**	*e*P	**Pb**	**02 04 37.4**	**+1.6**
MTBS	47nm,0.4s			*e*S	**Sg**	**02 05 22.1**	**+1.4**
TNSS	**Tian-Shan** 29nm,0.5s	**3.20**	**18**	Pg	**Pb**	**02 04 38.1**	**+1.9**
TNSS	52nm,0.5s			Lg	Lg	02 05 22.2	
TNSS	**Tian-Shan** 29nm,0.5s	**3.20**	**18**	*e*P	**Pb**	**02 04 38.1**	**+1.9**
TNSS	52nm,0.5s			*e*S	**Sg**	**02 05 22.2**	**+1.1**
DGS	**Degeres** 32nm,0.7s	**3.23**	**3**	Pg	**Pb**	**02 04 37.7**	**+1.1**
DGS	84nm,0.6s			Lg	Lg	02 05 22.3	
DGS	**Degeres** 32nm,0.7s	**3.23**	**3**	*e*P	**Pb**	**02 04 37.7**	**+1.1**
DGS	84nm,0.6s			*e*S	**Sg**	**02 05 22.3**	**0.0**
MRKS	**Merke** 35nm,0.5s	**3.25**	**328**	Pg	**Pb**	**02 04 36.6**	**-0.4**
MRKS	42nm,0.6s			Lg	Lg	02 05 19.9	
MRKS	**Merke** 35nm,0.5s	**3.25**	**328**	*e*P	**Pb**	**02 04 36.6**	**-0.4**
MRKS	42nm,0.6s			*e*S	**Sb**	**02 05 19.9**	**+2.8**
ARK	**Arkit** baz=8.0	**3.26**	**304**	⇑*i*P	**Pn**	**02 04 32.4**	**+1.6**
ARK	baz=8.0			⇑*i*S	**Sn**	**02 05 12.3**	**+2.0**
MDOK	**Medeo** 24nm,0.5s	**3.34**	**19**	Pg	**Pb**	**02 04 39.8**	**+1.3**
MDOK	65nm,0.7s			Lg	Lg	02 05 25.9	
MDOK	**Medeo** 24nm,0.5s	**3.34**	**19**	*e*P	**Pb**	**02 04 39.8**	**+1.3**
MDOK	65nm,0.7s			*e*S	**Sg**	**02 05 25.9**	**+0.2**
USP	**Ospenovka** baz=48	**3.35**	**347**	⇑*i*P	**Pn**	**02 04 35.5**	**+3.6**
USP	baz=48			⇑*i*S	**Sb**	**02 05 17.7**	**-2.2**
USP	**Ospenovka** SNR=16	**3.35**	**347**	P	**Pb**	**02 04 36.2**	**-2.5**
KNDC	**Almaty**	**3.37**	**18**	⇑Pg	**Pb**	**02 04 37.5**	**-1.5**
KNDC				⇑Lg	Lg	02 05 27.7	
KOTS	**Kotyrbulak** 17nm,0.6s	**3.42**	**19**	Pg	**Pb**	**02 04 41.5**	**+1.6**
KOTS	273nm,0.5s			Lg	Lg	02 05 28.8	
KOTS	**Kotyrbulak** 17nm,0.6s	**3.42**	**19**	*e*P	**Pb**	**02 04 41.5**	**+1.6**
KOTS	273nm,0.5s			*e*S	**Sg**	**02 05 28.8**	**+0.4**
SATY	**Saty** 42nm,0.8s	**3.72**	**34**	Pg	**Pb**	**02 04 46.9**	**+2.0**
SATY	44nm,0.5s			Lg	Lg	02 05 38.0	
SATY	**Saty** 42nm,0.8s	**3.72**	**34**	*e*P	**Pb**	**02 04 46.9**	**+2.0**
SATY	44nm,0.5s			*e*S	**Sg**	**02 05 38.0**	**+0.2**
KTBS	**Karatobe** 31nm,0.7s	**3.79**	**12**	Pg	**Pb**	**02 04 48.3**	**+2.2**
KTBS	95nm,0.5s			Lg	Lg	02 05 40.5	
KTBS	**Karatobe** 31nm,0.7s	**3.79**	**12**	*e*P	**Pb**	**02 04 48.3**	**+2.2**
KTBS	95nm,0.5s			*e*S	**Sg**	**02 05 40.5**	**+0.3**
KUU	**Kurty** 16nm,0.7s	**3.92**	**8**	Pg	**Pb**	**02 04 50.3**	**+1.9**
KUU	64nm,0.7s			Lg	Lg	02 05 43.9	
KUU	**Kurty** 16nm,0.7s	**3.92**	**8**	*e*P	**Pb**	**02 04 50.3**	**+1.9**
KUU	64nm,0.7s			*e*S	**Sg**	**02 05 43.9**	**-0.6**
KURS	**Kuram** 19nm,0.7s	**3.98**	**28**	Pg	**Pb**	**02 04 51.3**	**+1.9**
KURS	19nm,0.6s			Lg	Lg	02 05 44.9	
KURS	**Kuram** 19nm,0.7s	**3.98**	**28**	*e*P	**Pb**	**02 04 51.3**	**+1.9**
KURS	19nm,0.6s			*e*S	**Sg**	**02 05 44.9**	**-1.5**
CHKK	**Chushkaly** 23nm,0.7s	**3.98**	**15**	Pg	**Pb**	**02 04 51.9**	**+2.5**
CHKK	118nm,0.7s			Lg	Lg	02 05 46.1	
CHKK	**Chushkaly** 23nm,0.7s	**3.98**	**15**	*e*P	**Pb**	**02 04 51.9**	**+2.5**
CHKK	118nm,0.7s			*e*S	**Sg**	**02 05 46.1**	**-0.3**
UZB	**Uzynbulak** 14nm,0.6s	**4.07**	**38**	Pg	**Pb**	**02 04 52.9**	**+2.1**
UZB	19nm,0.8s			Lg	Lg	02 05 47.8	
UZB	**Uzynbulak** 14nm,0.6s	**4.07**	**38**	*e*P	**Pb**	**02 04 53.0**	**+2.1**
UZB	19nm,0.8s			*e*S	**Sg**	**02 05 47.8**	**-1.2**
KPKS	**Kokpek** 37nm,0.5s	**4.17**	**33**	*e*P	**Pb**	**02 04 54.2**	**+1.7**
KPKS	84nm,0.5s			*e*S	**Sg**	**02 05 50.6**	**-1.7**
PDGK	**Podgornoye** 6.1nm,0.6s	**4.43**	**40**	Pg	**Pb**	**02 04 59.2**	**+2.2**
PDGK	16nm,0.6s			Lg	Lg	02 05 58.6	
PDGK	**Podgornoye** 3.1nm,0.5s	**4.43**	**40**	⇑Pn	**Pn**	**02 04 49.3**	**+2.5**
PDGK	11nm,0.6s			⇑Pg	**Pb**	**02 04 59.6**	**+2.5**
PDGK	25nm,0.6s			⇓Lg	Lg	02 05 58.7	
ARXS	**Arharly** 18nm,0.7s	**4.52**	**21**	Pg	**Pb**	**02 05 01.4**	**+2.8**
ARXS	24nm,0.6s			Lg	Lg	02 06 02.4	
ARXS	**Arharly** 18nm,0.7s	**4.52**	**21**	*e*P	**Pb**	**02 05 01.4**	**+2.8**
ARXS	24nm,0.6s			*e*S	**Sg**	**02 06 02.4**	**-1.4**
MNBS	**Baschi** 14nm,0.5s	**4.58**	**26**	Pg	**Pb**	**02 05 03.4**	**+3.7**
MNBS	25nm,0.6s			Lg	Lg	02 06 05.6	
MNBS	**Baschi** 14nm,0.5s	**4.58**	**26**	*e*P	**Pb**	**02 05 03.4**	**+3.7**
MNBS	25nm,0.6s			*e*S	**Sg**	**02 06 05.6**	**0.0**
IUG	**Iuzhnay** 1.6nm,0.3s	**4.70**	**299**	Pg	**Pb**	**02 05 02.8**	**+1.2**
IUG	22nm,0.7s			Lg	Lg	02 06 04.9	
IUG	**Iuzhnay** 1.6nm,0.3s	**4.70**	**299**	*e*P	**Pb**	**02 05 02.8**	**+1.2**
IUG	22nm,0.7s			*e*S	**Sb**	**02 06 04.9**	**+6.2**
KK31	**Karatay Array** 0.5nm,0.3s,baz=128,slow=13,SNR=17	**4.89**	**311**	⇑Pn	**Pn**	**02 04 53.9**	**+0.8**
KK31	2.2nm,0.5s,baz=128,slow=16,SNR=12			⇓Pg	**Pg**	**02 05 10.2**	**-2.0**
KK31	3.8nm,0.5s,baz=120,slow=27,SNR=4.9			⇑Lg	Lg	02 06 17.0	
KTMS	**Ketmen** 6.4nm,0.3s	**4.96**	**45**	Pg	**Pb**	**02 05 09.0**	**+2.9**
KTMS	18nm,0.5s			Lg	Lg	02 06 15.3	
KTMS	**Ketmen** 6.4nm,0.3s	**4.96**	**45**	*e*P	**Pb**	**02 05 09.0**	**+2.9**
KTMS	18nm,0.5s			*e*S	**Sg**	**02 06 15.3**	**-2.4**
BTLS	**Baital** 5.0nm,0.9s	**5.15**	**348**	Pg	**Pb**	**02 05 13.4**	**+4.2**
BTLS	16nm,0.6s			Lg	Lg	02 06 22.8	
BTLS	**Baital** 5.0nm,0.9s	**5.15**	**348**	*e*P	**Pb**	**02 05 13.4**	**+4.2**
BTLS	16nm,0.6s			*e*S	**Sg**	**02 06 22.8**	**-1.1**
DJR	**Jarkent** 8.8nm,0.7s	**5.34**	**35**	Pg	**Pg**	**02 05 17.7**	**-3.0**
DJR	6.5nm,0.5s			Lg	Lg	02 06 30.1	
DJR	**Jarkent** 8.8nm,0.7s	**5.34**	**35**	*e*P	**Pg**	**02 05 17.7**	**-3.0**
DJR	6.5nm,0.5s			*e*S	**Sg**	**02 06 30.1**	**+0.2**
KAPS	**Kapalarasan** 7.4nm,0.7s	**5.96**	**27**	Pg	**Pb**	**02 05 27.8**	**+4.6**
KAPS	9.7nm,1.0s			Lg	Lg	02 06 48.2	
KAPS	**Kapalarasan** 7.4nm,0.7s	**5.96**	**27**	*e*P	**Pb**	**02 05 27.8**	**+4.6**
KAPS	9.7nm,1.0s			*e*S	**Sg**	**02 06 48.2**	**-1.8**
CHCP	**Chirah Chowk**	**6.60**	**197**	P	**Pn**	**02 05 15.8**	**-0.8**
CEP	**Cherat**	**6.83**	**207**	P	**Pn**	**02 05 20.6**	**+0.7**
CEP				S	**Sn**	**02 06 35.0**	**-3.3**
MAKZ	**Makanchi** 0.9nm,0.7s	**8.24**	**32**	⇓Pn	**Pn**	**02 05 39.8**	**+0.8**
MAKZ	0.9nm,0.7s			⇓Lg	Lg	02 07 58.6	
MK31	**Makanchi Array** 3.2nm,0.7s,baz=204,slow=13,SNR=8.2	**8.36**	**34**	⇑Pn	**Pn**	**02 05 42.1**	**+1.5**
MK31	0.7nm,0.6s,baz=206,slow=24,SNR=3.8			⇓Lg	Lg	02 08 00.5	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=221,slow=15,SNR=8.9	**8.36**	**34**	Pn	**Pn**	**02 05 42.9**	**+2.2**
MKAR	0.1nm,0.3s,baz=223,slow=27,SNR=3.1			Lg	Lg	02 08 05.2	
OTUK	**Ortayu** 2.6nm,1.2s	**8.55**	**345**	⇓Pn	Pn	02 05 48.7	+5.4
OTUK	13nm,1.0s			⇓Lg	Lg	02 08 11.1	
WMQ	**Urumqi**	**9.81**	**63**	*e*P	**Pn**	**02 06 01.1**	**+0.5**
WMQ	comp=N,15nm,1.1s			smax	smax		
WMQ	comp=E,46nm,0.9s			smax	smax		
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=195,slow=12,SNR=1.2	**10.81**	**10**	Pn	**Pn**	**02 06 15.1**	**+0.9**
KURBB	0.0nm,0.3s,baz=198,slow=29,SNR=6.6			Lg	Lg	02 09 22.3	
KURBB	**Kurchatov Arra** 13nm,1.3s	**10.81**	**10**	⇓Lg	Lg	02 09 23.4	
KURK	**Kurchatov** 8.8nm,1.0s	**10.92**	**10**	⇓Lg	Lg	02 09 23.2	
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=163,slow=12,SNR=1.4	**13.49**	**346**	Pn	**Pn**	**02 06 49.0**	**-1.9**
BVAR	0.1nm,0.3s,baz=159,slow=21,SNR=4.4			Lg	Lg	02 10 49.2	
FINES	**FINESS Array B** 0.4nm,0.4s,baz=104,slow=12,SNR=4.2	**36.74**	**322**	P	**P**	**02 10 44.1**	**-2.7**
ARCES	**ARCESS Array B** 1.4nm,0.8s,baz=101,slow=7.4,SNR=3.1	**39.39**	**335**	P	**P**	**02 11 07.7**	**-1.4**
ASAJ	**Asahikawa** comp=Z,36nm,19.1s,baz=352,slow=39	**48.69**	**62**	LR	LR	02 35 23.1	
TORD	**Torodi Ar. Bea** 6.9nm,0.4s,baz=44,slow=5.0,SNR=4.1	**69.36**	**270**	P	P	02 14 43.4	-4.5

SJA ***01*** *02:18:59.5±0.5, 24°.08S×67°.12W, h237*^{km}*±8*^{km}*, ML2.3, MW3.1*
ISCJB ***01*** *02:19:01.8±0.7, 24°.16S±0°.04×67°.25W±0°.06, h205*^{km}*±8*^{km}*, mb4.3/1, Error ellipse: s-maj=8.9km s-min=6.8km az=165.0*
IDC ***01*** *02:19:02.2±1.4, 24°.20S×66°.96W, h148*^{km}*±20*^{km}*, mb4.2/1, mb1 3.2/5, mb1mx3.0/22, mbtmp3.7/5, Error ellipse: s-maj=26.9km s-min=14.2km az=81.0*
ISC 01 02:19:03.1±0.9**, 24°.19S**±0°.06×**67°.25W**±0°.06**, h189**^{km}±9^{km}**, n13, σ1§69**/20**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.95**	**60**	*i* P	**Pn**	**02 19 40.3**	**-0.4**
HJA				*i* S	**Sn**	**02 20 10.4**	**+0.6**
AZAP	**Zapla**	**2.00**	**92**	*i* P	**Pn**	**02 19 40.6**	**-0.4**
AZAP	comp=Z,15nm,0.4s			IAML		02 19 41.6	
AZAP				*i* S	**Sn**	**02 20 11.1**	**+0.7**
LVC	**Limon Verde** comp=Z,83nm,0.3s,baz=122,slow=9.5,SNR=28	**2.19**	**316**	P	**Pn**	**02 19 43.8**	**+0.6**
LVC	comp=Z,81nm,0.3s,baz=51,slow=1.0,SNR=16			S	**Sn**	**02 20 13.4**	**-1.0**
FSA	**Cafayete**	**2.24**	**149**	*i* P	**Pn**	**02 19 44.0**	**+0.5**
FSA	comp=Z,5.0nm,0.7s			IAML		02 19 44.7	
FSA				*i* S	**Sn**	**02 20 17.6**	**+2.5**
PB15	**IPOC Station P**	**2.25**	**295**	*i* P	**Pn**	**02 19 44.3**	**+0.5**
YJA	**Yavi**	**2.56**	**39**	*i* P	**Pn**	**02 19 46.5**	**-1.0**
YJA				*i* S	**Sn**	**02 20 20.6**	**-1.3**
PB06	**IPOC Station P**	**2.59**	**304**	*i* P	**Pn**	**02 19 48.0**	**+0.4**
CFA	**Coronel Fontan** comp=Z,0.1nm,0.3s,baz=23,slow=15,SNR=1.3	**7.44**	**187**	P	**Pn**	**02 20 48.8**	**-0.3**
CFA	comp=Z,0.1nm,0.3s,baz=112,slow=7.1,SNR=1.5			S	**Sn**	**02 22 10.3**	**-2.7**
LPAZ	**La Paz** comp=Z,0.4nm,0.3s,baz=169,slow=11,SNR=20	**7.90**	**354**	P	**Pn**	**02 20 55.7**	**0.0**
LPAZ	comp=Z,0.0nm,0.3s,baz=264,slow=8.7,SNR=1.8			S	**Sn**	**02 22 21.7**	**-3.3**
SIV	**San Ignacio** comp=Z,0.1nm,0.3s,baz=237,slow=16,SNR=2.3	**10.01**	**37**	P	**Pn**	**02 21 21.6**	**-1.1**
BDFB	**Brasilia** comp=Z,0.2nm,0.3s,baz=221,slow=11,SNR=4.2	**19.97**	**68**	P	**P**	**02 23 20.1**	**-1.1**
ROSC	**El Rosal** comp=Z,2.9nm,0.3s,baz=185,slow=9.8,SNR=2.3	**29.66**	**346**	P	**P**	**02 24 55.1**	**+3.5**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.6s,baz=318,slow=1.9,SNR=2.9	**146.81**	**40**	PKPbc	**PKiKP**	**02 38 26.0**	**+0.6**

IDC ***01*** *02:19:09.8±4.8, 0°.85S×132°.49E, h0*^{km}*, mb3.7/2, mb1 4.0/3, mb1mx3.6/29, mbtmp3.8/3, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/23, Error ellipse: s-maj=304.1km s-min=7.6km az=74.0*
ISCJB ***01*** *02:19:12.4±1.0, 0°.66S±0°.09×133°.28E±0°.06, h33*^{km}*, mb3.8/2, MS2.8/1, Error ellipse: s-maj=12.7km s-min=8.4km az=2.3*
DJA ***01*** *02:19:13.2±1.5, 1°S±6°×13°3E±°, h21*^{km}*±15*^{km}*, M4.2/6, mb4.4/1, mB6.1/1, MLv4.0/6, Mw(mB)5.8/1*
ISC 01 02:19:13.7±1.2**, 0°.68S**±0°.10×**133°.25E**±0°.06**, h35**^{km}**, n8, σ1§36**/10**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.24**	**132**	P	**Pn**	**02 19 34.7**	**+0.1**
RKPI				S	**Sn**	**02 19 52.8**	**+2.7**
SWI	**Sorong**	**2.00**	**265**	P	**Pn**	**02 19 45.6**	**+0.6**
SWI				S	**Sn**	**02 20 10.4**	**+1.5**
FAKI	**Fak Fak**	**2.44**	**204**	P	**Pn**	**02 19 51.2**	**+0.1**
FAKI				S	**Sn**	**02 20 19.6**	**-0.2**
BAKI	**Biak**	**2.90**	**100**	P	**Pn**	**02 19 57.1**	**-0.3**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=353,slow=12,SNR=3.3	**19.18**	**177**	P	**P**	**02 23 33.0**	**-1.5**
ASAR	**Alice Springs** 2.5nm,0.7s,baz=1.1,slow=10,SNR=18	**22.86**	**178**	P	**P**	**02 24 13.6**	**-0.6**
KSRS	**Korea Array** comp=Z,18nm,21.9s,baz=250,slow=33	**38.26**	**353**	LR	LR	02 40 32.1	
MKAR	**Makanchi Array** 0.8nm,0.6s,baz=120,slow=7.5,SNR=8.5	**64.90**	**324**	P	**P**	**02 29 49.1**	**-0.5**

MEX 01 02:27:55.4±0.5**, 15°.40N×93°.70W, h21**^{km}±42^{km}**, MD3.5, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		**1.48**	**22**	*i* P	Pn	02 28 17.9	-3.0
TGIG				*i* S	Sn	02 28 35.4	-4.2
CCIG	**Comitan**	**1.74**	**59**	*e*P	Pn	02 28 21.4	-3.2
CCIG				*e*S	Sn	02 28 41.9	-4.3
CMIG	**Matias Romero**	**2.04**	**326**	*i* P	Pn	02 28 26.2	-2.2
CMIG				*e*S	Sn	02 28 49.8	-3.4

HUIG	**Huatulco**	2.35	279	iP	Pn	02 28 30.1	-2.8
HUIG				eS	Sn	02 28 58.4	-2.8

GUC 01 02:32:06.0±0.5, 25°.44S×69°.21W, h109^{km}±3^{km}, ML3.5, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO02	**Mina Guanaco**	0.44	309	eP	Pn	02 32 23.4	+0.6
GO02				iS	Sn	02 32 36.4	+1.0
GO02				IAML		02 32 37.3	
	comp=E,3µm,0.1s						
PB14	**IPOC Station P**	1.35	307	eP	Pn	02 32 32.3	+1.0
PB14				iS	Sn	02 32 52.0	+1.5
PB14				IAML		02 32 53.1	
	comp=E,539nm,0.3s						
CRCH	**Chaqaral**	1.56	234	eP	Pn	02 32 34.2	+0.7
CRCH				iS	Sn	02 32 54.8	+0.5
CRCH				IAML		02 32 56.1	
	comp=N,785nm,0.3s						
PB15	**IPOC Station P**	2.23	354	⇑iP	Pn	02 32 43.1	+0.9
PB15				iS	Sn	02 33 11.5	+1.7
PB10	**IPOC Station P**	2.27	327	eP	Pn	02 32 43.4	+0.9
PB10				iS	Sn	02 33 08.7	-1.7
PB10				IAML		02 33 12.9	
	comp=E,257nm,0.3s						
PB06	**IPOC Station P**	2.74	353	⇓iP	Pn	02 32 49.5	+0.8
PB06				iS	Sn	02 33 22.4	+0.8
PB06				IAML		02 33 26.7	
	comp=E,254nm,0.3s						

IDC 01 02:39:45.5±2.6, 6°.23S×130°.12E, h0^{km}, mb3.4/1, mb1 4.1/3, mb1mx3.6/21, mbtmp3.9/3, ML4.1/2, Error ellipse: s-maj=163.4km s-min=33.4km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	14.23	164	Pn	Pn	02 43 08.0	-0.6
	1.0nm,0.3s,baz=346,slow=14,SNR=5.3						
WRA				Sn	Sn	02 45 34.2	-13
	0.5nm,0.3s,baz=359,slow=11,SNR=1.6						
ASAR	**Alice Springs**	17.71	169	P	P	02 43 54.3	-0.5
	0.4nm,0.3s,baz=352,slow=13,SNR=7.1						
ASAR				S	Sn	02 46 59.5	-12
	0.1nm,0.3s,baz=339,slow=28,SNR=1.9						
MKAR	**Makanchi Array**	67.65	327	P	P	02 50 44.4	0.0
	0.2nm,0.5s,baz=130,slow=4.5,SNR=2.1						

SNET 01 03:22:54.1±1.1, 12°.76N×87°.99W, h70^{km}±6^{km}, ML3.6, 2C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	0.48	62	⇑iP	Pn	03 23 07.5	+0.6
CSGN				eS	Sn	03 23 17.9	+1.7
CNCH	**Conchagua**	0.54	17	eP	Pn	03 23 07.4	-0.2
CNCH				eS	Sn	03 23 18.4	+1.1
CNCH				IAML		03 23 23.3	
	comp=Z,10µm,0.4s						
LCND	**La Caada**	0.56	10	⇑eP	Pn	03 23 07.6	0.0
LCND				eS	Sn	03 23 18.5	+1.0
VSM	**San Miguel**	0.72	338	eP	Pn	03 23 09.9	+0.3
LCY	**Lacayo**	0.73	336	eP	Pn	03 23 09.6	+0.1
PACA	**Pacayal**	0.78	336	iP	Pn	03 23 10.1	0.0
PACA				eS	Sn	03 23 23.8	+1.9
TECA	**Tecapa**	0.89	326	eP	Pn	03 23 11.7	+0.3
SNVI	**San Vicente**	1.19	316	eP	Pn	03 23 15.7	+0.6
SNVI				eS	Sn	03 23 32.2	+1.3
CNGN	**Cerro Negro**	1.29	101	eP	Pn	03 23 16.1	-0.2
CNGN				eS	Sn	03 23 33.7	+0.6
PAVA	**Las Pavas**	1.32	316	eP	Pn	03 23 17.2	+0.3
PAVA				eS	Sn	03 23 35.9	+1.9
PAVA				IAML		03 23 42.0	
	comp=Z,468nm,0.3s						
VICT	**Victoria**	1.35	332	eP	Pn	03 23 17.4	+0.1
TGUH	**Tegucigalpa,Un**	1.47	28	eP	Pn	03 23 19.3	+0.5
LFU	**La Fuente**	1.47	312	eP	Pn	03 23 19.2	+0.4
SNET	**Serv Nac Est T**	1.52	308	eP	Pn	03 23 20.0	+0.5
SNET				eS	Sn	03 23 39.2	+0.6
SNET				IAML		03 23 41.0	
	comp=Z,676nm,0.3s						
UEES	**Universidad Ev**	1.54	308	eP	Pn	03 23 20.1	+0.2
UEES				eS	Sn	03 23 40.2	+0.9
UEES				IAML		03 23 41.3	
	comp=Z,552nm,0.3s						
ESTN	**Estel**	1.62	78	eP	Pn	03 23 20.8	0.0
ESTN				eS	Sn	03 23 41.3	+0.4
CEVE	**Cerro Verde**	1.91	304	eP	Pn	03 23 26.0	+1.1
SBLS	**San Blas**	1.92	304	eP	Pn	03 23 25.9	+0.9
SNJE	**San Jose**	1.92	305	eP	Pn	03 23 26.0	+1.0
RTR	**El Retiro**	1.97	305	eP	Pn	03 23 26.7	+1.2
IXG	**Ixpaco**	2.77	301	eP	Pn	03 23 37.0	+0.7

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*ISCJB **01** 03:41:06.4±0.6, 6°.49N±0°.02×71°.72W±0°.02, h8^{km}±3^{km}, mb3.6/2, MS3.0/1, Error ellipse: s-maj=4.4km s-min=3.1km az=34.1*

*IDC **01** 03:41:07.0±0.8, 6°.50N×71°.78W, h0^{km}, mb3.5/6, mb1 4.0/10, mb1mx3.8/31, mbtmp3.8/10, ML3.4/4, MS3.4/13, Ms1 3.4/13, ms1mx3.1/35, Error ellipse: s-maj=18.3km s-min=12.4km az=123.0*

*NEIC **01** 03:41:07.7±2.5, 6°.37N×71°.58W, h10^{km}±6^{km}, mb4.2/5, Error ellipse: s-maj=15.5km s-min=7.2km az=144.0*

*RSNC **01** 03:41:09.3±1.5, 6°.49N×71°.81W, h4^{km}±4^{km}, ML3.8, Mw4.0*

ISC 01 03:41:07.7±0.8, 6°.45N±0°.03×71°.74W±0°.03, h10^{km}±5^{km}, n75, σ1^{s}71/90, 6C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAMC	**Tame, Arauca**	0.05	257	⇓ePg	Pg	03 41 09.1	-0.6
TAMC				eSg	Sg	03 41 11.4	+0.1
YOPC	**Yopal, Colombi**	1.28	212	⇑eP	Pb	03 41 32.0	+0.1
YOPC				eS	Sn	03 41 50.4	+1.4
YOPC				i		03 41 56.2	
	comp=Z,3µm,0.5s						
PAMC	**Pamplona, Colo**	1.30	313	⇑iP	Pn	03 41 30.5	-1.8
PAMC				eS	Sb	03 41 47.3	-2.1
PAMC				i		03 41 51.6	
	comp=Z,3µm,0.2s						
BARC	**Barichara**	1.44	276	⇑iP	Pn	03 41 33.0	-1.0
BARC				eS	Sn	03 41 51.4	-1.7
BARC				i		03 41 59.2	
	comp=Z,1µm,0.3s						
RUSC	**La Rusia**	1.44	248	⇑iP	Pn	03 41 33.2	-1.0
RUSC				ePg	Pb	03 41 34.1	-0.9
RUSC				eS	Sb	03 41 53.2	-0.3
RUSC				i		03 41 57.0	
	comp=Z,607nm,0.6s						
CAPV	**Capacho**	1.52	338	⇑iP	Pn	03 41 35.2	+0.1
CAPV				eS	Sn	03 41 54.5	-0.6
GIRC	**Giron, Santand**	1.57	294	eP	Pn	03 41 35.7	-0.1
GRMC	**Gramalote, San**	1.64	320	eP	Pb	03 41 38.5	+0.4
GRMC				eS	Sg	03 42 00.5	-0.1
AGZ	**La Independenc**	1.67	206	eP	Pb	03 41 38.5	0.0
AGZ				eS	Sg	03 42 00.8	-0.5
SOCV	**Socops**	2.03	26	eP	Pn	03 41 42.3	+0.4
SOCV				eS	Sb	03 42 08.6	-1.3
BRRC	**Barranca, Sant**	2.06	289	eP	Pn	03 41 43.0	+0.6
BRRC				i		03 42 16.5	
	comp=N,957nm,0.6s						
BRRC				i		03 42 18.9	
	comp=Z,376nm,0.4s						
ELOV	**Elorza**	2.31	76	eP	Pn	03 41 47.4	+1.6
ELOV				ePg	Pb	03 41 50.4	+0.9
ELOV				eS	Sb	03 42 19.1	+1.0
OCAC	**Ocana**	2.37	319	eP	Pn	03 41 47.2	+0.5
OCAC				eS	Sn	03 42 15.4	-0.6
OCAC				i		03 42 29.6	
	comp=Z,2µm,0.4s						
SDV	**Santo Domingo**	2.66	24	Pn	Pn	03 41 52.0	+1.2
	comp=Z,56nm,0.3s,baz=128,slow=5.9,SNR=43						
SDV				Sn	Sn	03 42 25.8	+2.5
	comp=Z,626nm,0.3s,baz=323,slow=16,SNR=16						
SDV				Lg	Lg	03 42 29.4	
	comp=Z,626nm,0.3s,baz=340,slow=14,SNR=16						
SDV				LR	LR	03 43 17.9	
	comp=Z,827nm,19.4s,baz=212,slow=50						
SDV	**Santo Domingo**	2.66	24	eP	Pn	03 41 51.5	+0.7
CHIC	**Chingaza**	2.68	228	eP	Pn	03 41 51.8	+0.6
PTBC	**PUERTO BERRIO,**	2.70	272	eP	Pn	03 41 50.2	-1.0
PTBC				eS	Sn	03 42 24.4	+0.5
PTBC				i		03 42 33.5	
	comp=E,288nm,0.4s						
ROSC	**El Rosal**	3.02	238	Pn	Pn	03 41 57.7	+1.8
	comp=E,14nm,0.3s,baz=244,slow=22,SNR=22						
ROSC				Pg	Pg	03 42 07.3	+1.7
	comp=E,19nm,0.3s,baz=346,slow=6.1,SNR=44						
ROSC				Lg	Lg	03 42 43.1	
	comp=E,39nm,0.3s,baz=102,slow=23,SNR=6.0						
ROSC				LR	LR	03 43 06.4	
	comp=E,286nm,21.4s,baz=38,slow=40						
ROSC	**El Rosal**	3.02	238	eP	Pn	03 41 58.5	+2.6
VILC	**Villavicencio,**	3.02	220	eP	Pn	03 41 57.0	+1.3
NORC	**Norcasia**	3.23	254	eP	Pn	03 41 58.5	0.0
ZARC	**Zaragoza, Cauc**	3.26	289	eP	Pn	03 41 58.9	0.0
ZARC				eS	Sn	03 42 36.7	-1.1
ZARC				i		03 42 53.4	
	comp=Z,253nm,0.5s						
SMLC	**San Martn de**	3.29	316	eP	Pn	03 41 58.3	-0.9
HELC	**Santa Helena**	3.77	266	eP	Pn	03 42 05.9	-0.3
GUY2C	**Guyana, Caldas**	3.80	252	eP	Pn	03 42 07.6	+0.8
GUY2C				eS	Sn	03 42 53.2	+1.4
CODC	**Agustn Codazz**	3.85	334	⇑eP	Pn	03 42 06.1	-0.9
CODC				i		03 43 12.9	
	comp=Z,110nm,0.4s						
RREF	**El Recreo**	3.90	247	eP	Pn	03 42 09.3	+1.1
RREF				i		03 43 01.3	
	comp=Z,140nm,0.3s						
GUVC	**San Jose del G**	3.98	193	eP	Pn	03 42 09.3	+0.6
GUVC				eS	Sn	03 42 56.8	+1.3
GUVC				i		03 43 12.0	
	comp=Z,769nm,0.4s						
VIRV	**Villa del Rosa**	4.08	351	eP	Pn	03 42 08.8	-1.4
PRAC	**Prado**	4.14	229	eP	Pn	03 42 11.9	+0.8
PRAC				eS	Sn	03 43 01.4	+1.8
ARGC	**Ariguani, Magd**	4.20	324	eP	Pn	03 42 12.8	+1.0
ARGC				i		03 43 41.0	
	comp=Z,73nm,0.6s						
ORTC	**Ortega, Tolima**	4.30	234	eP	Pn	03 42 13.6	+0.3
DBBC	**Dabeiba**	4.47	278	eP	Pn	03 42 17.5	+1.9
DABV	**Dabajuro**	4.58	14	eP	Pn	03 42 18.4	+1.3
MACC	**Macarena, Meta**	4.76	206	eP	Pn	03 42 19.7	+0.2
YOTC	**Yotoco, Valle**	5.20	242	eP	Pn	03 42 25.0	-0.7
YOTC				i		03 43 38.1	
	comp=Z,13nm,0.6s						
PCON	**Cinco Dias**	6.19	229	eP	Pn	03 42 41.1	+1.5
FLOC	**Florencia**	6.21	219	eP	Pn	03 42 39.9	+0.4
POPC	**Popayan, Colom**	6.26	232	eP	Pn	03 42 41.4	+1.0
PTLC	**Puerto Leguiza**	6.94	206	eP	Pn	03 42 53.8	+4.3
BCIP	**Isla Barro Col**	8.46	289	ePn	Pn	03 43 11.6	+1.2
ICMP	**Isla Caja de M**	12.46	24	ePn	Pn	03 44 05.3	+0.1
SDDR	**Presa de Saban**	12.47	2	ePn	Pn	03 44 07.3	+1.9
OBIP	**Obispado Ponce**	12.57	23	ePn	Pn	03 44 06.4	-0.3
SJG	**San Juan**	12.81	25	Pn	Pn	03 44 10.5	+0.5
	comp=Z,1.6nm,0.3s,baz=204,slow=18,SNR=6.4						
SJG				LR	LR	03 49 25.3	
	comp=Z,96nm,21.3s,baz=264,slow=39						
SJG	**San Juan**	12.81	25	ePn	Pn	03 44 09.3	-0.7
HUMP	**Col San Antoni**	12.97	26	ePn	Pn	03 44 11.4	-0.8
MTDJ	**Mount Denham**	13.00	335	ePn	Pn	03 44 17.1	+4.4
MTP	**Monte Pirata**	13.06	27	ePn	Pn	03 44 12.5	-0.9
CBYP	**Canovanas**	13.08	26	ePn	Pn	03 44 13.9	+0.1
CUPR	**Culebra, Puert**	13.37	28	ePn	Pn	03 44 17.8	+0.2
STVI	**Saint Thomas**	13.56	29	ePn	Pn	03 44 20.2	+0.1
JTS	**Las Juntas de**	13.61	287	LR	LR	03 50 50.6	
	comp=Z,66nm,19.5s,baz=146,slow=43						
PTGA	**Pitinga**	13.75	121	Pn	Pn	03 44 19.9	-2.9
	comp=Z,2.7nm,0.3s,baz=312,slow=21,SNR=9.2						
PTGA				Sn	Sn	03 46 49.9	-5.9
	comp=Z,2.2nm,0.3s,baz=304,slow=7.1,SNR=7.4						
PTGA				Lg	Lg	03 48 23.2	
	comp=Z,6.1nm,0.3s,baz=201,slow=23,SNR=8.5						
PTGA				LR	LR	03 50 10.6	
	comp=Z,136nm,18.9s,baz=307,slow=39						
PTGA	**Pitinga**	13.75	121	ePn	Pn	03 44 20.4	-2.5
PTGA				eSn	Sn	03 46 48.5	-7.3
ATAH	**Atahualpa**	15.04	206	LR	LR	03 51 46.7	
	comp=Z,232nm,18.7s,baz=19,slow=42						
TGUH	**Tegucigalpa,Un**	17.04	298	ePn	Pn	03 45 04.9	-1.5
	comp=Z,17nm,1.0s						
NNA	**Nana**	19.00	195	LR	LR	03 54 01.3	
	comp=Z,156nm,18.3s,baz=360,slow=41						
MDP	**Montagnes des**	19.05	93	P	Pn	03 45 33.0	+1.9
	comp=Z,0.5nm,0.3s,baz=286,slow=13,SNR=9.4						
MDP				Lg	Lg	03 51 08.1	
	comp=Z,0.2nm,0.3s,baz=346,slow=11,SNR=4.1						
APG	**El Apazote**	20.25	296	LR	LR	03 53 58.6	
	comp=Z,70nm,22.0s,baz=96,slow=38						
LPAZ	**La Paz**	22.87	171	P	P	03 46 12.9	+0.7
	comp=Z,6.3nm,1.0s,baz=346,slow=13,SNR=16						
LPAZ				LR	LR	03 55 26.0	
	comp=Z,104nm,18.8s,baz=337,slow=38						
LPAZ	**La Paz**	22.87	171	eP	P	03 46 11.1	-1.0
	comp=Z,8.9nm,1.0s						
SIV	**San Ignacio**	24.67	155	P	P	03 46 29.8	+0.9
	comp=Z,0.4nm,0.4s,baz=339,slow=11,SNR=3.4						
SIV				Lg	Lg	03 54 07.4	
	comp=Z,9.9nm,1.0s,baz=268,slow=16,SNR=5.9						
CMIG	**Matias Romero**	24.97	297	LR	LR	03 56 53.2	
	comp=Z,63nm,19.6s,baz=88,slow=38						
GO01	**Chusmiza**	26.07	175	eP	P	03 46 38.7	-3.4
	comp=Z,14nm,1.0s						
152A	**Waverly Hall**	28.75	337	eP	P	03 47 07.5	+1.9
	comp=Z,2.6nm,0.8s						
VBMS	**Vicksburg**	31.05	328	eP	P	03 47 27.4	+1.5
	comp=Z,62nm,0.3s						
BDFB	**Brasilia**	32.16	133	LR	LR	04 01 34.1	
	comp=Z,80nm,19.2s,baz=118,slow=38						
TXAR	**Lajitas Array**	37.73	311	P	P	03 48 23.2	-0.8
	comp=Z,0.4nm,0.6s,baz=125,slow=11,SNR=6.8						
PDAR	**Pinedale Array**	49.19	323	P	P	03 49 55.7	-0.7
	comp=Z,0.6nm,0.8s,baz=122,slow=6.7,SNR=3.4						
NVAR	**Mina Array Bea**	52.72	314	P	P	03 50 23.6	+0.6
	comp=Z,0.4nm,0.8s,baz=104,slow=7.5,SNR=2.8						
TORD	**Torodi Ar. Bea**	72.47	78	P	P	03 52 35.5	+0.3
	comp=Z,4.6nm,0.3s,baz=275,slow=6.2,SNR=4.3						
ILAR	**Eielson Array**	77.88	335	P	P	03 53 07.3	+1.9
	comp=Z,0.2nm,0.8s,baz=134,slow=5.1,SNR=3.2						
ILAR				LR	LR	04 28 51.4	
	comp=Z,32nm,19.2s,baz=114,slow=37						
BRTR	**Keskin Array B**	97.60	49	LR	LR	04 35 06.2	
	comp=Z,31nm,19.5s,baz=90,slow=33						
ASAR	**Alice Springs**	149.99	233	PKPbc	PKiKP	04 01 00.3	0.0
	comp=Z,0.3nm,0.6s,baz=121,slow=3.2,SNR=3.6						

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*EAF **01** 03:46:26.0±1.1, 27°.37S×27°.43E, h10^{km}±32^{km}, MD3.5*

*PRE **01** 03:46:26.0±1.5, 26°.99S×26°.76E, h2^{km}, ML2.5*

*BUL **01** 03:46:26.8±1.0, 27°.40S×27°.48E, h5^{km}±25^{km}, MD3.7*

ISC 01 03:46:26.8±1.2, 27°.01S±0°.04×26°.77E±0°.04, h15^{km}±10^{km}, n19, σ1^{s}41/34, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	**Parys**	0.53	81	eP	Pb	03 46 37.5	-0.5
PRYS				eS	Sg	03 46 44.1	-0.4
PRYS				AML	AML	03 46 52.0	
	comp=Z,96nm,0.2s						
WDLM	**Western Deep L**	0.82	45	eP	Pb	03 46 42.5	-0.4
WDLM				eS	Sg	03 46 52.2	-1.6
WDLM				AML	AML	03 46 59.6	
	comp=Z,249nm,0.4s						
SWZ	**Schweizer**	1.30	262	eP	Pg	03 46 51.8	0.0
SWZ				eS	Sn	03 47 08.3	+0.7
SWZ				AML	AML	03 47 11.7	
	comp=Z,147nm,0.3s						
ERPM	**east rand prop**	1.47	64	eP	Pg	03 46 55.0	-0.2
ERPM				eS	Sg	03 47 15.3	+0.9
ERPM				AML	AML	03 47 16.4	
	comp=Z,51nm,0.4s						
BOSA	**Boshof**	2.09	220	iP	Pb	03 47 04.3	-0.2
BOSA				iS	Sb	03 47 30.6	+0.4
BOSA	**Boshof**	2.09	220	eP	Pb	03 47 03.1	-1.4
BOSA				eS	Sb	03 47 29.1	-1.2
BOSA				AML	AML	03 47 43.5	
	comp=Z,24nm,0.5s						
BOSA	**Boshof**	2.09	220	iP	Pb	03 47 04.3	-0.2
BOSA				iS	Sb	03 47 30.6	+0.4
LBTB	**Lobatse**	2.25	332	eP	Pb	03 47 05.4	-1.8
LBTB				eS	Sn	03 47 31.8	+0.7
LBTB				AML	AML	03 47 36.3	
	comp=Z,91nm,0.2s						
UPI	**Upington**	5.08	253	eP	Pn	03 47 44.3	+1.9
UPI				eS	Sn	03 48 39.8	-1.1
UPI				AML	AML	03 49 05.0	
	comp=Z,19nm,0.7s						
KEIM	**Keimoes**	5.41	250	eP	Pn	03 47 48.2	+1.2
KEIM				eS	Sn	03 48 48.4	-0.6
KEIM				AML	AML	03 49 20.6	
	comp=Z,8.3nm,0.3s						
MSNA	**Messina**	5.50	33	iP	Pn	03 47 47.7	-0.6
MSNA	**Messina**	5.50	33	iP	Pn	03 47 47.7	-0.6
MATP	**Matopo**	6.74	14	iP	Pn	03 48 07.1	+1.7
MATP				iS	Sn	03 49 22.0	0.0
MATP	**Matopo**	6.74	14	iP	Pn	03 48 07.1	+1.7
MATP				iS	Sn	03 49 22.0	0.0
BLWY	**Bulawayo**	7.04	14	iP	Pn	03 48 10.6	+1.1
BLWY	**Bulawayo**	7.04	14	iP	Pn	03 48 10.6	+1.1
BUFB	**Buffelsbos**	7.33	193	eP	Pn	03 48 15.3	+2.0
BUFB				eS	Sn	03 49 34.0	-2.3
BUFB				AML	AML	03 49 41.0	
	comp=Z,3.7nm,1.0s						
CVNA	**Calvinia**	7.57	232	eP	Pn	03 48 18.9	+2.1
CVNA				eS	Sn	03 49 40.4	-2.0
CVNA				AML	AML	03 49 57.0	
	comp=Z,3.2nm,0.6s						
KOMG	**Komaggas**	8.64	249	eP	Pn	03 48 33.3	+2.0
KOMG				eS	Sn	03 50 05.2	-3.2
KOMG				AML	AML	03 50 55.6	
	comp=Z,4.4nm,0.5s						

MEX 01 03:50:07.4±0.7, 14°.44N×92°.93W, h23^{km}±71^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.80	54	eP	Pb	03 50 20.8	-1.8
THIG				iS	Sb	03 50 29.7	-3.3
CCIG	**Comitan**	1.99	23	iP	Pn	03 50 36.5	-3.2
CCIG				iS	Sn	03 51 01.1	-2.9
TGIG		2.33	356	iP	Pn	03 50 43.0	-1.4
TGIG				iS	Sn	03 51 09.5	-3.0
CMIG	**Matias Romero**	3.24	325	eP	Pn	03 50 54.3	-2.6
CMIG				iS	Sn	03 51 31.4	-3.3

MAN 01 04:09:41.8, 14°.15N×120°.72E, h20^{km}, mb3.7, ML2.4, MS1.9, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	0.22	103	⇓iP	Pb	04 09 49.0	+1.7
TGY				iS	Sb	04 09 54.8	+3.8
LUBP	**Lubang**	0.62	228	eP	Pn	04 09 56.7	+1.3
PGP	**Puerto Galera**	0.69	160	⇓eP	Pb	04 09 54.5	-0.6
PGP				eS	Sb	04 10 03.7	-0.4
SJMP	**San Jose**	1.73	167	eP	Pb	04 10 12.2	-0.6
SJMP				eS	Sb	04 10 35.6	+1.5
SJMP	**San Jose**	1.73	167	eP	Pb	04 10 12.3	-0.5
SJMP				eS	Sb	04 10 35.6	+1.5
BALP	**Baler**	1.79	28	eP	Pn	04 10 10.3	-1.2
BALP				eS	Sb	04 10 36.8	+1.0

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*IDC **01** 04:12:37.2±3.3, 3°.63S×137°.17E, h0^{km}, mb3.5/2, mb1 3.9/3, mb1mx3.6/18, mbtmp3.7/3, ML3.8/1, Error ellipse: s-maj=130.4km s-min=31.0km az=82.0*

*NEIC **01** 04:12:41.3±2.3, 3°.82S×138°.90E, h84^{km}±18^{km}, mb4.1/6, Error ellipse: s-maj=36.7km s-min=19.2km az=75.0*

*ISCJB **01** 04:12:43.6±1.3, 4°.02S±0°.07×138°.6E±0°.1, h100^{km}, mb4.1/2, Error ellipse: s-maj=19.1km s-min=9.2km az=168.8*

ISC 01 04:12:44.4±1.3, 4°.09S±0°.09×138°.5E±0°.1, h100^{km}, n14, σ2^{s}51/20, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	6.34	280	ePn	Pn	04 14 16.9	+1.7
FAKI				eSn	Sn	04 15 20.7	-5.6
COEN	**Coen**	10.84	155	ePn	Pn	04 15 15.4	-1.2
COEN				eSn	Sn	04 17 12.8	-3.1
MTN	**Manton Dam**	11.33	219	ePn	Pn	04 15 25.9	+2.7
MTN				eSn	Sn	04 17 26.3	-1.7
SOEI	**Soe**	15.19	248	ePn	P	04 16 18.0	+1.5
	37nm,1.0s						
WRAB	**Tennant Creek**	16.25	194	ePn	P	04 16 32.2	+4.1
WRAB				eSn	Sn	04 19 25.4	-1.7
WB2	**Warramunga Arr**	16.26	194	ePn	P	04 16 30.4	+2.2
	5.6nm,0.9s						
WB2				eSn	Sn	04 19 25.6	-1.8
WR1	**Warramunga Arr**	16.27	194	ePn	P	04 16 29.6	+1.4
WR1				eSn	Sn	04 19 26.1	-1.3
WRA	**Warramunga Arr**	16.27	194	Pn	P	04 16 29.6	+1.4
	0.4nm,0.3s,baz=12,slow=12,SNR=7.1						
WRA				Sn	Sn	04 19 26.1	-1.3
	0.5nm,0.3s,baz=9.4,slow=22,SNR=5.3						
WC3	**Warramunga Arr**	16.27	194	eP	P	04 16 30.6	+2.3
	8.2nm,1.0s						
AS31	**Alice Springs**	19.96	192	eP	Pn	04 17 10.3	-1.0
AS31				ePn	P	04 17 10.5	+1.8
AS31				eS	Sn	04 20 56.0	-0.1
ASAR	**Alice Springs**	19.96	192	P	Pn	04 17 13.3	+2.0
	0.9nm,0.4s,baz=19,slow=9.2,SNR=8.8						
ASAR				S	Sn	04 20 56.0	-0.1
	0.3nm,0.5s,baz=2.3,slow=28,SNR=3.9						
PSAD3	**Pilbara Seismi**	25.18	225	eP	P	04 18 02.2	+1.5
	24nm,1.1s						
MK32	**Makanchi Array**	70.75	323	eP	P	04 23 48.3	-1.5
MKAR	**Makanchi Array**	70.75	323	P	P	04 23 48.3	-1.6
	0.6nm,0.6s,baz=103,slow=7.9,SNR=6.8						

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*SOME **01** 04:34:05.4, 39°.43N×73°.22E, h0^{km}*

*KRNET **01** 04:34:07.9±0.1, 39°.07N×73°.28E, mb3.5*

*NNC **01** 04:34:09.5±3.2, 39°.25N×73°.72E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=25.3km s-min=14.2km az=171.0*

ISC 01 04:34:16.2±1.9, 39°.63N±0°.10×73°.70E±0°.04, h10^{km}, n32, σ2^{s}41/49, 23C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	1.78	342	⇑iP	Pb	04 34 47.4	-1.5
	baz=54						
ARSB				⇑iS	Sb	04 35 16.3	+4.9
	baz=54						
ARK	**Arkit**	2.53	329	⇓iP	Pn	04 34 55.9	-1.6
	baz=40						
ARK				⇓iS	Sn	04 35 31.3	+2.8
	baz=40						
UCH	**Uchtor**	2.67	13	⇑iP	Pb	04 35 02.2	-2.1
	baz=16						
UCH				⇑iS	Sb	04 35 40.6	+3.3
	baz=16						
KZA	**Kyzart**	2.71	25	⇓iP	Pb	04 35 02.9	-2.2
	baz=26						
KZA				⇓iS	Sb	04 35 42.7	+4.2
	baz=26						
EKS2	**Erkin-Say**	3.03	1	⇓iP	Pn	04 35 06.2	+1.9
	baz=6.0						
EKS2				⇓iS	Sb	04 35 48.3	+1.0
	baz=6.0						
AAK	**Ala-Archa**	3.06	11	Pn	Pb	04 35 07.9	-3.0
	8.4nm,0.5s						
AAK				⇓Lg	Lg	04 35 57.4	
	45nm,1.1s						
AAK	**Ala-Archa**	3.06	11	⇑iP	Pb	04 35 07.3	-3.6
	baz=14						
AAK				⇑iS	Sb	04 35 50.2	+1.8
	baz=14						
MRKS	**Merke**	3.13	354	Pg	Pn	04 35 07.2	+1.5
	16nm,0.5s						
MRKS				Lg	Lg	04 35 58.1	
	26nm,0.5s						
MRKS	**Merke**	3.13	354	eP	Pb	04 35 08.4	-3.6
	6.9nm,0.2s						
MRKS				eS	Sb	04 35 51.6	+1.3
	26nm,0.3s						
KBK	**Karagaybulak**	3.17	17	⇓eP	Pb	04 35 08.9	-3.8
	baz=19						
KBK				⇓iS	Sb	04 35 53.0	+1.6
	baz=19						
ULHL	**Ulahol**	3.25	36	⇓iP	Pb	04 35 10.2	-3.8
	baz=34						
ULHL				⇓iS	Sb	04 35 55.2	+1.5
	baz=34						
BOOM	**Boomskoye usch**	3.32	30	⇑iP	Pb	04 35 11.1	-4.2
	baz=30						

BOOM				⇑iS	Sb	04 35 57.1	+1.3
	baz=30						
CHMS	Chumysh	3.46	13	⇑iP	Pn	04 35 12.7	+2.6
	baz=15						
CHMS				⇑iS	Sb	04 35 59.3	-0.3
	baz=15						
TKM2	Tokmak 2	3.58	23	⇓Pn	Pb	04 35 15.2	-4.6
	1.4nm,0.5s						
TKM2				⇑Pg	Pg	04 35 24.7	-0.2
	4.6nm,0.6s						
TKM2				⇑Lg	Lg	04 36 16.6	
	15nm,0.6s						
TKM2	Tokmak 2	3.58	23	⇑iP	Pb	04 35 14.7	-5.1
	baz=24						
TKM2				⇑iS	Sb	04 36 03.3	-0.1
	baz=24						
KDJ	Kajisay	3.63	45	⇑iP	Pb	04 35 15.4	-5.2
	baz=43						
KDJ				⇑iS	Sb	04 36 04.0	-0.8
	baz=43						
USP	Ospenovka	3.68	9	⇑iP	Pn	04 35 15.7	+2.5
	baz=12						
USP				⇑iS	Sb	04 36 04.7	-1.4
	baz=12						
IUG	Iuzhnay	3.75	313	eP	Pn	04 35 14.0	-0.1
	1.3nm,0.1s						
IUG				eS	Sn	04 36 00.9	+2.6
	34nm,0.4s						
KST	Kastek	3.81	26	Pg	Pb	04 35 22.0	-1.7
	5.8nm,0.4s						
KST				Lg	Lg	04 36 23.2	
	25nm,0.6s						
DGS	Degeres	3.93	23	Pg	Pb	04 35 24.2	-1.4
	9.7nm,0.7s						
DGS				Lg	Lg	04 36 26.9	
	30nm,0.6s						
IZV	Izvestkoviy	4.05	32	Pg	Pb	04 35 26.3	-1.4
	9.1nm,0.5s						
IZV				Lg	Lg	04 36 29.9	
	24nm,0.6s						
TNSS	Tian-Shan	4.19	35	Pg	Pb	04 35 29.4	-0.8
	10nm,0.4s						
TNSS				Lg	Lg	04 36 35.7	
	21nm,0.5s						
KK31	Karatay Array	4.22	326	⇓Pn	Pn	04 35 19.6	-0.9
	1.9nm,0.6s,baz=138,slow=13,SNR=22						
KK31				⇑Pg	Pb	04 35 30.7	+0.3
	3.1nm,0.5s,baz=155,slow=17,SNR=7.2						
KK31				⇑Sn	Sn	04 36 14.8	+5.0
	12nm,0.8s,baz=156,slow=23,SNR=5.5						
KK31				⇓Lg	Lg	04 36 29.8	
	4.3nm,0.5s						
MDOK	Medeo	4.34	34	Pg	Pb	04 35 31.4	-1.1
	6.7nm,0.6s						
MDOK				Lg	Lg	04 36 39.1	
	18nm,0.8s						
KOTS	Kotyrbulak	4.42	34	Pg	Pb	04 35 33.4	-0.6
	4.9nm,0.5s						
KOTS				Lg	Lg	04 36 42.2	
	88nm,0.5s						
KTBS	Karatobe	4.65	28	Pg	Pb	04 35 36.9	-0.9
	2.8nm,0.8s						
KTBS				Lg	Lg	04 36 48.2	
	26nm,0.5s						
KUU	Kurty	4.69	24	Pg	Pb	04 35 37.5	-1.1
	2.7nm,0.5s						
KUU				Lg	Lg	04 36 49.5	
	17nm,0.6s						
CHKK	Chushkaly	4.88	29	Pg	Pb	04 35 41.5	-0.3
	2.0nm,0.5s						
CHKK				Lg	Lg	04 36 56.4	
	16nm,0.5s						
SATY	Saty	4.93	44	Pg	Pb	04 35 42.0	-0.6
	9.9nm,0.6s						
SATY				Lg	Lg	04 36 57.2	
	10nm,0.8s						
PDGK	Podgornoye	5.71	48	⇓Pg	Pb	04 35 57.7	+1.8
	3.6nm,0.8s						
PDGK				⇑Lg	Lg	04 37 22.0	
	11nm,1.2s						
DJR	Jarkent	6.53	42	Pg	Pb	04 36 11.7	+1.8
	1.9nm,0.5s						
DJR				Lg	Lg	04 37 49.3	
	2.4nm,0.8s						
AB31	Akbulak array	13.73	319	⇑Pn	Pn	04 37 28.3	-2.5
	0.5nm,0.6s,baz=128,slow=12,SNR=6.1						
AB31				⇑Sn	Sn	04 40 04.2	+0.9
	0.5nm,0.7s,baz=133,slow=22,SNR=3.9						

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*IDC **01** 04:37:39.5±2.2, 38°.06N×92°.56E, h0^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.6/44, mbtmp3.8/10, ML3.6/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/37, Error ellipse: s-maj=43.5km s-min=38.1km az=38.0*

*BJI **01** 04:37:45.1±0.0, 38°.60N×92°.37E, h8^{km}, ML3.5/7*

ISC 01 04:37:44.7±1.2**, 38°.5N**±0°.1×**92°.24E**±0°.07**, h10^{km}, n16, σ1^{s}68**/20**, mb3.6**/7**, 2C-2D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	5.97	79	Pn	Pn	04 39 15.8	+2.6
GTA				Sg	Sg	04 40 53.7	-2.6
GTA				smax	smax		
	comp=N,28nm,1.5s						
GTA				smax	smax		
	comp=E,17nm,0.9s						
WMQ	Urumqi	6.31	329	ePn	Pn	04 39 20.4	+2.6
WMQ				Sn	Sn	04 40 30.0	0.0
WMQ				smax	smax		
	comp=N,21nm,0.7s						
WMQ				smax	smax		
	comp=E,56nm,0.9s						
MK31	Makanchi Array	11.04	322	⇓Pn	Pn	04 40 23.5	+0.9
	2.4nm,0.4s,baz=128,slow=13,SNR=62						
MK31				⇓Sn	Sn	04 42 25.5	-0.6
	1.9nm,0.4s,baz=129,slow=26,SNR=10						
MKAR	Makanchi Array	11.04	322	Pn	Pn	04 40 23.4	+0.8
	2.6nm,0.3s,baz=133,slow=14,SNR=59						
MKAR				Sn	Sn	04 42 24.8	-1.3
	1.2nm,0.3s,baz=133,slow=24,SNR=6.6						
MAKZ	Makanchi	11.21	321	⇑Pn	Pn	04 40 25.0	+0.1
	2.2nm,0.3s						
MAKZ				⇑Sn	Sn	04 42 26.4	-3.8
	2.3nm,0.5s						
KURBB	Kurchatov Arra	15.52	326	Pn	Pn	04 41 24.3	+0.8
	0.2nm,0.3s,baz=135,slow=12,SNR=19						
ZALV	Zalesovo Beam	16.25	344	Pn	P	04 41 36.2	+0.3
	0.2nm,0.3s,baz=160,slow=17,SNR=2.7						
BVAR	Borovoye Array	20.92	321	P	P	04 42 27.9	+0.6
	1.1nm,0.5s,baz=126,slow=9.0,SNR=5.6						
AKTO	Aktyubinsk	26.93	307	P	P	04 43 26.5	+0.6
	0.5nm,0.3s,baz=112,slow=5.3,SNR=3.8						
USRK	Ussuriysk Ar.	30.15	66	LR	LR	04 57 46.2	
	comp=Z,64nm,18.6s,baz=75,slow=40						
BRTR	Keskin Array B	44.77	291	P	P	04 45 59.4	+0.9
	1.0nm,0.7s,baz=82,slow=7.7,SNR=4.7						
FINES	FINESS Array B	45.88	322	P	P	04 46 06.8	+0.1
	0.7nm,0.5s,baz=70,slow=6.1,SNR=9.4						
ARCES	ARCESS Array B	46.41	334	P	P	04 46 11.2	+0.2
	1.3nm,0.8s,baz=92,slow=8.6,SNR=8.2						
NOA	NORSAR Array B	53.03	323	P	P	04 47 00.8	-0.7
	0.3nm,0.4s,baz=76,slow=7.4,SNR=3.8						
ILAR	Eielson Array	67.18	24	P	P	04 48 37.3	-1.2
	0.2nm,0.7s,baz=296,slow=4.9,SNR=2.8						
TORD	Torodi Ar. Bea	82.36	281	P	P	04 50 04.8	-2.4
	0.2nm,0.6s,baz=37,slow=5.1,SNR=4.3						

SJA 01 04:39:22.1±0.7**, 31°.35S×65°.06W, h10^{km}±4^{km}, ML3.2, MW3.7, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRA	San Martin	1.20	208	i P	Pg	04 39 46.2	+1.0
MRA				IAML		04 40 05.7	
	comp=N,7.5nm,0.2s						
APLL	PUNTA DE LOS L	1.58	307	i P	Pg	04 39 53.2	+0.7
APLL				IAML		04 40 15.5	
	comp=Z,2µm,0.6s						
APLL				i S	Sg	04 40 15.6	+2.5
ACAN	Cantantal	2.03	243	i P	Pg	04 40 00.5	-0.6
ACAN				i S	Sg	04 40 28.2	+0.7
RTLL	Cerro Villicun	2.92	270	i P	Pb	04 40 12.5	-1.9
RTLL				i S	Sb	04 40 50.8	+0.6
CYA	Choya	2.97	347	i P	Pb	04 40 13.5	-1.7
CYA				i S	Sb	04 40 51.6	0.0
CYA				IAML		04 40 59.3	
	comp=Z,509nm,0.4s						
RTCV	Cerro Valdivia	3.02	259	i P	Pb	04 40 13.8	-2.2
RTLS	Leoncito	3.65	262	i P	Pb	04 40 23.4	-3.5

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*ISCJB **01** 04:50:37.7±0.5, 12°.60N±0°.09×143°.6E±0°.1, h10^{km}, mb4.0/8, MS3.4/4, Error ellipse: s-maj=18.1km s-min=7.6km az=38.4*

*IDC **01** 04:50:38.4±0.9, 12°.60N×143°.78E, h0^{km}, mb3.8/5, mb1 4.2/5, mb1mx3.7/34, mbtmp3.8/5, MS3.3/4, Ms1 3.4/4, ms1mx2.9/33, Error ellipse: s-maj=36.3km s-min=17.5km az=123.0*

*NEIC **01** 04:50:43.2±2.4, 12°.58N×143°.82E, h34^{km}±3^{km}, mb4.1/5, Error ellipse: s-maj=32.8km s-min=19.8km az=113.0*

ISC 01 04:50:39.1±0.8**, 12°.6N**±0°.1×**143°.7E**±0°.1**, h10^{km}, n26, σ1^{s}17**/16**, mb3.9**/8**, MS3.4**/4**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.45	49	Pn	Pg	04 51 06.7	-0.4
	60nm,0.3s,baz=236,slow=3.3,SNR=15						
GUMO				Sn	Sg	04 51 25.1	-0.8
	79nm,0.3s,baz=196,slow=23,SNR=7.7						
SARN	Sarigan	4.49	26	ePn	Pn	04 51 47.7	+0.4
PATS	Pohnpei	15.48	111	ePn	Pn	04 54 08.2	-9.5
	13nm,1.0s						
H11S3	WAKE ISLAND Hy	22.85	72	T	T	05 19 35.2	
	baz=258,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	22.87	72	T	T	05 19 43.7	
	baz=258,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	22.87	72	T	T	05 19 28.7	
	baz=258,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	23.31	69	T	T	05 20 02.5	
	baz=255,slow=75,SNR=22						
H11N2	WAKE ISLAND Hy	23.32	69	T	T	05 20 03.4	
	baz=255,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	23.33	69	T	T	05 20 03.9	
	baz=255,slow=75,SNR=16						
WR1	Warramunga Arr	33.67	196	eP	P	04 57 20.0	-0.4
WRA	Warramunga Arr	33.67	196	P	P	04 57 20.0	-0.5
	3.0nm,0.5s,baz=13,slow=7.8,SNR=13						
WC3	Warramunga Arr	33.68	196	eP	P	04 57 19.0	-1.5
	3.9nm,0.8s						
AS31	Alice Springs	37.34	195	eP	P	04 57 52.8	+0.8
	0.8nm,0.8s						
ASAR	Alice Springs	37.34	195	P	P	04 57 52.8	+0.8
	1.0nm,0.8s,baz=15,slow=12,SNR=5.3						
PETK	Petropavlovsk-	41.88	13	LR	LR	05 13 04.0	
	comp=Z,27nm,21.5s,baz=222,slow=32						
CMAR	Chiang Mai Arr	43.45	284	LR	LR	05 16 05.8	
	comp=Z,34nm,18.9s,baz=170,slow=35						
CHTO	Chiang Mai	43.46	284	eP	P	04 58 40.5	-2.3
	2.5nm,0.6s						
SONM	Songino Array	46.88	326	LR	LR	05 20 45.6	
	comp=Z,47nm,18.2s,baz=94,slow=38						
MK32	Makanchi Array	61.41	317	eP	P	05 00 57.3	+1.7
MKAR	Makanchi Array	61.41	317	P	P	05 00 57.3	+1.7
	0.2nm,0.5s,baz=115,slow=5.8,SNR=2.7						
ILAR	Eielson Array	69.89	25	P	P	05 01 49.8	-0.3
	0.2nm,0.6s,baz=261,slow=6.0,SNR=3.7						
ILB	Eielson Array	69.89	25	eP	P	05 01 49.8	-0.3
	1.0nm,0.9s						
NV01	Mina Array Sit	88.37	51	eP	P	05 03 32.8	+0.9
NVAR	Mina Array Bea	88.37	51	P	P	05 03 32.8	+0.9
	0.9nm,0.4s,baz=256,slow=3.6,SNR=3.4						
ANMO	Albuquerque	98.50	51	LR	LR	05 43 30.0	
	comp=Z,18nm,18.5s,baz=36,slow=32						
LPAZ	La Paz	148.95	101	PKPbc	PKiKP	05 10 30.6	+0.2
	1.4nm,0.8s,baz=250,slow=3.8,SNR=6.2						

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*ISK **01** 04:51:16.1, 34°.94N×26°.81E, h22^{km}, ML3.1/13*

*ISCJB **01** 04:51:18.0±1.1, 35°.06N±0°.09×26°.77E±0°.05, h29^{km}±5^{km}, Error ellipse: s-maj=15.4km s-min=5.4km az=167.2*

*THE **01** 04:51:19.5, 35°.20N×26°.69E, h9^{km}±2^{km}, ML2.9/3, Error ellipse: s-maj=3.8km s-min=0.6km az=155.0*

ISC 01 04:51:17.7±1.6**, 35°.03N**±0°.10×**26°.78E**±0°.04**, h25^{km}**±12^{km}**, n21, σ0^{s}98**/28**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.47	280	PG	Pb	04 51 27.1	-0.3
ZKR				SG	Sb	04 51 35.0	+1.1
ZKR	Zakros	0.47	280	P	Pb	04 51 27.1	-0.3
ZKR				S	Sb	04 51 33.4	-0.5
STIA	Sitia Lasithi	0.58	287	P	Pb	04 51 29.2	-0.2
STIA				S	Sb	04 51 36.9	-0.4
KARP	Karpathos	0.60	32	PG	Pb	04 51 30.2	+0.5
KARP				SG	Sn	04 51 39.7	0.0
KARP	Karpathos	0.60	32	P	Pb	04 51 29.5	-0.2
KARP				S	Sb	04 51 37.8	0.0
LAST	Lasithi	1.07	277	P	Pn	04 51 37.5	+0.3
LAST				S	Sn	04 51 52.2	+0.9
ANAF	Anafi Island	1.55	329	P	Pn	04 51 43.7	-0.1
ANAF				S	Sn	04 52 01.1	-2.0
ARG	Arkhangelos	1.61	43	PN	Pn	04 51 44.5	-0.1
SANT	Santorini	1.71	322	PN	Pn	04 51 46.9	+0.9
THR3	Thira Island,	1.77	321	P	Pn	04 51 46.8	0.0
THR2	Thira island,	1.78	323	P	Pn	04 51 46.6	-0.3
DAT	Datca	1.81	21	PN	Pn	04 51 48.2	+0.7
BODT	Bodrum	2.07	12	PN	Pn	04 51 51.9	+1.0
APE	Apeiranthos	2.27	334	PN	Pn	04 51 54.7	+1.0
DALY	Dalyan (Mula)	2.34	40	PN	Pn	04 51 55.1	+0.5
TURN	Turunc	2.36	38	PN	Pn	04 51 51.7	-3.2
YER	Yerkesik	2.43	30	PN	Pn	04 51 56.7	+0.8
FETY	Fethiye	2.46	49	PN	Pn	04 51 56.7	+0.4
AKAS	Kas	2.60	62	PN	Pn	04 51 58.3	0.0
AYDB	Zeytinkoy-Aydi	3.04	17	PN	Pn	04 52 05.5	+1.1
KORT	Korkueli	3.50	55	PN	Pn	04 52 11.3	+0.6

MAN 01 05:07:37.4, 10°.27N×125°.18E, h29^{km}, mb4.0, ML2.8, MS2.4, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.34	247	eP	Pn	05 07 46.4	0.0
MSLP				eS	Sn	05 07 53.7	+1.3
PLP	Palo	0.91	347	⇑iP	Pn	05 07 54.4	0.0
PLP				i S	Sb	05 08 06.6	+0.1
LLP	Lapu-Lapu	1.20	272	eP	Pn	05 07 58.4	+0.2
LLP				eS	Sb	05 08 17.3	+2.8

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*ISCJB **01** 05:10:32.8±0.4, 38°.13N±0°.03×72°.96E±0°.06, h150^{km}, mb3.3/1, Error ellipse: s-maj=6.5km s-min=4.3km az=174.2*

*NNC **01** 05:10:37.1±2.4, 38°.42N×72°.77E, h168^{km}±40^{km}, mb3.0, mpv4.0, Error ellipse: s-maj=23.5km s-min=15.3km az=173.0*

ISC 01 05:10:34.0±0.8**, 38°.21N**±0°.05×**72°.84E**±0°.07**, h150^{km}, n23, σ2^{s}22**/27**, 6C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	4.22	17	P	Pn	05 11 38.7	+1.2
	SNR=52						
KZA	Kyzart	4.29	25	P	Pn	05 11 38.9	+0.5
	SNR=40						
CEP	Cherat	4.44	190	P	Pn	05 11 41.6	+1.5
CEP				S	Sn	05 12 30.0	-1.6
EKS2	Erkin-Say	4.51	9	P	Pn	05 11 42.8	+1.8
	SNR=37						
CHCP	Chirah Chowk	4.55	175	P	Pn	05 11 42.1	+0.6
AAK	Ala-Archa	4.61	15	⇑P	Pn	05 11 44.0	+1.7
	12nm,0.4s						
AAK				⇓S	Sn	05 12 34.7	-0.8
	32nm,0.8s						
AAK	Ala-Archa	4.61	15	P	Pn	05 11 44.3	+2.0
	SNR=22						
ULHL	Ulahol	4.80	32	P	Pn	05 11 46.3	+1.3
	SNR=9.9						
TKM2	Tokmak 2	5.16	23	⇓P	Pn	05 11 50.2	+0.6
	3.1nm,0.5s						
TKM2				⇓S	Sn	05 12 48.5	-0.2
	7.1nm,0.5s						
TKM2	Tokmak 2	5.16	23	P	Pn	05 11 50.8	+1.1
	SNR=8.0						
KK31	Karatay Array	5.20	341	⇑P	Pn	05 11 52.0	+2.0
	30nm,0.3s,baz=148,slow=12,SNR=516						
KK31				⇑S	Sn	05 12 49.2	-0.3
	41nm,0.3s,baz=156,slow=17,SNR=30						
USP	Ospenovka	5.21	14	P	Pn	05 11 51.6	+1.4
	SNR=18						
THW	Thamme Wali	5.47	190	P	Pn	05 11 54.7	+1.0
THN	Thein Dam	6.22	157	eP	Pn	05 12 05.5	+1.9
THN				eS	Sn	05 13 06.5	-7.3
GYA0B	ALIBECK ARRAY	11.61	273	⇓P	Pn	05 13 15.0	-0.1
GYA0B				⇑S	Sn	05 15 23.6	+0.1
PYUN	Piuthan	13.18	137	eP	Pn	05 13 31.5	-4.2
	19nm,0.4s						
PYUN				eS	Sn	05 15 43.0	-19
DANN	Dangsing	13.41	134	eP	Pn	05 13 33.9	-4.8
	13nm,0.3s						
DANN				eS	Sn	05 15 47.8	-19
KOLN	Koldanda	13.77	136	eP	Pn	05 13 39.0	-4.2
	6.1nm,0.3s						
AB31	Akbulak array	14.43	324	⇑P	P	05 13 53.4	-0.3
	0.6nm,0.3s,baz=130,slow=14,SNR=30						
AB31				⇓S	Sn	05 16 26.6	-4.4
	4.6nm,0.6s,baz=134,slow=22,SNR=15						
PKI	Pulchoki	14.95	131	eP	Pn	05 13 54.5	-3.6
	4.8nm,0.2s						
JIRN	Jiri	15.35	129	eP	Pn	05 13 59.3	-3.9
	16nm,0.3s						
AKTO	Aktyubinsk	16.15	324	⇑P	P	05 14 13.6	+0.9
	2.3nm,0.5s						
AKTO				⇓S	S	05 17 07.5	-4.2
	5.7nm,0.8s						
NB2	NORSAR Subarra	43.92	322	P	P	05 18 30.1	+4.6
	comp=Z,0.3nm,0.4s,baz=92,slow=7.9						

UCR 01 05:48:15.8±2.1**, 10°.23N×85°.49W, h30^{km}**±7^{km}**, MW3.5, 4C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	Las Juntas de	0.53	83	⇓eP	Pb	05 48 26.1	-0.7
JTS				eS	Sb	05 48 33.8	-0.4
CUI	Cuipilapa	0.53	37	⇑eP	Pb	05 48 26.6	-0.2
BUEV	Buena Vista	0.57	8	⇑eP	Pb	05 48 26.6	-0.9
BUEV				eS	Sb	05 48 35.8	+0.4
MESS	Mesas	0.58	29	⇑iP	Pb	05 48 26.5	-1.2
MESS				eS	Sb	05 48 35.5	-0.3
GB1A	Borinquen Arri	0.59	8	⇑eP	Pb	05 48 27.6	-0.2
GB1A				eS	Sn	05 48 36.6	-0.3
ARE1	Arenal 1	0.79	73	eP	Pn	05 48 30.6	-0.3
SRA1	San Ramn	1.00	98	⇓eP	Pn	05 48 33.4	-0.6
SRA1				eS	Sn	05 48 33.5	-14
ACON	Acoyapa	1.75	10	eP	Pn	05 48 44.3	+0.1

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*ISCJB **01** 06:01:29.7±0.6, 0°.89S±0°.03×80°.49W±0°.05, h10^{km}, Error ellipse: s-maj=7.4km s-min=3.8km az=12.8*

*IGQ **01** 06:01:29.6±0.6, 1°S±3°×8°1W±°, h0^{km}, MLv4.3*

ISC 01 06:01:29.6±1.3**, 0°.89S**±0°.04×**80°.51W**±0°.08**, h10^{km}, n77, σ1^{s}42**/77**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CABP	Cabo Pasado	0.50	9	P	Pb	06 01 40.6	0.0
CABP				S	Sb	06 01 48.2	+0.1
AQUE	Quevedo	1.03	99	P	Pb	06 01 50.0	+0.4
MAG1	Magdalena	1.09	42	P	Pb	06 01 49.9	-0.8
SALI	Salinas	1.38	200	P	Pn	06 01 54.5	-0.4
SALI				S	Sn	06 02 12.9	-0.3
MILO	Milagro-Astudi	1.68	145	P	Pn	06 01 56.7	-2.4
MORR	Playas El Morr	1.75	174	P	Pn	06 01 59.3	-0.7
GOLV	Golondrinas	1.75	52	P	Pn	06 01 59.7	-0.4
ILLI	Illinizas Sur	1.79	85	P	Pn	06 01 59.5	-1.6
ALAT	Latacunga	1.89	91	P	Pn	06 02 02.0	-0.3
NINA	Atacazo Ninahu	1.96	75	P	Pn	06 02 01.4	-1.9
COHC	Cochancay	2.01	141	P	Pn	06 02 02.0	-1.6
TERV	Terraza Guagua	2.03	70	P	Pn	06 02 04.3	-0.1
BMOR	Cotopaxi Volca	2.06	86	P	Pn	06 02 04.4	-0.4
PAC1	Pacto, Paraso	2.06	56	P	Pn	06 02 02.9	-1.6
BREF	Cotopaxi Volca	2.08	84	P	Pn	06 02 05.4	+0.2
YANA	Yana	2.08	69	P	Pn	06 02 03.9	-1.2
BBIL	Ulba Tungurahu	2.10	105	P	Pn	06 02 05.3	+0.1
PITA	Cotopaxi Volc	2.10	81	P	Pn	06 02 05.3	0.0
BVC2	Cotopaxi Volca	2.11	84	P	Pn	06 02 05.7	+0.2
BMAS	Trigal station	2.12	107	P	Pn	06 02 05.9	+0.4
VC1	Cotopaxi 1	2.12	83	P	Pn	06 02 05.7	0.0
BTAM	Cotopaxi Volca	2.12	84	P	Pn	06 02 05.7	0.0
POND	Pondoa	2.12	104	P	Pn	06 02 05.8	+0.2
PIS1	Pisayambo	2.13	95	P	Pn	06 02 06.8	+1.1
PISA	Pisayambo	2.13	95	P	Pn	06 02 06.9	+1.2
RETU	Refugio	2.14	105	P	Pn	06 02 06.0	+0.1
ARRY	Arrayan	2.15	107	P	Pn	06 02 06.1	+0.3
RUN5	Runtun	2.15	104	P	Pn	06 02 06.4	+0.5
PAT1	Patacocha	2.16	107	P	Pn	06 02 06.6	+0.5
BRUN	Tungurahua Vol	2.16	104	P	Pn	06 02 06.3	+0.2
BPAT	Tungurahua Vol	2.17	106	P	Pn	06 02 06.7	+0.5
BULB	Ulba Tungurahu	2.17	105	P	Pn	06 02 06.7	+0.5
COV1	Cotopaxi Volc	2.18	84	P	Pn	06 02 05.2	-1.4
PULU	Pululahua	2.20	66	P	Pn	06 02 05.6	-1.0
ANTG	Antisana-Guama	2.29	80	P	Pn	06 02 08.2	+0.2
ANTM	Antisana-La Mi	2.31	81	P	Pn	06 02 08.5	+0.2
OTAV	Otavalo	2.34	62	eP	Pn	06 02 07.4	-1.3
OTAV				eS	Sn	06 02 37.1	-0.6
ANTS	Antisana-Sarah	2.37	81	P	Pn	06 02 09.7	+0.5
ANTI	Antisana	2.39	80	P	Pn	06 02 09.9	+0.5
CUSE	Cuicocha Este	2.42	61	P	Pn	06 02 08.7	-1.0
CUIC	Cuicocha-Domo	2.45	61	P	Pn	06 02 08.9	-1.2
CUSW	Cuicocha Oeste	2.45	62	P	Pn	06 02 09.7	-0.4
COTA	Cotacachi	2.49	61	P	Pn	06 02 10.0	-0.7
APUY	Puyo	2.58	103	P	Pn	06 02 12.8	+1.2
IMBA	Imbabura, San	2.58	63	P	Pn	06 02 12.4	+0.4
URCU	Urcuqui	2.61	60	P	Pn	06 02 11.7	-0.6
CAYA	Cayambe	2.69	69	P	Pn	06 02 16.7	+3.1
AIB2	Ibarra (Univer	2.70	63	P	Pn	06 02 15.2	+1.8
ARDO	Archidona, Ten	2.71	92	P	Pn	06 02 14.5	+1.1
LITE1	Lita	2.72	52	P	Pn	06 02 13.5	-0.1
YAHU	Yahuarcocha	2.74	63	P	Pn	06 02 14.8	+0.8
REVS	Reventador Sur	2.99	75	P	Pn	06 02 18.3	+0.9
TUMC	Tumaco	3.23	34	eP	Pb	06 02 24.9	-2.2
CASC	Dorado de Casc	3.33	72	P	Pn	06 02 25.3	+3.4
MCRA	Macar, Loja	3.50	171	P	Pn	06 02 21.3	-2.9
GONZ	Gonzanam	3.51	162	P	Pn	06 02 26.0	+1.4
ZUMB	Zumba	4.18	161	P	Pn	06 02 36.5	+2.8
CRUC	La Cruz	4.31	56	eP	Pn	06 02 37.4	+1.7
BBAC	Balboa, Cauca	4.36	48	eP	Pn	06 02 36.4	+0.3
GRGC	Isla de Gorgon	4.52	31	eP	Pn	06 02 41.3	+3.1
SOTA	Rioblanco	4.92	52	eP	Pn	06 02 45.1	+0.9
POPC	Popayan, Colom	5.13	48	eP	Pn	06 02 46.9	+0.1
PCON	Cinco Dias	5.21	52	eP	Pn	06 02 49.9	+1.7
FLOC	Florencia	5.44	63	eP	Pn	06 02 51.1	+0.2
PTLC	Puerto Leguiza	5.81	80	eP	Pn	06 02 56.4	+0.4
MARP	Paez Belalcaza	5.87	51	eP	Pn	06 02 57.4	+0.3
YOTC	Yotoco, Valle	6.38	41	eP	Pn	06 03 02.0	-1.9
ORTC	Ortega, Tolima	7.10	48	eP	Pn	06 03 18.5	+4.8
PRAC	Prado	7.24	51	eP	Pn	06 03 16.6	+0.9
MACC	Macarena, Meta	7.31	66	eP	Pn	06 03 19.0	+2.4
RREF	El Recreo	7.72	42	eP	Pn	06 03 25.1	+2.3
GUY2C	Guyana, Caldas	7.95	40	eP	Pn	06 03 31.4	+5.6
ROSC	El Rosal	8.40	47	eP	Pn	06 03 37.2	+5.2
VILC	Villavicencio,	8.43	54	eP	Pn	06 03 32.3	+0.3
NORC	Norcasia	8.53	41	eP	Pn	06 03 40.2	+6.8
HELC	Santa Helena	8.61	35	eP	Pn	06 03 37.5	+2.8
CHIC	Chingaza	8.71	51	eP	Pn	06 03 35.0	-1.1

UCR 01 06:53:58.0±2.5**, 9°.65N×83°.85W, h0^{km}**±15^{km}**, MW3.8, 9C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.17	302	⇑iP	Pg	06 54 02.9	+1.6
SJS	Escuela Geolog	0.35	325	eP	Pb	06 54 07.8	+0.6
CVTR	Volcan Turrial	0.38	14	⇑eP	Pb	06 54 07.5	-0.4
EDDO	Dominical	0.40	181	eP	Pb	06 54 07.0	-0.8
HDC	Heredia	0.43	324	⇑eP	Pb	06 54 08.1	-0.5
EDLM	Las Mercedes	0.45	145	⇑iP	Pg	06 54 07.2	+0.5
DRK0	Durika	0.71	123	⇑eP	Pg	06 54 11.1	-0.6
EDBA	Buenos Aires	0.75	130	eP	Pg	06 54 11.5	-0.9
SRA1	San Ramn	0.75	305	eP	Pg	06 54 12.7	+0.2
EDPN	Palmar Norte	0.79	150	eP	Pb	06 54 14.6	0.0
ARE1	Arenal 1	1.17	313	eP	Pg	06 54 20.3	-0.2
CEDE	Laguna Cedeo	1.18	315	⇑iP	Pg	06 54 21.0	+0.3
EDSV	San Vito	1.20	133	⇑eP	Pb	06 54 21.7	0.0
JTS	Las Juntas de	1.25	301	⇓eP	Pg	06 54 22.0	-0.1
BRU2	Volcan	1.43	126	eP	Pn	06 54 24.9	-0.5
CUI	Cuipilapa	1.63	308	⇓eP	Pn	06 54 28.3	+0.3
MESS	Mesas	1.71	309	eP	Pb	06 54 30.0	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUEV	**Buena Vista**	1.91	307	*e*P	Pn	06 54 32.6	+0.7
GB1A	**Borinquen Arri**	1.91	307	*e*P	Pn	06 54 31.9	-0.1
ESPN	**Las Esperanzas**	2.57	350	*e*P	Pn	06 54 41.0	+0.2
ESTN	**Estel**	4.22	325⇑	*e*P	Pn	06 55 06.7	+2.9
CRIN	**San Cristobal**	4.36	314	*e*P	Pn	06 54 56.7	-9.0
RCON	**San Juan de Ri**	4.43	330⇑	*e*P	Pb	06 55 14.9	-1.9
CSGN	**Cosiguina Volc**	4.91	313	*e*P	Pn	06 55 16.1	+2.9

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*IDC **01** 07:02:21.6±4.4, 5°.89S×148°.13E, h0^{km}, mb4.0/1, mb1 4.3/2, mb1mx3.6/20, mbtmp4.0/2, ML4.1/1, Error ellipse: s-maj=165.1km s-min=47.8km az=112.0*

*ISCJB **01** 07:02:26.2±1.2, 5°.9S±0°.1×148°.02E±0°.09, h60^{km}, mb4.2/4, Error ellipse: s-maj=16.6km s-min=12.4km az=156.5*

*NEIC **01** 07:02:26.6±1.8, 5°.86S×148°.00E, h35^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=19.2km s-min=12.6km az=102.0*

ISC 01 07:02:28.7±1.3, **5°.9S**±0°.1×**148°.0E**±0°.1, **h60^{km}, n17, σ1^{s}.56**/18, **mb4.1**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.58	194	*e*Pn	Pn	07 03 23.7	+1.9
PMG				*e*Sn	Sn	07 04 02.8	-0.1
COEN	**Coen**	9.31	210	*e*Pn	Pn	07 04 39.8	-0.6
HNR	**Honiara**	12.34	107	*e*Pn	Pn	07 05 20.8	-1.0
MTN	**Manton Dam** 85nm,1.6s	18.01	246	*e*P	P	07 06 34.7	-0.2
WRAB	**Tennant Creek** 22nm,0.4s	19.26	222	*e*P	P	07 06 43.9	-4.6
WC3	**Warramunga Arr** 7.1nm,1.0s	19.26	222	*e*P	P	07 06 48.1	-0.4
WB2	**Warramunga Arr** 9.8nm,1.0s	19.26	222	*e*P	P	07 06 48.1	-0.5
WR1	**Warramunga Arr**	19.27	222	*e*P	P	07 06 47.9	-0.7
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=46,slow=10,SNR=18	19.27	222	P	P	07 06 47.9	-0.8
EIDS	**Eidsvold** 14nm,1.2s	19.58	172	*e*P	P	07 06 51.6	-0.3
AS31	**Alice Springs** 1.9nm,0.4s	22.27	216	*e*P	P	07 07 21.5	+0.4
ASAR	**Alice Springs** 3.7nm,0.6s,baz=51,slow=8.9,SNR=52	22.28	216	P	P	07 07 21.6	+0.5
ARMA	**Armidale** 38nm,1.5s	24.62	172	*e*P	P	07 07 41.8	-2.0
SBA	**Scott Base**	72.58	176	*e*P	P	07 13 49.5	+0.4
QSPA	**South Pole Qui** 3.3nm,1.3s	84.06	180	*e*P	P	07 14 54.5	+1.6
TORD	**Torodi Ar. Bea** 0.6nm,0.4s,baz=88,slow=3.8,SNR=6.2	146.04	285	PKPbc	PKPab	07 22 04.4	+0.8
TOA1	**Torodi Ar. Sit**	146.04	285	*e*PKPbc	PKPab	07 22 04.4	+0.8

ISC 01 07:02:42.0±1.1, **48°.39N**±0°.04×**17°.25E**±0°.05, **h6^{km}**±7^{km}, **n7, σ0^{s}.56**/12, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MODS	**Modra-Piesok**	0.02	127	*e*PG	Pg	07 02 42.7	-0.5
MODS				*e*SG	Sg	07 02 44.6	+0.6
ZST	**Bratislava**	0.21	207	*e*PG	Pg	07 02 45.9	-0.4
ZST				*e*SG	Sg	07 02 50.1	+1.0
JAVC	**Velka Javorina**	0.55	30	*e*PG	Pg	07 02 52.9	+0.3
JAVC				*e*SG	Sb	07 03 01.6	-0.7
KOLL	**Kolacno**	0.79	76	*e*SG	Sb	07 03 09.1	-0.1
KRUC	**Moravsky**	0.88	320	*e*PG	Pg	07 02 58.8	-0.1
KRUC				*e*SG	Sg	07 03 10.7	+0.3
VRAC	**Vranov**	1.02	335	*e*PG	Pg	07 03 01.5	-0.1
VRAC				*e*SG	Sg	07 03 15.0	+0.2
MORC	**Moravsky Berou**	1.40	8	*e*PG	Pn	07 03 08.2	-0.1

IDC 01 07:37:16.6±3.8, **3°.23S**×**102°.43E, h0^{km}, mb3.8**/4, **mb1 4.0**/4, **mb1mx3.6**/27, **mbtmp3.8**/4, **Error ellipse: s-maj=163.2km s-min=23.3km az=56.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=287,slow=11,SNR=12	35.28	121	P	P	07 44 13.0	-0.5
ASAR	**Alice Springs** 0.8nm,0.3s,baz=301,slow=7.5,SNR=18	36.57	127	P	P	07 44 24.9	+0.3
SONM	**Songino Array** 0.7nm,0.5s,baz=175,slow=7.9,SNR=4.0	50.97	3	P	P	07 46 19.5	-0.7
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=167,slow=8.9,SNR=3.5	52.89	343	P	P	07 46 34.7	+0.3

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*IDC **01** 07:50:52.8±3.3, 57°.17S×24°.72W, h0^{km}, mb4.2/4, mb1 4.3/4, mb1mx3.8/25, mbtmp4.2/4, Error ellipse: s-maj=106.3km s-min=43.9km az=2.0*

*ISCJB **01** 07:50:53.0±0.6, 57°.31S±0°.09×24°.8W±0°.2, h22^{km}, mb4.4/8, Error ellipse: s-maj=17.8km s-min=8.1km az=142.4*

*NEIC **01** 07:50:57.1±2.6, 57°.19S×24°.90W, h35^{km}, mb4.6/7, Error ellipse: s-maj=25.4km s-min=12.6km az=52.0*

ISC 01 07:50:54.9±0.8, **57°.3S**±0°.1×**24°.8W**±0°.1, **h22^{km}, n24, σ1^{s}.65**/24, **mb4.5**/8, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	7.22	290	*e*Pn	Pn	07 52 39.6	+0.6
VNA1	**Neumayer--Stat**	15.18	159	P	Pn	07 54 26.7	-0.8
VNA3	**Neumayer Olymp**	15.41	161	P	Pn	07 54 29.4	-1.2
VNA2	**Neumayer--Watz**	15.57	158	P	Pn	07 54 30.9	-1.7
SNAA	**Sanae**	17.09	156	P	Pn	07 54 52.4	+0.3
SNAA	**Sanae** 1.2nm,1.0s	17.09	156	*e*Pn	Pn	07 54 52.4	+0.3
EFI	**East Falkland** 41nm,1.1s	19.97	272	*e*P	Pn	07 55 27.4	+0.4
GO09	**Cerro Castillo**	27.90	262	*e*P	P	07 56 43.3	+0.4
QSPA	**South Pole Qui**	32.97	180	*e*P	P	07 57 28.3	+0.6
PLCA	**Paso Flores**	33.49	280	*e*P	P	07 57 32.0	-0.4
CPUP	**Villa Florida** 2.8nm,1.0s,baz=174,slow=10,SNR=3.1	38.60	309	P	P	07 58 17.0	+1.0
CPUP	**Villa Florida** 5.5nm,1.1s	38.60	309	*e*P	P	07 58 17.0	+1.0
LVC	**Limon Verde** 3.6nm,0.9s	47.04	299	*e*P	P	07 59 24.1	-0.8
SIV	**San Ignacio** 0.5nm,0.5s,baz=185,slow=12,SNR=3.6	49.37	311	P	P	07 59 43.2	+0.7
GO01	**Chusmiza**	49.70	300	*e*P	P	07 59 41.5	-4.1
PB11	**IPOC Station P** 8.5nm,0.9s	49.83	300	*e*P	P	07 59 41.9	-4.3
MNMC	**Minye Minye** 6.0nm,0.7s	50.35	300	*e*P	P	07 59 50.2	-0.1
RCBR	**Riachuelo** 17nm,1.1s	52.04	346	*e*P	P	08 00 00.5	-2.2
LPAZ	**La Paz** 1.1nm,0.6s,baz=149,slow=5.9,SNR=8.3	52.15	303	P	P	08 00 05.7	+1.5
LPAZ	**La Paz**	52.15	303	*e*P	P	08 00 04.6	+0.4
TORD	**Torodi Ar. Bea** 5.2nm,0.4s,baz=213,slow=6.6,SNR=4.2	73.52	27	P	P	08 02 26.5	+0.8
TOA1	**Torodi Ar. Sit**	73.52	27	*e*P	P	08 02 26.5	+0.8
RIDG	**Independent Ri**	150.79	308	*e*PKPdf	PKPdf	08 10 39.9	+1.6
ILAR	**Eielson Array** 0.5nm,0.5s,baz=136,slow=4.1,SNR=6.4	151.90	310	PKPbc	PKiKP	08 10 47.8	+1.0

IDC 01 08:05:13.8±3.9, **17°.94S**×**178°.21W, h625^{km}**±60^{km}, **mb3.0**/5, **mb1 3.3**/5, **mb1mx2.9**/23, **mbtmp4.0**/5, **Error ellipse: s-maj=120.2km s-min=17.1km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 2.0nm,0.7s,baz=82,slow=12,SNR=3.6	38.78	241	P	P	08 11 46.4	-0.6
WRA	**Warramunga Arr** 2.1nm,0.4s,baz=89,slow=8.0,SNR=16	44.81	260	P	P	08 12 34.7	+0.3
ASAR	**Alice Springs** 4.4nm,0.7s,baz=88,slow=8.0,SNR=63	44.97	254	P	P	08 12 35.5	0.0
ASAR	0.6nm,0.7s,baz=92,slow=14,SNR=4.2			S	S	08 18 30.6	+0.4
NVAR	**Mina Array Bea** 0.2nm,0.6s,baz=234,slow=7.7,SNR=2.6	79.32	44	P	P	08 16 16.4	-0.1
ILAR	**Eielson Array** 0.6nm,0.9s,baz=224,slow=4.7,SNR=4.5	85.88	13	P	P	08 16 48.8	+0.4

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*TAP **01** 08:05:28.6, 24°.88N×122°.05E, h12^{km}, ML2.9, C*

*ISCJB **01** 08:05:29.1±0.4, 24°.88N±0°.02×122°.08E±0°.02, h9^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=3.3km az=167.8*

*JMA **01** 08:05:29.9±0.1, 24°.84N×122°.02E, h28^{km}, M2.5*

ISC 01 08:05:28.1±1.0, **24°.88N**±0°.03×**122°.15E**±0°.02, **h8^{km}**±9^{km}, **n41, σ0^{s}.44**/62, **2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=339	0.19	313⇑	*i*P	Pg	08 05 32.6	+0.5
TWB1	baz=339			S	Sg	08 05 35.2	+0.4
EGS	baz=246	0.20	261	*e*P	Pg	08 05 32.1	0.0
EGS	baz=246			*e*S	Sg	08 05 34.6	-0.2
NTC	**Toucheng** baz=261	0.29	266	*e*P	Pg	08 05 33.7	-0.1
NTC	baz=261			*e*S	Sg	08 05 37.4	-0.3
TIPB	**Shuangxi** baz=293	0.31	288⇑	*i*P	Pg	08 05 34.2	0.0
TIPB	baz=293			S	Sg	08 05 38.1	-0.2
EOS1	**EOS1** baz=167	0.33	183	*e*P	Pb	08 05 36.2	+0.1
EOS1	baz=167			*e*S	Sb	08 05 41.8	+0.3
ILA	**Ilan** baz=245	0.38	253	*e*S	Sg	08 05 40.8	+0.3
TWC	**Suao** baz=212	0.38	225	*e*P	Pg	08 05 35.8	+0.2
TWC	baz=212			*e*S	Sg	08 05 41.4	+0.8
TWE	**Neicheng** baz=243	0.46	250	*e*P	Pg	08 05 37.2	+0.1
TWE	baz=243			*e*S	Sg	08 05 42.4	-0.8
TWA	**Mucha** baz=282	0.52	282	*e*P	Pg	08 05 38.0	-0.3
TWA	baz=282			*e*S	Sg	08 05 44.0	-1.0
NANB	**Nanao** baz=210	0.57	219	*e*P	Pb	08 05 39.9	-0.5
NANB	baz=210			*e*S	Sb	08 05 48.0	-0.7
ENTT	**Nioudou** baz=240	0.58	246	*e*P	Pg	08 05 39.1	-0.2
ENTT	baz=240			*e*S	Sg	08 05 46.9	0.0
YM01	**YM01** baz=301	0.59	297	*e*P	Pb	08 05 40.1	-0.6
YM01	baz=301			*e*S	Sg	08 05 47.5	+0.3
YM08	**YM08** baz=306	0.59	302	*e*P	Pg	08 05 40.0	+0.5
YM05	**YM05** baz=302	0.60	299	*e*P	Pg	08 05 40.2	+0.5
YM10	**YM10** baz=301	0.60	298	*e*P	Pb	08 05 40.3	-0.5
TATO	**Taipei** baz=280	0.60	279	*e*P	Pg	08 05 39.0	-0.8
TATO	baz=280			*e*S	Sg	08 05 47.0	-0.8
YM04	**YM04** baz=300	0.62	297	*e*P	Pg	08 05 40.4	+0.3
YM03	**YM03** baz=302	0.63	299	*e*P	Pg	08 05 40.7	+0.4
TWY	**Chenhua** baz=314	0.64	309	*e*P	Pb	08 05 41.3	-0.1
TWS1	**Kuangyinshan** baz=290	0.70	289	*e*P	Pb	08 05 42.9	+0.4
YHNB	**Yeheng** baz=250	0.73	254	*e*P	Pg	08 05 41.3	-0.9
NSK	**Sanguang** baz=251	0.74	255	*e*P	Pg	08 05 42.1	-0.4
NSK	baz=251			*e*S	Sg	08 05 51.7	-0.5
PCYT	**Pengchaiyu** baz=2.0	0.75	355	*e*P	Pn	08 05 45.1	+0.1
NNSB	**Datong** baz=233	0.82	237	*e*P	Pg	08 05 44.3	+0.3
JYNG	**Yonagunijimaku**	0.84	120	P	Pn	08 05 46.3	+0.1
NACB	**Ninganchiao** baz=210	0.86	216	*e*P	Pg	08 05 44.6	-0.1
NACB	baz=210			*e*S	Sg	08 05 56.0	+0.1
YOJ	**Yonaguni jima**	0.89	118	P	Pn	08 05 47.2	+0.3
YOJ				S	Sn	08 06 00.7	+0.8
ETLH	**Xiulin Townshi** baz=217	0.90	222	*e*P	Pb	08 05 45.9	-0.1
ETLH	baz=217			*e*S	Sb	08 05 57.7	-0.5
TWD	**Chiawan** baz=206	0.94	212	*e*P	Pb	08 05 46.9	+0.3
TWD	baz=206			*e*S	Sg	08 05 58.0	-0.3
LIOB	**Emei** baz=255	1.05	258	*e*P	Pn	08 05 49.6	+0.5
NSTT	**Nanjuang** baz=255	1.07	257	*e*P	Pn	08 05 49.9	+0.5
WHF	**Hehuan Shan** baz=223	1.08	228	*e*P	Pg	08 05 49.0	0.0
CHGB	**Renai** baz=224	1.20	228	*e*P	Pn	08 05 51.7	+0.3
ESL	**Shilin** baz=207	1.24	212	*e*P	Pg	08 05 52.3	+0.3
VWDT	**VWDT** baz=216	1.45	220	*e*P	Pg	08 05 55.8	-0.1
SSLB	**Suanglung** baz=222	1.54	225	*e*P	Pg	08 05 57.4	-0.2
IRIF	**Iriomote-Funau**	1.54	110	P	Pg	08 05 57.3	-0.4
IRIF				S	Sg	08 06 17.6	0.0
HATJ	**Hateruma jima**	1.72	118	P	Pb	08 06 00.0	+0.1
HATJ				S	Sb	08 06 21.4	-0.2
JKRS	**Kuro-shima**	1.81	110	P	Pb	08 06 01.2	-0.3
JIJ	**Ishigaki jima**	1.89	105	P	Pb	08 06 02.6	-0.2
JIJ				S	Sg	08 06 27.9	-0.9
JISG	**Ishigakijimahi**	1.99	98	P	Pb	08 06 04.6	+0.1
JISG				*e*S	Sb	08 06 29.1	-0.4

IDC 01 08:20:46.3±16.0, **8°.79S**×**117°.72E, h0^{km}, mb3.7**/2, **mb1 3.9**/3, **mb1mx3.5**/22, **mbtmp3.7**/3, **ML3.8**/1, **Error ellipse: s-maj=239.2km s-min=133.3km az=142.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=299,slow=11,SNR=7.6	19.53	126	P	P	08 25 13.7	-1.8
ASAR	**Alice Springs** 1.0nm,0.4s,baz=316,slow=9.8,SNR=18	21.42	136	P	P	08 25 36.2	+0.2
STKA	**Stephens Creek** 0.7nm,0.4s,baz=324,slow=8.1,SNR=3.1	31.93	139	P	P	08 27 14.9	+1.1

MAN 01 08:27:06.2, 18°.20N×122°.47E, h28^{km}, mb4.2, ML3.0, MS2.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	0.40	276	*e*P	Pn	08 27 15.6	-0.5
SGCP				*e*S	Sn	08 27 23.8	+1.0
CVP	**Callao Caves**	0.79	231⇑	*i*P	Pn	08 27 22.7	+1.3
CVP				*i* S	Sn	08 27 34.6	+2.3
PALP	**Palanan**	1.13	182	*e*P	Pn	08 27 24.9	-1.3
PALP				*e*S	Sb	08 27 41.4	0.0
APYP	**Conner**	1.21	254	*e*P	Pb	08 27 28.1	-0.4
APYP				*e*S	Sn	08 27 41.0	-1.8
BALP	**Baler**	2.59	199	*e*P	Pn	08 27 47.8	+1.5
SMPP	**San Manuel, Pa**	2.66	220	*e*P	Pn	08 27 50.0	+2.7

KRSC 01 08:30:04.6±3.3, **49°.86N**×**156°.73E, h18^{km}**±37^{km}, **ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	0.91	335	*e*S	Sb	08 30 33.7	+0.1
ALID	**Alaid**	1.26	324	*e*P	Pn	08 30 26.6	-0.8
ALID				*e*S	Sb	08 30 41.1	-2.7
PAU	**Pauzhetka**	1.61	2	*e*P	Pb	08 30 33.4	-0.3
PAU				*e*S	Sb	08 30 54.7	+1.1
KDTR	**Khodutka, Kamc**	2.13	23	*e*P	Pb	08 30 41.1	-1.5
KDTR				*e*S	Sb	08 31 07.2	-1.4
RUS	**Russkaya**	2.81	23	*e*P	Pn	08 30 51.0	+2.4
RUS				*e*S	Sn	08 31 23.6	+1.7
UGLR	**Uglovaya**	3.60	21	*e*P	Pb	08 31 04.5	-3.2
AVH	**Avacha**	3.63	19	*e*P	Pb	08 31 05.0	-3.2
SDLR	**Sedlovina**	3.67	21	*e*P	Pn	08 31 03.9	+3.3
SDLR				*e*S	Sn	08 31 47.4	+3.9
KRX	**Arik**	3.70	18	*e*P	Pb	08 31 06.8	-2.7
KRX				*e*S	Sb	08 31 52.6	-1.4
SPN	**Mys Shipunski**	3.84	31	*e*P	Pn	08 31 04.3	+1.6
SPN				*e*S	Sn	08 31 49.9	+2.6

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*NEIC **01** 08:32:50.1±0.0, 15°.45N×98°.74W, h6^{km}, MD4.0(MEX), After MEX.*

MEX 01 08:32:50.1±0.7, **15°.45N**×**98°.74W, h6^{km}**±14^{km}, **MD4.0, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	2.10	4	*e*Pn	Pn	08 33 24.6	-1.4
TLIG				*e*Sn	Sn	08 33 49.4	-3.1
TLIG	**Tlapa**	2.10	4	*e*P	Pn	08 33 23.3	-2.7
TLIG				*i* S	Sn	08 33 48.6	-3.9
CAIG	**El Cayaco**	2.16	317	*e*Pn	Pn	08 33 22.6	-4.1
CAIG				*e*Sn	Sn	08 33 48.6	-5.1
CAIG	**El Cayaco**	2.16	317	*i* P	Pn	08 33 22.6	-4.1
CAIG				*i* S	Sn	08 33 48.6	-5.1
VHO	**Vista Hermosa**	2.51	50	*e*Pn	Pn	08 33 28.1	-3.6
VHO				*e*Sn	Sn	08 33 59.4	-3.3
VHO	**Vista Hermosa**	2.51	50	*e*P	Pn	08 33 28.1	-3.6
VHO				*i* S	Sn	08 33 59.4	-3.3
HUIG	**Huatulco**	2.55	83	*e*Pn	Pn	08 33 29.3	-2.7
HUIG				*e*Sn	Sn	08 33 58.6	-4.8
HUIG	**Huatulco**	2.55	83	*e*P	Pn	08 33 29.3	-2.7
HUIG				*i* S	Sn	08 33 58.6	-4.8
MEIG	**Mezcala**	2.60	341	*e*Pn	Pn	08 33 30.1	-2.7
MEIG				*e*Sn	Sn	08 34 00.0	-4.7
MEIG	**Mezcala**	2.60	341	*e*P	Pn	08 33 30.1	-2.7
MEIG				*i* S	Sn	08 34 00.0	-4.7
PLIG	**Platanillo**	3.01	346	*e*Pn	Pn	08 33 34.7	-3.7
PLIG				*e*Sn	Sn	08 34 10.7	-4.2
PLIG	**Platanillo**	3.01	346	*e*P	Pn	08 33 35.4	-3.1
PLIG				*i* S	Sn	08 34 10.7	-4.2
YAIG	**Yautepec**	3.41	355	*e*Pn	Pn	08 33 41.0	-2.9
YAIG	**Yautepec**	3.41	355	*i* P	Pn	08 33 41.0	-2.9
YAIG				*i* S	Sn	08 34 20.9	-3.7
CMIG	**Matias Romero**	4.04	66	*e*Pn	Pn	08 33 49.5	-3.1
CMIG				*e*Sn	Sn	08 34 36.7	-3.5
CMIG	**Matias Romero**	4.04	66	*e*P	Pn	08 33 49.5	-3.1
CMIG				*i* S	Sn	08 34 36.7	-3.5
LVIG	**Laguna Verde**	4.79	27	*e*Pn	Pn	08 33 58.7	-4.0
LVIG				*e*Sn	Sn	08 34 55.5	-3.1
CCIG	**Comitan**	6.41	82	*e*Pn	Pn	08 34 24.2	-1.0
CCIG				*e*Sn	Sn	08 35 34.8	-4.0

IDC 01 08:39:07.3±10.0, **43°.14N**×**133°.88E, h456^{km}**±47^{km}, **mb2.8**/2, **mb1 2.6**/4, **mb1mx2.4**/46, **mbtmp3.5**/4, **Error ellipse: s-maj=231.9km s-min=33.2km az=102.0, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	**Ussuriysk Ar.** 0.2nm,0.3s,baz=125,slow=2.8,SNR=4.2	1.73	308	P	P	08 40 07.0	+0.1
KLR	**Kul'dur** 0.3nm,0.3s,baz=170,slow=12,SNR=4.1	6.26	347	P	P	08 40 44.3	0.0
KSRS	**Korea Array** 0.5nm,0.3s,baz=36,slow=11,SNR=6.9	7.28	221	P	P	08 40 55.5	+0.3
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=92,slow=10,SNR=3.5	36.14	294	P	P	08 45 29.4	0.0
KURBB	**Kurchatov Arra** 1.1nm,0.5s,baz=82,slow=9.0,SNR=5.6	37.78	301	P	P	08 45 42.4	-0.3

MAN 01 08:40:13.5, 7°.38N×124°.84E, h28^{km}, mb4.2, ML3.0, MS2.7, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	0.54	24	*e*P	Pn	08 40 25.5	0.0
BUKP				*e*S	Sn	08 40 35.4	+1.8
DMPH	**Davao City--Mi**	0.73	114⇑	*e*P	Pn	08 40 36.7	+8.8
DMPH				*e*S	Sn	08 40 47.1	+9.0
SKMP	**Bagumbayan, Su**	0.91	199	*e*P	Pn	08 40 29.6	-0.8
SKMP				*e*S	Sb	08 40 40.4	-2.0
CGP	**Cagayan de Oro**	1.08	352⇑	*e*P	Pn	08 40 31.6	-1.2
CGP				*e*S	Sn	08 40 46.6	-0.2
PAGZ	**Pagadian**	1.52	288	*e*P	Pn	08 40 39.7	+0.8
PAGZ				*e*S	Sb	08 41 01.4	+1.5
DDMP	**Don Marcelino,**	1.54	146	*e*P	Pn	08 40 39.3	+0.2

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*NIED **01** 08:40:00, 39°.80N×143°.50E, h23^{km}, Mw4.1 Best double couple: $M_0$1.86000×10^{15} NP1:ϕ_s190.00000°, δ24.00000°, λ71.00000°. NP2:ϕ_s30.00000°, δ67.00000°, λ98.00000°.*

*IDC **01** 08:40:36.4±0.7, 39°.73N×143°.28E, h0^{km}, mb4.0/19, mb1 4.2/24, mb1mx4.1/42, mbtmp4.0/24, ML3.4/5, MS3.3/8, Ms1 3.3/8, ms1mx3.0/41, Error ellipse: s-maj=17.5km s-min=14.6km az=127.0*

*JMA **01** 08:40:37.4±0.2, 39°.78N×143°.49E, h27^{km}, M4.3*

*ISCJB **01** 08:40:38.6±1.1, 39°.68N±0°.03×143°.35E±0°.03, h31^{km}±8^{km}, mb4.6/138, MS3.9/9, Error ellipse: s-maj=4.9km s-min=3.3km az=141.5*

*MOS **01** 08:40:38.0±1.1, 39°.71N×143°.30E, h26^{km}, mb4.7/31, Error ellipse: s-maj=7.9km s-min=5.2km az=99.7*

*NEIC **01** 08:40:39.8±2.7, 39°.70N×143°.28E, h27^{km}±3^{km}, mb4.7/116, Error ellipse: s-maj=11.5km s-min=5.1km az=112.0*

ISC 01 08:40:37.9±1.6, **39°.78N**±0°.04×**143°.32E**±0°.04, **h13^{km}**±9^{km}, **n252, σ1^{s}.47**/254, **mb4.6**/138, **MS4.0**/10, **7C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	1.13	278	P	Pn	08 40 59.5	+0.1
JTH				S	Sn	08 41 16.7	+2.0
MIYJ	**Miyakonagasawa**	1.17	260	P	Pg	08 41 00.3	-0.1
MIYJ				*e*S	Sn	08 41 17.3	+1.5
JKEN	**Kujiedanarisaw**	1.30	289	P	Pb	08 41 01.7	-0.5
JKEN				*e*S	Sg	08 41 19.7	-0.2
JANG	**Nango**	1.50	294	P	Pb	08 41 04.8	-0.8
JANG				*e*S	Sb	08 41 24.9	+0.3
JOM	**Ohasama**	1.59	259	P	Pb	08 41 07.0	-0.1
JOM				*e*S	Sg	08 41 28.2	-0.9
JMK	**Ichinoseki**	1.82	244	P	Pn	08 41 09.4	+0.5
JTM	**Tenmabayashi**	1.99	301	P	Pb	08 41 12.4	-1.5
JIO	**Ouri**	2.02	230	P	Pn	08 41 11.6	-0.1
ERM	**Erimo**	2.23	357	*e*Pn	Pn	08 41 15.0	+0.4
ERM				*e*Sn	Sn	08 41 43.5	+1.5
ERM	**Erimo**	2.23	357	*e*P	Pn	08 41 15.0	+0.4
ERM				*e*		08 41 43.5	
JOT	**Ohata**	2.35	314	P	Pn	08 41 17.5	+1.3
JYK	**Kaneyama**	2.45	250	P	Pn	08 41 18.9	+1.4
JNBK	**Urakawa-nobuka**	2.53	351	P	Pn	08 41 20.6	+1.9
JKB	**Kayabe**	2.73	321	P	Pn	08 41 23.1	+1.8
JCH	**Churui**	2.83	1	P	Pn	08 41 23.2	+0.4
JOMM	**Oshimamatsumae**	3.06	306	P	Pb	08 41 28.8	-3.4
ASAJ	**Asahikawa** 2.8nm,0.3s,baz=228,slow=17,SNR=17	4.37	353	Pn	Pn	08 41 45.8	+1.9
ASAJ	3.6nm,0.3s,baz=213,slow=30,SNR=3.7			Sn	Sb	08 42 42.8	-4.1
GRPR	**Tuman**	4.59	23	*e*P	Pn	08 41 48.2	+1.3
GRPR				*i* S	Sn	08 42 36.2	-3.9
GRPR	comp=N,43nm,0.2s			pmax	pmax		
GRPR	comp=E,64nm,0.2s			pmax	pmax		
GRPR	comp=Z,143nm,0.2s			pmax	pmax		
GRPR	comp=E,250nm,0.5s			smax	smax		
GRPR	comp=N,639nm,0.4s			smax	smax		
YUK	**Yuzh-Kuril'sk**	4.66	23*d*	*i*P	Pn	08 41 49.2	+1.4
YUK				*i* S	Sn	08 42 38.8	-2.9
YUK	comp=E,54nm,0.2s			pmax	pmax		
YUK	comp=Z,161nm,0.2s			pmax	pmax		
YUK	comp=N,15nm,0.1s			pmax	pmax		
YUK	comp=E,301nm,0.5s			smax	smax		
YUK	comp=N,55nm,0.4s			smax	smax		

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YUK                                MLR    MLR
      comp=Z,190nm,13.0s
MAT   Matsushiro         5.16 233  P      Pn      08 41 56.8 +1.9
MAT                                S      Sn      08 42 51.8 -2.5
MJAR  Matsushiro Arr     5.16 233  Pn     Pn      08 41 55.5 +0.6
      comp=Z,0.7nm,0.3s,baz=42,slow=11,SNR=66
MJAR                               LR     LR      08 44 08.2
      comp=Z,242nm,18.9s,baz=50,slow=42
MJB9  Matsu-Tunnel       5.16 233 ePn     Pn      08 41 56.0 +1.1
KUR   Kuril'sk           6.40  30  P      Pn      08 42 12.0 +0.2
KUR                                S      Sn      08 43 21.1 -3.6
KUR                                pmax   pmax
      comp=Z,84nm,0.3s
KUR                                pmax   pmax
      comp=E,39nm,0.2s
KUR                                smax   smax
      comp=E,122nm,0.5s
KUR                                smax   smax
      comp=N,71nm,0.4s
INU   Inuyama            6.68 230 ePn     Pn      08 42 10.4 -5.2
INU                               eSn     Sn      08 43 30.6 -1.0
YSS   Yuzh-Sakhalins     7.18 357 eP      Pn      08 42 12.6  -10
YSS                                MLR    MLR
      comp=Z,500nm,11.0s
TEY   Ternei             7.23 319⇑eP      Pn      08 42 27.7 +4.6
TEY                                pmax   pmax
      comp=Z,30nm,0.8s
TEY                                pmax   pmax
      comp=E,20nm,0.9s
TEY                                pmax   pmax
      comp=N,20nm,1.0s
JHJ2  Mitsune            7.23 204 ePn     Pn      08 42 20.5 -2.7
JHJ2                              eSn     Sn      08 43 43.5 -1.7
USA0B Ussuriysk Arra     9.52 301 ePn     Pn      08 42 55.5 +0.9
USA0B                             eSn     Sn      08 44 43.1 +1.8
USA0B Ussuriysk Arra     9.52 301 eP      Pn      08 42 55.5 +0.9
USA0B                             e               08 44 43.1
USRK  Ussuriysk Ar.      9.52 301  Pn     Pn      08 42 56.8 +2.2
      comp=N,0.9nm,0.3s,baz=95,slow=12,SNR=15
USRK                               LR     LR      08 46 38.0
      comp=N,226nm,18.1s,baz=89,slow=38
MDJ   Mudanjiang        11.26 300 ePn     Pn      08 43 17.5 -1.0
MDJ                               eSn     Sn      08 45 20.1 -4.1
JNU   Nakatsue          12.01 240  LR     LR      08 48 25.9
      comp=N,236nm,18.7s,baz=14,slow=39
JNU   Nakatsue          12.01 240 ePn     Pn      08 43 28.7 -0.1
KSRS  Korea Array       12.26 264  Pn     Pn      08 43 34.0 +1.8
      comp=N,0.5nm,0.3s,baz=82,slow=13,SNR=11
KSRS                               LR     LR      08 47 50.8
      comp=N,125nm,21.0s,baz=70,slow=35
KSRS  Korea Array       12.26 264  P      Pn      08 43 34.0 +1.8
KS15  Wonju Array Si    12.30 264 ePn     Pn      08 43 33.3 +0.7
KS15                              eSn     Sn      08 45 46.3 -3.2
KLR   Kul'dur           12.53 323  Pn     Pn      08 43 38.1 +2.4
      comp=N,0.1nm,0.3s,baz=128,slow=12,SNR=5.0
PEA0B Petropavlovsk-    16.57  32 ePn     Pn      08 44 30.8 +1.1
      comp=N,36nm,1.4s
PEA0B Petropavlovsk-    16.57  32 eP      Pn      08 44 30.8 +1.1
PEA0B                              pmax   pmax
      comp=Z,36nm,1.4s
PETK  Petropavlovsk-    16.57  32  LR     LR      08 50 34.0
      comp=Z,44nm,18.6s,baz=195,slow=36
PET   Petropavlovsk     16.90  33 eP      P       08 44 37.0 +1.1
      comp=Z,17nm,0.5s
PET   Petropavlovsk     16.90  33 eP      P       08 44 37.0 +1.1
PET                                pmax   pmax
      comp=Z,17nm,0.5s
ZEA   Zeya              17.72 327 eP      Pn      08 44 42.1 -2.0
ZEA                                pmax   pmax
      comp=Z,20nm,0.8s
JOW   Kunigami          17.99 229 eP      Pn      08 44 45.5 -2.1
      comp=Z,31nm,1.4s
MA2   Magadan           20.37  11  P      P       08 45 14.8 +0.8
      comp=Z,9.7nm,0.7s,baz=183,slow=8.8,SNR=7.9
MA2   Magadan           20.37  11 eP      P       08 45 13.6 -0.4
      comp=Z,9.5nm,0.7s
BJI   Beijing           20.80 279  P      P       08 45 19.5 +0.8
BJI                                pmax   pmax
      comp=Z,5.0nm,0.7s
BJT   Baijiatuau        20.80 279 eP      P       08 45 17.8 -1.0
      comp=Z,5.8nm,0.8s
BJT   Baijiatuau        20.80 279 eP      P       08 45 17.8 -1.0
BJT                                pmax   pmax
      comp=Z,6.0nm,0.8s
NJ2   Nanjing           21.22 256 eP      P       08 45 32.2 +8.9
NJ2                                pmax   pmax
      comp=Z,11nm,0.5s
YAK   Yakutsk           23.78 344 eP      P       08 45 48.8 -1.1
      comp=Z,24nm,0.5s
YAK   Yakutsk           23.78 344 eP      P       08 45 48.8 -1.1
YAK                                pmax   pmax
      comp=Z,24nm,0.5s
SEY   Seymchan          23.82  10  P      P       08 45 51.0 +0.8
      comp=Z,6.1nm,0.7s,baz=188,slow=8.5,SNR=11
SEY   Seymchan          23.82  10  P      P       08 45 51.0 +0.8
NACB  Ninganchiao       24.02 236 eP      P       08 45 53.0 +0.5
      comp=Z,14nm,0.7s
HHC   Hu-ho-hao-te      24.17 283  P      P       08 45 54.3 +0.4
HHC                                pmax   pmax
      comp=Z,7.0nm,0.7s
HHC                                pmax   pmax
      comp=Z,15nm,5.7s
SSLB  Suanglung         24.71 236 eP      P       08 45 58.2 -0.7
      comp=Z,36nm,1.8s
YULB  Yu-li             24.77 235 eP      P       08 45 57.2 -2.1
      comp=Z,26nm,1.6s
WHN   Wuhan             25.32 258 ⇓P      P       08 46 04.6 +0.3
TWG   Pinlang           25.33 235 eP      P       08 46 04.1 -0.3
      comp=Z,298nm,1.8s
BOD   Bodaibo           26.11 323 eP      P       08 46 11.6 +0.4
BOD                                pmax   pmax
      comp=Z,11nm,0.9s
ULN   Ulaanbaatar       27.18 299 eP      P       08 46 22.3 +1.2
      comp=Z,4.9nm,0.9s
ULN   Ulaanbaatar       27.18 299ceP      P       08 46 22.9 +1.7
ULN                                pmax   pmax
      comp=Z,9.0nm,1.7s
SONA0 Songino Array     27.62 299 eP      P       08 46 25.4 +0.3
SONM  Songino Array     27.62 299  P      P       08 46 25.4 +0.3
      comp=Z,3.4nm,0.8s,baz=93,slow=8.6,SNR=14
SONM                               LR     LR      08 58 03.6
      comp=Z,137nm,19.0s,baz=80,slow=38
XAN   Xi'an             27.98 269  P      P       08 46 28.1 -0.2
XAN                                pP     pwP     08 46 38.3 +4.2
XAN                                pmax   pmax
      comp=Z,7.0nm,0.9s
XAN                                pmax   pmax
      comp=Z,140nm,4.2s
XAN                                LR     LR
      comp=E,190nm,16.3s
XAN                                LR     LR
      comp=Z,180nm,16.3s
H11N2 WAKE ISLAND Hy 28.46 128     T      T       09 17 30.0
      baz=318,slow=75,SNR=30
H11N1 WAKE ISLAND Hy 28.47 128     T      T       09 17 28.0
      baz=318,slow=75,SNR=24
H11N3 WAKE ISLAND Hy 28.48 128     T      T       09 17 28.7
      baz=318,slow=75,SNR=25
ENH   Enshi             29.14 262 eP      P       08 46 39.0 +0.4
      comp=Z,16nm,0.9s
H11S1 WAKE ISLAND Hy 29.28 130     T      T       09 17 30.3
      baz=322,slow=76,SNR=6.6
H11S3 WAKE ISLAND Hy 29.28 130     T      T       09 17 23.7
      baz=322,slow=76,SNR=5.3
H11S2 WAKE ISLAND Hy 29.29 130     T      T       09 17 26.2
      baz=322,slow=76,SNR=5.4
TLY   Talaya            29.77 307 eP      P       08 46 44.4 +0.4
      comp=Z,8.2nm,0.7s
TLY   Talaya            29.77 307 eP      P       08 46 44.4 +0.4
TLY                                pmax   pmax
      comp=Z,8.0nm,0.7s
ZAK   Zakamensk         29.85 304 eP      P       08 46 45.1 +0.3
ZAK                                pmax   pmax
      comp=Z,4.0nm,1.1s
BILL  Bilibino          30.97  17 eP      P       08 46 56.2 +1.8
      comp=Z,5.5nm,1.1s
BILL  Bilibino          30.97  17 eP      P       08 46 56.2 +1.8
BILL                               pmax   pmax
      comp=Z,6.0nm,1.1s
LZH   Lanzhou           31.18 276 eP      P       08 47 01.8 +5.0
LZH                                pP     pwP     08 47 16.0  +13
LZH                                sP     sP      08 47 23.3  +22
LZH                               ePP     PnPn    08 47 59.0 +0.6
LZH                                pmax   pmax
      comp=Z,14nm,1.4s
LZH                                pmax   pmax
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      comp=Z,110nm,4.3s
LZH                                LR     LR
      comp=N,360nm,12.9s
LZH                                LR     LR
      comp=E,370nm,13.3s
LZH                                LR     LR
      comp=Z,420nm,15.5s
TIXI  Tiksi             32.77 352 eP      P       08 47 08.3 -1.8
      comp=Z,1.7nm,0.8s
TIXI  Tiksi             32.77 352 eP      P       08 47 08.3 -1.8
TIXI                               pmax   pmax
      comp=Z,2.0nm,0.8s
CD2   Chengdu           33.24 267  P      P       08 47 18.7 +3.9
CD2                                pmax   pmax
      comp=Z,20nm,0.6s
CD2                                LR     LR
      comp=N,420nm,10.8s
CD2                                LR     LR
      comp=E,640nm,9.8s
CD2                                LR     LR
      comp=Z,570nm,10.8s
GTA   Gaotai            33.28 284 eP      P       08 47 17.0 +1.9
GTA                                pP     pwP     08 47 30.8  +10
GTA                                sP     sP      08 47 35.7  +16
GTA                                pmax   pmax
      comp=Z,6.0nm,1.0s
GTA                                pmax   pmax
      comp=Z,72nm,6.7s
GTA                                LR     LR
      comp=N,65nm,16.8s
GTA                                LR     LR
      comp=E,190nm,17.1s
GTA                                LR     LR
      comp=Z,240nm,17.5s
SPIA  Saint Paul Isl    34.54  44 eP      P       08 47 27.8 +2.1
      comp=Z,816nm,1.3s
KMI   Kunming           36.90 259  P      P       08 47 54.5 +7.9
KMI                                pmax   pmax
      comp=Z,20nm,0.5s
KMI                                LR     LR
      comp=N,220nm,12.5s
KMI                                LR     LR
      comp=E,110nm,11.7s
KMI                                LR     LR
      comp=Z,180nm,12.6s
SDPT  Sand Point        39.83  48 eP      P       08 48 14.1 +3.4
      comp=Z,82nm,1.2s
CHGN  Chignik           40.97  46 eP      P       08 48 20.5 +0.5
      comp=Z,144nm,1.8s
WMQ   Urumqi            41.00 294 eP      P       08 48 21.0 +0.4
WMQ                                sP     pwP     08 48 46.2  +19
WMQ                                pmax   pmax
      comp=Z,15nm,1.1s
WMQ                                pmax   pmax
      comp=Z,84nm,4.7s
ZAA1  Zalesovo Array    41.23 310 eP      P       08 48 22.4 +0.2
ZAA0  Zalesovo Array    41.23 310 eP      P       08 48 22.5 +0.2
      comp=Z,8.0nm,0.7s
ZALV  Zalesovo Beam     41.23 310  P      P       08 48 22.4 +0.2
      comp=Z,4.9nm,0.5s,baz=97,slow=8.3,SNR=6.1
ZALV                               LR     LR      09 06 07.5
      comp=Z,36nm,21.9s,baz=70,slow=37
TNTI  Ternate           41.46 205 eP      P       08 48 23.6 -0.9
      comp=Z,34nm,0.3s
SVW2  Sparrevohn        42.44  39 eP      P       08 48 32.4 +0.3
      comp=Z,18nm,1.2s
SII   Sitkinak Islan    43.30  46 eP      P       08 48 40.1 +0.9
      comp=Z,155nm,1.2s
CHTO  Chiang Mai        43.44 254 eP      P       08 48 40.5 -0.2
      comp=Z,3.7nm,0.9s
CHTO  Chiang Mai        43.44 254 eP      P       08 48 40.5 -0.2
CHTO                               pmax   pmax
      comp=Z,4.0nm,0.9s
CMAR  Chiang Mai Arr    43.66 254  P      P       08 48 43.4 +1.0
      comp=Z,0.7nm,0.4s,baz=50,slow=6.5,SNR=4.8
CMAR                               LR     LR      09 08 47.2
      comp=Z,30nm,18.5s,baz=245,slow=39
CMAR  Chiang Mai Arr    43.66 254ceP      P       08 48 46.0 +3.6
CMAR                               pmax   pmax
      comp=Z,1.0nm,0.4s
MK31  Makanchi Array    43.98 300 eP      P       08 48 45.2 +0.4
MK31  Makanchi Array    43.98 300 eP      P       08 48 45.2 +0.4
MK32  Makanchi Array    43.98 300 eP      P       08 48 45.6 +0.9
MKAR  Makanchi Array    43.98 300  P      P       08 48 45.6 +0.9
      comp=Z,4.7nm,0.8s,baz=83,slow=9.5,SNR=23
SUA   Susitna One       44.77  39 eP      P       08 48 51.0 +0.1
      comp=Z,19nm,0.5s
BWN   Browne            45.28  35 eP      P       08 48 54.1 -0.7
      comp=Z,29nm,1.1s
TOLK  Toolik Lake Re    45.35  28 eP      P       08 48 56.7 +1.3
      comp=Z,17nm,1.8s
KURK  Kurchatov         45.46 306 eP      P       08 48 53.9 -2.5
      comp=Z,11nm,0.8s
KURK  Kurchatov         45.46 306ceP      P       08 48 57.7 +1.3
KURK                               pmax   pmax
      comp=Z,12nm,0.8s
KNK   Knik Glacier      45.87  38 eP      P       08 48 59.8 +0.2
      comp=Z,28nm,1.6s
ILAR  Eielson Array     46.38  34  P      P       08 49 04.9 +1.4
      comp=Z,0.8nm,0.6s,baz=268,slow=6.6,SNR=11
PDGK  Podgornoye        46.86 296  P      P       08 49 07.5 -0.2
PDGK                               pmax   pmax
      comp=Z,5.0nm,1.2s
FYU   Fort Yukon        46.99  31 eP      P       08 49 10.1 +1.9
      comp=Z,30nm,1.8s
PAX   Paxson            47.13  36 eP      P       08 49 12.1 +2.6
      comp=Z,4.4nm,0.8s
PAX   Paxson            47.13  36 eP      P       08 49 12.1 +2.6
PAX                                pmax   pmax
      comp=Z,4.0nm,0.8s
RIDG  Independent Ri    47.34  35 eP      P       08 49 10.2 -0.9
      comp=Z,33nm,1.1s
DOT   Dot Lake          47.70  35 eP      P       08 49 14.3 +0.4
      comp=Z,22nm,1.8s
KSM   Kuching           48.52 227 eP      P       08 49 18.4 -2.4
      comp=Z,14nm,1.2s
EGAK  Eagle             48.82  33 eP      P       08 49 24.2 +1.8
      comp=Z,15nm,1.9s
BALM  Baldy             48.85  38 eP      P       08 49 19.4 -3.5
      comp=Z,7.8nm,0.6s
BALM  Baldy             48.85  38 eP      P       08 49 19.4 -3.5
BALM                               pmax   pmax
      comp=Z,8.0nm,0.6s
KDJ   Kajisay           48.86 295 eP      P       08 49 21.9 -1.4
      comp=Z,4.7nm,1.1s
BOOM  Boomskoye usch    49.59 296 eP      P       08 49 30.3 +1.4
      comp=Z,6.5nm,0.8s
BOOM  Boomskoye usch    49.59 296 eP      P       08 49 30.3 +1.4
BOOM                               pmax   pmax
      comp=Z,7.0nm,0.8s
BRVK  Borovoye          49.92 311 eP      P       08 49 30.6 -0.4
      comp=Z,3.9nm,0.8s
BRVK  Borovoye          49.92 311ceP      P       08 49 33.2 +2.2
BRVK                               pmax   pmax
      comp=Z,3.0nm,0.8s
OTUK  Ortayu            50.06 304  P      P       08 49 32.8 +0.6
OTUK                               pmax   pmax
      comp=Z,4.0nm,0.7s
EPYK  Eagle Plains      50.40  31 eP      P       08 49 36.1 +1.6
      comp=Z,5.4nm,0.9s
AAK   Ala-Archa         50.54 297 eP      P       08 49 36.3 +0.3
      comp=Z,3.0nm,0.4s
AAK   Ala-Archa         50.54 297ceP      P       08 49 37.5 +1.4
AAK                                pmax   pmax
      comp=Z,9.0nm,2.5s
KSH   Kashi             50.69 293 eP      P       08 49 42.1 +4.9
KSH                                PcP    PcP     08 51 05.3  +11
KSH                                PP     PP      08 51 37.0 +4.0
KSH                                pmax   pmax
      comp=Z,5.0nm,0.7s
KSH                                pmax   pmax
      comp=Z,63nm,4.7s
KSH                                LR     LR
      comp=N,170nm,11.3s
KSH                                LR     LR
      comp=E,58nm,8.7s
HYT   Haines Junctio    51.21  38 eP      P       08 49 44.2 +3.4
      comp=E,7.5nm,0.9s
INK   Inuvik            51.26  28  P      P       08 49 42.7 +1.8
      comp=E,0.6nm,0.6s,baz=242,slow=13,SNR=2.6
INK   Inuvik            51.26  28 eP      P       08 49 41.4 +0.5
      comp=E,3.8nm,1.2s
WHY   Whitehorse        52.50  38 eP      P       08 49 50.4  0.0
      comp=E,19nm,1.9s
KKAR  Karatay Array     53.07 299 eP      P       08 49 54.3 -0.5
      comp=E,2.8nm,0.8s
KKAR  Karatay Array     53.07 299 eP      P       08 49 54.3 -0.5
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KKAR                               pmax   pmax
      comp=Z,3.0nm,0.8s
JIS   Juneau Island     53.44  41 eP      P       08 49 58.6 +1.4
      comp=Z,4.3nm,1.0s
NIL   Nilore            55.20 287 eP      P       08 50 09.1 -1.3
      comp=Z,26nm,1.6s
NIL   Nilore            55.20 287 eP      P       08 50 09.1 -1.3
NIL                                pmax   pmax
      comp=Z,26nm,1.6s
ARU   Arti              55.31 318 eP      P       08 50 10.8 -0.1
      comp=Z,5.5nm,0.8s
ARU   Arti              55.31 318ceP      P       08 50 12.4 +1.5
ARU                                pmax   pmax
      comp=Z,6.0nm,1.3s
LPH   Laupahoehoe       55.60  92 eP      P       08 50 13.4 -0.1
CHGR  Chuyangaron       55.86 294 eP      P       08 50 15.1 -0.1
      comp=Z,11nm,0.7s
ABKAR Akbulak array     57.33 309 eP      P       08 50 25.9 +0.5
      comp=Z,4.5nm,0.6s
CISI  Cisompet, Garu    57.40 223 eP      P       08 50 27.0 +0.7
      comp=Z,96nm,1.4s
KBL   Kabul             57.85 290 eP      P       08 50 28.8 -0.7
      comp=Z,6.4nm,0.9s
KBL   Kabul             57.85 290 eP      P       08 50 28.8 -0.7
KBL                                pmax   pmax
      comp=Z,6.0nm,0.9s
RES   Resolute Bay      59.57  15 eP      P       08 50 39.6 -1.0
      comp=Z,44nm,1.9s
RES   Resolute Bay      59.57  15 eP      P       08 50 39.6 -1.0
RES                                pmax   pmax
      comp=Z,44nm,1.9s
WRAB  Tennant Creek     59.99 190 eP      P       08 50 43.9 -0.2
      comp=Z,41nm,1.6s
WRAB  Tennant Creek     59.99 190 eP      P       08 50 43.9 -0.2
WRAB                               pmax   pmax
      comp=Z,41nm,1.6s
WB2   Warramunga Arr    60.00 190 eP      P       08 50 45.4 +1.3
      comp=Z,44nm,1.8s
WR1   Warramunga Arr    60.00 190 eP      P       08 50 43.8 -0.4
WRA   Warramunga Arr    60.00 190  P      P       08 50 43.8 -0.4
      comp=Z,2.3nm,0.9s,baz=359,slow=8.5,SNR=5.3
WC3   Warramunga Arr    60.01 190 eP      P       08 50 44.7 +0.4
      comp=Z,52nm,1.8s
ARA0  ARCESS Array S    61.95 339 eP      P       08 50 57.2 +0.3
ARCES ARCESS Array B    61.95 339  P      P       08 50 57.2 +0.3
      comp=Z,1.3nm,0.8s,baz=64,slow=8.2,SNR=5.6
SGF   Sodankyl          63.00 337  P      P       08 51 04.8 +0.9
DAG   Danmarks Havn     63.16 355  P      P       08 51 05.6 +0.7
DAG                                pmax   pmax
      comp=Z,3.0nm,1.2s
AS31  Alice Springs     63.73 190 eP      P       08 51 08.6 -0.7
      comp=Z,0.8nm,0.8s
ASAR  Alice Springs     63.73 190  P      P       08 51 09.4 +0.2
      comp=Z,0.6nm,0.6s,baz=15,slow=6.5,SNR=7.1
GYA0B ALIBECK ARRAY     63.82 299 eP      P       08 51 10.4 +0.5
      comp=Z,6.1nm,0.4s
PSAA2 Pilbara Seismi    64.84 204 eP      P       08 51 14.6 -1.9
      comp=Z,100nm,1.8s
LTY   Liberty           65.69  48 eP      P       08 51 21.5 -0.5
      comp=Z,8.7nm,1.5s
SUF   Sumiainen         66.20 333  P      P       08 51 25.1 +0.2
FIA1  FINESS Array S    67.08 332 eP      P       08 51 30.6 +0.1
      comp=Z,26nm,1.8s
FIA0  FINESS Array S    67.08 332 eP      P       08 51 30.1 -0.4
FIA0  FINESS Array S    67.08 332 eP      P       08 51 30.1 -0.4
FINES FINESS Array B    67.08 332  P      P       08 51 30.1 -0.4
      comp=Z,2.5nm,0.7s,baz=40,slow=9.9,SNR=9.2
PINE  Pine Mountain     67.44  51 eP      P       08 51 32.3 -1.1
      comp=Z,9.3nm,1.3s
YBH   Yreka Blue Hor    67.50  54 eP      P       08 51 34.2 +0.6
      comp=Z,13nm,1.8s
YBH   Yreka Blue Hor    67.50  54 eP      P       08 51 34.3 +0.6
YBH                                pmax   pmax
      comp=Z,13nm,1.8s
E09A  Wood Farm, Sta    67.55  48 eP      P       08 51 34.2 +0.4
      comp=Z,5.8nm,1.0s
K05A  Summer Lake       68.07  52 eP      P       08 51 38.1 +0.7
      comp=Z,23nm,1.9s
WDC   Whiskeytown Da    68.25  55 eP      P       08 51 38.7 +0.4
      comp=Z,17nm,2.0s
WDC   Whiskeytown Da    68.25  55 eP      P       08 51 38.7 +0.4
WDC                                pmax   pmax
      comp=Z,17nm,2.0s
F10A  Beach Ranch, E    68.38  48 eP      P       08 51 39.7 +0.6
      comp=Z,12nm,2.0s
J08A  Circle Bar Ran    69.16  51 eP      P       08 51 43.9 -0.2
      comp=Z,3.4nm,1.0s
WVOR  Wild Horse Val    69.60  51 eP      P       08 51 46.8  0.0
      comp=Z,3.9nm,1.3s
WVOR  Wild Horse Val    69.60  51 eP      P       08 51 46.8  0.0
WVOR                               pmax   pmax
      comp=Z,4.0nm,1.3s
MSO   Missoula          69.72  46 eP      P       08 51 46.2 -1.3
      comp=Z,8.4nm,1.8s
BEKR  Beckworth         70.03  54 esP     sP      08 52 00.1 +5.6
AFDM  Forest Hills D    70.17  56 eP      P       08 51 49.8 -0.5
      comp=Z,5.5nm,1.3s
KIV   Kislovodsk        70.23 311 eP      P       08 51 50.9 +0.2
      comp=Z,15nm,1.1s
KIV   Kislovodsk        70.23 311 eP      P       08 51 52.4 +1.8
KIV                                pmax   pmax
      comp=Z,29nm,0.9s
KIV                                MLR    MLR
      comp=Z,120nm,18.0s
KBZ   Khabaz            70.25 311  P      P       08 51 51.2 +0.6
      comp=Z,4.2nm,0.8s,baz=306,slow=0.5,SNR=8.4
PAHR  Pah Rah Range     70.73  54 eP      P       08 51 54.8 +1.0
      comp=Z,2.6nm,0.9s
VCNR  Virginia City     70.81  55 eP      P       08 51 52.0 -2.3
      comp=Z,17nm,2.0s
HRY   Holter Researc    70.94  45 eP      P       08 51 53.1 -1.8
LRM   Limekiln Ridge    71.15  46 eP      P       08 51 53.2 -3.2
YERR  Yerington         71.25  55 eP      P       08 51 54.1 -2.9
      comp=Z,6.0nm,1.0s
DLMT  Dillon            71.35  46 eP      P       08 52 00.1 +2.6
      comp=Z,5.5nm,1.4s
BOZ   Bozeman (W)       71.74  46 eP      P       08 52 01.4 +1.6
      comp=Z,2.3nm,1.0s
KVN   Kaiserville       71.92  54 eP      P       08 51 59.7 -1.4
      comp=Z,4.9nm,1.1s
KVN   Kaiserville       71.92  54 eP      P       08 51 59.7 -1.4
KVN                                pmax   pmax
      comp=Z,5.0nm,1.1s
NC204 NORSAR Array S    72.17 338 eP      P       08 52 02.0  0.0
      comp=Z,98nm,1.9s
NV01  Mina Array Sit    72.17  55 eP      P       08 52 04.8 +2.2
NVAR  Mina Array Bea    72.17  55  P      P       08 52 04.8 +2.2
      comp=Z,0.4nm,0.7s,baz=296,slow=5.3,SNR=4.0
NB2   NORSAR Subarra    72.22 338  P      P       08 52 03.1 +0.8
      comp=Z,1.4nm,0.7s,baz=38,slow=5.9
NB200 NORSAR Array S    72.22 338 eP      P       08 52 03.2 +0.9
NOA   NORSAR Array B    72.22 338  P      P       08 52 03.2 +0.9
      comp=Z,2.9nm,0.8s,baz=38,slow=5.9,SNR=11
YHB   Horse Butte       72.51  46 eP      P       08 52 02.7 -1.9
      comp=Z,4.0nm,1.0s
SFJD  Kangerlussuaq     73.02   6 eP      P       08 52 05.5 -1.3
      comp=Z,60nm,2.0s
SFJD  Kangerlussuaq     73.02   6 eP      P       08 52 05.5 -1.3
SFJD                               pmax   pmax
      comp=Z,60nm,2.0s
AKASG Malin Array Be    73.03 323  P      P       08 52 07.7 +0.5
      comp=Z,0.7nm,0.4s,baz=37,slow=4.8,SNR=3.5
AKBB  Malin Array Si    73.03 323 eP      P       08 52 06.3 -0.9
      comp=Z,14nm,1.4s
TPNV  Topopah Spring    74.36  55 eP      P       08 52 16.7 +1.2
      comp=Z,3.5nm,0.9s
TPNV  Topopah Spring    74.36  55 eP      P       08 52 16.7 +1.2
TPNV                               pmax   pmax
      comp=Z,4.0nm,0.9s
BW06  Boulder Array     74.69  47 eP      P       08 52 19.2 +1.8
      comp=Z,2.3nm,1.1s
PD31  Pinedale Array    74.69  47 eP      P       08 52 18.9 +1.5
      comp=Z,2.2nm,1.1s
PDAR  Pinedale Array    74.69  47  P      P       08 52 18.6 +1.2
      comp=Z,0.5nm,0.7s,baz=242,slow=3.2,SNR=5.6
PSUT  Pine Spring       74.86  52 eP      P       08 52 18.0 -0.5
      comp=Z,2.0nm,1.0s
NLU   North Lily Min    75.03  50 eP      P       08 52 19.0 -0.4
      comp=Z,44nm,1.6s
SHPR  Sheep Range       75.32  55 eP      P       08 52 21.5 +0.4
      comp=Z,3.7nm,1.2s
MSU   Marysvale         75.89  52 eP      P       08 52 22.7 -1.7
MSU   Marysvale         75.89  52 eP      P       08 52 22.7 -1.7
P17A  Butcher Ranch,    76.13  50 eP      P       08 52 24.1 -1.6
      comp=Z,2.5nm,0.5s
MTPU  Mount Pierson     76.19  52 eP      P       08 52 24.4 -1.9
      comp=Z,3.7nm,1.0s
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LCMT	Little Creek M	76.19	53	eP	P	08 52 28.2	+2.2
	comp=Z,2.6nm,0.9s						
SRU	San Rafael Swe	76.50	50	eP	P	08 52 28.6	+0.8
	comp=Z,3.4nm,0.8s						
SRU	San Rafael Swe	76.50	50	eP	P	08 52 28.6	+0.8
SRU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KWP	Kalwaria Pacla	76.76	325	eP	P	08 52 29.3	+0.5
	comp=Z,134nm,0.4s						
KWP	Kalwaria Pacla	76.76	325	eP	P	08 52 29.3	+0.5
KWP				pmax	pmax		
	comp=Z,134nm,0.4s						
BUR08	Bucovina Ar. S	77.06	322	eP	P	08 52 31.8	+1.1
	comp=Z,30nm,1.9s						
U15A	North Rim	77.16	53	eP	P	08 52 31.1	-0.6
	comp=Z,4.6nm,1.0s						
Y12C	Blythe	77.46	57	eP	P	08 52 31.8	-1.2
	comp=Z,5.2nm,0.8s						
OJC	Ojcow	77.58	327	eP	P	08 52 32.8	-0.6
	comp=Z,3.9nm,0.8s						
OJC	Ojcow	77.58	327	eP	P	08 52 32.8	-0.6
OJC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PV09	Paradox Valley	77.72	50	eP	P	08 52 34.2	-0.6
PV23	Carpenter Ridg	77.82	50	eP	P	08 52 34.0	-1.4
	comp=Z,5.5nm,1.0s						
PV14	Lion Creek, Pa	77.86	50	eP	P	08 52 36.1	+0.6
	comp=Z,6.5nm,1.0s						
PV22	Blue Mesa, Par	77.90	50	eP	P	08 52 34.4	-1.3
	comp=Z,4.3nm,1.0s						
PV20	West Nyswonger	77.92	50	eP	P	08 52 34.4	-1.4
	comp=Z,4.4nm,0.9s						
PV16	Nyswonger Mesa	77.97	50	eP	P	08 52 35.3	-0.8
	comp=Z,3.9nm,0.9s						
BR131	Keskin Array S	78.14	312	eP	P	08 52 38.0	+1.1
	comp=Z,5.5nm,1.3s						
BR131	Keskin Array S	78.14	312	eP	P	08 52 38.0	+1.1
BR131				pmax	pmax		
	comp=Z,6.0nm,1.3s						
Y14A	Wickenburg	78.31	56	eP	P	08 52 40.0	+2.1
	comp=Z,2.4nm,0.9s						
WUAZ	Wupatki	78.31	53	eP	P	08 52 39.3	+1.3
	comp=Z,4.3nm,1.0s						
KHC	Kasperske Hory	80.97	329	P	P	08 52 53.5	+1.5
KHC				pmax	pmax		
	comp=Z,2.0nm,2.1s						
GEC2	GERESS Array S	81.15	329	eP	P	08 52 53.8	+0.8
	comp=Z,8.8nm,1.6s						
GEC2	GERESS Array S	81.15	329	eP	P	08 52 53.8	+0.8
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.6s						
GERES	GERESS Array B	81.15	329	P	P	08 52 53.5	+0.5
	comp=Z,0.4nm,0.3s,baz=29,slow=8.3,SNR=2.9						
GRA1	Grafenberg Arr	81.42	331	eP	P	08 52 55.5	+1.1
	comp=Z,31nm,0.6s						
ANMO	Albuquerque	81.69	51	eP	P	08 52 54.7	-1.6
	comp=Z,3.4nm,1.3s						
ANMO	Albuquerque	81.69	51	eP	P	08 52 54.7	-1.6
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KBA	Koelnbreinsper	82.71	328	P	P	08 53 03.2	+1.8
KBA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FUORN	Ofenpass-Fuorn	84.31	330	eP	P	08 53 10.3	+0.6
	comp=Z,5.4nm,0.8s						
MSTX	Muleshoe	84.56	50	eP	P	08 53 08.7	-2.4
	comp=Z,4.4nm,1.0s						
MNTX	Cornudas Mount	84.57	53	eP	P	08 53 10.7	-0.4
	comp=Z,6.0nm,1.4s						
CLF	Chambon-Foret	85.98	335	eP	P	08 53 18.1	+0.4
	comp=Z,82nm,2.0s						
AQU	L'Aquila	86.49	325	eP	P	08 53 19.1	-1.2
	comp=Z,22nm,1.1s						
AQU	L'Aquila	86.49	325	eP	P	08 53 19.2	-1.2
AQU				pmax	pmax		
	comp=Z,22nm,1.1s						
TXAR	Lajitas Array	87.28	54	P	P	08 53 25.3	+0.7
	comp=Z,0.1nm,0.6s,baz=303,slow=5.3,SNR=2.8						

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*IDC **01** 08:45:32.5±3.5, 54°.20N×87°.55E, h0^{km}, mb1 3.1/2, mb1mx2.9/33, mbtmp3.1/2, ML2.3/2, Error ellipse: s-maj=33.0km s-min=19.9km az=39.0*

KRAR 01 08:45:35.0±0.1**, 54°.16N×87°.07E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.34	262	i		08 54 51.7	
	baz=80,slow=300,SNR=6.3						
ZALV	Zalesovo Beam	1.34	262	Pg	Pn	08 46 00.9	-0.1
	2.0nm,0.3s,baz=84,slow=16,SNR=31						
ZALV				Lg	Lg	08 46 24.9	
	3.7nm,0.3s,baz=82,slow=23,SNR=12						
KURBB	Kurchatov Arra	6.31	239	Pn	Pn	08 47 10.8	+1.6
	0.0nm,0.3s,baz=56,slow=14,SNR=14						
MKAR	Makanchi Array	7.98	204	Pn	Pn	08 47 33.3	+1.1
	0.1nm,0.3s,baz=21,slow=9.9,SNR=3.3						

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*BJI **01** 08:47:14.9±0.0, 55°.60S×28°.50W, h10^{km}, mB5.2/5, Ms5.1/6, Ms7 4.9/5*

*MOS **01** 08:47:16.5±1.0, 55°.49S×28°.59W, h25^{km}, mb5.2/14, Error ellipse: s-maj=18.2km s-min=11.1km az=106.4*

*ISCJB **01** 08:47:18.4±0.2, 55°.48S±0°.05×28°.57W±0°.08, h45^{km}, mb5.0/45, MS4.6/22, Error ellipse: s-maj=7.8km s-min=5.1km az=34.9*

*NEIC **01** 08:47:19.4±1.9, 55°.49S×28°.56W, h35^{km}, mb5.1/44, Error ellipse: s-maj=16.4km s-min=12.9km az=197.0*

*IDC **01** 08:47:20.8±2.5, 55°.41S×28°.43W, h44^{km}±22^{km}, mb4.5/10, mb1 4.6/11, mb1mx4.3/18, mbtmp4.8/11, ML5.4/1, MS4.5/17, Ms1 4.5/17, ms1mx4.4/21, Error ellipse: s-maj=20.8km s-min=15.0km az=52.0*

*GCMT **01** 08:47:21.4±0.2, 55°.55S±0°.01×28°.61W±0°.02, h21^{km}, MW5.1/89, Moment Tensor Solution. s53,c78; s89,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.36±.18; M$_{\theta\theta}$0.87±.13; M$_{\phi\phi}$2.49±.13; M$_{r\theta}$-4.15±.28; M$_{\theta\phi}$3.13±.09; M$_{\phi r}$-0.15±.19; Best double couple: M$_0$6.00500×10^{16} NP1:ϕ_s69.00000°,δ70.00000°,λ-58.00000°. NP2: ϕ_s188.00000°,δ37.00000°,λ-145.00000°. Principal axes: T 5.8200, Plg19.0000°, Azm136.0000°; N 0.3690, Plg30.0000°, Azm237.0000°; P -6.1900, Plg54.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 08:47:19.9±0.3**, 55°.52S**±0°.07×**28°.61W**±0°.06**, h45**^{km}**, n226,** σ1^{s}**22**/219**, mb5.1**/43**, MS4.6**/22**, 8C-2D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	4.71	282	ePn	Pn	08 48 27.9	-0.5
HOPE				eSn	Sn	08 49 20.7	-1.1
VNA1	Neumayer--Stat	17.59	157	P	P	08 51 23.3	+1.4
VNA3	Neumayer Olymp	17.76	160	P	P	08 51 24.8	+1.0
EFI	East Falkland	17.83	270	ePn	Pn	08 51 22.4	-2.0
	96nm,1.4s						
EFI	East Falkland	17.83	270	eP	Pn	08 51 22.4	-2.0
EFI				pmax	pmax		
	comp=Z,96nm,1.4s						
VNA2	Neumayer--Watz	17.98	157	P	P	08 51 27.2	+1.0
SNAA	Sanae	19.55	156	P	P	08 51 44.1	+0.6
SNAA	Sanae	19.55	156	P	P	08 51 44.1	+0.6
	comp=Z,11nm,0.3s,baz=308,slow=9.5,SNR=467						
SNAA				LR	LR	08 57 55.5	
	comp=Z,3µm,21.0s,baz=335,slow=32						
SNAA	Sanae	19.55	156	eP	P	08 51 44.0	+0.5
	comp=Z,39nm,0.6s						
SNAA	Sanae	19.55	156c	iP	P	08 51 43.8	+0.3
PMSA	Palmer Station	19.65	228	LR	LR	08 58 12.4	
	comp=Z,595nm,18.9s,baz=62,slow=33						
PMSA	Palmer Station	19.65	228	eP	P	08 51 44.9	+0.4
	comp=Z,91nm,1.2s						
TRQA	Tornquist	28.38	294	eP	P	08 53 10.5	+0.8
	comp=Z,21nm,1.3s						
TRQA	Tornquist	28.38	294	eP	P	08 53 10.5	+0.8
TRQA				pmax	pmax		
	comp=Z,21nm,1.3s						
PLCA	Paso Flores	31.12	281	P	P	08 53 34.7	+0.7
	comp=Z,3.7nm,1.1s,baz=194,slow=12,SNR=2.8						
PLCA				LR	LR	09 07 11.0	
	comp=Z,449nm,18.1s,baz=135,slow=38						
PLCA	Paso Flores	31.12	281	eP	P	08 53 34.0	0.0
	comp=Z,8.8nm,1.3s						
SYO	Syowa Base	32.50	141⇓	esP	P	08 53 45.3	-0.4
SYO	Syowa Base	32.50	141⇑	ePnPn	PnPn	08 54 47.8	-6.0
QSPA	South Pole Qui	34.73	180	eP	P	08 54 07.5	+2.1
	comp=Z,32nm,1.4s						
CPUP	Villa Florida	35.86	313	P	P	08 54 15.6	+0.4
	comp=Z,13nm,0.8s,baz=158,slow=6.2,SNR=14						
CPUP				LR	LR	09 07 49.6	
	comp=Z,983nm,21.2s,baz=152,slow=34						
CPUP	Villa Florida	35.86	313	eP	P	08 54 15.7	+0.4
	comp=Z,37nm,1.3s						
CPUP	Villa Florida	35.86	313	eP	P	08 54 15.7	+0.4
CPUP				pmax	pmax		
	comp=Z,37nm,1.3s						
CPUP	Villa Florida	35.86	313	eP	P	08 54 15.6	+0.4
GO05	Huala	35.96	286	eP	P	08 54 15.7	-0.4
	comp=Z,8.9nm,0.8s						
PEL	Peldehue	36.70	290	eP	P	08 54 23.1	+0.7
	comp=Z,14nm,0.8s						
PEL	Peldehue	36.70	290	eP	P	08 54 23.1	+0.7
PEL				pmax	pmax		
	comp=Z,14nm,0.8s						
BSFB	Barra de Sao F	37.79	341	eP	P	08 54 32.5	+0.9
GO04	Tololo Observa	39.09	293	eP	P	08 54 42.8	0.0
	comp=Z,94nm,1.4s						
PMNB	Patos De Minas	39.33	333	eP	P	08 54 45.5	+0.9
LCO	Las Campanas	39.96	294	eP	P	08 54 49.3	-0.8
	comp=Z,79nm,1.5s						
LCO	Las Campanas	39.96	294c	eP	P	08 54 51.7	+1.6
AQDB	Aquidauana	40.47	319	eP	P	08 54 55.4	+1.3
GO03	Copiap	40.87	296	eP	P	08 54 58.3	+1.0
	comp=Z,17nm,1.0s						
MAW	Mawson	41.05	144	P	P	08 54 59.5	+1.2
	comp=Z,3.3nm,0.7s,baz=210,slow=5.2,SNR=5.4						
MAW				LR	LR	09 09 36.4	
	comp=Z,652nm,21.8s,baz=254,slow=32						
MAW	Mawson	41.05	144	eP	P	08 54 57.7	-0.6
	comp=Z,1.6nm,0.8s						
SUR	Sutherland	41.29	77	eP	P	08 54 59.8	-1.2
	comp=Z,35nm,1.1s						
BDFB	Brasilia	42.51	332	P	P	08 55 11.5	+0.6
	comp=Z,7.3nm,0.9s,baz=173,slow=5.4,SNR=8.6						
BDFB				LR	LR	09 10 18.8	
	comp=Z,1µm,21.1s,baz=149,slow=32						
BDFB	Brasilia	42.51	332	eP	P	08 55 11.5	+0.6
BDFB				eP	P	08 55 11.8	+0.9
GO02	Mina Guanaco	42.54	298	eP	P	08 55 12.5	+1.2
	comp=Z,68nm,1.4s						
SHEL	Horse Pasture	43.21	33	eP	P	08 55 16.3	-0.2
	comp=Z,158nm,1.3s						
SHEL	Horse Pasture	43.21	33	eP	P	08 55 16.6	+0.1
LVC	Limon Verde	44.34	301	eP	P	08 55 27.3	+1.4
	comp=Z,27nm,1.3s						
LVC	Limon Verde	44.34	301	eP	P	08 55 27.3	+1.4
LVC				pmax	pmax		
	comp=Z,27nm,1.3s						
LVC	Limon Verde	44.34	301	eP	P	08 55 26.8	+0.8
PB10	IPOC Station P	44.39	299	eP	P	08 55 27.3	+1.4
	comp=Z,59nm,1.3s						
PB04	IPOC Station P	45.18	300	eP	P	08 55 33.5	+1.1
	comp=Z,60nm,1.3s						
PB01	IPOC Station P	45.95	302	eP	P	08 55 38.4	0.0
	comp=Z,23nm,0.9s						
SBA	Scott Base	46.55	184	eP	P	08 55 42.6	+0.3
SBA	Scott Base	46.55	184	eP	P	08 55 42.6	+0.3
BOSA	Boshof	46.63	78	P	P	08 55 44.1	+0.4
	comp=Z,21nm,1.0s,baz=212,slow=7.5,SNR=19						
BOSA				LR	LR	09 11 10.8	
	comp=Z,515nm,20.1s,baz=216,slow=31						
BOSA	Boshof	46.63	78	eP	P	08 55 44.2	+0.6
	comp=Z,31nm,1.0s						
BOSA	Boshof	46.63	78	eP	P	08 55 44.3	+0.6
BOSA				pmax	pmax		
	comp=Z,31nm,1.0s						
GO01	Chusmiza	46.99	303	eP	P	08 55 48.2	+1.2
	comp=Z,20nm,0.8s						
VNDA	Vanda	47.06	183	P	P	08 55 48.7	+2.4
	comp=Z,3.8nm,0.8s,baz=183,slow=6.7,SNR=27						
VNDA				LR	LR	09 14 43.2	
	comp=Z,177nm,20.9s,baz=170,slow=35						
VNDA	Vanda	47.06	183	eP	P	08 55 48.1	+1.8
PB11	IPOC Station P	47.13	302	eP	P	08 55 46.9	-0.8
	comp=Z,43nm,1.1s						
MNMC	Minye Minye	47.64	303	eP	P	08 55 53.3	+1.5
	comp=Z,20nm,0.7s						
H10S2	ASCENSION HYDR	47.74	19	T	T	09 47 51.0	
	baz=190,slow=75,SNR=55						
H10S3	ASCENSION HYDR	47.74	19	T	T	09 47 53.4	
	baz=190,slow=75,SNR=50						
H10S1	ASCENSION HYDR	47.76	19	T	T	09 47 52.1	
	baz=190,slow=75,SNR=61						
CRZF	Crozet Islands	48.76	115	eP	P	08 55 59.4	-0.4
	comp=Z,129nm,1.3s						
H10N1	ASCENSION HYDR	48.86	19	T	T	09 49 15.0	
	baz=190,slow=75,SNR=21						
H10N3	ASCENSION HYDR	48.86	19	T	T	09 49 14.4	
	baz=190,slow=75,SNR=38						
H10N2	ASCENSION HYDR	48.88	19	T	T	09 49 02.1	
	baz=190,slow=75,SNR=31						
LPAZ	La Paz	49.42	306	P	P	08 56 07.4	+1.5
	comp=Z,17nm,0.8s,baz=149,slow=5.8,SNR=70						
LPAZ				PcP	PcP	08 57 29.1	+1.4
	comp=Z,7.7nm,0.8s,baz=121,slow=3.0,SNR=4.0						
LPAZ				LR	LR	09 18 27.7	
	comp=Z,273nm,20.4s,baz=142,slow=38						
LPAZ	La Paz	49.42	306	eP	P	08 56 06.8	+0.9
	comp=Z,21nm,0.8s						
LPAZ	La Paz	49.42	306	eP	P	08 56 07.4	+1.5
LBTB	Lobatse	49.63	75	eP	P	08 56 06.9	0.0
	comp=Z,48nm,1.1s						
LBTB	Lobatse	49.63	75	eP	P	08 56 06.9	0.0
LBTB				pmax	pmax		
	comp=Z,48nm,1.1s						
RCBR	Riachuelo	49.90	350	eP	P	08 56 08.3	-0.5
	comp=Z,30nm,1.3s						
RCBR	Riachuelo	49.90	350	eP	P	08 56 08.3	-0.5
RCBR				pmax	pmax		
	comp=Z,30nm,1.3s						
TSUM	Tsumeb	50.14	63	eP	P	08 56 10.3	-0.5
	comp=Z,22nm,1.2s						
CASY	Casey	54.67	161	eP	P	08 56 42.8	-0.8
	comp=Z,18nm,1.5s						
NNA	Nana	57.29	300	eP	P	08 57 04.1	+1.0
	comp=Z,37nm,1.3s						
NNA	Nana	57.29	300	eP	P	08 57 04.1	+1.0
NNA				pmax	pmax		
	comp=Z,37nm,1.3s						
LSZ	Lusaka	58.94	71	eP	P	08 57 14.4	-0.3
	comp=Z,23nm,1.4s						
LSZ	Lusaka	58.94	71	eP	P	08 57 14.4	-0.3
LSZ				pmax	pmax		
	comp=Z,23nm,1.4s						
PTGA	Pitinga	60.27	323	LR	LR	09 23 11.2	
	comp=Z,549nm,20.0s,baz=154,slow=36						
PTGA	Pitinga	60.27	323	eP	P	08 57 23.8	+0.2
	comp=Z,5.5nm,0.8s						
MDP	Montagnes des	63.60	333	LR	LR	09 23 01.2	
	comp=Z,742nm,20.2s,baz=142,slow=34						
DBIC	Dimbokro	65.03	26	P	P	08 57 55.7	+0.4
	comp=Z,6.0nm,0.6s,baz=177,slow=8.4,SNR=12						
DBIC				LR	LR	09 18 44.0	
	comp=Z,194nm,20.9s,baz=172,slow=29						
DBIC	Dimbokro	65.03	26	eP	P	08 57 55.4	+0.1
	comp=Z,9.7nm,0.8s						
ABPO	Ambohimpanom	66.54	90	eP	P	08 58 03.5	-1.8
	comp=Z,7.9nm,1.2s						
ABPO	Ambohimpanom	66.54	90	eP	P	08 58 03.5	-1.8
ABPO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
FLOC	Florencia	68.61	308	eP	P	08 58 17.9	-0.2
OTAV	Otavalo	68.70	305	eP	P	08 58 18.8	-0.5
	comp=Z,14nm,1.3s						
OTAV	Otavalo	68.70	305	eP	P	08 58 18.8	-0.5
OTAV				pmax	pmax		
	comp=Z,14nm,1.3s						
OTAV	Otavalo	68.70	305	eP	P	08 58 19.7	+0.4
OTAV	Otavalo	68.70	305	eP	P	08 58 19.8	+0.6
SOTA	Rioblanco	69.53	308	eP	P	08 58 24.9	+0.5
PCON	Cinco Dias	69.60	308	eP	P	08 58 28.4	+3.4
BBAC	Balboa, Cauca	69.71	307	eP	P	08 58 25.8	+0.5
POPC	Popayan, Colom	69.92	308	eP	P	08 58 28.4	+1.9
ORTC	Ortega, Tolima	70.50	310	eP	P	08 58 29.3	-0.5
ROSC	El Rosal	70.93	311	LR	LR	09 29 50.0	
	comp=Z,213nm,20.9s,baz=168,slow=36						
YOTC	Yotoco, Valle	71.05	309	eP	P	08 58 31.9	-1.4
GUY2C	Guyana, Caldas	71.72	310	eP	P	08 58 36.3	-1.5
PLMC	San Jos del P	71.84	309	eP	P	08 58 36.3	-1.7
PTBC	PUERTO BERRIO,	72.51	312	eP	P	08 58 38.9	-3.0
SOCV	Socops	72.61	316	eP	P	08 58 43.3	+0.8
MBAR	Mbarara	72.63	64	i P	P	08 58 41.5	-1.4
MBAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TOA0	Torodi Ar. Sit	73.00	31	eP	P	08 58 45.7	+1.0
	comp=Z,40nm,0.6s						
TORD	Torodi Ar. Bea	73.00	31	P	P	08 58 43.7	-1.0
	comp=Z,22nm,0.5s,baz=205,slow=4.9,SNR=126						
TORD				LR	LR	09 23 59.5	
	comp=Z,489nm,21.3s,baz=280,slow=30						
TOA1	Torodi Ar. Sit	73.01	31	eP	P	08 58 43.7	-1.1
KMBO	Kilima Mbogo	75.61	70	LR	LR	09 29 03.1	
	comp=Z,268nm,20.5s,baz=177,slow=33						
JTS	Las Juntas de	80.55	304	eP	P	08 59 26.9	-0.4
	comp=Z,33nm,1.4s						
JTS	Las Juntas de	80.55	304	eP	P	08 59 26.9	-0.4
JTS				pmax	pmax		
	comp=Z,33nm,1.4s						
BFZ	Birch Farm	81.85	199	eP	P	08 59 29.6	-4.4
	comp=Z,65nm,0.8s						
ACON	Acoyapa	82.12	304	eP	P	08 59 33.1	-2.5
	comp=Z,17nm,0.9s						
TAM	Tamanrasset	83.25	31	eP	P	08 59 43.6	+2.1
	comp=Z,21nm,1.1s						
TAM	Tamanrasset	83.25	31	eP	P	08 59 43.6	+2.1
TAM				pmax	pmax		
	comp=Z,21nm,1.1s						
TBI	Tubuai	86.78	232	eLR	LR	09 27 33.3	
	comp=Z,142nm,26.8s						
H08N3	Diego Garcia H	90.23	101	T	T	10 40 42.8	
	baz=217,slow=75,SNR=40						
H08N1	Diego Carcia H	90.24	101	T	T	10 40 44.1	
	baz=217,slow=75,SNR=35						
H08N2	Diego Garcia H	90.25	101	T	T	10 40 44.4	
	baz=217,slow=75,SNR=41						
PPT2	Papeete2	91.84	235	eLR	LR	09 29 55.0	
	comp=Z,98nm,22.5s						
STKA	Stephens Creek	92.55	172	LR	LR	09 39 18.8	
	comp=Z,619nm,20.6s,baz=193,slow=34						
TLIG	Tlapa	93.49	296	eP	P	09 00 32.5	+1.8
	comp=Z,18nm,1.1s						
ASAR	Alice Springs	99.73	164	P	Pdif	09 00 59.2	+0.2
	comp=Z,0.9nm,1.0s,baz=186,slow=4.7,SNR=7.5						
ASAR				LR	LR	09 44 30.4	
	comp=Z,553nm,18.9s,baz=174,slow=34						
AS31	Alice Springs	99.73	164	ePdif	Pdif	09 01 00.2	+1.2
	comp=Z,1.5nm,1.1s						
DZM	Mont Dzumac	101.66	194	eLR	LR	09 34 24.7	
	comp=Z,406nm,24.1s						
ANMO	Albuquerque	111.76	300⇑	iPKIKP	PKiKP	09 05 49.6	+0.3
SHA1	Shidzhatmaz	115.74	50	i PKIKP	PKPdf	09 05 56.4	-0.2
KIV	Kislovodsk	115.93	50	i PKIKP	PKPdf	09 05 56.7	-0.1
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
PD31	Pinedale Array	119.38	303	ePKPdf	PKPdf	09 06 03.6	-0.1
PDAR	Pinedale Array	119.38	303	PKP	PKPdf	09 06 03.0	-0.7
	comp=Z,0.4nm,0.7s,baz=134,slow=4.3,SNR=3.7						
NV01	Mina Array Sit	120.45	294	ePKPdf	PKiKP	09 06 06.5	+0.5
NVAR	Mina Array Bea	120.45	294	PKP	PKiKP	09 06 06.5	+0.5
	comp=Z,0.6nm,0.8s,baz=222,slow=2.0,SNR=4.9						
FXWY	Fox Creek	120.74	303	ePKPdf	PKiKP	09 06 07.0	+0.6
OBN	Obninsk	122.42	38⇑	ePKIKP	PKiKP	09 06 09.1	+0.2
OBN				e		09 07 47.9	
OBN				eSS	SS	09 24 43.0	+19
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WVOR	Wild Horse Val	123.59	297	ePKPdf	PKiKP	09 06 13.6	+1.7
MOD	Modoc Plateau	124.05	296	ePKPdf	PKPdf	09 06 09.7	-2.9
J08A	Circle Bar Ran	124.18	298	ePKPdf	PKiKP	09 06 14.7	+1.7
FIA0	FINESS Array S	124.29	28	ePKPdf	PKiKP	09 06 12.7	+0.2
FIA0	FINESS Array S	124.29	28	ePKIKP	PKiKP	09 06 12.7	+0.2
FINES	FINESS Array B	124.29	28	PKP	PKiKP	09 06 12.7	+0.2
	comp=Z,3.3nm,0.5s,baz=140,slow=1.7,SNR=24						
MSO	Missoula	124.49	304	ePKPdf	PKiKP	09 06 13.8	+0.3
BMO	Blue Mountains	124.68	300	ePKPdf	PKPdf	09 06 13.6	0.0
BMO	Blue Mountains	124.68	300	ePKIKP	PKPdf	09 06 13.6	0.0
GAR	Garm	125.75	72	ePKPdf	PKPdf	09 06 15.8	-0.1
GAR	Garm	125.75	72	ePKIKP	PKPdf	09 06 15.8	-0.1
G08A	Pilot Rock	125.81	299	ePKPdf	PKiKP	09 06 17.2	+1.0
HUMO	Hull Mountain	125.92	295	ePKPdf	PKiKP	09 06 17.8	+1.4
CMAR	Chiang Mai Arr	126.00	112	PKP	PKiKP	09 06 17.9	+0.6
	comp=Z,0.8nm,0.3s,baz=240,slow=3.8,SNR=6.6						
ABKAR	Akbulak array	127.73	56	ePKPdf	PKiKP	09 06 20.0	+0.3
SUMG	Summit	127.99	356	ePKPdf	PKiKP	09 06 20.6	+0.6
SUMG	Summit	127.99	356	ePKIKP	PKiKP	09 06 20.7	+0.6
KK31	Karatay Array	128.76	68	ePKPdf	PKiKP	09 06 22.0	-0.1
KK31	Karatay Array	128.76	68	ePKIKP	PKiKP	09 06 22.0	-0.1
KKAR	Karatay Array	128.76	68	ePKPdf	PKiKP	09 06 22.0	0.0
KKAR	Karatay Array	128.76	68	ePKIKP	PKiKP	09 06 22.0	0.0
KSH	Kashi	129.20	75	ePKP	PKiKP	09 06 23.1	-0.1
KSH				PKS		09 09 58.9	
PRGR	Permogore	130.46	37	ePKIKP	PKPdf	09 06 23.6	-0.3
PRGR				pmax	pmax		
	comp=Z,22nm,1.0s						
AAK	Ala-Archa	130.56	71	i PKIKP	PKPdf	09 06 24.5	-0.5
ARA0	ARCESS Array S	130.75	22	ePKPdf	PKiKP	09 06 25.0	-0.2
ARCES	ARCESS Array B	130.75	22	PKP	PKiKP	09 06 25.0	-0.2
	comp=Z,3.2nm,0.7s,baz=191,slow=2.0,SNR=18						
LVZ	Lovozero	131.65	27	ePKPdf	PKPdf	09 06 25.7	-0.4
LVZ	Lovozero	131.65	27	ePKIKP	PKPdf	09 06 25.7	-0.4
ARU	Arti	131.94	48	i PKIKP	PKiKP	09 06 28.1	+0.2
ARU						09 08 54.4	
ARU				SS	SS	09 26 20.2	-2.1
KMI	Kunming	133.46	110	PKP	PKPdf	09 06 30.6	-0.5
BRVK	Borovoye	135.14	58⇑	iPKIKP	PKPdf	09 06 33.5	+0.4
YKA	Yellowknife Ar	135.24	319	PKP	PKPdf	09 06 33.8	+0.9
	comp=Z,3.9nm,0.9s,baz=120,slow=2.4,SNR=7.3						
YKA				SKPbc	SKPbc	09 09 59.5	-0.2
	comp=Z,1.5nm,0.9s,baz=112,slow=2.9,SNR=4.6						
YKB5	Yellowknife Ar	135.24	319	ePKPdf	PKPdf	09 06 33.8	+0.9
YKB5				eSKPbc	SKPbc	09 09 59.5	-0.2
GYA	Guiyang	136.61	113	ePKP	PKiKP	09 06 39.0	+0.4
GYA				PP	PP	09 09 26.0	+6.7
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
MK32	Makanchi Array	137.48	72	ePKPdf	PKPdf	09 06 37.3	-0.4
MKAR	Makanchi Array	137.48	72	PKP	PKPdf	09 06 37.3	-0.4
	comp=Z,0.5nm,0.7s,baz=188,slow=4.2,SNR=3.9						
KURK	Kurchatov	137.90	65⇑	iPKIKP	PKPdf	09 06 38.9	+0.7
CD2	Chengdu	138.57	106	PKP	PKPdf	09 06 39.5	-0.7
WMQ	Urumqi	138.59	79	ePKP	PKPdf	09 06 37.8	-2.1
WMQ				LR	LR		
	comp=Z,200nm,22.9s						
WMQ				LR	LR		
	comp=Z,410nm,21.7s						
WMQ				LR	LR		
	comp=Z,270nm,20.9s						
SKAG	Skagway	142.26	307	ePKPdf	PKPdf	09 06 42.8	-3.1
LZH	Lanzhou	142.49	101	ePKP	PKPdf	09 06 42.5	-4.8
LZH				pPKP	PKiKP	09 06 53.8	+3.4
LZH				sPKP		09 06 56.7	
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
GTA	Gaotai	142.55	93	ePKP	PKPdf	09 06 48.1	+0.8
WHY	Whitehorse	142.60	309	ePKPpre	PKPdf	09 06 43.5	-3.1
ZALV	Zalesovo Beam	142.86	64	PKP	PKPdf	09 06 44.8	-2.3
	comp=Z,1.0nm,0.5s,baz=230,slow=3.7,SNR=5.0						
ZAA1	Zalesovo Array	142.86	64	ePKPpre	PKPdf	09 06 44.8	-2.4
XAN	Xi'an	143.77	108	PKP	PKiKP	09 06 52.6	-0.3
PCA	Pinnacle	144.78	306	ePKPdf	PKPdf	09 06 51.0	+0.6
INK	Inuvik	144.89	321	ePKPdf	PKPdf	09 06 50.9	+0.7
INK	Inuvik	144.89	321	ePKIKP	PKPdf	09 06 50.9	+0.7
EPYK	Eagle Plains	145.49	317	ePKPdf	PKPab	09 06 52.5	+0.6
DAWY	Dawson	145.84	313	ePKPdf	PKPab	09 06 53.4	+0.1
HMT	Hamilton	146.73	305	ePKPbc	PKPab	09 06 56.4	-0.4
EGAK	Eagle	146.79	314	ePKPbc	PKPbc	09 06 55.9	+0.4
NJ2	Nanjing	147.30	122	ePKPbc	PKPdf	09 06 54.7	-0.8
EYAK	Cordova Ski Ar	147.49	305	ePKPbc	PKiKP	09 06 59.0	-0.6
DOT	Dot Lake	147.69	311	ePKPbc	PKiKP	09 06 59.5	-0.5
RIDG	Independent Ri	148.05	311	ePKPbc	PKiKP	09 07 00.8	0.0
PAX	Paxson	148.11	310	ePKPbc	PKPbc	09 06 59.9	+0.6
PAX	Paxson	148.11	310	ePKP2	PKPbc	09 06 59.9	+0.6
SCM	Sheep Creek Mo	148.62	307	ePKPbc	PKiKP	09 07 02.4	+0.4
SCM	Sheep Creek Mo	148.62	307	ePKP2	PKiKP	09 07 02.4	+0.4
PRP	Porcupine Dome	148.76	314	ePKPbc	PKiKP	09 07 02.0	-0.3
FYU	Fort Yukon	148.85	316	ePKPbc	PKiKP	09 07 02.7	+0.5

SML	Sawmill	149.07	307	*e*PKPbc	PKiKP	09 07 03.0	+0.1
SML	Sawmill	149.07	307	*e*PKP2	PKiKP	09 07 03.0	+0.1
SEW	Seward	149.09	303	*e*PKPbc	PKiKP	09 07 03.2	+0.3
HDA	Harding Lake	149.11	312	*e*PKPbc	PKiKP	09 07 02.5	-0.4
BTO	Baotou	149.12	101	*e*PKPbc	PKPbc	09 07 02.9	+0.3
ILAR	Eielson Array	149.17	313	PKP	PKPdf	09 06 56.6	-0.9
	comp=Z,1.0nm,1.1s,baz=290,slow=2.2,SNR=5.3						
ILAR				PKPbc	PKiKP	09 07 02.6	-0.3
	comp=Z,39nm,1.0s,baz=126,slow=1.8,SNR=173						
ILB	Eielson Array	149.17	313	*e*PKPbc	PKPbc	09 07 02.0	+0.2
PMR	Palmer	149.38	306	*e*PKPbc	PKiKP	09 07 03.6	+0.2
PMR	Palmer	149.38	306	*e*PKP2	PKiKP	09 07 03.6	+0.2
CCB	Clear Creek Bu	149.53	312	*e*PKPbc	PKiKP	09 07 03.3	-0.4
COLA	College	149.59	313	*e*PKPbc	PKiKP	09 07 03.9	+0.1
COLA				*e*PKPab	pPKPdf	09 07 09.8	-1.0
COLA	College	149.59	313*d*	*i*PKP2	PKPbc	09 07 02.2	-0.6
COLA				pmax	pmax		
	comp=Z,29nm,1.0s						
WRH	Wood River Hil	149.61	312	*e*PKPbc	PKiKP	09 07 03.5	-0.3
RND	Reindeer	149.71	310	*e*PKPbc	PKiKP	09 07 04.7	+0.5
RND				*e*PKPab	pPKPdf	09 07 10.5	-0.6
CNPM	China Poot	149.77	302	*e*PKPbc	PKiKP	09 07 04.9	+0.5
MCK	McKinley	149.82	310	*e*PKPbc	PKiKP	09 07 04.3	-0.1
MCK	McKinley	149.82	310	*e*PKP2	PKiKP	09 07 04.3	-0.1
KDAK	Kodiak Island	149.86	298	*i* PKP2	PKiKP	09 07 05.0	+0.4
HHC	Hu-ho-hao-te	150.14	103	PKPbc	PKPdf	09 07 01.2	+1.2
HHC				LR	LR		
	comp=Z,84nm,17.0s						
HHC				LR	LR		
	comp=Z,100nm,17.9s						
MOY	Mondy	150.38	76	*e*PKIKP	PKiKP	09 07 06.8	+0.8
MOY				pmax	pmax		
	comp=Z,31nm,1.5s						
TOLK	Toolik Lake Re	150.76	320	*e*PKPbc	PKiKP	09 07 06.4	+0.2
TOLK				*e*PKPab	PKPab	09 07 15.0	+2.1
RSO	Redoubt South	150.77	303	*e*PKPbc	PKiKP	09 07 06.6	-0.1
BPAW	Bear Paw Mtn.	150.78	311	*e*PKPbc	PKiKP	09 07 06.6	+0.2
COLD	Coldfoot	150.89	317	*e*PKPbc	PKiKP	09 07 07.5	+1.1
COLD				*e*PKPab	PKPab	09 07 13.5	0.0
ZAK	Zakamensk	151.04	80	*e*PKIKP	PKiKP	09 07 07.3	-0.1
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
PPLA	Purkeypile	151.08	308	*e*PKPbc	PKPbc	09 07 06.8	+0.2
SONA0	Songino Array	151.50	87	*e*PKPbc	PKPbc	09 07 08.3	+0.2
SONM	Songino Array	151.50	87	PKPbc	PKPbc	09 07 08.3	+0.2
	comp=Z,5.2nm,0.7s,baz=177,slow=3.0,SNR=5.7						
TLY	Talaya	151.85	78	*e*PKIKP	PKiKP	09 07 09.9	+0.9
TLY				pmax	pmax		
	comp=Z,19nm,0.8s						
ULN	Ulaanbaatar	151.88	87*c*	*i*PKIKP	PKiKP	09 07 10.0	+0.7
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
RDOG	Red Dog Mine	155.72	319	*e*PKPab	PKPab	09 07 35.3	+1.4
BOD	Bodaibo	159.50	68	*e*PKP2	PKPab	09 07 50.9	+0.4
BOD				pmax	pmax		
	comp=Z,7.0nm,1.6s						
CN2	Changchun	159.65	114	*e*PKP	PKPdf	09 07 09.0	-3.7
CN2				*e*PP	PP	09 11 32.0	-1.6
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
CN2				LR	LR		
	comp=Z,700nm,21.0s						

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*IDC **01** 09:03:06.2±2.4, 21°.51N×92°.12E, h0^{km}, mb3.7/2, mb1 3.7/3, mb1mx3.3/48, mbtmp3.6/3, ML4.3/1, MS3.8/3, Ms1 3.8/3, ms1mx2.9/54, Error ellipse: s-maj=106.5km s-min=26.8km az=56.0*

*NDI **01** 09:03:08.6±2.2, 21°.83N×93°.17E, h28^{km}±9^{km}, ML3.1*

*ISCJB **01** 09:03:12.7±0.9, 22°.15N±0°.06×93°.14E±0°.07, h42^{km}, mb3.6/2, Error ellipse: s-maj=9.5km s-min=8.2km az=155.3*

ISC 01 09:03:14.3±1.3**, 22°.13N**±0°.08×**93°.03E**±0°.07**, h42**^{km}**, n15, σ1.^{s}92**/19**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAIH	SAIHA	0.36	354	*e*P	Pn	09 03 21.9	-1.7
SAIH				*e*S	Sn	09 03 31.7	+1.6
SAIH				IAML		09 03 33.2	
	comp=E,1µm,0.1s						
SAIH				IAML		09 03 33.6	
	comp=N,941nm,0.2s						
BELO	BELONIA	1.84	308	*e*P	Pn	09 03 43.3	-0.1
BELO				*e*S	Sn	09 04 07.9	+2.4
BELO				IAML		09 04 13.1	
	comp=E,293nm,0.1s						
BELO				IAML		09 04 14.6	
	comp=N,427nm,0.2s						
IMP	Imphal	2.82	17	*e*P	Pn	09 03 59.3	+2.3
IMP				*e*S	Sn	09 04 33.6	+3.8
SHL	Shillong	3.58	343	*e*P	Pn	09 04 06.3	-1.2
SHL				*e*S	Sn	09 04 49.2	+0.5
SHL				IAML		09 04 54.0	
	comp=N,15nm,0.3s						
SHL				IAML		09 04 54.8	
	comp=E,23nm,0.2s						
KOHI	KOHIMA	3.71	15	*e*P	Pn	09 04 07.5	-1.8
KOHI				*e*S	Sn	09 04 53.1	+1.2
TURI	Tura	4.21	325	*e*P	Pn	09 04 14.9	-1.1
MOKO	MOKOCHONG	4.39	18	*e*P	Pn	09 04 16.8	-1.8
MOKO				*e*S	Sn	09 05 07.3	-1.3
TEZP	TEZPUR	4.47	357	*e*P	Pn	09 04 18.9	-0.7
ZIRO	ZIRO	5.43	8	*e*P	Pn	09 04 33.8	+0.9
ZIRO				*e*S	Sn	09 05 31.9	-2.3
CMAR	Chiang Mai Arr	6.64	122	Pn	Pn	09 04 51.9	+2.3
	comp=E,1.4nm,0.3s,baz=295,slow=14,SNR=7.2						
MKAR	Makanchi Array	26.10	343	P	P	09 08 45.0	+0.8
	comp=E,1.4nm,0.5s,baz=155,slow=9.3,SNR=12						
PETK	Petropavlovsk-	57.46	40	LR	LR	09 38 50.5	
	comp=E,84nm,19.1s,baz=214,slow=37						
ASAR	Alice Springs	60.44	136	P	P	09 13 18.6	-1.4
	comp=E,0.3nm,0.8s,baz=315,slow=6.4,SNR=2.5						
GERES	GERESS Array B	66.76	315	LR	LR	09 46 29.2	
	comp=E,183nm,20.4s,baz=236,slow=39						
YKA	Yellowknife Ar	92.85	12	LR	LR	10 02 00.4	
	comp=E,19nm,21.1s,baz=108,slow=38						

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*IDC **01** 09:06:42.0±4.9, 17°.01S×175°.40W, h0^{km}, mb4.2/4, mb1 4.5/4, mb1mx3.7/42, mbtmp4.2/4, Error ellipse: s-maj=216.0km s-min=35.7km az=138.0*

*ISCJB **01** 09:07:05.8±0.6, 17°.4S±0°.1×175°.2W±0°.1, h250^{km}, mb4.2/12, Error ellipse: s-maj=16.1km s-min=11.6km az=43.7*

*NEIC **01** 09:07:05.4±1.4, 17°.50S×175°.13W, h226^{km}±10^{km}, mb4.1/9, Error ellipse: s-maj=20.7km s-min=16.7km az=160.0*

ISC 01 09:07:07.2±0.8**, 17°.4S**±0°.1×**175°.2W**±0°.1**, h250**^{km}**, n15, σ1.^{s}38**/15**, mb4.1**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.74	44	*e*Pn	Pn	09 08 18.7	-1.3
AFI				*e*		09 09 12.2	
FUNA	Funafuti	10.36	327	*e*P	Pn	09 09 29.2	-1.1
URZ	Urewera	21.89	196	*e*P	P	09 11 38.1	-2.0
	9.0nm,1.1s						
THZ	Tophouse	26.39	200	*e*P	P	09 12 19.4	-1.4
	18nm,1.1s						
ARMA	Armidale	32.89	241	*e*P	P	09 13 18.3	-0.1
	6.3nm,0.9s						
STKA	Stephens Creek	41.60	241	P	P	09 14 31.7	+0.6
	1.0nm,0.4s,baz=79,slow=9.2,SNR=5.7						
PTCN	Pitcairn Islan	42.56	108	*e*P	P	09 14 39.3	+0.4
	438nm,0.7s						
BBOO	Buckleboo	46.37	241	*e*P	P	09 15 09.1	+0.2
	10.0nm,1.1s						
WB2	Warramunga Arr	47.76	259	*e*P	P	09 15 20.0	+0.3
	5.7nm,1.1s						
WR1	Warramunga Arr	47.77	259	*e*P	P	09 15 19.8	-0.1
WRA	Warramunga Arr	47.77	259	P	P	09 15 19.8	-0.1
	1.4nm,0.4s,baz=84,slow=7.9,SNR=32						
AS31	Alice Springs	47.91	254	*e*P	P	09 15 21.8	+0.9
	3.5nm,0.6s						
ASAR	Alice Springs	47.91	254	P	P	09 15 21.8	+0.9
	13nm,0.6s,baz=89,slow=8.0,SNR=180						
TTA	Tatalina	81.43	9	*e*P	P	09 18 56.7	+0.7
	21nm,0.5s						
ILAR	Eielson Array	84.69	12	P	P	09 19 15.9	+3.3
	0.3nm,0.5s,baz=207,slow=5.6,SNR=4.4						

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*ISCJB **01** 09:11:37.8±0.3, 36°.61N±0°.02×97°.66W±0°.02, h10^{km}, Error ellipse: s-maj=3.6km s-min=2.7km az=13.3*

*NEIC **01** 09:11:38.0±0.0, 36°.64N×97°.68W, h4^{km}, ML3.5(TUL), After TUL.*

NEIC Felt at Kremlin, Oklahoma City and Wellston.

*ANF **01** 09:11:38.9±1.4, 36°.62N×97°.69W, h10^{km}±11^{km}, ML4.0/11, Error ellipse: s-maj=4.1km s-min=3.3km az=146.0*

*TUL **01** 09:11:38.0, 36°.64N×97°.68W, h4^{km}, ML3.5*

ISC 01 09:11:38.7±0.7**, 36°.64N**±0°.03×**97°.70W**±0°.03**, h10**^{km}**, n47, σ1.^{s}38**/65**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	1.07	157	*e*Pg	Pg	09 11 57.9	-1.3
U32A	Winter Ranch,	1.08	256	*e*Pg	Pg	09 11 58.4	-1.1
U32A				*e*Sg	Sb	09 12 13.6	-0.1
OK001	Jones High Sch	1.13	163	*e*Pg	Pb	09 11 58.5	-1.8
TUL1	Leonard	1.70	115	*e*Pn	Pb	09 12 08.6	-1.5
TUL1				*e*Sn	Sb	09 12 30.6	-1.0
TUL1	Leonard	1.70	115	P	Pb	09 12 08.5	-1.5
	baz=296						
TUL1				S	Sb	09 12 31.1	-0.4
	baz=296						
WMOK	Wichita Mounta	2.09	205	*e*Pn	Pn	09 12 14.3	+0.4
WMOK				*e*Sn	Sb	09 12 41.5	-1.4
WMOK	Wichita Mounta	2.09	205	P	Pn	09 12 14.0	+0.2
	baz=25						
WMOK				S	Sb	09 12 40.9	-1.9
	baz=25						
KSU1	Kansas State U	2.60	19	P	Pn	09 12 21.5	+0.6
	baz=199						
KSU1				S	Sb	09 12 54.3	-3.1
	baz=199						
CBKS	Cedar Bluff	2.71	324	*e*Pn	Pb	09 12 25.2	-2.0
CBKS				*e*Sn	Sn	09 12 56.6	+1.5
CBKS	Cedar Bluff	2.71	324	Pb	Pb	09 12 27.1	-0.2
	baz=143						
CBKS				Sb	Sg	09 13 02.8	-2.9
	baz=143						
HHAR	Hobbs	3.05	96	*e*Pn	Pn	09 12 27.4	+0.5
HHAR				*e*Sg	Sb	09 13 11.4	+1.0
W39A	Magazine	3.49	113	*e*Pn	Pn	09 12 33.9	+0.9
AMTX	Amarillo	3.68	243	*e*Pn	Pn	09 12 37.0	+1.2
AMTX				*e*Sn	Sn	09 13 20.8	+1.5
AMTX	Amarillo	3.68	243	P	Pn	09 12 35.8	+0.1
	baz=60						
AMTX				S	Sn	09 13 20.5	+1.2
	baz=60						
U40A	Yellville	3.91	93	P	Pn	09 12 38.7	-0.1
	baz=276						
U40A				S	Sn	09 13 25.4	+0.6
	baz=276						
MIAR	Mount Ida	3.96	121	*e*Pn	Pn	09 12 40.0	+0.6
MIAR	Mount Ida	3.96	121	P	Pn	09 12 39.8	+0.3
	baz=303						
MIAR				S	Sn	09 13 27.0	+1.2
	baz=303						
ABTX	Abilene, Hawle	4.32	202	*e*Pn	Pn	09 12 44.3	-0.2
ABTX	Abilene, Hawle	4.32	202	P	Pn	09 12 44.2	-0.2
	baz=21						
ABTX				S	Sn	09 13 36.2	+1.4
	baz=21						
X40A	Basin Creek Fa	4.51	117	*e*Pn	Pn	09 12 47.7	+0.7
X40A	Basin Creek Fa	4.51	117	P	Pn	09 12 47.6	+0.6
	baz=300						
X40A				Sb	Sb	09 13 55.5	+3.2
	baz=300						
FCAR	Ozark Folk Cen	4.56	98	*e*Pn	Pn	09 12 48.5	+0.7
FCAR				*e*Sn	Sn	09 13 40.5	-0.3
KSCO	Kaye Shedlock'	4.56	303	*e*Pn	Pn	09 12 49.5	+1.6
KSCO	Kaye Shedlock'	4.56	303	P	Pn	09 12 49.0	+1.1
	baz=120						
KSCO				S	Sn	09 13 42.2	+1.1
	baz=120						
WHAR	Wooly Hollow	4.59	105	*e*Pn	Pn	09 12 46.8	-1.3
WHTX	Lake Whitney,	4.64	177	*e*Pn	Pn	09 12 48.9	0.0
W41B	Gary Mavity, V	4.66	107	*e*Pn	Pn	09 12 47.9	-1.2
W41B	Gary Mavity, V	4.66	107	P	Pn	09 12 48.7	-0.4
	baz=290						
W41B				S	Sn	09 13 44.0	+0.8
	baz=290						
UALR	University of	4.74	112	*e*Pn	Pn	09 12 51.1	+1.0
WLAR	White Oak Lake	4.77	127	*e*Pn	Pn	09 12 50.0	-0.6
BGNE	Belgrade	4.77	356	*e*Pn	Pn	09 12 51.2	+0.5
MSTX	Muleshoe	4.93	239	*e*Pn	Pn	09 12 53.2	+0.2
CCM	Cathedral Cave	5.33	73	*e*Pn	Pn	09 12 58.4	+0.1
OGNE	Ogallala	5.47	323	*e*Pn	Pn	09 13 02.5	+2.1
PBMO	Poplar Bluff	5.84	86	*e*Pn	Pn	09 13 07.8	+2.4
Q24A	Divide	6.34	294	*e*Pn	Pn	09 13 14.1	+1.6
JCT	Junction City	6.39	197	*e*Pn	Pn	09 13 12.6	-0.4
OXF	Oxford	7.08	105	*e*Pn	Pn	09 13 19.9	-2.4
S22A	4UR Ranch, Cre	7.37	281	*e*Pn	Pn	09 13 28.9	+2.3
L40A	Anamosa	7.38	41	*e*Pn	Pn	09 13 26.6	+0.2
HDIL	Hopedale	7.65	57	*e*Pn	Pn	09 13 31.3	+1.1
BNM	Barren Site	7.71	254	*e*Pn	Pn	09 13 34.4	+3.3
SMCO	Snowmass	7.76	292	*e*Pn	Pn	09 13 33.8	+1.8
P45A	Graceland, Par	8.36	67	*e*Pn	Pn	09 13 39.2	-0.7
T47A	Sharon Grove	8.50	85	*e*Pn	Pn	09 13 42.9	+1.0
RSSD	Black Hills	8.90	329	*e*Pn	Pn	09 13 48.7	+1.2
WCI	Wyandotte Cave	9.21	77	*e*Pn	Pn	09 13 52.0	+0.4

IDC 01 09:15:45.1±1.3**, 11°.43S**×**164°.97E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/31**, mbtmp3.8**/5**, ML3.6**/1**, Error ellipse: s-maj=49.8km s-min=27.2km az=137.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.68	173	Pn	Pn	09 18 19.4	-0.1
	0.4nm,0.3s,baz=302,slow=19,SNR=4.4						
WRA	Warramunga Arr	30.64	250	P	P	09 22 01.1	-0.4
	1.8nm,1.1s,baz=80,slow=10,SNR=3.5						
ASAR	Alice Springs	31.95	243	P	P	09 22 13.3	+0.4
	0.9nm,1.0s,baz=70,slow=8.7,SNR=4.9						
ILAR	Eielson Array	84.11	19	P	P	09 28 17.5	-0.1
	0.2nm,0.5s,baz=233,slow=5.4,SNR=6.0						
NVAR	Mina Array Bea	86.85	50	P	P	09 28 32.2	+0.1
	0.5nm,0.8s,baz=225,slow=6.4,SNR=3.8						

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*ISCJB **01** 09:19:01.6±1.8, 19°.73S±0°.03×66°.08W±0°.06, h3^{km}±12^{km}, Error ellipse: s-maj=9.4km s-min=4.6km az=163.2*

*SCB **01** 09:19:04.2±2.8, 19°.76S×66°.11W, h18^{km}±27^{km}, ML3.8/2, Error ellipse: s-maj=8.8km s-min=4.8km az=1.0*

ISC 01 09:19:02.9±1.6**, 19°.78S**±0°.03×**66°.06W**±0°.05**, h16**^{km}±13^{km}**, n14, σ1.^{s}22**/22**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.51	165	P	Pg	09 19 32.1	0.0
MOCB				S	Sg	09 19 52.2	+0.3
	126nm,0.4s						
BB01	Montecillos	1.86	24	P	Pn	09 19 34.7	+0.2
BB01				S	Sb	09 20 00.4	+0.4
BS08	Valle Grande	2.24	55	P	Pn	09 19 39.3	-0.3
BS10	CO. Tuti	2.32	5	P	Pn	09 19 42.3	+1.3
BS10				S	Sb	09 20 12.7	-0.7
BS06	Camiri	2.40	97	P	Pn	09 19 41.5	-0.2
BS06				S	Sn	09 20 10.8	-0.1
YJA	Yavi	2.43	168	*i* P	Pn	09 19 43.0	+0.6
YJA				IAML		09 20 16.9	
	comp=Z,36nm,0.4s						
YJA				*i* S	Sb	09 20 17.0	+0.4
BS05	Cuyupaya	2.88	343	P	Pn	09 19 48.3	-0.3
BS05				S	Sn	09 20 22.3	-0.9
MNMC	Minye Minye	3.40	280	P	Pn	09 19 55.7	0.0
BBOJ	La Paz, Jacaqu	3.45	324	P	Pn	09 19 57.1	+0.5
HJA	Humahuaca	3.46	170	*i* P	Pn	09 19 55.8	-0.8
HJA				IAML		09 20 40.4	
	comp=Z,38nm,0.4s						
HJA				*i* S	Sn	09 20 40.5	+3.0
BBOE	La Paz, Chanca	3.48	328	P	Pn	09 19 57.6	+0.7
LPAZ	La Paz	4.00	330	P	Pn	09 20 04.3	+0.1
LPAZ				S	Sn	09 20 50.1	-0.9
LPAZ				AML	AML	09 20 53.0	
	comp=Z,1µm,0.6s						
BBOB	La Paz, Bander	4.13	331	P	Pn	09 20 05.3	-0.5
AZAP	Zapla	4.51	168	*i* P	Pn	09 20 07.6	-3.3

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*NIED **01** 09:28:00, 42°.00N×142°.50E, h62^{km}, Mw4.4 Best double couple: M$_0$4.63000×10^{15} NP1:φ$_s$215.00000°, δ24.00000°, λ99.00000°. NP2:φ$_s$25.00000°, δ66.00000°, λ86.00000°.*

*MOS **01** 09:28:01.3±1.0, 41°.85N×142°.42E, h54^{km}, mb4.7/28, Error ellipse: s-maj=8.3km s-min=5.5km az=102.7*

*JMA **01** 09:28:03.8±0.1, 41°.98N×142°.52E, h64^{km}±2^{km}, M4.2*

JMA Felt II J1.

*ISCJB **01** 09:28:03.4±0.2, 41°.98N±0°.02×142°.50E±0°.03, h70^{km}±2^{km}, mb4.2/62, Error ellipse: s-maj=4.6km s-min=2.9km az=140.7*

*NEIC **01** 09:28:04.5±0.9, 41°.99N×142°.61E, h71^{km}±7^{km}, mb4.5/21, Error ellipse: s-maj=11.6km s-min=10.5km az=103.0*

NEIC Recorded [2 JMA] in southern Hokkaido.

*IDC **01** 09:28:05.2±0.6, 42°.02N×142°.47E, h73^{km}±4^{km}, mb3.9/22, mb1 4.0/29, mb1mx3.9/55, mbtmp4.2/29, MS3.3/13, Ms1 3.3/13, ms1mx3.1/53, Error ellipse: s-maj=12.2km s-min=8.1km az=103.0*

ISC 01 09:28:05.0±0.5**, 41°.98N**±0°.04×**142°.51E**±0°.03**, h68**^{km}±4^{km}**, n154, σ1.^{s}44**/174**, mb4.3**/62**, 19C-12D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.35	30	⇑P	Pn	09 28 14.5	-1.8
JNBK				*e*S	Sn	09 28 22.8	-1.8
JSHD	Hidakashinhida	0.43	356	⇓P	Pn	09 28 15.5	-1.5
JSHD				*e*S	Sn	09 28 24.7	-1.1
ERM	Erimo	0.48	85	*e*Pn	Pn	09 28 16.2	-1.2
ERM				*e*Sn	Sn	09 28 25.9	-0.6
ERM	Erimo	0.48	85*c*	*i*P	Pn	09 28 16.2	-1.2
ERM				pmax	pmax		
	comp=Z,3µm,0.7s						
JEM	Erimo	0.48	85	⇑P	Pn	09 28 16.2	-1.2
JEM				*e*S	Sn	09 28 25.0	-1.5
JTHR	Tokachihiroo	0.67	61	⇑P	Pn	09 28 18.0	-1.4
JTHR				*e*S	Sn	09 28 28.8	-1.1
JIAM	Iburiatsuma	0.78	326	P	Pn	09 28 20.0	-0.7
JBT2	Biratori 2	0.81	352	⇓P	Pn	09 28 19.4	-1.7
JBT2				*e*S	Sn	09 28 31.2	-1.7
JCH	Churui	0.90	44	⇑P	Pn	09 28 20.8	-1.3
JCH				*e*S	Sn	09 28 33.4	-1.4
JKB	Kayabe	1.11	266	⇓P	Pn	09 28 23.4	-1.3
JKB				*e*S	Sn	09 28 37.9	-1.5
JEW	Eniwo	1.17	318	⇓P	Pn	09 28 24.5	-1.1
JFR	Furan	1.19	3	⇓P	Pn	09 28 24.4	-1.4
JNB	Noboribetsu	1.20	295	⇓P	Pn	09 28 24.0	-1.9
JNB				*e*S	Sn	09 28 39.7	-1.9
JOT	Ohata	1.25	242	⇓P	Pn	09 28 25.4	-1.2
JOT				*e*S	Sn	09 28 41.2	-1.5
JOB	Onbets	1.35	46	⇑P	Pn	09 28 27.7	-0.2
JOB				*e*S	Sn	09 28 45.4	+0.4
JISS	Ishikarishitsu	1.53	328	P	Pn	09 28 29.4	-0.9
JISS				*e*S	Sn	09 28 48.5	-0.8
JAB	Ashibetsu	1.54	352	⇓P	Pn	09 28 29.7	-0.8
JAB				*e*S	Sn	09 28 49.4	-0.3
JYM2	Yakumo 2	1.60	276	⇓P	Pn	09 28 29.9	-1.3
JTM	Tenmabayashi	1.61	223	P	Pn	09 28 31.0	-0.4
JTM				*e*S	Sn	09 28 51.4	+0.1
JAR	Ashorobuto	1.61	35	P	Pn	09 28 29.9	-1.5
JSR	Shiriuchi	1.63	255	⇓P	Pn	09 28 30.5	-1.1
JSR				*e*S	Sn	09 28 49.8	-1.9
ASAJ	Asahikawa	2.14	2	P	Pn	09 28 38.2	-0.3
	comp=Z,110nm,0.3s,baz=210,slow=10,SNR=292						
ASAJ				S	Sn	09 29 03.8	-0.3
	comp=Z,43nm,0.3s,baz=204,slow=23,SNR=7.0						
GRPR	Tuman	3.13	49*d*	*i*P	Pn	09 28 51.6	-0.3
GRPR				*e*S	Sn	09 29 26.1	-2.0
GRPR				pmax	pmax		
	comp=Z,307nm,0.3s						
GRPR				pmax	pmax		
	comp=E,40nm,0.1s						
GRPR				smax	smax		
	comp=N,1µm,0.2s						
GRPR				smax	smax		
	comp=E,2µm,0.4s						
YUK	Yuzh-Kuril'sk	3.21	49*c*	*i*P	Pn	09 28 52.9	0.0
YUK				*i* S	Sn	09 29 27.7	-2.2
YUK				pmax	pmax		
	comp=N,68nm,0.2s						
YUK				pmax	pmax		
	comp=Z,795nm,0.2s						
YUK				smax	smax		
	comp=E,857nm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.6s						
YSS	Yuzh-Sakhalins	4.98	2	⇑*i*P	Pn	09 29 18.7	+1.5
YSS				*e*S	Sn	09 30 14.2	+0.8
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
KUR	Kuril'sk	5.07	48	*e*P	Pn	09 29 19.1	+0.7
KUR				*e*S	Sn	09 30 16.1	+0.5
KUR				pmax	pmax		
	comp=Z,175nm,0.6s						
KUR				pmax	pmax		
	comp=N,109nm,0.4s						
KUR				pmax	pmax		
	comp=E,89nm,0.5s						
KUR				smax	smax		
	comp=N,184nm,0.5s						
KUR				smax	smax		
	comp=E,143nm,0.3s						
TEY	Ternei	5.27	307	⇑*e*P	Pn	09 29 17.9	-3.3
TEY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MJB9	Matsu-Tunnel	6.37	213	*e*Pn	Pn	09 29 36.4	+0.2
MAJO	Matsushiro	6.37	213	*e*Pn	Pn	09 29 36.6	+0.3
MAJO	Matsushiro	6.37	213*c*	*i*P	Pn	09 29 36.4	+0.1
MAT	Matsushiro	6.37	213	P	Pn	09 29 38.5	+2.2
MAT				S	Sn	09 30 51.7	+4.1
MJAR	Matsushiro Arr	6.37	213	P	Pn	09 29 37.2	+0.9
	comp=Z,0.2nm,0.3s,baz=324,slow=17,SNR=15						
MJAR				LR	LR	09 32 38.0	
	comp=Z,127nm,20.3s,baz=35,slow=43						
INU	Inuyama	7.89	215	*e*Pn	Pn	09 29 58.2	+1.2
USA0B	Ussuriysk Arra	8.02	290	*e*Pn	Pn	09 29 58.6	-0.1
USA0B	Ussuriysk Arra	8.02	290	*e*P	Pn	09 29 58.6	-0.1
USRK	Ussuriysk Ar.	8.02	290	P	Pn	09 29 58.6	-0.1
	comp=Z,0.5nm,0.3s,baz=92,slow=13,SNR=28						
USRK				LR	LR	09 33 08.2	
	comp=Z,114nm,20.9s,baz=135,slow=38						
TYV	Tymovskoe	8.89	1	*e*P	Pn	09 30 11.1	+0.5
TYV				*e*S	Sn	09 31 54.6	+5.5
TYV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TYV				smax	smax		
	comp=E,7.0nm,1.2s						
JHJ	Hachijo jima 2	9.10	195	P	Pn	09 30 13.2	-0.4
	comp=E,13nm,0.3s,baz=87,slow=23,SNR=9.2						
JHJ				LR	LR	09 33 41.5	
	comp=E,108nm,21.4s,baz=54,slow=37						
JHJ2	Mitsune	9.10	194	*e*Pn	Pn	09 30 13.5	-0.1
KLR	Kul'dur	10.46	318	P	Pn	09 30 30.4	-1.6
	comp=E,0.2nm,0.3s,baz=124,slow=17,SNR=8.9						
KLR				LR	LR	09 34 39.2	
	comp=E,190nm,21.8s,baz=94,slow=38						
KLR	Kul'dur	10.46	318	⇑*i*P	Pn	09 30 32.7	+0.7
KSRS	Korea Array	12.11	253	P	Pn	09 30 55.8	+1.2
	comp=E,0.6nm,0.3s,baz=64,slow=13,SNR=22						
KSRS				S	Sn	09 33 13.4	+5.7
	comp=E,0.2nm,0.3s,baz=66,slow=24,SNR=4.4						
KSRS				LR	LR	09 35 06.9	
	comp=E,137nm,20.6s,baz=79,slow=35						
JNU	Nakatsue	12.77	230	LR	LR	09 35 57.7	
	comp=E,67nm,19.5s,baz=9.0,slow=37						
SKR	Severo-Kuril's	12.80	42	⇑*i*P	Pn	09 31 02.7	-1.2
PETK	Petropavlovsk-	15.10	37	P	Pn	09 31 35.4	+1.1
	comp=E,0.4nm,0.3s,baz=181,slow=10,SNR=3.5						
PEA1	Petropavlovsk-	15.11	37	*e*P	Pn	09 31 35.4	+1.1
ZEA	Zeya	15.56	324	*e*P	Pn	09 31 39.0	-1.1
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
MA2	Magadan	18.35	13	LR	LR	09 41 03.9	
	comp=Z,43nm,18.5s,baz=239,slow=42						
YAK	Yakutsk	21.50	343	*e*P	P	09 32 49.3	+1.4
YAK				*e*		09 33 04.2	
YAK				*e*S	S	09 36 44.3	+1.9
YAK				*e**SS	Sn	09 36 53.6	-0.7
YAK				*e*SS	SnSn	09 37 04.8	-5.7
YAK				*e*SSS	SSS	09 37 19.6	
SEY	Seymchan	21.79	12	P	P	09 32 48.8	-2.2

	comp=Z,3.7nm,0.9s,baz=210,slow=6.8,SNR=6.5						
SEY	**Seymchan**	21.79	12⇑	*i*P	P	09 32 52.0	+1.1
HHC	**Hu-ho-hao-te**	23.18	278	P	P	09 33 05.0	-0.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,14nm,5.5s						
HHC				LR	LR		
	comp=N,110nm,12.0s						
HHC				LR	LR		
	comp=E,130nm,11.6s						
SONA0	**Songino Array**	26.07	295	*e*P	P	09 33 31.7	-0.5
SONM	**Songino Array**	26.07	295	P	P	09 33 31.7	-0.5
	comp=E,3.2nm,0.6s,baz=76,slow=10,SNR=3.5						
SONM				LR	LR	09 44 23.6	
	comp=E,96nm,19.0s,baz=79,slow=38						
XAN	**Xi'an**	27.49	264	P	P	09 33 44.9	-0.1
XAN				pP	pP	09 33 51.3	-10
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TLY	**Talaya**	28.01	304	*e*P	P	09 33 49.3	-0.1
	comp=Z,9.1nm,1.1s						
TLY	**Talaya**	28.01	304	*e*P	P	09 33 49.2	-0.1
TLY				pmax	pmax		
	comp=Z,33nm,1.6s						
TLY				MLR	MLR		
	comp=Z,130nm,14.0s						
BILL	**Bilibino**	29.06	18⇓	*e*P	P	09 34 00.6	+2.1
BILL				*e*		09 34 55.9	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BILL				MLR	MLR		
	comp=Z,438nm,21.0s						
H11N2	**WAKE ISLAND Hy**	30.30	130	T	T	10 05 39.0	
	baz=323,slow=75,SNR=475						
H11N1	**WAKE ISLAND Hy**	30.31	130	T	T	10 05 49.6	
	baz=323,slow=75,SNR=361						
H11N3	**WAKE ISLAND Hy**	30.32	130	T	T	10 05 42.7	
	baz=323,slow=75,SNR=432						
TIXI	**Tiksi**	30.51	352⇑	*i*P	P	09 34 14.1	+2.9
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11S1	**WAKE ISLAND Hy**	31.16	131	T	T	10 06 49.8	
	baz=325,slow=76,SNR=580						
H11S3	**WAKE ISLAND Hy**	31.17	131	T	T	10 06 57.4	
	baz=325,slow=76,SNR=388						
H11S2	**WAKE ISLAND Hy**	31.18	131	T	T	10 06 56.8	
	baz=325,slow=76,SNR=405						
ZAA1	**Zalesovo Array**	39.37	308	*e*P	P	09 35 27.4	-0.3
ZAA0	**Zalesovo Array**	39.37	308	*e*P	P	09 35 27.5	-0.2
	comp=Z,8.8nm,0.9s						
ZALV	**Zalesovo Beam**	39.37	308	P	P	09 35 27.4	-0.3
	comp=Z,7.1nm,0.8s,baz=91,slow=7.7,SNR=19						
ZALV				LR	LR	09 53 25.1	
	comp=Z,46nm,18.4s,baz=246,slow=39						
NONG	**Nongkai**	41.08	247	P	P	09 35 45.4	+3.2
	comp=Z,0.2nm,1.1s						
MK32	**Makanchi Array**	42.39	298	*e*P	P	09 35 52.0	-0.6
MKAR	**Makanchi Array**	42.39	298	P	P	09 35 52.0	-0.6
	comp=Z,6.4nm,0.9s,baz=80,slow=9.0,SNR=30						
MKAR	**Makanchi Array**	42.39	298	P	P	09 35 52.0	-0.6
MAKZ	**Makanchi**	42.59	298	*e*P	P	09 35 53.8	-0.4
	comp=Z,11nm,1.0s						
MAKZ	**Makanchi**	42.59	298	*e*P	P	09 35 53.8	-0.4
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
CMMT	**Chiang Mai**	43.50	252	P	P	09 36 07.9	+6.1
	comp=Z,3.5nm,1.3s						
CHTO	**Chiang Mai**	43.50	252	P	P	09 36 02.3	+0.4
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	**Kurchatov**	43.70	304	*e*P	P	09 36 02.4	-0.6
	comp=Z,13nm,1.0s						
KURK	**Kurchatov**	43.70	304	*e*P	P	09 36 02.4	-0.6
KURK				pmax	pmax		
	comp=Z,13nm,1.0s						
CMAR	**Chiang Mai Arr**	43.74	251	P	P	09 36 03.3	-0.5
	comp=Z,0.7nm,0.3s,baz=36,slow=5.8,SNR=4.1						
CMAR	**Chiang Mai Arr**	43.74	251	*i* P	P	09 36 04.4	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
COLA	**College**	44.49	35	*i* P	P	09 36 09.4	+0.2
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	44.91	35	P	P	09 36 12.2	-0.3
	comp=Z,1.1nm,0.8s,baz=266,slow=6.5,SNR=12						
ILB	**Eielson Array**	44.91	35	*e*P	P	09 36 11.3	-1.3
	comp=Z,2.4nm,0.9s						
PDGK	**Podgornoye**	45.38	294	P	P	09 36 15.5	-1.2
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KDJ	**Kajisay**	47.40	293	*e*P	P	09 36 32.6	-0.1
	comp=Z,5.2nm,0.8s						
KDJ	**Kajisay**	47.40	293	*e*P	P	09 36 32.6	-0.1
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	47.99	309	P	P	09 36 36.6	-0.2
	comp=Z,4.0nm,0.6s,baz=77,slow=8.9,SNR=26						
BVAR				PcP	PcP	09 38 03.2	-0.7
	comp=Z,1.1nm,0.7s,baz=48,slow=2.2,SNR=3.5						
BRVK	**Borovoye**	48.04	309	*e*P	P	09 36 37.4	+0.2
	comp=Z,2.7nm,0.6s						
BRVK	**Borovoye**	48.04	309⇑	*i*P	P	09 36 36.8	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OTUK	**Ortayu**	48.34	303	P	P	09 36 39.0	-0.7
OTUK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AAK	**Ala-Archa**	49.03	295⇑	*i*P	P	09 36 44.7	-0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH	**Kashi**	49.31	291	*e*P	P	09 36 52.8	+5.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	**Inuvik**	49.63	29	P	P	09 36 48.8	-0.3
	comp=Z,0.7nm,0.4s,baz=301,slow=12,SNR=11						
INK	**Inuvik**	49.63	29	*e*P	P	09 36 48.8	-0.3
	comp=Z,1.6nm,0.7s						
INK	**Inuvik**	49.63	29	*e*P	P	09 36 48.8	-0.3
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HYT	**Haines Junctio**	49.88	39	*e*P	P	09 36 47.7	-3.6
	comp=Z,5.8nm,0.9s						
KK31	**Karatay Array**	51.51	297	*e*P	P	09 37 02.0	-1.6
	comp=Z,3.8nm,0.6s						
KK31	**Karatay Array**	51.51	297	*e*P	P	09 37 02.1	-1.6
KK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KKAR	**Karatay Array**	51.51	297	*e*P	P	09 37 02.0	-1.7
	comp=Z,3.8nm,0.6s						
KKAR	**Karatay Array**	51.51	297	*e*P	P	09 37 02.0	-1.7
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SVE	**Sverdlovsk**	52.08	316	*e*P	P	09 37 08.0	+0.3
SVE				pmax	pmax		
	comp=Z,17nm,1.0s						
ARU	**Arti**	53.30	316c	*i*P	P	09 37 16.4	-0.3
ARU						09 38 20.4	
ARU						09 39 12.5	
ARU				S	S	09 44 45.9	+3.1
ARU				pmax	pmax		
	comp=Z,13nm,1.4s						
AKTO	**Aktyubinsk**	56.08	310	P	P	09 37 36.0	-0.9
	comp=Z,1.8nm,0.6s,baz=68,slow=12,SNR=7.7						
AKTO				LR	LR	10 03 29.8	
	comp=Z,73nm,20.8s,baz=177,slow=38						
KBL	**Kabul**	56.55	288	P	P	09 37 39.5	-1.3
KBL				pmax	pmax		
	comp=Z,11nm,0.9s						
RES	**Resolute Bay**	57.61	15	P	P	09 37 45.4	-2.0
	comp=Z,5.6nm,1.0s,baz=337,slow=2.9,SNR=12						
RES	**Resolute Bay**	57.61	15	*e*P	P	09 37 45.3	-2.0
	comp=Z,9.7nm,1.1s						
ARA0	**ARCESS Array S**	59.69	339	*e*P	P	09 38 01.0	-0.9
ARCES	**ARCESS Array B**	59.69	339	P	P	09 38 01.0	-0.9
	comp=Z,0.8nm,0.6s,baz=54,slow=8.2,SNR=4.8						
WR1	**Warramunga Arr**	62.07	189	*e*P	P	09 38 17.4	-1.1
WRA	**Warramunga Arr**	62.07	189	P	P	09 38 17.4	-1.2
	comp=Z,1.3nm,0.7s,baz=10,slow=7.0,SNR=6.1						
GEYT	**Alibeck**	62.26	297	P	P	09 38 19.9	0.0
	comp=Z,4.1nm,0.9s,baz=164,slow=2.8,SNR=5.4						
OUL	**Oulu**	62.48	335	P	P	09 38 19.2	-1.6
SUF	**Sumiainen**	63.97	333	P	P	09 38 28.9	-1.8
SUF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OBN	**Obninsk**	64.68	322⇑	*e*P	P	09 38 35.4	0.0
OBN				*e*		09 41 00.6	
OBN				*e*S	S	09 47 48.4	+38
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,50nm,17.0s						
FIA0	**FINESS Array S**	64.86	332	*e*P	P	09 38 35.7	-0.8
FIA0	**FINESS Array S**	64.86	332	*e*P	P	09 38 35.7	-0.8
FINES	**FINESS Array B**	64.86	332	P	P	09 38 35.7	-0.8
	comp=Z,5.9nm,0.8s,baz=46,slow=8.2,SNR=21						
SUMG	**Summit**	65.75	0	*e*P	P	09 38 42.4	-0.2
	comp=Z,5.4nm,1.1s						
SUMG	**Summit**	65.75	0	*e*P	P	09 38 42.4	-0.2
SUMG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ASAR	**Alice Springs**	65.79	189	P	P	09 38 42.4	-0.6
	comp=Z,0.8nm,0.8s,baz=0.4,slow=5.3,SNR=5.9						
ASAR				pP	pP	09 39 02.0	+1.5
	comp=Z,1.6nm,0.7s,baz=2.0,slow=6.0,SNR=7.1						
KIV	**Kislovodsk**	68.35	310	*e*P	P	09 39 00.0	+0.8
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KBZ	**Khabaz**	68.36	310	P	P	09 38 56.9	-2.2
	comp=Z,2.4nm,0.7s,baz=334,slow=3.5,SNR=5.3						
KBZ				pP	pP	09 39 19.2	+2.4
	comp=Z,3.6nm,0.8s,baz=110,slow=3.6,SNR=3.8						
SHA1	**Shidzhatmaz**	68.50	310⇑	*i*P	P	09 39 00.5	+0.2
FFC	**Flin Flon**	69.12	34	*i* P	P	09 39 04.4	+0.8
HFS	**Hagfors**	69.94	335	LR	LR	10 12 26.5	
	comp=Z,46nm,19.9s,baz=90,slow=38						
NB2	**NORSAR Subarra**	69.97	337	P	P	09 39 07.8	-1.0
	comp=Z,2.1nm,0.8s,baz=36,slow=6.5						
NB2	**NORSAR Subarra**	69.97	337	P	P	09 39 07.5	-1.3
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB200	**NORSAR Array S**	69.97	337	*e*P	P	09 39 08.0	-0.9
NOA	**NORSAR Array B**	69.97	337	P	P	09 39 08.0	-0.9
	comp=Z,3.0nm,0.8s,baz=37,slow=6.1,SNR=13						
NOA				LR	LR	10 13 02.8	
	comp=Z,26nm,21.9s,baz=235,slow=39						
NOA	**NORSAR Array B**	69.97	337	P	P	09 39 08.0	-0.9
BOZ	**Bozeman (W)**	70.64	46	*e*P	P	09 39 12.1	-1.3
	comp=Z,1.7nm,0.8s						
BOZ	**Bozeman (W)**	70.64	46	*e*P	P	09 39 12.1	-1.3
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	70.93	322	P	P	09 39 13.6	-1.2
	comp=Z,1.3nm,0.4s,baz=45,slow=6.2,SNR=11						
AKASG				pP	pP	09 39 33.5	+0.7
	comp=Z,1.1nm,0.5s,baz=42,slow=6.2,SNR=2.5						
NV01	**Mina Array Sit**	71.40	55	*e*P	P	09 39 19.6	+1.4
NVAR	**Mina Array Bea**	71.40	55	P	P	09 39 19.6	+1.4
	comp=Z,0.9nm,0.7s,baz=299,slow=4.1,SNR=10						
NVAR				pP	PcP	09 39 36.7	-0.8
	comp=Z,1.0nm,0.7s,baz=291,slow=6.7,SNR=6.5						
DUG	**Dugway, Tooele**	73.52	51	P	P	09 39 31.5	+0.8
DUG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PD31	**Pinedale Array**	73.64	47	*e*P	P	09 39 28.9	-2.5
	comp=Z,1.6nm,0.8s						
PDAR	**Pinedale Array**	73.64	47	P	P	09 39 31.9	+0.6
	comp=Z,1.0nm,0.7s,baz=266,slow=1.9,SNR=11						
NIE	**Niedzica**	75.81	325	P	P	09 39 44.1	+0.5
NIE				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BR101	**Keskin Array S**	76.22	311	*e*P	P	09 39 46.4	+0.2
BRTR	**Keskin Array B**	76.22	311	P	P	09 39 46.4	+0.2
	comp=Z,1.4nm,0.8s,baz=116,slow=2.3,SNR=4.8						
MORC	**Moravsky Berou**	76.69	327	P	P	09 39 49.0	+0.4
MORC				pmax	pmax		
	comp=Z,4.0nm,2.1s						
CLL	**Collm**	77.24	330	*i* P	P	09 39 50.7	-0.8
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	77.24	330	*i* P	P	09 39 50.7	-0.8
	comp=Z,4.0nm,0.9s						
CLL				LmV		09 46 00.0	
	comp=Z,200nm,20.8s						
VRAC	**Vranov**	77.44	327	P	P	09 39 53.1	+0.4
VRAC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PRU	**Pruhonice**	77.71	329	P	P	09 39 54.1	-0.1
PRU				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TREC	**Trest**	77.89	328	P	P	09 39 55.5	+0.2
TREC				pmax	pmax		
	comp=Z,1.0nm,1.4s						
KHC	**Kasperske Hory**	78.78	329	P	P	09 40 00.3	+0.1
KHC				pmax	pmax		
	comp=Z,2.0nm,2.0s						
WET	**Wettzell**	79.04	329	P	P	09 40 01.6	0.0
WET				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VTS	**Vitosha**	79.61	319	P	P	09 40 05.3	+0.3
VTS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FUORN	**Ofenpass-Fuorn**	82.11	329	*e*P	P	09 40 18.0	-0.4
	comp=Z,7.4nm,0.8s						
PPT	**Papeete**	86.12	118	LR	LR	10 10 35.0	
	comp=Z,41nm,21.5s,baz=208,slow=30						
TX31	**Lajitas Ar. Si**	86.46	53	*e*P	P	09 40 39.6	-0.9
	comp=Z,1.2nm,0.9s						
TXAR	**Lajitas Array**	86.46	53	P	P	09 40 40.0	-0.6
	comp=Z,0.8nm,0.8s,baz=265,slow=2.8,SNR=8.4						
TXAR				pP	pP	09 40 59.1	0.0
	comp=Z,1.2nm,0.8s,baz=308,slow=4.5,SNR=6.9						

MEX 01 09:30:29.7±0.5, 15°.83N×98°.83W, h5^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	1.74	8	*e*P	Pn	09 30 57.4	-3.4
TLIG				*i* S	Sn	09 31 18.8	-4.5
CAIG	**El Cayaco**	1.84	311	*i* P	Pn	09 30 59.3	-2.6
CAIG				*e*S	Sn	09 31 21.6	-3.9
MEIG	**Mezcala**	2.22	340	*i* P	Pn	09 31 04.2	-3.0
MEIG				*e*S	Sn	09 31 30.8	-4.3
VHO	**Vista Hermosa**	2.36	58	*i* P	Pn	09 31 06.5	-2.8
VHO				*i* S	Sn	09 31 33.8	-5.0
HUIG	**Huatulco**	2.62	91	*i* P	Pn	09 31 09.5	-3.2
HUIG				*i* S	Sn	09 31 40.8	-4.1
PLIG	**Platanillo**	2.63	346	*e*P	Pn	09 31 09.1	-3.8
PLIG				*i* S	Sn	09 31 40.6	-4.6
YAIG	**Yautepec**	3.02	356	*i* P	Pn	09 31 15.0	-3.3
YAIG				*i* S	Sn	09 31 51.6	-3.4
CMIG	**Matias Romero**	3.99	71	*e*P	Pn	09 31 28.8	-2.7
CMIG				*i* S	Sn	09 32 15.1	-3.6

SJA 01 09:35:36.2±0.7, 31°.18S×68°.53W, h23^{km}±3^{km}, ML1.8, MW3.6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	0.16	163	*i* P	Pb	09 35 41.8	+0.6
AMOG	**MOGNA**	0.24	7	*i* P	Pb	09 35 42.8	+0.5
AMOG				*i* S	Sb	09 35 47.0	+0.7
CFA	**Coronel Fontan**	0.49	150	*i* P	Pb	09 35 46.3	0.0
RTCV	**Cerro Valdivia**	0.68	181	*i* P	Pb	09 35 50.0	+0.5
RTCV				*i* S	Sn	09 36 00.2	-0.3
RTLS	**Leoncito**	0.90	226	*i* P	Pn	09 35 54.6	+0.8
RTLS				IAML		09 36 08.9	
	comp=Z,31nm,0.2s						
AUSP	**Uspallata**	1.27	215	*i* P	Pb	09 36 00.7	+1.0
ACLC	**CERRO LA CRUZ**	2.21	38	*i* P	Pb	09 36 14.3	-1.4

UCR 01 09:41:11.0±0.8, 9°.91N×85°.70W, h17^{km}±9^{km}, MW3.5, 3C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	0.83	63	*e*P	Pb	09 41 25.8	-1.2
JTS				*e*S	Sb	09 41 37.7	-0.3
CUI	**Cuipilapa**	0.92	35⇑	*e*P	Pb	09 41 27.7	-0.8
CUI				*e*S	Sb	09 41 39.6	-0.9
BUEV	**Buena Vista**	0.93	18⇑	*i*P	Pb	09 41 28.0	-0.8
BUEV				*e*S	Sb	09 41 40.3	-0.7
MESS	**Mesas**	0.97	31⇑	*e*P	Pb	09 41 28.8	-0.6
MESS				*e*S	Sb	09 41 41.7	-0.3
ARE1	**Arenal 1**	1.11	60⇓	*e*P	Pb	09 41 31.2	-0.7
CEDE	**Laguna Cedeo**	1.14	60⇓	*e*P	Pn	09 41 31.8	-0.5

SJA 01 09:43:17.3±0.8, 31°.84S×65°.64W, h13^{km}±5^{km}, ML3.1, MW3.7, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLL	**PUNTA DE LOS L**	1.63	332	*i* P	Pb	09 43 47.6	+0.3
APLL				IAML		09 44 09.8	
	comp=Z,117nm,0.2s						
APLL				*i* S	Sg	09 44 10.6	+0.9
ACLC	**CERRO LA CRUZ**	2.66	334	*i* P	Pn	09 44 02.4	+2.3
ACLC				*i* S	Sb	09 44 35.6	-1.9
CYA	**Choya**	3.39	358	*i* P	Pn	09 44 12.8	+2.8
CYA				IAML		09 44 53.8	
	comp=Z,66nm,0.3s						
CYA				*i* S	Sn	09 44 54.0	+3.9
VCA	**Vinchina**	3.81	324	*i* P	Pn	09 44 19.4	+3.5
VCA				IAML		09 45 29.2	
	comp=Z,46nm,0.5s						

ROM 01 10:07:09.4±0.2, 43°.447N±0°.010×13°.15E±0°.02, h8^{km}, ML1.9/23, Error ellipse: s-maj=1.6km s-min=0.6km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	**Cingoli**	0.08	154	P	Pg	10 07 12.1	+0.5
CING				S	Sg	10 07 13.8	+0.6
CING				AML	AML		
	comp=E,2755µm,0.5s						
CING				AML	AML		
	comp=N,2560µm,0.2s						
CING				AML	AML		
	comp=N,2560µm,0.2s						
CING				AML	AML		
	comp=E,2755µm,0.5s						
CING				AML	AML		
	comp=N,2560µm,0.2s						
CING				AML	AML		
	comp=E,2755µm,0.5s						
EL6	**Elcito**	0.12	196	P	Pg	10 07 12.8	+0.5
EL6				AML	AML		
	comp=E,1100µm,0.4s						
EL6				AML	AML		
	comp=N,1002µm,0.2s						
EL6				AML	AML		
	comp=E,1104µm,0.4s						
EL6				AML	AML		
	comp=N,1004µm,0.2s						
EL6				AML	AML		
	comp=N,1004µm,0.2s						
EL6				AML	AML		
	comp=E,1104µm,0.4s						
EL6				AML	AML		
	comp=N,1004µm,0.2s						
EL6				AML	AML		
	comp=E,1104µm,0.4s						
ARVD	**Arcevia**	0.16	289	P	Pg	10 07 13.2	+0.4
ARVD				S	Sg	10 07 16.0	+0.8
ARVD				AML	AML		
	comp=E,486µm,0.1s						
ARVD				AML	AML		
	comp=N,530µm,0.1s						
ARVD				AML	AML		
	comp=E,486µm,0.1s						
ARVD				AML	AML		
	comp=N,530µm,0.1s						
ARVD				AML	AML		
	comp=E,486µm,0.1s						
ARVD				AML	AML		
	comp=N,530µm,0.1s						
ARVD				AML	AML		
	comp=E,486µm,0.1s						
ARVD				AML	AML		
	comp=N,530µm,0.1s						
COR1	**Corinaldo**	0.21	330	P	Pg	10 07 15.2	+1.4
COR1				AML	AML		
	comp=E,764µm,0.4s						
COR1				AML	AML		
	comp=N,1334µm,0.3s						
COR1				AML	AML		
	comp=E,754µm,0.4s						
COR1				AML	AML		
	comp=N,1334µm,0.3s						
COR1				AML	AML		
	comp=E,754µm,0.4s						
COR1				AML	AML		
	comp=N,1334µm,0.3s						
COR1				AML	AML		
	comp=N,1334µm,0.3s						
COR1				AML	AML		
	comp=E,754µm,0.4s						
FRON	**Frontone**	0.32	283	P	Pg	10 07 16.1	+0.4
FRON				S	Sb	10 07 21.4	-1.1
FRON				AML	AML		
	comp=E,206µm,0.5s						
FRON				AML	AML		
	comp=N,301µm,0.6s						
FRON				AML	AML		
	comp=E,206µm,0.5s						
FRON				AML	AML		
	comp=N,301µm,0.6s						
FRON				AML	AML		
	comp=E,206µm,0.5s						
FRON				AML	AML		
	comp=N,301µm,0.6s						
FOSV	**Fossato di Vic**	0.32	242	P	Pg	10 07 16.1	+0.3
FOSV				S	Sg	10 07 21.1	+1.1
FOSV				AML	AML		
	comp=E,230µm,0.3s						
FOSV				AML	AML		
	comp=N,221µm,0.8s						
FOSV				AML	AML		
	comp=E,230µm,0.3s						
FOSV				AML	AML		
	comp=N,221µm,0.8s						
FOSV				AML	AML		
	comp=N,221µm,0.8s						
FOSV				AML	AML		
	comp=E,230µm,0.3s						
FOSV				AML	AML		
	comp=N,221µm,0.8s						
FOSV				AML	AML		
	comp=E,230µm,0.3s						
MPAG	**Monte Paganucc**	0.34	303	P	Pg	10 07 16.4	+0.3
MPAG				S	Sg	10 07 21.9	+1.3
MPAG				AML	AML		
	comp=E,169µm,0.5s						
MPAG				AML	AML		
	comp=N,159µm,0.8s						
MPAG				AML	AML		
	comp=E,168µm,0.5s						
MPAG				AML	AML		
	comp=N,159µm,0.8s						
MPAG				AML	AML		
	comp=N,159µm,0.8s						
MPAG				AML	AML		
	comp=E,168µm,0.5s						
MPAG				AML	AML		
	comp=N,159µm,0.8s						
MPAG				AML	AML		
	comp=E,168µm,0.5s						
CSP1	**Cessapalombo**	0.36	173	P	Pg	10 07 17.1	+0.6
CSP1				S	Sb	10 07 23.1	-0.7
CSP1				AML	AML		
	comp=E,384µm,0.5s						
CSP1				AML	AML		
	comp=N,435µm,0.5s						
CSP1				AML	AML		
	comp=N,435µm,0.5s						
CSP1				AML	AML		
	comp=E,384µm,0.5s						
CSP1				AML	AML		
	comp=N,435µm,0.5s						
CSP1				AML	AML		
	comp=E,384µm,0.5s						
FSSB	**Fossombrone**	0.36	312	P	Pg	10 07 17.3	+0.7
FSSB				AML	AML		
	comp=E,528µm,1.3s						
FSSB				AML	AML		
	comp=N,958µm,0.4s						
FSSB				AML	AML		
	comp=E,528µm,1.3s						
FSSB				AML	AML		
	comp=N,957µm,0.4s						
FSSB				AML	AML		
	comp=E,528µm,1.3s						

FSSB				AML	AML		
	comp=N,957µm,0.4s						
FSSB				AML	AML		
	comp=E,528µm,1.3s						
FSSB				AML	AML		
	comp=N,957µm,0.4s						
FDMO	**Fiordimonte**	**0.41**	**186**	AML	AML		
	comp=N,203µm,1.1s						
FDMO				AML	AML		
	comp=E,210µm,1.1s						
FDMO				AML	AML		
	comp=N,203µm,1.1s						
FDMO				AML	AML		
	comp=E,210µm,1.1s						
FDMO				AML	AML		
	comp=N,203µm,1.1s						
FDMO				AML	AML		
	comp=E,210µm,1.1s						
ATFO	**Monte Foce - G**	**0.43**	**259**	P	Pg	10 07 17.8	0.0
ATFO				AML	AML		
	comp=E,272µm,0.2s						
ATFO				AML	AML		
	comp=N,368µm,0.6s						
ATFO				AML	AML		
	comp=E,272µm,0.2s						
ATFO				AML	AML		
	comp=N,368µm,0.6s						
ATFO				AML	AML		
	comp=N,368µm,0.6s						
ATFO				AML	AML		
	comp=E,272µm,0.2s						
ATFO				AML	AML		
	comp=N,368µm,0.6s						
ATFO				AML	AML		
	comp=E,272µm,0.2s						
PIEI	**Pieia**	**0.46**	**282**	P	Pg	10 07 18.4	+0.1
PIEI				S	Sb	10 07 25.7	-0.9
PIEI				AML	AML		
	comp=E,240µm,0.8s						
PIEI				AML	AML		
	comp=N,124µm,1.4s						
PIEI				AML	AML		
	comp=N,124µm,1.4s						
PIEI				AML	AML		
	comp=E,240µm,0.8s						
PIEI				AML	AML		
	comp=N,124µm,1.4s						
PIEI				AML	AML		
	comp=E,240µm,0.8s						
CESI	**CESI - Serrava**	**0.48**	**202**	P	Pg	10 07 19.0	+0.4
CESI				S	Sb	10 07 27.3	+0.1
CESI				AML	AML		
	comp=E,51µm,0.3s						
CESI				AML	AML		
	comp=N,94µm,0.2s						
CESI				AML	AML		
	comp=N,94µm,0.2s						
CESI				AML	AML		
	comp=E,51µm,0.3s						
CESI				AML	AML		
	comp=N,94µm,0.2s						
CESI				AML	AML		
	comp=E,51µm,0.3s						
MURB	**Monte Urbino**	**0.49**	**248**	P	Pg	10 07 19.5	+0.5
MURB				S	Sb	10 07 27.3	-0.3
MURB				AML	AML		
	comp=E,572µm,0.3s						
MURB				AML	AML		
	comp=N,432µm,0.2s						
MURB				AML	AML		
	comp=N,432µm,0.2s						
MURB				AML	AML		
	comp=E,572µm,0.3s						
MURB				AML	AML		
	comp=N,432µm,0.2s						
MURB				AML	AML		
	comp=E,572µm,0.3s						
PE3	**Peglio**	**0.54**	**298**	P	Pb	10 07 20.5	-0.6
PE3				S	Sb	10 07 29.7	+0.8
PE3				AML	AML		
	comp=E,228µm,0.3s						
PE3				AML	AML		
	comp=N,322µm,0.4s						
PE3				AML	AML		
	comp=E,228µm,0.3s						
PE3				AML	AML		
	comp=N,322µm,0.4s						
PE3				AML	AML		
	comp=E,228µm,0.3s						
PE3				AML	AML		
	comp=N,322µm,0.4s						
ATPI	**Pietralunga -**	**0.54**	**271**	P	Pg	10 07 20.2	+0.3
ATPI				S	Sb	10 07 28.9	-0.2
ATPI				AML	AML		
	comp=E,118µm,0.7s						
ATPI				AML	AML		
	comp=N,142µm,0.3s						
ATPI				AML	AML		
	comp=E,118µm,0.7s						
ATPI				AML	AML		
	comp=N,142µm,0.3s						
ATPI				AML	AML		
	comp=E,118µm,0.7s						
ATPI				AML	AML		
	comp=N,142µm,0.3s						
ATVO	**AVT- Monte Val**	**0.54**	**263**	P	Pg	10 07 20.3	+0.3
ATVO				S	Sb	10 07 28.6	-0.5
ATVO				AML	AML		
	comp=E,103µm,1.0s						
ATVO				AML	AML		
	comp=N,132µm,0.5s						
ATVO				AML	AML		
	comp=N,132µm,0.5s						
ATVO				AML	AML		
	comp=E,103µm,1.0s						
ATVO				AML	AML		
	comp=N,132µm,0.5s						
ATVO				AML	AML		
	comp=E,103µm,1.0s						
PARC	**Parchiule**	**0.69**	**287**	P	Pg	10 07 22.9	+0.1
PARC				S	Sb	10 07 34.0	+0.6
PARC				AML	AML		
	comp=E,48µm,1.5s						
PARC				AML	AML		
	comp=N,54µm,0.2s						
PARC				AML	AML		
	comp=N,54µm,0.2s						
PARC				AML	AML		
	comp=E,48µm,1.5s						
PARC				AML	AML		
	comp=N,54µm,0.2s						
PARC				AML	AML		
	comp=E,48µm,1.5s						
CPGN	**Carpegna, Ital**	**0.70**	**301**	AML	AML		
	comp=N,76µm,1.6s						
CPGN				AML	AML		
	comp=E,98µm,1.5s						
CPGN				AML	AML		
	comp=N,76µm,1.6s						
CPGN				AML	AML		
	comp=E,98µm,1.5s						
CPGN				AML	AML		
	comp=N,76µm,1.6s						
CPGN				AML	AML		
	comp=E,98µm,1.5s						
MOMA	**Monte Martano**	**0.77**	**214**	P	Pg	10 07 24.5	+0.2
MOMA				S	Sb	10 07 37.0	+1.3
MOMA				AML	AML		
	comp=E,80µm,0.2s						
MOMA				AML	AML		
	comp=N,72µm,0.2s						
MOMA				AML	AML		
	comp=E,80µm,0.2s						
MOMA				AML	AML		
	comp=N,72µm,0.2s						
MOMA				AML	AML		
	comp=E,80µm,0.2s						
MOMA				AML	AML		
	comp=N,72µm,0.2s						
SMA1	**SAN MARTINO**	**0.83**	**170**	P	Pb	10 07 26.2	+0.1
SMA1				AML	AML		
	comp=E,91µm,0.5s						
SMA1				AML	AML		
	comp=N,124µm,0.4s						
SMA1				AML	AML		
	comp=N,124µm,0.4s						
SMA1				AML	AML		
	comp=E,91µm,0.5s						
SMA1				AML	AML		
	comp=N,124µm,0.4s						
SMA1				AML	AML		
	comp=E,91µm,0.5s						
LNSS	**Leonessa**	**0.85**	**185**	S	Sn	10 07 40.0	-0.3
TERO	**Teramo**	**0.89**	**158**	P	Pb	10 07 26.8	-0.3
TERO				S	Sn	10 07 42.0	+0.7
TERO				AML	AML		
	comp=E,48µm,1.0s						
TERO				AML	AML		
	comp=N,34µm,0.8s						
TERO				AML	AML		
	comp=E,48µm,1.0s						
TERO				AML	AML		
	comp=N,34µm,0.8s						
TERO				AML	AML		
	comp=E,48µm,1.0s						
TERO				AML	AML		
	comp=N,34µm,0.8s						
VVLD	**Villa Vallelon**	**1.61**	**167**	P	Pn	10 07 38.0	-0.2
VVLD				AML	AML		
	comp=E,41µm,0.2s						
VVLD				AML	AML		
	comp=N,36µm,1.6s						
VVLD				AML	AML		
	comp=N,36µm,1.6s						
VVLD				AML	AML		
	comp=E,41µm,0.2s						
VVLD				AML	AML		
	comp=N,36µm,1.6s						
VVLD				AML	AML		
	comp=E,41µm,0.2s						
BDI	**Bagni Di Lucca**	**1.95**	**289**	S	Sg	10 08 11.0	-1.0
MAIM	**Mastiano**	**1.98**	**285**	S	Sg	10 08 12.0	-1.1
EQUI	**Equi**	**2.28**	**289**	P	Pn	10 07 48.2	+0.8
LJU	**Ljubljana**	**2.78**	**20**	P	Pn	10 07 55.1	+1.0
PCP	**Piancastagn**	**3.50**	**290**	P	Pb	10 08 13.9	+2.4
RISI	**Rein**	**3.58**	**348**	P	Pn	10 08 07.9	+2.5

DDA ***01*** *10:09:55.0, 39°.61N×29°.46E, h7^{km}±3^{km}, ML2.6*

ISCJB ***01*** *10:09:56.4±0.5, 39°.59N±0°.03×29°.41E±0°.04, h0^{km}, Error ellipse: s-maj=4.3km s-min=3.9km az=144.1*

ISK ***01*** *10:09:56.4, 39°.61N×29°.38E, h2^{km}, ML2.3/8, Suspected Mining explosion.*

ISC 01 10:09:55.5±0.9**, 39°.54N**±0°.03×**29°.46E**±0°.04**, h0**^{km}**, n14, σ0^{s}.66**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.45**	**178**	*i* P	**Pb**	**10 10 07.1**	**+0.6**
GDZ				*i* S	**Sb**	**10 10 13.0**	**-0.7**
GDZ				IAML_P			
	comp=Z,777nm,0.1s						
ULDT	**Uludag**	**0.65**	**338**	*i* P	**Pg**	**10 10 07.3**	**-0.8**
ULDT				*i* S	**Sg**	**10 10 15.4**	**-1.0**
ULDT				IAML_P			
	comp=Z,902nm,0.1s						
DURS	**Dursunbey**	**0.76**	**275**	*i* P	**Pg**	**10 10 09.4**	**-0.8**
DURS				*i* S	**Sg**	**10 10 20.9**	**+0.9**
DURS				IAML_P			
	comp=Z,962nm,0.1s						
YLV	**Yalova**	**1.03**	**356**	PG	**Pg**	**10 10 14.9**	**-0.4**
SRCK	**Saricakaya, Es**	**1.03**	**60**	PG	**Pn**	**10 10 17.2**	**-0.1**
SRCK				SG	**Sn**	**10 10 32.5**	**+0.1**
KCTX	**Karacabey (Bur**	**1.12**	**311**	PG	**Pg**	**10 10 16.5**	**-0.4**
KCTX				SG	**Sb**	**10 10 32.2**	**-0.6**
GULT	**Gulveren**	**1.21**	**42**	PN	**Pn**	**10 10 20.5**	**+0.7**
GULT				SN	**Sn**	**10 10 37.6**	**+0.7**
MANT	**Manisa**	**1.26**	**214**	*i* P	**Pg**	**10 10 18.7**	**-1.0**
MANT				*i* S	Sg	10 10 22.5	-14
HRT	**Hereke**	**1.29**	**7**	PN	**Pn**	**10 10 20.9**	**0.0**
HRT				SN	**Sb**	**10 10 37.8**	**-0.1**
BUY	**Buyukada**	**1.34**	**349**	PN	**Pb**	**10 10 21.8**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.36**	**264**	*i* P	**Pb**	**10 10 22.1**	**+0.2**
STEP				*i* S	**Sn**	**10 10 41.6**	**+1.1**
STEP				IAML_P			
	comp=Z,520nm,0.1s						
GONE	**Gonen-Balikesi**	**1.46**	**291**	PN	**Pg**	**10 10 23.2**	**-0.3**
EDC	**Edincik**	**1.47**	**304**	PN	**Pb**	**10 10 23.9**	**+0.2**
KAVV	**Kandilli-Istan**	**1.55**	**349**	PN	**Pn**	**10 10 24.7**	**+0.3**

ISCJB ***01*** *10:13:38.7±0.4, 30°.34S±0°.08×75°.7E±0°.1, h10^{km}, mb4.3/16, MS4.0/17, Error ellipse: s-maj=14.3km s-min=11.6km az=25.4*

IDC ***01*** *10:13:38.7±0.6, 30°.27S×75°.66E, h0^{km}, mb4.2/13, mb1 4.3/13, mb1mx4.1/33, mbtmp4.2/13, MS3.9/17, Ms1 3.9/17, ms1mx3.7/26, Error ellipse: s-maj=20.3km s-min=17.4km az=142.0*

GCMT ***01*** *10:13:39.6±0.4, 30°.23S±0°.04×75°.66E±0°.05, h18^{km}±1^{km}, MW4.8/72, Moment Tensor Solution. s16,c17; s72,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.17±.18; M$_{\theta\theta}$1.09±.11; M$_{\phi\phi}$1.08±.11; M$_{r\theta}$-0.20±.29; M$_{\theta\phi}$-0.76±.06; M$_{\phi r}$0.18±.30; Best double couple: M$_0$2.02300×10^{16} NP1:ϕ_s134.00000°, δ49.00000°, λ-90.00000°. NP2: ϕ_s315.00000°, δ41.00000°, λ-90.00000°. Principal axes: T 1.8590, Plg4.0000°, Azm225.0000°; N 0.3290, Plg0.0000°, Azm135.0000°; P -2.1880, Plg86.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***01*** *10:13:40.6±1.5, 30°.34S×75°.69E, h10^{km}, mb4.6/6 Error ellipse: s-maj=26.2km s-min=10.1km az=276.0*

ISC 01 10:13:40.6±0.5**, 30°.3S**±0°.1×**75°.7E**±0°.1**, h10**^{km}**, n45, σ0^{s}.67**/36**, mb4.3**/16**, MS4.0**/17**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**22.74**	**352**	T	T	10 42 13.9	
	baz=173,slow=76,SNR=136						
H08S1	**Diego Carcia H**	**22.75**	**352**	T	T	10 42 12.5	
	baz=173,slow=76,SNR=70						
H08S3	**Diego Garcia H**	**22.76**	**352**	T	T	10 42 13.8	
	baz=173,slow=76,SNR=147						
MAW	**Mawson**	**38.10**	**188**	LR	LR	10 33 18.3	
	comp=Z,213nm,19.7s,baz=18,slow=31						
BOSA	**Boshof**	**43.65**	**259**	P	**P**	**10 21 44.8**	**-0.8**
	4.4nm,0.8s,baz=109,slow=8.9,SNR=6.8						
BOSA				LR	LR	10 36 05.0	
	comp=Z,199nm,20.2s,baz=40,slow=31						
SUR	**Sutherland**	**46.47**	**253**	P	**P**	**10 22 07.3**	**-0.9**
	4.8nm,0.9s,baz=93,slow=18,SNR=3.5						
SUR	**Sutherland**	**46.47**	**253**	*e*P	**P**	**10 22 07.3**	**-0.9**
	7.7nm,0.9s						
ASAR	**Alice Springs**	**51.83**	**98**	P	**P**	**10 22 48.8**	**-0.4**
	2.3nm,0.8s,baz=249,slow=6.7,SNR=21						
ASAR				PcP	**PcP**	**10 24 00.9**	**-1.2**
	0.9nm,0.8s,baz=257,slow=2.6,SNR=6.0						
ASAR				LR	LR	10 43 34.1	
	comp=Z,122nm,18.4s,baz=215,slow=35						
CMAR	**Chiang Mai Arr**	**53.41**	**28**	P	**P**	**10 23 00.2**	**-0.4**
	1.2nm,0.3s,baz=209,slow=7.2,SNR=6.1						
CMAR				LR	LR	10 42 27.4	
	comp=Z,136nm,19.9s,baz=194,slow=32						
WR1	**Warramunga Arr**	**53.60**	**93**	*e*P	**P**	**10 23 02.1**	**-0.1**
WRA	**Warramunga Arr**	**53.60**	**93**	P	**P**	**10 23 02.1**	**-0.1**
	1.6nm,0.9s,baz=246,slow=7.7,SNR=3.9						
STKA	**Stephens Creek**	**55.66**	**110**	LR	LR	10 42 25.2	
	comp=Z,129nm,20.8s,baz=207,slow=31						
WSAR	**Wadi Sarin**	**55.70**	**341**	LR	LR	10 43 01.4	
	comp=Z,67nm,18.1s,baz=149,slow=32						
SNAA	**Sanae**	**57.94**	**201**	P	**P**	**10 23 32.9**	**+0.2**
SNAA	**Sanae**	**57.94**	**201**	P	**P**	**10 23 32.7**	**0.0**
	1.5nm,0.7s,baz=116,slow=11,SNR=13						
VNA2	**Neumayer--Watz**	**59.44**	**202**	P	**P**	**10 23 43.8**	**+0.8**
VNDA	**Vanda**	**59.83**	**165**	P	**P**	**10 23 45.8**	**+0.2**
	2.3nm,0.7s,baz=276,slow=6.9,SNR=18						
VNDA				LR	LR	10 46 44.5	
	comp=Z,122nm,18.6s,baz=278,slow=33						
VNDA	**Vanda**	**59.83**	**165**	*e*P	**P**	**10 23 45.8**	**+0.2**
	3.6nm,0.9s						
QSPA	**South Pole Qui**	**59.83**	**180**	*e*P	**P**	**10 23 46.2**	**+0.1**
	10nm,0.7s						
VNA3	**Neumayer Olymp**	**60.15**	**202**	P	**P**	**10 23 48.7**	**+0.8**
GEYT	**Alibeck**	**69.84**	**345**	LR	LR	10 52 03.0	
	comp=Z,73nm,18.9s,baz=120,slow=33						
H09N1	**TRISTAN DA CUN**	**71.00**	**238**	T	T	11 42 51.8	
	SNR=89						
KKAR	**Karatay Array**	**73.21**	**356**	*e*P	**P**	**10 25 12.8**	**+1.4**
	6.0nm,0.8s						
MK32	**Makanchi Array**	**76.97**	**5**	*e*P	**P**	**10 25 31.9**	**-1.2**
MKAR	**Makanchi Array**	**76.97**	**5**	P	**P**	**10 25 31.9**	**-1.2**
	1.3nm,0.8s,baz=179,slow=6.9,SNR=7.6						
MKAR				LR	LR	10 58 49.4	
	comp=Z,46nm,18.4s,baz=183,slow=35						
KBZ	**Khabaz**	**79.56**	**336**	LR	LR	10 56 02.6	
	comp=Z,36nm,19.9s,baz=79,slow=32						
BR101	**Keskin Array S**	**79.88**	**328**	*e*P	**P**	**10 25 49.6**	**+0.1**
BRTR	**Keskin Array B**	**79.88**	**328**	P	**P**	**10 25 49.6**	**+0.1**
	0.5nm,0.5s,baz=151,slow=3.3,SNR=3.0						
SONA0	**Songino Array**	**82.54**	**20**	*e*P	**P**	**10 26 03.6**	**+0.2**
SONM	**Songino Array**	**82.54**	**20**	P	**P**	**10 26 03.6**	**+0.2**
	0.4nm,0.5s,baz=182,slow=7.4,SNR=3.8						
SONM				LR	LR	11 02 39.3	
	comp=Z,60nm,19.1s,baz=159,slow=36						
BRVK	**Borovoye**	**83.15**	**357**	*e*P	**P**	**10 26 07.3**	**+1.0**
	3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.17**	**289**	P	**P**	**10 26 07.2**	**-0.1**
	4.3nm,0.3s,baz=123,slow=7.1,SNR=3.4						
TORD				LR	LR	11 00 43.4	
	comp=Z,67nm,18.8s,baz=335,slow=34						
TOA1	**Torodi Ar. Sit**	**83.18**	**289**	*e*P	**P**	**10 26 07.2**	**-0.1**
KSRS	**Korea Array**	**83.26**	**39**	P	**P**	**10 26 07.0**	**-0.2**
	0.9nm,0.7s,baz=212,slow=4.1,SNR=4.0						
KSRS				LR	LR	11 00 09.9	
	comp=Z,81nm,21.0s,baz=236,slow=34						
ZALV	**Zalesovo Beam**	**84.28**	**5**	P	**P**	**10 26 11.8**	**-0.2**
	2.5nm,0.7s,baz=190,slow=3.8,SNR=8.3						
ZALV				LR	LR	11 01 08.8	
	comp=Z,54nm,21.7s,baz=244,slow=34						
ZAA1	**Zalesovo Array**	**84.28**	**5**	*e*P	**P**	**10 26 11.8**	**-0.3**
DBIC	**Dimbokro**	**85.22**	**281**	LR	LR	11 00 52.1	
	comp=Z,86nm,19.5s,baz=114,slow=33						
MJAR	**Matsushiro Arr**	**88.65**	**46**	LR	LR	11 04 57.6	
	comp=Z,24nm,19.4s,baz=95,slow=35						
USRK	**Ussuriysk Ar.**	**90.22**	**37**	LR	LR	11 04 05.5	
	comp=Z,77nm,22.0s,baz=184,slow=34						
ILAR	**Eielson Array**	**136.60**	**25**	PKP	**PKiKP**	**10 33 04.0**	**+0.1**
	0.4nm,0.9s,baz=117,slow=1.4,SNR=3.7						
YKA	**Yellowknife Ar**	**147.12**	**9**	PKPbc	**PKPdf**	**10 33 21.5**	**+0.6**
	1.4nm,1.0s,baz=340,slow=4.0,SNR=3.8						
YKB5	**Yellowknife Ar**	**147.12**	**9**	*e*PKPdf	**PKPdf**	**10 33 21.6**	**+0.6**
NV01	**Mina Array Sit**	**165.90**	**51**	*e*PKPdf	**PKPdf**	**10 33 46.6**	**+0.6**
NV01				*e*PKPab	**PKPab**	**10 34 45.1**	**-0.8**
NVAR	**Mina Array Bea**	**165.90**	**51**	PKP	**PKPdf**	**10 33 46.6**	**+0.6**
	0.1nm,0.4s,baz=177,slow=1.6,SNR=3.0						
NVAR				PKPab	**PKPab**	**10 34 45.1**	**-0.8**
	0.8nm,0.9s,baz=296,slow=4.0,SNR=5.6						
NVAR				PP	**PP**	**10 38 33.8**	**+0.6**
	0.1nm,0.5s,baz=57,slow=5.5,SNR=3.8						
TXAR	**Lajitas Array**	**178.88**	**210**	PKPab	PKPab	10 35 41.8	
	0.3nm,0.8s,baz=208,slow=3.7,SNR=3.2						

MEX 01 10:16:56.2±0.6**, 14°.67N**×**93°.83W, h18**^{km}±999^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.53**	**81**	*i* P	Pn	10 17 18.7	-4.0
THIG				*e*S	Sn	10 17 38.2	-4.0
TGIG		**2.21**	**18**	*e*P	Pn	10 17 29.8	-2.3
TGIG				*e*S	Sn	10 17 54.8	-4.1
CCIG	**Comitan**	**2.29**	**45**	*i* P	Pn	10 17 30.5	-2.9
CCIG				*i* S	Sn	10 17 57.0	-4.3
HUIG	**Huatulco**	**2.46**	**297**	*e*P	Pn	10 17 32.5	-3.0
CMIG	**Matias Romero**	**2.61**	**337**	*e*P	Pn	10 17 34.1	-3.5
CMIG				*i* S	Sn	10 18 04.4	-4.6

SJA ***01*** *10:17:52.5±1.3, 31°.47S×72°.65W, h20^{km}±15^{km}, ML3.6, MW3.8*

GUC ***01*** *10:17:55.5±0.5, 31°.31S×72°.16W, h50^{km}±7^{km}, ML3.1*

ISC 01 10:17:51.8±3.5**, 31°.37S**±0°.04×**72°.45W**±0°.10**, h7**^{km}±26^{km}**, n21, σ2^{s}.53**/26**, 2C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	**Combarbal**	**1.25**	**83**⇑	*i*P	**Pb**	**10 18 14.5**	**-1.4**
CO02				*i* S	**Sb**	**10 18 29.2**	**-3.1**
LSCH	**La Serena**	**1.79**	**36**	*e*P	**Pn**	**10 18 22.7**	**-0.4**
LSCH				*e*S	**Sn**	**10 18 43.7**	**-2.4**
LSCH				IAML		10 18 53.0	
	comp=E,175nm,0.4s						
GO04	**Tololo Observa**	**1.86**	**50**⇓	*i*P	**Pn**	**10 18 24.3**	**0.0**
GO04				*i* S	**Sn**	**10 18 46.2**	**-1.9**
PEL	**Peldehue**	**2.32**	**140**	*e*P	**Pn**	**10 18 31.9**	**+1.4**
PEL				*e*S	**Sb**	**10 19 02.4**	**-0.5**
PEL	**Peldehue**	**2.32**	**140**⇓	*i*P	**Pn**	**10 18 32.2**	**+1.8**
PEL				*e*S	**Sn**	**10 18 59.2**	**0.0**
PEL				IAML		10 19 16.6	
	comp=E,162nm,0.5s						
RCDM	**Rinconada Maip**	**2.53**	**147**	*e*P	**Pb**	**10 18 35.9**	**-1.7**
CLCH	**Cerro Calan**	**2.59**	**142**	*e*P	**Pn**	**10 18 35.9**	**+1.6**
CLCH				IAML		10 19 17.6	
	comp=N,226nm,0.7s						
FCH	**Farellones**	**2.68**	**137**⇑	*i*P	**Pn**	**10 18 37.3**	**+1.6**
FCH				IAML		10 19 17.9	
	comp=E,87nm,0.2s						
RTLS	**Leoncito**	**2.73**	**100**	*e*P	**Pb**	**10 18 40.7**	**-0.4**
AUSP	**Uspallata**	**2.75**	**109**	*e*P	**Pb**	**10 18 40.2**	**-1.2**
LCO	**Las Campanas**	**2.80**	**33**	*e*P	**Pb**	**10 18 41.9**	**-0.4**
LCO				*e*S	**Sb**	**10 19 18.2**	**+1.4**
RTCV	**Cerro Valdivia**	**3.37**	**99**	*e*P	**Pb**	**10 18 49.4**	**-2.6**
RTLL	**Cerro Villicun**	**3.40**	**90**	*e*P	**Pb**	**10 18 50.9**	**-1.6**
AMOG	**MOGNA**	**3.42**	**84**	*e*P	**Pb**	**10 18 51.6**	**-1.2**
CFA	**Coronel Fontan**	**3.61**	**95**	*e*P	**Pb**	**10 18 53.8**	**-2.2**
GO05	**Huala**	**3.66**	**173**	*e*P	**Pn**	**10 18 50.5**	**+1.6**
VCA	**Vinchina**	**4.52**	**56**	*e*P	Pn	10 19 05.8	+5.0
VCA				IAML		10 19 14.0	
	comp=Z,52nm,0.3s						
ACAN	**Cantantal**	**4.57**	**103**	*e*P	**Pn**	**10 19 06.1**	**+4.7**
ACLC	**CERRO LA CRUZ**	**5.13**	**69**	*e*P	**Pn**	**10 19 14.0**	**+4.8**
APLL	**PUNTA DE LOS L**	**5.18**	**81**	*e*P	**Pn**	**10 19 14.0**	**+4.1**
APLL				IAML		10 19 18.3	
	comp=Z,23nm,0.3s						
CYA	**Choya**	**6.47**	**65**	*e*P	**Pn**	**10 19 32.3**	**+4.8**

UCR 01 10:25:37.9±1.1**, 9°.01N**×**84°.11W, h24**^{km}±6^{km}**, MW3.8, 6C-3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDLM	**Las Mercedes**	**0.58**	**63**⇓	*i*P	Pb	10 25 48.9	-0.6
EDPN	**Palmar Norte**	**0.65**	**95**⇓	*i*P	Pb	10 25 50.3	-0.3
LCR2	**La Lucha 2**	**0.73**	**8**⇑	*i*P	Pb	10 25 52.1	-0.1
EDBA	**Buenos Aires**	**0.84**	**80**	*e*P	Pb	10 25 52.7	-1.2
DRK0	**Durika**	**0.89**	**74**	*e*P	Pb	10 25 54.5	-0.4
PTJ1	**Puerto Jimnez**	**0.93**	**121**⇑	*i*P	Pb	10 25 54.9	-0.5
HDC	**Heredia**	**0.98**	**360**⇑	*i*P	Pb	10 25 55.7	-0.7
CVTR	**Volcan Turrial**	**1.06**	**19**⇑	*e*P	Pn	10 25 57.5	-0.1
SRA1	**San Ramn**	**1.12**	**341**⇓	*e*P	Pn	10 25 58.2	-0.1
EDSV	**San Vito**	**1.14**	**100**	*e*P	Pb	10 25 58.9	-0.2
BRU2	**Volcan**	**1.42**	**99**	*e*P	Pn	10 26 02.2	-0.2
JTS	**Las Juntas de**	**1.52**	**327**⇑	*i*P	Pn	10 26 02.7	-0.9
CEDE	**Laguna Cedeo**	**1.57**	**338**⇑	*e*P	Pn	10 26 05.0	+0.5
CUI	**Cuipilapa**	**1.94**	**328**	*e*P	Pn	10 26 09.3	-0.2
MESS	**Mesas**	**2.02**	**328**	*e*P	Pn	10 26 11.2	+0.5

UCR ***01*** *10:34:27.3±2.9, 6°.89N×82°.10W, h8^{km}±53^{km}, MW4.7*

IDC ***01*** *10:34:33.8±1.1, 8°.01N×81°.68W, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx4.0/41, mbtmp4.0/11, ML3.5/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/33, Error ellipse: s-maj=43.4km s-min=16.8km az=46.0*

ISC 01 10:34:34.4±0.8**, 7°.7N**±0°.1×**81°.78W**±0°.07**, h10**^{km}**, n40, σ1^{s}.93**/41**, mb4.1**/11**, 4C-2D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**1.42**	**321**⇑	*e*P	**Pn**	**10 34 59.0**	**-1.4**
BRU2				*e*S	**Sg**	**10 35 26.7**	**+6.5**
AZU	**Azuero**	**1.50**	**86**⇓	*e*P	**Pb**	**10 35 03.2**	**+0.9**
EDSV	**San Vito**	**1.63**	**314**	*e*P	**Pn**	**10 34 59.5**	**-3.7**
PTJ1	**Puerto Jimnez**	**1.72**	**299**	*e*P	**Pn**	**10 35 01.6**	**-2.8**
EDBA	**Buenos Aires**	**2.08**	**315**	*e*P	**Pn**	**10 35 10.1**	**+0.7**
EDPN	**Palmar Norte**	**2.08**	**307**⇓	*e*P	**Pn**	**10 35 07.3**	**-2.2**
DRK0	**Durika**	**2.13**	**317**	*e*P	**Pn**	**10 35 08.9**	**-1.4**
DRK0				*e*S	**Sb**	**10 35 40.5**	**+0.7**
ZANG	**Zanguenga, Cho**	**2.27**	**56**⇑	*e*P	**Pb**	**10 35 15.9**	**+0.4**
EDLM	**Las Mercedes**	**2.38**	**312**	*e*P	**Pn**	**10 35 12.7**	**-1.0**
BCIP	**Isla Barro Col**	**2.42**	**53**	*e*P	**Pb**	**10 35 17.6**	**-0.4**
BCIP	**Isla Barro Col**	**2.42**	**53**⇑	*e*P	**Pb**	**10 35 17.6**	**-0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPA	Univ. de Panam	2.57	60	*e*P	Pb	10 35 20.6	0.0
EDDO	Dominical	2.58	307	*e*P	Pn	10 35 16.3	+0.1
HDC	Heredia	3.25	315⇑	*e*P	Pn	10 35 25.2	-0.5
ARE1	Arenal 1	4.00	314	*e*P	Pn	10 35 35.9	0.0
CEDE	Laguna Cedeo	4.01	314	*e*P	Pn	10 35 36.9	+0.9
CEDE				*e*S	Sb	10 36 34.5	+0.7
JTS	Las Juntas de	4.06	310	Pn	Pn	10 35 35.3	-1.3
	3.2nm,0.3s,baz=232,slow=5.0,SNR=23						
JTS				Lg	Lg	10 36 31.2	
	baz=0.0,slow=20,SNR=1.9						
JTS				LR	LR	10 36 38.1	
	comp=Z,48nm,20.9s,baz=208,slow=32						
JTS	Las Juntas de	4.06	310	*e*P	Pn	10 35 35.6	-1.1
CUI	Cuipilapa	4.46	312	*e*P	Pn	10 35 41.7	-0.4
MESS	Mesas	4.53	312	*e*P	Pn	10 35 46.4	+3.2
SOLC	Bahia Solano	4.58	108	*e*P	Pn	10 35 43.3	-0.4
SOLC				*e*S	Sn	10 36 35.0	-2.0
BUEV	Buena Vista	4.73	311	*e*P	Pn	10 35 45.5	-0.4
DBBC	Dabeiba	5.57	97	*e*P	Pn	10 35 59.4	+1.9
HELC	Santa Helena	6.38	103	*e*P	Pn	10 36 11.2	+2.3
MATN	Matagalpa	6.61	322	*e*P	Pn	10 36 01.6	-10
RREF	El Recreo	6.97	113	*e*P	Pn	10 36 21.0	+3.8
ATAH	Atahualpa	15.11	167	LR	LR	10 43 19.1	
	comp=Z,146nm,20.5s,baz=359,slow=34						
PTGA	Pitinga	23.31	110	P	P	10 39 43.5	+0.6
	4.8nm,0.8s,baz=288,slow=10,SNR=5.7						
LPAZ	La Paz	27.39	150	P	P	10 40 23.8	+2.8
	0.6nm,0.3s,baz=253,slow=17,SNR=7.8						
TXAR	Lajitas Array	29.79	319	P	P	10 40 40.8	-0.9
	0.2nm,0.5s,baz=134,slow=7.7,SNR=2.9						
PDAR	Pinedale Array	42.63	330	P	P	10 42 29.7	-1.7
	0.2nm,0.6s,baz=131,slow=13,SNR=3.4						
ULM	Lac du Bonnet	44.02	347	P	P	10 42 40.1	-2.0
	4.4nm,0.8s,baz=155,slow=6.8,SNR=4.5						
NVAR	Mina Array Bea	44.94	319	P	P	10 42 49.9	-0.1
	0.9nm,0.7s,baz=128,slow=6.4,SNR=12						
SCHQ	Schefferville	48.51	11	P	P	10 43 15.4	-2.0
	3.9nm,0.6s,baz=231,slow=12,SNR=3.9						
YKA	Yellowknife Ar	59.70	343	P	P	10 44 38.3	-0.6
	2.2nm,0.8s,baz=134,slow=7.2,SNR=8.7						
INK	Inuvik	69.42	342	P	P	10 45 42.4	+0.1
	5.6nm,1.1s,baz=144,slow=6.6,SNR=8.2						
ILAR	Eielson Array	72.61	336	P	P	10 46 01.3	-0.5
	1.1nm,0.7s,baz=107,slow=4.5,SNR=10						
TORD	Torodi Ar. Bea	81.97	78	P	P	10 46 55.8	+0.5
	4.8nm,0.3s,baz=288,slow=5.1,SNR=4.8						
NOA	NORSAR Array B	84.78	29	LR	LR	11 23 04.0	
	comp=Z,11nm,19.4s,baz=115,slow=34						
ASAR	Alice Springs	142.29	241	PKhKP	PKPpre	10 54 00.1	
	0.6nm,0.8s,baz=119,slow=4.0,SNR=6.7						
ASAR				PKP	PKPdf	10 54 09.1	+0.9
	0.4nm,0.6s,baz=90,slow=2.0,SNR=6.0						

SJA 01 10:59:53.7±0.7**,31°.57S×67°.29W,h72^{km}**±7^{km}**,ML2.5, MW3.6,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	1.34	29	*i* P	Pn	11 00 18.3	+1.6
APLL				IAmb	IAmb	11 00 33.9	
APLL				IAML		11 00 34.0	
	comp=Z,50nm,0.1s						
APLL				*i* S	Sn	11 00 35.7	+1.8
ACLC	CERRO LA CRUZ	2.15	8	*i* P	Pn	11 00 29.3	+1.6
ACLC				*i* S	Sn	11 00 55.6	+2.1
AGUA	GUANDACOL	2.32	333	*i* P	Pn	11 00 31.6	+1.8
AGUA				*i* S	Sn	11 00 59.7	+2.3
VCA	Vinchina	2.93	344	*i* P	Pn	11 00 39.8	+1.6
VCA				*i* S	Sn	11 01 14.9	+2.5
VCA				IAML		11 01 18.0	
	comp=Z,16nm,0.3s						

ANF ***01*** *11:00:45.2±0.7,65°.26N×144°.08W,h10^{km},ML3.9/5,Error ellipse: s-maj=12.2km s-min=5.7km az=150.0*

IDC ***01*** *11:00:45.2±1.0,65°.31N×144°.14W,h0^{km},mb3.7/1, mb1 3.9/4,mb1mx3.4/48,mbtmp3.5/4,ML3.4/3,MS2.9/2, Ms1 2.9/2,ms1mx2.4/36,Error ellipse: s-maj=14.0km s-min=9.1km az=173.0*

NEIC ***01*** *11:00:46.0±0.0,65°.30N×144°.12W,h14^{km},ML3.5(AEIC), ML3.9(OTT),After AEIC.*

AEIC ***01*** *11:00:46.0,65°.30N×144°.12W,h14^{km},ML3.5, ML3.9(OTT)*

PGC ***01*** *11:00:46.2±0.0,65°.36N×144°.02W,h5^{km},ML3.9/9,182km east of Fairbanks, Ak Northern Alaska*

ISC 01 11:00:44.0±1.2**,65°.32N**±0°.03×**144°.00W**±0°.02**,h5^{km}**±10^{km}**, n79,**σ**1^{s}.76**/102**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRP	Porcupine Dome	0.67	288	*e*Pg	Pb	11 00 58.4	+0.2
PRP				*e*Pn	Pn	11 01 06.3	+6.0
EGAK	Eagle	1.32	113	*e*Pn	Pg	11 01 10.3	+1.0
ILAR	Eielson Array	1.34	247	Pg	Pg	11 01 09.8	+0.1
	85nm,0.3s,baz=61,slow=16,SNR=924						
ILAR				Lg	Lg	11 01 26.2	
	298nm,0.3s,baz=66,slow=28,SNR=54						
ILB	Eielson Array	1.34	247	*e*Pn	Pn	11 01 09.0	-0.4
ILB				*e*Sg	Sg	11 01 26.9	-0.2
FYU	Fort Yukon	1.35	339	*e*Pn	Pg	11 01 10.2	+0.4
FYU				*e*Sn	Sg	11 01 28.1	+0.9
PS08	TAPS Pump Stn8	1.44	238	*e*Pn	Pn	11 01 10.5	-0.2
PS08				*e*Sn	Sg	11 01 30.0	0.0
POKR	Poker Plat Res	1.46	263	P	Pn	11 01 10.8	-0.2
	baz=81						
POKR				S	Sb	11 01 29.8	-0.7
	baz=81						
HDA	Harding Lake	1.56	235	*e*Pn	Pn	11 01 12.4	0.0
HDA	Harding Lake	1.56	235	P	Pn	11 01 12.4	0.0
	baz=52						
HDA				Sb	Sg	11 01 33.8	-0.2
	baz=52						
RIDG	Independent Ri	1.63	193	*e*Pn	Pb	11 01 14.2	-0.4
DOT	Dot Lake	1.68	181	*e*Pn	Pb	11 01 14.9	-0.5
DOT	Dot Lake	1.68	181	Pn	Pb	11 01 15.0	-0.4
DOT				Sg	Sg	11 01 38.2	+0.2
COLA	College	1.69	256	*e*Pn	Pn	11 01 14.0	-0.1
TCOL	CIGO, UAF Yank	1.70	256	P	Pn	11 01 14.0	-0.2
	baz=73						
TCOL				Sb	Sg	11 01 37.9	-0.5
	baz=73						
CCB	Clear Creek Bu	1.75	249	*e*Pn	Pn	11 01 14.4	-0.6
MDM	Murphy Dome	1.82	260	*e*Pn	Pn	11 01 15.6	-0.5
WRH	Wood River Hil	1.94	246	*e*Pn	Pn	11 01 17.1	-0.5
BM3	Burnt Mountain	2.12	354	*e*Pn	Pn	11 01 21.0	+0.9
DAWY	Dawson	2.35	120	*e*Pn	Pn	11 01 24.1	+0.8
DAWY	Dawson	2.35	120	Pn	Pn	11 01 24.3	+1.0
DAWY				Pg	Pg	11 01 29.4	+0.4
DAWY				Sg	Sg	11 01 59.7	+0.3
MENT	Mentasta	2.40	177	*e*Pn	Pn	11 01 24.9	+1.0
PS06	TAPS Pump Stn6	2.44	285	*e*Pn	Pn	11 01 23.9	-0.6
PAX	Paxson	2.45	196	*e*Pn	Pn	11 01 25.2	+0.5
PAX	Paxson	2.45	196	Pn	Pn	11 01 25.8	+1.1
PAX				Sg	Sb	11 02 00.7	+1.6
BCA3	Beaver Creek A	2.47	156	*e*Pn	Pn	11 01 25.8	+0.9
BWN	Browne	2.61	246	*e*Pn	Pn	11 01 25.8	-1.1
MCK	McKinley	2.67	235	*e*Pn	Pn	11 01 27.9	+0.3
DHY	Denali Highway	2.70	215	*e*Pn	Pn	11 01 28.6	+0.5
RND	Reindeer	2.86	230	*e*Pn	Pn	11 01 30.9	+0.6
MLY	Manley	2.86	267	*e*Pn	Pn	11 01 29.3	-0.9
PS05	TAPS Pump Stn5	3.10	302	*e*Pn	Pn	11 01 33.5	0.0
COLD	Coldfoot	3.15	310	*e*Pn	Pn	11 01 35.0	+0.8
COLD	Coldfoot	3.15	310	Pn	Pn	11 01 35.0	+0.8
COLD				Sg	Sg	11 02 23.2	-2.0
EPYK	Eagle Plains	3.17	67	*e*Pn	Pn	11 01 35.8	+1.2
EPYK	Eagle Plains	3.17	67	P	Pn	11 01 35.7	+1.2
	baz=254						
EPYK				S	Sn	11 02 12.5	-0.2
	baz=254						
BVCY	Beaver Creek	3.23	153	Pn	Pn	11 01 37.0	+1.5
BVCY				Sg	Sg	11 02 27.1	-0.7
BPAW	Bear Paw Mtn.	3.24	251	*e*Pn	Pn	11 01 34.5	-0.9
TRF	Thorofare Moun	3.32	238	*e*Pn	Pn	11 01 36.7	0.0
KTH	Kantishna Hill	3.49	243	*e*Pn	Pn	11 01 39.3	+0.3
YUK1	Sand Pete Hill	3.54	153	Pn	Pn	11 01 41.3	+1.6
YUK1				Sg	Sg	11 02 37.3	-0.2
SCM	Sheep Creek Mo	3.81	205	*e*Pn	Pn	11 01 45.2	+1.9
YUK2	White River	3.82	157	Pn	Pn	11 01 45.6	+2.1
YUK2				Sg	Sg	11 02 45.7	-0.9
YUK3	Moose Creek	3.90	154	Pn	Pn	11 01 46.0	+1.3
YUK3				Sg	Sg	11 02 48.6	-0.4
TOLK	Toolik Lake Re	3.98	329	*e*Pn	Pn	11 01 47.5	+1.8
TOLK	Toolik Lake Re	3.98	329	P	Pn	11 01 47.7	+2.0
	baz=145						
TOLK				S	Sn	11 02 33.5	+0.7
	baz=145						
SML	Sawmill	4.03	211	*e*Pn	Pn	11 01 47.7	+1.4
IM3	Indian Mountai	4.09	284	*e*Pn	Pn	11 01 46.4	-0.8
PTPK	Patty Peak	4.21	170	Pn	Pn	11 01 51.3	+2.4
PTPK				Sg	Sg	11 02 59.0	-0.1
PPLA	Purkeypile	4.34	240	*e*Pn	Pn	11 01 51.0	+0.4
BALM	Baldy	4.37	169	Pn	Pn	11 01 53.3	+2.3
BALM				Sg	Sg	11 03 03.3	-0.9
PMR	Palmer	4.40	214	*e*Pn	Pn	11 01 53.5	+2.3
KNK	Knik Glacier	4.41	209	*e*Pn	Pn	11 01 53.8	+2.3
KIAG	Kiagna River	4.48	170	Pn	Pn	11 01 54.8	+2.1
KIAG				Sg	Sg	11 03 07.0	-0.8
YUK4	Talbot Arm	4.67	146	Sg	Sg	11 03 09.9	-3.7
SKT	Skwentna	4.75	228	*e*Pn	Pn	11 01 57.1	+1.0
HMT	Hamilton	5.01	181	*e*Pn	Pn	11 02 02.6	+2.9
TABL	Table Mountain	5.07	164	Pn	Pn	11 02 03.9	+3.0
YUK6	Outpost Mounta	5.08	147	Pn	Pn	11 02 03.1	+2.1
YUK6				Sg	Sg	11 03 25.0	-2.2
INK	Inuvik	5.11	49	Pn	Pn	11 02 02.0	+1.0
	0.5nm,0.3s,baz=238,slow=17,SNR=40						
INK				Sn	Sn	11 02 58.4	-1.9
	4.2nm,0.3s,baz=148,slow=29,SNR=4.2						
INK				Lg	Lg	11 03 27.8	
	1.3nm,0.3s,baz=143,slow=20,SNR=4.4						
INK	Inuvik	5.11	49	*e*Pn	Pn	11 02 02.5	+1.5
INK	Inuvik	5.11	49	Pn	Pn	11 02 02.1	+1.0
INK				Sn	Sn	11 02 58.6	-1.6
HYT	Haines Junctio	5.39	144	*e*Pn	Pn	11 02 06.9	+1.8
HYT	Haines Junctio	5.39	144	Pn	Pn	11 02 07.0	+1.8
HYT				Sg	Sg	11 03 34.9	-2.2
SAMH	Samovar Hills	5.42	163	Pn	Pn	11 02 07.8	+2.3
PCA	Pinnacle	5.52	160	*e*Pn	Pn	11 02 09.8	+3.0
PNL	Peninsula	6.06	157	Pn	Pn	11 02 16.1	+1.9
WHY	Whitehorse	6.25	134	*e*Pn	Pn	11 02 18.4	+1.5
WHY	Whitehorse	6.25	134	Pn	Pn	11 02 18.6	+1.7
WHY				Sg	Sg	11 04 01.0	-3.6
PLBC	Pleasant Camp	6.87	145	Sg	Sg	11 04 21.1	-3.3
BESE	Bessie Mountai	8.02	143	Sg	Sg	11 04 55.6	-5.4
DLBC	Dease Lake	9.53	130	Pn	Pn	11 03 04.0	+2.2
	0.7nm,0.3s,baz=320,slow=11,SNR=8.6						
DLBC				Lg	Lg	11 05 44.0	
	0.4nm,0.3s,baz=210,slow=19,SNR=3.3						
DLBC	Dease Lake	9.53	130	Pn	Pn	11 03 02.8	+1.0
DLBC				Sg	Sn	11 05 43.1	+54
DHRN	Dharma Camp	10.03	69	Pn	Pn	11 03 08.5	+0.1
DHRN				Sn	Sn	11 04 53.3	-7.9
FNBB	Fort Nelson	11.71	114	Sg		11 06 51.0	
KUKN	Kugluktuk,NWT	11.71	65	Pn	Pn	11 03 30.3	-1.2
KUKN				Sn	Sn	11 05 31.4	-11
YKA	Yellowknife Ar	13.18	89	Pn	Pn	11 03 50.5	-0.9
	0.1nm,0.3s,baz=294,slow=13,SNR=3.4						
BBB	Bella Bella	15.47	141	LR	LR	11 10 09.6	
	comp=Z,47nm,20.5s,baz=185,slow=36						
NEW	Newport	22.26	127	LR	LR	11 14 49.6	
	comp=Z,29nm,19.6s,baz=292,slow=38						
NVAR	Mina Array Bea	30.81	138	P	P	11 07 04.3	+3.7
	0.8nm,0.7s,baz=315,slow=6.7,SNR=9.8						

ISK ***01*** *11:13:42.9,39°.68N×25°.61E,h10^{km},ML2.6/8*

ATH ***01*** *11:13:42.6,39°.66N×25°.52E,h27^{km}±1^{km},ML2.3/6,Error ellipse: s-maj=2.0km s-min=0.9km az=234.0*

ISCJB ***01*** *11:13:43.0±0.5,39°.67N±0°.02×25°.58E±0°.03,h8^{km}±4^{km}, Error ellipse: s-maj=3.9km s-min=3.0km az=148.0*

DDA ***01*** *11:13:43.9,39°.60N×25°.72E,h28^{km}±1^{km},ML2.6*

THE ***01*** *11:13:43.5,39°.67N×25°.54E,h10^{km},ML2.3/9,Error ellipse: s-maj=0.8km s-min=0.4km az=98.0*

ISC 01 11:13:43.0±0.9**,39°.66N**±0°.02×**25°.60E**±0°.02**,h16^{km}**±8^{km}**, n38,**σ**0^{s}.70**/64**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.40	307	P	Pg	11 13 50.9	-0.2
LIA				S	Sg	11 13 56.3	-0.4
LIA	Limnos Island	0.40	307	P	Pg	11 13 50.7	-0.5
LIA				S	Sg	11 13 56.3	-0.4
LIA				AML	AML	11 13 56.6	
	comp=E,769μm,0.3s						
LIA				AML	AML	11 13 57.0	
	comp=N,520μm,0.1s						
SIGR	SIGRI	0.49	156	P	Pg	11 13 53.0	+0.2
SIGR				S	Sb	11 14 00.8	+0.7
SIGR	SIGRI	0.49	156	P	Pg	11 13 53.0	+0.2
SIGR				S	Sb	11 14 00.7	+0.7
SIGR				AML	AML	11 14 01.2	
	comp=E,2010μm,0.2s						
SIGR				AML	AML	11 14 01.4	
	comp=N,2034μm,0.4s						
EZN	Ezine	0.58	73	PG	Pb	11 13 54.3	-0.5
EZN				SG	Sg	11 14 02.5	+0.1
PRK	Paraskevi	0.67	128	P	Pn	11 13 57.2	-0.5
PRK				S	Sn	11 14 07.5	-0.3
PRK	Paraskevi	0.67	128	P	Pn	11 13 57.1	-0.6
PRK				S	Sn	11 14 07.2	-0.5
PRK				AML	AML	11 14 10.9	
	comp=N,1064μm,0.3s						
PRK				AML	AML	11 14 11.5	
	comp=E,835μm,0.4s						
BAYC	CANAKKALE_Bayr	0.74	83	*i* P	Pg	11 13 57.6	+0.2
BAYC				*i* S	Sn	11 14 07.9	-1.7
BAYC				IAML_P			
	comp=Z,2μm,0.2s						
SMTH	Samothraki Isl	0.81	356	P	Pb	11 13 58.4	-0.3
SMTH				S	Sg	11 14 10.2	+0.6
SMTH	Samothraki Isl	0.81	356	P	Pb	11 13 58.5	-0.2
SMTH				S	Sg	11 14 10.6	+1.0
SMTH				AML	AML	11 14 11.7	
	comp=E,220μm,0.3s						
SMTH				AML	AML	11 14 12.1	
	comp=N,319μm,0.4s						
AYVA	Ayvalik	0.92	112	*i* P	Pn	11 14 01.9	+0.8
AYVA				*i* S	Sn	11 14 15.3	+1.4
GELI	Tayfur-Gelibol	1.00	42	PG	Pg	11 14 02.6	+0.3
GELI				SG	Sn	11 14 16.3	+0.3
SKY	Skiros Island	1.13	227	P	Pn	11 14 03.3	-0.8
SKY				S	Sb	11 14 19.8	+1.3
SKY	Skiros Island	1.13	227	P	Pn	11 14 03.8	-0.3
LPK	Lapseki	1.14	51	PN	Pg	11 14 05.1	0.0
LPK				SN	Sg	11 14 21.2	+1.2
ENEZ	Enez	1.16	21	PN	Pb	11 14 04.9	+0.3
ENEZ				SN	Sg	11 14 20.7	+0.2
THAS	Thassos island	1.16	325	P	Pn	11 14 04.3	-0.2
THAS				S	Sb	11 14 20.3	+0.8
THAS	Thassos island	1.16	325	P	Pn	11 14 04.3	-0.2
THAS				S	Sb	11 14 19.6	+0.2
THAS				AML	AML	11 14 20.9	
	comp=N,336μm,0.2s						
THAS				AML	AML	11 14 21.6	
	comp=E,412μm,0.3s						
ALN	Alexandroupoli	1.28	15	P	Pn	11 14 06.5	+0.3
ALN				S	Sg	11 14 24.3	-0.2
ALN	Alexandroupoli	1.28	15	P	Pb	11 14 06.8	0.0
ALN				S	Sg	11 14 24.3	-0.2
ALN				AML	AML	11 14 30.2	
	comp=E,96μm,0.5s						
ALN				AML	AML	11 14 30.7	
	comp=N,105μm,0.4s						
CHOS	Chios island	1.32	164	P	Pn	11 14 07.3	+0.5
CHOS				S	Sg	11 14 26.1	+0.5
CHOS	Chios island	1.32	164	P	Pn	11 14 07.4	+0.5
ZEDA	zmir-Bergama	1.34	121	*i* P	Pb	11 14 07.2	-0.5
ZEDA				*i* S	Sb	11 14 24.3	-0.3
ZEDA				IAML_P			
	comp=Z,556nm,0.1s						
OUR	Ouranopolis	1.41	299	P	Pn	11 14 08.0	0.0
OUR	Ouranopolis	1.41	299	P	Pn	11 14 08.1	+0.1
RDO	Rodhopi	1.49	358	PN	Pn	11 14 09.5	+0.5
RDO	Rodhopi	1.49	358	P	Pn	11 14 09.1	+0.1
RDO				S	Sb	11 14 29.1	+0.3
RDO	Rodhopi	1.49	358	P	Pn	11 14 09.5	+0.5
URLA	Izmir	1.51	149	PN	Pb	11 14 10.5	-0.2
URLA	Izmir	1.51	149	*i* P	Pb	11 14 11.0	+0.3
URLA				*i* S	Sn	11 14 27.7	-1.0
URLA				IAML_P			
	comp=Z,199nm,0.1s						
KAVA	Kavala	1.57	329	P	Pn	11 14 10.5	+0.3
RKY	Sarkoy-Tekirda	1.59	49	PN	Pb	11 14 11.7	-0.3
SART	Tekirdag	1.59	49	*i* P	Pg	11 14 12.8	-0.8
SART				*i* S	Sg	11 14 34.7	+0.4
SART				IAML_P			
	comp=Z,684nm,0.2s						
GONE	Gonen-Balikesi	1.65	76	PN	Pb	11 14 12.1	-0.9
STEP	BALIKESIR_Sava	1.66	99	*i* P	Pb	11 14 13.7	+0.4
STEP				*i* S	Sg	11 14 34.8	-1.9
EDC	Edincik	1.87	68	PN	Pb	11 14 15.9	-0.9
KCTX	Karacabey (Bur	2.21	73	PN	Pn	11 14 19.9	+1.0
DURS	Dursunbey	2.22	91	*i* P	Pn	11 14 20.5	+1.3
DURS				*i* S	Sb	11 14 48.6	-1.5
DURS				IAML_P			
	comp=Z,267nm,0.3s						

ISCJB ***01*** *11:13:46.9±0.4,24°.96N±0°.08×123°.21E±0°.05, h133^{km}±5^{km},mb3.5/11,Error ellipse: s-maj=12.8km s-min=7.1km az=164.0*

JMA ***01*** *11:13:48.8±0.2,24°.86N×123°.23E,h126^{km}±3^{km},M3.5*

IDC ***01*** *11:13:48.2±2.8,25°.01N×123°.21E,h133^{km}±27^{km}, mb3.4/12,mb1 3.5/14,mb1mx3.4/33,mbtmp3.8/14,Error ellipse: s-maj=21.1km s-min=14.5km az=80.0*

ISC 01 11:13:47.8±0.7**,24°.99N**±0°.09×**123°.21E**±0°.06**,h128^{km}**±7^{km}**, n26,**σ**0^{s}.87**/39**,mb3.5**/11**,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.56	199	P	Pn	11 14 07.4	+0.4
YOJ				S	Sn	11 14 21.2	-0.3
JYNG	Yonagunijimaku	0.59	204	P	Pn	11 14 07.6	+0.4
JYNG				S	Sn	11 14 21.6	-0.3
IRIF	Iriomote-Funau	0.81	144	P	Pn	11 14 08.8	-0.1
IRIF				S	Sn	11 14 24.0	-0.8
JKRS	Kuro-shima	1.05	136	P	Pn	11 14 11.3	+0.3
JKRS				S	Sn	11 14 27.8	-0.8
JIJ	Ishigaki jima	1.06	126	P	Pn	11 14 11.1	0.0
JIJ				S	Sn	11 14 27.1	-1.6
HATJ	Hateruma jima	1.08	150	P	Pn	11 14 11.4	+0.1
HATJ				S	Sn	11 14 28.3	-0.8
JISG	Ishigakijimahi	1.08	112	P	Pn	11 14 11.6	+0.3
JISG				S	Sn	11 14 28.5	-0.6
JTJ	Tarama	1.40	104	P	Pn	11 14 15.4	+0.7
JTJ				S	Sn	11 14 34.8	-0.3
JIRB	Irabujima	1.79	95	P	Pn	11 14 19.8	+0.7
JIRB				S	Sn	11 14 42.8	-0.3
JIKM	Ikemajima	1.85	92	P	Pn	11 14 20.9	+1.0
JIKM				S	Sn	11 14 44.4	0.0
JMJ2	Miyako jima3	1.94	97	P	Pn	11 14 22.1	+1.1
JMJ2				S	Sn	11 14 46.5	+0.2
JOGS	Gusukube	2.01	96	P	Pn	11 14 23.1	+1.3
JOGS				S	Sn	11 14 47.8	0.0
JOW	Kunigami	4.92	67	P	Pn	11 14 59.6	-0.2
	0.9nm,0.3s,baz=163,slow=12,SNR=57						
JOW				S	Sn	11 15 52.5	-3.2
	1.9nm,0.3s,baz=104,slow=16,SNR=11						
KSRS	Korea Array	13.06	17	P	Pn	11 16 49.4	+1.0
	0.8nm,0.3s,baz=199,slow=11,SNR=36						
USRK	Ussuriysk Ar.	20.46	18	P	P	11 18 15.4	+0.3
	1.7nm,0.6s,baz=207,slow=11,SNR=5.2						
CMAR	Chiang Mai Arr	23.44	259	P	P	11 18 46.4	+0.7
	0.7nm,0.4s,baz=57,slow=9.0,SNR=5.5						
KLR	Kul'dur	25.10	13	P	P	11 19 00.5	+0.1
	3.7nm,0.8s,baz=242,slow=3.4,SNR=7.7						
SONM	Songino Array	26.40	334	P	P	11 19 11.6	-0.7
	0.5nm,0.6s,baz=131,slow=6.5,SNR=2.4						
MKAR	Makanchi Array	39.06	314	P	P	11 21 02.1	-0.1
	1.6nm,0.4s,baz=99,slow=9.7,SNR=18						
WRA	Warramunga Arr	45.96	165	P	P	11 21 57.5	-0.6
	0.6nm,0.3s,baz=348,slow=12,SNR=20						
ASAR	Alice Springs	49.47	167	P	P	11 22 25.3	+0.2
	0.3nm,0.4s,baz=355,slow=6.9,SNR=8.6						
ILAR	Eielson Array	67.65	28	P	P	11 24 29.8	-0.8
	0.2nm,0.5s,baz=298,slow=6.6,SNR=5.8						
FINES	FINESS Array B	71.68	330	P	P	11 24 54.5	-0.8
	0.4nm,0.5s,baz=48,slow=5.7,SNR=5.2						
NOA	NORSAR Array B	78.37	333	P	P	11 25 33.4	-0.4
	0.3nm,0.5s,baz=56,slow=5.7,SNR=3.4						
YKA	Yellowknife Ar	81.51	23	P	P	11 25 50.7	+0.1
	0.8nm,0.6s,baz=327,slow=4.5,SNR=3.6						
NVAR	Mina Array Bea	94.58	44	P	P	11 26 55.5	+1.1
	0.3nm,0.6s,baz=316,slow=6.3,SNR=4.7						

SJA 01 11:37:36.6±0.7**,21°.55S×69°.89W,h28^{km}**±3^{km}**,ML1.8, MW3.9,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB07	IPOC Station P	0.18	179	*i* P	Pn	11 37 43.3	-0.3
PB02	IPOC Station P	0.23	358	*i* P	Pb	11 37 43.1	+0.1
PB03	IPOC Station P	0.51	166	*i* P	Pn	11 37 47.8	-0.4
PB03				*i* S	Sn	11 37 55.7	-0.5
PB15	IPOC Station P	1.69	167	*i* P	Pb	11 38 06.6	-0.6
HJA	Humahuaca	4.46	113	*i* P	Pn	11 38 47.1	+4.4
HJA				IAML		11 39 57.5	
	comp=Z,1.0nm,0.3s						

PRE ***01*** *11:42:17.9±1.2,24°.35S×28°.22E,h5^{km},ML2.3*

EAF ***01*** *11:42:24.5±1.7,23°.43S×27°.27E,h10^{km},MD3.2*

BUL ***01*** *11:42:26.0±1.6,23°.43S×27°.26E,h10^{km},MD3.2*

ISC 01 11:42:17.5±0.8**,24°.31S**±0°.07×**28°.2E**±0°.1**,h10^{km},n15,** σ**1^{s}.69**/24**,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	2.48	253	*e*P	Pn	11 43 00.2	+2.0
LBTB				*e*S	Sn	11 43 29.4	+0.8
LBTB				AML	AML	11 43 34.4	
	comp=Z,17nm,0.5s						
MSNA	Messina	2.56	41	*i* P	Pg	11 43 08.5	+1.8
MSNA				*i* S	Sg	11 43 40.7	+0.7
MSNA	Messina	2.56	41	*i* P	Pg	11 43 08.5	+1.8
MSNA				*i* S	Sg	11 43 40.7	+0.7
MSNA	Messina	2.56	41	*i* P	Pg	11 43 08.5	+1.8
MSNA				*i* S	Sg	11 43 40.7	+0.7
SWZ	Schweizer	3.87	222	*e*P	Pn	11 43 18.8	+1.6
SWZ				*e*S	Sn	11 44 03.1	+0.3
SWZ				AML	AML	11 44 29.8	
	comp=Z,12nm,0.4s						
MATP	Matopo	3.87	4	*i* P	Pn	11 43 15.4	-1.8
MATP				*i* S	Sn	11 43 49.6	-13
MATP	Matopo	3.87	4	*i* P	Pn	11 43 15.4	-1.8
MATP				*i* S	Sn	11 43 49.6	-13
MATP	Matopo	3.87	4	*i* P	Pn	11 43 15.4	-1.8
MATP				*i* S	Sn	11 43 49.6	-13
BLWY	Bulawayo	4.16	5	*i* P	Pn	11 43 20.2	-1.0
BLWY				*i* S	Sn	11 43 58.2	-12
BLWY	Bulawayo	4.16	5	*i* P	Pn	11 43 20.2	-1.0
BLWY				*i* S	Sn	11 43 58.2	-12
BLWY	Bulawayo	4.16	5	*i* P	Pn	11 43 20.2	-1.0
BLWY				*i* S	Sn	11 43 58.2	-12
BOSA	Boshof	5.04	211	*i* P	Pb	11 43 45.9	0.0
BOSA				*i* S	Sb	11 44 43.7	-3.0
BOSA	Boshof	5.04	211	*e*P	Pn	11 43 33.7	+0.3
BOSA				*e*S	Sn	11 44 30.4	-1.3
BOSA				AML	AML	11 45 24.0	
	comp=Z,7.5nm,0.6s						
BOSA	Boshof	5.04	211	*i* P	Pb	11 43 45.9	0.0
BOSA				*i* S	Sb	11 44 43.7	-3.0
BOSA	Boshof	5.04	211	*i* P	Pb	11 43 45.9	0.0
BOSA				*i* S	Sb	11 44 43.7	-3.0

IDC 01 11:54:44.5±5.4**,2°.04S×139°.78E,h0^{km},mb3.5**/2**, mb1 4.0**/3**,mb1mx3.5**/18**,mbtmp3.7**/3**,ML4.1**/1**,Error ellipse: s-maj=213.5km s-min=28.0km az=87.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.57	196	P	P	11 59 03.1	-0.1
	0.7nm,0.3s,baz=18,slow=11,SNR=34						
ASAR	Alice Springs	22.24	194	P	P	11 59 43.0	-0.1
	1.5nm,0.5s,baz=18,slow=10,SNR=32						
MKAR	Makanchi Array	69.92	322	P	P	12 05 57.7	+0.1
	0.2nm,0.5s,baz=116,slow=6.6,SNR=2.4						

ISCJB ***01*** *12:10:05.3±0.5,17°.36S±0°.04×70°.65W±0°.06,h132^{km}±5^{km}, mb4.3/24,Error ellipse: s-maj=9.8km s-min=5.7km az=9.6*

NEIC ***01*** *12:10:05.7±1.9,17°.28S×70°.67W,h122^{km}±7^{km},mb4.4/20, Error ellipse: s-maj=30.6km s-min=14.7km az=94.0*

*IDC **01** 12:10:06.1±1.4, 17°.38S×70°.54W, h117km±12km, mb4.3/7, mb1 4.3/13, mb1mx4.0/30, mbtmp4.7/13, Error ellipse: s-maj=15.3km s-min=12.0km az=109.0*

*GUC **01** 12:10:08.5±0.4, 17°.46S×70°.45W, h130km±4km, ML4.5*

ISC 01 12:10:06.3±0.8**, 17°.35S**±0°.04×**70°.61W**±0°.07**, h125**km±7km**, n70, σ1ˢ.62**/94**, mb4.4**/24**, 7D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	1.29	168	*i* P	Pn	12 10 32.2	+0.4
PB12				*i* S	Sn	12 10 51.7	+0.5
PB12	**IPOC Station P**	1.29	168	⇓*i*P	Pn	12 10 32.1	+0.4
PB12				*i* S	Sn	12 10 50.8	-0.4
PB12				IAML		12 10 51.8	
	comp=N,8μm,0.2s						
PB16	**IPOC Station P**	1.44	133	*i* P	Pn	12 10 34.8	+0.9
PB16				*i* S	Sn	12 10 56.4	+1.5
PB16	**IPOC Station P**	1.44	133	⇓*i*P	Pn	12 10 34.8	+0.9
PB16				*i* S	Sn	12 10 55.0	+0.1
MNMC	**Minye Minye**	2.02	152	*e*Pn	Pn	12 10 41.0	+0.5
MNMC				*e*Sn	Sn	12 11 07.6	+1.0
MNMC	**Minye Minye**	2.02	152	⇓*i*P	Pn	12 10 41.6	+1.1
MNMC				*i* S	Sn	12 11 05.5	-1.2
MNMC				IAML		12 11 10.4	
	comp=E,5μm,0.2s						
MNMCX	**Minye Minye**	2.02	152	*i* P	Pn	12 10 41.7	+1.3
PSGC	**Pisagua**	2.28	168	⇓*i*P	Pn	12 10 44.0	+0.4
PSGC				*i* S	Sn	12 11 11.2	-1.1
PSGC				IAML		12 11 14.1	
	comp=E,2μm,0.6s						
PSGCX	**Pisagua**	2.28	168	*i* P	Pn	12 10 44.0	+0.4
PB11	**IPOC Station P**	2.56	159	*e*Pn	Pn	12 10 47.4	+0.1
PB11				*e*Sn	Sn	12 11 18.4	-0.3
PB11	**IPOC Station P**	2.56	159	*i* P	Pn	12 10 47.7	+0.5
PB11	**IPOC Station P**	2.56	159	⇓*i*P	Pn	12 10 47.7	+0.5
PB11				*i* S	Sn	12 11 17.5	-1.2
PB11				IAML		12 11 19.1	
	comp=E,3μm,0.3s						
LPAZ	**La Paz**	2.60	66	P	Pn	12 10 48.9	+0.8
	comp=E,117nm,0.3s,baz=271,slow=8.0,SNR=2527						
LPAZ				S	Sn	12 11 19.2	-1.0
	comp=E,17nm,0.3s,baz=347,slow=24,SNR=11						
LPAZ	**La Paz**	2.60	66	*e*Pn	Pn	12 10 48.9	+0.8
LPAZ				*e*Sn	Sn	12 11 20.0	-0.1
LPAZ	**La Paz**	2.60	66	*i* P	Pn	12 10 48.9	+0.8
GO01	**Chusmiza**	2.67	150	*e*Pn	Pn	12 10 50.9	+2.1
GO01				*e*Sn	Sn	12 11 23.9	+2.2
GO01	**Chusmiza**	2.67	150	⇓*i*P	Pn	12 10 51.0	+2.1
GO01				*i* S	Sn	12 11 23.0	+1.3
GO01				IAML		12 11 26.6	
	comp=N,3μm,0.2s						
PB08	**IPOC Station P**	3.10	154	*i* P	Pn	12 10 55.3	+0.9
PB08				*i* S	Sn	12 11 32.0	+0.5
PB08	**IPOC Station P**	3.10	154	⇓*i*P	Pn	12 10 55.9	+1.4
PB08				*i* S	Sn	12 11 31.6	0.0
PB08				IAML		12 11 34.5	
	comp=E,1μm,0.2s						
PB01	**IPOC Station P**	3.83	164	*e*Pn	Pn	12 11 03.8	+0.1
PB01				*e*Sn	Sn	12 11 46.2	-2.0
PB04	**IPOC Station P**	4.98	175	*e*Pn	Pn	12 11 19.2	0.0
PB04				*e*Sn	Sn	12 12 12.1	-3.8
LVC	**Limon Verde**	5.47	163	P	Pn	12 11 27.0	+1.0
	comp=E,40nm,0.3s,baz=14,slow=9.0,SNR=610						
LVC				S	Sn	12 12 25.9	-2.2
	comp=E,29nm,0.3s,baz=229,slow=22,SNR=21						
LVC	**Limon Verde**	5.47	163	*e*Pn	Pn	12 11 27.0	+1.0
LVC				*e*Sn	Sn	12 12 26.4	-1.7
PB10	**IPOC Station P**	6.13	180	*e*Pn	Pn	12 11 34.0	-0.5
PB10				*e*Sn	Sn	12 12 38.2	-5.2
GO02	**Mina Guanaco**	7.83	173	*e*Pn	Pn	12 11 57.2	-0.6
GO02				*e*Sn	Sn	12 13 23.8	-1.2
NNA	**Nana**	8.05	311	P	Pn	12 11 59.4	-1.1
	comp=E,6.3nm,0.3s,baz=128,slow=12,SNR=8.3						
NNA	**Nana**	8.05	311	*e*Pn	Pn	12 11 59.1	-1.3
AZAP	**Zapla**	8.58	144	IAML		12 12 08.2	
	comp=Z,6.8nm,0.4s						
AZAP				*i* P	Pn	12 12 08.3	+0.5
SIV	**San Ignacio**	9.24	83	P	Pn	12 12 14.9	-1.6
	comp=Z,4.1nm,0.3s,baz=278,slow=11,SNR=107						
SIV				S	Sn	12 13 51.1	-7.7
	comp=Z,0.1nm,0.3s,baz=8.2,slow=19,SNR=5.4						
GO03	**Copiap**	10.20	178	*e*Pn	Pn	12 12 28.7	-0.7
GO03				*e*Sn	Sn	12 14 17.6	-4.5
LCO	**Las Campanas**	11.61	180	*e*Pn	Pn	12 12 48.1	-0.3
GO04	**Tololo Observa**	12.77	181	*e*Pn	Pn	12 13 02.2	-1.4
CFA	**Coronel Fontan**	14.36	172	P	Pn	12 13 22.5	-1.3
	comp=Z,3.3nm,0.3s,baz=314,slow=9.9,SNR=18						
GO05	**Huala**	17.63	184	*e*P	P	12 14 03.1	-0.1
	comp=Z,9.3nm,0.9s						
PTGA	**Pitinga**	19.55	33	P	P	12 14 23.1	-1.3
	comp=Z,4.5nm,0.3s,baz=224,slow=24,SNR=27						
PTGA	**Pitinga**	19.55	33	*e*P	P	12 14 23.1	-1.3
	comp=Z,8.9nm,0.5s						
BDFB	**Brasilia**	21.73	89	P	P	12 14 47.0	-0.9
	comp=Z,6.8nm,0.6s,baz=264,slow=12,SNR=9.8						
BDFB	**Brasilia**	21.73	89	*e*P	P	12 14 46.8	-1.1
	comp=Z,7.2nm,0.6s						
TRQA	**Tornquist**	21.98	162	*e*P	P	12 14 50.8	+0.6
	comp=Z,10nm,1.3s						
PLCA	**Paso Flores**	23.30	180	P	P	12 15 06.8	+3.7
	comp=Z,3.8nm,0.7s,baz=17,slow=8.3,SNR=12						
PLCA	**Paso Flores**	23.30	180	*e*P	P	12 15 05.3	+2.2
	comp=Z,6.5nm,0.8s						
SDV	**Santo Domingo**	26.07	360	*e*P	P	12 15 27.5	-0.9
	comp=Z,3.2nm,1.0s						
MDP	**Montagnes des**	28.51	40	P	P	12 15 49.3	-0.8
	comp=Z,14nm,0.9s,baz=230,slow=7.8,SNR=5.8						
SVB	**Belmont**	31.80	17	*e*P	P	12 16 18.3	-0.8
	comp=Z,81nm,1.0s						
RCBR	**Riachuelo**	35.80	76	*e*P	P	12 16 54.3	+0.4
	comp=Z,16nm,1.2s						
LTX	**Lajitas**	56.32	325	*e*P	P	12 19 35.2	+0.8
TXAR	**Lajitas Array**	56.32	325	P	P	12 19 35.2	+0.8
	comp=Z,0.1nm,0.5s,baz=147,slow=9.6,SNR=4.0						
N49A	**Columbus Grove**	59.33	348	*e*P	P	12 19 54.6	-0.3
	comp=Z,12nm,0.7s						
D53A	**Lac Vacive, Po**	64.44	355	*e*P	P	12 20 28.8	-0.3
	comp=Z,6.8nm,1.3s						
BATG	**Bathurst New B**	64.45	3	*e*P	P	12 20 28.9	-0.3
	comp=Z,13nm,1.4s						
E43A	**Lone Tree Farm**	65.13	348	*e*P	P	12 20 33.2	-0.3
	comp=Z,5.5nm,0.7s						
SNAA	**Sanae**	66.71	161	*e*P	P	12 20 45.6	+2.2
	comp=Z,2.6nm,1.2s						
EYMN	**Ely**	67.63	345	*e*P	P	12 20 49.8	+0.3
	comp=Z,8.2nm,1.4s						
DBIC	**Dimbokro**	69.18	76	P	P	12 21 00.1	+0.2
	comp=Z,9.1nm,0.5s,baz=232,slow=6.4,SNR=16						
DBIC	**Dimbokro**	69.18	76	*e*P	P	12 21 00.0	+0.2
	comp=Z,16nm,1.0s						
PDAR	**Pinedale Array**	69.73	330	P	P	12 21 04.8	+1.8
	comp=Z,0.2nm,0.5s,baz=134,slow=8.4,SNR=3.6						
ULM	**Lac du Bonnet**	70.90	343	P	P	12 21 10.2	+0.6
	comp=Z,2.2nm,0.4s,baz=140,slow=6.0,SNR=3.8						
TOA0	**Torodi Ar. Sit**	77.54	72	*e*P	P	12 21 49.1	+0.3
	comp=Z,15nm,0.6s						
TORD	**Torodi Ar. Bea**	77.54	72	P	P	12 21 49.1	+0.3
	comp=Z,5.6nm,0.3s,baz=254,slow=4.7,SNR=98						
TSUM	**Tsumeb**	82.80	108	*e*P	P	12 22 18.1	+0.8
	comp=Z,4.2nm,0.8s						
PAB	**San Pablo**	83.72	45	*e*P	P	12 22 21.5	+0.1
	comp=Z,17nm,1.5s						
ESDC	**Sonseca Array**	84.05	45	P	P	12 22 24.2	+1.2
	comp=Z,2.6nm,0.8s,baz=248,slow=5.1,SNR=9.1						
ESLA	**Sonseca Array**	84.05	45	*e*P	P	12 22 23.5	+0.5
	comp=Z,2.9nm,0.9s						
YKA	**Yellowknife Ar**	86.76	341	P	P	12 22 37.3	+1.5
	comp=Z,1.3nm,0.6s,baz=134,slow=4.9,SNR=6.5						
MK32	**Makanchi Array**	143.08	31	*e*PKPdf	PKPdf	12 29 23.6	-1.8
MKAR	**Makanchi Array**	143.08	31	PKP	PKPdf	12 29 23.6	-1.8
	comp=Z,0.3nm,0.5s,baz=282,slow=4.7,SNR=5.2						
KSH	**Kashi**	143.56	46	*e*PKP	PKiKP	12 29 29.4	-0.7
KSH				PKS	PKSdf	12 33 01.5	-0.9
SONM	**Songino Array**	149.50	4	PKPbc	PKiKP	12 29 43.2	+1.2
	comp=Z,1.9nm,0.5s,baz=323,slow=2.3,SNR=8.6						
LZH	**Lanzhou**	160.70	14	*e*PKP	PKPdf	12 29 53.0	+1.1
LZH				pPKP	pPKPdf	12 30 16.3	-10
LZH				sPKP		12 30 33.7	
CD2	**Chengdu**	165.56	20	PKP	PKPdf	12 29 54.5	-2.1

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*IDC **01** 12:14:15.6±1.4, 6°.15S×146°.94E, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.7/33, mbtmp3.7/6, ML3.3/1, MS2.7/2, Ms1 2.7/2, ms1mx2.5/23, Error ellipse: s-maj=45.7km s-min=24.0km az=100.0*

*ISCJB **01** 12:14:16.0±1.1, 6°.2S±0°.1×146°.7E±0°.2, h10km, mb3.6/4, Error ellipse: s-maj=30.6km s-min=15.8km az=1.2*

ISC 01 12:14:17.2±1.2**, 6°.20S**±0°.08×**146°.9E**±0°.2**, h10**km**, n8, σ0ˢ.94**/8**, mb3.7**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.20	175	Pn	Pn	12 15 08.6	+1.1
	2.3nm,0.3s,baz=345,slow=6.5,SNR=7.9						
PMG				LR	LR	12 15 58.5	
	comp=Z,102nm,22.0s,baz=357,slow=32						
PMG				Sn	Sg	12 15 59.2	-0.7
	5.8nm,0.3s,baz=11,slow=19,SNR=4.0						
JAY	**Jayapura**	7.18	300	LR	LR	12 19 13.2	
	comp=Z,90nm,20.5s,baz=62,slow=41						
WRA	**Warramunga Arr**	18.32	221	P	Pn	12 18 30.6	-1.0
	0.1nm,0.3s,baz=46,slow=11,SNR=5.8						
ASAR	**Alice Springs**	21.40	214	P	P	12 19 05.7	+0.4
	1.2nm,0.8s,baz=33,slow=12,SNR=14						
CMAR	**Chiang Mai Arr**	53.25	298	P	P	12 23 37.4	+0.9
	1.0nm,0.5s,baz=122,slow=5.4,SNR=6.8						
MKAR	**Makanchi Array**	77.58	321	P	P	12 26 13.1	-0.5
	0.1nm,0.3s,baz=134,slow=4.2,SNR=3.0						
ILAR	**Eielson Array**	85.70	23	P	P	12 26 55.8	-0.3
	0.9nm,0.8s,baz=262,slow=5.3,SNR=9.3						
TORD	**Torodi Ar. Bea**	145.04	284	PKPbc	PKPdf	12 33 55.4	-0.6
	0.9nm,0.7s,baz=76,slow=2.7,SNR=6.2						

SJA 01 12:19:06.4±0.6**, 31°.29S×64°.94W, h11**km±3km**, ML2.5, MW3.9, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRA	**San Martin**	1.30	210	*i* P	Pn	12 19 30.8	+0.1
MRA				*i* S	Sg	12 19 49.6	+1.1
MRA				IAML		12 19 50.5	
	comp=Z,85nm,0.5s						
APLL	**PUNTA DE LOS L**	1.63	303	*i* P	Pb	12 19 37.0	+0.5
APLL				*i* S	Sg	12 19 59.3	+0.6
ACAN	**Cantantal**	2.15	242	*i* P	Pb	12 19 44.7	-0.7
ACAN				*i* S	Sb	12 20 12.6	+0.5

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*ISCJB **01** 12:32:43.5±0.3, 30°.36S±0°.06×75°.73E±0°.09, h10km, mb4.5/47, MS3.9/18, Error ellipse: s-maj=10.9km s-min=9.1km az=175.6*

*IDC **01** 12:32:43.6±0.6, 30°.30S×75°.65E, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.1/45, mbtmp4.2/16, MS3.9/18, Ms1 3.9/18, ms1mx3.8/23, Error ellipse: s-maj=19.4km s-min=17.9km az=106.0*

*NEIC **01** 12:32:45.5±1.1, 30°.34S×75°.69E, h10km, mb4.8/33, Error ellipse: s-maj=20.7km s-min=18.6km az=287.0*

*GCMT **01** 12:32:46.5±0.4, 30°.20S±0°.03×75°.58E±0°.03, h15km±1km, MW4.8/67, Moment Tensor Solution. s24,c28; s67,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.23±.16; $M_{\theta\theta}$1.14±.11; $M_{\phi\phi}$1.09±.10; $M_{r\theta}$-0.32±.22; $M_{\theta\phi}$-0.87±.06; $M_{\phi r}$0.26±.22; Best double couple: $M_0$2.14500×10^{16} NP1:ϕ_s133.00000°, δ50.00000°, λ-91.00000°. NP2: ϕ_s315.00000°, δ40.00000°, λ-89.00000°. Principal axes: T 2.0200, Plg5.0000°, Azm224.0000°; N 0.2490, Plg1.0000°, Azm134.0000°; P -2.2700, Plg84.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 12:32:45.3±0.5**, 30°.34S**±0°.09×**75°.7E**±0°.1**, h10**km**, n77, σ0ˢ.58**/64**, mb4.5**/47**, MS4.0**/18**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	22.78	352	T	T	13 01 09.6	
	baz=173,slow=76,SNR=222						
H08S1	**Diego Carcia H**	22.78	352	T	T	13 01 11.4	
	baz=173,slow=76,SNR=150						
H08S3	**Diego Garcia H**	22.80	352	T	T	13 01 08.4	
	baz=173,slow=76,SNR=254						
OPO	**Ambohidratompo**	28.39	288	LR	LR	12 47 26.7	
	comp=Z,78nm,20.2s,baz=224,slow=31						
H01W2	**Cape Leeuwin H**	32.56	108	T	T	13 13 32.1	
	baz=267,slow=74,SNR=13						
H01W3	**Cape Leeuwin H**	32.56	108	T	T	13 13 33.6	
	baz=267,slow=74,SNR=15						
H01W1	**Cape Leeuwin H**	32.57	108	T	T	13 13 32.9	
	baz=267,slow=74,SNR=16						
MAW	**Mawson**	38.07	188	LR	LR	12 52 12.9	
	comp=Z,248nm,21.2s,baz=12,slow=31						
MAW	**Mawson**	38.07	188	*e*P	P	12 40 04.0	+0.2
	3.2nm,1.5s						
UGM	**Wanagama**	39.49	63	*e*P	P	12 40 15.3	-1.0
	275nm,1.5s						
BOSA	**Boshof**	43.65	259	P	P	12 40 49.9	-0.6
	8.9nm,1.2s,baz=128,slow=9.7,SNR=3.8						
BOSA				LR	LR	12 55 40.4	
	comp=Z,261nm,18.7s,baz=36,slow=32						
BOSA	**Boshof**	43.65	259	*e*P	P	12 40 50.2	-0.3
	22nm,1.4s						
LBTB	**Lobatse**	44.40	264	P	P	12 40 56.0	-0.5
	2.6nm,0.8s,baz=163,slow=11,SNR=4.2						
LBTB	**Lobatse**	44.40	264	*e*P	P	12 40 56.0	-0.5
	18nm,1.6s						
ASAR	**Alice Springs**	51.81	97	P	P	12 41 54.4	+0.6
	2.6nm,0.9s,baz=252,slow=6.2,SNR=22						
ASAR				PcP	PcP	12 43 06.6	-0.3
	0.9nm,0.9s,baz=236,slow=3.3,SNR=4.8						
ASAR				LR	LR	13 02 29.7	
	comp=Z,122nm,18.2s,baz=255,slow=34						
AS31	**Alice Springs**	51.81	97	*e*P	P	12 41 54.4	+0.6
	1.6nm,1.1s						
CM31	**Chiang Mai Arr**	53.43	28	*e*P	P	12 42 05.5	-0.2
	10.0nm,1.2s						
CMAR	**Chiang Mai Arr**	53.43	28	P	P	12 42 06.2	+0.5
	1.9nm,0.8s,baz=208,slow=7.3,SNR=11						
CMAR				LR	LR	13 01 32.4	
	comp=Z,149nm,20.0s,baz=200,slow=32						
WR1	**Warramunga Arr**	53.59	93	*e*P	P	12 42 06.7	-0.2
WRA	**Warramunga Arr**	53.59	93	P	P	12 42 06.7	-0.2
	2.5nm,1.0s,baz=246,slow=6.2,SNR=3.0						
CHTO	**Chiang Mai**	53.75	28	*e*P	P	12 42 07.8	-0.2
	12nm,1.3s						
STKA	**Stephens Creek**	55.63	110	LR	LR	13 01 41.7	
	comp=Z,87nm,21.9s,baz=204,slow=31						
SHL	**Shillong**	57.71	17	*e*P	P	12 42 36.5	0.0
	16nm,1.2s						
SNAA	**Sanae**	57.91	201	P	P	12 42 37.8	+0.5
	3.6nm,1.1s,baz=52,slow=6.0,SNR=5.7						
SNAA	**Sanae**	57.91	201	*e*P	P	12 42 37.4	+0.1
	8.7nm,1.3s						
SLVN	**Son La**	58.10	31	*e*P	P	12 42 39.3	+0.2
	13nm,1.5s						
VNDA	**Vanda**	59.79	165	P	P	12 42 50.3	+0.1
	2.3nm,0.8s,baz=284,slow=6.5,SNR=16						
VNDA				LR	LR	13 05 50.1	
	comp=Z,138nm,18.2s,baz=270,slow=33						
VNDA	**Vanda**	59.79	165	*e*P	P	12 42 50.6	+0.5
QSPA	**South Pole Qui**	59.80	180	*e*P	P	12 42 50.6	+0.1
	6.8nm,0.8s						
CAN	**Canberra**	60.50	116	*e*P	P	12 42 55.4	-0.3
	13nm,1.3s						
SBA	**Scott Base**	60.80	166	*e*P	P	12 42 57.5	+0.5
	3.0nm,1.2s						
RAYN	**Ar Rayn**	60.90	328	*e*P	P	12 42 58.5	+0.1
	11nm,1.4s						
NIL	**Nilore**	63.69	358	*e*P	P	12 43 17.3	+0.4
	9.1nm,1.3s						
KBL	**Kabul**	64.84	354	*e*P	P	12 43 24.6	0.0
	5.3nm,0.9s						
CHGR	**Chuyangaron**	68.91	355	*e*P	P	12 43 51.3	+0.9
	7.2nm,0.8s						
GAR	**Garm**	69.17	356	*e*P	P	12 43 51.3	-0.7
	7.3nm,1.1s						
GEYT	**Alibeck**	69.88	345	LR	LR	13 10 37.6	
	comp=Z,47nm,19.6s,baz=140,slow=33						
BTK	**Batken**	70.19	356	*e*P	P	12 43 58.3	+0.1
	16nm,1.5s						
XAN	**Xi'an**	71.31	29	*e*P	P	12 44 05.3	+0.1
	7.6nm,1.0s						
XAN	**Xi'an**	71.31	29	P	P	12 44 05.8	+0.7
XAN				pP	pwP	12 44 14.0	+2.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PRZ	**Przheval'sk**	72.51	2	*e*P	P	12 44 12.8	+0.5
	comp=Z,16nm,0.3s						
AAK	**Ala-Archa**	72.63	359	P	P	12 44 12.5	-0.5
	comp=Z,0.9nm,0.3s,baz=186,slow=5.9,SNR=8.0						
AAK	**Ala-Archa**	72.63	359	*e*P	P	12 44 13.5	+0.5
	comp=Z,8.3nm,1.3s						
FRU1	**Bishkek**	72.80	359	*e*P	P	12 44 14.7	+0.8
	comp=Z,30nm,0.3s						
GTA	**Gaotai**	72.94	19	*e*P	P	12 44 16.9	+2.0
GTA				pP	pwP	12 44 23.2	+1.9
GTA				sP	PcP	12 44 26.1	-5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	73.24	356	*e*P	P	12 44 17.1	+0.7
	comp=Z,8.8nm,0.9s						
WMQ	**Urumqi**	74.62	9	*e*P	P	12 44 25.4	+0.9
	comp=Z,14nm,0.3s						
MAKZ	**Makanchi**	77.00	4	*e*P	P	12 44 37.5	-0.5
	comp=Z,6.5nm,1.4s						
MK31	**Makanchi Array**	77.01	5	*e*P	P	12 44 37.8	-0.3
	comp=Z,6.9nm,1.4s						
MK32	**Makanchi Array**	77.01	5	*e*P	P	12 44 38.2	+0.1
MKAR	**Makanchi Array**	77.01	5	P	P	12 44 38.2	+0.1
	comp=Z,2.8nm,0.9s,baz=165,slow=5.0,SNR=12						
MKAR				LR	LR	13 17 34.8	
	comp=Z,68nm,18.6s,baz=184,slow=35						
TBLG	**Delisi**	77.20	337	*e*P	P	12 44 39.6	+0.4
	comp=Z,9.1nm,0.4s						
KBZ	**Khabaz**	79.60	336	LR	LR	13 18 22.2	
	comp=Z,24nm,18.4s,baz=154,slow=34						
BR101	**Keskin Array S**	79.92	328	*e*P	P	12 44 54.8	+0.3
BRTR	**Keskin Array B**	79.92	328	P	P	12 44 54.8	+0.3
	comp=Z,3.3nm,1.3s,baz=162,slow=10,SNR=3.6						
BRTR				LR	LR	13 17 28.6	
	comp=Z,26nm,18.8s,baz=100,slow=34						
ANTO	**Ankara**	80.42	328	*e*P	P	12 44 57.6	+0.5
	comp=Z,18nm,1.1s						
ABKAR	**Akbulak array**	80.48	350	*e*P	P	12 44 57.2	+0.1
	comp=Z,4.7nm,1.3s						
KURBB	**Kurchatov Arra**	80.65	2	P	P	12 44 57.5	-0.5
	comp=Z,2.8nm,1.2s,baz=191,slow=5.6,SNR=8.5						
KURK	**Kurchatov**	80.74	2	*e*P	P	12 44 58.5	0.0
	comp=Z,3.6nm,1.0s						
AKTO	**Aktyubinsk**	81.93	349	P	P	12 45 04.5	-0.2
	comp=Z,0.6nm,0.5s,baz=196,slow=5.0,SNR=4.1						
SONA0	**Songino Array**	82.56	20	*e*P	P	12 45 07.7	-0.7
SONM	**Songino Array**	82.56	20	P	P	12 45 07.7	-0.7
	comp=Z,0.3nm,0.3s,baz=225,slow=5.9,SNR=5.3						
SONM				LR	LR	13 21 03.9	
	comp=Z,110nm,19.5s,baz=218,slow=35						
BVAR	**Borovoye Array**	83.14	357	P	P	12 45 11.6	+0.6
	comp=Z,2.0nm,0.7s,baz=142,slow=7.4,SNR=5.3						
BRVK	**Borovoye**	83.18	357	*e*P	P	12 45 11.2	0.0
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	83.19	289	P	P	12 45 11.5	-0.7
	comp=Z,1.6nm,1.1s,baz=140,slow=7.8,SNR=3.8						
TORD				LR	LR	13 19 26.0	
	comp=Z,83nm,21.4s,baz=80,slow=34						
TOA1	**Torodi Ar. Sit**	83.20	289	*e*P	P	12 45 11.5	-0.7
KSRS	**Korea Array**	83.28	39	P	P	12 45 11.7	-0.4
	comp=Z,0.5nm,0.7s,baz=210,slow=6.7,SNR=2.6						
KSRS				LR	LR	13 19 25.1	
	comp=Z,84nm,20.8s,baz=225,slow=34						
ZAA0	**Zalesovo Array**	84.31	5	*e*P	P	12 45 16.6	-0.4
	comp=Z,5.1nm,1.1s						
ZALV	**Zalesovo Beam**	84.31	5	P	P	12 45 16.1	-0.9
	comp=Z,0.7nm,0.3s,baz=207,slow=6.3,SNR=7.1						
ZALV				LR	LR	13 21 40.0	
	comp=Z,54nm,18.1s,baz=248,slow=35						
DBIC	**Dimbokro**	85.24	281	LR	LR	13 21 25.9	
	comp=Z,85nm,19.1s,baz=112,slow=34						
MJAR	**Matsushiro Arr**	88.66	46	LR	LR	13 23 53.3	
	comp=Z,27nm,19.4s,baz=225,slow=35						
USRK	**Ussuriysk Ar.**	90.24	37	LR	LR	13 23 32.9	
	comp=Z,80nm,21.6s,baz=195,slow=34						
YKA	**Yellowknife Ar**	147.15	9	PKPbc	PKPdf	12 52 25.0	-0.8
	comp=Z,1.9nm,0.9s,baz=333,slow=2.7,SNR=5.6						
YKB5	**Yellowknife Ar**	147.15	9	*e*PKPdf	PKPdf	12 52 25.0	-0.8
NV01	**Mina Array Sit**	165.91	51	*e*PKPab	PKPab	12 53 49.9	-0.8
NVAR	**Mina Array Bea**	165.91	51	PKPab	PKPab	12 53 49.9	-0.8
	comp=Z,0.3nm,0.7s,baz=270,slow=1.7,SNR=4.3						
R11A	**Troy Canyon, C**	167.73	46	*e*PKPdf	PKPdf	12 52 52.9	+0.7

MEX 01 12:40:36.0±0.5**, 14°.79N×94°.49W, h16**km±9km**, MD3.9, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	1.84	302	*e*P	Pn	12 41 03.8	-3.2
HUIG				*i* S	Sn	12 41 24.9	-5.1
CMIG	**Matias Romero**	2.32	351	*i* P	Pn	12 41 10.7	-2.9
CMIG				*i* S	Sn	12 41 37.2	-4.6
TGIG		2.37	33	*e*P	Pn	12 41 12.0	-2.3
TGIG				*i* S	Sn	12 41 38.4	-4.8
CCIG	**Comitan**	2.71	56	*i* P	Pn	12 41 16.6	-2.4
CCIG				*i* S	Sn	12 41 47.8	-3.8

JSO 01 12:46:49.2±1.2**, 30°N**±9°×**3°6E**±°**, h10**km**, M3.5**/8**, Mjma3.3**/8**, ML3.7**/2**, MLv3.4**/8**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSNJ	**Maan**	0.48	310	P	Pg	12 46 58.5	-0.1
JDRJ	**Daraweish**	0.86	334	P	Pg	12 47 04.4	-1.5
HRFI	**Mount Harif**	0.94	276	P	Pg	12 47 06.9	-0.3
AQBJ	**Aqaba**	0.95	257	P	Pg	12 47 06.9	-0.5
LISJ	**El Lisan**	1.40	337	P	Pn	12 47 14.1	-0.6
WALJ	**Wala**	1.63	351	P	Pn	12 47 17.6	-0.3
KZIT	**Kziot**	1.76	303	P	Pb	12 47 21.2	-0.4
ASF	**Jabal al Asfar**	2.32	17	P	Pn	12 47 27.5	0.0

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*ISCJB **01** 12:50:51.1±0.8, 18°.0S±0°.2×178°.6W±0°.2, h579km, mb3.7/9, Error ellipse: s-maj=31.2km s-min=16.1km az=150.6*

*IDC **01** 12:50:55.9±5.9, 17°.93S×178°.68W, h624km±75km, mb3.1/8, mb1 3.4/9, mb1mx3.1/32, mbtmp4.1/9, Error ellipse: s-maj=29.7km s-min=23.9km az=107.0*

ISC 01 12:50:52.3±0.9**, 17°.9S**±0°.2×**178°.5W**±0°.2**, h579**km**, n10, σ1ˢ.05**/11**, mb3.4**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	14.72	251	P	P	12 54 00.2	+1.6
	0.7nm,0.3s,baz=84,slow=18,SNR=3.6						
STKA	**Stephens Creek**	38.54	241	P	P	12 57 26.2	-0.2
	4.6nm,0.5s,baz=91,slow=8.5,SNR=16						
JAY	**Jayapura**	42.79	286	P	P	12 58 00.8	+0.4
	2.1nm,0.4s,baz=185,slow=8.5,SNR=5.1						
WRA	**Warramunga Arr**	44.52	260	P	P	12 58 12.5	-1.2
	3.6nm,0.5s,baz=88,slow=8.4,SNR=44						
ASAR	**Alice Springs**	44.69	254	P	P	12 58 14.2	-0.7
	31nm,0.6s,baz=88,slow=8.3,SNR=726						
ASAR				PcP	PcP	12 59 44.1	-0.6
	0.8nm,0.5s,baz=104,slow=3.9,SNR=4.8						
VNDA	**Vanda**	60.46	185	P	P	13 00 05.9	-0.4
	0.7nm,1.1s,baz=324,slow=8.7,SNR=4.8						
NVAR	**Mina Array Bea**	79.49	44	P	P	13 02 00.4	+0.5
	0.6nm,0.7s,baz=224,slow=8.4,SNR=6.6						
ILAR	**Eielson Array**	85.89	13	P	P	13 02 29.7	-1.4
	0.3nm,0.4s,baz=220,slow=5.1,SNR=4.0						
TXAR	**Lajitas Array**	86.08	58	P	P	13 02 34.1	+1.2
	0.6nm,0.8s,baz=225,slow=6.1,SNR=6.8						
PDAR	**Pinedale Array**	87.42	43	P	P	13 02 39.3	+0.2
	0.4nm,0.5s,baz=223,slow=4.5,SNR=6.3						

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*ISCJB **01** 12:51:29.4±0.4, 62°.22N±0°.02×145°.70W±0°.05, h24km±4km, mb3.6/5, Error ellipse: s-maj=3.8km s-min=3.0km az=8.6*

*NEIC **01** 12:51:30.0±0.0, 62°.22N×145°.73W, h11km, ML3.5(AEIC), After AEIC.*

*AEIC **01** 12:51:30.0, 62°.22N×145°.73W, h11km, ML3.5*

*IDC **01** 12:51:30.8±0.9, 62°.40N×146°.48W, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/37, mbtmp3.6/7, ML3.1/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/38, Error ellipse: s-maj=19.0km s-min=11.7km az=90.0*

ISC 01 12:51:29.8±0.9**, 62°.21N**±0°.02×**145°.75W**±0°.03**, h23**km±8km**, n63, σ1ˢ.51**/79**, mb3.5**/5**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PS11	**TAPS Pump St11**	0.19	135	*e*Pg	Pb	12 51 34.5	-0.6
PS11				*e*Sg	Sb	12 51 39.3	+0.7
PAX	**Paxson**	0.77	10	*e*Pg	Pb	12 51 42.5	-2.2
PAX				*e*Pn	Pn	12 51 52.1	+6.6
PS12	**TAPS Pump St12**	0.80	158	*e*Pg	Pb	12 51 43.7	-1.2
PS12				*e*Sn	Sb	12 51 55.3	0.0

SCM	**Sheep Creek Mo**	**0.83**	**244**	*e*Pg	**Pb**	**12 51 44.8**	**-0.9**
SCM				*e*Sg	**Sb**	**12 51 56.6**	**+0.1**
DHY	**Denali Highway**	**1.15**	**320**	*e*Pg	**Pn**	**12 51 49.1**	**-1.5**
DHY				*e*Sg	**Sb**	**12 52 03.9**	**-1.6**
VMT	**TAPS Tl Valdez**	**1.17**	**195**	*e*Pg	**Pn**	**12 51 49.5**	**-1.3**
MENT	**Mentasta**	**1.19**	**51**	*e*Pg	**Pn**	**12 51 49.4**	**-1.7**
MENT				*e*Sg	**Sn**	**12 52 04.7**	**-1.9**
PS10	**TAPS Pump St10**	**1.22**	**360**	*e*Pn	**Pn**	**12 51 50.5**	**-1.0**
PS10				*e*Sn	**Sn**	**12 52 06.3**	**-1.0**
JPK	**Jack Peak**	**1.23**	**200**	*e*Pn	**Pn**	**12 51 50.1**	**-1.5**
SML	**Sawmill**	**1.28**	**253**	*e*Pn	**Pn**	**12 51 51.4**	**-1.0**
SML				*e*Sn	**Sn**	**12 52 08.1**	**-0.7**
GLI	**Glacier Island**	**1.48**	**206**	*e*Pn	**Pn**	**12 51 54.3**	**-0.9**
KNK	**Knik Glacier**	**1.51**	**239**	*e*Pn	**Pn**	**12 51 55.8**	**+0.3**
KNK				*e*Sn	**Sn**	**12 52 15.3**	**+0.8**
RIDG	**Independent Ri**	**1.59**	**15**	*e*Pn	**Pn**	**12 51 56.8**	**+0.2**
RIDG				*e*Sn	**Sb**	**12 52 17.8**	**-0.4**
DOT	**Dot Lake**	**1.64**	**27**	*e*Pn	**Pn**	**12 51 57.1**	**-0.1**
DOT				*e*Sn	**Sn**	**12 52 18.6**	**+1.0**
EYAK	**Cordova Ski Ar**	**1.67**	**180**	*e*Pn	**Pn**	**12 51 58.3**	**+0.7**
PMR	**Palmer**	**1.71**	**250**	*e*Pn	**Pn**	**12 51 58.6**	**+0.4**
SGAM	**Sherman Glacie**	**1.74**	**171**	*e*Pn	**Pn**	**12 51 58.8**	**+0.2**
RND	**Reindeer**	**1.86**	**311**	*e*Pn	**Pn**	**12 52 01.5**	**+1.1**
RND				*e*Sn	**Sb**	**12 52 25.6**	**-0.4**
HUR	**Hurricane**	**1.95**	**295**	*e*Pn	**Pn**	**12 52 02.2**	**+0.6**
BALM	**Baldy**	**2.01**	**124**	*e*Pn	**Pn**	**12 52 03.2**	**+0.7**
HMT	**Hamilton**	**2.02**	**158**	*e*Pn	**Pb**	**12 52 04.4**	**-1.3**
BCA3	**Beaver Creek A**	**2.02**	**63**	*e*Pn	**Pn**	**12 52 01.8**	**-0.8**
MCK	**McKinley**	**2.11**	**318**	*e*Pn	**Pn**	**12 52 05.2**	**+1.5**
NICHA	**Nichawak Mount**	**2.16**	**156**	*e*Pn	**Pb**	**12 52 06.6**	**-1.7**
RC01	**Rabbit Creek A**	**2.21**	**241**	*e*Pn	**Pb**	**12 52 07.3**	**-1.7**
HDA	**Harding Lake**	**2.27**	**347**	P	**Pn**	**12 52 07.0**	**+1.1**
	baz=165						
HDA				S	**Sn**	**12 52 35.7**	**+2.6**
	baz=165						
PS08	**TAPS Pump Stn8**	**2.39**	**349**	*e*Pn	**Pn**	**12 52 07.3**	**-0.2**
SUA	**Susitna One**	**2.48**	**255**	*e*Pn	**Pn**	**12 52 10.1**	**+1.2**
WRH	**Wood River Hil**	**2.50**	**336**	*e*Pn	**Pn**	**12 52 10.1**	**+1.0**
BWN	**Browne**	**2.59**	**321**	*e*Pn	**Pn**	**12 52 10.2**	**0.0**
BWN				*e*Pn	**Pb**	**12 52 11.5**	**-4.0**
ILAR	**Eielson Array**	**2.62**	**349**	Pn	**Pn**	**12 52 10.2**	**-0.5**
	2.4nm,0.3s,baz=178,slow=13,SNR=62						
ILAR				Lg	Lg	12 52 46.8	
	117nm,0.3s,baz=164,slow=29,SNR=37						
SKT	**Skwentna**	**2.73**	**268**	*e*Pn	**Pn**	**12 52 14.7**	**+2.5**
SEW	**Seward**	**2.77**	**222**	*e*Pn	**Pn**	**12 52 14.9**	**+2.2**
COLA	**College**	**2.83**	**342**	*e*Pn	**Pn**	**12 52 13.9**	**+0.3**
TCOL	**CIGO, UAF Yank**	**2.83**	**341**	P	**Pn**	**12 52 13.7**	**+0.1**
	baz=159						
TCOL				Sb	**Sb**	**12 52 56.6**	**+2.8**
	baz=159						
POKR	**Poker Plat Res**	**3.01**	**346**	P	**Pn**	**12 52 17.2**	**+1.1**
	baz=164						
POKR				Sb	**Sb**	**12 53 00.8**	**+1.8**
	baz=164						
BPAW	**Bear Paw Mtn.**	**3.04**	**311**	*e*Pn	**Pn**	**12 52 18.1**	**+1.6**
EGAK	**Eagle**	**3.30**	**37**	*e*Pn	**Pn**	**12 52 19.9**	**0.0**
PRP	**Porcupine Dome**	**3.32**	**2**	*e*Pn	**Pn**	**12 52 20.4**	**-0.1**
CHUM	**Lake Minchumin**	**3.43**	**302**	*e*Pn	**Pn**	**12 52 22.7**	**+1.0**
DAWY	**Dawson**	**3.44**	**54**	*e*Pn	**Pn**	**12 52 21.3**	**-0.6**
BRLK	**Bradley Lake**	**3.50**	**228**	*e*Pn	**Pn**	**12 52 24.4**	**+1.5**
MLY	**Manley**	**3.60**	**324**	*e*Pn	**Pn**	**12 52 25.4**	**+1.2**
BCPM	**Bancas Point**	**3.74**	**125**	*e*Pn	**Pn**	**12 52 27.6**	**+1.5**
CNPM	**China Poot**	**3.80**	**227**	*e*Pn	**Pn**	**12 52 29.1**	**+2.1**
PNL	**Peninsula**	**4.02**	**127**	*e*Pn	**Pn**	**12 52 31.1**	**+1.2**
HYT	**Haines Junctio**	**4.19**	**106**	*e*Pn	**Pn**	**12 52 34.0**	**+1.6**
TT01	**Tatalina**	**4.80**	**283**	*e*Pn	**Pn**	**12 52 41.9**	**+1.2**
TT01				*e*Pn	**Pn**	**12 52 41.9**	**+1.2**
SVW2	**Sparrevohn**	**4.82**	**261**	*e*Pn	**Pn**	**12 52 42.7**	**+1.8**
IM3	**Indian Mountai**	**5.16**	**321**	*e*Pn	**Pn**	**12 52 46.5**	**+1.0**
BM3	**Burnt Mountain**	**5.25**	**5**	*e*Pn	**Pn**	**12 52 47.0**	**+0.1**
KDAK	**Kodiak Island**	**5.61**	**221**	Pn	**Pn**	**12 52 51.9**	**+0.1**
	1.3nm,0.3s,baz=43,slow=13,SNR=7.6						
KDAK				Sn	**Sn**	**12 53 53.8**	**-1.5**
	1.3nm,0.3s,baz=311,slow=23,SNR=5.6						
KDAK	**Kodiak Island**	**5.61**	**221**	*e*Pn	**Pn**	**12 52 52.9**	**+1.2**
EPYK	**Eagle Plains**	**5.73**	**39**	P	**Pn**	**12 52 52.7**	**-0.7**
	baz=227						
EPYK				Sb	**Sb**	**12 54 22.2**	**+5.1**
	baz=227						
SKAG	**Skagway**	**5.80**	**114**	*e*Pn	**Pn**	**12 52 56.7**	**+2.4**
TOLK	**Toolik Lake Re**	**6.65**	**348**	P	**Pn**	**12 53 07.4**	**+1.4**
	baz=164						
TOLK				S	**Sn**	**12 54 24.1**	**+3.1**
	baz=164						
INK	**Inuvik**	**7.97**	**35**	Pn	**Pn**	**12 53 24.0**	**-0.1**
	1.3nm,0.3s,baz=259,slow=14,SNR=39						
INK				Sn	**Sn**	**12 54 51.1**	**-2.2**
	0.6nm,0.3s,baz=276,slow=30,SNR=3.7						
INK				Lg	Lg	12 55 36.6	
	0.4nm,0.3s,baz=200,slow=12,SNR=2.6						
DLBC	**Dease Lake**	**8.66**	**109**	LR	LR	12 57 05.9	
	comp=Z,148nm,18.2s,baz=290,slow=37						
PDAR	**Pinedale Array**	**28.82**	**116**	P	P	12 57 34.0	+7.7
	0.2nm,0.3s,baz=338,slow=6.4,SNR=4.6						
NVAR	**Mina Array Bea**	**29.14**	**132**	P	P	12 57 35.7	+6.6
	0.8nm,0.8s,baz=319,slow=8.4,SNR=7.0						
TXAR	**Lajitas Array**	**42.76**	**120**	P	P	12 59 33.6	+8.3
	0.2nm,0.6s,baz=330,slow=14,SNR=3.7						
USRK	**Ussuriysk Ar.**	**48.77**	**289**	P	**P**	**13 00 12.7**	**+0.2**
	1.7nm,0.7s,baz=55,slow=8.5,SNR=4.4						
KSRS	**Korea Array**	**56.02**	**287**	P	**P**	**13 01 07.2**	**+0.9**
	0.7nm,0.5s,baz=14,slow=7.2,SNR=3.5						

MEX 01 13:17:12.6±0.8, 15°.84N×92°.41W, h218^{km}±10^{km}, MD3.8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.94**	**172**	*i* P	Pn	13 17 42.0	-1.9
THIG				*i* S	S	13 18 05.1	-3.2
TGIG		**1.15**	**324**	*i* P	Pn	13 17 44.0	-1.3
TGIG				*i* S	S	13 18 08.1	-2.7
CMIG	**Matias Romero**	**2.68**	**298**	*e*P	Pn	13 17 59.0	-0.6
CMIG				*i* S	S	13 18 33.8	-2.3
HUIG	**Huatulco**	**3.56**	**269**	*e*P	Pn	13 18 08.6	-1.2

MAN 01 13:26:12.1, 9°.30N×123°.22E, h6^{km}, mb4.5, ML3.4, MS3.2, 3C, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.05**	**26**	⇑*i*P	Pg	13 26 13.9	+0.4
SNPH				*i* S	Sg	13 26 16.1	+1.5
DCPH	**Dipolog City**	**0.72**	**169**	⇑*e*P	Pg	13 26 26.1	+0.1
DCPH				*i* S	Sn	13 26 40.2	-0.1
TBP	**Tagbilaran**	**0.75**	**59**	*e*P	Pg	13 26 26.9	+0.4
TBP				*i* S	Sn	13 26 39.4	-1.4
LLP	**Lapu-Lapu**	**1.25**	**36**	⇑*e*P	Pg	13 26 35.9	-0.2
LLP				*e*S	Sg	13 26 52.3	-0.1
GUIM	**Jordan**	**1.46**	**335**	*e*P	Pn	13 26 37.0	-1.9
GUIM				*e*S	Sg	13 26 59.6	+0.7
IPIL	**Ipil**	**1.63**	**203**	*e*P	Pn	13 26 41.3	-0.1
MSLP	**Maasin**	**1.82**	**63**	*e*P	Pn	13 26 44.6	+0.6
MSLP				*e*S	Sg	13 27 13.3	+2.7

MAN 01 13:30:32.3, 9°.63N×123°.06E, h33^{km}, mb4.2, ML3.0, MS2.6, Negros

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SJA 01 13:35:10.7±0.4, 31°.30S×64°.92W, h4^{km}±3^{km}, ML3.1, MW3.9, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRA	**San Martin**	**1.31**	**211**	*i* P	Pb	13 35 36.0	+0.1
MRA				*i* S	Sn	13 35 55.1	+1.3
MRA				IAML		13 35 55.9	
	comp=Z,616nm,0.4s						
APLL	**PUNTA DE LOS L**	**1.65**	**303**	*i* P	Pg	13 35 42.2	-0.1
APLL				IAML		13 36 05.5	
	comp=Z,143nm,0.4s						
APLL				*i* S	Sg	13 36 05.5	+1.8
ACAN	**Cantantal**	**2.16**	**243**	*i* P	Pb	13 35 49.8	-0.6
ACAN				*i* S	Sb	13 36 18.9	+1.2
ACLC	**CERRO LA CRUZ**	**2.56**	**316**	*i* P	Pb	13 35 55.9	-1.4
ACLC				*i* S	Sb	13 36 29.0	-0.2

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*IDC **01** 13:55:58.0±1.0, 9°.47S×159°.12E, h0^{km}, mb4.0/5, mb1 4.3/6, mb1mx3.9/26, mbtmp4.1/6, ML4.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/20, Error ellipse: s-maj=31.4km s-min=13.9km az=167.0*

*ISCJB **01** 13:55:59.8±0.6, 9°.38S±0°.10×159°.03E±0°.04, h27^{km}, mb4.0/7, Error ellipse: s-maj=14.3km s-min=6.0km az=178.0*

*NEIC **01** 13:55:59.2±0.5, 9°.38S×159°.08E, h10^{km}, mb4.7/4, Error ellipse: s-maj=13.2km s-min=9.5km az=144.0*

ISC 01 13:56:01.4±0.8, 9°.4S±0°.1×159°.12E±0°.07, h27^{km}, n15, σ0^{s}87/16, mb4.0/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.82**	**96**	Pn	**Pn**	**13 56 17.1**	**-0.1**
	558nm,0.3s,baz=221,slow=2.4,SNR=233						
HNR				Sn	**Sn**	**13 56 28.9**	**+0.4**
	1µm,0.3s,baz=288,slow=20,SNR=67						
HNR				LR	LR	13 56 32.6	
	comp=Z,270nm,18.1s,baz=251,slow=42						
HNR	**Honiara**	**0.82**	**96**	*i* P	**Pb**	**13 56 16.0**	**-1.1**
HNR				*i* S	**Sn**	**13 56 28.5**	**0.0**
DZM	**Mont Dzumac**	**14.47**	**152**	LR	LR	14 03 45.0	
	comp=Z,94nm,18.2s,baz=17,slow=32						
PATS	**Pohnpei**	**16.10**	**357**	*e*Pn	**Pn**	**13 59 45.4**	**-0.6**
	43nm,1.1s						
JAY	**Jayapura**	**19.52**	**289**	P	**Pn**	**14 00 28.1**	**-0.3**
	0.5nm,0.3s,baz=57,slow=4.0,SNR=5.4						
WR1	**Warramunga Arr**	**26.14**	**243**	*e*P	**P**	**14 01 33.2**	**-0.4**
WRA	**Warramunga Arr**	**26.14**	**243**	P	**P**	**14 01 33.2**	**-0.4**
	2.5nm,0.6s,baz=75,slow=9.9,SNR=23						
STKA	**Stephens Creek**	**27.69**	**213**	P	**P**	**14 01 47.1**	**-0.2**
	2.7nm,0.5s,baz=43,slow=14,SNR=6.1						
STKA	**Stephens Creek**	**27.69**	**213**	*e*P	**P**	**14 01 47.1**	**-0.2**
	9.6nm,1.8s						
AS31	**Alice Springs**	**27.98**	**236**	*e*P	**P**	**14 01 49.1**	**-1.0**
	0.7nm,0.8s						
ASAR	**Alice Springs**	**27.98**	**236**	P	**P**	**14 01 49.1**	**-1.0**
	1.3nm,0.7s,baz=69,slow=10.0,SNR=9.0						
VNDA	**Vanda**	**68.16**	**179**	P	**P**	**14 07 00.2**	**+1.5**
	0.6nm,0.7s,baz=336,slow=6.2,SNR=6.5						
ILAR	**Eielson Array**	**84.10**	**20**	P	**P**	**14 08 30.9**	**+1.5**
	0.4nm,0.5s,baz=248,slow=4.9,SNR=10						
ILB	**Eielson Array**	**84.10**	**20**	*e*P	**P**	**14 08 30.0**	**+0.5**
	14nm,1.9s						
HYT	**Haines Junctio**	**85.64**	**26**	*e*P	**P**	**14 08 38.4**	**+0.9**
	7.1nm,0.7s						

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*DDA **01** 14:08:46.1, 35°.17N×27°.43E, h22^{km}±3^{km}, ML3.0*

*ISCJB **01** 14:08:48.1±1.0, 35°.21N±0°.04×27°.74E±0°.04, h6^{km}±6^{km}, Error ellipse: s-maj=8.0km s-min=4.1km az=151.1*

*ATH **01** 14:08:48.9, 35°.25N×27°.68E, h18^{km}±2^{km}, ML2.8/3, Error ellipse: s-maj=4.4km s-min=1.3km az=327.0*

*ISK **01** 14:08:48.8, 35°.25N×27°.66E, h14^{km}, ML3.0/12*

*THE **01** 14:08:49.2, 35°.28N×27°.65E, h0^{km}, ML2.9/4, Error ellipse: s-maj=2.1km s-min=0.9km az=150.0*

ISC 01 14:08:48.9±1.3, 35°.25N±0°.05×27°.67E±0°.03, h17^{km}±9^{km}, n38, σ1^{s}16/54, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.51**	**305**	PG	**Pb**	**14 08 59.3**	**-0.2**
KARP				SG	**Sb**	**14 09 06.9**	**+0.2**
KARP	**Karpathos**	**0.51**	**305**	P	**Pg**	**14 08 58.8**	**-0.4**
KARP				S	**Sb**	**14 09 07.3**	**+0.6**
KARP	**Karpathos**	**0.51**	**305**	P	**Pg**	**14 08 59.0**	**-0.2**
KARP				S	**Sb**	**14 09 06.8**	**+0.2**
KARP				AML	AML	14 09 10.0	
	comp=N,3338µm,0.6s						
KARP				AML	AML	14 09 11.5	
	comp=E,2343µm,0.4s						
ARG	**Arkhangelos**	**1.03**	**21**	PG	**Pg**	**14 09 09.2**	**+0.3**
ARG				SG	**Sn**	**14 09 23.9**	**+1.2**
ARG	**Arkhangelos**	**1.03**	**21**	P	**Pn**	**14 09 08.7**	**+0.1**
ARG				S	**Sn**	**14 09 24.3**	**+1.6**
ARG	**Arkhangelos**	**1.03**	**21**	P	**Pn**	**14 09 08.5**	**-0.1**
ARG				S	**Sn**	**14 09 22.5**	**-0.2**
ARG				AML	AML	14 09 28.9	
	comp=E,1255µm,0.3s						
ARG				AML	AML	14 09 29.2	
	comp=N,1256µm,0.8s						
ZKR	**Zakros**	**1.20**	**264**	PN	**Pb**	**14 09 11.2**	**0.0**
ZKR	**Zakros**	**1.20**	**264**	P	**Pb**	**14 09 11.2**	**0.0**
ZKR				S	**Sg**	**14 09 28.8**	**+1.0**
ZKR	**Zakros**	**1.20**	**264**	P	**Pb**	**14 09 11.3**	**0.0**
ZKR				AML	AML	14 09 37.9	
	comp=E,622µm,0.9s						
ZKR				AML	AML	14 09 38.9	
	comp=N,336µm,0.8s						
STIA	**Sitia Lasithi**	**1.30**	**268**	P	**Pb**	**14 09 12.9**	**0.0**
DAT	**Datca**	**1.48**	**357**	PN	**Pn**	**14 09 15.2**	**+0.3**
DAT	**Datca**	**1.48**	**357**	*i* P	**Pb**	**14 09 15.6**	**-0.4**
DAT				*i* S	**Sg**	**14 09 37.8**	**+1.2**
DAT				IAML_P			
	comp=Z,860nm,0.2s						
NPS	**Neapolis**	**1.69**	**271**	P	**Pb**	**14 09 20.0**	**+0.5**
DALY	**Dalyan (Mula)**	**1.75**	**27**	PN	**Pb**	**14 09 20.0**	**-0.6**
DALY	**Dalyan (Mula)**	**1.75**	**27**	*i* P	**Pb**	**14 09 21.4**	**+0.7**
DALY				*i* S	**Sg**	**14 09 46.6**	**+1.2**
TURN	**Turunc**	**1.78**	**25**	PN	**Pn**	**14 09 17.4**	**-1.6**
TURN	**Turunc**	**1.78**	**25**	*i* P	**Pn**	**14 09 18.3**	**-0.7**
TURN				*i* S	**Sn**	**14 09 41.8**	**+0.5**
FETY	**Fethiye**	**1.79**	**39**	PN	**Pb**	**14 09 20.4**	**-1.0**
FETY	**Fethiye**	**1.79**	**39**	*i* P	**Pb**	**14 09 22.3**	**+0.9**
FETY				*i* S	**Sg**	**14 09 47.8**	**+1.0**
FETY				IAML_P			
	comp=Z,1µm,0.4s						
LAST	**Lasithi**	**1.80**	**268**	P	**Pb**	**14 09 21.7**	**+0.2**
BDRM	**Kayabasi**	**1.82**	**354**	*i* P	**Pn**	**14 09 19.9**	**+0.4**
BDRM				*i* S	**Sg**	**14 09 46.5**	**-1.0**
BDRM				IAML_P			
	comp=Z,1µm,0.2s						
BODT	**Bodrum**	**1.83**	**351**	PN	**Pn**	**14 09 20.3**	**+0.6**
AKAS	**Kas**	**1.85**	**58**	PN	**Pb**	**14 09 21.4**	**-1.0**
AKAS	**Kas**	**1.85**	**58**	*i* P	**Pn**	**14 09 20.8**	**+0.7**
AKAS				*i* S	**Sb**	**14 09 44.9**	**-0.4**
ANAF	**Anafi Island**	**1.90**	**306**	P	**Pb**	**14 09 21.7**	**-1.4**
ANAF				S	**Sb**	**14 09 45.6**	**-1.0**
ANAF	**Anafi Island**	**1.90**	**306**	P	**Pb**	**14 09 22.0**	**-1.2**
YER	**Yerkesik**	**1.94**	**15**	PN	**Pb**	**14 09 22.6**	**-1.3**
SANT	**Santorini**	**2.12**	**302**	PN	**Pn**	**14 09 24.6**	**+1.0**
AMGA	**Amorgos Island**	**2.14**	**318**	P	**Pn**	**14 09 25.1**	**+1.3**
IDI	**Anoyia**	**2.28**	**272**	P	**Pb**	**14 09 28.2**	**-1.4**
AYDN	**Tasoluk**	**2.41**	**4**	*i* P	**Pn**	**14 09 29.2**	**+1.5**
AYDN				*i* S	**Sb**	**14 09 59.5**	**-1.8**
AKUM	**Antalya-Kumluc**	**2.42**	**63**	*i* P	**Pn**	**14 09 27.8**	**+0.1**
AKUM				*i* S	**Sn**	**14 09 56.1**	**-0.8**
IOSP	**Ios island**	**2.43**	**308**	P	**Pb**	**14 09 30.0**	**-2.1**
APE	**Apeiranthos**	**2.51**	**317**	PN	**Pn**	**14 09 30.5**	**+1.5**
APE	**Apeiranthos**	**2.51**	**317**	P	**Pn**	**14 09 29.9**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.69**	**4**	PN	**Pn**	**14 09 33.2**	**+1.5**
VAM	**Vamos**	**2.84**	**274**	P	**Pb**	**14 09 36.3**	**-3.0**
IMMV	**Iera Moni Meta**	**3.02**	**275**	P	**Pb**	**14 09 38.9**	**-3.4**

MEX 01 15:18:57.8±0.5, 15°.57N×96°.52W, h5^{km}, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.44**	**63**	*i* P	Pg	15 19 06.1	-0.2
HUIG				*i* S	Sg	15 19 12.1	0.0
CMIG	**Matias Romero**	**2.18**	**46**	*e*P	Pn	15 19 32.0	-2.8
CMIG				*i* S	Sn	15 19 57.9	-4.3

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*BJI **01** 15:25:03.9±0.0, 18°.54N×146°.16E, h206^{km}, mb4.4/24, mB4.7/21*

*ISCJB **01** 15:25:06.7±0.7, 18°.79N±0°.03×145°.71E±0°.05, h199^{km}±7^{km}, mb4.3/75, Error ellipse: s-maj=8.2km s-min=5.5km az=179.3*

*IDC **01** 15:25:07.0±0.7, 18°.79N×145°.65E, h191^{km}±6^{km}, mb3.9/27, mb1 4.0/28, mb1mx4.0/37, mbtmp4.4/28, MS2.6/1, Ms1 2.8/1, ms1mx2.4/32, Error ellipse: s-maj=12.9km s-min=7.8km az=89.0*

*NEIC **01** 15:25:06.8±0.2, 18°.78N×145°.70E, mb4.7/38, Error ellipse: s-maj=7.4km s-min=4.8km az=85.0*

*MOS **01** 15:25:07.6±1.0, 18°.83N×145°.56E, h206^{km}, mb4.7/26, Error ellipse: s-maj=13.3km s-min=6.5km az=103.6*

ISC 01 15:25:07.7±0.5, 18°.83N±0°.05×145°.68E±0°.07, h196^{km}±4^{km}, h196^{km}:pP-P, n153, σ1^{s}21/173, mb4.5/75, 11C-2D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	**Sarigan**	**2.12**	**178**	*e*Pn	**Pn**	**15 25 45.4**	**-1.9**
ANA2	**Anatahan**	**2.48**	**179**	*e*Pn	**Pn**	**15 25 49.4**	**-1.8**
GUMO	**Guam**	**5.27**	**189**	*e*Pn	**Pn**	**15 26 25.1**	**-0.5**
GUMO	**Guam**	**5.27**	**189**	*e*P	**Pn**	**15 26 25.1**	**-0.5**
PATS	**Pohnpei**	**17.12**	**132**	*e*P	**P**	**15 28 53.9**	**-0.5**
	45nm,1.0s						
JOW	**Kunigami**	**17.90**	**300**	P	**Pn**	**15 29 05.7**	**+0.8**
	2.5nm,0.3s,baz=136,slow=13,SNR=44						
JOW	**Kunigami**	**17.90**	**300**	*e*P	**Pn**	**15 29 05.2**	**+0.3**
	50nm,0.5s						
INU	**Inuyama**	**18.16**	**337**	*e*P	**Pn**	**15 29 08.5**	**+0.7**
	15nm,0.7s						
MJAR	**Matsushiro Arr**	**18.83**	**341**	P	**Pn**	**15 29 14.3**	**-1.4**
	0.5nm,0.3s,baz=170,slow=9.3,SNR=48						
MAJO	**Matsushiro**	**18.83**	**341**	*e*P	**Pn**	**15 29 14.2**	**-1.4**
	23nm,0.6s						
MAJO	**Matsushiro**	**18.83**	**341**	*i* P	**Pn**	**15 29 15.6**	**-0.1**
MAT	**Matsushiro**	**18.83**	**341**	P	**Pn**	**15 29 14.1**	**-1.6**
MAT				S	**S**	**15 32 36.9**	**+0.4**
MJB9	**Matsu-Tunnel**	**18.84**	**341**	*e*P	**Pn**	**15 29 14.1**	**-1.6**
	24nm,0.6s						
JNU	**Nakatsue**	**19.45**	**320**	*e*P	**Pn**	**15 29 22.1**	**-1.0**
	32nm,1.5s						
H11S3	**WAKE ISLAND Hy**	**19.90**	**88**	T	T	15 50 27.0	
	baz=275,slow=74,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**19.91**	**88**	T	T	15 50 27.9	
	baz=275,slow=74,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**19.92**	**88**	T	T	15 50 28.7	
	baz=275,slow=74,SNR=8.1						
H11N1	**WAKE ISLAND Hy**	**20.04**	**84**	T	T	15 50 51.4	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**20.04**	**84**	T	T	15 51 05.7	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**20.06**	**84**	T	T	15 50 50.5	
	baz=274						
MANU	**Manus Island**	**20.81**	**175**	*e*P	**P**	**15 29 33.0**	**-1.2**
	106nm,1.3s						
JAY	**Jayapura**	**21.77**	**194**	P	**P**	**15 29 43.5**	**-0.7**
	13nm,0.8s,baz=11,slow=6.5,SNR=8.0						
JAY	**Jayapura**	**21.77**	**194**	P	**P**	**15 29 43.1**	**-1.1**
	141nm,0.9s						
GENI	**Genyem**	**21.97**	**195**	P	**P**	**15 29 46.2**	**+0.1**
	64nm,0.8s						
BAKI	**Biak**	**22.01**	**206**	P	**P**	**15 29 45.8**	**-0.7**
SRPI	**Serui, Papua**	**22.57**	**205**	P	**P**	**15 29 53.4**	**+1.7**
	101nm,1.2s						
YHNB	**Yeheng**	**23.30**	**289**	*e*P	**P**	**15 29 59.6**	**+1.3**
	29nm,1.2s						
SSLB	**Suanglung**	**23.55**	**286**	*e*P	**P**	**15 30 02.0**	**+1.4**
	19nm,0.7s						
SIJI	**Sorong**	**24.17**	**217**	P	**P**	**15 30 06.2**	**0.0**
	22nm,0.9s,baz=13,slow=6.3,SNR=4.9						
KSRS	**Korea Array**	**24.20**	**324**	P	**P**	**15 30 05.8**	**-0.5**
	2.0nm,0.7s,baz=146,slow=8.8,SNR=10						
KSRS				pP	**pP**	**15 30 42.5**	**-0.3**
	3.0nm,1.0s,baz=138,slow=8.3,SNR=2.5						
KS15	**Wonju Array Si**	**24.22**	**324**	*e*P	**P**	**15 30 05.8**	**-0.6**
	38nm,1.8s						
KS15				*e*pP	**pP**	**15 30 42.5**	**-0.5**
KSAR	**Wonju Array Be**	**24.22**	**324**	P	**P**	**15 30 05.8**	**-0.6**
KSAR				pP	**pP**	**15 30 42.5**	**-0.5**
KSAR	**Wonju Array Be**	**24.22**	**324**	P	**P**	**15 30 05.8**	**-0.6**
KSAR				*PP	**pP**	**15 30 42.6**	**-0.5**
ASAJ	**Asahikawa**	**25.34**	**355**	P	**P**	**15 30 17.3**	**+0.8**
	2.5nm,0.6s,baz=172,slow=13,SNR=6.5						
USRK	**Ussuriysk Ar.**	**27.78**	**339**	P	**P**	**15 30 36.5**	**-1.8**
	2.8nm,0.8s,baz=156,slow=8.8,SNR=9.4						
PMG	**Port Moresby**	**28.10**	**177**	P	**P**	**15 30 40.1**	**-1.3**
	9.8nm,0.6s,baz=343,slow=17,SNR=4.6						
PMG	**Port Moresby**	**28.10**	**177**	*i* P	**P**	**15 30 43.3**	**+1.9**
PMG				pmax	pmax		
	comp=Z,64nm,0.7s						
KKM	**Kota Kinabalu**	**31.39**	**250**	P	**P**	**15 31 12.0**	**+1.3**
SPMM	**Sapulut**	**31.79**	**247**	P	**P**	**15 31 14.0**	**0.0**
KLR	**Kul'dur**	**32.34**	**343**	*c i*P	**P**	**15 31 19.1**	**+0.7**
KLR				pmax	pmax		
	comp=Z,12nm,0.6s						
GRNR	**Gornyy**	**32.71**	**349**	*e*P	**P**	**15 31 23.5**	**+1.9**
GRNR				pmax	pmax		
	comp=Z,14nm,0.7s						
TTSI	**Tana Toraja**	**33.47**	**232**	P	**P**	**15 31 28.8**	**+0.2**
SPSI	**Sidrap Palu**	**34.12**	**231**	P	**P**	**15 31 35.3**	**+1.1**
	comp=Z,22nm,0.8s						
PETK	**Petropavlovsk-**	**35.46**	**12**	P	**P**	**15 31 46.2**	**+0.9**
	comp=Z,3.4nm,0.7s,baz=186,slow=7.1,SNR=5.6						
PEA1	**Petropavlovsk-**	**35.47**	**12**	*e*P	**P**	**15 31 46.2**	**+0.9**
HHC	**Hu-ho-hao-te**	**36.50**	**314**	P	**P**	**15 31 57.0**	**+2.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,16nm,5.7s						
SBUM	**Sibu**	**36.58**	**248**	*e*P	**P**	**15 31 56.2**	**+1.0**
	comp=Z,6.0nm,0.7s						
ZEA	**Zeya**	**37.64**	**342**	*e*P	**P**	**15 32 03.9**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
KSM	**Kuching**	**38.72**	**248**	P	**P**	**15 32 14.0**	**+0.8**
CD2	**Chengdu**	**39.68**	**296**	*e*P	**P**	**15 32 20.2**	**-0.8**
WRAB	**Tennant Creek**	**40.10**	**197**	*ce*P	**P**	**15 32 25.0**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,15nm,0.6s						
WB2	**Warramunga Arr**	**40.10**	**197**	*e*P	**P**	**15 32 24.6**	**+0.1**
	comp=Z,20nm,0.7s						
WR1	**Warramunga Arr**	**40.11**	**197**	*e*P	**P**	**15 32 24.4**	**-0.1**
WR1				*e*PcP	**PcP**	**15 34 24.5**	**-0.6**
WRA	**Warramunga Arr**	**40.11**	**197**	P	**P**	**15 32 24.4**	**-0.1**
	comp=Z,11nm,0.4s,baz=7.7,slow=9.3,SNR=109						
WRA				PcP	**PcP**	**15 34 24.5**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=6.4,slow=4.2,SNR=5.2						
LZH	**Lanzhou**	**40.56**	**304**	*e*P	**P**	**15 32 30.5**	**+2.2**
LZH				pP	pwP	15 33 14.6	+0.9
LZH				sP	sP	15 33 37.7	+7.1
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
FITZ	**Fitzroy Crossi**	**41.65**	**209**	*e*P	**P**	**15 32 37.4**	**+0.3**
	comp=Z,13nm,0.8s						
PBKT	**Sadao Pong**	**42.58**	**274**	P	**P**	**15 32 47.4**	**+2.7**
	comp=Z,5.3nm,0.9s						
SONA0	**Songino Array**	**43.03**	**321**	*e*P	**P**	**15 32 48.6**	**+0.4**
SONM	**Songino Array**	**43.03**	**321**	P	**P**	**15 32 48.6**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=137,slow=9.4,SNR=12						
AS31	**Alice Springs**	**43.77**	**196**	*e*P	**P**	**15 32 53.9**	**-0.2**
	comp=Z,2.1nm,0.6s						
AS31				*e*PcP	**PcP**	**15 34 37.1**	**-0.2**
ASAR	**Alice Springs**	**43.77**	**196**	P	**P**	**15 32 53.5**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=18,slow=8.3,SNR=27						
ASAR				PcP	**PcP**	**15 34 37.1**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=24,slow=3.6,SNR=8.2						
CM31	**Chiang Mai Arr**	**44.19**	**277**	*e*P	**P**	**15 32 57.8**	**+0.1**
	comp=Z,5.3nm,1.0s						
CM31				*e*PcP	**PcP**	**15 34 39.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**44.19**	**277**	P	**P**	**15 32 57.8**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=70,slow=6.7,SNR=16						
CMAR				PcP	**PcP**	**15 34 39.5**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=87,slow=1.6,SNR=7.4						
CMAR				LR	LR	15 51 41.9	
	comp=Z,6.4nm,18.2s,baz=210,slow=36						
CMAR	**Chiang Mai Arr**	**44.19**	**277**	*ce*P	**P**	**15 32 59.5**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	**44.59**	**349**	*e*P	**P**	**15 33 00.6**	**+0.5**
	comp=Z,45nm,0.7s						
YAK	**Yakutsk**	**44.59**	**349**	*e*P	**P**	**15 33 00.6**	**+0.5**
YAK				pmax	pmax		
	comp=Z,45nm,0.7s						
DZM	**Mont Dzumac**	**45.44**	**153**	P	**P**	**15 33 06.7**	**-0.7**
	comp=Z,12nm,0.7s,baz=341,slow=12,SNR=6.7						
MNSI	**Mandailing Nat**	**48.62**	**254**	P	**P**	**15 33 33.8**	**+1.7**
	comp=Z,16nm,0.9s						
STKA	**Stephens Creek**	**50.57**	**185**	P	**P**	**15 33 45.2**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=354,slow=8.1,SNR=7.8						
BILL	**Bilibino**	**50.89**	**10**	*c i*P	**P**	**15 33 50.5**	**+2.1**
BILL				*e*		15 35 49.7	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FORT	**Forrest**	**52.16**	**199**	*e*P	**P**	**15 33 58.6**	**+0.3**
	comp=Z,27nm,0.6s						
TIXI	**Tiksi**	**53.74**	**353**	*e*P	**P**	**15 34 09.7**	**+0.4**
	comp=Z,3.1nm,0.8s						
TIXI	**Tiksi**	**53.74**	**353**	*ce*P	**P**	**15 34 10.0**	**+0.8**

TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	**Urumqi**	54.21	311	eP	P	15 34 15.7	+2.4
WMQ				LR	LR		
	comp=Z,91nm,29.2s						
WMQ				LR	LR		
	comp=Z,53nm,29.1s						
WMQ				LR	LR		
	comp=Z,110nm,29.0s						
MORW	**Morawa**	55.56	212	eP	P	15 34 22.6	-0.4
	comp=Z,28nm,0.6s						
ZAA0	**Zalesovo Array**	57.90	322	eP	P	15 34 38.8	-0.4
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	57.90	322	P	P	15 34 38.1	-1.0
	comp=Z,3.3nm,0.6s,baz=104,slow=6.9,SNR=13						
ZALV				PcP	PcP	15 35 28.1	-1.1
	comp=Z,1.8nm,0.6s,baz=101,slow=7.7,SNR=4.0						
ZAA1	**Zalesovo Array**	57.90	322	eP	P	15 34 38.1	-1.0
ZAA1				epP	PcP	15 35 28.1	-1.1
MK31	**Makanchi Array**	58.36	314	eP	P	15 34 42.7	+0.2
	comp=Z,2.9nm,0.6s						
MK31	**Makanchi Array**	58.36	314	eP	P	15 34 42.7	+0.2
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	**Makanchi Array**	58.36	314	eP	P	15 34 42.8	+0.2
MK32				epP	pwP	15 35 30.6	0.0
MKAR	**Makanchi Array**	58.36	314	P	P	15 34 42.8	+0.2
	comp=Z,4.3nm,0.6s,baz=91,slow=8.5,SNR=51						
MKAR				PcP	pwP	15 35 30.6	0.0
	comp=Z,1.0nm,0.5s,baz=94,slow=9.0,SNR=4.3						
MKAR	**Makanchi Array**	58.36	314	ceP	P	15 34 42.9	+0.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAKZ	**Makanchi**	58.58	314	eP	P	15 34 44.1	+0.1
	comp=Z,6.7nm,0.6s						
MAKZ	**Makanchi**	58.58	314	eP	P	15 34 44.1	+0.1
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KDAK	**Kodiak Island**	59.26	33	P	P	15 34 49.0	+0.7
	comp=Z,5.8nm,0.6s,baz=326,slow=3.6,SNR=5.8						
KDAK	**Kodiak Island**	59.26	33	eP	P	15 34 49.0	+0.7
	comp=Z,79nm,1.5s						
KDAK	**Kodiak Island**	59.26	33	eP	P	15 34 49.1	+0.7
KDAK				pmax	pmax		
	comp=Z,79nm,1.5s						
PDGK	**Podgornoye**	60.11	310	P	P	15 34 55.4	+0.7
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURK	**Kurchatov**	61.16	318	eP	P	15 35 00.9	-0.5
	comp=Z,6.7nm,0.8s						
KURK	**Kurchatov**	61.16	318	deP	P	15 35 01.4	-0.1
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MLY	**Manley**	62.00	25	eP	P	15 35 08.3	+1.4
	comp=Z,17nm,2.0s						
SML	**Sawmill**	62.26	29	eP	P	15 35 10.0	+1.3
	comp=Z,9.4nm,0.9s						
SML				epP	pwP	15 35 57.2	-0.5
SML	**Sawmill**	62.26	29	eP	P	15 35 10.0	+1.3
SML				e*PP	pwP	15 35 57.2	-0.5
SML				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SCM	**Sheep Creek Mo**	62.73	29	eP	P	15 35 12.4	+0.6
	comp=Z,14nm,1.0s						
SCM	**Sheep Creek Mo**	62.73	29	eP	P	15 35 12.4	+0.6
SCM				pmax	pmax		
	comp=Z,14nm,1.0s						
ILAR	**Eielson Array**	63.53	26	P	P	15 35 17.2	+0.3
	comp=Z,0.9nm,0.6s,baz=254,slow=5.0,SNR=12						
ILAR				pP	pP	15 36 01.0	-0.2
	comp=Z,0.6nm,0.9s,baz=258,slow=4.5,SNR=1.8						
ILB	**Eielson Array**	63.53	26	eP	P	15 35 17.2	+0.3
ILB				epP	pP	15 36 01.0	-0.2
AAK	**Ala-Archa**	63.78	309	i P	P	15 35 19.3	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
OTUK	**Ortayu**	65.16	315	P	P	15 35 28.6	+0.7
OTUK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NIL	**Nilore**	65.45	299	eP	P	15 35 29.6	-0.4
	comp=Z,32nm,0.8s						
NIL	**Nilore**	65.45	299	eP	P	15 35 29.6	-0.4
NIL				pmax	pmax		
	comp=Z,32nm,0.8s						
BRVK	**Borovoye**	66.43	320	eP	P	15 35 35.5	-0.3
	comp=Z,14nm,0.9s						
BRVK	**Borovoye**	66.43	320	d iP	P	15 35 35.9	+0.1
BRVK				pmax	pmax		
	comp=Z,15nm,1.0s						
KK31	**Karatay Array**	66.67	310	eP	P	15 35 37.6	0.0
	comp=Z,9.4nm,0.8s						
KK31	**Karatay Array**	66.67	310	eP	P	15 35 37.6	0.0
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	**Karatay Array**	66.67	310	eP	P	15 35 38.0	+0.4
	comp=Z,9.4nm,0.8s						
KKAR	**Karatay Array**	66.67	310	eP	P	15 35 38.0	+0.4
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GAR	**Garm**	67.20	305	eP	P	15 35 41.3	+0.2
	comp=Z,76nm,0.8s						
GAR	**Garm**	67.20	305	eP	P	15 35 41.3	+0.2
GAR				pmax	pmax		
	comp=Z,76nm,0.8s						
HYT	**Haines Junctio**	67.32	31	eP	P	15 35 43.0	+1.5
	comp=Z,4.8nm,1.1s						
INK	**Inuvik**	69.26	23	P	P	15 35 53.3	+0.2
	comp=Z,1.6nm,0.6s,baz=273,slow=5.6,SNR=5.1						
INK	**Inuvik**	69.26	23	eP	P	15 35 53.3	+0.2
	comp=Z,14nm,1.8s						
INK	**Inuvik**	69.26	23	eP	P	15 35 53.3	+0.2
INK				pmax	pmax		
	comp=Z,14nm,1.8s						
ARU	**Arti**	72.95	325	eP	P	15 36 15.3	-0.2
	comp=Z,6.7nm,0.9s						
ARU	**Arti**	72.95	325	c iP	P	15 36 15.1	-0.5
ARU						15 38 55.9	
ARU				S	S	15 45 19.3	-6.6
ARU				SS	SS	15 50 03.8	-6.4
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ABKAR	**Akbulak array**	73.23	317	eP	P	15 36 16.6	-0.8
	comp=Z,9.1nm,0.5s						
GEYT	**Alibeck**	76.81	306	P	P	15 36 37.3	-0.8
	comp=Z,2.5nm,0.8s,baz=82,slow=3.1,SNR=5.6						
YKA	**Yellowknife Ar**	77.88	28	P	P	15 36 43.8	+0.4
	comp=Z,1.4nm,0.6s,baz=294,slow=6.3,SNR=6.2						
YKA				pP	pP	15 37 30.8	+1.1
	comp=Z,1.3nm,0.7s,baz=292,slow=5.6,SNR=3.3						
YKB5	**Yellowknife Ar**	77.88	28	eP	P	15 36 43.8	+0.4
YKB5				epP	pP	15 37 30.8	+1.1
PRGR	**Permogore**	78.29	331	eP	P	15 36 44.5	-1.2
PRGR				e		15 36 53.9	
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARA0	**ARCESS Array S**	82.36	342	eP	P	15 37 07.1	-0.2
ARCES	**ARCESS Array B**	82.36	342	P	P	15 37 07.1	-0.2
	comp=Z,2.8nm,0.6s,baz=69,slow=6.1,SNR=21						
KVN	**Kaiserville**	83.02	51	eP	P	15 37 12.3	+0.7
	comp=Z,2.2nm,0.9s						
KVN	**Kaiserville**	83.02	51	eP	P	15 37 12.3	+0.7
KVN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NV01	**Mina Array Sit**	83.07	52	eP	P	15 37 12.9	+1.0
NV01				epP	pP	15 37 58.0	-0.6
NVAR	**Mina Array Bea**	83.07	52	P	P	15 37 12.9	+1.0
	comp=Z,1.3nm,0.6s,baz=276,slow=5.8,SNR=12						
NVAR				pP	pP	15 37 58.0	-0.6
	comp=Z,2.3nm,0.7s,baz=266,slow=5.7,SNR=3.0						
SGF	**Sodankyl**	83.23	340	P	P	15 37 12.8	+1.0
SGF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LRM	**Limekiln Ridge**	84.65	43	eP	P	15 37 18.8	-1.0
HRY	**Holter Researc**	84.73	42	eP	P	15 37 21.2	+1.2
OUL	**Oulu**	84.76	338	P	P	15 37 20.0	+0.4
OUL				pmax	pmax		
	comp=Z,12nm,0.7s						
OBN	**Obninsk**	85.16	327	⇑eP	P	15 37 21.9	+0.2
OBN				e		15 40 42.5	
OBN				eS	S	15 47 16.1	-19
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
KIV	**Kislovodsk**	86.10	315	eP	P	15 37 26.1	-0.7
KIV				pmax	pmax		
	comp=Z,17nm,0.9s						
FIA0	**FINESS Array S**	86.76	335	eP	P	15 37 27.7	-1.8
FIA0	**FINESS Array S**	86.76	335	eP	P	15 37 27.7	-1.8
FINES	**FINESS Array B**	86.76	335	P	P	15 37 27.7	-1.8
	comp=Z,4.6nm,0.3s,baz=70,slow=4.3,SNR=73						
FINES	**FINESS Array B**	86.76	335	ceP	P	15 37 28.0	-1.5
FINES				pmax	pmax		
	comp=Z,5.0nm,0.3s						
FFC	**Flin Flon**	86.99	32	ceP	P	15 37 33.1	+2.4
PD31	**Pinedale Array**	87.74	45	eP	P	15 37 35.2	+0.3
	comp=Z,8.0nm,2.0s						
PD31				epP	pP	15 38 21.1	-1.0
PDAR	**Pinedale Array**	87.74	45	P	P	15 37 35.2	+0.3
	comp=Z,0.2nm,0.4s,baz=101,slow=1.8,SNR=3.3						
PDAR				pP	pP	15 38 21.1	-1.0
	comp=Z,0.2nm,0.5s,baz=239,slow=42,SNR=2.3						
NB2	**NORSAR Subarra**	92.44	340	P	P	15 37 54.7	-1.5
	comp=Z,0.4nm,0.6s,baz=42,slow=4.6						
NB200	**NORSAR Array S**	92.44	340	eP	P	15 37 54.9	-1.2
NOA	**NORSAR Array B**	92.44	340	P	P	15 37 54.9	-1.2
	comp=Z,0.4nm,0.5s,baz=39,slow=5.0,SNR=3.6						
BR101	**Keskin Array S**	94.01	314	eP	P	15 38 02.6	-1.4
BRTR	**Keskin Array B**	94.01	314	P	P	15 38 02.6	-1.4
	comp=Z,1.4nm,0.8s,baz=42,slow=3.8,SNR=4.7						
BRTR	**Keskin Array B**	94.01	314	ceP	P	15 38 02.0	-2.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	97.77	56	P	P	15 38 20.7	-0.5
	comp=Z,0.1nm,0.4s,baz=345,slow=6.5,SNR=2.4						
TOA1	**Torodi Ar. Sit**	132.36	309	ePKPdf	PKPdf	15 43 57.9	-1.7
TORD	**Torodi Ar. Bea**	132.36	309	PKP	PKPdf	15 43 57.9	-1.7
	comp=Z,0.6nm,0.8s,baz=25,slow=1.8,SNR=2.8						
PLCA	**Paso Flores**	142.10	133	PKhKP	PKPpre	15 44 12.4	
	comp=Z,2.9nm,1.0s,baz=240,slow=11,SNR=3.4						
LPAZ	**La Paz**	147.69	91	PKPbc	PKPdf	15 44 28.4	+0.7
	comp=Z,3.4nm,0.7s,baz=334,slow=4.2,SNR=6.4						
LPAZ	**La Paz**	147.69	91	ePKPdf	PKPdf	15 44 28.6	+0.8
LPAZ	**La Paz**	147.69	91	ePKIKP	PKPdf	15 44 28.6	+0.8

*BJI **01** 15:34:48.9±0.0, 37°.44N×74°.71E, h9^{km}, ML3.5/2*

ISC 01 15:35:12.5±1.8**, 39°.7N**±0°.1×**75°.3E**±0°.1**, h10^{km}, n4, σ0^{s}.81**/5**,**
1C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	0.54	107	Pg	Pg	15 35 22.4	-0.5
KSH				Sg	Sn	15 35 45.1	+10
KSH				smax	smax		
	comp=N,230nm,0.6s						
KSH				smax	smax		
	comp=E,170nm,0.9s						
TKM2	**Tokmak 2**	3.25	4	⇓Pn	Pg	15 36 14.4	-0.4
	6.2nm,0.6s						
TKM2				⇓Sn	Sg	15 37 18.8	+22
	8.4nm,0.7s						
KK31	**Karatay Array**	4.98	315	⇓Pn	Pn	15 36 27.7	+0.5
	1.5nm,0.5s,baz=136,slow=12,SNR=2.6						
KK31				⇑Sn	Sb	15 37 38.9	-0.7
	5.4nm,0.6s,baz=145,slow=23,SNR=4.9						
WMQ	**Urumqi**	10.14	62	eP	Pn	15 37 38.6	+0.5
WMQ				sP		15 37 45.0	

IDC 01 15:44:25.5±2.6**, 3°.72S**×**129°.20E, h0^{km}, mb3.6**/2**,**
mb1 3.9/3**, mb1mx3.5**/22**, mbtmp3.7**/3**, ML3.4**/1**, Error**
ellipse: s-maj=183.2km s-min=29.7km az=69.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	16.89	163	Pn	Pn	15 48 21.3	-2.1
	0.1nm,0.3s,baz=342,slow=10,SNR=6.2						
ASAR	**Alice Springs**	20.35	168	P	P	15 49 04.6	+0.9
	2.1nm,0.4s,baz=351,slow=11,SNR=105						
MKAR	**Makanchi Array**	65.06	326	P	P	15 55 07.8	0.0
	0.4nm,0.7s,baz=126,slow=7.3,SNR=3.7						

KRSC 01 15:46:10.2±0.2**, 59°.88N**×**163°.59E, h57^{km}**±11^{km}**, ML3.8,**
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OSSR	**Ossora**	0.69	203	eP	Pn	15 46 24.7	+0.6
OSSR				eS	Sn	15 46 36.1	+1.8
TILK	**Tilichiki**	1.40	65	eP	Pn	15 46 33.8	+0.4
TILK				eS	Sn	15 46 53.1	+2.2
PALN	**Palana**	2.01	248	eP	Pn	15 46 43.0	+1.3
PALN				eS	Sn	15 47 09.4	+3.7
KMSK	**Kamenskaya**	2.89	25	eP	Pn	15 46 57.8	+4.1
BKI	**Bering**	4.86	164	eP	Pn	15 47 25.1	+4.4

*ISCJB **01** 16:10:58.4±0.3, 24°.24N±0°.02×122°.24E±0°.02, h49^{km}±6^{km},*
Error ellipse: s-maj=4.0km s-min=2.3km az=164.1
*JMA **01** 16:10:58.0±0.1, 24°.20N×122°.21E, h56^{km}±2^{km}, M2.1*
*TAP **01** 16:10:58.6, 24°.27N×122°.17E, h58^{km}, ML2.8, B*

ISC 01 16:10:58.9±1.2**, 24°.24N**±0°.03×**122°.23E**±0°.02**, h48^{km}**±10^{km}**,**
n66, σ0^{s}.73/114**, 2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	0.32	343	P	Pn	16 11 08.4	+0.4
	baz=346						
EOS1				eS	Sn	16 11 15.7	+1.2
	baz=346						
NANB	**Nanao**	0.47	293	eP	Pn	16 11 09.8	0.0
	baz=296						
NANB				eS	Sn	16 11 17.7	+0.2
	baz=296						
ENA	**Nanau**	0.48	293	P	Pn	16 11 09.8	0.0
	baz=295						
ENA				S	Sn	16 11 18.0	+0.3
	baz=295						
TWC	**Suao**	0.51	317	P	Pn	16 11 09.9	-0.2
	baz=319						
TWC				eS	Sn	16 11 17.6	-0.5
	baz=319						
NACB	**Ninganchiao**	0.58	264	⇑eP	Pn	16 11 10.6	-0.5
	baz=254						
NACB				eS	Sn	16 11 19.5	-0.3
	baz=254						
TWD	**Chiawan**	0.60	255	P	Pn	16 11 10.8	-0.4
	baz=243						
TWD				eS	Sn	16 11 19.9	-0.3
	baz=243						
HWA	**Hwalien**	0.63	245	eP	Pn	16 11 11.6	0.0
	baz=240						
ETLH	**Xiulin Townshi**	0.68	267	P	Pn	16 11 12.0	-0.4
	baz=260						
ETLH				eS	Sn	16 11 22.0	-0.2
	baz=260						
JYNG	**Yonagunijimaku**	0.69	72	P	Pn	16 11 12.4	0.0
JYNG				eS	Sn	16 11 22.7	+0.6
TWE	**Neicheng**	0.70	313	P	Pn	16 11 12.7	+0.1
	baz=310						
TWE				S	Sn	16 11 22.6	+0.2
	baz=310						
ENTT	**Nioudou**	0.72	303	P	Pn	16 11 13.0	+0.1
	baz=297						
ENTT				eS	Sn	16 11 23.0	0.0
	baz=297						
SLBB	**Yuanshan**	0.74	313	eP	Pn	16 11 13.6	+0.3
	baz=310						
SLBB				eS	Sn	16 11 23.9	+0.4
	baz=310						
YOJ	**Yonaguni jima**	0.75	73	eP	Pn	16 11 13.1	-0.1
	baz=75						
YOJ				eS	Sn	16 11 24.1	+0.6
	baz=75						
YOJ	**Yonaguni jima**	0.75	73	P	Pn	16 11 13.2	0.0
YOJ				S	Sn	16 11 23.9	+0.4
NNSB	**Datong**	0.79	284	eP	Pn	16 11 13.5	-0.5
	baz=282						
NNSB				eS	Sn	16 11 24.6	-0.3
	baz=282						
NNS	**Nan Shan**	0.81	284	P	Pn	16 11 13.7	-0.4
	baz=283						
NNS				eS	Sn	16 11 24.6	-0.6
	baz=283						
TIPB	**Shuangxi**	0.81	333	eP	Pn	16 11 13.8	-0.4
	baz=342						
TIPB				eS	Sn	16 11 24.4	-0.9
	baz=342						
ESL	**Shilin**	0.84	240	eP	Pn	16 11 13.8	-0.7
	baz=236						
ESL				eS	Sn	16 11 24.7	-1.1
	baz=236						
WHF	**Hehuan Shan**	0.89	264	eP	Pn	16 11 15.1	-0.3
	baz=252						
WHF				eS	Sn	16 11 26.9	-0.6
	baz=252						
YHNB	**Yeheng**	0.89	299	eP	Pn	16 11 15.0	-0.1
	baz=298						
YHNB				eS	Sn	16 11 26.6	-0.4
	baz=298						
NSK	**Sanguang**	0.91	299	P	Pn	16 11 15.2	-0.2
	baz=298						
NSK				eS	Sn	16 11 26.9	-0.6
	baz=298						
NWF	**Wu-fen Shan**	0.92	334	eS	Sn	16 11 26.9	-1.0
	baz=345						
EGFH	**Guangfu**	0.93	232	eP	Pn	16 11 15.1	-0.5
	baz=229						
TWA	**Mucha**	0.94	322	eP	Pn	16 11 15.8	0.0
	baz=333						
TWA				eS	Sn	16 11 27.2	-1.0
	baz=333						
TWT	**Tachien**	0.96	271	eP	Pn	16 11 17.0	+0.8
	baz=269						
TWT				eS	Sn	16 11 29.2	+0.3
	baz=269						
TDCB	**Techi**	0.98	271	eP	Pn	16 11 16.8	+0.4
	baz=269						
TDCB				eS	Sn	16 11 29.1	-0.2
	baz=269						
CHGB	**Renai**	0.98	260	eP	Pn	16 11 16.3	-0.2
	baz=250						
CHGB				eS	Sn	16 11 28.5	-0.9
	baz=250						
TATO	**Taipei**	0.99	317	eP	Pn	16 11 16.6	+0.1
	baz=318						
OWD	**Renai**	1.00	254	eP	Pn	16 11 16.3	-0.5
	baz=251						
OWD				eS	Sn	16 11 28.8	-1.2
	baz=251						
HGSD	**Ruisui**	1.05	225	eP	Pn	16 11 16.6	-0.7
	baz=219						
HGSD				eS	Sn	16 11 30.7	0.0
	baz=219						
WLTB	**Daxi**	1.08	305	eP	Pn	16 11 17.7	+0.1
	baz=294						
YM01	**YM01**	1.08	327	eP	Pn	16 11 17.2	-0.5
	baz=339						
YM01				eS	Sn	16 11 30.4	-1.3
	baz=339						
YM10	**YM10**	1.09	326	eP	Pn	16 11 17.4	-0.5
	baz=338						
YM10				eS	Sn	16 11 30.9	-1.1
	baz=338						
YM05	**YM05**	1.10	327	eP	Pn	16 11 17.1	-0.9
	baz=338						
EHY	**Hungye**	1.11	229	eP	Pn	16 11 17.2	-0.9
	baz=234						
VWDT	**VWDT**	1.11	244	⇑eP	Pn	16 11 18.0	0.0
	baz=234						
VWDT				eS	Sn	16 11 31.9	-0.3
	baz=234						
TWS1	**Kuangyinshan**	1.13	319	eP	Pn	16 11 18.4	0.0
	baz=330						
WHP	**Taichung City**	1.17	272	eP	Pn	16 11 19.8	+0.8
	baz=265						
WHP				eS	Sn	16 11 34.8	+0.9
	baz=265						
LIOB	**Emei**	1.18	290	eP	Pn	16 11 19.4	+0.4
	baz=289						
LIOB				eS	Sn	16 11 34.5	+0.6
	baz=289						
NSTT	**Nanjuang**	1.19	289	P	Pn	16 11 19.5	+0.4
	baz=288						
NSTT				eS	Sn	16 11 34.7	+0.6
	baz=288						
YULB	**Yu-li**	1.20	225	eP	Pn	16 11 18.5	-0.9
	baz=233						
YULB				eS	Sn	16 11 32.5	-2.0
	baz=233						
DPDB	**Guoxing**	1.21	260	eP	Pn	16 11 19.9	+0.4
	baz=255						
TWF1	**Yuli**	1.23	224	P	Pn	16 11 18.9	-0.9
	baz=231						
SSLB	**Suanglung**	1.25	249	eP	Pn	16 11 19.6	-0.4
	baz=247						
SSLB				eS	Sn	16 11 34.9	-0.8
	baz=247						
SMLT	**Sun Moon Lake**	1.27	254	eP	Pn	16 11 20.4	+0.1
	baz=246						
SMLT				eS	Sn	16 11 36.5	+0.3
	baz=246						
TWQ1	**Liyutan**	1.33	275	eP	Pn	16 11 21.6	+0.5
	baz=273						
TWQ1				eS	Sn	16 11 37.7	-0.1
	baz=273						
NSY	**Sanyi**	1.35	278	eP	Pn	16 11 22.5	+1.2
	baz=276						
WHYT	**Xinyi Township**	1.37	247	eP	Pn	16 11 22.1	+0.4
	baz=245						
WHYT				eS	Sn	16 11 38.8	+0.1
	baz=245						
IRIF	**Iriomote-Funau**	1.37	86	P	Pn	16 11 21.6	0.0
IRIF				S	Sn	16 11 38.4	-0.3
CHKT	**Chengkung**	1.39	215	eP	Pn	16 11 20.6	-1.3
	baz=205						
YUS	**Yu-Shan**	1.39	238	eP	Pn	16 11 22.4	+0.1
	baz=228						
YUS				eS	Sn	16 11 38.5	-1.2
	baz=228						
HATJ	**Hateruma jima**	1.45	97	P	Pn	16 11 23.3	+0.6
HATJ				eS	Sn	16 11 40.6	0.0
WNT	**Mingjian**	1.46	256	eS	Sn	16 11 42.6	+1.8
	baz=254						
ELDTW	**Lidau**	1.53	227	eP	Pn	16 11 22.8	-1.1
	baz=225						
CHN5	**Tsauling**	1.56	246	eP	Pn	16 11 25.2	+0.9
	baz=236						
CHN5				eS	Sn	16 11 43.9	+0.6
	baz=236						
JKRS	**Kuro-shima**	1.62	90	P	Pn	16 11 25.4	+0.3
JKRS				S	Sn	16 11 45.3	+0.5
TPUB	**Ta-pu**	1.74	238	eP	Pn	16 11 27.8	+1.1
	baz=228						
TPUB				eS	Sn	16 11 49.4	+1.7
	baz=228						
CHN4	**Tsaushan**	1.74	240	eP	Pn	16 11 28.0	+1.3
	baz=230						
CHN4				eS	Sn	16 11 49.8	+2.1
	baz=230						
JIJ	**Ishigaki jima**	1.75	86	P	Pn	16 11 26.6	-0.2
JIJ				S	Sn	16 11 47.1	-0.8
WTP	**Ta-pu**	1.78	237	eP	Pn	16 11 27.9	+0.6
	baz=226						
WTP				eS	Sn	16 11 50.5	+1.7
	baz=226						
CHN1	**Nanshi**	1.88	236	eP	Pn	16 11 29.9	+1.3
	baz=235						
CHN1				eS	Sn	16 11 52.2	+1.0
	baz=235						
JISG	**Ishigakijimahi**	1.93	79	P	Pn	16 11 28.7	-0.5
JISG				eS	Sn	16 11 51.6	-0.7
MASBT	**Mashibuluo**	2.19	222	eP	Pn	16 11 33.2	+0.4
	baz=222						
EAST	**Anshuo**	2.24	215	eP	Pn	16 11 32.9	-0.7
	baz=207						
JTJ	**Tarama**	2.29	79	eS	Sn	16 12 00.7	-0.5
JIRB	**Irabujima**	2.74	77	eS	Sn	16 12 13.0	+0.6

MEX 01 16:19:13.3±0.4**, 13°.99N**×**93°.16W, h84^{km}**±44^{km}**, MD3.9,**
Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	2.49	23	i P	Pn	16 19 51.7	-0.3
CCIG				eS	Sn	16 20 19.9	-1.7
TGIG		2.78	1	i P	Pn	16 19 55.1	-0.6
TGIG				i S	Sn	16 20 26.2	-2.2
CMIG	**Matias Romero**	3.51	332	i P	Pn	16 20 05.2	-0.4
CMIG				i S	Sn	16 20 45.0	-1.1

ROM 01 16:36:24.8±0.1**, 43°.503N**±0°.002×**12°.255E**±0°.003**,**
h6^{km}, ML1.2/8**, Error ellipse: s-maj=0.2km s-min=0.0km**
az=51.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BADI	**Badiali**	0.01	312	P	Pg	16 36 26.2	+0.2
BADI				S	Sg	16 36 27.0	+0.1

CDCA	**Citt‘ di Caste**	**0.05**	**199**	P	Pg	16 36 26.8	+0.5
CDCA				S	Sg	16 36 27.6	+0.3
ATPI	**Pietralunga -**	**0.12**	**116**	P	Pg	16 36 27.9	+0.4
ATPI				S	Sg	16 36 30.0	+0.8
ATPI				AML	AML		
	comp=E,196µm,0.1s						
ATPI				AML	AML		
	comp=N,111µm,0.2s						
ATPI				AML	AML		
	comp=E,196µm,0.1s						
ATPI				AML	AML		
	comp=N,111µm,0.2s						
ATPI				AML	AML		
	comp=E,196µm,0.1s						
ATPI				AML	AML		
	comp=N,111µm,0.2s						
ATPI				AML	AML		
	comp=E,196µm,0.1s						
ATPI				AML	AML		
	comp=N,111µm,0.2s						
PARC	**Parchiule**	**0.15**	**355**	P	Pg	16 36 28.4	+0.5
PARC				S	Sg	16 36 30.9	+1.0
PARC				AML	AML		
	comp=E,234µm,0.8s						
PARC				AML	AML		
	comp=N,280µm,0.2s						
PARC				AML	AML		
	comp=E,234µm,0.8s						
PARC				AML	AML		
	comp=N,280µm,0.2s						
PARC				AML	AML		
	comp=E,234µm,0.8s						
PARC				AML	AML		
	comp=N,280µm,0.2s						
PARC				AML	AML		
	comp=E,234µm,0.8s						
PARC				AML	AML		
	comp=N,280µm,0.2s						
ATVO	**AVT- Monte Val**	**0.16**	**137**	P	Pg	16 36 28.8	+0.6
ATVO				S	Sg	16 36 31.7	+1.3
ATVO				AML	AML		
	comp=E,190µm,0.1s						
ATVO				AML	AML		
	comp=N,150µm,1.6s						
ATVO				AML	AML		
	comp=E,189µm,0.1s						
ATVO				AML	AML		
	comp=N,150µm,1.6s						
ATVO				AML	AML		
	comp=E,189µm,0.1s						
ATVO				AML	AML		
	comp=N,150µm,1.6s						
ATVO				AML	AML		
	comp=E,189µm,0.1s						
ATVO				AML	AML		
	comp=N,150µm,1.6s						
ATMI	**Monte Miggiano**	**0.17**	**177**	P	Pg	16 36 28.9	+0.6
ATMI				S	Sg	16 36 31.7	+1.2
ATMI				AML	AML		
	comp=E,134µm,0.6s						
ATMI				AML	AML		
	comp=N,121µm,0.3s						
ATMI				AML	AML		
	comp=E,134µm,0.6s						
ATMI				AML	AML		
	comp=N,121µm,0.3s						
ATMI				AML	AML		
	comp=E,134µm,0.6s						
ATMI				AML	AML		
	comp=N,121µm,0.3s						
ATMI				AML	AML		
	comp=E,134µm,0.6s						
ATMI				AML	AML		
	comp=N,121µm,0.3s						
PIEI	**Pieia**	**0.21**	**81**	P	Pg	16 36 29.3	+0.4
PIEI				S	Sg	16 36 32.9	+1.2
PIEI				AML	AML		
	comp=E,116µm,1.1s						
PIEI				AML	AML		
	comp=N,79µm,0.4s						
PIEI				AML	AML		
	comp=E,116µm,1.1s						
PIEI				AML	AML		
	comp=N,79µm,0.4s						
PIEI				AML	AML		
	comp=E,116µm,1.1s						
PIEI				AML	AML		
	comp=N,79µm,0.4s						
CRE	**Caprese Michel**	**0.25**	**298**	P	Pg	16 36 30.3	+0.5
CRE				S	Sg	16 36 34.8	+1.6
PE3	**Peglio**	**0.26**	**42**	AML	AML		
	comp=N,104µm,0.8s						
PE3				AML	AML		
	comp=E,118µm,0.3s						
PE3				AML	AML		
	comp=E,118µm,0.3s						
PE3				AML	AML		
	comp=N,104µm,0.8s						
PE3				AML	AML		
	comp=E,118µm,0.3s						
PE3				AML	AML		
	comp=N,104µm,0.8s						
CAFI	**Castiglion Fio**	**0.27**	**231**	P	Pg	16 36 31.0	+0.8
CAFI				S	Sb	16 36 35.5	-1.5
CAFI				AML	AML		
	comp=E,37µm,0.8s						
CAFI				AML	AML		
	comp=N,34µm,0.7s						
CAFI				AML	AML		
	comp=N,34µm,0.7s						
CAFI				AML	AML		
	comp=E,37µm,0.8s						
CAFI				AML	AML		
	comp=N,34µm,0.7s						
CAFI				AML	AML		
	comp=E,37µm,0.8s						
CPGN	**Carpegna, Ital**	**0.30**	**9**	P	Pb	16 36 31.9	-0.8
MURB	**Monte Urbino**	**0.31**	**141**	P	Pg	16 36 31.4	+0.5
MURB				S	Sb	16 36 36.9	-1.2
MURB				AML	AML		
	comp=E,83µm,0.3s						
MURB				AML	AML		
	comp=N,83µm,0.3s						
MURB				AML	AML		
	comp=E,83µm,0.3s						
MURB				AML	AML		
	comp=N,83µm,0.3s						
MURB				AML	AML		
	comp=N,83µm,0.3s						
MURB				AML	AML		
	comp=E,83µm,0.3s						
MURB				AML	AML		
	comp=N,83µm,0.3s						
MURB				AML	AML		
	comp=E,83µm,0.3s						

GEN 01 16:36:25.8, 44°.18N×10°.18E, h5^{km}±1^{km}, Ml0.7, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.03**	**234**	P	Pg	16 36 27.0	+0.3
EQUI				S	Sg	16 36 27.7	+0.3
CARD	**Cardoso**	**0.27**	**125**	P	Pg	16 36 31.2	+0.3
CARD				S	Sg	16 36 35.0	+0.6
MAIM	**Mastiano**	**0.35**	**140**	P	Pg	16 36 32.6	+0.2
MAIM				S	Sg	16 36 37.3	+0.3

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*ISK **01** 16:39:02.5, 40°.08N×34°.89E, h5^{km}, ML2.1/6*
*DDA **01** 16:39:02.4, 40°.12N×34°.92E, h7^{km}±3^{km}, ML2.9*

ISC 01 16:39:03.0±1.1, 40°.10N±0°.05×34°.92E±0°.04, h9^{km}±15^{km}, n10, $\sigma 0^{s}.72$/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COAL	**Corum-Alaca**	**0.16**	**19**	*i* P	**Pg**	**16 39 06.3**	**-0.3**
COAL				IAML_P			
	comp=Z,7µm,0.1s						
CORM	**Corum**	**0.23**	**289**	PG	**Pg**	**16 39 07.2**	**-0.6**
CORM				SG	**Sg**	**16 39 11.6**	**+0.5**
YOZ	**Yozgat**	**0.56**	**146**	PG	**Pb**	**16 39 14.4**	**-0.5**
CDAG	**Cicekdag**	**0.64**	**222**	*i* P	**Pb**	**16 39 15.8**	**-0.6**
CDAG				*i* S	**Sb**	**16 39 25.4**	**+0.1**
CDAG				IAML_P			
	comp=Z,1µm,0.1s						
DELI	**KIRIKKALE**	**0.77**	**263**	*i* P	**Pg**	**16 39 17.2**	**-0.7**
DELI				IAML_P			
	comp=Z,1µm,0.1s						
SIRC	**Yozgat**	**0.79**	**167**	*i* P	**Pb**	**16 39 18.6**	**-0.2**
SIRC				IAML_P			
	comp=Z,2µm,0.2s						
YAYX	**Yaylak**	**1.44**	**217**	PN	**Pg**	**16 39 30.5**	**-0.2**
YAYX				SN	**Sg**	**16 39 50.9**	**+1.5**
SERE	**Sereflikochisa**	**1.56**	**223**	PN	**Pg**	**16 39 32.9**	**0.0**
SERE				SN	**Sg**	**16 39 53.9**	**+0.8**
DIKM	**Dikmen**	**1.57**	**9**	PN	**Pg**	**16 39 33.5**	**+0.5**
SVSK	**Karacayir**	**1.61**	**96**	PN	**Pg**	**16 39 33.3**	**-0.5**

IDC 01 16:45:57.2±6.3, 17°.75S×178°.08W, h466^{km}±72^{km}, mb3.3/7, mb1 3.5/7, mb1mx3.1/42, mbtmp4.1/7, Error ellipse: s-maj=42.5km s-min=20.8km az=173.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.86**	**191**	P	P	16 50 05.0	-0.3
	3.7nm,0.5s,baz=31,slow=5.9,SNR=4.8						
STKA	**Stephens Creek**	**38.98**	**241**	P	P	16 52 43.2	+1.1
	1.6nm,0.4s,baz=85,slow=7.1,SNR=13						
WRA	**Warramunga Arr**	**44.97**	**259**	P	P	16 53 28.5	-1.4
	1.8nm,0.6s,baz=83,slow=9.3,SNR=15						
ASAR	**Alice Springs**	**45.14**	**254**	P	P	16 53 31.0	-0.1
	15nm,0.5s,baz=89,slow=8.2,SNR=546						
ASAR				PcP	pP	16 54 60.0	+1.1
	0.3nm,0.5s,baz=94,slow=4.1,SNR=3.9						
FITZ	**Fitzroy Crossi**	**53.36**	**260**	P	P	16 54 32.2	0.0
	4.4nm,1.1s,baz=80,slow=11,SNR=4.8						
NVAR	**Mina Array Bea**	**79.09**	**44**	P	P	16 57 11.7	-0.9
	0.3nm,0.3s,baz=229,slow=9.3,SNR=8.5						
TXAR	**Lajitas Array**	**85.64**	**58**	P	P	16 57 47.1	+1.0
	0.1nm,0.4s,baz=252,slow=5.2,SNR=3.2						
BRTR	**Keskin Array B**	**144.89**	**315**	PKP	PKPdf	17 04 40.6	-0.2
	0.7nm,0.5s,baz=117,slow=2.7,SNR=3.7						
MMAI	**Mount Meron Ar**	**146.32**	**303**	PKPbc	PKPbc	17 04 45.2	-0.2
	1.2nm,0.5s,baz=69,slow=7.9,SNR=2.6						
GERES	**GERESS Array B**	**147.54**	**345**	PKPbc	PKPbc	17 04 48.1	-0.1
	0.6nm,0.5s,baz=36,slow=3.2,SNR=5.8						

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*ISCJB **01** 16:48:39.5±0.8, 20°.9S±0°.2×178°.6W±0°.2, h579^{km}, mb3.4/7, Error ellipse: s-maj=29.8km s-min=16.7km az=142.7*
*IDC **01** 16:48:39.0±6.5, 20°.92S×178°.46W, h559^{km}±80^{km}, mb3.0/7, mb1 3.3/8, mb1mx3.0/33, mbtmp3.9/8, Error ellipse: s-maj=45.0km s-min=22.4km az=173.0*

ISC 01 16:48:40.5±0.9, 21°.0S±0°.2×178°.5W±0°.2, h579^{km}, n10, $\sigma 1^{s}.03$/10, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.64**	**191**	P	**P**	**16 52 13.0**	**-0.6**
	0.4nm,0.3s,baz=315,slow=1.4,SNR=4.1						
ASAR	**Alice Springs**	**43.96**	**257**	P	**P**	**16 55 57.7**	**+0.2**
	1.3nm,0.5s,baz=90,slow=8.5,SNR=11						
ASAR				PcP	**PcP**	**16 57 31.6**	**+1.2**
	0.3nm,0.6s,baz=106,slow=3.0,SNR=4.6						
WRA	**Warramunga Arr**	**44.07**	**263**	P	**P**	**16 55 58.1**	**-0.4**
	1.6nm,0.3s,baz=96,slow=7.5,SNR=41						
FITZ	**Fitzroy Crossi**	**52.50**	**263**	P	**P**	**16 57 01.5**	**+0.6**
	2.5nm,0.9s,baz=95,slow=19,SNR=2.9						
NVAR	**Mina Array Bea**	**81.69**	**44**	P	**P**	**17 00 00.2**	**+0.7**
	0.2nm,0.5s,baz=228,slow=9.5,SNR=2.9						
TXAR	**Lajitas Array**	**87.70**	**58**	P	**P**	**17 00 29.9**	**+1.2**
	0.1nm,0.7s,baz=233,slow=4.4,SNR=2.8						
ILAR	**Eielson Array**	**88.87**	**13**	P	**P**	**17 00 32.1**	**-1.1**
	0.4nm,0.6s,baz=216,slow=5.7,SNR=4.1						
PDAR	**Pinedale Array**	**89.62**	**43**	P	**P**	**17 00 36.1**	**-1.4**
	0.3nm,0.6s,baz=177,slow=1.8,SNR=3.2						
ARCES	**ARCESS Array B**	**129.29**	**349**	PKP	**PKPdf**	**17 06 43.2**	**+0.1**
	2.6nm,1.1s,baz=345,slow=5.6,SNR=3.1						
AKASG	**Malin Array Be**	**143.19**	**330**	PKP	PKPab	17 07 07.1	-0.1
	1.2nm,0.4s,baz=44,slow=4.4,SNR=8.8						

DDA 01 16:50:17.5, 38°.67N×43°.41E, h6^{km}±4^{km}, ML3.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.14**	**181**	*i* P	Pg	16 50 21.8	+1.3
TVAN				*i* S	Sg	16 50 26.3	+3.7
TVAN				IAML_P			
	comp=Z,29µm,0.1s						
VMUR	**Van-Muradiye**	**0.34**	**22**	*i* P	Pg	16 50 24.4	0.0
VMUR				*i* S	Sb	16 50 31.4	-0.5
VMUR				IAML_P			
	comp=Z,3µm,0.1s						
GEVA	**Gevas**	**0.45**	**218**	*i* P	Pg	16 50 26.6	+0.4
GEVA				*i* S	Sb	16 50 34.1	-0.8
ADCV	**BITLIS_Adilcev**	**0.55**	**285**	*i* P	Pg	16 50 28.0	-0.2
ADCV				*i* S	Sb	16 50 37.1	-0.8
ADCV				IAML_P			
	comp=Z,1µm,0.1s						
BASK	**Baskale_VAN**	**0.77**	**143**	*i* P	Pb	16 50 32.9	-0.5
BASK				IAML_P			
	comp=Z,2µm,0.1s						
BLIS	**Bitlis-Merkez**	**1.05**	**256**	*i* P	Pg	16 50 36.4	-1.2
BLIS				*i* S	Sg	16 50 50.9	-0.3
BLIS				IAML_P			
	comp=Z,4µm,0.1s						
HAKT	**HAKKARI**	**1.13**	**168**	*i* P	Pg	16 50 39.1	-0.2
SRTM	**Siirt_Merkez**	**1.35**	**240**	*i* P	Pg	16 50 44.5	+1.0
SRTM				*i* S	Sn	16 51 03.1	+1.9
SRTM				IAML_P			
	comp=Z,4µm,0.2s						

ISK 01 16:50:55.3, 39°.25N×42°.95E, h16^{km}, ML2.5/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLAZ	**Malazgirt-MUS**	**0.33**	**251**	PG	Pg	16 51 02.5	+0.2
MLAZ				SG	Sb	16 51 07.9	0.0
AGRB	**Hanur-Agry**	**0.33**	**6**	PG	Pb	16 51 02.8	-0.1
AGRB				SG	Sb	16 51 07.8	-0.2
KOPR	**Koprukoy-ERZUR**	**1.12**	**312**	PN	Pb	16 51 16.4	0.0
KOPR				SN	Sg	16 51 32.6	+0.8
HOMI	**Horasan**	**1.13**	**315**	*i* P	Pb	16 51 15.4	-1.2
SENK	**Senkaya-Erzuru**	**1.39**	**341**	PN	Pb	16 51 20.9	-0.1
BNGL	**BINGOL**	**1.43**	**259**	*i* P	Pg	16 51 23.2	+0.3
KARO	**Karliova-Bingo**	**1.47**	**273**	PN	Pn	16 51 21.7	+0.4

MEX 01 17:12:26.2±0.8, 27°.83N×111°.89W, h10^{km}, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.60**	**212**	*i* P	Pg	17 12 36.2	-1.6
SRIG				*i* S	Sg	17 12 45.4	-0.3
GUYB	**Guaymas**	**0.90**	**86**	*e*P	Pg	17 12 40.6	-2.9
GUYB				*i* S	Sg	17 12 53.0	-2.3
HSIG		**1.44**	**35**	*e*P	Pn	17 12 48.5	-3.9
HSIG				*e*S	Sn	17 13 07.3	-4.2

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*KRNET **01** 17:12:43.6±0.1, 40°.37N×76°.80E, mb3.3*
*SOME **01** 17:12:44.4, 40°.33N×76°.82E, h20^{km}*
*NNC **01** 17:12:46.6±1.7, 40°.46N×76°.81E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=12.4km s-min=9.1km az=164.0*

ISC 01 17:12:45.2±1.7, 40°.43N±0°.08×76°.79E±0°.03, h10^{km}, n64, $\sigma 1^{s}.97$/97, 31C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.72**	**10**	⇓*i*P	**Pb**	**17 13 16.6**	**-0.5**
	baz=10.0						
KDJ				⇓*i*S	**Sg**	**17 13 41.3**	**+0.7**
	baz=10.0						
ULHL	**Ulahol**	**1.86**	**347**	⇑*i*P	**Pb**	**17 13 19.2**	**-0.2**
	baz=48						
ULHL				⇑*i*S	**Sg**	**17 13 45.0**	**0.0**
	baz=48						
ULHL	**Ulahol**	**1.86**	**347**	P	**Pb**	**17 13 19.4**	**0.0**
	SNR=31						
KZA	**Kyzart**	**2.01**	**325**	⇓*i*P	**Pb**	**17 13 21.8**	**-0.3**
	baz=26						
KZA				⇓*i*S	**Sg**	**17 13 49.6**	**-0.3**
	baz=26						
KZA	**Kyzart**	**2.01**	**325**	P	**Pg**	**17 13 22.4**	**-1.4**
	SNR=32						
BOOM	**Boomskoye usch**	**2.15**	**343**	⇑*i*P	**Pb**	**17 13 23.7**	**-0.7**
	baz=43						
BOOM				⇑*i*S	**Sb**	**17 13 52.9**	**+1.7**
	baz=43						
ARLS	**Aral**	**2.35**	**308**	⇑*i*P	**Pb**	**17 13 25.8**	**-1.9**
	baz=10.0						
ARLS				⇑*i*S	**Sb**	**17 13 57.1**	**+0.3**
	baz=10.0						
PRZ	**Przheval'sk**	**2.38**	**30**	⇑*i*P	**Pb**	**17 13 26.4**	**-1.9**
	baz=30						
PRZ				⇑*i*S	**Sb**	**17 13 57.9**	**+0.1**
	baz=30						
UCH	**Uchtor**	**2.48**	**317**	⇑*i*P	**Pb**	**17 13 27.9**	**-2.2**
	baz=18						
UCH				⇑*i*S	**Sb**	**17 14 00.7**	**-0.2**
	baz=18						
UCH	**Uchtor**	**2.48**	**317**	P	**Pg**	**17 13 31.9**	**-0.9**
	SNR=5.9						
TNSS	**Tian-Shan**	**2.61**	**3**	Pg	**Pg**	**17 13 33.5**	**-1.7**
	68nm,0.5s						
TNSS				Lg	Lg	17 14 09.2	
	24nm,0.3s						
TNSS	**Tian-Shan**	**2.61**	**3**	*e*P	**Pg**	**17 13 33.5**	**-1.7**
	68nm,0.5s						
TNSS				*e*S	**Sg**	**17 14 09.2**	**+0.2**
	24nm,0.3s						
KBK	**Karagaybulak**	**2.62**	**329**	⇑*e*P	**Pb**	**17 13 30.0**	**-2.3**
	baz=29						
KBK				⇑*i*S	**Sb**	**17 14 03.8**	**-0.8**
	baz=29						
KBK	**Karagaybulak**	**2.62**	**329**	P	**Pg**	**17 13 33.8**	**-1.6**
	SNR=8.9						
TKM2	**Tokmak 2**	**2.64**	**341**	⇑Pn	**Pb**	**17 13 31.5**	**-1.2**
	3.2nm,0.4s						
TKM2				⇑Lg	Lg	17 14 09.8	
	10nm,0.5s						
TKM2	**Tokmak 2**	**2.64**	**341**	⇑*i*P	**Pb**	**17 13 30.5**	**-2.3**
	baz=41						
TKM2				⇑*i*S	**Sb**	**17 14 04.5**	**-0.8**
	baz=41						
TKM2	**Tokmak 2**	**2.64**	**341**	P	**Pb**	**17 13 32.0**	**-0.8**
	SNR=10						
KST	**Kastek**	**2.68**	**347**	Pg	**Pg**	**17 13 34.5**	**-2.2**
	13nm,0.3s						
KST				Lg	Lg	17 14 11.8	
	18nm,0.5s						
KST	**Kastek**	**2.68**	**347**	*e*P	**Pg**	**17 13 34.4**	**-2.2**
	12nm,0.7s						
KST				*e*S	**Sg**	**17 14 10.5**	**-0.9**
	20nm,0.8s						
MTBS	**Maitube**	**2.71**	**354**	Pg	**Pg**	**17 13 35.4**	**-1.8**
	11nm,0.3s						
MTBS				Lg	Lg	17 14 12.4	
	25nm,0.3s						
MTBS	**Maitube**	**2.71**	**354**	*e*P	**Pg**	**17 13 35.4**	**-1.8**
	11nm,0.3s						
MTBS				⇑*i*S	**Sg**	**17 14 12.4**	**+0.1**
	25nm,0.3s						
MDOK	**Medeo**	**2.74**	**4**	Pg	**Pb**	**17 13 34.9**	**+0.6**
	15nm,0.5s						
MDOK				Lg	Lg	17 14 12.2	
	24nm,0.5s						
MDOK	**Medeo**	**2.74**	**4**	*e*P	**Pb**	**17 13 34.9**	**+0.6**
	15nm,0.5s						
MDOK				*e*S	**Sg**	**17 14 11.2**	**-1.9**
	24nm,0.5s						
KNDC	**Almaty**	**2.79**	**3**	⇑Pn	**Pb**	**17 13 35.9**	**+0.8**
	29nm,0.6s						
KNDC				⇑Lg	Lg	17 14 14.6	
	81nm,0.7s						
AAK	**Ala-Archa**	**2.80**	**323**	⇑Pg	**Pg**	**17 13 38.2**	**-0.6**
	17nm,0.5s						
AAK				⇑Lg	Lg	17 14 13.8	
	31nm,0.9s						
AAK	**Ala-Archa**	**2.80**	**323**	⇑*i*P	**Pb**	**17 13 32.5**	**-2.9**
	baz=23						
AAK				⇑*i*S	**Sb**	**17 14 08.0**	**-1.7**
	baz=23						
AAK	**Ala-Archa**	**2.80**	**323**	P	**Pg**	**17 13 38.8**	**0.0**
	SNR=12						
KOTS	**Kotyrbulak**	**2.81**	**5**	Pg	**Pg**	**17 13 37.3**	**-1.8**
	16nm,0.4s						
KOTS				Lg	Lg	17 14 15.9	
	40nm,0.5s						
KOTS	**Kotyrbulak**	**2.81**	**5**	*e*P	**Pg**	**17 13 36.8**	**-2.2**
	11nm,0.3s						
KOTS				*e*S	**Sg**	**17 14 14.8**	**-0.7**
	91nm,0.5s						
SATY	**Saty**	**2.89**	**24**	Pg	**Pg**	**17 13 38.6**	**-2.1**
	36nm,0.5s						
SATY				Lg	Lg	17 14 17.9	
	46nm,0.3s						
SATY	**Saty**	**2.89**	**24**	*e*P	**Pg**	**17 13 38.5**	**-2.1**
	36nm,0.5s						
SATY				⇑*i*S	**Sg**	**17 14 17.9**	**-0.2**
	46nm,0.3s						
DGS	**Degeres**	**2.91**	**345**	Pg	**Pb**	**17 13 38.5**	**+1.2**
	18nm,0.5s						
DGS				Lg	Lg	17 14 17.9	
	18nm,0.4s						
DGS	**Degeres**	**2.91**	**345**	*e*P	**Pb**	**17 13 38.5**	**+1.2**
	18nm,0.5s						
DGS				*e*S	**Sg**	**17 14 17.9**	**-0.7**
	18nm,0.4s						
CHMS	**Chumysh**	**2.98**	**330**	⇓*i*P	**Pb**	**17 13 35.1**	**-3.4**
	baz=30						
CHMS				⇓*i*S	**Sb**	**17 14 12.2**	**-2.8**
	baz=30						
EKS2	**Erkin-Say**	**3.17**	**316**	⇓*i*P	**Pn**	**17 13 37.6**	**+2.3**
	baz=16						
EKS2				⇓*i*S	**Sb**	**17 14 16.7**	**-3.8**
	baz=16						
UZB	**Uzynbulak**	**3.19**	**31**	Pg	**Pb**	**17 13 43.3**	**+1.3**
	3.4nm,0.4s						
UZB				Lg	Lg	17 14 26.1	
	12nm,0.4s						
UZB	**Uzynbulak**	**3.19**	**31**	*e*P	**Pb**	**17 13 43.3**	**+1.3**
	3.4nm,0.4s						
UZB				*e*S	**Sg**	**17 14 26.1**	**-1.5**
	12nm,0.4s						
KURS	**Kuram**	**3.22**	**18**	Pg	**Pb**	**17 13 44.0**	**+1.4**
	8.3nm,0.5s						
KURS				Lg	Lg	17 14 27.4	
	16nm,0.6s						
KURS	**Kuram**	**3.22**	**18**	*e*P	**Pb**	**17 13 44.0**	**+1.4**
	8.3nm,0.5s						
KURS				*e*S	**Sg**	**17 14 27.4**	**-1.3**
	16nm,0.6s						
KTBS	**Karatobe**	**3.28**	**359**	Pg	**Pb**	**17 13 45.2**	**+1.7**
	7.5nm,0.5s						
KTBS				Lg	Lg	17 14 29.4	
	26nm,0.5s						
KTBS	**Karatobe**	**3.28**	**359**	*e*P	**Pb**	**17 13 45.2**	**+1.7**
	7.5nm,0.5s						
KTBS				*e*S	**Sg**	**17 14 29.6**	**-1.0**
	26nm,0.5s						
USP	**Ospenovka**	**3.31**	**330**	⇑*i*P	**Pn**	**17 13 39.4**	**+2.3**
	baz=30						
USP				⇑*i*S	**Sn**	**17 14 20.2**	**+3.7**
	baz=30						
USP	**Ospenovka**	**3.31**	**330**	P	**Pg**	**17 13 50.3**	**+1.7**
	SNR=6.0						
KPKS	**Kokpek**	**3.35**	**24**	*e*P	**Pg**	**17 13 46.6**	**-2.7**
	28nm,0.4s						
KPKS				*e*S	**Sg**	**17 14 31.6**	**-1.1**
	68nm,0.6s						
CHKK	**Chushkaly**	**3.42**	**2**	Pg	**Pb**	**17 13 47.7**	**+1.7**
	9.6nm,0.3s						
CHKK				Lg	Lg	17 14 34.2	
	16nm,0.2s						
CHKK	**Chushkaly**	**3.42**	**2**	*e*P	**Pb**	**17 13 47.7**	**+1.7**
	9.6nm,0.3s						
CHKK				*e*S	**Sg**	**17 14 33.3**	**-1.9**
	16nm,0.2s						
KUU	**Kurty**	**3.48**	**355**	Pg	**Pb**	**17 13 48.3**	**+1.5**
	5.1nm,0.4s						
KUU				Lg	Lg	17 14 34.8	
	21nm,0.5s						
KUU	**Kurty**	**3.48**	**355**	*e*P	**Pb**	**17 13 48.3**	**+1.5**
	5.1nm,0.4s						
KUU				*e*S	**Sg**	**17 14 34.9**	**-1.9**
	21nm,0.5s						
PDGK	**Podgornoye**	**3.53**	**34**	Pg	**Pb**	**17 13 49.5**	**+1.7**
	3.5nm,0.5s						
PDGK				Lg	Lg	17 14 36.6	
	9.3nm,0.5s						
PDGK	**Podgornoye**	**3.53**	**34**	⇓Pg	**Pb**	**17 13 49.6**	**+1.7**
	4.6nm,0.5s						
PDGK				⇑Lg	Lg	17 14 37.9	
	14nm,0.6s						

PDGK	**Podgornoye** baz=33	**3.53**	**34**	⇑*i*P	**Pn**	**17 13 42.7**	**+2.5**
PDGK	baz=33			⇑*i*S	**Sn**	**17 14 25.5**	**+3.4**
MRKS	**Merke** 15nm,0.5s	**3.53**	**312**	Pg	**Pb**	**17 13 49.3**	**+1.5**
MRKS	9.4nm,0.3s			Lg	Lg	17 14 36.7	
MRKS	**Merke** 15nm,0.5s	**3.53**	**312**	*e*P	**Pb**	**17 13 49.3**	**+1.5**
MRKS	9.4nm,0.3s			*e*S	**Sg**	**17 14 35.9**	**-2.8**
MNBS	**Baschi** 4.2nm,0.5s	**3.84**	**18**	Pg	**Pg**	**17 13 55.8**	**-2.9**
MNBS	11nm,0.3s			Lg	Lg	17 14 47.4	
MNBS	**Baschi** 4.2nm,0.5s	**3.84**	**18**	*e*P	**Pg**	**17 13 55.8**	**-2.9**
MNBS	11nm,0.3s			*e*S	**Sg**	**17 14 47.4**	**-1.0**
ARXS	**Arharly** 7.5nm,0.5s	**3.86**	**11**	Pg	**Pb**	**17 13 55.4**	**+2.0**
ARXS	9.1nm,0.4s			Lg	Lg	17 14 47.0	
ARXS	**Arharly** 7.5nm,0.5s	**3.86**	**11**	*e*P	**Pb**	**17 13 55.4**	**+2.0**
ARXS	9.1nm,0.4s			*e*S	**Sg**	**17 14 47.0**	**-2.0**
KTMS	**Ketmen** 2.1nm,0.2s	**4.02**	**40**	Pg	**Pg**	**17 13 58.6**	**-3.6**
KTMS	12nm,0.6s			Lg	Lg	17 14 52.1	
KTMS	**Ketmen** 2.1nm,0.2s	**4.02**	**40**	*e*P	**Pg**	**17 13 58.6**	**-3.6**
KTMS	12nm,0.6s			*e*S	**Sg**	**17 14 52.1**	**-2.1**
DJR	**Jarkent** 3.4nm,0.5s	**4.49**	**29**	Pg	**Pb**	**17 14 06.3**	**+2.2**
DJR	3.5nm,0.4s			Lg	Lg	17 15 05.7	
DJR	**Jarkent** 3.4nm,0.5s	**4.49**	**29**	*e*P	**Pb**	**17 14 06.3**	**+2.2**
DJR	3.5nm,0.4s			*e*S	**Sg**	**17 15 05.7**	**-3.5**
KAPS	**Kapalarasan** 2.7nm,0.5s	**5.21**	**20**	Pg	**Pg**	**17 14 20.6**	**-4.3**
KAPS	3.8nm,0.5s			Lg	Lg	17 15 30.0	
KAPS	**Kapalarasan** 2.7nm,0.5s	**5.21**	**20**	*e*P	**Pg**	**17 14 20.6**	**-4.3**
KAPS	3.8nm,0.5s			*e*S	**Sg**	**17 15 30.0**	**-2.3**
KK31	**Karatay Array** 1.9nm,0.6s,baz=131,slow=17,SNR=17	**5.40**	**302**	⇑Pg	**Pg**	**17 14 26.9**	**-1.7**
KK31	0.9nm,0.4s,baz=122,slow=28,SNR=5.9			⇑Lg	Lg	17 15 35.7	

ISN ***01*** *17:18:15.1±24.0, 35°.52N×45°.97E, h0^{km}±224^{km}, ML3.3*
ISCJB ***01*** *17:18:19.0±0.5, 35°.44N±0°.03×45°.80E±0°.05, h10^{km}, Error ellipse: s-maj=5.7km s-min=4.6km az=144.7*
TEH ***01*** *17:18:18.5, 35°.49N×45°.89E, h10^{km}, ML3.3*
AZER ***01*** *17:18:28.0±2.7, 35°.67N×46°.87E, h10^{km}, ml3.2/7, Error ellipse: s-maj=21.3km s-min=15.1km az=163.0*
ISC 01 17:18:18.5±0.9**, 35°.49N**±0°.03×**45°.88E**±0°.04**, h10**^{km}**, n26, σ1^{s}.85**/36**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.89**	**152**	*e*Pg	**Pb**	**17 18 36.0**	**-0.1**
IDHR	comp=Z,0.0nm,0.2s			IAMB	IAmb	17 18 53.0	
ILIN	**Lien**	**1.05**	**122**	*e*Pg	**Pg**	**17 18 38.0**	**-0.8**
ILIN				*e*Sg	**Sn**	**17 18 53.8**	**-0.6**
ILIN	comp=Z,9μm,0.5s			IAMB	IAmb	17 19 01.0	
IVIS	**Veis**	**1.25**	**140**	*e*Pg	**Pg**	**17 18 42.7**	**+0.3**
IVIS	comp=Z,4μm,0.3s			IAMB	IAmb	17 19 10.4	
MAHB	**Mahabad**	**1.28**	**354**	*e*Pg	**Pn**	**17 18 42.0**	**-0.6**
IGHG	**Ghaleghazi**	**1.29**	**154**	*e*Pg	**Pg**	**17 18 45.4**	**+2.2**
IGHG	comp=N,8μm,0.3s			IAMB	IAmb	17 19 11.9	
KCHF	**Cheshme Sefid,**	**1.54**	**141**	*e*Pn	**Pg**	**17 18 48.5**	**+0.4**
IKOM	**Komasi**	**1.88**	**134**	*e*Pn	**Pg**	**17 18 53.9**	**-0.6**
IBZA	**Bozab**	**1.92**	**121**	*e*Pn	**Pb**	**17 18 53.2**	**-0.5**
IAZR	**Azarshahr**	**2.19**	**2**	*e*Pn	**Pb**	**17 18 57.6**	**-0.7**
IAZR	comp=Z,4μm,0.3s			IAMB	IAmb	17 19 35.9	
MSL	**Mosul** baz=110	**2.42**	**293**	*e*Pn	**Pn**	**17 18 58.0**	**-0.1**
MSL				*e*Sn	**Sn**	**17 19 28.0**	**+0.1**
BHD	**Baghdad** baz=30	**2.54**	**210**	*e*Pn	**Pn**	**17 18 59.5**	**-0.2**
BHD				*e*Sn	**Sn**	**17 19 30.0**	**-0.6**
HSAM	**Samen**	**2.58**	**119**	*e*Pn	**Pb**	**17 19 04.4**	**-0.5**
ISRB	**Sarab** comp=Z,946nm,0.2s	**2.74**	**31**	IAMB	IAmb	17 19 09.6	
ISRB				*e*Pn	**Pn**	**17 19 04.6**	**+1.9**
HAGD	**Aghdareh**	**2.75**	**103**	*e*Pn	**Pb**	**17 19 06.2**	**-1.7**
ISHB	**Shabestar** comp=N,3μm,0.4s	**2.80**	**356**	IAMB	IAmb	17 19 54.0	
IHRS	**Heris** comp=Z,429nm,0.4s	**2.97**	**18**	IAMB	IAmb	17 19 56.5	
IHRS				*e*Pn	**Pn**	**17 19 08.2**	**+2.3**
QABG	**Abgarm-Qazvin**	**3.03**	**85**	*e*Pn	**Pn**	**17 19 09.2**	**+2.5**
IRAZ	**Razeghan**	**3.31**	**90**	*e*Pn	**Pn**	**17 19 11.9**	**+1.4**
IRAZ	comp=Z,508nm,0.7s			IAMB	IAmb	17 20 14.0	
ORD	**Ordubad**	**3.44**	**2**	P	**Pb**	**17 19 19.4**	**-0.1**
ORD				S	**Sb**	**17 20 00.6**	**-0.7**
IGZV	**Ghazvin** comp=Z,405nm,0.5s	**3.63**	**74**	IAMB	IAmb	17 20 19.8	
NAX	**Nakhchivan**	**3.69**	**355**	P	**Pb**	**17 19 24.7**	**+0.9**
NAX				S	**Sb**	**17 20 10.3**	**+1.6**
LRK	**Lerik**	**3.71**	**31**	P	**Pn**	**17 19 18.2**	**+2.2**
LRK				S	**Sn**	**17 19 56.8**	**-3.1**
ASTR	**Astara**	**3.85**	**36**	P	**Pn**	**17 19 20.5**	**+2.7**
ASTR				P	**Pn**	**17 19 20.5**	**+2.7**
ASTR				P	**Pn**	**17 19 20.5**	**+2.7**
ASTR				S	**Sn**	**17 20 00.6**	**-2.5**
SBZ	**Shahbuz**	**3.91**	**356**	P	**Pb**	**17 19 28.3**	**+0.7**
SBZ				S	**Sb**	**17 20 12.8**	**-2.1**
LKRN	**Lenkeran, Azer**	**3.96**	**35**	P	**Pn**	**17 19 21.3**	**+2.0**
LKRN				S	**Sn**	**17 20 03.5**	**-2.3**
GLBA	**Clilabad**	**4.25**	**27**	P	**Pn**	**17 19 27.3**	**+4.1**
GLBA				S	**Sn**	**17 20 10.3**	**-2.6**

IDC ***01*** *17:20:05.3±2.5, 6°.00S×128°.18E, h0^{km}, mb3.3/1, mb1 4.0/3, mb1mx3.5/20, mbtmp3.8/3, ML3.9/2, Error ellipse: s-maj=264.6km s-min=30.0km az=66.0*
ISCJB ***01*** *17:20:21.8±0.7, 5°.80S±0°.05×129°.9E±0°.1, h200^{km}, mb2.8/1, Error ellipse: s-maj=15.3km s-min=6.7km az=174.8*
DJA ***01*** *17:20:23.9±0.7, 6°S±6°×13°0E±°, h190^{km}±17^{km}, M4.1/4, mb3.7/1, MLv4.3/4*
ISC 01 17:20:22.3±0.9**, 5°.85S**±0°.07×**130°.0E**±0°.1**, h200**^{km}**, n6, σ2^{s}.33**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**2.70**	**337**	P	**Pn**	**17 21 08.5**	**0.0**
MSAI				S	**Sn**	**17 21 42.8**	**-1.8**
FAKI	**Fak Fak**	**3.68**	**38**	P	**Pn**	**17 21 20.5**	**+0.3**
FAKI				S	**Sn**	**17 22 04.9**	**-0.7**
SWI	**Sorong**	**5.11**	**14**	P	**Pn**	**17 21 37.6**	**-0.6**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=336,slow=19,SNR=16	**14.64**	**164**	Pn	**Pn**	**17 23 41.5**	**+1.3**
WRA	0.3nm,0.3s,baz=18,slow=28,SNR=5.3			Sn	**S**	**17 26 21.2**	**-1.7**
ASAR	**Alice Springs** 0.7nm,0.3s,baz=342,slow=11,SNR=124	**18.11**	**168**	P	**P**	**17 24 21.3**	**+1.8**
ASAR	0.1nm,0.3s,baz=349,slow=19,SNR=4.4			S	**S**	**17 27 31.6**	**-5.0**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=126,slow=6.5,SNR=3.7	**67.26**	**327**	P	**P**	**17 30 56.4**	**+1.0**

ISK ***01*** *17:20:49.9, 36°.80N×27°.68E, h13^{km}±2^{km}, ML1.8/3*
DDA ***01*** *17:20:50.8, 36°.83N×27°.56E, h7^{km}±3^{km}, ML2.5*
ISC 01 17:20:45.5±3.5**, 36°.6N**±0°.2×**27°.85E**±0°.06**, h27**^{km}±19^{km}**, n7, σ1^{s}.49**/12**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DATC	**Datca-Mugla**	**0.22**	**316**	PG	**Pb**	**17 20 52.5**	**+0.9**
DATC				SG	**Sb**	**17 20 54.5**	**-1.2**
DAT	**Datca**	**0.25**	**300**	PG	**Pb**	**17 20 53.4**	**+1.3**
DAT				SG	**Sb**	**17 20 55.4**	**-1.3**
DAT	**Datca**	**0.25**	**300**	*i* P	**Pb**	**17 20 53.6**	**+1.4**
DAT				*i* S	**Sb**	**17 20 55.6**	**-1.0**
DAT	comp=Z,9μm,0.1s			IAML_P			
BDRM	**Kayabasi**	**0.56**	**325**	*i* P	**Pb**	**17 20 57.8**	**+0.9**
BDRM	comp=Z,3μm,0.1s			IAML_P			
BODT	**Bodrum**	**0.63**	**317**	PG	**Pb**	**17 20 58.2**	**+0.2**
BODT				SG	**Sb**	**17 21 04.5**	**-2.0**
TURN	**Turunc**	**0.67**	**66**	PG	**Pb**	**17 20 58.8**	**+0.2**
TURN				SG	**Sb**	**17 21 06.5**	**-0.9**
AYDN	**Tasoluk**	**1.06**	**1**	*i* P	**Pb**	**17 21 07.1**	**+1.9**
AYDN	comp=Z,638nm,0.2s			IAML_P			

ISCJB ***01*** *17:26:11.8±0.7, 47°.59N±0°.05×92°.64W±0°.08, h0^{km}, Error ellipse: s-maj=7.4km s-min=7.4km az=20.0*
NEIC ***01*** *17:26:13.6±0.8, 47°.57N×92°.53W, h0^{km}, MN2.5, Error ellipse: s-maj=11.6km s-min=9.5km az=42.0, Suspected Mining explosion.*
NEIC 4 km [2 miles] N of Virginia.
IDC ***01*** *17:26:15.0±3.8, 47°.50N×92°.60W, h0^{km}, mb1 2.6/1, mb1mx2.6/55, mbtmp2.6/1, ML1.1/1, Error ellipse: s-maj=74.1km s-min=28.3km az=53.0*
ISC 01 17:26:11.9±1.0**, 47°.63N**±0°.05×**92°.46W**±0°.05**, h0**^{km}**, n16, σ1^{s}.45**/17**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.72**	**63**	Pg	**Pn**	**17 26 29.1**	**-0.3**
EYMN				Sg	**Sn**	**17 26 40.6**	**-0.6**
E38A	**The Farm, Brul**	**1.19**	**149**	Pg	**Pg**	**17 26 35.0**	**+0.2**
C40A	**Isle Royale Na**	**2.25**	**81**	Pn	**Pb**	**17 26 52.4**	**-0.9**
AGMN	**Agassiz Nation**	**2.38**	**288**	Pn	**Pb**	**17 26 54.9**	**-0.8**
SPMN	**Marine on St.**	**2.42**	**186**	Pn	**Pn**	**17 26 53.1**	**+0.4**
D41A	**Chassel**	**2.71**	**101**	Pn	**Pn**	**17 26 57.4**	**+0.7**
COWI	**Conover**	**2.74**	**123**	Pn	**Pb**	**17 27 00.5**	**-1.3**
G40A	**Rib Lake**	**2.83**	**146**	Pn	**Pb**	**17 27 01.7**	**-1.5**
ULM	**Lac du Bonnet** 0.3nm,0.3s,baz=135,slow=7.7,SNR=2.4	**3.46**	**321**	Pn	**Pn**	**17 27 08.7**	**+1.7**
ULM	1.0nm,0.3s,baz=142,slow=14,SNR=7.1			Pg	**Pg**	**17 27 18.4**	**+0.2**
ULM	3.1nm,0.3s,baz=62,slow=19,SNR=8.8			Lg	Lg	17 28 02.4	
ULM	**Lac du Bonnet**	**3.46**	**321**	Pn	**Pn**	**17 27 07.1**	**+0.2**
ULM				Pg	**Pg**	**17 27 18.4**	**+0.2**
ULM				Lg	Lg	17 28 02.4	
I10CA	**LAC DU BONNET** baz=138,slow=314,SNR=7.5	**3.49**	**319**	*i*		17 46 30.0	
E43A	**Lone Tree Farm**	**3.94**	**107**	Pn	**Pn**	**17 27 15.8**	**+2.2**
I42A	**Draeger Farm,**	**4.49**	**145**	Pn	**Pn**	**17 27 23.1**	**+2.0**
H43A	**Windswept, Lux**	**4.54**	**132**	Pn	**Pn**	**17 27 25.0**	**+3.2**
JFWS	**Jewell Farm**	**4.96**	**161**	Pn	**Pn**	**17 27 26.9**	**-0.7**
I56US	**NEWPORT INFRAS** baz=86,slow=308,SNR=1.8	**16.53**	**281**	*i*		19 07 50.0	

ROM 01 17:27:58.0±0.1**, 43°.504N**±0°.004×**12°.255E**±0°.005**, h7**^{km}**, ML0.6**/4**, Error ellipse: s-maj=0.4km s-min=0.1km az=210.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BADI	**Badiali**	**0.01**	**306**	P	Pg	17 27 59.5	+0.2
BADI				S	Sg	17 28 00.2	+0.1
ATPI	**Pietralunga -**	**0.12**	**116**	P	Pg	17 28 01.1	+0.5
ATPI				S	Sg	17 28 03.2	+0.9
ATPI	comp=E,45μm,0.1s			AML	AML		
ATPI	comp=N,29μm,0.2s			AML	AML		
ATPI	comp=E,45μm,0.1s			AML	AML		
ATPI	comp=N,29μm,0.2s			AML	AML		
ATPI	comp=E,45μm,0.1s			AML	AML		
ATPI	comp=N,29μm,0.2s			AML	AML		
PARC	**Parchiule**	**0.14**	**355**	P	Pg	17 28 01.5	+0.5
PARC				S	Sg	17 28 04.2	+1.1
PARC	comp=E,55μm,0.8s			AML	AML		
PARC	comp=N,64μm,0.2s			AML	AML		
PARC	comp=E,55μm,0.8s			AML	AML		
PARC	comp=N,64μm,0.2s			AML	AML		
PARC	comp=E,55μm,0.8s			AML	AML		
PARC	comp=N,64μm,0.2s			AML	AML		
ATVO	**AVT- Monte Val**	**0.17**	**138**	P	Pg	17 28 02.0	+0.7
ATVO				S	Sg	17 28 04.9	+1.3
ATVO	comp=E,42μm,0.1s			AML	AML		
ATVO	comp=N,41μm,1.6s			AML	AML		
ATVO	comp=N,41μm,1.6s			AML	AML		
ATVO	comp=E,42μm,0.1s			AML	AML		
ATVO	comp=N,41μm,1.6s			AML	AML		
ATVO	comp=E,42μm,0.1s			AML	AML		
PIEI	**Pieia**	**0.21**	**81**	P	Pg	17 28 02.2	+0.1
PIEI				S	Sg	17 28 06.2	+1.2
PIEI	comp=E,28μm,0.8s			AML	AML		
PIEI	comp=N,19μm,0.4s			AML	AML		
PIEI	comp=N,19μm,0.4s			AML	AML		
PIEI	comp=E,28μm,0.8s			AML	AML		
PIEI	comp=N,19μm,0.4s			AML	AML		
PIEI	comp=E,28μm,0.8s			AML	AML		
CAFI	**Castiglion Fio**	**0.27**	**230**	P	Pg	17 28 04.1	+0.7
CAFI				S	Sb	17 28 08.7	-1.4

GEN 01 17:28:34.4, 44°.19N×**10°.19E, h4**^{km}**, Ml0.8, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.03**	**224**	P	Pg	17 28 35.7	+0.3
EQUI				S	Sg	17 28 36.4	+0.4
GRAM	**Graiana**	**0.31**	**344**	P	Pg	17 28 41.2	+0.7
GRAM				S	Sg	17 28 45.6	+1.0

NEIC ***01*** *17:28:56.9±1.7, 39°.45N×29°.64W, h9^{km}±4^{km}, mb4.8/112, Error ellipse: s-maj=18.2km s-min=13.8km az=189.0*
ISCJB ***01*** *17:28:56.7±0.1, 39°.31N±0°.03×29°.65W±0°.02, h17^{km}, mb4.6/179, MS3.9/38, Error ellipse: s-maj=4.1km s-min=1.8km az=16.3*
IDC ***01*** *17:28:56.0±0.6, 39°.61N×29°.79W, h0^{km}, mb4.2/34, mb1 4.4/35, mb1mx4.2/70, mbtmp4.2/35, ML4.4/1, MS3.9/32, Ms1 3.9/32, ms1mx3.8/42, Error ellipse: s-maj=18.6km s-min=10.6km az=177.0*
SVSA ***01*** *17:28:57.7±0.7, 39°.45N×29°.82W, h10^{km}, MD3.9, ML4.1, Error ellipse: s-maj=4.3km s-min=1.4km az=25.0*
GCMT ***01*** *17:28:57.9±0.3, 39°.46N±0°.03×29°.83W±0°.02, h12^{km}, MW4.8/72, Moment Tensor Solution. s17,c19; s72,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.29±.08; $M_{\theta\theta}$-0.16±.08; $M_{\phi\phi}$1.45±.06; $M_{r\theta}$-0.59±.30; $M_{\theta\phi}$1.26±.06; $M_{\phi r}$-0.92±.22; Best double couple: $M_0$2.03700×10^{16} NP1:ϕ_s34.00000°, δ61.00000°, λ-84.00000°. NP2: ϕ_s201.00000°, δ29.00000°, λ-101.00000°. Principal axes: T 2.4590, Plg16.0000°, Azm119.0000°; N -0.8410, Plg5.0000°, Azm211.0000°; P -1.6150, Plg73.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***01*** *17:28:57.0±1.0, 39°.62N×29°.84W, h12^{km}, mb4.8/74 Error ellipse: s-maj=9.7km s-min=4.9km az=140.5*
ISC 01 17:28:57.1±1.4**, 39°.34N**±0°.06×**29°.58W**±0°.04**, h9**^{km}±9^{km}**, n451, σ1^{s}.57**/454**, mb4.7**/188**, MS3.9**/38**, 17C-3D, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.99**	**136**	⇑*e*P	**Pg**	**17 29 15.7**	**-0.4**
PCED				*e*S	**Sg**	**17 29 29.4**	**+0.5**
PCED	1μm,0.8s			A	A	17 29 32.8	
CALA	**Caldeira**	**1.02**	**138**	*e*P	**Pg**	**17 29 16.8**	**+0.1**
CALA				*e*S	**Sg**	**17 29 30.2**	**+0.2**
HOR	**Horta**	**1.10**	**137**	*e*P	**Pb**	**17 29 17.4**	**-0.9**
HOR				*e*S	**Sb**	**17 29 32.0**	**-0.7**
HOR	4μm,0.3s			A	A	17 29 35.0	
ROSA	**Rosais**	**1.21**	**120**	*e*P	**Pn**	**17 29 19.0**	**-1.3**
ROSA				*e*S	**Sb**	**17 29 35.0**	**-1.1**
ROSA	774nm,0.6s			A	A	17 29 37.1	
ROSA	**Rosais**	**1.21**	**120**	*e*Pn	**Pn**	**17 29 18.6**	**-1.7**
PCAN	**Candelaria**	**1.22**	**135**	⇑*e*P	**Pn**	**17 29 19.2**	**-1.3**
PCAN				*e*S	**Sb**	**17 29 35.4**	**-0.9**
PCAN	2μm,0.3s			A	A	17 29 42.5	
H07N1	**FLORES T-PHASE**	**1.24**	**287**	Pn	Pb	17 29 13.3	-7.4
H07N1	**FLORES T-PHASE**	**1.24**	**287**	⇑*e*P	Pb	17 29 13.5	-7.3
H07N1				*e*S	Sg	17 29 25.6	-11
H07S1	**FLORES T-PHASE**	**1.26**	**272**	Pn	Pb	17 29 14.4	-6.7
H07S1	**FLORES T-PHASE**	**1.26**	**272**	⇑*e*P	Pb	17 29 14.2	-6.9
H07S1				*e*S	Sb	17 29 26.2	-11
PGRA	**Graciosa**	**1.28**	**103**	*e*P	**Pn**	**17 29 19.8**	**-1.4**
PGRA	630nm,0.4s			A	A	17 29 36.2	
PGRA				*e*S	**Sb**	**17 29 36.5**	**-1.5**
PMAN	**Manadas**	**1.36**	**121**	*e*P	**Pn**	**17 29 21.0**	**-1.3**
PMAN				*e*S	**Sn**	**17 29 38.7**	**-1.8**
PMAN	636nm,0.3s			A	A	17 29 46.3	
ADH	**Angra Heroismo**	**1.95**	**110**	*e*P	**Pn**	**17 29 29.5**	**-0.9**
ADH				*e*S	**Sn**	**17 29 52.9**	**-2.2**
ADH	120nm,0.3s			A	A	17 29 58.0	
PSCM	**Serra do Cume**	**2.02**	**108**	⇑*e*P	**Pn**	**17 29 30.1**	**-1.3**
PSCM				*e*S	**Sn**	**17 29 54.5**	**-2.4**
PSCM	175nm,0.3s			A	A	17 30 03.0	
PSET	**Sete Cidades**	**3.38**	**115**	*e*P	**Pn**	**17 29 49.3**	**-0.9**
PSET				*e*S	**Sn**	**17 30 27.7**	**-2.8**
PSET	120nm,0.5s			A	A	17 30 39.0	
PDA	**Ponta Delgada**	**3.46**	**116**	*e*P	**Pn**	**17 29 50.5**	**-0.7**
PDA				*e*S	**Sn**	**17 30 30.2**	**-2.1**
PDA	52nm,0.3s			A	A	17 30 33.9	
CMLA	**Cha da Macela**	**3.55**	**115**	*e*P	**Pn**	**17 29 51.5**	**-0.9**
CMLA				*e*S	**Sn**	**17 30 32.2**	**-2.3**
CMLA	147nm,0.3s			A	A	17 30 38.8	
CMLA	**Cha da Macela**	**3.55**	**115**	*e*Pn	**Pn**	**17 29 52.2**	**-0.2**
CMLA	**Cha da Macela**	**3.55**	**115**	*e*P	**Pn**	**17 29 52.3**	**-0.2**
PCALD	**Caldeiras da R**	**3.56**	**114**	*e*P	**Pn**	**17 29 51.4**	**-1.2**
BART	**Pico Bartolome**	**3.79**	**113**	*e*P	**Pn**	**17 29 55.0**	**-0.9**
PSMA	**Santa Maria**	**4.22**	**122**	*e*P	**Pn**	**17 30 00.9**	**-0.7**
PSMA				*e*S	**Sn**	**17 30 48.1**	**-2.9**
PSMA	27nm,0.3s			A	A	17 30 51.2	
PSMN	**Pico do Norte,**	**4.25**	**122**	⇑*e*P	**Pn**	**17 30 01.1**	**-1.0**
PSMN				*e*S	**Sn**	**17 30 49.3**	**-2.6**
PSMN	28nm,0.3s			A	A	17 30 51.4	
PMOZ	**Porto Moniz, M**	**11.94**	**119**	*e*P	Pn	17 31 56.0	+8.4
PMOZ				*e*S	**Sn**	**17 34 09.4**	**+8.4**
PMAFR	**Mafra**	**15.76**	**85**	*e*P	**P**	**17 32 43.8**	**+0.6**
PMAFR				*e*S	**Sn**	**17 35 40.4**	**+6.5**
PCAS	**Casmilo, Conde**	**16.25**	**81**	*e*P	**P**	**17 32 51.9**	**+3.3**
PCAS				*e*S	**S**	**17 35 53.0**	**-5.8**
PGAV	**Gavieira, Arco**	**16.38**	**74**	*e*P	P	17 33 02.9	+13
PGAV				*e*S	**S**	**17 36 07.1**	**+5.3**
PFVI	**Vila Bisbo**	**16.45**	**91**	*e*P	**Pn**	**17 32 46.9**	**-1.3**
PFVI				*e*S	**S**	**17 36 01.6**	**-1.5**
PNCL	**Nicolau / Gran**	**16.48**	**88**	*e*P	**P**	**17 32 54.3**	**+3.1**
PNCL				*e*S	**Sn**	**17 35 54.8**	**+3.4**
MORF	**Marmelete**	**16.55**	**90**	*e*P	**P**	**17 32 51.6**	**-0.5**
MORF				*e*S	**Sn**	**17 35 51.3**	**-2.0**
PMTG	**Montargil**	**16.56**	**84**	*e*S	**S**	**17 36 05.0**	**-0.2**
POLO	**Lamas de Olo**	**16.73**	**76**	*e*P	**Pn**	**17 32 52.4**	**+0.6**
POLO				*e*S	**S**	**17 36 07.6**	**-1.3**
MTE	**Manteigas**	**16.95**	**79**	*e*P	**P**	**17 32 59.4**	**+2.9**
MTE				*e*S	**S**	**17 36 20.2**	**+6.9**
PCVE	**Castro Verde**	**16.95**	**89**	*e*P	**P**	**17 33 01.0**	**+4.5**
PBDV	**Barranco-do-Ve**	**17.12**	**90**	*e*P	**Pn**	**17 32 52.3**	**-4.4**
PMRV	**Marv??o**	**17.15**	**83**	*e*P	**Pn**	**17 32 54.5**	**-2.6**
PMRV				*e*S	**S**	**17 36 16.3**	**-1.1**
MVO	**Moncorvo**	**17.31**	**77**	*e*P	**P**	**17 33 04.3**	**+3.8**
MVO				*e*S	**S**	**17 36 22.1**	**+1.5**
ESDC	**Sonseca Array** 0.2nm,0.3s,baz=285,slow=9.6,SNR=18	**19.75**	**81**	P	**Pn**	**17 33 30.7**	**+1.8**
ESDC	comp=Z,453nm,18.1s,baz=275,slow=34			LR	LR	17 40 17.7	
QUIF	**Quistinic**	**20.88**	**57**	*e*P	Pn	17 33 43.4	+1.5
QUIF	comp=Z,22nm,1.2s			pmax	pmax		
MDT	**Midelt** comp=Z,1.2nm,0.9s,baz=316,slow=13,SNR=2.0	**21.17**	**100**	P	**P**	**17 33 46.0**	**+3.1**
MDT	comp=Z,344nm,18.9s,baz=343,slow=33			LR	LR	17 40 50.4	
SGMF	**Saint Gilles**	**21.36**	**56**	*e*P	**P**	**17 33 47.4**	**+2.8**
SGMF	comp=Z,34nm,1.4s			pmax	pmax		
SJPF	**Ste Jean**	**21.61**	**71**	*e*P	**P**	**17 33 51.8**	**+4.4**
SJPF	comp=Z,13nm,1.4s			pmax	pmax		
DRLN	**Deer Lake** comp=Z,174nm,1.8s	**22.19**	**306**	*e*P	**P**	**17 33 53.7**	**+0.2**
GRR	**Gorron**	**22.49**	**57**	*e*P	**P**	**17 33 59.1**	**+2.4**
GRR	comp=Z,45nm,1.6s			pmax	pmax		
MFF	**Saint Martin d**	**22.64**	**62**	*e*P	**P**	**17 33 59.7**	**+1.4**
MFF	comp=Z,17nm,1.2s			pmax	pmax		
EPF	**Esparros**	**22.76**	**71**	*e*P	**P**	**17 34 01.2**	**+1.5**
EPF	comp=Z,28nm,1.4s			pmax	pmax		
FLN	**La Foliniere**	**22.82**	**56**	*e*P	**P**	**17 34 02.4**	**+2.2**
FLN	comp=Z,21nm,1.2s			pmax	pmax		
LDF	**La Druitiere**	**23.01**	**57**	*e*P	**P**	**17 34 02.8**	**+0.6**
LDF	comp=Z,14nm,1.1s			pmax	pmax		
LFF	**La Frestale**	**23.09**	**66**	*e*P	**P**	**17 34 03.5**	**+0.4**
LFF	comp=Z,8.0nm,1.0s			pmax	pmax		
ESK	**Eskdalemuir**	**23.77**	**39**	*i* P	**P**	**17 34 11.8**	**+2.1**
EKA	**Eskdalemuir Ar** comp=Z,5.8nm,1.0s,baz=240,slow=7.6,SNR=8.1	**23.80**	**39**	P	**P**	**17 34 07.7**	**-2.4**
MTLF	**Montolieu**	**24.13**	**70**	*e*P	**P**	**17 34 14.3**	**+1.0**
MTLF	comp=Z,11nm,1.6s			pmax	pmax		
TCF	**Toulx Ste Croi**	**24.22**	**63**	*e*P	**P**	**17 34 15.3**	**+1.2**
TCF	comp=Z,43nm,1.9s			pmax	pmax		
GBN	**Guysborough** comp=Z,82nm,1.3s	**24.25**	**295**	*e*P	**P**	**17 34 16.2**	**+1.9**
BGF	**Bois d'Agland**	**24.68**	**62**	*e*P	**P**	**17 34 19.2**	**+0.9**
BGF	comp=Z,11nm,0.9s			pmax	pmax		
AVF	**Avril sur Loir**	**25.05**	**62**	*e*P	**P**	**17 34 22.4**	**+0.8**
AVF	comp=Z,14nm,1.3s			pmax	pmax		
SSF	**Saint Saulge**	**25.18**	**61**	*e*P	**P**	**17 34 25.1**	**+2.3**
SSF	comp=Z,16nm,1.4s			pmax	pmax		
SMF	**Signal de Mont**	**25.37**	**62**	*e*P	**P**	**17 34 25.7**	**+1.1**
SMF	comp=Z,23nm,1.4s			pmax	pmax		
LOR	**Lormes**	**25.44**	**61**	*e*P	**P**	**17 34 27.1**	**+1.9**

```
LOR                                        pmax     pmax
       comp=Z,8.0nm,2.8s
BORG   Borgarnes       25.90   8   LR      LR       17 41 46.4
       comp=Z,322nm,20.4s,baz=199,slow=30
GIVF   Givet           26.48  55   eP      P        17 34 35.1 +0.5
GIVF                               pmax    pmax
       comp=Z,10.0nm,0.8s
LMN    Caledonia Moun  26.58 296   eP      P        17 34 38.5 +3.0
       comp=Z,20nm,1.1s
CABF   La Chapelle     26.92  63   eP      P        17 34 40.0 +1.4
CABF                               pmax    pmax
       comp=Z,32nm,1.5s
HAU    Haudompre       27.19  60   eP      P        17 34 40.7 -0.3
HAU                                pmax    pmax
       comp=Z,16nm,1.4s
LPL    La Plagne       27.34  65   eP      P        17 34 44.6 +2.0
LPL                                pmax    pmax
       comp=Z,9.0nm,1.3s
FRF    La Foret Royal  27.34  69   eP      P        17 34 42.3  0.0
FRF                                pmax    pmax
       comp=Z,7.0nm,1.1s
HINF   Hinteralfeld    27.51  60   eP      P        17 34 44.8 +0.9
HINF                               pmax    pmax
       comp=Z,12nm,1.4s
ECH    Echery          27.75  59   eP      P        17 34 45.7 -0.3
       comp=Z,14nm,1.3s
ECH    Echery          27.75  59   eP      P        17 34 45.7 -0.3
ECH                                pmax    pmax
       comp=Z,14nm,1.3s
CDF    Champ du Feu    27.84  59   eP      P        17 34 46.8 -0.1
CDF                                pmax    pmax
       comp=Z,10.0nm,1.0s
BFO    Black Forest    28.54  59   eP      P        17 34 52.9 -0.2
       comp=Z,12nm,1.3s
BFO    Black Forest    28.54  59   iP      P        17 34 54.7 +1.7
TUE    Stuetta         29.16  63   eP      P        17 34 58.6 -0.2
       comp=Z,5.0nm,1.0s
SCHQ   Schefferville   29.30 314   LR      LR       17 45 31.0
       comp=Z,298nm,19.1s,baz=96,slow=34
DAVOX  Davos/Dischmat  29.53  62   LR      LR       17 44 50.8
       comp=Z,88nm,21.5s,baz=262,slow=32
FETA   Feichten        30.11  62   epP     P        17 35 07.7 +0.5
       comp=Z,4.0nm,1.1s
SFJD   Kangerlussuaq   30.11 344   LR      LR       17 44 26.1
       comp=Z,344nm,20.1s,baz=171,slow=31
MOTA   Moosalm         30.37  61   ipP     P        17 35 11.1 +1.6
       comp=Z,3.5nm,0.8s
SQTA   Sankt Quirin    30.44  62   epP     P        17 35 11.9 +1.9
       comp=Z,6.4nm,1.1s
WTTA   Wattenberg      30.73  61   ipP     P        17 35 14.7 +2.0
       comp=Z,8.7nm,1.2s
MOX    Moxa            30.87  55   P       P        17 35 16.4 +2.8
MOX                                pmax    pmax
       comp=Z,7.0nm,1.9s
KEST   Kesra           30.92  84   LR      LR       17 46 58.5
       comp=Z,230nm,19.0s,baz=214,slow=35
NKC    Novy Kostel     31.36  56   eP      P        17 35 19.7 +1.7
NKC    Novy Kostel     31.36  56   eP      P        17 35 19.7 +1.7
WET    Wettzell        31.59  58   P       P        17 35 22.4 +2.4
WET                                pmax    pmax
       comp=Z,4.0nm,1.4s
LBNH   Lisbon          31.69 293   P       P        17 35 20.9  0.0
       baz=84
CLL    Collm           31.80  54   eP      P        17 35 23.0 +1.2
CLL    Collm           31.80  54   eP      P        17 35 23.0 +1.2
KONO   Kongsberg       31.88  37⇑iP     P        17 35 22.4  0.0
KONO                               pmax    pmax
       comp=Z,14nm,1.1s
KBA    Koelnbreinsper  31.90  62   epP     P        17 35 24.7 +1.7
       comp=Z,15nm,1.0s
KBA    Koelnbreinsper  31.90  62   P       P        17 35 24.6 +1.7
KBA                                pmax    pmax
       comp=Z,12nm,1.2s
KHC    Kasperske Hory  32.05  58   eP      P        17 35 24.1 +0.1
       comp=Z,2.6nm,1.2s
KHC    Kasperske Hory  32.05  58   eP      P        17 35 25.4 +1.3
KHC                                e                17 35 29.8
KHC                                MLR     MLR
       comp=Z,100nm,14.5s
KHC    Kasperske Hory  32.05  58   eP      P        17 35 25.4 +1.3
KHC                                ex      x        17 35 29.8
KHC                                AMS     AMS      17 47 50.0
       comp=Z,100nm,14.5s
MYKA   Terra Mystica   32.12  63   epP     P        17 35 26.2 +1.4
       comp=Z,2.9nm,0.6s
GERES  GERESS Array B  32.12  58   P       P        17 35 24.8  0.0
       comp=Z,0.5nm,0.8s,baz=268,slow=6.4,SNR=6.7
BRG    Berggiesshubel  32.36  55   eP      P        17 35 27.8 +1.1
       comp=Z,11nm,1.5s
MOA    Molln           32.50  60   epP     P        17 35 29.5 +1.5
       comp=Z,12nm,1.1s
PRU    Pruhonice       32.70  56   eP      P        17 35 31.6 +1.9
PRU                                e                17 35 36.7
PRU                                MLR     MLR
       comp=Z,200nm,14.8s
PRU    Pruhonice       32.70  56   eP      P        17 35 31.6 +1.9
PRU                                ex      x        17 35 36.7
PRU                                AMS     AMS      17 48 20.0
       comp=Z,200nm,14.8s
OBKA   Obir            32.75  63   ipP     P        17 35 31.5 +1.1
       comp=Z,10.0nm,1.0s
GOPC   GO Pecny, Ondr  32.85  56   AMS     AMS      17 48 20.0
       comp=Z,200nm,10.4s
SOKA   Soboth          33.08  62   eP      P        17 35 32.6 -0.5
       comp=Z,4.5nm,1.0s
CHGQ   Chibougamau     33.13 304   P       P        17 35 35.0 +1.5
       baz=91
TRY    Troy            33.15 290   eP      P        17 35 33.5 -0.2
       comp=Z,35nm,1.2s
NB2    NORSAR Subarra  33.15  36   P       P        17 35 34.6 +1.0
       comp=Z,2.0nm,0.8s,baz=249,slow=9.3
NB200  NORSAR Array S  33.15  36   eP      P        17 35 34.2 +0.7
NOA    NORSAR Array B  33.15  36   P       P        17 35 34.2 +0.7
       comp=Z,6.4nm,1.0s,baz=249,slow=9.3,SNR=9.6
NC602  NORSAR Array S  33.18  36   eP      P        17 35 34.9 +1.0
       comp=Z,33nm,1.0s
NB201  NORSAR Array S  33.19  36   eP      P        17 35 35.2 +1.3
       comp=Z,120nm,1.7s
NC303  NORSAR Array S  33.29  35   eP      P        17 35 34.9 +0.2
       comp=Z,98nm,1.4s
TRQ    Mont Tremblant  33.35 297   eP      P        17 35 34.6 -1.0
ARSA   Arzberg         33.38  61   epP     P        17 35 36.4 +0.7
       comp=Z,7.9nm,1.2s
FRB    Frobisher Bay   33.52 330   P       P        17 35 35.3 -1.4
       comp=Z,11nm,1.1s,baz=69,slow=8.6,SNR=2.2
FRB                                LR      LR       17 45 46.5
       comp=Z,249nm,19.7s,baz=120,slow=30
CONA   Conrad Observa  33.58  60   epP     P        17 35 38.5 +1.0
       comp=Z,4.5nm,1.4s
SUMG   Summit          33.61 355   eP      P        17 35 36.6 -1.2
       comp=Z,14nm,1.1s
SUMG   Summit          33.61 355   eP      P        17 35 36.6 -1.2
SUMG                               pmax    pmax
       comp=Z,14nm,1.1s
UPC    Upice           33.66  55   eP      P        17 35 39.5 +1.4
UPC                                MLR     MLR
       comp=Z,300nm,11.7s
UPC    Upice           33.66  55   eP      P        17 35 39.5 +1.4
UPC                                AMS     AMS      17 48 20.0
       comp=Z,300nm,11.7s
OSTC   Ostas           33.79  55   eP      P        17 35 41.2 +2.0
OSTC                               AMS     AMS      17 48 20.0
       comp=Z,300nm,12.0s
DPC    Dobruska-Polom  33.85  56   eP      P        17 35 41.3 +1.5
DPC                                MLR     MLR
       comp=Z,200nm,12.5s
DPC    Dobruska-Polom  33.85  56   eP      P        17 35 41.3 +1.5
DPC                                AMS     AMS      17 48 30.0
       comp=Z,200nm,12.5s
KRUC   Moravsky        33.90  58   P       P        17 35 42.9 +2.7
KRUC                               pmax    pmax
       comp=Z,7.0nm,1.6s
KRUC   Moravsky        33.90  58   eP      P        17 35 41.2 +1.0
HFS    Hagfors         33.99  38   LR      LR       17 48 36.3
       comp=Z,34nm,18.8s,baz=270,slow=35
VRAC   Vranov          34.02  58   P       P        17 35 40.2 -1.0
       comp=Z,2.1nm,0.8s,baz=306,slow=19
VRAC                               LR      LR       17 47 44.7
       comp=Z,62nm,19.0s,baz=263,slow=33
VRAC   Vranov          34.02  58   P       P        17 35 45.3 +4.0
VRAC                               pmax    pmax
       comp=Z,4.0nm,1.3s
VRAC   Vranov          34.02  58   eP      P        17 35 41.6 +0.3
VAE    Valguarnera     34.27  79   LR      LR       17 48 44.7
       comp=Z,824nm,19.3s,baz=1.0,slow=35
N60A   Cedar Hill Far  34.55 287   P       P        17 35 47.9 +1.9
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       baz=77
MORC   Moravsky Berou  34.64  57   eP      P        17 35 47.7 +1.1
H56A   Elgin           34.73 294   P       P        17 35 48.6 +1.2
       baz=82
JAVC   Velka Javorina  34.74  58   eP      P        17 35 48.9 +1.3
LSQQ   Lebel-sur-Quev  34.83 302   P       P        17 35 48.3  0.0
       baz=88
O60A   Telford         34.90 287   P       P        17 35 49.5 +0.5
       baz=76
G55A   Calabogie       34.96 295   P       P        17 35 49.8 +0.4
       baz=83
N59A   State Game Lan  35.04 288   P       P        17 35 51.4 +1.2
       baz=77
E54A   Lac Daplat, Po  35.15 297   P       P        17 35 52.2 +1.1
       baz=84
PLVO   Plevna          35.24 295   eP      P        17 35 52.6 +0.8
       comp=Z,24nm,1.2s
PLVO   Plevna          35.24 295   P       P        17 35 51.9 +0.1
       baz=82
H55A   Tweed           35.38 294   P       P        17 35 53.5 +0.4
       baz=81
D53A   Lac Vacive, Po  35.44 299   eP      P        17 35 52.9 -0.7
       comp=Z,15nm,1.2s
D53A   Lac Vacive, Po  35.44 299   P       P        17 35 54.3 +0.8
       baz=84
E53A   Dumoine, Ponti  35.49 297   P       P        17 35 54.1 +0.2
       baz=84
VYHS   Vyhne           35.53  59   eP      P        17 35 55.1 +0.8
MORH   Mrgy, Hungar    35.60  63⇓eP     P        17 35 55.0 +0.1
DELO   Deloro Mine     35.70 294   P       P        17 35 55.4 -0.4
       baz=81
BUD    Budapest        35.73  61   eP      P        17 35 57.0 +1.0
I55A   Frankford       35.79 294   P       P        17 35 56.0 -0.6
       baz=81
ALGO   Algonquin Park  35.80 297   P       P        17 35 57.2 +0.5
       baz=83
O58A   Lewisberry      36.08 287   P       P        17 35 59.1  0.0
       baz=75
OJC    Ojcow           36.08  56   eP      P        17 35 57.8 -1.2
       comp=Z,15nm,0.9s
OJC    Ojcow           36.08  56   eP      P        17 35 57.8 -1.2
OJC                                pmax    pmax
       comp=Z,15nm,0.9s
E52A   Mattawa         36.18 297   P       P        17 35 59.0 -0.9
       baz=83
MMNY   Mt. Morris Dam  36.22 291   eP      P        17 36 00.5 +0.2
       comp=Z,21nm,1.0s
PSZ    Piszkesteto     36.28  60   eP      P        17 35 59.2 -1.7
       comp=Z,11nm,1.1s
PSZ    Piszkesteto     36.28  60   eP      P        17 35 59.2 -1.7
PSZ                                pmax    pmax
       comp=Z,11nm,1.1s
PSZ    Piszkesteto     36.28  60   eP      P        17 36 00.0 -0.8
N57A   Milroy          36.39 288   P       P        17 36 01.2 -0.5
       baz=76
NIE    Niedzica        36.44  57   P       P        17 36 04.9 +2.8
NIE                                pmax    pmax
       comp=Z,3.0nm,1.6s
D51A   Lot 18 Range I  36.58 299   P       P        17 36 02.6 -0.6
       baz=84
DRWO   Darlington Wes  36.59 293   P       P        17 36 03.3 -0.1
       baz=80
SSPA   Standing Stone  36.67 288   eP      P        17 36 03.8 -0.4
       comp=Z,33nm,1.4s
SSPA   Standing Stone  36.67 288   P       P        17 36 04.1  0.0
       baz=76
SADO   Sadowa          36.73 295   P       P        17 36 02.4 -2.3
       comp=Z,1.4nm,0.4s,baz=96,slow=6.2,SNR=2.3
SADO                               LR      LR       17 49 21.9
       comp=Z,551nm,22.0s,baz=156,slow=34
P56A   Dayton Farm, R  37.66 286   P       P        17 36 11.6 -1.0
       baz=74
M54A   Oil Creek Stat  37.76 290   P       P        17 36 12.5 -0.9
       baz=76
UZH    Uzhgorod        37.81  58   eP      P        17 36 12.8 -0.9
UZH                                e                17 36 20.4
UZH                                eS      S        17 42 01.2 -3.4
TOA1   Torodi Ar. Sit  37.96 125   eP      P        17 36 17.3 +2.0
TORD   Torodi Ar. Bea  37.97 125   P       P        17 36 17.3 +1.9
       comp=Z,8.2nm,0.3s,baz=309,slow=2.2,SNR=6.2
TORD                               LR      LR       17 51 18.9
       comp=Z,410nm,18.4s,baz=325,slow=35
N54A   Moraine State   38.13 289   P       P        17 36 17.1 +0.5
       baz=75
P55A   Reedsville      38.40 287   P       P        17 36 19.0 +0.2
       baz=74
R56A   Bull Pasture M  38.40 285   P       P        17 36 19.1 +0.2
       baz=72
Q55A   Buckhannon      38.73 286   P       P        17 36 21.7  0.0
       baz=73
LVV    L'vov           38.83  56   eP      P        17 36 23.1 +0.8
P54A   Burton          38.85 287   P       P        17 36 22.6 -0.1
       baz=73
E47A   Iron Bridge     39.32 298   P       P        17 36 25.6 -0.9
       baz=80
DBIC   Dimbokro        39.42 139   LR      LR       17 50 58.2
       comp=Z,316nm,21.0s,baz=300,slow=33
R54A   Victor          39.66 285   P       P        17 36 29.9 +0.5
       baz=72
T55A   Pulaski         39.85 284   P       P        17 36 30.3 -0.7
       baz=70
P52A   Corning         40.07 288   P       P        17 36 32.5 -0.3
       baz=73
FIA0   FINESS Array S  40.19  38   eP      P        17 36 32.4 -1.1
FIA0   FINESS Array S  40.19  38   eP      P        17 36 32.4 -1.1
FINES  FINESS Array B  40.19  38   P       P        17 36 32.4 -1.1
       comp=Z,11nm,0.9s,baz=242,slow=4.0,SNR=25
FIA1   FINESS Array S  40.19  38   eP      P        17 36 32.1 -1.4
       comp=Z,21nm,1.0s
VSU    Vasula          40.26  43⇑iP     P        17 36 34.3 +0.3
VSU                                pmax    pmax
       comp=Z,28nm,1.1s
Q52A   Bidwell         40.37 287   P       P        17 36 35.2 -0.1
       baz=72
U54A   Nelsons Funny   40.83 283   eP      P        17 36 39.4 +0.2
       comp=Z,34nm,1.1s
ARA0   ARCESS Array S  41.66  26   eP      P        17 36 44.1 -1.4
ARCES  ARCESS Array B  41.66  26   P       P        17 36 44.1 -1.4
       comp=Z,4.3nm,0.8s,baz=263,slow=9.4,SNR=13
AKASG  Malin Array Be  42.04  54   P       P        17 36 48.5 -0.3
       comp=Z,6.2nm,0.8s,baz=277,slow=8.1,SNR=16
AKASG                              LR      LR       17 53 56.3
       comp=Z,117nm,18.7s,baz=260,slow=36
AKASG  Malin Array Be  42.04  54   iP      P        17 36 49.5 +0.7
AKASG                              pmax    pmax
       comp=Z,8.0nm,0.9s
AKBB   Malin Array Si  42.04  54   eP      P        17 36 49.3 +0.5
       comp=Z,9.8nm,0.9s
AKBB   Malin Array Si  42.04  54   eP      P        17 36 49.3 +0.5
AKBB                               pmax    pmax
       comp=Z,10.0nm,0.9s
O48A   Farmland        42.10 290   P       P        17 36 49.0 -0.5
       baz=72
PUL    Pulkovo         42.16  41⇑iP     P        17 36 50.4 +0.8
PUL                                pmax    pmax
       comp=Z,47nm,0.6s
W53A   Cullowhee       42.34 282   P       P        17 36 50.5 -1.1
       baz=68
U51A   La Follette     42.54 284   P       P        17 36 53.0 -0.1
       baz=69
V51A   Loudon          43.00 283   eP      P        17 36 53.6 -3.2
       comp=Z,22nm,1.0s
SPITS  Spitsbergen Ar  43.20  13   P       P        17 36 56.9 -1.1
       comp=Z,15nm,1.1s,baz=280,slow=17,SNR=5.0
CPCT   Cooper Cave     43.26 283   eP      P        17 37 00.2 +1.3
       comp=Z,43nm,1.6s
T49A   Edmonton        43.42 285   P       P        17 37 00.2  0.0
       baz=69
SFIN   Lafayette       43.48 291   P       P        17 37 00.3 -0.3
       baz=72
R47A   Wooly Knot Far  43.74 287   P       P        17 37 01.9 -0.9
       baz=70
W50A   Signal Mountai  43.95 283   eP      P        17 37 04.6 +0.1
       comp=Z,19nm,1.1s
W50A   Signal Mountai  43.95 283   P       P        17 37 03.7 -0.9
       baz=67
F40A   Park Falls      44.09 299   P       P        17 37 05.1 -0.3
       baz=76
G40A   Rib Lake        44.30 298   eP      P        17 37 07.1 -0.1
       comp=Z,12nm,1.1s
X50B   Fort Payne      44.50 282   P       P        17 37 08.5 -0.4
       baz=66
M43A   Waltham Townsh  44.50 293   P       P        17 37 08.9 +0.1
       baz=72
W49A   Belvidere       44.70 283   P       P        17 37 10.2 -0.4
       baz=67
Q45A   Warren Harvey,  44.74 289   P       P        17 37 10.6 -0.2
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       baz=70
L42A   Oliver, Polo    44.83 294   P       P        17 37 11.2 -0.3
       baz=72
U47A   Clarksville     44.97 285   P       P        17 37 15.7 +3.1
       baz=68
X49A   Woodville       44.99 282   P       P        17 37 13.9 +1.1
       baz=66
R45A   Skylar, Fairfi  45.04 288   P       P        17 37 14.4 +1.3
       baz=69
T46A   Princeton       45.20 286   P       P        17 37 14.0 -0.4
       baz=68
WVT    Waverly         45.49 285   eP      P        17 37 16.9 +0.1
       comp=Z,15nm,1.2s
WVT    Waverly         45.49 285   eP      P        17 37 16.9 +0.1
WVT                                pmax    pmax
       comp=Z,15nm,1.2s
OBN    Obninsk         45.82  47ceP     P        17 37 20.2 +1.1
OBN                                e                17 39 10.1
OBN                                eS      S        17 44 03.2 +0.4
OBN                                eSS     SS       17 47 24.7 -2.1
OBN                                pmax    pmax
       comp=Z,19nm,1.1s
OBN                                MLR     MLR
       comp=Z,78nm,17.0s
N41A   Harden Midland  46.09 292   eP      P        17 37 20.1 -1.3
       comp=Z,61nm,1.3s
PLAL   Pickwick Lake   46.12 284   eP      P        17 37 20.4 -1.4
       comp=Z,9.2nm,0.9s
ULM    Lac du Bonnet   46.82 306   LR      LR       17 56 05.5
       comp=Z,305nm,18.2s,baz=80,slow=35
PBMO   Poplar Bluff    47.18 287   eP      P        17 37 26.9 -3.2
       comp=Z,34nm,1.4s
CCM    Cathedral Cave  47.30 289   eP      P        17 37 28.5 -2.5
       comp=Z,30nm,1.4s
CCM    Cathedral Cave  47.30 289   eP      P        17 37 28.5 -2.5
CCM                                pmax    pmax
       comp=Z,30nm,1.4s
CCM    Cathedral Cave  47.30 289   P       P        17 37 28.7 -2.2
       baz=68
OXF    Oxford          47.32 284   eP      P        17 37 30.4 -0.8
       comp=Z,97nm,1.1s
OXF    Oxford          47.32 284   eP      P        17 37 30.4 -0.8
OXF                                pmax    pmax
       comp=Z,97nm,1.1s
OXF    Oxford          47.32 284   P       P        17 37 31.1  0.0
       baz=66,SNR=7.5
LPSR   Galich'ya Gora  47.66  50   eP      P        17 37 34.2 +0.7
LPSR                               pmax    pmax
       comp=Z,20nm,1.1s
BR101  Keskin Array S  47.83  68   eP      P        17 37 34.0 -1.2
BRTR   Keskin Array B  47.83  68   P       P        17 37 34.0 -1.3
       comp=Z,1.7nm,1.0s,baz=329,slow=14,SNR=3.9
BRTR                               LR      LR       17 57 49.5
       comp=Z,60nm,19.3s,baz=276,slow=36
BRTR   Keskin Array B  47.83  68   iP      P        17 37 37.7 +2.4
BRTR                               pmax    pmax
       comp=Z,1.0nm,0.9s
VSR    Storozhevoye    48.12  52   eP      P        17 37 36.9 -0.2
VSR                                pmax    pmax
       comp=Z,8.0nm,0.8s
H10N2  ASCENSION HYDR48.97 160   T       T        18 28 43.2
       baz=345,slow=75,SNR=6.1
H10N3  ASCENSION HYDR48.98 160   T       T        18 28 58.6
       baz=345,slow=75,SNR=5.9
H10N1  ASCENSION HYDR48.99 160   T       T        18 28 48.9
       baz=345,slow=75,SNR=7.0
ECSD   EROS Data Cent  49.13 298   eP      P        17 37 43.6 -1.5
       comp=Z,16nm,1.0s
ECSD   EROS Data Cent  49.13 298   P       P        17 37 44.6 -0.5
       baz=71
U40A   Yellville       49.14 288   P       P        17 37 44.7 -0.5
       baz=66,SNR=7.8
W41B   Gary Mavity, V  49.17 286   P       P        17 37 45.0 -0.4
       baz=65
FFC    Flin Flon       49.43 313   iP      P        17 37 51.0 +3.8
PRGR   Permogore       49.51  37   eP      P        17 37 46.3 -1.4
PRGR                               pmax    pmax
       comp=Z,9.0nm,0.9s
X40A   Basin Creek Fa  49.90 285   eP      P        17 37 49.8 -1.2
       comp=Z,14nm,0.9s
X40A   Basin Creek Fa  49.90 285   P       P        17 37 51.7 +0.7
       baz=65,SNR=5.9
HHAR   Hobbs           49.97 288   eP      P        17 37 52.2 +0.6
       comp=Z,16nm,1.4s
W39A   Magazine        50.31 287   eP      P        17 37 53.3 -0.8
       comp=Z,32nm,1.1s
W39A   Magazine        50.31 287   P       P        17 37 53.7 -0.4
       baz=65,SNR=7.0
MIAR   Mount Ida       50.43 286   eP      P        17 37 54.2 -0.8
       comp=Z,19nm,1.1s
MIAR   Mount Ida       50.43 286   eP      P        17 37 54.2 -0.8
MIAR                               pmax    pmax
       comp=Z,19nm,1.1s
MIAR   Mount Ida       50.43 286   P       P        17 37 54.7 -0.4
       baz=64,SNR=6.3
KSU1   Kansas State U  50.80 292   P       P        17 37 57.7 -0.1
       baz=67
BGNE   Belgrade        51.01 296   P       P        17 37 59.5 +0.1
       baz=68
X37A   Clayton         51.74 287   eP      P        17 38 04.2 -0.7
       comp=Z,23nm,1.3s
KIRV   Kirov           52.02  41   P       P        17 38 06.2 -0.4
       comp=Z,15nm,0.9s,baz=316,slow=4.6,SNR=13
KBZ    Khabaz          52.83  60   P       P        17 38 13.7 +0.9
       comp=Z,4.2nm,0.8s,baz=342,slow=22,SNR=5.6
ROSC   El Rosal        53.00 241   LR      LR       18 00 16.7
       comp=Z,30nm,18.7s,baz=57,slow=36
YKA    Yellowknife Ar  53.81 325   P       P        17 38 17.1 -2.7
       comp=Z,0.2nm,0.3s,baz=358,slow=32,SNR=3.0
YKA                                LR      LR       17 58 22.7
       comp=Z,16nm,18.2s,baz=67,slow=33
YKB5   Yellowknife Ar  53.81 325   eP      P        17 38 17.1 -2.7
ZEI    Tsey            53.87  61   eP      P        17 38 22.2 +1.4
ZEI                                pmax    pmax
       comp=Z,12nm,0.8s
WMOK   Wichita Mounta  54.20 288   eP      P        17 38 22.2 -0.8
       comp=Z,9.3nm,1.0s
WMOK   Wichita Mounta  54.20 288   eP      P        17 38 22.3 -0.8
WMOK                               pmax    pmax
       comp=Z,9.0nm,1.0s
WMOK   Wichita Mounta  54.20 288   P       P        17 38 22.3 -0.8
       baz=63,SNR=9.0
WHTX   Lake Whitney,   54.48 285   eP      P        17 38 24.3 -0.8
       comp=Z,20nm,0.8s
WHTX   Lake Whitney,   54.48 285   P       P        17 38 24.7 -0.4
       baz=62
BTLR   Botlikh         55.49  60⇑iP     P        17 38 34.5 +2.1
BTLR                               pmax    pmax
       comp=Z,3.0nm,0.8s
GNI    Garni           55.52  64⇑eP     P        17 38 35.0 +2.2
GNI                                pmax    pmax
       comp=Z,19nm,1.1s
ABTX   Abilene, Hawle  55.81 286   eP      P        17 38 33.8 -1.0
       comp=Z,21nm,1.1s
ABTX   Abilene, Hawle  55.81 286   P       P        17 38 33.5 -1.3
       baz=62
PHWY   Pilot Hill      56.10 298   eP      P        17 38 34.8 -2.3
       comp=Z,9.1nm,1.3s
EGMT   Eagleton        56.16 307   eP      P        17 38 37.2 +0.1
       comp=Z,16nm,1.3s
EGMT   Eagleton        56.16 307   P       P        17 38 37.4 +0.2
       baz=67
K22A   Casper          56.26 300   P       P        17 38 37.9 -0.1
       baz=65
AMTX   Amarillo        56.26 290   eP      P        17 38 37.3 -0.8
       comp=Z,31nm,1.1s
AMTX   Amarillo        56.26 290   P       P        17 38 37.8 -0.3
       baz=62
N23A   Red Feather La  56.61 298   eP      P        17 38 41.1 +0.4
       comp=Z,25nm,1.3s
N23A   Red Feather La  56.61 298   P       P        17 38 40.2 -0.5
       baz=64,SNR=7.7
ISCO   Idaho Springs   56.86 297   eP      P        17 38 43.5 +1.0
       comp=Z,14nm,1.6s
ISCO   Idaho Springs   56.86 297   eP      P        17 38 43.5 +1.0
ISCO                               pmax    pmax
       comp=Z,14nm,1.6s
ISCO   Idaho Springs   56.86 297   P       P        17 38 42.4 -0.1
       baz=64
Q24A   Divide          56.90 296   P       P        17 38 42.6 -0.2
       baz=64
JTS    Las Juntas de   56.92 255   iP      P        17 38 51.8 +8.9
JTS                                pmax    pmax
       comp=Z,9.0nm,1.1s
JCT    Junction City   56.96 284   eP      P        17 38 44.3 +1.2
       comp=Z,16nm,1.1s
JCT    Junction City   56.96 284   eP      P        17 38 44.3 +1.2
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JCT				pmax	pmax		
	comp=Z,16nm,1.1s						
JCT	**Junction City**	**56.96**	**284**	P	**P**	**17 38 42.5**	**-0.6**
	baz=60						
RLMT	**Red Lodge**	**57.03**	**304**	P	**P**	**17 38 43.7**	**+0.1**
	baz=65						
T25A	**Trinidad**	**57.20**	**293**	P	**P**	**17 38 45.0**	**+0.1**
	baz=63,SNR=6.0						
BDFB	**Brasilia**	**57.34**	**201**	LR	LR	17 59 20.3	
	comp=Z,133nm,21.5s,baz=195,slow=32						
ARU	**Arti**	**57.39**	**41**	P	**P**	**17 38 45.2**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=296,slow=5.0,SNR=19						
ARU	**Arti**	**57.39**	**41**	*e*P	**P**	**17 38 46.3**	**+0.7**
	comp=Z,16nm,1.0s						
ARU	**Arti**	**57.39**	**41**	*d i*P	**P**	**17 38 46.0**	**+0.4**
ARU						17 39 39.2	
ARU				S	**S**	**17 46 42.9**	**+0.7**
ARU				pmax	pmax		
	comp=Z,20nm,1.1s						
MSTX	**Muleshoe**	**57.48**	**289**	*e*P	**P**	**17 38 46.2**	**-0.6**
	comp=Z,22nm,1.0s						
MSTX	**Muleshoe**	**57.48**	**289**	P	**P**	**17 38 48.0**	**+1.2**
	baz=62,SNR=7.6						
SDCO	**Great Sand Dun**	**57.70**	**295**	*e*P	**P**	**17 38 46.8**	**-1.6**
	comp=Z,6.9nm,1.4s						
SDCO	**Great Sand Dun**	**57.70**	**295**	P	**P**	**17 38 49.1**	**+0.6**
	baz=63						
BW06	**Boulder Array**	**58.23**	**301**	*e*P	**P**	**17 38 50.8**	**-1.2**
	comp=Z,11nm,1.3s						
BW06	**Boulder Array**	**58.23**	**301**	P	**P**	**17 38 51.9**	**-0.1**
	baz=64,SNR=7.6						
PD31	**Pinedale Array**	**58.23**	**301**	*e*P	**P**	**17 38 49.4**	**-2.6**
	comp=Z,10nm,1.3s						
PDAR	**Pinedale Array**	**58.23**	**301**	P	**P**	**17 38 50.7**	**-1.4**
	comp=Z,3.9nm,1.0s,baz=65,slow=7.0,SNR=18						
PDAR				LR	LR	18 03 14.2	
	comp=Z,212nm,20.0s,baz=103,slow=36						
SVE	**Sverdlovsk**	**58.28**	**40**	*e*P	**P**	**17 38 53.1**	**+1.2**
SVE				pmax	pmax		
	comp=Z,21nm,1.5s						
BOZ	**Bozeman (W)**	**58.34**	**305**	*e*P	**P**	**17 38 51.7**	**-1.0**
	comp=Z,6.0nm,1.3s						
BOZ	**Bozeman (W)**	**58.34**	**305**	*e*P	**P**	**17 38 51.7**	**-1.0**
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BOZ	**Bozeman (W)**	**58.34**	**305**	P	**P**	**17 38 52.8**	**+0.1**
	baz=64						
LOHW	**Long Hollow**	**58.54**	**303**	*e*P	**P**	**17 38 52.6**	**-1.6**
	comp=Z,6.7nm,1.3s						
MOOW	**Moose Ponds**	**58.58**	**303**	*e*P	**P**	**17 38 53.9**	**-0.6**
	comp=Z,9.3nm,1.4s						
S22A	**4UR Ranch, Cre**	**58.63**	**295**	P	**P**	**17 38 55.7**	**+0.7**
	baz=62						
IMW	**Indian Meadow**	**58.64**	**303**	*e*P	**P**	**17 38 53.0**	**-1.9**
	comp=Z,11nm,1.4s						
FXWY	**Fox Creek**	**58.81**	**303**	*e*P	**P**	**17 38 54.6**	**-1.5**
	comp=Z,9.3nm,1.4s						
REDW	**Red Top Meadow**	**58.82**	**303**	*e*P	**P**	**17 38 55.1**	**-1.0**
	comp=Z,19nm,1.3s						
TPAW	**Teton Pass**	**58.82**	**303**	*e*P	**P**	**17 38 55.9**	**-0.3**
	comp=Z,9.5nm,1.3s						
INK	**Inuvik**	**58.89**	**335**	P	**P**	**17 38 53.2**	**-2.7**
	comp=Z,2.8nm,0.9s,baz=70,slow=9.2,SNR=3.9						
INK	**Inuvik**	**58.89**	**335**	*e*P	**P**	**17 38 54.8**	**-1.1**
	comp=Z,3.0nm,0.8s						
INK	**Inuvik**	**58.89**	**335**	*e*P	**P**	**17 38 54.8**	**-1.1**
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MSO	**Missoula**	**59.25**	**307**	*e*P	**P**	**17 38 58.6**	**-0.3**
	comp=Z,8.8nm,1.3s						
MSO	**Missoula**	**59.25**	**307**	P	**P**	**17 38 59.2**	**+0.3**
	baz=64						
AKTO	**Aktyubinsk**	**59.59**	**48**	P	**P**	**17 39 00.6**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=298,slow=5.8,SNR=11						
PV22	**Blue Mesa, Par**	**59.63**	**297**	*e*P	**P**	**17 38 59.7**	**-2.1**
	comp=Z,13nm,1.4s						
ANMO	**Albuquerque**	**59.69**	**292**	*e*P	**P**	**17 39 01.5**	**-0.8**
	comp=Z,5.2nm,1.1s						
ANMO	**Albuquerque**	**59.69**	**292**	*e*P	**P**	**17 39 01.5**	**-0.8**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PV21	**Cone Mtn., Par**	**59.74**	**297**	*e*P	**P**	**17 39 01.8**	**-0.8**
	comp=Z,34nm,1.6s						
PV23	**Carpenter Ridg**	**59.82**	**297**	*e*P	**P**	**17 39 01.7**	**-1.5**
	comp=Z,8.0nm,1.0s						
MVCO	**Mesa Verde**	**60.05**	**295**	*e*P	**P**	**17 39 04.0**	**-0.7**
	comp=Z,30nm,1.5s						
MVCO	**Mesa Verde**	**60.05**	**295**	P	**P**	**17 39 05.7**	**+0.9**
	baz=61						
HWUT	**Hardware Ranch**	**60.08**	**301**	*e*P	**P**	**17 39 04.6**	**-0.2**
	comp=Z,7.4nm,1.1s						
BNM	**Barren Site**	**60.20**	**291**	*e*P	**P**	**17 39 05.0**	**-0.8**
LTX	**Lajitas**	**60.44**	**285**	*e*P	**P**	**17 39 06.0**	**-1.3**
LTX	**Lajitas**	**60.44**	**285**	*e*P	**P**	**17 39 06.0**	**-1.3**
TX31	**Lajitas Ar. Si**	**60.44**	**285**	*e*P	**P**	**17 39 05.9**	**-1.4**
	comp=Z,14nm,1.2s						
TXAR	**Lajitas Array**	**60.44**	**285**	P	**P**	**17 39 06.0**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=72,slow=5.8,SNR=8.3						
TXAR				LR	LR	18 03 19.7	
	comp=Z,148nm,21.1s,baz=0.0,slow=34						
LENM	**Lemitar**	**60.44**	**292**	*e*P	**P**	**17 39 08.0**	**+0.6**
MNTX	**Cornudas Mount**	**60.51**	**288**	*e*P	**P**	**17 39 06.2**	**-1.5**
	comp=Z,5.8nm,1.2s						
MNTX	**Cornudas Mount**	**60.51**	**288**	P	**P**	**17 39 09.5**	**+1.8**
	baz=60						
NEW	**Newport**	**60.53**	**310**	P	**P**	**17 39 06.2**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=24,slow=10.0,SNR=2.4						
NEW	**Newport**	**60.53**	**310**	*e*P	**P**	**17 39 06.3**	**-1.4**
	comp=Z,15nm,1.4s						
NEW	**Newport**	**60.53**	**310**	*e*P	**P**	**17 39 06.3**	**-1.3**
NEW				pmax	pmax		
	comp=Z,15nm,1.4s						
NEW	**Newport**	**60.53**	**310**	P	**P**	**17 39 08.4**	**+0.8**
	baz=63						
HVU	**Hansel Valley**	**60.80**	**302**	*e*P	**P**	**17 39 09.2**	**-0.5**
	comp=Z,9.9nm,1.3s						
HVU	**Hansel Valley**	**60.80**	**302**	*e*P	**P**	**17 39 09.2**	**-0.5**
HVU				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TMUT	**Trail Mountain**	**60.93**	**299**	*e*P	**P**	**17 39 09.8**	**-1.0**
	comp=Z,17nm,1.2s						
HLID	**Hailey**	**61.03**	**304**	*e*P	**P**	**17 39 10.7**	**-0.6**
	comp=Z,6.9nm,1.3s						
HLID	**Hailey**	**61.03**	**304**	P	**P**	**17 39 11.8**	**+0.6**
	baz=62,SNR=6.4						
ABKAR	**Akbulak array**	**61.24**	**48**	*e*P	**P**	**17 39 11.4**	**-0.9**
	comp=Z,9.9nm,1.7s						
PLID	**Pearl Lake**	**61.32**	**306**	*e*P	**P**	**17 39 12.1**	**-1.2**
	comp=Z,12nm,1.1s						
DUG	**Dugway, Tooele**	**61.58**	**300**	*e*P	**P**	**17 39 14.1**	**-0.9**
	comp=Z,9.9nm,1.1s						
DUG	**Dugway, Tooele**	**61.58**	**300**	*e*P	**P**	**17 39 14.1**	**-0.9**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DUG	**Dugway, Tooele**	**61.58**	**300**	P	**P**	**17 39 15.4**	**+0.4**
	baz=61,SNR=5.8						
121A	**Cookes Peak, D**	**61.85**	**290**	P	**P**	**17 39 18.2**	**+1.3**
	baz=59						
MSU	**Marysvale**	**61.97**	**298**	*e*P	**P**	**17 39 18.3**	**+0.5**
MSU	**Marysvale**	**61.97**	**298**	*e*P	**P**	**17 39 18.3**	**+0.5**
MTPU	**Mount Pierson**	**62.21**	**298**	*e*P	**P**	**17 39 20.2**	**+0.6**
	comp=Z,5.5nm,1.1s						
BMO	**Blue Mountains**	**62.25**	**307**	*e*P	**P**	**17 39 18.9**	**-0.5**
	comp=Z,4.8nm,1.4s						
BMO	**Blue Mountains**	**62.25**	**307**	*e*P	**P**	**17 39 18.9**	**-0.5**
BMO				pmax	pmax		
	comp=Z,5.0nm,1.4s						
WUAZ	**Wupatki**	**62.91**	**295**	*e*P	**P**	**17 39 23.6**	**-0.4**
	comp=Z,12nm,1.2s						
WUAZ	**Wupatki**	**62.91**	**295**	P	**P**	**17 39 25.3**	**+1.3**
	baz=59						
ELK	**Elko**	**62.93**	**302**	P	**P**	**17 39 21.9**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=51,slow=6.5,SNR=3.3						
ELK	**Elko**	**62.93**	**302**	*e*P	**P**	**17 39 23.7**	**-0.5**
	comp=Z,4.5nm,1.1s						
ELK	**Elko**	**62.93**	**302**	*e*P	**P**	**17 39 23.7**	**-0.5**
ELK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SZCU	**Shurtz Canyon**	**63.05**	**298**	*e*P	**P**	**17 39 25.3**	**+0.3**
	comp=Z,12nm,1.4s						
U15A	**North Rim**	**63.09**	**296**	*e*P	**P**	**17 39 25.9**	**+0.5**
	comp=Z,10nm,1.4s						
PSUT	**Pine Spring**	**63.10**	**299**	*e*P	**P**	**17 39 24.4**	**-0.9**
	comp=Z,7.1nm,1.0s						
KNB	**Kanab**	**63.16**	**297**	*e*P	**P**	**17 39 25.4**	**-0.3**
	comp=Z,5.0nm,1.1s						
KNB	**Kanab**	**63.16**	**297**	*e*P	**P**	**17 39 25.4**	**-0.3**
KNB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CCUT	**Cedar City**	**63.26**	**298**	*e*P	**P**	**17 39 25.7**	**-0.7**
	comp=Z,9.4nm,1.2s						
J08A	**Circle Bar Ran**	**63.71**	**306**	*e*P	**P**	**17 39 28.1**	**-1.1**
	comp=Z,33nm,1.6s						
TUC	**Tucson**	**64.13**	**292**	*e*P	**P**	**17 39 31.7**	**-0.4**
	comp=Z,6.3nm,1.1s						
TUC	**Tucson**	**64.13**	**292**	*e*P	**P**	**17 39 31.7**	**-0.4**
TUC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TUC	**Tucson**	**64.13**	**292**	P	**P**	**17 39 34.0**	**+2.0**
	baz=58						
WVOR	**Wild Horse Val**	**64.28**	**305**	*e*P	**P**	**17 39 31.8**	**-1.2**
	comp=Z,38nm,1.9s						
WVOR	**Wild Horse Val**	**64.28**	**305**	*e*P	**P**	**17 39 31.8**	**-1.2**
WVOR				pmax	pmax		
	comp=Z,37nm,1.9s						
R11A	**Troy Canyon, C**	**64.37**	**300**	*e*P	**P**	**17 39 32.5**	**-1.2**
	comp=Z,4.7nm,1.3s						
R11A	**Troy Canyon, C**	**64.37**	**300**	P	**P**	**17 39 35.2**	**+1.5**
	baz=59,SNR=5.9						
W13A	**Hualapai Mount**	**64.88**	**296**	*e*P	**P**	**17 39 36.4**	**-0.6**
	comp=Z,4.9nm,1.0s						
BRVK	**Borovoye**	**64.96**	**41**	*d i*P	**P**	**17 39 37.8**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SHPR	**Sheep Range**	**65.03**	**298**	*e*P	**P**	**17 39 37.0**	**-1.0**
	comp=Z,6.1nm,1.2s						
BVAR	**Borovoye Array**	**65.04**	**41**	P	**P**	**17 39 37.1**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=303,slow=6.9,SNR=8.2						
ILAR	**Eielson Array**	**65.29**	**335**	P	**P**	**17 39 35.6**	**-3.3**
	comp=Z,2.3nm,1.2s,baz=33,slow=3.3,SNR=7.0						
ILAR				LR	LR	18 05 19.3	
	comp=Z,104nm,18.2s,baz=66,slow=34						
PDMCI	**Parker Dam,Lak**	**65.48**	**295**	P	**P**	**17 39 40.9**	**+0.3**
	baz=58						
J05D	**Fort Rock, OR**	**65.48**	**307**	P	**P**	**17 39 42.6**	**+1.9**
	baz=58						
TPNV	**Topopah Spring**	**65.54**	**299**	*e*P	**P**	**17 39 40.2**	**-1.1**
	comp=Z,6.6nm,1.3s						
TPNV	**Topopah Spring**	**65.54**	**299**	*e*P	**P**	**17 39 40.2**	**-1.1**
TPNV				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TPNV	**Topopah Spring**	**65.54**	**299**	P	**P**	**17 39 40.8**	**-0.5**
	baz=58						
MOD	**Modoc Plateau**	**65.62**	**305**	*e*P	**P**	**17 39 40.3**	**-1.4**
	comp=Z,12nm,1.4s						
KVN	**Kaiserville**	**65.68**	**301**	*e*P	**P**	**17 39 40.7**	**-1.5**
	comp=Z,15nm,1.3s						
KVN	**Kaiserville**	**65.68**	**301**	*e*P	**P**	**17 39 40.7**	**-1.5**
KVN				pmax	pmax		
	comp=Z,15nm,1.3s						
GEYT	**Alibeck**	**65.73**	**60**	P	**P**	**17 39 42.1**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=280,slow=10,SNR=5.8						
214A	**Organ Pipe Nat**	**65.78**	**292**	P	**P**	**17 39 45.6**	**+2.9**
	baz=57						
WRH	**Wood River Hil**	**65.88**	**335**	*e*P	**P**	**17 39 41.4**	**-1.4**
	comp=Z,12nm,1.4s						
LPAZ	**La Paz**	**66.02**	**221**	P	**P**	**17 39 45.6**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=44,slow=8.8,SNR=4.1						
LPAZ				LR	LR	18 06 17.9	
	comp=Z,34nm,18.9s,baz=340,slow=34						
LPAZ	**La Paz**	**66.02**	**221**	*e*P	**P**	**17 39 45.5**	**+0.6**
LPAZ				*e*pP	**P**	**17 39 46.1**	**+1.2**
LPAZ	**La Paz**	**66.02**	**221**	*e*P	**P**	**17 39 45.5**	**+0.6**
LPAZ				*e**PP	**P**	**17 39 46.1**	**+1.2**
NV01	**Mina Array Sit**	**66.15**	**301**	*e*P	**P**	**17 39 44.6**	**-0.6**
NVAR	**Mina Array Bea**	**66.15**	**301**	P	**P**	**17 39 44.6**	**-0.6**
	comp=Z,1.8nm,1.1s,baz=70,slow=6.4,SNR=7.5						
NVAR				LR	LR	18 08 57.9	
	comp=Z,142nm,18.0s,baz=42,slow=36						
FURC	**Furnace Creek,**	**66.22**	**298**	P	**P**	**17 39 44.3**	**-1.0**
	baz=58						
IRM	**Iron Mountain**	**66.26**	**295**	P	**P**	**17 39 48.5**	**+2.7**
	baz=57						
GLA	**Glamis**	**66.63**	**294**	P	**P**	**17 39 50.9**	**+2.8**
	baz=57						
HEC	**Hector,Ludlow**	**66.73**	**297**	P	**P**	**17 39 51.1**	**+2.3**
	baz=57						
BC3	**Big Chuckawall**	**66.75**	**295**	P	**P**	**17 39 50.7**	**+1.7**
	baz=57						
GSC	**Goldstone, Bar**	**66.80**	**297**	P	**P**	**17 39 51.7**	**+2.5**
	baz=57						
DAC	**Darwin (Calif)**	**66.82**	**299**	*e*P	**P**	**17 39 48.9**	**-0.6**
	comp=Z,12nm,1.2s						
DAC	**Darwin (Calif)**	**66.82**	**299**	*e*P	**P**	**17 39 48.9**	**-0.6**
DAC				pmax	pmax		
	comp=Z,12nm,1.2s						
MPMC	**Manual Prospec**	**66.86**	**298**	P	**P**	**17 39 51.9**	**+2.1**
	baz=57						
BELC	**Belle Mtn. Jos**	**66.94**	**296**	P	**P**	**17 39 52.9**	**+2.6**
	baz=57						
OMMB	**Old Mammoth Mi**	**67.05**	**300**	*e*P	**P**	**17 39 48.3**	**-2.8**
	comp=Z,8.4nm,1.3s						
CWC	**Cottonwood Cre**	**67.06**	**299**	P	**P**	**17 39 53.7**	**+2.7**
	baz=57						
LRMC	**Laurel Mtn Rad**	**67.31**	**298**	P	**P**	**17 39 55.2**	**+2.6**
	baz=57						
PFO	**Pinyon Flats O**	**67.47**	**296**	P	**P**	**17 39 56.3**	**+2.7**
	baz=57						
L02E	**Cave Junction**	**67.56**	**307**	P	**P**	**17 39 56.5**	**+2.6**
	baz=57						
ISA	**Isabella, Lake**	**67.75**	**298**	P	**P**	**17 39 57.5**	**+2.2**
	baz=57						
MBAR	**Mbarara**	**67.83**	**110**	⇑*i*P	P	17 40 02.4	+6.3
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
EDW2	**Edwards Air Fo**	**67.85**	**297**	P	**P**	**17 39 58.1**	**+2.2**
	baz=57						
TIXI	**Tiksi**	**68.26**	**7**	⇑*i*P	**P**	**17 39 57.4**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CPUP	**Villa Florida**	**70.28**	**206**	LR	LR	18 07 35.0	
	comp=Z,48nm,19.8s,baz=36,slow=33						
KURK	**Kurchatov**	**70.53**	**40**	*e*P	**P**	**17 40 11.4**	**-0.8**
	comp=Z,9.9nm,1.1s						
KURK	**Kurchatov**	**70.53**	**40**	*i* P	**P**	**17 40 13.3**	**+1.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KURBB	**Kurchatov Arra**	**70.54**	**40**	P	**P**	**17 40 12.7**	**+0.5**
	comp=Z,4.9nm,1.1s,baz=311,slow=7.0,SNR=23						
KK31	**Karatay Array**	**70.71**	**50**	*e*P	**P**	**17 40 14.6**	**+1.1**
	comp=Z,6.9nm,1.4s						
KK31	**Karatay Array**	**70.71**	**50**	*e*P	**P**	**17 40 14.6**	**+1.1**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KKAR	**Karatay Array**	**70.71**	**50**	*e*P	**P**	**17 40 14.6**	**+1.1**
	comp=Z,6.9nm,1.4s						
KKAR	**Karatay Array**	**70.71**	**50**	*e*P	**P**	**17 40 14.6**	**+1.1**
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ZAA1	**Zalesovo Array**	**71.34**	**35**	*e*P	**P**	**17 40 16.8**	**-0.2**
ZAA0	**Zalesovo Array**	**71.34**	**35**	*e*P	**P**	**17 40 16.9**	**-0.1**
	comp=Z,11nm,1.2s						
ZALV	**Zalesovo Beam**	**71.34**	**35**	P	**P**	**17 40 16.8**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=302,slow=8.5,SNR=12						
ZALV				LR	LR	18 11 07.9	
	comp=Z,27nm,18.6s,baz=252,slow=36						
KMBO	**Kilima Mbogo**	**72.98**	**106**	LR	LR	18 12 47.8	
	comp=Z,71nm,18.4s,baz=81,slow=36						
GAR	**Garm**	**73.03**	**53**	*e*P	**P**	**17 40 28.6**	**+1.0**
	comp=Z,9.3nm,0.9s						
GAR	**Garm**	**73.03**	**53**	*e*P	**P**	**17 40 28.6**	**+1.0**
GAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AAK	**Ala-Archa**	**73.33**	**48**	P	**P**	**17 40 29.9**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=283,slow=4.3,SNR=5.0						
AAK	**Ala-Archa**	**73.33**	**48**	⇑*i*P	**P**	**17 40 31.3**	**+2.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MAKZ	**Makanchi**	**74.75**	**41**	*e*P	**P**	**17 40 37.6**	**+0.3**
	comp=Z,11nm,1.3s						
MAKZ	**Makanchi**	**74.75**	**41**	*e*P	**P**	**17 40 37.6**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.3s						
MK31	**Makanchi Array**	**74.92**	**41**	*e*P	**P**	**17 40 39.0**	**+0.6**
	comp=Z,7.7nm,1.0s						
MK31	**Makanchi Array**	**74.92**	**41**	*e*P	**P**	**17 40 39.0**	**+0.6**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK32	**Makanchi Array**	**74.92**	**41**	*e*P	**P**	**17 40 38.7**	**+0.3**
MKAR	**Makanchi Array**	**74.92**	**41**	P	**P**	**17 40 38.7**	**+0.3**
	comp=Z,5.9nm,0.9s,baz=318,slow=5.2,SNR=36						
MKAR				LR	LR	18 13 53.4	
	comp=Z,54nm,19.6s,baz=306,slow=36						
MKAR	**Makanchi Array**	**74.92**	**41**	*i* P	**P**	**17 40 39.2**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SEY	**Seymchan**	**78.06**	**359**	*i* P	**P**	**17 40 56.3**	**+0.5**
BOD	**Bodaibo**	**78.50**	**19**	*e*P	**P**	**17 40 56.1**	**-2.2**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TLY	**Talaya**	**80.60**	**27**	⇑*i*P	**P**	**17 41 10.9**	**+1.0**
BOSA	**Boshof**	**84.73**	**134**	LR	LR	18 15 31.9	
	comp=Z,259nm,21.7s,baz=308,slow=33						
SONA0	**Songino Array**	**84.79**	**28**	*e*P	**P**	**17 41 32.3**	**+0.4**
SONM	**Songino Array**	**84.79**	**28**	P	**P**	**17 41 32.3**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=326,slow=6.5,SNR=21						
SONM				LR	LR	18 20 38.1	
	comp=Z,42nm,19.5s,baz=254,slow=37						
ULN	**Ulaanbaatar**	**85.00**	**28**	*e*P	**P**	**17 41 33.3**	**+0.3**
	comp=Z,13nm,1.1s						
ULN	**Ulaanbaatar**	**85.00**	**28**	⇑*i*P	**P**	**17 41 34.2**	**+1.2**
ULN				pmax	pmax		
	comp=Z,11nm,1.2s						
PETK	**Petropavlovsk-**	**87.71**	**356**	LR	LR	18 21 30.1	
	comp=Z,75nm,18.0s,baz=29,slow=36						
PLCA	**Paso Flores**	**88.02**	**210**	P	**P**	**17 41 49.9**	**+2.3**
	comp=Z,2.8nm,0.9s,baz=36,slow=8.0,SNR=3.0						
GTA	**Gaotai**	**88.97**	**37**	*e*P	**P**	**17 41 52.8**	**+0.3**
GTA				pP	pwP	17 41 58.2	+0.8
GTA				sP	sP	17 42 01.4	+5.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**92.68**	**28**	P	**P**	**17 42 10.9**	**+1.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,22nm,4.6s						
XAN	**Xi'an**	**97.50**	**34**	P	Pdif	17 42 33.7	+1.9
XAN				pP	pwP	17 42 43.1	+6.5
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WR1	**Warramunga Arr**	**156.22**	**40**	*e*PKPab	**PKPab**	**17 49 19.7**	**-0.5**
WRA	**Warramunga Arr**	**156.22**	**40**	PKPab	**PKPab**	**17 49 19.7**	**-0.5**
	comp=Z,2.7nm,1.0s,baz=271,slow=8.0,SNR=3.6						
ASAR	**Alice Springs**	**159.02**	**47**	PKP	**PKPdf**	**17 48 53.7**	**-2.2**
	comp=Z,1.1nm,1.1s,baz=329,slow=1.3,SNR=4.6						
ASAR				PKPab	**PKPab**	**17 49 32.4**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=330,slow=3.6,SNR=7.8						

TAP 01 17:33:55.8,24°.28N×121°.71E,h7^{km},ML1.3,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.15**	**224**	*e*P	Pg	17 33 59.7	+0.8
	baz=224						
NACB				*e*S	Sg	17 34 02.6	+1.7
	baz=224						
ENA	**Nanau**	**0.15**	**12**	*i* P	Pg	17 33 59.8	+0.8
	baz=14						
ENA				S	Sg	17 34 02.8	+1.7
	baz=14						
NANB	**Nanao**	**0.15**	**15**	P	Pg	17 33 59.8	+0.8
	baz=14						
NANB				S	Sg	17 34 02.7	+1.5
	baz=14						
ETLH	**Xiulin Townshi**	**0.22**	**251**	*e*S	Sg	17 34 05.1	+1.9
	baz=250						
TWD	**Chiawan**	**0.22**	**207**	*e*P	Pg	17 34 00.9	+0.7
	baz=205						
NNSB	**Datong**	**0.33**	**297**	*e*P	Pb	17 34 03.6	-0.5
	baz=296						
NNSB				*e*S	Sb	17 34 08.4	-1.3
	baz=296						
NNS	**Nan Shan**	**0.34**	**298**	P	Pb	17 34 03.8	-0.6
	baz=298						
NNS				*e*S	Sb	17 34 09.3	-0.8
	baz=298						
TWC	**Suao**	**0.35**	**21**	*e*P	Pg	17 34 03.0	+0.3
	baz=23						
ENTT	**Nioudou**	**0.38**	**340**	P	Pb	17 34 04.3	-0.7
	baz=341						
EOS1	**EOS1**	**0.47**	**55**	*e*S	Sb	17 34 14.0	+0.5
	baz=54						
YHNB	**Yeheng**	**0.49**	**322**	*e*P	Pb	17 34 06.4	-0.4
	baz=322						
YHNB				*e*S	Sb	17 34 13.9	-0.4
	baz=322						
NSK	**Sanguang**	**0.51**	**321**	*e*P	Pb	17 34 06.9	-0.2
	baz=321						
CHGB	**Renai**	**0.53**	**246**	*e*P	Pb	17 34 07.0	-0.6
	baz=245						
OWD	**Renai**	**0.58**	**236**	*e*S	Sg	17 34 15.8	+1.0
	baz=236						

JMA 01 17:34:51.6±0.2,24°.84N×123°.30E,h27^{km},M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.46**	**215**	P	Pb	17 35 01.0	-0.2
YOJ				*e*S	Sb	17 35 07.4	-0.4
JYNG	**Yonagunijimaku**	**0.50**	**220**	P	Pb	17 35 01.7	-0.3
JYNG				*e*S	Sb	17 35 08.1	-0.9
IRIF	**Iriomote-Funau**	**0.64**	**142**	P	Pb	17 35 03.9	-0.3
IRIF				*e*S	Sb	17 35 12.3	-0.4
JKRS	**Kuro-shima**	**0.88**	**133**	P	Pn	17 35 07.9	-0.3
JKRS				*e*S	Sn	17 35 20.3	+0.2
JIJ	**Ishigaki jima**	**0.90**	**122**	P	Pn	17 35 07.8	-0.7
HATJ	**Hateruma jima**	**0.91**	**149**	P	Pn	17 35 08.4	-0.2
JISG	**Ishigakijimahi**	**0.95**	**105**	P	Pn	17 35 08.4	-0.8

IDC 01 17:35:18.1±14.0,8°.20S×115°.26E,h309^{km}±156^{km}, mb2.8/3,mb1 3.0/4,mb1mx2.7/43,mbtmp3.5/4,Error ellipse: s-maj=227.8km s-min=34.5km az=58.0,Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.10**	**135**	P	P	17 38 24.9	+0.2
	0.1nm,0.3s,baz=324,slow=13,SNR=2.6						
FITZ				S	S	17 40 55.0	-4.8
	0.1nm,0.3s,baz=0.9,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**21.85**	**124**	P	P	17 39 45.5	-0.6
	1.4nm,0.9s,baz=298,slow=12,SNR=13						
ASAR	**Alice Springs**	**23.57**	**133**	P	P	17 40 02.3	+0.5
	0.3nm,0.5s,baz=304,slow=8.6,SNR=11						
SONM	**Songino Array**	**56.34**	**353**	P	P	17 44 27.5	-0.1
	0.5nm,0.5s,baz=175,slow=8.7,SNR=2.7						

UCR 01 17:37:33.2±1.9,9°.67N×83°.97W,h61^{km}±9^{km},MW3.5, 2C-1D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.09**	**335**	⇓*e*P	Pn	17 37 42.0	-0.6
LCR2				*e*S	Sn	17 37 49.1	-0.2
CVTR	**Volcan Turrial**	**0.41**	**30**	*e*P	Pn	17 37 45.2	+0.4
CVTR				*e*S	Sn	17 37 55.0	+1.8
EDDO	**Dominical**	**0.42**	**166**	*e*P	Pn	17 37 45.0	+0.5
EDDO				*e*S	Sn	17 37 53.8	+1.2
ARE1	**Arenal 1**	**1.08**	**317**	⇑*e*P	Pn	17 37 52.4	-0.1
ARE1				*e*S	Sn	17 38 08.0	+1.3
CEDE	**Laguna Cedeo**	**1.09**	**318**	⇑*e*P	Pn	17 37 52.6	0.0
CEDE				*e*S	Sn	17 38 07.3	+0.3
JTS	**Las Juntas de**	**1.15**	**303**	*e*P	Pn	17 37 52.9	-0.4
JTS				*e*S	Sn	17 38 08.7	+0.3
MESS	**Mesas**	**1.61**	**312**	*e*P	Pn	17 37 59.4	-0.1
MESS				*e*S	Sn	17 38 19.4	0.0
ACON	**Acoyapa**	**2.58**	**333**	*e*P	Pn	17 38 11.6	-1.0

MAN 01 17:43:07.5,16°.46N×120°.81E,h27^{km},mb4.4,ML3.2, MS2.9,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.33**	**202**	*e*P	Pb	17 43 15.4	+0.2
SMPP				*e*S	Sn	17 43 22.1	-0.5
BOLP	**Bolinao**	**0.87**	**265**	*e*P	Pb	17 43 24.9	+1.0
BALP	**Baler**	**1.03**	**134**	*e*P	Pn	17 43 25.7	-0.4
BALP				*e*S	Sb	17 43 39.9	+0.2
CAUP	**Cauayan**	**1.08**	**64**	*e*P	Pn	17 43 26.0	-0.9
CAUP				*e*S	Sb	17 43 41.9	+0.6
ABRA	**Dolores**	**1.18**	**355**	*e*P	Pn	17 43 27.7	-0.6
ABRA				*e*S	Sn	17 43 42.0	-1.6
APYP	**Conner**	**1.45**	**16**	*e*P	Pn	17 43 31.8	-0.2

APYP				eS	Sn	17 43 50.1	0.0
POLP	Polilio Island	2.04	148	eP	Pb	17 43 43.6	-0.2
POLP				eS	Sb	17 44 12.4	+3.6

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*TAP **01** 18:07:33.0,24.°28N×121.°93E,h13^{km},ML2.7,B*
*ISCJB **01** 18:07:33.1±0.5,24.°26N±0.°02×121.°96E±0.°02,h4^{km}±4^{km}, Error ellipse: s-maj=3.9km s-min=2.5km az=35.2*
*JMA **01** 18:07:33.1,24.°22N×121.°91E,h14^{km}±3^{km},M2.0*
ISC 01 18:07:33.0±0.9,**24.°25N**±0.°02×**121.°93E**±0.°02,**h12**^{km}±8^{km}, **n78,σ0^{s}54**/93,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao baz=311	0.24	316	P	Pg	18 07 38.1	0.0
NANB	baz=311			S	Sg	18 07 41.6	0.0
ENA	Nanau baz=310	0.25	315	iP	Pg	18 07 38.1	-0.1
ENA	baz=310			iS	Sg	18 07 41.8	0.0
NACB	Ninganchiao baz=251	0.32	256	P	Pg	18 07 39.6	+0.1
EOS1	EOS1 baz=31	0.34	31	eP	Pg	18 07 40.6	+0.6
EOS1	baz=31			eS	Sb	18 07 46.4	-0.2
TWD	Chiawan baz=245	0.35	241	eP	Pg	18 07 40.4	+0.3
TWC	Suao baz=348	0.36	348	iP	Pg	18 07 40.2	-0.2
TWC	baz=348			S	Sg	18 07 44.9	-0.3
HWA	Hwalien baz=235	0.41	228	eP	Pb	18 07 43.2	+1.0
ETLH	Xiulin Townshi baz=261	0.41	264	eP	Pg	18 07 41.4	+0.1
ENLB	Shoufeng baz=231	0.46	221	eP	Pb	18 07 43.1	0.0
ENTT	Nioudou baz=317	0.51	319	P	Pg	18 07 43.1	+0.1
ENTT	baz=317			eS	Sg	18 07 50.0	+0.1
TWE	Neicheng baz=331	0.53	333	iP	Pg	18 07 43.3	0.0
TWE	baz=331			S	Sg	18 07 50.2	-0.2
NNSB	Datong baz=287	0.53	289	eP	Pg	18 07 43.7	+0.3
ILA	Ilan baz=333	0.54	342	eP	Pb	18 07 44.7	+0.3
NNS	Nan Shan baz=296	0.54	290	P	Pb	18 07 44.0	-0.6
NNS	baz=296			eS	Sg	18 07 51.2	+0.3
NTC	Toucheng baz=349	0.61	351	eS	Sg	18 07 52.7	-0.2
WHF	Hehuan Shan baz=258	0.62	260	eP	Pg	18 07 45.3	+0.1
ESL	Shilin baz=234	0.63	226	eP	Pb	18 07 46.5	+0.5
YHNB	Yeheng baz=307	0.66	309	eP	Pb	18 07 46.1	-0.4
NSK	Sanguang baz=314	0.67	309	eP	Pb	18 07 46.4	-0.4
NSK	baz=314			eS	Sg	18 07 54.8	-0.2
TWT	Tachien baz=268	0.69	270	eP	Pn	18 07 47.9	-0.9
TDCB	Techi baz=269	0.71	270	eP	Pb	18 07 47.9	+0.5
TDCB	baz=269			eS	Sb	18 07 58.0	+0.8
CHGB	Renai baz=253	0.72	255	eP	Pb	18 07 47.4	-0.2
TIPB	Shuangxi baz=350	0.72	352	eP	Pg	18 07 46.9	-0.2
TIPB	baz=350			eS	Sg	18 07 56.3	-0.3
EGFH	Guangfu baz=233	0.74	219	eP	Pb	18 07 48.2	+0.3
OWD	Renai baz=246	0.75	247	eP	Pb	18 07 48.3	+0.1
TWB1	Santiao Chiao baz=352	0.75	4	eS	Sg	18 07 56.1	-1.4
TATO	Taipei baz=324	0.83	331	eP	Pb	18 07 49.5	+0.2
NWF	Wu-fen Shan baz=339	0.83	350	eP	Pb	18 07 49.5	+0.1
NWF	baz=339			eS	Sg	18 07 59.9	0.0
WFSB	Wu-fen Shan baz=350	0.83	350	eP	Pb	18 07 49.7	+0.4
VWDT	VWDT baz=235	0.88	236	eP	Pn	18 07 50.7	-0.5
HGSD	Ruisui baz=194	0.89	212	eP	Pb	18 07 50.6	+0.2
WHP	Taichung City baz=271	0.90	272	P	Pn	18 07 51.4	-0.2
LIOB	Emei baz=294	0.92	295	eP	Pn	18 07 52.3	+0.4
NSTT	Nanjuang baz=293	0.93	294	eP	Pn	18 07 52.0	+0.1
EHY	Hungye baz=217	0.93	217	eP	Pn	18 07 51.3	-0.6
JYNG	Yonagunijimaku	0.94	78	P	Pb	18 07 51.2	-0.1
DPDB	Guoxing baz=264	0.94	257	eP	Pn	18 07 51.9	-0.3
DPDB	baz=264			eS	Sn	18 08 04.8	-0.8
YM01	YM01 baz=339	0.95	340	eP	Pn	18 07 51.9	-0.3
YM10	YM10 baz=339	0.96	339	eP	Pn	18 07 52.3	-0.1
TWS1	Kuangyinshan baz=330	0.97	331	eP	Pn	18 07 53.0	+0.6
YM05	YM05 baz=339	0.97	340	eP	Pn	18 07 52.2	-0.3
YM08	YM08 baz=341	0.98	342	P	Pg	18 07 52.2	+0.3
YM03	YM03 baz=338	0.99	339	eP	Pn	18 07 53.1	+0.2
ANP	Anpu baz=338	1.00	338	eP	Pg	18 07 52.5	+0.2
YOJ	Yonaguni jima baz=67	1.00	78	eP	Pb	18 07 52.4	0.0
YOJ	Yonaguni jima	1.00	78	P	Pb	18 07 52.2	-0.2
YOJ				eS	Sg	18 08 06.0	+0.5
SSLB	Suanglung baz=243	1.01	243	eP	Pn	18 07 53.0	0.0
SMLT	Sun Moon Lake baz=249	1.01	249	eP	Pn	18 07 53.1	0.0
YULB	Yu-li baz=224	1.03	214	eP	Pb	18 07 52.0	-0.9
TYC	Yuchr baz=258	1.04	251	eP	Pn	18 07 53.5	0.0
TWQ1	Liyutan baz=275	1.06	275	eP	Pn	18 07 55.3	+1.5
TWY	Chenhua baz=332	1.06	344	eP	Pn	18 07 53.9	+0.1
TWF1	Yuli baz=222	1.07	213	eP	Pn	18 07 54.0	+0.1
WHYT	Xinyi Township baz=249	1.13	241	eP	Pg	18 07 55.2	+0.4
YUS	Yu-Shan baz=230	1.18	230	eP	Pg	18 07 55.9	+0.1
WJS	Zhushan baz=243	1.18	249	eP	Pg	18 07 55.5	-0.3
WNT	Mingjian baz=252	1.20	252	eP	Pg	18 07 57.8	+1.7
ALS	Alishan baz=224	1.27	235	eP	Pg	18 07 57.5	0.0
CHN5	Tsauling baz=241	1.32	241	eP	Pg	18 07 59.1	+0.6
ELDTW	Lidau baz=219	1.35	219	eP	Pg	18 07 58.6	-0.4
WGK	Gukeng baz=247	1.38	246	eP	Pb	18 07 58.5	-0.2
WDLH	Douliu baz=248	1.39	247	eP	Pg	18 08 00.2	+0.4
RLNB	Erlin baz=257	1.48	256	eP	Pn	18 07 59.6	+0.1
CHN4	Tsaushan baz=235	1.52	234	eP	Pb	18 08 01.2	+0.1
TPUB	Ta-pu baz=233	1.52	232	eP	Pg	18 08 01.8	-0.5
STYT	Tauyuan baz=210	1.53	225	eP	Pb	18 08 01.3	-0.1
WTP	Ta-pu baz=231	1.57	231	eP	Pb	18 08 02.2	+0.1
TWG	Pinlang baz=193	1.63	209	eP	Pb	18 08 03.5	+0.5
IRIF	Iriomote-Funau	1.64	87	P	Pn	18 08 02.3	+0.6
TWK	Hsinying baz=234	1.65	234	eP	Pb	18 08 03.7	+0.3
CHN1	Nanshi baz=232	1.67	231	eP	Pg	18 08 04.3	-0.8
SGST	Jiashian baz=213	1.70	227	eP	Pb	18 08 04.5	+0.2
JKRS	Kuro-shima	1.90	90	P	Pb	18 08 06.6	-1.0
JKRS				eS	Sn	18 08 29.6	+0.6
SSD	Sandimen baz=218	1.92	219	eP	Pb	18 08 06.8	-1.1
SCLT	Jiali baz=238	1.92	236	eP	Pb	18 08 06.6	-1.4
JIJ	Ishigaki jima	2.02	86	P	Pn	18 08 07.4	+0.5
JIJ				eS	Sn	18 08 31.7	-0.4
MASBT	Mashibuluo baz=216	2.02	216	eP	Pn	18 08 08.1	+1.1
EAST	Anshuo baz=194	2.11	208	eP	Pb	18 08 10.2	-1.1

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*IDC **01** 18:08:04.5±8.3,23.°60N×121.°94E,h0^{km},mb3.9/3, mb1 3.8/4,mb1mx3.5/28,mbtmp3.8/4,ML3.0/1,Error ellipse: s-maj=155.4km s-min=71.2km az=143.0*
*JMA **01** 18:08:10.9,24.°23N×121.°91E,h16^{km}±2^{km},M3.4*
*TAP **01** 18:08:10.7,24.°30N×121.°91E,h7^{km},ML3.9,C*
*ISCJB **01** 18:08:11.5±0.3,24.°28N±0.°01×121.°97E±0.°02,h18^{km}±3^{km}, mb3.7/3,Error ellipse: s-maj=2.9km s-min=2.0km az=38.3*
ISC 01 18:08:09.7±1.0,**24.°24N**±0.°02×**122.°00E**±0.°02,**h9**^{km}±7^{km}, **n122,σ0^{s}84**/178,**mb3.9**/3,**16C-2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao baz=310	0.29	309	⇑P	Pg	18 08 15.8	+0.2
NANB	baz=310			S	Sg	18 08 19.2	-0.4
ENA	Nanau baz=310	0.30	308	⇑iP	Pg	18 08 15.8	+0.1
ENA	baz=310			S	Sg	18 08 19.4	-0.4
EOS1	EOS1 baz=38	0.33	21	⇑P	Pb	18 08 18.3	+0.6
EOS1	baz=38			S	Sb	18 08 23.9	+0.9
NACB	Ninganchiao baz=246	0.38	260	⇓P	Pg	18 08 17.1	0.0
NACB	baz=246			S	Sg	18 08 23.2	+1.0
TWC	Suao baz=351	0.39	339	⇑iP	Pg	18 08 17.8	+0.4
TWC	baz=351			iS	Sg	18 08 22.5	-0.1
TWD	Chiawan baz=232	0.40	247	eP	Pg	18 08 18.1	+0.5
HWA	Hwalien baz=220	0.45	234	eP	Pb	18 08 20.2	+0.5
ETLH	Xiulin Townshi baz=256	0.48	266	P	Pg	18 08 19.1	+0.1
ENTT	Nioudou baz=317	0.56	315	⇑iP	Pg	18 08 20.8	+0.2
ENTT	baz=317			S	Sg	18 08 27.5	-0.5
TWE	Neicheng baz=333	0.57	328	⇑iP	Pg	18 08 21.0	+0.3
TWE	baz=333			S	Sg	18 08 27.9	-0.3
ILA	Ilan baz=342	0.57	336	P	Pg	18 08 21.2	+0.4
ILA	baz=342			S	Sg	18 08 28.9	+0.6
NNSB	Datong baz=284	0.59	288	P	Pg	18 08 21.4	+0.2
NNSB	baz=284			eS	Sg	18 08 29.8	+0.7
NNS	Nan Shan baz=285	0.61	289	⇑iP	Pg	18 08 21.4	-0.1
NTC	Toucheng baz=352	0.63	346	eP	Pg	18 08 22.2	+0.3
NTC	baz=352			eS	Sg	18 08 30.6	+0.5
ESL	Shilin baz=221	0.67	231	⇑iP	Pb	18 08 23.5	0.0
ESL	baz=221			eS	Sn	18 08 35.4	-0.6
WHF	Hehuan Shan baz=255	0.68	262	P	Pg	18 08 23.0	+0.1
WHF	baz=255			eS	Sb	18 08 33.9	+0.3
YHNB	Yeheng baz=307	0.71	307	⇑P	Pg	18 08 23.6	+0.1
YHNB	baz=307			S	Sg	18 08 31.9	-0.9
NSK	Sanguang baz=306	0.73	307	⇑P	Pg	18 08 23.8	0.0
NSK	baz=306			S	Sg	18 08 32.7	-0.6
TIPB	Shuangxi baz=353	0.74	348	eP	Pg	18 08 24.5	+0.4
TIPB	baz=353			S	Sg	18 08 33.5	-0.3
TWT	Tachien baz=265	0.75	271	P	Pb	18 08 25.3	+0.3
TWT	baz=265			S	Sb	18 08 35.3	-0.2
TWB1	Santiao Chiao baz=6.0	0.76	359	eP	Pb	18 08 25.1	0.0
TDCB	Techi baz=266	0.77	271	P	Pb	18 08 25.3	0.0
TDCB	baz=266			eS	Sb	18 08 35.6	-0.4
EGFH	Guangfu baz=215	0.78	223	eP	Pb	18 08 25.5	+0.2
CHGB	Renai baz=250	0.78	257	P	Pb	18 08 25.1	-0.4
CHGB	baz=250			S	Sb	18 08 35.9	-0.3
OWD	Renai baz=242	0.81	249	⇑P	Pb	18 08 25.9	-0.1
NWF	Wu-fen Shan baz=351	0.85	346	P	Pb	18 08 26.9	+0.2
NWF	baz=351			S	Sg	18 08 37.0	-0.2
WFSB	Wu-fen Shan baz=351	0.85	346	⇓P	Pb	18 08 26.8	+0.2
WFSB	baz=351			S	Sg	18 08 36.9	-0.3
TATO	Taipei baz=330	0.87	327	P	Pb	18 08 27.0	+0.1
TATO	baz=330			S	Sg	18 08 36.3	-1.5
JYNG	Yonagunijimaku	0.89	76	P	Pn	18 08 28.9	+0.6
JYNG				eS	Sn	18 08 42.2	+1.0
TAP	Taipei baz=333	0.91	331	eP	Pg	18 08 26.9	-0.4
HGSD	Ruisui baz=209	0.91	215	eP	Pn	18 08 28.7	0.0
VWDT	VWDT baz=232	0.93	239	P	Pb	18 08 28.0	+0.1
VWDT	baz=232			S	Sn	18 08 41.5	-0.6
YOJ	Yonaguni jima baz=80	0.95	76	P	Pn	18 08 29.6	+0.5
YOJ	baz=80			eS	Sn	18 08 45.8	+3.1
YOJ	Yonaguni jima	0.95	76	P	Pn	18 08 30.0	+0.9
YOJ				eS	Sn	18 08 44.0	+1.3
EHY	Hungye baz=213	0.96	220	eP	Pb	18 08 27.7	-0.8
WHP	Taichung City baz=268	0.96	272	P	Pg	18 08 28.8	+0.5
WHP	baz=268			S	Sn	18 08 42.1	-1.3
YM01	YM01 baz=339	0.98	337	eP	Pn	18 08 29.5	-0.2
YM01	baz=339			eS	Sb	18 08 41.8	-0.2
LIOB	Emei baz=292	0.98	294	⇑P	Pn	18 08 29.6	-0.1
LIOB	baz=292			S	Sb	18 08 41.5	-0.6
NSTT	Nanjuang baz=291	0.99	293	P	Pg	18 08 29.2	+0.5
NSTT	baz=291			S	Sg	18 08 42.8	+1.1
YM10	YM10 baz=339	0.99	336	eP	Pn	18 08 29.6	-0.3
YM10	baz=339			eS	Sb	18 08 41.4	-0.9
YM05	YM05 baz=339	1.00	337	P	Pn	18 08 29.6	-0.3
YM05	baz=339			S	Sg	18 08 42.7	+0.7
DPDB	Guoxing baz=253	1.00	258	⇑P	Pg	18 08 29.2	+0.2
DPDB	baz=253			S	Sn	18 08 43.2	-1.1
TWS1	Kuangyinshan baz=330	1.01	328	P	Pn	18 08 30.1	+0.1
YM08	YM08 baz=341	1.01	338	P	Pg	18 08 29.7	+0.5
YM08	baz=341			eS	Sb	18 08 41.7	-1.2
YM03	YM03 baz=338	1.02	336	P	Pn	18 08 30.3	0.0
NCU	National Centr baz=315	1.04	315	eP	Pn	18 08 30.8	+0.4
NCU	baz=315			eS	Sn	18 08 44.7	-0.3
NCUH	Zhongli baz=315	1.04	314	P	Pn	18 08 30.9	+0.5
NCUH	baz=315			eS	Sn	18 08 46.5	+1.4
ANP	Anpu baz=338	1.04	335	eP	Pb	18 08 29.9	0.0
NTST	Danshui baz=333	1.05	331	eP	Pn	18 08 31.1	+0.6
SSLB	Suanglung baz=239	1.06	245	⇑P	Pb	18 08 29.8	-0.4
SSLB	baz=239			S	Sn	18 08 45.0	-0.6
YULB	Yu-li baz=211	1.06	217	eP	Pb	18 08 29.2	-1.1
SMLT	Sun Moon Lake baz=245	1.07	251	P	Pg	18 08 30.3	+0.1
SMLT	baz=245			S	Sn	18 08 45.1	-0.8
SBCB	Hsinchu baz=300	1.08	301	P	Pg	18 08 31.7	+1.3
SBCB	baz=300			eS	Sn	18 08 46.4	+0.5
HSN	Hsinchu baz=302	1.09	301	P	Pg	18 08 31.4	+0.7
HSN	baz=302			eS	Sn	18 08 46.7	+0.3
TWY	Chenhua baz=344	1.09	341	eP	Pg	18 08 31.6	+0.8
TWY	baz=344			eS	Sn	18 08 46.1	-0.3
TWF1	Yuli baz=210	1.10	216	eP	Pb	18 08 29.7	-1.1
TYC	Yuchr baz=247	1.10	252	eP	Pg	18 08 31.0	+0.2
TWQ1	Liyutan baz=272	1.13	276	⇑iP	Pg	18 08 32.3	+1.0
TWQ1	baz=272			eS	Sn	18 08 48.1	+0.9
NMLH	Miaoli baz=283	1.14	285	P	Pg	18 08 33.0	+1.3
NMLH	baz=283			eS	Sn	18 08 48.8	+1.2
NSY	Sanyi baz=276	1.15	279	P	Pg	18 08 32.8	+1.1
NSY	baz=276			eS	Sn	18 08 48.3	+0.6
WHYT	Xinyi Township baz=238	1.18	243	eP	Pg	18 08 32.4	0.0
WHYT	baz=238			eS	Sn	18 08 50.1	+1.4
PTSB	Yuanli baz=277	1.20	280	P	Pg	18 08 33.9	+1.1
PTSB	baz=277			S	Sg	18 08 50.8	+2.4
TCU	Taichung baz=262	1.21	266	eP	Pg	18 08 33.9	+0.9
YUS	Yu-Shan baz=227	1.22	232	eP	Pn	18 08 33.0	-0.3
YUS	baz=227			eS	Sn	18 08 51.9	+1.8
WJS	Zhushan baz=246	1.24	251	eP	Pg	18 08 33.3	-0.1
WDJ	Dajia District baz=272	1.25	275	eP	Pg	18 08 34.4	+0.7
WDJ	baz=272			eS	Sg	18 08 52.5	+2.7
WNT	Mingjian baz=249	1.26	254	eP	Pg	18 08 33.9	+0.1
CHKT	Chengkung baz=202	1.28	207	eP	Pb	18 08 33.4	-0.5
ALS	Alishan baz=231	1.31	237	⇑P	Pb	18 08 34.7	-0.1
ALS	baz=231			eS	Sg	18 08 54.4	+2.3
WCHH	Zhanghua baz=259	1.33	263	eP	Pg	18 08 35.3	+0.1
CHN5	Tsauling baz=238	1.37	242	eP	Pg	18 08 36.3	+0.3
CHN5	baz=238			eS	Sg	18 08 57.3	+3.4
ELDTW	Lidau baz=216	1.38	221	eP	Pn	18 08 34.3	-1.0
PCYT	Pengchaiyu baz=6.0	1.38	3	eP	Pb	18 08 35.8	0.0
WGK	Gukeng baz=243	1.43	248	eP	Pg	18 08 36.9	-0.3
WDLH	Douliu baz=244	1.45	248	eP	Pb	18 08 37.0	+0.2
RLNB	Erlin baz=254	1.54	257	eP	Pb	18 08 38.5	+0.1
RLNB	baz=254			eS	Sg	18 09 01.0	+1.7
CHN4	Tsaushan baz=231	1.56	236	eP	Pb	18 08 38.9	0.0
CHN4	baz=231			eS	Sg	18 09 02.6	+2.5
STYT	Tauyuan baz=222	1.57	227	eP	Pb	18 08 38.4	-0.5
STYT	baz=222			eS	Sg	18 09 00.6	+0.5
TPUB	Ta-pu baz=229	1.57	234	eP	Pb	18 08 39.2	+0.3
IRIF	Iriomote-Funau	1.58	86	P	Pb	18 08 39.2	+0.1
IRIF				eS	Sg	18 09 01.4	+0.9
WTP	Ta-pu baz=228	1.61	232	eP	Pb	18 08 39.2	-0.4
CHY	Chiayi baz=239	1.62	243	eP	Pb	18 08 40.0	+0.2
TWGBT	Beinan baz=207	1.65	211	eP	Pn	18 08 38.4	-0.5
TWG	Pinlang baz=207	1.65	211	eP	Pn	18 08 38.4	-0.4
HATJ	Hateruma jima	1.66	96	P	Pg	18 08 41.5	0.0
TWK	Hsinying baz=231	1.69	235	eP	Pb	18 08 40.8	-0.2
CHN1	Nanshi baz=228	1.71	232	eP	Pb	18 08 41.7	+0.3
SNST	Tainan City baz=230	1.71	234	eP	Pb	18 08 41.0	-0.4
WSF	Szhu baz=246	1.74	250	eP	Pb	18 08 40.9	-0.8
JKRS	Kuro-shima	1.83	90	P	Pb	18 08 43.5	+0.1
JKRS				eS	Sb	18 09 06.6	+0.2
CHN8	Yiju baz=238	1.87	242	eP	Pb	18 08 42.9	-1.0
ECL	Taimali baz=207	1.90	211	eP	Pn	18 08 42.6	+0.4
SSD	Sandimen baz=217	1.95	220	eP	Pb	18 08 45.0	-0.3
JIJ	Ishigaki jima	1.96	86	P	Pb	18 08 44.6	-0.9
JIJ				eS	Sb	18 09 09.9	-0.1
TWM1	Shoushan baz=222	2.02	226	eP	Pb	18 08 46.8	+0.1
MASBT	Mashibuluo baz=214	2.05	218	eP	Pb	18 08 46.4	-0.8
EAST	Anshuo baz=206	2.13	210	eP	Pb	18 08 47.9	-0.6
JISG	Ishigakijimahi	2.13	80	P	Pb	18 08 47.2	-1.3
TAW	Tawu baz=205	2.13	209	eP	Pb	18 08 47.7	-0.8
SSPT	Xinbi	2.19	217	eP	Pb	18 08 49.4	0.0

	baz=214						
LAY	Lan-yu	2.23	191	eP	Pn	18 08 46.1	-0.7
	baz=188						
SCZT	Fangliau	2.25	215	eP	Pb	18 08 49.5	-1.0
	baz=211						
SCZT				eS	Sb	18 09 18.6	+0.1
	baz=211						
PNG	Penghu	2.34	254	eP	Pn	18 08 47.8	-0.4
	baz=251						
PHUB	P'eng-hu	2.34	252	eP	Pn	18 08 47.3	-1.0
	baz=249						
WDGT	Dungji	2.36	246	eP	Pn	18 08 48.5	-0.1
	baz=243						
PTTC	Pingtan	2.38	302	eP	Pn	18 08 48.8	-0.1
	baz=301						
JTJ	Tarama	2.49	80	P	Pb	18 08 53.3	-1.3
HEN	Hengchun	2.51	208	eP	Pb	18 08 53.7	-1.3
	baz=205						
TWKBT	Hengchun	2.54	206	eP	Pb	18 08 53.6	-1.8
	baz=203						
VCHM	Qimei	2.57	247	eP	Pn	18 08 52.1	+0.6
	baz=244						
MATB	Ma-tsu	2.66	316	eP	Pn	18 08 53.1	+0.3
	baz=316						
PTMZ	Houxiangcun	2.74	287	eP	Pn	18 08 54.1	+0.3
	baz=286						
LYJJ	Jianjiangzhen	3.06	319	eP	Pn	18 08 59.5	+1.2
	baz=319						
XPSS	Dashiqiu	3.14	329	eP	Pn	18 08 59.4	+0.1
	baz=329						
MHZQ	Yeshan	3.27	305	eP	Pn	18 09 02.6	+1.5
	baz=304						
KNMB	Chin-men Tao	3.30	275	eP	Pn	18 09 01.3	-0.2
	baz=272						
AXDP	Jialang	3.73	281	eP	Pn	18 09 07.2	-0.3
	baz=279						
ZPLA	Ao Xicun	3.90	266	eP	Pn	18 09 09.8	+0.1
	baz=264						
KSRS	Korea Array	14.11	20	Pn	P	18 11 35.8	-1.6
	0.1nm,0.3s,baz=200,slow=12,SNR=4.4						
SONM	Songino Array	26.61	336	P	P	18 13 48.6	+0.2
	2.7nm,0.9s,baz=149,slow=8.8,SNR=8.4						
MKAR	Makanchi Array	38.82	316	P	P	18 15 35.4	+0.5
	0.3nm,0.5s,baz=104,slow=9.2,SNR=12						
FINES	FINESS Array B	71.77	330	P	P	18 19 31.4	-0.7
	1.5nm,0.9s,baz=57,slow=5.1,SNR=4.6						

UCR 01 18:15:21.9±3.0**,10°.27N×86°.35W,h4^{km}**±728^{km}**,MW3.5,**
1D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	Buena Vista	1.07	61	eP	Pg	18 15 41.1	-1.3
GB1A	Borinquen Arri	1.08	60	eP	Pg	18 15 41.7	-1.0
CUI	Cuipilapa	1.23	72	⇓eP	Pg	18 15 45.1	-0.4
CUI				eS	Sg	18 16 00.5	-1.0
MESS	Mesas	1.23	68	eP	Pg	18 15 44.4	-1.1
JTS	Las Juntas de	1.38	89	eP	Pn	18 15 45.4	-2.5
ARE1	Arenal 1	1.62	83	eP	Pg	18 15 53.3	+0.4

NSSP ***01*** *18:50:58.6,38°.65N×43°.55E,h10^{km},Ms3.3*
TEH ***01*** *18:51:01.4,38°.66N×43°.37E,h10^{km},ML3.5*
DDA ***01*** *18:51:01.3,38°.68N×43°.42E,h20^{km}±2^{km},ML3.5*
ISK ***01*** *18:51:01.6,38°.72N×43°.43E,h5^{km},ML3.4/11*
AZER ***01*** *18:51:03.4±1.4,38°.70N×43°.41E,h2^{km},ml3.3/23,Error ellipse: s-maj=10.6km s-min=9.8km az=27.0*
ISC 01 18:51:03.1±0.8**,38°.68N**±0°.02×**43°.39E**±0°.02**,h14**^{km}±5^{km}**,**
n106,σ1^{s}.**75**/132**,4C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.08	178	PG	Pg	18 51 05.9	-0.3
VANB				SG	Sg	18 51 10.7	+2.4
VANB	Van	0.08	178	ePg	Pg	18 51 05.9	-0.3
VMUR	Van-Muradiye	0.34	25	iP	Pg	18 51 09.1	-1.1
VMUR				iS	Sb	18 51 15.4	-1.1
VMUR				IAML_P			
	comp=Z,30μm,0.3s						
VMUR	Van-Muradiye	0.34	25	ePg	Pg	18 51 08.5	-1.7
ERCV	ERCIS-VAN	0.35	354	PG	Pg	18 51 09.1	-1.2
ERCV				SG	Sg	18 51 14.7	-0.4
ERCV	ERCIS-VAN	0.35	354	ePg	Pg	18 51 09.0	-1.2
GEVA	Gevas	0.44	215	iP	Pg	18 51 10.8	-1.2
GEVA				iS	Sb	18 51 19.2	-0.1
GEVA				IAML_P			
	comp=Z,28μm,0.3s						
GEVA	Gevas	0.44	215	ePg	Pg	18 51 10.4	-1.6
BASK	Baskale_VAN	0.79	142	iP	Pg	18 51 16.4	-2.0
BASK				IAML_P			
	comp=Z,14μm,0.2s						
BASK	Baskale_VAN	0.79	142	ePg	Pg	18 51 16.2	-2.2
MLAZ	Malazgirt-MUS	0.80	306	PG	Pg	18 51 17.9	-0.8
MLAZ				SG	Sb	18 51 30.4	+0.8
MLAZ	Malazgirt-MUS	0.80	306	ePg	Pg	18 51 17.8	-0.9
TUTA	Tutak	0.85	329	iP	Pg	18 51 17.5	-2.1
TUTA				iS	Sg	18 51 29.8	-1.1
TUTA	Tutak	0.85	329	ePg	Pg	18 51 17.2	-2.4
BLIS	Bitlis-Merkez	1.03	256	iP	Pb	18 51 21.3	-1.4
BLIS	Bitlis-Merkez	1.03	256	ePg	Pb	18 51 20.6	-2.1
HAKT	HAKKARI	1.14	167	iP	Pb	18 51 23.1	-1.6
HAKT				IAML_P			
	comp=Z,6μm,0.4s						
HAKT	HAKKARI	1.14	167	ePg	Pb	18 51 22.5	-2.2
SRTM	Siirt_Merkez	1.34	240	iP	Pg	18 51 28.7	-0.1
SRTM				iS	Sg	18 51 47.6	+1.4
SRTM	Siirt_Merkez	1.34	240	ePg	Pb	18 51 27.8	-0.2
EATA	Eleskirt	1.37	330	iP	Pn	18 51 27.7	-0.4
EATA				IAML_P			
	comp=Z,5μm,0.3s						
EATA	Eleskirt	1.37	330	ePg	Pn	18 51 26.8	-1.3
CUKT	Cukurca	1.44	173	PN	Pg	18 51 30.2	-0.5
CUKT	Cukurca	1.44	173	iP	Pb	18 51 28.6	-1.1
CUKT				IAML_P			
	comp=Z,10μm,0.6s						
CUKT	Cukurca	1.44	173	ePg	Pn	18 51 28.2	-0.5
TASB	TASBURUN-IGDIR	1.46	27	PN	Pb	18 51 29.3	-0.8
TASB				SN	Sg	18 51 50.2	-0.1
TASB	TASBURUN-IGDIR	1.46	27	ePg	Pb	18 51 29.2	-0.8
MUSM	Mu-Merkez	1.47	272	iP	Pn	18 51 28.1	-1.1
MUSM				IAML_P			
	comp=Z,5μm,0.3s						
MUSM	Mu-Merkez	1.47	272	ePg	Pn	18 51 27.5	-1.7
HYR	Heyderabad	1.54	47	ePn	Pb	18 51 31.0	-0.4
HYR	Heyderabad	1.54	47	P	Pb	18 51 31.1	-0.4
	SNR=8.9						
HYR				S	Sg	18 51 52.6	-0.3
VRTB	Varto-Mus	1.58	288	PN	Pb	18 51 32.2	+0.1
VRTB				SN	Sg	18 51 54.9	+0.9
VRTB	Varto-Mus	1.58	288	iP	Pb	18 51 32.5	+0.4
VRTB				IAML_P			
	comp=Z,12μm,0.5s						
VRTB	Varto-Mus	1.58	288	ePn	Pb	18 51 32.2	+0.1
ARUZ	Aruch	1.70	19	⇑iP	Pn	18 51 32.4	0.0
ARUZ				⇑iS	Sg	18 51 57.0	-0.6
NAX	Nakhchivan	1.72	73	ePn	Pb	18 51 33.5	-0.9
NAX	Nakhchivan	1.72	73	P	Pb	18 51 33.6	-0.9
	SNR=13						
NAX				S	Sg	18 51 56.4	-2.0
DIGO	Kars	1.74	360	iP	Pb	18 51 34.4	-0.4
DIGO	Kars	1.74	360	ePn	Pb	18 51 34.2	-0.7
BNGL	BINGOL	1.77	280	iP	Pb	18 51 34.5	-0.8
KOPR	Koprukoy-ERZUR	1.77	318	PN	Pb	18 51 34.6	-0.8
HOMI	Horasan	1.79	320	iP	Pb	18 51 35.0	-0.7
HOMI				IAML_P			
	comp=Z,2μm,0.2s						
HOMI	Horasan	1.79	320	ePn	Pb	18 51 35.0	-0.7
ISHB	Shabestar	1.79	102	ePn	Pb	18 51 34.6	-1.2
ISHB				IAMB	IAmb	18 51 39.9	
	comp=Z,4μm,0.4s						
SVAN	Silvan-Diyarba	1.80	254	PN	Pb	18 51 35.5	-0.2
SVAN	Silvan-Diyarba	1.80	254	iP	Pn	18 51 34.1	+0.5
SVAN				iS	Sg	18 52 00.8	-0.1
SVAN				IAML_P			
	comp=Z,3μm,0.3s						
SVAN	Silvan-Diyarba	1.80	254	ePn	Pn	18 51 34.0	+0.4
GNI	Garni	1.81	35	PN	Pb	18 51 34.4	-1.6
GNI	Garni	1.81	35	⇓iP	Pb	18 51 35.8	-0.3
GNI				⇓iS	Sg	18 52 01.0	-0.3
IMRD	Marand	1.81	88	ePn	Pb	18 51 34.7	-1.4
IMRD				IAMB	IAmb	18 51 50.9	
	comp=Z,6μm,0.8s						
SBZ	Shahbuz	1.83	66	ePn	Pb	18 51 35.9	-0.5
SBZ	Shahbuz	1.83	66	P	Pb	18 51 36.0	-0.5
	SNR=26						
SBZ				S	Sb	18 51 59.2	-0.1
BTMN	Batman	1.84	245	iP	Pb	18 51 35.8	-0.7
BTMN				iS	Sg	18 52 01.8	-0.4
EAK	Akyaka	2.02	5	iP	Pg	18 51 41.9	+0.2
EAK	Akyaka	2.02	5	ePn	Pg	18 51 40.9	-0.8
SENK	Senkaya-Erzuru	2.05	337	PN	Pn	18 51 38.3	+1.1
SENK	Senkaya-Erzuru	2.05	337	ePn	Pb	18 51 39.1	-1.0
ORD	Ordubad	2.05	82	ePn	Pb	18 51 38.0	-2.1
ORD	Ordubad	2.05	82	P	Pb	18 51 38.1	-2.1
	SNR=44						
ORD				S	Sb	18 52 05.5	-0.1
BNGB	Bingl	2.14	279	PN	Pb	18 51 39.9	-1.7
BGOL	Bingol	2.14	279	iP	Pb	18 51 40.1	-1.6
BGOL				IAML_P			
	comp=Z,407nm,0.2s						
ITBZ	Tabriz	2.21	101	ePn	Pb	18 51 41.0	-1.9
IAZR	Azarshahr	2.27	115	ePn	Pb	18 51 42.0	-2.0
IAZR				IAMB	IAmb	18 51 51.5	
	comp=Z,3μm,0.4s						
YEDI	Yedisu-Bingol	2.34	290	PN	Pb	18 51 43.4	-1.7
YEDI	Yedisu-Bingol	2.34	290	ePn	Pb	18 51 43.3	-1.8
HANI	Diyarbakir_Han	2.36	265	iP	Pb	18 51 43.5	-1.7
HANI				IAML_P			
	comp=Z,1μm,0.5s						
STEZ	Stepenevan	2.45	18	⇑eP	Pn	18 51 44.0	+1.3
STEZ				⇑eS	Sb	18 52 17.5	+0.5
MAZI	Mazidag	2.62	243	PN	Pn	18 51 45.0	0.0
MAZI	Mazidag	2.62	243	ePn	Pn	18 51 45.0	0.0
DAGI	Agillar	2.65	335	iP	Pb	18 51 50.8	+0.4
DYBB	Diyarbakir	2.65	255	PN	Pb	18 51 48.2	-2.2
DBAD	Bademkaya	2.68	331	iP	Pb	18 51 51.0	+0.2
GDB	GEDABAY	2.74	41	ePn	Pb	18 51 48.6	-3.3
GDB	GEDABAY	2.74	41	P	Pb	18 51 48.7	-3.3
	SNR=11						
GDB				S	Sn	18 52 21.5	+1.8
QZX	Qazax, Azerbai	2.83	32	ePn	Pn	18 51 49.8	+2.0
QZX	Qazax, Azerbai	2.83	32	P	Pn	18 51 49.8	+2.0
	SNR=30						
QZX				S	Sn	18 52 23.9	+2.3
IHRS	Heris	2.89	96	ePn	Pn	18 51 50.1	+1.3
IHRS				IAMB	IAmb	18 52 06.9	
	comp=Z,886nm,0.7s						
GANJ	Ganja	3.00	48	ePn	Pn	18 51 51.8	+1.6
GANJ	Ganja	3.00	48	P	Pn	18 51 51.8	+1.6
	SNR=11						
GANJ				S	Sb	18 52 30.2	-2.6
BRDA	Brd	3.34	60	S	Sb	18 52 37.5	-4.9
MNGR	Mingechevir, A	3.54	53	S	Sb	18 52 42.9	-5.3
ZRD	Zardab	3.69	63	S	Sn	18 52 46.5	+3.6
ZKTA	Zakatala	3.86	39	P	Pn	18 52 04.2	+2.2
ZKTA				S	Sn	18 52 50.7	+3.6
SEKA	Sheki	3.87	48	ePn	Pn	18 52 04.7	+2.5
SEKA	Sheki	3.87	48	P	Pn	18 52 04.7	+2.5
LRK	Lerik	3.88	89	ePn	Pn	18 52 03.9	+1.5
LRK	Lerik	3.88	89	P	Pn	18 52 03.9	+1.5
LRK				S	Sn	18 52 51.6	+3.8
GLBA	Clilabad	3.94	80	ePn	Pn	18 52 05.0	+1.9
GLBA	Clilabad	3.94	80	P	Pn	18 52 05.0	+1.9
GLBA				S	Sn	18 52 52.9	+3.8
KDMR	Kurdemir	4.08	64	S	Sn	18 52 54.9	+2.4
SAAT	Saatly	4.08	72	S	Sn	18 52 54.3	+1.8
QBL	Gabala	4.11	55	S	Sn	18 52 55.9	+2.6
LKRN	Lenkeran, Azer	4.22	88	ePn	Pn	18 52 08.5	+1.7
LKRN	Lenkeran, Azer	4.22	88	P	Pn	18 52 08.6	+1.7
LKRN				S	Sn	18 52 58.4	+2.5
ASTR	Astara	4.24	90	ePn	Pn	18 52 09.2	+2.2
ASTR	Astara	4.24	90	P	Pn	18 52 09.3	+2.2
ASTR				S	Sn	18 52 58.8	+2.5
IML	Ismayilli	4.26	59	S	Sn	18 52 59.3	+2.3
XNQ	Khinaliq	4.42	54	ePn	Pn	18 52 11.9	+2.0
XNQ	Khinaliq	4.42	54	P	Pn	18 52 12.0	+2.0
PQL	Pirkuli	4.54	61	ePn	Pn	18 52 13.1	+1.8
PQL	Pirkuli	4.54	61	P	Pn	18 52 13.2	+1.8
QSAR	Qusar	4.69	51	ePn	Pn	18 52 15.3	+1.9
QSAR	Qusar	4.69	51	P	Pn	18 52 15.4	+1.9
ATGJ	Altiaghaj	4.80	61	ePn	Pn	18 52 16.8	+1.8
ATGJ	Altiaghaj	4.80	61	P	Pn	18 52 16.8	+1.8
IKFM	Kafar-mosalman	6.28	144	ePn	Pn	18 52 37.1	+1.9

DSN ***01*** *19:03:54.9±2.7,27°.79N×58°.31E,h10^{km},ML4.2/10,Error ellipse: s-maj=60.8km s-min=14.8km az=152.0*
TEH ***01*** *19:03:54.7,28°.28N×57°.46E,h10^{km},ML4.2*
THR ***01*** *19:03:54.0,28°.12N×57°.46E,h15^{km},ML4.1*
NEIC ***01*** *19:03:55.5±0.0,28°.21N×57°.43E,h10^{km},mb4.2/19, ML4.1(THR),MN4.2(TEH),After TEH.*
IDC ***01*** *19:03:55.8±4.1,28°.25N×57°.26E,h12^{km}±24^{km},mb4.0/20, mb1 4.1/24,mb1mx4.0/39,mbtmp4.1/24,ML3.9/2,MS3.0/2, Ms1 3.1/2,ms1mx2.6/42,Error ellipse: s-maj=16.9km s-min=13.3km az=4.0*
MOS ***01*** *19:03:58.3±1.1,28°.49N×57°.32E,h34^{km},mb4.6/36,Error ellipse: s-maj=7.7km s-min=5.0km az=114.9*
ISC 01 19:03:54.4±1.4**,28°.25N**±0°.04×**57°.37E**±0°.04**,h5**^{km}±9^{km}**,**
n179,σ1^{s}.**43**/183**,mb4.3**/69**,5C,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.42	136	ePg	Pg	19 04 02.6	0.0
NIAN	Nian	0.84	215	ePg	Pb	19 04 11.5	0.0
NIAN				IAMB	IAmb	19 04 31.8	
	comp=Z,0.0nm,0.9s						
GENO	Geno	1.36	232	ePg	Pg	19 04 22.0	+1.5
GENO				IAMB	IAmb	19 04 44.0	
	comp=N,0.0nm,0.4s						
NGRK	Negar Kerman	1.50	338	ePn	Pn	19 04 20.5	-1.8
NGRK				IAMB	IAmb	19 04 23.4	
	comp=Z,0.0nm,0.2s						
CHMN	Cheshme madani	1.61	5	ePn	Pn	19 04 22.7	-1.1
CHMN				IAMB	IAmb	19 04 43.7	
	comp=Z,0.0nm,0.4s						
KRBR	Kerman	1.80	343	eAML	AML	19 04 57.1	
	comp=E,2μm,0.4s						
KHGB	Koh Gabri	2.25	340	ePn	Pn	19 04 33.1	+0.5
KHGB				IAMB	IAmb	19 04 41.8	
	comp=Z,0.0nm,0.5s						
SHME	Shamm	2.45	207	eP	Pn	19 04 36.2	+1.0
	SNR=7.0						
SHME				S	Sb	19 05 09.6	0.0
SHME	Shamm	2.45	207	ePn	Pn	19 04 35.6	+0.4
BANOM	Banah	2.51	203	eP	Pn	19 04 37.9	+2.0
	SNR=56						
MSFE	Esma-Masafi	3.08	201	iP	Pn	19 04 45.1	+1.3
	SNR=13						
MSFE	Esma-Masafi	3.08	201	ePn	Pb	19 04 47.4	-2.3
MDH	Madha	3.10	198	P	Pn	19 04 41.9	-2.0
MDH	Madha	3.10	198	ePn	Pn	19 04 45.3	+1.3
ZHSF	Zahedan	3.27	65	ePn	Pn	19 04 46.9	+0.3
ZHSF	Zahedan	3.27	65	ePn	Pn	19 04 46.9	+0.3
UOSS	Minazif	3.46	198	ePn	Pn	19 04 49.6	+0.7
UOSS	Minazif	3.46	198	P	Pn	19 04 48.1	-0.8
UOSS	Minazif	3.46	198	ePn	Pn	19 04 51.7	+2.8
HATD	Hatta, Dubai	3.59	198	iP	Pn	19 04 49.2	-1.6
	SNR=7.0						
HATD	Hatta, Dubai	3.59	198	ePn	Pn	19 04 51.9	+1.1
NAZ	Nazwa, Dubai	3.59	206	P	Pn	19 04 52.4	+1.6
NAZ	Nazwa, Dubai	3.59	206	ePn	Pb	19 04 56.7	-1.8
IBAF	Bafgh	3.68	335	ePn	Pn	19 04 54.8	+2.7
ASHO	Ashiyiah	3.75	199	iP	Pn	19 04 52.5	-0.4
	SNR=31						
ASHO	Ashiyiah	3.75	199	ePn	Pn	19 04 55.3	+2.4
FAQ	Al Faqa, Dubai	3.84	205	P	Pn	19 04 54.8	+0.6
FAQ	Al Faqa, Dubai	3.84	205	ePn	Pn	19 04 55.9	+1.7
GHIR	Ghir-Karzin	3.87	272	ePn	Pn	19 04 56.2	+1.5
GHIR	Ghir-Karzin	3.87	272	ePn	Pn	19 04 56.2	+1.5
ISRV	Sarvestan	3.90	288	ePn	Pn	19 04 58.3	+2.9
IMEH	Mehriz	3.94	323	ePn	Pn	19 04 58.5	+2.7
IMEH				IAMB	IAmb	19 05 18.3	
	comp=Z,2μm,0.3s						
BSRN	Basiran	4.00	22	ePn	Pn	19 04 58.4	+1.9
BSRN	Basiran	4.00	22	eP	Pn	19 04 58.4	+1.9
ASUD	Al Ashush, Dub	4.05	207	iP	Pn	19 04 57.5	+0.4
	SNR=14						
ASUD	Al Ashush, Dub	4.05	207	ePn	Pn	19 05 00.5	+3.4
IKOO	Kooshah	4.39	18	ePn	Pn	19 05 03.0	+1.0
ALNE	Al Ain	4.43	200	iP	Pn	19 05 03.1	+0.8
	SNR=7.2						
ALNE	Al Ain	4.43	200	ePn	Pn	19 05 06.8	+4.5
HOQ	Hoqain	4.65	181	ePn	Pn	19 05 07.0	+1.6
BIDO	Bidbid	4.76	172	ePn	Pn	19 05 07.5	+0.6
ITEG	Tejag	4.78	14	ePn	Pn	19 05 08.6	+1.3
ISAD	Sadrabad	4.85	320	ePn	Pn	19 05 11.1	+2.8
IDAH	Dahanechah	4.96	25	ePn	Pn	19 05 13.9	+4.0
IKAZ	Kazeroun	5.08	289	ePn	Pn	19 05 14.5	+3.0
IKAZ				IAMB	IAmb	19 06 18.9	
	comp=Z,3μm,0.4s						
WSAR	Wadi Sarin	5.12	167	Pn	Pn	19 05 13.4	+1.5
	comp=Z,6.3nm,0.3s,baz=3.4,slow=12,SNR=66						
WSAR				Sn	Sn	19 06 12.3	+0.9
	comp=Z,8.7nm,0.3s,baz=234,slow=22,SNR=6.2						
IRAM	Ramesheh	5.59	311	ePn	Pn	19 05 19.8	+1.3
SHRT	Shahrakht	5.93	24	ePn	Pn	19 05 24.7	+1.7
SHRT	Shahrakht	5.93	24	eP	Pn	19 05 24.7	+1.7
IGAR	Gharneh	6.19	313	ePn	Pn	19 05 28.6	+1.9
ROKH	ROKH	6.83	308	ePn	Pn	19 05 36.8	+1.3
JHBN	Jahan bin	7.03	306	ePn	Pn	19 05 41.1	+2.8
IPIR	Pirpir	7.12	310	ePn	Pn	19 05 41.8	+2.2
GEYT	Alibeck	9.67	4	Pn	Pn	19 06 20.9	+6.6
	comp=Z,0.4nm,0.3s,baz=192,slow=15,SNR=9.7						
GEYT				LR	LR	19 10 27.8	
	comp=Z,53nm,21.5s,baz=195,slow=40						
RAYN	Ar Rayn	11.68	249	ePn	Pn	19 06 38.9	-2.9
RAYN	Ar Rayn	11.68	249	eP	Pn	19 06 38.9	-2.9
GAR	Garm	15.19	42	ePn	Pn	19 07 31.0	+1.3
	comp=Z,26nm,1.8s						
GAR	Garm	15.19	42	eP	Pn	19 07 31.0	+1.3
GAR				pmax	pmax		
	comp=Z,26nm,1.8s						
AKT	Akhty	15.37	332	iP	Pn	19 07 32.2	+0.1
GNI	Garni	15.79	322	Pn	Pn	19 07 35.5	-2.2
	comp=Z,1.0nm,0.3s,baz=128,slow=17,SNR=3.1						
GNI	Garni	15.79	322	ePn	Pn	19 07 35.0	-2.6
	comp=Z,12nm,0.8s						
GNI	Garni	15.79	322	iP	Pn	19 07 35.1	-2.6
GROC	Groznyy	17.60	331	eP	Pn	19 07 58.3	-2.1
GROC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASF	Jabal al Asfar	18.12	287	P	Pn	19 08 05.2	-1.8
	comp=Z,0.3nm,0.3s,baz=229,slow=9.3,SNR=2.4						
KK31	Karatay Array	18.23	32	ePn	Pn	19 08 07.8	-0.4
	comp=Z,5.2nm,1.4s						
KK31	Karatay Array	18.23	32	eP	Pn	19 08 07.8	-0.4
KK31				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KKAR	Karatay Array	18.23	32	ePn	Pn	19 08 07.8	-0.3
	comp=Z,5.2nm,1.4s						
KKAR	Karatay Array	18.23	32	eP	Pn	19 08 07.9	-0.3
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NCK	Nalchik	18.83	328	iP	P	19 08 14.8	-0.2
NCK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEY	Neytrino	19.07	326	iP	P	19 08 17.2	-0.6
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KBZ	Khabaz	19.34	327	P	P	19 08 20.5	-0.1
	baz=90,slow=5.1,SNR=1.9						
KBZ				ScP	ScP	19 16 19.3	-0.1
	comp=Z,0.4nm,0.3s,baz=150,slow=6.3,SNR=5.7						
SHA1	Shidzhatmaz	19.46	326	iP	P	19 08 22.6	+0.4
MMAI	Mount Meron Ar	19.48	290	P	P	19 08 22.4	0.0
	baz=70,slow=13,SNR=2.5						
KIV	Kislovodsk	19.61	327	eP	P	19 08 22.6	-1.0
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
AAK	Ala-Archa	19.96	40	P	Pn	19 08 30.4	+1.1
	comp=Z,1.7nm,0.5s,baz=202,slow=5.9,SNR=3.8						
AAK	Ala-Archa	19.96	40	ceP	P	19 08 27.6	0.0
AAK				pmax	pmax		
	comp=Z,9.0nm,1.8s						
BOOM	Boomskoye usch	20.70	42	eP	P	19 08 36.3	+0.7
	comp=Z,11nm,1.0s						
BOOM	Boomskoye usch	20.70	42	eP	P	19 08 36.3	+0.7
BOOM				pmax	pmax		
	comp=Z,11nm,1.0s						
ABKAR	Akbulak array	21.07	5	eP	P	19 08 40.4	+1.1
	comp=Z,7.9nm,0.9s						
KDJ	Kajisay	21.23	44	eP	P	19 08 43.2	+1.8
	comp=Z,7.4nm,0.8s						
KDJ	Kajisay	21.23	44	eP	P	19 08 43.2	+1.8
KDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKTO	Aktyubinsk	22.16	1	P	P	19 08 52.5	+1.5
	comp=Z,9.2nm,0.7s,baz=184,slow=9.2,SNR=22						
BR101	Keskin Array S	22.69	306	eP	P	19 08 57.3	+0.2
BR131	Keskin Array S	22.69	306	eP	P	19 08 57.6	+0.5
	comp=Z,11nm,0.8s						
BR131	Keskin Array S	22.69	306	eP	P	19 08 57.6	+0.5
BR131				pmax	pmax		
	comp=Z,11nm,0.8s						
BRTR	Keskin Array B	22.69	306	P	P	19 08 57.3	+0.2
	comp=Z,4.1nm,0.8s,baz=120,slow=10,SNR=9.0						
BRTR	Keskin Array B	22.69	306	ceP	P	19 08 58.9	+1.8
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANN	Anapa	22.91	321	eP	P	19 09 02.7	+3.6
ANN				e		19 09 19.6	
ANN				pmax	pmax		
	comp=Z,51nm,1.1s						
BVAR	Borovoye Array	26.56	18	P	P	19 09 34.1	+0.9
	comp=Z,2.4nm,0.8s,baz=204,slow=8.8,SNR=13						
BRVK	Borovoye	26.56	18	iP	P	19 09 33.0	-0.2
BRVK				pmax	pmax		
	comp=Z,25nm,1.0s						
MK31	Makanchi Array	26.89	40	eP	P	19 09 35.8	-0.5
	comp=Z,2.3nm,1.3s						
MK31	Makanchi Array	26.89	40	eP	P	19 09 35.8	-0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MK32	Makanchi Array	26.89	40	eP	P	19 09 37.0	+0.7
MK32				ePcP	PcP	19 12 57.9	-0.5
MKAR	Makanchi Array	26.89	40	P	P	19 09 37.0	+0.7
	comp=Z,0.9nm,0.7s,baz=225,slow=8.4,SNR=10						
MKAR				PcP	PcP	19 12 57.9	-0.5
	comp=Z,0.1nm,0.4s,baz=241,slow=2.9,SNR=2.7						
KURBB	Kurchatov Arra	27.49	30	P	P	19 09 42.6	+1.0
	comp=Z,2.4nm,0.9s,baz=228,slow=8.6,SNR=20						
KURK	Kurchatov	27.60	30	ceP	P	19 09 43.7	+1.2
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
IDI	Anoyia	28.40	293	P	P	19 09 49.7	-0.3
	comp=Z,1.8nm,0.3s,baz=94,slow=16,SNR=4.0						
AKASG	Malin Array Be	30.90	324	P	P	19 10 11.3	-0.5
	comp=Z,1.9nm,0.6s,baz=130,slow=8.6,SNR=6.2						
AKASG	Malin Array Be	30.90	324	ceP	P	19 10 13.3	+1.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	30.90	324	eP	P	19 10 10.0	-1.8
	comp=Z,4.4nm,0.9s						
AKBB	Malin Array Si	30.90	324	eP	P	19 10 10.0	-1.8
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BUR08	Bucovina Ar. S	31.59	317	eP	P	19 10 17.2	-0.9
	comp=Z,20nm,2.0s						
ZAA0	Zalesovo Array	32.59	30	eP	P	19 10 26.7	+0.1
	comp=Z,5.3nm,0.6s						
ZALV	Zalesovo Beam	32.59	30	P	P	19 10 27.0	+0.4
	comp=Z,5.0nm,0.4s,baz=244,slow=9.9,SNR=29						
ZALV				PcP	PcP	19 13 11.1	-1.7
	comp=Z,0.5nm,0.4s,baz=222,slow=1.9,SNR=2.4						
ZAA1	Zalesovo Array	32.59	30	eP	P	19 10 27.0	+0.3
ZAA1				ePcP	PcP	19 13 11.1	-1.7
KOLS	Kolonicke sedl	33.91	317	eP	P	19 10 38.8	+0.6
LANS	Liptovska Anna	35.69	316	eP	P	19 10 53.2	-0.5
VYHS	Vyhne	35.84	315	eP	P	19 10 55.1	+0.1
OJC	Ojcow	35.90	318	eP	P	19 10 54.4	-1.0
	comp=Z,12nm,0.5s						
OJC	Ojcow	35.90	318	eP	P	19 10 54.4	-1.0
OJC				pmax	pmax		
	comp=Z,12nm,0.5s						
MORC	Moravsky Berou	37.09	316	eP	P	19 11 04.9	-0.7
	comp=Z,2.2nm,0.8s						
MORC	Moravsky Berou	37.09	316	eP	P	19 11 04.9	-0.7
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MOA	Molln	38.57	312	eP	P	19 11 17.7	-0.4
	comp=Z,6.5nm,1.0s						
KBA	Koelnbreinsper	38.99	311	eP	P	19 11 22.1	+0.2
	comp=Z,4.5nm,1.1s						
KBA	Koelnbreinsper	38.99	311	P	P	19 11 27.3	+5.4
KBA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FIA0	FINESS Array S	39.18	337	eP	P	19 11 22.2	-0.8
FIA0	FINESS Array S	39.18	337	eP	P	19 11 22.2	-0.8
FINES	FINESS Array B	39.18	337	P	P	19 11 22.2	-0.8
	comp=Z,1.9nm,0.6s,baz=129,slow=9.3,SNR=12						

GERES	**GERESS Array B**	**39.19**	**314**	P	**P**	**19 11 22.3**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=113,slow=10,SNR=15						
GERES				PcP	**PcP**	**19 13 32.0**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=139,slow=4.7,SNR=3.3						
CMAR	**Chiang Mai Arr**	**39.23**	**95**	PcP	**PcP**	**19 13 33.3**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=286,slow=4.2,SNR=7.3						
KHC	**Kasperske Hory**	**39.34**	**314**	*e*P	**P**	**19 11 23.7**	**-0.9**
	comp=Z,1.9nm,0.8s						
KHC	**Kasperske Hory**	**39.34**	**314**	*e*P	**P**	**19 11 23.7**	**-0.9**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ABTA	**Abfaltersbach**	**39.48**	**310**	*e*P	**P**	**19 11 26.3**	**+0.5**
	comp=Z,3.8nm,0.6s						
CLL	**Collm**	**40.32**	**317**	*e*P	**P**	**19 11 32.0**	**-0.7**
CLL	**Collm**	**40.32**	**317**	*e*P	**P**	**19 11 32.0**	**-0.7**
CLL				*i*		19 11 35.7	
	comp=Z,6.0nm,0.9s						
CLL				*e*		19 11 43.0	
SQTA	**Sankt Quirin**	**40.44**	**311**	*i* P	**P**	**19 11 32.8**	**-1.1**
	comp=Z,4.0nm,0.5s						
MOTA	**Moosalm**	**40.54**	**311**	*e*P	**P**	**19 11 34.0**	**-0.7**
	comp=Z,5.3nm,0.7s						
FETA	**Feichten**	**40.73**	**310**	*e*P	**P**	**19 11 35.4**	**-0.9**
	comp=Z,5.2nm,0.6s						
DAVA	**Damuels**	**41.35**	**311**	*e*P	**P**	**19 11 40.2**	**-1.2**
	comp=Z,7.3nm,0.7s						
PGF	**Pioggiola**	**41.38**	**303**	*e*P	**P**	**19 11 40.6**	**-1.1**
PGF				pmax	pmax		
	comp=Z,18nm,1.2s						
TUE	**Stuetta**	**41.57**	**309**	*e*P	**P**	**19 11 42.5**	**-0.8**
	comp=Z,3.1nm,0.7s						
SONA0	**Songino Array**	**42.46**	**49**	*e*P	**P**	**19 11 51.9**	**+1.4**
SONM	**Songino Array**	**42.46**	**49**	P	**P**	**19 11 51.9**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=262,slow=10,SNR=5.1						
SBF	**Sospel**	**42.62**	**305**	*e*P	**P**	**19 11 50.7**	**-1.0**
SBF				pmax	pmax		
	comp=Z,15nm,0.7s						
ULN	**Ulaanbaatar**	**42.90**	**49**	*i* P	**P**	**19 11 53.8**	**-0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SENIN	**Lac Senin/Sane**	**42.96**	**309**	*e*P	**P**	**19 11 53.7**	**-0.9**
	comp=Z,3.9nm,0.6s						
MBDF	**Montbardon**	**43.16**	**306**	*e*P	**P**	**19 11 56.3**	**+0.1**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LPG	**La Plagne**	**43.25**	**307**	*e*P	**P**	**19 11 58.5**	**+1.4**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BNI	**Bardonecchia**	**43.26**	**307**	*e*P	**P**	**19 11 55.8**	**-1.2**
	comp=Z,6.3nm,0.7s						
BNI	**Bardonecchia**	**43.26**	**307**	*e*P	**P**	**19 11 55.8**	**-1.2**
BNI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LPL	**La Plagne**	**43.26**	**308**	*e*P	**P**	**19 11 57.1**	**0.0**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CABF	**La Chapelle**	**43.82**	**309**	*e*P	**P**	**19 12 02.6**	**+1.1**
CABF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VIVF	**Saint-Julien-l**	**44.66**	**306**	*e*P	**P**	**19 12 09.6**	**+1.4**
VIVF				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SSB	**Saint Sauveur**	**44.78**	**307**	*e*P	**P**	**19 12 08.0**	**-1.1**
	comp=Z,6.5nm,0.8s						
SSB	**Saint Sauveur**	**44.78**	**307**	*e*P	**P**	**19 12 08.0**	**-1.1**
SSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NB2	**NORSAR Subarra**	**44.87**	**330**	P	**P**	**19 12 12.1**	**+2.6**
	comp=Z,0.8nm,0.8s,baz=112,slow=7.9						
NB200	**NORSAR Array S**	**44.87**	**330**	*e*P	**P**	**19 12 09.8**	**+0.3**
NOA	**NORSAR Array B**	**44.87**	**330**	P	**P**	**19 12 09.8**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=118,slow=7.7,SNR=4.0						
ARA0	**ARCESS Array S**	**45.23**	**345**	*e*P	**P**	**19 12 11.7**	**-0.6**
ARCES	**ARCESS Array B**	**45.23**	**345**	P	**P**	**19 12 11.7**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=133,slow=8.4,SNR=7.8						
ARCES				LR	LR	19 32 31.1	
	comp=Z,32nm,19.0s,baz=347,slow=38						
SMF	**Signal de Mont**	**45.37**	**309**	*e*P	**P**	**19 12 13.1**	**-0.6**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LOR	**Lormes**	**45.41**	**310**	*e*P	**P**	**19 12 12.5**	**-1.5**
LOR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SSF	**Saint Saulge**	**45.63**	**309**	*e*P	**P**	**19 12 15.2**	**-0.6**
SSF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**45.70**	**59**	P	**P**	**19 12 18.6**	**+2.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,13nm,6.9s						
HHC				LR	LR		
	comp=N,150nm,15.3s						
HHC				LR	LR		
	comp=E,160nm,13.3s						
AVF	**Avril sur Loir**	**45.71**	**309**	*e*P	**P**	**19 12 17.7**	**+1.3**
AVF				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MTLF	**Montolieu**	**46.39**	**304**	*e*P	**P**	**19 12 22.0**	**+0.2**
MTLF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TCF	**Toulx Ste Croi**	**46.47**	**308**	*e*P	**P**	**19 12 24.2**	**+1.8**
TCF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CAF	**Calviac**	**46.52**	**306**	*e*P	**P**	**19 12 22.8**	**0.0**
CAF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RJF	**Les Rejaudoux**	**46.92**	**307**	*e*P	**P**	**19 12 27.5**	**+1.6**
RJF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LFF	**La Frestale**	**47.46**	**306**	*e*P	**P**	**19 12 32.3**	**+2.2**
LFF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LDF	**La Druitiere**	**48.17**	**311**	*e*P	**P**	**19 12 36.0**	**+0.4**
LDF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
FLN	**La Foliniere**	**48.42**	**312**	*e*P	**P**	**19 12 37.9**	**+0.4**
FLN				pmax	pmax		
	comp=Z,13nm,1.2s						
BOD	**Bodaibo**	**48.89**	**36**	*e*P	**P**	**19 12 40.1**	**-0.9**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SJPF	**Ste Jean**	**48.91**	**304**	*e*P	**P**	**19 12 44.6**	**+3.2**
SJPF				pmax	pmax		
	comp=Z,27nm,1.9s						
QUIF	**Quistinic**	**50.19**	**310**	*e*P	P	19 12 55.9	+4.9
QUIF				pmax	pmax		
	comp=Z,36nm,1.6s						
ESDC	**Sonseca Array**	**51.24**	**300**	P	**P**	**19 12 59.7**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=62,slow=7.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**53.77**	**266**	P	**P**	**19 13 17.3**	**-0.9**
	comp=Z,7.2nm,0.4s,baz=66,slow=7.7,SNR=18						
TOA1	**Torodi Ar. Sit**	**53.77**	**266**	*e*P	**P**	**19 13 17.3**	**-0.9**
ZEA	**Zeya**	**56.01**	**42**	*e*P	**P**	**19 13 34.1**	**+0.2**
TIXI	**Tiksi**	**57.63**	**21**	*e*P	**P**	**19 13 45.2**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS	**Korea Array**	**58.74**	**61**	P	**P**	**19 13 52.9**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=285,slow=7.2,SNR=6.4						
KLR	**Kul'dur**	**59.25**	**47**	*i* P	**P**	**19 13 56.7**	**-0.1**
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL	**Bilibino**	**70.80**	**22**	⇑*e*P	**P**	**19 15 12.8**	**+1.2**
BILL				*e*		19 15 33.9	
BILL				*e*		19 17 43.5	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**85.37**	**10**	P	**P**	**19 16 31.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=321,slow=4.2,SNR=4.0						
WRA	**Warramunga Arr**	**88.42**	**114**	P	**P**	**19 16 49.2**	**+1.1**
	comp=Z,5.9nm,0.8s,baz=298,slow=4.3,SNR=17						
WR1	**Warramunga Arr**	**88.42**	**114**	*e*P	**P**	**19 16 49.2**	**+1.1**
YKA	**Yellowknife Ar**	**89.34**	**356**	P	**P**	**19 16 51.2**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=3.0,slow=5.3,SNR=4.2						
YKB5	**Yellowknife Ar**	**89.34**	**356**	*e*P	**P**	**19 16 51.2**	**-0.4**
ASAR	**Alice Springs**	**89.98**	**117**	P	**P**	**19 16 56.2**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=305,slow=5.2,SNR=20						

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*ISCJB **01** 19:33:46.4±0.5, 37°.59N±0°.04×71°.68E±0°.06, h10^{km}, mb3.6/12, MS2.8/1, Error ellipse: s-maj=7.2km s-min=5.9km az=0.1*

*IDC **01** 19:33:46.7±1.1, 37°.66N×72°.10E, h0^{km}, mb3.7/9, mb1 3.9/15, mb1mx3.7/57, mbtmp3.8/15, ML3.4/6, MS3.0/2, Ms1 3.0/2, ms1mx2.5/40, Error ellipse: s-maj=20.7km s-min=14.9km az=141.0*

*NNC **01** 19:33:47.6±3.7, 37°.63N×71°.36E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=37.9km s-min=18.1km az=156.0*

ISC 01 19:33:47.1±0.5**, 37°.67N**±0°.04×**71°.88E**±0°.05**, h10^{km}, n39, σ2^{s}.96**/42**, mb3.7**/12**, 12C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.83**	**180**	P	**Pb**	**19 34 50.3**	**-4.6**
CEP				S	**Sb**	**19 35 41.0**	**-0.5**
CHCP	**Chirah Chowk**	**4.15**	**164**	P	**Pn**	**19 34 51.1**	**+0.5**
THW	**Thamme Wali**	**4.86**	**181**	P	**Pn**	**19 35 00.8**	**+0.4**
UCH	**Uchtor**	**4.99**	**23**	P	Pn	19 35 06.1	+3.7
	SNR=29						
KZA	**Kyzart**	**5.11**	**29**	P	Pn	19 35 07.8	+3.7
	SNR=18						
EKS2	**Erkin-Say**	**5.20**	**16**	P	Pn	19 35 09.3	+4.3
	SNR=11						
AAK	**Ala-Archa**	**5.35**	**21**	Pn	Pn	19 35 11.2	+4.0
	2.3nm,0.3s,baz=185,slow=7.8,SNR=19						
AAK				Sn	**Sn**	**19 36 11.5**	**+2.4**
	2.2nm,0.3s,baz=198,slow=20,SNR=2.3						
AAK				Lg	Lg	19 36 37.2	
	5.4nm,0.3s,baz=7.7,slow=17,SNR=3.5						
AAK	**Ala-Archa**	**5.35**	**21**	⇑Pn	**Pn**	**19 35 10.8**	**+3.6**
	8.5nm,0.6s						
AAK				⇑Pg	**Pg**	**19 35 25.1**	**-4.5**
	18nm,0.6s						
AAK				⇓Sn	**Sb**	**19 36 18.1**	**-7.1**
	50nm,0.9s						
AAK	**Ala-Archa**	**5.35**	**21**	P	Pb	19 35 13.3	-7.5
	SNR=8.9						
KK31	**Karatay Array**	**5.53**	**350**	⇑Pn	**Pn**	**19 35 13.1**	**+3.6**
	6.7nm,0.4s,baz=175,slow=13,SNR=140						
KK31				⇓Pg	**Pg**	**19 35 28.9**	**-4.1**
	20nm,0.5s,baz=174,slow=19,SNR=9.2						
KK31				⇑Lg	Lg	19 36 41.9	
	67nm,0.7s,baz=179,slow=34						
ULHL	**Ulahol**	**5.67**	**35**	P	Pn	19 35 16.1	+4.5
	SNR=6.8						
CHMS	**Chumysh**	**5.76**	**21**	P	Pn	19 35 16.6	+3.9
	SNR=7.4						
TKM2	**Tokmak 2**	**5.97**	**27**	⇑Pn	**Pn**	**19 35 18.9**	**+3.2**
	5.5nm,0.6s						
TKM2				⇑Lg	Lg	19 37 04.3	
	23nm,0.7s						
TKM2	**Tokmak 2**	**5.97**	**27**	P	**Pn**	**19 35 19.1**	**+3.4**
	SNR=15						
THN	**Thein Dam**	**6.09**	**148**	*e*P	**Pn**	**19 35 18.5**	**+1.3**
THN				*e*S	**Sn**	**19 36 23.6**	**-3.4**
PDGK	**Podgornoye**	**8.10**	**43**	⇑Pn	**Pn**	**19 35 47.3**	**+2.5**
	5.5nm,0.6s						
PDGK				⇓Lg	Lg	19 38 14.1	
	14nm,0.9s						
OTUK	**Ortayu**	**10.58**	**2**	⇑Pn	**Pn**	**19 36 22.8**	**+4.1**
	1.2nm,0.5s						
OTUK				⇓Lg	Lg	19 39 23.4	
	15nm,0.8s						
GEYT	**Alibeck**	**10.90**	**276**	Pn	**Pn**	**19 36 21.8**	**-1.4**
	0.9nm,0.3s,baz=116,slow=11,SNR=12						
GEYT				Sn	**Sn**	**19 38 21.8**	**-3.4**
	0.8nm,0.3s,baz=101,slow=15,SNR=4.2						
GEYT				LR	LR	19 42 02.8	
	comp=Z,93nm,18.4s,baz=130,slow=45						
GYA0B	**ALIBECK ARRAY**	**10.90**	**276**	⇑Pn	**Pn**	**19 36 21.3**	**-1.8**
GYA0B				⇓Sn	**Sn**	**19 38 21.0**	**-4.2**
MKAR	**Makanchi Array**	**11.94**	**37**	Pn	**Pn**	**19 36 36.6**	**-0.7**
	0.1nm,0.3s,baz=216,slow=12,SNR=8.6						
MKAR				Lg	Lg	19 40 03.3	
	0.1nm,0.3s,baz=224,slow=24,SNR=2.6						
KURBB	**Kurchatov Arra**	**13.80**	**18**	Pn	**Pn**	**19 37 02.0**	**-0.7**
	0.1nm,0.3s,baz=214,slow=13,SNR=4.6						
KURBB				Lg	Lg	19 41 01.5	
	0.0nm,0.3s,baz=205,slow=31,SNR=4.8						
AB31	**Akbulak array**	**14.45**	**327**	⇑Pn	**Pn**	**19 37 10.1**	**-1.5**
	1.2nm,0.5s,baz=134,slow=12,SNR=58						
AB31				⇓Sn	**Sn**	**19 39 47.4**	**-4.3**
	2.1nm,0.6s,baz=143,slow=23,SNR=5.2						
BVAR	**Borovoye Array**	**15.40**	**357**	Pn	**Pn**	**19 37 23.6**	**-0.7**
	0.3nm,0.3s,baz=163,slow=11,SNR=10						
AKTO	**Aktyubinsk**	**16.16**	**327**	Pn	**Pn**	**19 37 35.0**	**+0.8**
	0.2nm,0.3s,baz=110,slow=10,SNR=4.4						
AKTO	**Aktyubinsk**	**16.16**	**327**	⇑Pn	**Pn**	**19 37 31.9**	**-2.3**
	9.9nm,0.8s						
AKTO				⇑Sn	**Sn**	**19 40 33.7**	**+0.3**
	5.2nm,0.9s						
ZALV	**Zalesovo Beam**	**18.56**	**25**	P	**Pn**	**19 38 03.0**	**-1.2**
	0.9nm,0.3s,baz=217,slow=12,SNR=21						
ARU	**Arti**	**20.78**	**339**	P	**P**	**19 38 27.5**	**-0.6**
	0.3nm,0.2s,baz=137,slow=18,SNR=3.0						
GNI	**Garni**	**21.24**	**285**	P	**P**	**19 38 35.9**	**+2.5**
	3.9nm,0.5s,baz=199,slow=3.5,SNR=4.8						
KBZ	**Khabaz**	**22.73**	**295**	P	**P**	**19 38 54.5**	**+5.3**
	2.6nm,0.8s,baz=24,slow=2.5,SNR=4.1						
SONM	**Songino Array**	**27.10**	**57**	P	**P**	**19 39 29.7**	**-0.4**
	0.3nm,0.5s,baz=262,slow=10.0,SNR=3.2						
SONM				LR	LR	19 51 21.5	
	comp=Z,26nm,21.9s,baz=258,slow=39						
CMAR	**Chiang Mai Arr**	**30.43**	**122**	P	**P**	**19 40 00.5**	**+0.7**
	0.3nm,0.5s,baz=8.5,slow=27,SNR=3.5						
AKASG	**Malin Array Be**	**32.79**	**307**	P	**P**	**19 40 21.1**	**+0.8**
	0.6nm,0.6s,baz=82,slow=6.8,SNR=3.4						
FINES	**FINESS Array B**	**36.92**	**325**	P	**P**	**19 40 55.9**	**+0.1**
	2.5nm,1.0s,baz=109,slow=10,SNR=4.6						
ARCES	**ARCESS Array B**	**40.35**	**337**	P	**P**	**19 41 25.3**	**+0.8**
	0.9nm,0.6s,baz=82,slow=8.7,SNR=4.2						
NOA	**NORSAR Array B**	**43.88**	**322**	P	**P**	**19 41 56.4**	**+2.9**
	0.7nm,0.7s,baz=95,slow=7.7,SNR=3.1						
ESDC	**Sonseca Array**	**57.54**	**298**	P	**P**	**19 43 40.1**	**+3.2**
	0.5nm,0.6s,baz=60,slow=8.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**66.45**	**269**	P	**P**	**19 44 38.6**	**+1.6**
	0.5nm,0.6s,baz=70,slow=5.1,SNR=3.7						
ILAR	**Eielson Array**	**73.47**	**16**	P	**P**	**19 45 21.8**	**+2.4**
	0.4nm,0.7s,baz=338,slow=2.3,SNR=4.1						
YKA	**Yellowknife Ar**	**80.05**	**3**	P	**P**	**19 46 00.2**	**+3.7**
	0.5nm,0.4s,baz=351,slow=5.3,SNR=5.0						

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*ISCJB **01** 19:44:50.9±0.5, 55°.52S±0°.07×27°.1W±0°.1, h25^{km}, mb4.7/17, MS3.6/1, Error ellipse: s-maj=12.6km s-min=8.2km az=141.5*

*IDC **01** 19:44:53.7±4.1, 55°.61S×27°.00W, h34^{km}±30^{km}, mb4.4/8, mb1 4.4/9, mb1mx4.1/23, mbtmp4.5/9, ML3.8/1, MS3.5/9, Ms1 3.4/9, ms1mx3.3/18, Error ellipse: s-maj=23.4km s-min=20.3km az=44.0*

*NEIC **01** 19:44:55.8±1.6, 55°.63S×27°.26W, h51^{km}±5^{km}, mb4.9/13, Error ellipse: s-maj=24.7km s-min=16.9km az=216.0*

ISC 01 19:44:52.3±0.5**, 55°.5S**±0°.1×**27°.1W**±0°.1**, h25^{km}, n64, σ0^{s}.94**/53**, mb4.9**/16**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.55**	**279**	*e*Pn	**Pn**	**19 46 12.7**	**-0.6**
VNA1	**Neumayer--Stat**	**17.26**	**159**	P	**P**	**19 48 54.1**	**+1.6**
VNA3	**Neumayer Olymp**	**17.46**	**161**	P	**P**	**19 48 58.0**	**+3.2**
VNA2	**Neumayer--Watz**	**17.65**	**159**	P	**P**	**19 48 58.2**	**+1.3**
SNAA	**Sanae**	**19.20**	**157**	P	**Pn**	**19 49 14.8**	**-0.1**
SNAA	**Sanae**	**19.20**	**157**	P	**P**	**19 49 13.4**	**-0.5**
	0.3nm,0.3s,baz=308,slow=9.8,SNR=28						
SNAA				LR	LR	19 54 60.0	
	comp=Z,73nm,19.8s,baz=306,slow=32						
SNAA				ScP	**ScP**	**19 57 08.4**	**-1.7**
	0.0nm,0.3s,baz=27,slow=0.1,SNR=2.7						
SNAA	**Sanae**	**19.20**	**157**	*e*P	**Pn**	**19 49 14.9**	**-0.1**
	4.9nm,0.8s						
PMSA	**Palmer Station**	**20.27**	**228**	P	Pn	19 49 27.1	-0.6
	41nm,1.1s,baz=69,slow=8.1,SNR=3.0						
PMSA				LR	LR	19 55 45.9	
	comp=Z,158nm,19.3s,baz=33,slow=32						
USHA	**Ushuaia**	**23.36**	**254**	P	**P**	**19 49 59.3**	**+0.8**
	8.2nm,0.8s,baz=139,slow=11,SNR=2.7						
PLCA	**Paso Flores**	**31.96**	**279**	LR	LR	20 04 43.1	
	comp=Z,51nm,19.1s,baz=144,slow=37						
QSPA	**South Pole Qui**	**34.71**	**180**	*e*P	**P**	**19 51 39.1**	**-0.9**
	22nm,1.5s						
CPUP	**Villa Florida**	**36.51**	**311**	P	**P**	**19 51 55.5**	**0.0**
	8.1nm,0.9s,baz=133,slow=7.7,SNR=5.5						
CPUP				LR	LR	20 04 38.8	
	comp=Z,72nm,20.6s,baz=180,slow=32						
GO03	**Copiap**	**41.64**	**294**	*e*P	**P**	**19 52 38.4**	**-0.1**
	72nm,1.8s						
BDFB	**Brasilia**	**42.94**	**330**	LR	LR	20 08 06.8	
	comp=Z,80nm,20.4s,baz=163,slow=32						
GO02	**Mina Guanaco**	**43.30**	**297**	*e*P	**P**	**19 52 52.7**	**+0.5**
	17nm,0.7s						
LVC	**Limon Verde**	**45.08**	**300**	*e*P	**P**	**19 53 07.5**	**+0.9**
	12nm,0.7s						
BOSA	**Boshof**	**45.80**	**76**	LR	LR	20 08 34.8	
	comp=Z,86nm,19.4s,baz=208,slow=31						
SBA	**Scott Base**	**46.59**	**184**	*e*P	**P**	**19 53 18.2**	**+0.7**
	4.9nm,1.0s						
PB01	**IPOC Station P**	**46.69**	**300**	*e*P	**P**	**19 53 19.3**	**+0.3**
	19nm,0.7s						
VNDA	**Vanda**	**47.09**	**183**	P	**P**	**19 53 20.2**	**-1.1**
	3.5nm,0.8s,baz=189,slow=7.1,SNR=3.4						
VNDA	**Vanda**	**47.09**	**183**	*e*P	**P**	**19 53 20.6**	**-0.7**
	3.8nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.50**	**17**	T	T	20 45 25.8	
	baz=190,slow=75,SNR=37						
H10S3	**ASCENSION HYDR**	**47.50**	**17**	T	T	20 45 26.5	
	baz=190,slow=75,SNR=35						
H10S1	**ASCENSION HYDR**	**47.51**	**17**	T	T	20 45 27.6	
	baz=190,slow=75,SNR=40						
GO01	**Chusmiza**	**47.71**	**301**	*e*P	**P**	**19 53 27.5**	**+0.1**
	15nm,0.8s						
PB11	**IPOC Station P**	**47.86**	**301**	*e*P	**P**	**19 53 29.7**	**+1.5**
	16nm,0.9s						
MNMC	**Minye Minye**	**48.37**	**301**	*e*P	**P**	**19 53 32.6**	**+0.3**
	15nm,0.8s						
H10N1	**ASCENSION HYDR**	**48.61**	**17**	T	T	20 46 49.9	
	baz=189,slow=75,SNR=18						
H10N3	**ASCENSION HYDR**	**48.62**	**17**	T	T	20 46 50.3	
	baz=189,slow=75,SNR=31						
H10N2	**ASCENSION HYDR**	**48.63**	**17**	T	T	20 46 51.0	
	baz=189,slow=75,SNR=23						
LBTB	**Lobatse**	**48.82**	**74**	P	**P**	**19 53 35.7**	**+0.2**
	3.1nm,0.9s,baz=209,slow=13,SNR=3.0						
LPAZ	**La Paz**	**50.12**	**305**	P	**P**	**19 53 47.1**	**+1.0**
	6.9nm,0.7s,baz=147,slow=5.5,SNR=32						
LPAZ				LR	LR	20 17 04.0	
	comp=Z,28nm,19.2s,baz=164,slow=38						
LPAZ	**La Paz**	**50.12**	**305**	*e*P	**P**	**19 53 46.9**	**+0.8**
	10nm,0.9s						
ROSC	**El Rosal**	**71.59**	**310**	LR	LR	20 28 21.6	
	comp=Z,22nm,20.9s,baz=90,slow=36						
TOA0	**Torodi Ar. Sit**	**72.59**	**29**	*e*P	**P**	**19 56 18.5**	**+1.3**
	23nm,1.9s						
TORD	**Torodi Ar. Bea**	**72.59**	**29**	P	**P**	**19 56 17.3**	**+0.1**
	6.5nm,0.3s,baz=217,slow=4.1,SNR=6.4						
TORD				LR	LR	20 22 24.2	
	comp=Z,36nm,19.8s,baz=115,slow=31						
TOA1	**Torodi Ar. Sit**	**72.59**	**29**	*e*P	**P**	**19 56 17.3**	**+0.1**
ASAR	**Alice Springs**	**99.47**	**162**	P	**Pdif**	**19 58 31.0**	**-1.9**
	0.7nm,0.9s,baz=177,slow=4.2,SNR=6.9						
FIA0	**FINESS Array S**	**123.91**	**28**	*e*PKPdf	**PKPdf**	**20 03 46.5**	**-0.1**
FINES	**FINESS Array B**	**123.91**	**28**	PKP	**PKPdf**	**20 03 46.5**	**-0.1**
	1.2nm,0.8s,baz=96,slow=2.8,SNR=7.6						
CMAR	**Chiang Mai Arr**	**125.20**	**110**	PKP	**PKPdf**	**20 03 50.1**	**-0.4**
	0.5nm,0.8s,baz=207,slow=3.7,SNR=5.0						
ARA0	**ARCESS Array S**	**130.45**	**22**	*e*PKPdf	**PKPdf**	**20 03 58.1**	**-0.9**
ARCES	**ARCESS Array B**	**130.45**	**22**	PKP	**PKPdf**	**20 03 58.1**	**-0.9**
	2.3nm,0.9s,baz=191,slow=1.2,SNR=7.9						
BVAR	**Borovoye Array**	**134.47**	**57**	PKP	**PKiKP**	**20 04 07.9**	**-0.5**
	0.5nm,0.5s,baz=207,slow=2.9,SNR=4.3						
YKA	**Yellowknife Ar**	**135.82**	**318**	PKP	**PKPdf**	**20 04 09.1**	**-0.1**
	0.8nm,0.6s,baz=123,slow=3.1,SNR=3.8						
YKB5	**Yellowknife Ar**	**135.82**	**318**	*e*PKPdf	**PKPdf**	**20 04 09.1**	**-0.1**
MK32	**Makanchi Array**	**136.68**	**71**	*e*PKPdf	**PKPdf**	**20 04 10.1**	**-1.3**
MKAR	**Makanchi Array**	**136.68**	**71**	PKP	**PKPdf**	**20 04 10.1**	**-1.3**
	0.1nm,0.4s,baz=221,slow=0.7,SNR=2.5						
ZALV	**Zalesovo Beam**	**142.10**	**63**	PKP	**PKPdf**	**20 04 22.0**	**+1.1**
	0.4nm,0.5s,baz=242,slow=3.1,SNR=3.0						
ZAA1	**Zalesovo Array**	**142.10**	**63**	*e*PKPdf	**PKPdf**	**20 04 22.0**	**+1.1**
HYT	**Haines Junctio**	**144.51**	**308**	*e*PKPdf	PKPbc	20 04 24.1	+0.2
INK	**Inuvik**	**145.43**	**321**	PKPbc	**PKPbc**	**20 04 26.4**	**0.0**
	6.0nm,0.8s,baz=112,slow=3.6,SNR=9.2						
INK	**Inuvik**	**145.43**	**321**	*e*PKPdf	**PKPdf**	**20 04 25.1**	**-1.2**
EPYK	**Eagle Plains**	**146.08**	**317**	*e*PKPdf	**PKPdf**	**20 04 27.8**	**+0.2**
DAWY	**Dawson**	**146.48**	**313**	*e*PKPdf	**PKPdf**	**20 04 28.9**	**+0.6**
RIDG	**Independent Ri**	**148.71**	**311**	*e*PKPdf	**PKPdf**	**20 04 32.9**	**+0.8**
ILAR	**Eielson Array**	**149.80**	**312**	PKPbc	**PKPbc**	**20 04 38.3**	**-0.2**
	3.9nm,0.9s,baz=122,slow=1.5,SNR=34						
ILB	**Eielson Array**	**149.80**	**312**	*e*PKPdf	**PKPdf**	**20 04 34.0**	**+0.3**
WRH	**Wood River Hil**	**150.26**	**312**	*e*PKPdf	**PKPdf**	**20 04 35.4**	**+1.0**
RND	**Reindeer**	**150.38**	**309**	*e*PKPbc	**PKPbc**	**20 04 40.3**	**+0.3**
KDAK	**Kodiak Island**	**150.62**	**297**	PKPbc	**PKPbc**	**20 04 40.8**	**+0.2**
	7.4nm,0.7s,baz=112,slow=5.4,SNR=3.7						
SONA0	**Songino Array**	**150.65**	**86**	*e*PKPbc	**PKPbc**	**20 04 41.2**	**0.0**
SONM	**Songino Array**	**150.65**	**86**	PKPbc	**PKPbc**	**20 04 41.2**	**0.0**
	3.5nm,0.8s,baz=233,slow=3.4,SNR=16						
BPAW	**Bear Paw Mtn.**	**151.44**	**310**	*e*PKPbc	**PKPbc**	**20 04 41.9**	**-0.5**

MAN 01 19:48:11.4, 9°.07N×125°.47E, h8^{km}, mb3.5, ML2.2, MS1.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.17**	**124**	*e*P	Pg	19 48 15.9	+0.9
BUTP				*e*S	Sg	19 48 26.0	+8.5
SCPH	**Surigao**	**0.71**	**1**	⇑*e*P	Pg	19 48 25.2	+0.1
SCPH				*e*S	Sb	19 48 36.2	+0.2
BUKP	**Musuan**	**1.25**	**199**	*e*P	Pn	19 48 34.2	-1.1

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*NIED **01** 20:01:00, 41°.50N×142°.10E, h50^{km}, Mw4.1 Best double couple: M$_0$1.76000×10^{15} NP1:φ$_s$169.00000°, δ18.00000°, λ60.00000°. NP2:φ$_s$20.00000°, δ74.00000°, λ99.00000°.*

*ISCJB **01** 20:01:55.8±0.3, 41°.54N±0°.03×142°.06E±0°.04, h70^{km}±3^{km}, mb3.9/17, Error ellipse: s-maj=6.2km s-min=3.4km az=32.9*

*JMA **01** 20:01:56.0±0.1, 41°.55N×142°.07E, h66^{km}±2^{km}, M3.9 Broadband fault plane solution: P waves. NP1: φ$_s$16.00000°, δ81.00000°, λ94.00000°. NP2:φ$_s$173.00000°, δ10.00000°, λ67.00000°. Principal axes: T Plg54.0000°, Azm291.0000°; N Plg4.0000°, Azm196.0000°; P Plg36.0000°, Azm103.0000°;*

JMA Felt II J1.

*IDC **01** 20:01:58.1±0.7, 41°.61N×141°.99E, h73^{km}±6^{km}, mb3.7/17, mb1 3.8/22, mb1mx3.6/64, mbtmp4.0/22, MS2.8/11, Ms1 2.8/11, ms1mx2.8/32 Error ellipse: s-maj=14.5km s-min=8.9km az=109.0*

ISC 01 20:01:57.5±0.6**, 41°.53N**±0°.04×**142°.09E**±0°.04**, h67^{km}**±5^{km}**, n53, σ1^{s}.80**/67**, mb4.0**/17**, 2C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	**Aomorihigashid**	**0.62**	**245**	⇓P	**Pn**	**20 02 10.2**	**-1.1**
JAHD				S	**Sn**	**20 02 20.4**	**-1.1**
JARK	**Aomorirokkasho**	**0.75**	**226**	P	**Pn**	**20 02 11.3**	**-1.5**
JARK				S	**Sn**	**20 02 22.2**	**-1.9**
JOT	**Ohata**	**0.79**	**260**	⇓P	**Pn**	**20 02 11.7**	**-1.6**
JOT				*e*S	**Sn**	**20 02 23.5**	**-1.5**
JKB	**Kayabe**	**0.87**	**295**	⇓P	**Pn**	**20 02 12.1**	**-2.1**
JKB				*e*S	**Sn**	**20 02 24.6**	**-1.9**
JNBK	**Urakawa-nobuka**	**0.90**	**33**	⇑P	**Pn**	**20 02 12.5**	**-2.1**
JNBK				*e*S	**Sn**	**20 02 25.7**	**-1.6**
JEM	**Erimo**	**0.94**	**58**	⇑P	**Pn**	**20 02 13.5**	**-1.5**
JEM				*e*S	**Sn**	**20 02 26.2**	**-1.9**
JTM	**Tenmabayashi**	**1.07**	**226**	⇓P	**Pn**	**20 02 15.8**	**-0.9**
JTM				*e*S	**Sn**	**20 02 29.8**	**-1.2**
JIAM	**Iburiatsuma**	**1.10**	**354**	P	**Pn**	**20 02 16.2**	**-0.9**
JIAM				*e*S	**Sn**	**20 02 31.2**	**-0.5**
JNB	**Noboribetsu**	**1.22**	**321**	⇓P	**Pn**	**20 02 16.5**	**-2.2**
JNB				*e*S	**Sn**	**20 02 32.1**	**-2.4**
JANG	**Nango**	**1.23**	**201**	⇓P	**Pn**	**20 02 17.6**	**-1.3**
JANG				S	**Sn**	**20 02 33.3**	**-1.5**
JSR	**Shiriuchi**	**1.25**	**271**	⇓P	**Pn**	**20 02 17.7**	**-1.4**
JSR				*e*S	**Sn**	**20 02 33.6**	**-1.6**
JBT2	**Biratori 2**	**1.26**	**9**	P	**Pn**	**20 02 18.4**	**-0.9**
JBT2				*e*S	**Sn**	**20 02 35.5**	**-0.1**
JEW	**Eniwo**	**1.39**	**340**	⇓P	**Pn**	**20 02 19.7**	**-1.2**
JEW				*e*S	**Sn**	**20 02 37.1**	**-1.4**
JYM2	**Yakumo 2**	**1.41**	**295**	⇓P	**Pn**	**20 02 20.1**	**-1.1**
JCH	**Churui**	**1.44**	**41**	P	**Pn**	**20 02 20.8**	**-0.8**
JCH				*e*S	**Sn**	**20 02 39.5**	**-0.2**
JOMM	**Oshimamatsumae**	**1.56**	**270**	P	**Pn**	**20 02 21.8**	**-1.3**
JFR	**Furan**	**1.68**	**13**	P	**Pn**	**20 02 23.3**	**-1.4**
JFR				*e*S	**Sn**	**20 02 44.5**	**-0.8**
JAH	**Hinai**	**1.73**	**220**	P	**Pn**	**20 02 25.3**	**-0.2**
JAH				*e*S	**Sn**	**20 02 46.4**	**-0.3**
JOSM	**Okushiri--Mats**	**2.03**	**287**	P	**Pn**	**20 02 27.7**	**-1.7**
ASAJ	**Asahikawa**	**2.61**	**8**	P	**Pn**	**20 02 37.2**	**-0.2**
	18nm,0.3s,baz=216,slow=20,SNR=134						
ASAJ				S	**Sn**	**20 03 07.0**	**-1.0**
	14nm,0.3s,baz=145,slow=32,SNR=10						
ASAJ				LR	LR	20 03 15.4	
	comp=Z,61nm,21.9s,baz=246,slow=30						

MJAR	Matsushiro Arr	5.82	212	P	Pn	20 03 22.7	+1.4
	0.2nm,0.3s,baz=22,slow=15,SNR=9.8						
MJAR				LR	LR	20 06 00.2	
	comp=Z,68nm,20.2s,baz=210,slow=41						
USRK	Ussuriysk Ar.	7.88	293	P	Pn	20 03 48.6	-0.7
	1.1nm,0.3s,baz=91,slow=14,SNR=18						
USRK				LR	LR	20 06 53.0	
	comp=Z,73nm,18.9s,baz=99,slow=38						
JHJ	Hachijo jima 2	8.59	193	P	Pn	20 03 59.2	0.0
	3.7nm,0.3s,baz=143,slow=24,SNR=4.3						
JHJ				S	Sn	20 05 28.1	-6.4
	6.0nm,0.3s,baz=37,slow=20,SNR=3.0						
JHJ				LR	LR	20 07 53.2	
	comp=Z,28nm,18.9s,baz=34,slow=41						
KLR	Kul'dur	10.58	320	P	Pn	20 04 27.9	+1.7
	0.2nm,0.3s,baz=121,slow=12,SNR=5.0						
KLR				LR	LR	20 08 33.6	
	comp=Z,86nm,20.4s,baz=124,slow=38						
KSRS	Korea Array	11.67	254	P	Pn	20 04 44.9	+3.8
	1.0nm,0.3s,baz=63,slow=14,SNR=12						
KSRS				S	Sn	20 06 56.7	+7.0
	0.4nm,0.3s,baz=70,slow=23,SNR=4.6						
KSRS				LR	LR	20 08 45.6	
	comp=Z,58nm,20.7s,baz=50,slow=35						
JNU	Nakatsue	12.24	230	P	Pn	20 04 50.8	+1.9
	0.3nm,0.3s,baz=138,slow=6.1,SNR=2.9						
JNU				LR	LR	20 09 21.3	
	comp=Z,43nm,19.7s,baz=358,slow=36						
MA2	Magadan	18.86	14	LR	LR	20 14 48.7	
	comp=Z,12nm,18.8s,baz=108,slow=41						
SONM	Songino Array	25.98	296	P	P	20 07 23.5	-0.4
	1.1nm,0.5s,baz=87,slow=8.1,SNR=8.1						
H11N2	WAKE ISLAND Hy	30.27	128	T	T	20 39 26.6	
	baz=325						
H11N1	WAKE ISLAND Hy	30.28	128	T	T	20 39 23.9	
	baz=325						
H11N3	WAKE ISLAND Hy	30.29	128	T	T	20 39 26.6	
	baz=325						
H11S1	WAKE ISLAND Hy	31.11	130	T	T	20 40 33.3	
	baz=318						
H11S3	WAKE ISLAND Hy	31.12	130	T	T	20 40 34.0	
	baz=318						
H11S2	WAKE ISLAND Hy	31.13	130	T	T	20 40 34.5	
	baz=318						
ZALV	Zalesovo Beam	39.40	308	P	P	20 09 19.8	-0.6
	2.5nm,0.5s,baz=92,slow=9.0,SNR=13						
MKAR	Makanchi Array	42.32	298	LR	LR	20 26 22.8	
	comp=Z,21nm,20.2s,baz=192,slow=35						
CMAR	Chiang Mai Arr	43.29	251	P	P	20 09 52.8	+0.1
	0.3nm,0.5s,baz=41,slow=8.4,SNR=3.5						
KURBB	Kurchatov Arra	43.77	304	P	P	20 09 55.4	-0.7
	2.1nm,0.4s,baz=78,slow=8.7,SNR=7.4						
KURBB				pP	pP	20 10 12.6	-0.1
	1.5nm,0.5s,baz=77,slow=8.7,SNR=3.3						
ILAR	Eielson Array	45.46	35	P	P	20 10 09.2	-0.2
	2.0nm,1.0s,baz=276,slow=6.4,SNR=17						
INK	Inuvik	50.17	29	P	P	20 10 46.0	+0.3
	1.6nm,0.5s,baz=283,slow=6.3,SNR=6.6						
KIRV	Kirov	57.02	321	P	P	20 11 35.5	-0.4
	4.2nm,0.6s,baz=80,slow=6.1,SNR=3.1						
RES	Resolute Bay	58.13	15	P	P	20 11 43.0	-0.5
	4.4nm,1.0s,baz=311,slow=6.6,SNR=8.7						
ARCES	ARCESS Array B	59.99	339	P	P	20 11 55.9	-0.6
	0.6nm,0.5s,baz=55,slow=7.8,SNR=5.1						
WRA	Warramunga Arr	61.58	188	P	P	20 12 06.6	-1.2
	1.1nm,0.7s,baz=7.0,slow=7.6,SNR=7.5						
FINES	FINESS Array B	65.10	332	P	P	20 12 29.6	-0.9
	1.7nm,0.5s,baz=48,slow=8.1,SNR=21						
FINES				LR	LR	20 41 50.0	
	comp=Z,40nm,19.9s,baz=55,slow=37						
ASAR	Alice Springs	65.31	188	P	P	20 12 31.9	-0.4
	0.4nm,0.6s,baz=5.7,slow=7.8,SNR=6.9						
NB2	NORSAR Subarra	70.25	337	P	P	20 13 02.2	-0.9
	comp=Z,0.4nm,0.5s,baz=35,slow=6.5						
NOA	NORSAR Array B	70.25	337	P	P	20 13 02.1	-0.9
	comp=Z,0.3nm,0.5s,baz=52,slow=7.8,SNR=5.3						
NOA				LR	LR	20 46 52.4	
	comp=Z,14nm,21.3s,baz=85,slow=38						
AKASG	Malin Array Be	71.08	322	P	P	20 13 07.3	-0.8
	comp=Z,1.1nm,0.5s,baz=43,slow=6.4,SNR=7.0						
NVAR	Mina Array Bea	71.92	55	P	P	20 13 15.3	+1.6
	comp=Z,0.2nm,0.6s,baz=354,slow=2.7,SNR=2.2						
NVAR				pP	pP	20 13 34.0	+2.5
	comp=Z,1.5nm,0.8s,baz=296,slow=5.6,SNR=7.6						
PDAR	Pinedale Array	74.17	47	P	P	20 13 26.6	-0.4
	comp=Z,0.2nm,0.5s,baz=252,slow=1.4,SNR=2.5						
PDAR				pP	pP	20 13 46.6	+1.8
	comp=Z,0.6nm,0.7s,baz=270,slow=2.4,SNR=3.6						
MMAI	Mount Meron Ar	79.80	305	P	P	20 13 58.2	-0.4
	comp=Z,0.5nm,0.4s,baz=28,slow=6.5,SNR=2.9						
LPAZ	La Paz	143.82	55	PKP	PKPdf	20 21 27.1	+1.1
	comp=Z,0.4nm,0.5s,baz=0.0,slow=1.0,SNR=2.4						

NNC 01 20:02:58.7±3.1, 37°.92N×71°.95E, h0^{km}, mb3.8, mpv3.4, 4C-3D, Error ellipse: s-maj=27.4km s-min=20.1km az=175.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.10	22	Pg	Pb	20 04 31.4	+2.6
	3.3nm,0.5s						
AAK				Lg	Lg	20 05 35.9	
	9.6nm,0.9s						
KK31	Karatay Array	5.29	349	⇑Pn	Pn	20 04 19.7	+0.7
	1.7nm,0.4s,baz=174,slow=13,SNR=21						
KK31				⇓Pg	Pb	20 04 34.9	+2.9
	3.5nm,0.5s,baz=172,slow=19,SNR=7.7						
KK31				⇑Lg	Lg	20 05 48.5	
	10nm,0.6s,baz=170,slow=26						
TKM2	Tokmak 2	5.72	28	⇓Pn	Pn	20 04 25.5	+0.4
	1.7nm,0.7s						
TKM2				⇓Lg	Lg	20 06 02.6	
	5.5nm,0.7s						
PDGK	Podgornoye	7.88	44	⇑Pn	Pn	20 04 53.5	-1.1
	2.6nm,1.2s						
PDGK				⇑Lg	Lg	20 07 09.0	
	2.8nm,1.0s						

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*SOME **01** 20:06:30.5, 38°.85N×73°.70E, h0^{km}*

*BJI **01** 20:06:42.8±0.0, 39°.22N×73°.13E, h7^{km}, mb4.3/25, mB4.6/20, ML4.3/6, Ms3.8/8, Ms7 3.7/10*

*NNC **01** 20:06:42.8±2.7, 39°.24N×73°.58E, h0^{km}, mb5.0, mpv4.7, Error ellipse: s-maj=24.9km s-min=13.8km az=152.0*

*IDC **01** 20:06:44.1±0.6, 39°.15N×73°.50E, h0^{km}, mb4.0/19, mb1 4.2/26, mb1mx4.0/56, mbtmp4.0/26, ML3.5/7, MS3.2/10, Ms1 3.2/10, ms1mx2.9/45, Error ellipse: s-maj=11.5km s-min=10.9km az=155.0*

*KRNET **01** 20:06:44.5±0.1, 39°.08N×73°.48E, mb4.8*

*MOS **01** 20:06:45.8±1.7, 39°.30N×73°.52E, h33^{km}, mb4.5/13, Error ellipse: s-maj=6.7km s-min=4.6km az=88.8*

*NEIC **01** 20:06:51.7±1.4, 39°.28N×73°.48E, h52^{km}±6^{km}, mb4.3/11, Error ellipse: s-maj=14.8km s-min=6.8km az=157.0*

ISC 01 20:06:43.6±0.9, **39°.25N**±0°.03×**73°.58E**±0°.02, **h4**^{km}±5^{km}, **n215**, σ**2^{s}.34**/223, **mb4.2**/36, **MS3.5**/9, **43C-24D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	1.40	280	⇓iP	Pg	20 07 10.1	-0.2
	baz=88						
DRK				⇓iS	Sg	20 07 27.7	-0.7
	baz=88						
KSH	Kashi	1.88	81	Pg	Pb	20 07 16.2	-2.3
KSH				Sg	Sn	20 07 33.1	-7.7
KSH				smax	smax		
	comp=N,9µm,0.7s						
KSH				smax	smax		
	comp=E,4µm,0.5s						
ARSB	Arslanbob	2.12	348	⇓eP	Pg	20 07 24.1	-0.1
	baz=51						
ARSB				⇓iS	Sg	20 07 53.6	+1.9
	baz=51						
BTK	Batken	2.28	292	ePn	Pb	20 07 24.6	-0.7
BTK	Batken	2.28	292	ePN	Pb	20 07 24.6	-0.7
BTK	Batken	2.28	292	⇓iP	Pb	20 07 25.0	-0.3
	baz=96						
BTK				⇓iS	Sb	20 07 53.7	-0.1
	baz=96						
GAR	Garm	2.55	265	ePn	Pb	20 07 29.5	-0.4
GAR	Garm	2.55	265	ePN	Pb	20 07 29.5	-0.4
ARLS	Aral	2.67	12	⇑iP	Pg	20 07 32.5	-2.3
	baz=13						
ARLS				⇑iS	Sg	20 08 07.6	-1.7
	baz=13						
ARK	Arkit	2.83	335	⇓iP	Pb	20 07 33.2	-1.5
	baz=38						
ARK				⇓iS	Sb	20 08 09.0	-0.7
	baz=38						
UCH	Uchtor	3.06	13	⇑eP	Pb	20 07 38.9	+0.1
	baz=14						
UCH				⇑iS	Sb	20 08 18.0	+1.3
	baz=14						
UCH	Uchtor	3.06	13	P	Pb	20 07 39.0	+0.1
	SNR=290						
KZA	Kyzart	3.10	24	⇑iP	Pb	20 07 39.2	-0.3
	baz=24						
KZA				⇑iS	Sb	20 08 19.1	+1.3
	baz=24						
KZA	Kyzart	3.10	24	P	Pb	20 07 39.4	-0.1
	SNR=232						
EKS2	Erkin-Say	3.41	3	⇑eP	Pb	20 07 43.2	-1.5
	baz=4.0						
EKS2				⇑iS	Sb	20 08 26.0	-0.5
	baz=4.0						
EKS2	Erkin-Say	3.41	3	P	Pb	20 07 43.5	-1.1
	SNR=62						
AAK	Ala-Archa	3.45	11	Pn	Pb	20 07 44.6	-0.9
	36nm,0.3s,baz=164,slow=6.0,SNR=127						
AAK				Sn	Sb	20 08 27.9	0.0
	14nm,0.3s,baz=12,slow=12,SNR=8.4						
AAK				Lg	Lg	20 08 34.7	
	21nm,0.3s,baz=18,slow=13,SNR=14						
AAK				LR	LR	20 09 22.4	
	comp=Z,177nm,21.9s,baz=190,slow=44						
AAK	Ala-Archa	3.45	11	ePn	Pb	20 07 44.3	-1.2
AAK	Ala-Archa	3.45	11	⇑Pg	Pg	20 07 46.9	-2.9
	131nm,0.5s						
AAK				Lg	Lg	20 08 34.5	
	688nm,0.8s						
AAK	Ala-Archa	3.45	11	⇓iP	Pb	20 07 43.8	-1.6
	baz=12						
AAK				⇓iS	Sb	20 08 27.2	-0.6
	baz=12						
AAK	Ala-Archa	3.45	11	P	Pb	20 07 44.4	-1.0
	SNR=119						
MRKS	Merke	3.50	356	Pg	Pb	20 07 44.1	-2.1
	56nm,0.7s						
MRKS				Pg	Pg	20 07 51.0	+0.3
	116nm,0.3s						
MRKS				Lg	Lg	20 08 27.0	
	180nm,0.4s						
MRKS				Lg	Lg	20 08 36.3	
	567nm,0.6s						
MRKS	Merke	3.50	356	eP	Pb	20 07 44.0	-2.1
	43nm,0.2s						
MRKS				eS	Sb	20 08 31.3	+2.2
	219nm,0.5s						
KBK	Karagaybulak	3.56	17	⇑iP	Pb	20 07 45.5	-1.7
	baz=17						
KBK				⇑iS	Sb	20 08 29.9	-0.9
	baz=17						
KBK	Karagaybulak	3.56	17	P	Pb	20 07 46.2	-1.0
	SNR=86						
ULHL	Ulahol	3.61	33	⇑eP	Pb	20 07 45.9	-2.3
	baz=33						
ULHL				⇑iS	Sb	20 08 31.2	-1.2
	baz=33						
ULHL	Ulahol	3.61	33	P	Pb	20 07 46.5	-1.7
	SNR=12						
FRU1	Bishkek	3.64	12	ePn	Pb	20 07 47.0	-1.6
FRU1	Bishkek	3.64	12	ePN	Pb	20 07 47.0	-1.6
FRU1	Bishkek	3.64	12	⇑eP	Pb	20 07 46.1	-2.5
	baz=13						
FRU1				⇑eS	Sb	20 08 31.1	-2.1
	baz=13						
BOOM	Boomskoye usch	3.70	28	ePn	Pb	20 07 47.6	-2.0
BOOM	Boomskoye usch	3.70	28	ePN	Pb	20 07 47.6	-2.0
BOOM	Boomskoye usch	3.70	28	⇑iP	Pb	20 07 46.9	-2.7
	baz=28						
BOOM				⇑iS	Sb	20 08 31.9	-3.0
	baz=28						
CHMS	Chumysh	3.85	13	⇓iP	Pb	20 07 49.0	-3.1
	baz=13						
CHMS				⇓iS	Sb	20 08 36.2	-2.8
	baz=13						
CHMS	Chumysh	3.85	13	P	Pb	20 07 49.7	-2.4
	SNR=97						
TAS	Tashkent	3.88	304	⇑eP	Pb	20 07 47.9	-4.7
	baz=6.0						
TAS				⇑eS	Sb	20 08 34.4	-5.6
	baz=6.0						
TKM2	Tokmak 2	3.97	22	⇑Pn	Pb	20 07 51.5	-2.8
	110nm,0.7s						
TKM2				⇓Lg	Lg	20 08 51.5	
	301nm,0.9s						
TKM2	Tokmak 2	3.97	22	PN	Pb	20 07 51.5	-2.8
TKM2				pmax	pmax		
	comp=Z,110nm,0.7s						
TKM2	Tokmak 2	3.97	22	⇑iP	Pb	20 07 51.2	-3.1
	baz=22						
TKM2				⇑eS	Sb	20 08 39.8	-3.0
	baz=22						
TKM2	Tokmak 2	3.97	22	P	Pb	20 07 51.5	-2.8
	SNR=46						
KDJ	Kajisay	3.97	42	ePn	Pb	20 07 51.3	-3.0
KDJ	Kajisay	3.97	42	ePN	Pb	20 07 51.3	-3.0
KDJ	Kajisay	3.97	42	⇑eP	Pb	20 07 50.9	-3.4
	baz=42						
KDJ				⇑iS	Sb	20 08 38.9	-3.9
	baz=42						
USP	Ospenovka	4.07	10	⇑iP	Pb	20 07 52.0	-3.9
	baz=10.0						
USP				⇑iS	Sb	20 08 41.8	-3.7
	baz=10.0						
USP	Ospenovka	4.07	10	P	Pb	20 07 53.2	-2.7
	SNR=28						
KST	Kastek	4.20	25	Pg	Pb	20 07 55.0	-3.0
	comp=Z,107nm,0.7s						
KST				Pg	Pg	20 08 02.6	-1.4
	comp=Z,121nm,0.7s						
KST				Lg	Lg	20 08 46.1	
	comp=Z,153nm,0.9s						
KST				Lg	Lg	20 08 59.7	
	comp=Z,265nm,0.9s						
KST	Kastek	4.20	25	eP	Pb	20 07 54.8	-3.3
	comp=Z,18nm,0.2s						
KST				eS	Sg	20 08 59.4	+1.1
	comp=Z,157nm,0.3s						
DGS	Degeres	4.32	22	Pg	Pb	20 07 58.7	-1.5
	comp=Z,109nm,0.7s						
DGS				Pg	Pb	20 08 00.1	0.0
	comp=Z,111nm,0.6s						
DGS				Lg	Lg	20 08 42.3	
	comp=Z,199nm,0.6s						
DGS				Lg	Lg	20 09 01.7	
	comp=Z,202nm,0.7s						
MTBS	Maitube	4.43	28	Pg	Pb	20 07 58.3	-3.8
	comp=Z,19nm,0.4s						
MTBS				Pg	Pb	20 08 00.7	-1.4
	comp=Z,23nm,0.4s						
MTBS				Lg	Lg	20 09 04.7	
	comp=Z,210nm,0.9s						
MTBS				Lg	Lg	20 09 04.8	
	comp=Z,210nm,0.8s						
KK31	Karatay Array	4.49	330	ePn	Pn	20 07 56.3	+3.8
KK31	Karatay Array	4.49	330	⇑Pn	Pb	20 07 56.7	-6.3
	comp=Z,14nm,0.3s,baz=143,slow=12,SNR=143						
KK31				Pg	Pg	20 08 07.9	-1.7
	comp=Z,68nm,0.6s,baz=171,slow=17,SNR=6.6						
KK31				⇑Lg	Lg	20 09 03.4	
	comp=Z,118nm,0.7s,baz=141,slow=23,SNR=4.1						
KK31	Karatay Array	4.49	330	ePN	Pn	20 07 56.3	+3.9
KKAR	Karatay Array	4.49	330	ePn	Pn	20 07 56.2	+3.8
KKAR	Karatay Array	4.49	330	ePN	Pn	20 07 56.2	+3.8
TNSS	Tian-Shan	4.56	33	Pg	Pb	20 08 02.5	-1.9
	comp=Z,50nm,0.5s						
TNSS				Lg	Lg	20 09 11.8	
	comp=Z,310nm,0.7s						
AAA	Alma-Ata	4.69	31	Pg	Pb	20 08 02.3	-4.1
	comp=Z,153nm,0.7s						
AAA				Pg	Pg	20 08 06.1	-7.3
	comp=Z,153nm,0.8s						
AAA				Lg	Lg	20 09 11.1	
	comp=Z,303nm,1.1s						
AAA				Lg	Lg	20 09 15.7	
	comp=Z,268nm,0.8s						
AAA	Alma-Ata	4.69	31	ePN	Pg	20 08 12.5	-0.9
AAA				pmax	pmax		
	comp=Z,151nm,0.6s						
MDOK	Medeo	4.71	33	Pg	Pb	20 08 05.1	-1.7
	comp=Z,155nm,0.6s						
MDOK				Pg	Pb	20 08 06.4	-0.4
	comp=Z,155nm,0.8s						
MDOK				Lg	Lg	20 09 15.4	
	comp=Z,187nm,1.1s						
MDOK				Lg	Lg	20 09 15.6	
	comp=Z,178nm,1.2s						
KNDC	Almaty	4.71	32	⇑Pg	Pg	20 08 13.1	-0.9
	comp=Z,415nm,0.8s						
KNDC				⇓Lg	Lg	20 09 17.0	
	comp=Z,949nm,1.2s						
KOTS	Kotyrbulak	4.79	33	Pg	Pb	20 08 08.9	+0.7
	comp=Z,113nm,0.8s						
KOTS				Pg	Pg	20 08 14.6	-0.7
	comp=Z,69nm,0.7s						
KOTS				Lg	Lg	20 09 06.8	
	comp=Z,842nm,1.1s						
KOTS				Lg	Lg	20 09 19.9	
	comp=Z,2µm,1.1s						
PRZ	Przheval'sk	4.88	47	ePn	Pb	20 08 03.5	-6.2
PRZ	Przheval'sk	4.88	47	ePN	Pb	20 08 03.5	-6.2
PRZ	Przheval'sk	4.88	47	⇑eP	Pb	20 08 03.3	-6.4
	baz=46						
PRZ				⇑eS	Sn	20 08 59.9	+4.9
	baz=46						
KTBS	Karatobe	5.03	27	Pg	Pb	20 08 12.4	+0.2
	comp=Z,94nm,1.0s						
KTBS				P	Pg	20 08 13.9	-6.0
	comp=Z,68nm,0.8s						
KTBS				Lg	Lg	20 09 25.9	
	comp=Z,334nm,0.7s						
KUU	Kurty	5.08	23	Pg	Pb	20 08 10.4	-2.6
	comp=Z,58nm,0.8s						
KUU				Pg	Pb	20 08 10.6	-2.4
	comp=Z,56nm,0.6s						
KUU				Lg	Lg	20 09 21.4	
	comp=Z,448nm,0.5s						
KUU				Lg	Lg	20 09 24.7	
	comp=Z,417nm,0.9s						
CHKK	Chushkaly	5.26	28	Pg	Pb	20 08 13.0	-3.2
	comp=Z,45nm,0.9s						
CHKK				Pg	Pg	20 08 16.3	-8.2
	comp=Z,42nm,1.0s						
CHKK				Lg	Lg	20 09 29.4	
	comp=Z,152nm,0.9s						
CHKK				Lg	Lg	20 09 32.5	
	comp=Z,152nm,0.6s						
SATY	Saty	5.27	42	Pg	Pb	20 08 12.9	-3.4
	comp=Z,152nm,0.9s						
SATY				Pg	Pg	20 08 22.4	-2.1
	comp=Z,172nm,0.8s						
SATY				Lg	Lg	20 09 28.8	
	comp=Z,142nm,1.0s						
SATY				Lg	Lg	20 09 42.4	
	comp=Z,205nm,1.2s						
KURS	Kuram	5.46	38	Pg	Pb	20 08 18.8	-0.8
	comp=Z,64nm,0.9s						
KURS				Pg	Pg	20 08 23.7	-4.5
	comp=Z,59nm,0.8s						
KURS				Lg	Lg	20 09 36.2	
	comp=Z,48nm,1.6s						
KURS				Lg	Lg	20 09 47.5	
	comp=Z,83nm,2.2s						
CEP	Cherat	5.58	194	P	Pn	20 08 12.3	+4.8
CEP				S	Sb	20 09 23.0	-6.0
CHCP	Chirah Chowk	5.59	183	P	Pb	20 08 13.8	-7.9
NIL	Nilore	5.60	183	ePn	Pb	20 08 13.4	-8.5
NIL	Nilore	5.60	183	ePN	Pb	20 08 13.4	-8.5
UZB	Uzynbulak	5.66	45	Pg	Pb	20 08 25.4	+2.4
	comp=Z,38nm,1.0s						
UZB				Lg	Lg	20 09 47.1	
	comp=Z,58nm,1.3s						
BTLS	Baital	5.80	3	Pg	Pg	20 08 32.3	-2.3
	comp=Z,12nm,0.8s						
BTLS				Lg	Lg	20 09 36.8	
	comp=Z,25nm,0.6s						
ARXS	Arharly	5.89	31	Pg	Pb	20 08 25.4	-1.4
	comp=Z,59nm,0.7s						
ARXS				Pg	Pb	20 08 26.8	-0.1
	comp=Z,59nm,0.6s						
ARXS				Lg	Lg	20 09 50.0	
	comp=Z,104nm,1.2s						
ARXS				Lg	Lg	20 09 50.2	
	comp=Z,138nm,1.2s						
KBL	Kabul	5.94	219	ePn	Pb	20 08 18.8	-9.0
KBL	Kabul	5.94	219	ePN	Pb	20 08 18.8	-9.0
PDGK	Podgornoye	6.04	46	⇓Pn	Pn	20 08 18.1	+4.3
	comp=Z,20nm,0.7s						
PDGK				⇑Pg	Pg	20 08 38.5	-0.7
	comp=Z,58nm,0.7s						
PDGK				⇑Lg	Lg	20 10 00.9	
	comp=Z,98nm,0.8s						
PDGK	Podgornoye	6.04	46	PN	Pn	20 08 18.7	+4.9
PDGK				pmax	pmax		
	comp=Z,20nm,0.7s						
THW	Thamme Wali	6.61	194	P	Pn	20 08 25.5	+3.9
DJR	Jarkent	6.88	40	Pg	Pg	20 08 50.6	-4.8
	comp=Z,27nm,1.2s						
DJR				Lg	Lg	20 10 08.2	
	comp=Z,18nm,1.3s						
THN	Thein Dam	7.02	165	eP	Pn	20 08 31.5	+4.3
THN				ex	x	20 09 57.5	
DHRM	DHARAMSHALA	7.33	162	eP	Pn	20 08 35.3	+3.7
DHRM				eS	Sn	20 09 51.5	-3.9
DHRM				IAML		20 10 14.4	
	comp=E,204nm,0.5s						
DHRM				IAML		20 10 14.5	
	comp=N,230nm,0.7s						
SMLA	Simla	8.62	159	eP	Pn	20 08 52.8	+3.7
SMLA				eS	Sn	20 10 24.5	-2.3
SMLA				IAML		20 10 32.8	
	comp=E,93nm,0.4s						
SMLA				IAML		20 10 36.0	
	comp=N,97nm,0.6s						
OTUK	Ortayu	9.04	355	⇑Pn	Pn	20 08 57.7	+2.9
	comp=N,4.8nm,0.5s						
OTUK				⇑Lg	Lg	20 11 29.0	
	comp=N,60nm,0.7s						
OTUK	Ortayu	9.04	355	P	Pn	20 08 57.7	+2.9
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DDI	Dehra Dun	9.64	156	eP	Pn	20 09 05.7	+2.5
DDI				eS	Sn	20 10 47.3	-4.6
DDI				IAML		20 11 04.1	
	comp=N,117nm,0.2s						
DDI				IAML		20 11 05.2	
	comp=E,90nm,0.6s						
MAKZ	Makanchi	9.74	36	ePn	Pn	20 09 09.3	+4.9
MAKZ	Makanchi	9.74	36	⇓Pn	Pn	20 09 10.5	+6.1
	comp=E,3.8nm,0.7s						
MAKZ				⇓Lg	Lg	20 11 55.3	
	comp=E,24nm,1.3s						
MAKZ	Makanchi	9.74	36	eP	Pn	20 09 09.3	+4.9
MK31	Makanchi Array	9.87	37	ePn	Pn	20 09 10.9	+4.7
MK31	Makanchi Array	9.87	37	⇓Pn	Pn	20 09 11.8	+5.5
	comp=E,12nm,0.9s,baz=222,slow=16,SNR=18						
MK31				⇑Lg	Lg	20 12 03.7	
	comp=E,37nm,1.3s,baz=213,slow=27,SNR=3.7						
MK31	Makanchi Array	9.87	37	eP	Pn	20 09 10.9	+4.6
MK32	Makanchi Array	9.87	37	ePn	Pn	20 09 10.6	+4.3
MKAR	Makanchi Array	9.87	37	Pn	Pn	20 09 10.6	+4.3
	comp=E,0.4nm,0.3s,baz=221,slow=13,SNR=15						
MKAR				Lg	Lg	20 12 00.5	
	comp=E,0.7nm,0.3s,baz=209,slow=29,SNR=3.7						
MKAR				LR	LR	20 12 44.0	
	comp=E,77nm,20.9s,baz=220,slow=36						
SONA	Sohna	11.35	164	eP	Pn	20 09 30.0	+3.4
SONA				eS	Sn	20 11 27.0	-6.8
WMQ	Urumqi	11.52	62	eP	Pn	20 09 35.6	+6.7
WMQ				LR	LR		
	comp=E,150nm,6.9s						
KURBB	Kurchatov Arra	11.90	15	Pn	Pn	20 09 36.5	+2.5
	comp=E,0.1nm,0.3s,baz=204,slow=12,SNR=9.5						
KURBB				Lg	Lg	20 12 58.0	
	comp=E,0.2nm,0.3s,baz=203,slow=28,SNR=8.1						
KURBB	Kurchatov Arra	11.90	15	⇓Pn	Pn	20 09 35.8	+1.9
	comp=E,2.1nm,0.5s						
KURBB				⇓Lg	Lg	20 13 05.3	
	comp=E,64nm,1.0s						
KURK	Kurchatov	12.00	16	ePn	Pn	20 09 37.8	+2.4
KURK	Kurchatov	12.00	16	⇑Pn	Pn	20 09 36.8	+1.4
	comp=E,4.1nm,1.0s						
KURK				⇓Lg	Lg	20 13 09.3	
	comp=E,116nm,1.3s						
KURK	Kurchatov	12.00	16	i P	Pn	20 09 37.2	+1.8
GEYT	Alibeck	12.17	269	Pn	Pn	20 09 34.9	-2.9
	comp=E,1.0nm,0.3s,baz=72,slow=14,SNR=14						
GEYT				Sn	Sn	20 11 49.1	-4.9
	comp=E,1.1nm,0.3s,baz=92,slow=30,SNR=4.5						

GYA0B	ALIBECK ARRAY	12.17	269	⇑Pn	Pn	20 09 35.6	-2.2
GYA0B				⇓Sn	Sn	20 11 50.5	-3.5
PYUN	Piuthan	13.60	142	eP	Pn	20 09 55.3	-2.1
	comp=E,45nm,0.5s						
DANN	Dangsing	13.77	139	eP	Pn	20 09 58.0	-1.9
	comp=E,56nm,0.6s						
BVAR	Borovoye Array	13.95	352	Pn	Pn	20 10 02.4	+0.4
	comp=E,0.7nm,0.3s,baz=157,slow=13,SNR=21						
AB31	Akbulak array	13.96	320	⇑Pn	Pn	20 10 01.6	-0.5
	comp=E,8.8nm,0.6s,baz=133,slow=13,SNR=90						
AB31				⇑Sn	Sn	20 12 33.3	-4.1
	comp=E,14nm,0.9s,baz=126,slow=24,SNR=7.4						
AB31	Akbulak array	13.96	320	P	Pn	20 10 01.6	-0.5
AB31				S	Sn	20 12 33.3	-4.1
AB31				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AB31				smax	smax		
	comp=N,14nm,1.0s						
ABKAR	Akbulak array	13.96	320	ePn	Pn	20 10 01.5	-0.6
BRVK	Borovoye	13.99	352	ePn	Pn	20 10 02.4	-0.2
BRVK	Borovoye	13.99	352	eP	Pn	20 10 02.4	-0.2
GKN	Gorkha	14.50	137	eP	Pn	20 10 07.4	-2.4
KKN	Kakani	15.02	136	eP	Pn	20 10 14.1	-2.7
	comp=N,15nm,0.5s						
DMN	Daman	15.07	137	eP	Pn	20 10 14.3	-3.2
	comp=N,18nm,0.5s						
PKIN	Phulchoki	15.25	136	eP	Pn	20 10 16.9	-3.0
	comp=N,29nm,0.8s						
GUN	Gumba	15.25	134	eP	Pn	20 10 17.6	-2.4
	comp=N,29nm,0.5s						
PKI	Pulchoki	15.26	136	eP	Pn	20 10 16.8	-3.3
	comp=N,18nm,0.5s						
JIRN	Jiri	15.62	134	eP	Pn	20 10 22.0	-2.9
	comp=N,34nm,0.4s						
AKTO	Aktyubinsk	15.67	321	Pn	Pn	20 10 25.3	+0.1
	comp=N,0.8nm,0.3s,baz=133,slow=13,SNR=31						
AKTO				Sn	Sn	20 13 14.7	-4.5
	comp=N,0.2nm,0.3s,baz=351,slow=19,SNR=6.1						
AKTO				LR	LR	20 17 20.6	
	comp=N,43nm,20.7s,baz=122,slow=40						
AKTO	Aktyubinsk	15.67	321	⇓Pn	Pn	20 10 25.3	+0.1
	comp=N,10.0nm,0.7s						
AKTO				⇓Sn	Sn	20 13 16.5	-2.6
	comp=N,9.2nm,0.8s						
BHPL	Bhopal	16.29	167	eP	P	20 10 36.8	+0.3
BHPL				ex	x	20 13 26.9	
ZAA0	Zalesovo Array	16.57	24	ePn	P	20 10 37.5	-1.8
	comp=N,18nm,1.1s						
ZALV	Zalesovo Beam	16.57	24	Pn	P	20 10 39.2	-0.1
	comp=N,1.6nm,0.3s,baz=211,slow=12,SNR=21						
ZALV				Lg	Lg	20 15 34.8	
	comp=N,0.1nm,0.3s,baz=217,slow=24,SNR=3.6						
ZALV				LR	LR	20 17 48.0	
	comp=N,35nm,20.0s,baz=248,slow=40						
ZAA1	Zalesovo Array	16.58	24	ePn	P	20 10 39.2	-0.2
LSA	Lhasa	17.32	118	ePn	P	20 10 51.0	+2.8
	comp=N,5.1nm,1.0s						
LSA	Lhasa	17.32	118	P	P	20 10 50.8	+2.6
LSA				pmax	pmax		
	comp=N,3.0nm,0.1s						
LSA	Lhasa	17.32	118	eP	P	20 10 51.0	+2.8
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOK	Bokaro	18.61	142	eP	Pn	20 11 04.5	+2.3
NGP	Nagpur	18.64	164	eP	Pn	20 11 04.0	+1.3
NGP				IAmb	IAmb	20 11 15.2	
	comp=Z,27nm,1.4s						
SVE	Sverdlovsk	19.54	338	eP	Pn	20 11 14.0	+0.8
AKT	Akhty	19.80	285	eP	Pn	20 11 17.9	+1.4
AKT				eS	Sn	20 15 02.8	+3.5
AKT				pmax	pmax		
	comp=Z,11nm,0.8s						
ARU	Arti	19.85	335	P	Pn	20 11 16.5	-0.3
	comp=Z,0.0nm,0.3s,baz=160,slow=5.8,SNR=17						
ARU				Lg	Lg	20 17 21.9	
	comp=Z,0.0nm,0.3s,baz=144,slow=23,SNR=5.7						
ARU				LR	LR	20 19 27.2	
	comp=Z,51nm,18.6s,baz=136,slow=38						
ARU	Arti	19.85	335	eP	Pn	20 11 17.6	+0.8
	comp=Z,11nm,0.8s						
ARU	Arti	19.85	335	c iP	Pn	20 11 19.7	+2.9
ARU				S	Sn	20 15 04.1	+4.0
ARU				pmax	pmax		
	comp=Z,12nm,0.8s						
GTA	Gaotai	20.28	81	eP	Pn	20 11 25.0	+2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,41nm,7.6s						
GTA				LR	LR		
	comp=Z,150nm,19.4s						
GTA				LR	LR		
	comp=Z,110nm,18.1s						
GTA				LR	LR		
	comp=Z,150nm,17.8s						
BTLR	Botlikh	20.90	288	iP	Pn	20 11 31.8	+2.3
GROC	Groznyy	21.22	290	eP	P	20 11 28.1	-2.2
GROC				pmax	pmax		
	comp=Z,7.0nm,0.4s						
GNI	Garni	22.17	282	P	P	20 11 44.7	+4.0
	comp=Z,13nm,1.0s,baz=215,slow=5.8,SNR=6.3						
GNI	Garni	22.17	282	eP	P	20 11 42.0	+1.3
	comp=Z,35nm,1.3s						
GNI	Garni	22.17	282	iP	P	20 11 44.9	+4.2
GNI				pmax	pmax		
	comp=Z,25nm,0.8s						
NCK	Nalchik	22.83	290	iP	P	20 11 52.2	+4.6
NCK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KBZ	Khabaz	23.34	291	P	P	20 11 54.1	+1.4
	comp=Z,1.8nm,0.8s,baz=86,slow=14,SNR=1.9						
KBZ				LR	LR	20 23 04.4	
	comp=Z,64nm,18.8s,baz=102,slow=42						
NEY	Neytrino	23.47	290	c eP	P	20 11 59.2	+4.9
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	Kislovodsk	23.49	292	eP	P	20 11 56.4	+1.9
	comp=Z,13nm,0.7s						
KIV	Kislovodsk	23.49	292	eP	P	20 11 57.8	+3.3
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
KIV				MLR	MLR		
	comp=Z,123nm,15.0s						
SHA1	Shidzhatmaz	23.51	291	iP	P	20 11 57.7	+2.9
ZAK	Zakamensk	23.67	52	eP	P	20 11 58.8	+2.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONA0	Songino Array	25.14	59	eP	P	20 12 12.9	+3.1
SONM	Songino Array	25.14	59	P	P	20 12 12.9	+3.1
	comp=Z,3.5nm,0.7s,baz=268,slow=8.2,SNR=24						
SONM				LR	LR	20 22 39.5	
	comp=Z,62nm,19.3s,baz=260,slow=38						
ULN	Ulaanbaatar	25.58	59	eP	P	20 12 15.8	+2.0
	comp=Z,4.6nm,0.9s						
ULN	Ulaanbaatar	25.58	59	iP	P	20 12 16.7	+2.9
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSR	Storozhevoye	26.77	308	eP	P	20 12 27.6	+3.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	27.25	311	eP	P	20 12 30.0	+1.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RAYN	Ar Rayn	28.48	245	eP	P	20 12 42.9	+2.9
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	28.48	245	eP	P	20 12 42.9	+2.9
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	Hu-ho-hao-te	28.98	75	P	P	20 12 48.7	+4.4
HHC				S	S	20 17 42.5	+6.6
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,14nm,5.7s						
HHC				LR	LR		
	comp=Z,150nm,15.1s						
HHC				LR	LR		
	comp=Z,160nm,13.9s						
CMAR	Chiang Mai Arr	30.20	126	P	P	20 12 57.8	+2.6
	comp=Z,0.3nm,0.7s,baz=313,slow=8.5,SNR=2.8						
BR101	Keskin Array S	30.65	284	eP	P	20 13 00.8	+1.6
BRTR	Keskin Array B	30.65	284	P	P	20 13 00.8	+1.6
	comp=Z,2.7nm,0.8s,baz=91,slow=9.1,SNR=10						
BRTR	Keskin Array B	30.65	284	iP	P	20 13 04.5	+5.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	32.92	305	P	P	20 13 19.9	+1.0
	comp=Z,1.1nm,0.3s,baz=69,slow=7.4,SNR=7.5						
AKBB	Malin Array Si	32.92	305	eP	P	20 13 19.8	+1.0
	comp=Z,4.6nm,0.8s						
AKBB	Malin Array Si	32.92	305	eP	P	20 13 19.8	+1.0
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FIA0	FINESS Array S	36.42	323	eP	P	20 13 50.2	+1.4
FIA0	FINESS Array S	36.42	323	eP	P	20 13 50.3	+1.4
FINES	FINESS Array B	36.42	323	P	P	20 13 50.2	+1.4
	comp=Z,1.9nm,0.4s,baz=112,slow=8.4,SNR=16						
ARA0	ARCESS Array S	39.43	336	eP	P	20 14 15.5	+1.2
ARCES	ARCESS Array B	39.43	336	P	P	20 14 15.5	+1.2
	comp=Z,1.6nm,0.4s,baz=110,slow=8.6,SNR=34						
ARCES	ARCESS Array B	39.43	336	eP	P	20 14 15.8	+1.5
ARE0	ARCESS Array S	39.43	336	eP	P	20 14 15.3	+1.0
KTK1	Kautokeino	39.97	334	eP	P	20 14 20.3	+1.5
HAMF	Hammerfest	40.46	337	eP	P	20 14 21.9	-0.9
YAK	Yakutsk	40.55	37	⇑eP	P	20 14 26.3	+2.7
YAK				pmax	pmax		
	comp=Z,26nm,1.0s						
TRO	Tromso	41.62	335	eP	P	20 14 33.5	+1.1
KLR	Kul'dur	41.90	57	P	P	20 14 37.4	+2.5
	comp=Z,2.5nm,0.5s,baz=286,slow=7.0,SNR=14						
KLR				LR	LR	20 33 40.7	
	comp=Z,59nm,18.4s,baz=204,slow=38						
KLR	Kul'dur	41.90	57	iP	P	20 14 37.3	+2.3
KLR				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KSRS	Korea Array	42.12	75	LR	LR	20 35 17.1	
	comp=Z,58nm,20.0s,baz=274,slow=41						
TIXI	Tiksi	42.46	23	P	P	20 14 40.8	+1.6
	comp=Z,1.9nm,0.4s,baz=203,slow=4.1,SNR=3.9						
MOR8	Moi Rana	42.47	329	eP	P	20 14 39.6	+0.2
STEI	Steigen	42.48	332	eP	P	20 14 40.8	+1.4
KONS	Konsvik	43.05	329	eP	P	20 14 45.5	+1.5
GEC2	GERESS Array S	43.07	303	eP	P	20 14 46.8	+2.2
	comp=Z,13nm,1.9s						
GEC2	GERESS Array S	43.07	303	eP	P	20 14 46.8	+2.2
GEC2				pmax	pmax		
	comp=Z,13nm,1.9s						
GERES	GERESS Array B	43.07	303	P	P	20 14 46.1	+1.6
	comp=Z,1.3nm,0.7s,baz=56,slow=7.1,SNR=7.4						
USRK	Ussuriysk Ar.	43.09	64	P	P	20 14 46.5	+1.9
	comp=Z,1.7nm,0.8s,baz=260,slow=9.2,SNR=4.0						
CLL	Collm	43.11	307	eP	P	20 14 46.0	+1.2
NSS	Namsos	43.29	326	eP	P	20 14 47.4	+1.3
NC602	NORSAR Array S	43.30	321	eP	P	20 14 45.4	-0.7
NORES	NORESS Array B	43.30	321	eP	P	20 14 49.1	+2.9
NC303	NORSAR Array S	43.39	321	eP	P	20 14 48.2	+1.3
	comp=Z,163nm,2.0s						
NB2	NORSAR Subarra	43.46	321	P	P	20 14 48.1	+0.6
	comp=Z,1.4nm,0.5s,baz=91,slow=8.6						
NB2	NORSAR Subarra	43.46	321	P	P	20 14 48.1	+0.6
	baz=91,slow=8.6						
NB200	NORSAR Array S	43.46	321	eP	P	20 14 48.3	+0.8
NOA	NORSAR Array B	43.46	321	P	P	20 14 48.3	+0.8
	comp=Z,2.2nm,0.7s,baz=91,slow=7.7,SNR=13						
SKAR	Skarslia	44.89	321	eP	P	20 14 60.0	+1.0
HSPB	Hornsund (broa	45.02	344	eP	P	20 15 01.7	+1.9
AKN	Aaknes	45.47	323	eP	P	20 15 04.1	+0.6
BLS5	Blasjo	45.90	319	eP	P	20 15 07.0	0.0
KBS	Kingsbay	46.40	346	eP	P	20 15 09.9	-0.8
TGY	Tagaytay City	48.48	108	LR	LR	20 37 08.3	
	comp=Z,57nm,20.4s,baz=286,slow=38						
MAJO	Matsushiro	50.10	72	eP	P	20 15 41.7	+1.9
MAJO	Matsushiro	50.10	72	iP	P	20 15 41.3	+1.5
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	50.10	72	P	P	20 15 41.7	+1.9
	comp=Z,2.1nm,0.8s,baz=287,slow=9.6,SNR=6.8						
BILL	Bilibino	55.24	27	eP	P	20 16 20.2	+2.9
BILL				e		20 18 28.1	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,63nm,16.0s						
ESDC	Sonseca Array	57.99	297	P	P	20 16 38.8	+1.4
	comp=Z,0.5nm,0.5s,baz=60,slow=7.2,SNR=5.5						
TOA1	Torodi Ar. Sit	67.81	269	eP	P	20 17 43.5	+0.4
TORD	Torodi Ar. Bea	67.81	269	P	P	20 17 43.5	+0.4
	comp=Z,0.9nm,0.5s,baz=52,slow=5.2,SNR=14						
INK	Inuvik	70.85	10	P	P	20 18 02.6	+1.6
	comp=Z,1.3nm,0.4s,baz=303,slow=4.8,SNR=2.6						
ILAR	Eielson Array	71.57	17	P	P	20 18 06.1	+0.6
	comp=Z,0.7nm,0.7s,baz=325,slow=4.8,SNR=7.4						
YKA	Yellowknife Ar	78.39	4	P	P	20 18 45.9	+1.0
	comp=Z,1.0nm,0.8s,baz=348,slow=5.4,SNR=3.3						
YKB5	Yellowknife Ar	78.39	4	eP	P	20 18 45.9	+1.0
WR1	Warramunga Arr	81.77	124	eP	P	20 19 04.4	+0.6
WRA	Warramunga Arr	81.77	124	P	P	20 19 04.4	+0.6
	comp=Z,3.1nm,0.8s,baz=304,slow=5.6,SNR=7.3						
ASAR	Alice Springs	84.21	127	P	P	20 19 16.6	+0.3
	comp=Z,1.4nm,0.9s,baz=314,slow=4.9,SNR=8.5						

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*SOME **01** 20:15:30.0, 41°.97N×70°.73E, h5^{km}*

*KRNET **01** 20:15:30.9±0.1, 42°.12N×70°.73E, h5^{km}, mb3.2*

*NNC **01** 20:15:32.4±0.9, 42°.11N×70°.64E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=5.6km s-min=4.2km az=179.0*

ISC 01 20:15:30.8±1.1, **42°.15N**±0°.04×**70°.75E**±0°.02, **h9**^{km}±10^{km}, **n45**, σ2.^{s}00/74, **25C-8D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	0.53	270	P	Pg	20 15 40.6	-0.5
	13nm,0.3s						
IUG				S	Sg	20 15 48.4	+0.3
	228nm,0.3s						
IUG	Iuzhnay	0.53	270	eP	Pg	20 15 40.6	-0.5
	baz=73						
IUG				eS	Sg	20 15 48.4	+0.3
	baz=73						
IUG	Iuzhnay	0.53	270	eP	Pg	20 15 40.6	-0.5
	13nm,0.3s						
IUG				eS	Sg	20 15 48.4	+0.3
	228nm,0.3s						
ARK	Arkit	0.97	111	⇓iP	Pb	20 15 50.2	+0.4
	baz=10.0						
ARK				⇓iS	Sb	20 16 02.4	-0.4
	baz=10.0						
KK31	Karatay Array	0.97	350	⇓P	Pb	20 15 51.0	+1.2
	7.0nm,0.3s,baz=174,slow=18,SNR=102						
KK31				S	Sn	20 16 05.9	+1.3
	12nm,0.5s,baz=175,slow=30,SNR=8.1						
TAS	Tashkent	1.36	234	⇑eP	Pn	20 15 55.9	-0.1
	baz=34						
TAS				⇑eS	Sb	20 16 13.4	-0.6
	baz=34						
ARSB	Arslanbob	1.86	115	⇑iP	Pb	20 16 04.8	-0.2
	baz=15						
ARSB				⇑iS	Sb	20 16 28.8	+0.3
	baz=15						
MRKS	Merke	1.93	71	Pg	Pg	20 16 09.3	+1.6
	7.8nm,0.4s						
MRKS				Lg	Lg	20 16 38.1	
	37nm,0.6s						
MRKS	Merke	1.93	71	eP	Pg	20 16 09.3	+1.6
	baz=71						
MRKS				eS	Sg	20 16 38.1	+5.3
	baz=71						
MRKS	Merke	1.93	71	eP	Pg	20 16 09.3	+1.6
	9.1nm,0.3s						
MRKS				eS	Sg	20 16 38.1	+5.3
	37nm,0.6s						
BTK	Batken	2.09	178	⇑iP	Pn	20 16 06.6	+0.6
	baz=78						
BTK				⇑iS	Sn	20 16 32.2	+0.1
	baz=78						
AML	Almayashu	2.19	89	P	Sg	20 16 46.3	+5.1
	SNR=5.0						
EKS2	Erkin-Say	2.30	76	⇑iP	Pg	20 16 14.2	-0.7
	baz=76						
EKS2				⇑iS	Sg	20 16 44.9	+0.2
	baz=76						
EKS2	Erkin-Say	2.30	76	P	Pg	20 16 14.6	-0.3
	SNR=20						
ARLS	Aral	2.68	95	⇑eP	Pb	20 16 18.6	-0.4
	baz=94						
ARLS				⇑iS	Sb	20 16 51.9	-0.1
	baz=94						
DRK	Karamyk	2.78	163	⇑iP	Pn	20 16 17.3	+1.6
	baz=62						
DRK				⇑iS	Sn	20 16 49.9	+0.4
	baz=62						
UCH	Uchtor	2.80	87	⇓iP	Pb	20 16 20.8	-0.4
	baz=87						
UCH				⇓iS	Sb	20 16 56.3	+0.5
	baz=87						
UCH	Uchtor	2.80	87	P	Pg	20 16 23.3	-1.2
	SNR=18						
AAK	Ala-Archa	2.82	79	⇑Pn	Pb	20 16 23.0	+1.7
	4.8nm,0.4s						
AAK				⇑Lg	Lg	20 17 04.7	
	5.6nm,0.5s						
AAK	Ala-Archa	2.82	79	⇑iP	Pb	20 16 21.3	0.0
	baz=78						
AAK				⇑iS	Sb	20 16 57.2	+1.2
	baz=78						
AAK	Ala-Archa	2.82	79	P	Pg	20 16 23.6	-1.2
	SNR=5.7						
USP	Ospenovka	2.98	67	⇑eP	Pb	20 16 24.2	+0.1
	baz=66						
USP				⇑iS	Sb	20 17 01.8	+1.1
	baz=66						
USP	Ospenovka	2.98	67	P	Pb	20 16 23.8	-0.3
	SNR=5.3						
CHMS	Chumysh	3.08	73	⇑iP	Pb	20 16 25.1	-0.6
	baz=72						
CHMS				⇑iS	Sb	20 17 03.5	+0.1
	baz=72						
KBK	Karagaybulak	3.15	79	⇑eP	Pb	20 16 25.9	-1.1
	baz=79						
KBK				⇑iS	Sb	20 17 04.9	-0.7
	baz=79						
KBK	Karagaybulak	3.15	79	P	Pg	20 16 29.8	-1.4
	SNR=5.9						
KZA	Kyzart	3.35	90	⇓iP	Pb	20 16 28.4	-2.2
	baz=89						
KZA				⇓iS	Sb	20 17 09.3	-2.3
	baz=89						
KZA	Kyzart	3.35	90	P	Pb	20 16 32.7	+2.2
	SNR=12						
TKM2	Tokmak 2	3.67	76	⇑Pn	Pb	20 16 32.9	-2.9
	1.8nm,0.5s						
TKM2				⇓Lg	Lg	20 17 30.6	
	3.3nm,0.5s						
TKM2	Tokmak 2	3.67	76	⇑eP	Pb	20 16 33.2	-2.6
	baz=76						
TKM2				⇑iS	Sb	20 17 17.4	-3.1
	baz=76						
DGS	Degeres	3.86	72	Pg	Pg	20 16 42.6	-2.1
	5.7nm,0.7s						
DGS				Lg	Lg	20 17 34.6	
	9.7nm,1.0s						
DGS	Degeres	3.86	72	eP	Pg	20 16 42.6	-2.1
	baz=72						
DGS				eS	Sg	20 17 34.6	-0.2
	baz=72						
DGS	Degeres	3.86	72	eP	Pg	20 16 42.6	-2.1
	5.7nm,0.7s						
DGS				eS	Sg	20 17 34.6	-0.2
	9.7nm,1.0s						
KST	Kastek	3.95	75	Pg	Pb	20 16 43.0	+2.3
	4.5nm,0.4s						
KST				Lg	Lg	20 17 35.5	
	7.5nm,0.8s						
KST	Kastek	3.95	75	eP	Pb	20 16 43.0	+2.3
	baz=75						
KST				eS	Sg	20 17 35.4	-2.3
	baz=75						
KST	Kastek	3.95	75	eP	Pb	20 16 43.0	+2.3
	4.5nm,0.4s						
KST				eS	Sg	20 17 35.5	-2.3
	7.5nm,0.8s						
KTBS	Karatobe	4.63	68	Pg	Pg	20 16 56.7	-2.7
	2.0nm,0.9s						
KTBS				Lg	Lg	20 17 58.7	
	8.9nm,0.6s						
KTBS	Karatobe	4.63	68	eP	Pg	20 16 56.7	-2.7
	baz=67						
KTBS				eS	Sg	20 17 58.7	-0.7
	baz=67						
KTBS	Karatobe	4.63	68	eP	Pg	20 16 56.7	-2.7
	2.0nm,0.9s						
KTBS				eS	Sg	20 17 58.7	-0.7
	8.9nm,0.6s						
TNSS	Tian-Shan	4.66	77	Pg	Pg	20 16 59.0	-1.0
TNSS				Lg	Lg	20 18 03.3	
	3.4nm,0.6s						
TNSS	Tian-Shan	4.66	77	eP	Pg	20 16 59.0	-1.0
TNSS				eS	Sg	20 18 03.3	+2.8
	3.4nm,0.6s						
ARXS	Arharly	5.57	66	Pg	Pg	20 17 13.4	-4.1
	0.8nm,0.5s						
ARXS				Lg	Lg	20 18 27.4	
	3.9nm,0.8s						
ARXS	Arharly	5.57	66	eP	Pg	20 17 13.4	-4.1
	0.8nm,0.5s						
ARXS				eS	Sg	20 18 27.4	-2.2
	3.9nm,0.8s						
SATY	Saty	5.73	78	Pg	Pg	20 17 17.6	-2.8
	4.5nm,0.9s						
SATY				Lg	Lg	20 18 34.8	
	7.8nm,0.6s						
SATY	Saty	5.73	78	eP	Pg	20 17 17.6	-2.8
	4.5nm,0.9s						
SATY				eS	Sg	20 18 34.8	+0.3
	7.8nm,0.6s						

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*ISCJB **01** 20:17:26.1±0.5, 17°.12N±0°.07×95°.44W±0°.04, h109^{km}±7^{km}, mb4.7/3, Error ellipse: s-maj=11.6km s-min=6.3km az=9.4*

*NEIC **01** 20:17:28.1±0.0, 17°.06N×95°.43W, h109^{km}, mb4.4/11, MD4.2(MEX), After MEX.*

*MEX **01** 20:17:28.0±1.1, 17°.11N×95°.43W, h107^{km}±8^{km}, MD4.2*

ISC 01 20:17:27.2±1.0, **17°.13N**±0°.06×**95°.45W**±0°.04, **h104**^{km}±9^{km}, **n24**, σ0.^{s}97/34, **mb4.5**/3, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.55	94	ePn	Pn	20 17 43.8	+0.1
CMIG				eSn	Sn	20 17 55.5	-0.6
CMIG	Matias Romero	0.55	94	iP	Pn	20 17 43.8	+0.1
CMIG				eS	Sn	20 17 55.5	-0.6
VHO	Vista Hermosa	1.23	268	ePn	Pn	20 17 51.0	+0.3
VHO				eSn	Sn	20 18 09.2	+0.9
VHO	Vista Hermosa	1.23	268	eP	Pn	20 17 51.0	+0.3
VHO				iS	Sn	20 18 09.2	+0.9
HUIG	Huatulco	1.49	205	ePn	Pn	20 17 52.3	-1.3
HUIG				eSn	Sn	20 18 12.5	-1.1
HUIG	Huatulco	1.49	205	eP	Pn	20 17 52.3	-1.3
HUIG				eS	Sn	20 18 12.5	-1.1
TGIG		2.26	99	ePn	Pn	20 18 03.5	+0.2
TGIG				eSn	Sn	20 18 30.0	-1.0
TGIG		2.26	99	eP	Pn	20 18 03.5	+0.2
TGIG				iS	Sn	20 18 30.0	-1.0
PCIG		2.57	123	ePn	Pn	20 18 08.3	+1.0
PCIG		2.57	123	iP	Pn	20 18 07.1	-0.2
PCIG				iS	Sn	20 18 37.1	-1.0
LVIG	Laguna Verde	2.74	341	ePn	Pn	20 18 07.3	-2.2
LVIG				ePn	Pn	20 18 07.8	-1.8
LVIG				eSn	Sn	20 18 34.3	-7.8
LVIG	Laguna Verde	2.74	341	iP	Pn	20 18 07.8	-1.8
TLIG	Tlapa	3.00	279	ePn	Pn	20 18 13.3	+0.1
CCIG	Comitan	3.29	104	ePn	Pn	20 18 17.6	+0.5
CCIG				ePn	Pn	20 18 17.9	+0.9
CCIG				eSn	Sn	20 18 45.8	-10
CCIG	Comitan	3.29	104	eP	Pn	20 18 16.9	-0.1
CCIG				iS	Sn	20 18 54.8	-0.7
957A	Wimauma	16.09	47	eP	Pn	20 21 08.8	+1.3
	189nm,0.4s						
X37A	Clayton	17.39	0	eP	P	20 21 24.2	+1.2
	9.1nm,0.6s						
MIAR	Mount Ida	17.43	5	eP	P	20 21 24.4	+0.9
	6.4nm,0.7s						
W39A	Magazine	18.05	4	eP	P	20 21 30.6	+0.3
	9.1nm,0.8s						
W41B	Gary Mavity, V	18.20	8	eP	P	20 21 32.4	+0.5
	23nm,1.8s						
FCAR	Ozark Folk Cen	18.92	8	eP	P	20 21 39.8	0.0
	7.4nm,0.8s						
T47A	Sharon Grove	21.11	19	eP	P	20 22 04.6	+1.1
	17nm,0.6s						
SFIN	Lafayette	24.27	16	eP	P	20 22 33.9	-0.8
	12nm,0.8s						
O49A	Covington	24.92	21	eP	P	20 22 39.9	-0.7
	38nm,0.4s						

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*NIED **01** 20:29:00, 38°.70N×142°.30E, h47^{km}, Mw3.6   Best double* *couple: $M_0$2.92000×10^{14} NP1:ϕ_s194.00000°,δ25.00000°, λ98.00000°. NP2:ϕ_s6.00000°,δ66.00000°,λ86.00000°.*

*ISCJB **01** 20:29:39.4±1.2, 38°.71N±0°.04×142°.34E±0°.08, h31^{km}±5^{km}, mb3.4/3, MS3.4/1, Error ellipse: s-maj=10.4km s-min=5.4km az=22.0*

*JMA **01** 20:29:40.7±0.1, 38°.72N×142°.27E, h39^{km}±1^{km}, M3.7*

JMA Felt I J1.

*IDC **01** 20:29:46.8±2.2, 39°.39N×140°.62E, h0^{km}, mb3.5/3, mb1 3.5/5, mb1mx3.3/37, mbtmp3.4/5, ML2.8/2, MS2.9/2, Ms1 2.9/2, ms1mx2.4/38, Error ellipse: s-maj=49.2km s-min=25.0km az=127.0*

ISC 01 20:29:39.7±2.0**, 38°.77N**±0°.05×**142°.16E**±0°.08**, h15**^{km}±10^{km}**, n18,** σ**1**^{s}**.18**/30**, mb3.6**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.49**	**309**	P	**Pn**	**20 29 52.7**	**+0.4**
OFUJ				*e*S	**Sn**	**20 30 01.0**	**+0.3**
JKMT	**Kesennumamotoy**	**0.54**	**275**	P	**Pn**	**20 29 53.1**	**+0.2**
JKMT				S	**Sn**	**20 30 01.7**	**-0.1**
JIO	**Ouri**	**0.71**	**244**	P	**Pb**	**20 29 54.9**	**+1.1**
JIO				S	**Sb**	**20 30 04.8**	**+1.4**
JIKH	**Ishinomakikobu**	**0.71**	**230**	P	**Pb**	**20 29 54.6**	**+0.7**
JIKH				S	**Sb**	**20 30 04.5**	**+1.0**
JMK	**Ichinoseki**	**0.76**	**284**	P	**Pn**	**20 29 56.5**	**+0.6**
JMK				*e*S	**Sn**	**20 30 07.7**	**+0.6**
JOM	**Ohasama**	**0.97**	**316**	P	**Pn**	**20 29 59.7**	**+0.8**
JOM				S	**Sn**	**20 30 13.4**	**+0.9**
JTH	**Tanohata**	**1.19**	**349**	P	**Pn**	**20 30 02.4**	**+0.5**
JTH				*e*S	**Sg**	**20 30 17.9**	**-0.3**
JOU	**Okura**	**1.24**	**251**	P	**Pn**	**20 30 02.9**	**+0.3**
JOU				S	**Sg**	**20 30 19.7**	**-0.2**
JRG	**Rokugo**	**1.34**	**298**	P	**Pg**	**20 30 05.0**	**-0.6**
JRG				*e*S	**Sg**	**20 30 23.9**	**+0.8**
JMM	**Marumori**	**1.41**	**230**	P	**Pn**	**20 30 04.2**	**-0.6**
JMM				*e*S	**Sn**	**20 30 21.8**	**-1.3**
JYK	**Kaneyama**	**1.42**	**277**	P	**Pb**	**20 30 05.9**	**0.0**
JYK				*e*S	**Sg**	**20 30 25.3**	**-0.1**
MAT	**Matsushiro**	**3.85**	**236**	P	**Pn**	**20 30 40.4**	**+2.0**
MAT				S	**Sn**	**20 31 25.2**	**+1.8**
MJAR	**Matsushiro Arr**	**3.85**	**236**	Pn	**Pn**	**20 30 40.6**	**+2.2**
	0.5nm,0.3s,baz=38,slow=11,SNR=37						
MJAR				Sn	**Sb**	**20 31 31.0**	**-2.7**
	0.1nm,0.3s,baz=56,slow=18,SNR=3.0						
MJAR				LR	LR	20 32 21.0	
	comp=Z,50nm,19.2s,baz=140,slow=45						
ASAJ	**Asahikawa**	**5.35**	**3**	Pn	**Pn**	**20 31 00.3**	**+1.3**
	0.4nm,0.3s,baz=184,slow=16,SNR=4.9						
ASAJ				Sn	**Sn**	**20 32 01.0**	**+0.5**
	0.5nm,0.3s,baz=0.0,slow=20,SNR=2.7						
ZALV	**Zalesovo Beam**	**41.20**	**311**	P	**P**	**20 37 22.1**	**-1.6**
	0.6nm,0.5s,baz=70,slow=8.4,SNR=3.5						
MKAR	**Makanchi Array**	**43.72**	**301**	P	**P**	**20 37 42.7**	**-1.6**
	0.3nm,0.6s,baz=79,slow=9.5,SNR=4.6						
ILAR	**Eielson Array**	**47.72**	**33**	P	P	20 38 26.6	+11
	0.4nm,0.7s,baz=253,slow=6.6,SNR=4.3						
ARU	**Arti**	**55.46**	**318**	LR	LR	21 05 07.5	
	comp=Z,34nm,19.6s,baz=144,slow=39						

*IDC **01** 20:35:42.4±0.8, 12°.72N×143°.36E, h0^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.8/37, mbtmp3.8/10, MS3.2/5, Ms1 3.3/5, ms1mx2.9/40, Error ellipse: s-maj=32.1km s-min=19.7km az=98.0*

*ISCJB **01** 20:35:44.9±0.7, 12°.7N±0°.1×143°.3E±0°.2, h27^{km}, mb3.8/10, MS3.2/5, Error ellipse: s-maj=27.4km s-min=15.9km az=8.7*

ISC 01 20:35:46.4±0.8**, 12°.7N**±0°.1×**143°.3E**±0°.2**, h27**^{km}**, n20,** σ**0**^{s}**.92**/12**, mb3.8**/10**, MS3.2**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**23.20**	**73**	T	T	21 04 43.4	
	baz=258,slow=75,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	**23.21**	**73**	T	T	21 04 31.4	
	baz=258,slow=75,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**23.21**	**73**	T	T	21 04 33.3	
	baz=258,slow=75,SNR=9.0						
H11N1	**WAKE ISLAND Hy**	**23.64**	**70**	T	T	21 05 11.8	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**23.66**	**70**	T	T	21 05 12.2	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**23.66**	**70**	T	T	21 05 13.1	
	baz=255						
MJAR	**Matsushiro Arr**	**24.18**	**350**	P	**P**	**20 40 59.1**	**-1.5**
	0.3nm,0.3s,baz=167,slow=11,SNR=2.7						
MJAR				LR	LR	20 50 24.7	
	comp=Z,43nm,18.6s,baz=215,slow=36						
WRA	**Warramunga Arr**	**33.63**	**195**	P	**P**	**20 42 24.2**	**-0.8**
	1.6nm,0.5s,baz=12,slow=7.9,SNR=20						
ASAR	**Alice Springs**	**37.31**	**194**	P	**P**	**20 42 56.7**	**+0.1**
	0.5nm,0.4s,baz=13,slow=11,SNR=11						
PETK	**Petropavlovsk-**	**41.90**	**13**	LR	LR	21 01 04.9	
	comp=Z,29nm,19.0s,baz=194,slow=36						
CMAR	**Chiang Mai Arr**	**43.06**	**283**	P	**P**	**20 43 44.9**	**+0.5**
	0.3nm,0.6s,baz=90,slow=5.7,SNR=2.9						
CMAR				LR	LR	21 01 12.1	
	comp=Z,30nm,20.5s,baz=350,slow=36						
MKAR	**Makanchi Array**	**61.10**	**317**	P	**P**	**20 45 57.9**	**-0.4**
	0.2nm,0.6s,baz=100,slow=6.7,SNR=2.8						
ILAR	**Eielson Array**	**70.00**	**25**	P	**P**	**20 46 54.5**	**-0.9**
	0.2nm,0.3s,baz=269,slow=6.0,SNR=3.7						
ILAR				LR	LR	21 15 49.1	
	comp=Z,20nm,19.9s,baz=326,slow=34						
YKA	**Yellowknife Ar**	**84.32**	**27**	P	**P**	**20 48 16.7**	**+0.9**
	0.3nm,0.4s,baz=284,slow=5.1,SNR=2.8						
ARCES	**ARCESS Array B**	**87.46**	**342**	P	**P**	**20 48 32.4**	**+1.1**
	1.2nm,0.9s,baz=82,slow=7.4,SNR=3.5						
NVAR	**Mina Array Bea**	**88.63**	**51**	P	**P**	**20 48 38.2**	**+0.4**
	0.5nm,0.6s,baz=270,slow=7.6,SNR=5.2						
FINES	**FINESS Array B**	**91.32**	**335**	P	**P**	**20 48 50.3**	**+0.8**
	3.0nm,0.9s,baz=102,slow=8.0,SNR=4.0						
PDAR	**Pinedale Array**	**93.64**	**45**	LR	LR	21 24 48.6	
	comp=Z,13nm,19.5s,baz=262,slow=32						
PLCA	**Paso Flores**	**139.26**	**140**	PKP	**PKiKP**	**20 55 12.9**	**-0.8**
	2.2nm,0.7s,baz=270,slow=1.0,SNR=3.2						
LPAZ	**La Paz**	**149.34**	**101**	PKPbc	**PKPbc**	**20 55 35.0**	**+0.3**
	0.6nm,0.5s,baz=61,slow=2.1,SNR=4.1						

*IDC **01** 21:06:10.6±0.7, 32°.95N×92°.76E, h0^{km}, mb3.9/15, mb1 4.0/17, mb1mx3.9/46, mbtmp3.9/17, ML3.8/2, MS3.4/16, Ms1 3.4/16, ms1mx3.2/44, Error ellipse: s-maj=20.8km s-min=15.3km az=46.0*

*BJI **01** 21:06:13.8±0.0, 33°.06N×92°.69E, h8^{km}, mb4.1/3, mB4.0/1, ML3.7/5, Ms3.9/11, Ms7 3.7/10*

*ISCJB **01** 21:06:14.3±0.4, 33°.07N±0°.04×92°.81E±0°.06, h33^{km}, mb3.9/15, MS3.5/12, Error ellipse: s-maj=8.3km s-min=5.4km az=31.9*

ISC 01 21:06:16.8±0.5**, 33°.04N**±0°.06×**92°.71E**±0°.06**, h35**^{km}**, n42,** σ**2**^{s}**.12**/34**, mb3.9**/15**, MS3.5**/12**, 1C, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**7.48**	**186**	*e*P	**Pn**	**21 08 04.0**	**+0.3**
	comp=Z,4.0nm,0.6s						
SHL				*e*S	**Sn**	**21 09 32.0**	**+4.6**
GUN	**Gumba**	**7.80**	**231**	*e*P	**Pn**	**21 08 09.9**	**+1.7**
	comp=Z,26nm,0.6s						
KKN	**Kakani**	**8.28**	**233**	*e*P	**Pn**	**21 08 16.5**	**+1.9**
PKI	**Pulchoki**	**8.34**	**231**	*e*P	**Pn**	**21 08 16.4**	**+0.9**
	comp=Z,21nm,0.7s						
PKIN	**Phulchoki**	**8.34**	**231**	*e*P	**Pn**	**21 08 16.8**	**+1.3**
	comp=Z,12nm,0.5s						
DMN	**Daman**	**8.51**	**233**	*e*P	**Pn**	**21 08 19.6**	**+1.7**
	comp=Z,25nm,0.9s						
GTA	**Gaotai**	**8.56**	**40**	⇑P	**Pn**	**21 08 19.6**	**+1.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,48nm,6.4s						
GTA				LR	LR		
	comp=Z,370nm,11.4s						
GTA				LR	LR		
	comp=Z,430nm,11.4s						
GTA				LR	LR		
	comp=Z,480nm,12.1s						
GKN	**Gorkha**	**8.58**	**236**	*e*P	**Pn**	**21 08 20.6**	**+1.9**
	comp=Z,24nm,0.6s						
DANN	**Dangsing**	**9.01**	**241**	*e*P	**Pn**	**21 08 27.5**	**+2.8**
	comp=Z,33nm,0.6s						
PYUN	**Piuthan**	**9.72**	**242**	*e*P	**Pn**	**21 08 35.7**	**+1.4**
	comp=Z,30nm,0.7s						
WMQ	**Urumqi**	**11.46**	**341**	*e*P	**Pn**	**21 08 59.1**	**+1.2**
WMQ				LR	LR		
	comp=Z,110nm,6.3s						
WMQ				LR	LR		
	comp=Z,150nm,6.3s						
WMQ				LR	LR		
	comp=Z,220nm,6.3s						
XAN	**Xi'an**	**13.56**	**81**	P	**Pn**	**21 09 26.5**	**-0.2**
XAN				pP	P	21 09 32.2	-3.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				LR	LR		
	comp=Z,410nm,15.2s						
XAN				LR	LR		
	comp=Z,280nm,19.5s						
CMAR	**Chiang Mai Arr**	**15.56**	**157**	Pn	**Pn**	**21 09 51.1**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=329,slow=14,SNR=3.6						
CMAR				LR	LR	21 15 47.5	
	comp=Z,54nm,18.3s,baz=330,slow=37						
MKAR	**Makanchi Array**	**15.87**	**333**	LR	LR	21 16 39.7	
	comp=Z,80nm,18.2s,baz=150,slow=39						
HHC	**Hu-ho-hao-te**	**16.95**	**57**	P	**P**	**21 10 14.7**	**+1.8**
HHC				S	**Sn**	**21 13 20.8**	**+2.3**
HHC				SS	**SnSn**	**21 13 39.4**	**+7.7**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				LR	LR		
	comp=Z,240nm,8.6s						
HHC				LR	LR		
	comp=Z,250nm,10.3s						
AAK	**Ala-Archa**	**17.26**	**309**	LR	LR	21 17 37.9	
	comp=Z,58nm,19.7s,baz=96,slow=40						
SONM	**Songino Array**	**18.04**	**31**	P	**Pn**	**21 10 22.9**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=221,slow=11,SNR=21						
SONM				LR	LR	21 17 57.0	
	comp=Z,105nm,21.1s,baz=215,slow=39						
KURBB	**Kurchatov Arra**	**20.44**	**333**	P	**P**	**21 10 50.8**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=143,slow=10,SNR=38						
ZALV	**Zalesovo Beam**	**21.64**	**347**	P	**P**	**21 11 04.3**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=142,slow=5.4,SNR=3.2						
BVAR	**Borovoye Array**	**25.60**	**328**	P	**P**	**21 11 44.0**	**+1.3**
	comp=Z,2.3nm,0.7s,baz=137,slow=11,SNR=14						
GEYT	**Alibeck**	**28.49**	**290**	LR	LR	21 25 44.2	
	comp=Z,93nm,21.6s,baz=20,slow=41						
KSRS	**Korea Array**	**28.98**	**71**	P	**P**	**21 12 12.5**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=270,slow=9.7,SNR=3.3						
KSRS				LR	LR	21 25 03.9	
	comp=Z,44nm,18.4s,baz=267,slow=39						
KIRV	**Kirov**	**38.51**	**325**	LR	LR	21 31 44.7	
	comp=Z,64nm,18.3s,baz=163,slow=40						
OBN	**Obninsk**	**44.52**	**317**	LR	LR	21 33 43.1	
	comp=Z,25nm,21.3s,baz=6.5,slow=37						
ASF	**Jabal al Asfar**	**46.55**	**285**	LR	LR	21 38 52.1	
	comp=Z,143nm,18.6s,baz=166,slow=42						
BRTR	**Keskin Array B**	**47.28**	**296**	P	**P**	**21 14 46.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=93,slow=5.8,SNR=2.7						
MMAI	**Mount Meron Ar**	**47.51**	**286**	LR	LR	21 38 13.4	
	comp=Z,27nm,18.4s,baz=125,slow=40						
PETK	**Petropavlovsk-**	**49.68**	**46**	P	**P**	**21 15 03.8**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=276,slow=7.1,SNR=2.3						
FINES	**FINESS Array B**	**50.51**	**325**	P	**P**	**21 15 10.8**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=96,slow=10,SNR=8.6						
ARCES	**ARCESS Array B**	**51.51**	**336**	P	**P**	**21 15 18.4**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=105,slow=13,SNR=5.2						
MLR	**Muntele Rosu**	**51.77**	**305**	LR	LR	21 40 48.6	
	comp=Z,49nm,21.0s,baz=304,slow=40						
HFS	**Hagfors**	**56.64**	**324**	LR	LR	21 41 54.0	
	comp=Z,64nm,18.5s,baz=100,slow=38						
VRAC	**Vranov**	**57.17**	**311**	LR	LR	21 42 34.5	
	comp=Z,25nm,18.1s,baz=86,slow=38						
NOA	**NORSAR Array B**	**57.69**	**325**	P	**P**	**21 16 02.9**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=78,slow=7.0,SNR=6.9						
NOA				LR	LR	21 42 55.6	
	comp=Z,40nm,20.3s,baz=75,slow=38						
GERES	**GERESS Array B**	**59.13**	**311**	P	**P**	**21 16 13.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=74,slow=7.2,SNR=5.4						
GERES				LR	LR	21 45 24.6	
	comp=Z,40nm,18.5s,baz=88,slow=40						
DAVOX	**Davos/Dischmat**	**62.21**	**310**	LR	LR	21 47 52.5	
	comp=Z,29nm,20.0s,baz=80,slow=40						
WRA	**Warramunga Arr**	**66.00**	**137**	P	**P**	**21 16 58.9**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=5.9,slow=8.8,SNR=16						
ASAR	**Alice Springs**	**68.72**	**140**	P	**P**	**21 17 16.4**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=324,slow=6.5,SNR=6.3						
ILAR	**Eielson Array**	**72.05**	**23**	P	**P**	**21 17 35.5**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=293,slow=5.7,SNR=8.8						
LSZ	**Lusaka**	**78.08**	**243**	P	**P**	**21 18 10.8**	**-1.7**
	comp=Z,1.8nm,0.3s,baz=276,slow=1.3,SNR=5.4						
YKA	**Yellowknife Ar**	**82.29**	**12**	P	**P**	**21 18 33.1**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=296,slow=8.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**83.79**	**282**	P	**P**	**21 18 42.2**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=77,slow=4.4,SNR=8.8						

*IDC **01** 21:29:50.0±3.2, 37°.38N×72°.01E, h0^{km}, mb3.7/1, mb1 3.4/8, mb1mx3.2/64, mbtmp3.4/8, ML2.9/7, MS2.9/3, Ms1 2.9/3, ms1mx2.5/40, Error ellipse: s-maj=43.6km s-min=23.0km az=157.0*

*ISCJB **01** 21:29:51.6±1.2, 37°.61N±0°.09×71°.81E±0°.07, h10^{km}, mb3.5/1, MS2.8/2, Error ellipse: s-maj=14.1km s-min=6.9km az=156.7*

*NNC **01** 21:29:57.5±6.3, 37°.81N×71°.82E, h4^{km}±31^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=42.4km s-min=22.0km az=169.0*

ISC 01 21:29:53.8±1.6**, 37°.6N**±0°.1×**71°.80E**±0°.08**, h10**^{km}**, n17,** σ**2**^{s}**.95**/23**, 9C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.49**	**21**	Pn	**Pn**	**21 31 19.0**	**+3.3**
	0.8nm,0.3s,baz=184,slow=15,SNR=4.7						
AAK				Sn	**Sn**	**21 32 18.9**	**-0.1**
	0.8nm,0.3s,baz=175,slow=11,SNR=1.6						
AAK	**Ala-Archa**	**5.49**	**21**	⇓Pn	**Pn**	**21 31 19.1**	**+3.3**
	4.6nm,0.8s						
AAK				⇓Pg	**Pb**	**21 31 31.0**	**+1.2**
	8.8nm,0.8s						
AAK				⇑Lg	Lg	21 32 42.2	
	19nm,0.9s						
KK31	**Karatay Array**	**5.64**	**350**	⇓Pn	**Pn**	**21 31 19.6**	**+1.9**
	2.4nm,0.5s,baz=174,slow=13,SNR=43						
KK31				⇓Pg	**Pb**	**21 31 35.8**	**+3.5**
	11nm,0.7s,baz=165,slow=17,SNR=8.7						
KK31				⇑Lg	Lg	21 32 48.2	
	38nm,0.8s,baz=162,slow=30						
TKM2	**Tokmak 2**	**6.10**	**27**	⇑Pn	**Pn**	**21 31 26.1**	**+1.9**
	3.7nm,0.7s						
TKM2				⇓Lg	Lg	21 33 02.4	
	15nm,0.9s						
PDGK	**Podgornoye**	**8.23**	**43**	⇑Pn	**Pn**	**21 31 53.8**	**+0.4**
	3.5nm,0.9s						
PDGK				⇑Lg	Lg	21 34 16.0	
	9.8nm,1.1s						
GEYT	**Alibeck**	**10.84**	**276**	Pn	**Pn**	**21 32 27.9**	**-1.2**
	0.2nm,0.3s,baz=118,slow=18,SNR=1.9						
GEYT				Sn	**Sn**	**21 34 26.1**	**-4.4**
	0.3nm,0.3s,baz=91,slow=11,SNR=3.8						
GEYT				LR	LR	21 38 01.0	
	comp=Z,57nm,18.1s,baz=50,slow=44						
GYA0B	**ALIBECK ARRAY**	**10.84**	**276**	⇓Pn	**Pn**	**21 32 31.3**	**+2.2**
GYA0B				⇓Sn	**Sn**	**21 34 33.1**	**+2.6**
MKAR	**Makanchi Array**	**12.07**	**37**	Pn	**Pn**	**21 32 45.5**	**-0.4**
	0.0nm,0.3s,baz=226,slow=10.0,SNR=3.7						
KURBB	**Kurchatov Arra**	**13.93**	**18**	Pn	**Pn**	**21 33 07.8**	**-3.3**
	0.0nm,0.3s,baz=8.6,slow=32,SNR=2.8						
AB31	**Akbulak array**	**14.51**	**328**	⇑Pn	**Pn**	**21 33 20.5**	**+1.3**
	0.8nm,0.6s,baz=142,slow=4.8,SNR=7.9						
AB31				⇑Sn	**Sn**	**21 35 57.7**	**-2.3**
	1.6nm,0.8s,baz=147,slow=23,SNR=2.8						
BVAR	**Borovoye Array**	**15.51**	**357**	Pn	**Pn**	**21 33 28.4**	**-4.0**
	0.1nm,0.3s,baz=155,slow=14,SNR=5.0						
AKTO	**Aktyubinsk**	**16.22**	**327**	Pn	**Pn**	**21 33 40.8**	**-0.9**
	0.1nm,0.3s,baz=122,slow=17,SNR=3.4						
AKTO				Sn	**Sn**	**21 36 34.4**	**-7.2**
	0.1nm,0.3s,baz=294,slow=10.0,SNR=1.8						
AKTO	**Aktyubinsk**	**16.22**	**327**	⇑Pn	**Pn**	**21 33 44.0**	**+2.3**
	5.1nm,0.8s						
AKTO				⇑Sn	**Sn**	**21 36 40.6**	**-1.0**
	1.7nm,1.1s						
ZALV	**Zalesovo Beam**	**18.70**	**25**	P	**P**	**21 34 10.0**	**-2.1**
	0.2nm,0.3s,baz=204,slow=11,SNR=4.5						
ARU	**Arti**	**20.87**	**339**	LR	LR	21 42 21.8	
	comp=Z,32nm,18.3s,baz=109,slow=36						
SONM	**Songino Array**	**27.22**	**57**	LR	LR	21 47 54.1	
	comp=Z,30nm,19.2s,baz=259,slow=40						
BRTR	**Keskin Array B**	**29.74**	**286**	P	**P**	**21 35 59.9**	**-0.5**
	1.0nm,1.0s,baz=70,slow=12,SNR=2.1						

*IDC **01** 21:37:22.8±1.2, 23°.05N×93°.99E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.2/56, mbtmp3.5/4, Error ellipse: s-maj=27.2km s-min=15.6km az=175.0*

*ISCJB **01** 21:37:27.5±0.7, 23°.0N±0°.1×93°.7E±0°.1, h58^{km}, mb3.5/4, Error ellipse: s-maj=20.8km s-min=7.2km az=40.7*

ISC 01 21:37:29.8±1.0**, 23°.0N**±0°.1×**93°.8E**±0°.1**, h58**^{km}**, n17,** σ**1**^{s}**.39**/18**, mb3.4**/4**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.01**	**261**	Pg	**Pn**	**21 38 04.8**	**+3.5**
	41nm,0.3s,baz=88,slow=20,SNR=2.4						
BRDH				Lg	Lg	21 38 30.9	
	36nm,0.3s,baz=65,slow=23,SNR=10						
SHL	**Shillong**	**3.08**	**326**	*i* PNDS	**Pn**	**21 38 19.0**	**+2.8**
SHL				*i* SN	**Sn**	**21 38 51.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**6.62**	**132**	Pn	**Pn**	**21 39 04.8**	**+0.3**
	0.4nm,0.3s,baz=306,slow=13,SNR=7.9						
JIRN	**Jiri**	**8.29**	**306**	*e*P	**Pn**	**21 39 28.2**	**+0.5**
	153nm,0.3s						
GUN	**Gumba**	**8.65**	**306**	*e*P	**Pn**	**21 39 33.6**	**+0.9**
	37nm,0.2s						
PKI	**Pulchoki**	**8.84**	**303**	*e*P	**Pn**	**21 39 35.0**	**-0.2**
	27nm,0.3s						
PKIN	**Phulchoki**	**8.85**	**303**	*e*P	**Pn**	**21 39 35.0**	**-0.3**
	31nm,0.3s						
KKN	**Kakani**	**9.04**	**303**	*e*P	**Pn**	**21 39 38.1**	**+0.2**
	17nm,0.2s						
DMN	**Daman**	**9.09**	**302**	*e*P	**Pn**	**21 39 38.2**	**-0.4**
	10nm,0.2s						
GKN	**Gorkha**	**9.64**	**303**	*e*P	**Pn**	**21 39 45.6**	**-0.5**
	46nm,0.2s						
KOLN	**Koldanda**	**10.36**	**299**	*e*P	**Pn**	**21 39 55.0**	**-0.9**
	22nm,0.2s						
DANN	**Dangsing**	**10.49**	**303**	*e*P	**Pn**	**21 39 56.6**	**-1.1**
	14nm,0.2s						
PYUN	**Piuthan**	**10.99**	**300**	*e*P	**Pn**	**21 40 03.0**	**-1.4**
	9.9nm,0.2s						
MKAR	**Makanchi Array**	**25.48**	**341**	P	**P**	**21 42 53.1**	**+0.6**
	0.4nm,0.5s,baz=166,slow=10,SNR=4.5						
SONM	**Songino Array**	**26.74**	**19**	P	**P**	**21 43 02.9**	**-1.1**
	0.6nm,0.7s,baz=219,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**58.21**	**134**	P	**P**	**21 47 19.0**	**+0.7**
	1.2nm,0.9s,baz=317,slow=9.2,SNR=2.9						
ASAR	**Alice Springs**	**60.60**	**137**	P	**P**	**21 47 34.2**	**-0.6**
	0.2nm,0.5s,baz=314,slow=6.5,SNR=4.1						

NEIC 01 21:38:14.9±0.0**, 56°.24N**×**159°.07W, h102**^{km}**, ML3.2**(AEIC)**, After AEIC., Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNHG	**Veniaminof 1**	**0.06**	**254**	*e*Pn	Pn	21 38 28.8	-0.3
VNHG				*e*Sn	Sn	21 38 39.2	-0.6
CHGN	**Chignik**	**0.37**	**80**	*e*Pn	Pn	21 38 29.3	-0.7
CHGN				*e*Sn	Sn	21 38 40.9	-0.4
AZAC	**Aniakchak**	**0.81**	**35**	*e*Pn	Pn	21 38 32.6	-0.9
ANNW	**Aniakchak Nort**	**0.87**	**32**	*e*Pn	Pn	21 38 33.9	-0.2
SDPT	**Sand Point**	**1.20**	**222**	*e*Pn	Pn	21 38 36.4	-1.1
PVV	**Pavlof Volcano**	**1.77**	**242**	*e*Pn	Pn	21 38 43.5	-1.0
PS4A	**Pavlof South-4**	**1.81**	**242**	*e*Pn	Pn	21 38 44.1	-0.9
DOL	**Dolgoi Island**	**1.92**	**237**	*e*Pn	Pn	21 38 45.6	-0.9
CHIR	**Chirikof Islan**	**1.98**	**101**	*e*Pn	Pn	21 38 46.4	-0.8
CHIR				*e*Sn	Sn	21 39 10.4	-1.4
CHIA	**Chirikof Islan**	**2.00**	**100**	*e*Pn	Pn	21 38 46.4	-1.0
CHIA				*e*Sn	Sn	21 39 10.0	-2.3
SII	**Sitkinak Islan**	**2.73**	**81**	*e*Pn	Pn	21 38 56.0	-1.0
SII				*e*Sn	Sn	21 39 27.6	-1.9
KELA	**Mount Kelaz**	**2.85**	**38**	*e*Pn	Pn	21 38 57.9	-0.8
KAHC	**Katmai Hardscr**	**3.26**	**41**	*e*Pn	Pn	21 39 03.5	-0.7
OHAK	**Old Harbor**	**3.33**	**70**	*e*Pn	Pn	21 39 03.4	-1.6
FONW	**Fourpeaked Sta**	**3.81**	**45**	*e*Pn	Pn	21 39 09.6	-1.9
KDAK	**Kodiak Island**	**3.87**	**64**	*e*Pn	Pn	21 39 10.4	-1.7
KDAK				*e*Sn	Sn	21 39 52.2	-4.4
MSW	**Makushin Switc**	**5.01**	**246**	*e*Pn	Pn	21 39 25.9	-1.7
CNPM	**China Poot**	**5.32**	**48**	*e*Pn	Pn	21 39 30.6	-1.3
RC01	**Rabbit Creek A**	**6.88**	**41**	*e*Pn	Pn	21 39 51.6	-1.3
GLI	**Glacier Island**	**7.79**	**48**	*e*Pn	Pn	21 40 02.0	-3.4
SML	**Sawmill**	**7.86**	**40**	*e*Pn	Pn	21 40 04.5	-1.7
SML				*e*Sn	Sn	21 41 27.8	-5.7
SCM	**Sheep Creek Mo**	**8.24**	**42**	*e*Pn	Pn	21 40 08.3	-3.2
SCM				*e*Sn	Sn	21 41 37.8	-5.1
HMT	**Hamilton**	**8.81**	**56**	*e*Pn	Pn	21 40 15.2	-3.9
HMT				*e*Sn	Sn	21 41 48.3	-8.2
BPAW	**Bear Paw Mtn.**	**8.85**	**24**	*e*Pn	Pn	21 40 18.2	-1.4

IDC 01 21:48:24.2±7.0**, 6°.42S**×**149°.99E, h66**^{km}±52^{km}**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.4**/26**, mbtmp4.1**/4**, ML2.4**/1**, MS3.7**/5**, Ms1 3.8**/5**, ms1mx3.0**/28**, Error ellipse: s-maj=99.6km s-min=53.7km az=124.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.09**	**223**	P	Pn	21 49 24.9	+0.7
	20nm,0.3s,baz=54,slow=6.2,SNR=25						
PMG				S	Sn	21 50 06.5	-4.3
	26nm,0.3s,baz=212,slow=20,SNR=9.5						
WRA	**Warramunga Arr**	**20.30**	**227**	P	P	21 52 54.2	-0.6
	2.9nm,0.4s,baz=54,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**23.10**	**220**	P	P	21 53 25.2	+0.5
	1.0nm,0.5s,baz=55,slow=8.8,SNR=28						
BATI	**Baumata**	**26.32**	**260**	LR	LR	22 05 10.2	
	comp=Z,425nm,19.7s,baz=104,slow=38						
FITZ	**Fitzroy Crossi**	**26.43**	**242**	P	P	21 53 53.5	-1.6
	1.6nm,0.4s,baz=49,slow=11,SNR=2.0						
FITZ				LR	LR	22 03 55.5	
	comp=Z,1µm,18.6s,slow=35						
NWAO	**Narrogin (SRO)**	**40.27**	**225**	LR	LR	22 11 47.4	
	comp=Z,48nm,20.2s,baz=342,slow=35						
PSI	**Prapat**	**51.80**	**279**	LR	LR	22 21 06.3	
	comp=Z,42nm,20.2s,baz=183,slow=38						
CMAR	**Chiang Mai Arr**	**56.07**	**297**	LR	LR	22 21 49.0	
	comp=Z,28nm,21.0s,baz=140,slow=36						
TORD	**Torodi Ar. Bea**	**148.07**	**285**	PKPbc	PKPbc	22 08 03.6	+0.2
	0.3nm,0.5s,baz=48,slow=2.8,SNR=5.5						

NEIC 01 21:54:50.7±0.0**, 54°.66N**×**162°.27W, h50**^{km}**, ML3.0**(AEIC)**, After AEIC., Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOL	**Dolgoi Island**	**0.54**	**25**	*e*Pn	Pn	21 55 02.8	+0.3
DOL				*e*Sn	Sn	21 55 12.2	+1.2
FALS	**False Pass**	**0.69**	**287**	*e*Pn	Pn	21 55 04.5	+0.2
FALS				*e*Sn	Sn	21 55 15.5	+1.3
PS4A	**Pavlof South-4**	**0.73**	**19**	*e*Pn	Pn	21 55 05.2	+0.4
PS4A				*e*Sn	Sn	21 55 16.4	+1.3
PVV	**Pavlof Volcano**	**0.77**	**21**	*e*Pn	Pn	21 55 05.7	+0.4
PVV				*e*Sn	Sn	21 55 17.2	+1.3
WESP	**Westdahl Peak**	**1.44**	**264**	*e*Pn	Pn	21 55 15.2	+0.8
WESP				*e*Sn	Sn	21 55 34.6	+2.4
AKSA	**Akutan Strait**	**2.07**	**257**	*e*Pn	Pn	21 55 23.4	+0.4
AHB	**Akutan Harbor**	**2.14**	**257**	*e*Pn	Pn	21 55 24.5	+0.6
ZRO	**Akutan Zero**	**2.24**	**257**	*e*Pn	Pn	21 55 25.7	+0.4
VNHG	**Veniaminof 1**	**2.36**	**47**	*e*Pn	Pn	21 55 27.6	+0.6
MSW	**Makushin Switc**	**2.75**	**256**	*e*Pn	Pn	21 55 32.4	+0.1
MCIR	**Makushin Cirqu**	**2.80**	**257**	*e*Pn	Pn	21 55 33.4	+0.4
CHIA	**Chirikof Islan**	**4.01**	**70**	*e*Pn	Pn	21 55 48.3	-1.2
KDAK	**Kodiak Island**	**6.24**	**56**	*e*Pn	Pn	21 56 18.7	-1.4
RSO	**Redoubt South**	**7.74**	**37**	*e*Pn	Pn	21 56 41.6	+0.8

*IDC **01** 21:59:37.0±1.4, 10°.35S×118°.98E, h0^{km}, mb3.7/5, mb1 3.9/10, mb1mx3.7/37, mbtmp3.8/10, ML3.8/4, MS3.0/2, Ms1 3.0/2, ms1mx2.6/26, Error ellipse: s-maj=51.2km s-min=19.1km az=49.0*

*ISCJB **01** 21:59:40.5±0.8, 10°.30S±0°.07×119°.19E±0°.08, h41^{km}, mb3.7/5, Error ellipse: s-maj=12.3km s-min=7.5km az=142.1*

ISC 01 21:59:42.7±1.0**, 10°.29S**±0°.10×**119°.2E**±0°.1**, h41**^{km}**, n11,** σ**0**^{s}**.87**/12**, mb3.7**/5**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.43**	**89**	Pn	**Pn**	**22 00 48.1**	**+0.7**
	11nm,0.3s,baz=266,slow=2.2,SNR=10						
BATI				Sn	**Sn**	**22 01 37.4**	**-0.4**

	27nm,0.3s,baz=58,slow=23,SNR=10						
KAPI	**Kappang**	**5.28**	**6**	Pn	**Pn**	**22 00 59.5**	**+0.4**
	2.8nm,0.3s,baz=171,slow=5.4,SNR=7.9						
KAPI				Sn	**Sn**	**22 01 58.4**	**-0.3**
	4.0nm,0.3s,baz=152,slow=18,SNR=2.3						
KAPI				LR	LR	22 03 17.4	
	comp=Z,235nm,19.6s,baz=133,slow=41						
FITZ	**Fitzroy Crossi**	**9.98**	**142**	Pn	**Pn**	**22 02 03.3**	**-0.3**
WRA	**Warramunga Arr**	**17.49**	**125**	P	**Pn**	**22 03 42.1**	**-1.6**
	0.2nm,0.3s,baz=299,slow=15,SNR=2.4						
WRA				S	Sn	22 06 39.6	-18
	0.1nm,0.3s,baz=292,slow=20,SNR=3.1						
DAV	**Davao City (W)**	**18.39**	**21**	LR	LR	22 13 09.0	
	comp=Z,27nm,18.2s,baz=130,slow=44						
ASAR	**Alice Springs**	**19.35**	**135**	P	**P**	**22 04 06.0**	**+1.1**
	0.2nm,0.3s,baz=315,slow=12,SNR=19						
ASAR				S	S	22 07 31.7	-10
	0.1nm,0.3s,baz=320,slow=27,SNR=4.2						
CMAR	**Chiang Mai Arr**	**34.85**	**325**	P	**P**	**22 06 30.4**	**+0.2**
	0.3nm,0.3s,baz=161,slow=8.6,SNR=1.4						
SONM	**Songino Array**	**58.97**	**350**	P	**P**	**22 09 37.3**	**-0.8**
	0.3nm,0.3s,baz=169,slow=8.1,SNR=2.1						
MKAR	**Makanchi Array**	**65.68**	**333**	P	**P**	**22 10 22.5**	**-0.4**
	0.4nm,0.6s,baz=145,slow=5.5,SNR=3.3						
KURBB	**Kurchatov Arra**	**70.19**	**334**	P	**P**	**22 10 51.2**	**+0.1**
	0.2nm,0.4s,baz=148,slow=5.5,SNR=1.7						
ZALV	**Zalesovo Beam**	**70.30**	**339**	P	**P**	**22 10 52.9**	**+1.2**
	0.6nm,0.5s,baz=133,slow=6.2,SNR=2.1						

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*BJI **01** 22:12:50.0±0.0, 39°.19N×73°.10E, h8^{km}, ML3.5/3*
*KRNET **01** 22:12:51.9±0.1, 39°.09N×73°.55E, mb3.8*
*IDC **01** 22:12:52.1±1.2, 39°.20N×73°.44E, h0^{km}, mb3.6/5, mb1 3.5/12, mb1mx3.4/46, mbtmp3.5/12, ML2.9/7, Error ellipse: s-maj=20.0km s-min=12.7km az=130.0*
*SOME **01** 22:12:54.9, 39°.47N×73°.60E, h0^{km}*
*ISCJB **01** 22:12:55.0±0.8, 39°.02N±0°.04×73°.57E±0°.04, h47^{km}±8^{km}, mb3.6/7, Error ellipse: s-maj=7.8km s-min=4.8km az=155.8*
*NNC **01** 22:13:02.7±3.8, 39°.80N×73°.58E, h2^{km}±20^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=28.3km s-min=17.5km az=171.0*
ISC 01 22:12:54.3±1.5**, 38°.96N**±0°.06×**73°.46E**±0°.03**, h28^{km}**±11^{km}**, n64, $\sigma 1^{s}68$**/91**, mb3.6**/7**, 37C-15D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.39**	**293**	⇑*i*P	**Pn**	**22 13 18.1**	**0.0**
	baz=87						
DRK				⇑*e*S	**Sb**	**22 13 37.0**	**-0.2**
	baz=87						
KSH	**Kashi**	**2.03**	**73**	Pg	**Pn**	**22 13 23.3**	**-3.5**
KSH				Sg	**Sn**	**22 13 47.1**	**-4.2**
KSH				smax	smax		
	comp=N,820nm,0.7s						
KSH				smax	smax		
	comp=E,710nm,0.9s						
BTK	**Batken**	**2.32**	**299**	⇑*e*P	**Pn**	**22 13 32.3**	**+1.6**
	baz=95						
BTK				⇑*i*S	**Sb**	**22 14 02.1**	**-1.6**
	baz=95						
ARSB	**Arslanbob**	**2.39**	**351**	⇑*i*P	**Pn**	**22 13 31.5**	**-0.3**
	baz=49						
ARSB				⇑*i*S	**Sn**	**22 14 01.0**	**+0.8**
	baz=49						
ARLS	**Aral**	**2.98**	**13**	⇓*i*P	**Pn**	**22 13 40.1**	**+0.3**
	baz=12						
ARLS				⇓*i*S	**Sn**	**22 14 14.9**	**+0.3**
	baz=12						
ARK	**Arkit**	**3.06**	**339**	⇑*i*P	**Pn**	**22 13 41.0**	**+0.1**
	baz=37						
ARK				⇑*i*S	**Sn**	**22 14 17.4**	**+0.8**
	baz=37						
UCH	**Uchtor**	**3.37**	**14**	⇑*i*P	**Pn**	**22 13 45.6**	**+0.2**
	baz=13						
UCH				⇑*i*S	**Sn**	**22 14 24.5**	**-0.1**
	baz=13						
UCH	**Uchtor**	**3.37**	**14**	P	**Pn**	**22 13 46.8**	**+1.4**
	SNR=40						
KZA	**Kyzart**	**3.40**	**23**	⇑*e*P	**Pn**	**22 13 45.4**	**-0.5**
	baz=23						
KZA				⇑*i*S	**Sn**	**22 14 24.7**	**-0.8**
	baz=23						
KZA	**Kyzart**	**3.40**	**23**	P	**Pn**	**22 13 46.6**	**+0.7**
	SNR=39						
EKS2	**Erkin-Say**	**3.71**	**4**	⇑*i*P	**Pn**	**22 13 50.6**	**+0.8**
	baz=3.0						
EKS2				⇑*i*S	**Sn**	**22 14 33.0**	**+0.3**
	baz=3.0						
EKS2	**Erkin-Say**	**3.71**	**4**	P	**Pn**	**22 13 51.4**	**+1.6**
	SNR=9.3						
AAK	**Ala-Archa**	**3.76**	**12**	Pn	**Pn**	**22 13 52.4**	**+1.8**
	6.3nm,0.3s,baz=204,slow=11,SNR=22						
AAK				Sn	**Sn**	**22 14 35.9**	**+1.9**
	3.7nm,0.3s,baz=12,slow=14,SNR=17						
AAK				Lg	Lg	22 14 42.0	
	9.0nm,0.3s,baz=27,slow=21,SNR=11						
AAK	**Ala-Archa**	**3.76**	**12**	⇑Pn	**Pn**	**22 13 52.1**	**+1.5**
	11nm,0.5s						
AAK				⇑Lg	Lg	22 14 31.1	
	81nm,1.1s						
AAK	**Ala-Archa**	**3.76**	**12**	⇑*e*P	**Pn**	**22 13 51.0**	**+0.4**
	baz=11						
AAK				⇑*i*S	**Sn**	**22 14 33.5**	**-0.5**
	baz=11						
AAK	**Ala-Archa**	**3.76**	**12**	P	**Pn**	**22 13 52.2**	**+1.7**
	SNR=19						
KBK	**Karagaybulak**	**3.87**	**17**	⇑*i*P	**Pn**	**22 13 52.3**	**+0.3**
	baz=16						
KBK				⇑*i*S	**Sn**	**22 14 35.4**	**-1.2**
	baz=16						
KBK	**Karagaybulak**	**3.87**	**17**	P	**Pn**	**22 13 54.2**	**+2.2**
	SNR=9.3						
ULHL	**Ulahol**	**3.91**	**32**	⇑*e*P	**Pn**	**22 13 52.0**	**-0.7**
	baz=32						
ULHL				⇑*e*S	**Sn**	**22 14 35.0**	**-2.7**
	baz=32						
ULHL	**Ulahol**	**3.91**	**32**	P	**Pn**	**22 13 54.1**	**+1.5**
	SNR=6.1						
FRU1	**Bishkek**	**3.95**	**13**	⇑*e*P	**Pn**	**22 13 53.5**	**+0.4**
	baz=12						
FRU1				⇑*e*S	**Sn**	**22 14 37.8**	**-0.7**
	baz=12						
TAS	**Tashkent**	**3.98**	**308**	⇑*e*P	**Pn**	**22 13 55.2**	**+1.8**
	baz=6.0						
TAS				⇑*e*S	**Sn**	**22 14 41.4**	**+2.2**
	baz=6.0						
BOOM	**Boomskoye usch**	**4.00**	**27**	⇓*e*P	**Pn**	**22 13 53.4**	**-0.5**
	baz=27						
BOOM				⇓*i*S	**Sn**	**22 14 39.0**	**-1.0**
	baz=27						
CHMS	**Chumysh**	**4.16**	**13**	⇑*e*P	**Pn**	**22 13 56.1**	**+0.2**
	baz=13						
CHMS				⇑*e*S	**Sn**	**22 14 42.6**	**-0.9**
	baz=13						
CHMS	**Chumysh**	**4.16**	**13**	P	**Pn**	**22 13 56.9**	**+1.0**
	SNR=14						
TKM2	**Tokmak 2**	**4.28**	**22**	⇓Pn	**Pn**	**22 13 59.1**	**+1.3**
	2.0nm,0.3s						
TKM2				⇑Lg	Lg	22 14 50.4	
	36nm,0.7s						
TKM2	**Tokmak 2**	**4.28**	**22**	⇓*i*P	**Pn**	**22 13 57.2**	**-0.5**
	baz=21						
TKM2				⇓*i*S	**Sn**	**22 14 44.9**	**-1.9**
	baz=21						
USP	**Ospenovka**	**4.38**	**10**	⇑*i*P	**Pn**	**22 13 59.4**	**+0.5**
	baz=9.0						
USP				⇑*i*S	**Sn**	**22 14 48.3**	**-0.7**
	baz=9.0						
USP	**Ospenovka**	**4.38**	**10**	P	**Pn**	**22 14 00.9**	**+1.9**
	SNR=12						
KST	**Kastek**	**4.50**	**24**	Pg	**Pb**	**22 14 10.4**	**-2.3**
	8.6nm,0.5s						
KST				Lg	Lg	22 15 06.7	
	31nm,0.6s						
DGS	**Degeres**	**4.62**	**21**	Pg	**Pb**	**22 14 13.3**	**-1.5**
	21nm,0.8s						
DGS				Lg	Lg	22 15 11.2	
	39nm,0.6s						
KK31	**Karatay Array**	**4.70**	**333**	⇓Pn	**Pn**	**22 14 03.8**	**+0.4**
	2.2nm,0.3s,baz=133,slow=12,SNR=90						
KK31				⇓Pg	**Pb**	**22 14 16.1**	**+0.1**
	6.6nm,0.5s,baz=140,slow=16,SNR=7.1						
KK31				⇓Lg	Lg	22 15 07.5	
	13nm,0.6s,baz=131,slow=23,SNR=4.2						
MTBS	**Maitube**	**4.74**	**27**	Pg	**Pb**	**22 14 15.5**	**-1.2**
	6.7nm,0.6s						
MTBS				Lg	Lg	22 15 14.9	
	24nm,0.9s						
MTBS	**Maitube**	**4.74**	**27**	*e*P	**Pb**	**22 14 15.2**	**-1.5**
	4.8nm,0.1s						
MTBS				*e*S	**Sb**	**22 15 15.2**	**+2.0**
	24nm,0.3s						
TNSS	**Tian-Shan**	**4.86**	**32**	Pg	**Pb**	**22 14 17.5**	**-1.4**
	20nm,0.7s						
TNSS				Lg	Lg	22 15 19.9	
	47nm,0.7s						
TNSS	**Tian-Shan**	**4.86**	**32**	*e*P	**Pb**	**22 14 17.5**	**-1.4**
	12nm,0.1s						
TNSS				*e*S	**Sb**	**22 15 19.7**	**+2.7**
	42nm,0.3s						
MDOK	**Medeo**	**5.00**	**32**	Pg	**Pb**	**22 14 19.7**	**-1.6**
	12nm,0.6s						
MDOK				Lg	Lg	22 15 23.1	
	22nm,1.1s						
KNDC	**Almaty**	**5.01**	**31**	⇑Pg	**Pb**	**22 14 20.2**	**-1.2**
	28nm,0.6s						
KNDC				⇓Lg	Lg	22 15 15.2	
	111nm,0.9s						
KOTS	**Kotyrbulak**	**5.09**	**32**	Pg	**Pb**	**22 14 22.0**	**-0.6**
	16nm,0.6s						
KOTS				Lg	Lg	22 15 26.1	
	103nm,1.0s						
KTBS	**Karatobe**	**5.33**	**26**	Pg	**Pb**	**22 14 26.1**	**-0.7**
	6.6nm,0.6s						
KTBS				Lg	Lg	22 15 33.0	
	41nm,0.8s						
KUU	**Kurty**	**5.39**	**23**	Pg	**Pb**	**22 14 25.9**	**-1.8**
	4.9nm,0.7s						
KUU				Lg	Lg	22 15 32.8	
	48nm,0.8s						
SATY	**Saty**	**5.55**	**41**	Pg	**Pb**	**22 14 30.5**	**0.0**
	17nm,1.0s						
SATY				Lg	Lg	22 15 40.6	
	18nm,1.1s						
SATY	**Saty**	**5.55**	**41**	*e*P	**Pb**	**22 14 29.9**	**-0.6**
	16nm,0.4s						
SATY				*e*S	**Sb**	**22 15 40.5**	**+3.8**
	19nm,0.4s						
CHKK	**Chushkaly**	**5.57**	**27**	Pg	**Pb**	**22 14 29.4**	**-1.3**
	3.1nm,0.6s						
CHKK				Lg	Lg	22 15 39.1	
	21nm,0.8s						
KURS	**Kuram**	**5.75**	**37**	Pg	**Pb**	**22 14 30.3**	**-3.7**
	7.5nm,1.0s						
KURS				Lg	Lg	22 15 41.4	
	7.2nm,1.4s						
UZB	**Uzynbulak**	**5.93**	**43**	Pg	**Pb**	**22 14 38.5**	**+1.4**
	4.9nm,1.0s						
UZB				Lg	Lg	22 15 54.2	
	11nm,1.3s						
PDGK	**Podgornoye**	**6.31**	**44**	⇑Pn	**Pn**	**22 14 25.4**	**-0.1**
	1.3nm,0.4s						
PDGK				⇑Pg	**Pb**	**22 14 43.5**	**+0.1**
	6.2nm,0.9s						
PDGK				⇑Lg	Lg	22 16 01.4	
	18nm,1.1s						
OTUK	**Ortayu**	**9.32**	**355**	⇑Pn	**Pn**	**22 15 05.3**	**-1.4**
	1.4nm,0.8s						
OTUK				⇑Lg	Lg	22 17 29.8	
	16nm,1.0s						
MKAR	**Makanchi Array**	**10.16**	**37**	Pn	**Pn**	**22 15 18.6**	**+0.4**
	0.0nm,0.3s,baz=216,slow=7.1,SNR=2.8						
MKAR				Lg	Lg	22 18 09.1	
	0.1nm,0.3s,baz=222,slow=25,SNR=3.3						
WMQ	**Urumqi**	**11.74**	**61**	*e*P	**Pn**	**22 15 41.5**	**+1.5**
GEYT	**Alibeck**	**12.07**	**270**	Pn	**Pn**	**22 15 45.1**	**+0.6**
	0.3nm,0.3s,baz=108,slow=9.3,SNR=3.3						
GEYT				Sn	**Sn**	**22 17 53.0**	**-5.1**
	0.1nm,0.3s,baz=24,slow=43,SNR=2.4						
KURBB	**Kurchatov Arra**	**12.20**	**15**	Pn	**Pn**	**22 15 44.7**	**-1.4**
	0.0nm,0.3s,baz=205,slow=13,SNR=3.1						
KURBB				Lg	Lg	22 19 08.7	
	0.0nm,0.3s,baz=206,slow=27,SNR=8.8						
AB31	**Akbulak array**	**14.13**	**321**	⇓Pn	**Pn**	**22 16 15.1**	**+2.7**
	1.1nm,0.6s,baz=132,slow=13,SNR=21						
AB31				⇓Sn	**Sn**	**22 18 47.0**	**-1.1**
	1.5nm,0.8s,baz=129,slow=25,SNR=6.1						
AKTO	**Aktyubinsk**	**15.84**	**321**	Pn	**Pn**	**22 16 32.5**	**-2.7**
	0.1nm,0.3s,baz=136,slow=15,SNR=4.4						
AKTO				Sn	Sn	22 19 17.4	-12
	0.1nm,0.3s,baz=73,slow=20,SNR=1.9						
AKTO	**Aktyubinsk**	**15.84**	**321**	⇓Pn	**P**	**22 16 40.3**	**+1.6**
	3.6nm,1.2s						
AKTO				⇓Sn	**Sn**	**22 19 25.5**	**-4.4**
	1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**16.88**	**24**	Pn	**Pn**	**22 16 46.3**	**-2.1**
	0.1nm,0.3s,baz=198,slow=9.2,SNR=3.7						
ARU	**Arti**	**20.07**	**335**	P	**P**	**22 17 24.7**	**-0.6**
	0.0nm,0.3s,baz=195,slow=19,SNR=3.8						
SONM	**Songino Array**	**25.37**	**59**	P	**P**	**22 18 19.0**	**0.0**
	0.6nm,0.6s,baz=250,slow=11,SNR=4.4						
FINES	**FINESS Array B**	**36.60**	**324**	P	**P**	**22 19 57.3**	**-0.3**
	0.3nm,0.3s,baz=126,slow=9.7,SNR=7.0						
ATD	**Arta Tunnel**	**38.55**	**233**	P	**P**	**22 20 17.3**	**+2.6**
	12nm,1.2s,baz=253,slow=20,SNR=3.8						
ARCES	**ARCESS Array B**	**39.66**	**336**	P	**P**	**22 20 23.8**	**+0.4**
	1.0nm,0.9s,baz=109,slow=11,SNR=5.5						
KLR	**Kul'dur**	**42.14**	**56**	P	**P**	**22 20 44.4**	**+0.4**
	0.7nm,0.5s,baz=296,slow=8.4,SNR=4.3						
NOA	**NORSAR Array B**	**43.63**	**321**	P	**P**	**22 20 56.9**	**+0.9**
	0.3nm,0.7s,baz=93,slow=7.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**67.71**	**269**	P	**P**	**22 23 51.1**	**+1.7**
	0.2nm,0.5s,baz=50,slow=6.0,SNR=3.0						

MEX 01 22:19:53.2±0.3**, 15°.50N**×**96°.51W, h15^{km}**±11^{km}**, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.47**	**55**	*e*P	Pg	22 20 01.2	-1.3
HUIG				*i* S	Sg	22 20 07.4	-1.5
VHO	**Vista Hermosa**	**1.58**	**352**	*i* P	Pn	22 20 17.8	-3.1
VHO				*i* S	Sn	22 20 36.5	-4.7
CMIG	**Matias Romero**	**2.22**	**44**	*i* P	Pn	22 20 26.8	-2.7
CMIG				*i* S	Sn	22 20 52.6	-4.1

GUC 01 22:23:52.8±0.7**, 24°.32S**×**67°.39W, h191^{km}**±14^{km}**, ML3.5, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**2.17**	**247**	⇑*i*P	Pn	22 24 33.8	+1.0
GO02				*e*S	Sn	22 25 04.9	+1.0
GO02				IAML		22 25 06.4	
	comp=E,132nm,0.1s						
LVC	**Limon Verde**	**2.21**	**320**	*e*S	Sn	22 25 04.7	0.0
PB15	**IPOC Station P**	**2.21**	**300**	⇑*e*P	Pn	22 24 34.2	+1.1
PB15				*e*S	Sn	22 25 04.9	+0.5
PB06	**IPOC Station P**	**2.57**	**308**	⇑*i*P	Pn	22 24 38.2	+1.0
PB06				*e*S	Sn	22 25 11.1	-0.5
PB06				IAML		22 25 13.7	
	comp=E,139nm,0.1s						
PB14	**IPOC Station P**	**2.77**	**263**	*e*P	Pn	22 24 40.2	+0.6
PB05	**IPOC Station P**	**2.97**	**299**	*e*P	Pn	22 24 42.6	+0.9
PB05				*e*S	Sn	22 25 18.8	-1.2
PB05				IAML		22 25 21.6	
	comp=N,68nm,0.2s						
PB10	**IPOC Station P**	**3.01**	**285**	*e*P	Pn	22 24 42.9	+0.8
PB10				*e*S	Sn	22 25 21.0	+0.5
PB03	**IPOC Station P**	**3.14**	**316**	*e*P	Pn	22 24 44.5	+0.6
PB03				*e*S	Sn	22 25 22.2	-1.5

GUC 01 22:37:45.0±0.3**, 20°.54S**×**68°.96W, h115^{km}**±2^{km}**, ML3.7, 8C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.44**	**335**	⇓*i*P	Pn	22 38 02.2	-0.4
PB08				*e*S	Sn	22 38 14.6	-1.1
PB08				IAML		22 38 15.6	
	comp=E,4µm,0.2s						
PB01	**IPOC Station P**	**0.70**	**225**	⇑*i*P	Pn	22 38 03.4	-0.6
PB01				*e*S	Sn	22 38 17.5	-0.8
PB01				IAML		22 38 18.4	
	comp=N,2µm,0.1s						
GO01	**Chusmiza**	**0.90**	**346**	⇓*e*P	Pn	22 38 06.0	-0.2
GO01				*e*S	Sn	22 38 21.8	-0.2
GO01				IAML		22 38 24.1	
	comp=N,2µm,0.2s						
PB11	**IPOC Station P**	**1.02**	**320**	⇑*i*P	Pn	22 38 06.7	-0.3
PB11				*e*S	Sn	22 38 23.2	-0.3
PB11				IAML		22 38 25.2	
	comp=N,1µm,0.4s						
PB02	**IPOC Station P**	**1.17**	**228**	⇑*i*P	Pn	22 38 08.2	-0.3
PB02				*e*S	Sn	22 38 26.1	-0.2
PB02				IAML		22 38 28.1	
	comp=E,2µm,0.4s						
PB09	**IPOC Station P**	**1.28**	**192**	⇑*i*P	Pn	22 38 09.7	-0.1
PB09				*e*S	Sn	22 38 28.5	0.0
PSGC	**Pisagua**	**1.44**	**310**	⇑*i*P	Pn	22 38 11.2	-0.3
PSGC				*e*S	Sn	22 38 31.1	-0.6
PB07	**IPOC Station P**	**1.46**	**216**	⇑*i*P	Pn	22 38 11.5	-0.4
PB07				*e*S	Sn	22 38 31.4	-0.9
MNMC	**Minye Minye**	**1.53**	**337**	⇑*i*P	Pn	22 38 13.0	+0.2
MNMC				*e*S	Sn	22 38 34.0	+0.3
MNMC				IAML		22 38 36.3	
	comp=E,945nm,0.4s						
PB03	**IPOC Station P**	**1.67**	**206**	⇑*e*P	Pn	22 38 14.0	-0.4
PB03				*e*S	Sn	22 38 35.7	-1.0

ROM 01 22:49:23.2±0.2**, 43°.387N**±0°.005×**12°.515E**±0°.006**, h5^{km}**±1^{km}**, ML0.5**/2**, Error ellipse: s-maj=0.6km s-min=0.3km az=218.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.05**	**116**	P	Pg	22 49 24.7	+0.1
ATFO				S	Sg	22 49 25.7	+0.1
ATFO				AML	AML		
	comp=E,143µm,0.2s						
ATFO				AML	AML		
	comp=N,173µm,0.2s						
ATFO				AML	AML		
	comp=N,173µm,0.2s						
ATFO				AML	AML		
	comp=E,143µm,0.2s						
ATFO				AML	AML		
	comp=N,173µm,0.2s						
ATFO				AML	AML		
	comp=E,143µm,0.2s						
ATVO	**AVT- Monte Val**	**0.08**	**267**	P	Pg	22 49 25.1	+0.1
ATVO				S	Sg	22 49 26.6	+0.3
ATVO				AML	AML		
	comp=E,39µm,1.4s						
ATVO				AML	AML		
	comp=N,42µm,0.2s						
ATVO				AML	AML		
	comp=N,42µm,0.2s						
ATVO				AML	AML		
	comp=E,39µm,1.4s						
ATVO				AML	AML		
	comp=N,42µm,0.2s						
ATVO				AML	AML		
	comp=E,39µm,1.4s						
ATPI	**Pietralunga -**	**0.10**	**308**	P	Pg	22 49 25.7	+0.3
ATPI				S	Sg	22 49 27.8	+0.9
MURB	**Monte Urbino**	**0.12**	**177**	P	Pg	22 49 26.1	+0.3
MURB				S	Sg	22 49 28.5	+1.0
MURB				AML	AML		
	comp=E,72µm,1.4s						
MURB				AML	AML		
	comp=N,48µm,0.2s						
MURB				AML	AML		
	comp=N,48µm,0.2s						
MURB				AML	AML		
	comp=E,72µm,1.4s						
MURB				AML	AML		
	comp=N,48µm,0.2s						
MURB				AML	AML		
	comp=E,72µm,1.4s						
NOVE	**Novellara**	**1.92**	**318**	AML	AML		
	comp=N,975µm,1.5s						
NOVE				AML	AML		
	comp=E,460µm,1.5s						
NOVE				AML	AML		
	comp=E,460µm,1.5s						
NOVE				AML	AML		
	comp=N,975µm,1.5s						
NOVE				AML	AML		
	comp=E,460µm,1.5s						
NOVE				AML	AML		
	comp=N,975µm,1.5s						
T0721	**Laino Castello**	**4.31**	**142**	AML	AML		
	comp=E,322µm,0.3s						
T0721				AML	AML		
	comp=E,322µm,0.3s						
T0721				AML	AML		
	comp=N,391µm,0.4s						
T0721				AML	AML		
	comp=E,322µm,0.3s						
T0721				AML	AML		
	comp=N,391µm,0.4s						
T0721				AML	AML		
	comp=N,391µm,0.4s						

GEN 01 22:49:28.1, 44°.18N×10°.18E, h4^{km}, Ml0.4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.02**	**235**	P	Pg	22 49 29.1	+0.2
EQUI				S	Sg	22 49 29.8	+0.2
GRAM	**Graiana**	**0.32**	**345**	P	Pg	22 49 34.8	+0.4
GRAM				S	Sg	22 49 39.7	+1.1
MAIM	**Mastiano**	**0.35**	**140**	P	Pg	22 49 34.9	+0.1
MAIM				S	Sg	22 49 39.9	+0.6

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*DDA **01** 22:57:51.1, 35°.70N×28°.10E, h8^{km}±5^{km}, ML3.2*
*ATH **01** 22:57:52.4, 35°.79N×28°.22E, h21^{km}±4^{km}, ML2.5/1, Error ellipse: s-maj=5.0km s-min=1.9km az=14.0*
*ISCJB **01** 22:57:53.8±0.8, 35°.75N±0°.04×28°.20E±0°.04, h17^{km}±7^{km}, Error ellipse: s-maj=6.8km s-min=5.1km az=11.4*
*ISK **01** 22:57:53.4, 35°.84N×28°.25E, h11^{km}, ML3.1/17*
*THE **01** 22:57:53.0, 35°.80N×28°.19E, h0^{km}±1^{km}, ML2.6/4, Error ellipse: s-maj=1.8km s-min=1.1km az=154.0*
ISC 01 22:57:53.2±1.3**, 35°.81N**±0°.04×**28°.21E**±0°.03**, h8^{km}**±10^{km}**, n38, $\sigma 0^{s}96$**/53**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.41**	**351**	PG	**Pg**	**22 58 00.7**	**-0.6**
ARG				SG	**Sg**	**22 58 07.7**	**+1.0**
ARG	**Arkhangelos**	**0.41**	**351**	P	**Pg**	**22 58 00.7**	**-0.6**
ARG				S	**Sb**	**22 58 09.2**	**0.0**
ARG	**Arkhangelos**	**0.41**	**351**	P	**Pg**	**22 58 00.6**	**-0.7**
ARG				S	**Sb**	**22 58 08.3**	**-0.8**
ARG				AML	AML	22 58 12.1	
	comp=E,1641µm,0.5s						
ARG				AML	AML	22 58 13.9	
	comp=N,1492µm,0.6s						
BBRN	**Bozburun-Marma**	**0.88**	**352**	PG	**Pg**	**22 58 10.3**	**+0.2**
KARP	**Karpathos**	**0.89**	**253**	PG	**Pn**	**22 58 11.5**	**-0.5**
KARP				SG	**Sn**	**22 58 25.4**	**+0.3**
KARP	**Karpathos**	**0.89**	**253**	P	**Pg**	**22 58 10.0**	**-0.3**
KARP				S	**Sn**	**22 58 24.6**	**-0.5**
KARP	**Karpathos**	**0.89**	**253**	P	**Pg**	**22 58 09.7**	**-0.6**
MRSB	**Marmaris-Mugla**	**0.91**	**360**	PG	**Pg**	**22 58 10.3**	**-0.4**
DATC	**Datca-Mugla**	**1.05**	**335**	PG	**Pg**	**22 58 13.5**	**+0.2**
DATC				SG	**Sn**	**22 58 28.8**	**-0.1**
DAT	**Datca**	**1.05**	**331**	PG	**Pg**	**22 58 13.6**	**+0.2**
DAT				SG	**Sn**	**22 58 28.9**	**-0.3**
DAT	**Datca**	**1.05**	**331**	*i* P	**Pn**	**22 58 13.8**	**-0.5**
DALY	**Dalyan (Mula)**	**1.07**	**20**	PG	**Pb**	**22 58 13.1**	**-0.8**
DALY	**Dalyan (Mula)**	**1.07**	**20**	*i* P	**Pg**	**22 58 13.8**	**0.0**
DALY				*i* S	**Sn**	**22 58 31.6**	**+2.1**
DALY				IAML_P			
	comp=Z,2µm,0.3s						
FETY	**Fethiye**	**1.09**	**40**	PG	**Pb**	**22 58 13.8**	**-0.5**
FETY				SG	**Sn**	**22 58 28.9**	**-1.1**
TURN	**Turunc**	**1.11**	**17**	PG	**Pb**	**22 58 11.4**	**-3.2**
TURN	**Turunc**	**1.11**	**17**	*i* P	**Pb**	**22 58 11.3**	**-3.3**
TURN				IAML_P			
	comp=Z,2µm,0.1s						
KSL	**Kastellorizon**	**1.17**	**73**	P	**Pg**	**22 58 15.3**	**-0.3**
KSL				S	**Sn**	**22 58 32.5**	**+0.6**
KSL	**Kastellorizon**	**1.17**	**73**	P	**Pb**	**22 58 15.1**	**-0.5**
AKAS	**Kas**	**1.21**	**69**	PN	**Pg**	**22 58 16.7**	**+0.2**
AKAS	**Kas**	**1.21**	**69**	*i* P	**Pg**	**22 58 17.8**	**+1.3**
YER	**Yerkesik**	**1.33**	**3**	PN	**Pn**	**22 58 17.8**	**-0.3**
YER	**Yerkesik**	**1.33**	**3**	P	**Pn**	**22 58 17.9**	**-0.2**

YER				S	Sg	22 58 36.7	+0.8
BDRM	Kayabasi	1.40	334	i P	Pb	22 58 19.7	+0.1
BDRM				i S	Sg	22 58 39.9	+1.7
BDRM				IAML_P			
	comp=Z,4µm,0.4s						
BODT	Bodrum	1.45	330	PN	Pb	22 58 19.9	-0.5
BODT	Bodrum	1.45	330	P	Pn	22 58 19.4	-0.2
BODT				S	Sb	22 58 39.1	+0.2
ELL	Elmali	1.67	55	PN	Pn	22 58 22.6	-0.2
AYDN	Tasoluk	1.87	352	i P	Pb	22 58 27.3	-0.3
AYDN				IAML_P			
	comp=Z,2µm,0.5s						
GCAM	G?zelcaml?	2.04	338	PN	Pn	22 58 28.9	+1.1
GCAM	G?zelcaml?	2.04	338	i P	Pn	22 58 28.9	+1.1
GCAM				i S	Sb	22 58 56.5	+0.4
GCAM				IAML_P			
	comp=Z,673nm,0.1s						
KORT	Korkueli	2.10	55	PN	Pn	22 58 28.9	+0.1
AYDB	Zeytinkoy-Aydi	2.15	353	PN	Pn	22 58 29.4	0.0
SMG	Samos	2.19	330	P	Pn	22 58 29.9	0.0
SMG				S	Sn	22 58 57.7	+0.5
SMG	Samos	2.19	330	P	Pn	22 58 29.7	-0.2
LAST	Lasithi	2.32	255	P	Pn	22 58 32.8	+1.1
APE	Apeiranthos	2.50	301	PN	Pn	22 58 35.1	+1.0
APE	Apeiranthos	2.50	301	P	Pn	22 58 34.9	+0.7
IOSP	Ios island	2.53	292	P	Pn	22 58 34.6	+0.1
IDI	Anoyia	2.75	260	P	Pn	22 58 37.7	0.0

ISCJB ***01*** *22:59:44.9±0.3, 5°.05N±0°.04×125°.51E±0°.06, h189^{km}±3^{km}, mb4.3/22, Error ellipse: s-maj=10.5km s-min=5.0km az=157.2*

IDC ***01*** *22:59:46.7±0.8, 5°.14N×125°.32E, h198^{km}±7^{km}, mb3.6/13, mb1 3.8/16, mb1mx3.6/32, mbtmp4.3/16, Error ellipse: s-maj=18.9km s-min=8.8km az=78.0*

DJA ***01*** *22:59:56.7±0.9, 4°N±5°×12°5E±°, h227^{km}±15^{km}, M4.5/8, mb4.4/4, mB4.8/4, MLv4.7/8, Mw(mB)4.0/4*

ISC 01 22:59:45.8±0.7**, 5°.02N**±0°.05×**125°.46E**±0°.08**, h186**^{km}±6^{km}**, n38,** σ**1$\overset{s}{.}$69**/48**, mb4.0**/22**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.11	13	eP	Pn	23 00 14.6	-0.4
DDMP				eS	Sn	23 00 35.8	-1.9
GSPH	General Santos	1.18	334	⇑iP	Pn	23 00 15.8	+0.1
GSPH				i S	Sn	23 00 38.4	-0.6
SGSI	Sangihe	1.32	177	P	Pn	23 00 17.3	+0.6
SKMP	Bagumbayan, Su	1.75	329	eP	Pn	23 00 19.6	-1.2
SKMP				eS	Sn	23 00 45.5	-2.5
DAV	Davao City (W)	2.04	3	P	Pn	23 00 24.7	+0.9
	53nm,0.3s,baz=50,slow=3.5,SNR=3.3						
DAV				S	Sn	23 00 54.1	+0.6
	114nm,0.3s,baz=313,slow=23,SNR=20						
DMPH	Davao City--Mi	2.06	1	⇑eP	Pn	23 00 27.8	+3.9
DMPH				eS	Sn	23 00 55.8	+2.1
MATI	Mati	2.08	22	eP	Pn	23 00 22.1	-2.0
MATI				eS	Sn	23 00 52.1	-1.9
TNTI	Ternate	4.62	156	P	Pn	23 00 54.9	-0.2
TNTI				S	Sn	23 01 48.2	-1.4
LBMI	Labuha	5.97	160	P	Pn	23 01 13.2	+0.6
SANI	Sanana	7.04	176	P	Pn	23 01 23.3	-3.2
	84nm,0.8s,2µm						
SIJI	Sorong	8.23	135	P	Pn	23 01 44.6	+2.3
	2.4nm,0.3s,baz=336,slow=17,SNR=6.0						
SIJI				S	Sn	23 03 12.3	-2.4
	0.9nm,0.3s,baz=41,slow=19,SNR=3.5						
NLAI	Namlea	8.36	169	P	Pn	23 01 42.3	-1.6
BATI	Baumata	15.23	187	P	P	23 03 14.3	+2.0
	12nm,0.3s,baz=360,slow=1.6,SNR=9.7						
JAY	Jayapura	16.96	116	P	Pn	23 03 33.0	+0.4
	3.0nm,0.3s,baz=283,slow=4.6,SNR=22						
JOW	Kunigami	21.86	7	P	P	23 04 23.6	-0.2
	1.1nm,0.7s,baz=200,slow=15,SNR=5.4						
FITZ	Fitzroy Crossi	22.97	180	P	P	23 04 35.5	+1.4
	3.9nm,0.3s,baz=2.7,slow=8.9,SNR=52						
PANO	Nakornpanom	23.71	302	P	P	23 04 41.2	+0.2
	0.6nm,0.9s						
SKNT	Sakolnakorn	24.17	301	P	P	23 04 45.6	+0.4
	38nm,1.0s						
KHON	Khomkaen	24.90	299	P	P	23 04 53.2	+1.4
	106µm,0.9s						
NONG	Nongkai	25.38	303	P	P	23 04 59.0	+2.9
	0.2nm,0.8s						
CHAI	Chaiyaphum	25.46	297	P	P	23 04 56.9	0.0
	39µm,0.8s						
KRAB	Krabi	26.28	278	P	P	23 05 05.7	+1.4
WRA	Warramunga Arr	26.29	161	P	P	23 05 05.2	+0.9
	0.8nm,0.3s,baz=341,slow=13,SNR=21						
PSI	Prapat	26.57	266	P	P	23 05 06.8	-0.2
	5.9nm,0.4s,baz=96,slow=4.6,SNR=7.8						
CMAR	Chiang Mai Arr	29.14	299	P	P	23 05 30.9	+1.2
	2.5nm,0.6s,baz=119,slow=7.6,SNR=15						
ASAR	Alice Springs	29.67	164	P	P	23 05 35.5	+1.1
	0.6nm,0.3s,baz=338,slow=7.2,SNR=13						
ASAR				PcP	PcP	23 08 34.4	+0.3
	0.7nm,0.3s,baz=346,slow=2.4,SNR=5.7						
ASAR				ScP	ScP	23 11 57.5	-1.0
	0.9nm,0.6s,baz=343,slow=3.1,SNR=7.1						
MJAR	Matsushiro Arr	33.49	19	P	P	23 06 06.3	-1.2
	2.1nm,0.8s,baz=196,slow=9.5,SNR=4.7						
HHC	Hu-ho-hao-te	37.80	343	P	P	23 06 46.2	+1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,12nm,5.5s						
STKA	Stephens Creek	39.78	158	P	P	23 07 02.2	+1.5
	comp=Z,1.0nm,0.4s,baz=314,slow=7.9,SNR=4.2						
ASAJ	Asahikawa	41.76	19	P	P	23 07 16.7	-0.1
	comp=Z,1.8nm,0.4s,baz=300,slow=20,SNR=3.0						
PETK	Petropavlovsk-	54.74	23	P	P	23 08 56.9	+1.0
	comp=Z,1.8nm,0.6s,baz=173,slow=2.9,SNR=4.4						
MKAR	Makanchi Array	55.79	325	P	P	23 09 02.2	-1.3
	comp=Z,1.6nm,0.5s,baz=121,slow=8.1,SNR=20						
KSH	Kashi	56.25	315	eP	P	23 09 08.0	+0.9
KSH				sP	sP	23 10 07.8	-0.2
KSH				pmax	pmax		
	comp=Z,14nm,1.7s						
ZALV	Zalesovo Beam	58.88	333	P	P	23 09 22.2	-2.8
	comp=Z,0.3nm,0.3s,baz=132,slow=6.0,SNR=2.5						
VNDA	Vanda	84.85	173	P	P	23 11 59.0	0.0
	comp=Z,0.5nm,0.7s,baz=317,slow=5.9,SNR=5.1						
ARCES	ARCESS Array B	88.81	340	P	P	23 12 15.9	-2.4
	comp=Z,1.7nm,0.8s,baz=76,slow=7.6,SNR=5.3						
FINES	FINESS Array B	90.11	332	P	P	23 12 21.3	-3.2
	comp=Z,0.8nm,0.5s,baz=66,slow=6.5,SNR=10						
TORD	Torodi Ar. Bea	121.32	289	PKP	PKPdf	23 18 17.1	-0.8
	comp=Z,0.2nm,0.4s,baz=356,slow=8.5,SNR=3.9						

ISCJB ***01*** *23:35:16.5±0.4, 35°.01S±0°.07×54°.09E±0°.10, h10^{km}, mb4.2/26, MS3.9/16, Error ellipse: s-maj=11.9km s-min=8.9km az=152.0*

IDC ***01*** *23:35:16.7±0.5, 35°.02S×54°.06E, h0^{km}, mb4.1/18, mb1 4.2/19, mb1mx4.1/33, mbtmp4.1/19, ML4.8/1, MS3.8/17, Ms1 3.8/17, ms1mx3.6/28, Error ellipse: s-maj=18.7km s-min=14.4km az=44.0*

NEIC ***01*** *23:35:17.6±1.9, 35°.03S×53°.97E, h10^{km}±2^{km}, mb4.4/17, Error ellipse: s-maj=22.0km s-min=8.9km az=64.0*

ISC 01 23:35:18.1±0.5**, 34°.87S**±0°.07×**54°.1E**±0°.1**, h10**^{km}**, n62,** σ**1$\overset{s}{.}$48**/47**, mb4.2**/26**, MS3.9**/16**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	13.73	6	ePn	Pn	23 38 30.2	-2.8
ABPO	Ambohimpanom	16.93	337	ePn	P	23 39 17.3	0.0
	20nm,0.9s						
OPO	Ambohidratompo	17.36	338	P	P	23 39 23.9	+1.8
	3.0nm,0.3s,baz=164,slow=12,SNR=27						
OPO				S	Sn	23 42 29.2	-4.9
	0.4nm,0.3s,baz=99,slow=13,SNR=3.1						
OPO				LR	LR	23 45 05.3	
	comp=Z,128nm,18.8s,baz=291,slow=34						
BOSA	Boshof	25.26	276	P	P	23 40 46.5	+1.9
	3.9nm,0.9s,baz=103,slow=10,SNR=5.2						
BOSA				LR	LR	23 48 12.5	
	comp=Z,149nm,21.0s,baz=110,slow=31						
LBTB	Lobatse	26.50	284	P	P	23 40 54.6	-1.3
	4.1nm,0.9s,baz=123,slow=7.2,SNR=5.1						
LBTB				LR	LR	23 49 37.7	
	comp=Z,254nm,20.6s,baz=118,slow=32						
LBTB	Lobatse	26.50	284	eP	P	23 40 54.6	-1.3
	6.9nm,1.0s						
MATP	Matopo	26.76	296	P	P	23 40 57.4	-0.9
	1.3nm,0.5s,baz=128,slow=7.4,SNR=6.1						
MATP				LR	LR	23 50 11.7	
	comp=Z,335nm,18.9s,baz=126,slow=33						
SUR	Sutherland	27.76	266	LR	LR	23 49 44.1	
	comp=Z,119nm,20.6s,baz=118,slow=31						
H08S1	Diego Carcia H	31.93	36	T	T	00 15 07.5	
	baz=208,slow=75,SNR=66						
H08S2	Diego Garcia H	31.94	36	T	T	00 15 06.2	
	baz=208,slow=75,SNR=35						
H08S3	Diego Garcia H	31.95	36	T	T	00 15 07.0	
	baz=208,slow=75,SNR=62						
H08N3	Diego Garcia H	32.38	33	T	T	00 15 39.9	
	baz=205,slow=76,SNR=117						
H08N1	Diego Carcia H	32.39	33	T	T	00 15 40.8	
	baz=205,slow=76,SNR=101						
H08N2	Diego Garcia H	32.40	33	T	T	00 15 41.5	
	baz=205,slow=76,SNR=94						
MAW	Mawson	33.17	174	P	P	23 41 52.9	-1.5
	2.2nm,0.9s,baz=331,slow=13,SNR=2.6						
MAW				LR	LR	23 51 45.7	
	comp=Z,216nm,20.7s,baz=346,slow=30						
MAW	Mawson	33.17	174	eP	P	23 41 51.4	-3.0
	0.6nm,0.9s						
TSUM	Tsumeb	35.84	286	P	P	23 42 18.4	+0.1
	1.5nm,0.4s,baz=115,slow=4.8,SNR=3.6						
KMBO	Kilima Mbogo	37.07	331	P	P	23 42 28.6	-0.3
	0.5nm,0.4s,baz=165,slow=6.6,SNR=3.5						
KMBO				LR	LR	23 55 32.5	
	comp=Z,195nm,21.9s,baz=166,slow=33						
MBAR	Mbarara	40.47	322	P	P	23 42 59.3	+2.0
	1.0nm,0.2s,baz=128,slow=12,SNR=3.4						
MBAR	Mbarara	40.47	322	eP	P	23 42 57.5	+0.2
	3.6nm,1.0s						
SNAA	Sanae	47.02	201	P	P	23 43 49.1	-0.2
SNAA	Sanae	47.02	201	P	P	23 43 49.2	-0.1
	2.1nm,0.8s,baz=72,slow=4.4,SNR=8.1						
SNAA	Sanae	47.02	201	eP	P	23 43 47.8	-1.4
	4.7nm,1.0s						
VNA2	Neumayer--Watz	48.20	203	P	P	23 44 00.7	+2.3
H01W2	Cape Leeuwin H	48.57	108	T	T	00 35 46.6	
	baz=250,slow=75,SNR=17						
H01W3	Cape Leeuwin H	48.58	108	T	T	00 35 47.1	
	baz=250,slow=75,SNR=20						
H01W1	Cape Leeuwin H	48.59	108	T	T	00 35 48.2	
	baz=250,slow=75,SNR=19						
VNA3	Neumayer Olymp	49.00	203	P	P	23 44 06.1	+1.6
H09W1	TRISTAN DA CUN	52.80	247	T	T	00 41 06.1	
QSPA	South Pole Qui	55.31	180	eP	P	23 44 50.7	-1.0
	5.5nm,0.8s						
RAYN	Ar Rayn	58.64	351	eP	P	23 45 16.0	+0.4
	4.5nm,1.0s						
VNDA	Vanda	59.94	166	P	P	23 45 22.3	-1.6
	1.0nm,0.9s,baz=264,slow=10.0,SNR=4.0						
VNDA				LR	LR	00 08 16.9	
	comp=Z,118nm,21.0s,baz=250,slow=33						
CM31	Chiang Mai Arr	68.02	46	eP	P	23 46 18.6	+0.8
	9.3nm,1.0s						
CMAR	Chiang Mai Arr	68.02	46	P	P	23 46 18.6	+0.8
	3.3nm,0.9s,baz=227,slow=6.7,SNR=12						
CMAR				LR	LR	00 12 50.2	
	comp=Z,74nm,18.5s,baz=330,slow=33						
ASAR	Alice Springs	68.86	105	P	P	23 46 22.6	-0.7
	1.5nm,0.8s,baz=241,slow=5.6,SNR=11						
AS31	Alice Springs	68.86	105	eP	P	23 46 22.6	-0.7
	1.1nm,1.0s						
TORD	Torodi Ar. Bea	68.90	304	P	P	23 46 23.6	+0.3
	4.6nm,0.3s,baz=101,slow=5.0,SNR=1.1						
TORD				LR	LR	00 15 34.1	
	comp=Z,92nm,20.1s,baz=345,slow=35						
TOA1	Torodi Ar. Sit	68.90	304	eP	P	23 46 23.6	+0.2
DBIC	Dimbokro	69.17	294	LR	LR	00 13 28.0	
	comp=Z,48nm,21.1s,baz=116,slow=33						
STKA	Stephens Creek	70.75	116	LR	LR	00 13 46.9	
	comp=Z,90nm,19.4s,baz=206,slow=33						
WR1	Warramunga Arr	71.09	101	eP	P	23 46 38.2	+1.2
WRA	Warramunga Arr	71.09	101	P	P	23 46 38.2	+1.2
	4.4nm,0.7s,baz=234,slow=7.1,SNR=9.6						
GEYT	Alibeck	72.53	3	P	P	23 46 48.1	+3.0
	0.7nm,0.7s,baz=163,slow=7.5,SNR=3.2						
BR101	Keskin Array S	76.59	344	eP	P	23 47 09.0	+0.2
BRTR	Keskin Array B	76.59	344	P	P	23 47 09.0	+0.2
	1.2nm,0.8s,baz=188,slow=8.3,SNR=5.3						
BRTR				LR	LR	00 18 25.9	
	comp=Z,24nm,20.4s,baz=124,slow=34						
KBZ	Khabaz	78.89	352	P	P	23 47 20.8	-0.4
	1.2nm,0.4s,baz=214,slow=7.3,SNR=3.0						
AAK	Ala-Archa	79.36	15	eP	P	23 47 24.9	+0.8
	4.4nm,0.9s						
KEST	Kesra	81.71	325	LR	LR	00 25 16.8	
	comp=Z,96nm,18.2s,baz=311,slow=37						
MAKZ	Makanchi	85.09	19	eP	P	23 47 54.3	+0.5
	3.9nm,0.9s						
MK32	Makanchi Array	85.16	19	eP	P	23 47 55.6	+1.4
MKAR	Makanchi Array	85.16	19	P	P	23 47 55.6	+1.4
	1.7nm,0.9s,baz=205,slow=5.1,SNR=8.0						
AKASG	Malin Array Be	87.98	344	P	P	23 48 08.1	+0.3
	0.3nm,0.3s,baz=162,slow=4.4,SNR=5.4						
AKBB	Malin Array Si	87.98	344	eP	P	23 48 08.1	+0.3
	5.8nm,1.1s						
BDFB	Brasilia	90.79	250	LR	LR	00 21 01.6	
	comp=Z,41nm,20.0s,baz=135,slow=30						
CPUP	Villa Florida	91.06	237	LR	LR	00 23 07.6	
	comp=Z,41nm,18.5s,baz=192,slow=32						
ESDC	Sonseca Array	91.50	319	P	P	23 48 26.4	+1.7
	0.8nm,0.8s,baz=119,slow=5.2,SNR=5.9						
ESDC				LR	LR	00 29 36.5	
	comp=Z,98nm,20.9s,baz=130,slow=36						
INK	Inuvik	146.24	5	PKPbc	PKPab	23 54 59.5	+0.9
	2.7nm,0.8s,baz=295,slow=2.7,SNR=4.5						
INK	Inuvik	146.24	5	ePKPdf	PKPab	23 54 58.5	0.0
ILAR	Eielson Array	147.48	17	PKPbc	PKPbc	23 55 01.2	-0.3
	3.1nm,0.8s,baz=321,slow=3.5,SNR=25						
ILB	Eielson Array	147.48	17	ePKPbc	PKiKP	23 55 03.1	-0.5
YKA	Yellowknife Ar	151.45	349	PKPbc	PKPbc	23 55 10.7	-0.7
	1.1nm,0.7s,baz=38,slow=2.3,SNR=2.9						
YKB5	Yellowknife Ar	151.45	349	ePKPbc	PKPbc	23 55 10.7	-0.7

MAN 01 23:40:28.6, 11°.30N×125°.04E, h33^{km}, mb3.8, ML2.5, MS2.0, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	0.15	204	⇑iP	Pb	23 40 36.1	+1.4
PLP				i S	Sb	23 40 40.6	+1.7
BESP	Borongan	0.49	52	eP	Pn	23 40 40.4	+1.0
BESP				eS	Sn	23 40 48.1	+1.3
CNP	Catarman	1.26	343	eP	Pn	23 40 49.6	-0.3
CNP				eS	Sn	23 41 06.1	+0.4

ROM 02 00:20:28.7±0.1**, 44°.195N**±0°.004×**10°.131E**±0°.005**, h6**^{km}**, ML1.4**/4**, Error ellipse: s-maj=0.4km s-min=0.3km az=54.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	Equi	0.03	151	P	Pg	00 20 30.2	+0.3
EQUI				S	Sg	00 20 31.0	+0.2
T0912	Minucciano (LU	0.06	115	P	Pg	00 20 30.7	+0.3
T0912				S	Sg	00 20 31.9	+0.4
VLC	Villacollemand	0.19	101	P	Pg	00 20 32.9	+0.5
VLC				S	Sg	00 20 36.0	+1.1
VLC				AML	AML		
	comp=E,129µm,1.6s						
VLC				AML	AML		
	comp=N,114µm,0.8s						
VLC				AML	AML		
	comp=E,99µm,1.6s						
VLC				AML	AML		
	comp=N,119µm,0.8s						
VLC				AML	AML		
	comp=N,119µm,0.8s						
VLC				AML	AML		
	comp=N,114µm,0.8s						
VLC				AML	AML		
	comp=E,128µm,1.6s						
VLC				AML	AML		
	comp=E,99µm,1.6s						
PLMA	Palmaria, Port	0.25	234	P	Pg	00 20 34.5	+1.0
PLMA				S	Sg	00 20 38.1	+1.3
PLMA				AML	AML		
	comp=E,151µm,0.8s						
PLMA				AML	AML		
	comp=N,124µm,0.3s						
PLMA				AML	AML		
	comp=N,124µm,0.3s						
PLMA				AML	AML		
	comp=E,151µm,0.8s						
GRAM	Graiana	0.30	351	P	Pg	00 20 35.5	+0.9
GRAM				S	Sb	00 20 40.3	-1.5
GRAM				AML	AML		
	comp=E,322µm,0.2s						
GRAM				AML	AML		
	comp=N,444µm,0.3s						
GRAM				AML	AML		
	comp=N,444µm,0.3s						
GRAM				AML	AML		
	comp=E,322µm,0.2s						
ERBM	Eremo	0.30	42	P	Pb	00 20 35.7	-0.9
ERBM				AML	AML		
	comp=E,101µm,1.0s						
ERBM				AML	AML		
	comp=N,116µm,0.7s						
ERBM				AML	AML		
	comp=N,116µm,0.7s						
ERBM				AML	AML		
	comp=E,101µm,1.0s						

ISCJB ***02*** *00:20:50.4±0.2, 44°.29N±0°.01×11°.28E±0°.02, h13^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=173.2*

ROM ***02*** *00:20:52.0±0.1, 44°.211N±0°.008×11°.385E±0°.009, h15^{km}±2^{km}, ML2.3/36, Error ellipse: s-maj=0.8km s-min=0.3km az=190.0*

LDG ***02*** *00:20:51.9±0.1, 44°.24N×11°.40E, h10^{km}, Ml2.4/21, Error ellipse: s-maj=2.3km s-min=1.8km az=63.0*

ISC 02 00:20:50.9±0.7**, 44°.24N**±0°.02×**11°.36E**±0°.02**, h13**^{km}**, n87,** σ**1$\overset{s}{.}$78**/125**, 2C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRIS	BRISIGHELLA	0.14	128	P	Pb	00 20 57.5	+2.1
BRIS				S	Sb	00 21 03.3	+5.0
BRIS				AML	AML		
	comp=E,2850µm,1.4s						
BRIS				AML	AML		
	comp=N,2740µm,0.3s						
BRIS				AML	AML		
	comp=E,2850µm,1.4s						
BRIS				AML	AML		
	comp=N,2740µm,0.3s						
BRIS				AML	AML		
	comp=E,2850µm,1.4s						
BRIS				AML	AML		
	comp=N,2740µm,0.3s						
BRIS				AML	AML		
	comp=N,2740µm,0.3s						
BRIS				AML	AML		
	comp=E,2850µm,1.4s						
BRIS				AML	AML		
	comp=N,2740µm,0.3s						
BRIS				AML	AML		
	comp=E,2850µm,1.4s						
MTRZ	Monterenzio	0.16	28	P	Pg	00 20 54.9	+0.1
MTRZ				S	Sg	00 20 58.7	+1.2
MTRZ				AML	AML		
	comp=E,14600µm,0.6s						
MTRZ				AML	AML		
	comp=N,11400µm,0.3s						
MTRZ				AML	AML		
	comp=E,15450µm,0.6s						
MTRZ				AML	AML		
	comp=N,11850µm,0.3s						
MTRZ				AML	AML		
	comp=E,14650µm,0.6s						
MTRZ				AML	AML		
	comp=N,11450µm,0.3s						
MTRZ				AML	AML		
	comp=E,15450µm,0.6s						
MTRZ				AML	AML		
	comp=N,11850µm,0.3s						
MTRZ				AML	AML		
	comp=E,14650µm,0.6s						
MTRZ				AML	AML		
	comp=N,11450µm,0.3s						
MTRZ				AML	AML		
	comp=E,15450µm,0.6s						
MTRZ				AML	AML		
	comp=N,11850µm,0.3s						
MTRZ				AML	AML		
	comp=N,11450µm,0.3s						
MTRZ				AML	AML		
	comp=N,11850µm,0.3s						
MTRZ				AML	AML		
	comp=E,14650µm,0.6s						
MTRZ				AML	AML		
	comp=E,15450µm,0.6s						
MTRZ				AML	AML		
	comp=N,11450µm,0.3s						
MTRZ				AML	AML		
	comp=N,11850µm,0.3s						
MTRZ				AML	AML		
	comp=E,14650µm,0.6s						
MTRZ				AML	AML		
	comp=E,15450µm,0.6s						
SEI	Scarperia	0.18	181	P	Pg	00 20 55.9	+0.8
SEI				S	Sb	00 21 00.1	+0.4
FNVD	Fontana Vidola	0.18	248	P	Pg	00 20 55.9	+0.7
FNVD				S	Sb	00 21 00.7	+0.9
FNVD				AML	AML		
	comp=E,1350µm,1.1s						
FNVD				AML	AML		
	comp=N,1345µm,1.6s						
FNVD				AML	AML		
	comp=E,1350µm,1.1s						
FNVD				AML	AML		
	comp=N,1350µm,1.6s						
FNVD				AML	AML		
	comp=E,1350µm,1.1s						
FNVD				AML	AML		
	comp=N,1350µm,1.6s						
FNVD				AML	AML		
	comp=E,1350µm,1.1s						
FNVD				AML	AML		
	comp=N,1350µm,1.6s						
ZCCA	Zocca	0.30	293	P	Pg	00 20 58.3	+1.2
ZCCA				AML	AML		
	comp=E,222µm,0.4s						
ZCCA				AML	AML		
	comp=N,187µm,0.9s						
ZCCA				AML	AML		
	comp=E,222µm,0.4s						
ZCCA				AML	AML		
	comp=N,187µm,0.9s						
ZCCA				AML	AML		
	comp=E,222µm,0.4s						
ZCCA				AML	AML		
	comp=N,187µm,0.9s						
ZCCA				AML	AML		
	comp=E,222µm,0.4s						
ZCCA				AML	AML		
	comp=N,187µm,0.9s						
ZCCA				AML	AML		
	comp=E,222µm,0.4s						
ZCCA				AML	AML		
	comp=N,187µm,0.9s						
IMOL	Imola, Italy	0.30	66	P	Pg	00 20 58.2	+1.1
MTCR	Monte La Croce	0.33	232	P	Pg	00 20 58.4	+0.6
MTCR				S	Sg	00 21 04.5	+2.1
PTF	Prato	0.35	217	P	Pg	00 20 58.7	+0.7
RUFI	Rufina	0.41	165	P	Pg	00 20 59.6	+0.5
RUFI				S	Sb	00 21 06.3	+0.1
FIU	Minerbio Fiu	0.41	13	P	Pg	00 21 00.2	+1.0
FIU				AML	AML		
	comp=E,891µm,1.5s						
FIU				AML	AML		
	comp=N,638µm,0.9s						
FIU				AML	AML		
	comp=E,891µm,1.5s						
FIU				AML	AML		
	comp=N,637µm,0.9s						
FIU				AML	AML		
	comp=E,890µm,1.5s						
FIU				AML	AML		
	comp=N,638µm,0.9s						
FIU				AML	AML		
	comp=N,638µm,0.9s						
FIU				AML	AML		
	comp=E,890µm,1.5s						
FIU				AML	AML		
	comp=N,638µm,0.9s						
FIU				AML	AML		

	comp=E,890µm,1.5s						
POPM	**Popiglio**	**0.47**	**247**	P	**Pg**	**00 21 01.5**	**+1.2**
POPM				AML	AML		
	comp=E,288µm,1.0s						
POPM				AML	AML		
	comp=N,348µm,0.3s						
POPM				AML	AML		
	comp=E,288µm,1.0s						
POPM				AML	AML		
	comp=N,348µm,0.3s						
POPM				AML	AML		
	comp=E,288µm,1.0s						
POPM				AML	AML		
	comp=N,348µm,0.3s						
POPM				AML	AML		
	comp=E,288µm,1.0s						
POPM				AML	AML		
	comp=N,348µm,0.3s						
POPM				AML	AML		
	comp=E,288µm,1.0s						
POPM				AML	AML		
	comp=N,348µm,0.3s						
SFI	**Santa Sofia**	**0.48**	**133**	P	**Pg**	**00 21 00.6**	**+0.1**
SFI				S	**Sb**	**00 21 08.3**	**0.0**
SFI				AML	AML		
	comp=E,470µm,0.5s						
SFI				AML	AML		
	comp=N,630µm,0.9s						
SFI				AML	AML		
	comp=E,470µm,0.5s						
SFI				AML	AML		
	comp=N,630µm,0.9s						
SFI				AML	AML		
	comp=N,630µm,0.9s						
SFI				AML	AML		
	comp=E,470µm,0.5s						
SFI				AML	AML		
	comp=N,630µm,0.9s						
SFI				AML	AML		
	comp=E,470µm,0.5s						
CRMI	**Carmignano**	**0.53**	**212**	P	**Pg**	**00 21 01.9**	**+0.6**
ASQU	**Asqua**	**0.54**	**145**	P	**Pg**	**00 21 01.8**	**+0.3**
ASQU				S	**Sb**	**00 21 10.2**	**+0.3**
ASQU				AML	AML		
	comp=E,384µm,0.2s						
ASQU				AML	AML		
	comp=N,446µm,1.6s						
ASQU				AML	AML		
	comp=E,384µm,0.2s						
ASQU				AML	AML		
	comp=N,446µm,1.6s						
ASQU				AML	AML		
	comp=E,384µm,0.2s						
ASQU				AML	AML		
	comp=N,446µm,1.6s						
ASQU				AML	AML		
	comp=E,384µm,0.2s						
ASQU				AML	AML		
	comp=N,446µm,1.6s						
ASQU				AML	AML		
	comp=E,384µm,0.2s						
ASQU				AML	AML		
	comp=N,446µm,1.6s						
BDI	**Bagni Di Lucca**	**0.58**	**253**	P	**Pg**	**00 21 03.5**	**+1.2**
BDI				AML	AML		
	comp=E,448µm,0.4s						
BDI				AML	AML		
	comp=N,218µm,0.3s						
BDI				AML	AML		
	comp=E,420µm,0.4s						
BDI				AML	AML		
	comp=N,264µm,0.3s						
BDI				AML	AML		
	comp=E,448µm,0.4s						
BDI				AML	AML		
	comp=N,218µm,0.3s						
BDI				AML	AML		
	comp=E,420µm,0.4s						
BDI				AML	AML		
	comp=N,264µm,0.3s						
BDI				AML	AML		
	comp=E,420µm,0.4s						
BDI				AML	AML		
	comp=E,448µm,0.4s						
BDI				AML	AML		
	comp=N,264µm,0.3s						
BDI				AML	AML		
	comp=N,218µm,0.3s						
BDI				AML	AML		
	comp=E,420µm,0.4s						
BDI				AML	AML		
	comp=E,448µm,0.4s						
BDI				AML	AML		
	comp=N,264µm,0.3s						
BDI				AML	AML		
	comp=N,218µm,0.3s						
CARD	**Cardoso**	**0.67**	**252**	P	**Pb**	**00 21 05.6**	**+1.2**
CARD				AML	AML		
	comp=E,176µm,0.7s						
CARD				AML	AML		
	comp=N,198µm,0.5s						
CARD				AML	AML		
	comp=E,176µm,0.7s						
CARD				AML	AML		
	comp=N,198µm,0.5s						
CARD				AML	AML		
	comp=E,176µm,0.7s						
CARD				AML	AML		
	comp=N,198µm,0.5s						
CARD				AML	AML		
	comp=E,176µm,0.7s						
CARD				AML	AML		
	comp=N,198µm,0.5s						
CAVE	**Cavezzo**	**0.68**	**338**	P	**Pn**	**00 21 06.8**	**+0.6**
CAVE				AML	AML		
	comp=E,487µm,0.6s						
CAVE				AML	AML		
	comp=N,462µm,0.4s						
CAVE				AML	AML		
	comp=E,487µm,0.6s						
CAVE				AML	AML		
	comp=N,462µm,0.4s						
CAVE				AML	AML		
	comp=N,462µm,0.4s						
CAVE				AML	AML		
	comp=E,487µm,0.6s						
CAVE				AML	AML		
	comp=N,462µm,0.4s						
CAVE				AML	AML		
	comp=E,487µm,0.6s						
MAIM	**Mastiano**	**0.70**	**243**	P	**Pg**	**00 21 05.5**	**+0.9**
MAIM				AML	AML		
	comp=E,126µm,0.6s						
MAIM				AML	AML		
	comp=N,90µm,0.4s						
MAIM				AML	AML		
	comp=E,126µm,0.6s						
MAIM				AML	AML		
	comp=N,90µm,0.4s						
MAIM				AML	AML		
	comp=N,90µm,0.4s						
MAIM				AML	AML		
	comp=E,126µm,0.6s						
MAIM				AML	AML		
	comp=N,90µm,0.4s						
MAIM				AML	AML		
	comp=E,126µm,0.6s						
VLC	**Villacollemand**	**0.70**	**264**	P	**Pg**	**00 21 05.9**	**+1.2**
VLC				AML	AML		
	comp=E,129µm,1.6s						
VLC				AML	AML		
	comp=N,114µm,0.8s						
VLC				AML	AML		
	comp=E,99µm,1.6s						
VLC				AML	AML		
	comp=N,119µm,0.8s						
VLC				AML	AML		
	comp=E,129µm,1.6s						
VLC				AML	AML		
	comp=N,114µm,0.8s						
VLC				AML	AML		
	comp=E,99µm,1.6s						
VLC				AML	AML		
	comp=N,119µm,0.8s						
VLC				AML	AML		
	comp=E,99µm,1.6s						
VLC				AML	AML		
	comp=N,114µm,0.8s						
VLC				AML	AML		
	comp=N,119µm,0.8s						
VLC				AML	AML		
	comp=E,128µm,1.6s						
VLC				AML	AML		
	comp=E,99µm,1.6s						
VLC				AML	AML		
	comp=N,114µm,0.8s						
VLC				AML	AML		
	comp=N,119µm,0.8s						
VLC				AML	AML		
	comp=E,128µm,1.6s						
NOVE	**Novellara**	**0.73**	**321**	P	**Pn**	**00 21 08.1**	**+1.2**
CSNT	**Castellina Chi**	**0.77**	**184**	P	**Pg**	**00 21 06.2**	**+0.4**
CSNT				AML	AML		
	comp=E,121µm,0.7s						
CSNT				AML	AML		
	comp=N,116µm,0.4s						
CSNT				AML	AML		
	comp=E,121µm,0.7s						
CSNT				AML	AML		
	comp=N,116µm,0.4s						
CSNT				AML	AML		
	comp=N,116µm,0.4s						
CSNT				AML	AML		
	comp=E,121µm,0.7s						
CSNT				AML	AML		
	comp=N,116µm,0.4s						
CSNT				AML	AML		
	comp=E,121µm,0.7s						
CPGN	**Carpegna, Ital**	**0.82**	**122**	P	**Pg**	**00 21 07.4**	**+0.7**
PARC	**Parchiule**	**0.86**	**132**	P	**Pg**	**00 21 07.4**	**-0.3**
PARC				AML	AML		
	comp=E,92µm,0.9s						
PARC				AML	AML		
	comp=N,107µm,1.2s						
PARC				AML	AML		
	comp=E,93µm,0.9s						
PARC				AML	AML		
	comp=N,107µm,1.2s						
PARC				AML	AML		
	comp=N,107µm,1.2s						
PARC				AML	AML		
	comp=E,93µm,0.9s						
PARC				AML	AML		
	comp=N,107µm,1.2s						
PARC				AML	AML		
	comp=E,93µm,0.9s						
SSP9	**Sansepolcro**	**0.86**	**140**	P	**Pg**	**00 21 07.9**	**+0.3**
SSP9				AML	AML		
	comp=E,174µm,0.9s						
SSP9				AML	AML		
	comp=N,180µm,1.5s						
SSP9				AML	AML		
	comp=N,180µm,1.5s						
SSP9				AML	AML		
	comp=E,174µm,0.9s						
SSP9				AML	AML		
	comp=N,180µm,1.5s						
SSP9				AML	AML		
	comp=E,174µm,0.9s						
EQUI	**Equi**	**0.87**	**266**	AML	AML		
	comp=E,679µm,0.8s						
EQUI				AML	AML		
	comp=E,679µm,0.8s						
EQUI				AML	AML		
	comp=N,834µm,0.2s						
EQUI				AML	AML		
	comp=N,834µm,0.2s						
EQUI				AML	AML		
	comp=N,834µm,0.2s						
EQUI				AML	AML		
	comp=E,679µm,0.8s						
ADRI	**Adria, Italy**	**0.93**	**30**	*e*Pg	**Pg**	**00 21 08.7**	**-0.2**
ADRI				*e*Sg	**Sn**	**00 21 23.7**	**+0.9**
GRAM	**Graiana**	**0.96**	**286**	P	**Pn**	**00 21 11.3**	**+1.1**
GRAM				AML	AML		
	comp=E,322µm,0.2s						
GRAM				AML	AML		
	comp=N,444µm,0.3s						
GRAM				AML	AML		
	comp=E,322µm,0.2s						
GRAM				AML	AML		
	comp=N,444µm,0.3s						
GRAM				AML	AML		
	comp=N,444µm,0.3s						
GRAM				AML	AML		
	comp=E,322µm,0.2s						
GRAM				AML	AML		
	comp=N,444µm,0.3s						
GRAM				AML	AML		
	comp=E,322µm,0.2s						
PE3	**Peglio**	**0.98**	**123**	P	**Pb**	**00 21 09.7**	**-0.1**
PE3				AML	AML		
	comp=E,356µm,0.4s						
PE3				AML	AML		
	comp=N,456µm,0.5s						
PE3				AML	AML		
	comp=E,356µm,0.4s						
PE3				AML	AML		
	comp=N,456µm,0.5s						
PE3				AML	AML		
	comp=N,456µm,0.5s						
PE3				AML	AML		
	comp=E,356µm,0.4s						
PE3				AML	AML		
	comp=N,456µm,0.5s						
PE3				AML	AML		
	comp=E,356µm,0.4s						
CAFI	**Castiglion Fio**	**1.01**	**154**	P	**Pb**	**00 21 10.3**	**+0.1**
CAFI				AML	AML		
	comp=E,89µm,0.7s						
CAFI				AML	AML		
	comp=N,102µm,0.4s						
CAFI				AML	AML		
	comp=E,89µm,0.7s						
CAFI				AML	AML		
	comp=N,101µm,0.4s						
CAFI				AML	AML		
	comp=N,101µm,0.4s						
CAFI				AML	AML		
	comp=E,89µm,0.7s						
CAFI				AML	AML		
	comp=N,101µm,0.4s						
CAFI				AML	AML		
	comp=E,89µm,0.7s						
FROS	**Frosini**	**1.04**	**188**	P	**Pb**	**00 21 10.8**	**+0.1**
FROS				AML	AML		
	comp=E,118µm,0.5s						
FROS				AML	AML		
	comp=N,104µm,0.6s						
FROS				AML	AML		
	comp=E,118µm,0.5s						
FROS				AML	AML		
	comp=N,104µm,0.6s						
FROS				AML	AML		
	comp=N,104µm,0.6s						
FROS				AML	AML		
	comp=E,118µm,0.5s						
FROS				AML	AML		
	comp=N,104µm,0.6s						
FROS				AML	AML		
	comp=E,118µm,0.5s						
PIEI	**Pieia**	**1.10**	**129**	P	**Pb**	**00 21 11.2**	**-0.7**
PIEI				AML	AML		
	comp=E,110µm,0.7s						
PIEI				AML	AML		
	comp=N,61µm,0.9s						
PIEI				AML	AML		
	comp=E,110µm,0.7s						
PIEI				AML	AML		
	comp=N,61µm,0.9s						
PIEI				AML	AML		
	comp=N,61µm,0.9s						
PIEI				AML	AML		
	comp=E,110µm,0.7s						
PIEI				AML	AML		
	comp=N,61µm,0.9s						
PIEI				AML	AML		
	comp=E,110µm,0.7s						
PLMA	**Palmaria, Port**	**1.10**	**261**	P	**Pb**	**00 21 12.4**	**+0.5**
PLMA				AML	AML		
	comp=E,151µm,0.8s						
PLMA				AML	AML		
	comp=N,124µm,0.3s						
PLMA				AML	AML		
	comp=E,151µm,0.8s						
PLMA				AML	AML		
	comp=N,124µm,0.3s						
PLMA				AML	AML		
	comp=N,124µm,0.3s						
PLMA				AML	AML		
	comp=E,151µm,0.8s						
PLMA				AML	AML		
	comp=N,124µm,0.3s						
PLMA				AML	AML		
	comp=E,151µm,0.8s						
ATVO	**AVT- Monte Val**	**1.14**	**138**	P	**Pb**	**00 21 12.7**	**+0.2**
ATVO				AML	AML		
	comp=E,136µm,0.5s						
ATVO				AML	AML		
	comp=N,136µm,0.7s						
ATVO				AML	AML		
	comp=E,136µm,0.5s						
ATVO				AML	AML		
	comp=N,136µm,0.7s						
ATVO				AML	AML		
	comp=E,136µm,0.5s						
ATVO				AML	AML		
	comp=N,136µm,0.7s						
ATVO				AML	AML		
	comp=E,136µm,0.5s						
ATVO				AML	AML		
	comp=N,136µm,0.7s						
TEOL	**Teolo**	**1.15**	**11**	*e*Pg	**Pb**	**00 21 11.3**	**-1.3**
TEOL				*e*Sg	**Sb**	**00 21 27.4**	**0.0**
ATTE	**AVT- Monte Tez**	**1.26**	**145**	P	**Pn**	**00 21 14.7**	**+0.3**
ATTE				AML	AML		
	comp=E,82µm,0.8s						
ATTE				AML	AML		
	comp=N,71µm,1.2s						
ATTE				AML	AML		
	comp=E,82µm,0.8s						
ATTE				AML	AML		
	comp=N,71µm,1.2s						
ATTE				AML	AML		
	comp=N,71µm,1.2s						
ATTE				AML	AML		
	comp=E,82µm,0.8s						
ATTE				AML	AML		
	comp=N,71µm,1.2s						
ATTE				AML	AML		
	comp=E,82µm,0.8s						
MSSA	**Maissana**	**1.33**	**274**	P	**Pn**	**00 21 16.6**	**+1.3**
MSSA				AML	AML		
	comp=E,83µm,0.8s						
MSSA				AML	AML		
	comp=N,89µm,0.8s						
MSSA				AML	AML		
	comp=N,89µm,0.8s						
MSSA				AML	AML		
	comp=E,83µm,0.8s						
MSSA				AML	AML		
	comp=N,89µm,0.8s						
MSSA				AML	AML		
	comp=E,83µm,0.8s						
ARCI	**Arcidosso**	**1.39**	**177**	AML	AML		
	comp=N,28µm,0.8s						
ARCI				AML	AML		
	comp=E,26µm,0.4s						
ARCI				AML	AML		
	comp=N,28µm,0.8s						
ARCI				AML	AML		
	comp=E,26µm,0.4s						
ARCI				AML	AML		
	comp=N,28µm,0.8s						
ARCI				AML	AML		
	comp=E,26µm,0.4s						
MARN	**Marana (Italy)**	**1.41**	**356**	*e*Pg	**Pn**	**00 21 15.4**	**-0.9**
MARN				*e*Sg	**Sb**	**00 21 37.0**	**+2.0**
MGAB	**Montegabbione**	**1.43**	**157**	AML	AML		
	comp=N,87µm,0.6s						
MGAB				AML	AML		
	comp=E,91µm,0.5s						
MGAB				AML	AML		
	comp=N,87µm,0.6s						
MGAB				AML	AML		
	comp=E,91µm,0.5s						
MGAB				AML	AML		
	comp=N,87µm,0.6s						
MGAB				AML	AML		
	comp=E,91µm,0.5s						
CASP	**Castiglione de**	**1.49**	**194**	AML	AML		
	comp=E,21µm,0.5s						
CASP				AML	AML		
	comp=N,21µm,0.4s						
CASP				AML	AML		
	comp=E,21µm,0.5s						
CASP				AML	AML		
	comp=N,21µm,0.4s						
CASP				AML	AML		
	comp=E,21µm,0.5s						
CASP				AML	AML		
	comp=N,21µm,0.4s						
GORR	**Gorreto**	**1.53**	**285**	AML	AML		
	comp=N,133µm,0.5s						
GORR				AML	AML		
	comp=E,126µm,0.6s						
GORR				AML	AML		
	comp=N,133µm,0.5s						
GORR				AML	AML		
	comp=N,133µm,0.5s						
GORR				AML	AML		
	comp=E,126µm,0.6s						
GORR				AML	AML		
	comp=E,126µm,0.6s						
MAGA	**Magasa**	**1.62**	**342**	AML	AML		
	comp=N,288µm,0.4s						
MAGA				AML	AML		
	comp=E,311µm,0.3s						
MAGA				AML	AML		
	comp=N,288µm,0.4s						
MAGA				AML	AML		
	comp=E,311µm,0.3s						
MAGA				AML	AML		
	comp=E,311µm,0.3s						
MAGA				AML	AML		
	comp=N,288µm,0.4s						
DOSS	**Dosso del Somm**	**1.65**	**356**⇑	*e*Pg	**Pn**	**00 21 18.6**	**-1.2**
DOSS				*e*Sg	**Sn**	**00 21 42.4**	**+1.5**
CGRP	**Cima Grappa**	**1.67**	**11**⇑	*e*Pg	**Pn**	**00 21 18.8**	**-1.3**
CGRP				*e*Sg	**Sn**	**00 21 41.0**	**-0.5**
QLNO	**Quiliano**	**2.17**	**273**	AML	AML		
	comp=N,22µm,0.4s						
QLNO				AML	AML		
	comp=E,20µm,1.2s						
QLNO				AML	AML		
	comp=N,22µm,0.4s						
QLNO				AML	AML		
	comp=E,20µm,1.2s						
QLNO				AML	AML		
	comp=E,20µm,1.2s						
QLNO				AML	AML		
	comp=N,22µm,0.4s						
KOSI	**Kohlern**	**2.23**	**0**	AML	AML		
	comp=E,40µm,0.4s						
KOSI				AML	AML		
	comp=E,40µm,0.4s						
KOSI				AML	AML		
	comp=N,39µm,1.0s						
KOSI				AML	AML		
	comp=N,39µm,1.0s						
KOSI				AML	AML		
	comp=E,40µm,0.4s						
KOSI				AML	AML		
	comp=N,39µm,1.0s						
PGF	**Pioggiola**	**2.41**	**226**	*e*Pn	**Pn**	**00 21 29.9**	**-0.2**
PGF				*e*Sn	**Sn**	**00 21 58.0**	**-1.6**
	comp=N,2.6nm,0.4s						
ABSI	**Aberstueckl**	**2.49**	**359**	AML	AML		
	comp=E,53µm,0.7s						
ABSI				AML	AML		
	comp=N,47µm,0.6s						
ABSI				AML	AML		
	comp=E,53µm,0.7s						
ABSI				AML	AML		
	comp=N,47µm,0.6s						
ABSI				AML	AML		
	comp=E,53µm,0.7s						
ABSI				AML	AML		
	comp=N,47µm,0.6s						
NVLJ	**Novalja**	**2.54**	**81**	*e*Pn	**Pn**	**00 21 31.6**	**-0.2**
NVLJ				Sn	**Sn**	**00 22 00.1**	**-2.4**
ABTA	**Abfaltersbach**	**2.64**	**17**	*e*Pn	**Pn**	**00 21 32.8**	**-0.5**
	comp=N,0.4nm,0.1s						
ABTA				*e*Sn	**Sn**	**00 22 03.0**	**-2.2**

	comp=N,2.3nm,0.3s						
DUGI	Dugi Otok	2.67	94	ePn	Pn	00 21 34.2	+0.6
DUGI				Sn	Sn	00 22 03.5	-2.5
RISI	Rein	2.76	10	AML	AML		
	comp=E,40µm,0.8s						
RISI				AML	AML		
	comp=E,40µm,0.8s						
RISI				AML	AML		
	comp=N,55µm,0.4s						
RISI				AML	AML		
	comp=N,55µm,0.4s						
RISI				AML	AML		
	comp=E,40µm,0.8s						
RISI				AML	AML		
	comp=N,55µm,0.4s						
FETA	Feichten	2.82	351	ePn	Pn	00 21 37.2	+1.3
	comp=N,2.1nm,0.3s,SNR=5.8						
FETA				eSn	Sn	00 22 11.3	+1.5
	comp=N,0.7nm,0.4s						
SBF	Sospel	2.85	264	ePn	Pn	00 21 35.9	-0.3
SBF				eSn	Sn	00 22 09.2	-1.3
	comp=N,3.0nm,0.2s						
MYKA	Terra Mystica	2.88	33	ePn	Pn	00 21 36.5	-0.1
	comp=N,0.8nm,0.1s						
MYKA				eSn	Sn	00 22 09.7	-1.5
	comp=N,1.3nm,0.2s						
SQTA	Sankt Quirin	2.99	358	ePn	Pn	00 21 39.4	+1.3
	comp=N,8.6nm,0.2s,SNR=9.3						
SQTA				eSn	Sn	00 22 14.9	+1.1
	comp=N,4.8nm,0.2s						
WTTA	Wattenberg	3.04	4	i Pn	Pn	00 21 40.0	+1.1
	comp=N,1.8nm,0.2s						
WTTA				eSn	Sn	00 22 15.4	+0.3
	comp=N,3.4nm,0.3s						
WATA	Walderalm	3.10	3	ePn	Pn	00 21 40.7	+0.9
	comp=N,2.3nm,0.2s,SNR=6.1						
MOTA	Moosalm	3.12	357	ePn	Pn	00 21 40.8	+0.9
	comp=N,1.3nm,0.3s						
MOTA				i Sn	Sn	00 22 18.0	+0.9
	comp=N,1.2nm,0.2s						
ZIRJ	Zirje	3.15	99	ePn	Pn	00 21 40.4	+0.2
ZIRJ				Sn	Sn	00 22 15.5	-2.1
MORI	Morici	3.16	95	i Pn	Pn	00 21 41.3	+1.0
MORI				Sn	Sn	00 22 15.9	-1.9
KBA	Koelnbreinsper	3.17	25	i Pn	Pn	00 21 40.3	-0.3
	comp=N,1.4nm,0.2s						
KBA				eSn	Sn	00 22 16.9	-1.4
	comp=N,2.6nm,0.3s,SNR=5.4						
DAVA	Damuels	3.22	342	i Pn	Pn	00 21 42.6	+1.2
	comp=N,2.3nm,0.1s,SNR=8.0						
DAVA				i Sn	Sn	00 22 20.4	+0.7
	comp=N,4.4nm,0.4s						
OZLJ	Ozalj	3.23	63	ePn	Pn	00 21 40.8	-0.4
OZLJ				Sn	Sn	00 22 15.5	-4.0
RETA	Reutte	3.28	353	i Pn	Pn	00 21 43.0	+1.0
	comp=N,1.8nm,0.2s						
RETA				i Sn	Sn	00 22 22.5	+1.5
	comp=N,2.0nm,0.4s						
MBDF	Montbardon	3.32	280	ePn	Pn	00 21 42.4	-0.3
MBDF				eSn	Sn	00 22 20.4	-1.7
	comp=N,1.6nm,0.3s						
BNALP	Bannalp	3.35	323	AML	AML		
	comp=E,13µm,1.6s						
BNALP				AML	AML		
	comp=N,18µm,0.6s						
BNALP				AML	AML		
	comp=N,18µm,0.6s						
BNALP				AML	AML		
	comp=E,13µm,1.6s						
BNALP				AML	AML		
	comp=N,18µm,0.6s						
BNALP				AML	AML		
	comp=E,13µm,1.6s						
FRF	La Foret Royal	3.47	260	ePn	Pn	00 21 44.6	-0.1
FRF				eSn	Sn	00 22 23.5	-2.1
	comp=E,1.9nm,0.2s						
LPG	La Plagne	3.51	293	ePn	Pn	00 21 43.5	-2.0
LPG				eSn	Sn	00 22 26.1	-0.9
	comp=E,1.3nm,0.3s						
LPL	La Plagne	3.53	293	ePn	Pn	00 21 45.9	+0.2
LPL				eSn	Sn	00 22 25.7	-1.7
	comp=E,1.1nm,0.3s						
LMR	La Mourre	3.63	257	ePn	Pn	00 21 46.2	-0.6
LMR				eSn	Sn	00 22 27.3	-2.1
	comp=E,1.3nm,0.2s						
KIJV	Kijevo	3.64	92	Sn	Sn	00 22 27.6	-2.2
ORIF	Oris-en-Rattie	3.98	282	eP	Pn	00 21 53.1	+1.4
ORIF				eSn	Sn	00 22 35.9	-2.3
	comp=E,0.7nm,0.3s						
SMRF	Simiane la Rot	4.17	268	ePn	Pn	00 21 54.4	0.0
SMRF				eSn	Sn	00 22 40.1	-2.9
	comp=E,0.3nm,0.2s						
CABF	La Chapelle	4.41	304	ePn	Pn	00 21 58.1	+0.5
CABF				eSn	Sn	00 22 46.1	-2.7
	comp=E,0.7nm,0.2s						
HINF	Hinteralfeld	4.76	320	ePn	Pn	00 22 01.8	-0.6
HINF				eSn	Sn	00 22 53.6	-3.9
	comp=E,1.3nm,0.3s						
VIVF	Saint-Julien-l	4.82	280	ePn	Pn	00 22 02.3	-0.9
VIVF				eSn	Sn	00 22 56.0	-2.9
	comp=E,0.5nm,0.2s						
CDF	Champ du Feu	5.04	327	ePn	Pn	00 22 05.7	-0.6
CDF				eSn	Sn	00 23 00.6	-3.9
	comp=E,0.7nm,0.2s						
HAU	Haudompre	5.13	319	ePn	Pn	00 22 06.1	-1.4
HAU				eSn	Sn	00 23 02.6	-4.0
	comp=E,2.5nm,0.3s						
LASF	Ste Croix	5.40	271	ePn	Pn	00 22 11.4	+0.2
LASF				eSn	Sn	00 23 09.6	-3.6
	comp=E,0.6nm,0.3s						
SMF	Signal de Mont	5.81	297	ePn	Pn	00 22 16.3	-0.5
SMF				eSn	Sn	00 23 18.5	-4.8
	comp=E,0.9nm,0.2s						
PAGF	Fort de Pagny	5.82	320	ePn	Pn	00 22 16.9	0.0
PAGF				eSn	Sn	00 23 19.0	-4.4
SFTF	Sexfontaines	5.92	314	ePn	Pn	00 22 16.9	-1.3
SFTF				eSn	Sn	00 23 21.8	-4.0
	comp=E,0.9nm,0.3s						
LOR	Lormes	6.06	303	ePn	Pn	00 22 19.7	-0.5
LOR				eSn	Sn	00 23 25.1	-4.3
	comp=E,2.3nm,0.3s						
MEZF	Maizieres J'vi	6.10	317	ePn	Pn	00 22 21.3	+0.5
MEZF				eSn	Sn	00 23 26.4	-4.0
	comp=E,1.6nm,0.2s						
AVF	Avril sur Loir	6.18	297	ePn	Pn	00 22 21.1	-0.7
AVF				eSn	Sn	00 23 28.1	-4.2
	comp=E,0.3nm,0.2s						
SSF	Saint Saulge	6.19	300	ePn	Pn	00 22 20.6	-1.4
SSF				eSn	Sn	00 23 28.4	-4.1
	comp=E,0.9nm,0.3s						

IDC **02** *00:28:35.6±0.5, 33°.04N×92°.76E, h0^{km}, mb4.4/28, mb1 4.5/31, mb1mx4.4/48, mbtmp4.4/31, ML3.8/2, MS3.9/29, Ms1 3.9/29, ms1mx3.8/44, Error ellipse: s-maj=13.9km s-min=10.7km az=44.0*

ISCJB **02** *00:28:36.4±0.1, 33°.08N±0°.02×92°.74E±0°.02, h10^{km}, mb4.6/119, MS4.0/41, Error ellipse: s-maj=3.0km s-min=2.4km az=155.1*

BJI **02** *00:28:38.9±0.0, 33°.08N×92°.75E, h7^{km}, mb4.5/36, mB4.7/26, ML4.0/8, Ms4.6/46, Ms7 4.4/40*

GCMT **02** *00:28:39.8±0.3, 33°.10N±0°.03×92°.82E±0°.02, h22^{km}±1^{km}, MW4.8/65, Moment Tensor Solution. s17,c20; s65,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.38±.17; $M_{\theta\theta}$-0.37±.10; $M_{\phi\phi}$1.75±.11; $M_{r\theta}$0.40±.17; $M_{\theta\phi}$1.31±.06; $M_{\phi r}$0.36±.14; Best double couple: $M_0$1.98200×10^{16} NP1:ϕ_s224.00000°, δ56.00000°, λ-65.00000°. NP2: ϕ_s4.00000°, δ42.00000°, λ-122.00000°. Principal axes: T 2.4410, Plg7.0000°, Azm296.0000°; N -0.9140, Plg21.0000°, Azm29.0000°; P -1.5240, Plg68.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NDI **02** *00:28:39.3±3.1, 33°.26N×92°.74E, h24^{km}±46^{km}, ML4.5, mb4.6(NEIC)*

MOS **02** *00:28:40.6±1.2, 33°.09N×92°.80E, h43^{km}, mb4.9/71, MS4.2/9, Error ellipse: s-maj=7.0km s-min=3.7km az=124.3*

NEIC **02** *00:28:41.8±1.9, 33°.08N×92°.73E, h42^{km}±5^{km}, mb4.6/67, Error ellipse: s-maj=13.4km s-min=12.9km az=64.0*

ISC 02 00:28:38.1±0.3, **33°.03N**±0°.03×**92°.72E**±0°.03, **h10**^{km}, **n339,** σ1^{s}77/354, **mb4.7**/119, **MS4.1**/41, **26C-1D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	3.58	202	ePn	Pb	00 29 40.1	-1.6
LSA	Lhasa	3.58	202	Pn	Pn	00 29 38.8	+4.7
LSA				Sn	Sb	00 30 26.6	+1.2
LSA				LR	LR		
	comp=N,8µm,4.6s						
LSA				LR	LR		
	comp=E,14µm,6.0s						
LSA				LR	LR		
	comp=Z,28µm,5.3s						
LSA	Lhasa	3.58	202	eP	Pb	00 29 40.1	-1.6
TAWA	Tawang	5.47	188	eP	Pn	00 30 02.9	+2.9
TAWA				eS	Sn	00 31 02.7	-0.3
TAWA				IAML		00 31 19.1	
	comp=N,1µm,0.9s						
TAWA				IAML		00 31 19.2	
	comp=E,683nm,0.1s						
ZIRO	ZIRO	5.57	170	eP	Pn	00 30 04.7	+3.5
ZIRO				eS	Sn	00 31 03.2	-2.2
ZIRO				IAML		00 31 43.5	
	comp=E,1µm,0.2s						
ZIRO				IAML		00 31 46.4	
	comp=N,2µm,0.6s						
DIBR	DIBRUGARH	5.86	161	eP	Pn	00 30 05.9	+0.9
DIBR				eS	Sn	00 31 14.4	+2.2
DIBR				IAML		00 32 05.1	
	comp=N,307nm,0.6s						
DIBR				IAML		00 32 05.2	
	comp=E,242nm,0.8s						
TEZP	TEZPUR	6.39	179	eP	Pn	00 30 14.6	+2.3
TEZP				eS	Sn	00 31 24.8	-0.5
JORH	JORHAT	6.41	168	eP	Pn	00 30 13.9	+1.4
JORH				i S	Sn	00 31 24.6	-1.1
GTK	Tadong	6.71	213	eP	Pn	00 30 18.9	+2.1
GTK				eS	Sn	00 31 31.3	-2.2
MOKO	MOKOCHONG	6.87	166	eP	Pn	00 30 21.1	+2.1
GUWA	GUWAHATI	6.87	188	eP	Pn	00 30 22.3	+3.4
GUWA				eS	Sn	00 31 34.7	-2.4
KOHI	KOHIMA	7.38	170	eP	Pn	00 30 28.4	+2.3
KOHI				eS	Sn	00 31 49.0	-1.0
SHL	Shillong	7.47	186	ePn	Pn	00 30 28.6	+1.3
SHL				eSn	Sn	00 31 49.7	-2.5
SHL	Shillong	7.47	186	eP	Pn	00 30 28.6	+1.3
SHL				e		00 31 49.7	
SHL	Shillong	7.47	186	eP	Pn	00 30 28.8	+1.5
SHL				eS	Sn	00 31 50.7	-1.5
JIRN	Jiri	7.77	228	eP	Pn	00 30 34.3	+2.7
	comp=E,83nm,0.7s						
GUN	Gumba	7.80	231	eP	Pn	00 30 34.9	+3.0
	comp=E,69nm,0.5s						
KKN	Kakani	8.27	233	eP	Pn	00 30 41.5	+3.2
	comp=E,80nm,0.6s						
PKI	Pulchoki	8.33	231	eP	Pn	00 30 41.4	+2.1
	comp=E,94nm,0.7s						
PKIN	Phulchoki	8.34	231	eP	Pn	00 30 41.6	+2.3
	comp=E,30nm,0.4s						
DMN	Daman	8.51	233	eP	Pn	00 30 44.3	+2.7
	comp=E,123nm,0.9s						
GTA	Gaotai	8.57	40	eP	Pn	00 30 43.3	+1.0
GTA				pP	Pg	00 30 47.8	-34
GTA				sP		00 30 50.5	
GTA				S	Sn	00 32 23.6	+4.5
GTA				pmax	pmax		
	comp=E,13nm,1.1s						
GTA				pmax	pmax		
	comp=E,120nm,6.3s						
GTA				LR	LR		
	comp=E,1µm,12.1s						
GTA				LR	LR		
	comp=E,2µm,12.4s						
GTA				LR	LR		
	comp=E,2µm,13.0s						
DANN	Dangsing	9.01	241	eP	Pn	00 30 50.7	+2.2
	comp=E,100nm,0.6s						
KOLN	Koldanda	9.45	239	eP	Pn	00 30 56.5	+2.0
	comp=E,70nm,0.7s						
CD2	Chengdu	9.62	100	P	Pn	00 31 03.6	+7.0
CD2				S	Sn	00 32 54.3	+10
CD2				pmax	pmax		
	comp=E,40nm,0.9s						
CD2				pmax	pmax		
	comp=E,230nm,5.7s						
CD2				LR	LR		
	comp=E,6µm,11.2s						
CD2				LR	LR		
	comp=E,5µm,10.0s						
CD2				LR	LR		
	comp=E,3µm,15.3s						
LZH	Lanzhou	9.67	69	⇑P	Pn	00 30 58.3	+0.9
LZH				pP		00 31 06.8	
LZH				sP		00 31 10.6	
LZH				S	Sn	00 32 42.0	-4.2
LZH				sS		00 32 55.6	
LZH				pmax	pmax		
	comp=E,13nm,1.4s						
LZH				pmax	pmax		
	comp=E,95nm,4.8s						
LZH				LR	LR		
	comp=E,3µm,8.7s						
LZH				LR	LR		
	comp=E,2µm,7.1s						
LZH				LR	LR		
	comp=E,4µm,10.4s						
PYUN	Piuthan	9.71	242	eP	Pn	00 30 58.8	+0.7
	comp=E,121nm,0.7s						
BRDH	Bariadhala	10.36	186	Pn	Pn	00 31 06.8	+0.1
	comp=E,47nm,0.3s,baz=62,slow=19,SNR=4.5						
BRDH				Sn	Sn	00 33 03.8	+0.9
	baz=41,slow=19,SNR=3.3						
SAIH	SAIHA	10.50	179	eP	Pn	00 31 11.2	+2.3
SAIH				ex	x	00 33 04.2	
BOK	Bokaro	10.98	215	eP	Pn	00 31 18.2	+2.8
WMQ	Urumqi	11.47	341	ePn	Pn	00 31 21.6	-0.3
WMQ	Urumqi	11.47	341	P	Pn	00 31 23.5	+1.6
WMQ				pP		00 31 32.7	
WMQ				S	Sn	00 33 34.1	+4.0
WMQ				SS	SnSn	00 33 48.4	+6.2
WMQ				pmax	pmax		
	comp=E,16nm,1.3s						
WMQ				pmax	pmax		
	comp=E,76nm,4.1s						
WMQ				LR	LR		
	comp=E,950nm,9.7s						
WMQ				LR	LR		
	comp=E,2µm,9.5s						
WMQ				LR	LR		
	comp=E,540nm,8.7s						
WMQ	Urumqi	11.47	341	eP	Pn	00 31 21.6	-0.3
KMI	Kunming	11.78	129	ePn	Pn	00 31 27.8	+1.4
KMI	Kunming	11.78	129	P	Pn	00 31 28.2	+1.8
KMI				pP		00 31 36.9	
KMI				sP		00 31 41.8	
KMI				LR	LR		
	comp=E,2µm,8.3s						
KMI				LR	LR		
	comp=E,1µm,8.6s						
KMI				LR	LR		
	comp=E,1µm,10.2s						
KMI	Kunming	11.78	129	eP	Pn	00 31 27.8	+1.4
DDI	Dehra Dun	12.78	262	eP	Pn	00 31 39.0	-0.8
SMLA	Simla	13.32	266	eP	Pn	00 31 47.0	-0.2
SMLA				ex	x	00 34 07.5	
XAN	Xi'an	13.56	81	ePn	Pn	00 31 50.6	+0.1
XAN	Xi'an	13.56	81	P	Pn	00 31 46.1	-4.4
XAN				pP	P	00 31 53.2	-6.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,130nm,5.3s						
XAN				LR	LR		
	comp=N,2µm,17.3s						
XAN				LR	LR		
	comp=E,890nm,13.9s						
XAN				LR	LR		
	comp=Z,1µm,14.7s						
XAN	Xi'an	13.56	81	eP	Pn	00 31 50.6	+0.1
GYA	Guiyang	13.77	115	⇓iP	Pn	00 31 54.3	+0.8
GYA				pP	P	00 32 01.9	-0.2
GYA				PP	PnPn	00 32 09.0	+7.7
GYA				S	Sn	00 34 25.6	-0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,4.7s						
GYA				LR	LR		
	comp=Z,1µm,8.9s						
GYA				LR	LR		
	comp=Z,710nm,9.2s						
GYA				LR	LR		
	comp=Z,1µm,10.3s						
DHRM	DHARAMSHALA	13.86	271	eP	Pn	00 31 54.0	-0.7
ENH	Enshi	14.55	96	ePn	Pn	00 32 07.1	+3.0
PRZ	Przheval'sk	14.72	314	ePn	Pn	00 32 06.4	-0.1
PRZ	Przheval'sk	14.72	314	eP	Pn	00 32 06.4	-0.1
KSH	Kashi	14.97	300	eP	P	00 32 15.0	-0.4
KSH				pP	Pn	00 32 21.5	+12
KSH				sP		00 32 28.7	
KSH				S	Sn	00 35 02.1	+6.4
KSH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,110nm,4.8s						
KSH				LR	LR		
	comp=Z,270nm,6.2s						
KSH				LR	LR		
	comp=Z,850nm,12.3s						
PAYA	Payao	15.04	153	P	P	00 32 20.1	+3.9
CHTO	Chiang Mai	15.22	157	ePn	Pn	00 32 10.2	-2.9
	comp=Z,4.4nm,0.8s						
CHTO	Chiang Mai	15.22	157	eP	Pn	00 32 10.2	-2.9
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMMT	Chiang Mai	15.22	157	P	P	00 32 24.1	+5.9
KDJ	Kajisay	15.29	311	ePn	Pn	00 32 14.4	+0.3
	comp=Z,9.1nm,0.9s						
KDJ	Kajisay	15.29	311	P	Pn	00 32 15.4	+1.4
KDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
SLVN	Son La	15.31	137	ePn	Pn	00 32 16.2	+1.9
	comp=Z,9.2nm,0.9s						
CM31	Chiang Mai Arr	15.55	157	ePn	Pn	00 32 18.6	+1.1
	comp=Z,16nm,0.8s						
CMAR	Chiang Mai Arr	15.55	157	Pn	Pn	00 32 16.5	-1.0
	baz=322,slow=12,SNR=15						
CMAR				LR	LR	00 38 03.6	
	comp=Z,275nm,21.3s,baz=344,slow=36						
CMAR	Chiang Mai Arr	15.55	157	eP	Pn	00 32 20.4	+2.9
LAMP	Lampang	15.72	155	P	P	00 32 29.4	+5.7
BTO	Baotou	15.77	56	eP	Pn	00 32 09.2	-11
MK31	Makanchi Array	15.88	333	ePn	Pn	00 32 19.9	-1.8
	comp=Z,5.7nm,0.8s						
MK31	Makanchi Array	15.88	333	P	Pn	00 32 21.3	-0.4
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK32	Makanchi Array	15.88	333	ePn	Pn	00 32 19.9	-1.8
MKAR	Makanchi Array	15.88	333	Pn	Pn	00 32 19.9	-1.8
	comp=Z,0.2nm,0.3s,baz=130,slow=13,SNR=11						
MKAR				LR	LR	00 38 42.2	
	comp=Z,258nm,19.1s,baz=146,slow=38						
MKAR	Makanchi Array	15.88	333	eP	Pn	00 32 21.4	-0.3
MAKZ	Makanchi	16.02	332	ePn	Pn	00 32 22.3	-1.1
	comp=Z,14nm,0.8s						
MAKZ	Makanchi	16.02	332	eP	Pn	00 32 22.3	-1.1
MAKZ				pmax	pmax		
	comp=Z,14nm,0.8s						
BOOM	Boomskoye usch	16.26	310	ePn	Pn	00 32 26.3	-0.3
	comp=Z,14nm,1.1s						
BOOM	Boomskoye usch	16.26	310	P	Pn	00 32 27.1	+0.4
BOOM				pmax	pmax		
	comp=Z,14nm,1.1s						
NIL	Nilore	16.28	278	ePn	Pn	00 32 25.0	-1.9
	comp=Z,11nm,0.6s						
NIL	Nilore	16.28	278	eP	Pn	00 32 25.0	-1.9
NIL				pmax	pmax		
	comp=Z,11nm,0.6s						
BHPL	Bhopal	16.62	238	ex	Pn	00 32 29.3	-2.0
TIY	Taiyuan	16.74	68	eP	P	00 32 36.2	+1.2
TIY				S	Sn	00 35 35.2	-3.6
TIY				LR	LR		
	comp=Z,890nm,7.1s						
TIY				LR	LR		
	comp=Z,1µm,7.7s						
TIY				LR	LR		
	comp=Z,1µm,9.7s						
UTTA	Uttaradit	16.78	153	P	P	00 32 36.2	+0.8
	comp=Z,16µm,1.1s,comp=Z,202µm						
HHC	Hu-ho-hao-te	16.95	57	P	Pn	00 32 36.5	+1.1
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				LR	LR		
	comp=Z,1µm,11.3s						
HHC				LR	LR		
	comp=Z,1µm,9.7s						
AAK	Ala-Archa	17.27	309	LR	LR	00 40 36.6	
	comp=Z,858nm,19.3s,baz=93,slow=42						
AAK	Ala-Archa	17.27	309	ePn	Pn	00 32 39.2	-0.2
	comp=Z,7.0nm,1.0s						
AAK	Ala-Archa	17.27	309	ceP	Pn	00 32 40.7	+1.3
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NONG	Nongkai	17.61	145	P	P	00 32 46.6	+2.0
PBKT	Sadao Pong	18.01	154	P	Pn	00 32 49.9	+1.4
	comp=Z,12nm,0.9s						
SONA0	Songino Array	18.05	31	ePn	Pn	00 32 48.0	-0.9
SONM	Songino Array	18.05	31	P	Pn	00 32 48.0	-0.9
	comp=Z,0.4nm,0.3s,baz=218,slow=11,SNR=54						
SONM				LR	LR	00 40 21.0	
	comp=Z,547nm,19.8s,baz=214,slow=39						
ULN	Ulaanbaatar	18.36	32	eP	Pn	00 32 52.0	-0.9
	comp=Z,5.5nm,0.9s						
ULN	Ulaanbaatar	18.36	32	ceP	Pn	00 32 52.3	-0.5
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
WHN	Wuhan	18.56	92	⇑P	Pn	00 33 02.7	+7.5
WHN				S	S	00 36 30.1	+3.4
WHN				LR	LR		
	comp=Z,3µm,9.7s						
WHN				LR	LR		
	comp=Z,2µm,7.2s						
WHN				LR	LR		
	comp=Z,2µm,18.7s						
BTK	Batken	18.91	298	eP	Pn	00 33 00.2	+0.6
	comp=Z,23nm,0.9s						
BTK	Batken	18.91	298	eP	Pn	00 33 00.2	+0.6
BTK				pmax	pmax		
	comp=Z,23nm,0.9s						
SKNT	Sakolnakorn	18.95	145	P	P	00 33 00.4	+1.1
CHAI	Chaiyaphum	19.01	152	P	Pn	00 33 03.4	+2.7
	comp=Z,19µm,0.8s						
ZAK	Zakamensk	19.01	21	eP	Pn	00 33 00.7	0.0
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s						
GAR	Garm	19.05	295	eP	P	00 33 00.3	-0.3
	comp=Z,27nm,1.1s						
GAR	Garm	19.05	295	eP	P	00 33 00.3	-0.3
GAR				pmax	pmax		
	comp=Z,27nm,1.1s						
PANO	Nakornpanom	19.11	143	P	Pn	00 33 02.9	+0.9
MOY	Mondy	19.58	16	eP	Pn	00 33 07.9	+0.4
MOY				pmax	pmax		
	comp=Z,40nm,1.8s						
KBL	Kabul	19.73	281	eP	P	00 33 08.3	+0.3
	comp=Z,27nm,1.1s						
KBL	Kabul	19.73	281	P	P	00 33 09.4	+1.3
KBL				pmax	pmax		
	comp=Z,38nm,1.3s						
CHGR	Chuyangaron	19.88	293	eP	Pn	00 33 13.1	+1.9
	comp=Z,49nm,1.0s						
HYB	Hyderabad	20.11	223	i P	P	00 33 13.0	+0.9
KK31	Karatay Array	20.11	306	eP	P	00 33 13.4	+1.4
	comp=Z,8.4nm,0.9s						
KK31	Karatay Array	20.11	306	eP	P	00 33 13.4	+1.4
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	20.11	306	eP	P	00 33 13.4	+1.4
	comp=Z,8.4nm,0.9s						
KKAR	Karatay Array	20.11	306	eP	P	00 33 13.4	+1.4
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY	Talaya	20.27	20	eP	P	00 33 13.5	-0.1
TLY				pmax	pmax		
	comp=Z,20nm,1.0s						
TLY				MLR	MLR		
	comp=Z,1µm,11.0s						
TIA	Tai'an	20.32	74	P	P	00 33 15.4	+1.1
TIA				S	S	00 36 58.8	-3.3
TIA				pmax	pmax		
	comp=Z,24nm,0.8s						

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TIA                                LR     LR
      comp=Z,1µm,17.7s
TIA                                LR     LR
      comp=Z,430nm,13.3s
TIA                                LR     LR
      comp=Z,320nm,12.9s
KURBB Kurchatov Arra    20.45 333  P      P      00 33 15.6  0.0
      comp=Z,25nm,0.8s,baz=143,slow=10,SNR=78
KURK  Kurchatov         20.49 334 eP      P      00 33 16.2 +0.2
      comp=Z,42nm,0.8s
KURK  Kurchatov         20.49 334ceP      P      00 33 16.1 +0.2
KURK                               pmax   pmax
      comp=Z,77nm,1.3s
PHET  Kaeng Krachan     21.00 161  P      P      00 33 23.8 +2.1
      comp=Z,81µm,0.9s,comp=Z,854µm
OTUK  Ortayu            21.58 321  P      P      00 33 28.4 +0.5
OTUK                               pmax   pmax
      comp=Z,16nm,0.8s
ZAA0  Zalesovo Array    21.65 347 eP      P      00 33 27.4 -1.1
      comp=Z,3.6nm,0.7s
ZALV  Zalesovo Beam     21.65 347  P      P      00 33 28.6 +0.1
      comp=Z,2.6nm,0.6s,baz=156,slow=10,SNR=7.7
ZALV                               LR     LR     00 42 32.4
      comp=Z,125nm,18.7s,baz=244,slow=39
ZALV  Zalesovo Beam     21.65 347 eP      P      00 33 31.9 +3.4
ZALV                               pmax   pmax
      comp=Z,3.0nm,0.6s
NJ2   Nanjing           22.04  85 eP      P      00 33 34.3 +1.4
NJ2                                pP     sP     00 33 42.9 +3.8
NJ2                                sP     pP     00 33 46.7  +10
NJ2                                S      S      00 37 24.9  -11
NJ2                                pmax   pmax
      comp=Z,25nm,0.7s
NJ2                                LR     LR
      comp=Z,760nm,8.5s
NJ2                                LR     LR
      comp=Z,970nm,10.0s
NJ2                                LR     LR
      comp=Z,710nm,10.9s
BVAR  Borovoye Array    25.61 328  P      P      00 34 07.9 +0.4
      comp=Z,8.6nm,0.7s,baz=129,slow=12,SNR=36
BVAR                               PcP    PcP    00 37 37.0 -1.0
      comp=Z,0.7nm,0.6s,baz=136,slow=1.7,SNR=4.1
BRVK  Borovoye          25.68 328ceP      P      00 34 09.3 +1.3
BRVK                               pmax   pmax
      comp=Z,32nm,1.3s
HIA   Hailar            25.83  43 eP      P      00 34 09.4 -0.1
      comp=Z,15nm,0.9s
HIA   Hailar            25.83  43 eP      P      00 34 09.4 -0.1
HIA                                pmax   pmax
      comp=Z,15nm,0.9s
PALK  Pallekele         27.95 206  LR     LR     00 47 48.6
      comp=Z,125nm,18.9s,baz=296,slow=41
GEYT  Alibeck           28.49 290  P      P      00 34 31.2 -2.4
      comp=Z,1.1nm,0.6s,baz=89,slow=14,SNR=3.8
GEYT                               LR     LR     00 48 09.0
      comp=Z,647nm,20.4s,baz=85,slow=41
GYA0B ALIBECK ARRAY     28.49 290 eP      P      00 34 31.8 -1.7
      comp=Z,5.0nm,1.0s
TJN   Taejon            28.59  74ceP      P      00 34 34.5 +0.1
BOD   Bodaibo           28.70  24 eP      P      00 34 35.1  0.0
BOD                                pmax   pmax
      comp=Z,8.0nm,1.4s
KS15  Wonju Array Si    28.96  71 eP      P      00 34 35.5 -2.2
      comp=Z,5.2nm,0.9s
KSRS  Korea Array       28.99  71  P      P      00 34 35.5 -2.4
      comp=Z,2.7nm,0.7s,baz=266,slow=9.0,SNR=6.9
KSRS                               LR     LR     00 46 32.9
      comp=Z,229nm,18.3s,baz=272,slow=37
KSRS  Korea Array       28.99  71 eP      P      00 34 38.5 +0.6
KSRS                               pmax   pmax
      comp=Z,3.0nm,0.7s
AB31  Akbulak array     29.23 313 i P     P      00 34 39.9  0.0
AB31                               pmax   pmax
      comp=Z,3.0nm,0.9s
ABKAR Akbulak array     29.23 313 eP      P      00 34 39.6 -0.3
      comp=Z,3.2nm,0.8s
PSI   Prapat            30.63 168  LR     LR     00 47 29.3
      comp=Z,206nm,21.0s,baz=353,slow=37
TGY   Tagaytay City     31.84 120  LR     LR     00 48 00.1
      comp=Z,271nm,21.6s,baz=346,slow=37
JNU   Nakatsue          31.86  79  LR     LR     00 47 29.1
      comp=Z,262nm,20.3s,baz=298,slow=36
USRK  Ussuriysk Ar.     32.37  58  LR     LR     00 49 54.4
      comp=Z,127nm,21.9s,baz=254,slow=40
SVE   Sverdlovsk        32.38 327 eP      P      00 35 09.7 +2.1
KLR   Kul'dur           33.13  49  P      P      00 35 12.2 -2.0
      comp=Z,3.9nm,0.6s,baz=270,slow=9.9,SNR=11
KLR                                LR     LR     00 51 03.9
      comp=Z,60nm,19.2s,baz=298,slow=41
KLR   Kul'dur           33.13  49 eP      P      00 35 13.0 -1.3
KLR                                pmax   pmax
      comp=Z,4.0nm,0.9s
ARU   Arti              33.15 325 eP      P      00 35 14.5 +0.1
      comp=Z,4.4nm,0.8s
ARU   Arti              33.15 325  P      P      00 35 14.1 -0.2
ARU                                S      S      00 40 33.1 -0.4
ARU                                SS     SnSn   00 42 32.7 +0.3
ARU                                MLR    MLR
      comp=Z,289nm,15.0s
KKM   Kota Kinabalu     34.62 136 eP      P      00 35 29.0 +1.3
      comp=Z,25nm,1.0s
MAJO  Matsushiro        37.26  72 eP      P      00 35 48.0 -2.1
MAJO  Matsushiro        37.26  72 eP      P      00 35 48.0 -2.1
MAT   Matsushiro        37.26  72  P      P      00 35 51.8 +1.7
MJAR  Matsushiro Arr    37.27  72  P      P      00 35 48.0 -2.1
      comp=Z,1.2nm,0.5s,baz=282,slow=8.8,SNR=6.3
MJAR                               LR     LR     00 52 56.0
      comp=Z,120nm,18.8s,baz=270,slow=39
MJA0  Matsu Arr-Jizo    37.30  72 eP      P      00 35 50.4  0.0
MJA0                               pmax   pmax
      comp=Z,1.0nm,0.3s
PMBI  Palembang         37.54 160  P      P      00 35 52.2 -0.3
JHJ   Hachijo jima 2    39.18  77  LR     LR     00 52 28.3
      comp=Z,191nm,19.2s,baz=309,slow=37
AKH   Akhalkalaki       39.63 297⇑iP      P      00 36 12.5 +2.3
AKH   Akhalkalaki       39.63 297  P      P      00 36 12.4 +2.3
KBZ   Khabaz            39.95 300  LR     LR     00 55 34.3
      comp=Z,35nm,19.4s,baz=50,slow=40
ASAJ  Asahikawa         39.98  59  P      P      00 36 12.1 -0.7
      comp=Z,7.0nm,0.8s,baz=300,slow=14,SNR=3.6
KIV   Kislovodsk        40.09 301 eP      P      00 36 14.7 +0.9
KIV                                pmax   pmax
      comp=Z,19nm,1.0s
KIV                                MLR    MLR
      comp=Z,266nm,16.0s
PRGR  Permogore         41.43 328 eP      P      00 36 23.6 -0.8
PRGR                               pmax   pmax
      comp=Z,10.0nm,0.9s
TIXI  Tiksi             43.16  16  P      P      00 36 36.2 -2.2
      comp=Z,1.9nm,0.3s,baz=139,slow=6.1,SNR=5.5
TIXI  Tiksi             43.16  16ceP      P      00 36 39.5 +1.1
TIXI                               pmax   pmax
      comp=Z,13nm,1.7s
OBN   Obninsk           44.53 317 eP      P      00 36 50.1 +0.5
OBN                               e              00 38 34.6
OBN                               eS      S      00 43 18.2 -6.7
OBN                               eSS     ScS    00 46 46.7 -0.8
OBN                                pmax   pmax
      comp=Z,6.0nm,1.2s
OBN                                MLR    MLR
      comp=Z,290nm,19.0s
MA2   Magadan           46.12  37  LR     LR     00 58 14.3
      comp=Z,115nm,19.2s,baz=262,slow=39
BRTR  Keskin Array B    47.29 296  P      P      00 37 09.8 -2.1
      comp=Z,1.6nm,0.9s,baz=88,slow=7.1,SNR=4.4
BRTR                               LR     LR     01 00 04.2
      comp=Z,59nm,19.1s,baz=90,slow=40
BRTR  Keskin Array B    47.29 296 eP      P      00 37 14.6 +2.7
BRTR                               pmax   pmax
      comp=Z,2.0nm,1.0s
LVZ   Lovozero          47.91 334ceP      P      00 37 18.6 +2.5
LVZ                                pmax   pmax
      comp=Z,30nm,2.5s
AKASG Malin Array Be    48.92 311  P      P      00 37 23.6 -0.5
      comp=Z,3.0nm,0.7s,baz=75,slow=6.8,SNR=8.3
AKASG                              LR     LR     01 00 05.4
      comp=Z,163nm,21.5s,baz=85,slow=39
AKASG Malin Array Be    48.92 311 eP      P      00 37 23.9 -0.2
AKASG                              pmax   pmax
      comp=Z,5.0nm,0.6s
PEA1  Petropavlovsk-    49.69  46 eP      P      00 37 29.3 -0.7
PETK  Petropavlovsk-    49.69  46  P      P      00 37 29.3 -0.7
      comp=Z,5.2nm,0.7s,baz=278,slow=10,SNR=5.1
PETK                               LR     LR     00 59 53.5
      comp=Z,81nm,19.1s,baz=216,slow=38
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VSU   Vasula            50.12 321ceP      P      00 37 34.0 +0.9
VSU                                pmax   pmax
      comp=Z,23nm,1.0s
FINES FINESS Array B    50.52 325  P      P      00 37 36.2 +0.1
      comp=Z,3.8nm,0.6s,baz=89,slow=8.8,SNR=25
FINES                              LR     LR     01 01 07.9
      comp=Z,298nm,18.8s,baz=78,slow=39
SUF   Sumiainen         50.55 327  P      P      00 37 38.6 +2.3
SUF                                pmax   pmax
      comp=Z,19nm,1.0s
SGF   Sodankyl          50.85 333  P      P      00 37 40.8 +2.3
SGF                                pmax   pmax
      comp=Z,9.0nm,0.8s
VRI   Vrincioaia        51.17 305⇑iP      P      00 37 41.5 +0.1
VRI   Vrincioaia        51.17 305  P      P      00 37 44.8 +3.4
VRI                                pmax   pmax
      comp=Z,13nm,0.9s
PLOR  Plostina          51.23 305⇑iP      P      00 37 43.2 +1.4
PLOR  Plostina          51.23 305  P      P      00 37 43.2 +1.4
BIZ   Bicaz             51.42 306⇑iP      P      00 37 43.0 -0.2
ARCES ARCESS Array B    51.52 336  P      P      00 37 42.8 -0.8
      comp=Z,2.6nm,0.6s,baz=88,slow=6.2,SNR=20
ARCES                              PcP    PcP    00 38 57.7 +0.1
      comp=Z,3.8nm,0.8s,baz=90,slow=2.4,SNR=7.8
ARCES                              LR     LR     01 01 34.1
      comp=Z,149nm,18.3s,baz=120,slow=38
MLR   Muntele Rosu      51.78 305 eP      P      00 37 42.5 -3.5
      comp=Z,14nm,0.8s
MLR   Muntele Rosu      51.78 305⇑iP      P      00 37 46.6 +0.6
MLR   Muntele Rosu      51.78 305  P      P      00 37 47.6 +1.6
MLR                                pmax   pmax
      comp=Z,14nm,0.8s
BURAR Bucovina Array    51.90 307⇑iP      P      00 37 46.7 -0.2
BURAR Bucovina Array    51.90 307  P      P      00 37 46.7 -0.2
DOPR  Dopca             52.08 305⇑iP      P      00 37 48.5 +0.4
SUW   Suwalki           52.32 316 eP      P      00 37 50.8 +1.1
LVV   L'vov             52.33 310 eP      P      00 37 52.2 +2.3
VOIR                    52.41 305⇑iP      P      00 37 50.9 +0.2
VOIR                    52.41 305  P      P      00 37 54.6 +3.9
VOIR                               pmax   pmax
      comp=Z,5.0nm,0.8s
ARCR  ARCALIA           52.57 307⇑iP      P      00 37 52.6 +0.8
ARR   Arges             52.71 305⇑iP      P      00 37 53.2 +0.3
KWP   Kalwaria Pacla    53.21 310 eP      P      00 37 56.8 +0.4
KWP   Kalwaria Pacla    53.21 310  P      P      00 37 57.5 +1.1
LOT   Lotru             53.29 305⇑iP      P      00 37 57.6 +0.4
KOLS  Kolonicke sedl    53.61 309 eP      P      00 38 00.3 +0.9
KOLS  Kolonicke sedl    53.61 309 eP      P      00 38 00.3 +0.9
BILL  Bilibino          53.69  27 i P     P      00 37 58.6 -1.1
BILL                              i              00 38 59.6
BILL                              i              00 40 02.0
BILL                               pmax   pmax
      comp=Z,9.0nm,1.2s
BILL                               MLR    MLR
      comp=Z,445nm,17.0s
DRGR                    53.73 307⇑iP      P      00 38 01.1 +0.7
DRGR                    53.73 307  P      P      00 38 02.0 +1.6
DRGR                               pmax   pmax
      comp=Z,12nm,1.1s
DEV   Deva              53.79 306  P      P      00 38 04.6 +3.9
DEV                                pmax   pmax
      comp=Z,12nm,1.0s
SIRR  Siria             54.55 306⇑iP      P      00 38 06.9 +0.6
BZS   Buzias            54.73 306  P      P      00 38 10.2 +2.6
OJC   Ojcow             54.95 311 eP      P      00 38 09.5 +0.4
OJC   Ojcow             54.95 311  P      P      00 38 11.6 +2.5
PSZ   Piszkesteto       55.37 309⇑iP      P      00 38 12.6 +0.3
PSZ   Piszkesteto       55.37 309  P      P      00 38 12.5 +0.3
VYHS  Vyhne             55.93 310 eP      P      00 38 16.6 +0.4
VYHS  Vyhne             55.93 310 eP      P      00 38 16.6 +0.4
MORC  Moravsky Berou    56.47 311⇑iP      P      00 38 19.8 -0.3
MORC  Moravsky Berou    56.47 311  P      P      00 38 20.9 +0.8
MORC  Moravsky Berou    56.47 311 eP      P      00 38 20.4 +0.3
JAVC  Velka Javorina    56.60 310 eP      P      00 38 22.3 +1.3
KSP   Ksiaz             57.01 313 eP      P      00 38 26.1 +2.3
DPC   Dobruska-Polom    57.10 312 eP      P      00 38 25.3 +0.7
DPC                                MLR    MLR
      comp=Z,200nm,17.3s
DPC   Dobruska-Polom    57.10 312 eP      P      00 38 25.3 +0.7
DPC                               ex      x      00 38 27.4
DPC                                AMS    AMS    01 04 20.0
      comp=Z,200nm,17.3s
OSTC  Ostas             57.12 312 eP      P      00 38 25.0 +0.4
OSTC                              ex      x      00 38 27.2
OSTC                               AMS    AMS    01 04 50.0
      comp=Z,200nm,18.4s
VRAC  Vranov            57.18 311⇑iP      P      00 38 24.9 -0.2
VRAC  Vranov            57.18 311 eP      P      00 38 25.6 +0.5
UPC   Upice             57.26 312 eP      P      00 38 26.1 +0.5
UPC                                MLR    MLR
      comp=Z,200nm,26.0s
UPC   Upice             57.26 312 eP      P      00 38 26.1 +0.5
UPC                               ex      x      00 38 28.4
UPC                                AMS    AMS    01 04 50.0
      comp=Z,200nm,26.0s
KRUC  Moravsky          57.36 311  P      P      00 38 27.1 +0.7
KRUC                               pmax   pmax
      comp=Z,8.0nm,0.9s
KRUC  Moravsky          57.36 311 eP      P      00 38 26.9 +0.5
NC405 NORSAR Array S    57.45 325 eP      P      00 38 27.1 +0.3
      comp=Z,19nm,0.9s
NC602 NORSAR Array S    57.60 325 eP      P      00 38 27.1 -0.7
      comp=Z,19nm,1.0s
NORES NORESS Array B    57.60 325  P      P      00 38 29.0 +1.2
SOP   Sopron            57.61 309  P      P      00 38 31.9 +3.8
SOP                                pmax   pmax
      comp=Z,11nm,0.7s
NB2   NORSAR Subarra    57.70 325  P      P      00 38 27.8 -0.8
      comp=Z,3.9nm,0.8s,baz=78,slow=6.9
NB2   NORSAR Subarra    57.70 325  P      P      00 38 26.6 -2.0
NB2                                pmax   pmax
      comp=Z,4.0nm,0.7s
NOA   NORSAR Array B    57.70 325  P      P      00 38 28.0 -0.6
      comp=Z,5.2nm,0.8s,baz=79,slow=7.0,SNR=23
NOA                                LR     LR     01 05 19.6
      comp=Z,274nm,18.1s,baz=80,slow=38
NOA   NORSAR Array B    57.70 325 eP      P      00 38 27.6 -1.0
NOA                                pmax   pmax
      comp=Z,5.0nm,0.8s
BEHE  Becsehely         57.78 308 eP      P      00 38 31.0 +1.6
NC204 NORSAR Array S    57.87 326 eP      P      00 38 29.0 -0.8
      comp=Z,22nm,0.8s
CONA  Conrad Observa    58.00 309 eP      P      00 38 31.3 +0.4
      comp=Z,13nm,0.9s,SNR=13
PVCC  Panska Ves        58.15 313 eP      P      00 38 34.2 +2.4
PVCC                               MLR    MLR
      comp=Z,200nm,16.6s
PVCC  Panska Ves        58.15 313 eP      P      00 38 34.2 +2.4
PVCC                               AMS    AMS    01 04 50.0
      comp=Z,200nm,16.6s
GOPC  GO Pecny, Ondr    58.16 312 eP      P      00 38 33.4 +1.4
GOPC                               MLR    MLR
      comp=Z,200nm,14.6s
GOPC  GO Pecny, Ondr    58.16 312 eP      P      00 38 33.4 +1.4
GOPC                               AMS    AMS    01 05 00.0
      comp=Z,200nm,14.6s
PRU   Pruhonice         58.30 312 eP      P      00 38 33.4 +0.5
PRU                                MLR    MLR
      comp=Z,200nm,18.8s
PRU   Pruhonice         58.30 312 eP      P      00 38 33.4 +0.5
PRU                               ex      x      00 38 35.6
PRU                                AMS    AMS    01 07 00.0
      comp=Z,200nm,18.8s
ARSA  Arzberg           58.40 309 eP      P      00 38 33.4 -0.3
      comp=Z,3.5nm,0.7s
BRG   Berggiesshubel    58.44 313 eP      P      00 38 34.1 +0.2
      comp=Z,3.3nm,0.7s
      comp=N,155nm,19.7s
      comp=E,151nm,18.8s
      comp=Z,316nm,25.8s
BRG   Berggiesshubel    58.44 313 eP      P      00 38 34.1 +0.2
BRG                                pmax   pmax
      comp=Z,3.0nm,0.7s
BRG                                MLR    MLR
      comp=N,155nm,19.7s
BRG                                MLR    MLR
      comp=E,151nm,18.8s
BRG                                MLR    MLR
      comp=Z,316nm,25.8s
SOKA  Soboth            58.88 308 eP      P      00 38 37.3 +0.1
      comp=Z,12nm,0.9s,SNR=12
CLL   Collm             58.90 314 i P     P      00 38 36.9 -0.2
CLL                                pmax   pmax
      comp=Z,7.0nm,1.0s
CLL   Collm             58.90 314 i P     P      00 38 36.9 -0.2
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      comp=Z,7.0nm,1.0s
CLL                               eSS     SS     00 50 48.0  +12
CLL                                LmH           01 01 00.0
      comp=N,300nm,20.9s
CLL                                LmH           01 01 00.0
      comp=E,100nm,18.5s
CLL                                LmV           01 07 00.0
      comp=Z,100nm,19.4s
MOA   Molln             59.05 310 i P     P      00 38 37.4 -0.8
      comp=Z,4.5nm,1.0s
KHC   Kasperske Hory    59.13 311 eP      P      00 38 37.4 -1.4
      comp=Z,1.2nm,1.0s
KHC   Kasperske Hory    59.13 311 eP      P      00 38 39.0 +0.2
KHC                               e              00 38 50.3
KHC                                MLR    MLR
      comp=Z,200nm,26.7s
KHC   Kasperske Hory    59.13 311 eP      P      00 38 39.0 +0.2
KHC                               ex      x      00 38 40.7
KHC                               ex      x      00 38 50.3
KHC                                AMS    AMS    01 07 30.0
      comp=Z,200nm,26.7s
GEC2  GERESS Array S    59.13 311 eP      P      00 38 37.2 -1.7
      comp=Z,5.5nm,0.9s
GEC2  GERESS Array S    59.13 311 eP      P      00 38 37.2 -1.7
GEC2                               pmax   pmax
      comp=Z,6.0nm,0.9s
GERES GERESS Array B    59.13 311  P      P      00 38 38.6 -0.3
      comp=Z,2.6nm,0.8s,baz=72,slow=5.7,SNR=21
GERES                              LR     LR     01 08 00.2
      comp=Z,168nm,20.7s,baz=92,slow=40
GERES GERESS Array B    59.13 311 eP      P      00 38 41.5 +2.6
GERES                              pmax   pmax
      comp=Z,2.0nm,0.7s
OBKA  Obir              59.25 308 eP      P      00 38 39.7  0.0
      comp=Z,3.9nm,0.8s
NKC   Novy Kostel       59.53 313  AMS    AMS    01 05 40.0
      comp=Z,300nm,15.7s
WET   Wettzell          59.57 311  P      P      00 38 42.6 +0.8
KBA   Koelnbreinsper    59.87 309 eP      P      00 38 43.7 -0.4
      comp=Z,3.8nm,0.8s
TRI   Trieste           60.01 307  P      P      00 38 47.1 +2.3
GRA1  Grafenberg Arr    60.45 312 eP      P      00 38 48.0 +0.2
      comp=Z,8.9nm,0.9s
GRF   Grafenberg Arr    60.45 312 eP      P      00 38 48.0 +0.2
GRF                                pmax   pmax
      comp=Z,9.0nm,0.9s
WTTA  Wattenberg        60.92 310 i P     P      00 38 50.9 -0.4
      comp=Z,5.0nm,1.0s
WATA  Walderalm         60.94 310 i P     P      00 38 52.0 +0.6
      comp=Z,1.1nm,0.4s
SQTA  Sankt Quirin      61.22 310 eP      P      00 38 52.6 -0.6
      comp=Z,4.6nm,0.7s
MOTA  Moosalm           61.24 310 i P     P      00 38 52.8 -0.6
      comp=Z,4.3nm,0.9s
AQU   L'Aquila          61.34 304  P      P      00 38 58.1 +4.1
RETA  Reutte            61.42 310 eP      P      00 38 54.3 -0.2
      comp=Z,7.2nm,0.9s,SNR=5.1
FETA  Feichten          61.59 310 eP      P      00 38 55.3 -0.5
      comp=Z,7.1nm,0.9s,SNR=6.6
FUORN Ofenpass-Fuorn    62.02 309 eP      P      00 38 57.8 -1.0
      comp=Z,3.5nm,0.8s
DAVA  Damuels           62.05 310 i P     P      00 38 58.4 -0.5
      comp=Z,6.1nm,0.8s
KMBO  Kilima Mbogo      62.25 249  P      P      00 39 00.6 -0.2
      comp=Z,1.4nm,0.3s,baz=47,slow=11,SNR=9.1
KMBO  Kilima Mbogo      62.25 249 eP      P      00 39 00.6 -0.2
      comp=Z,4.1nm,0.8s
KMBO  Kilima Mbogo      62.25 249 eP      P      00 39 00.7 -0.1
KMBO                               pmax   pmax
      comp=Z,1.0nm,0.3s
TUE   Stuetta           62.67 309 eP      P      00 39 02.0 -1.1
      comp=Z,5.2nm,0.7s
BFO   Black Forest      62.69 312 eP      P      00 39 02.4 -0.6
      comp=Z,4.6nm,0.9s
BFO   Black Forest      62.69 312 eP      P      00 39 02.4 -0.6
BFO                                pmax   pmax
      comp=Z,5.0nm,0.9s
CDF   Champ du Feu      63.32 312 eP      P      00 39 06.2 -1.0
CDF                                pmax   pmax
      comp=Z,6.0nm,1.0s
ECH   Echery            63.46 312 eP      P      00 39 07.0 -1.0
      comp=Z,3.4nm,1.0s
ECH   Echery            63.46 312 eP      P      00 39 07.1 -1.0
ECH                                pmax   pmax
      comp=Z,3.0nm,1.0s
WLF   Walferdange       63.57 314 eP      P      00 39 08.7 -0.1
      comp=Z,69nm,1.1s
WLF   Walferdange       63.57 314 eP      P      00 39 08.7 -0.1
WLF                                pmax   pmax
      comp=Z,69nm,1.1s
WLF   Walferdange       63.57 314  P      P      00 39 06.0 -2.7
HINF  Hinteralfeld      63.79 311 eP      P      00 39 09.6 -0.7
HINF                               pmax   pmax
      comp=Z,3.0nm,0.7s
SENIN Lac Senin/Sane    64.03 310 eP      P      00 39 10.7 -1.5
      comp=Z,10nm,0.8s
HAU   Haudompre         64.04 312 eP      P      00 39 11.6 -0.3
HAU                                pmax   pmax
      comp=Z,2.0nm,0.5s
GIVF  Givet             64.22 314 eP      P      00 39 13.5 +0.5
GIVF                               pmax   pmax
      comp=Z,5.0nm,0.6s
PGF   Pioggiola         64.31 305 eP      P      00 39 15.3 +1.4
PGF                                pmax   pmax
      comp=Z,7.0nm,0.9s
LPG   La Plagne         64.71 309 eP      P      00 39 16.2 -0.5
LPG                                pmax   pmax
      comp=Z,14nm,0.7s
LPL   La Plagne         64.71 309 eP      P      00 39 16.2 -0.4
LPL                                pmax   pmax
      comp=Z,14nm,0.8s
CABF  La Chapelle       64.72 310 eP      P      00 39 17.7 +1.2
CABF                               pmax   pmax
      comp=Z,27nm,1.9s
SBF   Sospel            64.87 307 eP      P      00 39 16.6 -0.9
SBF                                pmax   pmax
      comp=Z,18nm,0.8s
BNI   Bardonecchia      64.92 309 eP      P      00 39 18.0 +0.1
      comp=Z,5.5nm,1.0s
BNI   Bardonecchia      64.92 309 eP      P      00 39 18.0 +0.1
BNI                                pmax   pmax
      comp=Z,6.0nm,1.0s
MBDF  Montbardon        64.99 308 eP      P      00 39 16.6 -1.7
MBDF                               pmax   pmax
      comp=Z,7.0nm,0.8s
ORIF  Oris-en-Rattie    65.50 309 eP      P      00 39 21.1 -0.5
ORIF                               pmax   pmax
      comp=Z,6.0nm,0.7s
FRF   La Foret Royal    65.52 307 eP      P      00 39 20.4 -1.2
FRF                                pmax   pmax
      comp=Z,4.0nm,0.8s
LMR   La Mourre         65.70 307 eP      P      00 39 24.2 +1.4
LMR                                pmax   pmax
      comp=Z,6.0nm,1.0s
LOR   Lormes            65.88 312 eP      P      00 39 24.8 +0.9
LOR                                pmax   pmax
      comp=Z,5.0nm,1.0s
WRA   Warramunga Arr    65.99 137  P      P      00 39 24.9 +0.1
      comp=Z,9.0nm,1.2s,baz=305,slow=7.8,SNR=5.1
WR1   Warramunga Arr    66.00 137 eP      P      00 39 24.9 +0.1
SMF   Signal de Mont    66.14 311 eP      P      00 39 24.4 -1.2
SMF                                pmax   pmax
      comp=Z,9.0nm,0.9s
SSF   Saint Saulge      66.18 312 eP      P      00 39 24.7 -1.1
SSF                                pmax   pmax
      comp=Z,9.0nm,0.9s
VIVF  Saint-Julien-l    66.31 309 eP      P      00 39 25.9 -0.8
VIVF                               pmax   pmax
      comp=Z,8.0nm,1.2s
AVF   Avril sur Loir    66.39 311 eP      P      00 39 26.0 -1.1
AVF                                pmax   pmax
      comp=Z,8.0nm,0.9s
KEST  Kesra             66.78 298  P      P      00 39 27.9 -2.1
      comp=Z,4.1nm,0.9s,baz=66,slow=20,SNR=3.8
KEST                               LR     LR     01 13 22.7
      comp=Z,45nm,18.3s,baz=300,slow=40
MBAR  Mbarara           67.11 253 eP      P      00 39 32.3 -0.1
      comp=Z,9.4nm,0.9s
MBAR  Mbarara           67.11 253 eP      P      00 39 32.3 -0.1
MBAR                               pmax   pmax
      comp=Z,9.0nm,0.9s
TCF   Toulx Ste Croi    67.31 311 eP      P      00 39 32.4 -0.7
TCF                                pmax   pmax
      comp=Z,11nm,0.9s
LDF   La Druitiere      67.78 314 eP      P      00 39 34.8 -1.2
LDF                                pmax   pmax
```

	comp=Z,10.0nm,1.0s						
CAF	Calviac	67.97	310	*e*P	P	00 39 36.9	-0.4
CAF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RJF	Les Rejaudoux	68.16	311	*e*P	P	00 39 38.1	-0.4
RJF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GRR	Gorron	68.31	314	*e*P	P	00 39 40.6	+1.3
GRR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MTLF	Montolieu	68.55	308	*e*P	P	00 39 42.5	+1.6
MTLF				pmax	pmax		
	comp=Z,11nm,1.4s						
ASAR	Alice Springs	68.71	140	P	P	00 39 42.0	-0.1
	comp=Z,4.6nm,0.9s,baz=321,slow=6.2,SNR=24						
ASAR	Alice Springs	68.71	140	P	P	00 39 42.0	-0.1
LFF	La Frestale	68.82	310	*e*P	P	00 39 42.1	-0.4
LFF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NWAO	Narrogin (SRO)	69.56	158	P	P	00 39 45.9	-1.1
	comp=Z,14nm,1.0s,baz=348,slow=6.7,SNR=3.2						
ROSF	Rostrenen	69.78	315	*e*P	P	00 39 50.2	+1.8
ROSF				pmax	pmax		
	comp=Z,16nm,1.1s						
QUIF	Quistinic	69.91	315	*e*P	P	00 39 53.3	+4.1
QUIF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ETSF	Etsaut	70.57	309	*e*P	P	00 39 55.5	+2.0
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MLY	Manley	70.62	24	*e*P	P	00 39 51.7	-1.7
	comp=Z,7.0nm,1.1s						
SJPF	Ste Jean	70.90	309	*e*P	P	00 39 57.7	+2.3
SJPF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ILAR	Eielson Array	72.06	23	P	P	00 40 00.8	-1.2
	comp=Z,3.6nm,0.9s,baz=292,slow=5.1,SNR=22						
ILAR	Eielson Array	72.06	23	*e*P	P	00 40 01.0	-1.0
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	73.29	16	*e*P	P	00 40 08.6	-0.6
	comp=Z,7.8nm,0.8s						
INK	Inuvik	73.29	16	*e*P	P	00 40 08.6	-0.6
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTA	Charters Tower	73.50	128	P	P	00 40 09.9	-1.3
	comp=Z,3.1nm,0.7s,baz=311,slow=11,SNR=4.0						
SCM	Sheep Creek Mo	73.83	25	*e*P	P	00 40 12.5	-0.1
	comp=Z,18nm,1.0s						
SCM	Sheep Creek Mo	73.83	25	*e*P	P	00 40 12.5	-0.1
SCM				pmax	pmax		
	comp=Z,18nm,1.0s						
EGAK	Eagle	73.86	21	*e*P	P	00 40 11.9	-0.7
	comp=Z,5.8nm,0.9s						
ESDC	Sonseca Array	74.36	307	P	P	00 40 15.9	-0.2
	comp=Z,2.1nm,0.7s,baz=62,slow=5.9,SNR=13						
ESDC				LR	LR	01 16 52.7	
	comp=Z,51nm,19.1s,baz=195,slow=39						
LSZ	Lusaka	78.07	243	*e*P	P	00 40 37.1	-0.5
	comp=Z,3.1nm,0.6s						
LSZ	Lusaka	78.07	243	*e*P	P	00 40 37.1	-0.5
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
STKA	Stephens Creek	79.34	139	P	P	00 40 43.0	-1.0
	comp=Z,4.3nm,1.0s,baz=73,slow=4.5,SNR=4.3						
STKA	Stephens Creek	79.34	139	*e*P	P	00 40 43.0	-1.0
	comp=Z,2.2nm,1.1s						
STKA	Stephens Creek	79.34	139	*e*P	P	00 40 43.9	-0.1
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YKA	Yellowknife Ar	82.30	12	P	P	00 40 58.0	-1.5
	comp=Z,3.7nm,0.7s,baz=329,slow=5.0,SNR=8.9						
YKA	Yellowknife Ar	82.30	12	*e*P	P	00 40 58.4	-1.1
YKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TOA0	Torodi Ar. Sit	83.80	282	*e*P	P	00 41 06.8	-1.3
	comp=Z,11nm,0.9s						
TORD	Torodi Ar. Bea	83.80	282	P	P	00 41 06.4	-1.7
	comp=Z,6.6nm,0.3s,baz=26,slow=7.1,SNR=34						
TORD				LR	LR	01 22 59.0	
	comp=Z,97nm,18.2s,baz=60,slow=39						
LBTB	Lobatse	86.09	237	*e*P	P	00 41 17.6	-1.8
	comp=Z,8.0nm,0.8s						
LBTB	Lobatse	86.09	237	*e*P	P	00 41 17.6	-1.8
LBTB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BOSA	Boshof	88.59	234	LR	LR	01 19 50.7	
	comp=Z,64nm,18.0s,baz=56,slow=35						
DBIC	Dimbokro	92.71	280	P	P	00 41 50.0	-0.9
	comp=Z,3.7nm,1.1s,baz=358,slow=3.4,SNR=3.5						
DBIC				LR	LR	01 26 59.1	
	comp=Z,71nm,19.7s,baz=42,slow=38						
PD31	Pinedale Array	101.86	17	*e*Pdif	Pdif	00 42 31.2	-0.8
PDAR	Pinedale Array	101.86	17	P	Pdif	00 42 31.2	-0.8
	comp=Z,0.1nm,0.4s,baz=18,slow=6.1,SNR=3.1						
VNA2	Neumayer--Watz	124.11	203	PKPdf	PKPdf	00 47 35.1	-0.7
VNA1	Neumayer--Stat	124.39	203	PKPdf	PKPdf	00 47 35.1	-1.1
VNA3	Neumayer Olymp	124.86	203	PKPdf	PKPdf	00 47 36.2	-1.0

MEX 02 00:35:15.8±0.7, 13°.93N×93°.34W, h15^{km}±159^{km}, MD3.7, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.42	47	*i*P	Pn	00 35 38.0	-3.1
THIG				*i*S	Sn	00 35 54.1	-5.4
PCIG		1.77	4	*i*P	Pn	00 35 42.2	-3.7
PCIG				*i*S	Sn	00 36 03.3	-4.7
CCIG	Comitan	2.61	26	*e*P	Pn	00 35 55.0	-2.6
CCIG				*i*S	Sn	00 36 25.0	-4.1

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*ISCJB **02** 00:37:13.0±0.6, 7°.57S±0°.05×128°.29E±0°.07, h142^{km}, mb3.7/4, Error ellipse: s-maj=10.7km s-min=6.9km az=17.4*

*IDC **02** 00:37:14.5±1.7, 7°.52S×128°.23E, h138^{km}±17^{km}, mb3.5/4, mb1 3.8/8, mb1mx3.5/35, mbtmp4.2/8, Error ellipse: s-maj=20.2km s-min=13.6km az=114.0*

ISC 02 00:37:14.2±0.8, 7°.64S±0°.07×128°.38E±0°.10, h142^{km}, n8, σ2^{s}.68/11, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	5.31	241	P	Pn	00 38 32.8	+1.1
	13nm,0.3s,baz=121,slow=3.8,SNR=5.0						
BATI				S	Sn	00 39 30.3	-1.8
	18nm,0.3s,baz=114,slow=3.8,SNR=6.5						
SIJI	Sorong	7.32	23	P	Pn	00 38 57.6	-0.9
	3.7nm,0.3s,baz=250,slow=23,SNR=4.7						
SIJI				S	Sn	00 40 20.1	-0.2
	0.9nm,0.3s,baz=233,slow=20,SNR=2.3						
WRA	Warramunga Arr	13.52	155	P	Pn	00 40 21.2	+0.8
	1.8nm,0.3s,baz=330,slow=13,SNR=24						
WRA				S	Sn	00 42 41.5	-8.6
	0.8nm,0.3s,baz=330,slow=21,SNR=5.8						
ASAR	Alice Springs	16.79	162	P	Pn	00 41 05.0	+4.0
	1.0nm,0.3s,baz=340,slow=11,SNR=32						
ASAR				S	S	00 44 02.9	-5.6
	0.7nm,0.3s,baz=324,slow=19,SNR=9.0						
STKA	Stephens Creek	27.08	155	P	P	00 42 45.5	+2.0
	1.8nm,0.5s,baz=335,slow=11,SNR=4.7						
SONM	Songino Array	58.56	343	P	P	00 46 56.2	+0.3
	0.9nm,0.6s,baz=169,slow=5.7,SNR=5.8						
MKAR	Makanchi Array	67.89	328	P	P	00 47 56.8	-0.6
	0.4nm,0.5s,baz=115,slow=9.1,SNR=6.1						
ZALV	Zalesovo Beam	71.46	335	P	P	00 48 18.2	-0.8
	1.2nm,0.6s,baz=107,slow=2.0,SNR=5.1						

MAN 02 01:09:50.0, 13°.97N×120°.39E, h65^{km}, mb3.8, ML2.6, MS2.1, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.27	212	*e*P	Pn	01 10 02.5	+2.1
LUBP				*e*S	Sn	01 10 11.5	+3.5
TGY	Tagaytay City	0.54	76	⇓*i*P	Pn	01 10 04.9	+2.0
TGY				*i*S	Sn	01 10 13.1	+0.8
PGP	Puerto Galera	0.71	130	⇓*i*P	Pn	01 10 06.4	+1.6
PGP				*i*S	Sn	01 10 17.9	+2.3
SJMP	San Jose	1.66	155	*e*P	Pn	01 10 18.2	+1.3
SJMP				*e*S	Sn	01 10 38.9	+1.6
OTRP	Odiongan	2.25	135	*e*P	Pn	01 10 26.5	+1.6
ENPP	El Nido	2.90	199	*e*P	Pn	01 10 33.9	+0.1
ENPP				*e*S	Sn	01 11 04.4	-3.2

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*IDC **02** 01:16:07.8±1.2, 43°.30N×126°.80W, h0^{km}, mb3.7/7, mb1 3.8/15, mb1mx3.7/43, mbtmp3.6/15, ML3.5/7, MS3.4/17, Ms1 3.4/17, ms1mx3.2/39, Error ellipse: s-maj=23.2km s-min=10.4km az=48.0*

*NEIC **02** 01:16:10.3±2.1, 43°.33N×126°.89W, h10^{km}±1^{km}, mb3.9/21, Error ellipse: s-maj=10.6km s-min=7.8km az=53.0*

*ANF **02** 01:16:12.3±0.8, 43°.38N×126°.55W, h10^{km}, ML3.4/20, Error ellipse: s-maj=8.3km s-min=5.8km az=73.0*

ISC 02 01:16:11.1±3.4, 43°.34N±0°.06×126°.87W±0°.10, h17^{km}±15^{km}, n136, σ1^{s}.38/134, mb4.0/14, MS3.3/11, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	1.91	103	*e*Pn	Pn	01 16 40.9	-2.0
KEBM				*e*Sn	Sn	01 17 06.3	-0.2
J01E	Myrtle Point	2.15	94	P	Pn	01 16 44.1	-2.0
	baz=276,SNR=54						
J01E				Sb	Sn	01 17 12.9	+0.6
	baz=276						
I02D	Swisshome	2.32	70	P	Pn	01 16 46.8	-1.6
	baz=252,SNR=346						
I02D				Sb	Sn	01 17 17.2	+0.7
	baz=252						
K02D	Willamette Mer	2.43	104	P	Pn	01 16 48.2	-1.9
	baz=286,SNR=11						
K02D				S	Sn	01 17 17.0	-2.4
	baz=286						
I03D	Drain, OR	2.58	81	P	Pn	01 16 50.8	-1.3
	baz=263,SNR=160						
I03D				Sb	Sn	01 17 23.6	+0.5
	baz=263						
L02E	Cave Junction	2.68	115	P	Pn	01 16 51.9	-1.5
	baz=297,SNR=7.0						
COR	Corvallis	2.86	63	*e*Pn	Pn	01 16 55.2	-0.7
COR				*e*Sn	Sn	01 17 30.1	+0.3
HUMO	Hull Mountain	2.96	103	*e*Pn	Pn	01 16 56.3	-1.0
HUMO				*e*Sn	Sn	01 17 32.4	0.0
G03D	McMinnville, O	3.19	53	P	Pn	01 16 59.6	-0.9
	baz=235,SNR=44						
H04D	Lebanon	3.21	67	P	Pn	01 17 00.4	-0.3
	baz=250,SNR=62						
I04A	Tendick Farm,	3.27	80	P	Pn	01 17 01.1	-0.4
	baz=263,SNR=43						
KHMM	Horse Mountain	3.39	135	*e*Pn	Pn	01 17 03.9	+0.6
YBH	Yreka Blue Hor	3.46	116	Pn	Pn	01 17 03.9	-0.3
	1.3nm,0.3s,baz=306,slow=11,SNR=43						
YBH				LR	LR	01 17 41.5	
	comp=Z,37nm,18.5s,baz=300,slow=28						
YBH				Sn	Sn	01 17 45.7	+0.8
	0.8nm,0.3s,baz=247,slow=13,SNR=4.4						
YBH	Yreka Blue Hor	3.46	116	*e*Pn	Pn	01 17 03.5	-0.8
YBH				*e*Sn	Sn	01 17 46.4	+1.5
J04D	Umpqua Nationa	3.47	90	P	Pn	01 17 04.8	+0.3
	baz=273,SNR=15						
L04D	Klamath Falls	3.54	107	P	Pn	01 17 06.0	+0.6
	baz=290,SNR=15						
M02C	Callahan	3.55	122	P	Pn	01 17 04.6	-0.8
	baz=304						
H04A	Detroit Lake	3.63	67	*e*Pn	Pn	01 17 06.5	0.0
H04A				*e*Sn	Sn	01 17 49.5	+0.5
F04D	Rainier, OR	3.88	44	P	Pn	01 17 09.5	-0.5
	baz=226						
N02D	Trinity Center	3.89	126	P	Pn	01 17 09.9	-0.3
	baz=309						
KMRM	Mail Ridge	3.91	142	*e*Pn	Pn	01 17 11.7	+1.3
J05D	Fort Rock, OR	4.11	89	P	Pn	01 17 12.7	-0.5
	baz=273						
I05D	Terrebonne, OR	4.12	74	P	Pn	01 17 13.0	-0.3
	baz=258,SNR=21						
PINE	Pine Mountain	4.33	82	*e*Pn	Pn	01 17 16.2	-0.1
G05D	Wamic, OR	4.42	63	P	Pn	01 17 17.2	-0.1
	baz=246,SNR=20						
K05A	Summer Lake	4.42	96	*e*Pn	Pn	01 17 17.4	-0.2
E04D	Cinebar	4.44	42	P	Pn	01 17 17.3	-0.2
	baz=225,SNR=7.1						
NLWA	Neilton Lookou	4.57	26	*e*Pn	Pn	01 17 18.7	-0.7
NLWA				*e*Sn	Sn	01 18 10.8	-1.3
F05D	White Salmon	4.62	55	P	Pn	01 17 20.4	+0.3
	baz=238,SNR=19						
D04E	Lakebay	4.81	36	P	Pn	01 17 20.9	-1.8
	baz=218						
LON	Longmire	4.95	45	*e*Pn	Pn	01 17 25.0	+0.4
LON				*e*Sn	Sn	01 18 22.8	+1.4
D03D	Eldon	4.97	31	P	Pn	01 17 23.6	-1.2
	baz=214,SNR=7.1						
D05A	Enumclaw	5.17	40	*e*Pn	Pn	01 17 28.1	+0.6
I07A	Izee	5.39	80	*e*Pn	Pn	01 17 30.8	+0.1
ORV	Oroville	5.52	131	*e*Pn	Pn	01 17 32.4	-0.2
F07A	Phinny Hill Vi	5.57	60	*e*Pn	Pn	01 17 33.7	+0.6
PGC	Sidney	5.82	23	*e*Pn	Pn	01 17 36.4	-0.1
LTY	Liberty	5.87	46	*e*Pn	Pn	01 17 35.8	-1.5
B05A	Bryant	5.95	32	P	Pn	01 17 37.7	-0.6
	baz=216,SNR=9.3						
HAWA	Hanford	6.04	57	*e*Pn	Pn	01 17 40.2	+0.7
WVOR	Wild Horse Val	6.11	96	*e*Pn	Pn	01 17 40.3	-0.4
J08A	Circle Bar Ran	6.12	87	*e*Pn	Pn	01 17 42.0	+1.2
E08A	Dider Farm, El	6.38	58	*e*Pn	Pn	01 17 44.5	+0.3
B06A	Marblemount	6.40	34	*e*Pn	Pn	01 17 43.1	-1.4
D08A	Wollman Farm,	6.73	54	*e*Pn	Pn	01 17 49.8	+0.7
E09A	Wood Farm, Sta	6.96	60	*e*Pn	Pn	01 17 51.6	-0.5
BMO	Blue Mountains	7.05	74	*e*Pn	Pn	01 17 53.3	-0.2
CMB	Columbia Colle	7.23	135	*e*Pn	Pn	01 17 56.2	+0.3
F10A	Beach Ranch, E	7.36	66	*e*Pn	Pn	01 17 52.8	-5.0
C09A	Chrisman Ranch	7.50	50	*e*Pn	Pn	01 18 00.2	+0.6
LLLB	Lillooet	8.03	23	*e*Pn	Pn	01 18 07.7	+0.8
NV01	Mina Array Sit	8.13	124	*e*Pn	Pn	01 18 07.0	-1.5
NVAR	Mina Array Bea	8.13	124	Pn	Pn	01 18 07.0	-1.5
	0.1nm,0.3s,baz=295,slow=16,SNR=3.3						
NVAR				LR	LR	01 21 25.0	
	comp=Z,170nm,18.3s,baz=256,slow=39						
NEW	Newport	8.40	51	Pn	Pn	01 18 12.2	+0.2
	0.6nm,0.3s,baz=233,slow=11,SNR=9.6						
NEW				LR	LR	01 21 30.4	
	comp=Z,374nm,21.1s,baz=249,slow=38						
NEW	Newport	8.40	51	*e*Pn	Pn	01 18 11.7	-0.3
NEW	Newport	8.40	51	P	Pn	01 18 11.3	-0.7
	baz=238						
BBB	Bella Bella	8.89	355	Pn	Pn	01 18 18.6	0.0
	0.7nm,0.3s,baz=192,slow=9.0,SNR=6.5						
BBB				LR	LR	01 21 05.1	
	comp=Z,267nm,19.2s,baz=193,slow=33						
BBB	Bella Bella	8.89	355	*e*Pn	Pn	01 18 19.5	+0.8
ELK	Elko	9.03	103	Pn	Pn	01 18 21.4	+0.6
	0.0nm,0.3s,baz=301,slow=18,SNR=3.7						
ELK				LR	LR	01 22 08.2	
	comp=Z,121nm,18.2s,baz=282,slow=40						
ELK	Elko	9.03	103	*e*Pn	Pn	01 18 24.6	+3.8
HLID	Hailey	9.06	84	*e*Pn	Pn	01 18 18.9	-2.3
MSO	Missoula	9.79	65	*e*Pn	Pn	01 18 30.7	-0.3
MSO	Missoula	9.79	65	P	Pn	01 18 30.1	-1.0
	baz=254						
MCMT	McKenzie Canyo	10.20	77	*e*Pn	Pn	01 18 39.5	+2.7
ARVC	Arvin	10.29	140	P	Pn	01 18 39.1	+1.2
	baz=325						
LRM	Limekiln Ridge	10.58	71	*e*Pn	Pn	01 18 43.4	+1.3
WALA	Waterton Lakes	10.64	53	*e*Pn	Pn	01 18 44.2	+1.4
DUG	Dugway, Tooele	10.96	102	*e*Pn	Pn	01 18 50.7	+3.6
DUG	Dugway, Tooele	10.96	102	P	Pn	01 18 46.6	-0.5
	baz=291						
BOZ	Bozeman (W)	11.12	73	*e*Pn	Pn	01 18 50.6	+1.2
BOZ	Bozeman (W)	11.12	73	P	Pn	01 18 49.2	-0.2
	baz=263						
QLMT	Earthquake Lak	11.21	77	*e*Pn	Pn	01 18 53.5	+2.9
YHB	Horse Butte	11.37	77	*e*Pn	Pn	01 18 55.7	+2.9
TUQ	Turquoise Moun	11.56	129	P	Pn	01 18 56.9	+1.4
	baz=316						
YHH	Holmes Hill	11.62	77	*e*Pn	Pn	01 18 58.7	+2.4
YPP	Pitchstone Pla	11.65	80	*e*Pn	Pn	01 19 00.4	+3.7
HEC	Hector,Ludlow	11.79	133	P	Pn	01 19 01.4	+3.0
	baz=319						
LDFC	Landfair	12.28	128	*e*Pn	Pn	01 19 07.8	+2.6
KNB	Kanab	12.45	116	*e*Pn	Pn	01 19 12.5	+4.9
GCMT	Greycliff	12.51	73	*e*Pn	Pn	01 19 06.4	-2.0
PFO	Pinyon Flats O	12.67	137	LR	LR	01 24 09.1	
	comp=Z,246nm,19.4s,baz=304,slow=38						
PD31	Pinedale Array	12.68	87	*e*Pn	Pn	01 19 13.3	+2.6
PDAR	Pinedale Array	12.68	87	Pn	Pn	01 19 12.2	+1.5
	0.1nm,0.3s,baz=280,slow=12,SNR=13						
PDAR				LR	LR	01 24 29.1	
	comp=Z,297nm,19.2s,baz=272,slow=40						
P17A	Butcher Ranch,	12.71	102	*e*Pn	Pn	01 19 13.3	+2.3
EGMT	Eagleton	12.85	63	*e*Pn	Pn	01 19 11.2	-1.7
GLA	Glamis	13.95	133	*e*Pn	Pn	01 19 30.8	+2.8
O20A	White River Ci	14.27	97	*e*Pn	Pn	01 19 32.7	+0.3
WUAZ	Wupatki	14.28	118	*e*Pn	Pn	01 19 33.7	+1.1
113A	Mohawk Valley,	14.74	131	*e*Pn	Pn	01 19 37.3	-1.4
K22A	Casper	14.90	86	*e*Pn	Pn	01 19 38.9	-2.1
DLBC	Dease Lake	15.25	354	Pn	Pn	01 19 45.2	-0.2
	0.1nm,0.3s,baz=198,slow=20,SNR=2.1						
DLBC	Dease Lake	15.25	354	*e*Pn	Pn	01 19 45.2	-0.2
	5.7nm,0.8s						
N23A	Red Feather La	15.71	92	*e*Pn	Pn	01 19 49.2	-2.6
	9.9nm,1.4s						
X18A	Snowflake	15.81	118	*e*Pn	P	01 19 55.1	-1.6
	4.7nm,0.9s						
ISCO	Idaho Springs	16.29	95	*e*Pn	Pn	01 19 58.3	-0.9
	4.2nm,1.0s						
TUC	Tucson	16.78	126	*e*P	P	01 20 06.4	-1.0
	1.7nm,0.8s						
SDCO	Great Sand Dun	17.16	102	*e*P	P	01 20 11.9	+0.1
	6.5nm,1.0s						
LAZ	Ladron	17.73	114	*e*Pn	Pn	01 20 17.1	-0.2
ANMO	Albuquerque	17.88	111	P	P	01 20 19.4	-0.3
	0.1nm,0.3s,baz=288,slow=9.4,SNR=4.7						
ANMO				LR	LR	01 26 43.5	
	comp=Z,29nm,20.8s,baz=336,slow=36						
ANMO	Albuquerque	17.88	111	*e*P	P	01 20 19.4	-0.3
	5.0nm,1.3s						
BNM	Barren Site	18.22	113	*e*P	P	01 20 25.0	+1.5
KSCO	Kaye Shedlock’	18.73	95	*e*P	P	01 20 27.5	-1.5
	24nm,1.4s						
FFC	Flin Flon	19.79	46	*e*P	Pn	01 20 41.4	-0.4
	140nm,1.3s						
YKA	Yellowknife Ar	20.50	16	P	P	01 20 49.1	+1.3
	1.6nm,0.7s,baz=203,slow=9.9,SNR=2.7						
YKA				LR	LR	01 27 50.0	
	comp=Z,5.7nm,21.2s,baz=232,slow=34						
YKB5	Yellowknife Ar	20.50	16	*e*P	P	01 20 49.1	+1.3
KDAK	Kodiak Island	21.63	321	LR	LR	01 27 18.8	
	comp=Z,171nm,18.2s,baz=114,slow=31						
ECSD	EROS Data Cent	21.88	78	*e*P	P	01 21 05.1	+2.1
	7.0nm,0.9s						
DAWY	Dawson	21.97	345	*e*P	P	01 21 04.7	+0.8
	6.6nm,1.0s						
AGMN	Agassiz Nation	22.08	66	*e*P	P	01 21 06.3	+1.2
	18nm,1.2s						
AGMN				*e*S	S	01 25 09.0	+1.3
ULM	Lac du Bonnet	22.20	61	P	P	01 21 05.2	-1.2
	6.2nm,0.8s,baz=276,slow=12,SNR=7.2						
ULM				LR	LR	01 30 02.8	
	comp=Z,166nm,19.6s,baz=288,slow=38						
ULM	Lac du Bonnet	22.20	61	*e*P	P	01 21 07.4	+1.1
	32nm,1.3s						
TX31	Lajitas Ar. Si	23.23	119	*e*P	P	01 21 20.6	+3.2
	4.2nm,1.3s						
TXAR	Lajitas Array	23.24	119	P	P	01 21 17.7	+0.2
	0.5nm,0.6s,baz=302,slow=10,SNR=5.5						
TXAR				LR	LR	01 30 08.8	
	comp=Z,57nm,20.1s,baz=0.0,slow=36						
WMOK	Wichita Mounta	23.36	102	*e*P	P	01 21 20.5	+1.9
LPIG	La Paz	23.54	139	LR	LR	01 29 60.0	
	comp=Z,112nm,19.4s,baz=190,slow=35						
EPYK	Eagle Plains	23.71	350	*e*P	P	01 21 22.3	+0.5
	9.5nm,1.0s						
ILAR	Eielson Array	24.27	339	P	P	01 21 26.6	-0.4
	2.2nm,0.7s,baz=150,slow=9.1,SNR=26						
ILAR				LR	LR	01 29 29.1	
	comp=Z,75nm,19.5s,baz=158,slow=33						
ILB	Eielson Array	24.27	339	*e*P	P	01 21 27.2	+0.3
	3.4nm,0.8s						
SPMN	Marine on St.	24.36	74	*e*P	P	01 21 26.6	-1.3
	12nm,1.0s						
BPAW	Bear Paw Mtn.	24.93	335	*e*P	P	01 21 33.0	-0.1
	5.2nm,0.7s						
INK	Inuvik	25.28	354	P	P	01 21 35.4	-0.6
	2.0nm,0.9s,baz=156,slow=11,SNR=4.1						
INK				LR	LR	01 31 11.1	
	comp=Z,150nm,18.7s,baz=174,slow=36						
INK	Inuvik	25.28	354	*e*P	P	01 21 35.4	-0.6
	4.4nm,1.1s						
MLY	Manley	25.53	337	*e*P	P	01 21 38.4	0.0
	8.1nm,1.0s						
H11N3	WAKE ISLAND Hy	59.57	269	T	T	02 30 28.0	
	baz=50,slow=75,SNR=68						
H11N2	WAKE ISLAND Hy	59.57	269	T	T	02 30 32.9	
	baz=50,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	59.59	269	T	T	02 30 31.9	
	baz=50,slow=75,SNR=51						
H11S1	WAKE ISLAND Hy	60.49	268	T	T	02 31 34.1	
	baz=50,slow=75,SNR=339						
H11S2	WAKE ISLAND Hy	60.50	268	T	T	02 31 41.1	
	baz=50,slow=75,SNR=353						
H11S3	WAKE ISLAND Hy	60.51	268	T	T	02 31 41.8	
	baz=50,slow=75,SNR=345						
ARCES	ARCESS Array B	65.62	10	LR	LR	01 56 37.1	
	comp=Z,36nm,18.1s,baz=200,slow=37						
MJAR	Matsushiro Arr	69.21	301	LR	LR	01 55 36.9	
	comp=Z,8.5nm,19.3s,baz=210,slow=34						
SONA0	Songino Array	77.80	326	*e*P	P	01 28 07.7	+0.4
SONM	Songino Array	77.80	326	P	P	01 28 07.7	+0.4
	0.3nm,0.4s,baz=331,slow=5.4,SNR=3.6						
ZALV	Zalesovo Beam	79.36	342	LR	LR	02 09 02.5	
	comp=Z,13nm,18.1s,baz=70,slow=40						
LPAZ	La Paz	80.03	124	P	P	01 28 18.6	-1.8
	0.5nm,0.6s,baz=301,slow=5.9,SNR=2.9						
GEYT	Alibeck	98.99	356	LR	LR	02 15 46.4	
	comp=Z,11nm,21.9s,baz=95,slow=36						

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*NEIC **02** 01:28:24.8±1.9, 13°.10S×169°.97E, h622^{km}±5^{km}, mb4.7/50, Error ellipse: s-maj=16.6km s-min=13.4km az=92.0*

*ISCJB **02** 01:28:25.3±0.3, 13°.19S±0°.03×169°.98E±0°.05, h650^{km}, mb4.5/66, Error ellipse: s-maj=6.6km s-min=4.3km az=7.0*

*IDC **02** 01:28:25.7±2.0, 13°.15S×170°.02E, h634^{km}±26^{km}, mb3.8/19, mb1 4.0/20, mb1mx3.8/26, mbtmp4.8/20, Error ellipse: s-maj=17.5km s-min=11.7km az=73.0*

ISC 02 01:28:26.7±0.4, 13°.19S±0°.06×169°.95E±0°.07, h650^{km}, n133, σ1^{s}.34/140, mb4.4/66, 1C, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	8.44	192	*e*P	P	01 30 29.4	-2.3
MARNC				*e*S	S	01 32 11.0	-3.3
DZM	Mont Dzumac	9.44	200	P	P	01 30 41.0	-0.1
	3.1nm,0.3s,baz=56,slow=21,SNR=12						
DZM				S	S	01 32 27.3	-4.1
	0.3nm,0.3s,baz=102,slow=13,SNR=2.1						
DZM	Mont Dzumac	9.44	200	*e*P	P	01 30 38.9	-2.2
DZM				*e*S	S	01 32 29.8	-1.6
ONTNC	Ouen Toro	9.65	200	*e*P	P	01 30 43.5	+0.4
PINNC	Pines Island,	9.66	194	*e*P	P	01 30 43.3	+0.1
PINNC				*e*S	S	01 32 34.1	-1.0
FUNA	Funafuti	10.20	64	*e*P	P	01 30 45.2	-3.3
HNR	Honiara	10.49	290	S	S	01 32 45.7	-4.0
	12nm,0.3s,baz=184,slow=14,SNR=2.6						
EIDS	Eidsvold	21.50	233	*e*P	P	01 32 32.3	+0.7
	35nm,0.6s						
EIDS	Eidsvold	21.50	233	P	P	01 32 30.9	-0.7
	baz=22,SNR=34						
OUZ	Omahuta	22.18	172	*e*P	P	01 32 38.6	+1.2
	17nm,1.3s						
PATS	Pohnpei	23.01	329	*e*P	P	01 32 43.3	-1.9
	28nm,0.7s						
CTA	Charters Tower	23.70	250	P	P	01 32 51.6	+0.4
	13nm,0.6s,baz=77,slow=11,SNR=16						
CTAO	Charters Tower	23.70	250	*e*P	P	01 32 51.9	+0.7
	17nm,0.8s						
RMQ	Roma	23.87	233	P	P	01 32 53.6	+0.9
	baz=24,SNR=56						
ARMA	Armidale	24.08	222	*e*P	P	01 32 55.8	+1.2
	73nm,1.3s						
ARMA	Armidale	24.08	222	P	P	01 32 55.8	+1.2
	baz=24,SNR=36						
MXZ	Matakaoa Point	25.39	164	*e*P	P	01 33 04.0	-1.8
	63nm,1.2s						
HIZ	Hauiti	25.59	171	*e*P	P	01 33 07.3	-0.3
	41nm,1.0s						
URZ	Urewera	25.76	167	P	P	01 33 08.3	-0.8
	18nm,0.6s,baz=15,slow=1.8,SNR=12						
URZ	Urewera	25.76	167	*e*P	P	01 33 08.6	-0.5
	18nm,0.6s						
COEN	Coen	26.03	265	*e*P	P	01 33 12.2	+0.4
	31nm,1.0s						
COEN	Coen	26.03	265	P	P	01 33 12.8	+1.0
	baz=26,SNR=25						
MGCD	Mangrove Creek	26.31	218	P	P	01 33 15.3	+1.4
	baz=27,SNR=7.6						
BKZ	Black Stump Fm	26.51	169	*e*P	P	01 33 15.1	-0.6

	36nm,0.5s						
BFZ	Birch Farm	27.93	170	eP	P	01 33 26.1	-1.8
	32nm,1.0s						
SNZO	South Karori	28.32	172	eP	P	01 33 29.5	-1.7
	75nm,1.2s						
THZ	Tophouse	28.58	175	eP	P	01 33 33.5	-0.1
	30nm,1.2s						
CMSA	Cobar Meteorol	28.81	227	P	P	01 33 36.2	+0.6
	baz=29,SNR=74						
CNB	Canberra Magne	28.82	217	P	P	01 33 35.7	0.0
	baz=29,SNR=12						
CAN	Canberra	29.03	217	eP	P	01 33 38.5	+0.9
	20nm,0.8s						
QIS	Mount Isa	29.91	252	P	P	01 33 45.7	+0.5
	baz=30,SNR=27						
MILA	Mila	30.18	214	P	P	01 33 47.6	+0.3
	baz=30,SNR=5.5						
RPZ	Rata Peaks	30.43	178	P	P	01 33 50.3	+1.0
	25nm,0.9s,baz=6.0,slow=6.5,SNR=3.1						
MQZ	McQueen's Vall	30.49	176	eP	P	01 33 49.9	+0.1
	22nm,1.0s						
STKA	Stephens Creek	31.96	230	P	P	01 34 03.6	+1.1
	44nm,0.4s,baz=58,slow=8.6,SNR=155						
STKA	Stephens Creek	31.96	230	eP	P	01 34 03.6	+1.1
	11nm,0.9s						
TOO	Toolangi	32.63	218	eP	P	01 34 09.4	+1.3
	56nm,0.6s						
TOO	Toolangi	32.63	218	P	P	01 34 09.4	+1.3
	baz=33,SNR=56						
ARPS	Mount Arapiles	34.41	222	P	P	01 34 23.6	+0.7
	baz=35,SNR=8.9						
HTT	Hallett	34.68	229	P	P	01 34 26.3	+1.1
	baz=35,SNR=22						
WB2	Warramunga Arr	34.72	254	eP	P	01 34 25.6	-0.1
	44nm,0.8s						
WRAB	Tennant Creek	34.72	254	eP	P	01 34 25.3	-0.4
	42nm,0.6s						
WR1	Warramunga Arr	34.73	254	eP	P	01 34 25.6	-0.2
WRA	Warramunga Arr	34.73	254	P	P	01 34 25.6	-0.2
	35nm,0.4s,baz=79,slow=9.2,SNR=156						
WRA				S	S	01 39 08.7	-3.9
	1.1nm,0.5s,baz=62,slow=22,SNR=3.1						
TAU	Tasmania Unive	35.48	209	eP	P	01 34 30.9	-0.6
	75nm,1.3s						
AS31	Alice Springs	35.65	248	eP	P	01 34 33.5	+0.2
	32nm,1.0s						
AS31				ePcP	PcP	01 36 43.6	+0.8
AS31				eS	S	01 39 25.6	-0.6
ASAR	Alice Springs	35.65	248	P	P	01 34 33.5	+0.2
	56nm,0.5s,baz=75,slow=9.5,SNR=566						
ASAR				PcP	PcP	01 36 43.6	+0.8
	1.7nm,0.7s,baz=70,slow=5.3,SNR=2.8						
ASAR				S	S	01 39 24.3	-1.9
	4.9nm,0.7s,baz=77,slow=17,SNR=15						
KDU	Kakadu	36.50	266	P	P	01 34 40.5	+0.2
	baz=37,SNR=19						
BBOO	Buckleboo	36.57	232	eP	P	01 34 41.6	+1.0
	102nm,0.8s						
BBOO	Buckleboo	36.57	232	P	P	01 34 41.6	+1.0
	baz=37,SNR=127						
MTN	Manton Dam	37.79	266	eP	P	01 34 50.9	+0.1
	43nm,0.4s						
MTN	Manton Dam	37.79	266	P	P	01 34 51.7	+0.9
	baz=38,SNR=3.4						
SARN	Sarigan	38.11	321	eP	P	01 34 52.6	-0.7
	24nm,0.9s						
KNRA	Kununurra	39.92	261	P	P	01 35 07.8	+0.1
	baz=40,SNR=12						
WRKA	Warakurna	40.92	247	P	P	01 35 16.3	+0.7
	baz=41,SNR=128						
FORT	Forrest	42.31	239	eP	P	01 35 27.0	+0.7
	104nm,0.6s						
FORT	Forrest	42.31	239	P	P	01 35 27.0	+0.7
	baz=43,SNR=29						
KMBL	Kambalda	47.60	240	P	P	01 36 06.8	+0.3
	baz=48,SNR=15						
PSA00	Pilbara Seismi	48.36	253	eP	P	01 36 12.8	+0.6
	39nm,0.4s						
MEEK	Meekatharra	49.77	246	P	P	01 36 23.0	+0.5
	baz=50,SNR=21						
KLBR	Kellerberrin	51.12	240	P	P	01 36 32.3	+0.2
	baz=51,SNR=13						
NWAO	Narrogin (SRO)	51.76	238	eP	P	01 36 36.2	-0.5
	25nm,0.6s						
NWAO	Narrogin (SRO)	51.76	238	P	P	01 36 37.1	+0.4
	baz=52,SNR=8.5						
MORW	Morawa	52.27	243	eP	P	01 36 40.2	-0.2
	16nm,0.9s						
MORW	Morawa	52.27	243	P	P	01 36 41.2	+0.8
	baz=53,SNR=7.7						
GIRL	Giralia	53.58	252	eP	P	01 36 51.8	+2.1
	320nm,1.4s						
MJAR	Matsushiro Arr	57.82	330	P	P	01 37 18.5	0.0
	13nm,0.6s,baz=166,slow=7.6,SNR=32						
MAJO	Matsushiro	57.82	330	eP	P	01 37 18.9	+0.4
	15nm,0.7s						
MAT	Matsushiro	57.82	330	P	P	01 37 18.7	+0.2
MJB9	Matsu-Tunnel	57.82	330	eP	P	01 37 18.9	+0.4
	15nm,0.7s						
JNU	Nakatsue	59.26	322	eP	P	01 37 28.0	-0.2
	20nm,0.9s						
SSLB	Suanglung	60.37	307	eP	P	01 37 35.5	-0.2
	8.8nm,0.6s						
KSRS	Korea Array	64.00	324	P	P	01 37 59.7	+1.1
	5.0nm,0.9s,baz=138,slow=6.7,SNR=9.3						
KS15	Wonju Array Si	64.01	324	eP	P	01 37 59.7	+0.9
	18nm,1.4s						
VNDA	Vanda	64.46	182	P	P	01 38 01.9	+0.9
	1.1nm,0.7s,baz=357,slow=6.0,SNR=14						
SBA	Scott Base	64.68	181	eP	P	01 38 04.8	+2.5
	3.5nm,0.8s						
CASY	Casey	65.93	202	eP	P	01 38 11.2	+1.0
	9.9nm,0.8s						
PET	Petropavlovsk	66.66	353	eP	P	01 38 14.6	-0.2
	50nm,1.1s						
USA0B	Ussuriysk Arra	66.75	331	eP	P	01 38 17.4	+1.8
	7.8nm,0.8s						
USRK	Ussuriysk Ar.	66.75	331	P	P	01 38 16.6	+0.9
	8.0nm,0.8s,baz=131,slow=5.6,SNR=19						
PETK	Petropavlovsk-	66.87	352	P	P	01 38 16.9	+0.7
	9.7nm,0.7s,baz=136,slow=7.5,SNR=13						
PEA1	Petropavlovsk-	66.87	352	eP	P	01 38 16.9	+0.7
MDJ	Mudanjiang	68.20	330	eP	P	01 38 26.0	+1.5
	15nm,0.9s						
SKNT	Sakolnakorn	71.71	293	P	P	01 38 48.2	+2.5
XAN	Xi'an	74.61	311	P	P	01 39 02.8	+1.0
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN				pmax	pmax		
	comp=Z,150nm,4.3s						
HHC	Hu-ho-hao-te	76.14	318	P	P	01 39 15.6	+5.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,17nm,5.1s						
HHC				LR	LR		
	comp=N,100nm,14.1s						
HHC				LR	LR		
	comp=E,100nm,13.7s						
CM31	Chiang Mai Arr	76.73	293	eP	P	01 39 15.8	+2.0
	comp=E,6.0nm,0.9s						
CMAR	Chiang Mai Arr	76.73	293	P	P	01 39 15.8	+2.0
	comp=E,1.1nm,0.5s,baz=142,slow=3.6,SNR=7.7						
QSPA	South Pole Qui	76.83	180	eP	P	01 39 14.7	+1.1
	comp=E,3.6nm,0.8s						
KTH	Kantishna Hill	82.21	17	eP	P	01 39 41.5	0.0
	comp=E,9.7nm,0.9s						
RND	Reindeer	82.69	17	eP	P	01 39 44.6	+0.7
	comp=E,8.7nm,1.0s						
SONA0	Songino Array	82.84	323	eP	P	01 39 44.9	-0.2
SONM	Songino Array	82.84	323	P	P	01 39 44.9	-0.2
	comp=E,1.1nm,0.5s,baz=129,slow=4.8,SNR=7.0						
GTA	Gaotai	83.51	313	⇑P	P	01 39 50.1	+1.5
GTA				pP	PcP	01 39 54.8	+3.6
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WRH	Wood River Hil	83.72	17	eP	P	01 39 49.1	+0.3
	comp=Z,11nm,1.2s						
CCB	Clear Creek Bu	83.93	17	eP	P	01 39 49.6	-0.2
	comp=Z,5.5nm,0.7s						
HDA	Harding Lake	84.00	17	eP	P	01 39 50.6	+0.3
	comp=Z,7.4nm,0.8s						
MAW	Mawson	84.27	202	P	P	01 39 52.7	+1.1
	comp=Z,5.2nm,0.7s,baz=115,slow=7.3,SNR=10.0						
MAW	Mawson	84.27	202	eP	P	01 39 52.9	+1.3
	comp=Z,1.6nm,0.9s						
MAW	Mawson	84.27	202	P	P	01 39 53.0	+1.5
	baz=84,SNR=7.1						
ILAR	Eielson Array	84.29	17	P	P	01 39 51.0	-0.7
	comp=Z,5.6nm,0.7s,baz=235,slow=5.6,SNR=47						
ILB	Eielson Array	84.29	17	eP	P	01 39 51.0	-0.7
	comp=Z,5.8nm,0.8s						
NV01	Mina Array Sit	84.31	49	eP	P	01 39 53.8	+1.2
NVAR	Mina Array Bea	84.31	49	P	P	01 39 53.8	+1.2
	comp=Z,0.8nm,0.7s,baz=215,slow=6.0,SNR=5.8						
U15A	North Rim	88.14	52	eP	P	01 40 13.7	+2.8
	comp=Z,2.2nm,0.9s						
YKA	Yellowknife Ar	95.01	27	P	P	01 40 40.8	-0.6
	comp=Z,2.0nm,0.8s,baz=258,slow=3.9,SNR=5.8						
YKB5	Yellowknife Ar	95.01	27	eP	P	01 40 40.8	-0.6
ZALV	Zalesovo Beam	97.70	324	P	P	01 40 53.0	-0.7
	comp=Z,1.2nm,0.5s,baz=113,slow=3.7,SNR=2.5						
ZAA1	Zalesovo Array	97.70	324	ePdif	P	01 40 53.0	-0.7
MK32	Makanchi Array	97.90	316	ePdif	P	01 40 54.0	-0.7
MKAR	Makanchi Array	97.90	316	P	P	01 40 54.0	-0.7
	comp=Z,1.8nm,1.0s,baz=90,slow=6.8,SNR=5.5						
ARA0	ARCESS Array S	119.40	346	ePKPdf	PKiKP	01 46 03.6	+0.1
ARCES	ARCESS Array B	119.40	346	PKP	PKiKP	01 46 03.6	+0.1
	comp=Z,1.5nm,0.6s,baz=48,slow=1.8,SNR=11						
FIA0	FINESS Array S	125.23	340	ePKPdf	PKiKP	01 46 15.1	-0.2
FINES	FINESS Array B	125.23	340	PKP	PKiKP	01 46 15.1	-0.2
	comp=Z,1.5nm,0.8s,baz=86,slow=2.7,SNR=6.4						
NB2	NORSAR Subarra	129.78	347	PKP	SKPab	01 48 50.2	+3.2
	comp=Z,13nm,1.0s,baz=28,slow=2.9						
NB200	NORSAR Array S	129.78	347	ePKPdf	PKiKP	01 46 24.4	-0.1
NB200				eSKPbc	SKPab	01 48 49.9	+2.9
NOA	NORSAR Array B	129.78	347	PKP	PKiKP	01 46 24.4	-0.1
	comp=Z,0.5nm,0.6s,baz=76,slow=1.9,SNR=3.3						
NOA				SKPbc	SKPab	01 48 49.9	+2.9
	comp=Z,6.7nm,0.9s,baz=30,slow=2.8,SNR=16						
AKASG	Malin Array Be	130.88	328	SKPbc	SKPab	01 48 54.0	+2.1
	comp=Z,1.2nm,0.6s,baz=48,slow=5.5,SNR=6.6						
GEC2	GERESS Array S	139.39	336	eSKPbc	SKiKP	01 49 20.2	-0.1
GERES	GERESS Array B	139.39	336	SKPbc	SKiKP	01 49 20.2	-0.1
	comp=Z,0.8nm,0.6s,baz=29,slow=3.0,SNR=11						
WTTA	Wattenberg	141.48	336	i PKPdf	PKPdf	01 46 41.8	-4.0
	comp=Z,1.1nm,0.5s						
RETA	Reutte	141.64	337	ePKPdf	PKPdf	01 46 43.0	-3.0
	comp=Z,2.6nm,1.1s						
FETA	Feichten	142.04	337	ePKPdf	PKPdf	01 46 44.8	-2.0
	comp=Z,0.7nm,0.5s						
DAVA	Damuels	142.13	338	ePKPdf	PKPdf	01 46 45.2	-1.8
	comp=Z,1.5nm,0.5s						
FUORN	Ofenpass-Fuorn	142.55	337	ePKPdf	PKPdf	01 46 46.5	-1.3
TUE	Stuetta	143.02	338	ePKPdf	PKPdf	01 46 48.0	-0.6
CLF	Chambon-Foret	143.79	346	ePKPbc	PKiKP	01 46 50.5	-2.8
SENIN	Lac Senin/Sane	143.84	340	ePKPbc	PKPdf	01 46 50.7	+0.6
TIP	Timpagrande	144.92	322	ePKPab	PKiKP	01 46 54.4	-1.7
BNI	Bardonecchia	145.20	339	ePKPbc	PKiKP	01 46 54.9	-1.6
SSB	Saint Sauveur	145.70	342	ePKPbc	PKPab	01 46 55.7	-1.1
ESDC	Sonseca Array	153.08	350	PKPab	PKPab	01 47 26.8	-0.9
	comp=Z,1.3nm,0.6s,baz=2.2,slow=4.2,SNR=10						

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*DSN **02** 01:33:38.0±1.4, 28°.78N×57°.27E, h10^{km}, ML4.6/10, Error ellipse: s-maj=20.1km s-min=11.9km az=92.0*

*MOS **02** 01:33:41.9±1.4, 28°.01N×57°.18E, h14^{km}, mb4.6/48, Error ellipse: s-maj=8.4km s-min=4.7km az=122.7*

*IDC **02** 01:33:41.7±0.6, 28°.21N×57°.29E, h0^{km}, mb4.1/21, mb1 4.2/29, mb1mx4.1/52, mbtmp4.1/29, ML3.8/6, MS2.9/4, Ms1 2.9/4, ms1mx2.6/31, Error ellipse: s-maj=14.2km s-min=12.5km az=2.0*

*ISCJB **02** 01:33:42.5±0.2, 28°.27N±0°.02×57°.31E±0°.03, h10^{km}, mb4.3/90, Error ellipse: s-maj=4.1km s-min=3.0km az=6.1*

*THR **02** 01:33:42.7, 28°.07N×57°.46E, h15^{km}, ML4.1*

*NEIC **02** 01:33:42.9±0.0, 28°.29N×57°.61E, h31^{km}, mb4.3/29, ML4.1(THR), MN4.3(TEH), After TEH.*

*TEH **02** 01:33:43.2, 28°.31N×57°.45E, h10^{km}, ML4.2*

ISC 02 01:33:43.0±0.4, **28°.30N**±0°.03×**57°.39E**±0°.04, **h10^{km}, n242,** σ**$2^{s}23$**/247, **mb4.3**/90, **15C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.44	142	ePg	Pg	01 33 51.2	-0.6
NIAN	Nian	0.89	214	ePn	Pg	01 33 59.6	-0.5
NIAN	Nian	0.89	214	ePg	Pg	01 34 00.2	+0.1
NIAN				IAMB	IAmb	01 34 18.4	
	comp=Z,0.0nm,0.3s						
GENO	Geno	1.40	231	ePn	Pb	01 34 10.3	+0.8
GENO				eSg	Sg	01 34 31.5	+3.2
GENO	Geno	1.40	231	ePg	Pb	01 34 10.5	+1.0
GENO				IAMB	IAmb	01 34 33.9	
	comp=Z,0.0nm,0.3s						
NGRK	Negar Kerman	1.46	337	ePn	Pn	01 34 08.9	-0.9
NGRK	Negar Kerman	1.46	337	IAMB	IAmb	01 34 11.5	
	comp=Z,0.0nm,0.3s						
NGRK				ePn	Pn	01 34 09.0	-0.9
CHMN	Cheshme madani	1.56	5	ePn	Pn	01 34 11.0	-0.2
CHMN	Cheshme madani	1.56	5	ePg	Pn	01 34 11.2	0.0
CHMN				IAMB	IAmb	01 34 35.3	
	comp=Z,0.0nm,0.3s						
KRBR	Kerman	1.77	342	eAML	AML	01 34 44.3	
	comp=E,2μm,0.4s						
KRBR				eAML	AML	01 34 55.0	
	comp=N,2μm,0.6s						
TVBK	TV Kerman	1.77	342	ePn	Pn	01 34 14.4	+0.3
KHGB	Koh Gabri	2.22	339	ePn	Pn	01 34 21.8	+1.6
KHGB				IAMB	IAmb	01 34 30.3	
	comp=Z,0.0nm,0.5s						
SHME	Shamm	2.50	207	eP	Pn	01 34 24.7	+0.9
	SNR=183						
SHME				S	Sb	01 35 00.4	+1.4
SHME	Shamm	2.50	207	ePn	Pn	01 34 25.0	+1.1
MSFE	Esma-Masafi	3.13	201	i P	Pn	01 34 34.9	+2.4
	SNR=18						
MSFE	Esma-Masafi	3.13	201	ePn	Pn	01 34 35.8	+3.3
MDH	Madha	3.14	198	i P	Pn	01 34 32.6	0.0
	SNR=12						
MDH	Madha	3.14	198	ePn	Pn	01 34 33.5	+0.9
UMQ	Umm Al-Quwin	3.16	210	P	Pn	01 34 34.6	+1.7
UMQ	Umm Al-Quwin	3.16	210	ePn	Pn	01 34 36.0	+3.1
ZHSF	Zahedan	3.24	65	ePn	Pn	01 34 35.9	+1.7
ZHSF	Zahedan	3.24	65	ePn	Pn	01 34 35.9	+1.7
ZHSF	Zahedan	3.24	65	ePn	Pn	01 34 35.9	+1.7
UOSS	Minazif	3.50	198	ePn	Pn	01 34 38.1	+0.5
UOSS				eSn	Sn	01 35 16.7	-2.4
UOSS	Minazif	3.50	198	i P	Pn	01 34 37.9	+0.3
	SNR=10						
UOSS	Minazif	3.50	198	ePn	Pn	01 34 38.1	+0.5
HATD	Hatta, Dubai	3.64	198	i P	Pn	01 34 39.8	+0.4
	SNR=13						
HATD	Hatta, Dubai	3.64	198	ePn	Pn	01 34 40.1	+0.6
NAZ	Nazwa, Dubai	3.64	206	i P	Pn	01 34 39.6	+0.1
	SNR=8.1						
NAZ	Nazwa, Dubai	3.64	206	ePn	Pn	01 34 43.1	+3.6
IBAF	Bafgh	3.65	335	ePn	Pn	01 34 43.4	+3.7
ASHO	Ashiyiah	3.79	199	i P	Pn	01 34 42.3	+0.7
	SNR=32						
ASHO	Ashiyiah	3.79	199	ePn	Pn	01 34 44.0	+2.4
GHIR	Ghir-Karzin	3.89	271	ePn	Pn	01 34 45.0	+2.0
GHIR	Ghir-Karzin	3.89	271	ePn	Pn	01 34 45.0	+2.0
GHIR	Ghir-Karzin	3.89	271	ePn	Pn	01 34 45.0	+2.0
FAQ	Al Faqa, Dubai	3.89	205	P	Pn	01 34 43.7	+0.8
FAQ	Al Faqa, Dubai	3.89	205	ePn	Pn	01 34 46.6	+3.7
ISRV	Sarvestan	3.91	287	ePn	Pn	01 34 46.7	+3.2
ISRV				IAMB	IAmb	01 36 09.3	
	comp=Z,2μm,0.5s						
IMEH	Mehriz	3.92	323	ePn	Pn	01 34 46.3	+2.8
IMEH				IAMB	IAmb	01 34 59.6	
	comp=Z,2μm,0.3s						
BSRN	Basiran	3.95	22	ePn	Pn	01 34 47.4	+3.5
BSRN	Basiran	3.95	22	ePn	Pn	01 34 47.4	+3.5
ASUD	Al Ashush, Dub	4.10	207	i P	Pn	01 34 46.5	+0.8
	SNR=24						
ASUD	Al Ashush, Dub	4.10	207	ePn	Pn	01 34 48.5	+2.7
AJN	Ajban	4.30	211	i P	Pn	01 34 48.2	-0.3
	SNR=13						
AJN	Ajban	4.30	211	ePn	Pn	01 34 50.3	+1.8
IKOO	Kooshah	4.34	18	ePn	Pn	01 34 51.4	+2.0
IKOO				IAMB	IAmb	01 36 08.0	
	comp=Z,3μm,0.7s						
ALNE	Al Ain	4.47	200	ePn	Pn	01 34 54.7	+3.7
HOQ	Hoqain	4.70	181	ePn	Pn	01 34 54.2	+0.2
ITEG	Tejag	4.73	14	ePn	Pn	01 34 56.8	+2.1
ITEG				IAMB	IAmb	01 36 24.0	
	comp=Z,2μm,0.7s						
YZKH	Yazd	4.74	330	ePn	Pn	01 34 59.2	+4.5
YZKH	Yazd	4.74	330	ePn	Pn	01 34 59.2	+4.5
BIDO	Bidbid	4.80	172	ePn	Pn	01 34 55.6	+0.1
ISAD	Sadrabad	4.83	319	ePn	Pn	01 34 58.7	+2.6
ISAD				IAMB	IAmb	01 35 26.0	
	comp=Z,946nm,0.6s						
IKAZ	Kazeroun	5.08	288	ePn	Pn	01 35 01.6	+2.0
IKAZ	Kazeroun	5.08	288	ePn	Pn	01 35 01.8	+2.2
IKAZ				IAMB	IAmb	01 35 14.6	
	comp=Z,2μm,0.3s						
WSAR	Wadi Sarin	5.16	167	Pn	Pn	01 35 01.3	+0.9
	comp=Z,14nm,0.3s,baz=355,slow=7.0,SNR=82						
WSAR				Sn	Sn	01 35 58.4	-1.6
	comp=Z,16nm,0.3s,baz=287,slow=21,SNR=8.2						
TABS	Tabas	5.34	358	ePn	Pn	01 35 07.0	+4.1
TABS	Tabas	5.34	358	ePn	Pn	01 35 07.0	+4.1
TABS	Tabas	5.34	358	ePn	Pn	01 35 07.0	+4.1
IRAM	Ramesheh	5.58	310	ePn	Pn	01 35 09.0	+2.7
SHRT	Shahrakht	5.88	24	ePn	Pn	01 35 14.8	+4.4
SHRT	Shahrakht	5.88	24	ePn	Pn	01 35 14.8	+4.4
IGAR	Gharneh	6.18	313	ePn	Pn	01 35 17.2	+2.7
IZEF	Zefreh	6.33	318	ePn	Pn	01 35 18.9	+2.2
ROKH	ROKH	6.82	308	ePn	Pn	01 35 25.8	+2.4
ZNGN	Zangian	6.82	306	ePn	Pn	01 35 25.8	+2.3
IPIR	Pirpir	7.11	310	ePn	Pn	01 35 30.2	+2.7
GEYT	Alibeck	9.62	3	Pn	Pn	01 36 02.5	+0.8
	comp=Z,0.3nm,0.3s,baz=196,slow=17,SNR=2.8						
GEYT				LR	LR	01 40 15.9	
	comp=Z,79nm,21.5s,baz=195,slow=41						
RAYN	Ar Rayn	11.71	249	ePn	Pn	01 36 27.5	-2.8
RAYN	Ar Rayn	11.71	249	i P	Pn	01 36 25.9	-4.4
	SNR=28						
RAYN	Ar Rayn	11.71	249	eP	Pn	01 36 27.5	-2.8
GAR	Garm	15.14	42	ePn	Pn	01 37 12.8	-4.3
	comp=Z,6.3nm,0.7s						
GAR	Garm	15.14	42	eP	Pn	01 37 12.8	-4.3
GAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKT	Akhty	15.34	332	i P	P	01 37 24.0	-0.5
GNI	Garni	15.77	322	Pn	Pn	01 37 26.0	+0.6
	comp=Z,0.1nm,0.3s,baz=73,slow=17,SNR=2.1						
GNI	Garni	15.77	322	ePn	Pn	01 37 21.9	-3.5
	comp=Z,19nm,0.9s						
GNI	Garni	15.77	322	i P	Pn	01 37 26.6	+1.2
GNI				pmax	pmax		
	comp=Z,15nm,1.0s						
AKH	Akhalkalaki	17.33	323	⇑iP	P	01 37 47.5	+0.9
ASF	Jabal al Asfar	18.12	287	P	Pn	01 37 54.5	-0.5
	comp=Z,0.5nm,0.3s,baz=26,slow=4.2,SNR=5.9						
ASF				S	Sn	01 41 08.8	-8.6
	comp=Z,0.1nm,0.3s,baz=47,slow=19,SNR=3.2						
KK31	Karatay Array	18.18	32	eP	Pn	01 37 52.0	-3.6
	comp=Z,3.0nm,1.1s						
KK31	Karatay Array	18.18	32	eP	Pn	01 37 52.0	-3.6
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	Karatay Array	18.18	32	eP	Pn	01 37 51.2	-4.3
	comp=Z,3.0nm,1.1s						
KKAR	Karatay Array	18.18	32	eP	Pn	01 37 51.2	-4.3
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NCK	Nalchik	18.80	327	i P	Pn	01 38 06.0	+2.9
NCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH	Kashi	19.01	49	P	Pn	01 38 09.7	+3.8
KSH				PP	PnPn	01 38 30.6	+12
KSH				pmax	pmax		
	comp=Z,17nm,1.5s						
NEY	Neytrino	19.04	325	i P	Pn	01 38 08.6	+2.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	19.31	327	P	P	01 38 07.9	-0.2
	comp=Z,0.1nm,0.3s,baz=90,slow=7.1,SNR=1.6						
SHA1	Shidzhatmaz	19.43	326	i P	Pn	01 38 14.4	+3.4
MMAI	Mount Meron Ar	19.48	289	P	P	01 38 09.9	-0.4
	comp=Z,0.6nm,0.3s,baz=90,slow=17,SNR=4.8						
KVAR	Kislovodsk Arr	19.58	327	P	Pn	01 38 13.1	+0.5
	baz=75,slow=20,SNR=1.9						
KIV	Kislovodsk	19.58	327	eP	Pn	01 38 13.1	+0.5
	comp=Z,8.7nm,0.8s						
KIV	Kislovodsk	19.58	327	⇑iP	P	01 38 10.8	-0.5
KIV	Kislovodsk	19.58	327	eP	Pn	01 38 13.8	+1.2
KIV				pmax	pmax		
	comp=Z,37nm,1.1s						
EIL	Elat	19.68	279	P	P	01 38 13.6	+1.2
	comp=Z,0.2nm,0.3s,baz=90,slow=20,SNR=2.5						
AAK	Ala-Archa	19.91	40	P	Pn	01 38 17.9	+1.3
	comp=Z,1.4nm,0.4s,baz=221,slow=9.3,SNR=3.7						
AAK	Ala-Archa	19.91	40	eP	P	01 38 10.1	-4.9
	comp=Z,7.7nm,1.3s						
AAK	Ala-Archa	19.91	40	i P	Pn	01 38 20.1	+3.5
AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BOOM	Boomskoye usch	20.65	42	eP	P	01 38 17.6	-5.5
	comp=Z,10nm,0.9s						
BOOM	Boomskoye usch	20.65	42	eP	P	01 38 17.6	-5.5
BOOM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AB31	Akbulak array	21.02	5	eP	P	01 38 40.2	+13
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ABKAR	Akbulak array	21.02	5	eP	P	01 38 29.2	+2.4
	comp=Z,16nm,1.1s						
KDJ	Kajisay	21.19	44	eP	P	01 38 23.2	-5.6
	comp=Z,7.9nm,0.9s						
KDJ	Kajisay	21.19	44	eP	P	01 38 23.3	-5.6
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CSS	Mathiatis	21.51	294	eP	P	01 38 31.2	-1.0
	comp=Z,17nm,0.9s						
AKTO	Aktyubinsk	22.11	1	P	P	01 38 41.0	+2.5
	comp=Z,6.0nm,0.4s,baz=183,slow=10,SNR=16						
BR101	Keskin Array S	22.68	306	eP	P	01 38 45.9	+1.0
BR131	Keskin Array S	22.68	306	eP	P	01 38 46.6	+1.7
	comp=Z,9.2nm,0.9s						
BRTR	Keskin Array B	22.68	306	P	P	01 38 45.9	+1.0
	comp=Z,8.3nm,0.9s,baz=116,slow=10,SNR=15						
BRTR				LR	LR	01 48 03.7	
	comp=Z,18nm,18.4s,baz=112,slow=38						
BRTR	Keskin Array B	22.68	306	ceP	P	01 38 46.4	+1.5
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OTUK	Ortayu	23.04	26	P	P	01 38 52.5	+4.2
OTUK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PDGK	Podgornoye	23.27	44	P	P	01 38 54.1	+3.2
PDGK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BVAR	Borovoye Array	26.51	18	P	P	01 39 22.5	+1.9
	comp=Z,2.8nm,0.8s,baz=195,slow=8.5,SNR=12						
BVAR				PcP	PcP	01 42 43.9	-1.3
	comp=Z,0.4nm,0.4s,baz=238,slow=2.7,SNR=4.1						
BRVK	Borovoye	26.51	18	ePcP	PcP	01 42 41.7	-3.5
BRVK	Borovoye	26.51	18	i P	P	01 39 25.5	+4.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	26.85	40	eP	P	01 39 19.6	-4.2
	comp=Z,1.9nm,1.0s						
MK31	Makanchi Array	26.85	40	eP	P	01 39 19.6	-4.2
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK32	Makanchi Array	26.85	40	eP	P	01 39 25.6	+1.9
MK32				ePcP	PcP	01 42 44.1	-2.1
MKAR	Makanchi Array	26.85	40	P	P	01 39 25.6	+1.9
	comp=Z,1.1nm,0.6s,baz=217,slow=9.9,SNR=11						
MKAR				PcP	PcP	01 42 44.1	-2.1
	comp=Z,0.3nm,0.5s,baz=253,slow=4.4,SNR=3.5						
MKAR				LR	LR	01 51 13.1	
	comp=Z,31nm,21.6s,baz=244,slow=39						
KURBB	Kurchatov Arra	27.45	30	P	P	01 39 31.0	+2.0
	comp=Z,4.1nm,1.0s,baz=229,slow=8.4,SNR=20						
KURK	Kurchatov	27.55	30	eP	P	01 39 32.4	+2.4
	comp=Z,3.2nm,0.9s						
KURK	Kurchatov	27.55	30	ceP	P	01 39 34.3	+4.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	Arti	28.13	1	d iP	P	01 39 40.6	+5.6
ARU						01 40 22.7	
ARU				S	S	01 44 30.0	+10
ARU				pmax	pmax		
	comp=Z,6.0nm,1.9s						
IDI	Anoyia	28.41	292	P	P	01 39 38.3	+0.5
	comp=Z,2.4nm,0.5s,baz=55,slow=18,SNR=5.6						
OBN	Obninsk	30.74	336	eP	P	01 40 03.2	+5.0
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKASG	Malin Array Be	30.88	324	P	P	01 39 59.5	0.0
	comp=Z,0.8nm,0.5s,baz=129,slow=8.5,SNR=8.2						
AKASG	Malin Array Be	30.88	324	ceP	P	01 40 02.2	+2.7
AKASG				pmax	pmax		

	comp=Z,1.0nm,0.4s						
VTS	Vitosha	31.05	307	eP	P	01 39 59.3	-2.0
	comp=Z,2.4nm,0.8s						
VTS	Vitosha	31.05	307	⇑iP	P	01 40 01.9	+0.6
VTS	Vitosha	31.05	307	⇑P	P	01 40 01.9	+0.6
BURAR	Bucovina Array	31.54	316	⇑iP	P	01 40 05.8	+0.3
BURAR	Bucovina Array	31.54	316	⇑P	P	01 40 05.9	+0.4
BUR08	Bucovina Ar. S	31.57	317	eP	P	01 40 03.4	-2.4
	comp=Z,9.1nm,1.5s						
ZAA0	Zalesovo Array	32.54	30	eP	P	01 40 15.2	+1.2
	comp=Z,11nm,1.2s						
ZALV	Zalesovo Beam	32.54	30	P	P	01 40 15.4	+1.3
	comp=Z,4.5nm,0.3s,baz=244,slow=9.1,SNR=15						
ZALV	Zalesovo Beam	32.54	30	i P	P	01 40 15.6	+1.6
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZAA1	Zalesovo Array	32.54	30	eP	P	01 40 15.4	+1.3
KOLS	Kolonicke sedl	33.89	317	eP	P	01 40 27.5	+1.6
KOLS	Kolonicke sedl	33.89	317	eP	P	01 40 27.5	+1.6
KWP	Kalwaria Pacla	33.93	318	eP	P	01 40 24.8	-1.5
	comp=Z,142nm,1.5s						
KWP	Kalwaria Pacla	33.93	318	eP	P	01 40 24.8	-1.5
KWP				pmax	pmax		
	comp=Z,142nm,1.5s						
TIP	Timpagrande	35.23	299	⇑iP	P	01 40 38.6	+0.8
VYHS	Vyhne	35.83	315	eP	P	01 40 43.4	+0.7
VYHS	Vyhne	35.83	315	eP	P	01 40 43.3	+0.6
OJC	Ojcow	35.88	318	eP	P	01 40 40.8	-2.3
	comp=Z,11nm,0.6s						
OJC	Ojcow	35.88	318	eP	P	01 40 40.8	-2.3
OJC				pmax	pmax		
	comp=Z,11nm,0.6s						
JAVC	Velka Javorina	36.68	315	eP	P	01 40 51.3	+1.3
SOP	Sopron	37.02	313	P	P	01 40 55.6	+2.8
SOP				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SOP	Sopron	37.02	313	eP	P	01 40 55.1	+2.2
MORC	Moravsky Berou	37.07	316	eP	P	01 40 51.9	-1.4
	comp=Z,3.0nm,0.8s						
MORC	Moravsky Berou	37.07	316	⇑iP	P	01 40 53.2	-0.1
MORC	Moravsky Berou	37.07	316	⇑P	P	01 40 53.2	-0.1
MORC	Moravsky Berou	37.07	316	eP	P	01 40 52.9	-0.4
VRAC	Vranov	37.49	315	⇑iP	P	01 40 57.1	+0.2
VRAC	Vranov	37.49	315	⇑P	P	01 40 57.1	+0.2
VRAC	Vranov	37.49	315	eP	P	01 40 56.8	-0.1
KRUC	Moravsky	37.54	315	eP	P	01 40 57.6	+0.4
CONA	Conrad Observa	37.54	313	eP	P	01 40 57.6	+0.3
	comp=Z,1.3nm,0.7s						
DPC	Dobruska-Polom	38.00	317	eP	P	01 41 01.2	0.0
DPC				e		01 41 05.1	
DPC	Dobruska-Polom	38.00	317	eP	P	01 41 01.2	0.0
DPC				epP	pP	01 41 05.1	+0.5
AQU	L'Aquila	38.11	303	eP	P	01 41 00.2	-2.1
	comp=Z,9.9nm,0.8s						
AQU				eS	S	01 46 53.5	-1.7
AQU	L'Aquila	38.11	303	eP	P	01 41 00.2	-2.1
AQU				eS	S	01 46 53.5	-1.7
AQU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TREC	Trest	38.18	315	P	P	01 41 06.7	+4.0
TREC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MOA	Molln	38.55	312	eP	P	01 41 06.3	+0.4
	comp=Z,3.0nm,0.6s						
KBA	Koelnbreinsper	38.98	311	P	P	01 41 13.8	+4.2
KBA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FIA0	FINESS Array S	39.15	337	eP	P	01 41 10.7	+0.2
FINES	FINESS Array B	39.15	337	P	P	01 41 10.7	+0.2
	comp=Z,1.4nm,0.6s,baz=135,slow=7.4,SNR=9.6						
FINES	FINESS Array B	39.15	337	i P	P	01 41 10.6	0.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GEC2	GERESS Array S	39.17	314	eP	P	01 41 09.0	-2.1
	comp=Z,3.7nm,0.8s						
GEC2	GERESS Array S	39.17	314	eP	P	01 41 09.0	-2.1
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	39.17	314	P	P	01 41 11.1	0.0
	comp=Z,1.9nm,0.7s,baz=108,slow=8.7,SNR=9.6						
KHC	Kasperske Hory	39.33	314	eP	P	01 41 11.7	-0.7
	comp=Z,2.3nm,0.8s						
KHC	Kasperske Hory	39.33	314	eP	P	01 41 11.7	-0.7
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	39.33	314	eP	P	01 41 12.3	-0.1
KHC				epP	pP	01 41 15.5	-0.2
ABTA	Abfaltersbach	39.46	310	eP	P	01 41 13.9	+0.4
	comp=Z,4.2nm,0.8s						
WTTA	Wattenberg	40.15	311	eP	P	01 41 19.3	-0.2
	comp=Z,7.5nm,0.8s						
WATA	Walderalm	40.21	311	eP	P	01 41 20.9	+1.0
	comp=Z,3.6nm,0.5s						
CLL	Collm	40.30	317	eP	P	01 41 20.0	-0.4
CLL				pmax	pmax		
	comp=Z,11nm,1.7s						
CLL	Collm	40.30	317	eP	P	01 41 20.0	-0.4
	comp=Z,11nm,1.7s						
SQTA	Sankt Quirin	40.43	311	eP	P	01 41 21.2	-0.4
	comp=Z,9.2nm,0.6s						
MOTA	Moosalm	40.52	311	eP	P	01 41 21.3	-1.1
	comp=Z,5.3nm,0.8s						
FETA	Feichten	40.72	310	eP	P	01 41 24.0	-0.1
	comp=Z,6.3nm,0.7s						
RETA	Reutte	40.78	311	eP	P	01 41 23.8	-0.6
	comp=Z,3.4nm,0.7s						
FUORN	Ofenpass-Fuorn	40.96	310	eP	P	01 41 25.0	-1.2
	comp=Z,3.7nm,0.8s						
DAVA	Damuels	41.33	311	eP	P	01 41 28.8	-0.4
	comp=Z,8.1nm,0.6s						
TUE	Stuetta	41.56	309	eP	P	01 41 28.9	-2.2
	comp=Z,3.8nm,0.6s						
SONA0	Songino Array	42.42	49	eP	P	01 41 38.6	+0.6
SONM	Songino Array	42.42	49	P	P	01 41 38.6	+0.6
	comp=Z,0.5nm,0.4s,baz=258,slow=8.5,SNR=4.3						
SBF	Sospel	42.61	305	eP	P	01 41 38.5	-1.0
SBF				pmax	pmax		
	comp=Z,16nm,0.7s						
ULN	Ulaanbaatar	42.86	49	ceP	P	01 41 43.6	+2.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SENIN	Lac Senin/Sane	42.95	309	eP	P	01 41 42.4	0.0
	comp=Z,5.0nm,0.6s						
MBDF	Montbardon	43.15	306	eP	P	01 41 43.9	-0.1
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FRF	La Foret Royal	43.16	305	eP	P	01 41 43.2	-0.7
FRF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPG	La Plagne	43.24	307	eP	P	01 41 44.1	-0.7
LPG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BNI	Bardonecchia	43.25	307	eP	P	01 41 43.5	-1.3
	comp=Z,9.9nm,0.7s						
BNI	Bardonecchia	43.25	307	eP	P	01 41 43.5	-1.3
BNI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CDF	Champ du Feu	43.25	312	eP	P	01 41 45.5	+0.9
CDF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LPL	La Plagne	43.25	307	eP	P	01 41 44.9	0.0
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HAU	Haudompre	43.80	311	eP	P	01 41 50.7	+1.7
HAU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CABF	La Chapelle	43.81	309	eP	P	01 41 48.1	-1.1
CABF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NORES	NORESS Array B	44.56	330	P	P	01 41 56.7	+1.8
VIVF	Saint-Julien-l	44.65	306	eP	P	01 41 55.1	-0.8
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SSB	Saint Sauveur	44.77	307	eP	P	01 41 55.4	-1.5
	comp=Z,6.5nm,0.8s						
SSB	Saint Sauveur	44.77	307	eP	P	01 41 55.4	-1.5
SSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NB2	NORSAR Subarra	44.84	330	P	P	01 41 56.7	-0.4
	comp=Z,0.8nm,0.6s,baz=113,slow=7.9						
NB200	NORSAR Array S	44.84	330	eP	P	01 41 55.9	-1.2
NOA	NORSAR Array B	44.84	330	P	P	01 41 55.9	-1.2
	comp=Z,1.0nm,0.7s,baz=115,slow=8.0,SNR=6.6						
NOA				LR	LR	02 03 21.9	
	comp=Z,14nm,18.7s,baz=355,slow=40						
GIVF	Givet	45.10	314	eP	P	01 42 02.7	+3.4
GIVF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARA0	ARCESS Array S	45.19	345	eP	P	01 42 00.4	+0.6
ARCES	ARCESS Array B	45.19	345	P	P	01 42 00.4	+0.6
	comp=Z,0.9nm,0.6s,baz=134,slow=8.9,SNR=11						
SMF	Signal de Mont	45.35	309	eP	P	01 42 01.7	+0.3
SMF				pmax	pmax		
	comp=Z,11nm,0.9s						
LOR	Lormes	45.39	310	eP	P	01 42 02.4	+0.6
LOR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SSF	Saint Saulge	45.62	309	eP	P	01 42 04.5	+1.0
SSF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC	Hu-ho-hao-te	45.66	59	P	P	01 42 07.3	+3.2
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,19nm,5.8s						
AVF	Avril sur Loir	45.70	309	eP	P	01 42 05.1	+1.0
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BGF	Bois d'Agland	46.03	309	eP	P	01 42 07.2	+0.4
BGF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MTLF	Montolieu	46.38	304	eP	P	01 42 10.7	+1.1
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TCF	Toulx Ste Croi	46.46	308	eP	P	01 42 09.7	-0.5
TCF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CAF	Calviac	46.51	306	eP	P	01 42 10.3	-0.3
CAF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RJF	Les Rejaudoux	46.91	307	eP	P	01 42 14.4	+0.7
RJF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LFF	La Frestale	47.45	306	eP	P	01 42 18.3	+0.4
LFF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LDF	La Druitiere	48.16	311	eP	P	01 42 23.3	0.0
LDF				pmax	pmax		
	comp=Z,12nm,1.4s						
FLN	La Foliniere	48.41	311	eP	P	01 42 26.4	+1.2
FLN				pmax	pmax		
	comp=Z,12nm,1.3s						
BOD	Bodaibo	48.85	36	eP	P	01 42 29.5	+1.0
BOD				pmax	pmax		
	comp=Z,11nm,1.5s						
SJPF	Ste Jean	48.90	304	eP	P	01 42 32.6	+3.4
SJPF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ROSF	Rostrenen	50.25	311	eP	P	01 42 42.5	+3.2
ROSF				pmax	pmax		
	comp=Z,19nm,1.4s						
ESDC	Sonseca Array	51.24	300	P	P	01 42 47.0	-0.1
	comp=Z,0.4nm,0.4s,baz=67,slow=7.9,SNR=9.7						
TOA0	Torodi Ar. Sit	53.80	266	eP	P	01 43 06.0	-0.3
	comp=Z,11nm,1.4s						
TOA1	Torodi Ar. Sit	53.80	266	eP	P	01 43 05.2	-1.1
TORD	Torodi Ar. Bea	53.80	266	P	P	01 43 05.2	-1.1
	comp=Z,6.3nm,0.4s,baz=56,slow=7.9,SNR=22						
TIXI	Tiksi	57.59	21	i P	P	01 43 37.6	+5.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KSRS	Korea Array	58.70	61	P	P	01 43 41.0	+0.1
	comp=Z,2.0nm,0.6s,baz=274,slow=6.7,SNR=6.3						
KLR	Kul'dur	59.20	47	i P	P	01 43 47.9	+3.6
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOSA	Boshof	64.42	211	P	P	01 44 19.5	-0.1
	comp=Z,1.0nm,0.4s,baz=315,slow=3.0,SNR=5.1						
SEY	Seymchan	67.40	30	P	P	01 44 39.2	+0.8
	comp=Z,2.8nm,0.6s,baz=281,slow=9.9,SNR=4.8						
BILL	Bilibino	70.75	22	i P	P	01 45 02.4	+3.3
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ILAR	Eielson Array	85.32	10	P	P	01 46 20.5	+0.5
	comp=Z,0.3nm,0.6s,baz=319,slow=4.9,SNR=4.2						
ILB	Eielson Array	85.32	10	eP	P	01 46 13.3	-6.7
	comp=Z,4.7nm,1.4s						
WR1	Warramunga Arr	88.42	114	eP	P	01 46 37.1	+1.2
WRA	Warramunga Arr	88.42	114	P	P	01 46 37.1	+1.2
	comp=Z,5.9nm,0.7s,baz=300,slow=4.2,SNR=13						
ASAR	Alice Springs	89.98	117	P	P	01 46 44.9	+1.8
	comp=Z,1.8nm,0.7s,baz=305,slow=5.5,SNR=11						
TXAR	Lajitas Array	119.90	341	PKP	PKPdf	01 52 33.2	-1.2
	comp=Z,0.1nm,0.6s,baz=338,slow=0.5,SNR=2.7						

SVSA 02 01:46:41.8±0.9, 37°.42N×24°.66W, h15^{km}, MD3.6, ML2.2,
Error ellipse: s-maj=8.3km s-min=2.2km az=82.0,
Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMN	Pico do Norte,	0.53	218	eP	Pg	01 46 50.5	-1.8
PSMN				eS	Sg	01 46 56.9	-2.5
PSMN				A	A	01 47 01.9	
	35nm,0.6s						
BART	Pico Bartolome	0.54	311	eP	Pg	01 46 50.4	-2.0
BART				eS	Sg	01 46 57.0	-2.6
BART				A	A	01 46 59.5	
	59nm,0.3s						
PSMA	Santa Maria	0.57	221	eP	Pg	01 46 50.9	-2.1
PSMA				eS	Sg	01 46 57.6	-3.0
PSMA				A	A	01 47 03.6	
	25nm,0.6s						
PDA	Ponta Delgada	0.86	292	eP	Pb	01 46 55.2	-3.2
PDA				eS	Sb	01 47 05.1	-4.6
PDA				A	A	01 47 05.4	
	23nm,0.1s						
PSET	Sete Cidades	0.93	296	eP	Pb	01 46 56.0	-3.7
PSET				eS	Sb	01 47 06.9	-5.0
PSET				A	A	01 47 12.5	
	37nm,0.7s						
PSCM	Serra do Cume	2.32	304	eP	Pn	01 47 15.4	-4.1
PSCM				eS	Sn	01 47 39.9	-7.8
PSCM				A	A	01 47 41.3	
	5.2nm,0.2s						

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*JMA **02** 01:52:29.9±0.1, 24°.25N×121°.94E, h0^{km}*
*ISCJB **02** 01:52:30.4±0.4, 24°.28N±0°.02×121°.98E±0°.02, h0^{km}±4^{km},*
Error ellipse: s-maj=3.1km s-min=2.1km az=141.3
*TAP **02** 01:52:30.5, 24°.31N×121°.91E, h8^{km}, ML2.8, C*
ISC 02 01:52:30.8±1.0, 24°.29N±0°.02×121°.94E±0°.02, h10^{km}±8^{km},
n50, σ0^{s}.78/89, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	Nanao	0.22	309	P	Pg	01 52 35.2	-0.1
	baz=307						
NANB				S	Sg	01 52 38.8	+0.4
	baz=307						
ENA	Nanau	0.23	308	P	Pg	01 52 35.2	-0.2
	baz=307						
ENA				S	Sg	01 52 38.9	+0.3
	baz=307						
EOS1	EOS1	0.32	34	P	Pb	01 52 37.8	-0.8
	baz=39						
EOS1				S	Sb	01 52 43.2	-0.6
	baz=39						
TWC	Suao	0.33	346	P	Pg	01 52 37.3	0.0
	baz=350						
TWC				S	Sg	01 52 42.4	+0.6
	baz=350						
NACB	Ninganchiao	0.33	250	eP	Pg	01 52 36.8	-0.6
	baz=244						
NACB				eS	Sb	01 52 44.1	-0.1
	baz=244						
TWD	Chiawan	0.37	236	eP	Pb	01 52 38.8	-0.7
	baz=231						
ETLH	Xiulin Townshi	0.42	259	eP	Pg	01 52 38.5	-0.6
	baz=255						
ETLH				eS	Sb	01 52 46.7	-0.2
	baz=255						
ENTT	Nioudou	0.49	316	P	Pg	01 52 40.3	0.0
	baz=316						
ENTT				S	Sb	01 52 47.6	-1.2
	baz=316						
ENLB	Shoufeng	0.49	219	eP	Pg	01 52 39.1	-1.2
	baz=215						
ENLB				eS	Sb	01 52 49.0	+0.2
	baz=215						
TWE	Neicheng	0.50	331	P	Pg	01 52 40.6	+0.1
	baz=332						
TWE				eS	Sg	01 52 47.3	+0.3
	baz=332						
NNSB	Datong	0.52	286	eP	Pg	01 52 40.9	-0.1
	baz=283						
NNS	Nan Shan	0.54	287	eP	Pb	01 52 42.1	-0.3
	baz=284						
NNS				eS	Sg	01 52 48.6	+0.3
	baz=284						
SLBB	Yuanshan	0.54	330	P	Pb	01 52 41.6	-0.8
	baz=330						
SLBB				S	Sb	01 52 49.3	-1.0
	baz=330						
NTC	Toucheng	0.57	350	eP	Pg	01 52 42.0	+0.1
	baz=351						
NTC				eS	Sb	01 52 50.6	-0.6
	baz=351						
WHF	Hehuan Shan	0.63	257	P	Pg	01 52 42.5	-0.5
	baz=254						
WHF				eS	Sb	01 52 53.4	+0.2
	baz=254						
YHNB	Yeheng	0.64	307	eP	Pb	01 52 43.3	-0.8
	baz=306						
YHNB				eS	Sg	01 52 51.2	-0.3
	baz=306						
NSK	Sanguang	0.65	306	P	Pb	01 52 43.5	-0.9
	baz=305						
NSK				eS	Sg	01 52 51.9	-0.1
	baz=305						
ESL	Shilin	0.66	224	eP	Pb	01 52 43.8	-0.6
	baz=221						
ESL				eS	Sn	01 52 55.5	-1.1
	baz=221						
TIPB	Shuangxi	0.69	352	P	Pb	01 52 44.3	-0.7
	baz=353						
TIPB				S	Sb	01 52 53.8	-0.8
	baz=353						
TWT	Tachien	0.69	267	eP	Pb	01 52 44.7	-0.4
	baz=264						
TWT				eS	Sb	01 52 55.2	+0.4
	baz=264						
TDCB	Techi	0.71	267	eP	Pb	01 52 45.2	-0.2
	baz=265						
TDCB				eS	Sb	01 52 55.3	0.0
	baz=265						
CHGB	Renai	0.73	252	eP	Pg	01 52 44.6	-0.3
	baz=249						
CHGB				eS	Sb	01 52 56.1	+0.1
	baz=249						
OWD	Renai	0.77	245	eP	Pb	01 52 45.5	-0.9
	baz=242						
OWD				eS	Sb	01 52 56.9	0.0
	baz=242						
NWF	Wu-fen Shan	0.79	350	eS	Sb	01 52 57.1	-0.5
	baz=350						
VWDT	VWDT	0.90	234	eP	Pb	01 52 48.0	-0.5
	baz=231						
VWDT				eS	Sb	01 53 01.6	+1.0
	baz=231						
WHP	Taichung City	0.90	270	eP	Pb	01 52 48.7	0.0
	baz=267						
WHP				eS	Sb	01 53 01.9	+1.1
	baz=267						
LIOB	Emei	0.91	293	eP	Pn	01 52 49.4	-0.3
	baz=292						
LIOB				eS	Sb	01 53 01.2	+0.2
	baz=292						
NSTT	Nanjuang	0.92	292	eP	Pn	01 52 49.9	+0.1
	baz=291						
NSTT				eS	Sn	01 53 03.1	0.0
	baz=291						
YM01	YM01	0.92	339	eP	Pb	01 52 49.3	+0.5
	baz=339						
HGSD	Ruisui	0.92	211	eP	Pb	01 52 49.0	+0.1
	baz=208						
YM10	YM10	0.93	339	eP	Pb	01 52 49.5	+0.4
	baz=339						
YM10				eS	Sb	01 53 01.6	+0.1
	baz=339						
JYNG	Yonagunijimaku	0.94	80	P	Pg	01 52 48.4	-0.4
JYNG				eS	Sb	01 53 01.5	-0.1
YM05	YM05	0.94	339	eP	Pb	01 52 49.5	+0.3
	baz=339						
YM05				eS	Sn	01 53 03.2	-0.4
	baz=339						
EHY	Hungye	0.96	216	eP	Pb	01 52 49.1	-0.4
	baz=213						
EHY				eS	Sn	01 53 03.3	-0.8
	baz=213						
YOJ	Yonaguni jima	1.00	80	eP	Pg	01 52 49.5	-0.5
	baz=80						
YOJ				eS	Sb	01 53 03.4	0.0
	baz=80						
SSLB	Suanglung	1.03	241	eP	Pg	01 52 49.7	-0.8
	baz=239						
SSLB				eS	Sn	01 53 05.2	-0.6
	baz=239						
SMLT	Sun Moon Lake	1.03	247	eP	Pb	01 52 50.2	-0.6
	baz=245						
SMLT				eS	Sn	01 53 07.5	+1.6
	baz=245						
YULB	Yu-li	1.07	213	eP	Pg	01 52 49.8	-1.5
	baz=211						
TWF1	Yuli	1.10	212	eP	Pb	01 52 51.7	-0.3
	baz=210						
YUS	Yu-Shan	1.20	229	eP	Pg	01 52 52.9	-1.0
	baz=226						
YUS				eS	Sn	01 53 10.9	+0.1
	baz=226						
CHN5	Tsauling	1.34	239	eP	Pb	01 52 56.1	0.0
	baz=237						
CHN5				eS	Sn	01 53 16.9	+3.3
	baz=237						
ELDTW	Lidau	1.38	218	eP	Pn	01 52 55.2	-1.0
	baz=216						
CHN4	Tsaushan	1.54	233	eP	Pg	01 52 59.7	-0.7
	baz=231						
CHN4				eS	Sg	01 53 22.3	+1.8
	baz=231						
TPUB	Ta-pu	1.55	231	eP	Pg	01 52 59.6	-0.9
	baz=229						
WTP	Ta-pu	1.59	230	eP	Pn	01 52 59.2	+0.1
	baz=228						
WTP				eS	Sg	01 53 23.5	+1.4
	baz=228						
IRIF	Iriomote-Funau	1.64	88	eS	Sb	01 53 22.0	+0.1
TWK	Hsinying	1.67	233	eP	Pn	01 53 00.6	+0.4
	baz=231						
TWK				eS	Sg	01 53 26.3	+1.8
	baz=231						
CHN1	Nanshi	1.69	230	eP	Pb	01 53 01.7	-0.4
	baz=228						
JKRS	Kuro-shima	1.89	91	P	Pn	01 53 04.2	+1.0
JKRS				eS	Sn	01 53 28.3	+1.1
JIJ	Ishigaki jima	2.02	87	P	Pn	01 53 05.7	+0.8
JIJ				eS	Sn	01 53 29.2	-1.0

IDC 02 02:25:57.8±731.0, 44°.66N×63°.89E, h0^{km}, Error ellipse:
s-maj=300.4km s-min=136.9km az=154.0, Western
Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	6.98	328	i		03 10 20.0	
	baz=142,slow=322,SNR=12						
I46RU	ZALESOVO INFRA	16.46	48	i		04 13 45.0	
	baz=243,slow=339,SNR=4.2						
I26DE	FREYUNG INFRAS	34.12	295	i		05 52 45.0	
	baz=77,slow=320,SNR=8.2						

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*SOME **02** 02:36:58.2, 41°.25N×72°.82E, h5^{km}*
*ISCJB **02** 02:36:59.9±0.8, 41°.32N±0°.05×72°.79E±0°.04, h7^{km}±5^{km},*
Error ellipse: s-maj=8.1km s-min=4.7km az=171.6
*KRNET **02** 02:36:59.0±0.1, 41°.26N×72°.83E, h25^{km}, mb2.1*
*NNC **02** 02:37:03.7±1.0, 41°.54N×72°.83E, h0^{km}, mb2.8, mpv2.5,*
Error ellipse: s-maj=9.5km s-min=4.3km az=166.0
ISC 02 02:36:60.0±1.1, 41°.32N±0°.05×72°.80E±0°.03, h9^{km}±8^{km},
n19, σ1^{s}.01/31, 14C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	Arslanbob	0.14	87	⇑iP	Pg	02 37 03.1	0.0
	baz=61						
ARSB				⇑iS	Sg	02 37 05.5	+0.2

	baz=61						
ARK	Arkit	0.79	308	⇑iP	Pg	02 37 14.5	-0.7
	baz=9.0						
ARK				⇑iS	Sg	02 37 25.9	+0.4
	baz=9.0						
ARLS	Aral	1.27	64	⇓iP	Pg	02 37 23.1	-1.2
	baz=61						
ARLS				⇓iS	Sg	02 37 40.0	-0.7
	baz=61						
MRKS	Merke	1.46	12	P	Pn	02 37 26.7	0.0
	1.4nm,0.1s						
MRKS				S	Sn	02 37 44.8	-1.2
	4.6nm,0.1s						
MRKS	Merke	1.46	12	eP	Pn	02 37 26.6	0.0
	1.4nm,0.1s						
MRKS				eS	Sn	02 37 44.8	-1.2
	7.8nm,0.2s						
AAK	Ala-Archa	1.83	43	⇑P	Pb	02 37 33.1	-0.6
	1.0nm,0.5s						
AAK				⇑S	Sb	02 37 56.4	-0.4
	1.1nm,0.3s						
AAK	Ala-Archa	1.83	43	⇑P	Pb	02 37 33.1	-0.6
	1.0nm,0.5s						
AAK				⇑S	Sb	02 37 56.4	-0.4
	1.1nm,0.3s						
BTK	Batken	1.96	231	⇓iP	Pn	02 37 33.7	+0.2
	baz=33						
BTK				⇓iS	Sn	02 37 58.4	+0.1
	baz=33						
IUG	Iuzhnay	2.23	293	Pg	Pg	02 37 42.9	+0.1
	0.8nm,0.2s						
IUG				Lg	Lg	02 38 12.5	
	10nm,0.3s						
IUG	Iuzhnay	2.23	293	eP	Pb	02 37 40.6	0.0
	0.8nm,0.3s						
IUG				eS	Sg	02 38 10.8	-0.9
	11nm,0.4s						
KK31	Karatay Array	2.46	317	⇑Pn	Pb	02 37 43.7	-0.8
	0.5nm,0.3s,baz=128,slow=16,SNR=16						
KK31				⇓Lg	Lg	02 38 17.5	
	1.1nm,0.3s,baz=137,slow=27,SNR=10.0						
KK31	Karatay Array	2.46	317	⇑Pn	Pb	02 37 43.7	-0.8
	0.5nm,0.3s,baz=128,slow=16,SNR=16						
KK31				⇓Lg	Lg	02 38 17.5	
	1.1nm,0.3s,baz=137,slow=27,SNR=10.0						
BOOM	Boomskoye usch	2.62	62	⇑iP	Pn	02 37 43.4	+0.7
	baz=61						
BOOM				⇑iS	Sn	02 38 14.5	-0.2
	baz=61						
TKM2	Tokmak 2	2.63	51	⇓Pn	Pb	02 37 46.7	-0.6
	1.8nm,0.8s						
TKM2				⇑Lg	Lg	02 38 21.1	
	1.1nm,0.6s						
TKM2	Tokmak 2	2.63	51	⇓Pn	Pb	02 37 46.7	-0.6
	1.8nm,0.8s						
TKM2				⇑Lg	Lg	02 38 21.1	
	1.1nm,0.6s						
DGS	Degeres	2.93	48	Pg	Pb	02 37 53.3	+0.9
	1.3nm,0.4s						
DGS				Lg	Lg	02 38 30.3	
	2.7nm,0.6s						
DGS	Degeres	2.93	48	eP	Pb	02 37 53.1	+0.7
	1.3nm,0.4s						
DGS				eS	Sb	02 38 30.1	+1.8
	2.7nm,0.6s						
BTLS	Baital	3.83	13	Pg	Pb	02 38 09.0	+1.3
	1.8nm,1.1s						
BTLS				Lg	Lg	02 38 57.1	
	1.8nm,0.3s						
BTLS	Baital	3.83	13	eP	Pb	02 38 09.1	+1.3
	0.4nm,0.1s						
BTLS				eS	Sb	02 38 57.5	+3.2
	1.6nm,0.2s						

DRS ***02*** *02:55:13.9±0.0, 43°.61N×45°.14E, h43km*

NORS 02 02:55:14.8±0.0, 43°.01N×46°.07E, h53km, MPVA3.4, 4D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	Groznyy	0.28	314	ePg	Pn	02 55 28.3	+4.3
GROC				eSg	Sn	02 55 39.1	+8.4
BTLR	Botlikh	0.36	162	⇓ePg	Pn	02 55 27.6	+2.8
	60nm,0.4s						
BTLR				⇓eSg	Sn	02 55 37.2	+5.2
	126nm,0.2s						
DBC	Dubki	0.56	89	iPg	Pn	02 55 28.8	+1.8
DBC				eSg	Sn	02 55 39.2	+3.3
UNCR	Uncukul	0.61	119	eSg	Sn	02 55 43.0	+6.2
KRNR	Karanay	0.64	106	ePg	Pn	02 55 29.8	+1.7
KRNR				iSg	Sn	02 55 40.8	+3.2
XNZR	Khunzakh	0.66	135	ePg	Pn	02 55 30.2	+1.9
XNZR				eSg	Sn	02 55 41.5	+3.3
BUJR	Buynaksk	0.79	103	ePg	Pn	02 55 31.8	+2.0
BUJR				eSg	Sn	02 55 44.8	+4.1
GNBR	Gunib	0.91	133	⇓ePg	Pn	02 55 33.5	+2.1
	19nm,0.1s						
GNBR				⇓eSg	Sn	02 55 46.9	+3.3
	71nm,0.2s						
LGD	Lagodekhi	1.18	174	P	Pn	02 55 36.5	+1.5
LGD				S	Sn	02 55 52.9	+2.8
LACR	Lac	1.31	263	ePg	Pn	02 55 38.0	+1.1
LACR				eSg	Sn	02 55 55.9	+2.5
DRN	Derbent	1.94	120	ePg	Pn	02 55 45.9	+0.7
DRN				eSg	Sn	02 56 09.9	+1.5
AKT	Akhty	1.96	141	ePg	Pn	02 55 45.9	+0.1
AKT				eSg	Sn	02 56 09.2	0.0
NEY	Neytrino	2.46	277	ePn	Pn	02 55 54.1	+1.5
NEY				eSn	Sn	02 56 24.5	+2.9
SHA1	Shidzhatmaz	2.59	288	ePn	Pn	02 55 55.4	+0.9
SHA1				eSn	Sn	02 56 25.2	+0.4

ISCJB ***02*** *03:05:55.8±0.6, 18°.5N±0°.2×68°.71W±0°.03, h82km±9km, Error ellipse: s-maj=25.8km s-min=3.6km az=6.3*

NEIC ***02*** *03:05:56.3±0.0, 18°.60N×68°.70W, h85km, MD3.4(RSPR), After RSPR.*

RSPR ***02*** *03:05:56.3, 18°.60N×68°.70W, h85km±1km, MD3.4/9*

OSPL ***02*** *03:05:57.9, 17°.91N×68°.74W, h31km, ML2.9*

ISC 02 03:05:57.3±1.2, 18°.3N±0°.1×68°.71W±0°.03, h59km±14km, n45, σ1s.08/66, 7C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	Punta Cana, DR	0.41	50	⇓eP	Pn	03 06 08.3	+0.1
PCDR	Punta Cana, DR	0.41	50	ePn	Pn	03 06 07.3	-0.9
PCDR				eSn	Sn	03 06 18.1	+2.0
DR12	Loma Pena Alta	0.83	310	⇑eP	Pn	03 06 11.6	-1.7
DR12				eS	Sn	03 06 23.6	-1.4
SDD	Santo Domingo	1.17	280	ePn	Pn	03 06 15.5	-2.0
SDD				eSn	Sn	03 06 33.1	+0.6
SDD	Santo Domingo	1.17	280	iP	Pn	03 06 17.0	-0.5
SDD				eS	Sn	03 06 32.4	-0.1
SDD				IAML		03 06 35.1	
	comp=Z,159nm,0.3s						
MPR	Mayaguez	1.49	91	ePn	Pn	03 06 21.1	-0.8
MPR				eSn	Sn	03 06 40.4	+0.1
MPR	Mayaguez	1.49	91	iP	Pn	03 06 21.7	-0.2
MPR				eS	Sn	03 06 40.5	+0.2
MPR				IAML		03 06 43.5	
	comp=Z,88nm,0.3s						
AGP	Aguadilla	1.50	84	ePn	Pn	03 06 21.8	-0.2
AGP				eSn	Sn	03 06 41.1	+0.6
AGPR	Aguadilla, PR	1.53	82	⇑eP	Pn	03 06 21.8	-0.6
AGPR	Aguadilla, PR	1.53	82	eS	Sn	03 06 41.1	-0.2
AGPR	Aguadilla, PR	1.53	82	iP	Pn	03 06 22.1	-0.3
AGPR				eS	Sn	03 06 42.6	+1.3
AGPR				IAML		03 06 46.8	
	comp=Z,369nm,0.2s						
LSP	Las Mesas	1.54	92	⇓eP	Pn	03 06 22.6	0.0
LSP	Las Mesas	1.54	92	eS	Sn	03 06 42.7	+1.1
LSP	Las Mesas	1.54	92	ePn	Pn	03 06 22.6	0.0
LSP				eSn	Sn	03 06 42.7	+1.1
BANI	BANI	1.57	275	iP	Pn	03 06 23.3	+0.2
BANI				eS	Sn	03 06 41.3	-1.3
BANI				IAML		03 06 49.3	
	comp=Z,94nm,0.5s						
MLPR	Magueyes Islan	1.61	100	⇑eP	Pn	03 06 23.5	+0.1
MLPR	Magueyes Islan	1.61	100	eS	Sn	03 06 45.3	+2.2
AOPR	Arecibo Observ	1.86	87	⇑eP	Pn	03 06 26.4	-0.4
AOPR	Arecibo Observ	1.86	87	eS	Sn	03 06 49.3	0.0
AOPR	Arecibo Observ	1.86	87	ePn	Pn	03 06 26.4	-0.4
AOPR				eSn	Sn	03 06 49.3	0.0
OBIP	Obispado Ponce	2.01	96	⇑eP	Pn	03 06 29.0	+0.1
OBIP	Obispado Ponce	2.01	96	eS	Sn	03 06 54.5	+1.6
OBIP	Obispado Ponce	2.01	96	ePn	Pn	03 06 29.0	+0.1
OBIP				eSn	Sn	03 06 54.5	+1.6
EMPR	Esperanza - Ma	2.08	83	⇓eP	Pn	03 06 29.0	-0.8
EMPR				eS	Sn	03 06 54.1	-0.5
EMPR	Esperanza - Ma	2.08	83	ePn	Pn	03 06 29.9	0.0
EMPR				eSn	Sn	03 06 56.2	+1.5
SC01	Santiago de lo	2.24	302	iP	Pn	03 06 34.3	+2.2
SC01				eS	Sn	03 07 00.5	+1.8
SC01				IAML		03 07 05.7	
	comp=Z,84nm,0.4s						
SJG	San Juan	2.44	93	⇓eP	Pn	03 06 34.0	-0.7
SJG	San Juan	2.44	93	eS	Sn	03 07 03.5	+0.2
SJG	San Juan	2.44	93	ePn	Pn	03 06 33.3	-1.4
SJG				eSn	Sn	03 07 03.0	-0.3
SDDR	Presa de Saban	2.55	287	ePn	Pn	03 06 38.2	+1.9
SDDR				eSn	Sn	03 07 04.6	-1.7
SDDR	Presa de Saban	2.55	287	iP	Pn	03 06 38.0	+1.6
SDDR				ePG		03 06 38.2	
SDDR				eSG	Sn	03 07 06.4	0.0
SDDR				IAML		03 07 12.3	
	comp=Z,91nm,0.6s						
PDPR	Patillas Dam,	2.56	95	⇑eP	Pn	03 06 36.5	0.0
PDPR	Patillas Dam,	2.56	95	eS	Sn	03 07 07.6	+1.1
CBYP	Canovanas	2.71	89	⇓iP	Pn	03 06 37.9	-0.7
CBYP	Canovanas	2.71	89	eS	Sn	03 07 09.5	-0.6
CBYP	Canovanas	2.71	89	ePn	Pn	03 06 37.9	-0.7
CBYP				eSn	Sn	03 07 09.5	-0.6
HUMP	Col San Antoni	2.72	92	⇓iP	Pn	03 06 37.8	-0.8
HUMP	Col San Antoni	2.72	92	eS	Sn	03 07 10.2	-0.1
HUMP	Col San Antoni	2.72	92	ePn	Pn	03 06 38.0	-0.6
HUMP				eSn	Sn	03 07 07.7	-2.6
MTP	Monte Pirata	3.00	92	⇑eP	Pn	03 06 42.3	-0.1
MTP	Monte Pirata	3.00	92	eS	Sn	03 07 17.9	+0.6
MTP	Monte Pirata	3.00	92	ePn	Pn	03 06 42.0	-0.5
CUPR	Culebra, Puert	3.25	88	⇓eP	Pn	03 06 44.8	-1.1
CUPR	Culebra, Puert	3.25	88	eS	Sn	03 07 22.6	-0.8
CUPR	Culebra, Puert	3.25	88	ePn	Pn	03 06 44.5	-1.4
CUPR				eSn	Sn	03 07 21.9	-1.5

ATH ***02*** *03:15:37.9, 37°.56N×26°.91E, h23km±1km, ML3.5/7, Error ellipse: s-maj=4.8km s-min=1.7km az=105.0*

ISCJB ***02*** *03:15:38.9±0.4, 37°.54N±0°.02×26°.85E±0°.03, h11km±3km, Error ellipse: s-maj=3.9km s-min=2.6km az=162.1*

DDA ***02*** *03:15:38.8, 37°.53N×26°.88E, h7km±4km, ML3.3*

ISK ***02*** *03:15:38.5, 37°.55N×26°.84E, h13km, ML3.3/28*

THE ***02*** *03:15:39.2, 37°.53N×26°.84E, h5km±1km, ML3.4/5, Error ellipse: s-maj=1.4km s-min=0.4km az=59.0*

ISC 02 03:15:39.0±0.9, 37°.54N±0°.02×26°.86E±0°.02, h13km±6km, n66, σ0s.78/90, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.17	353	P	Pg	03 15 43.0	0.0
SMG				S	Sg	03 15 45.5	-0.2
	41μm,0.4s						
SMG	Samos	0.17	353	P	Pg	03 15 42.9	0.0
SMG				S	Sg	03 15 45.8	+0.1
SMG				AML	AML	03 15 46.1	
	comp=N,70386μm,0.3s						
SMG				AML	AML	03 15 46.2	
	comp=E,92288μm,0.4s						
GCAM	G?zelcaml?	0.33	62	PG	Pb	03 15 46.1	-0.7
GCAM				SG	Sb	03 15 51.3	-0.7
GCAM	G?zelcaml?	0.33	62	iP	Pb	03 15 46.8	+0.1
GCAM				iS	Sb	03 15 51.9	-0.1
GMLD	Gumuldur	0.53	4	PG	Pb	03 15 50.4	+0.2
GMLD				SG	Sb	03 15 57.6	-0.2
BODT	Bodrum	0.60	143	PG	Pb	03 15 50.9	-0.4
BODT				SG	Sb	03 15 59.9	+0.2
BODT	Bodrum	0.60	143	P	Pb	03 15 50.8	-0.5
BODT				S	Sb	03 15 59.9	+0.2
BDRM	Kayabasi	0.67	136	iP	Pb	03 15 52.4	-0.1
BDRM				IAML_P			
	comp=Z,16μm,0.2s						
AYDN	Tasoluk	0.81	81	iP	Pn	03 15 55.5	-0.7
AYDN				IAML_P			
	comp=Z,11μm,0.2s						
URLA	Izmir	0.84	346	PG	Pg	03 15 55.2	-0.1
URLA				SG	Sb	03 16 07.4	+0.6
URLA	Izmir	0.84	346	iP	Pn	03 15 56.1	-0.5
URLA				IAML_P			
	comp=Z,20μm,0.2s						
BLCB	Balcova	0.85	9	PG	Pb	03 15 55.5	-0.2
BLCB				SG	Sn	03 16 07.8	-1.2
AYDB	Zeytinkoy-Aydi	0.91	63	PG	Pb	03 15 56.7	0.0
AYDB				SG	Sn	03 16 10.2	-0.4
NISR	Nisiros	0.95	167	P	Pg	03 15 57.3	-0.1
DAT	Datca	0.99	145	PG	Pn	03 15 58.2	-0.5
DAT				SG	Sn	03 16 12.9	+0.3
DAT	Datca	0.99	145	iP	Pn	03 15 59.0	+0.2
DATC	Datca-Mugla	1.01	141	PG	Pg	03 15 58.2	-0.3
AMGA	Amorgos Island	1.05	228	P	Pb	03 15 58.4	-0.6
AMGA				S	Sg	03 16 13.6	+0.7
	comp=Z,2μm,0.4s						
AMGA	Amorgos Island	1.05	228	P	Pb	03 15 58.4	-0.6
AMGA				S	Sg	03 16 13.3	+0.4
AMGA				AML	AML	03 16 17.4	
	comp=E,4803μm,0.4s						
AMGA				AML	AML	03 16 18.2	
	comp=N,3543μm,0.2s						
CHOS	Chios island	1.06	323	PG	Pb	03 15 58.8	-0.4
CHOS	Chios island	1.06	323	P	Pb	03 15 58.7	-0.4
CHOS				S	Sn	03 16 14.0	-0.2
	comp=N,1μm,0.4s						
CHOS	Chios island	1.06	323	P	Pb	03 15 58.9	-0.4
CHOS				S	Sb	03 16 12.7	-0.2
CHOS				AML	AML	03 16 15.5	
	comp=E,3453μm,0.3s						
CHOS				AML	AML	03 16 15.9	
	comp=N,2160μm,0.4s						
KRBN	Karaburun	1.08	347	PG	Pb	03 15 59.1	-0.4
APE	Apeiranthos	1.16	246	PN	Pb	03 16 01.1	+0.1
APE	Apeiranthos	1.16	246	P	Pn	03 16 00.3	-0.7
APE				S	Sn	03 16 17.2	+0.4
	comp=N,610nm,0.2s						
APE	Apeiranthos	1.16	246	P	Pg	03 16 02.0	+0.6
APE				S	Sn	03 16 17.8	+1.0
FOCM	Foa	1.17	355	PN	Pb	03 16 01.1	0.0
YER	Yerkesik	1.20	109	PN	Pg	03 16 01.9	-0.2
YER	Yerkesik	1.20	109	P	Pg	03 16 01.7	-0.5
MRSB	Marmaris-Mugla	1.35	127	PN	Pb	03 16 03.9	-0.2
PSRA	Psara	1.43	315	P	Pb	03 16 05.1	-0.4
ZEDA	zmir-Bergama	1.43	7	iP	Pb	03 16 04.9	-0.6
ZEDA				IAML_P			
	comp=Z,1μm,0.3s						
ANAF	Anafi Island	1.47	217	P	Pn	03 16 05.0	-0.2
ANAF				S	Sn	03 16 24.1	-0.2
	comp=Z,3μm,0.3s						
ANAF	Anafi Island	1.47	217	P	Pn	03 16 05.0	-0.2
ANAF				S	Sg	03 16 27.5	+1.1
ANAF				AML	AML	03 16 31.6	
	comp=E,5973μm,0.3s						
ANAF				AML	AML	03 16 34.2	
	comp=N,6624μm,0.3s						
IOSP	Ios island	1.50	237	P	Pn	03 16 04.8	-0.8
IOSP	Ios island	1.50	237	P	Pn	03 16 04.8	-0.8
IOSP				S	Sg	03 16 28.2	+0.9
IOSP				AML	AML	03 16 30.2	
	comp=N,2144μm,0.3s						
IOSP				AML	AML	03 16 32.2	
	comp=E,2193μm,0.3s						
DKL	Dikili	1.53	1	PN	Pn	03 16 05.5	-0.4
AKHS	Akhisar	1.53	29	iP	Pg	03 16 08.2	-0.2
AKHS				iS	Sg	03 16 30.3	+2.1
TURN	Turunc	1.54	115	PN	Pn	03 16 03.6	-2.5
TURN	Turunc	1.54	115	iP	Pn	03 16 03.1	-3.0
TURN				IAML_P			
	comp=Z,2μm,0.3s						
DALY	Dalyan (Mula)	1.60	116	PN	Pn	03 16 07.3	+0.3
ARG	Arkhangelos	1.67	142	PN	Pn	03 16 08.1	+0.2
ARG	Arkhangelos	1.67	142	P	Pn	03 16 08.0	+0.2
KULA	Kula-Manisa	1.72	55	PN	Pb	03 16 09.3	-1.2
PRK	Paraskevi	1.76	345	P	Pn	03 16 09.7	+0.5
PRK	Paraskevi	1.76	345	P	Pn	03 16 09.3	+0.1
PRK				S	Sg	03 16 34.4	-1.4
PRK				AML	AML	03 16 41.0	
	comp=N,1385μm,0.5s						
PRK				AML	AML	03 16 45.2	
	comp=E,1293μm,0.7s						
AYVA	Ayvalik	1.77	356	iP	Pg	03 16 12.8	-0.1
AYVA				iS	Sg	03 16 38.3	+2.4
AYVA				IAML_P			
	comp=Z,302nm,0.3s						
SIGR	SIGRI	1.84	335	PN	Pn	03 16 09.8	-0.5
SIGR	SIGRI	1.84	335	P	Pn	03 16 09.8	-0.5
SIGR	SIGRI	1.84	335	P	Pn	03 16 09.8	-0.5
SIGR				S	Sn	03 16 32.9	-0.6
SIGR				AML	AML	03 16 42.5	
	comp=N,496μm,0.6s						
SIGR				AML	AML	03 16 45.0	
	comp=E,395μm,0.5s						
SERI	Serifos	1.93	259	P	Pn	03 16 10.7	-0.9
KARP	Karpathos	2.01	173	PN	Pn	03 16 12.8	+0.2
KARP	Karpathos	2.01	173	P	Pn	03 16 12.1	-0.5
BAYC	CANAKKALE_Bayr	2.21	354	iP	Pn	03 16 15.4	0.0
BAYC				IAML_P			
	comp=Z,655nm,0.2s						
KHAL	Karahalli	2.24	68	iP	Pn	03 16 16.1	+0.3
KHAL				IAML_P			
	comp=Z,257nm,0.1s						
BALB	Balikesir	2.24	21	PN	Pn	03 16 16.9	+1.1
EZN	Ezine	2.32	350	PN	Pn	03 16 17.1	+0.3
EZN	Ezine	2.32	350	P	Pn	03 16 16.9	+0.1
NPS	Neapolis	2.49	204	P	Pn	03 16 18.8	-0.4
AKAS	Kas	2.56	120	PN	Pn	03 16 21.3	+1.0
LIA	Limnos Island	2.69	331	P	Pn	03 16 21.8	-0.2
TVSB	Tavsanli	2.79	46	PN	Pn	03 16 24.8	+1.4
LPK	Lapseki	2.83	358	PN	Pn	03 16 23.8	0.0
KORT	Korkueli	2.83	100	PN	Pn	03 16 25.2	+1.1
KCTX	Karacabey (Bur	2.96	23	PN	Pn	03 16 26.9	+1.2
SMTH	Samothraki Isl	3.10	341	P	Pn	03 16 27.4	-0.2

SJA 02 03:17:48.3±0.6, 31°.60S×68°.46W, h103km±104km, ML2.5, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APLL	PUNTA DE LOS L	2.04	55	iP	Pn	03 18 22.8	+1.2
APLL				IAML		03 18 56.2	
	comp=Z,14nm,0.1s						
ACLC	CERRO LA CRUZ	2.52	31	iP	Pn	03 18 29.6	+1.6
ACLC				iS	Sn	03 18 59.5	+1.1
VCA	Vinchina	2.86	4	iP	Pn	03 18 33.5	+1.1
VCA				IAML		03 18 33.8	
	comp=Z,26nm,0.2s						
VCA				iS	Sn	03 19 07.5	+1.2

NNC 02 03:22:56.9±1.9, 38°.75N×70°.52E, h0km, mb3.5, mpv3.1, 9C-1D, Error ellipse: s-maj=13.7km s-min=10.4km az=17.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	4.35	360	⇑Pn	Pn	03 24 04.3	0.0
	0.5nm,0.2s,baz=180,slow=12,SNR=23						
KK31				Pg	Pb	03 24 14.8	+0.5
	0.5nm,0.2s,baz=149,slow=11,SNR=5.0						
KK31				⇑Sn	Sn	03 24 57.4	+1.7
	2.2nm,0.4s						
KK31				⇓Lg	Lg	03 25 13.8	
	2.9nm,0.5s,baz=176,slow=27,SNR=4.9						
AAK	Ala-Archa	4.92	37	⇑Pn	Pn	03 24 12.7	+0.5
	2.9nm,0.5s						
AAK				⇑Sn	Sn	03 25 11.3	+1.4
	5.3nm,0.7s						
TKM2	Tokmak 2	5.67	41	⇑Pn	Pn	03 24 22.5	-0.2
	2.1nm,0.6s						
TKM2				⇑Sn	Sn	03 25 29.3	+0.7
	3.3nm,0.8s						
TKM2				⇑Lg	Lg	03 25 56.9	
	3.7nm,1.2s						
AB31	Akbulak array	12.96	328	⇑P	Pn	03 25 59.7	-2.5
	0.3nm,0.5s,baz=142,slow=12,SNR=7.4						
AB31				⇑S	Sn	03 28 21.0	-6.0
	0.8nm,0.5s,baz=140,slow=24,SNR=6.8						

IDC 02 03:26:16.5±8.0, 30°.97S×179°.97W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/22, mbtmp3.7/2, Error ellipse: s-maj=328.6km s-min=62.4km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	41.39	268	P	P	03 34 04.8	+0.1
	0.5nm,0.7s,baz=119,slow=7.5,SNR=5.1						
WRA	Warramunga Arr	42.43	274	P	P	03 34 13.0	-0.2
	2.2nm,1.0s,baz=114,slow=9.7,SNR=2.6						
FINES	FINESS Array B	145.07	338	PKPbc	PKPbc	03 45 53.4	-1.1
	0.5nm,0.5s,baz=64,slow=4.4,SNR=3.8						

IDC ***02*** *03:28:48.3±1.0, 56°.95S×24°.97W, h0km, mb4.4/4, mb1 4.5/4, mb1mx4.0/24, mbtmp4.4/4, MS3.4/2, Ms1 3.4/2, ms1mx3.0/14, Error ellipse: s-maj=35.7km s-min=28.3km az=61.0*

ISCJB ***02*** *03:28:50.0±0.7, 57°.0S±0°.1×24°.6W±0°.3, h22km, mb4.3/5, MS3.4/2, Error ellipse: s-maj=28.9km s-min=10.9km az=156.9*

NEIC ***02*** *03:28:56.1±0.4, 56°.92S×24°.74W, h53km±10km, mb4.6/4, Error ellipse: s-maj=36.3km s-min=20.2km az=71.0*

ISC 02 03:28:51.6±0.8, 57°.0S±0°.1×25°.0W±0°.2, h22km, n24, σ1s.05/18, mb4.2/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	15.45	159	P	Pn	03 32 27.3	-0.6
VNA3	Neumayer Olymp	15.68	162	P	Pn	03 32 30.3	-0.6
VNA2	Neumayer--Watz	15.85	159	P	Pn	03 32 31.8	-1.1
SNAA	Sanae	17.37	156	P	P	03 32 53.9	+0.4
SNAA	Sanae	17.37	156	ePn	Pn	03 32 51.1	-1.2
	6.6nm,1.1s						
PLCA	Paso Flores	33.38	279	LR	LR	03 48 23.6	
	comp=Z,44nm,18.8s,baz=138,slow=35						
CFA	Coronel Fontan	39.06	292	P	P	03 36 14.5	-2.3
	1.3nm,0.4s,baz=122,slow=12,SNR=4.2						
BOSA	Boshof	45.05	73	LR	LR	03 54 06.1	
	comp=Z,61nm,18.6s,baz=218,slow=34						
VNDA	Vanda	45.67	182	P	P	03 37 10.4	+0.5
	1.2nm,0.6s,baz=170,slow=7.1,SNR=13						
VNDA	Vanda	45.67	182	eP	P	03 37 11.4	+1.5
	11nm,2.0s						
H10S2	ASCENSION HYDR	48.60	14	T	T	04 30 12.1	
	baz=188						
H10S3	ASCENSION HYDR	48.61	14	T	T	04 30 09.9	
	baz=188						
H10S1	ASCENSION HYDR	48.62	14	T	T	04 30 12.1	
	baz=188						
GO01	Chusmiza	49.49	300	eP	P	03 37 41.7	+0.9
	30nm,1.6s						
LPAZ	La Paz	51.93	303	P	P	03 38 00.5	+1.1
	5.0nm,0.7s,baz=130,slow=4.2,SNR=27						
LPAZ	La Paz	51.93	303	eP	P	03 38 00.7	+1.3
	5.3nm,0.6s						
TORD	Torodi Ar. Bea	73.32	27	P	P	03 40 21.0	-0.2
	0.5nm,0.6s,baz=207,slow=6.3,SNR=7.3						
TOA1	Torodi Ar. Sit	73.32	27	eP	P	03 40 21.0	-0.3
BRVK	Borovoye	134.24	57	ePKPpre	PKPpre	03 47 53.1	
SONA0	Songino Array	149.56	86	ePKPbc	PKPbc	03 48 38.1	-0.3
SONM	Songino Array	149.56	86	PKPbc	PKPbc	03 48 38.1	-0.3
	0.4nm,0.4s,baz=242,slow=3.1,SNR=3.2						
ILAR	Eielson Array	151.67	310	PKPbc	PKPbc	03 48 42.9	+0.3
	1.6nm,0.8s,baz=132,slow=1.9,SNR=12						
ILB	Eielson Array	151.67	310	ePKPbc	PKPbc	03 48 42.9	+0.3
RND	Reindeer	152.22	307	ePKPbc	PKiKP	03 48 45.4	+1.1

IDC ***02*** *03:30:53.6±0.7, 22°.10S×114°.56W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.1/24, mbtmp4.0/7, MS3.6/7, Ms1 3.6/7, ms1mx3.4/15, Error ellipse: s-maj=32.5km s-min=23.3km az=74.0*

ISCJB ***02*** *03:30:54.9±0.4, 22°.14S±0°.07×114°.3W±0°.1, h10km, mb4.6/75, MS3.6/9, Error ellipse: s-maj=17.0km s-min=9.1km az=169.0*

NEIC ***02*** *03:30:56.6±1.9, 22°.25S×114°.23W, h11km±3km, mb4.8/75, Error ellipse: s-maj=22.6km s-min=18.7km az=93.0*

ISC 02 03:30:56.3±0.5, 22°.1S±0°.1×114°.4W±0°.1, h10km, n116, σ1s.52/106, mb4.7/75, MS3.6/9, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	Rikitea	19.03	263	*e*T	T	03 54 23.7	
	2.6nm,0.3s						
TBI	Tubuai	32.32	261	*e*LR	LR	03 45 42.5	
	comp=Z,124nm,26.8s						
PPT2	Papeete2	33.35	271	*e*LR	LR	03 46 08.8	
	comp=Z,81nm,27.5s						
OTAV	Otavalo	41.48	62	*e*P	P	03 38 46.6	+2.2
	6.9nm,1.1s						
CFA	Coronel Fontan	41.99	113	P	P	03 38 48.3	+0.4
	0.8nm,0.4s,baz=258,slow=9.3,SNR=4.0						
LPAZ	La Paz	43.94	91	P	P	03 39 05.0	+0.4
	4.0nm,1.0s,baz=278,slow=4.7,SNR=4.5						
LPAZ				LR	LR	03 54 01.1	
	comp=Z,19nm,21.0s,baz=232,slow=32						
CCIG	Comitan	43.95	32	*e*P	P	03 39 02.2	-1.7
	26nm,1.4s						
ZAIG	Zacatecas	46.08	15	*e*P	P	03 39 19.8	-1.2
	20nm,2.0s						
LNIG	Linares	48.93	18	*e*P	P	03 39 39.5	-3.3
	12nm,1.7s						
TXAR	Lajitas Array	52.18	12	LR	LR	03 58 08.4	
	comp=Z,34nm,18.8s,baz=0.0,slow=31						
833A	Chaparral WMA,	52.19	17	*e*P	P	03 40 06.0	-1.4
	10nm,1.1s						
JCT	Junction City	54.14	16	*e*P	P	03 40 23.2	+1.5
	27nm,1.3s						
MNTX	Cornudas Mount	54.20	9	*e*P	P	03 40 23.2	+1.1
	4.9nm,1.1s						
TUC	Tucson	54.23	4	*e*P	P	03 40 20.8	-1.6
	5.2nm,1.5s						
HKT	Hockley	54.76	20	*e*P	P	03 40 27.9	+1.8
	20nm,1.6s						
435B	Jarrell	55.02	18	*e*P	P	03 40 28.8	+0.8
	23nm,1.4s						
Y14A	Wickenburg	55.76	1	*e*P	P	03 40 34.6	+1.2
	13nm,1.9s						
WHTX	Lake Whitney,	56.19	17	*e*P	P	03 40 35.9	-0.6
	19nm,1.4s						
LENM	Lemitar	56.41	7	*e*P	P	03 40 39.5	+1.3
X18A	Snowflake	56.49	4	*e*P	P	03 40 39.3	+0.5
	13nm,1.6s						
LAZ	Ladron	56.62	7	*e*P	P	03 40 39.6	-0.2
NATX	Nacogdoches	56.80	20	*e*P	P	03 40 40.2	-0.7
	11nm,0.8s						
MSTX	Muleshoe	56.86	12	*e*P	P	03 40 41.7	+0.3
	8.0nm,1.1s						
LDFC	Landfair	56.88	359	*e*P	P	03 40 43.0	+1.6
	15nm,1.5s						
W13A	Hualapai Mount	56.90	0	*e*P	P	03 40 43.3	+1.6
	3.0nm,1.0s						
PTGA	Pitinga	57.03	76	*e*P	P	03 40 41.4	-1.5
	9.8nm,1.2s						
GSC	Goldstone, Bar	57.15	358	*e*P	P	03 40 43.2	-0.1
	15nm,1.7s						
STCH	Steam Cracks	57.33	313	*e*P	P	03 40 45.6	+0.7
	227nm,0.8s						
WUAZ	Wupatki	57.39	3	*e*P	P	03 40 43.9	-1.2
	3.3nm,1.0s						
U15A	North Rim	58.26	2	*e*P	P	03 40 53.5	+2.1
	9.9nm,1.4s						
SHPR	Sheep Range	58.31	359	*e*P	P	03 40 53.3	+1.8
	17nm,1.6s						
KNB	Kanab	58.83	1	*e*P	P	03 40 57.4	+2.2
	8.4nm,1.4s						
MVCO	Mesa Verde	59.27	5	*e*P	P	03 40 60.0	+1.6
	28nm,1.8s						
PKCU	Pink Cliffs	59.27	2	*e*P	P	03 41 00.4	+1.9
	17nm,1.6s						
CCUT	Cedar City	59.35	1	*e*P	P	03 41 00.8	+1.9
	6.1nm,1.1s						
SZCU	Shurtz Canyon	59.40	1	*e*P	P	03 41 01.5	+2.3
	7.7nm,1.3s						
147A	Livingston	59.93	25	*e*P	P	03 41 04.5	+1.9
	75nm,1.4s						
SDCO	Great Sand Dun	60.12	8	*e*P	P	03 41 05.2	+0.9
	6.2nm,1.3s						
R11A	Troy Canyon, C	60.15	359	*e*P	P	03 41 06.0	+1.6
	4.9nm,1.4s						
NV11	Mina Array Sit	60.33	357	*e*P	P	03 41 06.9	+1.4
	0.7nm,1.5s						
NV01	Mina Array Sit	60.33	356	*e*P	P	03 41 06.3	+0.7
NVAR	Mina Array Bea	60.33	356	P	P	03 41 06.3	+0.7
	1.6nm,0.7s,baz=182,slow=9.7,SNR=13						
NVAR				LR	LR	04 01 54.2	
	comp=Z,68nm,19.7s,baz=188,slow=31						
YERR	Yerington	60.95	356	*e*P	P	03 41 11.7	+2.0
	7.7nm,1.2s						
SRU	San Rafael Swe	61.01	3	*e*P	P	03 41 11.4	+1.3
	7.6nm,1.2s						
P17A	Butcher Ranch,	61.36	3	*e*P	P	03 41 14.6	+2.1
	12nm,1.3s						
FCAR	Ozark Folk Cen	61.42	21	*e*P	P	03 41 13.2	+0.4
	5.1nm,1.1s						
DUG	Dugway, Tooele	62.00	1	*e*P	P	03 41 18.1	+1.3
	8.5nm,1.3s						
ELK	Elko	62.54	359	*e*P	P	03 41 21.8	+1.2
	6.9nm,1.4s						
BGU	Big Grassy Mou	62.73	1	*e*P	P	03 41 23.2	+1.5
	8.4nm,1.4s						
WDC	Whiskeytown Da	62.83	353	*e*P	P	03 41 23.4	+1.3
	12nm,1.4s						
SPUT	South Promonto	63.12	2	*e*P	P	03 41 25.6	+1.3
	8.2nm,1.3s						
CCM	Cathedral Cave	63.68	20	*e*P	P	03 41 27.4	-0.4
	9.2nm,1.2s						
MOD	Modoc Plateau	63.93	355	*e*P	P	03 41 31.4	+1.8
	25nm,1.8s						
WVOR	Wild Horse Val	64.34	357	*e*P	P	03 41 34.3	+2.0
	8.2nm,1.3s						
PD31	Pinedale Array	64.71	4	*e*P	P	03 41 33.8	-1.1
	9.5nm,1.8s						
PDAR	Pinedale Array	64.71	4	P	P	03 41 33.8	-1.1
	1.3nm,0.7s,baz=176,slow=6.8,SNR=12						
PDAR				LR	LR	04 04 44.1	
	comp=Z,40nm,19.1s,baz=160,slow=31						
K22A	Casper	64.85	6	*e*P	P	03 41 36.4	+0.7
	9.9nm,1.0s						
HUMO	Hull Mountain	64.88	353	*e*P	P	03 41 36.7	+1.1
	4.9nm,1.0s						
J08A	Circle Bar Ran	65.25	357	*e*P	P	03 41 39.9	+1.7
	10nm,1.2s						
HLID	Hailey	65.35	360	*e*P	P	03 41 40.0	+1.1
	15nm,1.5s						
TPAW	Teton Pass	65.36	3	*e*P	P	03 41 39.2	+0.1
	12nm,1.5s						
FXWY	Fox Creek	65.50	3	*e*P	P	03 41 40.0	+0.1
	11nm,1.8s						
IMW	Indian Meadow	65.76	3	*e*P	P	03 41 41.8	+0.1
	5.1nm,1.1s						
PINE	Pine Mountain	65.86	355	*e*P	P	03 41 43.9	+1.8
	22nm,1.8s						
I07A	Izee	66.04	356	*e*P	P	03 41 44.6	+1.4
	12nm,1.5s						
MCMT	McKenzie Canyo	66.63	1	*e*P	P	03 41 48.4	+1.2
YHH	Holmes Hill	66.66	3	*e*P	P	03 41 48.6	+1.2
	6.6nm,1.3s						
QLMT	Earthquake Lak	66.67	2	*e*P	P	03 41 49.0	+1.5
DLMT	Dillon	67.17	1	*e*P	P	03 41 52.1	+1.6
	6.0nm,1.2s						
G08A	Pilot Rock	67.21	357	*e*P	P	03 41 52.5	+1.8
	10nm,1.3s						
VNDA	Vanda	67.22	194	P	P	03 41 50.5	+0.3
	0.5nm,0.8s,baz=91,slow=7.0,SNR=3.3						
VNDA				LR	LR	04 04 33.9	
	comp=Z,61nm,18.7s,baz=14,slow=30						
ECSD	EROS Data Cent	67.53	14	*e*P	P	03 41 51.4	-1.2
	15nm,1.6s						
QSPA	South Pole Qui	68.03	180	*e*P	P	03 41 56.0	+0.2
	4.1nm,1.0s						
MSO	Missoula	68.62	0	*e*P	P	03 41 59.9	+0.4
	10.0nm,1.5s						
EGMT	Eagleton	69.94	3	*e*P	P	03 42 09.0	+1.4
	12nm,1.1s						
NEW	Newport	70.10	358	*e*P	P	03 42 09.8	+1.3
	4.9nm,1.1s						
G40A	Rib Lake	70.59	18	*e*P	P	03 42 11.9	+0.3
	16nm,1.4s						
COWI	Conover	71.66	18	*e*P	P	03 42 18.8	+0.7
	11nm,1.0s						
EYMN	Ely	72.71	16	*e*P	P	03 42 25.4	+1.1
	12nm,1.3s						
VNA3	Neumayer Olymp	73.86	161	P	P	03 42 30.4	-0.6
VNA2	Neumayer--Watz	74.67	161	P	P	03 42 35.2	-0.4
SNAA	Sanae	75.68	162	P	P	03 42 41.0	-0.6
DLBC	Dease Lake	81.29	352	*e*P	P	03 43 11.8	-0.7
	10nm,1.3s						
YKA	Yellowknife Ar	84.32	360	P	P	03 43 27.1	-0.8
	1.2nm,0.8s,baz=188,slow=3.7,SNR=5.7						
YKB5	Yellowknife Ar	84.32	360	*e*P	P	03 43 27.1	-0.8
H11S2	WAKE ISLAND Hy	87.05	291	T	T	05 19 52.5	
	baz=115,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	87.06	291	T	T	05 19 53.3	
	baz=115,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	87.07	291	T	T	05 19 53.3	
	baz=115,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	87.38	292	T	T	05 20 16.5	
	baz=114,slow=74,SNR=5.1						
H11N1	WAKE ISLAND Hy	87.39	292	T	T	05 20 18.1	
	baz=114						
H11N2	WAKE ISLAND Hy	87.40	292	T	T	05 20 16.7	
	baz=114,slow=74,SNR=8.5						
RIDG	Independent Ri	88.83	347	*e*P	P	03 43 50.2	0.0
	16nm,1.3s						
RND	Reindeer	89.43	345	*e*P	P	03 43 53.4	+0.4
	23nm,1.7s						
STKA	Stephens Creek	89.67	236	LR	LR	04 19 35.0	
	comp=Z,58nm,18.0s,baz=195,slow=33						
ILAR	Eielson Array	90.17	347	P	P	03 43 55.8	-0.5
	1.1nm,1.2s,baz=182,slow=2.8,SNR=4.3						
ILB	Eielson Array	90.17	347	*e*P	P	03 43 55.8	-0.5
	1.8nm,1.2s						
MAW	Mawson	90.53	179	LR	LR	04 20 18.4	
	comp=Z,40nm,18.5s,baz=181,slow=33						
BPAW	Bear Paw Mtn.	90.53	345	*e*P	P	03 43 58.2	+0.2
	6.9nm,1.1s						
KMBO	Kilima Mbogo	143.96	126	PKP	PKPdf	03 50 31.5	-1.8
	3.6nm,1.0s,baz=170,slow=2.2,SNR=7.1						
KMBO	Kilima Mbogo	143.96	126	*e*PKPdf	PKPdf	03 50 32.5	-0.9
ZAA1	Zalesovo Array	145.03	340	*e*PKPbc	PKPbc	03 50 30.9	-2.1
ZALV	Zalesovo Beam	145.03	340	PKP	PKPbc	03 50 30.9	-2.1
	2.1nm,0.6s,baz=14,slow=1.8,SNR=12						
ARU	Arti	145.34	7	PKPbc	PKPbc	03 50 31.6	-2.3
	1.6nm,0.2s,baz=13,slow=1.9,SNR=8.5						
ARU	Arti	145.34	7	*e*PKPdf	PKPbc	03 50 32.7	-1.2
BR101	Keskin Array S	147.67	50	*e*PKPdf	PKPdf	03 50 38.8	0.0
BRTR	Keskin Array B	147.67	50	PKPbc	PKPdf	03 50 38.8	0.0
	1.4nm,1.1s,baz=248,slow=2.3,SNR=3.5						
CMAR	Chiang Mai Arr	148.56	269	PKPbc	PKPdf	03 50 41.6	+0.9
	2.4nm,0.4s,baz=31,slow=0.3,SNR=9.4						
BVAR	Borovoye Array	148.92	354	PKPbc	PKPbc	03 50 42.6	-1.6
	2.4nm,0.6s,baz=338,slow=1.6,SNR=16						
KURK	Kurchatov	149.69	344	*e*PKPdf	PKPdf	03 50 41.5	0.0
KURBB	Kurchatov Arra	149.80	344	PKPbc	PKPbc	03 50 44.7	-1.7
	2.0nm,0.6s,baz=26,slow=2.1,SNR=22						
AKTO	Aktyubinsk	151.11	10	PKPbc	PKPdf	03 50 46.1	+2.4
	0.8nm,0.3s,baz=42,slow=4.8,SNR=4.1						
MK31	Makanchi Array	151.92	335	*e*PKPdf	PKPdf	03 50 43.8	-1.4
MK32	Makanchi Array	151.92	335	*e*PKPdf	PKPdf	03 50 41.8	-3.3
MKAR	Makanchi Array	151.92	335	PKP	PKPdf	03 50 41.8	-3.3
	0.3nm,0.7s,baz=45,slow=2.2,SNR=4.8						
MKAR				PKPbc	PKPbc	03 50 50.0	-1.6
	2.7nm,0.8s,baz=323,slow=1.8,SNR=22						
ABKAR	Akbulak array	152.54	8	*e*PKPdf	PKPdf	03 50 46.5	+0.6
KSH	Kashi	160.53	335	*e*PKP	PKPdf	03 51 01.6	+4.8
KSH				PKS	PKSdf	03 54 33.9	+3.7

SJA 02 03:50:14.1±0.7, 22°.99S×70°.20W, h46^{km}±4^{km}, ML1.8, MW4.1, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB05	IPOC Station P	0.14	358	*i* P	Pn	03 50 22.5	+0.7
PB05				*i* S	Sn	03 50 28.2	+1.1
PB06	IPOC Station P	0.64	64	*i* P	Pn	03 50 27.8	+0.7
PB06				*i* S	Sn	03 50 38.2	+1.8
PB04	IPOC Station P	0.65	4	*i* P	Pn	03 50 27.7	+0.4
PB04				*i* S	Sn	03 50 39.0	+2.3
PB15	IPOC Station P	0.70	108	*i* P	Pn	03 50 28.8	+0.8
PB15				*i* S	Sn	03 50 40.1	+2.1
LVC	Limon Verde	1.25	73	*i* P	Pn	03 50 36.7	+1.2
HJA	Humahuaca	4.41	94	*i* P	Pn	03 51 22.8	+3.9
HJA				IAML		03 51 28.7	
	comp=Z,1.0nm,0.4s						

DJA 02 03:50:53.2±2.3, 2°S±33°×13°9E±1°2, h38^{km}±70^{km}, M3.9/3, MLv3.9/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	1.86	125	P	Pn	03 51 22.5	0.0
GENI				S	Sn	03 51 45.6	+0.9
JAY	Jayapura	2.28	115	P	Pn	03 51 28.6	+0.2
JAY				S	Sn	03 51 56.0	+0.7
BAKI	Biak	2.56	278	P	Pn	03 51 32.2	+0.1

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*ISCJB **02** 04:19:21.8±0.6, 8°.01S±0°.08×123°.42E±0°.09, h250^{km}, mb3.6/2, Error ellipse: s-maj=14.9km s-min=8.1km az=137.6*

*DJA **02** 04:19:22.4±0.5, 8°S±4°×12°3E±°, h239^{km}±8^{km}, M4.0/10, mb4.1/3, MLv3.9/10*

*IDC **02** 04:19:27.2±4.8, 7°.33S×124°.65E, h285^{km}±52^{km}, mb3.3/2, mb1 3.7/4, mb1mx3.1/29, mbtmp4.3/4, Error ellipse: s-maj=123.5km s-min=15.1km az=61.0*

ISC 02 04:19:23.0±1.0, 8°.03S±0°.07×123°.45E±0°.09, h250^{km}, n12, σ1^{s}.51/14, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.34	243	P	Pn	04 19 59.5	-0.7
EDFI	Ende, Flores	1.88	247	P	Pn	04 20 03.6	-1.0
SOEI	Soe	1.90	155	P	Pn	04 20 03.0	-1.8
BATI	Baumata	2.18	174	P	Pn	04 20 06.0	-1.2
BBSI	Bau Bau	2.67	341	P	Pn	04 20 11.3	-0.8
KDI	Kendari	4.13	348	P	Pn	04 20 26.9	-1.5
WBSI	Waikabubak, Su	4.32	248	P	Pn	04 20 29.3	-1.4
PLAI	Plampang	5.67	262	P	Pn	04 20 46.0	-1.1
	48nm,1.3s						
WRA	Warramunga Arr	15.86	139	P	P	04 22 52.9	+0.5
	2.1nm,0.3s,baz=318,slow=12,SNR=40						
WRA				S	S	04 25 43.8	-2.7
	0.5nm,0.3s,baz=323,slow=25,SNR=3.7						
ASAR	Alice Springs	18.50	148	P	P	04 23 22.9	+1.7
	1.0nm,0.3s,baz=324,slow=10,SNR=50						
ASAR				S	S	04 26 40.1	+1.1
	0.1nm,0.3s,baz=328,slow=22,SNR=7.9						
STKA	Stephens Creek	29.13	147	P	P	04 25 02.2	+1.1
	1.4nm,0.3s,baz=321,slow=7.9,SNR=7.0						
MKAR	Makanchi Array	65.70	330	P	P	04 29 41.5	+0.5
	0.4nm,0.8s,baz=116,slow=8.2,SNR=4.7						

MEX 02 04:20:43.7±0.4, 14°.77N×93°.05W, h12^{km}±12^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.77	79	*e*P	Pg	04 20 55.9	-2.8
THIG				*i* S	Sg	04 21 05.8	-3.0
CCIG	Comitan	1.74	30	*i* P	Pn	04 21 10.3	-3.6
CCIG				*i* S	Sn	04 21 31.5	-4.7
CMIG	Matias Romero	2.91	323	*e*P	Pn	04 21 27.2	-2.6
CMIG				*e*S	Sn	04 22 01.1	-3.6

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*ISCJB **02** 04:25:54.9±0.3, 47°.04N±0°.03×146°.00E±0°.07, h395^{km}, mb3.9/35, Error ellipse: s-maj=6.2km s-min=3.6km az=9.9*

*MOS **02** 04:25:55.7±0.8, 47°.10N×145°.92E, h409^{km}, mb4.2/15, Error ellipse: s-maj=12.2km s-min=7.8km az=105.1*

*JMA **02** 04:25:56.8±0.4, 46°.63N×146°.09E, h418^{km}, M3.8*

*SKHL **02** 04:25:56.7±0.7, 47°.12N×145°.71E, h396^{km}±16^{km}, mb4.7/13, msh5.1/5*

*IDC **02** 04:25:56.5±0.9, 47°.17N×145°.83E, h395^{km}±13^{km}, mb3.4/19, mb1 3.5/26, mb1mx3.4/40, mbtmp4.1/26, Error ellipse: s-maj=20.7km s-min=9.9km az=167.0*

ISC 02 04:25:55.8±0.5, 46°.98N±0°.05×145°.84E±0°.06, h395^{km}, n102, σ1^{s}.93/121, mb3.9/35, 12C-4D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	2.11	270	⇑*i*PN	Pn	04 26 54.4	+2.5
YSS				*e*S	S	04 27 39.2	+1.9
YSS				pmax	pmax		
	comp=Z,40nm,0.3s						
YSS				smax	smax		
	comp=E,250nm,1.0s						
YSS	Yuzh-Sakhalins	2.11	270	*e*P	Pn	04 26 54.4	+2.5
YSS				AMB	AMB	04 26 55.8	
	comp=E,40nm,0.3s						
YSS				*e*S	S	04 27 39.5	+2.2
YSS				A	A	04 27 40.5	
	comp=E,250nm,1.0s						
KUR	Kuril'sk	2.25	140	*e*P	Pn	04 26 57.5	+4.6
KUR				AMB	AMB	04 26 58.0	
	comp=E,70nm,0.3s						
YUK	Yuzh-Kuril'sk	2.95	180	*i* P	Pn	04 27 03.2	+5.0
YUK				*e*S	S	04 27 55.2	+6.5
JSE	Soyaes	3.04	229	P	Pn	04 27 01.2	+2.3
JSE				*e*S	S	04 27 52.0	+2.0
JRA	Rausu	3.09	190	P	Pn	04 27 00.1	+0.7
JWK2	Keihoku	3.21	240	P	Pn	04 27 03.4	+3.1
JWK2				*e*S	S	04 27 55.7	+3.1
UGL	Uglegorsk	3.29	311	⇑*i*PN	Pn	04 27 02.2	+1.3
UGL				S	S	04 27 51.7	-2.0
UGL				pmax	pmax		
	comp=Z,311nm,0.7s						
UGL				pmax	pmax		
	comp=E,208nm,0.5s						
UGL				smax	smax		
	comp=E,162nm,0.7s						
UGL				smax	smax		
	comp=N,400nm,2.0s						
UGL				smax	smax		
	comp=E,400nm,2.2s						
UGL	Uglegorsk	3.29	311	*i* P	Pn	04 27 02.4	+1.5
UGL				AMB	AMB	04 27 03.2	
	comp=E,180nm,1.0s						
UGL				*e*S	S	04 27 52.9	-0.8
UGL				A	A	04 27 57.7	
	comp=E,190nm,0.4s						
UGL				A	A	04 27 57.7	
	comp=E,30nm,0.4s						
JTKR	Abashiri--Toko	3.30	205	P	Pn	04 27 02.7	+1.5
NEM2	Nemuro 2	3.62	181	P	Pn	04 27 02.8	-1.2
NEM2				*e*S	S	04 27 55.6	-3.7
JKA	Kamikawa-asahi	3.66	220	*e*P	Pn	04 27 06.4	+2.0
ASAJ	Asahikawa	3.66	220	P	Pn	04 27 06.4	+2.0
	comp=E,3.4nm,0.3s,baz=41,slow=4.3,SNR=17						
ASAJ				S	S	04 28 02.5	+2.5
	baz=15,slow=20,SNR=4.3						
JKK2	Kamakawa 2	3.80	216	P	Pn	04 27 07.6	+1.9
JAR	Ashorobuto	3.97	202	P	Pn	04 27 08.7	+1.4
JAR				*e*S	S	04 28 05.0	-0.2
JAK	Akkeshi	4.07	192	P	Pn	04 27 07.9	-0.3
JAK				*e*S	S	04 28 04.1	-2.8
TYV	Tymovskoe	4.41	333	⇑*i*PN	Pn	04 27 12.2	+0.8
TYV				pmax	pmax		
	comp=Z,200nm,2.2s						
TYV				pmax	pmax		
	comp=Z,78nm,0.6s						
TYV	Tymovskoe	4.41	333	*e*P	Pn	04 27 12.5	+1.1
TYV				AMB	AMB	04 27 12.5	
	comp=Z,200nm,2.0s						
TYV				AMB	AMB	04 27 12.7	
	comp=Z,90nm,0.6s						
TYV				*e*S	S	04 28 12.7	-0.2
TYV				A	A	04 28 14.2	
	comp=Z,40nm,0.4s						
JFR	Furan	4.46	212	P	Pn	04 27 13.9	+1.8
JCH	Churui	4.71	203	P	Pn	04 27 14.1	-0.5
JCH				*e*S	S	04 28 14.5	-4.1
JEW	Eniwo	5.18	219	*e*S	S	04 28 26.8	-0.7
JNBK	Urakawa-nobuka	5.19	206	P	Pn	04 27 19.2	-0.4
JNBK				*e*S	S	04 28 23.9	-3.8
JKB	Kayabe	6.15	216	P	Pn	04 27 29.8	0.0
JKB				*e*S	S	04 28 41.7	-4.8
JOT	Ohata	6.57	213	P	Pn	04 27 34.4	-0.2
JOT				*e*S	S	04 28 50.0	-5.1
TEY	Ternei	6.72	257	*e*P	P	04 27 38.4	+1.6
TEY				AMB	AMB	04 27 39.2	
	comp=Z,70nm,0.6s						
NKL	Nikolayevsk	7.01	334	*e*PN	P	04 27 39.8	0.0
NKL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
NKL				pmax	pmax		
	comp=N,5.0nm,0.6s						
NKL				pmax	pmax		
	comp=E,20nm,0.7s						
NKL	Nikolayevsk	7.01	334	*i* P	P	04 27 39.9	+0.1
NKL				AMB	AMB	04 27 40.3	
	comp=E,5.0nm,0.7s						
NKL				AMB	AMB	04 27 40.3	
	comp=E,20nm,0.7s						
NKL				AMB	AMB	04 27 40.3	
	comp=E,60nm,0.4s						
NKL				*e*S	S	04 29 02.3	-1.4
GRNR	Gornyy	7.27	305	*e*PN	P	04 27 43.4	+0.5
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
GRNR	Gornyy	7.27	305	*i* P	P	04 27 43.8	+0.9
GRNR				AMB	AMB	04 27 44.4	
	comp=Z,40nm,0.7s						
SKR	Severo-Kuril's	7.72	58	*e*P	P	04 27 50.4	+2.5
SKR				AMB	AMB	04 27 53.9	
	comp=Z,100nm,1.0s						
KLR	Kul'dur	9.69	289	P	Pn	04 28 11.5	+1.4
	comp=Z,0.3nm,0.3s,baz=94,slow=9.9,SNR=11						
KLR	Kul'dur	9.69	289	*i* PN	Pn	04 28 12.2	+2.1
KLR	Kul'dur	9.69	289	*e*P	Pn	04 28 12.2	+2.1
PETK	Petropavlovsk-	9.78	47	P	Pn	04 28 11.2	+0.2
	comp=Z,0.1nm,0.3s,baz=253,slow=32,SNR=3.9						
USRK	Ussuriysk Ar.	10.10	259	P	Pn	04 28 15.9	+1.0
	comp=Z,0.2nm,0.3s,baz=60,slow=12,SNR=3.9						
PET	Petropavlovsk	10.22	49	⇑*e*PN	Pn	04 28 20.2	+4.1
PET				pmax	pmax		
	comp=Z,50nm,1.2s						
PET	Petropavlovsk	10.22	49	*e*P	Pn	04 28 17.7	+1.6
PET				AMB	AMB	04 28 19.4	
	comp=Z,20nm,1.0s						
EKMR	Ekimchan	10.28	311	*e*P	Pn	04 28 18.4	+1.5
EKMR				AMB	AMB	04 28 21.0	
	comp=Z,10.0nm,0.6s						
MJAR	Matsushiro Arr	11.88	211	P	Pn	04 28 37.5	+1.8
	comp=Z,0.1nm,0.3s,baz=10,slow=10.0,SNR=7.6						
BMKR	Bomnak	13.21	312	*i* P	Pn	04 28 49.8	-1.0
BMKR				AMB	AMB	04 28 50.2	
	comp=Z,20nm,0.4s						
KROS	Kirovskiy	14.06	309	*i* P	Pn	04 28 59.0	-1.3
KROS				AMB	AMB	04 28 59.8	
	comp=Z,10.0nm,0.4s						
KROS				AMB	AMB	04 28 59.8	
	comp=Z,20nm,0.4s						
KSRS	Korea Array	16.30	241	P	Pn	04 29 24.3	-1.9
	comp=Z,0.3nm,0.3s,baz=44,slow=10,SNR=3.0						
SEY	Seymchan	16.41	11	P	P	04 29 23.5	+0.4
	comp=Z,0.6nm,0.3s,baz=182,slow=7.2,SNR=11						
SEY	Seymchan	16.41	11	*i* P	P	04 29 23.1	-0.1
SEY	Seymchan	16.41	11	*e*P	P	04 29 23.1	-0.1
YAK	Yakutsk	17.67	334	*e*P	P	04 29 34.8	-1.8
YAK				*e*S	S	04 32 35.4	-4.1
YAK	Yakutsk	17.67	334	*e*P	P	04 29 34.8	-1.8
BOD	Bodaibo	22.03	311	*e*P	P	04 30 17.4	-1.3
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOD	Bodaibo	22.03	311	*e*P	P	04 30 17.4	-1.3
BILL	Bilibino	23.56	19	*i* P	P	04 30 30.9	-1.5
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BILL	Bilibino	23.56	19	*i* P	P	04 30 32.6	+0.2
HHC	Hu-ho-hao-te	25.30	269	P	P	04 30 48.8	+0.4
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,18nm,5.5s						
ULN	Ulaanbaatar	26.07	286	*ce*P	P	04 30 55.4	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	26.07	286	*e*P	P	04 30 55.4	+0.1
SONM	Songino Array	26.51	286	P	P	04 30 59.9	+0.7
	comp=Z,1.0nm,0.6s,baz=72,slow=9.7,SNR=3.7						
XAN	Xi'an	30.61	258	P	P	04 31 35.7	+0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA	Gaotai	33.99	274	*e*P	P	04 32 06.6	+2.4
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KDAK	Kodiak Island	37.81	50	P	P	04 32 34.2	-1.6
	comp=Z,10nm,1.1s,baz=344,slow=1.0,SNR=7.1						
ZALV	Zalesovo Beam	38.38	304	P	P	04 32 39.7	-0.8
	comp=Z,1.2nm,0.5s,baz=70,slow=8.8,SNR=3.6						
ZALV	Zalesovo Beam	38.38	304	*i* P	P	04 32 39.9	-0.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	39.48	38	P	P	04 32 48.7	-0.7
	comp=Z,2.1nm,0.7s,baz=274,slow=8.1,SNR=26						
MKAR	Makanchi Array	42.34	294	P	P	04 33 13.2	+0.4
	comp=Z,3.8nm,0.7s,baz=70,slow=7.7,SNR=36						
MKAR				PcP	PcP	04 34 57.0	-0.6
	comp=Z,0.4nm,0.6s,baz=66,slow=4.5,SNR=3.5						
KURK	Kurchatov	43.02	301	ceP	P	04 33 17.9	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	Kurchatov	43.02	301	eP	P	04 33 17.9	-0.1
INK	Inuvik	44.11	32	P	P	04 33 25.6	-0.7
	comp=Z,1.7nm,0.5s,baz=287,slow=6.2,SNR=16						
BRVK	Borovoye	46.83	307	c iP	P	04 33 47.9	+0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	46.83	307	i P	P	04 33 47.9	+0.4
AAK	Ala-Archa	49.19	293	ceP	P	04 34 06.3	+0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	49.19	293	eP	P	04 34 06.3	+0.5
ARU	Arti	51.38	315	c iP	P	04 34 21.3	-0.2
ARU				S	S	04 41 01.6	-8.2
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARU	Arti	51.38	315	i P	P	04 34 21.3	-0.2
YKA	Yellowknife Ar	53.65	35	P	P	04 34 36.5	-1.2
	comp=Z,1.3nm,0.7s,baz=305,slow=6.7,SNR=3.0						
ARCES	ARCESS Array B	55.90	338	P	P	04 34 52.3	-1.3
	comp=Z,0.8nm,0.4s,baz=43,slow=7.7,SNR=10						
SUMG	Summit	60.70	1	⇓iP	P	04 35 27.0	+0.1
SUMG				pmax	pmax		
	comp=Z,24nm,0.8s						
SUMG	Summit	60.70	1	⇓iP	P	04 35 27.0	+0.1
	comp=Z,24nm,0.8s						
FINES	FINESS Array B	61.58	332	P	P	04 35 31.6	-0.7
	comp=Z,8.5nm,0.5s,baz=41,slow=7.5,SNR=56						
GEYT	Alibeck	62.12	297	P	P	04 35 36.7	+0.4
	comp=Z,0.9nm,0.3s,baz=57,slow=11,SNR=3.7						
OBN	Obninsk	62.18	322	eP	P	04 35 36.3	0.0
OBN				i		04 36 14.2	
OBN				i *PP	pP	04 37 06.8	+6.7
OBN				eS	S	04 43 30.5	+1.0
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
OBN	Obninsk	62.18	322	eP	P	04 35 36.3	0.0
NB2	NORSAR Subarra	66.26	338	P	P	04 36 01.9	-0.6
	comp=Z,2.4nm,0.5s,baz=31,slow=6.5						
NB2	NORSAR Subarra	66.26	338	P	P	04 36 01.9	-0.6
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	NORSAR Array B	66.26	338	P	P	04 36 02.2	-0.3
	comp=Z,3.5nm,0.6s,baz=32,slow=6.6,SNR=22						
NORES	NORESS Array B	66.43	337	P	P	04 36 02.6	-0.9
NVAR	Mina Array Bea	66.65	58	P	P	04 36 06.1	+0.5
	comp=Z,0.5nm,0.7s,baz=303,slow=5.5,SNR=4.9						
KIV	Kislovodsk	66.94	310	eP	P	04 36 08.9	+1.7
KIV				pmax	pmax		
	comp=Z,55nm,1.0s						
KIV	Kislovodsk	66.94	310	eP	P	04 36 08.9	+1.7
KBZ	Khabaz	66.99	310	P	P	04 36 08.1	+0.8
	comp=Z,6.5nm,0.7s,baz=65,slow=5.2,SNR=8.5						
AKASG	Malin Array Be	68.44	322	P	P	04 36 15.6	-0.5
	comp=Z,3.7nm,0.5s,baz=38,slow=6.6,SNR=13						
AKASG	Malin Array Be	68.44	322	ceP	P	04 36 15.8	-0.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PDAR	Pinedale Array	68.53	50	P	P	04 36 17.9	+0.8
	comp=Z,0.9nm,0.5s,baz=349,slow=1.2,SNR=12						
CLL	Collm	74.03	331	⇓iP	P	04 36 48.0	-1.2
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CLL	Collm	74.03	331	⇓iP	P	04 36 48.0	-1.2
	comp=Z,4.0nm,0.6s						
BRTR	Keskin Array B	74.67	312	P	P	04 36 53.8	+0.5
	comp=Z,1.1nm,0.7s,baz=66,slow=2.9,SNR=4.6						
BRTR	Keskin Array B	74.67	312	ceP	P	04 36 54.0	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	75.89	330	P	P	04 36 59.9	0.0
	comp=Z,1.0nm,0.5s,baz=42,slow=6.1,SNR=8.9						
WET	Wettzell	75.92	330	P	P	04 37 02.3	+2.3
WET				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KBA	Koelnbreinsper	77.53	329	P	P	04 37 11.4	+2.3
KBA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BFO	Black Forest	78.12	333	ceP	P	04 37 13.4	+1.3
TXAR	Lajitas Array	81.61	56	P	P	04 37 32.5	+1.5
	comp=Z,1.0nm,0.7s,baz=277,slow=3.9,SNR=8.8						
ESDC	Sonseca Array	89.61	337	P	P	04 38 08.2	-1.5
	comp=Z,0.3nm,0.5s,baz=35,slow=3.4,SNR=2.7						
TORD	Torodi Ar. Bea	112.08	322	PKiKP	PKiKP	04 43 43.0	-2.2
	comp=Z,0.2nm,0.4s,baz=83,slow=1.8,SNR=3.7						
BDFB	Brasilia	146.69	25	PKPbc	PKiKP	04 44 52.7	-1.8
	comp=Z,1.8nm,0.4s,baz=262,slow=7.1,SNR=3.4						

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*NNC **02** 05:11:35.8±4.3, 53°.40N×86°.76E, h0km, mb2.4, mpv2.4, Error ellipse: s-maj=53.0km s-min=21.0km az=40.0, Suspected Mining explosion.*

IDC 02 05:11:37.4±2.5**, 53°.57N×86°.77E, h0km, mb1 2.8**/2**, mb1mx2.8**/36**, mbtmp2.8**/2**, ML2.3**/2**, 4C-2D, Error ellipse: s-maj=22.3km s-min=13.3km az=75.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.22	289	i		05 20 00.0	
	baz=105,slow=297,SNR=4.5						
ZAA0	Zalesovo Array	1.22	289	⇑P	Pg	05 11 59.6	-1.1
	0.6nm,0.8s						
ZAA0				⇑S	Sb	05 12 17.4	-0.2
	3.7nm,1.4s						
ZALV	Zalesovo Beam	1.22	289	Pg	Pg	05 11 59.8	-1.0
	0.9nm,0.3s,baz=103,slow=16,SNR=14						
ZALV				Lg	Lg	05 12 17.1	
	1.1nm,0.3s,baz=111,slow=29,SNR=24						
KURK	Kurchatov	5.78	244	⇓Lg	Lg	05 14 38.7	
	5.6nm,1.0s						
KURBB	Kurchatov Arra	5.87	243	Pn	Pn	05 13 07.0	+1.4
	0.0nm,0.3s,baz=59,slow=14,SNR=5.8						
KURBB				Lg	Lg	05 14 42.8	
	0.0nm,0.3s,baz=59,slow=33,SNR=3.8						
KURBB	Kurchatov Arra	5.87	243	⇓Lg	Lg	05 14 40.8	
	7.8nm,0.8s						
MK31	Makanchi Array	7.37	205	⇑Pn	Pn	05 13 21.5	-4.7
	1.1nm,0.8s,baz=22,slow=12,SNR=6.8						
MK31				⇑Lg	Lg	05 15 26.4	
	2.2nm,0.9s,baz=15,slow=26,SNR=3.9						
MKAR	Makanchi Array	7.37	205	Pn	Pn	05 13 27.3	+1.2
	0.1nm,0.3s,baz=24,slow=12,SNR=5.4						
MKAR				Sn	Sn	05 14 46.0	-4.4
	0.0nm,0.3s,baz=19,slow=23,SNR=2.3						
MKAR				Lg	Lg	05 15 29.0	
	0.1nm,0.3s,baz=24,slow=28,SNR=7.8						

WEL 02 05:39:08.8, 44°S±4°**×16°8E**±°**, h5km, M3.6**/14**, ML3.8**/13**, MLv3.6**/14**, Error ellipse: s-maj=0.0km s-min=0.0km az=98.4, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.36	227	P	Pb	05 39 17.2	-0.5
MSZ				S	Sb	05 39 22.6	-1.2
JCZ	Jackson Bay	0.50	45	P	Pg	05 39 18.8	+0.5
JCZ				S	Sg	05 39 25.7	+0.9
WKZ	Wanaka	0.65	128	P	Pg	05 39 21.2	-0.1
MLZ	Mavora Lakes	0.95	188	P	Pg	05 39 26.8	-0.2
MLZ				S	Sg	05 39 39.5	+0.1
EAZ	Earnscleugh	1.08	139	P	Pg	05 39 29.2	-0.4
DCZ	Deep Cove	1.32	218	P	Pn	05 39 33.3	-0.6
DCZ				S	Sg	05 39 51.1	-0.2
LBZ	Lake Benmore	1.35	89	P	Pb	05 39 34.7	0.0
LBZ				S	Sb	05 39 51.3	-0.9
FOZ	Fox Glacier	1.41	51	P	Pn	05 39 35.3	+0.2
WHZ	Wether Hill Ro	1.49	189	P	Pn	05 39 36.2	-0.1
ODZ	Otahua Downs	1.78	111	P	Pb	05 39 41.2	-0.8
TUZ	Tuapeka	1.80	149	P	Pb	05 39 42.1	-0.1
PYZ	Puysegur Point	2.08	213	P	Pn	05 39 45.6	+1.3
RPZ	Rata Peaks	2.11	71	P	Pg	05 39 48.9	-0.3
HHSZ	Highcliff Hill	2.19	133	P	Pn	05 39 47.0	+1.2
SYZ	Scrubby Hill	2.19	165	P	Pn	05 39 47.2	+1.4
APZ	The Paps	2.42	185	P	Pn	05 39 49.7	+0.7
INZ	Inchbonnie	2.85	54	P	Pn	05 39 56.2	+1.3
DSZ	Denniston Nort	3.71	45	P	Pn	05 40 06.0	-0.8

IDC 02 05:43:53.5±1.3**, 10°.89S×164°.28E, h0km, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.8**/25**, mbtmp3.9**/5**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.7**/22**, Error ellipse: s-maj=48.8km s-min=29.8km az=127.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.50	288	LR	LR	05 47 07.4	
	comp=Z,266nm,18.5s,baz=152,slow=43						
PMG	Port Moresby	16.92	273	LR	LR	05 54 12.6	
	comp=Z,109nm,21.0s,baz=132,slow=37						
H11S2	WAKE ISLAND Hy	29.30	5	T	T	06 20 15.8	
	baz=184,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	29.30	5	T	T	06 20 17.1	
	baz=184,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	29.31	5	T	T	06 20 17.4	
	baz=184,slow=76,SNR=20						
WRA	Warramunga Arr	30.19	249	P	P	05 50 06.4	+0.6
	4.0nm,1.3s,baz=72,slow=9.7,SNR=2.7						
H11N1	WAKE ISLAND Hy	30.52	5	T	T	06 21 46.9	
	baz=184,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	30.53	5	T	T	06 21 47.3	
	baz=184,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	30.54	5	T	T	06 21 48.6	
	baz=184,slow=76,SNR=18						
ASAR	Alice Springs	31.58	242	P	P	05 50 18.6	+0.5
	0.2nm,0.5s,baz=64,slow=10,SNR=4.3						
VNDA	Vanda	66.62	181	P	P	05 54 44.5	-0.8
	0.6nm,0.9s,baz=338,slow=5.4,SNR=4.0						
ILAR	Eielson Array	83.83	19	P	P	05 56 25.6	+1.0
	1.1nm,0.8s,baz=232,slow=5.9,SNR=11						
MKAR	Makanchi Array	92.43	317	P	P	05 57 04.6	-1.7
	0.7nm,0.7s,baz=100,slow=6.0,SNR=5.8						

ROM 02 06:21:28.7±0.3**, 43°.34N**±0°.01×**12°.529E**±0°.009**, h7km**±1km**, Md0.7**/3**, Error ellipse: s-maj=1.1km s-min=0.8km az=12.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	Monte Foce - G	0.04	52	P	Pg	06 21 30.1	-0.2
ATFO				S	Sg	06 21 31.8	+0.4
ATFO				END			
ATVO	AVT- Monte Val	0.10	294	P	Pg	06 21 31.4	+0.4
ATVO				S	Sg	06 21 33.0	+0.5
ATVO				END			
ATPI	Pietralunga -	0.14	320	P	Pg	06 21 32.3	+0.6
ATPI				S	Sg	06 21 34.5	+0.7
ATPI				END			
PIEI	Pieia	0.19	1	P	Pg	06 21 33.2	+0.6
PIEI				S	Sg	06 21 36.6	+1.3
FSSB	Fossombrone	0.39	27	AML	AML		
	comp=N,251µm,0.4s						
FSSB				AML	AML		
	comp=E,150µm,0.6s						
FSSB				AML	AML		
	comp=E,150µm,0.6s						
FSSB				AML	AML		
	comp=N,251µm,0.4s						
CADA	Capodarco di F	0.91	99	AML	AML		
	comp=N,956µm,1.2s						
CADA				AML	AML		
	comp=E,746µm,1.3s						
CADA				AML	AML		
	comp=E,746µm,1.3s						
CADA				AML	AML		
	comp=N,956µm,1.2s						

ROM 02 06:21:29.9±0.1**, 43°.435N**±0°.009×**13°.12E**±0°.01**, h9km, ML1.4**/2**, Error ellipse: s-maj=1.3km s-min=0.4km az=45.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	Cingoli	0.08	139	P	Pg	06 21 32.2	+0.2
CING				S	Sg	06 21 33.9	+0.3
MMUR	Monte Murano	0.09	274	P	Pg	06 21 32.8	+0.5
EL6	Elcito	0.11	189	P	Pg	06 21 32.9	+0.4
EL6				S	Sg	06 21 35.3	+1.0
ARVD	Arcevia	0.15	296	P	Pg	06 21 33.4	+0.3
ARVD				S	Sg	06 21 36.2	+0.9
COR1	Corinaldo	0.22	336	P	Pg	06 21 35.5	+1.1
FOSV	Fossato di Vic	0.30	242	P	Pg	06 21 36.5	+0.7
FOSV				S	Sb	06 21 41.3	-1.3
CSP1	Cessapalombo	0.35	170	P	Pg	06 21 37.2	+0.4
CSP1				S	Sb	06 21 43.2	-0.8
PIEI	Pieia	0.44	283	P	Pg	06 21 38.8	+0.3
PIEI				S	Sb	06 21 46.0	-0.6
ATVO	AVT- Monte Val	0.53	265	P	Pg	06 21 40.2	+0.1
ATVO				S	Sb	06 21 49.1	0.0
ATVO				AML	AML		
	comp=E,28µm,1.2s						
ATVO				AML	AML		
	comp=N,29µm,0.5s						
ATVO				AML	AML		
	comp=E,28µm,1.2s						
ATVO				AML	AML		
	comp=N,29µm,0.5s						
ATVO				AML	AML		
	comp=E,28µm,1.2s						
ATVO				AML	AML		
	comp=N,29µm,0.5s						
GUMA	Gualdo di Mace	0.70	122	P	Pg	06 21 38.6	-4.7
GUMA				S	Sg	06 21 45.7	-6.8
GUMA				AML	AML		
	comp=E,444µm,0.3s						
GUMA				AML	AML		
	comp=N,148µm,0.3s						
GUMA				AML	AML		
	comp=N,148µm,0.3s						
GUMA				AML	AML		
	comp=E,444µm,0.3s						
GUMA				AML	AML		
	comp=N,148µm,0.3s						
GUMA				AML	AML		
	comp=E,444µm,0.3s						

IDC 02 06:31:21.3±3.1**, 4°.40S×151°.83E, h0km, mb4.0**/2**, mb1 4.3**/2**, mb1mx3.5**/28**, mbtmp4.0**/2**, Error ellipse: s-maj=133.3km s-min=43.4km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.00	226	P	P	06 36 28.9	+0.9
	3.7nm,0.4s,baz=53,slow=10,SNR=37						
ASAR	Alice Springs	25.81	220	P	P	06 36 54.5	0.0
	0.8nm,0.5s,baz=58,slow=8.9,SNR=12						
TORD	Torodi Ar. Bea	149.27	288	PKPbc	PKPbc	06 51 12.0	-1.2
	3.4nm,0.3s,baz=77,slow=3.3,SNR=2.3						

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*IDC **02** 06:32:57.9±9.4, 21°.11N×144°.69E, h183km±90km, mb3.5/9, mb1 3.7/9, mb1mx3.4/34, mbtmp4.0/9, Error ellipse: s-maj=32.0km s-min=15.7km az=88.0*

*ISCJB **02** 06:32:58.2±0.8, 21°.1N±0°.1×144°.7E±0°.2, h200km, mb3.6/9, Error ellipse: s-maj=29.2km s-min=17.3km az=2.6*

ISC 02 06:32:59.8±1.0**, 21°.1N**±0°.2×**144°.7E**±0°.2**, h200km, n9, σ0s82**/9**, mb3.6**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	21.83	322	P	P	06 37 36.0	-0.1
	1.7nm,0.7s,baz=148,slow=8.7,SNR=4.6						
WRA	Warramunga Arr	42.01	195	P	P	06 40 31.7	+0.1
	4.2nm,0.3s,baz=13,slow=8.0,SNR=69						
ASAR	Alice Springs	45.70	194	P	P	06 41 00.7	-0.3
	2.1nm,0.4s,baz=13,slow=7.7,SNR=38						
MKAR	Makanchi Array	56.11	313	P	P	06 42 19.0	+0.6
	0.5nm,0.4s,baz=92,slow=8.9,SNR=7.5						
ILAR	Eielson Array	61.96	27	P	P	06 42 57.0	-1.1
	0.5nm,0.6s,baz=260,slow=4.5,SNR=5.9						
INK	Inuvik	67.58	23	P	P	06 43 34.5	+0.2
	1.4nm,0.7s,baz=287,slow=6.2,SNR=4.5						
ARCES	ARCESS Array B	79.93	342	P	P	06 44 46.5	+0.4
	0.8nm,0.6s,baz=61,slow=6.5,SNR=5.5						
NVAR	Mina Array Bea	82.45	52	P	P	06 45 01.0	+0.8
	0.6nm,0.6s,baz=282,slow=5.3,SNR=6.3						
FINES	FINESS Array B	84.31	335	P	P	06 45 07.8	-1.2
	0.2nm,0.3s,baz=86,slow=5.7,SNR=4.4						

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*BJI **02** 07:04:18.5±0.0, 51°.51N×90°.07E, h12km, mb4.4/2, mB4.2/2, ML4.3/4, Ms3.9/1*

*ISCJB **02** 07:04:22.9±0.3, 51°.09N±0°.02×89°.93E±0°.02, h4km±3km, mb3.4/2, Error ellipse: s-maj=3.3km s-min=2.3km az=149.4*

*MOS **02** 07:04:23.5±1.9, 51°.02N×90°.03E, h11km, mb4.0/1, Error ellipse: s-maj=12.5km s-min=10.2km az=157.5*

*ASRS **02** 07:04:24.5±0.1, 51°.1N±0°.8×89°.9E±0°.8, h1km, MLh4.7/24, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

*IDC **02** 07:04:26.8±1.4, 50°.93N×89°.90E, h0km, mb3.4/2, mb1 3.7/7, mb1mx3.5/42, mbtmp3.7/7, ML3.5/5, Error ellipse: s-maj=20.1km s-min=14.0km az=172.0*

*NNC **02** 07:04:29.4±1.1, 50°.95N×89°.56E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=8.9km s-min=5.0km az=102.0*

ISC 02 07:04:26.1±0.9**, 51°.05N**±0°.03×**90°.00E**±0°.02**, h11km**±6km**, n66, σ1s80**/110**, 19C-11D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEL	Teeli	0.13	104	Pg	Pg	07 04 28.9	-0.4
TEL				Sg	Sg	07 04 30.9	-0.7
ULGR	Ulagan, Altay	1.36	252	Pg	Pn	07 04 49.4	-1.8
ULGR				Sg	Sb	07 05 07.2	-1.9
CUR	Chagan-Uzun	1.42	228	Pg	Pn	07 04 51.5	-0.5
CUR				Sg	Sn	07 05 09.3	-1.4
AKAR	Aktash	1.68	245	Pg	Pb	07 04 57.0	-0.1
AKAR				Sg	Sb	07 05 19.0	+0.6
CHBI	Chibit, Altay	1.75	246	Pg	Pb	07 04 58.2	0.0
CHBI				Sg	Sb	07 05 20.9	+0.5
ARTR	Artybash	1.86	295	Pg	Pg	07 05 01.5	-0.3
ARTR				Sg	Sg	07 05 26.9	+1.0
DJO	Djoy, Khakassi	1.89	23	Pg	Pg	07 05 01.9	-0.5
DJO				Sg	Sg	07 05 28.2	+1.4
DJOS	Djoyskaya Sosn	1.95	26	Pg	Pg	07 05 02.6	-0.9
DJOS				Sg	Sg	07 05 28.7	0.0
CERR	Cheremushki	2.01	25	Pg	Pg	07 05 04.2	-0.4
CERR				Sg	Sg	07 05 31.7	+1.1
TASR	Tashtagol	2.16	323	Pg	Pg	07 05 07.1	-0.3
TASR				Sg	Sg	07 05 36.5	+1.1
VEH	Verkhnyaya Baz	2.21	5	Pg	Pg	07 05 07.8	-0.7
VEH				Sg	Sg	07 05 38.1	+0.9
TUNR	Tungur	2.50	251	Pg	Pb	07 05 10.8	-0.3
TUNR				Sg	Sb	07 05 44.5	+2.6
ARDR	Aradan	2.62	53	Pg	Pb	07 05 13.4	+0.3
ARDR				Sg	Sg	07 05 48.0	-2.3
GALT	Gorno-Altaysk,	2.69	291	Pg	Pg	07 05 16.3	-1.4
GALT				Sg	Sg	07 05 51.7	-0.8
LUZB	Luzhba, Kemero	2.70	346	Pg	Pg	07 05 15.4	-2.4
LUZB				Sg	Sg	07 05 52.2	-0.6
ABNR	Abakan	2.82	18	⇑ePN	Pn	07 05 08.9	-2.2
ABNR	Abakan	2.82	18	Pg	Pg	07 05 18.6	-1.5
ABNR				Sg	Sg	07 05 55.9	-0.6
KZLR	Kyzyl	2.87	75	Pn	Pn	07 05 13.3	+1.5
KZLR				Pg	Pb	07 05 18.7	+1.4
KZLR				Sg	Sb	07 05 52.2	-0.2
ELT	Eltsovka	3.20	315	Pn	Pb	07 05 19.5	-3.5
ELT				Pg	Pg	07 05 25.5	-2.0
ELT				Sg	Sg	07 06 08.8	-0.1
UKR	Ust'-Kan	3.30	270	Pg	Pb	07 05 27.0	+2.3
UKR				Sg	Sg	07 06 10.8	-1.4
TDJR	Todzha	4.03	68	Pn	Pn	07 05 30.1	+2.4
TDJR				Pg	Pg	07 05 41.1	-2.1
TDJR				Sg	Sg	07 06 33.3	-2.0
SALR	Pechorkino, Sa	4.26	324	Pn	Pn	07 05 34.7	+3.8
SALR				Pg	Pg	07 05 44.6	-3.1
SALR				Sg	Sg	07 06 40.8	-2.1
ZAA0	Zalesovo Array	4.29	315	⇑Pn	Pn	07 05 34.1	+2.8
	1.0nm,0.3s						
ZAA0				⇑Pg	Pb	07 05 44.2	+2.7
	4.8nm,0.7s						
ZAA0				⇑Lg	Lg	07 06 43.6	
	50nm,0.8s						
ZALV	Zalesovo Beam	4.29	315	Pn	Pn	07 05 34.0	+2.7
	2.4nm,0.3s,baz=134,slow=13,SNR=19						
ZALV				Pg	Pg	07 05 47.1	-1.1
	12nm,0.3s,baz=126,slow=17,SNR=39						
ZALV				Lg	Lg	07 06 40.5	
	27nm,0.3s,baz=134,slow=25,SNR=10						
MINR	Mina	4.62	32	Pn	Pn	07 05 39.4	+3.6
MINR				Pg	Pg	07 05 53.3	-1.1
MINR				Sg	Sg	07 06 53.8	-0.3
BRCR	Berchikul'	4.71	348	Pg	Pb	07 05 50.8	+2.3
BRCR				Sg	Sg	07 06 56.5	-0.6
KEM	Kemerovo	4.90	333	Sg	Sg	07 07 01.3	-1.9
NVSII	Novosibirsk	5.58	316	Pn	Pn	07 05 49.4	+0.5
NVSII				Pg	Pg	07 06 08.4	-4.4
NVSII				Sg	Sg	07 07 23.3	-1.7
NVS	Novosibirsk	5.58	315	Pn	Pn	07 05 48.4	-0.5
NVS				Sg	Sg	07 07 23.5	-1.5
GZL	Zheleznogorsk	5.63	21	Sg	Sg	07 07 27.2	+0.5
BSTK	Bystrovka, Nov	5.68	311	Pn	Pn	07 05 55.0	+4.6
BSTK				Pg	Pg	07 06 14.0	-0.7
BSTK				Sg	Sg	07 07 30.0	+1.8
NHES	Novosibirsk, N	5.70	315	Pg	Pg	07 06 12.7	-2.5
NHES				Sg	Sg	07 07 30.2	+1.3
SEM	Semipalatinsk	6.22	268	Pg	Pb	07 06 16.1	+1.5
	35nm,0.5s						
SEM				Lg	Lg	07 07 36.9	
	225nm,0.5s						
MK31	Makanchi Array	6.63	233	⇓Pn	Pn	07 06 04.9	+1.5
	9.0nm,0.5s,baz=57,slow=13,SNR=207						
MK31				⇑Sn	Sn	07 07 18.0	-0.9
	8.3nm,0.3s						
MK31				⇓Lg	Lg	07 07 51.2	
	62nm,0.7s,baz=47,slow=27,SNR=6.1						
MK31	Makanchi Array	6.63	233	ePN	Pn	07 06 05.4	+2.0
MKAR	Makanchi Array	6.63	233	Pn	Pn	07 06 05.1	+1.7
	5.7nm,0.3s,baz=49,slow=12,SNR=107						
MKAR				Lg	Lg	07 07 50.5	
	5.0nm,0.3s,baz=45,slow=29,SNR=3.0						
MKAR	Makanchi Array	6.63	233	i PN	Pn	07 06 05.0	+1.6
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MAKZ	Makanchi	6.78	234	⇑Pn	Pn	07 06 07.0	+1.5
	comp=Z,4.2nm,0.4s						
MAKZ				⇑Pg	Pb	07 06 27.6	+3.8
	comp=Z,9.7nm,0.5s						
MAKZ				⇑Sn	Sn	07 07 21.9	-0.8
	comp=Z,5.7nm,0.3s						
MAKZ				⇓Lg	Lg	07 07 55.8	
	comp=Z,70nm,0.8s						
MAKZ	Makanchi	6.78	234	PN	Pn	07 06 07.0	+1.5
MAKZ				S	Sn	07 07 21.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MAKZ				smax	smax		
	comp=Z,6.0nm,0.3s						
MAKZ	Makanchi	6.78	234	Pn	Pn	07 06 07.5	+2.0
MAKZ				Pg	Pg	07 06 36.7	+0.9
KURK	Kurchatov	7.21	272	⇓Pn	Pn	07 06 12.3	+0.9
	comp=Z,22nm,0.9s						
KURK				⇑Sn	Sn	07 07 32.7	-0.4
	comp=Z,31nm,0.8s						
KURK				⇑Lg	Lg	07 08 11.3	
	comp=Z,101nm,0.7s						
KURK	Kurchatov	7.21	272	⇓iP	Pn	07 06 12.1	+0.8
KURBB	Kurchatov Arra	7.28	271	Pn	Pn	07 06 13.6	+1.3
	comp=Z,0.6nm,0.3s,baz=85,slow=14,SNR=21						
KURBB				Sn	Sn	07 07 35.1	+0.3
	comp=Z,1.4nm,0.3s,baz=80,slow=27,SNR=6.1						
KURBB				Lg	Lg	07 08 14.4	
	comp=Z,2.1nm,0.3s,baz=81,slow=35,SNR=9.9						
KURBB	Kurchatov Arra	7.28	271	⇑Pn	Pn	07 06 13.4	+1.1
	comp=Z,21nm,0.6s						
KURBB				⇓Sn	Sn	07 07 34.9	+0.1
	comp=Z,100nm,0.8s						
KURBB				⇑Lg	Lg	07 08 11.7	
	comp=Z,362nm,0.8s						
TLY	Talaya	8.56	80	⇑eP	Pn	07 06 29.5	-0.5
KAPS	Kapalarasan	9.15	235	Pg	Pn	07 07 10.1	+32
	comp=Z,7.1nm,0.5s						
KAPS				Lg	Lg	07 09 10.4	
	comp=Z,21nm,0.7s						
DJR	Jarkent	9.62	230	Pg	Pn	07 07 20.0	+36
	comp=Z,5.2nm,0.3s						
DJR				Lg	Lg	07 09 25.8	
	comp=Z,19nm,1.5s						
SONM	Songino Array	11.15	100	Pn	Pn	07 07 06.8	+1.3
	comp=Z,0.1nm,0.3s,baz=299,slow=15,SNR=3.6						
SONM				Lg	Lg	07 10 14.1	

	comp=Z,0.5nm,0.3s,baz=298,slow=28,SNR=7.6						
ULN	Ulaanbaatar	11.55	99	⇓eP	Pn	07 07 09.0	-1.9
OTUK	Ortayu	11.79	263	⇑Pn	Pn	07 07 14.8	+0.7
	comp=Z,2.9nm,0.5s						
OTUK				⇑Sn	Sn	07 09 27.1	+1.5
OTUK				⇑Lg	Lg	07 10 33.0	
	comp=Z,50nm,1.0s						
OTUK	Ortayu	11.79	263	P	Pn	07 07 14.8	+0.7
OTUK				S	Sn	07 09 27.8	+2.2
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BVAR	Borovoye Array	12.23	287	Pn	Pn	07 07 19.9	-0.3
	comp=Z,0.9nm,0.3s,baz=88,slow=13,SNR=8.3						
BVAR				Sn	Sn	07 09 32.2	-4.2
	comp=Z,0.5nm,0.3s,baz=94,slow=23,SNR=3.6						
BRVK	Borovoye	12.30	287	⇓Pn	Pn	07 07 23.5	+2.5
	comp=Z,2.6nm,0.5s						
BRVK				⇑Sn	Sn	07 09 38.9	+0.9
	comp=Z,6.8nm,0.7s						
BRVK	Borovoye	12.30	287	⇑iP	Pn	07 07 20.2	-0.8
AAK	Ala-Archa	13.52	238	Lg	Lg	07 11 28.2	
	comp=Z,0.3nm,0.3s,baz=18,slow=20,SNR=2.6						
AAK	Ala-Archa	13.52	238	⇓eP	Pn	07 07 37.1	-0.8
GTA	Gaotai	13.52	146	eP	P	07 07 49.5	+2.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				smax	smax		
	comp=N,7.0nm,2.0s						
GTA				smax	smax		
	comp=E,10.0nm,1.4s						
HHC	Hu-ho-hao-te	18.07	116	P	Pn	07 08 36.4	-0.7
HHC				pmax	pmax		
	comp=E,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=E,18nm,5.4s						
HHC				LR	LR		
	comp=E,190nm,10.2s						
HHC				LR	LR		
	comp=E,150nm,10.0s						
ARU	Arti	19.25	298	S	Sn	07 12 22.7	-4.0
	comp=E,0.0nm,0.3s,baz=298,slow=17,SNR=2.3						
ARU	Arti	19.25	298	P	P	07 08 47.2	-3.0
ARU				S	Sn	07 12 24.4	-2.2
AKTO	Aktyubinsk	20.17	281	P	Pn	07 09 01.6	-0.7
	comp=E,0.6nm,0.3s,baz=87,slow=10,SNR=4.4						
YAK	Yakutsk	24.07	48	⇓eP	P	07 09 42.2	+1.1
KLR	Kul'dur	26.57	77	⇓eP	P	07 10 02.4	-1.5
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TJN	Taejon	30.36	104	⇑eP	P	07 10 35.9	-1.8
KIV	Kislovodsk	32.27	276	eP	P	07 10 53.4	-1.2
ILAR	Eielson Array	56.43	26	P	P	07 14 10.7	+3.6
	comp=Z,0.4nm,0.7s,baz=319,slow=5.4,SNR=3.8						

KRSC 02 07:20:46.7±0.7**, 54°.05N×161°.34E, h54^{km}**±14^{km}**, ML3.7,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.55	24	eP	Pn	07 21 00.2	+1.4
MKZ				eS	Sn	07 21 08.8	+1.3
KZV	Kizimen	1.23	330	eP	Pn	07 21 08.7	+1.0
KZV				eS	Sn	07 21 23.6	+0.3
SPN	Mys Shipunski	1.24	220	eP	Pn	07 21 09.0	+1.3
SPN				eS	Sn	07 21 24.3	+0.9
NLC	Nalytchevo	1.48	234	eP	Pn	07 21 12.6	+1.6
NLC				eS	Sn	07 21 30.8	+1.6
SDLR	Sedlovina	1.66	243	eP	Pn	07 21 15.8	+2.3
SDLR				eS	Sn	07 21 35.8	+2.1
SMAR	Somma	1.71	243	eP	Pn	07 21 16.6	+2.3
SMAR				eS	Sn	07 21 37.1	+2.0
KRER	Koryakskii	1.72	245	eP	Pn	07 21 17.0	+2.6
UGLR	Uglovaya	1.72	242	eP	Pn	07 21 16.8	+2.4
AVH	Avacha	1.74	244	eP	Pn	07 21 17.3	+2.7
AVH				eS	Sn	07 21 38.7	+3.0
KRX	Arik	1.75	248	eP	Pn	07 21 17.0	+2.3
KRX				eS	Sn	07 21 38.0	+2.1
KOK	Koryaka	1.78	246	eP	Pn	07 21 17.9	+2.7
DALK	Dalny	1.85	237	eP	Pn	07 21 18.1	+2.1
DALK				eS	Sn	07 21 40.2	+1.9
BZGR	Bezymyannyi-Gr	1.93	349	eP	Pn	07 21 19.8	+2.7
GNL	Ganaly	2.05	261	eP	Pn	07 21 20.9	+2.1
LGNR	Loginova	2.07	350	eP	Pn	07 21 22.4	+3.2
CIRR	Tsirk	2.09	351	eP	Pn	07 21 23.0	+3.5
CIRR				eS	Sn	07 21 48.0	+3.6
KOZ	Kozyrevsk	2.18	338	eP	Pn	07 21 23.4	+2.9
KOZ				eS	Sn	07 21 49.1	+2.8
KRSR	Krestovskiy	2.21	349	eP	Pn	07 21 24.0	+2.9
KRSR				eS	Sn	07 21 50.1	+2.8
KRMR	Karymshinskiy	2.28	239	eP	Pn	07 21 24.7	+2.9
KRMR				eS	Sn	07 21 51.5	+2.8
KLY	Klyuchi	2.30	350	eP	Pn	07 21 24.4	+2.3
KLY				eS	Sn	07 21 51.1	+1.9
KBTR	Krutoberegovo	2.32	21	eP	Pn	07 21 24.9	+2.5
KBTR				eS	Sn	07 21 51.4	+1.7
KBG	Krutoberegovo	2.34	19	eP	Pn	07 21 25.8	+3.1
KBG				eS	Sn	07 21 53.5	+3.3
RUS	Russkaya	2.35	227	eP	Pn	07 21 25.8	+3.0
RUS				eS	Sn	07 21 53.1	+2.6
ESO	Esso	2.42	322	eS	Sn	07 21 54.4	+2.3
SRDR	Sredinnyy	2.45	338	eP	Pn	07 21 26.8	+2.5
MTVR	Mutnovka	2.47	232	eP	Pn	07 21 27.4	+2.9
MTVR				eS	Sn	07 21 56.1	+2.6
BDR	Baidarnaya	2.52	358	eP	Pn	07 21 29.4	+4.2
BDR				eS	Sn	07 21 59.3	+4.5
SMKR	Semkarok	2.54	2	eP	Pn	07 21 28.8	+3.4
SMKR				eS	Sn	07 21 57.8	+2.7
SRKR	Sorokina	2.61	358	eP	Pn	07 21 29.2	+2.8
SRKR				eS	Sn	07 21 58.6	+1.7
ASAK	Asacha	2.66	232	eP	Pn	07 21 30.9	+3.7
APC	Apacha	2.74	247	eP	Pn	07 21 31.7	+3.5
APC				eS	Sn	07 22 02.8	+2.7
BKI	Bering	2.93	65	eP	Pn	07 21 33.5	+2.8
BKI				eS	Sn	07 22 05.3	+0.8
KDTR	Khodutka, Kamc	2.99	223	eP	Pn	07 21 34.9	+3.3
KDTR				eS	Sn	07 22 09.0	+2.8

NNC ***02*** *07:22:53.8±5.8, 36°.60N×69°.54E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=53.8km s-min=46.6km az=123.0*

IDC ***02*** *07:23:16.1±25.0, 36°.96N×70°.23E, h264^{km}±206^{km}, mb3.1/1, mb1 2.9/4, mb1mx2.7/31, mbtmp3.6/4, Error ellipse: s-maj=385.2km s-min=121.2km az=162.0*

ISC 02 07:22:49.3±2.5**, 36°.1N**±0°.2×**69°.6E**±0°.2**, h35^{km}, n8,**
σ**1^{s}62**/10**, 3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	7.07	6	⇓Pn	Pn	07 24 33.0	+2.6
	0.8nm,0.3s,baz=198,slow=16,SNR=30						
KK31				⇑Sn	Sn	07 25 48.1	-1.4
	1.3nm,0.5s,baz=196,slow=25,SNR=6.4						
AAK	Ala-Archa	7.60	29	⇑Pn	Pn	07 24 39.6	+1.9
	2.0nm,0.6s						
AAK				⇑Sn	Sn	07 26 01.9	-0.7
	3.8nm,0.6s						
TKM2	Tokmak 2	8.29	32	⇓Pn	Pn	07 24 48.8	+1.6
	0.8nm,0.5s						
MKAR	Makanchi Array	14.34	38	P	P	07 26 15.2	-1.2
	0.1nm,0.3s,baz=219,slow=11,SNR=3.9						
AB31	Akbulak array	14.95	335	⇓Pn	Pn	07 26 17.5	-0.4
	0.3nm,0.5s,baz=154,slow=12,SNR=9.6						
KURBB	Kurchatov Arra	15.93	21	P	P	07 26 33.7	-0.2
	0.0nm,0.3s,baz=212,slow=10,SNR=3.7						
ZALV	Zalesovo Beam	20.81	26	P	P	07 27 26.5	-1.0
	0.7nm,0.3s,baz=225,slow=10,SNR=11						
ARCES	ARCESS Array B	41.11	338	P	P	07 30 28.9	-0.6
	0.9nm,0.7s,baz=118,slow=9.3,SNR=3.1						

ISCJB ***02*** *07:37:02.8±0.5, 4°.64N±0°.02×96°.56E±0°.02, h25^{km}±3^{km}, mb5.6/311, MS6.2/737, Error ellipse: s-maj=3.0km s-min=2.3km az=43.4*

NEIC ***02*** *07:37:02.6±1.3, 4°.65N×96°.67E, h13^{km}, mb5.9/193, ME6.8, MS6.2/706, MW6.0, MW6.1, MW6.1, Error ellipse: s-maj=10.1km s-min=2.9km az=202.0, Moment Tensor Solution. s55 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.01; M$_{θθ}$-1.25; M$_{φφ}$1.26; M$_{rθ}$-0.11; M$_{θφ}$-0.36; M$_{φr}$0.28; Best double couple: M$_0$1.30000×10^{18} NP1:φ$_s$38.00000°, δ79.00000°, λ6.00000°. NP2:φ$_s$306.00000°, δ84.00000°, λ169.00000°. Principal axes: T 1.3700, Plg12.0000°, Azm262.0000°; N -0.0700, Plg78.0000°, Azm97.0000°; P -1.3000, Plg3.0000°, Azm352.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$47.00000°, δ80.00000°, λ10.00000°. NP2:φ$_s$315.00000°, δ80.00000°, λ170.00000°. Principal axes: T Plg14.0000°, Azm271.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm181.0000°; Apparent Stress 7.34 MPa Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least 42 people killed, 2,500 injured, 6 missing and 53,339 displaced and 20,401 buildings destroyed or damaged in the Bener Meriah-Central Aceh area. One person killed by a landslide in Bener Meriah. Several landslides damaged roads, cutting off access to 9 villages. Felt [IV] at Banda Aceh, Lhokseumawe and Takengon and [III] at Medan. Felt [III] at Georgetown and Gelugor, Malaysia. Also felt at Ayer Itam, Balakong, Butterworth, Petaling Jaya, Sungai Ara and Tanjong Bunga. Felt at Phuket, Thailand.

IDC ***02*** *07:37:02.4±1.7, 4°.74N×96°.59E, h12^{km}±10^{km}, mb5.3/42, mb1 5.3/46, mb1mx5.3/46, mbtmp5.4/46, ML5.1/4, MS6.0/34, Ms1 6.0/34, ms1mx5.9/41 Error ellipse: s-maj=12.1km s-min=7.9km az=50.0*

BJI ***02*** *07:37:02.0±0.0, 4°.70N×96°.70E, h6^{km}, mb6.0/68, mB6.1/77, Ms6.4/91, Ms7 6.2/85*

NEIC ***02*** *07:37:02.0±0.0, 4°.60N×96°.79E, h11^{km}, Moment Tensor Solution. s23 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.12; M$_{θθ}$-1.50; M$_{φφ}$1.38; M$_{rθ}$0.10; M$_{θφ}$-0.46; M$_{φr}$0.67; Best double couple: M$_0$1.70000×10^{18} NP1:φ$_s$38.00000°, δ80.00000°, λ21.00000°. NP2:φ$_s$304.00000°, δ69.00000°, λ169.00000°. Principal axes: T 1.7200, Plg22.0000°, Azm262.0000°; N -0.1200, Plg66.0000°, Azm62.0000°; P -1.6000, Plg7.0000°, Azm169.0000°;*

KLM ***02*** *07:37:02.0, 4°.57N×96°.58E, h0^{km}, mb5.9*

MOS ***02*** *07:37:02.4±1.2, 4°.64N×96°.57E, h23^{km}, mb5.9/142, MS6.0/100, Error ellipse: s-maj=6.1km s-min=3.4km az=117.7*

DJA ***02*** *07:37:03.4±0.7, 5°N±4°×9°7E±°, h10^{km}, M6.2/13, mb6.2/12, mB6.4/12, MLv6.4/13, Mw(mB)6.2/12, Mwp6.0/6*

GCMT ***02*** *07:37:04.6±0.1, 4°.74N×96°.68E, h16^{km}, MW6.1/137, Moment Tensor Solution. s137, c291; s130, c476; Duration: 2^{s}8 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.04±.01; M$_{θθ}$-1.51±.01; M$_{φφ}$1.55±.01; M$_{rθ}$-1.07±.05; M$_{θφ}$-0.52±.01; M$_{φr}$-0.17±.03; Best double couple: M$_0$1.89400×10^{18} NP1:φ$_s$129.00000°, δ72.00000°, λ-160.00000°. NP2:φ$_s$32.00000°, δ71.00000°, λ-20.00000°. Principal axes: T 1.6360, Plg0.0000°, Azm260.0000°; N 0.5160, Plg63.0000°, Azm170.0000°; P -2.1510, Plg27.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *07:37:17.9±0.0, 4°.83N×96°.35E, h10^{km}, Moment Tensor Solution. s53 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.04; M$_{θθ}$-1.31; M$_{φφ}$1.27; M$_{rθ}$0.46; M$_{θφ}$-0.50; M$_{φr}$0.64; Best double couple: M$_0$1.60000×10^{18} NP1:φ$_s$305.00000°, δ60.00000°, λ180.00000°. NP2:φ$_s$35.00000°, δ90.00000°, λ30.00000°. Principal axes: T 1.5700, Plg21.0000°, Azm264.0000°; N 0.0400, Plg60.0000°, Azm35.0000°; P -1.6100, Plg20.0000°, Azm166.0000°;*

ISC 02 07:37:05.1±0.4**, 4°.69N**±0°.02×**96°.58E**±0°.03**, h25^{km}**±2^{km}**,**
h25^{km}:pP-P, n2019, σ**1^{s}84**/1751**, mb5.7**/321**, MS6.2**/759**,**
44C-62D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	Meulaboh, Aceh	0.46	203	P	Pb	07 37 12.9	-1.7
LHMI	Lhok Sumawe	0.65	34	ePg	Pb	07 37 14.5	-3.3
LHMI	Lhok Sumawe	0.65	34	P	Pb	07 37 15.9	-1.9
TPTI		1.54	157	P	Pn	07 37 29.8	-1.2
KCSI	Kotacane, Aceh	1.66	134	P	Pn	07 37 30.9	-1.7
SNSI	Sinabang, Aceh	2.28	186	P	Pn	07 37 42.3	+1.1
TSI	Tuntungan	2.30	121	P	Pn	07 37 41.1	-0.4
PSI	Prapat	3.00	129	Pn	Pn	07 37 50.4	-0.7
	178nm,0.3s,baz=325,slow=11,SNR=222						
PSI				Sn	Sn	07 38 29.1	+2.8
	536nm,0.3s,baz=43,slow=5.8,SNR=4.3						
PSI				Lg	Lg	07 38 38.7	
	811nm,0.3s,baz=342,slow=16,SNR=6.6						
PSI				LR	LR	07 39 20.4	
	comp=Z,444μm,20.1s,baz=241,slow=45						
PSI	Prapat	3.00	129	ePn	Pn	07 37 49.9	-1.2
PSI	Prapat	3.00	129	eP	Pn	07 37 49.9	-1.2
GSI	Gunungsitoli	3.51	164	ePn	Pn	07 37 57.7	-0.4
GSI	Gunungsitoli	3.51	164	P	Pn	07 37 58.1	+0.1
PKDT	Phuket	3.63	29	P	Pn	07 37 58.6	-1.1
KULM	Kulim	4.10	81	ePn	Pn	07 38 03.6	-2.5
KULM				eSn	Sn	07 38 50.4	-2.9
KULM	Kulim	4.10	81	P	Pn	07 38 04.0	-2.1
TRTT	Trang	4.39	45	P	Pn	07 38 10.1	-0.1
IPM	Ipoh	4.43	93	ePn	Pn	07 38 07.7	-3.2
IPM				eSn	Sn	07 38 59.6	-2.0
IPM	Ipoh	4.43	93	P	Pn	07 38 08.0	-2.8
SKLT	Songkhla	4.71	58	P	Pn	07 38 13.4	-1.2
MNSI	Mandailing Nat	4.89	142	P	Pn	07 38 16.8	-0.3
JRMM	Jerantut	5.93	98	P	Pn	07 38 28.0	-3.4
BKNI	Bangkinang	6.21	134	ePn	Pn	07 38 34.5	-0.8
BKNI	Bangkinang	6.21	134	P	Pn	07 38 36.0	+0.7
	4μm,1.0s,61μm56μm64nm						
SISI	Saibi	6.48	157	P	Pn	07 38 39.8	+0.9
	1μm,1.1s,26μm126μm11nm						
PDSI	Padang	6.78	145	P	Pn	07 38 43.4	+0.3
MYKOM	Kota Tinggi	7.81	111	ePn	Pn	07 38 53.9	-3.3
MYKOM				eSn	Sn	07 40 21.4	-3.3
MYKOM	Kota Tinggi	7.81	111	P	Pn	07 38 55.0	-2.2
PBA	Port Blair	7.89	331	eP	Pn	07 38 57.9	-0.5
PBA				eS	Sn	07 40 23.4	-3.5
PPSI	Pulau Pagai	8.16	155	P	Pn	07 39 02.2	+0.2
KRJI	Kerinci	8.32	144	P	Pn	07 39 04.6	+0.4
PHET	Kaeng Krachan	8.70	20	P	Pn	07 39 10.3	+0.8
	829μm,0.6s,9μm						
JMBI	JAMBI	9.45	132	P	Pn	07 39 21.2	+1.6
CHBT	CHBT	9.82	35	P	Pn	07 39 26.0	+1.3
	1μm,0.5s,17μm						
SRDT	SRDT	9.92	14	P	Pn	07 39 28.7	+2.6
	148nm,0.8s,3μm						
LHSI	Lahat	10.94	141	P	Pn	07 39 39.8	-0.3
	2μm,1.2s,18μm50μm						
MNAI	Manna	11.02	145	ePn	Pn	07 39 39.3	-1.9
MNAI				eSn	Sn	07 41 38.5	-5.2
MNAI	Manna	11.02	145	P	Pn	07 39 40.4	-0.8
PMBI	Palembang	11.14	133	P	Pn	07 39 45.1	+2.1
UMPA	Umpang Tak	11.66	11	P	Pn	07 39 50.2	+0.2
	696μm,0.8s						
PPBI	Pangkal Pinang	11.72	125	P	Pn	07 39 52.8	+1.9
MDSI	Maura Dua	11.86	140	P	Pn	07 39 50.3	-2.4
	806nm,0.8s						
LWLI	Liwa	12.20	142	P	Pn	07 39 56.8	-0.7
CHAI	Chaiyaphum	12.34	25	P	Pn	07 40 00.9	+1.6
	335μm,0.8s						
PBKT	Sadao Pong	12.57	20	P	Pn	07 40 03.2	+0.8
	859nm,0.6s,11μm						
KLI	Kotabumi	12.58	139	P	Pn	07 40 02.2	-0.4
KHON	Khomkaen	13.10	27	P	Pn	07 40 14.2	+4.6
	578μm,1.1s						
UTTA	Uttaradit	13.54	16	P	Pn	07 40 18.4	+2.7
	473μm,0.8s						
DLV	T Lat	13.80	58	ePn	Pn	07 40 18.9	-0.5
CM31	Chiang Mai Arr	13.88	9	ePn	Pn	07 40 21.4	+1.1
CMAR	Chiang Mai Arr	13.88	9	Pn	Pn	07 40 21.4	+1.2
	2.9nm,0.3s,baz=196,slow=10,SNR=38						
CMAR				Lg	Lg	07 44 11.5	
	1.1nm,0.3s,baz=202,slow=32,SNR=4.9						
CMAR				LR	LR	07 46 27.4	
	comp=Z,66μm,18.2s,baz=199,slow=41						
CMAR	Chiang Mai Arr	13.88	9	ceP	Pn	07 40 22.2	+1.9
CMAR				pmax	pmax		
	comp=Z,31nm,1.0s						
LAMP	Lampang	14.07	12	P	P	07 40 26.7	-3.7
	comp=Z,497μm,1.0s						
KSM	Kuching	14.07	103	ePn	Pn	07 40 21.9	-1.1
KSM	Kuching	14.07	103	P	Pn	07 40 24.0	+1.0
SKNT	Sakolnakorn	14.20	30	P	Pn	07 40 25.6	+0.9
	comp=Z,532nm,2.1s,comp=Z,13μmcomp=Z,11μm						
CHTO	Chiang Mai	14.22	9	ePn	Pn	07 40 25.6	+0.5
CHTO	Chiang Mai	14.22	9	eP	Pn	07 40 25.6	+0.5
CMMT	Chiang Mai	14.22	9	P	Pn	07 40 27.1	+2.0
	comp=Z,175nm,1.7s,comp=Z,4μm						
PANO	Nakornpanom	14.67	32	P	Pn	07 40 32.4	+1.3
	comp=Z,13nm,1.2s,comp=Z,166nm						
NONG	Nongkai	14.76	25	P	Pn	07 40 33.7	+1.4
	comp=Z,9.2nm,1.2s,comp=Z,124nm						
PAYA	Payao	14.93	12	P	P	07 40 37.6	-2.4
	comp=Z,526μm,1.1s						
SBUM	Sibu	15.76	98	ePn	Pn	07 40 44.6	-1.0
	comp=Z,870nm,1.8s						
SBUM	Sibu	15.76	98	P	Pn	07 40 47.0	+1.4
SIMRM	Sittwe	15.77	347	ePn	Pn	07 40 44.7	-0.9
	comp=Z,2μm,1.3s						
LEM	Lembang	15.88	136	Pn	Pn	07 40 47.6	+0.3
	comp=Z,3.2nm,0.3s,baz=299,slow=12,SNR=5.3						
LEM				LR	LR	07 46 34.0	
	comp=Z,83μm,18.1s,baz=295,slow=36						
PALK	Pallekele	16.00	280	Pn	Pn	07 40 49.2	+0.5
	comp=Z,3.6nm,0.3s,baz=116,slow=12,SNR=24						
PALK				Sn	Sn	07 43 37.5	-8.0
	comp=Z,18nm,0.3s,baz=116,slow=13,SNR=7.6						
PALK				LR	LR	07 47 05.0	
	comp=Z,30μm,19.5s,baz=47,slow=38						
PALK	Pallekele	16.00	280	ePn	Pn	07 40 49.7	+1.1
	comp=Z,1μm,1.0s						
PALK				eSn	Sn	07 43 38.7	-6.8
PALK	Pallekele	16.00	280	i P	P	07 40 50.9	-1.1
	SNR=38						
CISI	Cisompet, Garu	16.54	137	ePn	Pn	07 40 53.2	-2.4
	comp=Z,334nm,0.9s						
XMIS	Christmas Isla	17.57	149	ePn	Pn	07 41 03.7	-4.8
	comp=Z,378nm,1.0s						
SLVN	Son La	18.01	23	eP	P	07 41 14.6	+0.4
	comp=Z,845nm,1.4s						
SAIH	SAIHA	18.03	349	eP	P	07 41 14.7	+0.1
SAIH				eP	Pn	07 41 15.0	+0.8
SAIH				IAmb	IAmb	07 41 20.8	
	comp=Z,7μm,2.1s						
SMRI	Semarang	18.09	130	eP	Pn	07 41 13.6	-1.3
	comp=Z,907nm,1.3s						
VIS	Vishakhapatnam	18.33	316	i S	Sn	07 44 43.1	+1.3
BRDH	Bariadhala	18.51	345	P	Pn	07 41 19.9	+0.1
	comp=Z,23nm,0.3s,baz=190,slow=8.8,SNR=24						
BRDH				LR	LR	07 49 53.1	
	comp=Z,79μm,19.9s,baz=165,slow=42						
UGM	Wanagama	18.71	132	eP	P	07 41 19.8	-2.1
	comp=Z,1μm,1.5s						
BWNR	Bhubaneshwar	18.72	327	eP	Pn	07 41 22.4	-0.1
BELO	BELONIA	19.11	345	eP	Pn	07 41 27.0	-0.1
BELO				⇓eP	Pn	07 41 27.0	-0.1
QIZ	Qiongzhong	19.25	41	eP	Pn	07 41 29.1	+0.2
	comp=Z,366nm,1.3s						
QIZ	Qiongzhong	19.25	41	P	P	07 41 26.9	-0.9
QIZ				S	Sn	07 45 02.1	-2.1
QIZ				pmax	pmax		
	comp=Z,7μm,5.9s						
QIZ				LR	LR		
	comp=Z,135μm,22.6s						
QIZ				LR	LR		
	comp=Z,110μm,22.0s						
QIZ				LR	LR		
	comp=Z,34μm,16.4s						
KKM	Kota Kinabalu	19.59	85	eP	P	07 41 31.5	-0.2
	comp=Z,4μm,1.7s						
AGT	Agartala	19.76	345	eP	Pn	07 41 34.1	-0.8
AGT				eP	Pn	07 41 34.9	0.0
SPMM	Sapulut	19.82	89	P	Pn	07 41 36.0	+0.3
TRD	Trivandrum	19.86	282	eP	Pn	07 41 37.0	+0.8
SILR	SILCHAR	20.30	350	eP	Pn	07 41 41.3	0.0
SILR				eP	Pn	07 41 42.4	+1.0
KOHI	KOHIMA	21.05	354	eP	P	07 41 47.8	+0.4
KOHI				eP	P	07 41 48.2	+0.7
KOHI				IAMs_20	IAMs_20	07 51 53.6	
	comp=Z,54μm,16.0s						
KMI	Kunming	21.16	16	eP	P	07 41 51.5	+2.7
	comp=Z,543nm,1.1s						
KMI				LR	LR		
	comp=Z,6μm,18.0s						
KMI	Kunming	21.16	16	P	P	07 41 51.8	+3.0
KMI				pP	pP	07 41 54.2	-1.7
KMI				S	S	07 45 42.1	-1.0
KMI				sS	Sn	07 45 46.3	-4.1
KMI				pmax	pmax		
	comp=Z,270nm,1.8s						
KMI				pmax	pmax		
	comp=Z,7μm,8.1s						
KMI				LR	LR		
	comp=Z,46μm,11.2s						
KMI				LR	LR		
	comp=Z,47μm,18.1s						
KMI				LR	LR		
	comp=Z,50μm,15.0s						
KMI	Kunming	21.16	16	eP	P	07 41 51.5	+2.7
KMI				pmax	pmax		
	comp=Z,543nm,1.1s						
KMI				MLR	MLR		
	comp=Z,6μm,18.0s						
SHL	Shillong	21.24	348	eP	P	07 41 50.4	+0.8
SHL				eP	P	07 41 51.5	+1.9
SHL				IAmb	IAmb	07 41 55.4	
	comp=Z,1μm,0.9s						
SHL				eS	Sn	07 45 49.0	-3.3
MOKO	MOKOCHONG	21.60	355	eP	P	07 41 52.7	-0.7
MOKO				eP	P	07 41 53.2	-0.2
BOK	Bokaro	21.61	333	eP	P	07 41 52.8	-0.6
BOK				IAmb	IAmb	07 41 57.6	
	comp=Z,189nm,1.0s						
HYB	Hyderabad	21.72	307	i P	P	07 41 57.0	+2.4
	comp=Z,1μm,1.0s						
HYB				eS	S	07 45 48.0	-6.0
HYB				LR	LR		
	comp=Z,18nm,20.0s						
JAGI	Jajag, Banyuwa	21.86	127	eP	P	07 41 54.9	-1.2
	comp=Z,416nm,0.9s						
JAGI				LR	LR		
	comp=Z,83μm,20.0s						
GUWA	GUWAHATI	21.89	348	eP	P	07 41 55.6	-0.7
GUWA				eP	P	07 41 55.8	-0.5
JORH	JORHAT	22.04	354	eP	P	07 41 57.7	-0.3
JORH				eP	P	07 41 58.2	+0.3
JORH				IAmb	IAmb	07 42 25.1	
	comp=Z,4μm,1.9s						
TEZP	TEZPUR	22.10	351	eP	P	07 41 58.1	-0.5
TEZP				eP	P	07 41 59.0	+0.4
DHUB	DHUBRI	22.13	344	eP	P	07 41 58.5	-0.4
DHUB				eP	P	07 41 59.6	+0.7
LKP	Lekhapani	22.53	358	eP	P	07 42 03.5	+0.3
LKP				eP	P	07 42 04.1	+0.9
DIBR	DIBRUGARH	22.71	356	eP	P	07 42 04.8	-0.3
ZIRO	ZIRO	22.86	354	eP	P	07 42 06.4	-0.5
ZIRO				eP	P	07 42 07.2	+0.4
TAWA	Tawang	23.22	349	eP	P	07 42 11.9	+1.2
TAWA				eP	P	07 42 13.0	+2.3
ENPP	El Nido	23.52	73	eP	P	07 42 12.5	-1.0
NGP	Nagpur	23.61	315	eP	P	07 42 14.9	+0.6
NGP				IAmb	IAmb	07 42 18.4	
	comp=Z,1μm,2.1s						
GYA	Guiyang	23.70	23	⇑iP	P	07 42 16.9	+1.7
GYA				PcP	PcP	07 45 59.8	+0.6
GYA				S	S	07 46 30.8	+1.9
GYA				SS	SnSn	07 47 19.4	+12
GYA				ScP	ScP	07 49 38.9	+2.8
GYA				pmax	pmax		
	comp=Z,260nm,1.0s						
GYA				pmax	pmax		
	comp=Z,3μm,5.4s						
GYA				LR	LR		
	comp=Z,58μm,19.3s						
GYA				LR	LR		
	comp=Z,98μm,18.3s						
GYA				LR	LR		
	comp=Z,46μm,14.6s						
GTK	Tadong	23.76	342	ex	P	07 42 11.8	-3.9
GTK				eP	P	07 42 15.9	+0.1
GTK				IAmb	IAmb	07 42 20.7	
	comp=Z,230nm,1.1s						
GTK				IAMs_20	IAMs_20	07 52 36.9	
	comp=Z,39μm,17.6s						
KAAM	Kaadhehdhoo	23.92	261	PFAKE		07 42 30.0	+13
KAAM				LR	LR		
	comp=Z,43μm,20.0s						
JBP	Jabalpur	24.38	320	⇓eP	P	07 42 22.5	+1.0
JBP				ex	x	07 46 37.0	
HKPS	Hong Kong Po S	24.39	43	eP	P	07 42 20.7	-0.9
	comp=Z,438nm,1.3s						
HKPS				LR	LR		

	comp=Z,40µm,18.0s						
BUSP	Coron	24.45	71	eP	P	07 42 24.1	+1.9
GOA	Goa	24.81	297	eP	P	07 42 25.9	+0.5
JIRN	Jiri	24.90	338	eP	P	07 42 27.3	+0.8
	comp=Z,443nm,0.9s						
CUYO	Cuyo Island	24.96	74	eP	P	07 42 28.2	+1.4
LUBP	Lubang	25.00	67	eP	P	07 42 27.0	-0.2
KAPI	Kappang	25.07	112	P	P	07 42 26.3	-1.5
	comp=Z,140nm,0.8s,baz=309,slow=8.3,SNR=31						
KAPI				LR	LR	07 54 53.0	
	comp=Z,28µm,18.1s,baz=118,slow=43						
KAPI	Kappang	25.07	112	eP	P	07 42 26.5	-1.3
	comp=Z,460nm,1.1s						
KAPI				LR	LR		
	comp=Z,42µm,20.0s						
PKI	Pulchoki	25.12	336	eP	P	07 42 28.8	+0.3
	comp=Z,90nm,0.6s						
PKIN	Phulchoki	25.13	336	eP	P	07 42 28.7	+0.2
GUN	Gumba	25.24	337	eP	P	07 42 30.4	+0.8
	comp=Z,402nm,0.7s						
DMN	Daman	25.28	336	eP	P	07 42 30.2	+0.3
	comp=Z,97nm,0.7s						
KKN	Kakani	25.37	336	eP	P	07 42 31.0	+0.4
	comp=Z,364nm,1.3s						
LSA	Lhasa	25.40	349	eP	P	07 42 31.7	+0.5
	comp=Z,3µm,1.6s						
LSA	Lhasa	25.40	349	P	P	07 42 32.9	+1.7
LSA				S	S	07 46 58.1	+1.3
LSA				pmax	pmax		
	comp=Z,330nm,0.9s						
LSA				LR	LR		
	comp=Z,90µm,18.7s						
LSA				LR	LR		
	comp=Z,64µm,16.2s						
LSA				LR	LR		
	comp=Z,112µm,16.0s						
LSA	Lhasa	25.40	349	P	P	07 42 31.3	+0.1
LSA	Lhasa	25.40	349	eP	P	07 42 31.7	+0.5
LSA				pmax	pmax		
	comp=Z,3µm,1.6s						
SCZP	Santa Cruz	25.43	63	eP	P	07 42 34.3	+3.2
SJMP	San Jose	25.44	71	eP	P	07 42 35.0	+3.8
BOLP	Bolinao	25.67	61	eP	P	07 42 35.2	+2.0
TGY	Tagaytay City	25.76	67	P	P	07 42 34.6	+0.6
	comp=Z,134nm,0.3s,baz=224,slow=3.6,SNR=11						
TGY				LR	LR	07 51 52.0	
	comp=Z,16µm,21.1s,baz=228,slow=35						
GKN	Gorkha	25.82	335	eP	P	07 42 34.9	+0.2
IPIL	Ipil	26.01	82	eP	P	07 42 37.5	+1.1
KOLN	Koldanda	26.07	333	eP	P	07 42 37.4	+0.4
	comp=Z,503nm,0.9s						
BHPL	Bhopal	26.12	317	eP	P	07 42 38.6	+1.3
BHPL				IAmb	IAmb	07 42 45.4	
	comp=Z,318nm,1.2s						
BHPL				IAMs_20	IAMs_20	07 53 17.7	
	comp=Z,89µm,15.3s						
POO	Poona	26.12	304	⇓iP	P	07 42 36.0	-1.4
	comp=Z,450nm,1.0s						
POO				eP	P	07 42 38.9	+1.5
POO				IAmb	IAmb	07 42 42.1	
	comp=Z,137nm,0.5s						
SMPP	San Manuel, Pa	26.25	62	eP	P	07 42 37.9	-0.7
OTRP	Odiongan	26.27	72	eP	P	07 42 39.9	+1.2
GUIM	Jordan	26.43	76	eP	P	07 42 41.8	+1.7
DANN	Dangsing	26.50	334	eP	P	07 42 40.7	-0.3
	comp=Z,454nm,0.8s						
PYUN	Piuthan	26.63	332	eP	P	07 42 42.4	+0.3
	comp=Z,1µm,1.4s						
LUWI	Luwuk	26.78	102	eP	P	07 42 42.6	-0.7
	comp=Z,2µm,1.1s						
I52GB	DIEGO GARCIA I	26.87	244	i		10 25 10.0	
	baz=65,slow=310,SNR=0.9						
BALP	Baler	26.90	64	eP	P	07 42 46.1	+1.8
ABRA	Dolores	26.90	59	eP	P	07 42 47.1	+2.8
DGAR	Diego Garcia	26.91	244	eP	P	07 42 45.3	+0.8
	comp=Z,316nm,1.1s						
DGAR				LR	LR		
	comp=Z,35µm,19.0s						
DGAR	Diego Garcia	26.91	244	eP	P	07 42 45.3	+0.8
DGAR				pmax	pmax		
	comp=Z,316nm,1.1s						
DGAR				MLR	MLR		
	comp=Z,35µm,19.0s						
CD2	Chengdu	26.94	14	⇓iP	P	07 42 45.0	+0.4
CD2				pP	pP	07 42 47.4	-5.1
CD2				S	S	07 47 23.4	+3.0
CD2				SS	SnSn	07 48 33.7	+6.7
CD2				pmax	pmax		
	comp=Z,60nm,0.9s						
CD2				pmax	pmax		
	comp=Z,8µm,6.1s						
CD2				LR	LR		
	comp=Z,143µm,14.9s						
CD2				LR	LR		
	comp=Z,127µm,14.1s						
GQP	Guinayangan	27.09	68	⇓eP	P	07 42 48.4	+2.3
BOM	Bombay	27.16	303	eP	P	07 42 42.0	-4.7
BOM				eS	S	07 47 21.2	-2.8
APYP	Conner	27.45	60	eP	P	07 42 51.3	+2.0
CAUP	Cauayan	27.57	62	eP	P	07 42 51.5	+1.1
CTBH	Cotabato--PC H	27.63	83	⇑iP	P	07 42 51.9	+1.0
CVP	Callao Caves	27.88	60	⇓iP	P	07 42 56.8	+3.6
SKMP	Bagumbayan, Su	27.88	85	eP	P	07 42 53.8	+0.5
CGP	Cagayan de Oro	28.17	81	⇓eP	P	07 42 55.8	0.0
ENH	Enshi	28.21	24	eP	P	07 42 56.0	+0.1
	comp=Z,799nm,1.9s						
ENH				LR	LR		
	comp=Z,45µm,20.0s						
SGCP	Mt. Cagua	28.30	60	eP	P	07 42 58.7	+1.8
OCLP	Ormoc	28.46	75	eP	P	07 43 02.5	+4.1
BUKP	Musuan	28.48	82	eP	P	07 42 59.5	+0.9
MSLP	Maasin	28.55	77	eP	P	07 43 01.6	+2.5
PVCP	Virac	28.59	70	eP	P	07 42 59.4	-0.2
KNMB	Chin-men Tao	28.75	45	eP	P	07 42 59.6	-1.2
	comp=Z,482nm,2.0s						
KNMB				LR	LR		
	comp=Z,16µm,18.0s						
MMRI	Maumere	28.80	117	eP	P	07 42 59.9	-1.6
	comp=Z,188nm,0.9s						
MMRI				LR	LR		
	comp=Z,73µm,18.0s						
DAV	Davao City (W)	28.94	84	P	P	07 43 03.3	+0.7
	comp=Z,226nm,0.4s,baz=270,slow=8.1,SNR=1.9						
DAV	Davao City (W)	28.94	84	eP	P	07 43 00.9	-1.7
	comp=Z,757nm,1.4s						
DAV	Davao City (W)	28.94	84	P	P	07 43 01.4	-1.2
QZH	Quanzhou	29.20	44	⇓P	P	07 43 06.6	+1.8
QZH				S	S	07 48 00.4	+4.4
QZH				pmax	pmax		
	comp=Z,98nm,1.5s						
QZH				pmax	pmax		
	comp=Z,1µm,6.1s						
QZH				LR	LR		
	comp=Z,82µm,16.6s						
QZH				LR	LR		
	comp=Z,63µm,16.1s						
QZH				LR	LR		
	comp=Z,47µm,14.7s						
MATI	Mati	29.60	84	eP	P	07 43 09.1	+0.5
TPUB	Ta-pu	29.68	49	PFAKE		07 43 20.0	+11
TPUB				LR	LR		
	comp=Z,26µm,18.0s						
TWG	Pinlang	29.75	50	eP	P	07 43 09.8	+0.1
	comp=Z,799nm,1.2s						
TWG				LR	LR		
	comp=Z,65µm,22.0s						
NDI	New Delhi	30.12	325	eP	P	07 43 14.0	+1.1
SSLB	Suanglung	30.20	49	PFAKE		07 43 20.0	+6.2
SSLB				LR	LR		
	comp=Z,30µm,18.0s						
YULB	Yu-li	30.24	50	eP	P	07 43 13.6	-0.5
	comp=Z,93nm,1.1s						
YULB				LR	LR		
	comp=Z,29µm,21.0s						
WHN	Wuhan	30.69	31	⇑P	P	07 43 20.0	+2.1
WHN				S	S	07 48 14.0	-5.2
WHN				pmax	pmax		
	comp=Z,510nm,1.3s						
WHN				pmax	pmax		
	comp=Z,4µm,8.1s						
WHN				LR	LR		
	comp=Z,100µm,12.4s						
WHN				LR	LR		
	comp=Z,120µm,13.6s						
BATI	Baumata	30.77	119	LR	LR	07 57 01.4	
	comp=Z,103µm,19.8s,baz=302,slow=39						
NACB	Ninganchiao	30.91	49	PFAKE		07 43 30.0	+10
NACB				LR	LR		
	comp=Z,36µm,18.0s						
DDI	Dehra Dun	30.91	328	eP	P	07 43 20.6	+0.6
TNTI	Ternate	30.99	96	eP	P	07 43 18.9	-1.9
	comp=Z,92nm,1.2s						
YHNB	Yeheng	31.03	48	eP	P	07 43 20.1	-1.0
	comp=Z,173nm,1.3s						
YHNB				LR	LR		
	comp=Z,33µm,19.0s						
SOEI	Soe	31.09	118	eP	P	07 43 20.2	-1.7
	comp=Z,232nm,0.8s						
SOEI				LR	LR		
	comp=Z,57µm,21.0s						
TATO	Taipei	31.29	47	eP	P	07 43 24.1	+0.8
	comp=Z,409nm,1.8s						
TATO				LR	LR		
	comp=Z,22µm,20.0s						
XAN	Xi'an	31.37	20	eP	P	07 43 23.5	-0.5
	comp=Z,503nm,1.4s						
XAN				LR	LR		
	comp=Z,42µm,18.0s						
XAN	Xi'an	31.37	20	P	P	07 43 23.8	-0.2
XAN				pP	pP	07 43 32.8	+1.0
XAN				sP	sP	07 43 37.3	+2.2
XAN				S	S	07 48 27.3	-2.7
XAN				sS	sS	07 48 41.9	-0.6
XAN				SS	ScP	07 50 17.9	+19
XAN				pmax	pmax		
	comp=Z,260nm,1.3s						
XAN				pmax	pmax		
	comp=Z,2µm,6.7s						
XAN				LR	LR		
	comp=Z,27µm,21.7s						
XAN				LR	LR		
	comp=Z,72µm,17.5s						
XAN				LR	LR		
	comp=Z,40µm,16.7s						
XAN	Xi'an	31.37	20	eP	P	07 43 23.5	-0.5
XAN				pmax	pmax		
	comp=Z,503nm,1.4s						
XAN				MLR	MLR		
	comp=Z,42µm,18.0s						
BHJ	Bhuj	31.88	308	eP	P	07 43 28.9	+0.4
BHJ				IAmb	IAmb	07 43 34.2	
	comp=Z,301nm,1.4s						
BHJ				IAMs_20	IAMs_20	07 57 21.3	
	comp=Z,40µm,16.3s						
LZH	Lanzhou	31.95	11	⇓P	P	07 43 30.2	+1.0
LZH				sP	pP	07 43 38.0	+1.0
LZH				S	S	07 48 42.8	+3.6
LZH				sS	pS	07 48 49.4	+1.5
LZH				SS	SnSn	07 50 32.4	+3.4
LZH				pmax	pmax		
	comp=Z,67nm,1.4s						
LZH				pmax	pmax		
	comp=Z,2µm,5.4s						
LZH				LR	LR		
	comp=Z,28µm,17.4s						
LZH				LR	LR		
	comp=Z,53µm,16.3s						
LZH				LR	LR		
	comp=Z,37µm,17.1s						
SMLA	Simla	32.02	327	eP	P	07 43 28.4	-1.2
SMLA				IAmb	IAmb	07 43 36.4	
YOJ	Yonaguni jima	32.13	50	PFAKE		07 43 40.0	+9.3
YOJ				LR	LR		
	comp=Z,21µm,20.0s						
GIRL	Giralia	32.19	148	eP	P	07 43 31.0	-0.2
	comp=Z,301nm,1.1s						
GIRL				LR	LR		
	comp=Z,51µm,22.0s						
GIRL	Giralia	32.19	148	P	P	07 43 32.5	+1.4
	baz=32,SNR=5.7						
BHK	Bhakra	32.65	327	ex	P	07 43 36.0	+0.8
DHRM	DHARAMSHALA	33.35	328	eP	P	07 43 40.8	-0.8
THN	Thein Dam	33.81	327	eP	P	07 43 46.6	+1.4
MBWA	Marble Bar	34.28	139	PFAKE		07 44 00.0	+10
MBWA				LR	LR		
	comp=Z,23µm,22.0s						
NJ2	Nanjing	34.30	35	eP	P	07 43 49.6	+0.1
NJ2				pP	pP	07 43 53.9	-3.5
NJ2				PP	PP	07 45 06.1	-1.4
NJ2				S	S	07 49 19.6	+4.2
NJ2				pmax	pmax		
	comp=Z,160nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,2µm,5.2s						
NJ2				LR	LR		
	comp=Z,58µm,10.4s						
NJ2				LR	LR		
	comp=Z,46µm,13.3s						
NJ2				LR	LR		
	comp=Z,31µm,10.0s						
PSAD1	Pilbara Seismi	34.56	140	PFAKE		07 44 00.0	+8.1
PSAD1				LR	LR		
	comp=Z,26µm,21.0s						
PSAC1	Pilbara Seismi	34.60	140	PFAKE		07 44 00.0	+7.7
PSAC1				LR	LR		
	comp=Z,26µm,22.0s						
PSAB1	Pilbara Seismi	34.64	140	PFAKE		07 44 00.0	+7.4
PSAB1				LR	LR		
	comp=Z,24µm,21.0s						
PSAA2	Pilbara Seismi	34.65	140	PFAKE		07 44 00.0	+7.3
PSAA2				LR	LR		
	comp=Z,25µm,21.0s						
PSAA1	Pilbara Seismi	34.65	140	PFAKE		07 44 00.0	+7.3
PSAA1				LR	LR		
	comp=Z,24µm,21.0s						
PSAB2	Pilbara Seismi	34.65	140	PFAKE		07 44 00.0	+7.3
PSAB2				LR	LR		
	comp=Z,25µm,21.0s						
PSA00	Pilbara Seismi	34.65	140	eP	P	07 43 51.4	-1.4
	comp=Z,265nm,1.6s						
PSA00				LR	LR		
	comp=Z,24µm,21.0s						
PSAD3	Pilbara Seismi	34.66	140	PFAKE		07 44 00.0	+7.2
PSAD3				LR	LR		
	comp=Z,26µm,22.0s						
PSAA3	Pilbara Seismi	34.66	140	PFAKE		07 44 00.0	+7.2
PSAA3				LR	LR		
	comp=Z,25µm,22.0s						
PSAB3	Pilbara Seismi	34.67	140	PFAKE		07 44 00.0	+7.1
PSAB3				LR	LR		
	comp=Z,25µm,21.0s						
PSAC3	Pilbara Seismi	34.68	140	PFAKE		07 44 00.0	+7.0
PSAC3				LR	LR		
	comp=Z,24µm,21.0s						
PSAC2	Pilbara Seismi	34.68	140	PFAKE		07 44 00.0	+7.0
PSAC2				LR	LR		
	comp=Z,25µm,21.0s						
GTA	Gaotai	34.69	4	⇓P	P	07 43 54.2	+1.2
GTA				pP	pP	07 43 58.8	-2.0
GTA				sP	sP	07 44 01.2	-2.8
GTA				PcP	PcP	07 46 29.2	+2.5
GTA				S	S	07 49 24.2	+2.7
GTA				sS	pS	07 49 31.5	+1.2
GTA				ScP	ScP	07 50 15.6	+5.0
GTA				SS	SS	07 51 38.7	-14
GTA				pmax	pmax		
	comp=Z,79nm,1.9s						
GTA				pmax	pmax		
	comp=Z,3µm,9.2s						
GTA				LR	LR		
	comp=Z,16µm,15.2s						
GTA				LR	LR		
	comp=Z,19µm,15.9s						
GTA				LR	LR		
	comp=Z,24µm,15.2s						
PSAD2	Pilbara Seismi	34.76	140	PFAKE		07 44 00.0	+6.3
PSAD2				LR	LR		
	comp=Z,23µm,21.0s						
SSE	Sheshan	35.00	39	PFAKE		07 44 10.0	+14
SSE				LR	LR		
	comp=Z,25µm,18.0s						
SSE	Sheshan	35.00	39	P	P	07 43 58.6	+3.0
SSE				S	S	07 49 30.0	+3.7
SSE				pmax	pmax		
	comp=Z,420nm,5.1s						
SSE				LR	LR		
	comp=Z,2µm,22.2s						
SSE				LR	LR		
	comp=Z,6µm,20.2s						
TIY	Taiyuan	35.92	22	eP	P	07 44 07.7	+4.2
TIY				S	S	07 49 45.1	+4.7
TIY				pmax	pmax		
	comp=Z,75nm,0.5s						
TIY				pmax	pmax		
	comp=Z,2µm,7.3s						
TIY				LR	LR		
	comp=Z,29µm,10.5s						
TIY				LR	LR		
	comp=Z,52µm,13.9s						
TIY				LR	LR		
	comp=Z,32µm,15.4s						
NIL	Nilore	36.08	326	eP	P	07 44 04.0	-0.9
	comp=Z,189nm,0.8s						
NIL				LR	LR		
	comp=Z,28µm,20.0s						
NIL	Nilore	36.08	326	eP	P	07 44 04.0	-0.9
NIL				pmax	pmax		
	comp=Z,189nm,0.8s						
NIL				MLR	MLR		
	comp=Z,28µm,20.0s						
FAKI	Fak Fak	36.43	101	eP	P	07 44 06.6	-1.6
	comp=Z,385nm,1.2s						
FAKI				LR	LR		
	comp=Z,14µm,20.0s						
TIA	Tai'an	36.62	28	P	P	07 44 11.3	+1.8
TIA				S	S	07 49 53.8	+2.7
TIA				sS	sS	07 50 03.7	-0.2
TIA				pmax	pmax		
	comp=Z,1µm,3.5s						
TIA				LR	LR		
	comp=Z,30µm,17.7s						
TIA				LR	LR		
	comp=Z,68µm,18.4s						
TIA				LR	LR		
	comp=Z,22µm,17.6s						
SAUI	Saumlaki	36.85	110	PFAKE		07 44 20.0	+8.3
SAUI				LR	LR		
	comp=Z,27µm,19.0s						
JOW	Kunigami	37.41	51	eP	P	07 44 15.6	-0.8
	comp=Z,130nm,0.8s						
JOW				LR	LR		
	comp=Z,11µm,21.0s						
KNRA	Kununurra	37.74	123	P	P	07 44 16.5	-2.7
	baz=38,SNR=25						
BTO	Baotou	37.75	17	eP	P	07 44 21.1	+2.0
BTO				S	S	07 50 06.1	-2.1
MEEK	Meekatharra	37.75	147	P	P	07 44 19.2	0.0
	baz=38,SNR=22						
PALU	Palau	37.77	84	P	P	07 44 18.9	-0.6
	baz=38,SNR=10						
MORW	Morawa	38.42	152	eP	P	07 44 25.0	+0.2
	comp=Z,196nm,1.1s						
MORW				LR	LR		
	comp=Z,21µm,20.0s						
MORW	Morawa	38.42	152	P	P	07 44 24.9	+0.2
	baz=38,SNR=46						
HHC	Hu-ho-hao-te	38.43	18	P	P	07 44 27.4	+2.5
HHC				pP	pP	07 44 30.4	-2.4
HHC				S	S	07 50 22.0	+3.3
HHC				pmax	pmax		
	comp=Z,670nm,6.6s						
HHC				LR	LR		
	comp=Z,43µm,18.6s						
HHC				LR	LR		
	comp=Z,81µm,18.1s						
MTN	Manton Dam	38.49	117	eP	P	07 44 23.8	-1.8
	comp=Z,136nm,1.0s						
MTN				LR	LR		
	comp=Z,25µm,19.0s						
MTN	Manton Dam	38.49	117	P	P	07 44 23.6	-2.0
	baz=38,SNR=14						
KBL	Kabul	39.16	323	eP	P	07 44 30.7	-0.5
	comp=Z,45nm,1.0s						
KBL				LR	LR		
	comp=Z,30µm,20.0s						
KBL	Kabul	39.16	323	eP	P	07 44 30.7	-0.5
KBL				pmax	pmax		
	comp=Z,45nm,1.0s						
KBL				MLR	MLR		
	comp=Z,30µm,20.0s						
BJT	Baijiatuau	39.36	24	eP	P	07 44 33.4	+0.9
BJT				LR	LR		
	comp=Z,18µm,19.0s						
BJT	Baijiatuau	39.36	24	eP	P	07 44 33.4	+0.9
BJT				MLR	MLR		
	comp=Z,18µm,19.0s						
KSH	Kashi	39.37	335	P	P	07 44 32.4	-0.3
KSH				pP	PP	07 46 02.2	-1.1
KSH				PcP	PcP	07 46 50.4	+9.5
KSH				PcS	PcS	07 50 37.7	+6.9
KSH				pmax	pmax		
	comp=Z,51nm,1.2s						
KSH				pmax	pmax		
	comp=Z,550nm,4.3s						
KSH				LR	LR		
	comp=N,3µm,10.6s						
KSH				LR	LR		
	comp=E,16µm,21.9s						
KSH				LR	LR		
	comp=Z,6µm,18.0s						
KSH	Kashi	39.37	335	P	P	07 44 31.4	-1.3
KSH				pP	pP	07 44 35.7	-5.1
KSH				PP	PnPn	07 46 06.4	+0.2
KSH				PcP	PcP	07 46 40.7	-0.2
KSH				S	S	07 50 30.5	-2.3
KSH				SS	SS	07 53 16.7	-10
KSH				pmax	pmax		
	comp=Z,51nm,1.2s						
KSH				pmax	pmax		
	comp=Z,850nm,6.8s						
KSH				LR	LR		
	comp=Z,4µm,13.0s						
KSH				LR	LR		
	comp=Z,20µm,15.7s						
KSH				LR	LR		
	comp=Z,38µm,24.9s						
BJI	Beijing	39.38	24	P	P	07 44 34.9	+2.2
BJI				S	S	07 50 37.3	+4.6
BJI				pmax	pmax		
	comp=Z,370nm,1.2s						
BJI				LR	LR		
	comp=Z,9µm,19.6s						
BJI				LR	LR		
	comp=Z,4µm,21.6s						
BJI				LR	LR		
	comp=Z,7µm,22.1s						
KDU	Kakadu	39.62	116	P	P	07 44 32.1	-2.9
	baz=40,SNR=45						
WMQ	Urumqi	39.75	350	eP	P	07 44 36.3	+0.5
	comp=Z,102nm,1.0s						
WMQ				LR	LR		
	comp=Z,15µm,22.0s						
WMQ	Urumqi	39.75	350	P	P	07 44 37.9	+2.1
WMQ				pP	pP	07 44 43.7	-0.2
WMQ				PP	PnPn	07 46 13.6	+2.9
WMQ				S	S	07 50 42.0	+3.7
WMQ				SS	SS	07 53 30.8	-3.9
WMQ				pmax	pmax		
	comp=Z,64nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,2µm,4.5s						
WMQ				LR	LR		
	comp=Z,6µm,19.7s						
WMQ				LR	LR		
	comp=Z,11µm,20.7s						
WMQ				LR	LR		
	comp=Z,22µm,23.1s						
WMQ	Urumqi	39.75	350	eP	P	07 44 36.3	+0.5
WMQ				pmax	pmax		
	comp=Z,102nm,1.0s						
WMQ				MLR	MLR		
	comp=Z,15µm,22.0s						
BLDU	Ballidu	40.04	153	P	P	07 44 39.6	+1.3
	baz=40,SNR=18						
DL2	Dalian	40.95	30	P	P	07 44 50.0	+4.3
DL2				S	S	07 51 00.6	+4.5
DL2				pmax	pmax		
	comp=Z,550nm,0.9s						
DL2				pmax	pmax		
	comp=Z,3µm,6.6s						
DL2				LR	LR		
	comp=Z,38µm,23.2s						
DL2				LR	LR		
	comp=Z,57µm,23.7s						
DL2				LR	LR		
	comp=Z,30µm,17.4s						
PRZ	Przheval'sk	40.96	339	eP	P	07 44 46.6	+0.6
	comp=Z,133nm,1.0s						

PRZ				LR	LR		
	comp=Z,18µm,20.0s						
PRZ	**Przheval'sk**	**40.96**	**339**	*e*P	**P**	**07 44 46.6**	**+0.6**
PRZ				pmax	pmax		
	comp=Z,133nm,1.0s						
PRZ				MLR	MLR		
	comp=Z,18µm,20.0s						
MUN	**Mundaring**	**40.97**	**154**	P	**P**	**07 44 47.1**	**+1.1**
	baz=41,SNR=24						
KDJ	**Kajisay**	**41.10**	**338**	*e*P	**P**	**07 44 47.4**	**+0.2**
	comp=Z,196nm,1.1s						
KDJ				LR	LR		
	comp=Z,13µm,22.0s						
KDJ	**Kajisay**	**41.10**	**338**	*e*P	**P**	**07 44 47.4**	**+0.2**
KDJ				pmax	pmax		
	comp=Z,196nm,1.1s						
KDJ				MLR	MLR		
	comp=Z,13µm,22.0s						
UZB	**Uzynbulak**	**41.34**	**340**	*e*P	**P**	**07 44 49.0**	**0.0**
UZB				*e*S	**S**	**07 50 54.4**	**-7.8**
UZB	**Uzynbulak**	**41.34**	**340**	*e*P	**P**	**07 44 49.0**	**0.0**
UZB				*e*S	**S**	**07 50 54.4**	**-7.8**
KLBR	**Kellerberrin**	**41.34**	**152**	P	**P**	**07 44 49.5**	**+0.4**
	baz=41,SNR=106						
PDGK	**Podgornoye**	**41.35**	**341**	P	**P**	**07 44 48.9**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,167nm,1.4s						
SATY	**Saty**	**41.47**	**340**	*e*P	**P**	**07 44 49.8**	**-0.3**
SATY				*e*		07 46 30.6	
SATY				*e*S	**S**	**07 51 06.0**	**+1.9**
SATY				pmax	pmax		
	comp=Z,180nm,1.8s						
SATY				smax	smax		
	comp=N,368nm,5.7s						
SATY	**Saty**	**41.47**	**340**	*e*P	**P**	**07 44 49.9**	**-0.3**
	comp=N,180nm,1.8s						
SATY				*e*PP	**PP**	**07 46 30.6**	**+4.5**
SATY				*e*S	**S**	**07 51 06.0**	**+1.9**
	comp=N,368nm,5.7s						
ULHL	**Ulahol**	**41.55**	**337**	P	**P**	**07 44 51.1**	**+0.2**
	SNR=20						
ZHN	**Zhinishke**	**41.55**	**340**	*e*P	**P**	**07 44 49.7**	**-1.1**
ZHN				pmax	pmax		
	comp=Z,50nm,1.5s						
ZHN	**Zhinishke**	**41.55**	**340**	*e*P	**P**	**07 44 49.8**	**-1.1**
	comp=Z,50nm,1.5s						
GAR	**Garm**	**41.64**	**329**	*e*P	**P**	**07 44 50.5**	**-1.1**
	comp=Z,679nm,1.4s						
GAR				LR	LR		
	comp=Z,72µm,19.0s						
GAR	**Garm**	**41.64**	**329**	*e*P	**P**	**07 44 50.5**	**-1.1**
GAR				pmax	pmax		
	comp=Z,679nm,1.4s						
GAR				MLR	MLR		
	comp=Z,72µm,19.0s						
KPKS	**Kokpek**	**41.73**	**340**	*e*P	**P**	**07 44 51.7**	**-0.5**
KPKS				*e*		07 46 32.7	
KPKS				*e*S	**S**	**07 51 06.2**	**-1.7**
KPKS				pmax	pmax		
	comp=Z,67nm,1.3s						
KPKS				smax	smax		
	comp=N,374nm,6.2s						
KPKS	**Kokpek**	**41.73**	**340**	*e*P	**P**	**07 44 51.7**	**-0.5**
	comp=N,67nm,1.3s						
KPKS				*e*PP	**PP**	**07 46 32.8**	**+3.8**
KPKS				*e*S	**S**	**07 51 06.3**	**-1.7**
	comp=N,374nm,6.2s						
KPKS				*e*LR	LR	08 05 17.0	
	comp=N,6µm,18.4s						
KZA	**Kyzart**	**41.81**	**336**	P	**P**	**07 44 53.7**	**+0.5**
	SNR=30						
BOOM	**Boomskoye usch**	**41.88**	**337**	*e*P	**P**	**07 44 53.4**	**-0.2**
	comp=N,89nm,1.0s						
BOOM				LR	LR		
	comp=Z,23µm,21.0s						
BOOM	**Boomskoye usch**	**41.88**	**337**	*e*P	**P**	**07 44 53.4**	**-0.2**
BOOM				pmax	pmax		
	comp=Z,89nm,1.0s						
BOOM				MLR	MLR		
	comp=Z,23µm,21.0s						
CHGR	**Chuyangaron**	**42.00**	**327**	PFAKE		07 45 10.0	+16
CHGR				LR	LR		
	comp=Z,115µm,20.0s						
MSEY	**Mahe Island**	**42.10**	**258**	*e*P	**P**	**07 44 56.1**	**+0.5**
	comp=Z,256nm,0.9s						
MSEY				LR	LR		
	comp=Z,20µm,19.0s						
MSEY	**Mahe Island**	**42.10**	**258**	*i* P	**P**	**07 44 59.3**	**+3.7**
	SNR=8.7						
MSEY	**Mahe Island**	**42.10**	**258**	*e*P	**P**	**07 44 56.1**	**+0.5**
MSEY				pmax	pmax		
	comp=Z,256nm,0.9s						
MSEY				MLR	MLR		
	comp=Z,20µm,19.0s						
AAA	**Alma-Ata**	**42.13**	**338**	*e*P	**P**	**07 44 57.5**	**+2.1**
AAA				*e*S	**S**	**07 51 13.5**	**-0.2**
AAA				pmax	pmax		
	comp=Z,1µm,6.0s						
AAA	**Alma-Ata**	**42.13**	**338**	*e*LR	LR	08 05 02.9	
	comp=Z,6µm,19.2s						
BTK	**Batken**	**42.18**	**330**	*e*P	**P**	**07 44 56.3**	**+0.3**
	comp=Z,524nm,1.5s						
BTK				LR	LR		
	comp=Z,47µm,20.0s						
BTK	**Batken**	**42.18**	**330**	*e*P	**P**	**07 44 56.3**	**+0.3**
BTK				pmax	pmax		
	comp=Z,524nm,1.5s						
BTK				MLR	MLR		
	comp=Z,47µm,20.0s						
NWAO	**Narrogin (SRO)**	**42.23**	**154**	LR	LR	08 00 53.6	
	comp=Z,33µm,21.9s,baz=336,slow=34						
NWAO	**Narrogin (SRO)**	**42.23**	**154**	*e*P	**P**	**07 44 56.6**	**+0.3**
	comp=Z,301nm,1.0s						
NWAO				LR	LR		
	comp=Z,30µm,21.0s						
NWAO	**Narrogin (SRO)**	**42.23**	**154**	P	**P**	**07 44 57.0**	**+0.7**
	baz=42,SNR=31						
UCH	**Uchtor**	**42.23**	**335**	P	**P**	**07 44 57.1**	**+0.3**
	SNR=49						
TJN	**Taejon**	**42.35**	**38***c*	*i*P	**P**	**07 44 58.6**	**+1.4**
TKM2	**Tokmak 2**	**42.38**	**337**	*i* P	**P**	**07 44 57.8**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,141nm,1.3s						
TKM2	**Tokmak 2**	**42.38**	**337**	P	**P**	**07 44 58.0**	**+0.3**
	SNR=56						
KBK	**Karagaybulak**	**42.41**	**336**	P	**P**	**07 44 59.1**	**+1.3**
	SNR=9.0						
AML	**Almayashu**	**42.50**	**335**	P	PP	07 46 28.3	-9.3
	SNR=12						
AAK	**Ala-Archa**	**42.58**	**336**	P	**P**	**07 44 59.8**	**+0.6**
	comp=Z,34nm,1.0s,baz=127,slow=9.9						
AAK				ScP	**ScP**	**07 50 41.4**	**+0.7**
	comp=Z,19nm,0.9s,baz=168,slow=6.2,SNR=4.8						
AAK				LR	LR	08 04 24.3	
	comp=Z,26µm,21.2s,baz=142,slow=39						
AAK	**Ala-Archa**	**42.58**	**336**	*e*P	**P**	**07 44 59.6**	**+0.4**
	comp=Z,168nm,1.3s						
AAK				LR	LR		
	comp=Z,40µm,22.0s						
AAK	**Ala-Archa**	**42.58**	**336**	*i* P	**P**	**07 44 58.7**	**-0.6**
	SNR=34						
AAK	**Ala-Archa**	**42.58**	**336***d*	*i*P	**P**	**07 45 00.4**	**+1.2**
AAK				pmax	pmax		
	comp=Z,88nm,1.1s						
AAK				MLR	MLR		
	comp=Z,43µm,22.0s						
AAK	**Ala-Archa**	**42.58**	**336**	P	**P**	**07 45 00.6**	**+1.3**
	SNR=26						
FRU1	**Bishkek**	**42.67**	**336**	PFAKE		07 45 10.0	+10
FRU1				LR	LR		
	comp=Z,27µm,22.0s						
JNU	**Nakatsue**	**42.68**	**44**	*e*P	**P**	**07 44 59.9**	**-0.2**
	comp=Z,200nm,1.1s						
JNU				LR	LR		
	comp=Z,18µm,20.0s						
WRKA	**Warakurna**	**42.70**	**135**	P	**P**	**07 44 59.0**	**-1.3**
	baz=43,SNR=48						
CHMS	**Chumysh**	**42.78**	**336**	P	**P**	**07 45 01.3**	**+0.7**
	SNR=19						
EKS2	**Erkin-Say**	**42.90**	**335**	P	**P**	**07 45 02.1**	**+0.3**
	SNR=24						
KUU	**Kurty**	**42.93**	**338**	*e*P	**P**	**07 45 00.7**	**-1.1**
KUU				*i* S	**S**	**07 51 24.9**	**-0.5**
KUU				pmax	pmax		
	comp=Z,127nm,1.2s						
KUU				smax	smax		
	comp=E,942nm,5.6s						
KUU				MLR	MLR		
	comp=Z,8µm,18.0s						
KUU	**Kurty**	**42.93**	**338**	*e*P	**P**	**07 45 00.8**	**-1.1**
	comp=Z,127nm,1.2s						
KUU				*i* S	**S**	**07 51 24.9**	**-0.5**
	comp=Z,942nm,5.6s						
KUU				*e*LR	LR	08 05 06.9	
	comp=Z,8µm,17.7s						
USP	**Ospenovka**	**43.10**	**336**	P	**P**	**07 45 03.5**	**+0.2**
	SNR=38						
TDK	**Taldyqorghan**	**43.19**	**341**	*e*P	**P**	**07 45 03.2**	**-0.8**
TDK				*e*		07 46 45.5	
TDK				MLR	MLR		
	comp=Z,15µm,27.0s						
TDK	**Taldyqorghan**	**43.19**	**341**	*e*P	**P**	**07 45 03.2**	**-0.8**
TDK				*e*PP	**PP**	**07 46 45.5**	**+0.9**
TDK				*e*LR	LR	08 02 27.7	
	comp=Z,15µm,27.2s						
SGDS	**Sogindy**	**43.21**	**337**	*e*P	**P**	**07 45 03.6**	**-0.6**
	comp=Z,244nm,3.8s						
SGDS				*e*S	**S**	**07 51 29.4**	**-0.2**
	comp=Z,288nm,5.7s						
SGDS				*e*LR	LR	08 02 27.7	
	comp=Z,17µm,25.4s						
KMBL	**Kambalda**	**43.22**	**148**	P	**P**	**07 45 05.0**	**+0.6**
	baz=43,SNR=37						
KS15	**Wonju Array Si**	**43.36**	**37**	*e*P	**P**	**07 45 06.4**	**+0.9**
	comp=Z,65nm,1.4s						
KSRS	**Korea Array**	**43.40**	**37**	P	**P**	**07 45 05.8**	**+0.2**
	comp=Z,80nm,0.8s,baz=226,slow=9.1,SNR=73						
KSRS				LR	LR	08 05 49.0	
	comp=Z,17µm,18.7s,baz=230,slow=40						
RKGY	**Rocky Gully**	**43.56**	**155**	P	**P**	**07 45 08.6**	**+1.6**
	baz=44,SNR=7.0						
UOSS	**Minazif**	**43.67**	**302**	*e*P	**P**	**07 45 08.7**	**+0.5**
	comp=Z,61nm,0.9s						
UOSS				LR	LR		
	comp=Z,7µm,20.0s						
UOSS	**Minazif**	**43.67**	**302**	*i* P	**P**	**07 45 08.1**	**0.0**
	SNR=10						
HATD	**Hatta, Dubai**	**43.69**	**301**	*i* P	**P**	**07 45 09.3**	**+1.0**
	SNR=15						
ASHO	**Ashiyiah**	**43.70**	**301**	*i* P	**P**	**07 45 09.4**	**+0.9**
	SNR=34						
MK31	**Makanchi Array**	**43.73**	**346**	*e*P	**P**	**07 45 07.2**	**-1.0**
	comp=Z,90nm,0.9s						
MK31	**Makanchi Array**	**43.73**	**346**	*i* P	**P**	**07 45 07.3**	**-1.0**
MK31				pmax	pmax		
	comp=Z,59nm,0.8s						
MKAR	**Makanchi Array**	**43.73**	**346**	P	**P**	**07 45 06.7**	**-1.6**
	comp=Z,41nm,0.7s,baz=156,slow=6.4,SNR=164						
MKAR				ScP	**ScP**	**07 50 44.3**	**-0.8**
	comp=Z,6.0nm,0.9s,baz=120,slow=5.2,SNR=4.5						
MKAR				LR	LR	08 08 02.3	
	comp=Z,10µm,18.5s,baz=171,slow=43						
MKAR				PKPPKP		08 17 01.8	
	comp=Z,0.6nm,0.8s,baz=356,slow=1.6,SNR=3.7						
ALNE	**Al Ain**	**43.75**	**300**	*i* P	**P**	**07 45 10.5**	**+1.7**
	SNR=30						
ZSN	**Zaisan**	**43.78**	**349**	*e*P	**P**	**07 45 08.5**	**-0.1**
ZSN				*e*		07 46 49.8	
ZSN				pmax	pmax		
	comp=Z,98nm,3.1s						
ZSN	**Zaisan**	**43.78**	**349**	*e*P	**P**	**07 45 08.6**	**-0.1**
	comp=Z,98nm,3.1s						
ZSN				*e*PP	**PP**	**07 46 49.8**	**-1.1**
SONM	**Songino Array**	**43.80**	**10**	P	**P**	**07 45 09.2**	**+0.2**
	comp=Z,39nm,0.6s,baz=191,slow=9.1,SNR=77						
SONM				PcP	**PcP**	**07 46 55.6**	**+0.3**
	comp=Z,24nm,0.8s,baz=200,slow=3.8,SNR=3.1						
SONM				ScP	**ScP**	**07 50 45.3**	**-0.2**
	comp=Z,4.7nm,1.1s,baz=197,slow=4.5,SNR=3.3						
SONM				LR	LR	08 07 08.1	
	comp=Z,25µm,18.3s,baz=188,slow=41						
SONM				PKPPKP		08 16 57.5	
	comp=Z,0.3nm,0.4s,baz=5.7,slow=1.4,SNR=2.1						
MAKZ	**Makanchi**	**43.82**	**346**	*e*P	**P**	**07 45 07.6**	**-1.4**
	comp=Z,72nm,0.9s						
MAKZ				LR	LR		
	comp=Z,11µm,22.0s						
MAKZ	**Makanchi**	**43.82**	**346**	P	**P**	**07 45 08.0**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,60nm,0.9s						
MSFE	**Esma-Masafi**	**43.86**	**302**	*i* P	**P**	**07 45 10.9**	**+1.2**
	SNR=7.6						
BANOM	**Banah**	**43.94**	**303**	P	**P**	**07 45 10.2**	**-0.2**
ULN	**Ulaanbaatar**	**43.95**	**10**	*e*P	**P**	**07 45 10.7**	**+0.5**
	comp=Z,104nm,1.1s						
ULN				LR	LR		
	comp=Z,14µm,19.0s						
ULN	**Ulaanbaatar**	**43.95**	**10***d*	*i*P	**P**	**07 45 11.3**	**+1.1**
ULN				pmax	pmax		
	comp=Z,124nm,1.3s						
ULN				MLR	MLR		
	comp=Z,23µm,17.0s						
FAQ	**Al Faqa, Dubai**	**44.12**	**301**	*i* P	**P**	**07 45 13.0**	**+1.2**
	SNR=6.9						
SHME	**Shamm**	**44.12**	**303**	P	**P**	**07 45 12.6**	**+0.8**
SNY	**Shenyang**	**44.13**	**29**	⇓P	**P**	**07 45 12.3**	**+0.8**
SNY				PP	**PcP**	**07 46 58.9**	**+2.5**
SNY				S	**S**	**07 51 42.0**	**-1.0**
SNY				sS	**pS**	**07 51 52.8**	**+0.6**
SNY				ScS	**ScS**	**07 55 07.6**	**-1.1**
SNY				pmax	pmax		
	comp=Z,270nm,0.9s						
SNY				pmax	pmax		
	comp=Z,2µm,6.5s						
SNY				LR	LR		
	comp=Z,36µm,23.5s						
SNY				LR	LR		
	comp=Z,51µm,23.5s						
SNY				LR	LR		
	comp=Z,46µm,21.1s						
JBG	**Jabagly**	**44.14**	**332**	*e*P	**P**	**07 45 11.7**	**-0.1**
JBG				*i* S	**S**	**07 51 43.3**	**-0.1**
JBG				pmax	pmax		
	comp=Z,71nm,1.9s						
JBG				smax	smax		
	comp=E,170nm,4.2s						
JBG				MLR	MLR		
	comp=Z,16µm,20.0s						
NAZ	**Nazwa, Dubai**	**44.15**	**301**	*i* P	**P**	**07 45 13.1**	**+1.1**
	SNR=12						
IUG	**Iuzhnay**	**44.16**	**332**	*e*P	**P**	**07 45 11.5**	**-0.5**
IUG				MLR	MLR		
	comp=Z,2µm,20.0s						
IUG	**Iuzhnay**	**44.16**	**332**	*e*P	**P**	**07 45 11.5**	**-0.5**
IUG				*e*LR	LR	08 03 07.3	
	comp=Z,2µm,20.5s						
ASUD	**Al Ashush, Dub**	**44.31**	**301**	*i* P	**P**	**07 45 14.8**	**+1.5**
	SNR=129						
WC1	**Warramunga Arr**	**44.45**	**125**	PFAKE		07 45 20.0	+5.6
WC1				LR	LR		
	comp=Z,16µm,21.0s						
WRA	**Warramunga Arr**	**44.46**	**125**	P	**P**	**07 45 12.3**	**-2.2**
	comp=Z,147nm,0.6s,baz=293,slow=10,SNR=167						
WRA				ScP	**ScP**	**07 50 49.3**	**+0.7**
	comp=Z,20nm,1.0s,baz=297,slow=3.7,SNR=6.8						
WRAB	**Tennant Creek**	**44.46**	**125**	*e*P	**P**	**07 45 12.3**	**-2.2**
	comp=Z,218nm,0.7s						
WRAB				LR	LR		
	comp=Z,26µm,22.0s						
WRAB	**Tennant Creek**	**44.46**	**125***d*	*i*P	**P**	**07 45 12.6**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,229nm,0.7s						
WRAB				MLR	MLR		
	comp=Z,28µm,23.0s						
WB2	**Warramunga Arr**	**44.47**	**125**	*e*P	**P**	**07 45 12.6**	**-2.0**
	comp=Z,227nm,0.7s						
WB2				LR	LR		
	comp=Z,26µm,22.0s						
WC2	**Warramunga Arr**	**44.47**	**125**	PFAKE		07 45 20.0	+5.4
WC2				LR	LR		
	comp=Z,25µm,22.0s						
AJN	**Ajban**	**44.58**	**301**	*i* P	**P**	**07 45 16.4**	**+1.0**
	SNR=30						
JAY	**Jayapura**	**44.66**	**98**	LR	LR	08 04 29.0	
	comp=Z,8µm,21.9s,baz=254,slow=37						
KK31	**Karatay Array**	**44.68**	**333**	*i* P	**P**	**07 45 15.6**	**-0.4**
KK31				pmax	pmax		
	comp=Z,47nm,1.1s						
KKAR	**Karatay Array**	**44.68**	**333**	*e*P	**P**	**07 45 15.4**	**-0.6**
	comp=Z,116nm,1.1s						
KKAR	**Karatay Array**	**44.68**	**333**	*e*P	**P**	**07 45 15.4**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,116nm,1.1s						
BTLS	**Baital**	**44.77**	**337**	*e*P	**P**	**07 45 15.8**	**-0.8**
BTLS				*e*S	**S**	**07 51 50.2**	**-2.0**
BTLS				pmax	pmax		
	comp=Z,54nm,2.0s						
BTLS				smax	smax		
	comp=E,177nm,5.4s						
BTLS				MLR	MLR		
	comp=Z,3µm,17.0s						
BTLS	**Baital**	**44.77**	**337**	*e*P	**P**	**07 45 15.8**	**-0.8**
	comp=Z,54nm,2.0s						
BTLS				*e*S	**S**	**07 51 50.2**	**-2.0**
	comp=Z,178nm,5.4s						
BTLS				*e*LR	LR	08 05 33.9	
	comp=Z,3µm,17.3s						
MZR	**Muzera**	**45.40**	**298**	*i* P	**P**	**07 45 23.4**	**+1.4**
	SNR=44						
ZAK	**Zakamensk**	**45.88**	**6**	*e*P	P	07 45 41.9	+16
ZAK				pmax	pmax		
	comp=Z,78nm,1.7s						
ASAR	**Alice Springs**	**46.03**	**129**	P	**P**	**07 45 24.8**	**-2.2**
	comp=Z,137nm,0.7s,baz=301,slow=7.7,SNR=137						
ASAR				PcP	**PcP**	**07 47 01.8**	**-1.6**
	comp=Z,56nm,0.9s,baz=301,slow=3.8,SNR=5.1						
ASAR				ScP	**ScP**	**07 50 55.4**	**+0.3**
	comp=Z,16nm,1.0s,baz=302,slow=4.0,SNR=6.8						
ASAR				S	**S**	**07 52 09.2**	**-1.8**
	comp=Z,5.1nm,0.9s,baz=302,slow=14,SNR=5.8						
ASAR				ScS	**ScS**	**07 55 24.1**	**+2.5**
	comp=Z,2.6nm,0.9s,baz=292,slow=7.5,SNR=5.1						
ASAR				LR	LR	08 04 40.1	
	comp=Z,23µm,21.7s,baz=300,slow=36						
ASAR				PKPPKP	**P'P'df**	**08 16 53.0**	**-2.8**
	comp=Z,0.6nm,0.8s,baz=131,slow=2.6,SNR=3.4						
AS31	**Alice Springs**	**46.03**	**129**	*e*P	**P**	**07 45 25.2**	**-1.8**
	comp=Z,88nm,0.9s						
FORT	**Forrest**	**46.35**	**142**	*e*P	**P**	**07 45 29.2**	**-0.2**
	comp=Z,219nm,1.0s						
FORT				LR	LR		
	comp=Z,21µm,19.0s						
FORT	**Forrest**	**46.35**	**142**	P	**P**	**07 45 29.8**	**+0.5**
	baz=46,SNR=32						
CN2	**Changchun**	**46.52**	**29**	⇑P	**P**	**07 45 31.6**	**+1.1**
CN2				*e*PP	**PP**	**07 47 22.0**	**+1.9**
CN2				*e*S	**S**	**07 52 19.3**	**+1.8**
CN2				pmax	pmax		
	comp=Z,1µm,7.0s						
CN2				LR	LR		
	comp=Z,32µm,22.0s						
CN2				LR	LR		
	comp=Z,42µm,22.0s						
CN2				LR	LR		
	comp=Z,23µm,22.0s						
TLY	**Talaya**	**47.20**	**6**	*e*P	**P**	**07 45 35.8**	**+0.1**
	comp=Z,52nm,0.9s						
TLY				LR	LR		
	comp=Z,19µm,21.0s						
TLY	**Talaya**	**47.20**	**6***d*	*i*P	**P**	**07 45 37.8**	**+2.1**
TLY				*e*		07 47 28.1	
TLY				*e*S	**S**	**07 52 30.3**	**+3.3**
TLY				*e*SSS	SSS	07 56 52.7	
TLY				pmax	pmax		
	comp=Z,223nm,1.6s						
TLY				MLR	MLR		
	comp=Z,41µm,16.0s						
RER	**Riviere de l'E**	**47.57**	**236**	*e*P	**P**	**07 45 40.0**	**+0.9**
	comp=Z,585nm,1.0s						
RER				LR	LR		
	comp=Z,8µm,20.0s						
SEM	**Semipalatinsk**	**47.59**	**346**	*e*LR	LR	08 07 42.1	
	comp=Z,4µm,18.2s						
IRK	**Irkutsk**	**47.83**	**6**	*e*P	**P**	**07 45 43.3**	**+2.8**
IRK				pmax	pmax		
	comp=Z,384nm,2.2s						
OTUK	**Ortayu**	**48.10**	**338**	P	**P**	**07 45 42.5**	**-0.2**
OTUK				pmax	pmax		
	comp=Z,133nm,1.2s						
INU	**Inuyama**	**48.17**	**45**	*e*P	**P**	**07 45 42.8**	**-0.7**
	comp=Z,202nm,1.2s						
INU				LR	LR		
	comp=Z,21µm,20.0s						
GEYT	**Alibeck**	**48.18**	**319**	P	**P**	**07 45 43.2**	**-0.3**
	comp=Z,69nm,1.1s,baz=134,slow=6.4,SNR=39						
GEYT				LR	LR	08 08 01.7	
	comp=Z,34µm,20.1s,baz=125,slow=39						
GYA0B	**ALIBECK ARRAY**	**48.18**	**319**	*e*P	**P**	**07 45 43.5**	**-0.1**
	comp=Z,87nm,0.8s						
GYA0B				LR	LR		
	comp=Z,33µm,20.0s						
KURBB	**Kurchatov Arra**	**48.22**	**345**	P	**P**	**07 45 42.6**	**-1.0**
	comp=Z,24nm,0.8s,baz=164,slow=7.0,SNR=111						
KURBB				ScP	**ScP**	**07 51 03.3**	**-0.3**
	comp=Z,13nm,0.9s,baz=164,slow=3.8,SNR=5.8						
KURK	**Kurchatov**	**48.28**	**345**	*e*P	**P**	**07 45 43.5**	**-0.6**
	comp=Z,118nm,1.0s						
KURK				LR	LR		
	comp=Z,18µm,22.0s						
KURK	**Kurchatov**	**48.28**	**345***c*	*i*P	**P**	**07 45 43.9**	**-0.2**
KURK				pmax	pmax		
	comp=Z,99nm,1.1s						
KURK				MLR	MLR		
	comp=Z,22µm,23.0s						
GUMO	**Guam**	**48.41**	**76**	PFAKE		07 46 00.0	+14
GUMO				LR	LR		
	comp=Z,5µm,22.0s						
HIA	**Hailar**	**48.57**	**20**	*e*P	**P**	**07 45 47.0**	**+0.6**
	comp=Z,204nm,1.2s						
HIA				LR	LR		
	comp=Z,31µm,20.0s						
HIA	**Hailar**	**48.57**	**20**	*e*P	**P**	**07 45 47.0**	**+0.6**
HIA				pmax	pmax		
	comp=Z,204nm,1.2s						
HIA				MLR	MLR		
	comp=Z,31µm,20.0s						
QIS	**Mount Isa**	**49.12**	**122**	P	**P**	**07 45 49.5**	**-1.5**
	baz=49,SNR=23						
MDJ	**Mudanjiang**	**49.17**	**31**	*e*P	**P**	**07 45 51.0**	**0.0**
	comp=Z,158nm,1.1s						
MDJ				LR	LR		
	comp=Z,15µm,19.0s						
MDJ	**Mudanjiang**	**49.17**	**31**	P	**P**	**07 45 53.0**	**+2.0**
MDJ				pP	pP	07 45 56.9	-2.2
MDJ				sP	sP	07 45 58.3	-4.0
MDJ				PcP	**PcP**	**07 47 18.3**	**+4.2**
MDJ				PP	**PP**	**07 47 46.8**	**+1.9**
MDJ				ScP	**ScP**	**07 51 13.6**	**+5.7**
MDJ				PcS	**PcS**	**07 51 14.9**	**+4.5**
MDJ				S	**S**	**07 52 56.8**	**+1.7**
MDJ				sS	pS	07 53 02.4	-2.0
MDJ				ScS	**ScS**	**07 55 46.7**	**+5.1**
MDJ				pmax	pmax		
	comp=Z,150nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,3µm,5.8s						
MDJ				LR	LR		
	comp=Z,38µm,21.7s						
MDJ				LR	LR		
	comp=Z,30µm,21.1s						
MDJ				LR	LR		
	comp=Z,28µm,13.9s						
JHJ2	**Mitsune**	**49.19**	**49**	PFAKE		07 46 00.0	+8.7
JHJ2				LR	LR		
	comp=Z,8µm,20.0s						
CIT	**Chita**	**49.24**	**14**	*e*P	**P**	**07 45 52.8**	**+1.4**
CIT				*e*		07 46 01.8	
CIT				*e*		07 53 03.2	
CIT				pmax	pmax		
	comp=Z,218nm,1.3s						
BRZS	**Berezniki**	**49.44**	**340**	*e*P	**P**	**07 45 52.3**	**-0.6**
BRZS				pmax	pmax		
	comp=Z,188nm,3.0s						
BRZS				MLR	MLR		
	comp=Z,5µm,19.0s						
BRZS	**Berezniki**	**49.44**	**340**	*e*P	**P**	**07 45 52.4**	**-0.6**
	comp=Z,188nm,3.0s						
BRZS				*e*LR	LR	08 08 26.2	
	comp=Z,5µm,18.8s						
MAJO	**Matsushiro**	**49.60**	**45**	*e*P	**P**	**07 45 54.2**	**-0.2**
MAJO				LR	LR		
	comp=Z,16µm,20.0s						
MAJO	**Matsushiro**	**49.60**	**45***d*	*i*P	**P**	**07 45 55.5**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,180nm,1.8s						
MAT	**Matsushiro**	**49.60**	**45**	P	**P**	**07 45 53.9**	**-0.5**
MAT				S	**S**	**07 53 01.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**49.60**	**45**	PFAKE		07 46 10.0	+16
MJB9				LR	LR		
	comp=Z,17µm,20.0s						

MJAR	**Matsushiro Arr**	**49.60**	**45**	P	**P**	**07 45 54.8**	**+0.3**
	comp=Z,38nm,0.9s,baz=231,slow=7.6,SNR=40						
MJAR				ScP	**ScP**	**07 51 07.5**	**-2.4**
	comp=Z,2.0nm,0.8s,baz=225,slow=3.2,SNR=3.2						
MJAR				LR	LR	08 06 04.0	
	comp=Z,14µm,21.8s,baz=235,slow=35						
COEN	**Coen**	**49.80**	**113**	*e*P	**P**	**07 45 54.9**	**-1.4**
	comp=Z,473nm,1.8s						
COEN				LR	LR		
	comp=Z,21µm,21.0s						
COEN	**Coen**	**49.80**	**113**	P	**P**	**07 45 54.8**	**-1.4**
	baz=50,SNR=54						
ZAA0	**Zalesovo Array**	**50.04**	**351**	*e*P	**P**	**07 45 56.9**	**-0.5**
	comp=Z,218nm,1.1s						
ZALV	**Zalesovo Beam**	**50.04**	**351**	P	**P**	**07 45 56.3**	**-1.1**
	comp=Z,16nm,0.5s,baz=174,slow=6.6,SNR=36						
ZALV				LR	LR	08 08 54.1	
	comp=Z,8µm,21.9s,baz=166,slow=38						
ZALV				PKPPKP	**P'P'df**	**08 16 55.3**	**+5.3**
	comp=Z,0.8nm,0.4s,baz=336,slow=3.2,SNR=3.5						
USA0B	**Ussuriysk Arra**	**50.15**	**33**	*e*P	**P**	**07 45 58.2**	**-0.3**
	comp=Z,63nm,0.9s						
USRK	**Ussuriysk Ar.**	**50.15**	**33**	P	**P**	**07 45 59.0**	**+0.5**
	comp=Z,35nm,0.9s,baz=231,slow=6.1,SNR=25						
USRK				LR	LR	08 09 42.9	
	comp=Z,24µm,18.0s,baz=215,slow=39						
USRK	**Ussuriysk Ar.**	**50.15**	**33**	P	**P**	**07 45 59.0**	**+0.5**
MANU	**Manus Island**	**51.18**	**96**	*e*P	**P**	**07 46 05.8**	**-1.0**
	comp=Z,372nm,1.5s						
MANU				LR	LR		
	comp=Z,7µm,21.0s						
DAMY	**Dhamar**	**52.27**	**285**	*e*P	**P**	**07 46 16.1**	**+0.9**
	comp=Z,688nm,1.2s						
DAMY				LR	LR		
	comp=Z,10µm,20.0s						
PMG	**Port Moresby**	**52.31**	**106**	P	**P**	**07 46 13.8**	**-1.4**
	comp=Z,180nm,0.8s,baz=288,slow=5.7						
PMG	**Port Moresby**	**52.31**	**106**	*e*P	**P**	**07 46 14.0**	**-1.2**
	comp=Z,200nm,0.8s						
PMG				LR	LR		
	comp=Z,13µm,20.0s						
PMG	**Port Moresby**	**52.31**	**106***c*	*i*P	**P**	**07 46 13.9**	**-1.2**
PMG				pmax	pmax		
	comp=Z,724nm,0.9s						
PMG				MLR	MLR		
	comp=Z,50µm,19.0s						
RAYN	**Ar Rayn**	**52.63**	**296**	*e*P	**P**	**07 46 17.8**	**+0.3**
	comp=Z,281nm,0.9s						
RAYN				LR	LR		
	comp=Z,18µm,18.0s						
RAYN	**Ar Rayn**	**52.63**	**296**	*i* P	**P**	**07 46 17.7**	**+0.3**
	SNR=172						
RAYN	**Ar Rayn**	**52.63**	**296**	P	**P**	**07 46 17.9**	**+0.4**
BVAR	**Borovoye Array**	**52.77**	**340**	P	**P**	**07 46 16.4**	**-1.6**
	comp=Z,16nm,0.7s,baz=145,slow=8.1,SNR=72						
BRVK	**Borovoye**	**52.84**	**340**	*e*P	**P**	**07 46 17.2**	**-1.2**
	comp=Z,84nm,1.0s						
BRVK				LR	LR		
	comp=Z,19µm,19.0s						
BRVK	**Borovoye**	**52.84**	**340***c*	*i*P	**P**	**07 46 17.3**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,81nm,1.2s						
BRVK				MLR	MLR		
	comp=Z,18µm,18.0s						
BBOO	**Buckleboo**	**52.84**	**138**	*e*P	**P**	**07 46 17.8**	**-0.9**
	comp=Z,128nm,1.1s						
BBOO				LR	LR		
	comp=Z,19µm,21.0s						
BBOO	**Buckleboo**	**52.84**	**138**	P	**P**	**07 46 17.7**	**-1.1**
	baz=53,SNR=23						
TEY	**Ternei**	**53.24**	**35**⇑	*e*P	**P**	**07 46 24.2**	**+2.7**
TEY				pmax	pmax		
	comp=Z,40nm,1.3s						
TEY				pmax	pmax		
	comp=N,80nm,0.7s						
KLR	**Kul'dur**	**53.45**	**28**	P	**P**	**07 46 23.5**	**+0.5**
	comp=N,101nm,1.0s,baz=254,slow=8.1,SNR=43						
KLR	**Kul'dur**	**53.45**	**28***c*	*i*P	**P**	**07 46 23.5**	**+0.5**
KLR				pmax	pmax		
	comp=Z,302nm,1.3s						
ATD	**Arta Tunnel**	**53.56**	**281**	*e*P	**P**	**07 46 25.5**	**+1.0**
	comp=Z,248nm,1.1s						
ATD				LR	LR		
	comp=Z,5µm,19.0s						
OPO	**Ambohidratompo**	**53.87**	**243**	LR	LR	08 06 00.7	
	comp=Z,6µm,18.6s,baz=146,slow=32						
ABPO	**Ambohimpanom**	**53.99**	**243**	*e*P	**P**	**07 46 28.1**	**+0.4**
	comp=Z,152nm,1.0s						
ABPO				LR	LR		
	comp=Z,11µm,18.0s						
ABPO	**Ambohimpanom**	**53.99**	**243**	*e*P	**P**	**07 46 28.1**	**+0.4**
ABPO				pmax	pmax		
	comp=Z,152nm,1.0s						
ABPO				MLR	MLR		
	comp=Z,11µm,18.0s						
AB31	**Akbulak array**	**54.17**	**331**	*i* P	**P**	**07 46 26.8**	**-1.5**
AB31				pmax	pmax		
	comp=Z,66nm,1.1s						
ABKAR	**Akbulak array**	**54.17**	**331**	*e*P	**P**	**07 46 26.8**	**-1.4**
	comp=Z,133nm,1.1s						
CTA	**Charters Tower**	**54.65**	**119**	P	**P**	**07 46 30.9**	**-1.4**
	comp=Z,98nm,0.9s,baz=289,slow=9.3,SNR=32						
CTAO	**Charters Tower**	**54.65**	**119**	*e*P	**P**	**07 46 31.4**	**-0.9**
	comp=Z,163nm,1.0s						
CTAO				LR	LR		
	comp=Z,18µm,20.0s						
CTAO	**Charters Tower**	**54.65**	**119**	*e*P	**P**	**07 46 31.4**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,163nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,18µm,20.0s						
BOD	**Bodaibo**	**54.72**	**11**	*e*P	**P**	**07 46 32.8**	**+0.7**
BOD				pmax	pmax		
	comp=Z,205nm,1.8s						
ZEA	**Zeya**	**54.93**	**22**	*e*P	**P**	**07 46 34.8**	**+1.1**
ZEA				*e*S	**S**	**07 54 15.0**	**+1.2**
ZEA				pmax	pmax		
	comp=N,71nm,1.0s						
ZEA				pmax	pmax		
	comp=E,59nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,7.0s						
ZEA				pmax	pmax		
	comp=N,800nm,6.0s						
ZEA				pmax	pmax		
	comp=E,400nm,6.0s						
ZEA				pmax	pmax		
	comp=N,400nm,9.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,9.0s						
ZEA				smax	smax		
	comp=Z,5µm,10.0s						
ZEA				smax	smax		
	comp=E,3µm,14.0s						
HTT	**Hallett**	**55.14**	**137**	P	**P**	**07 46 35.8**	**+0.1**
	baz=55,SNR=16						
ERM	**Erimo**	**55.62**	**41**	*e*P	**P**	**07 46 38.3**	**-0.6**
	comp=E,92nm,1.0s						
ERM				LR	LR		
	comp=Z,9µm,19.0s						
ERM	**Erimo**	**55.62**	**41**⇓	*e*P	**P**	**07 46 38.1**	**-0.8**
ERM				pmax	pmax		
	comp=Z,107nm,1.2s						
ERM				MLR	MLR		
	comp=Z,11µm,16.0s						
AKTO	**Aktyubinsk**	**55.89**	**331**	P	**P**	**07 46 38.9**	**-1.8**
	comp=Z,14nm,0.6s,baz=125,slow=7.9,SNR=40						
STKA	**Stephens Creek**	**56.17**	**134**	P	**P**	**07 46 41.3**	**-1.7**
	comp=Z,57nm,0.7s,baz=308,slow=7.6,SNR=38						
STKA				LR	LR	08 12 37.2	
	comp=Z,16µm,19.5s,baz=296,slow=38						
STKA	**Stephens Creek**	**56.17**	**134**	*e*P	**P**	**07 46 42.2**	**-0.8**
	comp=Z,18nm,0.8s						
STKA				LR	LR		
	comp=Z,3µm,20.0s						
STKA	**Stephens Creek**	**56.17**	**134**	P	**P**	**07 46 43.0**	**+0.1**
	baz=56,SNR=37						
RABL	**Rabaul**	**56.22**	**98**	PFAKE		07 46 50.0	+6.3
RABL				LR	LR		
	comp=Z,5µm,21.0s						
DESE	**Dese**	**56.70**	**280**	*i* P	**P**	**07 46 49.7**	**+2.2**
DESE				*e*S	S	07 54 24.7	-15
DESE	**Dese**	**56.70**	**280**	*i* P	**P**	**07 46 50.7**	**+3.2**
DESE				*e*S	S	07 54 29.7	-10
GRNR	**Gornyy**	**56.72**	**29**	*e*P	**P**	**07 46 48.0**	**+1.4**
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
AKT	**Akhty**	**56.88**	**318**⇓	*i*P	**P**	**07 46 47.5**	**-0.6**
AKT				*e*		07 47 41.4	
AKT				*e*S	**S**	**07 54 41.0**	**+0.5**
AKT				pmax	pmax		
	comp=Z,97nm,1.4s						
AAE	**Adis Abeba**	**57.52**	**278**	*i* P	**P**	**07 46 56.4**	**+3.1**
AAE	**Adis Abeba**	**57.52**	**278**	*i* P	**P**	**07 46 56.4**	**+3.1**
FURI	**Furi**	**57.60**	**278**	PFAKE		07 47 10.0	+16
FURI				LR	LR		
	comp=Z,10µm,21.0s						
MAK	**Makhachkala**	**57.70**	**319**	*e*P	P	07 46 48.2	-5.4
MAK				*e*S	**S**	**07 54 44.9**	**-5.9**
MAK				*e*SS	**SS**	**07 58 35.9**	**-5.6**
MAK				pmax	pmax		
	comp=Z,150nm,1.0s						
YSS	**Yuzh-Sakhalins**	**57.86**	**36**⇑	*e*P	**P**	**07 46 56.2**	**+1.5**
YSS				*e**SP	**sP**	**07 47 04.3**	**-1.7**
YSS				*e*		07 49 03.6	
YSS				*e*S	**S**	**07 54 52.9**	**0.0**
YSS				*e*PS		07 55 15.9	
YSS				pmax	pmax		
	comp=Z,160nm,1.1s						
YSS				pmax	pmax		
	comp=Z,1µm,4.0s						
YUK	**Yuzh-Kuril'sk**	**58.32**	**40**	*e*P	**P**	**07 46 56.3**	**-1.7**
YUK				*e*		07 47 47.9	
YUK				*e*		07 49 05.5	
YUK				*e*S	**S**	**07 54 58.9**	**0.0**
YUK				*e*		07 56 45.5	
YUK				*e*SS	**SS**	**07 58 53.9**	**+2.7**
YUK				pmax	pmax		
	comp=E,157nm,0.9s						
YUK				pmax	pmax		
	comp=Z,379nm,0.9s						
YUK				pmax	pmax		
	comp=N,275nm,1.2s						
YUK				pmax	pmax		
	comp=Z,452nm,1.6s						
GNI	**Garni**	**58.39**	**315**	*e*P	**P**	**07 46 58.5**	**-0.2**
	comp=Z,133nm,1.1s						
GNI				LR	LR		
	comp=Z,10µm,22.0s						
GNI	**Garni**	**58.39**	**315**	*i* P	**P**	**07 46 57.8**	**-1.0**
	SNR=12						
GNI	**Garni**	**58.39**	**315***c*	*i*P	**P**	**07 46 58.4**	**-0.4**
GNI				pmax	pmax		
	comp=Z,531nm,1.0s						
GNI				MLR	MLR		
	comp=Z,22µm,18.0s						
GROC	**Groznyy**	**58.92**	**319**	*e*P	**P**	**07 47 00.3**	**-1.9**
GROC				*e*		07 47 49.7	
GROC				*e*S	**S**	**07 55 04.3**	**-2.6**
GROC				pmax	pmax		
	comp=Z,192nm,1.2s						
ARPS	**Mount Arapiles**	**59.01**	**138**	P	**P**	**07 47 03.3**	**+0.4**
	baz=59,SNR=5.6						
CMSA	**Cobar Meteorol**	**59.01**	**131**	P	**P**	**07 47 01.9**	**-1.2**
	baz=59,SNR=146						
TBLG	**Delisi**	**59.02**	**317**	*e*P	**P**	**07 47 02.5**	**-0.4**
	comp=Z,140nm,1.2s						
TBLG	**Delisi**	**59.02**	**317**	*e*P	**P**	**07 47 02.6**	**-0.4**
TBLG				pmax	pmax		
	comp=Z,140nm,1.2s						
RMQ	**Roma**	**59.22**	**125**	P	**P**	**07 47 04.8**	**+0.2**
	baz=59,SNR=39						
SVE	**Sverdlovsk**	**59.24**	**338**⇓	*e*P	**P**	**07 47 03.6**	**-0.6**
SVE				*e*		07 49 13.3	
SVE				*e*S	**S**	**07 55 09.5**	**-1.0**
SVE				*e*SS	**SS**	**07 59 00.0**	**-5.3**
SVE				pmax	pmax		
	comp=Z,180nm,1.3s						
SVE				MLR	MLR		
	comp=E,22µm,21.0s						
SVE				MLR	MLR		
	comp=Z,38µm,23.0s						
SVE				MLR	MLR		
	comp=N,21µm,22.0s						
KMBO	**Kilima Mbogo**	**59.55**	**266**	P	**P**	**07 47 10.1**	**+2.6**
	comp=N,139nm,1.1s,baz=54,slow=8.9,SNR=83						
KMBO				LR	LR	08 09 19.2	
	comp=N,11µm,20.5s,baz=77,slow=32						
KMBO	**Kilima Mbogo**	**59.55**	**266**	*e*P	**P**	**07 47 08.0**	**+0.6**
	comp=N,144nm,1.0s						
KMBO				LR	LR		
	comp=Z,12µm,22.0s						
KMBO	**Kilima Mbogo**	**59.55**	**266**	*i* P	**P**	**07 47 10.0**	**+2.6**
	SNR=93						
AKH	**Akhalkalaki**	**59.75**	**316**	*e*P	**P**	**07 47 08.6**	**+0.4**
	comp=Z,68nm,1.1s						
AKH				LR	LR		
	comp=Z,9µm,20.0s						
AKH	**Akhalkalaki**	**59.75**	**316**	*e*P	**P**	**07 47 08.6**	**+0.4**
AKH				pmax	pmax		
	comp=Z,68nm,1.1s						
AKH				MLR	MLR		
	comp=Z,9µm,20.0s						
ARU	**Arti**	**59.75**	**337**	P	**P**	**07 47 06.0**	**-1.7**
	comp=Z,5.4nm,0.5s,baz=148,slow=7.0,SNR=29						
ARU	**Arti**	**59.75**	**337**	*e*P	**P**	**07 47 06.7**	**-1.0**
	comp=Z,94nm,1.1s						
ARU				LR	LR		
	comp=Z,39µm,21.0s						
ARU	**Arti**	**59.75**	**337***c*	*i*P	**P**	**07 47 06.5**	**-1.2**
ARU						07 47 50.6	
ARU				S	**S**	**07 55 17.8**	**+0.7**
ARU						07 56 53.0	
ARU				SS	**SS**	**07 59 11.5**	**-1.8**
ARU				pmax	pmax		
	comp=Z,57nm,1.0s						
ARU				MLR	MLR		
	comp=Z,40µm,21.0s						
TYV	**Tymovskoe**	**59.93**	**32**	*e*P	**P**	**07 47 11.8**	**+2.8**
TYV				*e*S	**S**	**07 55 25.9**	**+6.3**
TYV				pmax	pmax		
	comp=Z,69nm,1.5s						
TYV				pmax	pmax		
	comp=Z,1µm,4.4s						
TYV				smax	smax		
	comp=E,3µm,9.2s						
ZEI	**Tsey**	**60.01**	**317**	*e*P	**P**	**07 47 08.5**	**-1.6**
ZEI				*e*S	**S**	**07 55 18.4**	**-3.1**
ZEI				*e*		07 56 59.0	
ZEI				pmax	pmax		
	comp=Z,37nm,0.6s						
KUR	**Kuril'sk**	**60.13**	**39***c*	*i*P	**P**	**07 47 11.7**	**+1.2**
KUR				*e*		07 47 49.0	
KUR				*i* S	**S**	**07 55 26.5**	**+4.1**
KUR				*e*		07 57 01.3	
KUR				*i* SS	**SS**	**07 59 24.6**	**+4.9**
KUR				*e*SSS	SSS	08 01 57.5	
KUR				pmax	pmax		
	comp=Z,478nm,1.4s						
KUR				pmax	pmax		
	comp=Z,2µm,4.4s						
KUR				pmax	pmax		
	comp=E,800nm,3.6s						
KUR				MLR	MLR		
	comp=Z,6µm,16.0s						
KUR				MLR	MLR		
	comp=N,5µm,17.0s						
KUR				MLR	MLR		
	comp=E,1µm,15.0s						
NKL	**Nikolayevsk**	**60.27**	**29**	*e*P	**P**	**07 47 14.8**	**+3.5**
NKL				*e*		07 47 54.3	
NKL				*e*		07 49 23.7	
NKL				*e*S	**S**	**07 55 29.9**	**+6.1**
NKL				*e*		07 57 01.1	
NKL				*e*SS	**SS**	**07 59 22.7**	**+1.2**
NKL				pmax	pmax		
	comp=Z,23nm,0.9s						
NKL				pmax	pmax		
	comp=N,166nm,1.2s						
NKL				pmax	pmax		
	comp=E,38nm,1.1s						
NKL				pmax	pmax		
	comp=Z,255nm,3.6s						
NKL				MLR	MLR		
	comp=N,11µm,14.0s						
NKL				MLR	MLR		
	comp=Z,11µm,15.0s						
NKL				MLR	MLR		
	comp=E,5µm,12.0s						
EIDS	**Eidsvold**	**60.73**	**122**	*e*P	**P**	**07 47 14.3**	**-0.7**
	comp=E,52nm,1.0s						
EIDS				LR	LR		
	comp=Z,14µm,19.0s						
EIDS	**Eidsvold**	**60.73**	**122**	P	**P**	**07 47 14.0**	**-0.9**
	baz=61,SNR=8.7						
NEY	**Neytrino**	**60.99**	**318***d*	*i*P	**P**	**07 47 17.3**	**+0.6**
NEY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBZ	**Khabaz**	**61.06**	**318**	P	**P**	**07 47 15.5**	**-1.4**
	comp=Z,27nm,0.9s,baz=109,slow=3.3,SNR=12						
KBZ				PKP2ab		08 16 48.5	
	comp=Z,3.3nm,0.9s,baz=292,slow=6.0,SNR=3.7						
KBZ				LR	LR	08 17 25.3	
	comp=Z,6µm,20.7s,baz=113,slow=40						
KIV	**Kislovodsk**	**61.29**	**318**	*e*P	**P**	**07 47 18.4**	**-0.2**
	comp=Z,104nm,1.1s						
KIV				LR	LR		
	comp=Z,8µm,20.0s						
KIV	**Kislovodsk**	**61.29**	**318**	*i* P	**P**	**07 47 17.4**	**-1.2**
	SNR=9.0						
KIV	**Kislovodsk**	**61.29**	**318**	*e*P	**P**	**07 47 17.4**	**-1.2**
KIV				*e*		07 47 59.0	
KIV				*e*S	**S**	**07 55 38.3**	**+0.8**
KIV				pmax	pmax		
	comp=Z,189nm,1.0s						
KIV				pmax	pmax		
	comp=Z,573nm,4.8s						
KIV				MLR	MLR		
	comp=Z,17µm,17.0s						
PATS	**Pohnpei**	**61.42**	**85**	*e*P	**P**	**07 47 18.8**	**-1.1**
	comp=Z,618nm,1.4s						
PATS				LR	LR		
	comp=Z,5µm,22.0s						
PATS	**Pohnpei**	**61.42**	**85**	P	**P**	**07 47 19.5**	**-0.4**
	baz=61,SNR=14						
GOF	**Gofitskoye**	**61.50**	**320**⇑	*i*P	**P**	**07 47 19.1**	**-0.8**
GOF				pmax	pmax		
	comp=Z,78nm,1.1s						
TOO	**Toolangi**	**61.89**	**137**	*e*P	**P**	**07 47 23.0**	**+0.4**
	comp=Z,170nm,1.3s						
TOO				LR	LR		
	comp=Z,24µm,22.0s						
TOO	**Toolangi**	**61.89**	**137**	P	**P**	**07 47 22.8**	**+0.1**
	baz=62,SNR=9.0						
TOO	**Toolangi**	**61.89**	**137**	*e*P	**P**	**07 47 23.0**	**+0.4**
TOO				pmax	pmax		
	comp=Z,170nm,1.3s						
TOO				MLR	MLR		
	comp=Z,24µm,22.0s						
YAK	**Yakutsk**	**62.27**	**17**	*e*P	**P**	**07 47 24.4**	**-0.3**
	comp=Z,176nm,1.0s						
YAK				LR	LR		
	comp=Z,18µm,21.0s						
YAK	**Yakutsk**	**62.27**	**17**	*e*P	**P**	**07 47 24.8**	**+0.1**
YAK				*e**PP	**pP**	**07 47 32.6**	**-0.3**
YAK				*e*S	**S**	**07 55 48.8**	**-0.2**
YAK				*e**SS	**sS**	**07 56 04.2**	**+1.6**
YAK				*e*		07 57 06.7	
YAK				*e*SS	**SS**	**07 59 48.3**	**-4.3**
YNG	**Young**	**62.32**	**133**	P	**P**	**07 47 25.5**	**-0.1**
	baz=62,SNR=18						
TOTH	**TOTAH**	**62.64**	**305**	*e*P	**P**	**07 47 28.7**	**+0.8**
WALJ	**Wala**	**62.76**	**303**	P	**P**	**07 47 30.2**	**+1.7**
QASN	**Qassioun**	**62.80**	**305**	*e*P	**P**	**07 47 30.1**	**+1.1**
BRBR	**Barbar**	**63.04**	**305**	*e*P	P	07 47 38.2	+7.6
SHMJ	**Saham**	**63.04**	**304**	P	**P**	**07 47 32.0**	**+1.5**
ARMA	**Armidale**	**63.11**	**127**	*e*P	**P**	**07 47 30.3**	**-0.7**
	comp=Z,127nm,1.4s						
ARMA				LR	LR		
	comp=Z,16µm,19.0s						
ARMA	**Armidale**	**63.11**	**127**	P	**P**	**07 47 32.0**	**+1.0**
	baz=63,SNR=6.9						
SOC	**Sochi**	**63.15**	**317**	*e*P	**P**	**07 47 27.3**	**-3.6**
SOC				*e*		07 49 49.7	
SOC				*e*PPP	PPP	07 51 20.0	
SOC				*e*S	**S**	**07 55 56.4**	**-4.3**
SOC				pmax	pmax		
	comp=Z,71nm,0.8s						
SOC				MLR	MLR		
	comp=Z,4µm,18.0s						
CAN	**Canberra**	**63.23**	**133**	*e*P	**P**	**07 47 30.9**	**-0.8**
	comp=Z,152nm,1.0s						
CAN				LR	LR		
	comp=Z,22µm,20.0s						
CAN	**Canberra**	**63.23**	**133**	*e*P	**P**	**07 47 30.9**	**-0.8**
CAN				pmax	pmax		
	comp=Z,152nm,1.0s						
CAN				MLR	MLR		
	comp=Z,22µm,20.0s						
CNB	**Canberra Magne**	**63.49**	**133**	P	**P**	**07 47 33.3**	**-0.1**
	baz=63,SNR=14						
MGCD	**Mangrove Creek**	**63.86**	**130**	P	**P**	**07 47 36.7**	**+0.9**
	baz=64,SNR=6.3						
RIV	**Riverview**	**64.16**	**131**	P	**P**	**07 47 38.6**	**+0.9**
	baz=64,SNR=3.5						
MILA	**Mila**	**64.16**	**135**	P	**P**	**07 47 38.3**	**+0.5**
	baz=64,SNR=3.6						
HNR	**Honiara**	**64.68**	**103**	P	**P**	**07 47 40.4**	**-1.2**
	comp=Z,260nm,0.9s,baz=238,slow=9.5,SNR=4.6						
HNR	**Honiara**	**64.68**	**103**	PFAKE		07 47 50.0	+8.5
HNR				LR	LR		
	comp=Z,3µm,20.0s						
HNR	**Honiara**	**64.68**	**103**	*e*P	**P**	**07 47 40.0**	**-1.5**
KIRV	**Kirov**	**64.91**	**335**	P	**P**	**07 47 39.8**	**-2.4**
	comp=Z,16nm,0.4s,baz=139,slow=9.7,SNR=7.3						
CSS	**Mathiatis**	**65.50**	**306**	*e*P	**P**	**07 47 46.4**	**-0.1**
	comp=Z,214nm,1.2s						
CSS				LR	LR		
	comp=Z,12µm,20.0s						
CSS	**Mathiatis**	**65.50**	**306**	P	**P**	**07 47 45.7**	**-0.8**
CSS	**Mathiatis**	**65.50**	**306**	P	**P**	**07 47 46.3**	**-0.2**
	comp=Z,39nm,1.2s						
TAU	**Tasmania Unive**	**65.90**	**141**	*e*P	**P**	**07 47 48.8**	**-0.1**
	comp=Z,248nm,1.5s						
TAU				LR	LR		
	comp=Z,11µm,18.0s						
TAU	**Tasmania Unive**	**65.90**	**141**	*e*P	**P**	**07 47 48.8**	**-0.1**
TAU				pmax	pmax		
	comp=Z,248nm,1.5s						
TAU				MLR	MLR		
	comp=Z,11µm,18.0s						
MBAR	**Mbarara**	**65.98**	**267**	*e*P	**P**	**07 47 50.8**	**+0.5**
	comp=Z,196nm,1.0s						
MBAR				LR	LR		
	comp=Z,16µm,20.0s						
MBAR	**Mbarara**	**65.98**	**267***c*	*i*P	**P**	**07 47 52.1**	**+1.9**
MBAR				pmax	pmax		
	comp=Z,179nm,1.3s						
VORD	**Divnogorie**	**66.20**	**324**	*e*P	**P**	**07 47 48.7**	**-2.0**
VORD				*e*S	**S**	**07 56 31.8**	**-6.3**
VORD				pmax	pmax		
	comp=Z,20nm,0.7s						
VORD				smax	smax		
	comp=N,130nm,1.3s						
BR131	**Keskin Array S**	**66.34**	**311**	*e*P	**P**	**07 47 50.5**	**-1.5**
	comp=N,50nm,0.8s						
BRTR	**Keskin Array B**	**66.34**	**311**	P	**P**	**07 47 49.5**	**-2.5**
	comp=N,14nm,0.6s,baz=124,slow=6.6,SNR=34						
BRTR				PKP2ab		08 16 30.4	
	comp=N,2.6nm,1.0s,baz=219,slow=1.6,SNR=4.8						
BRTR				LR	LR	08 18 30.4	
	comp=N,4µm,21.5s,baz=100,slow=38						
VSR	**Storozhevoye**	**66.38**	**325**	*e*P	**P**	**07 47 49.8**	**-2.0**
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VSR				MLR	MLR		
	comp=Z,14µm,19.0s						
VORR	**Voronezh**	**66.53**	**325**	P	P	07 47 58.0	+5.2
VORR				pmax	pmax		
	comp=Z,300nm,1.0s						
ILGA	**Ilgaz**	**66.61**	**313**	*e*P	**P**	**07 47 53.2**	**-0.7**
	comp=Z,155nm,1.2s						
ANTO	**Ankara**	**67.00**	**311**	*e*P	**P**	**07 47 55.3**	**-0.9**
	comp=Z,89nm,1.1s						
ANTO	**Ankara**	**67.00**	**311**	*e*P	**P**	**07 47 55.3**	**-0.9**
ANTO				pmax	pmax		
	comp=Z,89nm,1.1s						
BR231	**Keskin MP Arra**	**67.01**	**311**	*e*P	**P**	**07 47 55.7**	**-0.5**
	comp=Z,71nm,0.9s						
LPSR	**Galich'ya Gora**	**67.07**	**326**	*e*P	**P**	**07 47 54.5**	**-1.7**
LPSR				*e*S	**S**	**07 56 40.4**	**-8.1**
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
LPSR				smax	smax		
	comp=N,1µm,2.5s						
LPSR				MLR	MLR		
	comp=Z,12µm,17.0s						

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SIM   Simferopol'       67.39 317ceP    P       07 47 57.5 -0.9
SIM                              ePPP   PPP     07 51 59.0
SIM                              eS     S       07 56 49.0 -3.8
SIM                               pmax  pmax
      comp=Z,50nm,1.2s
SIM                               pmax  pmax
      comp=Z,170nm,8.3s
SIM                               MLR   MLR
      comp=Z,4µm,15.0s
SKR   Severo-Kuril's    67.41  36 eP    P       07 47 58.1 -0.3
SKR                              e              07 48 25.3
SKR                              eS     S       07 56 56.5 +3.8
SKR                               pmax  pmax
      comp=Z,329nm,0.9s
SKR                               pmax  pmax
      comp=Z,900nm,5.1s
SKR                               pmax  pmax
      comp=Z,2µm,6.8s
SKR                               MLR   MLR
      comp=Z,9µm,16.0s
SKR                               MLR   MLR
      comp=Z,9µm,16.0s
PRGR  Permogore         68.21 336⇓iP    P       07 48 02.2 -1.0
PRGR                             eS     S       07 56 58.5 -3.4
PRGR                              pmax  pmax
      comp=Z,64nm,0.8s
ISP   Isparta           68.29 309 PFAKE         07 48 20.0  +16
ISP                               LR    LR
      comp=Z,5µm,20.0s
MDUB  Mudurnu           68.33 312 eP    P       07 48 03.7 -0.9
      comp=Z,508nm,0.9s
MA2   Magadan           68.48  26 eP    P       07 48 05.6 +0.6
MA2                               LR    LR
      comp=Z,12µm,20.0s
MA2   Magadan           68.48  26d iP   P       07 48 06.2 +1.2
MA2                               pmax  pmax
      comp=Z,64nm,1.2s
MA2                               MLR   MLR
      comp=Z,10µm,17.0s
MOS   Moscow            69.04 329 eP    P       07 48 05.5 -3.0
MOS                              e              07 48 28.7
MOS                              eS     S       07 57 05.9 -6.1
MOS                              e              07 58 06.0
MOS                               pmax  pmax
      comp=Z,74nm,0.7s
MOS                               pmax  pmax
      comp=Z,900nm,4.4s
MOS                               smax  smax
      comp=E,1µm,3.6s
MOS                               smax  smax
      comp=N,2µm,4.7s
MOS                               MLR   MLR
      comp=N,13µm,19.0s
MOS                               MLR   MLR
      comp=Z,21µm,19.0s
MOS                               MLR   MLR
      comp=E,12µm,18.0s
FETY  Fethiye           69.20 307 P     P       07 48 08.4 -1.6
PEA0B Petropavlovsk-    69.20  34 eP    P       07 48 08.0 -1.6
PEA0B                             LR    LR
      comp=Z,11µm,19.0s
PETK  Petropavlovsk-    69.20  34 P     P       07 48 09.4 -0.2
      comp=Z,13nm,0.9s,baz=200,slow=3.2,SNR=12
PETK                              PKPPKP        08 16 21.4
      comp=Z,2.3nm,0.8s,baz=43,slow=6.5,SNR=2.8
OBN   Obninsk           69.35 328 P     P       07 48 08.7 -1.7
      comp=Z,4.8nm,0.3s,baz=118,slow=5.7,SNR=11
OBN   Obninsk           69.35 328 eP    P       07 48 09.7 -0.7
      comp=Z,258nm,1.5s
OBN                               LR    LR
      comp=Z,17µm,20.0s
OBN   Obninsk           69.35 328d iP   P       07 48 09.4 -1.0
OBN                              e              07 50 45.0
OBN                              i S    S       07 57 11.0 -4.6
OBN                               pmax  pmax
      comp=Z,66nm,1.3s
OBN                               MLR   MLR
      comp=Z,17µm,19.0s
LHI   Lord Howe Isla    69.45 126 PFAKE         07 48 20.0 +8.5
LHI                               LR    LR
      comp=Z,13µm,19.0s
WAKE  Wake Island       69.66  71 PFAKE         07 48 20.0 +6.9
WAKE                              LR    LR
      comp=Z,3µm,20.0s
PET   Petropavlovsk     69.71  35 eP    P       07 48 12.6 -0.1
      comp=Z,104nm,1.0s
PET                               LR    LR
      comp=Z,10µm,19.0s
PET   Petropavlovsk     69.71  35d iP   P       07 48 14.0 +1.3
PET                              e              07 48 36.9
PET                              e              07 50 54.5
PET                              i S    S       07 57 19.0 -1.0
PET                              ePS    PnS     07 57 46.7 -1.2
PET                              eSS    SS      08 01 50.1 +1.6
PET                              eSSS   SSS     08 04 51.8
PET                               pmax  pmax
      comp=Z,500nm,7.8s
PET                               pmax  pmax
      comp=Z,1µm,6.5s
PET                               pmax  pmax
      comp=Z,124nm,1.0s
PET                               smax  smax
      comp=E,1µm,13.2s
PET                               smax  smax
      comp=N,3µm,13.9s
PET                               smax  smax
      comp=N,2µm,13.1s
PET                               MLR   MLR
      comp=Z,11µm,19.0s
YLV   Yalova            69.71 312⇓iP    P       07 48 12.6 -0.5
KULA  Kula-Manisa       69.86 309 P     P       07 48 13.5 -0.6
TIXI  Tiksi             69.88  10 P     P       07 48 12.1 -1.3
      comp=Z,26nm,0.8s,baz=239,slow=2.9,SNR=10
TIXI  Tiksi             69.88  10 eP    P       07 48 12.7 -0.7
      comp=Z,119nm,1.3s
TIXI                              LR    LR
      comp=Z,15µm,21.0s
TIXI  Tiksi             69.88  10d iP   P       07 48 12.7 -0.7
TIXI                              pmax  pmax
      comp=Z,42nm,0.9s
TIXI                              MLR   MLR
      comp=Z,18µm,22.0s
YER   Yerkesik          69.92 308 P     P       07 48 13.4 -1.0
MANT  Manisa            69.94 309 eP    P       07 48 14.0 -0.7
      comp=Z,274nm,0.9s
ISK   Istanbul-Kandi    70.05 312 P     P       07 48 14.1 -0.9
KLYT  Kilyos            70.09 312⇓iP    P       07 48 14.3 -1.0
LSZ   Lusaka            70.55 252 eP    P       07 48 18.8  0.0
      comp=Z,184nm,1.3s
LSZ                               LR    LR
      comp=Z,23µm,19.0s
LSZ   Lusaka            70.55 252 eP    P       07 48 18.8  0.0
LSZ                               pmax  pmax
      comp=Z,184nm,1.3s
LSZ                               MLR   MLR
      comp=Z,23µm,19.0s
KARP  Karpathos         70.57 306 eP    P       07 48 18.4  0.0
      comp=Z,421nm,0.9s
KARP                              LR    LR
      comp=Z,6µm,22.0s
KARP  Karpathos         70.57 306 P     P       07 48 18.6 +0.2
BALB  Balikesir         70.66 310 eP    P       07 48 18.3 -0.6
      comp=Z,576nm,1.0s
BALB                              LR    LR
      comp=Z,18µm,20.0s
TLCR                    71.09 316⇑iP    P       07 48 19.8 -1.5
TLCR                    71.09 316 P     P       07 48 19.8 -1.5
SMG   Samos             71.15 308 P     P       07 48 20.8 -1.1
PSN   Preselentsi       71.21 315 P     P       07 48 21.0 -1.1
TIRR  Tirgusor          71.21 315 eP    P       07 48 21.4 -0.6
      comp=Z,220nm,0.9s
TIRR                              LR    LR
      comp=Z,11µm,19.0s
TIRR  Tirgusor          71.21 315⇓iP    P       07 48 21.9 -0.1
TIRR  Tirgusor          71.21 315 eP    P       07 48 21.4 -0.6
TIRR                              pmax  pmax
      comp=Z,220nm,0.9s
TIRR                              MLR   MLR
      comp=Z,11µm,19.0s
PHSR  Pinarhisar        71.29 312⇓iP    P       07 48 22.8 +0.2
KIS   Kishinev          71.50 318 eP    P       07 48 23.0 -0.7
      comp=Z,420nm,3.0s
KIS   Kishinev          71.50 318 ePcP  PcP     07 48 52.0 +8.9
KIS   Kishinev          71.50 318 ePPP  PPP     07 51 10.0
KIS                              eS     S       07 57 37.0 -4.0
KIS   Kishinev          71.50 318 eP    P       07 48 23.0 -0.7
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KIS                              ePPP   PPP     07 51 10.0
KIS                              eS     S       07 57 37.0 -4.0
KIS                              e              07 58 23.0
KIS                               pmax  pmax
      comp=Z,420nm,3.0s
KIS                               MLR   MLR
      comp=Z,9µm,19.0s
TLB   Topalu            71.50 315⇑iP    P       07 48 23.7 -0.1
TLB   Topalu            71.50 315 P     P       07 48 23.7 -0.1
CASY  Casey             71.52 174 eP    P       07 48 23.5 +0.1
      comp=Z,130nm,1.4s
CASY                              LR    LR
      comp=Z,8µm,18.0s
CFR   Carcaliu          71.55 316⇓iP    P       07 48 23.9 -0.2
CFR   Carcaliu          71.55 316 P     P       07 48 23.8 -0.3
ICOR  Ion Corvin        71.57 315⇓iP    P       07 48 24.4 +0.2
HARR  Harsova           71.59 316⇑iP    P       07 48 24.6 +0.2
HARR  Harsova           71.59 316 P     P       07 48 24.6 +0.2
PRD   Provadia          71.67 314 P     P       07 48 23.0 -1.9
AMGA  Amorgos Island    71.76 307 P     P       07 48 24.6 -1.0
NPS   Neapolis          71.78 305 P     P       07 48 25.7 -0.1
ANAF  Anafi Island      71.80 307 P     P       07 48 25.1 -0.7
CHOS  Chios island      71.86 309 P     P       07 48 26.2  0.0
EZN   Ezine             71.87 310 P     P       07 48 25.0 -1.2
EZN   Ezine             71.87 310⇓iP    P       07 48 26.1 -0.1
EZN   Ezine             71.87 310 P     P       07 48 26.1 -0.1
LAST  Lasithi           71.88 305 P     P       07 48 26.6 +0.2
APE   Apeiranthos       72.08 307⇓iP    P       07 48 26.8 -0.8
APE   Apeiranthos       72.08 307 P     P       07 48 26.8 -0.8
JMB   Yambol            72.13 313 P     P       07 48 27.0 -0.6
AKASG Malin Array Be    72.14 322 P     P       07 48 25.0 -2.5
      comp=Z,2.1nm,0.5s,baz=88,slow=4.9,SNR=21
AKASG                             LR    LR      08 25 18.8
      comp=Z,8µm,18.0s,baz=95,slow=40
AKBB  Malin Array Si    72.14 322 eP    P       07 48 25.9 -1.6
      comp=Z,36nm,0.9s
AKBB                              LR    LR
      comp=Z,9µm,18.0s
AKBB  Malin Array Si    72.14 322 eP    P       07 48 25.9 -1.6
AKBB                              pmax  pmax
      comp=Z,36nm,0.9s
AKBB                              MLR   MLR
      comp=Z,9µm,18.0s
IOSP  Ios island        72.23 307 P     P       07 48 26.3 -2.1
ALN   Alexandroupoli    72.26 311 eP    P       07 48 28.3 -0.1
      comp=Z,47nm,0.9s
ALN                               LR    LR
      comp=Z,2µm,21.0s
ALN   Alexandroupoli    72.26 311 P     P       07 48 27.1 -1.3
ALN   Alexandroupoli    72.26 311 eP    P       07 48 28.3 -0.1
ALN                               pmax  pmax
      comp=Z,47nm,0.9s
ALN                               MLR   MLR
      comp=Z,2µm,21.0s
SIVA  Sivas             72.41 305 P     P       07 48 30.0 +0.6
SMTH  Samothraki Isl    72.58 311 P     P       07 48 29.5 -0.9
VRI   Vrincioaia        72.67 317⇓iP    P       07 48 31.4 +0.6
VRI   Vrincioaia        72.67 317 P     P       07 48 31.3 +0.5
RDO   Rodhopi           72.68 312 P     P       07 48 28.8 -2.1
PLOR  Plostina          72.72 317⇓iP    P       07 48 31.4 +0.3
PLOR  Plostina          72.72 317 P     P       07 48 31.3 +0.2
SZH   Strazhica         72.74 314 P     P       07 48 32.0 +0.7
LIA   Limnos Island     72.75 310 P     P       07 48 31.0 -0.4
TESR  Tescani           72.85 317⇑iP    P       07 48 31.2 -0.7
SERI  Serifos           72.92 307 P     P       07 48 30.8 -1.8
VAM   Vamos             72.95 305 P     P       07 48 32.4 -0.3
SECR                    72.96 316⇑iP    P       07 48 34.4 +1.8
GVD   Gavdhos           72.97 305 P     P       07 48 31.8 -1.1
IMMV  Iera Moni Meta    73.13 306 P     P       07 48 33.1 -0.7
MLR   Muntele Rosu      73.13 316 eP    P       07 48 33.2 -0.5
      comp=Z,150nm,1.1s
MLR                               LR    LR
      comp=Z,10µm,19.0s
MLR   Muntele Rosu      73.13 316⇓iP    P       07 48 33.8 +0.1
MLR   Muntele Rosu      73.13 316 eP    P       07 48 33.2 -0.5
MLR                               pmax  pmax
      comp=Z,150nm,1.1s
MLR                               MLR   MLR
      comp=Z,10µm,19.0s
THAS  Thassos island    73.21 311 P     P       07 48 34.2 +0.1
DZM   Mont Dzumac       73.26 115 eP    P       07 48 35.0 +0.1
      comp=Z,171nm,1.1s
DZM                              eS     S       07 57 54.4 -7.9
      comp=Z,4µm,28.4s
DZM                              eSS    SS      08 02 33.5  -11
      comp=Z,5µm,26.4s
DZM                              eLQ    LQ      08 07 32.9
      comp=Z,9µm,27.4s
DZM                              eLR    LR      08 10 39.9
      comp=Z,14µm,22.4s
DZM   Mont Dzumac       73.26 115 P     P       07 48 34.0 -0.9
      comp=Z,45nm,1.0s,baz=302,slow=3.3,SNR=8.8
DZM   Mont Dzumac       73.26 115 eP    P       07 48 33.5 -1.4
      comp=Z,70nm,1.0s
DZM                               LR    LR
      comp=Z,9µm,18.0s
BIZ   Bicaz             73.30 318⇓iP    P       07 48 34.7 +0.2
PRAR  RASCA             73.30 318⇓iP    P       07 48 35.2 +0.7
ONTNC Ouen Toro         73.32 115 eP    P       07 48 33.9 -1.2
      comp=Z,104nm,0.9s
KAVA  Kavala            73.42 311 P     P       07 48 34.6 -0.7
PTL   Penteli           73.52 308 P     P       07 48 34.6 -1.5
VLY   Voula,Athens      73.56 308 P     P       07 48 34.8 -1.4
ATHU  Athens Univers    73.58 308 P     P       07 48 34.8 -1.6
DOPR  Dopca             73.60 317⇑iP    P       07 48 36.2 -0.2
ATH   Athens Observa    73.63 308 P     P       07 48 35.4 -1.2
ANKY  Antikythira Is    73.72 306 P     P       07 48 36.0 -1.2
OUR   Ouranopolis       73.73 311 P     P       07 48 36.2 -1.0
VOIR                    73.74 316⇓iP    P       07 48 36.5 -0.8
VOIR                    73.74 316 P     P       07 48 36.5 -0.8
MICGM Minsk             73.91 326⇓eP    P       07 48 34.0 -3.9
MICGM                            eP     P       07 48 34.0 -3.9
MICGM                            ePPP   PPP     07 53 08.0
MICGM                            eS     SKiKP   07 58 02.0 -3.3
MICGM                            eSSS   SSS     08 06 00.0
MICGM                            eLQ    LQ      08 19 16.0
MICGM                            eLR    LR      08 22 28.0
MICGM                             LRM   MLR     08 54 40.0
      comp=E,11nm,20.0s
MICGM                             LRM   MLR     08 54 44.0
      comp=Z,24nm,20.0s
MICGM                             LRM   MLR     08 54 48.0
      comp=Z,37nm,20.0s
MNK   Minsk             73.91 326⇓eP    P       07 48 34.0 -3.9
MNK                              ePPP   PPP     07 53 08.0
MNK                              eS     SKiKP   07 58 02.0 -3.3
MNK                              eSSS   SSS     08 06 00.0
DID   Didima            73.95 308 P     P       07 48 35.8 -2.8
KTHA  Kythira Island    73.96 306 P     P       07 48 37.1 -1.5
NVR   Nevrokopi         73.96 312 P     P       07 48 36.2 -2.4
VILL  Villia            73.97 308 P     P       07 48 36.5 -2.2
KTHR  Kythira           74.00 306 P     P       07 48 37.8 -1.1
KRND  KRANIDI           74.01 307 P     P       07 48 36.9 -2.0
ARR   Arges             74.02 316⇑iP    P       07 48 37.6 -1.3
BURAR Bucovina Array    74.02 318⇓iP    P       07 48 39.6 +0.7
BURAR Bucovina Array    74.02 318 P     P       07 48 39.6 +0.7
BUR08 Bucovina Ar. S    74.04 318 eP    P       07 48 38.9 -0.1
      comp=Z,89nm,1.2s
VLI   Veliai            74.11 307 P     P       07 48 36.3 -3.2
PLG   Polygyros         74.14 311 P     P       07 48 37.2 -2.4
PUL   Pulkovo           74.15 331⇑eP    P       07 48 39.9 +0.7
PUL                               pmax  pmax
      comp=Z,115nm,0.4s
LOUT  Loutraki          74.22 308 P     P       07 48 37.8 -2.3
PINNC Pines Island,     74.28 115 PFAKE         07 48 50.0 +9.3
PINNC                             LR    LR
      comp=Z,18µm,21.0s
MPEP  Malo Peshtene     74.33 314 P     P       07 48 40.7  0.0
ARCR  ARCALIA           74.50 318⇓iP    P       07 48 42.2 +0.6
MARNC Mare, Loyalty     74.59 114 PFAKE         07 48 50.0 +7.5
MARNC                             LR    LR
      comp=Z,12µm,21.0s
VTS   Vitosha           74.59 313 eP    P       07 48 41.5 -0.9
      comp=Z,58nm,1.1s
VTS                               LR    LR
      comp=Z,5µm,22.0s
VTS   Vitosha           74.59 313 P     P       07 48 40.9 -1.5
VTS   Vitosha           74.59 313⇓iP    P       07 48 41.4 -1.0
VTS   Vitosha           74.59 313 eP    P       07 48 41.5 -0.9
VTS                               pmax  pmax
      comp=Z,58nm,1.1s
VTS                               MLR   MLR
      comp=Z,5µm,22.0s
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VTS   Vitosha           74.59 313 P     P       07 48 41.0 -1.5
KKB   Krupnik           74.61 312 P     P       07 48 41.0 -1.3
VLX   Vlachokerasia     74.62 307 P     P       07 48 41.0 -1.6
NACGM Naroch            74.63 326 eP    P       07 48 45.0 +2.9
NACGM                            eS     SKiKP   07 58 11.0 +4.6
NACGM                            eSS    SS      08 03 23.0  +19
NACGM                            eSSS   SSS     08 06 22.0
NACGM                            eLQ    LQ      08 15 42.0
NACGM                            eLR    LR      08 19 34.0
NACGM                             LRM   MLR     08 25 42.0
      comp=Z,22nm,21.0s
LOT   Lotru             74.63 316⇓iP    P       07 48 42.0 -0.5
KNT   Kendrikon         74.65 311 P     P       07 48 39.2 -3.4
TRIP  Tripoli           74.72 307 P     P       07 48 42.0 -1.1
IDID  Didziasalis       74.75 326 eP    P       07 48 42.1 -0.7
IDID                              IAmb  IAmb    07 48 57.8
      comp=Z,32nm,1.0s
LIT   Litokhoron        74.83 310 eP    P       07 48 42.1 -1.6
      comp=Z,115nm,0.8s
LIT                               LR    LR
      comp=Z,3µm,19.0s
LIT   Litokhoron        74.83 310 eP    P       07 48 42.1 -1.6
LIT                               pmax  pmax
      comp=Z,115nm,0.8s
LIT                               MLR   MLR
      comp=Z,3µm,19.0s
AGG   Agios Georgios    74.83 309 eP    P       07 48 42.0 -1.7
      comp=Z,48nm,1.1s
AGG                               LR    LR
      comp=Z,4µm,20.0s
AGG   Agios Georgios    74.83 309 P     P       07 48 40.8 -2.9
AGG   Agios Georgios    74.83 309 eP    P       07 48 42.0 -1.7
AGG                               pmax  pmax
      comp=Z,48nm,1.1s
AGG                               MLR   MLR
      comp=Z,4µm,20.0s
TRAZ  Trapeza           74.83 308 P     P       07 48 42.3 -1.4
LBTB  Lobatse           74.90 243 eP    P       07 48 45.9 +1.5
      comp=Z,151nm,0.9s
KALE  Kalithea          74.91 308 P     P       07 48 41.1 -3.1
VAY   Valandovo         74.92 311 P     P       07 48 42.3 -1.8
VAY   Valandovo         74.92 311 i P   P       07 48 42.8 -1.3
CJR   Cluj-Napoca       74.95 317⇑iP    P       07 48 45.3 +1.1
CJR   Cluj-Napoca       74.95 317 P     P       07 48 45.3 +1.1
ITM   Ithomi            74.96 307 eP    P       07 48 43.1 -1.4
      comp=Z,116nm,0.9s
ITM                               LR    LR
      comp=Z,6µm,21.0s
ITM   Ithomi            74.96 307 P     P       07 48 42.3 -2.1
TRIZ  Trizonia          74.96 308 P     P       07 48 42.3 -2.1
SERG  Sergoula          74.98 308 P     P       07 48 42.8 -1.8
GRG   Griva             75.00 311 P     P       07 48 43.2 -1.4
LAKA  Lakka             75.02 308 P     P       07 48 43.5 -1.3
IIGN  Ignalina          75.05 326 eP    P       07 48 44.0 -0.5
IIGN                              IAmb  IAmb    07 48 59.6
      comp=Z,56nm,1.2s
PYL   PYLOS             75.08 307 P     P       07 48 42.3 -2.8
EFP   Efpalio           75.10 308 P     P       07 48 43.7 -1.5
ANX   Ano Chora         75.10 309 P     P       07 48 43.9 -1.5
IZAR  Zarasai           75.13 327 eP    P       07 48 44.7 -0.3
IZAR                              IAmb  IAmb    07 48 59.8
      comp=Z,20nm,0.7s
ISAL  Salakas           75.15 326 eP    P       07 48 44.7 -0.4
ISAL                              IAmb  IAmb    07 49 00.1
      comp=Z,26nm,1.0s
LVV   L'vov             75.20 320 eP    P       07 48 46.0 +0.5
LVV                              e              07 51 37.5
LVV                              eS     S       07 58 20.0 -2.9
LVV                              e              07 58 53.7
LVV                               pmax  pmax
      comp=Z,200nm,1.4s
LVV                               MLR   MLR
      comp=E,5µm,21.0s
LVV                               MLR   MLR
      comp=Z,8µm,21.0s
LVV                               MLR   MLR
      comp=N,6µm,20.0s
DRO   Drossia           75.20 308 P     P       07 48 45.3 -0.6
EVR   Evrytania         75.22 309 P     P       07 48 43.0 -3.1
STIP  Stip              75.25 312 i P   P       07 48 42.9 -3.2
GZR   Gura Zlata        75.31 316⇑iP    P       07 48 45.8 -0.6
GZR   Gura Zlata        75.31 316 P     P       07 48 45.7 -0.6
LVZ   Lovozero          75.36 340 eP    P       07 48 45.6 -0.6
      comp=N,42nm,0.8s
LVZ                               LR    LR
      comp=Z,37µm,21.0s
LVZ   Lovozero          75.36 340⇓eP    P       07 48 45.3 -0.9
LVZ                               pmax  pmax
      comp=Z,29nm,0.7s
LVZ                               MLR   MLR
      comp=Z,36µm,20.0s
RLS   Riolos of Patr    75.41 308 P     P       07 48 46.3 -0.7
PVO   Paravola          75.41 309 P     P       07 48 45.4 -1.6
HERR  Herculane         75.50 315⇓iP    P       07 48 47.4 +0.1
VSU   Vasula            75.55 329 eP    P       07 48 46.6 -0.7
VSU                               IAmb  IAmb    07 49 00.9
      comp=Z,137nm,0.8s
VSU   Vasula            75.55 329⇑eP    P       07 48 45.8 -1.5
VSU                               pmax  pmax
      comp=Z,158nm,1.6s
VSU                               MLR   MLR
      comp=Z,38µm,20.0s
DRGR                    75.57 317⇓iP    P       07 48 48.3 +0.4
DRGR                    75.57 317 P     P       07 48 48.2 +0.4
APA   Apatity           75.66 339⇓iP    P       07 48 46.3 -1.5
APA                              i              07 49 01.5
APA                              i              07 51 41.0
APA                              i PPP  PPP     07 53 32.0
APA                              i S    S       07 58 25.0 -2.4
APA                              i              07 58 50.0
APA                              i PS   PnS     07 59 08.0 +2.3
APA                              i SS   SS      08 03 24.0 +5.2
APA                               pmax  pmax
      comp=Z,11nm,1.0s
PDO   Prodromos         75.68 309 P     P       07 48 46.7 -1.8
SKO   Skopje            75.84 312 i P   P       07 48 47.2 -2.2
SKO   Skopje            75.84 312 P     P       07 48 48.7 -0.7
TRPA  Tarpa             75.89 318⇓iP    P       07 48 50.1 +0.6
KFL   Anninata          75.94 308 P     P       07 48 49.1 -1.0
MAW   Mawson            75.96 193 P     P       07 48 50.9 +1.5
      comp=Z,34nm,0.9s,baz=22,slow=7.3,SNR=26
MAW                               LR    LR      08 19 14.0
      comp=Z,3µm,18.4s,baz=32,slow=33
MAW   Mawson            75.96 193 eP    P       07 48 50.3 +0.9
      comp=Z,66nm,1.8s
MAW                               LR    LR
      comp=Z,1µm,22.0s
MAW   Mawson            75.96 193 P     P       07 48 51.8 +2.4
      baz=76,SNR=37
MAW   Mawson            75.96 193 eP    P       07 48 50.3 +0.9
MAW                               pmax  pmax
      comp=Z,66nm,1.8s
MAW                               MLR   MLR
      comp=Z,1µm,22.0s
MDVR  Moldovita         75.98 315⇓iP    P       07 48 50.1 -0.1
BOSA  Boshof            76.00 239 P     P       07 48 52.0 +1.3
      comp=Z,114nm,1.0s,baz=77,slow=3.8,SNR=44
BOSA                              LR    LR      08 20 16.1
      comp=Z,7µm,19.3s,baz=73,slow=34
BOSA  Boshof            76.00 239 eP    P       07 48 51.6 +0.9
      comp=Z,205nm,1.0s
BOSA  Boshof            76.00 239 eP    P       07 48 51.6 +0.9
BOSA                              pmax  pmax
      comp=Z,205nm,1.0s
VLS   Valsamata         76.11 308 P     P       07 48 49.4 -1.6
LKD2  Lefkada island    76.11 309 P     P       07 48 49.2 -1.8
UZH   Uzhgorod          76.12 319 eP    P       07 48 48.7 -2.1
UZH                              i              07 48 51.9
UZH                              i              07 48 58.8
UZH                              i              07 49 02.5
UZH                              e              07 51 38.5
UZH                              i S    S       07 58 28.2 -4.9
UZH                              e              07 58 48.2
UZH                              ePS            07 58 58.5
BZS   Buzias            76.15 316⇓iP    P       07 48 51.0 -0.1
BZS   Buzias            76.15 316 P     P       07 48 50.9 -0.1
KOLS  Kolonicke sedl    76.18 319 eP    P       07 48 52.3 +1.1
KOLS                              pmax  pmax
      comp=Z,120nm,1.5s
KOLS  Kolonicke sedl    76.18 319 eP    P       07 48 52.3 +1.1
KOLS                             eS     S       07 58 29.8 -4.1
KOLS                             eL     L       08 21 14.5
SIRR  Siria             76.21 316⇓iP    P       07 48 51.8 +0.4
OHR   Ohrid             76.22 311 i P   P       07 48 49.7 -1.9
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TARA	Tarawa	76.28	90	PFAKE		07 49 00.0	+7.6
TARA				LR	LR		
	comp=Z,4µm,22.0s						
IGT	Igoumenitsa	76.43	309	P	P	07 48 51.9	-0.9
SUW	Suwalki	76.49	324	eP	P	07 48 51.6	-1.2
SUW				eS	S	07 58 32.4	-4.5
SUW				LMZ	LR	08 26 36.9	
	comp=Z,11µm,21.1s						
SUW	Suwalki	76.49	324	eP	P	07 48 51.6	-1.2
	comp=Z,163nm,1.0s						
SUW				LR	LR		
	comp=Z,11µm,21.0s						
SUW	Suwalki	76.49	324	eP	P	07 48 51.6	-1.2
SUW				pmax	pmax		
	comp=Z,163nm,1.0s						
SUW				MLR	MLR		
	comp=Z,11µm,21.0s						
PHP	Peshkopia	76.55	312	P	P	07 48 50.1	-3.4
FIA1	FINESS Array S	76.64	332	eP	P	07 48 53.2	-0.2
	comp=Z,232nm,2.0s						
FINES	FINESS Array B	76.64	332	P	P	07 48 51.4	-2.1
	comp=Z,4.5nm,0.6s,baz=101,slow=4.9,SNR=19						
FINES				LR	LR	08 28 52.8	
	comp=Z,11µm,18.4s,baz=114,slow=41						
KEK	Kerkira	76.85	310	P	P	07 48 54.0	-1.2
TIR	Tirane	76.95	311	eP	P	07 48 56.1	+0.4
	comp=Z,52nm,0.8s						
TIR				LR	LR		
	comp=Z,6µm,22.0s						
TIR	Tirane	76.95	311	eP	P	07 48 56.1	+0.4
TIR				pmax	pmax		
	comp=Z,52nm,0.8s						
TIR				MLR	MLR		
	comp=Z,6µm,22.0s						
IVA	Berane	77.07	313	⇑iP	P	07 48 55.5	-1.0
DIVS	Divibare	77.12	314	eP	P	07 48 56.5	-0.2
KECS	Kecovo	77.29	319	eP	P	07 48 57.8	+0.3
KECS				pmax	pmax		
	comp=Z,150nm,1.2s						
KECS	Kecovo	77.29	319	eP	P	07 48 57.8	+0.3
KOME	Kolasin	77.34	313	⇑iP	P	07 48 56.6	-1.4
FRGS	Fruska Gora	77.36	315	eP	P	07 48 56.7	-1.3
ULC	Ulcinj	77.46	312	⇑iP	P	07 48 58.1	-0.5
PLE	Pljevlja	77.48	313	⇑iP	P	07 48 59.2	+0.4
PDG	Podgorica	77.50	312	⇓iP	P	07 48 58.0	-0.7
PDG	Podgorica	77.50	312	eP	P	07 48 56.2	-2.5
TTG	Podgorica	77.50	312	⇑iP	P	07 48 57.6	-1.1
TTG	Podgorica	77.50	312	eP	P	07 48 57.0	-1.7
	comp=Z,67nm,0.7s						
TTG				LR	LR		
	comp=Z,5µm,20.0s						
TTG	Podgorica	77.50	312	eP	P	07 48 57.0	-1.7
TTG				pmax	pmax		
	comp=Z,67nm,0.7s						
TTG				MLR	MLR		
	comp=Z,5µm,20.0s						
TEKS	Tekeris	77.50	314	eP	P	07 48 57.7	-1.0
BBLS	Lazići	77.52	314	eP	P	07 48 58.0	-0.9
DRME	Dracevica, Mon	77.53	312	⇑iP	P	07 48 57.3	-1.6
DRME	Dracevica, Mon	77.53	312	eP	P	07 48 56.8	-2.1
NIE	Niedzica	77.53	319	eS	S	07 58 46.5	-2.2
NIE				LMZ	LR	08 27 35.7	
	comp=Z,6µm,20.6s						
NIE	Niedzica	77.53	319	P	P	07 48 59.5	+0.7
BEL	Belsk	77.56	322	eP	P	07 48 58.2	-0.6
BEL				eS	S	07 58 45.9	-2.8
BEL				LMZ	LR	08 26 14.8	
	comp=Z,8µm,21.9s						
PSZ	Piszkesteto	77.61	318	eP	P	07 48 58.5	-0.9
	comp=Z,128nm,1.1s						
PSZ				LR	LR		
	comp=Z,6µm,20.0s						
PSZ	Piszkesteto	77.61	318	⇓iP	P	07 48 59.7	+0.3
PSZ	Piszkesteto	77.61	318	eP	P	07 48 58.5	-0.9
PSZ				pmax	pmax		
	comp=Z,128nm,1.1s						
PSZ				MLR	MLR		
	comp=Z,6µm,20.0s						
PSZ	Piszkesteto	77.61	318	eP	P	07 48 58.1	-1.3
PSZ				ePP	PP	07 51 45.1	-9.4
PSZ				eS	S	07 58 46.1	-3.6
NKY	Niksic	77.72	313	⇑iP	P	07 48 59.4	-0.7
NKY	Niksic	77.72	313	P	P	07 49 01.0	+0.9
NKME	Niksic	77.75	313	⇑iP	P	07 48 58.8	-1.4
CEME	Cevo	77.76	312	⇑iP	P	07 48 58.6	-1.7
UPM	Unac-Piva	77.82	313	⇑iP	P	07 48 59.3	-1.5
UPM	Unac-Piva	77.82	313	eP	P	07 48 59.5	-1.3
HAPS	Han Pijesak,Bl	77.87	314	eP	P	07 49 00.2	-0.7
OJC	Ojcow	77.96	320	eP	P	07 49 00.8	-0.4
OJC				eS	S	07 58 50.0	-3.2
OJC				LMZ	LR	08 27 23.3	
	comp=Z,7µm,21.6s						
OJC	Ojcow	77.96	320	eP	P	07 49 00.3	-0.8
	comp=Z,96nm,1.1s						
OJC	Ojcow	77.96	320	eP	P	07 49 00.3	-0.8
OJC				pmax	pmax		
	comp=Z,97nm,1.1s						
LANS	Liptovska Anna	78.04	319	eP	P	07 49 02.7	+1.0
LANS	Liptovska Anna	78.04	319	eP	P	07 49 02.7	+1.0
HCY	Herceg Novi	78.06	312	⇑iP	P	07 49 00.8	-1.1
HCY	Herceg Novi	78.06	312	eP	P	07 49 01.4	-0.5
BRY	Bratogost	78.06	313	⇑iP	P	07 49 00.6	-1.5
BRY	Bratogost	78.06	313	eP	P	07 49 00.4	-1.7
BILL	Bilibino	78.15	21	eP	P	07 49 01.5	-0.3
	comp=Z,204nm,2.0s						
BILL				LR	LR		
	comp=Z,27µm,21.0s						
BILL	Bilibino	78.15	21	d iP	P	07 49 01.9	+0.1
BILL				i		07 49 13.3	
BILL				i		07 52 04.0	
BILL				i S	S	07 58 54.1	-0.4
BILL				i SS	SS	08 03 57.1	+0.8
BILL				pmax	pmax		
	comp=Z,43nm,1.3s						
BILL				MLR	MLR		
	comp=Z,26µm,21.0s						
BUD	Budapest	78.15	317	eP	P	07 49 01.1	-1.2
TREB	Trebinje	78.19	313	eP	P	07 49 01.2	-1.4
MORH	Mrgy, Hungar	78.28	316	eP	P	07 49 01.1	-1.9
MORH				eS	S	07 58 52.1	-4.6
KLNR	Kaliningrad	78.31	325	c eP	P	07 49 04.3	+1.4
KLNR				pmax	pmax		
	comp=Z,127nm,0.9s						
KLNR				MLR	MLR		
	comp=Z,13µm,20.0s						
DBRK	Dubrovnik	78.33	312	i P	P	07 49 02.1	-1.2
VYHS	Vyhne	78.38	318	eP	P	07 49 03.3	-0.3
VYHS				pmax	pmax		
	comp=Z,42nm,1.6s						
VYHS	Vyhne	78.38	318	eP	P	07 49 03.3	-0.3
VYHS				eS	S	07 58 53.7	-4.1
VYHS				eL	L	08 28 30.3	
CSKK	Cskako	78.66	317	eS	S	07 58 58.1	-2.6
SRO	Srobarova	78.66	318	eP	P	07 49 05.9	+0.8
SRO	Srobarova	78.66	318	eP	P	07 49 05.9	+0.8
STON	Ston	78.68	313	i P	P	07 49 03.9	-1.3
STON	Ston	78.68	313	eP	P	07 49 03.6	-1.6
TIH	Tihany	78.86	317	eP	P	07 49 05.1	-1.1
TIH				ePP	PP	07 51 46.1	-19
TIH				eS	S	07 59 00.1	-2.9
ARCES	ARCESS Array B	79.06	340	P	P	07 49 04.7	-2.1
	comp=Z,10nm,0.6s,baz=95,slow=5.4,SNR=59						
ARCES				LR	LR	08 27 20.1	
	comp=Z,29µm,19.8s,baz=116,slow=38						
ARE0	ARCESS Array S	79.06	340	eP	P	07 49 06.0	-0.8
	comp=Z,4.3nm,1.3s						
ARE0				LR	LR		
	comp=Z,2µm,20.0s						
ARE0	ARCESS Array S	79.06	340	eP	P	07 49 05.9	-1.0
TIP	Timpagrande	79.17	309	eP	P	07 49 07.9	-0.3
	comp=Z,62nm,0.9s						
TIP	Timpagrande	79.17	309	P	P	07 49 06.9	-1.2
TIP	Timpagrande	79.17	309	⇑iP	P	07 49 08.4	+0.3
BLY	Banja Luka	79.18	315	eP	P	07 49 07.7	-0.3
	comp=Z,99nm,1.0s						
BLY				LR	LR		
	comp=Z,4µm,20.0s						
BLY	Banja Luka	79.18	315	⇑iP	P	07 49 08.0	0.0
BLY	Banja Luka	79.18	315	eP	P	07 49 06.3	-1.7
JAVC	Velka Javorina	79.19	319	eP	P	07 49 08.0	0.0
JAVC				eS	S	07 59 02.1	-4.4
MAKA	Makarska	79.20	313	i P	P	07 49 06.4	-1.7
MATE	Matera	79.28	310	⇓iP	P	07 49 07.8	-0.8
MORC	Moravsky Berou	79.36	320	eP	P	07 49 08.1	-0.9
	comp=Z,112nm,1.5s						
MORC				LR	LR		
	comp=Z,7µm,20.0s						
MORC	Moravsky Berou	79.36	320	⇓iP	P	07 49 08.4	-0.5
MORC	Moravsky Berou	79.36	320	eP	P	07 49 08.1	-0.9
MORC				pmax	pmax		
	comp=Z,112nm,1.5s						
MORC				MLR	MLR		
	comp=Z,7µm,20.0s						
MORC	Moravsky Berou	79.36	320	eP	P	07 49 08.0	-0.9
MORC				eS	S	07 59 03.1	-5.1
MODS	Modra-Piesok	79.41	318	eP	P	07 49 08.8	-0.4
MODS				pmax	pmax		
	comp=Z,215nm,2.2s						
MODS	Modra-Piesok	79.41	318	eP	P	07 49 08.8	-0.4
MODS				eS	S	07 59 02.3	-6.4
MODS				eL	L	08 29 03.9	
ZST	Bratislava	79.51	318	eP	P	07 49 09.7	0.0
ZST				eS	S	07 59 06.0	-3.7
ZST	Bratislava	79.51	318	eP	P	07 49 09.7	0.0
ZST				eS	S	07 59 06.0	-3.7
BEHE	Becsehely	79.59	316	eP	P	07 49 08.7	-1.5
BEHE	Becsehely	79.59	316	eP	P	07 49 10.0	-0.2
BEHE				eS	S	07 59 07.1	-3.7
KIJV	Kijevo	79.69	314	i P	P	07 49 09.7	-1.2
KTK1	Kautokeino	79.71	339	eP	P	07 49 09.1	-1.3
KTK1				IVmB_BB		07 49 13.5	
	comp=Z,790nm,3.5s						
KALN	Kalnik	79.79	316	i P	P	07 49 11.0	-0.4
CEL	Celeste	79.80	308	eP	P	07 49 11.3	-0.3
	comp=Z,240nm,1.1s						
CEL				LR	LR		
	comp=Z,4µm,21.0s						
SOP	Sopron	79.83	317	eP	P	07 49 10.1	-1.4
SOP				ePP	PP	07 51 44.1	-29
SOP				eS	S	07 59 10.0	-3.2
GKP	Gorka Klasztor	79.89	323	eP	P	07 49 11.1	-0.6
GKP				eS	S	07 59 09.9	-3.6
GKP				LMZ	LR	08 23 30.2	
	comp=Z,8µm,26.0s						
VRAC	Vranov	79.93	319	P	P	07 49 13.0	+1.0
VRAC	Vranov	79.93	319	eP	P	07 49 10.4	-1.6
VRAC				eS	S	07 59 08.7	-5.5
KOGS	Kog	79.95	316	i P	P	07 49 11.2	-1.0
HAMF	Hammerfest	79.96	341	eP	P	07 49 09.7	-1.9
HAMF				IVmB_BB		07 49 14.4	
	comp=Z,598nm,2.7s						
KRUC	Moravsky	80.04	319	P	P	07 49 12.8	+0.2
KRUC	Moravsky	80.04	319	eP	P	07 49 10.6	-2.0
PTJ	Puntijarka	80.12	316	P	P	07 49 13.5	+0.3
UDBI	Udbina	80.18	314	i P	P	07 49 12.2	-1.4
MORI	Morici	80.19	314	i P	P	07 49 11.6	-1.9
DPC	Dobruska-Polom	80.19	320	eP	P	07 49 14.5	+1.1
DPC				e		07 49 22.7	
DPC				eS	S	07 59 10.6	-6.4
DPC				MLR	MLR		
	comp=Z,7µm,18.5s						
DPC	Dobruska-Polom	80.19	320	eP	P	07 49 14.5	+1.1
DPC				ex	x	07 49 22.7	
DPC				eS	S	07 59 10.6	-6.4
DPC				AMS	AMS	08 29 40.0	
	comp=Z,7µm,18.5s						
ZIRJ	Zirje	80.22	313	i P	P	07 49 11.4	-2.2
KSP	Ksiaz	80.25	321	eP	P	07 49 13.6	0.0
KSP				eS	S	07 59 13.7	-3.8
KSP				LMZ	LR	08 24 01.6	
	comp=Z,6µm,26.2s						
KSP	Ksiaz	80.25	321	P	P	07 49 15.0	+1.3
OSTC	Ostas	80.27	320	eP	P	07 49 14.8	+1.0
OSTC				ex	x	07 49 24.1	
OSTC				eS	S	07 59 12.5	-5.3
OSTC				AMS	AMS	08 31 00.0	
	comp=Z,7µm,17.0s						
CONA	Conrad Observa	80.32	318	i P	P	07 49 13.6	-0.6
	comp=Z,14nm,0.9s,SNR=12						
UPC	Upice	80.40	320	eP	P	07 49 15.6	+1.1
UPC				eS	S	07 59 13.3	-5.8
UPC				MLR	MLR		
	comp=Z,8µm,17.6s						
UPC	Upice	80.40	320	eP	P	07 49 15.6	+1.1
UPC				eS	S	07 59 13.3	-5.8
UPC				AMS	AMS	08 29 50.0	
	comp=Z,8µm,17.6s						
OZLJ	Ozalj	80.45	315	i P	P	07 49 14.7	-0.2
CRES	Cresnjev	80.47	316	eP	P	07 49 13.4	-1.6
ARSA	Arzberg	80.50	317	i P	P	07 49 14.2	-1.0
	comp=Z,45nm,1.4s,SNR=15						
MLZ	Mavora Lakes	80.51	137	PFAKE		07 49 30.0	+15
MLZ				LR	LR		
	comp=Z,13µm,22.0s						
WHZ	Wether Hill Ro	80.54	138	PFAKE		07 49 30.0	+15
WHZ				LR	LR		
	comp=Z,10µm,20.0s						
SUR	Sutherland	80.56	236	eP	P	07 49 16.7	+0.7
	comp=Z,219nm,1.0s						
SUR				LR	LR		
	comp=Z,7µm,19.0s						
BOJS	Bojanci	80.59	315	i P	P	07 49 14.3	-1.3
BOJS				eS	S	07 59 16.2	-5.1
TREC	Trest	80.65	319	eP	P	07 49 16.5	+0.6
TREC	Trest	80.65	319	eP	P	07 49 16.5	+0.6
DUGI	Dugi Otok	80.66	314	i P	P	07 49 14.5	-1.5
PERS	Pernice	80.75	316	i P	P	07 49 15.7	-0.8
PERS				i S	S	07 59 20.2	-2.8
SOKA	Soboth	80.81	316	i P	P	07 49 16.4	-0.5
	comp=Z,65nm,1.1s,SNR=40						
NVLJ	Novalja	80.82	314	i P	P	07 49 15.4	-1.5
WDD	Wied Dalam	80.84	305	eP	P	07 49 14.9	-2.2
	comp=Z,176nm,0.7s						
WDD				LR	LR		
	comp=Z,3µm,20.0s						
VISS	Visnje	80.90	315	i P	P	07 49 16.3	-1.0
WKZ	Wanaka	80.97	137	PFAKE		07 49 30.0	+12
WKZ				LR	LR		
	comp=Z,12µm,20.0s						
LJU	Ljubljana	81.13	316	eP	P	07 49 17.1	-1.4
RIY	Rijeka	81.13	315	P	P	07 49 16.8	-1.7
OBKA	Obir	81.13	316	eP	P	07 49 18.6	-0.1
	comp=Z,35nm,1.3s,SNR=12						
GOPC	GO Pecny, Ondr	81.14	320	eP	P	07 49 19.0	+0.5
GOPC				eS	S	07 59 20.9	-6.0
GOPC				MLR	MLR		
	comp=Z,6µm,20.1s						
GOPC	GO Pecny, Ondr	81.14	320	eP	P	07 49 19.0	+0.5
GOPC				eS	S	07 59 20.9	-6.0
GOPC				AMS	AMS	08 30 10.0	
	comp=Z,6µm,20.1s						
FOZ	Fox Glacier	81.18	135	PFAKE		07 49 30.0	+11
FOZ				LR	LR		
	comp=Z,11µm,19.0s						
CEY	Cerknica	81.19	315	eP	P	07 49 16.8	-2.0
TSUM	Tsumeb	81.19	250	eP	P	07 49 19.9	+0.4
	comp=Z,155nm,1.0s						
TSUM				LR	LR		
	comp=Z,10µm,20.0s						
PRU	Pruhonice	81.31	320	eP	P	07 49 20.1	+0.8
PRU				e		07 49 28.0	
PRU				eS	S	07 59 17.5	-11
PRU				MLR	MLR		
	comp=Z,6µm,19.6s						
PRU	Pruhonice	81.31	320	eP	P	07 49 20.1	+0.8
PRU				ex	x	07 49 28.0	
PRU				eS	S	07 59 17.5	-11
PRU				AMS	AMS	08 30 20.0	
	comp=Z,6µm,19.6s						
PVCC	Panska Ves	81.32	320	eP	P	07 49 20.2	+0.8
PVCC				eS	S	07 59 22.1	-6.6
PVCC				MLR	MLR		
	comp=Z,8µm,18.4s						
PVCC	Panska Ves	81.32	320	eP	P	07 49 20.2	+0.8
PVCC				eS	S	07 59 22.1	-6.6
PVCC				AMS	AMS	08 30 30.0	
	comp=Z,8µm,18.4s						
TRO	Tromso	81.33	340	eP	P	07 49 17.5	-1.5
MOA	Molln	81.39	318	i P	P	07 49 18.9	-1.0
	comp=Z,28nm,1.1s,SNR=16						
JAVS	Javornik	81.44	316	i P	P	07 49 17.9	-2.4
JAVS				i S	S	07 59 25.9	-4.4
TRI	Trieste	81.65	315	eP	P	07 49 19.9	-1.3
	comp=Z,26nm,0.8s						
TRI				LR	LR		
	comp=Z,4µm,20.0s						
TRI	Trieste	81.65	315	eP	P	07 49 19.9	-1.3
TRI				pmax	pmax		
	comp=Z,26nm,0.8s						
TRI				MLR	MLR		
	comp=Z,4µm,20.0s						
LBZ	Lake Benmore	81.66	136	PFAKE		07 49 30.0	+8.7
LBZ				LR	LR		
	comp=Z,7µm,20.0s						
CADS	Cadrg	81.68	316	i P	P	07 49 19.1	-2.4
MYKA	Terra Mystica	81.76	316	i P	P	07 49 21.2	-0.7
	comp=Z,19nm,1.0s,SNR=5.8						
GEC2	GERESS Array S	81.80	319	eP	P	07 49 21.4	-0.7
	comp=Z,89nm,1.4s						
GEC2				LR	LR		
	comp=Z,3µm,19.0s						
GEC2	GERESS Array S	81.80	319	eP	P	07 49 21.5	-0.7
GEC2				pmax	pmax		
	comp=Z,89nm,1.4s						
GEC2				MLR	MLR		
	comp=Z,3µm,19.0s						
GERES	GERESS Array B	81.80	319	P	P	07 49 21.9	-0.2
	comp=Z,12nm,0.8s,baz=86,slow=5.5,SNR=49						
GERES				LR	LR	08 30 08.4	
	comp=Z,4µm,21.6s,baz=82,slow=39						
GERES	GERESS Array B	81.80	319	P	P	07 49 22.0	-0.2
AQU	L'Aquila	81.82	312	eP	P	07 49 21.8	-0.5
	comp=Z,160nm,1.1s						
AQU				LR	LR		
	comp=Z,5µm,21.0s						
AQU	L'Aquila	81.82	312	eP	P	07 49 21.8	-0.5
AQU				pmax	pmax		
	comp=Z,160nm,1.1s						
AQU				MLR	MLR		
	comp=Z,5µm,21.0s						
AQU	L'Aquila	81.82	312	eP	P	07 49 21.3	-1.0
KHC	Kasperske Hory	81.89	319	eP	P	07 49 22.4	-0.1
	comp=Z,8.9nm,1.0s						
KHC				LR	LR		
	comp=Z,2µm,21.0s						
KHC	Kasperske Hory	81.89	319	eP	P	07 49 22.4	-0.1
KHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KHC				MLR	MLR		
	comp=Z,2µm,21.0s						
KHC	Kasperske Hory	81.89	319	eP	P	07 49 22.8	+0.3
KHC				ex	x	07 49 34.7	
KHC				eS	S	07 59 34.8	0.0
KHC				AMS	AMS	08 31 30.0	
	comp=Z,6µm,17.8s						
CLTB	Caltabellotta	81.91	307	eP	P	07 49 22.6	-0.3
	comp=Z,78nm,0.9s						
KBA	Koelnbreinsper	81.98	317	i P	P	07 49 22.1	-1.1
	comp=Z,25nm,1.3s,SNR=14						
KBA	Koelnbreinsper	81.98	317	P	P	07 49 22.4	-0.8
RPZ	Rata Peaks	82.09	135	P	P	07 49 23.3	-0.3
	comp=Z,73nm,1.0s,baz=341,slow=3.6,SNR=8.1						
RPZ	Rata Peaks	82.09	135	eP	P	07 49 23.3	-0.3
	comp=Z,94nm,1.1s						
RPZ				LR	LR		
	comp=Z,12µm,20.0s						
WIN	Windhoek	82.12	247	eP	P	07 49 24.2	-0.2
	comp=Z,92nm,0.8s						
WIN				LR	LR		
	comp=Z,9µm,19.0s						
OUZ	Omahuta	82.14	126	PFAKE		07 49 30.0	+6.0
OUZ				LR	LR		
	comp=Z,16µm,20.0s						
ODZ	Otahua Downs	82.14	137	PFAKE		07 49 30.0	+6.2
ODZ				LR	LR		
	comp=Z,10µm,18.0s						
RGN	Rugen	82.29	324	PFAKE		07 49 40.0	+16
RGN				LR	LR		
	comp=Z,16µm,21.0s						
CLL	Collm	82.35	321	eP	P	07 49 24.0	-0.8
	comp=Z,62nm,1.5s						
CLL				LR	LR		
	comp=Z,6µm,19.0s						
CLL	Collm	82.35	321	i P	P	07 49 23.3	-1.5
CLL				eS	S	07 59 37.0	-2.2
CLL				pmax	pmax		
	comp=Z,35nm,1.2s						
CLL				MLR	MLR		
	comp=Z,6µm,21.6s						
CLL	Collm	82.35	321	i P	P	07 49 23.3	-1.5
	comp=Z,35nm,1.2s						
CLL				i pP	PcP	07 49 27.9	-2.1
CLL				i		07 49 33.2	
CLL				eS	S	07 59 37.0	-2.2
CLL				eSS	SS	08 05 00.0	+0.2
CLL				e		08 09 36.0	
CLL				eSSSS		08 11 18.0	
CLL				LmV		08 29 00.0	
	comp=Z,6µm,21.6s						
WET	Wettzell	82.36	319	P	P	07 49 25.0	+0.1
STEI	Steigen	82.42	338	eP	P	07 49 23.8	-1.0
ABTA	Abfaltersbach	82.54	316	i P	P	07 49 25.1	-0.9
	comp=Z,17nm,1.2s,SNR=10						
MOR8	Moi Rana	82.55	336	eP	P	07 49 24.4	-1.2
NKC	Novy Kostel	82.66	320	eP	P	07 49 26.6	+0.1
NKC				eS	S	07 59 38.2	-4.4
NKC				MLR	MLR		
	comp=Z,9µm,19.1s						
NKC	Novy Kostel	82.66	320	eP	P	07 49 26.6	+0.1
NKC				eS	S	07 59 38.2	-4.4
NKC				AMS	AMS	08 31 20.0	
	comp=Z,9µm,19.1s						
OXZ	Oxford	82.70	135	PFAKE		07 49 40.0	+13
OXZ				LR	LR		
	comp=Z,12µm,20.0s						
LTZ	Lake Taylor	82.74	134	PFAKE		07 49 40.0	+13
LTZ				LR	LR		
	comp=Z,14µm,20.0s						
THZ	Tophouse	82.97	133	PFAKE		07 49 40.0	+12
THZ				LR	LR		
	comp=Z,15µm,22.0s						
LOF	Lofoten	83.08	338	eP	P	07 49 27.2	-1.0
SYO	Syowa Base	83.11	198	⇓iP	P	07 49 28.4	+0.1
SYO	Syowa Base	83.11	198	⇓iP	P	07 49 31.6	+3.3
WTTA	Wattenberg	83.15	317	i P	P	07 49 28.3	-1.0
	comp=Z,39nm,0.9s,SNR=14						
CRLZ	Canterbury Las	83.17	135	PFAKE		07 49 40.0	+11
CRLZ				LR	LR		
	comp=Z,11µm,20.0s						
WATA	Walderalm	83.19	317	eP	P	07 49 27.7	-1.8
	comp=Z,12nm,0.6s						
MOX	Moxa	83.20	320	P	P	07 49 30.0	+0.7
MQZ	McQueen’s Vall	83.22	135	PFAKE		07 49 40.0	+11
MQZ				LR	LR		
	comp=Z,10µm,19.0s						
SPA0	Spitsbergen Ar	83.43	348	eP	P	07 49 29.3	-0.6
	comp=Z,83nm,1.0s						
SPA0	Spitsbergen Ar	83.43	348	eP	P	07 49 30.2	+0.3
SPITS	Spitsbergen Ar	83.43	348	P	P	07 49 28.4	-1.5
SPITS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NC405	NORSAR Array S	83.44	331	eP	P	07 49 30.1	-0.1
	comp=Z,103nm,1.4s						
HSPB	Hornsund (broa	83.44	347	eP	P	07 49 30.1	+0.1
SQTA	Sankt Quirin	83.44	317	i P	P	07 49 29.7	-1.0
	comp=Z,32nm,0.6s,SNR=16						
GRA1	Grafenberg Arr	83.45	319	PFAKE		07 49 40.0	+9.4
GRA1				LR	LR		
	comp=Z,7µm,19.0s						
GRFO	Grafenberg	83.45	319	PFAKE		07 49 40.0	+9.4
GRFO				LR	LR		
	comp=Z,4µm,22.0s						
NSS	Namsos	83.47	334	eP	P	07 49 28.7	-1.6
NSS				IVmB_BB		07 49 34.0	
	comp=Z,777nm,4.0s						
NC602	NORSAR Array S	83.51	330	eP	P	07 49 29.7	-0.9
	comp=Z,84nm,1.3s						
NC602	NORSAR Array S	83.51	330	eP	P	07 49 29.0	-1.6
NORES	NORESS Array B	83.51	330	P	P	07 49 34.6	+4.0
NORES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MOTA	Moosalm	83.51	317	i P	P	07 49 30.0	-1.2
	comp=Z,14nm,0.7s,SNR=9.7						
KHZ	Kahutara	83.57	133	eP	P	07 49 30.6	-0.6
	comp=Z,71nm,1.1s						
KHZ				LR	LR		
	comp=Z,13µm,21.0s						
NB2	NORSAR Subarra	83.68	331	P	P	07 49 29.3	-2.2
	comp=Z,374nm,5.0s,baz=91,slow=5.1						
NB2	NORSAR Subarra	83.68	331	P	P	07 49 29.3	-2.2
	baz=91,slow=5.1						
NOA	NORSAR Array B	83.68	331	P	P	07 49 29.6	-2.0
	comp=Z,2.9nm,0.7s,baz=94,slow=5.1,SNR=12						

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NOA                                      LR       LR        08 30 30.2
           comp=Z,17µm,21.1s,baz=95,slow=38
RETA  Reutte              83.74 317  i P      P         07 49 31.4  -0.9
           comp=Z,26nm,0.8s,SNR=14
FETA  Feichten            83.77 317  i P      P         07 49 31.8  -0.6
           comp=Z,21nm,1.2s,SNR=12
HIZ   Hauiti              83.77 129  PFAKE              07 49 40.0 +7.6
HIZ                                  LR       LR
           comp=Z,15µm,20.0s
NAO01 NORSAR Array S      83.83 331  eP       P         07 49 32.6 +0.3
           comp=Z,52nm,1.0s
NBO00 NORSAR Array S      83.89 331  eP       P         07 49 32.9 +0.3
           comp=Z,67nm,1.2s
NC204 NORSAR Array S      83.90 331  eP       P         07 49 32.3  -0.4
           comp=Z,120nm,1.5s
VLC   Villacollemand      84.03 314  PFAKE              07 49 40.0 +6.3
VLC                                  LR       LR
           comp=Z,3µm,20.0s
KIWB  Kanaga Island       84.03  38  eP       P         07 49 32.9  -0.5
FUORN Ofenpass-Fuorn      84.09 316  eP       P         07 49 33.6  -0.7
           comp=Z,272nm,1.8s
FUORN                                LR       LR
           comp=Z,7µm,20.0s
SNZO  South Karori        84.20 132  PFAKE              07 49 40.0 +5.5
SNZO                                 LR       LR
           comp=Z,9µm,22.0s
ADK   Adak                84.32  38  eP       P         07 49 34.6  -0.3
           comp=Z,136nm,1.1s
ADK                                  LR       LR
           comp=Z,6µm,21.0s
ADK   Adak                84.32  38  eP       P         07 49 34.6  -0.3
ADK                                  pmax     pmax
           comp=Z,136nm,1.1s
ADK                                  MLR      MLR
           comp=Z,6µm,21.0s
MIDW  Midway              84.33  62  PFAKE              07 49 50.0  +15
MIDW                                 LR       LR
           comp=Z,4µm,22.0s
DAVA  Damuels             84.34 317  i P      P         07 49 35.0  -0.4
           comp=Z,31nm,1.0s,SNR=15
KBS   Kingsbay            84.39 349  eP       P         07 49 34.6  -0.2
           comp=Z,24nm,0.9s
KBS                                  LR       LR
           comp=Z,14µm,20.0s
KBS   Kingsbay            84.39 349  eP       P         07 49 34.6  -0.2
KBS                                  pmax     pmax
           comp=Z,24nm,0.9s
KBS                                  MLR      MLR
           comp=Z,14µm,20.0s
KBS   Kingsbay            84.39 349  eP       P         07 49 33.8  -1.0
KONO  Kongsberg           84.46 329  eP       P         07 49 35.6 +0.1
           comp=Z,60nm,1.3s
KONO                                 LR       LR
           comp=Z,19µm,20.0s
KONO  Kongsberg           84.46 329  eP       P         07 49 35.6 +0.1
KONO                                 pmax     pmax
           comp=Z,60nm,1.3s
KONO                                 MLR      MLR
           comp=Z,19µm,20.0s
DOMB  Dombas              84.72 332  eP       P         07 49 36.1  -0.7
DOMB                                 IVmB_BB            07 49 40.9
           comp=Z,751nm,4.3s
TUE   Stuetta             84.72 316  eP       P         07 49 36.6  -0.8
           comp=Z,42nm,1.1s
TUE                                  LR       LR
           comp=Z,7µm,20.0s
STU   Stuttgart           84.78 318  PFAKE              07 49 50.0  +13
STU                                  LR       LR
           comp=Z,6µm,20.0s
TOD   Tromm               85.02 319  P        P         07 49 38.8 +0.2
KEST  Kesra               85.05 305  P        P         07 49 38.7  -0.4
           comp=Z,66nm,0.9s,baz=69,slow=3.4,SNR=45
KEST                                 PKKPbc   PKKPbc    08 07 48.0 +1.0
           comp=Z,2.5nm,0.7s,baz=310,slow=11,SNR=3.6
KEST  Kesra               85.05 305  eP       P         07 49 39.0  -0.1
           comp=Z,207nm,1.0s
KEST                                 LR       LR
           comp=Z,4µm,20.0s
PGF   Pioggiola           85.08 312  P        P         07 49 38.5  -0.6
PGF                                  pmax     pmax
           comp=Z,42nm,1.0s
SKAR  Skarslia            85.10 330  eP       P         07 49 40.0 +1.2
BKZ   Black Stump Fm      85.14 130  eP       P         07 49 38.6  -0.8
           comp=Z,97nm,0.9s
BKZ                                  LR       LR
           comp=Z,21µm,19.0s
TAMR  Tamra               85.19 307  eP       P         07 49 39.4  -0.2
           comp=Z,87nm,1.1s
BFZ   Birch Farm          85.22 131  PFAKE              07 49 50.0  +10
BFZ                                  LR       LR
           comp=Z,10µm,21.0s
TNS   Taunus Mts          85.23 320  P        P         07 49 42.1 +2.4
SLE   Schleitheim         85.28 317  P        P         07 49 39.9   0.0
BFO   Black Forest        85.37 318  eP       P         07 49 39.6  -0.8
           comp=Z,31nm,1.1s
BFO                                  LR       LR
           comp=Z,4µm,21.0s
BFO   Black Forest        85.37 318  eP       P         07 49 39.6  -0.8
BFO                                  pmax     pmax
           comp=Z,31nm,1.1s
BFO                                  MLR      MLR
           comp=Z,4µm,21.0s
MOL   Molde               85.42 332  eP       P         07 49 36.0  -4.3
URZ   Urewera             85.47 129  P        P         07 49 39.8  -1.2
           comp=Z,28nm,0.7s,baz=237,slow=3.7,SNR=15
URZ   Urewera             85.47 129  eP       P         07 49 40.0  -1.0
           comp=Z,100nm,1.1s
URZ                                  LR       LR
           comp=Z,14µm,18.0s
KTD   Kalmit              85.50 319  P        P         07 49 41.5 +0.5
AKN   Aaknes              85.69 332  IVmBBB             07 49 38.5
           comp=Z,844nm,3.5s
AKN                                  eP       P         07 49 38.7  -3.0
LANF  Langenberg          85.69 319  P        P         07 49 41.8  -0.1
BLS5  Blasjo              86.06 329  eP       P         07 49 44.1 +0.6
BLS5                                 IVmB_BB            07 49 47.9
           comp=Z,778nm,3.4s
CDF   Champ du Feu        86.06 318  eP       P         07 49 42.7  -1.2
CDF                                  pmax     pmax
           comp=Z,8.0nm,0.7s
SENIN Lac Senin/Sane      86.14 316  eP       P         07 49 44.0  -0.5
           comp=Z,76nm,1.4s
SENIN                                LR       LR
           comp=Z,4µm,19.0s
ECH   Echery              86.15 318  eP       P         07 49 43.8  -0.4
           comp=Z,26nm,1.0s
ECH                                  LR       LR
           comp=Z,3µm,22.0s
ECH   Echery              86.15 318  eP       P         07 49 43.8  -0.4
ECH                                  pmax     pmax
           comp=Z,26nm,1.0s
ECH                                  MLR      MLR
           comp=Z,3µm,22.0s
SBF   Sospel              86.17 314  eP       P         07 49 43.7  -0.8
SBF                                  pmax     pmax
           comp=Z,72nm,1.0s
MOF   Molkenrain          86.19 318  P        P         07 49 45.1 +0.6
MXZ   Matakaoa Point      86.29 128  PFAKE              07 50 00.0  +15
MXZ                                  LR       LR
           comp=Z,12µm,21.0s
HINF  Hinteralfeld        86.38 318  eP       P         07 49 47.2 +1.8
HINF                                 pmax     pmax
           comp=Z,5.0nm,0.6s
LOMF  Lomont              86.42 317  eP       P         07 49 47.4 +1.7
ABSA  Djebel Ababsia      86.53 306  P        P         07 49 48.1 +1.6
CMAH  Djebel Manchou      86.56 306  P        P         07 49 48.0 +1.4
LPG   La Plagne           86.57 315  eP       P         07 49 46.0  -0.7
LPG                                  pmax     pmax
           comp=Z,71nm,1.0s
LPL   La Plagne           86.58 315  eP       P         07 49 45.1  -1.6
LPL                                  pmax     pmax
           comp=Z,63nm,0.8s
MBDF  Montbardon          86.60 314  eP       P         07 49 45.3  -1.4
MBDF                                 pmax     pmax
           comp=Z,17nm,0.8s
BNI   Bardonecchia        86.65 315  eP       P         07 49 45.5  -1.4
           comp=Z,42nm,0.9s
BNI                                  LR       LR
           comp=Z,7µm,22.0s
BNI   Bardonecchia        86.65 315  eP       P         07 49 45.5  -1.4
BNI                                  pmax     pmax
           comp=Z,42nm,0.9s
BNI                                  MLR      MLR
           comp=Z,7µm,22.0s
HAU   Haudompre           86.71 318  eP       P         07 49 45.9  -1.1
HAU                                  pmax     pmax
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           comp=Z,22nm,0.7s
WLF   Walferdange         86.74 319  PFAKE              07 50 00.0  +13
WLF                                  LR       LR
           comp=Z,26µm,20.0s
WLF   Walferdange         86.74 319  P        P         07 49 46.3  -0.8
WLF   Walferdange         86.74 319  PcP      P         07 49 48.1 +1.1
FRF   La Foret Royal      86.76 313  eP       P         07 49 46.8  -0.5
FRF                                  pmax     pmax
           comp=Z,44nm,0.9s
MEM   Membach             86.78 320  P        P         07 49 49.9 +2.7
MEM   Membach             86.78 320  P        P         07 49 47.0  -0.2
MEM                                  sP       PcP       07 49 51.2 +1.7
LMR   La Mourre           86.87 313  eP       P         07 49 47.2  -0.6
LMR                                  pmax     pmax
           comp=Z,50nm,1.2s
CABF  La Chapelle         86.97 316  eP       P         07 49 47.8  -0.6
CABF                                 pmax     pmax
           comp=Z,21nm,0.8s
CAEH  'Ain El Ouahch      87.01 306  P        P         07 49 49.9 +1.2
CKFL  Kef-Lekhel          87.14 306  P        P         07 49 50.8 +1.3
ORIF  Oris-en-Rattie      87.22 315  eP       P         07 49 49.2  -0.4
ORIF                                 pmax     pmax
           comp=Z,24nm,1.0s
BCLA  Clavier             87.24 320  P        P         07 49 50.0 +0.6
BGES  Gesves              87.38 320  P        P         07 49 50.0  -0.2
CTEI  Djebel Teioual      87.41 306  P        P         07 49 51.2 +0.4
GIVF  Givet               87.57 320  eP       P         07 49 53.5 +2.4
GIVF                                 pmax     pmax
           comp=Z,19nm,1.0s
BMRD  Maredsous           87.59 320  P        P         07 49 51.1  -0.1
DOU   Dourbes             87.71 320  P        P         07 49 52.3 +0.6
DFRA  Djebel Bou Aff      87.81 306  P        P         07 49 54.6 +1.9
UCC   Uccle               87.81 321  PFAKE              07 50 00.0 +7.8
UCC                                  LR       LR
           comp=Z,4µm,22.0s
SNF   Seneffe             87.88 320  P        P         07 49 52.5   0.0
BAIF  Baives              87.97 320  eP       P         07 49 52.7  -0.3
BAIF                                 pmax     pmax
           comp=Z,17nm,0.7s
VIVF  Saint-Julien-l      88.08 315  eP       P         07 49 53.1  -0.6
VIVF                                 pmax     pmax
           comp=Z,10.0nm,0.9s
SSB   Saint Sauveur       88.14 315  eP       P         07 49 53.5  -0.5
           comp=Z,36nm,1.0s
SSB   Saint Sauveur       88.14 315  eP       P         07 49 53.5  -0.5
SSB                                  pmax     pmax
           comp=Z,36nm,1.0s
RAO   Raoul Island        88.35 119  PFAKE              07 50 10.0  +15
RAO                                  LR       LR
           comp=Z,10µm,18.0s
LOR   Lormes              88.44 317  eP       P         07 49 54.6  -0.7
LOR                                  pmax     pmax
           comp=Z,15nm,0.7s
SMF   Signal de Mont      88.51 316  eP       P         07 49 54.8  -0.8
SMF                                  pmax     pmax
           comp=Z,14nm,0.6s
SSF   Saint Saulge        88.70 317  eP       P         07 49 56.4  -0.1
SSF                                  pmax     pmax
           comp=Z,35nm,1.3s
AVF   Avril sur Loir      88.83 317  eP       P         07 49 56.4  -0.7
AVF                                  pmax     pmax
           comp=Z,22nm,1.1s
TAM   Tamanrasset         89.18 293  PFAKE              07 50 10.0  +11
TAM                                  LR       LR
           comp=Z,6µm,20.0s
BGF   Bois d'Agland       89.20 316  eP       P         07 49 58.7  -0.2
BGF                                  pmax     pmax
           comp=Z,74nm,1.4s
ANM   Nome                89.25  25  PFAKE              07 50 10.0  +11
ANM                                  LR       LR
           comp=Z,11µm,19.0s
VNDA  Vanda               89.35 169  P        P         07 49 59.2 +0.4
           comp=Z,10nm,0.7s,baz=298,slow=5.6,SNR=38
VNDA                                 PKKP     PKKPbc    08 07 36.8  -1.4
           comp=Z,1.6nm,0.9s,baz=135,slow=2.9,SNR=6.7
VNDA                                 PKPPKP             08 15 44.7
           comp=Z,0.9nm,0.9s,baz=164,slow=2.4,SNR=4.3
VNDA                                 LR       LR        08 24 22.9
           comp=Z,4µm,22.0s,baz=316,slow=32
VNDA  Vanda               89.35 169  eP       P         07 49 58.6  -0.3
           comp=Z,70nm,1.1s
VNDA  Vanda               89.35 169  eP       P         07 49 58.6  -0.3
VNDA                                 pmax     pmax
           comp=Z,70nm,1.1s
CLF   Chambon-Foret       89.44 318  eP       P         07 49 60.0   0.0
           comp=Z,54nm,0.9s
CLF                                  LR       LR
           comp=Z,9µm,18.0s
RDOG  Red Dog Mine        89.60  22  eP       P         07 50 00.5 +0.1
           comp=Z,22nm,1.1s
RDOG                                 LR       LR
           comp=Z,26µm,18.0s
TCF   Toulx Ste Croi      89.67 316  eP       P         07 50 00.9  -0.2
TCF                                  pmax     pmax
           comp=Z,63nm,1.7s
WACR  West Acre           89.91 323  eP       P         07 50 02.2 +0.2
WACR                                 IAMs_20  IAMs_20   08 36 31.6
           comp=Z,7µm,22.7s
CAF   Calviac             89.92 315  eP       P         07 50 02.3   0.0
CAF                                  pmax     pmax
           comp=Z,26nm,1.0s
MTLF  Montolieu           89.99 313  eP       P         07 50 02.5  -0.1
MTLF                                 pmax     pmax
           comp=Z,24nm,1.0s
ABA   Alger-Bouzarea      90.06 307  P        P         07 50 05.0 +1.9
RJF   Les Rejaudoux       90.26 315  eP       P         07 50 04.0 +0.1
RJF                                  pmax     pmax
           comp=Z,32nm,1.0s
SBA   Scott Base          90.45 169  eP       P         07 50 04.4 +0.4
           comp=Z,122nm,1.3s
SBA                                  LR       LR
           comp=Z,4µm,20.0s
SBA   Scott Base          90.45 169  eP       P         07 50 04.4 +0.4
SBA                                  pmax     pmax
           comp=Z,122nm,1.3s
SBA                                  MLR      MLR
           comp=Z,4µm,20.0s
LFF   La Frestale         90.85 315  eP       P         07 50 06.9 +0.3
LFF                                  pmax     pmax
           comp=Z,54nm,1.2s
LDF   La Druitiere        90.95 319  eP       P         07 50 06.6  -0.4
LDF                                  pmax     pmax
           comp=Z,54nm,1.3s
HPK   Haverah Park        91.06 324  eP       P         07 50 07.0  -0.3
HPK                                  IAMs_20  IAMs_20   08 38 35.6
           comp=Z,11µm,18.9s
CWF   Charnwood Fore      91.07 323  eP       P         07 50 06.8  -0.7
CWF                                  IAMs_20  IAMs_20   08 35 56.6
           comp=Z,6µm,19.4s
DAG   Danmarks Havn       91.08 348  i P      P         07 50 05.5  -1.5
DAG                                  pmax     pmax
           comp=Z,14nm,0.9s
DAG                                  MLR      MLR
           comp=Z,15µm,23.0s
DAG   Danmarks Havn       91.08 348  i P      P         07 50 05.5  -1.5
           comp=Z,16nm,0.9s
           comp=Z,13µm,23.0s
EDMD  Edmundbyers         91.11 325  eP       P         07 50 08.4 +0.8
EDMD                                 IAMs_20  IAMs_20   08 38 38.0
           comp=Z,9µm,17.2s
FLN   La Foliniere        91.16 319  eP       P         07 50 07.6  -0.3
FLN                                  pmax     pmax
           comp=Z,58nm,1.2s
LBWR  Ladybower, Pea      91.21 324  eP       P         07 50 08.1   0.0
LBWR                                 IAMs_20  IAMs_20   08 35 45.7
           comp=Z,12µm,20.4s
MFF   Saint Martin d      91.24 317  eP       P         07 50 08.2  -0.2
MFF                                  pmax     pmax
           comp=Z,51nm,1.0s
WOL   Wolverton           91.24 322  eP       P         07 50 08.0  -0.3
WOL                                  IAMs_20  IAMs_20   08 36 53.5
           comp=Z,14µm,20.0s
EPF   Esparros            91.39 313  eP       P         07 50 09.2   0.0
EPF                                  pmax     pmax
           comp=Z,4.0nm,0.5s
GRR   Gorron              91.46 319  eP       P         07 50 09.2  -0.2
GRR                                  pmax     pmax
           comp=Z,47nm,1.3s
BIGH  Upper Bighouse      91.50 329  eP       P         07 50 10.2 +1.0
BIGH                                 IAMs_20  IAMs_20   08 39 09.3
           comp=Z,8µm,16.6s
ESK   Eskdalemuir         91.73 326  PFAKE              07 50 20.0  +10
ESK                                  LR       LR
           comp=Z,11µm,21.0s
KNTN  Kanton              91.92  93  PFAKE              07 50 20.0 +7.8
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KNTN                                 LR       LR
           comp=Z,3µm,22.0s
HLM1  Long Mynd           92.05 323  eP       P         07 50 12.2 +0.2
HLM1                                 IAMs_20  IAMs_20   08 36 26.0
           comp=Z,8µm,19.8s
ETSF  Etsaut              92.06 313  eP       P         07 50 12.6 +0.2
ETSF                                 pmax     pmax
           comp=Z,39nm,0.9s
JSA   Saint Aubin         92.19 320  eP       P         07 50 12.1  -0.6
JSA                                  IAMs_20  IAMs_20   08 40 37.9
           comp=Z,6µm,17.4s
MCH1  Michaelchurch       92.22 322  eP       P         07 50 12.2  -0.5
MCH1                                 IAMs_20  IAMs_20   08 36 47.2
           comp=Z,10µm,20.4s
KAC   Achnashellach       92.43 328  eP       P         07 50 14.3 +0.6
SJPF  Ste Jean            92.51 313  eP       P         07 50 14.8 +0.4
SJPF                                 pmax     pmax
           comp=Z,53nm,1.0s
SGMF  Saint Gilles        92.60 319  eP       P         07 50 16.4 +1.8
SGMF                                 pmax     pmax
           comp=Z,37nm,1.3s
TOC2  Torodi Ar. Sit      93.67 283  PFAKE              07 50 30.0  +10
TOC2                                 LR       LR
           comp=Z,6µm,18.0s
TOC3  Torodi Ar. Sit      93.67 283  PFAKE              07 50 30.0  +10
TOC3                                 LR       LR
           comp=Z,6µm,18.0s
TOC1  Torodi Ar. Sit      93.68 283  PFAKE              07 50 30.0  +10
TOC1                                 LR       LR
           comp=Z,7µm,18.0s
TOB3  Torodi Ar. Sit      93.68 283  PFAKE              07 50 30.0  +10
TOB3                                 LR       LR
           comp=Z,6µm,18.0s
TOA2  Torodi Ar. Sit      93.69 283  PFAKE              07 50 30.0  +10
TOA2                                 LR       LR
           comp=Z,6µm,20.0s
TOC4  Torodi Ar. Sit      93.69 283  PFAKE              07 50 30.0  +10
TOC4                                 LR       LR
           comp=Z,6µm,18.0s
TOA0  Torodi Ar. Sit      93.69 283  eP       P         07 50 20.3  -0.1
           comp=Z,147nm,1.6s
TOA0                                 LR       LR
           comp=Z,6µm,18.0s
TORD  Torodi Ar. Bea      93.69 283  P        P         07 50 19.9  -0.4
           comp=Z,21nm,0.8s,baz=81,slow=3.2,SNR=77
TORD                                 PP       PP        07 54 08.2 +2.5
           comp=Z,28nm,1.2s,baz=100,slow=7.2,SNR=15
TORD                                 PKKP     PKKPbc    08 07 25.1 +0.2
           comp=Z,1.8nm,0.9s,baz=293,slow=3.1,SNR=6.0
TORD                                 LR       LR        08 31 19.6
           comp=Z,5µm,19.8s,baz=25,slow=35
TOA1  Torodi Ar. Sit      93.69 283  PFAKE              07 50 30.0  +10
TOA1                                 LR       LR
           comp=Z,6µm,20.0s
TOB4  Torodi Ar. Sit      93.70 283  PFAKE              07 50 30.0  +10
TOB4                                 LR       LR
           comp=Z,6µm,21.0s
TOB5  Torodi Ar. Sit      93.70 283  PFAKE              07 50 30.0  +10
TOB5                                 LR       LR
           comp=Z,6µm,18.0s
TOC7  Torodi Ar. Sit      93.70 283  PFAKE              07 50 30.0  +10
TOC7                                 LR       LR
           comp=Z,6µm,18.0s
TOC5  Torodi Ar. Sit      93.71 283  PFAKE              07 50 30.0  +10
TOC5                                 LR       LR
           comp=Z,7µm,21.0s
DSB   Dublin              93.98 324  PFAKE              07 50 30.0 +9.1
DSB                                  LR       LR
           comp=Z,7µm,20.0s
TOLK  Toolik Lake Re      94.13  20  eP       P         07 50 20.7  -0.6
           comp=Z,19nm,0.9s
TOLK                                 LR       LR
           comp=Z,29µm,20.0s
TOLK  Toolik Lake Re      94.13  20  P        P         07 50 21.1  -0.3
           baz=294
FIGM  Figuig              94.15 303  P        P         07 50 24.1 +1.7
SESP  Santiago Espad      94.29 309  P        P         07 50 23.7 +0.8
SVW2  Sparrevohn          94.43  28  eP       P         07 50 23.1 +0.3
UCM   Universidad Co      94.46 311  Pdif     P         07 50 21.3  -2.2
UCM                                  eS       S         08 01 26.2  -8.3
QSPA  South Pole Qui      94.61 180  eP       P         07 50 23.8 +0.1
           comp=Z,60nm,1.4s
QSPA                                 LR       LR
           comp=Z,9µm,20.0s
SCO   Scoresbysund        94.79 343  PFAKE              07 50 40.0  +16
SCO                                  LR       LR
           comp=Z,13µm,22.0s
JBK   JBK                 94.91 305  P        P         07 50 28.0 +2.1
MELI  Melilla             95.05 306  Pdif     P         07 50 19.3  -6.9
MELI                                 eS       S         08 01 43.5 +3.7
GUD   Guadarrama          95.08 311  P        P         07 50 27.8 +1.4
ESDC  Sonseca Array       95.11 310  P        P         07 50 25.8  -0.7
           comp=Z,11nm,0.8s,baz=60,slow=4.1,SNR=17
ESDC                                 PP       PP        07 54 19.4 +3.2
           comp=Z,1.3nm,0.7s,baz=76,slow=6.8,SNR=2.7
ESDC                                 PKKP     PKKPbc    08 07 22.7 +0.7
           comp=Z,3.9nm,1.1s,baz=276,slow=2.9,SNR=6.7
ESLA  Sonseca Array       95.11 310  eP       P         07 50 26.6 +0.1
           comp=Z,16nm,0.9s
MLY   Manley              95.14  23  eP       P         07 50 25.3  -0.7
           comp=Z,58nm,1.8s
MLY                                  LR       LR
           comp=Z,7µm,21.0s
CAST  Castle Rocks        95.20  25  PFAKE              07 50 40.0  +14
CAST                                 LR       LR
           comp=Z,3µm,19.0s
BPAW  Bear Paw Mtn.       95.40  24  eP       P         07 50 26.1  -1.0
           comp=Z,53nm,1.2s
BPAW                                 LR       LR
           comp=Z,7µm,21.0s
PAB   San Pablo           95.43 310  eP       P         07 50 27.7  -0.2
           comp=Z,22nm,1.1s
PAB   San Pablo           95.43 310  eP       P         07 50 27.7  -0.2
PAB                                  pmax     pmax
           comp=Z,22nm,1.1s
KTH   Kantishna Hill      95.63  25  PFAKE              07 50 40.0  +12
KTH                                  LR       LR
           comp=Z,10µm,19.0s
TRF   Thorofare Moun      95.93  25  eP       P         07 50 30.9 +1.1
           comp=Z,20nm,0.9s
TRF                                  LR       LR
           comp=Z,2µm,19.0s
BWN   Browne              95.98  24  PFAKE              07 50 40.0  +10
BWN                                  LR       LR
           comp=Z,8µm,22.0s
EMAL  Malaga-Limoner      96.00 308  Pdif     P         07 50 19.9   -11
EMAL                                 eS       S         08 01 43.9  -4.0
CHIA  Chirikof Islan      96.04  33  PFAKE              07 50 40.0  +10
CHIA                                 LR       LR
           comp=Z,10µm,22.0s
MDM   Murphy Dome         96.14  23  PFAKE              07 50 40.0 +9.4
MDM                                  LR       LR
           comp=Z,6µm,20.0s
PVLZ  Peæn de             96.18 306  Pdif     P         07 50 37.3 +6.0
PVLZ                                 eS       S         08 01 49.0  -0.5
COLA  College             96.33  23  PFAKE              07 50 40.0 +8.7
COLA                                 LR       LR
           comp=Z,6µm,20.0s
MCK   McKinley            96.38  24  eP       P         07 50 30.9  -0.7
           comp=Z,44nm,1.1s
MCK                                  LR       LR
           comp=Z,9µm,20.0s
MCK   McKinley            96.38  24  eP       P         07 50 30.9  -0.7
MCK                                  pmax     pmax
           comp=Z,44nm,1.1s
MCK                                  MLR      MLR
           comp=Z,9µm,20.0s
WRH   Wood River Hil      96.41  23  PFAKE              07 50 40.0 +8.3
WRH                                  LR       LR
           comp=Z,10µm,20.0s
CCB   Clear Creek Bu      96.44  23  PFAKE              07 50 40.0 +8.1
CCB                                  LR       LR
           comp=Z,7µm,20.0s
FYU   Fort Yukon          96.54  21  PFAKE              07 50 40.0 +7.8
FYU                                  LR       LR
           comp=Z,16µm,21.0s
RND   Reindeer            96.54  24  PFAKE              07 50 40.0 +7.5
RND                                  LR       LR
           comp=Z,9µm,21.0s
SII   Sitkinak Islan      96.55  32  PFAKE              07 50 40.0 +7.4
SII                                  LR       LR
           comp=Z,8µm,20.0s
ILAR  Eielson Array       96.74  23  P        P         07 50 30.9  -2.4
           comp=Z,1.1nm,0.7s,baz=280,slow=4.6,SNR=12
ILAR                                 PP       PP        07 54 28.4 +0.6
           comp=Z,8.5nm,1.1s,baz=285,slow=6.9,SNR=7.2
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ILAR				PKKP	**PKKPbc**	**08 07 17.9**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=144,slow=1.8,SNR=5.8						
ILAR				PKPPKP		08 15 29.5	
	comp=Z,0.4nm,0.9s,baz=149,slow=2.1,SNR=2.8						
ILAR				LR	LR	08 38 07.0	
	comp=Z,4µm,19.1s,baz=322,slow=38						
ARF	**Arif**	**96.75**	**302**	P	P	07 50 39.0	+4.8
HOM	**Homer**	**96.76**	**28**	PFAKE		07 50 40.0	+6.6
HOM				LR	LR		
	comp=Z,5µm,20.0s						
HDA	**Harding Lake**	**96.88**	**23**	PFAKE		07 50 40.0	+6.1
HDA				LR	LR		
	comp=Z,8µm,20.0s						
HDA	**Harding Lake**	**96.88**	**23**	P	**P**	**07 50 33.5**	**-0.4**
	baz=296						
PRP	**Porcupine Dome**	**96.92**	**22**	PFAKE		07 50 40.0	+5.8
PRP				LR	LR		
	comp=Z,8µm,20.0s						
KDAK	**Kodiak Island**	**96.97**	**30**	PFAKE		07 50 40.0	+5.6
KDAK				LR	LR		
	comp=Z,7µm,22.0s						
KDAK	**Kodiak Island**	**96.97**	**30**	*i* P	**P**	**07 50 37.7**	**+3.3**
CNPM	**China Poot**	**97.00**	**28**	PFAKE		07 50 50.0	+15
CNPM				LR	LR		
	comp=Z,6µm,19.0s						
BRLK	**Bradley Lake**	**97.08**	**28**	PFAKE		07 50 50.0	+15
BRLK				LR	LR		
	comp=Z,6µm,18.0s						
RC01	**Rabbit Creek A**	**97.10**	**27**	PFAKE		07 50 50.0	+15
RC01				LR	LR		
	comp=Z,10µm,21.0s						
MVO	**Moncorvo**	**97.11**	**312**	*e*P	Pdif	07 50 42.6	+6.9
MVO	**Moncorvo**	**97.11**	**312**	*e*S	**S**	**08 01 54.4**	**-3.1**
MVO				*e*SS	**SS**	**08 08 36.7**	**+2.3**
MVO	**Moncorvo**	**97.11**	**312**	*e*LR	LR	08 30 06.8	
	comp=Z,3µm,20.0s						
IFR	**Ifrane**	**97.14**	**304**	Pdif	Pdif	07 50 36.8	+0.7
IFR				*e*S	**S**	**08 01 58.6**	**+0.3**
BORG	**Borgarnes**	**97.28**	**338**	PFAKE		07 50 50.0	+14
BORG				LR	LR		
	comp=Z,9µm,22.0s						
SNAA	**Sanae**	**97.39**	**198**	P	Pdif	07 50 45.0	+8.8
SNAA	**Sanae**	**97.39**	**198**	PFAKE		07 50 50.0	+14
SNAA				LR	LR		
	comp=Z,5µm,19.0s						
SNAA	**Sanae**	**97.39**	**198**	*de*P	Pdif	07 50 38.3	+2.1
SML	**Sawmill**	**97.42**	**26**	PFAKE		07 50 50.0	+13
SML				LR	LR		
	comp=Z,9µm,21.0s						
SFS	**San Fernando**	**97.46**	**308**	*e*S	**SKSac**	**08 01 18.0**	**+4.8**
KNK	**Knik Glacier**	**97.53**	**26**	PFAKE		07 50 50.0	+13
KNK				LR	LR		
	comp=Z,11µm,22.0s						
MTE	**Manteigas**	**97.66**	**312**	*e*P	**P**	**07 50 35.6**	**-2.5**
MTE	**Manteigas**	**97.66**	**312**	*e*S	**S**	**08 02 04.1**	**+1.9**
MTE				*e*SS	**SS**	**08 08 44.9**	**+2.7**
MTE	**Manteigas**	**97.66**	**312**	*e*LR	LR	08 30 17.5	
	comp=Z,3µm,20.0s						
MTE	**Manteigas**	**97.66**	**312**	PFAKE		07 50 50.0	+12
MTE				LR	LR		
	comp=Z,3µm,20.0s						
SUMG	**Summit**	**97.76**	**348**	*e*P	**P**	**07 50 37.7**	**-0.5**
	comp=Z,19nm,1.1s						
SUMG				LR	LR		
	comp=Z,7µm,22.0s						
SUMG	**Summit**	**97.76**	**348**	*e*P	**P**	**07 50 37.7**	**-0.5**
SUMG				pmax	pmax		
	comp=Z,19nm,1.1s						
SUMG				MLR	MLR		
	comp=Z,7µm,22.0s						
SUMG	**Summit**	**97.76**	**348**	*i* P	Pdif	07 50 39.4	+1.2
	comp=Z,17µm,23.0s						
PMRV	**Marv??o**	**97.76**	**311**	*e*LR	LR	08 33 07.3	
	comp=Z,3µm,20.0s						
PGAV	**Gavieira, Arco**	**97.84**	**313**	*e*S	**S**	**08 02 05.0**	**+1.2**
PGAV				*e*SS	**SS**	**08 08 48.2**	**+3.6**
PGAV	**Gavieira, Arco**	**97.84**	**313**	*e*LR	LR	08 30 47.1	
	comp=Z,2µm,20.0s						
SCM	**Sheep Creek Mo**	**97.84**	**25**	PFAKE		07 50 50.0	+12
SCM				LR	LR		
	comp=Z,8µm,20.0s						
RIDG	**Independent Ri**	**98.01**	**23**	PFAKE		07 50 50.0	+11
RIDG				LR	LR		
	comp=Z,7µm,19.0s						
COI	**Coimbra**	**98.35**	**312**	*e*P	P	07 50 33.3	-7.7
GLI	**Glacier Island**	**98.36**	**26**	PFAKE		07 50 50.0	+9.4
GLI				LR	LR		
	comp=Z,9µm,22.0s						
PBEJ	**Beja**	**98.43**	**309**	*e*P	**P**	**07 50 41.1**	**-0.4**
TULEG	**Thule**	**98.45**	**357**	PFAKE		07 50 50.0	+9.3
TULEG				LR	LR		
	comp=Z,10µm,20.0s						
RTC	**Rabat Centre**	**98.47**	**305**	PFAKE		07 50 50.0	+8.3
RTC				LR	LR		
	comp=Z,13µm,19.0s						
PBDV	**Barranco-do-Ve**	**98.65**	**309**	*e*P	Pdif	07 50 49.2	+6.7
MESJ	**Messejana**	**98.74**	**309**	*e*Pdif	Pdif	07 50 43.0	+0.1
MESJ				*e*SKSac	**SKSac**	**08 01 20.9**	**+1.2**
MESJ				AMS	AMS	08 46 03.4	
	comp=Z,3µm,18.2s						
MESJ	**Messejana**	**98.74**	**309**	*e*P	Pdif	07 50 44.5	+1.6
MESJ	**Messejana**	**98.74**	**309**	*e*P	Pdif	07 50 42.9	0.0
MESJ				*e*		08 01 20.9	
EGAK	**Eagle**	**98.89**	**22**	PFAKE		07 50 50.0	+7.1
EGAK				LR	LR		
	comp=Z,9µm,20.0s						
MORF	**Marmelete**	**99.19**	**309**	*e*SKSac	**SKSac**	**08 01 23.2**	**+1.0**
MORF				AMS	AMS	08 47 41.5	
	comp=E,4µm,18.3s						
MORF	**Marmelete**	**99.19**	**309**	*e*P	**Pdif**	**07 50 41.9**	**-3.1**
VNA1	**Neumayer--Stat**	**99.31**	**199**	P	**Pdif**	**07 50 50.1**	**+5.5**
INK	**Inuvik**	**99.34**	**17**	*e*P	**Pdif**	**07 50 44.3**	**-0.5**
	comp=E,12nm,1.2s						
INK				LR	LR		
	comp=Z,9µm,20.0s						
INK	**Inuvik**	**99.34**	**17**	*e*P	**Pdif**	**07 50 44.3**	**-0.5**
INK				pmax	pmax		
	comp=Z,12nm,1.2s						
INK				MLR	MLR		
	comp=Z,9µm,20.0s						
PFVI	**Vila Bisbo**	**99.37**	**309**	PFAKE		07 51 00.0	+14
PFVI				LR	LR		
	comp=Z,2µm,20.0s						
EPYK	**Eagle Plains**	**99.54**	**19**	*e*P	**Pdif**	**07 50 45.4**	**-0.4**
	comp=Z,8.0nm,0.9s						
EPYK				LR	LR		
	comp=Z,11µm,21.0s						
EPYK	**Eagle Plains**	**99.54**	**19**	P	**Pdif**	**07 50 45.5**	**-0.4**
	baz=306						
VNA3	**Neumayer Olymp**	**99.62**	**198**	P	**Pdif**	**07 50 56.2**	**+10**
HMT	**Hamilton**	**99.85**	**26**	PFAKE		07 51 00.0	+13
HMT				LR	LR		
	comp=Z,11µm,20.0s						
DAWY	**Dawson**	**99.92**	**22**	PFAKE		07 51 00.0	+12
DAWY				LR	LR		
	comp=Z,9µm,19.0s						
BALM	**Baldy**	**100.34**	**25**	PFAKE		07 51 00.0	+10
BALM				LR	LR		
	comp=Z,9µm,20.0s						
RES	**Resolute Bay**	**100.44**	**3**	PFAKE		07 51 00.0	+10
RES				LR	LR		
	comp=Z,7µm,21.0s						
TTIG	**Tnine Tigouga,**	**100.47**	**302**	P	**Pdif**	**07 51 01.0**	**+10**
KIC	**Kosan Boka**	**100.69**	**277**	*e*P	**Pdif**	**07 50 54.8**	**+2.7**
	comp=Z,82nm,1.3s						
KIC	**Kosan Boka**	**100.69**	**277**	*e*P	**PP**	**07 55 00.1**	**+0.4**
	comp=Z,48nm,1.2s						
DBIC	**Dimbokro**	**100.78**	**278**	P	**Pdif**	**07 50 54.6**	**+2.3**
	comp=Z,22nm,1.1s,baz=76,slow=6.0,SNR=5.1						
DBIC				PP	**PP**	**07 55 02.9**	**+2.6**
	comp=Z,22nm,1.1s,baz=90,slow=6.7,SNR=5.3						
TIC	**Toumodi**	**100.94**	**278**	*e*P	**Pdif**	**07 50 57.0**	**+3.8**
TIC	**Toumodi**	**100.94**	**278**	*e*P	**PP**	**07 55 00.6**	**-1.0**
LIC	**Lamto**	**100.99**	**277**	*e*P	**Pdif**	**07 50 57.4**	**+4.0**
	comp=Z,54nm,1.1s						
LIC	**Lamto**	**100.99**	**277**	*e*P	**PP**	**07 55 04.2**	**+2.2**
	comp=Z,89nm,1.3s						
BCPM	**Bancas Point**	**102.05**	**25**	PFAKE		07 51 10.0	+13
BCPM				LR	LR		
	comp=Z,7µm,21.0s						
ANGG	**Ammassalik, Gr**	**102.40**	**342**	PFAKE		07 51 10.0	+12
ANGG				LR	LR		
	comp=Z,12µm,22.0s						
ILULI	**Ilulissat**	**102.99**	**349**	PFAKE		07 51 10.0	+8.9
ILULI				LR	LR		
	comp=Z,10µm,19.0s						
SHEL	**Horse Pasture**	**103.11**	**255**	PFAKE		07 51 10.0	+7.2
SHEL				LR	LR		
	comp=Z,5µm,18.0s						
WHY	**Whitehorse**	**103.60**	**23**	PFAKE		07 51 10.0	+5.9
WHY				LR	LR		
	comp=Z,9µm,19.0s						
HLK	**Haleakala**	**104.28**	**67**	PFAKE		07 51 20.0	+12
HLK				LR	LR		
	comp=Z,4µm,21.0s						
SFJD	**Kangerlussuaq**	**104.75**	**347**	PFAKE		07 51 20.0	+11
SFJD				LR	LR		
	comp=Z,8µm,20.0s						
KHLU	**Kahalu`u**	**104.83**	**68**	PFAKE		07 51 20.0	+10
KHLU				LR	LR		
	comp=Z,3µm,22.0s						
HPAH	**Hawaii Prepara**	**104.93**	**68**	PFAKE		07 51 20.0	+9.2
HPAH				LR	LR		
	comp=Z,3µm,22.0s						
POHA	**Pohakuloa**	**105.13**	**68**	PFAKE		07 55 40.0	+13
POHA				LR	LR		
	comp=Z,3µm,22.0s						
MLOA	**Mauna Loa Obse**	**105.13**	**68**	PFAKE		07 55 40.0	+13
MLOA				LR	LR		
	comp=Z,3µm,19.0s						
KHU	**Kahuku**	**105.15**	**69**	PFAKE		07 55 40.0	+13
KHU				LR	LR		
	comp=Z,2µm,21.0s						
JIS	**Juneau Island**	**105.23**	**25**	PFAKE		07 55 40.0	+15
JIS				LR	LR		
	comp=Z,10µm,22.0s						
DLBC	**Dease Lake**	**106.92**	**24**	PFAKE		07 55 40.0	+11
DLBC				LR	LR		
	comp=Z,7µm,22.0s						
PMOZ	**Porto Moniz, M**	**107.13**	**306**	*e*LR	LR	08 31 26.7	
	comp=Z,4µm,20.0s						
WRAK	**Wrangell Islan**	**107.24**	**26**	PFAKE		07 55 40.0	+11
WRAK				LR	LR		
	comp=Z,6µm,20.0s						
NRS	**Narsarsuaq**	**108.05**	**342**	PFAKE		07 55 40.0	+10
NRS				LR	LR		
	comp=Z,8µm,21.0s						
YKW3	**Yellowknife Ar**	**108.84**	**15**	PFAKE		07 55 40.0	+8.1
YKW3				LR	LR		
	comp=Z,7µm,20.0s						
IVI	**Ivigtut**	**108.84**	**343**	PFAKE		07 55 40.0	+8.1
IVI				LR	LR		
	comp=Z,14µm,22.0s						
YKA	**Yellowknife Ar**	**108.90**	**15**	PP	**PP**	**07 55 59.8**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=329,slow=5.8,SNR=4.2						
YKA				PKKP	**PKKPab**	**08 06 52.7**	**-1.4**
	comp=Z,3.2nm,1.0s,baz=138,slow=3.0,SNR=3.9						
DIB	**Dawson Inlet,**	**109.15**	**29**	PFAKE		07 55 40.0	+7.3
DIB				LR	LR		
	comp=Z,5µm,20.0s						
MOBC	**Moresby Island**	**109.43**	**29**	PFAKE		07 55 40.0	+6.6
MOBC				LR	LR		
	comp=Z,5µm,20.0s						
ASCN	**Ascension**	**111.35**	**263**	PFAKE		07 55 50.0	+12
ASCN				LR	LR		
	comp=Z,5µm,19.0s						
CMLA	**Cha da Macela**	**111.73**	**314**	PFAKE		07 55 50.0	+12
CMLA				LR	LR		
	comp=Z,3µm,19.0s						
BBB	**Bella Bella**	**111.85**	**28**	PFAKE		07 55 50.0	+12
BBB				LR	LR		
	comp=Z,4µm,22.0s						
ROSA	**Rosais**	**113.24**	**316**	PFAKE		07 55 50.0	+9.0
ROSA				LR	LR		
	comp=Z,4µm,21.0s						
TBI	**Tubuai**	**113.83**	**113**	*e*Sdif	Sdif	08 04 16.8	-0.9
	comp=Z,567nm,32.5s						
TBI				*e*SP	**SP**	**08 06 04.3**	**-5.6**
	comp=Z,905nm,28.8s						
TBI	**Tubuai**	**113.83**	**113**	*e*LQ	LQ	08 24 41.0	
	comp=Z,7µm,36.5s						
TBI				*e*LR	LR	08 29 29.5	
	comp=Z,8µm,24.8s						
PPT2	**Papeete2**	**114.12**	**107**	*e*Sdif	Sdif	08 04 19.1	-1.4
	comp=Z,767nm,29.2s						
PPT2				*e*SP	**SP**	**08 06 06.9**	**-6.1**
	comp=Z,1µm,26.2s						
PPT2	**Papeete2**	**114.12**	**107**	*e*LQ	LQ	08 24 50.2	
	comp=Z,8µm,33.2s						
PPT2				*e*LR	LR	08 29 41.7	
	comp=Z,6µm,25.8s						
LLLB	**Lillooet**	**115.76**	**26**	PFAKE		07 56 00.0	+14
LLLB				LR	LR		
	comp=Z,7µm,21.0s						
FCC	**Fort Churchill**	**116.17**	**6**	PFAKE		07 56 00.0	+14
FCC				LR	LR		
	comp=Z,9µm,22.0s						
NLWA	**Neilton Lookou**	**117.11**	**30**	PFAKE		07 56 00.0	+12
NLWA				LR	LR		
	comp=Z,4µm,20.0s						
B05A	**Bryant**	**117.35**	**28**	P	**PKPdf**	**07 55 48.4**	**-0.1**
	baz=315						
B06A	**Marblemount**	**117.45**	**28**	PFAKE		07 56 00.0	+11
B06A				LR	LR		
	comp=Z,7µm,21.0s						
HOPE	**Hope Point**	**117.70**	**209**	PFAKE		07 56 00.0	+11
HOPE				LR	LR		
	comp=Z,3µm,21.0s						
D05A	**Enumclaw**	**118.17**	**29**	PFAKE		07 56 00.0	+10
D05A				LR	LR		
	comp=Z,5µm,21.0s						
E04D	**Cinebar**	**118.33**	**30**	P	**PKPdf**	**07 55 50.3**	**-0.2**
	baz=314						
LON	**Longmire**	**118.57**	**29**	PFAKE		07 56 00.0	+8.9
LON				LR	LR		
	comp=Z,4µm,21.0s						
LTY	**Liberty**	**118.75**	**28**	*e*PKPdf	**PKPdf**	**07 55 50.7**	**-0.7**
FFC	**Flin Flon**	**118.81**	**12**	*e*PKPdf	**PKPdf**	**07 55 51.1**	**-0.1**
FFC				LR	LR		
	comp=Z,7µm,20.0s						
FFC	**Flin Flon**	**118.81**	**12**	*e*PKIKP	**PKPdf**	**07 55 51.1**	**-0.1**
FFC				MLR	MLR		
	comp=Z,7µm,20.0s						
SCHQ	**Schefferville**	**119.11**	**349**	PKP	**PKiKP**	**07 55 52.1**	**+0.2**
	comp=Z,4.7nm,0.4s,baz=302,slow=3.1,SNR=2.8						
SCHQ	**Schefferville**	**119.11**	**349**	PFAKE		07 56 00.0	+8.1
SCHQ				LR	LR		
	comp=Z,11µm,21.0s						
COR	**Corvallis**	**119.32**	**32**	PFAKE		07 56 00.0	+7.5
COR				LR	LR		
	comp=Z,5µm,21.0s						
C09A	**Chrisman Ranch**	**119.43**	**26**	PFAKE		07 56 00.0	+7.3
C09A				LR	LR		
	comp=Z,6µm,22.0s						
NEW	**Newport**	**119.58**	**25**	PFAKE		07 56 00.0	+7.0
NEW				LR	LR		
	comp=Z,6µm,20.0s						
NEW	**Newport**	**119.58**	**25**	P	**PKiKP**	**07 55 53.3**	**+0.2**
	baz=320						
H04D	**Lebanon**	**119.66**	**31**	P	**PKPdf**	**07 55 52.8**	**-0.3**
	baz=313						
D08A	**Wollman Farm,**	**119.70**	**27**	PFAKE		07 56 00.0	+6.8
D08A				LR	LR		
	comp=Z,5µm,19.0s						
H04A	**Detroit Lake**	**119.83**	**31**	PFAKE		07 56 00.0	+6.4
H04A				LR	LR		
	comp=Z,3µm,21.0s						
I03D	**Drain, OR**	**119.90**	**32**	P	**PKiKP**	**07 55 54.2**	**+0.5**
	baz=312						
KEBM	**Edson Butte**	**119.91**	**34**	PFAKE		07 56 00.0	+6.1
KEBM				LR	LR		
	comp=Z,4µm,21.0s						
HAWA	**Hanford**	**119.91**	**28**	*e*PKPdf	**PKPdf**	**07 55 53.5**	**-0.1**
HAWA				LR	LR		
	comp=Z,4µm,21.0s						
J01E	**Myrtle Point**	**119.94**	**33**	P	**PKPdf**	**07 55 53.1**	**-0.6**
	baz=312						
E08A	**Dider Farm, El**	**120.06**	**28**	PFAKE		07 56 00.0	+6.1
E08A				LR	LR		
	comp=Z,4µm,19.0s						
F07A	**Phinny Hill Vi**	**120.09**	**29**	PFAKE		07 56 00.0	+6.0
F07A				LR	LR		
	comp=Z,5µm,19.0s						
G06A	**Carlson Farm,**	**120.22**	**30**	PFAKE		07 56 10.0	+16
G06A				LR	LR		
	comp=Z,4µm,20.0s						
WALA	**Waterton Lakes**	**120.25**	**23**	PFAKE		07 56 10.0	+16
WALA				LR	LR		
	comp=Z,6µm,20.0s						
I04A	**Tendick Farm,**	**120.33**	**32**	P	**PKiKP**	**07 55 55.2**	**+0.6**
	baz=313						
K02D	**Willamette Mer**	**120.39**	**34**	P	**PKPdf**	**07 55 54.1**	**-0.7**
	baz=312						
E09A	**Wood Farm, Sta**	**120.46**	**27**	PFAKE		07 56 10.0	+15
E09A				LR	LR		
	comp=Z,5µm,21.0s						
I05D	**Terrebonne, OR**	**120.50**	**31**	P	**PKiKP**	**07 55 55.2**	**+0.2**
	baz=315						
L02E	**Cave Junction**	**120.79**	**34**	P	**PKiKP**	**07 55 56.1**	**+0.6**
	baz=312						
HUMO	**Hull Mountain**	**120.84**	**33**	*e*PKPdf	**PKPdf**	**07 55 55.4**	**-0.2**
HUMO				LR	LR		
	comp=Z,3µm,20.0s						
J04D	**Umpqua Nationa**	**120.87**	**32**	P	**PKPdf**	**07 55 55.0**	**-0.8**
	baz=313						
G08A	**Pilot Rock**	**120.99**	**29**	PFAKE		07 56 10.0	+14
G08A				LR	LR		
	comp=Z,4µm,20.0s						
PINE	**Pine Mountain**	**121.09**	**31**	*e*PKPdf	**PKPdf**	**07 55 56.2**	**0.0**
PINE				LR	LR		
	comp=Z,5µm,21.0s						
F10A	**Beach Ranch, E**	**121.29**	**27**	*e*PKPdf	**PKPdf**	**07 55 55.2**	**-1.2**
F10A				LR	LR		
	comp=Z,4µm,21.0s						
J05D	**Fort Rock, OR**	**121.30**	**32**	P	**PKPdf**	**07 55 56.1**	**-0.5**
	baz=314						
L04D	**Klamath Falls**	**121.46**	**33**	P	**PKPdf**	**07 55 56.1**	**-0.8**
	baz=313						
KHMM	**Horse Mountain**	**121.56**	**35**	PFAKE		07 56 10.0	+13
KHMM				LR	LR		
	comp=Z,3µm,21.0s						
YBH	**Yreka Blue Hor**	**121.57**	**34**	PFAKE		07 56 10.0	+13
YBH				LR	LR		
	comp=Z,5µm,22.0s						
I07A	**Izee**	**121.61**	**30**	PFAKE		07 56 10.0	+13
I07A				LR	LR		
	comp=Z,5µm,21.0s						
M02C	**Callahan**	**121.71**	**34**	P	**PKPdf**	**07 55 57.2**	**-0.1**
	baz=312						
K05A	**Summer Lake**	**121.87**	**32**	PFAKE		07 56 10.0	+12
K05A				LR	LR		
	comp=Z,5µm,22.0s						
KMRM	**Mail Ridge**	**122.00**	**36**	PFAKE		07 56 10.0	+12
KMRM				LR	LR		
	comp=Z,4µm,19.0s						
M04C	**Macdoel**	**122.01**	**33**	P	**PKPdf**	**07 55 57.9**	**0.0**
	baz=313						
MSO	**Missoula**	**122.04**	**24**	*e*PKPdf	**PKPdf**	**07 55 56.5**	**-1.4**
MSO				LR	LR		
	comp=Z,7µm,21.0s						
MSO	**Missoula**	**122.04**	**24**	P	**PKPdf**	**07 55 56.9**	**-0.9**
	baz=323						
N02D	**Trinity Center**	**122.08**	**34**	P	**PKiKP**	**07 55 58.5**	**+0.3**
	baz=312						
BMO	**Blue Mountains**	**122.10**	**28**	PFAKE		07 56 10.0	+12
BMO				LR	LR		
	comp=Z,5µm,21.0s						
KCPM	**Cahto Peak**	**122.42**	**36**	PFAKE		07 56 10.0	+11
KCPM				LR	LR		
	comp=Z,3µm,21.0s						
WDC	**Whiskeytown Da**	**122.43**	**35**	PFAKE		07 56 10.0	+11
WDC				LR	LR		
	comp=Z,4µm,21.0s						
PLID	**Pearl Lake**	**122.52**	**27**	*e*PKPdf	**PKPdf**	**07 55 57.4**	**-1.6**
O02D	**Mt. Diablo Mer**	**122.56**	**35**	P	**PKiKP**	**07 56 00.4**	**+1.2**
	baz=311						
EGMT	**Eagleton**	**122.64**	**21**	*e*PKPdf	**PKPdf**	**07 55 58.5**	**-0.4**
EGMT				LR	LR		
	comp=Z,6µm,20.0s						
EGMT	**Eagleton**	**122.64**	**21**	P	**PKPdf**	**07 55 57.8**	**-1.1**
	baz=328						
J08A	**Circle Bar Ran**	**122.65**	**30**	PFAKE		07 56 10.0	+11
J08A				LR	LR		
	comp=Z,4µm,22.0s						
MOD	**Modoc Plateau**	**122.76**	**32**	*e*PKPdf	**PKPdf**	**07 55 59.0**	**-0.4**
MOD				LR	LR		
	comp=Z,3µm,20.0s						
O03E	**Paynes Creek**	**123.04**	**35**	P	**PKPdf**	**07 55 58.5**	**-1.4**
	baz=312						
HOPS	**Hopland Field**	**123.17**	**36**	PFAKE		07 56 10.0	+10
HOPS				LR	LR		
	comp=Z,4µm,21.0s						
WVOR	**Wild Horse Val**	**123.24**	**31**	*e*PKPdf	**PKPdf**	**07 55 59.9**	**-0.4**
WVOR				LR	LR		
	comp=Z,4µm,21.0s						
WVOR	**Wild Horse Val**	**123.24**	**31**	*e*PKIKP	**PKPdf**	**07 55 59.9**	**-0.4**
WVOR				MLR	MLR		
	comp=Z,4µm,21.0s						
GDXM	**Geysers**	**123.45**	**36**	PFAKE		07 56 10.0	+9.0
GDXM				LR	LR		
	comp=Z,4µm,21.0s						
ORV	**Oroville**	**123.71**	**35**	PFAKE		07 56 10.0	+8.6
ORV				LR	LR		
	comp=Z,3µm,21.0s						
DLMT	**Dillon**	**123.77**	**24**	PFAKE		07 56 10.0	+8.5
DLMT				LR	LR		
	comp=Z,8µm,22.0s						
MCCM	**Marconi Confer**	**123.83**	**37**	PFAKE		07 56 10.0	+8.4
MCCM				LR	LR		
	comp=Z,3µm,22.0s						
BOZ	**Bozeman (W)**	**123.97**	**24**	*e*PKPdf	**PKPdf**	**07 56 01.0**	**-0.6**
BOZ				LR	LR		
	comp=Z,7µm,20.0s						
BOZ	**Bozeman (W)**	**123.97**	**24**	P	**PKPdf**	**07 56 00.4**	**-1.2**
	baz=325						
DGMT	**Dagmar**	**124.02**	**17**	PFAKE		07 56 10.0	+8.2
DGMT				LR	LR		
	comp=Z,7µm,18.0s						
DGMT	**Dagmar**	**124.02**	**17**	P	**PKiKP**	**07 56 02.8**	**+1.1**
	baz=335						
MCMT	**McKenzie Canyo**	**124.10**	**25**	*e*PKPdf	**PKiKP**	**07 56 02.2**	**-0.1**
BEKR	**Beckworth**	**124.14**	**34**	*e*PKPdf	**PKPdf**	**07 56 01.7**	**-0.5**
BEKR				LR	LR		
	comp=Z,5µm,22.0s						
ULM	**Lac du Bonnet**	**124.23**	**10**	PKP	**PKPdf**	**07 55 59.7**	**-2.0**
	comp=Z,15nm,0.7s,baz=346,slow=3.3,SNR=16						
ULM	**Lac du Bonnet**	**124.23**	**10**	*e*PKPdf	**PKPdf**	**07 56 00.8**	**-0.9**
ULM				LR	LR		
	comp=Z,11µm,21.0s						
AFDM	**Forest Hills D**	**124.42**	**35**	PFAKE		07 56 10.0	+7.2
AFDM				LR	LR		
	comp=Z,3µm,22.0s						
HLID	**Hailey**	**124.42**	**27**	*e*PKPdf	**PKPdf**	**07 56 02.2**	**-0.4**
HLID				LR	LR		
	comp=Z,6µm,21.0s						
HLID	**Hailey**	**124.42**	**27**	P	**PKPdf**	**07 56 01.8**	**-0.8**
	baz=322						
QLMT	**Earthquake Lak**	**124.68**	**24**	*e*PKPdf	**PKPdf**	**07 56 03.1**	**0.0**
PAHR	**Pah Rah Range**	**124.79**	**33**	*e*PKPdf	**PKPdf**	**07 56 02.7**	**-0.7**
PAHR				LR	LR		
	comp=Z,3µm,20.0s						
RUBR	**Rubicon Trail**	**124.82**	**35**	PFAKE		07 56 10.0	+6.1
RUBR				LR	LR		
	comp=Z,5µm,21.0s						
VCNR	**Virginia City**	**124.93**	**34**	PFAKE		07 56 10.0	+5.9
VCNR				LR	LR		
	comp=Z,3µm,22.0s						
YHH	**Holmes Hill**	**124.95**	**24**	*e*PKPdf	**PKPdf**	**07 56 03.4**	**-0.3**
LAO	**LASA Array**	**125.00**	**19**	*e*PKPdf	**PKPdf**	**07 56 03.4**	**0.0**
LAO				LR	LR		
	comp=Z,9µm,22.0s						
LAO	**LASA Array**	**125.00**	**19**	P	**PKPdf**	**07 56 03.4**	**0.0**
	baz=332						
CHGQ	**Chibougamau**	**125.06**	**353**	P	**PKPdf**	**07 56 02.2**	**-1.2**
	baz=11						
PNTR	**Pine Nut**	**125.10**	**34**	*e*PKPdf	**PKPdf**	**07 56 03.8**	**-0.3**
PNTR				LR	LR		
	comp=Z,4µm,21.0s						
RLMT	**Red Lodge**	**125.29**	**22**	*e*PKPdf	**PKiKP**	**07 56 05.2**	**+0.6**
RLMT				LR	LR		
	comp=Z,6µm,19.0s						
RLMT	**Red Lodge**	**125.29**	**22**	P	**PKPdf**	**07 56 03.9**	**-0.3**
	baz=328						
LKWY	**Lake**	**125.32**	**23**	PFAKE		07 56 20.0	+15
LKWY				LR	LR		
	comp=Z,12µm,21.0s						
YERR	**Yerington**	**125.38**	**34**	PFAKE		07 56 20.0	+15
YERR				LR	LR		
	comp=Z,4µm,22.0s						
CMB	**Columbia Colle**	**125.38**	**36**	*e*PKPdf	**PKPdf**	**07 56 04.3**	**-0.1**
CMB				LR	LR		
	comp=Z,4µm,21.0s						
CMB	**Columbia Colle**	**125.38**	**36**	*e*PKIKP	**PKPdf**	**07 56 04.3**	**-0.1**
CMB				MLR	MLR		
	comp=Z,4µm,21.0s						
H17A	**Grant Village**	**125.39**	**24**	*e*PKPdf	**PKiKP**	**07 56 05.0**	**+0.1**
H17A				LR	LR		

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      comp=Z,12μm,21.0s
H17A  Grant Village  125.39  24 P        PKiKP    07 56 05.3 +0.4
      baz=326
BMN   Battle Mountai 125.43  31 PFAKE             07 56 20.0  +15
BMN                             LR       LR
      comp=Z,3μm,20.0s
MATQ  Matagami       125.54 355 P        PKPdf    07 56 03.5 -0.8
      baz=7.0
SAO   San Andreas Ge 125.59  37 PFAKE             07 56 20.0  +15
SAO                             LR       LR
      comp=Z,3μm,21.0s
FLWY  Flagg Ranch    125.60  24 PFAKE             07 56 20.0  +15
FLWY                            LR       LR
      comp=Z,4μm,21.0s
WAKR  Walker         125.60  35 PFAKE             07 56 20.0  +15
WAKR                            LR       LR
      comp=Z,4μm,22.0s
IMW   Indian Meadow  125.65  24 PFAKE             07 56 20.0  +15
IMW                             LR       LR
      comp=Z,5μm,22.0s
MDND  Maddock        125.78  13 ePKPdf   PKPdf    07 56 04.5 -0.4
MDND                            LR       LR
      comp=Z,11μm,22.0s
MDND  Maddock        125.78  13 P        PKPdf    07 56 04.6 -0.3
      baz=340
FXWY  Fox Creek      125.83  25 ePKPdf   PKPdf    07 56 05.0 -0.4
MOOW  Moose Ponds    125.85  24 PFAKE             07 56 20.0  +14
MOOW                            LR       LR
      comp=Z,6μm,21.0s
KVN   Kaiserville    125.96  33 ePKPdf   PKPdf    07 56 05.8 +0.2
KVN                             LR       LR
      comp=Z,3μm,19.0s
TPAW  Teton Pass     125.98  25 PFAKE             07 56 20.0  +14
TPAW                            LR       LR
      comp=Z,6μm,21.0s
LOHW  Long Hollow    126.02  24 PFAKE             07 56 20.0  +14
LOHW                            LR       LR
      comp=Z,6μm,22.0s
RYN   Ryan           126.03  34 PFAKE             07 56 20.0  +14
RYN                             LR       LR
      comp=Z,4μm,21.0s
SNOW  Snow King Moun 126.08  24 PFAKE             07 56 20.0  +14
SNOW                            LR       LR
      comp=Z,8μm,22.0s
AGMN  Agassiz Nation 126.12  10 ePKPdf   PKPdf    07 56 04.7 -0.8
AGMN                            LR       LR
      comp=Z,12μm,21.0s
AGMN  Agassiz Nation 126.12  10 P        PKPdf    07 56 04.5 -0.9
      baz=344
LSQQ  Lebel-sur-Quev 126.18 355 P        PKPdf    07 56 04.4 -1.1
      baz=7.8
ELK   Elko           126.20  30 ePKPdf   PKPdf    07 56 06.2 +0.1
ELK                             LR       LR
      comp=Z,5μm,22.0s
NVAR  Mina Array Bea 126.29  34 PKP      PKPdf    07 56 06.1 -0.2
      comp=Z,8.5nm,1.0s,baz=312,slow=2.3,SNR=18
NVAR                            PKKPab   PKKPbc   08 05 40.4 +0.5
      comp=Z,1.4nm,1.0s,baz=139,slow=3.9,SNR=4.2
NV11  Mina Array Sit 126.37  34 ePKPdf   PKPdf    07 56 06.3 -0.1
MDPB  Devils Postpil 126.41  35 ePKPdf   PKPdf    07 56 06.4 -0.3
MDPB                            LR       LR
      comp=Z,4μm,21.0s
GBN   Guysborough    126.42 341 PFAKE             07 56 20.0  +13
GBN                             LR       LR
      comp=Z,4μm,20.0s
OMMB  Old Mammoth Mi 126.47  35 PFAKE             07 56 20.0  +13
OMMB                            LR       LR
      comp=Z,4μm,20.0s
AHID  Auburn Hatcher 126.51  25 PFAKE             07 56 20.0  +13
AHID                            LR       LR
      comp=Z,6μm,21.0s
HVU   Hansel Valley  126.57  27 ePKPdf   PKPdf    07 56 05.6 -1.1
HVU   Hansel Valley  126.57  27 ePKIKP   PKPdf    07 56 05.6 -1.1
PAGB  Antelope Grade 127.00  38 PFAKE             07 56 20.0  +12
PAGB                            LR       LR
      comp=Z,2μm,20.0s
LMN   Caledonia Moun 127.02 344 PFAKE             07 56 20.0  +12
LMN                             LR       LR
      comp=Z,8μm,22.0s
RKT   Rikitea        127.03 115 eLQ      LQ       08 30 14.6
      comp=Z,6μm,38.0s
RKT                             eLR      LR       08 35 34.0
      comp=Z,11μm,25.2s
PQI   Presque Isle   127.07 347 PFAKE             07 56 20.0  +12
PQI                             LR       LR
      comp=Z,8μm,20.0s
EYMN  Ely            127.11   7 ePKPdf   PKPdf    07 56 06.4 -1.0
EYMN                            LR       LR
      comp=Z,7μm,21.0s
EYMN  Ely            127.11   7 P        PKPdf    07 56 06.3 -1.0
      baz=350
BW06  Boulder Array  127.15  24 ePKPdf   PKPdf    07 56 07.0 -0.9
BW06                            LR       LR
      comp=Z,4μm,21.0s
BW06  Boulder Array  127.15  24 P        PKPdf    07 56 06.5 -1.4
      baz=327
PD31  Pinedale Array 127.15  24 ePKPdf   PKPdf    07 56 06.9 -1.0
PDAR  Pinedale Array 127.15  24 PKP      PKPdf    07 56 07.5 -0.5
      comp=Z,2.0nm,0.5s,baz=140,slow=1.1,SNR=22
PDAR                            SKKPbc   SKKPbc   08 09 27.9 +1.2
      comp=Z,0.4nm,0.7s,baz=157,slow=5.6,SNR=2.6
VLDQ  Val d'Or       127.16 355 PFAKE             07 56 20.0  +12
VLDQ                            LR       LR
      comp=Z,12μm,22.0s
HWUT  Hardware Ranch 127.25  26 PFAKE             07 56 20.0  +11
HWUT                            LR       LR
      comp=Z,5μm,22.0s
LATQ  La Tuque       127.31 351 P        PKPdf    07 56 06.5 -1.3
      baz=13
C40A  Isle Royale Na 127.37   5 PFAKE             07 56 20.0  +12
C40A                            LR       LR
      comp=Z,8μm,19.0s
C40A  Isle Royale Na 127.37   5 P        PKPdf    07 56 06.8 -1.0
      baz=353
DUG   Dugway, Tooele 127.80  28 ePKPdf   PKPdf    07 56 08.7 -0.4
DUG                             LR       LR
      comp=Z,4μm,21.0s
DUG   Dugway, Tooele 127.80  28 ePKIKP   PKPdf    07 56 08.7 -0.4
DUG                             MLR      MLR
      comp=Z,4μm,21.0s
DUG   Dugway, Tooele 127.80  28 P        PKPdf    07 56 08.9 -0.2
      baz=322
CWC   Cottonwood Cre 127.81  35 P        PKPdf    07 56 08.7 -0.6
      baz=314
R11A  Troy Canyon, C 127.82  32 ePKPdf   PKPdf    07 56 08.9 -0.4
R11A                            LR       LR
      comp=Z,4μm,22.0s
R11A  Troy Canyon, C 127.82  32 P        PKPdf    07 56 09.1 -0.2
      baz=318
PKM   Mcpherson Peak 127.83  38 P        PKPdf    07 56 08.2 -1.1
      baz=312
CTU   Camp Tracy     127.90  27 ePKPdf   PKPdf    07 56 08.9 -0.5
RSSD  Black Hills    127.99  19 ePKPdf   PKPdf    07 56 08.7 -0.7
RSSD                            LR       LR
      comp=Z,6μm,21.0s
RSSD  Black Hills    127.99  19 ePKIKP   PKPdf    07 56 08.7 -0.7
RSSD                            MLR      MLR
      comp=Z,6μm,21.0s
RSSD  Black Hills    127.99  19 P        PKPdf    07 56 08.8 -0.7
      baz=334
D54A  Lac Fusel, La  128.04 354 P        PKPdf    07 56 08.7 -0.5
      baz=8.4
ISA   Isabella, Lake 128.11  36 PFAKE             07 56 20.0  +10
ISA                             LR       LR
      comp=Z,5μm,20.0s
ISA   Isabella, Lake 128.11  36 P        PKPdf    07 56 09.4 -0.3
      baz=313
DAC   Darwin (Calif) 128.20  35 ePKPdf   PKiKP    07 56 11.0 +0.3
DAC                             LR       LR
      comp=Z,3μm,20.0s
DAC   Darwin (Calif) 128.20  35 ePKIKP   PKiKP    07 56 11.0 +0.3
DAC                             MLR      MLR
      comp=Z,3μm,20.0s
D53A  Lac Vacive, Po 128.21 355 PFAKE             07 56 20.0  +10
D53A                            LR       LR
      comp=Z,8μm,20.0s
D53A  Lac Vacive, Po 128.21 355 P        PKPdf    07 56 09.1 -0.4
      baz=7.1
D49A  Beulah Townshi 128.23 358 P        PKPdf    07 56 07.2 -2.3
      baz=2.5
GGN   Saint George   128.24 345 PFAKE             07 56 20.0  +10
GGN                             LR       LR
      comp=Z,6μm,21.0s
ARVC  Arvin          128.27  37 P        PKPdf    07 56 09.9  0.0
      baz=313
D41A  Chassel        128.27   4 PFAKE             07 56 20.0  +10
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D41A                            LR       LR
      comp=Z,8μm,21.0s
D41A  Chassel        128.27   4 P        PKPdf    07 56 09.2 -0.4
      baz=353
D51A  Lot 18 Range I 128.32 356 P        PKPdf    07 56 08.2 -1.5
      baz=5.0
D48A  Paudash Townsh 128.34 359 P        PKPdf    07 56 08.4 -1.4
      baz=1.9
D52A  ZEK Kipawa Sen 128.37 356 P        PKPdf    07 56 08.1 -1.7
      baz=6.2
MPMC  Manual Prospec 128.42  35 P        PKPdf    07 56 09.1 -1.3
      baz=315
E38A  The Farm, Brul 128.42   7 ePKPdf   PKPdf    07 56 09.3 -0.6
E38A                            LR       LR
      comp=Z,10μm,21.0s
E38A  The Farm, Brul 128.42   7 P        PKPdf    07 56 09.1 -0.8
      baz=350
K22A  Casper         128.43  22 PFAKE             07 56 20.0 +9.1
K22A                            LR       LR
      comp=Z,6μm,21.0s
K22A  Casper         128.43  22 P        PKPdf    07 56 09.4 -0.9
      baz=330
D47A  Chapleau       128.48 360 P        PKPdf    07 56 07.9 -2.2
      baz=0.3
TPNV  Topopah Spring 128.48  34 PFAKE             07 56 20.0 +8.8
TPNV                            LR       LR
      comp=Z,4μm,21.0s
FURC  Furnace Creek, 128.49  35 P        PKPdf    07 56 09.3 -1.0
      baz=315
PSUT  Pine Spring    128.58  31 ePKPdf   PKPdf    07 56 10.2 -0.5
D46A  Sault St. Mari 128.64   1 P        PKPdf    07 56 09.1 -1.2
      baz=359
OSI   Osito Audit: C 128.68  38 PFAKE             07 56 20.0 +8.5
OSI                             LR       LR
      comp=Z,3μm,20.0s
PKME  Peaks-Kenny Pk 128.69 347 PFAKE             07 56 20.0 +8.9
PKME                            LR       LR
      comp=Z,6μm,19.0s
PKME  Peaks-Kenny Pk 128.69 347 P        PKiKP    07 56 10.8 -0.2
      baz=18
LRMC  Laurel Mtn Rad 128.71  36 P        PKPdf    07 56 10.6 -0.4
      baz=314
EMMW  East Machias   128.78 345 PFAKE             07 56 20.0 +8.7
EMMW                            LR       LR
      comp=Z,8μm,22.0s
E54A  Lac Daplat, Po 128.80 354 P        PKPdf    07 56 09.5 -1.2
      baz=7.8
E44A  Grand Marais A 128.87   2 PFAKE             07 56 20.0 +8.6
E44A                            LR       LR
      comp=Z,7μm,21.0s
E44A  Grand Marais A 128.87   2 P        PKPdf    07 56 08.3 -2.4
      baz=357
E51A  G1948 Merrick  128.88 357 P        PKPdf    07 56 10.1 -0.7
      baz=4.9
E53A  Dumoine, Ponti 128.90 355 P        PKPdf    07 56 09.1 -1.8
      baz=7.2
EDW2  Edwards Air Fo 128.94  37 P        PKPdf    07 56 11.5 +0.2
      baz=313
RWWY  Rawlins        128.99  23 ePKPdf   PKPdf    07 56 11.2 -0.3
RWWY                            LR       LR
      comp=Z,6μm,20.0s
F38A  Pierce - Schro 129.01   8 P        PKPdf    07 56 11.0  0.0
      baz=349
E48A  Lockeyer       129.04 359 P        PKPdf    07 56 10.6 -0.5
      baz=1.5
E50A  Wahnapitae     129.05 358 P        PKPdf    07 56 09.8 -1.3
      baz=3.3
E43A  Lone Tree Farm 129.06   3 ePKPdf   PKPdf    07 56 10.9 -0.3
E43A                            LR       LR
      comp=Z,7μm,19.0s
E43A  Lone Tree Farm 129.06   3 P        PKPdf    07 56 09.7 -1.4
      baz=355
E52A  Mattawa        129.07 356 P        PKPdf    07 56 10.8 -0.4
      baz=6.0
E47A  Iron Bridge    129.08 360 P        PKPdf    07 56 09.8 -1.4
      baz=0.1
SUSD  Miller         129.13  14 P        PKPdf    07 56 09.8 -1.6
      baz=340
F37A  Hinrichs Farm, 129.14   8 P        PKPdf    07 56 10.7 -0.6
      baz=348
E46A  Sault Ste Mari 129.16   1 ePKPdf   PKPdf    07 56 10.8 -0.5
E46A                            LR       LR
      comp=Z,8μm,20.0s
E46A  Sault Ste Mari 129.16   1 P        PKPdf    07 56 10.6 -0.7
      baz=359
F39A  Loretta        129.18   7 P        PKPdf    07 56 10.9 -0.5
      baz=350
COWI  Conover        129.18   5 ePKPdf   PKPdf    07 56 10.8 -0.6
COWI                            LR       LR
      comp=Z,10μm,22.0s
SHOC  Shoshone, Teco 129.22  35 P        PKiKP    07 56 12.5  0.0
      baz=316
F40A  Park Falls     129.26   6 P        PKPdf    07 56 11.2 -0.4
      baz=351
PASC  Pasadena Art C 129.30  38 PFAKE             07 56 20.0 +7.3
PASC                            LR       LR
      comp=Z,3μm,21.0s
GSC   Goldstone, Bar 129.34  36 ePKPdf   PKPdf    07 56 11.8 -0.3
GSC                             LR       LR
      comp=Z,3μm,21.0s
GSC   Goldstone, Bar 129.34  36 ePKIKP   PKPdf    07 56 11.8 -0.3
GSC                             MLR      MLR
      comp=Z,3μm,21.0s
GSC   Goldstone, Bar 129.34  36 P        PKiKP    07 56 13.2 +0.4
      baz=315
MWC   Mount Wilson   129.34  38 PFAKE             07 56 20.0 +7.0
MWC                             LR       LR
      comp=Z,3μm,20.0s
ALGO  Algonquin Park 129.35 355 P        PKPdf    07 56 11.0 -0.7
      baz=6.8
SHPR  Sheep Range    129.41  33 ePKPdf   PKPdf    07 56 11.7 -0.6
SHPR                            LR       LR
      comp=Z,4μm,21.0s
WVL   Waterville     129.43 347 PFAKE             07 56 20.0 +7.4
WVL                             LR       LR
      comp=Z,8μm,22.0s
F51A  Arnstein       129.51 357 P        PKPdf    07 56 11.3 -0.7
      baz=4.4
PEMO  Pembroke       129.55 354 P        PKPdf    07 56 11.1 -1.0
      baz=7.9
BFSC  Mount Baldy Ra 129.58  37 P        PKPdf    07 56 11.7 -0.9
      baz=313
SPMN  Marine on St.  129.60   9 ePKPdf   PKPdf    07 56 12.3 +0.1
SPMN                            LR       LR
      comp=Z,9μm,21.0s
SPMN  Marine on St.  129.60   9 P        PKPdf    07 56 12.1 -0.1
      baz=348
F52A  Sundridge      129.60 356 P        PKPdf    07 56 11.7 -0.5
      baz=5.2
SZCU  Shurtz Canyon  129.68  31 ePKPdf   PKPdf    07 56 12.5 -0.4
F48A  Evansville     129.70 359 P        PKiKP    07 56 13.0 -0.1
      baz=0.9
F49A  Sandfield      129.75 359 P        PKPdf    07 56 12.4  0.0
      baz=1.7
TUQ   Turquoise Moun 129.75  35 P        PKPdf    07 56 12.9  0.0
      baz=316
G39A  Holcombe       129.76   7 P        PKPdf    07 56 12.2 -0.3
      baz=350
F45A  CMU Biological 129.81   2 P        PKPdf    07 56 12.6 +0.1
      baz=357
O20A  White River Ci 129.89  25 ePKPdf   PKPdf    07 56 12.8 -0.4
O20A                            LR       LR
      comp=Z,6μm,22.0s
O20A  White River Ci 129.89  25 P        PKPdf    07 56 12.5 -0.7
      baz=327
G40A  Rib Lake       129.90   6 PFAKE             07 56 20.0 +6.4
G40A                            LR       LR
      comp=Z,8μm,21.0s
G40A  Rib Lake       129.90   6 P        PKPdf    07 56 12.9 +0.1
      baz=351
FRNY  Flat Rock      129.92 351 PFAKE             07 56 20.0 +6.4
FRNY                            LR       LR
      comp=Z,6μm,20.0s
G55A  Calabogie      129.92 354 P        PKPdf    07 56 12.5 -0.3
      baz=8.6
HEC   Hector,Ludlow  129.95  36 P        PKiKP    07 56 13.8 -0.3
      baz=315
BUKO  Buck Lake      129.96 356 P        PKPdf    07 56 12.4 -0.4
      baz=5.1
PHWY  Pilot Hill     129.99  22 PFAKE             07 56 20.0 +5.8
PHWY                            LR       LR
      comp=Z,4μm,19.0s
BBRC  Big Bear Solar 130.00  37 P        PKiKP    07 56 15.2 +0.8
      baz=314
N23A  Red Feather La 130.16  22 ePKPdf   PKPdf    07 56 13.7 -0.1
N23A                            LR       LR
      comp=Z,6μm,21.0s
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N23A  Red Feather La 130.16  22 P        PKPdf    07 56 13.8  0.0
      baz=330
PLVO  Plevna         130.17 354 PFAKE             07 56 20.0 +5.9
PLVO                            LR       LR
      comp=Z,9μm,21.0s
PLVO  Plevna         130.17 354 P        PKPdf    07 56 13.4 +0.1
      baz=8.2
G46A  Petoskey       130.20   1 P        PKPdf    07 56 13.1 -0.2
      baz=358
LBNH  Lisbon         130.21 349 PFAKE             07 56 20.0 +5.8
LBNH                            LR       LR
      comp=Z,5μm,21.0s
G53A  Haliburton     130.22 356 P        PKPdf    07 56 13.6 +0.2
      baz=6.1
VT1   Waterbury      130.27 350 PFAKE             07 56 20.0 +5.7
VT1                             LR       LR
      comp=Z,8μm,21.0s
BANO  Bancroft       130.27 355 P        PKPdf    07 56 13.8 +0.3
      baz=7.0
LONY  Lake Ozonia    130.28 352 PFAKE             07 56 20.0 +5.7
LONY                            LR       LR
      comp=Z,7μm,22.0s
LONY  Lake Ozonia    130.28 352 P        PKPdf    07 56 13.8 +0.3
      baz=11
ECSD  EROS Data Cent 130.35  13 PFAKE             07 56 20.0 +5.5
ECSD                            LR       LR
      comp=Z,8μm,21.0s
ECSD  EROS Data Cent 130.35  13 P        PKPdf    07 56 13.7  0.0
      baz=343
G47A  Hillman        130.36   0 P        PKiKP    07 56 14.0 -0.4
      baz=359
GMRC  Granite Mounta 130.37  35 P        PKiKP    07 56 15.8 +0.8
      baz=316
G45A  Suttons Bay    130.45   2 PFAKE             07 56 20.0 +5.4
G45A                            LR       LR
      comp=Z,9μm,20.0s
G45A  Suttons Bay    130.45   2 P        PKiKP    07 56 14.4 -0.2
      baz=357
LDFC  Landfair       130.47  35 PFAKE             07 56 30.0  +15
LDFC                            LR       LR
      comp=Z,4μm,21.0s
H56A  Elgin          130.52 353 P        PKPdf    07 56 13.8 -0.1
      baz=9.3
SADO  Sadowa         130.61 356 PFAKE             07 56 30.0  +15
SADO                            LR       LR
      comp=Z,7μm,20.0s
H55A  Tweed          130.66 354 P        PKPdf    07 56 14.2  0.0
      baz=8.1
GLMI  Grayling       130.70   1 PFAKE             07 56 30.0  +15
GLMI                            LR       LR
      comp=Z,9μm,20.0s
GLMI  Grayling       130.70   1 P        PKiKP    07 56 15.2  0.0
      baz=358
PFO   Pinyon Flats O 130.73  37 PFAKE             07 56 30.0  +14
PFO                             LR       LR
      comp=Z,3μm,19.0s
TPFO  Pinon Flats    130.74  37 P        PKPdf    07 56 15.0 +0.1
      baz=314
DELO  Deloro Mine    130.74 355 PFAKE             07 56 30.0  +15
DELO                            LR       LR
      comp=Z,9μm,21.0s
HNH   Hanover        130.79 349 PFAKE             07 56 30.0  +15
HNH                             LR       LR
      comp=Z,7μm,21.0s
H48A  Harrisville    130.83 360 PFAKE             07 56 30.0  +15
H48A                            LR       LR
      comp=Z,8μm,21.0s
CPE   Camp Elliot    130.84  38 PFAKE             07 56 30.0  +14
CPE                             LR       LR
      comp=Z,4μm,21.0s
NCB   Newcomb        130.86 351 PFAKE             07 56 30.0  +14
NCB                             LR       LR
      comp=Z,4μm,22.0s
PV21  Cone Mtn., Par 130.88  27 PFAKE             07 56 30.0  +14
PV21                            LR       LR
      comp=Z,5μm,22.0s
FFD   Franklin Falls 130.90 349 PFAKE             07 56 30.0  +14
FFD                             LR       LR
      comp=Z,7μm,22.0s
H43A  Windswept, Lux 130.91   4 PFAKE             07 56 30.0  +14
H43A                            LR       LR
      comp=Z,7μm,22.0s
H43A  Windswept, Lux 130.91   4 P        PKPdf    07 56 12.5 -2.2
      baz=354
H47A  Mio            130.93   1 P        PKPdf    07 56 14.9 +0.2
      baz=359
PV23  Carpenter Ridg 130.96  27 PFAKE             07 56 30.0  +14
PV23                            LR       LR
      comp=Z,7μm,21.0s
U15A  North Rim      130.99  31 ePKPdf   PKPdf    07 56 15.2 -0.2
U15A                            LR       LR
      comp=Z,4μm,21.0s
PV22  Blue Mesa, Par 130.99  26 PFAKE             07 56 30.0  +14
PV22                            LR       LR
      comp=Z,5μm,22.0s
PV10  Paradox Valley 131.00  27 PFAKE             07 56 30.0  +14
PV10                            LR       LR
      comp=Z,6μm,21.0s
PV14  Lion Creek, Pa 131.01  27 PFAKE             07 56 30.0  +14
PV14                            LR       LR
      comp=Z,7μm,21.0s
PV20  West Nyswonger 131.07  27 PFAKE             07 56 30.0  +14
PV20                            LR       LR
      comp=Z,5μm,21.0s
PV19  Morning Glory  131.09  27 PFAKE             07 56 30.0  +14
PV19                            LR       LR
      comp=Z,6μm,22.0s
PV16  Nyswonger Mesa 131.11  27 PFAKE             07 56 30.0  +14
PV16                            LR       LR
      comp=Z,5μm,21.0s
I41A  Arkdale        131.13   6 PFAKE             07 56 30.0  +14
I41A                            LR       LR
      comp=Z,10μm,21.0s
PV07  Paradox Valley 131.13  26 PFAKE             07 56 30.0  +13
PV07                            LR       LR
      comp=Z,6μm,21.0s
W13A  Hualapai Mount 131.14  34 PFAKE             07 56 30.0  +13
W13A                            LR       LR
      comp=Z,5μm,22.0s
PV12  Saucer Basin,  131.16  27 PFAKE             07 56 30.0  +13
PV12                            LR       LR
      comp=Z,7μm,22.0s
PV18  Skein Mesa, Pa 131.17  27 PFAKE             07 56 30.0  +13
PV18                            LR       LR
      comp=Z,5μm,21.0s
PV05  Paradox Valley 131.22  27 PFAKE             07 56 30.0  +13
PV05                            LR       LR
      comp=Z,6μm,21.0s
SMCO  Snowmass       131.23  24 PFAKE             07 56 30.0  +13
SMCO                            LR       LR
      comp=Z,5μm,20.0s
ISCO  Idaho Springs  131.24  23 ePKPdf   PKPdf    07 56 15.7 -0.2
ISCO                            LR       LR
      comp=Z,4μm,20.0s
ISCO  Idaho Springs  131.24  23 ePKIKP   PKPdf    07 56 15.7 -0.2
ISCO                            MLR      MLR
      comp=Z,4μm,20.0s
ISCO  Idaho Springs  131.24  23 P        PKPdf    07 56 15.1 -0.8
      baz=330
BAR   Barrett        131.24  38 PFAKE             07 56 30.0  +13
BAR                             LR       LR
      comp=Z,4μm,22.0s
MONP2 Monument Peak  131.25  38 P        PKiKP    07 56 16.4 -0.5
      baz=314
PECO  Prince Edward  131.25 354 PFAKE             07 56 30.0  +14
PECO                            LR       LR
      comp=Z,14μm,20.0s
PV13  Radium Mtn., P 131.28  27 ePKPdf   PKPdf    07 56 15.7 -0.2
PV13                            LR       LR
      comp=Z,6μm,22.0s
BC3   Big Chuckawall 131.29  36 P        PKiKP    07 56 17.3 +0.5
      baz=315
ACCN  Adirondack Com 131.34 351 PFAKE             07 56 30.0  +13
ACCN                            LR       LR
      comp=Z,8μm,20.0s
BWLO  Walkerton      131.37 358 P        PKPdf    07 56 15.9 +0.3
      baz=2.9
I42A  Draeger Farm,  131.39   5 PFAKE             07 56 30.0  +13
I42A                            LR       LR
      comp=Z,8μm,19.0s
I42A  Draeger Farm,  131.39   5 P        PKPdf    07 56 15.9 +0.3
      baz=353
WLVO  Wesleyville    131.40 355 P        PKiKP    07 56 16.5  0.0
      baz=6.5
PV01  Paradox Valley 131.41  27 ePKPdf   PKPdf    07 56 16.2  0.0
I45A  Fountain       131.43   3 PFAKE             07 56 30.0  +13
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I45A                                LR       LR
      comp=Z,9µm,19.0s
OGNE  Ogallala           131.49  19 PFAKE             07 56 30.0  +13
OGNE                                LR       LR
      comp=Z,8µm,20.0s
BASO  Ashfield           131.49 358 P        PKPdf    07 56 15.4 -0.4
      baz=2.2
I47A  Gladwin            131.50   1 PFAKE             07 56 30.0  +13
I47A                                LR       LR
      comp=Z,11µm,20.0s
I47A  Gladwin            131.50   1 P        PKiKP    07 56 16.9 +0.1
      baz=358
PDMCI Parker Dam,Lak     131.58  34 P        PKiKP    07 56 17.2 -0.1
      baz=317
SWSC  Sam W. Stewart     131.59  37 P        PKiKP    07 56 17.1 -0.2
      baz=314
I49A  Point Hope         131.59 359 PFAKE             07 56 30.0  +13
I49A                                LR       LR
      comp=Z,9µm,19.0s
IKP   In-Ko-Pah, Jac     131.61  38 P        PKPdf    07 56 16.0 -0.4
      baz=314
I51A  Listowel           131.68 358 P        PKiKP    07 56 17.3 +0.1
      baz=3.1
Y12C  Blythe             131.77  35 PFAKE             07 56 30.0  +12
Y12C                                LR       LR
      comp=Z,3µm,22.0s
HRV   Adam Dziewonsk     131.81 348 PFAKE             07 56 30.0  +13
HRV                                 LR       LR
      comp=Z,7µm,22.0s
WES   Weston             131.87 348 PFAKE             07 56 30.0  +12
WES                                 LR       LR
      comp=Z,7µm,22.0s
BCX   Boston College     131.89 348 PFAKE             07 56 30.0  +12
BCX                                 LR       LR
      comp=Z,6µm,21.0s
TRY   Troy               131.98 350 PFAKE             07 56 30.0  +12
TRY                                 LR       LR
      comp=Z,10µm,21.0s
J55A  Hilton             132.00 354 PFAKE             07 56 30.0  +12
J55A                                LR       LR
      comp=Z,11µm,21.0s
J45A  Montague           132.02   3 PFAKE             07 56 30.0  +12
J45A                                LR       LR
      comp=Z,8µm,20.0s
J54A  Appleton           132.06 355 PFAKE             07 56 30.0  +12
J54A                                LR       LR
      comp=Z,12µm,21.0s
GLA   Glamis             132.09  36 PFAKE             07 56 30.0  +12
GLA                                 LR       LR
      comp=Z,3µm,21.0s
Q24A  Divide             132.14  23 PFAKE             07 56 30.0  +11
Q24A                                LR       LR
      comp=Z,6µm,20.0s
MEDO  Medina             132.16 355 PFAKE             07 56 30.0  +12
MEDO                                LR       LR
      comp=Z,10µm,21.0s
MEDO  Medina             132.16 355 P        PKiKP    07 56 18.3 +0.2
      baz=6.5
WUAZ  Wupatki            132.16  31 ePKPdf   PKPdf    07 56 17.3 -0.3
WUAZ                                LR       LR
      comp=Z,4µm,22.0s
QUA2  Belchertown        132.18 349 PFAKE             07 56 30.0  +12
QUA2                                LR       LR
      comp=Z,6µm,20.0s
BGNE  Belgrade           132.19  15 ePKPdf   PKPdf    07 56 17.6 +0.3
BGNE                                LR       LR
      comp=Z,8µm,22.0s
BGNE  Belgrade           132.19  15 P        PKiKP    07 56 18.7 +0.4
      baz=340
MVCO  Mesa Verde         132.21  27 ePKPdf   PKPdf    07 56 18.0 +0.3
MVCO                                LR       LR
      comp=Z,5µm,22.0s
MVCO  Mesa Verde         132.21  27 P        PKiKP    07 56 18.3 -0.5
      baz=325
JFWS  Jewell Farm        132.22   7 PFAKE             07 56 30.0  +12
JFWS                                LR       LR
      comp=Z,9µm,21.0s
JFWS  Jewell Farm        132.22   7 P        PKPdf    07 56 17.2  0.0
      baz=351
J52A  Paris              132.22 357 P        PKiKP    07 56 19.0 +0.7
      baz=3.8
J48A  Bridge Port        132.23   0 PFAKE             07 56 30.0  +12
J48A                                LR       LR
      comp=Z,6µm,21.0s
J48A  Bridge Port        132.23   0 P        PKiKP    07 56 18.0 -0.3
      baz=359
J47A  Sunmer             132.28   1 PFAKE             07 56 30.0  +12
J47A                                LR       LR
      comp=Z,10µm,19.0s
J47A  Sunmer             132.28   1 P        PKiKP    07 56 17.9 -0.4
      baz=358
TYNO  Tyneside           132.33 356 P        PKiKP    07 56 18.1 -0.3
      baz=4.7
BRYW  Bryant College     132.37 348 PFAKE             07 56 30.0  +11
BRYW                                LR       LR
      comp=Z,9µm,21.0s
Y14A  Wickenburg         132.49  34 PFAKE             07 56 30.0  +11
Y14A                                LR       LR
      comp=Z,4µm,21.0s
S22A  4UR Ranch, Cre     132.50  25 ePKPdf   PKPdf    07 56 18.1 -0.2
S22A                                LR       LR
      comp=Z,6µm,22.0s
MMNY  Mt. Morris Dam     132.54 354 PFAKE             07 56 30.0  +11
MMNY                                LR       LR
      comp=Z,13µm,22.0s
K55A  Perry              132.56 355 P        PKiKP    07 56 18.5 -0.5
      baz=7.1
K43A  Burlington         132.62   5 PFAKE             07 56 30.0  +11
K43A                                LR       LR
      comp=Z,8µm,22.0s
RCBR  Riachuelo          132.68 266 PFAKE             07 56 30.0  +10
RCBR                                LR       LR
      comp=Z,5µm,19.0s
K50A  Casco              132.75 359 PFAKE             07 56 30.0  +11
K50A                                LR       LR
      comp=Z,10µm,20.0s
SCIA  State Center       132.77  10 PFAKE             07 56 30.0  +11
SCIA                                LR       LR
      comp=Z,11µm,21.0s
K46A  Dorr               132.80   2 P        PKPdf    07 56 18.5 +0.2
      baz=357
K47A  Vermontville       132.84   2 P        PKiKP    07 56 19.2 -0.4
      baz=358
BINY  Binghamton         132.84 352 ePKPdf   PKPdf    07 56 18.9 +0.4
BINY                                LR       LR
      comp=Z,6µm,20.0s
BINY  Binghamton         132.84 352 P        PKiKP    07 56 19.3 -0.3
      baz=10.0
113A  Mohawk Valley,     132.91  36 PFAKE             07 56 30.0  +10
113A                                LR       LR
      comp=Z,2µm,20.0s
KSCT  Kent School, K     132.92 350 PFAKE             07 56 30.0  +10
KSCT                                LR       LR
      comp=Z,8µm,20.0s
L40A  Anamosa            132.93   8 ePKPdf   PKPdf    07 56 18.6  0.0
L40A                                LR       LR
      comp=Z,9µm,22.0s
L40A  Anamosa            132.93   8 P        PKiKP    07 56 19.7  0.0
      baz=349
KSCO  Kaye Shedlock’     133.03  21 PFAKE             07 56 30.0  +10
KSCO                                LR       LR
      comp=Z,7µm,20.0s
SDCO  Great Sand Dun     133.05  24 ePKPdf   PKPdf    07 56 18.7 -0.6
SDCO                                LR       LR
      comp=Z,6µm,20.0s
SDCO  Great Sand Dun     133.05  24 P        PKPdf    07 56 19.5 +0.1
      baz=329
L55A  Hinsdale           133.13 355 P        PKiKP    07 56 20.0 -0.2
      baz=6.7
L54A  Sinclairville      133.15 356 P        PKPdf    07 56 19.0  0.0
      baz=5.5
L42A  Oliver, Polo       133.18   6 PFAKE             07 56 30.0  +10
L42A                                LR       LR
      comp=Z,8µm,22.0s
L42A  Oliver, Polo       133.18   6 P        PKiKP    07 56 20.5 +0.3
      baz=351
YLE   Yale               133.22 349 PFAKE             07 56 30.0  +10
YLE                                 LR       LR
      comp=Z,8µm,21.0s
AAM   Ann Arbor          133.23   0 PFAKE             07 56 30.0  +10
AAM                                 LR       LR
      comp=Z,10µm,20.0s
W18A  Petrified Fore     133.30  30 PFAKE             07 56 30.0 +9.0
W18A                                LR       LR
      comp=Z,5µm,22.0s
W18A  Petrified Fore     133.30  30 P        PKiKP    07 56 20.5 -0.5
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      baz=323
M61A  Granite Spring     133.38 350 P        PKiKP    07 56 20.3 -0.3
      baz=13
M59A  Waymart            133.41 352 P        PKPdf    07 56 20.0 +0.5
      baz=11
L49A  Milan              133.42   0 P        PKiKP    07 56 21.2 +0.4
      baz=359
L46A  Eue Claire         133.44   3 PFAKE             07 56 30.0 +9.2
L46A                                LR       LR
      comp=Z,9µm,20.0s
KSPA  Keystone Colle     133.45 352 PFAKE             07 56 30.0 +9.2
KSPA                                LR       LR
      comp=Z,6µm,21.0s
L47A  Sherwood           133.53   2 P        PKPdf    07 56 20.0 +0.3
      baz=357
L48A  N Adams            133.58   1 P        PKPdf    07 56 19.5 -0.3
      baz=358
X18A  Snowflake          133.66  31 PFAKE             07 56 30.0 +8.3
X18A                                LR       LR
      comp=Z,6µm,22.0s
M41A  Milan              133.70   7 P        PKPdf    07 56 20.2 +0.1
      baz=350
PAL   Palisades          133.70 350 PFAKE             07 56 30.0 +8.7
PAL                                 LR       LR
      comp=Z,6µm,20.0s
PAL   Palisades          133.70 350 P        PKPdf    07 56 20.2 +0.2
      baz=13
ODNJ  Ogdensburg         133.74 351 PFAKE             07 56 30.0 +8.6
ODNJ                                LR       LR
      comp=Z,9µm,22.0s
ALLY  Alegheny Colle     133.79 357 PFAKE             07 56 30.0 +8.5
ALLY                                LR       LR
      comp=Z,6µm,20.0s
M56A  Emporium           133.80 355 P        PKPdf    07 56 18.2 -2.1
      baz=7.1
M55A  Ridgway            133.87 355 P        PKPdf    07 56 19.8 -0.7
      baz=6.3
M54A  Oil Creek Stat     133.90 356 ePKPdf   PKPdf    07 56 20.2 -0.3
M54A                                LR       LR
      comp=Z,10µm,21.0s
M54A  Oil Creek Stat     133.90 356 P        PKPdf    07 56 20.0 -0.5
      baz=5.1
M44A  Midewin, Midew     133.95   5 PFAKE             07 56 30.0 +8.2
M44A                                LR       LR
      comp=Z,8µm,20.0s
M52A  Chesterland        133.95 358 PFAKE             07 56 30.0 +8.2
M52A                                LR       LR
      comp=Z,10µm,20.0s
T25A  Trinidad           134.01  23 ePKPdf   PKPdf    07 56 21.0  0.0
T25A                                LR       LR
      comp=Z,5µm,20.0s
M48A  Edgerton           134.03   1 PFAKE             07 56 30.0 +8.0
M48A                                LR       LR
      comp=Z,7µm,20.0s
M46A  Old House Fiel     134.04   3 PFAKE             07 56 30.0 +8.0
M46A                                LR       LR
      comp=Z,9µm,20.0s
N59A  State Game Lan     134.08 352 PFAKE             07 56 30.0 +7.9
N59A                                LR       LR
      comp=Z,7µm,20.0s
N59A  State Game Lan     134.08 352 P        PKiKP    07 56 21.6 -0.5
      baz=10
BRNJ  Basking Ridge      134.12 351 PFAKE             07 56 30.0 +7.8
BRNJ                                LR       LR
      comp=Z,6µm,19.0s
M50A  Fremont            134.13 360 PFAKE             07 56 30.0 +7.8
M50A                                LR       LR
      comp=Z,12µm,20.0s
M47A  Cromwell           134.13   2 P        PKPdf    07 56 20.9  0.0
      baz=357
CBKS  Cedar Bluff        134.15  18 PFAKE             07 56 30.0 +7.6
CBKS                                LR       LR
      comp=Z,11µm,19.0s
N43A  Stutzman Famil     134.29   6 P        PKiKP    07 56 22.1 -0.4
      baz=352
N41A  Harden Midland     134.31   8 PFAKE             07 56 30.0 +7.4
N41A                                LR       LR
      comp=Z,8µm,22.0s
LUPA  Lehigh Univers     134.33 351 PFAKE             07 56 30.0 +7.4
LUPA                                LR       LR
      comp=Z,900nm,22.0s
N56A  West Decatur       134.37 355 P        PKPdf    07 56 21.9 +0.5
      baz=7.0
N57A  Milroy             134.46 354 P        PKPdf    07 56 21.6 +0.1
      baz=8.1
N54A  Moraine State      134.46 356 PFAKE             07 56 30.0 +7.1
N54A                                LR       LR
      comp=Z,7µm,20.0s
N54A  Moraine State      134.46 356 P        PKiKP    07 56 23.1 +0.2
      baz=4.7
N45A  Kentland           134.53   4 P        PKiKP    07 56 22.9 -0.1
      baz=354
N46A  Monticello         134.53   4 P        PKPdf    07 56 20.9 -0.7
      baz=355
N55A  Marion Center      134.57 355 PFAKE             07 56 30.0 +6.8
N55A                                LR       LR
      comp=Z,12µm,22.0s
N55A  Marion Center      134.57 355 P        PKPdf    07 56 22.1 +0.4
      baz=6.1
N47A  Urbana             134.60   2 P        PKPdf    07 56 22.1 +0.3
      baz=357
N49A  Columbus Grove     134.60   1 PFAKE             07 56 30.0 +6.8
N49A                                LR       LR
      comp=Z,8µm,19.0s
N49A  Columbus Grove     134.60   1 P        PKPdf    07 56 21.8  0.0
      baz=359
N51A  Ashland            134.60 359 PFAKE             07 56 30.0 +6.8
N51A                                LR       LR
      comp=Z,6µm,21.0s
SSPA  Standing Stone     134.61 354 PFAKE             07 56 30.0 +6.8
SSPA                                LR       LR
      comp=Z,10µm,22.0s
SSPA  Standing Stone     134.61 354 P        PKPdf    07 56 21.5 -0.3
      baz=7.6
O60A  Telford            134.61 351 P        PKPdf    07 56 21.0 -0.8
      baz=11
N48A  Decatur            134.65   2 P        PKPdf    07 56 21.5 -0.4
      baz=358
HDIL  Hopedale           134.65   6 PFAKE             07 56 30.0 +6.7
HDIL                                LR       LR
      comp=Z,8µm,20.0s
N53A  Lisbon             134.66 357 PFAKE             07 56 30.0 +6.7
N53A                                LR       LR
      comp=Z,12µm,20.0s
N53A  Lisbon             134.66 357 P        PKPdf    07 56 22.1 +0.2
      baz=3.5
O59A  Robesonia          134.73 352 P        PKiKP    07 56 23.0 -0.4
      baz=10.0
KSU1  Kansas State U     134.75  14 PFAKE             07 56 30.0 +6.5
KSU1                                LR       LR
      comp=Z,8µm,19.0s
KSU1  Kansas State U     134.75  14 P        PKiKP    07 56 23.0 -0.5
      baz=341
N50A  Nevada             134.76 360 P        PKiKP    07 56 23.6 +0.2
      baz=0.3
PAGS  Pennsylvania G     134.88 353 PFAKE             07 56 30.0 +6.3
PAGS                                LR       LR
      comp=Z,7µm,20.0s
TUC   Tucson             134.94  33 PFAKE             07 56 30.0 +5.8
TUC                                 LR       LR
      comp=Z,4µm,22.0s
TUC   Tucson             134.94  33 P        PKiKP    07 56 24.2  0.0
      baz=320
PSUB  Penn St. - Bra     135.00 351 PFAKE             07 56 30.0 +6.0
PSUB                                LR       LR
      comp=Z,10µm,22.0s
ANMO  Albuquerque        135.00  27 ePKPdf   PKPdf    07 56 22.5 -0.5
ANMO                                LR       LR
      comp=Z,5µm,22.0s
ANMO  Albuquerque        135.00  27d iPKIKP  PKiKP    07 56 23.9 -0.5
ANMO                                pmax     pmax
      comp=Z,15nm,1.0s
O57A  Amberson           135.00 354 P        PKiKP    07 56 23.4 -0.6
      baz=8.0
O58A  Lewisberry         135.01 353 P        PKPdf    07 56 22.7 +0.1
      baz=9.0
SFIN  Lafayette          135.02   4 PFAKE             07 56 30.0 +6.0
SFIN                                LR       LR
      comp=Z,6µm,19.0s
SFIN  Lafayette          135.02   4 P        PKiKP    07 56 23.5 -0.5
      baz=355
O56A  Blue Knob Stat     135.04 355 PFAKE             07 56 30.0 +5.9
O56A                                LR       LR
      comp=Z,12µm,22.0s
O56A  Blue Knob Stat     135.04 355 P        PKiKP    07 56 24.5 +0.3
      baz=6.7
MVL   Millersville       135.06 352 PFAKE             07 56 30.0 +5.9
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MVL                                 LR       LR
      comp=Z,8µm,21.0s
O55A  Ligonier           135.16 356 P        PKPdf    07 56 22.2 -0.7
      baz=5.7
O47A  Sheridan           135.22   3 P        PKPdf    07 56 22.4 -0.5
      baz=356
O53A  New Philadelph     135.24 358 P        PKiKP    07 56 23.9 -0.6
      baz=3.0
O54A  Avella             135.26 357 P        PKPdf    07 56 22.7 -0.3
      baz=4.2
ACSO  Alum Creek Sta     135.30 360 ePKPdf   PKPdf    07 56 22.8 -0.3
ACSO                                LR       LR
      comp=Z,9µm,20.0s
ACSO  Alum Creek Sta     135.30 360 P        PKPdf    07 56 22.8 -0.3
      baz=0.5
O49A  Covington          135.33   1 ePKPdf   PKPdf    07 56 22.4 -0.7
O49A                                LR       LR
      comp=Z,11µm,20.0s
O49A  Covington          135.33   1 P        PKPdf    07 56 23.1  0.0
      baz=359
O51A  Pataskala          135.38 359 P        PKPdf    07 56 23.0 -0.2
      baz=1.0
O50A  Cable              135.38   0 P        PKPdf    07 56 22.8 -0.4
      baz=360
O52A  Adamsville         135.39 358 PFAKE             07 56 30.0 +5.2
O52A                                LR       LR
      comp=Z,10µm,20.0s
O52A  Adamsville         135.39 358 P        PKPdf    07 56 23.6 +0.4
      baz=2.1
P59A  Jarrettsville      135.45 352 P        PKPdf    07 56 23.2 -0.2
      baz=9.8
Y22D  IRIS PASSCAL I     135.51  28 PFAKE             07 56 30.0 +4.6
Y22D                                LR       LR
      comp=Z,5µm,20.0s
P43A  Skaggs, Pawnee     135.53   7 P        PKPdf    07 56 23.2 -0.3
      baz=351
BNM   Barren Site        135.58  28 ePKPdf   PKPdf    07 56 24.4 +0.3
ALF01 Guarapari-ES       135.62 245 eP       PKiKP    07 56 26.0 +0.3
SDMD  Soldier’s Deli     135.70 353 PFAKE             07 56 40.0  +15
SDMD                                LR       LR
      comp=Z,5µm,20.0s
MCWV  Mont Chateau       135.75 356 PFAKE             07 56 40.0  +14
MCWV                                LR       LR
      comp=Z,6µm,20.0s
P57A  Homestead Farm     135.76 354 P        PKPdf    07 56 24.2 +0.2
      baz=7.6
P46A  Rosedale           135.77   4 P        PKPdf    07 56 24.0  0.0
      baz=354
P45A  Graceland, Par     135.82   5 PFAKE             07 56 40.0  +14
P45A                                LR       LR
      comp=Z,5µm,20.0s
P45A  Graceland, Par     135.82   5 P        PKPdf    07 56 24.0  0.0
      baz=354
P56A  Dayton Farm, R     135.82 355 P        PKPdf    07 56 24.3 +0.2
      baz=6.4
P54A  Burton             135.84 357 P        PKPdf    07 56 24.1 -0.1
      baz=4.1
P52A  Corning            135.88 359 P        PKPdf    07 56 22.9 -1.3
      baz=1.7
P55A  Reedsville         135.90 356 P        PKPdf    07 56 22.9 -1.3
      baz=5.0
P50A  Jamestown          135.92   0 P        PKPdf    07 56 23.8 -0.4
      baz=359
P47A  Martinsville       135.96   3 P        PKPdf    07 56 24.2 -0.1
      baz=356
Q60A  Greensboro         135.97 352 P        PKPdf    07 56 24.8 +0.5
      baz=11
P49A  Miami Univ. Ec     135.98   1 P        PKPdf    07 56 24.5 +0.2
      baz=358
P53A  Whipple            136.00 358 PFAKE             07 56 40.0  +14
P53A                                LR       LR
      comp=Z,9µm,20.0s
P53A  Whipple            136.00 358 P        PKPdf    07 56 24.2 -0.2
      baz=2.8
P48A  Milroy             136.03   2 PFAKE             07 56 40.0  +14
P48A                                LR       LR
      comp=Z,7µm,20.0s
P48A  Milroy             136.03   2 P        PKPdf    07 56 23.5 -1.0
      baz=357
P51A  Williamsport       136.05 360 ePKPdf   PKPdf    07 56 23.4 -1.1
P51A                                LR       LR
      comp=Z,8µm,21.0s
P51A  Williamsport       136.05 360 P        PKPdf    07 56 23.1 -1.4
      baz=0.4
CAM01 Campos-RJ          136.12 243 eP       PKiKP    07 56 27.0 +0.3
BSFB  Barra de Sao F     136.16 248 eP       PKPdf    07 56 25.8 +0.6
Q57A  Strasburg          136.25 354 P        PKPdf    07 56 24.5 -0.4
      baz=7.1
BLO   Bloomington        136.26   3 ePKPdf   PKPdf    07 56 24.8 -0.1
BLO                                 LR       LR
      comp=Z,7µm,21.0s
BLO   Bloomington        136.26   3 ePKIKP   PKPdf    07 56 24.8 -0.1
BLO                                 MLR      MLR
      comp=Z,7µm,21.0s
Q58A  Fox Den Farm,      136.26 354 P        PKPdf    07 56 24.7 -0.2
      baz=8.1
Q56A  Snyder Ridge,      136.31 355 P        PKPdf    07 56 24.7 -0.4
      baz=6.0
121A  Cookes Peak, D     136.34  30 P        PKPdf    07 56 25.2 -0.3
      baz=323
Q45A  Warren Harvey,     136.41   5 P        PKPdf    07 56 24.7 -0.4
      baz=353
Q55A  Buckhannon         136.42 356 P        PKPdf    07 56 24.2 -1.1
      baz=4.7
SLM   Saint Louis        136.43   8 PFAKE             07 56 40.0  +13
SLM                                 LR       LR
      comp=Z,7µm,22.0s
Q54A  Coxs Mills         136.48 357 ePKPdf   PKPdf    07 56 25.2 -0.1
Q54A                                LR       LR
      comp=Z,10µm,20.0s
Q54A  Coxs Mills         136.48 357 P        PKPdf    07 56 25.9 +0.5
      baz=3.6
SJMB  Sao Joao De Ma     136.50 248 eP       PKiKP    07 56 27.2 -0.4
Q49A  Aurora             136.50   2 P        PKPdf    07 56 23.8 -1.5
      baz=358
Q47A  Bedord North L     136.50   3 P        PKPdf    07 56 24.1 -1.2
      baz=356
Q51A  Peebles            136.50 360 PFAKE             07 56 40.0  +13
Q51A                                LR       LR
      comp=Z,8µm,20.0s
Q51A  Peebles            136.50 360 P        PKPdf    07 56 24.1 -1.2
      baz=360
Q48A  North Vernon       136.55   3 P        PKPdf    07 56 24.6 -0.8
      baz=356
Q52A  Bidwell            136.55 359 P        PKPdf    07 56 24.6 -0.8
      baz=1.5
OLIL  Olney              136.58   5 PFAKE             07 56 40.0  +13
OLIL                                LR       LR
      comp=Z,9µm,22.0s
U32A  Winter Ranch,      136.62  18 PFAKE             07 56 40.0  +13
U32A                                LR       LR
      comp=Z,5µm,20.0s
Q53A  Leroy              136.63 358 P        PKPdf    07 56 23.4 -2.2
      baz=2.6
CCM   Cathedral Cave     136.85   9 ePKPdf   PKPdf    07 56 25.0 -1.0
CCM                                 LR       LR
      comp=Z,9µm,21.0s
CCM   Cathedral Cave     136.85   9 ePKIKP   PKPdf    07 56 25.0 -1.0
CCM                                 MLR      MLR
      comp=Z,9µm,21.0s
CCM   Cathedral Cave     136.85   9 P        PKPdf    07 56 23.2 -2.8
      baz=348
R59A  King George, V     136.93 353 P        PKPdf    07 56 24.4 -1.8
      baz=9.1
R58A  Rapidan            136.93 354 P        PKPdf    07 56 24.9 -1.2
      baz=7.8
CBN   Corbin Frederi     136.96 353 PFAKE             07 56 40.0  +12
CBN                                 LR       LR
      comp=Z,8µm,21.0s
CBN   Corbin Frederi     136.96 353 P        PKPdf    07 56 26.2  0.0
      baz=8.7
R56A  Bull Pasture M     136.96 355 P        PKPdf    07 56 26.3 -0.1
      baz=5.7
R57A  Stanardsville      136.99 354 P        PKPdf    07 56 26.7 +0.4
      baz=7.0
R45A  Skylar, Fairfi     137.00   6 P        PKPdf    07 56 26.6 +0.3
      baz=353
AMTX  Amarillo           137.04  22 PFAKE             07 56 40.0  +12
AMTX                                LR       LR
      comp=Z,8µm,22.0s
R48A  Northridge Ran     137.07   3 P        PKPdf    07 56 27.0 +0.6
      baz=356
R47A  Wooly Knot Far     137.13   4 P        PKPdf    07 56 27.0 +0.5
      baz=355
R55A  Marlinton          137.14 356 PFAKE             07 56 40.0  +12
R55A                                LR       LR
      comp=Z,9µm,21.0s
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R53A	**Hurricane**	**137.18**	**358**	PFAKE		07 56 40.0	+12
R53A				LR	LR		
	comp=Z,11µm,20.0s						
R53A	**Hurricane**	**137.18**	**358**	P	**PKPdf**	**07 56 25.1**	**-1.6**
	baz=2.0						
R52A	**Catlettsburg**	**137.19**	**359**	P	**PKPdf**	**07 56 25.9**	**-0.8**
	baz=1.0						
R49A	**Shelbyville**	**137.21**	**2**	PFAKE		07 56 40.0	+11
R49A				LR	LR		
	comp=Z,7µm,20.0s						
R49A	**Shelbyville**	**137.21**	**2**	P	**PKPdf**	**07 56 27.1**	**+0.4**
	baz=357						
WCI	**Wyandotte Cave**	**137.22**	**3**	*e*PKPdf	**PKPdf**	**07 56 26.2**	**-0.4**
WCI				LR	LR		
	comp=Z,7µm,19.0s						
WCI	**Wyandotte Cave**	**137.22**	**3**	*e*PKIKP	**PKPdf**	**07 56 26.3**	**-0.4**
WCI				MLR	MLR		
	comp=Z,7µm,19.0s						
WCI	**Wyandotte Cave**	**137.22**	**3**	P	**PKPdf**	**07 56 25.1**	**-1.6**
	baz=356						
R51A	**Hillsboro**	**137.23**	**0**	P	**PKPdf**	**07 56 26.2**	**-0.5**
	baz=360						
S61A	**Accomac**	**137.23**	**351**	PFAKE		07 56 40.0	+11
S61A				LR	LR		
	comp=Z,7µm,20.0s						
R50A	**Paris**	**137.24**	**1**	*e*PKPdf	**PKPdf**	**07 56 26.1**	**-0.6**
R50A				LR	LR		
	comp=Z,10µm,20.0s						
R50A	**Paris**	**137.24**	**1**	P	**PKPdf**	**07 56 26.8**	**0.0**
	baz=359						
R58B	**Mineral**	**137.25**	**354**	PFAKE		07 56 40.0	+11
R58B				LR	LR		
	comp=Z,11µm,20.0s						
R58B	**Mineral**	**137.25**	**354**	P	**PKPdf**	**07 56 27.1**	**+0.3**
	baz=8.0						
HSIG		**137.30**	**37**	PFAKE		07 56 40.0	+11
HSIG				LR	LR		
	comp=Z,2µm,20.0s						
USIN	**University of**	**137.38**	**5**	PFAKE		07 56 40.0	+11
USIN				LR	LR		
	comp=Z,7µm,21.0s						
S59A	**Mechanicsville**	**137.38**	**353**	P	**PKPdf**	**07 56 27.5**	**+0.5**
	baz=8.9						
MSTX	**Muleshoe**	**137.42**	**24**	PFAKE		07 56 40.0	+11
MSTX				LR	LR		
	comp=Z,8µm,22.0s						
S44A	**Carbondale**	**137.48**	**7**	P	**PKPdf**	**07 56 25.4**	**-1.8**
	baz=351						
S57A	**Dark Hollow, R**	**137.56**	**355**	PFAKE		07 56 40.0	+11
S57A				LR	LR		
	comp=Z,8µm,22.0s						
S57A	**Dark Hollow, R**	**137.56**	**355**	P	**PKPdf**	**07 56 27.9**	**+0.5**
	baz=6.5						
VAS01	**Vassouras-RJ**	**137.57**	**242**	*e*P	**PKiKP**	**07 56 30.6**	**+0.9**
S58A	**Poland Farm, P**	**137.62**	**354**	PFAKE		07 56 40.0	+11
S58A				LR	LR		
	comp=Z,11µm,20.0s						
S58A	**Poland Farm, P**	**137.62**	**354**	P	**PKPdf**	**07 56 27.4**	**-0.1**
	baz=7.8						
S55A	**Lewisburg**	**137.67**	**357**	P	**PKPdf**	**07 56 27.3**	**-0.4**
	baz=4.2						
S49A	**Springfield**	**137.71**	**2**	P	**PKPdf**	**07 56 25.8**	**-1.9**
	baz=357						
SRIG	**Santa Rosalia**	**137.72**	**40**	PFAKE		07 56 40.0	+10
SRIG				LR	LR		
	comp=Z,3µm,22.0s						
S48A	**Wiedeman Farm,**	**137.80**	**3**	P	**PKPdf**	**07 56 28.5**	**+0.7**
	baz=356						
S47A	**Hartford**	**137.81**	**4**	P	**PKPdf**	**07 56 27.7**	**-0.1**
	baz=355						
S53A	**Williamson**	**137.83**	**358**	P	**PKPdf**	**07 56 28.3**	**+0.4**
	baz=1.8						
S50A	**Richmond**	**137.84**	**1**	P	**PKPdf**	**07 56 26.8**	**-1.1**
	baz=358						
S52A	**Salyersville**	**137.85**	**360**	P	**PKPdf**	**07 56 27.9**	**0.0**
	baz=0.4						
S51A	**Beattyville**	**137.89**	**0**	*e*PKPdf	**PKPdf**	**07 56 27.4**	**-0.6**
S51A				LR	LR		
	comp=Z,13µm,21.0s						
S51A	**Beattyville**	**137.89**	**0**	P	**PKPdf**	**07 56 25.7**	**-2.3**
	baz=360						
T60A	**Surry**	**137.92**	**352**	PFAKE		07 56 40.0	+10
T60A				LR	LR		
	comp=Z,6µm,20.0s						
TUL1	**Leonard**	**137.98**	**15**	PFAKE		07 56 40.0	+10
TUL1				LR	LR		
	comp=Z,8µm,22.0s						
HHAR	**Hobbs**	**138.07**	**13**	PFAKE		07 56 40.0	+10
HHAR				LR	LR		
	comp=Z,11µm,22.0s						
T59A	**Double "B" Far**	**138.19**	**353**	PFAKE		07 56 40.0	+9.4
T59A				LR	LR		
	comp=Z,7µm,20.0s						
WMOK	**Wichita Mounta**	**138.19**	**19**	PFAKE		07 56 40.0	+9.3
WMOK				LR	LR		
	comp=Z,6µm,22.0s						
MNTX	**Cornudas Mount**	**138.20**	**29**	*e*PKPdf	**PKPdf**	**07 56 27.8**	**-0.9**
MNTX				LR	LR		
	comp=Z,6µm,20.0s						
MNTX	**Cornudas Mount**	**138.20**	**29**	P	**PKPdf**	**07 56 26.5**	**-2.3**
	baz=326						
T45A	**Paducah**	**138.22**	**6**	PFAKE		07 56 40.0	+9.4
T45A				LR	LR		
	comp=Z,6µm,21.0s						
BLA	**Blacksburg**	**138.22**	**356**	PFAKE		07 56 40.0	+9.3
BLA				LR	LR		
	comp=Z,10µm,22.0s						
PBMO	**Poplar Bluff**	**138.23**	**8**	PFAKE		07 56 40.0	+9.3
PBMO				LR	LR		
	comp=Z,8µm,22.0s						
GDL2	**Guadalupe Moun**	**138.25**	**27**	*e*PKPdf	**PKPdf**	**07 56 27.6**	**-1.4**
T48A	**Bowling Green**	**138.32**	**4**	P	**PKPdf**	**07 56 27.0**	**-1.8**
	baz=355						
T55A	**Pulaski**	**138.34**	**357**	P	**PKPdf**	**07 56 26.5**	**-2.3**
	baz=3.8						
T57A	**Hurt**	**138.34**	**355**	PFAKE		07 56 40.0	+9.1
T57A				LR	LR		
	comp=Z,8µm,20.0s						
T49A	**Edmonton**	**138.37**	**3**	PFAKE		07 56 40.0	+9.0
T49A				LR	LR		
	comp=Z,6µm,21.0s						
T47A	**Sharon Grove**	**138.39**	**4**	*e*PKPdf	**PKPdf**	**07 56 28.0**	**-0.9**
T47A				LR	LR		
	comp=Z,7µm,20.0s						
T52A	**Hallie**	**138.42**	**359**	PFAKE		07 56 40.0	+8.9
T52A				LR	LR		
	comp=Z,9µm,21.0s						
T54A	**Tazewell**	**138.43**	**358**	P	**PKPdf**	**07 56 29.5**	**+0.4**
	baz=2.6						
PARMO	**Parma**	**138.44**	**8**	PFAKE		07 56 40.0	+8.9
PARMO				LR	LR		
	comp=Z,7µm,22.0s						
T50A	**Nancy**	**138.48**	**2**	P	**PKPdf**	**07 56 29.5**	**+0.4**
	baz=358						
U60A	**Pendleton**	**138.64**	**352**	P	**PKPdf**	**07 56 30.1**	**+0.8**
	baz=9.3						
U61A	**Possum Corner**	**138.67**	**351**	PFAKE		07 56 40.0	+8.4
U61A				LR	LR		
	comp=Z,10µm,20.0s						
PVMO	**Portageville**	**138.69**	**8**	PFAKE		07 56 40.0	+8.4
PVMO				LR	LR		
	comp=Z,7µm,21.0s						
FCAR	**Ozark Folk Cen**	**138.81**	**11**	PFAKE		07 56 40.0	+8.1
FCAR				LR	LR		
	comp=Z,5µm,19.0s						
U59A	**Littleton**	**138.83**	**353**	PFAKE		07 56 40.0	+8.1
U59A				LR	LR		
	comp=Z,6µm,20.0s						
U58A	**Oxford**	**138.88**	**354**	P	**PKPdf**	**07 56 30.4**	**+0.6**
	baz=7.2						
GLAT	**Glass**	**138.88**	**7**	PFAKE		07 56 40.0	+8.0
GLAT				LR	LR		
	comp=Z,6µm,19.0s						
U54A	**Nelsons Funny**	**138.98**	**358**	PFAKE		07 56 40.0	+7.7
U54A				LR	LR		
	comp=Z,10µm,20.0s						
TZTN	**Tazewell**	**138.98**	**0**	PFAKE		07 56 40.0	+7.8
TZTN				LR	LR		
	comp=Z,15µm,20.0s						
BBSR	**BB Station**	**139.07**	**336**	PFAKE		07 56 40.0	+7.5
BBSR				LR	LR		
	comp=Z,4µm,22.0s						
GNAR	**Gosnell**	**139.09**	**8**	PFAKE		07 56 40.0	+7.6
GNAR				LR	LR		
	comp=Z,8µm,21.0s						
U52A	**Thorn Hill**	**139.13**	**360**	P	**PKPdf**	**07 56 29.2**	**-1.1**
	baz=360						
W39A	**Magazine**	**139.14**	**13**	*e*PKPdf	**PKPdf**	**07 56 29.6**	**-0.8**
W39A				LR	LR		
	comp=Z,9µm,21.0s						
WVT	**Waverly**	**139.18**	**5**	PFAKE		07 56 40.0	+7.4
WVT				LR	LR		
	comp=Z,6µm,19.0s						
V61A	**Roper**	**139.22**	**351**	PFAKE		07 56 40.0	+7.3
V61A				LR	LR		
	comp=Z,9µm,19.0s						
HALT	**Halls**	**139.23**	**7**	PFAKE		07 56 40.0	+7.3
HALT				LR	LR		
	comp=Z,5µm,20.0s						
CLTN	**Cedars of Leba**	**139.34**	**4**	PFAKE		07 56 40.0	+7.0
CLTN				LR	LR		
	comp=Z,4µm,19.0s						
V60A	**Jim Taylor Roa**	**139.34**	**352**	PFAKE		07 56 40.0	+7.1
V60A				LR	LR		
	comp=Z,8µm,20.0s						
V62A	**Hyde County Ai**	**139.35**	**351**	PFAKE		07 56 40.0	+7.0
V62A				LR	LR		
	comp=Z,9µm,21.0s						
WHAR	**Wooly Hollow**	**139.37**	**11**	PFAKE		07 56 40.0	+7.0
WHAR				LR	LR		
	comp=Z,8µm,21.0s						
HBAR	**Harrisburg**	**139.39**	**9**	PFAKE		07 56 40.0	+6.9
HBAR				LR	LR		
	comp=Z,6µm,22.0s						
W41B	**Gary Mavity, V**	**139.49**	**11**	PFAKE		07 56 40.0	+6.7
W41B				LR	LR		
	comp=Z,9µm,21.0s						
V56A	**Mocksville**	**139.62**	**356**	PFAKE		07 56 40.0	+6.5
V56A				LR	LR		
	comp=Z,8µm,20.0s						
V48A	**Smith Brothers**	**139.66**	**4**	*e*PKPdf	**PKPdf**	**07 56 30.4**	**-0.9**
V48A				LR	LR		
	comp=Z,6µm,19.0s						
V52A	**Sevierville**	**139.68**	**0**	PFAKE		07 56 40.0	+6.3
V52A				LR	LR		
	comp=Z,13µm,19.0s						
V51A	**Loudon**	**139.71**	**1**	PFAKE		07 56 40.0	+6.3
V51A				LR	LR		
	comp=Z,7µm,20.0s						
MIAR	**Mount Ida**	**139.81**	**13**	PFAKE		07 56 40.0	+6.0
MIAR				LR	LR		
	comp=Z,10µm,21.0s						
ABTX	**Abilene, Hawle**	**139.82**	**21**	PFAKE		07 56 40.0	+5.9
ABTX				LR	LR		
	comp=Z,8µm,20.0s						
V53A	**Saluda**	**139.85**	**359**	PFAKE		07 56 40.0	+5.9
V53A				LR	LR		
	comp=Z,11µm,20.0s						
UALR	**University of**	**139.85**	**11**	PFAKE		07 56 40.0	+6.0
UALR				LR	LR		
	comp=Z,10µm,21.0s						
MET	**Memphis--Engin**	**139.93**	**8**	PFAKE		07 56 40.0	+5.8
MET				LR	LR		
	comp=Z,7µm,22.0s						
CNNC	**Cliffs of the**	**139.94**	**353**	PFAKE		07 56 40.0	+5.8
CNNC				LR	LR		
	comp=Z,7µm,20.0s						
X40A	**Basin Creek Fa**	**140.03**	**12**	PFAKE		07 56 40.0	+5.6
X40A				LR	LR		
	comp=Z,10µm,22.0s						
CPCT	**Cooper Cave**	**140.06**	**1**	*e*PKPdf	**PKPdf**	**07 56 31.1**	**-0.9**
CPCT				LR	LR		
	comp=Z,10µm,22.0s						
SWET	**Sewanee**	**140.24**	**3**	PFAKE		07 56 40.0	+5.1
SWET				LR	LR		
	comp=Z,6µm,21.0s						
W57A	**Gilead**	**140.24**	**356**	PFAKE		07 56 40.0	+5.2
W57A				LR	LR		
	comp=Z,9µm,22.0s						
W57A	**Gilead**	**140.24**	**356**	P	**PKPdf**	**07 56 31.9**	**-0.4**
	baz=5.2						
OGAUY	**Aigu**	**140.27**	**218**	*e*P	**PKiKP**	**07 56 41.2**	**+6.3**
W50A	**Signal Mountai**	**140.28**	**2**	PFAKE		07 56 40.0	+5.0
W50A				LR	LR		
	comp=Z,6µm,19.0s						
PLAL	**Pickwick Lake**	**140.30**	**6**	*e*PKPdf	**PKPdf**	**07 56 31.7**	**-0.7**
PLAL				LR	LR		
	comp=Z,6µm,20.0s						
KMSC	**Kings Mountain**	**140.33**	**357**	*e*PKPdf	**PKPdf**	**07 56 31.4**	**-1.1**
KMSC				LR	LR		
	comp=Z,9µm,22.0s						
KMSC	**Kings Mountain**	**140.33**	**357**	P	**PKPdf**	**07 56 30.9**	**-1.6**
	baz=3.1						
W51A	**Cleveland**	**140.34**	**2**	P	**PKPdf**	**07 56 32.1**	**-0.4**
	baz=358						
W53A	**Cullowhee**	**140.35**	**360**	P	**PKPdf**	**07 56 32.8**	**+0.1**
	baz=0.3						
X43A	**Marvell**	**140.37**	**10**	PFAKE		07 56 40.0	+4.9
X43A				LR	LR		
	comp=Z,9µm,22.0s						
W52A	**Murphy**	**140.43**	**1**	PFAKE		07 56 40.0	+4.7
W52A				LR	LR		
	comp=Z,11µm,19.0s						
W52A	**Murphy**	**140.43**	**1**	P	**PKPdf**	**07 56 31.8**	**-1.0**
	baz=359						
BG3	**Lake Jocassee**	**140.53**	**359**	PFAKE		07 56 40.0	+4.6
BG3				LR	LR		
	comp=Z,7µm,20.0s						
SPB	**Sao Paulo**	**140.55**	**238**	PFAKE		07 56 40.0	+4.3
SPB				LR	LR		
	comp=Z,6µm,19.0s						
SPB	**Sao Paulo**	**140.55**	**238**	*e*P	**PKiKP**	**07 56 37.1**	**+1.4**
OXF	**Oxford**	**140.60**	**8**	*e*PKPdf	**PKPdf**	**07 56 33.2**	**+0.2**
OXF				LR	LR		
	comp=Z,5µm,18.0s						
OXF	**Oxford**	**140.60**	**8**	*e*PKIKP	**PKPdf**	**07 56 33.2**	**+0.2**
OXF				MLR	MLR		
	comp=Z,5µm,18.0s						
CNLB	**Canela**	**140.64**	**228**	*e*P	**PKiKP**	**07 56 37.4**	**+1.5**
X46A	**Booneville**	**140.66**	**7**	P	**PKPdf**	**07 56 30.4**	**-2.7**
	baz=352						
PAULI	**Pauline**	**140.67**	**358**	PFAKE		07 56 40.0	+4.3
PAULI				LR	LR		
	comp=Z,10µm,22.0s						
WLAR	**White Oak Lake**	**140.74**	**13**	PFAKE		07 56 40.0	+4.1
WLAR				LR	LR		
	comp=Z,10µm,22.0s						
X58A	**Rowland**	**140.78**	**355**	PFAKE		07 56 40.0	+4.1
X58A				LR	LR		
	comp=Z,6µm,20.0s						
CCAR	**Cane Creek**	**140.80**	**11**	PFAKE		07 56 40.0	+4.0
CCAR				LR	LR		
	comp=Z,7µm,19.0s						
X52A	**Dahlonega**	**140.91**	**1**	P	**PKPdf**	**07 56 34.5**	**+0.9**
	baz=359						
X48A	**Hartselle**	**140.92**	**5**	PFAKE		07 56 40.0	+3.8
X48A				LR	LR		
	comp=Z,9µm,21.0s						
X57A	**Johnson Farm,**	**140.93**	**356**	P	**PKiKP**	**07 56 34.9**	**-1.3**
	baz=5.1						
X51A	**Calhoun**	**140.93**	**2**	*e*PKPdf	**PKPdf**	**07 56 33.8**	**+0.2**
X51A				LR	LR		
	comp=Z,9µm,21.0s						
X51A	**Calhoun**	**140.93**	**2**	P	**PKPdf**	**07 56 34.8**	**+1.2**
	baz=358						
X54A	**Belton**	**140.96**	**359**	P	**PKPdf**	**07 56 34.6**	**+0.9**
	baz=1.5						
TXAR	**Lajitas Array**	**140.98**	**29**	PKhKP	PKPpre	07 56 29.6	
	comp=Z,1.5nm,0.7s,baz=219,slow=0.8,SNR=5.6						
TXAR				PP	**PP**	**07 59 36.6**	**+2.9**
	comp=Z,12nm,1.2s,baz=329,slow=5.2,SNR=4.4						
TXAR				SKP		08 00 08.0	
	comp=Z,7.5nm,1.1s,baz=306,slow=3.1,SNR=3.0						
X55A	**Gracelyn & Ava**	**141.01**	**358**	P	**PKPdf**	**07 56 34.2**	**+0.4**
	baz=2.7						
RCLB	**Rio Claro- Sao**	**141.08**	**240**	*e*P	**PKiKP**	**07 56 37.7**	**+0.8**
WHTX	**Lake Whitney,**	**141.15**	**19**	PFAKE		07 56 50.0	+13
WHTX				LR	LR		
	comp=Z,9µm,20.0s						
JSC	**Jenkinsville**	**141.18**	**357**	PFAKE		07 56 50.0	+13
JSC				LR	LR		
	comp=Z,10µm,22.0s						
PLTB	**Pedras Altas**	**141.19**	**223**	*e*P	**PKiKP**	**07 56 41.5**	**+4.6**
Y60A	**Bolivia**	**141.20**	**353**	PFAKE		07 56 50.0	+13
Y60A				LR	LR		
	comp=Z,12µm,21.0s						
Z41A	**Richland Creek**	**141.22**	**13**	PFAKE		07 56 50.0	+13
Z41A				LR	LR		
	comp=Z,8µm,22.0s						
HODGE	**Hodges**	**141.27**	**358**	*e*PKPdf	**PKPdf**	**07 56 34.1**	**-0.2**
HODGE				LR	LR		
	comp=Z,8µm,20.0s						
Y57A	**Sumter**	**141.40**	**356**	PFAKE		07 56 50.0	+13
Y57A				LR	LR		
	comp=Z,9µm,20.0s						
Y57A	**Sumter**	**141.40**	**356**	P	**PKPdf**	**07 56 35.7**	**+1.2**
	baz=4.7						
Y58A	**Scranton**	**141.45**	**355**	PFAKE		07 56 50.0	+13
Y58A				LR	LR		
	comp=Z,7µm,20.0s						
TRQA	**Tornquist**	**141.47**	**208**	*e*PKPdf	**PKPdf**	**07 56 34.1**	**-0.4**
TRQA				LR	LR		
	comp=Z,4µm,21.0s						
TRQA	**Tornquist**	**141.47**	**208**	*e*PKIKP	**PKPdf**	**07 56 34.1**	**-0.4**
TRQA				MLR	MLR		
	comp=Z,4µm,21.0s						
Y49A	**Blount Mountai**	**141.56**	**4**	PFAKE		07 56 50.0	+12
Y49A				LR	LR		
	comp=Z,8µm,20.0s						
Y50A	**Piedmont**	**141.56**	**3**	P	**PKPdf**	**07 56 33.0**	**-1.8**
	baz=356						
Y51A	**Rockmart**	**141.59**	**2**	P	**PKPdf**	**07 56 32.7**	**-2.2**
	baz=357						
Y52A	**Lilburn**	**141.65**	**1**	*e*PKPdf	**PKPdf**	**07 56 34.8**	**-0.2**
Y52A				LR	LR		
	comp=Z,10µm,21.0s						
Y52A	**Lilburn**	**141.65**	**1**	P	**PKPdf**	**07 56 33.0**	**-2.0**
	baz=359						
Y54A	**Tignall**	**141.65**	**359**	P	**PKPdf**	**07 56 32.9**	**-2.0**
	baz=1.0						
Y53A	**Monroe**	**141.66**	**0**	P	**PKPdf**	**07 56 32.4**	**-2.5**
	baz=360						
JCT	**Junction City**	**141.67**	**23**	*e*PKPdf	**PKPdf**	**07 56 34.1**	**-1.0**
JCT				LR	LR		
	comp=Z,8µm,20.0s						
JCT	**Junction City**	**141.67**	**23**	*e*PKIKP	**PKPdf**	**07 56 34.1**	**-1.0**
JCT				MLR	MLR		
	comp=Z,8µm,20.0s						
GOGA	**Godfrey**	**142.11**	**0**	PFAKE		07 56 50.0	+11
GOGA				LR	LR		
	comp=Z,10µm,21.0s						
Z56A	**Williston**	**142.14**	**357**	PFAKE		07 56 50.0	+11
Z56A				LR	LR		
	comp=Z,7µm,20.0s						
Z51A	**Franklin**	**142.16**	**2**	P	**PKPdf**	**07 56 33.4**	**-2.5**
	baz=357						
Z50A	**Ashland**	**142.19**	**3**	PFAKE		07 56 50.0	+11
Z50A				LR	LR		
	comp=Z,11µm,19.0s						
Z50A	**Ashland**	**142.19**	**3**	P	**PKPdf**	**07 56 32.8**	**-3.1**
	baz=356						
NATX	**Nacogdoches**	**142.20**	**16**	PFAKE		07 56 50.0	+11
NATX				LR	LR		
	comp=Z,9µm,21.0s						
435B	**Jarrell**	**142.22**	**20**	PFAKE		07 56 50.0	+11
435B				LR	LR		
	comp=Z,10µm,20.0s						
NHSC	**New Hope**	**142.28**	**356**	PFAKE		07 56 50.0	+11
NHSC				LR	LR		
	comp=Z,6µm,19.0s						
PLCA	**Paso Flores**	**142.30**	**196**	PKP	**PKPdf**	**07 56 33.6**	**-2.4**
	comp=Z,9.5nm,0.7s,baz=213,slow=1.5,SNR=17						
PLCA				SKP		08 00 11.0	
	comp=Z,6.2nm,0.9s,baz=162,slow=2.9,SNR=3.2						
PLCA	**Paso Flores**	**142.30**	**196**	*e*PKPdf	**PKPdf**	**07 56 34.7**	**-1.2**
PLCA	**Paso Flores**	**142.30**	**196**	*e*P	PKiKP	07 56 48.6	+10
Z52A	**Williamson**	**142.31**	**1**	P	**PKPdf**	**07 56 32.2**	**-3.9**
	baz=358						
LRAL	**Lakeview Retre**	**142.33**	**5**	*e*PKPdf	**PKPdf**	**07 56 34.3**	**-1.9**
LRAL				LR	LR		
	comp=Z,8µm,20.0s						
LRAL	**Lakeview Retre**	**142.33**	**5**	P	**PKPdf**	**07 56 33.5**	**-2.7**
	baz=354						
BB19B	**Bebedouro**	**142.43**	**241**	*e*P	**PKiKP**	**07 56 39.7**	**0.0**
FRTB	**Fartura**	**142.44**	**237**	*e*P	**PKiKP**	**07 56 38.9**	**-0.8**
147A	**Livingston**	**142.56**	**7**	*e*PKPdf	**PKPdf**	**07 56 34.7**	**-1.8**
147A				LR	LR		
	comp=Z,900nm,22.0s						
148A	**Greensboro**	**142.66**	**6**	P	**PKPdf**	**07 56 33.9**	**-2.9**
	baz=353						
VBMS	**Vicksburg**	**142.68**	**10**	PFAKE		07 56 50.0	+10
VBMS				LR	LR		
	comp=Z,8µm,22.0s						
149A	**Jones**	**142.78**	**5**	P	**PKPdf**	**07 56 33.7**	**-3.3**
	baz=354						
150A	**Eclectic**	**142.83**	**4**	P	**PKPdf**	**07 56 35.2**	**-1.8**
	baz=356						
152A	**Waverly Hall**	**142.83**	**2**	*e*PKPdf	**PKPdf**	**07 56 36.2**	**-0.8**
152A				LR	LR		
	comp=Z,12µm,21.0s						
152A	**Waverly Hall**	**142.83**	**2**	P	**PKPdf**	**07 56 35.1**	**-1.9**
	baz=358						
155A	**Kite**	**142.88**	**359**	P	**PKPdf**	**07 56 35.4**	**-1.7**
	baz=1.4						
154A	**Montrose**	**142.90**	**360**	PFAKE		07 56 50.0	+10
154A				LR	LR		
	comp=Z,11µm,22.0s						
151A	**Opelika**	**142.94**	**3**	P	**PKPdf**	**07 56 33.4**	**-3.9**
	baz=357						
249A	**Camden**	**143.37**	**5**	P	PKPbc	07 56 34.8	-0.2
	baz=354						
251A	**Midway**	**143.37**	**3**	P	PKPbc	07 56 35.7	+0.7
	baz=357						
250A	**Grady**	**143.43**	**4**	PFAKE		07 56 50.0	+8.5
250A				LR	LR		
	comp=Z,10µm,20.0s						
250A	**Grady**	**143.43**	**4**	P	PKPab	07 56 34.0	-0.3
	baz=355						
253A	**Americus**	**143.45**	**1**	PFAKE		07 56 50.0	+8.5
253A				LR	LR		
	comp=Z,8µm,22.0s						
253A	**Americus**	**143.45**	**1**	P	PKPbc	07 56 35.4	+0.1
	baz=359						
257A	**Skidaway Islan**	**143.47**	**357**	PFAKE		07 56 50.0	+8.5
257A				LR	LR		
	comp=Z,8µm,21.0s						
252A	**Lumpkin**	**143.50**	**2**	P	PKPbc	07 56 35.8	+0.4
	baz=358						
BDFB	**Brasilia**	**143.56**	**250**	PKP	PKPbc	07 56 36.5	+0.3
	comp=Z,29nm,0.7s,baz=111,slow=4.6,SNR=28						
BDFB	**Brasilia**	**143.56**	**250**	*e*PKPdf	PKPbc	07 56 37.1	+0.9
BDFB				LR	LR		
	comp=Z,5µm,22.0s						
HKT	**Hockley**	**143.56**	**18**	*e*PKPdf	**PKPdf**	**07 56 37.8**	**-0.6**
HKT				LR	LR		
	comp=Z,10µm,20.0s						
254A	**Abbeville**	**143.57**	**360**	P	PKPbc	07 56 36.3	+0.7
	baz=0.1						
255A	**Hazlehurst**	**143.58**	**359**	PFAKE		07 56 50.0	+8.3
255A				LR	LR		
	comp=Z,10µm,20.0s						
GO06	**Curarrehue**	**143.62**	**196**	*e*PKPdf	**PKPdf**	**07 56 38.0**	**-0.4**
833A	**Chaparral WMA,**	**143.75**	**24**	*e*PKPdf	**PKPdf**	**07 56 38.2**	**-0.6**
833A				LR	LR		
	comp=Z,6µm,22.0s						
833A	**Chaparral WMA,**	**143.75**	**24**	P	PKPbc	07 56 36.6	+0.3
	baz=332						
349A	**Repton**	**143.98**	**5**	P	PKPbc	07 56 37.2	+0.3
	baz=354						
350A	**Dozier**	**143.98**	**4**	P	PKPbc	07 56 37.8	+1.0
	baz=355						
352A	**Blakely**	**144.00**	**2**	PFAKE		07 56 50.0	+7.4
352A				LR	LR		
	comp=Z,9µm,21.0s						
352A	**Blakely**	**144.00**	**2**	P	PKPbc	07 56 37.6	+0.7
	baz=357						
TIGA	**Tifton**	**144.07**	**0**	PFAKE		07 56 50.0	+7.2
TIGA				LR	LR		
	comp=Z,10µm,22.0s						
TIGA	**Tifton**	**144.07**	**0**	P	PKPbc	07 56 37.0	-0.1
	baz=360						
353A	**Camilla**	**144.16**	**1**	P	PKPbc	07 56 37.4	0.0
	baz=358						
355A	**Pearson**	**144.16**	**359**	P	PKPbc	07 56 37.9	+0.5
	baz=0.8						
BRAL	**Brewton**	**144.17**	**5**	PFAKE		07 56 50.0	+7.0
BRAL				LR	LR		
	comp=Z,9µm,19.0s						
SMTB	**Santa Maria do**	**144.19**	**261**	*e*P	PKPbc	07 56 38.6	+0.5
ITRB	**Iturama**	**144.51**	**242**	*e*P	**PKPdf**	**07 56 40.7**	**+0.4**
PEXB	**Peixe**	**144.52**	**256**	*e*P	**PKPdf**	**07 56 40.6**	**+0.1**
449A	**Pace**	**144.56**	**6**	P	**PKPab**	**07 56 38.3**	**-0.2**
	baz=353						
450A	**Crestview**	**144.58**	**5**	P	**PKPab**	**07 56 38.1**	**-0.5**
	baz=354						
453A	**Whigham**	**144.65**	**1**	PFAKE		07 56 50.0	+6.0
453A				LR	LR		
	comp=Z,7µm,19.0s						

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456A   Hilliard          144.76 358  PFAKE                07 56 50.0 +5.8
456A                                  LR        LR
       comp=Z,7µm,20.0s
451A   Vernon            144.82   3 ePKPdf    PKPab      07 56 39.3 -0.1
451A                                  LR        LR
       comp=Z,10µm,22.0s
451A   Vernon            144.82   3  P        PKPab      07 56 38.3 -1.1
       baz=356
KVTX   Kingsville        145.04  23  PFAKE                07 56 50.0 +5.2
KVTX                                  LR        LR
       comp=Z,4µm,20.0s
552A   Lynn Haven        145.33   3  P        PKPbc      07 56 39.9 -1.3
       baz=357
555A   McAlpin           145.38 359 ePKPbc    PKPbc      07 56 40.6 -0.8
555A                                  LR        LR
       comp=Z,8µm,21.0s
555A   McAlpin           145.38 359  P        PKPbc      07 56 40.4 -1.0
       baz=0.6
554A   Perry             145.42   0  P        PKPbc      07 56 40.3 -1.2
       baz=359
557A   Orange Park       145.45 357  P        PKPbc      07 56 40.7 -0.9
       baz=2.8
556A   Lake Butler       145.49 358  P        PKPbc      07 56 40.8 -0.9
       baz=1.6
657A   Interlachen       145.89 358  P        PKPdf      07 56 42.1 -0.3
       baz=2.6
656A   Willston          146.12 359 ePKPdf    PKPdf      07 56 43.2 +0.3
656A                                  LR        LR
       comp=Z,8µm,21.0s
656A   Willston          146.12 359  P        PKPdf      07 56 43.0 +0.2
       baz=1.4
758A   Lake Helen        146.47 356  P        PKPdf      07 56 44.1 +0.6
       baz=3.8
757A   Oxford            146.54 358  P        PKPdf      07 56 44.2 +0.6
       baz=2.3
LNIG   Linares           146.70  27 ePKPdf    PKPdf      07 56 43.7 -0.3
LNIG                                  LR        LR
       comp=Z,4µm,21.0s
ZAIG   Zacatecas         146.91  34  PFAKE                07 57 00.0  +11
ZAIG                                  LR        LR
       comp=Z,5µm,20.0s
CPUP   Villa Florida     147.05 227  PKPbc    PKPdf      07 56 44.6 +0.1
       comp=Z,40nm,0.8s,baz=90,slow=3.6,SNR=21
857A   Zephyrhills       147.21 358  P        PKPbc      07 56 46.6 -0.3
       baz=2.0
DWPF   Disney Wildern    147.33 357 ePKPbc    PKPbc      07 56 47.0 -0.2
DWPF                                  LR        LR
       comp=Z,6µm,20.0s
DWPF   Disney Wildern    147.33 357  P        PKPbc      07 56 46.1 -1.1
       baz=3.5
859A   Kempfer Cattle    147.35 356  P        PKPbc      07 56 46.8 -0.5
       baz=4.5
957A   Wimauma           147.81 358  PFAKE                07 57 00.0 +9.1
957A                                  LR        LR
       comp=Z,8µm,22.0s
957A   Wimauma           147.81 358  P        PKPbc      07 56 47.8 -0.7
       baz=2.0
958A   Wauchula          147.87 357  P        PKPbc      07 56 47.9 -0.9
       baz=3.0
959A   Okeechobee        147.88 356  P        PKPbc      07 56 47.8 -1.0
       baz=4.6
060A   Indiantown        148.32 355  PFAKE                07 57 00.0 +7.1
060A                                  LR        LR
       comp=Z,7µm,20.0s
060A   Indiantown        148.32 355  P        PKPbc      07 56 49.2 -0.7
       baz=5.6
058A   Arcadia           148.40 357  P        PKPbc      07 56 50.1 -0.1
       baz=2.9
059A   Moore Haven       148.45 356  PFAKE                07 57 00.0 +6.5
059A                                  LR        LR
       comp=Z,6µm,20.0s
059A   Moore Haven       148.45 356  P        PKPbc      07 56 49.3 -1.0
       baz=4.2
AQDB   Aquidauana        148.81 237 eP        PKPbc      07 56 51.3 -0.1
059Z   Ave Maria         149.10 357  P        PKPbc      07 56 51.4 -0.5
       baz=3.7
ANWB   Willy Bob         149.19 317  PFAKE                07 57 00.0 +3.3
ANWB                                  LR        LR
       comp=Z,4µm,22.0s
ANWB   Willy Bob         149.19 317 e         PKPdf      07 56 46.8 -1.3
PEL    Peldehue          149.30 201  PFAKE                07 57 00.0 +3.2
PEL                                   LR        LR
       comp=Z,5µm,20.0s
061Z   Ochoppi           149.53 356  PFAKE                07 57 00.0 +2.2
061Z                                  LR        LR
       comp=Z,9µm,21.0s
BPA    Boggy Peak        149.66 316 e         PKPbc      07 56 54.0 +0.4
CFA    Coronel Fontan    149.67 206  PKP      PKPdf      07 56 48.6  0.0
       comp=Z,17nm,0.7s,baz=246,slow=2.6,SNR=16
CFA                                  PKPbc    PKPbc      07 56 52.8 -0.5
       comp=Z,72nm,0.7s,baz=152,slow=2.4,SNR=48
SMRT   St. Maarten       149.78 319 ePKPbc    PKPbc      07 56 53.5 -0.4
SMRT                                  LR        LR
       comp=Z,5µm,22.0s
SMRT   St. Maarten       149.78 319 e         PKiKP      07 56 54.7 -0.2
SKI    Saint Kitts       150.07 317  PFAKE                07 57 00.0 -0.4
SKI                                   LR        LR
       comp=Z,4µm,21.0s
SKI    Saint Kitts       150.07 317 e         PKiKP      07 56 56.8 +1.3
SKTB   Turtle Beach      150.07 317 e         PKiKP      07 56 55.2 -0.3
NEV    Hard Times        150.09 317 e         PKPab      07 56 58.3 -2.2
SEUS   St. Eustatius     150.12 318  PFAKE                07 57 00.0 -0.5
SEUS                                  LR        LR
       comp=Z,4µm,21.0s
SEUS   St. Eustatius     150.12 318 e         PKPab      07 56 58.2 -2.3
MLYT   Lee's Yard        150.12 316 e         PKiKP      07 56 57.5 +1.8
BSK    Brimstone Hill    150.12 318 e         PKiKP      07 56 56.6 +1.0
NVBH   Bath Hotel, Ne    150.14 317 e         PKPab      07 56 58.8 -1.8
SABA   Saba              150.20 319  PFAKE                07 57 00.0 -0.9
SABA                                  LR        LR
       comp=Z,3µm,20.0s
SABA   Saba              150.20 319 e         PKiKP      07 56 57.1 +1.3
DWS    Wesley            150.26 313 e         PKPdf      07 56 34.6  -15
MDPO   Dominica; Chan    150.36 313 e         PKiKP      07 56 56.7 +0.6
DLPL   La Plaine         150.37 313 e         PKPdf      07 56 50.6 +0.5
BBGH   Gun Hill          150.41 307 e         PKPdf      07 56 29.1  -21
DBCT   Belle View Cho    150.48 313 e         PKPab      07 57 01.6 -0.6
MDN    Morne-Daniel      150.48 313 e         PKiKP      07 56 57.5 +1.1
FDF    Fort de France    150.68 312 ePKPbc    PKPbc      07 56 56.3 +0.1
FDF                                   LR        LR
       comp=Z,3µm,21.0s
FDF    Fort de France    150.68 312 e         PKiKP      07 56 56.8  0.0
FDF    Fort de France    150.68 312 ePKIKP    PKPbc      07 56 56.3 +0.1
FDF                                   MLR       MLR
       comp=Z,3µm,21.0s
SLW    Petit Monier      150.97 310 e         PKPdf      07 56 53.7 +2.6
CUPR   Culebra, Puert    150.98 322 ePKPbc    PKPbc      07 56 56.5 -0.2
SLBI   Saint Lucia, B    150.99 310 e         PKPbc      07 56 56.0 -0.8
SLPA   Patience          151.05 310 e         PKiKP      07 57 00.6 +3.0
MCLT   Moule a Chique    151.16 310 e         PKiKP      07 56 59.7 +1.9
SLB    Belfond           151.16 310 e         PKiKP      07 56 59.0 +1.1
SLDE   Delcer            151.19 310 e         PKiKP      07 56 59.5 +1.7
MTP    Monte Pirata      151.31 323 ePKPbc    PKPbc      07 56 57.0 -0.5
GRTK   Grand Turk        151.31 336 ePKPbc    PKPbc      07 56 57.1 -0.3
GRTK                                  LR        LR
       comp=Z,4µm,20.0s
CBYP   Canovanas         151.36 323 ePKPbc    PKPbc      07 56 57.3 -0.4
HUMP   Col San Antoni    151.45 323 ePKPdf    PKPdf      07 56 51.0 -0.7
SFAN   Fancy Village     151.53 309 e         PKiKP      07 56 58.8 +0.2
EMPR   Esperanza - Ma    151.59 325 ePKPbc    PKPbc      07 56 57.9 -0.2
SJG    San Juan          151.65 324 ePKPbc    PKPbc      07 56 57.3 -1.0
SJG                                   LR        LR
       comp=Z,4µm,22.0s
SJG    San Juan          151.65 324 ePKIKP    PKPbc      07 56 57.3 -1.0
SJG                                   MLR       MLR
       comp=Z,4µm,22.0s
SVB    Belmont           151.66 309 e         PKiKP      07 56 59.8 +0.9
AOPR   Arecibo Observ    151.82 325 ePKPbc    PKPbc      07 56 58.2 -0.5
CLDB   Colider           151.97 256 eP        PKPdf      07 56 53.0 +0.3
OBIP   Obispado Ponce    151.98 324 ePKPdf    PKPdf      07 56 51.6 -0.9
OBIP                                  LR        LR
       comp=Z,2µm,21.0s
GO04   Tololo Observa    151.99 204 ePKPbc    PKPbc      07 56 58.1 -1.0
AGP    Aguadilla         152.00 325 ePKPbc    PKPbc      07 56 58.5 -0.6
ICMP   Isla Caja de M    152.05 324 ePKPdf    PKPdf      07 56 51.9 -0.7
ICMP                                  LR        LR
       comp=Z,3µm,19.0s
TOSP   Speyside          152.24 305 e         PKPab      07 57 06.9 -2.6
LVIG   Laguna Verde      152.58  27 ePKPbc    PKPbc      07 56 58.9 -1.4
LVIG                                  LR        LR
       comp=Z,2µm,22.0s
LCO    Las Campanas      152.97 205 ePKPbc    PKPbc      07 57 01.2 -0.2
LCO                                   LR        LR
       comp=Z,5µm,20.0s
LCO    Las Campanas      152.97 205 eP        PKiKP      07 57 03.2 +1.7
TLIG   Tlapa             153.31  34  PFAKE                07 57 10.0 -3.9
TLIG                                  LR        LR
       comp=Z,7µm,22.0s
SDD    Santo Domingo     153.42 330  PFAKE                07 57 10.0 -4.2
SDD                                   LR        LR
       comp=Z,8µm,20.0s
SDDR   Presa de Saban    153.62 333 ePKPbc    PKiKP      07 57 03.1 +0.3
SDDR                                  LR        LR
       comp=Z,6µm,22.0s
MYIG   Mrida             153.77  13  PFAKE                07 57 10.0 -5.6
MYIG                                  LR        LR
       comp=Z,10µm,22.0s
GO03   Copiap            153.99 207 ePKPbc    PKPbc      07 57 03.0 -0.3
GTBY   Guantanamo Bay    154.21 342  PFAKE                07 57 10.0 +6.1
GTBY                                  LR        LR
       comp=Z,4µm,21.0s
TEIG   Tepich            154.78  11  PFAKE                07 57 10.0 +4.9
TEIG                                  LR        LR
       comp=Z,6µm,22.0s
SIV    San Ignacio       155.35 241  PKP      PKPdf      07 56 57.0 -0.5
       comp=Z,4.1nm,0.8s,baz=103,slow=3.5,SNR=14
SIV                                  PKPab    PKPab      07 57 23.7 +1.0
       comp=Z,25nm,0.8s,baz=120,slow=6.7,SNR=16
SIV                                  PP       PP         08 01 01.9 +2.9
       comp=Z,14nm,1.2s,baz=150,slow=7.0,SNR=4.9
GO02   Mina Guanaco      155.70 212  PFAKE                07 57 10.0  +12
GO02                                  LR        LR
       comp=Z,3µm,19.0s
PTGA   Pitinga           156.25 279  PKP      PKPdf      07 56 57.8 -0.9
       comp=Z,14nm,1.0s,baz=341,slow=1.8,SNR=12
PTGA                                 PKPab    PKPab      07 57 27.0 +0.3
       comp=Z,42nm,0.9s,baz=70,slow=5.9,SNR=15
PTGA   Pitinga           156.25 279 ePKPdf    PKPdf      07 56 58.2 -0.5
PTGA                                  LR        LR
       comp=Z,5µm,22.0s
PTGA   Pitinga           156.25 279 eP        PKPdf      07 56 55.6 -3.1
MTDJ   Mount Denham      156.50 346  PFAKE                07 57 10.0  +11
MTDJ                                  LR        LR
       comp=Z,4µm,20.0s
LVC    Limon Verde       157.32 217  PKPab    PKPab      07 57 29.8 -1.5
       comp=Z,29nm,1.0s,baz=103,slow=3.9,SNR=3.7
LVC    Limon Verde       157.32 217 ePKPdf    PKPdf      07 56 58.5 -1.8
LVC                                   LR        LR
       comp=Z,3µm,20.0s
LVC    Limon Verde       157.32 217 ePKIKP    PKPdf      07 56 58.5 -1.8
LVC                                   MLR       MLR
       comp=Z,3µm,20.0s
LVC    Limon Verde       157.32 217 eP        PKPdf      07 57 08.0 +7.7
CCIG   Comitan           157.45  22 ePKPab    PKPab      07 57 31.6 -0.1
CCIG                                  LR        LR
       comp=Z,7µm,22.0s
PB10   IPOC Station P    157.54 212  PFAKE                07 57 10.0  +10
PB10                                  LR        LR
       comp=Z,3µm,20.0s
PB01   IPOC Station P    158.85 219  PFAKE                07 57 10.0 +8.2
PB01                                  LR        LR
       comp=Z,3µm,22.0s
GO01   Chusmiza          159.66 222 ePKPdf    PKPdf      07 57 02.8 -0.6
GO01                                  LR        LR
       comp=Z,4µm,22.0s
PB11   IPOC Station P    159.90 221 ePKPdf    PKPdf      07 57 03.2  0.0
PB11                                  LR        LR
       comp=Z,4µm,22.0s
MNMC   Minye Minye       160.31 222 ePKPdf    PKPdf      07 57 03.9 +0.1
LPAZ   La Paz            161.08 231  PKP      PKPdf      07 57 04.8 -0.4
       comp=Z,13nm,0.9s,baz=58,slow=4.2,SNR=29
LPAZ                                 PKPab    PKPab      07 57 47.9 -0.2
       comp=Z,19nm,0.8s,baz=128,slow=2.3,SNR=3.8
LPAZ                                 PP       PP         08 01 34.2 +3.5
       comp=Z,3.4nm,0.9s,baz=103,slow=6.5,SNR=3.5
LPAZ   La Paz            161.08 231 ePKPdf    PKPdf      07 57 04.6 -0.5
LPAZ   La Paz            161.08 231 ePKIKP    PKPdf      07 57 04.6 -0.5
LPAZ   La Paz            161.08 231 eP        PKPdf      07 57 09.4 +4.3
VIRV   Villa del Rosa    161.34 324 eP        PKPdf      07 57 05.4 +0.7
SDV    Santo Domingo     161.44 317  PKPab    PKPab      07 57 49.7 +0.4
       comp=Z,13nm,0.4s,baz=16,slow=7.8,SNR=2.4
SDV    Santo Domingo     161.44 317 eP        PKPdf      07 57 00.0 -5.0
ESTN   Estel             162.08   9 ePKPdf    PKPdf      07 57 03.8 -1.7
ESTN                                ePKPab    PKPab      07 57 51.8 +0.1
CODC   Agustn Codazz     162.40 326 eP        PKPdf      07 57 06.5 +0.7
ACON   Acoyapa           163.36   6 ePKPdf    PKPdf      07 57 06.1 -0.6
OCAC   Ocana             163.68 322 eP        PKPdf      07 57 07.7 +0.5
PAMC   Pamplona, Colo    163.96 318 eP        PKPdf      07 57 07.1 -0.8
BRRC   Barranca, Sant    164.80 320 eP        PKPdf      07 57 09.0 +1.0
BARC   Barichara         164.83 318 eP        PKPdf      07 57 07.4 -0.9
ZARC   Zaragoza, Cauc    165.19 325 eP        PKPdf      07 57 09.0 +0.6
RUSC   La Rusia          165.27 315 eP        PKPdf      07 57 08.6 -0.5
PTBC   PUERTO BERRIO,    165.70 321 eP        PKPdf      07 57 08.0 -0.8
BCIP   Isla Barro Col    165.78 345 ePKPdf    PKPdf      07 57 08.7 -0.1
BCIP   Isla Barro Col    165.78 345 ePKIKP    PKPdf      07 57 08.7 -0.1
BCIP   Isla Barro Col    165.78 345 eP        PKPdf      07 57 09.0 +0.1
CHIC   Chingaza          166.61 314 eP        PKPdf      07 57 09.9 -0.2
NORC   Norcasia          166.71 320 eP        PKPdf      07 57 12.3 +2.6
ROSC   El Rosal          166.88 316  PKP      PKPdf      07 57 10.1 -0.2
       comp=Z,38nm,1.1s,baz=137,slow=9.1,SNR=9.0
ROSC   El Rosal          166.88 316 ePKPdf    PKPdf      07 57 09.9 -0.3
ROSC   El Rosal          166.88 316 eP        PKPdf      07 57 14.0 +3.8
GUY2C  Guyana, Caldas    167.28 321 eP        PKPdf      07 57 12.4 +1.8
RREF   El Recreo         167.52 320 eP        PKPdf      07 57 16.6 +5.6
PRAC   Prado             168.07 314 eP        PKPdf      07 57 08.9 -1.8
PLMC   San Jos del P     168.10 323 eP        PKPdf      07 57 10.2 -0.5
MACC   Macarena, Meta    168.27 305 eP        PKPdf      07 57 10.6 -0.2
YOTC   Yotoco, Valle     168.86 321 eP        PKPdf      07 57 09.7 -1.6
MARP   Paez Belalcaza    169.44 315 eP        PKPdf      07 57 12.8 +0.9
FLOC   Florencia         170.05 309 eP        PKPdf      07 57 12.4 +0.6
PCON   Cinco Dias        170.11 315 eP        PKPdf      07 57 13.1 +0.5
POPC   Popayan, Colom    170.15 317 eP        PKPdf      07 57 11.4 -0.8
NNA    Nana              170.26 221  PKP      PKPdf      07 57 12.4 +0.5
       comp=Z,32nm,1.1s,baz=237,slow=11,SNR=5.0
NNA    Nana              170.26 221 ePKPdf    PKPdf      07 57 12.1 +0.1
NNA    Nana              170.26 221 ePKIKP    PKPdf      07 57 12.1 +0.1
SOTA   Rioblanco         170.40 315 eP        PKPdf      07 57 13.1 +0.5
BBAC   Balboa, Cauca     170.92 317 eP        PKPdf      07 57 12.7 +0.1
OTAV   Otavalo           173.03 314 ePKPdf    PKPdf      07 57 13.4 -0.5
OTAV   Otavalo           173.03 314 ePKIKP    PKPdf      07 57 13.4 -0.5
OTAV   Otavalo           173.03 314 eP        PKPdf      07 57 14.8 +0.9
OTAV   Otavalo           173.03 314 eP        PKPdf      07 57 13.8 -0.1
ATAH   Atahualpa         174.44 244  PKP      PKPdf      07 57 14.7 +0.3
       comp=Z,9.3nm,0.9s,baz=51,slow=0.5,SNR=5.2
```

ROM 02 07:44:38.9±0.4**, 43°.35N**±0°.01×**13°.26E**±0°.02**, h7**^{km}±2^{km}**, ML0.8**/1**, Error ellipse: s-maj=1.6km s-min=1.2km az=67.0, Central Italy**

```
Code   Station Name       Δ°   AZ°    Phase ID             Time      Res
                                     Op        ISC        h  m  s    ISC
CING   Cingoli           0.05 303    P         Pg         07 44 40.8 +0.2
CING                                 S         Sg         07 44 41.9 +0.1
EL6    Elcito            0.12 261    P         Pg         07 44 42.0 +0.5
EL6                                  S         Sg         07 44 44.1 +0.8
CSP1   Cessapalombo      0.26 189    P         Pg         07 44 44.9 +0.8
CSP1                                 S         Sb         07 44 49.5 -1.2
FDMO   Fiordimonte       0.33 202    P         Pg         07 44 46.3 +0.8
FDMO                                 S         Sb         07 44 51.6 -1.2
FDMO                                 AML       AML
       comp=E,28µm,0.2s
FDMO                                 AML       AML
       comp=N,24µm,0.7s
FDMO                                 AML       AML
       comp=E,28µm,0.2s
FDMO                                 AML       AML
       comp=N,24µm,0.7s
FDMO                                 AML       AML
       comp=E,28µm,0.2s
FDMO                                 AML       AML
       comp=N,24µm,0.7s
MURB   Monte Urbino      0.54 261    AML       AML
       comp=N,60µm,0.3s
MURB                                 AML       AML
       comp=E,60µm,0.3s
MURB                                 AML       AML
       comp=E,60µm,0.3s
MURB                                 AML       AML
       comp=N,60µm,0.3s
MURB                                 AML       AML
       comp=E,60µm,0.3s
MURB                                 AML       AML
       comp=N,60µm,0.3s
PE3    Peglio            0.65 303    AML       AML
       comp=E,117µm,0.1s
PE3                                  AML       AML
       comp=E,117µm,0.1s
PE3                                  AML       AML
       comp=N,108µm,0.2s
PE3                                  AML       AML
       comp=N,108µm,0.2s
PE3                                  AML       AML
       comp=E,117µm,0.1s
PE3                                  AML       AML
       comp=N,108µm,0.2s
MCIV   Monte Civitell    1.29 244    AML       AML
       comp=E,795µm,0.1s
MCIV                                 AML       AML
       comp=E,795µm,0.1s
MCIV                                 AML       AML
       comp=N,850µm,0.1s
MCIV                                 AML       AML
       comp=N,850µm,0.1s
MCIV                                 AML       AML
       comp=N,850µm,0.1s
MCIV                                 AML       AML
       comp=E,795µm,0.1s
CARD   Cardoso           2.12 290    AML       AML
       comp=E,53µm,1.0s
CARD                                 AML       AML
       comp=N,56µm,1.2s
CARD                                 AML       AML
       comp=N,56µm,1.2s
CARD                                 AML       AML
       comp=E,53µm,1.0s
CARD                                 AML       AML
       comp=N,56µm,1.2s
CARD                                 AML       AML
       comp=E,53µm,1.0s
STAL   STALIGIAL         2.94 353    AML       AML
       comp=E,39µm,0.1s
STAL                                 AML       AML
       comp=E,39µm,0.1s
STAL                                 AML       AML
       comp=N,25µm,0.2s
STAL                                 AML       AML
       comp=N,25µm,0.2s
STAL                                 AML       AML
       comp=E,39µm,0.1s
STAL                                 AML       AML
       comp=N,25µm,0.2s
PZUN   Potenza           3.30 144    AML       AML
       comp=N,371µm,0.1s
PZUN                                 AML       AML
       comp=E,122µm,0.2s
PZUN                                 AML       AML
       comp=N,371µm,0.1s
PZUN                                 AML       AML
       comp=E,122µm,0.2s
PZUN                                 AML       AML
       comp=E,122µm,0.2s
PZUN                                 AML       AML
       comp=N,371µm,0.1s
```

ROM 02 07:45:20.7±0.0**, 44°.206N**±0°.001×**10°.216E**±0°.001**, h5**^{km}**, ML0.4**/1**, Error ellipse: s-maj=0.9km s-min=0.1km az=302.0, Northern Italy**

```
Code   Station Name       Δ°   AZ°    Phase ID             Time      Res
                                     Op        ISC        h  m  s    ISC
T0912  Minucciano (LU    0.04 187    P         Pg         07 45 22.1 +0.1
T0912                                S         Sg         07 45 23.1 +0.2
T0912                                AML       AML
       comp=E,412µm,0.2s
T0912                                AML       AML
       comp=N,573µm,0.6s
T0912                                AML       AML
       comp=E,412µm,0.2s
T0912                                AML       AML
       comp=N,573µm,0.6s
T0912                                AML       AML
       comp=E,412µm,0.2s
T0912                                AML       AML
       comp=N,573µm,0.6s
T0912                                AML       AML
       comp=E,412µm,0.2s
T0912                                AML       AML
       comp=N,573µm,0.6s
EQUI   Equi              0.06 229    P         Pg         07 45 22.5 +0.3
EQUI                                 S         Sg         07 45 23.5 +0.2
EQUI   Equi              0.06 229    P         Pg         07 45 22.5 +0.3
EQUI                                 S         Sg         07 45 23.7 +0.4
EQUI                                 AML       AML
       comp=E,72µm,0.1s
EQUI                                 AML       AML
       comp=N,86µm,0.5s
EQUI                                 AML       AML
       comp=E,72µm,0.1s
EQUI                                 AML       AML
       comp=N,86µm,0.5s
EQUI                                 AML       AML
       comp=E,72µm,0.1s
EQUI                                 AML       AML
       comp=N,86µm,0.5s
EQUI                                 AML       AML
       comp=E,72µm,0.1s
EQUI                                 AML       AML
       comp=N,86µm,0.5s
VLC    Villacollemand    0.13 111    P         Pg         07 45 23.8 +0.4
VLC                                  S         Sg         07 45 26.1 +0.9
VLC                                  AML       AML
       comp=E,32µm,0.7s
VLC                                  AML       AML
       comp=N,26µm,1.1s
VLC                                  AML       AML
       comp=E,32µm,0.7s
VLC                                  AML       AML
       comp=N,26µm,1.1s
VLC                                  AML       AML
       comp=E,32µm,0.7s
VLC                                  AML       AML
       comp=N,26µm,1.1s
VLC                                  AML       AML
       comp=E,32µm,0.7s
VLC                                  AML       AML
       comp=N,26µm,1.1s
T0911  Castelpoggio (    0.14 227    P         Pg         07 45 24.0 +0.4
T0911                                S         Sg         07 45 26.3 +0.9
GRAM   Graiana           0.30 339    P         Pg         07 45 27.6 +0.9
GRAM                                 S         Sb         07 45 32.6 -1.5
```

NNC 02 07:49:09.2±0.7**, 50°.17N×79°.18E, h0**^{km}**, mb3.6, mpv3.2, 6C-3D, Error ellipse: s-maj=15.7km s-min=3.6km az=53.0, Suspected Mining explosion., Eastern Kazakhstan**

```
Code   Station Name       Δ°   AZ°    Phase ID             Time      Res
                                     Op        ISC        h  m  s    ISC
KURBB  Kurchatov Arra    0.61 317   ⇑P         Pg         07 49 20.9  0.0
       26nm,0.3s
KURBB                               ⇑S         Sg         07 49 29.8 +1.0
       328nm,0.6s
KURK   Kurchatov         0.65 327   ⇑P         Pg         07 49 22.1 +0.5
       17nm,0.6s
KURK                                ⇓S         Sg         07 49 30.9 +0.9
       45nm,0.6s
MAKZ   Makanchi          3.85 150   ⇑Pg        Pb         07 50 17.6 -0.3
       17nm,1.2s
MAKZ                                ⇓Lg        Lg         07 51 10.6
       13nm,0.6s
MK31   Makanchi Array    3.96 147   ⇓Pn        Pn         07 50 13.1 +1.8
       0.8nm,0.3s,baz=322,slow=10.0,SNR=87
MK31                                ⇑Pg        Pb         07 50 21.3 +1.4
       4.3nm,0.6s,baz=322,slow=14,SNR=26
MK31                                ⇑Lg        Lg         07 51 14.6
       4.8nm,0.4s,baz=328,slow=26,SNR=5.6
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*IDC **02** 07:51:38.9±7.4, 3°.54N×95°.15E, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.6/42, mbtmp3.8/3, Error ellipse: s-maj=365.8km s-min=28.8km az=57.0*

*ISCJB **02** 07:51:43.9±0.8, 4°.60N±0°.07×96°.7E±0°.1, h10^{km}, mb4.1/8, Error ellipse: s-maj=16.2km s-min=9.0km az=159.2*

*NEIC **02** 07:51:46.0±1.8, 4°.65N×96°.75E, h10^{km}, mb4.5/5, Error ellipse: s-maj=19.7km s-min=10.7km az=300.0*

ISC 02 07:51:46.0±1.2**, 4°.66N**±0°.08×**96°.8E**±0°.1**, h10**^{km}**, n17,** σ**0^{s}.85**/17**, mb4.0**/8**, Northern Sumatera**

```
Code   Station Name       Δ°   AZ°    Phase ID             Time      Res
                                     Op        ISC        h  m  s    ISC
LHMI   Lhok Sumawe       0.60  19   ePg        Pg         07 51 58.2 +0.6
PSI    Prapat            2.85 130   ePn        Pn         07 52 33.6 +2.0
```

GSI	Gunungsitoli	3.44	166	ePn	Pn	07 52 40.5	+0.8
KULM	Kulim	3.93	81	ePn	Pn	07 52 46.6	+0.1
IPM	Ipoh	4.26	92	ePn	Pn	07 52 51.9	+0.8
MYKOM	Kota Tinggi	7.64	112	ePn	Pn	07 53 37.5	+0.1
MNAI	Manna	10.90	145	ePn	Pn	07 54 22.9	+0.7
JAGI	Jajag, Banyuwa	21.71	127	eP	P	07 56 36.4	-1.1
	33nm,0.7s						
MTN	Manton Dam	38.33	117	eP	P	07 59 06.8	-0.6
	30nm,1.2s						
MK31	Makanchi Array	43.80	346	eP	P	07 59 51.6	-0.4
	1.4nm,1.2s						
MK32	Makanchi Array	43.80	346	eP	P	07 59 52.1	0.0
MKAR	Makanchi Array	43.80	346	P	P	07 59 52.1	0.0
	0.3nm,0.4s,baz=159,slow=9.7,SNR=5.4						
WR1	Warramunga Arr	44.30	125	eP	P	07 59 55.8	-0.7
WRA	Warramunga Arr	44.30	125	P	P	07 59 55.8	-0.7
	1.5nm,0.6s,baz=300,slow=8.1,SNR=11						
WB2	Warramunga Arr	44.31	125	eP	P	07 59 55.7	-0.8
	19nm,1.5s						
ASAR	Alice Springs	45.88	130	P	P	08 00 08.2	-0.7
	0.9nm,0.6s,baz=301,slow=8.2,SNR=12						
AS31	Alice Springs	45.88	130	eP	P	08 00 08.7	-0.3
	1.2nm,1.0s						

IDC ***02*** *07:59:30.7±2.3, 4°.32N×96°.03E, h0^{km}, mb4.1/4, mb1 4.3/5, mb1mx3.7/38, mbtmp4.1/5, ML3.8/1, Error ellipse: s-maj=90.4km s-min=21.0km az=59.0*

ISCJB ***02*** *07:59:32.9±0.5, 4°.85N±0°.04×96°.61E±0°.05, h10^{km}, mb4.2/10, Error ellipse: s-maj=7.6km s-min=5.7km az=177.6*

NEIC ***02*** *07:59:33.6±1.2, 4°.65N×96°.53E, h10^{km}, mb4.3/6, Error ellipse: s-maj=15.8km s-min=7.6km az=188.0*

DJA ***02*** *07:59:36.1±0.5, 5°N±3°×9°7E±°, h10^{km}, M4.2/8, MLv4.2/8*

ISC 02 07:59:35.1±0.7, **4°.73N**±0°.04×**96°.61E**±0°.07, **h10^{km}, n31, σ1^{s}60**/34, **mb4.4**/10, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.50	204	P	Pb	07 59 46.5	+0.4
MLSI				S	Sg	07 59 53.0	+1.4
LHMI	Lhok Sumawe	0.60	34	ePg	Pg	07 59 48.2	+1.4
LHMI	Lhok Sumawe	0.60	34	P	Pb	07 59 48.4	+0.7
LHMI				S	Sb	07 59 57.3	+1.1
TPTI		1.56	159	P	Pn	08 00 03.6	+0.6
TPTI				S	Sn	08 00 23.9	+0.6
KCSI	Kotacane, Aceh	1.66	136	P	Pn	08 00 05.3	+0.9
TSI	Tuntungan	2.30	122	P	Pn	08 00 14.0	+0.9
SNSI	Sinabang, Aceh	2.32	187	P	Pn	08 00 15.8	+2.4
PSI	Prapat	3.00	130	Pn	Pn	08 00 24.0	+1.2
	8.8nm,0.3s,baz=323,slow=14,SNR=15						
PSI	Prapat	3.00	130	ePn	Pn	08 00 23.0	+0.2
GSI	Gunungsitoli	3.53	164	ePn	Pn	08 00 29.2	-1.0
GSI	Gunungsitoli	3.53	164	P	Pg	08 00 42.9	0.0
KULM	Kulim	4.06	82	ePn	Pn	08 00 36.3	-1.0
IPM	Ipoh	4.41	93	ePn	Pn	08 00 41.5	-0.7
MNSI	Mandailing Nat	4.90	143	P	Pn	08 00 51.9	+3.0
BKNI	Bangkinang	6.22	135	ePn	Pn	08 01 05.5	-1.5
MYKOM	Kota Tinggi	7.79	112	ePn	Pn	08 01 27.6	-1.1
CMAR	Chiang Mai Arr	13.84	9	Lg	Lg	08 06 59.0	
	0.4nm,0.3s,baz=188,slow=32,SNR=2.9						
PALK	Pallekele	16.02	280	ePn	Pn	08 03 18.9	-1.9
	12nm,0.8s						
HHC	Hu-ho-hao-te	38.39	18	P	P	08 07 01.2	+4.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.4s						
MK31	Makanchi Array	43.70	346	eP	P	08 07 39.3	-1.1
	comp=Z,0.9nm,1.0s						
MK32	Makanchi Array	43.70	346	eP	P	08 07 38.8	-1.6
MKAR	Makanchi Array	43.70	346	P	P	08 07 38.8	-1.6
	comp=Z,1.0nm,0.8s,baz=168,slow=7.7,SNR=9.1						
SONA0	Songino Array	43.76	10	eP	P	08 07 42.5	+1.5
SONM	Songino Array	43.76	10	P	P	08 07 42.5	+1.5
	comp=Z,0.7nm,0.6s,baz=182,slow=8.7,SNR=3.6						
WR1	Warramunga Arr	44.45	125	eP	P	08 07 45.2	-1.6
WRA	Warramunga Arr	44.45	125	P	P	08 07 45.2	-1.6
	comp=Z,3.5nm,0.6s,baz=301,slow=8.4,SNR=15						
WRAB	Tennant Creek	44.46	125	eP	P	08 07 46.6	-0.2
	comp=Z,10nm,0.7s						
WB2	Warramunga Arr	44.46	125	eP	P	08 07 45.2	-1.7
	comp=Z,5.3nm,0.9s						
ASAR	Alice Springs	46.03	129	P	P	08 07 57.7	-1.6
	comp=Z,3.9nm,0.6s,baz=302,slow=7.6,SNR=31						
ASAR				PcP	PcP	08 09 35.0	-0.9
	comp=Z,0.8nm,0.9s,baz=315,slow=3.2,SNR=2.9						
AS31	Alice Springs	46.03	129	eP	P	08 07 58.0	-1.4
	comp=Z,1.2nm,0.6s						
RAYN	Ar Rayn	52.64	296	eP	P	08 08 48.3	-1.6
	comp=Z,4.9nm,0.8s						

IDC ***02*** *08:02:28.8±1.2, 14°.88S×76°.03W, h0^{km}, mb3.5/2, mb1 4.1/6, mb1mx3.9/27, mbtmp4.0/6, ML4.1/4, MS4.1/1, Ms1 4.1/1, ms1mx3.2/37, Error ellipse: s-maj=36.9km s-min=22.3km az=54.0*

ISCJB ***02*** *08:02:31.3±1.0, 14°.90S±0°.10×76°.0W±0°.2, h29^{km}, mb3.8/3, MS4.0/1, Error ellipse: s-maj=24.4km s-min=7.6km az=150.3*

ISC 02 08:02:32.2±0.9, **15°.0S**±0°.1×**75°.9W**±0°.1, **h29^{km}, n18, σ1^{s}77**/17, **mb3.8**/3, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	3.13	343	Pn	Pn	08 03 18.5	-1.2
	22nm,0.3s,baz=129,slow=10,SNR=44						
NNA				Lg	Lg	08 04 03.4	
	78nm,0.3s,baz=180,slow=15,SNR=6.5						
LPAZ	La Paz	7.60	101	Pn	Pn	08 04 25.0	+3.3
	2.4nm,0.3s,baz=304,slow=8.8,SNR=61						
ATAH	Atahualpa	8.18	342	Pn	Pn	08 04 30.1	+0.7
	0.5nm,0.3s,baz=142,slow=3.1,SNR=4.3						
ATAH				Sn	Sn	08 06 00.7	-0.6
	1.1nm,0.3s,baz=188,slow=18,SNR=2.7						
LVC	Limon Verde	10.06	140	Pn	Pn	08 04 56.6	+1.4
	3.9nm,0.3s,baz=330,slow=10.0,SNR=25						
LVC				Sn	Sn	08 06 45.0	-2.3
	0.5nm,0.3s,baz=74,slow=19,SNR=3.1						
LVC				Lg	Lg	08 07 45.8	
	0.3nm,0.3s,baz=221,slow=20,SNR=2.9						
SIV	San Ignacio	14.34	96	Pn	Pn	08 05 50.6	-2.8
	0.3nm,0.3s,baz=290,slow=12,SNR=6.6						
CFA	Coronel Fontan	17.96	158	P	P	08 06 43.7	+3.5
	0.3nm,0.3s,baz=332,slow=12,SNR=5.5						
PTGA	Pitinga	21.19	49	P	P	08 07 16.5	+0.9
	2.3nm,0.6s,baz=226,slow=14,SNR=4.5						
JTS	Las Juntas de	26.67	340	LR	LR	08 18 15.9	
	comp=Z,428nm,21.6s,baz=316,slow=36						
TXAR	Lajitas Array	51.58	329	P	P	08 11 36.0	-0.1
	0.3nm,0.5s,baz=150,slow=8.2,SNR=4.2						
TORD	Torodi Ar. Bea	81.72	74	P	P	08 14 49.4	+0.7
	4.0nm,0.8s,baz=274,slow=3.6,SNR=16						
H11N3	WAKE ISLAND Hy	120.14	284	T	T	10 32 44.4	
	baz=97						
H11N2	WAKE ISLAND Hy	120.15	284	T	T	10 32 45.7	
	baz=97						
H11N1	WAKE ISLAND Hy	120.16	284	T	T	10 32 45.7	
	baz=97						
ASAR	Alice Springs	131.77	218	PKP	PKiKP	08 21 44.2	-0.2
	0.6nm,0.9s,baz=113,slow=2.1,SNR=3.5						
KURBB	Kurchatov Arra	138.90	25	PKP	PKiKP	08 21 56.9	-1.0
	0.2nm,0.3s,baz=318,slow=2.6,SNR=3.9						
MKAR	Makanchi Array	143.45	25	PKP	PKPdf	08 22 03.5	-0.7
	0.1nm,0.4s,baz=309,slow=2.9,SNR=3.6						
KSH	Kashi	145.31	40	ePKPbc	PKPab	08 22 08.1	+0.4
KSH				PKS	PKSdf	08 25 42.7	-0.6
SONM	Songino Array	147.20	357	PKPbc	PKPbc	08 22 13.4	+0.5
	0.8nm,0.7s,baz=344,slow=2.6,SNR=3.9						

TIR ***02*** *08:15:21.8, 39°.22N×18°.85E, h10^{km}, Md3.7/7*

ISCJB ***02*** *08:15:22.5±1.0, 39°.25N±0°.03×18°.67E±0°.05, h13^{km}±8^{km}, Error ellipse: s-maj=7.2km s-min=4.2km az=135.0*

THE ***02*** *08:15:23.3, 39°.24N×18°.81E, h0^{km}±3^{km}, ML3.1/3, Error ellipse: s-maj=3.3km s-min=1.0km az=341.0*

ISC 02 08:15:24.3±1.2, **39°.27N**±0°.04×**18°.83E**±0°.03, **h18^{km}**±4^{km}, **n46, σ1^{s}61**/63, **Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCTE	Santa Cesarea	0.85	341	i PG	Pg	08 15 39.7	-1.2
SCTE				i SG	Sb	08 15 53.0	+1.4
KEK	Kerkira	0.88	59	P	Pg	08 15 39.8	-1.6
KEK				S	Sb	08 15 53.6	+1.3
SRN	Sarande	1.10	56	P	Pb	08 15 43.6	-1.1
SRN	Sarande	1.10	56	i PN	Pb	08 15 44.2	-0.5
SRN				i SN	Sn	08 16 00.9	+1.5
IGT	Igoumenitsa	1.20	77	P	Pn	08 15 45.7	-0.4
IGT				S	Sn	08 16 04.4	+2.5
IGT	Igoumenitsa	1.20	77	i PN	Pn	08 15 46.0	-0.1
IGT				i SN	Sn	08 16 03.2	+1.3
VLO	Vlora	1.31	23	i PN	Pn	08 15 48.1	+0.5
VLO				i SN	Sg	08 16 07.7	+1.0
TPE	Tepelena	1.38	41	P	Pb	08 15 49.5	0.0
TPE	Tepelena	1.38	41	i PN	Pn	08 15 49.0	+0.4
TPE				i SN	Sg	08 16 09.4	+0.6
TSLK	Tsoukalades, L	1.49	107	P	Pb	08 15 50.7	-0.7
TSLK				S	Sg	08 16 12.4	-0.1
LKD2	Lefkada island	1.50	108	P	Pn	08 15 50.7	+0.3
LKD2				S	Sg	08 16 12.3	-0.6
FSK	Fiskardo	1.58	120	P	Pn	08 15 50.6	-0.7
FSK				S	Sg	08 16 13.9	-1.3
TIP	Timpagrande	1.61	268	P	Pn	08 15 52.1	+0.3
JAN	Janina	1.62	75	P	Pn	08 15 52.8	+0.9
CGL1	Ceglie Messapi	1.73	324	ePn	Pn	08 15 54.2	+0.7
VLS	Valsamata	1.76	128	P	Pn	08 15 54.3	+0.5
FASA	Fasano	1.92	324	ePn	Pn	08 15 49.1	-6.9
FASA				Sn	Sg	08 16 28.6	+2.6
KFL	Anninata	1.92	126	P	Pn	08 15 56.4	+0.3
MEV	Metsovon	1.93	74	P	Pb	08 15 57.9	-1.1
PDO	Prodromos	1.96	109	P	Pn	08 15 57.5	+1.0
NOCI	Noci	2.04	319	i PN	Pb	08 16 00.1	-0.6
NOCI				i SN	Sg	08 16 28.9	-0.9
KPRO	Kipourio	2.08	70	P	Pn	08 15 59.6	+1.3
SG1	Sgolgore (BA)	2.28	314	ePn	Pg	08 16 07.6	-0.4
SG1				Sn	Sg	08 16 41.0	+3.4
BAI	Bari	2.37	322	ePn	Pg	08 16 10.9	+1.2
BAI				Sn	Sg	08 16 45.7	+5.3
OHR	Ohrid	2.38	39	ePn	Pb	08 16 05.2	-1.5
EFP	Efpalio	2.55	108	P	Pn	08 16 06.3	+1.6
DRO	Drossia	2.61	119	P	Pn	08 16 06.8	+1.2
PHP	Peshkopia	2.71	27	i SN	Pn	08 16 07.7	+0.7
KALE	Kalithea	2.73	108	P	Pn	08 16 09.0	+1.7
AGG	Agios Georgios	2.74	94	P	Pn	08 16 08.6	+1.3
KLV	Kalavryta, Ach	2.88	114	P	Pn	08 16 10.4	+1.2
DRME	Dracevica, Mon	2.93	5	ePn	Pn	08 16 10.3	+0.4
HCY	Herceg Novi	3.19	356	ePn	Pn	08 16 12.8	-0.7
TREB	Trebinje	3.47	354	ePn	Pn	08 16 16.4	-0.9
STIP	Stip	3.53	46	ePn	Pn	08 16 20.7	+2.5
BRY	Bratogost	3.64	357	ePn	Pn	08 16 18.9	-0.9
STON	Ston	3.70	347	ePn	Pn	08 16 18.4	-2.1
STON				Sn	Sn	08 17 00.8	-2.8
STON	Ston	3.70	347	ePn	Pn	08 16 16.2	-4.3
UPM	Unac-Piva	3.93	1	ePn	Pn	08 16 23.2	-0.7
BBLS	Lazići	4.62	5	ePn	Pn	08 16 34.0	+0.8
DIVS	Divibare	4.91	10	ePn	Pn	08 16 36.1	-1.1
ZIRJ	Zirje	4.99	332	ePn	Pn	08 16 37.8	-0.4
ZIRJ				Sn	Sn	08 17 33.5	-1.9
KIJV	Kijevo	5.07	340	ePn	Pn	08 16 39.6	+0.2
KIJV				Sn	Sn	08 17 35.6	-1.8
MORI	Morici	5.16	334	ePn	Pn	08 16 40.4	-0.1
MORI				Sn	Sn	08 17 36.2	-3.3
DUGI	Dugi Otok	5.50	330	ePn	Pn	08 16 45.5	+0.2
NVLJ	Novalja	6.06	332	ePn	Pn	08 16 52.2	-0.7

DJA ***02*** *08:18:18.2±1.9, 5°N±11°×9°7E±2°2, h12^{km}±9^{km}, M3.9/4, MLv3.9/4*

IDC ***02*** *08:18:20.7±6.3, 3°.88N×95°.35E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/36, mbtmp3.6/3, Error ellipse: s-maj=315.5km s-min=27.7km az=57.0*

ISC 02 08:18:23.3±1.2, **4°.2N**±0°.1×**96°.70E**±0°.10, **h10^{km}, n7, σ2^{s}11**/6, **mb3.9**/3, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.30	281	P	Pg	08 18 28.8	-0.6
MLSI				S	Sb	08 18 36.7	+0.8
LHMI	Lhok Sumawe	1.04	14	P	Pg	08 18 30.6	-13
LHMI				S	Sg	08 18 39.8	-17
TPTI		1.06	153	P	Pn	08 18 46.4	+2.1
TPTI				S	Sg	08 18 55.0	-2.5
KCSI	Kotacane, Aceh	1.27	123	P	Pb	08 18 47.8	+0.4
WRA	Warramunga Arr	44.09	124	P	P	08 26 37.8	+5.7
	1.0nm,0.6s,baz=300,slow=8.6,SNR=7.3						
MKAR	Makanchi Array	44.22	346	P	P	08 26 31.7	-1.1
	0.2nm,0.5s,baz=153,slow=8.1,SNR=2.1						
ASAR	Alice Springs	45.63	129	P	P	08 26 50.5	+6.2
	0.9nm,0.7s,baz=302,slow=7.8,SNR=8.3						

IDC 02 08:18:41.7±1.9, **0°.73N**×**127°.01E, h0^{km}, mb3.6**/4, **mb1 3.7**/4, **mb1mx3.4**/31, **mbtmp3.6**/4, **Error ellipse: s-maj=181.1km s-min=22.3km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.77	161	P	P	08 23 33.8	-1.4
	1.2nm,0.8s,baz=340,slow=12,SNR=5.5						
ASAR	Alice Springs	25.16	165	P	P	08 24 09.8	+0.9
	0.6nm,0.5s,baz=343,slow=10,SNR=9.8						
MKAR	Makanchi Array	60.17	326	P	P	08 28 51.7	+0.3
	0.5nm,0.6s,baz=128,slow=7.8,SNR=4.1						
KURBB	Kurchatov Arra	64.41	328	P	P	08 29 19.3	-0.4
	0.3nm,0.5s,baz=126,slow=6.4,SNR=5.2						

IDC ***02*** *08:21:31.5±5.2, 4°.14N×96°.24E, h0^{km}, mb3.8/4, mb1 4.1/4, mb1mx3.6/35, mbtmp3.8/4, Error ellipse: s-maj=299.5km s-min=22.1km az=55.0*

DJA ***02*** *08:21:33.2±3.0, 5°N±19°×9°6E±4°0, h26^{km}±23^{km}, M4.2/6, MLv4.2/6*

ISCJB ***02*** *08:21:34.1±0.5, 4°.65N±0°.04×96°.83E±0°.05, h10^{km}, mb4.1/13, Error ellipse: s-maj=6.8km s-min=5.6km az=173.3*

NEIC ***02*** *08:21:37.6±2.5, 4°.74N×96°.96E, h10^{km}, mb4.3/9, Error ellipse: s-maj=16.5km s-min=6.2km az=60.0*

ISC 02 08:21:36.4±0.8, **4°.71N**±0°.05×**96°.86E**±0°.08, **h10^{km}, n25, σ1^{s}32**/27, **mb4.2**/13, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	0.53	10	ePg	Pg	08 21 47.1	+0.5
LHMI				eSg	Sg	08 21 54.2	+0.7
LHMI	Lhok Sumawe	0.53	10	P	Pg	08 21 47.1	+0.5
MLSI	Meulaboh, Aceh	0.63	226	P	Pg	08 21 45.1	-3.5
TPTI		1.47	167	P	Pn	08 22 02.0	-1.0
KCSI	Kotacane, Aceh	1.49	142	P	Pn	08 22 03.7	+0.5
PSI	Prapat	2.80	132	ePn	Pn	08 22 23.1	+1.8
GSI	Gunungsitoli	3.46	168	ePn	Pn	08 22 32.7	+2.4
KULM	Kulim	3.82	81	ePn	Pn	08 22 35.1	-0.2
KULM				eSn	Sn	08 23 20.6	+0.3
IPM	Ipoh	4.16	93	ePn	Pn	08 22 41.0	+1.0
IPM				eSn	Sn	08 23 28.4	-0.3
MNAI	Manna	10.87	146	ePn	Pn	08 24 13.4	+1.2
SHL	Shillong	21.28	348	eP	P	08 26 22.2	-1.1
	15nm,0.7s						
MTN	Manton Dam	38.26	117	eP	P	08 28 56.6	-0.5
	12nm,1.1s						
MORW	Morawa	38.31	152	eP	P	08 28 57.7	+0.3
	6.0nm,1.1s						
KDJ	Kajisay	41.19	338	eP	P	08 29 21.8	+0.4
	2.3nm,0.8s						
JNU	Nakatsue	42.48	44	eP	P	08 29 32.2	+0.3
	9.3nm,1.0s						
MK32	Makanchi Array	43.78	346	eP	P	08 29 42.0	-0.3
MKAR	Makanchi Array	43.78	346	P	P	08 29 42.0	-0.3
	0.2nm,0.4s,baz=153,slow=8.4,SNR=3.2						
WR1	Warramunga Arr	44.24	125	eP	P	08 29 43.9	-2.4
WRA	Warramunga Arr	44.24	125	P	P	08 29 43.9	-2.4
	2.8nm,0.7s,baz=301,slow=8.4,SNR=12						
WB2	Warramunga Arr	44.25	125	eP	P	08 29 44.8	-1.6
	6.6nm,1.0s						
WC3	Warramunga Arr	44.27	125	eP	P	08 29 44.7	-1.9
	5.9nm,0.9s						
AS31	Alice Springs	45.83	130	eP	P	08 29 57.7	-1.3
	1.2nm,1.0s						
ASAR	Alice Springs	45.83	130	P	P	08 29 56.9	-2.1
	1.8nm,0.6s,baz=302,slow=7.8,SNR=16						
BVAR	Borovoye Array	52.85	340	P	P	08 30 51.2	-0.9
	0.4nm,0.5s,baz=138,slow=8.9,SNR=2.5						
BRVK	Borovoye	52.91	340	eP	P	08 30 53.9	+1.3
	1.0nm,0.7s						

IDC 02 08:26:16.6±3.2, **53°.55N**×**87°.77E, h0^{km}, mb1 3.0**/2, **mb1mx2.9**/47, **mbtmp3.0**/2, **ML2.7**/2, **Error ellipse: s-maj=28.1km s-min=15.4km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.80	284	i		08 37 50.2	
	baz=98,slow=322,SNR=5.4						
ZALV	Zalesovo Beam	1.80	284	Pg	Pn	08 26 48.7	-0.1
	2.5nm,0.3s,baz=98,slow=17,SNR=11						
ZALV				Lg	Lg	08 27 13.9	
	3.5nm,0.3s,baz=109,slow=25,SNR=9.3						
KURBB	Kurchatov Arra	6.41	246	Pn	Pn	08 27 53.0	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=7.6						
KURBB				Lg	Lg	08 29 37.9	
	0.0nm,0.3s,baz=63,slow=32,SNR=3.5						
MKAR	Makanchi Array	7.62	210	Pn	Pn	08 28 10.1	+1.2
	0.1nm,0.3s,baz=28,slow=14,SNR=4.5						
MKAR				Sn	Sn	08 29 35.1	-0.7
	0.1nm,0.3s,baz=27,slow=21,SNR=2.9						
MKAR				Lg	Lg	08 30 16.6	
	0.1nm,0.3s,baz=40,slow=32,SNR=6.2						

RSNC 02 08:41:09.3±1.4, **5°.28N**×**73°.74W, h142^{km}**±6^{km}, **ML3.6, Mw3.8, 7C-6D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAU	Tausa, Cundina	0.32	257	eP	Pn	08 41 33.5	+3.8
CTAU				eS	Sn	08 41 48.4	+3.5
CTAU				i		08 41 51.2	
	comp=Z,304nm,0.6s						
CTAB	Cerro Tablazo,	0.54	241	eP	Pn	08 41 31.7	+1.1
CTAB				eS	Sn	08 41 45.7	-0.9
CTAB				i		08 41 50.3	
	comp=Z,386nm,0.3s						
CHIC	Chingaza	0.64	180	eP	Pn	08 41 31.0	-0.1
CHIC				eS	Sn	08 41 47.2	-0.5
CHIC				i		08 41 48.4	
	comp=N,1µm,0.4s						
ROSC	El Rosal	0.73	233	⇑iP	Pn	08 41 32.7	+1.1
ROSC				eS	Sn	08 41 50.2	+1.7
CVER	Cruz Verde, Cu	0.82	204	eP	Pn	08 41 33.0	+0.5
CVER				eS	Sn	08 41 47.9	-2.1
RUSC	La Rusia	0.89	47	⇓iP	Pn	08 41 33.3	+0.3
RUSC				i		08 41 33.9	
	comp=Z,324nm,0.2s						
RUSC				eS	Sn	08 41 51.7	+0.7
VILC	Villavicencio,	1.16	178	⇓iP	Pn	08 41 34.4	-0.6
VILC				eS	Sn	08 41 53.9	-0.7
VILC				i		08 41 55.3	
	comp=N,2µm,0.5s						
NORC	Norcasia	1.17	284	eP	Pn	08 41 34.8	-0.1
NORC				eS	Sn	08 41 54.3	-0.1
NORC				i		08 41 56.7	
	comp=N,718nm,0.1s						
AGZ	La Independenc	1.31	105	⇓iP	Pn	08 41 36.1	-0.2
AGZ				eS	Sn	08 41 55.3	-1.5
YOPC	Yopal, Colombi	1.31	87	⇓iP	Pn	08 41 36.6	+0.2
YOPC				eS	Sn	08 41 57.7	+0.6
YOPC				i		08 41 59.2	
	comp=N,641nm,0.4s						
BARC	Barichara	1.42	23	eP	Pn	08 41 37.0	-0.7
BARC				eS	Sn	08 41 57.0	-2.3
BARC				i		08 42 04.2	
	comp=Z,270nm,0.5s						
PTBC	PUERTO BERRIO,	1.45	330	⇑eP	Pn	08 41 36.6	-1.1
PTBC				eS	Sn	08 41 58.4	-1.1
PTBC				i		08 42 03.7	
	comp=N,324nm,0.3s						
GUY2C	Guyana, Caldas	1.62	268	eP	Pn	08 41 39.7	-0.4
GUY2C				eS	Sn	08 42 04.7	+1.1
RREF	El Recreo	1.65	257	eP	Pn	08 41 40.6	+0.1
RREF				eS	Sn	08 42 04.3	-0.1
BRRC	Barranca, Sant	1.82	1	eP	Pn	08 41 41.8	-0.1
BRRC				i		08 41 42.4	
	comp=Z,279nm,0.2s						
BRRC				eS	Sn	08 42 06.4	-0.5
GIRC	Giron, Santand	1.87	17	eP	Pn	08 41 42.2	-0.4
PRAC	Prado	1.93	217	⇑iP	Pn	08 41 42.8	-0.5
PRAC				eS	Sn	08 42 08.6	-0.6
PRAC				i		08 42 10.4	
	comp=E,393nm,0.2s						
HELC	Santa Helena	2.00	297	⇑iP	Pn	08 41 43.9	-0.4
HELC				eS	Sn	08 42 10.7	-0.5
HELC				i		08 42 13.6	
	comp=N,200nm,0.4s						
ORTC	Ortega, Tolima	2.03	228	⇑iP	Pn	08 41 43.6	-0.8
ORTC				eS	Sn	08 42 10.5	-0.7
TAMC	Tame, Arauca	2.25	59	eP	Pn	08 41 46.9	-0.1
PAMC	Pamplona, Colo	2.29	27	eP	Pn	08 41 48.2	+0.2
PAMC				eS	Sn	08 42 17.3	-0.4
PAMC				i		08 42 19.9	
	comp=N,94nm,0.3s						
ZARC	Zaragoza, Cauc	2.47	333	⇑iP	Pn	08 41 47.4	-2.3
ZARC				eS	Sn	08 42 18.6	-2.3
GRMC	Gramalote, San	2.60	21	eP	Pn	08 41 53.6	+2.1
GRMC				eS	Sn	08 42 27.0	+3.1
GUVC	San Jose del G	2.93	158	eP	Pn	08 41 53.8	-1.7
GUVC				eS	Sn	08 42 28.7	-2.5
GUVC				i		08 42 31.5	
	comp=N,426nm,0.3s						
CAPV	Capacho	2.93	29	eP	Pn	08 41 55.3	-0.5
OCAC	Ocana	2.97	8	eP	Pn	08 41 55.4	-0.8
OCAC				eS	Sn	08 42 31.6	-0.8
DBBC	Dabeiba	3.01	305	eP	Pn	08 41 55.9	-0.7
BETC	Betania	3.09	214	eP	Pn	08 41 56.4	-1.2
MACC	Macarena, Meta	3.11	182	⇑iP	Pn	08 41 55.8	-2.1
SMLC	San Martn de	3.52	355	eP	Pn	08 42 00.8	-2.3
SMLC				eS	Sn	08 42 42.2	-2.6
SMLC				i		08 42 46.3	
	comp=N,206nm,0.1s						
SOCV	Socops	4.14	44	⇓iP	Pn	08 42 09.2	-2.0
FLOC	Florencia	4.14	208	⇓iP	Pn	08 42 10.4	-0.8
ELOV	Elorza	4.56	68	eP	Pn	08 42 14.8	-2.0

KRAR ***02*** *08:45:21.9±0.1, 53°.59N×87°.84E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC ***02*** *08:45:25.9±2.5, 53°.50N×87°.81E, h0^{km}, mb1 3.3/3, mb1mx3.1/37, mbtmp3.3/3, ML3.0/3, Error ellipse: s-maj=23.1km s-min=15.0km az=77.0*

NNC ***02*** *08:45:27.6±2.9, 53°.43N×87°.54E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=22.5km s-min=10.4km az=66.0, Suspected Mining explosion.*

ISC 02 08:45:26.2±3.4, **53°.5N**±0°.1×**87°.7E**±0°.2, **h0^{km}, n10, σ1^{s}46**/17, **9C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.73	285	i		08 57 15.5	
	baz=98,slow=312,SNR=3.7						
ZAA0	Zalesovo Array	1.73	285	⇑Pg	Pn	08 45 57.7	+0.2
	0.7nm,0.6s						
ZAA0				⇓Lg	Lg	08 46 23.8	
	4.8nm,0.4s						
ZALV	Zalesovo Beam	1.73	285	Pn	Pn	08 45 57.7	+0.2
	3.5nm,0.3s,baz=100,slow=15,SNR=23						
ZALV				Sn	Sg	08 46 23.4	+1.7
	17nm,0.3s,baz=103,slow=28,SNR=33						
KURK	Kurchatov	6.24	247	⇓Pn	Pn	08 47 00.7	+1.3
	1.0nm,0.6s						
KURK				⇑Sn	Sn	08 48 11.1	-0.3
	2.2nm,0.7s						
KURK				⇓Lg	Lg	08 48 42.3	
	12nm,1.1s						
KURBB	Kurchatov Arra	6.33	246	Pn	Pn	08 47 02.1	+1.3
	0.3nm,0.3s,baz=62,slow=14,SNR=24						
KURBB				Sn	Sn	08 48 14.6	+0.9
	0.1nm,0.3s,baz=62,slow=24,SNR=4.7						
KURBB				Lg	Lg	08 48 47.5	
	0.1nm,0.3s,baz=61,slow=31,SNR=9.3						
KURBB	Kurchatov Arra	6.33	246	⇑Pn	Pn	08 47 02.1	+1.3
	2.7nm,0.5s						
KURBB				⇑Sn	Sn	08 48 11.7	-2.1
	6.3nm,0.6s						
KURBB				⇓Lg	Lg	08 48 46.3	
	12nm,0.7s						
MK31	Makanchi Array	7.58	209	⇑Pn	Pn	08 47 18.6	+0.7
	0.2nm,0.5s,baz=28,slow=13,SNR=4.5						

MK31				⇓Sn	**Sn**	**08 48 43.4**	**-1.1**
	0.4nm,0.5s,baz=77,slow=27,SNR=3.5						
MK31				⇑Lg	Lg	08 49 26.5	
	1.4nm,0.7s,baz=36,slow=31,SNR=4.4						
MKAR	**Makanchi Array**	**7.58**	**209**	Pn	**Pn**	**08 47 18.9**	**+1.0**
	0.3nm,0.3s,baz=28,slow=14,SNR=8.4						
MKAR				Sn	**Sn**	**08 48 43.6**	**-0.9**
	0.2nm,0.3s,baz=30,slow=28,SNR=6.0						
MKAR				Lg	Lg	08 49 25.5	
	0.2nm,0.3s,baz=31,slow=30,SNR=8.8						
MAKZ	**Makanchi**	**7.66**	**211**	⇑Pn	**Pn**	**08 47 19.1**	**+0.1**
	2.5nm,1.2s						
MAKZ				⇑Sn	**Sn**	**08 48 46.2**	**-0.3**
	0.6nm,0.5s						
MAKZ				⇑Lg	Lg	08 49 25.4	
	2.3nm,1.0s						
BVAR	**Borovoye Array**	**10.35**	**274**	Pn	**Pn**	**08 47 56.6**	**+0.8**
	0.2nm,0.3s,baz=76,slow=15,SNR=3.4						
BVAR				Sn	**Sn**	**08 49 48.9**	**-3.5**
	0.3nm,0.3s,baz=77,slow=25,SNR=3.7						

MAN 02 09:09:07.8,13°.89N×122°.94E,h7^{km},mb4.1,ML2.9,MS2.5,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	**Guinayangan**	**0.48**	**271**	⇑*e*P	Pg	09 09 17.8	+0.7
GQP				*i* S	Sb	09 09 25.8	-0.2
AUQP	**San Andres**	**0.62**	**205**	*e*P	Pb	09 09 20.6	-0.5
AUQP				*e*S	Sb	09 09 30.8	+0.8
BOAC	**Boac**	**1.15**	**248**	*e*P	Pg	09 09 28.7	-1.3
BOAC				*e*S	Sn	09 09 47.7	+1.3
PVCP	**Virac**	**1.21**	**104**	*e*P	Pb	09 09 29.6	-1.5
PVCP				*e*S	Sn	09 09 48.9	+1.0

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*KRAR **02** 09:09:48.9±0.1,53°.49N×87°.50E,M2.5,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 02 09:09:54.9±2.8**,53°.59N×87°.72E,h0^{km},mb1 3.4**/2**,mb1mx3.1**/54**,mbtmp3.4**/2**,ML3.1**/2**,2C-3D,Error ellipse: s-maj=23.9km s-min=14.6km az=57.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.76**	**283**	*i*		09 21 16.3	
	baz=99,slow=312,SNR=3.3						
ZAA0	**Zalesovo Array**	**1.76**	**283**	⇓P	Pn	09 10 26.9	+0.3
	1.1nm,0.3s						
ZAA0				⇓S	Sb	09 10 50.2	-0.4
	1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**1.76**	**283**	Pg	Pn	09 10 26.6	0.0
	7.0nm,0.3s,baz=103,slow=15,SNR=44						
ZALV				Lg	Lg	09 10 50.3	
	6.3nm,0.3s,baz=99,slow=26,SNR=15						
ZALV				*i*		09 21 17.6	
	0.9nm,0.3s,baz=68,slow=30,SNR=6.3						
KURBB	**Kurchatov Arra**	**6.40**	**246**	Pn	Pn	09 11 31.1	+0.8
	0.4nm,0.3s,baz=63,slow=15,SNR=6.4						
KURBB				Sn	Sn	09 12 43.8	-0.1
	baz=65,slow=29,SNR=1.7						
KURBB				Lg	Lg	09 13 17.0	
	0.1nm,0.3s,baz=63,slow=32,SNR=5.1						
MK31	**Makanchi Array**	**7.64**	**209**	⇓Pn	Pn	09 11 48.3	+0.8
	0.5nm,0.6s,baz=30,slow=13,SNR=11						
MK31				⇑Sn	Sn	09 13 15.1	+0.4
	0.9nm,0.6s						
MK31				⇑Lg	Lg	09 13 56.4	
	2.4nm,0.8s						
MKAR	**Makanchi Array**	**7.65**	**209**	Pn	Pn	09 11 48.6	+1.1
	0.3nm,0.3s,baz=30,slow=13,SNR=10						
MKAR				Sn	Sn	09 13 14.2	-0.5
	0.2nm,0.3s,baz=23,slow=26,SNR=6.4						

RSNC 02 09:17:09.4±1.2**,6°.39N×73°.66W,h103^{km}**±5^{km}**,ML3.2,Mw3.5,1C-3D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.52**	**67**	*i* P	Pn	09 17 25.8	-0.1
BARC				*e*S	Sn	09 17 38.3	+0.1
BARC				*i*		09 17 39.6	
	comp=Z,753nm,0.1s						
BRRC	**Barranca, Sant**	**0.71**	**356**	⇓*i*P	Pn	09 17 26.8	-0.5
BRRC				*e*S	Sn	09 17 40.7	+0.1
BRRC				*i*		09 17 41.4	
	comp=N,366nm,0.2s						
RUSC	**La Rusia**	**0.76**	**131**	⇓*i*P	Pn	09 17 27.5	-0.6
RUSC				*e*S	Sn	09 17 41.7	-0.4
RUSC				*i*		09 17 44.1	
	comp=N,100nm,0.3s						
PTBC	**PUERTO BERRIO,**	**0.81**	**281**	⇑*i*P	Pn	09 17 26.8	-1.3
PTBC				*e*S	Sn	09 17 41.2	-0.9
PTBC				*i*		09 17 43.1	
	comp=N,573nm,0.2s						
GIRC	**Giron, Santand**	**0.83**	**34**	*e*P	Pn	09 17 28.2	-0.2
CTAU	**Tausa, Cundina**	**1.24**	**198**	*e*P	Pn	09 17 39.3	+6.0
CTAU				*e*S	Sn	09 17 59.1	+7.9
PAMC	**Pamplona, Colo**	**1.34**	**45**	*e*P	Pn	09 17 34.0	-0.4
PAMC				*e*S	Sn	09 17 52.6	-0.6
PAMC				*i*		09 17 57.3	
	comp=N,253nm,0.2s						
NORC	**Norcasia**	**1.46**	**236**	*e*P	Pn	09 17 34.0	-1.3
NORC				*e*S	Sn	09 17 54.0	-1.0
CTAB	**Cerro Tablazo,**	**1.47**	**202**	*e*P	Pn	09 17 36.5	+0.5
CTAB				*e*S	Sn	09 17 57.9	+1.9
YOPC	**Yopal, Colombi**	**1.60**	**130**	*e*P	Pn	09 17 36.9	-0.4
YOPC				*e*S	Sn	09 17 58.8	+0.5
ZARC	**Zaragoza, Cauc**	**1.62**	**313**	*e*P	Pn	09 17 36.7	-0.6
ZARC				*e*S	Sn	09 17 58.7	+0.2
ROSC	**El Rosal**	**1.67**	**203**	*e*P	Pn	09 17 38.4	+0.1
ROSC				*e*S	Sn	09 18 01.0	+0.7
CHIC	**Chingaza**	**1.75**	**182**	*e*P	Pn	09 17 38.7	-0.7
CHIC				*e*S	Sn	09 18 01.7	-0.4
CHIC				*i*		09 18 04.6	
	comp=N,217nm,0.3s						
TAMC	**Tame, Arauca**	**1.86**	**89**	*e*P	Pn	09 17 39.6	-0.7
TAMC				*e*S	Sn	09 18 02.9	-1.0
OCAC	**Ocana**	**1.87**	**10**	*e*P	Pn	09 17 39.7	-0.8
OCAC				*e*S	Sn	09 18 04.3	0.0
OCAC				*i*		09 18 08.8	
	comp=N,1μm,0.2s						
HELC	**Santa Helena**	**1.87**	**264**	*e*P	Pn	09 17 40.3	-0.4
HELC				*e*S	Sn	09 18 04.4	-0.3
HELC				*i*		09 18 07.5	
	comp=N,89nm,0.2s						
AGZ	**La Independenc**	**1.87**	**141**	⇓*i*P	Pn	09 17 39.7	-0.8
AGZ				*e*S	Sn	09 18 01.9	-2.2
CAPV	**Capacho**	**1.98**	**42**	*e*P	Pn	09 17 42.3	+0.2
CAPV				*e*S	Sn	09 18 07.6	+0.6
GUY2C	**Guyana, Caldas**	**2.06**	**236**	*e*P	Pn	09 17 42.7	-0.5
GUY2C				*e*S	Sn	09 18 10.0	+1.0
GUY2C				*i*		09 18 13.1	
	comp=N,83nm,0.3s						
RREF	**El Recreo**	**2.24**	**229**	*e*P	Pn	09 17 45.6	-0.2
RREF				*e*S	Sn	09 18 13.9	+0.4
RREF				*i*		09 18 23.7	
	comp=Z,54nm,0.2s						
VILC	**Villavicencio,**	**2.26**	**181**	*e*P	Pn	09 17 45.2	-0.5
VILC				*e*S	Sn	09 18 13.9	+0.5
SMLC	**San Martn de**	**2.43**	**350**	*e*P	Pn	09 17 47.2	-0.5
SMLC				*e*S	Sn	09 18 17.2	+0.2
DBBC	**Dabeiba**	**2.61**	**284**	*e*P	Pn	09 17 49.7	-0.5
PRAC	**Prado**	**2.93**	**205**	*e*P	Pn	09 17 53.1	-1.2
PRAC				*e*S	Sn	09 18 27.6	-1.2
PRAC				*i*		09 18 34.1	
	comp=N,41nm,0.4s						
ORTC	**Ortega, Tolima**	**2.93**	**213**	*e*P	Pn	09 17 53.5	-0.8
ORTC				*e*S	Sn	09 18 29.2	+0.3
SOCV	**Socops**	**3.36**	**56**	*e*P	Pn	09 17 58.4	-1.7
ELOV	**Elorza**	**4.19**	**81**	*e*P	Pn	09 18 09.3	-1.9

WEL 02 09:23:43.3±1.6**,35°S**±15°×**17°9E**±1°7**,h269^{km}**±21^{km}**,M3.8**/24**,mB4.1**/2**,ML3.7**/1**,MLv3.8**/24**,Mw(mB)3.1**/2**,Error ellipse: s-maj=0.0km s-min=0.0km az=50.8,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.07**	**197**	P	Pn	09 24 38.0	+0.4
WMGZ	**Waiomatatini S**	**3.29**	**194**	P	Pn	09 24 40.5	+0.6
HAZ	**Te Kaha**	**3.40**	**203**	P	Pn	09 24 41.0	-0.1
HAZ				S	S	09 25 27.3	+0.1
PKGZ	**Pakihiroa**	**3.44**	**198**	P	Pn	09 24 41.5	-0.1
PUZ	**Puketiti**	**3.57**	**195**	P	Pn	09 24 42.9	-0.1
PUZ				S	S	09 25 30.8	+0.2
RUGZ	**Raukumara Rang**	**3.62**	**203**	P	Pn	09 24 43.5	-0.3
GRZ	**Great Barrier**	**3.64**	**242**	P	Pn	09 24 43.1	-0.7
KUZ	**Kuaotunu**	**3.70**	**234**	P	Pn	09 24 44.6	+0.2
OPRZ	**Ohinepanea**	**3.97**	**215**	P	Pn	09 24 48.2	+0.8
CNGZ	**Carnagh Statio**	**3.98**	**194**	P	Pn	09 24 48.1	+0.6
MWZ	**Matawai**	**4.01**	**202**	P	Pn	09 24 47.9	0.0
TKGZ	**Te Karaka**	**4.01**	**198**	P	Pn	09 24 47.9	0.0
TKGZ				S	S	09 25 40.3	+0.7
URZ	**Urewera**	**4.08**	**207**	P	Pn	09 24 48.9	+0.1
RIGZ	**Rimuhau**	**4.29**	**198**	P	Pn	09 24 52.2	+1.0
WCZ	**Waipu Caves**	**4.37**	**251**	P	Pn	09 24 51.4	-0.8
RTZ	**Ruatahuna**	**4.45**	**206**	P	Pn	09 24 52.4	-0.7
TOZ	**Tahuroa Road**	**4.45**	**225**	P	Pn	09 24 54.2	+1.2
PRGZ	**Paritu Road**	**4.47**	**196**	P	Pn	09 24 53.0	-0.2
SNGZ	**Shannon Statio**	**4.48**	**202**	P	Pn	09 24 53.2	-0.2
KNZ	**Kokohu**	**4.61**	**197**	P	Pn	09 24 54.3	-0.6
RAHZ	**Arahi**	**4.68**	**203**	P	Pn	09 24 55.4	-0.4
MTHZ	**Maungataniwha**	**4.71**	**206**	P	Pn	09 24 56.0	-0.1
WHHZ	**Waihua**	**4.78**	**201**	P	Pn	09 24 56.7	-0.2
MRHZ	**Matea Rd**	**4.85**	**209**	P	Pn	09 24 57.8	0.0
TLZ	**Tolley Road**	**4.85**	**219**	P	Pn	09 24 58.8	+0.9
NMHZ	**Naumai**	**4.94**	**205**	P	Pn	09 24 58.5	-0.4
ARHZ	**Aropaoanui**	**5.03**	**202**	P	Pn	09 24 59.5	-0.3
BKZ	**Black Stump Fm**	**5.11**	**207**	P	Pn	09 25 00.2	-0.8
MCHZ	**McNeill Hill**	**5.29**	**204**	P	Pn	09 25 04.0	+1.0
HIZ	**Hauiti**	**5.36**	**222**	P	Pn	09 25 05.1	+1.3
KAHZ	**Kahuranaki**	**5.55**	**201**	P	Pn	09 25 05.3	-0.9
BHHZ	**Black Hill Sta**	**5.55**	**208**	P	Pn	09 25 05.5	-0.8
FWVZ	**Far West T-bar**	**5.57**	**213**	P	Pn	09 25 06.3	-0.4
MOVZ	**Moawhango**	**5.61**	**211**	P	Pn	09 25 05.2	-1.8
PNHZ	**Pukenui**	**5.88**	**205**	P	Pn	09 25 08.4	-1.8

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*NEIC **02** 09:25:06.0±0.0,55°.52N×135°.06W,h10^{km},ML2.6(OTT), After OTT.*

PGC 02 09:25:06.0±2.4**,55°.52N×135°.06W,h10^{km},ML2.6**/5**, 171km south of Sitka, Ak Off Coast Of Southeastern Alaska,Off coast of southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAK	**Wrangell Islan**	**1.77**	**58**	*e*Pn	Pn	09 25 35.7	-0.9
WRAK				*e*Sn	Sn	09 25 57.9	-1.3
NDB	**Naden**	**1.99**	**141**	*e*Pn	Pn	09 25 38.7	-1.0
NDB				*e*Sg	Sg	09 26 08.5	-1.4
NDB	**Naden**	**1.99**	**141**	Pn	Pn	09 25 38.7	-1.0
NDB				Sg	Sg	09 26 08.5	-1.4
DIB	**Dawson Inlet,**	**2.77**	**146**	*e*Pn	Pn	09 25 49.6	-0.7
DIB				*e*Sn	Sn	09 26 22.4	-1.4
DIB	**Dawson Inlet,**	**2.77**	**146**	Pn	Pn	09 25 49.5	-0.8
DIB				Sn	Sn	09 26 21.8	-2.0
JIS	**Juneau Island**	**2.79**	**7**	*e*Pn	Pn	09 25 50.4	-0.1
JIS				*e*Sn	Sn	09 26 23.9	-0.3
MOBC	**Moresby Island**	**2.99**	**141**	*e*Pn	Pn	09 25 53.8	+0.4
MOBC				*e*Sn	Sn	09 26 28.0	-1.3
MOBC	**Moresby Island**	**2.99**	**141**	Pn	Pn	09 25 53.0	-0.5
MOBC				Sn	Sn	09 26 26.9	-2.4
RUBB	**Prince Rupert**	**3.02**	**111**	Pn	Pn	09 25 52.7	-1.0
RUBB				Sg	Sb	09 26 38.0	+1.3
PLBC	**Pleasant Camp**	**4.01**	**350**	Sg	Sg	09 27 11.0	-3.6
DLBC	**Dease Lake**	**4.02**	**41**	*e*Pn	Pn	09 26 08.1	+0.6
DLBC				*e*Sn	Sn	09 26 54.3	-0.3
DLBC	**Dease Lake**	**4.02**	**41**	Pn	Pn	09 26 07.9	+0.4
DLBC				Sg	Sg	09 27 10.5	-4.3
BCPM	**Bancas Point**	**5.08**	**333**	*e*Pn	Pn	09 26 19.8	-2.2
BCPM				*e*Sn	Sn	09 27 22.3	+1.7
WHY	**Whitehorse**	**5.16**	**1**	*e*Pn	Pn	09 26 21.9	-1.3
WHY				*e*Sn	Sn	09 27 21.6	-1.2
BBB	**Bella Bella**	**5.30**	**126**	*e*Pn	Pn	09 26 25.6	+0.6
BBB				*e*Sn	Sn	09 27 23.5	-2.6
PCA	**Pinnacle**	**5.36**	**331**	*e*Pn	Pn	09 26 26.9	+0.9

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*ISCJB **02** 09:38:39.6±0.9,15°.67S±0°.02×173°.84W±0°.02,h41^{km}±7^{km}, mb5.5/234,MS5.0/141,Error ellipse: s-maj=4.1km s-min=2.8km az=138.2*

*BJI **02** 09:38:39.8±0.0,15°.50S×173°.45W,h45^{km},mb5.1/34, mB5.4/22,Ms5.3/20,Ms7 5.0/16*

*MOS **02** 09:38:40.5±1.0,15°.68S×173°.85W,h44^{km},mb5.8/52, Error ellipse: s-maj=7.7km s-min=6.5km az=59.7*

*NEIC **02** 09:38:41.6±2.0,15°.73S×173°.80W,h47^{km}±4^{km},mb5.6/380, MS5.0/106,Error ellipse: s-maj=10.7km s-min=8.2km az=50.0*

*IDC **02** 09:38:42.5±1.4,15°.78S×173°.78W,h53^{km}±11^{km},mb5.0/26, mb1 5.2/28,mb1mx5.1/33,mbtmp5.3/28,MS4.4/24, Ms1 4.4/24,ms1mx4.3/33,Error ellipse: s-maj=13.8km s-min=10.1km az=140.0*

*GCMT **02** 09:38:47.6±0.1,15°.67S±0°.01×173°.42W±0°.01,h89^{km}±1^{km}, MW5.5/125,Moment Tensor Solution. s110,c176; s125,c247; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.60±.04; M$_{\theta\theta}$0.23±.04; M$_{\phi\phi}$-1.83±.04; M$_{r\theta}$-0.84±.03; M$_{\theta\phi}$-0.18±.04; M$_{\phi r}$-1.22±.03; Best double couple: M$_0$2.28200×10^{17} NP1:φ$_s$204.00000°,δ66.00000°, λ108.00000°. NP2:φ$_s$346.00000°,δ29.00000°,λ56.00000°. Principal axes: T 2.2660, Plg64.0000°, Azm144.0000°; N 0.0280, Plg16.0000°, Azm17.0000°; P -2.2970, Plg19.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 09:38:42.1±0.4**,15°.75S**±0°.04×**173°.75W**±0°.04**,h53^{km}**±3^{km}**, h53^{km}:pP-P,n1175,σ1^{s}15**/1184**,mb5.6**/234**,MS4.9**/142**, 33C-49D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.93**	**133**	*e*Pn	**Pn**	**09 39 54.4**	**+0.8**
NIUE				*e*Sn	**Sn**	**09 40 45.4**	**-3.9**
NIUE	**Niue**	**4.93**	**133**	P	**Pn**	**09 39 54.4**	**+0.8**
	baz=5.0,SNR=193						
FUNA	**Funafuti**	**9.95**	**315**	*e*Pn	**Pn**	**09 41 00.7**	**-1.8**
FUNA				*e*Sn	**Sn**	**09 42 51.1**	**-1.7**
KNTN	**Kanton**	**13.05**	**9**	*e*Pn	**Pn**	**09 41 45.1**	**+0.3**
KNTN				*e*Sn	**Sn**	**09 44 05.7**	**-2.8**
RAO	**Raoul Island**	**13.98**	**195**	*e*Pn	**Pn**	**09 41 57.2**	**-0.1**
RAO	**Raoul Island**	**13.98**	**195**	*e*P	**Pn**	**09 41 57.3**	**-0.1**
RAR	**Rarotonga**	**14.33**	**114**	P	**Pn**	**09 42 02.0**	**0.0**
	14nm,0.3s,baz=262,slow=6.7,SNR=26						
RAR				S	Sn	09 44 30.3	-9.3
	3.1nm,0.3s,baz=142,slow=18,SNR=3.0						
RAR				LR	LR	09 46 13.3	
	comp=Z,2μm,18.9s,baz=302,slow=31						
RAR	**Rarotonga**	**14.33**	**114**	*e*Pn	**Pn**	**09 42 01.9**	**-0.1**
RAR				*e*Sn	**Sn**	**09 44 33.1**	**-6.5**
MARNC	**Mare, Loyalty**	**18.18**	**249**	*e*P	**Pn**	**09 42 51.2**	**+0.5**
	2μm,1.4s						
PINNC	**Pines Island,**	**19.02**	**246**	*e*P	**P**	**09 42 58.5**	**-1.1**
	1μm,1.7s						
DZM	**Mont Dzumac**	**19.75**	**248**	*e*P	**Pn**	**09 43 10.5**	**+0.8**
	3μm,3.3s						
DZM				*e*LR	LR	09 47 53.8	
	comp=Z,7μm,29.4s						
DZM	**Mont Dzumac**	**19.75**	**248**	P	**P**	**09 43 07.3**	**-0.6**
	0.3nm,0.3s,baz=97,slow=17,SNR=3.4						
DZM				LR	LR	09 49 42.1	
	comp=Z,3μm,21.7s,baz=87,slow=34						
DZM	**Mont Dzumac**	**19.75**	**248**	*e*P	**P**	**09 43 07.2**	**-0.6**
	452nm,1.6s						
ONTNC	**Ouen Toro**	**19.81**	**248**	*e*P	**P**	**09 43 08.1**	**-0.3**
	284nm,1.0s						
TARA	**Tarawa**	**21.50**	**321**	*e*P	**P**	**09 43 26.9**	**+0.3**
	349nm,1.3s						
OUZ	**Omahuta**	**22.46**	**208**	*e*P	**P**	**09 43 36.6**	**-0.1**
	44nm,1.1s						
OUZ	**Omahuta**	**22.46**	**208**	P	**P**	**09 43 36.2**	**-0.5**
GRZ	**Great Barrier**	**22.57**	**203**	P	**P**	**09 43 40.1**	**+2.2**
WCZ	**Waipu Caves**	**22.74**	**206**	P	**P**	**09 43 40.3**	**+0.6**
MXZ	**Matakaoa Point**	**22.84**	**196**	*e*P	**P**	**09 43 41.6**	**+0.9**
	92nm,1.3s						
MXZ				LR	LR		
	comp=Z,2μm,22.0s						
MXZ	**Matakaoa Point**	**22.84**	**196**	P	**P**	**09 43 41.9**	**+1.2**
KUZ	**Kuaotunu**	**22.91**	**202**	P	**P**	**09 43 42.4**	**+1.0**
HAZ	**Te Kaha**	**23.16**	**197**	P	**P**	**09 43 44.8**	**+0.9**
WIAZ	**Waiheke Island**	**23.17**	**203**	P	**P**	**09 43 45.3**	**+1.2**
PKGZ	**Pakihiroa**	**23.20**	**197**	P	**P**	**09 43 46.4**	**+2.0**
PAE	**Paea**	**23.23**	**98**	*e*P	**P**	**09 43 44.6**	**-0.2**
	comp=Z,25nm,1.2s						
PAE	**Paea**	**23.23**	**98**	*e*T	T	10 07 18.2	
	comp=Z,12nm,0.4s						
PPT	**Papeete**	**23.23**	**98**	P	**P**	**09 43 45.9**	**+1.1**
	comp=Z,70nm,1.0s,baz=265,slow=6.7,SNR=11						
PPT				LR	LR	09 51 34.2	
	comp=Z,458nm,19.7s,baz=256,slow=33						
PPT	**Papeete**	**23.23**	**98**	*e*P	**P**	**09 43 45.7**	**+0.9**
PPT				*e*P	**P**	**09 43 45.9**	**+1.1**
PPT2	**Papeete2**	**23.23**	**98**	*e*P	**P**	**09 43 45.4**	**+0.5**
	comp=Z,223nm,1.5s						
PPT2				*e*LQ	LQ	09 48 14.5	
	comp=Z,3μm,27.0s						
PPT2				*e*LR	LR	09 49 07.6	
	comp=Z,6μm,30.2s,baz=261						
PPT2	**Papeete2**	**23.23**	**98**	*e*T	T	10 07 19.7	
	comp=Z,15nm,0.3s						
PPTF	**Pamatai, Papee**	**23.24**	**98**	*e*P	**P**	**09 43 45.4**	**+0.4**
	comp=Z,398nm,1.5s						
MBAZ	**Motutapu North**	**23.24**	**204**	P	**P**	**09 43 45.0**	**+0.3**
PUZ	**Puketiti**	**23.33**	**196**	P	**P**	**09 43 47.0**	**+1.4**
RUGZ	**Raukumara Rang**	**23.39**	**197**	P	**P**	**09 43 49.6**	**+3.3**
ETAZ	**East Tamaki Re**	**23.39**	**203**	P	**P**	**09 43 49.7**	**+3.5**
MKAZ	**Moumakai**	**23.44**	**203**	P	**P**	**09 43 48.2**	**+1.6**
TIAR	**Tiarei**	**23.45**	**98**	*e*P	**P**	**09 43 47.2**	**+0.3**
	comp=Z,31nm,1.0s						
TIAR	**Tiarei**	**23.45**	**98**	*e*T	T	10 07 34.5	
	comp=Z,6.7nm,0.3s						
TWGZ	**Tauwhareparae**	**23.50**	**197**	P	**P**	**09 43 49.2**	**+2.0**
WTAZ	**Waiatarua**	**23.51**	**204**	P	**P**	**09 43 48.7**	**+1.3**
TVO	**Taravao**	**23.54**	**98**	*e*P	**P**	**09 43 48.2**	**+0.3**
	comp=Z,82nm,1.3s						
TVO	**Taravao**	**23.54**	**98**	*e*T	T	10 07 38.9	
	comp=Z,3.8nm,0.3s						
AWAZ	**Awhitu Peninsu**	**23.60**	**204**	P	**P**	**09 43 50.7**	**+2.6**
OPRZ	**Ohinepanea**	**23.62**	**199**	P	**P**	**09 43 51.9**	**+3.6**
CNGZ	**Carnagh Statio**	**23.73**	**196**	P	**P**	**09 43 50.9**	**+1.6**
MWZ	**Matawai**	**23.77**	**197**	P	**P**	**09 43 51.5**	**+1.8**
TKGZ	**Te Karaka**	**23.78**	**197**	P	**P**	**09 43 51.3**	**+1.5**
URZ	**Urewera**	**23.83**	**198**	P	**P**	**09 43 48.5**	**-1.7**
	comp=Z,23nm,0.8s,baz=23,slow=7.1,SNR=17						
URZ				S	**S**	**09 47 59.1**	**-3.1**
	comp=Z,3.9nm,0.8s,baz=310,slow=17,SNR=2.4						
URZ	**Urewera**	**23.83**	**198**	*e*P	**P**	**09 43 48.8**	**-1.4**
	comp=Z,46nm,0.8s						
URZ				LR	LR		
	comp=Z,2μm,21.0s						
URZ	**Urewera**	**23.83**	**198**	P	**P**	**09 43 49.1**	**-1.1**
TOZ	**Tahuroa Road**	**23.87**	**201**	P	**P**	**09 43 52.0**	**+1.4**
XMAS	**Kiritimati**	**23.93**	**44**	*e*P	**P**	**09 43 51.9**	**+0.5**
	comp=Z,200nm,0.8s						
RIGZ	**Rimuhau**	**24.06**	**196**	P	**P**	**09 43 54.6**	**+2.2**
TBI	**Tubuai**	**24.08**	**112**	*e*P	**P**	**09 43 53.3**	**+0.6**
	comp=Z,653nm,1.2s						
TBI				*e*LQ	LQ	09 48 46.0	
	comp=Z,2μm,32.4s						
TBI				*e*LR	LR	09 49 38.2	
	comp=Z,6μm,30.0s,baz=283						
TBI	**Tubuai**	**24.08**	**112**	*e*T	T	10 08 17.6	
	comp=Z,39nm,0.3s						
RTZ	**Ruatahuna**	**24.20**	**198**	P	**P**	**09 43 55.6**	**+2.0**
PRGZ	**Paritu Road**	**24.23**	**196**	P	**P**	**09 43 57.2**	**+3.3**
SNGZ	**Shannon Statio**	**24.25**	**197**	P	**P**	**09 43 55.6**	**+1.5**
KNZ	**Kokohu**	**24.38**	**196**	P	**P**	**09 43 56.9**	**+1.8**
TLZ	**Tolley Road**	**24.39**	**201**	P	**P**	**09 43 56.0**	**+0.6**
RAHZ	**Arahi**	**24.44**	**197**	P	**P**	**09 43 58.5**	**+2.6**
MTHZ	**Maungataniwha**	**24.46**	**198**	P	**P**	**09 43 58.5**	**+2.5**
WHHZ	**Waihua**	**24.55**	**197**	P	**P**	**09 44 01.3**	**+4.5**
MEH	**Mehetia**	**24.67**	**99**	*e*P	**P**	**09 43 59.2**	**+1.0**
	comp=Z,31nm,1.1s						
NMHZ	**Naumai**	**24.69**	**198**	P	**P**	**09 44 00.1**	**+1.9**
ARHZ	**Aropaoanui**	**24.79**	**197**	P	**P**	**09 44 04.1**	**+5.1**
HIZ	**Hauiti**	**24.80**	**202**	*e*P	**P**	**09 43 58.6**	**-0.4**
	comp=Z,273nm,1.2s						
HIZ				LR	LR		
	comp=Z,900nm,18.0s						
HIZ	**Hauiti**	**24.80**	**202**	P	**P**	**09 44 02.0**	**+2.9**
BKZ	**Black Stump Fm**	**24.85**	**198**	*e*P	**P**	**09 43 59.5**	**-0.1**
	comp=Z,42nm,1.2s						
BKZ	**Black Stump Fm**	**24.85**	**198**	P	**P**	**09 43 59.8**	**+0.2**
PMOR	**Pomariorio Ree**	**24.94**	**92**	*e*P	**P**	**09 44 01.6**	**+1.0**
	comp=Z,425nm,1.1s						
PMOR	**Pomariorio Ree**	**24.94**	**92**	*e*T	T	10 09 25.7	
	comp=Z,8.1nm,0.3s						
MCHZ	**McNeill Hill**	**25.05**	**198**	P	**P**	**09 44 02.5**	**+1.2**
OTVZ	**Oturere**	**25.11**	**200**	P	**P**	**09 44 02.0**	**0.0**
VAH	**Vaihoa**	**25.18**	**92**	*e*P	**P**	**09 44 03.4**	**+0.7**
	comp=Z,285nm,1.3s						
VAH	**Vaihoa**	**25.18**	**92**	*e*T	T	10 09 43.4	
	comp=Z,12nm,0.3s						
WHVZ	**Whangaehu Hut**	**25.24**	**200**	P	**P**	**09 44 01.8**	**-1.5**
WNVZ	**Wahianoa**	**25.28**	**200**	P	**P**	**09 44 02.2**	**-1.4**
BHHZ	**Black Hill Sta**	**25.28**	**199**	P	**P**	**09 44 02.2**	**-1.2**
MOVZ	**Moawhango**	**25.30**	**199**	P	**P**	**09 44 05.5**	**+1.8**
VRZ	**Vera Road**	**25.38**	**201**	P	**P**	**09 44 06.5**	**+2.2**
PXZ	**Pawanui**	**25.54**	**197**	P	**P**	**09 44 08.0**	**+2.2**
BFZ	**Birch Farm**	**26.32**	**197**	*e*P	**P**	**09 44 12.5**	**-0.4**
BFZ				LR	LR		
	comp=Z,1μm,20.0s						
BFZ	**Birch Farm**	**26.32**	**197**	P	**P**	**09 44 13.0**	**+0.2**
HNR	**Honiara**	**26.41**	**281**	LR	LR	09 53 20.8	
	comp=Z,1μm,21.1s,baz=120,slow=33						
HNR	**Honiara**	**26.41**	**281**	PFAKE		09 44 30.0	+16
HNR				LR	LR		
	comp=Z,2μm,20.0s						
MRZ	**Mangatainoka R**	**26.50**	**198**	P	**P**	**09 44 14.0**	**-0.4**
OGWZ	**Otaki Gorge**	**26.77**	**199**	P	**P**	**09 44 18.7**	**+1.9**
SNZO	**South Karori**	**27.36**	**199**	*e*P	**P**	**09 44 18.8**	**-3.4**
	comp=Z,76nm,1.1s						
THZ	**Tophouse**	**28.37**	**201**	*e*P	**P**	**09 44 28.8**	**-2.4**
	comp=Z,187nm,1.9s						
KHZ	**Kahutara**	**28.73**	**200**	*e*P	**P**	**09 44 33.4**	**-1.0**
	comp=Z,39nm,1.0s						
LTZ	**Lake Taylor**	**29.49**	**201**	*e*P	**P**	**09 44 41.2**	**+0.1**
	comp=Z,59nm,0.9s						
OXZ	**Oxford**	**30.05**	**201**	*e*P	**P**	**09 44 46.7**	**+0.7**
	comp=Z,55nm,0.9s						
MQZ	**McQueen's Vall**	**30.18**	**200**	*e*P	**P**	**09 44 45.5**	**-1.7**
	comp=Z,104nm,1.3s						
KWAJ	**Kwajalein Atol**	**30.59**	**322**	*e*P	**P**	**09 44 49.2**	**-1.9**
	comp=Z,96nm,1.0s						
KWAJ	**Kwajalein Atol**	**30.59**	**322**	*e*P	**P**	**09 44 49.2**	**-1.9**
KWAJ				pmax	pmax		
	comp=Z,96nm,1.0s						
RPZ	**Rata Peaks**	**30.73**	**202**	P	**P**	**09 44 51.9**	**-0.3**
	comp=Z,7.6nm,0.4s,baz=45,slow=14,SNR=1.8						
RPZ				LR	LR	09 57 03.6	
	comp=Z,1μm,20.7s,baz=30,slow=36						
FOZ	**Fox Glacier**	**31.04**	**204**	*e*P	**P**	**09 44 53.9**	**-0.9**
LBZ	**Lake Benmore**	**31.63**	**202**	*e*P	**P**	**09 44 56.9**	**-3.1**
	comp=Z,107nm,1.6s						
WKZ	**Wanaka**	**32.44**	**203**	*e*P	**P**	**09 45 06.0**	**-1.1**
	comp=Z,160nm,1.4s						
MLZ	**Mavora Lakes**	**33.23**	**204**	*e*P	**P**	**09 45 13.4**	**-0.6**
	comp=Z,101nm,1.3s						
TAOE	**Nuku Hiva Isla**	**33.51**	**82**	*e*LR	LR	09 54 04.2	
	comp=Z,3μm,29.1s						
TAOE	**Nuku Hiva Isla**	**33.51**	**82**	*e*T	T	10 19 51.9	
	comp=Z,108nm,0.3s						
DCZ	**Deep Cove**	**33.70**	**205**	*e*P	**P**	**09 45 18.1**	**+0.1**
	comp=Z,79nm,1.0s						
WHZ	**Wether Hill Ro**	**33.74**	**203**	*e*P	**P**	**09 45 18.2**	**-0.2**
	comp=Z,199nm,1.0s						
EIDS	**Eidsvold**	**34.20**	**248**	*e*P	**P**	**09 45 21.7**	**-1.0**
	comp=Z,100nm,1.6s						
EIDS				LR	LR		
	comp=Z,1μm,20.0s						
EIDS	**Eidsvold**	**34.20**	**248**	P	**P**	**09 45 22.4**	**-0.3**
	baz=34,SNR=7.9						
ARMA	**Armidale**	**34.87**	**239**	*e*P	**P**	**09 45 28.6**	**0.0**
	comp=Z,135nm,1.7s						
ARMA	**Armidale**	**34.87**	**239**	P	**P**	**09 45 28.8**	**+0.2**
	baz=35,SNR=16						
RABL	**Rabaul**	**35.41**	**285**	PFAKE		09 45 40.0	+6.7
RABL				LR	LR		
	comp=Z,800nm,22.0s						
PATS	**Pohnpei**	**35.62**	**307**	*e*P	**P**	**09 45 34.8**	**-0.3**
	comp=Z,105nm,1.1s						
MGCD	**Mangrove Creek**	**36.18**	**235**	P	**P**	**09 45 40.1**	**+0.5**
	baz=36,SNR=4.5						
RMQ	**Roma**	**36.45**	**247**	P	**P**	**09 45 42.6**	**+0.6**
	baz=37,SNR=15						
RKT	**Rikitea**	**37.21**	**108**	*e*P	**P**	**09 45 49.7**	**+1.2**

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      comp=Z,104nm,1.0s
RKT                                  eLR      LR         09 55 35.5
      comp=Z,3µm,31.2s
CTAO  Charters Tower     38.24 257   eP       P          09 45 57.0  -0.2
      comp=Z,28nm,1.3s
CTAO  Charters Tower     38.24 257   eP       P          09 45 57.0  -0.2
CTAO                                  pmax    pmax
      comp=Z,28nm,1.3s
CNB   Canberra Magne     38.27 232    P       P          09 45 57.3  -0.1
      baz=38,SNR=20
CAN   Canberra           38.55 233   eP       P          09 45 58.6  -1.2
      comp=Z,76nm,1.3s
CAN   Canberra           38.55 233   eP       P          09 45 58.6  -1.2
CAN                                   pmax    pmax
      comp=Z,76nm,1.3s
PMG   Port Moresby       38.62 275   eP       P          09 45 58.7  -1.8
      comp=Z,81nm,1.2s
PMG                                   LR      LR
      comp=Z,900nm,18.0s
PMG   Port Moresby       38.62 275⇑eP       P          09 46 01.3  +0.8
PMG                                   pmax    pmax
      comp=Z,63nm,0.9s
YNG   Young              38.67 234    P       P          09 46 00.8  +0.1
      baz=39,SNR=7.6
MILA  Mila               39.08 230    P       P          09 46 05.5  +1.3
      baz=39,SNR=3.4
KHLU  Kahalu`u           39.27  27   eP       P          09 46 05.8   0.0
      comp=Z,281nm,1.8s
MLOA  Mauna Loa Obse     39.36  28   eP       P          09 46 06.5  -0.5
      comp=Z,185nm,1.4s
HUH   Hualalai           39.37  27   eP       P          09 46 05.5  -1.5
      comp=Z,232nm,1.5s
HMH   Humu‘ula Sheep     39.46  28   eP       P          09 46 06.1  -1.6
      comp=Z,174nm,1.3s
POHA  Pohakuloa          39.57  28   eP       P          09 46 07.4  -1.2
      comp=Z,81nm,1.1s
HPAH  Hawaii Prepara     39.74  27   eP       P          09 46 09.2  -0.6
      comp=Z,62nm,1.0s
MHA   Mahukona           39.79  27   eP       P          09 46 08.7  -1.3
MHA   Mahukona           39.79  27   eP       P          09 46 08.7  -1.3
WAKE  Wake Island        39.79 330   eP       P          09 46 09.5  -0.7
      comp=Z,953nm,1.9s
KEKH  Kekaha             39.94  21   eP       P          09 46 08.6  -2.8
      comp=Z,116nm,1.1s
KIP   Kipapa             40.04  23   eP       P          09 46 12.8  +0.7
      comp=Z,68nm,0.8s
KIP   Kipapa             40.04  23   eP       P          09 46 12.8  +0.7
KIP                                   pmax    pmax
      comp=Z,68nm,0.8s
CMSA  Cobar Meteorol     40.09 240    P       P          09 46 12.1  -0.4
      baz=40,SNR=68
COEN  Coen               41.62 267   eP       P          09 46 25.0  -0.4
      comp=Z,51nm,0.7s
COEN  Coen               41.62 267    P       P          09 46 26.9  +1.5
      baz=42,SNR=27
TOO   Toolangi           41.98 231   eP       P          09 46 27.6  -0.5
      comp=Z,106nm,1.1s
TOO   Toolangi           41.98 231    P       P          09 46 28.0  -0.2
      baz=42,SNR=12
TOO   Toolangi           41.98 231   eP       P          09 46 27.6  -0.5
TOO                                   pmax    pmax
      comp=Z,106nm,1.1s
TAU   Tasmania Unive     42.83 223   eP       P          09 46 34.6  -0.2
      comp=Z,61nm,1.2s
TAU   Tasmania Unive     42.83 223   eP       P          09 46 34.6  -0.2
TAU                                   pmax    pmax
      comp=Z,61nm,1.2s
STKA  Stephens Creek     43.57 240    P       P          09 46 41.0  -0.1
      comp=Z,80nm,0.9s,baz=90,slow=9.6,SNR=78
STKA                                  PcP     PcP        09 48 27.8  -0.2
      comp=Z,12nm,0.8s,baz=45,slow=7.4,SNR=2.8
STKA                                  LR      LR         10 03 03.6
      comp=Z,483nm,19.0s,baz=68,slow=34
STKA  Stephens Creek     43.57 240   eP       P          09 46 41.3  +0.3
      comp=Z,34nm,1.1s
STKA  Stephens Creek     43.57 240    P       P          09 46 41.0  -0.1
      baz=44,SNR=64
STKA  Stephens Creek     43.57 240   eP       P          09 46 41.3  +0.3
STKA                                  pmax    pmax
      comp=Z,34nm,1.1s
QIS   Mount Isa          44.47 257    P       P          09 46 49.2  +0.8
      baz=45,SNR=7.3
ARPS  Mount Arapiles     44.51 233    P       P          09 46 48.3  -0.2
      baz=45,SNR=8.3
HTT   Hallett            46.08 239    P       P          09 47 00.8  -0.2
      baz=46,SNR=24
JAY   Jayapura           46.72 282    P       P          09 47 07.5  +1.2
GENI  Genyem             47.20 281    P       P          09 47 11.8  +1.8
BBOO  Buckleboo          48.34 240   eP       P          09 47 18.3  -0.4
      comp=Z,90nm,0.9s
BBOO  Buckleboo          48.34 240    P       P          09 47 18.1  -0.5
      baz=48,SNR=27
WC3   Warramunga Arr     49.40 257    PFAKE              09 47 40.0  +13
WC3                                   LR      LR
      comp=Z,900nm,18.0s
WB2   Warramunga Arr     49.42 257   eP       P          09 47 27.0  -0.1
      comp=Z,152nm,1.2s
WRAB  Tennant Creek      49.43 257   eP       P          09 47 26.9  -0.2
      comp=Z,129nm,1.2s
WRAB  Tennant Creek      49.43 257d iP       P          09 47 26.6  -0.5
WRAB                                  pmax    pmax
      comp=Z,88nm,1.1s
WRA   Warramunga Arr     49.44 257    P       P          09 47 27.1  -0.1
      comp=Z,67nm,0.8s,baz=89,slow=8.4,SNR=138
WRA                                   S       S          09 54 26.6  -4.2
      comp=Z,2.3nm,0.9s,baz=91,slow=14,SNR=2.8
AS31  Alice Springs      49.68 252   eP       P          09 47 29.1   0.0
      comp=Z,96nm,0.7s
ASAR  Alice Springs      49.68 252    P       P          09 47 28.7  -0.3
      comp=Z,444nm,0.7s,baz=86,slow=8.2,SNR=1233
ASAR                                  S       S          09 54 30.4  -3.9
      comp=Z,5.8nm,1.0s,baz=87,slow=15,SNR=14
ASAR                                  LR      LR         10 06 45.6
      comp=Z,1µm,21.4s,baz=94,slow=34
ASAR                                  PKPPKP  P'P'df     10 18 23.8  -3.1
      comp=Z,1.1nm,1.0s,baz=169,slow=0.6,SNR=4.0
BAKI  Biak               51.50 281    P       P          09 47 44.5  +1.7
KDU   Kakadu             52.11 266    P       P          09 47 47.7  +0.4
      baz=52,SNR=9.0
MTN   Manton Dam         53.37 266   eP       P          09 47 53.8  -2.8
      comp=Z,131nm,1.3s
MTN   Manton Dam         53.37 266    P       P          09 47 56.7  +0.1
      baz=54,SNR=15
FAKI  Fak Fak            54.63 278   eP       P          09 48 06.2  +0.3
      comp=Z,176nm,1.6s
WRKA  Warakurna          54.76 250    P       P          09 48 06.2  -0.5
      baz=55,SNR=258
FORT  Forrest            54.96 243   eP       P          09 48 07.4  -0.6
      comp=Z,148nm,1.3s
FORT  Forrest            54.96 243    P       P          09 48 07.2  -0.8
      baz=55,SNR=50
KNRA  Kununurra          55.18 262    P       P          09 48 09.9  +0.1
      baz=55,SNR=7.5
SWI   Sorong             56.19 280    P       P          09 48 18.4  +1.3
SWI                                   pmax    pmax
      comp=Z,300nm,0.7s
SWI   Sorong             56.19 280    P       P          09 48 17.8  +0.7
NLAI  Namlea             59.46 276    P       P          09 48 40.4  +0.4
      comp=Z,70nm,0.8s,comp=Z,4µm
LBMI  Labuha             59.83 279    P       P          09 48 42.6   0.0
KMBL  Kambalda           60.26 243    P       P          09 48 44.4  -1.0
      baz=60,SNR=11
TNTI  Ternate            60.40 280    PFAKE              09 49 00.0  +14
TNTI                                  LR      LR
      comp=Z,100nm,20.0s
SOEI  Soe                60.58 268   eP       P          09 48 48.8  +1.0
      comp=Z,164nm,1.0s
SOEI  Soe                60.58 268    P       P          09 48 49.8  +2.0
SANI  Sanana             60.86 277    P       P          09 48 48.3  -1.3
      comp=Z,111nm,1.0s,comp=Z,1µm
PSAD2 Pilbara Seismi     62.67 254   eP       P          09 49 02.0  +0.3
      comp=Z,143nm,0.8s
PSAC2 Pilbara Seismi     62.73 254   eP       P          09 48 50.8   -11
      comp=Z,155nm,0.7s
PSAB2 Pilbara Seismi     62.77 254   eP       P          09 49 02.7  +0.3
      comp=Z,160nm,0.7s
PSAA3 Pilbara Seismi     62.77 254   eP       P          09 49 02.3  -0.1
      comp=Z,160nm,0.7s
PSA00 Pilbara Seismi     62.78 254   eP       P          09 49 02.7  +0.2
      comp=Z,160nm,0.7s
PSAD1 Pilbara Seismi     62.81 254   eP       P          09 49 03.0  +0.3
      comp=Z,169nm,0.7s
SBA   Scott Base         62.88 185   eP       P          09 49 04.2  +2.1
      comp=Z,141nm,1.0s
SBA   Scott Base         62.88 185   eP       P          09 49 04.2  +2.1
SBA                                   pmax    pmax
      comp=Z,141nm,1.0s
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VNDA  Vanda              63.00 186    P       P          09 49 04.8  +1.9
      comp=Z,64nm,1.0s,baz=6.9,slow=6.8,SNR=231
VNDA  Vanda              63.00 186   eP       P          09 49 05.2  +2.3
      comp=Z,117nm,1.1s
VNDA  Vanda              63.00 186   eP       P          09 49 05.2  +2.3
VNDA                                  pmax    pmax
      comp=Z,117nm,1.1s
MNI   Manado             63.01 280    P       P          09 49 03.6  -0.4
MNI                                   pmax    pmax
      comp=Z,146nm,1.0s
SGSI  Sangihe            63.08 283    P       P          09 49 05.4  +0.9
EDFI  Ende, Flores       63.28 268    P       P          09 49 05.7  -0.3
MEEK  Meekatharra        63.37 248    P       P          09 49 05.7  -0.6
      baz=64,SNR=34
KLBR  Kellerberrin       63.78 242    P       P          09 49 08.6  -0.3
      baz=64,SNR=20
NWAO  Narrogin (SRO)     64.15 241   eP       P          09 49 10.6  -0.7
      comp=Z,229nm,1.5s
NWAO  Narrogin (SRO)     64.15 241    P       P          09 49 11.4   0.0
      baz=64,SNR=21
NWAO  Narrogin (SRO)     64.15 241   eP       P          09 49 10.6  -0.7
NWAO                                  pmax    pmax
      comp=Z,229nm,1.5s
DAV   Davao City (W)     64.20 286⇑iP       P          09 49 12.9  +1.0
LUWI  Luwuk              64.23 277   eP       P          09 49 12.0  -0.1
      comp=Z,134nm,0.9s
LUWI  Luwuk              64.23 277    P       P          09 49 12.7  +0.6
BLDU  Ballidu            64.73 243    P       P          09 49 14.9  -0.3
      baz=65,SNR=29
MUN   Mundaring          65.07 242    P       P          09 49 17.4  +0.1
      baz=65,SNR=17
APSI  Ampana             65.34 276    P       P          09 49 20.7  +1.4
MORW  Morawa             65.43 245   eP       P          09 49 19.2  -0.5
      comp=Z,111nm,1.3s
MORW  Morawa             65.43 245    P       P          09 49 19.2  -0.5
      baz=66,SNR=24
MRSI  Marisa             65.47 278    P       P          09 49 21.1  +0.9
KAPI  Kappang            66.05 271   eP       P          09 49 22.8  -1.1
      comp=Z,27nm,0.8s
KAPI  Kappang            66.05 271   eP       P          09 49 22.8  -1.1
KAPI                                  pmax    pmax
      comp=Z,27nm,0.8s
SPSI  Sidrap Palu        66.30 273    P       P          09 49 25.6  +0.1
      comp=Z,22nm,1.0s
TTSI  Tana Toraja        66.50 274    P       P          09 49 26.9  +0.1
PLAI  Plampang           67.03 267    P       P          09 49 30.0  -0.1
ADK   Adak               67.39 358   eP       P          09 49 31.1  -0.4
      comp=Z,128nm,1.5s
ADK   Adak               67.39 358   eP       P          09 49 31.2  -0.4
ADK                                   pmax    pmax
      comp=Z,128nm,1.5s
GIRL  Giralia            67.80 252   eP       P          09 49 36.1  +1.2
      comp=Z,168nm,0.9s
GIRL  Giralia            67.80 252    P       P          09 49 36.0  +1.2
      baz=68,SNR=14
INU   Inuyama            68.98 318    PFAKE              09 49 50.0  +8.1
INU                                   LR      LR
      comp=Z,300nm,21.0s
MJAR  Matsushiro Arr     68.99 320    P       P          09 49 42.4  +0.4
      comp=Z,2.7nm,0.5s,baz=152,slow=5.8,SNR=10
MJAR                                  LR      LR         10 15 56.2
      comp=Z,106nm,20.4s,baz=125,slow=32
MJAR                                  PKP2bc             10 17 54.4
      comp=Z,0.8nm,0.8s,baz=320,slow=2.8,SNR=6.3
MAJO  Matsushiro         68.99 320   eP       P          09 49 42.4  +0.3
MAJO  Matsushiro         68.99 320⇑eP       P          09 49 42.6  +0.6
MAJO                                  pmax    pmax
      comp=Z,3.0nm,0.8s
MAT   Matsushiro         68.99 320    P       P          09 49 42.6  +0.6
MAT                                   S       S          09 58 38.4  -4.5
MJB9  Matsu-Tunnel       68.99 320   eP       P          09 49 41.0  -1.0
      comp=Z,28nm,1.3s
CASY  Casey              69.95 205   eP       P          09 49 46.1  -1.4
      comp=Z,108nm,1.1s
KUR   Kuril'sk           69.97 332   eP       P          09 49 47.7  -0.1
KUR                                  eS       S          09 58 53.0  -1.0
KUR                                   MLR     MLR
      comp=Z,300nm,20.0s
JAGI  Jajag, Banyuwa     70.59 266   eP       P          09 49 51.3  -1.1
      comp=Z,157nm,0.8s
JAGI  Jajag, Banyuwa     70.59 266    P       P          09 49 51.4  -1.0
SCZ2  Santa Cruz Isl     71.41  45    P       P          09 49 58.1  +1.2
      baz=235,SNR=11
SCI2  San Clemente I     71.59  47    P       P          09 49 59.2  +1.2
      baz=236,SNR=10
SBC   Santa Barbara      71.61  45    P       P          09 49 59.4  +1.4
      baz=235,SNR=6.2
MCCM  Marconi Confer     71.75  40   eP       P          09 50 00.7  +2.0
      comp=Z,108nm,0.9s
JNU   Nakatsue           71.79 313   eP       P          09 49 59.1  -0.1
      comp=Z,178nm,2.0s
PKM   Mcpherson Peak     71.80  44    P       P          09 50 01.0  +1.6
      baz=235,SNR=17
SAO   San Andreas Ge     71.81  42   eP       P          09 49 58.6  -0.6
      comp=Z,83nm,1.0s
SAO   San Andreas Ge     71.81  42   eP       P          09 49 58.6  -0.6
SAO                                   pmax    pmax
      comp=Z,83nm,1.0s
BLG   Laguna Peak, P     71.86  45    P       P          09 50 00.8  +1.2
      baz=236
SMMC  Simmler            71.92  44    P       P          09 50 01.7  +1.7
      baz=235,SNR=12
CIS   Catalina Islan     71.92  46    P       P          09 50 01.0  +1.0
      baz=236,SNR=6.9
PAGB  Antelope Grade     71.99  43   eP       P          09 50 00.1  -0.2
      comp=Z,104nm,1.5s
HOPS  Hopland Field      72.15  39   eP       P          09 50 00.7  -0.5
      comp=Z,129nm,1.1s
FMP   Fort Macarthur     72.17  46    P       P          09 50 02.7  +1.2
      baz=236
GDXM  Geysers            72.21  40   eP       P          09 50 03.6  +2.0
      comp=Z,74nm,1.4s
KCPM  Cahto Peak         72.28  38   eP       P          09 50 01.1  -1.0
      comp=Z,86nm,1.1s
OSI   Osito Audit: C     72.38  45    PFAKE              09 50 10.0  +7.3
OSI                                   LR      LR
      comp=Z,500nm,18.0s
OSI   Osito Audit: C     72.38  45    P       P          09 50 04.0  +1.2
      baz=236
DECC  Green Verdugo      72.45  46    P       P          09 50 04.2  +1.0
      baz=236
PASC  Pasadena Art C     72.50  46   eP       P          09 50 05.0  +1.6
      comp=Z,125nm,1.6s
PASC                                  LR      LR
      comp=Z,600nm,21.0s
PET   Petropavlovsk      72.51 343   eP       P          09 50 03.7  +0.7
      comp=Z,88nm,1.2s
PET   Petropavlovsk      72.51 343   eP       P          09 50 01.9  -1.1
PET                                  eS       S          09 59 21.9  -1.2
PET                                   pmax    pmax
      comp=Z,61nm,1.1s
PET                                   MLR     MLR
      comp=Z,300nm,20.0s
KMRM  Mail Ridge         72.54  38   eP       P          09 50 04.0  +0.4
      comp=Z,238nm,0.8s
109C  Camp Elliot, M     72.56  47    P       P          09 50 04.8  +1.1
      baz=237
CPE   Camp Elliot        72.56  47   eP       P          09 50 03.1  -0.7
      comp=Z,31nm,1.0s
ARVC  Arvin              72.59  45    P       P          09 50 05.1  +1.1
      baz=236,SNR=9.4
KKM   Kota Kinabalu      72.62 282   eP       P          09 50 03.1  -1.5
      comp=Z,47nm,1.2s
MWC   Mount Wilson       72.62  46   eP       P          09 50 05.0  +0.7
      comp=Z,40nm,0.8s
MWC                                   LR      LR
      comp=Z,600nm,21.0s
MWC   Mount Wilson       72.62  46   eP       P          09 50 05.0  +0.7
MWC                                   pmax    pmax
      comp=Z,40nm,0.8s
MWC                                   MLR     MLR
      comp=Z,600nm,21.0s
JCC   Jacoby Creek,      72.73  37   eP       P          09 50 06.4  +1.8
      comp=Z,41nm,0.9s
JCC                                   LR      LR
      comp=Z,400nm,21.0s
BAR   Barrett            72.76  48   eP       P          09 50 05.0   0.0
      comp=Z,25nm,1.0s
VES   Vestal, Richgr     72.83  44    P       P          09 50 06.2  +0.9
      baz=235,SNR=28
PEA0B Petropavlovsk-     72.86 342   eP       P          09 50 05.4  +0.3
      comp=Z,31nm,0.8s
PETK  Petropavlovsk-     72.86 342    P       P          09 50 06.0  +0.9
      comp=Z,25nm,0.7s,baz=127,slow=8.6,SNR=38
PETK                                  LR      LR         10 16 22.4
      comp=Z,165nm,21.6s,baz=96,slow=31
PETK  Petropavlovsk-     72.86 342    P       P          09 50 06.0  +0.9
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PEA1  Petropavlovsk-     72.86 342   eP       P          09 50 06.0  +0.8
MURC  Murrieta           72.88  47    P       P          09 50 06.8  +1.1
      baz=237,SNR=15
VOG   Valley Oaks Go     72.90  43    P       P          09 50 06.7  +1.0
      baz=235
BFSC  Mount Baldy Ra     72.91  46    P       P          09 50 06.7  +0.8
      baz=237,SNR=24
CHGN  Chignik            72.92   9   eP       P          09 50 05.9  +0.6
CHIA  Chirikof Islan     72.94  11   eP       P          09 50 06.3  +0.8
      comp=Z,192nm,1.3s
KHMM  Horse Mountain     72.94  37   eP       P          09 50 07.8  +1.8
      comp=Z,88nm,1.0s
EDW2  Edwards Air Fo     73.03  45    P       P          09 50 07.9  +1.3
      baz=236,SNR=51
MONP2 Monument Peak      73.05  48    P       P          09 50 08.3  +1.4
      baz=238,SNR=53
O02D  Mt. Diablo Mer     73.06  38    P       P          09 50 08.8  +2.1
      baz=231,SNR=28
ISA   Isabella, Lake     73.14  44   eP       P          09 50 08.3  +1.0
      comp=Z,116nm,1.3s
ISA                                   LR      LR
      comp=Z,800nm,18.0s
ISA   Isabella, Lake     73.14  44   eP       P          09 50 08.3  +1.0
ISA                                   pmax    pmax
      comp=Z,116nm,1.3s
ISA                                   MLR     MLR
      comp=Z,800nm,18.0s
ISA   Isabella, Lake     73.14  44    P       P          09 50 08.7  +1.4
      baz=236,SNR=40
IKP   In-Ko-Pah, Jac     73.14  48    P       P          09 50 08.9  +1.5
      baz=238,SNR=40
CMB   Columbia Colle     73.25  41   eP       P          09 50 08.7  +0.9
      comp=Z,58nm,0.9s
PFO   Pinyon Flats O     73.41  47    P       P          09 50 10.1  +1.2
      comp=Z,19nm,0.9s,baz=245,slow=3.9,SNR=24
PFO   Pinyon Flats O     73.41  47   eP       P          09 50 09.4  +0.5
      comp=Z,117nm,1.8s
PFO   Pinyon Flats O     73.41  47    P       P          09 50 10.2  +1.2
      baz=238,SNR=18
AFDM  Forest Hills D     73.42  40   eP       P          09 50 09.4  +0.6
      comp=Z,60nm,1.0s
BBRC  Big Bear Solar     73.43  46    P       P          09 50 10.2  +1.0
      baz=237,SNR=9.9
WDC   Whiskeytown Da     73.46  38   eP       P          09 50 08.4  -0.4
      comp=Z,180nm,1.6s
WDC                                   LR      LR
      comp=Z,400nm,20.0s
WDC   Whiskeytown Da     73.46  38   eP       P          09 50 08.5  -0.4
WDC                                   pmax    pmax
      comp=Z,180nm,1.6s
WDC                                   MLR     MLR
      comp=Z,400nm,20.0s
SWSC  Sam W. Stewart     73.52  48    P       P          09 50 10.6  +1.2
      baz=238,SNR=18
LRMC  Laurel Mtn Rad     73.57  45    P       P          09 50 10.9  +1.1
      baz=236,SNR=12
N02D  Trinity Center     73.61  38    P       P          09 50 11.8  +1.9
      baz=231,SNR=37
YSS   Yuzh-Sakhalins     73.62 331⇑eP       P          09 50 10.8  +1.1
YSS                                  e                   09 50 33.9
YSS                                   pmax    pmax
      comp=Z,40nm,0.6s
RRX   Edison Barstow     73.71  46    P       P          09 50 11.6  +1.0
      baz=237
O03E  Paynes Creek       73.73  39    P       P          09 50 11.7  +1.1
      baz=232,SNR=44
M02C  Callahan           73.78  37    P       P          09 50 12.8  +1.9
      baz=231,SNR=38
L02E  Cave Junction      73.83  36    P       P          09 50 13.0  +1.9
      baz=230
CWC   Cottonwood Cre     73.84  44    P       P          09 50 12.7  +1.3
      baz=236
MDPB  Devils Postpil     73.85  42   eP       P          09 50 11.3  -0.3
      comp=Z,50nm,1.0s
SII   Sitkinak Islan     73.88  11   eP       P          09 50 10.9  -0.1
      comp=Z,47nm,0.8s
BELC  Belle Mtn. Jos     73.94  47    P       P          09 50 13.4  +1.3
      baz=238,SNR=36
MLAC  Mammoth, Mammo74.01  43    P       P          09 50 14.2  +1.7
      baz=235,SNR=11
MPMC  Manual Prospec     74.02  44    P       P          09 50 13.9  +1.3
      baz=236,SNR=61
DAC   Darwin (Calif)     74.07  44   eP       P          09 50 12.2  -0.7
DAC   Darwin (Calif)     74.07  44   eP       P          09 50 12.2  -0.7
GSC   Goldstone, Bar     74.07  45   eP       P          09 50 11.7  -1.1
      comp=Z,119nm,1.6s
GSC                                   LR      LR
      comp=Z,500nm,19.0s
GSC   Goldstone, Bar     74.07  45   eP       P          09 50 11.7  -1.1
GSC                                   pmax    pmax
      comp=Z,119nm,1.6s
GSC                                   MLR     MLR
      comp=Z,500nm,19.0s
GSC   Goldstone, Bar     74.07  45    P       P          09 50 13.9  +1.2
      baz=237,SNR=35
YBH   Yreka Blue Hor     74.08  37    P       P          09 50 14.5  +1.8
      comp=Z,75nm,0.9s,baz=201,slow=3.1,SNR=143
YBH   Yreka Blue Hor     74.08  37   eP       P          09 50 13.8  +1.1
      comp=Z,100nm,0.9s
TIN   Tinemaha, Big      74.08  43    P       P          09 50 14.3  +1.5
      baz=236
WAKR  Walker             74.13  41   eP       P          09 50 14.2  +1.0
      comp=Z,304nm,1.9s
BC3   Big Chuckawall     74.14  48    P       P          09 50 14.6  +1.4
      baz=238,SNR=28
K02D  Willamette Mer     74.14  36    P       P          09 50 14.7  +1.7
      baz=230,SNR=16
HEC   Hector,Ludlow      74.14  46    P       P          09 50 14.2  +1.1
      baz=237,SNR=34
UGM   Wanagama           74.21 266   eP       P          09 50 14.1  +0.1
      comp=Z,497nm,1.6s
GLA   Glamis             74.28  48    P       P          09 50 15.5  +1.5
      baz=239,SNR=22
J01E  Myrtle Point       74.29  36    P       P          09 50 15.5  +1.8
      baz=230,SNR=7.1
QSPA  South Pole Qui     74.30 180   eP       P          09 50 15.0  +1.3
      comp=Z,158nm,1.1s
BEKR  Beckworth          74.35  40   eP       P          09 50 15.6  +1.2
      comp=Z,64nm,0.9s
PNTR  Pine Nut           74.37  41   eP       P          09 50 15.6  +1.0
      comp=Z,108nm,0.9s
YULB  Yu-li              74.45 300   eP       P          09 50 16.0  +0.9
      comp=Z,52nm,1.8s
VCNR  Virginia City      74.45  41   eP       P          09 50 16.2  +1.2
      comp=Z,57nm,0.8s
HUMO  Hull Mountain      74.49  36   eP       P          09 50 15.6  +0.6
      comp=Z,74nm,1.2s
YERR  Yerington          74.53  41   eP       P          09 50 16.7  +1.2
      comp=Z,65nm,0.9s
GMRC  Granite Mounta     74.59  46    P       P          09 50 16.9  +1.1
      baz=238,SNR=20
L04D  Klamath Falls      74.62  37    P       P          09 50 17.3  +1.5
      baz=231,SNR=32
IRM   Iron Mountain      74.62  47    P       P          09 50 17.2  +1.3
      baz=238,SNR=44
M04C  Macdoel            74.62  38    P       P          09 50 17.5  +1.7
      baz=232,SNR=49
GRAC  Grapevine Rang     74.62  44    P       P          09 50 17.5  +1.7
      baz=236,SNR=33
FURC  Furnace Creek,     74.67  44    P       P          09 50 17.1  +1.1
      baz=237,SNR=35
TUQ   Turquoise Moun     74.75  46    P       P          09 50 18.0  +1.3
      baz=238,SNR=11
SHOC  Shoshone, Teco     74.76  45    P       P          09 50 17.6  +0.9
      baz=237,SNR=14
RYN   Ryan               74.78  42   eP       P          09 50 17.9  +1.0
      comp=Z,51nm,0.9s
NV01  Mina Array Sit     74.81  42   eP       P          09 50 18.7  +1.6
NVAR  Mina Array Bea     74.81  42    P       P          09 50 18.7  +1.6
      comp=Z,44nm,0.8s,baz=228,slow=10.0,SNR=290
NVAR                                  LR      LR         10 15 50.1
      comp=Z,228nm,21.7s,baz=216,slow=30
NVAR                                  PKPPKP  P'P'df     10 17 44.8  +2.2
      comp=Z,0.2nm,0.5s,baz=107,slow=1.5,SNR=3.9
Y12C  Blythe             74.85  48    P       P          09 50 18.6  +1.4
      baz=239
113A  Mohawk Valley,     74.90  49    PFAKE              09 50 30.0  +13
113A                                  LR      LR
      comp=Z,400nm,19.0s
SSLB  Suanglung          74.90 300   eP       P          09 50 16.8  -0.9
      comp=Z,18nm,0.6s
I02D  Swisshome          74.95  35    P       P          09 50 19.2  +1.7
      baz=230
I03D  Drain, OR          74.96  35    P       P          09 50 19.1  +1.6
      baz=230,SNR=6.9
K04D  Chiloquin, OR      75.19  37    P       P          09 50 20.6  +1.4
      baz=232,SNR=6.9
214A  Organ Pipe Nat     75.19  50    P       P          09 50 20.7  +1.4
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      baz=240
NEE2  Needles Airpor   75.31  47  P        P        09 50 21.2 +1.4
      baz=239
KDAK  Kodiak Island    75.33  12  eP       P        09 50 20.6 +1.3
      comp=Z,64nm,0.8s
KDAK  Kodiak Island    75.33  12  i P      P        09 50 20.2 +0.9
SBUM  Sibu             75.33 277  P        P        09 50 22.0 +1.6
TPNV  Topopah Spring   75.34  44  P        P        09 50 21.5 +1.4
      baz=237,SNR=38
J04D  Umpqua Nationa   75.37  36  P        P        09 50 21.7 +1.4
      baz=231,SNR=42
PDMCI Parker Dam,Lak   75.41  48  P        P        09 50 21.9 +1.5
      baz=239
I04A  Tendick Farm,    75.55  36  P        P        09 50 22.0 +0.9
      baz=231,SNR=19
H04D  Lebanon          75.83  35  P        P        09 50 24.0 +1.4
      baz=230,SNR=11
SHPR  Sheep Range      75.84  45  eP       P        09 50 24.2 +1.1
      comp=Z,168nm,1.8s
J05D  Fort Rock, OR    75.90  37  P        P        09 50 24.8 +1.6
      baz=232,SNR=80
G03D  McMinnville, O   75.98  34  P        P        09 50 24.8 +1.5
      baz=230,SNR=8.8
KSRS  Korea Array      76.17 316  P        P        09 50 26.7 +2.1
      comp=Z,4.0nm,0.7s,baz=122,slow=5.4,SNR=9.9
KSRS                              LR       LR       10 19 11.6
      comp=Z,123nm,21.8s,baz=49,slow=32
KS15  Wonju Array Si   76.19 316  eP       P        09 50 23.6  -1.2
      comp=Z,178nm,1.9s
I05D  Terrebonne, OR   76.49  36  P        P        09 50 27.7 +1.3
      baz=232,SNR=23
TYV   Tymovskoe        76.51 333  eP       P        09 50 26.7 +0.5
TYV                               pmax     pmax
      comp=Z,19nm,1.5s
R11A  Troy Canyon, C   76.54  43  P        P        09 50 27.9 +0.8
      baz=237,SNR=46
F04D  Rainier, OR      76.67  34  P        P        09 50 28.8 +1.5
      baz=230
TUC   Tucson           76.87  51  eP       P        09 50 30.0 +1.2
      comp=Z,71nm,1.0s
TUC   Tucson           76.87  51  eP       P        09 50 30.0 +1.2
TUC                               pmax     pmax
      comp=Z,71nm,1.0s
TUC   Tucson           76.87  51  P        P        09 50 30.5 +1.6
      baz=242
KSM   Kuching          76.88 275  P        P        09 50 31.0 +1.8
WVOR  Wild Horse Val   76.92  39  P        P        09 50 30.0 +1.1
WVOR                              pmax     pmax
      comp=Z,93nm,1.3s
G05D  Wamic, OR        77.06  35  P        P        09 50 30.7 +1.1
      baz=232,SNR=8.6
NLWA  Neilton Lookou   77.08  32  eP       P        09 50 28.1  -1.5
      comp=Z,28nm,1.0s
E04D  Cinebar          77.21  33  P        P        09 50 31.7 +1.3
      baz=230,SNR=18
LEM   Lembang          77.27 266  P        P        09 50 32.3 +0.7
      comp=Z,68nm,0.7s,baz=106,slow=6.8,SNR=7.0
F05D  White Salmon     77.39  34  P        P        09 50 32.4 +1.0
      baz=231,SNR=8.6
USRK  Ussuriysk Ar.    77.46 323  P        P        09 50 32.9 +1.1
      comp=Z,5.0nm,0.8s,baz=128,slow=3.1,SNR=10.0
USRK                              LR       LR       10 18 09.0
      comp=Z,162nm,21.4s,baz=78,slow=30
BRLK  Bradley Lake     77.50  12  eP       P        09 50 32.0 +0.3
      comp=Z,63nm,1.1s
D04E  Lakebay          77.50  33  P        P        09 50 33.8 +1.9
      baz=230,SNR=5.2
J08A  Circle Bar Ran   77.55  38  eP       P        09 50 33.5 +1.1
      comp=Z,67nm,1.1s
D03D  Eldon            77.57  32  P        P        09 50 33.7 +1.4
      baz=230,SNR=12
CCUT  Cedar City       77.62  45  eP       P        09 50 33.9 +0.8
      comp=Z,81nm,1.5s
WUAZ  Wupatki          77.98  48  eP       P        09 50 36.3 +1.2
      comp=Z,117nm,1.5s
WUAZ  Wupatki          77.98  48  P        P        09 50 36.7 +1.6
      baz=241
ELK   Elko             78.07  41  P        P        09 50 35.9 +0.3
      comp=Z,29nm,0.9s,baz=234,slow=5.7,SNR=108
ELK   Elko             78.07  41  eP       P        09 50 36.3 +0.7
      comp=Z,42nm,1.0s
ELK   Elko             78.07  41  eP       P        09 50 36.3 +0.7
ELK                               pmax     pmax
      comp=Z,42nm,1.0s
F07A  Phinny Hill Vi   78.23  35  eP       P        09 50 36.9 +0.8
      comp=Z,61nm,1.4s
BBB   Bella Bella      78.35  27  P        P        09 50 37.3 +0.9
      comp=Z,29nm,0.8s,baz=275,slow=6.1
G08A  Pilot Rock       78.41  36  eP       P        09 50 37.9 +0.6
      comp=Z,63nm,1.1s
A04D  Lummi Island     78.53  32  P        P        09 50 38.5 +0.9
      baz=230,SNR=5.3
B05A  Bryant           78.55  32  P        P        09 50 38.7 +1.0
      baz=230,SNR=15
HAWA  Hanford          78.75  35  eP       P        09 50 38.4  -0.5
      comp=Z,96nm,1.5s
TCRU  Three Creeks R   78.78  44  eP       P        09 50 40.6 +1.0
      comp=Z,56nm,1.3s
C06D  Leavenworth      78.96  33  P        P        09 50 40.8 +0.7
      baz=231
W18A  Petrified Fore   78.97  49  P        P        09 50 42.0 +1.4
      baz=242
MDJ   Mudanjiang       79.09 323  P        P        09 50 41.6 +0.8
MDJ                               pmax     pmax
      comp=Z,16nm,1.0s
MDJ                               pmax     pmax
      comp=Z,170nm,3.1s
121A  Cookes Peak, D   79.23  52  P        P        09 50 43.7 +1.7
      baz=244,SNR=42
DUG   Dugway, Tooele   79.34  43  P        P        09 50 43.4 +0.9
DUG                               pmax     pmax
      comp=Z,36nm,1.4s
DUG   Dugway, Tooele   79.34  43  P        P        09 50 43.4 +0.9
      baz=239
SML   Sawmill          79.88  12  eP       P        09 50 45.2 +0.4
      comp=Z,57nm,1.2s
SML   Sawmill          79.88  12  eP       P        09 50 45.2 +0.4
SML                               pmax     pmax
      comp=Z,57nm,1.2s
NJ2   Nanjing          80.11 307  eP       P        09 50 47.9 +1.3
NJ2                               pmax     pmax
      comp=Z,13nm,0.6s
HLID  Hailey           80.11  39  eP       P        09 50 47.6 +1.0
      comp=Z,60nm,1.0s
HLID  Hailey           80.11  39  P        P        09 50 48.0 +1.4
      baz=237
LAZ   Ladron           80.54  50  eP       P        09 50 50.0 +0.8
Y22D  IRIS PASSCAL I   80.56  51  P        P        09 50 51.1 +1.9
      baz=244
KLR   Kul'dur          80.63 327c iP       P        09 50 49.3 +0.3
KLR                               pmax     pmax
      comp=Z,5.0nm,1.0s
MNTX  Cornudas Mount   80.70  53  P        P        09 50 51.2 +1.3
      baz=245,SNR=110
PV05  Paradox Valley   80.81  46  PFAKE             09 51 00.0 +9.5
PV05                              LR       LR
      comp=Z,300nm,18.0s
MVCO  Mesa Verde       80.83  47  eP       P        09 50 51.5 +0.8
      comp=Z,15nm,0.9s
MVCO  Mesa Verde       80.83  47  P        P        09 50 51.8 +1.1
      baz=242,SNR=8.4
HWUT  Hardware Ranch   80.88  42  PFAKE             09 51 00.0 +9.2
HWUT                              LR       LR
      comp=Z,200nm,18.0s
PV10  Paradox Valley   80.99  46  eP       P        09 50 51.3  -0.3
      comp=Z,42nm,0.9s
TRF   Thorofare Moun   81.03  10  PFAKE             09 51 00.0 +9.0
TRF                               LR       LR
      comp=Z,600nm,21.0s
PV20  West Nyswonger   81.03  46  PFAKE             09 51 00.0 +8.4
PV20                              LR       LR
      comp=Z,400nm,20.0s
PV16  Nyswonger Mesa   81.05  46  PFAKE             09 51 00.0 +8.2
PV16                              LR       LR
      comp=Z,300nm,19.0s
PV03  Paradox Valley   81.07  46  PFAKE             09 51 00.0 +8.1
PV03                              LR       LR
      comp=Z,400nm,20.0s
TX31  Lajitas Ar. Si   81.08  56  eP       P        09 50 53.5 +1.4
      comp=Z,142nm,1.3s
TXAR  Lajitas Array    81.09  56  P        P        09 50 53.4 +1.3
      comp=Z,54nm,1.0s,baz=218,slow=8.0,SNR=259
TXAR                              PKPPKP   P'P'df   10 17 34.5 +2.0
      comp=Z,0.4nm,0.9s,baz=116,slow=2.1,SNR=2.7
TXAR                              LR       LR       10 21 50.5
      comp=Z,238nm,18.1s,baz=0.0,slow=32
PV21  Cone Mtn., Par   81.13  46  PFAKE             09 51 00.0 +7.8
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PV21                              LR       LR
      comp=Z,500nm,22.0s
PV12  Saucer Basin,    81.13  46  PFAKE             09 51 00.0 +7.8
PV12                              LR       LR
      comp=Z,800nm,21.0s
CN2   Changchun        81.14 320  eP       P        09 50 53.0 +1.2
CN2                               esP      sP       09 51 13.0 +0.6
CN2                               eS       S        10 00 58.7 +1.1
CN2                               pmax     pmax
      comp=Z,10.0nm,0.7s
CN2                               pmax     pmax
      comp=Z,200nm,6.0s
CN2                               LR       LR
      comp=Z,1µm,18.0s
CN2                               LR       LR
      comp=Z,2µm,18.0s
CN2                               LR       LR
      comp=Z,2µm,18.0s
NEW   Newport          81.19  34  P        P        09 50 52.1 +0.1
      comp=Z,6.5nm,0.9s,baz=242,slow=4.4,SNR=15
NEW   Newport          81.19  34  P        P        09 50 52.2 +0.1
      baz=234,SNR=11
PV01  Paradox Valley   81.21  46  PFAKE             09 51 00.0 +7.3
PV01                              LR       LR
      comp=Z,2µm,20.0s
TASM  ASL Pad, Albuq   81.28  50  P        P        09 50 54.5 +1.4
      baz=244,SNR=61
TASM  ASL Pad, Albuq   81.28  50  P        P        09 50 54.5 +1.4
      baz=244,SNR=60
ANMO  Albuquerque      81.28  50  P        P        09 50 54.5 +1.4
      comp=Z,16nm,0.7s,baz=262,slow=5.9,SNR=15
ANMO  Albuquerque      81.28  50  eP       P        09 50 54.4 +1.3
      comp=Z,28nm,0.8s
ANMO  Albuquerque      81.28  50c iP       P        09 50 54.1 +1.0
ANMO                              pmax     pmax
      comp=Z,33nm,1.1s
ANMO  Albuquerque      81.28  50  P        P        09 50 54.4 +1.4
      baz=244
BPAW  Bear Paw Mtn.    81.51  10  eP       P        09 50 52.6  -0.8
      comp=Z,35nm,1.2s
MCK   McKinley         81.53  11  eP       P        09 50 53.9 +0.4
      comp=Z,120nm,1.0s
MCK   McKinley         81.53  11  eP       P        09 50 53.9 +0.4
MCK                               pmax     pmax
      comp=Z,120nm,1.0s
HYT   Haines Junctio   81.64  17  PFAKE             09 51 10.0  +16
HYT                               LR       LR
      comp=Z,400nm,21.0s
GDL2  Guadalupe Moun   81.70  53  eP       P        09 50 56.8 +1.5
DLBC  Dease Lake       82.15  22  eP       P        09 50 58.0 +1.0
      comp=Z,121nm,1.8s
MSO   Missoula         82.16  37  P        P        09 50 57.4 +0.1
      baz=237,SNR=39
S22A  4UR Ranch, Cre   82.25  47  P        P        09 50 59.7 +1.4
      baz=243,SNR=155
WHY   Whitehorse       82.27  18  eP       P        09 50 57.4  -0.1
      comp=Z,100nm,1.6s
SNOW  Snow King Moun   82.33  41  eP       P        09 50 59.5 +1.0
      comp=Z,87nm,1.1s
O20A  White River Ci   82.37  45  P        P        09 50 59.6 +0.9
      baz=242,SNR=23
MOOW  Moose Ponds      82.48  41  eP       P        09 50 59.0  -0.2
      comp=Z,38nm,1.3s
HDA   Harding Lake     82.51  11  P        P        09 50 58.9 +0.3
      baz=206
BW06  Boulder Array    82.75  42  P        P        09 51 01.0 +0.4
      baz=241,SNR=75
PDAR  Pinedale Array   82.75  42  P        P        09 51 01.0 +0.4
      comp=Z,38nm,1.0s,baz=207,slow=3.0,SNR=195
PDAR                              PKKPbc   PKKPbc   10 09 25.0  -1.5
      comp=Z,0.6nm,0.8s,baz=102,slow=6.8,SNR=5.5
PDAR                              LR       LR       10 24 53.0
      comp=Z,202nm,18.1s,baz=173,slow=34
TCOL  CIGO, UAF Yank   82.76  11  P        P        09 51 00.2 +0.4
      baz=205
COLA  College          82.77  11  eP       P        09 51 00.2 +0.3
      comp=Z,124nm,1.0s
COLA  College          82.77  11c iP       P        09 50 59.9  0.0
COLA                              pmax     pmax
      comp=Z,116nm,1.1s
MDM   Murphy Dome      82.78  11  PFAKE             09 51 10.0  +10
MDM                               LR       LR
      comp=Z,800nm,22.0s
SMCO  Snowmass         82.80  46  PFAKE             09 51 10.0 +8.8
SMCO                              LR       LR
      comp=Z,500nm,20.0s
ILAR  Eielson Array    82.85  11  P        P        09 51 00.6 +0.2
      comp=Z,23nm,1.0s,baz=236,slow=6.0,SNR=117
ILAR                              PKiKP    PKiKP    09 56 18.8  -0.8
      comp=Z,0.8nm,0.8s,baz=239,slow=3.4,SNR=5.2
ILAR                              PKPPKP   P'P'df   10 17 29.5 +3.6
      comp=Z,0.3nm,0.9s,baz=327,slow=4.4,SNR=4.8
ILB   Eielson Array    82.85  11  eP       P        09 51 00.3  -0.1
      comp=Z,128nm,1.5s
BOZ   Bozeman (W)      82.87  39  P        P        09 51 02.1 +1.0
      baz=239,SNR=62
H17A  Grant Village    82.91  40  P        P        09 51 03.5 +2.1
      baz=240
POKR  Poker Plat Res   83.06  11  P        P        09 51 01.9 +0.5
      baz=206
LKWY  Lake             83.10  40  eP       P        09 51 04.6 +2.1
      comp=Z,72nm,1.1s
LKWY  Lake             83.10  40  eP       P        09 51 04.6 +2.1
LKWY                              pmax     pmax
      comp=Z,72nm,1.1s
SDCO  Great Sand Dun   83.20  48  eP       P        09 51 03.6 +0.4
      comp=Z,42nm,1.1s
SDCO  Great Sand Dun   83.20  48  P        P        09 51 04.0 +0.8
      baz=244,SNR=60
WALA  Waterton Lakes   83.39  35  PFAKE             09 51 20.0  +16
WALA                              LR       LR
      comp=Z,400nm,20.0s
PAYG  Puerto Ayora     83.53  89  eP       P        09 51 06.1 +1.1
      comp=Z,118nm,1.8s
MSTX  Muleshoe         83.64  52  eP       P        09 51 05.7 +0.4
      comp=Z,152nm,1.0s
MSTX                              LR       LR
      comp=Z,400nm,19.0s
MSTX  Muleshoe         83.64  52  P        P        09 51 06.1 +0.8
      baz=246
T25A  Trinidad         83.72  49  P        P        09 51 06.3 +0.6
      baz=245,SNR=17
DAWY  Dawson           83.84  14  eP       P        09 51 06.5 +1.0
      comp=Z,88nm,1.2s
RDOG  Red Dog Mine     83.94   4  eP       P        09 51 07.0 +1.1
      comp=Z,29nm,0.8s
Q24A  Divide           83.97  47  P        P        09 51 07.9 +0.8
      baz=244,SNR=16
ISCO  Idaho Springs    84.02  46  eP       P        09 51 07.6 +0.3
      comp=Z,15nm,0.9s
ISCO  Idaho Springs    84.02  46  eP       P        09 51 07.6 +0.3
ISCO                              pmax     pmax
      comp=Z,15nm,0.9s
ISCO  Idaho Springs    84.02  46  P        P        09 51 08.2 +0.9
      baz=244,SNR=14
EGAK  Eagle            84.04  13  eP       P        09 51 07.2 +0.7
      comp=Z,64nm,1.1s
RLMT  Red Lodge        84.08  40  P        P        09 51 08.4 +1.0
      baz=241,SNR=35
GCMT  Greycliff        84.16  39  eP       P        09 51 08.1 +0.4
833A  Chaparral WMA,   84.17  59  P        P        09 51 08.7 +0.8
      baz=249,SNR=17
N23A  Red Feather La   84.27  45  P        P        09 51 09.4 +0.8
      baz=244,SNR=31
JCT   Junction City    84.62  56  P        P        09 51 10.5 +0.2
      baz=248,SNR=18
K22A  Casper           84.67  43  eP       P        09 51 10.7 +0.3
      comp=Z,42nm,1.3s
K22A  Casper           84.67  43  P        P        09 51 10.6 +0.2
      baz=243,SNR=15
BILL  Bilibino         84.81 353  eP       P        09 51 10.3  0.0
      comp=Z,45nm,1.3s
BILL  Bilibino         84.81 353c iP       P        09 51 10.6 +0.3
BILL                              i                 09 51 19.2
BILL                              i                 09 54 30.8
BILL                              pmax     pmax
      comp=Z,27nm,1.0s
AMTX  Amarillo         84.83  52  eP       P        09 51 11.7 +0.4
      comp=Z,64nm,0.8s
AMTX  Amarillo         84.83  52  P        P        09 51 11.7 +0.4
      baz=247
EGMT  Eagleton         85.21  37  eP       P        09 51 13.3 +0.4
      comp=Z,50nm,1.3s
EGMT  Eagleton         85.21  37  P        P        09 51 13.3 +0.4
      baz=240,SNR=14
BJT   Baijiatuau       85.46 314  PFAKE             09 51 30.0  +16
BJT                               LR       LR
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      comp=Z,300nm,20.0s
ABTX  Abilene, Hawle   85.54  54  P        P        09 51 15.5 +0.7
      baz=248
ZEA   Zeya             85.55 329  eP       P        09 51 14.8 +0.5
ZEA                               pmax     pmax
      comp=Z,28nm,1.2s
KSCO  Kaye Shedlock'   85.78  48  P        P        09 51 16.2 +0.2
      baz=246
TOLK  Toolik Lake Re   85.94   9  P        P        09 51 16.9 +0.9
      baz=203
EPYK  Eagle Plains     86.39  14  P        P        09 51 18.8 +0.6
      baz=216,SNR=30
435B  Jarrell          86.51  57  eP       P        09 51 20.3 +0.7
      comp=Z,100nm,0.8s
435B  Jarrell          86.51  57  P        P        09 51 20.5 +0.9
      baz=250,SNR=15
IPM   Ipoh             86.62 276  eP       P        09 51 20.6 +0.1
      comp=Z,21nm,0.6s
LAO   LASA Array       86.69  40  P        P        09 51 21.3 +1.1
      baz=243
ENH   Enshi            86.82 302  PFAKE             09 51 30.0 +8.8
ENH                               LR       LR
      comp=Z,300nm,19.0s
PANO  Nakornpanom      86.86 289  P        P        09 51 22.9 +1.4
RSSD  Black Hills      86.94  43  eP       P        09 51 21.2  -0.4
      comp=Z,13nm,0.8s
RSSD  Black Hills      86.94  43  eP       P        09 51 21.3  -0.4
RSSD                              pmax     pmax
      comp=Z,13nm,0.8s
RSSD  Black Hills      86.94  43  P        P        09 51 21.4  -0.3
      baz=245
OGNE  Ogallala         86.98  46  P        P        09 51 21.6  -0.2
      baz=246
WMOK  Wichita Mounta   86.98  53  P        P        09 51 21.4  -0.5
      baz=249
WHTX  Lake Whitney,    87.04  56  P        P        09 51 22.7 +0.6
      baz=250
MAW   Mawson           87.36 199  P        P        09 51 23.7 +0.7
      comp=Z,84nm,1.0s,baz=124,slow=6.0,SNR=82
MAW                               LR       LR       10 27 49.2
      comp=Z,474nm,19.8s,baz=198,slow=34
MAW   Mawson           87.36 199  P        P        09 51 23.6 +0.6
      baz=87,SNR=49
SKNT  Sakolnakorn      87.38 288  P        P        09 51 25.2 +1.1
HKT   Hockley          87.65  58  eP       P        09 51 25.8 +0.8
      comp=Z,145nm,1.8s
HKT   Hockley          87.65  58  eP       P        09 51 25.8 +0.8
HKT                               pmax     pmax
      comp=Z,145nm,1.8s
APG   El Apazote       87.74  74  LR       LR       10 23 07.8
      comp=Z,203nm,20.8s,baz=358,slow=30
CBKS  Cedar Bluff      87.78  49  P        P        09 51 25.4  -0.2
      baz=248
GYA   Guiyang          87.91 298  eP       P        09 51 27.6 +1.0
GYA                               pP       sP       09 51 44.8  -2.7
GYA                               SKS      SKSac    10 01 49.7  -1.2
GYA                               S        S        10 02 06.2 +0.1
GYA                               sS       sS       10 02 27.8  -3.0
GYA                               SS       SS       10 07 54.9  0.0
GYA                               pmax     pmax
      comp=Z,20nm,0.9s
GYA                               pmax     pmax
      comp=Z,180nm,4.0s
GYA                               LR       LR
      comp=Z,130nm,3.8s
GYA                               LR       LR
      comp=Z,110nm,3.8s
PSI   Prapat           88.18 273  LR       LR       10 33 20.8
      comp=Z,174nm,18.4s,baz=95,slow=37
NONG  Nongkai          88.46 289  P        P        09 51 30.6 +1.4
XAN   Xi'an            88.56 306  P        P        09 51 30.0 +0.6
XAN                               pP       pP       09 51 40.0  -4.4
XAN                               sP       sP       09 51 44.9  -5.3
XAN                               pmax     pmax
      comp=Z,16nm,1.0s
XAN                               LR       LR
      comp=Z,270nm,21.7s
DGMT  Dagmar           88.71  39  P        P        09 51 30.5 +0.7
      baz=244,SNR=18
SLVN  Son La           88.74 292  PFAKE             09 51 40.0 +9.5
SLVN                              LR       LR
      comp=Z,200nm,20.0s
TRTT  Trang            88.81 278  P        P        09 51 33.8 +2.8
HHC   Hu-ho-hao-te     89.02 313  P        P        09 51 33.2 +1.7
HHC                               pmax     pmax
      comp=Z,23nm,5.7s
NATX  Nacogdoches      89.20  57  eP       P        09 51 33.5 +1.1
      comp=Z,193nm,1.6s
NATX  Nacogdoches      89.20  57  P        P        09 51 33.5 +1.1
      baz=251,SNR=6.4
GO06  Curarrehue       89.26 131  eP       P        09 51 34.7 +1.9
      comp=Z,93nm,1.2s
YAK   Yakutsk          89.30 337  PFAKE             09 51 40.0 +7.9
YAK                               LR       LR
      comp=Z,300nm,20.0s
YAK   Yakutsk          89.30 337  eP       P        09 51 31.6  -0.5
YAK                               e                 09 51 41.3
YAK                               e*PP     pP       09 51 49.3 +2.0
YAK                               e                 09 55 04.6
YAK                               e                 10 02 06.8
PLCA  Paso Flores      89.53 132  P        P        09 51 35.8 +1.8
      comp=Z,20nm,1.0s,baz=271,slow=6.5,SNR=12
PLCA                              LR       LR       10 22 11.9
      comp=Z,274nm,21.0s,baz=262,slow=29
PLCA  Paso Flores      89.53 132  eP       P        09 51 35.4 +1.4
      comp=Z,76nm,1.3s
TUL1  Leonard          89.68  53  P        P        09 51 34.6 +0.1
      baz=250
BGNE  Belgrade         89.86  47  P        P        09 51 35.4 +0.1
      baz=249
PBKT  Sadao Pong       90.03 287  P        P        09 51 39.1 +2.5
MYIG  Mrida            90.12  68  eP       P        09 51 38.1 +1.2
      comp=Z,134nm,0.9s
KSU1  Kansas State U   90.15  49  P        P        09 51 36.6  -0.1
      baz=250
PHET  Kaeng Krachan    90.26 283  P        P        09 51 40.7 +3.0
SUSD  Miller           90.42  44  P        P        09 51 37.1  -0.7
      baz=248
GO05  Huala            90.45 127  eP       P        09 51 39.9 +1.5
      comp=Z,136nm,1.5s
YKA   Yellowknife Ar   90.55  23  P        P        09 51 38.8 +0.9
      comp=Z,12nm,0.9s,baz=240,slow=4.0,SNR=16
YKA                               LR       LR       10 23 29.4
      comp=Z,14nm,21.4s,baz=192,slow=30
YKB5  Yellowknife Ar   90.55  23  eP       P        09 51 38.9 +0.9
UTTA  Uttaradit        90.73 288  P        P        09 51 41.9 +2.1
KMI   Kunming          90.87 296  P        P        09 51 40.8 +0.1
KMI                               pmax     pmax
      comp=Z,21nm,0.5s
KMI                               LR       LR
      comp=Z,130nm,4.3s
KMI                               LR       LR
      comp=Z,150nm,3.8s
KMI                               LR       LR
      comp=Z,230nm,11.8s
MIAR  Mount Ida        90.95  54  P        P        09 51 40.9 +0.3
      baz=252,SNR=8.3
W39A  Magazine         91.00  54  P        P        09 51 41.2 +0.5
      baz=252,SNR=7.2
SRDT  SRDT             91.13 284  P        P        09 51 44.3 +2.6
Z41A  Richland Creek   91.16  56  P        P        09 51 42.3 +0.8
      baz=252,SNR=7.8
HHAR  Hobbs            91.22  53  eP       P        09 51 41.1  -0.6
      comp=Z,6.0nm,0.8s
TEIG  Tepich           91.22  69  eP       P        09 51 43.0 +0.9
      comp=Z,106nm,1.3s
MDND  Maddock          91.27  40  P        P        09 51 41.3  -0.4
      baz=248,SNR=8.8
X40A  Basin Creek Fa   91.52  55  P        P        09 51 43.3 +0.2
      baz=252
JTS   Las Juntas de    91.61  80  LR       LR       10 23 30.9
      comp=Z,208nm,20.1s,baz=325,slow=29
JTS   Las Juntas de    91.61  80  eP       P        09 51 45.4 +1.4
      comp=Z,107nm,1.1s
JTS   Las Juntas de    91.61  80c iP       P        09 51 45.2 +1.2
JTS                               pmax     pmax
      comp=Z,86nm,1.1s
CD2   Chengdu          91.70 302  P        P        09 51 44.2  0.0
CD2                               pmax     pmax
      comp=Z,20nm,0.6s
ECSD  EROS Data Cent   91.74  45  eP       P        09 51 43.6  -0.5
      comp=Z,12nm,1.0s
ECSD  EROS Data Cent   91.74  45  P        P        09 51 43.3  -0.8
      baz=250,SNR=11
PAYA  Payao            91.80 289  P        P        09 51 47.4 +2.6
UMPA  Umpang Tak       91.87 286  P        P        09 51 47.4 +2.2
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PEL	Peldehue	92.06	125	P	P	09 51 48.1	+2.2
PEL				pmax	pmax		
	comp=Z,105nm,1.4s						
U40A	Yellville	92.08	53	P	P	09 51 45.4	-0.3
	baz=252,SNR=13						
CCAR	Cane Creek	92.18	55	*e*P	P	09 51 47.2	+1.0
	comp=Z,94nm,1.3s						
W41B	Gary Mavity, V	92.19	54	*e*P	P	09 51 46.5	+0.3
	comp=Z,55nm,1.3s						
W41B	Gary Mavity, V	92.19	54	P	P	09 51 46.8	+0.5
	baz=252,SNR=21						
WHAR	Wooly Hollow	92.19	54	*e*P	P	09 51 46.6	+0.4
	comp=Z,52nm,1.2s						
SYO	Syowa Base	92.19	191	⇓*e*P	P	09 51 43.2	-2.4
SYO	Syowa Base	92.19	191	⇓*i*Pcp	P	09 51 44.0	-1.6
SYO	Syowa Base	92.19	191	⇑*e*pP	pP	09 51 58.2	-2.9
HDC	Heredia	92.32	80	*e*P	P	09 51 46.0	-1.5
	comp=Z,86nm,1.1s						
CM31	Chiang Mai Arr	92.40	288	*e*P	P	09 51 48.1	+0.5
	comp=Z,15nm,0.8s						
CMAR	Chiang Mai Arr	92.40	288	P	P	09 51 49.4	+1.8
	comp=Z,14nm,0.9s,baz=95,slow=2.9,SNR=30						
CMAR				PKKPbc	PKKPbc	10 09 01.8	+0.3
	comp=Z,2.6nm,0.9s,baz=286,slow=4.8,SNR=8.4						
CMAR				LR	LR	10 28 55.3	
	comp=Z,82nm,21.8s,baz=40,slow=33						
FCAR	Ozark Folk Cen	92.50	54	*e*P	P	09 51 47.6	-0.1
	comp=Z,32nm,1.2s						
CHTO	Chiang Mai	92.50	289	*e*P	P	09 51 46.7	-1.4
	comp=Z,14nm,0.8s						
CHTO				LR	LR		
	comp=Z,300nm,21.0s						
CHTO	Chiang Mai	92.50	289	*e*P	P	09 51 46.7	-1.4
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO				MLR	MLR		
	comp=Z,300nm,21.0s						
VNA3	Neumayer Olymp	92.54	175	P	P	09 51 47.9	+0.7
SNAA	Sanae	92.58	177	P	P	09 51 47.9	+0.4
SNAA	Sanae	92.58	177	*e*P	P	09 51 47.4	-0.1
	comp=Z,34nm,1.1s						
SNAA	Sanae	92.58	177	*c* *i*P	P	09 51 47.6	+0.1
FFC	Flin Flon	92.58	33	*e*P	P	09 51 46.7	-0.9
	comp=Z,223nm,1.4s						
FFC	Flin Flon	92.58	33	*i* P	P	09 51 48.0	+0.4
VBMS	Vicksburg	92.69	57	P	P	09 51 49.6	+1.0
	baz=253						
ESPN	Las Esperanzas	92.73	78	*e*P	P	09 51 48.6	-0.6
	comp=Z,22nm,1.0s						
ESPN				LR	LR		
	comp=Z,100nm,18.0s						
EFI	East Falkland	92.80	146	⇑*e*P	P	09 51 49.2	+0.4
EFI				pmax	pmax		
	comp=Z,55nm,1.0s						
GO04	Tololo Observa	92.98	122	*e*P	P	09 51 51.6	+1.1
	comp=Z,75nm,0.9s						
X43A	Marvell	93.06	55	*e*P	P	09 51 51.3	+1.0
	comp=Z,66nm,1.1s						
X43A	Marvell	93.06	55	P	P	09 51 51.3	+1.0
	baz=253						
LZH	Lanzhou	93.16	306	⇑P	P	09 51 52.0	+1.1
LZH				pP	pP	09 52 05.8	-0.2
LZH				sP	sP	09 52 13.6	+1.9
LZH				PP	PP	09 55 41.2	+6.1
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,5.5s						
LZH				LR	LR		
	comp=Z,370nm,17.0s						
LZH				LR	LR		
	comp=Z,290nm,17.1s						
LZH				LR	LR		
	comp=Z,440nm,19.1s						
VNA1	Neumayer--Stat	93.23	175	P	P	09 51 51.5	+1.0
NNA	Nana	93.31	103	LR	LR	10 23 33.1	
	comp=Z,138nm,21.9s,baz=284,slow=29						
LCO	Las Campanas	93.46	121	*e*P	P	09 51 52.6	-0.1
	comp=Z,75nm,1.0s						
LCO	Las Campanas	93.46	121	*e*P	P	09 51 52.6	-0.1
LCO				pmax	pmax		
	comp=Z,75nm,1.0s						
SCIA	State Center	93.51	48	*e*P	P	09 51 52.3	+0.1
	comp=Z,38nm,1.0s						
SCIA	State Center	93.51	48	P	P	09 51 52.3	+0.1
	baz=252,SNR=5.5						
HBAR	Harrisburg	93.54	54	*e*P	P	09 51 53.1	+0.6
	comp=Z,103nm,1.0s						
AGMN	Agassiz Nation	93.78	41	*e*P	P	09 51 52.2	-1.0
	comp=Z,20nm,1.0s						
AGMN	Agassiz Nation	93.78	41	P	P	09 51 52.3	-1.0
	baz=251						
CCM	Cathedral Cave	93.81	52	*e*P	P	09 51 53.0	-0.7
	comp=Z,30nm,1.2s						
CCM	Cathedral Cave	93.81	52	*e*P	P	09 51 53.0	-0.7
CCM				pmax	pmax		
	comp=Z,30nm,1.2s						
CCM	Cathedral Cave	93.81	52	P	P	09 51 52.9	-0.7
	baz=253						
PBMO	Poplar Bluff	94.06	53	*e*P	P	09 51 54.7	-0.2
	comp=Z,39nm,1.4s						
GNAR	Gosnell	94.15	54	*e*P	P	09 51 55.9	+0.6
	comp=Z,84nm,1.1s						
OXF	Oxford	94.23	55	*e*P	P	09 51 55.8	+0.1
	comp=Z,56nm,1.1s						
OXF	Oxford	94.23	55	*e*P	P	09 51 55.8	+0.1
OXF				pmax	pmax		
	comp=Z,56nm,1.1s						
OXF	Oxford	94.23	55	P	P	09 51 55.8	+0.1
	baz=254,SNR=8.3						
N40A	Mertquake, Sal	94.38	49	P	P	09 51 56.0	-0.2
	baz=253,SNR=17						
ULM	Lac du Bonnet	94.42	39	P	P	09 51 55.2	-0.9
	comp=Z,10nm,1.0s,baz=239,slow=3.6,SNR=7.7						
ULM				LR	LR	10 32 09.3	
	comp=Z,219nm,18.1s,baz=255,slow=34						
ULN	Ulaanbaatar	94.47	318	⇑*e*P	P	09 51 57.3	+0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PARMO	Parma	94.56	53	*e*P	P	09 51 57.6	+0.5
	comp=Z,73nm,0.9s						
SPMN	Marine on St.	94.81	44	PFAKE		09 52 10.0	+12
SPMN				LR	LR		
	comp=Z,300nm,20.0s						
SPMN	Marine on St.	94.81	44	P	P	09 51 57.9	-0.1
	baz=253						
GLAT	Glass	94.81	54	*e*P	P	09 51 57.4	-0.9
	comp=Z,108nm,1.1s						
N41A	Harden Midland	94.86	49	*e*P	P	09 51 57.5	-0.9
	comp=Z,51nm,0.9s						
N41A	Harden Midland	94.86	49	P	P	09 51 58.2	-0.2
	baz=254,SNR=8.6						
SONA0	Songino Array	94.88	318	*e*P	P	09 51 58.1	-0.4
SONA0				*e*PP	PP	09 55 48.7	+0.6
SONM	Songino Array	94.88	318	P	P	09 51 58.2	-0.4
	comp=Z,1.0nm,0.7s,baz=147,slow=4.7,SNR=6.0						
SONM				PP	PP	09 55 48.7	+0.6
	comp=Z,1.0nm,0.9s,baz=111,slow=7.9,SNR=4.2						
SONM				LR	LR	10 33 22.3	
	comp=Z,143nm,19.3s,baz=47,slow=35						
X46A	Booneville	94.89	56	P	P	09 51 58.6	-0.1
	baz=254						
L40A	Anamosa	94.98	48	P	P	09 51 58.8	-0.2
	baz=253,SNR=17						
F37A	Hinrichs Farm,	95.07	44	P	P	09 51 59.2	-0.1
	baz=253						
349A	Repton	95.17	59	P	P	09 52 00.7	+0.6
	baz=255						
148A	Greensboro	95.20	58	P	P	09 51 59.7	-0.4
	baz=255						
W46A	Michie	95.21	55	P	P	09 52 00.1	-0.1
	baz=254,SNR=6.4						
S44A	Carbondale	95.22	52	P	P	09 52 00.2	+0.1
	baz=254,SNR=7.0						
TIXI	Tiksi	95.25	344	*e*P	P	09 51 57.7	-1.7
	comp=Z,7.7nm,1.0s						
TIXI	Tiksi	95.25	344	⇓*e*P	P	09 51 59.6	+0.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
M41A	Milan	95.27	49	P	P	09 52 00.0	-0.3
	baz=254,SNR=6.4						
X47A	Russelville	95.46	56	P	P	09 52 00.9	-0.4
	baz=255						
P43A	Skaggs, Pawnee	95.55	51	P	P	09 52 01.7	+0.1
	baz=254,SNR=8.7						
V46A	Holladay	95.59	55	P	P	09 52 01.7	-0.2
	baz=255,SNR=5.0						
F38A	Pierce - Schro	95.64	44	P	P	09 52 01.7	-0.1
	baz=253,SNR=11						
U46A	Springville	95.69	54	P	P	09 52 02.3	-0.1
	baz=255						
149A	Jones	95.83	58	P	P	09 52 03.0	0.0
	baz=255						
Y48A	Jasper	95.86	57	P	P	09 52 02.6	-0.6
	baz=255						
W47A	Westpoint	95.86	55	P	P	09 52 03.1	-0.1
	baz=255,SNR=11						
WVT	Waverly	95.91	54	P	P	09 52 03.3	0.0
	baz=255						
JFWS	Jewell Farm	95.91	47	P	P	09 52 02.6	-0.6
	baz=254,SNR=12						
G39A	Holcombe	95.93	45	P	P	09 52 02.6	-0.6
	baz=254,SNR=7.8						
HDIL	Hopedale	95.96	50	*e*P	P	09 52 01.5	-2.0
	comp=Z,24nm,0.8s						
HDIL	Hopedale	95.96	50	P	P	09 52 03.1	-0.3
	baz=254						
E38A	The Farm, Brul	96.04	43	P	P	09 52 03.2	-0.5
	baz=254						
V47A	Nunnelly	96.07	55	P	P	09 52 03.9	-0.2
	baz=255						
L42A	Oliver, Polo	96.08	48	PFAKE		09 52 20.0	+16
L42A				LR	LR		
	comp=Z,300nm,19.0s						
L42A	Oliver, Polo	96.08	48	P	P	09 52 03.4	-0.5
	baz=254						
T46A	Princeton	96.09	53	P	P	09 52 04.6	+0.5
	baz=255,SNR=9.8						
X48A	Hartselle	96.09	56	PFAKE		09 52 20.0	+16
X48A				LR	LR		
	comp=Z,300nm,18.0s						
X48A	Hartselle	96.09	56	P	P	09 52 03.8	-0.4
	baz=255						
250A	Grady	96.10	59	P	P	09 52 04.3	0.0
	baz=255						
R45A	Skylar, Fairfi	96.12	52	P	P	09 52 04.2	0.0
	baz=255						
Z49A	Columbiana	96.19	57	P	P	09 52 04.7	+0.1
	baz=255						
F39A	Loretta	96.27	44	P	P	09 52 04.3	-0.4
	baz=254,SNR=20						
W48A	Pulaski	96.36	55	P	P	09 52 05.2	-0.2
	baz=255,SNR=8.0						
Q45A	Warren Harvey,	96.37	52	P	P	09 52 05.3	-0.1
	baz=255						
S46A	Don Dixon Farm	96.39	53	P	P	09 52 04.9	-0.5
	baz=255						
U47A	Clarksville	96.41	54	P	P	09 52 05.5	-0.1
	baz=255,SNR=6.3						
M43A	Waltham Townsh	96.44	49	P	P	09 52 05.0	-0.6
	baz=255						
Y49A	Blount Mountai	96.45	57	P	P	09 52 05.4	-0.5
	baz=255						
EYMN	Ely	96.46	42	P	P	09 52 04.6	-1.0
	baz=254						
150A	Eclectic	96.46	58	P	P	09 52 05.5	-0.4
	baz=256						
I41A	Arkdale	96.48	46	P	P	09 52 05.1	-0.7
	baz=254,SNR=5.5						
G40A	Rib Lake	96.58	45	P	P	09 52 05.9	-0.2
	baz=254,SNR=9.8						
V48A	Smith Brothers	96.60	55	P	P	09 52 05.7	-0.7
	baz=255						
R46A	Gibon Southern	96.69	52	P	P	09 52 06.0	-0.8
	baz=255						
X49A	Woodville	96.69	56	P	P	09 52 06.2	-0.6
	baz=256,SNR=5.3						
T47A	Sharon Grove	96.69	54	P	P	09 52 07.0	+0.2
	baz=255,SNR=5.5						
Z50A	Ashland	96.70	57	P	P	09 52 06.7	-0.3
	baz=256						
F40A	Park Falls	96.81	44	P	P	09 52 06.7	-0.5
	baz=254,SNR=15						
P45A	Graceland, Par	96.84	51	PFAKE		09 52 20.0	+13
P45A				LR	LR		
	comp=Z,500nm,20.0s						
P45A	Graceland, Par	96.84	51	P	P	09 52 07.0	-0.5
	baz=255						
N44A	Piper City	96.87	50	P	P	09 52 07.4	-0.2
	baz=255						
W49A	Belvidere	96.88	56	P	P	09 52 07.5	-0.3
	baz=256,SNR=5.7						
151A	Opelika	97.01	58	P	P	09 52 08.3	-0.1
	baz=256						
Y50A	Piedmont	97.01	57	P	P	09 52 08.2	-0.1
	baz=256						
U48A	Cassie Pea, Po	97.01	54	P	P	09 52 08.2	-0.2
	baz=256,SNR=5.5						
S47A	Hartford	97.02	53	P	P	09 52 08.2	-0.1
	baz=256						
352A	Blakely	97.08	59	P	P	09 52 08.7	0.0
	baz=256						
I42A	Draeger Farm,	97.11	47	P	P	09 52 08.0	-0.5
	baz=255,SNR=6.1						
GTA	Gaotai	97.13	309	*e*P	Pdif	09 52 11.4	+2.3
GTA				pP	pP	09 52 24.6	+0.6
GTA				sP	sP	09 52 29.7	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LVC	Limon Verde	97.17	116	LR	LR	10 27 26.3	
	comp=Z,160nm,20.8s,baz=294,slow=30						
LVC	Limon Verde	97.17	116	*e*P	P	09 52 09.2	-0.7
	comp=Z,25nm,1.2s						
LVC	Limon Verde	97.17	116	*e*P	P	09 52 09.2	-0.7
LVC				pmax	pmax		
	comp=Z,25nm,1.2s						
X50B	Fort Payne	97.21	56	P	P	09 52 08.9	-0.4
	baz=256						
K43A	Burlington	97.21	48	P	P	09 52 08.6	-0.5
	baz=255						
P46A	Rosedale	97.27	51	P	P	09 52 09.1	-0.3
	baz=256						
T48A	Bowling Green	97.27	54	P	P	09 52 09.2	-0.3
	baz=256						
V49A	McMinnville	97.33	55	P	P	09 52 09.2	-0.6
	baz=256						
N45A	Kentland	97.34	50	P	Pdif	09 52 09.8	0.0
	baz=256						
SFIN	Lafayette	97.53	50	P	P	09 52 10.5	-0.1
	baz=256						
152A	Waverly Hall	97.54	58	P	Pdif	09 52 10.9	+0.1
	baz=256						
U49A	Red Boiling Sp	97.60	54	P	P	09 52 10.7	-0.3
	baz=256,SNR=10						
WCI	Wyandotte Cave	97.62	53	PFAKE		09 52 20.0	+8.9
WCI				LR	LR		
	comp=Z,300nm,18.0s						
WCI	Wyandotte Cave	97.62	53	P	P	09 52 10.3	-0.7
	baz=256						
W50A	Signal Mountai	97.66	56	P	P	09 52 11.2	-0.1
	baz=256						
S48A	Wiedeman Farm,	97.66	53	P	Pdif	09 52 11.3	+0.1
	baz=256						
Q47A	Bedord North L	97.69	52	P	Pdif	09 52 11.4	0.0
	baz=256						
TLY	Talaya	97.70	321	*e*P	P	09 52 08.4	-2.7
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
X51A	Calhoun	97.87	56	P	P	09 52 12.0	-0.2
	baz=256						
Z52A	Williamson	97.91	58	P	Pdif	09 52 12.7	+0.2
	baz=256						
N46A	Monticello	97.93	50	P	P	09 52 12.3	0.0
	baz=256						
T49A	Edmonton	97.94	54	P	Pdif	09 52 12.9	+0.4
	baz=256						
V50A	Pikevile	97.94	55	P	P	09 52 12.4	-0.1
	baz=256						
C40A	Isle Royale Na	97.97	43	P	P	09 52 11.9	-0.4
	baz=256,SNR=10						
D41A	Chassel	98.14	43	P	P	09 52 13.1	0.0
	baz=256,SNR=8.3						
TIGA	Tifton	98.18	60	P	Pdif	09 52 13.7	0.0
	baz=257						
S49A	Springfield	98.29	53	P	Pdif	09 52 14.2	+0.1
	baz=257						
Y52A	Lilburn	98.35	57	P	P	09 52 14.3	-0.1
	baz=257						
R49A	Shelbyville	98.49	53	P	Pdif	09 52 15.4	+0.4
	baz=257						
V51A	Loudon	98.56	55	P	Pdif	09 52 15.6	+0.2
	baz=257						
Q49A	Aurora	98.86	52	P	P	09 52 16.3	-0.3
	baz=257						
E43A	Lone Tree Farm	99.03	44	P	Pdif	09 52 16.8	-0.4
	baz=257,SNR=7.3						
X53A	Estanollee	99.11	57	P	Pdif	09 52 17.4	-0.4
	baz=257						
P49A	Miami Univ. Ec	99.12	52	P	Pdif	09 52 17.2	-0.5
	baz=257						
R50A	Paris	99.14	53	P	Pdif	09 52 17.6	-0.2
	baz=257						
T51A	Gray	99.14	54	P	Pdif	09 52 17.6	-0.3
	baz=257						
J46A	Howard City	99.28	48	P	Pdif	09 52 18.4	+0.1
	baz=257						
L47A	Sherwood	99.30	49	P	Pdif	09 52 18.5	+0.1
	baz=257						
O49A	Covington	99.55	51	PFAKE		09 52 30.0	+10
O49A				LR	LR		
	comp=Z,300nm,18.0s						
O49A	Covington	99.55	51	P	Pdif	09 52 19.8	+0.2
	baz=258						
658A	Bunnell	99.69	62	PFAKE		09 52 30.0	+10
658A				LR	LR		
	comp=Z,2µm,22.0s						
P50A	Jamestown	99.83	52	P	Pdif	09 52 20.9	+0.1
	baz=258						
J47A	Sunmer	99.84	48	P	Pdif	09 52 20.8	0.0
	baz=258						
LPAZ	La Paz	100.01	110	P	Pdif	09 52 25.2	+2.2
	comp=Z,3.0nm,1.0s,baz=351,slow=1.9,SNR=6.7						
LPAZ				PP	PP	09 56 30.3	+1.7
	comp=Z,4.1nm,1.3s,baz=270,slow=11,SNR=4.7						
LPAZ	La Paz	100.01	110	*e*Pdif	Pdif	09 52 24.7	+1.7
Q51A	Peebles	100.05	52	P	Pdif	09 52 22.2	+0.4
	baz=258						
O50A	Cable	100.07	51	P	Pdif	09 52 22.5	+0.6
	baz=258						
H47A	Mio	100.56	47	P	Pdif	09 52 24.5	+0.5
	baz=258						
M50A	Fremont	100.76	50	P	Pdif	09 52 25.6	+0.6
	baz=259						
E46A	Sault Ste Mari	100.84	45	P	Pdif	09 52 25.7	+0.4
	baz=259						
Q52A	Bidwell	100.86	53	P	Pdif	09 52 25.6	+0.1
	baz=259						
G47A	Hillman	100.92	46	P	Pdif	09 52 25.9	+0.3
	baz=259						
P52A	Corning	101.09	52	P	Pdif	09 52 26.8	+0.3
	baz=259						
D46A	Sault St. Mari	101.13	44	P	Pdif	09 52 26.8	+0.4
	baz=259						
N51A	Ashland	101.16	51	P	Pdif	09 52 27.1	+0.3
	baz=259						
Q53A	Leroy	101.41	53	P	Pdif	09 52 28.3	+0.4
	baz=259						
E47A	Iron Bridge	101.56	45	P	Pdif	09 52 29.0	+0.6
	baz=259						
P53A	Whipple	101.63	52	P	Pdif	09 52 29.3	+0.5
	baz=259						
V56A	Mocksville	101.63	56	P	Pdif	09 52 29.4	+0.4
	baz=259						
E48A	Lockeyer	102.32	45	P	Pdif	09 52 32.4	+0.7
	baz=260						
D48A	Paudash Townsh	102.68	44	P	Pdif	09 52 33.9	+0.5
	baz=261						
T57A	Hurt	102.83	55	PFAKE		09 52 50.0	+16
T57A				LR	LR		
	comp=Z,300nm,18.0s						
D49A	Beulah Townshi	103.00	44	P	Pdif	09 52 35.4	+0.6
	baz=261						
MEDO	Medina	104.41	49	PFAKE		09 52 50.0	+8.9
MEDO				LR	LR		
	comp=Z,400nm,20.0s						
SIV	San Ignacio	106.45	112	PP	PP	09 57 16.4	+0.4
	comp=Z,5.9nm,1.2s,baz=245,slow=12,SNR=9.4						
SDD	Santo Domingo	107.67	75	PFAKE		09 57 20.0	+16
SDD				LR	LR		
	comp=Z,2µm,22.0s						
ACCN	Adirondack Com	107.91	49	PFAKE		09 57 20.0	+16
ACCN				LR	LR		
	comp=Z,300nm,22.0s						
ZALV	Zalesovo Beam	109.29	322	PKiKP	PKiKP	09 57 05.0	-1.0
	comp=Z,1.1nm,0.5s,baz=107,slow=1.5,SNR=4.8						
ZALV				PKKPbc	PKKPbc	10 08 12.7	-1.2
	comp=Z,1.2nm,0.5s,baz=253,slow=4.5,SNR=4.5						
ZALV				PKKPab	PKKPab	10 08 23.8	+0.4
	comp=Z,1.0nm,0.6s,baz=250,slow=4.4,SNR=4.2						
MKAR	Makanchi Array	110.83	314	Pdiff	Pdif	09 53 10.3	+0.6
	comp=Z,0.2nm,0.5s,baz=92,slow=4.3,SNR=2.6						
MKAR				PKiKP	PKiKP	09 57 08.5	-0.7
	comp=Z,2.1nm,0.8s,baz=66,slow=2.9,SNR=12						
MKAR				PKKPbc	PKKPbc	10 08 07.3	-1.4
	comp=Z,1.6nm,0.9s,baz=266,slow=3.6,SNR=9.7						
MKAR				PKKPab	PKKPab	10 08 17.4	+0.5
	comp=Z,3.4nm,0.8s,baz=264,slow=3.4,SNR=14						
EMMW	East Machias	112.44	48	PFAKE		09 57 20.0	+7.7
EMMW				LR	LR		
	comp=Z,400nm,18.0s						
PTGA	Pitinga	112.64	98	PKKPbc	PKKPbc	10 08 01.4	-0.3
	comp=Z,1.7nm,0.7s,baz=60,slow=12,SNR=5.3						
KURK	Kurchatov	113.18	319	*d* *i*PKIKP	PKiKP	09 57 13.0	-0.5
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURBB	Kurchatov Arra	113.24	319	PKiKP	PKiKP	09 57 12.8	-0.8
	comp=Z,4.4nm,0.9s,baz=95,slow=1.8,SNR=16						
KURBB				PP	PP	09 58 04.5	0.0
	comp=Z,0.8nm,0.7s,baz=91,slow=5.3,SNR=4.5						
KURBB				PKKPbc	PKKPbc	10 07 59.7	-1.0
	comp=Z,3.6nm,0.9s,baz=267,slow=3.8,SNR=14						
KURBB				PKKPab	PKKPab	10 08 06.6	+0.6
	comp=Z,0.7nm,0.3s,baz=269,slow=4.9,SNR=7.4						
SEUS	St. Eustatius	113.98	78	PFAKE		09 57 30.0	+14
SEUS				LR	LR		
	comp=Z,300nm,18.0s						
SKI	Saint Kitts	114.18	78	PFAKE		09 57 30.0	+14
SKI				LR	LR		
	comp=Z,300nm,18.0s						
LMN	Caledonia Moun	114.29	46	PFAKE		09 57 30.0	+14
LMN				LR	LR		
	comp=Z,300nm,20.0s						
KSH	Kashi	115.41	307	*e*PKP	PKiKP	09 57 18.6	+0.3
KSH				sPKP		09 57 33.0	
KSH				PP	PP	09 58 28.1	+7.7
KSH				PKS	PKSdf	10 00 55.1	0.0
KSH				AMB	AMB		
	comp=Z,160nm,8.9s						
KSH				LR	LR		
	comp=Z,300nm,12.1s						
KSH				LR	LR		
	comp=Z,200nm,11.8s						
KSH				LR	LR		
	comp=Z,110nm,11.5s						
AAK	Ala-Archa	116.45	310	PKKPbc	PKKPbc	10 07 49.2	-0.5
	comp=Z,3.7nm,0.5s,baz=208,slow=9.4,SNR=7.1						
AAK	Ala-Archa	116.45	310	⇓*i*PKIKP	PKPdf	09 57 19.9	-0.4
AAK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
KBS	Kingsbay	116.74	359	⇑*i*PKIKP	PKiKP	09 57 20.7	+1.1
KBS				pmax	pmax		
	comp=Z,106nm,2.5s						
KBS	Kingsbay	116.74	359	*e*Pdif	Pdif	09 53 35.8	+0.6
KBS				*e*PKPdf	PKiKP	09 57 20.4	+0.7
SFJD	Kangerlussuaq	117.06	22	PFAKE		09 57 30.0	+10
SFJD				LR	LR		
	comp=Z,300nm,19.0s						
SPA0	Spitsbergen Ar	117.35	358	*e*PKPdf	PKPdf	09 57 20.8	0.0
SPA0	Spitsbergen Ar	117.35	358	*e*PKPdf	PKPdf	09 57 20.9	0.0
SUMG	Summit	117.61	14	*e*PKPdf	PKPdf	09 57 21.9	-0.1
SUMG	Summit	117.61	14	*e*PKIKP	PKPdf	09 57 21.9	-0.1
BVAR	Borovoye Array	117.95	322	PKP	PKPdf	09 57 22.3	-0.4
	comp=Z,6.8nm,0.8s,baz=114,slow=1.8,SNR=28						
BVAR				PKKPbc	PKKPbc	10 07 44.0	-0.5
	comp=Z,0.6nm,0.6s,baz=273,slow=5.6,SNR=4.8						
BRVK	Borovoye	118.00	322	*e*PKPdf	PKPdf	09 57 22.1	-0.6
BRVK	Borovoye	118.00	322	*c* *i*PKIKP	PKPdf	09 57 22.1	-0.6
BDFB	Brasilia	118.01	118	PKP	PKPdf	09 57 23.3	-0.7
	comp=Z,1.3nm,0.3s,baz=335,slow=1.3,SNR=3.6						
KK31	Karatay Array	119.33	311	*e*PKPdf	PKPdf	09 57 25.1	-0.6
KK31	Karatay Array	119.33	311	*e*PKIKP	PKPdf	09 57 25.1	-0.6
KKAR	Karatay Array	119.33	311	*e*PKPdf	PKPdf	09 57 25.1	-0.6
KKAR	Karatay Array	119.33	311	*e*PKIKP	PKPdf	09 57 25.1	-0.6
GAR	Garm	119.81	306	*e*PKPdf	PKPdf	09 57 26.8	0.0
GAR	Garm	119.81	306	*e*PKIKP	PKPdf	09 57 26.8	0.0
KBL	Kabul	121.04	301	*e*PKPdf	PKiKP	09 57 29.6	0.0
KBL	Kabul	121.04	301	*e*PKIKP	PKiKP	09 57 29.6	0.0
SVE	Sverdlovsk	122.25	328	*e*PKIKP	PKiKP	09 57 31.0	+0.1
SVE				pmax	pmax		
	comp=Z,21nm,0.9s						
ARU	Arti	123.46	328	PKP	PKPdf	09 57 32.8	-0.2

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       comp=Z,1.6nm,0.3s,baz=7.4,slow=1.9,SNR=19
ARU                                   PKKPab  PKKPab  10 07 21.2  0.0
       comp=Z,2.0nm,0.2s,baz=196,slow=4.6,SNR=5.9
ARU    Arti              123.46 328  ePKPdf   PKPdf   09 57 33.0 -0.1
ARU    Arti              123.46 328  i PKIKP  PKPdf   09 57 32.9 -0.2
ARU                                                   09 59 15.6
ARU                                                   10 04 41.0
HAMF   Hammerfest        124.10 353  ePKPdf   PKPdf   09 57 33.7 -0.2
LVZ    Lovozero          124.77 347  ePKPdf   PKPdf   09 57 34.5 -0.8
LVZ    Lovozero          124.77 347c iPKIKP   PKPdf   09 57 34.7 -0.7
LVZ                                   pmax    pmax
       comp=Z,28nm,1.7s
ARA0   ARCESS Array S    124.91 352  ePKPdf   PKPdf   09 57 35.4 -0.1
ARCES  ARCESS Array B    124.91 352   PKP     PKPdf   09 57 35.4 -0.1
       comp=Z,27nm,0.7s,baz=0.0,slow=1.2,SNR=82
ARCES                                 PKKPbc  PKKPbc  10 07 18.2 -0.2
       comp=Z,1.4nm,0.9s,baz=277,slow=12,SNR=4.3
ARE0   ARCESS Array S    124.91 352  ePKPdf   PKPdf   09 57 35.4 -0.2
ARE0   ARCESS Array S    124.91 352  ePKPdf   PKPdf   09 57 35.7 +0.2
ABKAR  Akbulak array     125.26 320  ePKPdf   PKPdf   09 57 36.0 -0.8
APA    Apatity           125.30 348⇑iPKIKP    PKPdf   09 57 35.0 -1.3
APA                                   pmax    pmax
       comp=Z,5.0nm,0.9s
TRO    Tromso            125.56 355  ePKPdf   PKPdf   09 57 36.8 +0.1
KTK1   Kautokeino        125.69 353  ePKPdf   PKPdf   09 57 36.8 -0.3
AKTO   Aktyubinsk        126.05 322   PKP     PKPdf   09 57 37.9 -0.4
       comp=Z,6.8nm,0.8s,baz=70,slow=3.2,SNR=19
PRGR   Permogore         126.33 338  ePKIKP   PKPdf   09 57 37.2 -1.2
PRGR                                  pmax    pmax
       comp=Z,32nm,0.9s
KIRV   Kirov             126.70 333   PKP     PKPdf   09 57 38.8 -0.4
       comp=Z,27nm,0.8s,baz=229,slow=3.1,SNR=10
ABPO   Ambohimpanom      126.90 231  ePKPdf   PKPdf   09 57 40.4 -0.6
LOF    Lofoten           127.44 357  ePdif    Pdif    09 54 21.9 -1.1
STEI   Steigen           127.53 356  ePKPdf   PKPdf   09 57 40.2 -0.3
MOR8   Moi Rana          129.32 356  ePKPdf   PKPdf   09 57 44.0 -0.1
GEYT   Alibeck           129.44 306   PKP     PKPdf   09 57 45.1 -0.1
       comp=Z,4.9nm,1.0s,baz=211,slow=1.7,SNR=8.4
NSS    Namsos            131.11 357  ePKPdf   PKPdf   09 57 47.5 +0.1
FIA0   FINESS Array S    132.21 347  ePKPpre  PKPpre  09 57 39.2
FIA0                                 ePKPdf   PKPdf   09 57 49.5 -0.1
FIA0   FINESS Array S    132.21 347  ePKHKP   PKPpre  09 57 39.2
FIA0                                 e                09 57 49.5
FINES  FINESS Array B    132.21 347   PKhKP   PKPpre  09 57 39.2
       comp=Z,4.3nm,0.9s,baz=48,slow=2.8,SNR=6.6
FINES                                 PKP     PKPdf   09 57 49.5 -0.1
       comp=Z,8.4nm,0.7s,baz=67,slow=5.0,SNR=19
FINES                                 SKPbc   SKPbc   10 01 11.2 -0.5
       comp=Z,12nm,1.1s,baz=30,slow=5.1,SNR=11
BOSA   Boshof            132.22 203   PKP     PKiKP   09 57 52.3 +0.3
       comp=Z,5.0nm,0.8s,baz=147,slow=3.3,SNR=6.8
UOSS   Minazif           132.50 290  ePKPdf   PKPdf   09 57 50.2 -1.1
MOS    Moscow            133.43 336  ePKIKP   PKPdf   09 57 52.0 -0.1
MOS                                  e                10 05 00.4
AKN    Aaknes            133.63 360  ePKPdf   PKPdf   09 57 52.4 +0.1
DOMB   Dombas            133.72 358  ePKPdf   PKPdf   09 57 52.6  0.0
OBN    Obninsk           134.29 336   SKPbc   SKPbc   10 01 19.7 +0.8
       comp=Z,4.4nm,0.4s,baz=304,slow=3.6,SNR=6.4
OBN    Obninsk           134.29 336   PFAKE           09 58 10.0  +15
OBN                                   LR      LR
       comp=Z,800nm,18.0s
OBN    Obninsk           134.29 336⇓iPKIKP    PKPdf   09 57 53.9 +0.2
OBN                                  e                10 00 25.4
OBN                                  i PS     PS      10 10 32.3  -14
OBN                                  i SS     SS      10 18 09.0 -1.7
OBN                                   pmax    pmax
       comp=Z,50nm,1.7s
NC303  NORSAR Array S    134.44 357  ePKPdf   PKPdf   09 57 53.3 -0.5
NB2    NORSAR Subarra    134.63 357   PKP     PKPdf   09 57 53.8 -0.5
       comp=Z,101nm,3.3s,baz=17,slow=2.6
NB2    NORSAR Subarra    134.63 357   PKIKP   PKPdf   09 57 54.0 -0.2
NB2                                   pmax    pmax
       comp=Z,137nm,2.8s
NB2    NORSAR Subarra    134.63 357   PKPaf   PKPdf   09 57 53.8 -0.5
       baz=17,slow=2.6
NOA    NORSAR Array B    134.63 357   PKhKP   PKPpre  09 57 41.7
       comp=Z,1.3nm,0.8s,baz=36,slow=2.1,SNR=4.1
NOA                                   PKP     PKPdf   09 57 54.1 -0.2
       comp=Z,5.6nm,1.0s,baz=13,slow=4.1,SNR=10.0
VSU    Vasula            134.72 345  eP       PKPdf   09 57 54.4  0.0
VSU    Vasula            134.72 345⇑iPKIKP    PKPdf   09 57 55.1 +0.7
VSU                                   pmax    pmax
       comp=Z,59nm,1.0s
NC602  NORSAR Array S    134.91 356  ePKPdf   PKPdf   09 57 54.1 -0.7
NC602  NORSAR Array S    134.91 356  ePKPdf   PKPdf   09 57 54.6 -0.1
NORES  NORESS Array B    134.91 356   PKIKP   PKPdf   09 57 54.4 -0.3
NORES                                 pmax    pmax
       comp=Z,10.0nm,0.8s
SKAR   Skarslia          135.11 359  ePKPdf   PKPdf   09 57 55.2  0.0
KONO   Kongsberg         136.10 358⇑iPKIKP    PKPdf   09 57 57.7 +0.7
KONO   Kongsberg         136.10 358  ePKPdf   PKPdf   09 57 56.8 -0.2
BLS5   Blasjo            136.39 360  ePKPdf   PKPdf   09 57 58.1 +0.5
IZAR   Zarasai           137.23 343  eP       PKPdf   09 57 58.9 -0.3
IDID   Didziasalis       137.47 343  eP       PKPdf   09 57 58.0 -1.7
IIGN   Ignalina          137.59 343  eP       PKPdf   09 57 59.3 -0.6
KIV    Kislovodsk        138.25 320  i PKIKP  PKiKP   09 58 05.6 +1.9
KIV                                   pmax    pmax
       comp=Z,29nm,1.0s
KIV                                   MLR     MLR
       comp=Z,730nm,24.0s
NEY    Neytrino          138.59 319⇓iPKIKP    PKiKP   09 58 05.9 +1.4
GNI    Garni             138.67 314   PKP     PKPdf   09 58 02.8 +0.2
       comp=Z,8.2nm,0.8s,baz=300,slow=20,SNR=5.5
GNI    Garni             138.67 314   PFAKE           09 58 10.0 +5.3
GNI                                   LR      LR
       comp=Z,700nm,20.0s
GNI    Garni             138.67 314d iPKIKP   PKiKP   09 58 05.2 +0.5
GNI                                   pmax    pmax
       comp=Z,114nm,1.7s
AKH    Akhalkalaki       138.97 316   PFAKE           09 58 20.0  +15
AKH                                   LR      LR
       comp=Z,700nm,22.0s
SUW    Suwalki           139.59 345   PFAKE           09 58 20.0  +14
SUW                                   LR      LR
       comp=Z,700nm,19.0s
AKASG  Malin Array Be    140.53 337   PKhKP   PKPpre  09 57 56.4
       comp=Z,2.2nm,0.6s,baz=36,slow=4.2,SNR=11
AKASG                                 PKP     PKPdf   09 58 04.9 -0.4
       comp=Z,8.5nm,0.8s,baz=38,slow=3.7,SNR=14
AKASG                                 SKPbc   SKPbc   10 01 37.2 -0.2
       comp=Z,0.3nm,0.3s,baz=23,slow=1.8,SNR=10
AKBB   Malin Array Si    140.53 337  ePKPdf   PKPdf   09 58 05.1 -0.3
AKBB   Malin Array Si    140.53 337  ePKIKP   PKPdf   09 58 05.1 -0.3
RGN    Rugen             140.89 353   PFAKE           09 58 20.0  +11
RGN                                   LR      LR
       comp=Z,200nm,18.0s
RAYN   Ar Rayn           142.32 288  ePKPpre  PKPdf   09 58 05.3 -4.2
LVV    L'vov             143.07 341  ePKHKP   PKPab   09 58 06.0 +0.6
DAMY   Dhamar            143.20 273  ePKPdf   PKPbc   09 58 09.6 +0.9
TSUM   Tsumeb            143.52 198  ePKPdf   PKPbc   09 58 09.7 +0.5
WTSB   Winterswijk       143.87 359  ePKPbc   PKPab   09 58 08.4  0.0
WTSB                                 epPKPbc  sPKPdf  09 58 29.8 -2.8
CLL    Collm             144.12 353   PFAKE           09 58 20.0 +4.7
CLL                                   LR      LR
       comp=Z,200nm,19.0s
CLL    Collm             144.12 353⇓iPKIKP    PKPab   09 58 08.9 -0.5
CLL                                   pmax    pmax
       comp=Z,28nm,0.8s
CLL    Collm             144.12 353⇓iPKPdf    PKPab   09 58 08.9 -0.5
       comp=Z,28nm,0.8s
CLL                                  i                09 58 11.0
CLL                                  eSKPdf   SKPdf   10 01 40.0 -1.8
CLL                                  i SKPbc  SKPbc   10 01 45.7 -0.6
       comp=Z,67nm,1.9s
ATD    Arta Tunnel       144.22 268   PKP     PKPdf   09 58 13.0 -0.1
       comp=Z,12nm,0.8s,baz=149,slow=2.5,SNR=6.4
OSTC   Ostas             144.36 349  ePKP     PKPbc   09 58 11.2 +0.5
OSTC                                 ex       x       09 58 22.5
OSTC                                  AMS     AMS     10 52 40.0
       comp=Z,2µm,11.1s
KOLS   Kolonicke sedl    144.40 342  ePKIKP   PKPdf   09 58 11.9 -0.5
KOLS   Kolonicke sedl    144.40 342  ePKP     PKPdf   09 58 11.9 -0.5
CMLA   Cha da Macela     144.42  46  i PKIKP  PKiKP   09 58 15.8 -0.6
BRG    Berggiesshubel    144.42 352  i PKP    PKPbc   09 58 10.9 +0.1
       comp=Z,12nm,0.8s
BRG                                  i                09 58 12.4
       comp=Z,45nm,1.6s
BRG                                  i                09 58 36.3
       comp=Z,40nm,1.5s
       comp=N,381nm,22.2s
       comp=E,290nm,18.5s
       comp=Z,506nm,17.6s
BRG    Berggiesshubel    144.42 352  i PKIKP  PKPbc   09 58 10.9 +0.1
BRG                                   pmax    pmax
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       comp=Z,12nm,0.8s
BRG                                   MLR     MLR
       comp=N,381nm,22.2s
BRG                                   MLR     MLR
       comp=E,290nm,18.5s
BRG                                   MLR     MLR
       comp=Z,506nm,17.6s
UPC    Upice             144.44 349  ePKIKP   PKPbc   09 58 11.4 +0.5
UPC                                   MLR     MLR
       comp=Z,2µm,16.6s
UPC    Upice             144.44 349  ePKP     PKPbc   09 58 11.4 +0.5
UPC                                  ex       x       09 58 17.8
UPC                                   AMS     AMS     10 52 50.0
       comp=Z,2µm,16.6s
NIE    Niedzica          144.52 344   PKIKP   PKPdf   09 58 12.0 -0.6
DPC    Dobruska-Polom    144.54 349  ePKIKP   PKPdf   09 58 12.2 -0.4
DPC                                   MLR     MLR
       comp=Z,3µm,15.8s
DPC    Dobruska-Polom    144.54 349  ePKP     PKPdf   09 58 12.2 -0.4
DPC                                  ex       x       09 58 35.5
DPC                                   AMS     AMS     10 52 40.0
       comp=Z,3µm,15.8s
BURAR  Bucovina Array    144.56 338⇓iP        PKPbc   09 58 12.1 +0.6
BURAR  Bucovina Array    144.56 338   PKIKP   PKPbc   09 58 12.0 +0.5
PVCC   Panska Ves        144.66 351  ePKIKP   PKPdf   09 58 12.2 -0.5
PVCC                                  MLR     MLR
       comp=Z,3µm,8.7s
PVCC   Panska Ves        144.66 351  ePKP     PKPdf   09 58 12.2 -0.5
PVCC                                  AMS     AMS     10 52 50.0
       comp=Z,3µm,8.7s
UZH    Uzhgorod          144.66 342  ePKIKP   PKPab   09 58 10.0 -1.5
UZH                                  i                09 58 18.9
BIZ    Bicaz             144.79 336⇓iP        PKPdf   09 58 13.0 -0.1
MORC   Moravsky Berou    144.84 347   PFAKE           09 58 20.0 +3.1
MORC                                  LR      LR
       comp=Z,400nm,18.0s
MORC   Moravsky Berou    144.84 347⇓iP        PKPdf   09 58 13.3 +0.2
MORC   Moravsky Berou    144.84 347   PKIKP   PKPdf   09 58 13.3 +0.2
MORC   Moravsky Berou    144.84 347  ePKP     PKPbc   09 58 12.3  0.0
MORC                                 e                09 58 36.1
MORC                                 e                10 01 48.6
TESR   Tescani           144.93 335⇓iP        PKPbc   09 58 12.9 +0.3
LANS   Liptovska Anna    144.98 345  ePKIKP   PKPdf   09 58 14.2 +0.8
LANS   Liptovska Anna    144.98 345  ePKP     PKPdf   09 58 14.1 +0.7
UCC    Uccle             145.00   2   PFAKE           09 58 30.0  +13
UCC                                   LR      LR
       comp=Z,300nm,22.0s
UCC    Uccle             145.00   2   PKPdf   PKPbc   09 58 12.6  0.0
UCC                                   x       x       09 58 36.6
TRPA   Tarpa             145.03 341⇓iP        PKPdf   09 58 13.6 +0.2
BEBN   Eben Emael        145.04   1   PKPdf   PKPdf   09 58 13.1 -0.2
BEBN                                  x       x       09 58 36.0
TLCR                     145.04 332⇑iP        PKPdf   09 58 14.2 +0.7
HGN    Heimansgroeve     145.07   0  ePKPbc   PKPab   09 58 13.0 +0.1
       comp=Z,211nm,1.5s
HGN                                  epPKPbc  sPKPdf  09 58 34.7  0.0
KMBO   Kilima Mbogo      145.08 244   PKPbc   PKPdf   09 58 15.4 +0.5
       comp=Z,46nm,1.0s,baz=116,slow=4.1,SNR=48
KMBO   Kilima Mbogo      145.08 244  ePKPbc   PKPdf   09 58 15.0 +0.1
BMR    Baia Mare         145.12 339⇑iP        PKPdf   09 58 13.8 +0.2
PRU    Pruhonice         145.19 351  ePKIKP   PKPdf   09 58 14.0 +0.3
PRU                                   MLR     MLR
       comp=Z,4µm,9.1s
PRU    Pruhonice         145.19 351  ePKP     PKPdf   09 58 14.0 +0.3
PRU                                   AMS     AMS     10 52 20.0
       comp=Z,4µm,9.1s
GOPC   GO Pecny, Ondr    145.22 350  ePKIKP   PKPab   09 58 13.6  0.0
GOPC                                 e                09 58 27.8
GOPC                                  MLR     MLR
       comp=Z,4µm,8.5s
GOPC   GO Pecny, Ondr    145.22 350  ePKP     PKPab   09 58 13.6  0.0
GOPC                                 epPKP    pPKPab  09 58 27.8 -1.0
GOPC                                  AMS     AMS     10 52 30.0
       comp=Z,4µm,8.5s
MEM    Membach           145.23   0   PKPdf   PKPab   09 58 13.6 +0.1
MEM                                   PKPdf   PKPab   09 58 13.6 +0.1
MEM                                   x       x       09 58 15.3
MEM                                   sPKiKP  sPKPab  09 58 34.4  0.0
NKC    Novy Kostel       145.24 353  ePKIKP   PKPdf   09 58 14.1 +0.3
NKC                                   MLR     MLR
       comp=Z,5µm,9.1s
NKC    Novy Kostel       145.24 353  ePKP     PKPdf   09 58 14.1 +0.3
NKC                                   AMS     AMS     10 53 10.0
       comp=Z,5µm,9.1s
BSTI   Sart Tilman       145.25   1   PKPdf   PKPdf   09 58 14.1 +0.3
BSTI                                  x       x       09 58 15.9
SNF    Seneffe           145.29   2   PKPdf   PKPdf   09 58 14.1 +0.3
SNF                                   PKiKP   PKiKP   09 58 17.1 -0.6
SNF                                   x       x       09 58 37.1
KECS   Kecovo            145.32 343  ePKIKP   PKPab   09 58 14.8 +0.8
KECS   Kecovo            145.32 343  ePKP     PKPab   09 58 14.8 +0.8
ARCR   ARCALIA           145.32 338⇓iP        PKPab   09 58 15.0 +1.0
CFR    Carcaliu          145.35 332⇓iP        PKPab   09 58 14.5 +0.4
CFR    Carcaliu          145.35 332   PKIKP   PKPab   09 58 14.5 +0.4
BCLA   Clavier           145.41   1   PKPdf   PKPbc   09 58 14.0  0.0
VRI    Vrincioaia        145.41 334⇓iP        PKPbc   09 58 13.2 -1.0
VRI    Vrincioaia        145.41 334   PKIKP   PKPab   09 58 14.6 +0.2
BGES   Gesves            145.44   1   PKPdf   PKPdf   09 58 13.8 -0.2
PLOR   Plostina          145.46 335⇓iP        PKPab   09 58 15.0 +0.4
PLOR   Plostina          145.46 335   PKIKP   PKPab   09 58 14.6  0.0
VRAC   Vranov            145.48 348   PKPbc   PKPab   09 58 14.7 +0.1
       comp=Z,70nm,1.1s,baz=20,slow=1.6,SNR=82
VRAC   Vranov            145.48 348⇓iP        PKPab   09 58 15.4 +0.9
VRAC   Vranov            145.48 348   PKIKP   PKPab   09 58 15.0 +0.5
VRAC   Vranov            145.48 348  ePKP     PKPab   09 58 14.7 +0.1
VRAC                                 e                09 58 37.4
VRAC                                 e                10 01 49.3
BMRD   Maredsous         145.51   2   PKPdf   PKPbc   09 58 14.5 +0.1
JAVC   Velka Javorina    145.68 347  ePKP     PKPab   09 58 16.2 +0.8
JAVC                                 e                09 58 39.5
JAVC                                 e                10 01 51.7
DOU    Dourbes           145.72   2   PKPdf   PKPab   09 58 15.6 +0.2
DOU                                   x       x       09 58 21.6
DOU                                   x       x       09 58 39.0
GIVF   Givet             145.72   2  ePKP2    PKPdf   09 58 14.7 +0.1
GIVF                                  pmax    pmax
       comp=Z,116nm,1.1s
BAIF   Baives            145.74   2  ePKP2    PKPbc   09 58 15.0  0.0
BAIF                                  pmax    pmax
       comp=Z,216nm,1.2s
VYHS   Vyhne             145.75 345  ePKP2    PKPab   09 58 15.7 +0.1
VYHS   Vyhne             145.75 345  ePKP     PKPab   09 58 15.7 +0.1
KRUC   Moravsky          145.75 348   PKP2    PKPab   09 58 15.6  0.0
KRUC   Moravsky          145.75 348  ePKP     PKPbc   09 58 15.0 -0.1
KRUC                                 e                09 58 38.9
KRUC                                 e                10 01 50.3
TIRR   Tirgusor          145.78 331   PFAKE           09 58 30.0  +11
TIRR                                  LR      LR
       comp=Z,800nm,20.0s
TIRR   Tirgusor          145.78 331⇓iP        PKPab   09 58 16.0 +0.2
HARR   Harsova           145.82 332⇓iP        PKPab   09 58 16.5 +0.6
HARR   Harsova           145.82 332   PKP2    PKPab   09 58 16.5 +0.6
TLB    Topalu            145.85 332⇓iP        PKPab   09 58 16.6 +0.5
TLB    Topalu            145.85 332   PKP2    PKPab   09 58 16.5 +0.5
DOPR   Dopca             145.87 336⇓iP        PKPab   09 58 17.2 +1.1
GRA1   Grafenberg Arr    145.91 354   PFAKE           09 58 30.0  +11
GRA1                                  LR      LR
       comp=Z,300nm,22.0s
CJR    Cluj-Napoca       145.91 339⇓iP        PKPab   09 58 16.3  0.0
PSZ    Piszkesteto       146.00 344   PFAKE           09 58 30.0  +11
PSZ                                   LR      LR
       comp=Z,800nm,18.0s
PSZ    Piszkesteto       146.00 344⇓iP        PKPab   09 58 17.0 +0.4
MLR    Muntele Rosu      146.04 335   PKPbc   PKPbc   09 58 16.3  0.0
       comp=Z,72nm,1.0s,baz=358,slow=4.3,SNR=52
MLR                                   SKPbc   SKPbc   10 01 50.9 -0.3
       comp=Z,7.0nm,1.2s,baz=328,slow=5.8,SNR=3.5
MLR    Muntele Rosu      146.04 335   PFAKE           09 58 30.0  +10
MLR                                   LR      LR
       comp=Z,4µm,19.0s
MLR    Muntele Rosu      146.04 335⇓iP        PKPab   09 58 16.8 -0.1
ISR    Istrita           146.09 334⇓iP        PKPab   09 58 17.4 +0.4
DRGR                     146.15 340⇓iP        PKPab   09 58 17.1 -0.1
DRGR                     146.15 340   PKP2    PKPbc   09 58 16.5  0.0
KHC    Kasperske Hory    146.17 351   PFAKE           09 58 30.0  +10
KHC                                   LR      LR
       comp=Z,100nm,19.0s
KHC    Kasperske Hory    146.17 351  ePKP2    PKPdf   09 58 15.8 +0.4
KHC                                   MLR     MLR
       comp=Z,4µm,8.8s
KHC    Kasperske Hory    146.17 351  ePKP     PKPdf   09 58 15.8 +0.4
KHC                                  ex       x       09 58 40.7
KHC                                   AMS     AMS     10 52 10.0
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       comp=Z,4µm,8.8s
WLF    Walferdange       146.17   0   PFAKE           09 58 30.0  +10
WLF                                   LR      LR
       comp=Z,4µm,18.0s
WLF    Walferdange       146.17   0   PKPdf   PKPab   09 58 17.2 +0.1
BRTR   Keskin Array B    146.21 320   PKPbc   PKPdf   09 58 16.3 +0.3
       comp=Z,66nm,0.8s,baz=137,slow=2.5,SNR=154
MODS   Modra-Piesok      146.22 347  ePKP2    PKPdf   09 58 16.0 +0.5
MODS   Modra-Piesok      146.22 347  ePKP     PKPdf   09 58 16.0 +0.5
WET    Wettzell          146.26 352   PKP2    PKPbc   09 58 16.3 -0.4
SHEL   Horse Pasture     146.34 159  ePKPbc   PKPab   09 58 18.7  0.0
SHEL   Horse Pasture     146.34 159  i PKP2   PKiKP   09 58 20.1 -0.9
SECR                     146.36 334⇓iP        PKPab   09 58 17.9 -0.1
ZST    Bratislava        146.43 347  ePKP2    PKPbc   09 58 17.4 +0.2
ZST    Bratislava        146.43 347  ePKP     PKPbc   09 58 17.4 +0.2
GEC2   GERESS Array S    146.43 351   PFAKE           09 58 30.0  +10
GEC2                                  LR      LR
       comp=Z,500nm,19.0s
GERES  GERESS Array B    146.43 351   PKPbc   PKPdf   09 58 16.4 +0.5
       comp=Z,11nm,0.7s,baz=28,slow=3.2,SNR=45
GERES                                 SKPbc   SKiKP   10 01 52.6 +0.5
       comp=Z,0.5nm,0.6s,baz=349,slow=2.0,SNR=3.6
VOIR                     146.44 336⇓iP        PKPab   09 58 18.7 +0.3
VOIR                     146.44 336   PKP2    PKPab   09 58 18.5 +0.1
ROSF   Rostrenen         146.57  12  ePKP2    PKPbc   09 58 16.9 -0.7
ROSF                                  pmax    pmax
       comp=Z,46nm,1.0s
FLN    La Foliniere      146.62   8  ePKP2    PKPbc   09 58 17.0 -0.7
FLN                                   pmax    pmax
       comp=Z,73nm,0.7s
ANTO   Ankara            146.64 321  ePKPbc   PKPab   09 58 19.1 -0.2
ANTO                                  LR      LR
       comp=Z,3µm,19.0s
ARR    Arges             146.67 336⇓iP        PKPab   09 58 19.9 +0.6
SGMF   Saint Gilles      146.78  11  ePKP2    PKPbc   09 58 17.5 -0.7
SGMF                                  pmax    pmax
       comp=Z,112nm,1.2s
LDF    La Druitiere      146.83   8  ePKIKP   PKPdf   09 58 16.7 +0.2
LDF                                   pmax    pmax
       comp=Z,111nm,1.2s
DEV    Deva              146.87 339⇓iP        PKPab   09 58 19.5 -0.4
LOT    Lotru             146.93 337⇓iP        PKPbc   09 58 18.7 -0.2
GRR    Gorron            146.93   9  ePKIKP   PKPdf   09 58 16.3 -0.4
GRR                                   pmax    pmax
       comp=Z,74nm,0.8s
CONA   Conrad Observa    146.94 348  i PKPbc  PKPdf   09 58 16.9  0.0
       comp=Z,64nm,1.0s,SNR=40
CONA                                 i PKiKP  PKPab   09 58 19.7 -0.5
       comp=Z,64nm,1.0s
CONA                                 i sPKiKP sPKiKP  09 58 43.1 +0.4
       comp=Z,71nm,1.5s
CONA   Conrad Observa    146.94 348  i PKPbc  PKPdf   09 58 16.9  0.0
       comp=Z,64nm,1.0s,SNR=40
CONA                                 i PKiKP  PKPab   09 58 19.7 -0.5
       comp=Z,64nm,1.0s
CONA                                 i sPKiKP sPKiKP  09 58 43.1 +0.4
       comp=Z,71nm,1.5s
SIRR   Siria             146.96 340⇓iP        PKPab   09 58 19.7 -0.6
STU    Stuttgart         146.98 356   PFAKE           09 58 30.0 +8.7
STU                                   LR      LR
       comp=Z,3µm,18.0s
QUIF   Quistinic         146.99  12  ePKP2    PKPbc   09 58 18.1 -0.7
QUIF                                  pmax    pmax
       comp=Z,76nm,1.0s
MDUB   Mudurnu           147.19 324   PFAKE           09 58 30.0 +7.9
MDUB                                  LR      LR
       comp=Z,9µm,21.0s
MOA    Molln             147.31 350  i PKPbc  PKPdf   09 58 17.3 -0.1
       comp=Z,34nm,0.8s,SNR=17
MOA                                  i PKPab  PKPbc   09 58 20.3 +0.5
       comp=Z,34nm,0.8s
MOA                                  i sPKiKP sPKiKP  09 58 43.4  0.0
       comp=Z,32nm,1.2s
MOA    Molln             147.31 350  i PKPbc  PKPdf   09 58 17.3 -0.1
       comp=Z,34nm,0.8s,SNR=17
MOA                                  i PKPab  PKPbc   09 58 20.3 +0.5
       comp=Z,34nm,0.8s
MOA                                  i sPKiKP sPKiKP  09 58 43.4  0.0
       comp=Z,32nm,1.2s
GZR    Gura Zlata        147.34 338⇓iP        PKPbc   09 58 20.4 +0.4
CDF    Champ du Feu      147.42 359  ePKIKP   PKPdf   09 58 18.0 +0.4
CDF                                   pmax    pmax
       comp=Z,70nm,1.0s
BFO    Black Forest      147.46 357  ePKPdf   PKPdf   09 58 17.5 -0.1
BFO                                  ePKPbc   PKPbc   09 58 20.2 +0.1
BFO                                  ePKPab   PKiKP   09 58 23.9 +1.6
BFO                                   LR      LR
       comp=Z,300nm,18.0s
BFO    Black Forest      147.46 357ceePKIKP   PKPdf   09 58 18.1 +0.5
BZS    Buzias            147.54 340⇓iP        PKPbc   09 58 21.1 +0.7
BZS    Buzias            147.54 340   PKP2    PKPbc   09 58 20.1 -0.3
ECH    Echery            147.62 359   PFAKE           09 58 30.0 +7.2
ECH                                   LR      LR
       comp=Z,200nm,22.0s
CLF    Chambon-Foret     147.65   5   PFAKE           09 58 30.0 +7.1
CLF                                   LR      LR
       comp=Z,1µm,18.0s
ARSA   Arzberg           147.66 348  i PKPdf  PKPdf   09 58 17.6 -0.4
       comp=Z,36nm,1.4s,SNR=7.1
ARSA                                 i PKPab  PKPbc   09 58 20.8 +0.1
       comp=Z,36nm,1.4s
ARSA                                 i sPKiKP sPKiKP  09 58 44.3 +0.1
       comp=Z,33nm,1.4s
ARSA   Arzberg           147.66 348  i PKPdf  PKPdf   09 58 17.6 -0.4
       comp=Z,36nm,1.4s,SNR=7.1
ARSA                                 i PKPab  PKPbc   09 58 20.8 +0.1
       comp=Z,36nm,1.4s
ARSA                                 i sPKiKP sPKiKP  09 58 44.3 +0.1
       comp=Z,33nm,1.4s
ASF    Jabal al Asfar    147.72 306   PKPbc   PKPbc   09 58 22.1 +0.6
       comp=Z,11nm,0.7s,baz=6.4,slow=3.1,SNR=17
ASF    Jabal al Asfar    147.72 306   P       PKiKP   09 58 22.5 -1.0
HAU    Haudompre         147.83 360  ePKP2    PKPbc   09 58 20.1 -1.1
HAU                                   pmax    pmax
       comp=Z,64nm,0.8s
HERR   Herculane         147.91 338⇓iP        PKPbc   09 58 22.0 +0.6
HINF   Hinteralfeld      148.02 359  ePKP2    PKPbc   09 58 21.1 -0.6
HINF                                  pmax    pmax
       comp=Z,120nm,1.6s
RETA   Reutte            148.13 354  i PKPdf  PKPdf   09 58 18.7 -0.1
       comp=Z,52nm,1.4s,SNR=15
RETA                                 i PKiKP  PKPbc   09 58 22.5 +0.4
       comp=Z,52nm,1.4s
RETA                                 eS       sPKPab  09 58 45.6 -0.3
       comp=Z,83nm,1.6s
RETA   Reutte            148.13 354  i PKPdf  PKPdf   09 58 18.7 -0.1
       comp=Z,52nm,1.4s,SNR=15
RETA                                 i PKiKP  PKPbc   09 58 22.5 +0.4
       comp=Z,52nm,1.4s
RETA                                 eS       sPKPab  09 58 45.6 -0.3
       comp=Z,83nm,1.6s
YLV    Yalova            148.14 325⇓iP        PKPbc   09 58 22.6 +0.3
WATA   Walderalm         148.20 353  ePKiKP   PKPbc   09 58 22.3  0.0
       comp=Z,15nm,0.6s
WATA   Walderalm         148.20 353  ePKiKP   PKPbc   09 58 22.3  0.0
       comp=Z,15nm,0.6s
KBA    Koelnbreinsper    148.21 351  i PKPdf  PKPdf   09 58 18.3 -0.8
       comp=Z,20nm,0.6s,SNR=23
KBA                                  i PKiKP  PKPbc   09 58 22.1 -0.4
       comp=Z,32nm,0.8s
KBA                                  eS       sPKPab  09 58 45.5 -0.9
       comp=Z,26nm,1.1s
KBA    Koelnbreinsper    148.21 351  i PKPdf  PKPdf   09 58 18.3 -0.8
       comp=Z,20nm,0.6s,SNR=23
KBA                                  i PKiKP  PKPbc   09 58 22.1 -0.4
       comp=Z,32nm,0.8s
KBA                                  eS       sPKPab  09 58 45.5 -0.9
       comp=Z,26nm,1.1s
KBA    Koelnbreinsper    148.21 351   PKIKP   PKPdf   09 58 18.9 -0.2
MOTA   Moosalm           148.24 354  i PKPdf  PKPdf   09 58 18.7 -0.4
       comp=Z,17nm,0.7s,SNR=7.7
MOTA                                 i PKiKP  PKPbc   09 58 22.5  0.0
       comp=Z,68nm,1.3s
MOTA                                 i S      sPKPab  09 58 46.5  0.0
       comp=Z,47nm,1.4s
MOTA   Moosalm           148.24 354  i PKPdf  PKPdf   09 58 18.7 -0.4
       comp=Z,17nm,0.7s,SNR=7.7
MOTA                                 i PKiKP  PKPbc   09 58 22.5  0.0
       comp=Z,68nm,1.3s
MOTA                                 i S      sPKPab  09 58 46.5  0.0
       comp=Z,47nm,1.4s
MDVR   Moldovita         148.24 339⇓iP        PKPbc   09 58 23.0 +0.6
KSDI   Kefar Szold       148.25 309   P       PKiKP   09 58 23.7 -0.7
WTTA   Wattenberg        148.26 353  i PKPbc  PKPdf   09 58 19.2  0.0
       comp=Z,56nm,0.6s,SNR=11
WTTA                                 i PKiKP  PKPbc   09 58 22.9 +0.4
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        comp=Z,56nm,0.6s
WTTA                                eS        sPKPab   09 58 46.0 -0.6
        comp=Z,81nm,1.6s
WTTA   Wattenberg       148.26 353  i PKPbc   PKPdf    09 58 19.2  0.0
        comp=Z,56nm,0.6s,SNR=11
WTTA                                i PKiKP   PKPbc    09 58 22.9 +0.4
        comp=Z,56nm,0.6s
WTTA                                eS        sPKPab   09 58 46.0 -0.6
        comp=Z,81nm,1.6s
SOKA   Soboth           148.30 348  i PKPdf   PKPdf    09 58 18.5 -0.6
        comp=Z,36nm,0.9s,SNR=22
SOKA                                i PKiKP   PKPbc    09 58 22.5 -0.1
        comp=Z,36nm,0.9s
SOKA                                i S       sPKPab   09 58 45.4 -1.3
        comp=Z,39nm,1.2s
SOKA   Soboth           148.30 348  i PKPdf   PKPdf    09 58 18.5 -0.6
        comp=Z,36nm,0.9s,SNR=22
SOKA                                i PKiKP   PKPbc    09 58 22.5 -0.1
        comp=Z,36nm,0.9s
SOKA                                i S       sPKPab   09 58 45.4 -1.3
        comp=Z,39nm,1.2s
PERS   Pernice          148.33 348  i PKPdf   PKPdf    09 58 18.2 -0.9
PERS                                i PKPbc   PKPbc    09 58 22.3 -0.3
PHSR   Pinarhisar       148.34 329⇓ iP        PKPab    09 58 27.2 +1.3
SQTA   Sankt Quirin     148.35 354  i PKPdf   PKPdf    09 58 19.1 -0.1
        comp=Z,21nm,0.7s,SNR=7.1
SQTA                                i PKiKP   PKPbc    09 58 23.0 +0.3
        comp=Z,26nm,0.7s
SQTA                                eS        sPKPab   09 58 46.2 -0.7
        comp=Z,33nm,1.0s
SQTA   Sankt Quirin     148.35 354  i PKPdf   PKPdf    09 58 19.1 -0.1
        comp=Z,21nm,0.7s,SNR=7.1
SQTA                                i PKiKP   PKPbc    09 58 23.0 +0.3
        comp=Z,26nm,0.7s
SQTA                                eS        sPKPab   09 58 46.2 -0.7
        comp=Z,33nm,1.0s
DAVA   Damuels          148.41 355  i PKPdf   PKPdf    09 58 19.1 -0.3
        comp=Z,52nm,0.8s,SNR=16
DAVA                                i PKiKP   PKPbc    09 58 23.5 +0.6
        comp=Z,52nm,0.8s
DAVA                                eS        sPKPab   09 58 46.7 -0.4
        comp=Z,65nm,1.6s
DAVA   Damuels          148.41 355  i PKPdf   PKPdf    09 58 19.1 -0.3
        comp=Z,52nm,0.8s,SNR=16
DAVA                                i PKiKP   PKPbc    09 58 23.5 +0.6
        comp=Z,52nm,0.8s
DAVA                                eS        sPKPab   09 58 46.7 -0.4
        comp=Z,65nm,1.6s
LOR    Lormes           148.51   3  ePKIKP    PKPdf    09 58 19.1 -0.3
LOR                                  pmax     pmax
        comp=Z,70nm,0.9s
MMAI   Mount Meron Ar   148.52 308   PKPbc    PKPbc    09 58 24.2 +0.7
        comp=Z,40nm,0.7s,baz=65,slow=4.1,SNR=29
FRGS   Fruska Gora      148.53 341  eP        PKPbc    09 58 23.1  0.0
OBKA   Obir             148.56 349  i PKPdf   PKPdf    09 58 18.6 -1.0
        comp=Z,15nm,0.9s,SNR=6.5
OBKA                                ePKiKP    PKPbc    09 58 22.9 -0.3
        comp=Z,19nm,0.7s
OBKA   Obir             148.56 349  i PKPdf   PKPdf    09 58 18.6 -1.0
        comp=Z,15nm,0.9s,SNR=6.5
OBKA                                ePKiKP    PKPbc    09 58 22.9 -0.3
        comp=Z,19nm,0.7s
FETA   Feichten         148.60 354  i PKPdf   PKPdf    09 58 19.6 -0.1
        comp=Z,51nm,1.1s,SNR=20
FETA                                i PKiKP   PKPbc    09 58 24.0 +0.6
        comp=Z,51nm,1.1s
FETA                                eS        sPKPab   09 58 47.4 -0.6
        comp=Z,47nm,1.4s
FETA   Feichten         148.60 354  i PKPdf   PKPdf    09 58 19.6 -0.1
        comp=Z,51nm,1.1s,SNR=20
FETA                                i PKiKP   PKPbc    09 58 24.0 +0.6
        comp=Z,51nm,1.1s
FETA                                eS        sPKPab   09 58 47.4 -0.6
        comp=Z,47nm,1.4s
MYKA   Terra Mystica    148.60 350  i PKPdf   PKPdf    09 58 18.9 -0.7
        comp=Z,30nm,0.6s,SNR=13
MYKA                                i PKPbc   PKPbc    09 58 22.8 -0.5
        comp=Z,30nm,0.6s
MYKA   Terra Mystica    148.60 350  i PKPdf   PKPdf    09 58 18.9 -0.7
        comp=Z,30nm,0.6s,SNR=13
MYKA                                i PKPbc   PKPbc    09 58 22.8 -0.5
        comp=Z,30nm,0.6s
ABTA   Abfaltersbach    148.66 352  i PKPdf   PKPdf    09 58 19.3 -0.5
        comp=Z,48nm,0.7s,SNR=23
ABTA                                i PKiKP   PKPbc    09 58 23.3 -0.2
        comp=Z,48nm,0.7s
ABTA                                i S       sPKPab   09 58 46.6 -1.5
        comp=Z,28nm,1.3s
ABTA   Abfaltersbach    148.66 352  i PKPdf   PKPdf    09 58 19.3 -0.5
        comp=Z,48nm,0.7s,SNR=23
ABTA                                i PKiKP   PKPbc    09 58 23.3 -0.2
        comp=Z,48nm,0.7s
ABTA                                i S       sPKPab   09 58 46.6 -1.5
        comp=Z,28nm,1.3s
SSF    Saint Saulge     148.69   4  ePKIKP    PKPdf    09 58 19.5 -0.1
SSF                                  pmax     pmax
        comp=Z,116nm,1.0s
MFF    Saint Martin d   148.78   9  ePKIKP    PKPdf    09 58 19.3 -0.5
MFF                                  pmax     pmax
        comp=Z,141nm,1.4s
WALJ   Wala             148.81 306   P        PKiKP    09 58 25.3 -0.3
DAVOX  Davos/Dischmat   148.91 355   PKP      PKPdf    09 58 20.2 -0.1
        comp=Z,39nm,0.9s,baz=295,slow=1.9,SNR=14
DAVOX                                PKPbc    PKiKP    09 58 25.1 -0.5
        comp=Z,47nm,0.7s,baz=213,slow=1.1,SNR=42
AVF    Avril sur Loir   148.96   4  ePKIKP    PKPdf    09 58 19.5 -0.6
AVF                                  pmax     pmax
        comp=Z,67nm,1.0s
LJU    Ljubljana        149.01 349  eP        PKPdf    09 58 19.8 -0.4
CRES   Cresnjev         149.03 347  eP        PKPdf    09 58 20.0 -0.2
FUORN  Ofenpass-Fuorn   149.04 355   PFAKE             09 58 30.0 +1.1
FUORN                                LR       LR
        comp=Z,300nm,20.0s
CSS    Mathiatis        149.10 313  ePKPdf    PKPdf    09 58 19.9 -0.8
CSS                                 ePKPbc    PKPbc    09 58 25.1 +0.2
CSS                                 ePKPab    PKPab    09 58 29.7 +0.4
CSS                                  LR       LR
        comp=Z,900nm,19.0s
CSS    Mathiatis        149.10 313   P        PKPbc    09 58 24.6 -0.3
SMF    Signal de Mont   149.13   3  ePKIKP    PKPdf    09 58 21.1 +0.7
SMF                                  pmax     pmax
        comp=Z,74nm,1.1s
BGF    Bois d'Agland    149.15   5  ePKIKP    PKPdf    09 58 20.7 +0.3
BGF                                  pmax     pmax
        comp=Z,91nm,0.9s
TEKS   Tekeris          149.17 341  eP        PKPbc    09 58 24.3 -0.4
VISS   Visnje           149.18 348  i PKPdf   PKPdf    09 58 20.3 -0.2
VISS                                i PKPbc   PKPbc    09 58 24.8  0.0
LISJ   El Lisan         149.20 305   P        PKiKP    09 58 26.4 +0.1
CABF   La Chapelle      149.23   0  ePKIKP    PKPdf    09 58 20.8 +0.2
CABF                                 pmax     pmax
        comp=Z,143nm,1.0s
JAVS   Javornik         149.24 349  i PKPdf   PKPdf    09 58 20.2 -0.5
JAVS                                i PKPbc   PKPbc    09 58 24.6 -0.3
JDRJ   Daraweish        149.25 304   P        PKiKP    09 58 26.3 -0.4
TUE    Stuetta          149.26 356  ePKPdf    PKPdf    09 58 21.4 +0.6
TUE                                 ePKPbc    PKPbc    09 58 25.6 +0.4
TUE                                 ePKPab    PKPab    09 58 30.2 +0.5
TUE                                  LR       LR
        comp=Z,1µm,18.0s
ISP    Isparta          149.30 320   PFAKE             09 58 30.0 -0.1
ISP                                  LR       LR
        comp=Z,400nm,19.0s
ISP    Isparta          149.30 320⇓ iP        PKPbc    09 58 25.2 -0.2
LEF    Lefka            149.32 314⇓ iP        PKPbc    09 58 25.8 +0.4
CEY    Cerknica         149.32 349  eP        PKPdf    09 58 20.6 -0.1
KDZ    Kurdzhali        149.34 331   P        PKPbc    09 58 24.0 -1.3
KDZ    Kurdzhali        149.34 331   P        PKPbc    09 58 24.0 -1.3
TCF    Toulx Ste Croi   149.37   6  ePKIKP    PKPdf    09 58 20.3 -0.5
TCF                                  pmax     pmax
        comp=Z,144nm,1.5s
BOJS   Bojanci          149.38 348  i PKPdf   PKPdf    09 58 21.2 +0.4
BOJS                                i PKPbc   PKPbc    09 58 25.7 +0.5
DIVS   Divibare         149.43 340  eP        PKPbc    09 58 25.5  0.0
SENIN  Lac Senin/Sane   149.47 359   PFAKE             09 58 30.0 -0.6
SENIN                                LR       LR
        comp=Z,2µm,18.0s
TRI    Trieste          149.47 350   PFAKE             09 58 30.0 -0.3
TRI                                  LR       LR
        comp=Z,2µm,18.0s
VTS    Vitosha          149.51 335   PFAKE             09 58 30.0 -0.8
VTS                                  LR       LR
        comp=Z,700nm,18.0s
VTS    Vitosha          149.51 335   P        PKPbc    09 58 25.9 +0.1
VTS    Vitosha          149.51 335⇓ iP        PKiKP    09 58 26.7 -0.2
VTS    Vitosha          149.51 335   P        PKPbc    09 58 25.8  0.0
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VTS    Vitosha          149.51 335   P        PKPbc    09 58 25.8  0.0
BALB   Balikesir        149.61 326   PFAKE             09 58 30.0 -1.1
BALB                                 LR       LR
        comp=Z,18µm,18.0s
ALN    Alexandroupoli   149.62 329   PFAKE             09 58 30.0 -1.1
ALN                                  LR       LR
        comp=Z,2µm,18.0s
RZN    Rozhen           149.63 332   P        PKPbc    09 58 26.0 -0.2
RZN    Rozhen           149.63 332   P        PKPbc    09 58 26.0 -0.2
BLY    Banja Luka       149.65 344   PFAKE             09 58 30.0 -1.1
BLY                                  LR       LR
        comp=Z,500nm,19.0s
BLY    Banja Luka       149.65 344⇓ iP        PKiKP    09 58 26.9  0.0
BLY    Banja Luka       149.65 344  eP        PKPbc    09 58 26.2 +0.3
RDO    Rodhopi          149.68 330   P        PKPbc    09 58 25.9 -0.2
RIY    Rijeka           149.71 348  eP        PKPbc    09 58 25.7 -0.3
HAPS   Han Pijesak,BI   149.76 342  eP        PKPbc    09 58 25.9 -0.5
BBLS   Lazi&#263;i      149.82 341  eP        PKPbc    09 58 26.6 +0.1
MMB    Musomiste        150.15 333   P        PKPbc    09 58 26.0 -1.3
MMB    Musomiste        150.15 333   P        PKPbc    09 58 26.0 -1.3
KKB    Krupnik          150.20 334   P        PKPbc    09 58 27.0 -0.4
KKB    Krupnik          150.20 334   P        PKPbc    09 58 27.0 -0.4
SMTH   Samothraki Isl   150.20 330   P        PKPbc    09 58 26.7 -0.7
EIL    Elat             150.22 303   PKP      PKPdf    09 58 22.4 -0.2
        comp=Z,2.4nm,0.4s,baz=108,slow=12,SNR=4.0
EIL                                  PKPbc    PKiKP    09 58 28.4 -0.2
        comp=Z,44nm,1.0s,baz=26,slow=2.4,SNR=21
EIL    Elat             150.22 303   P        sPKPbc   09 58 46.3 -2.8
RJF    Les Rejaudoux    150.27   7  ePKIKP    PKPdf    09 58 21.9 -0.3
RJF                                  pmax     pmax
        comp=Z,187nm,1.4s
KAVA   Kavala           150.28 331   P        PKPbc    09 58 27.3 -0.2
NVR    Nevrokopi        150.29 333   P        PKPbc    09 58 27.2 -0.4
EZN    Ezine            150.29 328⇓ iP        PKPbc    09 58 27.9 +0.3
PLE    Pljevlja         150.31 340⇑ iPKP      PKiKP    09 58 28.2 -0.3
LPL    La Plagne        150.32 359  ePKIKP    PKPdf    09 58 22.7 +0.1
LPL                                  pmax     pmax
        comp=Z,62nm,1.0s
LPG    La Plagne        150.34 359  ePKIKP    PKPdf    09 58 22.8 +0.1
LPG                                  pmax     pmax
        comp=Z,70nm,1.0s
SSB    Saint Sauveur    150.53   2  ePKPdf    PKPdf    09 58 23.5 +0.8
SSB                                 ePKPbc    PKiKP    09 58 29.0 +0.2
SSB                                 ePKPab    PKPab    09 58 33.1 -1.6
SSB                                  LR       LR
        comp=Z,700nm,20.0s
IVA    Berane           150.55 339⇑ iPKP      PKiKP    09 58 28.8 -0.2
UPM    Unac-Piva        150.58 341⇑ iPKP      PKPbc    09 58 28.3 -0.1
UPM    Unac-Piva        150.58 341  eP        PKPbc    09 58 27.9 -0.5
SRS    Serrai           150.59 333   P        PKPbc    09 58 27.4 -0.9
KOME   Kolasin          150.69 340⇑ iPKP      PKPbc    09 58 28.8 +0.2
CAF    Calviac          150.70   6  ePKIKP    PKPdf    09 58 22.8 -0.1
CAF                                  pmax     pmax
        comp=Z,116nm,1.3s
STIP   Stip             150.71 335  i PKP     PKPbc    09 58 27.9 -0.7
PRK    Paraskevi        150.75 327   P        PKiKP    09 58 29.3  0.0
SKO    Skopje           150.77 336  i PKP     PKPbc    09 58 29.0 +0.3
BNI    Bardonecchia     150.79 359  ePKPdf    PKPdf    09 58 22.7 -0.5
BNI                                 ePKPbc    PKiKP    09 58 30.2 +0.7
BNI                                 ePKPab    PKPab    09 58 37.7 +1.8
BNI                                  LR       LR
        comp=Z,2µm,21.0s
BNI    Bardonecchia     150.79 359  ePKIKP    PKPdf    09 58 22.7 -0.5
BNI                                 e                  09 58 30.2
BNI                                 e                  09 58 37.7
BNI                                  MLR      MLR
        comp=Z,2µm,21.0s
LIA    Limnos Island    150.81 329   P        PKPbc    09 58 28.2 -0.6
MBAR   Mbarara          150.86 238  ePKPbc    PKiKP    09 58 30.5 -0.1
MBAR                                 LR       LR
        comp=Z,400nm,20.0s
VAY    Valandovo        150.87 334  i PKP     PKPbc    09 58 28.5 -0.4
RRL    Rocca Remolon    150.92 359   P        PKiKP    09 58 30.4 +0.6
ORIF   Oris-en-Rattie   150.92   1  ePKIKP    PKPdf    09 58 23.3 -0.1
ORIF                                 pmax     pmax
        comp=Z,34nm,0.9s
FETY   Fethiye          150.94 320   P        PKPbc    09 58 29.2 -0.1
NKME   Niksic           150.95 341⇑ iPKP      PKPbc    09 58 29.4 +0.2
VIVF   Saint-Julien-l   150.95   2  ePKIKP    PKPdf    09 58 23.4 +0.1
VIVF                                 pmax     pmax
        comp=Z,66nm,1.3s
BRY    Bratogost        150.96 341⇑ iPKP      PKPbc    09 58 28.9 -0.4
BRY    Bratogost        150.96 341  eP        PKPbc    09 58 28.7 -0.6
SIGR   SIGRI            150.99 327   P        PKPbc    09 58 28.5 -0.8
PGAV   Gavieira, Arco   151.03  23  ePKPdf    PKPdf    09 58 24.7 +1.1
PGAV   Gavieira, Arco   151.03  23  ePKPbc    PKiKP    09 58 30.0  0.0
OUR    Ouranopolis      151.05 331   P        PKPbc    09 58 28.7 -0.7
MBDF   Montbardon       151.11 359  ePKIKP    PKPdf    09 58 23.5 -0.2
MBDF                                 pmax     pmax
        comp=Z,38nm,0.9s
PDG    Podgorica        151.16 340⇓ iP        PKiKP    09 58 29.9 -0.2
PDG    Podgorica        151.16 340  eP        PKPbc    09 58 29.0 -0.5
TTG    Podgorica        151.16 340⇑ iPKP      PKPbc    09 58 29.5  0.0
TTG    Podgorica        151.16 340  ePKPbc    PKPbc    09 58 28.8 -0.8
TTG                                  LR       LR
        comp=Z,3µm,20.0s
TTG    Podgorica        151.16 340  ePKIKP    PKPbc    09 58 28.8 -0.8
TTG                                  MLR      MLR
        comp=Z,3µm,20.0s
CEME   Cevo             151.16 340⇑ iPKP      PKPbc    09 58 29.4 -0.3
TREB   Trebinje         151.19 341  eP        PKPbc    09 58 29.2 -0.4
SACV   Santiago Islan   151.21  87  ePKPbc    PKPbc    09 58 28.8 -1.7
STON   Ston             151.24 342  eP        PKPbc    09 58 29.0 -0.7
PLG    Polygyros        151.26 332   P        PKPbc    09 58 28.8 -1.1
PCAB   Cabril           151.34  23  ePKPbc    PKiKP    09 58 30.9 +0.3
HCY    Herceg Novi      151.39 341  eP        PKPbc    09 58 29.2 -0.9
PHP    Peshkopia        151.40 337   P        PKPbc    09 58 29.9 -0.3
DRME   Dracevica, Mon   151.40 340⇑ iPKP      PKPbc    09 58 30.2 +0.1
DRME   Dracevica, Mon   151.40 340  eP        PKPbc    09 58 29.4 -0.7
VLC    Villacollemand   151.46 354   PFAKE             09 58 40.0 +1.4
VLC                                  LR       LR
        comp=Z,2µm,19.0s
CHOS   Chios island     151.50 326   P        PKPbc    09 58 30.2 -0.4
ULC    Ulcinj           151.58 339⇑ iPKP      PKPbc    09 58 30.8 +0.2
PBRG   Braganca         151.72  21  ePKPdf    PKPdf    09 58 25.3 +0.7
PBRG   Braganca         151.72  21  ePKPbc    PKiKP    09 58 31.4  0.0
POLO   Lamas de Olo     151.72  23  ePKPdf    PKPdf    09 58 25.9 +1.2
POLO   Lamas de Olo     151.72  23  ePKPbc    PKiKP    09 58 32.1 +0.7
OHR    Ohrid            151.76 336  i PKP     PKPbc    09 58 30.9 -0.2
PVRL   Vila Real        151.84  23  ePKPbc    PKiKP    09 58 32.1 +0.5
LIT    Litokhoron       151.91 333   PFAKE             09 58 40.0 -0.6
LIT                                  LR       LR
        comp=Z,600nm,18.0s
LIT    Litokhoron       151.91 333   P        PKPbc    09 58 30.3 -1.1
MVO    Moncorvo         152.19  22  ePKPdf    PKPdf    09 58 26.6 +1.2
MVO    Moncorvo         152.19  22  ePKPbc    PKiKP    09 58 32.8 +0.4
PVIS   Viseu            152.25  24  ePKPdf    PKPdf    09 58 26.2 +0.7
PVIS   Viseu            152.25  24  ePKPbc    PKiKP    09 58 32.6 +0.1
MTLF   Montolieu        152.28   6  ePKIKP    PKPdf    09 58 25.2 -0.2
MTLF                                 pmax     pmax
        comp=Z,29nm,1.1s
ETSF   Etsaut           152.32  11  ePKIKP    PKPdf    09 58 25.7 +0.2
ETSF                                 pmax     pmax
        comp=Z,74nm,1.1s
EPF    Esparros         152.34   9  ePKIKP    PKPdf    09 58 25.4 -0.1
EPF                                  pmax     pmax
        comp=Z,47nm,1.4s
COI    Coimbra          152.49  25   PFAKE             09 58 40.0 -3.0
COI                                  LR       LR
        comp=Z,500nm,20.0s
PCAS   Casmilo, Conde   152.58  25  ePKPbc    PKiKP    09 58 33.4 +0.3
MTE    Manteigas        152.66  23  ePKPdf    PKPdf    09 58 26.9 +0.8
MTE    Manteigas        152.66  23  ePKPbc    PKiKP    09 58 33.8 +0.4
MEV    Metsovon         152.71 334   P        PKiKP    09 58 34.2 +0.6
AQU    L'Aquila         152.78 348   PFAKE             09 58 40.0 -4.2
AQU                                  LR       LR
        comp=Z,400nm,20.0s
ATAL   Atalanti         152.80 330   P        PKPdf    09 58 24.8 -1.5
KARP   Karpathos        152.83 320   PFAKE             09 58 40.0 -4.7
KARP                                 LR       LR
        comp=Z,1µm,20.0s
LKR    Lokris           152.84 330   P        PKPbc    09 58 32.4 -1.1
PTL    Penteli          152.89 328   P        PKPbc    09 58 32.4 -1.3
PTOM   Tomar            152.98  25  ePKPdf    PKPdf    09 58 27.8 +1.3
PTOM   Tomar            152.98  25  ePKPbc    PKiKP    09 58 34.6 +0.6
PCBR   Castelo Branco   153.17  24  ePKPdf    PKPdf    09 58 28.1 +1.4
PCBR   Castelo Branco   153.17  24  ePKPbc    PKiKP    09 58 34.7 +0.4
EVR    Evrytania        153.18 332   P        PKPbc    09 58 34.0 -0.4
DSF    Desfina          153.26 331   P        PKPbc    09 58 33.1 -1.4
ANX    Ano Chora        153.39 332   P        PKPdf    09 58 27.2  0.0
KALE   Kalithea         153.46 331   P        PKPbc    09 58 34.3 -0.7
SERG   Sergoula         153.48 331   P        PKPbc    09 58 34.3 -0.7
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PMTG   Montargil        153.52  26  ePKPdf    PKPdf    09 58 28.3 +1.0
PMTG   Montargil        153.52  26  ePKPbc    PKiKP    09 58 35.4 +0.3
EFP    Efpalio          153.53 332   P        PKiKP    09 58 35.4 +0.3
PMRV   Marv??o          153.56  24  ePKPdf    PKPdf    09 58 28.6 +1.2
PMRV   Marv??o          153.56  24  ePKPbc    PKiKP    09 58 35.9 +0.7
DID    Didima           153.62 328   P        PKPbc    09 58 33.8 -1.5
GUR    Goura            153.72 330   P        PKPbc    09 58 34.6 -1.0
PNCL   Nicolau / Gran   154.19  28  ePKPdf    PKPdf    09 58 29.4 +1.2
PNCL   Nicolau / Gran   154.19  28  ePKPbc    PKiKP    09 58 37.1 +0.6
ITM    Ithomi           154.53 330   PFAKE             09 58 40.0 +2.7
ITM                                  LR       LR
        comp=Z,500nm,20.0s
PAB    San Pablo        154.54  19  ePKPdf    PKPdf    09 58 29.4 +0.6
PAB                                 ePKPbc    PKiKP    09 58 37.7 +0.4
PAB                                 ePKPab    PKPab    09 58 52.8 +0.9
PAB                                  LR       LR
        comp=Z,600nm,22.0s
PAB    San Pablo        154.54  19  ePKIKP    PKPdf    09 58 29.4 +0.6
PAB                                 e                  09 58 37.7
PAB                                  MLR      MLR
        comp=Z,600nm,22.0s
ESDC   Sonseca Array    154.54  19   PKP      PKPdf    09 58 29.2 +0.4
        comp=Z,3.8nm,0.7s,baz=343,slow=2.6,SNR=21
ESDC                                 PKPbc    PKiKP    09 58 37.6 +0.3
        comp=Z,7.8nm,0.9s,baz=331,slow=2.6,SNR=19
ESDC                                 PKPab    PKPab    09 58 51.0 -0.8
        comp=Z,5.9nm,0.9s,baz=319,slow=3.1,SNR=8.3
ESDC                                 PP       PP       10 02 27.5 +1.2
        comp=Z,0.2nm,0.3s,baz=325,slow=5.7,SNR=5.0
ESLA   Sonseca Array    154.54  19   PFAKE             09 58 40.0 +2.7
ESLA                                 LR       LR
        comp=Z,500nm,20.0s
MESJ   Messejana        154.55  27  ePKPdf    PKPdf    09 58 30.5 +1.7
MORF   Marmelete        154.79  29  ePKPbc    PKiKP    09 58 38.4 +0.6
TIP    Timpagrande      154.90 340   PFAKE             09 58 40.0 +2.0
TIP                                  LR       LR
        comp=Z,3µm,19.0s
TIP    Timpagrande      154.90 340⇓ iP        PKiKP    09 58 38.5 +0.5
CEL    Celeste          156.02 341   PFAKE             09 58 40.0 +9.2
CEL                                  LR       LR
        comp=Z,3µm,20.0s
SESP   Santiago Espad   156.40  18   P        PKPdf    09 58 32.5 +1.0
SFS    San Fernando     156.58  26   PFAKE             09 58 40.0 +8.5
SFS                                  LR       LR
        comp=Z,300nm,19.0s
CLTB   Caltabellotta    157.40 345   PFAKE             09 58 40.0 +7.3
CLTB                                 LR       LR
        comp=Z,2µm,22.0s
WDD    Wied Dalam       158.67 341   PFAKE             09 58 50.0  +16
WDD                                  LR       LR
        comp=Z,700nm,22.0s
JBK    JBK              159.86  22   P        PKPdf    09 58 37.1 +1.3
KEST   Kesra            159.91 353   PKP      PKPdf    09 58 34.9 -0.8
        comp=Z,4.2nm,0.8s,baz=237,slow=8.2,SNR=4.9
KEST                                 PKPab    PKPab    09 59 15.0  0.0
        comp=Z,8.2nm,0.9s,baz=238,slow=3.1,SNR=5.1
KEST   Kesra            159.91 353  ePKPdf    PKPdf    09 58 34.9 -0.8
KEST                                ePKPab    PKPab    09 59 15.0  0.0
KEST                                 LR       LR
        comp=Z,700nm,20.0s
CZD    Col de Zad       159.98  29   P        PKPdf    09 58 39.0 +2.8
OUZM   OUZ              160.78  36   P        PKPdf    09 58 39.0 +2.1
FIGM   Figuig           162.31  21   P        PKPdf    09 58 40.0 +1.5
LIC    Lamto            165.44 129  eP        PKPab    09 59 40.0 +0.1
        comp=Z,160nm,1.3s
LIC    Lamto            165.44 129  eP        PKPdf    09 58 40.9 -0.8
        comp=Z,73nm,1.4s
TIC    Toumodi          165.72 128  eP        PKPab    09 59 41.5 +0.4
TIC    Toumodi          165.72 128  eP        PKPdf    09 58 41.2 -0.7
KIC    Kosan Boka       165.75 130  eP        PKPab    09 59 41.4 +0.2
        comp=Z,198nm,1.4s
KIC    Kosan Boka       165.75 130  eP        PKPdf    09 58 37.5 -4.4
        comp=Z,104nm,1.4s
DBIC   Dimbokro         165.86 128   PKP      PKPdf    09 58 41.2 -0.7
        comp=Z,11nm,1.0s,baz=162,slow=1.6,SNR=6.1
DBIC                                 PKPab    PKPab    09 59 41.8 +0.1
        comp=Z,40nm,1.0s,baz=205,slow=5.0,SNR=13
TOA0   Torodi Ar. Sit   174.89 120  ePKPdf    PKPdf    09 58 45.8 -1.1
TOA0                                ePKPab    PKPab    10 00 21.8 +0.1
TORD   Torodi Ar. Bea   174.89 120   PKP      PKPdf    09 58 44.7 -2.2
        comp=Z,9.7nm,1.1s,baz=316,slow=1.1,SNR=35
TORD                                 PKPab    PKPab    10 00 20.6 -1.1
        comp=Z,25nm,1.1s,baz=260,slow=3.4,SNR=22
TORD                                 PP       PP       10 04 12.9 -1.1
        comp=Z,6.5nm,1.1s,baz=234,slow=5.5,SNR=12
TOA1   Torodi Ar. Sit   174.89 120  ePKPdf    PKPdf    09 58 44.7 -2.3
TOA1                                ePKPab    PKPab    10 00 20.6 -1.1
TOA1                                ePP       PP       10 04 12.9 -1.1
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ISCJB ***02*** *09:39:05.4±0.3, 27°.79S±0°.02×66°.81W±0°.03, h177^{km}±3^{km}, mb4.2/19, Error ellipse: s-maj=4.7km s-min=3.5km az=4.6*

IDC ***02*** *09:39:06.1±1.6, 27°.77S×66°.59W, h158^{km}±14^{km}, mb3.8/6, mb1 3.9/11, mb1mx3.7/34, mbtmp4.3/11, Error ellipse: s-maj=18.7km s-min=15.0km az=84.0*

VAO ***02*** *09:39:06.6±0.5, 27°.74S×66°.79W, h176^{km}±6^{km}, mb4.4*

SJA ***02*** *09:39:06.0±0.7, 27°.84S×66°.63W, h180^{km}±7^{km}, ML3.9, MW4.1*

NEIC ***02*** *09:39:07.0±0.0, 27°.86S×66°.92W, h187^{km}, mb4.4/14, ML4.4(GUC), After GUC.*

GUC ***02*** *09:39:07.2±0.6, 27°.89S×66°.95W, h192^{km}±6^{km}, ML4.5*

ISC 02 09:39:06.3±0.6, **27°.79S**±0°.04×**66°.81W**±0°.04, **h171**^{km}±5^{km}, **n76**, σ**1§64**/104, **mb4.3**/19, **4C-1D, Catamarca Province**

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Code   Station Name          Δ°  AZ°    Phase ID           Time      Res
                                        Op       ISC       h  m  s   ISC
CYA    Choya               1.10 126   i P      Pn        09 39 34.1 +0.2
CYA                                   i S      Sn        09 39 54.2 -1.0
CYA                                     IAML             09 39 54.5
        comp=Z,266nm,0.5s
CYA    Choya               1.10 126     IAML             09 39 55.1
        comp=N,883nm,0.6s
VCA    Vinchina            1.55 232   i P      Pn        09 39 39.7 +1.5
VCA                                   i S      Sn        09 40 05.5 +2.7
VCA                                     IAML             09 40 08.0
        comp=Z,5µm,0.5s
VCA    Vinchina            1.55 232⇑ iP        Pn        09 39 39.6 +1.4
VCA                                   i S      Sn        09 40 04.7 +1.8
VCA                                     IAML             09 40 06.2
        comp=E,14µm,0.4s
ACLC   CERRO LA CRUZ       1.63 184   i P      Pn        09 39 39.6 +0.6
ACLC                                  i S      Sn        09 40 04.9 +0.5
AHML   Horco Molle         1.65  53   i P      Pn        09 39 39.1 +0.1
AHML                                  i S      Sn        09 40 03.5 -0.9
AHML   Horco Molle         1.65  53     IAML             09 40 04.8
        comp=N,513nm,0.5s
FSA    Cafayete            1.83  24   i P      Pn        09 39 42.6 +1.5
FSA                                   i S      Sn        09 40 09.1 +1.1
FSA                                     IAML             09 40 11.2
        comp=Z,223nm,0.8s
GO03   Copiap              3.05 273   ePn      Pn        09 39 56.2 +1.1
GO03                                  eSn      Sn        09 40 33.1  0.0
GO03   Copiap              3.05 273⇑ iP        Pn        09 39 56.2 +1.1
GO03                                  i S      Sn        09 40 32.9 -0.3
GO03                                    IAML             09 40 33.7
        comp=N,4µm,0.3s
GO02   Mina Guanaco        3.62 316   ePn      Pn        09 40 05.1 +2.5
GO02                                  eSn      Sn        09 40 47.6 +1.2
GO02   Mina Guanaco        3.62 316⇓ iP        Pn        09 40 05.0 +2.5
GO02                                  i S      Sn        09 40 48.4 +2.0
LCO    Las Campanas        3.64 250   ePn      Pn        09 40 03.3 +0.5
LCO                                   eSn      Sn        09 40 46.7 -0.1
LCO    Las Campanas        3.64 250⇑ iP        Pn        09 40 03.2 +0.5
LCO                                   eS       Sn        09 40 45.7 -1.1
LCO    Las Campanas        3.64 250   eP       Pn        09 40 03.5 +0.7
CFA    Coronel Fontan      4.00 198     P      Pn        09 40 06.9 -0.2
        baz=28,slow=17
CFA                                     S      Sn        09 40 51.8 -2.9
        comp=N,107nm,0.3s,baz=174,slow=19,SNR=33
GO04   Tololo Observa      4.23 235   ePn      Pn        09 40 10.1 -0.1
GO04                                  eSn      Sn        09 41 00.5 +0.3
GO04   Tololo Observa      4.23 235⇑ iP        Pn        09 40 10.2 -0.1
GO04                                  eS       Sn        09 40 58.4 -1.9
LSCH   La Serena           4.43 241   eP       Pn        09 40 11.8 -0.8
LSCH                                  i S      Sn        09 41 01.7 -2.8
PB14   IPOC Station P      4.51 313   eP       Pn        09 40 15.6 +1.5
PB10   IPOC Station P      5.44 321   ePn      Pn        09 40 27.0 +1.1
PB10                                  eSn      Sn        09 41 27.9 -0.4
LVC    Limon Verde         5.50 339     P      Pn        09 40 28.6 +1.6
        comp=N,6.6nm,0.3s,baz=143,slow=12,SNR=60
LVC                                     S      Sn        09 41 29.0 -1.3
        comp=N,12nm,0.3s,baz=268,slow=22,SNR=33
```

PB04	IPOC Station P	6.22	330	*e*Pn	Pn	09 40 36.4	0.0
PB04				*e*Sn	Sn	09 41 44.9	-2.2
PEL	Peldehue	6.30	211	*e*Pn	Pn	09 40 36.2	-0.9
PEL				*e*Sn	Sn	09 41 46.9	-1.7
PB01	IPOC Station P	7.15	339	*e*Pn	Pn	09 40 48.7	+0.2
PB01				*e*Sn	Sn	09 42 06.2	-2.8
GO01	Chusmiza	8.38	344	*e*Pn	Pn	09 41 04.5	-0.6
GO01				*e*Sn	Sn	09 42 36.2	-2.9
PB11	IPOC Station P	8.41	341	*e*Pn	Pn	09 41 03.4	-1.9
PB11				*e*Sn	Sn	09 42 29.9	-9.4
GO05	Huala	8.42	210	*e*Pn	Pn	09 41 01.2	-3.9
GO05				*e*Sn	Sn	09 42 36.3	-2.9
CPUP	Villa Florida	8.57	82	P	Pn	09 41 04.7	-2.5
	comp=N,0.5nm,0.3s,baz=257,slow=10,SNR=15						
CPUP	Villa Florida	8.57	82	*e*Pn	Pn	09 41 04.8	-2.5
CPUP				*e*Sn	Sn	09 42 49.0	+6.1
CPUP	Villa Florida	8.57	82	*e*P	Pn	09 41 05.3	-1.9
MNMC	Minye Minye	8.99	343	*e*Pn	Pn	09 41 11.4	-1.7
MNMC				*e*Sn	Sn	09 42 50.0	-3.5
LPAZ	La Paz	11.52	354	P	Pn	09 41 46.2	-0.2
	comp=N,1.1nm,0.3s,baz=163,slow=8.9,SNR=30						
LPAZ				S	Sn	09 43 49.8	-4.7
	comp=N,0.2nm,0.3s,baz=266,slow=19,SNR=3.6						
LPAZ	La Paz	11.52	354	*e*Pn	Pn	09 41 47.1	+0.7
LPAZ				*e*Sn	Sn	09 43 53.4	-1.1
PLTB	Pedras Altas	12.13	112	*e*P	Pn	09 41 55.3	+1.7
GO06	Curarrehue	12.38	197	*e*Pn	Pn	09 41 55.9	-1.0
AQDB	Aquidauana	12.48	57	*e*P	Pn	09 41 57.6	-0.6
SIV	San Ignacio	12.89	26	P	Pn	09 42 02.8	-0.7
	comp=N,0.3nm,0.3s,baz=221,slow=14,SNR=21						
ITRB	Iturama	17.06	65	*e*P	P	09 42 54.4	+0.5
RCLB	Rio Claro- Sao	18.25	77	*e*P	P	09 43 06.8	-0.2
BDFB	Brasilia	21.20	59	P	P	09 43 37.7	-1.1
	comp=N,4.0nm,0.6s,baz=227,slow=13,SNR=6.0						
BDFB	Brasilia	21.20	59	*e*P	P	09 43 37.7	-1.1
BDFB				*e*P	P	09 43 39.9	+1.1
GO09	Cerro Castillo	23.82	189	*e*P	P	09 44 01.9	-1.5
	comp=N,62nm,1.6s						
PTGA	Pitinga	27.70	15	P	P	09 44 38.2	-0.4
	comp=N,3.2nm,0.4s,baz=202,slow=18,SNR=8.4						
PTGA	Pitinga	27.70	15	*e*P	P	09 44 39.3	+0.6
	comp=N,4.4nm,0.8s						
PTGA	Pitinga	27.70	15	*e*P	P	09 44 38.5	-0.1
ESPN	Las Esperanzas	43.22	335	*e*P	P	09 46 48.7	-1.9
	comp=N,11nm,1.3s						
CCIG	Comitan	50.22	328	*e*P	P	09 47 45.5	+0.2
	comp=N,7.0nm,1.2s						
TEIG	Tepich	52.06	334	*e*P	P	09 47 57.9	-0.8
	comp=N,15nm,1.3s						
VNA3	Neumayer Olymp	53.53	160	P	P	09 48 10.2	+1.3
VNA1	Neumayer--Stat	53.74	159	P	P	09 48 12.1	+1.7
SNAA	Sanae	55.74	160	P	P	09 48 25.9	+1.1
SNAA	Sanae	55.74	160	*e*P	P	09 48 25.7	+0.9
	comp=N,3.6nm,0.8s						
QSPA	South Pole Qui	62.43	180	*e*P	P	09 49 12.8	+1.9
	comp=N,6.6nm,0.8s						
Z50A	Ashland	63.37	342	*e*P	P	09 49 18.3	+1.0
	comp=N,10nm,1.4s						
X48A	Hartselle	64.80	342	*e*P	P	09 49 27.4	+0.8
	comp=N,13nm,1.4s						
WVT	Waverly	66.60	342	*e*P	P	09 49 38.0	0.0
	comp=N,7.6nm,0.8s						
TXAR	Lajitas Array	66.87	325	P	P	09 49 41.2	+1.2
	comp=N,0.3nm,0.5s,baz=145,slow=8.1,SNR=6.2						
FCAR	Ozark Folk Cen	67.69	338	*e*P	P	09 49 46.1	+1.2
	comp=N,7.1nm,1.3s						
PBMO	Poplar Bluff	67.96	340	*e*P	P	09 49 48.0	+1.3
	comp=N,6.6nm,0.7s						
ANMO	Albuquerque	72.79	327	P	P	09 50 18.2	+1.9
	comp=N,0.8nm,0.5s,baz=135,slow=9.8						
ECSD	EROS Data Cent	76.25	338	*e*P	P	09 50 37.1	+1.3
	comp=N,5.2nm,1.2s						
MAW	Mawson	77.78	162	P	P	09 50 45.4	+1.4
	comp=N,4.0nm,0.8s,baz=201,slow=4.0,SNR=8.2						
TORD	Torodi Ar. Bea	77.79	68	P	P	09 50 43.6	-1.3
	comp=N,1.4nm,0.6s,baz=286,slow=7.1,SNR=15						
TOA1	Torodi Ar. Sit	77.79	68	*e*P	P	09 50 43.6	-1.3
BOSA	Boshof	78.88	116	P	P	09 50 52.2	+1.2
	comp=N,1.5nm,0.3s,baz=233,slow=6.3,SNR=4.3						
ASAR	Alice Springs	125.08	203	PKP	PKiKP	09 57 47.5	+0.2
	comp=N,0.9nm,0.5s,baz=136,slow=1.7,SNR=12						
ASAR				pPKP	pPKPdf	09 58 31.3	-0.7
	comp=N,0.4nm,0.6s,baz=134,slow=1.4,SNR=3.0						
WR1	Warramunga Arr	128.32	206	*e*PKPdf	PKiKP	09 57 53.8	0.0
WRA	Warramunga Arr	128.32	206	PKP	PKiKP	09 57 53.8	0.0
	comp=N,0.9nm,0.3s,baz=167,slow=2.2,SNR=14						
KURBB	Kurchatov Arra	145.26	39	PKPbc	PKPab	09 58 24.7	+1.1
	comp=N,5.8nm,0.8s,baz=297,slow=3.3,SNR=16						
AAK	Ala-Archa	145.41	54	PKPbc	PKPab	09 58 25.5	+0.8
	comp=N,13nm,0.7s,baz=195,slow=2.3,SNR=18						
ZAA1	Zalesovo Array	146.60	31	*e*PKPbc	PKPbc	09 58 27.1	-0.1
ZALV	Zalesovo Beam	146.60	31	PKPbc	PKPbc	09 58 27.1	-0.1
	comp=N,4.5nm,0.6s,baz=311,slow=3.4,SNR=8.8						
KSH	Kashi	147.10	59	*e*PKPbc	PKPdf	09 58 24.8	-2.1
KSH				pPKP	pPKPdf	09 59 07.2	-5.0
KSH				PKS	PKSdf	10 02 00.4	-1.8
MK32	Makanchi Array	149.24	44	*e*PKPbc	PKiKP	09 58 35.8	+0.2
MKAR	Makanchi Array	149.24	44	PKPbc	PKiKP	09 58 35.8	+0.2
	comp=N,3.8nm,0.7s,baz=301,slow=2.8,SNR=14						

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*ISK **02** 09:40:49.6, 39°.72N×30°.69E, h8^{km}, ML2.0/8, Suspected Mining explosion.*

*ISCJB **02** 09:40:50.5±0.4, 39°.71N±0°.02×30°.68E±0°.04, h0^{km}, Error ellipse: s-maj=4.9km s-min=3.0km az=151.5*

*DDA **02** 09:40:50.5, 39°.73N×30°.61E, h7^{km}±5^{km}, ML2.5*

ISC 02 09:40:50.1±0.8**, 39°.70N**±0°.03×**30°.71E**±0°.03**, h0^{km}, n15, σ1^{s}02**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESKT	Eskisehir	0.21	149	PG	Pg	09 40 54.7	+0.6
ESKT				SG	Sg	09 40 58.3	+1.5
BORA	Eskisehir	0.27	312	*i* P	Pg	09 40 55.6	+0.3
BORA				*i* S	Sg	09 40 58.2	-0.5
BORA				IAML_P			
	comp=Z,7µm,0.1s						
SRCK	Saricakaya, Es	0.35	349	PG	Pg	09 40 56.4	-0.4
SRCK				SG	Sg	09 41 01.8	+0.5
SRCK	Saricakaya, Es	0.35	349	*i* P	Pg	09 40 56.8	0.0
SRCK				*i* S	Sg	09 41 02.6	+1.2
SRCK				IAML_P			
	comp=Z,2µm,0.1s						
CIFT	Cifteler, Eski	0.43	141	PG	Pg	09 40 58.8	+0.3
CIFT				SG	Sb	09 41 06.2	-1.6
AUKIR	Kırka- Seyitga	0.45	198	*i* P	Pg	09 40 58.4	-0.2
AUKIR				*i* S	Sb	09 41 06.8	-1.4
SVRH	Sivrihisar-ESK	0.68	112	PG	Pg	09 41 02.8	-0.3
SVRH				SG	Sb	09 41 13.7	-1.1
GEYV	SAKARYA_Geyve	0.85	338	*i* P	Pn	09 41 08.9	-0.4
GEYV				*i* S	Sn	09 41 23.9	+1.5
MDUB	Mudurnu	0.86	26	PG	Pg	09 41 06.7	+0.1
BOLV	Bolvadin	1.00	169	*i* P	Pn	09 41 11.3	-0.2
BOLV				*i* S	Sn	09 41 26.9	+0.5
TVSB	Tavsanli	1.00	256	PG	Pg	09 41 09.2	-0.1
KIBS	BOLU	1.13	50	*i* P	Pn	09 41 13.1	-0.3
KIBS				*i* S	Sn	09 41 30.6	+0.8
KIBS				IAML_P			
	comp=Z,441nm,0.3s						
KIZT	Kizilcal	1.22	132	PN	Pb	09 41 13.8	-0.4
ULDT	Uludag	1.29	291	*i* P	Pb	09 41 15.2	-0.2
ULDT				*i* S	Sn	09 41 36.6	+3.0
ULDT				IAML_P			
	comp=Z,258nm,0.2s						
YLV	Yalova	1.34	311	PN	Pg	09 41 14.9	-1.0

ROM 02 09:56:10.7±0.1**, 43°.443N**±0°.006×**13°.13E**±0°.01**, h9^{km}, ML1.7**/13**, Error ellipse: s-maj=1.1km s-min=0.3km az=52.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CING	Cingoli	0.08	146	P	Pg	09 56 13.3	+0.4
CING				S	Sg	09 56 14.9	+0.4
CING				AML	AML		
	comp=E,1270µm,0.5s						
CING				AML	AML		
	comp=N,1335µm,0.1s						
CING				AML	AML		
	comp=N,1335µm,0.1s						
CING				AML	AML		
	comp=E,1270µm,0.5s						
CING				AML	AML		
	comp=N,1335µm,0.1s						
CING				AML	AML		
	comp=E,1270µm,0.5s						
EL6	Elcito	0.12	192	P	Pg	09 56 14.0	+0.5
EL6				S	Sg	09 56 16.1	+0.8
EL6				AML	AML		
	comp=E,776µm,0.5s						
EL6				AML	AML		
	comp=N,692µm,0.3s						
ARVD	Arcevia	0.15	292	P	Pg	09 56 14.4	+0.4
ARVD				S	Sg	09 56 17.1	+0.9
ARVD				AML	AML		
	comp=E,304µm,0.1s						
ARVD				AML	AML		
	comp=N,363µm,0.1s						
ARVD				AML	AML		
	comp=E,304µm,0.1s						
ARVD				AML	AML		
	comp=N,362µm,0.1s						
ARVD				AML	AML		
	comp=E,304µm,0.1s						
ARVD				AML	AML		
	comp=N,362µm,0.1s						
ARVD				AML	AML		
	comp=E,304µm,0.1s						
ARVD				AML	AML		
	comp=N,362µm,0.1s						
COR1	Corinaldo	0.21	333	P	Pg	09 56 16.6	+1.5
COR1				AML	AML		
	comp=E,1630µm,1.0s						
COR1				AML	AML		
	comp=N,1350µm,1.5s						
COR1				AML	AML		
	comp=N,1350µm,1.5s						
COR1				AML	AML		
	comp=E,1630µm,1.0s						
COR1				AML	AML		
	comp=N,1350µm,1.5s						
COR1				AML	AML		
	comp=E,1630µm,1.0s						
MPAG	Monte Paganucc	0.33	304	P	Pg	09 56 17.7	+0.4
MPAG				S	Sb	09 56 23.3	-1.0
MPAG				AML	AML		
	comp=E,75µm,0.7s						
MPAG				AML	AML		
	comp=N,88µm,0.3s						
MPAG				AML	AML		
	comp=E,75µm,0.7s						
MPAG				AML	AML		
	comp=N,88µm,0.3s						
MPAG				AML	AML		
	comp=N,88µm,0.3s						
MPAG				AML	AML		
	comp=E,75µm,0.7s						
MPAG				AML	AML		
	comp=N,88µm,0.3s						
MPAG				AML	AML		
	comp=E,75µm,0.7s						
FSSB	Fossombrone	0.36	314	P	Pg	09 56 18.4	+0.6
FSSB				S	Sb	09 56 24.4	-0.8
FSSB				AML	AML		
	comp=E,230µm,1.3s						
FSSB				AML	AML		
	comp=N,434µm,0.4s						
FSSB				AML	AML		
	comp=E,230µm,1.3s						
FSSB				AML	AML		
	comp=N,434µm,0.4s						
FSSB				AML	AML		
	comp=E,230µm,1.3s						
FSSB				AML	AML		
	comp=N,434µm,0.4s						
FSSB				AML	AML		
	comp=E,230µm,1.3s						
FSSB				AML	AML		
	comp=N,434µm,0.4s						
FDMO	Fiordimonte	0.41	185	P	Pg	09 56 19.0	+0.3
FDMO				S	Sb	09 56 25.9	-0.6
FDMO				AML	AML		
	comp=E,93µm,0.2s						
FDMO				AML	AML		
	comp=N,90µm,0.2s						
FDMO				AML	AML		
	comp=E,93µm,0.2s						
FDMO				AML	AML		
	comp=N,90µm,0.2s						
FDMO				AML	AML		
	comp=N,90µm,0.2s						
FDMO				AML	AML		
	comp=E,93µm,0.2s						
FDMO				AML	AML		
	comp=N,90µm,0.2s						
FDMO				AML	AML		
	comp=E,93µm,0.2s						
NARO	Abbazia di Nar	0.44	293	P	Pg	09 56 19.6	+0.3
NARO				S	Sb	09 56 26.9	-0.4
NARO				AML	AML		
	comp=E,58µm,0.2s						
NARO				AML	AML		
	comp=N,47µm,0.5s						
NARO				AML	AML		
	comp=E,58µm,0.2s						
NARO				AML	AML		
	comp=N,47µm,0.5s						
NARO				AML	AML		
	comp=E,58µm,0.2s						
NARO				AML	AML		
	comp=N,47µm,0.5s						
NARO				AML	AML		
	comp=E,58µm,0.2s						
NARO				AML	AML		
	comp=N,47µm,0.5s						
PIEI	Pieia	0.45	282	P	Pg	09 56 19.6	+0.2
PIEI				S	Sb	09 56 26.8	-0.8
PIEI				AML	AML		
	comp=E,95µm,0.2s						
PIEI				AML	AML		
	comp=N,54µm,1.6s						
PIEI				AML	AML		
	comp=E,95µm,0.2s						
PIEI				AML	AML		
	comp=N,54µm,1.6s						
PIEI				AML	AML		
	comp=N,54µm,1.6s						
PIEI				AML	AML		
	comp=E,95µm,0.2s						
PIEI				AML	AML		
	comp=N,54µm,1.6s						
PIEI				AML	AML		
	comp=E,95µm,0.2s						
PE3	Peglio	0.53	299	P	Pb	09 56 21.6	-0.6
PE3				AML	AML		
	comp=E,183µm,0.4s						
PE3				AML	AML		
	comp=N,142µm,1.3s						
PE3				AML	AML		
	comp=E,183µm,0.4s						
PE3				AML	AML		
	comp=N,142µm,1.3s						
PE3				AML	AML		
	comp=E,183µm,0.4s						
PE3				AML	AML		
	comp=N,142µm,1.3s						
ATVO	AVT- Monte Val	0.53	264	P	Pg	09 56 21.5	+0.4
ATVO				S	Sb	09 56 29.9	-0.2
NRCA	Norcia	0.61	181	P	Pg	09 56 22.7	+0.2
NRCA				AML	AML		
	comp=E,115µm,0.1s						
NRCA				AML	AML		
	comp=N,68µm,0.1s						
NRCA				AML	AML		
	comp=N,68µm,0.1s						
NRCA				AML	AML		
	comp=E,115µm,0.1s						
NRCA				AML	AML		
	comp=N,68µm,0.1s						
NRCA				AML	AML		
	comp=E,115µm,0.1s						
PARC	Parchiule	0.68	288	P	Pg	09 56 24.2	+0.3
PARC				S	Sb	09 56 34.6	+0.2
PARC				AML	AML		
	comp=E,22µm,0.5s						
PARC				AML	AML		
	comp=N,21µm,0.2s						
PARC				AML	AML		
	comp=E,22µm,0.5s						
PARC				AML	AML		
	comp=N,21µm,0.2s						
PARC				AML	AML		
	comp=E,22µm,0.5s						
PARC				AML	AML		
	comp=N,21µm,0.2s						
GUMA	Gualdo di Mace	0.70	123	P	Pg	09 56 19.6	-4.6
GUMA				S	Sg	09 56 26.2	-7.1
GUMA				AML	AML		
	comp=E,962µm,0.3s						
GUMA				AML	AML		
	comp=N,350µm,0.3s						
GUMA				AML	AML		
	comp=N,350µm,0.3s						
GUMA				AML	AML		
	comp=E,962µm,0.3s						
GUMA				AML	AML		
	comp=N,350µm,0.3s						
GUMA				AML	AML		
	comp=E,962µm,0.3s						
FAGN	Fagnano	1.22	164	AML	AML		
	comp=E,178µm,0.4s						
FAGN				AML	AML		
	comp=E,178µm,0.4s						
FAGN				AML	AML		
	comp=N,160µm,0.9s						
FAGN				AML	AML		
	comp=E,178µm,0.4s						
FAGN				AML	AML		
	comp=N,160µm,0.9s						
FAGN				AML	AML		
	comp=N,160µm,0.9s						

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*IDC **02** 10:21:16.2±1.2, 2°.33N×73°.94W, h0^{km}, mb3.3/1, mb1 3.8/5, mb1mx3.5/32, mbtmp3.8/5, ML3.0/4, Error ellipse: s-maj=42.2km s-min=18.5km az=89.0*

*RSNC **02** 10:21:18.3±0.9, 2°.49N×73°.54W, h4^{km}±5^{km}, ML4.1, Mw4.3*

ISC 02 10:21:16.7±1.2**, 2°.55N**±0°.03×**73°.53W**±0°.03**, h5^{km}**±9^{km}**, n36, σ1^{s}77**/59**, 2C-7D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACC	Macarena, Meta	0.51	218	⇑*i*P	Pg	10 21 26.1	-0.5
MACC				*e*S	Sg	10 21 32.5	-0.7
MACC				*i*		10 21 37.8	
	comp=N,10µm,0.2s						
GUVC	San Jose del G	0.91	90	⇓*e*P	Pg	10 21 34.3	+0.2
GUVC				*e*S	Sg	10 21 46.5	+0.7
GUVC				*i*		10 21 48.2	
	comp=Z,5µm,0.5s						
VILC	Villavicencio,	1.56	354	⇓*e*P	Pn	10 21 46.3	+1.0
VILC				*e*S	Sg	10 22 07.9	+1.0
VILC				*i*		10 22 10.4	
	comp=Z,4µm,0.3s						
PRAC	Prado	1.78	311	⇓*e*P	Pn	10 21 48.6	+0.4
PRAC				*e*S	Sn	10 22 11.7	+0.5
BETC	Betania	1.91	274	⇓*e*P	Pn	10 21 50.8	+0.7
CVER	Cruz Verde, Cu	2.03	345	*e*P	Pn	10 21 53.9	+1.8
CHIC	Chingaza	2.07	355	*e*P	Pn	10 21 53.5	+0.9
CHIC				*e*S	Sb	10 22 21.2	-0.1
CHIC				*i*		10 22 25.3	
	comp=Z,2µm,0.6s						
ORTC	Ortega, Tolima	2.18	308	*e*P	Pn	10 21 54.5	+0.7
ORTC				*e*S	Sb	10 22 22.9	-1.1
FLOC	Florencia	2.33	246	*e*P	Pn	10 21 56.1	+0.4
FLOC				*e*S	Sn	10 22 24.6	-0.2
FLOC				*i*		10 22 28.9	
	comp=Z,2µm,0.5s						
ROSC	El Rosal	2.40	341	Pn	Pn	10 21 59.8	+2.6
	comp=Z,18nm,0.3s,baz=231,slow=18,SNR=17						
ROSC				Sn	Sb	10 22 32.1	+1.2
	comp=Z,34nm,0.3s,baz=282,slow=22,SNR=6.5						
ROSC	El Rosal	2.40	341	*e*P	Pb	10 21 59.9	-0.8
ROSC				*e*S	Sb	10 22 32.6	+1.7
MARP	Paez Belalcaza	2.44	277	*e*P	Pn	10 21 57.9	+0.4
MARP				*e*S	Sn	10 22 29.2	+1.4
MARP				*i*		10 22 33.0	
	comp=Z,1µm,0.5s						
PTLC	Puerto Leguiza	2.68	208	⇑*e*P	Pb	10 22 05.0	-0.3
PTLC				*e*S	Sb	10 22 40.5	+2.0
PCON	Cinco Dias	2.87	266	*e*P	Pn	10 22 04.3	+0.6
PCON				*e*S	Sb	10 22 42.4	-2.1
PCON				*i*		10 22 47.5	
	comp=Z,785nm,0.6s						
RREF	El Recreo	2.95	322	*e*Pg	Pb	10 22 09.7	-0.6
RREF				*e*S	Sb	10 22 46.7	-0.2
RREF				*i*		10 22 50.7	
	comp=Z,300nm,0.5s						
YOPC	Yopal, Colombi	3.00	22	*e*P	Pn	10 22 07.3	+2.2
YOPC				*i*		10 23 08.8	
	comp=Z,456nm,0.7s						
SOTA	Rioblanco	3.10	262	*e*Pg	Pb	10 22 11.1	-1.6
SOTA				*e*S	Sn	10 22 47.4	+2.9
SOTA				*i*		10 22 56.4	
	comp=Z,576nm,0.7s						
POPC	Popayan, Colom	3.14	270	*e*P	Pn	10 22 08.3	+1.1
POPC				*e*S	Sn	10 22 46.4	+1.3
YOTC	Yotoco, Valle	3.15	297	*e*P	Pn	10 22 07.3	+0.2
YOTC				*e*S	Sn	10 22 46.4	+1.2
GUY2C	Guyana, Caldas	3.22	326	⇓*e*P	Pn	10 22 09.5	+1.0
GUY2C				*e*S	Sn	10 22 48.9	+1.3
NORC	Norcasia	3.27	336	*e*P	Pn	10 22 09.8	+0.9
NORC				*e*S	Sb	10 22 55.1	-0.5
NORC				*i*		10 22 59.4	
	comp=N,496nm,0.8s						
RUSC	La Rusia	3.35	8	⇓*e*P	Pn	10 22 12.1	+1.8
RUSC				*e*S	Sn	10 22 52.0	+1.3
CRUC	La Cruz	3.55	254	⇓*e*P	Pn	10 22 16.6	+3.7
CRUC				*e*Sg	Sb	10 23 05.1	+1.2
CRUC				*i*		10 23 15.5	
	comp=Z,486nm,0.7s						
BBAC	Balboa, Cauca	3.75	262	*e*P	Pn	10 22 16.5	+1.0
BBAC				*e*Sg	Sb	10 23 11.3	+1.9
BBAC				*i*		10 23 13.8	
	comp=Z,156nm,0.5s						
CPAS2	Pasto	3.94	250	*e*S	Sb	10 23 16.9	+1.8
BARC	Barichara	4.03	5	*e*P	Pn	10 22 22.0	+2.6
PTBC	PUERTO BERRIO,	4.07	347	*e*P	Pn	10 22 20.5	+0.8
HELC	Santa Helena	4.13	331	*e*S	Sb	10 23 18.2	-2.2
TAMC	Tame, Arauca	4.23	24	*e*P	Pn	10 22 23.6	+1.7
TAMC				*i*		10 23 45.6	
	comp=Z,143nm,0.6s						
SDV	Santo Domingo	6.92	25	Pn	Pn	10 23 02.6	+3.5
	comp=Z,5.1nm,0.3s,baz=209,slow=12,SNR=3.8						
SDV				Pg	Pg	10 23 27.7	-1.7
	comp=Z,7.0nm,0.3s,baz=169,slow=6.7,SNR=3.3						
SDV				Sn	Sn	10 24 18.6	+0.1
	baz=233,slow=20,SNR=2.4						
SDV				Lg	Lg	10 24 55.9	
	comp=Z,5.5nm,0.3s,baz=349,slow=16,SNR=2.5						
ATAH	Atahualpa	10.78	207	Pn	Pn	10 23 45.2	-7.0
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=3.4						
PTGA	Pitinga	13.95	103	Pn	Pn	10 24 36.1	+0.9
	comp=Z,0.3nm,0.3s,baz=288,slow=14,SNR=4.1						
PTGA				Sn	Sn	10 27 03.8	-7.0
	comp=Z,1.8nm,0.3s,baz=350,slow=20,SNR=4.6						
PTGA				Lg	Lg	10 28 32.8	
	comp=Z,2.0nm,0.3s,baz=14,slow=23,SNR=7.1						
LPAZ	La Paz	19.47	164	P	P	10 25 43.5	-1.7
	comp=Z,0.0nm,0.3s,baz=6.0,slow=19,SNR=1.5						
LPAZ				Lg	Lg	10 31 26.1	
	comp=Z,0.2nm,0.3s,baz=176,slow=13,SNR=2.7						
SIV	San Ignacio	22.16	147	P	P	10 26 15.6	+1.7
	comp=Z,1.1nm,0.8s,baz=330,slow=13,SNR=5.6						
SIV				Lg	Lg	10 32 47.6	
	comp=Z,12nm,0.9s,baz=238,slow=19,SNR=3.7						
ASAR	Alice Springs	146.16	229	PKPbc	PKPdf	10 40 57.4	-0.8
	comp=Z,0.4nm,0.8s,baz=125,slow=4.3,SNR=4.1						
WRA	Warramunga Arr	147.76	236	PKPbc	PKPdf	10 41 02.1	+1.2
	comp=Z,2.1nm,1.0s,baz=109,slow=3.5,SNR=6.3						

MAN 02 10:22:42.1, 11°.08N×122°.08E, h1^{km}, mb4.5, ML3.4, MS3.2, 1C-2D, Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	Jordan	0.67	132	*e*P	Pg	10 22 54.8	-0.2
GUIM				*e*S	Sg	10 23 04.8	+1.2
CUYO	Cuyo Island	1.07	258	*e*P	Pn	10 23 05.4	+1.1
CUYO				*e*S	Sn	10 23 23.1	+3.3
LLP	Lapu-Lapu	2.00	112	⇓*e*P	Pn	10 23 17.2	+0.2
LLP				*e*S	Sn	10 23 43.6	+0.8
SNPH	Sibulan	2.06	147	⇓*i*P	Pn	10 23 19.1	+1.2
SNPH				*i* S	Sb	10 23 46.9	+0.3

BUSP	**Coron**	2.06	297	*e*P	Pb	10 23 20.3	-0.2
BUSP				*e*S	Sn	10 23 43.6	-0.8
ENPP	**El Nido**	2.61	273	*e*P	Pn	10 23 26.5	+1.0
ENPP				*e*S	Sn	10 23 56.4	-1.5
DCPH	**Dipolog City**	2.77	153	⇑*e*P	Pn	10 23 29.7	+1.9
DCPH				*e*S	Sb	10 24 05.2	-1.9
CNP	**Catarman**	2.90	60	*e*P	Pn	10 23 30.9	+1.5
CNP				*e*S	Sn	10 24 07.1	+2.2
LUBP	**Lubang**	3.19	326	*e*P	Pn	10 23 34.4	+0.8
LUBP				*e*S	Sn	10 24 14.1	+1.8
IPIL	**Ipil**	3.30	172	*e*P	Pn	10 23 33.4	-1.6
IPIL				*e*S	Sn	10 24 10.8	-4.1
PAGZ	**Pagadian**	3.45	158	*e*P	Pn	10 23 38.9	+1.8
PAGZ				*e*S	Sn	10 24 17.6	-1.1
BUKP	**Musuan**	4.33	137	*e*P	Pn	10 23 49.8	+0.7
BUKP				*e*S	Sn	10 24 31.9	-8.4

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*GEN **02** 10:43:50.5, 44°.18N×10°.19E, h3^{km}, Ml0.6*
ROM 02 10:43:49.8±0.1**, 44°.178N**±0°.006×**10°.180E**±0°.009**, h8^{km}, ML1.0**/2**, Error ellipse: s-maj=0.7km s-min=0.6km az=167.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	**Equi**	0.02	237	P	Pg	10 43 51.6	+0.2
EQUI				S	Sg	10 43 52.4	-0.1
EQUI	**Equi**	0.02	237	P	Pg	10 43 51.6	+0.2
EQUI				S	Sg	10 43 52.4	-0.1
VLC	**Villacollemand**	0.15	97	P	Pg	10 43 53.7	+0.7
VLC				S	Sg	10 43 56.2	+0.9
VLC				AML	AML		
	comp=E,58µm,1.6s						
VLC				AML	AML		
	comp=N,94µm,1.6s						
VLC				AML	AML		
	comp=E,70µm,0.2s						
VLC				AML	AML		
	comp=N,85µm,0.1s						
VLC				AML	AML		
	comp=N,85µm,0.1s						
VLC				AML	AML		
	comp=N,94µm,1.6s						
VLC				AML	AML		
	comp=E,70µm,0.2s						
VLC				AML	AML		
	comp=E,58µm,1.6s						
PLMA	**Palmaria, Port**	0.27	242	P	Pb	10 43 56.5	-0.4
PLMA				S	Sb	10 44 00.4	-1.1
ERBM	**Eremo**	0.29	35	P	Pb	10 43 56.7	-0.6
ERBM				S	Sb	10 44 01.5	-0.9
GRAM	**Graiana**	0.32	345	P	Pb	10 43 57.1	-0.7
GRAM				S	Sb	10 44 02.0	-1.3
GRAM	**Graiana**	0.32	345	P	Pb	10 43 57.1	-0.7
GRAM				S	Sb	10 44 01.9	-1.3
GRAM				AML	AML		
	comp=E,58µm,1.1s						
GRAM				AML	AML		
	comp=N,75µm,0.2s						
GRAM				AML	AML		
	comp=N,75µm,0.2s						
GRAM				AML	AML		
	comp=E,58µm,1.1s						
MAIM	**Mastiano**	0.35	139	P	Pg	10 43 56.8	+0.2
MAIM				S	Sg	10 44 02.4	+1.3
MAIM	**Mastiano**	0.35	139	P	Pb	10 43 57.6	-0.5
MAIM				S	Sb	10 44 02.6	-1.2
POPM	**Popiglio**	0.44	108	P	Pg	10 43 58.8	+0.5
POPM				S	Sb	10 44 05.2	-1.2

ROM 02 10:44:16.1±0.1**, 38°.139N**±0°.010×**15°.849E**±0°.009**, h9^{km}, ML1.5**/1**, Error ellipse: s-maj=1.3km s-min=0.4km az=35.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMB	**Gambarie**	0.03	332	P	Pg	10 44 18.2	+0.3
GMB				S	Sg	10 44 19.2	0.0
MSCL	**Scilla**	0.10	334	P	Pg	10 44 19.1	+0.5
MSCL				S	Sg	10 44 20.9	+0.4
MSCL				AML	AML		
	comp=E,482µm,0.1s						
MSCL				AML	AML		
	comp=N,370µm,0.1s						
MSCL				AML	AML		
	comp=E,481µm,0.1s						
MSCL				AML	AML		
	comp=N,370µm,0.1s						
MSCL				AML	AML		
	comp=N,370µm,0.1s						
MSCL				AML	AML		
	comp=E,481µm,0.1s						
MSCL				AML	AML		
	comp=N,370µm,0.1s						
MSCL				AML	AML		
	comp=E,481µm,0.1s						
CEL	**Celeste**	0.12	17	P	Pg	10 44 19.5	+0.5
SOI	**Samo**	0.18	112	P	Pg	10 44 20.6	+0.8
SOI				S	Sg	10 44 23.1	+0.8
MSRU	**Castanea**	0.29	295	P	Pg	10 44 22.8	+0.8
MSRU				S	Sb	10 44 27.8	-0.9
ATN	**Antennamare**	0.30	274	P	Pg	10 44 22.9	+0.7
ATN				S	Sb	10 44 28.1	-0.9

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*HLW **02** 10:45:16.2, 40°.17N×21°.41E, h10^{km}±31^{km}, Md5.5, Ml5.4*
*BJI **02** 10:45:20.0±0.0, 40°.10N×21°.90E, h10^{km}, mb5.0/39, mB5.1/27, Ms4.7/19, Ms7 4.4/17*
*MOS **02** 10:45:21.3±0.9, 40°.12N×21°.83E, h16^{km}, mb4.9/51, MS4.4/8, Error ellipse: s-maj=3.6km s-min=2.4km az=91.5*
*GII **02** 10:45:21.1±0.0, 40°.02N×21°.66E, h5^{km}*
*ATH **02** 10:45:21.4, 40°.12N×21°.85E, h22^{km}, ML4.7/7, Error ellipse: s-maj=1.1km s-min=0.7km az=325.0*
*NEIC **02** 10:45:21.0±0.0, 40°.12N×21°.85E, h22^{km}, mb4.9/223, MW4.8, ML4.6(THE), ML4.7(ATH), Moment Tensor Solution. s21 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.67; M$_{\theta\theta}$1.24; M$_{\phi\phi}$0.43; M$_{r\theta}$-0.11; M$_{\theta\phi}$1.03; M$_{\phi r}$0.43; Best double couple: M$_0$1.90000×10^{16} NP1:ϕ_s221.00000°, δ49.00000°, λ-110.00000°. NP2:ϕ_s71.00000°, δ45.00000°, λ-68.00000°. Principal axes: T 1.9500, Plg2.0000°, Azm325.0000°; N -0.1600, Plg15.0000°, Azm235.0000°; P -1.7900, Plg74.0000°, Azm64.0000°; After ATH.*
NEIC Felt at Kozani and Thessaloniki.
*ISCJB **02** 10:45:22.8±0.2, 40°.125N±0°.009×21°.82E±0°.01, h27^{km}±1^{km}, mb4.8/249, MS4.1/22 Error ellipse: s-maj=1.7km s-min=1.2km az=37.2*
*SKO **02** 10:45:22.5, 40°.11N×21°.81E, h13^{km}, M4.0, ML4.8*
*THE **02** 10:45:22.1, 40°.12N×21°.85E, h8^{km}, ML4.6/13, Error ellipse: s-maj=0.5km s-min=0.3km az=318.0*
*PDG **02** 10:45:22.3±0.4, 40°.11N×21°.89E, h13^{km}, MD5.0/13, ML4.9/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*MED_RC **02** 10:45:22.0±0.4, 40°.03N×21°.74E, h18^{km}±1^{km}, MW4.9/13, Moment Tensor Solution.Mantle waves: s13,c20; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.68±.35; M$_{\theta\theta}$2.18±.22; M$_{\phi\phi}$0.50±.21; M$_{r\theta}$-0.94±.38; M$_{\theta\phi}$1.51±.14; M$_{\phi r}$-0.32±.51; Best double couple: M$_0$3.04000×10^{16} NP1:ϕ_s64.00000°, δ55.00000°, λ-85.00000°. NP2:ϕ_s235.00000°, δ36.00000°, λ-98.00000°. Principal axes: T 3.2300, Plg9.0000°, Azm150.0000°; N -0.3700, Plg4.0000°, Azm241.0000°; P -2.8600, Plg80.0000°, Azm356.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*BEO **02** 10:45:22.3±0.5, 40°.07N×21°.93E, h11^{km}±3^{km}, ML4.6/8*
*GCMT **02** 10:45:23.0±0.3, 39°.97N±0°.03×21°.74E±0°.03, h28^{km}, MW5.1/70, Moment Tensor Solution. s24,c31; s70,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.75±.35; M$_{\theta\theta}$2.71±.25; M$_{\phi\phi}$2.04±.22; M$_{r\theta}$-1.52±.36; M$_{\theta\phi}$2.21±.11; M$_{\phi r}$0.20±.30; Best double couple: M$_0$4.91500×10^{16} NP1:ϕ_s62.00000°, δ52.00000°, λ-75.00000°. NP2: ϕ_s218.00000°, δ40.00000°, λ-109.00000°. Principal axes: T 4.7240, Plg6.0000°, Azm141.0000°; N 0.3810, Plg12.0000°, Azm232.0000°; P -5.1060, Plg76.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*TIR **02** 10:45:23.6, 40°.22N×21°.86E, h20^{km}, Md4.7/9*
*IDC **02** 10:45:24.9±1.5, 40°.09N×21°.81E, h35^{km}±12^{km}, mb4.4/33, mb1 4.5/48, mb1mx4.4/52, mbtmp4.5/48, ML4.3/11, MS3.9/27, Ms1 3.9/27, ms1mx3.8/49, Error ellipse: s-maj=8.4km s-min=8.0km az=151.0*
*SOF **02** 10:45:25.5, 40°.35N×22°.20E, h2^{km}*
ISC 02 10:45:22.1±0.7**, 40°.12N**±0°.01×**21°.84E**±0°.01**, h13^{km}**±4^{km}**, n1268, σ1^{s}54**/1413**, mb4.9**/249**, MS4.2**/24**, 52C-34D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	0.19	343	P	Pg	10 45 26.2	-0.4
KZN				S	Sg	10 45 29.0	-0.6
	801µm,0.5s						
KZN	**Kozani**	0.19	343	P	Pg	10 45 26.2	-0.4
KZN				S	Sg	10 45 29.3	-0.3
KZN	**Kozani**	0.19	343	P	Pg	10 45 26.2	-0.4
KZN				S	Sg	10 45 29.7	+0.1
KZN				AML	AML	10 45 30.1	
KZN				AML	AML	10 45 30.4	
KPRO	**Kipourio**	0.41	246	P	Pg	10 45 29.9	-0.3
KPRO				S	Sg	10 45 36.2	+0.5
	93µm,0.5s						
KPRO	**Kipourio**	0.41	246	P	Pg	10 45 30.1	-0.2
KPRO				S	Sb	10 45 36.9	-0.4
KPRO				AML	AML	10 45 39.4	
KPRO				AML	AML	10 45 41.7	
LIT	**Litokhoron**	0.50	92	*e*Pg	Pg	10 45 31.6	-0.3
LIT				*e*Sg	Sb	10 45 39.9	0.0
LIT	**Litokhoron**	0.50	92	P	Pg	10 45 31.2	-0.6
LIT				S	Sg	10 45 38.5	0.0
	246µm,0.3s						
LIT	**Litokhoron**	0.50	92	⇑*i*Pg	Pg	10 45 31.3	-0.6
LIT				*i* Sg	Sb	10 45 40.3	+0.5
LIT	**Litokhoron**	0.50	92	*e*P	Pg	10 45 31.6	-0.3
LIT				*e*		10 45 39.9	
LIT	**Litokhoron**	0.50	92	P	Pg	10 45 31.3	-0.6
LIT				S	Sb	10 45 39.2	-0.6
LIT				AML	AML	10 45 42.8	
LIT				AML	AML	10 45 44.3	
PENT	**Pentalofos**	0.55	278	P	Pg	10 45 32.5	-0.4
PENT				S	Sb	10 45 41.0	-0.3
	63µm,0.7s						
PENT	**Pentalofos**	0.55	278	P	Pg	10 45 32.5	-0.4
PENT				S	Sg	10 45 39.8	-0.4
PENT				AML	AML	10 45 44.4	
PENT				AML	AML	10 45 44.8	
THL	**Klokotos Trika**	0.57	167	P	Pg	10 45 32.6	-0.7
THL				S	Sg	10 45 41.0	+0.1
	45µm,0.7s						
THL	**Klokotos Trika**	0.57	167	P	Pg	10 45 32.7	-0.7
THL				S	Sg	10 45 41.2	+0.3
THL				AML	AML	10 45 48.2	
	comp=E,94359µm,0.7s						
THL				AML	AML	10 45 49.3	
	comp=N,72742µm,0.6s						
LRSO	**Larissa Observ**	0.62	137	P	Pg	10 45 33.9	-0.2
LRSO				S	Sb	10 45 43.0	-0.2
LRSO	**Larissa Observ**	0.62	137	P	Pg	10 45 34.0	-0.2
LRSO				S	Sb	10 45 43.2	0.0
JAN	**Janina**	0.90	239	P	Pg	10 45 38.7	-0.7
JAN				S	Sb	10 45 51.9	+0.6
	comp=N,15µm,0.8s						
JAN	**Janina**	0.90	239	P	Pg	10 45 38.5	-0.9
JAN	**Janina**	0.90	239	P	Pg	10 45 38.5	-0.9
GRG	**Griva**	0.94	27	*i* P	Pb	10 45 39.6	-0.6
GRG				*i* S	Sb	10 45 53.2	+0.7
GRG	**Griva**	0.94	27	P	Pb	10 45 39.4	-0.8
GRG				S	Sn	10 45 53.6	-0.6
	comp=N,48µm,0.8s						
GRG	**Griva**	0.94	27	*i* Pg	Pb	10 45 39.6	-0.6
GRG				*i* Sg	Sn	10 45 53.9	-0.3
GRG	**Griva**	0.94	27	P	Pb	10 45 39.4	-0.8
GRG				S	Sb	10 45 53.0	+0.5
GRG	**Griva**	0.94	27	P	Pb	10 45 39.5	-0.6
GRG				AML	AML	10 45 56.2	
	comp=E,94475µm,1.0s						
GRG				AML	AML	10 45 58.0	
	comp=N,90833µm,0.5s						
THE	**Thessaloniki**	1.00	59	P	Pb	10 45 40.9	-0.3
THE	**Thessaloniki**	1.00	59	*i* Pg	Pb	10 45 41.1	-0.1
THE				*i* Sg	Sn	10 45 56.7	+1.1
THE	**Thessaloniki**	1.00	59	P	Pb	10 45 40.9	-0.3
THE	**Thessaloniki**	1.00	59	*i* PG	Pn	10 45 41.8	+0.1
THE				*i* SG	Sn	10 45 55.2	-0.4
THE	**Thessaloniki**	1.00	59	P	Pb	10 45 41.2	+0.1
FYTO	**Fytoko, Volos**	1.10	130	*e*Pn	Pb	10 45 42.4	-0.6
FYTO				*e*Sn	Sn	10 45 58.7	+0.4
FYTO	**Fytoko, Volos**	1.10	130	P	Pb	10 45 42.4	-0.6
FYTO				S	Sn	10 45 58.7	+0.4
	comp=N,26µm,0.5s						
FYTO	**Fytoko, Volos**	1.10	130	P	Pb	10 45 42.5	-0.5
AGG	**Agios Georgios**	1.16	161	*i* P	Pb	10 45 43.7	-0.3
AGG				*i* S	Sg	10 45 59.7	+0.1
AGG	**Agios Georgios**	1.16	161	*e*Pn	Pb	10 45 43.8	-0.3
AGG				*e*Sg	Sn	10 46 03.0	+3.3
AGG	**Agios Georgios**	1.16	161	P	Pb	10 45 43.7	-0.3
AGG				S	Sn	10 46 00.4	+0.7
	comp=N,41µm,1.4s						
AGG	**Agios Georgios**	1.16	161	*e*P	Pb	10 45 43.8	-0.3
AGG				*e*		10 46 03.0	
AGG	**Agios Georgios**	1.16	161	P	Pb	10 45 43.4	-0.6
EVR	**Evrytania**	1.21	181	P	Pn	10 45 44.2	-0.5
EVR				S	Sg	10 46 01.7	+0.7
	comp=N,27µm,0.5s						
EVR	**Evrytania**	1.21	181	P	Pn	10 45 44.0	-0.7
EVR				AML	AML	10 46 06.1	
	comp=N,58390µm,0.3s						
EVR				AML	AML	10 46 07.5	
	comp=E,50853µm,0.8s						
PLG	**Polygyros**	1.25	78	P	Pn	10 45 44.9	-0.4
PLG	**Polygyros**	1.25	78	P	Pn	10 45 44.2	-1.1
PLG	**Polygyros**	1.25	78	P	Pn	10 45 44.8	-0.4
OHR	**Ohrid**	1.27	321	⇑*i*Pg	Pn	10 45 45.4	-0.1
OHR				*i* Sg	Sb	10 46 01.6	-0.5
OHR				*e*Lg	Lg	10 46 06.6	
	comp=N,15µm,0.8s						
OHR				*e*Lg	Lg	10 46 09.6	
	comp=E,22µm,0.7s						
OHR	**Ohrid**	1.27	321	P	Pn	10 45 45.1	-0.4
XOR	**Xorichti**	1.28	126	P	Pn	10 45 45.6	-0.1
XOR				S	Sg	10 46 03.6	+0.1
	comp=E,27µm,0.7s						
XOR	**Xorichti**	1.28	126	P	Pn	10 45 45.5	-0.3
IGT	**Igoumenitsa**	1.30	244	*e*Pn	Pb	10 45 46.3	-0.1
IGT	**Igoumenitsa**	1.30	244	*e*Pg	Pg	10 45 46.9	-0.3
IGT				*e*Sg	Sg	10 46 04.8	+0.6
IGT	**Igoumenitsa**	1.30	244	P	Pb	10 45 46.3	-0.1
IGT				S	Sg	10 46 04.3	+0.1
	comp=E,11µm,1.1s						
IGT	**Igoumenitsa**	1.30	244	*i* Pg	Pb	10 45 46.3	-0.1
IGT	**Igoumenitsa**	1.30	244	P	Pb	10 45 46.4	0.0
IGT	**Igoumenitsa**	1.30	244	*i* PN	Pg	10 45 49.5	+2.3
IGT				*i* SN	Sg	10 46 08.7	+4.6
IGT	**Igoumenitsa**	1.30	244	P	Pb	10 45 46.5	0.0
KNT	**Kendrikon**	1.31	37	*i* P	Pb	10 45 46.8	+0.2
KNT	**Kendrikon**	1.31	37	P	Pn	10 45 45.9	-0.2
KNT				S	Sg	10 46 04.0	-0.4
	comp=E,15µm,1.4s						
KNT	**Kendrikon**	1.31	37	⇓*i*Pg	Pb	10 45 46.5	-0.1
KNT				*i* Sg	Sg	10 46 04.4	0.0
KNT	**Kendrikon**	1.31	37	P	Pb	10 45 46.4	-0.1
KNT				S	Sg	10 46 06.6	+2.2
KNT	**Kendrikon**	1.31	37	P	Pb	10 45 46.7	+0.2
VAY	**Valandovo**	1.32	25	*e*Pn	Pn	10 45 45.8	-0.4
VAY	**Valandovo**	1.32	25	*e*Pg	Sg	10 46 06.0	+1.4
VAY	**Valandovo**	1.32	25	P	Pn	10 45 45.8	-0.4
VAY	**Valandovo**	1.32	25	*i* Pg	Pb	10 45 46.7	0.0
VAY				*i* Sg	Sg	10 46 05.0	+0.4
VAY				*e*Lg	Lg	10 46 10.6	
	comp=N,17µm,0.8s						
VAY				*e*Lg	Lg	10 46 11.2	
	comp=E,18µm,1.0s						
VAY	**Valandovo**	1.32	25	*e*P	Pn	10 45 45.8	-0.4
NEO	**Neokhori**	1.34	127	P	Pn	10 45 46.5	0.0
NEO	**Neokhori**	1.34	127	P	Pn	10 45 46.6	+0.2
SOH	**Sokhos**	1.35	58	P	Pn	10 45 46.6	0.0
SOH	**Sokhos**	1.35	58	*i* Pg	Pb	10 45 47.4	+0.2
SOH	**Sokhos**	1.35	58	P	Pb	10 45 47.1	-0.1
SOH	**Sokhos**	1.35	58	P	Pn	10 45 46.8	+0.2
TPE	**Tepelena**	1.42	278	*i* PN	Pg	10 45 50.5	+1.2
TPE				*i* SN	Sg	10 46 11.5	+3.8
SRN	**Sarande**	1.44	261	*i* PN	Pg	10 45 50.9	+1.2
SRN				*i* SN	Sg	10 46 11.5	+3.1
PVO	**Paravola**	1.52	189	P	Pn	10 45 49.4	+0.4
SKIA	**Skiathos**	1.57	127	P	Pn	10 45 49.7	0.0
TSLK	**Tsoukalades, L**	1.59	216	P	Pg	10 45 52.0	-0.6
STIP	**Stip**	1.59	9	*i* Pn	Pb	10 45 51.8	+0.4
STIP				*i* Sn	Sg	10 46 18.0	+4.7
STIP				*e*Lg	Lg	10 46 20.7	
	comp=Z,928nm,0.6s						
STIP				*e*Lg	Lg	10 46 24.5	
	comp=N,1µm,0.6s						
LKD2	**Lefkada island**	1.62	215	*i* PN	Pg	10 45 54.2	+1.0
LKD2				*i* SN	Sg	10 46 19.5	+5.4
KEK	**Kerkira**	1.62	256	P	Pb	10 45 52.2	+0.3
SMIA	**Simia**	1.63	139	P	Pn	10 45 50.9	+0.4
OUR	**Ouranopolis**	1.65	82	*i* P	Pn	10 45 50.6	-0.1
OUR	**Ouranopolis**	1.65	82	*e*Pn	Pn	10 45 50.4	-0.3
OUR	**Ouranopolis**	1.65	82	P	Pn	10 45 50.4	-0.3
OUR	**Ouranopolis**	1.65	82	*e*P	Pn	10 45 50.4	-0.3
OUR	**Ouranopolis**	1.65	82	P	Pn	10 45 51.0	+0.3
SRS	**Serrai**	1.66	53	*e*Pg	Pn	10 45 51.2	+0.3
SRS				*e*Sg	Sb	10 46 14.0	+0.7
SRS	**Serrai**	1.66	53	P	Pn	10 45 50.9	0.0
SRS	**Serrai**	1.66	53	⇓*i*Pn	Pn	10 45 51.1	+0.2
SRS	**Serrai**	1.66	53	P	Pn	10 45 50.9	0.0
SRS	**Serrai**	1.66	53	P	Pn	10 45 50.9	0.0
ATAL	**Atalanti**	1.69	147	P	Pn	10 45 51.8	+0.5
LKR	**Lokris**	1.72	148	P	Pn	10 45 52.0	+0.3
KALE	**Kalithea**	1.74	172	*e*Pn	Pn	10 45 52.0	-0.1
KALE	**Kalithea**	1.74	172	P	Pn	10 45 52.0	-0.1
KALE	**Kalithea**	1.74	172	P	Pn	10 45 52.7	+0.6
EVGI	**Lefkada island**	1.76	212	P	Pb	10 45 54.2	0.0
TRIZ	**Trizonia**	1.76	174	P	Pn	10 45 52.9	+0.6
VLO	**Vlora**	1.83	282	*i* PN	Pg	10 45 57.2	0.0
VLO				*i* SN	Sg	10 46 22.5	+1.5
SKO	**Skopje**	1.87	351	*e*Pg	Pb	10 45 55.5	-0.6
SKO				*e*Sg	Sg	10 46 23.6	+1.2
SKO	**Skopje**	1.87	351	*i* Pn	Pb	10 45 55.1	-1.1
SKO				*i* Sn	Sg	10 46 24.5	+2.1
SKO				*e*Lg	Lg	10 46 26.9	
	comp=Z,540nm,0.8s						
SKO				*e*Lg	Lg	10 46 27.6	
	comp=N,454nm,0.7s						
SKO	**Skopje**	1.87	351	P	Pn	10 45 54.6	+0.8
LAKA	**Lakka**	1.88	177	*e*Pn	Pn	10 45 54.9	+0.9
LAKA	**Lakka**	1.88	177	P	Pn	10 45 54.7	+0.8
PHP	**Peshkopia**	1.89	326	*i* PN	Pb	10 45 57.0	+0.6
PHP				*i* SN	Sg	10 46 21.9	-0.9
TIR	**Tirane**	1.94	310	*e*Pn	Pb	10 45 57.3	+0.1
TIR				*e*Sn	Sn	10 46 19.1	+0.2
TIR	**Tirane**	1.94	310	*e*P	Pb	10 45 57.3	+0.1
TIR				*e*		10 46 19.1	
TIR	**Tirane**	1.94	310	*i* SN	Sg	10 46 24.1	-0.4
MRKA	**Markates**	1.96	136	P	Pn	10 45 55.0	+0.1
MRKA	**Markates**	1.96	136	P	Pn	10 45 55.2	+0.3
NVR	**Nevrokopi**	1.96	51	P	Pn	10 45 55.1	0.0
NVR	**Nevrokopi**	1.96	51	P	Pn	10 45 55.5	+0.5
TRAZ	**Trapeza**	1.97	172	P	Pn	10 45 55.5	+0.3
KKB	**Krupnik**	1.98	28	⇓*i*Pn	Pn	10 45 55.6	+0.4
KKB	**Krupnik**	1.98	28	P	Pn	10 45 55.9	+0.7
KKB	**Krupnik**	1.98	28	P	Pn	10 45 56.0	+0.7
PROD	**Prodromos**	2.03	156	P	Pn	10 45 55.9	-0.1
PROD	**Prodromos**	2.03	156	P	Pn	10 45 56.3	+0.3
MMB	**Musomiste**	2.05	44	⇓*i*Pn	Pn	10 45 56.4	+0.2
MMB	**Musomiste**	2.05	44	P	Pn	10 45 56.1	-0.1
MMB	**Musomiste**	2.05	44	P	Pn	10 45 56.5	+0.2
KLV	**Kalavryta, Ach**	2.09	173	P	Pn	10 45 57.2	+0.4
VLS	**Valsamata**	2.17	207	P	Pn	10 45 59.5	+1.6
THAL	**Thalero**	2.18	163	P	Pn	10 45 58.4	+0.5
VIL2	**Platees**	2.21	149	P	Pn	10 45 59.6	+1.2
KAVA	**Kavala**	2.21	66	*e*Pn	Pn	10 45 58.2	-0.3
KAVA	**Kavala**	2.21	66	P	Pn	10 45 58.2	-0.3
KAVA	**Kavala**	2.21	66	P	Pn	10 45 57.9	-0.6
GUR	**Goura**	2.22	170	P	Pn	10 45 59.0	+0.3
THAS	**Thassos island**	2.25	77	P	Pn	10 45 58.5	-0.5
LOUT	**Loutraki**	2.31	157	P	Pn	10 46 00.1	+0.3
EREA	**Eretria**	2.35	136	P	Pn	10 46 00.4	0.0
EREA	**Eretria**	2.35	136	P	Pn	10 46 01.0	+0.6
ACOR	**Acrocorinthos**	2.37	160	P	Pn	10 46 00.8	+0.2
SKY	**Skiros Island**	2.44	120	P	Pn	10 46 01.6	+0.1
LIA	**Limnos Island**	2.57	94	P	Pn	10 46 03.5	+0.1
LIA	**Limnos Island**	2.57	94	P	Pn	10 46 03.4	-0.1
ATH	**Athens Observa**	2.59	145	P	Pn	10 46 05.0	+1.3
PTL	**Penteli**	2.60	142	P	Pn	10 46 04.8	+1.0
BCI	**Bajram Curri**	2.61	330	*i* PN	Pb	10 46 07.6	-1.1
TRIP	**Tripoli**	2.61	173	P	Pn	10 46 04.6	+0.6
ATHU	**Athens Univers**	2.63	144	P	Pn	10 46 05.0	+0.8
RZN	**Rozhen**	2.68	53	P	Pn	10 46 06.0	+0.9
BARS	**Barje**	2.69	360	*e*Pn	Pn	10 46 06.2	+1.1
BARS	**Barje**	2.69	360	*e*Pn	Pg	10 46 22.5	+8.8
BARS				*e*Sn	Sn	10 46 38.3	+0.8
ULC	**Ulcinj**	2.69	314	⇓*i*Pn	Pn	10 46 07.3	+2.2
ULC				*e*Sn	Sb	10 46 41.5	-1.5
EPID	**Epidavros**	2.69	158	P	Pn	10 46 05.7	+0.6
VTS	**Vitosha**	2.70	22	*e*Pn	Pn	10 46 06.3	+0.9
VTS				*e*Sg	Sb	10 46 41.8	-1.6
VTS	**Vitosha**	2.70	22	⇑*i*P	Pn	10 46 07.3	+1.9
VTS	**Vitosha**	2.70	22	S	Sb	10 46 41.9	-1.6
VTS	**Vitosha**	2.70	22	*e*P	Pn	10 46 06.3	+0.9
VTS				*e*		10 46 41.8	
VTS	**Vitosha**	2.70	22	P	Pn	10 46 06.5	+1.1
VLY	**Voula,Athens**	2.73	146	P	Pn	10 46 06.3	+0.7
VLX	**Vlachokerasia**	2.78	171	P	Pn	10 46 06.3	0.0
SMTH	**Samothraki Isl**	2.84	82	P	Pn	10 46 06.5	-0.6
PVY	**Plav**	2.85	331	⇓*i*Pn	Pn	10 46 09.5	+2.2
PVY				*e*Sn	Sb	10 46 45.2	-2.4
DRME	**Dracevica, Mon**	2.88	317	⇑*i*Pn	Pn	10 46 09.7	+2.1
DRME				*e*Sn	Sb	10 46 46.8	-1.6
DRME	**Dracevica, Mon**	2.88	317	*e*Pn	Pn	10 46 10.2	+2.6
KRND	**KRANIDI**	2.92	159	P	Pn	10 46 08.4	+0.2
KRND	**KRANIDI**	2.92	159	P	Pn	10 46 08.8	+0.7
PLD	**Plovdiv**	2.93	47	P	Pn	10 46 09.9	+1.6
PLD	**Plovdiv**	2.93	47	*e*Pn	Pn	10 46 09.8	+1.5
PLD	**Plovdiv**	2.93	47	P	Pn	10 46 10.0	+1.6
PLD	**Plovdiv**	2.93	47	P	Pn	10 46 10.3	+2.0
ITM	**Ithomi**	2.94	179	P	Pn	10 46 10.7	+2.2
ITM	**Ithomi**	2.94	179	*e*Pn	Pb	10 46 11.9	-2.4
ITM				*e*Sn	Sn	10 46 41.1	-2.5
RDO	**Rodhopi**	2.99	69	P	Pn	10 46 09.2	+0.1
RDO	**Rodhopi**	2.99	69	P	Pn	10 46 08.7	-0.4
PDG	**Podgorica**	3.02	321	*e*Pn	Pn	10 46 11.9	+2.4
PDG	**Podgorica**	3.02	321	⇓*i*P	Pn	10 46 12.3	+2.8
PDG	**Podgorica**	3.02	321	S	Sb	10 46 51.0	-1.4
PDG	**Podgorica**	3.02	321	*e*Pn	Pb	10 46 12.8	-2.9
TTG	**Podgorica**	3.02	321	⇓*i*Pn	Pn	10 46 11.7	+2.2
TTG				*e*Sn	Sb	10 46 49.7	-2.7
TTG	**Podgorica**	3.02	321	*e*Pn	Pn	10 46 12.6	+3.0
TTG				*e*Sn	Sn	10 46 45.9	+0.3
TTG	**Podgorica**	3.02	321	*e*P	Pn	10 46 12.6	+3.0
TTG				*e*		10 46 45.9	
KDZ	**Kurdzhali**	3.11	59	P	Pn	10 46 10.9	+0.1
KDZ	**Kurdzhali**	3.11	59	P	Pn	10 46 10.0	-0.8
BUM	**Brajici-Budva**	3.11	315	⇑*i*Pn	Pn	10 46 13.1	+2.2
BUM				*e*Sn	Sb	10 46 51.7	-3.5
IVA	**Berane**	3.11	333	⇑*i*Pn	Pn	10 46 13.1	+2.2
IVA				*e*Sn	Sn	10 46 51.4	+3.4
SELS	**Selova**	3.14	350	*e*Pn	Pn	10 46 12.0	+0.7
ZAPS	**Zavoj**	3.20	10	*e*Pn	Pn	10 46 06.4	-5.7
SIGR	**SIGRI**	3.23	105	P	Pn	10 46 12.7	+0.3
SIGR	**SIGRI**	3.23	105	P	Pn	10 46 13.7	+1.3
KOME	**Kolasin**	3.24	328	⇑*i*Pn	Pn	10 46 14.9	+2.2
KOME				*e*Sn	Sn	10 46 54.5	+3.4
CEME	**Cevo**	3.27	319	⇑*i*Pn	Pn	10 46 15.1	+2.0
CEME				*e*Sn	Sn	10 46 55.4	+3.5
ALN	**Alexandroupoli**	3.29	75	P	Pn	10 46 13.9	+0.6
ALN	**Alexandroupoli**	3.29	75	*e*Pn	Pn	10 46 13.4	+0.1
ALN	**Alexandroupoli**	3.29	75	*e*P	Pn	10 46 13.4	+0.1
ALN	**Alexandroupoli**	3.29	75	P	Pn	10 46 13.2	-0.1
ENEZ	**Enez**	3.34	78	P	Pn	10 46 14.7	+0.7
CGL1	**Ceglie Messapi**	3.38	280	*e*Pn	Pn	10 46 15.6	+1.1
CGL1				(Sn)	Sn	10 46 53.2	-1.2
DIM	**Dimitrovgrad**	3.39	54	P	Pn	10 46 16.4	+1.8
DIM				S	Sn	10 46 56.6	+2.0
NKME	**Niksic**	3.42	322	⇑*i*Pn	Pn	10 46 17.6	+2.5
NKME				*e*Sn	Sn	10 46 59.0	+3.5
HCY	**Herceg Novi**	3.43	314	⇑*i*Pn	Pn	10 46 17.2	+2.0
HCY				*e*Sn	Sn	10 46 59.6	+3.9
HCY	**Herceg Novi**	3.43	314	P	Pn	10 46 17.1	+1.9
HCY				S	Sn	10 46 59.0	+3.3

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HCY   Herceg Novi        3.43 314  ePn     Pn      10 46 17.4 +2.2
SJES  Sjenica            3.44 337  ePn     Pn      10 46 17.1 +1.7
NKY   Niksic             3.44 322⇑iPn      Pn      10 46 17.2 +1.8
NKY                                eSn     Sn      10 46 59.2 +3.2
NKY   Niksic             3.44 322   P      Pn      10 46 17.1 +1.7
NKY                                 S      Sn      10 46 59.0 +3.0
EZN   Ezine              3.46  93   P      Pn      10 46 16.3 +0.7
EZN   Ezine              3.46  93⇓iP       Pn      10 46 16.3 +0.7
EZN   Ezine              3.46  93   P      Pn      10 46 16.2 +0.7
FASA  Fasano             3.50 283  ePn     Pn      10 46 17.4 +1.3
TAR1  Taranto            3.51 278  ePn     Pn      10 46 17.4 +1.1
TAR1                                (Sn)   Sn      10 47 00.2 +2.6
BOVS  Bovan              3.51 358  ePn     Pn      10 46 17.0 +0.7
MPEP  Malo Peshtene      3.53  23   P      Pn      10 46 18.2 +1.6
GELI  Tayfur-Gelibol     3.55  84   P      Pn      10 46 18.1 +1.2
MASS  Massafra           3.63 280  ePn     Pn      10 46 20.5 +2.6
BAYC  CANAKKALE_Bayr     3.64  95  i P     Pn      10 46 19.4 +1.4
BAYC                               i S     Sn      10 46 59.2  -1.5
BAYC                                IAML_P
      comp=Z,9µm,0.3s
IVAS  Ivanjica           3.67 340  ePn     Pn      10 46 19.5 +0.9
TREB  Trebinje           3.69 316  ePn     Pn      10 46 20.9 +2.1
PLE   Pljevlja           3.69 331⇑iPn      Pn      10 46 21.2 +2.3
PLE                                eSn     Sn      10 47 05.4 +3.0
PLE   Pljevlja           3.69 331   P      Pn      10 46 21.2 +2.3
PLE                                 S      Sn      10 47 05.0 +2.6
CHOS  Chios island       3.70 117   P      Pn      10 46 19.8 +0.8
CHOS  Chios island       3.70 117   P      Pn      10 46 20.0 +1.0
BRY   Bratogost          3.72 319⇑iPn      Pn      10 46 21.5 +2.1
BRY                                eSn     Sn      10 47 06.5 +3.4
BRY   Bratogost          3.72 319   P      Pn      10 46 21.4 +2.1
BRY                                 S      Sn      10 47 06.0 +2.9
BRY   Bratogost          3.72 319  ePn     Pn      10 46 21.2 +1.8
KESN  Edirne-Kesan       3.75  78  i P     Pn      10 46 21.5 +1.5
KESN                               i S     Sn      10 47 04.0  -0.2
KESN                                IAML_P
      comp=Z,2µm,0.3s
DBRK  Dubrovnik          3.77 314  i Pn    Pn      10 46 21.5 +1.6
DBRK                                Sn     Sn      10 47 05.2 +1.2
LPK   Lapseki            3.77  85  eP      Pn      10 46 21.1 +1.2
UPM   Unac-Piva          3.78 325⇓iPn      Pn      10 46 22.5 +2.3
UPM                                eSn     Sn      10 47 07.8 +3.1
UPM   Unac-Piva          3.78 325  ePn     Pn      10 46 23.1 +2.9
AYVA  Ayvalik            3.83 101  i P     Pn      10 46 22.6 +2.0
AYVA                               i S     Sn      10 46 59.7  -5.7
AYVA                                IAML_P
      comp=Z,2µm,0.4s
GRUS  Gruza              3.86 348  ePn     Pn      10 46 22.3 +1.3
BAI   Bari               3.91 286⇓iPn      Pn      10 46 23.0 +1.3
MATE  Matera             3.96 279⇑iP       Pn      10 46 24.2 +1.7
SG1   Sgolgore (BA)      4.00 282⇓iPn      Pn      10 46 24.1 +1.0
TIP   Timpagrande        4.04 258  ePn     Pn      10 46 24.5 +0.9
TIP                                eSn     Sn      10 47 13.8 +3.1
DKL   Dikili             4.05 103  eP      Pn      10 46 24.9 +1.2
PVL   Pavlikeni          4.05  39   P      Pn      10 46 25.1 +1.4
URLA  Izmir              4.09 114  eP      Pn      10 46 25.2 +0.9
URLA  Izmir              4.09 114  i P     Pn      10 46 26.7 +2.5
EDRB  Edirne             4.09  64  eP      Pn      10 46 25.7 +1.5
RKY   Sarkoy-Tekirda     4.11  80  eP      Pn      10 46 25.7 +1.1
SART  Tekirdag           4.11  80  i P     Pn      10 46 26.4 +1.8
SART                               i S     Sn      10 47 06.6  -6.0
SART                                IAML_P
      comp=Z,4µm,0.3s
STON  Ston               4.15 313  ePn     Pn      10 46 26.1 +1.0
STON  Ston               4.15 313  ePn     Pn      10 46 27.1 +2.1
STON                                Sn     Sn      10 47 14.9 +1.6
STON  Ston               4.15 313  ePn     Pn      10 46 25.8 +0.7
BBLS  Lazi&#263;i        4.16 335  ePn     Pn      10 46 26.4 +1.1
BBLS  Lazi&#263;i        4.16 335  ePn     Pn      10 46 26.4 +1.1
APE   Apeiranthos        4.20 135  eP      Pn      10 46 27.2 +1.4
APE   Apeiranthos        4.20 135⇓iP       Pn      10 46 27.2 +1.4
APE   Apeiranthos        4.20 135deP       Pn      10 46 26.7 +0.9
DIVS  Divibare           4.21 341  ePn     Pn      10 46 27.5 +1.6
DIVS  Divibare           4.21 341  ePn     Pn      10 46 26.8 +0.9
ZEDA  zmir-Bergama       4.21 104  i P     Pn      10 46 28.0 +2.1
ZEDA                               i S     Sn      10 47 14.8   0.0
TRUS  Trudelj            4.24 346  ePn     Pn      10 46 20.4  -5.9
JMB   Yambol             4.27  55   P      Pn      10 46 27.4 +0.7
KUBS  Kucevo             4.29 358  ePn     Pn      10 46 28.6 +1.6
KIRK  Kırklareli         4.31  66  i P     Pn      10 46 28.2 +1.0
KIRK                               i S     Sb      10 47 33.7 +4.2
VLAD  Vladila            4.32  25⇑iP       Pn      10 46 29.7 +2.3
BLCB  Balcova            4.39 112  eP      Pn      10 46 30.3 +1.9
GONE  Gonen-Balikesi     4.48  89  eP      Pn      10 46 30.9 +1.3
HAPS  Han Pijesak,BI     4.51 332  ePn     Pn      10 46 31.1 +1.0
PHSR  Pinarhisar         4.56  69  eP      Pn      10 46 32.2 +1.5
PHSR  Pinarhisar         4.56  69⇑iP       Pn      10 46 31.4 +0.7
STEP  BALIKESIR_Sava     4.59  97  i P     Pn      10 46 34.0 +2.9
STEP                               i S     Sn      10 47 26.7 +2.4
STEP                                IAML_P
      comp=Z,8µm,0.5s
EDC   Edincik            4.61  85  eP      Pn      10 46 32.4 +1.0
EDC   Edincik            4.61  85   P      Pn      10 46 32.4 +1.0
SRE   Strehaia           4.65  12⇑iP       Pn      10 46 33.7 +1.8
SRE   Strehaia           4.65  12   P      Pn      10 46 34.0 +2.1
MDVR  Moldovita          4.66 359⇑iP       Pn      10 46 33.6 +1.5
BALB  Balikesir          4.67  94  eP      Pn      10 46 32.9 +0.7
BALB  Balikesir          4.67  94  ePn     Pn      10 46 33.6 +1.4
BALB                               eSn     Sn      10 47 27.0 +0.8
TEKS  Tekeris            4.75 340  ePn     Pn      10 46 34.7 +1.4
TEKS  Tekeris            4.75 340  ePn     Pn      10 46 34.5 +1.2
HERR  Herculane          4.77   5⇑iP       Pn      10 46 34.7 +1.0
AKHS  Akhisar            4.78 103  i P     Pn      10 46 37.2 +3.4
AKHS                                IAML_P
      comp=Z,2µm,0.4s
BEO   Beograd            4.79 348   P      Pn      10 46 35.7 +1.8
MAKA  Makarska           4.80 313  i Pn    Pn      10 46 35.2 +1.2
MAKA                                Sn     Sn      10 47 28.5  -0.9
GCAM  G?zelcaml?         4.85 118  eP      Pn      10 46 36.1 +1.4
IMMV  Iera Moni Meta     4.95 159  eP      Pn      10 46 38.9 +2.8
HUMR  Humele             4.98  27⇑iP       Pn      10 46 38.3 +1.8
CEL   Celeste            4.98 250  ePn     Pn      10 46 36.9 +0.3
CEL                                eSn     Sn      10 47 31.4  -2.6
KCTX  Karacabey (Bur     4.99  86  eP      Pn      10 46 37.7 +1.1
DURS  Dursunbey          5.13  94  i P     Pn      10 46 41.5 +2.9
DURS                               i S     Sn      10 47 35.5  -2.2
DURS                                IAML_P
      comp=Z,2µm,0.4s
PRD   Provadia           5.17  52   P      Pn      10 46 42.0 +2.9
PRD   Provadia           5.17  52   P      Pn      10 46 40.7 +1.6
AYDB  Zeytinkoy-Aydi     5.18 113  eP      Pn      10 46 40.7 +1.3
CTKS  Kestanelik-??a     5.19  75  eP      Pn      10 46 40.7 +1.4
GOLR                     5.25  25⇓iP       Pn      10 46 43.1 +2.9
FRGS  Fruska Gora        5.25 344  ePn     Pn      10 46 41.4 +1.2
FRGS                               eSn     Sn      10 47 40.8 +0.2
FRGS  Fruska Gora        5.25 344  ePn     Pn      10 46 40.7 +0.5
BODT  Bodrum             5.26 124  eP      Pn      10 46 41.9 +1.5
AVR   AVREN              5.29  54   P      Pn      10 46 42.2 +1.4
AYDN  Tasoluk            5.31 116  i P     Pn      10 46 44.3 +3.2
GZR   Gura Zlata         5.31   7⇓iP       Pn      10 46 42.6 +1.5
GZR   Gura Zlata         5.31   7   P      Pn      10 46 42.0 +0.9
BGKT  Bogazkoy           5.38  76  eP      Pn      10 46 43.5 +1.6
DOB   Doboj              5.38 330  ePn     Pn      10 46 45.3 +3.4
ARMT  Armutlu            5.38  83  eP      Pn      10 46 43.8 +1.8
IDI   Anoyia             5.40 152  eP      Pn      10 46 45.3 +3.0
IDI   Anoyia             5.40 152   Pn     Pn      10 46 43.6 +1.3
      comp=Z,5.6nm,0.3s,baz=326,slow=11,SNR=22
IDI                                 Sn     Sn      10 47 43.8  -0.5
      comp=Z,11nm,0.3s,baz=252,slow=19,SNR=2.6
MANT  Manisa             5.46 105  ePn     Pn      10 46 43.4 +0.1
MANT  Manisa             5.46 105  i P     Pn      10 46 46.1 +2.9
MANT                                IAML_P
      comp=Z,2µm,0.3s
BZS   Buzias             5.49 358   P      Pn      10 46 44.3 +0.8
BZS                                 pmax   pmax
      comp=Z,140nm,0.9s
LOT   Lotru              5.51  14  eP      Pn      10 46 46.3 +2.5
KULA  Kula-Manisa        5.52 105  eP      Pn      10 46 45.6 +1.5
ISK   Istanbul-Kandi     5.57  78  eP      Pn      10 46 45.6 +0.9
ISK   Istanbul-Kandi     5.57  78   P      Pn      10 46 45.5 +0.9
KAVV  Kandilli-Istan     5.57  78  eP      Pn      10 46 46.6 +2.0
ULDT  Uludag             5.59  87  i P     Pn      10 46 47.4 +2.4
ULDT                                IAML_P
      comp=Z,2µm,0.3s
BUY   Buyukada           5.59  80  eP      Pn      10 46 45.8 +0.9
BUY   Buyukada           5.59  80  i P     Pn      10 46 48.1 +3.2
BUY                                 IAML_P
      comp=Z,816nm,0.3s
SULR                     5.60  34⇑iP       Pn      10 46 47.9 +2.9
KIJV  Kijevo             5.61 316  i Pn    Pn      10 46 46.6 +1.5
KIJV                                Sn     Sn      10 47 49.1  -0.2
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DAT   Datca              5.63 125  eP      Pn      10 46 47.1 +1.5
BLY   Banja Luka         5.77 325  ePn     Pn      10 46 49.1 +1.8
BLY                                eSn     Sn      10 47 54.6 +1.3
BLY   Banja Luka         5.77 325⇑iP       Pn      10 46 49.4 +2.1
BLY   Banja Luka         5.77 325  ePn     Pn      10 46 48.9 +1.6
YLV   Yalova             5.77  83  eP      Pn      10 46 49.4 +2.0
YLV   Yalova             5.77  83⇑iP       Pn      10 46 48.9 +1.5
DEV   Deva               5.81   7⇑iP       Pn      10 46 50.8 +2.9
VOIR                     5.81  23⇓iP       Pn      10 46 49.7 +1.7
VOIR                     5.81  23   P      Pn      10 46 50.0 +2.0
VOIR                                pmax   pmax
      comp=Z,74nm,0.7s
SECR                     5.81  31⇑iP       Pn      10 46 50.6 +2.6
ZIRJ  Zirje              5.82 309  i Pn    Pn      10 46 48.8 +0.8
ZIRJ                                Sn     Sn      10 47 53.3  -1.2
MORI  Morici             5.91 311  ePn     Pn      10 46 50.9 +1.7
MORI                                Sn     Sn      10 47 56.0  -0.7
GDZ   Gediz              5.99  97  i P     Pn      10 46 53.1 +2.6
GDZ                                 IAML_P
      comp=Z,3µm,0.6s
HRT   Hereke             6.01  81  eP      Pn      10 46 52.4 +1.7
HRT   Hereke             6.01  81   P      Pn      10 46 53.2 +2.5
SILT  Sile               6.02  78  eP      Pn      10 46 52.7 +1.9
ISR   Istrita            6.08  33⇑iP       Pn      10 46 54.8 +3.2
ISR   Istrita            6.08  33   P      Pn      10 46 53.0 +1.4
SIRR  Siria              6.14 359⇑iP       Pn      10 46 54.0 +1.5
MLR   Muntele Rosu       6.15  28   Pn     Pn      10 46 55.5 +2.7
      comp=Z,10nm,0.3s,baz=238,slow=2.6,SNR=47
MLR                                 Sn     Sn      10 48 04.0 +1.0
      comp=Z,0.5nm,0.3s,baz=228,slow=16,SNR=3.3
MLR                                 Lg     Lg      10 48 43.8
      comp=Z,2.6nm,0.3s,baz=61,slow=15,SNR=3.5
MLR   Muntele Rosu       6.15  28  ePn     Pn      10 46 54.3 +1.6
MLR   Muntele Rosu       6.15  28⇑iP       Pn      10 46 55.6 +2.9
MLR   Muntele Rosu       6.15  28  eP      Pn      10 46 54.3 +1.6
KHAL  Karahalli          6.19 104  i P     Pn      10 46 56.6 +3.4
KARP  Karpathos          6.21 136  ePn     Pn      10 46 54.2 +0.8
KARP                               eSg     Sn      10 48 13.5 +9.3
UDBI  Udbina             6.30 316  ePn     Pn      10 46 56.6 +1.9
MFTR  Murfatlar          6.35  48⇑iP       Pn      10 46 57.8 +2.5
DUGI  Dugi Otok          6.36 310  i Pn    Pn      10 46 56.6 +1.1
VAE   Valguarnera        6.38 248   Pn     Pn      10 46 57.8 +2.0
      comp=Z,1.2nm,0.3s,baz=105,slow=13,SNR=2.4
VAE                                 Sn     Sn      10 48 07.8  -0.7
      comp=Z,5.1nm,0.3s,baz=49,slow=11,SNR=2.6
VAE                                 LR     LR      10 49 43.6
      comp=Z,826nm,18.2s,baz=180,slow=40
DOPR  Dopca              6.39  23⇑iP       Pn      10 46 58.8 +2.9
TLB   Topalu             6.40  44⇑iP       Pn      10 46 57.6 +1.6
HARR  Harsova            6.41  43⇓iP       Pn      10 46 57.7 +1.6
GRER                     6.47  34⇓iP       Pn      10 46 59.8 +2.9
TIRR  Tirgusor           6.52  46  ePn     Pn      10 46 58.2 +0.6
TIRR                               eSn     Sn      10 48 15.7 +4.0
TIRR  Tirgusor           6.52  46⇑iP       Pn      10 46 58.2 +0.6
TIRR  Tirgusor           6.52  46  eP      Pn      10 46 58.2 +0.6
TIRR                               e               10 48 15.7
MORH  Mrgy, Hungar       6.52 340  ePn     Pn      10 46 57.1  -0.6
MORH                                Sn     Sn      10 48 16.0 +4.2
MORH                               eSg     Sg      10 48 56.0 +4.7
DRGR                     6.70   5⇑iP       Pn      10 47 02.2 +2.1
DRGR                     6.70   5   P      Pn      10 47 03.8 +3.7
PLOR  Plostina           6.72  30⇑iP       Pn      10 47 03.5 +3.1
PLOR  Plostina           6.72  30   P      Pn      10 47 03.9 +3.5
AQU   L'Aquila           6.74 292  ePn     Pn      10 47 03.0 +2.2
AQU                                eSn     Sn      10 48 15.6  -1.8
AQU   L'Aquila           6.74 292  eP      Pn      10 47 03.0 +2.2
AQU                                e               10 48 15.6
AQU   L'Aquila           6.74 292  ePn     Pn      10 47 03.9 +3.2
VRI   Vrincioaia         6.76  30⇑iP       Pn      10 47 03.7 +2.7
VRI   Vrincioaia         6.76  30   P      Pn      10 47 02.8 +1.8
NVLJ  Novalja            6.81 313  ePn     Pn      10 47 02.2 +0.7
CFR   Carcaliu           6.86  40⇑iP       Pn      10 47 03.9 +1.7
ISP   Isparta            7.14 106  ePn     Pn      10 47 07.6 +1.3
ISP                                eSn     Sn      10 48 28.8 +1.5
ISP   Isparta            7.14 106  eP      Pn      10 47 07.6 +1.3
ISP                                e               10 48 28.8
MDUB  Mudurnu            7.16  84  ePn     Pn      10 47 05.5  -1.1
MDUB                               eSn     Sn      10 48 24.9  -2.8
KALN  Kalnik             7.18 329  i Pn    Pn      10 47 07.6 +0.9
WDD   Wied Dalam         7.19 236  ePn     Pn      10 47 06.6  -0.2
WDD                                eSn     Sn      10 48 27.9  -0.4
ARCR  ARCALIA            7.19  14⇑iP       Pn      10 47 08.7 +1.8
CLTB  Caltabellotta      7.20 252  ePn     Pn      10 47 09.8 +2.7
PTJ   Puntijarka         7.21 325   iPn    Pn      10 47 07.9 +0.8
PTJ                                 Sn     Sn      10 48 27.5  -1.3
TLCR                     7.21  43⇓iP       Pn      10 47 08.9 +1.8
BOJS  Bojanci            7.24 320  i Pn    Pn      10 47 08.2 +0.8
BOJS                               i Sn    Sn      10 48 28.0  -1.5
TESR  Tescani            7.28  27⇑iP       Pn      10 47 11.1 +3.0
BEHE  Becsehely          7.34 331  ePn     Pn      10 47 10.3 +1.4
BEHE  Becsehely          7.34 331  ePn     Pn      10 47 12.0 +3.1
BEHE                               ePg     Pg      10 47 44.0 +1.4
BEHE                                Sn     Sn      10 48 32.1 +0.1
BEHE                               eSg     Sg      10 49 23.1 +5.5
TIH   Tihany             7.36 338  ePn     Pn      10 47 09.1   0.0
TIH                                 Sn     Sn      10 48 34.1 +1.7
CRES  Cresnjev           7.38 323  ePn     Pn      10 47 09.7 +0.3
BIZ   Bicaz              7.48  23⇑iP       Pn      10 47 13.9 +3.1
RIY   Rijeka             7.51 316   ePn    Pn      10 47 12.3 +1.1
RIY   Rijeka             7.51 316  ePn     Pn      10 47 11.3 +0.1
BUD   Budapest           7.64 345   P      Pn      10 47 15.5 +2.6
BUD                                 pmax   pmax
      comp=Z,337nm,0.6s
BUD   Budapest           7.64 345  ePn     Pn      10 47 14.1 +1.2
BUD                                eSn     Sn      10 48 42.0 +2.8
BMR   Baia Mare          7.64   8⇑iP       Pn      10 47 15.3 +2.3
VISS  Visnje             7.65 320  i Pn    Pn      10 47 13.9 +0.7
VISS                               i Sn    Sn      10 48 38.7  -1.0
CSKK  Cskako             7.69 341  ePn     Pn      10 47 16.0 +2.4
CSKK                                Sn     Sn      10 48 38.0  -2.5
CEY   Cerknica           7.82 318  ePn     Pn      10 47 15.7 +0.3
BURAR Bucovina Array     7.88  17⇑iP       Pn      10 47 19.4 +3.1
BUR08 Bucovina Ar. S     7.90  17  ePn     Pn      10 47 18.3 +1.6
PSZ   Piszkesteto        7.92 350  ePn     Pn      10 47 18.4 +1.6
PSZ   Piszkesteto        7.92 350⇑iP       Pn      10 47 19.4 +2.5
PSZ   Piszkesteto        7.92 350  eP      Pn      10 47 18.5 +1.6
PSZ   Piszkesteto        7.92 350  ePn     Pn      10 47 18.1 +1.2
PSZ                                 Sn     Sn      10 48 51.1 +4.7
PSZ                                eSg     Sg      10 49 55.0  +19
LJU   Ljubljana          7.98 320  ePn     Pn      10 47 19.4 +1.7
TRPA  Tarpa              8.02   3⇑iP       Pn      10 47 20.1 +1.9
TRPA  Tarpa              8.02   3  ePn     Pn      10 47 25.1 +6.9
TRPA                                Sn     Sn      10 48 53.1 +4.4
TRPA                               eSg     Sg      10 49 40.1 +0.8
SRO2  Moca               8.03 343  eP      Pn      10 47 20.3 +2.0
SRO2  Moca               8.03 343  ePN     Pn      10 47 20.3 +2.0
SRO   Srobarova          8.10 343  eSN     Sn      10 48 55.3 +4.7
JAVS  Javornik           8.11 318  i Pn    Pn      10 47 20.1 +0.6
JAVS                               i Sn    Sn      10 48 48.2  -2.8
TRI   Trieste            8.14 316  ePn     Pn      10 47 19.3  -0.5
TRI   Trieste            8.14 316  eP      Pn      10 47 19.3  -0.5
PERS  Pernice            8.14 325  i Pn    Pn      10 47 20.4 +0.5
PERS                               i Sn    Sn      10 48 49.8  -2.1
SOKA  Soboth             8.21 325  ePn     Pn      10 47 21.7 +0.7
      comp=Z,99nm,1.1s,SNR=75
SOKA                               eSn     Sn      10 48 55.9 +2.3
      comp=Z,16nm,0.6s
OBKA  Obir               8.31 323  ePn     Pn      10 47 23.4 +1.1
      comp=Z,27nm,0.5s,SNR=14
OBKA                               eSn     Sn      10 48 59.7 +3.8
      comp=Z,107nm,0.7s
KECS  Kecovo             8.41 354  eP      Pn      10 47 25.9 +2.3
KECS                               e               10 48 56.7
KECS  Kecovo             8.41 354  ePN     Pn      10 47 25.9 +2.3
KECS                               eSN     Sn      10 48 56.7  -1.7
SOP   Sopron             8.46 335   P      Pn      10 47 26.4 +2.1
SOP   Sopron             8.46 335  ePn     Pn      10 47 26.1 +1.8
SOP                                 Sn     Sn      10 48 56.0  -3.6
SOP                                eSg     Sg      10 49 49.1  -4.5
ARSA  Arzberg            8.47 329  ePn     Pn      10 47 25.6 +1.2
      comp=Z,30nm,0.5s,SNR=21
ARSA                               eSn     Sn      10 49 00.1 +0.4
      comp=Z,12nm,0.5s
UZH   Uzhgorod           8.51   2  eP      Pn      10 47 25.7 +0.8
UZH                                eS      Sn      10 49 01.5 +0.7
UZH                                 MLR    MLR
      comp=N,300nm,10.0s
UZH                                 MLR    MLR
      comp=E,300nm,10.0s
UZH                                 MLR    MLR
      comp=Z,160nm,10.0s
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KIS   Kishinev           8.53  34  eP      Pn      10 47 28.0 +2.8
      comp=Z,210nm,2.0s
KIS                                eS      Sn      10 49 10.0 +8.7
KIS                                 LQM            10 51 46.0
      comp=Z,3µm,12.0s
KIS                                 LRM    MLR     10 52 36.0
      comp=Z,5µm,14.0s
KIS   Kishinev           8.53  34  eP      Pn      10 47 28.0 +2.8
KIS                                eS      Sn      10 49 10.0 +8.7
KIS                                 pmax   pmax
      comp=Z,210nm,2.0s
KIS                                 MLR    MLR
      comp=Z,5µm,14.0s
VYHS  Vyhne              8.64 347  eP      Pn      10 47 28.8 +2.0
VYHS                               e               10 49 00.5
VYHS  Vyhne              8.64 347  ePN     Pn      10 47 28.8 +2.0
VYHS                               eSN     Sn      10 49 00.5  -3.5
ZST   Bratislava         8.76 339  eP      Pn      10 47 30.0 +1.7
ZST                                e               10 49 01.8
ZST   Bratislava         8.76 339  ePN     Pn      10 47 30.0 +1.7
ZST                                eSN     Sn      10 49 01.8  -5.0
KOLL  Kolacno            8.80 345  ePN     Pn      10 47 31.7 +2.7
MODS  Modra-Piesok       8.87 340  eP      Pn      10 47 31.7 +1.8
MODS                               e               10 49 04.4
MODS  Modra-Piesok       8.87 340  ePN     Pn      10 47 31.7 +1.8
MODS                               eSN     Sn      10 49 04.4  -5.3
CONA  Conrad Observa     8.91 333  ePn     Pn      10 47 31.8 +1.3
      comp=Z,12nm,0.7s,SNR=17
SLUM  Salum              9.04 161   S      Sn      10 49 07.3  -6.4
      baz=159
BR101 Keskin Array S     9.07  89  ePn     Pn      10 47 34.2 +1.4
BR101                              eSn     Sn      10 49 11.4  -3.4
BR131 Keskin Array S     9.07  89  ePn     Pn      10 47 33.2 +0.4
BRTR  Keskin Array B     9.07  89   Pn     Pn      10 47 34.2 +1.4
      comp=Z,2.4nm,0.3s,baz=259,slow=11,SNR=34
BRTR                                Sn     Sn      10 49 11.4  -3.4
      comp=Z,0.4nm,0.3s,baz=281,slow=22,SNR=3.3
BRTR                                LR     LR      10 51 33.5
      comp=Z,1µm,21.4s,baz=266,slow=40
LANS  Liptovska Anna     9.18 350  eP      Pn      10 47 40.8 +6.6
LANS                               e               10 49 24.1
LANS  Liptovska Anna     9.18 350  ePN     Pn      10 47 40.8 +6.6
LANS                               e               10 49 24.1
JAVC  Velka Javorina     9.23 343  ePN     Pn      10 47 39.7 +4.9
KBA   Koelnbreinsper     9.29 321  ePn     Pn      10 47 36.2 +0.4
      comp=Z,15nm,0.7s,SNR=33
KBA                                eSn     Sn      10 49 21.3 +1.2
      comp=Z,15nm,0.7s
KBA   Koelnbreinsper     9.29 321   P      Pn      10 47 36.8 +1.0
KBA                                 pmax   pmax
      comp=Z,59nm,1.4s
NIE   Niedzica           9.36 354  eP      Pn      10 47 40.6 +4.0
NIE                                eS      Sn      10 49 55.0  +33
VLC   Villacollemand     9.42 299  ePn     Pn      10 47 35.7  -1.7
MOA   Molln              9.46 327  ePn     Pn      10 47 39.6 +1.7
      comp=Z,29nm,0.8s,SNR=34
MOA                                eSn     Sn      10 49 26.8 +2.7
      comp=Z,44nm,0.7s
ABTA  Abfaltersbach      9.48 317  ePn     Pn      10 47 38.8 +0.5
      comp=Z,17nm,0.5s,SNR=18
ABTA                               eSn     Sn      10 49 21.4  -3.2
      comp=Z,22nm,0.6s
KRUC  Moravsky           9.74 338   P      Pn      10 47 43.1 +1.3
KRUC  Moravsky           9.74 338  ePN     Pn      10 47 42.9 +1.1
KRUC                               eSN     Sn      10 49 35.4 +4.4
LVV   L'vov              9.82   8  eP      Pn      10 47 46.0 +3.2
LVV                                eS      Sn      10 49 29.0  -3.9
LVV                                 MLR    MLR
      comp=N,900nm,12.0s
LVV                                 MLR    MLR
      comp=Z,900nm,12.0s
VRAC  Vranov             9.91 340   Pn     Pn      10 47 45.3 +1.1
      comp=Z,1.0nm,0.3s,baz=167,slow=14,SNR=22
VRAC                                Sn     Sn      10 49 30.2  -5.0
      comp=Z,0.4nm,0.3s,baz=184,slow=14,SNR=1.9
VRAC                                LR     LR      10 51 42.2
      comp=Z,518nm,18.5s,baz=9.5,slow=38
VRAC  Vranov             9.91 340⇓iP       Pn      10 47 46.5 +2.3
VRAC  Vranov             9.91 340  ePN     Pn      10 47 44.8 +0.6
VRAC                               eSN     Sn      10 49 42.0 +6.8
PGF   Pioggiola          9.96 288   P      Pn      10 47 46.8 +1.9
MORC  Moravsky Berou    10.12 344  ePn     Pn      10 47 46.5  -0.6
MORC  Moravsky Berou    10.12 344⇓iP       Pn      10 47 50.3 +3.3
MORC  Moravsky Berou    10.12 344  eP      Pn      10 47 46.5  -0.6
MORC  Moravsky Berou    10.12 344  ePN     Pn      10 47 48.0 +1.0
MORC                               eSN     Sn      10 49 43.5 +3.1
OJC   Ojcow             10.20 353  eP      Pn      10 47 51.7 +3.6
OJC                                eS      Sn      10 49 56.3  +14
OJC   Ojcow             10.20 353  ePn     Pn      10 47 48.9 +0.8
OJC   Ojcow             10.20 353  eP      Pn      10 47 48.9 +0.8
WTTA  Wattenberg        10.27 317  ePn     Pn      10 47 51.3 +2.1
      comp=Z,28nm,0.8s,SNR=11
WTTA                                Sn     Sn      10 49 42.0  -2.2
      comp=Z,142nm,0.8s
WATA  Walderalm         10.35 318  ePn     Pn      10 47 51.7 +1.5
      comp=Z,32nm,0.7s
WATA                               eSn     Sn      10 49 42.8  -3.2
      comp=Z,126nm,1.2s
SQTA  Sankt Quirin      10.47 316  ePn     Pn      10 47 52.8 +1.0
      comp=Z,21nm,0.5s,SNR=18
SQTA                               eSn     Sn      10 49 45.8  -3.1
      comp=Z,38nm,0.6s
CSS   Mathiatis         10.47 116  ePn     Pn      10 47 50.8  -1.1
CSS   Mathiatis         10.47 116   Pn     Pn      10 47 53.1 +1.2
GEC2  GERESS Array S    10.48 329  ePn     Pn      10 47 51.1  -0.9
GEC2                               eSn     Sn      10 49 46.5  -2.6
GEC2  GERESS Array S    10.48 329  eP      Pn      10 47 51.1  -0.9
GEC2                               e               10 49 46.5
GERES GERESS Array B    10.48 329   Pn     Pn      10 47 53.8 +1.8
      comp=Z,0.6nm,0.3s,baz=154,slow=13,SNR=26
GERES                               Sn     Sn      10 49 48.3  -0.8
      comp=Z,0.3nm,0.3s,baz=145,slow=22,SNR=2.2
GERES                               LR     LR      10 53 09.3
      comp=Z,426nm,19.9s,baz=160,slow=44
MOTA  Moosalm           10.60 316  i Pn    Pn      10 47 54.6 +0.9
      comp=Z,60nm,1.0s,SNR=11
MOTA                               eSn     Sn      10 49 50.4  -1.9
      comp=Z,54nm,1.0s
FETA  Feichten          10.60 314  i Pn    Pn      10 47 55.3 +1.6
      comp=Z,8.5nm,0.5s,SNR=14
FETA                               eSn     Sn      10 49 51.0  -1.4
      comp=Z,26nm,0.7s
FUORN Ofenpass-Fuorn    10.63 311  ePn     Pn      10 47 53.0  -1.3
KHC   Kasperske Hory    10.76 330  ePn     Pn      10 47 57.2 +1.5
KHC   Kasperske Hory    10.76 330  eP      Pn      10 47 57.1 +1.4
KHC                                e               10 49 58.9
KHC   Kasperske Hory    10.76 330  ePN     Pn      10 47 57.1 +1.4
KHC                                eSN     Sn      10 49 58.9 +3.0
KEST  Kesra             10.80 250   Pn     Pn      10 47 55.9  -0.6
      comp=Z,0.2nm,0.3s,baz=78,slow=9.3,SNR=10
KEST  Kesra             10.80 250  ePn     Pn      10 47 58.8 +2.4
RETA  Reutte            10.87 316  i Pn    Pn      10 47 59.7 +2.4
      comp=Z,0.9nm,0.2s
RETA                               i Sn    Sn      10 49 55.0  -3.7
      comp=Z,22nm,0.6s
DPC   Dobruska-Polom    10.94 341  eP      Pn      10 47 59.5 +1.3
DPC                                e               10 50 01.6
DPC   Dobruska-Polom    10.94 341  ePN     Pn      10 47 59.5 +1.3
DPC                                eSN     Sn      10 50 01.6 +1.2
DAVOX Davos/Dischmat    10.94 311   Pn     Pn      10 47 59.8 +1.3
      comp=Z,1.3nm,0.3s,baz=106,slow=20,SNR=7.3
DAVOX                               Sn     Sn      10 49 55.0  -5.7
      comp=Z,0.5nm,0.3s,baz=150,slow=20,SNR=2.1
GOPC  GO Pecny, Ondr    10.98 335  eP      Pn      10 47 59.9 +1.1
GOPC  GO Pecny, Ondr    10.98 335  ePN     Pn      10 47 59.9 +1.1
WET   Wettzell          11.04 328   P      Pn      10 48 01.5 +1.8
TUE   Stuetta           11.09 309  ePn     Pn      10 48 02.1 +1.6
PRU   Pruhonice         11.13 335  eP      Pn      10 48 01.7 +0.9
PRU   Pruhonice         11.13 335  ePN     Pn      10 48 01.7 +0.9
OSTC  Ostas             11.16 341  ePN     Pn      10 48 03.1 +1.9
UPC   Upice             11.16 340  eP      Pn      10 48 02.7 +1.5
UPC   Upice             11.16 340  ePN     Pn      10 48 02.7 +1.5
DAVA  Damuels           11.23 314  ePn     Pn      10 48 04.7 +2.4
      comp=Z,10nm,0.5s
SWA2                    11.25 164   P      Pn      10 48 00.2  -2.4
      baz=161
SWA2                                S      Sn      10 49 59.0  -9.1
      baz=161
SWA2                                AMP            10 50 00.0
      baz=161
KSP   Ksiaz             11.40 342  eP      Pn      10 48 10.0 +5.5
KSP                                eS      Sn      10 50 47.3  +36
PVCC  Panska Ves        11.59 336  eP      Pn      10 48 08.7 +1.6
PVCC  Panska Ves        11.59 336  ePN     Pn      10 48 08.7 +1.6
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AKBB  Malin Array Si   11.77  24 ePn     Pn     10 48 10.0 +0.4
AKBB  Malin Array Si   11.77  24 eP      Pn     10 48 10.0 +0.4
AKASG Malin Array Be   11.77  24  Pn     Pn     10 48 10.1 +0.5
      comp=Z,0.7nm,0.3s,baz=211,slow=12,SNR=7.1
AKASG                             LR     LR     10 52 52.6
      comp=Z,771nm,18.9s,baz=200,slow=38
NKC   Novy Kostel      12.08 330 eP      Pn     10 48 15.1 +1.3
NKC   Novy Kostel      12.08 330 ePN     Pn     10 48 15.1 +1.3
BRG   Berggiesshubel   12.09 335 eP      Pn     10 48 14.2 +0.3
      comp=Z,11nm,1.3s
BRG                              i              10 48 18.8
      comp=Z,35nm,1.2s
BRG                               S      Sn     10 50 29.0 +0.6
      comp=N,4µm,9.4s
      comp=E,4µm,8.7s
      comp=Z,4µm,8.3s
BRG   Berggiesshubel   12.09 335 eP      Pn     10 48 14.2 +0.3
BRG                               S      Sn     10 50 29.0 +0.6
BRG                               pmax   pmax
      comp=Z,11nm,1.3s
BRG                               MLR    MLR
      comp=N,4µm,8.3s
BNI   Bardonecchia     12.21 299 ePn     Pn     10 48 19.6 +3.9
SENIN Lac Senin/Sane   12.30 305 ePn     Pn     10 48 19.1 +2.2
STU   Stuttgart        12.49 318 ePn     Pn     10 48 19.2 -0.2
STU   Stuttgart        12.49 318 eP      Pn     10 48 19.2 -0.2
BFO   Black Forest     12.69 315 ePn     Pn     10 48 22.8 +0.7
BFO   Black Forest     12.69 315 i P     Pn     10 48 23.4 +1.3
CLL   Collm            12.77 334 ePn     Pn     10 48 21.2 -1.9
CLL   Collm            12.77 334 eP      Pn     10 48 21.2 -1.9
CLL   Collm            12.77 334 e(P)    Pn     10 48 24.0 +0.9
CLL                              i pP    P      10 48 26.7 -7.5
      comp=Z,23nm,1.3s
CLL                              ePP     PnPn   10 48 33.0 +2.1
CLL                               Lmax          10 53 00.0
MMAI  Mount Meron Ar   12.99 119  Pn     Pn     10 48 28.3 +1.9
      comp=Z,3.2nm,0.3s,baz=303,slow=11,SNR=13
MMAI                              LR     LR     10 54 15.5
      comp=Z,517nm,19.1s,baz=315,slow=41
KSDI  Kefar Szold      13.06 118  Pn     Pn     10 48 28.4 +1.1
NATI  Neve Ativ        13.07 117  Pn     Pn     10 48 29.1 +1.7
CABF  La Chapelle      13.16 305 eP      Pn     10 48 29.1 +0.5
CABF                              pmax   pmax
      comp=Z,32nm,1.2s
HINF  Hinteralfeld     13.24 310 eP      Pn     10 48 29.9 +0.2
HINF                              pmax   pmax
      comp=Z,13nm,0.8s
GLL   Jalalah          13.27 139  P      Pn     10 48 30.1  0.0
      baz=138
ECH   Echery           13.27 312 ePn     Pn     10 48 27.1 -3.0
ECH   Echery           13.27 312  P      Pn     10 48 32.1 +2.0
ECH                               pmax   pmax
      comp=Z,32nm,1.3s
RSH                    13.30 130  P      Pn     10 48 31.4 +0.9
      baz=129
CDF   Champ du Feu     13.31 313 eP      Pn     10 48 30.3 -0.4
CDF                               pmax   pmax
      comp=Z,11nm,0.9s
SHMJ  Saham            13.41 119  P      P      10 48 36.9 -4.6
      comp=Z,134nm,1.1s,comp=Z,2µm
VIVF  Saint-Julien-l   13.52 296 eP      Pn     10 48 36.8 +3.3
VIVF                              pmax   pmax
      comp=Z,11nm,1.1s
HMDT  Nahal Hemdat     13.54 121  Pn     Pn     10 48 35.6 +1.7
HAU   Haudompre        13.63 310 eP      Pn     10 48 35.3 +0.3
HAU                               pmax   pmax
      comp=Z,20nm,0.8s
SUZ   Suez             13.64 135  P      Pn     10 48 35.0 -0.2
      baz=134
SSB   Saint Sauveur    13.72 298 ePn     Pn     10 48 37.9 +1.6
SSB   Saint Sauveur    13.72 298 eP      Pn     10 48 37.9 +1.6
KZIT  Kziot            13.74 128  Pn     Pn     10 48 37.2 +0.7
KZIT  Kziot            13.74 128  P      Pn     10 48 36.3 -0.2
SOC   Sochi            13.76  70 eP      Pn     10 48 34.2 -2.6
SOC                              e              10 51 08.5
TNS   Taunus Mts       13.81 321  P      Pn     10 48 39.7 +2.3
YTIR  Yattir           13.86 125  Pn     Pn     10 48 39.5 +1.2
SUW   Suwalki          13.93   3 ePn     Pn     10 48 40.9 +2.0
SUW   Suwalki          13.93   3 eP      Pn     10 48 40.9 +2.0
WALJ  Wala             14.17 123  P      P      10 48 50.9 +0.9
LISJ  El Lisan         14.18 124  P      Pn     10 48 45.5 +3.0
      comp=Z,32nm,1.0s
ZFRI  Zfri             14.46 127  Pn     Pn     10 48 46.6 +0.2
PRNI  Paran            14.50 128  Pn     Pn     10 48 47.6 +0.6
PRNI                              Sn     Sn     10 51 28.8 +1.3
ASF   Jabal al Asfar   14.51 118  Pn     Pn     10 48 49.2 +2.0
      comp=Z,0.1nm,0.3s,baz=230,slow=7.9,SNR=2.5
ASF   Jabal al Asfar   14.51 118  P      P      10 48 54.7 +0.9
SWQJ  Swaqa            14.54 123  P      P      10 48 51.5 -2.7
      comp=Z,482nm,0.6s,comp=Z,8µm
WLF   Walferdange      14.63 316 eP      Pn     10 48 51.0 +2.4
WLF   Walferdange      14.63 316 eP      Pn     10 48 51.0 +2.4
WLF   Walferdange      14.63 316  P      P      10 48 54.9 +0.1
WLF   Walferdange      14.63 316  sP     P      10 48 59.8 +4.9
JDRJ  Daraweish        14.64 126  P      P      10 49 00.4 +5.1
HRFI  Mount Harif      14.74 129  Pn     Pn     10 48 50.9 +0.6
HRFI                              Sn     Sn     10 51 35.7 +2.2
MBRI  Mt Berech        14.85 130  Pn     Pn     10 48 53.3 +1.5
MBRI                              Sn     Sn     10 51 38.3 +2.2
EIL   Elat             14.96 130  Pn     Pn     10 48 54.5 +1.3
      comp=Z,0.6nm,0.3s,baz=318,slow=5.6,SNR=9.2
EIL                               LR     LR     10 57 39.8
      comp=Z,276nm,18.5s,baz=282,slow=49
EIL   Elat             14.96 130  Pn     Pn     10 48 54.0 +0.8
AVF   Avril sur Loir   14.97 303 eP      P      10 48 57.5 -1.3
AVF                               pmax   pmax
      comp=Z,33nm,1.0s
MTLF  Montolieu        15.00 289 eP      Pn     10 48 56.2 +2.5
MTLF                              pmax   pmax
      comp=Z,19nm,1.5s
BUG   Bochum--Univer   15.18 323  P      P      10 48 58.9 -2.1
BGF   Bois d'Agland    15.23 301 eP      P      10 49 00.2 -1.4
BGF                               pmax   pmax
      comp=Z,50nm,1.1s
MEM   Membach          15.26 319  pP     P      10 49 04.7 +2.8
MEM                               sP     pP     10 49 06.4 +0.6
MEM                               x      x      10 49 08.3
CAF   Calviac          15.34 295 eP      P      10 49 05.0 +2.1
CAF                               pmax   pmax
      comp=Z,62nm,1.6s
BCLA  Clavier          15.51 317  pP     P      10 49 06.5 +1.8
      comp=Z,38nm,1.0s
IIGN  Ignalina         15.51   9 eP      P      10 49 04.5 -0.2
IIGN                              IAmb   IAmb   10 49 07.7
      comp=Z,35nm,1.0s
BEBN  Eben Emael       15.54 319  pP     P      10 49 06.5 +1.5
IDID  Didziasalis      15.55  10 eP      P      10 49 04.7 -0.4
IDID                              IAmb   IAmb   10 49 07.8
      comp=Z,18nm,0.8s
TCF   Toulx Ste Croi   15.57 300 eP      P      10 49 06.9 +1.5
TCF                               pmax   pmax
      comp=Z,55nm,1.3s
DOU   Dourbes          15.70 315  P      P      10 49 06.5 -0.3
DOU   Dourbes          15.70 315  pP     P      10 49 08.1 +1.3
      comp=Z,30nm,0.7s
ISAL  Salakas          15.72   9 eP      P      10 49 05.9 -1.1
ISAL                              IAmb   IAmb   10 49 09.1
      comp=Z,17nm,0.7s
BMRD  Maredsous        15.72 316  x      P      10 49 08.6 +1.5
RJF   Les Rejaudoux    15.80 296 eP      P      10 49 10.3 +2.3
RJF                               pmax   pmax
      comp=Z,40nm,1.5s
BSEG  Bad Segeberg     15.87 334  P      P      10 49 08.6  0.0
BSEG                              pmax   pmax
      comp=Z,21nm,1.0s
NEY   Neytrino         15.90  72⇑iP      Pn     10 49 06.8 +1.1
IZAR  Zarasai          15.91   9 eP      Pn     10 49 06.5 +1.0
IZAR                              IAmb   IAmb   10 49 11.2
      comp=Z,11nm,0.8s
KIV   Kislovodsk       15.94  69 eP      Pn     10 49 07.5 +1.4
      comp=Z,36nm,1.4s
KIV   Kislovodsk       15.94  69 eP      P      10 49 08.2 -1.5
KIV                               pmax   pmax
      comp=Z,55nm,1.1s
KVAR  Kislovodsk Arr   15.95  69  LR     LR     10 55 43.0
      comp=Z,272nm,20.7s,baz=269,slow=39
KBZ   Khabaz           16.07  70  Pn     P      10 49 13.8 +2.9
      comp=Z,0.0nm,0.3s,baz=278,slow=9.8,SNR=7.1
KBZ                               LR     LR     10 55 58.3
      comp=Z,239nm,20.6s,baz=354,slow=39
SNF   Seneffe          16.10 316  x      P      10 49 13.1 +1.9
CLF   Chambon-Foret    16.11 306 eP      Pn     10 49 08.9 +0.9
      comp=Z,123nm,1.4s
UCC   Uccle            16.22 317 eP      P      10 49 13.5 +1.0
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      comp=Z,93nm,1.1s
UCC   Uccle            16.22 317 eP      P      10 49 13.5 +1.0
UCC                               pmax   pmax
      comp=Z,93nm,1.1s
UCC   Uccle            16.22 317  x      P      10 49 14.8 +2.2
UCC                               PnPn   PnPn   10 49 18.0 -0.3
UCC                               x      x      10 49 19.2
VORD  Divnogorie       16.30  43 eP      P      10 49 13.9 +0.5
VORD                              pmax   pmax
      comp=Z,20nm,1.3s
VORD                              MLR    MLR
      comp=Z,3µm,15.0s
GOF   Gofitskoye       16.36  66⇓iP      P      10 49 16.6 +2.5
GOF                               pmax   pmax
      comp=Z,56nm,0.9s
VSR   Storozhevoye     16.38  42 eP      P      10 49 13.4 -0.9
VSR                               pmax   pmax
      comp=Z,30nm,1.3s
VSR                               MLR    MLR
      comp=Z,2µm,16.0s
AKH   Akhalkalaki      16.45  78 eP      P      10 49 16.7 +1.3
      comp=Z,28nm,1.2s
AKH   Akhalkalaki      16.45  78 eP      P      10 49 16.7 +1.3
AKH                               pmax   pmax
      comp=Z,28nm,1.2s
ZEI   Tsey             16.74  74 eP      P      10 49 20.4 +1.7
ZEI                               pmax   pmax
      comp=Z,12nm,0.4s
LPSR  Galich'ya Gora   17.11  38 eP      Pn     10 49 20.4 -0.4
LPSR                              pmax   pmax
      comp=Z,40nm,0.9s
LPSR                              MLR    MLR
      comp=Z,1µm,12.0s
MFF   Saint Martin d   17.22 299 eP      P      10 49 25.4 +1.7
MFF                               pmax   pmax
      comp=Z,99nm,1.6s
TBLG  Delisi           17.37  77 eP      P      10 49 25.6 +0.2
      comp=Z,25nm,1.3s
TBLG  Delisi           17.37  77 eP      P      10 49 25.6 +0.2
TBLG                              pmax   pmax
      comp=Z,25nm,1.3s
GNI   Garni            17.50  83  P      P      10 49 27.1 +0.1
      comp=Z,1.6nm,0.3s,baz=270,slow=13,SNR=2.3
GNI                               LR     LR     10 56 01.8
      comp=Z,86nm,19.2s,baz=98,slow=36
GNI   Garni            17.50  83 eP      Pn     10 49 26.4 +0.5
      comp=Z,45nm,1.3s
GNI   Garni            17.50  83⇑eP      P      10 49 27.3 +0.2
OBN   Obninsk          17.93  28  P      Pn     10 49 30.5 -0.3
      comp=Z,1.4nm,0.3s,baz=214,slow=4.7,SNR=11
OBN                               LR     LR     10 56 47.8
      comp=Z,188nm,18.8s,baz=206,slow=38
OBN   Obninsk          17.93  28 eP      Pn     10 49 30.4 -0.3
      comp=Z,61nm,1.2s
OBN   Obninsk          17.93  28⇓eP      P      10 49 31.2 -0.2
OBN                               pmax   pmax
      comp=Z,88nm,1.7s
OBN                               MLR    MLR
      comp=Z,949nm,15.0s
VSU   Vasula           18.62   8 eP      P      10 49 38.6 -0.4
VSU                               IAmb   IAmb   10 49 41.5
      comp=Z,136nm,0.8s
VSU   Vasula           18.62   8c iP     Pn     10 49 40.8 +1.5
VSU                               pmax   pmax
      comp=Z,142nm,0.7s
MOS   Moscow           18.79  29 eP      Pn     10 49 41.4  0.0
MOS                              eS      S      10 53 18.3 +4.1
MOS                               pmax   pmax
      comp=Z,64nm,0.8s
MOS                               MLR    MLR
      comp=Z,2µm,14.0s
ROSF  Rostrenen        19.72 303  P      Pn     10 49 52.6  0.0
ROSF                              pmax   pmax
      comp=Z,73nm,1.4s
ESDC  Sonseca Array    19.79 277  P      P      10 49 51.7 -0.3
      comp=Z,0.5nm,0.3s,baz=74,slow=10,SNR=22
ESLA  Sonseca Array    19.79 277 eP      P      10 49 52.6 +0.6
      comp=Z,22nm,1.1s
PAB   San Pablo        20.10 277 eP      Pn     10 49 56.7 -0.6
      comp=Z,44nm,1.4s
PAB   San Pablo        20.10 277 eP      Pn     10 49 56.7 -0.6
PAB                               pmax   pmax
      comp=Z,44nm,1.4s
PUL   Pulkovo          20.38  12 eP      P      10 49 57.9 -0.3
PUL   Pulkovo          20.38  12⇓eP      Pn     10 50 00.1 -0.2
PUL                               pmax   pmax
      comp=Z,134nm,0.5s
HFS   Hagfors          20.67 348  P      P      10 50 00.8 -0.6
      comp=Z,15nm,0.6s,baz=170,slow=10,SNR=22
KONO  Kongsberg        21.01 343 eP      P      10 50 04.3 -0.7
      comp=Z,67nm,1.3s
KONO  Kongsberg        21.01 343ceP      P      10 50 05.0 -0.1
KONO                              pmax   pmax
      comp=Z,44nm,1.7s
KONO  Kongsberg        21.01 343 eP      P      10 50 03.5 -1.6
OSL   Oslo             21.03 344 eP      P      10 50 01.9 -3.3
FIA0  FINESS Array S   21.51   6 eP      P      10 50 10.3  0.0
FIA0  FINESS Array S   21.51   6 eP      P      10 50 10.3  0.0
FINES FINESS Array B   21.51   6  P      P      10 50 10.3  0.0
      comp=Z,4.6nm,0.5s,baz=181,slow=10,SNR=22
FINES                             LR     LR     10 59 24.7
      comp=Z,468nm,21.2s,baz=190,slow=39
NC602 NORSAR Array S   21.60 346 eP      P      10 50 10.6 -0.8
      comp=Z,94nm,0.8s
NC602 NORSAR Array S   21.60 346 eP      P      10 50 09.9 -1.5
PBRG  Braganca         21.61 284 eP      P      10 50 13.6 +1.8
      comp=Z,32nm,1.1s
BLS5  Blasjo           21.62 338 eP      P      10 50 09.7 -2.0
KMY   Karmoy           21.80 337 eP      P      10 50 11.5 -2.1
NAO01 NORSAR Array S   21.83 346 eP      P      10 50 13.0 -0.8
      comp=Z,144nm,1.4s
MVO   Moncorvo         21.89 282 eP      P      10 50 15.9 +1.1
      comp=Z,24nm,1.1s
MVO                              eS      Sn     10 54 22.8 -3.6
NC405 NORSAR Array S   21.93 347 eP      P      10 50 14.7 -0.2
      comp=Z,116nm,0.9s
NB201 NORSAR Array S   21.94 346 eP      P      10 50 14.4 -0.7
      comp=Z,374nm,1.5s
NB2   NORSAR Subarra   21.95 346  P      P      10 50 14.1 -1.1
      comp=Z,4.1nm,0.6s,baz=158,slow=10
NB2   NORSAR Subarra   21.95 346  P      P      10 50 14.1 -1.1
      baz=158,slow=10
NB200 NORSAR Array S   21.95 346 eP      P      10 50 14.5 -0.7
NOA   NORSAR Array B   21.95 346  P      P      10 50 14.5 -0.7
      comp=Z,27nm,0.9s,baz=161,slow=11,SNR=44
NOA                               LR     LR     11 00 04.2
      comp=Z,432nm,18.9s,baz=165,slow=40
NBO00 NORSAR Array S   22.02 346 eP      P      10 50 15.2 -0.7
      comp=Z,75nm,1.0s
NC303 NORSAR Array S   22.09 346 eP      P      10 50 16.9 +0.2
      comp=Z,132nm,0.9s
TAM   Tamanrasset      22.13 224 eP      P      10 50 19.5 +2.0
      comp=Z,44nm,1.3s
TAM   Tamanrasset      22.13 224 eP      P      10 50 19.5 +2.0
TAM                               pmax   pmax
      comp=Z,44nm,1.3s
SKAR  Skarslia         22.23 342 eP      P      10 50 16.5 -1.7
NC204 NORSAR Array S   22.25 346 eP      P      10 50 18.2 -0.2
      comp=Z,82nm,1.1s
MTE   Manteigas        22.39 280 eP      P      10 50 21.8 +1.7
      comp=Z,36nm,1.3s
MTE                              eS      Sn     10 54 32.4 -5.8
MTE   Manteigas        22.39 280 eP      P      10 50 19.8 -0.3
      comp=Z,20nm,1.0s
PCBR  Castelo Branco   22.43 279 eP      P      10 50 20.9 +0.4
      comp=Z,32nm,1.8s
MDT   Midelt           22.43 259  P      P      10 50 20.2 -0.5
      comp=Z,10nm,0.9s,baz=85,slow=10,SNR=14
PMRV  Marv??o          22.44 278 eS      Sn     10 54 33.7 -5.7
ESK   Eskdalemuir      22.52 321 eP      P      10 50 20.7 -0.5
      comp=Z,75nm,0.8s
ESK   Eskdalemuir      22.52 321 eP      P      10 50 20.7 -0.5
ESK                               pmax   pmax
      comp=Z,75nm,0.8s
PGAV  Gavieira, Arco   22.73 284 eS      Sn     10 54 41.0 -5.5
SUF   Sumiainen        22.78   5  P      P      10 50 25.6 +1.7
SUF                               pmax   pmax
      comp=Z,38nm,1.1s
ASK   Askoy            22.86 339 eP      P      10 50 22.4 -2.4
PBEJ  Beja             23.11 274 eP      P      10 50 29.9 +2.2
      comp=Z,30nm,1.7s
HYA   Hoyanger         23.17 341 eP      P      10 50 25.8 -2.1
DOMB  Dombas           23.28 345 eP      P      10 50 27.6 -1.6
AKN   Aaknes           23.85 343 eP      P      10 50 32.9 -1.8
MOL   Molde            24.07 344 eP      P      10 50 35.0 -1.8
OUL   Oulu             25.11   4  P      P      10 50 47.4 +1.2
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OUL                               pmax   pmax
      comp=Z,29nm,1.2s
NSS   Namsos           25.12 350 eP      P      10 50 44.3 -1.9
KIRV  Kirov            25.47  34  P      P      10 50 49.1 -0.4
      comp=Z,12nm,0.5s,baz=222,slow=1.2,SNR=12
RAYN  Ar Rayn          25.92 123 eP      P      10 50 54.8 +0.8
      comp=Z,33nm,1.5s
RAYN  Ar Rayn          25.92 123 eP      P      10 50 54.8 +0.8
RAYN                              pmax   pmax
      comp=Z,33nm,1.5s
PRGR  Permogore        25.97  26 eP      P      10 50 54.0  0.0
PRGR                              pmax   pmax
      comp=Z,120nm,1.0s
MSF   Maaselka         26.16   7  P      P      10 50 57.5 +1.8
MSF                               pmax   pmax
      comp=Z,20nm,1.0s
MOR8  Moi Rana         26.43 353 eP      P      10 50 56.8 -1.4
AKTO  Aktyubinsk       27.21  56  P      P      10 51 05.0 -0.3
      comp=Z,2.3nm,0.4s,baz=266,slow=11,SNR=14
AKTO                              LR     LR     11 03 41.8
      comp=Z,230nm,19.9s,baz=268,slow=40
SGF   Sodankyl         27.50   4  P      P      10 51 11.1 +3.4
SGF                               pmax   pmax
      comp=Z,29nm,1.7s
STEI  Steigen          28.10 355 eP      P      10 51 11.9 -1.2
GEYT  Alibeck          28.14  83  P      P      10 51 13.1 -0.8
      comp=Z,1.9nm,0.7s,baz=245,slow=5.9,SNR=3.7
GEYT                              LR     LR     11 05 36.9
      comp=Z,191nm,18.4s,baz=200,slow=43
GYA0B ALIBECK ARRAY    28.14  83 eP      P      10 51 13.7 -0.2
      comp=Z,20nm,1.4s
APA   Apatity          28.23   9⇓iP      P      10 51 18.0 +3.7
APA                               pmax   pmax
      comp=Z,1.0nm,0.6s
APA                               MLR    MLR
      comp=Z,100nm,13.0s
ABKAR Akbulak array    28.32  58 eP      P      10 51 15.5 +0.2
      comp=Z,5.2nm,1.2s
ARU   Arti             28.93  43  P      P      10 51 20.4 -0.3
      comp=Z,2.5nm,0.2s,baz=222,slow=6.7,SNR=7.0
ARU                               LR     LR     11 04 10.4
      comp=Z,321nm,18.1s,baz=272,slow=39
ARU   Arti             28.93  43 eP      P      10 51 21.2 +0.5
      comp=Z,11nm,1.0s
ARU   Arti             28.93  43d iP     P      10 51 21.0 +0.4
ARU                               S      S      10 56 14.4 +3.7
ARU                               pmax   pmax
      comp=Z,20nm,1.8s
ARU                               MLR    MLR
      comp=Z,781nm,14.0s
KTK1  Kautokeino       28.96   1 eP      P      10 51 19.1 -1.6
ARE0  ARCESS Array S   29.54   3 eP      P      10 51 25.5 -0.4
      comp=Z,0.5nm,0.9s
ARE0  ARCESS Array S   29.54   3 eP      P      10 51 24.4 -1.5
ARA0  ARCESS Array S   29.54   3 eP      P      10 51 25.1 -0.9
ARCES ARCESS Array B   29.54   3  P      P      10 51 25.1 -0.9
      comp=Z,6.5nm,0.6s,baz=195,slow=6.5,SNR=23
ARCES                             LR     LR     11 03 48.0
      comp=Z,573nm,19.5s,baz=109,slow=37
TRO   Tromso           29.61 358 eP      P      10 51 24.9 -1.7
SVE   Sverdlovsk       30.15  43 eP      P      10 51 33.1 +1.7
SVE                               pmax   pmax
      comp=Z,45nm,1.5s
TOA1  Torodi Ar. Sit   32.18 219 eP      P      10 51 48.6 -1.1
TOA0  Torodi Ar. Sit   32.19 219 eP      P      10 51 49.8  0.0
      comp=Z,17nm,0.8s
TORD  Torodi Ar. Bea   32.19 219  P      P      10 51 48.6 -1.2
      comp=Z,13nm,0.4s,baz=30,slow=7.8,SNR=37
TORD                              LR     LR     11 06 02.6
      comp=Z,198nm,18.1s,baz=345,slow=38
DAMY  Dhamar           32.20 136 eP      P      10 51 52.2 +2.0
      comp=Z,18nm,1.2s
BRVK  Borovoye         35.03  52 eP      P      10 52 15.2 +1.0
      comp=Z,15nm,0.9s
BRVK  Borovoye         35.03  52d iP     P      10 52 15.2 +1.0
BRVK                              pmax   pmax
      comp=Z,14nm,1.0s
BVAR  Borovoye Array   35.09  52  P      P      10 52 15.7 +0.9
      comp=Z,5.4nm,0.9s,baz=259,slow=6.9,SNR=26
KK31  Karatay Array    36.10  69 eP      P      10 52 24.1 +0.5
      comp=Z,5.2nm,0.8s
KK31  Karatay Array    36.10  69 eP      P      10 52 24.1 +0.5
KK31                              pmax   pmax
      comp=Z,5.0nm,0.8s
KKAR  Karatay Array    36.10  69 eP      P      10 52 23.9 +0.4
      comp=Z,5.2nm,0.8s
KKAR  Karatay Array    36.10  69 eP      P      10 52 23.9 +0.4
KKAR                              pmax   pmax
      comp=Z,5.0nm,0.8s
GAR   Garm             37.02  76 eP      P      10 52 32.3 +0.8
      comp=Z,34nm,1.0s
GAR   Garm             37.02  76 eP      P      10 52 32.3 +0.8
GAR                               pmax   pmax
      comp=Z,34nm,1.0s
BTK   Batken           37.08  74 eP      P      10 52 32.8 +0.8
      comp=Z,14nm,1.2s
BTK   Batken           37.08  74 eP      P      10 52 32.8 +0.8
BTK                               pmax   pmax
      comp=Z,14nm,1.2s
HSPB  Hornsund (broa   37.08 358 eP      P      10 52 28.5 -3.0
KBL   Kabul            37.59  83 eP      P      10 52 37.9 +1.4
      comp=Z,9.0nm,1.0s
KBL   Kabul            37.59  83 eP      P      10 52 37.9 +1.4
KBL                               pmax   pmax
      comp=Z,9.0nm,1.0s
SPA0  Spitsbergen Ar   38.23 358 eP      P      10 52 39.0 -2.2
ARSB  Arslanbob        38.31  71 eP      P      10 52 44.1 +1.6
      comp=Z,11nm,0.8s
AAK   Ala-Archa        39.06  69  P      P      10 52 48.8  0.0
      comp=Z,2.9nm,0.4s,baz=226,slow=1.8,SNR=8.5
AAK   Ala-Archa        39.06  69 eP      P      10 52 50.2 +1.4
      comp=Z,5.5nm,0.8s
AAK   Ala-Archa        39.06  69deP      P      10 52 49.6 +0.8
AAK                               pmax   pmax
      comp=Z,14nm,1.7s
FRU1  Bishkek          39.11  68 eP      P      10 52 50.7 +1.6
      comp=Z,32nm,0.5s
FRU1  Bishkek          39.11  68 eP      P      10 52 50.7 +1.6
FRU1                              pmax   pmax
      comp=Z,32nm,0.5s
KBS   Kingsbay         39.12 357 eP      P      10 52 45.1 -3.5
KURBB Kurchatov Arra   40.26  55  P      P      10 52 58.8 +0.3
      comp=Z,3.6nm,0.8s,baz=280,slow=9.2,SNR=14
KURBB                             PcP    PcP    10 55 00.1 -1.9
      comp=Z,1.9nm,0.9s,baz=288,slow=4.0,SNR=4.2
KURK  Kurchatov        40.31  55 eP      P      10 52 59.2 +0.4
      comp=Z,9.4nm,1.1s
KURK  Kurchatov        40.31  55d iP     P      10 52 59.8 +1.0
KURK                              pmax   pmax
      comp=Z,11nm,1.7s
DBIC  Dimbokro         41.02 223  P      P      10 53 04.7 -0.3
      comp=Z,12nm,0.8s,baz=22,slow=11,SNR=7.3
DBIC  Dimbokro         41.02 223 eP      P      10 53 05.8 +0.9
      comp=Z,42nm,1.4s
KSH   Kashi            41.03  73  P      P      10 53 04.6 -0.5
KSH                               pP     sP     10 53 10.4 -0.8
KSH                               PcP    PcP    10 55 06.7 +1.8
KSH                               pmax   pmax
      comp=Z,8.0nm,1.0s
KSH                               pmax   pmax
      comp=Z,140nm,6.0s
KSH                               LR     LR
      comp=Z,250nm,12.3s
KSH                               LR     LR
      comp=Z,200nm,9.8s
KDJ   Kajisay          41.11  69 eP      P      10 53 06.9 +1.1
      comp=Z,14nm,1.2s
KDJ   Kajisay          41.11  69 eP      P      10 53 06.9 +1.1
KDJ                               pmax   pmax
      comp=Z,14nm,1.2s
TIC   Toumodi          41.12 223 eP      P      10 53 06.1 +0.2
NIL   Nilore           41.15  82 eP      P      10 53 07.1 +1.1
      comp=Z,22nm,0.9s
NIL   Nilore           41.15  82 eP      P      10 53 07.1 +1.1
NIL                               pmax   pmax
      comp=Z,22nm,0.9s
KIC   Kosan Boka       41.22 222 eP      P      10 53 07.1 +0.4
      comp=Z,84nm,1.4s
MBAR  Mbarara          41.34 166  P      P      10 53 07.5 -0.3
      comp=Z,3.6nm,0.2s,baz=95,slow=6.3,SNR=3.6
MBAR  Mbarara          41.34 166 eP      P      10 53 07.5 -0.3
      comp=Z,10nm,1.1s
MBAR  Mbarara          41.34 166⇓eP      P      10 53 07.7 -0.1
MBAR                              pmax   pmax
      comp=Z,5.0nm,1.2s
LIC   Lamto            41.48 223 eP      P      10 53 09.3 +0.5
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	comp=Z,142nm,1.3s						
PRZ	**Przheval'sk**	41.88	68	*e*P	P	10 53 14.2	+2.1
	comp=Z,11nm,0.6s						
PRZ	**Przheval'sk**	41.88	68	*e*P	P	10 53 14.2	+2.1
PRZ				pmax	pmax		
	comp=Z,11nm,0.6s						
MAKZ	**Makanchi**	43.21	60	*e*P	P	10 53 23.1	+0.4
	comp=Z,7.3nm,1.0s						
MAKZ	**Makanchi**	43.21	60	*e*P	P	10 53 23.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMBO	**Kilima Mbogo**	43.40	157	P	P	10 53 24.9	+0.2
	comp=Z,0.9nm,0.3s,baz=354,slow=9.2,SNR=2.2						
KMBO	**Kilima Mbogo**	43.40	157	*e*P	P	10 53 25.8	+1.1
	comp=Z,3.0nm,0.8s						
SUMG	**Summit**	43.40	338	*e*P	P	10 53 24.2	-0.1
	comp=Z,10.0nm,0.8s						
SUMG	**Summit**	43.40	338	*e*P	P	10 53 24.2	-0.1
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	43.43	60	*e*P	P	10 53 24.6	+0.2
	comp=Z,16nm,1.4s						
MK31	**Makanchi Array**	43.43	60	*e*P	P	10 53 24.6	+0.2
MK31				pmax	pmax		
	comp=Z,17nm,1.4s						
MK32	**Makanchi Array**	43.43	60	*e*P	P	10 53 24.6	+0.2
MKAR	**Makanchi Array**	43.43	60	P	P	10 53 24.6	+0.2
	comp=Z,6.9nm,0.6s,baz=281,slow=7.2,SNR=64						
ZAA0	**Zalesovo Array**	43.64	50	*e*P	P	10 53 25.8	-0.2
	comp=Z,12nm,0.9s						
ZAA1	**Zalesovo Array**	43.64	50	*e*P	P	10 53 26.0	0.0
ZALV	**Zalesovo Beam**	43.64	50	P	P	10 53 26.0	0.0
	comp=Z,14nm,0.9s,baz=275,slow=8.9,SNR=21						
ZALV				LR	LR	11 13 37.8	
	comp=Z,192nm,18.8s,baz=250,slow=39						
ZALV	**Zalesovo Beam**	43.64	50	P	P	10 53 26.0	0.0
WMQ	**Urumqi**	47.94	63	*e*P	P	10 54 02.3	+2.1
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.1s						
WMQ				LR	LR		
	comp=Z,150nm,17.9s						
WMQ				LR	LR		
	comp=Z,270nm,15.7s						
WMQ				LR	LR		
	comp=Z,190nm,18.5s						
PYUN	**Piuthan**	51.12	84	*e*P	P	10 54 24.6	-0.2
	comp=Z,56nm,0.7s						
DANN	**Dangsing**	51.58	83	*e*P	P	10 54 28.1	-0.3
	comp=Z,84nm,0.9s						
KOLN	**Koldanda**	51.75	84	*e*P	P	10 54 29.0	-0.6
	comp=Z,29nm,0.8s						
DMN	**Daman**	52.98	83	*e*P	P	10 54 38.3	-0.5
	comp=Z,61nm,0.9s						
PKIN	**Phulchoki**	53.22	83	*e*P	P	10 54 39.9	-0.6
	comp=Z,21nm,0.8s						
PKI	**Pulchoki**	53.23	83	*e*P	P	10 54 39.9	-0.8
	comp=Z,92nm,1.6s						
GUN	**Gumba**	53.42	82	*e*P	P	10 54 41.5	-0.6
	comp=Z,66nm,1.1s						
JIRN	**Jiri**	53.78	82	*e*P	P	10 54 44.4	-0.4
DRLN	**Deer Lake**	54.70	308	*e*P	P	10 54 50.8	+0.1
	comp=Z,28nm,0.9s						
LSZ	**Lusaka**	55.43	173	*e*P	P	10 54 57.0	+0.7
	comp=Z,4.7nm,0.9s						
LSZ	**Lusaka**	55.43	173	*e*P	P	10 54 57.0	+0.7
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAK	**Zakamensk**	55.51	50	*e*P	P	10 54 55.2	-1.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
LSA	**Lhasa**	56.48	77	*e*P	P	10 55 04.6	+0.2
LSA				*e*pP	P	10 55 04.7	+0.3
LSA	**Lhasa**	56.48	77	*e*P	P	10 55 04.6	+0.2
LSA				*e**PP	P	10 55 04.7	+0.3
TIXI	**Tiksi**	57.47	21	*e*P	P	10 55 10.9	+0.7
	comp=Z,7.8nm,1.3s						
TIXI	**Tiksi**	57.47	21⇑	*e*P	P	10 55 11.5	+1.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SCHQ	**Schefferville**	57.74	317	P	P	10 55 10.9	-1.5
	comp=Z,8.5nm,0.6s,baz=72,slow=4.0,SNR=9.6						
SCHQ				LR	LR	11 20 09.8	
	comp=Z,150nm,18.5s,baz=83,slow=36						
SCHQ	**Schefferville**	57.74	317	*e*P	P	10 55 12.5	+0.1
	comp=Z,11nm,0.7s						
GTA	**Gaotai**	58.02	63	*e*P	P	10 55 15.2	+0.5
GTA				pP	sP	10 55 20.0	-0.9
GTA				sP	pP	10 55 22.3	+3.1
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA				pmax	pmax		
	comp=Z,120nm,6.7s						
GTA				LR	LR		
	comp=Z,140nm,19.0s						
GTA				LR	LR		
	comp=Z,120nm,18.1s						
GTA				LR	LR		
	comp=Z,290nm,18.1s						
SONA0	**Songino Array**	58.44	52	*e*P	P	10 55 16.7	-0.8
SONM	**Songino Array**	58.44	52	P	P	10 55 16.7	-0.8
	comp=Z,2.1nm,0.9s,baz=292,slow=7.8,SNR=8.9						
GBN	**Guysborough**	58.80	305	*e*P	P	10 55 20.4	+0.6
	comp=Z,36nm,1.1s						
ULN	**Ulaanbaatar**	58.82	52⇓	*e*P	P	10 55 21.0	+0.8
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
SHL	**Shillong**	59.21	81	*e*P	P	10 55 22.3	-0.9
	comp=Z,31nm,1.2s						
SHL	**Shillong**	59.21	81	*e*P	P	10 55 22.3	-0.9
SHL				pmax	pmax		
	comp=Z,31nm,1.2s						
LMN	**Caledonia Moun**	60.63	307	*e*P	P	10 55 32.5	0.0
	comp=Z,10nm,0.9s						
BATG	**Bathurst New B**	60.71	309	*e*P	P	10 55 33.3	+0.3
	comp=Z,18nm,1.0s						
LZH	**Lanzhou**	62.43	65	⇑P	P	10 55 45.6	+0.6
LZH				pP	pP	10 55 49.6	+0.1
LZH				sP	sP	10 55 51.8	+0.6
LZH				PP	PP	10 58 07.1	+5.0
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=Z,240nm,17.4s						
LZH				LR	LR		
	comp=Z,250nm,17.4s						
LZH				LR	LR		
	comp=Z,170nm,17.9s						
CHGQ	**Chibougamau**	64.15	314	P	P	10 55 56.2	+0.2
	baz=58						
LBTB	**Lobatse**	64.89	176	*e*P	P	10 56 01.9	+0.8
	comp=Z,8.6nm,1.0s						
LBTB	**Lobatse**	64.89	176	*e*P	P	10 56 01.9	+0.8
LBTB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC	**Hu-ho-hao-te**	65.10	57	P	P	10 56 03.0	+0.6
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,24nm,5.7s						
CD2	**Chengdu**	65.11	70⇑	*i*P	P	10 56 02.7	+0.1
CD2				S	S	11 04 44.0	-1.0
CD2				pmax	pmax		
	comp=Z,70nm,0.8s						
CD2				LR	LR		
	comp=Z,440nm,9.0s						
CD2				LR	LR		
	comp=Z,380nm,13.5s						
CD2				LR	LR		
	comp=Z,390nm,20.6s						
LBNH	**Lisbon**	65.79	308	P	P	10 56 07.1	+0.4
	baz=57						
MATQ	**Matagami**	66.00	316	P	P	10 56 08.0	0.0
	baz=56						
LSQQ	**Lebel-sur-Quev**	66.04	315	P	P	10 56 08.4	+0.1
	baz=56						
VLDQ	**Val d'Or**	66.83	314	*e*P	P	10 56 13.9	+0.6
	comp=Z,10nm,0.9s						
D54A	**Lac Fusel, La**	66.94	313	P	P	10 56 14.2	+0.2
	baz=55						
XAN	**Xi'an**	67.04	64	*e*P	P	10 56 13.3	-1.7
	comp=Z,29nm,1.1s						
XAN	**Xi'an**	67.04	64	P	P	10 56 14.0	-1.0
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
XAN				pmax	pmax		
	comp=Z,120nm,6.9s						
XAN				LR	LR		
	comp=Z,160nm,21.7s						
XAN				LR	LR		
	comp=Z,140nm,23.9s						
XAN	**Xi'an**	67.04	64	*e*P	P	10 56 13.3	-1.7
XAN				pmax	pmax		
	comp=Z,29nm,1.1s						
LONY	**Lake Ozonia**	67.17	310	P	P	10 56 15.9	+0.3
	baz=56						
ACCN	**Adirondack Com**	67.32	308	*e*P	P	10 56 17.8	+1.3
	comp=Z,15nm,1.0s						
D53A	**Lac Vacive, Po**	67.56	313	*e*P	P	10 56 19.2	+1.2
	comp=Z,15nm,1.0s						
D53A	**Lac Vacive, Po**	67.56	313	P	P	10 56 18.5	+0.6
	baz=55						
KMI	**Kunming**	67.60	75	P	P	10 56 20.6	+1.7
KMI				pmax	pmax		
	comp=Z,12nm,0.7s						
E54A	**Lac Daplat, Po**	67.64	312	P	P	10 56 18.6	+0.1
	baz=55						
E53A	**Dumoine, Ponti**	67.94	313	P	P	10 56 20.6	+0.2
	baz=55						
D52A	**ZEK Kipawa Sen**	68.02	313	P	P	10 56 21.2	+0.3
	baz=54						
G55A	**Calabogie**	68.06	311	P	P	10 56 21.2	+0.1
	baz=55						
PEMO	**Pembroke**	68.11	312	P	P	10 56 21.9	+0.5
	baz=55						
H56A	**Elgin**	68.17	310	P	P	10 56 22.0	+0.2
	baz=55						
PLVO	**Plevna**	68.38	311	*e*P	P	10 56 19.2	-4.0
	comp=Z,25nm,0.9s						
PLVO	**Plevna**	68.38	311	P	P	10 56 23.5	+0.4
	baz=54						
ALGO	**Algonquin Park**	68.41	312	P	P	10 56 24.0	+0.7
	baz=54						
CHTO	**Chiang Mai**	68.41	83	*e*P	P	10 56 21.0	-2.8
	comp=Z,5.8nm,1.0s						
CHTO	**Chiang Mai**	68.41	83	*e*P	P	10 56 21.0	-2.8
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOSA	**Boshof**	68.46	177	P	P	10 56 23.7	-0.1
	comp=Z,7.3nm,0.8s,baz=344,slow=5.6,SNR=8.9						
BOSA				LR	LR	11 28 48.7	
	comp=Z,191nm,18.2s,baz=15,slow=38						
BOSA	**Boshof**	68.46	177	*e*P	P	10 56 24.2	+0.4
	comp=Z,22nm,1.1s						
D51A	**Lot 18 Range I**	68.48	314	P	P	10 56 24.2	+0.4
	baz=54						
E52A	**Mattawa**	68.56	313	P	P	10 56 24.8	+0.6
	baz=54						
CM31	**Chiang Mai Arr**	68.62	84	*e*P	P	10 56 23.4	-1.7
	comp=Z,13nm,1.4s						
CMAR	**Chiang Mai Arr**	68.62	84	P	P	10 56 24.8	-0.3
	comp=Z,1.6nm,0.5s,baz=300,slow=7.7,SNR=10.0						
H55A	**Tweed**	68.73	311	P	P	10 56 25.9	+0.6
	baz=54						
PAL	**Palisades**	68.81	306	P	P	10 56 26.0	+0.1
	baz=55						
E51A	**G1948 Merrick**	68.88	313	P	P	10 56 26.7	+0.4
	baz=54						
BANO	**Bancroft**	68.89	311	P	P	10 56 26.8	+0.4
	baz=54						
BILL	**Bilibino**	68.89	14	*i* P	P	10 56 22.8	-3.2
BILL				*i*		10 56 29.8	
BILL				*i*		10 56 47.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,378nm,19.0s						
PECO	**Prince Edward**	68.98	310	P	P	10 56 27.0	+0.1
	baz=54						
DELO	**Deloro Mine**	69.00	311	P	P	10 56 27.2	+0.2
	baz=54						
F52A	**Sundridge**	69.22	313	P	P	10 56 29.1	+0.7
	baz=54						
G53A	**Haliburton**	69.22	312	P	P	10 56 29.5	+1.0
	baz=54						
BINY	**Binghamton**	69.39	308	*e*P	P	10 56 26.6	-3.0
	comp=Z,14nm,1.0s						
BINY	**Binghamton**	69.39	308	P	P	10 56 30.1	+0.6
	baz=54						
D49A	**Beulah Townshi**	69.46	315	P	P	10 56 29.9	0.0
	baz=53						
BUKO	**Buck Lake**	69.48	312	P	P	10 56 29.3	-0.7
	baz=53						
F51A	**Arnstein**	69.48	313	P	P	10 56 29.5	-0.5
	baz=53						
ENH	**Enshi**	69.56	67	*e*P	P	10 56 29.9	-0.9
ENH				*e*pP	P	10 56 30.3	-0.5
N60A	**Cedar Hill Far**	69.63	307	P	P	10 56 31.4	+0.4
	baz=54						
E50A	**Wahnapitae**	69.64	314	P	P	10 56 31.4	+0.5
	baz=53						
SADO	**Sadowa**	69.73	312	*e*P	P	10 56 31.9	+0.4
	comp=Z,16nm,1.0s						
D48A	**Paudash Townsh**	69.77	315	P	P	10 56 32.1	+0.3
	baz=52						
KLBO	**Killbear Provi**	69.99	313	P	P	10 56 33.0	-0.1
	baz=53						
N59A	**State Game Lan**	70.01	307	*e*P	P	10 56 33.8	+0.4
	comp=Z,8.1nm,0.8s						
N59A	**State Game Lan**	70.01	307	P	P	10 56 33.6	+0.2
	baz=54						
MEDO	**Medina**	70.29	310	P	P	10 56 34.4	-0.7
	baz=53						
INK	**Inuvik**	70.32	351	*e*P	P	10 56 34.6	-0.1
	comp=Z,5.4nm,0.9s						
INK	**Inuvik**	70.32	351	*e*P	P	10 56 34.6	-0.1
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
K55A	**Perry**	70.33	310	P	P	10 56 35.4	+0.1
	baz=53						
E48A	**Lockeyer**	70.39	315	P	P	10 56 35.3	-0.2
	baz=52						
D47A	**Chapleau**	70.54	316	P	P	10 56 36.0	-0.6
	baz=52						
I52A	**Shelburne**	70.75	312	P	P	10 56 38.5	+0.7
	baz=52						
F49A	**Sandfield**	70.76	314	P	P	10 56 37.8	0.0
	baz=52						
K54A	**Basiliko Farm,**	70.76	310	P	P	10 56 38.0	0.0
	baz=53						
L55A	**Hinsdale**	70.87	309	P	P	10 56 38.6	0.0
	baz=53						
E47A	**Iron Bridge**	71.00	315	P	P	10 56 40.1	+0.8
	baz=51						
BMRO	**Meriville Lake**	71.02	313	P	P	10 56 38.8	-0.6
	baz=52						
F48A	**Evansville**	71.03	314	P	P	10 56 39.6	+0.1
	baz=52						
M56A	**Emporium**	71.14	309	P	P	10 56 40.7	+0.5
	baz=53						
D46A	**Sault St. Mari**	71.14	316	P	P	10 56 40.8	+0.6
	baz=51						
N57A	**Milroy**	71.19	308	P	P	10 56 40.3	-0.2
	baz=53						
R61A	**Willards**	71.27	305	P	P	10 56 41.0	-0.1
	baz=53						
L54A	**Sinclairville**	71.36	310	P	P	10 56 41.2	-0.4
	baz=52						
TOLK	**Toolik Lake Re**	71.37	357	*e*P	P	10 56 38.8	-2.4
	comp=Z,3.9nm,0.8s						
TOLK	**Toolik Lake Re**	71.37	357	P	P	10 56 41.4	+0.2
	baz=6.9						
I51A	**Listowel**	71.39	312	P	P	10 56 42.3	+0.6
	baz=52						
J52A	**Paris**	71.42	311	P	P	10 56 42.3	+0.3
	baz=52						
SSPA	**Standing Stone**	71.47	308	*e*P	P	10 56 39.6	-2.7
	comp=Z,14nm,1.0s						
SSPA	**Standing Stone**	71.47	308	P	P	10 56 42.9	+0.6
	baz=53						
M55A	**Ridgway**	71.50	309	P	P	10 56 43.3	+0.9
	baz=52						
N56A	**West Decatur**	71.55	308	P	P	10 56 43.5	+0.8
	baz=53						
O57A	**Amberson**	71.58	307	P	P	10 56 43.1	+0.2
	baz=53						
E46A	**Sault Ste Mari**	71.61	316	*e*P	P	10 56 38.2	-4.8
	comp=Z,25nm,1.3s						
E46A	**Sault Ste Mari**	71.61	316	P	P	10 56 43.6	+0.5
	baz=51						
BASO	**Ashfield**	71.63	312	P	P	10 56 43.5	+0.3
	baz=52						
KLR	**Kul'dur**	71.72	40⇑	*e*P	P	10 56 43.4	-0.2
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YKA	**Yellowknife Ar**	71.91	340	P	P	10 56 44.5	0.0
	comp=Z,4.9nm,0.9s,baz=40,slow=5.9,SNR=6.1						
YKA				LR	LR	11 30 00.0	
	comp=Z,8.2nm,18.0s,baz=18,slow=37						
YKB5	**Yellowknife Ar**	71.91	340	*e*P	P	10 56 44.5	0.0
M54A	**Oil Creek Stat**	72.01	309	P	P	10 56 46.3	+0.8
	baz=52						
N55A	**Marion Center**	72.05	308	*e*P	P	10 56 47.8	+2.1
	comp=Z,20nm,0.9s						
N55A	**Marion Center**	72.05	308	P	P	10 56 46.4	+0.7
	baz=52						
L53A	**Girard**	72.09	310	P	P	10 56 45.7	-0.3
	baz=52						
O56A	**Blue Knob Stat**	72.11	308	*e*P	P	10 56 46.8	+0.7
	comp=Z,10.0nm,0.8s						
O56A	**Blue Knob Stat**	72.11	308	P	P	10 56 46.9	+0.8
	baz=52						
G47A	**Hillman**	72.12	314	P	P	10 56 45.6	-0.5
	baz=51						
H48A	**Harrisville**	72.13	314	*e*P	P	10 56 44.1	-2.1
P57A	**Homestead Farm**	72.25	307	P	P	10 56 47.4	+0.5
	baz=52						
Q58A	**Fox Den Farm,**	72.37	306	P	P	10 56 47.2	-0.5
	baz=52						
N54A	**Moraine State**	72.54	309	*e*P	P	10 56 47.9	-0.8
	comp=Z,13nm,0.8s						
N54A	**Moraine State**	72.54	309	P	P	10 56 47.8	-0.9
	baz=52						
EPYK	**Eagle Plains**	72.56	351	*e*P	P	10 56 48.0	-0.3
	comp=Z,8.8nm,0.9s						
EPYK	**Eagle Plains**	72.56	351	P	P	10 56 48.1	-0.3
	baz=17						
O55A	**Ligonier**	72.59	308	P	P	10 56 49.3	+0.3
	baz=52						
CBN	**Corbin Frederi**	72.63	305	*e*P	P	10 56 46.7	-2.5
	comp=Z,30nm,0.8s						
M53A	**WI Miller and**	72.65	310	P	P	10 56 49.1	-0.2
	baz=52						
I48A	**Sherman Twp**	72.66	313	P	P	10 56 49.7	+0.4
	baz=51						
F45A	**CMU Biological**	72.70	316	P	P	10 56 49.3	-0.2
	baz=50						
P56A	**Dayton Farm, R**	72.74	307	P	P	10 56 49.7	-0.1
	baz=52						
GLMI	**Grayling**	72.76	314	*e*P	P	10 56 44.8	-5.1
	comp=Z,23nm,0.6s						
GLMI	**Grayling**	72.76	314	P	P	10 56 49.9	0.0
	baz=50						
J49A	**Marlette**	72.87	313	P	P	10 56 51.1	+0.6
	baz=51						
M52A	**Chesterland**	72.99	310	P	P	10 56 51.6	+0.3
	baz=51						
E43A	**Lone Tree Farm**	73.04	317	*e*P	P	10 56 47.6	-4.0
	comp=Z,12nm,1.0s						
E43A	**Lone Tree Farm**	73.04	317	P	P	10 56 52.0	+0.5
	baz=49						
R58B	**Mineral**	73.09	305	P	P	10 56 52.6	+0.7
	baz=52						
C40A	**Isle Royale Na**	73.14	319	P	P	10 56 51.5	-0.5
	baz=48						
N53A	**Lisbon**	73.14	309	*e*P	P	10 56 49.6	-2.6
	comp=Z,18nm,0.8s						
N53A	**Lisbon**	73.14	309	P	P	10 56 52.5	+0.2
	baz=51						
FYU	**Fort Yukon**	73.18	355	*e*P	P	10 56 50.0	-1.9
	comp=Z,20nm,1.2s						
G45A	**Suttons Bay**	73.19	315	*e*P	P	10 56 49.1	-3.3
	comp=Z,16nm,0.8s						
G45A	**Suttons Bay**	73.19	315	P	P	10 56 52.8	+0.3
	baz=50						
I47A	**Gladwin**	73.22	314	P	P	10 56 52.9	+0.3
	baz=50						
Q56A	**Snyder Ridge,**	73.24	307	P	P	10 56 53.2	+0.4
	baz=52						
O54A	**Avella**	73.25	309	P	P	10 56 53.0	+0.1
	baz=51						
MCWV	**Mont Chateau**	73.26	308	P	P	10 56 52.5	-0.5
	baz=52						
R57A	**Stanardsville**	73.29	306	P	P	10 56 53.6	+0.5
	baz=52						
P55A	**Reedsville**	73.34	308	P	P	10 56 52.9	-0.6
	baz=52						
D41A	**Chassel**	73.40	318	*e*P	P	10 56 54.1	+0.4
	comp=Z,22nm,1.0s						
D41A	**Chassel**	73.40	318	P	P	10 56 54.1	+0.4
	baz=48						
S58A	**Poland Farm, P**	73.41	305	P	P	10 56 54.1	+0.2
	baz=52						
L50A	**Kingsville**	73.51	311	P	P	10 56 54.8	+0.5
	baz=51						
N52A	**McGinn's Farm,**	73.64	310	P	P	10 56 55.8	+0.7
	baz=51						
P54A	**Burton**	73.67	308	P	P	10 56 56.2	+0.8
	baz=51						
O53A	**New Philadelph**	73.71	309	P	P	10 56 56.4	+0.8
	baz=51						
K48A	**Perry**	73.78	313	P	P	10 56 55.4	-0.5
	baz=50						
J47A	**Sunmer**	73.89	313	P	P	10 56 56.2	-0.4
	baz=50						
N51A	**Ashland**	73.97	310	P	P	10 56 56.9	-0.2
	baz=50						
FFC	**Flin Flon**	74.02	330	*e*P	P	10 56 53.9	-3.3
	comp=Z,37nm,0.8s						
FFC	**Flin Flon**	74.02	330	*e*P	P	10 56 53.9	-3.3
FFC				pmax	pmax		
	comp=Z,37nm,0.8s						
V60A	**Jim Taylor Roa**	74.05	303	P	P	10 56 57.9	+0.3
	baz=52						
O52A	**Adamsville**	74.16	309	*e*P	P	10 56 56.2	-2.0
	comp=Z,19nm,0.9s						
O52A	**Adamsville**	74.16	309	P	P	10 56 58.5	+0.2
	baz=51						
PRP	**Porcupine Dome**	74.23	355	*e*P	P	10 56 55.7	-2.7
	comp=Z,4.8nm,0.5s						
Q54A	**Coxs Mills**	74.28	308	*e*P	P	10 56 59.3	+0.5
	comp=Z,16nm,1.0s						
Q54A	**Coxs Mills**	74.28	308	P	P	10 56 59.4	+0.5
	baz=51						
EYMN	**Ely**	74.28	320	*e*P	P	10 56 56.6	-2.2
	comp=Z,10nm,1.2s						
EYMN	**Ely**	74.28	320	P	P	10 56 58.7	-0.1
	baz=47						
R55A	**Marlinton**	74.28	307	P	P	10 56 59.7	+0.6
	baz=51						
P53A	**Whipple**	74.29	309	*e*P	P	10 56 57.8	-1.2
	comp=Z,17nm,0.9s						
P53A	**Whipple**	74.29	309	P	P	10 56 59.7	+0.7
	baz=51						
S56A	**Natural Bridge**	74.32	306	P	P	10 56 59.3	+0.1
	baz=51						
COWI	**Conover**	74.34	318	*e*P	P	10 56 59.7	+0.5
	comp=Z,8.9nm,0.9s						
K47A	**Vermontville**	74.36	313	P	P	10 56 59.0	-0.3
	baz=50						
U58A	**Oxford**	74.48	305	P	P	10 57 00.8	+0.7
	baz=51						
L48A	**N Adams**	74.51	312	P	P	10 57 00.2	0.0
	baz=50						
T57A	**Hurt**	74.55	305	P	P	10 57 01.3	+0.8
	baz=51						
O51A	**Pataskala**	74.60	310	P	P	10 57 01.5	+0.7
	baz=50						
J45A	**Montague**	74.63	314	*e*P	P	10 56 57.7	-3.2
	comp=Z,44nm,0.6s						
P52A	**Corning**	74.64	309	P	P	10 57 01.3	+0.3
	baz=50						
V59A	**Middlesex**	74.67	304	P	P	10 57 01.4	+0.2
	baz=51						
H43A	**Windswept, Lux**	74.70	316	*e*P	P	10 57 01.8	+0.5
	comp=Z,21nm,1.1s						
H43A	**Windswept, Lux**	74.70	316	P	P	10 57 01.7	+0.5
	baz=48						
ULM	**Lac du Bonnet**	74.74	324	P	P	10 57 01.4	0.0
	comp=Z,12nm,1.0s,baz=36,slow=5.0,SNR=7.6						
ULM				LR	LR	11 30 35.8	
	comp=Z,154nm,18.9s,baz=22,slow=36						
ULM	**Lac du Bonnet**	74.74	324	*e*P	P	10 57 00.8	-0.6
	comp=Z,14nm,1.0s						
ULM	**Lac du Bonnet**	74.74	324	*e*P	P	10 57 00.8	-0.6
ULM				pmax	pmax		
	comp=Z,14nm,1.0s						
ACSO	**Alum Creek Sta**	74.77	310	*e*P	P	10 56 59.5	-2.3
	comp=Z,13nm,0.9s						
ACSO	**Alum Creek Sta**	74.77	310	P	P	10 57 02.7	+0.9

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      baz=50
Q53A  Leroy            74.77 308  P     P     10 57 02.2 +0.4
      baz=50
W60A  Pink Hill        74.78 303  P     P     10 57 02.2 +0.4
      baz=52
S55A  Lewisburg        74.83 307  P     P     10 57 03.0 +0.8
      baz=51
L47A  Sherwood         74.92 312  P     P     10 57 02.7 +0.1
      baz=49
U57A  Blanch           74.95 305  P     P     10 57 03.7 +0.8
      baz=51
NJ2   Nanjing          74.96  61  eP    P     10 57 02.4 -0.6
NJ2                               pmax  pmax
      comp=Z,26nm,0.5s
F40A  Park Falls       74.97 318  P     P     10 57 02.7 -0.2
      baz=47
M48A  Edgerton         74.97 312  P     P     10 57 02.8 -0.1
      baz=49
T56A  Rocky Mt         75.01 306  P     P     10 57 04.0 +0.7
      baz=51
MLY   Manley           75.02 357  eP    P     10 57 00.8 -2.1
      comp=Z,13nm,1.4s
N49A  Columbus Grove   75.02 311  eP    P     10 57 03.7 +0.5
      comp=Z,14nm,0.9s
N49A  Columbus Grove   75.02 311  P     P     10 57 03.1 -0.2
      baz=50
ILAR  Eielson Array    75.07 355  P     P     10 57 04.2 +1.1
      comp=Z,0.9nm,0.8s,baz=352,slow=4.1,SNR=11
ILAR                              LR    LR    11 33 42.4
      comp=Z,72nm,19.1s,baz=356,slow=39
ILB   Eielson Array    75.07 355  eP    P     10 57 01.2 -1.9
      comp=Z,3.6nm,1.1s
DAWY  Dawson           75.09 352  eP    P     10 57 03.0 -0.3
      comp=Z,9.8nm,0.8s
Q52A  Bidwell          75.15 309  P     P     10 57 04.1 +0.1
      baz=50
USA0B Ussuriysk Arra   75.17  44  eP    P     10 57 01.5 -2.4
      comp=Z,13nm,1.0s
USRK  Ussuriysk Ar.    75.17  44  P     P     10 57 03.9 -0.1
      comp=Z,8.4nm,0.9s,baz=282,slow=9.2,SNR=10
P51A  Williamsport     75.29 309  P     P     10 57 05.2 +0.4
      baz=50
S54A  Dingess, Beckl   75.31 307  P     P     10 57 05.5 +0.5
      baz=50
R53A  Hurricane        75.37 308  eP    P     10 57 04.3 -1.0
      comp=Z,17nm,0.8s
R53A  Hurricane        75.37 308  P     P     10 57 05.7 +0.5
      baz=50
F39A  Loretta          75.38 318  P     P     10 57 04.7 -0.5
      baz=47
T55A  Pulaski          75.42 306  P     P     10 57 05.8 +0.1
      baz=50
HDA   Harding Lake     75.43 355  eP    P     10 57 03.5 -1.6
      comp=Z,5.9nm,0.8s
HDA   Harding Lake     75.43 355  P     P     10 57 04.8 -0.4
      baz=8.8
WRH   Wood River Hil   75.44 356  eP    P     10 57 03.2 -2.0
      comp=Z,5.1nm,0.9s
G40A  Rib Lake         75.45 317  eP    P     10 57 04.1 -1.5
      comp=Z,9.3nm,1.0s
G40A  Rib Lake         75.45 317  P     P     10 57 05.2 -0.5
      baz=47,SNR=5.9
N48A  Decatur          75.55 311  P     P     10 57 06.0 -0.3
      baz=49
V57A  Coltrane Farms   75.57 305  P     P     10 57 06.5 +0.1
      baz=51
O49A  Covington        75.59 311  eP    P     10 57 05.4 -1.1
      comp=Z,15nm,0.8s
O49A  Covington        75.59 311  P     P     10 57 06.5  0.0
      baz=49
P50A  Jamestown        75.65 310  P     P     10 57 06.9  0.0
      baz=50
U56A  King             75.66 305  P     P     10 57 07.6 +0.6
      baz=50
I42A  Draeger Farm,    75.70 316  P     P     10 57 07.0  0.0
      baz=48
Q51A  Peebles          75.76 309  eP    P     10 57 04.9 -2.6
      comp=Z,22nm,1.0s
Q51A  Peebles          75.76 309  P     P     10 57 08.1 +0.6
      baz=50
W58A  Raeford          75.77 304  P     P     10 57 07.6  0.0
      baz=51
F38A  Pierce - Schro   75.83 319  P     P     10 57 08.1 +0.3
      baz=46
S53A  Williamson       75.89 307  P     P     10 57 08.3  0.0
      baz=50
G39A  Holcombe         75.94 318  P     P     10 57 08.2 -0.2
      baz=47,SNR=6.5
T54A  Tazewell         75.95 307  P     P     10 57 08.3 -0.4
      baz=50
BPAW  Bear Paw Mtn.    75.96 357  eP    P     10 57 04.5 -3.7
      comp=Z,2.7nm,0.8s
U55A  TA2, Sparta      75.98 306  P     P     10 57 08.6 -0.3
      baz=50
O48A  Farmland         76.02 311  P     P     10 57 09.1 +0.1
      baz=49
I41A  Arkdale          76.10 316  P     P     10 57 09.3  0.0
      baz=47
AGMN  Agassiz Nation   76.13 322  P     P     10 57 09.8 +0.4
      baz=44
W57A  Gilead           76.17 304  P     P     10 57 10.3 +0.5
      baz=50
K43A  Burlington       76.18 315  P     P     10 57 09.6 -0.2
      baz=48
P49A  Miami Univ. Ec   76.23 310  P     P     10 57 09.8 -0.4
      baz=49
R51A  Hillsboro        76.37 309  P     P     10 57 10.8 -0.1
      baz=49
F37A  Hinrichs Farm,   76.37 319  P     P     10 57 11.0 +0.2
      baz=46
U54A  Nelsons Funny    76.44 306  eP    P     10 57 10.3 -1.2
      comp=Z,20nm,0.8s
U54A  Nelsons Funny    76.44 306  P     P     10 57 11.8 +0.3
      baz=50
V55A  Taylorsville     76.50 306  P     P     10 57 12.2 +0.4
      baz=50
W56A  Indian Trail     76.56 305  P     P     10 57 12.7 +0.7
      baz=50
T53A  Wise             76.58 307  P     P     10 57 12.6 +0.3
      baz=50
O47A  Sheridan         76.62 312  P     P     10 57 12.5 +0.1
      baz=48
X57A  Johnson Farm,    76.67 304  P     P     10 57 13.0 +0.3
      baz=50
Q49A  Aurora           76.69 310  P     P     10 57 12.8  0.0
      baz=49
P48A  Milroy           76.70 311  P     P     10 57 12.9 +0.1
      baz=49
T52A  Hallie           76.78 307  P     P     10 57 13.7 +0.4
      baz=50
S51A  Beattyville      76.80 308  P     P     10 57 13.9 +0.5
      baz=49
SPMN  Marine on St.    76.81 319  P     P     10 57 13.9 +0.5
      baz=46
R50A  Paris            76.82 309  P     P     10 57 14.1 +0.6
      baz=49
V54A  Nebo             77.00 306  P     P     10 57 15.1 +0.5
      baz=50
U53A  Fall Branch      77.01 307  P     P     10 57 14.4 -0.3
      baz=50
KMSC  Kings Mountain   77.02 305  P     P     10 57 14.5 -0.2
      baz=50
SFIN  Lafayette        77.05 312  P     P     10 57 14.7 -0.1
      baz=48
JFWS  Jewell Farm      77.08 316  eP    P     10 57 15.1 +0.2
      comp=Z,15nm,1.0s
JFWS  Jewell Farm      77.08 316  eP    P     10 57 15.1 +0.2
JFWS                              pmax  pmax
      comp=Z,15nm,1.0s
JFWS  Jewell Farm      77.08 316  P     P     10 57 13.7 -1.2
      baz=47
P47A  Martinsville     77.17 311  P     P     10 57 14.9 -0.6
      baz=48
Q48A  North Vernon     77.23 310  P     P     10 57 16.0 +0.3
      baz=48
X56A  White Oak        77.25 304  P     P     10 57 15.9 -0.1
      baz=50
KS15  Wonju Array Si   77.29  52  eP    P     10 57 16.0 -0.2
      comp=Z,60nm,1.5s
KSRS  Korea Array      77.31  52  P     P     10 57 16.1 -0.2
      comp=Z,15nm,0.9s,baz=317,slow=4.6,SNR=20
R49A  Shelbyville      77.32 310  eP    P     10 57 17.0 +0.7
      comp=Z,17nm,1.1s
R49A  Shelbyville      77.32 310  P     P     10 57 15.6 -0.8
      baz=49
N44A  Piper City       77.36 313  P     P     10 57 16.7 +0.2
      baz=48
M43A  Waltham Townsh   77.38 314  P     P     10 57 16.8 +0.2
      baz=47
L42A  Oliver, Polo     77.39 315  P     P     10 57 17.0 +0.3
      baz=47
T51A  Gray             77.45 308  P     P     10 57 17.3 +0.2
      baz=49
U52A  Thorn Hill       77.48 307  P     P     10 57 17.6 +0.4
      baz=49
W54A  Cherokee Point   77.59 305  P     P     10 57 18.2 +0.3
      baz=50
Q47A  Bedord North L   77.63 311  P     P     10 57 18.5 +0.5
      baz=48
X55A  Gracelyn & Ava   77.64 305  P     P     10 57 18.7 +0.5
      baz=50
TJN   Taejon           77.67  53⇓ eP    P     10 57 17.8 -0.5
S49A  Springfield      77.72 309  P     P     10 57 18.3 -0.2
      baz=48
U51A  La Follette      77.88 307  P     P     10 57 19.6 +0.1
      baz=49
T50A  Nancy            77.96 308  P     P     10 57 20.2 +0.3
      baz=49
P45A  Graceland, Par   77.99 312  eP    P     10 57 18.7 -1.4
      comp=Z,18nm,0.9s
HYT   Haines Junctio   78.00 350  eP    P     10 57 19.7 -0.2
      comp=Z,7.6nm,1.0s
WCI   Wyandotte Cave   78.02 310  eP    P     10 57 18.0 -2.2
      comp=Z,17nm,0.8s
WCI   Wyandotte Cave   78.02 310  eP    P     10 57 18.0 -2.2
WCI                               pmax  pmax
      comp=Z,17nm,0.8s
WCI   Wyandotte Cave   78.02 310  P     P     10 57 20.2  0.0
      baz=48
X54A  Belton           78.06 305  P     P     10 57 20.4 -0.1
      baz=49
R47A  Wooly Knot Far   78.11 310  P     P     10 57 21.0 +0.3
      baz=48
Y55A  Saluda           78.13 304  P     P     10 57 21.1 +0.1
      baz=49
W53A  Cullowhee        78.15 306  P     P     10 57 21.3 +0.2
      baz=49
HDIL  Hopedale         78.17 313  P     P     10 57 20.5 -0.5
      baz=47
MDND  Maddock          78.17 324  P     P     10 57 20.3 -0.6
      baz=42
L40A  Anamosa          78.19 316  eP    P     10 57 20.7 -0.4
      comp=Z,16nm,0.9s
L40A  Anamosa          78.19 316  P     P     10 57 20.9 -0.2
      baz=46,SNR=5.2
S48A  Wiedeman Farm,   78.26 310  P     P     10 57 20.8 -0.8
      baz=48
T49A  Edmonton         78.32 309  eP    P     10 57 22.0 +0.1
      comp=Z,15nm,0.9s
T49A  Edmonton         78.32 309  P     P     10 57 22.0 +0.1
      baz=48,SNR=7.6
U50A  Jamestown        78.36 308  P     P     10 57 22.5 +0.4
      baz=48
157A  Early Branch     78.39 303  P     P     10 57 22.3 -0.1
      baz=50
V51A  Loudon           78.46 307  eP    P     10 57 25.0 +2.3
      comp=Z,20nm,1.3s
V51A  Loudon           78.46 307  P     P     10 57 23.0 +0.3
      baz=49
YSS   Yuzh-Sakhalins   78.59  37  eP    P     10 57 19.5 -3.7
YSS                               e           10 57 23.5
Q45A  Warren Harvey,   78.65 312  P     P     10 57 23.6 -0.2
      baz=47
X53A  Estanollee       78.67 306  P     P     10 57 23.4 -0.5
      baz=49
W52A  Murphy           78.67 306  P     P     10 57 23.5 -0.5
      baz=49
Y54A  Tignall          78.70 305  P     P     10 57 23.7 -0.4
      baz=49,SNR=5.3
156A  Sylvania         78.73 303  P     P     10 57 23.7 -0.5
      baz=49
OLIL  Olney            78.73 311  eP    P     10 57 24.3 +0.1
      comp=Z,20nm,1.0s
S47A  Hartford         78.79 310  P     P     10 57 24.0 -0.5
      baz=48,SNR=6.0
CPCT  Cooper Cave      78.80 307  eP    P     10 57 25.8 +1.2
      comp=Z,16nm,1.1s
T48A  Bowling Green    78.83 309  P     P     10 57 24.3 -0.4
      baz=48,SNR=13
U49A  Red Boiling Sp   78.86 309  P     P     10 57 25.1 +0.2
      baz=48,SNR=10
P43A  Skaggs, Pawnee   78.92 313  P     P     10 57 25.4 +0.2
      baz=47
N41A  Harden Midland   78.93 314  eP    P     10 57 24.9 -0.2
      comp=Z,21nm,0.8s
N41A  Harden Midland   78.93 314  P     P     10 57 25.3 +0.1
      baz=46,SNR=5.5
X52A  Dahlonega        78.97 306  P     P     10 57 25.9 +0.3
      baz=49
V50A  Pikevile         79.01 307  P     P     10 57 25.7 -0.1
      baz=48,SNR=8.6
R45A  Skylar, Fairfi   79.13 311  P     P     10 57 25.9 -0.5
      baz=47
W51A  Cleveland        79.14 307  P     P     10 57 25.8 -0.6
      baz=48
N40A  Mertquake, Sal   79.20 315  P     P     10 57 26.0 -0.7
      baz=46
Z54A  Sparta           79.21 304  P     P     10 57 27.1 +0.2
      baz=49
S46A  Don Dixon Farm   79.22 310  P     P     10 57 27.0 +0.2
      baz=47
Y53A  Monroe           79.27 305  P     P     10 57 27.7 +0.6
      baz=49
U48A  Cassie Pea, Po   79.31 309  P     P     10 57 27.6 +0.2
      baz=48,SNR=7.2
T47A  Sharon Grove     79.33 310  eP    P     10 57 28.1 +0.6
      comp=Z,23nm,0.9s
T47A  Sharon Grove     79.33 310  P     P     10 57 27.5 +0.1
      baz=47,SNR=6.8
155A  Kite             79.37 304  P     P     10 57 27.7  0.0
      baz=49
V49A  McMinnville      79.43 308  P     P     10 57 28.4 +0.4
      baz=48
W50A  Signal Mountai   79.45 307  eP    P     10 57 28.9 +0.7
      comp=Z,19nm,0.8s
W50A  Signal Mountai   79.45 307  P     P     10 57 28.9 +0.7
      baz=48,SNR=7.7
CLTN  Cedars of Leba   79.47 308  eP    P     10 57 28.6 +0.4
      comp=Z,6.1nm,0.8s
GOGA  Godfrey          79.49 305  eP    P     10 57 29.6 +1.3
      comp=Z,16nm,1.0s
GOGA  Godfrey          79.49 305  eP    P     10 57 29.7 +1.3
GOGA                              pmax  pmax
      comp=Z,15nm,1.0s
GOGA  Godfrey          79.49 305  P     P     10 57 28.4  0.0
      baz=49
Y52A  Lilburn          79.56 306  eP    P     10 57 29.9 +1.1
      comp=Z,24nm,1.0s
Y52A  Lilburn          79.56 306  P     P     10 57 29.3 +0.4
      baz=48,SNR=6.5
X51A  Calhoun          79.59 307  P     P     10 57 29.5 +0.5
      baz=48
PEA1  Petropavlovsk-   79.60  25  eP    P     10 57 28.3 -0.3
PETK  Petropavlovsk-   79.61  25  P     P     10 57 28.3 -0.4
      comp=Z,2.3nm,0.8s,baz=308,slow=4.9,SNR=3.2
Z53A  Monticello       79.64 305  P     P     10 57 29.4 +0.2
      baz=49,SNR=5.4
T46A  Princeton        79.76 310  P     P     10 57 30.1 +0.3
      baz=47
ECSD  EROS Data Cent   79.79 320  P     P     10 57 29.8 -0.1
      baz=43
U47A  Clarksville      79.81 309  P     P     10 57 29.5 -0.5
      baz=47,SNR=7.0
V48A  Smith Brothers   80.00 308  eP    P     10 57 30.9 -0.2
      comp=Z,12nm,0.9s
V48A  Smith Brothers   80.00 308  P     P     10 57 30.9 -0.2
      baz=47
W49A  Belvidere        80.08 308  P     P     10 57 31.4 -0.2
      baz=48
S44A  Carbondale       80.10 311  P     P     10 57 31.8 +0.1
      baz=46,SNR=5.4
X50B  Fort Payne       80.15 307  P     P     10 57 31.6 -0.4
      baz=48
Y51A  Rockmart         80.16 306  P     P     10 57 31.5 -0.5
      baz=48,SNR=5.8
Z52A  Williamson       80.23 305  P     P     10 57 32.2 -0.2
      baz=48
SDDR  Presa de Saban   80.33 287  eP    P     10 57 33.7 +0.5
      comp=Z,26nm,1.0s
WVT   Waverly          80.34 309  eP    P     10 57 32.5 -0.5
      comp=Z,9.4nm,1.1s
WVT   Waverly          80.34 309  eP    P     10 57 32.5 -0.5
WVT                               pmax  pmax
      comp=Z,9.0nm,1.1s
WVT   Waverly          80.34 309  P     P     10 57 32.4 -0.5
      baz=47
254A  Abbeville        80.34 304  P     P     10 57 33.1 +0.1
      baz=48
V47A  Nunnelly         80.36 309  P     P     10 57 32.5 -0.6
      baz=47
U46A  Springville      80.39 310  P     P     10 57 33.2  0.0
      baz=47
SUSD  Miller           80.41 321  P     P     10 57 32.6 -0.6
      baz=42
W48A  Pulaski          80.47 308  P     P     10 57 33.7  0.0
      baz=47,SNR=5.4
X49A  Woodville        80.53 307  P     P     10 57 34.1 +0.1
      baz=48,SNR=10
Y50A  Piedmont         80.58 307  P     P     10 57 33.9 -0.4
      baz=48
V46A  Holladay         80.73 309  P     P     10 57 34.5 -0.6
      baz=47,SNR=9.3
152A  Waverly Hall     80.77 305  eP    P     10 57 36.1 +0.8
      comp=Z,21nm,1.1s
152A  Waverly Hall     80.77 305  P     P     10 57 34.4 -0.9
      baz=48,SNR=6.2
W47A  Westpoint        80.80 309  P     P     10 57 34.9 -0.6
      baz=47
758A  Lake Helen       80.93 300  P     P     10 57 36.6 +0.3
      baz=49
CCM   Cathedral Cave   80.99 313  eP    P     10 57 36.0 -0.4
      comp=Z,13nm,0.7s
CCM   Cathedral Cave   80.99 313  eP    P     10 57 36.0 -0.4
CCM                               pmax  pmax
      comp=Z,13nm,0.7s
CCM   Cathedral Cave   80.99 313  P     P     10 57 35.1 -1.3
      baz=46
X48A  Hartselle        81.01 308  eP    P     10 57 36.7 +0.1
      comp=Z,21nm,0.9s
X48A  Hartselle        81.01 308  P     P     10 57 36.4 -0.2
      baz=47,SNR=8.1
Y49A  Blount Mountai   81.02 307  eP    P     10 57 36.0 -0.7
      comp=Z,17nm,1.0s
Y49A  Blount Mountai   81.02 307  P     P     10 57 36.5 -0.2
      baz=47
PARMO Parma            81.10 311  eP    P     10 57 37.4 +0.4
      comp=Z,30nm,0.8s
Z50A  Ashland          81.13 306  eP    P     10 57 35.6 -1.6
      comp=Z,12nm,1.1s
Z50A  Ashland          81.13 306  P     P     10 57 36.2 -1.1
      baz=48
252A  Lumpkin          81.22 305  P     P     10 57 38.2 +0.5
      baz=48
151A  Opelika          81.24 305  P     P     10 57 38.3 +0.4
      baz=48
PLAL  Pickwick Lake    81.27 309  eP    P     10 57 37.8 -0.1
      comp=Z,17nm,1.0s
555A  McAlpin          81.33 302  P     P     10 57 37.6 -0.7
      baz=48
W46A  Michie           81.34 309  P     P     10 57 38.0 -0.3
      baz=47
454A  Quitman          81.37 303  P     P     10 57 38.0 -0.5
      baz=48
PBMO  Poplar Bluff     81.41 311  eP    P     10 57 38.8 +0.1
      comp=Z,12nm,1.1s
Y48A  Jasper           81.45 307  P     P     10 57 38.5 -0.4
      baz=47
X47A  Russelville      81.45 308  P     P     10 57 38.5 -0.4
      baz=47
Z49A  Columbiana       81.54 306  P     P     10 57 39.5 +0.1
      baz=47,SNR=6.3
150A  Eclectic         81.62 306  P     P     10 57 40.0 +0.1
      baz=47,SNR=5.7
352A  Blakely          81.69 304  P     P     10 57 39.7 -0.6
      baz=48
X46A  Booneville       81.86 309  P     P     10 57 40.7 -0.4
      baz=46
LRAL  Lakeview Retre   81.94 307  eP    P     10 57 42.3 +0.8
      comp=Z,37nm,1.0s
LRAL  Lakeview Retre   81.94 307  P     P     10 57 41.8 +0.3
      baz=47,SNR=15
LAO   LASA Array       81.95 327  eP    P     10 57 42.8 +1.4
      comp=Z,24nm,1.0s
LAO   LASA Array       81.95 327  P     P     10 57 41.6 +0.2
      baz=38
149A  Jones            82.11 306  P     P     10 57 42.5 +0.1
      baz=47,SNR=10
250A  Grady            82.20 305  P     P     10 57 42.3 -0.6
      baz=47
BGNE  Belgrade         82.26 319  eP    P     10 57 42.2 -1.0
      comp=Z,35nm,0.8s
BGNE  Belgrade         82.26 319  P     P     10 57 43.0 -0.1
      baz=42
EGMT  Eagleton         82.30 330  eP    P     10 57 43.7 +0.4
      comp=Z,20nm,1.1s
EGMT  Eagleton         82.30 330  P     P     10 57 43.5 +0.3
      baz=35
WALA  Waterton Lakes   82.98 332  eP    P     10 57 46.3 -0.6
      comp=Z,9.1nm,1.1s
FCAR  Ozark Folk Cen   83.01 312  eP    P     10 57 47.3 +0.3
      comp=Z,17nm,1.0s
RSSD  Black Hills      83.01 324  eP    P     10 57 46.9 -0.3
      comp=Z,8.0nm,1.2s
RSSD  Black Hills      83.01 324  eP    P     10 57 46.9 -0.3
RSSD                              pmax  pmax
      comp=Z,8.0nm,1.2s
RSSD  Black Hills      83.01 324  P     P     10 57 47.9 +0.6
      baz=39
U40A  Yellville        83.09 312  P     P     10 57 47.7 +0.2
      baz=44
KSU1  Kansas State U   83.17 316  P     P     10 57 47.9 +0.1
      baz=43
349A  Repton           83.20 305  P     P     10 57 47.6 -0.5
      baz=47
WHAR  Wooly Hollow     83.53 311  eP    P     10 57 50.6 +0.8
      comp=Z,23nm,1.0s
W41B  Gary Mavity, V   83.59 311  eP    P     10 57 49.8 -0.2
      comp=Z,22nm,1.0s
W41B  Gary Mavity, V   83.59 311  P     P     10 57 50.5 +0.5
      baz=45
HHAR  Hobbs            83.76 313  eP    P     10 57 51.0  0.0
      comp=Z,11nm,1.0s
MJB9  Matsu-Tunnel     83.89  47  eP    P     10 57 49.7 -1.9
      comp=Z,9.4nm,0.9s
MAJO  Matsushiro       83.90  47  eP    P     10 57 50.1 -1.5
      comp=Z,9.1nm,0.9s
MAJO  Matsushiro       83.90  47  eP    P     10 57 50.1 -1.5
MAJO                              pmax  pmax
      comp=Z,9.0nm,0.9s
MAT   Matsushiro       83.90  47  P     P     10 57 51.0 -0.6
MJAR  Matsushiro Arr   83.90  47  P     P     10 57 51.4 -0.3
      comp=Z,9.8nm,1.0s,baz=306,slow=5.1,SNR=14
UALR  University of    83.92 311  eP    P     10 57 49.8 -2.0
      comp=Z,15nm,1.0s
GCMT  Greycliff        84.09 328  eP    P     10 57 53.5 +0.9
HRY   Holter Researc   84.18 330  eP    P     10 57 53.0 -0.1
PTGA  Pitinga          84.20 264  eP    P     10 57 52.7 -0.8
      comp=Z,3.7nm,1.0s
X40A  Basin Creek Fa   84.41 311  eP    P     10 57 54.0 -0.2
      comp=Z,10nm,1.0s
X40A  Basin Creek Fa   84.41 311  P     P     10 57 54.6 +0.4
      baz=44
W39A  Magazine         84.45 312  eP    P     10 57 55.5 +1.0
      comp=Z,14nm,1.4s
W39A  Magazine         84.45 312  P     P     10 57 54.7 +0.2
      baz=44
RLMT  Red Lodge        84.47 328  eP    P     10 57 55.4 +0.7
      comp=Z,6.1nm,0.9s
RLMT  Red Lodge        84.47 328  P     P     10 57 55.1 +0.4
      baz=35
OGNE  Ogallala         84.53 321  P     P     10 57 55.5 +0.6
      baz=40
VBMS  Vicksburg        84.65 308  P     P     10 57 55.5  0.0
      baz=45
NEW   Newport          84.78 334  eP    P     10 57 55.0 -0.9
      comp=Z,7.0nm,1.2s
NEW   Newport          84.78 334  eP    P     10 57 55.0 -0.9
NEW                               pmax  pmax
      comp=Z,7.0nm,1.2s
NEW   Newport          84.78 334  P     P     10 57 56.1 +0.2
      baz=30
MIAR  Mount Ida        84.80 312  eP    P     10 57 56.4 +0.2
      comp=Z,22nm,0.9s
MIAR  Mount Ida        84.80 312  eP    P     10 57 56.4 +0.2
MIAR                              pmax  pmax
      comp=Z,22nm,0.9s
MIAR  Mount Ida        84.80 312  P     P     10 57 56.0 -0.3
      baz=44
MSO   Missoula         84.88 331  eP    P     10 57 56.4 -0.2
      comp=Z,5.0nm,1.0s
MSO   Missoula         84.88 331  P     P     10 57 55.7 -0.8
      baz=32
CBKS  Cedar Bluff      85.01 318  eP    P     10 57 58.0 +0.7
      comp=Z,35nm,1.4s
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CBKS	Cedar Bluff	85.01	318	eP	P	10 57 58.0	+0.7
CBKS				pmax	pmax		
	comp=Z,35nm,1.4s						
CBKS	Cedar Bluff	85.01	318	P	P	10 57 57.0	-0.3
	baz=41						
BOZ	Bozeman (W)	85.03	329	eP	P	10 57 58.4	+1.0
	comp=Z,8.2nm,1.0s						
BOZ	Bozeman (W)	85.03	329	P	P	10 57 57.7	+0.3
	baz=34						
TUL1	Leonard	85.06	314	eP	P	10 57 57.5	-0.1
	comp=Z,25nm,1.0s						
TUL1	Leonard	85.06	314	P	P	10 57 57.2	-0.3
	baz=43						
BDFB	Brasilia	85.27	245	P	P	10 57 59.0	+0.1
	comp=Z,4.1nm,0.5s,baz=44,slow=7.7,SNR=5.9						
BDFB	Brasilia	85.27	245	P	P	10 57 59.0	+0.1
K22A	Casper	85.29	325	eP	P	10 57 58.6	-0.1
	comp=Z,15nm,1.0s						
K22A	Casper	85.29	325	P	P	10 57 57.7	-1.1
	baz=37						
YHH	Holmes Hill	85.39	328	eP	P	10 57 59.5	+0.1
	comp=Z,4.2nm,1.0s						
LKWY	Lake	85.39	328	eP	P	10 58 00.3	+0.9
	comp=Z,9.3nm,1.0s						
LKWY	Lake	85.39	328	eP	P	10 58 00.3	+0.9
LKWY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YMR	Madison River	85.53	328	eP	P	10 58 00.3	+0.3
	comp=Z,11nm,1.1s						
YHB	Horse Butte	85.56	329	eP	P	10 58 01.7	+1.5
	comp=Z,8.0nm,1.0s						
C09A	Chrisman Ranch	85.56	334	eP	P	10 58 00.3	+0.5
	comp=Z,18nm,1.1s						
QLMT	Earthquake Lak	85.58	329	eP	P	10 58 01.1	+0.9
DLMT	Dillon	85.60	330	eP	P	10 58 01.3	+1.0
	comp=Z,12nm,1.1s						
H17A	Grant Village	85.60	328	P	P	10 58 03.6	+3.2
	baz=34						
YPP	Pitchstone Pla	85.80	328	eP	P	10 58 03.3	+1.9
	comp=Z,13nm,1.3s						
FLWY	Flagg Ranch	85.91	328	eP	P	10 58 02.5	+0.6
	comp=Z,20nm,1.3s						
MCMT	McKenzie Canyo	86.14	330	eP	P	10 58 03.0	-0.1
IMW	Indian Meadow	86.16	328	eP	P	10 58 03.0	-0.2
	comp=Z,5.0nm,1.1s						
RWWY	Rawlins	86.36	324	eP	P	10 58 03.2	-1.0
	comp=Z,12nm,1.4s						
FXWY	Fox Creek	86.41	328	eP	P	10 58 04.7	+0.3
	comp=Z,3.3nm,1.1s						
N23A	Red Feather La	86.42	323	eP	P	10 58 03.5	-1.0
	comp=Z,5.3nm,1.1s						
N23A	Red Feather La	86.42	323	P	P	10 58 03.6	-1.0
	baz=37						
TPAW	Teton Pass	86.50	328	eP	P	10 58 04.6	-0.3
	comp=Z,4.1nm,0.9s						
BW06	Boulder Array	86.51	326	eP	P	10 58 03.7	-1.2
	comp=Z,3.1nm,1.1s						
BW06	Boulder Array	86.51	326	P	P	10 58 04.4	-0.6
	baz=35						
PD31	Pinedale Array	86.51	326	eP	P	10 58 04.5	-0.5
	comp=Z,3.0nm,1.1s						
PDAR	Pinedale Array	86.51	326	P	P	10 58 04.4	-0.5
	comp=Z,1.8nm,1.0s,baz=61,slow=3.7,SNR=7.5						
PDAR				LR	LR	11 37 32.2	
	comp=Z,126nm,18.7s,baz=24,slow=36						
F10A	Beach Ranch, E	86.79	333	eP	P	10 58 04.8	-1.3
	comp=Z,9.9nm,1.0s						
ISCO	Idaho Springs	87.14	322	eP	P	10 58 06.7	-1.4
	comp=Z,4.1nm,1.3s						
ISCO	Idaho Springs	87.14	322	eP	P	10 58 06.7	-1.4
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ISCO	Idaho Springs	87.14	322	P	P	10 58 07.6	-0.5
	baz=37						
AHID	Auburn Hatcher	87.16	327	eP	P	10 58 04.9	-3.1
	comp=Z,4.4nm,0.9s						
HAWA	Hanford	87.21	334	eP	P	10 58 05.3	-2.6
	comp=Z,14nm,1.3s						
WMOK	Wichita Mounta	87.57	315	eP	P	10 58 10.6	+0.7
	comp=Z,5.2nm,0.9s						
WMOK	Wichita Mounta	87.57	315	P	P	10 58 10.0	0.0
	baz=41						
BMO	Blue Mountains	87.79	332	eP	P	10 58 09.2	-1.7
	comp=Z,3.1nm,0.8s						
BMO	Blue Mountains	87.79	332	eP	P	10 58 09.2	-1.7
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HLID	Hailey	87.82	330	P	P	10 58 11.4	+0.2
	baz=32						
O20A	White River Ci	88.08	324	eP	P	10 58 11.4	-1.1
	comp=Z,7.8nm,0.9s						
O20A	White River Ci	88.08	324	P	P	10 58 12.7	+0.2
	baz=36						
SMCO	Snowmass	88.27	323	eP	P	10 58 11.5	-2.2
	comp=Z,4.1nm,1.3s						
HWUT	Hardware Ranch	88.31	327	eP	P	10 58 11.9	-1.6
	comp=Z,5.5nm,1.0s						
T25A	Trinidad	88.65	320	eP	P	10 58 15.1	-0.2
	comp=Z,3.8nm,1.0s						
T25A	Trinidad	88.65	320	P	P	10 58 14.8	-0.5
	baz=38						
HVU	Hansel Valley	88.67	328	eP	P	10 58 15.3	+0.1
	comp=Z,3.7nm,1.1s						
SDCO	Great Sand Dun	88.71	321	eP	P	10 58 14.9	-0.7
	comp=Z,3.3nm,1.1s						
SDCO	Great Sand Dun	88.71	321	P	P	10 58 15.8	+0.2
	baz=38						
JLU	Jordanelle	89.10	326	eP	P	10 58 15.8	-1.6
	comp=Z,9.2nm,1.4s						
S22A	4UR Ranch, Cre	89.34	322	eP	P	10 58 18.2	-0.5
	comp=Z,2.6nm,0.9s						
S22A	4UR Ranch, Cre	89.34	322	P	P	10 58 18.7	0.0
	baz=37						
HKT	Hockley	89.44	310	eP	P	10 58 15.2	-3.5
	comp=Z,6.2nm,1.1s						
HKT	Hockley	89.44	310⇑	eP	P	10 58 20.2	+1.5
HKT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
J08A	Circle Bar Ran	89.50	332	eP	P	10 58 17.0	-2.0
	comp=Z,5.5nm,1.2s						
PV22	Blue Mesa, Par	89.62	323	eP	P	10 58 19.1	-0.7
	comp=Z,9.3nm,1.1s						
I05D	Terrebonne, OR	89.62	335	P	P	10 58 19.3	-0.2
	baz=27						
ABTX	Abilene, Hawle	89.63	314	eP	P	10 58 19.2	-0.5
	comp=Z,9.9nm,0.9s						
ABTX	Abilene, Hawle	89.63	314	P	P	10 58 20.0	+0.2
	baz=41						
PV04	Paradox Valley	89.79	323	eP	P	10 58 17.5	-3.0
	comp=Z,8.4nm,1.1s						
PV11	David Mesa, Pa	89.85	323	eP	P	10 58 18.8	-2.1
	comp=Z,14nm,1.0s						
PV20	West Nyswonger	89.86	323	eP	P	10 58 20.3	-0.6
	comp=Z,8.7nm,1.0s						
PV10	Paradox Valley	89.86	324	eP	P	10 58 21.3	+0.3
	comp=Z,14nm,1.0s						
SRU	San Rafael Swe	89.93	325	eP	P	10 58 20.6	-0.6
	comp=Z,5.9nm,1.0s						
PV13	Radium Mtn., P	89.94	323	eP	P	10 58 21.0	-0.4
	comp=Z,6.3nm,1.0s						
PINE	Pine Mountain	89.97	334	eP	P	10 58 22.5	+1.1
	comp=Z,6.6nm,1.1s						
DUG	Dugway, Tooele	90.01	327	eP	P	10 58 20.6	-0.9
	comp=Z,5.8nm,1.0s						
DUG	Dugway, Tooele	90.01	327	eP	P	10 58 20.6	-0.9
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DUG	Dugway, Tooele	90.01	327	P	P	10 58 21.6	+0.1
	baz=33						
TMUT	Trail Mountain	90.07	325	eP	P	10 58 20.4	-1.7
	comp=Z,4.1nm,1.0s						
WVOR	Wild Horse Val	90.37	332	eP	P	10 58 23.3	+0.2
	comp=Z,5.6nm,1.1s						
WVOR	Wild Horse Val	90.37	332	eP	P	10 58 23.3	+0.2
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
I04A	Tendick Farm,	90.46	335	P	P	10 58 23.1	-0.3
	baz=26						
J05D	Fort Rock, OR	90.52	334	P	P	10 58 23.4	-0.4
	baz=27						
ELK	Elko	90.53	329	eP	P	10 58 23.4	-0.6
	comp=Z,5.5nm,1.4s						
ELK	Elko	90.53	329	eP	P	10 58 23.5	-0.6
ELK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MVCO	Mesa Verde	90.56	323	eP	P	10 58 23.0	-1.2
	comp=Z,6.6nm,1.3s						
MVCO	Mesa Verde	90.56	323	P	P	10 58 23.9	-0.4
	baz=36						
MSU	Marysvale	91.14	326	eP	P	10 58 27.1	+0.2
MSU	Marysvale	91.14	326	eP	P	10 58 27.1	+0.2
JCT	Junction City	91.34	313	P	P	10 58 27.3	-0.4
	baz=41						
ANMO	Albuquerque	91.40	320	eP	P	10 58 28.6	+0.5
	comp=Z,1.2nm,0.8s						
ANMO	Albuquerque	91.40	320⇓	eP	P	10 58 28.7	+0.5
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ANMO	Albuquerque	91.40	320	P	P	10 58 28.3	+0.2
	baz=37						
TASM	ASL Pad, Albuq	91.40	320	P	P	10 58 28.1	-0.1
	baz=37						
TASM	ASL Pad, Albuq	91.40	320	P	P	10 58 28.5	+0.4
	baz=37						
MOD	Modoc Plateau	91.43	333	eP	P	10 58 28.9	+0.9
	comp=Z,4.4nm,1.0s						
MTPU	Mount Pierson	91.54	325	eP	P	10 58 30.0	+1.1
	comp=Z,8.3nm,1.3s						
L04D	Klamath Falls	91.83	334	P	P	10 58 29.7	-0.2
	baz=27						
PSUT	Pine Spring	91.84	327	eP	P	10 58 30.3	+0.2
	comp=Z,3.2nm,0.9s						
M04C	Macdoel	92.06	334	P	P	10 58 31.0	0.0
	baz=27						
M02C	Callahan	92.75	334	P	P	10 58 34.5	+0.4
	baz=26						
PAHR	Pah Rah Range	93.02	331	eP	P	10 58 34.0	-1.5
	comp=Z,6.2nm,1.2s						
WUAZ	Wupatki	93.27	323	eP	P	10 58 36.4	-0.3
	comp=Z,6.1nm,1.0s						
WUAZ	Wupatki	93.27	323	P	P	10 58 37.1	+0.4
	baz=34						
MNTX	Cornudas Mount	93.43	317	eP	P	10 58 37.2	-0.1
	comp=Z,2.8nm,1.1s						
MNTX	Cornudas Mount	93.43	317	P	P	10 58 37.0	-0.3
	baz=38						
NV01	Mina Array Sit	93.73	330	eP	P	10 58 38.6	-0.2
NVAR	Mina Array Bea	93.73	330	P	P	10 58 38.6	-0.2
	comp=Z,0.6nm,0.8s,baz=30,slow=3.3,SNR=3.7						
NVAR				LR	LR	11 42 35.9	
	comp=Z,131nm,18.2s,baz=8.0,slow=37						
121A	Cookes Peak, D	93.99	319	P	P	10 58 39.7	-0.4
	baz=36						
TX31	Lajitas Ar. Si	94.36	315	eP	P	10 58 41.8	+0.1
	comp=Z,4.2nm,1.1s						
TXAR	Lajitas Array	94.36	315	P	P	10 58 41.5	-0.2
	comp=Z,3.9nm,1.0s,baz=71,slow=3.3,SNR=22						
GRAC	Grapevine Rang	94.60	328	P	P	10 58 42.1	-0.6
	baz=30						
CWC	Cottonwood Cre	95.37	329	P	P	10 58 46.7	+0.4
	baz=30						
MPMC	Manual Prospec	95.46	328	P	P	10 58 46.9	+0.1
	baz=30						
PDMCI	Parker Dam,Lak	95.53	325	P	P	10 58 47.3	+0.4
	baz=32						
TUC	Tucson	95.64	321	P	P	10 58 46.7	-0.9
	baz=34						
BELC	Belle Mtn. Jos	96.60	326	P	P	10 58 51.5	-0.4
	baz=31						
BFSC	Mount Baldy Ra	97.10	327	P	Pdif	10 58 54.8	+0.5
	baz=30						
PFO	Pinyon Flats O	97.13	326	P	Pdif	10 58 54.9	+0.5
	baz=31						
CPUP	Villa Florida	98.85	243	LR	LR	11 45 56.2	
	comp=Z,112nm,19.1s,baz=58,slow=37						
ASAR	Alice Springs	121.35	96	PKP	PKPdf	11 04 13.6	-1.6
	comp=Z,3.4nm,0.9s,baz=311,slow=1.5,SNR=17						
STKA	Stephens Creek	131.38	100	PKP	PKPdf	11 04 33.2	-0.9
	comp=Z,3.1nm,0.9s,baz=54,slow=8.4,SNR=3.3						

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*MDD **02** 10:46:33.6±1.5, 43°.00N×0°.52E, h10^{km}±2^{km}, mbLg1.0/7, Error ellipse: s-maj=12.5km s-min=5.5km az=174.0, PRXIMO*

MRB 02 10:46:33.6±0.3**, 43°.00N**×**0°.53E, h6**^{km}±6^{km}**, ML0.5**/7**, Error ellipse: s-maj=1.6km s-min=1.5km az=332.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FMON	Montouss	0.10	307	P	Pg	10 46 35.9	0.0
FMON				S	Sg	10 46 37.6	+0.1
	19nm,0.1s						
MLS	Moulis	0.42	96	P	Pg	10 46 41.5	-0.1
MLS				S	Sg	10 46 47.3	+0.2
	2.6nm,0.3s						
ECHI	Chisagues Biel	0.42	217	Pg	Pg	10 46 41.6	-0.1
	0.7nm,0.3s,SNR=7.9						
ECHI				Lg	Lg	10 46 47.0	
	15nm,0.8s,SNR=7.9						
ECHI	Chisagues Biel	0.42	217	P	Pg	10 46 41.6	-0.1
ECHI				S	Sg	10 46 47.5	+0.4
	3.8nm,0.1s						
CEST	Esterri de Car	0.67	127	Pg	Pg	10 46 46.0	-0.4
CEST				Lg	Lg	10 46 55.3	
	3.3nm,0.3s						
CEST	Esterri de Car	0.67	127	P	Pg	10 46 46.1	-0.4
CEST				S	Sg	10 46 55.3	+0.2
	3.3nm,0.3s						
CTRE	Tremp	0.70	165	Pg	Pg	10 46 46.6	-0.4
CTRE				Lg	Lg	10 46 56.4	
	1.4nm,0.3s						
CTRE	Tremp	0.70	165	P	Pg	10 46 46.6	-0.4
CTRE				S	Sg	10 46 56.5	+0.4
	1.4nm,0.3s						
CSOR	Sort	0.77	144	Pg	Pg	10 46 47.2	-1.1
	0.2nm,0.3s,SNR=7.9						
CSOR				Lg	Lg	10 46 58.2	
	1.2nm,0.3s,SNR=7.9						
CSOR	Sort	0.77	144	P	Pg	10 46 48.0	-0.3
CSOR				S	Sg	10 46 58.9	+0.7
	2.7nm,0.3s						
CORG	Organya	0.96	143	Pg	Pg	10 46 51.4	-0.7
CORG	Organya	0.96	143	P	Pg	10 46 51.4	-0.7
CAVN	Les Avellanes	1.13	172	Pg	Pg	10 46 54.0	-1.2
CAVN				Lg	Lg	10 47 09.4	
	4.0nm,0.3s						
CAVN	Les Avellanes	1.13	172	P	Pg	10 46 54.1	-1.1
CAVN				S	Sg	10 47 09.5	-0.4
	8.0nm,0.3s						
ESAC	San Caprasio	1.48	210	Pg	Pn	10 46 59.9	-0.9
	1.8nm,0.3s,SNR=7.9						
ESAC				Lg	Lg	10 47 20.6	
	3.2nm,0.7s,SNR=7.9						
EPOB	Poblet	1.70	166	Pg	Pb	10 47 04.8	-0.5
	0.6nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	10 47 27.7	
	2.9nm,0.9s,SNR=7.9						

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*IDC **02** 10:57:47.9±2.4, 33°.95N×139°.11E, h0^{km}, mb3.7/2, mb1 3.9/3, mb1mx3.4/52, mbtmp3.6/3, ML2.3/1, Error ellipse: s-maj=83.6km s-min=27.3km az=75.0*

*ISCJB **02** 10:57:50.8±0.7, 34°.51N±0°.04×140°.17E±0°.06, h67^{km}±6^{km}, mb3.7/2, Error ellipse: s-maj=8.6km s-min=6.0km az=163.7*

*JMA **02** 10:57:51.4±0.2, 34°.52N×140°.19E, h56^{km}±3^{km}, M2.9*

ISC 02 10:57:51.6±1.1**, 34°.50N**±0°.04×**140°.19E**±0°.05**, h59**^{km}±9^{km}**, n16,** $\sigma 0^{s}.71$/26**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	Boso 3	0.40	42	P	Pn	10 58 02.1	0.0
BSO3				X		10 58 11.1	
BSO4	Boso 4	0.50	14	P	Pn	10 58 03.5	+0.1
BSO4				X		10 58 13.3	
TATJ	Tateyama 2	0.58	335	P	Pn	10 58 04.9	+0.5
TATJ				S	Sn	10 58 14.9	+1.3
JIM2	Oshima 3	0.66	289	P	Pn	10 58 05.0	-0.3
JIM2				S	Sn	10 58 14.8	-0.5
BSO1	Boso 1	0.67	77	P	Pn	10 58 04.5	-0.3
BSO1				X		10 58 14.9	
JTHY	Toshimahigashi	0.74	272	P	Pn	10 58 06.6	+0.3
JTHY				S	Sn	10 58 17.7	+0.7
JMKN	Mikurajimanish	0.79	219	P	Pn	10 58 07.0	+0.2
JMKN				S	Sn	10 58 18.1	+0.1
JKO	Kozu shima	0.93	250	P	Pn	10 58 08.9	+0.3
KTJ3	Kamata3	1.01	295	P	Pn	10 58 09.3	-0.5
KTJ3				S	Sn	10 58 21.9	-1.3
JIZS	Izushimoda	1.10	282	P	Pn	10 58 10.8	-0.1
JIZS				S	Sn	10 58 25.2	0.0
JOD2	Odawara 2	1.18	310	P	Pn	10 58 11.5	-0.5
JOD2				S	Sn	10 58 26.1	-1.1
JHJ2	Mitsune	1.42	193	P	Pn	10 58 15.7	+0.5
JHJ2				S	Sn	10 58 33.3	+0.4
MJAR	Matsushiro Arr	2.60	322	Pn	Pn	10 58 32.2	+1.1
	0.6nm,0.3s,baz=162,slow=13,SNR=24						
MJAR				Sn	Sn	10 59 01.6	0.0
	0.5nm,0.3s,baz=37,slow=13,SNR=8.8						
MAT	Matsushiro	2.60	322	P	Pn	10 58 32.8	+1.6
MAT				S	Sn	10 59 01.4	-0.2
MKAR	Makanchi Array	44.66	304	P	P	11 05 58.7	+0.3
	0.5nm,0.5s,baz=83,slow=8.0,SNR=6.1						
WRA	Warramunga Arr	54.43	187	P	P	11 07 12.2	-0.7
	0.8nm,0.6s,baz=3.0,slow=7.5,SNR=5.5						

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*BJI **02** 11:01:46.8±0.0, 14°.16N×146°.12E, h87^{km}, mb4.8/20, mB4.9/14, Ms4.5/5, Ms7 4.3/4*

*IDC **02** 11:01:48.0±5.0, 14°.41N×145°.83E, h56^{km}±46^{km}, mb4.1/23, mb1 4.2/23, mb1mx4.1/49, mbtmp4.3/23, Error ellipse: s-maj=21.6km s-min=11.1km az=91.0*

*ISCJB **02** 11:01:50.6±0.2, 14°.34N±0°.03×145°.78E±0°.05, h96^{km}, mb4.6/84, Error ellipse: s-maj=6.7km s-min=4.1km az=4.2*

*NEIC **02** 11:01:51.3±1.3, 14°.31N×145°.76E, h86^{km}±5^{km}, mb4.7/66, Error ellipse: s-maj=10.7km s-min=6.0km az=98.0*

ISC 02 11:01:51.9±0.4**, 14°.30N**±0°.04×**145°.89E**±0°.07**, h96**^{km}**, n117,** $\sigma 1^{s}.41$/118**, mb4.6**/84**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.21	235	ePn	Pn	11 02 12.2	-2.2
GUMO				eSn	Sn	11 02 26.7	-4.8
ANA2	Anatahan	2.04	355	ePn	Pn	11 02 24.2	-0.7
ANA2				eSn	Sn	11 02 46.1	-3.9
SARN	Sarigan	2.39	358	ePn	Pn	11 02 28.7	-0.7
SARN				eSn	Sn	11 02 56.5	-1.7
PATS	Pohnpei	14.28	120	ePn	Pn	11 05 08.7	-1.0
PATS				eSn	Sn	11 07 41.8	-5.4
H11S3	WAKE ISLAND Hy	20.38	75	T	T	11 27 50.5	
	baz=263,slow=74,SNR=19						
H11S1	WAKE ISLAND Hy	20.40	75	T	T	11 27 51.5	
	baz=263,slow=74,SNR=21						
H11S2	WAKE ISLAND Hy	20.40	75	T	T	11 27 53.2	
	baz=263,slow=74,SNR=15						
JOW	Kunigami	20.64	310	P	P	11 06 23.8	0.0
	0.9nm,0.3s,baz=119,slow=13,SNR=6.7						
JOW	Kunigami	20.64	310	eP	P	11 06 22.2	-1.6
	38nm,1.5s						
H11N1	WAKE ISLAND Hy	20.79	72	T	T	11 28 19.6	
	baz=260,slow=75,SNR=6.0						
H11N2	WAKE ISLAND Hy	20.80	72	T	T	11 28 20.1	
	baz=260,slow=75,SNR=4.9						
H11N3	WAKE ISLAND Hy	20.81	72	T	T	11 28 21.6	
	baz=260,slow=75,SNR=6.0						
FAKI	Fak Fak	21.80	219	eP	P	11 06 37.0	+0.6
	123nm,1.5s						
INU	Inuyama	22.43	341	eP	P	11 06 43.2	+0.4
	12nm,0.8s						
JNU	Nakatsue	23.18	326	P	P	11 06 49.0	-1.4
	10nm,0.9s,baz=352,slow=1.4,SNR=4.6						
JNU	Nakatsue	23.18	326	eP	P	11 06 49.3	-1.1
	65nm,1.7s						
MJAR	Matsushiro Arr	23.19	344	P	P	11 06 47.6	-2.8
	4.0nm,0.8s,baz=169,slow=10.0,SNR=9.4						
MAJO	Matsushiro	23.19	344	eP	P	11 06 48.6	-1.8
	4.3nm,0.6s						
MAT	Matsushiro	23.19	344	P	P	11 06 48.9	-1.5
MJB9	Matsu-Tunnel	23.20	344	eP	P	11 06 48.8	-1.7
	5.5nm,0.4s						
PMG	Port Moresby	23.59	177	eP	P	11 06 54.4	+0.3
	93nm,1.6s						
YOJ	Yonaguni jima	23.79	299	eP	P	11 06 55.8	-0.2
	119nm,1.2s						
YULB	Yu-li	24.93	295	eP	P	11 07 06.7	+0.3
	34nm,1.7s						
YHNB	Yeheng	25.26	298	eP	P	11 07 07.6	-1.8
	19nm,1.1s						
SSLB	Suanglung	25.35	296	eP	P	11 07 11.0	+0.9
	50nm,1.8s						
KSRS	Korea Array	28.06	329	P	P	11 07 33.0	-1.3
	3.3nm,0.6s,baz=144,slow=9.0,SNR=7.7						
KS15	Wonju Array Si	28.07	328	eP	P	11 07 34.1	-0.2
	40nm,1.3s						
ASAJ	Asahikawa	29.85	355	P	P	11 07 48.4	-1.6
	3.0nm,0.7s,baz=209,slow=8.2,SNR=5.8						
NJ2	Nanjing	30.36	310	eP	P	11 07 55.0	+0.3
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
MTN	Manton Dam	30.67	209	eP	P	11 07 57.4	-0.2
	57nm,1.5s						
USA0B	Ussuriysk Arra	32.08	341	eP	P	11 08 09.6	0.0
	27nm,1.5s						
USRK	Ussuriysk Ar.	32.08	341	P	P	11 08 08.8	-0.8
	1.2nm,0.7s,baz=146,slow=8.0,SNR=3.3						
CTA	Charters Tower	34.17	179	P	P	11 08 29.1	+0.9
	2.1nm,0.4s,baz=356,slow=9.0,SNR=5.0						
CTAO	Charters Tower	34.17	179	eP	P	11 08 29.8	+1.6
	38nm,2.0s						
WRAB	Tennant Creek	35.86	199	eP	P	11 08 43.3	+0.7
	18nm,1.3s						
WB2	Warramunga Arr	35.87	199	eP	P	11 08 43.4	+0.7
WR1	Warramunga Arr	35.87	199	eP	P	11 08 43.2	+0.5
WRA	Warramunga Arr	35.87	199	P	P	11 08 43.2	+0.5
	2.1nm,0.4s,baz=17,slow=6.8,SNR=32						
ENH	Enshi	37.05	302	eP	P	11 08 50.3	-2.5
	23nm,1.4s						
AS31	Alice Springs	39.51	197	eP	P	11 09 14.4	+1.0
	0.9nm,0.8s						
ASAR	Alice Springs	39.51	197	P	P	11 09 13.8	+0.4
	0.5nm,0.4s,baz=18,slow=6.8,SNR=24						
PETK	Petropavlovsk-	39.84	11	P	P	11 09 15.3	-0.5
	1.2nm,0.6s,baz=121,slow=5.7,SNR=4.9						
PEA1	Petropavlovsk-	39.84	11	eP	P	11 09 15.3	-0.5
HHC	Hu-ho-hao-te	39.89	318	P	P	11 09 16.0	-0.5
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,29nm,5.7s						
HHC				LR	LR		
	comp=N,200nm,13.2s						
HHC				LR	LR		
	comp=E,250nm,15.1s						
KMI	Kunming	41.86	292	P	P	11 09 32.3	-0.8
KMI				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2	Chengdu	41.98	300	eP	P	11 09 32.4	-1.3
LZH	Lanzhou	43.36	308	eP	P	11 09 45.3	+0.3
LZH				pP	pP	11 10 08.8	+1.7
LZH				sP	sP	11 10 20.5	+2.7
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,97nm,5.4s						
LZH				LR	LR		
	comp=N,240nm,15.9s						
LZH				LR	LR		
	comp=E,240nm,16.8s						
LZH				LR	LR		
	comp=Z,220nm,15.7s						
ARMA	Armidale	44.80	173	eP	P	11 09 57.1	+0.7
	106nm,2.0s						
CMAR	Chiang Mai Arr	45.13	282	P	P	11 09 59.5	+0.4
	2.8nm,0.4s,baz=81,slow=6.5,SNR=11						
MA2	Magadan	45.34	3	P	P	11 09 59.4	-0.8
	9.9nm,0.7s,baz=187,slow=7.5,SNR=4.4						
MA2	Magadan	45.34	3	eP	P	11 09 59.8	-0.4
	84nm,1.7s						
STKA	Stephens Creek	46.10	185	P	P	11 10 07.2	+0.8
	2.8nm,0.6s,baz=358,slow=8.4,SNR=7.2						
STKA	Stephens Creek	46.10	185	eP	P	11 10 07.5	+1.1
	11nm,2.0s						
ULN	Ulaanbaatar	46.38	324	eP	P	11 10 09.0	+0.3
	4.2nm,0.6s						
SONA0	Songino Array	46.73	324	eP	P	11 10 11.4	-0.1
SONA0				ePcP	PcP	11 11 43.4	-0.1
SONM	Songino Array	46.73	324	P	P	11 10 11.4	-0.1
	1.7nm,0.5s,baz=140,slow=9.7,SNR=9.8						
SONM				PcP	PcP	11 11 43.4	-0.1
	1.2nm,0.7s,baz=122,slow=3.7,SNR=3.8						
GTA	Gaotai	47.45	311	eP	P	11 10 17.4	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BBOO	Buckleboo	47.78	191	eP	P	11 10 20.7	+1.1
	70nm,1.8s						
FORT	Forrest	47.99	201	eP	P	11 10 22.6	+1.4
	61nm,1.5s						
TOO	Toolangi	51.59	180	eP	P	11 10 48.3	-0.1
	109nm,1.8s						

MORW	Morawa	51.87	214	*e*P	P	11 10 50.4	-0.2
	74nm,1.9s						
WMQ	Urumqi	57.37	313	*e*P	P	11 11 32.1	+1.7
WMQ				LR	LR		
	comp=N,240nm,25.7s						
WMQ				LR	LR		
	comp=E,240nm,19.5s						
WMQ				LR	LR		
	comp=Z,580nm,28.7s						
ZAA0	Zalesovo Array	61.63	324	*e*P	P	11 11 58.9	-0.4
	5.2nm,0.8s						
ZALV	Zalesovo Beam	61.63	324	P	P	11 11 58.5	-0.8
	3.3nm,0.4s,baz=102,slow=7.0,SNR=12						
ZAA1	Zalesovo Array	61.63	324	*e*P	P	11 11 58.5	-0.8
MK31	Makanchi Array	61.67	316	*e*P	P	11 11 60.0	+0.1
	3.7nm,0.4s						
MK32	Makanchi Array	61.67	316	*e*P	P	11 11 59.8	0.0
MKAR	Makanchi Array	61.67	316	P	P	11 11 59.8	0.0
	3.3nm,0.3s,baz=90,slow=8.6,SNR=56						
MAKZ	Makanchi	61.89	316	*e*P	P	11 12 01.4	+0.1
	5.5nm,0.8s						
KHZ	Kahutara	61.91	157	*e*P	P	11 12 01.9	+0.7
	124nm,1.8s						
KDAK	Kodiak Island	62.95	32	P	P	11 12 08.9	+0.8
	4.4nm,0.9s,baz=258,slow=9.3,SNR=4.8						
KDAK	Kodiak Island	62.95	32	*e*P	P	11 12 08.6	+0.5
KDAK				*e*		11 12 09.0	
KURK	Kurchatov	64.68	320	*e*P	P	11 12 19.2	-0.3
	17nm,0.8s						
KDJ	Kajisay	64.79	310	*e*P	P	11 12 19.0	-1.7
	6.2nm,0.8s						
RC01	Rabbit Creek A	65.28	29	*e*P	P	11 12 24.4	+1.1
	17nm,1.1s						
KTH	Kantishna Hill	65.47	26	*e*P	P	11 12 25.0	+0.4
	20nm,1.7s						
KSH	Kashi	65.60	307	P	P	11 12 29.2	+3.3
KSH				PP	PP	11 14 56.4	+5.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,160nm,5.6s						
KSH				LR	LR		
	comp=E,370nm,8.8s						
BPAW	Bear Paw Mtn.	65.61	25	*e*P	P	11 12 26.5	+1.1
	3.4nm,0.8s						
TRF	Thorofare Moun	65.71	26	*e*P	P	11 12 26.7	+0.5
	30nm,1.8s						
BOOM	Boomskoye usch	65.73	310	*e*P	P	11 12 26.9	+0.2
	5.9nm,1.1s						
MLY	Manley	66.01	25	*e*P	P	11 12 28.7	+0.7
	3.3nm,0.6s						
SML	Sawmill	66.12	28	*e*P	P	11 12 28.3	-0.4
	72nm,2.0s						
RND	Reindeer	66.31	27	*e*P	P	11 12 30.5	+0.5
	18nm,1.8s						
SCM	Sheep Creek Mo	66.59	28	*e*P	P	11 12 32.6	+0.9
	46nm,1.5s						
WRH	Wood River Hil	66.93	25	*e*P	P	11 12 34.6	+0.8
	4.6nm,1.1s						
CCB	Clear Creek Bu	67.09	25	*e*P	P	11 12 35.8	+1.0
	5.5nm,1.4s						
HDA	Harding Lake	67.39	26	*e*P	P	11 12 37.5	+0.8
	20nm,2.0s						
ILAR	Eielson Array	67.51	25	P	P	11 12 37.4	0.0
	2.4nm,0.4s,baz=248,slow=5.9,SNR=43						
ILB	Eielson Array	67.51	25	*e*P	P	11 12 37.8	+0.4
	2.5nm,0.8s						
TOLK	Toolik Lake Re	67.60	21	*e*P	P	11 12 39.0	+1.0
	3.6nm,0.6s						
RIDG	Independent Ri	68.13	27	*e*P	P	11 12 41.3	-0.1
	27nm,1.9s						
FYU	Fort Yukon	68.61	24	*e*P	P	11 12 46.2	+1.9
	25nm,1.6s						
MCQ	Macquarie Isla	69.42	172	*e*P	P	11 12 50.0	+0.7
	1µm,1.9s						
KK31	Karatay Array	69.73	311	*e*P	P	11 12 51.5	-0.2
	3.7nm,0.6s						
KKAR	Karatay Array	69.73	311	*e*P	P	11 12 51.8	+0.1
	3.7nm,0.6s						
EGAK	Eagle	69.91	26	*e*P	P	11 12 54.3	+1.9
	18nm,1.9s						
GAR	Garm	70.00	307	*e*P	P	11 12 53.6	0.0
	9.1nm,0.7s						
BRVK	Borovoye	70.05	322	*e*P	P	11 12 53.8	+0.3
	8.6nm,0.6s						
DAWY	Dawson	70.56	27	*e*P	P	11 12 57.2	+0.8
	13nm,1.8s						
HYT	Haines Junctio	71.10	30	*e*P	P	11 13 02.1	+2.3
	13nm,1.4s						
EPYK	Eagle Plains	71.95	24	*e*P	P	11 13 05.7	+1.0
	14nm,1.5s						
INK	Inuvik	73.33	23	P	P	11 13 13.7	+0.9
	1.7nm,0.8s,baz=244,slow=6.6,SNR=6.1						
INK	Inuvik	73.33	23	*e*P	P	11 13 15.3	+2.5
	2.6nm,0.9s						
DLBC	Dease Lake	74.86	33	*e*P	P	11 13 22.6	+0.7
	7.4nm,1.3s						
ABKAR	Akbulak array	76.68	318	*e*P	P	11 13 31.8	-0.6
	4.4nm,0.8s						
ARU	Arti	76.75	325	*e*P	P	11 13 32.9	+0.2
	9.2nm,1.0s						
YKA	Yellowknife Ar	81.78	28	P	P	11 13 59.5	-0.4
	0.8nm,0.4s,baz=285,slow=5.1,SNR=3.3						
YKB5	Yellowknife Ar	81.78	28	*e*P	P	11 13 59.5	-0.4
PINE	Pine Mountain	82.51	47	*e*P	P	11 14 06.5	+2.1
	3.3nm,0.8s						
NV01	Mina Array Sit	85.71	52	*e*P	P	11 14 22.9	+2.2
NVAR	Mina Array Bea	85.71	52	P	P	11 14 22.9	+2.2
	0.9nm,0.7s,baz=273,slow=6.0,SNR=6.5						
ARA0	ARCESS Array S	86.71	342	*e*P	P	11 14 24.2	-0.6
ARCES	ARCESS Array B	86.71	342	P	P	11 14 24.2	-0.6
	1.4nm,0.5s,baz=64,slow=7.5,SNR=15						
FIA0	FINESS Array S	90.93	335	*e*P	P	11 14 43.6	-1.2
FINES	FINESS Array B	90.93	335	P	P	11 14 43.6	-1.2
	1.3nm,0.3s,baz=66,slow=4.2,SNR=17						
VNDA	Vanda	92.11	177	P	P	11 14 51.9	+2.1
	1.0nm,0.8s,baz=312,slow=4.1,SNR=8.7						
VNDA	Vanda	92.11	177	*e*P	P	11 14 50.3	+0.6

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*ATH **02** 11:08:03.1, 35.°36N×27.°51E, h22^{km}±4^{km}, ML2.5/2, Error ellipse: s-maj=8.3km s-min=2.1km az=336.0*

*ISCJB **02** 11:08:04.8±1.9, 35.°6N±0.°2×27.°5E±0.°2, h29^{km}±8^{km}, Error ellipse: s-maj=39.7km s-min=9.1km az=142.5*

*DDA **02** 11:08:19.0, 36.°69N×27.°65E, h7^{km}±3^{km}, ML2.2*

ISC 02 11:08:04.7±1.8, **35.°5N**±0.°2×**27.°4E**±0.°1, **h32**^{km}±10^{km}, **n10, σ1^{s}.12**/10, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.19	279	P	Pb	11 08 10.9	-0.2
KARP				S	Sb	11 08 15.7	+0.2
KARP				AML	AML	11 08 15.8	
	comp=E,2770µm,0.3s						
KARP				AML	AML	11 08 16.8	
	comp=N,2114µm,0.1s						
ARG	Arkhangelos	0.92	40	P	Pn	11 08 21.8	+0.5
ARG				AML	AML	11 08 36.8	
	comp=N,337µm,0.5s						
ARG				AML	AML	11 08 37.3	
	comp=E,565µm,0.3s						
ZKR	Zakros	1.04	248	P	Pn	11 08 23.6	+0.5
DAT	Datca	1.22	7	*i* P	Pn	11 08 20.5	-5.2
NPS	Neapolis	1.48	261	P	Pb	11 08 31.4	-0.2
BDRM	Kayabasi	1.54	1	*i* P	Pn	11 08 29.1	-1.0
LAST	Lasithi	1.61	258	P	Pb	11 08 33.5	-0.3
DALY	Dalyan (Mula)	1.65	38	*i* P	Pb	11 08 35.0	+0.6
DALY				IAML_P			
	comp=Z,310nm,0.2s						
TURN	Turunc	1.67	35	*i* P	Pn	11 08 29.7	-1.9
TURN				IAML_P			
	comp=Z,632nm,0.1s						
AYDN	Tasoluk	2.17	10	*i* P	Pn	11 08 40.1	+1.4

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*ATH **02** 11:09:47.1, 40.°14N×21.°86E, h15^{km}±2^{km}, ML2.1/8, Error ellipse: s-maj=2.8km s-min=1.0km az=7.0*

*THE **02** 11:09:47.7, 40.°12N×21.°87E, h3^{km}±3^{km}, ML2.2/5, Error ellipse: s-maj=3.7km s-min=0.6km az=313.0*

ISC 02 11:09:47.1±0.9, **40.°13N**±0.°02×**21.°88E**±0.°02, **h9**^{km}±8^{km}, **n38, σ0^{s}.65**/56, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	Kozani	0.19	334	P	Pg	11 09 51.1	0.0
KZN				S	Sg	11 09 53.9	+0.1
KZN	Kozani	0.19	334	P	Pg	11 09 51.1	0.0
KZN				S	Sg	11 09 54.0	+0.1
KZN				AML	AML	11 09 54.2	
	comp=E,4920µm,0.2s						
KZN				AML	AML	11 09 54.4	
	comp=N,4299µm,0.2s						
KZN	Kozani	0.19	334	P	Pg	11 09 51.2	0.0
KZN				S	Sg	11 09 54.1	+0.3
KZN				AML	AML	11 09 54.2	
	comp=E,4920µm,0.2s						
KZN				AML	AML	11 09 54.4	
	comp=N,4299µm,0.2s						
KTI	Kastanea	0.32	35	P	Pb	11 09 54.2	-0.9
KPRO	Kipourio	0.43	246	P	Pg	11 09 55.6	-0.1
KPRO				S	Sg	11 10 01.9	+0.6
KPRO	Kipourio	0.43	246	P	Pg	11 09 55.3	-0.4
KPRO				S	Sg	11 10 02.0	+0.7
KPRO				AML	AML	11 10 07.4	
	comp=E,534µm,0.4s						
KPRO				AML	AML	11 10 07.7	
	comp=N,494µm,0.5s						
KPRO	Kipourio	0.43	246	P	Pg	11 09 55.5	-0.1
KPRO				AML	AML	11 10 07.4	
	comp=E,534µm,0.4s						
KPRO				AML	AML	11 10 07.7	
	comp=N,494µm,0.5s						
LIT	Litokhoron	0.47	94	P	Pg	11 09 56.3	+0.1
LIT				S	Sb	11 10 04.1	-0.6
LIT	Litokhoron	0.47	94	P	Pg	11 09 56.3	+0.1
LIT				S	Sg	11 10 02.8	+0.4
LIT				AML	AML	11 10 06.8	
	comp=N,971µm,0.2s						
LIT				AML	AML	11 10 07.0	
	comp=E,1166µm,0.3s						
LIT	Litokhoron	0.47	94	P	Pg	11 09 56.4	+0.2
LIT				S	Sb	11 10 04.0	-0.6
LIT				AML	AML	11 10 06.8	
	comp=N,971µm,0.2s						
LIT				AML	AML	11 10 07.0	
	comp=E,1166µm,0.3s						
PENT	Pentalofos	0.57	276	P	Pg	11 09 57.7	-0.5
PENT				S	Sb	11 10 06.7	-1.0
PENT				AML	AML	11 10 10.4	
	comp=E,437µm,0.3s						
PENT				AML	AML	11 10 11.7	
	comp=N,526µm,0.2s						
PENT	Pentalofos	0.57	276	P	Pg	11 09 57.7	-0.5
PENT				S	Sg	11 10 06.0	+0.3
PENT				AML	AML	11 10 10.4	
	comp=E,437µm,0.3s						
PENT				AML	AML	11 10 11.7	
	comp=N,526µm,0.2s						
THL	Klokotos Trika	0.58	170	P	Pg	11 09 58.0	-0.2
THL				S	Sg	11 10 06.1	+0.2
THL	Klokotos Trika	0.58	170	P	Pg	11 09 58.1	-0.2
THL				S	Sg	11 10 06.4	+0.6
THL				AML	AML	11 10 09.0	
	comp=E,365µm,0.5s						
THL				AML	AML	11 10 10.7	
	comp=N,320µm,0.5s						
THL	Klokotos Trika	0.58	170	P	Pg	11 09 58.1	-0.2
THL				S	Sg	11 10 06.6	+0.7
THL				AML	AML	11 10 09.0	
	comp=E,365µm,0.5s						
THL				AML	AML	11 10 10.7	
	comp=N,320µm,0.5s						
MEV	Metsovon	0.61	235	P	Pb	11 09 59.6	-0.5
MEV	Metsovon	0.61	235	P	Pg	11 09 58.9	0.0
MEV	Metsovon	0.61	235	P	Pb	11 09 59.5	-0.6
GRG	Griva	0.91	26	P	Pb	11 10 05.2	0.0
GRG	Griva	0.91	26	P	Pg	11 10 04.0	-0.6
GRG	Griva	0.91	26	P	Pb	11 10 04.8	-0.4
GRG				AML	AML	11 10 22.1	
	comp=N,68µm,0.3s						
GRG				AML	AML	11 10 25.6	
	comp=E,87µm,0.4s						
FYTO	Fytoko, Volos	1.09	131	P	Pn	11 10 08.4	-0.2
FYTO	Fytoko, Volos	1.09	131	P	Pn	11 10 08.4	-0.2
AGG	Agios Georgios	1.16	162	P	Pg	11 10 09.6	+0.1
AGG				S	Sn	11 10 26.8	+1.1
AGG	Agios Georgios	1.16	162	P	Pn	11 10 09.4	-0.3
AGG				S	Sn	11 10 25.1	-0.6
AGG				AML	AML	11 10 30.1	
	comp=E,135µm,0.2s						
AGG				AML	AML	11 10 32.1	
	comp=N,208µm,0.4s						
AGG	Agios Georgios	1.16	162	P	Pn	11 10 09.4	-0.3
AGG				AML	AML	11 10 32.1	
	comp=N,208µm,0.4s						
AGG				AML	AML	11 10 33.9	
	comp=E,142µm,0.4s						
EVR	Evrytania	1.22	183	P	Pn	11 10 10.1	-0.4
EVR				S	Sn	11 10 28.2	+1.1
EVR	Evrytania	1.22	183	P	Pn	11 10 10.1	-0.4
EVR				S	Sb	11 10 25.8	-0.5
EVR				AML	AML	11 10 31.0	
	comp=N,160µm,0.5s						
EVR				AML	AML	11 10 31.1	
	comp=E,143µm,0.3s						
EVR	Evrytania	1.22	183	P	Pn	11 10 10.1	-0.4
EVR				AML	AML	11 10 31.0	
	comp=N,160µm,0.5s						
EVR				AML	AML	11 10 31.1	
	comp=E,143µm,0.3s						
XOR	Xorichti	1.27	127	P	Pb	11 10 11.3	0.0
XOR	Xorichti	1.27	127	P	Pn	11 10 10.7	-0.4
XOR	Xorichti	1.27	127	P	Pb	11 10 11.3	0.0
OHR	Ohrid	1.28	320	*i* Pn	Pb	11 10 11.2	-0.2
OHR				*i* Sn	Sg	11 10 31.5	+3.3
PVO	Paravola	1.54	190	P	Pg	11 10 16.9	+0.3
STIP	Stip	1.58	8	*e*Pn	Pg	11 10 17.8	+0.4
KEK	Kerkira	1.66	256	P	Pb	11 10 17.8	0.0
SERG	Sergoula	1.72	175	P	Pb	11 10 18.8	-0.2
KALE	Kalithea	1.75	173	P	Pn	11 10 18.4	+0.6

DJA 02 11:12:55.4±1.7, **8°S**±15°×**12°3E**±°, **h10**^{km}, **M3.6**/4, **MLv3.6**/4, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	1.01	241	P	Pg	11 13 13.9	-0.9
MMRI				S	Sb	11 13 29.0	+0.7
EDFI	Ende, Flores	1.54	247	P	Pn	11 13 23.1	0.0
EDFI				S	Sn	11 13 43.4	+0.1
BATI	Baumata	2.11	166	P	Pn	11 13 31.3	+0.5

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*MOS **02** 11:18:30.2±1.0, 27.°18N×55.°00E, h11^{km}, mb5.2/93, Error ellipse: s-maj=5.0km s-min=3.1km az=119.8*

*BJI **02** 11:18:31.0±0.0, 27.°30N×55.°00E, h6^{km}, mb4.8/50, mB4.9/33, Ms4.5/32, Ms7 4.3/21*

*THR **02** 11:18:32.4, 27.°23N×55.°18E, h18^{km}, ML4.9*

*NEIC **02** 11:18:33.0±0.0, 27.°28N×55.°02E, h12^{km}, mb5.0/116, ML4.9(THR), MN5.0(TEH), After TEH.*

*TEH **02** 11:18:33.6, 27.°28N×55.°02E, h12^{km}, ML5.0*

*DSN **02** 11:18:33.2±0.5, 27.°38N×54.°87E, h10^{km}, mb5.2/1, ML5.1/13, Error ellipse: s-maj=7.4km s-min=5.3km az=74.0*

*GII **02** 11:18:34.5±0.0, 27.°31N×54.°97E, h10^{km}*

*GCMT **02** 11:18:35.0±0.4, 27.°10N±0.°03×54.°92E±0.°04, h23^{km}±1^{km}, MW4.9/61, Moment Tensor Solution. s25,c26; s61,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.58±.28; M$_{\theta\theta}$-2.55±.18; M$_{\phi\phi}$-0.02±.17; M$_{r\theta}$-0.44±.24; M$_{\theta\phi}$1.38±.12; M$_{\phi r}$-0.14±.30; Best double couple: M$_0$2.91200×10^{16} NP1:φ$_s$286.00000°, δ49.00000°, λ79.00000°. NP2: φ$_s$122.00000°, δ42.00000°, λ102.00000°. Principal axes: T 2.6450, Plg81.0000°, Azm136.0000°; N 0.5350, Plg8.0000°, Azm293.0000°; P -3.1790, Plg3.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **02** 11:18:35.8±0.2, 27.°31N±0.°02×55.°00E±0.°02, h45^{km}±2^{km}, mb5.0/226, MS4.1/41 Error ellipse: s-maj=3.0km s-min=2.2km az=25.9*

*IDC **02** 11:18:37.2±2.0, 27.°30N×55.°01E, h44^{km}±19^{km}, mb4.5/36, mb1 4.6/45, mb1mx4.5/51, mbtmp4.7/45, ML4.3/8, MS4.0/28, Ms1 4.0/28, ms1mx3.9/45, Error ellipse: s-maj=10.5km s-min=9.4km az=173.0*

ISC 02 11:18:33.2±0.5, **27.°18N**±0.°03×**54.°98E**±0.°02, **h14**^{km}±2^{km}, **h14**^{km}**:pP-P, n720, σ1^{s}.49**/726, **mb5.0**/232, **MS4.1**/41, **34C-13D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	1.08	78	*e*Pg	Pb	11 18 53.1	-0.7
GENO				IAMB	IAmb	11 18 56.7	
	comp=Z,0.0nm,0.4s						
SHME	Shamm	1.54	137	*e*P	Pg	11 19 02.2	-0.5
	SNR=118						
SHME	Shamm	1.54	137	*e*Pn	Pb	11 19 01.4	0.0
LMD1	Lamerd	1.62	276	*e*Pn	Pg	11 19 04.2	-0.2
LMD1				IAMB	IAmb	11 19 55.5	
	comp=Z,0.0nm,0.6s						
NIAN	Nian	1.69	77	*e*Pn	Pb	11 19 03.5	-0.5
NIAN				IAMB	IAmb	11 19 44.8	
	comp=Z,0.0nm,0.7s						
BANOM	Banah	1.72	136	*e*P	Pb	11 19 05.2	+0.6
	SNR=544						
UMQ	Umm Al-Quwin	1.76	160	*e*P	Pg	11 19 07.2	+0.2
	SNR=48						
UMQ	Umm Al-Quwin	1.76	160	*e*Pn	Pg	11 19 07.2	+0.2
JHRM	Jahrom	1.81	317	*e*Pn	Pb	11 19 05.9	-0.3
GHIR	Ghir-Karzin	2.08	302	*e*Pn	Pb	11 19 10.0	-0.8
GHIR				*e*Sg	Sg	11 19 42.0	+1.9
GHIR	Ghir-Karzin	2.08	302	*e*Pn	Pb	11 19 10.4	-0.4
GHIR	Ghir-Karzin	2.08	302	*e*AML	AML	11 20 02.3	
	comp=E,5µm,0.6s						
GHIR	Ghir-Karzin	2.08	302	*e*Pn	Pb	11 19 10.3	-0.4
GHIR				*e*Sg	Sg	11 19 42.1	+1.9
MSFE	Esma-Masafi	2.10	150	*e*P	Pb	11 19 11.2	+0.1
	SNR=119						
MSFE				S	Sg	11 19 41.8	+0.9
MSFE	Esma-Masafi	2.10	150	*e*Pn	Pb	11 19 11.0	-0.1
MDH	Madha	2.22	148	*e*P	Pb	11 19 12.5	-0.6
	SNR=90						
MDH	Madha	2.22	148	*e*Pn	Pb	11 19 12.6	-0.5
NAZ	Nazwa, Dubai	2.27	164	*e*P	Pb	11 19 14.5	+0.5
	SNR=79						
NAZ	Nazwa, Dubai	2.27	164	*e*Pn	Pb	11 19 14.3	+0.4
UOSS	Minazif	2.49	153	*e*Pn	Pb	11 19 16.2	-1.4
UOSS				*e*Sn	Sn	11 19 44.7	+1.3
UOSS	Minazif	2.49	153	*e*P	Pb	11 19 16.2	-1.4
	SNR=100						
UOSS	Minazif	2.49	153	*e*Pn	Pb	11 19 16.2	-1.4
FAQ	Al Faqa, Dubai	2.49	167	*e*P	Pb	11 19 17.2	-0.5
	SNR=93						
FAQ	Al Faqa, Dubai	2.49	167	*e*Pn	Pb	11 19 18.2	+0.5
KHNJ	Kahnooj	2.53	72	*e*Pn	Pn	11 19 14.9	+1.0
ASUD	Al Ashush, Dub	2.57	173	*e*P	Pb	11 19 18.9	0.0
	SNR=60						
ASUD	Al Ashush, Dub	2.57	173	*e*Pn	Pb	11 19 19.0	0.0
HATD	Hatta, Dubai	2.57	156	*e*P	Pb	11 19 17.7	-1.3
	SNR=96						
HATD	Hatta, Dubai	2.57	156	*e*Pn	Pb	11 19 17.8	-1.2
AJN	Ajban	2.61	180	*e*P	Pb	11 19 19.5	-0.2
	SNR=16						
AJN	Ajban	2.61	180	*e*Pn	Pb	11 19 19.4	-0.3
ASHO	Ashiyiah	2.67	158	*e*P	Pb	11 19 19.3	-1.5
	SNR=442						
ASHO	Ashiyiah	2.67	158	*e*Pn	Pb	11 19 19.3	-1.5
NGRK	Negar Kerman	2.89	32	*e*Pn	Pn	11 19 19.4	+0.2
NGRK				IAMB	IAmb	11 20 21.1	
	comp=Z,0.0nm,0.8s						
IPAR	Pars	3.15	328	*e*Pn	Pn	11 19 24.2	+1.6
IPAR				IAMB	IAmb	11 20 33.4	
	comp=Z,50µm,0.9s						
ALNE	Al Ain	3.19	167	*i* P	Pb	11 19 26.7	-2.9
	SNR=19						
ALNE	Al Ain	3.19	167	*e*Pn	Pb	11 19 26.8	-2.9
TVBK	TV Kerman	3.20	29	*e*Pn	Pn	11 19 25.0	+1.6
TVBK				IAMB	IAmb	11 20 27.5	
	comp=Z,0.0nm,0.6s						
SHI	Shiraz	3.27	319	P	Pn	11 19 27.1	+2.9
SHI	Shiraz	3.27	319	*e*Pn	Pn	11 19 25.9	+1.7
KHGB	Koh Gabri	3.44	22	*e*Pn	Pn	11 19 28.2	+1.6
KHGB				IAMB	IAmb	11 20 37.8	
	comp=Z,0.0nm,0.8s						
CHMN	Cheshme madani	3.49	40	*e*Pn	Pn	11 19 29.5	+2.2
CHMN				IAMB	IAmb	11 19 34.5	
	comp=Z,0.0nm,0.4s						
IKAZ	Kazeroun	3.79	314	*e*Pn	Pn	11 19 33.0	+1.6
IKAZ				IAMB	IAmb	11 21 08.8	
	comp=Z,76µm,1.3s						
HOQ	Hoqain	4.16	149	*e*Pn	Pn	11 19 37.9	+1.6
IMEH	Mehriz	4.20	356	*e*Pn	Pn	11 19 38.4	+1.3
IMEH				IAMB	IAmb	11 21 03.6	
	comp=Z,11µm,0.8s						
MZR	Muzera	4.38	198	*i* P	Pn	11 19 41.8	+2.5
	SNR=21						
MZR	Muzera	4.38	198	*e*Pn	Pn	11 19 31.7	-7.6
MZR				*e*Pn	Pb	11 19 42.1	-7.8
IBAF	Bafgh	4.42	6	*e*Pn	Pn	11 19 40.8	+0.8
IBAF				IAMB	IAmb	11 19 45.4	
	comp=Z,11µm,0.3s						
BIDO	Bidbid	4.63	141	*e*Pn	Pn	11 19 44.4	+1.7
ISAD	Sadrabad	4.85	347	*e*Pn	Pn	11 19 47.6	+1.7
ISAD				IAMB	IAmb	11 19 55.8	
	comp=Z,10µm,0.5s						
WSAR	Wadi Sarin	5.13	139	P	Pn	11 19 51.8	+2.1
	comp=Z,26nm,0.3s,baz=323,slow=10,SNR=113						
WSAR				S	Sn	11 20 49.8	+1.0
	comp=Z,4.6nm,0.3s,baz=89,slow=18,SNR=2.4						
WSAR				LR	LR	11 22 27.8	
	comp=Z,2µm,18.4s,baz=346,slow=44						
IRAM	Ramesheh	5.13	334	*e*Pn	Pn	11 19 50.9	+1.0
YZKH	Yazd	5.20	356	*e*Pn	Pn	11 19 51.1	+0.5
YZKH	Yazd	5.20	356	*e*Pn	Pn	11 19 51.1	+0.5
ZHSF	Zahedan	5.65	63	*e*Pn	Pn	11 19 55.0	-1.8
ZHSF	Zahedan	5.65	63	*e*Pn	Pn	11 19 55.6	-1.2
ZHSF	Zahedan	5.65	63	*e*P	Pn	11 19 55.6	-1.2
IGAR	Gharneh	5.79	335	*e*Pn	Pn	11 19 59.9	+1.0
BSRN	Basiran	5.98	36	*e*Pn	Pn	11 20 00.5	-0.8
BSRN	Basiran	5.98	36	*e*P	Pn	11 20 00.5	-0.8
ANAR	Anarak	6.08	350	*e*Pn	Pn	11 20 03.4	+0.6
ZNGN	Zangian	6.09	325	*e*Pn	Pn	11 20 04.0	+1.0
IZEF	Zefreh	6.14	339	*e*Pn	Pn	11 20 03.4	-0.3
ROKH	ROKH	6.18	327	*e*Pn	Pn	11 20 05.3	+1.1
JHBN	Jahan bin	6.28	324	*e*Pn	Pn	11 20 06.0	+0.4
IKOO	Kooshah	6.28	33	*e*Pn	Pn	11 20 06.4	+0.8
IPIR	Pirpir	6.53	328	*e*Pn	Pn	11 20 10.5	+1.4
ITEG	Tejag	6.56	29	*e*Pn	Pn	11 20 10.5	+1.1
TKDS	Koohdasht(Taba	6.67	16	*e*Pn	Pn	11 20 11.3	+0.5
TABS	Tabas	6.70	15	*e*Pn	Pn	11 20 11.0	-0.3
TABS	Tabas	6.70	15	*e*Pn	Pn	11 20 11.3	+0.1
TABS	Tabas	6.70	15	*e*Pn	Pn	11 20 11.3	+0.1
IKLH	Kolahrood	6.79	335	*e*Pn	Pn	11 20 12.9	+0.3
TNSJ	Nastanj	6.90	11	*e*Pn	Pn	11 20 14.3	+0.3
IDAH	Dahanechah	6.97	36	*e*Pn	Pn	11 20 17.6	+2.5
KRSH	Karshahi	7.19	341	*e*Pn	Pn	11 20 18.1	0.0
SHGR	Shooshtar-Gavs	7.28	314	*e*Pn	Pn	11 20 21.3	+2.2
SHGR	Shooshtar-Gavs	7.28	314	*e*Pn	Pn	11 20 21.2	+2.2
SHGR	Shooshtar-Gavs	7.28	314	*e*AML	AML	11 21 53.6	
	comp=E,233nm,0.6s						
IVRN	Varamin	8.27	341	*e*Pn	Pn	11 20 33.0	+0.2
IANJ	Anjilo	8.31	354	*e*Pn	Pn	11 20 34.1	+0.7
IKMR	Kamar-syah	8.51	320	*e*Pn	Pn	11 20 36.1	+0.2
ISHM	Shahmirzad	8.72	351	*e*Pn	Pn	11 20 39.9	+0.8
IHSB	Hasanabad	8.82	340	*e*Pn	Pn	11 20 40.4	+0.1
IKFM	Kafar-mosalman	8.82	317	*e*Pn	Pn	11 20 41.2	+0.9
IALA	Alasht	9.06	349	*e*Pn	Pn	11 20 46.4	+2.6
HAGD	Aghdareh	9.11	328	*e*Pn	Pn	11 20 45.4	+0.9
IMHD	Mahdasht	9.24	338	*e*Pn	Pn	11 20 45.5	-0.6
IRAZ	Razeghan	9.26	333	*e*Pn	Pn	11 20 46.3	-0.2
IPRN	Peran	9.31	347	*e*Pn	Pn	11 20 49.0	+2.0
RAYN	Ar Rayn	9.31	249	*e*Pn	Pn	11 20 46.5	-0.6
RAYN				*e*Sn	Sn	11 22 28.9	-2.9
RAYN	Ar Rayn	9.31	249	*i* P	Pn	11 20 46.5	-0.6
	SNR=66						
RAYN	Ar Rayn	9.31	249	*e*P	Pn	11 20 46.5	-0.6
RAYN				*e*		11 22 28.9	
IGLO	Ghaloghah	9.34	354	*e*Pn	Pn	11 20 49.2	+1.6
SBZV	Sabzevar	9.44	13	*e*Pn	Pn	11 20 49.3	+0.3
IKOM	Komasi	9.48	319	*e*Pn	Pn	11 20 49.3	-0.1
IBZA	Bozab	9.49	322	*e*Pn	Pn	11 20 49.8	+0.1
JRKH	Jarkhoshk	9.83	26	*e*Pn	Pn	11 20 53.4	-0.7
KCHF	Cheshme Sefid,	9.83	318	*e*Pn	Pn	11 20 53.9	-0.3
IAKL	Akhelmad	9.92	18	*e*Pn	Pn	11 20 56.6	+1.0
IGZV	Ghazvin	10.03	337	*e*Pn	Pn	11 20 56.2	-0.8
IMYA	Miami	10.11	24	*e*Pn	Pn	11 21 01.4	+3.3
IVIS	Veis	10.12	318	*e*Pn	Pn	11 20 58.0	-0.1
ISFR	Sfrayin	10.17	14	*e*Pn	Pn	11 20 59.8	+0.9

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GEYT  Alibeck           11.04  13    P      Pn       11 21 11.5 +0.9
      comp=E,0.7nm,0.3s,baz=206,slow=13,SNR=13
GEYT                                 LR     LR       11 26 19.6
      comp=E,3µm,18.3s,baz=190,slow=42
GYA0B ALIBECK ARRAY     11.04  13   ePn     Pn       11 21 08.8 -1.9
HAKT  HAKKARI           14.05 320   i P     Pn       11 21 49.8 -2.2
HAKT                                 IAML_P
      comp=Z,706nm,0.4s
KBL   Kabul             14.12  55   ePn     Pn       11 21 51.1 -1.9
KBL   Kabul             14.12  55   eP      Pn       11 21 51.1 -1.9
MNGR  Mingechevir, A    15.04 336    P      P        11 22 10.7 +0.1
GANJ  Ganja             15.22 334    P      P        11 22 12.9 +0.3
SRTM  Siirt_Merkez      15.39 318   i P     Pn       11 22 01.2 -8.7
SRTM                                 IAML_P
      comp=Z,175nm,0.2s
SEKA  Sheki             15.39 337    P      P        11 22 16.1 +1.6
AKT   Akhty             15.46 339   eP      P        11 22 16.3 +1.0
AKT                                 eS      S        11 25 11.9 -5.9
AKT                                  pmax   pmax
      comp=Z,193nm,0.6s
GNI   Garni             15.47 329    P      Pn       11 22 09.8 -1.3
      comp=Z,1.5nm,0.3s,baz=30,slow=20,SNR=2.3
GNI   Garni             15.47 329   ePn     Pn       11 22 10.3 -0.8
      comp=Z,258nm,0.9s
GNI   Garni             15.47 329ceP        Pn       11 22 10.3 -0.8
GNI                                  pmax   pmax
      comp=Z,587nm,1.0s
THW   Thamme Wali       15.56  65    P      Pn       11 22 11.1 -1.0
BTMN  Batman            15.72 316   i P     P        11 22 20.8 +2.6
BTMN                                 IAML_P
      comp=Z,1µm,0.8s
TUTA  Tutak             15.85 323   i P     P        11 22 19.8 -0.1
TUTA                                 IAML_P
      comp=Z,2µm,0.8s
DAMY  Dhamar            15.97 220   ePn     Pn       11 22 14.8 -2.9
      comp=Z,90nm,0.8s
DAMY                                eSn     Sn       11 25 10.6 -4.3
ZKTA  Zakatala          15.97 337    P      P        11 22 23.6 +2.7
CEP   Cherat            16.01  61    P      Pn       11 22 19.5 +1.4
EATA  Eleskirt          16.36 324   i P     P        11 22 24.6 -0.9
EATA                                 IAML_P
      comp=Z,54nm,0.4s
ASF   Jabal al Asfar    16.48 292    P      Pn       11 22 23.8 -0.2
      comp=Z,1.4nm,0.3s,baz=62,slow=3.5,SNR=14
ASF   Jabal al Asfar    16.48 292    P      Pn       11 22 24.3 +0.2
      comp=Z,52nm,1.2s
CHGR  Chuyangaron       16.49  43   ePn     Pn       11 22 21.6 -2.5
      comp=Z,72nm,0.8s
HANI  Diyarbakir_Han    16.58 316   i P     P        11 22 30.0 +2.2
HANI                                 IAML_P
      comp=Z,117nm,0.3s
KARS  Kars              16.63 327   eP      P        11 22 27.2 -1.1
KARS  Kars              16.63 327   eP      P        11 22 27.3 -1.1
MAK   Makhachkala       16.88 341   eP      P        11 22 30.4 -0.5
MAK                                 eS      S        11 25 41.4 -5.1
MAK                                  pmax   pmax
      comp=Z,480nm,1.2s
MAK                                  MLR    MLR
      comp=Z,361nm,15.0s
NIL   Nilore            17.02  63   eP      Pn       11 22 30.9 +0.1
      comp=Z,52nm,0.9s
NIL   Nilore            17.02  63   eP      Pn       11 22 30.9 +0.1
NIL                                  pmax   pmax
      comp=Z,52nm,0.9s
CHCP  Chirah Chowk      17.03  63    P      Pn       11 22 30.9  0.0
AKH   Akhalkalaki       17.05 329   eP      Pn       11 22 32.0 +0.7
      comp=Z,65nm,1.2s
AKH   Akhalkalaki       17.05 329   eP      Pn       11 22 32.0 +0.7
AKH                                  pmax   pmax
      comp=Z,65nm,1.2s
HSUJ  Al Zarqa          17.05 291    P      P        11 22 38.1 +5.1
WALJ  Wala              17.27 289    P      P        11 22 36.8 +1.5
      comp=Z,166nm,0.9s,comp=Z,1µm
JDRJ  Daraweish         17.27 286    P      P        11 22 36.0 +0.5
      comp=Z,127nm,1.5s,comp=Z,2µm
KARJ                    17.33 288    P      P        11 22 39.1 +3.1
      comp=Z,171nm,0.9s,comp=Z,1µm
GAR   Garm              17.41  44   eP      Pn       11 22 34.5 -1.2
      comp=Z,67nm,0.8s
GAR   Garm              17.41  44   eP      Pn       11 22 34.5 -1.2
GAR                                  pmax   pmax
      comp=Z,67nm,0.8s
LISJ  El Lisan          17.50 288    P      P        11 22 40.2 +2.4
      comp=Z,55nm,1.5s
SHMJ  Saham             17.54 293    P      Pn       11 22 37.4 +0.1
      comp=Z,254nm,0.9s,comp=Z,2µm
TNCL  Tunceli-Merkez    17.54 317   i P     P        11 22 39.6 +1.2
TNCL                                 IAML_P
      comp=Z,284nm,0.6s
DAGI  Agillar           17.55 325   i P     P        11 22 39.2 +0.7
DAGI                                 IAML_P
      comp=Z,916nm,0.6s
MZDA  Masada            17.61 288    Pn     P        11 22 39.0  0.0
DBAD  Bademkaya         17.62 325   i P     P        11 22 38.9 -0.4
DBAD                                 IAML_P
      comp=Z,23nm,0.2s
HMDT  Nahal Hemdat      17.63 291    Pn     P        11 22 39.6 +0.2
ZFRI  Zfri              17.67 286    Pn     P        11 22 40.0 +0.3
NATI  Neve Ativ         17.69 295    Pn     P        11 22 40.0  0.0
AQBJ  Aqaba             17.71 283    P      P        11 22 58.6  +18
KSDI  Kefar Szold       17.74 294    Pn     P        11 22 40.9 +0.4
KSDI  Kefar Szold       17.74 294    P      Pn       11 22 38.3 -1.4
GEM   Giv'at Ha'Em      17.74 294    Pn     P        11 22 40.6 +0.1
HRFI  Mount Harif       17.74 284    Pn     P        11 22 41.4 +0.8
HRFI  Mount Harif       17.74 284    P      Pn       11 22 39.6 -0.2
MMLI  Mount Malkishu    17.76 292    Pn     P        11 22 41.3 +0.5
EIL   Elat              17.79 283    P      P        11 22 43.0 +1.8
      comp=Z,1.0nm,0.3s,baz=62,slow=7.3,SNR=14
EIL   Elat              17.79 283    Pn     P        11 22 42.0 +0.8
PRNI  Paran             17.80 285    Pn     P        11 22 41.7 +0.5
YTIR  Yattir            17.82 288    Pn     P        11 22 42.3 +0.7
MBRI  Mt Berech         17.83 283    Pn     P        11 22 42.3 +0.6
MMA0B Mount Meron ar    17.90 294    Pn     P        11 22 42.8 +0.4
MMAI  Mount Meron Ar    17.90 294    P      P        11 22 42.3 -0.1
      comp=Z,2.3nm,0.3s,baz=101,slow=13,SNR=16
ZEI   Tsey              17.99 333   eP      P        11 22 43.3 -0.2
ZEI                                  pmax   pmax
      comp=Z,104nm,0.8s
KRMI  Paran Flat        18.02 284    Pn     P        11 22 44.7 +1.0
SLTI  Sal'it            18.03 291    Pn     P        11 22 43.6 -0.2
HNTI  Hanita            18.10 294    Pn     P        11 22 45.0 +0.4
KEMA  Kemaliye          18.28 315   i P     P        11 22 48.1 +1.5
KEMA                                 IAML_P
      comp=Z,377nm,0.5s
BTK   Batken            18.37  42   eP      Pn       11 22 46.1 -1.4
      comp=Z,43nm,0.8s
BTK   Batken            18.37  42   eP      Pn       11 22 46.1 -1.4
BTK                                  pmax   pmax
      comp=Z,43nm,0.8s
KZIT  Kziot             18.37 287    Pn     Pn       11 22 48.8 +1.2
NCK   Nalchik           18.71 333⇑eP        Pn       11 22 51.8 +0.2
NCK                                  pmax   pmax
      comp=Z,13nm,0.3s
ANDN  Andirin           18.81 308   i P     Pn       11 22 54.8 +1.8
ANDN                                 IAML_P
      comp=Z,1µm,0.6s
NEY   Neytrino          18.86 331⇓eP        Pn       11 22 55.2 +1.6
NEY                                  pmax   pmax
      comp=Z,4.0nm,0.7s
CUZAR Zara_SIVAS        19.10 316   i P     Pn       11 22 58.1 +1.6
KBZ   Khabaz            19.18 332    P      P        11 22 54.9 -1.4
      comp=Z,0.5nm,0.3s,baz=139,slow=9.4,SNR=19
SHA1  Shidzhatmaz       19.29 332   i P     Pn       11 22 59.4 +0.6
ATD   Arta Tunnel       19.30 219    P      Pn       11 22 59.5 +0.5
      comp=Z,0.7nm,0.3s,baz=356,slow=12,SNR=8.9
ATD   Arta Tunnel       19.30 219   eP      P        11 22 58.1 +0.2
      comp=Z,40nm,1.0s
DOMR  Dombai            19.38 329⇑eP        Pn       11 23 01.3 +1.4
DOMR                                 pmax   pmax
      comp=Z,9.0nm,0.9s
KVAR  Kislovodsk Arr    19.45 333    P      P        11 22 59.5 +0.1
      baz=253,slow=19,SNR=6.6
KIV   Kislovodsk        19.46 333   eP      P        11 22 59.3 -0.1
      comp=Z,122nm,1.1s
KIV   Kislovodsk        19.46 333⇑iP        Pn       11 23 05.3 +4.6
KIV   Kislovodsk        19.46 333   eP      Pn       11 23 01.1 +0.4
KIV                                  pmax   pmax
      comp=Z,288nm,1.0s
NDI   New Delhi         19.70  80   eP      Pn       11 23 09.0 +5.4
YAHY  KAYSERI_Yahyal    19.74 308   i P     Pn       11 23 04.5 +0.4
YAHY                                 IAML_P
      comp=Z,25nm,0.3s
CSS   Mathiatis         20.08 298   eP      P        11 23 05.8 -0.4
      comp=Z,68nm,1.0s
CSS   Mathiatis         20.08 298    Pn     Pn       11 23 07.2 -0.8
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CSS   Mathiatis         20.08 298    P      Pn       11 23 08.5 +0.5
      comp=Z,18nm,0.9s,comp=Z,272nm
GOF   Gofitskoye        20.24 335⇓iP        P        11 23 07.5 -0.3
GOF                                  pmax   pmax
      comp=Z,98nm,1.0s
KK31  Karatay Array     20.28  34   eP      P        11 23 07.6 -0.7
      comp=Z,35nm,0.8s
KK31  Karatay Array     20.28  34   eP      P        11 23 07.6 -0.7
KK31                                 pmax   pmax
      comp=Z,35nm,0.8s
KKAR  Karatay Array     20.28  34   eP      P        11 23 07.9 -0.5
      comp=Z,35nm,0.8s
KKAR  Karatay Array     20.28  34   eP      P        11 23 07.9 -0.5
KKAR                                 pmax   pmax
      comp=Z,35nm,0.8s
ARSB  Arslanbob         20.44  42   eP      P        11 23 09.8 -0.5
      comp=Z,55nm,0.9s
SOC   Sochi             20.50 327   eP      Pn       11 23 14.1 +1.2
SOC                                 e                11 23 31.5
SOC                                  pmax   pmax
      comp=Z,200nm,1.1s
SOC                                  MLR    MLR
      comp=Z,209nm,11.0s
AKSY  AKSARAY - Alti    21.11 308   i P     P        11 23 19.9 +2.4
AKSY                                 IAML_P
      comp=Z,35nm,0.2s
CDAG  Cicekdag          21.15 311   i P     P        11 23 19.8 +1.9
CDAG                                 IAML_P
      comp=Z,27nm,0.1s
KIRS  Kırehir-Merke     21.23 309   i P     P        11 23 20.7 +2.0
KIRS                                 IAML_P
      comp=Z,685nm,0.7s
GAZI  Gazipasa          21.25 301   i P     P        11 23 22.1 +3.2
GAZI                                 IAML_P
      comp=Z,296nm,0.3s
KSH   Kashi             21.36  50    P      P        11 23 14.9 -5.3
KSH                                  sP     pP       11 23 22.6 -1.8
KSH                                  PP     PnPn     11 23 38.0 -2.1
KSH                                  S      S        11 27 03.0  -14
KSH                                  SS     SnSn     11 27 36.2 -3.6
KSH                                  pmax   pmax
      comp=Z,50nm,0.8s
KSH                                  pmax   pmax
      comp=Z,140nm,3.3s
KSH                                  LR     LR
      comp=Z,750nm,11.7s
KSH                                  LR     LR
      comp=Z,860nm,10.8s
KSH                                  LR     LR
      comp=Z,600nm,14.0s
DELI  KIRIKKALE         21.64 312   i P     P        11 23 24.6 +1.5
BR101 Keskin Array S    21.70 311   eP      P        11 23 24.1 +0.3
BR131 Keskin Array S    21.70 311   eP      P        11 23 23.9 +0.1
      comp=Z,60nm,0.8s
BRTR  Keskin Array B    21.70 311    P      P        11 23 24.1 +0.3
      comp=Z,34nm,0.8s,baz=134,slow=12,SNR=39
BRTR                                 LR     LR       11 34 23.7
      comp=Z,242nm,20.5s,baz=106,slow=44
EKS2  Erkin-Say         21.74  40    P      P        11 23 24.6 +0.4
      SNR=25
KONT  Konya--Tatoy      21.82 305   i P     P        11 23 26.1 +1.0
KONT                                 IAML_P
      comp=Z,149nm,0.2s
UCH   Uchtor            21.90  42    P      P        11 23 30.5 +4.2
      SNR=32
AAK   Ala-Archa         22.14  41    P      P        11 23 29.0 +0.4
      comp=Z,10nm,0.5s,baz=208,slow=7.0,SNR=17
AAK   Ala-Archa         22.14  41   eP      P        11 23 26.8 -1.8
      comp=Z,148nm,1.4s
AAK   Ala-Archa         22.14  41    P      P        11 23 28.9 +0.4
AAK   Ala-Archa         22.14  41c iP       P        11 23 28.5 -0.1
AAK                                  pmax   pmax
      comp=Z,14nm,0.9s
AAK   Ala-Archa         22.14  41    P      P        11 23 29.1 +0.6
      SNR=9.1
KZA   Kyzart            22.25  43    P      P        11 23 33.1 +3.0
      SNR=47
FRU1  Bishkek           22.32  41   eP      P        11 23 27.4 -3.1
      comp=Z,70nm,1.1s
FRU1  Bishkek           22.32  41   eP      P        11 23 27.4 -3.1
FRU1                                 pmax   pmax
      comp=Z,70nm,1.1s
BR231 Keskin MP Arra    22.34 310   eP      P        11 23 29.6 -1.1
      comp=Z,91nm,0.9s
ANTO  Ankara            22.34 310   eP      P        11 23 30.5 -0.1
      comp=Z,113nm,0.9s
ANTO  Ankara            22.34 310   eP      P        11 23 30.5 -0.1
ANTO                                 pmax   pmax
      comp=Z,113nm,0.9s
AB31  Akbulak array     22.37   9    P      P        11 23 29.9 -0.8
AB31                                 pmax   pmax
      comp=Z,78nm,1.1s
ABKAR Akbulak array     22.37   9   eP      P        11 23 30.2 -0.6
      comp=Z,63nm,0.9s
KBK   Karagaybulak      22.42  41    P      P        11 23 32.1 +0.5
      SNR=21
CHMS  Chumysh           22.51  40    P      P        11 23 34.6 +2.2
      SNR=8.8
ANN   Anapa             22.51 326   eP      P        11 23 32.6 +0.3
ANN                                 eS      S        11 27 40.2 +1.4
ANN                                  pmax   pmax
      comp=Z,84nm,1.0s
ANN                                  MLR    MLR
      comp=Z,480nm,17.0s
USP   Ospenovka         22.54  40    P      P        11 23 31.9 -0.8
      SNR=14
CMDR  Camlidere-ANKA    22.85 311   i P     P        11 23 37.3 +1.2
CMDR                                 IAML_P
      comp=Z,737nm,0.3s
BOOM  Boomskoye usch    22.91  43   eP      P        11 23 35.6 -1.2
      comp=Z,84nm,1.0s
BOOM  Boomskoye usch    22.91  43   eP      P        11 23 35.6 -1.2
BOOM                                 pmax   pmax
      comp=Z,84nm,1.0s
TKM2  Tokmak 2          22.96  42   i P     P        11 23 37.0 -0.3
TKM2                                 pmax   pmax
      comp=Z,23nm,0.8s
TKM2  Tokmak 2          22.96  42    P      P        11 23 36.7 -0.6
      SNR=17
KORT  Korkueli          22.99 301   i P     P        11 23 40.4 +2.8
KORT                                 IAML_P
      comp=Z,434nm,0.2s
BAGO  Egridir - ISPA    22.99 304   i P     P        11 23 34.1 -3.5
BAGO                                 IAML_P
      comp=Z,12nm,0.1s
AUSIV SIVRIHISAR        23.02 308   i P     P        11 23 38.9 +1.1
ISP   Isparta           23.13 303   eP      P        11 23 38.0 -1.0
      comp=Z,186nm,1.8s
ISP   Isparta           23.13 303   eP      P        11 23 38.0 -1.0
ISP                                  pmax   pmax
      comp=Z,186nm,1.8s
KIBS  BOLU              23.23 311   i P     P        11 23 42.9 +2.8
KIBS                                 IAML_P
      comp=Z,38nm,0.2s
AUMIH MIHALICIK         23.24 309   i P     P        11 23 40.7 +0.5
AKTO  Aktyubinsk        23.33   5    P      P        11 23 39.9 -0.9
      comp=Z,9.2nm,0.4s,baz=184,slow=10,SNR=20
AKAS  Kas               23.34 299   i P     P        11 23 43.1 +1.8
AKAS                                 IAML_P
      comp=Z,606nm,0.6s
BRDR  BURDUR-Merkez     23.43 303   i P     P        11 23 44.4 +2.3
BRDR                                 IAML_P
      comp=Z,361nm,0.2s
KDJ   Kajisay           23.48  45   eP      P        11 23 41.0 -1.6
      comp=Z,41nm,1.0s
KDJ   Kajisay           23.48  45   eP      P        11 23 41.0 -1.6
KDJ                                  pmax   pmax
      comp=Z,41nm,1.0s
HYB   Hyderabad         23.84 109   i P     P        11 23 51.5 +5.4
SRCK  Saricakaya, Es    23.91 309   i P     P        11 23 48.0 +1.5
SRCK                                 IAML_P
      comp=Z,16nm,0.3s
KHAL  Karahalli         24.08 304   i P     P        11 23 48.4  0.0
KHAL                                 IAML_P
      comp=Z,200nm,0.4s
SAHE  Sakarya_HENDEK    24.11 311   i P     P        11 23 49.0 +0.5
SAHE                                 IAML_P
      comp=Z,153nm,0.7s
SIM   Simferopol'       24.35 322deP        P        11 23 52.2 +1.6
SIM                                  pmax   pmax
      comp=Z,33nm,0.8s
USAK  Uak-Merkez        24.55 304   i P     P        11 23 53.1 +0.5
USAK                                 IAML_P
      comp=Z,412nm,0.5s
PYUN  Piuthan           24.81  81   eP      P        11 23 57.1 +1.9
      comp=Z,249nm,0.8s
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MANT  Manisa            24.82 304   eP      P        11 23 54.4 -0.7
MANT  Manisa            24.82 304   i P     P        11 23 56.9 +1.7
MANT                                 IAML_P
      comp=Z,34nm,0.2s
ULDT  Uludag            24.99 308   i P     P        11 23 57.5 +0.8
ULDT                                 IAML_P
      comp=Z,981nm,0.7s
YLV   Yalova            25.00 309⇑iP        P        11 23 57.3 +0.7
OTUK  Ortayu            25.00  28   i P     P        11 23 56.1 -0.4
OTUK                                 pmax   pmax
      comp=Z,31nm,0.6s
KARP  Karpathos         25.11 296   eP      P        11 23 58.5 +0.9
      comp=Z,130nm,0.9s
KOLN  Koldanda          25.38  82   eP      P        11 24 01.9 +1.6
      comp=Z,211nm,1.1s
DANN  Dangsing          25.47  81   eP      P        11 24 03.2 +2.0
      comp=Z,662nm,0.8s
PDGK  Podgornoye        25.55  45    P      P        11 24 00.3 -1.4
PDGK                                 pmax   pmax
      comp=Z,66nm,1.2s
BALB  Balikesir         25.70 306   eP      P        11 23 59.9 -3.0
      comp=Z,160nm,0.9s
VORD  Divnogorie        26.58 338   eP      P        11 24 09.8 -0.8
VORD                                 pmax   pmax
      comp=Z,10.0nm,0.8s
PHSR  Pinarhisar        26.71 310⇑iP        P        11 24 12.0  0.0
DMN   Daman             26.72  82   eP      P        11 24 14.1 +1.6
      comp=Z,32nm,0.6s
APE   Apeiranthos       26.73 299⇑iP        P        11 24 11.2 -1.0
APE   Apeiranthos       26.73 299    P      P        11 24 11.1 -1.1
VSR   Storozhevoye      26.83 338   eP      P        11 24 11.5 -1.4
VSR                                 eS      S        11 28 53.7 +5.0
VSR                                  pmax   pmax
      comp=Z,30nm,0.7s
VSR                                  smax   smax
      comp=E,240nm,1.2s
KKN   Kakani            26.86  82   eP      P        11 24 15.1 +1.4
      comp=E,137nm,1.1s
IDI   Anoyia            26.89 295    P      P        11 24 14.4 +0.6
      comp=E,26nm,0.6s,baz=103,slow=5.3,SNR=17
EZN   Ezine             26.89 305⇑iP        P        11 24 13.3 -0.3
EZN   Ezine             26.89 305    P      P        11 24 13.3 -0.3
PKIN  Phulchoki         26.98  82   eP      P        11 24 15.9 +1.0
      comp=E,41nm,0.7s
PKI   Pulchoki          26.99  82   eP      P        11 24 16.1 +1.0
      comp=E,73nm,0.7s
GUN   Gumba             27.37  81   eP      P        11 24 19.8 +1.3
      comp=E,42nm,0.6s
TIRR  Tirgusor          27.41 316   eP      P        11 24 17.3 -0.9
      comp=E,225nm,1.6s
TIRR  Tirgusor          27.41 316   eP      P        11 24 17.3 -0.9
TIRR                                 pmax   pmax
      comp=Z,225nm,1.6s
ALN   Alexandroupoli    27.46 307   eP      P        11 24 19.3 +0.6
      comp=Z,16nm,1.0s
ALN   Alexandroupoli    27.46 307   eP      P        11 24 19.3 +0.6
ALN                                  pmax   pmax
      comp=Z,16nm,1.0s
ICOR  Ion Corvin        27.63 315⇑iP        P        11 24 20.8 +0.6
JIRN  Jiri              27.67  82   eP      P        11 24 22.3 +1.1
      comp=Z,134nm,0.9s
HARR  Harsova           27.83 316⇑iP        P        11 24 22.0  0.0
HARR  Harsova           27.83 316    P      P        11 24 21.9  0.0
CFR   Carcaliu          27.95 317⇑iP        P        11 24 23.9 +0.9
CFR   Carcaliu          27.95 317    P      P        11 24 23.8 +0.8
LPSR  Galich'ya Gora    28.09 339   eP      P        11 24 23.3 -0.9
LPSR                                eS      S        11 29 16.6 +8.2
LPSR                                 pmax   pmax
      comp=Z,50nm,0.8s
LPSR                                 smax   smax
      comp=E,270nm,2.4s
BRVK  Borovoye          28.25  20   eP      P        11 24 25.2 -0.4
      comp=E,27nm,1.1s
BRVK  Borovoye          28.25  20c iP       P        11 24 24.9 -0.7
BRVK                                 pmax   pmax
      comp=Z,9.0nm,1.1s
BVAR  Borovoye Array    28.25  20    P      P        11 24 25.2 -0.4
      comp=Z,8.6nm,0.5s,baz=201,slow=7.8,SNR=23
KIS   Kishinev          28.53 321   eP      P        11 24 40.0  +12
KIS   Kishinev          28.53 321   eP      P        11 24 40.0  +12
KIS                                 e                11 25 19.0
MAKZ  Makanchi          28.90  40   eP      P        11 24 31.3 -0.3
      comp=Z,28nm,0.9s
MAKZ  Makanchi          28.90  40   eP      P        11 24 31.3 -0.3
MAKZ                                 pmax   pmax
      comp=Z,28nm,0.9s
BISRR Bisoca            29.00 317⇑iP        P        11 24 32.8 +0.3
MK31  Makanchi Array    29.07  40   eP      P        11 24 32.0 -1.1
      comp=Z,8.0nm,0.8s
MK31  Makanchi Array    29.07  40   eP      P        11 24 32.0 -1.1
MK31                                 pmax   pmax
      comp=Z,8.0nm,0.8s
MK32  Makanchi Array    29.07  40   eP      P        11 24 32.7 -0.4
MKAR  Makanchi Array    29.07  40    P      P        11 24 32.7 -0.4
      comp=Z,2.1nm,0.4s,baz=227,slow=9.6,SNR=12
MKAR                                 LR     LR       11 38 02.1
      comp=Z,315nm,19.6s,baz=244,slow=40
VRI   Vrincioaia        29.15 317⇑iP        P        11 24 34.3 +0.5
VRI   Vrincioaia        29.15 317    P      P        11 24 34.3 +0.5
PLOR  Plostina          29.19 317⇑iP        P        11 24 35.0 +0.8
PLOR  Plostina          29.19 317    P      P        11 24 34.9 +0.8
SRS   Serrai            29.28 306    P      P        11 24 35.8 +0.8
ARU   Arti              29.34   4    P      P        11 24 34.4 -0.8
      comp=Z,2.5nm,0.2s,baz=173,slow=2.1,SNR=5.7
ARU   Arti              29.34   4   eP      P        11 24 33.9 -1.4
      comp=Z,11nm,0.9s
ARU   Arti              29.34   4d iP       P        11 24 37.0 +1.7
ARU                                                  11 25 28.7
ARU                                  S      S        11 29 31.2 +3.1
ARU                                  SS     SnSn     11 30 56.7 +2.5
ARU                                  pmax   pmax
      comp=Z,10.0nm,1.1s
SOH   Sokhos            29.36 306    P      P        11 24 37.8 +2.0
SOH                                  pmax   pmax
      comp=Z,26nm,1.7s
MLR   Muntele Rosu      29.45 316    P      P        11 24 37.8 +1.2
      comp=Z,8.1nm,0.8s,baz=344,slow=3.7,SNR=8.3
MLR   Muntele Rosu      29.45 316   eP      P        11 24 36.9 +0.3
      comp=Z,19nm,1.0s
MLR   Muntele Rosu      29.45 316⇑iP        P        11 24 37.6 +1.1
MLR   Muntele Rosu      29.45 316   eP      P        11 24 36.9 +0.3
MLR                                  pmax   pmax
      comp=Z,19nm,1.0s
KURBB Kurchatov Arra    29.49  31    P      P        11 24 36.0 -0.7
      comp=Z,3.9nm,0.6s,baz=232,slow=8.6,SNR=11
TESR  Tescani           29.52 318⇑iP        P        11 24 37.2 +0.1
ITM   Ithomi            29.57 298   eP      P        11 24 38.6 +1.0
      comp=Z,57nm,1.5s
KURK  Kurchatov         29.59  31   eP      P        11 24 37.3 -0.3
      comp=Z,15nm,1.0s
KURK  Kurchatov         29.59  31c iP       P        11 24 38.7 +1.1
KURK                                 pmax   pmax
      comp=Z,6.0nm,1.1s
AGG   Agios Georgios    29.64 302   eP      P        11 24 39.9 +1.8
      comp=Z,31nm,1.5s
LIT   Litokhoron        29.79 304   eP      P        11 24 39.0 -0.5
      comp=Z,12nm,0.7s
LIT   Litokhoron        29.79 304   eP      P        11 24 39.0 -0.5
LIT                                  pmax   pmax
      comp=Z,12nm,0.7s
KNT   Kendrikon         29.79 306    P      P        11 24 43.9 +4.4
KNT                                  pmax   pmax
      comp=Z,9.0nm,0.9s
VOIR                    29.98 315⇑iP        P        11 24 42.1 +0.9
VOIR                    29.98 315    P      P        11 24 42.0 +0.9
DOPR  Dopca             30.01 316⇓iP        P        11 24 41.6 +0.2
VTS   Vitosha           30.03 309   eP      P        11 24 42.5 +0.7
      comp=Z,20nm,1.5s
VTS   Vitosha           30.03 309⇑iP        P        11 24 41.6 -0.2
VTS   Vitosha           30.03 309   eP      P        11 24 42.5 +0.7
VTS                                  pmax   pmax
      comp=Z,20nm,1.5s
BIZ   Bicaz             30.07 319⇓iP        P        11 24 41.5 -0.4
VAY   Valandovo         30.08 306   i P     P        11 24 44.7 +2.7
STIP  Stip              30.47 307   i P     P        11 24 43.9 -1.6
AKASG Malin Array Be    30.58 327    P      P        11 24 45.1 -1.2
      comp=Z,6.7nm,0.6s,baz=135,slow=8.4,SNR=24
AKASG                                LR     LR       11 38 24.7
      comp=Z,151nm,20.6s,baz=65,slow=39
AKBB  Malin Array Si    30.58 327   eP      P        11 24 44.6 -1.7
      comp=Z,46nm,1.1s
AKBB  Malin Array Si    30.58 327   eP      P        11 24 44.7 -1.7
AKBB                                 pmax   pmax
      comp=Z,46nm,1.1s
BURAR Bucovina Array    30.93 319⇑iP        P        11 24 50.0 +0.4
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BURAR  Bucovina Array     30.93 319    P      P       11 24 50.0 +0.4
BUR08  Bucovina Ar. S     30.95 319   eP      P       11 24 48.9 -0.9
       comp=Z,6.8nm,0.8s
OBN    Obninsk            30.96 339    P      P       11 24 49.3 -0.3
       comp=Z,18nm,0.3s,baz=156,slow=3.8,SNR=8.0
OBN    Obninsk            30.96 339   eP      P       11 24 49.0 -0.6
       comp=Z,86nm,0.8s
OBN    Obninsk            30.96 339⇑ iP      P       11 24 49.8 +0.2
OBN    Obninsk            30.96 339c iP      P       11 24 49.5 -0.1
OBN                                  e               11 25 48.2
OBN                                  eS     S       11 29 53.0 -0.5
OBN                                  eSS    SnSn    11 31 39.0 +5.3
OBN                                   pmax  pmax
       comp=Z,19nm,0.7s
WMQ    Urumqi             31.12  49   eP      P       11 24 53.7 +2.4
WMQ                                   pP     pP      11 24 56.4 +0.5
WMQ                                   sP     sP      11 25 00.7 +3.0
WMQ                                   pmax  pmax
       comp=Z,20nm,0.7s
WMQ                                   pmax  pmax
       comp=Z,140nm,5.3s
WMQ                                   LR     LR
       comp=Z,240nm,19.1s
WMQ                                   LR     LR
       comp=Z,300nm,19.5s
WMQ                                   LR     LR
       comp=Z,550nm,22.7s
MOS    Moscow             31.17 341   eP      P       11 24 51.3 -0.2
MOS                                  e               11 25 50.1
MOS                                   pmax  pmax
       comp=Z,47nm,1.0s
OHR    Ohrid              31.30 305   eP      P       11 24 50.8 -2.1
GZR    Gura Zlata         31.40 314⇑ iP      P       11 24 53.0 -0.7
GZR    Gura Zlata         31.40 314    P      P       11 24 53.0 -0.7
KIRV   Kirov              31.63 354    P      P       11 24 55.5 +0.1
       comp=Z,9.4nm,0.4s,baz=172,slow=5.0,SNR=6.9
LSA    Lhasa              31.82  77   eP      P       11 24 59.6 +1.5
       comp=Z,15nm,1.0s
MDVR   Moldovita          31.85 312⇓ iP      P       11 24 57.7  0.0
DRGR                      32.04 316⇑ iP      P       11 24 59.7 +0.3
DRGR                      32.04 316    P      P       11 24 59.7 +0.3
TIR    Tirane             32.04 305   eP      P       11 24 57.9 -1.4
       comp=Z,34nm,0.7s
TIR    Tirane             32.04 305   eP      P       11 24 57.9 -1.4
TIR                                   pmax  pmax
       comp=Z,34nm,0.7s
BZS    Buzias             32.24 314⇓ iP      P       11 25 01.3 +0.3
BZS    Buzias             32.24 314    P      P       11 25 01.2 +0.3
SIRR   Siria              32.47 315⇑ iP      P       11 25 03.7 +0.6
PDG    Podgorica          32.77 307⇑ iP      P       11 25 04.4 -1.3
TTG    Podgorica          32.77 307   eP      P       11 25 05.6 -0.1
       comp=Z,12nm,0.9s
TTG    Podgorica          32.77 307   eP      P       11 25 05.6 -0.1
TTG                                   pmax  pmax
       comp=Z,12nm,0.9s
KMBO   Kilima Mbogo       32.92 214    P      P       11 25 10.1 +2.5
       comp=Z,4.1nm,0.6s,baz=18,slow=12,SNR=11
KMBO                                  LR     LR      11 38 19.1
       comp=Z,248nm,21.2s,baz=92,slow=36
KMBO   Kilima Mbogo       32.92 214   eP      P       11 25 07.5  0.0
KMBO                                 epP     pP      11 25 10.5 -1.6
KMBO   Kilima Mbogo       32.92 214   eP      P       11 25 07.5  0.0
KMBO                                 e*PP    pP      11 25 10.5 -1.6
SHL    Shillong           33.02  84   eP      P       11 25 08.2 -0.2
       comp=Z,27nm,0.2s
AMBH   Ambrzfalva         33.10 314   eP      P       11 25 11.1 +2.6
UZH    Uzhgorod           33.13 319deP      P       11 25 09.0 +0.2
KOLS   Kolonicke sedl     33.29 320   eP      P       11 25 11.2 +1.0
KOLS   Kolonicke sedl     33.29 320   eP      P       11 25 11.1 +0.9
HCY    Herceg Novi        33.32 307    P      P       11 25 13.6 +3.1
BRY    Bratogost          33.41 308    P      P       11 25 15.2 +3.7
TIP    Timpagrande        33.92 300   eP      P       11 25 16.2 +0.3
       comp=Z,97nm,1.5s
TIP    Timpagrande        33.92 300⇑ iP      P       11 25 08.9 -7.0
KECS   Kecovo             34.14 318   eP      P       11 25 17.7 +0.1
KECS   Kecovo             34.14 318   eP      P       11 25 17.7 +0.1
PSZ    Piszkesteto        34.25 317   eP      P       11 25 17.3 -1.4
       comp=Z,9.3nm,0.9s
PSZ    Piszkesteto        34.25 317   eP      P       11 25 17.3 -1.4
PSZ                                   pmax  pmax
       comp=Z,9.0nm,0.9s
PSZ    Piszkesteto        34.25 317   eP      P       11 25 19.0 +0.3
MORH   Mrgy, Hungar       34.38 313   eP      P       11 25 19.0 -0.7
ZAA0   Zalesovo Array     34.58  31   eP      P       11 25 20.3 -1.1
       comp=Z,36nm,1.0s
ZALV   Zalesovo Beam      34.58  31    P      P       11 25 20.6 -0.8
       comp=Z,16nm,0.5s,baz=239,slow=9.8,SNR=36
ZALV                                  LR     LR      11 41 36.3
       comp=Z,491nm,18.6s,baz=250,slow=40
ZAA1   Zalesovo Array     34.59  31   eP      P       11 25 20.6 -0.8
BUD    Budapest           34.62 315   eP      P       11 25 22.1 +0.4
NIE    Niedzica           34.66 319   eP      P       11 25 22.9 +0.7
IDID   Didziasalis        34.77 332   eP      P       11 25 22.8 -0.1
IDID                                  IAmb   IAmb    11 25 31.2
       comp=Z,26nm,0.8s
BLY    Banja Luka         34.88 310   eP      P       11 25 23.2 -0.8
       comp=Z,16nm,1.2s
IIGN   Ignalina           35.01 331   eP      P       11 25 24.9 -0.1
IIGN                                  IAmb   IAmb    11 25 33.5
       comp=Z,50nm,1.0s
PRGR   Permogore          35.02 352   eP      P       11 25 28.4 +3.5
PRGR                                  pmax  pmax
       comp=Z,7.0nm,0.6s
LANS   Liptovska Anna     35.03 318   eP      P       11 25 26.0 +0.6
LANS   Liptovska Anna     35.03 318   eP      P       11 25 26.0 +0.6
CSKK   Cskako             35.05 315   eP      P       11 25 27.1 +1.6
TIH    Tihany             35.11 314   eP      P       11 25 20.0 -6.0
VYHS   Vyhne              35.13 317   eP      P       11 25 26.2  0.0
VYHS   Vyhne              35.13 317   eP      P       11 25 26.2  0.0
ISAL   Salakas            35.20 332   eP      P       11 25 27.2 +0.6
ISAL                                  IAmb   IAmb    11 25 34.2
       comp=Z,29nm,0.9s
KIJV   Kijevo             35.20 309   i P     P       11 25 25.7 -1.1
IZAR   Zarasai            35.27 332   eP      P       11 25 27.0 -0.2
IZAR                                  IAmb   IAmb    11 25 34.8
       comp=Z,38nm,0.9s
OJC    Ojcow              35.32 320   eP      P       11 25 27.2 -0.5
OJC    Ojcow              35.32 320   eP      P       11 25 27.0 -0.8
       comp=Z,27nm,0.8s
OJC    Ojcow              35.32 320   eP      P       11 25 27.0 -0.8
OJC                                   pmax  pmax
       comp=Z,27nm,0.8s
SUW    Suwalki            35.55 328   eP      P       11 25 35.9 +6.3
SUW    Suwalki            35.55 328   eP      P       11 25 29.1 -0.5
       comp=Z,96nm,1.0s
SUW    Suwalki            35.55 328   eP      P       11 25 29.1 -0.5
SUW                                   pmax  pmax
       comp=Z,96nm,1.0s
ZIRJ   Zirje              35.64 308   i P     P       11 25 30.1 -0.5
MORI   Morici             35.65 308   i P     P       11 25 31.0 +0.3
BEHE   Becsehely          35.69 313   eP      P       11 25 30.1 -0.9
KALN   Kalnik             35.79 312   i P     P       11 25 31.3 -0.6
JAVC   Velka Javorina     35.99 317   eP      P       11 25 34.8 +1.2
PTJ    Puntijarka         36.04 312    P      P       11 25 33.8 -0.3
DUGI   Dugi Otok          36.14 308   i P     P       11 25 35.0 +0.1
MBAR   Mbarara            36.15 224   eP      P       11 25 36.7 +1.3
       comp=Z,21nm,0.2s
OZLJ   Ozalj              36.29 311   i P     P       11 25 36.5 +0.4
BOJS   Bojanci            36.40 311   i P     P       11 25 37.1  0.0
NVLJ   Novalja            36.41 309   i P     P       11 25 36.6 -0.5
MORC   Moravsky Berou     36.44 318   eP      P       11 25 36.4 -1.0
       comp=Z,19nm,0.8s
MORC   Moravsky Berou     36.44 318⇓ iP      P       11 25 37.0 -0.4
MORC   Moravsky Berou     36.44 318   eP      P       11 25 36.4 -1.0
MORC                                  pmax  pmax
       comp=Z,19nm,0.8s
MORC   Moravsky Berou     36.44 318   eP      P       11 25 36.2 -1.2
CLTB   Caltabellotta      36.50 297   eP      P       11 25 37.5 -0.7
       comp=Z,101nm,1.6s
ARSA   Arzberg            36.76 314   eP      P       11 25 40.4 +0.3
       comp=Z,7.2nm,0.9s
CONA   Conrad Observa     36.77 315   eP      P       11 25 40.0 -0.3
       comp=Z,8.1nm,0.9s
VISS   Visnje             36.77 311   i P     P       11 25 39.8 -0.4
VRAC   Vranov             36.82 317⇓ iP      P       11 25 40.7 +0.1
VRAC   Vranov             36.82 317    P      P       11 25 40.6  0.0
VRAC   Vranov             36.82 317   eP      P       11 25 40.1 -0.5
PERS   Pernice            36.83 313   i P     P       11 25 41.8 +1.0
KRUC   Moravsky           36.84 317   eP      P       11 25 39.4 -1.4
SOKA   Soboth             36.89 313   eP      P       11 25 42.3 +0.9
       comp=Z,6.3nm,0.7s
VSU    Vasula             36.96 336   eP      P       11 25 40.8 -0.9
VSU                                   IAmb   IAmb    11 25 48.8
       comp=Z,164nm,0.9s
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VSU    Vasula             36.96 336c iP      P       11 25 40.9 -0.7
VSU                                   pmax  pmax
       comp=Z,36nm,0.8s
AQU    L'Aquila           36.97 305   eP      P       11 25 41.6 -0.5
       comp=Z,40nm,0.8s
AQU    L'Aquila           36.97 305   eP      P       11 25 41.6 -0.5
AQU                                   pmax  pmax
       comp=Z,40nm,0.8s
OBKA   Obir               37.16 312   epP     P       11 25 44.9 +1.2
       comp=Z,4.4nm,0.8s
JAVS   Javornik           37.31 311   i P     P       11 25 44.5 -0.5
DPC    Dobruska-Polom     37.39 319   eP      P       11 25 44.9 -0.6
DPC                                  e               11 25 48.2
DPC    Dobruska-Polom     37.39 319   eP      P       11 25 44.9 -0.6
DPC                                  epP     pP      11 25 48.2 -1.9
TRI    Trieste            37.47 311   eP      P       11 25 45.3 -0.8
       comp=Z,21nm,1.0s
TRI    Trieste            37.47 311   eP      P       11 25 45.3 -0.8
TRI                                   pmax  pmax
       comp=Z,21nm,1.0s
OSTC   Ostas              37.53 319   eP      P       11 25 46.3 -0.4
OSTC                                 ex     x       11 25 49.7
OSTC                                 ex     x       11 25 56.4
KSP    Ksiaz              37.60 319   eP      P       11 25 49.4 +2.1
UPC    Upice              37.63 319   eP      P       11 25 47.1 -0.4
UPC                                  e               11 25 50.5
UPC                                  e               11 25 53.9
UPC                                   MLR    MLR
       comp=Z,200nm,15.3s
UPC    Upice              37.63 319   eP      P       11 25 47.1 -0.4
UPC                                  epP     pP      11 25 50.5 -1.7
UPC                                  esP     sP      11 25 53.9 -0.1
UPC                                   AMS    AMS     11 44 50.0
       comp=Z,200nm,15.3s
MOA    Molln              37.75 314   eP      P       11 25 48.1 -0.5
       comp=Z,12nm,0.8s
MYKA   Terra Mystica      37.80 312   eP      P       11 25 49.2 +0.1
       comp=Z,9.9nm,0.9s
KBA    Koelnbreinsper     38.12 313   eP      P       11 25 51.5 -0.4
       comp=Z,18nm,0.8s,SNR=15
KBA    Koelnbreinsper     38.12 313    P      P       11 25 51.4 -0.4
GOPC   GO Pecny, Ondr     38.13 317    AMS    AMS     11 43 00.0
       comp=Z,200nm,19.5s
SLIT   Slitere, Latvi     38.15 332   eP      P       11 25 52.1 +0.4
SLIT                                  IAmb   IAmb    11 25 58.4
       comp=Z,420nm,1.0s
PRU    Pruhonice          38.31 318    AMS    AMS     11 44 50.0
       comp=Z,200nm,16.7s
DGAR   Diego Garcia       38.33 151   eP      P       11 25 54.2 +0.5
       comp=Z,182nm,1.3s
GEC2   GERESS Array S     38.43 315   eP      P       11 25 53.0 -1.4
       comp=Z,8.0nm,1.0s
GEC2   GERESS Array S     38.43 315   eP      P       11 25 53.0 -1.4
GEC2                                  pmax  pmax
       comp=Z,8.0nm,1.0s
GERES  GERESS Array B     38.43 315    P      P       11 25 53.2 -1.2
       comp=Z,2.1nm,0.5s,baz=108,slow=7.2,SNR=5.7
GERES                                 LR     LR      11 43 31.9
       comp=Z,120nm,20.2s,baz=110,slow=39
PVCC   Panska Ves         38.49 318    AMS    AMS     11 46 50.0
       comp=Z,200nm,16.5s
ABTA   Abfaltersbach      38.58 312   eP      P       11 25 55.1 -0.6
       comp=Z,13nm,0.8s
KHC    Kasperske Hory     38.60 316   eP      P       11 25 54.0 -1.7
       comp=Z,7.4nm,0.8s
KHC    Kasperske Hory     38.60 316   eP      P       11 25 54.0 -1.7
KHC                                   pmax  pmax
       comp=Z,7.0nm,0.8s
KHC    Kasperske Hory     38.60 316   eP      P       11 25 55.2 -0.5
KHC                                  epP     pP      11 25 58.6 -1.8
KHC                                   AMS    AMS     11 46 40.0
       comp=Z,300nm,8.1s
BRG    Berggiesshubel     38.99 319   eP      P       11 25 58.2 -0.7
       comp=Z,5.0nm,1.0s
BRG                                  i               11 26 05.2
       comp=Z,15nm,1.0s
       comp=N,187nm,17.3s
       comp=E,173nm,16.8s
       comp=Z,181nm,15.1s
BRG    Berggiesshubel     38.99 319   eP      P       11 25 58.2 -0.7
BRG                                  i               11 26 05.2
BRG                                   pmax  pmax
       comp=Z,5.0nm,1.0s
BRG                                   MLR    MLR
       comp=N,187nm,17.3s
BRG                                   MLR    MLR
       comp=E,173nm,16.8s
BRG                                   MLR    MLR
       comp=Z,181nm,15.1s
GTA    Gaotai             39.04  60   eP      P       11 26 00.1 +0.5
GTA                                   pP     pP      11 26 04.8 +0.6
GTA                                   sP     sP      11 26 07.2 +1.1
GTA                                   pmax  pmax
       comp=Z,9.0nm,1.5s
GTA                                   pmax  pmax
       comp=Z,73nm,7.8s
GTA                                   LR     LR
       comp=Z,260nm,17.1s
GTA                                   LR     LR
       comp=Z,180nm,14.6s
WTTA   Wattenberg         39.29 312   eP      P       11 26 00.7 -1.0
       comp=Z,31nm,0.9s,SNR=13
WATA   Walderalm          39.35 313   eP      P       11 26 00.1 -2.1
       comp=Z,23nm,0.8s
FIA0   FINESS Array S     39.35 339   eP      P       11 26 01.2 -0.6
FIA0   FINESS Array S     39.35 339   eP      P       11 26 01.2 -0.6
FINES  FINESS Array B     39.35 339    P      P       11 26 01.2 -0.6
       comp=Z,10nm,0.4s,baz=145,slow=10.0,SNR=28
FINES                                 LR     LR      11 44 46.9
       comp=Z,240nm,19.8s,baz=134,slow=40
VLC    Villacollemand     39.46 307   eP      P       11 26 02.0 -1.1
       comp=Z,18nm,0.9s
KEST   Kesra              39.56 294    P      P       11 26 05.2 +1.3
       comp=Z,6.4nm,0.7s,baz=333,slow=2.0,SNR=7.2
KEST   Kesra              39.56 294   eP      P       11 26 04.5 +0.5
       comp=Z,24nm,1.1s
SQTA   Sankt Quirin       39.56 312   eP      P       11 26 02.6 -1.3
       comp=Z,32nm,0.5s,SNR=17
MOTA   Moosalm            39.66 312   i P     P       11 26 03.0 -1.7
       comp=Z,17nm,0.7s
CLL    Collm              39.70 319   eP      P       11 26 02.6 -2.2
       comp=Z,19nm,1.0s
CLL    Collm              39.70 319   eP      P       11 26 03.0 -1.8
CLL                                  e               11 26 10.0
CLL                                   pmax  pmax
       comp=Z,39nm,1.5s
CLL    Collm              39.70 319   eP      P       11 26 03.0 -1.8
       comp=Z,39nm,1.5s
CLL                                  esP     pP      11 26 10.0 +0.5
CLL                                   LmH            11 43 00.0
       comp=N,200nm,20.9s
CLL                                   LmH            11 43 00.0
       comp=E,200nm,20.6s
CLL                                   LmV            11 44 00.0
       comp=Z,200nm,18.9s
TAMR   Tamra              39.75 296   eP      P       11 26 05.2 -0.3
       comp=Z,32nm,1.0s
FETA   Feichten           39.83 312   eP      P       11 26 05.2 -1.0
       comp=Z,35nm,0.8s,SNR=15
RETA   Reutte             39.92 313   i P     P       11 26 05.3 -1.5
       comp=Z,18nm,0.8s
FUORN  Ofenpass-Fuorn     40.05 311   eP      P       11 26 07.2 -0.9
       comp=Z,14nm,0.7s
PGF    Pioggiola          40.22 305   eP      P       11 26 08.3 -1.1
PGF                                   pmax  pmax
       comp=Z,18nm,0.9s
GRA1   Grafenberg Arr     40.24 316   eP      P       11 26 08.5 -0.9
       comp=Z,29nm,0.6s
GRF    Grafenberg Arr     40.24 316   eP      P       11 26 08.5 -0.9
GRF                                   pmax  pmax
       comp=Z,29nm,0.6s
GRFO   Grafenberg         40.24 316   eP      P       11 26 06.6 -2.8
       comp=Z,29nm,0.7s
GRFO   Grafenberg         40.24 316   eP      P       11 26 06.6 -2.8
GRFO                                  pmax  pmax
       comp=Z,29nm,0.7s
DAVA   Damuels            40.45 312   i P     P       11 26 10.1 -1.2
       comp=Z,63nm,0.7s,SNR=40
TUE    Stuetta            40.63 311   eP      P       11 26 11.6 -1.3
       comp=Z,14nm,0.6s
RGN    Rugen              40.79 324   eP      P       11 26 13.7 -0.1
       comp=Z,86nm,0.8s
ABSA   Djebel Ababsia     41.07 295    P      P       11 26 18.1 +1.6
CMAH   Djebel Manchou     41.11 295    P      P       11 26 13.0 -3.8
CHTO   Chiang Mai         41.15  92   eP      P       11 26 18.0 +0.8
       comp=Z,16nm,1.0s
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CHTO   Chiang Mai         41.15  92   eP      P       11 26 18.0 +0.8
CHTO                                  pmax  pmax
       comp=Z,16nm,1.0s
CMMT   Chiang Mai         41.15  92    P      P       11 26 19.2 +1.9
       comp=Z,8.2nm,1.1s
CM31   Chiang Mai Arr     41.27  93   eP      P       11 26 18.1 -0.2
       comp=Z,6.8nm,0.7s
CMAR   Chiang Mai Arr     41.27  93    P      P       11 26 19.3 +1.1
       comp=Z,3.9nm,0.7s,baz=282,slow=9.0,SNR=17
CMAR                                  LR     LR      11 46 28.3
       comp=Z,120nm,20.0s,baz=288,slow=40
SBF    Sospel             41.52 306   eP      P       11 26 19.2 -0.9
SBF                                   pmax  pmax
       comp=Z,45nm,0.8s
CAEH   'Ain El Ouahch     41.56 296    P      P       11 26 21.5 +1.0
CKFL   Kef-Lekhel         41.67 295    P      P       11 26 22.6 +1.1
BFO    Black Forest       41.71 313   eP      P       11 26 21.5 -0.1
       comp=Z,6.7nm,0.8s
BFO    Black Forest       41.71 313   eP      P       11 26 21.5 -0.1
BFO                                   pmax  pmax
       comp=Z,7.0nm,0.8s
PAYA   Payao              41.79  91    P      P       11 26 24.0 +1.5
       comp=Z,82µm,0.9s,comp=Z,674µm
LAMP   Lampang            41.86  92    P      P       11 26 26.8 +3.7
       comp=Z,18µm,0.9s
CTEI   Djebel Teioual     41.94 295    P      P       11 26 25.2 +1.5
SENIN  Lac Senin/Sane     42.00 310   eP      P       11 26 22.9 -1.3
       comp=Z,11nm,0.6s
UMPA   Umpang Tak         42.02  96    P      P       11 26 29.6 +5.2
       comp=Z,67µm,1.0s
MBDF   Montbardon         42.11 308   eP      P       11 26 23.9 -1.1
MBDF                                  pmax  pmax
       comp=Z,15nm,0.6s
LZH    Lanzhou            42.17  65  ⇑P      P       11 26 26.9 +1.3
LZH                                   pP     pP      11 26 30.7 +0.5
LZH                                   sP     sP      11 26 32.8 +0.8
LZH                                   PP     PP      11 28 00.9 -2.3
LZH                                   pmax  pmax
       comp=Z,13nm,1.2s
LZH                                   pmax  pmax
       comp=Z,130nm,4.3s
LZH                                   LR     LR
       comp=Z,300nm,15.2s
LZH                                   LR     LR
       comp=Z,290nm,17.3s
LZH                                   LR     LR
       comp=Z,300nm,16.8s
MOY    Mondy              42.20  42   eP      P       11 26 17.2 -8.4
MOY                                   pmax  pmax
       comp=Z,18nm,1.8s
BNI    Bardonecchia       42.22 308   eP      P       11 26 24.5 -1.4
       comp=Z,20nm,0.9s
BNI    Bardonecchia       42.22 308   eP      P       11 26 24.5 -1.4
BNI                                   pmax  pmax
       comp=Z,20nm,0.9s
LPG    La Plagne          42.24 309   eP      P       11 26 25.2 -1.0
LPG                                   pmax  pmax
       comp=Z,21nm,0.7s
LPL    La Plagne          42.25 309   eP      P       11 26 25.3 -0.9
LPL                                   pmax  pmax
       comp=Z,36nm,1.1s
DFRA   Djebel Bou Aff     42.35 295    P      P       11 26 26.6 -0.4
CDF    Champ du Feu       42.42 313   eP      P       11 26 26.1 -1.3
CDF                                   pmax  pmax
       comp=Z,5.0nm,0.7s
ECH    Echery             42.45 313   eP      P       11 26 26.3 -1.3
       comp=Z,27nm,1.2s
ECH    Echery             42.45 313   eP      P       11 26 26.3 -1.3
ECH                                   pmax  pmax
       comp=Z,27nm,1.2s
CD2    Chengdu            42.54  73    P      P       11 26 26.8 -1.7
CD2                                   pmax  pmax
       comp=Z,10.0nm,0.5s
CD2                                   LR     LR
       comp=Z,750nm,15.7s
CD2                                   LR     LR
       comp=Z,900nm,18.8s
HINF   Hinteralfeld       42.57 312   eP      P       11 26 26.8 -1.8
HINF                                  pmax  pmax
       comp=Z,10.0nm,0.7s
KMI    Kunming            42.72  82    P      P       11 26 31.5 +1.2
KMI                                   pmax  pmax
       comp=Z,16nm,0.5s
SET    Setif              42.75 295    P      P       11 26 26.0 -4.2
ORIF   Oris-en-Rattie     42.77 308   eP      P       11 26 30.3  0.0
ORIF                                  pmax  pmax
       comp=Z,5.0nm,0.8s
CABF   La Chapelle        42.87 310   eP      P       11 26 29.9 -1.2
CABF                                  pmax  pmax
       comp=Z,39nm,1.0s
UTTA   Uttaradit          42.95  93    P      P       11 26 34.2 +2.2
       comp=Z,27µm,0.9s,comp=Z,247µm
ZAK    Zakamensk          43.24  44   eP      P       11 26 33.9 -0.1
ZAK                                   pmax  pmax
       comp=Z,5.0nm,1.2s
HFS    Hagfors            43.25 331    P      P       11 26 32.8 -1.0
       comp=Z,12nm,0.6s,baz=125,slow=9.4,SNR=26
WLF    Walferdange        43.41 315   eP      P       11 26 34.9 -0.4
       comp=Z,80nm,0.8s
VIVF   Saint-Julien-l     43.61 307   eP      P       11 26 35.4 -1.6
VIVF                                  pmax  pmax
       comp=Z,23nm,1.5s
MEM    Membach            43.72 316    P      P       11 26 35.2 -2.5
SSB    Saint Sauveur      43.75 308   eP      P       11 26 36.3 -1.9
       comp=Z,11nm,0.8s
SSB    Saint Sauveur      43.75 308   eP      P       11 26 36.3 -1.9
SSB                                   pmax  pmax
       comp=Z,11nm,0.8s
PBKT   Sadao Pong         43.75  94    P      P       11 26 40.2 +1.8
       comp=Z,14nm,1.0s
TLY    Talaya             43.79  42   eP      P       11 26 34.7 -3.6
       comp=Z,3.2nm,0.8s
TLY    Talaya             43.79  42   eP      P       11 26 36.4 -1.9
TLY                                   pmax  pmax
       comp=Z,12nm,1.7s
TLY                                   MLR    MLR
       comp=Z,925nm,13.0s
BGES   Gesves             44.24 315    P      P       11 26 41.8 -0.1
GIVF   Givet              44.34 315   eP      P       11 26 42.6 -0.2
GIVF                                  pmax  pmax
       comp=Z,38nm,1.2s
SMF    Signal de Mont     44.40 310   eP      P       11 26 41.9 -1.4
SMF                                   pmax  pmax
       comp=Z,43nm,1.1s
BMRD   Maredsous          44.42 315    P      P       11 26 43.7 +0.4
OSL    Oslo               44.45 330   eP      P       11 26 46.1 +2.6
NC602  NORSAR Array S     44.47 331   eP      P       11 26 43.3 -0.4
NORES  NORESS Array B     44.47 331    P      P       11 26 44.2 +0.6
NORES                                 pmax  pmax
       comp=Z,1.0nm,0.3s
LOR    Lormes             44.48 311   eP      P       11 26 42.3 -1.6
LOR                                   pmax  pmax
       comp=Z,20nm,1.0s
DOU    Dourbes            44.49 315    P      P       11 26 41.0 -2.9
       comp=Z,22nm,0.8s
DOU                                   pP     pP      11 26 44.0 -4.6
SSF    Saint Saulge       44.69 310   eP      P       11 26 44.3 -1.3
SSF                                   pmax  pmax
       comp=Z,34nm,1.0s
BAIF   Baives             44.72 315   eP      P       11 26 45.7 -0.1
BAIF                                  pmax  pmax
       comp=Z,45nm,0.8s
SONA0  Songino Array      44.75  48   eP      P       11 26 46.2 -0.1
SONM   Songino Array      44.75  48    P      P       11 26 46.2 -0.1
       comp=Z,5.1nm,0.9s,baz=263,slow=8.1,SNR=9.3
SONM                                  LR     LR      11 47 53.2
       comp=Z,324nm,19.7s,baz=254,slow=39
AVF    Avril sur Loir     44.76 310   eP      P       11 26 44.6 -1.5
AVF                                   pmax  pmax
       comp=Z,23nm,1.1s
NB2    NORSAR Subarra     44.76 331    P      P       11 26 44.4 -1.6
       comp=Z,42nm,1.7s,baz=118,slow=8.6
NB2    NORSAR Subarra     44.76 331    P      P       11 26 44.4 -1.6
       baz=118,slow=8.6
NB200  NORSAR Array S     44.76 331   eP      P       11 26 44.5 -1.4
NOA    NORSAR Array B     44.76 331    P      P       11 26 44.5 -1.4
       comp=Z,7.1nm,0.6s,baz=118,slow=7.9,SNR=37
NOA                                   LR     LR      11 47 35.3
       comp=Z,136nm,21.9s,baz=120,slow=39
SNF    Seneffe            44.77 315    P      P       11 26 43.0 -3.1
UCC    Uccle              44.78 316    P      P       11 26 44.7 -1.5
UCC                                   pP     pP      11 26 48.4 -2.6
TAM    Tamanrasset        44.82 276   eP      P       11 26 47.2 +0.2
       comp=Z,12nm,0.9s
TAM    Tamanrasset        44.82 276   eP      P       11 26 47.3 +0.2
TAM                                   pmax  pmax
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     comp=Z,12nm,0.9s
KONO Kongsberg         44.83 329 eP      P       11 26 46.5  0.0
CHAI Chaiyaphum        44.91  95  P      P       11 26 55.2 +7.5
     comp=Z,15µm,0.8s
BGF  Bois d'Agland     45.07 310 eP      P       11 26 47.4 -1.3
BGF                               pmax   pmax
     comp=Z,21nm,0.7s
NONG Nongkai           45.15  91  P      P       11 26 50.7 +1.1
     comp=Z,0.6nm,0.9s
ULN  Ulaanbaatar       45.20  48 eP      P       11 26 48.5 -1.4
     comp=Z,5.5nm,0.7s
ULN  Ulaanbaatar       45.20  48 eP      P       11 26 49.2 -0.6
ULN                               pmax   pmax
     comp=Z,2.0nm,0.6s
MTLF Montolieu         45.25 305 eP      P       11 26 49.8 -0.3
MTLF                              pmax   pmax
     comp=Z,44nm,1.3s
CAF  Calviac           45.46 307 eP      P       11 26 51.0 -0.8
CAF                               pmax   pmax
     comp=Z,20nm,0.8s
TCF  Toulx Ste Croi    45.48 309 eP      P       11 26 50.8 -1.2
TCF                               pmax   pmax
     comp=Z,21nm,0.9s
LHMI Lhok Sumawe       45.51 111 eP      P       11 26 50.7 -1.8
     comp=Z,160nm,0.9s
CLF  Chambon-Foret     45.65 312 eP      P       11 26 54.8 +1.6
     comp=Z,20nm,1.0s
ARA0 ARCESS Array S    45.72 346 eP      P       11 26 52.8 -0.6
ARA0                             ePP     PP      11 28 42.3 +1.9
ARCES ARCESS Array B   45.72 346  P      P       11 26 52.8 -0.7
     comp=Z,2.1nm,0.5s,baz=148,slow=9.3,SNR=13
ARCES                             PP     PP      11 28 42.3 +1.8
     comp=Z,8.1nm,0.9s,baz=153,slow=8.1,SNR=3.7
ARCES                             LR     LR      11 49 08.7
     comp=Z,207nm,19.5s,baz=150,slow=40
ARE0 ARCESS Array S    45.72 346 eP      P       11 26 53.0 -0.4
KTK1 Kautokeino        45.83 345 eP      P       11 26 53.9 -0.4
GYA  Guiyang           45.85  79 eP      P       11 26 59.9 +4.6
GYA                               PP     PP      11 28 46.3 +3.6
GYA                               S      S       11 33 43.5 +4.3
GYA                               pmax   pmax
     comp=Z,20nm,0.8s
GYA                               pmax   pmax
     comp=Z,130nm,4.0s
GYA                               LR     LR
     comp=Z,100nm,4.5s
GYA                               LR     LR
     comp=Z,60nm,3.5s
GYA                               LR     LR
     comp=Z,120nm,3.9s
SKAR Skarslia          45.86 330 eP      P       11 26 54.4 -0.4
RJF  Les Rejaudoux     45.88 308 eP      P       11 26 54.5 -0.6
RJF                               pmax   pmax
     comp=Z,104nm,1.5s
DOMB Dombas            46.14 332 eP      P       11 26 56.5 -0.5
BLS5 Blasjo            46.20 328 eP      P       11 26 57.0 -0.4
NSS  Namsos            46.26 336 eP      P       11 26 57.5 -0.2
SKNT Sakolnakorn       46.28  92  P      P       11 27 01.9 +3.3
     comp=Z,16nm,1.5s
ODD1 Odda              46.31 329 eP      P       11 26 57.9 -0.3
MOR8 Moi Rana          46.35 339 eP      P       11 26 58.0 -0.5
LFF  La Frestale       46.40 307 eP      P       11 26 58.5 -0.7
LFF                               pmax   pmax
     comp=Z,18nm,0.6s
XAN  Xi'an             46.48  68 eP      P       11 26 59.3 -0.7
     comp=Z,12nm,0.9s
XAN  Xi'an             46.48  68  P      P       11 27 00.5 +0.5
XAN                               pP     sP      11 27 11.1 +4.6
XAN                               pmax   pmax
     comp=Z,13nm,1.3s
XAN                               pmax   pmax
     comp=Z,100nm,5.1s
XAN                               LR     LR
     comp=Z,620nm,20.6s
XAN                               LR     LR
     comp=Z,220nm,19.5s
XAN  Xi'an             46.48  68 eP      P       11 26 59.3 -0.7
XAN                               pmax   pmax
     comp=Z,12nm,0.9s
EPF  Esparros          46.61 305 eP      P       11 26 59.3 -1.6
EPF                               pmax   pmax
     comp=Z,2.0nm,0.5s
PANO Nakornpanom       46.78  92  P      P       11 27 07.2 +4.7
     comp=Z,0.5nm,1.1s
KONS Konsvik           46.97 339 eP      P       11 27 02.9 -0.4
HAMF Hammerfest        46.98 346 eP      P       11 27 03.0 -0.3
HYA  Hoyanger          47.01 330 eP      P       11 27 03.4 -0.2
MOL  Molde             47.02 332 eP      P       11 27 03.5 -0.1
AKN  Aaknes            47.08 332 eP      P       11 27 03.8 -0.4
BER  Bergen            47.09 329 eP      P       11 27 04.2 -0.1
ASK  Askoy             47.19 329 eP      P       11 27 04.5 -0.5
STEI Steigen           47.19 341 eP      P       11 27 04.6 -0.4
ETSF Etsaut            47.27 304 eP      P       11 27 05.8 -0.3
ETSF                              pmax   pmax
     comp=Z,17nm,0.9s
LDF  La Druitiere      47.30 312 eP      P       11 27 04.4 -1.7
LDF                               pmax   pmax
     comp=Z,13nm,0.6s
TRO  Tromso            47.33 344 eP      P       11 27 05.7 -0.3
ENH  Enshi             47.52  73 eP      P       11 27 08.0 -0.1
     comp=Z,19nm,1.0s
FLN  La Foliniere      47.55 312 eP      P       11 27 06.5 -1.6
FLN                               pmax   pmax
     comp=Z,49nm,1.1s
SJPF Ste Jean          47.76 305 eP      P       11 27 09.4 -0.4
SJPF                              pmax   pmax
     comp=Z,17nm,0.7s
GRR  Gorron            47.77 312 eP      P       11 27 10.5 +0.7
GRR                               pmax   pmax
     comp=Z,15nm,0.8s
HHC  Hu-ho-hao-te      48.07  58  P      P       11 27 11.6 -0.8
HHC                               pmax   pmax
     comp=Z,13nm,0.9s
HHC                               pmax   pmax
     comp=Z,29nm,6.6s
HHC                               LR     LR
     comp=Z,230nm,18.0s
HHC                               LR     LR
     comp=Z,190nm,19.9s
PSI  Prapat            48.49 112  LR     LR      11 50 46.4
     comp=Z,65nm,18.2s,baz=356,slow=40
SGMF Saint Gilles      48.88 312 eP      P       11 27 17.1 -1.3
SGMF                              pmax   pmax
     comp=Z,40nm,1.1s
QUIF Quistinic         49.27 311 eP      P       11 27 19.8 -1.6
QUIF                              pmax   pmax
     comp=Z,46nm,1.1s
IPM  Ipoh              49.33 109 eP      P       11 27 20.8 -1.5
     comp=Z,12nm,0.8s
ROSF Rostrenen         49.37 312 eP      P       11 27 20.6 -1.5
ROSF                              pmax   pmax
     comp=Z,27nm,1.0s
LSZ  Lusaka            49.58 215 eP      P       11 27 25.9 +1.8
     comp=Z,21nm,1.3s
LSZ  Lusaka            49.58 215 eP      P       11 27 25.9 +1.8
LSZ                               pmax   pmax
     comp=Z,21nm,1.3s
ESDC Sonseca Array     49.94 300  P      P       11 27 26.3 -0.4
     comp=Z,4.2nm,0.5s,baz=62,slow=7.9,SNR=27
ESDC                              LR     LR      11 50 39.2
     comp=Z,67nm,21.2s,baz=165,slow=38
ESLA Sonseca Array     49.94 300 eP      P       11 27 26.6 -0.1
     comp=Z,77nm,1.8s
PAB  San Pablo         50.24 300 eP      P       11 27 29.1  0.0
     comp=Z,93nm,1.8s
PAB  San Pablo         50.24 300 eP      P       11 27 29.1  0.0
PAB                               pmax   pmax
     comp=Z,93nm,1.8s
BOD  Bodaibo           51.01  36 eP      P       11 27 33.6 -0.8
BOD                               pmax   pmax
     comp=Z,29nm,1.2s
TOA0 Torodi Ar. Sit    51.58 265 eP      P       11 27 39.1 -0.1
     comp=Z,74nm,1.2s
TOA1 Torodi Ar. Sit    51.58 265 eP      P       11 27 37.6 -1.7
TORD Torodi Ar. Bea    51.58 265  P      P       11 27 37.6 -1.7
     comp=Z,14nm,0.6s,baz=73,slow=6.4,SNR=98
TORD                              LR     LR      11 50 11.7
     comp=Z,204nm,18.8s,baz=55,slow=37
WHN  Wuhan             51.58  71 ⇓P      P       11 27 44.2 +5.1
PBRG Braganca          51.88 303 eP      P       11 27 41.1 -0.2
     comp=Z,26nm,2.1s
MVO  Moncorvo          52.15 302 eP      P       11 27 43.4 +0.1
     comp=Z,28nm,2.0s
PMRV Marv??o           52.60 300 eP      P       11 27 46.3 -0.3
     comp=Z,25nm,1.7s
MTE  Manteigas         52.61 301 eP      P       11 27 47.3 +0.6
     comp=Z,43nm,1.7s
MTE  Manteigas         52.61 301 eP      P       11 27 48.2 +1.5
     comp=Z,81nm,1.9s
PVRL Vila Real         52.66 303 eP      P       11 27 47.1 +0.1
     comp=Z,34nm,1.6s
POLO Lamas de Olo      52.70 303 eP      P       11 27 47.5 +0.1
     comp=Z,24nm,2.1s
PVIS Viseu             52.84 302 eP      P       11 27 48.7 +0.3
     comp=Z,46nm,2.1s
TIA  Tai'an            52.85  64  P      P       11 27 48.7 +0.2
TIA                               pmax   pmax
     comp=Z,17nm,0.6s
PTOM Tomar             53.36 301 eP      P       11 27 52.6 +0.4
     comp=Z,62nm,2.2s
PNCL Nicolau / Gran    53.65 299 eP      P       11 27 54.2 -0.1
     comp=Z,40nm,1.4s
MATP Matopo            53.83 211 i P     P       11 27 57.7 +1.8
MATP Matopo            53.83 211 i P     P       11 27 57.7 +1.8
MATP Matopo            53.83 211 i P     P       11 27 57.7 +1.8
SPA0 Spitsbergen Ar    53.97 351 eP      P       11 27 54.7 -1.4
     comp=Z,14nm,0.8s
NJ2  Nanjing           55.03  68 eP      P       11 28 02.9 -1.6
NJ2                               pmax   pmax
     comp=Z,18nm,0.7s
KBS  Kingsbay          55.13 351 eP      P       11 28 02.6 -1.9
     comp=Z,10nm,0.8s
KBS  Kingsbay          55.13 351 eP      P       11 28 02.6 -1.9
KBS                               pmax   pmax
     comp=Z,10.0nm,0.8s
KBS  Kingsbay          55.13 351 eP      P       11 28 02.6 -1.9
CN2  Changchun         58.05  54 eP      P       11 28 26.3 +0.5
CN2                              esP     sP      11 28 36.0 +3.7
CN2                              eS      S       11 36 23.3 -2.9
CN2                               pmax   pmax
     comp=Z,10.0nm,0.6s
CN2                               pmax   pmax
     comp=Z,200nm,3.0s
ZEA  Zeya              58.22  42 eP      P       11 28 27.0 +0.2
ZEA                               pmax   pmax
     comp=Z,29nm,1.0s
TSUM Tsumeb            58.65 222 i P     P       11 28 32.5 +2.1
TSUM Tsumeb            58.65 222 eP      P       11 28 31.5 +1.1
     comp=Z,26nm,1.1s
TSUM Tsumeb            58.65 222 i P     P       11 28 32.5 +2.1
TSUM Tsumeb            58.65 222 i P     P       11 28 32.5 +2.1
YHNB Yeheng            59.13  76 eP      P       11 28 35.1 +1.4
     comp=Z,29nm,0.8s
LBTB Lobatse           59.13 211 eP      P       11 28 35.0 +1.5
     comp=Z,24nm,1.0s
YAK  Yakutsk           59.23  32 eP      P       11 28 33.0 -0.7
YAK                              eS      S       11 36 37.9 -3.0
YAK                              e*SS    sS      11 36 53.1 +4.5
YAK                              e               11 38 17.1
YAK                              eSS     SS      11 40 31.9 -3.0
TIXI Tiksi             59.38  21 eP      P       11 28 33.5 -1.0
     comp=Z,12nm,0.8s
TIXI Tiksi             59.38  21ceP      P       11 28 34.6 +0.1
TIXI                              pmax   pmax
     comp=Z,12nm,1.7s
TWG  Pinlang           59.45  78 eP      P       11 28 34.8 -1.0
     comp=Z,158nm,1.4s
NACB Ninganchiao       59.47  77 eP      P       11 28 36.2 +0.3
     comp=Z,18nm,0.7s
SBUM Sibu              59.94 104 eP      P       11 28 39.8 +0.5
     comp=Z,9.7nm,1.7s
DBIC Dimbokro          60.20 262  P      P       11 28 41.0 -0.1
     comp=Z,48nm,1.2s,baz=44,slow=6.4,SNR=16
DBIC                              LR     LR      11 55 40.2
     comp=Z,101nm,18.0s,baz=39,slow=37
DBIC Dimbokro          60.20 262 eP      P       11 28 40.9 -0.2
     comp=Z,59nm,1.2s
DBIC Dimbokro          60.20 262 eP      P       11 28 40.9 -0.2
DBIC                              pmax   pmax
     comp=Z,59nm,1.2s
KIC  Kosan Boka        60.24 261 eP      P       11 28 41.3 -0.1
     comp=Z,82nm,1.1s
TIC  Toumodi           60.35 262 eP      P       11 28 41.9 -0.3
LIC  Lamto             60.55 261 eP      P       11 28 43.4 -0.1
     comp=Z,72nm,0.7s
KS15 Wonju Array Si    61.08  60 eP      P       11 28 50.1 +3.3
     comp=Z,122nm,1.8s
LEM  Lembang           61.11 116  LR     LR      11 57 40.4
     comp=Z,86nm,19.3s,baz=341,slow=38
KSRS Korea Array       61.11  60  P      P       11 28 46.0 -1.0
     comp=Z,5.9nm,0.6s,baz=279,slow=6.5,SNR=20
KSRS                              LR     LR      11 59 20.9
     comp=Z,126nm,18.1s,baz=308,slow=40
KSRS Korea Array       61.11  60  P      P       11 28 46.0 -1.0
KLR  Kul'dur           61.52  47  LR     LR      11 58 27.1
     comp=Z,253nm,18.5s,baz=274,slow=39
KLR  Kul'dur           61.52  47d iP     P       11 28 48.6 -1.0
KLR                               pmax   pmax
     comp=Z,7.0nm,0.9s
BOSA Boshof            62.38 209 i P     P       11 28 56.8 +1.1
BOSA Boshof            62.38 209  P      P       11 28 56.0 +0.4
     comp=Z,11nm,0.6s,baz=22,slow=6.8,SNR=21
BOSA                              LR     LR      11 57 34.7
     comp=Z,119nm,19.7s,baz=25,slow=37
BOSA Boshof            62.38 209 eP      P       11 28 56.4 +0.7
     comp=Z,14nm,0.8s
BOSA Boshof            62.38 209 i P     P       11 28 56.8 +1.1
BOSA Boshof            62.38 209 i P     P       11 28 56.8 +1.1
USRK Ussuriysk Ar.     62.63  52  P      P       11 28 55.2 -1.9
     comp=Z,2.4nm,0.6s,baz=293,slow=5.3,SNR=5.9
USRK                              LR     LR      11 57 55.6
     comp=Z,149nm,22.0s,baz=303,slow=38
JNU  Nakatsue          64.58  64  LR     LR      12 00 59.7
     comp=Z,133nm,21.1s,baz=302,slow=39
SUMG Summit            65.34 341 eP      P       11 29 15.0 +0.1
     comp=Z,20nm,0.9s
SUMG Summit            65.34 341 i P     P       11 29 15.0 +0.1
SUMG Summit            65.34 341 i P     P       11 29 15.0 +0.1
YSS  Yuzh-Sakhalins    69.22  47 eP      P       11 29 37.1 -2.4
MAJO Matsushiro        69.27  59 eP      P       11 29 38.2 -1.8
MAJO Matsushiro        69.27  59 eP      P       11 29 38.2 -1.8
MJAR Matsushiro Arr    69.27  59  P      P       11 29 38.2 -1.9
     comp=Z,1.0nm,0.6s,baz=279,slow=7.5,SNR=3.7
SEY  Seymchan          69.41  29⇑iP      P       11 29 40.2 -0.2
ASAJ Asahikawa         70.00  50  LR     LR      12 01 50.9
     comp=Z,140nm,19.3s,baz=326,slow=37
JHJ  Hachijo jima 2    71.65  62  LR     LR      12 04 13.1
     comp=Z,110nm,20.2s,baz=295,slow=38
BILL Bilibino          72.58  22 eP      P       11 29 58.1 -1.4
     comp=Z,10nm,0.9s
BILL Bilibino          72.58  22 i P     P       11 29 58.5 -1.0
BILL                             i               11 30 14.6
BILL                             i               11 32 45.4
BILL                              pmax   pmax
     comp=Z,6.0nm,0.9s
PEA1 Petropavlovsk-    75.86  37 eP      P       11 30 17.8 -1.1
PETK Petropavlovsk-    75.86  37  P      P       11 30 17.8 -1.1
     comp=Z,4.2nm,0.9s,baz=241,slow=3.1,SNR=3.7
PETK                              LR     LR      12 05 59.2
     comp=Z,112nm,20.8s,baz=288,slow=38
BATI Baumata           76.19 109  P      P       11 30 21.8 +0.4
     comp=Z,37nm,0.6s,baz=245,slow=1.4,SNR=6.4
TOLK Toolik Lake Re    82.76   9 eP      P       11 30 56.2 -0.2
     comp=Z,7.6nm,0.8s
TOLK Toolik Lake Re    82.76   9  P      P       11 30 56.1 -0.2
     baz=338
COLD Coldfoot          83.99  10 eP      P       11 31 04.2 +1.5
NWAO Narrogin (SRO)    84.09 132  P      P       11 31 03.0 -0.6
     comp=Z,16nm,1.0s,baz=301,slow=6.0
INK  Inuvik            84.59   3 eP      P       11 31 05.0 -0.6
     comp=Z,5.6nm,0.8s
INK  Inuvik            84.59   3 eP      P       11 31 05.0 -0.6
INK                               pmax   pmax
     comp=Z,6.0nm,0.8s
MLY  Manley            85.94  11 eP      P       11 31 12.6 +0.1
     comp=Z,6.8nm,0.8s
PRP  Porcupine Dome    86.25   8 eP      P       11 31 14.6 +0.4
     comp=Z,8.0nm,0.9s
EPYK Eagle Plains      86.31   5 eP      P       11 31 13.8 -0.5
     comp=Z,8.2nm,0.8s
EPYK Eagle Plains      86.31   5  P      P       11 31 13.9 -0.5
     baz=350
BPAW Bear Paw Mtn.     86.76  11 eP      P       11 31 16.4 -0.2
     comp=Z,16nm,0.9s
ILAR Eielson Array     86.77   9  P      P       11 31 15.4 -1.2
     comp=Z,1.3nm,0.7s,baz=322,slow=3.7,SNR=13
ILAR                              LR     LR      12 13 54.1
     comp=Z,65nm,20.5s,baz=324,slow=38
ILB  Eielson Array     86.77   9 eP      P       11 31 15.0 -1.6
     comp=Z,3.7nm,0.9s
HDA  Harding Lake      87.11   9 eP      P       11 31 16.9 -1.4
     comp=Z,5.5nm,0.9s
HDA  Harding Lake      87.11   9  P      P       11 31 16.9 -1.4
     baz=341
MCK  McKinley          87.44  10 eP      P       11 31 19.2 -0.7
     comp=Z,17nm,1.2s
MCK  McKinley          87.44  10 eP      P       11 31 19.2 -0.7
MCK                               pmax   pmax
     comp=Z,17nm,1.2s
EGAK Eagle             87.48   7 eP      P       11 31 19.7 -0.4
     comp=Z,13nm,0.8s
DAWY Dawson            88.36   6 eP      P       11 31 23.4 -0.9
     comp=Z,6.0nm,0.9s
WRA  Warramunga Arr    89.96 112  P      P       11 31 32.1 -0.4
     comp=Z,4.7nm,0.7s,baz=291,slow=4.5,SNR=16
WR1  Warramunga Arr    89.96 112 eP      P       11 31 32.1 -0.4
WB2  Warramunga Arr    89.97 112 eP      P       11 31 32.9 +0.3
     comp=Z,9.8nm,0.9s
YKA  Yellowknife Ar    90.25 355  P      P       11 31 32.6 -0.5
     comp=Z,2.2nm,0.7s,baz=3.5,slow=5.1,SNR=4.2
YKB5 Yellowknife Ar    90.25 355 eP      P       11 31 32.5 -0.5
ASAR Alice Springs     91.40 116  P      P       11 31 39.0 -0.1
     comp=Z,3.7nm,0.7s,baz=301,slow=4.8,SNR=32
AS31 Alice Springs     91.40 116 eP      P       11 31 38.0 -1.1
     comp=Z,1.4nm,0.7s
HYT  Haines Junctio    91.72   6 eP      P       11 31 40.3 +0.2
     comp=Z,6.9nm,1.0s
E54A Lac Daplat, Po    94.90 329  P      P       11 31 54.0 -1.0
     baz=41
LONY Lake Ozonia       95.00 326  P      P       11 31 56.8 +1.4
     baz=43
E53A Dumoine, Ponti    95.16 329  P      P       11 31 55.3 -0.8
     baz=41
SYO  Syowa Base        96.57 186⇑esP     sP      11 32 10.2 +1.8
ULM  Lac du Bonnet     98.69 342  LR     LR      12 18 54.2
     comp=Z,58nm,19.2s,baz=319,slow=37
SNOW Snow King Moun   108.49 349 ePdif   Pdif    11 32 55.8 -0.3
NV01 Mina Array Sit   114.43 354 ePKiKP  PKPdf   11 37 13.3 +0.2
NVAR Mina Array Bea   114.43 354  PKP    PKPdf   11 37 13.3 +0.2
     comp=Z,0.6nm,0.6s,baz=48,slow=2.1,SNR=7.1
QSPA South Pole Qui   117.03 180 ePKPdf  PKPdf   11 37 16.5 -0.4
VNDA Vanda            119.99 166  PKP    PKPdf   11 37 22.1 -0.2
     comp=Z,0.6nm,0.7s,baz=287,slow=3.7,SNR=4.0
VNDA Vanda            119.99 166 ePKPdf  PKPdf   11 37 21.3 -0.9
VNDA Vanda            119.99 166 ePKIKP  PKPdf   11 37 21.3 -0.9
TXAR Lajitas Array    120.19 338  PKP    PKPdf   11 37 23.2 -1.1
     comp=Z,0.3nm,0.6s,baz=165,slow=1.4,SNR=4.8
LPAZ La Paz           126.44 269  PKP    PKiKP   11 37 37.4 -0.2
     comp=Z,1.0nm,0.7s,baz=237,slow=6.7,SNR=4.2
LPAZ La Paz           126.44 269 ePKPdf  PKPdf   11 37 36.8 -0.4
LPAZ La Paz           126.44 269 ePKIKP  PKPdf   11 37 36.8 -0.4
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MAN 02 11:19:30.2, 10°.98N×125°.41E, h28km, mb4.2, ML3.0, MS2.7, 1C, Leyte

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Code Station Name        Δ°   AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
PLP  Palo               0.46 294⇑eP      Pn      11 19 41.0 +0.1
PLP                              eS      Sn      11 19 49.6 +1.5
BESP Borongan           0.62   3 eP      Pb      11 19 42.8 +0.3
BESP                             eS      Sn      11 19 53.4 +1.3
MSLP Maasin             0.99 213 eP      Pn      11 19 48.1 -0.1
MSLP                             eS      Sb      11 20 02.5 +1.0
CNP  Catarman           1.69 335 eP      Pb      11 20 00.5 -0.1
CNP                              eS      Sb      11 20 24.9 +3.4
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MAN 02 11:25:01.5, 5°.73N×126°.44E, h45km, mb4.6, ML3.4, MS3.3, 2C, Mindanao

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Code Station Name        Δ°   AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
DDMP Don Marcelino,     0.81 297 eP      Pn      11 25 17.7 +1.1
DDMP                             eS      Sn      11 25 29.5 +1.9
MATI Mati               1.22 351 eP      Pn      11 25 23.1 +1.0
MATI                             eS      Sn      11 25 42.1 +4.6
GSPH General Santos     1.52 283⇑iP      Pn      11 25 25.9 -0.5
GSPH                             i S     Sn      11 25 45.1  0.0
DMPH Davao City--Mi     1.63 325⇑eP      Pn      11 25 34.9 +7.1
DMPH                             eS      Sn      11 25 49.2 +1.7
SKMP Bagumbayan, Su     2.04 293 eP      Pn      11 25 34.0 +0.6
SKMP                             eS      Sn      11 25 59.0 +1.4
BUKP Musuan             2.53 327 eP      Pn      11 25 40.7 +0.5
BUKP                             eS      Sn      11 26 11.4 +1.5
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*THE **02** 11:37:03.8, 40°.13N×21°.87E, h10km±2km, ML1.9/5, Error ellipse: s-maj=2.5km s-min=0.8km az=337.0*

ATH 02 11:37:03.2, 40°.14N×21°.85E, h15km±5km, ML2.0/6, Error ellipse: s-maj=5.2km s-min=0.9km az=332.0, Greece

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Code Station Name        Δ°   AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
KZN  Kozani             0.18 340 P       Pg      11 37 07.3 -0.3
KZN                              S       Sg      11 37 10.3 -0.3
KZN  Kozani             0.18 340 P       Pg      11 37 07.4 -0.3
KZN                              S       Sg      11 37 10.4 -0.2
KZN                              AML     AML     11 37 10.7
     comp=N,3101µm,0.2s
KZN                              AML     AML     11 37 10.8
     comp=E,2763µm,0.2s
KZN  Kozani             0.18 340 P       Pg      11 37 07.4 -0.3
KZN                              S       Sg      11 37 10.4 -0.2
KZN                              AML     AML     11 37 10.7
     comp=N,3101µm,0.2s
KZN                              AML     AML     11 37 10.8
     comp=E,2763µm,0.2s
KTI  Kastanea           0.33  38 P       Pb      11 37 10.7 -0.2
KPRO Kipourio           0.41 244 P       Pg      11 37 11.3 -0.3
KPRO                             S       Sb      11 37 18.3 -0.2
KPRO Kipourio           0.41 244 P       Pg      11 37 11.3 -0.2
KPRO                             S       Sb      11 37 18.0 -0.4
KPRO                             AML     AML     11 37 21.9
     comp=E,368µm,0.3s
KPRO                             AML     AML     11 37 24.4
     comp=N,266µm,0.3s
KPRO Kipourio           0.41 244 P       Pg      11 37 11.4 -0.2
KPRO                             S       Sg      11 37 17.9 +0.6
KPRO                             AML     AML     11 37 21.9
     comp=E,368µm,0.3s
KPRO                             AML     AML     11 37 24.4
     comp=N,266µm,0.3s
LIT  Litokhoron         0.49  94 P       Pg      11 37 12.6 -0.4
LIT                              S       Sg      11 37 20.1 +0.5
LIT  Litokhoron         0.49  94 P       Pg      11 37 12.6 -0.4
LIT                              S       Sg      11 37 20.0 +0.4
LIT                              AML     AML     11 37 22.9
     comp=N,555µm,0.3s
LIT                              AML     AML     11 37 22.9
     comp=E,603µm,0.2s
LIT  Litokhoron         0.49  94 P       Pg      11 37 12.6 -0.4
LIT                              S       Sg      11 37 20.0 +0.5
LIT                              AML     AML     11 37 22.9
     comp=N,556µm,0.3s
LIT                              AML     AML     11 37 22.9
     comp=E,603µm,0.2s
PENT Pentalofos         0.55 277 P       Pg      11 37 13.8 -0.3
PENT                             S       Sb      11 37 22.2 -0.1
THL  Klokotos Trika     0.58 167 P       Pg      11 37 14.0 -0.7
THL                              S       Sg      11 37 22.6 +0.1
THL  Klokotos Trika     0.58 167 P       Pg      11 37 13.9 -0.8
THL                              S       Sg      11 37 22.8 +0.3
THL                              AML     AML     11 37 25.0
     comp=N,247µm,0.3s
THL                              AML     AML     11 37 26.6
     comp=E,252µm,0.4s
THL  Klokotos Trika     0.58 167 P       Pg      11 37 14.2 -0.5
THL                              S       Sb      11 37 23.0 -0.2
THL                              AML     AML     11 37 25.0
     comp=N,247µm,0.3s
THL                              AML     AML     11 37 26.6
     comp=E,252µm,0.4s
MEV  Metsovon           0.59 234 P       Pb      11 37 15.6 +0.2
MEV  Metsovon           0.59 234 P       Pb      11 37 15.4  0.0
MEV  Metsovon           0.59 234 P       Pg      11 37 14.8 -0.1
GRG  Griva              0.92  27 P       Pb      11 37 20.2 -0.8
GRG  Griva              0.92  27 P       Pb      11 37 20.8 -0.1
FYTO Fytoko, Volos      1.11 131 P       Pn      11 37 24.4 +0.2
FYTO                             S       Sn      11 37 40.0 +0.8
AGG  Agios Georgios     1.17 161 P       Pb      11 37 25.3 +0.1
AGG                              S       Sg      11 37 42.4 +1.3
AGG  Agios Georgios     1.17 161 P       Pb      11 37 25.3 +0.1
AGG  Agios Georgios     1.17 161 P       Pb      11 37 25.3 +0.1
AGG                              S       Sg      11 37 42.9 +1.8
AGG                              AML     AML     11 37 48.7
     comp=E,108µm,0.4s
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGG				AML	AML	11 37 50.2	
	comp=N,95µm,0.4s						
EVR	**Evrytania**	**1.22**	**182**	P	Pb	11 37 26.2	+0.2
EVR	**Evrytania**	**1.22**	**182**	P	Pb	11 37 25.9	-0.1
EVR	**Evrytania**	**1.22**	**182**	P	Pb	11 37 26.0	0.0
EVR				S	Sg	11 37 42.5	-0.1
EVR				AML	AML	11 37 47.4	
	comp=E,92µm,0.5s						
EVR				AML	AML	11 37 48.0	
	comp=N,158µm,0.3s						
XOR	**Xorichti**	**1.29**	**126**	P	Pb	11 37 27.5	+0.3
XOR	**Xorichti**	**1.29**	**126**	P	Pb	11 37 27.5	+0.3
XOR				S	Sg	11 37 45.9	+1.1

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*IDC **02** 11:42:42.8±1.9, 51.°22N×16.°55E, h0km, mb1 3.4/3, mb1mx3.1/38, mbtmp3.2/3, ML2.8/3, Error ellipse: s-maj=87.4km s-min=10.6km az=121.0*

*ISCJB **02** 11:42:43.0±0.4, 51.°39N±0.°02×16.°10E±0.°03, h0km, Error ellipse: s-maj=3.1km s-min=2.2km az=22.9*

*PRU **02** 11:42:44.4±0.0, 51.°44N×16.°16E, h0km*

*VIE **02** 11:42:45.9±1.3, 51.°29N×16.°23E, h0km, mb2.2/4, ml3.0/4, Error ellipse: s-maj=11.6km s-min=7.3km az=58.0, Suspected Mining induced.*

*BGR **02** 11:42:45.7±0.2, 51.°40N×16.°12E, h1km, ML3.0/23, Error ellipse: s-maj=3.3km s-min=2.2km az=15.0*

ISC 02 11:42:43.5±0.7, **51.°45N**±0.°03×**16.°15E**±0.°02, **h0km, n47, σ1.§17**/99, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61**	**172**	i Pg	**Pg**	**11 42 56.0**	**+0.8**
KSP				eSg	**Sg**	**11 43 03.7**	**+0.5**
KSP	**Ksiaz**	**0.61**	**172**	ePg	**Pg**	**11 42 56.0**	**+0.8**
KSP				eSg	**Sg**	**11 43 04.0**	**+0.8**
OSTC	**Ostas**	**0.90**	**177**	ePG	**Pg**	**11 43 01.4**	**+0.8**
OSTC				eSG	**Sg**	**11 43 13.0**	**+0.8**
	comp=Z,62nm,0.4s						
UPC	**Upice**	**0.95**	**185**	ePG	**Pg**	**11 43 02.1**	**+0.5**
UPC				eSG	**Sg**	**11 43 14.9**	**+1.0**
	comp=Z,135nm,0.5s						
DPC	**Dobruska-Polom**	**1.11**	**174**	ePg	**Pg**	**11 43 05.0**	**+0.3**
DPC				eSg	**Sg**	**11 43 20.1**	**+1.0**
DPC	**Dobruska-Polom**	**1.11**	**174**	ePG	**Pg**	**11 43 04.8**	**+0.1**
DPC				eSG	**Sg**	**11 43 20.0**	**+1.0**
	comp=Z,65nm,0.5s						
PVCC	**Panska Ves**	**1.36**	**228**	ePn	**Pg**	**11 43 10.0**	**+0.4**
PVCC				ePg	**Pb**	**11 43 10.4**	**+0.6**
PVCC				eSg	**Sn**	**11 43 29.0**	**+0.5**
PVCC	**Panska Ves**	**1.36**	**228**	ePG	**Pg**	**11 43 09.9**	**+0.4**
PVCC				eSG	**Sb**	**11 43 28.5**	**+0.8**
	comp=Z,183nm,0.4s						
BRG	**Berggiesshubel**	**1.50**	**248**	PG	**Pn**	**11 43 12.3**	**+0.6**
BRG				SG	**Sn**	**11 43 33.0**	**+0.9**
	73nm,0.5s						
BRG	**Berggiesshubel**	**1.50**	**248**	ePn	**Pn**	**11 43 12.3**	**+0.6**
BRG				ePg	**Pg**	**11 43 12.9**	**+0.6**
BRG				eSg	**Sn**	**11 43 33.3**	**+1.2**
GOPC	**GO Pecny, Ondr**	**1.77**	**210**	ePG	**Pb**	**11 43 16.8**	**+0.1**
GOPC				eSG	**Sb**	**11 43 39.9**	**+0.5**
	comp=Z,59nm,0.7s						
PRU	**Pruhonice**	**1.79**	**216**	ePn	**Pb**	**11 43 17.3**	**+0.2**
PRU				eSg	**Sg**	**11 43 41.4**	**+0.6**
PRU	**Pruhonice**	**1.79**	**216**	ePG	**Pb**	**11 43 17.1**	**+0.1**
PRU				eSG	**Sg**	**11 43 41.0**	**+0.2**
	comp=Z,54nm,0.4s						
RUE	**Ruedersdorf**	**1.79**	**306**	eSg	**Sg**	**11 43 43.6**	**+2.5**
FBE	**Freiberg**	**1.84**	**254**	ePn	**Pb**	**11 43 18.6**	**+0.7**
FBE				eSg	**Sg**	**11 43 43.6**	**+1.2**
MORC	**Moravsky Berou**	**1.90**	**152**	ePN	**Pn**	**11 43 16.6**	**-0.5**
MORC				eSG	**Sn**	**11 43 41.4**	**-0.3**
MORC	**Moravsky Berou**	**1.90**	**152**	ePn	**Pn**	**11 43 16.9**	**-0.2**
GKP	**Gorka Klasztor**	**1.94**	**20**	eSg	**Sg**	**11 43 49.3**	**+3.6**
CLL	**Collm**	**1.98**	**267**	ePg	**Pb**	**11 43 21.0**	**+0.7**
CLL				eSg	**Sg**	**11 43 47.0**	**0.0**
	comp=Z,31nm,0.5s						
VRAC	**Vranov**	**2.16**	**172**	ePN	**Pn**	**11 43 21.5**	**+0.8**
VRAC				eSG	**Sb**	**11 43 52.0**	**+1.1**
VRAC	**Vranov**	**2.16**	**172**	ePn	**Pn**	**11 43 21.6**	**+0.8**
VRAC				eSg	**Sg**	**11 43 52.6**	**-0.4**
KRUC	**Moravsky**	**2.40**	**176**	ePN	**Pn**	**11 43 24.8**	**+0.9**
KRUC				eSG	**Sb**	**11 43 58.7**	**+1.2**
KRUC	**Moravsky**	**2.40**	**176**	ePn	**Pn**	**11 43 24.9**	**+0.9**
KRUC				ePg	**Pg**	**11 43 29.8**	**+0.4**
KRUC				eSg	**Sg**	**11 44 00.8**	**+0.4**
TANN	**Tannenbergstha**	**2.55**	**247**	ePn	**Pn**	**11 43 26.7**	**+0.5**
TANN				ePg	**Pg**	**11 43 31.9**	**-0.4**
TANN				eSg	**Sg**	**11 44 04.6**	**-0.9**
OJC	**Ojcow**	**2.62**	**117**	ePg	**Pg**	**11 43 33.5**	**-0.2**
OJC				eSg	**Sg**	**11 44 08.0**	**+0.4**
OJC	**Ojcow**	**2.62**	**117**	ePn	**Pn**	**11 43 26.9**	**-0.2**
OJC				ePg	**Pg**	**11 43 33.6**	**0.0**
OJC				eSg	**Sg**	**11 44 07.8**	**+0.2**
NKC	**Novy Kostel**	**2.65**	**244**	ePG	**Pg**	**11 43 33.6**	**-0.5**
NKC				eSG	**Sg**	**11 44 08.9**	**+0.5**
	comp=Z,56nm,0.4s						
GUNZ	**Gunzen**	**2.65**	**247**	ePg	**Pg**	**11 43 35.0**	**+0.8**
GUNZ				eSg	**Sg**	**11 44 09.2**	**+0.6**
WERN	**Wernitzgruen**	**2.66**	**246**	ePn	**Pn**	**11 43 28.9**	**+1.3**
WERN				ePg	**Pg**	**11 43 36.0**	**+1.6**
WERN				eSg	**Sb**	**11 44 07.4**	**+2.3**
PLN	**Plauen**	**2.70**	**251**	ePg	**Pg**	**11 43 36.0**	**+0.8**
PLN				eSg	**Sg**	**11 44 09.8**	**-0.5**
JAVC	**Velka Javorina**	**2.77**	**159**	ePN	**Pn**	**11 43 29.0**	**-0.2**
JAVC				eSG	**Sb**	**11 44 08.9**	**+0.5**
JAVC	**Velka Javorina**	**2.77**	**159**	ePn	**Pn**	**11 43 31.4**	**+2.2**
JAVC				ePg	**Pg**	**11 43 38.1**	**+1.6**
JAVC				eSg	**Sg**	**11 44 13.8**	**+1.4**
KHC	**Kasperske Hory**	**2.85**	**216**	ePn	**Pn**	**11 43 31.0**	**+0.8**
KHC				ePg	**Pb**	**11 43 36.8**	**+1.6**
KHC				eSn	**Sn**	**11 44 04.9**	**-0.3**
KHC				eSg	**Sg**	**11 44 13.7**	**-1.2**
KHC	**Kasperske Hory**	**2.85**	**216**	ePN	**Pn**	**11 43 31.2**	**+1.0**
KHC				ePG	**Pb**	**11 43 36.3**	**+1.1**
KHC				eSN	**Sn**	**11 44 05.6**	**+0.4**
KHC				eSG	**Sg**	**11 44 14.8**	**-0.1**
	comp=Z,26nm,0.5s						
MANZ	**Manzenberg**	**2.96**	**242**	ePg	**Pg**	**11 43 40.7**	**+0.6**
MANZ				eSg	**Sg**	**11 44 18.7**	**+0.3**
MOX	**Moxa**	**2.97**	**256**	ePg	**Pg**	**11 43 40.8**	**+0.3**
MOX				eSg	**Sg**	**11 44 19.4**	**+0.4**
ROTZ	**Rotzenmuhle**	**3.02**	**238**	ePn	**Pn**	**11 43 33.3**	**+0.7**
ROTZ				ePg	**Pg**	**11 43 41.2**	**-0.2**
ROTZ				eSg	**Sg**	**11 44 19.5**	**-1.1**
GEC2	**GERESS Array S**	**3.05**	**212**	ePg	**Pb**	**11 43 40.0**	**+1.4**
GEC2				eSg	**Sg**	**11 44 19.7**	**-1.6**
GERES	**GERESS Array B**	**3.05**	**212**	Pn	**Pn**	**11 43 29.7**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=34,slow=14,SNR=3.9						
GERES				Pg	**Pb**	**11 43 39.3**	**+0.7**
	comp=Z,2.6nm,0.3s,baz=38,slow=12,SNR=15						
GERES				Lg	Lg	11 44 17.2	
	comp=Z,7.3nm,0.3s,baz=47,slow=46,SNR=11						
WET	**Wettzell**	**3.12**	**224**	ePn	**Pn**	**11 43 34.6**	**+0.6**
LANS	**Liptovska Anna**	**3.13**	**136**	ePG	**Pg**	**11 43 43.2**	**-0.3**
LANS				eSG	**Sg**	**11 44 25.6**	**+1.5**
MODS	**Modra-Piesok**	**3.17**	**166**	ePG	**Pg**	**11 43 43.1**	**-1.0**
MODS				eSG	**Sg**	**11 44 27.4**	**+2.3**
MODS				ePG		11 45 34.0	
MODS				eSG		11 45 48.5	
MODS				eLG	Lg	11 45 49.3	
VYHS	**Vyhne**	**3.43**	**149**	ePG	**Pb**	**11 43 47.2**	**+2.1**
VYHS				eSG	**Sg**	**11 44 34.5**	**+0.9**
VYHS				ePG		11 45 29.8	
VYHS				eSG		11 45 41.2	
CONA	**Conrad Observa**	**3.53**	**183**	eSg	**Sg**	**11 44 35.9**	**-0.9**
	comp=Z,12nm,0.3s						
MOA	**Molln**	**3.81**	**199**	ePn	**Pn**	**11 43 44.1**	**+0.8**
	comp=Z,1.2nm,0.2s						
MOA				Sg	**Sg**	**11 44 45.6**	**-0.1**
	comp=Z,12nm,0.5s						
FINES	**FINESS Array B**	**11.41**	**25**	Pn	**Pn**	**11 45 24.5**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=205,slow=15,SNR=5.1						
ARCES	**ARCESS Array B**	**18.68**	**10**	Pn	**P**	**11 46 58.7**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=195,slow=13,SNR=4.3						

RSNC 02 11:58:29.5±1.1, **6.°82N**×**73.°18W, h146**km±5km, **ML3.2, Mw3.6, 1C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.22**	**182**	⇓iP	Pn	11 58 49.2	-0.5
BARC				eS	Sn	11 59 04.0	-0.9
BARC				i		11 59 05.6	
	comp=Z,245nm,0.2s						
GIRC	**Giron, Santand**	**0.26**	**356**	eP	Pn	11 58 49.2	-0.4
BRRC	**Barranca, Sant**	**0.61**	**299**	⇑iP	Pn	11 58 51.0	0.0
BRRC				eS	Sn	11 59 08.0	+0.7
BRRC				i		11 59 10.5	
	comp=Z,216nm,0.3s						
PAMC	**Pamplona, Colo**	**0.70**	**42**	eP	Pn	11 58 52.0	-0.2
PAMC				eS	Sn	11 59 09.0	-0.3
PAMC				i		11 59 11.4	
	comp=Z,227nm,0.6s						
RUSC	**La Rusia**	**0.92**	**174**	eP	Pn	11 58 53.2	-0.7
RUSC				eS	Sn	11 59 11.9	-0.4
RUSC				i		11 59 14.3	
	comp=Z,163nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.30**	**258**	eP	Pn	11 58 55.7	-1.1
PTBC				eS	Sn	11 59 16.8	-0.7
PTBC				i		11 59 19.7	
	comp=Z,204nm,0.1s						
OCAC	**Ocana**	**1.42**	**354**	eP	Pn	11 58 57.3	-0.8
OCAC				eS	Sn	11 59 19.9	-0.2
OCAC				i		11 59 24.6	
	comp=Z,206nm,0.2s						
TAMC	**Tame, Arauca**	**1.43**	**105**	⇓iP	Pn	11 58 57.5	-0.5
TAMC				eS	Sn	11 59 18.7	-1.1
TAMC				i		11 59 19.8	
	comp=Z,78nm,0.2s						
YOPC	**Yopal, Colombi**	**1.63**	**153**	eP	Pn	11 58 60.0	-0.4
YOPC				eS	Sn	11 59 23.5	-0.4
YOPC				i		11 59 27.2	
	comp=Z,194nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.80**	**292**	eP	Pn	11 59 01.6	-0.5
ZARC				eS	Sn	11 59 26.3	-0.7
ZARC				i		11 59 33.0	
	comp=Z,184nm,0.3s						
NORC	**Norcasia**	**2.09**	**234**	eP	Pn	11 59 05.2	-0.4
NORC				eS	Sn	11 59 32.7	-0.5
SMLC	**San Martn de**	**2.16**	**336**	eP	Pn	11 59 05.4	-0.9
SMLC				eS	Sn	11 59 33.6	-1.1
CHIC	**Chingaza**	**2.24**	**194**	eP	Pn	11 59 07.4	-0.3
CHIC				eS	Sn	11 59 36.7	-0.3
CHIC				i		11 59 39.2	
	comp=Z,51nm,0.3s						
ROSC	**El Rosal**	**2.27**	**210**	eP	Pn	11 59 08.9	+0.9
ROSC				eS	Sn	11 59 39.5	+1.9
HELC	**Santa Helena**	**2.42**	**255**	eP	Pn	11 59 09.9	+0.1
HELC				eS	Sn	11 59 39.3	-1.4
HELC				i		11 59 50.1	
	comp=Z,111nm,0.3s						
VILC	**Villavicencio,**	**2.73**	**191**	eP	Pn	11 59 13.0	-0.6
VILC				eS	Sn	11 59 46.6	-0.8
VILC				i		11 59 53.0	
	comp=Z,90nm,0.4s						
RREF	**El Recreo**	**2.88**	**229**	eP	Pn	11 59 16.5	+0.7
RREF				i		12 00 01.5	
	comp=Z,87nm,0.3s						
DBBC	**Dabeiba**	**3.02**	**274**	eP	Pn	11 59 16.4	-0.7
PRAC	**Prado**	**3.52**	**209**	eP	Pn	11 59 22.5	-1.0
PRAC				eS	Sn	12 00 04.9	-0.4
PRAC				i		12 00 09.8	
	comp=Z,80nm,0.2s						
ORTC	**Ortega, Tolima**	**3.55**	**216**	eP	Pn	11 59 23.5	-0.3

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*SOF **02** 12:01:26.5, 42.°15N×25.°18E, h9km*

*ISCJB **02** 12:01:28.1±0.4, 42.°06N±0.°02×25.°09E±0.°05, h8km, Error ellipse: s-maj=4.9km s-min=3.3km az=0.1*

*THE **02** 12:01:28.5, 42.°11N×25.°23E, h13km±3km, ML2.5/2, Error ellipse: s-maj=4.8km s-min=1.5km az=26.0*

ISC 02 12:01:26.4±0.8, **42.°13N**±0.°02×**25.°09E**±0.°03, **h8km, n41, σ1.§47**/44, **6C-5D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.29**	**265**	P	**Pb**	**12 01 33.2**	**-0.6**
DIM	**Dimitrovgrad**	**0.34**	**104**	P	**Pg**	**12 01 33.1**	**+0.1**
RZN	**Rozhen**	**0.53**	**212**	P	**Pb**	**12 01 38.1**	**+0.2**
KDZ	**Kurdzhali**	**0.54**	**153**	P	**Pb**	**12 01 37.1**	**-1.0**
RDO	**Rodhopi**	**1.04**	**161**	P	**Pb**	**12 01 46.3**	**-0.3**
RDO				S	**Sn**	**12 02 01.5**	**-0.4**
PVL	**Pavlikeni**	**1.10**	**9**	P	**Pg**	**12 01 45.5**	**-2.0**
NVR	**Nevrokopi**	**1.21**	**230**	P	**Pn**	**12 01 50.6**	**+1.0**
KAVA	**Kavala**	**1.22**	**201**	P	**Pn**	**12 01 51.1**	**+1.5**
ALN	**Alexandroupoli**	**1.43**	**150**	P	**Pb**	**12 01 52.8**	**-0.4**
ALN				S	**Sn**	**12 02 10.9**	**-0.6**
VTS	**Vitosha**	**1.46**	**290**	⇑iP	**Pn**	**12 01 50.3**	**-2.9**
VTS	**Vitosha**	**1.46**	**290**	S	**Sg**	**12 02 15.0**	**+1.7**
SRS	**Serrai**	**1.51**	**228**	P	**Pg**	**12 01 55.8**	**+0.4**
ZIMR		**1.54**	**7**	S	**Sg**	**12 02 16.4**	**+0.6**
THAS	**Thassos island**	**1.55**	**191**	P	**Pb**	**12 01 54.6**	**-0.7**
MPEP	**Malo Peshtene**	**1.58**	**321**	P	**Pg**	**12 01 57.0**	**+0.4**
SMTH	**Samothraki Isl**	**1.69**	**169**	P	**Pb**	**12 01 56.7**	**-1.0**
SMTH				S	**Sb**	**12 02 18.0**	**-1.2**
SGRR	**Singureni**	**2.19**	**17**	S	**Sb**	**12 02 34.5**	**+1.1**
HUMR	**Humele**	**2.40**	**358**	⇓iP	**Pb**	**12 02 08.7**	**-1.0**
HUMR	**Humele**	**2.40**	**358**	S	**Sg**	**12 02 43.6**	**+0.3**
RASA	**Rasa**	**2.57**	**35**	S	**Sn**	**12 02 42.2**	**+2.6**
ICOR	**Ion Corvin**	**2.81**	**44**	⇑iP	**Pn**	**12 02 09.9**	**-1.6**
ICOR	**Ion Corvin**	**2.81**	**44**	S	**Sb**	**12 02 52.8**	**+1.6**
ARR	**Arges**	**3.25**	**354**	S	**Sg**	**12 03 09.3**	**-1.5**
TLB	**Topalu**	**3.26**	**40**	⇓iP	**Pb**	**12 02 24.0**	**-0.5**
TLB	**Topalu**	**3.26**	**40**	S	**Sb**	**12 03 06.1**	**+1.8**
VOIR		**3.30**	**359**	⇓iP	**Pn**	**12 02 20.1**	**+1.6**
VOIR		**3.30**	**359**	S	**Sg**	**12 03 10.4**	**-2.1**
TIRR	**Tirgusor**	**3.36**	**45**	⇑iP	**Pn**	**12 02 19.2**	**+0.1**
TIRR	**Tirgusor**	**3.36**	**45**	S	**Sb**	**12 03 07.2**	**+0.1**
HERR	**Herculane**	**3.37**	**326**	⇑iP	**Pn**	**12 02 19.1**	**-0.1**
HERR	**Herculane**	**3.37**	**326**	S	**Sb**	**12 03 09.9**	**+2.5**
MLR	**Muntele Rosu**	**3.41**	**10**	S	**Sb**	**12 03 11.6**	**+2.7**
MDVR	**Moldovita**	**3.61**	**318**	⇑iP	**Pn**	**12 02 20.9**	**-1.8**
MDVR	**Moldovita**	**3.61**	**318**	S	**Sb**	**12 03 15.0**	**+0.5**
CFR	**Carcaliu**	**3.76**	**35**	⇓iP	**Pn**	**12 02 25.0**	**+0.4**
CFR	**Carcaliu**	**3.76**	**35**	S	**Sb**	**12 03 17.4**	**-1.3**
PLOR	**Plostina**	**3.88**	**16**	S	**Sb**	**12 03 23.8**	**+1.5**
VRI	**Vrincioaia**	**3.92**	**17**	⇑iP	**Pn**	**12 02 29.1**	**+2.3**
VRI	**Vrincioaia**	**3.92**	**17**	S	**Sb**	**12 03 25.2**	**+2.0**
BZS	**Buzias**	**4.29**	**325**	⇓iP	**Pn**	**12 02 31.9**	**-0.1**
BZS	**Buzias**	**4.29**	**325**	S	**Sg**	**12 03 41.5**	**-2.7**

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*IDC **02** 12:03:16.6±0.8, 4.°98S×153.°50E, h67km±6km, mb3.9/12, mb1 4.0/13, mb1mx3.8/33, mbtmp4.2/13, Error ellipse: s-maj=19.4km s-min=13.9km az=94.0*

*ISCJB **02** 12:03:18.5±0.3, 5.°08S±0.°04×153.°39E±0.°04, h100km, mb4.6/48, Error ellipse: s-maj=6.4km s-min=4.8km az=42.0*

*NEIC **02** 12:03:19.6±2.8, 5.°07S×153.°36E, h98km±7km, mb4.8/44, Error ellipse: s-maj=12.2km s-min=8.4km az=222.0*

ISC 02 12:03:19.8±0.5, **5.°08S**±0.°05×**153.°38E**±0.°06, **h100km, n69, σ1.§80**/78, **mb4.7**/48, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.50**	**306**	ePn	**Pn**	**12 03 47.2**	**+1.1**
RABL				eSn	**Sn**	**12 04 04.4**	**-1.6**
MANU	**Manus Island**	**6.71**	**296**	ePn	**Pn**	**12 04 57.0**	**+1.1**
MANU				eSn	**Sn**	**12 06 11.5**	**+0.6**
PMG	**Port Moresby**	**7.52**	**235**	P	**Pn**	**12 05 04.6**	**-2.2**
	0.6nm,0.3s,baz=216,slow=19,SNR=2.6						
PMG				S	**Sn**	**12 06 31.1**	**+0.6**
	17nm,0.3s,baz=346,slow=12,SNR=3.2						
PMG	**Port Moresby**	**7.52**	**235**	ePn	**Pn**	**12 05 09.3**	**+2.4**
PMG				eSn	**Sn**	**12 06 30.5**	**0.0**
HNR	**Honiara**	**7.82**	**124**	S	**Sn**	**12 06 34.0**	**-3.9**
	4.8nm,0.3s,baz=241,slow=19,SNR=3.4						
HNR	**Honiara**	**7.82**	**124**	ePn	**Pn**	**12 05 09.7**	**-1.2**
HNR				eSn	**Sn**	**12 06 43.8**	**+5.9**
PATS	**Pohnpei**	**12.82**	**23**	ePn	**Pn**	**12 06 19.6**	**+1.1**
COEN	**Coen**	**13.38**	**228**	ePn	**Pn**	**12 06 26.8**	**+1.0**
CTAO	**Charters Tower**	**16.45**	**204**	eP	**P**	**12 07 05.2**	**-0.5**
	3.4nm,0.9s						
EIDS	**Eidsvold**	**20.30**	**186**	eP	**P**	**12 07 44.6**	**-3.2**
	7.7nm,1.0s						
DZM	**Mont Dzumac**	**21.11**	**144**	P	**P**	**12 07 56.3**	**-0.3**
	26nm,0.5s,baz=285,slow=6.0,SNR=14						
DZM	**Mont Dzumac**	**21.11**	**144**	eP	**P**	**12 07 56.2**	**-0.4**
	35nm,0.5s						
FAKI	**Fak Fak**	**21.18**	**275**	eP	**P**	**12 07 57.0**	**-0.4**
	62nm,1.2s						
ONTNC	**Ouen Toro**	**21.30**	**145**	eP	**P**	**12 07 56.6**	**-1.9**
MARNC	**Mare, Loyalty**	**21.63**	**140**	eP	**P**	**12 08 02.6**	**+0.5**
	150nm,1.2s						
PINNC	**Pines Island,**	**22.11**	**143**	eP	**P**	**12 08 06.5**	**-0.6**
	144nm,1.5s						
WC3	**Warramunga Arr**	**23.68**	**230**	eP	**P**	**12 08 22.8**	**+0.1**
	12nm,1.3s						
WRAB	**Tennant Creek**	**23.68**	**230**	eP	**P**	**12 08 23.8**	**+1.2**
	11nm,1.3s						
WB2	**Warramunga Arr**	**23.69**	**230**	eP	**P**	**12 08 24.1**	**+1.4**
	8.1nm,0.5s						
WR1	**Warramunga Arr**	**23.70**	**230**	eP	**P**	**12 08 23.8**	**+1.0**
WRA	**Warramunga Arr**	**23.70**	**230**	P	**P**	**12 08 23.8**	**+1.0**
	3.9nm,0.6s,baz=59,slow=10,SNR=40						
ARMA	**Armidale**	**25.26**	**184**	eP	**P**	**12 08 37.8**	**+0.9**
	13nm,0.9s						
ASAR	**Alice Springs**	**26.34**	**224**	P	**P**	**12 08 47.9**	**+1.2**
	0.6nm,0.5s,baz=56,slow=8.9,SNR=12						
STKA	**Stephens Creek**	**28.86**	**201**	eP	**P**	**12 09 08.9**	**-0.1**
	1.4nm,1.1s						
BBOO	**Buckleboo**	**31.98**	**208**	eP	**P**	**12 09 36.7**	**+0.2**
	30nm,1.4s						
FORT	**Forrest**	**34.94**	**220**	eP	**P**	**12 10 03.8**	**+1.5**
	18nm,0.8s						
OUZ	**Omahuta**	**35.33**	**151**	eP	**P**	**12 10 05.6**	**0.0**
	20nm,1.3s						
PSAD2	**Pilbara Seismi**	**36.30**	**240**	eP	**P**	**12 10 12.7**	**-1.4**
	11nm,1.3s						
PSAC2	**Pilbara Seismi**	**36.34**	**240**	eP	**P**	**12 10 13.9**	**-0.5**
	15nm,1.4s						
PSAD1	**Pilbara Seismi**	**36.36**	**240**	eP	**P**	**12 10 14.4**	**-0.1**
	18nm,1.2s						
PSAC1	**Pilbara Seismi**	**36.40**	**240**	eP	**P**	**12 10 11.8**	**-3.1**
	12nm,1.0s						
PSAB1	**Pilbara Seismi**	**36.41**	**240**	eP	**P**	**12 10 13.6**	**-1.3**
	8.3nm,1.0s						
PSAC3	**Pilbara Seismi**	**36.42**	**240**	eP	**P**	**12 10 12.6**	**-2.5**
	19nm,1.4s						
PSAD3	**Pilbara Seismi**	**36.47**	**240**	eP	**P**	**12 10 15.6**	**+0.1**
	6.5nm,1.0s						
HIZ	**Hauiti**	**38.58**	**153**	eP	**P**	**12 10 34.1**	**+1.0**
	50nm,1.1s						
JAGI	**Jajag, Banyuwa**	**39.08**	**263**	eP	**P**	**12 10 36.1**	**-1.5**
	56nm,1.1s						
URZ	**Urewera**	**39.46**	**150**	P	**P**	**12 10 40.7**	**+0.4**
	2.1nm,0.3s,baz=316,slow=1.2,SNR=6.8						
URZ	**Urewera**	**39.46**	**150**	eP	**P**	**12 10 40.6**	**+0.2**
	13nm,1.3s						
BKZ	**Black Stump Fm**	**39.87**	**152**	eP	**P**	**12 10 44.0**	**+0.1**
	24nm,1.3s						
THZ	**Tophouse**	**40.47**	**157**	eP	**P**	**12 10 48.6**	**-0.2**
	36nm,0.9s						
SNZO	**South Karori**	**40.81**	**155**	eP	**P**	**12 10 51.4**	**-0.1**
	165nm,1.4s						
BFZ	**Birch Farm**	**40.97**	**153**	eP	**P**	**12 10 52.8**	**0.0**
	21nm,0.8s						
LTZ	**Lake Taylor**	**41.12**	**159**	eP	**P**	**12 10 54.6**	**+0.5**
	18nm,0.8s						
KHZ	**Kahutara**	**41.28**	**157**	eP	**P**	**12 10 55.4**	**+0.1**
	22nm,1.1s						
GIRL	**Giralia**	**41.63**	**241**	eP	**P**	**12 10 58.3**	**-0.2**
	86nm,1.4s						
LBZ	**Lake Benmore**	**41.84**	**162**	eP	**P**	**12 10 59.8**	**-0.1**
	64nm,1.5s						
WKZ	**Wanaka**	**41.90**	**163**	eP	**P**	**12 10 56.7**	**-3.6**
	109nm,1.4s						
MQZ	**McQueen's Vall**	**42.06**	**159**	eP	**P**	**12 11 00.9**	**-0.8**
	81nm,1.4s						
MORW	**Morawa**	**42.62**	**232**	eP	**P**	**12 11 03.5**	**-3.0**
	12nm,1.3s						
PETK	**Petropavlovsk-**	**58.08**	**3**	P	**P**	**12 13 02.3**	**-0.2**
	1.3nm,0.6s,baz=176,slow=8.1,SNR=3.8						
PEA1	**Petropavlovsk-**	**58.09**	**3**	eP	**P**	**12 13 02.3**	**-0.2**
CM31	**Chiang Mai Arr**	**58.51**	**295**	eP	**P**	**12 13 04.9**	**-1.3**
	13nm,1.5s						
CMAR	**Chiang Mai Arr**	**58.51**	**295**	P	**P**	**12 13 07.8**	**+1.6**
	1.2nm,0.7s,baz=121,slow=6.2,SNR=6.9						
SONA0	**Songino Array**	**66.86**	**328**	eP	**P**	**12 14 02.6**	**+1.3**
SONM	**Songino Array**	**66.86**	**328**	P	**P**	**12 14 02.6**	**+1.3**
	0.3nm,0.5s,baz=145,slow=5.4,SNR=4.1						
VNDA	**Vanda**	**72.53**	**178**	P	**P**	**12 14 37.0**	**+1.6**
	2.9nm,0.6s,baz=326,slow=6.8,SNR=31						
SBA	**Scott Base**	**73.07**	**177**	eP	**P**	**12 14 41.5**	**+2.9**
	4.9nm,1.0s						
MK32	**Makanchi Array**	**80.91**	**319**	eP	**P**	**12 15 24.6**	**+1.4**
MKAR	**Makanchi Array**	**80.91**	**319**	P	**P**	**12 15 24.6**	**+1.4**
	0.6nm,0.6s,baz=97,slow=6.7,SNR=7.6						
MKAR				pP	**pP**	**12 15 42.4**	**-6.3**
	0.9nm,0.8s,baz=93,slow=6.7,SNR=4.9						
MAKZ	**Makanchi**	**81.12**	**319**	eP	**P**	**12 15 25.6**	**+1.4**
	1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**81.70**	**326**	P	**P**	**12 15 26.5**	**-0.6**
	1.1nm,0.4s,baz=113,slow=5.8,SNR=4.4						
ZALV				pP	**pP**	**12 15 47.0**	**-4.9**
	1.3nm,0.5s,baz=117,slow=5.0,SNR=2.0						
ZAA1	**Zalesovo Array**	**81.70**	**326**	eP	**P**	**12 15 26.5**	**-0.6**
ILAR	**Eielson Array**	**82.20**	**22**	P	**P**	**12 15 27.4**	**-2.1**
	0.7nm,0.8s,baz=245,slow=4.9,SNR=6.6						
ILB	**Eielson Array**	**82.20**	**22**	eP	**P**	**12 15 29.7**	**+0.2**
	3.7nm,1.5s						
KURK	**Kurchatov**	**84.34**	**322**	eP	**P**	**12 15 41.1**	**+0.3**
	2.6nm,0.8s						
QSPA	**South Pole Qui**	**84.88**	**180**	eP	**P**	**12 15 44.4**	**+1.0**
	10nm,0.9s						
MAW	**Mawson**	**85.53**	**203**	P	**P**	**12 15 47.6**	**+1.1**
	3.7nm,0.6s,baz=99,slow=6.3,SNR=19						
MAW	**Mawson**	**85.53**	**203**	eP	**P**	**12 15 48.0**	**+1.5**
	3.3nm,1.5s						
TORD	**Torodi Ar. Bea**	**150.94**	**288**	PKP	**PKPdf**	**12 22 57.0**	**+0.7**
	0.9nm,0.6s,baz=94,slow=2.8,SNR=7.7						
TORD				PKPbc	**PKiKP**	**12 23 02.4**	**-0.2**
	8.0nm,0.7s,baz=67,slow=2.7,SNR=37						
TORD				pPKPbc	**pPKPdf**	**12 23 21.4**	**-1.4**
	1.2nm,0.7s,baz=3.7,slow=6.0,SNR=3.1						

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*BJI **02** 12:05:12.6±0.0, 5.°04S×152.°39E, h38km, mb4.9/20, mB4.9/16, Ms4.9/4, Ms7 4.6/1*

*ISCJB **02** 12:05:15.3±0.2, 4.°92S±0.°03×152.°28E±0.°04, h55km, mb4.8/93, MS3.3/8, Error ellipse: s-maj=5.6km s-min=3.8km az=27.6*

*NEIC **02** 12:05:16.2±1.9, 4.°92S×152.°32E, h52km±3km, mb4.9/81, Error ellipse: s-maj=8.5km s-min=5.9km az=77.0*

*IDC **02** 12:05:19.1±3.4, 4.°88S×152.°29E, h70km±30km, mb4.2/19, mb1 4.3/21, mb1mx4.2/34, mbtmp4.5/21, ML3.7/1, MS3.3/9, Ms1 3.3/9, ms1mx3.3/15, Error ellipse: s-maj=19.5km s-min=12.3km az=75.0*

ISC 02 12:05:16.4±0.3, **4.°89S**±0.°04×**152.°32E**±0.°05, **h55km, n136, σ1.§42**/141, **mb4.9**/92, **MS3.3**/8, **1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.71**	**347**	ePn	**Pn**	**12 05 32.0**	**+1.4**
RABL				eSn	**Sn**	**12 05 44.0**	**+3.1**
MANU	**Manus Island**	**5.70**	**300**	ePn	Pn	12 06 43.4	+4.8
MANU				eSn	**Sn**	**12 07 42.0**	**-0.7**
PMG	**Port Moresby**	**6.81**	**228**	P	**Pn**	**12 06 56.9**	**+3.1**
	baz=50,slow=17,SNR=1.9						
PMG				S	**Sn**	**12 08 12.5**	**+2.5**
	12nm,0.3s,baz=317,slow=16,SNR=3.4						
PMG	**Port Moresby**	**6.81**	**228**	ePn	**Pn**	**12 06 52.8**	**-1.0**
PMG				eSn	**Sn**	**12 08 04.4**	**-5.6**
HNR	**Honiara**	**8.81**	**121**	LR	LR	12 10 54.5	
	comp=Z,229nm,20.5s,baz=267,slow=38						
HNR	**Honiara**	**8.81**	**121**	ePn	**Pn**	**12 07 20.1**	**-1.2**
HNR				eSn	**Sn**	**12 08 58.1**	**-1.1**
COEN	**Coen**	**12.75**	**224**	ePn	**Pn**	**12 08 13.5**	**-1.6**
COEN				eSn	**Sn**	**12 10 33.3**	**-2.2**
PATS	**Pohnpei**	**13.09**	**27**	ePn	**Pn**	**12 08 16.8**	**-3.0**
PATS				eSn	**Sn**	**12 10 38.6**	**-5.3**
CTA	**Charters Tower**	**16.22**	**201**	P	**P**	**12 09 04.1**	**+1.0**
	0.2nm,0.3s,baz=16,slow=12,SNR=6.9						
CTAO	**Charters Tower**	**16.22**	**201**	ePn	**Pn**	**12 09 00.7**	**-0.2**
	14nm,1.1s						
CTAO				eSn	**Sn**	**12 11 58.6**	**-1.4**
GUMO	**Guam**	**19.79**	**338**	eP	**P**	**12 09 40.6**	**-1.8**
	153nm,1.1s						
FAKI	**Fak Fak**	**20.12**	**275**	eP	**P**	**12 09 44.2**	**-1.9**
	100nm,1.4s						
EIDS	**Eidsvold**	**20.40**	**183**	eP	**P**	**12 09 48.6**	**-0.4**
	14nm,0.8s						
KWAJ	**Kwajalein Atol**	**20.43**	**48**	eP	**P**	**12 09 49.3**	**-0.1**
	55nm,0.8s						
SIJI	**Sorong**	**21.40**	**280**	P	**P**	**12 10 02.2**	**+2.4**
	11nm,0.5s,baz=140,slow=8.7,SNR=7.3						
DZM	**Mont Dzumac**	**21.88**	**143**	P	**P**	**12 10 07.6**	**+2.6**

	12nm,0.6s,baz=300,slow=8.6,SNR=5.6						
DZM				LR	LR	12 17 19.3	
	comp=Z,207nm,20.8s,baz=211,slow=33						
DZM	Mont Dzumac	21.88	143	eP	P	12 10 04.6	-0.4
	60nm,1.4s						
MTN	Manton Dam	22.36	248	eP	P	12 10 09.2	-1.0
	90nm,1.7s						
WC3	Warramunga Arr	23.02	228	eP	P	12 10 17.3	+0.3
	30nm,0.9s						
WRAB	Tennant Creek	23.02	228	eP	P	12 10 17.3	+0.3
	33nm,0.7s						
WB2	Warramunga Arr	23.02	228	eP	P	12 10 17.4	+0.4
	39nm,0.9s						
WR1	Warramunga Arr	23.03	228	eP	P	12 10 17.4	+0.3
WRA	Warramunga Arr	23.03	228	P	P	12 10 17.4	+0.3
	27nm,0.5s,baz=58,slow=10,SNR=27						
ARMA	Armidale	25.40	181	eP	P	12 10 41.4	+2.4
	51nm,1.5s						
TNTI	Ternate	25.55	282	eP	P	12 10 36.9	-3.6
	15nm,1.0s						
AS31	Alice Springs	25.76	222	eP	P	12 10 42.0	-0.3
	3.8nm,0.8s						
ASAR	Alice Springs	25.76	222	P	P	12 10 42.9	+0.6
	13nm,0.8s,baz=59,slow=9.3,SNR=23						
ASAR				LR	LR	12 21 34.3	
	comp=Z,34nm,18.2s,baz=79,slow=38						
STKA	Stephens Creek	28.67	199	P	P	12 11 08.2	0.0
	2.5nm,0.6s,baz=338,slow=20,SNR=6.4						
STKA				LR	LR	12 22 09.0	
	comp=Z,71nm,21.1s,baz=20,slow=35						
STKA	Stephens Creek	28.67	199	eP	P	12 11 08.4	+0.2
	11nm,1.9s						
BATI	Baumata	28.88	258	LR	LR	12 26 04.0	
	comp=Z,78nm,19.9s,baz=102,slow=43						
DAV	Davao City (W)	29.21	294	LR	LR	12 21 59.1	
	comp=Z,74nm,20.6s,baz=94,slow=34						
BBOO	Buckleboo	31.66	207	eP	P	12 11 34.6	0.0
	51nm,1.5s						
TOO	Toolangi	33.12	190	eP	P	12 11 49.2	+1.7
	54nm,1.6s						
FORT	Forrest	34.42	219	eP	P	12 11 58.9	+0.1
	24nm,0.7s						
PSAD2	Pilbara Seismi	35.49	239	eP	P	12 12 08.0	-0.2
	23nm,1.0s						
PSAC2	Pilbara Seismi	35.52	239	eP	P	12 12 08.2	-0.2
	20nm,0.8s						
PSAD1	Pilbara Seismi	35.54	239	eP	P	12 12 08.5	-0.1
	27nm,0.8s						
PSAB2	Pilbara Seismi	35.55	239	eP	P	12 12 06.2	-2.5
	26nm,0.9s						
PSAA3	Pilbara Seismi	35.57	239	eP	P	12 12 08.7	-0.1
	31nm,1.1s						
PSAA2	Pilbara Seismi	35.57	239	eP	P	12 12 08.7	-0.1
	42nm,1.3s						
PSA00	Pilbara Seismi	35.57	239	eP	P	12 12 08.2	-0.6
	37nm,1.2s						
PSAB3	Pilbara Seismi	35.57	239	eP	P	12 12 08.9	+0.1
	17nm,0.9s						
PSAA1	Pilbara Seismi	35.58	239	eP	P	12 12 08.9	0.0
	23nm,1.0s						
PSAC1	Pilbara Seismi	35.59	239	eP	P	12 12 09.0	0.0
	21nm,0.8s						
PSAB1	Pilbara Seismi	35.59	239	eP	P	12 12 09.1	+0.1
	22nm,0.9s						
PSAC3	Pilbara Seismi	35.61	239	eP	P	12 12 09.2	+0.1
	24nm,1.0s						
PSAD3	Pilbara Seismi	35.66	239	eP	P	12 12 09.8	+0.2
	22nm,0.8s						
URZ	Urewera	40.15	149	P	P	12 12 48.9	+1.7
	6.5nm,0.6s,baz=203,slow=1.8,SNR=6.1						
URZ	Urewera	40.15	149	eP	P	12 12 49.2	+2.0
	14nm,1.0s						
BKZ	Black Stump Fm	40.54	151	eP	P	12 12 49.0	-1.5
	51nm,1.6s						
GIRL	Giralia	40.81	241	eP	P	12 12 52.8	0.0
	320nm,1.5s						
KHZ	Kahutara	41.86	156	eP	P	12 13 02.1	+0.9
	41nm,1.4s						
MORW	Morawa	41.92	231	eP	P	12 13 02.1	+0.2
	15nm,0.9s						
JNU	Nakatsue	42.92	333	P	P	12 13 09.2	-0.8
	7.5nm,0.9s,baz=148,slow=19,SNR=3.2						
JNU	Nakatsue	42.92	333	eP	P	12 13 09.1	-0.9
WHZ	Wether Hill Ro	43.05	164	eP	P	12 13 10.6	-0.2
	64nm,0.7s						
ODZ	Otahua Downs	43.09	161	eP	P	12 13 12.4	+1.3
	102nm,1.7s						
MJAR	Matsushiro Arr	43.28	343	P	P	12 13 12.6	-0.2
	1.8nm,0.9s,baz=180,slow=7.2,SNR=5.5						
MJAR				LR	LR	12 29 17.0	
	comp=Z,38nm,21.6s,baz=35,slow=33						
MAJO	Matsushiro	43.28	343	eP	P	12 13 14.2	+1.5
	3.8nm,0.8s						
MJB9	Matsu-Tunnel	43.28	343	eP	P	12 13 14.5	+1.7
	4.6nm,1.0s						
CISI	Cisompet, Garu	44.31	264	eP	P	12 13 19.9	-1.6
	239nm,1.5s						
KSRS	Korea Array	47.87	334	P	P	12 13 50.7	+1.7
	1.8nm,0.8s,baz=144,slow=8.4,SNR=3.6						
KSRS				LR	LR	12 32 22.7	
	comp=Z,24nm,19.7s,baz=193,slow=34						
NJ2	Nanjing	48.61	321	eP	P	12 13 55.3	+0.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI	Kunming	56.64	304	P	P	12 14 57.3	+2.7
KMI				pP	pP	12 15 08.2	-1.5
KMI				sP	sP	12 15 12.8	-3.3
KMI				pmax	pmax		
	comp=Z,16nm,0.7s						
CM31	Chiang Mai Arr	57.48	295	eP	P	12 14 59.2	-1.2
CMAR	Chiang Mai Arr	57.48	295	P	P	12 15 02.6	+2.2
	3.3nm,0.8s,baz=116,slow=4.9,SNR=15						
PETK	Petropavlovsk-	57.96	4	P	P	12 15 04.2	+1.1
	2.1nm,0.7s,baz=159,slow=6.6,SNR=3.3						
PETK				LR	LR	12 36 34.8	
	comp=Z,28nm,19.4s,baz=179,slow=32						
PEA1	Petropavlovsk-	57.96	4	eP	P	12 15 04.2	+1.1
CD2	Chengdu	58.43	311	eP	P	12 15 05.9	-1.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	Hu-ho-hao-te	58.84	325	P	P	12 15 12.1	+2.4
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,21nm,6.6s						
LZH	Lanzhou	60.96	316	eP	P	12 15 26.7	+2.3
LZH				pP	pP	12 15 37.8	-1.9
LZH				sP	sP	12 15 41.3	-4.8
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
LZH				pmax	pmax		
	comp=Z,97nm,4.9s						
GTA	Gaotai	65.40	317	eP	P	12 15 49.6	-4.1
GTA				pP	pP	12 15 57.7	-11
GTA				sP	sP	12 16 01.6	-14
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONA0	Songino Array	66.14	328	eP	P	12 15 59.7	+1.4
SONM	Songino Array	66.14	328	P	P	12 15 59.7	+1.4
	comp=Z,0.9nm,0.8s,baz=131,slow=6.7,SNR=4.3						
VNDA	Vanda	72.76	178	P	P	12 16 39.7	+1.3
	comp=Z,2.7nm,0.8s,baz=324,slow=6.8,SNR=7.9						
VNDA	Vanda	72.76	178	eP	P	12 16 39.4	+1.0
	comp=Z,4.7nm,1.1s						
SBA	Scott Base	73.31	177	eP	P	12 16 43.8	+2.1
	comp=Z,9.1nm,1.5s						
BILL	Bilibino	73.42	5	eP	P	12 16 42.0	-0.5
	comp=Z,5.8nm,0.4s						
WMQ	Urumqi	75.48	318	eP	P	12 16 56.4	+1.4
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,50nm,5.1s						
CNPM	China Poot	78.00	26	eP	P	12 17 10.2	+1.4
	comp=Z,19nm,0.8s						
MK32	Makanchi Array	80.08	319	eP	P	12 17 21.7	+1.2
MKAR	Makanchi Array	80.08	319	P	P	12 17 21.7	+1.2
	comp=Z,1.9nm,0.6s,baz=100,slow=6.2,SNR=10						
KTH	Kantishna Hill	80.28	22	eP	P	12 17 21.1	-0.2
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	80.29	319	eP	P	12 17 21.6	0.0
	comp=Z,3.7nm,0.7s						
SML	Sawmill	80.40	24	eP	P	12 17 23.0	+1.1
	comp=Z,12nm,0.7s						
TRF	Thorofare Moun	80.46	23	eP	P	12 17 23.4	+1.0
	comp=Z,9.2nm,1.9s						
GLI	Glacier Island	80.47	26	eP	P	12 17 23.2	+1.0
	comp=Z,69nm,1.3s						
ZALV	Zalesovo Beam	80.96	326	P	P	12 17 25.8	+0.8
	comp=Z,2.6nm,0.6s,baz=109,slow=3.9,SNR=8.8						
ZAA1	Zalesovo Array	80.96	326	eP	P	12 17 25.8	+0.8
RND	Reindeer	80.99	23	eP	P	12 17 24.9	-0.1
	comp=Z,20nm,1.4s						
MCK	McKinley	81.13	23	eP	P	12 17 25.1	-0.7
	comp=Z,18nm,1.0s						
MLY	Manley	81.14	21	eP	P	12 17 26.8	+1.0
	comp=Z,6.9nm,0.8s						
BWN	Browne	81.15	22	eP	P	12 17 26.4	+0.6
	comp=Z,102nm,1.0s						
HMT	Hamilton	81.47	27	eP	P	12 17 27.9	+0.2
	comp=Z,37nm,1.0s						
WRH	Wood River Hil	81.82	22	eP	P	12 17 29.7	+0.3
	comp=Z,6.5nm,1.0s						
CCB	Clear Creek Bu	82.02	22	eP	P	12 17 30.3	0.0
	comp=Z,5.5nm,0.9s						
COLA	College	82.11	22	eP	P	12 17 31.9	+1.1
	comp=Z,10.0nm,0.8s						
ILAR	Eielson Array	82.42	22	P	P	12 17 32.2	-0.2
	comp=Z,4.5nm,0.8s,baz=251,slow=5.4,SNR=30						
ILB	Eielson Array	82.42	22	eP	P	12 17 33.0	+0.5
	comp=Z,5.0nm,0.8s						
KSH	Kashi	82.63	311	P	P	12 17 35.1	+0.8
KSH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RIDG	Independent Ri	82.73	24	eP	P	12 17 34.0	-0.2
	comp=Z,7.4nm,0.9s						
TOLK	Toolik Lake Re	83.45	18	eP	P	12 17 38.3	+0.6
	comp=Z,3.7nm,1.0s						
KURK	Kurchatov	83.54	322	eP	P	12 17 38.2	-0.4
	comp=Z,5.4nm,1.0s						
AAK	Ala-Archa	84.38	314	eP	P	12 17 42.6	-0.6
AAK				ePcP	PcP	12 17 46.7	-0.2
EGAK	Eagle	84.63	23	eP	P	12 17 43.8	0.0
	comp=Z,4.9nm,0.8s						
HYT	Haines Junctio	84.73	28	eP	P	12 17 45.6	+1.0
	comp=Z,9.4nm,0.8s						
QSPA	South Pole Qui	85.07	180	eP	P	12 17 46.3	0.0
	comp=Z,30nm,1.9s						
MAW	Mawson	85.31	203	P	P	12 17 47.3	+0.2
	comp=Z,6.0nm,0.7s,baz=112,slow=5.8,SNR=14						
MAW	Mawson	85.31	203	eP	P	12 17 47.4	+0.2
	comp=Z,1.9nm,0.8s						
EPYK	Eagle Plains	86.93	22	eP	P	12 17 56.6	+1.4
	comp=Z,12nm,0.8s						
DLBC	Dease Lake	87.70	31	eP	P	12 18 00.1	+0.9
	comp=Z,7.1nm,1.0s						
HUMO	Hull Mountain	89.39	47	eP	P	12 18 07.5	0.0
	comp=Z,6.8nm,1.0s						
K05A	Summer Lake	90.92	47	eP	P	12 18 13.9	-0.9
	comp=Z,5.4nm,0.8s						
PINE	Pine Mountain	90.99	46	eP	P	12 18 15.9	+0.8
	comp=Z,8.2nm,0.9s						
I07A	Izee	92.05	46	eP	P	12 18 19.0	-0.9
	comp=Z,4.2nm,0.8s						
NV01	Mina Array Sit	92.51	52	eP	P	12 18 24.0	+1.7
NVAR	Mina Array Bea	92.51	52	P	P	12 18 24.0	+1.7
	comp=Z,2.0nm,0.7s,baz=255,slow=6.4,SNR=19						
G08A	Pilot Rock	92.54	45	eP	P	12 18 20.8	-1.3
	comp=Z,4.4nm,1.1s						
NV11	Mina Array Sit	92.63	52	eP	P	12 18 22.3	-0.5
	comp=Z,0.5nm,1.4s						
J08A	Circle Bar Ran	92.74	47	eP	P	12 18 21.5	-1.6
	comp=Z,6.6nm,1.1s						
SYO	Syowa Base	93.43	199	⇑eP	P	12 18 26.6	+1.1
BMO	Blue Mountains	93.68	45	eP	P	12 18 27.8	+0.4
	comp=Z,2.8nm,0.8s						
F10A	Beach Ranch, E	93.79	44	eP	P	12 18 28.4	+0.6
	comp=Z,5.7nm,0.9s						
NEW	Newport	93.98	42	eP	P	12 18 28.9	+0.2
	comp=Z,3.7nm,1.0s						
PD31	Pinedale Array	99.26	48	eP	Pdif	12 18 52.5	-0.4
	comp=Z,10nm,1.9s						
PDAR	Pinedale Array	99.26	48	P	Pdif	12 18 53.5	+0.6
	comp=Z,1.0nm,0.6s,baz=254,slow=1.2,SNR=9.3						
VYHS	Vyhne	121.29	326	ePKP	PKPdf	12 24 02.1	-1.5
GEC2	GERESS Array S	123.88	328	ePKPdf	PKiKP	12 24 09.1	+0.2
GERES	GERESS Array B	123.88	328	PKP	PKiKP	12 24 09.2	+0.3
	comp=Z,0.8nm,0.5s,baz=67,slow=4.5,SNR=5.3						
LPAZ	La Paz	134.80	119	PKP	PKiKP	12 24 32.5	+0.2
	comp=Z,2.1nm,0.8s,baz=337,slow=3.5,SNR=8.4						
LPAZ	La Paz	134.80	119	ePKPdf	PKiKP	12 24 32.3	-0.1
PTGA	Pitinga	147.27	99	ePKPbc	PKPab	12 24 55.9	-1.0
TOA0	Torodi Ar. Sit	149.88	288	ePKPbc	PKiKP	12 25 01.6	-1.0
TORD	Torodi Ar. Bea	149.88	288	PKPbc	PKiKP	12 25 02.0	-0.6
	comp=Z,8.8nm,0.7s,baz=60,slow=3.1,SNR=28						
TOA1	Torodi Ar. Sit	149.88	288	ePKPbc	PKiKP	12 25 02.0	-0.6
BDFB	Brasilia	151.34	136	PKPbc	PKiKP	12 25 06.3	+0.6
	comp=Z,7.9nm,0.6s,baz=181,slow=2.9,SNR=10						

MAN 02 12:43:41.5, 5°28N×125°31E, h41^{km}, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.91	26	eP	Pn	12 43 58.9	+1.1
DDMP				eS	Sn	12 44 08.3	-1.5
SKMP	Bagumbayan, Su	1.45	328	eP	Pn	12 44 05.3	0.0
SKMP				eS	Sn	12 44 19.2	-3.8
MATI	Mati	1.91	30	eP	Pn	12 44 11.9	+0.4
MATI				eS	Sn	12 44 35.0	+0.8
CTBH	Cotabato--PC H	2.20	331	⇓iP	Pn	12 44 18.1	+2.5
CTBH				i S	Sn	12 44 40.8	-0.7
BUKP	Musuan	2.59	355	eP	Pn	12 44 22.3	+1.3
BUKP				eS	Sn	12 44 53.1	+1.7
PAGZ	Pagadian	3.19	323	eP	Pn	12 44 30.2	+1.1
PAGZ				eS	Sn	12 45 07.6	+1.6

IDC 02 12:54:26.8±1.9, 16°79S×178°22W, h0^{km}, mb3.7/5, mb1 4.2/5, mb1mx3.8/22, mbtmp3.7/5, MS3.0/1, Ms1 3.0/1, ms1mx2.5/23, Error ellipse: s-maj=131.7km s-min=28.5km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	17.99	107	LR	LR	13 03 54.2	
	comp=Z,40nm,18.5s,baz=182,slow=32						
ASAR	Alice Springs	45.27	253	P	P	13 02 46.5	0.0
	1.1nm,0.6s,baz=89,slow=8.4,SNR=19						
NVAR	Mina Array Bea	78.50	44	P	P	13 06 31.4	+1.2
	0.4nm,0.7s,baz=229,slow=8.2,SNR=4.6						
ILAR	Eielson Array	84.76	13	P	P	13 07 02.0	-0.5
	0.3nm,0.4s,baz=221,slow=5.1,SNR=5.7						
TXAR	Lajitas Array	85.25	58	P	P	13 07 05.8	-0.1
	0.6nm,0.6s,baz=218,slow=5.9,SNR=6.7						
PDAR	Pinedale Array	86.42	43	P	P	13 07 10.8	-0.8
	0.3nm,0.6s,baz=241,slow=5.0,SNR=3.7						

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*IDC **02** 13:07:19.4±3.4, 26°96N×54°59E, h0^{km}, mb3.6/3, mb1 3.7/3, mb1mx3.3/36, mbtmp3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/43, Error ellipse: s-maj=81.8km s-min=31.3km az=151.0*

*ISCJB **02** 13:07:21.5±0.6, 27°31N±0°06×55°04E±0°06, h10^{km}, mb3.9/4, Error ellipse: s-maj=9.0km s-min=7.0km az=136.1*

*TEH **02** 13:07:22.1, 27°29N×55°05E, h25^{km}, ML3.6*

ISC 02 13:07:21.7±0.9, 27°27N±0°06×55°02E±0°05, h10^{km}, n22, σ1ˢ68/21, mb3.7/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	1.04	83	ePg	Pg	13 07 41.1	-0.5
GENO				IAMB	IAmb	13 08 09.0	
	comp=Z,0.0nm,0.4s						
NIAN	Nian	1.64	80	ePn	Pn	13 07 51.1	+0.5
NIAN				IAMB	IAmb	13 08 20.8	
	comp=Z,0.0nm,0.5s						
LMD1	Lamerd	1.65	273	ePn	Pn	13 07 51.4	+0.7
JHRM	Jahrom	1.77	314	ePn	Pn	13 07 53.8	+1.4
NAZ	Nazwa, Dubai	2.35	166	ePn	Pg	13 08 07.5	+0.8
UOSS	Minazif	2.55	155	ePn	Pn	13 08 03.4	+0.3
FAQ	Al Faqa, Dubai	2.57	168	ePn	Pn	13 08 04.3	+0.9
NGRK	Negar Kerman	2.80	32	IAMB	IAmb	13 08 54.0	
	comp=Z,0.0nm,0.4s						
NGRK				ePn	Pn	13 08 06.6	-0.3
IPAR	Pars	3.09	326	ePn	Pn	13 08 11.1	+0.3
IPAR				IAMB	IAmb	13 09 13.3	
	comp=N,3µm,1.1s						
TVBK	TV Kerman	3.11	29	ePn	Pn	13 08 10.8	-0.3
TVBK				IAMB	IAmb	13 09 05.2	
	comp=Z,0.0nm,0.4s						
CHMN	Cheshme madani	3.40	40	ePn	Pn	13 08 15.5	+0.4
CHMN				IAMB	IAmb	13 18 48.1	
	comp=Z,0.0nm,0.3s						
IMEH	Mehriz	4.12	355	ePn	Pn	13 08 25.3	+0.4
IBAF	Bafgh	4.33	6	ePn	Pn	13 08 27.1	-0.6
ISAD	Sadrabad	4.77	346	ePn	Pn	13 08 34.5	+0.7
ISAD				IAMB	IAmb	13 08 39.0	
	comp=Z,477nm,0.4s						
IRAM	Ramesheh	5.07	334	ePn	Pn	13 08 38.1	+0.2
IZEF	Zefreh	6.07	338	ePn	Pn	13 08 50.3	-1.4
IKLH	Kolahrood	6.72	335	ePn	Pn	13 09 02.7	+2.1
GEYT	Alibeck	10.94	13	LR	LR	13 15 08.7	
	comp=Z,49nm,18.1s,baz=165,slow=41						
BRTR	Keskin Array B	21.66	310	P	P	13 12 10.6	-2.0
	comp=Z,1.2nm,0.7s,baz=126,slow=13,SNR=5.0						
BVAR	Borovoye Array	28.16	20	P	P	13 13 17.7	+3.8
	comp=Z,0.4nm,0.6s,baz=194,slow=5.2,SNR=3.7						
ZALV	Zalesovo Beam	34.49	31	P	P	13 14 12.2	+2.6
	comp=Z,0.7nm,0.4s,baz=264,slow=8.4,SNR=3.9						
TORD	Torodi Ar. Bea	51.62	265	P	P	13 16 24.9	-3.8
	comp=Z,6.2nm,0.3s,baz=74,slow=6.8,SNR=4.3						

BEO 02 13:14:03.7±0.4, 44°44N×21°97E, h0^{km}, ML1.6/7, 3C-2D, Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUBS	Kucevo	0.21	263	ePg	Pg	13 14 05.6	-2.2
KUBS				eSg	Sg	13 14 11.2	+0.6
MDVR	Moldovita	0.39	332	⇑iP	Pg	13 14 10.9	-0.3
MDVR	Moldovita	0.39	332	S	Sg	13 14 17.0	+0.8
HERR	Herculane	0.54	35	⇓iP	Pg	13 14 14.1	0.0
HERR	Herculane	0.54	35	S	Sg	13 14 22.5	+1.3
BOVS	Bovan	0.83	194	ePg	Pg	13 14 18.0	-1.5
BOVS				eSg	Sg	13 14 30.0	-0.2
SRE	Strehaia	0.91	75	S	Sb	13 14 34.7	-0.3
GRUS	Gruza	1.06	239	ePg	Pg	13 14 23.2	-0.8
GRUS				eSg	Sg	13 14 37.3	-0.4
GZR	Gura Zlata	1.11	31	⇓iP	Pg	13 14 24.9	-0.1
GZR	Gura Zlata	1.11	31	S	Sb	13 14 40.6	-0.3
TRUS	Trudelj	1.14	260	ePg	Pg	13 14 24.9	-0.7
TRUS				eSg	Sg	13 14 40.2	-0.2
BZS	Buzias	1.20	348	ePg	Pg	13 14 25.8	-1.0
BZS				eSg	Sg	13 14 42.2	-0.2
BZS	Buzias	1.20	348	⇑iP	Pg	13 14 26.2	-0.6
BZS	Buzias	1.20	348	S	Sg	13 14 42.8	+0.4
ZAPS	Zavoj	1.26	157	ePg	Pg	13 14 26.1	-1.7
ZAPS				eSg	Sg	13 14 43.8	-0.3
DIVS	Divibare	1.46	257	ePg	Pn	13 14 29.7	-1.7
DIVS				eSg	Sg	13 14 49.9	-0.8
IVAS	Ivanjica	1.57	237	ePg	Pn	13 14 32.0	-0.9
IVAS				eSg	Sn	13 14 53.3	-0.7
SIRR	Siria	1.84	353	⇑iP	Pn	13 14 37.2	+0.6
SIRR	Siria	1.84	353	S	Sn	13 15 00.1	-0.5

WEL 02 13:17:50.4, 45°S±4°×16°8E±°, h5^{km}, M3.6/16, ML3.9/18, MLv3.6/16, Error ellipse: s-maj=0.0km s-min=0.0km az=0.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.20	58	P	Pg	13 17 55.9	+1.6
MSZ				S	Sg	13 17 59.6	+2.6
MLZ	Mavora Lakes	0.66	152	P	Pb	13 18 04.3	-0.1
MLZ				S	Sb	13 18 14.8	+0.9
DCZ	Deep Cove	0.78	209	P	Pg	13 18 05.0	-0.3
DCZ				S	Sg	13 18 15.3	-0.2
WKZ	Wanaka	0.95	93	P	Pb	13 18 09.5	+0.2
WKZ				S	Sb	13 18 23.0	+0.8
JCZ	Jackson Bay	1.06	48	P	Pg	13 18 10.6	-0.1
JCZ				S	Sb	13 18 25.2	-0.2
WHZ	Wether Hill Ro	1.13	171	P	Pg	13 18 11.7	-0.3
WHZ				S	Sb	13 18 27.6	+0.3
EAZ	Earnscleugh	1.24	112	P	Pn	13 18 14.3	+0.1
PYZ	Puysegur Point	1.55	207	P	Pg	13 18 20.3	+0.2
TUZ	Tuapeka	1.80	131	P	Pb	13 18 23.1	-0.7
LBZ	Lake Benmore	1.83	78	P	Pn	13 18 22.9	+0.4
FOZ	Fox Glacier	1.98	52	P	Pn	13 18 23.3	-1.1
SYZ	Scrubby Hill	2.03	150	P	Pn	13 18 26.0	+0.8
APZ	The Paps	2.06	174	P	Pn	13 18 25.4	-0.2
ODZ	Otahua Downs	2.12	98	P	Pn	13 18 27.2	+0.8
HHSZ	Highcliff Hill	2.33	119	P	Pn	13 18 30.8	+1.4
RPZ	Rata Peaks	2.65	67	P	Pn	13 18 33.3	-0.4
WVZ	Waitaha Valley	2.79	53	P	Pn	13 18 34.0	-1.6
INZ	Inchbonnie	3.41	54	P	Pn	13 18 42.8	-1.4
MQZ	McQueen’s Vall	3.73	75	P	Pn	13 18 48.0	-0.5
CRLZ	Canterbury Las	3.75	73	P	Pn	13 18 47.8	-1.0
AKCZ	Akaroa Harbour	3.86	78	P	Pn	13 18 49.8	-0.5
AMCZ	Amberley	3.93	68	P	Pn	13 18 50.0	-1.2
DSZ	Denniston Nort	4.27	46	P	Pn	13 18 53.9	-2.2
THZ	Tophouse	4.86	53	P	Pn	13 19 02.8	-1.3
QRZ	Quartz Range	5.32	44	P	Pn	13 19 08.3	-2.2
NNZ	Nelson	5.49	52	P	Pn	13 19 11.2	-1.5
TUWZ	Tuamarina	5.67	56	P	Pn	13 19 15.7	+0.4
TCW	Tory Channel	6.01	56	P	Pn	13 19 20.6	+0.7
DUWZ	D’Urville Isla	6.07	51	P	Pn	13 19 19.0	-1.8

JSO 02 13:22:11.0±0.9, 31°N±8°×3°5E±°, h10^{km}, M3.1/7, Mjma3.0/7, ML3.6/1, MLv3.0/7, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZIT	Kziot	0.28	297	P	Pg	13 22 16.8	+0.1
AMAZ	Amatzia	0.78	14	P	Pn	13 22 29.0	+1.0
LISJ	El Lisan	0.82	56	P	Pg	13 22 23.5	-3.3
JDRJ	Daraweish	0.84	93	P	Pn	13 22 31.0	+1.9
WALJ	Wala	1.24	51	P	Pn	13 22 31.5	-2.9
SWQJ	Swaqa	1.26	68	P	Pn	13 22 34.4	-0.4
ASF	Jabal al Asfar	2.34	53	P	Pn	13 22 49.6	0.0

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*AAE **02** 13:33:05.9±13.0, 1°23N×29°56E, h15^{km}±402^{km}*

*ISCJB **02** 13:33:16.1±1.4, 1°57N±0°03×30°89E±0°03, h13^{km}±9^{km}, mb5.0/212, MS4.6/36, Error ellipse: s-maj=5.1km s-min=4.2km az=149.8*

*IDC **02** 13:33:16.3±0.4, 1°59N×30°89E, h0^{km}, mb4.7/34, mb1 4.7/36, mb1mx4.7/46, mbtmp4.7/36, ML4.8/3, MS4.5/20, Ms1 4.5/20, ms1mx4.4/44, Error ellipse: s-maj=15.1km s-min=9.5km az=101.0*

*MOS **02** 13:33:17.8±1.0, 1°60N×30°90E, h24^{km}, mb5.2/112, MS4.4/7, Error ellipse: s-maj=7.6km s-min=3.1km az=96.1*

*NEIC **02** 13:33:17.4±1.6, 1°61N×30°91E, h10^{km}±2^{km}, mb5.2/69, Error ellipse: s-maj=12.1km s-min=8.5km az=114.0*

NEIC Felt [II] at Kampala. Also felt at Arua, Fort Portal, Gulu, Kireka, Masaka and Wakiso.

*BJI **02** 13:33:18.8±0.0, 2°13N×31°10E, h10^{km}, mb5.0/42, mB5.1/26, Ms5.5/12, Ms7 5.3/12*

*GCMT **02** 13:33:18.4±0.2, 1°70N±0°02×30°83E±0°02, h23^{km}, MW5.0/67, Moment Tensor Solution. s52,c66; s67,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.43±.20; M$_{\theta\theta}$2.85±.14; M$_{\phi\phi}$0.57±.17; M$_{r\theta}$0.96±.22; M$_{\theta\phi}$3.09±.12; M$_{\phi r}$-0.99±.27; Best double couple: M$_0$4.58300×10^{16} NP1:ϕ_s260.00000°, δ53.00000°, λ-54.00000°. NP2: ϕ_s30.00000°, δ50.00000°, λ-128.00000°. Principal axes: T 5.0130, Plg2.0000°, Azm325.0000°; N -0.8610, Plg28.0000°, Azm56.0000°; P -4.1530, Plg62.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*EAF **02** 13:33:18.0±0.4, 1°82N×30°75E, h80^{km}±999^{km}*

ISC 02 13:33:18.4±0.6, 1°52N±0°03×30°96E±0°04, h17^{km}±3^{km}, h18^{km}:pP-P, n503, σ1ˢ55/527, mb5.0/214, MS4.5/37, 27C-19D, Uganda

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	2.12	186	Pn	Pn	13 33 54.5	+1.4
	1µm,0.3s,baz=360,slow=24,SNR=512						
MBAR				Sn	Sn	13 34 20.1	+1.0
	16µm,0.3s,baz=0.0,slow=20,SNR=51						
MBAR				LR	LR	13 34 56.1	
	comp=Z,20µm,19.2s,baz=2.5,slow=46						
MBAR	Mbarara	2.12	186	d iP	Pn	13 33 54.1	+1.0
MBAR	Mbarara	2.12	186	⇑eP	Pn	13 33 54.5	+1.4
MBAR				⇑eS	Sn	13 34 20.3	+1.2

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KMBO  Kilima Mbogo       6.82 113  i P    Pn     13 35 02.4 +4.4
KMBO  Kilima Mbogo       6.82 113    Pn   Pn     13 34 59.8 +1.9
      2.8nm,0.3s,baz=284,slow=15,SNR=52
KMBO                                 Sn   Sn     13 36 18.2 +2.9
      18nm,0.3s,baz=247,slow=20,SNR=4.6
KMBO                                 Lg   Lg     13 36 50.8
      31nm,0.3s,baz=282,slow=11,SNR=5.2
KMBO                                 LR   LR     13 37 56.9
      comp=Z,8µm,19.7s,baz=288,slow=41
KMBO  Kilima Mbogo       6.82 113  ePn    Pn     13 34 59.3 +1.4
KMBO                               eSn    Sn     13 36 18.2 +2.9
KMBO  Kilima Mbogo       6.82 113  i Pn   Pn     13 35 01.6 +3.7
      SNR=41
KMBO  Kilima Mbogo       6.82 113  eP     Pn     13 34 59.3 +1.4
KMBO                               e             13 36 18.2
KMBO  Kilima Mbogo       6.82 113  i P    Pn     13 35 02.4 +4.4
KMBO  Kilima Mbogo       6.82 113  eP     Pn     13 34 59.5 +1.5
KMBO                               eS     Sn     13 36 16.0 +0.7
KOND  Kondoa             8.00 143  i P    Pn     13 35 14.0 -0.1
KOND                               i S    Sn     13 36 38.7 -5.6
KOND  Kondoa             8.00 143  i P    Pn     13 35 14.0 -0.1
KOND                               i S    Sn     13 36 38.7 -5.6
KIBA  Kibaya             8.80 140  i P    Pn     13 35 24.3 -0.7
KIBA                               i S    Sn     13 36 56.9 -7.0
KIBA  Kibaya             8.80 140  i P    Pn     13 35 24.3 -0.7
KIBA                               i S    Sn     13 36 56.9 -7.0
FURI  Furi              10.62  46  eP     Pn     13 35 52.0 +1.9
FURI                               eS     Sn     13 37 43.0 -5.9
AAE   Adis Abeba        10.77  46  eP     Pn     13 35 55.1 +2.8
AAE                                eS     Sn     13 37 45.2 -7.5
ANKE  Ethiopia-Afar     11.86  47  eP     Pn     13 36 07.5 +0.3
ATD   Arta Tunnel       15.43  49    Lg   Lg     13 41 28.5
      0.5nm,0.3s,baz=287,slow=20,SNR=2.9
ATD                                  LR   LR     13 43 08.0
      comp=Z,5µm,18.6s,baz=232,slow=38
ATD   Arta Tunnel       15.43  49  ePn    Pn     13 36 55.5  0.0
      28nm,1.1s
ATD   Arta Tunnel       15.43  49  eP     Pn     13 36 52.5 -3.0
ATD                                eS     S      13 40 15.6  +13
LSZ   Lusaka            16.91 189  i P    Pn     13 37 14.9 +0.4
LSZ   Lusaka            16.91 189    Pn   Pn     13 37 13.7 -0.8
      0.8nm,0.3s,baz=16,slow=10,SNR=26
LSZ                                  Sn   Sn     13 40 13.3 -8.9
      2.3nm,0.3s,baz=321,slow=18,SNR=3.1
LSZ                                  Lg   Lg     13 42 03.1
      3.4nm,0.3s,baz=116,slow=22,SNR=9.1
LSZ                                  LR   LR     13 43 14.5
      comp=Z,634nm,21.2s,baz=12,slow=35
LSZ   Lusaka            16.91 189  ePn    Pn     13 37 13.1 -1.4
      76nm,1.4s
LSZ                                eSn    Sn     13 40 13.3 -8.9
LSZ   Lusaka            16.91 189  i P    Pn     13 37 14.9 +0.4
DAMY  Dhamar            18.56  45  eP     P      13 37 31.6 -3.3
      37nm,1.3s
MATP  Matopo            21.94 186  i P    P      13 38 11.9 +0.6
MATP                               i S    S      13 42 15.1 +1.9
MATP  Matopo            21.94 186    P    P      13 38 11.4 +0.1
      40nm,1.0s,baz=5.8,slow=11,SNR=78
MATP                                 Lg   Lg     13 44 34.1
      40nm,0.9s,baz=270,slow=22,SNR=5.3
MATP                                 LR   LR     13 46 60.0
      comp=Z,3µm,19.0s,baz=9.5,slow=37
MATP  Matopo            21.94 186  i P    P      13 38 11.9 +0.6
MATP                               i S    S      13 42 15.1 +1.9
TSUM  Tsumeb            24.42 212  i P    P      13 38 37.4 +0.9
TSUM  Tsumeb            24.42 212    P    P      13 38 37.2 +0.7
      47nm,1.0s,baz=22,slow=9.2,SNR=37
TSUM                                 S    S      13 43 16.0  +20
      6.5nm,0.7s,baz=17,slow=14,SNR=2.2
TSUM                                 Lg   Lg     13 45 51.2
      15nm,0.7s,baz=126,slow=18,SNR=2.2
TSUM  Tsumeb            24.42 212  eP     P      13 38 36.5  0.0
      68nm,1.0s
TSUM  Tsumeb            24.42 212  i P    P      13 38 37.4 +0.9
MSEY  Mahe Island       25.26 104  i P    P      13 38 48.8 +4.8
OPO   Ambohidratompo    25.56 142    P    P      13 38 50.8 +4.0
      19nm,1.0s,baz=307,slow=9.8,SNR=15
OPO                                  LR   LR     13 49 02.2
      comp=Z,475nm,18.4s,baz=324,slow=37
ABPO  Ambohimpanom      25.92 143  eP     P      13 38 51.0 +0.9
      43nm,1.1s
ABPO  Ambohimpanom      25.92 143  eP     P      13 38 51.0 +0.9
ABPO                                 pmax pmax
      comp=Z,43nm,1.1s
RAYN  Ar Rayn           26.03  32  eP     P      13 38 50.4 -0.4
      comp=Z,25nm,1.5s
RAYN  Ar Rayn           26.03  32  i P    P      13 38 52.9 +2.1
      SNR=5.9
RAYN  Ar Rayn           26.03  32  eP     P      13 38 50.4 -0.4
RAYN                                 pmax pmax
      comp=Z,25nm,1.5s
LBTB  Lobatse           26.88 191    P    P      13 38 59.3 +0.7
      comp=Z,19nm,0.8s,baz=7.3,slow=12,SNR=11
LBTB                                 Lg   Lg     13 47 12.2
      comp=Z,22nm,0.9s,baz=108,slow=13,SNR=3.3
LBTB                                 LR   LR     13 50 12.7
      comp=Z,1µm,18.4s,baz=16,slow=38
LBTB  Lobatse           26.88 191  eP     P      13 38 58.1 -0.5
      comp=Z,22nm,0.8s
LBTB  Lobatse           26.88 191  eP     P      13 38 58.1 -0.5
LBTB                                 pmax pmax
      comp=Z,22nm,0.8s
EIL   Elat              28.26   7    LR   LR     13 50 19.3
      comp=Z,980nm,18.4s,baz=228,slow=36
BOSA  Boshof            30.45 190  i P    P      13 39 31.0 +0.5
BOSA  Boshof            30.45 190    P    P      13 39 31.2 +0.8
      comp=Z,6.8nm,1.0s,baz=357,slow=11,SNR=6.6
BOSA                                 Lg   Lg     13 49 00.6
      comp=Z,12nm,0.9s,baz=301,slow=19,SNR=2.4
BOSA                                 LR   LR     13 52 02.7
      comp=Z,2µm,18.8s,baz=14,slow=37
BOSA  Boshof            30.45 190  eP     P      13 39 30.9 +0.5
      comp=Z,55nm,1.8s
BOSA  Boshof            30.45 190  eP     P      13 39 30.9 +0.5
BOSA                                 pmax pmax
      comp=Z,55nm,1.8s
BOSA  Boshof            30.45 190  i P    P      13 39 31.0 +0.5
ASF   Jabal al Asfar    31.00  10    P    P      13 39 33.9 -1.3
      comp=Z,4.5nm,1.2s,baz=171,slow=13,SNR=2.9
TOA0  Torodi Ar. Sit    31.19 293  eP     P      13 39 35.8 -1.2
      comp=Z,21nm,0.8s
TORD  Torodi Ar. Bea    31.19 293    P    P      13 39 36.0 -1.0
      comp=Z,6.5nm,0.5s,baz=100,slow=7.9,SNR=3.5
TORD                                 Lg   Lg     13 49 26.4
      comp=Z,16nm,0.4s,baz=124,slow=28,SNR=5.7
TORD                                 LR   LR     13 51 09.0
      comp=Z,658nm,18.4s,baz=25,slow=34
TOA1  Torodi Ar. Sit    31.20 293  eP     P      13 39 36.0 -1.0
TAM   Tamanrasset       32.52 312  eP     P      13 39 47.4 -1.3
      comp=Z,19nm,1.4s
TAM   Tamanrasset       32.52 312  eP     P      13 39 47.4 -1.3
TAM                                  pmax pmax
      comp=Z,19nm,1.4s
ALNE  Al Ain            32.83  45    P    P      13 39 53.7 +2.4
CSS   Mathiatis         33.35   4  eP     P      13 39 55.2 -0.5
      comp=Z,64nm,1.3s
ASHO  Ashiyiah          33.45  44  i P    P      13 39 58.6 +1.9
      SNR=7.4
HATD  Hatta, Dubai      33.59  44  i P    P      13 39 59.8 +1.9
      SNR=6.3
UOSS  Minazif           33.71  44  eP     P      13 39 59.3 +0.3
      comp=Z,82nm,1.6s
UOSS  Minazif           33.71  44    P    P      13 40 00.4 +1.5
IDI   Anoyia            34.07 351    P    P      13 40 01.6 -0.4
      comp=Z,9.0nm,0.7s,baz=181,slow=15,SNR=3.7
SHME  Shamm             34.38  43  i P    P      13 40 06.3 +1.4
      SNR=7.5
KIC   Kosan Boka        35.93 279  eP     P      13 40 18.0 -0.3
      comp=Z,199nm,1.7s
DBIC  Dimbokro          36.08 279    P    P      13 40 18.7 -0.9
      comp=Z,7.0nm,0.4s,baz=87,slow=8.9,SNR=20
DBIC                                 Lg   Lg     13 52 05.5
      comp=Z,14nm,1.1s,baz=327,slow=18,SNR=2.6
DBIC                                 LR   LR     13 55 36.0
      comp=Z,583nm,18.1s,baz=90,slow=37
DBIC  Dimbokro          36.08 279  eP     P      13 40 18.6 -0.9
      comp=Z,20nm,0.8s
ISP   Isparta           36.13 359  i P    P      13 40 20.7 +0.9
ISP                                  pmax pmax
      comp=Z,21nm,1.0s
LIC   Lamto             36.20 278  eP     P      13 40 19.8 -0.8
      comp=Z,141nm,1.8s
TIC   Toumodi           36.23 279  eP     P      13 40 19.1 -1.8
ITM   Ithomi            36.45 348  eP     P      13 40 22.0 -0.5
      comp=Z,141nm,1.8s
BR101 Keskin Array S    38.11   3  eP     P      13 40 38.0 +1.4
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BR101                              ePcP   PcP    13 42 52.0 +0.5
BR131 Keskin Array S    38.11   3  eP     P      13 40 37.4 +0.8
      comp=Z,33nm,1.3s
BRTR  Keskin Array B    38.11   3    P    P      13 40 38.0 +1.4
      comp=Z,12nm,1.1s,baz=178,slow=8.7,SNR=30
BRTR                                 PcP  PcP    13 42 52.0 +0.5
      comp=Z,5.9nm,0.8s,baz=179,slow=5.0,SNR=5.9
AGG   Agios Georgios    38.15 349  eP     P      13 40 36.7 -0.2
      comp=Z,25nm,0.9s
AGG   Agios Georgios    38.15 349  eP     P      13 40 36.7 -0.2
AGG                                  pmax pmax
      comp=Z,25nm,0.9s
IGT   Igoumenitsa       39.06 347    P    P      13 40 45.9 +1.5
CEL   Celeste           39.09 341  eP     P      13 40 44.0 -0.8
      comp=Z,25nm,0.8s
LIT   Litokhoron        39.17 350  eP     P      13 40 44.6 -0.8
      comp=Z,14nm,1.0s
LIT   Litokhoron        39.17 350  eP     P      13 40 44.6 -0.8
LIT                                  pmax pmax
      comp=Z,14nm,1.0s
ALN   Alexandroupoli    39.45 354  eP     P      13 40 48.1 +0.4
      comp=Z,35nm,1.7s
ALN   Alexandroupoli    39.45 354  eP     P      13 40 48.1 +0.4
ALN                                  pmax pmax
      comp=Z,35nm,1.7s
KEST  Kesra             39.52 332    P    P      13 40 49.5 +1.1
      comp=Z,4.4nm,0.9s,baz=149,slow=8.6,SNR=4.1
KEST                                 LR   LR     13 58 40.1
      comp=Z,777nm,19.1s,baz=126,slow=39
KEST  Kesra             39.52 332  eP     P      13 40 49.5 +1.1
      comp=Z,52nm,1.8s
THE   Thessaloniki      39.61 350    P    P      13 40 49.5 +0.6
THE                                  pmax pmax
      comp=Z,24nm,0.8s
TIP   Timpagrande       39.67 343  eP     P      13 40 49.5 -0.1
      comp=Z,90nm,2.0s
TIP   Timpagrande       39.67 343⇓iP     P      13 40 50.3 +0.7
SOH   Sokhos            39.73 351    P    P      13 40 50.8 +0.7
SOH                                  pmax pmax
      comp=Z,15nm,1.4s
SRS   Serrai            39.98 351    P    P      13 40 51.6 -0.5
SRS                                  pmax pmax
      comp=Z,21nm,1.5s
GRG   Griva             40.02 350    P    P      13 40 52.9 +0.5
GRG                                  pmax pmax
      comp=Z,9.0nm,1.1s
KNT   Kendrikon         40.13 351    P    P      13 40 54.4 +1.0
KNT                                  pmax pmax
      comp=Z,24nm,1.9s
VAY   Valandovo         40.34 350  i P    P      13 40 56.9 +1.8
GNI   Garni             40.44  16    P    P      13 40 57.7 +1.6
      comp=Z,4.9nm,0.4s,baz=137,slow=6.1,SNR=3.2
GNI   Garni             40.44  16⇑eP     P      13 40 54.5 -1.7
GNI                                  pmax pmax
      comp=Z,14nm,0.9s
OHR   Ohrid             40.47 348  i P    P      13 40 57.4 +1.2
STIP  Stip              40.77 350  i P    P      13 40 60.0 +1.3
PLD   Plovdiv           40.80 353    P    P      13 40 59.6 +0.8
TIR   Tirane            40.90 347⇑iP     P      13 41 01.1 +1.4
TIR   Tirane            40.90 347    P    P      13 41 00.7 +1.0
TIR                                  pmax pmax
      comp=Z,69nm,0.9s
MATE  Matera            41.04 343⇑iP     P      13 41 01.3 +0.5
SKO   Skopje            41.18 349  i P    P      13 41 03.2 +1.2
VTS   Vitosha           41.50 351  eP     P      13 41 03.7 -1.1
      comp=Z,21nm,1.7s
VTS   Vitosha           41.50 351  eP     P      13 41 03.7 -1.1
VTS                                  pmax pmax
      comp=Z,21nm,1.7s
PDG   Podgorica         42.07 347⇑iP     P      13 41 10.6 +1.4
TTG   Podgorica         42.07 347  eP     P      13 41 09.6 +0.3
      comp=Z,44nm,1.3s
TTG   Podgorica         42.07 347  eP     P      13 41 09.6 +0.3
TTG                                  pmax pmax
      comp=Z,44nm,1.3s
AKT   Akhty             42.56  19  eP     P      13 41 15.5 +2.0
AKT                                eS     S      13 47 35.0 -0.5
AKT                                  pmax pmax
      comp=Z,49nm,0.9s
SOC   Sochi             42.61   9  eP     P      13 41 12.0 -1.6
SOC                                ePPP   PPP    13 43 21.3
SOC                                eS     S      13 47 35.5 -0.3
SOC                                eSSS   SSS    13 51 17.5
SOC                                  MLR  MLR
      comp=Z,387nm,13.0s
ZEI   Tsey              42.70  14  eP     P      13 41 14.7 +0.1
ZEI                                  pmax pmax
      comp=Z,40nm,1.1s
TLB   Topalu            42.97 357⇑iP     P      13 41 19.4 +2.9
NCK   Nalchik           43.29  13⇑eP     P      13 41 21.0 +1.8
NCK                                  pmax pmax
      comp=Z,19nm,1.0s
SIM   Simferopol'       43.34   3  eP     P      13 41 19.8 +0.2
SIM                                  S    S      13 47 50.0 +3.5
SIM                                  pmax pmax
      comp=Z,21nm,1.3s
KBZ   Khabaz            43.36  13    P    P      13 41 15.5 -4.2
      comp=Z,1.6nm,0.3s,baz=197,slow=22,SNR=5.3
KBZ                                  LR   LR     14 00 22.5
      comp=Z,428nm,18.3s,baz=188,slow=38
ANN   Anapa             43.48   7  eP     P      13 41 20.8 +0.1
ANN                                e*PP   pP     13 41 25.0 -1.3
ANN                                  pmax pmax
      comp=Z,260nm,2.0s
KIV   Kislovodsk        43.53  12  eP     P      13 41 21.4 +0.2
KIV                                  pmax pmax
      comp=Z,36nm,1.1s
KIV                                  MLR  MLR
      comp=Z,446nm,16.0s
CFR   Carcaliu          43.55 357⇑iP     P      13 41 22.2 +1.0
CFR   Carcaliu          43.55 357    P    P      13 41 21.7 +0.5
CFR                                  pmax pmax
      comp=Z,27nm,1.7s
ISR   Istrita           43.60 355    P    P      13 41 24.3 +2.6
ISR                                  pmax pmax
      comp=Z,71nm,1.3s
MAK   Makhachkala       43.84  18  eP     P      13 41 19.5 -4.1
MAK                                eS     S      13 47 49.0 -4.8
MAK                                  pmax pmax
      comp=Z,424nm,1.6s
MAK                                  MLR  MLR
      comp=Z,337nm,14.0s
MDVR  Moldovita         43.85 350⇑iP     P      13 41 24.2 +0.4
GEYT  Alibeck           43.99  31    P    P      13 41 25.2 +0.2
      comp=Z,3.2nm,0.9s,baz=248,slow=4.0,SNR=4.9
GEYT                                 LR   LR     14 00 55.6
      comp=Z,921nm,18.9s,baz=220,slow=38
BISRR Bisoca            44.01 356⇑iP     P      13 41 27.0 +2.0
MLR   Muntele Rosu      44.02 355  eP     P      13 41 25.3 +0.1
      comp=Z,110nm,1.8s
MLR   Muntele Rosu      44.02 355⇑iP     P      13 41 26.2 +1.0
MLR   Muntele Rosu      44.02 355  eP     P      13 41 25.3 +0.1
MLR                                  pmax pmax
      comp=Z,110nm,1.8s
ARR   Arges             44.02 354⇑iP     P      13 41 25.8 +0.6
VOIR                    44.05 354⇑iP     P      13 41 25.9 +0.5
VOIR                    44.05 354    P    P      13 41 25.5 +0.1
VOIR                                 pmax pmax
      comp=Z,16nm,1.8s
BEO   Beograd           44.10 349    P    P      13 41 25.8 +0.2
GZR   Gura Zlata        44.29 352⇑iP     P      13 41 28.0 +0.7
PLOR  Plostina          44.32 356⇑iP     P      13 41 28.5 +1.1
VRI   Vrincioaia        44.33 356⇑iP     P      13 41 28.6 +1.1
VRI   Vrincioaia        44.33 356    P    P      13 41 28.0 +0.5
VRI                                  pmax pmax
      comp=Z,31nm,1.8s
GOF   Gofitskoye        44.66  12⇓iP     P      13 41 31.0 +0.9
GOF                                  pmax pmax
      comp=Z,48nm,0.6s
BZS   Buzias            44.68 351    P    P      13 41 30.7 +0.4
BZS                                  pmax pmax
      comp=Z,7.0nm,1.5s
SIRR  Siria             45.31 351⇓iP     P      13 41 36.7 +1.4
KIS   Kishinev          45.34 358  eP     P      13 41 55.0  +19
PGF   Pioggiola         45.35 337    P    P      13 41 35.4 -0.4
PGF                                  pmax pmax
      comp=Z,20nm,1.2s
AMBH  Ambrzfalva        45.54 350⇓eP     P      13 41 39.1 +2.0
IAS   Iasi              45.59 357    P    P      13 41 37.5  0.0
MDT   Midelt            45.66 317    P    P      13 41 39.7 +1.3
      comp=Z,5.4nm,0.9s,baz=128,slow=7.2,SNR=6.0
DRGR                    45.67 352⇑iP     P      13 41 39.4 +1.2
DRGR                    45.67 352    P    P      13 41 39.3 +1.1
DRGR                                 pmax pmax
      comp=Z,50nm,1.6s
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MORH  Mrgy, Hungar      45.81 348  eP     P      13 41 38.1 -1.1
BURAR Bucovina Array    46.19 355⇑iP     P      13 41 44.3 +1.9
BUR08 Bucovina Ar. S    46.22 355  eP     P      13 41 43.4 +0.8
      comp=Z,84nm,1.5s
BEHE  Becsehely         46.46 346⇓eP     P      13 41 45.1 +0.7
TIH   Tihany            46.62 348  eP     P      13 41 48.1 +2.5
BUD   Budapest          46.95 349⇓eP     P      13 41 49.1 +0.9
TRPA  Tarpa             47.00 352  eP     P      13 41 49.1 +0.5
OBKA  Obir              47.05 345  eP     P      13 41 49.9 +0.7
      comp=Z,13nm,1.1s,SNR=6.3
SOKA  Soboth            47.08 345  eP     P      13 41 50.2 +0.8
      comp=Z,12nm,1.2s
FRF   La Foret Royal    47.13 336    P    P      13 41 48.8 -0.9
FRF                                  pmax pmax
      comp=Z,25nm,1.2s
PSZ   Piszkesteto       47.20 350  eP     P      13 41 50.5 +0.2
      comp=Z,105nm,1.4s
PSZ   Piszkesteto       47.20 350⇑iP     P      13 41 50.8 +0.5
PSZ   Piszkesteto       47.20 350  eP     P      13 41 50.5 +0.2
PSZ                                  pmax pmax
      comp=Z,105nm,1.4s
PSZ   Piszkesteto       47.20 350  eP     P      13 41 51.1 +0.8
MYKA  Terra Mystica     47.41 344  i P    P      13 41 52.7 +0.8
      comp=Z,5.3nm,1.0s
ARSA  Arzberg           47.49 346  eP     P      13 41 53.4 +0.9
      comp=Z,23nm,1.2s,SNR=9.3
UZH   Uzhgorod          47.53 352c iP     P      13 41 53.4 +0.8
UZH                                i             13 42 07.0
UZH                                eS     S      13 48 45.3 -1.5
UZH                                i SP          13 48 52.7
SOP   Sopron            47.65 347⇑eP     P      13 41 50.1 -3.6
KOLS  Kolonicke sedl    47.83 352  eP     P      13 41 56.4 +1.4
KOLS                                 pmax pmax
      comp=Z,41nm,1.5s
KOLS  Kolonicke sedl    47.83 352  eP     P      13 41 56.4 +1.4
ABTA  Abfaltersbach     47.84 343  eP     P      13 41 55.8 +0.5
      comp=Z,10nm,1.0s,SNR=6.9
KBA   Koelnbreinsper    47.91 344  eP     P      13 41 56.2 +0.3
      comp=Z,21nm,1.2s,SNR=15
KBA   Koelnbreinsper    47.91 344    P    P      13 41 56.2 +0.3
KBA                                  pmax pmax
      comp=Z,24nm,1.6s
VYHS  Vyhne             47.95 349  eP     P      13 41 56.5 +0.5
VYHS                                 pmax pmax
      comp=Z,38nm,1.3s
VYHS  Vyhne             47.95 349  eP     P      13 41 56.5 +0.5
ZST   Bratislava        48.02 348  eP     P      13 41 55.9 -0.6
ZST   Bratislava        48.02 348  eP     P      13 41 55.9 -0.6
CONA  Conrad Observa    48.05 346  eP     P      13 41 57.3 +0.4
      comp=Z,14nm,1.3s,SNR=11
MBDF  Montbardon        48.05 337  eP     P      13 41 56.6 -0.4
MBDF                                 pmax pmax
      comp=Z,20nm,1.0s
MODS  Modra-Piesok      48.15 348  eP     P      13 41 57.0 -0.5
MODS                                 pmax pmax
      comp=Z,106nm,1.6s
MODS  Modra-Piesok      48.15 348  eP     P      13 41 57.0 -0.5
BNI   Bardonecchia      48.36 337  eP     P      13 41 58.6 -0.8
      comp=Z,74nm,1.7s
BNI   Bardonecchia      48.36 337  eP     P      13 41 58.6 -0.8
BNI                                  pmax pmax
      comp=Z,74nm,1.7s
MOA   Molln             48.37 345  eP     P      13 41 59.5 +0.3
      comp=Z,23nm,1.0s,SNR=15
FUORN Ofenpass-Fuorn    48.42 341  eP     P      13 41 59.0 -1.0
      comp=Z,52nm,1.8s
LANS  Liptovska Anna    48.47 350  eP     P      13 42 01.0 +1.0
LANS  Liptovska Anna    48.47 350  eP     P      13 42 01.0 +1.0
LVV   L'vov             48.49 354  eP     P      13 41 58.7 -1.4
JAVC  Velka Javorina    48.53 348  eP     P      13 42 01.2 +0.7
ORIF  Oris-en-Rattie    48.56 336  eP     P      13 42 02.4 +1.5
ORIF                                 pmax pmax
      comp=Z,12nm,1.5s
WTTA  Wattenberg        48.57 343  eP     P      13 42 01.1 +0.1
      comp=Z,16nm,1.1s
NIE   Niedzica          48.59 351  eP     P      13 42 01.6 +0.7
TUE   Stuetta           48.60 340  eP     P      13 42 00.4 -0.9
      comp=Z,25nm,1.1s
FETA  Feichten          48.63 342  eP     P      13 42 01.4 -0.1
      comp=Z,10nm,1.0s,SNR=7.9
WATA  Walderalm         48.65 343  eP     P      13 42 00.8 -0.8
      comp=Z,2.9nm,0.5s
SQTA  Sankt Quirin      48.66 342  eP     P      13 42 01.4 -0.2
      comp=Z,9.0nm,0.8s
DAVOX Davos/Dischmat    48.69 341    P    P      13 42 01.6 -0.3
      comp=Z,8.5nm,0.8s,baz=122,slow=14,SNR=9.0
LPG   La Plagne         48.70 337  eP     P      13 42 00.8 -1.4
LPG                                  pmax pmax
      comp=Z,19nm,1.0s
LPL   La Plagne         48.73 337  eP     P      13 42 00.9 -1.4
LPL                                  pmax pmax
      comp=Z,10.0nm,0.8s
MOTA  Moosalm           48.80 342  eP     P      13 42 02.0 -0.7
      comp=Z,5.1nm,0.6s
MTLF  Montolieu         48.90 332  eP     P      13 42 02.3 -1.1
MTLF                                 pmax pmax
      comp=Z,18nm,1.5s
KRUC  Moravsky          48.99 347    P    P      13 42 03.7 -0.3
KRUC                                 pmax pmax
      comp=Z,36nm,1.5s
KRUC  Moravsky          48.99 347  eP     P      13 42 03.4 -0.6
VIVF  Saint-Julien-l    49.01 335  eP     P      13 42 03.6 -0.7
VIVF                                 pmax pmax
      comp=Z,24nm,1.7s
AKASG Malin Array Be    49.03 359    P    P      13 42 03.7 -0.5
      comp=Z,3.5nm,0.6s,baz=182,slow=6.5,SNR=21
AKASG                                PcP  PcP    13 43 28.0 +0.1
      comp=Z,2.1nm,0.5s,baz=179,slow=3.7,SNR=7.8
AKBB  Malin Array Si    49.03 359  eP     P      13 42 03.1 -1.1
      comp=Z,63nm,1.5s
AKBB                               ePcP   PcP    13 43 28.0 +0.1
AKBB  Malin Array Si    49.03 359  eP     P      13 42 03.1 -1.1
AKBB                               e             13 43 28.0
AKBB                                 pmax pmax
      comp=Z,63nm,1.5s
RETA  Reutte            49.03 342  eP     P      13 42 03.6 -0.8
      comp=Z,15nm,0.9s,SNR=5.9
DAVA  Damuels           49.14 341  eP     P      13 42 04.5 -0.8
      comp=Z,23nm,0.8s,SNR=13
VRAC  Vranov            49.18 348⇑iP     P      13 42 05.6 +0.1
VRAC  Vranov            49.18 348    P    P      13 42 05.3 -0.2
VRAC                                 pmax pmax
      comp=Z,36nm,1.4s
VRAC  Vranov            49.18 348  eP     P      13 42 05.1 -0.4
SENIN Lac Senin/Sane    49.23 338  eP     P      13 42 04.2 -1.9
      comp=Z,58nm,1.9s
SSB   Saint Sauveur     49.41 336  eP     P      13 42 05.8 -1.4
      comp=Z,19nm,1.3s
SSB   Saint Sauveur     49.41 336    P    P      13 42 08.0 +0.7
SSB                                  pmax pmax
      comp=Z,13nm,1.1s
TREC  Trest             49.41 347  eP     P      13 42 06.9 -0.4
TREC                               e             13 42 14.8
TREC                                 MLR  MLR
      comp=Z,600nm,17.7s
TREC  Trest             49.41 347  eP     P      13 42 06.9 -0.4
TREC                               ex     x      13 42 14.8
TREC                                 AMS  AMS    14 06 00.0
      comp=Z,600nm,17.7s
MORC  Moravsky Berou    49.43 349  eP     P      13 42 05.8 -1.6
      comp=Z,46nm,1.3s
MORC  Moravsky Berou    49.43 349⇑iP     P      13 42 07.2 -0.2
MORC  Moravsky Berou    49.43 349    P    P      13 42 07.4  0.0
MORC                                 pmax pmax
      comp=Z,28nm,1.8s
MORC  Moravsky Berou    49.43 349  eP     P      13 42 07.2 -0.2
GEC2  GERESS Array S    49.43 345  eP     P      13 42 05.3 -2.2
      comp=Z,28nm,1.1s
GEC2  GERESS Array S    49.43 345  eP     P      13 42 05.3 -2.2
GEC2                                 pmax pmax
      comp=Z,28nm,1.1s
GERES GERESS Array B    49.43 345    P    P      13 42 07.3 -0.2
      comp=Z,7.1nm,0.8s,baz=157,slow=7.2,SNR=45
GERES                                LR   LR     14 04 23.2
      comp=Z,191nm,20.0s,baz=153,slow=38
OJC   Ojcow             49.45 351  eP     P      13 41 59.1 -8.4
OJC   Ojcow             49.45 351  eP     P      13 42 06.2 -1.3
      comp=Z,45nm,1.4s
OJC   Ojcow             49.45 351  eP     P      13 42 06.2 -1.3
OJC                                  pmax pmax
      comp=Z,45nm,1.4s
ESDC  Sonseca Array     49.51 324    P    P      13 42 08.0 -0.2
      comp=Z,5.6nm,0.9s,baz=132,slow=7.1,SNR=31
ESDC                                 PcP  PcP    13 43 29.6 -0.5
      comp=Z,5.0nm,1.0s,baz=125,slow=4.3,SNR=5.3
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ESLA	Sonseca Array	49.51	324	eP	P	13 42 06.9	-1.3
	comp=Z,17nm,1.2s						
EPF	Esparros	49.56	331	eP	P	13 42 07.7	-0.8
EPF				pmax	pmax		
	comp=Z,14nm,1.2s						
KHC	Kasperske Hory	49.73	345	eP	P	13 42 08.3	-1.3
	comp=Z,15nm,1.0s						
KHC	Kasperske Hory	49.73	345	eP	P	13 42 08.3	-1.3
KHC				pmax	pmax		
	comp=Z,15nm,1.0s						
KHC	Kasperske Hory	49.73	345	eP	P	13 42 09.4	-0.3
KHC				ex	x	13 42 17.5	
KHC				eSS	SS	13 53 07.3	+17
KHC				AMS	AMS	14 08 20.0	
	comp=Z,400nm,15.0s						
VORD	Divnogorie	49.77	7	eP	P	13 42 09.5	-0.4
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
ETSF	Etsaut	49.91	330	eP	P	13 42 10.5	-0.7
ETSF				pmax	pmax		
	comp=Z,18nm,1.1s						
WET	Wettzell	49.92	345	P	P	13 42 10.9	-0.2
WET				pmax	pmax		
	comp=Z,15nm,1.8s						
VSR	Storozhevoye	50.01	7	eP	P	13 42 10.6	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GOPC	GO Pecny, Ondr	50.16	346	eSS	SS	13 53 13.2	+16
GOPC				AMS	AMS	14 06 30.0	
	comp=Z,400nm,15.9s						
CAF	Calviac	50.19	333	eP	P	13 42 12.7	-0.6
CAF				pmax	pmax		
	comp=Z,11nm,0.9s						
DPC	Dobruska-Polom	50.22	348	eP	P	13 42 13.3	-0.1
DPC				e		13 42 21.3	
DPC				MLR	MLR		
	comp=Z,300nm,11.8s						
DPC	Dobruska-Polom	50.22	348	eP	P	13 42 13.3	-0.1
DPC				ex	x	13 42 21.3	
DPC				eSS	SS	13 53 13.2	+15
DPC				AMS	AMS	14 08 50.0	
	comp=Z,300nm,11.8s						
PRU	Pruhonice	50.28	346	P	P	13 42 15.0	+1.2
PRU				pmax	pmax		
	comp=Z,3.0nm,1.6s						
PRU	Pruhonice	50.28	346	eSS	SS	13 53 17.1	+18
PRU				AMS	AMS	14 06 40.0	
	comp=Z,400nm,18.1s						
SJPF	Ste Jean	50.40	330	eP	P	13 42 14.4	-0.5
SJPF				pmax	pmax		
	comp=Z,18nm,1.0s						
UPC	Upice	50.44	348	eP	P	13 42 15.0	0.0
UPC				MLR	MLR		
	comp=Z,400nm,17.9s						
UPC	Upice	50.44	348	eP	P	13 42 15.0	0.0
UPC				ex	x	13 42 23.0	
UPC				eSS	SS	13 53 30.7	+29
UPC				AMS	AMS	14 08 10.0	
	comp=Z,400nm,17.9s						
OSTC	Ostas	50.44	348	eP	P	13 42 14.8	-0.2
OSTC				ex	x	13 42 22.9	
OSTC				AMS	AMS	14 08 10.0	
	comp=Z,400nm,16.6s						
BFO	Black Forest	50.56	341	eP	P	13 42 14.8	-1.2
	comp=Z,29nm,1.4s						
BFO	Black Forest	50.56	341	eP	P	13 42 14.8	-1.2
BFO				pmax	pmax		
	comp=Z,29nm,1.4s						
HINF	Hinteralfeld	50.62	339	eP	P	13 42 15.2	-1.3
HINF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSP	Ksiaz	50.70	348	eP	P	13 42 16.2	-0.7
KSP	Ksiaz	50.70	348	P	P	13 42 17.5	+0.6
KSP				pmax	pmax		
	comp=Z,16nm,0.4s						
RJF	Les Rejaudoux	50.73	333	eP	P	13 42 16.8	-0.5
RJF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PVCC	Panska Ves	50.78	347	eP	P	13 42 18.3	+0.7
PVCC				MLR	MLR		
	comp=Z,300nm,17.0s						
PVCC	Panska Ves	50.78	347	eP	P	13 42 18.3	+0.7
PVCC				AMS	AMS	14 06 50.0	
	comp=Z,300nm,17.0s						
SMF	Signal de Mont	50.80	336	eP	P	13 42 16.8	-1.0
SMF				pmax	pmax		
	comp=Z,18nm,1.0s						
LFF	La Frestale	50.80	333	eP	P	13 42 17.4	-0.4
LFF				pmax	pmax		
	comp=Z,19nm,0.8s						
CHGR	Chuyangaron	50.84	39	eP	P	13 42 15.3	-3.1
	comp=Z,43nm,0.8s						
NIL	Nilore	50.85	46	eP	P	13 42 19.1	+0.6
	comp=Z,22nm,0.8s						
NIL	Nilore	50.85	46	eP	P	13 42 19.1	+0.6
NIL				pmax	pmax		
	comp=Z,22nm,0.8s						
ECH	Echery	50.86	340	eP	P	13 42 15.3	-2.9
	comp=Z,19nm,1.4s						
ECH	Echery	50.86	340	P	P	13 42 18.6	+0.4
ECH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HAU	Haudompre	50.97	339	eP	P	13 42 18.4	-0.7
HAU				pmax	pmax		
	comp=Z,23nm,1.2s						
MESJ	Messejana	50.98	320	eP	P	13 42 18.0	-1.3
MESJ				AMS	AMS	14 07 22.0	
	comp=Z,456nm,17.1s						
MESJ	Messejana	50.98	320	eP	P	13 42 18.0	-1.3
CDF	Champ du Feu	50.98	340	eP	P	13 42 17.9	-1.4
CDF				pmax	pmax		
	comp=Z,23nm,1.3s						
NKC	Novy Kostel	51.03	345	eP	P	13 42 19.5	0.0
NKC				MLR	MLR		
	comp=Z,400nm,15.3s						
NKC	Novy Kostel	51.03	345	eP	P	13 42 19.5	0.0
NKC				AMS	AMS	14 10 40.0	
	comp=Z,400nm,15.3s						
AVF	Avril sur Loir	51.12	336	eP	P	13 42 19.2	-0.9
AVF				pmax	pmax		
	comp=Z,22nm,0.9s						
BGF	Bois d'Agland	51.14	335	eP	P	13 42 19.9	-0.5
BGF				pmax	pmax		
	comp=Z,18nm,1.2s						
TCF	Toulx Ste Croi	51.19	335	eP	P	13 42 20.6	-0.2
TCF				pmax	pmax		
	comp=Z,34nm,1.2s						
SSF	Saint Saulge	51.27	336	eP	P	13 42 20.0	-1.3
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LOR	Lormes	51.30	337	eP	P	13 42 21.3	-0.3
LOR				pmax	pmax		
	comp=Z,11nm,1.4s						
PNCL	Nicolau / Gran	51.34	320	eP	P	13 42 22.0	0.0
	comp=Z,50nm,1.8s						
LPSR	Galich'ya Gora	51.34	6	eP	P	13 42 20.0	-1.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PMRV	Marv??o	51.41	322	eP	P	13 42 22.0	-0.5
	comp=Z,31nm,1.6s						
PMRV	Marv??o	51.41	322	eLQ	LQ	14 01 39.1	
PMRV				eLR	LR	14 02 58.0	
	comp=Z,393nm,18.0s						
MOX	Moxa	51.63	344	P	P	13 42 24.4	+0.5
MOX				pmax	pmax		
	comp=Z,7.0nm,1.6s						
PCBR	Castelo Branco	51.71	322	eP	P	13 42 24.1	-0.6
	comp=Z,27nm,1.7s						
GAR	Garm	51.78	39	eP	P	13 42 24.7	-0.7
	comp=Z,89nm,1.2s						
GAR	Garm	51.78	39	eP	P	13 42 24.7	-0.7
GAR				pmax	pmax		
	comp=Z,89nm,1.2s						
CLL	Collm	51.88	346	eP	P	13 42 24.0	-1.8
CLL				i		13 42 28.8	
CLL				i		13 43 37.7	
CLL				pmax	pmax		
	comp=Z,23nm,1.6s						
CLL				MLR	MLR		
	comp=Z,300nm,20.0s						
CLL	Collm	51.88	346	eP	P	13 42 24.0	-1.8
	comp=Z,23nm,1.6s						
CLL				i pP	pP	13 42 28.8	-2.7
CLL				i (sP)	sP	13 42 30.8	-2.9
CLL				i PcP	PcP	13 43 37.7	-0.7
	comp=Z,13nm,1.4s						
CLL				ePP	PP	13 44 30.0	+6.2
CLL				eS	S	13 49 48.0	+0.4
CLL				eSS	SS	13 53 24.0	-0.6
CLL				Lm	MLR	14 07 00.0	
	comp=Z,300nm,20.0s						
MTE	Manteigas	52.09	323	eP	P	13 42 27.3	-0.4
	comp=Z,35nm,1.6s						
MTE	Manteigas	52.09	323	eLQ	LQ	14 02 25.2	
MTE				eLR	LR	14 04 58.6	
	comp=Z,2µm,18.0s						
TNS	Taunus Mts	52.17	342	P	P	13 42 28.4	+0.3
TNS				pmax	pmax		
	comp=Z,20nm,1.2s						
MVO	Moncorvo	52.26	324	eP	P	13 42 29.2	+0.3
	comp=Z,34nm,1.7s						
MVO	Moncorvo	52.26	324	eLQ	LQ	14 02 15.4	
MVO				eLR	LR	14 03 32.7	
	comp=Z,1µm,18.0s						
MFF	Saint Martin d	52.47	333	eP	P	13 42 29.4	-0.9
MFF				pmax	pmax		
	comp=Z,12nm,1.0s						
PBRG	Braganca	52.50	325	eP	P	13 42 29.8	-0.8
	comp=Z,22nm,1.7s						
SUW	Suwalki	52.72	354	eP	P	13 42 31.8	-0.1
SUW	Suwalki	52.72	354	eP	P	13 42 31.0	-0.9
	comp=Z,198nm,1.2s						
SUW	Suwalki	52.72	354	eP	P	13 42 31.0	-0.9
SUW				pmax	pmax		
	comp=Z,198nm,1.2s						
POLO	Lamas de Olo	52.84	324	eP	P	13 42 33.1	-0.2
	comp=Z,20nm,1.7s						
MICGM	Minsk	52.88	358	e	P	13 42 33.0	-0.1
MICGM				eLR	LR	14 41 26.0	
MNK	Minsk	52.88	358	eP	P	13 42 33.0	-0.1
GIVF	Givet	53.27	339	eP	P	13 42 34.9	-1.2
GIVF				pmax	pmax		
	comp=Z,14nm,0.9s						
MEM	Membach	53.29	340	P	P	13 42 43.9	+7.6
BCLA	Clavier	53.37	340	P	P	13 42 36.0	-0.9
BGES	Gesves	53.42	340	P	P	13 42 36.4	-0.8
BAIF	Baives	53.46	339	eP	P	13 42 36.1	-1.4
BAIF				pmax	pmax		
	comp=Z,4.0nm,0.4s						
PGAV	Gavieira, Arco	53.49	324	eLQ	LQ	14 03 39.7	
PGAV				eLR	LR	14 04 21.8	
	comp=Z,2µm,16.0s						
OBN	Obninsk	53.62	4	deP	P	13 42 38.3	-0.3
OBN				i		13 42 45.1	
OBN				eS	S	13 50 04.0	-7.3
OBN				pmax	pmax		
	comp=Z,32nm,1.7s						
OBN				MLR	MLR		
	comp=Z,107nm,16.0s						
ABKAR	Akbulak array	53.65	23	eP	P	13 42 38.6	-0.3
	comp=Z,34nm,1.6s						
IDID	Didziasalis	53.74	357	eP	P	13 42 38.9	-0.6
IDID				IAmb	IAmb	13 42 49.2	
	comp=Z,11nm,1.0s						
IIGN	Ignalina	53.80	357	eP	P	13 42 39.4	-0.6
IIGN				IAmb	IAmb	13 42 49.7	
	comp=Z,17nm,0.9s						
AKTO	Aktyubinsk	53.88	21	P	P	13 42 41.2	+0.6
	comp=Z,17nm,0.9s,baz=216,slow=8.3,SNR=38						
LDF	La Druitiere	53.98	335	eP	P	13 42 40.2	-1.2
LDF				pmax	pmax		
	comp=Z,30nm,1.1s						
ISAL	Salakas	54.03	357	eP	P	13 42 41.0	-0.6
GRR	Gorron	54.14	334	eP	P	13 42 41.3	-1.2
GRR				pmax	pmax		
	comp=Z,48nm,1.4s						
IZAR	Zarasai	54.20	357	eP	P	13 42 42.2	-0.6
IZAR				IAmb	IAmb	13 42 52.4	
	comp=Z,17nm,0.9s						
FLN	La Foliniere	54.27	335	eP	P	13 42 42.0	-1.4
FLN				pmax	pmax		
	comp=Z,18nm,1.2s						
MOS	Moscow	54.32	5	eP	P	13 42 42.7	-1.0
MOS				pmax	pmax		
	comp=Z,300nm,2.3s						
MOS				pmax	pmax		
	comp=Z,108nm,1.5s						
KK31	Karatay Array	54.38	35	eP	P	13 42 44.6	+0.2
	comp=Z,36nm,1.1s						
KK31	Karatay Array	54.38	35	eP	P	13 42 44.6	+0.2
KK31				pmax	pmax		
	comp=Z,36nm,1.1s						
KKAR	Karatay Array	54.38	35	eP	P	13 42 44.7	+0.3
	comp=Z,36nm,1.1s						
KKAR	Karatay Array	54.38	35	eP	P	13 42 44.7	+0.3
KKAR				pmax	pmax		
	comp=Z,36nm,1.1s						
SGMF	Saint Gilles	54.79	333	eP	P	13 42 45.9	-1.4
SGMF				pmax	pmax		
	comp=Z,33nm,1.3s						
QUIF	Quistinic	54.82	333	eP	P	13 42 46.5	-1.0
QUIF				pmax	pmax		
	comp=Z,59nm,1.4s						
PMOZ	Porto Moniz, M	54.85	310	eLR	LR	14 03 08.1	
	comp=Z,595nm,18.0s						
KSH	Kashi	55.72	41	P	P	13 42 51.4	-2.9
KSH				pP	pP	13 42 57.8	-2.3
KSH				sP	sP	13 43 01.1	-1.1
KSH				PcP	PcP	13 43 53.6	+0.1
KSH				S	S	13 50 31.1	-9.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				LR	LR		
	comp=Z,160nm,10.0s						
KSH				LR	LR		
	comp=Z,180nm,9.5s						
EKS2	Erkin-Say	56.04	37	P	P	13 42 57.8	+1.2
	SNR=8.5						
UCH	Uchtor	56.24	38	P	P	13 42 59.7	+1.2
	SNR=31						
PYUN	Piuthan	56.24	57	eP	P	13 42 58.8	+0.4
	comp=Z,107nm,1.1s						
AAK	Ala-Archa	56.46	38	eP	P	13 42 59.7	+0.1
	comp=Z,37nm,1.4s						
AAK	Ala-Archa	56.46	38	i P	P	13 43 01.0	+1.4
	SNR=9.5						
AAK	Ala-Archa	56.46	38	d iP	P	13 43 00.7	+1.1
AAK				pmax	pmax		
	comp=Z,30nm,1.3s						
AAK	Ala-Archa	56.46	38	P	P	13 43 01.0	+1.4
	SNR=8.8						
KZA	Kyzart	56.62	39	P	P	13 43 02.3	+1.3
	SNR=16						
KOLN	Koldanda	56.66	57	eP	P	13 43 01.5	+0.2
	comp=Z,49nm,0.8s						
KBK	Karagaybulak	56.75	38	P	P	13 43 03.3	+1.6
	SNR=8.3						
CHMS	Chumysh	56.82	37	P	P	13 43 03.0	+1.0
	SNR=7.7						
USP	Ospenovka	56.82	37	P	P	13 43 02.7	+0.7
	SNR=16						
DANN	Dangsing	56.97	57	eP	P	13 43 03.8	+0.2
	comp=Z,58nm,0.8s						
ULHL	Ulahol	57.33	39	P	P	13 43 07.2	+1.3
	SNR=15						
GKN	Gorkha	57.60	58	eP	P	13 43 07.9	0.0
	comp=Z,27nm,0.6s						
KDJ	Kajisay	57.86	39	eP	P	13 43 09.4	-0.1
	comp=Z,14nm,1.0s						
KDJ	Kajisay	57.86	39	eP	P	13 43 09.4	-0.1
KDJ				pmax	pmax		
	comp=Z,14nm,1.0s						
DMN	Daman	57.88	58	eP	P	13 43 10.1	+0.1
	comp=Z,15nm,0.6s						
KKN	Kakani	58.08	58	eP	P	13 43 11.5	+0.1
	comp=Z,40nm,0.8s						
PKIN	Phulchoki	58.12	58	eP	P	13 43 11.2	-0.5
	comp=Z,12nm,0.6s						
PKI	Pulchoki	58.13	58	eP	P	13 43 11.4	-0.5
	comp=Z,19nm,0.8s						
OTUK	Ortayu	58.60	31	P	P	13 43 15.1	+0.7
OTUK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
GUN	Gumba	58.62	58	eP	P	13 43 15.5	+0.2
	comp=Z,45nm,0.7s						
KIRV	Kirov	58.73	11	P	P	13 43 14.6	-0.4
	comp=Z,3.7nm,0.4s,baz=197,slow=4.1,SNR=8.1						
PRZ	Przheval'sk	58.81	40	eP	P	13 43 16.6	+0.4
	comp=Z,55nm,1.4s						
PRZ	Przheval'sk	58.81	40	eP	P	13 43 16.6	+0.4
PRZ				pmax	pmax		
	comp=Z,55nm,1.4s						
JIRN	Jiri	58.82	58	eP	P	13 43 16.6	-0.1
	comp=Z,40nm,0.6s						
ARU	Arti	59.07	17	P	P	13 43 17.8	+0.4
	comp=Z,15nm,0.6s,baz=203,slow=5.3,SNR=68						
ARU	Arti	59.07	17	eP	P	13 43 17.4	0.0
	comp=Z,48nm,0.7s						
ARU	Arti	59.07	17	d iP	P	13 43 17.7	+0.2
ARU				pmax	pmax		
	comp=Z,123nm,1.7s						
FIA0	FINESS Array S	59.89	357	eP	P	13 43 23.1	+0.1
FIA0	FINESS Array S	59.89	357	eP	P	13 43 23.1	+0.1
FINES	FINESS Array B	59.89	357	P	P	13 43 23.1	+0.1
	comp=Z,4.1nm,0.6s,baz=132,slow=2.8,SNR=14						
PDGK	Podgornoye	59.93	39	P	P	13 43 24.0	+0.1
PDGK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HFS	Hagfors	59.97	350	P	P	13 43 23.6	+0.1
	comp=Z,1.7nm,0.7s,baz=123,slow=10,SNR=4.0						
SVE	Sverdlovsk	60.04	18	ceP	P	13 43 24.5	+0.4
SVE				pmax	pmax		
	comp=Z,46nm,1.5s						
KONO	Kongsberg	60.30	348	⇓eP	P	13 43 25.9	0.0
KONO				pmax	pmax		
	comp=Z,26nm,1.7s						
BRVK	Borovoye	60.81	26	eP	P	13 43 28.2	-1.2
	comp=Z,31nm,1.6s						
BRVK	Borovoye	60.81	26	d iP	P	13 43 29.1	-0.4
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BVAR	Borovoye Array	60.83	26	P	P	13 43 29.6	-0.1
	comp=Z,3.4nm,0.5s,baz=223,slow=5.7,SNR=28						
NORES	NORESS Array B	60.91	349	P	P	13 43 29.6	-0.4
NORES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PRGR	Permogore	60.99	8	eP	P	13 43 28.5	-2.0
PRGR				e*PP	pP	13 43 35.9	-0.4
PRGR				e		13 44 12.7	
PRGR				pmax	pmax		
	comp=Z,23nm,0.9s						
SUF	Sumiainen	61.16	357	P	P	13 43 31.9	+0.2
SUF				pmax	pmax		
	comp=Z,34nm,1.6s						
NB201	NORSAR Array S	61.25	349	eP	P	13 43 30.8	-1.6
	comp=Z,87nm,1.3s						
NB2	NORSAR Subarra	61.26	349	P	P	13 43 31.7	-0.7
	comp=Z,45nm,1.4s,baz=160,slow=6.9						
NB2	NORSAR Subarra	61.26	349	P	P	13 43 31.7	-0.7
NB2				pmax	pmax		
	comp=Z,43nm,1.7s						
NB2	NORSAR Subarra	61.26	349	P	P	13 43 31.7	-0.7
	baz=160,slow=6.9						
NB200	NORSAR Array S	61.26	349	eP	P	13 43 32.0	-0.5
NOA	NORSAR Array B	61.26	349	P	P	13 43 32.0	-0.5
	comp=Z,7.5nm,1.0s,baz=159,slow=6.7,SNR=9.3						
NOA				LR	LR	14 15 01.7	
	comp=Z,94nm,18.0s,baz=110,slow=41						
NOA	NORSAR Array B	61.26	349	P	P	13 43 32.0	-0.5
NBO00	NORSAR Array S	61.33	349	eP	P	13 43 32.0	-0.9
	comp=Z,54nm,1.2s						
CMLA	Cha da Macela	63.03	312	i P	P	13 43 47.4	+2.6
MAKZ	Makanchi	63.19	37	eP	P	13 43 45.4	-0.2
	comp=Z,67nm,1.7s						
MAKZ	Makanchi	63.19	37	eP	P	13 43 45.4	-0.2
MAKZ				pmax	pmax		
	comp=Z,67nm,1.7s						
SHL	Shillong	63.25	62	eP	P	13 43 46.1	-0.6
	comp=Z,71nm,1.5s						
SHL	Shillong	63.25	62	eP	P	13 43 46.1	-0.6
SHL				pmax	pmax		
	comp=Z,71nm,1.5s						
KURK	Kurchatov	63.37	32	eP	P	13 43 46.1	-0.6
	comp=Z,34nm,1.4s						
KURK	Kurchatov	63.37	32	d iP	P	13 43 47.2	+0.5
KURK				pmax	pmax		
	comp=Z,33nm,1.7s						
MK31	Makanchi Array	63.37	37	eP	P	13 43 46.2	-0.7
	comp=Z,56nm,1.9s						
MK31	Makanchi Array	63.37	37	eP	P	13 43 46.2	-0.7
MK31				pmax	pmax		
	comp=Z,56nm,1.9s						
MK32	Makanchi Array	63.37	37	eP	P	13 43 47.2	+0.4
MKAR	Makanchi Array	63.37	37	P	P	13 43 47.2	+0.4
	comp=Z,6.2nm,0.7s,baz=238,slow=6.2,SNR=51						
LSA	Lhasa	63.56	57	eP	P	13 43 48.8	-0.1
	comp=Z,64nm,1.9s						
LSA	Lhasa	63.56	57	eP	P	13 43 48.8	-0.1
LSA				pmax	pmax		
	comp=Z,64nm,1.9s						
MSF	Maaselka	64.28	359	P	P	13 43 52.6	+0.2
MSF				pmax	pmax		
	comp=Z,18nm,1.7s						
WMQ	Urumqi	65.48	42	eP	P	13 44 02.0	+1.2
WMQ				pP	pP	13 44 06.7	+0.1
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.1s						
WMQ				LR	LR		
	comp=Z,220nm,25.7s						
WMQ				LR	LR		
	comp=Z,740nm,17.9s						
WMQ				LR	LR		
	comp=Z,390nm,25.7s						
ARA0	ARCESS Array S	68.00	358	eP	P	13 44 15.8	-0.5
ARCES	ARCESS Array B	68.00	358	P	P	13 44 15.8	-0.5
	comp=Z,3.0nm,0.6s,baz=162,slow=5.6,SNR=22						
ZAA0	Zalesovo Array	68.30	31	eP	P	13 44 17.7	-0.8
	comp=Z,52nm,1.6s						
ZALV	Zalesovo Beam	68.30	31	P	P	13 44 18.2	-0.2
	comp=Z,8.8nm,0.6s,baz=252,slow=5.7,SNR=29						
ZAA1	Zalesovo Array	68.31	31	eP	P	13 44 18.2	-0.3
CM31	Chiang Mai Arr	68.66	71	eP	P	13 44 20.6	-0.7
	comp=Z,31nm,1.3s						
CMAR	Chiang Mai Arr	68.66	71	P	P	13 44 22.5	+1.1
	comp=Z,11nm,1.1s,baz=268,slow=7.4,SNR=32						
CHTO	Chiang Mai	68.69	70	P	P	13 44 21.9	+0.3
CHTO				pmax	pmax		
	comp=Z,18nm,1.3s						
IPM	Ipoh	70.01	86	eP	P	13 44 29.5	-0.4
	comp=Z,19nm,1.1s						
SYO	Syowa Base	70.63	177	⇑eP	P	13 44 33.4	+0.9
SYO	Syowa Base	70.63	177	⇓ipP	pP	13 44 37.2	-1.2
SYO	Syowa Base	70.63	177	⇓esP	sP	13 44 39.9	-0.7
MAW	Mawson	72.49	168	P	P	13 44 45.9	+2.2
	comp=Z,7.2nm,0.8s,baz=324,slow=7.3,SNR=20						
MAW	Mawson	72.49	168	eP	P	13 44 44.6	+0.9
	comp=Z,7.4nm,1.6s						
MAW	Mawson	72.49	168	eP	P	13 44 44.6	+0.9
MAW				pmax	pmax		
	comp=Z,7.0nm,1.6s						
GTA	Gaotai	72.78	49	⇓P	P	13 44 47.4	+1.1
GTA				pP	pP	13 44 52.1	-0.1
GTA				sP	sP	13 44 54.6	+0.2
GTA				S	S	13 54 12.6	+0.9
GTA				pmax	pmax		
	comp=Z,15nm,1.3s						
GTA				pmax	pmax		
	comp=Z,130nm,9.5s						
GTA				LR	LR		
	comp=Z,2µm,15.6s						
GTA				LR	LR		
	comp=Z,3µm,16.2s						
GTA				LR	LR		
	comp=Z,4µm,15.9s						
KMI	Kunming	72.88	64	P	P	13 44 48.8	+1.5
KMI				pmax	pmax		
	comp=Z,30nm,0.5s						
MDSI	Maura Dua	73.40	95	P	P	13 44 52.3	+2.1
	comp=Z,11nm,1.1s						
CD2	Chengdu	74.48	58	eP	P	13 44 55.2	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	75.30	53	⇑P	P	13 45 03.2	+2.0
LZH				pP	pP	13 45 08.1	+1.0
LZH				sP	sP	13 45 11.4	+2.2
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,94nm,5.0s						
LZH				LR	LR		
	comp=Z,370nm,17.0s						
LZH				LR	LR		
	comp=Z,290nm,17.1s						
LZH				LR	LR		
	comp=Z,440nm,18.1s						

TNG	Tangerang	75.94	97	P	P	13 45 17.3	+12
SNAA	Sanae	76.24	190	P	P	13 45 08.3	+2.6
SNAA	Sanae	76.24	190	*e*P	P	13 45 06.3	+0.7
	comp=Z,44nm,2.0s						
SNAA	Sanae	76.24	190	*e*P	P	13 45 06.3	+0.7
SNAA				pmax	pmax		
	comp=Z,44nm,2.0s						
VNA1	Neumayer--Stat	76.50	193	P	P	13 45 10.8	+3.7
MOY	Mondy	76.52	37	*e*P	P	13 45 08.9	+1.2
MOY				pmax	pmax		
	comp=Z,42nm,2.2s						
GYA	Guiyang	76.53	63	*e*P	P	13 45 09.5	+1.2
GYA				pP	sP	13 45 17.3	+0.9
GYA				S	S	13 54 59.1	+5.0
GYA				SKS	SKSac	13 55 18.4	-1.4
GYA				SS	SS	13 59 46.9	-2.4
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,180nm,5.5s						
GYA				LR	LR		
	comp=Z,3µm,18.4s						
GYA				LR	LR		
	comp=Z,4µm,17.8s						
GYA				LR	LR		
	comp=Z,4µm,17.9s						
VNA3	Neumayer Olymp	77.26	192	P	P	13 45 14.0	+2.7
IRK	Irkutsk	78.62	37	*e*P	P	13 45 17.2	-2.1
IRK				pmax	pmax		
	comp=Z,35nm,1.9s						
SONA0	Songino Array	79.12	42	*e*P	P	13 45 24.0	+1.7
SONM	Songino Array	79.12	42	P	P	13 45 24.0	+1.7
	comp=Z,3.0nm,0.6s,baz=255,slow=5.3,SNR=20						
SONM	Songino Array	79.12	42	P	P	13 45 24.0	+1.7
XAN	Xi'an	79.18	56	*e*P	P	13 45 21.4	-1.4
	comp=Z,22nm,1.4s						
XAN	Xi'an	79.18	56	P	P	13 45 23.4	+0.6
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,92nm,3.9s						
XAN	Xi'an	79.18	56	*e*P	P	13 45 21.4	-1.4
XAN				pmax	pmax		
	comp=Z,22nm,1.4s						
ENH	Enshi	79.33	60	*e*P	P	13 45 22.5	-1.2
	comp=Z,28nm,1.1s						
ULN	Ulaanbaatar	79.56	42	*d i*P	P	13 45 25.8	+1.1
ULN				pmax	pmax		
	comp=Z,19nm,2.5s						
BDFB	Brasilia	79.80	254	P	P	13 45 28.0	+1.4
	comp=Z,10nm,0.7s,baz=110,slow=5.9,SNR=7.7						
BDFB				LR	LR	14 17 22.9	
	comp=Z,387nm,19.3s,baz=100,slow=33						
BDFB	Brasilia	79.80	254	P	P	13 45 28.0	+1.4
DAG	Danmarks Havn	79.94	350	*i* P	P	13 45 26.4	+0.4
DAG				pmax	pmax		
	comp=Z,86nm,1.6s						
DAG				MLR	MLR		
	comp=Z,2µm,21.0s						
DAG	Danmarks Havn	79.94	350	*i* P	P	13 45 26.4	+0.4
	comp=Z,26nm,1.6s						
	comp=Z,2µm,21.0s						
HHC	Hu-ho-hao-te	81.90	49	P	P	13 45 37.6	+0.2
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,35nm,6.6s						
SUMG	Summit	82.48	343	*e*P	P	13 45 39.5	-0.6
	comp=Z,44nm,1.6s						
SUMG	Summit	82.48	343	*e*P	P	13 45 39.5	-0.6
SUMG				pmax	pmax		
	comp=Z,44nm,1.6s						
SUMG	Summit	82.48	343	*i* P	P	13 45 40.6	+0.5
	comp=Z,63nm,1.3s						
	comp=Z,2µm,23.0s						
BOD	Bodaibo	85.01	32	*e*P	P	13 45 53.3	+0.5
BOD				pmax	pmax		
	comp=Z,43nm,1.6s						
NJ2	Nanjing	87.42	58	*e*P	P	13 46 05.2	0.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
CPUP	Villa Florida	89.13	244	P	P	13 46 15.3	+1.8
	comp=Z,5.7nm,1.1s,baz=68,slow=8.4,SNR=4.4						
CPUP				LR	LR	14 21 39.5	
	comp=Z,420nm,19.8s,baz=95,slow=33						
PTGA	Pitinga	90.94	269	LR	LR	14 26 08.8	
	comp=Z,286nm,18.8s,baz=76,slow=35						
PTGA	Pitinga	90.94	269	*e*P	P	13 46 20.2	-2.0
	comp=Z,34nm,1.2s						
TIXI	Tiksi	91.07	18	*de*P	P	13 46 21.6	+0.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
QSPA	South Pole Qui	91.53	180	*e*P	P	13 46 24.7	+0.7
	comp=Z,34nm,1.5s						
CN2	Changchun	92.21	46	*e*P	P	13 46 28.2	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YAK	Yakutsk	92.77	28	*e*P	P	13 46 29.2	-0.4
YAK				*e**PP	sP	13 46 40.3	+2.6
YAK				*e*S	SKSac	13 56 58.9	-3.6
KS15	Wonju Array Si	94.59	52	*e*P	P	13 46 38.9	+0.3
	comp=Z,127nm,1.8s						
KSRS	Korea Array	94.62	52	P	P	13 46 38.9	+0.2
	comp=Z,0.9nm,0.5s,baz=288,slow=5.7,SNR=4.5						
MDJ	Mudanjiang	95.09	45	P	P	13 46 39.7	-1.0
MDJ				pmax	pmax		
	comp=Z,14nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,370nm,3.0s						
KLR	Kul'dur	95.90	40	⇓*e*P	P	13 46 44.4	+0.1
KLR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CFA	Coronel Fontan	98.63	238	LR	LR	14 25 09.8	
	comp=Z,156nm,21.1s,baz=276,slow=32						
LPAZ	La Paz	99.15	254	P	Pdif	13 46 59.7	-0.7
	comp=Z,0.7nm,0.6s,baz=334,slow=3.0,SNR=4.0						
ASAR	Alice Springs	102.46	114	PKKP	PKKPbc	14 03 16.3	+0.8
	comp=Z,0.3nm,0.6s,baz=84,slow=2.5,SNR=5.1						
ILAR	Eielson Array	113.85	359	PKiKP	PKiKP	13 51 55.9	-0.1
	comp=Z,0.2nm,0.6s,baz=345,slow=3.1,SNR=4.2						
ILB	Eielson Array	113.85	359	*e*PKiKP	PKiKP	13 51 55.9	-0.1
EGMT	Eagleton	120.00	331	*e*PKPdf	PKPdf	13 52 08.0	-0.4
WMOK	Wichita Mounta	120.76	313	*e*PKPdf	PKPdf	13 52 09.0	-1.2
WMOK	Wichita Mounta	120.76	313	*e*PKIKP	PKPdf	13 52 09.0	-1.2
MSO	Missoula	122.85	332	*e*PKPdf	PKPdf	13 52 13.4	-0.5
DLMT	Dillon	123.25	330	*e*PKPdf	PKPdf	13 52 14.9	0.0
BW06	Boulder Array	123.39	326	*e*PKPdf	PKPdf	13 52 14.9	-0.4
PD31	Pinedale Array	123.39	326	*e*PKPdf	PKPdf	13 52 14.9	-0.4
PDAR	Pinedale Array	123.39	326	PKP	PKPdf	13 52 15.4	+0.1
	comp=Z,1.2nm,0.7s,baz=108,slow=3.4,SNR=12						
IMW	Indian Meadow	123.40	328	*e*PKPdf	PKPdf	13 52 15.4	0.0
T25A	Trinidad	123.55	318	*e*PKPdf	PKiKP	13 52 16.1	+0.1
MCMT	McKenzie Canyo	123.75	330	*e*PKPdf	PKPdf	13 52 15.2	-0.7
C09A	Chrisman Ranch	124.03	335	*e*PKPdf	PKPdf	13 52 16.1	0.0
D08A	Wollman Farm,	124.89	335	*e*PKPdf	PKiKP	13 52 18.4	+0.3
E09A	Wood Farm, Sta	124.99	334	*e*PKPdf	PKiKP	13 52 19.1	+0.8
HLID	Hailey	125.44	330	*e*PKPdf	PKPdf	13 52 18.6	-0.5
PV07	Paradox Valley	125.56	321	*e*PKPdf	PKiKP	13 52 19.8	-0.1
PV22	Blue Mesa, Par	125.59	321	*e*PKPdf	PKiKP	13 52 20.1	+0.2
PV21	Cone Mtn., Par	125.69	322	*e*PKPdf	PKiKP	13 52 20.3	+0.1
PV12	Saucer Basin,	125.73	321	*e*PKPdf	PKiKP	13 52 20.5	+0.2
PV04	Paradox Valley	125.75	321	*e*PKPdf	PKiKP	13 52 20.3	+0.1
PV23	Carpenter Ridg	125.78	322	*e*PKPdf	PKiKP	13 52 20.3	-0.1
PV11	David Mesa, Pa	125.79	321	*e*PKPdf	PKiKP	13 52 20.8	+0.4
PV03	Paradox Valley	125.80	321	*e*PKPdf	PKiKP	13 52 20.8	+0.4
PV16	Nyswonger Mesa	125.81	321	*e*PKPdf	PKiKP	13 52 20.9	+0.5
PV20	West Nyswonger	125.82	321	*e*PKPdf	PKiKP	13 52 20.9	+0.5
PV14	Lion Creek, Pa	125.84	321	*e*PKPdf	PKiKP	13 52 20.6	+0.1
PV13	Radium Mtn., P	125.84	321	*e*PKPdf	PKiKP	13 52 20.9	+0.4
PV18	Skein Mesa, Pa	125.84	321	*e*PKPdf	PKiKP	13 52 20.9	+0.4
PV19	Morning Glory	125.85	321	*e*PKPdf	PKiKP	13 52 20.9	+0.4
BMO	Blue Mountains	125.89	332	*e*PKPdf	PKPdf	13 52 19.3	-0.5
BMO	Blue Mountains	125.89	332	*e*PKIKP	PKPdf	13 52 19.3	-0.5
G08A	Pilot Rock	126.30	334	*e*PKPdf	PKiKP	13 52 21.6	+0.5
SRU	San Rafael Swe	126.30	323	*e*PKPdf	PKPdf	13 52 20.8	-0.1
SRU	San Rafael Swe	126.30	323	*e*PKIKP	PKPdf	13 52 20.8	-0.1
LON	Longmire	126.31	337	*e*PKPdf	PKiKP	13 52 21.1	+0.2
LON	Longmire	126.31	337	*e*PKIKP	PKiKP	13 52 21.2	+0.2
TXAR	Lajitas Array	126.90	309	PKP	PKiKP	13 52 23.3	+0.6
	comp=Z,2.1nm,0.8s,baz=82,slow=1.8,SNR=16						
DUG	Dugway, Tooele	126.93	326	*e*PKPdf	PKPdf	13 52 22.1	+0.1
DUG	Dugway, Tooele	126.93	326	*e*PKIKP	PKPdf	13 52 22.1	+0.1
MNTX	Cornudas Mount	127.06	312	*e*PKPdf	PKPdf	13 52 22.4	0.0
I07A	Izee	127.49	333	*e*PKPdf	PKiKP	13 52 23.4	0.0
MTPU	Mount Pierson	127.98	323	*e*PKPdf	PKiKP	13 52 25.3	+0.4
PINE	Pine Mountain	128.35	334	*e*PKPdf	PKiKP	13 52 26.2	+0.9
PSUT	Pine Spring	128.64	325	*e*PKPdf	PKPdf	13 52 25.3	-0.2
X18A	Snowflake	128.74	318	*e*PKPdf	PKiKP	13 52 26.1	-0.2
CCUT	Cedar City	129.01	323	*e*PKPdf	PKiKP	13 52 27.9	+1.1
WUAZ	Wupatki	129.07	320	*e*PKPdf	PKiKP	13 52 27.5	+0.5
U15A	North Rim	129.08	322	*e*PKPdf	PKiKP	13 52 27.5	+0.4
LCMT	Little Creek M	129.29	323	*e*PKPdf	PKiKP	13 52 28.4	+1.0
MOD	Modoc Plateau	129.56	332	*e*PKPdf	PKiKP	13 52 28.0	+0.3
R11A	Troy Canyon, C	129.76	326	*e*PKPdf	PKiKP	13 52 28.5	+0.2
HUMO	Hull Mountain	130.18	335	*e*PKPdf	PKiKP	13 52 28.8	0.0
TUC	Tucson	130.60	316	*e*PKPdf	PKPdf	13 52 29.1	-0.1
TUC	Tucson	130.60	316	*e*PKIKP	PKPdf	13 52 29.1	-0.1
KVN	Kaiserville	130.63	328	*e*PKPdf	PKiKP	13 52 30.0	0.0
KVN	Kaiserville	130.63	328	*e*PKIKP	PKiKP	13 52 30.0	0.0
PAHR	Pah Rah Range	130.80	330	*e*PKPdf	PKiKP	13 52 30.4	+0.1
NV11	Mina Array Sit	131.11	328	*e*PKPdf	PKiKP	13 52 31.2	+0.3
RYN	Ryan	131.16	328	*e*PKPdf	PKiKP	13 52 31.3	+0.2
NV01	Mina Array Sit	131.19	328	*e*PKPdf	PKiKP	13 52 31.9	+0.7
NVAR	Mina Array Bea	131.19	328	PKP	PKiKP	13 52 31.9	+0.7
	comp=Z,5.9nm,1.1s,baz=84,slow=1.8,SNR=25						
WAKR	Walker	131.73	329	*e*PKPdf	PKPdf	13 52 30.5	-0.8

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*SOME **02** 13:42:58.7, 42°.75N×75°.55E*

NNC 02 13:42:58.7±0.5**, 42°.67N×75°.70E, h0km, mb3.0, mpv2.9, 5C-3D, Error ellipse: s-maj=2.9km s-min=2.2km az=167.0, Suspected Mining explosion., Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	0.26	343	⇑P	Pg	13 43 03.9	+0.2
	2.8nm,0.2s						
TKM2				⇓S	Sg	13 43 07.6	+0.6
	34nm,0.3s						
TKM2	Tokmak 2	0.26	343	P	Pg	13 43 04.1	+0.4
	SNR=31						
KST	Kastek	0.42	27	P	Pg	13 43 07.0	+0.3
	10nm,0.2s						
KST				S	Sg	13 43 13.3	+1.2
	28nm,0.5s						
AAK	Ala-Archa	0.89	268	⇓P	Pg	13 43 16.4	+0.6
	12nm,1.1s						
AAK				⇑S	Sg	13 43 28.1	+0.7
	7.6nm,0.7s						
TNSS	Tian-Shan	0.98	68	P	Pg	13 43 18.0	+0.5
	7.4nm,0.4s						
TNSS				S	Sb	13 43 32.1	-0.5
	7.9nm,0.5s						
KNDC	Almaty	1.08	59	⇑P	Pg	13 43 19.6	+0.3
	8.0nm,0.3s						
KNDC				⇑S	Sg	13 43 33.1	-0.1
	15nm,0.4s						
KTBS	Karatobe	1.26	34	P	Pb	13 43 23.2	-0.2
	5.8nm,0.5s						
KTBS				S	Sn	13 43 41.0	-0.4
	12nm,0.5s						
CHKK	Chushkaly	1.51	38	P	Pg	13 43 28.1	+0.5
	4.4nm,0.3s						
CHKK				S	Sn	13 43 49.4	+2.0
	9.2nm,0.2s						
MRKS	Merke	1.83	273	P	Pb	13 43 32.7	-0.4
	10nm,0.2s						
MRKS				S	Sg	13 43 57.5	+0.1
	5.2nm,0.2s						
SATY	Saty	2.02	78	Pg	Pb	13 43 36.1	-0.3
	10.0nm,0.6s						
SATY				Lg	Lg	13 44 03.6	
	6.8nm,0.1s						
ARXS	Arharly	2.18	44	Pg	Pb	13 43 39.1	0.0
	4.2nm,0.6s						
ARXS				Lg	Lg	13 44 08.3	
	9.9nm,0.5s						
PDGK	Podgornoye	2.85	75	Pg	Pb	13 43 50.3	-0.2
	1.4nm,0.3s						
PDGK				Lg	Lg	13 44 27.6	
	2.1nm,0.7s						
PDGK	Podgornoye	2.85	75	⇓Pg	Pb	13 43 50.2	-0.4
	3.1nm,0.7s						
PDGK				⇑Lg	Lg	13 44 29.6	
	4.1nm,0.7s						

ATH 02 13:53:08.8, 40°.17N×21°.87E, h21km±6km, ML1.8/6, Error ellipse: s-maj=6.5km s-min=1.4km az=3.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.15	332	P	Pb	13 53 13.8	-1.2
KZN				S	Sb	13 53 16.3	-3.1
KZN				AML	AML	13 53 17.2	
	comp=N,1330µm,0.2s						
KZN				AML	AML	13 53 17.3	
	comp=E,1074µm,0.2s						
KZN	Kozani	0.15	332	P	Pb	13 53 13.9	-1.1
KZN				S	Sb	13 53 16.7	-2.6
KZN				AML	AML	13 53 17.2	
	comp=N,1330µm,0.2s						
KZN				AML	AML	13 53 17.3	
	comp=E,1074µm,0.2s						
KPRO	Kipourio	0.44	241	P	Pb	13 53 18.0	+0.1
KPRO				S	Sb	13 53 24.9	+0.8
KPRO				AML	AML	13 53 29.3	
	comp=E,281µm,0.2s						
KPRO				AML	AML	13 53 31.7	
	comp=N,160µm,0.2s						
KPRO	Kipourio	0.44	241	P	Pb	13 53 17.7	-0.2
KPRO				S	Sb	13 53 23.9	-0.1
KPRO				AML	AML	13 53 29.3	
	comp=E,281µm,0.2s						
KPRO				AML	AML	13 53 31.7	
	comp=N,160µm,0.2s						
LIT	Litokhoron	0.48	98	P	Pb	13 53 18.9	+0.3
LIT				S	Sb	13 53 24.8	-0.5
LIT				AML	AML	13 53 29.1	
	comp=N,581µm,0.2s						
LIT				AML	AML	13 53 29.8	
	comp=E,654µm,0.3s						
LIT	Litokhoron	0.48	98	P	Pb	13 53 19.0	+0.4
LIT				S	Sb	13 53 26.5	+1.2
LIT				AML	AML	13 53 29.1	
	comp=N,581µm,0.2s						
LIT				AML	AML	13 53 29.8	
	comp=E,654µm,0.3s						
PENT	Pentalofos	0.56	273	P	Pb	13 53 19.3	-0.8
PENT				S	Sb	13 53 27.6	-0.1
PENT				AML	AML	13 53 34.4	
	comp=E,133µm,0.2s						
PENT				AML	AML	13 53 34.5	
	comp=N,216µm,0.4s						
PENT	Pentalofos	0.56	273	P	Pb	13 53 20.2	+0.1
PENT				S	Sb	13 53 27.4	-0.3
THL	Klokotos Trika	0.62	169	P	Pb	13 53 20.5	-0.5
THL				S	Sb	13 53 29.2	-0.1
THL				AML	AML	13 53 32.8	
	comp=E,182µm,0.2s						
THL				AML	AML	13 53 33.0	
	comp=N,157µm,0.3s						
THL	Klokotos Trika	0.62	169	P	Pb	13 53 20.5	-0.5
THL				S	Sb	13 53 29.8	+0.6
THL				AML	AML	13 53 32.8	
	comp=E,182µm,0.2s						
THL				AML	AML	13 53 33.0	
	comp=N,157µm,0.3s						
MEV	Metsovon	0.62	232	P	Pb	13 53 21.9	+0.7
AGG	Agios Georgios	1.20	163	P	Pb	13 53 31.8	+0.9
AGG				S	Sn	13 53 49.5	+3.4
AGG				AML	AML	13 53 52.8	
	comp=E,78µm,0.3s						
AGG				AML	AML	13 53 55.2	
	comp=N,70µm,0.3s						
AGG	Agios Georgios	1.20	163	P	Pb	13 53 31.8	+0.9
AGG				S	Sn	13 53 46.9	+0.8
AGG				AML	AML	13 53 52.8	
	comp=E,78µm,0.3s						
AGG				AML	AML	13 53 55.2	
	comp=N,70µm,0.3s						
EVR	Evrytania	1.25	182	P	Pb	13 53 31.9	+0.1

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*IDC **02** 13:55:37.5±0.3, 4°.73N×96°.81E, h0km, mb5.0/33, mb1 5.1/36, mb1mx5.1/37, mbtmp5.0/36, ML4.9/3, MS5.1/47, Ms1 5.1/47, ms1mx5.0/54, Error ellipse: s-maj=11.0km s-min=9.3km az=34.0*

*BJI **02** 13:55:37.9±0.0, 4°.54N×96°.54E, h18km, mb5.2/72, mB5.3/56, Ms5.6/83, Ms7 5.3/78*

*NEIC **02** 13:55:37.6±0.1, 4°.66N×96°.65E, h10km, mb5.3/113, MS5.3/300, MW5.5, MW5.5, Error ellipse: s-maj=5.2km s-min=3.4km az=223.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}0.05; $M_{\theta\theta}$-1.77; $M_{\phi\phi}$1.73; $M_{r\theta}$-0.06; $M_{\theta\phi}$-0.72; $M_{\phi r}$-0.19; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s124.00000°, δ84.00000°, λ178.00000°. NP2:ϕ_s214.00000°, δ88.00000°, λ6.00000°. Principal axes: T 1.8800, Plg5.0000°, Azm79.0000°; N 0.0300, Plg84.0000°, Azm231.0000°; P -1.9200, Plg3.0000°, Azm349.0000°; Moment Tensor Solution. s14 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.04; $M_{\theta\theta}$-2.27; $M_{\phi\phi}$2.31; $M_{r\theta}$0.85; $M_{\theta\phi}$-0.57; $M_{\phi r}$0.73; Best double couple: $M_0$2.60000×10^{17} NP1:ϕ_s309.00000°, δ65.00000°, λ-176.00000°. NP2:ϕ_s217.00000°, δ86.00000°, λ-25.00000°. Principal axes: T 2.5400, Plg14.0000°, Azm266.0000°; N 0.1400, Plg65.0000°, Azm29.0000°; P -2.6800, Plg20.0000°, Azm170.0000°;*

NEIC Felt [III] at Banda Aceh and Sigli. Felt at Ayer Itam and Kulim, Malaysia.

*MOS **02** 13:55:39.6±1.4, 4°.71N×96°.75E, h27km, mb5.4/91, MS5.2/43 Error ellipse: s-maj=6.9km s-min=4.1km az=118.2*

*ISCJB **02** 13:55:40.1±0.5, 4°.62N±0°.02×96°.71E±0°.02, h31km±3km, mb5.1/210, MS5.4/569, Error ellipse: s-maj=3.4km s-min=2.6km az=141.0*

*GCMT **02** 13:55:40.6±0.1, 4°.66N±0°.01×96°.76E±0°.01, h12km, MW5.5/119, Moment Tensor Solution. s97,c153; s119,c237; Duration: 1s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.32±.02; $M_{\theta\theta}$-1.74±.02; $M_{\phi\phi}$2.06±.02; $M_{r\theta}$-1.24±.07; $M_{\theta\phi}$-0.62±.02; $M_{\phi r}$-0.64±.07; Best double couple: $M_0$2.43200×10^{17} NP1:ϕ_s33.00000°, δ77.00000°, λ-31.00000°. NP2:ϕ_s130.00000°, δ60.00000°, λ-165.00000°. Principal axes: T 2.2470, Plg11.0000°, Azm85.0000°; N 0.3700, Plg57.0000°, Azm193.0000°; P -2.6170, Plg30.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **02** 13:55:40.7±0.1, 5°N±2°×9°7E±°, h10km, M5.2/51, mB5.6/29, mb5.4/51, MLv5.7/14, Mw(mB)5.1/29, Mwp5.4/3*

*KLM **02** 13:55:45.0, 4°.40N×96°.96E, h34km, mb5.6*

ISC 02 13:55:42.0±0.5**, 4°.62N**±0°.03×**96°.68E**±0°.03**, h32**km±3km**, n1162, σ1s.94**/805**, mb5.2**/227**, MS5.4**/571**, 46C-11D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.45	219	P	Pb	13 55 48.3	-3.5
LHMI	Lhok Sumawe	0.66	23	*e*Pg	Pb	13 55 51.3	-3.9
LHMI	Lhok Sumawe	0.66	23	P	Pb	13 55 50.9	-4.3
TPTI		1.44	160	P	Pn	13 56 04.4	-1.5
KCSI	Kotacane, Aceh	1.54	135	P	Pn	13 56 05.7	-1.5
TSI	Tuntungan	2.18	121	P	Pn	13 56 15.2	-0.9
SNSI	Sinabang, Aceh	2.23	189	P	Pn	13 56 18.3	+1.6
PSI	Prapat	2.87	129	Pn	Pn	13 56 25.9	+0.2
	76nm,0.3s,baz=323,slow=11,SNR=203						
PSI				Lg	Lg	13 57 11.1	
	308nm,0.3s,baz=150,slow=4.3,SNR=10						
PSI				LR	LR	13 57 53.5	
	comp=Z,43µm,21.2s,baz=260,slow=47						
PSI	Prapat	2.87	129	*e*P	Pn	13 56 25.7	0.0
GSI	Gunungsitoli	3.41	165	*e*Pn	Pn	13 56 33.3	+0.2
GSI	Gunungsitoli	3.41	165	P	Pn	13 56 33.4	+0.4
PKDT	Phuket	3.64	27	P	Pn	13 56 35.1	-1.1
KULM	Kulim	4.01	80	*e*Pn	Pn	13 56 38.8	-2.4
KULM	Kulim	4.01	80	P	Pn	13 56 40.0	-1.2
IPM	Ipoh	4.33	92	*e*Pn	Pn	13 56 43.1	-2.6
IPM	Ipoh	4.33	92	P	Pn	13 56 44.0	-1.7
TRTT	Trang	4.38	43	P	Pn	13 56 45.5	-0.8
SKLT	Songkhla	4.66	57	P	Pn	13 56 49.8	-0.4
MNSI	Mandailing Nat	4.77	143	P	Pn	13 56 53.1	+1.3
BKNI	Bangkinang	6.09	134	*e*Pn	Pn	13 57 09.8	-0.1
BKNI	Bangkinang	6.09	134	P	Pn	13 57 11.8	+1.9
SISI	Saibi	6.38	158	P	Pn	13 57 15.1	+1.3
	264nm,1.2s,4µm2.6nm						
PDSI	Padang	6.67	145	P	Pn	13 57 18.7	+0.9
	473nm,0.7s,4µm4.6nm						
SDSI	Sungai Dareh	7.27	139	P	Pn	13 57 35.4	+9.3
MYKOM	Kota Tinggi	7.69	111	*e*Pn	Pn	13 57 29.2	-2.5
MYKOM	Kota Tinggi	7.69	111	P	Pn	13 57 30.0	-1.8
PBA	Port Blair	8.01	331	*e*P	Pn	13 57 37.1	+0.9
PPSI	Pulau Pagai	8.05	156	P	Pn	13 57 37.6	+0.8
	227nm,0.6s,5µm						
KRJI	Kerinci	8.20	144	P	Pn	13 57 41.5	+2.6
TPRI	Tanjung Pinang	8.65	115	P	Pn	13 57 43.7	-1.4
	130nm,0.6s						
PHET	Kaeng Krachan	8.74	19	P	Pn	13 57 46.6	+0.4
	203µm,0.8s,3µm						
CHBT	CHBT	9.82	34	P	Pn	13 58 02.6	+1.5
	363nm,0.5s,4µm						
SRDT	SRDT	9.96	14	P	Pn	13 58 05.3	+2.3
	44nm,0.7s,2µm						
LHSI	Lahat	10.82	141	P	Pn	13 58 14.5	-0.3
	301nm,1.0s,4µm						
MNAI	Manna	10.90	145	*e*Pn	Pn	13 58 14.5	-1.4
MNAI	Manna	10.90	145	P	Pn	13 58 16.1	+0.2
	321nm,1.0s						
PPBI	Pangkal Pinang	11.60	125	P	Pn	13 58 31.3	+5.8
UMPA	Umpang Tak	11.71	10	P	Pn	13 58 26.8	-0.2
	259µm,0.9s						
MDSI	Maura Dua	11.74	140	P	Pn	13 58 26.0	-1.4
	134nm,0.9s,2µm						
LWLI	Liwa	12.08	142	P	Pn	13 58 35.2	+3.1
CHAI	Chaiyaphum	12.36	25	P	Pn	13 58 37.9	+2.0
	99µm,1.2s,832µm						
KLI	Kotabumi	12.46	139	P	P	13 58 44.0	-4.7
PBKT	Sadao Pong	12.60	19	P	Pn	13 58 40.0	+0.9
	161nm,0.7s,1µm						
KHON	Khomkaen	13.11	27	P	P	13 58 52.1	-3.8
	131µm,0.8s						
TPI	Tanjungpandan	13.18	124	P	Pn	13 58 51.8	+4.7
UTTA	Uttaradit	13.58	16	P	Pn	13 58 55.3	+2.7
	115µm,0.9s						
DLV	T Lat	13.76	57	*e*Pn	Pn	13 58 54.8	-0.3
CM31	Chiang Mai Arr	13.93	9	*e*Pn	Pn	13 58 58.5	+1.2
CMAR	Chiang Mai Arr	13.93	9	Pn	Pn	13 58 58.5	+1.2
	0.5nm,0.3s,baz=201,slow=13,SNR=50						
CMAR				Lg	Lg	14 02 58.1	
	0.3nm,0.3s,baz=184,slow=32,SNR=4.9						
CMAR				LR	LR	14 04 25.5	
	comp=Z,8µm,20.9s,baz=198,slow=38						
KSM	Kuching	13.96	103	*e*Pn	Pn	13 58 57.2	-0.5
LAMP	Lampang	14.12	12	P	P	13 59 04.2	-2.9
	111µm,0.8s,989µm						
SKNT	Sakolnakorn	14.21	30	P	Pn	13 59 02.6	+1.4
	104nm,1.2s						
CMMT	Chiang Mai	14.28	9	P	Pn	13 59 04.4	+2.3
	31nm,1.8s,885nm						
CHTO	Chiang Mai	14.28	9	*e*Pn	Pn	13 59 00.6	-1.5
CHTO	Chiang Mai	14.28	9	*e*P	Pn	13 59 00.6	-1.5
PANO	Nakornpanom	14.68	31	P	Pn	13 59 09.5	+2.0
	3.8nm,1.1s,64nm						
NONG	Nongkai	14.78	25	P	Pn	13 59 10.1	+1.2
	1.6nm,1.4s						
PAYA	Payao	14.98	12	P	P	13 59 14.1	-2.6
	153µm,1.0s						
SBUM	Sibu	15.65	97	*e*Pn	Pn	13 59 20.2	-0.2
	242nm,1.7s						
SBUM	Sibu	15.65	97	P	Pn	13 59 21.0	+0.6
LEM	Lembang	15.76	136	Pn	Pn	13 59 22.2	+0.3
	5.5nm,0.3s,baz=342,slow=18,SNR=2.4						
LEM				Lg	Lg	14 04 00.2	
	2.8nm,0.3s,baz=357,slow=19,SNR=4.1						
LEM				LR	LR	14 05 48.9	
	comp=Z,10µm,18.2s,baz=287,slow=39						
SIMRM	Sittwe	15.86	347	*e*P	Pn	13 59 23.8	+0.8
	120nm,1.0s						
PALK	Pallekele	16.11	280	Pn	P	13 59 28.4	-1.0
	6.2nm,0.3s,baz=116,slow=7.3,SNR=44						
PALK				Sn	Sn	14 02 15.3	-8.9
	1.8nm,0.3s,baz=116,slow=17,SNR=4.3						
PALK				LR	LR	14 05 32.9	
	comp=Z,7µm,19.3s,baz=97,slow=37						
PALK	Pallekele	16.11	280	*e*P	P	13 59 28.2	-1.1
	319nm,0.8s						
PALK	Pallekele	16.11	280	*i* P	Pn	13 59 27.6	+1.2
	SNR=39						
PALK	Pallekele	16.11	280	*e*P	P	13 59 28.2	-1.1

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PALK                              pmax      pmax
      comp=Z,319nm,0.8s
PBKI  Pangkalan Bun     16.65 116 P         Pn        13 59 34.2 +1.1
XMIS  Christmas Isla    17.46 149 ePn       Pn        13 59 41.2 -2.0
      comp=Z,190nm,1.2s
SMRI  Semarang          17.97 130 eP        Pn        13 59 49.7 +0.1
      comp=Z,145nm,1.1s
MDRS  Chennai           18.27 298 eP        Pn        13 59 57.0 +3.8
VIS   Vishakhapatnam    18.45 316 i P       Pn        13 59 57.3 +1.9
UGM   Wanagama          18.59 132 eP        P         13 59 52.7 -4.1
      comp=Z,480nm,1.5s
BRDH  Bariadhala        18.60 345 P         Pn        13 59 58.2 +1.0
      comp=Z,32nm,0.3s,baz=111,slow=6.3,SNR=6.6
BRDH                              LR        LR        14 09 54.9
      comp=Z,12µm,18.3s,baz=170,slow=46
BWNR  Bhubaneshwar      18.84 327 eP        Pn        14 00 01.1 +1.0
BWNR                              IAmb      IAmb      14 00 04.3
      comp=Z,202nm,0.1s
NGJI  Ngawi             18.95 129 P         Pn        14 00 07.7 +6.2
BELO  BELONIA           19.20 345 eP        Pn        14 00 05.5 +1.1
QIZ   Qiongzhong        19.24  41 P         P         14 00 01.7 -2.1
QIZ                               S         Sn        14 03 39.1 -0.7
QIZ                               pmax      pmax
      comp=Z,23nm,1.6s
QIZ                               pmax      pmax
      comp=Z,460nm,6.7s
QIZ                               LR        LR
      comp=Z,16µm,18.4s
QIZ                               LR        LR
      comp=Z,13µm,18.8s
QIZ                               LR        LR
      comp=Z,4µm,12.1s
GRJI  Gresik            19.49 126 P         Pn        14 00 13.0 +5.1
KKM   Kota Kinabalu     19.50  85 eP        P         14 00 06.3 -0.5
      comp=Z,863nm,1.3s
KKM   Kota Kinabalu     19.50  85 P         Pn        14 00 08.0 -0.2
PWJI  Pagerwojo         19.63 130 P         Pn        14 00 16.2 +6.6
AGT   Agartala          19.86 345 eP        Pn        14 00 11.6 -0.6
AGT                               IAmb      IAmb      14 00 16.9
      comp=Z,394nm,0.9s
TRD   Trivandrum        19.97 282 eP        Pn        14 00 16.0 +2.3
TRD                               IAmb      IAmb      14 00 17.6
      comp=Z,58nm,0.8s
KMMI  Kalianget         20.78 124 P         Pn        14 00 22.0 -1.2
      comp=Z,169nm,0.6s,comp=Z,1µm
BKB   Balikpapan        21.02 106 P         P         14 00 24.4 +1.2
      comp=Z,4µmcomp=Z,374nm,0.8s
KOHI  KOHIMA            21.13 354 eP        P         14 00 24.3 -0.1
KMI   Kunming           21.20  15 PFAKE               14 00 40.0  +15
KMI                               LR        LR
      comp=Z,6µm,19.0s
KMI   Kunming           21.20  15 P         P         14 00 27.4 +2.1
KMI                               pP        pP        14 00 34.3 +0.1
KMI                               sP        sP        14 00 36.6 -2.0
KMI                               PP        PnPn      14 00 44.4 -1.0
KMI                               S         S         14 04 16.1 -3.5
KMI                               sS        Sn        14 04 26.1 -1.2
KMI                               SS        SnSn      14 04 50.5 +7.7
KMI                               pmax      pmax
      comp=Z,57nm,1.3s
KMI                               pmax      pmax
      comp=Z,380nm,3.1s
KMI                               LR        LR
      comp=Z,8µm,15.0s
KMI                               LR        LR
      comp=Z,10µm,13.8s
KMI                               LR        LR
      comp=Z,9µm,16.2s
SHL   Shillong          21.33 348 eP        P         14 00 26.1 -0.6
      comp=Z,679nm,0.7s
SHL                               LR        LR
      comp=Z,5µm,22.0s
SHL   Shillong          21.33 348 eP        P         14 00 26.1 -0.6
SHL                               pmax      pmax
      comp=Z,679nm,0.7s
SHL                               MLR       MLR
      comp=Z,5µm,22.0s
SHL   Shillong          21.33 348 eP        P         14 00 27.6 +1.0
SHL                               eS        Sn        14 04 28.0 -2.4
BATP  Bataraza          21.37  78 eP        P         14 00 26.6 -0.4
SGKI  Sangatta, Kali    21.52 103 P         P         14 00 28.6  0.0
      comp=Z,190nm,1.4s,comp=Z,3µmcomp=Z,3µm
MOKO  MOKOCHONG         21.68 355 eP        P         14 00 30.9 +0.5
BOK   Bokaro            21.72 332 eP        P         14 00 31.9 +1.2
BOK                               IAMs_20   IAMs_20   14 08 01.7
      comp=Z,8µm,24.0s
JAGI  Jajag, Banyuwa    21.74 127 eP        P         14 00 31.0 +0.1
      comp=Z,178nm,1.0s
JAGI                              LR        LR
      comp=Z,12µm,19.0s
JAGI  Jajag, Banyuwa    21.74 127 P         P         14 00 40.7  +10
HYB   Hyderabad         21.84 307 i P       P         14 00 34.0 +1.9
      comp=Z,107nm,0.8s
HYB                               eS        S         14 04 34.0 +2.0
GUWA  GUWAHATI          21.98 348 eP        P         14 00 33.8 +0.4
GUWA                              IAmb      IAmb      14 00 35.1
JORH  JORHAT            22.12 354 eP        P         14 00 33.7 -1.2
TEZP  TEZPUR            22.19 351 eP        P         14 00 35.4 -0.2
TEZP                              IAmb      IAmb      14 00 37.7
DHUB  DHUBRI            22.22 344 eP        P         14 00 35.9 -0.1
DHUB                              IAmb      IAmb      14 00 42.5
SRBI  Singaraja         22.38 124 P         P         14 00 45.7 +7.9
ZIRO  ZIRO              22.94 354 eP        P         14 00 43.0 -0.8
TAWA  Tawang            23.30 349 eP        P         14 00 48.6 +1.0
ENPP  El Nido           23.44  72 eP        P         14 00 47.2 -1.6
GYA   Guiyang           23.72  23⇑iP        P         14 00 54.3 +2.8
GYA                               pP        pP        14 01 01.2 -0.1
GYA                               PP        PnPn      14 01 27.4 +7.6
GYA                               S         S         14 05 05.5 +0.8
GYA                               SS        SnSn      14 05 51.3 +6.9
GYA                               pmax      pmax
      comp=Z,30nm,0.6s
GYA                               pmax      pmax
      comp=Z,110nm,3.5s
GYA                               LR        LR
      comp=Z,5µm,14.0s
GYA                               LR        LR
      comp=Z,7µm,17.7s
GYA                               LR        LR
      comp=Z,8µm,15.5s
NGP   Nagpur            23.73 315 eP        P         14 00 51.8 +0.2
NGP                               IAmb      IAmb      14 00 59.0
      comp=Z,83nm,1.5s
NGP                               eS        S         14 05 10.5 +5.7
GTK   Tadong            23.86 342 eP        P         14 00 53.9 +1.2
KAAM  Kaadhehdhoo       24.01 261 PFAKE               14 01 00.0 +5.8
KAAM                              LR        LR
      comp=Z,8µm,19.0s
TTSI  Tana Toraja       24.34 108 P         P         14 00 56.6 -0.6
      comp=Z,120nm,1.0s,comp=Z,1µm
HKPS  Hong Kong Po S    24.37  42 PFAKE               14 01 10.0  +13
HKPS                              LR        LR
      comp=Z,4µm,18.0s
BUSP  Coron             24.38  71 eP        P         14 01 00.2 +2.6
GZH   Guangzhou         24.42  40 P         P         14 01 07.0 +9.2
GZH                               S         S         14 05 28.7  +13
GZH                               LR        LR
      comp=N,14µm,21.6s
GZH                               LR        LR
      comp=E,16µm,20.9s
SPSI  Sidrap Palu       24.59 110 P         P         14 01 03.0 +3.5
CUYO  Cuyo Island       24.88  74 eP        P         14 01 03.4 +1.2
PLAI  Plampang          24.91 122 P         P         14 01 03.9 +1.5
GOA   Goa               24.93 297 eP        P         14 01 05.0 +2.5
GOA                               IAmb      IAmb      14 01 09.7
      comp=Z,88nm,0.8s
LUBP  Lubang            24.94  67 eP        P         14 01 04.5 +1.9
KAPI  Kappang           24.95 112 P         P         14 01 01.4 -1.3
      comp=Z,53nm,0.8s,baz=304,slow=11,SNR=17
KAPI                              LR        LR        14 12 36.6
      comp=Z,5µm,18.1s,baz=118,slow=41
KAPI  Kappang           24.95 112 eP        P         14 01 01.5 -1.2
      comp=Z,62nm,0.8s
KAPI                              LR        LR
      comp=Z,5µm,20.0s
JIRN  Jiri              25.00 338 eP        P         14 01 04.4 +0.9
      comp=Z,159nm,0.9s
PKI   Pulchoki          25.23 336 eP        P         14 01 06.5 +1.0
      comp=Z,109nm,1.3s
PKIN  Phulchoki         25.24 336 eP        P         14 01 06.6 +1.1
      comp=Z,38nm,0.8s
GUN   Gumba             25.34 337 eP        P         14 01 07.7 +1.1
      comp=Z,132nm,0.8s
SJMP  San Jose          25.37  71 eP        P         14 01 09.7 +3.1
DMN   Daman             25.39 335 eP        P         14 01 07.7 +0.8
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      comp=Z,44nm,0.8s
BKSI  Bulukumba         25.41 113 P         P         14 01 07.5 +0.6
      comp=Z,182nm,0.9s,comp=Z,1µm
KKN   Kakani            25.48 336 eP        P         14 01 08.2 +0.6
      comp=Z,50nm,0.8s
LSA   Lhasa             25.49 349 eP        P         14 01 07.3 -0.7
      comp=Z,89nm,0.6s
LSA                               LR        LR
      comp=Z,4µm,21.0s
LSA   Lhasa             25.49 349 P         P         14 01 10.7 +2.7
LSA   Lhasa             25.49 349 eP        P         14 01 07.3 -0.7
LSA                               pmax      pmax
      comp=Z,89nm,0.6s
LSA                               MLR       MLR
      comp=Z,4µm,21.0s
APSI  Ampana            25.54 102 P         P         14 01 09.1 +1.0
      comp=Z,181nm,1.2s,comp=Z,2µm
TGY   Tagaytay City     25.69  67 P         P         14 01 10.0 +0.5
      comp=Z,134nm,0.2s,baz=180,slow=10.0,SNR=10
IPIL  Ipil              25.92  82 eP        P         14 01 13.8 +2.2
GKN   Gorkha            25.93 335 eP        P         14 01 12.2 +0.5
      comp=Z,130nm,0.9s
KOLN  Koldanda          26.18 333 eP        P         14 01 13.4 -0.6
      comp=Z,125nm,1.0s
OTRP  Odiongan          26.19  71 eP        P         14 01 14.4 +0.4
SMPP  San Manuel, Pa    26.20  62 eP        P         14 01 13.2 -0.9
BHPL  Bhopal            26.24 317 eP        P         14 01 17.5 +3.1
BHPL                              IAMs_20   IAMs_20   14 39 09.9
      comp=Z,1µm,3.5s
POO   Poona             26.25 304 eP        P         14 01 18.8 +4.3
POO                               IAmb      IAmb      14 01 19.8
      comp=Z,80nm,1.4s
BOAC  Boac              26.33  69 eP        P         14 01 15.9 +0.7
GUIM  Jordan            26.35  75 eP        P         14 01 15.6 +0.2
DANN  Dangsing          26.61 334 eP        P         14 01 17.5 -0.5
      comp=Z,65nm,0.6s
LUWI  Luwuk             26.66 102 eP        P         14 01 17.3 -1.0
      comp=Z,545nm,1.3s
LUWI  Luwuk             26.66 102 P         P         14 01 20.2 +1.9
      comp=Z,219nm,0.9s,comp=Z,4µm
WBSI  Waikabubak, Su    26.70 122 P         P         14 01 25.9 +7.3
PAGZ  Pagadian          26.73  82 eP        P         14 01 19.5 +0.6
PYUN  Piuthan           26.74 332 eP        P         14 01 17.7 -1.4
      comp=Z,55nm,0.8s
BALP  Baler             26.84  64 eP        P         14 01 22.2 +2.4
ABRA  Dolores           26.85  59 eP        P         14 01 21.7 +1.8
DGAR  Diego Garcia      26.97 244 PFAKE               14 01 30.0 +8.9
DGAR                              LR        LR
      comp=Z,6µm,19.0s
CD2   Chengdu           26.99  13⇑iP        P         14 01 21.4 +0.3
CD2                               pP        pP        14 01 26.1 -4.6
CD2                               sP        sP        14 01 30.7 -4.1
CD2                               S         S         14 05 57.9 +1.4
CD2                               pmax      pmax
      comp=Z,30nm,0.8s
CD2                               pmax      pmax
      comp=Z,200nm,4.1s
CD2                               LR        LR
      comp=Z,16µm,15.5s
CD2                               LR        LR
      comp=Z,16µm,13.5s
H08S2 Diego Garcia H    27.04 243 P         P         14 01 22.9 +1.6
H08S2                             T         T         14 28 49.2
      baz=60,slow=75,SNR=480
H08S3 Diego Garcia H    27.04 243 P         P         14 01 23.0 +1.6
H08S3                             T         T         14 28 57.5
      baz=60,slow=75,SNR=439
H08S1 Diego Carcia H    27.05 243 P         P         14 01 23.1 +1.6
H08S1                             T         T         14 28 50.4
      baz=60,slow=75,SNR=168
APYP  Conner            27.39  59 eP        P         14 01 25.8 +1.0
CAUP  Cauayan           27.52  62 eP        P         14 01 25.9  0.0
CTBH  Cotabato--PC H    27.53  83⇓iP        P         14 01 26.2 +0.1
SKMP  Bagumbayan, Su    27.79  85 eP        P         14 01 28.6 +0.2
ENH   Enshi             28.23  24 eP        P         14 01 30.5 -1.7
      comp=Z,122nm,1.6s
ENH                               LR        LR
      comp=Z,9µm,19.0s
MNI   Manado            28.29  96 P         P         14 01 34.2 +1.3
MNI                               pmax      pmax
      comp=Z,115nm,0.9s
OCLP  Ormoc             28.38  75 eP        P         14 01 35.6 +1.9
BUKP  Musuan            28.39  82 eP        P         14 01 34.8 +1.0
MSLP  Maasin            28.46  77 eP        P         14 01 35.5 +1.1
PVCP  Virac             28.52  70 eP        P         14 01 31.4 -3.5
MMRI  Maumere           28.68 117 PFAKE               14 01 50.0  +14
MMRI                              LR        LR
      comp=Z,8µm,19.0s
KNMB  Chin-men Tao      28.73  45 PFAKE               14 01 50.0  +13
KNMB                              LR        LR
      comp=Z,3µm,19.0s
DAV   Davao City (W)    28.84  84 LR        LR        14 14 42.7
      comp=Z,3µm,21.1s,baz=234,slow=40
DDMP  Don Marcelino,    28.94  86 eP        P         14 01 36.6 -2.1
QZH   Quanzhou          29.18  44⇑iP        P         14 01 44.0 +3.4
QZH                               S         S         14 06 34.6 +3.6
QZH                               LR        LR
      comp=Z,8µm,16.6s
QZH                               LR        LR
      comp=Z,5µm,16.6s
QZH                               LR        LR
      comp=Z,9µm,12.8s
TWG   Pinlang           29.72  50 PFAKE               14 02 00.0  +15
TWG                               LR        LR
      comp=Z,9µm,22.0s
SSLB  Suanglung         30.18  49 eP        P         14 01 49.8 +0.3
      comp=Z,17nm,1.0s
SSLB                              LR        LR
      comp=Z,4µm,18.0s
YULB  Yu-li             30.21  50 eP        P         14 01 49.3 -0.5
      comp=Z,46nm,1.3s
YULB                              LR        LR
      comp=Z,4µm,21.0s
WHN   Wuhan             30.70  31 ⇑P        P         14 01 56.9 +2.9
WHN                               S         S         14 06 56.8 +2.0
WHN                               LR        LR
      comp=Z,11µm,11.3s
WHN                               LR        LR
      comp=Z,15µm,11.7s
WHN                               LR        LR
      comp=Z,16µm,24.2s
NACB  Ninganchiao       30.88  49 PFAKE               14 02 10.0  +14
NACB                              LR        LR
      comp=Z,4µm,18.0s
TNTI  Ternate           30.88  96 eP        P         14 01 52.5 -3.3
      comp=Z,16nm,0.9s
TNTI  Ternate           30.88  96 P         P         14 01 58.9 +3.0
SOEI  Soe               30.97 118 PFAKE               14 02 10.0  +13
SOEI                              LR        LR
      comp=Z,7µm,22.0s
YHNB  Yeheng            31.00  48 PFAKE               14 02 10.0  +13
YHNB                              LR        LR
      comp=Z,3µm,19.0s
DDI   Dehra Dun         31.03 328 eP        P         14 01 57.5 +0.5
DDI                               IAmb      IAmb      14 02 19.1
      comp=Z,33nm,0.4s
DDI                               IAMs_20   IAMs_20   14 14 16.9
      comp=Z,9µm,20.1s
LBMI  Labuha            31.23  99 P         P         14 02 05.0 +6.1
TATO  Taipei            31.26  47 PFAKE               14 02 10.0  +11
TATO                              LR        LR
      comp=Z,2µm,21.0s
XAN   Xi'an             31.41  20 eP        P         14 01 58.0 -2.3
      comp=Z,52nm,1.0s
XAN                               LR        LR
      comp=Z,5µm,20.0s
XAN   Xi'an             31.41  20 P         P         14 01 59.7 -0.6
XAN                               S         S         14 07 05.0 -0.9
XAN                               sS        sS        14 07 21.2 -0.7
XAN                               SS        SnSn      14 09 00.9 +9.3
XAN                               pmax      pmax
      comp=Z,45nm,1.1s
XAN                               pmax      pmax
      comp=Z,190nm,3.9s
XAN                               LR        LR
      comp=Z,5µm,15.1s
XAN                               LR        LR
      comp=Z,13µm,18.4s
XAN                               LR        LR
      comp=Z,6µm,12.8s
XAN   Xi'an             31.41  20 eP        P         14 01 58.0 -2.3
XAN                               pmax      pmax
      comp=Z,52nm,1.0s
XAN                               MLR       MLR
      comp=Z,5µm,20.0s
LZH   Lanzhou           32.00  11 ⇑P        P         14 02 06.4 +0.8
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LZH                               pP        pP        14 02 13.8 -1.5
LZH                               sP        sP        14 02 16.3 -3.2
LZH                               S         S         14 07 18.5 +3.1
LZH                               sS        pS        14 07 25.5 -0.5
LZH                               SS        SS        14 09 07.3  -26
LZH                               pmax      pmax
      comp=Z,54nm,1.6s
LZH                               pmax      pmax
      comp=Z,320nm,4.3s
LZH                               LR        LR
      comp=Z,3µm,15.2s
LZH                               LR        LR
      comp=Z,4µm,14.1s
LZH                               LR        LR
      comp=Z,4µm,15.5s
GIRL  Giralia           32.07 148 PFAKE               14 02 20.0  +14
GIRL                              LR        LR
      comp=Z,7µm,20.0s
YOJ   Yonaguni jima     32.10  50 PFAKE               14 02 20.0  +14
YOJ                               LR        LR
      comp=Z,2µm,20.0s
SMLA  Simla             32.13 327 eP        P         14 02 07.8 +1.2
SMLA                              IAmb      IAmb      14 02 12.2
      comp=Z,15nm,0.5s
DHRM  DHARAMSHALA       33.47 328 eP        P         14 02 19.5 +0.9
DHRM                              IAmb      IAmb      14 02 22.7
      comp=Z,20nm,0.5s
MBWA  Marble Bar        34.16 139 PFAKE               14 02 40.0  +16
MBWA                              LR        LR
      comp=Z,4µm,21.0s
NJ2   Nanjing           34.30  35 ⇑P        P         14 02 28.9 +3.4
NJ2                               pP        pP        14 02 36.7 +1.3
NJ2                               S         S         14 07 55.6 +4.8
NJ2                               pmax      pmax
      comp=Z,43nm,0.9s
NJ2                               pmax      pmax
      comp=Z,240nm,4.3s
NJ2                               LR        LR
      comp=Z,5µm,12.3s
NJ2                               LR        LR
      comp=Z,8µm,16.1s
NJ2                               LR        LR
      comp=Z,5µm,15.2s
PSAD1 Pilbara Seismi    34.44 140 PFAKE               14 02 40.0  +13
PSAD1                             LR        LR
      comp=Z,4µm,22.0s
PSAC1 Pilbara Seismi    34.48 140 PFAKE               14 02 40.0  +13
PSAC1                             LR        LR
      comp=Z,4µm,22.0s
PSAB1 Pilbara Seismi    34.52 140 PFAKE               14 02 40.0  +12
PSAB1                             LR        LR
      comp=Z,4µm,21.0s
PSAA2 Pilbara Seismi    34.53 140 PFAKE               14 02 40.0  +12
PSAA2                             LR        LR
      comp=Z,4µm,21.0s
PSAA1 Pilbara Seismi    34.53 140 PFAKE               14 02 40.0  +12
PSAA1                             LR        LR
      comp=Z,4µm,20.0s
PSAB2 Pilbara Seismi    34.53 140 PFAKE               14 02 40.0  +12
PSAB2                             LR        LR
      comp=Z,4µm,21.0s
PSA00 Pilbara Seismi    34.53 140 eP        P         14 02 26.2 -1.5
      comp=Z,16nm,0.8s
PSA00                             ePcP      PcP       14 05 02.8 +0.4
PSA00                             LR        LR
      comp=Z,4µm,22.0s
PSAD3 Pilbara Seismi    34.54 140 PFAKE               14 02 40.0  +12
PSAD3                             LR        LR
      comp=Z,4µm,22.0s
PSAA3 Pilbara Seismi    34.54 140 PFAKE               14 02 40.0  +12
PSAA3                             LR        LR
      comp=Z,4µm,22.0s
PSAB3 Pilbara Seismi    34.55 140 PFAKE               14 02 40.0  +12
PSAB3                             LR        LR
      comp=Z,4µm,21.0s
PSAC3 Pilbara Seismi    34.56 140 PFAKE               14 02 40.0  +12
PSAC3                             LR        LR
      comp=Z,3µm,20.0s
PSAC2 Pilbara Seismi    34.56 140 PFAKE               14 02 40.0  +12
PSAC2                             LR        LR
      comp=Z,4µm,22.0s
GTA   Gaotai            34.75   4 ⇑P        P         14 02 30.1 +0.6
GTA                               pP        pP        14 02 36.7 -2.6
GTA                               sP        sP        14 02 39.4 -4.0
GTA                               S         S         14 07 59.3 +1.4
GTA                               sS        sS        14 08 12.5 -1.5
GTA                               ScP       ScP       14 08 48.3 +2.3
GTA                               SS        SnSn      14 10 14.2 +1.4
GTA                               ScS       ScS       14 12 48.4 -0.9
GTA                               pmax      pmax
      comp=Z,28nm,1.4s
GTA                               pmax      pmax
      comp=Z,340nm,7.9s
GTA                               LR        LR
      comp=Z,2µm,15.6s
GTA                               LR        LR
      comp=Z,3µm,15.2s
GTA                               LR        LR
      comp=Z,4µm,15.6s
SSE   Sheshan           35.00  38 PFAKE               14 02 40.0 +8.4
SSE                               LR        LR
      comp=Z,3µm,20.0s
NIL   Nilore            36.19 326 eP        P         14 02 39.6 -2.3
      comp=Z,38nm,0.6s
NIL                               LR        LR
      comp=Z,4µm,20.0s
NIL   Nilore            36.19 326 eP        P         14 02 39.6 -2.3
NIL                               pmax      pmax
      comp=Z,38nm,0.6s
NIL                               MLR       MLR
      comp=Z,4µm,20.0s
FAKI  Fak Fak           36.31 101 PFAKE               14 02 50.0 +6.8
FAKI                              LR        LR
      comp=Z,2µm,20.0s
TIA   Tai'an            36.64  28 P         P         14 02 46.3 +0.7
TIA                               S         S         14 08 28.8 +2.1
TIA                               pmax      pmax
      comp=Z,17nm,2.0s
TIA                               pmax      pmax
      comp=Z,100nm,3.7s
TIA                               LR        LR
      comp=Z,4µm,16.6s
TIA                               LR        LR
      comp=Z,9µm,18.0s
TIA                               LR        LR
      comp=Z,2µm,15.7s
SAUI  Saumlaki          36.73 110 PFAKE               14 03 00.0  +13
SAUI                              LR        LR
      comp=Z,5µm,19.0s
JOW   Kunigami          37.38  50 eP        P         14 02 52.1  0.0
      comp=Z,37nm,0.7s
JOW                               LR        LR
      comp=Z,1µm,20.0s
KNRA  Kununurra         37.62 123 P         P         14 02 52.8 -1.4
      baz=38,SNR=9.7
MEEK  Meekatharra       37.63 147 P         P         14 02 55.2 +1.1
      baz=38,SNR=3.9
PALU  Palau             37.67  84 P         P         14 02 55.0 +0.3
      baz=38,SNR=5.1
BTO   Baotou            37.78  17 eP        P         14 02 56.4 +1.0
BTO                               S         S         14 08 42.7 -1.5
MORW  Morawa            38.31 152 eP        P         14 02 59.5 -0.3
      comp=Z,34nm,0.9s
MORW                              LR        LR
      comp=Z,3µm,20.0s
MORW  Morawa            38.31 152 P         P         14 03 01.0 +1.2
      baz=38,SNR=14
MTN   Manton Dam        38.37 117 eP        P         14 02 58.3 -2.2
      comp=Z,26nm,0.8s
MTN                               LR        LR
      comp=Z,3µm,19.0s
MTN   Manton Dam        38.37 117 P         P         14 02 58.5 -2.0
      baz=38,SNR=14
HHC   Hu-ho-hao-te      38.47  18 P         P         14 03 03.8 +2.6
HHC                               pP        pP        14 03 08.3 -2.7
HHC                               S         S         14 08 59.0 +4.4
HHC                               pmax      pmax
      comp=Z,41nm,0.9s
HHC                               pmax      pmax
      comp=Z,76nm,7.6s
HHC                               LR        LR
      comp=Z,5µm,20.8s
HHC                               LR        LR
      comp=Z,10µm,16.7s
KBL   Kabul             39.28 323 PFAKE               14 03 20.0  +12
KBL                               LR        LR
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              comp=Z,4µm,18.0s
BJT    Baijiatuau        39.38  24 eP      P        14 03 08.0 -0.7
              comp=Z,142nm,1.0s
BJT                                LR      LR
              comp=Z,2µm,22.0s
BJT    Baijiatuau        39.38  24 eP      P        14 03 08.0 -0.7
BJT                                pmax    pmax
              comp=Z,142nm,1.0s
BJT                                MLR     MLR
              comp=Z,2µm,22.0s
BJI    Beijing           39.41  24 P       P        14 03 11.2 +2.3
BJI                                S       S        14 09 12.9 +4.5
BJI                                pmax    pmax
              comp=Z,66nm,1.0s
BJI                                LR      LR
              comp=Z,1µm,13.7s
BJI                                LR      LR
              comp=Z,2µm,13.9s
BJI                                LR      LR
              comp=Z,950nm,25.5s
BJI    Beijing           39.41  24 P       P        14 03 08.0 -0.9
BJI                                pmax    pmax
              comp=Z,142nm,1.0s
KSH    Kashi             39.47 335 P       P        14 03 09.5 -0.1
KSH                                pP      pP       14 03 14.7 -4.7
KSH                                PP      PP       14 04 44.4 +3.8
KSH                                PcP     PcP      14 05 18.4 +1.3
KSH                                S       S        14 09 08.7 -1.1
KSH                                SS      SS       14 11 56.7 -8.3
KSH                                ScS     ScS      14 13 14.5 -1.3
KSH                                pmax    pmax
              comp=Z,21nm,0.9s
KSH                                pmax    pmax
              comp=Z,130nm,6.2s
KSH                                LR      LR
              comp=Z,1µm,15.7s
KSH                                LR      LR
              comp=Z,2µm,18.5s
KSH                                LR      LR
              comp=Z,1µm,17.3s
KDU    Kakadu            39.50 116 P       P        14 03 08.2 -1.8
              baz=39,SNR=13
BAKI   Biak              39.81  97 P       P        14 03 12.6  0.0
WMQ    Urumqi            39.84 350 PFAKE            14 03 20.0 +7.5
WMQ                                LR      LR
              comp=Z,2µm,20.0s
WMQ    Urumqi            39.84 350 eP      P        14 03 14.8 +2.3
WMQ                                sP      pP       14 03 23.1 +0.7
WMQ                                PP      PP       14 04 49.1 +4.6
WMQ                                S       S        14 09 15.2 +0.2
WMQ                                SS      SS       14 12 04.9 -7.2
WMQ                                pmax    pmax
              comp=Z,27nm,1.3s
WMQ                                pmax    pmax
              comp=Z,130nm,5.5s
WMQ                                LR      LR
              comp=Z,590nm,17.1s
WMQ                                LR      LR
              comp=Z,2µm,19.3s
WMQ                                LR      LR
              comp=Z,3µm,25.3s
BLDU   Ballidu           39.93 153 P       P        14 03 15.4 +2.1
              baz=40,SNR=4.3
MUN    Mundaring         40.87 154 P       P        14 03 22.5 +1.4
              baz=41,SNR=13
DL2    Dalian            40.95  30 P       P        14 03 22.5 +0.8
DL2                                S       S        14 09 36.2 +4.6
DL2                                SS      SS       14 12 37.0 +2.7
DL2                                pmax    pmax
              comp=Z,100nm,0.9s
DL2                                pmax    pmax
              comp=Z,300nm,5.0s
DL2                                LR      LR
              comp=Z,5µm,23.2s
DL2                                LR      LR
              comp=Z,8µm,23.5s
DL2                                LR      LR
              comp=Z,4µm,16.9s
PRZ    Przheval'sk       41.06 339 PFAKE            14 03 30.0 +7.1
PRZ                                LR      LR
              comp=Z,2µm,20.0s
WSAR   Wadi Sarin        41.12 300 LR      LR       14 20 59.4
              comp=Z,1µm,19.7s,baz=126,slow=37
KDJ    Kajisay           41.20 338 eP      P        14 03 22.9 -1.1
              comp=Z,154nm,1.8s
KDJ                                LR      LR
              comp=Z,2µm,21.0s
KDJ    Kajisay           41.20 338 eP      P        14 03 22.9 -1.1
KDJ                                pmax    pmax
              comp=Z,154nm,1.8s
KDJ                                MLR     MLR
              comp=Z,2µm,21.0s
KLBR   Kellerberrin      41.23 152 P       P        14 03 24.8 +0.7
              baz=41,SNR=30
PDGK   Podgornoye        41.45 341 P       P        14 03 25.4 -0.5
PDGK                               pmax    pmax
              comp=Z,38nm,1.2s
GAR    Garm              41.75 329 eP      P        14 03 26.6 -1.8
              comp=Z,101nm,1.4s
GAR                                LR      LR
              comp=Z,10µm,20.0s
GAR    Garm              41.75 329 eP      P        14 03 26.7 -1.8
GAR                                pmax    pmax
              comp=Z,101nm,1.4s
GAR                                MLR     MLR
              comp=Z,10µm,20.0s
BOOM   Boomskoye usch    41.98 337 eP      P        14 03 27.7 -2.7
              comp=Z,17nm,0.9s
BOOM                               LR      LR
              comp=Z,3µm,21.0s
BOOM   Boomskoye usch    41.98 337 eP      P        14 03 27.7 -2.7
BOOM                               pmax    pmax
              comp=Z,17nm,0.9s
BOOM                               MLR     MLR
              comp=Z,3µm,21.0s
CHGR   Chuyangaron       42.11 327 PFAKE            14 03 40.0 +8.6
CHGR                               LR      LR
              comp=Z,15µm,20.0s
NWAO   Narrogin (SRO)    42.12 154 eP      P        14 03 32.2 +0.8
              comp=Z,58nm,0.8s
NWAO                               LR      LR
              comp=Z,3µm,20.0s
NWAO   Narrogin (SRO)    42.12 154 P       P        14 03 32.9 +1.5
              baz=42,SNR=14
NWAO   Narrogin (SRO)    42.12 154 eP      P        14 03 32.2 +0.8
NWAO                               pmax    pmax
              comp=Z,58nm,0.8s
NWAO                               MLR     MLR
              comp=Z,3µm,20.0s
MSEY   Mahe Island       42.18 258 PFAKE            14 03 40.0 +7.7
MSEY                               LR      LR
              comp=Z,4µm,20.0s
TJN    Taejon            42.35  38⇑eP      P        14 03 33.7 +0.5
TKM2   Tokmak 2          42.48 337 i P     P        14 03 35.1 +0.6
TKM2                               pmax    pmax
              comp=Z,32nm,1.4s
WRKA   Warakurna         42.58 135 P       P        14 03 34.2 -1.0
              baz=43,SNR=26
H01W3  Cape Leeuwin H    42.59 159 T       T        14 47 44.4
              baz=333,slow=75,SNR=6.1
H01W2  Cape Leeuwin H    42.60 159 T       T        14 47 31.8
              baz=333,slow=75,SNR=6.7
H01W1  Cape Leeuwin H    42.60 159 T       T        14 47 45.3
              baz=333,slow=75,SNR=5.7
JNU    Nakatsue          42.66  44 eP      P        14 03 36.0 +0.2
              comp=Z,50nm,1.0s
AAK    Ala-Archa         42.69 336 LR      LR       14 23 01.3
              comp=Z,4µm,21.2s,baz=146,slow=38
AAK    Ala-Archa         42.69 336 eP      P        14 03 35.3 -0.8
              comp=Z,27nm,0.9s
AAK                                LR      LR
              comp=Z,5µm,22.0s
AAK    Ala-Archa         42.69 336 P       P        14 03 38.0 +1.9
AAK    Ala-Archa         42.69 336deP      P        14 03 37.5 +1.4
AAK                                pmax    pmax
              comp=Z,10.0nm,1.3s
FRU1   Bishkek           42.78 336 PFAKE            14 03 50.0  +13
FRU1                               LR      LR
              comp=Z,5µm,22.0s
KMBL   Kambalda          43.11 148 P       P        14 03 39.9 +0.4
              baz=43,SNR=9.3
KSRS   Korea Array       43.39  37 P       P        14 03 42.1 +0.5
              comp=Z,12nm,0.9s,baz=220,slow=8.1,SNR=27
KSRS                               LR      LR       14 22 41.8
              comp=Z,2µm,19.5s,baz=228,slow=38
UOSS   Minazif           43.79 302 PFAKE            14 04 00.0  +15
UOSS                               LR      LR
              comp=Z,1µm,22.0s
MK31   Makanchi Array    43.82 346 eP      P        14 03 42.0 -3.0
              comp=Z,24nm,0.8s
MK31   Makanchi Array    43.82 346 eP      P        14 03 42.0 -3.0
MK31                               pmax    pmax
              comp=Z,25nm,0.8s
MK32   Makanchi Array    43.82 346 eP      P        14 03 43.8 -1.2
MKAR   Makanchi Array    43.82 346 P       P        14 03 43.8 -1.2
              comp=Z,20nm,0.8s,baz=165,slow=7.5,SNR=44
MKAR                               LR      LR       14 27 06.2
              comp=Z,2µm,18.2s,baz=170,slow=43
MKAR                               PKPPKP           14 35 19.6
              comp=Z,0.4nm,0.8s,baz=315,slow=2.9,SNR=3.7
ASHO   Ashiyiah          43.83 301 P       P        14 03 49.0 +3.5
SONM   Songino Array     43.86   9 P       P        14 03 45.9 +0.5
              comp=Z,13nm,0.9s,baz=192,slow=9.0,SNR=36
SONM                               LR      LR       14 25 33.5
              comp=Z,4µm,18.4s,baz=187,slow=41
ALNE   Al Ain            43.88 300 i P     P        14 03 48.4 +2.6
              SNR=7.3
MAKZ   Makanchi          43.91 345 eP      P        14 03 43.7 -2.0
              comp=Z,30nm,0.7s
MAKZ                               LR      LR
              comp=Z,1µm,20.0s
MAKZ   Makanchi          43.91 345 eP      P        14 03 43.7 -2.0
MAKZ                               pmax    pmax
              comp=Z,30nm,0.7s
MAKZ                               MLR     MLR
              comp=Z,1µm,20.0s
ULN    Ulaanbaatar       44.00  10 eP      P        14 03 45.7 -0.9
              comp=Z,36nm,1.3s
ULN                                LR      LR
              comp=Z,3µm,19.0s
ULN    Ulaanbaatar       44.00  10d iP     P        14 03 46.7 +0.1
ULN                                pmax    pmax
              comp=Z,7.0nm,1.1s
GENI   Genyem            44.03  99 P       P        14 03 50.0 +2.8
SNY    Shenyang          44.15  29 ⇓P      P        14 03 47.8 +0.2
SNY                                pP      pP       14 03 58.2 +0.5
SNY                                S       S        14 10 21.0 +2.5
SNY                                ScS     SS       14 13 38.9 +1.9
SNY                                pmax    pmax
              comp=Z,41nm,1.0s
SNY                                pmax    pmax
              comp=Z,270nm,2.7s
SNY                                LR      LR
              comp=Z,5µm,24.5s
SNY                                LR      LR
              comp=Z,7µm,22.6s
SNY                                LR      LR
              comp=Z,6µm,20.6s
FAQ    Al Faqa, Dubai    44.24 301 P       P        14 03 50.7 +2.0
SHME   Shamm             44.25 303 P       P        14 03 50.6 +1.8
WC1    Warramunga Arr    44.32 125 PFAKE            14 04 00.0  +11
WC1                                LR      LR
              comp=Z,2µm,19.0s
WRA    Warramunga Arr    44.33 125 P       P        14 03 48.2 -1.3
              comp=Z,42nm,0.6s,baz=293,slow=10,SNR=134
WRA                                ScP     ScP      14 09 24.5 +1.3
              comp=Z,2.7nm,0.8s,baz=278,slow=5.7,SNR=4.2
WR1    Warramunga Arr    44.33 125 eP      P        14 03 48.1 -1.3
WR1                                eScP    ScP      14 09 24.5 +1.3
WRAB   Tennant Creek     44.34 125 eP      P        14 03 47.8 -1.7
              comp=Z,66nm,0.8s
WRAB                               LR      LR
              comp=Z,2µm,21.0s
WRAB   Tennant Creek     44.34 125c iP     P        14 03 48.1 -1.4
WRAB                               pmax    pmax
              comp=Z,27nm,0.8s
WB2    Warramunga Arr    44.34 125 eP      P        14 03 47.5 -2.0
              comp=Z,68nm,0.8s
WB2                                LR      LR
              comp=Z,4µm,22.0s
ASUD   Al Ashush, Dub    44.43 301 i P     P        14 03 52.6 +2.4
              SNR=13
JAY    Jayapura          44.55  98 P       P        14 03 50.7 -0.7
KK31   Karatay Array     44.79 333 eP      P        14 03 53.5 +0.7
              comp=Z,17nm,0.9s
KK31   Karatay Array     44.79 333 eP      P        14 03 53.5 +0.7
KK31                               pmax    pmax
              comp=Z,17nm,0.9s
KKAR   Karatay Array     44.79 333 eP      P        14 03 51.8 -1.0
              comp=Z,17nm,0.9s
KKAR   Karatay Array     44.79 333 eP      P        14 03 51.8 -1.0
KKAR                               pmax    pmax
              comp=Z,17nm,0.9s
MZR    Muzera            45.53 298 i P     P        14 03 60.0 +1.0
              SNR=16
AS31   Alice Springs     45.90 129 eP      P        14 04 00.3 -1.7
              comp=Z,12nm,0.5s
AS31                               ePcP    PcP      14 05 39.7 +0.9
AS31                               eScP    ScP      14 09 31.1 +1.4
ASAR   Alice Springs     45.90 129 P       P        14 04 00.8 -1.1
              comp=Z,31nm,0.5s,baz=302,slow=7.4,SNR=348
ASAR                               PcP     PcP      14 05 39.7 +0.9
              comp=Z,19nm,0.9s,baz=298,slow=3.2,SNR=8.9
ASAR                               ScP     ScP      14 09 31.1 +1.4
              comp=Z,2.4nm,0.9s,baz=295,slow=4.5,SNR=7.0
ASAR                               S       S        14 10 42.6 -2.0
              comp=Z,1.3nm,0.9s,baz=282,slow=14,SNR=5.0
ASAR                               LR      LR       14 23 12.9
              comp=Z,3µm,21.9s,baz=300,slow=36
FORT   Forrest           46.23 142 eP      P        14 04 04.0 -0.4
              comp=Z,64nm,0.9s
FORT                               LR      LR
              comp=Z,3µm,20.0s
CN2    Changchun         46.54  29 eP      P        14 04 06.5 -0.1
CN2                                eS      S        14 10 53.5 +0.4
CN2                                pmax    pmax
              comp=Z,20nm,0.7s
CN2                                pmax    pmax
              comp=Z,200nm,4.0s
CN2                                LR      LR
              comp=Z,5µm,22.0s
CN2                                LR      LR
              comp=Z,4µm,22.0s
CN2                                LR      LR
              comp=Z,3µm,20.0s
MOY    Mondy             47.03   4 eP      P        14 04 12.4 +2.0
MOY                                pmax    pmax
              comp=Z,46nm,2.7s
TLY    Talaya            47.26   6 eP      P        14 04 10.3 -1.8
              comp=Z,14nm,0.9s
TLY                                LR      LR
              comp=Z,3µm,21.0s
TLY    Talaya            47.26   6 eP      P        14 04 10.5 -1.7
TLY                                eS      S        14 11 08.0 +4.8
TLY                                pmax    pmax
              comp=Z,31nm,0.9s
TLY                                MLR     MLR
              comp=Z,6µm,15.0s
RER    Riviere de l'E    47.61 236 eP      P        14 04 15.5 +0.1
              comp=Z,122nm,0.9s
IRK    Irkutsk           47.88   6 eP      P        14 04 17.7 +0.8
IRK                                pmax    pmax
              comp=Z,59nm,2.6s
INU    Inuyama           48.15  45 eP      P        14 04 18.8 -0.5
              comp=Z,44nm,1.1s
INU                                LR      LR
              comp=Z,2µm,20.0s
OTUK   Ortayu            48.20 338 P       P        14 04 18.6 -0.9
OTUK                               pmax    pmax
              comp=Z,19nm,0.8s
GEYT   Alibeck           48.30 319 P       P        14 04 19.3 -1.1
              comp=Z,8.9nm,0.7s,baz=147,slow=8.5,SNR=17
GEYT                               ScP     ScP      14 09 42.2 +2.7
              comp=Z,1.1nm,0.6s,baz=73,slow=4.8,SNR=2.8
GEYT                               S       S        14 11 18.9 +0.5
              comp=Z,0.3nm,0.3s,baz=203,slow=22,SNR=2.4
GEYT                               LR      LR       14 26 48.5
              comp=Z,4µm,19.8s,baz=125,slow=39
GYA0B  ALIBECK ARRAY     48.30 319 eP      P        14 04 18.6 -1.9
              comp=Z,27nm,0.9s
GYA0B                              LR      LR
              comp=Z,4µm,21.0s
KURBB  Kurchatov Arra    48.32 345 ScP     ScP      14 09 40.1 +1.0
              comp=Z,2.5nm,0.9s,baz=151,slow=3.5,SNR=4.1
GUMO   Guam              48.32  76 PFAKE            14 04 30.0 +9.1
GUMO                               LR      LR
              comp=Z,1µm,22.0s
KURK   Kurchatov         48.38 345 eP      P        14 04 19.3 -1.5
              comp=Z,52nm,1.2s
KURK   Kurchatov         48.38 345ceP      P        14 04 19.7 -1.1
KURK                               pmax    pmax
              comp=Z,19nm,1.3s
HIA    Hailar            48.61  20 eP      P        14 04 21.7 -0.9
              comp=Z,18nm,0.8s
HIA                                LR      LR
              comp=Z,4µm,20.0s
HIA    Hailar            48.61  20 eP      P        14 04 21.7 -0.9
HIA                                pmax    pmax
              comp=Z,18nm,0.8s
HIA                                MLR     MLR
              comp=Z,4µm,20.0s
QIS    Mount Isa         49.00 122 P       P        14 04 25.3 -0.8
              baz=49,SNR=7.9
MDJ    Mudanjiang        49.18  31 PFAKE            14 04 40.0  +13
MDJ                                LR      LR
              comp=Z,3µm,19.0s
MDJ    Mudanjiang        49.18  31 P       P        14 04 26.4 -0.7
MDJ                                pP      pP       14 04 35.0 -2.3
MDJ                                sP      sP       14 04 38.1 -3.0
MDJ                                PcP     PcP      14 05 50.4 +0.4
MDJ                                PP      PP       14 06 21.4 +0.4
MDJ                                ScP     ScP      14 09 43.6 +0.6
MDJ                                PcS     PcS      14 09 47.0 +0.7
MDJ                                S       S        14 11 32.0 +1.5
MDJ                                sS      pS       14 11 43.5 +1.2
MDJ                                ScS     ScS      14 14 16.8  0.0
MDJ                                SS      SS       14 15 04.3 +2.1
MDJ                                pmax    pmax
              comp=Z,50nm,1.4s
MDJ                                pmax    pmax
              comp=Z,390nm,2.7s
MDJ                                LR      LR
              comp=Z,4µm,16.3s
MDJ                                LR      LR
              comp=Z,5µm,16.3s
MDJ                                LR      LR
              comp=Z,5µm,13.9s
MAJO   Matsushiro        49.58  45 eP      P        14 04 30.7 +0.4
              comp=Z,103nm,1.9s
MAJO                               LR      LR
              comp=Z,2µm,21.0s
MAJO   Matsushiro        49.58  45⇑eP      P        14 04 31.1 +0.8
MAJO                               pmax    pmax
              comp=Z,17nm,0.9s
MAT    Matsushiro        49.58  45 P       P        14 04 29.7 -0.6
MAT                                S       S        14 11 32.4 -4.0
MJAR   Matsushiro Arr    49.58  45 P       P        14 04 30.3  0.0
              comp=Z,10.0nm,0.8s,baz=235,slow=9.0,SNR=17
MJAR                               LR      LR       14 24 38.1
              comp=Z,2µm,21.6s,baz=260,slow=35
COEN   Coen              49.68 113 eP      P        14 04 30.0 -1.3
              comp=Z,58nm,1.4s
COEN                               LR      LR
              comp=Z,3µm,21.0s
COEN   Coen              49.68 113 P       P        14 04 30.5 -0.8
              baz=50,SNR=9.8
ZAA0   Zalesovo Array    50.12 351 eP      P        14 04 32.9 -1.1
              comp=Z,25nm,0.8s
ZALV   Zalesovo Beam     50.12 351 P       P        14 04 33.8 -0.2
              comp=Z,13nm,0.7s,baz=178,slow=5.7,SNR=38
ZALV                               LR      LR       14 29 29.7
              comp=Z,1µm,20.2s,baz=134,slow=41
ZAA1   Zalesovo Array    50.13 351 eP      P        14 04 33.8 -0.3
USA0B  Ussuriysk Arra    50.16  33 PFAKE            14 04 50.0  +16
USA0B                              LR      LR
              comp=Z,3µm,19.0s
USRK   Ussuriysk Ar.     50.16  33 P       P        14 04 34.6 +0.1
              comp=Z,9.6nm,0.8s,baz=241,slow=4.9,SNR=10
USRK                               LR      LR       14 26 46.0
              comp=Z,3µm,18.3s,baz=215,slow=37
MANU   Manus Island      51.07  96 eP      P        14 04 40.3 -1.6
              comp=Z,62nm,1.3s
PMG    Port Moresby      52.20 106 LR      LR       14 32 13.6
              comp=Z,831nm,18.1s,baz=266,slow=42
PMG    Port Moresby      52.20 106 PFAKE            14 05 00.0  +10
PMG                                LR      LR
              comp=Z,2µm,21.0s
PMG    Port Moresby      52.20 106deP      P        14 04 49.1 -1.2
PMG                                pmax    pmax
              comp=Z,117nm,0.8s
DAMY   Dhamar            52.39 285 eP      P        14 04 50.5 -1.6
              comp=Z,89nm,1.0s
DAMY                               LR      LR
              comp=Z,2µm,20.0s
BBOO   Buckleboo         52.72 138 eP      P        14 04 51.3 -2.6
              comp=Z,31nm,1.0s
BBOO                               LR      LR
              comp=Z,4µm,21.0s
BBOO   Buckleboo         52.72 138 P       P        14 04 53.1 -0.8
              baz=53,SNR=13
RAYN   Ar Rayn           52.75 296 eP      P        14 04 53.8 -0.6
              comp=Z,65nm,0.9s
RAYN                               LR      LR
              comp=Z,3µm,18.0s
RAYN   Ar Rayn           52.75 296 i P     P        14 04 54.3 -0.1
              SNR=83
RAYN   Ar Rayn           52.75 296 P       P        14 04 53.8 -0.6
RAYN                               pmax    pmax
              comp=Z,65nm,0.9s
BRVK   Borovoye          52.94 340 eP      P        14 04 52.5 -2.6
              comp=Z,29nm,0.9s
BRVK                               LR      LR
              comp=Z,3µm,19.0s
BRVK   Borovoye          52.94 340deP      P        14 04 52.7 -2.4
BRVK                               pmax    pmax
              comp=Z,13nm,0.8s
KLR    Kul'dur           53.47  28⇓eP      P        14 04 58.7 -0.4
KLR                                pmax    pmax
              comp=Z,19nm,1.4s
ATD    Arta Tunnel       53.67 281 P       P        14 05 03.4 +2.1
              comp=Z,19nm,0.7s,baz=35,slow=9.3,SNR=6.1
ATD                                LR      LR       14 24 43.4
              comp=Z,703nm,20.9s,baz=76,slow=32
ATD    Arta Tunnel       53.67 281 PFAKE            14 05 10.0 +8.7
ATD                                LR      LR
              comp=Z,1µm,22.0s
OPO    Ambohidratompo    53.93 243 P       P        14 05 05.7 +2.5
              comp=Z,17nm,0.8s,baz=72,slow=7.6,SNR=20
ABPO   Ambohimpanom      54.05 243 PFAKE            14 05 10.0 +5.9
ABPO                               LR      LR
              comp=Z,2µm,18.0s
AB31   Akbulak array     54.28 331 P       P        14 05 03.1 -2.0
AB31                               pmax    pmax
              comp=Z,2.0nm,0.6s
ABKAR  Akbulak array     54.28 331 eP      P        14 05 02.6 -2.4
              comp=Z,28nm,1.0s
CTA    Charters Tower    54.53 119 LR      LR       14 29 46.3
              comp=Z,2µm,18.4s,baz=290,slow=38
CTAO   Charters Tower    54.53 119 eP      P        14 05 06.2 -1.2
              comp=Z,68nm,1.4s
CTAO                               LR      LR
              comp=Z,2µm,18.0s
CTAO   Charters Tower    54.53 119 eP      P        14 05 06.2 -1.2
CTAO                               pmax    pmax
              comp=Z,68nm,1.4s
CTAO                               MLR     MLR
              comp=Z,2µm,18.0s
BOD    Bodaibo           54.77  11 eP      P        14 05 08.2 -0.2
BOD                                pmax    pmax
              comp=Z,34nm,1.6s
ZEA    Zeya              54.95  22 eP      P        14 05 10.8 +1.0
ZEA                                eS      S        14 12 46.0 -3.5
ZEA                                eSS     SS       14 16 35.0 +1.6
ZEA                                pmax    pmax
              comp=E,21nm,0.8s
ZEA                                pmax    pmax
              comp=N,35nm,1.0s
ZEA                                pmax    pmax
              comp=Z,41nm,1.0s
ZEA                                smax    smax
              comp=E,400nm,10.0s
ZEA                                MLR     MLR
              comp=Z,3µm,14.0s
ZEA                                MLR     MLR
              comp=E,1µm,13.0s
ZEA                                MLR     MLR
              comp=N,3µm,14.0s
HTT    Hallett           55.02 137 P       P        14 05 12.1 +1.3
              baz=55,SNR=10
ERM    Erimo             55.60  41 PFAKE            14 05 30.0  +15
ERM                                LR      LR
              comp=Z,1µm,18.0s
AKTO   Aktyubinsk        56.00 331 LR      LR       14 31 24.2
              comp=Z,871nm,20.0s,baz=138,slow=38
STKA   Stephens Creek    56.05 134 P       P        14 05 17.3 -0.8
              comp=Z,11nm,0.7s,baz=306,slow=8.0,SNR=16
STKA                               LR      LR       14 31 09.1
              comp=Z,2µm,19.4s,baz=296,slow=38
STKA   Stephens Creek    56.05 134 eP      P        14 05 17.1 -1.0
              comp=Z,4.4nm,0.9s
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STKA                              LR      LR
      comp=Z,600nm,19.0s
STKA  Stephens Creek   56.05 134  P       P       14 05 18.1  0.0
      baz=56,SNR=18
STKA  Stephens Creek   56.05 134 eP       P       14 05 17.1 -1.0
STKA                              pmax    pmax
      comp=Z,4.0nm,0.9s
STKA                              MLR     MLR
      comp=Z,600nm,19.0s
GRNR  Gornyy           56.73  29 eP       P       14 05 23.6 +0.9
GRNR                              pmax    pmax
      comp=Z,13nm,1.0s
AKT   Akhty            57.00 317 eP       P       14 05 24.5 -0.4
AKT                              e                14 06 21.2
AKT                               pmax    pmax
      comp=Z,60nm,1.8s
FURI  Furi             57.71 278  PFAKE           14 05 40.0 +9.4
FURI                              LR      LR
      comp=Z,2µm,21.0s
MAK   Makhachkala      57.81 319 eP       P       14 05 26.1 -4.3
MAK                              e                14 07 34.7
MAK                              eS       S       14 13 24.3 -3.4
MAK                               pmax    pmax
      comp=Z,306nm,1.4s
YSS   Yuzh-Sakhalins   57.86  36⇓eP       P       14 05 31.7 +1.0
YSS                              e                14 05 39.0
YSS                              e                14 06 21.5
YSS                              e                14 07 37.0
YSS                              eS       S       14 13 20.3 -7.8
YSS                               pmax    pmax
      comp=Z,20nm,1.0s
YSS                               MLR     MLR
      comp=Z,1µm,16.6s
YSS                               MLR     MLR
      comp=E,2µm,15.6s
GNI   Garni            58.51 315  LR      LR      14 34 56.7
      comp=E,824nm,18.6s,baz=102,slow=40
GNI   Garni            58.51 315 eP       P       14 05 35.2 -0.3
      comp=E,25nm,0.9s
GNI                               LR      LR
      comp=Z,1µm,18.0s
GNI   Garni            58.51 315⇑eP       P       14 05 36.3 +0.7
GNI                               pmax    pmax
      comp=Z,33nm,1.0s
CMSA  Cobar Meteorol   58.89 131  P       P       14 05 38.0 -0.2
      baz=59,SNR=41
GROC  Groznyy          59.04 319 eP       P       14 05 35.8 -3.2
GROC                             e                14 06 26.6
GROC                             e                14 07 46.6
GROC                             eS       S       14 13 42.1 -1.7
GROC                              pmax    pmax
      comp=Z,41nm,0.8s
RMQ   Roma             59.09 125  P       P       14 05 40.6 +0.9
      baz=59,SNR=27
SVE   Sverdlovsk       59.34 338 eP       P       14 05 39.3 -1.5
SVE                               pmax    pmax
      comp=Z,51nm,1.5s
SVE                               MLR     MLR
      comp=Z,5µm,21.0s
KMBO  Kilima Mbogo     59.65 266  P       P       14 05 46.8 +2.8
      comp=Z,21nm,0.8s,baz=61,slow=9.8,SNR=41
KMBO                              LR      LR      14 27 45.9
      comp=Z,2µm,20.6s,baz=94,slow=32
KMBO  Kilima Mbogo     59.65 266 eP       P       14 05 45.7 +1.7
      comp=Z,22nm,0.8s
KMBO                              LR      LR
      comp=Z,2µm,21.0s
KMBO  Kilima Mbogo     59.65 266 i P      P       14 05 46.8 +2.8
      SNR=15
ARU   Arti             59.86 337  LR      LR      14 33 39.7
      comp=Z,5µm,21.3s,baz=138,slow=38
ARU   Arti             59.86 337 eP       P       14 05 42.5 -1.9
      comp=Z,14nm,0.9s
ARU                               LR      LR
      comp=Z,5µm,20.0s
ARU   Arti             59.86 337d iP      P       14 05 42.8 -1.6
ARU                                               14 06 27.8
ARU                               S       S       14 13 55.2 +1.4
ARU                               pmax    pmax
      comp=Z,18nm,1.7s
ARU                               MLR     MLR
      comp=Z,5µm,21.0s
AKH   Akhalkalaki      59.87 316  PFAKE           14 06 00.0  +15
AKH                               LR      LR
      comp=Z,1µm,20.0s
AKH   Akhalkalaki      59.87 316⇑iP       P       14 05 46.1 +1.1
TYV   Tymovskoe        59.94  32 eP       P       14 05 48.5 +3.5
TYV                               pmax    pmax
      comp=Z,200nm,3.4s
TYV                               pmax    pmax
      comp=Z,13nm,1.3s
ZEI   Tsey             60.13 317 eP       P       14 05 45.5 -1.3
ZEI                               pmax    pmax
      comp=Z,19nm,0.6s
NKL   Nikolayevsk      60.28  29⇑iP       P       14 05 48.6 +1.3
NKL                              e                14 06 33.3
NKL                              e                14 08 02.3
NKL                              eS       S       14 14 11.9  +13
NKL                              eSS      SS      14 18 01.9 +4.8
NKL                               pmax    pmax
      comp=Z,18nm,1.3s
NKL                               pmax    pmax
      comp=N,54nm,1.2s
NKL                               pmax    pmax
      comp=E,10.0nm,1.0s
NKL                               pmax    pmax
      comp=Z,45nm,2.5s
NKL                               MLR     MLR
      comp=N,1µm,15.0s
NKL                               MLR     MLR
      comp=Z,2µm,14.0s
NKL                               MLR     MLR
      comp=E,514nm,12.0s
EIDS  Eidsvold         60.60 122 eP       P       14 05 48.9 -1.1
      comp=E,35nm,1.3s
EIDS                              LR      LR
      comp=Z,2µm,20.0s
EIDS  Eidsvold         60.60 122  P       P       14 05 49.8 -0.3
      baz=61,SNR=4.9
KBZ   Khabaz           61.18 318  P       P       14 05 54.0 +0.4
      comp=Z,10nm,0.9s,baz=137,slow=5.8,SNR=7.2
KBZ                               LR      LR      14 36 13.1
      comp=Z,813nm,20.0s,baz=115,slow=40
PATS  Pohnpei          61.33  85 eP       P       14 05 53.6 -1.6
      comp=Z,218nm,1.6s
PATS  Pohnpei          61.33  85  P       P       14 05 54.5 -0.7
      baz=61,SNR=6.2
KVAR  Kislovodsk Arr   61.41 318  LR      LR      14 36 35.6
      comp=Z,681nm,18.0s,baz=147,slow=40
KIV   Kislovodsk       61.41 318 eP       P       14 05 55.4  0.0
      comp=Z,23nm,1.0s
KIV                               LR      LR
      comp=Z,1µm,20.0s
KIV   Kislovodsk       61.41 318 eP       P       14 05 55.6 +0.2
KIV                               pmax    pmax
      comp=Z,66nm,1.0s
KIV                               MLR     MLR
      comp=Z,2µm,17.0s
TOO   Toolangi         61.77 137 eP       P       14 05 58.4 +0.6
      comp=Z,33nm,1.1s
TOO                               LR      LR
      comp=Z,4µm,22.0s
TOO   Toolangi         61.77 137  P       P       14 05 59.2 +1.4
      baz=62,SNR=4.3
TOO   Toolangi         61.77 137 eP       P       14 05 58.4 +0.6
TOO                               pmax    pmax
      comp=Z,33nm,1.1s
TOO                               MLR     MLR
      comp=Z,4µm,22.0s
ASF   Jabal al Asfar   62.11 304  LR      LR      14 34 28.6
      comp=Z,933nm,20.9s,baz=58,slow=38
YAK   Yakutsk          62.31  17 eP       P       14 05 58.6 -2.3
      comp=Z,68nm,1.2s
YAK                               LR      LR
      comp=Z,3µm,19.0s
YAK   Yakutsk          62.31  17 eP       P       14 06 00.1 -0.8
YAK                              e*PP     sP      14 06 16.2 +1.1
YAK                              eS       S       14 14 24.1 -0.7
YAK                              e*SS     sS      14 14 42.3 +0.4
YAK                              eSSS     SSS     14 21 17.4
ARMA  Armidale         62.98 127  PFAKE           14 06 20.0  +14
ARMA                              LR      LR
      comp=Z,2µm,19.0s
CAN   Canberra         63.11 133 eP       P       14 06 05.4 -1.4
      comp=Z,20nm,0.8s
CAN                               LR      LR
      comp=Z,3µm,20.0s
CAN   Canberra         63.11 133 eP       P       14 06 05.4 -1.4
CAN                               pmax    pmax
      comp=Z,20nm,0.8s
CAN                               MLR     MLR
      comp=Z,3µm,20.0s
EIL   Elat             63.24 301  P       P       14 06 08.0 +0.2
      comp=Z,26nm,0.8s,baz=9.9,slow=3.1,SNR=11
EIL                               LR      LR      14 34 48.2
      comp=Z,2µm,18.5s,baz=73,slow=37
SOC   Sochi            63.27 317 eP       P       14 06 04.1 -3.6
SOC                              e                14 08 31.3
SOC                              ePPP     PPP     14 09 56.3
SOC                              eS       S       14 14 34.9 -2.6
SOC                              eSS      SS      14 18 38.7 -5.6
SOC                               pmax    pmax
      comp=Z,64nm,0.9s
SOC                               MLR     MLR
      comp=Z,792nm,22.0s
MMAI  Mount Meron Ar   63.52 305  LR      LR      14 38 46.2
      comp=Z,960nm,18.4s,baz=110,slow=41
CSS   Mathiatis        65.62 306 eP       P       14 06 22.9 -0.3
      comp=Z,39nm,1.1s
CSS                               LR      LR
      comp=Z,2µm,19.0s
MBAR  Mbarara          66.08 267  P       P       14 06 28.5 +1.7
      comp=Z,14nm,0.8s,baz=64,slow=7.3,SNR=13
MBAR  Mbarara          66.08 267 eP       P       14 06 27.4 +0.7
      comp=Z,29nm,1.1s
MBAR                              LR      LR
      comp=Z,400nm,21.0s
MBAR  Mbarara          66.08 267 eP       P       14 06 27.5 +0.7
MBAR                              pmax    pmax
      comp=Z,29nm,1.1s
MBAR                              MLR     MLR
      comp=Z,400nm,21.0s
VORD  Divnogorie       66.32 324 eP       P       14 06 27.8 +0.4
VORD                              pmax    pmax
      comp=Z,10.0nm,0.7s
BR101 Keskin Array S   66.46 311 eP       P       14 06 28.5 -0.2
BR131 Keskin Array S   66.46 311 eP       P       14 06 27.9 -0.8
      comp=Z,13nm,0.8s
BRTR  Keskin Array B   66.46 311  P       P       14 06 28.5 -0.2
      comp=Z,7.0nm,0.6s,baz=132,slow=7.0,SNR=20
BRTR                              LR      LR      14 37 57.2
      comp=Z,468nm,20.5s,baz=103,slow=38
VSR   Storozhevoye     66.49 325 eP       P       14 06 30.0 +1.5
VSR                               pmax    pmax
      comp=Z,8.0nm,0.6s
VSR                               MLR     MLR
      comp=Z,2µm,18.0s
LPSR  Galich'ya Gora   67.18 326 eP       P       14 06 32.4 -0.5
LPSR                              pmax    pmax
      comp=Z,10.0nm,0.8s
LPSR                              MLR     MLR
      comp=Z,2µm,20.0s
PRGR  Permogore        68.32 336 eP       P       14 06 37.5 -2.3
PRGR                             eS       S       14 15 36.2 -2.2
PRGR                              pmax    pmax
      comp=Z,25nm,0.6s
ISP   Isparta          68.42 309  PFAKE           14 06 50.0 +8.9
ISP                               LR      LR
      comp=Z,1µm,18.0s
MDUB  Mudurnu          68.45 312 eP       P       14 06 39.9 -1.4
      comp=Z,123nm,0.8s
MA2   Magadan          68.50  26  PFAKE           14 06 50.0 +9.0
MA2                               LR      LR
      comp=Z,2µm,20.0s
MOS   Moscow           69.16 329 eP       P       14 06 43.3 -1.8
MOS                              e                14 15 43.1
MOS                               pmax    pmax
      comp=Z,30nm,0.8s
PEA0B Petropavlovsk-   69.20  34  PFAKE           14 07 00.0  +14
PEA0B                             LR      LR
      comp=Z,1µm,21.0s
PETK  Petropavlovsk-   69.20  34  P       P       14 06 45.6 +0.1
      comp=Z,2.8nm,0.7s,baz=225,slow=3.6,SNR=5.6
PETK                              PKP2ab          14 35 00.0
      comp=Z,10nm,1.2s,baz=88,slow=6.5,SNR=3.7
PETK                              LR      LR      14 39 03.2
      comp=Z,837nm,20.5s,baz=247,slow=38
PEA1  Petropavlovsk-   69.21  34 eP       P       14 06 45.6 +0.1
OBN   Obninsk          69.46 328  PFAKE           14 07 00.0  +13
OBN                               LR      LR
      comp=Z,2µm,20.0s
PET   Petropavlovsk    69.71  35  PFAKE           14 07 00.0  +11
PET                               LR      LR
      comp=Z,1µm,19.0s
PET   Petropavlovsk    69.71  35⇑eP       P       14 06 47.1 -1.5
PET                               pmax    pmax
      comp=Z,14nm,0.9s
YLV   Yalova           69.83 312⇑iP       P       14 06 50.2 +0.4
TIXI  Tiksi            69.93  10 eP       P       14 06 47.6 -2.0
      comp=Z,23nm,0.9s
TIXI                              LR      LR
      comp=Z,2µm,22.0s
TIXI  Tiksi            69.93  10ceP       P       14 06 48.8 -0.9
TIXI                              pmax    pmax
      comp=Z,7.0nm,0.9s
LSZ   Lusaka           70.63 252  P       P       14 06 56.5 +1.4
      comp=Z,20nm,1.0s,baz=94,slow=4.3,SNR=15
LSZ                               LR      LR      14 34 33.4
      comp=Z,4µm,19.4s,baz=98,slow=33
LSZ   Lusaka           70.63 252 eP       P       14 06 55.6 +0.5
      comp=Z,37nm,1.3s
LSZ                               LR      LR
      comp=Z,4µm,20.0s
LSZ   Lusaka           70.63 252 eP       P       14 06 55.6 +0.5
LSZ                               pmax    pmax
      comp=Z,37nm,1.3s
LSZ                               MLR     MLR
      comp=Z,4µm,20.0s
KARP  Karpathos        70.69 306 eP       P       14 06 55.0 -0.1
      comp=Z,144nm,0.8s
KARP                              LR      LR
      comp=Z,1µm,22.0s
BALB  Balikesir        70.78 310 eP       P       14 06 53.3 -2.2
      comp=Z,116nm,1.0s
BALB                              LR      LR
      comp=Z,2µm,20.0s
SEY   Seymchan         70.84  24⇑eP       P       14 06 55.1 -0.3
MATP  Matopo           71.36 247  P       P       14 07 01.1 +1.6
      comp=Z,20nm,1.0s,baz=77,slow=5.8,SNR=21
MATP                              LR      LR      14 35 54.7
      comp=Z,2µm,18.8s,baz=85,slow=34
PHSR  Pinarhisar       71.41 312⇑iP       P       14 06 59.9 +0.6
CASY  Casey            71.44 174 eP       P       14 06 59.7 +0.9
      comp=Z,29nm,1.1s
CASY                              LR      LR
      comp=Z,1µm,19.0s
CFR   Carcaliu         71.68 316⇑iP       P       14 07 00.2 -0.6
CFR   Carcaliu         71.68 316  P       P       14 07 00.2 -0.6
EZN   Ezine            72.00 310⇑iP       P       14 07 02.1 -0.8
EZN   Ezine            72.00 310  P       P       14 07 02.0 -0.8
AKASG Malin Array Be   72.26 322  P       P       14 07 00.7 -3.4
      comp=Z,0.3nm,0.3s,baz=90,slow=4.4,SNR=9.6
AKASG                             LR      LR      14 43 56.0
      comp=Z,1µm,18.1s,baz=100,slow=40
AKBB  Malin Array Si   72.26 322 eP       P       14 07 01.6 -2.5
      comp=Z,8.7nm,0.8s
AKBB                              LR      LR
      comp=Z,1µm,18.0s
AKBB  Malin Array Si   72.26 322 eP       P       14 07 01.6 -2.5
AKBB                              pmax    pmax
      comp=Z,9.0nm,0.8s
AKBB                              MLR     MLR
      comp=Z,1µm,18.0s
ALN   Alexandroupoli   72.38 311 eP       P       14 07 03.0 -2.1
      comp=Z,16nm,1.2s
ALN   Alexandroupoli   72.38 311 eP       P       14 07 03.0 -2.1
ALN                               pmax    pmax
      comp=Z,16nm,1.2s
VRI   Vrincioaia       72.79 317⇑iP       P       14 07 07.9 +0.4
VRI   Vrincioaia       72.79 317  P       P       14 07 07.9 +0.4
PLOR  Plostina         72.84 317⇑iP       P       14 07 08.8 +1.0
PLOR  Plostina         72.84 317  P       P       14 07 08.8 +1.0
TESR  Tescani          72.97 317⇑iP       P       14 07 09.1 +0.6
VAM   Vamos            73.07 305  P       P       14 07 06.8 -2.5
DZM   Mont Dzumac      73.14 115 eLR      LR      14 29 30.9
      comp=Z,1µm,25.9s
DZM   Mont Dzumac      73.14 115  LR      LR      14 40 43.2
      comp=Z,1µm,21.6s,baz=273,slow=37
IMMV  Iera Moni Meta   73.25 306  P       P       14 07 11.1 +0.7
MLR   Muntele Rosu     73.25 316 eP       P       14 07 08.3 -2.1
      comp=Z,34nm,1.2s
MLR   Muntele Rosu     73.25 316⇑iP       P       14 07 10.7 +0.3
MLR   Muntele Rosu     73.25 316 eP       P       14 07 08.3 -2.1
MLR                               pmax    pmax
      comp=Z,34nm,1.2s
BIZ   Bicaz            73.42 318⇑iP       P       14 07 12.6 +1.4
VOIR                   73.86 316⇑iP       P       14 07 14.2 +0.3
VOIR                   73.86 316  P       P       14 07 14.1 +0.2
ARR   Arges            74.14 316⇑iP       P       14 07 15.0 -0.5
BURAR Bucovina Array   74.14 318⇑iP       P       14 07 16.9 +1.4
BURAR Bucovina Array   74.14 318  P       P       14 07 16.9 +1.4
BUR08 Bucovina Ar. S   74.16 318 eP       P       14 07 13.3 -2.3
      comp=Z,9.3nm,0.9s
VTS   Vitosha          74.72 313 eP       P       14 07 16.1 -2.9
      comp=Z,15nm,1.0s
VTS                               LR      LR
      comp=Z,700nm,22.0s
VTS   Vitosha          74.72 313⇑iP       P       14 07 18.7 -0.3
VTS   Vitosha          74.72 313 eP       P       14 07 16.1 -2.9
VTS                               pmax    pmax
      comp=Z,15nm,1.0s
VTS                               MLR     MLR
      comp=Z,700nm,22.0s
GUR   Goura            74.83 308 eP       P       14 07 17.3 -2.4
GUR   Goura            74.83 308  P       P       14 07 17.3 -2.4
IDID  Didziasalis      74.87 326 eP       P       14 07 19.3 -0.1
IDID                              IAmb    IAmb    14 07 22.1
      comp=Z,4.3nm,0.7s
AGG   Agios Georgios   74.95 309 eP       P       14 07 17.2 -3.1
      comp=Z,9.6nm,0.8s
AGG   Agios Georgios   74.95 309 eP       P       14 07 17.2 -3.1
AGG                               pmax    pmax
      comp=Z,10.0nm,0.8s
LIT   Litokhoron       74.95 310 eP       P       14 07 17.6 -2.7
      comp=Z,29nm,0.8s
LIT                               LR      LR
      comp=Z,400nm,20.0s
LIT   Litokhoron       74.95 310  P       P       14 07 18.0 -2.3
LIT   Litokhoron       74.95 310 eP       P       14 07 17.6 -2.7
LIT                               pmax    pmax
      comp=Z,29nm,0.8s
LIT                               MLR     MLR
      comp=Z,400nm,20.0s
LBTB  Lobatse          74.96 243 eP       P       14 07 20.4 -0.3
      comp=Z,35nm,0.8s
VAY   Valandovo        75.04 311 i P      P       14 07 19.8 -0.9
ITM   Ithomi           75.08 307 eP       P       14 07 19.3 -1.7
      comp=Z,34nm,0.8s
ITM                               LR      LR
      comp=Z,600nm,20.0s
IIGN  Ignalina         75.16 326 eP       P       14 07 21.1  0.0
IIGN                              IAmb    IAmb    14 07 23.0
      comp=Z,8.2nm,0.9s
ANX   Ano Chora        75.23 309  P       P       14 07 18.9 -3.1
IZAR  Zarasai          75.25 327 eP       P       14 07 21.5  0.0
IZAR                              IAmb    IAmb    14 07 22.3
      comp=Z,8.0nm,0.9s
ISAL  Salakas          75.27 326 eP       P       14 07 22.4 +0.7
ISAL                              IAmb    IAmb    14 07 25.1
      comp=Z,5.4nm,0.7s
DRO   Drossia          75.33 308  P       P       14 07 21.2 -1.3
STIP  Stip             75.37 312 i P      P       14 07 19.2 -3.4
GZR   Gura Zlata       75.44 316⇑iP       P       14 07 24.1 +1.1
LVZ   Lovozero         75.47 340 eP       P       14 07 20.2 -2.5
      comp=Z,22nm,0.9s
LVZ                               LR      LR
      comp=Z,5µm,20.0s
LVZ   Lovozero         75.47 340 eP       P       14 07 20.2 -2.5
LVZ                               pmax    pmax
      comp=Z,22nm,0.9s
LVZ                               MLR     MLR
      comp=Z,5µm,20.0s
HERR  Herculane        75.62 315⇑iP       P       14 07 24.6 +0.6
VSU   Vasula           75.66 329 eP       P       14 07 23.5 -0.3
VSU                               IAmb    IAmb    14 07 27.5
      comp=Z,31nm,0.7s
VSU   Vasula           75.66 329⇑eP       P       14 07 24.5 +0.6
VSU                               pmax    pmax
      comp=Z,50nm,1.0s
DRGR                   75.69 317⇑iP       P       14 07 25.9 +1.5
DRGR                   75.69 317  P       P       14 07 25.8 +1.4
PDO   Prodromos        75.80 309  P       P       14 07 24.5 -0.7
MAW   Mawson           75.91 193  P       P       14 07 26.7 +1.7
      comp=Z,19nm,0.9s,baz=18,slow=7.3,SNR=29
MAW                               LR      LR      14 37 28.4
      comp=Z,531nm,18.3s,baz=34,slow=33
MAW   Mawson           75.91 193 eP       P       14 07 26.0 +1.0
      comp=Z,5.2nm,0.9s
MAW   Mawson           75.91 193  P       P       14 07 27.5 +2.4
      baz=76,SNR=19
MAW   Mawson           75.91 193 eP       P       14 07 26.0 +1.0
MAW                               pmax    pmax
      comp=Z,5.0nm,0.9s
SKO   Skopje           75.96 312 i P      P       14 07 24.0 -2.0
TRPA  Tarpa            76.01 318⇑iP       P       14 07 26.3 +0.2
TRPA  Tarpa            76.01 318 eP       P       14 07 29.0 +3.0
BOSA  Boshof           76.05 239  P       P       14 07 28.0 +1.1
      comp=Z,18nm,0.6s,baz=84,slow=6.1,SNR=23
BOSA                              LR      LR      14 39 02.5
      comp=Z,1µm,19.3s,baz=69,slow=34
BOSA  Boshof           76.05 239 eP       P       14 07 26.9  0.0
      comp=Z,44nm,1.1s
BOSA  Boshof           76.05 239 eP       P       14 07 26.9  0.0
BOSA                              pmax    pmax
      comp=Z,44nm,1.1s
MDVR  Moldovita        76.10 315⇑iP       P       14 07 26.5 -0.3
LKD2  Lefkada island   76.23 309  P       P       14 07 25.1 -2.5
UZH   Uzhgorod         76.24 319 eP       P       14 07 31.0 +3.6
UZH                              e                14 07 36.3
UZH                              i                14 07 42.7
BZS   Buzias           76.28 316  P       P       14 07 31.0 +3.3
SIRR  Siria            76.33 316⇑iP       P       14 07 28.3 +0.3
IGT   Igoumenitsa      76.55 309  P       P       14 07 32.0 +2.6
SUW   Suwalki          76.61 324  PFAKE           14 07 40.0  +11
SUW                               LR      LR
      comp=Z,1µm,21.0s
FIA0  FINESS Array S   76.75 332 eP       P       14 07 30.1 +0.1
FIA0  FINESS Array S   76.75 332 eP       P       14 07 30.1 +0.1
FINES FINESS Array B   76.75 332  P       P       14 07 30.1 +0.1
      comp=Z,3.9nm,0.7s,baz=81,slow=8.6,SNR=10
FINES                             LR      LR      14 47 38.7
      comp=Z,1µm,18.1s,baz=114,slow=41
AMBH  Ambrzfalva       76.98 316⇓eP       P       14 07 33.0 +1.4
TIR   Tirane           77.07 311  PFAKE           14 07 40.0 +7.7
TIR                               LR      LR
      comp=Z,700nm,22.0s
PDG   Podgorica        77.62 312⇑iP       P       14 07 34.6 -0.7
TTG   Podgorica        77.62 312 eP       P       14 07 32.4 -2.9
      comp=Z,22nm,0.9s
TTG                               LR      LR
      comp=Z,800nm,20.0s
TTG   Podgorica        77.62 312 eP       P       14 07 32.4 -2.9
TTG                               pmax    pmax
      comp=Z,22nm,0.9s
TTG                               MLR     MLR
      comp=Z,800nm,20.0s
PSZ   Piszkesteto      77.74 318⇑iP       P       14 07 37.0 +1.0
PSZ   Piszkesteto      77.74 318  P       P       14 07 36.9 +1.0
PSZ   Piszkesteto      77.74 318 eP       P       14 07 37.1 +1.0
OJC   Ojcow            78.08 320  P       P       14 07 41.6 +3.9
BILL  Bilibino         78.18  21 eP       P       14 07 36.4 -1.5
      comp=Z,7.4nm,0.9s
BILL                              LR      LR
      comp=Z,3µm,21.0s
BILL  Bilibino         78.18  21 i P      P       14 07 39.6 +1.7
BILL                             i                14 07 45.3
BILL                             i                14 07 54.8
BILL                             i                14 10 30.0
BILL                             i S      S       14 17 31.3 +1.3
BILL                              pmax    pmax
      comp=Z,4µm,22.0s
BILL                              MLR     MLR
      comp=Z,4µm,21.0s
MORH  Mrgy, Hungar     78.41 316 eP       P       14 07 39.1 -0.5
VYHS  Vyhne            78.50 318 eP       P       14 07 45.9 +5.8
VYHS  Vyhne            78.50 318 eP       P       14 07 45.9 +5.8
TIH   Tihany           78.98 317 eP       P       14 07 45.1 +2.3
ARA0  ARCESS Array S   79.16 340 eP       P       14 07 43.5 +0.1
ARCES ARCESS Array B   79.16 340  P       P       14 07 43.5 +0.1
      comp=Z,3.6nm,0.6s,baz=92,slow=6.4,SNR=23
ARCES                             LR      LR      14 45 57.6
      comp=Z,4µm,20.0s,baz=112,slow=38
ARE0  ARCESS Array S   79.17 340  PFAKE           14 07 50.0 +6.7
ARE0                              LR      LR
      comp=Z,200nm,21.0s
ARE0  ARCESS Array S   79.17 340 eP       P       14 07 42.2 -1.1
TIP   Timpagrande      79.29 309 eP       P       14 07 42.1 -2.6
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	comp=Z,16nm,0.9s						
TIP	**Timpagrande**	**79.29**	**309**	⇑*i*P	**P**	**14 07 43.4**	**-1.3**
BLY	**Banja Luka**	**79.31**	**315**	*e*P	**P**	**14 07 43.1**	**-1.5**
	comp=Z,31nm,0.9s						
BLY				LR	LR		
	comp=Z,700nm,18.0s						
BLY	**Banja Luka**	**79.31**	**315**	⇑*i*P	**P**	**14 07 45.1**	**+0.5**
JAVC	**Velka Javorina**	**79.31**	**319**	*e*P	**P**	**14 07 44.9**	**+0.3**
MORC	**Moravsky Berou**	**79.48**	**320**	*e*P	**P**	**14 07 42.4**	**-3.1**
	comp=Z,14nm,1.1s						
MORC				LR	LR		
	comp=Z,1µm,20.0s						
MORC	**Moravsky Berou**	**79.48**	**320**	⇑*i*P	**P**	**14 07 46.8**	**+1.3**
MORC	**Moravsky Berou**	**79.48**	**320**	*e*P	**P**	**14 07 42.4**	**-3.1**
MORC				pmax	pmax		
	comp=Z,14nm,1.1s						
MORC				MLR	MLR		
	comp=Z,1µm,20.0s						
MORC	**Moravsky Berou**	**79.48**	**320**	*e*P	**P**	**14 07 44.7**	**-0.8**
BEHE	**Becsehely**	**79.72**	**316**	*e*P	P	14 07 35.0	-12
KTK1	**Kautokeino**	**79.81**	**339**	*e*P	**P**	**14 07 46.0**	**-0.9**
KTK1				*e*pP	**PcP**	**14 07 48.9**	**-5.5**
CEL	**Celeste**	**79.93**	**308**	*e*P	**P**	**14 07 45.7**	**-2.5**
	comp=Z,53nm,0.9s						
SOP	**Sopron**	**79.95**	**317**	*e*P	**P**	**14 07 45.1**	**-3.0**
VRAC	**Vranov**	**80.05**	**319**	*e*P	**P**	**14 07 50.3**	**+1.7**
HAMF	**Hammerfest**	**80.06**	**341**	*e*P	**P**	**14 07 46.7**	**-1.4**
HAMF				*e*pP	**PcP**	**14 07 50.0**	**-5.5**
KRUC	**Moravsky**	**80.16**	**319**	*e*P	**P**	**14 07 50.8**	**+1.6**
DPC	**Dobruska-Polom**	**80.31**	**320**	*e*P	**P**	**14 07 51.4**	**+1.4**
DPC				*e*		14 08 02.6	
DPC				*e*S	S	14 17 44.0	-9.5
DPC				MLR	MLR		
	comp=Z,900nm,18.5s						
DPC	**Dobruska-Polom**	**80.31**	**320**	*e*P	**P**	**14 07 51.4**	**+1.4**
DPC				*e*pP	**PcP**	**14 07 54.1**	**-3.0**
DPC				*e*x	x	14 08 02.6	
DPC				*e*S	S	14 17 44.0	-9.5
DPC				AMS	AMS	14 48 20.0	
	comp=Z,900nm,18.5s						
KSP	**Ksiaz**	**80.37**	**321**	P	**P**	**14 07 54.4**	**+4.2**
OSTC	**Ostas**	**80.39**	**320**	*e*P	**P**	**14 07 50.5**	**+0.1**
OSTC				AMS	AMS	14 49 20.0	
	comp=Z,1µm,18.1s						
CONA	**Conrad Observa**	**80.44**	**318**	*e*pP	**P**	**14 07 50.4**	**-0.4**
	comp=Z,2.8nm,0.7s						
GCIS	**Gornji Cirnik**	**80.47**	**316**	*i* P	**P**	**14 07 49.9**	**-1.0**
UPC	**Upice**	**80.52**	**320**	*e*P	**P**	**14 07 52.1**	**+1.0**
UPC				MLR	MLR		
	comp=Z,1µm,18.1s						
UPC	**Upice**	**80.52**	**320**	*e*P	**P**	**14 07 52.1**	**+1.0**
UPC				AMS	AMS	14 48 30.0	
	comp=Z,1µm,18.1s						
SUR	**Sutherland**	**80.61**	**236**	P	**P**	**14 07 55.2**	**+3.1**
	comp=Z,65nm,1.0s,baz=72,slow=1.9,SNR=14						
SUR	**Sutherland**	**80.61**	**236**	*e*P	**P**	**14 07 54.9**	**+2.8**
	comp=Z,77nm,1.0s						
SUR				LR	LR		
	comp=Z,1µm,21.0s						
ARSA	**Arzberg**	**80.62**	**317**	*e*pP	**P**	**14 07 52.1**	**+0.4**
	comp=Z,2.9nm,0.5s						
BOJS	**Bojanci**	**80.72**	**315**	*i* P	**P**	**14 07 51.9**	**-0.3**
BOJS				*i* S	**S**	**14 17 51.9**	**-5.9**
TREC	**Trest**	**80.77**	**319**	AMS	AMS	14 49 20.0	
	comp=Z,900nm,18.3s						
PERS	**Pernice**	**80.87**	**316**	*i* P	**P**	**14 07 52.7**	**-0.4**
SOKA	**Soboth**	**80.93**	**316**	*e*P	**P**	**14 07 52.7**	**-0.8**
	comp=Z,16nm,1.0s						
WDD	**Wied Dalam**	**80.96**	**305**	PFAKE		14 08 00.0	+6.3
WDD				LR	LR		
	comp=Z,500nm,19.0s						
VISS	**Visnje**	**81.02**	**315**	*i* P	**P**	**14 07 53.3**	**-0.5**
OBKA	**Obir**	**81.25**	**316**	*e*pP	**P**	**14 07 55.0**	**-0.2**
	comp=Z,11nm,0.9s						
TSUM	**Tsumeb**	**81.26**	**250**	P	**P**	**14 07 57.2**	**+1.5**
	comp=Z,21nm,1.0s,baz=86,slow=4.1,SNR=15						
TSUM	**Tsumeb**	**81.26**	**250**	*e*P	**P**	**14 07 55.2**	**-0.5**
	comp=Z,22nm,0.9s						
TSUM				LR	LR		
	comp=Z,2µm,19.0s						
GOPC	**GO Pecny, Ondr**	**81.27**	**320**	*e*S	**S**	**14 18 00.4**	**-3.0**
GOPC				AMS	AMS	14 49 00.0	
	comp=Z,800nm,18.1s						
PRU	**Pruhonice**	**81.43**	**320**	*e*S	**S**	**14 18 02.4**	**-2.6**
PRU				AMS	AMS	14 48 50.0	
	comp=Z,900nm,23.6s						
TRO	**Tromso**	**81.43**	**340**	*e*P	**P**	**14 07 54.8**	**-0.7**
TRO				*e*sP	**PcP**	**14 07 58.6**	**-2.9**
PVCC	**Panska Ves**	**81.44**	**320**	*e*P	**P**	**14 07 57.2**	**+1.3**
PVCC				MLR	MLR		
	comp=Z,1µm,17.8s						
PVCC	**Panska Ves**	**81.44**	**320**	*e*P	**P**	**14 07 57.2**	**+1.3**
PVCC				AMS	AMS	14 49 10.0	
	comp=Z,1µm,17.8s						
MOA	**Molln**	**81.51**	**318**	pP	**P**	**14 07 56.2**	**-0.2**
	comp=Z,7.3nm,0.8s						
JAVS	**Javornik**	**81.57**	**316**	*i* P	**P**	**14 07 57.5**	**+0.6**
SKDS	**Skadanscina**	**81.59**	**315**	*i* P	**P**	**14 07 55.4**	**-1.5**
GORS	**Gorjuse**	**81.63**	**316**	*e*P	**P**	**14 07 56.5**	**-0.7**
TRI	**Trieste**	**81.77**	**315**	PFAKE		14 08 10.0	+12
TRI				LR	LR		
	comp=Z,600nm,20.0s						
MYKA	**Terra Mystica**	**81.88**	**316**	*e*pP	**P**	**14 07 59.0**	**+0.5**
	comp=Z,5.8nm,0.6s						
GEC2	**GERESS Array S**	**81.92**	**319**	*e*P	**P**	**14 07 57.6**	**-1.1**
	comp=Z,11nm,0.9s						
GEC2				LR	LR		
	comp=Z,500nm,22.0s						
GERES	**GERESS Array B**	**81.92**	**319**	P	**P**	**14 07 58.5**	**-0.2**
	comp=Z,3.9nm,0.6s,baz=90,slow=5.9,SNR=7.8						
GERES				LR	LR	14 48 45.7	
	comp=Z,410nm,21.8s,baz=82,slow=39						
AQU	**L'Aquila**	**81.94**	**312**	PFAKE		14 08 10.0	+11
AQU				LR	LR		
	comp=Z,600nm,22.0s						
AQU	**L'Aquila**	**81.94**	**312**	P	**P**	**14 08 02.7**	**+3.8**
RPZ	**Rata Peaks**	**81.97**	**135**	LR	LR	14 44 39.5	
	comp=Z,1µm,18.6s,baz=270,slow=36						
KHC	**Kasperske Hory**	**82.02**	**319**	*e*P	**P**	**14 07 57.2**	**-1.9**
	comp=Z,1.8nm,0.7s						
KHC				LR	LR		
	comp=Z,400nm,18.0s						
KHC	**Kasperske Hory**	**82.02**	**319**	*e*P	**P**	**14 07 57.2**	**-1.9**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KHC				MLR	MLR		
	comp=Z,400nm,18.0s						
KHC	**Kasperske Hory**	**82.02**	**319**	*e*P	**P**	**14 07 57.4**	**-1.7**
KHC				*e*pP	**PcP**	**14 08 02.2**	**-2.3**
KHC				*e*x	x	14 08 10.9	
KHC				*e*S	**S**	**14 18 10.1**	**-1.1**
KHC				AMS	AMS	14 50 20.0	
	comp=Z,1µm,17.2s						
OUZ	**Omahuta**	**82.02**	**126**	PFAKE		14 08 10.0	+11
OUZ				LR	LR		
	comp=Z,2µm,20.0s						
CLTB	**Caltabellotta**	**82.03**	**307**	*e*P	**P**	**14 07 56.5**	**-3.0**
	comp=Z,22nm,1.0s						
KBA	**Koelnbreinsper**	**82.10**	**317**	P	**P**	**14 07 58.5**	**-1.2**
	comp=Z,4.9nm,0.9s						
WIN	**Windhoek**	**82.18**	**247**	PFAKE		14 08 10.0	+9.3
WIN				LR	LR		
	comp=Z,2µm,19.0s						
RGN	**Rugen**	**82.41**	**324**	PFAKE		14 08 10.0	+9.1
RGN				LR	LR		
	comp=Z,2µm,21.0s						
CLL	**Collm**	**82.47**	**321**	PFAKE		14 08 10.0	+8.7
CLL				LR	LR		
	comp=Z,800nm,20.0s						
CLL	**Collm**	**82.47**	**321**	*e*P	**P**	**14 08 01.0**	**-0.3**
CLL				*e*S	**S**	**14 18 12.0**	**-3.6**
CLL				MLR	MLR		
	comp=Z,700nm,21.4s						
CLL	**Collm**	**82.47**	**321**	*e*P	**P**	**14 08 01.0**	**-0.3**
CLL				*e*S	**S**	**14 18 12.0**	**-3.6**
CLL				*e*		14 21 24.0	
CLL				*e*SS	**SS**	**14 23 42.0**	**+5.1**
CLL				*e*SSS	SSS	14 26 42.0	
CLL				*e*		14 28 48.0	
CLL				*e*SSSS		14 29 30.0	
CLL				Lm	MLR	14 48 00.0	
	comp=N,900nm,21.0s						
CLL				Lm	MLR	14 48 00.0	
	comp=E,600nm,21.9s						
CLL				Lm	MLR	14 48 00.0	
	comp=Z,700nm,21.4s						
STEI	**Steigen**	**82.52**	**338**	*e*P	**P**	**14 08 00.5**	**-0.7**
STEI				*e*pP	**PcP**	**14 08 03.8**	**-2.4**
OXZ	**Oxford**	**82.58**	**135**	PFAKE		14 08 10.0	+8.0
OXZ				LR	LR		
	comp=Z,3µm,21.0s						
MOR8	**Moi Rana**	**82.66**	**336**	*e*P	**P**	**14 08 00.7**	**-1.4**
ABTA	**Abfaltersbach**	**82.66**	**316**	*e*pP	**P**	**14 08 02.8**	**+0.2**
	comp=Z,4.6nm,0.9s						
NKC	**Novy Kostel**	**82.78**	**320**	AMS	AMS	14 50 00.0	
	comp=Z,1µm,17.6s						
SYO	**Syowa Base**	**83.08**	**198**	⇑*i*P	**P**	**14 08 05.4**	**+1.4**
SYO	**Syowa Base**	**83.08**	**198**	⇓*i*PcP	**PcP**	**14 08 10.6**	**+2.0**
SYO	**Syowa Base**	**83.08**	**198**	⇑*e*pP	pP	14 08 16.0	+1.1
SYO	**Syowa Base**	**83.08**	**198**	⇑*e*sP	sP	14 08 20.4	+1.6
KONS	**Konsvik**	**83.22**	**336**	*e*P	**P**	**14 08 03.7**	**-1.2**
WTTA	**Wattenberg**	**83.27**	**317**	P	**P**	**14 08 04.2**	**-1.7**
	comp=Z,5.8nm,0.6s						
WATA	**Walderalm**	**83.31**	**317**	*e*P	**P**	**14 08 04.7**	**-1.3**
	comp=Z,3.5nm,0.5s						
SPA0	**Spitsbergen Ar**	**83.52**	**348**	*e*P	**P**	**14 08 05.9**	**-0.4**
HSPB	**Hornsund (broa**	**83.53**	**347**	*e*P	**P**	**14 08 05.2**	**-1.2**
SQTA	**Sankt Quirin**	**83.56**	**317**	*e*P	**P**	**14 08 05.8**	**-1.4**
	comp=Z,9.0nm,0.6s						
GRA1	**Grafenberg Arr**	**83.57**	**319**	PFAKE		14 08 20.0	+13
GRA1				LR	LR		
	comp=Z,900nm,18.0s						
GRFO	**Grafenberg**	**83.57**	**319**	PFAKE		14 08 20.0	+13
GRFO				LR	LR		
	comp=Z,900nm,18.0s						
NSS	**Namsos**	**83.58**	**334**	*e*P	**P**	**14 08 05.8**	**-1.0**
NSS				*e*pP	**PcP**	**14 08 09.1**	**-1.8**
NC602	**NORSAR Array S**	**83.62**	**330**	*e*P	**P**	**14 08 05.8**	**-1.3**
MOTA	**Moosalm**	**83.63**	**317**	*e*P	**P**	**14 08 06.7**	**-1.0**
	comp=Z,3.6nm,0.5s						
HIZ	**Hauiti**	**83.64**	**129**	PFAKE		14 08 20.0	+12
HIZ				LR	LR		
	comp=Z,2µm,21.0s						
NB2	**NORSAR Subarra**	**83.79**	**331**	P	**P**	**14 08 06.3**	**-1.7**
	comp=Z,3.6nm,1.0s,baz=96,slow=5.6						
NB2	**NORSAR Subarra**	**83.79**	**331**	P	**P**	**14 08 06.3**	**-1.7**
	baz=96,slow=5.6						
NB200	**NORSAR Array S**	**83.79**	**331**	*e*P	**P**	**14 08 05.8**	**-2.3**
NOA	**NORSAR Array B**	**83.79**	**331**	P	**P**	**14 08 05.8**	**-2.3**
	comp=Z,4.0nm,1.0s,baz=96,slow=5.4,SNR=7.3						
NOA				LR	LR	14 50 38.8	
	comp=Z,2µm,19.3s,baz=90,slow=39						
RETA	**Reutte**	**83.86**	**317**	P	**P**	**14 08 07.9**	**-0.8**
	comp=Z,4.3nm,0.6s						
FETA	**Feichten**	**83.89**	**317**	*e*P	**P**	**14 08 07.0**	**-2.0**
	comp=Z,8.1nm,0.8s						
VLC	**Villacollemand**	**84.15**	**314**	PFAKE		14 08 20.0	+10
VLC				LR	LR		
	comp=Z,600nm,20.0s						
FUORN	**Ofenpass-Fuorn**	**84.21**	**316**	PFAKE		14 08 20.0	+9.2
FUORN				LR	LR		
	comp=Z,700nm,20.0s						
ADK	**Adak**	**84.31**	**38**	PFAKE		14 08 20.0	+9.2
ADK				LR	LR		
	comp=Z,800nm,20.0s						
DAVA	**Damuels**	**84.47**	**317**	*e*pP	**P**	**14 08 11.9**	**0.0**
	comp=Z,9.4nm,0.8s						
KBS	**Kingsbay**	**84.48**	**349**	PFAKE		14 08 20.0	+8.8
KBS				LR	LR		
	comp=Z,2µm,22.0s						
KBS	**Kingsbay**	**84.48**	**349**	*e*P	**P**	**14 08 10.4**	**-0.8**
KONO	**Kongsberg**	**84.57**	**329**	PFAKE		14 08 20.0	+8.1
KONO				LR	LR		
	comp=Z,2µm,20.0s						
TUE	**Stuetta**	**84.85**	**316**	*e*P	**P**	**14 08 12.1**	**-1.9**
	comp=Z,14nm,1.2s						
TUE				LR	LR		
	comp=Z,900nm,19.0s						
STU	**Stuttgart**	**84.90**	**318**	PFAKE		14 08 20.0	+6.1
STU				LR	LR		
	comp=Z,900nm,20.0s						
BKZ	**Black Stump Fm**	**85.02**	**130**	*e*P	**P**	**14 08 13.6**	**-1.1**
	comp=Z,22nm,0.9s						
BKZ				LR	LR		
	comp=Z,3µm,20.0s						
KEST	**Kesra**	**85.17**	**305**	P	**P**	**14 08 15.3**	**-0.3**
	comp=Z,35nm,0.9s,baz=350,slow=1.3,SNR=27						
KEST	**Kesra**	**85.17**	**305**	*e*P	**P**	**14 08 14.2**	**-1.4**
	comp=Z,36nm,0.8s						
KEST				LR	LR		
	comp=Z,700nm,20.0s						
PGF	**Pioggiola**	**85.20**	**312**	*e*P	**P**	**14 08 16.6**	**+0.9**
PGF				pmax	pmax		
	comp=Z,16nm,1.1s						
SKAR	**Skarslia**	**85.21**	**330**	*e*P	**P**	**14 08 13.6**	**-1.6**
URZ	**Urewera**	**85.34**	**129**	LR	LR	14 47 39.6	
	comp=Z,2µm,19.1s,baz=295,slow=37						
URZ	**Urewera**	**85.34**	**129**	*e*P	**P**	**14 08 15.7**	**-0.5**
	comp=Z,23nm,1.0s						
URZ				LR	LR		
	comp=Z,2µm,20.0s						
BFO	**Black Forest**	**85.49**	**318**	PFAKE		14 08 30.0	+13
BFO				LR	LR		
	comp=Z,600nm,21.0s						
BFO	**Black Forest**	**85.49**	**318**	*i* P	**P**	**14 08 18.5**	**+1.6**
MXZ	**Matakaoa Point**	**86.17**	**128**	PFAKE		14 08 30.0	+10
MXZ				LR	LR		
	comp=Z,2µm,19.0s						
BLS5	**Blasjo**	**86.17**	**329**	*e*P	**P**	**14 08 18.8**	**-1.2**
SENIN	**Lac Senin/Sane**	**86.27**	**316**	*e*P	**P**	**14 08 18.8**	**-2.2**
	comp=Z,10.0nm,0.8s						
SENIN				LR	LR		
	comp=Z,600nm,22.0s						
ECH	**Echery**	**86.27**	**318**	PFAKE		14 08 30.0	+9.3
ECH				LR	LR		
	comp=Z,500nm,21.0s						
SBF	**Sospel**	**86.29**	**314**	*e*P	**P**	**14 08 21.9**	**+0.9**
SBF				pmax	pmax		
	comp=Z,14nm,0.6s						
ABSA	**Djebel Ababsia**	**86.66**	**306**	P	**P**	**14 08 25.5**	**+2.5**
CMAH	**Djebel Manchou**	**86.69**	**306**	P	**P**	**14 08 25.1**	**+2.0**
LPG	**La Plagne**	**86.69**	**315**	*e*P	**P**	**14 08 22.5**	**-0.7**
LPG				pmax	pmax		
	comp=Z,14nm,0.8s						
LPL	**La Plagne**	**86.70**	**315**	*e*P	**P**	**14 08 23.2**	**0.0**
LPL				pmax	pmax		
	comp=Z,19nm,0.8s						
MBDF	**Montbardon**	**86.72**	**314**	*e*P	**P**	**14 08 23.5**	**+0.3**
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BNI	**Bardonecchia**	**86.77**	**315**	*e*P	**P**	**14 08 21.9**	**-1.5**
	comp=Z,13nm,0.9s						
BNI				LR	LR		
	comp=Z,800nm,19.0s						
BNI	**Bardonecchia**	**86.77**	**315**	*e*P	**P**	**14 08 21.9**	**-1.5**
BNI				pmax	pmax		
	comp=Z,13nm,0.9s						
BNI				MLR	MLR		
	comp=Z,800nm,19.0s						
HAU	**Haudompre**	**86.83**	**318**	*e*P	**P**	**14 08 22.3**	**-1.2**
HAU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WLF	**Walferdange**	**86.86**	**319**	PFAKE		14 08 30.0	+6.5
WLF				LR	LR		
	comp=Z,3µm,18.0s						
FRF	**La Foret Royal**	**86.88**	**313**	*e*P	**P**	**14 08 24.9**	**+1.1**
FRF				pmax	pmax		
	comp=Z,24nm,1.0s						
CABF	**La Chapelle**	**87.09**	**316**	*e*P	**P**	**14 08 26.6**	**+1.7**
CABF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CKFL	**Kef-Lekhel**	**87.26**	**306**	P	**P**	**14 08 28.4**	**+2.4**
ORIF	**Oris-en-Rattie**	**87.34**	**315**	*e*P	**P**	**14 08 27.4**	**+1.3**
ORIF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTEI	**Djebel Teioual**	**87.54**	**306**	P	**P**	**14 08 30.0**	**+2.7**
DFRA	**Djebel Bou Aff**	**87.93**	**306**	P	**P**	**14 08 31.9**	**+2.7**
BAIF	**Baives**	**88.09**	**320**	*e*P	**P**	**14 08 32.5**	**+3.1**
BAIF				pmax	pmax		
	comp=Z,37nm,1.5s						
VIVF	**Saint-Julien-l**	**88.20**	**315**	*e*P	**P**	**14 08 29.6**	**-0.6**
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SSB	**Saint Sauveur**	**88.26**	**315**	*e*P	**P**	**14 08 28.8**	**-1.6**
	comp=Z,9.0nm,0.8s						
SSB	**Saint Sauveur**	**88.26**	**315**	*e*P	**P**	**14 08 28.8**	**-1.6**
SSB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LOR	**Lormes**	**88.56**	**317**	*e*P	**P**	**14 08 31.5**	**-0.3**
LOR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SMF	**Signal de Mont**	**88.63**	**317**	*e*P	**P**	**14 08 33.0**	**+0.9**
SMF				pmax	pmax		
	comp=Z,14nm,1.0s						
SSF	**Saint Saulge**	**88.82**	**317**	*e*P	**P**	**14 08 34.2**	**+1.2**
SSF				pmax	pmax		
	comp=Z,26nm,1.6s						
AVF	**Avril sur Loir**	**88.95**	**317**	*e*P	**P**	**14 08 34.6**	**+1.0**
AVF				pmax	pmax		
	comp=Z,12nm,1.1s						
VNDA	**Vanda**	**89.26**	**169**	P	**P**	**14 08 35.0**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=294,slow=5.6,SNR=28						
VNDA				LR	LR	14 43 06.3	
	comp=Z,508nm,21.4s,baz=312,slow=32						
VNDA	**Vanda**	**89.26**	**169**	*e*P	**P**	**14 08 35.1**	**+0.8**
	comp=Z,18nm,1.1s						
VNDA	**Vanda**	**89.26**	**169**	P	**P**	**14 08 35.0**	**+0.7**
ANM	**Nome**	**89.27**	**25**	PFAKE		14 08 40.0	+5.3
ANM				LR	LR		
	comp=Z,1µm,18.0s						
TAM	**Tamanrasset**	**89.30**	**293**	*e*P	**P**	**14 08 34.5**	**-1.5**
	comp=Z,23nm,1.3s						
TAM				LR	LR		
	comp=Z,900nm,20.0s						
TAM	**Tamanrasset**	**89.30**	**293**	*e*P	**P**	**14 08 34.5**	**-1.5**
TAM				pmax	pmax		
	comp=Z,23nm,1.3s						
TAM				MLR	MLR		
	comp=Z,900nm,20.0s						
BGF	**Bois d'Agland**	**89.32**	**316**	*e*P	**P**	**14 08 39.1**	**+3.8**
BGF				pmax	pmax		
	comp=Z,21nm,1.2s						
CLF	**Chambon-Foret**	**89.56**	**318**	PFAKE		14 08 50.0	+14
CLF				LR	LR		
	comp=Z,1µm,18.0s						
RDOG	**Red Dog Mine**	**89.63**	**22**	PFAKE		14 08 50.0	+14
RDOG				LR	LR		
	comp=Z,3µm,18.0s						
TCF	**Toulx Ste Croi**	**89.79**	**316**	*e*P	**P**	**14 08 39.0**	**+1.4**
TCF				pmax	pmax		
	comp=Z,31nm,1.7s						
CAF	**Calviac**	**90.04**	**315**	*e*P	**P**	**14 08 40.5**	**+1.7**
CAF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MTLF	**Montolieu**	**90.11**	**313**	*e*P	**P**	**14 08 40.7**	**+1.6**
MTLF				pmax	pmax		
	comp=Z,13nm,1.0s						
SBA	**Scott Base**	**90.36**	**169**	*e*P	**P**	**14 08 39.7**	**+0.2**
	comp=Z,32nm,1.1s						
SBA	**Scott Base**	**90.36**	**169**	*e*P	**P**	**14 08 39.7**	**+0.2**
SBA				pmax	pmax		
	comp=Z,33nm,1.1s						
RJF	**Les Rejaudoux**	**90.38**	**315**	*e*P	**P**	**14 08 42.1**	**+1.8**
RJF				pmax	pmax		
	comp=Z,15nm,1.0s						
LFF	**La Frestale**	**90.97**	**315**	*e*P	**P**	**14 08 47.2**	**+4.1**
LFF				pmax	pmax		
	comp=Z,4.0nm,0.4s						
LDF	**La Druitiere**	**91.07**	**319**	*e*P	**P**	**14 08 44.2**	**+0.8**
LDF				pmax	pmax		
	comp=Z,16nm,1.0s						
FLN	**La Foliniere**	**91.28**	**319**	*e*P	**P**	**14 08 47.5**	**+3.1**
FLN				pmax	pmax		
	comp=Z,15nm,0.9s						
MFF	**Saint Martin d**	**91.36**	**317**	*e*P	**P**	**14 08 46.3**	**+1.4**
MFF				pmax	pmax		
	comp=Z,28nm,1.0s						
EPF	**Esparros**	**91.51**	**313**	*e*P	**P**	**14 08 49.6**	**+3.9**
EPF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ESK	**Eskdalemuir**	**91.85**	**326**	PFAKE		14 09 00.0	+13
ESK				LR	LR		
	comp=Z,2µm,21.0s						
ETSF	**Etsaut**	**92.18**	**313**	*e*P	**P**	**14 08 50.8**	**+2.0**
ETSF				pmax	pmax		
	comp=Z,21nm,1.0s						
TOC2	**Torodi Ar. Sit**	**93.78**	**283**	PFAKE		14 09 10.0	+13
TOC2				LR	LR		
	comp=Z,1µm,21.0s						
TOC3	**Torodi Ar. Sit**	**93.78**	**283**	PFAKE		14 09 10.0	+13
TOC3				LR	LR		
	comp=Z,900nm,21.0s						
TOC1	**Torodi Ar. Sit**	**93.80**	**283**	PFAKE		14 09 10.0	+13
TOC1				LR	LR		
	comp=Z,1µm,21.0s						
TOB3	**Torodi Ar. Sit**	**93.80**	**283**	PFAKE		14 09 10.0	+13
TOB3				LR	LR		
	comp=Z,900nm,21.0s						
TOC4	**Torodi Ar. Sit**	**93.80**	**283**	PFAKE		14 09 10.0	+13
TOC4				LR	LR		
	comp=Z,900nm,21.0s						
TOA0	**Torodi Ar. Sit**	**93.81**	**283**	*e*P	**P**	**14 08 56.0**	**-0.7**
	comp=Z,13nm,1.1s						
TOA0				LR	LR		
	comp=Z,800nm,20.0s						
TORD	**Torodi Ar. Bea**	**93.81**	**283**	P	**P**	**14 08 56.9**	**+0.1**
	comp=Z,14nm,0.6s,baz=50,slow=4.5,SNR=3.9						
TORD				LR	LR	14 49 46.9	
	comp=Z,719nm,20.2s,baz=20,slow=35						
TOA1	**Torodi Ar. Sit**	**93.81**	**283**	*e*P	**P**	**14 08 56.9**	**+0.1**
TOA1				LR	LR		
	comp=Z,800nm,20.0s						
TOB4	**Torodi Ar. Sit**	**93.82**	**283**	PFAKE		14 09 10.0	+13
TOB4				LR	LR		
	comp=Z,800nm,21.0s						
TOB5	**Torodi Ar. Sit**	**93.82**	**283**	PFAKE		14 09 10.0	+13
TOB5				LR	LR		
	comp=Z,900nm,21.0s						
TOC7	**Torodi Ar. Sit**	**93.82**	**283**	PFAKE		14 09 10.0	+13
TOC7				LR	LR		
	comp=Z,800nm,21.0s						
TOC5	**Torodi Ar. Sit**	**93.83**	**283**	PFAKE		14 09 10.0	+13
TOC5				LR	LR		
	comp=Z,1µm,21.0s						
TOLK	**Toolik Lake Re**	**94.16**	**20**	*e*P	**P**	**14 08 56.3**	**-1.0**
	comp=Z,16nm,1.4s						
TOLK				LR	LR		
	comp=Z,4µm,20.0s						
TOLK	**Toolik Lake Re**	**94.16**	**20**	P	**P**	**14 08 56.1**	**-1.3**
	baz=294						
QSPA	**South Pole Qui**	**94.54**	**180**	*e*P	**P**	**14 08 59.4**	**+0.2**
	comp=Z,15nm,1.0s						
QSPA				LR	LR		
	comp=Z,1µm,20.0s						
SCO	**Scoresbysund**	**94.89**	**343**	PFAKE		14 09 10.0	+9.4
SCO				LR	LR		
	comp=Z,2µm,21.0s						
MLY	**Manley**	**95.16**	**23**	*e*P	**P**	**14 09 00.8**	**-1.3**
	comp=Z,10nm,1.4s						
MLY				LR	LR		
	comp=Z,800nm,21.0s						
ESDC	**Sonseca Array**	**95.24**	**310**	P	**P**	**14 09 02.9**	**0.0**
	comp=Z,4.5nm,0.9s,baz=53,slow=4.2,SNR=16						
ESDC				PP	**PP**	**14 12 57.7**	**+4.7**
	comp=Z,0.5nm,0.6s,baz=86,slow=7.8,SNR=3.7						
ESDC				PKKPbc	**PKKPbc**	**14 25 58.3**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=268,slow=2.9,SNR=6.2						
BPAW	**Bear Paw Mtn.**	**95.42**	**24**	*e*P	**P**	**14 09 01.9**	**-1.2**
	comp=Z,16nm,1.2s						
BPAW				LR	LR		
	comp=Z,900nm,20.0s						
PAB	**San Pablo**	**95.55**	**310**	*e*P	**P**	**14 09 03.6**	**-0.8**
	comp=Z,17nm,1.5s						
PAB	**San Pablo**	**95.55**	**310**	*e*P	**P**	**14 09 03.6**	**-0.8**
PAB				pmax	pmax		
	comp=Z,17nm,1.5s						
KTH	**Kantishna Hill**	**95.65**	**25**	PFAKE		14 09 10.0	+5.7
KTH				LR	LR		
	comp=Z,1µm,22.0s						
TRF	**Thorofare Moun**	**95.95**	**25**	PFAKE		14 09 20.0	+14
TRF				LR	LR		
	comp=Z,1µm,21.0s						
BWN	**Browne**	**96.01**	**24**	PFAKE		14 09 20.0	+14
BWN				LR	LR		
	comp=Z,1µm,20.0s						
COLA	**College**	**96.35**	**23**	PFAKE		14 09 20.0	+13
COLA				LR	LR		
	comp=Z,800nm,19.0s						
MCK	**McKinley**	**96.40**	**24**	PFAKE		14 09 20.0	+12
MCK				LR	LR		
	comp=Z,2µm,18.0s						
WRH	**Wood River Hil**	**96.43**	**23**	PFAKE		14 09 20.0	+12
WRH				LR	LR		
	comp=Z,1µm,20.0s						
CCB	**Clear Creek Bu**	**96.47**	**23**	PFAKE		14 09 20.0	+12
CCB				LR	LR		
	comp=Z,1µm,20.0s						

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RND   Reindeer           96.56  24  PFAKE              14 09 20.0 +12
RND                                 LR       LR
      comp=Z,1μm,19.0s
ILAR  Eielson Array      96.77  23  P        P         14 09 08.2 -1.0
      comp=Z,0.7nm,0.8s,baz=296,slow=4.9,SNR=6.3
ILAR                                PP       PP        14 13 04.6 +0.6
      comp=Z,0.8nm,1.0s,baz=288,slow=7.5,SNR=3.4
ILAR                                PKKPbc   PKKPbc    14 25 53.3 -0.9
      comp=Z,1.2nm,1.0s,baz=168,slow=1.8,SNR=7.7
ILAR                                LR       LR        14 56 42.2
      comp=Z,667nm,18.6s,baz=310,slow=38
ILB   Eielson Array      96.77  23  eP       P         14 09 08.2 -1.0
      comp=Z,7.6nm,1.4s
HOM   Homer              96.78  28  PFAKE              14 09 20.0 +11
HOM                                 LR       LR
      comp=Z,800nm,20.0s
HDA   Harding Lake       96.90  23  PFAKE              14 09 20.0 +10
HDA                                 LR       LR
      comp=Z,1μm,20.0s
PRP   Porcupine Dome     96.95  22  PFAKE              14 09 20.0 +10
PRP                                 LR       LR
      comp=Z,2μm,19.0s
KDAK  Kodiak Island      96.98  30  PFAKE              14 09 20.0 +10
KDAK                                LR       LR
      comp=Z,900nm,19.0s
BRLK  Bradley Lake       97.09  28  PFAKE              14 09 20.0 +9.0
BRLK                                LR       LR
      comp=Z,900nm,18.0s
RC01  Rabbit Creek A     97.11  27  PFAKE              14 09 20.0 +9.0
RC01                                LR       LR
      comp=Z,1μm,22.0s
SNAA  Sanae              97.36 198  P        Pdif      14 09 18.8 +6.9
SNAA  Sanae              97.36 198  P        Pdif      14 09 15.5 +3.6
      comp=Z,1.9nm,0.9s,baz=104,slow=3.6,SNR=7.1
SNAA  Sanae              97.36 198  PFAKE              14 09 20.0 +8.1
SNAA                                LR       LR
      comp=Z,700nm,19.0s
SML   Sawmill            97.44  26  PFAKE              14 09 20.0 +7.5
SML                                 LR       LR
      comp=Z,1μm,20.0s
SUMG  Summit             97.85 348  PFAKE              14 09 20.0 +5.5
SUMG                                LR       LR
      comp=Z,1μm,22.0s
SCM   Sheep Creek Mo     97.86  26  PFAKE              14 09 20.0 +5.6
SCM                                 LR       LR
      comp=Z,1μm,20.0s
RIDG  Independent Ri     98.03  23  PFAKE              14 09 30.0 +15
RIDG                                LR       LR
      comp=Z,1μm,20.0s
GLI   Glacier Island     98.38  26  PFAKE              14 09 30.0 +13
GLI                                 LR       LR
      comp=Z,1μm,21.0s
TULEG Thule              98.53 357  PFAKE              14 09 30.0 +13
TULEG                               LR       LR
      comp=Z,1μm,20.0s
RTC   Rabat Centre       98.59 305  PFAKE              14 09 30.0 +12
RTC                                 LR       LR
      comp=Z,2μm,19.0s
EGAK  Eagle              98.92  22  PFAKE              14 09 30.0 +11
EGAK                                LR       LR
      comp=Z,1μm,20.0s
INK   Inuvik             99.38  17  PFAKE              14 09 30.0 +9.1
INK                                 LR       LR
      comp=Z,1μm,20.0s
EPYK  Eagle Plains       99.58  19  PFAKE              14 09 30.0 +8.1
EPYK                                LR       LR
      comp=Z,2μm,22.0s
EPYK  Eagle Plains       99.58  19  P        Pdif      14 09 21.8 -0.1
      baz=306
HMT   Hamilton           99.87  26  PFAKE              14 09 30.0 +6.7
HMT                                 LR       LR
      comp=Z,1μm,19.0s
DAWY  Dawson             99.95  22  PFAKE              14 09 30.0 +6.4
DAWY                                LR       LR
      comp=Z,1μm,19.0s
BALM  Baldy             100.36  25  PFAKE              14 09 40.0 +14
BALM                                LR       LR
      comp=Z,1μm,21.0s
RES   Resolute Bay      100.51   3  PFAKE              14 09 40.0 +14
RES                                 LR       LR
      comp=Z,800nm,20.0s
BCPM  Bancas Point      102.07  25  PFAKE              14 09 40.0 +6.9
BCPM                                LR       LR
      comp=Z,1μm,20.0s
HYT   Haines Junctio    102.48  24  PFAKE              14 09 50.0 +15
HYT                                 LR       LR
      comp=Z,1μm,20.0s
ANGG  Ammassalik, Gr    102.50 342  PFAKE              14 09 40.0 +5.2
ANGG                                LR       LR
      comp=Z,2μm,22.0s
ILULI Ilulissat         103.08 349  PFAKE              14 09 50.0 +13
ILULI                               LR       LR
      comp=Z,1μm,20.0s
WHY   Whitehorse        103.62  23  PFAKE              14 09 50.0 +10
WHY                                 LR       LR
      comp=Z,1μm,19.0s
SFJD  Kangerlussuaq     104.84 347  PFAKE              14 10 00.0 +15
SFJD                                LR       LR
      comp=Z,1μm,20.0s
JIS   Juneau Island     105.25  25  PFAKE              14 14 10.0 +8.8
JIS                                 LR       LR
      comp=Z,1μm,22.0s
WRAK  Wrangell Islan    107.26  26  PFAKE              14 14 20.0 +15
WRAK                                LR       LR
      comp=Z,800nm,22.0s
NRS   Narsarsuaq        108.14 342  PFAKE              14 14 20.0 +14
NRS                                 LR       LR
      comp=Z,1μm,22.0s
YKW3  Yellowknife Ar    108.88  15  PFAKE              14 14 20.0 +12
YKW3                                LR       LR
      comp=Z,900nm,22.0s
IVI   Ivigtut           108.94 343  PFAKE              14 14 20.0 +12
IVI                                 LR       LR
      comp=Z,2μm,21.0s
DIB   Dawson Inlet,     109.16  29  PFAKE              14 14 20.0 +11
DIB                                 LR       LR
      comp=Z,900nm,18.0s
TBI   Tubuai            113.70 113  eLQ      LQ        14 43 40.4
      comp=Z,981nm,36.0s
TBI                                 eLR      LR        14 48 14.5
      comp=Z,1μm,25.0s
PPT2  Papeete2          114.00 107  ePS      PS        14 24 46.0 -5.3
      comp=Z,186nm,25.5s
PPT2  Papeete2          114.00 107  eLQ      LQ        14 43 46.9
      comp=Z,1μm,32.8s
PPT2                                eLR      LR        14 48 34.0
      comp=Z,834nm,25.8s
FCC   Fort Churchill    116.23   6  PFAKE              14 14 30.0 +8.1
FCC                                 LR       LR
      comp=Z,1μm,22.0s
A04D  Lummi Island      116.76  28  P        PKiKP     14 14 24.0 +0.7
      baz=315
NLWA  Neilton Lookou    117.12  30  PFAKE              14 14 30.0 +5.9
NLWA                                LR       LR
      comp=Z,700nm,18.0s
D03D  Eldon             117.41  29  P        PKiKP     14 14 25.5 +0.9
      baz=314
B06A  Marblemount       117.47  28  PFAKE              14 14 40.0 +15
B06A                                LR       LR
      comp=Z,800nm,21.0s
LON   Longmire          118.58  29  PFAKE              14 14 40.0 +13
LON                                 LR       LR
      comp=Z,700nm,22.0s
LTY   Liberty           118.76  28  PFAKE              14 14 40.0 +13
LTY                                 LR       LR
      comp=Z,600nm,20.0s
FFC   Flin Flon         118.86  12  PFAKE              14 14 40.0 +13
FFC                                 LR       LR
      comp=Z,1μm,21.0s
COR   Corvallis         119.33  32  PFAKE              14 14 40.0 +12
COR                                 LR       LR
      comp=Z,700nm,21.0s
C09A  Chrisman Ranch    119.45  26  PFAKE              14 14 40.0 +11
C09A                                LR       LR
      comp=Z,800nm,22.0s
NEW   Newport           119.60  25  PFAKE              14 14 40.0 +11
NEW                                 LR       LR
      comp=Z,900nm,22.0s
H04A  Detroit Lake      119.84  31  PFAKE              14 14 40.0 +11
H04A                                LR       LR
      comp=Z,500nm,20.0s
I03D  Drain, OR         119.90  33  P        PKPdf     14 14 29.1 -0.4
      baz=312
G06A  Carlson Farm,     120.23  30  PFAKE              14 14 40.0 +10
G06A                                LR       LR
      comp=Z,700nm,20.0s
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HUMO  Hull Mountain     120.85  33  PFAKE              14 14 40.0 +8.5
HUMO                                LR       LR
      comp=Z,500nm,21.0s
PINE  Pine Mountain     121.10  31  PFAKE              14 14 40.0 +7.8
PINE                                LR       LR
      comp=Z,800nm,21.0s
F10A  Beach Ranch, E    121.30  27  PFAKE              14 14 40.0 +7.6
F10A                                LR       LR
      comp=Z,500nm,21.0s
J05D  Fort Rock, OR     121.30  32  P        PKiKP     14 14 33.3 +0.7
      baz=314
L04D  Klamath Falls     121.47  33  P        PKiKP     14 14 34.2 +1.3
      baz=313
YBH   Yreka Blue Hor    121.57  34  PFAKE              14 14 40.0 +7.0
YBH                                 LR       LR
      comp=Z,700nm,22.0s
MSO   Missoula          122.06  24  ePKPdf   PKPdf     14 14 32.9 -0.9
MSO                                 LR       LR
      comp=Z,800nm,20.0s
MSO   Missoula          122.06  24  P        PKPdf     14 14 33.4 -0.4
      baz=323
BMO   Blue Mountains    122.12  28  PFAKE              14 14 40.0 +6.0
BMO                                 LR       LR
      comp=Z,600nm,22.0s
WDC   Whiskeytown Da    122.43  35  PFAKE              14 14 50.0 +15
WDC                                 LR       LR
      comp=Z,700nm,22.0s
PLID  Pearl Lake        122.54  27  PFAKE              14 14 50.0 +15
PLID                                LR       LR
      comp=Z,1μm,19.0s
EGMT  Eagleton          122.67  21  ePKPdf   PKPdf     14 14 33.3 -1.6
EGMT                                LR       LR
      comp=Z,600nm,20.0s
EGMT  Eagleton          122.67  21  P        PKPdf     14 14 34.9  0.0
      baz=328
MOD   Modoc Plateau     122.76  32  PFAKE              14 14 50.0 +15
MOD                                 LR       LR
      comp=Z,500nm,21.0s
O03E  Paynes Creek      123.04  35  P        PKPdf     14 14 35.9 +0.1
      baz=312
ORV   Oroville          123.71  35  PFAKE              14 14 50.0 +13
ORV                                 LR       LR
      comp=Z,500nm,20.0s
DLMT  Dillon            123.80  25  PFAKE              14 14 50.0 +13
DLMT                                LR       LR
      comp=Z,1μm,22.0s
BOZ   Bozeman (W)       124.00  24  ePKPdf   PKPdf     14 14 37.0 -0.5
BOZ                                 LR       LR
      comp=Z,800nm,20.0s
BOZ   Bozeman (W)       124.00  24  PKIKP    PKPdf     14 14 37.0 -0.5
BOZ   Bozeman (W)       124.00  24  P        PKPdf     14 14 37.1 -0.5
      baz=325
DGMT  Dagmar            124.06  17  PFAKE              14 14 50.0 +12
DGMT                                LR       LR
      comp=Z,800nm,19.0s
ULM   Lac du Bonnet     124.28  10  PKP      PKPdf     14 14 36.4 -1.3
      comp=Z,3.4nm,0.6s,baz=6.3,slow=5.2,SNR=4.3
ULM                                 PKKPbc   PKKPab    14 24 22.6 +0.1
      comp=Z,2.0nm,0.5s,baz=135,slow=1.4,SNR=3.3
ULM   Lac du Bonnet     124.28  10  ePKPdf   PKPdf     14 14 36.6 -1.1
ULM                                 LR       LR
      comp=Z,2μm,21.0s
ULM   Lac du Bonnet     124.28  10  ePKIKP   PKPdf     14 14 36.6 -1.1
ULM                                 MLR      MLR
      comp=Z,2μm,21.0s
AFDM  Forest Hills D    124.42  35  PFAKE              14 14 50.0 +11
AFDM                                LR       LR
      comp=Z,400nm,21.0s
HLID  Hailey            124.44  27  PFAKE              14 14 50.0 +11
HLID                                LR       LR
      comp=Z,800nm,20.0s
HLID  Hailey            124.44  27  P        PKiKP     14 14 38.9 +0.1
      baz=322
PAHR  Pah Rah Range     124.80  34  PFAKE              14 14 50.0 +10
PAHR                                LR       LR
      comp=Z,500nm,20.0s
RUBR  Rubicon Trail     124.82  35  PFAKE              14 14 50.0 +10
RUBR                                LR       LR
      comp=Z,600nm,20.0s
VCNR  Virginia City     124.93  34  PFAKE              14 14 50.0 +10
VCNR                                LR       LR
      comp=Z,600nm,20.0s
LAO   LASA Array        125.03  19  ePKPdf   PKPdf     14 14 37.1 -2.3
LAO                                 LR       LR
      comp=Z,900nm,22.0s
PNTR  Pine Nut          125.11  34  PFAKE              14 14 50.0 +10
PNTR                                LR       LR
      comp=Z,500nm,22.0s
CHGQ  Chibougamau       125.14 353  P        PKPdf     14 14 38.9 -0.5
      baz=11
RLMT  Red Lodge         125.31  22  PFAKE              14 14 50.0 +9.5
RLMT                                LR       LR
      comp=Z,900nm,22.0s
LKWY  Lake              125.34  24  PFAKE              14 14 50.0 +9.3
LKWY                                LR       LR
      comp=Z,1μm,22.0s
YPP   Pitchstone Pla    125.42  24  ePKPdf   PKPdf     14 14 38.2 -2.3
MATQ  Matagami          125.62 355  P        PKPdf     14 14 40.3  0.0
      baz=7.0
FLWY  Flagg Ranch       125.62  24  PFAKE              14 14 50.0 +8.8
FLWY                                LR       LR
      comp=Z,800nm,20.0s
IMW   Indian Meadow     125.67  24  PFAKE              14 14 50.0 +8.6
IMW                                 LR       LR
      comp=Z,800nm,22.0s
MDND  Maddock           125.83  13  PFAKE              14 14 50.0 +8.8
MDND                                LR       LR
      comp=Z,1μm,21.0s
KVN   Kaiserville       125.96  33  ePKPdf   PKPdf     14 14 39.5 -2.1
KVN   Kaiserville       125.96  33  ePKIKP   PKPdf     14 14 39.5 -2.1
TPAW  Teton Pass        126.00  25  PFAKE              14 14 50.0 +8.0
TPAW                                LR       LR
      comp=Z,800nm,20.0s
SNOW  Snow King Moun    126.11  25  PFAKE              14 14 50.0 +7.8
SNOW                                LR       LR
      comp=Z,700nm,20.0s
BATG  Bathurst New B    126.13 346  PFAKE              14 14 50.0 +8.2
BATG                                LR       LR
      comp=Z,800nm,20.0s
AGMN  Agassiz Nation    126.17  10  PFAKE              14 14 50.0 +8.2
AGMN                                LR       LR
      comp=Z,2μm,21.0s
ELK   Elko              126.21  30  ePKPdf   PKPdf     14 14 40.4 -1.7
ELK                                 LR       LR
      comp=Z,800nm,22.0s
ELK   Elko              126.21  30  ePKIKP   PKPdf     14 14 40.4 -1.7
ELK                                 MLR      MLR
      comp=Z,800nm,22.0s
LSQQ  Lebel-sur-Quev    126.26 355  P        PKPdf     14 14 41.3 -0.3
      baz=7.9
NV01  Mina Array Sit    126.29  34  ePKPdf   PKPdf     14 14 42.1 -0.1
NVAR  Mina Array Bea    126.29  34  PKP      PKPdf     14 14 42.1 -0.1
      comp=Z,1.6nm,0.7s,baz=266,slow=1.8,SNR=15
NVAR                                PKKPbc   PKKPbc    14 24 16.5 +0.7
      comp=Z,0.8nm,0.9s,baz=156,slow=4.4,SNR=4.2
AHID  Auburn Hatcher    126.53  25  PFAKE              14 14 50.0 +7.0
AHID                                LR       LR
      comp=Z,800nm,19.0s
PQI   Presque Isle      127.16 347  PFAKE              14 14 50.0 +6.2
PQI                                 LR       LR
      comp=Z,1μm,19.0s
EYMN  Ely               127.17   7  ePKPdf   PKPdf     14 14 42.3 -1.1
EYMN                                LR       LR
      comp=Z,1μm,21.0s
EYMN  Ely               127.17   7  P        PKPdf     14 14 43.3  0.0
      baz=350
BW06  Boulder Array     127.17  24  PFAKE              14 14 50.0 +5.7
BW06                                LR       LR
      comp=Z,800nm,20.0s
BW06  Boulder Array     127.17  24  P        PKPdf     14 14 43.6 -0.3
      baz=327
PD31  Pinedale Array    127.17  24  ePKPdf   PKPdf     14 14 44.1 +0.3
PDAR  Pinedale Array    127.17  24  PKP      PKPdf     14 14 44.1 +0.3
      comp=Z,0.8nm,0.7s,baz=85,slow=1.6,SNR=7.5
PDAR                                PP       PP        14 16 43.6 +1.7
      comp=Z,1.5nm,1.0s,baz=15,slow=3.7,SNR=2.6
HWUT  Hardware Ranch    127.27  26  PFAKE              14 14 50.0 +5.5
HWUT                                LR       LR
      comp=Z,500nm,22.0s
C40A  Isle Royale Na    127.44   5  ePKPdf   PKPdf     14 14 43.0 -0.8
C40A                                LR       LR
      comp=Z,1μm,20.0s
C40A  Isle Royale Na    127.44   5  P        PKPdf     14 14 43.9  0.0
      baz=353
CWC   Cottonwood Cre    127.81  36  P        PKiKP     14 14 45.9 +0.2
      baz=314
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DUG   Dugway, Tooele    127.82  29  P        PKPdf     14 14 45.0  0.0
      baz=322
R11A  Troy Canyon, C    127.83  32  ePKPdf   PKPdf     14 14 43.4 -1.7
R11A                                LR       LR
      comp=Z,600nm,22.0s
R11A  Troy Canyon, C    127.83  32  P        PKPdf     14 14 44.7 -0.4
      baz=318
GRAC  Grapevine Rang    127.83  35  P        PKPdf     14 14 44.9 -0.1
      baz=315
RSSD  Black Hills       128.02  19  PFAKE              14 15 00.0 +14
RSSD                                LR       LR
      comp=Z,900nm,19.0s
RSSD  Black Hills       128.02  19  P        PKiKP     14 14 46.2 +0.2
      baz=334
D54A  Lac Fusel, La     128.12 354  P        PKiKP     14 14 45.7 -0.1
      baz=8.5
D53A  Lac Vacive, Po    128.28 355  ePKPdf   PKPdf     14 14 45.0 -0.5
D53A                                LR       LR
      comp=Z,1μm,20.0s
D53A  Lac Vacive, Po    128.28 355  P        PKPdf     14 14 44.9 -0.6
      baz=7.2
D41A  Chassel           128.33   5  PFAKE              14 15 00.0 +14
D41A                                LR       LR
      comp=Z,600nm,19.0s
D41A  Chassel           128.33   5  P        PKPdf     14 14 45.9 +0.3
      baz=353
D48A  Paudash Townsh    128.41 359  P        PKPdf     14 14 45.3 -0.4
      baz=2.0
D52A  ZEK Kipawa Sen    128.44 356  P        PKPdf     14 14 44.5 -1.3
      baz=6.3
K22A  Casper            128.45  22  PFAKE              14 15 00.0 +13
K22A                                LR       LR
      comp=Z,600nm,21.0s
E38A  The Farm, Brul    128.48   7  PFAKE              14 15 00.0 +14
E38A                                LR       LR
      comp=Z,1μm,21.0s
E38A  The Farm, Brul    128.48   7  P        PKPdf     14 14 45.4 -0.5
      baz=350
TPNV  Topopah Spring    128.49  34  P        PKPdf     14 14 46.1 -0.3
      baz=316
D47A  Chapleau          128.55 360  P        PKPdf     14 14 46.1 +0.1
      baz=0.3
D46A  Sault St. Mari    128.71   1  P        PKPdf     14 14 46.5 +0.2
      baz=359
PKME  Peaks-Kenny Pk    128.78 347  PFAKE              14 15 00.0 +13
PKME                                LR       LR
      comp=Z,900nm,21.0s
PKME  Peaks-Kenny Pk    128.78 347  P        PKPdf     14 14 46.7 +0.3
      baz=18
EMMW  East Machias      128.87 346  PFAKE              14 15 00.0 +13
EMMW                                LR       LR
      comp=Z,1μm,21.0s
E54A  Lac Daplat, Po    128.88 355  P        PKPdf     14 14 46.3 -0.3
      baz=7.9
E44A  Grand Marais A    128.93   2  PFAKE              14 15 00.0 +13
E44A                                LR       LR
      comp=Z,1μm,20.0s
E51A  G1948 Merrick     128.96 357  P        PKiKP     14 14 47.7 +0.2
      baz=4.9
E53A  Dumoine, Ponti    128.98 355  P        PKiKP     14 14 47.2 -0.3
      baz=7.3
RWWY  Rawlins           129.02  23  PFAKE              14 15 00.0 +12
RWWY                                LR       LR
      comp=Z,800nm,20.0s
E48A  Lockeyer          129.11 359  P        PKPdf     14 14 46.7 -0.4
      baz=1.5
E43A  Lone Tree Farm    129.12   3  ePKPdf   PKPdf     14 14 45.8 -1.3
E43A                                LR       LR
      comp=Z,1μm,22.0s
E43A  Lone Tree Farm    129.12   3  P        PKPdf     14 14 46.7 -0.4
      baz=355
E50A  Wahnapitae        129.13 358  P        PKPdf     14 14 47.4 +0.3
      baz=3.3
SHOC  Shoshone, Teco    129.22  35  P        PKPdf     14 14 47.6  0.0
      baz=316
E46A  Sault Ste Mari    129.23   1  ePKPdf   PKPdf     14 14 46.4 -0.9
E46A                                LR       LR
      comp=Z,1μm,20.0s
E46A  Sault Ste Mari    129.23   1  P        PKPdf     14 14 46.9 -0.4
      baz=359
F39A  Loretta           129.23   7  P        PKPdf     14 14 47.4  0.0
      baz=350
COWI  Conover           129.24   5  PFAKE              14 15 00.0 +12
COWI                                LR       LR
      comp=Z,800nm,20.0s
F40A  Park Falls        129.32   6  P        PKPdf     14 14 47.7 +0.1
      baz=351
GSC   Goldstone, Bar    129.34  36  P        PKiKP     14 14 49.7 +1.0
      baz=315
ALGO  Algonquin Park    129.43 355  P        PKiKP     14 14 48.3 -0.1
      baz=6.8
WVL   Waterville        129.53 347  PFAKE              14 15 00.0 +11
WVL                                 LR       LR
      comp=Z,1μm,22.0s
F51A  Arnstein          129.58 357  P        PKPdf     14 14 48.1 +0.2
      baz=4.4
PEMO  Pembroke          129.63 354  P        PKPdf     14 14 48.5 +0.4
      baz=7.9
SPMN  Marine on St.     129.66   9  PFAKE              14 15 00.0 +11
SPMN                                LR       LR
      comp=Z,1μm,21.0s
F52A  Sundridge         129.68 356  P        PKPdf     14 14 48.0 -0.2
      baz=5.2
F48A  Evansville        129.77 359  P        PKPdf     14 14 47.6 -0.8
      baz=0.9
G39A  Holcombe          129.82   7  P        PKPdf     14 14 47.6 -0.9
      baz=350
F45A  CMU Biological    129.88   2  P        PKiKP     14 14 49.3  0.0
      baz=357
O20A  White River Ci    129.91  25  PFAKE              14 15 00.0 +10
O20A                                LR       LR
      comp=Z,800nm,20.0s
O20A  White River Ci    129.91  25  P        PKiKP     14 14 49.8  0.0
      baz=327
G40A  Rib Lake          129.96   6  PFAKE              14 15 00.0 +10
G40A                                LR       LR
      comp=Z,1μm,21.0s
G40A  Rib Lake          129.96   6  P        PKiKP     14 14 49.2 -0.3
      baz=351
FRNY  Flat Rock         130.00 351  PFAKE              14 15 00.0 +10
FRNY                                LR       LR
      comp=Z,600nm,20.0s
BUKO  Buck Lake         130.04 356  P        PKiKP     14 14 49.5 -0.2
      baz=5.1
N23A  Red Feather La    130.19  22  PFAKE              14 15 00.0 +10
N23A                                LR       LR
      comp=Z,700nm,20.0s
N23A  Red Feather La    130.19  22  P        PKPdf     14 14 50.0 +0.3
      baz=330
PLVO  Plevna            130.25 354  P        PKiKP     14 14 50.1  0.0
      baz=8.2
LBNH  Lisbon            130.29 349  PFAKE              14 15 00.0 +10
LBNH                                LR       LR
      comp=Z,900nm,20.0s
BANO  Bancroft          130.35 355  P        PKiKP     14 14 50.6 +0.3
      baz=7.1
VT1   Waterbury         130.35 350  PFAKE              14 15 00.0 +10
VT1                                 LR       LR
      comp=Z,800nm,20.0s
LONY  Lake Ozonia       130.36 352  PFAKE              14 15 00.0 +10
LONY                                LR       LR
      comp=Z,1μm,22.0s
GMRC  Granite Mounta    130.37  35  P        PKiKP     14 14 50.5 -0.3
      baz=316
ECSD  EROS Data Cent    130.40  13  ePKPdf   PKPdf     14 14 49.1 -0.5
ECSD                                LR       LR
      comp=Z,1μm,21.0s
ECSD  EROS Data Cent    130.40  13  P        PKiKP     14 14 50.2 -0.3
      baz=343
G47A  Hillman           130.43   1  P        PKiKP     14 14 50.1 -0.4
      baz=359
G45A  Suttons Bay       130.52   2  PFAKE              14 15 00.0 +9.4
G45A                                LR       LR
      comp=Z,900nm,19.0s
H56A  Elgin             130.60 353  P        PKPdf     14 14 48.7 -1.3
      baz=9.3
H55A  Tweed             130.74 354  P        PKPdf     14 14 48.2 -2.0
      baz=8.1
GLMI  Grayling          130.77   1  PFAKE              14 15 00.0 +8.8
GLMI                                LR       LR
      comp=Z,1μm,21.0s
DELO  Deloro Mine       130.82 355  PFAKE              14 15 00.0 +8.7
DELO                                LR       LR
      comp=Z,1μm,21.0s
HNH   Hanover           130.88 349  PFAKE              14 15 00.0 +8.6
HNH                                 LR       LR
      comp=Z,1μm,22.0s
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H48A Harrisville       130.90   0  PFAKE               14 15 00.0 +8.6
H48A                               LR      LR
     comp=Z,1µm,20.0s
NCB  Newcomb           130.94 351  PFAKE               14 15 00.0 +8.4
NCB                                LR      LR
     comp=Z,700nm,21.0s
H43A Windswept, Lux    130.97   4  PFAKE               14 15 00.0 +8.4
H43A                               LR      LR
     comp=Z,700nm,20.0s
FFD  Franklin Falls    130.99 349  PFAKE               14 15 00.0 +8.4
FFD                                LR      LR
     comp=Z,1µm,22.0s
PV14 Lion Creek, Pa    131.03  27  PFAKE               14 15 00.0 +7.8
PV14                               LR      LR
     comp=Z,700nm,20.0s
PV04 Paradox Valley    131.07  27  PFAKE               14 15 00.0 +7.8
PV04                               LR      LR
     comp=Z,1µm,19.0s
PV19 Morning Glory     131.10  27  PFAKE               14 15 00.0 +7.7
PV19                               LR      LR
     comp=Z,600nm,21.0s
PV16 Nyswonger Mesa    131.13  27  PFAKE               14 15 00.0 +7.6
PV16                               LR      LR
     comp=Z,600nm,20.0s
W13A Hualapai Mount    131.14  34  PFAKE               14 15 00.0 +7.5
W13A                               LR      LR
     comp=Z,600nm,21.0s
I41A Arkdale           131.19   6  PFAKE               14 15 00.0 +8.0
I41A                               LR      LR
     comp=Z,1µm,20.0s
PV18 Skein Mesa, Pa    131.19  27  PFAKE               14 15 00.0 +7.5
PV18                               LR      LR
     comp=Z,600nm,20.0s
ISCO Idaho Springs     131.26  23  PFAKE               14 15 00.0 +7.3
ISCO                               LR      LR
     comp=Z,700nm,20.0s
PECO Prince Edward     131.34 354  PFAKE               14 15 00.0 +7.7
PECO                               LR      LR
     comp=Z,2µm,20.0s
ACCN Adirondack Com    131.43 351  PFAKE               14 15 00.0 +7.5
ACCN                               LR      LR
     comp=Z,1µm,21.0s
I42A Draeger Farm,     131.45   5  PFAKE               14 15 00.0 +7.4
I42A                               LR      LR
     comp=Z,900nm,20.0s
I45A Fountain          131.50   3  PFAKE               14 15 00.0 +7.4
I45A                               LR      LR
     comp=Z,1µm,19.0s
OGNE Ogallala          131.52  19  PFAKE               14 15 00.0 +7.1
OGNE                               LR      LR
     comp=Z,1µm,22.0s
I47A Gladwin           131.57   1  PFAKE               14 15 00.0 +7.2
I47A                               LR      LR
     comp=Z,1µm,20.0s
I49A Point Hope        131.66 360  PFAKE               14 15 00.0 +7.0
I49A                               LR      LR
     comp=Z,1µm,19.0s
HRV  Adam Dziewonsk    131.90 348  PFAKE               14 15 00.0 +6.5
HRV                                LR      LR
     comp=Z,700nm,21.0s
WES  Weston            131.96 348  PFAKE               14 15 00.0 +6.4
WES                                LR      LR
     comp=Z,1µm,22.0s
TRY  Troy              132.06 350  PFAKE               14 15 00.0 +6.2
TRY                                LR      LR
     comp=Z,1µm,21.0s
J55A Hilton            132.08 355  PFAKE               14 15 00.0 +6.2
J55A                               LR      LR
     comp=Z,1µm,22.0s
J45A Montague          132.09   3  PFAKE               14 15 00.0 +6.2
J45A                               LR      LR
     comp=Z,700nm,20.0s
J54A Appleton          132.14 355  PFAKE               14 15 00.0 +6.1
J54A                               LR      LR
     comp=Z,2µm,21.0s
Q24A Divide            132.16  23 ePKPdf   PKPdf       14 14 51.7 -1.8
Q24A                               LR      LR
     comp=Z,700nm,19.0s
Q24A Divide            132.16  23  P       PKPdf       14 14 51.8 -1.8
     baz=330
WUAZ Wupatki           132.17  31  PFAKE               14 15 00.0 +5.5
WUAZ                               LR      LR
     comp=Z,500nm,20.0s
MVCO Mesa Verde        132.22  27  PFAKE               14 15 00.0 +5.4
MVCO                               LR      LR
     comp=Z,500nm,20.0s
BGNE Belgrade          132.23  15  PFAKE               14 15 00.0 +5.7
BGNE                               LR      LR
     comp=Z,900nm,20.0s
MEDO Medina            132.24 355  PFAKE               14 15 00.0 +5.9
MEDO                               LR      LR
     comp=Z,2µm,21.0s
QUA2 Belchertown       132.27 349  PFAKE               14 15 00.0 +5.8
QUA2                               LR      LR
     comp=Z,800nm,20.0s
JFWS Jewell Farm       132.27   7  PFAKE               14 15 00.0 +5.7
JFWS                               LR      LR
     comp=Z,1µm,22.0s
J48A Bridge Port       132.30   0  PFAKE               14 15 00.0 +5.7
J48A                               LR      LR
     comp=Z,800nm,20.0s
J47A Sunmer            132.35   1  PFAKE               14 15 00.0 +5.6
J47A                               LR      LR
     comp=Z,1µm,21.0s
BRYW Bryant College    132.46 348  PFAKE               14 15 00.0 +5.3
BRYW                               LR      LR
     comp=Z,1µm,21.0s
Y14A Wickenburg        132.49  34  PFAKE               14 15 00.0 +5.0
Y14A                               LR      LR
     comp=Z,500nm,22.0s
S22A 4UR Ranch, Cre    132.52  25  PFAKE               14 15 00.0 +4.7
S22A                               LR      LR
     comp=Z,600nm,20.0s
MMNY Mt. Morris Dam    132.62 355  PFAKE               14 15 00.0 +5.1
MMNY                               LR      LR
     comp=Z,2µm,22.0s
K55A Perry             132.63 355  P       PKPdf       14 14 54.0 +0.1
     baz=7.1
K43A Burlington        132.68   5  PFAKE               14 15 00.0 +4.9
K43A                               LR      LR
     comp=Z,900nm,21.0s
K43A Burlington        132.68   5  P       PKPdf       14 14 53.8 -0.1
     baz=353
RCBR Riachuelo         132.78 266  PFAKE               14 15 10.0  +14
RCBR                               LR      LR
     comp=Z,29µm,20.0s
K54A Basiliko Farm,    132.81 355  P       PKPdf       14 14 52.8 -1.4
     baz=6.3
K50A Casco             132.82 359  PFAKE               14 15 00.0 +4.6
K50A                               LR      LR
     comp=Z,1µm,20.0s
SCIA State Center      132.82  10  PFAKE               14 15 00.0 +4.6
SCIA                               LR      LR
     comp=Z,2µm,22.0s
113A Mohawk Valley,    132.91  36  PFAKE               14 15 10.0  +14
113A                               LR      LR
     comp=Z,400nm,21.0s
BINY Binghamton        132.93 353  PFAKE               14 15 10.0  +14
BINY                               LR      LR
     comp=Z,1µm,20.0s
L40A Anamosa           132.99   8  PFAKE               14 15 10.0  +14
L40A                               LR      LR
     comp=Z,1µm,21.0s
KSCT Kent School, K    133.01 350  PFAKE               14 15 10.0  +14
KSCT                               LR      LR
     comp=Z,1µm,20.0s
KSCO Kaye Shedlock’    133.06  21  PFAKE               14 15 10.0  +14
KSCO                               LR      LR
     comp=Z,1µm,20.0s
SDCO Great Sand Dun    133.07  24  PFAKE               14 15 10.0  +14
SDCO                               LR      LR
     comp=Z,800nm,21.0s
L42A Oliver, Polo      133.24   6  PFAKE               14 15 10.0  +14
L42A                               LR      LR
     comp=Z,900nm,20.0s
AAM  Ann Arbor         133.30   0  PFAKE               14 15 10.0  +14
AAM                                LR      LR
     comp=Z,1µm,20.0s
YLE  Yale              133.31 349  PFAKE               14 15 10.0  +14
YLE                                LR      LR
     comp=Z,1µm,22.0s
W18A Petrified Fore    133.31  30  PFAKE               14 15 10.0  +13
W18A                               LR      LR
     comp=Z,700nm,21.0s
L46A Eue Claire        133.51   3  PFAKE               14 15 10.0  +13
L46A                               LR      LR
     comp=Z,1µm,21.0s
KSPA Keystone Colle    133.53 352  PFAKE               14 15 10.0  +13
KSPA                               LR      LR
     comp=Z,1µm,21.0s
X18A Snowflake         133.67  31  PFAKE               14 15 10.0  +12
X18A                               LR      LR
     comp=Z,800nm,22.0s
PAL  Palisades         133.79 350  PFAKE               14 15 10.0  +13
PAL                                LR      LR
     comp=Z,800nm,20.0s
ODNJ Ogdensburg        133.82 351  PFAKE               14 15 10.0  +13
ODNJ                               LR      LR
     comp=Z,1µm,21.0s
ALLY Alegheny Colle    133.86 357  PFAKE               14 15 10.0  +12
ALLY                               LR      LR
     comp=Z,800nm,20.0s
M54A Oil Creek Stat    133.97 356  PFAKE               14 15 10.0  +12
M54A                               LR      LR
     comp=Z,1µm,20.0s
M44A Midewin, Midew    134.01   5  PFAKE               14 15 10.0  +12
M44A                               LR      LR
     comp=Z,1µm,19.0s
M52A Chesterland       134.03 358  PFAKE               14 15 10.0  +12
M52A                               LR      LR
     comp=Z,1µm,21.0s
T25A Trinidad          134.03  24  PFAKE               14 15 10.0  +12
T25A                               LR      LR
     comp=Z,700nm,18.0s
M48A Edgerton          134.10   1  PFAKE               14 15 10.0  +12
M48A                               LR      LR
     comp=Z,800nm,20.0s
M46A Old House Fiel    134.11   3  PFAKE               14 15 10.0  +12
M46A                               LR      LR
     comp=Z,1µm,19.0s
N59A State Game Lan    134.16 352  PFAKE               14 15 10.0  +12
N59A                               LR      LR
     comp=Z,900nm,18.0s
M50A Fremont           134.20 360  PFAKE               14 15 10.0  +12
M50A                               LR      LR
     comp=Z,1µm,19.0s
BRNJ Basking Ridge     134.21 351  PFAKE               14 15 10.0  +12
BRNJ                               LR      LR
     comp=Z,1µm,22.0s
N41A Harden Midland    134.37   8  PFAKE               14 15 10.0  +11
N41A                               LR      LR
     comp=Z,1µm,21.0s
N54A Moraine State     134.54 356  PFAKE               14 15 10.0  +11
N54A                               LR      LR
     comp=Z,800nm,20.0s
N55A Marion Center     134.65 355  PFAKE               14 15 10.0  +11
N55A                               LR      LR
     comp=Z,2µm,22.0s
N49A Columbus Grove    134.67   1  PFAKE               14 15 10.0  +11
N49A                               LR      LR
     comp=Z,900nm,19.0s
N51A Ashland           134.68 359  PFAKE               14 15 10.0  +11
N51A                               LR      LR
     comp=Z,1µm,18.0s
SSPA Standing Stone    134.69 354  PFAKE               14 15 10.0  +11
SSPA                               LR      LR
     comp=Z,2µm,22.0s
HDIL Hopedale          134.71   6  PFAKE               14 15 10.0  +11
HDIL                               LR      LR
     comp=Z,1µm,20.0s
N53A Lisbon            134.74 357  PFAKE               14 15 10.0  +11
N53A                               LR      LR
     comp=Z,2µm,20.0s
KSU1 Kansas State U    134.79  15  PFAKE               14 15 10.0  +11
KSU1                               LR      LR
     comp=Z,800nm,19.0s
PAGS Pennsylvania G    134.96 353  PFAKE               14 15 10.0  +10
PAGS                               LR      LR
     comp=Z,1µm,21.0s
ANMO Albuquerque       135.02  27  PFAKE               14 15 10.0  +10
ANMO                               LR      LR
     comp=Z,600nm,20.0s
ANMO Albuquerque       135.02  27c iPKIKP  PKiKP       14 15 01.4 +1.1
ANMO                               pmax    pmax
     comp=Z,2.0nm,1.0s
PSUB Penn St. - Bra    135.09 351  PFAKE               14 15 10.0  +10
PSUB                               LR      LR
     comp=Z,1µm,20.0s
SFIN Lafayette         135.09   4  PFAKE               14 15 10.0  +10
SFIN                               LR      LR
     comp=Z,900nm,19.0s
O56A Blue Knob Stat    135.12 355  PFAKE               14 15 10.0  +10
O56A                               LR      LR
     comp=Z,1µm,22.0s
ACSO Alum Creek Sta    135.37 360  PFAKE               14 15 10.0 +9.4
ACSO                               LR      LR
     comp=Z,1µm,22.0s
O49A Covington         135.40   1  PFAKE               14 15 10.0 +9.3
O49A                               LR      LR
     comp=Z,1µm,20.0s
O52A Adamsville        135.46 358  PFAKE               14 15 10.0 +9.2
O52A                               LR      LR
     comp=Z,1µm,20.0s
Y22D IRIS PASSCAL I    135.52  28  PFAKE               14 15 10.0 +8.7
Y22D                               LR      LR
     comp=Z,800nm,22.0s
SDMD Soldier’s Deli    135.78 353  PFAKE               14 15 10.0 +8.5
SDMD                               LR      LR
     comp=Z,700nm,21.0s
MCWV Mont Chateau      135.83 356  PFAKE               14 15 10.0 +8.4
MCWV                               LR      LR
     comp=Z,800nm,20.0s
P45A Graceland, Par    135.88   5  PFAKE               14 15 10.0 +8.3
P45A                               LR      LR
     comp=Z,900nm,21.0s
P53A Whipple           136.08 358  PFAKE               14 15 10.0 +7.9
P53A                               LR      LR
     comp=Z,1µm,19.0s
P48A Milroy            136.10   2  PFAKE               14 15 10.0 +7.9
P48A                               LR      LR
     comp=Z,800nm,20.0s
P51A Williamsport      136.12 360  PFAKE               14 15 10.0 +7.9
P51A                               LR      LR
     comp=Z,1µm,20.0s
BLO  Bloomington       136.33   4  PFAKE               14 15 10.0 +7.4
BLO                                LR      LR
     comp=Z,800nm,20.0s
SLM  Saint Louis       136.49   8  PFAKE               14 15 10.0 +7.1
SLM                                LR      LR
     comp=Z,900nm,22.0s
Q54A Coxs Mills        136.56 357  PFAKE               14 15 10.0 +6.9
Q54A                               LR      LR
     comp=Z,1µm,21.0s
Q51A Peebles           136.57   0  PFAKE               14 15 10.0 +6.9
Q51A                               LR      LR
     comp=Z,1µm,20.0s
OLIL Olney             136.64   5  PFAKE               14 15 10.0 +6.8
OLIL                               LR      LR
     comp=Z,1µm,22.0s
U32A Winter Ranch,     136.65  19  PFAKE               14 15 10.0 +6.6
U32A                               LR      LR
     comp=Z,700nm,21.0s
CCM  Cathedral Cave    136.91   9  PFAKE               14 15 10.0 +6.2
CCM                                LR      LR
     comp=Z,1µm,21.0s
CBN  Corbin Frederi    137.04 353  PFAKE               14 15 10.0 +6.0
CBN                                LR      LR
     comp=Z,1µm,22.0s
AMTX Amarillo          137.07  22  PFAKE               14 15 10.0 +5.6
AMTX                               LR      LR
     comp=Z,1µm,22.0s
R55A Marlinton         137.21 356  PFAKE               14 15 10.0 +5.5
R55A                               LR      LR
     comp=Z,1µm,22.0s
R53A Hurricane         137.25 358  PFAKE               14 15 10.0 +5.5
R53A                               LR      LR
     comp=Z,1µm,20.0s
R49A Shelbyville       137.27   2  PFAKE               14 15 10.0 +5.5
R49A                               LR      LR
     comp=Z,1µm,20.0s
WCI  Wyandotte Cave    137.28   3  PFAKE               14 15 10.0 +5.5
WCI                                LR      LR
     comp=Z,1µm,20.0s
HSIG                   137.29  37  PFAKE               14 15 10.0 +5.2
HSIG                               LR      LR
     comp=Z,400nm,22.0s
R50A Paris             137.31   1  PFAKE               14 15 10.0 +5.4
R50A                               LR      LR
     comp=Z,1µm,20.0s
R58B Mineral           137.33 354  PFAKE               14 15 10.0 +5.4
R58B                               LR      LR
     comp=Z,2µm,20.0s
USIN University of     137.44   5  PFAKE               14 15 10.0 +5.1
USIN                               LR      LR
     comp=Z,1µm,22.0s
MSTX Muleshoe          137.44  24  PFAKE               14 15 10.0 +4.8
MSTX                               LR      LR
     comp=Z,1µm,22.0s
EPT  El Paso           137.60  30  PFAKE               14 15 10.0 +4.4
EPT                                LR      LR
     comp=Z,800nm,21.0s
S57A Dark Hollow, R    137.64 355  PFAKE               14 15 10.0 +4.7
S57A                               LR      LR
     comp=Z,1µm,20.0s
S58A Poland Farm, P    137.70 354  PFAKE               14 15 10.0 +4.6
S58A                               LR      LR
     comp=Z,1µm,20.0s
S51A Beattyville       137.96   0  PFAKE               14 15 10.0 +4.0
S51A                               LR      LR
     comp=Z,2µm,20.0s
T60A Surry             138.00 352  PFAKE               14 15 10.0 +4.0
T60A                               LR      LR
     comp=Z,900nm,22.0s
TUL1 Leonard           138.02  15  PFAKE               14 15 10.0 +3.9
TUL1                               LR      LR
     comp=Z,1µm,21.0s
HHAR Hobbs             138.11  13  PFAKE               14 15 20.0  +14
HHAR                               LR      LR
     comp=Z,2µm,21.0s
MNTX Cornudas Mount    138.21  29  PFAKE               14 15 20.0  +13
MNTX                               LR      LR
     comp=Z,600nm,20.0s
WMOK Wichita Mounta    138.23  19  PFAKE               14 15 20.0  +13
WMOK                               LR      LR
     comp=Z,700nm,20.0s
T59A Double "B" Far    138.28 353  PFAKE               14 15 20.0  +13
T59A                               LR      LR
     comp=Z,1µm,20.0s
T45A Paducah           138.28   6  PFAKE               14 15 20.0  +13
T45A                               LR      LR
     comp=Z,900nm,20.0s
PBMO Poplar Bluff      138.28   9  PFAKE               14 15 20.0  +13
PBMO                               LR      LR
     comp=Z,2µm,22.0s
BLA  Blacksburg        138.30 357  PFAKE               14 15 20.0  +13
BLA                                LR      LR
     comp=Z,1µm,19.0s
T57A Hurt              138.43 355  PFAKE               14 15 20.0  +13
T57A                               LR      LR
     comp=Z,1µm,21.0s
T49A Edmonton          138.44   3  PFAKE               14 15 20.0  +13
T49A                               LR      LR
     comp=Z,1µm,21.0s
T47A Sharon Grove      138.46   5  PFAKE               14 15 20.0  +13
T47A                               LR      LR
     comp=Z,1µm,20.0s
T52A Hallie            138.49 360  PFAKE               14 15 20.0  +13
T52A                               LR      LR
     comp=Z,1µm,20.0s
PARMO Parma            138.49   8  PFAKE               14 15 20.0  +13
PARMO                              LR      LR
     comp=Z,1µm,22.0s
PVMO Portageville      138.75   8  PFAKE               14 15 20.0  +12
PVMO                               LR      LR
     comp=Z,1µm,21.0s
U61A Possum Corner     138.76 352  PFAKE               14 15 20.0  +12
U61A                               LR      LR
     comp=Z,1µm,20.0s
FCAR Ozark Folk Cen    138.87  11  PFAKE               14 15 20.0  +12
FCAR                               LR      LR
     comp=Z,1µm,21.0s
U59A Littleton         138.92 353  PFAKE               14 15 20.0  +12
U59A                               LR      LR
     comp=Z,900nm,20.0s
GLAT Glass             138.94   7  PFAKE               14 15 20.0  +12
GLAT                               LR      LR
     comp=Z,700nm,22.0s
TZTN Tazewell          139.05   0  PFAKE               14 15 20.0  +12
TZTN                               LR      LR
     comp=Z,2µm,20.0s
U54A Nelsons Funny     139.05 358  PFAKE               14 15 20.0  +12
U54A                               LR      LR
     comp=Z,1µm,20.0s
GNAR Gosnell           139.14   8  PFAKE               14 15 20.0  +12
GNAR                               LR      LR
     comp=Z,1µm,22.0s
W39A Magazine          139.19  13  PFAKE               14 15 20.0  +11
W39A                               LR      LR
     comp=Z,1µm,21.0s
WVT  Waverly           139.25   6 ePKPdf   PKPdf       14 15 05.1 -1.3
WVT                                LR      LR
     comp=Z,900nm,19.0s
WVT  Waverly           139.25   6 ePKIKP   PKPdf       14 15 05.1 -1.3
WVT                                MLR     MLR
     comp=Z,900nm,19.0s
HALT Halls             139.29   8  PFAKE               14 15 20.0  +11
HALT                               LR      LR
     comp=Z,800nm,19.0s
V61A Roper             139.31 352  PFAKE               14 15 20.0  +11
V61A                               LR      LR
     comp=Z,1µm,20.0s
X37A Clayton           139.38  15  PFAKE               14 15 20.0  +11
X37A                               LR      LR
     comp=Z,1µm,21.0s
CLTN Cedars of Leba    139.41   4  PFAKE               14 15 20.0  +11
CLTN                               LR      LR
     comp=Z,600nm,22.0s
WHAR Wooly Hollow      139.42  11  PFAKE               14 15 20.0  +11
WHAR                               LR      LR
     comp=Z,1µm,21.0s
V60A Jim Taylor Roa    139.43 352  PFAKE               14 15 20.0  +11
V60A                               LR      LR
     comp=Z,1µm,21.0s
HBAR Harrisburg        139.45   9  PFAKE               14 15 20.0  +11
HBAR                               LR      LR
     comp=Z,800nm,19.0s
W41B Gary Mavity, V    139.54  11  PFAKE               14 15 20.0  +11
W41B                               LR      LR
     comp=Z,1µm,21.0s
V56A Mocksville        139.70 356  PFAKE               14 15 20.0  +10
V56A                               LR      LR
     comp=Z,1µm,20.0s
V48A Smith Brothers    139.72   4  PFAKE               14 15 20.0  +10
V48A                               LR      LR
     comp=Z,700nm,20.0s
V52A Sevierville       139.75   0  PFAKE               14 15 20.0  +10
V52A                               LR      LR
     comp=Z,1µm,20.0s
V51A Loudon            139.78   1  PFAKE               14 15 20.0  +10
V51A                               LR      LR
     comp=Z,800nm,20.0s
MIAR Mount Ida         139.86  13 ePKPdf   PKPdf       14 15 05.3 -2.2
MIAR                               LR      LR
     comp=Z,2µm,21.0s
MIAR Mount Ida         139.86  13 ePKIKP   PKPdf       14 15 05.3 -2.2
MIAR                               MLR     MLR
     comp=Z,2µm,21.0s
UALR University of     139.90  12  PFAKE               14 15 20.0  +10
UALR                               LR      LR
     comp=Z,2µm,21.0s
V53A Saluda            139.92 359  PFAKE               14 15 20.0  +10
V53A                               LR      LR
     comp=Z,2µm,20.0s
MET  Memphis--Engin    139.98   8  PFAKE               14 15 20.0  +10
MET                                LR      LR
     comp=Z,900nm,19.0s
CNNC Cliffs of the     140.03 353  PFAKE               14 15 20.0  +10
CNNC                               LR      LR
     comp=Z,1µm,20.0s
X40A Basin Creek Fa    140.08  12  PFAKE               14 15 20.0  +10
X40A                               LR      LR
     comp=Z,1µm,22.0s
CPCT Cooper Cave       140.13   2  PFAKE               14 15 20.0  +10
CPCT                               LR      LR
     comp=Z,1µm,22.0s
SWET Sewanee           140.30   3  PFAKE               14 15 20.0 +9.1
SWET                               LR      LR
     comp=Z,800nm,21.0s
W57A Gilead            140.32 356  PFAKE               14 15 20.0 +9.2
W57A                               LR      LR
     comp=Z,1µm,22.0s
W50A Signal Mountai    140.35   3  PFAKE               14 15 20.0 +9.0
W50A                               LR      LR
     comp=Z,900nm,19.0s
KMSC Kings Mountain    140.41 357  PFAKE               14 15 20.0 +9.0
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KMSC				LR	LR		
	comp=Z,1µm,22.0s						
X43A	**Marvell**	**140.42**	**10**	PFAKE		14 15 20.0	+8.9
X43A				LR	LR		
	comp=Z,1µm,22.0s						
W52A	**Murphy**	**140.50**	**1**	PFAKE		14 15 20.0	+8.7
W52A				LR	LR		
	comp=Z,1µm,20.0s						
BG3	**Lake Jocassee**	**140.60**	**360**	PFAKE		14 15 20.0	+8.5
BG3				LR	LR		
	comp=Z,1µm,20.0s						
PAULI	**Pauline**	**140.75**	**358**	PFAKE		14 15 20.0	+8.3
PAULI				LR	LR		
	comp=Z,1µm,22.0s						
WLAR	**White Oak Lake**	**140.79**	**13**	PFAKE		14 15 20.0	+8.2
WLAR				LR	LR		
	comp=Z,1µm,22.0s						
CCAR	**Cane Creek**	**140.85**	**11**	PFAKE		14 15 20.0	+8.1
CCAR				LR	LR		
	comp=Z,1µm,21.0s						
X58A	**Rowland**	**140.86**	**355**	PFAKE		14 15 20.0	+8.1
X58A				LR	LR		
	comp=Z,1µm,19.0s						
X48A	**Hartselle**	**140.98**	**5**	PFAKE		14 15 20.0	+7.8
X48A				LR	LR		
	comp=Z,900nm,21.0s						
TXAR	**Lajitas Array**	**140.99**	**29**	PKhKP	PKPpre	14 15 04.1	
	comp=Z,1.0nm,0.7s,baz=216,slow=1.6,SNR=5.9						
X51A	**Calhoun**	**141.00**	**2**	PFAKE		14 15 20.0	+7.7
X51A				LR	LR		
	comp=Z,1µm,20.0s						
WHTX	**Lake Whitney,**	**141.18**	**19**	PFAKE		14 15 20.0	+7.3
WHTX				LR	LR		
	comp=Z,1µm,20.0s						
JSC	**Jenkinsville**	**141.26**	**357**	PFAKE		14 15 20.0	+7.2
JSC				LR	LR		
	comp=Z,1µm,22.0s						
Z41A	**Richland Creek**	**141.27**	**13**	PFAKE		14 15 20.0	+7.2
Z41A				LR	LR		
	comp=Z,800nm,21.0s						
Y60A	**Bolivia**	**141.28**	**353**	PFAKE		14 15 20.0	+7.2
Y60A				LR	LR		
	comp=Z,2µm,21.0s						
HODGE	**Hodges**	**141.35**	**359**	PFAKE		14 15 20.0	+7.0
HODGE				LR	LR		
	comp=Z,1µm,21.0s						
Y57A	**Sumter**	**141.47**	**356**	PFAKE		14 15 20.0	+6.8
Y57A				LR	LR		
	comp=Z,900nm,20.0s						
Y58A	**Scranton**	**141.53**	**355**	PFAKE		14 15 20.0	+6.7
Y58A				LR	LR		
	comp=Z,900nm,22.0s						
Y49A	**Blount Mountai**	**141.62**	**4**	PFAKE		14 15 20.0	+6.4
Y49A				LR	LR		
	comp=Z,800nm,20.0s						
JCT	**Junction City**	**141.70**	**23**	PFAKE		14 15 20.0	+6.1
JCT				LR	LR		
	comp=Z,1µm,22.0s						
Y52A	**Lilburn**	**141.72**	**1**	PFAKE		14 15 20.0	+6.2
Y52A				LR	LR		
	comp=Z,2µm,21.0s						
GOGA	**Godfrey**	**142.18**	**0**	PFAKE		14 15 20.0	+5.3
GOGA				LR	LR		
	comp=Z,1µm,20.0s						
Z56A	**Williston**	**142.22**	**357**	PFAKE		14 15 20.0	+5.2
Z56A				LR	LR		
	comp=Z,1µm,21.0s						
NATX	**Nacogdoches**	**142.24**	**16**	PFAKE		14 15 20.0	+5.1
NATX				LR	LR		
	comp=Z,1µm,21.0s						
435B	**Jarrell**	**142.25**	**20**	PFAKE		14 15 20.0	+5.1
435B				LR	LR		
	comp=Z,1µm,20.0s						
Z50A	**Ashland**	**142.25**	**4**	PFAKE		14 15 20.0	+5.1
Z50A				LR	LR		
	comp=Z,1µm,19.0s						
PLCA	**Paso Flores**	**142.26**	**196**	PKhKP	PKPpre	14 15 07.7	
	comp=Z,11nm,0.9s,baz=208,slow=5.1,SNR=8.2						
NHSC	**New Hope**	**142.36**	**356**	PFAKE		14 15 20.0	+4.9
NHSC				LR	LR		
	comp=Z,1µm,20.0s						
LRAL	**Lakeview Retre**	**142.39**	**5**	PFAKE		14 15 20.0	+4.9
LRAL				LR	LR		
	comp=Z,1µm,21.0s						
VBMS	**Vicksburg**	**142.73**	**10**	PFAKE		14 15 20.0	+4.2
VBMS				LR	LR		
	comp=Z,1µm,21.0s						
152A	**Waverly Hall**	**142.89**	**2**	PFAKE		14 15 20.0	+3.8
152A				LR	LR		
	comp=Z,2µm,21.0s						
154A	**Montrose**	**142.97**	**360**	PFAKE		14 15 20.0	+3.7
154A				LR	LR		
	comp=Z,1µm,22.0s						
250A	**Grady**	**143.50**	**4**	PFAKE		14 15 20.0	+2.6
250A				LR	LR		
	comp=Z,1µm,21.0s						
253A	**Americus**	**143.51**	**1**	PFAKE		14 15 20.0	+2.5
253A				LR	LR		
	comp=Z,1µm,19.0s						
257A	**Skidaway Islan**	**143.54**	**357**	PFAKE		14 15 20.0	+2.5
257A				LR	LR		
	comp=Z,1µm,20.0s						
GO06	**Curarrehue**	**143.58**	**195**	*e*PKPdf	PKPbc	14 15 12.5	+1.0
HKT	**Hockley**	**143.59**	**18**	PFAKE		14 15 20.0	+2.4
HKT				LR	LR		
	comp=Z,1µm,22.0s						
BDFB	**Brasilia**	**143.63**	**250**	PKP	PKPbc	14 15 13.3	+1.0
	comp=Z,10nm,0.5s,baz=93,slow=2.3,SNR=11						
BDFB	**Brasilia**	**143.63**	**250**	*e*PKPdf	PKPbc	14 15 12.6	+0.3
BDFB				*e*PKPdf	**PKPdf**	**14 15 13.3**	**-1.5**
BDFB				LR	LR		
	comp=Z,900nm,21.0s						
BDFB	**Brasilia**	**143.63**	**250**	*e*PKIKP	PKPbc	14 15 12.6	+0.3
BDFB				MLR	MLR		
	comp=Z,900nm,21.0s						
255A	**Hazlehurst**	**143.65**	**359**	PFAKE		14 15 20.0	+2.3
255A				LR	LR		
	comp=Z,1µm,21.0s						
833A	**Chaparral WMA,**	**143.77**	**24**	PFAKE		14 15 30.0	+12
833A				LR	LR		
	comp=Z,800nm,19.0s						
352A	**Blakely**	**144.07**	**2**	PFAKE		14 15 30.0	+11
352A				LR	LR		
	comp=Z,1µm,20.0s						
TIGA	**Tifton**	**144.14**	**0**	PFAKE		14 15 30.0	+11
TIGA				LR	LR		
	comp=Z,1µm,22.0s						
BRAL	**Brewton**	**144.24**	**5**	PFAKE		14 15 30.0	+11
BRAL				LR	LR		
	comp=Z,1µm,19.0s						
453A	**Whigham**	**144.71**	**1**	PFAKE		14 15 30.0	+10
453A				LR	LR		
	comp=Z,1µm,19.0s						
456A	**Hilliard**	**144.83**	**358**	PFAKE		14 15 30.0	+10
456A				LR	LR		
	comp=Z,900nm,21.0s						
451A	**Vernon**	**144.89**	**4**	PFAKE		14 15 30.0	+10
451A				LR	LR		
	comp=Z,2µm,20.0s						
555A	**McAlpin**	**145.46**	**359**	PFAKE		14 15 30.0	+8.5
555A				LR	LR		
	comp=Z,1µm,21.0s						
656A	**Willston**	**146.20**	**359**	PFAKE		14 15 30.0	+6.9
656A				LR	LR		
	comp=Z,800nm,20.0s						
LNIG	**Linares**	**146.72**	**27**	PFAKE		14 15 30.0	+5.7
LNIG				LR	LR		
	comp=Z,700nm,22.0s						
ZAIG	**Zacatecas**	**146.91**	**34**	PFAKE		14 15 30.0	+4.9
ZAIG				LR	LR		
	comp=Z,900nm,22.0s						
CPUP	**Villa Florida**	**147.08**	**226**	PKPbc	**PKPbc**	**14 15 22.6**	**+0.2**
	comp=Z,30nm,1.0s,baz=101,slow=3.0,SNR=18						
DWPF	**Disney Wildern**	**147.41**	**357**	PFAKE		14 15 30.0	+4.4
DWPF				LR	LR		
	comp=Z,700nm,20.0s						
957A	**Wimauma**	**147.88**	**358**	PFAKE		14 15 30.0	+3.0
957A				LR	LR		
	comp=Z,1µm,21.0s						
060A	**Indiantown**	**148.40**	**355**	PFAKE		14 15 30.0	+0.9
060A				LR	LR		
	comp=Z,1µm,21.0s						
059A	**Moore Haven**	**148.53**	**356**	PFAKE		14 15 30.0	+0.4
059A				LR	LR		
	comp=Z,800nm,22.0s						
061Z	**Ochoppi**	**149.61**	**356**	PFAKE		14 15 30.0	-0.2
061Z				LR	LR		
	comp=Z,1µm,22.0s						
CFA	**Coronel Fontan**	**149.65**	**206**	PKP	**PKPdf**	**14 15 25.6**	**+1.1**
	comp=Z,25nm,0.8s,baz=245,slow=1.1,SNR=15						
CFA				PKPbc	**PKiKP**	**14 15 30.4**	**+0.2**
	comp=Z,91nm,1.0s,baz=169,slow=2.2,SNR=40						
APLL	**PUNTA DE LOS L**	**149.86**	**210**	*e*P	**PKPdf**	**14 15 26.4**	**+1.5**
SMRT	**St. Maarten**	**149.90**	**319**	PFAKE		14 15 40.0	+4.5
SMRT				LR	LR		
	comp=Z,600nm,22.0s						
SEUS	**St. Eustatius**	**150.24**	**318**	PFAKE		14 15 40.0	+3.1
SEUS				LR	LR		
	comp=Z,800nm,21.0s						
SABA	**Saba**	**150.32**	**319**	PFAKE		14 15 40.0	+2.7
SABA				LR	LR		
	comp=Z,600nm,20.0s						
ACLC	**CERRO LA CRUZ**	**150.87**	**210**	*e*P	**PKPdf**	**14 15 27.8**	**+1.1**
CYA	**Choya**	**151.05**	**213**	*e*P	**PKPdf**	**14 15 29.0**	**+2.2**
GRTK	**Grand Turk**	**151.42**	**336**	PFAKE		14 15 40.0	-1.6
GRTK				LR	LR		
	comp=Z,800nm,20.0s						
MTP	**Monte Pirata**	**151.43**	**323**	*e*PKPbc	**PKPbc**	**14 15 32.5**	**-1.2**
AGUA	**GUANDACOL**	**151.56**	**208**	*e*P	**PKPdf**	**14 15 28.8**	**+1.1**
SJG	**San Juan**	**151.77**	**324**	PFAKE		14 15 40.0	-3.2
SJG				LR	LR		
	comp=Z,400nm,21.0s						
SVB	**Belmont**	**151.79**	**309**	PFAKE		14 15 40.0	-3.5
SVB				LR	LR		
	comp=Z,600nm,22.0s						
VCA	**Vinchina**	**152.05**	**209**	*e*P	**PKPdf**	**14 15 30.8**	**+2.3**
AHML	**Horco Molle**	**152.05**	**216**	*e*P	**PKPdf**	**14 15 29.7**	**+1.3**
OBIP	**Obispado Ponce**	**152.09**	**324**	*e*PKPdf	**PKPdf**	**14 15 26.1**	**-2.4**
LVIG	**Laguna Verde**	**152.59**	**28**	PFAKE		14 15 40.0	+3.5
LVIG				LR	LR		
	comp=Z,500nm,22.0s						
FSA	**Cafayete**	**152.94**	**216**	*e*P	**PKPdf**	**14 15 32.9**	**+3.0**
TLIG	**Tlapa**	**153.31**	**34**	PFAKE		14 15 40.0	+1.8
TLIG				LR	LR		
	comp=Z,900nm,22.0s						
SLA	**San Lorenzo**	**153.68**	**219**	*e*P	**PKPdf**	**14 15 32.4**	**+1.5**
SDDR	**Presa de Saban**	**153.72**	**334**	PFAKE		14 15 40.0	+1.1
SDDR				LR	LR		
	comp=Z,700nm,21.0s						
AZAP	**Zapla**	**153.75**	**220**	*e*P	**PKPdf**	**14 15 32.4**	**+1.3**
TEIG	**Tepich**	**154.83**	**11**	PFAKE		14 15 40.0	-1.1
TEIG				LR	LR		
	comp=Z,700nm,21.0s						
SIV	**San Ignacio**	**155.40**	**241**	PKP	**PKPdf**	**14 15 33.8**	**+0.4**
	comp=Z,2.8nm,1.0s,baz=134,slow=2.3,SNR=6.4						
SIV				PKPab	**PKPab**	**14 16 00.2**	**+1.3**
	comp=Z,12nm,0.9s,baz=108,slow=3.7,SNR=12						
SIV				PP	**PP**	**14 19 37.5**	**+2.3**
	comp=Z,1.6nm,1.0s,baz=98,slow=8.8,SNR=3.1						
PTGA	**Pitinga**	**156.36**	**279**	PKP	**PKPdf**	**14 15 35.3**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=147,slow=3.1,SNR=4.3						
PTGA				PKPab	**PKPab**	**14 16 04.9**	**+1.8**
	comp=Z,12nm,0.8s,baz=78,slow=4.3,SNR=7.6						
PTGA	**Pitinga**	**156.36**	**279**	PFAKE		14 15 40.0	+5.3
PTGA				LR	LR		
	comp=Z,600nm,20.0s						
MTDJ	**Mount Denham**	**156.59**	**346**	PFAKE		14 15 50.0	-14
MTDJ				LR	LR		
	comp=Z,800nm,20.0s						
LVC	**Limon Verde**	**157.33**	**217**	PKP	**PKPdf**	**14 15 36.9**	**+0.7**
	comp=Z,8.7nm,1.1s,baz=231,slow=4.3,SNR=2.3						
LVC				PKPab	**PKPab**	**14 16 09.5**	**+2.2**
	comp=Z,20nm,0.9s,baz=3.3,slow=1.4,SNR=8.0						
CCIG	**Comitan**	**157.47**	**23**	PFAKE		14 15 50.0	+14
CCIG				LR	LR		
	comp=Z,1µm,22.0s						
PB11	**IPOC Station P**	**159.91**	**220**	*e*PKPdf	**PKPdf**	**14 15 37.2**	**-1.8**
PB11				*e*PKPab	**PKPab**	**14 16 19.3**	**+1.1**
LPAZ	**La Paz**	**161.11**	**231**	PKP	**PKPdf**	**14 15 40.9**	**-0.1**
	comp=Z,11nm,1.0s,baz=52,slow=4.9,SNR=17						
LPAZ				PKPab	**PKPab**	**14 16 25.8**	**+1.6**
	comp=Z,14nm,1.0s,baz=166,slow=2.9,SNR=8.1						
LPAZ	**La Paz**	**161.11**	**231**	*e*PKPdf	**PKPdf**	**14 15 39.1**	**-1.9**
LPAZ				*e*pPKPab	**PKPab**	**14 16 25.8**	**+1.6**
LPAZ	**La Paz**	**161.11**	**231**	*e*PKIKP	**PKPdf**	**14 15 39.1**	**-1.9**
SDV	**Santo Domingo**	**161.56**	**317**	PKPab	**PKPab**	**14 16 26.1**	**+0.5**
	comp=Z,6.9nm,0.4s,baz=39,slow=6.6,SNR=4.5						
ACON	**Acoyapa**	**163.42**	**6**	*e*PKPdf	**PKPdf**	**14 15 40.4**	**-2.2**

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*THE **02** 13:58:41.7, 40°.11N×21°.87E, h0^{km}±3^{km}, ML2.2/5, Error ellipse: s-maj=3.0km s-min=0.7km az=11.0*

ATH 02 13:58:41.0, 40°.12N×21°.88E, h14^{km}±6^{km}, ML2.2/6, Error ellipse: s-maj=6.1km s-min=1.0km az=332.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.21**	**337**	P	Pg	13 58 45.6	-0.2
KZN				S	Sg	13 58 48.6	-0.4
KZN	**Kozani**	**0.21**	**337**	P	Pg	13 58 45.7	-0.1
KZN				S	Sg	13 58 48.8	-0.2
KZN				AML	AML	13 58 49.2	
	comp=E,8278µm,0.3s						
KZN				AML	AML	13 58 49.2	
	comp=N,6101µm,0.3s						
KZN	**Kozani**	**0.21**	**337**	P	Pg	13 58 45.7	-0.1
KZN				S	Sg	13 58 48.6	-0.4
KZN				AML	AML	13 58 49.2	
	comp=E,8278µm,0.3s						
KZN				AML	AML	13 58 49.2	
	comp=N,6101µm,0.3s						
KTI	**Kastanea**	**0.33**	**33**	P	Pb	13 58 48.5	-0.4
KPRO	**Kipourio**	**0.43**	**248**	P	Pg	13 58 49.5	-0.1
KPRO				S	Sb	13 58 56.6	-0.2
KPRO	**Kipourio**	**0.43**	**248**	P	Pg	13 58 49.6	0.0
KPRO				S	Sb	13 58 56.1	-0.7
KPRO				AML	AML	13 59 01.5	
	comp=E,584µm,0.4s						
KPRO				AML	AML	13 59 03.5	
	comp=N,541µm,0.4s						
KPRO	**Kipourio**	**0.43**	**248**	P	Pg	13 58 49.4	-0.2
KPRO				S	Sg	13 58 56.0	+0.6
KPRO				AML	AML	13 58 58.6	
	comp=N,629µm,0.3s						
KPRO				AML	AML	13 59 01.5	
	comp=E,584µm,0.4s						
LIT	**Litokhoron**	**0.47**	**92**	P	Pg	13 58 50.5	+0.1
LIT				S	Sb	13 58 58.5	+0.5
LIT	**Litokhoron**	**0.47**	**92**	P	Pg	13 58 50.5	+0.1
LIT				S	Sb	13 58 58.5	+0.5
LIT				AML	AML	13 59 00.7	
	comp=E,844µm,0.3s						
LIT				AML	AML	13 59 02.1	
	comp=N,838µm,0.2s						
LIT	**Litokhoron**	**0.47**	**92**	P	Pg	13 58 50.5	+0.2
LIT				S	Sg	13 58 56.9	+0.2
LIT				AML	AML	13 59 00.7	
	comp=E,844µm,0.3s						
LIT				AML	AML	13 59 02.1	
	comp=N,838µm,0.2s						
THL	**Klokotos Trika**	**0.56**	**169**	P	Pg	13 58 51.9	-0.2
THL				S	Sb	13 59 00.7	+0.2
THL	**Klokotos Trika**	**0.56**	**169**	P	Pg	13 58 51.8	-0.3
THL				S	Sb	13 59 00.5	0.0
THL				AML	AML	13 59 02.4	
	comp=E,507µm,0.3s						
THL				AML	AML	13 59 03.1	
	comp=N,365µm,0.3s						
THL	**Klokotos Trika**	**0.56**	**169**	P	Pg	13 58 51.9	-0.2
THL				S	Sg	13 58 59.9	+0.4
THL				AML	AML	13 59 02.4	
	comp=E,507µm,0.3s						
THL				AML	AML	13 59 03.1	
	comp=N,365µm,0.3s						
PENT	**Pentalofos**	**0.57**	**278**	P	Pg	13 58 51.8	-0.5
PENT				S	Sg	13 58 59.1	-0.9
PENT				AML	AML	13 59 04.8	
	comp=N,489µm,0.3s						
PENT				AML	AML	13 59 05.0	
	comp=E,472µm,0.4s						
PENT	**Pentalofos**	**0.57**	**278**	P	Pg	13 58 51.9	-0.4
MEV	**Metsovon**	**0.60**	**237**	P	Pb	13 58 53.4	0.0
GRG	**Griva**	**0.93**	**25**	P	Pb	13 58 58.7	-0.2
GRG	**Griva**	**0.93**	**25**	P	Pb	13 58 58.7	-0.3
FYTO	**Fytoko, Volos**	**1.08**	**130**	P	Pg	13 59 02.6	+0.7
AGG	**Agios Georgios**	**1.15**	**162**	P	Pb	13 59 02.5	-0.2
AGG				S	Sn	13 59 19.4	+1.1
AGG	**Agios Georgios**	**1.15**	**162**	P	Pb	13 59 02.4	-0.3
AGG	**Agios Georgios**	**1.15**	**162**	P	Pg	13 59 03.2	0.0
AGG				S	Sg	13 59 18.0	-0.1
AGG				AML	AML	13 59 23.5	
	comp=E,170µm,0.3s						
AGG				AML	AML	13 59 25.5	
	comp=N,218µm,0.6s						
EVR	**Evrytania**	**1.20**	**183**	P	Pb	13 59 03.8	+0.2
EVR	**Evrytania**	**1.20**	**183**	P	Pg	13 59 03.9	-0.3
EVR				S	Sg	13 59 20.1	+0.3
EVR				AML	AML	13 59 24.9	
	comp=E,153µm,0.3s						
EVR				AML	AML	13 59 25.3	
	comp=N,164µm,0.3s						
EVR	**Evrytania**	**1.20**	**183**	P	Pb	13 59 03.7	+0.1
EVR				S	Sg	13 59 20.6	+0.8
EVR				AML	AML	13 59 24.9	
	comp=E,153µm,0.3s						
EVR				AML	AML	13 59 25.3	
	comp=N,164µm,0.3s						
XOR	**Xorichti**	**1.26**	**126**	P	Pb	13 59 04.7	+0.1
XOR				S	Sg	13 59 23.9	+2.2
XOR				AML	AML	13 59 27.6	
	comp=N,223µm,0.5s						
XOR				AML	AML	13 59 28.3	
	comp=E,110µm,0.4s						
XOR	**Xorichti**	**1.26**	**126**	P	Pb	13 59 04.6	0.0
XOR				S	Sn	13 59 21.4	+0.3
ANX	**Ano Chora**	**1.52**	**179**	P	Pb	13 59 09.4	+0.3
SKIA	**Skiathos**	**1.55**	**127**	P	Pb	13 59 09.1	-0.5

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*ISCJB **02** 13:59:43.1±0.5, 33°.51N±0°.02×35°.68E±0°.05, h6^{km}±5^{km}, Error ellipse: s-maj=7.0km s-min=3.2km az=179.0*

*GRAL **02** 13:59:43.7±0.3, 33°.50N×35°.67E, h3^{km}±3^{km}, MD3.0*

*GII **02** 13:59:43.0±0.0, 33°.47N×35°.68E, h4^{km}, MD2.0/4*

ISC 02 13:59:43.4±0.9**, 33°.51N**±0°.02×**35°.67E**±0°.04**, h7**^{km}±7^{km}**, n20, σ0^{s}.44**/32**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRWL	**Qaraoun**	**0.04**	**10**	*e*P	**Pg**	**13 59 44.8**	**-0.2**
RCY	**Rachaya**	**0.14**	**94**	*e*P	**Pg**	**13 59 46.4**	**0.0**
SHBL	**Chebaa**	**0.17**	**160**	*e*P	**Pg**	**13 59 46.6**	**-0.3**
SHBL				*e*S	**Sg**	**13 59 48.9**	**-0.4**
DQRL	**Deir Qamar**	**0.22**	**336**	*e*P	**Pg**	**13 59 47.8**	**0.0**
DQRL				*e*S	**Sg**	**13 59 50.8**	**+0.1**
NATI	**Neve Ativ**	**0.25**	**168**	Pg	**Pg**	**13 59 47.9**	**-0.4**
NATI				Sg	**Sg**	**13 59 52.0**	**+0.4**
GEM	**Giv'at Ha'Em**	**0.30**	**182**	Pg	**Pg**	**13 59 49.0**	**-0.2**
GEM				Sg	**Sg**	**13 59 53.8**	**+0.7**
KSDI	**Kefar Szold**	**0.31**	**182**	Pg	**Pg**	**13 59 49.2**	**-0.3**
KSDI				Sg	**Pn**	**13 59 54.4**	**0.0**
KSDI	**Kefar Szold**	**0.31**	**182**	P	**Pn**	**13 59 54.4**	**0.0**
	355nm,0.5s						
BEYL	**Beirut**	**0.39**	**338**	*e*P	**Pg**	**13 59 50.9**	**-0.2**
BHL	**Bhannes**	**0.40**	**358**	*e*P	**Pg**	**13 59 50.9**	**-0.2**
BHL				*e*S	**Sg**	**13 59 56.3**	**-0.1**
KSHT	**Keshet**	**0.54**	**168**	Pg	**Pg**	**13 59 54.0**	**+0.3**
KSHT				Sg	**Sb**	**14 00 01.9**	**-1.2**
MMA0B	**Mount Meron ar**	**0.54**	**205**	Pg	**Pg**	**13 59 53.9**	**+0.1**
MMA0B				Sg	**Sb**	**14 00 02.8**	**-0.4**
HNTI	**Hanita**	**0.59**	**225**	Pg	**Pg**	**13 59 55.1**	**+0.2**
HNTI				Sg	**Sb**	**14 00 04.1**	**-0.7**
SHMJ	**Saham**	**0.78**	**174**	P	**Pb**	**13 59 59.8**	**+0.5**
HWQ	**Hawqa**	**0.80**	**16**	*e*P	**Pg**	**13 59 58.3**	**-0.5**
OFRI	**`Ofer**	**1.06**	**213**	Pg	**Pg**	**14 00 03.1**	**-0.6**
OFRI				Sg	**Sb**	**14 00 18.2**	**+0.1**
MMLI	**Mount Malkishu**	**1.09**	**191**	Pg	**Pg**	**14 00 03.8**	**-0.5**
HMDT	**Nahal Hemdat**	**1.26**	**186**	Pg	**Pg**	**14 00 06.9**	**-0.6**
HMDT				Sg	**Sn**	**14 00 24.6**	**+0.1**
SLTI	**Sal'it**	**1.37**	**203**	Pn	**Pn**	**14 00 08.9**	**-0.1**
SLTI				Sn	**Sn**	**14 00 27.7**	**+0.3**
ASF	**Jabal al Asfar**	**1.68**	**142**	P	**Pn**	**14 00 14.0**	**+0.7**
	69nm,0.5s						

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*MOS **02** 14:08:48.3±1.0, 27°.12N×54°.90E, h9^{km}, mb4.7/46, Error ellipse: s-maj=8.0km s-min=5.2km az=117.2*

*IDC **02** 14:08:49.0±0.7, 27°.16N×54°.97E, h0^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.2/46, mbtmp4.2/27, ML4.0/3, Error ellipse: s-maj=17.4km s-min=13.3km az=177.0*

*DSN **02** 14:08:51.7±1.4, 27°.42N×54°.97E, h10^{km}, ML4.4/13, Error ellipse: s-maj=18.2km s-min=7.3km az=28.0*

*NEIC **02** 14:08:51.4±1.6, 27°.30N×54°.90E, h10^{km}±4^{km}, mb4.5/36, ML4.2(THR), MN4.4(TEH), Error ellipse: s-maj=10.2km s-min=2.4km az=80.0*

*THR **02** 14:08:51.0, 27°.24N×55°.02E, h14^{km}, ML4.2*

*ISCJB **02** 14:08:51.4±0.2, 27°.28N±0°.02×54°.89E±0°.03, h20^{km}, mb4.4/96, MS4.7/2, Error ellipse: s-maj=3.8km s-min=3.0km az=34.2*

*TEH **02** 14:08:52.5, 27°.27N×55°.03E, h17^{km}, ML4.4*

ISC 02 14:08:52.4±0.3**, 27°.18N**±0°.04×**54°.96E**±0°.03**, h20**^{km}**, n252, σ1^{s}.50**/253**, mb4.4**/100**, 7C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**1.10**	**78**	*e*Pg	**Pn**	**14 09 12.3**	**-0.6**
GENO				IAMB	IAmb	14 09 31.7	
	comp=Z,0.0nm,0.3s						
SHME	**Shamm**	**1.55**	**137**	*e*P	**Pb**	**14 09 20.8**	**+0.4**
	SNR=21						
SHME	**Shamm**	**1.55**	**137**	*e*Pn	**Pb**	**14 09 21.0**	**+0.6**
LMD1	**Lamerd**	**1.61**	**276**	*e*Pn	**Pb**	**14 09 22.8**	**+1.4**
NIAN	**Nian**	**1.71**	**77**	*e*Pn	**Pn**	**14 09 22.0**	**+0.9**
NIAN				IAMB	IAmb	14 09 55.9	
	comp=Z,0.0nm,1.1s						
BANOM	**Banah**	**1.74**	**136**	*e*P	**Pb**	**14 09 23.9**	**+0.2**
	SNR=28						
UMQ	**Umm Al-Quwin**	**1.77**	**159**	*e*P	**Pb**	**14 09 26.6**	**+2.5**
	SNR=11						
UMQ	**Umm Al-Quwin**	**1.77**	**159**	*e*Pn	**Pb**	**14 09 26.7**	**+2.5**
JHRM	**Jahrom**	**1.80**	**317**	*e*Pn	**Pb**	**14 09 24.3**	**-0.4**
GHIR	**Ghir-Karzin**	**2.06**	**303**	*e*Pn	**Pn**	**14 09 27.6**	**+1.5**
GHIR	**Ghir-Karzin**	**2.06**	**303**	*e*AML	AML	14 10 06.2	
	comp=Z,1µm,0.4s						
GHIR	**Ghir-Karzin**	**2.06**	**303**	*e*Pn	**Pn**	**14 09 27.6**	**+1.5**
GHIR				*e*Sg	**Sb**	**14 09 56.7**	**+2.1**
MSFE	**Esma-Masafi**	**2.11**	**149**	*e*P	**Pb**	**14 09 29.1**	**-0.9**
	SNR=25						
MSFE				S	**Sb**	**14 09 58.6**	**+2.8**
MSFE	**Esma-Masafi**	**2.11**	**149**	*e*Pn	**Pb**	**14 09 30.2**	**+0.2**
MDH	**Madha**	**2.23**	**147**	*e*P	**Pb**	**14 09 31.3**	**-0.7**
	SNR=23						
MDH	**Madha**	**2.23**	**147**	*e*Pn	**Pb**	**14 09 31.7**	**-0.3**
NAZ	**Nazwa, Dubai**	**2.27**	**164**	*e*P	**Pb**	**14 09 33.8**	**+1.0**
	SNR=26						
NAZ	**Nazwa, Dubai**	**2.27**	**164**	*e*Pn	**Pb**	**14 09 33.6**	**+0.8**
FAQ	**Al Faqa, Dubai**	**2.49**	**167**	*e*P	**Pb**	**14 09 36.2**	**-0.4**
	SNR=8.6						
FAQ	**Al Faqa, Dubai**	**2.49**	**167**	*e*Pn	**Pb**	**14 09 36.4**	**-0.1**
UOSS	**Minazif**	**2.49**	**153**	*e*Pn	**Pb**	**14 09 34.8**	**-1.8**
UOSS	**Minazif**	**2.49**	**153**	*e*P	**Pb**	**14 09 34.9**	**-1.6**
	SNR=56						
UOSS	**Minazif**	**2.49**	**153**	*e*Pn	**Pb**	**14 09 35.4**	**-1.1**
KHNJ	**Kahnooj**	**2.55**	**72**	*e*Pn	**Pn**	**14 09 32.5**	**-0.2**
ASUD	**Al Ashush, Dub**	**2.57**	**172**	*e*P	**Pb**	**14 09 37.3**	**-0.5**
	SNR=18						
ASUD	**Al Ashush, Dub**	**2.57**	**172**	*e*Pn	**Pb**	**14 09 36.2**	**-1.6**
HATD	**Hatta, Dubai**	**2.57**	**156**	*e*P	**Pb**	**14 09 36.8**	**-1.1**
	SNR=25						
HATD	**Hatta, Dubai**	**2.57**	**156**	*e*Pn	**Pb**	**14 09 37.0**	**-0.9**
AJN	**Ajban**	**2.61**	**179**	*e*P	**Pb**	**14 09 38.3**	**-0.2**
	SNR=13						
AJN	**Ajban**	**2.61**	**179**	*e*Pn	**Pb**	**14 09 40.4**	**+1.9**
ASHO	**Ashiyiah**	**2.68**	**158**	*e*P	**Pb**	**14 09 38.0**	**-1.7**
	SNR=291						
ASHO	**Ashiyiah**	**2.68**	**158**	*e*Pn	**Pb**	**14 09 38.1**	**-1.6**
ISRV	**Sarvestan**	**2.73**	**324**	*e*Pn	**Pn**	**14 09 37.6**	**+2.2**
ISRV				IAMB	IAmb	14 10 32.7	
	comp=Z,18µm,0.9s						
NGRK	**Negar Kerman**	**2.91**	**32**	*e*Pn	**Pn**	**14 09 38.2**	**+0.3**
NGRK				IAMB	IAmb	14 10 40.1	
	comp=Z,0.0nm,1.0s						
IPAR	**Pars**	**3.14**	**328**	*e*Pn	**Pn**	**14 09 43.0**	**+2.0**
IPAR				IAMB	IAmb	14 10 41.9	
	comp=Z,12µm,0.9s						
ALNE	**Al Ain**	**3.19**	**167**	*i* P	**Pb**	**14 09 46.0**	**-2.5**
	SNR=5.7						
ALNE	**Al Ain**	**3.19**	**167**	*e*Pn	**Pb**	**14 09 47.0**	**-1.5**
KRBR	**Kerman**	**3.21**	**29**	*e*Pn	**Pn**	**14 09 42.3**	**+0.3**
KRBR	**Kerman**	**3.21**	**29**	*e*AML	AML	14 10 38.2	
	comp=Z,544nm,0.8s						

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KRBR  Kerman            3.21  29 ePn    Pn     14 09 42.3 +0.3
TVBK  TV Kerman         3.21  29  IAMB  IAmb   14 10 38.8
      comp=Z,0.0nm,0.6s
KHGB  Koh Gabri         3.45  22 ePn    Pn     14 09 47.3 +2.1
KHGB                              IAMB  IAmb   14 10 42.2
      comp=Z,0.0nm,0.8s
CHMN  Cheshme madani    3.50  40 ePn    Pn     14 09 48.0 +1.9
CHMN                              IAMB  IAmb   14 10 57.7
      comp=N,0.0nm,0.8s
IKAZ  Kazeroun          3.77 314 ePn    Pn     14 09 52.1 +2.3
IKAZ                              IAMB  IAmb   14 11 28.4
      comp=N,33µm,1.2s
HOQ   Hoqain            4.17 149 ePn    Pn     14 09 59.2 +4.3
IMEH  Mehriz            4.20 356 ePn    Pn     14 09 57.7 +2.1
IMEH                              IAMB  IAmb   14 11 14.8
      comp=Z,2µm,1.0s
MZR   Muzera            4.37 198 i P    Pn     14 10 00.6 +2.9
      SNR=9.2
MZR   Muzera            4.37 198 ePn    Pn     14 10 01.3 +3.5
IBAF  Bafgh             4.42   7 ePn    Pn     14 09 59.1 +0.6
ISAD  Sadrabad          4.84 347  IAMB  IAmb   14 10 10.9
      comp=Z,2µm,0.4s
ISAD                             ePn    Pn     14 10 06.3 +1.9
IRAM  Ramesheh          5.13 335 ePn    Pn     14 10 09.5 +1.2
WSAR  Wadi Sarin        5.14 139  Pn    Pn     14 10 10.8 +2.4
      comp=Z,3.8nm,0.3s,baz=313,slow=7.4,SNR=28
WSAR                              Sn    Sn     14 11 06.2 -1.0
      comp=Z,3.1nm,0.3s,baz=7.5,slow=19,SNR=3.3
CHBR  Chabahar          5.20 106 ePn    Pn     14 10 09.9 +0.8
CHBR  Chabahar          5.20 106 ePn    Pn     14 10 09.9 +0.8
IGAR  Gharneh           5.79 335 ePn    Pn     14 10 18.5 +1.1
NASN  Na'in             5.90 342 ePn    Pn     14 10 19.9 +0.9
NASN  Na'in             5.90 342 ePn    Pn     14 10 19.9 +0.9
ZNGN  Zangian           6.08 325 ePn    Pn     14 10 23.7 +2.3
ANAR  Anarak            6.08 350 ePn    Pn     14 10 22.2 +0.9
IZEF  Zefreh            6.13 339 ePn    Pn     14 10 21.8 -0.3
ROKH  ROKH              6.17 327 ePn    Pn     14 10 23.9 +1.2
JHBN  Jahan bin         6.26 324 ePn    Pn     14 10 25.1 +1.1
IKOO  Kooshah           6.29  33 ePn    Pn     14 10 25.5 +1.2
TKDS  Koohdasht(Taba    6.67  16 ePn    Pn     14 10 30.7 +1.2
TABS  Tabas             6.71  16 ePn    Pn     14 10 30.5 +0.6
TABS  Tabas             6.71  16 ePn    Pn     14 10 30.5 +0.6
IKLH  Kolahrood         6.78 335 ePn    Pn     14 10 31.8 +0.8
IDAH  Dahanechah        6.98  36 ePn    Pn     14 10 36.3 +2.5
KRSH  Karshahi          7.19 341 ePn    Pn     14 10 37.0 +0.5
SHGR  Shooshtar-Gavs    7.27 314 eAML   AML    14 12 05.0
      comp=Z,54nm,0.4s
IVRN  Varamin           8.27 341 ePn    Pn     14 10 52.2 +1.0
IANJ  Anjilo            8.31 354 ePn    Pn     14 10 53.2 +1.3
IKMR  Kamar-syah        8.49 320 ePn    Pn     14 10 55.0 +0.7
RAYN  Ar Rayn           9.30 249 ePn    Pn     14 11 04.8 -0.7
RAYN  Ar Rayn           9.30 249 i P    Pn     14 11 05.8 +0.4
      SNR=15
IKOM  Komasi            9.47 319 ePn    Pn     14 11 08.3 +0.5
GEYT  Alibeck          11.04  13  Pn    Pn     14 11 33.2 +4.0
      comp=Z,0.3nm,0.3s,baz=205,slow=24,SNR=4.5
KBL   Kabul            14.14  55 ePn    Pn     14 12 12.6 +0.9
AKT   Akhty            15.45 339 i P    Pn     14 12 31.1 +1.8
GNI   Garni            15.46 329  Pn    P      14 12 35.7 +1.9
      comp=Z,1.7nm,0.3s,baz=42,slow=6.0,SNR=7.9
GNI   Garni            15.46 329 ePn    Pn     14 12 28.8 -0.8
      comp=Z,58nm,1.0s
GNI   Garni            15.46 329 eP     Pn     14 12 28.7 -0.8
GNI                               pmax  pmax
      comp=Z,58nm,1.0s
ASF   Jabal al Asfar   16.46 292  Pn    Pn     14 12 41.8 -0.6
      comp=Z,0.5nm,0.3s,baz=288,slow=16,SNR=3.2
ASF                               Sn    Sn     14 15 34.1  -10
      comp=Z,0.2nm,0.3s,baz=115,slow=14,SNR=2.8
CHGR  Chuyangaron      16.50  43 ePn    Pn     14 12 42.0 -0.7
      comp=Z,40nm,1.1s
NIL   Nilore           17.03  63 eP     Pn     14 12 50.5 +1.0
      comp=Z,16nm,1.0s
NIL   Nilore           17.03  63  P     P      14 12 54.5 +3.3
NIL                               pmax  pmax
      comp=Z,16nm,1.7s
EIL   Elat             17.77 283  P     P      14 13 00.2 +0.8
      comp=Z,0.2nm,0.3s,baz=29,slow=7.9,SNR=5.1
MMAI  Mount Meron Ar   17.88 294  P     P      14 13 00.3 -0.4
      comp=Z,1.2nm,0.3s,baz=114,slow=15,SNR=6.3
KBZ   Khabaz           19.18 333  P     Pn     14 13 16.0 +0.4
      comp=Z,0.2nm,0.3s,baz=147,slow=8.0,SNR=8.6
DOMR  Dombai           19.37 329 eP     P      14 13 16.7 -0.3
DOMR                              pmax  pmax
      comp=Z,12nm,1.0s
KVAR  Kislovodsk Arr   19.45 333  P     Pn     14 13 22.1 +3.1
      baz=75,slow=20,SNR=4.5
KIV   Kislovodsk       19.45 333 eP     Pn     14 13 19.2 +0.2
      comp=Z,24nm,0.8s
KIV   Kislovodsk       19.45 333 i P    Pn     14 13 21.6 +2.6
CSS   Mathiatis        20.06 298 ePn    Pn     14 13 25.6 -0.7
      comp=Z,16nm,0.9s
KK31  Karatay Array    20.29  34 eP     P      14 13 27.4 +0.5
      comp=Z,13nm,1.0s
KKAR  Karatay Array    20.29  34 eP     P      14 13 27.4 +0.5
      comp=Z,13nm,1.0s
KKAR  Karatay Array    20.29  34 eP     P      14 13 27.4 +0.5
KKAR                              pmax  pmax
      comp=Z,13nm,1.0s
ARSB  Arslanbob        20.46  42 eP     P      14 13 28.8  0.0
      comp=Z,18nm,0.9s
KSH   Kashi            21.37  50  P     P      14 13 34.6 -4.1
KSH                               sP    pP     14 13 41.6 -3.0
KSH                               PP    PnPn   14 13 56.1 -2.7
KSH                               pmax  pmax
      comp=Z,10.0nm,0.8s
KSH                               pmax  pmax
      comp=Z,200nm,4.3s
KSH                               LR    LR
      comp=N,1µm,15.7s
KSH                               LR    LR
      comp=E,5µm,19.8s
KSH                               LR    LR
      comp=Z,2µm,16.4s
BR101 Keskin Array S   21.68 311 eP     P      14 13 42.7 +0.6
BR131 Keskin Array S   21.68 311 eP     P      14 13 41.3 -0.7
      comp=Z,17nm,0.9s
BRTR  Keskin Array B   21.68 311  P     P      14 13 42.7 +0.6
      comp=Z,11nm,0.8s,baz=132,slow=13,SNR=21
AAK   Ala-Archa        22.15  41  P     P      14 13 47.4 +0.3
      comp=Z,9.4nm,1.0s,baz=214,slow=9.4,SNR=8.6
AAK   Ala-Archa        22.15  41 eP     P      14 13 46.5 -0.6
      comp=Z,24nm,1.1s
AAK   Ala-Archa        22.15  41⇑eP     P      14 13 48.1 +1.0
AAK                               pmax  pmax
      comp=Z,15nm,1.2s
ABKAR Akbulak array    22.37   9 eP     P      14 13 48.0 -1.2
      comp=Z,28nm,1.4s
BOOM  Boomskoye usch   22.93  43 eP     P      14 13 55.1 -0.3
      comp=Z,33nm,1.1s
BOOM  Boomskoye usch   22.93  43 eP     P      14 13 55.1 -0.3
BOOM                              pmax  pmax
      comp=Z,33nm,1.1s
AKTO  Aktyubinsk       23.34   5  P     P      14 13 59.2  0.0
      comp=Z,1.4nm,0.4s,baz=193,slow=12,SNR=6.7
KDJ   Kajisay          23.49  45 eP     P      14 14 01.4 +0.3
      comp=Z,16nm,1.3s
KDJ   Kajisay          23.49  45 eP     P      14 14 01.4 +0.3
KDJ                               pmax  pmax
      comp=Z,16nm,1.3s
OTUK  Ortayu           25.01  28  P     P      14 14 16.1 +1.2
OTUK                              pmax  pmax
      comp=Z,14nm,0.9s
PDGK  Podgornoye       25.57  45  P     P      14 14 22.1 +1.9
PDGK                              pmax  pmax
      comp=Z,16nm,1.4s
IDI   Anoyia           26.88 295  P     P      14 14 30.4 -1.6
      comp=Z,9.9nm,0.8s,baz=84,slow=9.2,SNR=2.5
BRVK  Borovoye         28.25  20⇓eP     P      14 14 43.9 -0.1
BRVK                              pmax  pmax
      comp=Z,11nm,1.4s
BVAR  Borovoye Array   28.26  20  P     P      14 14 43.5 -0.6
      comp=Z,4.0nm,0.8s,baz=206,slow=23,SNR=8.4
MAKZ  Makanchi         28.91  40 eP     P      14 14 50.0  0.0
      comp=Z,10nm,1.3s
MAKZ  Makanchi         28.91  40 eP     P      14 14 50.1  0.0
MAKZ                              pmax  pmax
      comp=Z,10.0nm,1.3s
MK31  Makanchi Array   29.09  40 eP     P      14 14 50.3 -1.3
      comp=Z,3.3nm,1.2s
MK31  Makanchi Array   29.09  40 eP     P      14 14 50.3 -1.3
MK31                              pmax  pmax
      comp=Z,3.0nm,1.2s
MK32  Makanchi Array   29.09  40 eP     P      14 14 51.4 -0.2
MKAR  Makanchi Array   29.09  40  P     P      14 14 51.4 -0.2
      comp=Z,0.3nm,0.3s,baz=226,slow=8.0,SNR=6.9
SRS   Serrai           29.27 306  P     P      14 14 54.8 +1.6
SRS                               pmax  pmax
      comp=Z,14nm,1.1s
ARU   Arti             29.34   4⇑eP     P      14 14 54.9 +1.3
ARU                               pmax  pmax
      comp=Z,4.0nm,1.4s
MLR   Muntele Rosu     29.43 316  P     P      14 14 56.9 +2.1
      comp=Z,4.0nm,0.9s,baz=62,slow=18,SNR=3.3
KURBB Kurchatov Arra   29.50  31  P     P      14 14 54.4 -0.7
      comp=Z,0.6nm,0.5s,baz=231,slow=9.1,SNR=7.0
KURK  Kurchatov        29.60  31⇑eP     P      14 14 55.4 -0.6
KURK                              pmax  pmax
      comp=Z,2.0nm,1.1s
AKASG Malin Array Be   30.57 327  P     P      14 15 03.5 -1.1
      comp=Z,1.4nm,0.5s,baz=128,slow=8.5,SNR=9.0
AKBB  Malin Array Si   30.57 327 eP     P      14 15 03.5 -1.1
      comp=Z,8.3nm,1.0s
AKBB  Malin Array Si   30.57 327 eP     P      14 15 03.5 -1.1
AKBB                              pmax  pmax
      comp=Z,8.0nm,1.0s
OBN   Obninsk          30.95 339  P     P      14 15 07.7 -0.2
      comp=Z,4.1nm,0.4s,baz=99,slow=20,SNR=4.4
OBN   Obninsk          30.95 339 eP     P      14 15 07.7 -0.2
      comp=Z,20nm,0.5s
OBN   Obninsk          30.95 339ceP     P      14 15 07.4 -0.5
OBN                              e             14 16 12.2
OBN                               pmax  pmax
      comp=Z,15nm,0.6s
WMQ   Urumqi           31.14  49 eP     P      14 15 11.7 +1.9
ZAA0  Zalesovo Array   34.59  31 eP     P      14 15 38.7 -1.1
      comp=Z,6.4nm,0.9s
ZALV  Zalesovo Beam    34.59  31  P     P      14 15 39.2 -0.6
      comp=Z,2.6nm,0.5s,baz=251,slow=9.1,SNR=10
ZAA1  Zalesovo Array   34.60  31 eP     P      14 15 39.2 -0.6
IDID  Didziasalis      34.76 332 eP     P      14 15 40.9 -0.3
IDID                              IAmb  IAmb   14 15 45.1
      comp=Z,3.7nm,0.6s
IIGN  Ignalina         35.00 331 eP     P      14 15 43.0 -0.3
IIGN                              IAmb  IAmb   14 15 44.6
      comp=Z,8.1nm,1.0s
LANS  Liptovska Anna   35.02 318 eP     P      14 15 44.4 +0.8
LANS  Liptovska Anna   35.02 318 eP     P      14 15 44.4 +0.8
VYHS  Vyhne            35.12 317 eP     P      14 15 44.9 +0.4
VYHS  Vyhne            35.12 317 eP     P      14 15 44.8 +0.3
ISAL  Salakas          35.19 332 eP     P      14 15 44.5 -0.5
ISAL                              IAmb  IAmb   14 15 48.9
      comp=Z,8.0nm,1.0s
IZAR  Zarasai          35.26 332 eP     P      14 15 45.3 -0.2
IZAR                              IAmb  IAmb   14 15 47.8
      comp=Z,16nm,0.6s
JAVC  Velka Javorina   35.98 317 eP     P      14 15 52.6 +0.8
MORC  Moravsky Berou   36.42 318 eP     P      14 15 54.4 -1.2
      comp=Z,4.3nm,0.8s
MORC  Moravsky Berou   36.42 318 eP     P      14 15 54.4 -1.2
MORC                              pmax  pmax
      comp=Z,4.0nm,0.8s
MORC  Moravsky Berou   36.42 318 eP     P      14 15 55.1 -0.5
VRAC  Vranov           36.80 317 eP     P      14 15 57.0 -1.8
KRUC  Moravsky         36.83 317 eP     P      14 15 59.7 +0.6
VSU   Vasula           36.95 336 eP     P      14 15 58.6 -1.3
VSU                               IAmb  IAmb   14 16 00.9
      comp=Z,32nm,1.0s
VSU   Vasula           36.95 336⇑eP     P      14 16 00.0 +0.1
VSU                               pmax  pmax
      comp=Z,53nm,1.3s
UPC   Upice            37.62 319 eP     P      14 16 05.4 -0.3
UPC   Upice            37.62 319 eP     P      14 16 05.4 -0.3
MOA   Molln            37.74 314 eP     P      14 16 06.7 -0.1
      comp=Z,1.9nm,0.5s
KBA   Koelnbreinsper   38.10 313 eP     P      14 16 08.7 -1.4
      comp=Z,6.1nm,1.5s
GEC2  GERESS Array S   38.42 315 eP     P      14 16 12.4 -0.1
      comp=Z,2.1nm,0.9s
GEC2  GERESS Array S   38.42 315 eP     P      14 16 12.5 -0.1
GEC2                              pmax  pmax
      comp=Z,2.0nm,0.9s
GERES GERESS Array B   38.42 315  P     P      14 16 12.4 -0.1
      comp=Z,0.4nm,0.3s,baz=108,slow=8.7,SNR=4.5
ABTA  Abfaltersbach    38.56 312 eP     P      14 16 13.5 -0.4
      comp=Z,2.9nm,0.6s
KHC   Kasperske Hory   38.59 316 eP     P      14 16 12.9 -1.1
      comp=Z,2.9nm,1.2s
KHC   Kasperske Hory   38.59 316 eP     P      14 16 12.9 -1.1
KHC                               pmax  pmax
      comp=Z,3.0nm,1.2s
KHC   Kasperske Hory   38.59 316 eP     P      14 16 13.3 -0.7
GTA   Gaotai           39.05  60 eP     P      14 16 18.8 +0.7
GTA                               pP    pP     14 16 23.2 -1.3
GTA                               sP    sP     14 16 25.9 -1.2
GTA                               pmax  pmax
      comp=Z,6.0nm,1.3s
WTTA  Wattenberg       39.28 312 eP     P      14 16 19.3 -0.7
      comp=Z,4.9nm,0.7s
WATA  Walderalm        39.34 313 eP     P      14 16 20.0 -0.4
      comp=Z,4.2nm,0.6s
FIA0  FINESS Array S   39.35 339 eP     P      14 16 19.4 -0.7
FIA0  FINESS Array S   39.35 339 eP     P      14 16 19.4 -0.7
FINES FINESS Array B   39.35 339  P     P      14 16 19.4 -0.7
      comp=Z,3.0nm,0.7s,baz=144,slow=9.7,SNR=15
KEST  Kesra            39.54 294  P     P      14 16 23.4 +1.2
      comp=Z,3.5nm,0.8s,baz=236,slow=2.2,SNR=4.1
KEST  Kesra            39.54 294 eP     P      14 16 23.4 +1.2
      comp=Z,6.9nm,1.0s
SQTA  Sankt Quirin     39.55 312 eP     P      14 16 21.4 -0.7
      comp=Z,6.1nm,0.7s
MOTA  Moosalm          39.65 312 eP     P      14 16 22.4 -0.6
      comp=Z,3.2nm,0.5s
CLL   Collm            39.69 319 eP     P      14 16 20.8 -2.3
      comp=Z,6.0nm,1.0s
CLL   Collm            39.69 319 eP     P      14 16 20.8 -2.3
CLL                               pmax  pmax
      comp=Z,6.0nm,1.0s
CLL   Collm            39.69 319 eP     P      14 16 22.0 -1.1
      comp=Z,8.0nm,1.1s
FETA  Feichten         39.82 312 eP     P      14 16 23.4 -1.1
      comp=Z,9.5nm,1.2s
RETA  Reutte           39.91 313  P     P      14 16 23.8 -1.3
      comp=Z,3.7nm,0.8s
PGF   Pioggiola        40.20 305 eP     P      14 16 27.6  0.0
PGF                               pmax  pmax
      comp=Z,7.0nm,1.0s
DAVA  Damuels          40.44 312 eP     P      14 16 28.6 -1.0
      comp=Z,5.5nm,0.7s
CHTO  Chiang Mai       41.17  92 eP     P      14 16 35.6 -0.1
      comp=Z,12nm,1.4s
CHTO  Chiang Mai       41.17  92 eP     P      14 16 35.6 -0.1
CHTO                              pmax  pmax
      comp=Z,12nm,1.4s
CM31  Chiang Mai Arr   41.29  93 eP     P      14 16 37.8 +1.1
CMAR  Chiang Mai Arr   41.29  93  P     P      14 16 37.8 +1.1
      comp=Z,0.9nm,0.7s,baz=288,slow=10,SNR=5.9
SBF   Sospel           41.51 306 eP     P      14 16 37.4 -0.9
SBF                               pmax  pmax
      comp=Z,21nm,1.0s
MBDF  Montbardon       42.10 308 eP     P      14 16 41.8 -1.4
MBDF                              pmax  pmax
      comp=Z,5.0nm,0.8s
LZH   Lanzhou          42.19  65 eP     P      14 16 46.3 +2.2
LZH                               pP    pP     14 16 49.1 -1.4
LZH                               sP    sP     14 16 51.0 -2.1
LZH                               PP    PP     14 18 24.8 +3.0
LZH                               pmax  pmax
      comp=Z,14nm,1.2s
LZH                               pmax  pmax
      comp=Z,98nm,4.6s
LZH                               LR    LR
      comp=N,620nm,16.3s
LZH                               LR    LR
      comp=E,570nm,15.7s
LZH                               LR    LR
      comp=Z,630nm,16.3s
BNI   Bardonecchia     42.21 308 eP     P      14 16 43.0 -1.1
      comp=Z,5.8nm,1.0s
BNI   Bardonecchia     42.21 308 eP     P      14 16 43.0 -1.1
BNI                               pmax  pmax
      comp=Z,6.0nm,1.0s
LPG   La Plagne        42.22 309 eP     P      14 16 47.1 +2.7
LPG                               pmax  pmax
      comp=Z,4.0nm,0.7s
LPL   La Plagne        42.24 309 eP     P      14 16 43.2 -1.2
LPL                               pmax  pmax
      comp=Z,6.0nm,0.8s
ECH   Echery           42.44 313 eP     P      14 16 44.9 -0.9
      comp=Z,6.7nm,1.1s
ECH   Echery           42.44 313 eP     P      14 16 44.9 -0.9
ECH                               pmax  pmax
      comp=Z,7.0nm,1.1s
CD2   Chengdu          42.56  73 eP     P      14 16 46.4 -0.6
HINF  Hinteralfeld     42.56 312 eP     P      14 16 46.1 -0.7
HINF                              pmax  pmax
      comp=Z,12nm,1.3s
KMI   Kunming          42.74  82  P     P      14 16 51.0 +2.2
KMI                               pmax  pmax
      comp=Z,10.0nm,0.9s
VIVF  Saint-Julien-l   43.59 307 eP     P      14 16 54.5 -0.7
VIVF                              pmax  pmax
      comp=Z,5.0nm,1.2s
GIVF  Givet            44.33 315 eP     P      14 17 01.7 +0.7
GIVF                              pmax  pmax
      comp=Z,10.0nm,1.0s
SMF   Signal de Mont   44.39 310 eP     P      14 17 00.2 -1.4
SMF                               pmax  pmax
      comp=Z,10.0nm,0.9s
DOU   Dourbes          44.47 315  P     P      14 17 03.0 +0.9
DOU                               pmax  pmax
      comp=Z,12nm,1.1s
DOU   Dourbes          44.47 315  P     P      14 17 01.9 -0.2
NC405 NORSAR Array S   44.58 332 eP     P      14 17 01.4 -1.4
      comp=Z,21nm,0.9s
SSF   Saint Saulge     44.67 310 eP     P      14 17 02.6 -1.2
SSF                               pmax  pmax
      comp=Z,15nm,1.2s
BAIF  Baives           44.71 315 eP     P      14 17 04.0  0.0
BAIF                              pmax  pmax
      comp=Z,21nm,1.1s
NB2   NORSAR Subarra   44.75 331  P     P      14 17 02.8 -1.5
      comp=Z,1.9nm,0.6s,baz=120,slow=8.6
NB200 NORSAR Array S   44.75 331 eP     P      14 17 03.3 -1.0
NOA   NORSAR Array B   44.75 331  P     P      14 17 03.3 -1.0
      comp=Z,4.0nm,0.8s,baz=119,slow=8.0,SNR=15
SONA0 Songino Array    44.77  48 eP     P      14 17 05.3 +0.5
SONM  Songino Array    44.77  48  P     P      14 17 05.3 +0.5
      comp=Z,0.3nm,0.4s,baz=264,slow=10.0,SNR=3.8
NAO01 NORSAR Array S   44.80 331 eP     P      14 17 04.8 +0.3
      comp=Z,27nm,1.1s
BGF   Bois d'Agland    45.06 310 eP     P      14 17 07.5 +0.6
BGF                               pmax  pmax
      comp=Z,7.0nm,0.7s
MTLF  Montolieu        45.23 305 eP     P      14 17 08.1 -0.2
MTLF                              pmax  pmax
      comp=Z,7.0nm,1.0s
CAF   Calviac          45.45 307 eP     P      14 17 09.3 -0.7
CAF                               pmax  pmax
      comp=Z,8.0nm,1.0s
TCF   Toulx Ste Croi   45.47 309 eP     P      14 17 09.2 -1.0
TCF                               pmax  pmax
      comp=Z,25nm,1.5s
ARA0  ARCESS Array S   45.72 346 eP     P      14 17 12.2 +0.5
ARCES ARCESS Array B   45.72 346  P     P      14 17 12.2 +0.5
      comp=Z,1.8nm,1.0s,baz=144,slow=12,SNR=2.9
RJF   Les Rejaudoux    45.86 308 eP     P      14 17 12.8 -0.5
RJF                               pmax  pmax
      comp=Z,22nm,1.3s
XAN   Xi'an            46.50  68  P     P      14 17 22.0 +3.5
XAN                               pP    sP     14 17 32.8 +5.3
XAN                               pmax  pmax
      comp=Z,6.0nm,1.2s
ETSF  Etsaut           47.25 304 eP     P      14 17 26.6 +2.3
ETSF                              pmax  pmax
      comp=Z,4.0nm,0.8s
LDF   La Druitiere     47.29 312 eP     P      14 17 23.9 -0.5
LDF                               pmax  pmax
      comp=Z,18nm,1.3s
FLN   La Foliniere     47.54 312 eP     P      14 17 24.9 -1.4
FLN                               pmax  pmax
      comp=Z,27nm,1.4s
SJPF  Ste Jean         47.74 305 eP     P      14 17 31.8 +3.8
SJPF                              pmax  pmax
      comp=Z,7.0nm,0.8s
HHC   Hu-ho-hao-te     48.09  58  P     P      14 17 31.4 +0.6
HHC                               pmax  pmax
      comp=Z,11nm,0.7s
HHC                               pmax  pmax
      comp=Z,76nm,6.6s
ROSF  Rostrenen        49.35 312 eP     P      14 17 38.9 -1.4
ROSF                              pmax  pmax
      comp=Z,28nm,1.3s
ESDC  Sonseca Array    49.92 300  P     P      14 17 44.7 -0.2
      comp=Z,0.4nm,0.3s,baz=76,slow=7.5,SNR=8.8
PAB   San Pablo        50.23 300 eP     P      14 17 47.1 -0.1
      comp=Z,22nm,1.5s
PAB   San Pablo        50.23 300 eP     P      14 17 47.1 -0.1
PAB                               pmax  pmax
      comp=Z,22nm,1.5s
BOD   Bodaibo          51.02  36 eP     P      14 17 51.7 -1.1
BOD                               pmax  pmax
      comp=Z,8.0nm,1.6s
TOA0  Torodi Ar. Sit   51.56 265 eP     P      14 17 57.1 -0.3
      comp=Z,14nm,1.0s
TORD  Torodi Ar. Bea   51.56 265  P     P      14 17 57.9 +0.4
      comp=Z,11nm,0.5s,baz=54,slow=7.3,SNR=3.9
TOA1  Torodi Ar. Sit   51.56 265 eP     P      14 17 57.9 +0.4
NJ2   Nanjing          55.05  68 eP     P      14 18 22.5 -0.4
NJ2                               pmax  pmax
      comp=Z,15nm,0.5s
ZEA   Zeya             58.23  42 eP     P      14 18 42.6 -2.6
TSUM  Tsumeb           58.64 222 eP     P      14 18 50.0 +1.5
      comp=Z,14nm,1.3s
DBIC  Dimbokro         60.18 262  P     P      14 18 58.6 -0.6
      comp=Z,3.5nm,0.7s,baz=351,slow=17,SNR=3.0
DBIC  Dimbokro         60.18 262 eP     P      14 18 58.6 -0.6
      comp=Z,48nm,1.6s
KLR   Kul'dur          61.54  47⇑iP     P      14 19 07.4 -0.6
KLR                               pmax  pmax
      comp=Z,2.0nm,1.0s
BOSA  Boshof           62.37 209  P     P      14 19 13.3 -0.6
      comp=Z,4.1nm,0.9s,baz=22,slow=7.6,SNR=4.7
SUMG  Summit           65.33 341 eP     P      14 19 33.5 +0.3
      comp=Z,9.3nm,1.2s
SUMG  Summit           65.33 341 eP     P      14 19 33.5 +0.3
SUMG                              pmax  pmax
      comp=Z,9.0nm,1.2s
BILL  Bilibino         72.59  22 i P    P      14 20 15.9 -2.0
BILL                             i             14 20 33.1
BILL                             i             14 23 06.7
BILL                              pmax  pmax
      comp=Z,2.0nm,1.1s
PEA1  Petropavlovsk-   75.87  37 eP     P      14 20 36.9 -0.3
PETK  Petropavlovsk-   75.87  37  P     P      14 20 36.9 -0.4
      comp=Z,2.0nm,0.8s,baz=274,slow=5.6,SNR=2.9
ILAR  Eielson Array    86.78   9  P     P      14 21 33.5 -1.5
      comp=Z,0.6nm,1.0s,baz=343,slow=2.8,SNR=4.3
ILB   Eielson Array    86.78   9 eP     P      14 21 33.5 -1.5
      comp=Z,9.0nm,1.6s
EGAK  Eagle            87.48   7 eP     P      14 21 38.4 +0.1
      comp=Z,9.2nm,1.3s
WR1   Warramunga Arr   89.98 112 eP     P      14 21 50.8  0.0
WRA   Warramunga Arr   89.98 112  P     P      14 21 50.8  0.0
      comp=Z,1.0nm,0.7s,baz=297,slow=5.1,SNR=3.4
ASAR  Alice Springs    91.42 116  P     P      14 21 56.4 -1.2
      comp=Z,0.9nm,0.8s,baz=308,slow=4.5,SNR=11
AS31  Alice Springs    91.42 116 eP     P      14 21 56.4 -1.2
      comp=Z,3.9nm,1.8s
SYO   Syowa Base       96.57 186⇑eX     P      14 22 16.0 -4.0
```

NNC ***02*** *14:14:29.3±3.2, 37°.36N×70°.78E, h0km, mb4.2, mpv3.8,*
Error ellipse: s-maj=26.1km s-min=22.7km az=71.0
ISC 02 14:14:21.6±2.4**, 36°.6N**±0°.1×**70°.8E**±0°.2**, h35km, n8,**
σ**2s.19**/10**, 1C-5D, Hindu Kush region**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op    ISC        h  m  s    ISC
KK31  Karatay Array     6.46 358 ⇑Pn    Pn     14 15 56.5 +2.2
      2.1nm,0.3s,baz=175,slow=13,SNR=48
KK31                             ⇓Sn    Sn     14 17 02.9 -3.9
      2.1nm,0.3s,baz=192,slow=23,SNR=5.0
KK31                             ⇓Lg    Lg     14 17 31.6
      8.4nm,0.6s,baz=173,slow=31,SNR=6.6
AAK   Ala-Archa         6.66  25 ⇓Pn    Pn     14 15 59.3 +2.3
      4.6nm,0.4s
AAK                              ⇓Sn    Sn     14 17 10.9 -0.8
      5.6nm,0.9s
AAK                               Lg    Lg     14 17 39.5
      2.5nm,0.5s
TKM2  Tokmak 2          7.30  29 ⇓Pn    Pn     14 16 07.8 +1.8
      5.4nm,0.7s
PYUN  Piuthan          13.38 126 eP     Pn     14 17 28.7 -0.5
      16nm,0.3s
DANN  Dangsing         13.73 123 eP     Pn     14 17 33.5 -0.5
      10nm,0.3s
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GKN	Gorkha	14.54	122	eP	Pn	14 17 44.0	-1.0
	12nm,0.2s						
PKIN	Phulchoki	15.33	122	eP	Pn	14 17 54.7	-0.9
	5.7nm,0.3s						
PKI	Pulchoki	15.34	122	eP	Pn	14 17 54.6	-1.2
	5.2nm,0.3s						

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*IDC **02** 14:14:19.7±1.1, 27.°32N×54.°91E, h0^{km}, mb3.9/11, mb1 4.1/15, mb1mx3.9/49, mbtmp3.9/15, ML3.4/4, Error ellipse: s-maj=24.6km s-min=18.3km az=11.0*
*ISCJB **02** 14:14:21.1±0.3, 27.°26N±0.°04×54.°81E±0.°05, h17^{km}, mb3.9/15, Error ellipse: s-maj=6.3km s-min=4.9km az=154.6*
*NEIC **02** 14:14:21.5±0.4, 27.°32N×54.°90E, h10^{km}, mb4.1/3, ML3.7(THR), Error ellipse: s-maj=8.1km s-min=6.9km az=221.0*
*THR **02** 14:14:22.4, 27.°34N×55.°13E, h16^{km}, ML3.7*
*TEH **02** 14:14:23.3, 27.°28N×55.°00E, h17^{km}, ML3.6*
ISC 02 14:14:21.7±0.5, 27.°18N±0.°03×54.°99E±0.°04, h17^{km}, n60, σ1.^{s}17/62, mb3.9/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	1.08	78	ePg	Pg	14 14 43.2	+0.6
SHME	Shamm	1.53	137	ePn	Pg	14 14 50.7	-0.4
LMD1	Lamerd	1.63	276	ePn	Pg	14 14 53.3	+0.2
NIAN	Nian	1.69	77	ePn	Pg	14 14 54.2	+0.1
NIAN				IAMB	IAmb	14 15 26.9	
	comp=Z,0.0nm,0.5s						
UMQ	Umm Al-Quwin	1.75	160	ePn	Pg	14 14 58.6	+3.2
JHRM	Jahrom	1.82	317	ePn	Pb	14 14 54.2	-0.4
GHIR	Ghir-Karzin	2.09	302	eAML	AML	14 15 35.9	
	comp=N,555nm,0.5s						
GHIR				ePn	Pb	14 14 59.3	+0.1
GHIR				eSg	Sg	14 15 29.1	+0.2
MSFE	Esma-Masafi	2.09	150	ePn	Pb	14 15 00.0	+0.8
MDH	Madha	2.21	148	ePn	Pn	14 14 56.0	-1.6
NAZ	Nazwa, Dubai	2.26	164	ePn	Sb	14 15 29.6	-0.2
UOSS	Minazif	2.48	154	ePn	Pb	14 15 05.2	-0.6
UOSS	Minazif	2.48	154	ePn	Pb	14 15 05.7	-0.1
FAQ	Al Faqa, Dubai	2.48	167	ePn	Pn	14 15 02.0	+0.7
HATD	Hatta, Dubai	2.56	156	ePn	Pb	14 15 07.4	+0.3
ASUD	Al Ashush, Dub	2.56	173	ePn	Pb	14 15 07.6	+0.5
ASHO	Ashiyiah	2.66	159	ePn	Pb	14 15 07.4	-1.6
NGRK	Negar Kerman	2.90	32	ePn	Pn	14 15 07.2	-0.2
NGRK				IAMB	IAmb	14 16 01.5	
	comp=Z,0.0nm,0.6s						
IPAR	Pars	3.15	328	ePn	Pn	14 15 12.8	+1.9
IPAR				IAMB	IAmb	14 16 12.1	
	comp=Z,2µm,0.9s						
KRBR	Kerman	3.20	29	ePn	Pn	14 15 11.7	+0.2
KRBR	Kerman	3.20	29	ePn	Pn	14 15 11.7	+0.2
KHGB	Koh Gabri	3.44	22	ePn	Pn	14 15 17.1	+2.3
KHGB				IAMB	IAmb	14 16 25.0	
	comp=Z,0.0nm,1.0s						
CHMN	Cheshme madani	3.49	39	ePn	Pn	14 15 18.5	+3.0
CHMN				IAMB	IAmb	14 15 21.8	
	comp=Z,0.0nm,0.3s						
IMEH	Mehriz	4.21	356	ePn	Pn	14 15 27.2	+1.9
IMEH				IAMB	IAmb	14 16 33.8	
	comp=Z,539nm,0.6s						
IBAF	Bafgh	4.43	6	ePn	Pn	14 15 29.6	+1.4
WSAR	Wadi Sarin	5.12	139	Pn	Pn	14 15 40.9	+3.1
	comp=Z,1.3nm,0.3s,baz=333,slow=8.9,SNR=4.4						
WSAR				Sn	Sn	14 16 36.6	+0.1
	baz=198,slow=19,SNR=2.8						
YZKH	Yazd	5.21	356	ePn	Pn	14 15 40.1	+1.2
YZKH	Yazd	5.21	356	ePn	Pn	14 15 40.1	+1.2
IGAR	Gharneh	5.80	335	ePn	Pn	14 15 48.7	+1.5
IKOO	Kooshah	6.29	33	ePn	Pn	14 15 55.3	+1.4
TABS	Tabas	6.71	15	ePn	Pn	14 16 00.0	+0.5
TABS	Tabas	6.71	15	ePn	Pn	14 16 00.0	+0.5
IKLH	Kolahrood	6.79	335	ePn	Pn	14 16 01.2	+0.4
RAYN	Ar Rayn	9.32	249	ePn	Pn	14 16 35.5	+0.2
GNI	Garni	15.48	329	Pn	Pn	14 17 58.9	-0.4
	comp=Z,1.0nm,0.3s,baz=168,slow=20,SNR=1.8						
MMAI	Mount Meron Ar	17.91	294	P	Pn	14 18 29.1	-0.9
	comp=Z,0.6nm,0.3s,baz=88,slow=18,SNR=3.1						
KBZ	Khabaz	19.19	332	P	P	14 18 44.8	+0.2
	comp=Z,0.1nm,0.3s,baz=191,slow=10,SNR=2.4						
BR101	Keskin Array S	21.70	311	eP	P	14 19 12.6	+0.5
BR131	Keskin Array S	21.70	311	eP	P	14 19 12.2	+0.2
	comp=Z,13nm,1.3s						
BRTR	Keskin Array B	21.70	311	P	P	14 19 12.6	+0.5
	comp=Z,3.9nm,0.9s,baz=129,slow=12,SNR=8.8						
ABKAR	Akbulak array	22.37	9	eP	P	14 19 18.5	-0.5
	comp=Z,4.6nm,0.9s						
AKTO	Aktyubinsk	23.34	5	P	P	14 19 31.0	+2.0
	comp=Z,0.6nm,0.4s,baz=150,slow=15,SNR=2.2						
BVAR	Borovoye Array	28.25	20	P	P	14 20 13.6	-0.2
	comp=Z,1.0nm,0.6s,baz=221,slow=17,SNR=3.7						
MK32	Makanchi Array	29.07	40	eP	P	14 20 21.4	+0.2
MKAR	Makanchi Array	29.07	40	P	P	14 20 21.4	+0.2
	comp=Z,0.3nm,0.7s,baz=226,slow=8.1,SNR=2.7						
KURBB	Kurchatov Arra	29.49	31	P	P	14 20 25.4	+0.7
	comp=Z,0.3nm,0.3s,baz=232,slow=8.3,SNR=2.7						
AKASG	Malin Array Be	30.59	327	P	P	14 20 33.1	-1.4
	comp=Z,0.6nm,0.4s,baz=134,slow=8.1,SNR=2.8						
AKBB	Malin Array Si	30.59	327	eP	P	14 20 32.6	-1.9
	comp=Z,4.4nm,1.0s						
ZALV	Zalesovo Beam	34.59	31	P	P	14 21 09.2	-0.2
	comp=Z,1.2nm,0.5s,baz=238,slow=8.3,SNR=4.4						
ZAA1	Zalesovo Array	34.59	31	eP	P	14 21 09.2	-0.2
GERES	GERESS Array B	38.44	315	P	P	14 21 41.8	-0.7
	comp=Z,0.9nm,0.2s,baz=115,slow=6.6,SNR=2.7						
FIA0	FINESS Array S	39.36	339	eP	P	14 21 48.9	-1.1
FINES	FINESS Array B	39.36	339	P	P	14 21 48.9	-1.1
	comp=Z,1.0nm,0.4s,baz=140,slow=9.4,SNR=8.3						
CLL	Collm	39.71	319	eP	P	14 21 52.0	-0.9
NB2	NORSAR Subarra	44.77	331	P	P	14 22 32.8	-1.3
	comp=Z,3.1nm,0.9s,baz=118,slow=8.6						
NB200	NORSAR Array S	44.77	331	eP	P	14 22 33.0	-1.2
NOA	NORSAR Array B	44.77	331	P	P	14 22 33.0	-1.2
	comp=Z,1.8nm,0.7s,baz=119,slow=8.0,SNR=9.3						
ESDC	Sonseca Array	49.95	300	P	P	14 23 14.3	-0.4
	comp=Z,0.4nm,0.4s,baz=61,slow=7.3,SNR=4.3						
TOA1	Torodi Ar. Sit	51.58	265	eP	P	14 23 27.8	+0.5
TORD	Torodi Ar. Bea	51.58	265	P	P	14 23 27.8	+0.5
	comp=Z,7.9nm,0.5s,baz=58,slow=6.9,SNR=2.0						
ASAR	Alice Springs	91.39	116	P	P	14 27 27.8	+0.6
	comp=Z,0.3nm,0.7s,baz=304,slow=5.6,SNR=4.4						

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*DJA **02** 14:20:02.6±0.8, 5°N±5°×9°7E±1°0, h27^{km}±9^{km}, M3.9/7, MLv3.9/7*
*ISCJB **02** 14:20:03.6±0.9, 4.°69N±0.°05×96.°61E±0.°07, h35^{km}, mb3.6/3, Error ellipse: s-maj=10.2km s-min=6.4km az=12.6*
*IDC **02** 14:20:05.4±2.2, 2.°57N×96.°11E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.4/55, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=67.0km s-min=30.1km az=50.0*
ISC 02 14:20:03.6±1.4, 4.°72N±0.°06×96.°55E±0.°09, h35^{km}, n9, σ0.^{s}64/12, mb3.9/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	Meulaboh, Aceh	0.47	198	P	Pn	14 20 13.4	-0.5
MLSI				S	Sn	14 20 21.7	+0.7
LHMI	Lhok Sumawe	0.65	38	P	Pn	14 20 16.0	-0.3
LHMI				S	Sn	14 20 25.9	+0.5
TPTI		1.58	156	P	Pn	14 20 29.3	+0.1
TPTI				S	Sn	14 20 48.6	+0.2
KCSI	Kotacane, Aceh	1.70	134	P	Pn	14 20 30.5	-0.4
KCSI				S	Sn	14 20 50.4	-1.1
TSI	Tuntungan	2.35	121	P	Pn	14 20 45.9	+6.2
PSI	Prapat	3.04	129	Pn	Pn	14 20 50.4	+1.0
	3.1nm,0.3s,baz=325,slow=11,SNR=10.0						
PSI				Sn	Sn	14 21 24.4	-0.2
	3.9nm,0.3s,baz=159,slow=17,SNR=3.8						
MKAR	Makanchi Array	43.70	346	P	P	14 28 27.5	+22
	0.5nm,0.9s,baz=170,slow=9.5,SNR=3.6						
WRA	Warramunga Arr	44.50	125	P	P	14 28 12.1	0.0
	1.0nm,0.5s,baz=289,slow=11,SNR=2.2						
ASAR	Alice Springs	46.07	129	P	P	14 28 24.4	-0.1
	0.7nm,0.5s,baz=298,slow=7.6,SNR=19						

MAN 02 14:26:20.5, 9.°41N×125.°50E, h2^{km}, mb4.5, ML3.3, MS3.2, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.37	359	⇑eP	Pn	14 26 37.4	+4.5
SCPH				eS	Sb	14 26 44.0	+8.1
BUTP	Butuan	0.46	165	eP	Pg	14 26 28.9	-0.4
BUTP				eS	Sb	14 26 37.4	-1.2
MSLP	Maasin	0.95	319	eP	Pg	14 26 39.3	+0.5
MSLP				eS	Sn	14 27 00.2	+5.0
CGP	Cagayan de Oro	1.24	220	⇓eP	Pg	14 26 43.9	-0.5
CGP				eS	Sb	14 27 01.1	0.0
BUKP	Musuan	1.58	196	eP	Pn	14 26 49.1	-0.6
BUKP				eS	Sg	14 27 11.9	+0.4
LLP	Lapu-Lapu	1.76	301	eP	Pn	14 26 51.6	-0.4
LLP				eS	Sn	14 27 14.5	-0.5
PLP	Palo	1.81	344	⇑eP	Pn	14 26 53.1	+0.3
PLP				eS	Sg	14 27 19.9	+1.0
OCLP	Ormoc	1.85	332	eP	Pn	14 26 53.8	+0.5
BESP	Borongan	2.17	358	eP	Pn	14 26 58.2	+0.4
BESP				eS	Sg	14 27 29.6	-0.9
CTBH	Cotabato--PC H	2.51	210	⇓iP	Pb	14 27 05.2	-1.1
MATI	Mati	2.56	163	eP	Pb	14 27 07.0	-0.3
MATI				eS	Sg	14 27 43.2	+0.2
PAGZ	Pagadian	2.61	234	eP	Pn	14 27 04.1	+0.3
PAGZ				eS	Sn	14 27 37.5	+1.5
CNP	Catarman	3.19	345	eP	Pn	14 27 09.3	-2.3
CNP				eS	Sb	14 27 59.6	+2.4
IPIL	Ipil	3.31	241	eP	Pn	14 27 15.0	+1.6
IPIL				eS	Sn	14 27 48.6	-4.9

IDC 02 14:35:46.0±8.1, 20.°43S×177.°78W, h307^{km}±80^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/26, mbtmp4.3/9, Error ellipse: s-maj=31.7km s-min=19.7km az=38.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.31	193	P	P	14 39 38.0	-0.4
	1.7nm,0.3s,baz=238,slow=2.3,SNR=15						
URZ				S	S	14 42 42.7	-8.7
	0.3nm,0.3s,baz=54,slow=23,SNR=6.3						
CTA	Charters Tower	33.71	264	P	P	14 42 00.0	+0.8
	7.3nm,0.4s,baz=87,slow=11,SNR=19						
STKA	Stephens Creek	38.01	244	P	P	14 42 35.1	-0.3
	1.4nm,0.4s,baz=72,slow=11,SNR=7.8						
JAY	Jayapura	44.22	288	P	P	14 43 26.8	+0.9
	5.0nm,0.6s,baz=241,slow=9.9,SNR=5.8						
ASAR	Alice Springs	44.74	257	P	P	14 43 29.1	-0.8
	16nm,0.7s,baz=93,slow=8.5,SNR=267						
WRA	Warramunga Arr	44.82	262	P	P	14 43 29.3	-1.2
	2.8nm,0.3s,baz=96,slow=7.8,SNR=115						
VNDA	Vanda	58.00	185	P	P	14 45 07.1	+0.5
	0.8nm,0.6s,baz=360,slow=7.7,SNR=12						
ILAR	Eielson Array	88.20	13	P	P	14 48 01.3	-0.7
	0.4nm,0.7s,baz=218,slow=6.7,SNR=4.8						
PDAR	Pinedale Array	88.77	43	P	P	14 48 05.5	0.0
	0.2nm,0.4s,baz=243,slow=1.0,SNR=2.6						

JMA 02 14:48:02.4, 36.°77N×136.°86E, h9^{km}±1^{km}, M3.5, 1C-4D Broadband fault plane solution: P waves. NP1: ϕ_s34.00000°, δ75.00000°, λ123.00000°. **NP2:** ϕ_s145.00000°, δ36.00000°, λ26.00000°. **Principal axes:** T Plg49.0000°, Azm340.0000°; N Plg32.0000°, Azm204.0000°; P Plg23.0000°, Azm99.0000°; **Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	Hakui	0.17	338	⇓P	Pg	14 48 06.2	+0.2
JJH				eS	Sg	14 48 09.0	+0.6
JTT	Ttatey	0.41	113	⇓P	Pg	14 48 10.6	+0.1
JTT				eS	Sg	14 48 17.0	+1.0
JKG	Kaga	0.65	221	⇓P	Pg	14 48 14.9	-0.1
JKG				eS	Sg	14 48 23.9	+0.4
JGN	Niukaw	0.66	146	⇓P	Pg	14 48 14.4	-0.7
JGN				eS	Sg	14 48 23.2	-0.5
JSZ	Suzu	0.79	31	⇑P	Pg	14 48 17.4	-0.2
JSZ				eS	Sg	14 48 28.4	+0.5
MAT	Matsushiro	1.11	101	P	Pg	14 48 23.1	-0.6
MAT				S	Sn	14 48 39.0	-0.5

TRN 02 15:00:04.1, 17.°72N×63.°40W, h16^{km}, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SABA	Saba	0.18	122	eP	Pb	15 00 10.3	+1.2
SMRT	St. Maarten	0.46	43	eP	Pn	15 00 15.7	-0.4
SMRT				eS	Sn	15 00 23.3	-0.7
SEUS	St. Eustatius	0.46	119	eP	Pn	15 00 15.1	-1.0
SEUS				eS	Sn	15 00 22.8	-1.2
SKDB	Saint Kitts 2	0.65	119	eP	Pn	15 00 19.4	+0.7
SKDB				eS	Sn	15 00 30.8	+2.2
BSK	Brimstone Hill	0.65	124	eP	Pn	15 00 19.6	+0.9
BSK				eS	Sn	15 00 30.5	+1.8
SKI	Saint Kitts	0.74	121	eP	Pn	15 00 20.6	+0.7
SKI				eS	Sn	15 00 32.9	+2.0
SKTB	Turtle Beach	0.90	124	eP	Pn	15 00 23.8	+1.6
SKTB				eS	Sn	15 00 37.0	+2.1
NVRH	Round Hill, Ne	0.93	125	eP	Pn	15 00 23.9	+1.3
NVRH				eS	Sn	15 00 38.9	+3.2
NVBH	Bath Hotel, Ne	0.95	128	eP	Pn	15 00 24.2	+1.3
NVBH				eS	Sn	15 00 39.9	+3.6
NEV	Hard Times	0.98	126	eP	Pn	15 00 24.9	+1.6
NEV				eS	Sn	15 00 40.4	+3.5
MLYT	Lee's Yard	1.52	130	eP	Pb	15 00 32.7	+0.7
MLYT				eS	Sg	15 00 53.4	+0.2
ANWB	Willy Bob	1.54	91	eP	Pb	15 00 32.5	+0.1
ANWB				eS	Sg	15 00 53.7	-0.1
BPA	Boggy Peak	1.62	114	eP	Pg	15 00 34.5	-0.7
BPA				eS	Sg	15 00 56.6	+0.3

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*TAP **02** 15:08:34.7, 24.°85N×122.°03E, h5^{km}, ML2.7, C*
*ISCJB **02** 15:08:35.3±0.4, 24.°86N±0.°02×122.°08E±0.°02, h7^{km}±3^{km}, Error ellipse: s-maj=3.4km s-min=3.2km az=15.0*
*JMA **02** 15:08:35.9±0.1, 24.°85N×122.°01E, h32^{km}, M2.1*
ISC 02 15:08:35.6±0.9, 24.°86N±0.°02×122.°04E±0.°02, h18^{km}±2^{km}, n44, σ0.^{s}50/68, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.16	344	⇑iP	Pb	15 08 38.8	-0.2
	baz=348						
TWB1				i S	Sb	15 08 41.4	+0.2
	baz=348						
NTC	Toucheng	0.19	270	eP	Pb	15 08 39.8	0.0
	baz=270						
NTC				eS	Sg	15 08 43.3	-0.3
	baz=270						
TIPB	Shuangxi	0.22	302	P	Pb	15 08 40.5	-0.3
	baz=302						
TIPB				S	Sb	15 08 44.0	-0.3
	baz=302						
ILA	Ilan	0.28	251	eP	Pg	15 08 41.0	-0.7
	baz=250						
ILA				S	Sg	15 08 45.7	-0.2
	baz=250						
TWC	Suao	0.30	215	P	Pg	15 08 41.5	-0.6
	baz=212						
EOS1	EOS1	0.32	164	eP	Pg	15 08 42.3	-0.1
	baz=163						
EOS1				eS	Sg	15 08 47.0	0.0
	baz=163						
NWF	Wu-fen Shan	0.32	313	⇑iP	Pg	15 08 42.3	-0.1
	baz=313						
NWF				S	Sg	15 08 47.2	+0.1
	baz=313						
WFSB	Wu-fen Shan	0.32	313	eP	Pg	15 08 42.3	-0.1
	baz=313						
WFSB				eS	Sg	15 08 47.2	+0.1
	baz=313						
TWE	Neicheng	0.36	248	i P	Pg	15 08 42.8	-0.4
	baz=247						
TWE				S	Sb	15 08 48.6	-0.2
	baz=247						
SLBB	Yuanshan	0.38	255	P	Pg	15 08 43.4	-0.1
	baz=254						
SLBB				eS	Sb	15 08 49.2	-0.1
	baz=254						
TWA	Mucha	0.43	287	P	Pg	15 08 44.3	-0.1
	baz=287						
TWA				i S	Sb	15 08 50.8	0.0
	baz=287						
NANB	Nanao	0.50	211	eP	Pg	15 08 45.2	-0.4
	baz=211						
ENA	Nanau	0.50	212	eP	Pb	15 08 45.8	0.0
	baz=211						
ENA				eS	Sb	15 08 53.7	+0.9
	baz=211						
TATO	Taipei	0.51	284	eP	Pg	15 08 45.5	-0.4
	baz=283						
TATO				eS	Sb	15 08 53.2	+0.1
	baz=283						
YM01	YM01	0.51	305	eP	Pb	15 08 46.3	+0.3
	baz=304						
YM08	YM08	0.52	309	eP	Pb	15 08 46.2	0.0
	baz=309						
YM10	YM10	0.52	305	eP	Pb	15 08 46.3	+0.1
	baz=305						
YM05	YM05	0.53	306	eP	Pb	15 08 46.4	+0.2
	baz=306						
NDT	Datong Townshi	0.54	242	eP	Pb	15 08 46.3	-0.1
	baz=242						
NDT				eS	Sb	15 08 55.0	+1.2
	baz=242						
YM04	YM04	0.54	303	eP	Pg	15 08 46.9	+0.4
	baz=303						
YM03	YM03	0.55	306	eP	Pg	15 08 46.9	+0.2
	baz=305						
ANP	Anpu	0.57	305	eP	Pg	15 08 47.4	+0.4
	baz=305						
TWY	Chenhua	0.58	317	P	Pg	15 08 47.4	+0.3
	baz=317						
TWS1	Kuangyinshan	0.61	294	P	Pn	15 08 48.6	-0.7
	baz=294						
TWS1				S	Sn	15 08 57.3	-1.3
	baz=294						
NTST	Danshui	0.61	300	eP	Pg	15 08 48.4	+0.6
	baz=300						
YHNB	Yeheng	0.63	253	eP	Pb	15 08 47.3	-0.6
	baz=252						
NSK	Sanguang	0.64	254	P	Pb	15 08 47.6	-0.5
	baz=253						
WLTB	Daxi	0.71	270	eP	Pn	15 08 50.5	-0.2
	baz=269						
NNSB	Datong	0.73	235	eP	Pb	15 08 49.6	-0.2
	baz=234						
NNSB				eS	Sn	15 09 01.6	-0.2
	baz=234						
NNS	Nan Shan	0.73	236	P	Pg	15 08 50.2	+0.3
	baz=235						
NNS				eS	Sn	15 09 01.4	-0.4
	baz=235						
PCYT	Pengchaiyu	0.77	2	P	Pg	15 08 50.7	0.0
	baz=3.0						
NCU	National Centr	0.78	279	eP	Pg	15 08 50.7	-0.2
	baz=278						
NCU				eS	Sn	15 09 03.0	+0.2
	baz=278						
NACB	Ninganchiao	0.79	211	eP	Pb	15 08 50.5	-0.2
	baz=210						
NACB				eS	Sg	15 09 01.6	+0.2
	baz=210						
ETLH	Xiulin Townshi	0.82	218	eP	Pg	15 08 51.5	-0.1
	baz=217						
ETLH				eS	Sn	15 09 03.8	-0.1
	baz=217						
TWD	Chiawan	0.87	208	P	Pg	15 08 52.5	0.0
	baz=206						
TWD				S	Sg	15 09 04.1	+0.1
	baz=206						
JYNG	Yonagunijimaku	0.92	116	P	Pb	15 08 52.9	-0.1
JYNG				S	Sb	15 09 05.1	+0.3
LIOB	Emei	0.95	258	eP	Pg	15 08 55.3	+1.3
	baz=257						
LIOB				eS	Sn	15 09 08.4	+1.3
	baz=257						
NSTT	Nanjuang	0.97	257	eP	Pn	15 08 54.2	0.0
	baz=256						
NSTT				eS	Sn	15 09 07.9	+0.4
	baz=256						
YOJ	Yonaguni jima	0.97	114	eP	Pb	15 08 53.8	0.0
	baz=113						
YOJ	Yonaguni jima	0.97	114	P	Pb	15 08 53.4	-0.4
YOJ				eS	Sb	15 09 06.4	+0.1
IRIF	Iriomote-Funau	1.63	108	P	Pn	15 09 02.4	-0.9
JKRS	Kuro-shima	1.90	108	P	Pn	15 09 08.1	+1.1
JIJ	Ishigaki jima	1.98	104	P	Pn	15 09 09.1	+1.0
JISG	Ishigakijimahi	2.09	97	P	Pb	15 09 11.9	-0.9

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*IDC **02** 15:08:58.0±1.8, 22.°29N×122.°37E, h0^{km}, mb3.7/2, mb1 3.8/3, mb1mx3.3/44, mbtmp3.7/3, ML3.2/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/42, Error ellipse: s-maj=117.2km s-min=30.3km az=78.0*
*ISCJB **02** 15:09:18.2±0.7, 24.°69N±0.°02×122.°62E±0.°01, h14^{km}±5^{km}, mb3.5/1, MS3.6/1, Error ellipse: s-maj=3.5km s-min=2.0km az=18.8*
*JMA **02** 15:09:18.5, 24.°66N×122.°60E, h26^{km}±1^{km}, M3.2*
*TAP **02** 15:09:18.6, 24.°70N×122.°53E, h12^{km}±1^{km}, ML3.5, C*
ISC 02 15:09:17.1±1.1, 24.°68N±0.°02×122.°61E±0.°02, h4^{km}±9^{km}, n76, σ0.^{s}81/128, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.38	126	P	Pb	15 09 26.4	-0.1
JYNG				S	Sb	15 09 32.2	-0.5
YOJ	Yonaguni jima	0.43	121	eP	Pb	15 09 27.2	0.0
	baz=117						
YOJ				eS	Sb	15 09 33.4	-0.6
	baz=117						
YOJ	Yonaguni jima	0.43	121	P	Pb	15 09 27.2	0.0
YOJ				S	Sb	15 09 33.4	-0.6
EOS1	EOS1	0.46	253	eP	Pb	15 09 27.2	-0.4
	baz=248						
EOS1				eS	Sb	15 09 33.6	-1.1
	baz=248						
TWB1	Santiao Chiao	0.65	300	i P	Pb	15 09 30.8	-0.2
	baz=302						
TWB1				i S	Sb	15 09 39.2	-1.2
	baz=302						
TWC	Suao	0.69	264	P	Pg	15 09 30.6	+0.2
	baz=261						
TWC				i S	Sg	15 09 40.2	+0.8
	baz=261						
NTC	Toucheng	0.73	284	eP	Pb	15 09 32.0	-0.3
	baz=283						
NTC				eS	Sb	15 09 41.8	-0.8
	baz=283						
TIPB	Shuangxi	0.77	292	P	Pb	15 09 32.8	-0.2
	baz=293						
TIPB				S	Sb	15 09 42.9	-0.9
	baz=293						
ILA	Ilan	0.79	276	P	Pb	15 09 32.9	-0.4
	baz=275						
ILA				S	Sb	15 09 43.9	-0.4
	baz=275						
NANB	Nanao	0.82	252	eP	Pg	15 09 33.1	+0.3
	baz=249						
NANB				eS	Sb	15 09 44.3	-1.0
	baz=249						
ENA	Nanau	0.83	252	P	Pb	15 09 33.5	-0.5
	baz=249						
ENA				S	Sb	15 09 44.7	-0.8
	baz=249						
NWF	Wu-fen Shan	0.84	298	i P	Pb	15 09 34.3	-0.1
	baz=298						
NWF				i S	Sb	15 09 45.1	-1.0
	baz=298						
WFSB	Wu-fen Shan	0.84	298	eP	Pb	15 09 34.2	-0.1
	baz=298						
WFSB				eS	Sb	15 09 45.1	-0.9
	baz=298						
TWE	Neicheng	0.86	273	i P	Pb	15 09 34.6	0.0
	baz=271						
TWE				i S	Sb	15 09 45.5	-0.8
	baz=271						
SLBB	Yuanshan	0.89	275	P	Pn	15 09 35.5	-0.9
	baz=274						
SLBB				S	Sb	15 09 47.1	-0.2
	baz=274						
TWA	Mucha	0.98	288	P	Pb	15 09 36.4	-0.2
	baz=288						
TWA				i S	Sg	15 09 48.7	+0.1
	baz=288						
NDT	Datong Townshi	1.00	266	P	Pn	15 09 37.0	-0.9
	baz=264						
NDT				S	Sb	15 09 49.9	-0.6
	baz=264						

YM01	YM01	1.05	296	*e*P	Pg	15 09 37.2	0.0
	baz=297						
YM01				*e*S	Sg	15 09 50.8	0.0
	baz=297						
NACB	Ninganchiao	1.05	242	*e*P	Pg	15 09 37.3	0.0
	baz=238						
NACB				*e*S	Sb	15 09 52.0	+0.1
	baz=238						
YM08	YM08	1.05	299	P	Pg	15 09 37.0	-0.4
	baz=299						
YM08				*e*S	Sg	15 09 50.5	-0.5
	baz=299						
TATO	Taipei	1.06	286	*e*P	Pn	15 09 38.1	-0.6
	baz=286						
TATO				*e*S	Sg	15 09 50.7	-0.4
	baz=286						
YM05	YM05	1.06	297	*e*P	Pb	15 09 37.5	-0.6
	baz=298						
YM05				*e*S	Sg	15 09 51.1	-0.2
	baz=298						
YM10	YM10	1.06	297	*e*P	Pg	15 09 37.1	-0.3
	baz=297						
YM10				*e*S	Sg	15 09 51.1	-0.1
	baz=297						
PCYT	Pengchaiyu	1.06	333	P	Pb	15 09 37.5	-0.6
	baz=336						
PCYT				S	Sn	15 09 52.7	-1.3
	baz=336						
IRIF	Iriomote-Funau	1.08	108	P	Pg	15 09 37.6	-0.2
IRIF				S	Sb	15 09 52.6	-0.2
YM04	YM04	1.08	296	*e*P	Pg	15 09 37.5	-0.3
	baz=296						
YM04				*e*S	Sg	15 09 51.8	-0.1
	baz=296						
YM03	YM03	1.09	297	*e*P	Pn	15 09 39.5	+0.3
	baz=298						
YM03				*e*S	Sb	15 09 52.6	-0.6
	baz=298						
TWY	Chenhua	1.09	303	P	Pn	15 09 38.6	-0.5
	baz=304						
TWY				S	Sb	15 09 52.7	-0.4
	baz=304						
TWD	Chiawan	1.10	237	P	Pn	15 09 38.6	-0.7
	baz=234						
TWD				*e*S	Sb	15 09 53.5	+0.1
	baz=234						
ANP	Anpu	1.11	297	*e*P	Pn	15 09 40.2	+0.7
	baz=298						
YHNB	Yeheng	1.12	270	*e*P	Pn	15 09 39.1	-0.6
	baz=268						
YHNB				*e*S	Sg	15 09 53.2	+0.1
	baz=268						
ETLH	Xiulin Townshi	1.13	246	*e*P	Pb	15 09 38.9	-0.3
	baz=243						
ETLH				*e*S	Sg	15 09 53.5	+0.1
	baz=243						
NSK	Sanguang	1.14	270	P	Pn	15 09 39.1	-0.7
	baz=268						
NSK				S	Sg	15 09 53.7	+0.1
	baz=268						
NNSB	Datong	1.14	258	*e*P	Pb	15 09 39.2	-0.3
	baz=255						
NNSB				*e*S	Sb	15 09 54.2	-0.5
	baz=255						
NNS	Nan Shan	1.15	258	*i* P	Pn	15 09 39.5	-0.5
	baz=256						
NNS				*i* S	Sb	15 09 54.9	0.0
	baz=256						
NTST	Danshui	1.16	295	*e*P	Pn	15 09 40.4	+0.3
	baz=295						
TWS1	Kuangyinshan	1.16	291	*e*P	Pn	15 09 39.8	-0.3
	baz=291						
TWS1				S	Sb	15 09 54.7	-0.4
	baz=291						
ENLB	Shoufeng	1.20	230	*e*P	Pb	15 09 39.0	-1.4
	baz=227						
WLTB	Daxi	1.24	278	*e*P	Pg	15 09 41.4	+0.4
	baz=277						
WLTB				*e*S	Sn	15 09 57.5	-0.9
	baz=277						
HATJ	Hateruma jima	1.26	119	P	Pn	15 09 40.6	-0.8
HATJ				*e*S	Sg	15 09 57.8	+0.3
JKRS	Kuro-shima	1.35	109	P	Pn	15 09 42.0	-0.7
JKRS				S	Sb	15 10 00.0	-0.6
ESL	Shilin	1.38	231	P	Pn	15 09 42.4	-0.7
	baz=228						
ESL				*e*S	Sg	15 10 01.3	0.0
	baz=228						
JIJ	Ishigaki jima	1.43	102	P	Pn	15 09 42.8	-1.1
JIJ				S	Sn	15 10 00.5	-2.7
CHGB	Renai	1.45	245	*e*P	Pg	15 09 44.9	+0.1
	baz=242						
CHGB				*e*S	Sn	15 10 02.7	-1.1
	baz=242						
LIOB	Emei	1.45	269	P	Pg	15 09 45.1	+0.2
	baz=268						
NSTT	Nanjuang	1.46	268	P	Pg	15 09 45.4	+0.2
	baz=267						
EGFH	Guangfu	1.48	227	*e*P	Pn	15 09 44.4	-0.1
	baz=224						
EGFH				*e*S	Sn	15 10 03.3	-0.9
	baz=224						
JISG	Ishigakijimahi	1.55	93	P	Pn	15 09 44.5	-1.0
WHP	Taichung City	1.57	255	*e*P	Pg	15 09 47.6	+0.4
	baz=253						
HGSD	Ruisui	1.60	223	*e*P	Pn	15 09 45.8	-0.4
	baz=220						
HGSD				*e*S	Sn	15 10 06.6	-0.8
	baz=220						
VWDT	VWDT	1.62	236	*e*P	Pn	15 09 46.7	+0.2
	baz=233						
VWDT				*e*S	Sb	15 10 08.1	-0.4
	baz=233						
EHY	Hungye	1.66	225	P	Pn	15 09 46.0	-1.0
	baz=222						
EHY				*e*S	Sn	15 10 08.0	-0.7
	baz=222						
DPDB	Guoxing	1.66	248	P	Pb	15 09 47.8	-0.6
	baz=245						
DPDB				*e*S	Sn	15 10 08.4	-0.5
	baz=245						
TWQ1	Liyutan	1.70	259	P	Pg	15 09 50.1	+0.4
	baz=257						
TWQ1				*e*S	Sg	15 10 12.2	+0.4
	baz=257						
PTSB	Yuanli	1.75	263	*e*P	Pb	15 09 48.7	-1.1
	baz=261						
SMLT	Sun Moon Lake	1.75	243	P	Pb	15 09 48.8	-1.0
	baz=241						
SMLT				*e*S	Sn	15 10 10.0	-1.1
	baz=241						
SSLB	Suanglung	1.75	240	*e*P	Pn	15 09 48.4	+0.1
	baz=237						
YULB	Yu-li	1.75	223	*e*P	Pn	15 09 47.7	-0.6
	baz=221						
TYC	Yuchr	1.77	245	*e*P	Pb	15 09 49.0	-1.1
	baz=242						
TYC				*e*S	Sn	15 10 10.9	-0.6
	baz=242						
TWF1	Yuli	1.78	222	*e*P	Pn	15 09 48.0	-0.7
	baz=219						
WDJ	Dajia District	1.82	260	*e*P	Pn	15 09 49.1	-0.1
	baz=258						
WHYT	Xinyi Township	1.88	239	*e*P	Pb	15 09 51.4	-0.6
	baz=237						
WHYT				*e*S	Sn	15 10 13.8	-0.4
	baz=237						
JTJ	Tarama	1.91	91	P	Pn	15 09 50.3	-0.1
JTJ				*e*S	Sn	15 10 14.7	-0.1
WJS	Zhushan	1.92	244	*e*P	Pb	15 09 51.2	-1.4
	baz=242						
WJS				*e*S	Sn	15 10 14.3	-0.8
	baz=242						
CHN5	Tsauling	2.07	239	*e*P	Pb	15 09 54.1	-1.1
	baz=237						
ELDTW	Lidau	2.08	225	*e*P	Pn	15 09 52.8	0.0
	baz=222						
WTP	Ta-pu	2.32	232	*e*P	Pn	15 09 57.2	+1.2
	baz=230						
TWK	Hsinying	2.40	234	*e*P	Pb	15 09 58.8	-2.0
	baz=232						
TWK				*e*S	Sn	15 10 26.7	-0.3
	baz=232						
CHN1	Nanshi	2.42	232	*e*P	Pb	15 09 59.2	-1.9
	baz=230						
SGST	Jiashian	2.44	230	*e*P	Pn	15 09 59.2	+1.5
	baz=227						
ECL	Taimali	2.57	216	*e*P	Pn	15 10 01.2	+1.7
	baz=214						
SSD	Sandimen	2.64	224	*e*P	Pn	15 10 02.3	+1.8
	baz=221						
MASBT	Mashibuluo	2.74	222	*e*P	Pn	15 10 03.4	+1.5
	baz=220						
KSRS	Korea Array	13.52	18	Pn	P	15 12 42.3	+3.3
	0.1nm,0.3s,baz=196,slow=11,SNR=4.1						
SONM	Songino Array	26.44	335	P	P	15 14 55.4	+0.2
	1.0nm,0.6s,baz=154,slow=11,SNR=2.4						
PETK	Petropavlovsk-	38.73	34	LR	LR	15 32 59.9	
	comp=Z,86nm,19.9s,baz=344,slow=35						

IDC ***02*** *15:36:42.4±0.3, 4°.89N×96°.90E, h0^{km}, mb4.7/38, mb1 4.7/39, mb1mx4.7/44, mbtmp4.7/39, ML4.3/1, MS4.7/40, Ms1 4.7/40, ms1mx4.6/51, Error ellipse: s-maj=13.2km s-min=9.0km az=50.0*

ISCJB ***02*** *15:36:43.4±0.6, 4°.62N±0°.02×96°.66E±0°.02, h15^{km}±4^{km}, mb5.0/178, MS4.9/73, Error ellipse: s-maj=3.7km s-min=2.6km az=151.5*

NEIC ***02*** *15:36:43.4±0.1, 4°.65N×96°.71E, h10^{km}, mb5.2/99, MW5.3, Error ellipse: s-maj=4.6km s-min=3.1km az=47.0 Best double couple: NP1:ϕ_s289.00000°, δ90.00000°, λ169.00000°. NP2:ϕ_s19.00000°, δ79.00000°, λ0.00000°. Principal axes: T 1.1700, Plg8.0000°, Azm244.0000°; N -0.1400, Plg79.0000°, Azm107.0000°; P -1.0300, Plg7.0000°, Azm335.0000°;*

NEIC Felt at Medan. Also felt at Taiping, Malaysia.

BJI ***02*** *15:36:44.0±0.0, 4°.61N×96°.67E, h12^{km}, mb4.9/73, mB5.0/60, Ms5.2/79, Ms7 4.9/71*

GCMT ***02*** *15:36:45.4±0.1, 4°.64N±0°.01×96°.77E±0°.01, h13^{km}±1^{km}, MW5.2/103, Moment Tensor Solution. s65, c99; s103, c191; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.05±.01; $M_{\theta\theta}$-0.31±.01; $M_{\phi\phi}$0.35±.02; $M_{r\theta}$-0.12±.03; $M_{\theta\phi}$-0.79±.02; $M_{\phi r}$-0.39±.05; Best double couple: $M_0$0.94700×10^{17} NP1:ϕ_s11.00000°, δ87.00000°, λ-26.00000°. NP2:ϕ_s102.00000°, δ64.00000°, λ-176.00000°. Principal axes: T 0.9470, Plg15.0000°, Azm59.0000°; N -0.0020, Plg64.0000°, Azm184.0000°; P -0.9460, Plg20.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***02*** *15:36:46.7±0.1, 5°N±2°×9°7E±°, h10^{km}, M5.1/49, mB5.5/24, mb5.2/49, MLv5.5/13, Mw(mB)4.9/24*

MOS ***02*** *15:36:46.4±1.7, 4°.61N×96°.69E, h33^{km}, mb5.3/75, MS4.9/10, Error ellipse: s-maj=7.7km s-min=5.1km az=109.2*

ISC 02 15:36:46.2±0.2, **4°.63N**±0°.03×**96°.65E**±0°.03, **h21**^{km}±2^{km}, **n630,** σ1^{s}**87**/670, **mb5.0**/192, **MS4.9**/74, **24C-12D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	Meulaboh, Aceh	0.44	213	P	Pb	15 36 54.6	-0.5
MLSI				S	Sn	15 37 03.6	-1.0
LHMI	Lhok Sumawe	0.66	27	*e*Pg	Pb	15 36 56.7	-2.5
LHMI	Lhok Sumawe	0.66	27	P	Pb	15 36 55.9	-3.2
LHMI				S	Sb	15 37 07.3	-0.7
TPTI		1.47	159	P	Pn	15 37 10.5	-0.9
TPTI				S	Sb	15 37 31.3	+0.4
KCSI	Kotacane, Aceh	1.57	134	P	Pn	15 37 11.3	-1.6
KCSI				S	Sb	15 37 33.9	-0.2
TSI	Tuntungan	2.22	120	P	Pn	15 37 20.4	-1.4
TSI				S	Sb	15 37 53.7	+1.0
SNSI	Sinabang, Aceh	2.23	188	P	Pn	15 37 22.9	+0.9
SNSI				S	Sb	15 37 53.7	+0.7
PSI	Prapat	2.91	129	Pn	Pn	15 37 31.6	+0.2
	45nm,0.3s,baz=327,slow=12,SNR=109						
PSI				Sn	Sn	15 38 08.4	+2.5
	63nm,0.3s,baz=325,slow=11,SNR=4.9						
PSI				LR	LR	15 39 04.9	
	comp=Z,24µm,20.3s,baz=288,slow=48						
GSI	Gunungsitoli	3.44	164	*e*Pn	Pn	15 37 38.5	0.0
GSI	Gunungsitoli	3.44	164	P	Pn	15 37 39.1	+0.6
PKDT	Phuket	3.65	27	P	Pn	15 37 41.4	-0.1
KULM	Kulim	4.04	81	*e*Pn	Pn	15 37 44.1	-2.8
IPM	Ipoh	4.37	92	*e*Pn	Pn	15 37 48.5	-2.9
TRTT	Trang	4.39	43	P	Pn	15 37 50.5	-1.2
SKLT	Songkhla	4.69	57	P	Pn	15 37 55.8	0.0
MNSI	Mandailing Nat	4.81	142	P	Pn	15 37 58.0	+0.6
BKNI	Bangkinang	6.13	134	*e*Pn	Pn	15 38 16.1	+0.5
BKNI	Bangkinang	6.13	134	P	Pn	15 38 16.9	+1.3
	901nm,1.4s,8µm8.3nm						
PPI	Padang Panjang	6.29	143	P	Pn	15 38 15.0	-2.9
SISI	Saibi	6.40	158	P	Pn	15 38 20.9	+1.5
	141nm,1.3s,2µm1.7nm						
PDSI	Padang	6.70	145	P	Pn	15 38 24.0	+0.5
	245nm,1.0s,3µm2.4nm						
SDSI	Sungai Dareh	7.31	139	P	Pn	15 38 30.4	-1.4
	93nm,1.3s,6µm2.2nm						
MYKOM	Kota Tinggi	7.73	111	*e*Pn	Pn	15 38 34.1	-3.5
PBA	Port Blair	7.97	331	*e*P	Pn	15 38 39.6	-1.4
KRJI	Kerinci	8.23	144	P	Pn	15 38 45.3	+0.7
	234nm,0.9s,4µm						
TPRI	Tanjung Pinang	8.69	115	P	Pn	15 38 49.1	-1.7
	80nm,0.5s,23µm						
PHET	Kaeng Krachan	8.74	20	P	Pn	15 38 53.7	+2.3
	105µm,0.9s,1µm						
JMBI	JAMBI	9.36	132	P	Pn	15 39 03.2	+3.2
CHBT	CHBT	9.83	34	P	Pn	15 39 07.9	+1.5
	284nm,0.5s,3µm						
SRDT	SRDT	9.96	14	P	Pn	15 39 13.0	+4.8
	22nm,1.2s,2µm						
LHSI	Lahat	10.86	141	P	Pn	15 39 19.6	-0.9
	246nm,1.2s						
MNAI	Manna	10.93	145	*e*Pn	Pn	15 39 19.8	-1.8
PPBI	Pangkal Pinang	11.64	125	P	Pn	15 39 38.6	+7.4
UMPA	Umpang Tak	11.71	11	P	Pn	15 39 33.8	+1.7
	135µm,1.0s						
MDSI	Maura Dua	11.78	140	P	Pn	15 39 31.0	-2.1
LWLI	Liwa	12.11	142	P	P	15 39 44.6	-5.8
CHAI	Chaiyaphum	12.37	25	P	Pn	15 39 44.7	+3.5
	49µm,1.2s,585µm						
KLI	Kotabumi	12.50	139	P	P	15 39 58.4	+3.8
PBKT	Sadao Pong	12.60	19	P	Pn	15 39 45.3	+1.0
	53nm,0.7s,660nm						
KHON	Khomkaen	13.12	27	P	Pn	15 39 55.8	+4.4
	135µm,1.2s						
TPI	Tanjungpandan	13.22	124	P	Pn	15 39 55.4	+2.5
UTTA	Uttaradit	13.58	16	P	Pn	15 40 00.8	+3.1
	90µm,0.9s,787µm						
DLV	T Lat	13.78	57	*e*Pn	Pn	15 39 59.2	-1.5
CM31	Chiang Mai Arr	13.92	9	*e*Pn	Pn	15 40 02.6	+0.2
CMAR	Chiang Mai Arr	13.92	9	Pn	Pn	15 40 03.6	+1.2
	0.3nm,0.3s,baz=198,slow=12,SNR=29						
CMAR				Lg	Lg	15 43 57.6	
	0.1nm,0.3s,baz=195,slow=23,SNR=5.5						
CMAR				LR	LR	15 45 54.9	
	comp=Z,4µm,18.8s,baz=190,slow=40						
LAMP	Lampang	14.11	12	P	P	15 40 12.8	+0.3
SKNT	Sakolnakorn	14.22	30	P	Pn	15 40 08.9	+2.4
	159nm,1.5s,2µm						
CHTO	Chiang Mai	14.27	9	*e*Pn	Pn	15 40 07.1	-0.1
CHTO	Chiang Mai	14.27	9	*e*P	Pn	15 40 07.1	-0.1
CMMT	Chiang Mai	14.27	9	P	Pn	15 40 10.9	+3.7
	17nm,1.5s,461nm						
PANO	Nakornpanom	14.69	32	P	Pn	15 40 15.1	+2.3
	4.6nm,1.2s						
NONG	Nongkai	14.79	25	P	Pn	15 40 16.3	+2.1
	1.6nm,1.2s						
PAYA	Payao	14.97	12	P	P	15 40 21.5	-0.6
	135µm,1.2s						
SBUM	Sibu	15.70	97	*e*Pn	Pn	15 40 23.9	-2.4
	37nm,1.1s						
LEM	Lembang	15.80	136	Pn	Pn	15 40 28.9	+1.2
	2.6nm,0.3s,baz=311,slow=20,SNR=2.7						
LEM				LR	LR	15 47 45.4	
	comp=Z,8µm,18.6s,baz=297,slow=42						
PALK	Pallekele	16.07	280	Pn	Pn	15 40 29.5	-1.7
	0.5nm,0.3s,baz=116,slow=11,SNR=2.3						
PALK				Sn	Sn	15 43 23.9	-5.1
	2.4nm,0.3s,baz=116,slow=6.7,SNR=4.6						
PALK				LR	LR	15 46 54.7	
	comp=Z,2µm,18.4s,baz=111,slow=38						
CISI	Cisompet, Garu	16.46	137	*e*Pn	Pn	15 40 34.4	-1.6
	52nm,0.7s						
PBKI	Pangkalan Bun	16.69	116	P	Pn	15 40 39.9	+0.9
XMIS	Christmas Isla	17.49	149	*e*P	Pn	15 40 48.1	-0.8
	243nm,1.4s						
SMRI	Semarang	18.01	130	*e*P	Pn	15 40 54.3	-1.1
	202nm,1.4s						
SMRI	Semarang	18.01	130	P	P	15 41 02.2	+6.4
MDRS	Chennai	18.23	298	*e*P	Pn	15 40 56.5	-1.6
MDRS				IAmb	IAmb	15 41 04.3	
	comp=Z,170nm,1.0s						
VIS	Vishakhapatnam	18.41	316	*i* P	P	15 41 00.2	0.0
BRDH	Bariadhala	18.58	345	P	Pn	15 41 02.9	+0.5
	comp=Z,39nm,0.3s,baz=95,slow=18,SNR=3.9						
BRDH				LR	LR	15 50 06.2	
	comp=Z,4µm,20.3s,baz=141,slow=44						
BWNR	Bhubaneshwar	18.81	327	*e*P	P	15 41 03.6	-0.9
WOJI	Wonogiri, Jawa	18.88	131	P	Pn	15 41 13.9	+7.9
NGJI	Ngawi	18.99	129	P	Pn	15 41 13.4	+6.0
BELO	BELONIA	19.18	345	*e*P	P	15 41 07.9	-0.7
QIZ	Qiongzhong	19.25	41	P	P	15 41 06.9	-2.6
QIZ				S	Sn	15 44 40.9	-5.0
QIZ				pmax	pmax		
	comp=Z,18nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,280nm,4.4s						
QIZ				LR	LR		
	comp=Z,6µm,20.9s						
QIZ				LR	LR		
	comp=Z,6µm,19.2s						
QIZ				LR	LR		
	comp=Z,2µm,16.4s						
GRJI	Gresik	19.53	126	P	Pn	15 41 20.8	+7.0
KKM	Kota Kinabalu	19.54	85	*e*P	P	15 41 12.7	0.0
	comp=Z,179nm,1.0s						
PWJI	Pagerwojo	19.66	130	P	Pn	15 41 25.0	+10
TRD	Trivandrum	19.93	282	*e*P	P	15 41 16.4	-0.5
KMMI	Kalianget	20.82	124	P	P	15 41 27.6	+1.0
BKB	Balikpapan	21.06	106	P	P	15 41 29.9	+0.7
KOHI	KOHIMA	21.11	354	*e*P	P	15 41 28.2	-1.6
KOHI				IAmb	IAmb	15 41 33.2	
SMKI	Samarinda	21.15	103	P	P	15 41 35.4	+5.2
KMI	Kunming	21.20	15	P	P	15 41 33.7	+2.9
KMI				pP	pP	15 41 38.7	+1.7
KMI				sP	sP	15 41 41.1	+1.5
KMI				S	S	15 45 23.1	-2.8
KMI				sS	Sn	15 45 30.9	-2.1
KMI				pmax	pmax		
	comp=Z,45nm,1.0s						
KMI				pmax	pmax		
	comp=Z,200nm,3.1s						
KMI				LR	LR		
	comp=Z,1µm,11.9s						
KMI				LR	LR		
	comp=Z,3µm,13.5s						
KMI				LR	LR		
	comp=Z,2µm,12.7s						
SHL	Shillong	21.31	348	*e*P	P	15 41 32.2	+0.2
	comp=Z,3µm,2.0s						
SHL	Shillong	21.31	348	*e*P	P	15 41 32.2	+0.2
SHL	Shillong	21.31	348	*e*P	P	15 41 31.5	-0.4
SHL				IAmb	IAmb	15 41 35.6	
	comp=Z,532nm,1.3s						
SGKI	Sangatta, Kali	21.56	103	P	P	15 41 33.0	-1.5
MOKO	MOKOCHONG	21.66	355	*e*P	P	15 41 35.2	-0.5
MOKO				IAmb	IAmb	15 41 43.4	
	comp=Z,185nm,0.5s						
BOK	Bokaro	21.69	332	*e*P	P	15 41 34.4	-1.5
JAGI	Jajag, Banyuwa	21.78	127	P	P	15 41 44.5	+7.6
HYB	Hyderabad	21.80	307	*i* P	P	15 41 39.5	+2.3
HYB				*e*S	S	15 45 40.0	+2.4
HYB				*e*		15 45 54.0	
HYB	Hyderabad	21.80	307	*e*P	P	15 41 37.5	+0.3
HYB				IAmb	IAmb	15 41 40.8	
	comp=Z,2µm,3.6s						
GUWA	GUWAHATI	21.96	348	*e*P	P	15 41 38.3	-0.4
JORH	JORHAT	22.11	354	*e*P	P	15 41 41.0	+0.8
TEZP	TEZPUR	22.17	351	*e*P	P	15 41 38.3	-2.7
SRBI	Singaraja	22.42	124	P	P	15 41 42.1	-1.7
ZIRO	ZIRO	22.92	354	*e*P	P	15 41 47.4	-1.7
ZIRO				IAmb	IAmb	15 41 54.0	
	comp=Z,86nm,1.0s						
TAWA	Tawang	23.28	349	*e*P	P	15 41 51.6	-1.4
NGP	Nagpur	23.70	315	*e*P	P	15 41 55.5	-1.3
NGP				IAmb	IAmb	15 42 02.9	
	comp=Z,251nm,2.5s						
NGP				*e*S	S	15 46 11.7	+0.9
GYA	Guiyang	23.73	23⇑	*i*P	P	15 41 59.2	+2.1
GYA				pP	pP	15 42 04.7	+1.0
GYA				PP	PnPn	15 42 31.6	+6.6
GYA				S	S	15 46 10.2	-1.2
GYA				SS	SnSn	15 47 00.7	+11
GYA				pmax	pmax		
	comp=Z,40nm,1.3s						
GYA				pmax	pmax		
	comp=Z,190nm,4.9s						
GYA				LR	LR		
	comp=Z,2µm,14.3s						
GYA				LR	LR		
	comp=Z,3µm,14.3s						
GYA				LR	LR		
	comp=Z,4µm,14.3s						
GTK	Tadong	23.83	342	*e*P	P	15 41 57.7	-0.4
GTK				IAmb	IAmb	15 42 05.2	
	comp=Z,32nm,1.0s						
TTSI	Tana Toraja	24.38	108	P	P	15 42 03.5	+0.3
GZH	Guangzhou	24.43	40	P	P	15 42 12.8	+9.2
GZH				S	S	15 46 38.5	+16
GZH				LR	LR		
	comp=N,3µm,16.6s						
GZH				LR	LR		
	comp=E,3µm,16.0s						
SPSI	Sidrap Palu	24.63	110	P	P	15 42 05.8	+0.3
GOA	Goa	24.89	297	*e*P	P	15 42 08.3	+0.5
PLAI	Plampang	24.95	122	P	P	15 42 07.9	-0.5
JIRN	Jiri	24.97	338	*e*P	P	15 42 10.6	+1.7
	comp=E,62nm,0.8s						
KAPI	Kappang	24.99	112	P	P	15 42 07.9	-0.9
	comp=E,61nm,0.9s,baz=295,slow=13,SNR=11						
KAPI	Kappang	24.99	112	*e*P	P	15 42 07.1	-1.6
	comp=E,72nm,0.9s						
KAPI	Kappang	24.99	112	*e*P	P	15 42 07.1	-1.6
KAPI				pmax	pmax		
	comp=Z,72nm,0.9s						
PKI	Pulchoki	25.20	336	*e*P	P	15 42 12.0	+1.1
PKIN	Phulchoki	25.21	336	*e*P	P	15 42 12.2	+1.3
GUN	Gumba	25.32	337	*e*P	P	15 42 12.9	+0.9
	comp=Z,160nm,1.1s						
DMN	Daman	25.36	336	*e*P	P	15 42 13.4	+1.1
	comp=Z,52nm,1.1s						
KKN	Kakani	25.45	336	*e*P	P	15 42 14.2	+1.2
	comp=Z,82nm,1.1s						
BKSI	Bulukumba	25.45	113	P	P	15 42 13.7	+0.8
LSA	Lhasa	25.47	349	*e*P	P	15 42 12.3	-1.1
	comp=Z,293nm,1.4s						
LSA	Lhasa	25.47	349	*e*P	P	15 42 12.4	-1.1
LSA				pmax	pmax		
	comp=Z,293nm,1.4s						
APSI	Ampana	25.58	102	P	P	15 42 13.9	-0.2
TGY	Tagaytay City	25.72	67	P	P	15 42 14.2	-1.2
	comp=Z,88nm,0.4s,baz=277,slow=6.9,SNR=7.5						
TGY				LR	LR	15 51 21.9	
	comp=Z,914nm,19.2s,baz=245,slow=35						
KOLN	Koldanda	26.15	333	*e*P	P	15 42 20.8	+1.4
	comp=Z,82nm,0.8s						
BHPL	Bhopal	26.20	317	*e*P	P	15 42 19.4	-0.4
BHPL				IAmb	IAmb	15 42 25.3	
	comp=Z,14nm,0.6s						
DANN	Dangsing	26.58	334	*e*P	P	15 42 24.5	+1.1
	comp=Z,93nm,0.9s						
LUWI	Luwuk	26.70	102	*e*P	P	15 42 23.0	-1.3
	comp=Z,518nm,1.4s						
LUWI	Luwuk	26.70	102	P	P	15 42 25.5	+1.2
PYUN	Piuthan	26.71	332	*e*P	P	15 42 25.2	+0.7
	comp=Z,131nm,1.2s						
WBSI	Waikabubak, Su	26.74	122	P	P	15 42 22.9	-1.7
CD2	Chengdu	26.98	14⇑	*i*P	P	15 42 28.2	+1.5
CD2				pP	pP	15 42 30.1	-3.3
CD2				PcP	PcP	15 45 46.2	-2.0
CD2				S	S	15 47 03.2	+0.1
CD2				SS	SnSn	15 48 18.2	+8.5
CD2				PcS	PcS	15 49 28.4	-1.4
CD2				pmax	pmax		
	comp=Z,50nm,1.3s						
CD2				pmax	pmax		
	comp=Z,290nm,4.5s						
CD2				LR	LR		
	comp=Z,8µm,13.9s						
CD2				LR	LR		
	comp=Z,16µm,17.7s						
CD2				LR	LR		

	comp=Z,6µm,10.8s						
H08S2	**Diego Garcia H**	**27.01**	**243**	T	T	16 09 51.8	
	baz=61,slow=75,SNR=323						
H08S3	**Diego Garcia H**	**27.01**	**243**	T	T	16 09 44.0	
	baz=61,slow=75,SNR=272						
H08S1	**Diego Carcia H**	**27.02**	**243**	T	T	16 09 48.0	
	baz=61,slow=75,SNR=85						
ENH	**Enshi**	**28.24**	**24**	*e*P	**P**	**15 42 37.4**	**-0.5**
	comp=Z,128nm,1.8s						
MMRI	**Maumere**	**28.72**	**117**	*e*P	**P**	**15 42 41.1**	**-1.3**
	comp=Z,71nm,1.1s						
QZH	**Quanzhou**	**29.20**	**44**	⇑*i*P	**P**	**15 42 49.0**	**+2.5**
QZH				S	**S**	**15 47 44.1**	**+6.1**
QZH				LR	LR		
	comp=Z,4µm,16.1s						
QZH				LR	LR		
	comp=Z,3µm,17.0s						
QZH				LR	LR		
	comp=Z,3µm,11.8s						
TWG	**Pinlang**	**29.74**	**50**	*e*P	**P**	**15 42 49.8**	**-1.5**
	comp=Z,350nm,1.2s						
SSLB	**Suanglung**	**30.20**	**49**	*e*P	**P**	**15 42 53.6**	**-1.8**
	comp=Z,26nm,1.2s						
YULB	**Yu-li**	**30.23**	**50**	*e*P	**P**	**15 42 53.9**	**-1.7**
	comp=Z,36nm,1.2s						
BATI	**Baumata**	**30.68**	**119**	P	**P**	**15 42 59.3**	**-0.5**
	comp=Z,39nm,0.9s,baz=72,slow=17,SNR=3.8						
BATI				LR	LR	15 56 37.7	
	comp=Z,3µm,18.2s,baz=292,slow=39						
WHN	**Wuhan**	**30.71**	**31**	P	**P**	**15 42 56.0**	**-3.8**
WHN				S	**S**	**15 48 02.0**	**+0.4**
WHN				LR	LR		
	comp=N,8µm,14.2s						
WHN				LR	LR		
	comp=E,5µm,11.5s						
WHN				LR	LR		
	comp=Z,6µm,12.3s						
DDI	**Dehra Dun**	**30.99**	**328**	*ex*	P	15 43 08.1	+5.7
YHNB	**Yeheng**	**31.02**	**48**	*e*P	**P**	**15 43 00.4**	**-2.3**
	comp=Z,38nm,1.1s						
LBMI	**Labuha**	**31.27**	**99**	P	P	15 43 11.5	+6.5
XAN	**Xi'an**	**31.41**	**20**	*e*P	**P**	**15 43 04.0**	**-2.0**
	comp=Z,29nm,1.0s						
XAN	**Xi'an**	**31.41**	**20**	P	**P**	**15 43 06.8**	**+0.8**
XAN				pP	sP	15 43 17.8	+2.6
XAN				PcP	**PcP**	**15 46 00.3**	**+0.9**
XAN				S	**S**	**15 48 11.0**	**-1.6**
XAN				sS	sS	15 48 29.5	+6.7
XAN				SS	**SnSn**	**15 50 00.5**	**+3.1**
XAN				pmax	pmax		
	comp=Z,24nm,1.4s						
XAN				pmax	pmax		
	comp=Z,130nm,4.3s						
XAN				LR	LR		
	comp=Z,3µm,25.0s						
XAN				LR	LR		
	comp=Z,7µm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,19.5s						
XAN	**Xi'an**	**31.41**	**20**	*e*P	**P**	**15 43 04.0**	**-2.0**
XAN				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH	**Lanzhou**	**32.00**	**11**	⇑P	**P**	**15 43 13.5**	**+2.2**
LZH				sP	sP	15 43 22.6	+2.0
LZH				S	**S**	**15 48 23.2**	**+1.2**
LZH				sS	pS	15 48 31.3	+1.7
LZH				pmax	pmax		
	comp=Z,75nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
LZH				LR	LR		
	comp=Z,4µm,17.4s						
LZH				LR	LR		
	comp=Z,2µm,18.0s						
SMLA	**Simla**	**32.10**	**327**	*e*P	**P**	**15 43 11.2**	**-0.9**
SMLA				IAmb	IAmb	15 43 13.6	
	comp=Z,6.7nm,0.4s						
DHRM	**DHARAMSHALA**	**33.43**	**328**	*e*P	**P**	**15 43 23.5**	**-0.5**
DHRM				IAmb	IAmb	15 43 26.8	
	comp=Z,7.9nm,0.9s						
NJ2	**Nanjing**	**34.31**	**35**	⇑P	**P**	**15 43 33.8**	**+2.5**
NJ2				pP	**sP**	**15 43 41.4**	**+0.7**
NJ2				S	**S**	**15 48 56.2**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,32nm,1.1s						
NJ2				LR	LR		
	comp=Z,3µm,15.2s						
NJ2				LR	LR		
	comp=Z,3µm,17.1s						
NJ2				LR	LR		
	comp=Z,2µm,12.3s						
PSA00	**Pilbara Seismi**	**34.57**	**140**	*e*P	**P**	**15 43 32.7**	**-1.0**
	comp=Z,21nm,1.0s						
GTA	**Gaotai**	**34.74**	**4**	⇑P	**P**	**15 43 36.7**	**+1.6**
GTA				pP	sP	15 43 44.3	-0.1
GTA				sP	pP	15 43 48.6	+6.8
GTA				PcP	**PcP**	**15 46 10.5**	**+1.8**
GTA				S	**S**	**15 49 03.7**	**-0.7**
GTA				sS	sS	15 49 19.4	+4.9
GTA				SS	SS	15 51 20.2	-15
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,250nm,6.8s						
GTA				LR	LR		
	comp=Z,900nm,19.4s						
GTA				LR	LR		
	comp=Z,1µm,20.9s						
GTA				LR	LR		
	comp=Z,2µm,19.7s						
NIL	**Nilore**	**36.16**	**326**	*e*P	**P**	**15 43 46.3**	**-1.0**
	comp=Z,20nm,0.8s						
NIL	**Nilore**	**36.16**	**326**	*e*P	**P**	**15 43 46.3**	**-1.0**
NIL				pmax	pmax		
	comp=Z,21nm,0.8s						
TIA	**Tai'an**	**36.64**	**28**	P	**P**	**15 43 53.8**	**+2.4**
TIA				S	**S**	**15 49 33.0**	**-0.5**
TIA				pmax	pmax		
	comp=Z,27nm,1.3s						
TIA				pmax	pmax		
	comp=Z,140nm,4.9s						
TIA				LR	LR		
	comp=Z,2µm,15.7s						
TIA				LR	LR		
	comp=Z,4µm,14.6s						
TIA				LR	LR		
	comp=Z,770nm,16.2s						
JOW	**Kunigami**	**37.40**	**50**	P	**P**	**15 44 00.3**	**+2.3**
	comp=Z,5.6nm,0.8s,baz=188,slow=15,SNR=15						
JOW	**Kunigami**	**37.40**	**50**	*e*P	**P**	**15 43 56.6**	**-1.3**
	comp=Z,52nm,1.0s						
KNRA	**Kununurra**	**37.66**	**123**	P	**P**	**15 43 57.4**	**-2.8**
	baz=38,SNR=5.7						
MEEK	**Meekatharra**	**37.66**	**147**	P	**P**	**15 44 00.6**	**+0.5**
	baz=38,SNR=3.5						
BTO	**Baotou**	**37.78**	**17**	*e*P	**P**	**15 44 02.2**	**+1.1**
BTO				S	**S**	**15 49 48.0**	**-2.9**
MORW	**Morawa**	**38.34**	**152**	*e*P	**P**	**15 44 06.0**	**+0.1**
	comp=Z,57nm,1.3s						
MORW	**Morawa**	**38.34**	**152**	P	**P**	**15 44 06.3**	**+0.5**
	baz=38,SNR=4.8						
MTN	**Manton Dam**	**38.41**	**117**	*e*P	**P**	**15 44 03.5**	**-3.1**
	comp=Z,29nm,0.8s						
MTN	**Manton Dam**	**38.41**	**117**	P	**P**	**15 44 04.9**	**-1.7**
	baz=38,SNR=4.1						
HHC	**Hu-ho-hao-te**	**38.47**	**18**	P	**P**	**15 44 10.9**	**+4.0**
HHC				S	**S**	**15 50 05.2**	**+3.9**
HHC				pmax	pmax		
	comp=Z,35nm,1.3s						
HHC				pmax	pmax		
	comp=Z,59nm,6.6s						
HHC				LR	LR		
	comp=Z,2µm,19.9s						
HHC				LR	LR		
	comp=Z,4µm,18.9s						
BJT	**Baijiatuau**	**39.39**	**24**	*e*P	**P**	**15 44 15.0**	**+0.6**
	comp=Z,165nm,1.1s						
BJT	**Baijiatuau**	**39.39**	**24**	*e*P	**P**	**15 44 15.0**	**+0.6**
BJT				pmax	pmax		
	comp=Z,165nm,1.1s						
BJI	**Beijing**	**39.41**	**24**	P	**P**	**15 44 15.0**	**+0.4**
BJI				pmax	pmax		
	comp=Z,165nm,1.1s						
KSH	**Kashi**	**39.44**	**335**	P	**P**	**15 44 18.0**	**+2.9**
KSH				PP	**PP**	**15 45 52.1**	**+6.3**
KSH				PcP	**PcP**	**15 46 24.1**	**+1.2**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				LR	LR		
	comp=Z,220nm,8.4s						
KSH				LR	LR		
	comp=Z,2µm,19.0s						
KDU	**Kakadu**	**39.54**	**116**	P	**P**	**15 44 13.0**	**-3.0**
	baz=39,SNR=5.4						
WMQ	**Urumqi**	**39.82**	**350**	*e*P	**P**	**15 44 17.7**	**-0.4**
WMQ				pP	pP	15 44 23.2	-1.7
WMQ				sP	sP	15 44 27.3	-0.1
WMQ				PP	**PnPn**	**15 45 55.2**	**+2.1**
WMQ				S	**S**	**15 50 21.5**	**+0.1**
WMQ				SS	**SS**	**15 53 11.1**	**-6.9**
WMQ				pmax	pmax		
	comp=Z,19nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.5s						
WMQ				LR	LR		
	comp=Z,250nm,20.7s						
WMQ				LR	LR		
	comp=Z,590nm,18.3s						
WMQ				LR	LR		
	comp=Z,980nm,18.9s						
BAKI	**Biak**	**39.85**	**97**	P	**P**	**15 44 17.4**	**-1.3**
	comp=Z,45nm,0.9s						
BLDU	**Ballidu**	**39.96**	**153**	P	**P**	**15 44 21.1**	**+1.8**
	baz=40,SNR=4.5						
MUN	**Mundaring**	**40.90**	**154**	P	**P**	**15 44 27.9**	**+0.9**
	baz=41,SNR=6.7						
DL2	**Dalian**	**40.96**	**30**	P	**P**	**15 44 30.1**	**+2.6**
DL2				S	**S**	**15 50 42.9**	**+4.4**
DL2				pmax	pmax		
	comp=Z,110nm,1.0s						
DL2				pmax	pmax		
	comp=Z,180nm,5.1s						
DL2				LR	LR		
	comp=Z,2µm,22.8s						
DL2				LR	LR		
	comp=Z,3µm,22.0s						
DL2				LR	LR		
	comp=Z,1µm,15.3s						
WSAR	**Wadi Sarin**	**41.08**	**300**	P	**P**	**15 44 29.8**	**+1.0**
	comp=Z,8.7nm,0.5s,baz=163,slow=4.8,SNR=12						
KDJ	**Kajisay**	**41.17**	**338**	*e*P	**P**	**15 44 28.5**	**-1.0**
	comp=Z,36nm,1.4s						
KDJ	**Kajisay**	**41.17**	**338**	*e*P	**P**	**15 44 28.5**	**-1.0**
KDJ				pmax	pmax		
	comp=Z,36nm,1.4s						
KLBR	**Kellerberrin**	**41.26**	**152**	P	**P**	**15 44 30.2**	**+0.1**
	baz=41,SNR=23						
GAR	**Garm**	**41.72**	**329**	*e*P	**P**	**15 44 33.3**	**-0.6**
	comp=Z,38nm,1.2s						
GAR	**Garm**	**41.72**	**329**	*e*P	**P**	**15 44 33.3**	**-0.6**
GAR				pmax	pmax		
	comp=Z,38nm,1.2s						
BOOM	**Boomskoye usch**	**41.96**	**337**	*e*P	**P**	**15 44 35.0**	**-0.9**
	comp=Z,12nm,1.0s						
BOOM	**Boomskoye usch**	**41.96**	**337**	*e*P	**P**	**15 44 35.0**	**-0.9**
BOOM				pmax	pmax		
	comp=Z,12nm,1.0s						
NWAO	**Narrogin (SRO)**	**42.15**	**154**	P	**P**	**15 44 38.2**	**+0.8**
	comp=Z,76nm,1.1s,baz=327,slow=6.9,SNR=8.6						
NWAO	**Narrogin (SRO)**	**42.15**	**154**	*e*P	**P**	**15 44 36.3**	**-1.0**
	comp=Z,84nm,1.1s						
NWAO	**Narrogin (SRO)**	**42.15**	**154**	P	**P**	**15 44 38.6**	**+1.2**
	baz=42,SNR=8.0						
NWAO	**Narrogin (SRO)**	**42.15**	**154**	*e*P	**P**	**15 44 36.3**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,84nm,1.1s						
ARSB	**Arslanbob**	**42.23**	**333**	*e*P	**P**	**15 44 39.1**	**+1.0**
	comp=Z,48nm,1.0s						
TJN	**Taejon**	**42.36**	**38**	*ce*P	**P**	**15 44 40.7**	**+1.7**
WRKA	**Warakurna**	**42.61**	**135**	P	**P**	**15 44 40.9**	**-0.4**
	baz=42,SNR=28						
AAK	**Ala-Archa**	**42.66**	**336**	P	**P**	**15 44 43.8**	**+2.2**
	comp=Z,3.5nm,0.6s,baz=171,slow=6.0,SNR=5.6						
AAK	**Ala-Archa**	**42.66**	**336**	*e*P	**P**	**15 44 42.0**	**+0.4**
	comp=Z,20nm,1.1s						
AAK	**Ala-Archa**	**42.66**	**336**	*e*P	**P**	**15 44 42.0**	**+0.4**
AAK				pmax	pmax		
	comp=Z,20nm,1.1s						
JNU	**Nakatsue**	**42.68**	**44**	P	**P**	**15 44 44.1**	**+2.4**
	comp=Z,41nm,0.9s,baz=210,slow=3.2,SNR=14						
JNU	**Nakatsue**	**42.68**	**44**	*e*P	**P**	**15 44 40.5**	**-1.2**
	comp=Z,72nm,1.1s						
KMBL	**Kambalda**	**43.14**	**148**	P	**P**	**15 44 47.2**	**+1.8**
	baz=43,SNR=6.2						
KS15	**Wonju Array Si**	**43.37**	**37**	*e*P	**P**	**15 44 47.2**	**0.0**
	comp=Z,58nm,1.0s						
KSRS	**Korea Array**	**43.40**	**37**	P	**P**	**15 44 49.0**	**+1.5**
	comp=Z,26nm,0.9s,baz=230,slow=9.1,SNR=39						
KSRS				LR	LR	16 04 48.0	
	comp=Z,938nm,18.3s,baz=224,slow=39						
MK31	**Makanchi Array**	**43.80**	**346**	*e*P	**P**	**15 44 48.7**	**-1.8**
	comp=Z,14nm,1.0s						
MK31	**Makanchi Array**	**43.80**	**346**	*e*P	**P**	**15 44 48.7**	**-1.8**
MK31				pmax	pmax		
	comp=Z,14nm,1.0s						
MK32	**Makanchi Array**	**43.80**	**346**	*e*P	**P**	**15 44 48.9**	**-1.7**
MKAR	**Makanchi Array**	**43.80**	**346**	P	**P**	**15 44 48.9**	**-1.7**
	comp=Z,8.9nm,0.9s,baz=167,slow=6.5,SNR=33						
MKAR				LR	LR	16 06 24.5	
	comp=Z,561nm,20.3s,baz=160,slow=41						
SONA0	**Songino Array**	**43.85**	**9**	*e*P	**P**	**15 44 50.9**	**-0.2**
SONA0				*e*PcP	**PcP**	**15 46 38.7**	**+1.4**
SONM	**Songino Array**	**43.85**	**9**	P	**P**	**15 44 50.9**	**-0.2**
	comp=Z,21nm,1.1s,baz=191,slow=9.9,SNR=29						
SONM				PcP	**PcP**	**15 46 38.7**	**+1.4**
	comp=Z,7.2nm,1.0s,baz=188,slow=3.1,SNR=4.6						
SONM				LR	LR	16 04 48.4	
	comp=Z,2µm,20.8s,baz=188,slow=39						
MAKZ	**Makanchi**	**43.89**	**345**	*e*P	**P**	**15 44 49.4**	**-1.9**
	comp=Z,11nm,0.8s						
MAKZ	**Makanchi**	**43.89**	**345**	*e*P	**P**	**15 44 49.4**	**-1.9**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.8s						
ULN	**Ulaanbaatar**	**43.99**	**10**	*e*P	**P**	**15 44 51.6**	**-0.6**
	comp=Z,29nm,1.4s						
ULN	**Ulaanbaatar**	**43.99**	**10**	*ce*P	**P**	**15 44 54.1**	**+1.9**
ULN				pmax	pmax		
	comp=Z,44nm,2.5s						
SNY	**Shenyang**	**44.15**	**29**	⇑P	**P**	**15 44 55.3**	**+1.9**
SNY				S	**S**	**15 51 31.9**	**+6.5**
SNY				pmax	pmax		
	comp=Z,53nm,0.9s						
SNY				pmax	pmax		
	comp=Z,180nm,6.9s						
SNY				LR	LR		
	comp=Z,2µm,22.7s						
SNY				LR	LR		
	comp=Z,2µm,25.1s						
SNY				LR	LR		
	comp=Z,2µm,16.7s						
WR1	**Warramunga Arr**	**44.37**	**125**	*e*P	**P**	**15 44 53.7**	**-1.9**
WRA	**Warramunga Arr**	**44.37**	**125**	P	**P**	**15 44 53.7**	**-1.9**
	comp=Z,46nm,0.6s,baz=292,slow=11,SNR=180						
WRAB	**Tennant Creek**	**44.38**	**125**	*e*P	**P**	**15 44 53.0**	**-2.6**
	comp=Z,59nm,0.6s						
WRAB	**Tennant Creek**	**44.38**	**125**	*ce*P	**P**	**15 44 53.7**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,73nm,1.1s						
WB2	**Warramunga Arr**	**44.38**	**125**	*e*P	**P**	**15 44 53.2**	**-2.4**
	comp=Z,58nm,0.8s						
JAY	**Jayapura**	**44.59**	**98**	P	**P**	**15 44 55.8**	**-1.7**
	comp=Z,14nm,1.0s,baz=106,slow=19,SNR=5.1						
KK31	**Karatay Array**	**44.76**	**333**	*e*P	**P**	**15 44 58.6**	**+0.3**
	comp=Z,17nm,1.3s						
KK31	**Karatay Array**	**44.76**	**333**	*e*P	**P**	**15 44 58.6**	**+0.3**
KK31				pmax	pmax		
	comp=Z,17nm,1.3s						
KKAR	**Karatay Array**	**44.76**	**333**	*e*P	**P**	**15 44 58.8**	**+0.5**
	comp=Z,17nm,1.3s						
KKAR	**Karatay Array**	**44.76**	**333**	*e*P	**P**	**15 44 58.8**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,17nm,1.3s						
AS31	**Alice Springs**	**45.94**	**129**	*e*P	**P**	**15 45 05.9**	**-2.1**
	comp=Z,38nm,1.1s						
AS31				*e*PcP	**PcP**	**15 46 41.2**	**-3.6**
AS31				*e*ScP	**ScP**	**15 50 37.9**	**+0.8**
ASAR	**Alice Springs**	**45.94**	**129**	P	**P**	**15 45 06.0**	**-2.0**
	comp=Z,89nm,0.8s,baz=301,slow=7.7,SNR=400						
ASAR				PcP	**PcP**	**15 46 41.2**	**-3.6**
	comp=Z,4.7nm,1.0s,baz=308,slow=4.6,SNR=2.0						
ASAR				ScP	**ScP**	**15 50 37.9**	**+0.9**
	comp=Z,2.9nm,1.0s,baz=292,slow=3.9,SNR=3.8						
ASAR				S	**S**	**15 51 48.0**	**-4.0**
	comp=Z,2.0nm,1.1s,baz=302,slow=13,SNR=5.2						
ASAR				PKiKP	**PKiKP**	**15 53 41.5**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=304,slow=1.0,SNR=5.3						
ASAR				LR	LR	16 07 05.4	
	comp=Z,824nm,18.9s,baz=310,slow=40						
FORT	**Forrest**	**46.27**	**142**	*e*P	**P**	**15 45 08.7**	**-1.7**
	comp=Z,49nm,0.9s						
FORT	**Forrest**	**46.27**	**142**	P	**P**	**15 45 12.1**	**+1.8**
	baz=46,SNR=6.9						
CN2	**Changchun**	**46.55**	**29**	*e*P	**P**	**15 45 13.3**	**+0.9**
CN2				*e*sP	pP	15 45 20.0	+0.8
CN2				*e*S	**S**	**15 52 00.3**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,3µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,3µm,21.0s						
MOY	**Mondy**	**47.02**	**4**	*e*P	**P**	**15 45 17.7**	**+1.6**
MOY				pmax	pmax		
	comp=Z,48nm,2.8s						
TLY	**Talaya**	**47.25**	**6**	*e*P	**P**	**15 45 20.3**	**+2.5**
TLY				*e*		15 47 15.6	
TLY				*e*S	**S**	**15 52 10.1**	**+0.2**
TLY				pmax	pmax		
	comp=Z,27nm,0.8s						
TLY				MLR	MLR		
	comp=Z,2µm,16.0s						
RER	**Riviere de l'E**	**47.59**	**236**	*e*P	**P**	**15 45 22.2**	**+1.2**
	comp=Z,99nm,1.0s						
INU	**Inuyama**	**48.16**	**45**	*e*P	**P**	**15 45 21.9**	**-3.2**
	comp=Z,66nm,1.1s						
GEYT	**Alibeck**	**48.26**	**319**	P	**P**	**15 45 24.0**	**-1.9**
	comp=Z,1.6nm,0.7s,baz=142,slow=7.3,SNR=4.0						
GEYT				LR	LR	16 07 05.1	
	comp=Z,1µm,21.8s,baz=120,slow=38						
GYA0B	**ALIBECK ARRAY**	**48.26**	**319**	*e*P	**P**	**15 45 23.8**	**-2.1**
	comp=Z,19nm,1.1s						
KURBB	**Kurchatov Arra**	**48.30**	**345**	P	**P**	**15 45 23.5**	**-2.3**
	comp=Z,2.8nm,0.5s,baz=161,slow=7.1,SNR=16						
KURK	**Kurchatov**	**48.36**	**345**	*e*P	**P**	**15 45 24.6**	**-1.7**
	comp=Z,50nm,1.3s						
KURK	**Kurchatov**	**48.36**	**345**	*e*P	**P**	**15 45 24.6**	**-1.7**
KURK				pmax	pmax		
	comp=Z,50nm,1.3s						
HIA	**Hailar**	**48.61**	**20**	*e*P	**P**	**15 45 28.0**	**-0.3**
HIA	**Hailar**	**48.61**	**20**	*e*P	**P**	**15 45 28.0**	**-0.3**
QIS	**Mount Isa**	**49.04**	**122**	P	**P**	**15 45 30.3**	**-1.8**
	baz=49,SNR=16						
MDJ	**Mudanjiang**	**49.19**	**31**	P	**P**	**15 45 34.9**	**+2.0**
MDJ				pP	sP	15 45 42.5	+0.2
MDJ				sP	pP	15 45 46.4	+6.6
MDJ				PcP	**PcP**	**15 47 02.7**	**+6.8**
MDJ				PP	**PP**	**15 47 28.2**	**+1.4**
MDJ				ScP	**ScP**	**15 50 54.2**	**+4.0**
MDJ				PcS	**PcS**	**15 50 57.4**	**+5.2**
MDJ				S	**S**	**15 52 38.2**	**+0.8**
MDJ				sS	sS	15 52 48.2	0.0
MDJ				ScS	**ScS**	**15 55 25.8**	**+1.9**
MDJ				SS	**SS**	**15 56 09.3**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,70nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,500nm,3.4s						
MDJ				LR	LR		
	comp=Z,2µm,17.5s						
MDJ				LR	LR		
	comp=Z,2µm,18.1s						
MDJ				LR	LR		
	comp=Z,2µm,13.3s						
VLA	**Vladivostok**	**49.40**	**34**	⇑*e*P	**P**	**15 45 35.6**	**+1.1**
VLA				pmax	pmax		
	comp=Z,109nm,1.1s						
MJB9	**Matsu-Tunnel**	**49.59**	**45**	*e*P	**P**	**15 45 34.0**	**-2.2**
	comp=Z,27nm,1.0s						
MAJO	**Matsushiro**	**49.59**	**45**	*e*P	**P**	**15 45 35.9**	**-0.2**
	comp=Z,26nm,1.0s						
MAJO	**Matsushiro**	**49.59**	**45**	*c i*P	**P**	**15 45 36.9**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,22nm,1.0s						
MAT	**Matsushiro**	**49.59**	**45**	P	**P**	**15 45 36.8**	**+0.7**
MAT				S	**S**	**15 52 37.4**	**-6.0**
MJAR	**Matsushiro Arr**	**49.59**	**45**	P	**P**	**15 45 37.2**	**+1.0**
	comp=Z,17nm,1.0s,baz=232,slow=8.7,SNR=27						
MJAR				LR	LR	16 06 09.0	
	comp=Z,610nm,22.0s,baz=235,slow=36						
COEN	**Coen**	**49.72**	**113**	*e*P	**P**	**15 45 34.9**	**-2.4**
	comp=Z,79nm,1.4s						
COEN	**Coen**	**49.72**	**113**	P	**P**	**15 45 35.7**	**-1.6**
	baz=50,SNR=24						
ZAA0	**Zalesovo Array**	**50.10**	**351**	*e*P	**P**	**15 45 38.3**	**-1.4**
	comp=Z,32nm,1.1s						
ZALV	**Zalesovo Beam**	**50.10**	**351**	P	**P**	**15 45 38.5**	**-1.2**
	comp=Z,6.6nm,0.7s,baz=165,slow=6.2,SNR=14						
ZALV				LR	LR	16 09 19.3	
	comp=Z,434nm,21.4s,baz=230,slow=39						
ZAA1	**Zalesovo Array**	**50.11**	**351**	*e*P	**P**	**15 45 38.5**	**-1.2**
USRK	**Ussuriysk Ar.**	**50.17**	**33**	P	**P**	**15 45 40.8**	**+0.4**
	comp=Z,19nm,1.0s,baz=242,slow=5.9,SNR=16						
USRK				LR	LR	16 06 17.5	
	comp=Z,634nm,20.4s,baz=215,slow=36						
MANU	**Manus Island**	**51.11**	**96**	*e*P	**P**	**15 45 46.0**	**-2.0**
	comp=Z,41nm,1.0s						
PMG	**Port Moresby**	**52.24**	**106**	*e*P	**P**	**15 45 55.2**	**-1.1**
	comp=Z,33nm,0.8s						
PMG	**Port Moresby**	**52.24**	**106**	*de*P	**P**	**15 45 57.4**	**+1.1**
PMG				pmax	pmax		
	comp=Z,103nm,0.7s						
RAYN	**Ar Rayn**	**52.71**	**296**	*e*P	**P**	**15 45 59.5**	**-0.2**
	comp=Z,21nm,0.8s						
RAYN	**Ar Rayn**	**52.71**	**296**	P	**P**	**15 45 59.6**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,21nm,0.8s						
BBOO	**Buckleboo**	**52.75**	**138**	P	**P**	**15 45 59.1**	**-0.8**
	baz=53,SNR=9.1						
BVAR	**Borovoye Array**	**52.85**	**340**	P	**P**	**15 45 57.5**	**-2.7**
	comp=Z,6.3nm,0.8s,baz=157,slow=8.0,SNR=18						
BRVK	**Borovoye**	**52.91**	**340**	*e*P	**P**	**15 45 57.9**	**-2.8**
	comp=Z,14nm,1.0s						
BRVK	**Borovoye**	**52.91**	**340**	*e*P	**P**	**15 45 57.9**	**-2.8**
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
KLR	**Kul'dur**	**53.48**	**28**	P	**P**	**15 46 07.3**	**+2.4**
	comp=Z,32nm,1.0s,baz=246,slow=7.8,SNR=44						
KLR	**Kul'dur**	**53.48**	**28**	*d i*P	**P**	**15 46 06.7**	**+1.8**
KLR				pmax	pmax		
	comp=Z,49nm,1.1s						
ATD	**Arta Tunnel**	**53.63**	**281**	LR	LR	16 07 01.0	
	comp=Z,181nm,18.7s,baz=158,slow=34						
OPO	**Ambohidratompo**	**53.90**	**243**	P	**P**	**15 46 11.8**	**+3.1**
	comp=Z,26nm,1.0s,baz=66,slow=6.4,SNR=20						
ABPO	**Ambohimpanom**	**54.02**	**243**	*e*P	**P**	**15 46 10.2**	**+0.6**
	comp=Z,35nm,0.9s						
ABPO	**Ambohimpanom**	**54.02**	**243**	*e*P	**P**	**15 46 10.2**	**+0.6**
ABPO				pmax	pmax		
	comp=Z,35nm,0.9s						
ABKAR	**Akbulak array**	**54.25**	**331**	*e*P	**P**	**15 46 08.0**	**-2.6**
	comp=Z,14nm,0.9s						
CTAO	**Charters Tower**	**54.57**	**119**	*e*P	**P**	**15 46 11.4**	**-2.0**
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**54.57**	**119**	*e*P	**P**	**15 46 11.4**	**-2.0**
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s						
BOD	**Bodaibo**	**54.77**	**11**	*e*P	**P**	**15 46 13.8**	**-0.4**
BOD				pmax	pmax		
	comp=Z,25nm,1.6s						
ZEA	**Zeya**	**54.96**	**22**	*e*P	**P**	**15 46 17.6**	**+2.0**
ZEA				*e*S	**S**	**15 54 03.0**	**+6.7**
ZEA				*e*SS	**SS**	**15 57 45.0**	**+4.9**
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=N,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
ZEA				smax	smax		
	comp=E,300nm,14.0s						
ZEA				MLR	MLR		
	comp=N,1µm,15.0s						
ZEA				MLR	MLR		

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       comp=Z,2µm,15.0s
HTT    Hallett           55.06 137  P      P        15 46 18.5 +1.7
       baz=55,SNR=7.3
AKTO   Aktyubinsk        55.97 331  P      P        15 46 21.1  -1.9
       comp=Z,2.9nm,0.6s,baz=120,slow=9.6,SNR=6.8
AKTO                                LR     LR       16 13 29.5
       comp=Z,677nm,20.4s,baz=139,slow=40
STKA   Stephens Creek    56.08 134  P      P        15 46 21.9  -2.2
       comp=Z,16nm,0.7s,baz=308,slow=7.2,SNR=20
STKA                                LR     LR       16 12 07.2
       comp=Z,755nm,20.0s,baz=299,slow=38
STKA   Stephens Creek    56.08 134 eP      P        15 46 22.6  -1.5
       comp=Z,3.9nm,0.8s
STKA   Stephens Creek    56.08 134  P      P        15 46 24.0  -0.1
       baz=56,SNR=18
STKA   Stephens Creek    56.08 134 eP      P        15 46 22.6  -1.5
STKA                                pmax   pmax
       comp=Z,4.0nm,0.8s
RABL   Rabaul            56.15  98 eP      P        15 46 22.6  -2.4
       comp=Z,37nm,0.6s
GRNR   Gornyy            56.74  29 eP      P        15 46 29.3 +0.8
GRNR                                pmax   pmax
       comp=Z,13nm,1.0s
YSS    Yuzh-Sakhalins    57.87  36⇑eP      P        15 46 38.1 +1.6
YSS                                eS      S        15 54 35.3 +0.2
YSS                                eSS     SS       15 58 30.7 +4.5
YSS                                 pmax   pmax
       comp=Z,40nm,1.0s
GNI    Garni             58.47 315  LR     LR       16 14 37.8
       comp=Z,429nm,20.7s,baz=96,slow=39
CMSA   Cobar Meteorol    58.93 131  P      P        15 46 43.8  -0.3
       baz=59,SNR=42
GROC   Groznyy           59.01 319 eP      P        15 46 41.5  -3.0
GROC                               e                15 47 28.2
GROC                               eS      S        15 54 48.0  -2.1
GROC                                pmax   pmax
       comp=Z,38nm,1.2s
RMQ    Roma              59.13 125  P      P        15 46 45.6  -0.1
       baz=59,SNR=9.2
SVE    Sverdlovsk        59.32 338 eP      P        15 46 44.2  -2.2
SVE                                 pmax   pmax
       comp=Z,34nm,1.5s
SVE                                 MLR    MLR
       comp=Z,2µm,24.0s
KMBO   Kilima Mbogo      59.61 266  P      P        15 46 51.9 +2.3
       comp=Z,11nm,0.8s,baz=65,slow=9.7,SNR=22
KMBO                                LR     LR       16 11 01.9
       comp=Z,605nm,18.5s,baz=95,slow=34
ARU    Arti              59.83 337  P      P        15 46 47.7  -2.3
       comp=Z,0.4nm,0.3s,baz=146,slow=7.7,SNR=7.0
ARU                                 LR     LR       16 14 45.6
       comp=Z,2µm,21.3s,baz=142,slow=38
ARU    Arti              59.83 337 eP      P        15 46 47.8  -2.2
       comp=Z,10nm,1.1s
ARU    Arti              59.83 337c iP     P        15 46 48.2  -1.8
ARU                                 S      S        15 54 57.9  -2.4
ARU                                 pmax   pmax
       comp=Z,10.0nm,1.3s
ARU                                 MLR    MLR
       comp=Z,2µm,21.0s
TYV    Tymovskoe         59.95  32 eP      P        15 46 53.5 +2.6
TYV                                 pmax   pmax
       comp=Z,12nm,1.4s
TYV                                 pmax   pmax
       comp=Z,100nm,2.5s
NKL    Nikolayevsk       60.29  29 eP      P        15 46 54.7 +1.6
NKL                                e                15 47 37.3
NKL                                eS      S        15 55 08.0 +1.8
NKL                                e                15 56 38.7
NKL                                eSS     SS       15 59 04.1 +0.2
NKL                                 pmax   pmax
       comp=Z,8.0nm,1.2s
NKL                                 pmax   pmax
       comp=N,45nm,1.1s
NKL                                 pmax   pmax
       comp=E,10.0nm,1.0s
NKL                                 pmax   pmax
       comp=Z,42nm,1.7s
NKL                                 MLR    MLR
       comp=N,479nm,14.0s
NKL                                 MLR    MLR
       comp=Z,603nm,14.0s
EIDS   Eidsvold          60.64 122 eP      P        15 46 54.6  -1.5
       comp=Z,38nm,1.4s
EIDS   Eidsvold          60.64 122  P      P        15 46 57.0 +0.9
       baz=60,SNR=3.5
KBZ    Khabaz            61.15 318  P      P        15 46 59.1  -0.1
       comp=Z,4.7nm,0.9s,baz=112,slow=11,SNR=3.5
KBZ                                 LR     LR       16 16 59.1
       comp=Z,261nm,21.4s,baz=114,slow=40
PATS   Pohnpei           61.37  85  P      P        15 47 00.8  -0.4
       baz=61,SNR=5.8
KVAR   Kislovodsk Arr    61.37 318  LR     LR       16 17 13.0
       comp=Z,336nm,20.7s,baz=166,slow=40
KIV    Kislovodsk        61.38 318 eP      P        15 47 01.6 +0.7
KIV                                 pmax   pmax
       comp=Z,42nm,1.1s
KIV                                 MLR    MLR
       comp=Z,739nm,17.0s
TOO    Toolangi          61.80 137 eP      P        15 47 02.5  -1.3
       comp=Z,47nm,1.1s
TOO    Toolangi          61.80 137  P      P        15 47 04.8 +1.0
       baz=62,SNR=5.9
TOO    Toolangi          61.80 137 eP      P        15 47 02.5  -1.3
TOO                                 pmax   pmax
       comp=Z,47nm,1.1s
YNG    Young             62.23 133  P      P        15 47 06.9 +0.1
       baz=62,SNR=6.3
YAK    Yakutsk           62.31  17 eP      P        15 47 05.4  -1.3
       comp=Z,48nm,0.9s
YAK    Yakutsk           62.31  17 eP      P        15 47 06.6  -0.1
YAK                                eS      S        15 55 32.3 +0.7
YAK                                e*SS    sS       15 55 44.5 +1.8
CAN    Canberra          63.15 133 eP      P        15 47 12.5  -0.3
       comp=Z,33nm,0.9s
CAN    Canberra          63.15 133 eP      P        15 47 12.5  -0.3
CAN                                 pmax   pmax
       comp=Z,33nm,0.9s
EIL    Elat              63.20 301  LR     LR       16 15 51.2
       comp=Z,672nm,18.3s,baz=58,slow=37
CNB    Canberra Magne    63.41 133  P      P        15 47 14.6  -0.1
       baz=63,SNR=9.0
MMAI   Mount Meron Ar    63.48 305  P      P        15 47 16.7 +1.5
       comp=Z,2.9nm,0.5s,baz=101,slow=7.5,SNR=5.7
MMAI                                LR     LR       16 17 09.5
       comp=Z,427nm,20.0s,baz=130,slow=38
MBAR   Mbarara           66.04 267  P      P        15 47 34.0 +1.7
       comp=Z,9.7nm,0.8s,baz=79,slow=6.2,SNR=15
MBAR                                LR     LR       16 11 59.0
       comp=Z,857nm,21.6s,baz=88,slow=32
MBAR   Mbarara           66.04 267 eP      P        15 47 32.8 +0.4
       comp=Z,57nm,1.5s
MBAR   Mbarara           66.04 267 eP      P        15 47 32.8 +0.4
MBAR                                pmax   pmax
       comp=Z,57nm,1.5s
BR101  Keskin Array S    66.42 311 eP      P        15 47 32.8  -1.5
BR131  Keskin Array S    66.42 311 eP      P        15 47 34.2   0.0
       comp=Z,13nm,1.0s
BRTR   Keskin Array B    66.42 311  P      P        15 47 32.8  -1.5
       comp=Z,1.9nm,0.4s,baz=128,slow=6.6,SNR=8.3
BRTR                                LR     LR       16 20 23.8
       comp=Z,183nm,18.5s,baz=104,slow=40
SKR    Severo-Kuril's    67.42  36⇓eP      P        15 47 42.2 +2.0
PRGR   Permogore         68.29 336 eP      P        15 47 42.4  -3.0
PRGR                                pmax   pmax
       comp=Z,14nm,0.6s
PETK   Petropavlovsk-    69.22  34  P      P        15 47 49.3  -2.1
       comp=Z,4.7nm,0.9s,baz=199,slow=2.6,SNR=5.3
PETK                                PKP2bc          16 16 04.0
       comp=Z,4.6nm,1.1s,baz=38,slow=2.6,SNR=3.5
PETK                                LR     LR       16 18 27.7
       comp=Z,630nm,21.0s,baz=241,slow=36
PEA1   Petropavlovsk-    69.22  34 eP      P        15 47 49.3  -2.1
OBN    Obninsk           69.43 328  P      P        15 47 52.0  -0.6
       comp=Z,1.8nm,0.5s,baz=128,slow=20,SNR=3.8
OBN    Obninsk           69.43 328 eP      P        15 47 52.0  -0.6
       comp=Z,71nm,1.7s
OBN    Obninsk           69.43 328⇑eP      P        15 47 54.3 +1.7
OBN                                i                15 48 17.9
OBN                                e                15 50 26.5
OBN                                eS      S        15 56 55.5  -3.2
OBN                                 pmax   pmax
       comp=Z,7.0nm,0.6s
OBN                                 MLR    MLR
       comp=Z,610nm,19.0s
PET    Petropavlovsk     69.72  35 eP      P        15 47 53.6  -1.0
       comp=Z,45nm,1.1s
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PET    Petropavlovsk     69.72  35 i P     P        15 47 55.6 +1.1
PET                                 pmax   pmax
       comp=Z,36nm,1.0s
YLV    Yalova            69.80 312⇓iP      P        15 47 54.4  -1.0
TIXI   Tiksi             69.93  10  P      P        15 47 52.8  -2.6
       comp=Z,9.2nm,0.9s,baz=207,slow=1.2,SNR=8.0
TIXI   Tiksi             69.93  10 eP      P        15 47 53.4  -2.0
       comp=Z,11nm,0.9s
TIXI   Tiksi             69.93  10⇓eP      P        15 47 55.3  -0.1
TIXI                                pmax   pmax
       comp=Z,21nm,1.7s
LSZ    Lusaka            70.59 252  P      P        15 48 01.9 +1.2
       comp=Z,8.1nm,0.8s,baz=77,slow=6.4,SNR=13
LSZ    Lusaka            70.59 252 eP      P        15 48 00.7   0.0
       comp=Z,89nm,1.8s
LSZ    Lusaka            70.59 252 eP      P        15 48 00.7   0.0
LSZ                                 pmax   pmax
       comp=Z,89nm,1.8s
SEY    Seymchan          70.85  24c iP     P        15 48 02.1 +0.9
MATP   Matopo            71.33 247  P      P        15 48 07.0 +1.9
       comp=Z,18nm,1.0s,baz=76,slow=6.3,SNR=28
PHSR   Pinarhisar        71.37 312⇓iP      P        15 48 05.7 +0.8
AKASG  Malin Array Be    72.22 322  P      P        15 48 09.5  -0.3
       comp=Z,0.9nm,0.4s,baz=90,slow=5.1,SNR=7.7
AKASG                               LR     LR       16 25 02.6
       comp=Z,314nm,18.1s,baz=85,slow=40
AKBB   Malin Array Si    72.22 322 eP      P        15 48 09.5  -0.3
AKBB   Malin Array Si    72.22 322 eP      P        15 48 09.5  -0.3
IDI    Anoyia            72.46 305  P      P        15 48 10.9  -0.7
       comp=Z,9.3nm,0.6s,baz=70,slow=6.5,SNR=6.6
VRI    Vrincioaia        72.75 317⇑iP      P        15 48 12.7  -0.4
PLOR   Plostina          72.80 317⇓iP      P        15 48 16.1 +2.7
TESR   Tescani           72.93 317⇓iP      P        15 48 12.8  -1.3
DZM    Mont Dzumac       73.18 115 eLR     LR       16 10 52.9
       comp=Z,798nm,22.5s
MLR    Muntele Rosu      73.22 316 eP      P        15 48 14.8  -1.2
       comp=Z,48nm,1.5s
MLR    Muntele Rosu      73.22 316⇑iP      P        15 48 09.0  -7.0
MLR    Muntele Rosu      73.22 316 eP      P        15 48 14.8  -1.2
MLR                                 pmax   pmax
       comp=Z,48nm,1.5s
BURAR  Bucovina Array    74.11 318⇓iP      P        15 48 23.0 +1.9
BUR08  Bucovina Ar. S    74.12 318 eP      P        15 48 21.6 +0.3
       comp=Z,10nm,1.2s
MMB    Musomiste         74.17 312 eP      P        15 48 13.4  -8.2
VTS    Vitosha           74.68 313 eP      P        15 48 23.8  -0.9
       comp=Z,12nm,1.1s
VTS    Vitosha           74.68 313⇑iP      P        15 48 23.2  -1.4
VTS    Vitosha           74.68 313 eP      P        15 48 23.8  -0.9
VTS                                 pmax   pmax
       comp=Z,12nm,1.1s
VTS    Vitosha           74.68 313 eP      P        15 48 38.2  +14
KKB    Krupnik           74.69 312 eP      P        15 48 22.9  -1.6
LIT    Litokhoron        74.92 310 eP      P        15 48 24.1  -1.8
       comp=Z,16nm,0.8s
LIT    Litokhoron        74.92 310 eP      P        15 48 24.1  -1.8
LIT                                 pmax   pmax
       comp=Z,16nm,0.8s
LBTB   Lobatse           74.93 243 eP      P        15 48 26.4 +0.1
       comp=Z,34nm,0.8s
LBTB   Lobatse           74.93 243 eP      P        15 48 26.4 +0.1
LBTB                                pmax   pmax
       comp=Z,34nm,0.8s
STIP   Stip              75.33 312 i P     P        15 48 25.0  -3.2
GZR    Gura Zlata        75.40 316⇑iP      P        15 48 29.4 +0.8
HERR   Herculane         75.58 315⇑iP      P        15 48 28.4  -1.2
MAW    Mawson            75.91 193  P      P        15 48 32.6 +1.7
       comp=Z,9.4nm,0.9s,baz=20,slow=9.3,SNR=12
MAW                                 LR     LR       16 16 13.4
       comp=Z,268nm,21.1s,baz=22,slow=31
MAW    Mawson            75.91 193 eP      P        15 48 31.6 +0.7
       comp=Z,14nm,1.8s
MAW    Mawson            75.91 193  P      P        15 48 33.5 +2.6
       baz=76,SNR=8.3
MAW    Mawson            75.91 193 eP      P        15 48 31.6 +0.7
MAW                                 pmax   pmax
       comp=Z,14nm,1.8s
SKO    Skopje            75.92 312 i P     P        15 48 26.9  -4.7
TRPA   Tarpa             75.97 318 eP      P        15 48 38.0 +6.3
BOSA   Boshof            76.03 239  P      P        15 48 33.7 +1.1
       comp=Z,16nm,0.8s,baz=111,slow=4.6,SNR=20
BOSA                                LR     LR       16 20 07.3
       comp=Z,632nm,19.0s,baz=68,slow=34
BOSA   Boshof            76.03 239 eP      P        15 48 31.7  -0.9
       comp=Z,93nm,1.5s
BOSA   Boshof            76.03 239 eP      P        15 48 31.7  -0.9
BOSA                                pmax   pmax
       comp=Z,93nm,1.5s
OHR    Ohrid             76.31 311 i P     P        15 48 32.4  -1.5
FIA0   FINESS Array S    76.72 332 eP      P        15 48 34.5  -1.2
FIA0   FINESS Array S    76.72 332 eP      P        15 48 34.5  -1.2
FINES  FINESS Array B    76.72 332  P      P        15 48 34.5  -1.2
       comp=Z,1.0nm,0.5s,baz=108,slow=7.5,SNR=5.7
FINES                               LR     LR       16 26 50.7
       comp=Z,774nm,21.1s,baz=109,slow=39
TTG    Podgorica         77.58 312 eP      P        15 48 38.3  -2.6
       comp=Z,8.6nm,0.7s
TTG    Podgorica         77.58 312 eP      P        15 48 38.3  -2.6
TTG                                 pmax   pmax
       comp=Z,9.0nm,0.7s
PSZ    Piszkesteto       77.70 318 eP      P        15 48 39.8  -1.8
       comp=Z,14nm,1.1s
PSZ    Piszkesteto       77.70 318⇓iP      P        15 48 42.3 +0.7
PSZ    Piszkesteto       77.70 318 eP      P        15 48 39.8  -1.8
PSZ                                 pmax   pmax
       comp=Z,14nm,1.1s
PSZ    Piszkesteto       77.70 318 eP      P        15 48 40.0  -1.6
OJC    Ojcow             78.04 320 eP      P        15 48 42.8  -0.5
       comp=Z,6.0nm,0.8s
BILL   Bilibino          78.18  21 eP      P        15 48 42.5  -1.3
       comp=Z,19nm,1.4s
BILL   Bilibino          78.18  21 i P     P        15 48 42.0  -1.7
BILL                               i                15 48 51.9
BILL                                pmax   pmax
       comp=Z,10.0nm,1.3s
BILL                                MLR    MLR
       comp=Z,888nm,19.0s
MORH   Mrgy, Hungar      78.37 316 eP      P        15 48 42.1  -3.1
VYHS   Vyhne             78.47 318 eP      P        15 48 46.6 +0.8
VYHS   Vyhne             78.47 318 eP      P        15 48 46.6 +0.8
ARA0   ARCESS Array S    79.14 340 eP      P        15 48 47.7  -1.4
ARCES  ARCESS Array B    79.14 340  P      P        15 48 47.7  -1.4
       comp=Z,1.6nm,0.5s,baz=96,slow=5.4,SNR=15
ARCES                               LR     LR       16 26 53.6
       comp=Z,1µm,19.7s,baz=107,slow=38
TIP    Timpagrande       79.25 309 eP      P        15 48 48.1  -2.2
       comp=Z,11nm,1.1s
BLY    Banja Luka        79.27 315 eP      P        15 48 48.0  -2.2
       comp=Z,37nm,1.3s
BLY    Banja Luka        79.27 315⇑iP      P        15 48 50.6 +0.4
MORC   Moravsky Berou    79.44 320 eP      P        15 48 48.5  -2.6
       comp=Z,6.5nm,1.1s
MORC   Moravsky Berou    79.44 320⇓iP      P        15 48 50.0  -1.1
MORC   Moravsky Berou    79.44 320 eP      P        15 48 48.5  -2.6
MORC                                pmax   pmax
       comp=Z,7.0nm,1.1s
BEHE   Becsehely         79.68 316 eP      P        15 48 45.1  -7.3
DPC    Dobruska-Polom    80.27 320 eP      P        15 48 56.4 +0.8
DPC                                 MLR    MLR
       comp=Z,400nm,18.3s
DPC    Dobruska-Polom    80.27 320 eP      P        15 48 56.4 +0.8
DPC                                 AMS    AMS      16 29 30.0
       comp=Z,400nm,18.3s
OSTC   Ostas             80.36 320 eP      P        15 48 59.9 +3.9
OSTC                                AMS    AMS      16 30 30.0
       comp=Z,300nm,16.4s
CONA   Conrad Observa    80.40 318 epP     P        15 48 57.0 +0.6
       comp=Z,2.4nm,1.0s
UPC    Upice             80.48 320 eP      P        15 49 01.8 +5.1
UPC                                e                15 49 10.7
UPC                                 MLR    MLR
       comp=Z,500nm,20.1s
UPC    Upice             80.48 320 eP      P        15 49 01.8 +5.1
UPC                                ex      x        15 49 10.7
UPC                                 AMS    AMS      16 29 40.0
       comp=Z,500nm,20.1s
SUR    Sutherland        80.58 236  P      P        15 48 59.6 +1.7
       comp=Z,22nm,0.8s,baz=81,slow=6.7,SNR=12
SUR    Sutherland        80.58 236 eP      P        15 48 58.6 +0.8
       comp=Z,300nm,1.9s
ARSA   Arzberg           80.59 317 epP     P        15 48 57.9 +0.6
       comp=Z,3.9nm,1.2s
BOJS   Bojanci           80.68 315 i P     P        15 48 57.3  -0.6
TREC   Trest             80.74 319  AMS    AMS      16 33 40.0
       comp=Z,300nm,23.3s
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PERS   Pernice           80.83 316 i P     P        15 48 58.8 +0.1
SOKA   Soboth            80.89 316 epP     P        15 48 59.6 +0.5
       comp=Z,7.5nm,1.0s
VISS   Visnje            80.98 315 i P     P        15 49 01.1 +1.6
OBKA   Obir              81.22 316 epP     P        15 49 01.8 +1.0
       comp=Z,3.7nm,0.5s
GOPC   GO Pecny, Ondr    81.23 320  AMS    AMS      16 31 00.0
       comp=Z,400nm,22.3s
PRU    Pruhonice         81.39 320  AMS    AMS      16 30 10.0
       comp=Z,300nm,19.2s
PVCC   Panska Ves        81.40 320  AMS    AMS      16 30 20.0
       comp=Z,400nm,18.0s
MOA    Molln             81.47 318  pP     P        15 49 02.2 +0.2
       comp=Z,2.0nm,1.0s
MYKA   Terra Mystica     81.85 316 eP      P        15 49 03.9  -0.2
       comp=Z,1.1nm,0.5s
GEC2   GERESS Array S    81.89 319 eP      P        15 49 03.7  -0.6
       comp=Z,17nm,1.4s
GEC2   GERESS Array S    81.89 319 eP      P        15 49 03.7  -0.6
GEC2                                pmax   pmax
       comp=Z,17nm,1.4s
GERES  GERESS Array B    81.89 319  P      P        15 49 04.0  -0.4
       comp=Z,2.4nm,0.7s,baz=92,slow=3.3,SNR=11
GERES                               LR     LR       16 30 14.6
       comp=Z,224nm,21.3s,baz=70,slow=39
KHC    Kasperske Hory    81.98 319 eP      P        15 49 04.7   0.0
KHC                                eS      S        15 59 08.2   -10
KHC                                 MLR    MLR
       comp=Z,400nm,20.2s
KHC    Kasperske Hory    81.98 319 eP      P        15 49 04.7   0.0
KHC                                ex      x        15 49 35.0
KHC                                eS      S        15 59 08.2   -10
KHC                                 AMS    AMS      16 30 50.0
       comp=Z,400nm,20.2s
KBA    Koelnbreinsper    82.06 317  P      P        15 49 04.1  -1.3
       comp=Z,5.6nm,1.0s
CLL    Collm             82.43 321 eP      P        15 49 08.0 +1.0
CLL                                 pmax   pmax
       comp=Z,5.0nm,1.1s
CLL                                 MLR    MLR
       comp=Z,400nm,20.1s
CLL    Collm             82.43 321 eP      P        15 49 08.0 +1.0
       comp=Z,5.0nm,1.1s
CLL                                eS      S        15 59 24.0 +1.7
CLL                                eSSS    SSS      16 08 12.0
CLL                                 LmV             16 32 00.0
       comp=Z,400nm,20.1s
ABTA   Abfaltersbach     82.63 316  P      P        15 49 07.6  -0.7
       comp=Z,1.6nm,0.6s
NKC    Novy Kostel       82.75 320  AMS    AMS      16 31 50.0
       comp=Z,500nm,21.0s
SYO    Syowa Base        83.08 198⇑eP      P        15 49 09.4  -0.5
SYO    Syowa Base        83.08 198⇓ePcP    PcP      15 49 15.0 +0.5
WTTA   Wattenberg        83.23 317 eP      P        15 49 11.1  -0.4
       comp=Z,4.6nm,1.1s
SQTA   Sankt Quirin      83.53 317 epP     P        15 49 13.6 +0.7
       comp=Z,3.3nm,0.7s
MOTA   Moosalm           83.60 317 epP     P        15 49 14.7 +1.4
       comp=Z,6.1nm,0.9s
NB200  NORSAR Array S    83.76 331 eP      P        15 49 12.0  -1.7
NOA    NORSAR Array B    83.76 331  P      P        15 49 12.0  -1.7
       comp=Z,1.6nm,1.0s,baz=96,slow=5.3,SNR=3.2
NOA                                 LR     LR       16 30 14.0
       comp=Z,790nm,21.5s,baz=85,slow=38
RETA   Reutte            83.83 317  P      P        15 49 13.1  -1.3
       comp=Z,5.3nm,0.6s
FETA   Feichten          83.85 317  P      P        15 49 13.3  -1.4
       comp=Z,1.5nm,0.9s
FUORN  Ofenpass-Fuorn    84.17 316 eP      P        15 49 15.3  -1.2
       comp=Z,18nm,1.3s
DAVA   Damuels           84.43 317 epP     P        15 49 17.6   0.0
       comp=Z,11nm,1.1s
KEST   Kesra             85.13 305  P      P        15 49 20.7  -0.6
       comp=Z,6.4nm,0.8s,baz=27,slow=2.6,SNR=6.1
KEST   Kesra             85.13 305 eP      P        15 49 20.3  -0.9
       comp=Z,19nm,1.0s
PGF    Pioggiola         85.16 312 eP      P        15 49 23.8 +2.5
PGF                                 pmax   pmax
       comp=Z,22nm,1.4s
URZ    Urewera           85.38 129  LR     LR       16 28 19.0
       comp=Z,977nm,20.4s,baz=292,slow=36
CDF    Champ du Feu      86.15 318 eP      P        15 49 30.2 +4.1
CDF                                 pmax   pmax
       comp=Z,5.0nm,1.0s
SENIN  Lac Senin/Sane    86.23 316 eP      P        15 49 25.2  -1.5
       comp=Z,4.1nm,0.7s
SBF    Sospel            86.25 314 eP      P        15 49 29.0 +2.3
SBF                                 pmax   pmax
       comp=Z,25nm,0.9s
MBDF   Montbardon        86.68 314 eP      P        15 49 31.0 +2.1
MBDF                                pmax   pmax
       comp=Z,7.0nm,1.0s
BNI    Bardonecchia      86.73 315 eP      P        15 49 27.8  -1.3
       comp=Z,9.3nm,1.1s
BNI    Bardonecchia      86.73 315 eP      P        15 49 27.8  -1.3
BNI                                 pmax   pmax
       comp=Z,9.0nm,1.1s
HAU    Haudompre         86.79 318 eP      P        15 49 31.3 +2.2
HAU                                 pmax   pmax
       comp=Z,3.0nm,0.3s
FRF    La Foret Royal    86.84 313 eP      P        15 49 32.0 +2.5
FRF                                 pmax   pmax
       comp=Z,6.0nm,0.8s
CABF   La Chapelle       87.05 316 eP      P        15 49 33.0 +2.5
CABF                                pmax   pmax
       comp=Z,10.0nm,1.1s
ORIF   Oris-en-Rattie    87.31 315 eP      P        15 49 34.8 +3.0
ORIF                                pmax   pmax
       comp=Z,4.0nm,0.7s
VIVF   Saint-Julien-l    88.17 315 eP      P        15 49 38.4 +2.5
VIVF                                pmax   pmax
       comp=Z,3.0nm,0.9s
SSB    Saint Sauveur     88.22 315  P      P        15 49 38.9 +2.8
SMF    Signal de Mont    88.59 317 eP      P        15 49 40.1 +2.3
SMF                                 pmax   pmax
       comp=Z,11nm,1.0s
SSF    Saint Saulge      88.78 317 eP      P        15 49 41.5 +2.8
SSF                                 pmax   pmax
       comp=Z,8.0nm,1.2s
TAM    Tamanrasset       89.26 293 eP      P        15 49 42.4 +0.8
       comp=Z,23nm,1.2s
TAM    Tamanrasset       89.26 293 eP      P        15 49 42.4 +0.8
TAM                                 pmax   pmax
       comp=Z,23nm,1.2s
VNDA   Vanda             89.28 169  P      P        15 49 41.2 +0.9
       comp=Z,2.8nm,0.7s,baz=299,slow=6.8,SNR=11
VNDA                                LR     LR       16 24 07.0
       comp=Z,231nm,21.2s,baz=298,slow=32
VNDA   Vanda             89.28 169 eP      P        15 49 39.8  -0.5
       comp=Z,19nm,1.4s
VNDA   Vanda             89.28 169 eP      P        15 49 39.8  -0.5
VNDA                                pmax   pmax
       comp=Z,19nm,1.4s
CAF    Calviac           90.00 315 eP      P        15 49 46.6 +2.1
CAF                                 pmax   pmax
       comp=Z,7.0nm,1.0s
MTLF   Montolieu         90.07 313 eP      P        15 49 47.8 +3.0
MTLF                                pmax   pmax
       comp=Z,6.0nm,1.0s
SBA    Scott Base        90.38 169 eP      P        15 49 45.5 +0.1
       comp=Z,18nm,1.2s
SBA    Scott Base        90.38 169 eP      P        15 49 45.5 +0.1
SBA                                 pmax   pmax
       comp=Z,18nm,1.2s
LDF    La Druitiere      91.03 319 eP      P        15 49 48.8  -0.3
LDF                                 pmax   pmax
       comp=Z,44nm,1.7s
FLN    La Foliniere      91.24 319 eP      P        15 49 53.7 +3.6
FLN                                 pmax   pmax
       comp=Z,13nm,1.0s
MFF    Saint Martin d    91.33 317 eP      P        15 49 53.5 +3.0
MFF                                 pmax   pmax
       comp=Z,31nm,1.5s
EPF    Esparros          91.47 313 eP      P        15 49 55.5 +4.1
EPF                                 pmax   pmax
       comp=Z,4.0nm,0.9s
QUIF   Quistinic         93.15 318 eP      P        15 50 00.2 +1.3
QUIF                                pmax   pmax
       comp=Z,57nm,1.6s
TOA0   Torodi Ar. Sit    93.77 283 eP      P        15 50 00.4  -2.0
       comp=Z,20nm,1.4s
TORD   Torodi Ar. Bea    93.77 283  P      P        15 50 02.7 +0.2
       comp=Z,5.7nm,0.4s,baz=86,slow=5.3,SNR=19
TORD                                PP     PP       15 53 51.9 +3.9
       comp=Z,1.1nm,1.0s,baz=89,slow=9.6,SNR=4.2
TORD                                LR     LR       16 31 01.1
```

	comp=Z,290nm,19.2s,baz=35,slow=35						
TOA1	**Torodi Ar. Sit**	**93.77**	**283**	*e*P	**P**	**15 50 02.7**	**+0.2**
TOLK	**Toolik Lake Re**	**94.16**	**20**	*e*P	**P**	**15 50 01.5**	**-1.7**
	comp=Z,12nm,1.2s						
TOLK	**Toolik Lake Re**	**94.16**	**20**	P	**P**	**15 50 02.4**	**-0.9**
	baz=294						
QSPA	**South Pole Qui**	**94.55**	**180**	*e*P	**P**	**15 50 04.9**	**-0.2**
	comp=Z,18nm,1.5s						
MLY	**Manley**	**95.17**	**23**	*e*P	**P**	**15 50 05.9**	**-2.0**
	comp=Z,5.2nm,1.2s						
ESDC	**Sonseca Array**	**95.20**	**310**	P	**P**	**15 50 07.4**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=62,slow=5.3,SNR=3.3						
ESDC				PKKPbc	**PKKPbc**	**16 07 04.8**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=301,slow=3.2,SNR=4.1						
ESDC				LR	LR	16 38 36.5	
	comp=Z,97nm,18.4s,baz=225,slow=39						
BPAW	**Bear Paw Mtn.**	**95.42**	**24**	*e*P	**P**	**15 50 06.6**	**-2.5**
	comp=Z,16nm,1.0s						
MCK	**McKinley**	**96.40**	**24**	*e*P	**P**	**15 50 12.3**	**-1.2**
	comp=Z,13nm,1.3s						
MCK	**McKinley**	**96.40**	**24**	*e*P	**P**	**15 50 12.3**	**-1.2**
MCK				pmax	pmax		
	comp=Z,13nm,1.3s						
RND	**Reindeer**	**96.57**	**24**	*e*P	**P**	**15 50 13.5**	**-0.9**
	comp=Z,14nm,1.5s						
RND	**Reindeer**	**96.57**	**24**	*e*P	**P**	**15 50 13.5**	**-0.9**
RND				pmax	pmax		
	comp=Z,14nm,1.5s						
ILAR	**Eielson Array**	**96.77**	**23**	P	**P**	**15 50 14.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=288,slow=4.2,SNR=3.8						
ILAR				PP	**PP**	**15 54 08.2**	**-1.6**
	comp=Z,1.6nm,1.2s,baz=302,slow=7.4,SNR=6.3						
ILAR				LR	LR	16 36 23.6	
	comp=Z,426nm,20.5s,baz=307,slow=37						
ILB	**Eielson Array**	**96.77**	**23**	*e*P	**P**	**15 50 14.4**	**-0.7**
	comp=Z,11nm,1.8s						
INK	**Inuvik**	**99.37**	**17**	P	**Pdif**	**15 50 26.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=329,slow=10,SNR=3.3						
INK				PP	**PP**	**15 54 29.7**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=306,slow=8.5,SNR=3.6						
INK	**Inuvik**	**99.37**	**17**	*e*P	**Pdif**	**15 50 26.6**	**-0.2**
	comp=Z,4.4nm,1.2s						
INK	**Inuvik**	**99.37**	**17**	*e*P	**Pdif**	**15 50 26.6**	**-0.2**
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
EPYK	**Eagle Plains**	**99.57**	**19**	P	**Pdif**	**15 50 28.6**	**+0.9**
	baz=306						
TBI	**Tubuai**	**113.75**	**113**	*e*LR	LR	16 29 36.3	
	comp=Z,482nm,26.5s						
PPT2	**Papeete2**	**114.04**	**107**	*e*LR	LR	16 29 45.1	
	comp=Z,470nm,23.8s						
FFC	**Flin Flon**	**118.85**	**12**	*i* PKIKP	**PKiKP**	**15 55 34.5**	**+1.4**
NEW	**Newport**	**119.60**	**25**	P	**PKiKP**	**15 55 35.4**	**+0.6**
	baz=320						
I03D	**Drain, OR**	**119.91**	**33**	P	**PKiKP**	**15 55 35.6**	**+0.1**
	baz=312						
I04A	**Tendick Farm,**	**120.34**	**32**	P	**PKiKP**	**15 55 36.5**	**0.0**
	baz=313						
HUMO	**Hull Mountain**	**120.86**	**33**	*e*PKPdf	**PKPdf**	**15 55 35.0**	**-2.3**
F10A	**Beach Ranch, E**	**121.31**	**27**	*e*PKPdf	**PKPdf**	**15 55 36.6**	**-1.7**
J05D	**Fort Rock, OR**	**121.31**	**32**	P	**PKPdf**	**15 55 38.2**	**-0.2**
	baz=314						
L04D	**Klamath Falls**	**121.47**	**33**	P	**PKiKP**	**15 55 38.9**	**+0.1**
	baz=313						
M02C	**Callahan**	**121.73**	**34**	P	**PKPdf**	**15 55 39.0**	**-0.1**
	baz=312						
MSO	**Missoula**	**122.06**	**24**	*e*PKPdf	**PKPdf**	**15 55 37.7**	**-1.9**
MSO	**Missoula**	**122.06**	**24**	P	**PKPdf**	**15 55 39.6**	**-0.1**
	baz=323						
N02D	**Trinity Center**	**122.09**	**35**	P	**PKiKP**	**15 55 41.7**	**+1.7**
	baz=312						
PLID	**Pearl Lake**	**122.54**	**27**	*e*PKPdf	**PKPdf**	**15 55 39.4**	**-1.4**
EGMT	**Eagleton**	**122.68**	**21**	P	**PKiKP**	**15 55 41.4**	**+0.5**
	baz=328						
TAOE	**Nuku Hiva Isla**	**123.49**	**98**	*e*LR	LR	16 34 03.0	
	comp=Z,270nm,23.3s						
DLMT	**Dillon**	**123.80**	**24**	*e*PKPdf	**PKPdf**	**15 55 41.7**	**-1.4**
BOZ	**Bozeman (W)**	**124.00**	**24**	*e*PKPdf	**PKPdf**	**15 55 42.1**	**-1.4**
BOZ	**Bozeman (W)**	**124.00**	**24**	*e*PKIKP	**PKPdf**	**15 55 42.1**	**-1.4**
BOZ	**Bozeman (W)**	**124.00**	**24**	P	**PKPdf**	**15 55 43.6**	**+0.1**
	baz=325						
ULM	**Lac du Bonnet**	**124.28**	**10**	PKP	**PKPdf**	**15 55 42.2**	**-1.4**
	comp=Z,5.3nm,0.8s,baz=15,slow=3.0,SNR=4.9						
HLID	**Hailey**	**124.44**	**27**	*e*PKPdf	**PKPdf**	**15 55 43.3**	**-1.1**
HLID	**Hailey**	**124.44**	**27**	P	**PKiKP**	**15 55 45.6**	**+0.9**
	baz=322						
LAO	**LASA Array**	**125.03**	**19**	P	**PKiKP**	**15 55 46.2**	**+0.5**
	baz=332						
CHGQ	**Chibougamau**	**125.12**	**353**	P	**PKPdf**	**15 55 44.9**	**-0.4**
	baz=11						
MATQ	**Matagami**	**125.60**	**355**	P	**PKPdf**	**15 55 46.0**	**-0.1**
	baz=6.9						
KVN	**Kaiserville**	**125.97**	**33**	*e*PKPdf	**PKPdf**	**15 55 46.4**	**-1.1**
KVN	**Kaiserville**	**125.97**	**33**	*e*PKIKP	**PKPdf**	**15 55 46.4**	**-1.1**
LSQQ	**Lebel-sur-Quev**	**126.24**	**355**	P	**PKPdf**	**15 55 47.0**	**-0.5**
	baz=7.8						
NVAR	**Mina Array Bea**	**126.30**	**34**	PKP	**PKiKP**	**15 55 49.3**	**+0.7**
	comp=Z,2.5nm,1.0s,baz=269,slow=1.9,SNR=12						
EYMN	**Ely**	**127.16**	**7**	*e*PKPdf	**PKPdf**	**15 55 49.0**	**-0.3**
EYMN	**Ely**	**127.16**	**7**	P	**PKPdf**	**15 55 49.2**	**0.0**
	baz=350						
BW06	**Boulder Array**	**127.18**	**24**	*e*PKPdf	**PKPdf**	**15 55 48.7**	**-1.0**
BW06	**Boulder Array**	**127.18**	**24**	P	**PKPdf**	**15 55 48.8**	**-1.0**
	baz=326						
PDAR	**Pinedale Array**	**127.18**	**24**	PKP	**PKPdf**	**15 55 49.2**	**-0.5**
	comp=Z,3.5nm,1.1s,baz=45,slow=0.4,SNR=13						
C40A	**Isle Royale Na**	**127.43**	**5**	*e*PKPdf	**PKPdf**	**15 55 49.0**	**-0.7**
C40A	**Isle Royale Na**	**127.43**	**5**	P	**PKPdf**	**15 55 49.5**	**-0.2**
	baz=353						
CWC	**Cottonwood Cre**	**127.82**	**36**	P	**PKPdf**	**15 55 50.0**	**-1.0**
	baz=314						
DUG	**Dugway, Tooele**	**127.82**	**28**	*e*PKPdf	**PKPdf**	**15 55 49.4**	**-1.5**
DUG	**Dugway, Tooele**	**127.82**	**28**	*e*PKIKP	**PKPdf**	**15 55 49.4**	**-1.5**
DUG	**Dugway, Tooele**	**127.82**	**28**	P	**PKiKP**	**15 55 51.5**	**0.0**
	baz=322						
PKM	**Mcpherson Peak**	**127.83**	**38**	P	**PKiKP**	**15 55 53.3**	**+1.6**
	baz=312						
R11A	**Troy Canyon, C**	**127.83**	**32**	*e*PKPdf	**PKPdf**	**15 55 50.5**	**-0.6**
R11A	**Troy Canyon, C**	**127.83**	**32**	P	**PKiKP**	**15 55 51.4**	**-0.2**
	baz=318						
RSSD	**Black Hills**	**128.02**	**19**	*e*PKPdf	**PKPdf**	**15 55 49.8**	**-1.5**
RSSD	**Black Hills**	**128.02**	**19**	*e*PKIKP	**PKPdf**	**15 55 49.8**	**-1.5**
RSSD	**Black Hills**	**128.02**	**19**	P	**PKPdf**	**15 55 51.0**	**-0.3**
	baz=334						
D54A	**Lac Fusel, La**	**128.10**	**354**	P	**PKiKP**	**15 55 52.0**	**+0.3**
	baz=8.4						
ISA	**Isabella, Lake**	**128.12**	**37**	P	**PKPdf**	**15 55 51.2**	**-0.4**
	baz=313						
D53A	**Lac Vacive, Po**	**128.27**	**355**	P	**PKPdf**	**15 55 51.4**	**0.0**
	baz=7.1						
D41A	**Chassel**	**128.32**	**5**	P	**PKPdf**	**15 55 51.2**	**-0.3**
	baz=353						
D51A	**Lot 18 Range I**	**128.38**	**357**	P	**PKPdf**	**15 55 50.2**	**-1.4**
	baz=5.0						
D48A	**Paudash Townsh**	**128.40**	**359**	P	**PKPdf**	**15 55 51.3**	**-0.3**
	baz=1.9						
MPMC	**Manual Prospec**	**128.43**	**35**	P	**PKiKP**	**15 55 52.8**	**-0.1**
	baz=314						
D52A	**ZEK Kipawa Sen**	**128.43**	**356**	P	**PKiKP**	**15 55 52.5**	**+0.2**
	baz=6.2						
K22A	**Casper**	**128.46**	**22**	P	**PKPdf**	**15 55 52.4**	**+0.3**
	baz=330						
E38A	**The Farm, Brul**	**128.47**	**7**	*e*PKPdf	**PKPdf**	**15 55 50.4**	**-1.4**
E38A	**The Farm, Brul**	**128.47**	**7**	P	**PKiKP**	**15 55 52.1**	**-0.3**
	baz=350						
TPNV	**Topopah Spring**	**128.50**	**34**	P	**PKiKP**	**15 55 52.9**	**-0.1**
	baz=316						
D47A	**Chapleau**	**128.53**	**360**	P	**PKiKP**	**15 55 52.5**	**0.0**
	baz=0.2						
D46A	**Sault St. Mari**	**128.69**	**1**	P	**PKiKP**	**15 55 53.0**	**+0.1**
	baz=359						
E54A	**Lac Daplat, Po**	**128.86**	**355**	P	**PKPdf**	**15 55 51.7**	**-0.8**
	baz=7.8						
E51A	**G1948 Merrick**	**128.94**	**357**	P	**PKPdf**	**15 55 52.0**	**-0.7**
	baz=4.9						
EDW2	**Edwards Air Fo**	**128.94**	**37**	P	**PKPdf**	**15 55 53.4**	**+0.3**
	baz=313						
E53A	**Dumoine, Ponti**	**128.96**	**355**	P	**PKPdf**	**15 55 52.1**	**-0.6**
	baz=7.2						
E48A	**Lockeyer**	**129.10**	**359**	P	**PKPdf**	**15 55 52.5**	**-0.5**
	baz=1.4						
E43A	**Lone Tree Farm**	**129.11**	**3**	P	**PKiKP**	**15 55 53.5**	**-0.2**
	baz=355						
E50A	**Wahnapitae**	**129.11**	**358**	P	**PKPdf**	**15 55 53.2**	**+0.2**
	baz=3.3						
E52A	**Mattawa**	**129.13**	**356**	P	**PKPdf**	**15 55 52.8**	**-0.2**
	baz=5.9						
E47A	**Iron Bridge**	**129.13**	**360**	P	**PKiKP**	**15 55 53.4**	**-0.3**
E46A	**Sault Ste Mari**	**129.22**	**1**	*e*PKPdf	**PKPdf**	**15 55 51.3**	**-1.9**
E46A	**Sault Ste Mari**	**129.22**	**1**	P	**PKPdf**	**15 55 53.3**	**+0.1**
	baz=359						
F39A	**Loretta**	**129.23**	**7**	P	**PKPdf**	**15 55 53.4**	**+0.2**
	baz=350						
F40A	**Park Falls**	**129.31**	**6**	P	**PKPdf**	**15 55 53.6**	**+0.2**
	baz=351						
GSC	**Goldstone, Bar**	**129.35**	**36**	P	**PKiKP**	**15 55 54.6**	**-0.1**
	baz=315						
ALGO	**Algonquin Park**	**129.41**	**355**	P	**PKPdf**	**15 55 53.5**	**-0.1**
	baz=6.8						
F51A	**Arnstein**	**129.57**	**357**	P	**PKPdf**	**15 55 54.2**	**+0.3**
	baz=4.4						
PEMO	**Pembroke**	**129.62**	**354**	P	**PKPdf**	**15 55 54.0**	**+0.1**
	baz=7.8						
F52A	**Sundridge**	**129.67**	**356**	P	**PKPdf**	**15 55 54.3**	**+0.2**
	baz=5.1						
F48A	**Evansville**	**129.76**	**359**	P	**PKPdf**	**15 55 53.6**	**-0.6**
	baz=0.9						
G39A	**Holcombe**	**129.81**	**7**	P	**PKPdf**	**15 55 54.5**	**+0.2**
	baz=350						
O20A	**White River Ci**	**129.92**	**25**	P	**PKPdf**	**15 55 55.2**	**+0.2**
	baz=327						
G40A	**Rib Lake**	**129.95**	**6**	P	**PKPdf**	**15 55 54.6**	**0.0**
	baz=351						
N23A	**Red Feather La**	**130.19**	**22**	P	**PKiKP**	**15 55 56.2**	**-0.2**
	baz=330						
PLVO	**Plevna**	**130.23**	**354**	P	**PKiKP**	**15 55 55.7**	**-0.2**
	baz=8.1						
BANO	**Bancroft**	**130.33**	**355**	P	**PKiKP**	**15 55 56.1**	**-0.1**
	baz=7.0						
LONY	**Lake Ozonia**	**130.34**	**352**	P	**PKiKP**	**15 55 57.0**	**+0.8**
	baz=11						
GMRC	**Granite Mounta**	**130.38**	**35**	P	**PKiKP**	**15 55 57.3**	**+0.5**
	baz=316						
ECSD	**EROS Data Cent**	**130.39**	**13**	P	**PKiKP**	**15 55 56.8**	**+0.5**
	baz=342						
G47A	**Hillman**	**130.41**	**0**	P	**PKiKP**	**15 55 56.2**	**-0.1**
	baz=359						
BELC	**Belle Mtn. Jos**	**130.74**	**36**	P	**PKiKP**	**15 55 58.2**	**+0.7**
	baz=315						
MONP2	**Monument Peak**	**131.26**	**38**	P	**PKiKP**	**15 55 59.1**	**+0.4**
	baz=314						
M59A	**Waymart**	**133.48**	**352**	P	**PKiKP**	**15 56 03.1**	**+0.4**
	baz=11						
L48A	**N Adams**	**133.63**	**1**	P	**PKiKP**	**15 56 02.4**	**-0.6**
	baz=358						
M55A	**Ridgway**	**133.93**	**355**	P	**PKiKP**	**15 56 03.8**	**+0.1**
	baz=6.2						
M54A	**Oil Creek Stat**	**133.96**	**356**	P	**PKiKP**	**15 56 03.7**	**0.0**
	baz=5.0						
N59A	**State Game Lan**	**134.14**	**352**	P	**PKiKP**	**15 56 03.9**	**-0.2**
	baz=10						
N49A	**Columbus Grove**	**134.66**	**1**	P	**PKPdf**	**15 56 04.2**	**+0.5**
	baz=359						
SSPA	**Standing Stone**	**134.67**	**354**	P	**PKiKP**	**15 56 05.1**	**0.0**
	baz=7.6						
N48A	**Decatur**	**134.70**	**2**	P	**PKiKP**	**15 56 05.7**	**+0.6**
	baz=358						
N53A	**Lisbon**	**134.72**	**357**	P	**PKiKP**	**15 56 05.5**	**+0.3**
	baz=3.4						
N50A	**Nevada**	**134.82**	**360**	P	**PKiKP**	**15 56 06.2**	**+0.8**
	baz=0.2						
TUC	**Tucson**	**134.95**	**33**	P	**PKiKP**	**15 56 06.2**	**+0.2**
	baz=320						
ANMO	**Albuquerque**	**135.03**	**27**⇑	*i*PKIKP	**PKiKP**	**15 56 06.6**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
O57A	**Amberson**	**135.07**	**354**	P	**PKiKP**	**15 56 05.5**	**-0.5**
	baz=8.0						
O58A	**Lewisberry**	**135.07**	**353**	P	**PKiKP**	**15 56 07.2**	**+1.3**
	baz=9.0						
O56A	**Blue Knob Stat**	**135.10**	**355**	P	**PKiKP**	**15 56 07.4**	**+1.4**
	baz=6.7						
O48A	**Farmland**	**135.30**	**2**	P	**PKiKP**	**15 56 05.9**	**-0.5**
	baz=357						
O54A	**Avella**	**135.32**	**357**	P	**PKiKP**	**15 56 06.6**	**+0.2**
	baz=4.1						
ACSO	**Alum Creek Sta**	**135.35**	**360**	P	**PKiKP**	**15 56 05.8**	**-0.7**
	baz=0.4						
O49A	**Covington**	**135.39**	**1**	P	**PKiKP**	**15 56 05.9**	**-0.7**
	baz=358						
O51A	**Pataskala**	**135.44**	**359**	P	**PKiKP**	**15 56 06.7**	**0.0**
	baz=1.0						
O50A	**Cable**	**135.44**	**0**	P	**PKiKP**	**15 56 06.5**	**-0.1**
	baz=360						
P59A	**Jarrettsville**	**135.52**	**352**	P	**PKiKP**	**15 56 07.5**	**+0.7**
	baz=9.8						
P55A	**Reedsville**	**135.96**	**356**	P	**PKiKP**	**15 56 07.8**	**0.0**
	baz=5.0						
P50A	**Jamestown**	**135.98**	**0**	P	**PKiKP**	**15 56 07.7**	**-0.1**
	baz=359						
P53A	**Whipple**	**136.06**	**358**	P	**PKPdf**	**15 56 07.0**	**+0.7**
	baz=2.7						
P48A	**Milroy**	**136.08**	**2**	P	**PKPdf**	**15 56 07.1**	**+0.7**
	baz=357						
Q58A	**Fox Den Farm,**	**136.33**	**354**	P	**PKiKP**	**15 56 07.8**	**-0.7**
	baz=8.1						
Q56A	**Snyder Ridge,**	**136.37**	**355**	P	**PKiKP**	**15 56 09.6**	**+1.0**
	baz=5.9						
Q45A	**Warren Harvey,**	**136.46**	**5**	P	**PKiKP**	**15 56 09.6**	**+0.9**
	baz=353						
Q55A	**Buckhannon**	**136.49**	**356**	P	**PKiKP**	**15 56 08.8**	**-0.1**
	baz=4.6						
R58A	**Rapidan**	**137.00**	**354**	P	**PKiKP**	**15 56 10.0**	**+0.1**
	baz=7.7						
R56A	**Bull Pasture M**	**137.02**	**355**	P	**PKiKP**	**15 56 09.5**	**-0.6**
	baz=5.7						
R45A	**Skylar, Fairfi**	**137.05**	**6**	P	**PKiKP**	**15 56 09.2**	**-0.7**
	baz=353						
R47A	**Wooly Knot Far**	**137.19**	**4**	P	**PKPdf**	**15 56 08.8**	**+0.4**
	baz=355						
MSTX	**Muleshoe**	**137.45**	**24**	P	**PKiKP**	**15 56 10.3**	**-0.8**
	baz=331						
S44A	**Carbondale**	**137.53**	**7**	P	**PKPdf**	**15 56 10.0**	**+0.9**
	baz=351						
MNTX	**Cornudas Mount**	**138.22**	**29**	P	**PKPdf**	**15 56 10.5**	**-0.1**
	baz=326						
U40A	**Yellville**	**138.27**	**12**	P	**PKPdf**	**15 56 10.7**	**+0.2**
	baz=346						
T46A	**Princeton**	**138.32**	**5**	P	**PKPdf**	**15 56 11.2**	**+0.6**
	baz=353						
T48A	**Bowling Green**	**138.38**	**4**	P	**PKPdf**	**15 56 11.3**	**+0.6**
	baz=355						
WVT	**Waverly**	**139.24**	**6**	*e*PKPdf	**PKPdf**	**15 56 10.1**	**-2.1**
WVT	**Waverly**	**139.24**	**6**	*e*PKIKP	**PKPdf**	**15 56 10.1**	**-2.1**
W47A	**Westpoint**	**140.13**	**5**	P	**PKPdf**	**15 56 13.2**	**-0.7**
	baz=353						
W48A	**Pulaski**	**140.30**	**5**	P	**PKPdf**	**15 56 14.9**	**+0.6**
	baz=354						
X51A	**Calhoun**	**140.99**	**2**	*e*PKPdf	**PKPdf**	**15 56 12.5**	**-3.0**
TXAR	**Lajitas Array**	**141.00**	**29**	PKP	**PKPdf**	**15 56 14.5**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=333,slow=1.4,SNR=8.8						
TXAR				PP	**PP**	**15 59 13.0**	**-2.6**
	comp=Z,0.7nm,0.9s,baz=262,slow=2.7,SNR=3.5						
PLCA	**Paso Flores**	**142.26**	**196**	PKP	**PKPdf**	**15 56 16.9**	**-0.8**
	comp=Z,4.3nm,0.9s,baz=130,slow=8.0,SNR=3.1						
BDFB	**Brasilia**	**143.60**	**250**	PKP	PKPbc	15 56 18.3	+0.2
	comp=Z,5.3nm,0.7s,baz=186,slow=3.4,SNR=6.6						
BDFB	**Brasilia**	**143.60**	**250**	*e*PKPdf	PKPbc	15 56 18.3	+0.2
BDFB				*e*PKPdf	PKPab	15 56 18.5	+1.2
LNIG	**Linares**	**146.73**	**27**	*e*PKPbc	**PKPdf**	**15 56 25.6**	**-0.2**
ZAIG	**Zacatecas**	**146.92**	**34**	*e*PKPbc	**PKPdf**	**15 56 26.1**	**-0.5**
CPUP	**Villa Florida**	**147.06**	**226**	PKPbc	**PKPbc**	**15 56 27.2**	**-1.1**
	comp=Z,14nm,0.9s,baz=134,slow=3.6,SNR=8.0						
MTP	**Monte Pirata**	**151.39**	**323**	*e*PKPbc	**PKPbc**	**15 56 37.6**	**-1.8**
CBYP	**Canovanas**	**151.44**	**323**	*e*PKPbc	**PKPbc**	**15 56 37.5**	**-2.1**
OBIP	**Obispado Ponce**	**152.06**	**324**	*e*PKPdf	**PKPdf**	**15 56 32.3**	**-2.2**
SIV	**San Ignacio**	**155.38**	**241**	PKP	**PKPdf**	**15 56 40.7**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=119,slow=2.3,SNR=6.5						
PTGA	**Pitinga**	**156.32**	**279**	PKP	**PKPdf**	**15 56 41.8**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=346,slow=4.2,SNR=3.2						
PTGA				PKPab	**PKPab**	**15 57 08.7**	**-0.1**
	comp=Z,9.4nm,1.0s,baz=66,slow=5.7,SNR=6.9						
LPAZ	**La Paz**	**161.09**	**231**	PKP	**PKPdf**	**15 56 47.4**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=66,slow=4.2,SNR=14						
LPAZ				PKPab	**PKPab**	**15 57 30.6**	**+0.7**
	comp=Z,6.9nm,0.8s,baz=106,slow=6.8,SNR=12						
ROSC	**El Rosal**	**166.96**	**316**	PKP	**PKPdf**	**15 56 52.8**	**+0.7**
	comp=Z,6.6nm,0.6s,baz=292,slow=12,SNR=5.0						
OTAV	**Otavalo**	**173.12**	**315**	PKIKP	**PKPdf**	**15 56 53.3**	**-2.4**

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*IDC **02** 15:40:45.9±2.1, 4°.26N×96°.18E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.6/52, mbtmp4.0/5, ML3.8/1, Error ellipse: s-maj=71.1km s-min=18.5km az=48.0*

*ISCJB **02** 15:40:51.3±0.8, 4°.67N±0°.08×96°.7E±0°.1, h33km, mb4.1/6, Error ellipse: s-maj=17.4km s-min=8.8km az=154.8*

*NEIC **02** 15:40:51.1±2.1, 4°.65N×96°.75E, h18km±12km, mb4.4/2, Error ellipse: s-maj=20.1km s-min=8.7km az=64.0*

ISC 02 15:40:53.2±1.0**, 4°.74N**±0°.08×**96°.7E**±0°.1**, h33km, n14, σ1s.55**/15**, mb4.2**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**0.53**	**23**	*e*Pg	**Pb**	**15 41 02.8**	**-1.4**
PSI	**Prapat**	**2.91**	**131**	Pn	**Pn**	**15 41 37.8**	**+0.5**
	10nm,0.3s,baz=317,slow=16,SNR=2.6						
PSI				Sn	**Sn**	**15 42 13.5**	**+2.2**
	20nm,0.3s,baz=259,slow=22,SNR=4.2						
PSI				Lg	Lg	15 42 25.4	
	29nm,0.3s,baz=315,slow=20,SNR=2.7						
GSI	**Gunungsitoli**	**3.52**	**166**	*e*Pn	**Pn**	**15 41 44.7**	**-0.9**
KULM	**Kulim**	**3.93**	**82**	*e*Pn	**Pn**	**15 41 51.2**	**-0.1**
IPM	**Ipoh**	**4.28**	**93**	*e*Pn	**Pn**	**15 41 55.1**	**-1.0**
SHL	**Shillong**	**21.23**	**348**	*e*P	**P**	**15 45 37.2**	**+0.7**
	40nm,1.0s						
MK32	**Makanchi Array**	**43.72**	**346**	*e*P	**P**	**15 48 55.1**	**-0.1**
MKAR	**Makanchi Array**	**43.72**	**346**	P	**P**	**15 48 55.1**	**-0.1**
	0.3nm,0.4s,baz=158,slow=8.9,SNR=4.0						
SONA0	**Songino Array**	**43.73**	**9**	*e*P	**P**	**15 48 57.7**	**+2.3**
SONM	**Songino Array**	**43.73**	**9**	P	**P**	**15 48 57.7**	**+2.3**
	0.8nm,0.8s,baz=172,slow=12,SNR=2.0						
WR1	**Warramunga Arr**	**44.36**	**125**	*e*P	**P**	**15 48 59.4**	**-1.4**
WRA	**Warramunga Arr**	**44.36**	**125**	P	**P**	**15 48 59.4**	**-1.4**
	2.7nm,0.5s,baz=302,slow=9.5,SNR=4.0						
AS31	**Alice Springs**	**45.94**	**130**	*e*P	**P**	**15 49 11.5**	**-1.8**
	2.7nm,1.1s						
ASAR	**Alice Springs**	**45.94**	**130**	P	**P**	**15 49 11.9**	**-1.4**
	2.9nm,0.5s,baz=304,slow=7.7,SNR=16						

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*IDC **02** 16:04:41.7±1.2, 27°.24N×54°.82E, h0km, mb3.6/9, mb1 3.8/11, mb1mx3.6/43, mbtmp3.7/11, ML3.9/2, Error ellipse: s-maj=24.7km s-min=22.5km az=177.0*

*THR **02** 16:04:42.4, 27°.15N×55°.04E, h14km, ML3.6*

*ISCJB **02** 16:04:45.3±0.3, 27°.33N±0°.03×54°.99E±0°.04, h20km, mb3.6/10, Error ellipse: s-maj=6.0km s-min=3.6km az=158.2*

*TEH **02** 16:04:45.2, 27°.30N×54°.99E, h17km, ML3.8*

*DSN **02** 16:04:45.2±1.1, 27°.40N×55°.26E, h10km, ML3.6/9, Error ellipse: s-maj=14.9km s-min=6.5km az=34.0*

ISC 02 16:04:45.5±0.7**, 27°.27N**±0°.04×**55°.01E**±0°.04**, h20km, n61, σ1s.54**/64**, mb3.6**/10**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	**Geno**	**1.04**	**83**	*e*Sg	**Sn**	**16 05 21.7**	**+2.6**
GENO				*e*Pg	**Pb**	**16 05 04.8**	**-0.1**
GENO				IAMB	IAmb	16 05 24.8	
	comp=Z,0.0nm,0.2s						
SHME	**Shamm**	**1.58**	**140**	*e*P	**Pn**	**16 05 12.9**	**+0.5**
	SNR=14						
SHME				S	**Sb**	**16 05 34.3**	**+0.7**
SHME	**Shamm**	**1.58**	**140**	*e*Pn	**Pn**	**16 05 13.6**	**+1.2**
NIAN	**Nian**	**1.64**	**79**	*e*Pn	**Pn**	**16 05 14.2**	**+0.9**
LMD1	**Lamerd**	**1.65**	**273**	*e*Pn	**Pn**	**16 05 15.1**	**+1.8**
LMD1				IAMB	IAmb	16 05 48.4	
	comp=E,0.0nm,0.5s						
BANOM	**Banah**	**1.77**	**139**	*e*P	**Pn**	**16 05 15.9**	**+1.0**
	SNR=39						
JHRM	**Jahrom**	**1.77**	**314**	*e*Pn	**Pn**	**16 05 16.6**	**+1.5**
UMQ	**Umm Al-Quwin**	**1.83**	**161**	*e*Pn	**Pb**	**16 05 21.8**	**+3.5**
GHIR	**Ghir-Karzin**	**2.06**	**300**	*e*AML	AML	16 06 05.9	
	comp=E,396nm,0.5s						
GHIR				*e*Pn	**Pn**	**16 05 19.8**	**+0.6**
GHIR				*e*Sg	**Sb**	**16 05 49.8**	**+2.3**
MSFE	**Esma-Masafi**	**2.16**	**151**	P	**Pn**	**16 05 21.9**	**+1.5**
MSFE	**Esma-Masafi**	**2.16**	**151**	*e*Pn	**Pn**	**16 05 22.4**	**+2.0**
MDH	**Madha**	**2.28**	**149**	P	**Pn**	**16 05 23.4**	**+1.5**
MDH	**Madha**	**2.28**	**149**	*e*Pn	**Pn**	**16 05 24.2**	**+2.3**
NAZ	**Nazwa, Dubai**	**2.34**	**165**	P	**Pn**	**16 05 24.9**	**+2.0**
NAZ	**Nazwa, Dubai**	**2.34**	**165**	*e*Pn	**Pb**	**16 05 26.1**	**-1.0**
KHNJ	**Kahnooj**	**2.48**	**74**	*e*Pn	**Pn**	**16 05 25.1**	**+0.3**
UOSS	**Minazif**	**2.55**	**155**	*e*P	**Pn**	**16 05 26.8**	**+1.1**
	SNR=12						
UOSS	**Minazif**	**2.55**	**155**	*e*Pn	**Pn**	**16 05 28.4**	**+2.7**
FAQ	**Al Faqa, Dubai**	**2.57**	**168**	P	**Pn**	**16 05 28.1**	**+2.2**
FAQ	**Al Faqa, Dubai**	**2.57**	**168**	*e*Pn	**Pb**	**16 05 30.4**	**-0.4**
HATD	**Hatta, Dubai**	**2.63**	**157**	P	**Pn**	**16 05 28.3**	**+1.4**
ASUD	**Al Ashush, Dub**	**2.65**	**174**	P	**Pn**	**16 05 30.2**	**+3.2**
ASUD	**Al Ashush, Dub**	**2.65**	**174**	*e*Pn	**Pb**	**16 05 32.8**	**+0.6**
ISRV	**Sarvestan**	**2.69**	**322**	*e*Pn	**Pn**	**16 05 29.9**	**+2.0**
ISRV				IAMB	IAmb	16 06 45.9	
	comp=Z,4μm,1.1s						
ASHO	**Ashiyiah**	**2.74**	**160**	*e*P	**Pn**	**16 05 29.5**	**+1.1**
	SNR=34						
ASHO	**Ashiyiah**	**2.74**	**160**	*e*Pn	**Pn**	**16 05 30.2**	**+1.8**
NGRK	**Negar Kerman**	**2.81**	**32**	*e*Pn	**Pn**	**16 05 29.7**	**+0.1**
NGRK				IAMB	IAmb	16 06 32.5	
	comp=Z,0.0nm,0.4s						
KRBR	**Kerman**	**3.11**	**29**	*e*Pn	**Pn**	**16 05 34.7**	**+1.0**
KRBR	**Kerman**	**3.11**	**29**	*e*Pn	**Pn**	**16 05 34.7**	**+1.0**
TVBK	**TV Kerman**	**3.11**	**29**	*e*Pn	**Pn**	**16 05 35.3**	**+1.5**
TVBK				IAMB	IAmb	16 06 25.7	
	comp=Z,0.0nm,0.4s						
ALNE	**Al Ain**	**3.27**	**168**	*e*Pn	**Pb**	**16 05 41.9**	**-0.9**
KHGB	**Koh Gabri**	**3.35**	**22**	*e*Pn	**Pn**	**16 05 38.7**	**+1.7**
KHGB				IAMB	IAmb	16 06 42.4	
	comp=Z,0.0nm,0.5s						
CHMN	**Cheshme madani**	**3.41**	**40**	*e*Pn	**Pn**	**16 05 40.1**	**+2.3**
CHMN				IAMB	IAmb	16 06 24.9	
	comp=N,0.0nm,0.4s						
IKAZ	**Kazeroun**	**3.75**	**313**	IAMB	IAmb	16 07 14.6	
	comp=N,7μm,0.9s						
IMEH	**Mehriz**	**4.12**	**355**	*e*Pn	**Pn**	**16 05 49.5**	**+1.9**
IMEH				IAMB	IAmb	16 05 50.0	
	comp=Z,623nm,0.3s						
IBAF	**Bafgh**	**4.33**	**6**	*e*Pn	**Pn**	**16 05 51.3**	**+0.9**
MZR	**Muzera**	**4.47**	**198**	*e*Pn	**Pn**	**16 05 53.8**	**+1.7**
ISAD	**Sadrabad**	**4.77**	**346**	*e*Pn	**Pn**	**16 05 58.4**	**+1.9**
ISAD				IAMB	IAmb	16 05 59.5	
	comp=Z,890nm,0.3s						
IRAM	**Ramesheh**	**5.07**	**334**	*e*Pn	**Pn**	**16 06 01.0**	**+0.4**
WSAR	**Wadi Sarin**	**5.18**	**140**	Pn	**Pn**	**16 06 03.6**	**+1.8**
	comp=Z,2.2nm,0.3s,baz=333,slow=9.0,SNR=10						
WSAR				Sn	**Sn**	**16 07 00.3**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=25,slow=19,SNR=1.9						
BSRN	**Basiran**	**5.89**	**36**	*e*Pn	**Pn**	**16 06 12.6**	**+0.8**
BSRN	**Basiran**	**5.89**	**36**	*e*Pn	**Pn**	**16 06 12.6**	**+0.8**
IZEF	**Zefreh**	**6.07**	**338**	*e*Pn	**Pn**	**16 06 13.5**	**-0.9**
ROKH	**ROKH**	**6.13**	**327**	*e*Pn	**Pn**	**16 06 16.3**	**+1.2**
IKOO	**Kooshah**	**6.20**	**33**	*e*Pn	**Pn**	**16 06 17.5**	**+1.4**
TABS	**Tabas**	**6.61**	**15**	*e*Pn	**Pn**	**16 06 23.0**	**+1.3**
TABS	**Tabas**	**6.61**	**15**	*e*Pn	**Pn**	**16 06 23.0**	**+1.3**
IKLH	**Kolahrood**	**6.72**	**335**	*e*Pn	**Pn**	**16 06 23.1**	**-0.2**
KRSH	**Karshahi**	**7.12**	**340**	*e*Pn	**Pn**	**16 06 29.1**	**+0.4**
ISFB	**Sefidab**	**7.45**	**342**	*e*Pn	**Pn**	**16 06 34.1**	**+0.9**
KVAR	**Kislovodsk Arr**	**19.39**	**332**	P	**P**	**16 09 09.5**	**-0.8**
	baz=135,slow=14,SNR=1.9						
BRTR	**Keskin Array B**	**21.66**	**310**	P	**P**	**16 09 34.2**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=138,slow=15,SNR=4.5						
AAK	**Ala-Archa**	**22.06**	**41**	P	**P**	**16 09 40.4**	**+1.3**
	comp=Z,1.8nm,0.5s,baz=204,slow=10.0,SNR=2.1						
AKTO	**Aktyubinsk**	**23.25**	**5**	P	**P**	**16 09 51.8**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=243,slow=2.3,SNR=1.5						
BVAR	**Borovoye Array**	**28.16**	**20**	P	**P**	**16 10 34.9**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=173,slow=3.4,SNR=2.0						
MKAR	**Makanchi Array**	**28.99**	**41**	P	**P**	**16 10 46.2**	**+2.4**
	comp=Z,0.5nm,0.9s,baz=198,slow=8.8,SNR=2.8						
KURBB	**Kurchatov Arra**	**29.40**	**31**	P	**P**	**16 10 47.4**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=231,slow=8.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**34.50**	**31**	P	**P**	**16 11 31.4**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=236,slow=9.0,SNR=4.8						
FINES	**FINESS Array B**	**39.29**	**338**	P	**P**	**16 12 10.7**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=155,slow=4.6,SNR=6.0						
TORD	**Torodi Ar. Bea**	**51.61**	**265**	P	**P**	**16 13 48.9**	**-2.0**
	comp=Z,1.1nm,0.6s,baz=55,slow=7.5,SNR=8.2						
ASAR	**Alice Springs**	**91.41**	**116**	P	**P**	**16 17 49.3**	**-1.3**
	comp=Z,0.2nm,0.7s,baz=296,slow=5.1,SNR=1.3						

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*ISCJB **02** 16:05:39.2±0.9, 7°.95N±0°.03×127°.05E±0°.06, h10km, mb3.5/4, MS3.8/1, Error ellipse: s-maj=9.0km s-min=4.7km az=1.5*

*IDC **02** 16:05:40.7±1.2, 6°.86N×123°.92E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/44, mbtmp3.5/4, MS3.9/1, Ms1 3.8/1, ms1mx3.1/25, Error ellipse: s-maj=24.1km s-min=14.4km*

az=2.0

*MAN **02** 16:05:42.3,8.°00N×126.°67E,h3^{km},mb4.7,ML3.5,MS3.4*

ISC 02 16:05:40.3±1.1,**7.°99N**±0.°03×**126.°84E**±0.°07,**h10^{km},n22,**
σ1.^{s}95/30,**mb3.5**/4,**3C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	0.51	292	⇑*i*P	Pb	16 05 51.7	+0.2
BIPH				*i* S	Sb	16 05 58.3	-0.7
MATI	**Mati**	1.19	209	*e*P	Pb	16 06 03.1	+0.1
MATI				*e*S	Sb	16 06 18.2	-0.3
BUTP	**Butuan**	1.55	309	*e*P	Pb	16 06 08.6	-0.6
BUTP				*e*S	Sg	16 06 33.0	+2.7
DAV	**Davao City (W)**	1.55	234	Pg	Pg	16 06 10.9	+0.8
	69nm,0.3s,baz=64,slow=11,SNR=4.1						
DAV				Lg	Lg	16 06 33.5	
	103nm,0.3s,baz=214,slow=21,SNR=13						
DMPH	**Davao City--Mi**	1.60	236	⇑*e*P	Pg	16 06 11.9	+0.8
DMPH				*e*S	Sg	16 06 34.6	+2.6
BUKP	**Musuan**	1.77	266	*e*P	Pg	16 06 13.1	-1.2
BUKP				*e*S	Sg	16 06 37.9	+0.7
CGP	**Cagayan de Oro**	2.18	282	⇓*e*P	Pb	16 06 18.6	-1.2
DDMP	**Don Marcelino,**	2.19	211	*e*P	Pn	16 06 18.6	+1.9
DDMP				*e*S	Sb	16 06 46.7	-0.5
CTBH	**Cotabato--PC H**	2.69	254	⇑*i*P	Pn	16 06 25.4	+1.7
SKMP	**Bagumbayan, Su**	2.71	237	*e*P	Pn	16 06 25.9	+1.8
SKMP				*e*S	Sn	16 06 57.2	+0.3
MSLP	**Maasin**	2.89	317	*e*P	Pn	16 06 27.6	+1.1
MSLP				*e*S	Sb	16 07 07.1	-0.5
PAGZ	**Pagadian**	3.43	268	*e*P	Pn	16 06 34.9	+0.9
OCLP	**Ormoc**	3.75	324	*e*P	Pn	16 06 41.0	+2.7
OCLP				*e*S	Sb	16 07 31.6	-0.7
BESP	**Borongan**	3.84	339	*e*P	Pn	16 06 43.7	+4.1
BESP				*e*S	Sn	16 07 27.7	+2.8
IPIL	**Ipil**	4.24	268	*e*P	Pb	16 06 49.7	-5.3
CNP	**Catarman**	4.97	335	*e*P	Pn	16 06 58.2	+3.0
CNP				*e*S	Sn	16 07 50.2	-2.6
PVCP	**Virac**	6.16	335	*e*P	Pb	16 07 21.3	-6.5
WRA	**Warramunga Arr**	28.72	165	P	P	16 11 38.3	+0.3
	0.5nm,1.0s,baz=341,slow=11,SNR=0.8						
ASAR	**Alice Springs**	32.21	168	P	P	16 12 07.7	-1.3
	0.2nm,0.3s,baz=343,slow=7.1,SNR=16						
STKA	**Stephens Creek**	42.08	161	LR	LR	16 34 40.8	
	comp=Z,125nm,18.2s,baz=8.2,slow=41						
MKAR	**Makanchi Array**	54.18	324	P	P	16 15 03.0	-3.0
	0.3nm,0.5s,baz=128,slow=7.7,SNR=4.9						
KURBB	**Kurchatov Arra**	58.26	326	P	P	16 15 31.7	-3.4
	0.5nm,0.5s,baz=122,slow=7.6,SNR=6.6						

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*ISCJB **02** 16:06:55.3±0.3,24.°26N±0.°03×122.°97E±0.°02,h43^{km}±7^{km},*
Error ellipse: s-maj=5.6km s-min=2.6km az=178.5

*JMA **02** 16:06:55.5±0.1,24.°37N×122.°99E,h48^{km}±1^{km},M2.1*

*TAP **02** 16:06:55.6,24.°25N×122.°93E,h41^{km}±1^{km},ML2.7,D*

ISC 02 16:06:55.9±1.2,**24.°27N**±0.°04×**122.°98E**±0.°02,**h41**^{km}±8^{km},
n49,σ1.^{s}01/86,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.18	350	P	Pn	16 07 02.9	-0.2
JYNG				S	Sn	16 07 08.4	+0.2
YOJ	**Yonaguni jima**	0.19	9	*e*P	Pn	16 07 03.1	-0.1
	baz=15						
YOJ				*e*S	Sn	16 07 08.5	+0.2
	baz=15						
YOJ	**Yonaguni jima**	0.19	9	P	Pn	16 07 03.1	-0.1
YOJ				S	Sn	16 07 08.3	0.0
IRIF	**Iriomote-Funau**	0.69	85	P	Pn	16 07 08.7	-0.5
IRIF				S	Sn	16 07 18.7	0.0
HATJ	**Hateruma jima**	0.79	106	P	Pn	16 07 10.8	+0.3
HATJ				*e*S	Sn	16 07 21.6	+0.6
EOS1	**EOS1**	0.82	290	*e*P	Pn	16 07 10.4	-0.5
	baz=292						
EOS1				*e*S	Sn	16 07 21.4	-0.5
	baz=292						
JKRS	**Kuro-shima**	0.94	92	P	Pn	16 07 12.9	+0.3
JKRS				S	Sn	16 07 25.4	+0.5
JIJ	**Ishigaki jima**	1.07	85	P	Pn	16 07 13.7	-0.6
JIJ				S	Sn	16 07 27.2	-0.8
TWC	**Suao**	1.08	288	*e*P	Pn	16 07 13.6	-0.9
	baz=289						
NANB	**Nanao**	1.13	278	*e*P	Pn	16 07 14.9	-0.3
	baz=279						
NANB				*e*S	Sn	16 07 28.8	-0.8
	baz=279						
ENA	**Nanau**	1.14	278	*e*P	Pn	16 07 15.0	-0.4
	baz=279						
TWB1	**Santiao Chiao**	1.16	309	*e*P	Pn	16 07 15.1	-0.6
	baz=311						
JISG	**Ishigakijimahi**	1.25	75	P	Pn	16 07 16.4	-0.5
JISG				*e*S	Sn	16 07 32.6	0.0
TIPB	**Shuangxi**	1.26	304	P	Pn	16 07 16.3	-0.8
	baz=305						
TIPB				*e*S	Sn	16 07 31.8	-1.1
	baz=305						
NACB	**Ninganchiao**	1.27	266	*e*P	Pn	16 07 16.9	-0.2
	baz=266						
NACB				*e*S	Sn	16 07 32.0	-0.9
	baz=266						
TWE	**Neicheng**	1.28	291	P	Pn	16 07 17.1	-0.1
	baz=292						
TWE				*e*S	Sn	16 07 32.3	-0.8
	baz=292						
TWD	**Chiawan**	1.28	262	*e*P	Pn	16 07 16.7	-0.5
	baz=262						
TWD				*e*S	Sn	16 07 32.5	-0.6
	baz=262						
SLBB	**Yuanshan**	1.31	292	*e*P	Pn	16 07 18.4	+0.6
	baz=292						
SLBB				*e*S	Sn	16 07 33.2	-1.0
	baz=292						
ETLH	**Xiulin Townshi**	1.37	268	*e*P	Pn	16 07 18.0	-0.5
	baz=268						
ETLH				*e*S	Sn	16 07 35.2	-0.3
	baz=268						
NNSB	**Datong**	1.46	276	*e*P	Pn	16 07 20.1	+0.2
	baz=277						
ESL	**Shilin**	1.48	252	P	Pn	16 07 19.0	-1.0
	baz=252						
ESL				*e*S	Sn	16 07 37.1	-1.1
	baz=252						
YHNB	**Yeheng**	1.51	286	*e*P	Pn	16 07 22.1	+1.5
	baz=286						
YHNB				*e*S	Sn	16 07 39.2	+0.1
	baz=286						
TATO	**Taipei**	1.53	298	*e*P	Pn	16 07 20.3	-0.4
	baz=298						
TATO				*e*S	Sn	16 07 38.4	-0.9
	baz=298						
NSK	**Sanguang**	1.53	286	*e*S	Sn	16 07 40.2	+0.7
	baz=286						
YM01	**YM01**	1.55	305	*e*S	Sn	16 07 39.2	-0.7
	baz=305						
YM10	**YM10**	1.56	305	*e*S	Sn	16 07 40.2	-0.1
	baz=305						
JTJ	**Tarama**	1.61	76	P	Pn	16 07 21.8	0.0
JTJ				S	Sn	16 07 41.3	-0.1
HGSD	**Ruisui**	1.62	242	*e*P	Pn	16 07 20.6	-1.3
	baz=241						
HGSD				*e*S	Sn	16 07 39.9	-1.7
	baz=241						
CHGB	**Renai**	1.66	263	*e*P	Pn	16 07 22.9	+0.2
	baz=263						
CHGB				*e*S	Sn	16 07 43.6	+0.6
	baz=263						
EHY	**Hungye**	1.70	244	*e*P	Pn	16 07 22.2	-0.8
	baz=243						
EHY				*e*S	Sn	16 07 42.7	-0.8
	baz=243						
VWDT	**VWDT**	1.76	253	*e*P	Pn	16 07 23.8	0.0
	baz=253						
YULB	**Yu-li**	1.77	241	*e*P	Pn	16 07 23.0	-1.0
	baz=240						
YULB				*e*S	Sn	16 07 44.1	-1.2
	baz=240						
TWF1	**Yuli**	1.79	240	*e*P	Pn	16 07 23.4	-0.9
	baz=239						
TWF1				*e*S	Sn	16 07 44.9	-1.0
	baz=239						
LIOB	**Emei**	1.83	282	*e*S	Sn	16 07 49.3	+2.6
	baz=282						
WHP	**Taichung City**	1.85	271	*e*P	Pn	16 07 27.5	+2.3
	baz=270						
WHP				*e*S	Sn	16 07 48.5	+1.0
	baz=270						
DPDB	**Guoxing**	1.89	263	*e*P	Pn	16 07 25.4	-0.3
	baz=263						
SSLB	**Suanglung**	1.91	256	*e*P	Pn	16 07 26.2	+0.2
	baz=255						
SSLB				*e*S	Sn	16 07 48.4	-0.4
	baz=255						
SMLT	**Sun Moon Lake**	1.94	259	*e*P	Pn	16 07 27.0	+0.6
	baz=258						
SMLT				*e*S	Sn	16 07 50.7	+1.1
	baz=258						
TYC	**Yuchr**	1.97	260	*e*P	Pn	16 07 27.4	+0.6
	baz=259						
TYC				*e*S	Sn	16 07 51.0	+0.7
	baz=259						
YUS	**Yu-Shan**	2.01	248	*e*P	Pn	16 07 27.5	-0.3
	baz=247						
YUS				*e*S	Sn	16 07 50.5	-1.4
	baz=247						
WHYT	**Xinyi Township**	2.03	254	*e*P	Pn	16 07 28.8	+1.2
	baz=253						
WHYT				*e*S	Sn	16 07 53.4	+1.7
	baz=253						
JIRB	**Irabujima**	2.07	74	P	Pn	16 07 28.2	0.0
ELDTW	**Lidau**	2.10	239	*e*P	Pn	16 07 27.5	-1.1
	baz=238						
ELDTW				*e*S	Sn	16 07 51.5	-2.0
	baz=238						
WTP	**Ta-pu**	2.39	245	*e*P	Pn	16 07 34.1	+1.4
	baz=244						
WTP				*e*S	Sn	16 08 02.7	+1.9
	baz=244						
CHN1	**Nanshi**	2.49	245	*e*P	Pn	16 07 35.1	+1.2
	baz=244						
CHN1				*e*S	Sn	16 08 05.7	+2.6
	baz=244						
SGST	**Jiashian**	2.49	242	*e*P	Pn	16 07 35.3	+1.3
	baz=241						
SGST				*e*S	Sn	16 08 05.4	+2.2
	baz=241						
SSD	**Sandimen**	2.63	235	*e*P	Pn	16 07 37.3	+1.4
	baz=234						
SSD				*e*S	Sn	16 08 08.2	+1.5
	baz=234						
EAST	**Anshuo**	2.71	227	*e*P	Pn	16 07 35.8	-1.3
	baz=225						
EAST				*e*S	Sn	16 08 07.1	-1.5
	baz=225						
MASBT	**Mashibuluo**	2.71	233	*e*P	Pn	16 07 37.1	+0.1
	baz=232						

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*ISCJB **02** 16:13:18.5±0.7,16.°8N±0.°1×40.°8E±0.°1,h10^{km},mb3.8/6,*
MS3.9/2,Error ellipse: s-maj=15.6km s-min=13.7km
az=42.7

*IDC **02** 16:13:18.8±1.5,16.°86N×40.°81E,h0^{km},mb3.5/5,*
mb1 3.7/6,mb1mx3.4/44,mbtmp3.6/6,ML3.4/1,MS3.9/2,
Ms1 3.9/2,ms1mx3.1/47,Error ellipse: s-maj=33.4km
s-min=28.9km az=145.0

*NEIC **02** 16:13:20.3±0.5,16.°84N×40.°79E,h10^{km},mb4.2/1,Error*
ellipse: s-maj=10.4km s-min=9.3km az=135.0

ISC 02 16:13:20.3±0.9,**16.°8N**±0.°1×**40.°8E**±0.°1,**h10^{km},n15,**
σ0.^{s}43/13,**mb3.6**/6,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	5.65	159	Pn	Pn	16 14 44.4	-0.1
	1.1nm,0.3s,baz=280,slow=18,SNR=1.5						
UOSS	**Minazif**	16.51	58	*e*Pn	Pn	16 17 12.7	+0.6
	26nm,1.4s						
TORD	**Torodi Ar. Bea**	37.89	270	P	P	16 20 38.1	+0.2
	9.5nm,0.4s,baz=89,slow=7.6,SNR=4.4						
TOA1	**Torodi Ar. Sit**	37.89	270	*e*P	P	16 20 38.1	+0.2
GERES	**GERESS Array B**	38.79	331	P	P	16 20 44.9	-0.3
	0.3nm,0.3s,baz=126,slow=5.0,SNR=4.8						
DAVOX	**Davos/Dischmat**	39.30	326	LR	LR	16 37 59.2	
	comp=Z,190nm,20.1s,baz=88,slow=38						
KURBB	**Kurchatov Arra**	45.23	33	P	P	16 21 36.9	-0.8
	0.2nm,0.6s,baz=238,slow=8.2,SNR=2.9						
MK32	**Makanchi Array**	45.42	40	*e*P	P	16 21 38.8	-0.5
MKAR	**Makanchi Array**	45.42	40	P	P	16 21 38.8	-0.5
	0.4nm,0.8s,baz=242,slow=6.1,SNR=4.0						
FIA0	**FINESS Array S**	45.77	350	*e*P	P	16 21 42.0	+0.3
FINES	**FINESS Array B**	45.77	350	P	P	16 21 42.0	+0.3
	1.3nm,0.8s,baz=199,slow=13,SNR=1.6						
FINES	**FINESS Array B**	45.77	350	P	P	16 21 42.0	+0.3
ZALV	**Zalesovo Beam**	50.27	32	P	P	16 22 16.8	0.0
	0.3nm,0.3s,baz=270,slow=8.6,SNR=2.0						
ZAA1	**Zalesovo Array**	50.27	32	*e*P	P	16 22 16.8	0.0
SIJI	**Sorong**	90.72	91	LR	LR	17 06 37.0	
	comp=Z,47nm,21.4s,baz=66,slow=35						

IDC 02 16:32:42.5±3.6,**15.°49S**×**174.°09W,h0^{km},mb3.9**/3,
mb1 4.3/3,**mb1mx3.8**/23,**mbtmp3.9**/3,**Error ellipse:**
s-maj=485.1km s-min=34.3km az=157.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	38.70	330	T	T	17 21 13.1	
	baz=146						
H11S3	**WAKE ISLAND Hy**	38.72	330	T	T	17 21 14.4	
	baz=146						
H11S1	**WAKE ISLAND Hy**	38.72	330	T	T	17 21 14.8	
	baz=146						
WRA	**Warramunga Arr**	49.18	257	P	P	16 41 32.9	+0.1
	3.2nm,1.1s,baz=84,slow=7.4,SNR=3.0						
ASAR	**Alice Springs**	49.45	252	P	P	16 41 34.5	-0.3
	3.1nm,0.8s,baz=86,slow=8.3,SNR=36						
TXAR	**Lajitas Array**	81.21	56	P	P	16 45 00.8	0.0
	0.2nm,0.7s,baz=220,slow=9.4,SNR=3.4						

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*ISCJB **02** 16:40:08.5±0.3,24.°28N±0.°03×122.°96E±0.°02,h43^{km}±7^{km},*
Error ellipse: s-maj=5.5km s-min=2.4km az=176.2

*JMA **02** 16:40:08.5±0.1,24.°39N×122.°98E,h49^{km}±1^{km},M2.2*

*TAP **02** 16:40:08.5,24.°26N×122.°92E,h39^{km}±1^{km},ML2.8,C*

ISC 02 16:40:09.1±1.2,**24.°28N**±0.°04×**122.°97E**±0.°02,**h41**^{km}±7^{km},
n53,σ1.^{s}05/101,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.17	354	P	Pn	16 40 16.0	-0.3
JYNG				S	Sn	16 40 21.5	+0.2
YOJ	**Yonaguni jima**	0.18	13	P	Pn	16 40 16.2	-0.2
	baz=20						
YOJ				S	Sn	16 40 21.7	+0.3
	baz=20						
YOJ	**Yonaguni jima**	0.18	13	P	Pn	16 40 16.2	-0.2
YOJ				S	Sn	16 40 21.5	0.0
IRIF	**Iriomote-Funau**	0.70	86	P	Pn	16 40 21.9	-0.7
IRIF				S	Sn	16 40 31.7	-0.5
HATJ	**Hateruma jima**	0.80	106	P	Pn	16 40 23.9	0.0
HATJ				S	Sn	16 40 36.7	+2.0
EOS1	**EOS1**	0.81	289	*e*P	Pn	16 40 23.3	-0.7
	baz=291						
EOS1				*e*S	Sn	16 40 34.5	-0.3
	baz=291						
JKRS	**Kuro-shima**	0.95	92	P	Pn	16 40 25.9	-0.1
JKRS				S	Sn	16 40 38.6	+0.2
TWC	**Suao**	1.07	288	*e*P	Pn	16 40 27.0	-0.6
	baz=289						
TWC				*e*S	Sn	16 40 40.1	-1.1
	baz=289						
JIJ	**Ishigaki jima**	1.08	85	P	Pn	16 40 27.0	-0.7
JIJ				S	Sn	16 40 40.3	-1.2
NANB	**Nanao**	1.12	278	*e*P	Pn	16 40 27.9	-0.3
	baz=278						
NANB				*e*S	Sn	16 40 41.7	-0.8
	baz=278						
ENA	**Nanau**	1.12	278	*e*P	Pn	16 40 28.1	-0.3
	baz=278						
ENA				*e*S	Sn	16 40 42.1	-0.6
	baz=278						
TIPB	**Shuangxi**	1.24	304	P	Pn	16 40 29.3	-0.7
	baz=305						
TIPB				*e*S	Sn	16 40 44.0	-1.7
	baz=305						
NACB	**Ninganchiao**	1.25	265	*e*P	Pn	16 40 29.8	-0.4
	baz=265						
NACB				*e*S	Sn	16 40 46.1	+0.3
	baz=265						
TWE	**Neicheng**	1.26	291	*e*P	Pn	16 40 29.8	-0.4
	baz=292						
TWE				*e*S	Sn	16 40 45.6	-0.4
	baz=292						
JISG	**Ishigakijimahi**	1.26	76	P	Pn	16 40 29.7	-0.6
JISG				S	Sn	16 40 45.2	-0.9
TWD	**Chiawan**	1.27	261	*e*S	Sn	16 40 45.5	-0.6
	baz=261						
ETLH	**Xiulin Townshi**	1.36	267	*e*P	Pn	16 40 31.6	0.0
	baz=267						
ETLH				*e*S	Sn	16 40 48.2	-0.3
	baz=267						
NDT	**Datong Townshi**	1.36	284	*e*P	Pn	16 40 32.2	+0.6
	baz=284						
NDT				*e*S	Sn	16 40 48.3	-0.1
	baz=284						
NNSB	**Datong**	1.45	276	*e*P	Pn	16 40 32.8	-0.1
	baz=276						
NNS	**Nan Shan**	1.46	277	*e*P	Pn	16 40 32.7	-0.4
	baz=277						
NNS				*e*S	Sn	16 40 51.5	+0.5
	baz=277						
ESL	**Shilin**	1.48	252	*e*P	Pn	16 40 32.2	-1.0
	baz=251						
ESL				*e*S	Sn	16 40 50.1	-1.2
	baz=251						
YHNB	**Yeheng**	1.50	285	*e*P	Pn	16 40 34.3	+0.7
	baz=286						
YHNB				*e*S	Sn	16 40 52.4	+0.4
	baz=286						
NSK	**Sanguang**	1.52	285	*e*P	Pn	16 40 33.8	0.0
	baz=286						
NSK				*e*S	Sn	16 40 52.4	+0.1
	baz=286						
EGFH	**Guangfu**	1.53	247	*e*P	Pn	16 40 33.6	-0.4
	baz=246						
EGFH				*e*S	Sn	16 40 52.1	-0.5
	baz=246						
YM01	**YM01**	1.53	304	*e*P	Pn	16 40 33.1	-0.9
	baz=305						
YM01				*e*S	Sn	16 40 52.3	-0.5
	baz=305						
YM05	**YM05**	1.55	305	*e*P	Pn	16 40 34.4	+0.2
	baz=306						
YM05				*e*S	Sn	16 40 52.0	-1.1
	baz=306						
HGSD	**Ruisui**	1.61	241	*e*P	Pn	16 40 33.8	-1.3
	baz=240						
HGSD				*e*S	Sn	16 40 53.0	-1.7
	baz=240						
JTJ	**Tarama**	1.62	77	P	Pn	16 40 35.0	-0.2
JTJ				S	Sn	16 40 54.5	-0.4
TWT	**Tachien**	1.63	269	*e*P	Pn	16 40 36.0	+0.5
	baz=269						
TWT				*e*S	Sn	16 40 54.8	-0.6
	baz=269						
CHGB	**Renai**	1.65	263	*e*P	Pn	16 40 36.0	+0.2
	baz=262						
CHGB				*e*S	Sn	16 40 55.5	-0.4
	baz=262						
EHY	**Hungye**	1.69	243	*e*P	Pn	16 40 35.3	-0.9
	baz=242						
EHY				*e*S	Sn	16 40 54.8	-1.8
	baz=242						
VWDT	**VWDT**	1.75	253	*e*P	Pn	16 40 37.0	0.0
	baz=252						
VWDT				*e*S	Sn	16 40 57.6	-0.4
	baz=252						
YULB	**Yu-li**	1.77	240	*e*P	Pn	16 40 36.1	-1.0
	baz=239						
YULB				*e*S	Sn	16 40 57.4	-1.0
	baz=239						
TWF1	**Yuli**	1.79	239	*e*P	Pn	16 40 36.8	-0.7
	baz=238						
TWF1				*e*S	Sn	16 40 58.0	-0.9
	baz=238						
LIOB	**Emei**	1.81	282	*e*P	Pn	16 40 38.5	+0.7
	baz=282						
WHP	**Taichung City**	1.84	270	*e*P	Pn	16 40 40.2	+1.9
	baz=270						
DPDB	**Guoxing**	1.88	263	*e*P	Pn	16 40 39.3	+0.5
	baz=262						
DPDB				*e*S	Sn	16 41 01.9	+0.5
	baz=262						
CHKT	**Chengkung**	1.88	232	*e*P	Pn	16 40 37.2	-1.6
	baz=230						
CHKT				*e*S	Sn	16 40 58.0	-3.2
	baz=230						
SSLB	**Suanglung**	1.90	255	*e*P	Pn	16 40 39.1	0.0
	baz=255						
SSLB				*e*S	Sn	16 41 01.5	-0.4
	baz=255						
SMLT	**Sun Moon Lake**	1.93	259	*e*P	Pn	16 40 40.2	+0.7
	baz=258						
SMLT				*e*S	Sn	16 41 04.0	+1.4
	baz=258						
TYC	**Yuchr**	1.96	259	*e*P	Pn	16 40 40.4	+0.6
	baz=259						
TYC				*e*S	Sn	16 41 04.1	+0.8
	baz=259						
YUS	**Yu-Shan**	2.00	247	*e*P	Pn	16 40 41.1	+0.2
	baz=246						
YUS				*e*S	Sn	16 41 04.1	-0.9
	baz=246						
WHYT	**Xinyi Township**	2.02	254	*e*P	Pn	16 40 41.6	+0.9
	baz=253						
WHYT				*e*S	Sn	16 41 05.8	+1.1
	baz=253						
ELDTW	**Lidau**	2.09	239	*e*P	Pn	16 40 40.6	-1.2
	baz=238						
ELDTW				*e*S	Sn	16 41 04.6	-2.0
	baz=238						
WNT	**Mingjian**	2.12	260	*e*P	Pn	16 40 43.8	+1.7
	baz=259						
WNT				*e*S	Sn	16 41 09.5	+2.3
	baz=259						
JMJ	**Miyako jima 2**	2.19	75	*e*P	Pn	16 40 43.6	+0.7
	baz=75						
JMJ				*e*S	Sn	16 41 09.8	+1.0
	baz=75						
CHN5	**Tsauling**	2.20	252	*e*P	Pn	16 40 44.9	+1.7
	baz=252						
CHN5				*e*S	Sn	16 41 10.9	+1.6
	baz=252						
WTP	**Ta-pu**	2.39	245	*e*P	Pn	16 40 47.3	+1.5
	baz=244						
WTP				*e*S	Sn	16 41 15.8	+2.0
	baz=244						
CHN1	**Nanshi**	2.48	244	*e*P	Pn	16 40 48.8	+1.7
	baz=243						
CHN1				*e*S	Sn	16 41 18.2	+2.0
	baz=243						
SGST	**Jiashian**	2.49	242	*e*P	Pn	16 40 48.7	+1.6
	baz=241						
SGST				*e*S	Sn	16 41 18.5	+2.2
	baz=241						
SSD	**Sandimen**	2.63	235	*e*P	Pn	16 40 50.4	+1.3
	baz=234						
MASBT	**Mashibuluo**	2.71	233	*e*P	Pn	16 40 50.2	0.0
	baz=231						
MASBT				*e*S	Sn	16 41 23.3	+1.5
	baz=231						
EAST	**Anshuo**	2.71	226	*e*P	Pn	16 40 49.9	-0.4
	baz=225						
EAST				*e*S	Sn	16 41 20.3	-1.5
	baz=225						

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*ISCJB **02** 16:40:47.3±0.6,23.°56S±0.°03×68.°37W±0.°06,h160^{km}±9^{km},*
Error ellipse: s-maj=8.9km s-min=5.3km az=0.8

*NEIC **02** 16:40:48.0±0.0,23.°56S×68.°21W,h127^{km},ML4.1(GUC),*
After GUC.

*SJA **02** 16:40:48.0±0.7,23.°53S×68.°25W,h143^{km}±6^{km},ML3.0,*
MW3.3

*GUC **02** 16:40:48.5±0.5,23.°56S×68.°21W,h127^{km}±5^{km},ML4.1*

ISC 02 16:40:47.4±1.5,**23.°55S**±0.°04×**68.°34W**±0.°05,
h158^{km}±14^{km},**n38,σ0.^{s}95**/52,**4C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	1.08	331	*e*Pn	Pn	16 41 14.3	+0.2
LVC	**Limon Verde**	1.08	331	*e*P	Pn	16 41 14.4	+0.2
LVC				*e*S	Sn	16 41 33.0	-1.4
LVC				IAML		16 41 34.4	
	comp=Z,656nm,0.2s						
PB15	**IPOC Station P**	1.10	288	*e*P	Pn	16 41 14.9	+0.8
PB15				*e*S	Sn	16 41 34.2	-0.1
PB15	**IPOC Station P**	1.10	288	⇑*i*P	Pn	16 41 14.4	+0.4
PB15				*e*S	Sn	16 41 33.8	-0.6
PB06	**IPOC Station P**	1.42	306	*e*P	Pn	16 41 17.6	+0.7
PB06				*e*S	Sn	16 41 39.1	-0.4
PB06	**IPOC Station P**	1.42	306	⇑*i*P	Pn	16 41 17.6	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB06				eS	Sn	16 41 38.6	-1.0
PB06				IAML		16 41 40.7	
	comp=N,3μm,0.2s						
PB05	IPOC Station P	1.85	292	eP	Pn	16 41 22.4	+0.9
PB05	IPOC Station P	1.85	292	⇑iP	Pn	16 41 22.2	+0.7
PB05				eS	Sn	16 41 46.9	-0.9
PB09	IPOC Station P	1.94	334	eP	Pn	16 41 23.6	+1.0
PB09	IPOC Station P	1.94	334	⇓iP	Pn	16 41 23.6	+1.0
PB09				eS	Sn	16 41 49.6	0.0
PB09				IAML		16 41 50.9	
	comp=N,949nm,0.2s						
GO02	Mina Guanaco	1.97	215	ePn	Pn	16 41 24.2	+1.2
GO02	Mina Guanaco	1.97	215	eP	Pn	16 41 24.1	+1.1
GO02				eS	Sn	16 41 51.0	+0.5
PB03	IPOC Station P	1.99	319	eP	Pn	16 41 23.9	+0.8
PB10	IPOC Station P	2.04	271	ePn	Pn	16 41 24.6	+1.1
PB10				eSn	Sn	16 41 50.3	-0.9
PB10	IPOC Station P	2.04	271	eP	Pn	16 41 24.8	+1.3
PB10	IPOC Station P	2.04	271	⇑iP	Pn	16 41 24.8	+1.3
PB10				eS	Sn	16 41 52.8	+1.6
PB04	IPOC Station P	2.06	306	ePn	Pn	16 41 24.6	+0.6
PB04				eSn	Sn	16 41 50.6	-1.6
PB04	IPOC Station P	2.06	306	eP	Pn	16 41 25.0	+1.0
PB04	IPOC Station P	2.06	306	eP	Pn	16 41 24.7	+0.7
PB04				eS	Sn	16 41 51.5	-0.6
PB04				IAML		16 41 55.4	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	2.31	321	eP	Pn	16 41 27.6	+0.7
PB02	IPOC Station P	2.65	327	eP	Pn	16 41 31.8	+0.8
HJA	Humahuaca	2.71	83	eP	Pn	16 41 32.2	+0.3
HJA				IAML		16 41 33.4	
	comp=Z,61nm,0.5s						
PB01	IPOC Station P	2.72	337	ePn	Pn	16 41 31.8	0.0
YJA	Yavi	2.94	63	eP	Pn	16 41 35.5	+0.7
YJA				IAML		16 41 38.7	
	comp=Z,3.5nm,0.3s						
AZAP	Zapla	3.07	103	eP	Pn	16 41 36.0	-0.2
AZAP				IAML		16 41 36.6	
	comp=Z,28nm,0.6s						
GO01	Chusmiza	3.95	348	ePn	Pn	16 41 48.0	+0.3
GO01	Chusmiza	3.95	348	eP	Pn	16 41 47.8	+0.1
GO01				eS	Sn	16 42 35.0	+0.4
PB11	IPOC Station P	3.97	342	ePn	Pn	16 41 46.9	-0.8
AHML	Horco Molle	4.21	140	eP	Pn	16 41 51.8	+1.1
GO03	Copiap	4.37	203	ePn	Pn	16 41 52.2	-0.6
GO03	Copiap	4.37	203	eP	Pn	16 41 52.6	-0.2
GO03	Copiap	4.37	203	⇓iP	Pn	16 41 52.3	-0.5
GO03				eS	Sn	16 42 42.8	-1.0
MNMC	Minye Minye	4.55	345	ePn	Pn	16 41 54.7	-0.7
VCA	Vinchina	5.16	179	eP	Pn	16 42 04.8	+1.5
VCA				IAML		16 42 05.8	
	comp=Z,32nm,0.3s						
CYA	Choya	5.38	155	eP	Pn	16 42 06.8	+0.9
LCO	Las Campanas	5.83	201	ePn	Pn	16 42 10.8	-1.5
GO04	Tololo Observa	6.95	198	ePn	Pn	16 42 24.7	-2.3
LPAZ	La Paz	7.23	2	ePn	Pn	16 42 31.9	+0.7

**GUC 02 16:47:24.5±0.7, 35°.01S×73°.94W, h38km±18km, ML3.8,
Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COCH	Cobquecura	1.46	141	eP	Pn	16 47 49.1	+0.8
COCH				eS	Sn	16 48 07.8	+1.6
GO05	Huala	1.65	91	eP	Pn	16 47 51.6	+0.7
GO05				eS	Sn	16 48 12.0	+1.2
GO05				AMP		16 48 13.2	
	comp=N,12μm,0.2s						
LMEL	Las Melosas	3.29	71	eP	Pn	16 48 14.5	+0.9
LMEL				eS	Sn	16 48 53.3	+1.6
LMEL				IAML		16 48 57.9	
	comp=N,256nm,0.1s						
FCH	Farellones	3.45	62	eP	Pn	16 48 15.8	-0.2
FCH				eS	Sn	16 48 56.3	+0.5
FCH				IAML		16 48 57.2	
	comp=N,195nm,0.2s						

**MEX 02 16:50:28.4±0.5, 15°.96N×96°.67W, h49km±8km, MD3.6,
Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.57	109	eP	Pn	16 50 38.9	-1.6
HUIG				eS	Sn	16 50 47.1	-2.0
VHO	Vista Hermosa	1.11	357	eP	Pn	16 50 45.6	-2.2
VHO				iS	Sn	16 50 60.0	-2.2
CMIG	Matias Romero	2.05	56	iP	Pn	16 50 59.0	-1.5
CMIG				eS	Sn	16 51 23.8	-1.1

**UCR 02 17:12:19.1±1.5, 11°.43N×85°.83W, h171km±17km, MW3.7,
4C-4D, Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GB1A	Borinquen Arri	0.74	145	⇓eP	Pn	17 12 45.1	+0.8
GB1A				eS	Sn	17 13 06.2	+2.5
ACON	Acoyapa	0.84	50	eP	Pn	17 12 44.8	0.0
ACON				eS	Sn	17 13 05.8	+1.2
MESS	Mesas	0.93	137	⇑eP	Pn	17 12 45.4	-0.2
MESS				eS	Sn	17 13 07.2	+1.4
CUI	Cuipilapa	1.01	139	⇑iP	Pn	17 12 47.0	+0.8
JTS	Las Juntas de	1.43	143	⇑iP	Pn	17 12 49.9	+0.2
JTS				eS	Sn	17 13 12.8	-0.5
CEDE	Laguna Cedeo	1.45	130	eP	Pn	17 12 51.1	+1.1
ARE1	Arenal 1	1.46	131	⇑eP	Pn	17 12 50.8	+0.8
MATN	Matagalpa	1.49	357	⇓eP	Pn	17 12 50.7	+0.3
RCON	San Juan de Ri	2.06	351	⇓iP	Pn	17 12 56.8	+0.3
LCR2	La Lucha 2	2.46	133	eP	Pn	17 13 01.6	+0.5
LCR2				⇓eS	Sn	17 13 33.2	-0.4

**IDC 02 17:24:08.3±8.3, 30°.46S×178°.66W, h0km, mb3.7/2,
mb1 4.0/2, mb1mx3.6/31, mbtmp3.7/2, Error ellipse:
s-maj=352.2km s-min=58.7km az=156.0, Kermadec
Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.53	267	P	P	17 32 05.5	-0.5
	0.2nm,0.3s,baz=106,slow=7.4,SNR=13						
WRA	Warramunga Arr	43.53	273	P	P	17 32 13.7	-0.2
	0.8nm,0.3s,baz=104,slow=8.3,SNR=22						
FINES	FINESS Array B	145.00	339	PKPbc	PKPab	17 43 46.2	0.0
	1.2nm,0.6s,baz=48,slow=2.8,SNR=5.0						

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*JMA **02** 17:27:39.4±0.2, 23°.63N×121°.84E, h0km, M2.6*
*ISCJB **02** 17:27:41.1±0.4, 23°.64N±0°.02×121°.80E±0°.02, h23km±4km,
Error ellipse: s-maj=3.8km s-min=2.5km az=36.0*
*TAP **02** 17:27:41.2, 23°.66N×121°.75E, h22km, ML2.7, C*
**ISC 02 17:27:40.1±1.1, 23°.64N±0°.02×121°.80E±0°.02, h12km±9km,
n55, σ0s.50/97, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.32	326	eP	Pg	17 27 46.0	-0.7
	baz=331						
ENLB				S	Sg	17 27 51.9	+0.8
	baz=331						
EGFH	Guangfu	0.34	276	iP	Pb	17 27 49.0	+0.9
	baz=271						
EGFH				S	Sb	17 27 54.6	+1.1
	baz=271						
HGSD	Ruisui	0.37	247	eP	Pb	17 27 49.3	+0.7
	baz=240						
HGSD				eS	Sb	17 27 55.0	+0.6
	baz=240						
ESL	Shilin	0.38	298	P	Pb	17 27 49.2	+0.4
	baz=298						
ESL				eS	Sb	17 27 54.4	-0.2
	baz=298						
HWA	Hwalien	0.38	333	eP	Pb	17 27 49.9	+1.1
	baz=338						
HWA				eS	Sb	17 27 56.6	+1.9
	baz=338						
EHY	Hungye	0.46	254	P	Pb	17 27 50.4	+0.3
	baz=247						
EHY				eS	Sb	17 27 56.8	0.0
	baz=247						
TWD	Chiawan	0.48	337	P	Pb	17 27 51.1	+0.6
	baz=342						
TWD				eS	Sb	17 27 58.1	+0.6
	baz=342						
YULB	Yu-li	0.52	242	P	Pb	17 27 51.4	+0.2
	baz=236						
YULB				eS	Sb	17 27 58.7	+0.1
	baz=236						
TWF1	Yuli	0.54	238	P	Pb	17 27 51.7	+0.1
	baz=232						
TWF1				eS	Sb	17 27 59.4	+0.2
	baz=232						
NACB	Ninganchiao	0.57	341	eP	Pb	17 27 52.2	+0.2
	baz=344						
NACB				eS	Sb	17 27 60.0	-0.1
	baz=344						
VWDT	VWDT	0.61	281	P	Pb	17 27 52.8	+0.1
	baz=279						
VWDT				eS	Sb	17 28 01.0	-0.3
	baz=279						
ETLH	Xiulin Townshi	0.64	333	P	Pb	17 27 53.5	+0.2
	baz=335						
ETLH				eS	Sb	17 28 02.4	+0.3
	baz=335						
CHKT	Chengkung	0.67	217	P	Pb	17 27 54.2	+0.5
	baz=211						
CHKT				eS	Sb	17 28 03.7	+0.8
	baz=211						
CHGB	Renai	0.71	307	P	Pb	17 27 54.7	+0.1
	baz=307						
CHGB				eS	Sb	17 28 04.5	+0.1
	baz=307						
SSLB	Suanglung	0.79	281	eP	Pg	17 27 55.2	-0.2
	baz=279						
NANB	Nanao	0.79	357	P	Pb	17 27 56.0	+0.2
NANB				eS	Sb	17 28 06.7	+0.3
ENA	Nanau	0.79	356	eP	Pb	17 27 55.8	0.0
ENA				eS	Sb	17 28 06.7	+0.2
YUS	Yu-Shan	0.79	259	P	Pg	17 27 55.9	+0.3
	baz=256						
YUS				eS	Sg	17 28 06.3	+0.3
	baz=256						
TWT	Tachien	0.84	317	eP	Pb	17 27 57.3	+0.6
	baz=317						
TWT				eS	Sg	17 28 07.5	+0.1
	baz=317						
SMLT	Sun Moon Lake	0.86	287	P	Pg	17 27 56.9	+0.1
	baz=285						
SMLT				eS	Sg	17 28 07.7	-0.3
	baz=285						
WHYT	Xinyi Township	0.87	274	P	Pg	17 27 57.0	+0.1
	baz=272						
WHYT				eS	Sg	17 28 07.6	-0.7
	baz=272						
NNSB	Datong	0.88	334	P	Pb	17 27 57.5	+0.1
	baz=336						
NNSB				eS	Sg	17 28 08.3	-0.2
	baz=336						
NNS	Nan Shan	0.89	334	eP	Pb	17 27 57.7	+0.1
	baz=336						
NNS				eS	Sg	17 28 08.9	-0.1
	baz=336						
DPDB	Guoxing	0.89	297	P	Pg	17 27 57.4	0.0
	baz=296						
DPDB				eS	Sg	17 28 08.5	-0.5
	baz=296						
TYC	Yuchr	0.90	287	P	Pg	17 27 57.5	-0.1
	baz=286						
TYC				S	Sb	17 28 09.9	+0.2
	baz=286						
EOS1	EOS1	0.96	18	P	Pn	17 27 59.6	+0.3
	baz=21						
EOS1				S	Sn	17 28 12.7	-0.2
	baz=21						
NDT	Datong Townshi	1.00	345	P	Pg	17 27 59.4	0.0
	baz=347						
NDT				eS	Sg	17 28 11.9	-0.5
	baz=347						
WJS	Zhushan	1.00	281	P	Pb	17 27 59.7	+0.4
	baz=279						
WHP	Taichung City	1.01	310	P	Pb	17 27 59.8	+0.2
	baz=309						
WHP				S	Sb	17 28 13.2	+0.3
	baz=309						
CHN5	Tsauling	1.03	268	P	Pg	17 28 00.0	+0.1
	baz=266						
CHN5				S	Sg	17 28 13.4	0.0
	baz=266						
WNT	Mingjian	1.05	283	P	Pg	17 28 00.5	+0.2
	baz=282						
WNT				eS	Sg	17 28 13.8	-0.3
	baz=282						
TWGBT	Beinan	1.05	219	eP	Pb	17 27 59.3	-0.9
	baz=216						
TWE	Neicheng	1.09	354	eS	Sg	17 28 15.1	-0.2
	baz=356						
YHNB	Yeheng	1.10	340	P	Pb	17 28 01.1	-0.1
	baz=341						
YHNB				S	Sb	17 28 14.4	-1.1
	baz=341						
NSK	Sanguang	1.11	339	P	Pb	17 28 01.2	-0.1
	baz=340						
NSK				eS	Sb	17 28 14.8	-1.0
	baz=340						
WGK	Gukeng	1.13	273	eP	Pb	17 28 01.4	-0.2
	baz=271						
WTP	Ta-pu	1.15	251	eP	Pb	17 28 01.8	-0.2
	baz=248						
WDLH	Douliu	1.16	273	eP	Pb	17 28 01.8	-0.3
	baz=271						
TWQ1	Liyutan	1.18	307	eP	Pg	17 28 02.9	+0.1
	baz=307						
NSTT	Nanjuang	1.23	324	eP	Pg	17 28 03.7	-0.2
	baz=325						
LIOB	Emei	1.23	325	eP	Pn	17 28 03.2	+0.1
	baz=325						
LIOB				eS	Sb	17 28 18.5	-0.8
	baz=325						
CHN1	Nanshi	1.25	249	eP	Pn	17 28 03.7	+0.3
	baz=247						
CHN1				eS	Sb	17 28 19.6	-0.1
	baz=247						
TWK	Hsinying	1.26	253	eP	Pn	17 28 03.8	+0.2
	baz=250						
JYNG	Yonagunijimaku	1.33	52	P	Pg	17 28 05.6	-0.1
JYNG				eS	Sb	17 28 22.2	+0.3
TIPB	Shuangxi	1.33	1	P	Pn	17 28 04.9	+0.4
	baz=3.0						
TIPB				S	Sb	17 28 21.8	-0.2
	baz=3.0						
RLNB	Erlin	1.34	281	eP	Pn	17 28 05.0	+0.4
	baz=280						
RLNB				eS	Sg	17 28 23.8	+0.4
	baz=280						
YOJ	Yonaguni jima	1.38	53	eP	Pb	17 28 05.8	-0.1
	baz=55						
YOJ				eS	Sn	17 28 23.2	-0.1
	baz=55						
MASBT	Mashibuluo	1.48	227	eP	Pn	17 28 05.7	-0.9
	baz=224						
TWS1	Kuangyinshan	1.50	347	eP	Pn	17 28 06.9	+0.1
	baz=348						
YM01	YM01	1.52	352	eS	Sn	17 28 26.0	-0.9
	baz=353						
HATJ	Hateruma jima	1.89	77	P	Pn	17 28 12.6	+0.5
HATJ				eS	Sn	17 28 35.1	-0.7
IRIF	Iriomote-Funau	1.90	68	P	Pn	17 28 13.0	+0.7
IRIF				S	Sn	17 28 36.5	+0.3
JKRS	Kuro-shima	2.11	73	P	Pn	17 28 16.2	+1.0
JKRS				eS	Sn	17 28 41.8	+0.4
JIJ	Ishigaki jima	2.26	71	P	Pn	17 28 17.4	+0.1
JIJ				eS	Sn	17 28 44.5	-0.7
JISG	Ishigakijimahi	2.48	67	P	Pn	17 28 20.3	-0.1
JISG				eS	Sn	17 28 49.7	-0.9

**IDC 02 17:31:59.5±1.8, 2°.87N×122°.03E, h0km, mb3.4/3,
mb1 3.6/3, mb1mx3.2/42, mbtmp3.4/3, Error ellipse:
s-maj=267.3km s-min=26.8km az=62.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.69	152	P	P	17 37 31.2	-0.3
	0.7nm,0.7s,baz=328,slow=11,SNR=4.8						
ASAR	Alice Springs	28.80	157	P	P	17 37 59.7	+0.3
	0.1nm,0.3s,baz=334,slow=7.5,SNR=7.1						
MKAR	Makanchi Array	55.68	328	P	P	17 41 37.5	-0.1
	0.2nm,0.3s,baz=121,slow=8.4,SNR=4.8						

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*MEX **02** 17:42:50.6±0.5, 15°.90N×90°.70W, h15km, MD3.8*
*GCG **02** 17:42:53.3±0.5, 15°.98N×91°.11W, h64km±31km, MD3.7*
**ISC 02 17:42:53.8±1.5, 15°.90N±0°.06×91°.04W±0°.05, h27km±17km,
n8, σ1s.56/16, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCIG	Comitan	1.13	290	eP	Pn	17 43 12.7	-1.2
CCIG				iS	Sb	17 43 29.9	+0.9
STG3	Santiaguito 3,	1.29	204	eP	Pb	17 43 16.8	-0.7
STG3				eS	Sb	17 43 34.7	+0.9
FUG	Fuego 3	1.46	173	eP	Pb	17 43 19.6	-0.7
FUG				eS	Sb	17 43 39.7	+1.2
NBG	Las Nubes	1.46	153	eP	Pb	17 43 19.9	-0.6
NBG				eS	Sb	17 43 40.8	+2.0
MRL	Marmol	1.54	122	eP	Pb	17 43 20.6	-1.0
MRL				eS	Sb	17 43 42.6	+1.8
THIG		1.54	230	iP	Pn	17 43 17.8	-1.8
THIG				iS	Sn	17 43 38.9	+0.2
PCIG		2.11	265	iP	Pn	17 43 26.2	-1.1
PCIG				iS	Sn	17 43 54.9	+2.2
TGIG		2.19	294	iP	Pn	17 43 27.3	-1.2
TGIG				iS	Sn	17 43 56.7	+2.0

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*IDC **02** 17:54:21.4±3.6, 7°.29S×155°.55E, h0km, mb3.8/5,
mb1 4.0/6, mb1mx3.7/25, mbtmp3.8/6, ML1.8/1, MS3.3/2,
Ms1 3.3/2, ms1mx2.7/26, Error ellipse: s-maj=90.7km
s-min=28.7km az=114.0*
**ISC 02 17:54:26.7±2.1, 7°.3S±0°.3×155°.4E±0°.2, h29km, n7, σ0s.55/7,
mb3.8/5, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.39	255	Pn	Pn	17 56 26.2	-0.2
	0.6nm,0.3s,baz=86,slow=13,SNR=3.0						
PMG				Sn	Sn	17 58 00.3	0.0
	0.5nm,0.3s,baz=75,slow=20,SNR=2.2						
WRA	Warramunga Arr	23.96	236	P	P	17 59 38.6	-0.1
	2.7nm,0.8s,baz=62,slow=7.9,SNR=6.0						
ASAR	Alice Springs	26.26	229	P	P	17 59 59.8	+0.1
	1.0nm,0.7s,baz=59,slow=8.3,SNR=16						
ASAR				LR	LR	18 09 28.0	
	comp=Z,60nm,19.9s,baz=110,slow=34						
STKA	Stephens Creek	27.62	206	LR	LR	18 09 33.4	
	comp=Z,73nm,19.6s,baz=30,slow=33						
CMAR	Chiang Mai Arr	61.26	296	P	P	18 04 40.6	+0.9
	1.2nm,0.6s,baz=121,slow=5.2,SNR=9.3						
SONM	Songino Array	69.80	327	P	P	18 05 34.0	-0.6
	0.3nm,0.5s,baz=142,slow=7.3,SNR=2.6						
MKAR	Makanchi Array	83.88	319	P	P	18 06 53.8	-0.1
	0.4nm,0.7s,baz=115,slow=5.7,SNR=6.0						

**IDC 02 17:58:30.2±9.4, 19°.69S×177°.61W, h475km±106km,
mb3.5/7, mb1 3.6/8, mb1mx3.2/25, mbtmp4.4/8, Error
ellipse: s-maj=55.1km s-min=18.9km az=53.0, Fiji
Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	19.07	193	P	P	18 02 21.2	-0.3
	3.5nm,0.3s,baz=301,slow=3.4,SNR=17						
CTA	Charters Tower	33.95	263	P	P	18 04 33.5	+0.4
	5.9nm,0.4s,baz=88,slow=10.0,SNR=22						
JAY	Jayapura	44.14	287	P	P	18 05 56.8	+0.8
	5.7nm,0.6s,baz=82,slow=4.6,SNR=6.0						
ASAR	Alice Springs	45.07	256	P	P	18 06 02.5	-0.5
	3.2nm,0.6s,baz=87,slow=8.0,SNR=90						
WRA	Warramunga Arr	45.08	261	P	P	18 06 02.3	-0.8
	1.5nm,0.3s,baz=95,slow=7.3,SNR=39						
SIJI	Sorong	53.39	284	P	P	18 07 04.5	-0.4
	2.5nm,0.4s,baz=193,slow=11,SNR=5.5						
VNDA	Vanda	58.75	185	P	P	18 07 41.4	+0.4
	0.6nm,0.7s,baz=5.5,slow=6.5,SNR=6.8						
MJAR	Matsushiro Arr	69.78	323	P	P	18 08 51.6	-0.4
	1.8nm,0.7s,baz=169,slow=6.1,SNR=5.9						

**DJA 02 18:08:33.4±0.5, 0°N±3°×10°0E±°, h155km±5km, M4.1/9,
mb4.8/1, MLv3.8/9, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.52	307	P	Pn	18 08 56.5	+1.1
MNSI				S	Sn	18 09 14.0	+1.8
BKNI	Bangkinang	1.05	98	P	Pn	18 08 59.5	+0.4
BKNI				S	Sn	18 09 19.1	+0.4
PDSI	Padang	1.46	162	P	Pn	18 09 03.5	+0.5
PDSI				S	Sn	18 09 26.9	+1.2
SISI	Saibi	2.01	207	P	Pn	18 09 09.6	+0.6
SISI				S	Sn	18 09 37.5	+1.1
GSI	Gunungsitoli	2.56	289	P	Pn	18 09 17.0	+1.5
GSI				S	Sn	18 09 48.9	+0.9
KRJI	Kerinci	2.94	150	P	Pn	18 09 21.4	+1.0
KRJI				S	Sn	18 10 00.7	+4.0
PPSI	Pulau Pagai	3.22	180	P	Pn	18 09 22.9	-0.9
PPSI				S	Sn	18 10 02.1	-0.8
KCSI	Kotacane, Aceh	3.75	324	P	Pn	18 09 30.6	0.0
TPTI		3.95	314	P	Pn	18 09 33.6	+0.5
TPTI				S	Sn	18 10 18.7	-0.8
MNAI	Manna	5.64	148	P	Pn	18 09 54.4	-1.1

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*NEIC **02** 18:17:08.2±0.0, 55°.36N×134°.96W, h24km, ML2.5(AEIC),
After AEIC.*
**PGC 02 18:17:05.3±0.1, 55°.26N×135°.17W, h1km, ML3.1/8,
200km south of Sitka, Ak Off Coast Of Southeastern
Alaska, Off coast of southeastern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRAG	Craig	1.19	79	ePn	Pg	18 17 26.9	-1.1
SIT	Sitka	1.81	357	ePn	Pn	18 17 36.6	-0.9
NDB	Naden	1.84	134	Pn	Pn	18 17 38.0	+0.1
NDB				Sg	Sb	18 18 03.4	+0.3
WRAK	Wrangell Islan	1.97	53	ePn	Pn	18 17 38.6	-1.2
DIB	Dawson Inlet,	2.59	141	ePn	Pn	18 17 48.4	+0.1
DIB	Dawson Inlet,	2.59	141	Pn	Pn	18 17 48.5	+0.2
DIB				Sg	Sb	18 18 25.0	+0.2
MOBC	Moresby Island	2.83	137	ePn	Pn	18 17 51.6	0.0
MOBC	Moresby Island	2.83	137	Pn	Pn	18 17 51.6	0.0
MOBC				Sg	Sb	18 18 32.4	+0.7
HG1B	Mitchell Dam	2.93	141	Pn	Pn	18 17 51.7	-1.2
HG1B				Sg	Sb	18 18 36.0	+1.5
RUBB	Prince Rupert	2.99	106	Pn	Pn	18 17 54.1	+0.4
RUBB				Sg	Sb	18 18 35.2	-1.2
JIS	Juneau Island	3.06	8	ePn	Pn	18 17 53.3	-1.4
HG3B	Hotspring	3.47	139	Pn	Pn	18 18 00.2	-0.1
HG3B				Sg	Sb	18 18 51.3	+1.2
HG4B	Hotspring	3.79	140	Pn	Pn	18 18 04.8	+0.1
HG4B				Sg	Sb	18 19 01.6	+2.4
DLBC	Dease Lake	4.26	39	ePn	Pn	18 18 08.9	-2.4
DLBC	Dease Lake	4.26	39	Sg	Sb	18 19 17.2	+4.4
BBB	Bella Bella	5.20	123	ePn	Pn	18 18 21.3	-2.7
BBB	Bella Bella	5.20	123	Pn	Pn	18 18 23.9	-0.1
BBB				Sn	Sn	18 19 21.3	-3.2
BCPM	Bancas Point	5.29	335	eP	Pn	18 18 09.6	-16

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*IDC **02** 18:39:42.0±0.4, 35°.89S×102°.95W, h0km, mb5.1/27,
mb1 5.2/27, mb1mx5.1/33, mbtmp5.1/27, MS4.8/24,
Ms1 4.8/24, ms1mx4.8/25, Error ellipse: s-maj=13.8km
s-min=12.9km az=60.0*
*ISCJB **02** 18:39:42.1±0.2, 35°.80S±0°.03×102°.90W±0°.03, h12km,
mb5.2/357, MS4.9/39, Error ellipse: s-maj=4.9km
s-min=3.1km az=26.7*
*MOS **02** 18:39:42.3±1.1, 35°.79S×102°.92W, h10km, mb5.4/48,
Error ellipse: s-maj=11.3km s-min=6.6km az=91.2*
*NEIC **02** 18:39:43.2±1.6, 35°.93S×102°.96W, h10km±2km, mb5.2/355,
MW5.5, Error ellipse: s-maj=13.0km s-min=5.1km
az=225.0, Moment Tensor Solution. s42 Moment tensor:
Scale 10^{17}Nm; M_{rr}0.23; $M_{\theta\theta}$-0.90; $M_{\phi\phi}$0.67; $M_{r\theta}$0.44;
$M_{\theta\phi}$-1.90; $M_{\phi r}$-0.38; Best double couple: $M_0$2.10000×10^{17}
NP1:ϕ_s100.00000°, δ81.00000°, λ165.00000°. NP2:
ϕ_s192.00000°, δ75.00000°, λ9.00000°. Principal axes: T
2.1100, Plg17.0000°, Azm56.0000°; N 0.0700,
Plg73.0000°, Azm249.0000°; P -2.1900, Plg4.0000°,
Azm147.0000°;*

GCMT ***02*** *18:39:47.2±0.1, 35°.92S±0°.01×102°.97W±0°.01, h20^{km}, MW5.6/133, Moment Tensor Solution. s122,c231; s133,c357; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.22±.03; $M_{\theta\theta}$-0.68±.03; $M_{\phi\phi}$0.89±.03; $M_{r\theta}$0.33±.07; $M_{\theta\phi}$-3.47±.03; $M_{\phi r}$-0.62±.07; Best double couple: $M_0$3.62000×10^{17} NP1:ϕ_s187.00000°, δ85.00000°, λ9.00000°. NP2:ϕ_s96.00000°, δ81.00000°, λ175.00000°. Principal axes: T 3.7860, Plg10.0000°, Azm52.0000°; N -0.3320, Plg80.0000°, Azm218.0000°; P -3.4540, Plg2.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 18:39:43.3±0.2**, 35°.90S**±0°.06×**102°.94W**±0°.05**, h12**^{km}**, n1114, σ1s04**/1119**, mb5.2**/356**, MS4.9**/39**, 5C-3D, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	10.30	326	LR	LR	18 44 40.5	
	comp=Z,3μm,21.2s,baz=93,slow=29						
RPN	Rapa Nui	10.30	326	ePn	Pn	18 42 12.8	+1.9
RPN	Rapa Nui	10.30	326	eP	Pn	18 42 12.8	+1.9
GO06	Curarrehue	25.09	108	eP	P	18 45 08.5	+0.5
	97nm,1.1s						
GO05	Huala	25.23	97	eP	P	18 45 09.3	+0.2
	176nm,1.0s						
PLCA	Paso Flores	25.78	111	P	P	18 45 16.1	+2.0
	116nm,1.1s,baz=299,slow=9.6,SNR=26						
PLCA				LR	LR	18 52 47.6	
	comp=Z,2μm,21.2s,baz=284,slow=30						
PLCA	Paso Flores	25.78	111	eP	P	18 45 16.0	+1.8
	196nm,1.1s						
PLCA	Paso Flores	25.78	111	eP	P	18 45 16.0	+1.8
PLCA				pmax	pmax		
	comp=Z,196nm,1.1s						
PLCA	Paso Flores	25.78	111	eP	P	18 45 16.6	+2.4
PEL	Peldehue	26.66	94	eP	P	18 45 22.7	+0.6
	comp=Z,99nm,1.3s						
PEL	Peldehue	26.66	94	eP	P	18 45 22.7	+0.6
PEL				pmax	pmax		
	comp=Z,99nm,1.3s						
GO09	Cerro Castillo	26.72	135	eP	P	18 45 23.4	+0.9
	comp=Z,106nm,1.0s						
GO04	Tololo Observa	27.47	87	eP	P	18 45 30.4	+0.8
	comp=Z,231nm,1.2s						
LCO	Las Campanas	27.97	85	eP	P	18 45 34.1	-0.1
	comp=Z,240nm,1.4s						
LCO	Las Campanas	27.97	85	eP	P	18 45 34.1	-0.1
LCO				pmax	pmax		
	comp=Z,240nm,1.4s						
LCO	Las Campanas	27.97	85	eP	P	18 45 35.2	+1.0
GO10	Punta Arenas	28.22	138	eP	P	18 45 36.3	+0.4
	comp=Z,207nm,1.4s						
GO03	Copiap	28.92	83	eP	P	18 45 42.7	+0.4
	comp=Z,113nm,1.3s						
CFA	Coronel Fontan	29.08	92	P	P	18 45 44.6	+0.8
	comp=Z,32nm,0.9s,baz=266,slow=8.9,SNR=24						
CFA				LR	LR	18 54 39.1	
	comp=Z,2μm,20.2s,baz=264,slow=31						
CFA	Coronel Fontan	29.08	92	eP	P	18 45 44.5	+0.8
AGUA	GUANDACOL	29.58	87	eP	P	18 45 50.1	+1.8
VCA	Vinchina	30.10	86	eP	P	18 45 54.5	+1.6
PB14	IPOC Station P	30.13	77	eP	P	18 45 54.0	+0.5
USHA	Ushuaia	30.32	140	P	P	18 45 56.0	+1.6
	comp=Z,68nm,1.0s,baz=296,slow=9.9,SNR=16						
USHA				LR	LR	18 55 12.1	
	comp=Z,6μm,19.9s,baz=287,slow=31						
RKT	Rikitea	30.50	286	eP	P	18 45 58.7	+2.3
	comp=Z,89nm,1.3s						
RKT				eLQ	LQ	18 52 29.9	
	comp=Z,5μm,32.2s						
RKT	Rikitea	30.50	286	eT	T	19 17 16.8	
	comp=Z,3.4nm,0.3s						
GO02	Mina Guanaco	30.52	79	eP	P	18 45 57.3	+0.4
	comp=Z,152nm,1.1s						
PB10	IPOC Station P	30.57	75	eP	P	18 45 57.1	+0.1
	comp=Z,110nm,0.9s						
PB10	IPOC Station P	30.57	75	eP	P	18 45 57.6	+0.5
ACLC	CERRO LA CRUZ	30.86	88	eP	P	18 46 00.2	+0.6
APLL	PUNTA DE LOS L	30.86	90	eP	P	18 46 00.1	+0.6
PB04	IPOC Station P	31.51	74	eP	P	18 46 05.8	+0.3
	comp=Z,193nm,1.1s						
PB04	IPOC Station P	31.51	74	eP	P	18 46 06.1	+0.6
PB15	IPOC Station P	31.58	76	eP	P	18 46 07.2	+1.1
PB06	IPOC Station P	31.77	75	eP	P	18 46 08.3	+0.6
PB03	IPOC Station P	31.98	74	eP	P	18 46 10.6	+1.0
PB07	IPOC Station P	32.05	73	eP	P	18 46 11.1	+0.9
TCA	Tanti	32.12	93	eP	P	18 46 11.0	+0.3
CYA	Choya	32.16	87	eP	P	18 46 11.5	+0.5
PB02	IPOC Station P	32.27	72	eP	P	18 46 12.7	+0.7
LVC	Limon Verde	32.34	75	LR	LR	18 56 03.0	
	comp=Z,2μm,18.8s,baz=244,slow=30						
LVC	Limon Verde	32.34	75	eP	P	18 46 13.6	+0.6
	comp=Z,196nm,1.1s						
LVC	Limon Verde	32.34	75	eP	P	18 46 13.9	+0.9
LVC	Limon Verde	32.34	75	eP	P	18 46 13.6	+0.6
LVC				pmax	pmax		
	comp=Z,196nm,1.1s						
LVC	Limon Verde	32.34	75	eP	P	18 46 14.7	+1.8
PB09	IPOC Station P	32.51	74	eP	P	18 46 16.2	+1.9
TRQA	Tornquist	32.61	106	eP	P	18 46 15.6	+0.8
	comp=Z,61nm,1.4s						
TRQA	Tornquist	32.61	106	eP	P	18 46 15.6	+0.8
TRQA				pmax	pmax		
	comp=Z,61nm,1.4s						
TRQA	Tornquist	32.61	106	eP	P	18 46 18.0	+3.2
PB01	IPOC Station P	32.73	72	eP	P	18 46 17.1	+1.0
	comp=Z,326nm,1.2s						
FSA	Cafayete	32.98	83	eP	P	18 46 19.9	+1.5
PSGCX	Pisagua	33.08	69	eP	P	18 46 19.9	+0.7
AHML	Horco Molle	33.21	85	eP	P	18 46 20.8	+0.5
PB11	IPOC Station P	33.34	70	eP	P	18 46 22.2	+0.7
	comp=Z,448nm,1.1s						
PB11	IPOC Station P	33.34	70	eP	P	18 46 22.3	+0.8
NNA	Nana	33.50	51	eP	P	18 46 22.0	-0.8
	comp=Z,104nm,1.4s						
NNA	Nana	33.50	51	eP	P	18 46 22.0	-0.8
NNA				pmax	pmax		
	comp=Z,104nm,1.4s						
PB12	IPOC Station P	33.51	68	eP	P	18 46 23.3	+0.4
GO01	Chusmiza	33.74	70	eP	P	18 46 26.0	+0.6
	comp=Z,134nm,0.9s						
MNMC	Minye Minye	33.75	69	eP	P	18 46 25.8	+0.5
	comp=Z,465nm,1.1s						
MNMCX	Minye Minye	33.75	69	eP	P	18 46 26.1	+0.9
SLA	San Lorenzo	34.00	81	eP	P	18 46 28.6	+1.4
AZAP	Zapla	34.58	81	eP	P	18 46 32.4	0.0
HJA	Humahuaca	34.80	79	eP	P	18 46 35.8	+1.3
YJA	Yavi	35.24	77	eP	P	18 46 40.0	+1.7
EFI	East Falkland	35.41	131	eP	P	18 46 41.0	+2.1
	comp=Z,202nm,1.4s						
EFI	East Falkland	35.41	131	eP	P	18 46 41.0	+2.1
EFI				pmax	pmax		
	comp=Z,202nm,1.4s						
ATAH	Atahualpa	36.39	44	P	P	18 46 48.6	+0.4
	comp=Z,26nm,0.8s,baz=232,slow=4.5,SNR=24						
ATAH				LR	LR	18 57 58.8	
	comp=Z,3μm,21.2s,baz=236,slow=30						
LPAZ	La Paz	36.59	67	P	P	18 46 51.7	+1.6
	comp=Z,214nm,1.1s,baz=232,slow=6.7,SNR=204						
LPAZ				LR	LR	18 59 11.8	
	comp=Z,958nm,19.4s,baz=238,slow=32						
LPAZ	La Paz	36.59	67	eP	P	18 46 51.5	+1.4
LPAZ				epP	P	18 46 52.0	+1.9
LPAZ				esP	P	18 46 52.1	+2.0
LPAZ	La Paz	36.59	67	eP	P	18 46 51.4	+1.4
LPAZ	La Paz	36.59	67	eP	P	18 46 51.5	+1.4
LPAZ				e*PP	P	18 46 52.0	+1.9
LPAZ				e*SP	P	18 46 52.1	+2.0
LPAZ	La Paz	36.59	67	eP	P	18 46 51.9	+1.8
PAYG	Puerto Ayora	36.97	21	eP	P	18 46 55.1	+2.5
	comp=Z,51nm,1.2s						
OGAUY	Aigu	39.17	102	eP	P	18 47 12.9	+1.8
CPUP	Villa Florida	39.89	89	P	P	18 47 16.9	-0.3
	comp=Z,17nm,0.9s,baz=262,slow=8.3,SNR=14						
CPUP				LR	LR	19 00 56.5	
	comp=Z,1μm,19.1s,baz=249,slow=32						
CPUP	Villa Florida	39.89	89	eP	P	18 47 16.5	-0.7
	comp=Z,87nm,1.4s						
CPUP	Villa Florida	39.89	89	eP	P	18 47 16.5	-0.7
CPUP				pmax	pmax		
	comp=Z,87nm,1.4s						
CPUP	Villa Florida	39.89	89	eP	P	18 47 16.9	-0.3
PLTB	Pedras Altas	40.85	99	eP	P	18 47 26.0	+1.0
CPSB	Cacapava Do Su	41.45	97	eP	P	18 47 31.2	+1.2
TBI	Tubuai	41.97	274	eS	S	18 53 52.2	-0.6
	comp=Z,1μm,27.9s						
TBI				eLQ	LQ	18 57 14.7	
	comp=Z,7μm,34.0s						
TBI				eLR	LR	18 58 59.8	
	comp=Z,2μm,23.8s						
TBI	Tubuai	41.97	274	eT	T	19 31 50.8	
	comp=Z,10nm,0.3s						
MEH	Mehetia	43.64	282	eT	T	19 33 54.0	
	comp=Z,34nm,0.2s						
TUMC	Tumaco	43.81	36	eP	P	18 47 46.5	-2.7
CNLB	Canela	43.94	97	eP	P	18 47 52.7	+2.4
AQDB	Aquidauana	43.96	83	eP	P	18 47 50.4	-0.1
PTLC	Puerto Leguiza	44.42	42	eP	P	18 47 52.0	-2.2
CRUC	La Cruz	44.46	39	eP	P	18 48 03.2	+8.3
TVO	Taravao	44.64	281	eP	P	18 47 58.0	+2.0
	comp=Z,16nm,0.9s						
TVO	Taravao	44.64	281	eT	T	19 35 09.0	
	comp=Z,1.9nm,0.3s						
BBAC	Balboa, Cauca	44.70	38	eP	P	18 47 56.0	-0.6
VAH	Vaihoa	44.79	286	eP	P	18 47 58.6	+1.5
	comp=Z,130nm,1.0s						
TIAR	Tiarei	44.84	281	eP	P	18 47 59.6	+2.1
	comp=Z,26nm,0.8s						
TIAR	Tiarei	44.84	281	eT	T	19 35 23.3	
	comp=Z,6.5nm,0.3s						
PTGB	Pitanga	44.87	90	eP	P	18 47 58.9	+1.0
PAE	Paea	44.96	281	eP	P	18 48 00.2	+1.7
	comp=Z,10nm,0.8s						
PPTF	Pamatai, Papee	44.99	281	eP	P	18 47 59.0	+0.2
	comp=Z,124nm,1.0s						
PPT2	Papeete2	45.00	281	eP	P	18 48 01.0	+2.1
	comp=Z,101nm,1.0s						
PPT2				eS	S	18 54 36.2	-1.2
	comp=Z,1μm,25.0s						
PPT2				eLQ	LQ	18 57 54.2	
	comp=Z,3μm,26.2s						
PPT2				eLR	LR	19 00 26.2	
	comp=Z,897nm,23.5s						
PPT	Papeete	45.01	281	P	P	18 47 59.4	+0.5
	comp=Z,97nm,0.8s,baz=146,slow=3.4,SNR=11						
PPT				LR	LR	19 01 06.2	
	comp=Z,654nm,20.4s,baz=117,slow=28						
PPT	Papeete	45.01	281	eP	P	18 47 59.4	+0.5
PPT				eP	P	18 47 59.7	+0.8
SOTA	Rioblanco	45.12	39	eP	P	18 48 00.3	-0.1
PMOR	Pomariorio Ree	45.14	286	eP	P	18 48 01.7	+1.8
	comp=Z,46nm,0.9s						
FLOC	Florencia	45.15	40	eP	P	18 48 00.6	+0.6
TRCB	Terra Rica	45.30	87	eP	P	18 48 02.2	+1.0
PCON	Cinco Dias	45.40	39	eP	P	18 48 02.0	-0.6
POPC	Popayan, Colom	45.44	38	eP	P	18 48 00.9	-1.6
MARP	Paez Belalcaza	46.06	39	eP	P	18 48 05.8	-1.7
MACC	Macarena, Meta	46.58	42	eP	P	18 48 09.9	-1.4
YOTC	Yotoco, Valle	46.84	38	eP	P	18 48 13.6	+0.1
ORTC	Ortega, Tolima	47.33	39	eP	P	18 48 15.6	-1.6
PRAC	Prado	47.35	40	eP	P	18 48 16.6	-0.7
RREF	El Recreo	48.13	38	eP	P	18 48 24.6	+0.6
GUY2C	Guyana, Caldas	48.40	38	eP	P	18 48 26.4	+0.5
HOPE	Hope Point	48.47	134	eP	P	18 48 26.8	+1.3
	comp=Z,214nm,1.4s						
ROSC	El Rosal	48.60	40	P	P	18 48 28.8	+1.3
	comp=Z,42nm,0.9s,baz=176,slow=4.8,SNR=28						
ROSC				LR	LR	19 05 19.7	
	comp=Z,2μm,20.8s,baz=224,slow=32						
ROSC	El Rosal	48.60	40	eP	P	18 48 27.9	+0.5
	comp=Z,68nm,1.1s						
ROSC	El Rosal	48.60	40	eP	P	18 48 28.4	+1.0
ITRB	Iturama	48.66	85	eP	P	18 48 28.3	+0.8
CHIC	Chingaza	48.73	40	eP	P	18 48 29.7	+1.3
JTS	Las Juntas de	48.97	24	P	P	18 48 30.2	+0.4
	comp=Z,14nm,0.9s,baz=229,slow=9.3,SNR=3.3						
JTS	Las Juntas de	48.97	24	eP	P	18 48 29.7	-0.1
	comp=Z,45nm,1.4s						
JTS	Las Juntas de	48.97	24	eP	P	18 48 29.7	-0.1
JTS				pmax	pmax		
	comp=Z,45nm,1.4s						
SPB	Sao Paulo	49.15	92	eP	P	18 48 32.8	+1.6
	comp=Z,341nm,2.0s						
SPB	Sao Paulo	49.15	92	eP	P	18 48 33.0	+1.9
HELC	Santa Helena	49.15	37	eP	P	18 48 31.0	-0.6
CLDB	Colider	49.32	72	eP	P	18 48 32.8	+0.3
BB19B	Bebedouro	49.47	88	eP	P	18 48 33.8	+0.2
DBBC	Dabeiba	49.54	36	eP	P	18 48 35.7	+1.5
RCLB	Rio Claro- Sao	49.62	90	eP	P	18 48 35.0	+0.1
BCIP	Isla Barro Col	49.83	30	eP	P	18 48 38.1	+1.8
	comp=Z,42nm,1.1s						
BCIP	Isla Barro Col	49.83	30	eP	P	18 48 38.1	+1.8
BCIP				pmax	pmax		
	comp=Z,42nm,1.1s						
PTBC	PUERTO BERRIO,	49.98	38	eP	P	18 48 36.4	-1.1
YOPC	Yopal, Colombi	50.03	41	eP	P	18 48 38.2	+0.2
RUSC	La Rusia	50.13	40	eP	P	18 48 37.5	-1.8
ACON	Acoyapa	50.48	23	eP	P	18 48 43.2	+2.0
	comp=Z,19nm,1.0s						
ZARC	Zaragoza, Cauc	50.60	37	eP	P	18 48 41.6	-0.6
PARB	Paraibuna	50.73	92	eP	P	18 48 45.7	+2.3
BRRC	Barranca, Sant	50.84	39	eP	P	18 48 42.6	-1.4
ESPN	Las Esperanzas	50.97	24	eP	P	18 48 45.0	+0.1
	comp=Z,54nm,1.2s						
ESTN	Estel	51.19	21	eP	P	18 48 47.2	+0.6
	comp=Z,56nm,1.1s						
PAMC	Pamplona, Colo	51.56	40	eP	P	18 48 48.6	-1.3
ESAR	Angra dos Reis	51.84	93	eP	P	18 48 54.5	+3.0
TGUH	Tegucigalpa,Un	51.85	19	eP	P	18 48 54.0	+2.4
	comp=Z,28nm,0.9s						
APG	El Apazote	51.98	15	P	P	18 48 53.0	+0.2
	comp=Z,7.2nm,1.0s,baz=205,slow=11,SNR=3.0						
PMNB	Patos De Minas	52.44	86	eP	P	18 48 57.0	+0.9
BSCB	Bom Sucesso	52.55	90	eP	P	18 48 58.2	+1.2
BDFB	Brasilia	52.71	82	P	P	18 48 58.9	+0.7
	comp=Z,34nm,1.0s,baz=242,slow=6.1,SNR=12						
BDFB				LR	LR	19 10 05.8	
	comp=Z,919nm,18.0s,baz=225,slow=35						
BDFB	Brasilia	52.71	82	eP	P	18 48 58.7	+0.6
	comp=Z,35nm,1.0s						
BDFB				eP	P	18 48 58.9	+0.7
BDFB	Brasilia	52.71	82	eP	P	18 48 58.7	+0.6
BDFB				e		18 48 58.9	
BDFB				pmax	pmax		
	comp=Z,35nm,1.0s						
CCIG	Comitan	52.89	13	eP	P	18 48 59.1	-0.3
	comp=Z,25nm,1.2s						
VAS01	Vassouras-RJ	53.00	92	eP	P	18 49 02.5	+2.3
PTGA	Pitinga	53.03	59	P	P	18 48 59.4	-1.0
	comp=Z,16nm,1.0s,baz=210,slow=6.7,SNR=14						
PTGA	Pitinga	53.03	59	eP	P	18 48 59.1	-1.3
	comp=Z,59nm,1.5s						
PTGA	Pitinga	53.03	59	eP	P	18 48 59.2	-1.3
CMIG	Matias Romero	53.25	10	P	P	18 49 04.0	+2.2
	comp=Z,6.5nm,1.0s,baz=236,slow=6.3,SNR=3.6						
TLIG	Tlapa	53.33	5	eP	P	18 49 03.2	+0.7
	comp=Z,40nm,1.3s						
SDV	Santo Domingo	53.95	41	eP	P	18 49 06.3	-1.0
DUB01	Friburgo-RJ	53.97	93	eP	P	18 49 08.5	+1.2
QSPA	South Pole Qui	54.31	180	eP	P	18 49 09.5	+0.2
	comp=Z,41nm,1.0s						
PEXB	Peixe	54.47	79	eP	P	18 49 12.2	+1.2
SBA	Scott Base	55.28	195	eP	P	18 49 16.6	+0.6
	comp=Z,17nm,1.0s						
SBA	Scott Base	55.28	195	eP	P	18 49 16.6	+0.6
SBA				pmax	pmax		
	comp=Z,17nm,1.0s						
LVIG	Laguna Verde	55.66	7	eP	P	18 49 19.7	+0.4
	comp=Z,32nm,1.1s						
ALF01	Guarapari-ES	56.02	92	eP	P	18 49 23.2	+1.1
VNDA	Vanda	56.38	195	P	P	18 49 25.1	+1.2
	comp=Z,3.7nm,1.0s,baz=96,slow=7.3,SNR=20						
VNDA				LR	LR	19 08 01.4	
	comp=Z,1000nm,21.5s,baz=98,slow=30						
VNDA	Vanda	56.38	195	eP	P	18 49 24.6	+0.7
VNDA				epP	P	18 49 25.1	+1.2
VNDA	Vanda	56.38	195	eP	P	18 49 24.6	+0.7
VNDA				e*PP	P	18 49 25.1	+1.2
SJMB	Sao Joao De Ma	56.62	90	eP	P	18 49 27.6	+1.3
BSFB	Barra de Sao F	56.83	90	eP	P	18 49 28.8	+0.9
RIB01	Linhares ES	56.95	91	eP	P	18 49 29.8	+1.1
VNA3	Neumayer Olymp	57.50	157	P	P	18 49 32.5	+0.6
TEIG	Tepich	57.52	16	eP	P	18 49 32.3	-0.2
	comp=Z,37nm,1.3s						
VNA1	Neumayer--Stat	58.11	157	P	P	18 49 36.5	+0.3
ZAIG	Zacatecas	58.35	0	eP	P	18 49 37.7	-1.0
	comp=Z,22nm,0.3s						
SNAA	Sanae	59.42	159	P	P	18 49 46.1	+0.7
SNAA	Sanae	59.42	159	eP	P	18 49 45.2	-0.2
	comp=Z,56nm,1.3s						
SNAA	Sanae	59.42	159	eP	P	18 49 45.2	-0.2
SNAA				pmax	pmax		
	comp=Z,56nm,1.3s						
LPIG	La Paz	60.08	352	P	P	18 49 51.8	+1.6
	comp=Z,62nm,0.4s,baz=339,slow=2.7,SNR=3.8						
LNIG	Linares	60.55	4	eP	P	18 49 53.5	-0.1
	comp=Z,9.6nm,1.0s						
URZ	Urewera	61.87	242	eP	P	18 50 01.4	-1.1
	comp=Z,25nm,1.2s						
SDDR	Presa de Saban	62.27	34	eP	P	18 50 06.2	+0.9
	comp=Z,24nm,1.0s						
MDP	Montagnes des	62.28	60	P	P	18 50 04.9	-0.6
	comp=Z,25nm,0.8s,baz=229,slow=6.0,SNR=11						
KHZ	Kahutara	62.60	236	eP	P	18 50 05.9	-1.4
	comp=Z,40nm,1.1s						
THZ	Tophouse	63.31	236	eP	P	18 50 12.1	-0.1
	comp=Z,225nm,2.0s						
833A	Chaparral WMA,	63.96	3	eP	P	18 50 17.0	+0.7
	comp=Z,36nm,1.4s						
833A	Chaparral WMA,	63.96	3	P	P	18 50 17.5	+1.2
	baz=183						
SJG	San Juan	64.02	39	eP	P	18 50 14.9	-2.0
	comp=Z,57nm,1.0s						
SJG	San Juan	64.02	39	eP	P	18 50 14.9	-2.0
SJG				pmax	pmax		
	comp=Z,57nm,1.0s						
TXAR	Lajitas Array	64.89	359	P	P	18 50 22.8	+0.3
	comp=Z,5.4nm,0.8s,baz=184,slow=8.1,SNR=39						
TXAR				LR	LR	19 13 38.9	
	comp=Z,582nm,18.6s,baz=0.0,slow=31						
TX31	Lajitas Ar. Si	64.89	359	eP	P	18 50 23.5	+1.1
	comp=Z,49nm,1.8s						
OUZ	Omahuta	65.74	243	eP	P	18 50 27.4	-0.7
	comp=Z,115nm,1.7s						
HKT	Hockley	65.84	7	eP	P	18 50 28.8	+0.4
	comp=Z,25nm,1.4s						
HKT	Hockley	65.84	7	eP	P	18 50 28.8	+0.4
HKT				pmax	pmax		
	comp=Z,25nm,1.4s						
JCT	Junction City	66.09	3	eP	P	18 50 31.2	+1.0
	comp=Z,22nm,0.8s						
JCT	Junction City	66.09	3	eP	P	18 50 31.2	+1.0
JCT				pmax	pmax		
	comp=Z,22nm,0.8s						
JCT	Junction City	66.09	3	P	P	18 50 31.1	+1.0
	baz=183						
NBMO	Morrinhos-CE	66.25	76	eP	P	18 50 32.3	+0.7
435B	Jarrell	66.52	5	eP	P	18 50 33.7	+0.9
	comp=Z,41nm,1.1s						
435B	Jarrell	66.52	5	P	P	18 50 34.1	+1.3
	baz=185						
859A	Kempfer Cattle	66.92	21	P	P	18 50 36.6	+1.1
	baz=199						
858A	St. Cloud	66.93	21	P	P	18 50 36.4	+0.9
	baz=199						
MNTX	Cornudas Mount	67.28	358	eP	P	18 50 38.0	+0.3
	comp=Z,7.6nm,1.0s						
MNTX	Cornudas Mount	67.28	358	P	P	18 50 38.0	+0.3
	baz=178						
WHTX	Lake Whitney,	67.73	5	eP	P	18 50 40.7	+0.2
	comp=Z,24nm,0.9s						
552A	Lynn Haven	67.74	16	P	P	18 50 43.2	+2.6
	baz=195						
GDL2	Guadalupe Moun	67.75	359	eP	P	18 50 41.8	+1.0
RCBR	Riachuelo	68.04	81	eP	P	18 50 41.7	-1.3
	comp=Z,68nm,1.3s						
RCBR	Riachuelo	68.04	81	eP	P	18 50 41.7	-1.3
RCBR				pmax	pmax		
	comp=Z,68nm,1.3s						
RCBR	Riachuelo	68.04	81	eP	P	18 50 44.0	+0.9
214A	Organ Pipe Nat	68.13	351	P	P	18 50 45.7	+2.6
	baz=171						
121A	Cookes Peak, D	68.22	356	P	P	18 50 45.1	+1.3
	baz=176						
ABTX	Abilene, Hawle	68.23	3	eP	P	18 50 43.9	+0.2
	comp=Z,16nm,1.0s						
ABTX	Abilene, Hawle	68.23	3	P	P	18 50 44.7	+1.0
	baz=183						
TUC	Tucson	68.25	353	eP	P	18 50 44.3	+0.4
	comp=Z,18nm,1.0s						
TUC	Tucson	68.25	353	eP	P	18 50 44.3	+0.4
TUC				pmax	pmax		
	comp=Z,18nm,1.0s						
TUC	Tucson	68.25	353	P	P	18 50 44.8	+1.0
	baz=173						
349A	Repton	68.51	14	P	P	18 50 45.5	+0.1
	baz=194						
CPRX	Cap Rock	68.57	359	eP	P	18 50 48.1	+2.2
VBMS	Vicksburg	68.75	11	eP	P	18 50 47.8	+0.9
	comp=Z,98nm,0.3s						
113A	Mohawk Valley,	69.06	350	eP	P	18 50 49.2	+0.4
	comp=Z,17nm,1.1s						
352A	Blakely	69.12	16	eP	P	18 50 48.9	-0.3
	comp=Z,103nm,1.5s						
352A	Blakely	69.12	16	P	P	18 50 49.2	0.0
	baz=196						
249A	Camden	69.13	14	P	P	18 50 48.8	-0.5
	baz=194						
353A	Camilla	69.16	17	P	P	18 50 50.2	+0.7
	baz=196						
IKP	In-Ko-Pah, Jac	69.30	348	P	P	18 50 51.5	+1.1
	baz=169						
250A	Grady	69.31	15	eP	P	18 50 51.0	+0.6
	comp=Z,26nm,0.8s						
250A	Grady	69.31	15	P	P	18 50 51.2	+0.8
	baz=194						
BAR	Barrett	69.42	348	eP	P	18 50 51.5	+0.4
	comp=Z,17nm,1.0s						
GLA	Glamis	69.49	349	eP	P	18 50 51.9	+0.4
	comp=Z,16nm,0.9s						
GLA	Glamis	69.49	349	eP	P	18 50 51.9	+0.4
GLA				pmax	pmax		
	comp=Z,16nm,0.9s						
GLA	Glamis	69.49	349	P	P	18 50 52.2	+0.7
	baz=170						
MSTX	Muleshoe	69.50	0	eP	P	18 50 52.0	+0.3
	comp=Z,15nm,0.9s						
MSTX	Muleshoe	69.50	0	P	P	18 50 52.6	+0.9
	baz=180						
SWSC	Sam W. Stewart	69.53	348	P	P	18 50 53.2	+1.5
	baz=169						
MONP2	Monument Peak	69.58	348	P	P	18 50 53.1	+0.7
	baz=168,SNR=6.5						
251A	Midway	69.60	16	P	P	18 50 51.8	-0.4
	baz=195						
252A	Lumpkin	69.66	16	P	P	18 50 52.2	-0.4
	baz=196						
356A	Blackshear	69.66	19	P	P	18 50 52.5	0.0
	baz=198						
148A	Greensboro	69.69	14	P	P	18 50 52.0	-0.7
	baz=193						
109C	Camp Elliot, M	69.70	347	P	P	18 50 52.8	0.0
	baz=168						
CPE	Camp Elliot	69.70	347	eP	P	18 50 54.1	+1.3
	comp=Z,30nm,1.1s						
BNM	Barren Site	69.77	357	eP	P	18 50 54.1	+0.6
149A	Jones	69.80	14	P	P	18 50 53.1	-0.3
	baz=194						
LENM	Lemitar	69.80	356	eP	P	18 50 55.3	+1.7
WLAR	White Oak Lake	69.83	9	eP	P	18 50 54.1	+0.5
	comp=Z,19nm,0.7s						
254A	Abbeville	69.96	18	P	P	18 50 54.1	-0.2
	baz=197						
150A	Eclectic	69.97	15	P	P	18 50 54.6	+0.1
	baz=194						
LAZ	Ladron	70.05	356	eP	P	18 50 57.3	+2.2
SCI2	San Clemente I	70.06	346	P	P	18 50 55.0	0.0
	baz=167						
Y14A	Wickenburg	70.11	351	eP	P	18 50 55.9	+0.5
	comp=Z,19nm,0.9s						
Y12C	Blythe	70.13	350	eP	P	18 50 55.7	+0.3
	comp=Z,30nm,1.2s						
Y12C	Blythe	70.13	350	P	P	18 50 56.3	+0.8
	baz=170						
BC3	Big Chuckawall	70.17	349	P	P	18 50 55.5	-0.3
	baz=169						
LRAL	Lakeview Retre	70.18	14	eP	P	18 50 55.7	-0.1
	comp=Z,16nm,0.8s						
LRAL	Lakeview Retre	70.18	14	P	P	18 50 55.5	-0.3
	baz=194						
CCAR	Cane Creek	70.23	10	eP	P	18 50 57.0	+0.9
	comp=Z,103nm,1.4s						
PFO	Pinyon Flats O	70.29	348	P	P	18 50 57.5	+0.9
	comp=Z,10nm,1.0s,baz=154,slow=1.9,SNR=7.8						
PFO	Pinyon Flats O	70.29	348	eP	P	18 50 56.3	-0.3
	comp=Z,13nm,1.1s						

PFO	Pinyon Flats O	70.29	348	*e*P	P	18 50 56.3	-0.3
PFO				pmax	pmax		
	comp=Z,13nm,1.1s						
PFO	Pinyon Flats O	70.29	348	P	P	18 50 56.1	-0.5
	baz=168,SNR=5.2						
152A	Waverly Hall	70.31	16	*e*P	P	18 50 56.9	+0.3
	comp=Z,27nm,1.0s						
152A	Waverly Hall	70.31	16	P	P	18 50 55.9	-0.6
	baz=196						
X18A	Snowflake	70.37	354	*e*P	P	18 50 57.5	+0.4
	comp=Z,31nm,0.8s						
WMOK	Wichita Mounta	70.38	4	*e*P	P	18 50 56.7	-0.2
	comp=Z,7.7nm,1.0s						
WMOK	Wichita Mounta	70.38	4	*e*P	P	18 50 56.7	-0.2
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMOK	Wichita Mounta	70.38	4	P	P	18 50 56.9	-0.1
	baz=184						
AMTX	Amarillo	70.43	1	*e*P	P	18 50 57.6	+0.2
	comp=Z,41nm,1.0s						
AMTX	Amarillo	70.43	1	P	P	18 50 56.8	-0.5
	baz=181						
Z49A	Columbiana	70.43	15	P	P	18 50 56.4	-0.8
	baz=194,SNR=18						
CIS	Catalina Islan	70.44	346	P	P	18 50 58.0	+0.6
	baz=167						
X37A	Clayton	70.48	7	*e*P	P	18 50 59.5	+2.0
	comp=Z,14nm,1.0s						
ANMO	Albuquerque	70.56	357	P	P	18 50 60.0	+1.7
	comp=Z,4.4nm,1.0s,baz=164,slow=8.0,SNR=7.1						
ANMO	Albuquerque	70.56	357	*e*P	P	18 50 59.4	+1.2
	comp=Z,14nm,1.3s						
ANMO	Albuquerque	70.56	357	P	P	18 51 00.0	+1.7
ANMO	Albuquerque	70.56	357	P	P	18 50 59.0	+0.7
	baz=177						
TASM	ASL Pad, Albuq	70.56	357	P	P	18 50 59.7	+1.4
	baz=177						
TASM	ASL Pad, Albuq	70.56	357	P	P	18 50 59.1	+0.9
	baz=177						
BELC	Belle Mtn. Jos	70.60	349	P	P	18 50 59.3	+0.8
	baz=169						
Z50A	Ashland	70.61	15	*e*P	P	18 50 59.1	+0.7
	comp=Z,16nm,1.2s						
Z50A	Ashland	70.61	15	P	P	18 50 58.5	+0.1
	baz=194						
PDMCI	Parker Dam,Lak	70.62	350	P	P	18 50 59.4	+1.1
	baz=170,SNR=5.7						
IRM	Iron Mountain	70.62	349	P	P	18 50 59.4	+0.9
	baz=170						
MIAR	Mount Ida	70.62	8	*e*P	P	18 50 58.8	+0.4
	comp=Z,16nm,1.2s						
MIAR	Mount Ida	70.62	8	*e*P	P	18 50 58.8	+0.4
MIAR				pmax	pmax		
	comp=Z,15nm,1.2s						
MIAR	Mount Ida	70.62	8	P	P	18 50 58.8	+0.4
	baz=188						
155A	Kite	70.81	18	P	P	18 50 59.5	0.0
	baz=197						
Z51A	Franklin	70.83	16	P	P	18 50 59.8	+0.1
	baz=195						
Z52A	Williamson	70.88	16	P	P	18 50 59.8	-0.2
	baz=196						
W18A	Petrified Fore	70.93	354	*e*P	P	18 51 01.2	+0.7
	comp=Z,21nm,1.3s						
W18A	Petrified Fore	70.93	354	P	P	18 51 01.9	+1.3
	baz=174						
Y48A	Jasper	71.00	14	P	P	18 51 00.2	-0.5
	baz=193						
UALR	University of	71.00	9	*e*P	P	18 51 01.4	+0.7
	comp=Z,14nm,0.9s						
156A	Sylvania	71.09	19	P	P	18 51 01.0	-0.2
	baz=198						
Y49A	Blount Mountai	71.09	14	*e*P	P	18 51 02.3	+1.0
	comp=Z,10.0nm,0.9s						
Y49A	Blount Mountai	71.09	14	P	P	18 51 01.8	+0.5
	baz=194						
BFSC	Mount Baldy Ra	71.11	347	P	P	18 51 02.7	+1.1
	baz=168,SNR=9.1						
PASC	Pasadena Art C	71.15	347	*e*P	P	18 51 02.3	+0.7
	comp=Z,22nm,1.0s						
Z53A	Monticello	71.16	17	P	P	18 51 02.9	+1.2
	baz=196						
MWC	Mount Wilson	71.17	347	*e*P	P	18 51 02.3	+0.3
	comp=Z,30nm,1.4s						
MWC	Mount Wilson	71.17	347	*e*P	P	18 51 02.3	+0.3
MWC				pmax	pmax		
	comp=Z,30nm,1.4s						
W39A	Magazine	71.24	8	*e*P	P	18 51 02.7	+0.5
	comp=Z,18nm,1.1s						
W39A	Magazine	71.24	8	P	P	18 51 02.9	+0.8
	baz=188						
BLG	Laguna Peak, P	71.25	346	P	P	18 51 03.2	+0.9
	baz=166						
Y50A	Piedmont	71.27	15	P	P	18 51 02.7	+0.4
	baz=195						
Z54A	Sparta	71.30	18	P	P	18 51 02.5	0.0
	baz=197						
GMRC	Granite Mounta	71.31	349	P	P	18 51 03.3	+0.5
	baz=169,SNR=7.3						
GOGA	Godfrey	71.31	17	P	P	18 51 02.9	+0.3
	baz=196						
X46A	Booneville	71.36	12	P	P	18 51 02.2	-0.7
	baz=192						
W13A	Hualapai Mount	71.36	351	*e*P	P	18 51 03.9	+0.7
	comp=Z,11nm,1.1s						
W41B	Gary Mavity, V	71.41	9	*e*P	P	18 51 03.5	+0.4
	comp=Z,20nm,0.4s						
Y51A	Rockmart	71.42	16	P	P	18 51 02.3	-0.9
	baz=195						
X47A	Russelville	71.45	13	P	P	18 51 02.7	-0.8
	baz=193						
HEC	Hector,Ludlow	71.46	348	P	P	18 51 04.3	+0.7
	baz=169,SNR=8.8						
WUAZ	Wupatki	71.48	353	*e*P	P	18 51 04.5	+0.7
	comp=Z,22nm,1.0s						
WUAZ	Wupatki	71.48	353	P	P	18 51 04.6	+0.8
	baz=173,SNR=6.8						
WHAR	Wooly Hollow	71.52	9	*e*P	P	18 51 04.5	+0.7
	comp=Z,26nm,1.1s						
LDFC	Landfair	71.52	349	*e*P	P	18 51 05.3	+1.3
	comp=Z,110nm,1.3s						
X48A	Hartselle	71.54	14	*e*P	P	18 51 04.0	0.0
	comp=Z,24nm,1.0s						
X48A	Hartselle	71.54	14	P	P	18 51 03.3	-0.7
	baz=194						
Y52A	Lilburn	71.61	16	*e*P	P	18 51 04.8	+0.3
	comp=Z,19nm,1.1s						
Y52A	Lilburn	71.61	16	P	P	18 51 04.1	-0.3
	baz=196						
Y53A	Monroe	71.71	17	P	P	18 51 04.7	-0.4
	baz=196						
X49A	Woodville	71.74	14	P	P	18 51 04.6	-0.6
	baz=194						
TUL1	Leonard	71.75	6	*e*P	P	18 51 05.3	+0.1
	comp=Z,20nm,1.0s						
TUL1	Leonard	71.75	6	P	P	18 51 05.3	+0.1
	baz=186						
EDW2	Edwards Air Fo	71.80	347	P	P	18 51 06.6	+1.0
	baz=167,SNR=6.9						
SYO	Syowa Base	71.80	167⇑	*e*P	P	18 51 04.2	-1.0
SYO	Syowa Base	71.80	167⇓	*i*pP	P	18 51 06.4	+1.2
SYO	Syowa Base	71.80	167⇓	*i*PcP	PcP	18 51 21.5	-2.6
X50B	Fort Payne	71.83	15	P	P	18 51 05.7	-0.1
	baz=195						
PLAL	Pickwick Lake	71.87	13	*e*P	P	18 51 05.4	-0.6
	comp=Z,18nm,1.0s						
NHSC	New Hope	71.88	20	*e*P	P	18 51 06.1	+0.1
	comp=Z,95nm,1.0s						
NHSC	New Hope	71.88	20	P	P	18 51 05.1	-1.0
	baz=199						
Z57A	Bowman	71.91	19	P	P	18 51 06.8	+0.6
	baz=199						
Y54A	Tignall	71.93	18	P	P	18 51 05.8	-0.6
	baz=197						
TUQ	Turquoise Moun	71.99	349	P	P	18 51 07.4	+0.5
	baz=169						
U32A	Winter Ranch,	72.00	3	*e*P	P	18 51 07.4	+0.6
	comp=Z,100nm,1.5s						
GSC	Goldstone, Bar	72.00	348	*e*P	P	18 51 07.1	+0.2
	comp=Z,23nm,1.1s						
GSC	Goldstone, Bar	72.00	348	*e*P	P	18 51 07.1	+0.2
GSC				pmax	pmax		
	comp=Z,23nm,1.1s						
GSC	Goldstone, Bar	72.00	348	P	P	18 51 06.5	-0.4
	baz=168,SNR=14						
X51A	Calhoun	72.10	16	*e*P	P	18 51 07.7	+0.4
	comp=Z,34nm,1.0s						
X51A	Calhoun	72.10	16	P	P	18 51 07.0	-0.4
	baz=195						
PKM	Mcpherson Peak	72.16	345	P	P	18 51 07.4	-0.6
	baz=166,SNR=23						
Z58A	St. Stephen	72.19	20	P	P	18 51 07.2	-0.7
	baz=200						
Y55A	Saluda	72.21	18	P	P	18 51 06.8	-1.2
	baz=198						
W47A	Westpoint	72.22	13	P	P	18 51 06.9	-1.1
	baz=193,SNR=14						
W48A	Pulaski	72.23	14	P	P	18 51 07.1	-1.0
	baz=194						
HHAR	Hobbs	72.30	8	*e*P	P	18 51 08.6	+0.1
	comp=Z,22nm,1.1s						
LRMC	Laurel Mtn Rad	72.33	347	P	P	18 51 09.6	+0.7
	baz=168,SNR=5.9						
W49A	Belvidere	72.34	14	P	P	18 51 07.3	-1.5
	baz=194						
X52A	Dahlonega	72.36	16	P	P	18 51 07.5	-1.4
	baz=196						
HODGE	Hodges	72.39	18	*e*P	P	18 51 09.5	+0.4
	comp=Z,17nm,1.0s						
X53A	Estanollee	72.40	17	P	P	18 51 08.5	-0.6
	baz=197						
U15A	North Rim	72.48	352	*e*P	P	18 51 10.2	+0.2
	comp=Z,25nm,1.1s						
U40A	Yellville	72.50	9	P	P	18 51 09.2	-0.5
	baz=189						
SHOC	Shoshone, Teco	72.50	349	P	P	18 51 09.7	-0.1
	baz=169,SNR=6.9						
SWET	Sewanee	72.50	15	*e*P	P	18 51 09.5	-0.3
	comp=Z,25nm,1.0s						
HALT	Halls	72.56	12	*e*P	P	18 51 10.4	+0.4
	comp=Z,46nm,0.6s						
W50A	Signal Mountai	72.62	15	*e*P	P	18 51 10.0	-0.5
	comp=Z,23nm,1.0s						
W50A	Signal Mountai	72.62	15	P	P	18 51 09.3	-1.2
	baz=195						
ISA	Isabella, Lake	72.65	347	*e*P	P	18 51 11.4	+0.7
	comp=Z,79nm,0.6s						
ISA	Isabella, Lake	72.65	347	*e*P	P	18 51 11.4	+0.7
ISA				pmax	pmax		
	comp=Z,79nm,0.6s						
ISA	Isabella, Lake	72.65	347	P	P	18 51 11.0	+0.3
	baz=167,SNR=7.2						
V46A	Holladay	72.66	13	P	P	18 51 10.6	0.0
	baz=192						
X54A	Belton	72.66	18	P	P	18 51 10.4	-0.3
	baz=197						
Y57A	Sumter	72.67	19	*e*P	P	18 51 10.9	+0.1
	comp=Z,102nm,1.8s						
T25A	Trinidad	72.68	359	*e*P	P	18 51 11.3	+0.2
	comp=Z,40nm,1.4s						
T25A	Trinidad	72.68	359	P	P	18 51 10.3	-0.7
	baz=179,SNR=5.5						
JSC	Jenkinsville	72.69	19	*e*P	P	18 51 10.9	0.0
	comp=Z,22nm,0.9s						
JSC	Jenkinsville	72.69	19	*e*P	P	18 51 10.9	0.0
JSC				pmax	pmax		
	comp=Z,23nm,0.9s						
W51A	Cleveland	72.70	16	P	P	18 51 10.7	-0.2
	baz=195						
X55A	Gracelyn & Ava	72.78	18	P	P	18 51 11.7	+0.3
	baz=198						
V47A	Nunnelly	72.79	13	P	P	18 51 11.3	-0.1
	baz=193						
W52A	Murphy	72.82	16	*e*P	P	18 51 11.6	-0.1
	comp=Z,55nm,0.2s						
W52A	Murphy	72.82	16	P	P	18 51 11.4	-0.3
	baz=196						
V48A	Smith Brothers	72.83	14	*e*P	P	18 51 11.2	-0.6
	comp=Z,30nm,1.0s						
V48A	Smith Brothers	72.83	14	P	P	18 51 10.6	-1.2
	baz=194,SNR=12						
MPMC	Manual Prospec	72.86	348	P	P	18 51 11.7	-0.4
	baz=168,SNR=33						
MVCO	Mesa Verde	72.92	355	*e*P	P	18 51 13.1	+0.6
	comp=Z,26nm,0.8s						
MVCO	Mesa Verde	72.92	355	P	P	18 51 12.5	0.0
	baz=175,SNR=19						
SHPR	Sheep Range	72.92	350	*e*P	P	18 51 13.6	+1.2
	comp=Z,18nm,1.1s						
VES	Vestal, Richgr	72.94	346	P	P	18 51 12.8	+0.5
	baz=166,SNR=5.3						
BG3	Lake Jocassee	72.95	17	*e*P	P	18 51 12.5	+0.1
	comp=Z,18nm,0.9s						
X56A	White Oak	72.95	19	P	P	18 51 11.6	-0.8
	baz=198						
WVT	Waverly	73.03	13	*e*P	P	18 51 12.0	-0.8
	comp=Z,19nm,1.2s						
WVT	Waverly	73.03	13	*e*P	P	18 51 12.0	-0.8
WVT				pmax	pmax		
	comp=Z,19nm,1.2s						
WVT	Waverly	73.03	13	P	P	18 51 12.7	-0.1
	baz=193						
CPCT	Cooper Cave	73.03	16	*e*P	P	18 51 12.8	0.0
	comp=Z,17nm,1.0s						
V49A	McMinnville	73.04	14	P	P	18 51 13.1	+0.2
	baz=194						
PAGB	Antelope Grade	73.06	345	*e*P	P	18 51 13.4	+0.3
	comp=Z,59nm,1.3s						
PAULI	Pauline	73.06	18	*e*P	P	18 51 13.2	+0.1
	comp=Z,27nm,1.0s						
W53A	Cullowhee	73.07	17	P	P	18 51 12.3	-0.9
	baz=197						
DAC	Darwin (Calif)	73.09	348	*e*P	P	18 51 14.3	+0.9
	comp=Z,13nm,1.1s						
DAC	Darwin (Calif)	73.09	348	*e*P	P	18 51 14.3	+0.9
DAC				pmax	pmax		
	comp=Z,12nm,1.1s						
V50A	Pikevile	73.12	15	P	P	18 51 12.9	-0.4
	baz=195						
KNB	Kanab	73.12	352	*e*P	P	18 51 14.0	+0.4
	comp=Z,28nm,1.2s						
KNB	Kanab	73.12	352	*e*P	P	18 51 14.0	+0.4
KNB				pmax	pmax		
	comp=Z,28nm,1.2s						
FURC	Furnace Creek,	73.15	348	P	P	18 51 14.3	+0.8
	baz=168						
LCMT	Little Creek M	73.17	351	*e*P	P	18 51 14.4	+0.6
	comp=Z,12nm,1.2s						
U46A	Springville	73.19	12	P	P	18 51 12.8	-0.9
	baz=192						
W54A	Cherokee Point	73.22	18	P	P	18 51 13.9	-0.2
	baz=197						
PBMO	Poplar Bluff	73.24	10	*e*P	P	18 51 13.5	-0.5
	comp=Z,13nm,0.8s						
CLTN	Cedars of Leba	73.27	14	*e*P	P	18 51 15.1	+0.8
	comp=Z,6.9nm,1.0s						
SDCO	Great Sand Dun	73.31	358	*e*P	P	18 51 15.3	+0.4
	comp=Z,13nm,0.9s						
SDCO	Great Sand Dun	73.31	358	P	P	18 51 16.0	+1.1
	baz=178,SNR=26						
CWC	Cottonwood Cre	73.33	347	P	P	18 51 15.9	+1.1
	baz=167						
S22A	4UR Ranch, Cre	73.36	357	*e*P	P	18 51 15.6	+0.4
	comp=Z,38nm,1.4s						
S22A	4UR Ranch, Cre	73.36	357	P	P	18 51 14.8	-0.4
	baz=177,SNR=13						
V51A	Loudon	73.40	16	*e*P	P	18 51 14.7	-0.4
	comp=Z,23nm,1.1s						
V51A	Loudon	73.40	16	P	P	18 51 14.4	-0.7
	baz=196						
U47A	Clarksville	73.43	13	P	P	18 51 15.1	-0.1
	baz=193						
PKCU	Pink Cliffs	73.49	352	*e*P	P	18 51 14.3	-1.7
	comp=Z,39nm,1.0s						
KMSC	Kings Mountain	73.49	18	*e*P	P	18 51 14.5	-1.1
	comp=Z,17nm,1.0s						
KMSC	Kings Mountain	73.49	18	P	P	18 51 15.1	-0.5
	baz=198						
TPNV	Topopah Spring	73.52	349	*e*P	P	18 51 16.1	+0.1
	comp=Z,13nm,0.9s						
TPNV	Topopah Spring	73.52	349	*e*P	P	18 51 16.1	+0.1
TPNV				pmax	pmax		
	comp=Z,13nm,0.9s						
TPNV	Topopah Spring	73.52	349	P	P	18 51 15.5	-0.4
	baz=169,SNR=18						
V52A	Sevierville	73.61	16	*e*P	P	18 51 16.0	-0.3
	comp=Z,10nm,0.9s						
V52A	Sevierville	73.61	16	P	P	18 51 15.4	-0.9
	baz=196						
V53A	Saluda	73.63	17	P	P	18 51 15.7	-0.7
	baz=197						
U48A	Cassie Pea, Po	73.64	14	P	P	18 51 15.4	-1.0
	baz=194						
CCUT	Cedar City	73.71	351	*e*P	P	18 51 16.4	-0.7
	comp=Z,26nm,1.0s						
SZCU	Shurtz Canyon	73.73	352	*e*P	P	18 51 16.5	-0.7
	comp=Z,21nm,1.1s						
U49A	Red Boiling Sp	73.79	14	P	P	18 51 16.4	-0.9
	baz=194						
PV05	Paradox Valley	73.83	355	*e*P	P	18 51 19.6	+1.8
PV01	Paradox Valley	73.84	355	*e*P	P	18 51 18.7	+0.8
W57A	Gilead	73.85	19	*e*P	P	18 51 17.4	-0.3
	comp=Z,18nm,1.0s						
W57A	Gilead	73.85	19	P	P	18 51 16.3	-1.4
	baz=199						
X60A	Albert Glenn T	73.88	21	P	P	18 51 17.0	-0.9
	baz=201						
PV13	Radium Mtn., P	73.89	355	*e*P	P	18 51 18.0	-0.2
U50A	Jamestown	73.89	15	P	P	18 51 17.1	-0.8
	baz=195						
T46A	Princeton	73.90	12	P	P	18 51 17.5	-0.5
	baz=193						
PV02	Paradox Valley	73.93	355	*e*P	P	18 51 19.6	+1.2
W58A	Raeford	73.94	20	P	P	18 51 18.1	-0.1
	baz=200						
V54A	Nebo	73.94	18	P	P	18 51 17.8	-0.4
	baz=198						
TIN	Tinemaha, Big	73.96	347	P	P	18 51 18.7	+0.2
	baz=167						
PV18	Skein Mesa, Pa	73.98	355	*e*P	P	18 51 20.3	+1.6
PV03	Paradox Valley	73.98	355	*e*P	P	18 51 19.6	+0.9
T47A	Sharon Grove	73.99	13	*e*P	P	18 51 18.0	-0.5
	comp=Z,20nm,0.9s						
T47A	Sharon Grove	73.99	13	P	P	18 51 17.7	-0.8
	baz=193						
RIM	Rim	74.00	309	*e*P	P	18 51 17.2	-1.9
	comp=Z,231nm,1.0s						
BYL	Byron's Ledge	74.00	309	*e*P	P	18 51 18.6	-0.5
	comp=Z,324nm,1.3s						
PV17	East Wray Mesa	74.02	355	*e*P	P	18 51 19.8	+0.9
PV11	David Mesa, Pa	74.03	355	*e*P	P	18 51 20.4	+1.5
U51A	La Follette	74.03	16	P	P	18 51 17.8	-1.0
	baz=196						
PV12	Saucer Basin,	74.04	355	*e*P	P	18 51 21.2	+2.1
PV16	Nyswonger Mesa	74.04	355	*e*P	P	18 51 21.1	+2.0
PV19	Morning Glory	74.05	355	*e*P	P	18 51 21.6	+2.5
MTPU	Mount Pierson	74.06	352	*e*P	P	18 51 20.4	+1.0
	comp=Z,17nm,1.3s						
PV20	West Nyswonger	74.08	355	*e*P	P	18 51 21.0	+1.8
PV14	Lion Creek, Pa	74.11	355	*e*P	P	18 51 20.6	+1.2
PV10	Paradox Valley	74.12	355	*e*P	P	18 51 21.0	+1.4
PV04	Paradox Valley	74.12	355	*e*P	P	18 51 20.6	+1.1
PV07	Paradox Valley	74.15	355	*e*P	P	18 51 21.7	+2.0
U52A	Thorn Hill	74.19	16	P	P	18 51 19.3	-0.5
	baz=196						
PV23	Carpenter Ridg	74.19	355	*e*P	P	18 51 21.8	+1.8
V55A	Taylorsville	74.19	18	P	P	18 51 19.4	-0.3
	baz=198						
T48A	Bowling Green	74.24	14	P	P	18 51 19.2	-0.8
	baz=194,SNR=17						
PV09	Paradox Valley	74.25	355	*e*P	P	18 51 21.3	+1.0
PV22	Blue Mesa, Par	74.26	355	*e*P	P	18 51 21.5	+1.2
TZTN	Tazewell	74.29	16	*e*P	P	18 51 20.4	+0.1
	comp=Z,24nm,1.0s						
TZTN	Tazewell	74.29	16	P	P	18 51 20.0	-0.3
	baz=196						
PV21	Cone Mtn., Par	74.30	355	*e*P	P	18 51 21.7	+1.2
W59A	Clinton	74.30	21	P	P	18 51 19.1	-1.2
	baz=200						
SAO	San Andreas Ge	74.31	345	*e*P	P	18 51 22.0	+1.6
	comp=Z,15nm,0.9s						
S44A	Carbondale	74.31	11	P	P	18 51 19.7	-0.6
	baz=192						
V56A	Mocksville	74.34	19	P	P	18 51 19.9	-0.7
	baz=199						
U53A	Fall Branch	74.35	17	P	P	18 51 20.6	0.0
	baz=197						
CCM	Cathedral Cave	74.38	10	*e*P	P	18 51 21.1	+0.4
	comp=Z,24nm,1.0s						
CCM	Cathedral Cave	74.38	10	*e*P	P	18 51 21.1	+0.4
CCM				pmax	pmax		
	comp=Z,24nm,1.0s						
CCM	Cathedral Cave	74.38	10	P	P	18 51 21.1	+0.4
	baz=190						
CBKS	Cedar Bluff	74.40	3	*e*P	P	18 51 21.9	+1.0
	comp=Z,38nm,1.1s						
CBKS	Cedar Bluff	74.40	3	*e*P	P	18 51 21.9	+1.0
CBKS				pmax	pmax		
	comp=Z,38nm,1.1s						
W60A	Pink Hill	74.40	21	P	P	18 51 20.5	-0.4
	baz=201						
T49A	Edmonton	74.41	14	*e*P	P	18 51 21.5	+0.5
	comp=Z,14nm,1.3s						
T49A	Edmonton	74.41	14	P	P	18 51 21.2	+0.3
	baz=195						
POHA	Pohakuloa	74.43	309	*e*P	P	18 51 21.8	0.0
	comp=Z,269nm,1.8s						
T50A	Nancy	74.47	15	P	P	18 51 21.6	+0.3
	baz=195						
Q24A	Divide	74.52	358	*e*P	P	18 51 21.5	-0.4
	comp=Z,16nm,0.9s						
MSU	Marysvale	74.53	352	*e*P	P	18 51 22.5	+0.6
MSU	Marysvale	74.53	352	*e*P	P	18 51 22.5	+0.6
KSCO	Kaye Shedlock’	74.54	0	*e*P	P	18 51 22.6	+0.8
	comp=Z,50nm,0.3s						
S46A	Don Dixon Farm	74.56	12	P	P	18 51 21.0	-0.7
	baz=193						
V57A	Coltrane Farms	74.60	19	P	P	18 51 21.8	-0.3
	baz=199						
T51A	Gray	74.61	16	P	P	18 51 21.5	-0.6
	baz=196						
S47A	Hartford	74.62	13	P	P	18 51 22.4	+0.2
	baz=193						
OMMB	Old Mammoth Mi	74.64	347	*e*P	P	18 51 23.1	+0.4
	comp=Z,8.4nm,1.1s						
TCRU	Three Creeks R	74.66	352	*e*P	P	18 51 24.0	+1.3
	comp=Z,38nm,1.1s						
MDPB	Devils Postpil	74.67	347	*e*P	P	18 51 24.6	+1.8
	comp=Z,11nm,1.1s						
U54A	Nelsons Funny	74.68	18	*e*P	P	18 51 22.5	-0.1
	comp=Z,23nm,1.2s						
PSUT	Pine Spring	74.75	351	*e*P	P	18 51 23.6	+0.4
	comp=Z,20nm,1.2s						
SMCO	Snowmass	74.80	357	*e*P	P	18 51 24.9	+1.3
	comp=Z,24nm,1.0s						
R11A	Troy Canyon, C	74.80	350	*e*P	P	18 51 24.0	+0.6
	comp=Z,16nm,1.1s						
R11A	Troy Canyon, C	74.80	350	P	P	18 51 22.9	-0.5
	baz=169,SNR=32						
Q16A	Castle Valley	74.83	353	*e*P	P	18 51 24.1	+0.5
	comp=Z,33nm,1.0s						
S48A	Wiedeman Farm,	74.84	14	P	P	18 51 22.6	-0.8
	baz=194						
USIN	University of	74.84	12	*e*P	P	18 51 23.5	+0.1
	comp=Z,122nm,1.8s						
U55A	TA2, Sparta	74.85	18	P	P	18 51 22.6	-1.0
	baz=198						
U56A	King	74.88	19	P	P	18 51 23.0	-0.7
	baz=199						
V59A	Middlesex	74.91	21	P	P	18 51 22.9	-1.0
	baz=200						
T53A	Wise	74.95	17	P	P	18 51 23.5	-0.6
	baz=197						
T52A	Hallie	74.96	16	*e*P	P	18 51 23.4	-0.8
	comp=Z,20nm,1.1s						
T52A	Hallie	74.96	16	P	P	18 51 23.4	-0.8
	baz=197						
SRU	San Rafael Swe	74.96	354	*e*P	P	18 51 23.2	-1.1
	comp=Z,27nm,0.9s						
SRU	San Rafael Swe	74.96	354	*e*P	P	18 51 23.2	-1.1
SRU				pmax	pmax		
	comp=Z,27nm,0.9s						
R45A	Skylar, Fairfi	75.06	12	P	P	18 51 23.9	-0.7
	baz=192,SNR=11						
S50A	Richmond	75.20	15	P	P	18 51 24.7	-0.8
	baz=195						
TMUT	Trail Mountain	75.21	353	*e*P	P	18 51 26.5	+0.6
	comp=Z,33nm,0.9s						
U57A	Blanch	75.23	20	P	P	18 51 24.6	-1.1
	baz=200						
T54A	Tazewell	75.25	18	P	P	18 51 25.1	-0.8
	baz=198						
NV11	Mina Array Sit	75.29	348	*e*P	P	18 51 26.3	+0.1
	comp=Z,2.2nm,0.9s						
NVAR	Mina Array Bea	75.31	348	P	P	18 51 27.3	+0.9
	comp=Z,33nm,1.0s,baz=182,slow=7.8,SNR=45						
NVAR				LR	LR	19 17 05.7	
	comp=Z,414nm,20.9s,baz=175,slow=30						
CMB	Columbia Colle	75.31	346	*e*P	P	18 51 26.7	+0.5
	comp=Z,23nm,1.2s						
S51A	Beattyville	75.33	16	*e*P	P	18 51 26.8	+0.6
	comp=Z,21nm,1.2s						
S51A	Beattyville	75.33	16	P	P	18 51 25.5	-0.7

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      baz=196
P17A  Butcher Ranch,  75.34 354 eP    P      18 51 27.0 +0.5
      comp=Z,29nm,1.1s
WCI   Wyandotte Cave  75.35  13 eP    P      18 51 26.0 -0.3
      comp=Z,12nm,0.6s
WCI   Wyandotte Cave  75.35  13 eP    P      18 51 26.0 -0.3
WCI                             pmax  pmax
      comp=Z,12nm,0.6s
WCI   Wyandotte Cave  75.35  13 P     P      18 51 26.1 -0.2
      baz=194
ISCO  Idaho Springs   75.36 358 eP    P      18 51 27.0 +0.2
      comp=Z,12nm,1.0s
ISCO  Idaho Springs   75.36 358 eP    P      18 51 27.0 +0.2
ISCO                            pmax  pmax
      comp=Z,12nm,1.0s
ISCO  Idaho Springs   75.36 358 P     P      18 51 27.0 +0.2
      baz=178
R47A  Wooly Knot Far  75.37  13 P     P      18 51 26.4 -0.1
      baz=194
U58A  Oxford          75.42  20 P     P      18 51 26.0 -0.7
      baz=200
V61A  Roper           75.43  22 P     P      18 51 26.1 -0.7
      baz=202
T55A  Pulaski         75.50  18 P     P      18 51 27.1 -0.3
      baz=198
OLIL  Olney           75.52  12 eP    P      18 51 27.1 -0.2
      comp=Z,48nm,1.0s
RYN   Ryan            75.54 347 eP    P      18 51 27.7 +0.1
      comp=Z,18nm,1.0s
WAKR  Walker          75.59 347 eP    P      18 51 28.3 +0.3
      comp=Z,13nm,1.1s
U59A  Littleton       75.59  21 eP    P      18 51 27.1 -0.6
      comp=Z,26nm,1.2s
U59A  Littleton       75.59  21 P     P      18 51 27.7 -0.1
      baz=201
R48A  Northridge Ran  75.59  14 P     P      18 51 27.2 -0.6
      baz=194
T56A  Rocky Mt        75.61  19 P     P      18 51 27.6 -0.3
      baz=199
Q45A  Warren Harvey,  75.66  12 P     P      18 51 27.4 -0.7
      baz=192,SNR=12
BLA   Blacksburg      75.68  18 eP    P      18 51 27.9 -0.4
      comp=Z,13nm,0.9s
BLA   Blacksburg      75.68  18 eP    P      18 51 27.9 -0.4
BLA                             pmax  pmax
      comp=Z,13nm,0.9s
T57A  Hurt            75.79  19 eP    P      18 51 28.0 -0.9
      comp=Z,17nm,1.2s
T57A  Hurt            75.79  19 P     P      18 51 27.9 -0.9
      baz=200
R50A  Paris           75.79  15 eP    P      18 51 28.1 -0.8
      comp=Z,20nm,1.4s
O20A  White River Ci  75.82 356 eP    P      18 51 30.3 +1.0
      comp=Z,45nm,1.4s
O20A  White River Ci  75.82 356 P     P      18 51 30.6 +1.4
      baz=176,SNR=7.2
KVN   Kaiserville     75.88 348 eP    P      18 51 29.9 +0.3
      comp=Z,36nm,1.2s
KVN   Kaiserville     75.88 348 eP    P      18 51 29.9 +0.3
KVN                             pmax  pmax
      comp=Z,36nm,1.2s
T58A  Grand View Acr  75.94  20 P     P      18 51 27.8 -1.9
      baz=200
NLU   North Lily Min  75.95 353 eP    P      18 51 31.4 +1.4
      comp=Z,32nm,1.0s
MPU   Maple Canyon    75.96 353 eP    P      18 51 31.0 +0.9
      comp=Z,13nm,0.9s
R51A  Hillsboro       75.97  16 P     P      18 51 29.2 -0.7
      baz=196
Q47A  Bedord North L  76.01  13 P     P      18 51 30.0 -0.1
      baz=194
S54A  Dingess, Beckl  76.02  18 P     P      18 51 28.8 -1.5
      baz=198
YERR  Yerington       76.02 347 eP    P      18 51 30.7 +0.3
      comp=Z,24nm,1.1s
Q48A  North Vernon    76.13  14 P     P      18 51 30.3 -0.5
      baz=194
P43A  Skaggs, Pawnee  76.18  11 P     P      18 51 30.0 -1.0
      baz=191
PNTR  Pine Nut        76.18 347 eP    P      18 51 31.6 +0.2
      comp=Z,25nm,1.2s
S55A  Lewisburg       76.19  18 P     P      18 51 30.4 -0.8
      baz=199
BLO   Bloomington     76.22  13 eP    P      18 51 30.2 -1.1
      comp=Z,14nm,0.9s
BLO   Bloomington     76.22  13 eP    P      18 51 30.2 -1.1
BLO                             pmax  pmax
      comp=Z,14nm,0.9s
T59A  Double "B" Far  76.24  21 eP    P      18 51 30.5 -0.9
      comp=Z,21nm,1.0s
T59A  Double "B" Far  76.24  21 P     P      18 51 29.7 -1.7
      baz=201
MAW   Mawson          76.26 174 P     P      18 51 30.9 -0.4
      comp=Z,15nm,0.9s,baz=223,slow=7.0,SNR=15
MAW                             LR    LR     19 23 02.1
      comp=Z,761nm,19.8s,baz=196,slow=34
MAW   Mawson          76.26 174 eP    P      18 51 30.8 -0.5
      comp=Z,3.4nm,0.9s
DUG   Dugway, Tooele  76.26 352 eP    P      18 51 32.1 +0.4
      comp=Z,23nm,1.1s
DUG   Dugway, Tooele  76.26 352 eP    P      18 51 32.1 +0.4
DUG                             pmax  pmax
      comp=Z,23nm,1.1s
DUG   Dugway, Tooele  76.26 352 P     P      18 51 31.1 -0.6
      baz=172,SNR=17
AFDM  Forest Hills D  76.31 346 eP    P      18 51 32.3 +0.4
      comp=Z,24nm,1.2s
S56A  Natural Bridge  76.34  19 P     P      18 51 30.9 -1.2
      baz=199
P45A  Graceland, Par  76.35  12 eP    P      18 51 32.5 +0.5
      comp=Z,40nm,1.1s
P45A  Graceland, Par  76.35  12 P     P      18 51 30.9 -1.1
      baz=193
R53A  Hurricane       76.37  17 eP    P      18 51 33.8 +1.7
      comp=Z,22nm,1.0s
R53A  Hurricane       76.37  17 P     P      18 51 31.7 -0.5
      baz=197
VCNR  Virginia City   76.39 347 eP    P      18 51 33.3 +0.7
      comp=Z,19nm,1.2s
R54A  Victor          76.46  18 P     P      18 51 31.6 -1.1
      baz=198
N23A  Red Feather La  76.47 358 eP    P      18 51 34.4 +1.4
      comp=Z,29nm,1.3s
N23A  Red Feather La  76.47 358 P     P      18 51 31.6 -1.5
      baz=178
OGNE  Ogallala        76.47   1 eP    P      18 51 34.1 +1.3
      comp=Z,30nm,0.8s
OGNE  Ogallala        76.47   1 P     P      18 51 32.5 -0.3
      baz=181,SNR=7.6
JLU   Jordanelle      76.53 353 eP    P      18 51 34.2 +0.8
      comp=Z,15nm,0.9s
P46A  Rosedale        76.53  12 P     P      18 51 31.9 -1.1
      baz=193
GDXM  Geysers         76.56 344 eP    P      18 51 32.6 -0.7
      comp=Z,22nm,1.2s
S57A  Dark Hollow, R  76.59  19 P     P      18 51 32.3 -1.1
      baz=200
CTU   Camp Tracy      76.64 353 eP    P      18 51 34.7 +0.8
      comp=Z,15nm,1.1s
S58A  Poland Farm, P  76.69  20 eP    P      18 51 33.7 -0.3
      comp=Z,19nm,1.1s
S58A  Poland Farm, P  76.69  20 P     P      18 51 33.1 -0.9
      baz=200
P48A  Milroy          76.71  14 eP    P      18 51 33.2 -0.9
      comp=Z,26nm,1.3s
P48A  Milroy          76.71  14 P     P      18 51 33.1 -0.9
      baz=194
Q51A  Peebles         76.72  16 eP    P      18 51 33.5 -0.6
      comp=Z,19nm,0.8s
Q51A  Peebles         76.72  16 P     P      18 51 33.2 -1.0
      baz=196
PAHR  Pah Rah Range   76.74 347 eP    P      18 51 34.9 +0.4
      comp=Z,12nm,1.0s
R55A  Marlinton       76.77  18 eP    P      18 51 35.6 +1.0
      comp=Z,23nm,1.3s
HOPS  Hopland Field   76.81 344 eP    P      18 51 35.9 +1.2
      comp=Z,78nm,1.4s
O44A  Mansfield       76.84  11 P     P      18 51 34.1 -0.7
      baz=192
PHWY  Pilot Hill      76.86 358 eP    P      18 51 36.6 +1.3
      comp=Z,11nm,1.1s
Q52A  Bidwell         76.90  16 P     P      18 51 34.5 -0.7
      baz=197
P49A  Miami Univ. Ec  76.92  14 P     P      18 51 33.7 -1.6
      baz=195
Q53A  Leroy           76.97  17 P     P      18 51 34.5 -1.0
      baz=198
ORV   Oroville        77.01 345 eP    P      18 51 37.0 +1.2
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      comp=Z,14nm,0.8s
BGU   Big Grassy Mou  77.01 352 eP    P      18 51 35.5 -0.4
      comp=Z,18nm,1.2s
TCUT  Toone Canyon    77.03 353 eP    P      18 51 35.8 -0.4
      comp=Z,28nm,1.1s
N41A  Harden Midland  77.04   9 eP    P      18 51 36.0 +0.1
      comp=Z,35nm,1.4s
N41A  Harden Midland  77.04   9 P     P      18 51 35.0 -0.8
      baz=190
BGNE  Belgrade        77.06   4 eP    P      18 51 36.8 +0.7
      comp=Z,39nm,1.0s
BGNE  Belgrade        77.06   4 P     P      18 51 35.5 -0.5
      baz=184
R58B  Mineral         77.07  20 eP    P      18 51 35.9 -0.2
      comp=Z,24nm,1.0s
R58B  Mineral         77.07  20 P     P      18 51 35.5 -0.6
      baz=201
R56A  Bull Pasture M  77.07  19 P     P      18 51 35.3 -0.9
      baz=199
BEKR  Beckworth       77.08 346 eP    P      18 51 37.1 +0.8
      comp=Z,30nm,1.2s
BMN   Battle Mountai  77.08 349 eP    P      18 51 36.1 -0.3
      comp=Z,25nm,1.1s
BMN   Battle Mountai  77.08 349 eP    P      18 51 36.1 -0.3
BMN                             pmax  pmax
      comp=Z,25nm,1.1s
ELK   Elko            77.10 350 LR    LR     19 18 24.5
      comp=Z,387nm,21.3s,baz=129,slow=30
ELK   Elko            77.10 350 eP    P      18 51 36.3 -0.2
      comp=Z,16nm,1.3s
ELK   Elko            77.10 350 eP    P      18 51 36.3 -0.2
ELK                             pmax  pmax
      comp=Z,16nm,1.3s
HDIL  Hopedale        77.11  11 eP    P      18 51 36.2  0.0
      comp=Z,41nm,0.9s
HDIL  Hopedale        77.11  11 P     P      18 51 35.4 -0.8
      baz=191
P50A  Jamestown       77.18  15 P     P      18 51 35.4 -1.3
      baz=196
S60A  Water View      77.18  21 P     P      18 51 33.8 -2.9
      baz=202
R57A  Stanardsville   77.20  19 P     P      18 51 35.7 -1.1
      baz=200
P51A  Williamsport    77.22  16 eP    P      18 51 36.5 -0.5
      comp=Z,17nm,0.9s
P51A  Williamsport    77.22  16 P     P      18 51 35.7 -1.2
      baz=196
Q54A  Coxs Mills      77.26  18 eP    P      18 51 36.3 -0.9
      comp=Z,22nm,1.3s
SFIN  Lafayette       77.29  12 eP    P      18 51 36.7 -0.6
      comp=Z,109nm,2.0s
RWWY  Rawlins         77.31 357 eP    P      18 51 38.5 +0.7
      comp=Z,20nm,0.9s
SPUT  South Promonto  77.33 353 eP    P      18 51 37.6 -0.1
      comp=Z,19nm,1.1s
R58A  Rapidan         77.35  20 P     P      18 51 36.4 -1.3
      baz=200
S61A  Accomac         77.45  22 P     P      18 51 37.2 -1.0
      baz=202
N43A  Stutzman Famil  77.50  11 P     P      18 51 37.8 -0.7
      baz=191
N44A  Piper City      77.52  11 P     P      18 51 37.8 -0.8
      baz=192
O48A  Farmland        77.53  14 P     P      18 51 38.5 -0.2
      baz=195
HWUT  Hardware Ranch  77.53 353 eP    P      18 51 38.4 -0.6
      comp=Z,7.9nm,0.9s
P52A  Corning         77.57  16 P     P      18 51 37.9 -1.0
      baz=197
KCPM  Cahto Peak      77.58 344 eP    P      18 51 39.1  0.0
      comp=Z,51nm,1.3s
P53A  Whipple         77.60  17 eP    P      18 51 38.9 -0.2
      comp=Z,22nm,1.1s
P53A  Whipple         77.60  17 P     P      18 51 38.3 -0.8
      baz=198
O49A  Covington       77.63  14 eP    P      18 51 39.3 +0.1
      comp=Z,18nm,1.0s
O49A  Covington       77.63  14 P     P      18 51 37.7 -1.5
      baz=195
N45A  Kentland        77.68  12 P     P      18 51 38.8 -0.6
      baz=193
Q56A  Snyder Ridge,   77.73  19 P     P      18 51 38.9 -1.0
      baz=200
O50A  Cable           77.73  15 P     P      18 51 39.1 -0.7
      baz=196
O03E  Paynes Creek    77.78 345 P     P      18 51 40.5 +0.3
      baz=164
HVU   Hansel Valley   77.83 352 eP    P      18 51 39.9 -0.6
      comp=Z,14nm,1.0s
HVU   Hansel Valley   77.83 352 eP    P      18 51 39.9 -0.6
HVU                             pmax  pmax
      comp=Z,14nm,1.0s
N46A  Monticello      77.86  12 P     P      18 51 39.6 -0.9
      baz=193
O02D  Mt. Diablo Mer  77.88 345 P     P      18 51 39.7 -1.0
      baz=164
DZM   Mont Dzumac     77.88 252 eS    S      19 01 35.4 +0.9
      comp=Z,573nm,25.4s
DZM   Mont Dzumac     77.88 252 eLQ   LQ     19 12 32.3
      comp=Z,1µm,29.9s
DZM                             eLR   LR     19 15 54.1
      comp=Z,4µm,27.2s
DZM   Mont Dzumac     77.88 252 LR    LR     19 18 11.4
      comp=Z,1µm,21.6s,baz=114,slow=30
Q57A  Strasburg       77.93  19 P     P      18 51 40.2 -0.8
      baz=200
P54A  Burton          77.93  18 P     P      18 51 40.1 -0.9
      baz=198
ACSO  Alum Creek Sta  77.95  15 eP    P      18 51 39.6 -1.4
      comp=Z,18nm,0.8s
ACSO  Alum Creek Sta  77.95  15 P     P      18 51 40.1 -0.9
      baz=196
O51A  Pataskala       77.95  16 P     P      18 51 40.0 -1.1
      baz=197
M43A  Waltham Townsh  78.02  11 P     P      18 51 40.9 -0.5
      baz=192
N47A  Urbana          78.03  13 P     P      18 51 41.3 -0.1
      baz=194
Q58A  Fox Den Farm,   78.04  20 P     P      18 51 40.1 -1.4
      baz=201
O52A  Adamsville      78.10  16 eP    P      18 51 41.0 -0.9
      comp=Z,51nm,1.0s
O52A  Adamsville      78.10  16 P     P      18 51 40.8 -1.0
      baz=197
KMRM  Mail Ridge      78.12 344 eP    P      18 51 42.6 +0.5
      comp=Z,51nm,1.1s
WDC   Whiskeytown Da  78.21 345 eP    P      18 51 41.6 -0.9
      comp=Z,25nm,1.0s
WDC   Whiskeytown Da  78.21 345 eP    P      18 51 41.6 -0.9
WDC                             pmax  pmax
      comp=Z,25nm,1.0s
K22A  Casper          78.24 357 eP    P      18 51 44.9 +2.1
      comp=Z,141nm,1.9s
K22A  Casper          78.24 357 P     P      18 51 41.7 -1.1
      baz=177
L40A  Anamosa         78.32   9 eP    P      18 51 42.5 -0.5
      comp=Z,28nm,1.1s
L40A  Anamosa         78.32   9 P     P      18 51 42.2 -0.8
      baz=190
N49A  Columbus Grove  78.36  14 P     P      18 51 42.5 -0.8
      baz=195
O53A  New Philadelph  78.37  17 P     P      18 51 42.6 -0.7
      baz=198
M46A  Old House Fiel  78.42  13 P     P      18 51 43.0 -0.6
      baz=194
P57A  Homestead Farm  78.45  19 P     P      18 51 42.8 -1.0
      baz=200
L42A  Oliver, Polo    78.47  10 eP    P      18 51 44.1 +0.2
      comp=Z,18nm,0.8s
L42A  Oliver, Polo    78.47  10 P     P      18 51 43.5 -0.3
      baz=191
BW06  Boulder Array   78.52 355 eP    P      18 51 44.0 -0.5
      comp=Z,33nm,0.8s
BW06  Boulder Array   78.52 355 P     P      18 51 44.6 +0.1
      baz=175
PD31  Pinedale Array  78.52 355 eP    P      18 51 44.0 -0.4
      comp=Z,30nm,0.8s
PDAR  Pinedale Array  78.52 355 P     P      18 51 44.5 +0.1
      comp=Z,29nm,0.7s,baz=160,slow=5.8,SNR=52
PDAR                            LR    LR     19 22 35.5
      comp=Z,334nm,18.1s,baz=168,slow=33
N02D  Trinity Center  78.62 345 P     P      18 51 45.4 +0.6
      baz=164
AHID  Auburn Hatcher  78.64 354 eP    P      18 51 46.0 +0.9
      comp=Z,14nm,0.9s
P58A  Pank, Wackersv  78.66  20 P     P      18 51 44.0 -0.9
      baz=201
SDMD  Soldier's Deli  78.71  20 eP    P      18 51 45.0 -0.2
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      comp=Z,13nm,1.1s
KEKH  Kekaha          78.71 308 eP    P      18 51 44.4 -1.2
      comp=Z,570nm,1.9s
N51A  Ashland         78.74  16 eP    P      18 51 45.5 +0.1
      comp=Z,61nm,1.0s
N51A  Ashland         78.74  16 P     P      18 51 44.8 -0.5
      baz=197
KHMM  Horse Mountain  78.75 344 eP    P      18 51 47.1 +1.5
      comp=Z,58nm,1.4s
O55A  Ligonier        78.80  18 P     P      18 51 44.8 -0.9
      baz=199
N53A  Lisbon          78.99  17 eP    P      18 51 46.9 +0.1
      comp=Z,32nm,1.0s
N53A  Lisbon          78.99  17 P     P      18 51 45.4 -1.3
      baz=198
P59A  Jarrettsville   79.01  21 P     P      18 51 45.5 -1.4
      baz=202
MOD   Modoc Plateau   79.04 347 eP    P      18 51 47.6 +0.4
      comp=Z,26nm,1.1s
O56A  Blue Knob Stat  79.04  19 eP    P      18 51 46.5 -0.7
      comp=Z,30nm,1.1s
O56A  Blue Knob Stat  79.04  19 P     P      18 51 46.0 -1.1
      baz=200
M02C  Callahan        79.05 345 P     P      18 51 47.8 +0.6
      baz=164
M50A  Fremont         79.06  15 eP    P      18 51 45.5 -1.6
      comp=Z,41nm,0.9s
M50A  Fremont         79.06  15 P     P      18 51 45.4 -1.7
      baz=196
M51A  Elyria          79.18  16 P     P      18 51 46.9 -0.9
      baz=197
L47A  Sherwood        79.18  13 P     P      18 51 46.8 -1.0
      baz=195
M04C  Macdoel         79.22 346 P     P      18 51 47.4 -0.7
      baz=165
O57A  Amberson        79.24  19 P     P      18 51 46.8 -1.4
      baz=201
WVOR  Wild Horse Val  79.27 348 eP    P      18 51 48.6 +0.2
      comp=Z,26nm,1.1s
JFWS  Jewell Farm     79.29   9 eP    P      18 51 49.3 +1.0
      comp=Z,15nm,0.9s
JFWS  Jewell Farm     79.29   9 P     P      18 51 47.1 -1.2
      baz=190
SNOW  Snow King Moun  79.30 354 eP    P      18 51 50.4 +1.7
      comp=Z,20nm,0.9s
N54A  Moraine State   79.34  17 eP    P      18 51 48.6 -0.1
      comp=Z,27nm,1.1s
N54A  Moraine State   79.34  17 P     P      18 51 47.8 -0.9
      baz=199
TPAW  Teton Pass      79.35 354 eP    P      18 51 48.6 -0.3
      comp=Z,48nm,1.0s
O58A  Lewisberry      79.35  20 P     P      18 51 47.5 -1.3
      baz=201
YBH   Yreka Blue Hor  79.35 345 LR    LR     19 18 54.9
      comp=Z,575nm,21.5s,baz=151,slow=30
YBH   Yreka Blue Hor  79.35 345 eP    P      18 51 48.1 -0.7
      comp=Z,11nm,0.9s
YBH   Yreka Blue Hor  79.35 345 eP    P      18 51 48.1 -0.7
YBH                             pmax  pmax
      comp=Z,11nm,0.9s
K43A  Burlington      79.36  11 eP    P      18 51 49.5 +0.8
      comp=Z,47nm,1.0s
K43A  Burlington      79.36  11 P     P      18 51 48.3 -0.4
      baz=192
N55A  Marion Center   79.42  18 eP    P      18 51 49.7 +0.6
      comp=Z,39nm,1.3s
N55A  Marion Center   79.42  18 P     P      18 51 48.3 -0.9
      baz=200
LOHW  Long Hollow     79.44 354 eP    P      18 51 49.7 +0.3
      comp=Z,15nm,0.9s
ECSD  EROS Data Cent  79.46   5 eP    P      18 51 49.1 -0.1
      comp=Z,22nm,0.9s
ECSD  EROS Data Cent  79.46   5 P     P      18 51 48.7 -0.6
      baz=185
PLIO  Pelee Island,   79.48  15 P     P      18 51 48.5 -0.8
      baz=197
FXWY  Fox Creek       79.50 354 eP    P      18 51 49.5 -0.3
      comp=Z,20nm,1.0s
SSPA  Standing Stone  79.57  19 eP    P      18 51 48.0 -1.9
      comp=Z,34nm,1.3s
SSPA  Standing Stone  79.57  19 P     P      18 51 48.7 -1.1
      baz=200
MOOW  Moose Ponds     79.59 354 eP    P      18 51 48.8 -1.4
      comp=Z,13nm,1.1s
PSUB  Penn St. - Bra  79.59  21 eP    P      18 51 49.3 -0.7
      comp=Z,31nm,1.4s
RSSD  Black Hills     79.65 359 eP    P      18 51 50.7 +0.2
      comp=Z,22nm,0.9s
RSSD  Black Hills     79.65 359 eP    P      18 51 50.7 +0.2
RSSD                            pmax  pmax
      comp=Z,22nm,0.9s
RSSD  Black Hills     79.65 359 P     P      18 51 50.7 +0.2
      baz=179
L50A  Kingsville      79.72  15 P     P      18 51 50.5 -0.2
      baz=196
L04D  Klamath Falls   79.73 346 P     P      18 51 51.0  0.0
      baz=164
IMW   Indian Meadow   79.75 354 eP    P      18 51 51.2  0.0
      comp=Z,20nm,0.8s
N57A  Milroy          79.77  19 P     P      18 51 50.2 -0.8
      baz=201
HLID  Hailey          79.77 352 eP    P      18 51 50.9 -0.2
      comp=Z,46nm,0.9s
HLID  Hailey          79.77 352 P     P      18 51 51.3 +0.1
      baz=171
FLWY  Flagg Ranch     79.92 354 eP    P      18 51 52.1 +0.1
      comp=Z,40nm,1.1s
M54A  Oil Creek Stat  79.93  18 eP    P      18 51 51.3 -0.6
      comp=Z,23nm,1.1s
M54A  Oil Creek Stat  79.93  18 P     P      18 51 51.1 -0.8
      baz=199
K05A  Summer Lake     79.95 347 eP    P      18 51 52.8 +0.7
      comp=Z,40nm,1.2s
L02E  Cave Junction   79.95 345 P     P      18 51 51.4 -0.6
      baz=163
ALLY  Alegheny Colle  79.95  17 eP    P      18 51 51.5 -0.4
      comp=Z,22nm,0.8s
K04D  Chiloquin, OR   80.01 346 P     P      18 51 52.0 -0.5
      baz=165
YPP   Pitchstone Pla  80.11 354 eP    P      18 51 52.8 -0.4
      comp=Z,16nm,1.2s
M55A  Ridgway         80.12  18 P     P      18 51 51.8 -1.1
      baz=200
J08A  Circle Bar Ran  80.14 349 eP    P      18 51 53.6 +0.5
      comp=Z,41nm,1.1s
L53A  Girard          80.21  17 P     P      18 51 52.0 -1.3
      baz=198
H17A  Grant Village   80.22 354 eP    P      18 51 54.6 +0.9
      comp=Z,10nm,1.1s
HUMO  Hull Mountain   80.24 345 eP    P      18 51 54.3 +0.7
      comp=Z,12nm,0.9s
M56A  Emporium        80.28  19 P     P      18 51 53.2 -0.6
      baz=200
YFT   Old Faithful    80.29 354 eP    P      18 51 54.8 +0.8
      comp=Z,9.0nm,0.9s
LKWY  Lake            80.37 355 eP    P      18 51 56.9 +2.4
      comp=Z,20nm,1.0s
LKWY  Lake            80.37 355 eP    P      18 51 56.9 +2.4
LKWY                            pmax  pmax
      comp=Z,20nm,1.0s
N59A  State Game Lan  80.41  21 eP    P      18 51 54.7 +0.2
      comp=Z,10nm,0.8s
I42A  Draeger Farm,   80.43  10 eP    P      18 51 54.9 +0.4
      comp=Z,35nm,1.1s
I42A  Draeger Farm,   80.43  10 P     P      18 51 54.0 -0.5
      baz=192
I41A  Arkdale         80.46  10 eP    P      18 51 55.2 +0.6
      comp=Z,65nm,0.3s
K50A  Casco           80.47  15 eP    P      18 51 54.7  0.0
      comp=Z,82nm,1.4s
J47A  Sunmer          80.47  13 eP    P      18 51 54.5 -0.3
      comp=Z,94nm,1.8s
K02D  Willamette Mer  80.47 345 P     P      18 51 54.1 -0.8
      baz=163
YMR   Madison River   80.52 354 eP    P      18 51 56.3 +1.1
      comp=Z,23nm,1.2s
YNR   Norris Junctio  80.54 354 eP    P      18 51 56.0 +0.6
      comp=Z,18nm,1.2s
J05D  Fort Rock, OR   80.55 347 P     P      18 51 54.9 -0.4
      baz=165
YHB   Horse Butte     80.62 354 eP    P      18 51 56.0 +0.2
      comp=Z,16nm,0.5s
YHH   Holmes Hill     80.63 354 eP    P      18 51 56.1 +0.2
      comp=Z,8.3nm,1.0s
L54A  Sinclairville   80.70  18 P     P      18 51 55.1 -0.9
      baz=199
QLMT  Earthquake Lak  80.72 354 eP    P      18 51 57.8 +1.5
RLMT  Red Lodge       80.85 355 eP    P      18 51 58.4 +1.4
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      comp=Z,31nm,1.1s
RLMT  Red Lodge          80.85 355  P        P        18 51 57.1 +0.2
      baz=175
MCMT  McKenzie Canyo     80.85 353  eP       P        18 51 57.6 +0.6
L55A  Hinsdale           80.88  18  P        P        18 51 55.9 -1.1
      baz=200
PINE  Pine Mountain      80.99 347  eP       P        18 51 58.2 +0.5
      comp=Z,35nm,1.1s
KSPA  Keystone Colle     81.00  20  eP       P        18 51 56.8 -0.9
      comp=Z,100nm,1.8s
I07A  Izee               81.01 348  eP       P        18 51 58.2 +0.4
      comp=Z,33nm,1.1s
PAL   Palisades          81.04  22  eP       P        18 51 57.4 -0.4
      comp=Z,26nm,1.0s
PAL   Palisades          81.04  22  eP       P        18 51 57.4 -0.4
PAL                                 pmax     pmax
      comp=Z,26nm,1.0s
M59A  Waymart            81.09  21  P        P        18 51 57.5 -0.6
      baz=202
H43A  Windswept, Lux     81.17  11  eP       P        18 51 58.0 -0.4
      comp=Z,32nm,0.9s
H43A  Windswept, Lux     81.17  11  P        P        18 51 58.4  0.0
      baz=192
SPMN  Marine on St.      81.27   7  eP       P        18 51 58.8 -0.1
      comp=Z,33nm,0.7s
SPMN  Marine on St.      81.27   7  P        P        18 51 59.2 +0.3
      baz=188
I04A  Tendick Farm,      81.27 346  P        P        18 51 59.0 -0.1
      baz=164
I47A  Gladwin            81.29  13  eP       P        18 51 59.7 +0.7
      comp=Z,17nm,0.8s
DLMT  Dillon             81.35 353  eP       P        18 52 01.2 +1.7
      comp=Z,11nm,1.1s
BMO   Blue Mountains     81.42 350  eP       P        18 52 01.6 +1.7
      comp=Z,6.1nm,1.0s
BMO   Blue Mountains     81.42 350  eP       P        18 52 01.6 +1.7
BMO                                 pmax     pmax
      comp=Z,6.0nm,1.0s
PLID  Pearl Lake         81.47 351  eP       P        18 52 01.7 +1.4
      comp=Z,10nm,0.9s
K55A  Perry              81.48  18  P        P        18 51 58.8 -1.3
      baz=200
BOZ   Bozeman (W)        81.50 354  eP       P        18 52 00.8 +0.4
      comp=Z,21nm,1.1s
BOZ   Bozeman (W)        81.50 354  eP       P        18 52 00.8 +0.4
BOZ                                 pmax     pmax
      comp=Z,21nm,1.1s
BOZ   Bozeman (W)        81.50 354  P        P        18 52 00.8 +0.4
      baz=173
G39A  Holcombe           81.51   8  P        P        18 52 00.2  0.0
      baz=190
MMNY  Mt. Morris Dam     81.53  18  eP       P        18 52 00.1 -0.3
      comp=Z,49nm,1.4s
GCMT  Greycliff          81.54 355  eP       P        18 52 00.9 +0.3
I05D  Terrebonne, OR     81.59 347  P        P        18 51 59.9 -0.9
      baz=165
G40A  Rib Lake           81.61   9  eP       P        18 52 01.7 +0.9
      comp=Z,19nm,0.8s
G40A  Rib Lake           81.61   9  P        P        18 52 00.7 -0.1
      baz=190
MEDO  Medina             81.79  18  eP       P        18 52 00.9 -0.8
      comp=Z,16nm,0.8s
MEDO  Medina             81.79  18  P        P        18 52 00.5 -1.3
      baz=200
I51A  Listowel           81.79  16  P        P        18 52 00.9 -0.9
      baz=198
LRM   Limekiln Ridge     81.80 353  eP       P        18 52 05.1 +3.1
J54A  Appleton           81.85  18  eP       P        18 52 01.5 -0.5
      comp=Z,15nm,0.8s
BASO  Ashfield           81.85  15  P        P        18 52 00.6 -1.4
      baz=197
BWLO  Walkerton          82.07  16  P        P        18 52 02.6 -0.6
      baz=198
G45A  Suttons Bay        82.07  12  eP       P        18 52 03.5 +0.3
      comp=Z,27nm,0.6s
H04A  Detroit Lake       82.08 346  eP       P        18 52 03.6 +0.3
      comp=Z,14nm,1.0s
F38A  Pierce - Schro     82.09   8  P        P        18 52 02.6 -0.6
      baz=189
G08A  Pilot Rock         82.10 349  eP       P        18 52 04.2 +0.7
      comp=Z,17nm,1.0s
F39A  Loretta            82.16   8  P        P        18 52 03.2 -0.4
      baz=190
COR   Corvallis          82.21 345  eP       P        18 52 05.7 +1.8
      comp=Z,75nm,1.4s
COR   Corvallis          82.21 345  eP       P        18 52 05.7 +1.8
COR                                 pmax     pmax
      comp=Z,75nm,1.4s
I52A  Shelburne          82.23  16  P        P        18 52 03.2 -0.9
      baz=198
F40A  Park Falls         82.26   9  P        P        18 52 03.9 -0.3
      baz=190
LAO   LASA Array         82.26 358  eP       P        18 52 05.0 +0.7
      comp=Z,49nm,0.9s
LAO   LASA Array         82.26 358  P        P        18 52 03.4 -0.8
      baz=177
G06A  Carlson Farm,      82.33 347  eP       P        18 52 05.8 +1.2
      comp=Z,29nm,1.5s
BMRO  Meriville Lake     82.50  15  P        P        18 52 04.6 -0.8
      baz=198
F10A  Beach Ranch, E     82.51 350  eP       P        18 52 05.8 +0.3
      comp=Z,14nm,0.9s
WLVO  Wesleyville        82.52  18  P        P        18 52 04.4 -1.2
      baz=200
G47A  Hillman            82.52  13  P        P        18 52 05.0 -0.5
      baz=196
CAN   Canberra           82.52 232  eP       P        18 52 05.6 -0.6
      comp=Z,31nm,1.5s
CAN   Canberra           82.52 232  eP       P        18 52 05.6 -0.6
CAN                                 pmax     pmax
      comp=Z,31nm,1.5s
COWI  Conover            82.56  10  eP       P        18 52 05.6 -0.1
      comp=Z,15nm,0.8s
HRY   Holter Researc     82.62 354  eP       P        18 52 06.4 +0.2
E38A  The Farm, Brul     82.76   8  eP       P        18 52 07.8 +1.0
      comp=Z,8.2nm,0.8s
E38A  The Farm, Brul     82.76   8  P        P        18 52 05.4 -1.3
      baz=189
PECO  Prince Edward      82.88  19  eP       P        18 52 06.8 -0.6
      comp=Z,22nm,1.0s
MSO   Missoula           82.94 352  eP       P        18 52 06.9 -0.9
      comp=Z,14nm,1.3s
MSO   Missoula           82.94 352  P        P        18 52 07.0 -0.8
      baz=171
TOBO  Tobermory, Bru     83.04  15  P        P        18 52 07.2 -1.0
      baz=197
SADO  Sadowa             83.14  17  P        P        18 52 08.1 -0.6
      comp=Z,7.9nm,0.8s,baz=198,slow=0.8,SNR=6.1
SADO  Sadowa             83.14  17  eP       P        18 52 08.2 -0.6
      comp=Z,32nm,1.3s
E43A  Lone Tree Farm     83.15  11  eP       P        18 52 08.7 -0.1
      comp=Z,20nm,0.6s
E43A  Lone Tree Farm     83.15  11  P        P        18 52 08.5 -0.3
      baz=193
E09A  Wood Farm, Sta     83.17 349  eP       P        18 52 09.4 +0.5
      comp=Z,13nm,1.3s
HAWA  Hanford            83.27 349  eP       P        18 52 09.5 +0.1
      comp=Z,23nm,1.0s
TOO   Toolangi           83.27 228  eP       P        18 52 08.4 -1.6
      comp=Z,116nm,1.8s
TOO   Toolangi           83.27 228  eP       P        18 52 08.4 -1.6
TOO                                 pmax     pmax
      comp=Z,116nm,1.8s
DELO  Deloro Mine        83.27  18  eP       P        18 52 08.5 -0.9
      comp=Z,26nm,1.4s
DELO  Deloro Mine        83.27  18  P        P        18 52 08.3 -1.1
      baz=200
E08A  Dider Farm, El     83.29 349  eP       P        18 52 09.7 +0.3
      comp=Z,14nm,1.0s
H55A  Tweed              83.41  18  P        P        18 52 08.1 -2.0
      baz=201
MDND  Maddock            83.42   2  eP       P        18 52 10.5 +0.3
      comp=Z,35nm,0.9s
F49A  Sandfield          83.44  15  P        P        18 52 09.5 -0.8
      baz=197
KLBO  Killbear Provi     83.45  16  P        P        18 52 08.9 -1.4
      baz=198
D41A  Chassel            83.58  10  eP       P        18 52 11.7 +0.7
      comp=Z,48nm,1.1s
D41A  Chassel            83.58  10  P        P        18 52 10.5 -0.5
      baz=192
E46A  Sault Ste Mari     83.59  13  eP       P        18 52 11.2 +0.2
      comp=Z,21nm,0.9s
E46A  Sault Ste Mari     83.59  13  P        P        18 52 10.3 -0.7
      baz=195
G53A  Haliburton         83.59  17  P        P        18 52 09.7 -1.4
      baz=200
BANO  Bancroft           83.67  18  P        P        18 52 10.8 -0.7
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      baz=200
NCB   Newcomb            83.67  20  eP       P        18 52 10.6 -1.0
      comp=Z,12nm,0.7s
H56A  Elgin              83.69  19  P        P        18 52 10.6 -0.9
      baz=202
BUKO  Buck Lake          83.71  16  P        P        18 52 10.5 -1.1
      baz=199
EGMT  Eagleton           83.77 355  eP       P        18 52 12.1 +0.1
      comp=Z,17nm,1.0s
EGMT  Eagleton           83.77 355  P        P        18 52 12.1 +0.1
      baz=174
D08A  Wollman Farm,      83.82 349  eP       P        18 52 12.3 +0.1
      comp=Z,15nm,1.0s
E47A  Iron Bridge        83.87  14  P        P        18 52 12.1 -0.3
      baz=196
PLVO  Plevna             83.90  18  eP       P        18 52 11.8 -0.8
      comp=Z,26nm,1.1s
PLVO  Plevna             83.90  18  P        P        18 52 12.5 -0.2
      baz=201
E04D  Cinebar            83.96 347  P        P        18 52 13.3 +0.4
      baz=164
FFD   Franklin Falls     83.97  22  eP       P        18 52 12.9 -0.1
      comp=Z,44nm,0.3s
DGMT  Dagmar             84.00 359  eP       P        18 52 13.2  0.0
      comp=Z,40nm,1.0s
DGMT  Dagmar             84.00 359  P        P        18 52 13.6 +0.5
      baz=179
LON   Longmire           84.00 347  eP       P        18 52 12.8 -0.3
      comp=Z,14nm,1.0s
LON   Longmire           84.00 347  eP       P        18 52 12.9 -0.3
LON                                 pmax     pmax
      comp=Z,14nm,1.0s
F51A  Arnstein           84.06  16  P        P        18 52 13.1 -0.3
      baz=199
AGMN  Agassiz Nation     84.06   5  eP       P        18 52 13.2 -0.2
      comp=Z,16nm,0.9s
AGMN  Agassiz Nation     84.06   5  P        P        18 52 12.9 -0.5
      baz=186
EYMN  Ely                84.09   8  eP       P        18 52 14.0 +0.5
      comp=Z,17nm,0.9s
EYMN  Ely                84.09   8  P        P        18 52 12.7 -0.9
      baz=189
E48A  Lockeyer           84.11  14  P        P        18 52 13.1 -0.5
      baz=197
D46A  Sault St. Mari     84.14  13  P        P        18 52 12.8 -1.1
      baz=195
LONY  Lake Ozonia        84.17  20  eP       P        18 52 13.5 -0.5
      comp=Z,30nm,1.2s
LONY  Lake Ozonia        84.17  20  P        P        18 52 12.4 -1.6
      baz=203
G55A  Calabogie          84.19  18  P        P        18 52 12.6 -1.5
      baz=201
LTY   Liberty            84.29 348  eP       P        18 52 14.4 -0.3
      comp=Z,17nm,1.0s
C40A  Isle Royale Na     84.34   9  eP       P        18 52 14.9 +0.1
      comp=Z,14nm,0.9s
C40A  Isle Royale Na     84.34   9  P        P        18 52 14.1 -0.7
      baz=191
E50A  Wahnapitae         84.35  15  P        P        18 52 14.1 -0.8
      baz=198
C09A  Chrisman Ranch     84.44 350  eP       P        18 52 17.7 +2.3
      comp=Z,52nm,1.4s
PEMO  Pembroke           84.45  18  P        P        18 52 13.9 -1.5
      baz=201
D05A  Enumclaw           84.46 347  eP       P        18 52 15.2 -0.3
      comp=Z,40nm,1.1s
D47A  Chapleau           84.48  13  P        P        18 52 14.7 -0.9
      baz=196
ALGO  Algonquin Park     84.51  17  P        P        18 52 14.9 -0.8
      baz=200
LBNH  Lisbon             84.59  22  P        P        18 52 15.9 -0.3
      baz=205
D04E  Lakebay            84.59 347  P        P        18 52 16.5 +0.5
      baz=164
FRNY  Flat Rock          84.64  21  eP       P        18 52 15.9 -0.5
      comp=Z,34nm,1.5s
E52A  Mattawa            84.68  17  P        P        18 52 16.5 -0.1
      baz=200
NEW   Newport            84.74 351  P        P        18 52 17.3 +0.4
      comp=Z,18nm,0.9s,baz=176,slow=4.5,SNR=17
NEW                                 LR       LR       19 23 05.0
      comp=Z,346nm,21.9s,baz=170,slow=31
NEW   Newport            84.74 351  eP       P        18 52 17.3 +0.4
      comp=Z,24nm,1.0s
NEW   Newport            84.74 351  P        P        18 52 16.0 -0.9
      baz=168
D48A  Paudash Townsh     84.84  14  P        P        18 52 16.9 -0.5
      baz=197
D03D  Eldon              85.00 346  P        P        18 52 17.6 -0.5
      baz=164
E53A  Dumoine, Ponti     85.00  17  P        P        18 52 16.7 -1.5
      baz=200
NLWA  Neilton Lookou     85.01 346  eP       P        18 52 18.6 +0.3
      comp=Z,22nm,1.1s
D49A  Beulah Townshi     85.03  15  P        P        18 52 18.2 -0.1
      baz=197
WALA  Waterton Lakes     85.14 353  eP       P        18 52 19.4 +0.4
      comp=Z,20nm,1.0s
E54A  Lac Daplat, Po     85.17  18  P        P        18 52 17.8 -1.3
      baz=201
D52A  ZEK Kipawa Sen     85.39  17  P        P        18 52 18.7 -1.5
      baz=200
MOQ   Mont Orford        85.46  21  eP       P        18 52 19.9 -0.7
B05A  Bryant             85.52 347  P        P        18 52 19.8 -0.9
      baz=165
TRQ   Mont Tremblant     85.65  19  eP       P        18 52 20.5 -1.0
B06A  Marblemount        85.65 348  eP       P        18 52 22.1 +0.7
      comp=Z,61nm,0.3s
D53A  Lac Vacive, Po     85.65  17  eP       P        18 52 20.7 -0.7
      comp=Z,12nm,0.8s
D53A  Lac Vacive, Po     85.65  17  P        P        18 52 20.3 -1.1
      baz=200
D54A  Lac Fusel, La      85.97  18  P        P        18 52 22.4 -0.6
      baz=201
ULM   Lac du Bonnet      86.00   5  P        P        18 52 23.6 +0.5
      comp=Z,21nm,0.8s,baz=210,slow=4.2,SNR=16
ULM   Lac du Bonnet      86.00   5  eP       P        18 52 22.9 -0.1
      comp=Z,30nm,1.0s
ULM   Lac du Bonnet      86.00   5  eP       P        18 52 22.9 -0.1
ULM                                 pmax     pmax
      comp=Z,30nm,1.0s
VLDQ  Val d'Or           86.68  17  eP       P        18 52 26.0 -0.4
      comp=Z,14nm,1.0s
MATQ  Matagami           88.18  16  P        P        18 52 33.1 -0.6
      baz=200
LMN   Caledonia Moun     88.34  26  eP       P        18 52 33.6 -0.9
      comp=Z,82nm,1.9s
CHGQ  Chibougamau        89.10  18  P        P        18 52 37.7 -0.3
      baz=203
BATG  Bathurst New B     89.16  24  eP       P        18 52 37.3 -1.0
      comp=Z,53nm,1.8s
GBN   Guysborough        89.17  28  eP       P        18 52 38.3 -0.1
      comp=Z,36nm,1.2s
STKA  Stephens Creek     89.44 230  P        P        18 52 41.5 +1.1
      comp=Z,3.1nm,0.9s,baz=105,slow=2.8,SNR=3.7
STKA                                LR       LR       19 26 20.3
      comp=Z,1µm,19.3s,baz=151,slow=31
STKA  Stephens Creek     89.44 230  eP       P        18 52 40.0 -0.4
      comp=Z,3.6nm,1.4s
STKA  Stephens Creek     89.44 230  eP       P        18 52 40.0 -0.4
STKA                                pmax     pmax
      comp=Z,4.0nm,1.4s
BBB   Bella Bella        90.43 345  LR       LR       19 27 43.6
      comp=Z,147nm,18.4s,baz=179,slow=32
SCHQ  Schefferville      95.54  20  LR       LR       19 32 47.0
      comp=Z,636nm,19.9s,baz=258,slow=33
SCHQ  Schefferville      95.54  20  eP       P        18 53 06.7 -1.0
      comp=Z,52nm,1.8s
DLBC  Dease Lake         96.67 346  LR       LR       19 30 05.9
      comp=Z,234nm,19.8s,baz=122,slow=31
DLBC  Dease Lake         96.67 346  eP       P        18 53 12.6 -0.3
      comp=Z,10nm,1.1s
YKA   Yellowknife Ar     98.50 355  P        Pdif     18 53 21.4 +0.5
      comp=Z,2.4nm,0.9s,baz=167,slow=4.8,SNR=5.1
YKA                                 LR       LR       19 33 22.7
      comp=Z,26nm,19.0s,baz=158,slow=33
ASAR  Alice Springs     100.03 231  P        Pdif     18 53 26.5 -2.5
      comp=Z,0.8nm,0.8s,baz=125,slow=4.8,SNR=9.2
H11S2 WAKE ISLAND Hy    100.88 285  T        T        20 46 26.5
      baz=126,SNR=3.4
H11S1 WAKE ISLAND Hy    100.89 285  T        T        20 46 22.7
      baz=126
H11S3 WAKE ISLAND Hy    100.90 285  T        T        20 46 41.2
      baz=126
H01W1 Cape Leeuwin H    101.53 210  T        T        20 47 28.4
      baz=150,slow=76,SNR=363
H01W2 Cape Leeuwin H    101.54 210  T        T        20 47 29.6
      baz=150,slow=76,SNR=342
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H01W3 Cape Leeuwin H    101.55 210  T        T        20 47 29.7
      baz=150,slow=76,SNR=434
ILAR  Eielson Array     106.07 342  PKiKP    PKiKP    18 58 07.9 +1.5
      comp=Z,0.7nm,1.1s,baz=160,slow=2.9,SNR=4.6
TORD  Torodi Ar. Bea    109.38  88  PP       PP       18 58 42.0 -1.9
      comp=Z,5.7nm,0.3s,baz=243,slow=6.5,SNR=3.9
ESDC  Sonseca Array     117.97  60  PKP      PKPdf    18 58 29.3 -0.5
      comp=Z,1.0nm,0.8s,baz=298,slow=3.7,SNR=6.4
PETK  Petropavlovsk-    123.05 315  PKP      PKiKP    18 58 39.3  0.0
      comp=Z,6.2nm,1.1s,baz=88,slow=14,SNR=4.5
PEA1  Petropavlovsk-    123.05 315  ePKPdf   PKiKP    18 58 39.3 +0.1
BNI   Bardonecchia      127.23  57  ePKPdf   PKPdf    18 58 47.6 +0.1
BNI   Bardonecchia      127.23  57  ePKIKP   PKPdf    18 58 47.6 +0.1
SENIN Lac Senin/Sane    128.00  56  ePKPdf   PKPdf    18 58 47.8 -1.2
ECH   Echery            128.36  53  ePKPdf   PKPdf    18 58 49.0 -0.3
ECH   Echery            128.36  53  ePKIKP   PKPdf    18 58 49.1 -0.3
BFO   Black Forest      129.15  53  ePKPdf   PKPdf    18 58 50.5 -0.3
BFO   Black Forest      129.15  53  ePKIKP   PKPdf    18 58 50.6 -0.3
TUE   Stuetta           129.40  56  ePKPdf   PKPdf    18 58 49.7 -2.0
DAVA  Damuels           129.94  55  i PKPdf  PKPdf    18 58 52.8 +0.2
FUORN Ofenpass-Fuorn    130.05  56  ePKPdf   PKPdf    18 58 52.3 -0.7
FETA  Feichten          130.45  55  ePKPdf   PKiKP    18 58 54.1 -0.4
      comp=Z,7.9nm,0.9s
RETA  Reutte            130.57  55  ePKPdf   PKPdf    18 58 54.0 +0.3
      comp=Z,6.3nm,1.1s
MOTA  Moosalm           130.76  55  ePKPdf   PKPdf    18 58 53.8 -0.4
      comp=Z,8.1nm,0.7s
SQTA  Sankt Quirin      130.81  55  ePKPdf   PKPdf    18 58 54.6 +0.4
      comp=Z,24nm,1.5s
WTTA  Wattenberg        131.10  55  ePKPdf   PKPdf    18 58 54.7 -0.2
      comp=Z,16nm,1.5s
ABTA  Abfaltersbach     131.59  56  ePKPdf   PKPdf    18 58 55.6 -0.1
      comp=Z,2.7nm,0.8s
NKC   Novy Kostel       132.15  51  ePKIKP   PKiKP    18 58 58.3 +0.7
NKC                                 eSS      SS       19 18 56.2 -0.4
NKC                                 MLR      MLR
      comp=Z,400nm,25.2s
NKC   Novy Kostel       132.15  51  ePKP     PKiKP    18 58 58.3 +0.7
NKC                                 eSS      SS       19 18 56.2 -0.4
NKC                                 AMS      AMS      19 44 50.0
      comp=Z,400nm,25.2s
NOA   NORSAR Array B    132.19  37  PKP      PKPdf    18 58 56.5 +0.1
      comp=Z,5.8nm,1.2s,baz=286,slow=1.9,SNR=3.7
KBA   Koelnbreinsper    132.21  56  ePKPdf   PKPdf    18 58 57.0  0.0
      comp=Z,3.7nm,1.1s
MYKA  Terra Mystica     132.33  56  ePKPdf   PKPdf    18 58 57.5 +0.5
      comp=Z,2.9nm,1.0s
JAVS  Javornik          132.47  58  i PKPdf  PKiKP    18 59 07.1 +8.6
CLL   Collm             132.64  50  i PKIKP  PKPdf    18 58 56.7 -0.7
CLL   Collm             132.64  50  i PKPdf  PKPdf    18 58 56.7 -0.7
CLL                                 e                 18 59 08.0
CLL                                 ePP      PP       19 01 18.0 -4.2
CLL                                 ePKSbc   PKSbc    19 02 26.0 +0.4
CLL                                 ePPP     PPP      19 04 18.0
CLL                                 ePPS     PPS      19 13 17.0
CLL                                 eSS      SS       19 19 00.0 -2.5
CLL                                 e                 19 22 48.0
CLL                                 eSSS     SSS      19 23 54.0
KHC   Kasperske Hory    132.71  53  ePKIKP   PKPdf    18 58 57.8 +0.1
KHC                                 eSS      SS       19 19 08.7 +5.1
KHC                                 MLR      MLR
      comp=Z,400nm,25.7s
KHC   Kasperske Hory    132.71  53  ePKP     PKPdf    18 58 57.8 +0.1
KHC                                 eSS      SS       19 19 08.7 +5.1
KHC                                 AMS      AMS      19 45 30.0
      comp=Z,400nm,25.7s
GEC2  GERESS Array S    132.75  54  ePKPdf   PKPdf    18 58 57.1 -0.7
GEC2  GERESS Array S    132.75  54  ePKIKP   PKPdf    18 58 57.1 -0.7
GERES GERESS Array B    132.75  54  PKP      PKPdf    18 58 57.8  0.0
      comp=Z,2.3nm,0.9s,baz=198,slow=0.8,SNR=16
TIP   Timpagrande       132.84  67  ePKPdf   PKPdf    18 58 57.3 -1.0
OBKA  Obir              132.92  57  ePKPdf   PKPdf    18 58 58.4 +0.2
      comp=Z,7.3nm,1.2s
MOA   Molln             132.96  55  ePKPdf   PKiKP    18 58 59.0 -0.3
      comp=Z,2.7nm,1.0s
VISS  Visnje            132.99  58  i PKPdf  PKiKP    18 59 05.5 +6.1
BOJS  Bojanci           133.22  58  i PKPdf  PKiKP    18 59 09.0 +9.2
SOKA  Soboth            133.28  57  ePKiKP   PKiKP    18 58 59.8 -0.3
      comp=Z,8.1nm,1.3s
PRU   Pruhonice         133.45  52  eSS      SS       19 19 14.8 +2.4
PRU                                 AMS      AMS      19 44 40.0
      comp=Z,700nm,37.7s
PVCC  Panska Ves        133.53  51  ePKIKP   PKiKP    18 58 59.9 -0.4
PVCC                                MLR      MLR
      comp=Z,300nm,24.5s
PVCC  Panska Ves        133.53  51  ePKP     PKiKP    18 58 59.9 -0.4
PVCC                                ex       x        18 59 10.0
PVCC                                AMS      AMS      19 48 40.0
      comp=Z,300nm,24.5s
GOPC  GO Pecny, Ondr    133.60  52  eSS      SS       19 19 12.1 -2.2
GOPC                                AMS      AMS      19 48 40.0
      comp=Z,300nm,19.2s
ARSA  Arzberg           133.71  56  ePKPdf   PKPdf    18 58 59.5 -0.1
      comp=Z,5.0nm,0.9s
TREC  Trest             133.97  53  ePKIKP   PKiKP    18 59 01.1 -0.2
TREC                                MLR      MLR
      comp=Z,400nm,19.9s
TREC  Trest             133.97  53  ePKP     PKiKP    18 59 01.1 -0.2
TREC                                ex       x        18 59 13.2
TREC                                AMS      AMS      19 54 00.0
      comp=Z,400nm,19.9s
CONA  Conrad Observa    134.03  55  ePKPdf   PKPdf    18 59 00.4 +0.2
      comp=Z,8.5nm,1.2s
BLY   Banja Luka        134.42  60  ePKPdf   PKPdf    18 59 00.2 -0.7
UPC   Upice             134.44  51  eSS      SS       19 19 41.0 +17
UPC                                 AMS      AMS      19 55 50.0
      comp=Z,400nm,23.1s
KRUC  Moravsky          134.53  54  ePKP     PKPdf    18 59 00.8 -0.2
OSTC  Ostas             134.58  51  ePKP     PKiKP    18 59 02.7 +0.2
OSTC                                ex       x        18 59 13.2
OSTC                                eSS      SS       19 19 53.0 +27
OSTC                                AMS      AMS      19 56 10.0
      comp=Z,300nm,18.1s
DPC   Dobruska-Polom    134.63  52  ePKIKP   PKPdf    18 59 01.6 +0.4
DPC                                 MLR      MLR
      comp=Z,400nm,19.2s
DPC   Dobruska-Polom    134.63  52  ePKP     PKPdf    18 59 01.6 +0.4
DPC                                 ex       x        18 59 13.8
DPC                                 eSS      SS       19 19 44.7 +18
DPC                                 AMS      AMS      19 57 50.0
      comp=Z,400nm,19.2s
VRAC  Vranov            134.69  53  ePKP     PKiKP    18 59 02.2 -0.6
MODS  Modra-Piesok      135.03  55  ePKIKP   PKiKP    18 59 03.1 -0.4
MODS  Modra-Piesok      135.03  55  ePKP     PKiKP    18 59 03.1 -0.4
JAVC  Velka Javorina    135.35  54  ePKP     PKiKP    18 59 04.4 +0.2
MORC  Moravsky Berou    135.35  53  ePKPdf   PKPdf    18 59 02.1 -0.5
MORC  Moravsky Berou    135.35  53  ePKIKP   PKPdf    18 59 02.1 -0.5
MORC  Moravsky Berou    135.35  53  ePKP     PKiKP    18 59 03.5 -0.6
VYHS  Vyhne             136.08  55  ePKIKP   PKiKP    18 59 06.3 +0.7
VYHS  Vyhne             136.08  55  ePKP     PKiKP    18 59 06.3 +0.7
ARA0  ARCESS Array S    136.38  24  ePKPdf   PKPdf    18 59 04.4 +0.5
ARCES ARCESS Array B    136.38  24  PKP      PKPdf    18 59 04.4 +0.5
      comp=Z,2.8nm,0.8s,baz=343,slow=3.8,SNR=8.0
LANS  Liptovska Anna    136.55  54  ePKIKP   PKiKP    18 59 09.0 +2.4
LANS  Liptovska Anna    136.55  54  ePKP     PKiKP    18 59 09.0 +2.4
YAK   Yakutsk           138.35 326  ePKPdf   PKPdf    18 59 06.1 -1.5
YAK   Yakutsk           138.35 326  ePKIKP   PKPdf    18 59 07.1 -0.6
YAK                                 e                 19 01 55.9
FINES FINESS Array B    139.25  35  PKhKP    PKPpre   18 59 02.9
      comp=Z,2.3nm,0.9s,baz=328,slow=6.8,SNR=4.7
FINES                               PKP      PKPdf    18 59 10.1 +0.7
      comp=Z,5.5nm,1.0s,baz=288,slow=0.9,SNR=8.8
FIA1  FINESS Array S    139.25  35  ePKPdf   PKPdf    18 59 09.8 +0.5
KSRS  Korea Array       139.58 288  PKP      PKPdf    18 59 11.4 +0.7
      comp=Z,4.2nm,1.0s,baz=157,slow=2.0,SNR=6.5
KS15  Wonju Array Si    139.61 288  ePKPdf   PKPdf    18 59 10.4 -0.3
LVZ   Lovozero          140.10  23  ePKPdf   PKPdf    18 59 10.8  0.0
VSU   Vasula            140.27  39  eP       PKPdf    18 59 11.3  0.0
BUR08 Bucovina Ar. S    140.28  56  ePKPpre  PKPpre   18 59 05.1
BUR08                               ePKPdf   PKPdf    18 59 10.6 -1.2
ISAL  Salakas           140.45  44  eP       PKPdf    18 59 08.6 -3.1
IZAR  Zarasai           140.49  44  eP       PKiKP    18 59 14.8 +0.5
IIGN  Ignalina          140.54  44  eP       PKPdf    18 59 11.3 -0.6
IDID  Didziasalis       140.83  44  eP       PKPdf    18 59 10.9 -1.5
ZEA   Zeya              141.11 313  ePKHKP   PKPpre   18 59 03.8
ZEA                                 pmax     pmax
      comp=Z,24nm,1.8s
CN2   Changchun         142.47 297  ePKP     PKPdf    18 59 15.5 -0.2
AKASG Malin Array Be    142.85  51  PKhKP    PKPdf    18 59 14.0 -2.2
      comp=Z,0.9nm,0.5s,baz=276,slow=3.1,SNR=5.3
AKBB  Malin Array Si    142.85  51  ePKPpre  PKPpre   18 59 10.8
AKBB                                ePKPdf   PKPdf    18 59 18.2 +2.0
AKBB  Malin Array Si    142.85  51  ePKHKP   PKPpre   18 59 10.8
AKBB                                e                 18 59 18.2
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KONT  Konya--Tatoy      144.46  73 i P       PKPdf    18 59 19.8 +0.3
KONT                               IAML_P
      comp=Z,39nm,0.1s
KIBS  BOLU              144.46  69 i P       PKPdf    18 59 19.8 +0.2
KIBS                               IAML_P
      comp=Z,92nm,0.3s
CSS   Mathiatis         144.58  78 ePKPdf    PKPbc    18 59 18.7 +0.2
BCAM  Yenicaga          144.67  68 i P       PKPab    18 59 18.1 -0.5
BCAM                               IAML_P
      comp=Z,6.5nm,0.1s
CMDR  Camlidere-ANKA    144.94  69 i P       PKPdf    18 59 20.6 +0.2
CMDR                               IAML_P
      comp=Z,323nm,0.3s
GULN  MERSIN_Gulnar     145.03  76 i P       PKPbc    18 59 18.7 -1.2
GULN                               IAML_P
      comp=Z,117nm,0.5s
BR231 Keskin MP Arra    145.09  70 ePKPbc    PKPdf    18 59 21.2 +0.6
KKUL  Konya-Kulu        145.10  71 i P       PKPdf    18 59 21.1 +0.5
KKUL                               IAML_P
      comp=Z,3.0nm,0.4s
ANTO  Ankara            145.10  70 ePKPbc    PKPab    18 59 20.2  0.0
ANTO  Ankara            145.10  70 ePKIKP    PKPab    18 59 20.2  0.0
NJ2   Nanjing           145.32 276 ePKPbc    PKPdf    18 59 21.2 +0.1
AKSY  AKSARAY - Alti    145.67  72 i P       PKiKP    18 59 25.1 -0.6
AKSY                               IAML_P
      comp=Z,1.0nm,0.1s
BR131 Keskin Array S    145.73  70 ePKPdf    PKPdf    18 59 21.6 -0.2
BRTR  Keskin Array B    145.73  70  PKPbc    PKPbc    18 59 22.0 -0.2
      comp=Z,13nm,0.9s,baz=230,slow=3.1,SNR=20
KERG  Konya-Eregli      145.74  74 i P       PKPab    18 59 23.1 +0.4
KERG                               IAML_P
      comp=Z,102nm,0.5s
KIRS  Kırehir-Merke     145.86  71 i P       PKiKP    18 59 25.7 -0.4
KIRS                               IAML_P
      comp=Z,27nm,0.1s
DELI  KIRIKKALE         145.98  70 i P       PKiKP    18 59 25.1 -1.3
DELI                               IAML_P
      comp=Z,451nm,0.6s
CDAG  Cicekdag          146.28  71 i P       PKPbc    18 59 24.2 +0.4
CDAG                               IAML_P
      comp=Z,46nm,0.1s
OBN   Obninsk           146.36  42 ePKPdf    PKPdf    18 59 22.7 +0.6
OBN   Obninsk           146.36  42d iPKP2    PKPbc    18 59 22.9 -0.5
OBN                                 pmax     pmax
      comp=Z,169nm,1.7s
OBN                                 MLR      MLR
      comp=Z,229nm,18.0s
SIM   Simferopol'       146.41  61 ePKP2     PKPbc    18 59 24.2 +0.3
SIM                                 pmax     pmax
      comp=Z,29nm,0.9s
SIM                                 pmax     pmax
      comp=Z,130nm,8.9s
MOS   Moscow            146.73  41 ePKIKP    PKPdf    18 59 22.2 -0.5
MOS                                 pmax     pmax
      comp=Z,75nm,1.2s
COAL  Corum-Alaca       146.82  70 i P       PKPbc    18 59 25.9 +0.5
COAL                               IAML_P
      comp=Z,184nm,1.0s
SIRC  Yozgat            146.84  71 i P       PKPbc    18 59 25.8 +0.3
SIRC                               IAML_P
      comp=Z,14nm,0.5s
BOD   Bodaibo           147.18 324 ePKP2     PKPbc    18 59 24.9 -0.8
BOD                                 pmax     pmax
      comp=Z,39nm,1.6s
ANDN  Andirin           147.51  75 i P       PKPab    18 59 28.4 -1.1
ANDN                               IAML_P
      comp=Z,714nm,0.6s
PRGR  Permogore         147.53  28⇑iPKP2     PKPbc    18 59 26.8 +0.3
PRGR                                pmax     pmax
      comp=Z,56nm,0.8s
CUSAR Sarkisla-SIVAS    147.69  71 i P       PKPbc    18 59 27.0 -0.9
CUALT Altinyayla-SIV    148.06  72 i P       PKPbc    18 59 29.2 +0.3
LPSR  Galich'ya Gora    148.44  46 ePKIKP    PKPbc    18 59 27.4 -1.8
LPSR                                pmax     pmax
      comp=Z,30nm,1.0s
WHN   Wuhan             148.48 271 ⇑PKPbc    PKPbc    18 59 30.2 +0.2
WHN                                 PP       PP       19 03 07.7 +7.9
WHN                                 AMB      AMB
      comp=Z,210nm,9.7s
WHN                                 LR       LR
      comp=Z,520nm,18.6s
CUKAN kangal_SIVAS      148.62  72 i P       PKiKP    18 59 31.3 -0.5
CUZAR Zara_SIVAS        148.91  71 i P       PKPbc    18 59 29.3 -1.7
VSR   Storozhevoye      148.96  49 ePKIKP    PKPbc    18 59 28.9 -1.7
VSR                                 pmax     pmax
      comp=Z,60nm,1.5s
BJT   Baijiatuau        149.06 290 ePKPbc    PKPbc    18 59 31.2  0.0
VORD  Divnogorie        149.10  49 ePKIKP    PKPdf    18 59 28.7 +1.9
VORD                                pmax     pmax
      comp=Z,40nm,1.4s
SUSE  Susehri           149.27  70 i P       PKiKP    18 59 32.8 -0.4
SUSE                               IAML_P
      comp=Z,59nm,0.4s
KEMA  Kemaliye          149.41  72 i P       PKiKP    18 59 34.0 +0.6
KEMA                               IAML_P
      comp=Z,38nm,0.3s
KELT  Kelkit            150.07  70 i P       PKiKP    18 59 35.1 +0.2
RAYN  Ar Rayn           150.08 106 ePKPdf    PKPdf    18 59 29.4 +0.1
RAYN                               ePKPbc    PKPbc    18 59 36.9 +2.6
RAYN                               ePKPab    pPKPab   18 59 43.1 +0.2
RAYN  Ar Rayn           150.08 106 ePKIKP    PKPdf    18 59 29.4 +0.1
RAYN                               e                  18 59 36.9
TNCL  Tunceli-Merkez    150.20  72 i P       PKiKP    18 59 36.5 +1.5
HANI  Diyarbakir_Han    150.79  74 i P       PKPbc    18 59 34.6 -1.0
HANI                               IAML_P
      comp=Z,173nm,0.2s
MARD  Mardin            150.95  76 i P       PKPbc    18 59 36.0 -0.1
MARD                               IAML_P
      comp=Z,874nm,0.6s
PBKT  Sadao Pong        151.31 234  P        PKiKP    18 59 38.0 +0.2
      comp=Z,10.0nm,0.9s
MUSM  Mu-Merkez         151.69  74 i P       PKiKP    18 59 39.2 +1.0
MUSM                               IAML_P
      comp=Z,404nm,0.8s
SRTM  Siirt_Merkez      151.94  75 i P       PKPbc    18 59 37.4 -0.9
SRTM                               IAML_P
      comp=Z,261nm,0.4s
DBOC  Borcka            151.95  68 i P       PKiKP    18 59 38.9 +0.4
DBOC                               IAML_P
      comp=Z,224nm,0.4s
DBAD  Bademkaya         151.96  69 i P       PKPbc    18 59 37.8 -0.5
DBAD                               IAML_P
      comp=Z,15nm,0.2s
DAGI  Agillar           152.13  69 i P       PKiKP    18 59 38.9  0.0
DAGI                               IAML_P
      comp=Z,141nm,0.5s
ENH   Enshi             152.34 268 ePKPbc    PKPbc    18 59 38.9 -0.4
UTTA  Uttaradit         152.43 235  P        PKiKP    18 59 41.1 +1.0
      comp=Z,23µm,0.9s,comp=Z,225µm
KIV   Kislovodsk        152.59  62 ePKPbc    PKPbc    18 59 39.6  0.0
KIV                                e                  18 59 39.7
KIV                                ePKPab    PKPab    18 59 50.7 +0.6
KIV   Kislovodsk        152.59  62 i PKIKP   PKPbc    18 59 39.5  0.0
KIV                                 pmax     pmax
      comp=Z,53nm,1.1s
HHC   Hu-ho-hao-te      152.61 291  PKPbc    PKPdf    18 59 34.4 +1.7
GOF   Gofitskoye        152.72  60⇑ePKIKP    PKiKP    18 59 41.0 +1.1
GOF                                 pmax     pmax
      comp=Z,39nm,1.0s
KBZ   Khabaz            152.76  63  PKP      PKPdf    18 59 33.3 +0.7
      comp=Z,6.3nm,1.1s,baz=141,slow=4.8,SNR=3.3
GYA   Guiyang           153.07 258 ePKPbc    PKPdf    18 59 34.4 +0.6
GYA                                 PKS      PKSdf    19 03 07.4 -1.1
GYA                                 PP       PP       19 03 29.6 +3.3
GYA                                 AMB      AMB
      comp=Z,130nm,8.0s
ZEI   Tsey              153.57  65 ePKIKP    PKPdf    18 59 33.2 -1.0
ZEI                                 pmax     pmax
      comp=Z,11nm,0.3s
BTO   Baotou            153.78 290 eP        PKPbc    18 59 41.1 -1.2
XAN   Xi'an             153.88 275  PKPbc    PKPab    18 59 50.8 -5.1
XAN                                 pPKP     sPKPab   19 00 03.6 +4.0
XAN                                 LR       LR
      comp=N,250nm,24.4s
XAN                                 LR       LR
      comp=Z,180nm,23.5s
CM31  Chiang Mai Arr    154.01 234 ePKPdf    PKPdf    18 59 35.4 +0.2
CM31                               ePKPab    PKPab    18 59 54.9 -1.7
CMAR  Chiang Mai Arr    154.01 234  PKP      PKPdf    18 59 35.7 +0.4
      comp=Z,2.8nm,1.1s,baz=244,slow=0.4,SNR=9.9
CMAR                                PKPab    PKPab    18 59 57.4 +0.8
      comp=Z,3.3nm,0.9s,baz=144,slow=5.0,SNR=6.1
CMMT  Chiang Mai        154.26 234  P        PKPab    18 59 58.2 +0.5
      comp=Z,2.5nm,0.9s
CHTO  Chiang Mai        154.26 234 ePKPdf    PKPdf    18 59 34.9 -0.7
CHTO  Chiang Mai        154.26 234 ePKIKP    PKPdf    18 59 34.9 -0.7
GNI   Garni             154.27  71 ePKPdf    PKPdf    18 59 35.0 -0.2
GNI   Garni             154.27  71 ePKIKP    PKPdf    18 59 35.0 -0.2
ULN   Ulaanbaatar       154.83 308 ePKPdf    PKPdf    18 59 35.0 -0.7
ULN                                epPKPab   pPKPab   19 00 01.8 -0.6
ULN   Ulaanbaatar       154.83 308 ePKIKP    PKPdf    18 59 35.0 -0.7
SONA0 Songino Array     155.26 308 ePKPdf    PKPdf    18 59 35.1 -1.2
SONA0                              ePKPab    PKPab    19 00 00.6 -0.8
SONM  Songino Array     155.26 308  PKP      PKPdf    18 59 35.1 -1.2
      comp=Z,2.7nm,0.9s,baz=96,slow=1.5,SNR=7.2
SONM                                PKPab    PKPab    19 00 00.6 -0.8
      comp=Z,8.6nm,0.9s,baz=90,slow=3.3,SNR=8.8
KMI   Kunming           155.48 251  PKP      PKPdf    18 59 36.8 -0.6
ARU   Arti              155.94  26 ePKPdf    PKPdf    18 59 36.9 +0.2
ARU   Arti              155.94  26  PKIKP    PKPdf    18 59 37.2 +0.5
ZAK   Zakamensk         156.17 316 ePKP2     PKPab    18 59 59.5 -5.7
ZAK                                 pmax     pmax
      comp=Z,7.0nm,1.1s
MAK   Makhachkala       156.19  64 ePKIKP    PKPdf    18 59 32.2 -5.2
MAK                                 pmax     pmax
      comp=Z,309nm,1.1s
CD2   Chengdu           157.19 265  PKP      PKPdf    18 59 38.4 -0.8
LZH   Lanzhou           158.35 278 ePKP      PKPdf    18 59 35.0 -5.7
LZH                                 pPKP     sPKPdf   18 59 46.2 +1.7
LZH                                 sPKP              18 59 50.7
LZH                                 LR       LR
      comp=Z,150nm,18.1s
LZH                                 LR       LR
      comp=Z,150nm,18.3s
LZH                                 LR       LR
      comp=Z,170nm,20.0s
ZAA0  Zalesovo Array    161.15 346 ePKPdf    PKPdf    18 59 41.3 -1.7
ZALV  Zalesovo Beam     161.15 346  PKP      PKPdf    18 59 41.3 -1.7
      comp=Z,4.6nm,0.9s,baz=270,slow=0.9,SNR=12
ZALV                                PKPab    PKPab    19 00 26.5 +0.1
      comp=Z,1.7nm,0.6s,baz=352,slow=4.3,SNR=2.3
GTA   Gaotai            161.65 288 ⇑PKP      PKPdf    18 59 44.8 +0.6
GTA                                 PKPab    PKPab    19 00 29.7 +0.3
GTA                                 PP       PP       19 04 16.7 +3.2
GTA                                 SS       SS       19 24 36.1 +4.5
GTA                                 AMB      AMB
      comp=Z,98nm,8.7s
GTA                                 LR       LR
      comp=Z,170nm,22.8s
GTA                                 LR       LR
      comp=Z,130nm,22.2s
GTA                                 LR       LR
      comp=Z,270nm,20.6s
ABKAR Akbulak array     161.70  38 ePKPdf    PKPdf    18 59 44.2 +0.5
BRVK  Borovoye          162.19  13 ePKPdf    PKPdf    18 59 43.9 -0.2
BRVK                               ePKPab    PKPab    19 00 32.5 +1.5
BRVK  Borovoye          162.19  13 ePKIKP    PKPdf    18 59 43.9 -0.2
GEYT  Alibeck           164.71  77  PKP      PKPdf    18 59 47.7 +0.6
      comp=Z,2.9nm,0.9s,baz=270,slow=5.9,SNR=8.4
GYA0B ALIBECK ARRAY     164.71  77 ePKPdf    PKPdf    18 59 46.3 -0.8
KURK  Kurchatov         165.14 356 ePKPdf    PKPdf    18 59 46.5 -0.4
KURK                               ePKPab    PKPab    19 00 45.0 +1.0
KURK  Kurchatov         165.14 356 ePKIKP    PKPdf    18 59 46.5 -0.4
MK31  Makanchi Array    168.43 342 ePKPdf    PKPdf    18 59 47.9 -1.7
MK31                               ePKPab    PKPab    19 00 58.9 +0.2
MK31  Makanchi Array    168.43 342 ePKIKP    PKPdf    18 59 47.9 -1.7
MKAR  Makanchi Array    168.43 342  PKP      PKPdf    18 59 49.2 -0.4
      comp=Z,0.8nm,0.9s,baz=30,slow=5.6,SNR=6.6
MKAR                                PKPab    PKPab    19 00 59.3 +0.7
      comp=Z,2.2nm,1.0s,baz=316,slow=3.3,SNR=6.3
MKAR                                PP       PP       19 04 47.4 +0.1
      comp=Z,0.4nm,0.7s,baz=18,slow=3.9,SNR=3.1
MAKZ  Makanchi          168.49 343 ePKPdf    PKPdf    18 59 48.7 -0.9
MAKZ                               ePKPab    PKPab    19 00 58.5 -0.4
MAKZ  Makanchi          168.49 343 ePKIKP    PKPdf    18 59 48.7 -0.9
WMQ   Urumqi            168.63 317 ePKP      PKPdf    18 59 50.8 +0.9
WMQ                                 AMB      AMB
      comp=Z,65nm,4.3s
WMQ                                 LR       LR
      comp=Z,130nm,23.1s
WMQ                                 LR       LR
      comp=Z,170nm,22.1s
WMQ                                 LR       LR
      comp=Z,280nm,25.1s
CHGR  Chuyangaron       173.12  64 ePKPdf    PKPdf    18 59 52.3 -0.2
CHGR                               ePKPab    PKPab    19 01 14.6 -5.5
BTK   Batken            173.55  48 ePKPdf    PKPdf    18 59 53.1 +0.5
BTK                                ePKPab    PKPab    19 01 21.5 -0.3
BTK   Batken            173.55  48 ePKIKP    PKPdf    18 59 53.1 +0.5
ARSB  Arslanbob         173.71  29 ePKPdf    PKPdf    18 59 52.8 +0.1
KDJ   Kajisay           173.77 359 ePKPdf    PKPdf    18 59 52.1 -0.6
KDJ                                ePKPab    PKPab    19 01 22.8 +0.1
KDJ   Kajisay           173.77 359 ePKIKP    PKPdf    18 59 52.1 -0.6
GAR   Garm              173.81  58 ePKPdf    PKPdf    18 59 52.2 -0.5
GAR                                ePKPab    PKPab    19 01 21.7 -1.4
GAR   Garm              173.81  58 ePKIKP    PKPdf    18 59 52.3 -0.5
NIL   Nilore            176.15 124 ePKPdf    PKPdf    18 59 53.5  0.0
NIL                                ePKPab    PKPab    19 01 33.7 +0.2
NIL   Nilore            176.15 124 ePKIKP    PKPdf    18 59 53.5  0.0
KSH   Kashi             176.28  13 ePKP      PKPdf    18 59 55.5 +2.0
KSH                                 PKS      PKSdf    19 03 24.1 -1.6
KSH                                 LR       LR
      comp=Z,66nm,7.8s
KSH                                 LR       LR
      comp=Z,200nm,9.3s
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*ISCJB **02** 18:40:27.9±0.9, 9°.02S±0°.08×108°.57E±0°.07, h10^{km}, mb3.7/4, Error ellipse: s-maj=13.7km s-min=7.2km az=32.9*

*DJA **02** 18:40:29.1±1.2, 9°S±5°×10°9E±°, h11^{km}±10^{km}, M4.0/7, MLv4.0/7*

*IDC **02** 18:40:35.9±3.9, 8°.79S×108°.60E, h72^{km}±32^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.4/34, mbtmp3.8/5, ML3.5/1, MS2.8/2, Ms1 2.8/2, ms1mx2.6/40, Error ellipse: s-maj=112.2km s-min=19.8km az=52.0*

ISC 02 18:40:29.2±1.1**, 8°.9S**±0°.1×**108°.58E**±0°.07**, h10**^{km}**, n11, σ1^{s}.71**/14**, mb3.7**/4**, Jawa**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
CISI  Cisompet, Garu      1.54 331  P        Pn       18 40 55.7 -1.0
CISI                                S        Sn       18 41 13.7 -3.1
UGM   Wanagama            2.16  63  P        Pn       18 41 05.0 -0.4
LEM   Lembang             2.27 335  P        Pb       18 41 10.3 -0.1
      15nm,0.3s,baz=93,slow=17,SNR=9.8
LEM                                 S        Sn       18 41 36.9 +1.7
      22nm,0.3s,baz=351,slow=15,SNR=8.0
LEM                                 LR       LR       18 42 24.0
      comp=Z,263nm,19.4s,baz=100,slow=50
LEM   Lembang             2.27 335  P        Pn       18 41 08.9 +1.9
LEM                                 S        Sn       18 41 37.5 +2.4
PWJI  Pagerwojo           3.31  75  P        Pn       18 41 21.6 +0.5
PWJI                                S        Sn       18 42 02.1 +1.5
CGJI  Cibinong            3.65 308  P        Pn       18 41 27.4 +1.6
KAPI  Kappang            11.75  72  LR       LR       18 49 04.9
      comp=Z,37nm,18.5s,baz=119,slow=44
WRA   Warramunga Arr     27.21 117  P        P        18 46 13.1 -0.4
      0.8nm,0.5s,baz=286,slow=12,SNR=5.6
ASAR  Alice Springs      28.33 124  P        P        18 46 23.8 +0.3
      1.0nm,0.8s,baz=298,slow=9.3,SNR=13
STKA  Stephens Creek     38.22 131  P        P        18 47 49.7 +0.2
      4.0nm,0.7s,baz=304,slow=9.0,SNR=8.8
MKAR  Makanchi Array     60.20 339  P        P        18 50 35.6 -1.8
      0.3nm,0.6s,baz=153,slow=7.4,SNR=4.9
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*TIF **02** 18:43:55.5, 42°.50N×43°.49E, h16^{km}±1^{km}*

*NORS **02** 18:43:55.5±0.0, 42°.57N×43°.48E, h10^{km}, MPVA3.1*

ISC 02 18:43:55.9±1.1**, 42°.45N**±0°.03×**43°.52E**±0°.03**, h4**^{km}±10^{km}**, n19, σ0^{s}.79**/40**, Western Caucasus**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
ONI   Oni                 0.15 339  P        Pg       18 43 59.4 +0.6
ONI                                 S        Sg       18 44 01.4 +0.6
TKB   Tkibuli             0.41 255  P        Pg       18 44 03.9 +0.2
TKB                                 S        Sg       18 44 10.1 +1.1
ZEI   Tsey                0.43  40 ePg       Pg       18 44 04.0 -0.3
ZEI                                eSg       Sg       18 44 10.3 +0.3
DIGR  Digorskoe uzhe      0.45   5 ePg       Pg       18 44 03.6 -1.0
DIGR                               eSg       Sg       18 44 09.5 -1.0
LACR  Lac                 0.68  57 i Pg      Pg       18 44 07.9 -1.1
LACR                               eSg       Sg       18 44 17.2 -0.6
GUDG  Gudauri             0.70  89  P        Pg       18 44 08.6 -0.9
GUDG                                S        Sb       18 44 20.7 -0.3
KORR  Kora                0.75  32 ePg       Pg       18 44 10.1 -0.2
KORR                               eSg       Sb       18 44 21.4 -0.7
LSNR  Lesken              0.85  15 ePg       Pg       18 44 11.9 -0.3
LSNR                               eSg       Sg       18 44 24.1 +0.8
ARNR  Ardon               0.92  37 ePg       Pg       18 44 13.7 +0.2
ARNR                               eSg       Sb       18 44 27.5 +0.5
NEY   Neytrino            0.99 324 ePg       Pg       18 44 13.8 -1.1
NEY                                eSg       Sg       18 44 26.3 -1.4
STDR  Stavd-Durt          1.00  23 ePg       Pb       18 44 15.9 +0.1
STDR                               eSg       Sb       18 44 30.4 +1.1
VLKR  Vladikavkaz         1.03  55 ePg       Pn       18 44 17.2  0.0
VLKR                               ePg       Pb       18 44 17.4 +1.0
VLKR                               eSg       Sn       18 44 33.1 +0.9
VLKR                               eSg       Sn       18 44 33.1 +0.9
NCK   Nalchik             1.04   3 ePg       Pg       18 44 16.0 +0.1
NCK                                eSg       Sg       18 44 30.4 +0.9
AKH   Akhalkalaki         1.04 181  P        Pb       18 44 16.8 +0.1
AKH                                 S        Sn       18 44 31.9 -0.6
EPOS  Posof               1.12 212 i P       Pb       18 44 18.4 +0.4
EPOS                               i S       Sn       18 44 34.1 -0.3
SHA1  Shidzhatmaz         1.43 334 ePg       Pn       18 44 22.1 -0.7
SHA1                               eSg       Sg       18 44 39.9 -2.0
DBOC  Borcka              1.77 232 i P       Pn       18 44 28.3 +0.9
DBOC                               i S       Sb       18 44 52.0 +0.3
DBOC                                IAML_P
      comp=Z,275nm,0.1s
DAGI  Agillar             1.83 222 i P       Pg       18 44 30.6 -0.3
DAGI                               i S       Sg       18 44 54.6  0.0
DAGI                                IAML_P
      comp=Z,158nm,0.2s
DBAD  Bademkaya           1.98 224 i P       Pb       18 44 32.1 -0.5
DBAD                               i S       Sb       18 44 57.4 -0.3
DBAD                                IAML_P
      comp=Z,363nm,0.2s
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*ISCJB **02** 19:03:49.8±0.6, 4°.98S±0°.06×149°.00E±0°.09, h10^{km}, mb3.9/9, MS3.4/1, Error ellipse: s-maj=13.4km s-min=7.3km az=20.6*

*IDC **02** 19:03:49.8±1.5, 4°.95S×149°.07E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.9/35, mbtmp4.0/9, ML1.9/1, MS3.6/5, Ms1 3.6/5, ms1mx3.3/25, Error ellipse: s-maj=45.3km s-min=19.7km az=108.0*

*NEIC **02** 19:03:50.4±2.4, 4°.98S×149°.10E, h6^{km}±5^{km}, mb4.5/7, Error ellipse: s-maj=11.5km s-min=10.1km az=107.0*

ISC 02 19:03:51.2±0.7**, 4°.92S**±0°.06×**149°.12E**±0°.09**, h10**^{km}**, n29, σ1^{s}.11**/27**, mb4.0**/9**, Bismarck Sea**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
RABL  Rabaul              3.12  77 ePn       Pn       19 04 41.8 +1.2
MANU  Manus Island        3.35 329 ePn       Pn       19 04 45.8 +2.1
PMG   Port Moresby        4.86 203  Pn       Pn       19 05 05.6 +1.2
      3.6nm,0.3s,baz=36,slow=8.9,SNR=11
PMG                                 Sn       Sn       19 06 01.7 +1.0
      13nm,0.3s,baz=5.3,slow=21,SNR=13
PMG                                 LR       LR       19 07 17.1
      comp=Z,248nm,18.6s,baz=215,slow=43
PMG   Port Moresby        4.86 203 ePn       Pn       19 05 06.5 +2.1
PMG                                eSn       Sn       19 06 01.7 +1.0
JAY   Jayapura            8.73 286  LR       LR       19 08 43.3
      comp=Z,506nm,20.7s,baz=96,slow=34
COEN  Coen               10.72 213 ePn       Pn       19 06 24.5 -0.4
HNR   Honiara            11.64 113  LR       LR       19 10 38.9
      comp=Z,544nm,20.3s,baz=254,slow=35
SIJI  Sorong             18.27 282  P        P        19 08 04.8 -0.5
      0.4nm,0.3s,baz=69,slow=10,SNR=5.1
GUMO  Guam               18.87 347  LR       LR       19 15 36.8
      comp=Z,167nm,18.8s,baz=171,slow=37
MTN   Manton Dam         19.42 245 eP        P        19 08 16.8 -1.1
      48nm,1.5s
WRAB  Tennant Creek      20.72 223 eP        P        19 08 30.9 -1.1
      12nm,0.6s
WB2   Warramunga Arr     20.72 223 eP        P        19 08 30.8 -1.3
      52nm,1.6s
WR1   Warramunga Arr     20.73 223 eP        P        19 08 31.0 -1.2
WRA   Warramunga Arr     20.73 223  P        P        19 08 31.0 -1.2
      10.0nm,0.5s,baz=52,slow=10,SNR=42
AS31  Alice Springs      23.71 217 eP        P        19 09 02.1 -1.5
      2.2nm,0.6s
ASAR  Alice Springs      23.71 217  P        P        19 09 02.5 -1.1
      4.3nm,0.6s,baz=52,slow=8.9,SNR=51
DAV   Davao City (W)     26.34 297  LR       LR       19 18 54.9
      comp=Z,112nm,20.9s,baz=11,slow=34
CMAR  Chiang Mai Arr     54.63 297  P        P        19 13 20.3 -0.3
      0.6nm,0.8s,baz=142,slow=5.2,SNR=4.6
SHL   Shillong           63.23 302 eP        P        19 14 19.2 -1.3
      5.0nm,0.9s
ULN   Ulaanbaatar        64.21 330 eP        P        19 14 28.0 +1.5
      3.3nm,1.1s
SONA0 Songino Array      64.52 330 eP        P        19 14 29.3 +0.8
SONM  Songino Array      64.52 330  P        P        19 14 29.3 +0.8
      1.1nm,0.7s,baz=129,slow=6.6,SNR=6.3
MK32  Makanchi Array     78.03 320 eP        P        19 15 50.4 +0.2
MKAR  Makanchi Array     78.03 320  P        P        19 15 50.4 +0.2
      0.5nm,0.8s,baz=110,slow=6.6,SNR=4.4
ZALV  Zalesovo Beam      79.24 327  P        P        19 15 56.4 -0.2
      0.9nm,0.6s,baz=104,slow=6.3,SNR=3.9
ZAA1  Zalesovo Array     79.24 327 eP        P        19 15 56.4 -0.2
ILAR  Eielson Array      83.67  23  P        P        19 16 20.2 +0.3
      0.4nm,0.8s,baz=251,slow=5.6,SNR=3.3
TORD  Torodi Ar. Bea    146.84 286  PKPbc    PKPbc    19 23 34.6 -0.2
      1.6nm,0.8s,baz=76,slow=4.2,SNR=7.5
TOA1  Torodi Ar. Sit    146.84 286 ePKPbc    PKPbc    19 23 34.6 -0.2
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*GEN **02** 19:06:44.6, 44°.19N×10°.21E, h4^{km}±3^{km}, Ml0.9*

ROM 02 19:06:43.9±0.1**, 44°.185N**±0°.004×**10°.209E**±0°.005**, h10**^{km}**, ML1.3**/9**, Error ellipse: s-maj=0.6km s-min=0.4km az=209.0, Northern Italy**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
T0912 Minucciano (LU      0.02 178  P        Pg       19 06 45.9 +0.3
T0912                               S        Sg       19 06 47.0 +0.1
T0912                               AML      AML
      comp=E,4460µm,0.5s
T0912                               AML      AML
      comp=N,4655µm,0.1s
T0912                               AML      AML
      comp=E,4340µm,0.5s
T0912                               AML      AML
      comp=N,4695µm,0.1s
T0912                               AML      AML
      comp=E,4460µm,0.5s
T0912                               AML      AML
      comp=E,4340µm,0.5s
T0912                               AML      AML
      comp=N,4655µm,0.1s
T0912                               AML      AML
      comp=N,4695µm,0.1s
EQUI  Equi                0.04 244  P        Pg       19 06 46.1 +0.4
EQUI                                S        Sg       19 06 47.3 +0.1
EQUI  Equi                0.04 244  P        Pg       19 06 46.2 +0.4
EQUI                                S        Sg       19 06 47.3 +0.1
EQUI                                AML      AML
      comp=E,229µm,0.5s
EQUI                                AML      AML
      comp=N,210µm,0.3s
EQUI                                AML      AML
      comp=E,228µm,0.5s
EQUI                                AML      AML
      comp=N,210µm,0.3s
EQUI                                AML      AML
      comp=N,210µm,0.3s
EQUI                                AML      AML
      comp=E,228µm,0.5s
T0911 Castelpoggio (      0.12 233  P        Pg       19 06 47.7 +0.9
T0911                               AML      AML
      comp=E,150µm,1.0s
T0911                               AML      AML
      comp=N,150µm,0.3s
T0911                               AML      AML
      comp=N,150µm,0.3s
T0911                               AML      AML
      comp=E,150µm,1.0s
VLC   Villacollemand      0.13 101  P        Pg       19 06 47.5 +0.6
VLC                                 S        Sg       19 06 49.8 +0.8
VLC                                 AML      AML
      comp=E,180µm,0.7s
VLC                                 AML      AML
      comp=N,206µm,0.1s
VLC                                 AML      AML
      comp=E,194µm,0.7s
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VLC				AML	AML		
	comp=N,210µm,0.1s						
VLC				AML	AML		
	comp=E,180µm,0.7s						
VLC				AML	AML		
	comp=N,206µm,0.1s						
VLC				AML	AML		
	comp=E,194µm,0.7s						
VLC				AML	AML		
	comp=N,210µm,0.1s						
VLC				AML	AML		
	comp=N,206µm,0.1s						
VLC				AML	AML		
	comp=E,180µm,0.7s						
VLC				AML	AML		
	comp=E,194µm,0.7s						
VLC				AML	AML		
	comp=N,210µm,0.1s						
CARD	**Cardoso**	**0.25**	**129**	P	Pb	19 06 49.8	-0.8
CARD				S	Sg	19 06 53.6	+1.2
CARD	**Cardoso**	**0.25**	**129**	P	Pg	19 06 49.8	+0.8
CARD				S	Sg	19 06 53.6	+1.2
CARD				AML	AML		
	comp=E,260µm,0.9s						
CARD				AML	AML		
	comp=N,220µm,0.7s						
CARD				AML	AML		
	comp=E,260µm,0.9s						
CARD				AML	AML		
	comp=N,220µm,0.7s						
CARD				AML	AML		
	comp=N,220µm,0.7s						
CARD				AML	AML		
	comp=E,260µm,0.9s						
ERBM	**Eremo**	**0.28**	**32**	P	Pb	19 06 50.3	-0.7
ERBM				S	Sb	19 06 54.7	-1.1
ERBM				AML	AML		
	comp=E,65µm,0.5s						
ERBM				AML	AML		
	comp=N,58µm,1.4s						
ERBM				AML	AML		
	comp=E,65µm,0.5s						
ERBM				AML	AML		
	comp=N,58µm,1.4s						
ERBM				AML	AML		
	comp=E,65µm,0.5s						
ERBM				AML	AML		
	comp=N,58µm,1.4s						
PLMA	**Palmaria, Port**	**0.29**	**242**	P	Pb	19 06 50.6	-0.6
PLMA				S	Sb	19 06 54.9	-1.2
BDI	**Bagni Di Lucca**	**0.30**	**114**	P	Pg	19 06 50.6	+0.6
BDI				S	Sb	19 06 55.4	-1.2
BDI				AML	AML		
	comp=E,55µm,0.3s						
BDI				AML	AML		
	comp=N,78µm,0.5s						
BDI				AML	AML		
	comp=N,78µm,0.5s						
BDI				AML	AML		
	comp=E,55µm,0.3s						
GRAM	**Graiana**	**0.32**	**342**	P	Pg	19 06 51.0	+0.6
GRAM				S	Sg	19 06 55.7	+1.0
GRAM	**Graiana**	**0.32**	**342**	P	Pg	19 06 51.0	+0.7
GRAM				S	Sb	19 06 56.0	-1.1
GRAM				AML	AML		
	comp=E,213µm,1.1s						
GRAM				AML	AML		
	comp=N,159µm,1.1s						
GRAM				AML	AML		
	comp=E,214µm,1.1s						
GRAM				AML	AML		
	comp=N,159µm,1.1s						
GRAM				AML	AML		
	comp=E,214µm,1.1s						
GRAM				AML	AML		
	comp=N,159µm,1.1s						
MAIM	**Mastiano**	**0.34**	**143**	P	Pb	19 06 51.8	-0.2
MAIM				S	Sb	19 06 56.4	-1.0
MAIM	**Mastiano**	**0.34**	**143**	P	Pb	19 06 51.9	-0.1
MAIM				S	Sb	19 06 56.6	-0.8
MAIM				AML	AML		
	comp=E,56µm,0.2s						
MAIM				AML	AML		
	comp=N,51µm,1.0s						
MAIM				AML	AML		
	comp=E,56µm,0.2s						
MAIM				AML	AML		
	comp=N,51µm,1.0s						
MAIM				AML	AML		
	comp=E,56µm,0.2s						
MAIM				AML	AML		
	comp=N,51µm,1.0s						
POPM	**Popiglio**	**0.42**	**109**	P	Pg	19 06 52.7	+0.6
POPM				S	Sb	19 06 58.8	-1.0
POPM	**Popiglio**	**0.42**	**109**	P	Pb	19 06 52.8	-0.6
POPM				S	Sb	19 06 59.0	-0.8
POPM				AML	AML		
	comp=E,101µm,0.4s						
POPM				AML	AML		
	comp=N,98µm,0.7s						
POPM				AML	AML		
	comp=E,101µm,0.4s						
POPM				AML	AML		
	comp=N,98µm,0.7s						

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*BEO **02** 19:07:28.9±0.7, 48.°25N×19.°13E, h5^{km}, ML3.3/5*
*SIGU **02** 19:07:29.7±0.2, 48°N±2°×1°9E±°, h10^{km}, mb2.8/9*
*ISCJB **02** 19:07:31.0±0.3, 48.°00N±0.°01×19.°26E±0.°01, h8^{km}±2^{km}, Error ellipse: s-maj=2.0km s-min=1.6km az=4.2*
*IDC **02** 19:07:31.2±1.1, 47.°80N×19.°10E, h0^{km}, mb1 3.5/6, mb1mx3.3/50, mbtmp3.4/6, ML3.1/6, Error ellipse: s-maj=17.9km s-min=9.2km az=15.0*
*LDG **02** 19:07:31.9±0.1, 47.°97N×19.°26E, h10^{km}, Ml3.7/2, Error ellipse: s-maj=2.4km s-min=1.4km az=23.0*
*IPEC **02** 19:07:32.5±0.1, 47.°97N×19.°22E, h9^{km}, ML3.2/4, Error ellipse: s-maj=0.8km s-min=0.6km az=69.0*
*BGR **02** 19:07:33.9±0.2, 47.°96N×19.°28E, h10^{km}, ML3.4/15, Error ellipse: s-maj=4.4km s-min=4.4km az=144.0*
*PRU **02** 19:07:33.7±0.0, 48.°05N×19.°24E, h10^{km}*

ISC 02 19:07:32.0±0.9, 48.°01N±0.°02×19.°23E±0.°01, h15^{km}±7^{km}, n180, σ1§61/252, 20C-10D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PSZ	**Piszkesteto**	**0.46**	**101**	⇑*i*P	**Pg**	**19 07 41.3**	**+0.1**
PSZ				S	**Sg**	**19 07 47.6**	**+0.2**
PSZ	**Piszkesteto**	**0.46**	**101**	*e*Pg	**Pg**	**19 07 41.3**	**+0.1**
PSZ				*e*Sg	**Sg**	**19 07 47.7**	**+0.3**
PSZ	**Piszkesteto**	**0.46**	**101**	*e*Pg	**Pg**	**19 07 40.0**	**-1.2**
PSZ				*e*Sg	**Sg**	**19 07 47.0**	**-0.4**
PSZ	**Piszkesteto**	**0.46**	**101**	*e*Pg	**Pn**	**19 07 48.1**	**+3.9**
BUD	**Budapest**	**0.54**	**195**	*e*Pg	**Pg**	**19 07 42.4**	**-0.3**
BUD				*e*Sg	**Sg**	**19 07 50.0**	**0.0**
BUD	**Budapest**	**0.54**	**195**	⇑*e*Pg	**Pg**	**19 07 42.1**	**-0.7**
BUD				*e*Sg	**Sg**	**19 07 49.1**	**-0.9**
VYHS	**Vyhne**	**0.55**	**332**	*e*PG	**Pb**	**19 07 43.8**	**+0.4**
VYHS				*e*SG	**Sb**	**19 07 51.8**	**+0.6**
SRO2	**Moca**	**0.61**	**247**	*e*PG	**Pg**	**19 07 43.1**	**-0.9**
SRO2				*e*SG	**Sg**	**19 07 52.2**	**+0.1**
KOLL	**Kolacno**	**0.79**	**316**	*e*PG	**Pn**	**19 07 48.5**	**-0.2**
KOLL				*e*SG	**Sb**	**19 07 59.2**	**+1.1**
LANS	**Liptovska Anna**	**1.15**	**8**	*e*PG	**Pg**	**19 07 55.1**	**+0.8**
LANS				*e*SG	**Sg**	**19 08 11.1**	**+1.7**
JAVC	**Velka Javorina**	**1.34**	**310**	*e*PG	**Pb**	**19 07 57.4**	**+0.5**
JAVC				*e*SG	**Sg**	**19 08 15.6**	**+0.2**
JAVC	**Velka Javorina**	**1.34**	**310**	*e*Pg	**Pb**	**19 07 57.4**	**+0.5**
	baz=130						
JAVC				*e*Sg	**Sg**	**19 08 15.5**	**+0.2**
	595nm,1.2s,baz=130						
JAVC	**Velka Javorina**	**1.34**	**310**	*e*Pn	**Pg**	**19 07 57.9**	**0.0**
MODS	**Modra-Piesok**	**1.35**	**286**	*e*PG	**Pn**	**19 07 56.4**	**0.0**
MODS				*e*SG	**Sg**	**19 08 16.6**	**+0.9**
MODS				*e*LG	Lg	19 08 20.5	
TIH	**Tihany**	**1.43**	**220**	*e*Pg	**Pb**	**19 07 58.1**	**-0.3**
TIH				*e*Sg	**Sg**	**19 08 18.0**	**-0.1**
ZST	**Bratislava**	**1.44**	**278**	*e*PG	**Pn**	**19 07 57.4**	**-0.1**
ZST				*e*SG	**Sg**	**19 08 17.4**	**-0.9**
NIE	**Niedzica**	**1.58**	**26**	*e*Pg	**Pg**	**19 08 02.4**	**0.0**
NIE				*e*Sg	**Sg**	**19 08 24.5**	**+1.6**
NIE	**Niedzica**	**1.58**	**26**	*e*Pn	**Pb**	**19 08 01.7**	**+0.7**
NIE				*e*Sg	**Sg**	**19 08 24.7**	**+1.8**
SOP	**Sopron**	**1.83**	**261**	*e*Pn	**Pn**	**19 08 03.8**	**+1.0**
SOP				*e*Sn	**Sn**	**19 08 26.0**	**+0.3**
SOP	**Sopron**	**1.83**	**261**	*e*Pn	**Pb**	**19 08 04.1**	**-1.1**
SOP				*e*Pg	**Pg**	**19 08 07.1**	**0.0**
SOP				Sn	**Sb**	**19 08 27.1**	**-0.7**
MORH	**Mrgy, Hungar**	**1.84**	**193**	*e*Pn	**Sb**	**19 08 28.0**	**-0.1**
MORH	**Mrgy, Hungar**	**1.84**	**193**	*e*Pn	**Pn**	**19 08 03.1**	**0.0**
AMBH	**Ambrzfalva**	**1.95**	**148**	⇓*e*Pn	**Pn**	**19 08 05.1**	**+0.5**
AMBH				*e*Sn	**Sg**	**19 08 39.1**	**+4.4**
MORC	**Moravsky Berou**	**2.09**	**329**	⇓*i*P	**Pb**	**19 08 09.1**	**-0.6**
MORC	**Moravsky Berou**	**2.09**	**329**	S	**Sn**	**19 08 32.8**	**+0.5**
MORC	**Moravsky Berou**	**2.09**	**329**	*e*PN	**Pb**	**19 08 08.2**	**-1.5**
MORC				*e*SN	**Sb**	**19 08 35.6**	**+0.1**
MORC	**Moravsky Berou**	**2.09**	**329**	*e*Pn	**Pn**	**19 08 08.1**	**+1.5**
	baz=148						
MORC				*e*Sn	**Sb**	**19 08 35.5**	**+0.1**
	124nm,0.7s,baz=148						
MORC	**Moravsky Berou**	**2.09**	**329**	*e*Pn	**Pb**	**19 08 08.6**	**-1.1**
MORC				*e*Sn	**Sn**	**19 08 31.2**	**-1.2**
UZH	**Uzhgorod**	**2.14**	**72**	*e*Pn	**Pn**	**19 08 07.0**	**-0.2**
UZH				Pm		19 08 23.4	
UZH				*e*Sn	**Sn**	**19 08 34.3**	**+0.8**
UZH				Sm		19 08 48.2	
KRUC	**Moravsky**	**2.16**	**300**	*e*PN	**Pn**	**19 08 08.5**	**+1.1**
KRUC				*e*SN	**Sb**	**19 08 36.7**	**-0.6**
KRUC	**Moravsky**	**2.16**	**300**	*e*Pn	**Pn**	**19 08 08.5**	**+1.1**
	baz=119						
KRUC				*e*Sn	**Sb**	**19 08 36.7**	**-0.6**
	72nm,1.1s,baz=119						
KRUC	**Moravsky**	**2.16**	**300**	*e*Pn	**Pn**	**19 08 08.5**	**+1.1**
VRAC	**Vranov**	**2.18**	**308**	Pn	**Pn**	**19 08 09.4**	**+1.6**
	5.9nm,0.3s,baz=163,slow=6.9,SNR=90						
VRAC				Sn	**Sb**	**19 08 36.9**	**-1.0**
	4.9nm,0.3s,baz=72,slow=20,SNR=6.6						
VRAC	**Vranov**	**2.18**	**308**	⇓*i*P	**Pn**	**19 08 09.3**	**+1.6**
VRAC	**Vranov**	**2.18**	**308**	S	**Sb**	**19 08 37.3**	**-0.6**
VRAC	**Vranov**	**2.18**	**308**	*e*PN	**Pn**	**19 08 09.2**	**+1.5**
VRAC				*e*SN	**Sb**	**19 08 37.4**	**-0.5**
VRAC	**Vranov**	**2.18**	**308**	*e*Pn	**Pn**	**19 08 09.2**	**+1.5**
	baz=127						
VRAC				*e*Sn	**Sb**	**19 08 37.4**	**-0.5**
	72nm,0.8s,baz=127						
VRAC	**Vranov**	**2.18**	**308**	*e*Pn	**Pb**	**19 08 09.7**	**-1.5**
TRPA	**Tarpa**	**2.23**	**86**	⇑*i*P	**Pn**	**19 08 08.7**	**+0.4**
TRPA	**Tarpa**	**2.23**	**86**	S	**Sn**	**19 08 36.3**	**+0.7**
TRPA	**Tarpa**	**2.23**	**86**	*e*Pn	**Pn**	**19 08 08.1**	**-0.3**
TRPA				Sn	**Sb**	**19 08 39.0**	**-0.2**
TRPA	**Tarpa**	**2.23**	**86**	*e*Pg	**Pg**	**19 08 14.1**	**-0.6**
TRPA				*e*Sg	**Sg**	**19 08 45.0**	**+1.5**
KOLS	**Kolonicke sedl**	**2.23**	**64**	*e*PN	**Pn**	**19 08 09.0**	**+0.6**
KOLS				*e*PG	**Pg**	**19 08 14.7**	**-0.1**
KOLS				*e*		19 08 49.1	
KOLS				*e*LG	Lg	19 08 54.5	
OJC	**Ojcow**	**2.25**	**9**	*e*Pn	**Pn**	**19 08 10.2**	**+1.6**
OJC				*e*Pg	**Pg**	**19 08 14.6**	**-0.5**
OJC				*e*Sg	**Sg**	**19 08 44.8**	**+0.6**
OJC	**Ojcow**	**2.25**	**9**	*e*Pn	**Pb**	**19 08 10.7**	**-1.6**
CONA	**Conrad Observa**	**2.26**	**269**	*e*Pn	**Pn**	**19 08 10.0**	**+1.0**
	2.7nm,0.1s,SNR=26						
BEHE	**Becsehely**	**2.27**	**228**	*e*Pn	**Pn**	**19 08 09.8**	**+0.8**
BEHE	**Becsehely**	**2.27**	**228**	*e*Pg	**Pg**	**19 08 14.0**	**-1.5**
BEHE				*e*Pn	**Pn**	**19 08 09.1**	**+0.1**
BEHE				Sn	**Sn**	**19 08 37.1**	**+0.4**
BERU	**Beregovo**	**2.30**	**83**	*e*Pn	**Pn**	**19 08 08.9**	**-0.5**
BERU				*e*Sn	**Sn**	**19 08 38.2**	**+0.7**
MUKU	**Mukachevo**	**2.36**	**78**	*e*Pn	**Pn**	**19 08 09.8**	**-0.4**
MUKU				Pm		19 08 23.1	
MUKU				*e*Sn	**Sn**	**19 08 38.8**	**0.0**
MUKU				Sm		19 09 00.1	
SIRR	**Siria**	**2.41**	**135**	⇓*i*P	**Pn**	**19 08 11.2**	**+0.3**
SIRR	**Siria**	**2.41**	**135**	S	**Sn**	**19 08 39.5**	**-0.6**
STZU	**Stuzhytsa**	**2.47**	**65**	*e*Pn	**Pn**	**19 08 13.7**	**+1.9**
STZU				Pm		19 08 28.9	
STZU				*e*Sn	**Sn**	**19 08 43.7**	**+2.0**
STZU				Sm		19 09 10.3	
TRSU	**Trosnyk**	**2.50**	**87**	*e*Pn	**Pn**	**19 08 11.5**	**-0.7**
TRSU				Pm		19 08 27.2	
TRSU				*e*Sn	**Sn**	**19 08 42.5**	**+0.1**
TRSU				Sm		19 09 01.3	
KOGS	**Kog**	**2.56**	**234**	*i* P	**Pn**	**19 08 14.6**	**+1.7**
BRIU	**Brid**	**2.56**	**81**	*e*Pn	**Pn**	**19 08 12.2**	**-0.8**
BRIU				Pm		19 08 24.5	
BRIU				*e*Sn	**Sn**	**19 08 44.4**	**+0.6**
BRIU				Sm		19 09 00.3	
ARSA	**Arzberg**	**2.62**	**255**	Pn	**Pn**	**19 08 15.2**	**+1.4**
	3.3nm,0.2s,SNR=8.1						
ARSA				Sg	**Sg**	**19 08 58.1**	**+2.0**
	39nm,0.9s						
ARSA	**Arzberg**	**2.62**	**255**	*e*Pn	**Pn**	**19 08 15.6**	**+1.9**
KORU	**Korolevo**	**2.62**	**85**	*e*Pn	**Pn**	**19 08 13.8**	**0.0**
KORU				Pm		19 08 34.5	
KORU				*e*Sn	**Sn**	**19 08 46.2**	**+0.8**
KORU				Sm		19 09 15.0	
DRGR		**2.66**	**116**	*e*Pn	**Pn**	**19 08 14.9**	**+0.5**
DRGR				*e*Sn	**Sb**	**19 08 49.9**	**-2.0**
TREC	**Trest**	**2.79**	**299**	*e*Pn	**Pb**	**19 08 19.2**	**-2.5**
TREC	**Trest**	**2.79**	**299**	*e*PN	**Pn**	**19 08 17.8**	**+1.6**
TREC				AMS	AMS	19 09 20.0	
	comp=Z,400nm,9.4s						
FRGS	**Fruska Gora**	**2.88**	**172**	*e*Pn	**Pn**	**19 08 18.4**	**+1.0**
FRGS				*e*Sn	**Sb**	**19 08 55.4**	**-2.7**
FRGS	**Fruska Gora**	**2.88**	**172**	*e*Pn	**Pn**	**19 08 18.4**	**+1.0**
BMR	**Baia Mare**	**2.90**	**95**	⇑*i*P	**Pn**	**19 08 17.7**	**+0.1**
BMR	**Baia Mare**	**2.90**	**95**	S	**Sn**	**19 08 52.9**	**+0.8**
BZS	**Buzias**	**2.90**	**145**	*e*Pn	**Pn**	**19 08 18.0**	**+0.3**
BZS	**Buzias**	**2.90**	**145**	⇑*i*P	**Pn**	**19 08 18.3**	**+0.6**
MEZ	**Mezhgor'ye**	**2.91**	**78**	*e*Pn	**Pn**	**19 08 17.7**	**-0.1**
MEZ				Pm		19 08 41.1	
MEZ				*e*Sn	**Sn**	**19 08 52.9**	**+0.4**
MEZ				Sm		19 09 11.0	
SHIU	**Shidnytsya**	**3.00**	**65**	*e*Pn	**Pn**	**19 08 19.0**	**-0.1**
DPC	**Dobruska-Polom**	**3.02**	**322**	*e*Pn	**Pn**	**19 08 21.7**	**+2.4**
DPC	**Dobruska-Polom**	**3.02**	**322**	*e*PN	**Pn**	**19 08 21.4**	**+2.0**
DPC				*e*SN	**Sn**	**19 08 56.8**	**+1.5**
DPC				AMS	AMS	19 09 20.0	
	comp=Z,200nm,13.3s						
SOKA	**Soboth**	**3.15**	**247**	*e*Pn	**Pn**	**19 08 22.5**	**+1.4**
	1.0nm,0.2s,SNR=6.1						
SOKA				Pg	**Pg**	**19 08 32.7**	**+0.4**
	10nm,0.6s						
SOKA				Sn	**Sn**	**19 08 59.4**	**+1.0**
	25nm,1.0s						
OSTC	**Ostas**	**3.22**	**323**	*e*PN	**Pn**	**19 08 24.5**	**+2.4**
OSTC				*e*SG	**Sg**	**19 09 15.0**	**-0.5**
OSTC				AMS	AMS	19 09 30.0	
	comp=Z,300nm,13.0s						
CJR	**Cluj-Napoca**	**3.24**	**112**	⇓*i*P	**Pn**	**19 08 23.7**	**+1.3**
CJR	**Cluj-Napoca**	**3.24**	**112**	S	**Sn**	**19 09 01.4**	**+0.7**
UPC	**Upice**	**3.27**	**321**	*e*PN	**Pn**	**19 08 24.2**	**+1.5**
UPC				*e*SN	**Sn**	**19 09 02.4**	**+1.1**
UPC				AMS	AMS	19 09 40.0	
	comp=Z,200nm,16.5s						
MORS	**Morshin**	**3.30**	**68**	*e*Pn	**Pn**	**19 08 23.1**	**0.0**
MORS				*e*Sn	**Sn**	**19 09 03.6**	**+1.6**
RAKU	**Rahkiv**	**3.32**	**88**	*e*Pn	**Pn**	**19 08 23.9**	**+0.5**
RAKU				Pm		19 08 40.8	
RAKU				*e*Sn	**Sn**	**19 09 03.0**	**+0.5**
RAKU				Sm		19 09 34.5	
MOA	**Molln**	**3.34**	**269**	*e*Pn	**Pn**	**19 08 25.4**	**+1.7**
	1.2nm,0.2s,SNR=6.3						
CRES	**Cresnjev**	**3.38**	**231**	*e*Pn	**Pn**	**19 08 25.6**	**+1.3**
KSP	**Ksiaz**	**3.42**	**327**	*e*Pn	**Pn**	**19 08 27.7**	**+2.9**
TEKS	**Tekeris**	**3.47**	**176**	*e*Pn	**Pn**	**19 08 27.3**	**+1.8**
TEKS				*e*Sn	**Sb**	**19 09 11.4**	**-3.6**
TEKS	**Tekeris**	**3.47**	**176**	*e*Pn	**Pn**	**19 08 27.8**	**+2.3**
GOPC	**GO Pecny, Ondr**	**3.49**	**305**	*e*PN	**Pn**	**19 08 27.3**	**+1.5**
GOPC				AMS	AMS	19 09 40.0	
	comp=Z,200nm,11.2s						
NSLU	**Nyzhne Selyshc**	**3.51**	**85**	*e*Pn	Pn	19 08 16.5	-10
NSLU				Pm		19 08 38.5	
NSLU				*e*Sn	Sn	19 08 51.3	-16
NSLU				Sm		19 09 13.3	
OBKA	**Obir**	**3.52**	**247**	*e*Pn	**Pn**	**19 08 28.4**	**+2.2**
	1.2nm,0.1s,SNR=5.1						
OZLJ	**Ozalj**	**3.52**	**229**	P	**Pg**	**19 08 38.4**	**-1.0**
BLY	**Banja Luka**	**3.55**	**204**	⇑*i*P	**Pn**	**19 08 27.9**	**+1.3**
BLY	**Banja Luka**	**3.55**	**204**	S	**Sn**	**19 09 11.8**	**+3.5**
BLY	**Banja Luka**	**3.55**	**204**	*e*Pn	**Pn**	**19 08 27.8**	**+1.2**
GZR	**Gura Zlata**	**3.58**	**136**	⇓*i*P	**Pn**	**19 08 28.5**	**+1.5**
GZR	**Gura Zlata**	**3.58**	**136**	S	**Sn**	**19 09 09.5**	**+0.4**
ARCR	**ARCALIA**	**3.59**	**103**	⇑*i*P	**Pn**	**19 08 28.6**	**+1.4**
ARCR	**ARCALIA**	**3.59**	**103**	S	**Sn**	**19 09 10.4**	**+1.1**
MDVR	**Moldovita**	**3.66**	**151**	⇓*i*P	**Pn**	**19 08 28.8**	**+0.7**
PRU	**Pruhonice**	**3.67**	**304**	*e*PN	**Pn**	**19 08 30.4**	**+2.2**
PRU				*e*SN	**Sn**	**19 09 11.9**	**+0.8**
PRU				AMS	AMS	19 10 00.0	
	comp=Z,200nm,13.4s						
GEC2	**GERESS Array S**	**3.77**	**285**	*e*Pn	**Pn**	**19 08 31.3**	**+1.6**
GERES	**GERESS Array B**	**3.77**	**285**	Pn	**Pn**	**19 08 31.1**	**+1.3**
	1.8nm,0.3s,baz=110,slow=14,SNR=46						
GERES				Sn	**Sn**	**19 09 14.8**	**+0.8**
	2.7nm,0.3s,baz=102,slow=27,SNR=6.5						
HERR	**Herculane**	**3.83**	**144**	⇑*i*P	**Pn**	**19 08 31.7**	**+1.3**
HERR	**Herculane**	**3.83**	**144**	S	**Sn**	**19 09 15.1**	**0.0**
TRUS	**Trudelj**	**3.87**	**167**	*e*Pn	**Pn**	**19 08 32.0**	**+1.0**
KHC	**Kasperske Hory**	**3.92**	**289**	*e*PN	**Pn**	**19 08 33.3**	**+1.7**
KHC				*e*PG	**Pg**	**19 08 45.0**	**-2.0**
KHC				*e*SN	**Sn**	**19 09 18.6**	**+1.3**
HAPS	**Han Pijesak,BI**	**3.93**	**183**	*e*Pn	**Pn**	**19 08 32.2**	**+0.3**
HAPS	**Han Pijesak,BI**	**3.93**	**183**	*e*Pn	**Pn**	**19 08 32.1**	**+0.2**
DIVS	**Divibare**	**3.95**	**172**	*e*Pn	**Pn**	**19 08 32.8**	**+0.7**
DIVS				*e*Sn	**Sn**	**19 09 21.5**	**+3.3**
DIVS	**Divibare**	**3.95**	**172**	*e*Pn	**Pn**	**19 08 33.0**	**+0.9**
PVCC	**Panska Ves**	**3.96**	**311**	*e*PN	**Pn**	**19 08 33.8**	**+1.6**
PVCC				AMS	AMS	19 10 00.0	
	comp=Z,200nm,14.4s						
KUBS	**Kucevo**	**3.98**	**154**	*e*Pn	**Pn**	**19 08 33.6**	**+1.1**
MDB	**Medias**	**3.99**	**116**	⇑*i*P	**Pn**	**19 08 32.1**	**-0.5**
LOT	**Lotru**	**4.04**	**128**	⇓*i*P	**Pn**	**19 08 35.0**	**+1.6**
MYKA	**Terra Mystica**	**4.04**	**252**	Pn	**Pn**	**19 08 35.1**	**+1.7**
	1.2nm,0.4s						
BURAR	**Bucovina Array**	**4.06**	**93**	⇑*i*P	**Pn**	**19 08 35.4**	**+1.8**
BURAR	**Bucovina Array**	**4.06**	**93**	S	**Sn**	**19 09 23.1**	**+2.2**
KBA	**Koelnbreinsper**	**4.09**	**259**	*e*Pn	**Pn**	**19 08 36.5**	**+2.3**
	4.2nm,0.3s,SNR=14						
KBA				Pg	**Pg**	**19 08 52.7**	**+2.3**
	5.6nm,0.4s						
KBA				*e*Sn	**Sn**	**19 09 23.1**	**+1.3**
	3.8nm,0.3s						
BBLS	**Lazići**	**4.14**	**178**	*e*Pn	**Pn**	**19 08 36.0**	**+1.2**
BBLS	**Lazići**	**4.14**	**178**	*e*Pn	**Pn**	**19 08 36.1**	**+1.2**
CADS	**Cadrg**	**4.15**	**247**	*i* P	**Pn**	**19 08 37.8**	**+2.9**
GRUS	**Gruza**	**4.25**	**165**	*e*Pn	**Pn**	**19 08 37.6**	**+1.4**
GRUS				*e*Sn	**Sn**	**19 09 28.0**	**+2.5**
SKDS	**Skadanscina**	**4.34**	**237**	*i* P	**Pn**	**19 08 39.8**	**+2.2**
WET	**Wettzell**	**4.37**	**287**	*e*Pn	**Pn**	**19 08 39.5**	**+1.7**
KIJV	**Kijevo**	**4.46**	**207**	P	**Pn**	**19 08 41.3**	**+2.2**
IVAS	**Ivanjica**	**4.48**	**171**	*e*Pn	**Pn**	**19 08 39.8**	**+0.4**
IVAS				*e*Sn	**Sn**	**19 09 33.3**	**+2.0**
NVLJ	**Novalja**	**4.58**	**223**	P	**Pn**	**19 08 41.5**	**+0.8**
ZAGS	**Zajecar**	**4.69**	**152**	*e*Pn	**Pn**	**19 08 43.4**	**+1.1**
BOVS	**Bovan**	**4.70**	**157**	*e*Pn	**Pn**	**19 08 43.1**	**+0.7**
BOVS				*e*Sn	**Sn**	**19 09 38.5**	**+1.8**
VOIR		**4.76**	**121**	⇓*i*P	**Pn**	**19 08 44.9**	**+1.6**
PRAR	**RASCA**	**4.77**	**95**	⇑*i*P	**Pn**	**19 08 44.1**	**+0.7**
SJES	**Sjenica**	**4.78**	**173**	*e*Pn	**Pn**	**19 08 44.8**	**+1.3**
BIZ	**Bicaz**	**4.79**	**100**	⇓*i*P	**Pn**	**19 08 45.1**	**+1.5**
UPM	**Unac-Piva**	**4.81**	**183**	*e*Pn	**Pn**	**19 08 46.0**	**+1.9**
FBE	**Freiberg**	**4.81**	**309**	*e*Pn	**Pn**	**19 08 46.8**	**+2.9**
MORI	**Morici**	**4.81**	**212**	P	**Pn**	**19 08 46.4**	**+2.4**
KMPD	**K-Podol'skiy**	**4.86**	**81**	*e*Pn	**Pn**	**19 08 45.7**	**+1.1**
KMPD				*e*Sn	**Sn**	**19 09 41.5**	**+1.0**
OZUR		**4.88**	**111**	⇑*i*P	**Pn**	**19 08 46.4**	**+1.6**
HORU	**Horodok**	**4.93**	**73**	*e*Pn	**Pn**	**19 08 46.7**	**+1.2**
HORU				*e*Sn	**Sn**	**19 09 43.9**	**+1.7**
DUGI	**Dugi Otok**	**4.96**	**217**	P	**Pn**	**19 08 49.1**	**+3.2**
SELS	**Selova**	**4.97**	**164**	*e*Pn	**Pn**	**19 08 47.6**	**+1.5**
NKC	**Novy Kostel**	**4.98**	**299**	*e*PN	**Pn**	**19 08 48.3**	**+2.1**
NKC				*e*SN	**Sn**	**19 09 44.2**	**+0.8**
NKC				AMS	AMS	19 10 40.0	
	comp=Z,300nm,10.0s						
ZIRJ	**Zirje**	**5.02**	**211**	P	**Pn**	**19 08 48.5**	**+1.7**
WERN	**Wernitzgruen**	**5.04**	**299**	*e*Pn	**Pn**	**19 08 50.0**	**+2.9**
TANN	**Tannenbergstha**	**5.04**	**301**	*e*Pn	**Pn**	**19 08 49.3**	**+2.2**
BRY	**Bratogost**	**5.13**	**186**	*e*Pn	**Pn**	**19 08 50.0**	**+1.6**
WTTA	**Wattenberg**	**5.18**	**265**	*e*Pn	**Pn**	**19 08 51.7**	**+2.5**
	1.1nm,0.2s						
WTTA				Sg	**Sg**	**19 10 23.2**	**+4.8**
	18nm,1.0s						
CLL	**Collm**	**5.22**	**312**	*i* Pn	**Pn**	**19 08 50.3**	**+0.8**
	comp=Z,13nm,0.8s						
CLL				*e*		19 08 58.0	
CLL				*e*Pg	**Pg**	**19 09 14.0**	**+2.1**
CLL				*e*Sn	Sn	19 09 38.0	-11
CLL				*e*Sb	**Sb**	**19 10 01.0**	**-4.3**
CLL				*e*		19 10 17.0	
CLL				*e*Sg	**Sg**	**19 10 21.0**	**+1.6**
	comp=Z,46nm,1.2s						
CLL				*e*Lmax		19 10 42.0	
STON	**Ston**	**5.25**	**192**	*e*Pn	**Pn**	**19 08 52.8**	**+2.9**
MLR	**Muntele Rosu**	**5.26**	**116**	Pn	**Pn**	**19 08 51.7**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=326,slow=15,SNR=6.2						
MLR	**Muntele Rosu**	**5.26**	**116**	⇑*i*P	**Pn**	**19 08 51.4**	**+1.2**
TESR	**Tescani**	**5.27**	**104**	⇑*i*P	**Pn**	**19 08 50.4**	**+0.2**
ZAPS	**Zavoj**	**5.30**	**152**	*e*Pn	**Pn**	**19 08 52.5**	**+1.8**
SQTA	**Sankt Quirin**	**5.48**	**265**	*e*Pn	**Pn**	**19 08 56.5**	**+3.3**
	comp=Z,1.1nm,0.2s						
BARS	**Barje**	**5.50**	**160**	*e*Pn	Pn	19 08 38.0	-15
BARS	**Barje**	**5.50**	**160**	*e*Pn	**Pn**	**19 08 53.7**	**+0.3**
PLOR	**Plostina**	**5.52**	**110**	⇑*i*P	**Pn**	**19 08 53.6**	**-0.1**
MOTA	**Moosalm**	**5.53**	**266**	*e*Pn	**Pn**	**19 08 57.1**	**+3.2**
	comp=Z,0.7nm,0.2s						
VRI	**Vrincioaia**	**5.57**	**110**	⇑*i*P	**Pn**	**19 08 55.9**	**+1.6**
HCY	**Herceg Novi**	**5.58**	**186**	*e*Pn	**Pn**	**19 08 54.3**	**-0.2**
BISRR	**Bisoca**	**5.70**	**113**	⇑*i*P	**Pn**	**19 08 56.5**	**+0.3**
DRME	**Dracevica, Mon**	**5.82**	**180**	*e*Pn	**Pn**	**19 09 01.7**	**+3.9**
FETA	**Feichten**	**5.84**	**263**	*e*Pn	**Pn**	**19 09 00.3**	**+2.1**
	comp=Z,1.2nm,0.3s						
VTS	**Vitosha**	**6.09**	**151**	*e*Pn	**Pn**	**19 09 02.2**	**+0.6**
UBR	**Ueberruh**	**6.15**	**270**	*e*Pn	**Pn**	**19 09 05.0**	**+2.7**
DAVA	**Damuels**	**6.36**	**267**	*e*Pn	**Pn**	**19 09 08.3**	**+3.0**
	comp=Z,2.8nm,0.4s						
DAVOX	**Davos/Dischmat**	**6.46**	**263**	Pn	**Pn**	**19 09 06.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=65,slow=17,SNR=2.6						
DAVOX				Sn	**Sn**	**19 10 19.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.3						
CFR	**Carcaliu**	**6.76**	**111**	⇑*i*P	**Pn**	**19 09 10.4**	**-0.2**
TLB	**Topalu**	**7.00**	**116**	⇑*i*P	**Pn**	**19 09 14.6**	**+0.7**
AKASG	**Malin Array Be**	**7.06**	**64**	Pn	**Pn**	**19 09 17.0**	**+2.2**
	comp=Z,1.1nm,0.3s,baz=257,slow=12,SNR=3.5						
AKASG				Sn	**Sn**	**19 10 31.7**	**-3.1**
	comp=Z,1.8nm,0.3s,baz=246,slow=23,SNR=5.9						
TIRR	**Tirgusor**	**7.29**	**116**	⇑*i*P	**Pn**	**19 09 19.1**	**+1.2**
CDF	**Champ du Feu**	**8.00**	**277**	*e*Pn	**Pn**	**19 09 26.4**	**-1.3**
CDF				*e*Sg	Sb	19 11 43.7	+18
	comp=Z,18nm,1.0s						
HINF	**Hinteralfeld**	**8.32**	**273**	*e*Pn	**Pn**	**19 09 31.8**	**-0.3**
HINF				*e*Sg	Sb	19 11 53.3	+19
	comp=Z,12nm,1.1s						
LPG	**La Plagne**	**8.93**	**258**	*e*Pn	**Pn**	**19 09 38.9**	**-1.7**
LPG	**La Plagne**	**8.93**	**258**	*e*P	**Pn**	**19 09 44.6**	**+4.0**
LPL	**La Plagne**	**8.93**	**258**	*e*Pn	**Pn**	**19 09 39.4**	**-1.3**
LPL	**La Plagne**	**8.93**	**258**	*e*P	**Pn**	**19 09 45.0**	**+4.3**
MBDF	**Montbardon**	**9.21**	**254**	*e*Pn	**Pn**	**19 09 43.8**	**-0.7**
ORIF	**Oris-en-Rattie**	**9.71**	**256**	*e*Pn	**Pn**	**19 09 49.2**	**-2.1**
ORIF	**Oris-en-Rattie**	**9.71**	**256**	*e*P	**Pn**	**19 09 54.3**	**+3.0**
FRF	**La Foret Royal**	**9.85**	**248**	*e*Pn	**Pn**	**19 09 52.3**	**-0.7**
SMF	**Signal de Mont**	**10.54**	**268**	*e*Pn	**Pn**	**19 10 01.4**	**-1.0**
FINES	**FINESS Array B**	**14.02**	**14**	Pn	**Pn**	**19 10 50.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=200,slow=16,SNR=2.8						
FINES				Sn	**Sn**	**19 13 19.6**	**-5.5**
	comp=Z,0.2nm,0.3s,baz=196,slow=20,SNR=5.0						

MEX 02 19:20:05.8±0.4, 18.°17N×103.°68W, h28^{km}±11^{km}, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.34**	**69**	*i* P	Pb	19 20 12.2	-1.4
MMIG				*e*S	Sb	19 20 17.0	-2.0
EZ5V		**1.31**	**3**	*e*P	Pn	19 20 26.3	-2.2
EZ5V				*e*S	Sn	19 20 41.6	-3.5
CJM	**Chamela**	**1.85**	**316**	*i* P	Pn	19 20 33.0	-2.7
CJM				*i* S	Sn	19 20 54.8	-3.5
ARIG	**Puente Sto Nin**	**3.17**	**87**	*i* P	Pn	19 20 51.7	-2.1
ARIG				*i* S	Sn	19 21 27.9	-2.8

TRN 02 19:36:41.9, 11.°00N×62.°02W, h112^{km}, MD3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**0.87**	**140**	*e*S	Sn	19 37 16.8	-0.4

TBH	**Brigand Hill**	1.06	119	eP	Pn	19 37 03.7	-0.2
TBH				eS	Sn	19 37 21.2	+0.7
GRGR	**Grenville**	1.18	17	eP	Pn	19 37 04.4	-0.8
GRHS	**Sauteurs**	1.27	17	eP	Pn	19 37 06.2	0.0
GRHS				eS	Sn	19 37 23.6	-1.0
GRSS	**Sisters**	1.35	17	eP	Pn	19 37 07.7	+0.6
GRSS				eS	Sn	19 37 26.1	-0.1
TOSP	**Speyside**	1.48	78	eP	Pn	19 37 07.9	-0.7
TOSP				eS	Sn	19 37 27.9	-1.0
FCV	**Fort Charlotte**	2.28	19	eP	Pn	19 37 19.1	+0.6
FCV				eS	Sn	19 37 45.3	-1.3
SVB	**Belmont**	2.38	18	eP	Pn	19 37 19.8	-0.1
SVB				eS	Sn	19 37 48.1	-1.0
SVCV	**St. Vincent, C**	2.42	21	eP	Pn	19 37 20.8	+0.4
SVCV				eS	Sn	19 37 48.4	-1.4
SVV	**Soufriere Volc**	2.44	19	eP	Pn	19 37 20.8	+0.2
SVV				eS	Sn	19 37 49.6	-0.7
SSV	**Crater Summit**	2.45	19	eP	Pn	19 37 21.2	+0.3
SSV				eS	Sn	19 37 49.6	-1.2
MCLT	**Moule a Chique**	2.90	21	eP	Pn	19 37 27.0	+0.4
MCLT				eS	Sn	19 37 59.7	-1.3
SLBI	**Saint Lucia, B**	3.18	19	eP	Pn	19 37 31.0	+0.7
SLBI				eS	Sn	19 38 06.2	-1.5
SLW	**Petit Monier**	3.19	19	eP	Pn	19 37 30.0	-0.4
SLW				eS	Sn	19 38 06.5	-1.4

SVSA 02 19:54:44.7±0.6, 39°.50N×29°.78W, h10km, MD3.7, ML2.3, Error ellipse: s-maj=15.6km s-min=4.9km az=50.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSA	**Rosais**	1.43	123	eP	Pn	19 55 06.1	-4.6
ROSA				eS	Sn	19 55 21.6	-7.9
ROSA				A	A	19 55 22.4	
	11nm,0.4s						
PCAN	**Candelaria**	1.44	135	eP	Pn	19 55 06.1	-4.8
PCAN				eS	Sn	19 55 22.4	-7.5
PCAN				A	A	19 55 23.4	
	19nm,0.5s						
PICO	**Pico**	1.45	133	eP	Pn	19 55 06.4	-4.6
PICO				eS	Sn	19 55 22.6	-7.6
PICO				A	A	19 55 24.6	
	39nm,0.3s						
PPNO	**Prainha do Nor**	1.56	131	eP	Pn	19 55 07.8	-4.8
PPNO				eS	Sn	19 55 25.6	-7.3
PPNO				A	A	19 55 38.3	
	12nm,0.3s						

WEL 02 19:57:46.6, 40°S±9°×17°9E±1°1, h33km, M4.0/33, ML4.3/25, MLv4.0/33, Error ellipse: s-maj=0.0km s-min=0.0km az=95.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHGZ	**Mahia Peninsul**	1.47	327	P	Pn	19 58 10.8	+0.1
MHGZ				S	Sn	19 58 26.9	-1.9
CKHZ	**Cape Kidnapper**	1.61	296	P	Pn	19 58 12.7	0.0
CKHZ				S	Sn	19 58 31.3	-0.9
PXZ	**Pawanui**	1.63	282	P	Pn	19 58 12.7	-0.4
PXZ				S	Sn	19 58 30.2	-2.7
PRGZ	**Paritu Road**	1.67	330	P	Pn	19 58 13.4	-0.2
KNZ	**Kokohu**	1.68	324	P	Pn	19 58 13.5	-0.1
KAHZ	**Kahuranaki**	1.69	290	P	Pn	19 58 13.5	-0.4
KAHZ				S	Sn	19 58 33.4	-1.1
PRHZ	**Porangahau**	1.77	273	P	Pn	19 58 13.8	-1.2
PRHZ				S	Sn	19 58 33.2	-3.1
WHHZ	**Waihua**	1.85	314	P	Pn	19 58 16.5	+0.3
WHHZ				S	Sn	19 58 38.8	+0.4
ARHZ	**Aropaoanui**	1.87	306	P	Pn	19 58 16.9	+0.6
RIGZ	**Rimuhau**	1.91	331	P	Pn	19 58 17.2	+0.3
CNGZ	**Carnagh Statio**	1.98	343	P	Pn	19 58 18.1	+0.3
SNGZ	**Shannon Statio**	2.02	322	P	Pn	19 58 18.7	+0.3
RAHZ	**Arahi**	2.05	315	P	Pn	19 58 19.2	+0.4
NMHZ	**Naumai**	2.09	307	P	Pn	19 58 19.9	+0.4
TKGZ	**Te Karaka**	2.12	336	P	Pn	19 58 19.7	0.0
KWHZ	**Kaweka Forest**	2.16	295	P	Pn	19 58 20.3	-0.1
RAGZ	**Rawiri**	2.23	327	P	Pn	19 58 21.3	+0.1
MTHZ	**Maungataniwha**	2.23	313	P	Pn	19 58 21.4	0.0
BKZ	**Black Stump Fm**	2.25	302	P	Pn	19 58 21.6	0.0
MWZ	**Matawai**	2.32	331	P	Pn	19 58 22.5	-0.1
TWGZ	**Tauwhareparae**	2.33	341	P	Pn	19 58 22.5	-0.1
PUZ	**Puketiti**	2.37	347	P	Pn	19 58 22.2	-1.0
BHHZ	**Black Hill Sta**	2.39	291	P	Pn	19 58 23.0	-0.5
MRHZ	**Matea Rd**	2.49	308	P	Pn	19 58 25.2	+0.3
MUGZ	**Murupara**	2.54	318	P	Pn	19 58 26.5	+0.9
URZ	**Urewera**	2.55	326	P	Pn	19 58 25.9	+0.2
WMGZ	**Waiomatatini S**	2.59	351	P	Pn	19 58 26.1	-0.1
RUGZ	**Raukumara Rang**	2.61	337	P	Pn	19 58 26.0	-0.5
MOVZ	**Moawhango**	2.64	291	P	Pn	19 58 27.3	+0.3
ALRZ	**Allen Road**	2.71	311	P	Pn	19 58 28.4	+0.4
PRRZ	**Plateau Road**	2.73	313	P	Pn	19 58 28.2	+0.1
RITZ	**Rihia Road**	2.77	299	P	Pn	19 58 29.9	+1.2
TUVZ	**Tukino**	2.77	293	P	Pn	19 58 29.6	+0.8
WHVZ	**Whangaehu Hut**	2.81	292	P	Pn	19 58 29.7	+0.3
NGZ	**Ngauruhoe**	2.84	294	P	Pn	19 58 30.1	+0.2
WPRZ	**Whakapapatarin**	2.85	310	P	Pn	19 58 31.0	+1.3
KRVZ	**Karewarewa**	2.85	296	P	Pn	19 58 30.1	+0.2
TARZ	**Mount Tarawera**	2.86	318	P	Pn	19 58 30.7	+0.7
HRRZ	**Handcock Road**	2.87	313	P	Pn	19 58 31.4	+1.4
KATZ	**Kakaramea**	2.88	298	P	Pn	19 58 31.0	+0.8
WTVZ	**West Tongariro**	2.88	295	P	Pn	19 58 30.7	+0.4
RATZ	**Rangitukua**	2.88	301	P	Pn	19 58 31.0	+0.8
HSRZ	**Hossack Road**	2.94	314	P	Pn	19 58 31.7	+0.6
WHRZ	**Whale Island**	2.95	328	P	Pn	19 58 31.3	+0.1
MARZ	**Manawahe**	2.97	323	P	Pn	19 58 32.9	+1.4
PKVZ	**Pokaka**	2.98	290	P	Pn	19 58 32.4	+0.8
TWVZ	**Taurewa**	3.01	295	P	Pn	19 58 33.1	+1.0
KUTZ	**Kaahu Road**	3.07	307	P	Pn	19 58 33.0	+0.2
OPRZ	**Ohinepanea**	3.14	323	P	Pn	19 58 33.6	-0.2

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*ISCJB **02** 20:04:54.0±0.2, 23°.75S±0°.02×66°.53W±0°.02, h202km±2km, mb5.1/425, Error ellipse: s-maj=3.8km s-min=2.6km az=137.2*

*SJA **02** 20:04:54.6, 23°.93S×66°.68W, h223km, ML4.9, MW5.2*

*BJI **02** 20:04:54.1±0.0, 23°.41S×65°.94W, h184km, mB5.4/32*

*GUC **02** 20:04:55.2±0.3, 23°.99S×66°.79W, h227km±3km, ML5.4, MW5.2*

*VAO **02** 20:04:55.2±0.2, 23°.86S×66°.50W, h199km, mb5.3*

*NEIC **02** 20:04:55.8±1.5, 23°.85S×66°.52W, h199km±3km, mb5.2/406, MW5.7, MW5.6, ML5.4(GUC), Error ellipse: s-maj=8.4km s-min=6.5km az=187.0, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.40; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$3.66; $M_{r\theta}$0.73; $M_{\theta\phi}$0.15; $M_{\phi r}$-1.28; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s350.00000°, δ56.00000°, λ-104.00000°. NP2:ϕ_s195.00000°, δ37.00000°, λ-70.00000°. Principal axes: T 3.8900, Plg10.0000°, Azm90.0000°; N -0.1100, Plg12.0000°, Azm358.0000°; P -3.7800, Plg74.0000°, Azm219.0000°;*

NEIC Felt [III] at Antofagasta, Mejillones, Oficina Maria Elena and Taltal; [II] at Diego de Almagro and Tocopilla, Chile.

*MOS **02** 20:04:55.1±1.4, 23°.84S×66°.67W, h199km, mb5.2/65 Error ellipse: s-maj=9.1km s-min=5.2km az=102.9*

*NEIC **02** 20:04:55.0±0.0, 23°.91S×66°.51W, h190km, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.96; $M_{\theta\theta}$0.32; $M_{\phi\phi}$2.64; $M_{r\theta}$0.28; $M_{\theta\phi}$0.07; $M_{\phi r}$-1.33; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s356.00000°, δ58.00000°, λ-95.00000°. NP2:ϕ_s186.00000°, δ32.00000°, λ-81.00000°. Principal axes: T 2.9400, Plg12.0000°, Azm90.0000°; N 0.3400, Plg4.0000°, Azm359.0000°; P -3.2800, Plg76.0000°, Azm249.0000°;*

*IDC **02** 20:04:56.2±0.7, 23°.84S×66°.47W, h197km±5km, mb4.8/25, mb1 4.9/32, mb1mx4.9/33, mbtmp5.3/32, MS4.2/5, Ms1 4.2/5, ms1mx3.8/33 Error ellipse: s-maj=7.6km s-min=6.1km az=74.0*

*GCMT **02** 20:05:00.8±0.1, 23°.98S±0°.01×66°.73W±0°.01, h226km, MW5.7/123, Moment Tensor Solution. s106,c168; s123,c301; Duration: 1s.7 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.41±.04; $M_{\theta\theta}$0.10±.04; $M_{\phi\phi}$3.30±.05; $M_{r\theta}$0.52±.04; $M_{\theta\phi}$0.81±.04; $M_{\phi r}$-1.94±.04; Best double couple: $M_0$3.99200×10^{17} NP1:ϕ_s360.00000°, δ60.00000°, λ-104.00000°. NP2:ϕ_s206.00000°, δ33.00000°, λ-67.00000°. Principal axes: T 3.9310, Plg14.0000°, Azm100.0000°; N 0.1160, Plg12.0000°, Azm7.0000°; P -4.0520, Plg71.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 20:04:55.7±0.4, 23°.93S±0°.03×66°.66W±0°.03, h208km±3km, h209km:pP-P, n1380, σ1s.51/1441, mb5.2/416, 16C-9D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	1.31	127	eP	Pn	20 05 30.1	+1.4
SLA				IAML		20 05 33.3	
	comp=Z,5μm,0.5s						
SLA				eS	S	20 05 55.9	+1.6
SLA	**San Lorenzo**	1.31	127	⇓iP	Pn	20 05 30.1	+1.4
SLA				eS	S	20 05 56.7	+2.4
HJA	**Humahuaca**	1.35	58	eP	Pn	20 05 30.2	+0.9
HJA				IAML		20 05 34.8	
	comp=Z,4μm,0.3s						
HJA				eS	S	20 05 57.2	+2.1
AZAP	**Zapla**	1.48	102	eP	Pn	20 05 31.1	+0.8
AZAP				IAML		20 05 34.8	
	comp=Z,14μm,0.5s						
AZAP				eS	S	20 05 57.7	+1.0
YJA	**Yavi**	2.04	31	eP	Pn	20 05 37.0	+1.3
YJA				IAML		20 05 40.7	
	comp=Z,2μm,0.6s						
FSA	**Cafayete**	2.26	164	eP	Pn	20 05 38.4	+0.8
LVC	**Limon Verde**	2.45	302	P	Pn	20 05 40.4	+0.4
	comp=Z,1μm,0.3s,baz=135,slow=6.5,SNR=747						
LVC				LR	LR	20 06 08.5	
	comp=Z,6μm,21.7s,baz=163,slow=28						
LVC				S	S	20 06 15.6	+1.6
	comp=Z,3μm,0.3s,baz=245,slow=19,SNR=40						
LVC	**Limon Verde**	2.45	302	ePn	Pn	20 05 40.0	+0.1
LVC	**Limon Verde**	2.45	302	eP	Pn	20 05 40.9	+0.9
LVC				IAML		20 06 20.1	
	comp=Z,10μm,0.6s						
LVC	**Limon Verde**	2.45	302	eP	Pn	20 05 40.1	+0.1
PB15	**IPOC Station P**	2.68	285	⇑iP	Pn	20 05 42.3	-0.1
PB15				eS	S	20 06 17.8	-0.5
GO02	**Mina Guanaco**	2.94	245	ePn	Pn	20 05 45.3	-0.1
GO02				eSn	S	20 06 24.8	+1.0
GO02	**Mina Guanaco**	2.94	245	⇑iP	Pn	20 05 45.3	-0.1
GO02				eS	S	20 06 22.9	-0.8
PB06	**IPOC Station P**	2.94	294	⇑iP	Pn	20 05 45.2	-0.1
PB06				eS	S	20 06 23.2	-0.3
AHML	**Horco Molle**	3.08	157	eP	Pn	20 05 47.6	+0.8
AHML				eS	S	20 06 25.9	-0.5
AHML	**Horco Molle**	3.08	157	⇑iP	Pn	20 05 47.5	+0.8
AHML				eS	S	20 06 27.6	+1.2
AHML				IAML		20 06 30.4	
	comp=N,4μm,1.0s						
PB09	**IPOC Station P**	3.19	311	⇑iP	Pn	20 05 48.4	+0.2
PB09				eS	S	20 06 29.4	+0.6
PB03	**IPOC Station P**	3.41	303	⇑iP	Pn	20 05 50.2	-0.6
PB03				eS	S	20 06 32.4	-1.1
PB05	**IPOC Station P**	3.43	287	⇑iP	Pn	20 05 50.2	-0.7
PB05				eS	S	20 06 32.6	-1.2
PB14	**IPOC Station P**	3.49	258	eP	Pn	20 05 51.3	-0.6
PB14	**IPOC Station P**	3.49	258	⇑eP	Pn	20 05 51.2	-0.6
PB14				eS	S	20 06 33.8	-1.6
PB04	**IPOC Station P**	3.58	296	ePn	Pn	20 05 52.2	-0.7
PB04				eSn	S	20 06 36.6	-0.6
PB04	**IPOC Station P**	3.58	296	⇑iP	Pn	20 05 52.2	-0.7
PB04				eS	S	20 06 36.3	-1.0
PB10	**IPOC Station P**	3.60	276	ePn	Pn	20 05 52.2	-0.7
PB10				eSn	S	20 06 36.0	-1.2
PB10	**IPOC Station P**	3.60	276	eP	Pn	20 05 52.3	-0.5
PB10	**IPOC Station P**	3.60	276	⇑iP	Pn	20 05 52.3	-0.5
PB10				eS	S	20 06 35.5	-1.7
PB01	**IPOC Station P**	3.89	317	ePn	Pn	20 05 55.4	-1.1
PB01				eSn	S	20 06 43.0	-0.8
CYA	**Choya**	4.56	170	eP	Pn	20 06 06.2	+1.4
CYA				IAML		20 06 08.7	
	comp=Z,290nm,0.5s						
GO01	**Chusmiza**	4.85	330	ePn	Pn	20 06 08.1	-0.9
GO01				eSn	S	20 07 05.8	-0.4
GO03	**Copiap**	4.87	221	ePn	Pn	20 06 07.0	-1.7
GO03	**Copiap**	4.87	221	eP	Pn	20 06 07.6	-1.0
VCA	**Vinchina**	4.99	196	eP	Pn	20 06 11.5	+1.3
VCA				IAML		20 07 19.9	
	comp=Z,496nm,0.5s						
PB11	**IPOC Station P**	5.00	326	ePn	Pn	20 06 08.4	-2.1
ACLC	**CERRO LA CRUZ**	5.48	183	eP	Pn	20 06 16.7	+0.1
MNMC	**Minye Minye**	5.50	330	ePn	Pn	20 06 15.5	-1.5
AGUA	**GUANDACOL**	5.77	196	eP	Pn	20 06 20.3	+0.1
LCO	**Las Campanas**	6.22	215	ePn	Pn	20 06 24.4	-1.8
LCO	**Las Campanas**	6.22	215	eP	Pn	20 06 24.6	-1.6
LCO	**Las Campanas**	6.22	215	eP	Pn	20 06 24.4	-1.8
APLL	**PUNTA DE LOS L**	6.44	179	eP	Pn	20 06 28.3	-0.4
APLL				IAML		20 07 42.6	
	comp=Z,586nm,0.6s						
AMOG	**MOGNA**	7.17	193	eP	Pn	20 06 36.8	-1.4
GO04	**Tololo Observa**	7.23	210	ePn	Pn	20 06 36.8	-2.4
GO04	**Tololo Observa**	7.23	210	eP	Pn	20 06 36.9	-2.3
RTLL	**Cerro Villicun**	7.55	192	eP	Pn	20 06 41.7	-1.3
TCA	**Tanti**	7.60	167	eP	Pn	20 06 43.0	-0.8
LPAZ	**La Paz**	7.73	349	P	Pn	20 06 45.8	-0.2
	comp=Z,30nm,0.3s,baz=150,slow=5.7,SNR=149						
LPAZ				S	S	20 08 13.5	-0.3
	comp=Z,8.5nm,0.3s,baz=261,slow=23,SNR=8.5						
LPAZ	**La Paz**	7.73	349	ePn	Pn	20 06 45.7	-0.4
LPAZ	**La Paz**	7.73	349	eP	Pn	20 06 45.6	-0.4
LPAZ	**La Paz**	7.73	349	eP	Pn	20 06 44.4	-1.7
CFA	**Coronel Fontan**	7.77	190	P	Pn	20 06 45.3	-0.7
	comp=Z,50nm,0.3s,baz=40,slow=16,SNR=124						
CFA				S	S	20 08 08.7	-5.3
	comp=Z,122nm,0.3s,baz=282,slow=21,SNR=22						
CFA	**Coronel Fontan**	7.77	190	eP	Pn	20 06 45.0	-1.0
ZON	**Zonda**	7.80	193	eP	Pn	20 06 45.7	-0.6
RTCV	**Cerro Valdivia**	8.08	191	eP	Pn	20 06 48.7	-1.2
RTLS	**Leoncito**	8.18	196	eP	Pn	20 06 51.0	-0.5
ACAN	**Cantantal**	8.33	183	eP	Pn	20 06 52.9	-0.2
AUSP	**Uspallata**	8.61	196	eP	Pn	20 06 55.3	-1.7
CPUP	**Villa Florida**	8.78	108	P	Pn	20 06 58.1	-0.9
	comp=Z,13nm,0.3s,baz=288,slow=11,SNR=206						
CPUP				LR	LR	20 10 28.0	
	comp=Z,2μm,21.8s,baz=28,slow=38						
CPUP				ScP	ScP	20 16 19.4	+2.8
	comp=Z,0.3nm,0.3s,baz=320,slow=1.0,SNR=3.6						
CPUP	**Villa Florida**	8.78	108	eP	Pn	20 06 57.3	-1.8
SIV	**San Ignacio**	9.48	35	P	Pn	20 07 06.5	-1.7
	comp=Z,31nm,0.3s,baz=226,slow=14,SNR=293						
SIV				S	Sn	20 08 44.2	
	baz=238,slow=19,SNR=2.1						
PEL	**Peldehue**	9.84	200	ePn	Pn	20 07 12.1	-0.6
PEL	**Peldehue**	9.84	200	eP	Pn	20 07 12.4	-0.3
PEL	**Peldehue**	9.84	200	eP	Pn	20 07 12.1	-0.6
AQDB	**Aquidauana**	10.72	73	eP	Pn	20 07 21.8	-2.3
GO05	**Huala**	11.96	201	eP	P	20 07 44.5	+0.3
TRCB	**Terra Rica**	12.93	88	eP	Pn	20 07 50.3	-1.9
LPA	**La Plata**	13.32	147	ceP	P	20 07 58.0	-1.3
LPA				eS	S	20 10 24.0	-0.4
LPA				ePCP	PcP	20 13 11.0	+2.1
PTGB	**Pitanga**	13.33	96	eP	Pn	20 07 55.8	-1.3
PLTB	**Pedras Altas**	13.93	127	eP	Pn	20 08 03.2	-1.2
TRQA	**Tornquist**	14.64	165	ePn	P	20 08 12.8	-1.2
TRQA	**Tornquist**	14.64	165	eP	P	20 08 12.8	-1.2
TRQA	**Tornquist**	14.64	165	eP	P	20 08 12.8	-1.2
OGAUY	**Aigu**	14.70	138	eP	Pn	20 08 13.1	-0.7
CNLB	**Canela**	15.11	114	eP	P	20 08 18.3	-1.1
NNA	**Nana**	15.32	319	P	Pn	20 08 23.1	+1.6
	comp=Z,3.7nm,0.3s,baz=167,slow=12,SNR=31						
NNA				S	S	20 11 08.0	-3.3
	comp=Z,3.4nm,0.3s,baz=246,slow=20,SNR=2.5						
NNA	**Nana**	15.32	319	eP	Pn	20 08 22.0	+0.4
	comp=Z,148nm,0.9s						
NNA	**Nana**	15.32	319	i P	Pn	20 08 23.7	+2.1
FRTB	**Fartura**	15.68	91	eP	P	20 08 24.0	-1.6
ITRB	**Iturama**	15.71	78	eP	P	20 08 24.1	-1.8
GO06	**Curarrehue**	16.13	194	eP	Pn	20 08 31.8	+0.5
	comp=Z,369nm,0.9s						
CLDB	**Colider**	16.60	40	eP	P	20 08 34.2	-1.6
BB19B	**Bebedouro**	16.99	84	eP	P	20 08 38.9	-1.2
PLCA	**Paso Flores**	17.07	190	P	Pn	20 08 42.1	-0.3
	comp=Z,3.3nm,0.3s,baz=35,slow=12,SNR=68						
PLCA				S	S	20 11 52.5	+4.6
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=1.9						
PLCA				PcP	PcP	20 13 17.1	+2.7
	comp=Z,1.2nm,0.3s,baz=58,slow=3.3,SNR=5.5						
PLCA	**Paso Flores**	17.07	190	eP	Pn	20 08 42.4	0.0
	comp=Z,188nm,0.8s						
PLCA				ePcP	PcP	20 13 17.1	+2.7
PLCA	**Paso Flores**	17.07	190	eP	Pn	20 08 42.4	0.0
PLCA				pmax	pmax		
	comp=Z,188nm,0.8s						
PLCA	**Paso Flores**	17.07	190	eP	Pn	20 08 41.8	-0.6
SPB	**Sao Paulo**	17.60	93	eP	P	20 08 46.3	-0.4
	comp=Z,184nm,0.7s						
SPB	**Sao Paulo**	17.60	93	eP	P	20 08 45.3	-1.4
RCLB	**Rio Claro- Sao**	17.65	89	eP	P	20 08 45.8	-1.5
BDFB	**Brasilia**	19.37	68	P	P	20 09 06.2	+0.2
	comp=Z,24nm,0.3s,baz=247,slow=11,SNR=154						
BDFB				S	S	20 12 32.3	-1.6
	comp=Z,0.6nm,0.3s,baz=131,slow=11,SNR=2.0						
BDFB	**Brasilia**	19.37	68	eP	P	20 09 05.6	-0.4
	comp=Z,509nm,0.9s						
PMNB	**Patos De Minas**	19.59	78	eP	P	20 09 06.7	-1.7
ATAH	**Atahualpa**	20.14	324	P	P	20 09 15.0	+0.4
	comp=Z,18nm,0.7s,baz=17,slow=8.8,SNR=7.3						
ATAH				S	S	20 12 52.8	+3.2
	comp=Z,2.8nm,0.5s,baz=104,slow=8.3,SNR=2.5						
ESAR	**Angra dos Reis**	20.40	92	eP	P	20 09 15.9	-0.9
BSCB	**Bom Sucesso**	20.43	86	eP	P	20 09 15.8	-1.5
PEXB	**Peixe**	21.02	59	eP	P	20 09 21.8	-1.7
VAS01	**Vassouras-RJ**	21.41	90	eP	P	20 09 25.2	-2.3
DUB01	**Friburgo-RJ**	22.42	90	eP	P	20 09 36.6	-0.7
SMTB	**Santa Maria do**	23.60	54	eP	P	20 09 46.7	-1.2
PTGA	**Pitinga**	23.95	17	P	P	20 09 50.7	-0.4
	comp=Z,25nm,0.3s,baz=203,slow=15,SNR=40						
PTGA				S	S	20 13 50.2	-2.2
	comp=Z,9.2nm,0.6s,baz=107,slow=19,SNR=6.3						
PTGA	**Pitinga**	23.95	17	eP	P	20 09 50.3	-0.8
	comp=Z,68nm,0.8s						
PTGA	**Pitinga**	23.95	17	eP	P	20 09 50.2	-1.0
ALF01	**Guarapari-ES**	24.21	87	eP	P	20 09 52.4	-1.0
SJMB	**Sao Joao De Ma**	24.28	83	eP	P	20 09 53.0	-1.1
BSFB	**Barra de Sao F**	24.55	83	eP	P	20 09 55.4	-1.1
RIB01	**Linhares ES**	24.83	84	eP	P	20 09 57.9	-1.1
FLOC	**Florencia**	26.82	340	eP	P	20 10 18.2	+1.2
GO09	**Cerro Castillo**	27.65	188	eP	P	20 10 26.1	+2.2
	comp=Z,45nm,0.8s						
SOTA	**Rioblanco**	27.66	338	eP	P	20 10 27.7	+2.7
PCON	**Cinco Dias**	27.77	339	eP	P	20 10 28.8	+2.8
BBAC	**Balboa, Cauca**	27.77	337	eP	P	20 10 28.5	+2.8
BETC	**Betania**	27.80	341	eP	P	20 10 27.0	+1.3
POPC	**Popayan, Colom**	28.06	338	eP	P	20 10 29.2	+1.0
MARP	**Paez Belalcaza**	28.11	340	eP	P	20 10 29.4	+0.7
EFI	**East Falkland**	28.48	169	eP	P	20 10 32.3	+1.0
	comp=Z,408nm,1.8s						
EFI	**East Falkland**	28.48	169	eP	P	20 10 32.3	+1.0
EFI				pmax	pmax		
	comp=Z,408nm,1.8s						
PRAC	**Prado**	28.62	343	eP	P	20 10 33.0	0.0
ORTC	**Ortega, Tolima**	28.91	342	eP	P	20 10 35.0	-0.5
GRGC	**Isla de Gorgon**	29.02	336	eP	P	20 10 39.7	+3.2
CHIC	**Chingaza**	29.21	345	eP	P	20 10 38.2	-0.4
GO10	**Punta Arenas**	29.37	185	eP	P	20 10 41.9	+2.7
	comp=Z,197nm,0.8s						
ROSC	**El Rosal**	29.55	344	P	P	20 10 44.0	+2.5
	comp=Z,6.6nm,0.4s,baz=240,slow=20,SNR=2.8						
ROSC	**El Rosal**	29.55	344	eP	P	20 10 42.2	+0.6
	comp=Z,19nm,0.6s						
YOPC	**Yopal, Colombi**	29.64	348	eP	P	20 10 49.3	+7.2
MALC	**Bahia Malaga**	29.66	338	eP	P	20 10 45.7	+3.6
RREF	**El Recreo**	29.88	342	eP	P	20 10 45.5	+0.7
PLMC	**San Jos del P**	30.16	341	eP	P	20 10 46.4	-0.1
GUY2C	**Guyana, Caldas**	30.20	343	eP	P	20 10 48.5	+1.1
RUSC	**La Rusia**	30.30	347	eP	P	20 10 49.0	+0.7
NORC	**Norcasia**	30.39	344	eP	P	20 10 48.1	-0.5
USHA	**Ushuaia**	30.89	182	P	P	20 10 54.5	+2.0
	comp=Z,21nm,0.6s,baz=349,slow=7.6,SNR=22						
USHA				S	S	20 15 43.2	+2.5
	comp=Z,6.0nm,0.9s,baz=218,slow=22,SNR=3.1						
HELC	**Santa Helena**	31.16	343	eP	P	20 10 53.9	-1.8
PTBC	**PUERTO BERRIO,**	31.23	345	eP	P	20 10 52.2	-3.6
MDP	**Montagnes des**	31.93	27	P	P	20 11 01.3	-0.7
	comp=Z,37nm,0.6s,baz=203,slow=8.8,SNR=52						
DBBC	**Dabeiba**	32.14	342	eP	P	20 11 04.8	+0.8
ZARC	**Zaragoza, Cauc**	32.24	345	eP	P	20 11 02.8	-1.9
SDV	**Santo Domingo**	32.84	353	P	P	20 11 10.3	+0.2
	comp=Z,14nm,0.4s,baz=231,slow=10,SNR=10						
SDV	**Santo Domingo**	32.84	353	eP	P	20 11 09.0	-1.2
	comp=Z,40nm,1.1s						
SDV	**Santo Domingo**	32.84	353	eP	P	20 11 09.5	-0.6
NBMO	**Morrinhos-CE**	32.87	55	eP	P	20 11 09.1	-1.2
NBLI	**Livramento-PB**	32.89	65	eP	P	20 11 09.2	-1.3
RCBR	**Riachuelo**	34.61	64	P	P	20 11 26.6	+1.3
	comp=Z,32nm,0.4s,baz=239,slow=9.3,SNR=17						
RCBR	**Riachuelo**	34.61	64	eP	P	20 11 24.5	-0.8
	comp=Z,117nm,1.1s						
RCBR	**Riachuelo**	34.61	64	eP	P	20 11 24.0	-1.3
BCIP	**Isla Barro Col**	35.32	337	eP	P	20 11 32.4	+1.1
	comp=Z,130nm,0.7s						
BCIP	**Isla Barro Col**	35.32	337	eP	P	20 11 32.4	+1.1
BCIP				pmax	pmax		
	comp=Z,130nm,0.7s						
BCIP	**Isla Barro Col**	35.32	337	eP	P	20 11 34.7	+3.4
GRGR	**Grenville**	36.17	8	eP	P	20 11 39.0	+0.6
	comp=Z,124nm,0.6s						
SVB	**Belmont**	37.35	9	eP	P	20 11 48.2	-0.2
	comp=Z,71nm,0.4s						
HOPE	**Hope Point**	37.76	151	eP	P	20 11 53.7	+2.3
	comp=Z,104nm,1.1s						
JTS	**Las Juntas de**	38.42	330	P	P	20 12 00.5	+3.0
	comp=Z,38nm,0.8s,baz=264,slow=1.8,SNR=22						
JTS				PcP	PcP	20 14 07.8	+1.5
	comp=Z,11nm,0.6s,baz=307,slow=2.8,SNR=4.4						
JTS	**Las Juntas de**	38.42	330	eP	P	20 11 59.8	+2.4
	comp=Z,103nm,1.3s						
JTS	**Las Juntas de**	38.42	330	d iP	P	20 12 01.4	+4.0
JTS				pmax	pmax		
	comp=Z,54nm,1.1s						
FDF	**Fort de France**	38.80	9	eP	P	20 12 00.3	-0.2
	comp=Z,152nm,0.5s						
FDF	**Fort de France**	38.80	9	eP	P	20 12 00.3	-0.2
FDF				pmax	pmax		
	comp=Z,153nm,0.5s						
ESPN	**Las Esperanzas**	39.83	332	eP	P	20 12 12.1	+3.1
	comp=Z,131nm,1.3s						
ACON	**Acoyapa**	40.01	331	eP	P	20 12 12.6	+2.1
	comp=Z,55nm,1.4s						
PMSA	**Palmer Station**	40.88	178	P	P	20 12 19.1	+2.1
	comp=Z,38nm,0.7s,baz=15,slow=4.6,SNR=7.8						
PMSA	**Palmer Station**	40.88	178	eP	P	20 12 17.6	+0.6
ESTN	**Estel**	41.54	330	eP	P	20 12 25.6	+2.5
	comp=Z,86nm,0.6s						
ANWB	**Willy Bob**	41.62	7	eP	P	20 12 23.0	-0.5
	comp=Z,126nm,0.6s						
OBIP	**Obispado Ponce**	41.72	0	eP	P	20 12 23.0	-1.3
	comp=Z,71nm,0.6s						
SJG	**San Juan**	41.79	1	eP	P	20 12 23.7	-1.2
	comp=Z,47nm,0.7s						
SJG	**San Juan**	41.79	1	eP	P	20 12 23.7	-1.2
SJG				pmax	pmax		
	comp=Z,47nm,0.7s						
CSGN	**Cosiguina Volc**	41.99	329	eP	P	20 12 28.5	+1.8
	comp=Z,135nm,0.6s						
AOPR	**Arecibo Observ**	42.02	360	eP	P	20 12 25.9	-0.9
	comp=Z,35nm,0.7s						
BANI	**BANI**	42.22	355	eP	P	20 12 28.1	-0.5
TGUH	**Tegucigalpa,Un**	42.80	330	eP	P	20 12 34.2	+1.0
	comp=Z,266nm,1.4s						
SDDR	**Presa de Saban**	42.89	354	eP	P	20 12 34.5	+0.7
	comp=Z,138nm,1.9s						
APG	**El Apazote**	45.15	327	P	P	20 12 53.6	+1.5
	comp=Z,56nm,0.8s,baz=154,slow=4.6,SNR=40						
CCIG	**Comitan**	47.08	326	eP	P	20 13 07.8	+0.7
	comp=Z,100nm,1.3s						
TEIG	**Tepich**	48.68	333	eP	P	20 13 19.1	+0.1
	comp=Z,68nm,0.6s						
062Z	**Marathon**	50.34	343	P	P	20 13 32.1	+0.6
	baz=163						
061Z	**Ochoppi**	51.39	344	eP	P	20 13 41.3	+2.0
	comp=Z,568nm,1.4s						
061Z	**Ochoppi**	51.39	344	P	P	20 13 40.1	+0.8
	baz=163						
TLIG	**Tlapa**	51.68	320	eP	P	20 13 43.8	+2.0
	comp=Z,62nm,1.3s						
060Z	**West Palm Beac**	51.81	344	P	P	20 13 43.2	+0.8
	baz=164						
059Z	**Ave Maria**	51.98	343	P	P	20 13 44.6	+1.0
	baz=163,SNR=5.8						
060A	**Indiantown**	52.37	345	P	P	20 13 47.9	+1.4
	baz=164						
059A	**Moore Haven**	52.50	344	P	P	20 13 48.2	+0.8
	baz=163						

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058A  Arcadia          52.76 343   P      P     20 13 50.3 +0.9
      baz=162,SNR=7.7
959A  Okeechobee       52.96 344   P      P     20 13 49.9  -0.9
      baz=164
958A  Wauchula         53.25 343   P      P     20 13 53.6 +0.7
      baz=163
957A  Wimauma          53.45 343  eP      P     20 13 56.1 +1.7
      comp=Z,312nm,1.3s
957A  Wimauma          53.45 343   P      P     20 13 54.7 +0.3
      baz=162
DWPF  Disney Wildern   53.66 344   P      P     20 13 55.8  -0.1
      baz=163
858A  St. Cloud        53.74 344   P      P     20 13 56.6 +0.1
      baz=163
857A  Zephyrhills      54.02 343   P      P     20 13 58.8 +0.3
      baz=162
758A  Lake Helen       54.42 344   P      P     20 14 01.7 +0.4
      baz=164
757A  Oxford           54.62 343   P      P     20 14 03.4 +0.6
      baz=163
658A  Bunnell          54.87 344   P      P     20 14 05.0 +0.4
      baz=164
656A  Willston         55.15 343   P      P     20 14 06.9 +0.3
      baz=162
657A  Interlachen      55.18 344   P      P     20 14 06.9 +0.1
      baz=163
655A  Horseshoe Beac   55.48 342   P      P     20 14 09.1 +0.2
      baz=161
556A  Lake Butler      55.71 343   P      P     20 14 10.4  -0.2
      baz=162
555A  McAlpin          55.98 343   P      P     20 14 12.4   0.0
      baz=162
554A  Perry            56.14 342   P      P     20 14 13.3  -0.3
      baz=161
456A  Hilliard         56.30 344   P      P     20 14 14.5  -0.3
      baz=163
553A  Crawfordville    56.45 342   P      P     20 14 15.9 +0.1
      baz=160
455A  Stateville       56.58 343   P      P     20 14 16.0  -0.7
      baz=162
552A  Lynn Haven       56.65 341   P      P     20 14 17.4 +0.2
      baz=159
454A  Quitman          56.72 342   P      P     20 14 17.3  -0.4
      baz=161
356A  Blackshear       56.90 344   P      P     20 14 18.7  -0.3
      baz=163
453A  Whigham          57.04 342  eP      P     20 14 20.1 +0.1
      comp=Z,109nm,1.0s
453A  Whigham          57.04 342   P      P     20 14 19.6  -0.4
      baz=161
VNA3  Neumayer Olymp   57.12 161   P      P     20 14 21.6 +1.5
257A  Skidaway Islan   57.26 345   P      P     20 14 21.4   0.0
      baz=164
452A  Marianna         57.29 341   P      P     20 14 21.8 +0.1
      baz=160
VNA1  Neumayer--Stat   57.31 160   P      P     20 14 23.3 +2.0
TIGA  Tifton           57.39 343  eP      P     20 14 23.3 +0.9
      comp=Z,78nm,1.3s
TIGA  Tifton           57.39 343   P      P     20 14 21.9  -0.5
      baz=162
256A  Glennville       57.47 345   P      P     20 14 22.2  -0.7
      baz=163
353A  Camilla          57.48 342   P      P     20 14 22.2  -0.8
      baz=161,SNR=8.7
255A  Hazlehurst       57.56 344   P      P     20 14 22.4  -1.2
      baz=163
450A  Crestview        57.68 340   P      P     20 14 23.0  -1.4
      baz=158
254A  Abbeville        57.79 343   P      P     20 14 24.2  -1.0
      baz=162,SNR=7.3
352A  Blakely          57.80 342  eP      P     20 14 26.0 +0.7
      comp=Z,129nm,0.9s
352A  Blakely          57.80 342   P      P     20 14 24.0  -1.3
      baz=160,SNR=10.0
158A  Hollywood        57.81 347   P      P     20 14 24.8  -0.4
      baz=165
449A  Pace             57.84 339   P      P     20 14 25.1  -0.4
      baz=158
RGRS  Roger Stewart    57.98 347  eP      P     20 14 28.4 +2.0
      comp=Z,2µm,0.5s
LNIG  Linares          58.02 325  eP      P     20 14 27.7 +0.7
      comp=Z,59nm,1.3s
LNIG                              ePcP    pP    20 15 18.4 +2.9
ZAIG  Zacatecas        58.07 320  eP      P     20 14 29.9 +2.3
      comp=Z,54nm,0.8s
ZAIG                              epP     pP    20 15 20.8 +4.5
BRAL  Brewton          58.16 339  eP      P     20 14 29.0 +1.3
      comp=Z,150nm,0.6s
BRAL                              ePcP    pP    20 15 17.9 +1.3
BRAL  Brewton          58.16 339   P      P     20 14 26.6  -1.2
      baz=158,SNR=6.4
NHSC  New Hope         58.16 347  eP      P     20 14 29.1 +1.3
      comp=Z,215nm,1.0s
NHSC  New Hope         58.16 347   P      P     20 14 27.9 +0.2
      baz=165,SNR=7.7
155A  Kite             58.22 344   P      P     20 14 27.6  -0.5
      baz=163,SNR=7.6
252A  Lumpkin          58.23 342   P      P     20 14 27.2  -1.1
      baz=160
Z58A  St. Stephen      58.31 347   P      P     20 14 28.0  -0.7
      baz=166,SNR=9.0
154A  Montrose         58.38 344  eP      P     20 14 29.9 +0.7
      comp=Z,210nm,1.0s
154A  Montrose         58.38 344   P      P     20 14 28.8  -0.4
      baz=162,SNR=5.8
349A  Repton           58.38 339   P      P     20 14 27.8  -1.4
      baz=158,SNR=18
Z57A  Bowman           58.46 346   P      P     20 14 29.3  -0.4
      baz=165,SNR=10
251A  Midway           58.52 341   P      P     20 14 29.0  -1.2
      baz=160,SNR=14
153A  Fort Valley      58.60 343   P      P     20 14 29.9  -0.9
      baz=162
Y60A  Bolivia          58.65 349  eP      P     20 14 32.0 +0.9
      comp=Z,185nm,0.8s
Y60A  Bolivia          58.65 349   P      P     20 14 30.3  -0.7
      baz=168
250A  Grady            58.67 340  eP      P     20 14 31.3 +0.1
      comp=Z,215nm,1.4s
250A                              epP     pP    20 15 20.9 +0.9
250A  Grady            58.67 340   P      P     20 14 30.2  -1.1
      baz=159,SNR=14
Z55A  Blythe           58.72 345   P      P     20 14 30.4  -1.2
      baz=163
Y59A  Loris            58.76 348   P      P     20 14 30.6  -1.2
      baz=167
Y58A  Scranton         58.83 347  eP      P     20 14 33.9 +1.6
      comp=Z,136nm,0.8s
Y58A  Scranton         58.83 347   P      P     20 14 31.4  -0.9
      baz=166,SNR=7.3
152A  Waverly Hall     58.86 342  eP      P     20 14 32.5  -0.1
      comp=Z,40nm,0.9s
152A  Waverly Hall     58.86 342   P      P     20 14 31.4  -1.2
      baz=161,SNR=17
151A  Opelika          58.90 342   P      P     20 14 31.7  -1.2
      baz=160,SNR=5.7
Z54A  Sparta           58.90 344   P      P     20 14 31.9  -0.9
      baz=163,SNR=9.4
249A  Camden           58.93 340   P      P     20 14 32.1  -1.0
      baz=158,SNR=19
Y56A  Pelion           59.07 346   P      P     20 14 32.9  -1.0
      baz=164
Y57A  Sumter           59.09 347  eP      P     20 14 34.1   0.0
      comp=Z,96nm,1.1s
Y57A                              epP     pP    20 15 21.4  -1.5
Y57A  Sumter           59.09 347   P      P     20 14 33.3  -0.8
      baz=165
Z53A  Monticello       59.13 344   P      P     20 14 33.5  -0.9
      baz=162,SNR=8.5
X60A  Albert Glenn T   59.17 349   P      P     20 14 33.7  -0.9
      baz=168,SNR=5.8
150A  Eclectic         59.18 341   P      P     20 14 33.9  -0.9
      baz=159,SNR=28
GOGA  Godfrey          59.23 344  eP      P     20 14 35.5 +0.4
      comp=Z,35nm,1.0s
GOGA  Godfrey          59.23 344  eP      P     20 14 35.5 +0.4
GOGA                               pmax   pmax
      comp=Z,35nm,1.0s
GOGA  Godfrey          59.23 344   P      P     20 14 34.1  -1.0
      baz=162,SNR=12
Z52A  Williamson       59.27 343   P      P     20 14 34.1  -1.3
      baz=161,SNR=14
X59A  McDuffie Farm,   59.27 349   P      P     20 14 34.1  -1.2
      baz=167,SNR=6.6
SNAA  Sanae            59.31 161   P      P     20 14 36.7 +1.5
SNAA  Sanae            59.31 161   P      P     20 14 36.9 +1.6
      comp=Z,41nm,0.6s,baz=267,slow=8.5,SNR=188
SNAA  Sanae            59.31 161  eP      P     20 14 36.1 +0.8
      comp=Z,57nm,0.7s
SNAA                              epP     pP    20 15 23.6  -0.6
SNAA  Sanae            59.31 161c iP      P     20 14 36.8 +1.5
Y55A  Saluda           59.34 345   P      P     20 14 34.6  -1.2
      baz=164,SNR=11
X58A  Rowland          59.40 348  eP      P     20 14 37.3 +1.1
      comp=Z,80nm,0.6s
X58A                              epP     pP    20 15 23.9  -1.0
X58A  Rowland          59.40 348   P      P     20 14 35.4  -0.8
      baz=166,SNR=12
149A  Jones            59.41 340   P      P     20 14 35.3  -1.0
      baz=158,SNR=12
X57A  Johnson Farm,    59.46 347   P      P     20 14 35.5  -1.1
      baz=166
Y54A  Tignall          59.46 345   P      P     20 14 35.7  -1.0
      baz=163,SNR=11
JSC   Jenkinsville     59.53 346  eP      P     20 14 38.2 +1.1
      comp=Z,57nm,1.1s
JSC   Jenkinsville     59.53 346  eP      P     20 14 38.2 +1.1
JSC                                pmax   pmax
      comp=Z,57nm,1.1s
W60A  Pink Hill        59.59 349   P      P     20 14 36.4  -1.0
      baz=168
W61A  Ground Anchor    59.59 350   P      P     20 14 36.4  -1.1
      baz=169
Z51A  Franklin         59.60 342   P      P     20 14 36.5  -1.2
      baz=160,SNR=5.5
Y53A  Monroe           59.68 344   P      P     20 14 36.7  -1.5
      baz=162,SNR=11
X56A  White Oak        59.68 346   P      P     20 14 37.3  -0.9
      baz=165,SNR=16
148A  Greensboro       59.70 340   P      P     20 14 36.9  -1.4
      baz=158,SNR=7.2
HODGE Hodges           59.71 345  eP      P     20 14 40.1 +1.8
      comp=Z,32nm,1.1s
HODGE                             epP     pP    20 15 25.5  -1.9
Z50A  Ashland          59.76 341   P      P     20 14 37.6  -1.1
      baz=160,SNR=28
X55A  Gracelyn & Ava   59.80 346   P      P     20 14 38.0  -0.9
      baz=164,SNR=11
CNNC  Cliffs of the    59.80 349   P      P     20 14 37.7  -1.3
      baz=168
Y52A  Lilburn          59.81 343  eP      P     20 14 39.4 +0.3
      comp=Z,42nm,0.9s
Y52A                              epP     pP    20 15 25.9  -2.1
Y52A  Lilburn          59.81 343   P      P     20 14 37.8  -1.3
      baz=161,SNR=12
V62A  Hyde County Ai   59.82 351   P      P     20 14 38.1  -0.9
      baz=170
W59A  Clinton          59.83 349   P      P     20 14 37.7  -1.4
      baz=167
W58A  Raeford          59.83 348   P      P     20 14 38.1  -1.0
      baz=167,SNR=16
LRAL  Lakeview Retre   59.88 340  eP      P     20 14 40.0 +0.5
LRAL                              epP     pP    20 15 26.6  -1.8
LRAL  Lakeview Retre   59.88 340   P      P     20 14 38.5  -1.0
      baz=158,SNR=26
Z49A  Columbiana       59.88 341   P      P     20 14 38.1  -1.4
      baz=159,SNR=14
X54A  Belton           60.04 345   P      P     20 14 38.9  -1.7
      baz=163,SNR=10
W57A  Gilead           60.10 347  eP      P     20 14 42.0 +1.0
      comp=Z,45nm,0.8s
W57A  Gilead           60.10 347   P      P     20 14 40.2  -0.8
      baz=166,SNR=12
Y51A  Rockmart         60.12 342   P      P     20 14 39.8  -1.4
      baz=160,SNR=32
V61A  Roper            60.13 351   P      P     20 14 40.1  -1.1
      baz=169
PAULI Pauline          60.17 346  eP      P     20 14 42.2 +0.7
      comp=Z,33nm,1.0s
W56A  Indian Trail     60.21 347   P      P     20 14 41.2  -0.5
      baz=165,SNR=10
V60A  Jim Taylor Roa   60.21 350  eP      P     20 14 42.2 +0.5
      comp=Z,29nm,0.6s
V60A  Jim Taylor Roa   60.21 350   P      P     20 14 41.2  -0.5
      baz=169
X53A  Estanollee       60.22 344   P      P     20 14 41.8   0.0
      baz=162,SNR=9.9
Y50A  Piedmont         60.30 342   P      P     20 14 41.5  -0.9
      baz=160,SNR=16
VBMS  Vicksburg        60.31 337   P      P     20 14 41.7  -0.7
      baz=155
KMSC  Kings Mountain   60.37 346  eP      P     20 14 43.9 +1.1
      comp=Z,38nm,1.0s
KMSC  Kings Mountain   60.37 346   P      P     20 14 40.7  -2.1
      baz=164,SNR=6.8
V59A  Middlesex        60.37 349   P      P     20 14 42.0  -0.8
      baz=168,SNR=9.4
HKT   Hockley          60.46 331  eP      P     20 14 44.8 +1.4
      comp=Z,55nm,1.3s
HKT                               epP     pP    20 15 29.6  -2.8
HKT   Hockley          60.46 331  eP      P     20 14 44.8 +1.4
HKT                               e*PP    pP    20 15 29.6  -2.8
HKT                                pmax   pmax
      comp=Z,55nm,1.3s
Y49A  Blount Mountai   60.46 341  eP      P     20 14 43.8 +0.3
      comp=Z,42nm,0.9s
Y49A  Blount Mountai   60.46 341   P      P     20 14 42.0  -1.5
      baz=159,SNR=13
X52A  Dahlonega        60.47 344   P      P     20 14 42.5  -1.0
      baz=162,SNR=8.0
W54A  Cherokee Point   60.51 345   P      P     20 14 43.0  -0.8
      baz=164,SNR=14
V58A  Windy Hill, Pi   60.56 348   P      P     20 14 43.1  -1.0
      baz=167,SNR=6.4
BG3   Lake Jocassee    60.60 345  eP      P     20 14 45.1 +0.7
      comp=Z,19nm,1.0s
BG3                               epP     PcP   20 15 28.8 +2.2
X51A  Calhoun          60.69 343  eP      P     20 14 44.9  -0.1
      comp=Z,95nm,0.8s
X51A  Calhoun          60.69 343   P      P     20 14 43.9  -1.1
      baz=161,SNR=29
Y48A  Jasper           60.74 340   P      P     20 14 43.5  -1.8
      baz=158,SNR=9.2
V57A  Coltrane Farms   60.77 348   P      P     20 14 44.3  -1.3
      baz=166,SNR=5.3
833A  Chaparral WMA,   60.78 327  eP      P     20 14 46.3 +0.6
      comp=Z,351nm,1.4s
833A  Chaparral WMA,   60.78 327   P      P     20 14 44.8  -0.9
      baz=145,SNR=32
X50B  Fort Payne       60.81 342   P      P     20 14 44.6  -1.2
      baz=160,SNR=9.0
W53A  Cullowhee        60.82 345   P      P     20 14 44.6  -1.4
      baz=163,SNR=6.4
V56A  Mocksville       60.84 347  eP      P     20 14 46.7 +0.7
      comp=Z,72nm,1.0s
V56A  Mocksville       60.84 347   P      P     20 14 44.9  -1.1
      baz=165,SNR=19
U59A  Littleton        60.87 350  eP      P     20 14 46.6 +0.4
      comp=Z,34nm,1.1s
U59A  Littleton        60.87 350   P      P     20 14 45.1  -1.0
      baz=168
W52A  Murphy           60.94 344   P      P     20 14 45.1  -1.6
      baz=162
V55A  Taylorsville     61.03 347   P      P     20 14 45.9  -1.3
      baz=165,SNR=9.6
U58A  Oxford           61.04 349   P      P     20 14 46.2  -1.1
      baz=167,SNR=5.9
X49A  Woodville        61.05 341   P      P     20 14 45.4  -2.1
      baz=159,SNR=18
V54A  Nebo             61.12 346   P      P     20 14 46.3  -1.6
      baz=164,SNR=10
X48A  Hartselle        61.20 341  eP      P     20 14 48.3  -0.2
      comp=Z,93nm,0.9s
X48A  Hartselle        61.20 341   P      P     20 14 46.9  -1.6
      baz=159,SNR=41
V53A  Saluda           61.22 345  eP      P     20 14 48.8 +0.3
      comp=Z,23nm,1.0s
V53A  Saluda           61.22 345   P      P     20 14 46.6  -2.0
      baz=163
U57A  Blanch           61.22 348   P      P     20 14 46.8  -1.7
      baz=167,SNR=13
W51A  Cleveland        61.22 343   P      P     20 14 47.2  -1.3
      baz=161,SNR=11
U56A  King             61.34 347   P      P     20 14 47.2  -2.1
      baz=166
W50A  Signal Mountai   61.41 343  eP      P     20 14 49.9   0.0
      comp=Z,61nm,1.0s
W50A  Signal Mountai   61.41 343   P      P     20 14 48.6  -1.3
      baz=160,SNR=24
CPCT  Cooper Cave      61.43 343  eP      P     20 14 50.4 +0.5
      comp=Z,45nm,1.2s
T59A  Double "B" Far   61.44 350  eP      P     20 14 51.3 +1.4
      comp=Z,32nm,1.0s
T59A  Double "B" Far   61.44 350   P      P     20 14 48.4  -1.5
      baz=168,SNR=5.9
T60A  Surry            61.48 351   P      P     20 14 48.7  -1.5
      baz=169
NATX  Nacogdoches      61.51 333  eP      P     20 14 51.8 +1.2
      comp=Z,215nm,1.3s
NATX  Nacogdoches      61.51 333   P      P     20 14 49.3  -1.3
      baz=151,SNR=5.3
X47A  Russelville      61.51 340   P      P     20 14 48.9  -1.6
      baz=158,SNR=41
V52A  Sevierville      61.57 344  eP      P     20 14 51.1 +0.2
      comp=Z,57nm,1.3s
V52A  Sevierville      61.57 344   P      P     20 14 49.0  -1.9
      baz=162
T58A  Grand View Acr   61.57 349   P      P     20 14 49.7  -1.2
      baz=168,SNR=7.8
SWET  Sewanee          61.59 342  eP      P     20 14 50.9  -0.2
      comp=Z,69nm,0.9s
W49A  Belvidere        61.60 342   P      P     20 14 49.3  -1.8
      baz=160,SNR=20
U55A  TA2, Sparta      61.62 347   P      P     20 14 49.7  -1.6
      baz=165,SNR=5.4
V51A  Loudon           61.72 344  eP      P     20 14 51.7  -0.2
      comp=Z,16nm,0.9s
V51A  Loudon           61.72 344   P      P     20 14 50.1  -1.8
      baz=162
T57A  Hurt             61.75 349  eP      P     20 14 53.3 +1.2
      comp=Z,22nm,1.1s
T57A  Hurt             61.75 349   P      P     20 14 50.2  -1.9
      baz=167
X46A  Booneville       61.78 340   P      P     20 14 50.8  -1.5
      baz=157,SNR=11
V50A  Pikevile         61.79 343   P      P     20 14 50.8  -1.6
      baz=161,SNR=23
U54A  Nelsons Funny    61.80 346  eP      P     20 14 52.6 +0.1
      comp=Z,67nm,1.1s
U54A  Nelsons Funny    61.80 346   P      P     20 14 51.0  -1.5
      baz=164,SNR=8.9
W48A  Pulaski          61.81 341   P      P     20 14 51.4  -1.1
      baz=159,SNR=42
U53A  Fall Branch      61.83 345   P      P     20 14 51.0  -1.6
      baz=163
S61A  Accomac          61.87 352   P      P     20 14 51.0  -1.7
      baz=170
T56A  Rocky Mt         61.93 348   P      P     20 14 51.8  -1.5
      baz=166
435B  Jarrell          61.96 330  eP      P     20 14 55.2 +1.7
435B                              epP     PcP   20 15 35.3 +3.2
435B  Jarrell          61.96 330   P      P     20 14 52.6  -1.0
      baz=148
OXF   Oxford           62.01 339  eP      P     20 14 53.0  -0.8
      comp=Z,180nm,1.0s
OXF   Oxford           62.01 339  eP      P     20 14 53.0  -0.8
OXF                                pmax   pmax
      comp=Z,180nm,1.0s
PLAL  Pickwick Lake    62.01 340  eP      P     20 14 52.9  -0.9
      comp=Z,78nm,1.1s
PLAL                              ePcP    PcP   20 15 33.5 +1.2
S60A  Water View       62.02 351   P      P     20 14 50.3  -3.5
      baz=170
U52A  Thorn Hill       62.04 345   P      P     20 14 52.3  -1.8
      baz=163
RKT   Rikitea          62.05 256  eS      S     20 23 09.1 +6.4
      comp=Z,3µm,28.0s
Z41A  Richland Creek   62.09 335   P      P     20 14 53.0  -1.3
      baz=153
V49A  McMinnville      62.10 342   P      P     20 14 53.0  -1.5
      baz=160,SNR=17
W47A  Westpoint        62.11 341   P      P     20 14 52.8  -1.7
      baz=158,SNR=40
S58A  Poland Farm, P   62.15 350   P      P     20 14 53.0  -1.7
      baz=168
T55A  Pulaski          62.16 347   P      P     20 14 53.5  -1.3
      baz=165,SNR=8.8
BLA   Blacksburg       62.18 348  eP      P     20 14 55.8 +0.8
      comp=Z,79nm,1.6s
BLA   Blacksburg       62.18 348  eP      P     20 14 55.8 +0.8
BLA                                pmax   pmax
      comp=Z,79nm,1.6s
BLA   Blacksburg       62.18 348   P      P     20 14 52.9  -2.1
      baz=166
U51A  La Follette      62.18 344   P      P     20 14 53.0  -2.0
      baz=162
TZTN  Tazewell         62.23 345   P      P     20 14 53.5  -1.7
      baz=162
W46A  Michie           62.24 340   P      P     20 14 53.2  -2.2
      baz=157
T54A  Tazewell         62.27 347   P      P     20 14 54.2  -1.4
      baz=164,SNR=5.7
CCAR  Cane Creek       62.29 337  eP      P     20 14 56.7 +1.0
      comp=Z,106nm,0.9s
CCAR                              ePcP    PcP   20 15 35.4 +2.0
V48A  Smith Brothers   62.34 342  eP      P     20 14 55.2  -0.9
      comp=Z,47nm,0.8s
V48A                              ePcP    PcP   20 15 35.5 +1.9
V48A  Smith Brothers   62.34 342   P      P     20 14 55.1  -0.9
      baz=159,SNR=18
T53A  Wise             62.41 346   P      P     20 14 54.6  -1.9
      baz=164
U50A  Jamestown        62.43 344   P      P     20 14 54.8  -1.8
      baz=161,SNR=6.7
S57A  Dark Hollow, R   62.44 349  eP      P     20 14 57.1 +0.4
      comp=Z,11nm,0.6s
S57A  Dark Hollow, R   62.44 349   P      P     20 14 55.2  -1.4
      baz=167
R58B  Mineral          62.46 350  eP      P     20 14 57.0 +0.3
      comp=Z,28nm,1.1s
R58B  Mineral          62.46 350   P      P     20 14 55.7  -1.1
      baz=168,SNR=7.9
S56A  Natural Bridge   62.47 348   P      P     20 14 55.4  -1.4
      baz=167
X43A  Marvell          62.51 338  eP      P     20 14 57.6 +0.5
      comp=Z,160nm,0.7s
X43A                              ePcP    PcP   20 15 37.6 +3.2
X43A  Marvell          62.51 338   P      P     20 14 55.8  -1.3
      baz=155,SNR=5.4
CLTN  Cedars of Leba   62.53 342  eP      P     20 14 57.1  -0.1
      comp=Z,22nm,0.8s
CLTN                              ePcP    PcP   20 15 36.4 +2.0
R59A  King George, V   62.58 351   P      P     20 14 56.0  -1.5
      baz=169
WLAR  White Oak Lake   62.59 335  eP      P     20 14 58.8 +1.1
      comp=Z,180nm,0.7s
V47A  Nunnelly         62.62 341   P      P     20 14 56.1  -1.8
      baz=158,SNR=23
T52A  Hallie           62.63 345   P      P     20 14 57.0  -0.9
      baz=163
T51A  Gray             62.72 344   P      P     20 14 57.5  -1.0
      baz=162
S55A  Lewisburg        62.74 348   P      P     20 14 57.5  -1.2
      baz=166,SNR=13
JCT   Junction City    62.75 328  eP      P     20 14 59.3 +0.4
      comp=Z,67nm,0.8s
JCT   Junction City    62.75 328  eP      P     20 14 59.3 +0.4
JCT                                pmax   pmax
      comp=Z,67nm,0.8s
JCT   Junction City    62.75 328   P      P     20 14 57.7  -1.2
      baz=146,SNR=26
U49A  Red Boiling Sp   62.77 343   P      P     20 14 57.3  -1.5
      baz=160
V46A  Holladay         62.78 340   P      P     20 14 56.6  -2.3
      baz=158,SNR=19
R58A  Rapidan          62.81 350   P      P     20 14 57.7  -1.3
      baz=168
R57A  Stanardsville    62.89 350   P      P     20 14 58.5  -1.1
      baz=168
WHTX  Lake Whitney,    62.92 331  eP      P     20 15 00.4 +0.5
      comp=Z,87nm,1.2s
WHTX  Lake Whitney,    62.92 331   P      P     20 14 57.9  -2.0
      baz=148,SNR=7.3
S54A  Dingess, Beckl   62.93 347   P      P     20 14 59.0  -0.9
      baz=165,SNR=12
U48A  Cassie Pea, Po   62.98 342   P      P     20 14 58.8  -1.4
      baz=160,SNR=11
S53A  Williamson       62.99 346   P      P     20 14 59.1  -1.2
      baz=164
WVT   Waverly          63.00 341  eP      P     20 15 00.1  -0.2
      comp=Z,96nm,0.7s
WVT   Waverly          63.00 341  eP      P     20 15 00.1  -0.2
WVT                                pmax   pmax
      comp=Z,96nm,0.7s
WVT   Waverly          63.00 341   P      P     20 14 59.0  -1.3
      baz=158
T50A  Nancy            63.00 344   P      P     20 14 58.8  -1.5
      baz=161,SNR=5.1
Q61A  Milford          63.00 352   P      P     20 14 59.0  -1.3
      baz=171
U47A  Clarksville      63.13 341   P      P     20 14 59.8  -1.4
      baz=159,SNR=34
R56A  Bull Pasture M   63.15 349   P      P     20 15 00.4  -1.0
      baz=167
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R55A	Marlinton	63.16	348	*e*P	P	20 15 02.8	+1.3
	comp=Z,89nm,1.5s						
R55A	Marlinton	63.16	348	P	P	20 15 00.1	-1.4
	baz=166						
Q60A	Greensboro	63.19	352	P	P	20 15 00.4	-1.1
	baz=170						
X40A	Basin Creek Fa	63.19	336	*e*P	P	20 15 02.5	+0.9
	comp=Z,8.7nm,0.6s						
X40A	Basin Creek Fa	63.19	336	P	P	20 14 59.6	-2.0
	baz=153						
R54A	Victor	63.23	347	P	P	20 15 00.1	-1.7
	baz=165,SNR=7.3						
T49A	Edmonton	63.26	343	*e*P	P	20 15 01.9	-0.2
	comp=Z,45nm,1.1s						
T49A	Edmonton	63.26	343	P	P	20 14 60.0	-2.1
	baz=161,SNR=7.6						
UALR	University of	63.27	336	*e*P	P	20 15 03.3	+1.1
	comp=Z,29nm,0.7s						
S51A	Beattyville	63.28	345	P	P	20 15 00.0	-2.1
	baz=162						
U46A	Springville	63.31	341	P	P	20 15 01.0	-1.4
	baz=158,SNR=9.3						
Q58A	Fox Den Farm,	63.39	350	P	P	20 15 01.6	-1.3
	baz=169,SNR=5.4						
T48A	Bowling Green	63.50	342	P	P	20 15 01.3	-2.3
	baz=160,SNR=9.3						
UTMT	University of	63.51	340	*e*P	P	20 15 05.0	+1.3
	comp=Z,266nm,1.0s						
S50A	Richmond	63.51	344	P	P	20 15 01.3	-2.4
	baz=162,SNR=6.3						
MIAR	Mount Ida	63.52	335	*e*P	P	20 15 04.0	+0.2
	comp=Z,118nm,1.3s						
MIAR	Mount Ida	63.52	335	*e*P	P	20 15 04.0	+0.2
MIAR				pmax	pmax		
	comp=Z,118nm,1.3s						
MIAR	Mount Ida	63.52	335	P	P	20 15 02.0	-1.8
	baz=152,SNR=38						
GNAR	Gosnell	63.53	339	*e*P	P	20 15 04.0	+0.2
	comp=Z,78nm,0.7s						
R53A	Hurricane	63.57	347	*e*P	P	20 15 05.4	+1.3
	comp=Z,21nm,0.9s						
R53A	Hurricane	63.57	347	P	P	20 15 02.7	-1.4
	baz=164						
GLAT	Glass	63.58	340	*e*P	P	20 15 05.7	+1.5
	comp=Z,739nm,1.0s						
T47A	Sharon Grove	63.58	342	*e*P	P	20 15 03.8	-0.4
	comp=Z,62nm,0.9s						
T47A				*e*PcP	PcP	20 15 40.0	+1.3
T47A	Sharon Grove	63.58	342	P	P	20 15 02.6	-1.5
	baz=159,SNR=26						
W41B	Gary Mavity, V	63.59	337	*e*P	P	20 15 05.2	+0.9
	comp=Z,56nm,1.3s						
W41B	Gary Mavity, V	63.59	337	P	P	20 15 02.7	-1.6
	baz=154,SNR=15						
Q57A	Strasburg	63.59	350	P	P	20 15 03.4	-0.8
	baz=168,SNR=8.4						
WHAR	Wooly Hollow	63.71	337	*e*P	P	20 15 05.7	+0.6
	comp=Z,32nm,0.9s						
R52A	Catlettsburg	63.73	346	P	P	20 15 03.6	-1.5
	baz=164						
Q56A	Snyder Ridge,	63.73	349	P	P	20 15 04.3	-0.8
	baz=167,SNR=5.1						
TXAR	Lajitas Array	63.80	324	P	P	20 15 07.1	+1.2
	comp=Z,12nm,0.8s,baz=150,slow=7.8,SNR=63						
TX31	Lajitas Ar. Si	63.80	324	*e*P	P	20 15 06.5	+0.6
	comp=Z,17nm,1.0s						
S49A	Springfield	63.84	344	P	P	20 15 04.8	-1.0
	baz=161						
PVMO	Portageville	63.84	339	*e*P	P	20 15 06.6	+0.8
	comp=Z,563nm,0.6s						
Q55A	Buckhannon	63.84	348	P	P	20 15 05.5	-0.4
	baz=166,SNR=10						
T46A	Princeton	63.86	341	P	P	20 15 04.8	-1.2
	baz=158,SNR=18						
P59A	Jarrettsville	63.86	352	P	P	20 15 05.1	-0.8
	baz=170,SNR=5.2						
P58A	Pank, Wackersv	63.87	351	P	P	20 15 04.8	-1.1
	baz=169						
R51A	Hillsboro	63.91	345	P	P	20 15 04.8	-1.4
	baz=163						
S48A	Wiedeman Farm,	63.92	343	P	P	20 15 04.4	-2.0
	baz=160,SNR=7.6						
P60A	Greenville	63.96	352	P	P	20 15 05.2	-1.3
	baz=171						
P57A	Homestead Farm	63.97	350	P	P	20 15 05.2	-1.4
	baz=168,SNR=7.6						
Q54A	Coxs Mills	63.98	348	*e*P	P	20 15 07.5	+0.8
	comp=Z,36nm,1.0s						
Q53A	Leroy	63.99	347	P	P	20 15 05.1	-1.7
	baz=165,SNR=5.7						
R50A	Paris	64.07	345	*e*P	P	20 15 07.2	-0.1
	comp=Z,56nm,1.8s						
R50A	Paris	64.07	345	P	P	20 15 05.7	-1.6
	baz=162						
T45A	Paducah	64.07	341	P	P	20 15 05.5	-1.8
	baz=158						
S47A	Hartford	64.08	342	P	P	20 15 05.5	-2.0
	baz=159,SNR=11						
P56A	Dayton Farm, R	64.12	350	P	P	20 15 05.8	-1.8
	baz=168						
W39A	Magazine	64.18	335	*e*P	P	20 15 08.5	+0.4
	comp=Z,81nm,0.8s						
W39A	Magazine	64.18	335	P	P	20 15 06.7	-1.4
	baz=152,SNR=42						
FCAR	Ozark Folk Cen	64.19	337	*e*P	P	20 15 08.0	-0.2
	comp=Z,83nm,1.3s						
FCAR				*e*PcP	PcP	20 15 42.8	+1.6
MVL	Millersville	64.24	352	*e*P	P	20 15 09.6	+1.3
	comp=Z,27nm,1.2s						
Q52A	Bidwell	64.25	347	P	P	20 15 07.3	-1.1
	baz=164						
X37A	Clayton	64.27	334	*e*P	P	20 15 09.6	+0.9
	comp=Z,72nm,0.9s						
R49A	Shelbyville	64.28	344	*e*P	P	20 15 09.4	+0.7
	comp=Z,17nm,1.0s						
R49A	Shelbyville	64.28	344	P	P	20 15 06.6	-2.1
	baz=161						
P55A	Reedsville	64.30	349	P	P	20 15 08.2	-0.6
	baz=166,SNR=5.1						
S46A	Don Dixon Farm	64.41	342	P	P	20 15 07.9	-1.6
	baz=158,SNR=6.2						
PBMO	Poplar Bluff	64.41	339	*e*P	P	20 15 09.2	-0.3
	comp=Z,113nm,0.6s						
O60A	Telford	64.43	353	P	P	20 15 08.6	-0.9
	baz=171						
O58A	Lewisberry	64.44	351	P	P	20 15 08.2	-1.4
	baz=170						
MCWV	Mont Chateau	64.44	349	*e*P	P	20 15 10.5	+0.8
	comp=Z,14nm,0.6s						
MCWV	Mont Chateau	64.44	349	P	P	20 15 08.2	-1.5
	baz=166						
ABTX	Abilene, Hawle	64.45	329	*e*P	P	20 15 10.8	+0.8
	comp=Z,50nm,1.0s						
ABTX				*e*PcP	PcP	20 15 43.0	+0.6
ABTX	Abilene, Hawle	64.45	329	P	P	20 15 08.7	-1.3
	baz=146,SNR=14						
P54A	Burton	64.51	348	P	P	20 15 09.5	-0.7
	baz=166,SNR=6.9						
PAGS	Pennsylvania G	64.51	351	*e*P	P	20 15 11.0	+0.9
	comp=Z,15nm,1.0s						
Q50A	Georgetown	64.52	345	P	P	20 15 08.3	-1.9
	baz=162						
WCI	Wyandotte Cave	64.52	343	*e*P	P	20 15 09.5	-0.7
	comp=Z,32nm,0.8s						
WCI				*e*PcP	PcP	20 15 43.9	+1.4
WCI	Wyandotte Cave	64.52	343	*e*P	P	20 15 09.5	-0.7
WCI				*e*		20 15 43.9	
WCI				pmax	pmax		
	comp=Z,33nm,0.8s						
WCI	Wyandotte Cave	64.52	343	P	P	20 15 08.3	-1.9
	baz=160						
Q51A	Peebles	64.55	346	P	P	20 15 08.8	-1.6
	baz=163						
R48A	Northridge Ran	64.57	343	P	P	20 15 08.6	-1.9
	baz=160						
P53A	Whipple	64.57	347	*e*P	P	20 15 11.1	+0.5
P53A				*e*pP	pP	20 15 55.2	-5.0
P53A	Whipple	64.57	347	P	P	20 15 09.7	-0.9
	baz=165,SNR=6.9						
O57A	Amberson	64.62	351	P	P	20 15 10.6	-0.2
	baz=169						
R47A	Wooly Knot Far	64.64	343	P	P	20 15 09.8	-1.3
	baz=160						
USIN	University of	64.65	342	*e*P	P	20 15 10.8	-0.3
	comp=Z,33nm,0.7s						
BRNJ	Basking Ridge	64.70	353	*e*P	P	20 15 12.1	+0.8
	comp=Z,35nm,0.8s						
O56A	Blue Knob Stat	64.82	350	*e*P	P	20 15 13.3	+1.1
	comp=Z,16nm,0.8s						
O56A	Blue Knob Stat	64.82	350	P	P	20 15 11.6	-0.7
	baz=168						
R46A	Gibon Southern	64.84	342	P	P	20 15 10.5	-1.8
	baz=159						
P52A	Corning	64.86	347	P	P	20 15 11.2	-1.2
	baz=164,SNR=5.4						
U40A	Yellville	64.86	337	P	P	20 15 11.1	-1.5
	baz=153,SNR=32						
S44A	Carbondale	64.88	340	P	P	20 15 11.1	-1.5
	baz=157,SNR=12						
O55A	Ligonier	64.89	349	P	P	20 15 11.6	-1.0
	baz=167,SNR=8.5						
Q49A	Aurora	64.89	344	P	P	20 15 10.7	-1.9
	baz=162						
P51A	Williamsport	64.92	346	P	P	20 15 10.9	-1.8
	baz=163						
N60A	Cedar Hill Far	64.94	353	P	P	20 15 12.3	-0.6
	baz=171,SNR=6.8						
PAL	Palisades	64.95	354	*e*P	P	20 15 13.4	+0.5
	comp=Z,81nm,1.3s						
PAL	Palisades	64.95	354	*e*P	P	20 15 13.4	+0.5
PAL				pmax	pmax		
	comp=Z,81nm,1.3s						
PAL	Palisades	64.95	354	P	P	20 15 11.9	-1.1
	baz=173,SNR=5.7						
Q48A	North Vernon	65.03	344	P	P	20 15 11.8	-1.7
	baz=161,SNR=6.5						
O54A	Avella	65.05	348	P	P	20 15 11.8	-1.8
	baz=166						
N59A	State Game Lan	65.07	352	*e*P	P	20 15 14.6	+0.8
	comp=Z,35nm,1.4s						
N59A	State Game Lan	65.07	352	P	P	20 15 12.3	-1.5
	baz=171						
SSPA	Standing Stone	65.08	351	*e*P	P	20 15 14.7	+0.9
	comp=Z,40nm,1.4s						
SSPA	Standing Stone	65.08	351	P	P	20 15 12.7	-1.1
	baz=169						
ODNJ	Ogdensburg	65.10	353	*e*P	P	20 15 15.2	+1.3
	comp=Z,44nm,1.2s						
R45A	Skylar, Fairfi	65.14	341	P	P	20 15 12.5	-1.7
	baz=158,SNR=11						
N57A	Milroy	65.14	351	P	P	20 15 13.6	-0.6
	baz=169,SNR=8.7						
YLE	Yale	65.17	355	*e*P	P	20 15 15.6	+1.3
	comp=Z,102nm,1.1s						
HHAR	Hobbs	65.20	336	*e*P	P	20 15 14.7	0.0
	comp=Z,64nm,0.8s						
P50A	Jamestown	65.20	345	P	P	20 15 13.1	-1.5
	baz=163						
Q47A	Bedord North L	65.22	343	P	P	20 15 12.3	-2.4
	baz=160,SNR=5.7						
M61A	Granite Spring	65.24	354	P	P	20 15 13.6	-1.2
	baz=173,SNR=7.3						
M65A	Busby, Falmout	65.26	357	P	P	20 15 14.9	0.0
	baz=176						
O52A	Adamsville	65.27	347	P	P	20 15 12.7	-2.3
	baz=165						
O53A	New Philadelph	65.27	348	P	P	20 15 12.5	-2.5
	baz=165						
P49A	Miami Univ. Ec	65.35	345	P	P	20 15 14.8	-0.7
	baz=162,SNR=5.6						
N55A	Marion Center	65.39	350	*e*P	P	20 15 16.3	+0.5
	comp=Z,97nm,1.4s						
N55A	Marion Center	65.39	350	P	P	20 15 15.2	-0.6
	baz=168,SNR=15						
P48A	Milroy	65.45	344	*e*P	P	20 15 15.5	-0.8
	comp=Z,33nm,1.1s						
P48A	Milroy	65.45	344	P	P	20 15 14.6	-1.7
	baz=161,SNR=5.4						
O51A	Pataskala	65.46	347	P	P	20 15 13.8	-2.5
	baz=164						
BLO	Bloomington	65.47	343	*e*P	P	20 15 15.4	-0.9
	comp=Z,26nm,0.6s						
BLO	Bloomington	65.47	343	*e*P	P	20 15 15.4	-0.9
BLO				pmax	pmax		
	comp=Z,26nm,0.6s						
TUL1	Leonard	65.58	334	*e*P	P	20 15 17.3	+0.2
	comp=Z,63nm,0.9s						
TUL1	Leonard	65.58	334	P	P	20 15 15.9	-1.3
	baz=151,SNR=8.8						
ACSO	Alum Creek Sta	65.62	346	*e*P	P	20 15 17.3	0.0
	comp=Z,45nm,1.2s						
ACSO	Alum Creek Sta	65.62	346	P	P	20 15 16.3	-1.0
	baz=164						
KSCT	Kent School, K	65.63	354	*e*P	P	20 15 18.1	+0.9
	comp=Z,57nm,1.3s						
M59A	Waymart	65.64	353	P	P	20 15 16.4	-1.0
	baz=171,SNR=21						
Q45A	Warren Harvey,	65.66	342	P	P	20 15 16.2	-1.4
	baz=158,SNR=10						
BRYW	Bryant College	65.67	356	*e*P	P	20 15 18.9	+1.4
	comp=Z,170nm,1.2s						
O50A	Cable	65.68	346	P	P	20 15 15.4	-2.3
	baz=163						
P47A	Martinsville	65.69	343	P	P	20 15 16.3	-1.4
	baz=160						
KSPA	Keystone Colle	65.70	353	*e*P	P	20 15 19.6	+1.8
	comp=Z,99nm,1.4s						
N54A	Moraine State	65.74	349	*e*P	P	20 15 18.0	0.0
	comp=Z,43nm,1.3s						
N54A	Moraine State	65.74	349	P	P	20 15 16.8	-1.2
	baz=166						
N53A	Lisbon	65.74	348	P	P	20 15 16.4	-1.6
	baz=166						
WMOK	Wichita Mounta	65.83	331	*e*P	P	20 15 19.1	+0.3
	comp=Z,41nm,1.5s						
WMOK				*e*PcP	PcP	20 15 50.0	+1.9
WMOK	Wichita Mounta	65.83	331	*e*P	P	20 15 19.1	+0.3
WMOK				*e*		20 15 50.0	
WMOK				pmax	pmax		
	comp=Z,41nm,1.5s						
WMOK	Wichita Mounta	65.83	331	P	P	20 15 17.4	-1.3
	baz=148,SNR=14						
CCM	Cathedral Cave	65.84	339	*e*P	P	20 15 18.6	-0.1
	comp=Z,116nm,0.6s						
CCM	Cathedral Cave	65.84	339	*e*P	P	20 15 18.6	-0.1
CCM				pmax	pmax		
	comp=Z,116nm,0.6s						
CCM	Cathedral Cave	65.84	339	P	P	20 15 16.8	-2.0
	baz=155						
O49A	Covington	65.88	345	*e*P	P	20 15 19.0	+0.1
	comp=Z,34nm,1.2s						
O49A	Covington	65.88	345	P	P	20 15 17.1	-1.8
	baz=162						
N52A	McGinn’s Farm,	65.91	348	P	P	20 15 17.6	-1.5
	baz=165						
M56A	Emporium	65.95	351	P	P	20 15 18.0	-1.4
	baz=168,SNR=8.7						
M55A	Ridgway	66.03	350	P	P	20 15 18.8	-1.1
	baz=168,SNR=9.6						
P46A	Rosedale	66.07	343	P	P	20 15 17.0	-3.1
	baz=159						
QUA2	Belchertown	66.08	355	*e*P	P	20 15 21.3	+1.2
	comp=Z,43nm,1.2s						
WES	Weston	66.12	356	*e*P	P	20 15 20.5	+0.1
	comp=Z,18nm,0.7s						
WES	Weston	66.12	356	*e*P	P	20 15 20.5	+0.1
WES				pmax	pmax		
	comp=Z,18nm,0.7s						
P45A	Graceland, Par	66.13	342	*e*P	P	20 15 20.2	-0.3
	comp=Z,54nm,1.0s						
P45A	Graceland, Par	66.13	342	P	P	20 15 19.3	-1.3
	baz=159,SNR=7.8						
O48A	Farmland	66.14	345	P	P	20 15 18.7	-1.9
	baz=161,SNR=8.9						
N51A	Ashland	66.15	347	P	P	20 15 18.9	-1.8
	baz=164						
N50A	Nevada	66.17	346	P	P	20 15 19.1	-1.7
	baz=163						
M54A	Oil Creek Stat	66.21	349	*e*P	P	20 15 21.5	+0.5
	comp=Z,55nm,1.2s						
M54A	Oil Creek Stat	66.21	349	P	P	20 15 20.4	-0.6
	baz=167,SNR=9.7						
HRV	Adam Dziewonsk	66.26	356	*e*P	P	20 15 22.4	+1.1
	comp=Z,52nm,0.9s						
HRV	Adam Dziewonsk	66.26	356	*e*P	P	20 15 22.4	+1.1
HRV				pmax	pmax		
	comp=Z,52nm,0.9s						
HRV	Adam Dziewonsk	66.26	356	P	P	20 15 21.4	+0.2
	baz=175						
QSPA	South Pole Qui	66.28	180	*e*P	P	20 15 23.1	+1.7
	comp=Z,111nm,0.8s						
M53A	WI Miller and	66.32	349	P	P	20 15 20.6	-1.1
	baz=166						
BINY	Binghamton	66.36	352	*e*P	P	20 15 22.7	+0.7
	comp=Z,73nm,0.8s						
BINY	Binghamton	66.36	352	P	P	20 15 21.0	-1.0
	baz=171,SNR=25						
O47A	Sheridan	66.38	344	P	P	20 15 20.8	-1.2
	baz=160,SNR=6.2						
GDL2	Guadalupe Moun	66.43	326	*e*P	P	20 15 23.9	+1.2
ALLY	Alegheny Colle	66.43	349	*e*P	P	20 15 21.9	-0.6
	comp=Z,48nm,1.1s						
M51A	Elyria	66.51	347	P	P	20 15 22.2	-0.7
	baz=164						
N49A	Columbus Grove	66.54	346	*e*P	P	20 15 23.6	+0.4
	comp=Z,63nm,1.1s						
N49A	Columbus Grove	66.54	346	P	P	20 15 21.9	-1.2
	baz=162,SNR=9.6						
M52A	Chesterland	66.55	348	P	P	20 15 21.8	-1.4
	baz=165						
MNTX	Cornudas Mount	66.57	324	*e*P	P	20 15 23.3	-0.2
	comp=Z,34nm,1.0s						
MNTX	Cornudas Mount	66.57	324	P	P	20 15 22.6	-0.9
	baz=141,SNR=58						
TRY	Troy	66.64	354	*e*P	P	20 15 24.9	+1.2
	comp=Z,98nm,1.0s						
L55A	Hinsdale	66.67	350	P	P	20 15 22.8	-1.1
	baz=168,SNR=9.1						
N48A	Decatur	66.68	345	P	P	20 15 22.6	-1.4
	baz=162						
L53A	Girard	66.75	349	P	P	20 15 23.6	-0.8
	baz=166						
P43A	Skaggs, Pawnee	66.75	341	P	P	20 15 22.8	-1.7
	baz=157						
SFIN	Lafayette	66.75	343	P	P	20 15 22.6	-1.9
	baz=160						
M50A	Fremont	66.75	347	P	P	20 15 23.0	-1.4
	baz=164						
O45A	Potomac	66.80	343	P	P	20 15 23.6	-1.1
	baz=159,SNR=6.7						
N47A	Urbana	66.86	344	P	P	20 15 23.6	-1.5
	baz=161,SNR=7.6						
L54A	Sinclairville	66.86	350	P	P	20 15 24.1	-1.0
	baz=167,SNR=10						
O44A	Mansfield	66.92	342	P	P	20 15 24.0	-1.4
	baz=158						
PLIO	Pelee Island,	67.00	347	P	P	20 15 25.1	-0.9
	baz=164						
M49A	Liberty Center	67.02	346	P	P	20 15 24.4	-1.8
	baz=163,SNR=6.5						
MSTX	Muleshoe	67.05	328	*e*P	P	20 15 26.4	-0.2
	comp=Z,140nm,1.0s						
LIC	Lamto	67.12	72	*e*P	P	20 15 26.3	-1.1
	comp=Z,64nm,0.6s						
K54A	Basiliko Farm,	67.13	350	P	P	20 15 25.5	-1.3
	baz=168,SNR=8.4						
MMNY	Mt. Morris Dam	67.13	351	*e*P	P	20 15 27.5	+0.7
	comp=Z,117nm,1.4s						
N46A	Monticello	67.14	344	P	P	20 15 24.6	-2.3
	baz=160						
K55A	Perry	67.15	351	P	P	20 15 25.3	-1.6
	baz=169,SNR=9.3						
M48A	Edgerton	67.20	345	*e*P	P	20 15 27.8	+0.6
	comp=Z,32nm,1.2s						
M48A	Edgerton	67.20	345	P	P	20 15 25.7	-1.6
	baz=162						
FFD	Franklin Falls	67.22	356	*e*P	P	20 15 28.2	+0.9
	comp=Z,64nm,1.1s						
AMTX	Amarillo	67.27	329	*e*P	P	20 15 28.8	+0.8
	comp=Z,41nm,0.9s						
AMTX	Amarillo	67.27	329	P	P	20 15 27.2	-0.7
	baz=145						
ACCN	Adirondack Com	67.29	354	*e*P	P	20 15 29.2	+1.4
	comp=Z,78nm,1.8s						
M47A	Cromwell	67.30	345	P	P	20 15 26.3	-1.6
	baz=161						
N45A	Kentland	67.30	343	P	P	20 15 26.4	-1.5
	baz=159						
U32A	Winter Ranch,	67.31	332	*e*P	P	20 15 28.6	+0.5
	comp=Z,50nm,0.9s						
L50A	Kingsville	67.32	347	P	P	20 15 26.4	-1.6
	baz=164						
TIC	Toumodi	67.33	71	*e*P	P	20 15 26.8	-1.9
N44A	Piper City	67.42	342	P	P	20 15 26.4	-2.2
	baz=159,SNR=5.5						
KIC	Kosan Boka	67.43	72	*e*P	P	20 15 28.6	-0.7
	comp=Z,65nm,0.5s						
DBIC	Dimbokro	67.48	71	P	P	20 15 29.2	-0.4
	comp=Z,27nm,0.5s,baz=220,slow=6.7,SNR=36						
DBIC				S	S	20 24 05.2	-4.1
	comp=Z,4.3nm,0.9s,baz=155,slow=23,SNR=7.6						
DBIC	Dimbokro	67.48	71	*e*P	P	20 15 28.4	-1.2
	comp=Z,33nm,0.8s						
HNH	Hanover	67.50	356	*e*P	P	20 15 29.6	+0.5
	comp=Z,72nm,1.2s						
M46A	Old House Fiel	67.52	344	P	P	20 15 27.0	-2.3
	baz=160						
HDIL	Hopedale	67.53	341	*e*P	P	20 15 29.4	+0.1
	comp=Z,40nm,0.6s						
HDIL	Hopedale	67.53	341	P	P	20 15 27.9	-1.4
	baz=158						
L48A	N Adams	67.57	346	P	P	20 15 28.0	-1.6
	baz=162,SNR=6.8						
L49A	Milan	67.58	346	P	P	20 15 28.5	-1.2
	baz=163						
K52A	Tillsonburg	67.63	349	P	P	20 15 29.0	-0.9
	baz=166						
MEDO	Medina	67.64	351	P	P	20 15 29.4	-0.6
	baz=168						
J55A	Hilton	67.64	351	*e*P	P	20 15 30.4	+0.4
	comp=Z,63nm,1.4s						
K51A	Iona Station	67.72	348	P	P	20 15 29.5	-0.9
	baz=165						
HSIG		67.73	319	*e*P	P	20 15 31.7	+0.8
	comp=Z,74nm,1.1s						
AAM	Ann Arbor	67.75	346	P	P	20 15 29.8	-0.8
	baz=163						
J54A	Appleton	67.77	351	P	P	20 15 30.3	-0.4
	baz=168						
L47A	Sherwood	67.78	345	P	P	20 15 30.0	-0.9
	baz=162						
STCO	Saint Catharin	67.79	350	P	P	20 15 30.3	-0.6
	baz=168						
TYNO	Tyneside	67.79	350	P	P	20 15 30.5	-0.4
	baz=167,SNR=6.2						
N43A	Stutzman Famil	67.84	342	P	P	20 15 30.2	-1.1
	baz=158,SNR=14						
NCB	Newcomb	67.92	354	*e*P	P	20 15 33.3	+1.6
	comp=Z,18nm,0.9s						
M44A	Midewin, Midew	67.95	343	P	P	20 15 30.2	-1.7
	baz=159						
K50A	Casco	67.98	347	*e*P	P	20 15 32.9	+0.7
	comp=Z,49nm,0.6s						
K50A	Casco	67.98	347	P	P	20 15 30.9	-1.2
	baz=164						
LBNH	Lisbon	68.01	356	*e*P	P	20 15 33.0	+0.8
	comp=Z,29nm,0.9s						
LBNH	Lisbon	68.01	356	*e*P	P	20 15 33.0	+0.8
LBNH				pmax	pmax		
	comp=Z,29nm,0.9s						
J52A	Paris	68.04	349	P	P	20 15 32.2	-0.2
	baz=166,SNR=13						
L46A	Eue Claire	68.08	344	P	P	20 15 31.4	-1.3
	baz=161						
N41A	Harden Midland	68.13	340	*e*P	P	20 15 32.4	-0.7
	comp=Z,128nm,1.0s						
N41A	Harden Midland	68.13	340	P	P	20 15 31.8	-1.3
	baz=156,SNR=11						
VT1	Waterbury	68.16	355	*e*P	P	20 15 34.5	+1.4
	comp=Z,13nm,0.9s						
K49A	Clarkson	68.16	347	P	P	20 15 32.2	-1.0
	baz=163						
PECO	Prince Edward	68.19	352	*e*P	P	20 15 34.0	+0.6
	comp=Z,51nm,1.0s						
PECO	Prince Edward	68.19	352	P	P	20 15 32.1	-1.2
	baz=170,SNR=10						
WVL	Waterville	68.21	358	*e*P	P	20 15 34.7	+1.2
	comp=Z,27nm,0.9s						
M43A	Waltham Townsh	68.24	342	P	P	20 15 32.1	-1.7
	baz=158,SNR=15						
HAL	Halifax	68.29	2	*e*P	P	20 15 34.4	+0.5
	comp=Z,67nm,1.1s						
HAL	Halifax	68.29	2	*e*P	P	20 15 34.4	+0.5
HAL				pmax	pmax		
	comp=Z,67nm,1.1s						
ACTO	Acton	68.32	350	P	P	20 15 33.9	-0.3
	baz=167						
K48A	Perry	68.32	346	P	P	20 15 33.1	-1.1
	baz=163						
DRCO	St. Marys Ceme	68.37	351	P	P	20 15 33.8	-0.6
	baz=168						
WLVO	Wesleyville	68.37	351	P	P	20 15 34.1	-0.4
	baz=168						
K47A	Vermontville	68.39	346	P	P	20 15 33.8	-0.8

								baz=162
I53A	Kortright Cn E	68.46	350	P	P	20 15 34.4	-0.6	baz=167
121A	Cookes Peak, D	68.51	323	P	P	20 15 35.8	-0.1	baz=140,SNR=31
PKRO	Pickering	68.51	350	P	P	20 15 34.5	-0.9	baz=168
N40A	Mertquake, Sal	68.52	340	P	P	20 15 34.7	-0.8	baz=155,SNR=21
I55A	Frankford	68.56	352	P	P	20 15 35.5	-0.1	baz=169,SNR=16
K46A	Dorr	68.59	345	P	P	20 15 33.2	-2.7	baz=161
LONY	Lake Ozonia	68.60	354	*e*P	P	20 15 36.0	+0.1	comp=Z,34nm,1.1s
LONY	Lake Ozonia	68.60	354	P	P	20 15 35.6	-0.3	baz=172,SNR=9.5
M41A	Milan	68.65	341	P	P	20 15 35.0	-1.3	baz=156,SNR=9.5
L44A	Lake County Fo	68.65	343	P	P	20 15 34.7	-1.6	baz=159
J49A	Marlette	68.65	347	P	P	20 15 34.9	-1.3	baz=164
I51A	Listowel	68.68	349	P	P	20 15 35.7	-0.7	baz=166,SNR=16
KSU1	Kansas State U	68.68	335	P	P	20 15 35.4	-1.1	baz=151,SNR=10
GGN	Saint George	68.71	360	*e*P	P	20 15 38.0	+1.5	comp=Z,72nm,1.1s
FRNY	Flat Rock	68.72	355	*e*P	P	20 15 37.2	+0.6	comp=Z,33nm,1.3s
J48A	Bridge Port	68.73	347	*e*P	P	20 15 36.7	0.0	comp=Z,86nm,1.5s
J48A	Bridge Port	68.73	347	P	P	20 15 34.5	-2.2	baz=163
H56A	Elgin	68.75	353	P	P	20 15 36.7	-0.2	baz=170,SNR=7.8
I52A	Shelburne	68.79	350	P	P	20 15 36.2	-0.9	baz=167,SNR=7.1
H55A	Tweed	68.82	352	P	P	20 15 37.3	0.0	baz=170,SNR=8.5
DELO	Deloro Mine	68.85	352	*e*P	P	20 15 37.9	+0.5	comp=Z,16nm,0.8s
DELO	Deloro Mine	68.85	352	P	P	20 15 36.9	-0.5	baz=169,SNR=6.2
J47A	Sunmer	68.89	346	*e*P	P	20 15 38.2	+0.5	comp=Z,63nm,1.3s
J47A	Sunmer	68.89	346	P	P	20 15 36.6	-1.1	baz=162
PKME	Peaks-Kenny Pk	68.90	358	*e*P	P	20 15 39.2	+1.5	comp=Z,40nm,0.7s
PKME	Peaks-Kenny Pk	68.90	358	P	P	20 15 38.3	+0.5	baz=177,SNR=13
L42A	Oliver, Polo	68.97	342	*e*P	P	20 15 39.0	+0.8	comp=Z,40nm,1.1s
L42A	Oliver, Polo	68.97	342	P	P	20 15 37.1	-1.2	baz=157
BASO	Ashfield	69.00	348	P	P	20 15 37.6	-0.8	baz=165,SNR=5.2
BWLO	Walkerton	69.00	349	P	P	20 15 38.1	-0.3	baz=166,SNR=13
BNM	Barren Site	69.13	325	*e*P	P	20 15 40.5	+0.8	
I49A	Point Hope	69.15	348	P	P	20 15 38.1	-1.2	baz=164
J46A	Howard City	69.19	345	P	P	20 15 38.7	-0.8	baz=161
Y22D	IRIS PASSCAL I	69.23	325	P	P	20 15 40.0	-0.2	baz=141
K43A	Burlington	69.25	343	*e*P	P	20 15 40.8	+0.8	comp=Z,101nm,1.3s
K43A	Burlington	69.25	343	P	P	20 15 39.3	-0.7	baz=159
LPM	Los Pinos Moun	69.26	325	*e*P	P	20 15 42.1	+1.7	
PLVO	Plevna	69.29	352	*e*P	P	20 15 41.3	+1.1	comp=Z,22nm,0.9s
PLVO	Plevna	69.29	352	P	P	20 15 39.2	-0.9	baz=170,SNR=7.2
H52A	Wyevale	69.30	350	P	P	20 15 39.8	-0.5	baz=167
SADO	Sadowa	69.31	351	LR	LR	20 48 57.0		comp=Z,178nm,19.5s,baz=178,slow=38
SADO	Sadowa	69.31	351	*e*P	P	20 15 40.7	+0.5	comp=Z,58nm,1.4s
LENM	Lemitar	69.33	325	*e*P	P	20 15 42.8	+1.9	
BANO	Bancroft	69.38	351	P	P	20 15 40.5	-0.3	baz=169
J45A	Montague	69.44	345	P	P	20 15 39.7	-1.4	baz=161
G55A	Calabogie	69.46	352	P	P	20 15 40.6	-0.5	baz=170
LMN	Caledonia Moun	69.47	1	*e*P	P	20 15 42.1	+0.9	comp=Z,45nm,0.6s
BMRO	Meriville Lake	69.48	349	P	P	20 15 40.6	-0.7	baz=166,SNR=19
L40A	Anamosa	69.48	341	*e*P	P	20 15 41.1	-0.3	comp=Z,103nm,0.9s
L40A	Anamosa	69.48	341	P	P	20 15 40.0	-1.4	baz=156,SNR=27
I48A	Sherman Twp	69.56	347	P	P	20 15 41.0	-0.8	baz=163
I47A	Gladwin	69.57	346	P	P	20 15 41.1	-0.8	baz=162
G53A	Haliburton	69.58	351	P	P	20 15 40.8	-1.1	baz=168
LAZ	Ladron	69.59	325	*e*P	P	20 15 44.4	+1.8	
ANMO	Albuquerque	69.66	326	*e*P	P	20 15 43.9	+1.0	comp=Z,66nm,1.2s
ANMO	Albuquerque	69.66	326*c*	*i*P	P	20 15 45.0	+2.1	
ANMO				pmax	pmax			comp=Z,62nm,1.2s
ANMO	Albuquerque	69.66	326	P	P	20 15 43.1	+0.2	baz=141
TASM	ASL Pad, Albuq	69.66	326	P	P	20 15 42.9	-0.1	baz=141,SNR=40
TASM	ASL Pad, Albuq	69.66	326	P	P	20 15 42.9	-0.1	baz=141,SNR=38
CBKS	Cedar Bluff	69.68	333	*e*P	P	20 15 43.8	+1.0	comp=Z,211nm,1.1s
CBKS	Cedar Bluff	69.68	333	*e*P	P	20 15 43.8	+1.0	
CBKS				pmax	pmax			comp=Z,211nm,1.1s
CBKS	Cedar Bluff	69.68	333	P	P	20 15 41.9	-0.8	baz=148,SNR=19
I46A	Reed City	69.70	346	P	P	20 15 41.1	-1.6	baz=162
PEMO	Pembroke	69.94	352	P	P	20 15 44.6	+0.5	baz=170,SNR=6.7
SCIA	State Center	69.97	339	P	P	20 15 43.3	-1.1	baz=154
I45A	Fountain	69.97	345	P	P	20 15 43.1	-1.2	baz=161
JFWS	Jewell Farm	69.97	342	*e*P	P	20 15 44.8	+0.4	comp=Z,100nm,1.1s
JFWS	Jewell Farm	69.97	342	*e*P	P	20 15 44.8	+0.4	
JFWS				pmax	pmax			comp=Z,100nm,1.1s
JFWS	Jewell Farm	69.97	342	P	P	20 15 43.7	-0.7	baz=157,SNR=12
H48A	Harrisville	69.98	347	*e*P	P	20 15 45.0	+0.7	comp=Z,41nm,0.6s
H48A	Harrisville	69.98	347	P	P	20 15 43.2	-1.1	baz=164
F55A	Otter Lake	69.99	353	P	P	20 15 43.9	-0.5	baz=170
BUKO	Buck Lake	70.01	350	P	P	20 15 44.8	+0.3	baz=168,SNR=8.8
TUC	Tucson	70.02	321	*e*P	P	20 15 46.8	+1.8	comp=Z,40nm,1.2s
TUC	Tucson	70.02	321	*e*P	P	20 15 46.8	+1.8	
TUC				pmax	pmax			comp=Z,40nm,1.2s
TUC	Tucson	70.02	321	P	P	20 15 44.9	-0.1	baz=137
KLBO	Killbear Provi	70.05	350	P	P	20 15 44.1	-0.7	baz=167,SNR=12
H47A	Mio	70.06	347	P	P	20 15 43.8	-1.1	baz=163
TOBO	Tobermory, Bru	70.14	349	P	P	20 15 44.6	-0.7	baz=165,SNR=7.1
TRQ	Mont Tremblant	70.18	354	*e*P	P	20 15 46.4	+0.8	
PQI	Presque Isle	70.28	359	*e*P	P	20 15 47.5	+1.4	comp=Z,37nm,0.7s
ALGO	Algonquin Park	70.32	352	P	P	20 15 46.3	-0.1	baz=169,SNR=14
F52A	Sundridge	70.34	351	P	P	20 15 46.4	-0.2	baz=168,SNR=8.3
GLMI	Grayling	70.36	347	P	P	20 15 46.2	-0.5	baz=162
T25A	Trinidad	70.39	329	P	P	20 15 47.4	+0.1	baz=144
H45A	Beulah	70.49	345	P	P	20 15 45.9	-1.6	baz=161
I42A	Draeger Farm,	70.51	343	*e*P	P	20 15 47.9	+0.3	comp=Z,54nm,1.0s
I42A	Draeger Farm,	70.51	343	P	P	20 15 46.5	-1.1	baz=158,SNR=10
G47A	Hillman	70.53	347	P	P	20 15 46.8	-0.9	baz=163
F51A	Arnstein	70.56	350	P	P	20 15 46.9	-1.0	baz=167,SNR=6.7
E54A	Lac Daplat, Po	70.68	352	P	P	20 15 47.8	-0.7	baz=170,SNR=14
E53A	Dumoine, Ponti	70.68	352	P	P	20 15 47.8	-0.8	baz=169,SNR=8.0
E52A	Mattawa	70.72	351	P	P	20 15 47.6	-1.2	baz=168,SNR=6.1
F49A	Sandfield	70.76	349	P	P	20 15 47.5	-1.5	baz=165,SNR=21
H43A	Windswept, Lux	70.76	344	*e*P	P	20 15 50.2	+1.1	comp=Z,87nm,1.4s
H43A	Windswept, Lux	70.76	344	P	P	20 15 47.8	-1.3	baz=160,SNR=5.2
G45A	Suttons Bay	70.79	346	P	P	20 15 48.5	-0.7	baz=162
BATG	Bathurst New B	70.87	0	*e*P	P	20 15 50.8	+1.1	comp=Z,59nm,1.2s
G46A	Petoskey	70.88	347	P	P	20 15 48.3	-1.5	baz=162
F48A	Evansville	70.92	348	P	P	20 15 50.2	+0.1	baz=164,SNR=16
I41A	Arkdale	70.92	343	P	P	20 15 48.7	-1.4	baz=158
214A	Organ Pipe Nat	70.95	320	P	P	20 15 49.7	-0.9	baz=136,SNR=10.0
E51A	G1948 Merrick	71.09	351	P	P	20 15 49.7	-1.3	baz=168,SNR=9.6
KSCO	Kaye Shedlock'	71.09	331	*e*P	P	20 15 52.7	+1.4	comp=Z,168nm,1.4s
KSCO	Kaye Shedlock'	71.09	331	P	P	20 15 50.1	-1.3	baz=145,SNR=8.4
E50A	Wahnapitae	71.17	350	P	P	20 15 50.1	-1.4	baz=166,SNR=7.4
LATQ	La Tuque	71.19	356	P	P	20 15 51.4	-0.2	baz=174
X18A	Snowflake	71.20	323	*e*P	P	20 15 53.5	+1.3	comp=Z,39nm,1.2s
BGNE	Belgrade	71.27	335	*e*P	P	20 15 52.4	+0.1	comp=Z,568nm,0.6s
BGNE	Belgrade	71.27	335	P	P	20 15 51.0	-1.3	baz=150,SNR=42
D54A	Lac Fusel, La	71.32	353	P	P	20 15 52.1	-0.3	baz=170,SNR=5.8
D52A	ZEK Kipawa Sen	71.37	352	P	P	20 15 52.3	-0.4	baz=168,SNR=13
F45A	CMU Biological	71.37	346	P	P	20 15 51.7	-1.0	baz=162,SNR=13
D53A	Lac Vacive, Po	71.38	352	*e*P	P	20 15 52.9	+0.1	comp=Z,25nm,0.8s
D53A	Lac Vacive, Po	71.38	352	P	P	20 15 52.5	-0.3	baz=169,SNR=14
SDCO	Great Sand Dun	71.39	328	*e*P	P	20 15 54.2	+0.8	comp=Z,53nm,1.0s
SDCO	Great Sand Dun	71.39	328	P	P	20 15 52.6	-0.8	baz=143,SNR=72
E48A	Lockeyer	71.47	349	P	P	20 15 52.1	-1.3	baz=165
W18A	Petrified Fore	71.52	324	*e*P	P	20 15 55.6	+1.4	comp=Z,46nm,1.0s
W18A	Petrified Fore	71.52	324	P	P	20 15 53.5	-0.6	baz=139,SNR=16
E47A	Iron Bridge	71.65	348	P	P	20 15 53.7	-0.7	baz=164,SNR=11
E46A	Sault Ste Mari	71.77	347	*e*P	P	20 15 55.4	+0.3	comp=Z,106nm,1.4s
E46A	Sault Ste Mari	71.77	347	P	P	20 15 54.5	-0.6	baz=163,SNR=17
S22A	4UR Ranch, Cre	72.04	327	*e*P	P	20 15 58.7	+1.4	comp=Z,18nm,0.9s
S22A	4UR Ranch, Cre	72.04	327	P	P	20 15 56.5	-0.8	baz=142,SNR=30
F42A	Maple Grove Fa	72.05	344	P	P	20 15 55.4	-1.4	baz=159
D48A	Paudash Townsh	72.08	349	P	P	20 15 56.7	-0.2	baz=165,SNR=11
113A	Mohawk Valley,	72.09	320	*e*P	P	20 15 59.7	+2.4	comp=Z,19nm,0.9s
D49A	Beulah Townshi	72.10	350	P	P	20 15 55.8	-1.2	baz=166,SNR=14
G40A	Rib Lake	72.13	343	*e*P	P	20 15 57.6	+0.3	comp=Z,34nm,1.4s
G40A	Rib Lake	72.13	343	P	P	20 15 56.1	-1.2	baz=157,SNR=5.4
Q24A	Divide	72.20	329	*e*P	P	20 15 59.4	+1.1	comp=Z,83nm,1.0s
D47A	Chapleau	72.20	348	P	P	20 15 56.6	-1.1	baz=164,SNR=10
D46A	Sault St. Mari	72.22	348	P	P	20 15 56.9	-0.8	baz=163,SNR=14
E44A	Grand Marais A	72.35	346	P	P	20 15 57.5	-1.0	baz=161
E43A	Lone Tree Farm	72.36	345	*e*P	P	20 15 59.4	+0.8	comp=Z,21nm,0.6s
E43A	Lone Tree Farm	72.36	345	P	P	20 15 58.1	-0.5	baz=160,SNR=13
VLDQ	Val d'Or	72.36	352	*e*P	P	20 15 59.9	+1.3	comp=Z,16nm,0.9s
G39A	Holcombe	72.42	342	P	P	20 15 58.9	-0.1	baz=156,SNR=12
OGNE	Ogallala	72.43	333	*e*P	P	20 16 01.0	+1.7	comp=Z,68nm,0.7s
OGNE	Ogallala	72.43	333	P	P	20 15 59.3	0.0	baz=146,SNR=11
MVCO	Mesa Verde	72.46	326	*e*P	P	20 16 01.2	+1.5	comp=Z,61nm,1.1s
MVCO	Mesa Verde	72.46	326	P	P	20 15 59.3	-0.4	baz=140,SNR=25
Y14A	Wickenburg	72.48	321	*e*P	P	20 16 02.0	+2.3	comp=Z,47nm,1.3s
COWI	Conover	72.62	344	*e*P	P	20 16 00.1	-0.1	comp=Z,24nm,1.1s
F40A	Park Falls	72.71	343	P	P	20 16 00.2	-0.6	baz=158,SNR=44
WUAZ	Wupatki	72.71	323	*e*P	P	20 16 03.3	+2.1	comp=Z,65nm,1.1s
WUAZ	Wupatki	72.71	323	P	P	20 16 00.9	-0.3	baz=138,SNR=17
ECSD	EROS Data Cent	72.73	338	*e*P	P	20 16 00.9	0.0	comp=Z,78nm,0.9s
ECSD	EROS Data Cent	72.73	338	P	P	20 15 59.9	-1.0	baz=151,SNR=66
SPMN	Marine on St.	72.83	341	*e*P	P	20 16 01.5	+0.1	comp=Z,47nm,0.8s
SPMN	Marine on St.	72.83	341	P	P	20 16 00.4	-1.0	baz=155,SNR=11
F39A	Loretta	72.92	343	P	P	20 16 01.1	-0.9	baz=157,SNR=18
GLA	Glamis	72.93	319	*e*P	P	20 16 04.4	+2.1	comp=Z,36nm,1.0s
GLA	Glamis	72.93	319	*e*P	P	20 16 04.4	+2.1	
GLA				pmax	pmax			comp=Z,36nm,1.0s
GLA	Glamis	72.93	319	P	P	20 16 02.5	+0.2	baz=134,SNR=5.7
ISCO	Idaho Springs	73.08	330	*e*P	P	20 16 04.8	+1.4	comp=Z,41nm,1.0s
ISCO	Idaho Springs	73.08	330	*e*P	P	20 16 04.8	+1.4	
ISCO				pmax	pmax			comp=Z,41nm,1.0s
ISCO	Idaho Springs	73.08	330	P	P	20 16 02.3	-1.1	baz=143,SNR=44
SMCO	Snowmass	73.23	328	*e*P	P	20 16 06.3	+1.9	comp=Z,61nm,1.1s
F38A	Pierce - Schro	73.23	342	P	P	20 16 03.7	0.0	baz=156,SNR=17
F37A	Hinrichs Farm,	73.23	341	P	P	20 16 03.4	-0.3	baz=155,SNR=8.9
Y12C	Blythe	73.24	320	*e*P	P	20 16 06.2	+2.1	comp=Z,47nm,1.0s
Y12C	Blythe	73.24	320	P	P	20 16 04.3	+0.2	baz=135,SNR=9.4
LSQQ	Lebel-sur-Quev	73.24	353	P	P	20 16 03.4	-0.2	baz=170
DRLN	Deer Lake	73.31	6	*e*P	P	20 16 04.9	+0.8	comp=Z,97nm,1.1s
PV02	Paradox Valley	73.34	327	*e*P	P	20 16 06.3	+1.4	comp=Z,59nm,1.4s
PV13	Radium Mtn., P	73.35	326	*e*P	P	20 16 06.9	+2.0	comp=Z,50nm,1.1s
D41A	Chassel	73.38	345	*e*P	P	20 16 05.0	+0.5	comp=Z,58nm,0.8s
D41A	Chassel	73.38	345	P	P	20 16 04.5	0.0	baz=159,SNR=16
PDMCI	Parker Dam,Lak	73.40	320	P	P	20 16 04.7	-0.3	baz=135
IKP	In-Ko-Pah, Jac	73.42	318	P	P	20 16 05.5	+0.3	baz=134,SNR=7.3
PV05	Paradox Valley	73.43	326	*e*P	P	20 16 06.3	+0.9	comp=Z,40nm,1.1s
PV03	Paradox Valley	73.44	327	*e*P	P	20 16 07.2	+1.8	comp=Z,27nm,1.3s
SWSC	Sam W. Stewart	73.44	318	P	P	20 16 05.8	+0.6	baz=134,SNR=5.0
PV18	Skein Mesa, Pa	73.46	326	*e*P	P	20 16 07.1	+1.6	comp=Z,22nm,0.9s
PV12	Saucer Basin,	73.46	327	*e*P	P	20 16 07.0	+1.4	comp=Z,36nm,1.1s
PV07	Paradox Valley	73.48	327	*e*P	P	20 16 07.2	+1.6	comp=Z,48nm,1.2s
PV11	David Mesa, Pa	73.48	327	*e*P	P	20 16 07.5	+1.9	comp=Z,21nm,1.0s
SYO	Syowa Base	73.50	159	⇓*i*P	P	20 16 05.0	-0.1	
PV17	East Wray Mesa	73.51	326	*e*P	P	20 16 07.6	+1.7	comp=Z,22nm,1.0s
PV16	Nyswonger Mesa	73.52	327	*e*P	P	20 16 07.2	+1.3	comp=Z,29nm,1.2s
PV19	Morning Glory	73.55	326	*e*P	P	20 16 07.2	+1.2	comp=Z,32nm,1.3s
PMOZ	Porto Moniz, M	73.55	42	*e*S	S	20 25 18.9	0.0	
PV20	West Nyswonger	73.56	327	*e*P	P	20 16 07.5	+1.3	comp=Z,24nm,1.2s
PV04	Paradox Valley	73.57	327	*e*P	P	20 16 07.3	+1.2	comp=Z,42nm,1.3s
PV14	Lion Creek, Pa	73.62	326	*e*P	P	20 16 07.5	+1.0	comp=Z,34nm,1.1s
PV22	Blue Mesa, Par	73.62	327	*e*P	P	20 16 07.7	+1.2	comp=Z,72nm,1.2s
PV10	Paradox Valley	73.63	326	*e*P	P	20 16 07.7	+1.1	comp=Z,41nm,1.1s
PV23	Carpenter Ridg	73.67	327	*e*P	P	20 16 08.6	+1.8	comp=Z,40nm,1.2s
BC3	Big Chuckawall	73.72	319	P	P	20 16 07.5	+0.5	baz=134,SNR=23
E38A	The Farm, Brul	73.73	342	*e*P	P	20 16 06.0	-0.6	comp=Z,29nm,0.9s
E38A	The Farm, Brul	73.73	342	P	P	20 16 06.1	-0.6	baz=156
PV21	Cone Mtn., Par	73.74	327	*e*P	P	20 16 08.6	+1.4	comp=Z,34nm,1.1s
PV09	Paradox Valley	73.77	327	*e*P	P	20 16 08.9	+1.5	
MONP2	Monument Peak	73.78	318	P	P	20 16 08.1	+0.6	baz=133,SNR=16
BAR	Barrett	73.79	318	*e*P	P	20 16 08.9	+1.6	comp=Z,49nm,1.1s
W13A	Hualapai Mount	73.82	321	*e*P	P	20 16 09.2	+1.4	comp=Z,25nm,1.1s
SBA	Scott Base	73.82	190	*e*P	P	20 16 09.2	+2.3	comp=Z,124nm,1.6s
SBA	Scott Base	73.82	190	*e*P	P	20 16 09.2	+2.4	
SBA				pmax	pmax			comp=Z,124nm,1.6s
CHGQ	Chibougamau	73.83	355	P	P	20 16 07.4	+0.3	baz=172,SNR=5.3
U15A	North Rim	73.89	323	*e*P	P	20 16 09.6	+1.5	comp=Z,47nm,1.1s
IRM	Iron Mountain	73.89	320	P	P	20 16 08.1	+0.2	baz=134,SNR=16
MATQ	Matagami	74.00	353	P	P	20 16 08.0	-0.2	baz=169,SNR=6.6
NEE2	Needles Airpor	74.01	321	P	P	20 16 08.9	+0.4	baz=135
N23A	Red Feather La	74.11	330	*e*P	P	20 16 10.5	+1.2	comp=Z,46nm,0.9s
N23A	Red Feather La	74.11	330	P	P	20 16 09.1	-0.2	baz=143,SNR=41
SUSD	Miller	74.18	337	P	P	20 16 08.4	-0.9	baz=149
109C	Camp Elliot, M	74.20	318	P	P	20 16 10.0	+0.3	baz=133
PHWY	Pilot Hill	74.21	331	*e*P	P	20 16 11.0	+1.1	comp=Z,53nm,1.1s
BELC	Belle Mtn. Jos	74.29	319	P	P	20 16 10.2	-0.1	baz=134,SNR=18
PFO	Pinyon Flats O	74.30	319	*e*P	P	20 16 12.3	+1.9	comp=Z,31nm,1.0s
PFO	Pinyon Flats O	74.30	319	*e*P	P	20 16 12.3	+1.9	
PFO				pmax	pmax			comp=Z,31nm,1.0s
PFO	Pinyon Flats O	74.30	319	P	P	20 16 10.4	+0.1	baz=133,SNR=17
C40A	Isle Royale Na	74.32	344	*e*P	P	20 16 10.3	+0.4	comp=Z,68nm,1.7s
O20A	White River Ci	74.59	328	*e*P	P	20 16 13.3	+1.3	comp=Z,103nm,1.0s
O20A	White River Ci	74.59	328	P	P	20 16 11.9	-0.1	baz=141,SNR=36
KNB	Kanab	74.61	323	*e*P	P	20 16 14.1	+1.9	comp=Z,113nm,1.1s
KNB	Kanab	74.61	323	*e*P	P	20 16 14.1	+1.9	
KNB				pmax	pmax			comp=Z,113nm,1.1s
GMRC	Granite Mounta	74.63	320	P	P	20 16 12.5	+0.2	baz=134,SNR=56
PKCU	Pink Cliffs	74.64	324	*e*P	P	20 16 14.9	+2.4	comp=Z,18nm,0.9s
TBI	Tubuai	74.67	251	*e*S	S	20 25 37.6	+5.8	comp=Z,2µm,28.2s
MURC	Murrieta	74.74	318	P	P	20 16 13.1	+0.3	baz=133,SNR=6.7
VNDA	Vanda	74.82	190	P	P	20 16 15.4	+2.8	comp=Z,13nm,0.9s,baz=134,slow=4.4,SNR=47
VNDA	Vanda	74.82	190	*e*P	P	20 16 15.1	+2.5	comp=Z,39nm,1.3s
LCMT	Little Creek M	74.83	323	*e*P	P	20 16 15.7	+2.2	comp=Z,36nm,1.1s
SRU	San Rafael Swe	74.94	326	*e*P	P	20 16 15.1	+1.1	comp=Z,74nm,1.2s
SRU	San Rafael Swe	74.94	326	*e*P	P	20 16 15.1	+1.1	
SRU				pmax	pmax			comp=Z,74nm,1.2s
EYMN	Ely	74.95	343	*e*P	P	20 16 13.4	-0.2	comp=Z,16nm,0.7s
EYMN	Ely	74.95	343	P	P	20 16 12.9	-0.7	baz=156,SNR=18
MTPU	Mount Pierson	75.01	324	*e*P	P	20 16 16.4	+1.7	comp=Z,28nm,1.1s
BBRC	Big Bear Solar	75.02	319	P	P	20 16 14.7	0.0	baz=133
HEC	Hector,Ludlow	75.06	320	P	P	20 16 15.2	+0.5	baz=134,SNR=13
Q16A	Castle Valley	75.13	326	*e*P	P	20 16 16.8	+1.6	comp=Z,113nm,1.8s
SCI2	San Clemente I	75.16	317	P	P	20 16 16.2	+1.0	baz=132
SZCU	Shurtz Canyon	75.17	323	*e*P	P	20 16 16.2	+0.8	comp=Z,67nm,1.5s
TUQ	Turquoise Moun	75.24	320	P	P	20 16 16.1	+0.4	baz=134
CCUT	Cedar City	75.29	323	*e*P	P	20 16 18.5	+2.4	comp=Z,65nm,1.1s
RWWY	Rawlins	75.31	330	*e*P	P	20 16 17.2	+1.0	comp=Z,80nm,0.9s
P17A	Butcher Ranch,	75.32	326	*e*P	P	20 16 17.7	+1.5	comp=Z,70nm,1.2s
MSU	Marysvale	75.35	325	*e*P	P	20 16 18.3	+1.9	
MSU	Marysvale	75.35	325	*e*P	P	20 16 18.3	+1.9	
CIS	Catalina Islan	75.36	317	P	P	20 16 16.9	+0.6	baz=132
TMUT	Trail Mountain	75.43	326	*e*P	P	20 16 18.7	+1.8	comp=Z,77nm,1.9s
BFSC	Mount Baldy Ra	75.45	318	P	P	20 16 17.7	+0.7	baz=133,SNR=12
RRX	Edison Barstow	75.49	319	P	P	20 16 17.9	+0.9	baz=133
FMP	Fort Macarthur	75.49	318	P	P	20 16 18.1	+1.1	baz=132
SHPR	Sheep Range	75.55	321	*e*P	P	20 16 19.5	+1.9	comp=Z,38nm,1.2s
GSC	Goldstone, Bar	75.67	320	*e*P	P	20 16 19.8	+1.6	comp=Z,46nm,1.2s
GSC	Goldstone, Bar	75.67	320	*e*P	P	20 16 19.8	+1.6	
GSC				pmax	pmax			comp=Z,46nm,1.2s
GSC	Goldstone, Bar	75.67	320	P	P	20 16 19.4	+1.3	baz=134,SNR=22

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MWC  Mount Wilson     75.69 318 eP      P       20 16 20.6 +2.2
     comp=Z,76nm,1.4s
PASC Pasadena Art C   75.73 318 eP      P       20 16 21.5 +3.1
     comp=Z,63nm,1.4s
K22A Casper           75.77 331 eP      P       20 16 20.0 +1.4
     comp=Z,71nm,1.0s
K22A Casper           75.77 331  P      P       20 16 18.8 +0.2
     baz=143,SNR=10
SHOC Shoshone, Teco   75.77 320  P      P       20 16 18.3 -0.3
     baz=134
DECC Green Verdugo    75.88 318  P      P       20 16 20.1 +0.8
     baz=132
VAH  Vaihoa           75.88 259 eP      P       20 16 24.5 +4.8
     comp=Z,62nm,0.8s
RSSD Black Hills      75.89 333 eP      P       20 16 20.4 +1.1
     comp=Z,76nm,0.9s
RSSD Black Hills      75.89 333 eP      P       20 16 20.4 +1.1
RSSD                             pmax   pmax
     comp=Z,76nm,0.9s
RSSD Black Hills      75.89 333  P      P       20 16 18.5 -0.8
     baz=145
EDW2 Edwards Air Fo   76.09 319  P      P       20 16 21.6 +1.1
     baz=133,SNR=11
MPU  Maple Canyon     76.18 326 eP      P       20 16 22.3 +1.2
     comp=Z,53nm,1.2s
PMOR Pomariorio Ree   76.20 260 eP      P       20 16 26.8 +5.3
     comp=Z,77nm,0.8s
BLG  Laguna Peak, P   76.23 317  P      P       20 16 22.1 +0.8
     baz=132
TOA0 Torodi Ar. Sit   76.25  69 eP      P       20 16 20.8 -0.9
     comp=Z,46nm,0.9s
TORD Torodi Ar. Bea   76.25  69  P      P       20 16 22.2 +0.5
     comp=Z,21nm,0.4s,baz=247,slow=5.6,SNR=8.9
TORD                             S      S       20 25 44.8 -4.4
     comp=Z,7.2nm,0.3s,baz=234,slow=12,SNR=3.0
TORD                             PKKP   PKKPdf  20 35 24.0 +3.0
     comp=Z,10nm,0.5s,baz=63,slow=10,SNR=5.7
PSUT Pine Spring      76.27 324 eP      P       20 16 23.8 +2.2
     comp=Z,67nm,1.3s
LRMC Laurel Mtn Rad   76.31 319  P      P       20 16 22.5 +0.7
     baz=133,SNR=15
OSI  Osito Audit: C   76.36 318  P      P       20 16 22.0  0.0
     baz=132
NLU  North Lily Min   76.36 326 eP      P       20 16 24.4 +2.3
     comp=Z,33nm,1.2s
TPNV Topopah Spring   76.48 321 eP      P       20 16 24.8 +2.0
     comp=Z,75nm,1.3s
TPNV Topopah Spring   76.48 321  P      P       20 16 23.5 +0.8
     baz=134,SNR=39
FURC Furnace Creek,   76.50 320  P      P       20 16 23.7 +1.1
     baz=134,SNR=24
SCZ2 Santa Cruz Isl   76.51 317  P      P       20 16 23.9 +1.0
     baz=131,SNR=7.4
AGMN Agassiz Nation   76.52 340 eP      P       20 16 22.7 +0.2
     comp=Z,44nm,0.8s
AGMN Agassiz Nation   76.52 340  P      P       20 16 22.0 -0.5
     baz=153,SNR=20
JLU  Jordanelle       76.53 327 eP      P       20 16 24.5 +1.5
     comp=Z,108nm,1.4s
MPMC Manual Prospec   76.59 320  P      P       20 16 24.3 +0.8
     baz=133,SNR=22
CTU  Camp Tracy       76.75 326 eP      P       20 16 25.8 +1.6
     comp=Z,15nm,0.9s
PAE  Paea             76.75 256 eP      P       20 16 29.4 +4.8
     comp=Z,6.1nm,0.9s
ARVC Arvin            76.76 318  P      P       20 16 25.2 +1.0
     baz=132
PPT2 Papeete2         76.78 256 eP      P       20 16 29.9 +5.1
     comp=Z,48nm,1.1s
PPT2                            eS      S       20 26 00.2 +5.1
     comp=Z,3µm,26.2s
PPT  Papeete          76.79 257  P      P       20 16 27.7 +2.9
     comp=Z,33nm,0.8s,baz=112,slow=4.9,SNR=4.6
DAC  Darwin (Calif)   76.80 320 eP      P       20 16 24.4 -0.2
     comp=Z,43nm,1.1s
DAC  Darwin (Calif)   76.80 320 eP      P       20 16 24.4 -0.2
DAC                              pmax   pmax
     comp=Z,43nm,1.1s
SBC  Santa Barbara    76.85 317  P      P       20 16 24.9 +0.2
     baz=131
TCUT Toone Canyon     76.89 327 eP      P       20 16 26.7 +1.6
     comp=Z,103nm,1.4s
ISA  Isabella, Lake   76.91 319 eP      P       20 16 26.9 +1.8
     comp=Z,58nm,1.0s
ISA  Isabella, Lake   76.91 319 eP      P       20 16 26.9 +1.8
ISA                              pmax   pmax
     comp=Z,58nm,1.0s
ISA  Isabella, Lake   76.91 319  P      P       20 16 25.5 +0.4
     baz=132,SNR=24
DUG  Dugway, Tooele   76.92 325 eP      P       20 16 26.5 +1.3
     comp=Z,35nm,1.0s
DUG  Dugway, Tooele   76.92 325 eP      P       20 16 26.5 +1.3
DUG                              pmax   pmax
     comp=Z,35nm,1.0s
DUG  Dugway, Tooele   76.92 325  P      P       20 16 25.5 +0.3
     baz=137,SNR=42
R11A Troy Canyon, C   77.09 323 eP      P       20 16 27.6 +1.4
     comp=Z,59nm,1.4s
R11A Troy Canyon, C   77.09 323  P      P       20 16 26.9 +0.8
     baz=135,SNR=68
GRAC Grapevine Rang   77.16 321  P      P       20 16 27.1 +0.6
     baz=133,SNR=7.0
CWC  Cottonwood Cre   77.20 320  P      P       20 16 27.0 +0.2
     baz=133
PKM  Mcpherson Peak   77.21 318  P      P       20 16 28.0 +1.1
     baz=131,SNR=31
BW06 Boulder Array    77.25 329 eP      P       20 16 27.8 +0.8
     comp=Z,38nm,1.3s
BW06 Boulder Array    77.25 329  P      P       20 16 27.0  0.0
     baz=140,SNR=30
PD31 Pinedale Array   77.25 329 eP      P       20 16 27.9 +0.8
     comp=Z,32nm,1.3s
PDAR Pinedale Array   77.25 329  P      P       20 16 28.9 +1.9
     comp=Z,12nm,0.7s,baz=132,slow=7.1,SNR=63
HWUT Hardware Ranch   77.34 327 eP      P       20 16 28.8 +1.3
     comp=Z,42nm,1.1s
MDND Maddock          77.34 338 eP      P       20 16 28.5 +1.4
     comp=Z,232nm,0.8s
MDND Maddock          77.34 338  P      P       20 16 27.0 -0.1
     baz=149,SNR=10
TSUM Tsumeb           77.37 106 eP      P       20 16 27.9 -0.3
     comp=Z,11nm,0.8s
VES  Vestal, Richgr   77.39 319  P      P       20 16 27.8 +0.2
     baz=132,SNR=14
SPUT South Promonto   77.56 326 eP      P       20 16 30.4 +1.7
     comp=Z,94nm,1.2s
BGU  Big Grassy Mou   77.57 326 eP      P       20 16 30.5 +1.7
     comp=Z,51nm,1.3s
SMMC Simmler          77.60 318  P      P       20 16 29.0 +0.1
     baz=131,SNR=13
TIN  Tinemaha, Big    77.70 320  P      P       20 16 30.3 +0.7
     baz=133,SNR=6.2
VOG  Valley Oaks Go   77.89 319  P      P       20 16 31.1 +0.7
     baz=132
AHID Auburn Hatcher   77.98 328 eP      P       20 16 32.6 +1.5
     comp=Z,136nm,1.1s
PAGB Antelope Grade   78.03 318 eP      P       20 16 33.4 +2.2
     comp=Z,80nm,1.2s
HVU  Hansel Valley    78.07 327 eP      P       20 16 32.8 +1.3
     comp=Z,40nm,0.9s
ULM  Lac du Bonnet    78.26 341  P      P       20 16 33.5 +1.4
     comp=Z,36nm,0.6s,baz=163,slow=4.9,SNR=39
ULM  Lac du Bonnet    78.26 341 eP      P       20 16 32.1  0.0
     comp=Z,148nm,1.4s
SNOW Snow King Moun   78.34 329 eP      P       20 16 34.2 +1.1
     comp=Z,52nm,0.9s
LOHW Long Hollow      78.39 329 eP      P       20 16 34.4 +1.1
     comp=Z,42nm,0.8s
SCHQ Schefferville    78.44 360  P      P       20 16 34.1 +1.1
     comp=Z,19nm,0.5s,baz=190,slow=4.0,SNR=11
SCHQ Schefferville    78.44 360 eP      P       20 16 33.7 +0.7
     comp=Z,100nm,1.4s
MLAC Mammoth, Mammo78.45 320  P      P       20 16 34.3 +0.6
     baz=132
TPAW Teton Pass       78.46 329 eP      P       20 16 35.1 +1.3
     comp=Z,38nm,0.8s
OMMB Old Mammoth Mi   78.53 320 eP      P       20 16 35.6 +1.3
     comp=Z,41nm,0.9s
MOOW Moose Ponds      78.56 329 eP      P       20 16 35.2 +1.0
     comp=Z,22nm,0.8s
MDPB Devils Postpil   78.59 320 eP      P       20 16 36.2 +1.6
     comp=Z,24nm,0.9s
NV11 Mina Array Sit   78.60 321 eP      P       20 16 36.1 +1.6
     comp=Z,2.2nm,1.2s
ELK  Elko             78.60 324 eP      P       20 16 35.6 +1.1
     comp=Z,47nm,1.2s
ELK  Elko             78.60 324 eP      P       20 16 35.6 +1.1
ELK                              pmax   pmax
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     comp=Z,47nm,1.2s
FXWY Fox Creek        78.61 329 eP      P       20 16 35.7 +1.2
     comp=Z,22nm,0.9s
NVAR Mina Array Bea   78.68 321  P      P       20 16 37.3 +2.3
     comp=Z,9.1nm,0.7s,baz=143,slow=5.2,SNR=46
IMW  Indian Meadow    78.76 329 eP      P       20 16 37.1 +1.7
     comp=Z,66nm,0.9s
FLWY Flagg Ranch      78.79 329 eP      P       20 16 37.4 +2.0
     comp=Z,115nm,1.1s
LAO  LASA Array       78.87 333 eP      P       20 16 36.4 +0.8
     comp=Z,118nm,1.1s
LAO  LASA Array       78.87 333  P      P       20 16 35.9 +0.3
     baz=144,SNR=33
RLMT Red Lodge        78.93 331 eP      P       20 16 37.4 +1.1
     comp=Z,138nm,1.3s
RLMT Red Lodge        78.93 331  P      P       20 16 36.5 +0.3
     baz=141,SNR=62
RYN  Ryan             78.94 321 eP      P       20 16 37.8 +1.5
     comp=Z,39nm,1.2s
H17A Grant Village    78.97 330 eP      P       20 16 38.9 +2.4
     comp=Z,28nm,1.1s
H17A Grant Village    78.97 330  P      P       20 16 36.7 +0.3
     baz=140,SNR=14
KVN  Kaiserville      78.99 322 eP      P       20 16 37.4 +0.8
     comp=Z,59nm,1.1s
KVN  Kaiserville      78.99 322 eP      P       20 16 37.4 +0.8
KVN                              pmax   pmax
     comp=Z,59nm,1.1s
YFT  Old Faithful     79.13 329 eP      P       20 16 39.7 +2.3
     comp=Z,39nm,1.0s
YMR  Madison River    79.36 330 eP      P       20 16 40.2 +1.7
     comp=Z,88nm,0.9s
WAKR Walker           79.39 321 eP      P       20 16 40.4 +1.6
     comp=Z,39nm,1.1s
YHH  Holmes Hill      79.40 330 eP      P       20 16 40.2 +1.3
     comp=Z,124nm,1.1s
BMN  Battle Mountai   79.45 323 eP      P       20 16 41.0 +2.0
     comp=Z,14nm,0.6s
BMN  Battle Mountai   79.45 323 eP      P       20 16 41.1 +2.0
BMN                              pmax   pmax
     comp=Z,14nm,0.6s
DGMT Dagmar           79.52 336 eP      P       20 16 40.3 +1.3
     comp=Z,177nm,0.9s
DGMT Dagmar           79.52 336  P      P       20 16 39.2 +0.1
     baz=145,SNR=31
YHB  Horse Butte      79.53 329 eP      P       20 16 41.4 +2.0
     comp=Z,60nm,0.9s
YERR Yerington        79.59 321 eP      P       20 16 40.8 +0.9
     comp=Z,94nm,1.4s
CMB  Columbia Colle   79.63 320 eP      P       20 16 41.3 +1.4
     comp=Z,10nm,0.8s
CMB  Columbia Colle   79.63 320 eP      P       20 16 41.3 +1.4
CMB                              pmax   pmax
     comp=Z,10.0nm,0.8s
GCMT Greycliff        79.63 331 eP      P       20 16 41.1 +1.3
QLMT Earthquake Lak   79.70 329 eP      P       20 16 42.3 +2.0
PNTR Pine Nut         79.87 321 eP      P       20 16 43.4 +1.9
     comp=Z,65nm,0.9s
VCNR Virginia City    80.04 321 eP      P       20 16 44.0 +1.7
     comp=Z,43nm,1.2s
PAHR Pah Rah Range    80.16 321 eP      P       20 16 44.4 +1.5
     comp=Z,77nm,1.0s
HLID Hailey           80.20 327 eP      P       20 16 44.2 +1.2
     comp=Z,100nm,1.0s
HLID Hailey           80.20 327  P      P       20 16 43.8 +0.7
     baz=136,SNR=176
MCMT McKenzie Canyo   80.36 329 eP      P       20 16 45.4 +1.4
BOZ  Bozeman (W)      80.37 330 eP      P       20 16 44.4 +0.5
     comp=Z,23nm,1.0s
BOZ  Bozeman (W)      80.37 330 eP      P       20 16 44.4 +0.5
BOZ                              pmax   pmax
     comp=Z,23nm,1.0s
BOZ  Bozeman (W)      80.37 330  P      P       20 16 44.4 +0.5
     baz=139,SNR=28
BOSA Boshof           80.48 117 i P     P       20 16 39.7 -5.3
BOSA Boshof           80.48 117  P      P       20 16 45.9 +0.9
     comp=Z,7.0nm,0.8s,baz=232,slow=3.9,SNR=16
BOSA                             PKKPbc PKKPbc  20 35 26.5 +2.4
     comp=Z,1.1nm,0.5s,baz=79,slow=2.6,SNR=5.3
BOSA Boshof           80.48 117 eP      P       20 16 44.9 -0.1
     comp=Z,17nm,1.1s
BOSA Boshof           80.48 117 i P     P       20 16 39.7 -5.3
AFDM Forest Hills D   80.58 320 eP      P       20 16 46.3 +1.4
     comp=Z,42nm,1.2s
DLMT Dillon           80.64 329 eP      P       20 16 46.3 +1.0
     comp=Z,82nm,1.2s
BEKR Beckworth        80.83 321 eP      P       20 16 47.8 +1.4
     comp=Z,51nm,1.2s
ORV  Oroville         81.28 320 eP      P       20 16 50.4 +1.7
     comp=Z,69nm,1.2s
HRY  Holter Researc   81.30 330 eP      P       20 16 50.0 +1.3
EGMT Eagleton         81.40 332 eP      P       20 16 50.0 +0.9
     comp=Z,86nm,1.0s
EGMT Eagleton         81.40 332  P      P       20 16 49.3 +0.2
     baz=141,SNR=38
MAW  Mawson           81.41 163  P      P       20 16 50.8 +1.9
     comp=Z,43nm,0.8s,baz=197,slow=6.0,SNR=101
MAW  Mawson           81.41 163 eP      P       20 16 49.6 +0.7
     comp=Z,12nm,0.9s
WVOR Wild Horse Val   81.60 324 eP      P       20 16 51.1 +0.7
     comp=Z,23nm,1.3s
WVOR Wild Horse Val   81.60 324 eP      P       20 16 51.1 +0.7
WVOR                             pmax   pmax
     comp=Z,23nm,1.3s
MORF Marmelete        81.77  43 eP      P       20 16 51.2 -0.1
MORF                            epP     pP      20 17 38.2 -4.7
MORF                            eS      S       20 26 47.4 +0.6
O03E Paynes Creek     81.94 321  P      P       20 16 52.5 +0.3
     baz=131,SNR=20
PLID Pearl Lake       82.09 327 eP      P       20 16 53.9 +0.9
     comp=Z,106nm,0.9s
LBTB Lobatse          82.13 114 eP      P       20 16 54.4 +0.8
     comp=Z,65nm,1.9s
LBTB Lobatse          82.13 114 eP      P       20 16 54.4 +0.8
LBTB                             pmax   pmax
     comp=Z,65nm,1.9s
J08A Circle Bar Ran   82.14 325 eP      P       20 16 54.5 +1.3
     comp=Z,148nm,1.3s
MOD  Modoc Plateau    82.15 323 eP      P       20 16 54.0 +0.7
     comp=Z,33nm,0.9s
PBDV Barranco-do-Ve   82.18  44 eP      P       20 16 55.2 +1.8
     comp=Z,93nm,1.9s
LIS  Lisbon           82.34  42 epP     pP      20 17 41.6 -4.2
LIS                             eS      S       20 26 53.2 +0.9
PNCL Nicolau / Gran   82.34  43 eP      P       20 16 56.1 +1.9
     comp=Z,31nm,1.5s
MSO  Missoula         82.36 329 eP      P       20 16 55.4 +1.2
     comp=Z,55nm,1.3s
MSO  Missoula         82.36 329  P      P       20 16 54.6 +0.4
     baz=137,SNR=16
MESJ Messejana        82.37  43 eP      P       20 16 54.5 +0.2
MESJ                            epP     pP      20 17 41.5 -4.4
MESJ                            eS      S       20 26 53.3 +0.6
MESJ Messejana        82.37  43 eP      P       20 16 57.8 +3.5
     comp=Z,44nm,2.0s
O02D Mt. Diablo Mer   82.44 320  P      P       20 16 55.6 +0.8
     baz=130
WDC  Whiskeytown Da   82.56 321 eP      P       20 16 55.0 -0.2
     comp=Z,20nm,0.8s
WDC  Whiskeytown Da   82.56 321 eP      P       20 16 55.0 -0.2
WDC                              pmax   pmax
     comp=Z,20nm,0.8s
BMO  Blue Mountains   82.58 326 eP      P       20 16 55.8 +0.4
     comp=Z,66nm,1.4s
BMO  Blue Mountains   82.58 326 eP      P       20 16 55.8 +0.4
BMO                              pmax   pmax
     comp=Z,66nm,1.4s
N02D Trinity Center   82.91 321  P      P       20 16 57.2 +0.1
     baz=130,SNR=8.3
EVO  Evora            82.92  42 eP      P       20 16 58.6 +1.5
     comp=Z,24nm,1.3s
M04C Macdoel          82.93 322  P      P       20 16 57.7 +0.4
     baz=131,SNR=16
ALMR Almeirim         82.96  42 epP     pP      20 17 45.1 -4.0
ALMR                            eS      S       20 26 59.3 +0.7
KMRM Mail Ridge       83.01 320 eP      P       20 17 01.0 +3.3
     comp=Z,53nm,1.1s
K05A Summer Lake      83.03 323 eP      P       20 16 59.2 +1.4
     comp=Z,105nm,1.0s
PMTG Montargil        83.12  42 eP      P       20 17 00.1 +1.9
     comp=Z,33nm,2.2s
I07A Izee             83.19 325 eP      P       20 17 00.3 +1.8
     comp=Z,34nm,1.0s
M02C Callahan         83.26 321  P      P       20 16 58.9  0.0
     baz=130,SNR=5.6
F10A Beach Ranch, E   83.32 327 eP      P       20 17 00.3 +1.1
     comp=Z,104nm,1.2s
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PTOM Tomar            83.35  41 eP      P       20 17 00.9 +1.6
     comp=Z,36nm,2.3s
YBH  Yreka Blue Hor   83.40 321 eP      P       20 17 01.1 +1.5
     comp=Z,13nm,0.8s
YBH  Yreka Blue Hor   83.40 321 eP      P       20 17 01.1 +1.5
YBH                              pmax   pmax
     comp=Z,13nm,0.8s
K04D Chiloquin, OR    83.44 322  P      P       20 16 59.9 +0.1
     baz=131
KHMM Horse Mountain   83.44 320 eP      P       20 17 03.0 +3.0
     comp=Z,28nm,1.0s
L04D Klamath Falls    83.48 322  P      P       20 17 00.2 +0.1
     baz=130,SNR=12
JCC  Jacoby Creek,    83.58 320 eP      P       20 17 03.7 +3.3
     comp=Z,85nm,1.1s
J05D Fort Rock, OR    83.58 323  P      P       20 17 01.0 +0.3
     baz=131,SNR=16
G08A Pilot Rock       83.72 326 eP      P       20 17 02.5 +1.2
     comp=Z,36nm,1.4s
PINE Pine Mountain    83.76 324 eP      P       20 17 03.1 +1.5
     comp=Z,65nm,0.8s
PMRV Marv??o          83.85  42 eS      S       20 27 08.8 +1.2
KRMB Red Mountain     83.95 321 eP      P       20 17 03.7 +1.2
     comp=Z,31nm,1.0s
WALA Waterton Lakes   83.99 331 eP      P       20 17 03.3 +0.8
     comp=Z,36nm,1.0s
FFC  Flin Flon        84.00 340 eP      P       20 17 02.6 +0.4
     comp=Z,17nm,0.9s
FFC  Flin Flon        84.00 340 i P     P       20 17 03.9 +1.7
J04D Umpqua Nationa   84.04 323  P      P       20 17 02.8 -0.1
     baz=131
PCBR Castelo Branco   84.05  42 eP      P       20 17 06.0 +3.1
     comp=Z,22nm,2.0s
TAM  Tamanrasset      84.08  62 eP      P       20 17 04.2 +0.6
     comp=Z,20nm,0.9s
TAM  Tamanrasset      84.08  62  P      P       20 17 05.1 +1.5
TAM                              pmax   pmax
     comp=Z,28nm,0.9s
HUMO Hull Mountain    84.10 322 eP      P       20 17 03.6 +0.5
     comp=Z,9.4nm,0.6s
E09A Wood Farm, Sta   84.16 327 eP      P       20 17 03.3 +0.1
     comp=Z,35nm,1.4s
L02E Cave Junction    84.18 321  P      P       20 17 03.5  0.0
     baz=130,SNR=6.5
I05D Terrebonne, OR   84.34 324  P      P       20 17 04.8 +0.6
     baz=131,SNR=27
MTE  Manteigas        84.36  41 eP      P       20 17 06.4 +1.9
     comp=Z,42nm,1.5s
MTE  Manteigas        84.36  41 eS      S       20 27 11.1 -1.6
MTE  Manteigas        84.36  41 eP      P       20 17 04.9 +0.5
     comp=Z,16nm,0.9s
K02D Willamette Mer   84.56 322  P      P       20 17 06.4 +0.9
     baz=130,SNR=19
G06A Carlson Farm,    84.56 325 eP      P       20 17 07.2 +1.9
     comp=Z,37nm,1.3s
I04A Tendick Farm,    84.56 323  P      P       20 17 05.9 +0.5
     baz=130,SNR=14
E08A Dider Farm, El   84.60 327 eP      P       20 17 07.4 +2.0
     comp=Z,14nm,0.8s
HAWA Hanford          84.77 326 eP      P       20 17 08.0 +1.7
     comp=Z,56nm,0.9s
PVRL Vila Real        84.79  40 eP      P       20 17 08.3 +1.7
     comp=Z,43nm,1.8s
POLO Lamas de Olo     84.81  40 eP      P       20 17 08.5 +1.8
     comp=Z,15nm,1.6s
PCAB Cabril           84.88  40 eP      P       20 17 08.1 +1.1
     comp=Z,37nm,1.6s
NEW  Newport          84.89 329 eP      P       20 17 08.3 +1.4
     comp=Z,20nm,1.0s
NEW  Newport          84.89 329 eP      P       20 17 08.3 +1.4
NEW                              pmax   pmax
     comp=Z,20nm,1.0s
NEW  Newport          84.89 329  P      P       20 17 07.4 +0.5
     baz=135,SNR=12
PGAV Gavieira, Arco   84.89  40 eS      S       20 27 12.5 -5.5
D08A Wollman Farm,    84.92 327 eP      P       20 17 07.7 +0.6
     comp=Z,79nm,1.1s
G05D Wamic, OR        84.92 325  P      P       20 17 08.1 +0.9
     baz=131,SNR=11
J01E Myrtle Point     85.00 322  P      P       20 17 08.5 +1.0
     baz=129,SNR=6.2
H04A Detroit Lake     85.02 324 eP      P       20 17 08.3 +0.7
     comp=Z,31nm,1.0s
I03D Drain, OR        85.02 323  P      P       20 17 09.1 +1.5
     baz=130,SNR=9.7
KEBM Edson Butte      85.05 321 eP      P       20 17 10.1 +2.3
     comp=Z,98nm,1.1s
C09A Chrisman Ranch   85.11 328 eP      P       20 17 08.2 +0.2
     comp=Z,114nm,0.9s
MVO  Moncorvo         85.13  41 eP      P       20 17 09.8 +1.5
     comp=Z,42nm,1.3s
MVO  Moncorvo         85.13  41 eS      S       20 27 15.1 -5.2
H04D Lebanon          85.22 323  P      P       20 17 09.4 +0.8
     baz=130
F05D White Salmon     85.42 325  P      P       20 17 09.9 +0.3
     baz=131
FCC  Fort Churchill   85.47 346 eP      P       20 17 09.9 +0.5
     comp=Z,99nm,1.3s
FCC  Fort Churchill   85.47 346 eP      P       20 17 09.9 +0.5
FCC                              pmax   pmax
     comp=Z,99nm,1.3s
I02D Swisshome        85.56 323  P      P       20 17 10.6 +0.4
     baz=130,SNR=9.0
COR  Corvallis        85.56 323 eP      P       20 17 11.4 +1.2
     comp=Z,113nm,1.1s
COR  Corvallis        85.56 323 eP      P       20 17 11.4 +1.2
COR                              pmax   pmax
     comp=Z,113nm,1.1s
PBRG Braganca         85.69  40 eP      P       20 17 12.4 +1.3
     comp=Z,45nm,1.5s
PAB  San Pablo        85.81  43 eP      P       20 17 12.2 +0.4
     comp=Z,13nm,0.8s
PAB  San Pablo        85.81  43 eP      P       20 17 12.2 +0.4
PAB                              pmax   pmax
     comp=Z,13nm,0.8s
LTY  Liberty          85.93 326 eP      P       20 17 12.7 +0.5
     comp=Z,74nm,1.2s
G03D McMinnville, O   85.94 324  P      P       20 17 12.4 +0.3
     baz=130
ESDC Sonseca Array    86.13  43  P      P       20 17 14.6 +1.3
     comp=Z,7.8nm,0.8s,baz=234,slow=4.1,SNR=27
ESLA Sonseca Array    86.13  43 eP      P       20 17 13.3 +0.1
     comp=Z,14nm,1.1s
LON  Longmire         86.18 326 eP      P       20 17 14.3 +1.0
     comp=Z,20nm,1.0s
LON  Longmire         86.18 326 eP      P       20 17 14.3 +1.0
LON                              pmax   pmax
     comp=Z,20nm,1.0s
F04D Rainier, OR      86.37 325  P      P       20 17 14.7 +0.5
     baz=130
E04D Cinebar          86.44 325  P      P       20 17 14.8 +0.3
     baz=130
C06D Leavenworth      86.49 327  P      P       20 17 15.1 +0.4
     baz=132
NRS  Narsarsuaq       86.51  10 eP      P       20 17 15.7 +1.2
     comp=Z,41nm,1.0s
NRS  Narsarsuaq       86.51  10 eP      P       20 17 15.7 +1.2
NRS                              pmax   pmax
     comp=Z,41nm,1.0s
D05A Enumclaw         86.56 326 eP      P       20 17 16.3 +1.2
     comp=Z,72nm,1.0s
GUD  Guadarrama       86.57  43  P      P       20 17 20.0 +4.5
GUD                              pmax   pmax
     comp=Z,13nm,1.1s
D04E Lakebay          86.95 325  P      P       20 17 17.3 +0.3
     baz=130
B06A Marblemount      87.18 327 eP      P       20 17 18.3 +0.3
     comp=Z,54nm,0.7s
B05A Bryant           87.32 327  P      P       20 17 18.5 -0.2
     baz=131,SNR=21
D03D Eldon            87.35 326  P      P       20 17 19.2 +0.3
     baz=130,SNR=14
NLWA Neilton Lookou   87.66 325 eP      P       20 17 21.4 +1.0
     comp=Z,39nm,0.9s
A04D Lummi Island     87.92 327  P      P       20 17 21.9 +0.3
     baz=130
LSZ  Lusaka           88.22 106 eP      P       20 17 25.6 +1.6
     comp=Z,41nm,1.8s
LSZ  Lusaka           88.22 106 eP      P       20 17 25.6 +1.6
LSZ                              pmax   pmax
     comp=Z,41nm,1.8s
PGC  Sidney           88.25 326 eP      P       20 17 26.1 +3.0
     comp=Z,86nm,1.1s
LLLB Lillooet         88.76 328 eP      P       20 17 25.8 +0.2
     comp=Z,28nm,0.9s
SJPF Ste Jean         89.77  42 eP      P       20 17 32.4 +2.0
SJPF                             pmax   pmax
     comp=Z,12nm,0.9s
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CASY	Casey	90.05	179	eP	P	20 17 33.1	+1.8
	comp=Z,68nm,0.8s						
ETSF	Etsaut	90.06	42	eP	P	20 17 33.8	+2.0
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
EPF	Esparros	90.69	42	eP	P	20 17 37.6	+2.9
EPF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LFF	La Frestale	91.96	41	eP	P	20 17 41.7	+1.3
LFF				pmax	pmax		
	comp=Z,11nm,0.6s						
ANGG	Ammassalik, Gr	91.99	12	eP	P	20 17 41.1	+1.1
	comp=Z,23nm,1.1s						
MTLF	Montolieu	92.02	43	eP	P	20 17 41.8	+1.0
MTLF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MFF	Saint Martin d	92.33	39	eP	P	20 17 43.2	+1.1
MFF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BBB	Bella Bella	92.79	327	eP	P	20 17 45.0	+0.9
	comp=Z,25nm,1.0s						
GRR	Gorron	92.90	38	eP	P	20 17 46.9	+2.2
GRR				pmax	pmax		
	comp=Z,11nm,0.8s						
KEST	Kesra	93.12	52	P	P	20 17 48.3	+2.1
	comp=Z,9.9nm,0.9s,baz=246,slow=5.0,SNR=7.6						
KEST	Kesra	93.12	52	eP	P	20 17 48.8	+2.6
	comp=Z,12nm,1.0s						
LDF	La Druitiere	93.42	38	eP	P	20 17 51.9	+4.8
LDF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TCF	Toulx Ste Croi	93.54	40	eP	P	20 17 48.6	+0.8
TCF				pmax	pmax		
	comp=Z,16nm,1.5s						
URZ	Urewera	94.00	225	LR	LR	20 51 51.6	
	comp=Z,127nm,19.0s,baz=346,slow=30						
BGF	Bois d'Agland	94.06	40	eP	P	20 17 51.9	+1.8
BGF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YKA	Yellowknife Ar	94.17	340	P	P	20 17 51.8	+1.6
	comp=Z,14nm,0.5s,baz=139,slow=4.7,SNR=43						
YKW3	Yellowknife Ar	94.22	340	eP	P	20 17 52.6	+2.2
	comp=Z,23nm,0.8s						
SSB	Saint Sauveur	94.44	42	eP	P	20 17 52.5	+0.5
	comp=Z,4.1nm,0.7s						
SSB	Saint Sauveur	94.44	42	eP	P	20 17 52.5	+0.5
SSB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SMF	Signal de Mont	94.70	41	eP	P	20 17 54.2	+1.2
SMF				pmax	pmax		
	comp=Z,14nm,1.2s						
BORG	Borgarnes	95.07	18	LR	LR	20 58 51.5	
	comp=Z,103nm,18.1s,baz=232,slow=34						
ORIF	Oris-en-Rattie	95.09	43	eP	P	20 17 56.9	+1.9
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DIB	Dawson Inlet,	95.55	327	eP	P	20 17 59.3	+2.6
	comp=Z,71nm,0.3s						
SBF	Sospel	95.57	44	eP	P	20 17 58.8	+1.6
SBF				pmax	pmax		
	comp=Z,14nm,1.1s						
LPL	La Plagne	95.91	43	eP	P	20 18 00.8	+1.9
LPL				pmax	pmax		
	comp=Z,11nm,1.2s						
LPG	La Plagne	95.91	43	eP	P	20 18 01.0	+2.0
LPG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HAU	Haudompre	96.85	40	eP	P	20 18 06.8	+4.0
HAU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
DLBC	Dease Lake	97.31	332	eP	Pdif	20 18 05.8	+1.1
	comp=Z,21nm,1.0s						
TUE	Stuetta	97.96	43	eP	Pdif	20 18 08.3	+0.2
	comp=Z,6.2nm,0.9s						
SUMG	Summit	98.14	8	eP	Pdif	20 18 10.1	+1.6
	comp=Z,11nm,1.1s						
SUMG	Summit	98.14	8	eP	Pdif	20 18 10.1	+1.6
SUMG				pmax	pmax		
	comp=Z,11nm,1.1s						
FUORN	Ofenpass-Fuorn	98.60	43	eP	P	20 18 12.0	+1.0
	comp=Z,4.7nm,0.8s						
FETA	Feichten	99.06	43	ePdiff	Pdif	20 18 14.2	+1.3
	comp=Z,5.1nm,1.1s						
MOTA	Moosalm	99.43	42	ePdiff	Pdif	20 18 16.1	+1.6
	comp=Z,5.3nm,1.1s						
SQTA	Sankt Quirin	99.44	42	ePdiff	Pdif	20 18 15.5	+1.0
	comp=Z,9.3nm,1.2s						
WATA	Walderalm	99.71	42	ePdiff	Pdif	20 18 16.4	+0.6
	comp=Z,1.0nm,0.5s						
WTTA	Wattenberg	99.72	43	Pdiff	Pdif	20 18 16.6	+0.8
	comp=Z,7.8nm,1.1s						
ABTA	Abfaltersbach	100.06	43	ePdiff	Pdif	20 18 18.4	+1.2
	comp=Z,2.2nm,0.9s						
ABTA				epPKiKP	pPKiKP	20 23 35.9	-3.2
	comp=Z,0.6nm,0.2s						
OBKA	Obir	101.25	44	epPKiKP	pPKiKP	20 23 35.2	-6.1
	comp=Z,0.7nm,0.2s						
NKC	Novy Kostel	101.42	40	eSKS	SKSac	20 28 45.3	+3.2
NKC				eSDIF	Sdif	20 29 46.9	+2.2
NKC				eSP	SP	20 31 14.1	-3.8
MOA	Molln	101.59	43	ePdiff	Pdif	20 18 25.9	+1.9
	comp=Z,1.6nm,0.8s						
GERES	GERESS Array B	101.63	42	PKiKP	PKiKP	20 22 48.0	+1.3
	comp=Z,0.3nm,0.5s,baz=45,slow=0.8,SNR=3.7						
GERES				PKKPbc	PKKPdf	20 34 33.0	-5.4
	comp=Z,1.0nm,0.7s,baz=74,slow=1.9,SNR=4.5						
KHC	Kasperske Hory	101.66	41	eSKS	SKSac	20 28 45.3	+2.0
KHC				eSDIF	Sdif	20 29 47.1	+0.3
KHC				eSP	SP	20 31 18.5	-2.0
CLL	Collm	102.17	39	eSKSac	SKSac	20 28 51.0	+5.5
CLL				eSdif	Sdif	20 29 49.0	-1.8
CLL				eSP	SP	20 31 21.0	-4.7
CLL				ePPS	PPS	20 32 40.0	
CLL				eSS	SS	20 37 01.0	-0.6
CLL				eSSS	SSS	20 40 54.0	
CLL				e		20 42 48.0	
BRG	Berggiesshubel	102.55	40	SDIFF	Sdif	20 29 57.0	+3.0
PRU	Pruhonice	102.57	41	eSKS	SKSac	20 28 51.1	+3.7
PRU				eSDIF	Sdif	20 29 58.0	+3.8
PRU				eSP	SP	20 31 28.7	-1.3
GOPC	GO Pecny, Ondr	102.69	41	eSKS	SKSac	20 28 46.9	-1.2
GOPC				ex	x	20 29 59.5	
GOPC				eSP	SP	20 31 26.5	-4.8
UPC	Upice	103.64	41	eSKS	SKSac	20 28 54.6	+2.2
UPC				eSDIF	Sdif	20 30 04.6	+1.5
UPC				eSP	SP	20 31 37.5	-3.7
DPC	Dobruska-Polom	103.77	41	eSKS	SKSac	20 28 58.1	+5.0
DPC				eSDIF	Sdif	20 30 04.7	+0.4
DPC				eSP	SP	20 31 39.7	-2.9
OSTC	Ostas	103.78	41	eSKS	SKSac	20 28 56.2	+3.1
OSTC				ex	x	20 30 06.1	
OSTC				eSP	SP	20 31 43.0	+0.3
DAWY	Dawson	104.05	334	ePdif	Pdif	20 18 35.4	+0.9
EGAK	Eagle	105.05	335	ePdif	Pdif	20 18 40.9	+2.0
ILAR	Eielson Array	107.33	334	Pdiff	Pdif	20 18 51.5	+2.4
	comp=Z,1.3nm,0.9s,baz=151,slow=3.0,SNR=8.0						
ILAR				PKiKP	PKiKP	20 22 58.3	+1.7
	comp=Z,0.6nm,0.9s,baz=132,slow=1.3,SNR=5.0						
ILAR				PKKPbc	PKKPbc	20 34 13.6	-1.6
	comp=Z,0.4nm,0.6s,baz=304,slow=4.4,SNR=4.3						
AKASG	Malin Array Be	111.77	43	PKiKP	PKiKP	20 23 06.8	+1.5
	comp=Z,1.8nm,0.5s,baz=263,slow=2.4,SNR=12						
AKASG				PKKPbc	PKKPbc	20 34 00.6	+0.2
	comp=Z,2.1nm,0.6s,baz=63,slow=3.8,SNR=7.1						
FINES	FINESS Array B	112.00	31	PKiKP	PKiKP	20 23 06.8	+1.4
	comp=Z,2.6nm,0.9s,baz=357,slow=3.1,SNR=8.7						
FINES				PKKPbc	PKKPbc	20 33 59.5	-0.4
	comp=Z,0.7nm,0.4s,baz=72,slow=4.3,SNR=14						
BRTR	Keskin Array B	112.51	55	PKiKP	PKiKP	20 23 08.4	+1.1
	comp=Z,1.1nm,0.8s,baz=188,slow=1.3,SNR=4.5						
BRTR				PKKPbc	PKKPab	20 34 01.4	-3.3
	comp=Z,0.7nm,0.8s,baz=125,slow=4.1,SNR=2.6						
ARCES	ARCESS Array B	112.94	22	PKiKP	PKiKP	20 23 08.3	+1.2
	comp=Z,1.1nm,0.8s,baz=209,slow=2.2,SNR=4.1						
ARCES				PKKPbc	PKKPbc	20 33 56.0	-1.1
	comp=Z,1.8nm,0.6s,baz=93,slow=3.6,SNR=19						
ANN	Anapa	116.22	50	i PKIKP	PKiKP	20 23 16.5	+2.5
ANN				pmax	pmax		
	comp=Z,219nm,1.8s						
OBN	Obninsk	116.77	39	⇓iPKIKP	PKiKP	20 23 14.9	+0.1
OBN				pmax	pmax		
	comp=Z,11nm,0.9s						
LPSR	Galich'ya Gora	118.01	42	ePKIKP	PKiKP	20 23 18.9	+1.6
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	118.07	43	ePKIKP	PKiKP	20 23 18.0	+0.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	Divnogorie	118.13	44	ePKIKP	PKiKP	20 23 18.6	+1.1
VORD				pmax	pmax		
	comp=Z,7.0nm,0.5s						
STKA	Stephens Creek	118.28	207	PKP	PKiKP	20 23 20.4	+1.8
	comp=Z,3.0nm,0.9s,baz=225,slow=1.4,SNR=3.6						
STKA				PKKPbc	PKKPab	20 33 38.6	-4.5
	comp=Z,2.4nm,0.9s,baz=340,slow=4.7,SNR=4.2						
KBZ	Khabaz	119.99	52	PKP	PKiKP	20 23 23.7	+2.3
	comp=Z,7.1nm,0.9s,baz=217,slow=3.4,SNR=6.1						
PRGR	Permogore	121.34	31	ePKIKP	PKiKP	20 23 24.0	+0.5
PRGR				pmax	pmax		
	comp=Z,18nm,0.9s						
NWAO	Narrogin (SRO)	123.34	184	PKP	PKiKP	20 23 30.1	+1.5
	comp=Z,11nm,0.7s,baz=136,slow=3.4,SNR=12						
BILL	Bilibino	125.53	338	ePKPdf	PKiKP	20 23 32.5	+0.9
BILL	Bilibino	125.53	338	i PKIKP	PKiKP	20 23 32.6	+0.9
BILL				i		20 25 23.1	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CTA	Charters Tower	125.76	219	PKP	PKiKP	20 23 35.0	+1.3
	comp=Z,7.7nm,0.5s,baz=94,slow=2.3,SNR=16						
CTA	Charters Tower	125.76	219	PKIKP	PKiKP	20 23 35.0	+1.3
CTAO	Charters Tower	125.76	219	ePKPdf	PKiKP	20 23 34.6	+0.9
CTAO	Charters Tower	125.76	219	ePKIKP	PKiKP	20 23 34.6	+0.9
MORW	Morawa	127.25	183	ePKPdf	PKiKP	20 23 37.3	+0.9
AS31	Alice Springs	128.65	204	ePKPdf	PKiKP	20 23 39.4	0.0
ASAR	Alice Springs	128.65	204	PKP	PKiKP	20 23 40.0	+0.6
	comp=Z,23nm,0.7s,baz=134,slow=1.8,SNR=98						
ARU	Arti	128.94	36	ePKPdf	PKiKP	20 23 39.4	+0.6
ARU	Arti	128.94	36	i PKIKP	PKiKP	20 23 40.3	+1.5
ARU						20 25 52.3	
ARU				SS	SS	20 42 46.7	-3.5
GEYT	Alibeck	131.27	60	PKP	PKiKP	20 23 45.4	+1.2
	comp=Z,1.9nm,0.7s,baz=222,slow=2.0,SNR=5.0						
GEYT				SKPbc	SKPab	20 26 49.9	+0.8
	comp=Z,5.8nm,0.8s,baz=251,slow=4.5,SNR=11						
TIXI	Tiksi	131.44	354	ePKPdf	PKiKP	20 23 43.7	+0.3
TIXI	Tiksi	131.44	354	⇓iPKIKP	PKiKP	20 23 44.9	+1.5
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
ABKAR	Akbulak array	131.46	45	ePKPdf	PKiKP	20 23 44.1	0.0
WB2	Warramunga Arr	131.83	207	ePKPdf	PKiKP	20 23 46.1	+0.3
WRA	Warramunga Arr	131.83	207	PKP	PKiKP	20 23 46.3	+0.5
	comp=Z,15nm,0.5s,baz=170,slow=2.3,SNR=33						
WRA				SKPbc	SKiKP	20 26 53.3	-8.8
	comp=Z,6.2nm,0.7s,baz=165,slow=3.6,SNR=11						
WRAB	Tennant Creek	131.84	207	ePKPdf	PKiKP	20 23 45.6	-0.3
WRAB	Tennant Creek	131.84	207	⇑iPKIKP	PKiKP	20 23 47.0	+1.1
WRAB				pmax	pmax		
	comp=Z,61nm,1.7s						
SEY	Seymchan	133.14	337	⇓iPKIKP	PKiKP	20 23 48.1	+1.0
PSA00	Pilbara Seismi	134.33	188	ePKPdf	PKiKP	20 23 50.9	0.0
PETK	Petropavlovsk-	135.75	323	PKhKP	PKPpre	20 23 45.5	
	comp=Z,3.8nm,0.5s,baz=67,slow=2.3,SNR=18						
PETK				PKP	PKiKP	20 23 53.2	+0.5
	comp=Z,10nm,0.5s,baz=77,slow=3.2,SNR=25						
PETK				SKPbc	SKiKP	20 27 04.9	-4.0
	comp=Z,4.6nm,0.8s,baz=56,slow=6.0,SNR=5.4						
BRVK	Borovoye	136.48	37	ePKPdf	PKiKP	20 23 54.4	+0.2
BRVK	Borovoye	136.48	37	⇓iPKIKP	PKiKP	20 23 54.4	+0.2
YAK	Yakutsk	140.32	348	ePKPpre	PKPpre	20 23 53.2	
YAK	Yakutsk	140.32	348	ePKHKP	PKPpre	20 23 53.2	
KURK	Kurchatov	142.13	36	ePKPdf	PKiKP	20 24 01.9	-3.9
KURK	Kurchatov	142.13	36	ePKIKP	PKiKP	20 24 01.9	-3.9
ARSB	Arslanbob	142.23	53	ePKPdf	PKPdf	20 24 02.2	-1.3
JAY	Jayapura	142.59	229	PKhKP	PKPdf	20 24 03.9	-1.0
	comp=Z,13nm,0.9s,baz=300,slow=2.7,SNR=8.8						
GENI	Genyem	142.91	228	PKP	PKiKP	20 24 06.9	-1.6
AAK	Ala-Archa	142.95	50	ePKPdf	PKPdf	20 24 03.5	-1.2
AAK	Ala-Archa	142.95	50	cePKIKP	PKiKP	20 24 05.0	-3.0
AAK				pmax	pmax		
	comp=Z,12nm,1.0s						
ZAA0	Zalesovo Array	143.18	28	ePKPdf	PKPdf	20 24 02.7	-1.8
ZALV	Zalesovo Beam	143.18	28	PKhKP	PKPbc	20 24 03.1	+1.0
	comp=Z,28nm,0.7s,baz=306,slow=4.7,SNR=52						
ZALV				SKPbc	SKiKP	20 27 25.2	+1.0
	comp=Z,12nm,0.7s,baz=301,slow=3.8,SNR=7.6						
NIL	Nilore	143.74	65	ePKPdf	PKPdf	20 24 04.0	-2.3
BOOM	Boomskoye usch	144.01	50	ePKPdf	PKiKP	20 24 06.1	-4.1
BOOM	Boomskoye usch	144.01	50	ePKIKP	PKiKP	20 24 06.1	-4.1
PALK	Pallekele	144.60	113	PKP	PKiKP	20 24 09.2	-2.8
	comp=Z,17nm,0.6s,baz=117,slow=1.4,SNR=5.7						
PALK	Pallekele	144.60	113	ePKPdf	PKiKP	20 24 08.9	-3.1
BATI	Baumata	144.61	198	PKP	PKiKP	20 24 09.6	-2.5
	comp=Z,222nm,0.6s,baz=218,slow=1.0,SNR=51						
BATI	Baumata	144.61	198	PKP	PKiKP	20 24 09.9	-2.2
SOEI	Soe	144.86	199	ePKPbc	PKiKP	20 24 10.2	-2.5
SOEI	Soe	144.86	199	PKP	PKiKP	20 24 11.1	-1.6
KUR	Kuril'sk	144.90	316	d iPKIKP	PKiKP	20 24 10.0	-1.6
KUR				pmax	pmax		
	comp=Z,1µm,2.9s						
KSH	Kashi	144.90	55	ePKP	PKPbc	20 24 02.7	-5.2
KSH				PP	PP	20 27 28.5	+0.2
KSH				PKS	PKSdf	20 27 39.0	-4.8
KSH				SKKS		20 33 52.7	
KSH				AMB	AMB		
	comp=Z,120nm,6.1s						
KSH				LR	LR		
	comp=Z,64nm,7.0s						
KSH				LR	LR		
	comp=Z,65nm,6.1s						
KDJ	Kajisay	144.99	50	ePKPbc	PKiKP	20 24 09.1	-3.1
KDJ	Kajisay	144.99	50	ePKIKP	PKiKP	20 24 09.1	-3.1
PRZ	Przheval'sk	145.72	49	ePKPdf	PKiKP	20 24 11.8	-1.9
PRZ	Przheval'sk	145.72	49	ePKP2	PKiKP	20 24 11.8	-1.9
MAKZ	Makanchi	146.08	40	ePKPdf	PKPab	20 24 10.5	-1.6
MAKZ	Makanchi	146.08	40	ePKIKP	PKPab	20 24 10.5	-1.6
WBSI	Waikabubak, Su	146.12	191	PKP	PKiKP	20 24 14.2	-1.0
BOD	Bodaibo	146.14	359	ePKIKP	PKPab	20 24 10.2	-1.7
BOD				pmax	pmax		
	comp=Z,83nm,0.9s						
MK31	Makanchi Array	146.27	40	ePKPdf	PKPab	20 24 11.1	-1.7
MK31	Makanchi Array	146.27	40	ePKIKP	PKPab	20 24 11.1	-1.7
MKAR	Makanchi Array	146.27	40	PKPbc	PKiKP	20 24 12.5	-2.0
	comp=Z,47nm,0.8s,baz=310,slow=1.5,SNR=123						
MKAR				SKPbc	SKiKP	20 27 33.0	+2.1
	comp=Z,7.1nm,0.7s,baz=315,slow=2.5,SNR=5.5						
MMRI	Maumere	146.49	196	ePKPdf	PKiKP	20 24 13.3	-2.6
MMRI	Maumere	146.49	196	PKP	PKiKP	20 24 15.0	-0.9
EDFI	Ende, Flores	146.51	195	PKP	PKiKP	20 24 15.1	-1.0
BAKI	Biak	146.64	225	PKP	PKiKP	20 24 15.8	-0.4
HYB	Hyderabad	146.87	95	i PKP	PKiKP	20 24 15.0	-1.6
HYB				e		20 25 12.0	
YSS	Yuzh-Sakhalins	147.13	322	⇑ePKP2	PKiKP	20 24 14.9	-1.3
YSS				pmax	pmax		
	comp=Z,80nm,0.7s						
JAGI	Jajag, Banyuwa	147.79	182	ePKPbc	PKPab	20 24 18.9	-0.7
GRNR	Gornyy	147.79	332	ePKIKP	PKPab	20 24 15.6	-3.1
GRNR				pmax	pmax		
	comp=Z,78nm,1.0s						
UGM	Wanagama	148.23	175	ePKPbc	PKPab	20 24 19.8	-1.6
CISI	Cisompet, Garu	148.25	170	ePKPbc	PKPab	20 24 19.0	-2.5
CISI	Cisompet, Garu	148.25	170	PKP	PKPab	20 24 19.6	-1.9
JMP	Maruseppu	148.32	317	P	PKiKP	20 24 16.8	-2.0
WOJI	Wonogiri, Jawa	148.34	175	PKP	PKPab	20 24 19.8	-2.0
ZEA	Zeya	148.44	344	ePKIKP	PKPbc	20 24 15.2	-2.0
ZEA				pmax	pmax		
	comp=N,84nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,210nm,2.0s						
GUMO	Guam	148.50	257	ePKPbc	PKPab	20 24 18.8	-3.8
JWK2	Keihoku	148.53	320	P	PKPab	20 24 18.3	-3.5
ASAJ	Asahikawa	148.74	317	PKPbc	PKPab	20 24 19.1	-3.7
	baz=73,slow=2.1						
ASAJ	Asahikawa	148.74	317	P	PKiKP	20 24 18.1	-1.5
CGJI	Cibinong	148.74	165	PKP	PKPab	20 24 20.3	-3.1
SARN	Sarigan	148.79	263	ePKPbc	PKPab	20 24 19.4	-4.4
NGJI	Ngawi	148.84	176	PKP	PKPab	20 24 24.1	+0.3
LEM	Lembang	148.93	169	PKPbc	PKPab	20 24 21.2	-3.2
	comp=Z,188nm,0.6s,baz=42,slow=1.2,SNR=26						
AAI	Ambon	148.97	210	PKP	PKPab	20 24 20.7	-3.7
SMRI	Semarang	149.08	174	ePKPbc	PKPab	20 24 20.8	-4.0
GRJI	Gresik	149.33	178	PKP	PKPab	20 24 21.5	-4.3
ERM	Erimo	149.38	313	ePKPdf	PKPdf	20 24 14.8	-0.6
ERM				ePKPab	PKPab	20 24 24.6	-0.8
ERM	Erimo	149.38	313	ePKIKP	PKPdf	20 24 14.8	-0.6
ERM				e		20 24 24.6	
JEM	Erimo	149.38	313	P	PKPab	20 24 23.9	-1.5
KASI	Kota Agung	149.48	162	PKP	PKPab	20 24 21.9	-4.5
SIJI	Sorong	149.82	218	PKPbc	PKPab	20 24 23.8	-4.2
	comp=Z,143nm,0.7s,baz=98,slow=2.1,SNR=39						
BLSI	Bandar Lampung	149.83	164	PKP	PKPab	20 24 24.8	-3.1
LWLI	Liwa	149.84	161	PKP	PKPab	20 24 25.1	-3.0
NLAI	Namlea	149.86	208	PKP	PKPab	20 24 25.3	-2.7
JEW	Eniwo	150.10	316	P	PKPab	20 24 23.7	-4.7
BKSI	Bulukumba	150.19	194	PKP	PKiKP	20 24 21.2	-2.3
KLI	Kotabumi	150.21	163	PKP	PKiKP	20 24 23.7	+0.1
MDSI	Maura Dua	150.38	161	PKP	PKiKP	20 24 22.9	-1.0
KAPI	Kappang	150.56	193	PKPbc	PKPab	20 24 25.4	-5.5
	comp=Z,34nm,0.4s,baz=168,slow=0.9,SNR=30						
KAPI	Kappang	150.56	193	ePKPbc	PKPab	20 24 26.3	-4.6
MOY	Mondy	150.72	16	ePKIKP	PKPbc	20 24 19.9	-3.1
MOY				pmax	pmax		
	comp=Z,129nm,2.4s						
JOT	Ohata	151.08	314	P	PKiKP	20 24 24.8	+0.3
WMQ	Urumqi	151.09	40	ePKPbc	PKPdf	20 24 18.5	+0.4
WMQ				AMB	AMB		
	comp=Z,120nm,4.9s						
JSH	Shimam	151.09	317	P	PKiKP	20 24 25.5	+1.0
TLY	Talaya	151.31	13	ePKIKP	PKPbc	20 24 20.7	-3.6
TLY				pmax	pmax		
	comp=Z,74nm,1.4s						
JTM	Tenmabayashi	151.34	313	P	PKiKP	20 24 25.8	+0.7
SANI	Sanana	151.40	207	PKP	PKiKP	20 24 24.7	-1.3
SPSI	Sidrap Palu	151.58	194	PKP	PKPab	20 24 29.6	-5.5
KRJI	Kerinci	151.67	154	PKP	PKiKP	20 24 25.4	-1.3
JOM	Ohasama	151.77	310	P	PKiKP	20 24 26.9	+0.9
PDSI	Padang	152.32	151	PKP	PKPab	20 24 30.5	-7.8
ZAK	Zakamensk	152.46	14	ePKIKP	PKPbc	20 24 21.9	-5.1
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
JMM	Marumori	152.77	307	P	PKiKP	20 24 28.9	+0.8
TPI	Tanjungpandan	152.90	167	PKP	PKiKP	20 24 26.4	-2.7
JYA	Atsumi	153.25	309	P	PKiKP	20 24 31.5	+2.4
TNTI	Ternate	153.27	213	ePKPdf	PKPdf	20 24 20.1	-2.0
TNTI				ePKPab	PKPab	20 24 43.5	+1.3
LUWI	Luwuk	153.54	202	ePKPdf	PKPdf	20 24 23.3	+0.8
LUWI				ePKPbc	PKiKP	20 24 32.4	+1.9
LUWI				ePKPab	PKPab	20 24 45.0	+1.6
LUWI	Luwuk	153.54	202	PKP	PKPab	20 24 35.7	-7.7
USRK	Ussuriysk Ar.	154.66	327	PKPbc	PKiKP	20 24 33.5	+1.7
	comp=Z,6.4nm,0.6s,baz=10,slow=2.5,SNR=13						
JRY	Ryogami san	154.88	305	P	PKiKP	20 24 35.2	+2.6
JOD2	Odawara 2	155.00	303	P	PKPbc	20 24 34.9	+2.0
MJAR	Matsushiro Arr	155.19	306	PKP	PKPdf	20 24 25.8	+1.6
	comp=Z,1.6nm,0.8s,baz=128,slow=2.5,SNR=3.9						
MJAR				PKPbc	PKPbc	20 24 35.1	
	comp=Z,7.2nm,0.5s,baz=91,slow=1.2,SNR=20						
MJAR				PKPab	PKPab	20 24 51.7	+1.6
	comp=Z,16nm,0.9s,baz=66,slow=1.8,SNR=13						
MAJO	Matsushiro	155.19	306	ePKPdf	PKPdf	20 24 25.8	+1.6
MAJO				e		20 24 51.7	
MAJO				ePKPab	PKPab	20 24 52.7	+2.6
MAJO	Matsushiro	155.19	306	ePKIKP	PKPdf	20 24 25.8	+1.6
MAT	Matsushiro	155.19	306	ePKP	PKPbc	20 24 34.3	
MJB9	Matsu-Tunnel	155.19	306	ePKPab	PKPab	20 24 53.0	+2.8
SONM	Songino Array	155.51	11	PKP	PKPdf	20 24 25.9	+1.6
	comp=Z,6.2nm,0.8s,baz=227,slow=1.6,SNR=29						
SONM				PKPbc	PKPbc	20 24 35.7	
	comp=Z,4.4nm,0.7s,baz=296,slow=1.2,SNR=14						
SONM				PKPab	PKPab	20 24 52.7	+1.6
	comp=Z,9.8nm,0.7s,baz=330,slow=4.5,SNR=14						
ULN	Ulaanbaatar	155.59	10	ePKPdf	PKPdf	20 24 25.6	+1.1
ULN				ePKPab	PKPab	20 24 52.8	+1.3
ULN	Ulaanbaatar	155.59	10	ePKIKP	PKPdf	20 24 25.6	+1.1
ULN				e		20 24 52.8	
JGN	Niukaw	155.98	306	P	PKPab	20 24 39.7	-14
JGF	Kuroka	156.19	305	P	PKPab	20 24 37.6	-17
INU	Inuyama	156.55	304	ePKPdf	PKPdf	20 24 27.3	+1.3
INU				ePKPab	PKPab	20 24 57.7	+1.8
KSM	Kuching	157.49	172	ePKPdf	PKPdf	20 24 27.3	-0.5
KSM				ePKPab	PKPab	20 25 02.0	+1.7
CN2	Changchun	157.82	336	eP	PKPab	20 24 46.1	-15
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
SBUM	Sibu	158.62	177	ePKPdf	PKPdf	20 24 28.8	-0.4
SBUM				ePKPab	PKPab	20 25 07.3	+2.1
LSA	Lhasa	159.39	69	ePKPdf	PKPdf	20 24 31.2	+1.0
LSA				ePKPab	PKPab	20 25 10.5	+1.4
LSA	Lhasa	159.39	69	ePKIKP	PKPdf	20 24 31.2	+1.0
LSA				e		20 25 10.5	
SHL	Shillong	160.44	81	ePKPdf	PKPdf	20 24 31.9	+0.8
SHL	Shillong	160.44	81	ePKIKP	PKPdf	20 24 31.9	+0.8
GTA	Gaotai	160.78	33	ePKP	PKPdf	20 24 32.1	+1.1
GTA				PKPab	PKPab	20 25 15.3	+1.0
GTA				pPKP	pPKPdf	20 25 23.1	-3.4
GTA				PP	PP	20 28 59.4	+2.2
GTA				AMB	AMB		
	comp=Z,62nm,8.4s						
GTA				LR	LR		
	comp=Z,250nm,19.7s						
GTA				LR	LR		
	comp=Z,400nm,19.7s						
GTA				LR	LR		
	comp=Z,130nm,21.3s						
KSRS	Korea Array	161.62	321	PKP	PKPdf	20 24 33.5	+1.8
	comp=Z,4.4nm,0.9s,baz=39,slow=0.9,SNR=9.9						
KSRS				PKPab	PKPab	20 25 19.4	+1.6
	comp=Z,2.6nm,0.5s,baz=70,slow=4.0,SNR=8.5						
HHC	Hu-ho-hao-te	163.06	5	PKP	PKPdf	20 24 37.4	+4.1
DL2	Dalian	163.49	337	PKP	PKPdf	20 24 34.2	+0.7
DL2				PKPab	PKPab	20 25 27.3	+1.4
DL2				sPKP		20 25 43.3	
DL2				PP	PP	20 29 12.0	+1.0
DL2				AMB	AMB		
	comp=Z,280nm,5.3s						
LZH	Lanzhou	165.37	32	ePKP	PKPdf	20 24 39.0	+3.5
LZH				pPKP	PKPab	20 25 19.9	-15
LZH				sPKP		20 25 42.4	
CM31	Chiang Mai Arr	165.51	109	ePKPdf	PKPdf	20 24 36.3	+0.4
CM31				ePKPab	PKPab	20 25 36.1	+0.5
CMAR	Chiang Mai Arr	165.51	109	PKP	PKPdf	20 24 37.2	+1.3
	comp=Z,4.7nm,1.0s,baz=269,slow=2.3,SNR=25						
CMAR				PKPab	PKPab	20 25 36.1	+0.5
	comp=Z,3.1nm,0.7s,baz=247,slow=5.2,SNR=12						
CHTO	Chiang Mai	165.66	108	ePKPdf	PKPdf	20 24 37.2	+1.2
CHTO				ePKPab	PKPab	20 25 36.5	+0.2
CHTO	Chiang Mai	165.66	108	PKIKP	PKPdf	20 24 37.7	+1.6
CMMT	Chiang Mai	165.66	108	P	PKPab	20 25 37.3	+1.0
	comp=Z,4.9nm,1.4s						
TIY	Taiyuan	166.24	3	ePKP	PKPdf	20 24 38.2	+2.1
TIY				PKPab	PKPab	20 25 37.0	-1.1
TIY				PP	PP	20 29 26.0	+0.9
TIA	Tai'an	167.33	346	PKP	PKPdf	20 24 38.6	+1.7
CD2	Chengdu	169.01	49	PKP	PKPdf	20 24 38.1	-0.1
CD2				pPKP	pPKPdf	20 25 27.1	-6.8
CD2				PP	PP	20 29 36.6	-3.8
CD2				SKS	SKSdf	20 31 24.4	+2.1
CD2				SKKS	SKKSac	20 36 05.8	-1.5
CD2				AMB	AMB		
	comp=Z,550nm,6.7s						
XAN	Xi'an	169.21	20	ePKPdf	PKPdf	20 24 37.0	-1.2
XAN				ePKPab	PKPab	20 25 52.2	+0.8
XAN	Xi'an	169.21	20	PKP	PKPdf	20 24 39.8	+1.6
XAN				PKPab	PKPab	20 25 52.0	+0.7
XAN				PP	PP	20 29 39.9	-0.5
XAN				AMB	AMB		
	comp=Z,220nm,7.1s						
XAN				LR	LR		
	comp=Z,120nm,25.0s						
XAN				LR	LR		
	comp=Z,160nm,24.8s						
XAN	Xi'an	169.21	20	ePKIKP	PKPdf	20 24 37.0	-1.2
XAN				e		20 25 52.2	
NJ2	Nanjing	170.56	330	ePKP	PKPdf	20 24 40.4	+1.4
SLVN	Son La	170.91	105	ePKPdf	PKPdf	20 24 40.0	+0.4
SLVN				ePKPab	PKPab	20 26 01.0	+1.4
ENH	Enshi	172.81	28	ePKPdf	PKPdf	20 24 40.1	-0.1
SSLB	Suanglung	173.03	270	ePKPdf	PKPdf	20 24 41.2	+0.8
GYA	Guiyang	173.45	66	PKP	PKPdf	20 24 43.8	+3.1
GYA				pPKP	pPKPdf	20 25 26.4	-10
GYA				PP	PP	20 30 04.7	+1.6
GYA				SKS	SKSdf	20 31 26.4	+2.0
GYA				SKKS	SKKSac	20 36 28.0	-1.3
GYA				AMB	AMB		
	comp=Z,130nm,7.5s						
GYA				LR	LR		
	comp=Z,50nm,3.5s						
GYA				LR	LR		
	comp=Z,60nm,4.5s						
GYA				LR	LR		
	comp=Z,90nm,3.7s						
QIZ	Qiongzhong	174.14	146	PKP	PKPdf	20 24 41.3	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
QIZ				PP	PP	20 30 04.7	-0.3
QZH	**Quanzhou**	175.11	283	⇓PKP	PKPdf	20 24 41.4	+0.4
QZH				pPKP	pPKPdf	20 25 34.3	-2.4
QZH				PP	PP	20 30 21.5	+10
QZH				SS	SS	20 51 23.4	+5.2

JMA 02 20:23:03.4, 34°.95N×132°.67E, h9km, M0.9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGT2	**ShimaneMisato**	0.17	310	P	Pg	20 23 07.2	+0.1
JGT2				S	Sg	20 23 09.6	0.0
JHT	**Toyohira**	0.35	216	P	Pg	20 23 10.4	0.0
JHT				*e*S	Sg	20 23 15.1	+0.1
JHS	**Saijyo**	0.37	82	P	Pg	20 23 10.7	0.0
JHS				*e*S	Sg	20 23 15.9	+0.3
JHIK	**Hikimi**	0.74	236	S	Sg	20 23 27.1	-0.2

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*IDC **02** 20:33:23.4±3.9, 19°.46S×177°.56W, h570km±41km, mb3.5/10, mb1 3.6/10, mb1mx3.3/42, mbtmp4.4/10, Error ellipse: s-maj=25.4km s-min=18.1km az=56.0*

*ISCJB **02** 20:33:24.9±0.7, 19°.6S±0°.1×177°.6W±0°.1, h600km, mb3.9/10, Error ellipse: s-maj=18.0km s-min=16.4km az=10.0*

ISC 02 20:33:25.3±0.6, 19°.4S±0°.1×177°.6W±0°.1, h600km, n46, σ1s.08/48, mb4.0/10, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	15.18	257	P	P	20 36 35.9	+0.6
	2.0nm,0.3s,baz=83,slow=17,SNR=3.8						
URZ	**Urewera**	19.34	193	P	P	20 37 10.5	-2.4
	1.9nm,0.3s,baz=301,slow=5.9,SNR=6.0						
STKA	**Stephens Creek**	38.62	243	P	P	20 39 58.7	-0.1
	9.4nm,0.9s,baz=96,slow=7.8,SNR=29						
JAY	**Jayapura**	44.09	287	P	P	20 40 42.5	+0.4
	5.4nm,0.5s,baz=124,slow=6.6,SNR=7.4						
WRA	**Warramunga Arr**	45.15	261	P	P	20 40 49.6	-0.6
	5.3nm,0.3s,baz=93,slow=7.6,SNR=112						
WRA				PcP	PcP	20 42 18.2	+0.7
	1.4nm,0.5s,baz=82,slow=4.9,SNR=4.3						
ASAR	**Alice Springs**	45.16	256	P	P	20 40 49.9	-0.3
	8.2nm,0.6s,baz=86,slow=8.1,SNR=135						
ASAR				PcP	PcP	20 42 18.1	+0.6
	3.1nm,0.7s,baz=100,slow=3.8,SNR=9.5						
VNDA	**Vanda**	59.02	185	P	P	20 42 29.1	+0.9
	1.1nm,0.8s,baz=352,slow=7.0,SNR=12						
NWAO	**Narrogin (SRO)**	59.21	243	P	P	20 42 30.5	+0.2
	8.3nm,0.8s,baz=147,slow=4.4,SNR=3.4						
MAW	**Mawson**	82.72	200	P	P	20 44 47.4	+0.6
	1.4nm,0.5s,baz=145,slow=6.3,SNR=8.7						
TXAR	**Lajitas Array**	86.14	57	P	P	20 45 06.0	+1.6
	0.5nm,0.6s,baz=229,slow=5.6,SNR=5.2						
ILAR	**Eielson Array**	87.17	13	P	P	20 45 08.4	+0.2
	0.2nm,0.4s,baz=232,slow=4.5,SNR=4.8						
SNAA	**Sanae**	89.08	178	P	P	20 45 17.1	-0.2
VNA3	**Neumayer Olymp**	89.20	176	P	P	20 45 17.9	+0.1
VNA1	**Neumayer--Stat**	89.87	176	P	P	20 45 21.3	+0.4
CMAR	**Chiang Mai Arr**	90.12	289	P	P	20 45 25.1	+2.0
	2.0nm,0.8s,baz=117,slow=2.9,SNR=14						
MKAR	**Makanchi Array**	110.74	314	PKiKP	PKiKP	20 50 50.8	-0.1
	0.4nm,0.5s,baz=126,slow=1.0,SNR=8.2						
KURBB	**Kurchatov Arra**	113.51	318	PKiKP	PKiKP	20 50 55.8	-0.3
	0.9nm,0.7s,baz=76,slow=1.8,SNR=7.5						
BVAR	**Borovoye Array**	118.50	320	PKP	PKiKP	20 51 05.8	+0.2
	1.7nm,0.4s,baz=122,slow=2.7,SNR=7.2						
ARU	**Arti**	124.53	326	PKP	PKiKP	20 51 17.6	+0.2
	1.2nm,0.5s,baz=104,slow=4.2,SNR=5.2						
ARCES	**ARCESS Array B**	127.92	350	PKP	PKiKP	20 51 23.9	0.0
	0.9nm,0.4s,baz=20,slow=1.4,SNR=17						
FINES	**FINESS Array B**	134.84	344	PKP	PKiKP	20 51 37.8	-0.2
	0.8nm,0.6s,baz=21,slow=1.8,SNR=5.4						
HFS	**Hagfors**	138.53	352	PKhKP	PKPpre	20 51 34.2	
	0.7nm,0.5s,baz=72,slow=4.7,SNR=4.9						
HFS				PKP	PKiKP	20 51 43.7	-1.9
	2.7nm,0.9s,baz=3.3,slow=5.1,SNR=3.0						
AKASG	**Malin Array Be**	142.25	332	PKhKP	PKPpre	20 51 46.9	
	1.4nm,0.5s,baz=40,slow=4.0,SNR=7.3						
BRTR	**Keskin Array B**	146.39	314	PKPbc	PKiKP	20 52 01.0	-1.6
	2.9nm,0.5s,baz=131,slow=4.0,SNR=10						
OSTC	**Ostas**	147.04	344	*e*PKP	PKPab	20 52 02.7	-2.5
CLL	**Collm**	147.09	348	⇓*i*PKPbc	PKiKP	20 52 01.6	-1.9
	comp=Z,7.0nm,0.9s						
CLL				*i* PKPab	PKPab	20 52 03.9	-1.4
	comp=Z,4.0nm,1.1s						
DPC	**Dobruska-Polom**	147.20	343	*e*PKP	PKPab	20 52 03.5	-2.4
DPC				*e*x	x	20 52 07.4	
BRG	**Berggiesshubel**	147.30	346	*i* PKP	PKPab	20 52 03.5	-2.7
	comp=Z,3.6nm,0.8s						
BRG				*e*		20 52 06.8	
	comp=Z,4.3nm,0.9s						
MLR	**Muntele Rosu**	147.51	328	PKPbc	PKiKP	20 52 03.8	-0.9
	comp=Z,2.5nm,0.5s,baz=321,slow=6.5,SNR=8.3						
PRU	**Pruhonice**	147.99	345	*e*PKP	PKiKP	20 52 05.2	-0.2
TREC	**Trest**	148.39	344	*e*PKP	PKiKP	20 52 06.3	0.0
KHC	**Kasperske Hory**	149.02	346	*e*PKP	PKiKP	20 52 07.6	0.0
KHC				*e*x	x	20 52 14.8	
GERES	**GERESS Array B**	149.26	345	PKPbc	PKiKP	20 52 08.1	-0.1
	comp=Z,3.1nm,0.8s,baz=29,slow=3.0,SNR=21						
CONA	**Conrad Observa**	149.53	342	*e*PKPbc	PKiKP	20 52 09.5	+0.8
	comp=Z,5.3nm,0.6s,SNR=6.6						
MOA	**Molln**	150.04	344	*e*PKPbc	PKiKP	20 52 10.1	+0.4
	comp=Z,1.5nm,0.5s,SNR=4.0						
SOKA	**Soboth**	150.90	342	*e*PKPbc	PKiKP	20 52 11.8	+0.2
	comp=Z,2.9nm,0.8s						
KBA	**Koelnbreinsper**	150.99	345	*e*PKPbc	PKiKP	20 52 11.8	-0.1
	comp=Z,2.7nm,0.5s,SNR=4.4						
WATA	**Walderalm**	151.16	347	*e*PKPbc	PKiKP	20 52 12.5	+0.3
	comp=Z,2.2nm,0.5s						
RETA	**Reutte**	151.18	348	*e*PKPbc	PKiKP	20 52 13.6	+1.4
	comp=Z,1.5nm,0.5s						
WTTA	**Wattenberg**	151.21	347	*e*PKPbc	PKiKP	20 52 13.1	+0.7
	comp=Z,7.2nm,0.6s						
MOTA	**Moosalm**	151.25	348	*i* PKPbc	PKiKP	20 52 12.8	+0.4
	comp=Z,1.1nm,0.7s						
MYKA	**Terra Mystica**	151.33	344	*i* PKPbc	PKiKP	20 52 12.4	0.0
	comp=Z,3.0nm,0.5s						
SQTA	**Sankt Quirin**	151.34	347	*e*PKPbc	PKiKP	20 52 13.2	+0.7
	comp=Z,3.9nm,0.6s						
ABTA	**Abfaltersbach**	151.50	345	*e*PKPbc	PKiKP	20 52 13.0	+0.2
	comp=Z,6.7nm,0.6s						
FETA	**Feichten**	151.63	348	*e*PKPbc	PKiKP	20 52 14.0	+0.8
	comp=Z,2.2nm,0.6s						
DAVOX	**Davos/Dischmat**	152.02	349	PKPbc	PKiKP	20 52 14.8	+0.8
	comp=Z,3.7nm,0.5s,baz=223,slow=4.2,SNR=11						

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*IDC **02** 20:42:09.4±0.6, 81°.54N×3°.64W, h0km, mb3.9/18, mb1 4.2/20, mb1mx3.9/52, mbtmp4.0/20, ML4.5/3, MS3.6/7, Ms1 3.6/7, ms1mx3.1/45, Error ellipse: s-maj=18.3km s-min=12.8km az=57.0*

*ISCJB **02** 20:42:10.2±0.3, 81°.43N±0°.04×2°.8W±0°.3, h10km, mb4.3/63, MS3.8/4, Error ellipse: s-maj=6.1km s-min=4.9km az=142.5*

*NEIC **02** 20:42:11.4±1.9, 81°.43N×3°.55W, h8km±5km, mb4.4/52, Error ellipse: s-maj=14.5km s-min=9.5km az=204.0*

*IEPN **02** 20:42:12.0, 81°.76N×1°.34W, h15km*

*BER **02** 20:42:14.4±1.6, 81°.50N×1°.44W, h10km, ML2.9, ML4.4(NAO)*

ISC 02 20:42:11.0±0.5, 81°.39N±0°.07×3°.24W±0°.05, h10km, n157, σ2s.19/156, mb4.3/75, MS3.8/4, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	3.58	126	Pn	Pn	20 43 05.7	-0.7
KBS				Sn	Sn	20 43 44.6	-4.0
KBS	**Kingsbay**	3.58	126	*e*Pn	Pn	20 43 05.7	-0.7
KBS				*e*Sn	Sn	20 43 44.3	-4.4
KBS	**Kingsbay**	3.58	126	*e*P	Pn	20 43 05.7	-0.7
KBS				*e*S	Sn	20 43 44.4	-4.3
KBS				IAML		20 43 53.1	
	comp=Z,104nm,0.3s						
BRBA	**Barentsburg A**	4.55	128	Pn	Pn	20 43 20.0	+0.3
BRBA				Sn	Sn	20 44 11.3	-1.3
BRBA	**Barentsburg A**	4.55	128	Pn	Pn	20 43 20.0	+0.3
BRBA				Sn	Sn	20 44 11.3	-1.3
SPA0	**Spitsbergen Ar**	4.72	123	Pn	Pn	20 43 21.5	-0.6
	baz=331,slow=12						
SPA0				Sn	Sn	20 44 12.2	-4.6
SPA0	**Spitsbergen Ar**	4.72	123	*e*Pn	Pn	20 43 21.2	-0.9
SPA0				*e*Sn	Sn	20 44 12.5	-4.3
SPA0	**Spitsbergen Ar**	4.72	123	Pn	Pn	20 43 21.5	-0.6
	baz=331,slow=12						
SPA0				IAML		20 44 25.6	
	comp=Z,39nm,0.5s						
SPITS	**Spitsbergen Ar**	4.72	123	Pn	Pn	20 43 21.5	-0.6
	baz=348,slow=9.7,SNR=194						
SPITS				Sn	Sn	20 44 12.6	-4.2
	baz=306,slow=18,SNR=2.8						
SPITS				LR	LR	20 45 15.1	
	comp=Z,518nm,18.6s,baz=335,slow=38						
DAG	**Danmarks Havn**	5.46	220	*i* P	Pn	20 43 31.7	-0.5
HSPB	**Hornsund (broa**	5.60	132	Pn	Pn	20 43 34.7	+0.6
HSPB				Sn	Sn	20 44 38.9	+0.5
HSPB	**Hornsund (broa**	5.60	132	*e*Pn	Pn	20 43 34.6	+0.4
HSPB				*e*Sn	Sn	20 44 38.3	-0.2
HSPB	**Hornsund (broa**	5.60	132	*e*P	Pn	20 43 34.5	+0.4
HSPB				*e*S	Sn	20 44 32.9	-5.6
HSPB				IAML		20 44 40.3	
	comp=Z,25nm,0.3s						
HOPEN	**Hopen**	7.20	118	Pn	Pn	20 43 54.8	-1.2
HOPEN	**Hopen**	7.20	118	*e*P	Pn	20 43 54.9	-1.2
HOPEN				*e*S	Sn	20 45 06.5	-11
HOPEN				IAML		20 45 15.5	
	comp=Z,25nm,0.3s						
ZFI2	**Zemlya Franca-**	7.69	69	*e*P	Pn	20 43 58.2	-4.6
ZFI2				*e*S	Sn	20 45 16.6	-13
	comp=Z,40nm,0.4s						
BJO1	**Bjornoya**	8.24	135	Pn	Pn	20 44 11.1	+0.8
BJO1				Sn	Sn	20 45 40.4	-2.8
BJO1	**Bjornoya**	8.24	135	*e*P	Pn	20 44 08.6	-1.9
JNW	**Jan Mayen West**	10.48	189	*e*P	Pn	20 44 40.4	-0.6
JMIC	**Jan Mayen**	10.53	189	Pn	Pn	20 44 43.2	+1.5
	comp=Z,24nm,0.3s,baz=148,slow=7.5,SNR=6.5						
JMIC				LR	LR	20 47 29.2	
	comp=Z,110nm,20.3s,baz=77,slow=30						
JMIC	**Jan Mayen**	10.53	189	*e*P	Pn	20 44 42.6	+1.0
SUMG	**Summit**	11.55	240	*e*Pn	Pn	20 44 52.3	-3.7
SUMG	**Summit**	11.55	240	*i* P	Pn	20 44 53.1	-2.9
SCO	**Scoresbysund**	11.75	212	*e*Pn	Pn	20 44 59.5	+1.2
SCO	**Scoresbysund**	11.75	212	*i* P	Pn	20 44 59.5	+1.2
TULEG	**Thule**	12.67	283	*e*P	Pn	20 45 02.4	-8.4
ARA0	**ARCESS Array S**	13.62	134	P	Pn	20 45 23.9	+0.2
	baz=350,slow=11						
ARA0	**ARCESS Array S**	13.62	134	*e*Pn	Pn	20 45 24.4	+0.6
ARA0				*e*Sn	Sn	20 47 47.5	-7.4
ARA0	**ARCESS Array S**	13.62	134	P	Pn	20 45 23.9	+0.2
	baz=350,slow=11						
ARCES	**ARCESS Array B**	13.62	134	Pn	Pn	20 45 24.4	+0.6
	comp=Z,0.9nm,0.3s,baz=354,slow=11,SNR=16						
ARCES				Sn	Sn	20 47 47.5	-7.4
	comp=Z,0.2nm,0.3s,baz=338,slow=20,SNR=3.6						
ARE0	**ARCESS Array S**	13.62	134	*e*Pn	Pn	20 45 23.6	-0.2
KIF	**Kilpisjarvi**	13.65	142	P	Pn	20 45 25.9	+1.7
KIF	**Kilpisjarvi**	13.65	142	*e*P	Pn	20 45 20.6	-3.6
KIF				E		20 45 25.9	
KTK1	**Kautokeino**	13.88	138	*e*P	Pn	20 45 22.4	-5.0
KONS	**Konsvik**	15.51	155	*e*P	Pn	20 45 44.0	-5.3
STOK	**Stokkvaagen**	15.66	155	*e*P	Pn	20 45 47.1	-4.3
APA0	**Apatity Array**	16.32	126	P	Pn	20 45 56.9	-2.8
	baz=348,slow=22						
APA0	**Apatity Array**	16.32	126	P	Pn	20 45 56.9	-2.8
	baz=348,slow=22						
RES	**Resolute Bay**	17.85	300	P	Pn	20 46 10.5	-8.4
	comp=Z,0.9nm,0.3s,baz=28,slow=11,SNR=17						
RES				LR	LR	20 52 49.1	
	comp=Z,197nm,20.8s,baz=153,slow=36						
RES	**Resolute Bay**	17.85	300	*e*Pn	Pn	20 46 10.3	-8.6
	comp=Z,40nm,1.3s						
SFJD	**Kangerlussuaq**	18.35	247	P	Pn	20 46 19.0	-6.2
	comp=Z,2.3nm,0.3s,baz=9.0,slow=14,SNR=7.8						
SFJD				LR	LR	20 53 34.4	
	comp=Z,201nm,19.1s,baz=170,slow=37						
SFJD	**Kangerlussuaq**	18.35	247	*e*P	Pn	20 46 18.9	-6.2
	comp=Z,22nm,1.2s						
AMDE	**Amderma**	18.37	91	*e*P	P	20 46 21.0	-4.4
AMDE				*e*S	Sn	20 49 32.1	-18
NC204	**NORSAR Array S**	20.57	161	*e*P	P	20 46 50.7	+1.2
	comp=Z,28nm,1.3s						
LSH	**Leshukonskoye**	20.57	114	*e*P	P	20 46 49.3	-0.1
	comp=Z,6.9nm,1.0s						
LSH				*e*S	S	20 50 24.5	-14
NC303	**NORSAR Array S**	20.65	160	*e*P	P	20 46 52.4	+2.0
	comp=Z,21nm,1.1s						
NC405	**NORSAR Array S**	20.79	159	*e*P	P	20 46 53.7	+1.9
	comp=Z,18nm,1.0s						
NBO00	**NORSAR Array S**	20.82	161	*e*P	P	20 46 54.2	+2.1
	comp=Z,10nm,1.0s						
NB201	**NORSAR Array S**	20.83	160	*e*P	P	20 46 54.5	+2.2
	comp=Z,29nm,1.3s						
NB2	**NORSAR Subarra**	20.83	160	P	Pn	20 46 54.9	+0.1
	baz=354,slow=10						
NB2	**NORSAR Subarra**	20.83	160	P	P	20 46 54.0	+1.7
	comp=Z,22nm,1.4s,baz=355,slow=11						
NB2	**NORSAR Subarra**	20.83	160	P	Pn	20 46 54.9	+0.1
	baz=354,slow=10						
NB200	**NORSAR Array S**	20.83	160	*e*P	P	20 46 54.2	+1.9
NOA	**NORSAR Array B**	20.83	160	P	P	20 46 54.2	+1.9
	comp=Z,4.6nm,0.7s,baz=350,slow=11,SNR=13						
NAO01	**NORSAR Array S**	21.01	161	*e*P	P	20 46 56.2	+2.0
	comp=Z,33nm,1.1s						
NC602	**NORSAR Array S**	21.15	160	*e*P	P	20 46 57.7	+2.0
	comp=Z,39nm,0.9s						
NRA0	**NORESS Array S**	21.15	160	P	P	20 46 57.6	+1.9
	baz=341,slow=9.3						
NRA0	**NORESS Array S**	21.15	160	P	P	20 46 57.6	+1.9
	baz=341,slow=9.3						
FIA1	**FINESS Array S**	21.55	140	*e*P	P	20 47 01.6	+1.8
	comp=Z,12nm,0.9s						
FIA0	**FINESS Array S**	21.55	140	P	P	20 47 01.6	+1.7
	baz=345,slow=14						
FIA0	**FINESS Array S**	21.55	140	*e*P	P	20 47 01.4	+1.5
FIA0	**FINESS Array S**	21.55	140	P	P	20 47 01.6	+1.7
	baz=345,slow=14						
FINES	**FINESS Array B**	21.55	140	P	P	20 47 01.4	+1.5
	comp=Z,6.0nm,0.8s,baz=352,slow=12,SNR=16						
HFS	**Hagfors**	21.87	157	P	P	20 47 05.8	+2.4
	slow=7.9						
HFS	**Hagfors**	21.87	157	P	P	20 47 05.2	+1.8
	comp=Z,6.1nm,0.9s,baz=7.8,slow=12,SNR=7.2						
HFS	**Hagfors**	21.87	157	P	P	20 47 05.8	+2.4
	slow=7.9						
KONO	**Kongsberg**	22.14	163	*e*P	P	20 47 07.9	+1.6
	comp=Z,31nm,1.4s						
NRS	**Narsarsuaq**	23.25	236	*e*P	P	20 47 18.9	+0.9
	comp=Z,23nm,0.8s						
FRB	**Frobisher Bay**	24.02	263	LR	LR	20 55 12.3	
	comp=Z,189nm,21.3s,baz=156,slow=33						
VSU	**Vasula**	24.55	141	*e*P	P	20 47 36.2	+5.9
VSU				IAmb	IAmb	20 47 40.0	
	comp=Z,21nm,0.8s						
ISAL	**Salakas**	27.34	143	*e*P	P	20 47 58.5	+2.9
ISAL				IAmb	IAmb	20 48 05.1	
	comp=Z,6.8nm,0.8s						
IIGN	**Ignalina**	27.57	143	*e*P	P	20 48 00.3	+2.7
IIGN				IAmb	IAmb	20 48 11.0	
	comp=Z,8.4nm,1.1s						
IDID	**Didziasalis**	27.66	142	*e*P	P	20 48 02.8	+4.4
IDID				IAmb	IAmb	20 48 11.7	
	comp=Z,6.7nm,1.0s						
INK	**Inuvik**	28.18	323	P	P	20 48 02.9	0.0
	comp=Z,3.3nm,0.9s,baz=314,slow=4.2,SNR=2.2						
INK	**Inuvik**	28.18	323	*e*P	P	20 48 02.7	-0.2
	comp=Z,3.7nm,0.9s						
ARU	**Arti**	30.51	105	*e*P	P	20 48 26.6	+2.9
	comp=Z,5.4nm,1.3s						
CLL	**Collm**	30.64	160	*e*P	P	20 48 25.2	+0.4
	comp=Z,8.2nm,1.4s						
CLL	**Collm**	30.64	160	*i* P	P	20 48 24.9	0.0
	comp=Z,5.0nm,1.1s						
FYU	**Fort Yukon**	30.84	331	*e*P	P	20 48 25.4	-1.2
	comp=Z,13nm,0.6s						
BRG	**Berggiesshubel**	31.12	159	*e*PKP	P	20 48 31.2	+2.1
	comp=Z,4.4nm,1.0s						
OJC	**Ojcow**	32.14	152	*e*P	P	20 48 39.3	+1.2
	comp=Z,5.3nm,1.0s						
GRA1	**Grafenberg Arr**	32.16	162	*e*P	P	20 48 40.0	+1.6
	comp=Z,4.7nm,0.9s						
GRFO	**Grafenberg**	32.16	162	*e*P	P	20 48 39.8	+1.5
	comp=Z,12nm,0.5s						
EGAK	**Eagle**	32.30	327	*e*P	P	20 48 41.8	+2.4
	comp=Z,4.2nm,0.9s						
SCHQ	**Schefferville**	32.32	256	LR	LR	21 02 49.6	
	comp=Z,116nm,18.6s,baz=274,slow=38						
MORC	**Moravsky Berou**	32.43	155	*e*P	P	20 48 42.7	+2.0
	comp=Z,3.4nm,0.9s						
MORC	**Moravsky Berou**	32.43	155	*e*P	P	20 48 42.8	+2.1
AKASG	**Malin Array Be**	32.45	141	P	P	20 48 41.4	+0.6
	comp=Z,1.4nm,0.7s,baz=347,slow=8.8,SNR=5.6						
AKBB	**Malin Array Si**	32.45	141	*e*P	P	20 48 42.0	+1.2
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	32.74	332	P	P	20 48 42.2	-1.0
	comp=Z,0.7nm,0.8s,baz=4.8,slow=7.3,SNR=7.5						
ILAR				PcP	PcP	20 51 26.5	-1.6
	comp=Z,0.4nm,0.7s,baz=329,slow=3.0,SNR=4.7						
ILB	**Eielson Array**	32.74	332	*e*P	P	20 48 41.9	-1.4
	comp=Z,5.5nm,1.6s						
VRAC	**Vranov**	32.84	156	P	P	20 48 46.1	+1.9
	comp=Z,2.1nm,0.5s,baz=12,slow=8.8,SNR=5.5						
VRAC	**Vranov**	32.84	156	*e*P	P	20 48 46.9	+2.7
KHC	**Kasperske Hory**	32.84	159	*e*P	P	20 48 47.1	+2.9
	comp=Z,0.8nm,0.8s						
DAWY	**Dawson**	32.85	326	*e*P	P	20 48 49.7	+5.4
	comp=Z,3.1nm,0.8s						
KRUC	**Moravsky**	33.07	156	*e*P	P	20 48 48.8	+2.6
GEC2	**GERESS Array S**	33.13	159	*e*P	P	20 48 49.1	+2.2
	comp=Z,5.9nm,0.9s						
GERES	**GERESS Array B**	33.13	159	P	P	20 48 49.2	+2.2
	comp=Z,2.6nm,0.7s,baz=5.2,slow=7.4,SNR=28						
ECH	**Echery**	33.48	167	*e*P	P	20 48 52.1	+2.2
	comp=Z,8.3nm,1.0s						
VYHS	**Vyhne**	33.79	153	*e*P	P	20 49 03.9	+11
MOA	**Molln**	34.16	159	*e*pP	P	20 48 58.2	+2.5
	comp=Z,3.8nm,0.8s						
CONA	**Conrad Observa**	34.17	157	*e*pP	P	20 48 58.7	+2.8
	comp=Z,4.8nm,0.9s						
MOTA	**Moosalm**	34.50	163	*e*pP	P	20 49 01.5	+2.6
	comp=Z,2.2nm,0.6s						
SQTA	**Sankt Quirin**	34.63	163	*e*pP	P	20 49 03.8	+3.9
	comp=Z,0.9nm,0.5s						
KBA	**Koelnbreinsper**	34.88	160	*e*pP	P	20 49 05.5	+3.4
	comp=Z,2.0nm,0.9s						
BUR08	**Bucovina Ar. S**	35.12	146	*e*P	P	20 49 05.8	+1.6
	comp=Z,4.4nm,1.0s						
FUORN	**Ofenpass-Fuorn**	35.19	164	*e*P	P	20 49 06.3	+1.4
	comp=Z,3.3nm,0.8s						
TUE	**Stuetta**	35.30	165	*e*P	P	20 49 07.9	+2.1
	comp=Z,6.3nm,0.8s						
SENIN	**Lac Senin/Sane**	35.33	167	*e*P	P	20 49 07.5	+1.4
	comp=Z,3.6nm,0.9s						
MYKA	**Terra Mystica**	35.34	160	*e*pP	P	20 49 09.2	+3.2
	comp=Z,3.9nm,0.8s						
SOKA	**Soboth**	35.37	158	*e*pP	P	20 49 09.2	+2.9
	comp=Z,2.6nm,0.7s						
PERS	**Pernice**	35.41	158	*i* P	P	20 49 09.4	+2.8
OBKA	**Obir**	35.51	159	*e*pP	P	20 49 10.8	+3.3
	comp=Z,6.8nm,0.9s						
HYT	**Haines Junctio**	35.88	323	*e*P	P	20 49 11.6	+1.0
	comp=Z,7.7nm,0.7s						
JAVS	**Javornik**	36.09	159	*i* P	P	20 49 14.4	+1.9
VISS	**Visnje**	36.23	158	*i* P	P	20 49 15.3	+1.7
TRI	**Trieste**	36.26	160	*e*P	P	20 49 14.8	+1.0
	comp=Z,12nm,0.9s						
BNI	**Bardonecchia**	36.62	168	*e*P	P	20 49 19.8	+2.7
	comp=Z,6.1nm,1.2s						
ZAA1	**Zalesovo Array**	36.83	80	*e*P	P	20 49 18.8	+0.2
ZALV	**Zalesovo Beam**	36.83	80	P	P	20 49 18.8	+0.2
	comp=Z,0.5nm,0.5s,baz=316,slow=10,SNR=2.3						
ABKAR	**Akbulak array**	37.69	107	*e*P	P	20 49 26.6	+0.7
	comp=Z,1.9nm,0.8s						
KURK	**Kurchatov**	39.04	88	*e*P	P	20 49 37.5	+0.2
	comp=Z,10nm,1.4s						
KURBB	**Kurchatov Arra**	39.12	88	P	P	20 49 38.2	+0.3
	comp=Z,1.8nm,0.8s,baz=346,slow=7.6,SNR=18						
AQU	**L'Aquila**	39.59	161	*e*P	P	20 49 42.5	+0.4
	comp=Z,5.8nm,0.9s						
KBZ	**Khabaz**	40.83	127	P	P	20 49 53.6	+1.5
	comp=Z,4.2nm,0.9s,baz=14,slow=6.9,SNR=4.0						
ULM	**Lac du Bonnet**	41.10	283	LR	LR	21 06 56.8	
	comp=Z,156nm,18.1s,baz=29,slow=36						
ESDC	**Sonseca Array**	41.85	181	P	P	20 50 02.0	+1.4
	comp=Z,0.6nm,0.5s,baz=0.1,slow=8.1,SNR=5.6						
PAB	**San Pablo**	41.98	181	*e*P	P	20 50 02.9	+1.1
	comp=Z,2.3nm,0.8s						
E46A	**Sault Ste Mari**	43.16	270	*e*P	P	20 50 11.1	-0.1
	comp=Z,6.0nm,1.0s						
MAKZ	**Makanchi**	43.36	86	*e*P	P	20 50 12.8	0.0
	comp=Z,10nm,1.3s						
MK31	**Makanchi Array**	43.42	85	*e*P	P	20 50 13.4	+0.1
	comp=Z,3.7nm,1.4s						
MK32	**Makanchi Array**	43.42	85	*e*P	P	20 50 13.4	0.0
MKAR	**Makanchi Array**	43.42	85	P	P	20 50 13.4	0.0
	comp=Z,1.0nm,0.7s,baz=352,slow=7.4,SNR=7.6						
AGG	**Agios Georgios**	43.46	151	*e*P	P	20 50 15.0	+1.3
	comp=Z,8.8nm,1.3s						
BR101	**Keskin Array S**	43.76	138	*e*P	P	20 50 18.1	+1.9
BRTR	**Keskin Array B**	43.76	138	P	P	20 50 18.1	+1.9
	comp=Z,1.6nm,0.8s,baz=10,slow=8.8,SNR=4.1						
KK31	**Karatay Array**	45.25	98	*e*P	P	20 50 29.4	+1.4
	comp=Z,4.9nm,1.0s						
KKAR	**Karatay Array**	45.25	98	*e*P	P	20 50 28.7	+0.7
	comp=Z,4.9nm,1.0s						
SONA0	**Songino Array**	45.86	62	*e*P	P	20 50 32.7	-0.2
SONM	**Songino Array**	45.86	62	P	P	20 50 32.7	-0.2
	comp=Z,0.6nm,0.6s,baz=350,slow=7.3,SNR=2.9						
ULN	**Ulaanbaatar**	45.92	62	*e*P	P	20 50 33.8	+0.4
	comp=Z,6.9nm,1.0s						
NEW	**Newport**	45.99	302	*e*P	P	20 50 34.6	+0.8
	comp=Z,2.1nm,0.8s						
BOOM	**Boomskoye usch**	46.67	93	*e*P	P	20 50 40.3	+0.9
	comp=Z,4.5nm,0.8s						
KDJ	**Kajisay**	47.21	92	*e*P	P	20 50 44.7	+1.1
	comp=Z,1.9nm,0.8s						
BTK	**Batken**	48.28	99	*e*P	P	20 50 52.9	+1.0
	comp=Z,5.1nm,0.8s						
GAR	**Garm**	49.24	99	*e*P	P	20 51 00.7	+1.4
	comp=Z,10.0nm,1.0s						
KSH	**Kashi**	49.58	94	P	P	20 51 02.6	+0.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GTA	**Gaotai**	53.22	70	P	P	20 51 36.0	+6.9
GTA				pP	pwP	20 51 45.9	+10
GTA				sP	sP	20 51 49.7	+18
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC	**Hu-ho-hao-te**	53.41	59	P	P	20 51 28.1	-2.3
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,21nm,5.3s						
HHC				LR	LR		
	comp=N,130nm,17.8s						
HHC				LR	LR		
	comp=E,160nm,15.1s						
PV13	**Radium Mtn., P**	54.81	292	*e*P	P	20 51 41.1	+0.3
	comp=E,4.9nm,1.2s						
TXAR	**Lajitas Array**	62.74	285	P	P	20 52 34.6	-1.4
	comp=E,0.5nm,0.6s,baz=36,slow=4.8,SNR=5.9						
TOA1	**Torodi Ar. Sit**	68.30	175	*e*P	P	20 53 12.2	+0.4
TORD	**Torodi Ar. Bea**	68.30	175	P	P	20 53 12.2	+0.4
	comp=E,9.9nm,0.5s,baz=357,slow=5.9,SNR=4.7						
CM31	**Chiang Mai Arr**	73.69	75	*e*P	P	20 53 46.8	+2.3
	comp=E,5.8nm,1.1s						
CMAR	**Chiang Mai Arr**	73.69	75	P	P	20 53 45.0	+0.5
	comp=E,0.4nm,0.9s,baz=342,slow=5.8,SNR=3.0						
ASAR	**Alice Springs**	119.73	46	PKP	PKPdf	21 00 58.6	-1.8
	comp=E,0.4nm,0.7s,baz=30,slow=1.3,SNR=4.2						
MAW	**Mawson**	152.84	130	PKPbc	PKPbc	21 02 05.5	-0.5
	comp=E,1.0nm,0.7s,baz=180,slow=2.0,SNR=3.1						

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*ISCJB **02** 20:44:03.9±0.3, 43°.44N±0°.02×13°.14E±0°.02, h11km±2km, Error ellipse: s-maj=3.4km s-min=2.5km az=138.3*

*ROM **02** 20:44:03.4±0.1, 43°.438N±0°.004×13°.128E±0°.007, h9km, ML2.6/29, Error ellipse: s-maj=0.6km s-min=0.2km az=60.0*

ISC 02 20:44:03.5±0.8, 43°.45N±0°.02×13°.21E±0°.02, h10km±6km, n52, σ1s.74/79, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CING	**Cingoli**	0.07	189	P	Pg	20 44 05.9	+0.2
CING				S	Sg	20 44 07.5	+0.2
CING				AML	AML		
	comp=E,14400μm,0.5s						
CING				AML	AML		
	comp=N,15150μm,0.2s						
CING				AML	AML		
	comp=E,14400μm,0.5s						
CING				AML	AML		
	comp=N,15150μm,0.2s						
CING				AML	AML		
	comp=N,15150μm,0.2s						
CING				AML	AML		

	comp=E,14400μm,0.5s					
CING			AML	AML		
	comp=N,15150μm,0.2s					
CING			AML	AML		
	comp=E,14400μm,0.5s					
EL6	**Elcito**	**0.14 214**	P	**Pg**	**20 44 06.6**	**-0.2**
EL6			S	**Sg**	**20 44 08.8**	**-0.2**
EL6			AML	AML		
	comp=E,7040μm,0.4s					
EL6			AML	AML		
	comp=N,5150μm,0.4s					
EL6			AML	AML		
	comp=E,7035μm,0.4s					
EL6			AML	AML		
	comp=N,5150μm,0.4s					
EL6			AML	AML		
	comp=E,7035μm,0.4s					
EL6			AML	AML		
	comp=N,5155μm,1.0s					
EL6			AML	AML		
	comp=E,7035μm,0.4s					
EL6			AML	AML		
	comp=N,5155μm,1.0s					
EL6			AML	AML		
	comp=E,7035μm,0.4s					
EL6			AML	AML		
	comp=N,5155μm,1.0s					
MMUR	**Monte Murano**	**0.16 267**	P	**Pg**	**20 44 06.4**	**-0.5**
MMUR			S	**Sg**	**20 44 08.3**	**-1.0**
MMUR			AML	AML		
	comp=E,16200μm,0.3s					
MMUR			AML	AML		
	comp=N,14450μm,0.4s					
MMUR			AML	AML		
	comp=E,16200μm,0.3s					
MMUR			AML	AML		
	comp=N,14400μm,0.4s					
MMUR			AML	AML		
	comp=E,16200μm,0.3s					
MMUR			AML	AML		
	comp=N,14400μm,0.4s					
MMUR			AML	AML		
	comp=N,14400μm,0.4s					
MMUR			AML	AML		
	comp=E,16200μm,0.3s					
MMUR			AML	AML		
	comp=N,14400μm,0.4s					
MMUR			AML	AML		
	comp=E,16200μm,0.3s					
ARVD	**Arcevia**	**0.20 284**	P	**Pg**	**20 44 07.0**	**-0.7**
ARVD			S	**Sg**	**20 44 09.8**	**-0.8**
ARVD			AML	AML		
	comp=E,1272μm,0.7s					
ARVD			AML	AML		
	comp=N,1058μm,0.5s					
ARVD			AML	AML		
	comp=E,1272μm,0.7s					
ARVD			AML	AML		
	comp=N,1058μm,0.5s					
ARVD			AML	AML		
	comp=E,1272μm,0.7s					
ARVD			AML	AML		
	comp=N,1058μm,0.5s					
ARVD			AML	AML		
	comp=E,1272μm,0.7s					
ARVD			AML	AML		
	comp=N,1058μm,0.5s					
ARVD			AML	AML		
	comp=E,1272μm,0.7s					
ARVD			AML	AML		
	comp=N,1058μm,0.5s					
GAG1	**Gagliole**	**0.24 206**	P	**Pg**	**20 44 08.1**	**-0.1**
GAG1			S	**Sg**	**20 44 12.0**	**+0.5**
GAG1			AML	AML		
	comp=E,4820μm,1.3s					
GAG1			AML	AML		
	comp=N,6855μm,1.2s					
GAG1			AML	AML		
	comp=E,4820μm,1.3s					
GAG1			AML	AML		
	comp=N,6850μm,1.2s					
GAG1			AML	AML		
	comp=E,4820μm,1.3s					
GAG1			AML	AML		
	comp=N,6850μm,1.2s					
GAG1			AML	AML		
	comp=E,4820μm,1.3s					
GAG1			AML	AML		
	comp=N,6850μm,1.2s					
GAG1			AML	AML		
	comp=E,4820μm,1.3s					
GAG1			AML	AML		
	comp=N,6850μm,1.2s					
COR1	**Corinaldo**	**0.24 320**	P	**Pg**	**20 44 09.0**	**+0.7**
COR1			AML	AML		
	comp=E,3965μm,0.4s					
COR1			AML	AML		
	comp=N,5100μm,0.4s					
COR1			AML	AML		
	comp=E,2330μm,0.4s					
COR1			AML	AML		
	comp=N,4945μm,0.3s					
COR1			AML	AML		
	comp=E,3965μm,0.4s					
COR1			AML	AML		
	comp=N,5100μm,0.4s					
COR1			AML	AML		
	comp=E,2330μm,0.4s					
COR1			AML	AML		
	comp=N,4940μm,0.3s					
COR1			AML	AML		
	comp=E,3965μm,0.4s					
COR1			AML	AML		
	comp=N,5100μm,0.4s					
COR1			AML	AML		
	comp=E,2330μm,0.4s					
COR1			AML	AML		
	comp=N,4940μm,0.3s					
COR1			AML	AML		
	comp=E,2330μm,0.4s					
COR1			AML	AML		
	comp=E,3965μm,0.4s					
COR1			AML	AML		
	comp=N,5100μm,0.4s					
COR1			AML	AML		
	comp=N,4940μm,0.3s					
COR1			AML	AML		
	comp=E,2330μm,0.4s					
COR1			AML	AML		
	comp=E,3965μm,0.4s					
COR1			AML	AML		
	comp=N,5100μm,0.4s					
COR1			AML	AML		
	comp=N,4940μm,0.3s					
MTL1	**Matelica**	**0.24 217**	P	**Pg**	**20 44 08.2**	**-0.2**
MTL1			S	**Sg**	**20 44 11.8**	**+0.1**
SENI	**Senigallia**	**0.26 4**	P	**Pb**	**20 44 10.5**	**+0.3**
SENI			AML	AML		
	comp=E,694μm,0.9s					
SENI			AML	AML		
	comp=N,1005μm,0.9s					
SENI			AML	AML		
	comp=E,697μm,0.9s					
SENI			AML	AML		
	comp=N,1004μm,0.9s					
SENI			AML	AML		
	comp=N,1004μm,0.9s					
SENI			AML	AML		
	comp=E,697μm,0.9s					
SENI			AML	AML		
	comp=N,1004μm,0.9s					
SENI			AML	AML		
	comp=E,697μm,0.9s					
MDAR	**Monte D'Aria**	**0.26 191**	P	**Pg**	**20 44 08.9**	**+0.2**
MDAR			S	**Sg**	**20 44 13.3**	**+1.0**
CSP1	**Cessapalombo**	**0.36 181**	P	**Pg**	**20 44 10.8**	**+0.3**
CSP1			S	**Sb**	**20 44 16.8**	**-0.9**
CSP1			AML	AML		
	comp=E,2145μm,0.5s					
CSP1			AML	AML		
	comp=N,2690μm,0.5s					
FRON	**Frontone**	**0.36 281**	P	**Pg**	**20 44 09.9**	**-0.7**
FRON			S	**Sb**	**20 44 15.1**	**-2.6**
FRON			AML	AML		
	comp=E,642μm,0.9s					
FRON			AML	AML		
	comp=N,946μm,0.7s					
FRON			AML	AML		
	comp=E,642μm,0.9s					
FRON			AML	AML		
	comp=N,946μm,0.7s					
FRON			AML	AML		
	comp=N,946μm,0.7s					
FRON			AML	AML		
	comp=E,642μm,0.9s					
FRON			AML	AML		
	comp=N,946μm,0.7s					
FRON			AML	AML		
	comp=E,642μm,0.9s					
FOSV	**Fossato di Vic**	**0.36 245**	P	**Pg**	**20 44 09.9**	**-0.7**
FOSV			S	**Sb**	**20 44 14.9**	**-2.9**
FOSV			AML	AML		
	comp=E,1280μm,0.7s					
FOSV			AML	AML		
	comp=N,1255μm,0.7s					
FOSV			AML	AML		
	comp=E,1285μm,0.7s					
FOSV			AML	AML		
	comp=N,1255μm,0.7s					
FOSV			AML	AML		
	comp=E,1280μm,0.7s					
FOSV			AML	AML		
	comp=N,1255μm,0.7s					
FOSV			AML	AML		
	comp=E,1280μm,0.7s					
FOSV			AML	AML		
	comp=N,1255μm,0.7s					
FOSV			AML	AML		
	comp=E,1280μm,0.7s					
FOSV			AML	AML		
	comp=N,1255μm,0.7s					
MPAG	**Monte Paganucc**	**0.37 299**	P	**Pg**	**20 44 10.2**	**-0.6**
MPAG			S	**Sb**	**20 44 15.7**	**-2.5**
MPAG			AML	AML		
	comp=E,490μm,0.7s					
MPAG			AML	AML		
	comp=N,645μm,0.9s					
MPAG			AML	AML		
	comp=E,490μm,0.7s					
MPAG			AML	AML		
	comp=N,645μm,0.9s					
MPAG			AML	AML		
	comp=E,490μm,0.7s					
MPAG			AML	AML		
	comp=N,645μm,0.9s					
MPAG			AML	AML		
	comp=E,490μm,0.7s					
MPAG			AML	AML		
	comp=N,645μm,0.9s					
FSSB	**Fossombrone**	**0.40 308**	P	**Pg**	**20 44 10.9**	**-0.4**
FSSB			S	**Sb**	**20 44 17.2**	**-1.7**
FSSB			AML	AML		
	comp=E,1800μm,0.3s					
FSSB			AML	AML		
	comp=N,3230μm,0.3s					
FSSB			AML	AML		
	comp=E,1800μm,0.3s					
FSSB			AML	AML		
	comp=N,3225μm,0.3s					
FSSB			AML	AML		
	comp=E,1800μm,0.3s					
FSSB			AML	AML		
	comp=N,3225μm,0.3s					
FSSB			AML	AML		
	comp=E,1800μm,0.3s					
FSSB			AML	AML		
	comp=N,3225μm,0.3s					
FDMO	**Fiordimonte**	**0.42 192**	P	**Pg**	**20 44 11.7**	**-0.1**
FDMO			S	**Sb**	**20 44 18.6**	**-0.9**
FDMO			AML	AML		
	comp=E,1225μm,1.1s					
FDMO			AML	AML		
	comp=N,1084μm,1.0s					
FDMO			AML	AML		
	comp=E,1225μm,1.1s					
FDMO			AML	AML		
	comp=N,1084μm,1.0s					
FDMO			AML	AML		
	comp=E,1225μm,1.1s					
FDMO			AML	AML		
	comp=N,1084μm,1.0s					
FDMO			AML	AML		
	comp=E,1225μm,1.1s					
FDMO			AML	AML		
	comp=N,1084μm,1.0s					
ATFO	**Monte Foce - G**	**0.47 260**	P	**Pg**	**20 44 12.0**	**-0.7**
ATFO			S	**Sb**	**20 44 19.0**	**-2.1**
ATFO			AML	AML		
	comp=E,1600μm,0.2s					
ATFO			AML	AML		
	comp=N,2150μm,0.6s					
ATFO			AML	AML		
	comp=E,1600μm,0.2s					
ATFO			AML	AML		
	comp=N,2150μm,0.6s					
ATFO			AML	AML		
	comp=N,2150μm,0.6s					
ATFO			AML	AML		
	comp=E,1600μm,0.2s					
ATFO			AML	AML		
	comp=N,2150μm,0.6s					
ATFO			AML	AML		
	comp=E,1600μm,0.2s					
CESI	**CESI - Serrava**	**0.50 207**	P	**Pg**	**20 44 12.8**	**-0.3**
CESI			S	**Sb**	**20 44 20.7**	**-1.0**
CESI			AML	AML		
	comp=E,261μm,0.3s					
CESI			AML	AML		
	comp=N,574μm,0.3s					
CESI			AML	AML		
	comp=E,261μm,0.3s					
CESI			AML	AML		
	comp=N,574μm,0.3s					
CESI			AML	AML		
	comp=N,574μm,0.3s					
CESI			AML	AML		
	comp=E,261μm,0.3s					
CESI			AML	AML		
	comp=N,574μm,0.3s					
CESI			AML	AML		
	comp=E,261μm,0.3s					
PIEI	**Pieia**	**0.50 280**	P	**Pg**	**20 44 12.2**	**-1.0**
PIEI			S	**Sb**	**20 44 19.3**	**-2.5**
PIEI			AML	AML		
	comp=E,486μm,1.4s					
PIEI			AML	AML		
	comp=N,398μm,1.4s					
PIEI			AML	AML		
	comp=E,486μm,1.4s					
PIEI			AML	AML		
	comp=N,398μm,1.4s					
PIEI			AML	AML		
	comp=N,398μm,1.4s					
PIEI			AML	AML		
	comp=E,486μm,1.4s					
PIEI			AML	AML		
	comp=N,398μm,1.4s					
PIEI			AML	AML		
	comp=E,486μm,1.4s					
MURB	**Monte Urbino**	**0.53 250**	P	**Pb**	**20 44 13.6**	**-1.4**
MURB			S	**Sb**	**20 44 20.9**	**-1.9**
MURB			AML	AML		
	comp=E,2570μm,0.2s					
MURB			AML	AML		
	comp=N,2340μm,1.5s					
MURB			AML	AML		
	comp=E,3020μm,0.2s					
MURB			AML	AML		
	comp=N,2340μm,1.5s					
MURB			AML	AML		
	comp=E,3020μm,0.2s					
MURB			AML	AML		
	comp=N,2340μm,1.5s					
MURB			AML	AML		
	comp=N,2340μm,1.5s					
MURB			AML	AML		
	comp=E,3020μm,0.2s					
MURB			AML	AML		
	comp=N,2340μm,1.5s					
MURB			AML	AML		
	comp=E,3020μm,0.2s					
PE3	**Peglio**	**0.57 296**	P	**Pb**	**20 44 14.3**	**-1.4**
PE3			AML	AML		
	comp=E,989μm,0.5s					
PE3			AML	AML		
	comp=N,1495μm,0.4s					
PE3			AML	AML		
	comp=E,988μm,0.5s					
PE3			AML	AML		
	comp=N,1495μm,0.4s					
PE3			AML	AML		
	comp=E,988μm,0.5s					
PE3			AML	AML		
	comp=N,1495μm,0.4s					
PE3			AML	AML		
	comp=E,988μm,0.5s					
PE3			AML	AML		
	comp=N,1495μm,0.4s					
ATPI	**Pietralunga -**	**0.59 270**	P	**Pg**	**20 44 14.1**	**-0.8**
ATPI			S	**Sb**	**20 44 22.8**	**-1.6**
ATPI			AML	AML		
	comp=E,682μm,0.7s					
ATPI			AML	AML		
	comp=N,681μm,0.5s					
ATPI			AML	AML		
	comp=E,683μm,0.7s					
ATPI			AML	AML		
	comp=N,682μm,0.5s					
ATPI			AML	AML		
	comp=E,683μm,0.7s					
ATPI			AML	AML		
	comp=N,682μm,0.5s					
ATPI			AML	AML		
	comp=E,683μm,0.7s					
ATPI			AML	AML		
	comp=N,682μm,0.5s					
ATVO	**AVT- Monte Val**	**0.59 264**	P	**Pg**	**20 44 14.0**	**-0.9**
ATVO			S	**Sb**	**20 44 22.5**	**-1.9**
ATVO			AML	AML		
	comp=E,562μm,1.0s					
ATVO			AML	AML		
	comp=N,734μm,0.5s					
ATVO			AML	AML		
	comp=E,562μm,1.0s					
ATVO			AML	AML		
	comp=N,734μm,0.5s					
ATVO			AML	AML		
	comp=N,734μm,0.5s					
ATVO			AML	AML		
	comp=E,562μm,1.0s					
ATVO			AML	AML		
	comp=N,734μm,0.5s					
ATVO			AML	AML		
	comp=E,562μm,1.0s					
NRCA	**Norcia**	**0.62 187**	P	**Pg**	**20 44 15.2**	**-0.3**
NRCA			AML	AML		
	comp=E,993μm,0.1s					
NRCA			AML	AML		
	comp=N,818μm,0.1s					
NRCA			AML	AML		
	comp=E,1090μm,0.1s					
NRCA			AML	AML		
	comp=N,862μm,0.2s					
NRCA			AML	AML		
	comp=E,1090μm,0.1s					
NRCA			AML	AML		
	comp=N,862μm,0.2s					
NRCA			AML	AML		
	comp=N,862μm,0.2s					
NRCA			AML	AML		
	comp=E,1090μm,0.1s					
NRCA			AML	AML		
	comp=N,862μm,0.2s					
NRCA			AML	AML		
	comp=E,1090μm,0.1s					
GUMA	**Gualdo di Mace**	**0.66 126**	P	**Pg**	**20 44 12.2**	**-4.0**
GUMA			S	**Sg**	**20 44 19.2**	**-5.5**
GUMA			AML	AML		
	comp=E,8015μm,0.4s					
GUMA			AML	AML		
	comp=N,5090μm,0.3s					
GUMA			AML	AML		
	comp=E,10600μm,0.3s					
GUMA			AML	AML		
	comp=N,3360μm,1.3s					
GUMA			AML	AML		
	comp=E,8015μm,0.4s					
GUMA			AML	AML		
	comp=N,5095μm,0.3s					
GUMA			AML	AML		
	comp=E,10600μm,0.3s					
GUMA			AML	AML		
	comp=N,3360μm,1.3s					
GUMA			AML	AML		
	comp=E,10600μm,0.3s					
GUMA			AML	AML		
	comp=N,3360μm,1.3s					
GUMA			AML	AML		
	comp=N,5095μm,0.3s					
GUMA			AML	AML		
	comp=E,8015μm,0.4s					
GUMA			AML	AML		
	comp=E,10600μm,0.3s					
GUMA			AML	AML		
	comp=N,3360μm,1.3s					
GUMA			AML	AML		
	comp=N,5095μm,0.3s					
GUMA			AML	AML		
	comp=E,8015μm,0.4s					
BADI	**Badiali**	**0.71 275**	P	**Pg**	**20 44 16.3**	**-0.8**
BADI			AML	AML		
	comp=E,453μm,0.5s					
BADI			AML	AML		
	comp=N,982μm,0.3s					
BADI			AML	AML		
	comp=E,453μm,0.5s					
BADI			AML	AML		
	comp=N,980μm,0.3s					
BADI			AML	AML		
	comp=E,453μm,0.5s					
BADI			AML	AML		
	comp=N,980μm,0.3s					
BADI			AML	AML		
	comp=E,453μm,0.5s					
BADI			AML	AML		
	comp=N,980μm,0.3s					
PARC	**Parchiule**	**0.73 286**	P	**Pg**	**20 44 16.7**	**-0.9**
PARC			S	**Sg**	**20 44 25.9**	**-1.3**
PARC			AML	AML		
	comp=E,220μm,0.4s					
PARC			AML	AML		
	comp=N,210μm,0.3s					
PARC			AML	AML		
	comp=E,220μm,0.4s					
PARC			AML	AML		
	comp=N,210μm,0.3s					
PARC			AML	AML		
	comp=N,210μm,0.3s					
PARC			AML	AML		
	comp=E,220μm,0.4s					
PARC			AML	AML		
	comp=N,210μm,0.3s					
PARC			AML	AML		
	comp=E,220μm,0.4s					
CPGN	**Carpegna, Ital**	**0.74 299**	P	**Pb**	**20 44 17.9**	**-0.6**
CPGN			AML	AML		
	comp=E,258μm,1.1s					
CPGN			AML	AML		
	comp=N,260μm,1.2s					
CPGN			AML	AML		
	comp=E,258μm,1.1s					
CPGN			AML	AML		
	comp=N,260μm,1.2s					
CPGN			AML	AML		
	comp=E,258μm,1.1s					
CPGN			AML	AML		
	comp=N,260μm,1.2s					
SMA1	**SAN MARTINO**	**0.82 174**	P	**Pg**	**20 44 19.1**	**-0.2**
LNSS	**Leonessa**	**0.85 188**	P	**Pg**	**20 44 19.2**	**-0.7**
LNSS			AML	AML		
	comp=E,449μm,1.2s					
LNSS			AML	AML		
	comp=N,358μm,0.4s					
LNSS			AML	AML		
	comp=E,449μm,1.2s					
LNSS			AML	AML		
	comp=N,358μm,0.4s					
LNSS			AML	AML		
	comp=E,449μm,1.2s					
LNSS			AML	AML		
	comp=N,358μm,0.4s					
LNSS			AML	AML		

	comp=E,449µm,1.2s						
LNSS				AML	AML		
	comp=N,358µm,0.4s						
TERO	**Teramo**	**0.88**	**161**	P	**Pg**	**20 44 20.2**	**-0.1**
CAFI	**Castiglion Fio**	**0.92**	**263**	P	**Pb**	**20 44 20.5**	**-1.0**
CAFI				AML	AML		
	comp=E,228µm,0.7s						
CAFI				AML	AML		
	comp=N,151µm,0.4s						
CAFI				AML	AML		
	comp=N,151µm,0.4s						
CAFI				AML	AML		
	comp=E,228µm,0.7s						
CAFI				AML	AML		
	comp=N,151µm,0.4s						
CAFI				AML	AML		
	comp=E,228µm,0.7s						
CESX	**Cesi**	**0.96**	**209**	P	**Pg**	**20 44 20.4**	**-1.5**
MGAB	**Montegabbione**	**0.97**	**237**	P	**Pg**	**20 44 20.9**	**-1.2**
ASQU	**Asqua**	**1.09**	**289**	P	**Pg**	**20 44 23.0**	**-1.4**
ASQU				AML	AML		
	comp=E,96µm,0.7s						
ASQU				AML	AML		
	comp=N,91µm,0.6s						
ASQU				AML	AML		
	comp=E,96µm,0.7s						
ASQU				AML	AML		
	comp=N,91µm,0.6s						
ASQU				AML	AML		
	comp=E,96µm,0.7s						
ASQU				AML	AML		
	comp=N,91µm,0.6s						
T0104	**Madonna delle**	**1.09**	**175**	P	**Pg**	**20 44 24.3**	**-0.2**
T0104				AML	AML		
	comp=E,390µm,0.6s						
T0104				AML	AML		
	comp=N,440µm,0.4s						
T0104				AML	AML		
	comp=N,440µm,0.4s						
T0104				AML	AML		
	comp=E,390µm,0.6s						
T0104				AML	AML		
	comp=N,440µm,0.4s						
T0104				AML	AML		
	comp=E,390µm,0.6s						
FAGN	**Fagnano**	**1.21**	**167**	AML	AML		
	comp=E,800µm,0.5s						
FAGN				AML	AML		
	comp=E,800µm,0.5s						
FAGN				AML	AML		
	comp=N,488µm,0.5s						
FAGN				AML	AML		
	comp=N,488µm,0.5s						
FAGN				AML	AML		
	comp=N,488µm,0.5s						
FAGN				AML	AML		
	comp=E,800µm,0.5s						
DUGI	**Dugi Otok**	**1.45**	**67**	*e*Pn	**Pn**	**20 44 31.0**	**+1.3**
NVLJ	**Novalja**	**1.64**	**47**	*e*Pn	**Pn**	**20 44 33.2**	**+0.9**
NVLJ				Sn	**Sn**	**20 44 55.2**	**+1.7**
ZIRJ	**Zirje**	**1.78**	**83**	*e*Pn	**Pn**	**20 44 35.6**	**+1.3**
MORI	**Morici**	**1.86**	**76**	*e*Pn	**Pn**	**20 44 37.0**	**+1.6**
MORI				Sn	**Sn**	**20 45 01.3**	**+2.4**
KIJV	**Kijevo**	**2.38**	**75**	*e*Pn	**Pn**	**20 44 44.6**	**+2.0**
KIJV				Sn	**Sn**	**20 45 14.0**	**+2.1**
OZLJ	**Ozalj**	**2.70**	**36**	*i* Pn	**Pn**	**20 44 48.0**	**+1.0**
OZLJ				Sn	**Sn**	**20 45 21.4**	**+1.8**
MAKA	**Makarska**	**2.78**	**92**	*e*Pn	**Pn**	**20 44 49.4**	**+1.3**
MAKA				Sn	**Sn**	**20 45 25.6**	**+3.9**
OBKA	**Obir**	**3.20**	**17**	Pn	**Pn**	**20 44 55.5**	**+1.5**
	comp=E,1.6nm,0.4s						
ABTA	**Abfaltersbach**	**3.33**	**352**	*e*Pn	**Pn**	**20 44 55.6**	**-0.2**
	comp=E,1.2nm,0.3s						
SOKA	**Soboth**	**3.48**	**21**	Pg	**Pg**	**20 45 08.8**	**-1.3**
	comp=E,0.6nm,0.3s						
KBA	**Koelnbreinsper**	**3.63**	**1**	*e*Pn	**Pn**	**20 45 01.8**	**+1.8**
	comp=E,0.3nm,0.2s						
KBA				Sn	**Sn**	**20 45 44.2**	**+1.3**
	comp=E,1.4nm,0.4s						
WTTA	**Wattenberg**	**3.97**	**344**	*e*Pn	**Pn**	**20 45 07.4**	**+2.8**
	comp=E,0.8nm,0.3s						
WTTA				Sn	**Sn**	**20 45 55.1**	**+3.8**
	comp=E,2.7nm,0.5s						
FETA	**Feichten**	**3.98**	**335**	*e*Pn	**Pn**	**20 45 07.2**	**+2.5**
	comp=E,0.6nm,0.3s						
SQTA	**Sankt Quirin**	**4.03**	**340**	Pn	**Pn**	**20 45 08.9**	**+3.5**
	comp=E,2.1nm,0.3s						
WATA	**Walderalm**	**4.05**	**344**	*e*Pn	**Pn**	**20 45 08.9**	**+3.2**
	comp=E,0.7nm,0.2s						
MOTA	**Moosalm**	**4.17**	**340**	*e*Pn	**Pn**	**20 45 09.4**	**+2.1**
	comp=E,0.3nm,0.2s						

ROM 02 20:46:59.1±0.1**, 43°.445N**±0°.005×**13°.13E**±0°.01**, h9**^{km}**, ML1.0**/5**, Error ellipse: s-maj=1.0km s-min=0.3km az=57.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CING	**Cingoli**	**0.08**	**145**	P	Pg	20 47 01.8	+0.4
CING				S	Sg	20 47 03.4	+0.3
CING				AML	AML		
	comp=E,352µm,0.5s						
CING				AML	AML		
	comp=N,418µm,0.1s						
CING				AML	AML		
	comp=N,418µm,0.1s						
CING				AML	AML		
	comp=E,352µm,0.5s						
EL6	**Elcito**	**0.12**	**190**	P	Pg	20 47 02.4	+0.5
EL6				S	Sg	20 47 04.7	+0.8
ARVD	**Arcevia**	**0.15**	**291**	P	Pg	20 47 02.9	+0.5
ARVD				S	Sg	20 47 05.4	+0.8
ARVD				AML	AML		
	comp=E,50µm,0.4s						
ARVD				AML	AML		
	comp=N,60µm,0.3s						
ARVD				AML	AML		
	comp=E,50µm,0.4s						
ARVD				AML	AML		
	comp=N,60µm,0.3s						
ARVD				AML	AML		
	comp=E,50µm,0.4s						
ARVD				AML	AML		
	comp=N,60µm,0.3s						
COR1	**Corinaldo**	**0.21**	**333**	P	Pg	20 47 04.8	+1.4
FRON	**Frontone**	**0.30**	**284**	P	Pg	20 47 05.7	+0.6
FRON				S	Sb	20 47 11.0	-0.8
MPAG	**Monte Paganucc**	**0.33**	**305**	P	Pg	20 47 06.1	+0.5
MPAG				S	Sb	20 47 11.7	-0.9
FSSB	**Fossombrone**	**0.36**	**314**	P	Pg	20 47 06.7	+0.5
FSSB				S	Sb	20 47 12.9	-0.5
FSSB				AML	AML		
	comp=E,52µm,1.3s						
FSSB				AML	AML		
	comp=N,110µm,0.4s						
FSSB				AML	AML		
	comp=E,52µm,1.3s						
FSSB				AML	AML		
	comp=N,110µm,0.4s						
FSSB				AML	AML		
	comp=E,52µm,1.3s						
FSSB				AML	AML		
	comp=N,110µm,0.4s						
CSP1	**Cessapalombo**	**0.36**	**171**	P	Pg	20 47 06.8	+0.6
CSP1				S	Sb	20 47 12.9	-0.6
FDMO	**Fiordimonte**	**0.41**	**184**	P	Pg	20 47 07.6	+0.5
FDMO				S	Sb	20 47 14.3	-0.6
FDMO				AML	AML		
	comp=E,26µm,0.7s						
FDMO				AML	AML		
	comp=N,22µm,0.2s						
FDMO				AML	AML		
	comp=E,26µm,0.7s						
FDMO				AML	AML		
	comp=N,22µm,0.2s						
FDMO				AML	AML		
	comp=E,26µm,0.7s						
FDMO				AML	AML		
	comp=N,22µm,0.2s						
PIEI	**Pieia**	**0.44**	**282**	P	Pg	20 47 08.0	+0.3
PIEI				S	Sb	20 47 15.4	-0.5
PIEI				AML	AML		
	comp=E,30µm,0.1s						
PIEI				AML	AML		
	comp=N,15µm,0.1s						
PIEI				AML	AML		
	comp=E,30µm,0.1s						
PIEI				AML	AML		
	comp=N,15µm,0.1s						
PIEI				AML	AML		
	comp=N,15µm,0.1s						
PIEI				AML	AML		
	comp=E,30µm,0.1s						

IDC 02 20:50:12.9±2.4**, 6°.93S**×**127°.41E, h0**^{km}**, mb3.8**/1**, mb1 3.8**/3**, mb1mx3.5**/26**, mbtmp3.7**/3**, ML3.2**/2**, Error ellipse: s-maj=292.7km s-min=32.1km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.58**	**153**	Pn	Pn	20 53 40.9	+0.3
	0.1nm,0.3s,baz=332,slow=13,SNR=5.8						
WRA				Sn	Sn	20 56 04.8	-18
	0.4nm,0.3s,baz=324,slow=24,SNR=10						
ASAR	**Alice Springs**	**17.77**	**160**	P	Pn	20 54 21.7	-0.2
	0.1nm,0.3s,baz=337,slow=12,SNR=8.2						
MKAR	**Makanchi Array**	**66.78**	**328**	P	P	21 01 06.3	0.0
	0.4nm,0.8s,baz=128,slow=4.4,SNR=4.1						

DRS ***02*** *20:53:22.6±0.0, 43°.74N×45°.17E, h24*^{km}

NORS ***02*** *20:53:23.2±0.0, 43°.19N×45°.69E, h102*^{km}*±2*^{km}*, MPVA3.5*

ISCJB ***02*** *20:53:24.1±0.6, 43°.28N±0°.03×45°.64E±0°.03, h109*^{km}*±5*^{km}*, Error ellipse: s-maj=5.9km s-min=3.1km az=26.5*

TIF ***02*** *20:53:24.3, 43°.18N×45°.58E, h15*^{km}*±3*^{km}

ISC 02 20:53:24.8±1.4**, 43°.25N**±0°.04×**45°.63E**±0°.03**, h107**^{km}±8^{km}**, n33, σ1**^{s}**.05**/68**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.14**	**112**	*e*Pg	**Pn**	**20 53 39.9**	**+0.3**
	15nm,0.2s						
GROC				*e*Sg	**Sn**	**20 53 50.9**	**+0.2**
	22nm,0.1s						
DVE	**Vedeno**	**0.47**	**129**	*e*Pg	**Pn**	**20 53 40.2**	**-1.0**
DVE				*e*Sg	**Sn**	**20 53 51.7**	**-1.7**
KMGR	**Komgaron**	**0.59**	**251**	*e*Pg	**Pn**	**20 53 42.2**	**+0.3**
KMGR				*e*Sg	**Sn**	**20 53 55.8**	**+0.9**
VLKR	**Vladikavkaz**	**0.72**	**254**	*e*Pg	**Pn**	**20 53 42.5**	**-0.5**
VLKR				*e*Sg	**Sn**	**20 53 57.5**	**+0.7**
BTLR	**Botlikh**	**0.73**	**143**	*e*Pg	**Pn**	**20 53 42.8**	**-0.4**
	77nm,0.3s						
BTLR				*e*Pg	**Pn**	**20 53 42.8**	**-0.4**
BTLR				*e*Sg	**Sn**	**20 53 56.5**	**-0.6**
BTLR				*e*Sg	**Sn**	**20 53 56.5**	**-0.6**
	131nm,0.3s						
BTKR	**Batakoyurt**	**0.80**	**279**	*e*Pg	**Pn**	**20 53 44.6**	**+0.9**
	4.7nm,0.2s						
BTKR				*e*Sg	**Sn**	**20 53 59.2**	**+1.2**
	51nm,0.4s						
TRKR	**Terskaya**	**0.80**	**306**	*i* Pg	**Pn**	**20 53 44.0**	**+0.3**
	84nm,0.2s						
TRKR				*e*Sg	**Sn**	**20 53 59.1**	**+1.2**
	242nm,0.7s						
DBC	**Dubki**	**0.91**	**104**	*e*Pg	**Pn**	**20 53 44.1**	**-0.8**
DBC				*e*Sg	**Sn**	**20 53 58.5**	**-1.5**
ARNR	**Ardon**	**0.98**	**266**	*e*Pg	**Pn**	**20 53 46.2**	**+0.7**
ARNR				*e*Sg	**Sn**	**20 54 02.3**	**+1.1**
LACR	**Lac**	**1.06**	**247**	*e*Pg	**Pn**	**20 53 45.7**	**-0.8**
	34nm,0.3s						
LACR				*e*Sg	**Sn**	**20 54 01.3**	**-1.6**
	176nm,0.5s						
PRTR	**Priterechnaya**	**1.10**	**297**	*e*Pg	**Pn**	**20 53 47.2**	**+0.5**
PRTR				*e*Sg	**Sn**	**20 54 04.6**	**+1.4**
	208nm,0.4s						
STDR	**Stavd-Durt**	**1.15**	**276**	*e*Pg	**Pn**	**20 53 47.9**	**+0.6**
STDR				*e*Sg	**Sn**	**20 54 05.6**	**+1.3**
KORR	**Kora**	**1.15**	**262**	*e*Pg	**Pn**	**20 53 47.5**	**+0.2**
	11nm,0.2s						
KORR				*e*Sg	**Sn**	**20 54 04.7**	**+0.3**
	144nm,0.2s						
LSNR	**Lesken**	**1.31**	**272**	*e*Pg	**Pn**	**20 53 49.6**	**+0.4**
LSNR				*e*Sg	**Sn**	**20 54 07.9**	**+0.2**
ZEI	**Tsey**	**1.35**	**250**	*e*Pg	**Pn**	**20 53 48.8**	**-1.0**
ZEI				*e*Sg	**Sn**	**20 54 06.8**	**-1.9**
MAK	**Makhachkala**	**1.41**	**101**	*e*Pg	**Pn**	**20 53 52.5**	**+2.3**
MAK				*e*Sg	**Sn**	**20 54 09.9**	**+0.4**
	118nm,0.4s						
LGD	**Lagodekhi**	**1.49**	**162**	P	**Pn**	**20 53 51.3**	**+0.1**
LGD				S	**Sn**	**20 54 11.6**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.54**	**257**	*e*Pg	**Pn**	**20 53 51.6**	**-0.5**
DIGR				*e*Sg	**Sn**	**20 54 11.0**	**-1.7**
TBLG	**Delisi**	**1.66**	**204**	P	**Pn**	**20 53 53.4**	**0.0**
TBLG				S	**Sn**	**20 54 15.0**	**0.0**
BTNK	**Botanikuri**	**1.68**	**202**	P	**Pn**	**20 53 53.7**	**0.0**
BTNK				S	**Sn**	**20 54 15.5**	**-0.2**
KBTC	**Kuba-Taba**	**1.71**	**290**	*e*Pg	**Pn**	**20 53 53.3**	**-0.6**
KBTC				*e*Sg	**Sn**	**20 54 15.3**	**-0.9**
ONI	**Oni**	**1.73**	**248**	P	**Pn**	**20 53 55.5**	**+1.3**
ONI				S	**Sn**	**20 54 17.8**	**+1.2**
URKR	**Urkarakh**	**1.84**	**126**	*e*Pg	**Pn**	**20 53 55.6**	**-0.1**
URKR				*e*Sg	**Sn**	**20 54 19.6**	**+0.4**
DDFL	**Dedoflistskaro**	**1.84**	**168**	P	**Pn**	**20 53 53.2**	**-2.5**
DDFL				S	**Sn**	**20 54 20.4**	**+1.1**
KZRT	**Kazreti**	**2.08**	**206**	P	**Pn**	**20 53 59.5**	**+0.8**
KZRT				S	**Sn**	**20 54 26.1**	**+1.6**
NEY	**Neytrino**	**2.12**	**271**	*e*Pg	**Pn**	**20 53 59.4**	**+0.1**
NEY				*e*Sg	**Sn**	**20 54 24.9**	**-0.8**
TKB	**Tkibuli**	**2.14**	**246**	P	**Pn**	**20 54 00.3**	**+0.9**
TKB				S	**Sn**	**20 54 28.0**	**+2.2**
SHA1	**Shidzhatmaz**	**2.21**	**284**	*e*Pg	**Pn**	**20 54 00.1**	**-0.5**
SHA1				*e*Sg	**Sn**	**20 54 25.7**	**-2.2**
KIV0	**Kislovodsk Arr**	**2.24**	**289**	*e*Pg	**Pn**	**20 54 00.2**	**-0.6**
KIV0				*e*Sg	**Sn**	**20 54 26.1**	**-2.2**
DRN	**Derbent**	**2.34**	**121**	*e*Pn	**Pn**	**20 54 02.9**	**+1.0**
DRN				*e*Sn	**Sn**	**20 54 31.4**	**+0.9**
AKT	**Akhty**	**2.36**	**138**	*e*Pn	**Pn**	**20 54 02.4**	**+0.1**
AKT				*e*Sn	**Sn**	**20 54 30.0**	**-1.2**
ALER	**Alexandrovskoy**	**2.47**	**309**	*e*Pn	**Pn**	**20 54 03.6**	**0.0**
ALER				*e*Sn	**Sn**	**20 54 32.9**	**-0.6**
GOF	**Gofitskoye**	**2.59**	**315**	*e*Pn	**Pn**	**20 54 05.1**	**-0.1**
	35nm,0.2s						
GOF				*e*Sn	**Sn**	**20 54 35.9**	**-0.4**
	60nm,0.2s						

IDC ***02*** *21:04:30.1±1.7, 39°.79N×106°.68E, h0*^{km}*, mb3.2/2, mb1 3.3/4, mb1mx3.0/33, mbtmp3.2/4, ML3.1/2, MS3.5/2, Ms1 3.5/2, ms1mx2.9/17, Error ellipse: s-maj=62.9km s-min=26.3km az=54.0*

BJI ***02*** *21:04:33.4±0.0, 39°.92N×106°.36E, h6*^{km}*, mb3.6/3, ML3.7/13, Ms3.4/3*

ISC 02 21:04:31.7±0.7**, 39°.78N**±0°.04×**106°.56E**±0°.03**, h16**^{km}**, n12, σ2**^{s}**.10**/21**, 1C, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**2.78**	**72**	*e*Pn	**Pn**	**21 05 16.1**	**+0.5**
BTO				*e*Pg	**Pb**	**21 05 20.8**	**-0.2**
BTO				Sg	**Sb**	**21 05 56.4**	**+1.6**
HHC	**Hu-ho-hao-te**	**3.97**	**73**	Pg	**Pg**	**21 05 46.0**	**-1.8**
HHC				Sg	**Sg**	**21 06 37.4**	**-1.8**
HHC				smax	smax		
	comp=N,280nm,0.4s						
HHC				smax	smax		
	comp=E,230nm,0.7s						
LZH	**Lanzhou**	**4.26**	**211**	*e*Pn	**Pn**	**21 05 38.6**	**+2.5**
LZH				Pg	**Pb**	**21 05 45.3**	**-1.1**
LZH				Sn	**Sn**	**21 06 28.5**	**+2.9**
LZH				Sg	**Sb**	**21 06 39.4**	**+1.7**
LZH				smax	smax		
	comp=N,280nm,0.9s						
LZH				smax	smax		
	comp=E,230nm,0.5s						
LZH				LR	LR		
	comp=N,270nm,6.0s						
LZH				LR	LR		
	comp=E,310nm,5.9s						
GTA	**Gaotai**	**5.22**	**268**	⇑Pn	**Pn**	**21 05 49.3**	**+0.1**
GTA				Pg	**Pb**	**21 06 02.1**	**-0.6**
GTA				Sn	**Sn**	**21 06 45.2**	**-4.0**
GTA				Sg	**Sb**	**21 07 04.3**	**-0.9**
GTA				smax	smax		
	comp=N,88nm,0.7s						
GTA				smax	smax		
	comp=E,67nm,1.1s						
GTA				LR	LR		
	comp=N,190nm,6.0s						
GTA				LR	LR		
	comp=E,91nm,4.1s						
XAN	**Xi'an**	**6.03**	**161**	Pg	**Pg**	**21 06 25.0**	**-2.1**
XAN				Sn	**Sn**	**21 07 11.7**	**+2.7**
XAN				Sg	**Sg**	**21 07 41.2**	**-4.0**
XAN				smax	smax		
	comp=N,45nm,0.6s						
XAN				smax	smax		
	comp=E,32nm,0.8s						
XAN				LR	LR		
	comp=E,180nm,4.7s						
SONM	**Songino Array**	**8.06**	**359**	Pn	**Pn**	**21 06 28.7**	**+0.6**
	0.2nm,0.3s,baz=178,slow=14,SNR=3.4						
SONM				Lg	Lg	21 08 38.6	
	1.7nm,0.3s,baz=188,slow=31,SNR=10						
WMQ	**Urumqi**	**14.64**	**292**	*e*P	**Pn**	**21 07 58.9**	**+0.8**
MKAR	**Makanchi Array**	**18.96**	**300**	P	**Pn**	**21 08 54.9**	**+2.1**
	0.1nm,0.3s,baz=97,slow=12,SNR=3.4						
JNU	**Nakatsue**	**20.62**	**101**	LR	LR	21 16 38.0	
	comp=Z,111nm,21.3s,baz=162,slow=35						
KURBB	**Kurchatov Arra**	**22.40**	**308**	P	**P**	**21 09 29.6**	**+0.3**
	0.4nm,0.6s,baz=106,slow=13,SNR=3.3						
BVAR	**Borovoye Array**	**27.91**	**310**	LR	LR	21 22 06.7	
	comp=Z,97nm,19.1s,baz=3.0,slow=38						
ASAR	**Alice Springs**	**68.08**	**153**	P	**P**	**21 15 31.4**	**+0.8**
	0.3nm,0.5s,baz=338,slow=6.2,SNR=4.9						

MAN 02 21:21:04.3, 7°.32N×124°.86E, h27^{km}**, mb4.2, ML3.0, MS2.7, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**0.59**	**20**	*e*P	Pn	21 21 16.8	-0.2
BUKP				*e*S	Sn	21 21 26.1	+0.4
CTBH	**Cotabato--PC H**	**0.61**	**260**	⇓*i*P	Pb	21 21 15.8	-0.6
CTBH				*i* S	Sb	21 21 23.7	-1.1
DMPH	**Davao City--Mi**	**0.69**	**110**	⇑*e*P	Pn	21 21 21.6	+3.3
DMPH				*e*S	Sn	21 21 31.6	+3.5
SKMP	**Bagumbayan, Su**	**0.86**	**201**	*e*P	Pb	21 21 20.5	-0.1
SKMP				*e*S	Sn	21 21 32.3	+0.1
CGP	**Cagayan de Oro**	**1.14**	**352**	⇑*e*P	Pb	21 21 25.3	0.0
CGP				*e*S	Sn	21 21 39.2	+0.1
DDMP	**Don Marcelino,**	**1.48**	**145**	*e*P	Pb	21 21 30.9	-0.3
DDMP				*e*S	Sn	21 21 48.0	+0.4
PAGZ	**Pagadian**	**1.55**	**290**	*e*P	Pn	21 21 30.5	+0.4
PAGZ				*e*S	Sn	21 21 50.4	+1.0
IPIL	**Ipil**	**2.31**	**282**	*e*P	Pb	21 21 43.8	-1.5
IPIL				*e*S	Sb	21 22 13.0	-0.5
PVCP	**Virac**	**6.27**	**354**	*e*P	Pn	21 22 36.6	+1.6
PVCP				*e*S		21 22 40.1	

IDC ***02*** *22:13:09.3±3.5, 5°.90S×103°.20E, h0*^{km}*, mb3.8/5, mb1 3.8/5, mb1mx3.6/36, mbtmp3.8/5, Error ellipse: s-maj=168.4km s-min=22.5km az=57.0*

ISCJB ***02*** *22:13:11.1±2.0, 6°.06S±0°.06×103°.38E±0°.06, h10*^{km}*±14*^{km}*, mb3.9/5, Error ellipse: s-maj=10.5km s-min=8.5km az=135.1*

DJA ***02*** *22:13:13.4±0.5, 6°S±4°×10°3E±°, h10*^{km}*, M3.8/7, MLv3.8/7*

ISC 02 22:13:10.4±2.2**, 5°.96S**±0°.08×**103°.38E**±0°.06**, h5**^{km}±12^{km}**, n17, σ0**^{s}**.79**/21**, mb4.0**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**1.15**	**36**	P	**Pn**	**22 13 33.5**	**+0.2**
LWLI				S	**Sg**	**22 13 48.0**	**+0.5**
KASI	**Kota Agung**	**1.19**	**69**	P	**Pn**	**22 13 34.1**	**+0.3**
KASI				S	**Sg**	**22 13 48.5**	**-0.3**
MNAI	**Manna**	**1.64**	**345**	P	**Pg**	**22 13 41.9**	**0.0**
MNAI				S	**Sg**	**22 14 04.0**	**+0.8**
MDSI	**Maura Dua**	**1.66**	**29**	P	**Pb**	**22 13 41.7**	**+0.1**
MDSI				S	**Sn**	**22 14 02.6**	**+0.6**
KLI	**Kotabumi**	**1.83**	**54**	P	**Pg**	**22 13 45.1**	**-0.4**
KLI				S	**Sg**	**22 14 09.2**	**-0.1**
BLSI	**Bandar Lampung**	**1.95**	**73**	P	**Pb**	**22 13 46.1**	**-0.3**
BLSI				S	**Sb**	**22 14 11.7**	**+0.7**
LHSI	**Lahat**	**2.12**	**4**	P	**Pb**	**22 13 49.9**	**+0.6**
LHSI				S	**Sg**	**22 14 17.6**	**-1.0**
CGJI	**Cibinong**	**2.39**	**106**	P	**Pn**	**22 13 50.5**	**+0.2**
H08S2	**Diego Garcia H**	**30.71**	**265**	T	T	22 51 27.1	
	baz=94						
H08S3	**Diego Garcia H**	**30.72**	**265**	T	T	22 51 25.7	
	baz=94						
H08S1	**Diego Carcia H**	**30.73**	**265**	T	T	22 51 27.4	
	baz=94						
ASAR	**Alice Springs**	**34.23**	**124**	P	**P**	**22 19 57.6**	**+0.1**
	0.3nm,0.5s,baz=306,slow=8.0,SNR=4.1						
STKA	**Stephens Creek**	**44.02**	**131**	P	**P**	**22 21 20.8**	**+1.5**
	1.5nm,0.5s,baz=300,slow=10,SNR=5.3						
SONM	**Songino Array**	**53.63**	**3**	P	**P**	**22 22 32.4**	**-0.5**
	0.4nm,0.6s,baz=196,slow=10.0,SNR=2.6						
MKAR	**Makanchi Array**	**55.75**	**343**	P	**P**	**22 22 47.3**	**-0.9**
	0.9nm,0.5s,baz=153,slow=8.9,SNR=11						
ZALV	**Zalesovo Beam**	**61.69**	**348**	P	**P**	**22 23 27.5**	**-1.9**
	1.0nm,0.4s,baz=165,slow=4.9,SNR=5.8						
TXAR	**Lajitas Array**	**145.47**	**44**	PKPbc	**PKPbc**	**22 32 50.3**	**-0.2**
	0.3nm,0.4s,baz=241,slow=0.5,SNR=8.6						

MEX 02 22:13:52.5±0.8**, 17°.16N**×**94°.84W, h134**^{km}±6^{km}**, MD3.8, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.08**	**212**	*i* P	Pn	22 14 09.8	-1.0
CMIG				*e*S	Sn	22 14 22.3	-2.2
HUIG	**Huatulco**	**1.84**	**222**	*e*P	Pn	22 14 22.8	-2.0
HUIG				*e*S	Sn	22 14 47.9	-1.7
PCIG		**2.12**	**133**	*i* P	Pn	22 14 26.9	-1.3
PCIG				*i* S	Sn	22 14 54.2	-1.4

PGC 02 22:21:32.1, 61°.15N×**139°.99W, h1**^{km}**, ML2.1**/7**, 140km west of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK3	**Moose Creek**	**0.67**	**340**	P	Pg	22 21 43.7	-1.1
YUK3				S	Sg	22 21 52.9	-0.6
YUK6	**Outpost Mounta**	**0.82**	**104**	P	Pg	22 21 46.8	-0.9
TABL	**Table Mountain**	**0.91**	**219**	P	Pg	22 21 48.0	-1.5
TABL				S	Sg	22 21 59.7	-1.6
YUK1	**Sand Pete Hill**	**1.04**	**346**	P	Pg	22 21 50.5	-1.5
PCA	**Pinnacle**	**1.07**	**187**	P	Pg	22 21 51.7	-0.8
PCA				S	Sg	22 22 06.0	-0.3
SAMH	**Samovar Hills**	**1.10**	**201**	P	Pg	22 21 52.6	-0.5
SAMH				S	Sg	22 22 07.0	-0.4
BALM	**Baldy**	**1.15**	**265**	P	Pg	22 21 52.3	-1.8
BALM				S	Sg	22 22 07.7	-1.3
KIAG	**Kiagna River**	**1.18**	**260**	P	Pg	22 21 52.6	-2.0
KIAG				S	Sg	22 22 08.0	-1.8
PTPK	**Patty Peak**	**1.20**	**273**	P	Pg	22 21 53.0	-2.1
PTPK				S	Sg	22 22 09.8	-0.9
BVCY	**Beaver Creek**	**1.33**	**342**	P	Pg	22 21 55.7	-1.9
MESA	**MESA**	**1.38**	**226**	Pn	Pg	22 21 57.6	-0.8
MESA				Sg	Sg	22 22 16.0	-0.2
PNL	**Peninsula**	**1.52**	**169**	Pn	Pn	22 21 59.5	-0.8
PNL				Sg	Sb	22 22 19.7	-1.0
PLBC	**Pleasant Camp**	**2.48**	**132**	Pg	Pb	22 22 16.3	-1.1
PLBC				Sg	Sb	22 22 49.6	+1.2
WHY	**Whitehorse**	**2.54**	**99**	Pn	Pn	22 22 14.2	-0.4
WHY				Sg	Sb	22 22 50.2	-0.1
DAWY	**Dawson**	**2.94**	**5**	Pn	Pn	22 22 19.5	-0.4
DAWY				Sg	Sb	22 23 02.5	+0.9
DOT	**Dot Lake**	**3.14**	**325**	Pn	Pn	22 22 22.9	+0.2
DOT				Sg	Sb	22 23 10.1	+2.6

UCR 02 22:25:05.7±2.5**, 9°.50N**×**82°.94W, h24**^{km}±17^{km}**, MW3.6, 2C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDBA	**Buenos Aires**	**0.47**	**225**	*e*P	Pb	22 25 15.0	-0.3
EDBA				*e*S	Sb	22 25 22.4	+0.5
EDLM	**Las Mercedes**	**0.67**	**251**	⇓*e*P	Pb	22 25 18.1	-0.8
EDLM				*e*S	Sb	22 25 27.6	-0.2
EDPN	**Palmar Norte**	**0.73**	**224**	*e*P	Pn	22 25 20.4	-0.2
EDPN				*e*S	Sn	22 25 31.2	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BRU2	**Volcan**	0.74	160	eP	Pb	22 25 19.1	-0.9
BRU2				eS	Sb	22 25 28.6	-1.2
CVTR	**Volcan Turrial**	0.96	303⇑	eP	Pb	22 25 23.4	-0.5
CVTR				eS	Sn	22 25 37.1	0.0
LCR2	**La Lucha 2**	1.07	283⇑	eP	Pn	22 25 25.3	-0.2
LCR2				eS	Sb	22 25 39.1	-0.4

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*SJA **02** 22:25:23.1±0.7, 21°.33S×67°.21W, h211km±7km, ML2.5, MW3.0*
*ISCJB **02** 22:25:24.3±0.9, 21°.30S±0°.04×67°.28W±0°.05, h202km±11km, Error ellipse: s-maj=9.3km s-min=5.9km az=144.4*
*GUC **02** 22:25:24.6±0.6, 21°.23S×67°.82W, h240km±7km, ML3.3*
ISC 02 22:25:23.5±2.0**, 21°.30S**±0°.05×**67°.26W**±0°.06**, h208**km±18km**, n16, σ1s.06**/27**, 1C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	**Yavi**	1.84	119	eP	Pn	22 26 01.9	+0.3
YJA				IAML		22 26 02.4	
	comp=Z,21nm,0.1s						
YJA				eS	Sn	22 26 30.2	-0.9
PB09	**IPOC Station P**	1.91	255	eP	Pn	22 26 02.8	+0.8
PB09				eS	Sn	22 26 32.1	+0.2
LVC	**Limon Verde**	2.02	229	eP	Pn	22 26 03.8	+0.6
LVC				eS	Sn	22 26 33.6	-0.5
LVC				IAML		22 26 37.1	
	comp=Z,6.9nm,0.1s						
PB01	**IPOC Station P**	2.10	276	eP	Pn	22 26 04.2	+0.5
PB01				eS	Sn	22 26 33.7	-1.3
PB01				IAML		22 26 35.6	
	comp=N,77nm,0.2s						
PB08	**IPOC Station P**	2.11	303	eP	Pn	22 26 05.2	+1.0
PB08				eS	Sn	22 26 35.7	-0.1
GO01	**Chusmiza**	2.43	311⇑	iP	Pn	22 26 08.4	+0.7
GO01				eS	Sn	22 26 42.3	+0.2
GO01				IAML		22 26 48.4	
	comp=N,103nm,0.1s						
HJA	**Humahuaca**	2.56	138	eP	Pn	22 26 09.7	+0.7
HJA				IAML		22 26 10.4	
	comp=Z,18nm,0.4s						
PB11	**IPOC Station P**	2.72	304	eP	Pn	22 26 10.6	0.0
PB11				eS	Sn	22 26 45.3	-1.9
PB15	**IPOC Station P**	2.80	227	eP	Pn	22 26 13.1	+1.6
PB15				eS	Sn	22 26 49.1	+0.1
MNMC	**Minye Minye**	3.08	314⇓	eP	Pn	22 26 15.7	+0.9
MNMC				eS	Sn	22 26 54.0	-0.8
MNMC				IAML		22 26 55.8	
	comp=E,83nm,0.2s						
PSGC	**Pisagua**	3.17	302	eP	Pn	22 26 14.9	-0.8
PSGC				eS	Sn	22 26 53.8	-2.8
PSGC				IAML		22 26 57.3	
	comp=N,28nm,0.3s						
AZAP	**Zapla**	3.55	146	eP	Pn	22 26 20.1	-0.2
AZAP				IAML		22 26 21.8	
	comp=Z,9.5nm,0.2s						
PB16	**IPOC Station P**	3.63	324	eP	Pn	22 26 23.2	+1.5
PB16				eS	Sn	22 27 07.4	+0.2
PB16				IAML		22 27 09.5	
	comp=E,20nm,0.3s						
PB10	**IPOC Station P**	3.77	233	eP	Pn	22 26 23.2	+0.5
PB14	**IPOC Station P**	4.40	221	eP	Pn	22 26 30.9	0.0
LPAZ	**La Paz**	5.05	350	eP	Pn	22 26 40.2	+0.8

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*NEIC **02** 22:36:32.3±0.0, 19°.10N×104°.13W, h2km, MD4.0(MEX), After MEX.*
NEIC Felt [IV] at Manzanillo.
MEX 02 22:36:32.9±0.7**, 19°.14N×104°.11W, h7**km±4km**, MD4.1, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZ5V		0.58	55	eP	Pg	22 36 44.2	0.0
EZ5V				i S	Sg	22 36 51.2	-0.7
CJM	**Chamela**	0.95	292	ePg	Pg	22 36 48.4	-2.9
CJM				eSg	Sg	22 37 01.3	-2.4
CJM	**Chamela**	0.95	292	i P	Pg	22 36 48.4	-2.9
CJM				i S	Sg	22 37 01.3	-2.4
MMIG	**Aquila**	1.11	139	ePg	Pg	22 36 50.8	-3.5
MMIG				eSg	Sg	22 37 05.4	-3.4
MMIG	**Aquila**	1.11	139	eP	Pg	22 36 50.8	-3.5
MMIG				eS	Sg	22 37 05.4	-3.4
ZIIG	**Zihuatanejo**	2.94	121	ePn	Pn	22 37 19.8	-0.2
ZIIG	**Zihuatanejo**	2.94	121	eP	Pn	22 37 17.0	-3.0
ZIIG				i S	Sn	22 37 52.1	-3.4
ARIG	**Puente Sto Nin**	3.66	103	eP	Pn	22 37 27.1	-3.0
ARIG				eS	Sn	22 38 10.5	-3.1
ZAIG	**Zacatecas**	3.89	21	ePn	Pn	22 37 34.4	+1.1
TLIG	**Tlapa**	5.49	106	ePn	Pn	22 37 55.5	+0.2
TLIG				eSn	Sn	22 38 57.0	-1.7
LNIG	**Linares**	7.17	36	ePn	Pn	22 38 18.9	+0.8
LVIG	**Laguna Verde**	7.28	84	ePn	Pn	22 38 18.2	-1.5
KVTX	**Kingsville**	10.12	33	ePn	Pn	22 38 56.0	-2.8
TX31	**Lajitas Ar. Si**	10.16	2	ePn	Pn	22 39 01.7	+2.4
CCIG	**Comitan**	11.75	102	ePn	Pn	22 39 21.3	0.0
JCT	**Junction City**	11.95	18	ePn	Pn	22 39 23.5	-0.3
MNTX	**Cornudas Mount**	12.56	355	ePn	Pn	22 39 32.2	+0.1
ABTX	**Abilene, Hawle**	14.01	16	ePn	P	22 39 57.3	-2.7
WHTX	**Lake Whitney,**	14.13	24	eP	P	22 40 00.7	-0.5
ANMO	**Albuquerque**	15.88	353	eP	P	22 40 20.2	-0.7
X18A	**Snowflake**	16.18	342	eP	Pn	22 40 21.1	0.0
Y14A	**Wickenburg**	16.74	333	ePn	Pn	22 40 28.2	+0.2

MAN 02 22:43:18.6, 9°.09N×127°.03E, h1km, mb4.2, ML3.0, MS2.6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	1.40	265	eP	Pn	22 43 43.4	-1.9
BUTP				eS	Sn	22 44 04.6	+0.3
BUKP	**Musuan**	2.29	238	eP	Pn	22 43 58.6	+1.0
BUKP				eS	Sn	22 44 27.9	+1.4
MSLP	**Maasin**	2.38	296	eP	Pn	22 43 59.8	+0.9
MSLP				eS	Sn	22 44 29.6	+1.0
CGP	**Cagayan de Oro**	2.39	255	eP	Pn	22 43 59.3	+0.3

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*ISCJB **02** 23:02:47.1±0.6, 1°.45N±0°.06×98°.97E±0°.07, h106km±6km, mb3.6/3, Error ellipse: s-maj=13.1km s-min=6.4km az=143.3*
*IDC **02** 23:02:47.9±3.4, 1°.47N×99°.31E, h95km±16km, mb3.4/3, mb1 3.5/4, mb1mx3.1/45, mbtmp3.7/4, MS2.9/1, Ms1 2.9/1, ms1mx2.4/19, Error ellipse: s-maj=124.8km s-min=22.4km az=60.0*
*DJA **02** 23:02:48.9±0.5, 1°N±2°×9°9E±°, h85km±6km, M3.5/9, MLv3.5/9*
ISC 02 23:02:47.9±0.9**, 1°.46N**±0°.06×**98°.98E**±0°.07**, h100**km±9km**, n12, σ1s.12**/16**, mb3.4**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	0.89	137	P	Pn	23 03 07.8	+0.6
MNSI				S	Sn	23 03 22.9	+1.1
PSI	**Prapat**	1.34	358	P	Pn	23 03 12.4	0.0
	8.3nm,0.3s,baz=174,slow=9.2,SNR=13						
PSI				S	Sn	23 03 28.7	-2.1
	6.9nm,0.3s,baz=198,slow=20,SNR=8.2						
GSI	**Gunungsitoli**	1.41	264	P	Pn	23 03 13.0	-0.1
GSI				S	Sn	23 03 31.4	-0.8
KCSI	**Kotacane, Aceh**	2.38	330	P	Pn	23 03 26.2	+0.7
KCSI				S	Sn	23 03 54.5	+0.2
PDSI	**Padang**	2.78	148	P	Pn	23 03 31.2	+0.4
PDSI				S	Sn	23 04 03.6	-0.2
SNSI	**Sinabang, Aceh**	2.81	290	P	Pn	23 03 31.6	+0.4
MLSI	**Meulaboh, Aceh**	3.79	317	P	Pn	23 03 45.5	+1.1
CMAR	**Chiang Mai Arr**	16.90	360	P	P	23 06 39.5	+0.8
	0.6nm,0.3s,baz=189,slow=10,SNR=5.3						
DAV	**Davao City (W)**	27.10	77	LR	LR	23 20 29.8	
	comp=Z,21nm,18.2s,baz=164,slow=40						
ASAR	**Alice Springs**	42.15	129	P	P	23 10 28.8	-2.0
	0.3nm,0.4s,baz=300,slow=7.7,SNR=3.1						
MKAR	**Makanchi Array**	47.45	344	P	P	23 11 13.3	+0.8
	0.2nm,0.3s,baz=161,slow=8.0,SNR=5.4						
ZALV	**Zalesovo Beam**	53.61	350	P	P	23 11 59.5	+0.9
	1.2nm,0.4s,baz=157,slow=6.7,SNR=6.2						

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*PRU **02** 23:03:48.7±0.0, 53°.95N×6°.74E, h0km*
*ISCJB **02** 23:03:51.7±0.2, 53°.31N±0°.02×6°.60E±0°.03, h0km, Error ellipse: s-maj=2.7km s-min=2.3km az=9.5*
*IDC **02** 23:03:53.4±2.2, 53°.14N×6°.31E, h0km, mb1 3.6/7, mb1mx3.3/46, mbtmp3.5/7, ML3.0/6, Error ellipse: s-maj=36.4km s-min=14.6km az=81.0*
*BGR **02** 23:03:54.8±0.4, 53°.32N×6°.55E, h5km, ML3.1/20, Error ellipse: s-maj=6.7km s-min=3.3km az=127.0*
BGR Felt V EMS.
*BGS **02** 23:03:55.0±0.7, 53°.33N×6°.79E, h5km, ML3.4, ML3.4*
*LDG **02** 23:03:56.5±0.1, 53°.26N×6°.73E, h3km, Md3.5/3, Ml3.2/49, Error ellipse: s-maj=1.5km s-min=1.4km az=77.0*
*BNS **02** 23:03:56.3±1.1, 53°.24N×6°.56E, h3km, ML2.8*
*UPP **02** 23:03:59.4±2.6, 53°.50N×7°.30E, h0km, ML2.0, Suspected explosion*
ISC 02 23:03:52.3±0.6**, 53°.28N**±0°.03×**6°.74E**±0°.03**, h0**km**, n150, σ2s.83**/215**, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WDB4	**Woudbloem 4**	0.07	181	ePg	Pg	23 03 57.8	+4.2
	baz=30						
WDB4				eSg	Sg	23 04 00.2	+5.8
SPY4	**Spijk (Roodesc**	0.14	12	eSg	Sg	23 04 02.0	+5.3
ENM4	**Eenrum**	0.20	310	eSg	Sg	23 04 05.1	+6.3
FSW4	**Finsterwolde 4**	0.24	105	eSg	Sb	23 04 05.2	+5.2
HWF4	**Haulerwijk**	0.31	229	ePg	Pb	23 04 03.3	+2.6
	baz=50						
HWF4				eSg	Sb	23 04 11.8	+5.4
VLW4	**Vlagtwedde**	0.38	145	eSg	Sb	23 04 10.8	+2.5
ENV4	**Elp / Enerveen**	0.39	189	ePg	Pb	23 04 04.6	+2.5
	baz=16						
ENV4				eSg	Sb	23 04 12.3	+3.7
NIW4	**Wetzens (Niawi**	0.42	281	ePg	Pn	23 04 05.7	0.0
	baz=95						
NIW4				eSg	Sb	23 04 14.9	+5.3
VBG4	**Venebrugge (Br**	0.73	183	ePg	Pn	23 04 11.1	+1.2
	baz=7.5						
HLG	**Helgoland**	1.14	36	ePg	Pn	23 04 17.4	+1.9
IBBN	**Ibbenburen**	1.15	147	ePg	Pn	23 04 18.3	+2.6
IBBN				eSg	Sn	23 04 34.9	+2.8
WTSB	**Winterswijk**	1.31	178	ePg	Pb	23 04 19.1	+1.3
WTSB				eSg	Sn	23 04 38.4	+2.3
WTSB	**Winterswijk**	1.31	178	ePn	Pg	23 04 19.0	+1.5
	60nm,0.4s						
WTSB				ePg	Pn	23 04 20.1	+2.2
WTSB				eSg	Sn	23 04 38.5	+2.5
RETH	**Rethem/Aller,**	1.68	108	ePn	Pn	23 04 25.0	+2.1
OPLO	**Oploo**	1.78	199	ePg	Pb	23 04 26.6	+0.7
OPLO				eSg	Sg	23 04 50.6	+1.0
BUG	**Bochum--Univer**	1.87	170	ePn	Pn	23 04 27.4	+1.8
LAUG	**Laupendahl**	1.93	176	ePn	Pn	23 04 28.2	+1.8
LAUG				eSg	Sn	23 04 51.9	+0.5
	60nm,0.2s						
NRDL	**Niedersach Rie**	2.19	110	ePn	Pn	23 04 32.0	+2.1
BSEG	**Bad Segeberg**	2.23	71	ePn	Pn	23 04 32.0	+1.4
HOBG	**Hohbusch**	2.33	171	ePn	Pn	23 04 33.9	+2.1
BNS	**Bensberg**	2.33	173	ePn	Pn	23 04 34.0	+2.1
HGN	**Heimansgroeve**	2.56	192	ePn	Pn	23 04 36.9	+1.8
HGN	**Heimansgroeve**	2.56	192	ePn	Pn	23 04 36.8	+1.7
	11nm,0.1s						
HGN				ePg	Pg	23 04 43.9	+2.5
HGN				eSg	Sg	23 05 17.1	+2.4
GTTG	**Gvttingen**	2.63	130	ePn	Pn	23 04 38.2	+2.2
DREG	**Dreilaegerbach**	2.64	187	ePn	Pn	23 04 37.4	+1.3
CLZ	**Clausthal**	2.64	121	ePn	Pn	23 04 38.5	+2.2
KLL	**Kalltalsperre**	2.65	186	ePn	Pn	23 04 37.7	+1.4
ASSE	**Asse, Remlinge**	2.66	114	ePn	Pn	23 04 38.1	+1.8
STB	**Steinbach**	2.69	179	ePn	Pn	23 04 38.7	+1.9
MEM	**Membach**	2.71	190	ePn	Pn	23 04 38.6	+1.5
AHRW	**Bad Neuenahr-A**	2.75	175	ePn	Pn	23 04 39.9	+2.3
BSTI	**Sart Tilman**	2.79	196	P	Pn	23 04 40.8	+2.5
UCC	**Uccle**	2.88	212	ePn	Pn	23 04 41.9	+2.4
KOE	**Koeppel**	2.92	167	ePn	Pn	23 04 42.0	+1.9
BHOU	**Houvegnez**	2.96	189	P	Pn	23 04 42.9	+2.3
BCLA	**Clavier**	3.00	198	P	Pn	23 04 43.4	+2.3
BGES	**Gesves**	3.07	200	P	Pn	23 04 44.4	+2.3
BGG	**Burgeitz**	3.10	173	ePn	Pn	23 04 44.6	+2.2
BSKQ	**Steenkerk**	3.10	213	P	Pn	23 04 45.1	+2.6
SNF	**Seneffe**	3.16	210	P	Pn	23 04 45.9	+2.6
UBBA	**Unterbreizbach**	3.18	139	ePn	Pn	23 04 45.5	+2.0
BMRD	**Maredsous**	3.22	203	P	Pn	23 04 46.6	+2.5
TNS	**Taunus Mts**	3.24	160	ePn	Pn	23 04 46.7	+2.3
RCHB	**Rochefort**	3.26	197	P	Pn	23 04 43.9	-0.8
GIVF	**Givet**	3.40	201	ePn	Pn	23 04 48.7	+2.2
GIVF				eSn	Sn	23 05 26.6	-0.9
	13nm,0.2s						
GIVF				eSg	Sg	23 05 42.6	+1.3
	27nm,0.3s						
DOU	**Dourbes**	3.45	204	eP	Pn	23 04 49.4	+2.0
DOU	**Dourbes**	3.45	204	P	Pn	23 04 49.7	+2.4
MUD	**Monsted U'grnd**	3.48	23	i P	Pn	23 04 49.7	+2.0
BAIF	**Baives**	3.59	207	ePn	Pn	23 04 51.2	+2.0
BAIF				eSn	Sn	23 05 30.7	-1.5
	6.6nm,0.2s						
BAIF				eSg	Sg	23 05 48.9	+1.4
	23nm,0.6s						
WLF	**Walferdange**	3.64	186	P	Pn	23 04 54.0	+4.2
WACR	**West Acre**	3.73	264	eP	Pn	23 04 53.5	+2.4
WACR				IAML		23 05 44.6	
	comp=N,37nm,0.3s						
WACR				IAML		23 05 46.3	
	comp=E,28nm,0.2s						
MOX	**Moxa**	4.01	129	ePn	Pn	23 04 57.2	+2.3
ELSH	**Elham, Standar**	4.05	240	eP	Pn	23 04 58.0	+2.5
ELSH				IAML		23 05 46.5	
	comp=N,39nm,0.4s						
ELSH				IAML		23 05 48.5	
	comp=E,35nm,0.4s						
GRF	**Grafenberg Arr**	4.55	140	ePn	Pn	23 05 05.3	+2.8
TANN	**Tannenbergstha**	4.56	127	ePn	Pn	23 05 04.9	+2.3
LUNU	**Lund**	4.57	56	P	Pn	23 05 03.5	+0.9
LUNU				S	Sn	23 05 53.3	-3.1
BJUU	**Bjuv**	4.60	50	P	Pn	23 05 04.2	+1.1
BJUU				S	Sn	23 05 52.4	-4.8
HMNX	**Herstmonceux**	4.63	241	eP	Pn	23 05 05.1	+1.7
HMNX				IAML		23 06 02.1	
	comp=N,36nm,0.3s						
HMNX				IAML		23 06 06.4	
	comp=E,26nm,0.3s						
NKC	**Novy Kostel**	4.68	128	ePN	Pn	23 05 05.7	+1.5
STU	**Stuttgart**	4.77	160	ePn	Pn	23 05 07.7	+2.3
PAGF	**Fort de Pagny**	4.77	188	ePn	Pn	23 05 07.2	+1.8
	baz=14						
PAGF				eSn	Sn	23 05 59.0	-2.4
	comp=E,10nm,0.4s,baz=11						
PAGF				eSg	Sg	23 06 25.8	+0.3
	comp=E,6.4nm,0.4s,baz=18						
CDF	**Champ du Feu**	4.88	176	ePn	Pn	23 05 08.6	+1.5
CDF				eSn	Sn	23 06 03.4	-0.9
	comp=E,3.4nm,0.3s						
CDF				eSg	Sg	23 06 28.7	-0.4
	comp=E,6.0nm,0.4s						
CWF	**Charnwood Fore**	4.89	267	eP	Pn	23 05 09.2	+2.2
CWF				IAML		23 06 04.7	
	comp=E,13nm,0.6s						
CWF				IAML		23 06 10.6	
	comp=N,9.8nm,0.3s						
MEZF	**Maizieres J'vi**	4.90	193	ePn	Pn	23 05 08.9	+1.7
	baz=20						
MEZF				eSn	Sn	23 06 02.1	-2.4
	comp=N,6.3nm,0.3s,baz=10						
MEZF				eSg	Sg	23 06 29.7	+0.1
	comp=N,22nm,0.7s						
HPK	**Haverah Park**	5.03	281	eP	Pn	23 05 11.0	+2.1
HPK				IAML		23 06 09.8	
	comp=E,34nm,0.6s						
HPK				IAML		23 06 11.4	
	comp=N,42nm,0.3s						
BRG	**Berggiesshubel**	5.05	116	PN	Pn	23 05 11.9	+2.6
BRG				i		23 05 38.1	
BRG				i		23 06 06.9	
BRG	**Berggiesshubel**	5.05	116	SG	Sg	23 06 47.8	+13
	comp=N,4.8nm,1.1s						
BRG	**Berggiesshubel**	5.05	116	ePn	Pn	23 05 11.9	+2.6
BFO	**Black Forest**	5.05	168	ePn	Pn	23 05 11.2	+1.8
FABU	**Falkenberg**	5.07	40	P	Pn	23 05 10.2	+0.7
FABU				S	Sn	23 06 04.5	-4.2
LBWR	**Ladybower, Pea**	5.07	275	eP	Pn	23 05 11.3	+1.7
LBWR				IAML		23 06 09.3	
	comp=E,27nm,0.3s						
LBWR				IAML		23 06 13.3	
	comp=N,25nm,0.3s						
SFTF	**Sexfontaines**	5.19	193	ePn	Pn	23 05 12.8	+1.6
	baz=12						
SFTF				eSn	Sn	23 06 09.6	-2.2
	comp=N,3.0nm,0.3s						
SFTF				eSg	Sg	23 06 38.6	-0.4
	comp=N,8.5nm,0.4s						
HAU	**Haudompre**	5.28	183	ePn	Pn	23 05 13.8	+1.3
HAU				eSn	Sn	23 06 10.6	-3.5
	comp=N,4.6nm,0.3s						
HAU				eSg	Sg	23 06 41.3	-0.7
	comp=N,11nm,0.6s						
EDMD	**Edmundbyers**	5.36	290	eP	Pn	23 05 14.8	+1.3
EDMD				IAML		23 06 15.4	
	comp=N,32nm,0.3s						
EDMD				IAML		23 06 17.9	
	comp=E,35nm,0.5s						
HINF	**Hinteralfeld**	5.47	179	ePn	Pn	23 05 16.6	+1.5
HINF				eSn	Sn	23 06 15.8	-2.8
	comp=E,2.0nm,0.3s						
HINF				eSg	Sg	23 06 47.3	-0.6
	comp=E,2.6nm,0.3s						
BORU	**Boraas**	5.55	36	S	Sn	23 06 15.3	-5.3
STRD	**Stroud**	5.64	258	eP	Pn	23 05 19.1	+1.8
STRD				IAML		23 06 26.1	
	comp=E,22nm,0.5s						
STRD				IAML		23 06 28.4	
	comp=N,20nm,0.4s						
WET	**Wettzell**	5.66	135	ePn	Pn	23 05 21.4	+3.8
HLM1	**Long Mynd**	5.87	266	eP	Pn	23 05 22.7	+2.2
HLM1				IAML		23 06 28.5	
	comp=N,13nm,0.4s						
HLM1				IAML		23 06 29.9	
	comp=E,10nm,0.5s						
KESW	**Keswick, Cumbr**	5.96	287	eP	Pn	23 05 24.6	+2.8
KESW				IAML		23 06 39.6	
	comp=N,10.0nm,0.6s						
KESW				IAML		23 06 40.3	
	comp=E,12nm,0.6s						
KHC	**Kasperske Hory**	5.97	131	ePN	Pn	23 05 24.1	+2.1
KHC				eSN	Sn	23 06 35.4	+4.3
MONM	**Monmouth**	6.00	260	eP	Pn	23 05 24.3	+2.1
MONM				IAML		23 06 34.3	
	comp=E,11nm,0.6s						
MONM				IAML		23 06 35.3	
	comp=N,14nm,0.3s						
UBR	**Ueberruh**	6.00	158	ePn	Pn	23 05 24.7	+2.3
FOEL	**Foel Wylfa**	6.00	270	eP	Pn	23 05 24.7	+2.3
FOEL				IAML		23 06 35.8	
	comp=N,16nm,0.4s						
FOEL				IAML		23 06 45.5	
	comp=E,12nm,0.6s						
VANU	**Vaenersborg**	6.03	28	P	Pn	23 05 24.0	+1.3
MCH1	**Michaelchurch**	6.07	262	eP	Pn	23 05 24.5	+1.3
MCH1				IAML		23 06 33.3	
	comp=E,10nm,0.4s						
MCH1				IAML		23 06 34.0	
	comp=N,11nm,0.4s						
ESK	**Eskdalemuir**	6.17	293	eP	Pn	23 05 26.3	+1.7
ESK				IAML		23 06 35.8	
	comp=E,9.4nm,0.4s						
ESK				IAML		23 06 38.9	
	comp=N,7.8nm,0.6s						
GEC2	**GERESS Array S**	6.24	133	ePn	Pn	23 05 28.7	+2.9
GERES	**GERESS Array B**	6.24	133	Pn	Pn	23 05 28.6	+2.9
	comp=N,0.5nm,0.3s,baz=311,slow=14,SNR=12						
GERES				Lg	Lg	23 07 13.3	
	comp=N,0.1nm,0.3s,baz=309,slow=28,SNR=2.8						
STRU	**Stroemstad**	6.28	21	P	Pn	23 05 26.6	+0.4
STRU	**Stroemstad**	6.28	21	eP	Pn	23 05 26.6	+0.4
STRU				eS	Sn	23 06 32.8	-5.7
LOR	**Lormes**	6.29	198	ePn	Pn	23 05 27.4	+1.1
	baz=22						
LOR				eSn	Sn	23 06 35.9	-3.0
	comp=N,2.6nm,0.3s						
LOR				eSg	Sg	23 07 13.7	-0.6
	comp=N,5.5nm,0.3s,baz=14						
DAVA	**Damuels**	6.33	160	ePn	Pn	23 05 29.5	+2.5
	comp=N,6.4nm,0.6s						
LDF	**La Druitiere**	6.38	225	ePn	Pn	23 05 27.6	0.0
LDF				eSn	Sn	23 06 37.5	-3.6
	comp=N,2.9nm,0.3s						
FLN	**La Foliniere**	6.42	228	ePn	Pn	23 05 28.5	+0.5
	baz=45						
FLN				eSn	Sn	23 06 37.6	-4.3
	comp=N,3.5nm,0.3s						
SSF	**Saint Saulge**	6.56	200	ePn	Pn	23 05 30.9	+0.9
SSF				eSn	Sn	23 06 42.4	-3.0
	comp=N,2.1nm,0.3s						
SSF				eSg	Sg	23 07 22.4	-0.5
	comp=N,6.9nm,0.6s						
HYF	**Humbligny**	6.56	205	ePn	Pn	23 05 30.8	+0.8
HYF				eSn	Sn	23 06 41.9	-3.6
MOTA	**Moosalm**	6.56	153	ePn	Pn	23 05 31.9	+1.8
	comp=N,1.0nm,0.4s						
KONO	**Kongsberg**	6.58	13	eP	Pn	23 05 30.3	0.0
KONO				eS	Sn	23 06 40.6	-5.4
KONO				IAML		23 06 43.1	
	comp=Z,3.6nm,0.5s						
WME	**Myndd Eilian**	6.62	275	eP	Pn	23 05 32.3	+1.6
WLF1	**Llynfaes**	6.68	275	eP	Pn	23 05 33.2	+1.7
WLF1				IAML		23 06 47.2	
	comp=N,26nm,0.5s						
WLF1				IAML		23 06 47.8	
	comp=E,14nm,0.3s						
CABF	**La Chapelle**	6.69	184	ePn	Pn	23 05 33.2	+1.4
CABF				eSn	Sn	23 06 44.8	-3.9
	comp=E,3.2nm,0.5s						
SQTA	**Sankt Quirin**	6.71	153	ePn	Pn	23 05 34.4	+2.3
	comp=E,0.4nm,0.3s						
NASU	**Vaermlandsnaes**	6.71	30	P	Pn	23 05 32.9	+0.8
NASU				S	Sn	23 06 43.7	-5.4
FETA	**Feichten**	6.77	156	ePn	Pn	23 05 35.4	+2.4
	comp=E,1.4nm,0.5s						
IOMK	**Kirk Michael**	6.78	283	eP	Pn	23 05 34.5	+1.6
IOMK				IAML		23 06 35.3	
	comp=N,12nm,0.7s						
IOMK				IAML		23 06 46.2	
	comp=E,8.3nm,0.4s						
WTTA	**Wattenberg**	6.79	151	ePn	Pn	23 05 35.9	+2.6
	comp=E,1.7nm,0.4s						
YRC	**Rhoscolyn**	6.79	274	eP	Pn	23 05 34.5	+1.4
DAVOX	**Davos/Dischmat**	6.81	161	Pn	Pn	23 05 34.8	+1.2
	comp=E,0.4nm,0.3s,baz=342,slow=20,SNR=3.4						
AVF	**Avril sur Loir**	6.85	200	ePn	Pn	23 05 34.4	+0.4
AVF				eSn	Sn	23 06 48.6	-3.9
	comp=E,0.8nm,0.3s						
GRR	**Gorron**	6.86	228	ePn	Pn	23 05 33.9	-0.2
GRR				eSn	Sn	23 06 47.9	-4.9
	comp=E,5.3nm,0.2s						
SMF	**Signal de Mont**	6.90	197	ePn	Pn	23 05 35.4	+0.8
SMF				eSn	Sn	23 06 50.3	-3.5
	comp=E,3.0nm,0.4s						
GAL1	**Galloway**	6.92	288	eP	Pn	23 05 36.4	+1.5
INVG	**Invergeldie, C**	6.98	301	eP	Pn	23 05 37.7	+2.0
BGF	**Bois d'Agland**	7.18	202	ePn	Pn	23 05 39.5	+1.0
BGF				eSn	Sn	23 06 57.1	-3.6
	comp=E,9.0nm,0.4s						
HTL	**Hartland**	7.28	256	eP	Pn	23 05 41.3	+1.6
KBA	**Koelnbreinsper**	7.51	143	ePn	Pn	23 05 46.7	+3.4
	comp=E,3.6nm,0.5s						
ABTA	**Abfaltersbach**	7.52	148	ePn	Pn	23 05 47.4	+4.2
	comp=E,1.5nm,0.6s						
TCF	**Toulx Ste Croi**	7.58	205	ePn	Pn	23 05 44.9	+0.8
TCF				eSn	Sn	23 07 06.4	-4.3
	comp=E,1.0nm,0.2s						
SGMF	**Saint Gilles**	7.74	233	ePn	Pn	23 05 46.0	-0.2
SGMF				eSn	Sn	23 07 09.2	-5.3
	comp=E,2.6nm,0.3s						
CLGH	**Cloghs, Cushen**	7.75	289	eP	Pn	23 05 48.6	+2.2
LPL	**La Plagne**	7.77	180	ePn	Pn	23 05 47.5	+0.7
LPL				eSn	Sn	23 07 10.8	-4.7
	comp=E,0.8nm,0.2s						
LPG	**La Plagne**	7.79	180	ePn	Pn	23 05 48.5	+1.4
LPG				eSn	Sn	23 07 11.1	-5.0
	comp=E,1.8nm,0.4s						
HFS	**Hagfors**	7.86	26	Pn	Pn	23 05 47.2	-0.7
	comp=E,0.4nm,0.3s,baz=207,slow=12,SNR=15						
HFS				Sn	Sn	23 07 09.5	-7.9
	comp=E,1.3nm,0.3s,baz=217,slow=26,SNR=11						
NAO01	**NORSAR Array S**	7.92	15	eP	Pn	23 05 47.6	-1.0
NAO01				eS	Sn	23 07 10.7	-8.0
NAO01				IAML		23 07 16.2	
	comp=Z,4.2nm,0.4s						
NC602	**NORSAR Array S**	7.92	17	eP	Pn	23 05 47.6	-1.1
NC602				eS	Sn	23 07 09.3	-10

NC602				IAML		23 07 16.6	
	comp=Z,220nm,0.4s						
BIGH	**Upper Bighouse**	7.94	315	*e*P	Pn	23 05 50.4	+1.5
MFF	**Saint Martin d**	8.02	216	*e*Pn	Pn	23 05 50.1	+0.1
MFF				*e*Sn	Sn	23 07 16.4	-4.9
	comp=Z,1.8nm,0.3s						
ROSF	**Rostrenen**	8.04	236	*e*Pn	Pn	23 05 49.8	-0.5
ROSF				*e*Sn	Sn	23 07 16.4	-5.4
	comp=Z,4.5nm,0.2s						
NBO00	**NORSAR Array S**	8.08	14	*e*P	Pn	23 05 51.3	+0.5
NBO00				*e*S	Sn	23 07 15.4	-7.3
NBO00				IAML		23 07 25.1	
	comp=Z,3.3nm,0.4s						
NOA	**NORSAR Array B**	8.15	16	Pn	Pn	23 05 51.0	-0.9
	comp=Z,0.1nm,0.3s,baz=197,slow=13,SNR=17						
NOA				Sn	Sn	23 07 14.3	-10
	comp=Z,0.1nm,0.3s,baz=203,slow=18,SNR=12						
NB201	**NORSAR Array S**	8.18	16	*e*P	Pn	23 05 51.6	-0.5
NB201				*e*S	Sn	23 07 16.6	-8.5
NB201				IAML		23 07 24.4	
	comp=Z,5.3nm,0.5s						
QUIF	**Quistinic**	8.27	234	*e*Pn	Pn	23 05 53.4	-0.1
QUIF				*e*Sn	Sn	23 07 22.0	-5.5
	comp=Z,2.0nm,0.2s						
NC204	**NORSAR Array S**	8.31	14	*e*P	Pn	23 05 53.9	-0.1
NC204				*e*S	Sn	23 07 19.5	-9.1
NC204				IAML		23 07 39.1	
	comp=Z,3.7nm,0.3s						
NC303	**NORSAR Array S**	8.35	16	*e*P	Pn	23 05 54.2	-0.4
NC303				*e*S	Sn	23 07 20.6	-8.9
NC303				IAML		23 07 27.9	
	comp=Z,4.5nm,0.3s						
ORIF	**Oris-en-Rattie**	8.38	184	*e*Pn	Pn	23 05 55.6	+0.5
ORIF				*e*Sn	Sn	23 07 25.0	-5.5
	comp=Z,0.5nm,0.3s						
VIVF	**Saint-Julien-l**	8.54	190	*e*Pn	Pn	23 05 58.1	+1.0
VIVF				*e*Sn	Sn	23 07 29.4	-4.7
	comp=Z,0.8nm,0.3s						
MBDF	**Montbardon**	8.56	180	*e*Pn	Pn	23 05 58.7	+1.2
MBDF				*e*Sn	Sn	23 07 29.5	-5.3
	comp=Z,0.8nm,0.2s						
RJF	**Les Rejaudoux**	8.68	205	*e*Pn	Pn	23 05 59.3	+0.3
RJF				*e*Sn	Sn	23 07 32.4	-5.1
	comp=Z,2.0nm,0.3s						
CAF	**Calviac**	8.90	202	*e*Pn	Pn	23 06 02.7	+0.6
CAF				*e*Sn	Sn	23 07 38.1	-5.0
	comp=Z,0.8nm,0.3s						
LFF	**La Frestale**	9.22	208	*e*Pn	Pn	23 06 06.6	+0.1
LFF				*e*Sn	Sn	23 07 45.3	-5.6
	comp=Z,4.5nm,0.5s						
SMRF	**Simiane la Rot**	9.34	185	*e*Pn	Pn	23 06 09.0	+0.8
SMRF				*e*Sn	Sn	23 07 50.0	-3.9
	comp=Z,2.7nm,0.5s						
LASF	**Ste Croix**	9.40	193	*e*Pn	Pn	23 06 09.7	+0.7
LASF				*e*Sn	Sn	23 07 49.9	-5.5
	comp=Z,1.8nm,0.6s						
MTLF	**Montolieu**	10.38	199	*e*Pn	Pn	23 06 23.0	+0.6
MTLF				*e*Sn	Sn	23 08 13.1	-6.4
	comp=Z,0.4nm,0.3s						
EPF	**Esparros**	11.10	205	*e*Pn	Pn	23 06 32.5	+0.2
EPF				*e*Sn	Sn	23 08 30.2	-6.9
	comp=Z,0.9nm,0.3s						
ETSF	**Etsaut**	11.46	208	*e*Pn	Pn	23 06 37.6	+0.3
ETSF				*e*Sn	Sn	23 08 38.6	-7.4
	comp=Z,0.8nm,0.3s						
SJPF	**Ste Jean**	11.46	211	*e*Pn	Pn	23 06 36.8	-0.4
SJPF				*e*Sn	Sn	23 08 39.0	-6.9
	comp=Z,8.1nm,0.7s						
FINES	**FINESS Array B**	13.21	44	Pn	Pn	23 07 01.1	+0.1
	comp=Z,0.1nm,0.3s,baz=248,slow=11,SNR=6.1						
ESDC	**Sonseca Array**	15.45	213	Pn	Pn	23 07 28.6	-2.9
	comp=Z,0.5nm,0.3s,baz=28,slow=14,SNR=7.0						
ARCES	**ARCESS Array B**	18.47	21	Pn	P	23 08 04.9	-4.4
	comp=Z,0.1nm,0.3s,baz=222,slow=12,SNR=2.6						

MAN 02 23:19:39.6, 7°.35N×124°.77E, h9^{km}, mb3.7, ML2.4, MS1.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	0.54	256	⇓*i*P	Pg	23 19 50.2	+0.1
CTBH				*i* S	Sb	23 19 58.8	-0.3
BUKP	**Musuan**	0.59	29	*e*P	Pg	23 19 51.4	+0.2
BUKP				*e*S	Sb	23 20 01.3	+0.5
SKMP	**Bagumbayan, Su**	0.86	195	*e*P	Pg	23 19 55.9	-0.2
SKMP				*e*S	Sn	23 20 10.7	+0.2
PAGZ	**Pagadian**	1.47	290	*e*P	Pn	23 20 05.3	-0.9
PAGZ				*e*S	Sg	23 20 26.3	-0.5

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*SOME **02** 23:23:13.7, 43°.28N×78°.65E, h15^{km}*
*NNC **02** 23:23:13.6±0.7, 43°.28N×78°.66E, h0^{km}, mb2.6, mpv2.4, Error ellipse: s-maj=7.5km s-min=3.9km az=174.0*
ISC 02 23:23:13.1±1.1, **43°.31N**±0°.05×**78°.70E**±0°.04, **h14**^{km}±10^{km}, **n11, σ0^{s}.27**/20, **2C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPKS	**Kokpek**	0.16	356	⇓*i*P	Pb	23 23 17.9	0.0
	5.5nm,0.1s						
KPKS				⇓*i*S	Sb	23 23 21.1	-0.1
	21nm,0.2s						
ZHN	**Zhinishke**	0.24	235	*e*P	Pg	23 23 18.3	0.0
	1.6nm,0.1s						
ZHN				*e*S	Sg	23 23 21.6	-0.3
	19nm,0.2s						
UZB	**Uzynbulak**	0.28	124	P	Pb	23 23 20.1	0.0
	3.2nm,0.0s						
UZB				S	Sb	23 23 24.6	-0.2
	8.0nm,0.1s						
UZB	**Uzynbulak**	0.28	124	⇓*i*P	Pb	23 23 20.1	0.0
	3.2nm,0.0s						
UZB				⇑*i*S	Sb	23 23 24.6	-0.2
	8.0nm,0.1s						
SATY	**Saty**	0.33	221	P	Pg	23 23 20.1	+0.2
	9.0nm,0.1s						
SATY				S	Sg	23 23 24.5	+0.1
	14nm,0.2s						
SATY	**Saty**	0.33	221	*e*P	Pg	23 23 19.9	0.0
	9.0nm,0.1s						
SATY				*e*S	Sg	23 23 24.3	-0.2
	42nm,0.2s						
PDGK	**Podgornoye**	0.58	88	P	Pb	23 23 24.9	-0.2
	0.5nm,0.1s						
PDGK				S	Sb	23 23 33.1	-0.1
	0.4nm,0.1s						
PDGK	**Podgornoye**	0.58	88	⇑P	Pb	23 23 25.6	+0.6
	1.9nm,1.1s						
PDGK				⇓S	Sb	23 23 33.5	+0.3
	1.0nm,0.6s						
KTBS	**Karatobe**	1.52	286	P	Pn	23 23 40.2	+0.2
	0.6nm,0.2s						
KTBS				S	Sn	23 23 59.2	-0.5
	2.8nm,0.3s						
TKM2	**Tokmak 2**	2.31	261	⇓Pg	Pb	23 23 54.9	+0.3
	1.2nm,1.0s						
TKM2				⇓Lg	Lg	23 24 24.7	
	0.6nm,0.5s						
AAK	**Ala-Archa**	3.16	259	⇓Pg	Pb	23 24 09.3	+0.2
	0.8nm,0.6s						
AAK				⇓Lg	Lg	23 24 51.2	
	0.5nm,0.3s						

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*HEL **03** 00:08:33.5, 67°.95N×20°.64E, h0^{km}, ML1.4, Explosion*
UPP 03 00:08:29.6±0.0, **67°.82N×20°.20E, h0**^{km}**, ML1.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.14	22	P	Pg	00 08 32.6	+0.3
KUA				S	Sg	00 08 34.6	+0.5
KUA	**Kurravaara**	0.14	22	*i* P	Pg	00 08 32.6	+0.3
KUA				*i* S	Sg	00 08 34.6	+0.5
RATU	**Laukkuluspa**	0.23	270	P	Pg	00 08 34.2	+0.2
RATU				S	Sg	00 08 37.3	+0.3
RATU	**Laukkuluspa**	0.23	270	*i* P	Pg	00 08 34.2	+0.2
RATU				*i* S	Sg	00 08 37.3	+0.3
NIKU	**Nikkaluokta**	0.44	276	P	Pg	00 08 38.1	+0.1
NIKU				S	Sg	00 08 44.2	+0.4
NIKU	**Nikkaluokta**	0.44	276	*i* P	Pg	00 08 38.1	+0.1
NIKU				*i* S	Sg	00 08 44.2	+0.4
LANU	**Lannavaara**	0.71	71	P	Pg	00 08 43.1	-0.2
LANU	**Lannavaara**	0.71	71	*e*P	Pg	00 08 43.0	-0.2
	baz=266						
LANU				*e*S	Sg	00 08 49.1	-3.3
DUNU	**Dundret**	0.72	168	P	Pg	00 08 43.2	-0.2
DUNU	**Dundret**	0.72	168	*i* P	Pg	00 08 43.2	-0.2
SALU	**Saltoluokta**	0.79	236	P	Pg	00 08 44.5	-0.1
SALU	**Saltoluokta**	0.79	236	*i* P	Pg	00 08 44.5	-0.1
KIF	**Kilpisjarvi**	1.21	10	*e*PB	Pb	00 08 53.3	0.0
KIF				MSG		00 09 07.2	
	comp=Z,4.1nm,0.2s						
KIF				*e*S	Sg	00 09 08.6	+0.3
PAJU	**Pajala**	1.38	124	P	Pg	00 08 55.0	-1.1
PAJU				S	Sg	00 09 13.4	-0.5
PAJU	**Pajala**	1.38	124	*e*P	Pg	00 08 55.0	-1.1
PAJU				*e*S	Sg	00 09 13.4	-0.5
HEF	**Hetta**	1.42	64	*e*PG	Pn	00 08 55.8	-0.9
	baz=251						
HEF				MSG		00 09 10.6	
	comp=Z,1.6nm,0.2s						
HEF				*e*SN	Sb	00 09 15.6	-0.1
HEF	**Hetta**	1.42	64	*e*P	Pn	00 08 55.0	-1.7
ERTU	**Ertsjaerv**	1.49	148	P	Pn	00 08 56.9	-0.7
ERTU	**Ertsjaerv**	1.49	148	*e*P	Pn	00 08 56.9	-0.7
KTK1	**Kautokeino**	1.64	42	*e*P	Pn	00 08 59.7	0.0
TOF	**Tornio**	2.39	135	*e*PB	Pn	00 09 11.4	+1.5
TOF				*e*SG	Sb	00 09 43.4	0.0
TOF				MSG		00 09 43.7	
	comp=Z,1.9nm,0.2s						
SGF	**Sodankyl**	2.45	96	*e*PG	Pb	00 09 13.7	-0.7
	baz=284						
SGF				*e*SG	Sb	00 09 45.8	+0.6
RNF	**Rovaniemi**	2.57	116	*e*PB	Pn	00 09 14.4	+2.0
RNF				*e*SG	Sb	00 09 48.7	+0.1
ARE0	**ARCESS Array S**	2.59	46	*e*PB	Pn	00 09 14.6	+1.9
	baz=225						
ARE0				*e*SB	Sn	00 09 46.7	+1.9

UPP 03 00:09:14.4±0.1, **67°.85N×20°.20E, h0**^{km}**, ML1.8, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.11	27	P	Pg	00 09 16.9	+0.3
KUA				S	Sg	00 09 18.4	+0.4
RATU	**Laukkuluspa**	0.23	263	P	Pg	00 09 19.1	+0.2
RATU				S	Sg	00 09 22.3	+0.5
NIKU	**Nikkaluokta**	0.44	272	P	Pg	00 09 22.9	+0.1
NIKU				S	Sg	00 09 28.9	+0.4
LANU	**Lannavaara**	0.70	73	P	Pg	00 09 27.7	-0.2
LANU				S	Sg	00 09 37.0	0.0
SALU	**Saltoluokta**	0.80	235	P	Pg	00 09 29.6	-0.2

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*DRS **03** 00:30:25.9±0.0, 41°.02N×50°.72E, h19^{km}*
*AZER **03** 00:30:31.8±0.2, 41°.50N×50°.06E, h58^{km}, ml3.1/27, Error ellipse: s-maj=4.8km s-min=2.1km az=31.0*
*NNC **03** 00:30:33.3±7.4, 41°.61N×50°.77E, h0^{km}, mb3.4, Error ellipse: s-maj=79.6km s-min=23.3km az=74.0*
ISC 03 00:30:32.3±1.3, **41°.43N**±0°.03×**50°.15E**±0°.04, **h34**^{km}±3^{km}, **n34, σ1^{s}.92**/67, **3C-3D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDR	**Nardaran**	0.85	188	P	Pn	00 30 49.5	+1.6
NDR				S	Sn	00 31 02.2	+3.1
SIZA	**Siyzn**	1.00	250	P	Pn	00 30 51.5	+1.4
	SNR=24						
SIZA				S	Sn	00 31 05.3	+2.2
GALA	**Gala**	1.02	180	P	Pb	00 30 52.4	+1.0
GALA				S	Sn	00 31 08.3	+5.2
GOBA	**Gobu**	1.07	197	P	Pb	00 30 52.8	+0.4
GOBA				S	Sn	00 31 09.7	+5.1
ATGJ	**Altiaghaj**	1.07	239	P	Pb	00 30 51.7	-0.8
	SNR=47						
ATGJ				S	Sn	00 31 07.3	+2.5
QUBA	**Quba, Azerbaij**	1.25	267	P	Pb	00 30 55.0	-0.4
	SNR=20						
QUBA				S	Sb	00 31 11.7	+0.5
GBS	**Qobustan**	1.28	226	P	Pb	00 30 55.5	-0.4
	SNR=10.0						
GBS				S	Sb	00 31 13.3	+1.3
PQL	**Pirkuli**	1.34	242	P	Pb	00 30 56.8	-0.1
	SNR=22						
PQL				S	Sb	00 31 13.1	-0.8
QSAR	**Qusar**	1.42	274	P	Pb	00 30 57.7	-0.6
	SNR=10						
QSAR				S	Sb	00 31 17.2	+1.1
DRN	**Derbent**	1.49	294	*e*Pg	Pb	00 30 59.3	-0.1
	81nm,0.5s						
DRN				*e*Sg	Sb	00 31 19.3	+1.4
	1μm,0.5s						
XNQ	**Khinaliq**	1.53	261	Pn	Pb	00 30 58.7	-1.6
	SNR=11						
XNQ				Sn	Sb	00 31 18.8	-0.8
IML	**Ismayilli**	1.61	248	Pn	Pn	00 30 59.1	+0.7
	SNR=7.2						
IML				Sn	Sb	00 31 20.1	-1.5
ALIB	**Äli-Bayra**	1.71	211	Pn	Pb	00 31 01.1	-1.9
ALIB				Sn	Sb	00 31 23.4	-0.7
QBL	**Gabala**	1.81	255	Pn	Pn	00 31 01.8	+0.7
QBL				Sn	Sn	00 31 24.8	+1.9
KDMR	**Kurdemir**	1.82	235	Pn	Pn	00 31 01.5	+0.3
KDMR				Sn	Sn	00 31 25.0	+2.0
URKR	**Urkarakh**	2.02	292	*e*Pn	Pb	00 31 07.8	-0.7
URKR				*e*Sn	Sb	00 31 35.1	+1.8
ZRD	**Zardab**	2.19	239	Pn	Pn	00 31 06.2	0.0
ZRD				Sn	Sn	00 31 33.2	+1.0
SEKA	**Sheki**	2.23	265	Pn	Pn	00 31 07.8	+0.9
	SNR=12						
SEKA				Sg	Sb	00 31 41.6	+2.3
KMKR	**Kumukh**	2.39	288	*e*Pn	Pb	00 31 13.5	-1.2
KMKR				*i* Sn	Sb	00 31 48.0	+4.1
	202nm,0.5s						
BRDA	**Brd**	2.54	244	Pn	Pn	00 31 11.6	+0.6
BRDA				Sn	Sn	00 31 43.0	+2.3
GLBA	**Clilabad**	2.56	212	Pn	Pn	00 31 11.2	-0.2
GLBA				Sn	Sn	00 31 39.3	-2.0
ZKTA	**Zakatala**	2.66	276	Pn	Pn	00 31 14.2	+1.5
ZKTA				Sn	Sn	00 31 44.6	+0.9
KRNR	**Karanay**	2.79	301	*e*Pn	Pb	00 31 21.0	-0.5
	72nm,0.1s						
KRNR				*e*Sn	Sb	00 31 54.0	-1.3
	551nm,0.1s						
LKRN	**Lenkeran, Azer**	2.91	202	Pn	Pn	00 31 16.5	+0.3
LKRN				Sn	Sn	00 31 46.0	-3.9
GANJ	**Ganja**	3.00	256	Pn	Pn	00 31 16.7	-0.7
	SNR=22						
GANJ				Sn	Sn	00 31 50.5	-1.6
ASTR	**Astara**	3.05	200	Pn	Pn	00 31 19.0	+0.9
ASTR				Sn	Sn	00 31 49.5	-3.8
LRK	**Lerik**	3.11	207	Pn	Pn	00 31 19.7	+0.7
LRK				Sn	Sn	00 31 51.5	-3.6
GDB	**GEDABAY**	3.40	259	Pn	Pn	00 31 22.2	-0.8
	SNR=9.0						
GDB				Sn	Sn	00 32 01.2	-0.9
QZX	**Qazax, Azerbai**	3.62	266	Pn	Pn	00 31 25.0	-1.0
QZX				Sn	Sn	00 32 08.2	+0.7
ORD	**Ordubad**	4.04	233	Pn	Pn	00 31 32.8	+1.0
ORD				Sn	Sn	00 32 16.0	-2.0
SBZ	**Shahbuz**	4.05	241	Pn	Pn	00 31 33.2	+1.2
GYA0B	**ALIBECK ARRAY**	7.07	117	⇑Pn	Pn	00 32 11.6	-1.8
GYA0B				⇑Sn	Sn	00 33 33.6	+1.1
AB31	**Akbulak array**	10.42	38	⇓Pn	Pn	00 32 59.4	+0.2
	0.2nm,0.3s,baz=200,slow=12,SNR=5.9						
AB31				⇑Sn	Sn	00 34 50.5	-4.2
	0.9nm,0.6s,baz=222,slow=26,SNR=3.4						
AKTO	**Aktyubinsk**	10.54	29	⇓Pn	Pn	00 33 01.8	+1.0
	0.9nm,0.7s						
AKTO				⇓Sn	Sn	00 34 55.4	-2.1
	2.2nm,0.8s						

JMA 03 00:44:36.7±0.1, **38°.72N×144°.41E, h45**^{km}**, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.17	280	P	Pn	00 45 11.6	+1.3
OFUJ				*e*S	Sn	00 45 37.0	+1.0
MIYJ	**Miyakonagasawa**	2.19	294	P	Pn	00 45 11.8	+1.2
MIYJ				*e*S	Sn	00 45 37.7	+1.3
JKMT	**Kesennumamotoy**	2.30	273	P	Pn	00 45 13.3	+1.2
JKMT				*e*S	Sn	00 45 40.1	+1.0
JMK	**Ichinoseki**	2.50	276	P	Pn	00 45 16.6	+1.7
JMK				*e*S	Sn	00 45 46.2	+2.1
JOM	**Ohasama**	2.54	288	P	Pn	00 45 17.1	+1.7
JOM				S	Sn	00 45 47.3	+2.2
JANG	**Nango**	2.78	307	P	Pn	00 45 19.7	+1.0
JANG				*e*S	Sn	00 45 51.6	+0.6
JYK	**Kaneyama**	3.17	275	P	Pn	00 45 26.4	+2.3
JYK				*e*S	Sn	00 46 03.8	+3.2
JFT	**Otama**	3.43	251	P	Pn	00 45 29.1	+1.5
JFT				S	Sn	00 46 08.3	+1.3
JOT	**Ohata**	3.71	317	*e*S	Sn	00 46 13.9	+0.2
JNBK	**Urakawa-nobuka**	3.77	341	P	Pn	00 45 33.3	+1.0
JNBK				*e*S	Sn	00 46 15.4	0.0
JCH	**Churui**	3.97	349	P	Pn	00 45 34.5	-0.5
JCH				*e*S	Sn	00 46 18.6	-1.7
NEM2	**Nemuro 2**	4.75	12	*e*S	Sn	00 46 33.7	-5.7
JRY	**Ryogami san**	5.15	240	P	Pn	00 45 52.1	+0.8
JRY				*e*S	Sn	00 46 48.4	-1.0
MAT	**Matsushiro**	5.38	248	P	Pn	00 45 56.3	+1.9

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*TIR **03** 01:07:31.7, 40°.95N×20°.07E, h1^{km}, Md3.2/6*
*BEO **03** 01:07:34.3±0.8, 40°.83N×19°.93E, h1^{km}±3^{km}, ML2.6/9*
*ISCJB **03** 01:07:34.3±0.4, 40°.94N±0°.01×19°.91E±0°.02, h0^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=1.7km az=155.2*
*PDG **03** 01:07:34.2±0.4, 40°.85N×19°.86E, h16^{km}±1^{km}, ML3.0/10, Error ellipse: s-maj=1.1km s-min=1.3km az=0.0*
*ATH **03** 01:07:35.3, 41°.01N×19°.88E, h33^{km}±3^{km}, ML2.7/13, Error ellipse: s-maj=4.3km s-min=1.4km az=343.0*
*THE **03** 01:07:35.6, 40°.95N×20°.01E, h0^{km}±1^{km}, ML2.6/12, Error ellipse: s-maj=1.5km s-min=0.4km az=280.0*
*SKO **03** 01:07:36.5, 40°.97N×19°.97E, h10^{km}*
ISC 03 01:07:35.7±1.0, **40°.96N**±0°.01×**19°.95E**±0°.02, **h8**^{km}±8^{km}, **n169, σ0^{s}.95**/222, **14C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.40	350	*e*Pg	Pg	01 07 43.5	+0.1
TIR				*e*Sg	Sb	01 07 51.7	+0.5
TIR	**Tirane**	0.40	350	P	Pg	01 07 43.6	+0.1
TIR				S	Sb	01 07 50.5	-0.7
TIR	**Tirane**	0.40	350	⇑*i*P	Pg	01 07 43.7	+0.2
TIR				S	Sg	01 07 48.8	+0.1
TIR	**Tirane**	0.40	350	⇑*i*Pg	Pg	01 07 43.6	+0.2
TIR	**Tirane**	0.40	350	*i* PG	Pg	01 07 42.6	-0.9
TIR				*i* SG	Sb	01 07 50.0	-1.2
TIR	**Tirane**	0.40	350	P	Pg	01 07 43.8	+0.2
TIR				S	Sg	01 07 49.9	+1.1
TIR				AML	AML	01 07 56.5	
	comp=E,3120μm,0.4s						
TIR				AML	AML	01 07 59.9	
	comp=N,3756μm,0.5s						
VLO	**Vlora**	0.60	216	P	Pg	01 07 47.5	+0.2
OHR	**Ohrid**	0.66	76	*i* Pg	Pg	01 07 47.7	-0.7
OHR				*i* Sg	Sb	01 07 58.1	-0.7
TPE	**Tepelena**	0.66	176	P	Pg	01 07 47.5	-1.0
TPE				S	Sg	01 07 57.2	+0.1
TPE	**Tepelena**	0.66	176	*i* PG	Pg	01 07 48.6	+0.1
TPE				*i* SG	Sb	01 07 58.4	-0.4
PHP	**Peshkopia**	0.81	27	P	Pg	01 07 50.1	-1.3
PHP				S	Sg	01 08 02.4	+0.4
PHP	**Peshkopia**	0.81	27	*i* PG	Pg	01 07 50.6	-0.8
PHP				*i* SG	Sg	01 08 02.1	+0.1
SRN	**Sarande**	1.08	178	P	Pb	01 07 55.3	-1.2
SRN				S	Sn	01 08 12.5	+0.4
SRN	**Sarande**	1.08	178	*i* PG	Pb	01 07 56.1	-0.5
SRN				*i* SG	Sn	01 08 13.8	+1.8
PUK	**Puka**	1.09	358	*i* PG	Pb	01 07 56.6	-0.2
PUK				*i* SG	Sn	01 08 14.2	+1.6
ULC	**Ulcinj**	1.14	332	⇓*i*Pg	Pn	01 07 57.7	-0.3
ULC				*i* Sg	Sn	01 08 16.3	+2.5
PENT	**Pentalofos**	1.18	130	P	Pb	01 07 57.4	-1.0
PENT	**Pentalofos**	1.18	130	P	Pb	01 07 57.4	-1.0
PENT				AML	AML	01 08 20.3	
	comp=N,304μm,0.4s						
PENT				AML	AML	01 08 22.2	
	comp=E,422μm,0.4s						
KASA	**Kassiopi**	1.21	181	P	Pg	01 07 59.2	+0.3
KEK	**Kerkira**	1.25	186	P	Pn	01 07 58.7	-0.7
KEK				S	Sg	01 08 17.6	+1.8
KEK	**Kerkira**	1.25	186	P	Pn	01 07 58.7	-0.7
KEK				AML	AML	01 08 21.4	
	comp=E,488μm,0.4s						
KEK				AML	AML	01 08 24.4	
	comp=N,422μm,0.5s						
DRME	**Dracevica, Mon**	1.36	335	⇑*i*Pg	Pn	01 08 00.5	-0.5
DRME				*i* Sg	Sg	01 08 21.4	+2.0
DRME	**Dracevica, Mon**	1.36	335	*e*Pn	Pb	01 08 01.5	+0.1
BCI	**Bajram Curri**	1.41	3	*i* PN	Pb	01 08 02.4	+0.1
BCI				*i* SN	Sg	01 08 23.2	+2.1
SCTE	**Santa Cesarea**	1.44	233	P	Pn	01 08 01.0	-1.0
IGT	**Igoumenitsa**	1.45	168	P	Pn	01 08 01.9	-0.3
IGT				S	Sg	01 08 22.7	+0.3
IGT	**Igoumenitsa**	1.45	168	*i* Pn	Pb	01 08 02.7	-0.2
IGT				*i* Sn	Sg	01 08 25.0	+2.7
IGT	**Igoumenitsa**	1.45	168	P	Pb	01 08 02.4	-0.5
IGT				AML	AML	01 08 29.6	
	comp=E,504μm,0.6s						
IGT				AML	AML	01 08 30.0	
	comp=N,619μm,0.5s						
JAN	**Janina**	1.47	152	P	Pn	01 08 01.7	-0.8
JAN				S	Sg	01 08 23.8	+0.9
JAN	**Janina**	1.47	152	P	Pn	01 08 02.0	-0.5
JAN				AML	AML	01 08 28.0	
	comp=N,677μm,0.8s						
JAN				AML	AML	01 08 33.1	
	comp=E,729μm,0.7s						
KPRO	**Kipourio**	1.47	132	P	Pn	01 08 01.3	-1.2
KPRO				S	Sg	01 08 23.2	+0.3
KPRO	**Kipourio**	1.47	132	P	Pn	01 08 01.4	-1.1
KPRO				AML	AML	01 08 31.8	
	comp=N,650μm,0.5s						
KPRO				AML	AML	01 08 34.6	
	comp=E,462μm,0.5s						
SKO	**Skopje**	1.51	47	*e*Pg	Pb	01 08 03.4	-0.5
SKO				*e*Sg	Sg	01 08 23.9	-0.3
SKO	**Skopje**	1.51	47	*i* Pn	Pb	01 08 03.4	-0.5
SKO				*i* Sn	Sg	01 08 24.1	-0.1
MEV	**Metsovon**	1.52	140	P	Pn	01 08 03.5	+0.2
KZN	**Kozani**	1.53	115	P	Pn	01 08 02.5	-0.8
KZN				S	Sg	01 08 24.8	0.0
KZN	**Kozani**	1.53	115	P	Pn	01 08 03.3	0.0
KZN				AML	AML	01 08 29.2	
	comp=N,246μm,0.6s						
KZN				AML	AML	01 08 30.6	
	comp=E,483μm,0.4s						
BUM	**Brajici-Budva**	1.56	330	⇑*i*Pn	Pn	01 08 03.5	-0.3
BUM				*i* Sn	Sg	01 08 26.1	+0.2
PDG	**Podgorica**	1.56	341	*e*Pg	Pb	01 08 04.8	-0.1
PDG				*e*Sg	Sg	01 08 27.4	+1.4
PDG	**Podgorica**	1.56	341	⇓*i*P	Pb	01 08 05.0	+0.1
PDG	**Podgorica**	1.56	341	*i* Pn	Pb	01 08 04.2	-0.7
PDG				*i* Sn	Sg	01 08 27.9	+1.9
PDG	**Podgorica**	1.56	341	*e*Pn	Pb	01 08 04.2	-0.7
TTG	**Podgorica**	1.56	341	⇓*i*Pn	Pn	01 08 03.8	+0.1
TTG				*i* Sn	Sg	01 08 26.7	+0.7
PVY	**Plav**	1.64	0	⇑*i*Pn	Pn	01 08 05.1	+0.2
PVY				*i* Sn	Sg	01 08 29.2	+0.8
CEME	**Cevo**	1.77	334	⇓*i*Pn	Pn	01 08 06.3	-0.3
CEME				*i* Sn	Sb	01 08 31.4	+0.6
STIP	**Stip**	1.84	66	*i* Pn	Pb	01 08 09.6	+0.1
HCY	**Herceg Novi**	1.85	324	⇑*i*Pn	Pn	01 08 06.9	-0.8
HCY				*i* Sn	Sb	01 08 32.9	-0.1
HCY	**Herceg Novi**	1.85	324	*e*Pn	Pn	01 08 06.7	-1.0
GRG	**Griva**	1.85	89	P	Pn	01 08 07.2	-0.6
GRG				S	Sb	01 08 32.0	-1.2
GRG	**Griva**	1.85	89	*i* Pn	Pn	01 08 07.3	-0.6
GRG	**Griva**	1.85	89	P	Pn	01 08 07.6	-0.2
GRG				AML	AML	01 08 40.7	
	comp=E,143μm,0.4s						
GRG				AML	AML	01 08 41.4	
	comp=N,146μm,0.5s						
IVA	**Berane**	1.92	359	⇓*i*Pn	Pb	01 08 10.8	-0.1
IVA				*i* Sn	Sb	01 08 35.7	+0.7
KOME	**Kolasin**	1.92	350	⇑*i*Pn	Pb	01 08 11.0	0.0
KOME				*i* Sn	Sb	01 08 35.7	+0.5
NKME	**Niksic**	1.96	338	⇑*i*Pn	Pn	01 08 09.1	-0.1
NKME				*i* Sn	Sb	01 08 36.2	0.0
NKY	**Niksic**	1.99	339	⇑*i*Pn	Pb	01 08 11.4	-0.8
NKY				*i* Sn	Sb	01 08 36.9	-0.3
VAY	**Valandovo**	2.01	79	*e*Pn	Pn	01 08 09.6	-0.3

VAY				eSn	Sb	01 08 36.3	-1.3
VAY	Valandovo	2.01	79	i Pn	Pn	01 08 09.4	-0.4
VAY				i Sn	Sg	01 08 40.0	-0.2
THL	Klokotos Trika	2.10	131	P	Pn	01 08 12.1	+1.0
THL				AML	AML	01 08 53.9	
	comp=E,138µm,0.8s						
THL				AML	AML	01 08 55.4	
	comp=N,153µm,0.7s						
LIT	Litokhoron	2.11	113	P	Pn	01 08 11.2	-0.1
LIT	Litokhoron	2.11	113	i Pn	Pn	01 08 10.7	-0.6
LIT	Litokhoron	2.11	113	P	Pn	01 08 11.6	+0.2
TREB	Trebinje	2.13	326	ePn	Pn	01 08 11.3	-0.2
TREB				eSn	Sb	01 08 39.8	-1.3
TREB	Trebinje	2.13	326	ePn	Pn	01 08 10.3	-1.2
DBRK	Dubrovnik	2.18	322	i Pn	Pn	01 08 11.3	-1.0
DBRK				Sn	Sb	01 08 40.9	-1.7
TSLK	Tsoukalades, L	2.20	166	P	Pn	01 08 12.3	-0.1
TSLK	Tsoukalades, L	2.20	166	P	Pn	01 08 12.5	+0.1
NOCI	Noci	2.20	267	P	Pn	01 08 11.0	-1.5
NOCI				AML	AML	01 08 50.9	
	comp=E,170µm,0.3s						
NOCI				AML	AML	01 08 51.8	
	comp=N,232µm,0.3s						
BRY	Bratogost	2.21	332	⇓iPn	Pn	01 08 12.0	-0.8
BRY				i Sn	Sg	01 08 46.7	-0.1
BRY	Bratogost	2.21	332	ePn	Pn	01 08 12.5	-0.3
LKD2	Lefkada island	2.23	166	P	Pn	01 08 12.7	-0.3
LKD2				S	Sn	01 08 40.8	+0.1
LKD2	Lefkada island	2.23	166	P	Pn	01 08 12.9	-0.1
KNT	Kendrikon	2.24	84	P	Pn	01 08 12.6	-0.5
KNT	Kendrikon	2.24	84	i Pn	Pn	01 08 12.5	-0.5
KNT	Kendrikon	2.24	84	P	Pn	01 08 12.6	-0.5
KNT				AML	AML	01 08 44.5	
	comp=E,45µm,0.8s						
KNT				AML	AML	01 08 57.0	
	comp=N,73µm,0.7s						
SJES	Sjenica	2.30	0	ePn	Pb	01 08 16.2	-1.4
BARS	Barje	2.32	36	ePn	Pn	01 08 14.8	+0.6
BARS				eSn	Sb	01 08 46.5	-0.1
UPM	Unac-Piva	2.38	341	⇓iPn	Pn	01 08 15.6	+0.5
UPM				i Sn	Sn	01 08 44.6	+0.1
UPM	Unac-Piva	2.38	341	ePn	Pn	01 08 16.4	+1.3
EVGI	Lefkada island	2.39	167	P	Pn	01 08 14.4	-0.8
EVGI	Lefkada island	2.39	167	P	Pn	01 08 14.7	-0.5
SELS	Selova	2.42	21	ePn	Pn	01 08 15.8	+0.2
EVR	Evrytania	2.49	144	P	Pn	01 08 18.4	+1.8
EVR	Evrytania	2.49	144	P	Pn	01 08 18.4	+1.8
EVR				AML	AML	01 08 58.4	
	comp=N,152µm,0.6s						
EVR				AML	AML	01 09 03.5	
	comp=E,130µm,1.0s						
MATE	Matera	2.49	264	⇑iP	Pg	01 08 23.5	+0.2
KKB	Krupnik	2.52	68	i Pn	Pn	01 08 17.0	0.0
FSK	Fiskardo	2.54	169	P	Pn	01 08 16.0	-1.1
STON	Ston	2.55	319	ePn	Pn	01 08 16.8	-0.5
STON	Ston	2.55	319	ePn	Pn	01 08 16.2	-1.0
STON	Ston	2.55	319	ePn	Pn	01 08 15.9	-1.4
SOH	Sokhos	2.58	92	P	Pn	01 08 17.5	-0.3
SOH	Sokhos	2.58	92	i Pn	Pn	01 08 17.6	-0.2
SOH	Sokhos	2.58	92	P	Pn	01 08 17.7	-0.2
IVAS	Ivanjica	2.62	3	ePn	Pb	01 08 20.9	-2.1
PVO	Paravola	2.63	152	P	Pn	01 08 19.1	+0.7
PVO	Paravola	2.63	152	P	Pn	01 08 19.3	+0.9
AGG	Agios Georgios	2.66	136	P	Pn	01 08 19.4	+0.6
AGG				S	Sn	01 08 52.0	+0.8
AGG	Agios Georgios	2.66	136	P	Pn	01 08 20.0	+1.2
AGG				AML	AML	01 09 00.7	
	comp=N,134µm,0.8s						
AGG				AML	AML	01 09 06.5	
	comp=E,108µm,0.5s						
PLG	Polygyros	2.72	101	P	Pn	01 08 19.6	-0.1
PLG				S	Sn	01 08 53.1	+0.4
PLG	Polygyros	2.72	101	P	Pn	01 08 19.7	+0.1
SRS	Serrai	2.76	85	P	Pn	01 08 20.6	+0.4
SRS	Serrai	2.76	85	i Pn	Pn	01 08 20.1	0.0
SRS	Serrai	2.76	85	P	Pn	01 08 20.5	+0.4
ANX	Ano Chora	2.81	147	P	Pn	01 08 22.2	+1.3
ANX	Ano Chora	2.81	147	P	Pn	01 08 22.2	+1.3
VLS	Valsamata	2.82	170	P	Pn	01 08 19.9	-1.2
KFL	Anninata	2.92	167	P	Pn	01 08 21.4	-0.9
KFL	Anninata	2.92	167	P	Pn	01 08 21.6	-0.8
BBLS	Lazići	2.94	352	ePn	Pn	01 08 25.2	+2.5
BBLS	Lazići	2.94	352	ePn	Pb	01 08 28.0	-0.3
EFP	Efpalio	2.94	149	P	Pn	01 08 22.9	+0.2
EFP	Efpalio	2.94	149	P	Pn	01 08 23.3	+0.6
XOR	Xorichti	2.95	122	P	Pn	01 08 22.6	-0.2
XOR	Xorichti	2.95	122	P	Pn	01 08 22.7	-0.1
VTS	Vitosha	2.96	55	ePn	Pn	01 08 23.2	+0.1
VTS				eSn	Sn	01 08 58.6	-0.4
VTS	Vitosha	2.96	55	P	Pn	01 08 23.0	-0.1
VTS				S	Sn	01 08 58.5	-0.4
VTS	Vitosha	2.96	55	⇑iP	Pn	01 08 23.1	-0.1
BOVS	Bovan	2.98	25	ePn	Pn	01 08 24.3	+1.1
NVR	Nevrokopi	2.98	81	P	Pn	01 08 22.7	-0.5
NVR	Nevrokopi	2.98	81	P	Pn	01 08 23.2	-0.1
GRUS	Gruza	2.98	11	ePn	Pb	01 08 26.3	-2.8
NEO	Neokhori	3.00	122	P	Pn	01 08 23.2	-0.3
NEO				S	Sn	01 09 01.0	+1.4
SERG	Sergoula	3.01	147	P	Pn	01 08 24.2	+0.5
SERG	Sergoula	3.01	147	P	Pn	01 08 25.1	+1.4
TIP	Timpagrande	3.03	235	⇑iP	Pg	01 08 34.3	+0.6
TIP	Timpagrande	3.03	235	P	Pn	01 08 22.8	-1.2
ZAPS	Zavoj	3.06	40	ePn	Pn	01 08 25.8	+1.5
ZAPS				eSn	Sn	01 09 03.5	+2.4
TRIZ	Trizonia	3.06	147	P	Pn	01 08 25.8	+1.5
DIVS	Divibare	3.14	0	ePn	Pn	01 08 27.1	+1.6
DIVS	Divibare	3.14	0	ePn	Pn	01 08 20.8	-4.7
MAKA	Makarska	3.19	318	ePn	Pn	01 08 24.8	-1.3
MAKA				Sn	Sn	01 09 03.5	-0.9
HAPS	Han Pijesak,BI	3.21	347	ePn	Pn	01 08 26.1	-0.5
HAPS	Han Pijesak,BI	3.21	347	ePn	Pn	01 08 25.7	-0.9
DSF	Desfina	3.23	141	P	Pn	01 08 27.1	+0.4
SKIA	Skiathos	3.23	122	P	Pn	01 08 26.7	0.0
SMIA	Simia	3.25	129	P	Pn	01 08 27.4	+0.5
ATAL	Atalanti	3.27	133	P	Pn	01 08 28.6	+1.4
TRUS	Trudelj	3.28	6	ePn	Pn	01 08 28.3	+0.9
LKR	Lokris	3.29	133	P	Pn	01 08 28.6	+1.2
CUC	Castrocucco	3.30	254	P	Pn	01 08 27.2	-0.5
ZAGS	Zajecar	3.32	30	ePn	Pn	01 08 28.8	+1.0
KLV	Kalavryta, Ach	3.37	149	P	Pn	01 08 29.9	+1.3
KLV	Kalavryta, Ach	3.37	149	P	Pn	01 08 29.6	+1.0
GUR	Goura	3.54	148	P	Pn	01 08 31.4	+0.4
GUR	Goura	3.54	148	P	Pn	01 08 31.4	+0.4
MRKA	Markates	3.59	128	P	Pn	01 08 32.8	+1.1
AMT	Artemida-Makis	3.68	158	P	Pn	01 08 33.2	+0.3
AMT	Artemida-Makis	3.68	158	P	Pn	01 08 33.3	+0.3
KUBS	Kucevo	3.68	20	ePn	Pn	01 08 33.2	+0.3
KIJV	Kijevo	4.02	320	ePn	Pn	01 08 36.8	-0.8
MDVR	Moldovita	4.04	18	⇓iP	Pn	01 08 38.2	+0.4
ZIRJ	Zirje	4.18	312	ePn	Pn	01 08 38.2	-1.5
ZIRJ				Sn	Sn	01 09 27.6	-1.1
FRGS	Fruska Gora	4.20	359	ePn	Pn	01 08 41.4	+1.4
MORI	Morici	4.28	314	i Pn	Pn	01 08 40.6	-0.5
MORI				Sn	Sn	01 09 30.0	-1.2
BLY	Banja Luka	4.30	333	ePn	Pn	01 08 41.9	+0.5
BLY	Banja Luka	4.30	333	⇑iP	Pn	01 08 42.6	+1.2
UDBI	Udbina	4.72	321	ePn	Pn	01 08 48.0	+0.9
DUGI	Dugi Otok	4.72	312	ePn	Pn	01 08 46.4	-0.8
BZS	Buzias	4.81	14	ePn	Pn	01 08 48.7	+0.3
BZS	Buzias	4.81	14	⇑iP	Pn	01 08 48.8	+0.3
NVLJ	Novalja	5.20	316	ePn	Pn	01 08 52.9	-0.7
OZLJ	Ozalj	5.69	326	ePn	Pn	01 09 00.4	-0.1
CRES	Cresnjev	5.87	328	ePn	Pn	01 09 02.8	-0.1
CEY	Cerknica	6.25	322	ePn	Pn	01 09 06.4	-1.8
SOKA	Soboth	6.74	330	Pn	Pn	01 09 15.1	+0.2
	comp=E,0.3nm,0.2s						
OBKA	Obir	6.79	327	ePn	Pn	01 09 16.6	+0.9
	comp=E,0.2nm,0.2s						
ABTA	Abfaltersbach	7.90	320	Pn	Pn	01 09 30.6	-0.2
	comp=E,0.4nm,0.2s						
WTTA	Wattenberg	8.69	319	ePn	Pn	01 09 42.2	+0.5
	comp=E,1.9nm,0.4s						
WATA	Walderalm	8.77	319	ePn	Pn	01 09 43.6	+0.7
	comp=E,4.0nm,0.6s						
MOTA	Moosalm	9.01	318	ePn	Pn	01 09 47.0	+0.8
	comp=E,0.7nm,0.4s						

KRSC 03 01:38:45.3±0.8**, 55°.56N×161°.07E, h129**^{km}±8^{km}**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMD	Tumrok D	0.52	227	eP	Pn	01 39 05.0	+0.6
TUMD				eS	Sn	01 39 19.6	+0.8
LGNR	Loginova	0.57	338	eP	Pn	01 39 06.5	+1.4
TUMR	Tumrok	0.59	243	eP	Pn	01 39 06.1	+1.1
TUMR				eS	Sn	01 39 21.2	+1.4
KZV	Kizimen	0.62	225	eP	Pn	01 39 06.4	+1.1
KPT	Kopyto	0.63	311	eP	Pn	01 39 05.3	+0.1
KPT				eS	Sn	01 39 20.5	+0.2
KRSR	Krestovskiy	0.72	337	eP	Pn	01 39 06.1	+0.2
KRSR				eS	Sn	01 39 21.6	+0.1
KLY	Klyuchi	0.79	343	eP	Pn	01 39 06.8	+0.5
KLY				eS	Sn	01 39 22.7	+0.5
KOZ	Kozyrevsk	0.84	307	eP	Pn	01 39 07.7	+1.0
KOZ				eS	Sn	01 39 24.3	+1.3
BDR	Baidarnaya	1.02	4	eP	Pn	01 39 09.2	+0.8
BDR				eS	Sn	01 39 26.5	+0.6
SMKR	Semkarok	1.05	12	eP	Pn	01 39 10.1	+1.4
SMKR				eS	Sn	01 39 27.8	+1.3
MKZ	Mys Kozlova	1.07	159	eP	Pn	01 39 10.5	+1.7
MKZ				eS	Sn	01 39 28.9	+2.3
SRDR	Sredinnyy	1.08	316	eP	Pn	01 39 09.8	+0.9
SRKR	Sorokina	1.10	3	eP	Pn	01 39 10.2	+1.0
SRKR				eS	Sn	01 39 28.6	+1.3
KBG	Krutoberegovo	1.16	52	eP	Pn	01 39 11.2	+1.6
KBG				eS	Sn	01 39 30.1	+2.0
KBTR	Krutoberegovo	1.19	56	eP	Pn	01 39 11.7	+1.8
KBTR				eS	Sn	01 39 31.0	+2.4
SPN	Mys Shipunski	2.54	194	eP	Pn	01 39 26.6	+0.7
SPN				eS	Sn	01 39 57.3	+0.2
GNL	Ganaly	2.60	226	eP	Pn	01 39 29.5	+2.6
GNL				eS	Sn	01 40 01.0	+2.2
KRX	Arik	2.61	214	eP	Pn	01 39 28.5	+1.4
SDLR	Sedlovina	2.61	210	eP	Pn	01 39 29.1	+2.1
SMAR	Somma	2.65	211	eP	Pn	01 39 29.4	+1.8
AVH	Avacha	2.67	212	eP	Pn	01 39 29.1	+1.4
UGLR	Uglovaya	2.69	210	eP	Pn	01 39 28.3	+0.3
BKI	Bering	2.82	95	eP	Pn	01 39 31.3	+1.8
BKI				eS	Sn	01 40 03.6	0.0
KDTR	Khodutka, Kamc	4.15	207	eP	Pn	01 39 49.2	+2.2
KDTR				eS	Sn	01 40 34.9	0.0

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*NIED **03** 01:45:00, 30°.70N×142°.20E, h5^{km}, Mw4.0 Best double couple: M$_0$1.09000×10^{15} NP1:φ$_s$171.00000°, δ22.00000°, λ98.00000°. NP2:φ$_s$342.00000°, δ68.00000°, λ87.00000°.*

*IDC **03** 01:45:33.6±1.2, 30°.50N×142°.00E, h0^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.7/52, mbtmp3.8/10, ML3.3/2, MS2.8/3, Ms1 2.8/3, ms1mx2.5/34, Error ellipse: s-maj=43.0km s-min=22.9km az=72.0*

*ISCJB **03** 01:45:35.2±0.5, 30°.63N±0°.04×141°.96E±0°.09, h23^{km}, mb4.3/18, Error ellipse: s-maj=11.3km s-min=4.4km az=164.4*

*JMA **03** 01:45:35.8±0.1, 30°.71N×142°.16E, h33^{km}, M4.1*

*NEIC **03** 01:45:37.6±1.5, 30°.49N×142°.11E, h31^{km}±4^{km}, mb4.6/13, Error ellipse: s-maj=18.0km s-min=9.6km az=52.0*

ISC 03 01:45:36.9±0.6**, 30°.58N**±0°.06×**142°.08E**±0°.10**, h23**^{km}**, n48, σ1ˢ.50**/54**, mb4.1**/18**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	3.15	323	P	Pn	01 46 23.9	-1.2
JHJ2	Mitsune	3.17	323	ePn	Pn	01 46 24.6	-0.8
JHJ2				eSn	Sn	01 47 01.6	-0.9
JHJ2	Mitsune	3.17	323	P	Pn	01 46 24.6	-0.8
JHJ2				S	Sn	01 47 00.9	-1.6
JHJ	Hachijo jima 2	3.20	323	Pn	Pn	01 46 24.5	-1.2
	10nm,0.3s,baz=90,slow=20,SNR=4.8						
JHJ				Sn	Sn	01 46 59.4	-3.7
	20nm,0.3s,baz=72,slow=19,SNR=3.5						
CBIJ	Chichi jima	3.47	178	P	Pn	01 46 31.5	+2.0
JMKN	Mikurajimanish	3.92	328	P	Pn	01 46 34.1	-1.5
BSO1	Boso 1	4.17	347	S	Sn	01 47 24.2	-2.1
BSO4	Boso 4	4.64	342	P	Pn	01 46 45.0	-0.4
JOD2	Odawara 2	5.30	333	P	Pn	01 46 54.0	-0.7
JHU	Hanno	5.76	337	P	Pn	01 47 01.4	+0.5
JRY	Ryogami san	6.04	335	P	Pn	01 47 03.8	-1.0
JRY				S	Sn	01 48 10.6	-2.6
JHO	Hitachi	6.15	349	P	Pn	01 47 06.3	+0.1
MJAR	Matsushiro Arr	6.77	333	Pn	Pn	01 47 15.5	+0.8
	0.4nm,0.3s,baz=160,slow=11,SNR=22						
MJAR				Sn	Sn	01 48 30.8	-0.3
	baz=274,slow=24,SNR=3.3						
MAJO	Matsushiro	6.77	333	ePn	Pn	01 47 13.2	-1.6
MAJO				eSn	Sn	01 48 30.8	-0.4
MAT	Matsushiro	6.77	333	P	Pn	01 47 14.4	-0.4
MAT				eS	Sn	01 48 29.5	-1.6
MJB9	Matsu-Tunnel	6.77	333	ePn	Pn	01 47 13.1	-1.8
JNU	Nakatsue	9.86	288	LR	LR	01 51 50.3	
	comp=Z,80nm,18.6s,baz=164,slow=38						
KSRS	Korea Array	13.59	304	LR	LR	01 54 02.7	
	comp=Z,48nm,18.2s,baz=154,slow=37						
GUMO	Guam	17.10	171	LR	LR	01 54 31.6	
	comp=Z,20nm,20.6s,baz=106,slow=32						
NACB	Ninganchiao	19.26	256	eP	P	01 49 59.2	-0.6
	16nm,0.8s						
YULB	Yu-li	19.84	254	eP	P	01 50 06.0	-0.1
	6.1nm,0.7s						
TPUB	Ta-pu	20.43	254	eP	P	01 50 12.3	-0.3
	16nm,1.3s						
SONA0	Songino Array	32.22	313	eP	P	01 52 07.6	+4.2
SONM	Songino Array	32.22	313	P	P	01 52 07.6	+4.2
	0.8nm,0.4s,baz=115,slow=10.0,SNR=3.9						
KKM	Kota Kinabalu	34.44	230	eP	P	01 52 21.8	-1.2
	18nm,1.3s						
BILL	Bilibino	40.10	14	eP	P	01 53 11.4	+1.1
	6.0nm,0.4s						
MTN	Manton Dam	44.44	195	eP	P	01 53 45.6	-0.5
	14nm,1.1s						
ZAA1	Zalesovo Array	46.84	317	eP	P	01 54 05.2	+0.4
ZAA1				ePcP	PcP	01 55 37.3	-0.2
ZALV	Zalesovo Beam	46.84	317	P	P	01 54 05.2	+0.4
	0.6nm,0.4s,baz=76,slow=7.6,SNR=2.7						
ZALV				PcP	PcP	01 55 37.3	-0.2
	1.5nm,0.3s,baz=72,slow=4.7,SNR=7.0						
MK32	Makanchi Array	48.24	307	eP	P	01 54 16.3	+0.5
MKAR	Makanchi Array	48.24	307	P	P	01 54 16.3	+0.5
	1.2nm,0.6s,baz=89,slow=9.5,SNR=10						
KURBB	Kurchatov Arra	50.59	312	P	P	01 54 33.8	+0.2
	0.8nm,0.5s,baz=90,slow=7.8,SNR=20						
KNK	Knik Glacier	53.89	34	eP	P	01 54 57.4	-0.7
	12nm,1.1s						
AS31	Alice Springs	54.50	189	eP	P	01 55 02.9	0.0
	1.0nm,1.1s						
ASAR	Alice Springs	54.50	189	P	P	01 55 02.9	0.0
	0.6nm,0.5s,baz=360,slow=5.3,SNR=10.0						
ILAR	Eielson Array	54.73	30	P	P	01 55 05.0	+0.9
	0.2nm,0.5s,baz=270,slow=6.3,SNR=2.8						
ILB	Eielson Array	54.73	30	eP	P	01 55 05.0	+0.9
	2.1nm,1.1s						
BVAR	Borovoye Array	55.45	316	P	P	01 55 09.7	+0.2
	0.6nm,0.5s,baz=101,slow=8.1,SNR=5.8						
SBLHI	Steaming Bluff	57.23	86	eP	P	01 55 20.0	-2.8
	115nm,0.7s						
MARNC	Mare, Loyalty	57.46	151	eP	P	01 55 23.1	-0.9
	286nm,1.3s						
ABKAR	Akbulak array	62.63	313	eP	P	01 55 59.3	0.0
	1.8nm,0.6s						
FIA0	FINESS Array S	74.80	333	eP	P	01 57 15.4	+0.6
FINES	FINESS Array B	74.80	333	P	P	01 57 15.4	+0.6
	0.6nm,0.5s,baz=90,slow=5.7,SNR=6.5						
NB200	NORSAR Array S	80.35	338	eP	P	01 57 48.5	+2.5
NOA	NORSAR Array B	80.35	338	P	P	01 57 48.5	+2.5
	0.2nm,0.5s,baz=45,slow=5.0,SNR=2.7						
RAYN	Ar Rayn	83.67	293	eP	P	01 58 04.0	-0.2
	9.0nm,1.3s						
TOA1	Torodi Ar. Sit	122.19	313	ePKPdf	PKPdf	02 04 30.1	-0.3
TORD	Torodi Ar. Bea	122.19	313	PKP	PKPdf	02 04 30.2	-0.3
	4.5nm,0.3s,baz=56,slow=1.4,SNR=4.9						

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*DDA **03** 01:48:23.5, 39°.13N×29°.11E, h7^{km}±3^{km}, ML2.5*

*ISCJB **03** 01:48:24.0±0.5, 39°.13N±0°.03×29°.10E±0°.03, h1^{km}±6^{km}, Error ellipse: s-maj=4.5km s-min=3.7km az=169.2*

*ISK **03** 01:48:24.2, 39°.17N×29°.15E, h5^{km}, ML1.9/9*

ISC 03 01:48:24.2±1.1**, 39°.12N**±0°.02×**29°.13E**±0°.02**, h4**^{km}±10^{km}**, n18, σ0ˢ.79**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEDZ	Gediz	0.23	110	PG	Pg	01 48 29.6	+0.9
GEDZ				SG	Sg	01 48 33.4	+1.7
GDZ	Gediz	0.27	97	i P	Pb	01 48 30.6	-1.2
GDZ				i S	Sb	01 48 34.3	-2.5
GDZ				IAML_P			
	comp=Z,830nm,0.1s						
TVSB	Tavsanli	0.41	38	PG	Pg	01 48 31.9	-0.3
TVSB				SG	Sg	01 48 37.6	-0.1
USAK	Uak-Merkez	0.42	193	i P	Pg	01 48 32.2	-0.1
USAK				i S	Sg	01 48 37.8	0.0
USAK				IAML_P			
	comp=Z,3µm,0.1s						
DURS	Dursunbey	0.70	313	i P	Pg	01 48 37.4	-0.2
DURS				i S	Sg	01 48 46.7	-0.1
DURS				IAML_P			
	comp=Z,363nm,0.1s						
KULA	Kula-Manisa	0.71	211	PG	Pb	01 48 39.1	-0.1
MANT	Manisa	0.78	216	i P	Pg	01 48 39.0	-0.1
MANT				i S	Sg	01 48 48.8	-0.4
MANT				IAML_P			
	comp=Z,973nm,0.1s						
KHAL	Karahalli	0.80	160	i P	Pb	01 48 40.1	-0.7
KHAL				i S	Sg	01 48 50.8	+0.7
KHAL				IAML_P			
	comp=Z,469nm,0.1s						
ULDT	Uludag	1.02	0	i P	Pg	01 48 43.0	-0.7
ULDT				i S	Sg	01 48 56.5	-0.5
ULDT				IAML_P			
	comp=Z,321nm,0.1s						
STEP	BALIKESIR_Sava	1.13	283	i P	Pg	01 48 45.8	-0.1
STEP				i S	Sb	01 49 01.5	+0.2
STEP				IAML_P			
	comp=Z,129nm,0.1s						
SHUT	Suhut-Afyon	1.25	117	PN	Pn	01 48 48.3	-0.2
BORA	Eskisehir	1.27	53	i P	Pn	01 48 48.6	-0.2
BORA				i S	Sb	01 49 05.5	0.0
BORA				IAML_P			
	comp=Z,496nm,0.2s						
KCTX	Karacabey (Bur	1.29	332	PN	Pb	01 48 48.9	-0.1
KCTX				SN	Sb	01 49 06.3	+0.4
ARMT	Armutlu	1.46	352	PN	Pn	01 48 51.5	+0.2
SRCK	Saricakaya, Es	1.47	51	PN	Pb	01 48 52.1	-0.1
SRCK				SN	Sn	01 49 11.7	+0.5
SRCK	Saricakaya, Es	1.47	51	i P	Pb	01 48 52.4	+0.2
SRCK				i S	Sn	01 49 12.9	+1.7
SRCK				IAML_P			
	comp=Z,200nm,0.1s						
EDC	Edincik	1.57	322	PN	Pn	01 48 53.2	+0.4
EDC				SN	Sn	01 49 14.1	+0.6
GULT	Gulveren	1.69	39	PN	Pn	01 48 54.8	+0.3

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*DDA **03** 02:11:31.8, 38°.43N×39°.33E, h7^{km}±4^{km}, ML2.5*

*ISCJB **03** 02:11:32.9±0.6, 38°.45N±0°.03×39°.31E±0°.05, h3^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=4.7km az=165.3*

*ISK **03** 02:11:32.6, 38°.39N×39°.38E, h2^{km}, ML2.0/4*

ISC 03 02:11:32.4±1.0**, 38°.43N**±0°.03×**39°.34E**±0°.03**, h6**^{km}±7^{km}**, n14, σ0ˢ.65**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.06	207	PG	Pg	02 11 34.0	-0.1
SVRC				SG	Sg	02 11 35.2	-0.1
TNCL	Tunceli-Merkez	0.70	13	i P	Pg	02 11 46.5	+0.5
TNCL				i S	Sg	02 11 55.8	+0.7
TNCL				IAML_P			
	comp=Z,151nm,0.2s						
DYBB	Diyarbakir	0.79	127	PG	Pb	02 11 47.9	-0.7
DIYA	Diyarbakir	0.80	129	i P	Pn	02 11 49.6	-0.6
DIYA				i S	Sn	02 12 02.1	-0.4
HANI	Diyarbakir_Han	0.83	91	i P	Pn	02 11 50.9	+0.1
KEMA	Kemaliye	1.07	322	i P	Pg	02 11 51.7	-1.2
URFA	Urfa	1.07	203	PG	Pn	02 11 53.5	-0.5
URFA				SG	Sn	02 12 08.9	-0.3
HEKM	Malatya_Hekimh	1.17	293	i P	Pn	02 11 55.8	+0.3
HEKM				IAML_P			
	comp=Z,393nm,0.2s						
MAZI	Mazidag	1.30	138	PN	Pn	02 11 57.5	+0.2
MAZI				SN	Sn	02 12 15.6	+0.5
SVAN	Silvan-Diyarba	1.49	100	PN	Pg	02 12 00.7	-0.2
SVAN				SN	Sg	02 12 21.2	+0.9
MARD	Mardin	1.59	134	i P	Pg	02 12 02.4	-0.5
MARD				i S	Sg	02 12 24.3	+0.7
SURC	SANLIURFA_SURC	1.65	201	i P	Pg	02 12 05.3	+1.2
CUKAN	kangal_SIVAS	1.71	302	i P	Pb	02 12 04.4	+0.1
MUSM	Mu-Merkez	1.73	79	i P	Pg	02 12 05.5	0.0
MUSM				IAML_P			
	comp=Z,120nm,0.2s						

MAN 03 02:48:39.7, 6°.79N×123°.90E, h13^{km}**, mb3.9, ML2.7, MS2.3, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.55	39	⇑iP	Pb	02 48 50.9	-0.3
CTBH				i S	Sg	02 48 56.8	-1.1
SKMP	Bagumbayan, Su	0.69	113	eP	Pg	02 48 52.9	-0.3
SKMP				eS	Sg	02 49 01.6	-0.7
PAGZ	Pagadian	1.17	334	eP	Pn	02 49 00.2	-1.6
PAGZ				eS	Sb	02 49 15.1	-1.8
BUKP	Musuan	1.58	47	eP	Pn	02 49 07.2	-0.3
BUKP				eS	Sn	02 49 26.7	-1.2
IPIL	Ipil	1.65	307	eP	Pn	02 49 08.3	-0.1
IPIL				eS	Sb	02 49 31.3	+0.6
CGP	Cagayan de Oro	1.83	25	⇑eP	Pb	02 49 12.2	-0.9
CGP				eS	Sn	02 49 34.9	+0.9
DDMP	Don Marcelino,	1.92	111	eP	Pn	02 49 11.4	-0.8
DDMP				eS	Sb	02 49 37.5	-1.0

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*SJA **03** 03:03:38.4±0.7, 21°.23S×67°.61W, h163^{km}±96^{km}, ML3.1, MW3.6*

*ISCJB **03** 03:03:43.0±1.1, 21°.34S±0°.05×66°.98W±0°.04, h216^{km}±12^{km}, Error ellipse: s-maj=9.3km s-min=5.1km az=35.5*

*GUC **03** 03:03:43.1±0.5, 21°.32S×67°.24W, h232^{km}±13^{km}, ML4.2*

ISC 03 03:03:42.2±2.6**, 21°.31S**±0°.06×**66°.93W**±0°.06**, h221**^{km}±23^{km}**, n17, σ0ˢ.96**/30**, 7C-1D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.57	123	i P	Pn	03 04 18.2	-0.7
YJA				i S	S	03 04 47.2	-0.3
YJA				IAML		03 04 48.1	
	comp=Z,56nm,0.4s						
PB09	IPOC Station P	2.21	257	IAML		03 05 00.6	
	comp=N,211nm,0.2s						
HJA	Humahuaca	2.36	144	i P	Pn	03 04 26.2	-0.2
HJA				IAML		03 04 27.1	
	comp=Z,68nm,0.3s						
HJA				i S	S	03 05 01.1	+0.3
PB08	IPOC Station P	2.38	299	⇑iP	Pn	03 04 27.8	+1.1
PB08				i S	S	03 05 01.5	+0.3
PB08				IAML		03 05 05.0	
	comp=E,188nm,0.2s						
PB01	IPOC Station P	2.40	276	⇑iP	Pn	03 04 27.5	+1.0
PB01				i S	S	03 05 01.0	0.0
PB01				IAML		03 05 03.9	
	comp=N,442nm,0.2s						
GO01	Chusmiza	2.68	307	⇑iP	Pn	03 04 30.6	+0.7
GO01				eS	S	03 05 08.1	+1.1
GO01				IAML		03 05 17.9	
	comp=E,461nm,0.1s						
PB03	IPOC Station P	2.73	254	eP	Pn	03 04 30.4	+0.3
PB03				i S	S	03 05 06.3	-1.0
PB03				IAML		03 05 08.4	
	comp=N,580nm,0.1s						
PB02	IPOC Station P	2.77	269	⇑iP	Pn	03 04 31.1	+0.6
PB02				i S	S	03 05 06.8	-1.3
PB02				IAML		03 05 09.6	
	comp=E,1µm,0.1s						
PB07	IPOC Station P	2.78	261	⇓iP	Pn	03 04 31.4	+0.6
PB07				i S	S	03 05 07.6	-0.9
PB07				IAML		03 05 09.9	
	comp=N,567nm,0.1s						
PB06	IPOC Station P	2.82	240	⇑iP	Pn	03 04 31.9	+0.8
PB06				i S	S	03 05 09.0	-0.2
PB06				IAML		03 05 10.2	
	comp=E,471nm,0.1s						
PB11	IPOC Station P	2.98	301	⇑iP	Pn	03 04 33.3	+0.2
PB11				i S	S	03 05 11.6	-1.0
PB11				IAML		03 05 14.2	

	comp=E,718nm,0.2s						
PB15	IPOC Station P	3.02	231	eP	Pn	03 04 34.5	+1.0
PB15				i S	S	03 05 13.5	+0.1
PB04	IPOC Station P	3.16	251	IAML		03 05 16.0	
	comp=N,454nm,0.1s						
MNMC	Minye Minye	3.31	310	i P	Pn	03 04 37.8	+0.9
MNMC				i S	S	03 05 19.9	+0.3
AZAP	Zapla	3.37	150	i P	Pn	03 04 37.2	-0.3
AZAP				i S	S	03 05 22.0	+1.2
PB05	IPOC Station P	3.40	243	⇑iP	Pn	03 04 38.4	+0.6
PB05				i S	S	03 05 19.5	-1.7
PSGC	Pisagua	3.44	299	eP	Pn	03 04 37.5	-0.8
PSGC				i S	S	03 05 19.7	-2.4

MAN 03 03:08:44.5,16°.39N×122°.32E,h1^{km},mb4.3,ML3.1,MS2.8, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	Palanan	0.68	9	eP	Pg	03 08 57.1	-0.4
PALP				eS	Sn	03 09 15.8	+3.3
CAUP	Cauayan	0.73	319	eP	Pg	03 08 58.6	+0.1
CAUP				eS	Sg	03 09 09.1	+1.1
BALP	Baler	0.96	228	eP	Pb	03 09 03.6	-0.4
BALP				eS	Sn	03 09 19.2	-0.4
CVP	Callao Caves	1.39	340	⇑iP	Pg	03 09 11.2	0.0
CVP				i S	Sg	03 09 28.7	-0.6
APYP	Conner	1.79	325	eP	Pn	03 09 16.3	-0.2
APYP				eS	Sn	03 09 39.0	-1.0
BOLP	Bolinao	2.31	270	eP	Pn	03 09 24.4	+0.6
BOLP				eS	Sb	03 09 56.2	+0.1

SJA 03 03:10:17.5±0.7,27°.78S×64°.39W,h40^{km}±62^{km},ML3.0, MW3.8,Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHML	Horco Molle	1.30	319	i P	Pn	03 10 40.4	+1.2
AHML				IAML		03 10 57.2	
	comp=Z,315nm,0.3s						
AHML				i S	Sn	03 10 57.8	+2.3
CYA	Choya	1.41	242	i P	Pn	03 10 42.5	+1.7
CYA				i S	Sn	03 11 00.2	+2.0
CYA				IAML		03 11 00.6	
	comp=Z,264nm,0.2s						
FSA	Cafayete	2.19	319	i P	Pn	03 10 53.4	+1.8
FSA				i S	Sn	03 11 20.6	+3.2
FSA				IAML		03 11 22.6	
	comp=Z,57nm,0.3s						
VCA	Vinchina	3.50	253	i P	Pn	03 11 12.5	+2.9

*NEIC **03** 03:25:46.8±2.3,5°.67S×103°.47E,h86^{km}±8^{km},mb4.1/6, Error ellipse: s-maj=10.8km s-min=5.3km az=81.0*
NEIC Felt [II] at Liwa.
*ISCJB **03** 03:25:48.4±0.5,5°.22S±0°.07×103°.83E±0°.07,h98^{km}±3^{km}, mb4.0/14,Error ellipse: s-maj=15.9km s-min=4.9km az=42.8*
*IDC **03** 03:25:49.7±3.5,5°.18S×103°.65E,h89^{km}±27^{km},mb3.8/9, mb1 3.9/10,mb1mx3.6/47,mbtmp4.1/10,MS3.0/2, Ms1 3.0/2,ms1mx2.7/28,Error ellipse: s-maj=61.6km s-min=15.5km az=53.0*
*DJA **03** 03:25:51.4±0.3,5°S±4°×10°4E±°,h60^{km}±6^{km},M4.3/11, MLv4.3/11*
ISC 03 03:25:49.3±0.9,**5°.24S**±0°.09×**103°.82E**±0°.07,**h88**^{km}±6^{km}, **n41**,σ**1^s.19**/49,**mb4.1**/14,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	0.32	47	P	Pn	03 26 02.6	-0.2
LWLI				S	Sn	03 26 12.5	-0.2
KASI	Kota Agung	0.73	113	P	Pn	03 26 05.9	0.0
KASI				S	Sn	03 26 17.8	-0.4
MDSI	Maura Dua	0.83	25	P	Pn	03 26 07.2	+0.2
MDSI				S	Sn	03 26 19.6	-0.5
KLI	Kotabumi	1.10	70	P	Pn	03 26 10.6	+0.6
MNAI	Manna	1.23	315	ePn	Pn	03 26 10.5	-1.1
MNAI				eSn	Sn	03 26 29.3	+0.9
MNAI	Manna	1.23	315	P	Pn	03 26 13.1	+1.5
MNAI				S	Sn	03 26 30.7	+2.3
BLSI	Bandar Lampung	1.42	95	P	Pn	03 26 14.9	+0.9
LHSI	Lahat	1.44	348	P	Pn	03 26 15.9	+1.7
CGJI	Cibinong	2.31	126	P	Pn	03 26 26.0	+0.5
CGJI				S	Sn	03 26 53.8	+0.6
PMBI	Palembang	2.49	22	P	Pn	03 26 37.7	+10
KRJI	Kerinci	3.92	323	P	Pn	03 26 55.6	+8.3
LEM	Lembang	4.09	113	P	Pn	03 26 53.5	+3.8
	8.2nm,0.3s,baz=205,slow=19,SNR=2.7						
LEM				S	Sn	03 27 51.4	+15
	4.1nm,0.3s,baz=342,slow=20,SNR=2.1						
PPSI	Pulau Pagai	4.53	303	P	Pn	03 26 56.7	+1.1
CISI	Cisompet, Garu	4.58	120	ePn	Pn	03 26 57.3	+0.9
CISI				eSn	Sn	03 27 49.0	+0.5
XMIS	Christmas Isla	5.51	161	ePn	Pn	03 27 03.0	-6.0
XMIS				eSn	Sn	03 27 59.0	-12
MYKOM	Kota Tinggi	6.99	0	ePn	Pn	03 27 31.8	+2.8
UGM	Wanagama	7.17	112	ePn	Pn	03 27 33.3	+1.8
GSI	Gunungsitoli	9.01	316	ePn	Pn	03 27 56.0	-0.7
GSI				eSn	Sn	03 29 35.2	-1.3
JAGI	Jajag, Banyuwa	10.74	108	ePn	Pn	03 28 19.3	-1.0
BATI	Baumata	20.26	105	LR	LR	03 39 40.5	
	comp=Z,80nm,18.6s,baz=142,slow=41						
CM31	Chiang Mai Arr	24.04	349	eP	P	03 30 56.1	-0.2
	8.2nm,1.2s						
CMAR	Chiang Mai Arr	24.04	349	P	P	03 30 56.1	-0.2
	2.9nm,0.7s,baz=185,slow=9.0,SNR=14						
CMAR				LR	LR	03 41 08.0	
	comp=Z,15nm,20.3s,baz=300,slow=38						
AS31	Alice Springs	34.27	125	eP	P	03 32 25.5	-1.9
	0.8nm,0.6s						
AS31				eScP	ScP	03 38 40.5	+1.1
ASAR	Alice Springs	34.27	125	P	P	03 32 28.4	+1.1
	1.4nm,0.6s,baz=301,slow=8.3,SNR=11						
ASAR				ScP	ScP	03 38 40.5	+1.1
	0.9nm,0.8s,baz=297,slow=3.6,SNR=4.6						
STKA	Stephens Creek	44.16	132	P	P	03 33 51.2	+1.7
	1.8nm,0.5s,baz=289,slow=6.4,SNR=5.6						
STKA	Stephens Creek	44.16	132	eP	P	03 33 48.0	-1.5
	0.6nm,0.9s						
SONA0	Songino Array	52.90	2	eP	P	03 34 56.5	+0.1
SONA0				ePcP	PcP	03 36 04.4	0.0
SONM	Songino Array	52.90	2	P	P	03 34 56.5	+0.1
	1.3nm,0.4s,baz=180,slow=8.7,SNR=8.0						
SONM				PcP	PcP	03 36 04.4	0.0
	1.0nm,0.5s,baz=194,slow=3.0,SNR=4.1						
KDJ	Kajisay	53.02	335	eP	P	03 34 57.8	+0.3
	3.0nm,0.7s						
MK31	Makanchi Array	55.21	342	eP	P	03 35 12.7	-0.4
	2.3nm,0.8s						
MK32	Makanchi Array	55.21	342	eP	P	03 35 12.4	-0.7
MKAR	Makanchi Array	55.21	342	P	P	03 35 12.4	-0.7
	2.2nm,0.7s,baz=142,slow=8.1,SNR=19						
ZALV	Zalesovo Beam	61.09	347	P	P	03 35 53.2	-0.8
	1.0nm,0.3s,baz=172,slow=4.5,SNR=6.3						
ZAA1	Zalesovo Array	61.10	347	eP	P	03 35 53.2	-0.8
BVAR	Borovoye Array	64.55	338	P	P	03 36 15.6	-1.4
	0.4nm,0.3s,baz=116,slow=6.6,SNR=4.9						
ABKAR	Akbulak array	66.31	330	eP	P	03 36 28.1	-0.3
	2.7nm,1.0s						
BR101	Keskin Array S	78.31	312	eP	P	03 37 40.1	-0.2
BRTR	Keskin Array B	78.31	312	P	P	03 37 40.1	-0.2
	1.3nm,0.7s,baz=115,slow=6.6,SNR=6.8						
FIA0	FINESS Array S	88.74	332	eP	P	03 38 32.8	-0.1
FINES	FINESS Array B	88.74	332	P	P	03 38 32.8	-0.1
	1.4nm,0.7s,baz=96,slow=4.2,SNR=7.9						
TXAR	Lajitas Array	144.65	44	PKP	PKPab	03 45 15.8	+0.3
	0.3nm,0.6s,baz=343,slow=2.8,SNR=4.0						

DJA 03 03:33:26.0±0.7,**8°S**±4°×**10°8E**±°,**h16**^{km}±5^{km},**M3.8**/6, **MLv3.8**/6,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.61	349	P	Pb	03 33 39.0	+0.6
CISI				S	Sb	03 33 47.0	+0.2
LEM	Lembang	1.36	347	P	Pn	03 33 50.2	-0.3
LEM				S	Sg	03 34 09.5	-0.5
UGM	Wanagama	2.58	85	P	Pn	03 34 07.7	+0.5
CGJI	Cibinong	2.70	305	P	Pn	03 34 08.1	-0.7

*BJI **03** 03:40:25.3±0.0,51°.39N×167°.33W,h7^{km},mb5.4/77, mB5.8/66,Ms5.5/85,Ms7 5.2/65*
*ISCJB **03** 03:40:25.6±0.6,51°.57N±0°.02×166°.74W±0°.02,h5^{km}±3^{km}, mb5.8/780,MS5.2/587,Error ellipse: s-maj=2.7km s-min=1.7km az=15.9*
*IDC **03** 03:40:25.9±0.5,51°.39N×167°.00W,h0^{km},mb5.5/39, mb1 5.7/39,mb1mx5.6/42,mbtmp5.5/39,MS4.9/33, Ms1 4.9/33,ms1mx4.9/38,Error ellipse: s-maj=15.4km s-min=9.5km az=4.0*
*NEIC **03** 03:40:27.0±2.7,51°.62N×167°.02W,h5^{km}±1^{km},mb5.9/653, MS5.2/549,MW5.7,MW5.8,ML5.1(AEIC),Error ellipse: s-maj=7.6km s-min=6.1km az=166.0,Moment Tensor Solution. s71 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.41; $M_{\theta\theta}$3.72; $M_{\phi\phi}$-0.32; $M_{r\theta}$-0.91; $M_{\theta\phi}$1.84; $M_{\phi r}$0.46; Best double couple: $M_0$4.20000×10^{17} NP1:ϕ_s233.00000°, δ42.00000°,λ-114.00000°. NP2:ϕ_s84.00000°,δ52.00000°, λ-70.00000°. Principal axes: T 4.5000, Plg5.0000°, Azm160.0000°; N -0.8200, Plg16.0000°, Azm251.0000°; P -3.6800, Plg73.0000°, Azm52.0000°;*
NEIC Felt at Nikolski.
*MOS **03** 03:40:27.3±1.0,51°.55N×166°.99W,h17^{km},mb6.0/187, MS5.0/105 Error ellipse: s-maj=6.1km s-min=5.0km az=107.1*
*NEIC **03** 03:40:27.0±0.0,51°.62N×166°.30W,h11^{km},Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.93; $M_{\theta\theta}$2.87; $M_{\phi\phi}$-0.94; $M_{r\theta}$-4.78; $M_{\theta\phi}$3.35; $M_{\phi r}$1.26; Best double couple: $M_0$6.50000×10^{17} NP1:ϕ_s97.00000°, δ79.00000°,λ-54.00000°. NP2:ϕ_s202.00000°,δ37.00000°, λ-162.00000°. Principal axes: T 6.5300, Plg25.0000°, Azm160.0000°; N -0.0800, Plg34.0000°, Azm269.0000°; P -6.4500, Plg44.0000°, Azm42.0000°;*
*AEIC **03** 03:40:30.0±0.0,51°.61N×167°.01W,h16^{km}*
*GCMT **03** 03:40:31.0±0.1,51°.48N±0°.01×167°.13W±0°.01,h12^{km}, MW5.7/118,Moment Tensor Solution. s90,c185; s118,c329; Duration: 1^s.7 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.63±.03; $M_{\theta\theta}$2.72±.03; $M_{\phi\phi}$-0.08±.03; $M_{r\theta}$-1.55±.10; $M_{\theta\phi}$2.40±.03; $M_{\phi r}$0.75±.10; Best double couple: $M_0$3.95400×10^{17} NP1:ϕ_s88.00000°,δ61.00000°, λ-53.00000°. NP2:ϕ_s211.00000°,δ46.00000°, λ-137.00000°. Principal axes: T 4.2410, Plg8.0000°, Azm152.0000°; N -0.5740, Plg32.0000°, Azm248.0000°; P -3.6670, Plg57.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 03 03:40:28.0±0.5,**51°.54N**±0°.03×**166°.96W**±0°.03,**h12**^{km}±2^{km}, **n2393**,σ**1^s.55**/2544,**mb5.9**/829,**MS5.2**/614,**50C-115D, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.85	322	ePn	Pn	03 40 58.0	-1.6
NIKH				eSn	Sn	03 41 20.6	-2.3
OKTU	Okmok Mt. Tuli	1.96	341	ePn	Pn	03 41 00.2	-1.0
OKAK	Okmok	2.22	338	ePn	Pn	03 41 01.4	-3.2
MREP	Makushin Rep't	2.28	3	ePn	Pn	03 41 04.5	-1.1
UNV	Unalaska Valle	2.33	7	ePn	Pn	03 41 05.0	-1.1
UNV				eSn	Sn	03 41 30.7	-3.9
MSW	Makushin Switc	2.38	2	ePn	Pn	03 41 05.9	-1.0
MSW				eSn	Sn	03 41 34.2	-1.8
MCIR	Makushin Cirqu	2.42	1	ePn	Pn	03 41 07.0	-0.4
ZRO	Akutan Zero	2.62	13	ePn	Pn	03 41 09.2	-1.0
AKRB	Akutan Reef Bi	2.65	11	ePn	Pn	03 41 09.8	-0.8
AKRB				eSn	Sn	03 41 41.1	-1.6
AHB	Akutan Harbor	2.67	15	ePn	Pn	03 41 09.8	-1.1
AKUT	Akutan	2.70	15	ePn	Pn	03 41 10.0	-1.2
AKUT				eSn	Sn	03 41 40.7	-3.1
AKSA	Akutan Strait	2.71	16	ePn	Pn	03 41 10.0	-1.4
AKSA				eSn	Sn	03 41 42.1	-2.0
WESP	Westdahl Peak	3.25	24	ePn	Pn	03 41 18.7	-0.2
WEBT	Westdahl Beart	3.33	23	ePn	Pn	03 41 20.2	+0.2
FALS	False Pass	3.95	31	ePn	Pn	03 41 27.9	-0.4
FALS				eSn	Sn	03 42 10.3	-4.2
KOSE	Korovin Southe	4.46	283	ePn	Pn	03 41 35.0	-0.5
KOFP	Korovin Flat P	4.48	282	ePn	Pn	03 41 35.3	-0.5
ATKA	Atka Island	4.54	281	ePn	Pn	03 41 35.2	-1.2
ATKA				eSn	Sn	03 42 26.0	-3.1
KOKL	Mount Kliuchef	4.55	283	ePn	Pn	03 41 37.2	+0.4
KOWE	Korovin West	4.59	283	ePn	Pn	03 41 36.8	-0.4
DOL	Dolgoi Island	4.73	38	ePn	Pn	03 41 38.9	-0.3
PS4A	Pavlof South-4	4.88	37	ePn	Pn	03 41 41.5	+0.3
PVV	Pavlof Volcano	4.93	37	ePn	Pn	03 41 42.2	+0.3
SDPT	Sand Point	5.44	43	ePn	Pn	03 41 48.6	-0.2
SDPT				eSn	Sn	03 42 47.9	-3.3
GSMY	Great Sitkin M	5.67	279	ePn	Pn	03 41 51.6	-0.4
GSTR	Great Sitkin T	5.67	279	ePn	Pn	03 41 51.5	-0.6
GSTR				eSn	Sn	03 42 53.9	-3.3
GSTD	Great Sitkin T	5.73	279	ePn	Pn	03 41 52.5	-0.4
ETKA	Kagalaska Isla	5.89	277	ePn	Pn	03 41 54.0	-1.0
SPIA	Saint Paul Isl	5.97	342	ePn	Pn	03 41 56.5	+0.4
SPIA				eSn	Sn	03 43 05.2	+0.9
ADAG	Mount Adagdak	6.01	278	ePn	Pn	03 41 56.5	-0.1
ADK	Adak	6.06	277	ePn	Pn	03 41 56.5	-0.9
ADK				eSn	Sn	03 43 02.4	-4.2
ADK	Adak	6.06	277	eP	Pn	03 41 56.5	-0.9
ADK				e		03 43 02.4	
KIWB	Kanaga Island	6.35	277	ePn	Pn	03 42 01.0	-0.3
KIWB				eSn	Sn	03 43 10.4	-3.3
KIKV	Kanaga Island	6.36	277	ePn	Pn	03 42 00.9	-0.6
VNWF	Veniaminof 8	6.36	41	ePn	Pn	03 42 01.8	+0.2
KIMD	Kanaga Island	6.40	276	ePn	Pn	03 42 01.6	-0.5
VNHG	Veniaminof 1	6.57	41	ePn	Pn	03 42 04.8	+0.4
TAFP	Tanaga Falls P	6.86	277	ePn	Pn	03 42 07.7	-0.7
TASE	Tanaga Southea	6.90	277	ePn	Pn	03 42 08.4	-0.5
CHGN	Chignik	6.94	43	ePn	Pn	03 42 09.4	-0.1
GAEA	Gareloi East	7.34	277	ePn	Pn	03 42 14.2	-0.8
AZAC	Aniakchak	7.41	40	ePn	Pn	03 42 15.7	-0.3
CHIR	Chirikof Islan	7.98	53	ePn	Pn	03 42 22.6	-1.1
CHIA	Chirikof Islan	8.01	53	ePn	Pn	03 42 22.5	-1.5
CHIA				eSn	Sn	03 43 45.9	-8.6
SII	Sitkinak Islan	9.04	51	ePn	Pn	03 42 37.3	-0.9
SII				eSn	Sn	03 44 13.0	-6.8
KELA	Mount Kelaz	9.44	39	ePn	Pn	03 42 43.5	-0.3
KABU	Katmai Buttres	9.51	40	ePn	Pn	03 42 44.3	-0.5
OHAK	Old Harbor	9.79	49	ePn	Pn	03 42 46.6	-1.8
OHAK				eSn	Sn	03 44 29.8	-8.4
KAHC	Katmai Hardscr	9.87	39	ePn	Pn	03 42 49.4	-0.2
KARR	Katmai Rainbow	9.89	40	ePn	Pn	03 42 49.5	-0.4
KAHG	Katmai Hook Gl	9.95	41	ePn	Pn	03 42 50.2	-0.6
KDAK	Kodiak Island	10.40	47	Pn	Pn	03 42 54.7	-2.1
	39nm,0.3s,baz=222,slow=6.9,SNR=279						
KDAK				Sn	Sn	03 44 45.7	-7.4
	2.9nm,0.3s,baz=342,slow=19,SNR=4.4						
KDAK	Kodiak Island	10.40	47	ePn	Pn	03 42 54.9	-2.0
KDAK				eSn	Sn	03 44 42.4	-11
KDAK	Kodiak Island	10.40	47	i P	Pn	03 42 54.5	-2.3
FONW	Fourpeaked Sta	10.43	40	ePn	Pn	03 42 56.6	-0.7
SVW2	Sparrevohn	11.45	29	ePn	Pn	03 43 11.6	+0.4
SMY	Shemya	11.70	283	ePn	Pn	03 43 13.7	-1.0
SMY	Shemya	11.70	283	eP	Pn	03 43 13.7	-1.0
HOM	Homer	11.86	41	ePn	Pn	03 43 13.6	-3.1
RSO	Redoubt South	11.94	36	ePn	Pn	03 43 18.1	+0.1
CNPM	China Poot	11.95	42	ePn	Pn	03 43 16.7	-1.3
CNPM				eSn	Sn	03 45 30.1	-0.9
BRLK	Bradley Lake	12.23	41	ePn	Pn	03 43 20.5	-1.4
GAMB	Gambell	12.53	350	ePn	Pn	03 43 27.9	+2.1
GAMB				eSn	Sn	03 45 42.4	-2.7
TTA	Tatalina	12.84	23	ePn	Pn	03 43 30.9	+0.7
TTA	Tatalina	12.84	23	eP	Pn	03 43 31.0	+0.7
SEW	Seward	13.02	42	ePn	Pn	03 43 30.4	-2.1
ANM	Nome	13.09	3	ePn	Pn	03 43 33.0	-0.6
ANM				eSn	Sn	03 45 56.6	-2.3
ANM	Nome	13.09	3	eP	Pn	03 43 33.0	-0.6
ANM				e		03 45 56.6	
SKT	Skwentna	13.41	33	ePn	Pn	03 43 38.2	+0.2
RC01	Rabbit Creek A	13.48	38	ePn	Pn	03 43 37.0	-1.8
PPLA	Purkeypile	13.87	29	ePn	Pn	03 43 45.8	+1.5
PPLA				eSn	Sn	03 46 19.1	+1.1
PMR	Palmer	14.02	37	ePn	Pn	03 43 42.1	-4.1
PMR				eSn	Sn	03 46 15.9	-5.5
PMR	Palmer	14.02	37	eP	Pn	03 43 42.1	-4.1
PMR				e		03 46 16.0	
KNK	Knik Glacier	14.17	39	ePn	Pn	03 43 45.4	-2.9
CAST	Castle Rocks	14.29	28	ePn	Pn	03 43 50.4	+0.4
CAST				eSn	Sn	03 46 32.9	+4.6
GLI	Glacier Island	14.42	42	ePn	Pn	03 43 48.4	-3.3
GLI				eSn	Sn	03 46 25.8	-5.5
SML	Sawmill	14.45	37	ePn	Pn	03 43 47.8	-4.4
SML	Sawmill	14.45	37	eP	Pn	03 43 47.8	-4.4
KTH	Kantishna Hill	14.74	29	ePn	Pn	03 43 55.3	-0.8
EYAK	Cordova Ski Ar	14.83	44	ePn	Pn	03 43 54.5	-2.7
EYAK				eSn	Sn	03 46 33.3	-7.9
SCM	Sheep Creek Mo	14.85	38	ePn	Pn	03 43 53.4	-4.3
SCM	Sheep Creek Mo	14.85	38	eP	Pn	03 43 53.4	-4.3
TRF	Thorofare Moun	14.86	30	ePn	Pn	03 43 55.5	-2.4
BPAW	Bear Paw Mtn.	15.13	28	ePn	Pn	03 44 00.5	-0.8
	771nm,0.8s						
RND	Reindeer	15.29	32	ePn	Pn	03 43 59.8	-3.7
	127nm,0.8s						
RND				eSn	Sn	03 46 45.9	-6.8
RND	Reindeer	15.29	32	eP	Pn	03 43 59.8	-3.7
RND				e		03 46 45.9	
RND				pmax	pmax		
	comp=Z,127nm,0.8s						
HMT	Hamilton	15.39	46	ePn	Pn	03 44 02.9	-2.0
	comp=Z,2µm,1.2s						
MCK	McKinley	15.49	31	ePn	Pn	03 44 03.1	-3.0
	comp=Z,144nm,0.9s						
MCK	McKinley	15.49	31	eP	Pn	03 44 03.1	-3.0
MCK				pmax	pmax		
	comp=Z,145nm,0.9s						
DHY	Denali Highway	15.58	35	ePn	Pn	03 44 03.2	-4.3
	comp=Z,166nm,0.8s						
BWN	Browne	15.63	29	ePn	Pn	03 44 07.5	-0.5
	comp=Z,476nm,1.0s						
MLY	Manley	15.91	26	ePn	Pn	03 44 10.8	-0.8
	comp=Z,896nm,1.1s						
PAX	Paxson	16.21	37	ePn	Pn	03 44 13.5	-2.0
	comp=Z,246nm,0.8s						
PAX				eS	S	03 47 29.7	+1.5
PAX	Paxson	16.21	37	eP	Pn	03 44 13.5	-2.0
PAX				pmax	pmax		
	comp=Z,246nm,0.8s						
WRH	Wood River Hil	16.27	30	ePn	Pn	03 44 12.0	-4.1
	comp=Z,146nm,0.8s						
CCB	Clear Creek Bu	16.48	30	ePn	Pn	03 44 14.3	-4.5
	comp=Z,179nm,0.9s						
MDM	Murphy Dome	16.57	29	ePn	Pn	03 44 17.5	-2.4
	comp=Z,128nm,1.0s						
HDA	Harding Lake	16.59	31	ePn	Pn	03 44 15.7	-4.6
	comp=Z,194nm,0.8s						
HDA	Harding Lake	16.59	31	P	Pn	03 44 16.1	-4.1
	baz=229						
TCOL	CIGO, UAF Yank	16.62	29	P	Pn	03 44 17.5	-3.1
	baz=226,SNR=25						
COLA	College	16.63	29	ePn	Pn	03 44 17.2	-3.4
	comp=Z,189nm,0.8s						
COLA				eSn	Sn	03 47 12.5	-12
COLA	College	16.63	29	deP	Pn	03 44 16.2	-4.4
RDOG	Red Dog Mine	16.69	5	eP	P	03 44 22.7	-1.0
	comp=Z,351nm,1.0s						
ILAR	Eielson Array	16.86	30	Pn	Pn	03 44 18.8	-4.8
	comp=Z,1.7nm,0.3s,baz=226,slow=12,SNR=146						
ILAR				LR	LR	03 51 17.6	
	comp=Z,7µm,19.1s,baz=244,slow=38						
ILB	Eielson Array	16.86	30	ePn	Pn	03 44 19.4	-4.2
	comp=Z,113nm,0.8s						
MENT	Mentasta	16.86	38	ePn	Pn	03 44 20.7	-3.0
	comp=Z,414nm,0.6s						
RIDG	Independent Ri	16.89	35	ePn	Pn	03 44 20.7	-3.4
	comp=Z,351nm,0.8s						
POKR	Poker Plat Res	16.92	29	P	Pn	03 44 21.0	-3.4
	baz=226,SNR=34						
DOT	Dot Lake	17.12	36	ePn	Pn	03 44 23.6	-3.3
	comp=Z,228nm,0.7s						
PCA	Pinnacle	17.17	50	eP	P	03 44 28.8	-0.4
	comp=Z,1µm,1.2s						
PRP	Porcupine Dome	17.78	30	eP	Pn	03 44 31.9	-3.3
	comp=Z,202nm,1.1s						
COLD	Coldfoot	17.79	22	eP	P	03 44 35.8	-0.1
	comp=Z,156nm,0.9s						
COLD				eSn	S	03 47 55.9	-4.1
FYU	Fort Yukon	18.59	28	eP	P	03 44 42.4	-2.3
	comp=Z,201nm,0.7s						
HYT	Haines Junctio	18.69	49	eP	Pn	03 44 48.3	+2.0
	comp=Z,1µm,1.1s						
EGAK	Eagle	18.81	35	eP	P	03 44 44.3	-2.9
	comp=Z,542nm,1.0s						
TOLK	Toolik Lake Re	19.08	20	eP	Pn	03 44 51.7	+0.7
	comp=Z,645nm,1.2s						
TOLK	Toolik Lake Re	19.08	20	P	Pn	03 44 51.6	+0.7
	baz=215,SNR=305						
DAWY	Dawson	19.11	38	eP	Pn	03 44 53.1	+1.7
	comp=Z,4µm,0.9s						
SIT	Sitka	19.15	61	eP	Pn	03 44 54.0	+2.2
	comp=Z,924nm,1.0s						
SIT				eSn	Sn	03 48 18.8	-7.3
SIT	Sitka	19.15	61	eP	Pn	03 44 54.0	+2.2
SIT				e		03 48 18.8	
SIT				pmax	pmax		
	comp=Z,924nm,1.0s						
SKAG	Skagway	19.43	54	ePn	Pn	03 44 56.5	+1.3
	comp=Z,1µm,1.0s						
JIS	Juneau Island	19.75	57	ePn	Pn	03 44 59.6	+0.7
	comp=Z,868nm,1.0s						
WHY	Whitehorse	19.89	50	ePn	Pn	03 45 00.7	-0.1
	comp=Z,1µm,1.3s						
CRAG	Craig	20.38	66	ePn	Pn	03 45 06.9	+0.5
	comp=Z,555nm,1.0s						
WRAK	Wrangell Islan	20.78	63	ePn	Pn	03 45 11.2	+0.2
	comp=Z,530nm,1.0s						
WRAK				LR	LR		
	comp=Z,4µm,21.0s						
PET	Petropavlovsk	20.98	288	eP	P	03 45 10.5	-0.4
	comp=Z,493nm,1.4s						
PET				LR	LR		
	comp=Z,4µm,19.0s						
PET	Petropavlovsk	20.98	288	d iP	P	03 45 10.6	-0.2
PET				eS	S	03 48 57.3	-6.8
PET				pmax	pmax		
	comp=Z,2µm,8.6s						
PET				pmax	pmax		
	comp=Z,267nm,1.4s						
PET				pmax	pmax		
	comp=Z,2µm,10.6s						
PET				MLR	MLR		
	comp=Z,4µm,15.0s						
PET				MLR	MLR		
	comp=Z,4µm,13.0s						
DIB	Dawson Inlet,	21.00	72	eP	P	03 45 12.7	+1.6
	comp=Z,271nm,1.0s						
DIB				LR	LR		
	comp=Z,5µm,19.0s						
BILL	Bilibino	21.03	332	ePn	P	03 45 12.5	+1.2
	comp=Z,643nm,1.5s						
BILL				LR	LR		
	comp=Z,8µm,20.0s						
BILL	Bilibino	21.03	332	d iP	P	03 45 12.3	+1.0
BILL				e		03 45 21.6	
BILL				i PPP	PPP	03 45 36.7	
BILL				i S	Sn	03 49 06.8	-4.4
BILL				i SS	SnSn	03 49 20.8	-5.1
BILL				eSSS	SSS	03 49 33.8	
BILL				pmax	pmax		
	comp=Z,834nm,2.5s						
BILL				MLR	MLR		
	comp=Z,3µm,14.0s						
EPYK	Eagle Plains	21.21	34	eP	P	03 45 13.4	+0.1
	comp=Z,3µm,0.9s						
EPYK				LR	LR		
	comp=Z,8µm,18.0s						
EPYK	Eagle Plains	21.21	34	P	P	03 45 13.9	+0.6
	baz=240,SNR=1000						
MOBC	Moresby Island	21.31	72	eP	P	03 45 16.3	+1.8
	comp=Z,489nm,1.1s						
MOBC				LR	LR		
	comp=Z,8µm,18.0s						
PEA0B	Petropavlovsk-	21.53	288	eP	P	03 45 16.4	-0.4
	comp=Z,576nm,1.3s						
PEA0B				eS	S	03 49 10.4	-4.7
PEA1	Petropavlovsk-	21.53	288	eP	P	03 45 16.3	-0.5
PETK	Petropavlovsk-	21.53	288	P	P	03 45 16.3	-0.5
	comp=Z,66nm,0.5s,baz=86,slow=14,SNR=128						
PETK				LR	LR	03 53 34.8	
	comp=Z,2µm,20.9s,baz=90,slow=37						
DLBC	Dease Lake	22.05	57	P	P	03 45 23.8	+1.3
	comp=Z,330nm,1.0s,baz=271,slow=11,SNR=48						
DLBC	Dease Lake	22.05	57	eP	P	03 45 23.9	+1.5
	comp=Z,556nm,1.1s						
DLBC				LR	LR		
	comp=Z,3µm,20.0s						
SKR	Severo-Kuril's	23.05	282	eP	P	03 45 31.8	-1.1

SKR				*e*		03 46 02.2	
SKR				*e*S	**S**	**03 49 41.5**	**-1.8**
SKR				pmax	pmax		
	comp=Z,3µm,5.2s						
SKR				pmax	pmax		
	comp=Z,199nm,1.1s						
INK	**Inuvik**	**23.25**	**31**	P	**P**	**03 45 34.2**	**-0.6**
	comp=Z,1µm,0.9s,baz=226,slow=10,SNR=142						
INK				LR	LR	03 55 30.1	
	comp=Z,7µm,18.0s,baz=234,slow=39						
INK	**Inuvik**	**23.25**	**31**	*e*P	**P**	**03 45 34.2**	**-0.6**
	comp=Z,1µm,0.8s						
INK				LR	LR		
	comp=Z,8µm,18.0s						
BBB	**Bella Bella**	**23.81**	**73**	P	**P**	**03 45 42.0**	**+1.6**
	comp=Z,323nm,0.9s,baz=280,slow=10,SNR=74						
BBB				LR	LR	03 53 10.5	
	comp=Z,5µm,18.1s,baz=276,slow=32						
BBB	**Bella Bella**	**23.81**	**73**	*e*P	**P**	**03 45 42.1**	**+1.7**
	comp=Z,377nm,1.0s						
BBB				LR	LR		
	comp=Z,6µm,19.0s						
SEY	**Seymchan**	**24.33**	**314**	P	**P**	**03 45 45.7**	**+0.5**
	comp=Z,36nm,0.8s,baz=102,slow=10.0,SNR=58						
SEY				LR	LR	03 54 39.3	
	comp=Z,3µm,21.8s,baz=124,slow=35						
SEY	**Seymchan**	**24.33**	**314**	*d i*P	**P**	**03 45 45.1**	**-0.1**
MA2	**Magadan**	**24.84**	**305**	P	**P**	**03 45 51.0**	**+1.0**
	comp=Z,43nm,1.0s,baz=93,slow=10.0,SNR=16						
MA2				LR	LR	03 57 58.7	
	comp=Z,1µm,18.3s,baz=82,slow=42						
MA2	**Magadan**	**24.84**	**305**	*e*P	**P**	**03 45 50.8**	**+0.9**
	comp=Z,220nm,1.4s						
MA2	**Magadan**	**24.84**	**305**	*d i*P	**P**	**03 45 50.3**	**+0.4**
MA2				pmax	pmax		
	comp=Z,325nm,2.5s						
PGC	**Sidney**	**27.75**	**79**	*e*P	**P**	**03 46 18.6**	**+2.4**
	comp=Z,106nm,1.4s						
LLLB	**Lillooet**	**28.00**	**74**	*e*P	**P**	**03 46 20.4**	**+1.8**
	comp=Z,58nm,1.1s						
LLLB				LR	LR		
	comp=Z,6µm,18.0s						
NLWA	**Neilton Lookou**	**28.00**	**81**	*e*P	**P**	**03 46 20.9**	**+2.3**
	comp=Z,85nm,1.0s						
NLWA				*e*PcP	**PcP**	**03 49 33.1**	**0.0**
NLWA				LR	LR		
	comp=Z,6µm,21.0s						
A04D	**Lummi Island**	**28.18**	**78**	P	**P**	**03 46 21.8**	**+1.7**
	baz=293						
D03D	**Eldon**	**28.42**	**81**	P	**P**	**03 46 24.0**	**+1.8**
	baz=295,SNR=32						
B05A	**Bryant**	**28.73**	**79**	P	**P**	**03 46 26.6**	**+1.5**
	baz=294,SNR=60						
D04E	**Lakebay**	**28.77**	**81**	P	**P**	**03 46 27.3**	**+2.0**
	baz=296,SNR=9.6						
B06A	**Marblemount**	**29.01**	**78**	*e*P	**P**	**03 46 28.7**	**+1.2**
	comp=Z,88nm,1.0s						
B06A				*e*PcP	**PcP**	**03 49 35.3**	**-0.3**
B06A				LR	LR		
	comp=Z,7µm,19.0s						
F04D	**Rainier, OR**	**29.10**	**83**	P	**P**	**03 46 29.5**	**+1.2**
	baz=297						
E04D	**Cinebar**	**29.16**	**82**	P	**P**	**03 46 30.9**	**+2.0**
	baz=297,SNR=51						
D05A	**Enumclaw**	**29.25**	**81**	*e*P	**P**	**03 46 31.9**	**+2.3**
	comp=Z,426nm,1.2s						
D05A				LR	LR		
	comp=Z,4µm,19.0s						
G03D	**McMinnville, O**	**29.35**	**85**	P	**P**	**03 46 31.6**	**+1.1**
	baz=299						
I02D	**Swisshome**	**29.52**	**87**	P	**P**	**03 46 33.4**	**+1.4**
	baz=300						
I02D				S	**S**	**03 51 30.9**	**+4.5**
	baz=300						
LON	**Longmire**	**29.55**	**81**	*e*P	**P**	**03 46 34.3**	**+2.0**
	comp=Z,68nm,1.1s						
LON				*e*PcP	**PcP**	**03 49 36.1**	**-0.9**
LON				LR	LR		
	comp=Z,4µm,19.0s						
LON	**Longmire**	**29.55**	**81**	*e*P	**P**	**03 46 34.3**	**+2.0**
LON				*e*		03 49 36.1	
LON				pmax	pmax		
	comp=Z,68nm,1.1s						
LON				MLR	MLR		
	comp=Z,4µm,19.0s						
C06D	**Leavenworth**	**29.61**	**79**	P	**P**	**03 46 33.7**	**+0.8**
	baz=295						
COR	**Corvallis**	**29.63**	**86**	*e*P	**P**	**03 46 35.4**	**+2.4**
	comp=Z,132nm,1.1s						
COR				LR	LR		
	comp=Z,4µm,19.0s						
COR	**Corvallis**	**29.63**	**86**	*e*P	**P**	**03 46 35.4**	**+2.4**
COR				pmax	pmax		
	comp=Z,132nm,1.1s						
COR				MLR	MLR		
	comp=Z,4µm,19.0s						
YKW3	**Yellowknife Ar**	**29.67**	**48**	*e*P	**P**	**03 46 30.2**	**-2.9**
	comp=Z,119nm,1.0s						
YKA	**Yellowknife Ar**	**29.68**	**48**	P	**P**	**03 46 33.6**	**+0.4**
	comp=Z,90nm,0.9s,baz=270,slow=8.4,SNR=84						
YKA				PcP	**PcP**	**03 49 36.9**	**-0.1**
	comp=Z,8.3nm,0.8s,baz=271,slow=2.1,SNR=4.7						
YKA				LR	LR	03 58 30.2	
	comp=Z,227nm,20.2s,baz=271,slow=36						
YKB5	**Yellowknife Ar**	**29.68**	**48**	*e*P	**P**	**03 46 33.6**	**+0.4**
YKB5				*e*PcP	**PcP**	**03 49 36.9**	**-0.1**
KEBM	**Edson Butte**	**29.86**	**90**	*e*P	**P**	**03 46 37.2**	**+2.1**
	comp=Z,102nm,1.1s						
KEBM				LR	LR		
	comp=Z,7µm,19.0s						
J01E	**Myrtle Point**	**29.95**	**89**	P	**P**	**03 46 37.6**	**+1.7**
	baz=302						
H04D	**Lebanon**	**30.01**	**86**	P	**P**	**03 46 37.8**	**+1.4**
	baz=300,SNR=8.3						
LTY	**Liberty**	**30.03**	**80**	*e*P	**P**	**03 46 37.7**	**+1.0**
	comp=Z,98nm,1.1s						
LTY				*e*PcP	**PcP**	**03 49 37.6**	**-0.7**
LTY				LR	LR		
	comp=Z,6µm,20.0s						
KEKH	**Kekaha**	**30.04**	**166**	PFAKE		03 46 50.0	+13
KEKH				LR	LR		
	comp=Z,8µm,20.0s						
I03D	**Drain, OR**	**30.04**	**88**	P	**P**	**03 46 38.2**	**+1.6**
	baz=301,SNR=10						
F05D	**White Salmon**	**30.15**	**83**	P	**P**	**03 46 39.2**	**+1.5**
	baz=298,SNR=9.5						
KUR	**Kuril'sk**	**30.26**	**276**	*c i*P	**P**	**03 46 39.6**	**+1.0**
KUR				*i* S	**S**	**03 51 39.4**	**+1.5**
KUR				*i*		03 57 15.7	
KUR				pmax	pmax		
	comp=Z,900nm,14.3s						
KUR				MLR	MLR		
	comp=Z,800nm,12.0s						
H04A	**Detroit Lake**	**30.27**	**85**	*e*P	**P**	**03 46 40.2**	**+1.4**
	comp=Z,116nm,1.2s						
H04A				LR	LR		
	comp=Z,2µm,20.0s						
K02D	**Willamette Mer**	**30.37**	**90**	P	**P**	**03 46 41.1**	**+1.4**
	baz=302,SNR=14						
G05D	**Wamic, OR**	**30.55**	**84**	P	**P**	**03 46 42.8**	**+1.7**
	baz=299,SNR=15						
I04A	**Tendick Farm,**	**30.58**	**87**	P	**P**	**03 46 42.8**	**+1.3**
	baz=301,SNR=30						
OPA	**Opana**	**30.60**	**163**	PFAKE		03 46 50.0	+8.3
OPA				LR	LR		
	comp=Z,10µm,18.0s						
L02E	**Cave Junction**	**30.69**	**91**	P	**P**	**03 46 43.9**	**+1.4**
	baz=303,SNR=16						
KRMB	**Red Mountain**	**30.85**	**92**	*e*P	**P**	**03 46 46.2**	**+2.2**
	comp=Z,106nm,1.3s						
HUMO	**Hull Mountain**	**30.86**	**89**	*e*P	**P**	**03 46 46.1**	**+2.2**
	comp=Z,51nm,1.2s						
HUMO				*e*PcP	**PcP**	**03 49 41.4**	**+0.9**
HUMO				LR	LR		
	comp=Z,4µm,19.0s						
KIP	**Kipapa**	**30.86**	**164**	*e*P	**P**	**03 46 45.9**	**+1.9**
	comp=Z,109nm,1.1s						
KIP				LR	LR		
	comp=Z,8µm,20.0s						
KIP	**Kipapa**	**30.86**	**164**	*e*P	**P**	**03 46 45.9**	**+1.9**
KIP				pmax	pmax		
	comp=Z,109nm,1.1s						
KIP				MLR	MLR		
	comp=Z,8µm,20.0s						
HON	**Honolulu**	**30.96**	**164**	PFAKE		03 47 00.0	+15
HON				LR	LR		
	comp=Z,6µm,18.0s						
G06A	**Carlson Farm,**	**30.97**	**83**	*e*P	**P**	**03 46 46.3**	**+1.4**
	comp=Z,128nm,1.3s						
G06A				LR	LR		
	comp=Z,3µm,18.0s						
I05D	**Terrebonne, OR**	**30.97**	**85**	P	**P**	**03 46 46.0**	**+1.1**
	baz=300,SNR=24						
J04D	**Umpqua Nationa**	**31.05**	**88**	P	**P**	**03 46 46.9**	**+1.0**
	baz=302,SNR=14						
TYV	**Tymovskoe**	**31.08**	**289**	*e*P	**P**	**03 46 46.6**	**+0.9**
TYV				*e*S	**S**	**03 51 54.4**	**+3.9**
TYV				pmax	pmax		
	comp=Z,800nm,4.5s						
TYV				pmax	pmax		
	comp=Z,49nm,1.2s						
TYV				smax	smax		
	comp=N,2µm,7.5s						
TYV				MLR	MLR		
	comp=Z,2µm,12.0s						
F07A	**Phinny Hill Vi**	**31.10**	**82**	*e*P	**P**	**03 46 47.6**	**+1.7**
	comp=Z,182nm,1.1s						
F07A				LR	LR		
	comp=Z,6µm,19.0s						
HAWA	**Hanford**	**31.11**	**81**	*e*P	**P**	**03 46 47.7**	**+1.6**
	comp=Z,230nm,1.0s						
HAWA				*e*PcP	**PcP**	**03 49 40.9**	**-0.2**
HAWA				LR	LR		
	comp=Z,4µm,21.0s						
JCC	**Jacoby Creek,**	**31.17**	**93**	*e*P	**P**	**03 46 49.7**	**+3.1**
	comp=Z,117nm,1.1s						
JCC				LR	LR		
	comp=Z,4µm,22.0s						
D08A	**Wollman Farm,**	**31.19**	**79**	*e*P	**P**	**03 46 47.8**	**+1.0**
	comp=Z,131nm,1.0s						
D08A				*e*PcP	**PcP**	**03 49 42.0**	**+0.7**
D08A				LR	LR		
	comp=Z,4µm,21.0s						
C09A	**Chrisman Ranch**	**31.26**	**77**	*e*P	**P**	**03 46 48.4**	**+1.0**
	comp=Z,72nm,0.9s						
C09A				LR	LR		
	comp=Z,5µm,18.0s						
KHMM	**Horse Mountain**	**31.33**	**93**	*e*P	**P**	**03 46 50.5**	**+2.2**
	comp=Z,155nm,1.2s						
KHMM				*e*PcP	**PcP**	**03 49 43.5**	**+1.6**
KHMM				LR	LR		
	comp=Z,3µm,18.0s						
E08A	**Dider Farm, El**	**31.36**	**80**	*e*P	**P**	**03 46 50.0**	**+1.7**
	comp=Z,164nm,1.0s						
E08A				*e*PcP	**PcP**	**03 49 42.3**	**+0.5**
E08A				LR	LR		
	comp=Z,6µm,19.0s						
NKL	**Nikolayevsk**	**31.45**	**294**	⇓*i*P	**P**	**03 46 49.6**	**+0.7**
NKL				*e*		03 49 41.8	
NKL				*e*S	**S**	**03 51 58.6**	**+2.4**
NKL				*e*		03 57 22.5	
NKL				pmax	pmax		
	comp=N,35nm,1.7s						
NKL				pmax	pmax		
	comp=E,56nm,1.7s						
NKL				pmax	pmax		
	comp=Z,115nm,1.7s						
NKL				pmax	pmax		
	comp=Z,140nm,2.5s						
NKL				MLR	MLR		
	comp=N,2µm,17.0s						
NKL				MLR	MLR		
	comp=Z,1µm,15.0s						
L04D	**Klamath Falls**	**31.47**	**89**	P	**P**	**03 46 50.8**	**+1.3**
	baz=303,SNR=18						
YBH	**Yreka Blue Hor**	**31.48**	**91**	*e*P	**P**	**03 46 51.6**	**+2.1**
	comp=Z,46nm,1.0s						
YBH				*e*PcP	**PcP**	**03 49 42.5**	**+0.2**
YBH				LR	LR		
	comp=Z,4µm,18.0s						
YBH	**Yreka Blue Hor**	**31.48**	**91**	*e*P	**P**	**03 46 51.6**	**+2.1**
YBH				*e*		03 49 42.5	
YBH				pmax	pmax		
	comp=Z,46nm,1.0s						
YBH				MLR	MLR		
	comp=Z,4µm,18.0s						
PINE	**Pine Mountain**	**31.50**	**86**	*e*P	**P**	**03 46 51.7**	**+1.9**
	comp=Z,118nm,1.3s						
PINE				*e*PcP	**PcP**	**03 49 40.7**	**-1.8**
PINE				LR	LR		
	comp=Z,3µm,19.0s						
J05D	**Fort Rock, OR**	**31.57**	**87**	P	**P**	**03 46 52.3**	**+1.9**
	baz=302,SNR=16						
M02C	**Callahan**	**31.58**	**91**	P	**P**	**03 46 52.3**	**+1.9**
	baz=304,SNR=35						
K04D	**Chiloquin, OR**	**31.60**	**88**	P	**P**	**03 46 52.0**	**+1.4**
	baz=302						
KHLH	**Kahului Airpor**	**31.67**	**161**	PFAKE		03 47 00.0	+8.8
KHLH				LR	LR		
	comp=Z,9µm,20.0s						
KMRM	**Mail Ridge**	**31.71**	**94**	*e*P	**P**	**03 46 54.5**	**+3.0**
	comp=Z,105nm,1.0s						
KMRM				LR	LR		
	comp=Z,4µm,21.0s						
NEW	**Newport**	**31.76**	**76**	*e*P	**P**	**03 46 52.8**	**+0.9**
	comp=Z,61nm,1.1s						
NEW				LR	LR		
	comp=Z,4µm,20.0s						
NEW	**Newport**	**31.76**	**76**	*e*P	**P**	**03 46 52.8**	**+0.9**
NEW				pmax	pmax		
	comp=Z,61nm,1.1s						
NEW				MLR	MLR		
	comp=Z,4µm,20.0s						
NEW	**Newport**	**31.76**	**76**	P	**P**	**03 46 52.8**	**+0.9**
	baz=295,SNR=40						
HLK	**Haleakala**	**31.84**	**161**	PFAKE		03 47 10.0	+17
HLK				LR	LR		
	comp=Z,7µm,20.0s						
E09A	**Wood Farm, Sta**	**31.91**	**79**	*e*P	**P**	**03 46 53.5**	**+0.4**
	comp=Z,179nm,1.0s						
E09A				LR	LR		
	comp=Z,5µm,18.0s						
N02D	**Trinity Center**	**31.91**	**92**	P	**P**	**03 46 55.0**	**+1.8**
	baz=305,SNR=33						
G08A	**Pilot Rock**	**31.98**	**82**	*e*P	**P**	**03 46 55.0**	**+1.0**
	comp=Z,101nm,1.2s						
G08A				LR	LR		
	comp=Z,3µm,21.0s						
M04C	**Macdoel**	**32.00**	**90**	P	**P**	**03 46 55.8**	**+1.7**
	baz=304,SNR=32						
K05A	**Summer Lake**	**32.08**	**88**	*e*P	**P**	**03 46 57.1**	**+2.2**
	comp=Z,100nm,1.0s						
K05A				LR	LR		
	comp=Z,3µm,21.0s						
YUK	**Yuzh-Kuril'sk**	**32.10**	**275**	P	P	03 46 43.7	-11
KCPM	**Cahto Peak**	**32.11**	**94**	*e*P	**P**	**03 46 57.9**	**+2.9**
	comp=Z,140nm,1.2s						
KCPM				LR	LR		
	comp=Z,4µm,19.0s						
WDC	**Whiskeytown Da**	**32.24**	**92**	*e*P	**P**	**03 46 57.6**	**+1.5**
	comp=Z,50nm,0.9s						
WDC				*e*PcP	**PcP**	**03 49 44.2**	**0.0**
WDC				LR	LR		
	comp=Z,3µm,18.0s						
WDC	**Whiskeytown Da**	**32.24**	**92**	*e*P	**P**	**03 46 57.6**	**+1.5**
WDC				*e*		03 49 44.2	
WDC				pmax	pmax		
	comp=Z,50nm,0.9s						
WDC				MLR	MLR		
	comp=Z,3µm,18.0s						
I07A	**Izee**	**32.24**	**84**	*e*P	**P**	**03 46 57.2**	**+1.0**
	comp=Z,154nm,1.2s						
O02D	**Mt. Diablo Mer**	**32.31**	**93**	P	**P**	**03 46 58.7**	**+1.9**
	baz=306,SNR=48						
YSS	**Yuzh-Sakhalins**	**32.62**	**282**	*d e*P	**P**	**03 46 59.1**	**-0.2**
YSS				*e**SP	**pP**	**03 47 02.2**	**+0.8**
YSS				*e*		03 47 05.8	
YSS				*e*		03 48 19.5	
YSS				*e*S	**S**	**03 52 15.6**	**+1.0**
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				pmax	pmax		
	comp=Z,700nm,7.0s						
YSS				pmax	pmax		
	comp=E,300nm,5.0s						
YSS				smax	smax		
	comp=E,3µm,7.0s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS				MLR	MLR		
	comp=E,1µm,14.0s						
F10A	**Beach Ranch, E**	**32.73**	**80**	*e*P	**P**	**03 47 01.4**	**+0.9**
	comp=E,74nm,1.0s						
F10A				*e*PcP	**PcP**	**03 49 45.0**	**-0.6**
F10A				LR	LR		
	comp=Z,4µm,22.0s						
HOPS	**Hopland Field**	**32.84**	**95**	*e*P	**P**	**03 47 03.3**	**+2.0**
	comp=Z,76nm,1.2s						
HOPS				LR	LR		
	comp=Z,4µm,18.0s						
O03E	**Paynes Creek**	**32.86**	**92**	P	**P**	**03 47 02.5**	**+0.8**
	baz=306,SNR=56						
MOD	**Modoc Plateau**	**32.89**	**88**	*e*P	**P**	**03 47 03.2**	**+1.3**
	comp=Z,84nm,0.9s						
MOD				*e*PcP	**PcP**	**03 49 46.9**	**+0.6**
MOD				LR	LR		
	comp=Z,4µm,18.0s						
POHA	**Pohakuloa**	**32.96**	**160**	PFAKE		03 47 20.0	+17
POHA				LR	LR		
	comp=Z,4µm,20.0s						
KHLU	**Kahalu`u**	**33.05**	**161**	PFAKE		03 47 20.0	+17
KHLU				LR	LR		
	comp=Z,7µm,21.0s						
GDXM	**Geysers**	**33.12**	**95**	*e*P	**P**	**03 47 06.5**	**+2.5**
	comp=Z,92nm,1.1s						
GDXM				LR	LR		
	comp=Z,5µm,20.0s						
MLOA	**Mauna Loa Obse**	**33.17**	**160**	PFAKE		03 47 20.0	+15
MLOA				LR	LR		
	comp=Z,6µm,20.0s						
BMO	**Blue Mountains**	**33.22**	**82**	*e*P	**P**	**03 47 05.8**	**+1.1**
	comp=Z,84nm,1.3s						
BMO				LR	LR		
	comp=Z,4µm,20.0s						
BMO	**Blue Mountains**	**33.22**	**82**	*e*P	**P**	**03 47 05.8**	**+1.1**
BMO				pmax	pmax		
	comp=Z,84nm,1.3s						
BMO				MLR	MLR		
	comp=Z,4µm,20.0s						
J08A	**Circle Bar Ran**	**33.26**	**85**	*e*P	**P**	**03 47 06.6**	**+1.5**
	comp=Z,179nm,1.1s						
J08A				LR	LR		
	comp=Z,3µm,18.0s						
WALA	**Waterton Lakes**	**33.36**	**73**	*e*P	**P**	**03 47 06.7**	**+0.7**
	comp=Z,154nm,1.1s						
WALA				*e*PcP	**PcP**	**03 49 47.0**	**-0.4**
PUH	**Pauahi**	**33.40**	**160**	*e*P	**P**	**03 47 08.1**	**+1.6**
	comp=Z,209nm,1.3s						
KHU	**Kahuku**	**33.44**	**160**	PFAKE		03 47 20.0	+13
KHU				LR	LR		
	comp=Z,7µm,18.0s						
MCCM	**Marconi Confer**	**33.47**	**96**	PFAKE		03 47 20.0	+13
MCCM				LR	LR		
	comp=Z,3µm,18.0s						
ORV	**Oroville**	**33.48**	**93**	*e*P	**P**	**03 47 08.2**	**+1.2**
	comp=Z,32nm,1.1s						
ORV				LR	LR		
	comp=Z,2µm,21.0s						
ORV	**Oroville**	**33.48**	**93**	*e*P	**P**	**03 47 08.2**	**+1.2**
ORV				pmax	pmax		
	comp=Z,32nm,1.1s						
ORV				MLR	MLR		
	comp=Z,2µm,21.0s						
WVOR	**Wild Horse Val**	**33.64**	**86**	*e*P	**P**	**03 47 09.5**	**+1.0**
	comp=Z,188nm,1.5s						
WVOR				LR	LR		
	comp=Z,4µm,21.0s						
WVOR	**Wild Horse Val**	**33.64**	**86**	*e*P	**P**	**03 47 09.5**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,189nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,4µm,21.0s						
PLID	**Pearl Lake**	**33.91**	**80**	*e*P	**P**	**03 47 11.8**	**+0.9**
	comp=Z,66nm,1.3s						
PLID				*e*PcP	**PcP**	**03 49 49.3**	**+0.2**
PLID				LR	LR		
	comp=Z,5µm,19.0s						
BEKR	**Beckworth**	**34.01**	**91**	*e*P	**P**	**03 47 13.9**	**+2.1**
	comp=Z,64nm,1.2s						
BEKR				LR	LR		
	comp=Z,1µm,19.0s						
ASAJ	**Asahikawa**	**34.08**	**278**	LR	LR	04 00 34.0	
	comp=Z,1µm,20.5s,baz=51,slow=36						
AFDM	**Forest Hills D**	**34.17**	**93**	*e*P	**P**	**03 47 14.4**	**+1.4**
	comp=Z,38nm,1.3s						
AFDM				*e*PcP	**PcP**	**03 49 49.3**	**-0.4**
AFDM				LR	LR		
	comp=Z,3µm,18.0s						
TIXI	**Tiksi**	**34.21**	**330**	P	**P**	**03 47 13.4**	**+0.5**
	comp=Z,28nm,1.0s,baz=98,slow=10,SNR=18						
TIXI				PcP	**PcP**	**03 49 48.9**	**-0.3**
	comp=Z,33nm,0.7s,baz=109,slow=3.4,SNR=12						
TIXI	**Tiksi**	**34.21**	**330**	*e*P	**P**	**03 47 13.7**	**+0.8**
	comp=Z,59nm,1.2s						
TIXI				*e*PcP	**PcP**	**03 49 48.6**	**-0.5**
TIXI				LR	LR		
	comp=Z,3µm,22.0s						
TIXI	**Tiksi**	**34.21**	**330**	*d i*P	**P**	**03 47 12.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,62nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,4µm,24.0s						
MSO	**Missoula**	**34.33**	**77**	*e*P	**P**	**03 47 14.7**	**+0.3**
	comp=Z,44nm,1.0s						
MSO				*e*PcP	**PcP**	**03 49 49.2**	**-1.0**
MSO				LR	LR		
	comp=Z,3µm,19.0s						
MSO	**Missoula**	**34.33**	**77**	P	**P**	**03 47 14.7**	**+0.3**
	baz=298,SNR=51						
RUBR	**Rubicon Trail**	**34.62**	**92**	PFAKE		03 47 30.0	+13
RUBR				LR	LR		
	comp=Z,3µm,18.0s						
PAHR	**Pah Rah Range**	**34.71**	**91**	PFAKE		03 47 30.0	+12
PAHR				LR	LR		
	comp=Z,3µm,20.0s						
GRNR	**Gornyy**	**34.76**	**292**	*e*P	**P**	**03 47 17.1**	**-0.9**
GRNR				*e*		03 52 37.4	
GRNR				pmax	pmax		
	comp=N,50nm,1.0s						
GRNR				pmax	pmax		
	comp=E,80nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,150nm,1.0s						
JOHN	**Johnston Islan**	**34.78**	**184**	PFAKE		03 47 30.0	+12
JOHN				LR	LR		
	comp=Z,6µm,22.0s						
VCNR	**Virginia City**	**34.79**	**92**	*e*P	**P**	**03 47 19.6**	**+1.0**
	comp=Z,113nm,1.1s						
VCNR				LR	LR		
	comp=Z,2µm,19.0s						
YAK	**Yakutsk**	**34.84**	**312**	*e*P	**P**	**03 47 18.1**	**-0.3**
	comp=Z,119nm,0.9s						
YAK				*e*PcP	**PcP**	**03 49 51.2**	**+0.1**
YAK				LR	LR		
	comp=Z,2µm,21.0s						
YAK	**Yakutsk**	**34.84**	**312**	*e*P	**P**	**03 47 17.6**	**-0.8**
YAK				*e**PP	**pwP**	**03 47 25.6**	**-1.5**
YAK				*e*		03 48 34.5	
YAK				*e*		03 49 50.8	
YAK				*e*S	**S**	**03 52 46.0**	**-2.7**
YAK				*e**SS	sS	03 52 58.2	+6.0
ERM	**Erimo**	**34.85**	**274**	PFAKE		03 47 30.0	+11
ERM				LR	LR		
	comp=Z,2µm,20.0s						
ERM	**Erimo**	**34.85**	**274**	⇓*e*P	**P**	**03 47 18.3**	**-0.5**
ERM				pmax	pmax		
	comp=Z,24nm,1.1s						
PNTR	**Pine Nut**	**34.94**	**92**	*e*P	**P**	**03 47 21.6**	**+1.7**
	comp=Z,142nm,0.9s						
PNTR				LR	LR		
	comp=Z,1µm,19.0s						
CMB	**Columbia Colle**	**35.09**	**94**	*e*P	**P**	**03 47 22.2**	**+1.2**
	comp=Z,50nm,1.3s						
CMB				*e*PcP	**PcP**	**03 49 52.7**	**+0.3**
CMB				LR	LR		
	comp=Z,2µm,21.0s						
CMB	**Columbia Colle**	**35.09**	**94**	*e*P	**P**	**03 47 22.2**	**+1.2**
CMB				*e*		03 49 52.7	
CMB				pmax	pmax		
	comp=Z,50nm,1.3s						
CMB				MLR	MLR		
	comp=Z,2µm,21.0s						
SAO	**San Andreas Ge**	**35.22**	**97**	*e*P	**P**	**03 47 23.1**	**+1.0**
	comp=Z,52nm,1.1s						
SAO				LR	LR		
	comp=Z,3µm,19.0s						
SAO	**San Andreas Ge**	**35.22**	**97**	*e*P	**P**	**03 47 23.1**	**+1.0**
SAO				pmax	pmax		
	comp=Z,52nm,1.1s						
SAO				MLR	MLR		
	comp=Z,3µm,19.0s						

YERR	Yerington	35.23	92	eP	P	03 47 23.9	+1.5
	comp=Z,120nm,0.9s						
YERR				LR	LR		
	comp=Z,1µm,18.0s						
WAKR	Walker	35.40	93	eP	P	03 47 25.5	+1.7
	comp=Z,83nm,0.9s						
WAKR				LR	LR		
	comp=Z,3µm,18.0s						
BMN	Battle Mountai	35.64	88	eP	P	03 47 27.1	+1.3
	comp=Z,74nm,1.1s						
BMN				ePcP	PcP	03 49 54.8	+0.6
BMN				LR	LR		
	comp=Z,3µm,18.0s						
BMN	Battle Mountai	35.64	88	eP	P	03 47 27.1	+1.3
BMN				e		03 49 54.8	
BMN				pmax	pmax		
	comp=Z,74nm,1.1s						
BMN				MLR	MLR		
	comp=Z,3µm,18.0s						
HLID	Hailey	35.67	82	eP	P	03 47 27.0	+1.0
	comp=Z,72nm,1.1s						
HLID				LR	LR		
	comp=Z,3µm,19.0s						
HLID	Hailey	35.67	82	P	P	03 47 27.1	+1.1
	baz=302,SNR=95						
HRY	Holter Researc	35.67	76	eP	P	03 47 26.3	+0.4
LRM	Limekiln Ridge	35.72	77	eP	P	03 47 26.8	+0.3
DLMT	Dillon	35.86	78	eP	P	03 47 28.7	+1.0
	comp=Z,29nm,1.0s						
DLMT				ePcP	PcP	03 49 55.0	+0.3
DLMT				LR	LR		
	comp=Z,2µm,19.0s						
RYN	Ryan	35.89	92	eP	P	03 47 29.3	+1.3
	comp=Z,118nm,1.0s						
RYN				LR	LR		
	comp=Z,2µm,18.0s						
KVN	Kaiserville	35.90	91	eP	P	03 47 29.4	+1.3
	comp=Z,89nm,1.1s						
KVN				LR	LR		
	comp=Z,3µm,19.0s						
KVN	Kaiserville	35.90	91	eP	P	03 47 29.4	+1.3
KVN				pmax	pmax		
	comp=Z,89nm,1.1s						
KVN				MLR	MLR		
	comp=Z,3µm,19.0s						
MCMT	McKenzie Canyo	35.98	79	eP	P	03 47 29.3	+0.6
NV01	Mina Array Sit	36.15	92	eP	P	03 47 31.5	+1.2
NV01				ePcP	PcP	03 49 56.0	+0.2
NV01				eScP	ScP	03 53 41.1	-0.6
NVAR	Mina Array Bea	36.15	92	P	P	03 47 31.5	+1.2
	comp=Z,82nm,1.0s,baz=292,slow=7.9,SNR=164						
NVAR				PcP	PcP	03 49 56.0	+0.2
	comp=Z,21nm,1.0s,baz=273,slow=3.2,SNR=8.3						
NVAR				ScP	ScP	03 53 41.1	-0.6
	comp=Z,4.4nm,0.9s,baz=275,slow=4.4,SNR=6.8						
NVAR				LR	LR	03 57 56.9	
	comp=Z,1µm,21.7s,baz=304,slow=29						
MDPB	Devils Postpil	36.15	94	eP	P	03 47 32.0	+1.6
	comp=Z,122nm,1.0s						
MDPB				LR	LR		
	comp=Z,3µm,18.0s						
OMMB	Old Mammoth Mi	36.22	93	eP	P	03 47 32.6	+1.7
	comp=Z,129nm,1.1s						
OMMB				LR	LR		
	comp=Z,3µm,18.0s						
NV11	Mina Array Sit	36.24	92	eP	P	03 47 32.0	+1.1
	comp=Z,4.3nm,0.9s						
NV11				LR	LR		
	comp=Z,200nm,18.0s						
EGMT	Eagleton	36.30	72	eP	P	03 47 31.7	+0.4
	comp=Z,442nm,1.0s						
EGMT				LR	LR		
	comp=Z,3µm,20.0s						
EGMT	Eagleton	36.30	72	P	P	03 47 31.7	+0.4
	baz=298,SNR=281						
MLAC	Mammoth, Mammo	36.31	93	P	P	03 47 33.6	+1.9
	baz=308,SNR=11						
BOZ	Bozeman (W)	36.33	77	eP	P	03 47 31.9	+0.2
	comp=Z,120nm,1.5s						
BOZ				LR	LR		
	comp=Z,2µm,18.0s						
BOZ	Bozeman (W)	36.33	77	eP	P	03 47 31.9	+0.2
BOZ				pmax	pmax		
	comp=Z,120nm,1.5s						
BOZ				MLR	MLR		
	comp=Z,2µm,18.0s						
BOZ	Bozeman (W)	36.33	77	P	P	03 47 32.0	+0.2
	baz=300,SNR=59						
RES	Resolute Bay	36.48	25	eP	P	03 47 33.3	+0.9
	comp=Z,124nm,0.9s						
RES				ePcP	PcP	03 49 54.7	-1.1
RES				LR	LR		
	comp=Z,2µm,21.0s						
RES	Resolute Bay	36.48	25	eP	P	03 47 33.3	+0.9
RES				e		03 49 54.7	
RES				pmax	pmax		
	comp=Z,125nm,0.9s						
RES				MLR	MLR		
	comp=Z,2µm,21.0s						
PAGB	Antelope Grade	36.63	97	eP	P	03 47 35.6	+1.5
	comp=Z,120nm,1.1s						
PAGB				LR	LR		
	comp=Z,3µm,22.0s						
ELK	Elko	36.70	86	eP	P	03 47 36.0	+1.0
	comp=Z,63nm,1.0s						
ELK				LR	LR		
	comp=Z,4µm,18.0s						
ELK	Elko	36.70	86	eP	P	03 47 36.0	+1.0
ELK				pmax	pmax		
	comp=Z,63nm,1.0s						
ELK				MLR	MLR		
	comp=Z,4µm,18.0s						
VOG	Valley Oaks Go	36.79	95	P	P	03 47 35.9	+0.5
	baz=310						
QLMT	Earthquake Lak	36.84	78	eP	P	03 47 36.5	+0.4
QLMT				ePcP	PcP	03 49 58.9	+1.1
YHB	Horse Butte	37.03	78	eP	P	03 47 38.7	+1.0
	comp=Z,47nm,1.1s						
YHB				ePcP	PcP	03 49 59.0	+0.7
TIN	Tinemaha, Big	37.04	94	P	P	03 47 39.4	+1.6
	baz=309,SNR=11						
SMMC	Simmler	37.06	97	P	P	03 47 39.2	+1.4
	baz=311,SNR=19						
YMR	Madison River	37.21	78	eP	P	03 47 40.3	+1.1
	comp=Z,82nm,1.2s						
YHH	Holmes Hill	37.22	78	eP	P	03 47 39.9	+0.5
	comp=Z,90nm,1.2s						
VES	Vestal, Richgr	37.28	96	P	P	03 47 40.1	+0.5
	baz=310,SNR=38						
YNR	Norris Junctio	37.36	78	eP	P	03 47 42.3	+1.8
	comp=Z,128nm,1.3s						
YNR				ePcP	PcP	03 49 56.5	-2.8
YFT	Old Faithful	37.40	78	eP	P	03 47 42.9	+2.0
	comp=Z,33nm,1.2s						
YFT				ePcP	PcP	03 49 58.7	-0.8
GCMT	Greycliff	37.43	76	eP	P	03 47 41.5	+0.5
PKM	Mcpherson Peak	37.45	98	P	P	03 47 42.7	+1.4
	baz=311,SNR=48						
YPP	Pitchstone Pla	37.51	78	eP	P	03 47 43.5	+1.6
	comp=Z,20nm,1.2s						
CWC	Cottonwood Cre	37.52	94	P	P	03 47 43.2	+1.3
	baz=310						
H17A	Grant Village	37.59	78	eP	P	03 47 44.5	+2.0
	comp=Z,124nm,1.4s						
H17A				LR	LR		
	comp=Z,2µm,18.0s						
H17A	Grant Village	37.59	78	P	P	03 47 44.0	+1.5
	baz=302,SNR=30						
LKWY	Lake	37.61	78	eP	P	03 47 44.6	+1.9
	comp=Z,64nm,1.2s						
LKWY				LR	LR		
	comp=Z,3µm,19.0s						
GRAC	Grapevine Rang	37.62	93	P	P	03 47 43.8	+1.2
	baz=309,SNR=12						
IMW	Indian Meadow	37.63	79	eP	P	03 47 43.9	+1.1
	comp=Z,44nm,1.1s						
HVU	Hansel Valley	37.65	83	eP	P	03 47 42.2	-0.6
	comp=Z,61nm,1.0s						
HVU	Hansel Valley	37.65	83	eP	P	03 47 42.3	-0.6
HVU				pmax	pmax		
	comp=Z,61nm,1.0s						
FLWY	Flagg Ranch	37.68	79	eP	P	03 47 44.3	+1.1
	comp=Z,64nm,1.3s						
FLWY				LR	LR		
	comp=Z,2µm,19.0s						
FXWY	Fox Creek	37.71	79	eP	P	03 47 44.6	+1.1
	comp=Z,41nm,1.3s						
ISA	Isabella, Lake	37.77	96	eP	P	03 47 44.5	+0.6
	comp=Z,129nm,1.0s						
ISA				LR	LR		
	comp=Z,3µm,18.0s						
ISA	Isabella, Lake	37.77	96	P	P	03 47 44.5	+0.6
	baz=310,SNR=65						
H11N2	WAKE ISLAND Hy	37.79	223	T	T	04 27 50.8	
	baz=27,slow=76,SNR=43						
H11N3	WAKE ISLAND Hy	37.80	223	T	T	04 27 48.5	
	baz=27,slow=76,SNR=43						
SBC	Santa Barbara	37.80	98	P	P	03 47 45.1	+1.0
	baz=312						
H11N1	WAKE ISLAND Hy	37.81	223	T	T	04 27 50.4	
	baz=27,slow=76,SNR=38						
MOOW	Moose Ponds	37.83	79	eP	P	03 47 45.8	+1.3
	comp=Z,14nm,1.0s						
TPAW	Teton Pass	37.84	80	eP	P	03 47 45.8	+1.2
	comp=Z,126nm,1.5s						
TPAW				LR	LR		
	comp=Z,2µm,19.0s						
FFC	Flin Flon	37.87	59	eP	P	03 47 44.5	0.0
	comp=Z,92nm,0.9s						
FFC				LR	LR		
	comp=Z,3µm,21.0s						
FFC	Flin Flon	37.87	59	i P	P	03 47 44.5	0.0
R11A	Troy Canyon, C	37.90	90	eP	P	03 47 45.9	+0.8
	comp=Z,97nm,1.2s						
R11A				LR	LR		
	comp=Z,2µm,20.0s						
R11A	Troy Canyon, C	37.90	90	P	P	03 47 45.9	+0.8
	baz=308,SNR=182						
ARVC	Arvin	37.90	97	P	P	03 47 45.3	+0.3
	baz=311,SNR=14						
DAC	Darwin (Calif)	37.93	94	eP	P	03 47 48.8	+3.4
	comp=Z,70nm,1.0s						
DAC				LR	LR		
	comp=Z,2µm,18.0s						
DAC	Darwin (Calif)	37.93	94	eP	P	03 47 48.8	+3.4
DAC				pmax	pmax		
	comp=Z,70nm,1.0s						
DAC				MLR	MLR		
	comp=Z,2µm,18.0s						
BGU	Big Grassy Mou	37.97	84	eP	P	03 47 46.6	+0.9
	comp=Z,64nm,1.0s						
SNOW	Snow King Moun	37.97	80	eP	P	03 47 47.6	+1.8
	comp=Z,92nm,1.4s						
SNOW				eS	S	03 53 41.0	+3.4
LOHW	Long Hollow	37.99	79	eP	P	03 47 46.7	+0.9
	comp=Z,30nm,1.1s						
RLMT	Red Lodge	38.01	76	eP	P	03 47 46.7	+0.7
	comp=Z,133nm,1.0s						
RLMT				LR	LR		
	comp=Z,2µm,19.0s						
RLMT	Red Lodge	38.01	76	P	P	03 47 46.6	+0.7
	baz=301,SNR=107						
SPUT	South Promonto	38.12	84	eP	P	03 47 46.0	-0.8
	comp=Z,68nm,1.1s						
MPMC	Manual Prospec	38.13	94	P	P	03 47 48.2	+1.1
	baz=310,SNR=96						
AHID	Auburn Hatcher	38.14	81	eP	P	03 47 48.0	+1.0
	comp=Z,89nm,1.3s						
AHID				LR	LR		
	comp=Z,5µm,18.0s						
KLR	Kul'dur	38.15	291	LR	LR	04 03 13.8	
	comp=Z,2µm,20.4s,baz=68,slow=36						
KLR	Kul'dur	38.15	291	d iP	P	03 47 45.8	-1.0
KLR				pmax	pmax		
	comp=Z,48nm,1.1s						
SCZ2	Santa Cruz Isl	38.15	99	P	P	03 47 46.4	-0.6
	baz=312						
FURC	Furnace Creek,	38.26	93	P	P	03 47 49.0	+1.1
	baz=310,SNR=161						
WAKE	Wake Island	38.30	223	PFAKE		03 48 00.0	+12
WAKE				LR	LR		
	comp=Z,2µm,18.0s						
OSI	Osito Audit: C	38.30	97	PFAKE		03 48 00.0	+12
OSI				LR	LR		
	comp=Z,4µm,21.0s						
OSI	Osito Audit: C	38.30	97	P	P	03 47 49.0	+0.6
	baz=312						
TPNV	Topopah Spring	38.34	92	eP	P	03 47 49.9	+1.1
	comp=Z,168nm,1.1s						
TPNV				LR	LR		
	comp=Z,2µm,19.0s						
TPNV	Topopah Spring	38.34	92	eP	P	03 47 49.9	+1.1
TPNV				pmax	pmax		
	comp=Z,168nm,1.1s						
TPNV				MLR	MLR		
	comp=Z,2µm,19.0s						
TPNV	Topopah Spring	38.34	92	P	P	03 47 49.9	+1.1
	baz=309,SNR=192						
LRMC	Laurel Mtn Rad	38.38	95	P	P	03 47 49.2	+0.1
	baz=311						
BLG	Laguna Peak, P	38.42	98	P	P	03 47 50.0	+0.7
	baz=312,SNR=18						
HWUT	Hardware Ranch	38.49	83	eP	P	03 47 50.8	+0.8
	comp=Z,23nm,1.0s						
HWUT				ePcP	PcP	03 50 03.0	+0.2
DUG	Dugway, Tooele	38.53	85	eP	P	03 47 51.3	+1.0
	comp=Z,158nm,1.1s						
DUG				LR	LR		
	comp=Z,3µm,20.0s						
DUG	Dugway, Tooele	38.53	85	eP	P	03 47 51.3	+1.0
DUG				pmax	pmax		
	comp=Z,158nm,1.1s						
DUG				MLR	MLR		
	comp=Z,3µm,20.0s						
DUG	Dugway, Tooele	38.53	85	P	P	03 47 51.1	+0.8
	baz=306,SNR=162						
EDW2	Edwards Air Fo	38.58	96	P	P	03 47 51.3	+0.6
	baz=311,SNR=25						
ZEA	Zeya	38.71	300	deP	P	03 47 50.8	-0.7
ZEA				e		03 49 26.0	
ZEA				ePPP	PPP	03 49 48.0	
ZEA				eS	S	03 53 46.0	-1.9
ZEA				eSS	SnSn	03 56 29.0	-7.0
ZEA				eSSS	SSS	03 57 02.0	
ZEA				pmax	pmax		
	comp=E,150nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,270nm,1.2s						
ZEA				pmax	pmax		
	comp=E,1µm,6.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,6.0s						
ZEA				pmax	pmax		
	comp=E,700nm,10.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,10.0s						
ZEA				smax	smax		
	comp=N,2µm,10.0s						
ZEA				MLR	MLR		
	comp=E,2µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,15.0s						
ZEA				MLR	MLR		
	comp=N,1µm,13.0s						
DECC	Green Verdugo	38.78	97	P	P	03 47 52.8	+0.4
	baz=312						
PSUT	Pine Spring	38.87	88	eP	P	03 47 54.0	+0.8
	comp=N,102nm,1.1s						
TCUT	Toone Canyon	38.87	83	eP	P	03 47 54.2	+0.9
	comp=N,91nm,0.9s						
CTU	Camp Tracy	38.90	84	eP	P	03 47 54.3	+0.8
	comp=N,58nm,1.0s						
PASC	Pasadena Art C	38.93	97	eP	P	03 47 54.2	+0.6
	comp=N,29nm,0.8s						
PASC				LR	LR		
	comp=Z,2µm,20.0s						
H11S1	WAKE ISLAND Hy	38.97	222	T	T	04 29 19.8	
	baz=25						
MWC	Mount Wilson	38.97	97	eP	P	03 47 55.0	+0.8
	comp=Z,118nm,1.2s						
MWC				LR	LR		
	comp=Z,2µm,21.0s						
MWC	Mount Wilson	38.97	97	eP	P	03 47 55.0	+0.8
MWC				pmax	pmax		
	comp=Z,118nm,1.2s						
MWC				MLR	MLR		
	comp=Z,2µm,21.0s						
H11S2	WAKE ISLAND Hy	38.98	222	T	T	04 29 25.3	
	baz=25						
H11S3	WAKE ISLAND Hy	38.98	222	T	T	04 29 23.5	
	baz=25						
SHOC	Shoshone, Teco	38.99	93	P	P	03 47 54.7	+0.6
	baz=310,SNR=34						
LAO	LASA Array	39.04	72	eP	P	03 47 55.0	+0.5
	comp=Z,98nm,1.0s						
LAO				LR	LR		
	comp=Z,3µm,18.0s						
LAO	LASA Array	39.04	72	P	P	03 47 55.1	+0.6
	baz=300,SNR=18						
GSC	Goldstone, Bar	39.05	95	eP	P	03 47 55.6	+1.0
	comp=Z,194nm,1.1s						
GSC				LR	LR		
	comp=Z,3µm,18.0s						
GSC	Goldstone, Bar	39.05	95	eP	P	03 47 55.6	+1.0
GSC				pmax	pmax		
	comp=Z,194nm,1.1s						
GSC				MLR	MLR		
	comp=Z,3µm,18.0s						
GSC	Goldstone, Bar	39.05	95	P	P	03 47 55.6	+1.0
	baz=311,SNR=120						
BW06	Boulder Array	39.09	80	eP	P	03 47 55.5	+0.4
	comp=Z,139nm,1.3s						
BW06				LR	LR		
	comp=Z,3µm,19.0s						
BW06	Boulder Array	39.09	80	P	P	03 47 55.5	+0.4
	baz=304,SNR=47						
PD31	Pinedale Array	39.09	80	eP	P	03 47 55.6	+0.5
	comp=Z,140nm,1.4s						
PDAR	Pinedale Array	39.09	80	P	P	03 47 55.5	+0.5
	comp=Z,26nm,0.8s,baz=301,slow=6.1,SNR=130						
PDAR				LR	LR	04 02 04.7	
	comp=Z,3µm,18.5s,baz=308,slow=33						
NLU	North Lily Min	39.13	85	eP	P	03 47 56.3	+0.8
	comp=Z,96nm,1.0s						
JLU	Jordanelle	39.14	84	eP	P	03 47 56.4	+0.9
	comp=Z,93nm,1.2s						
FMP	Fort Macarthur	39.17	98	P	P	03 47 55.7	+0.1
	baz=312						
RRX	Edison Barstow	39.20	95	P	P	03 47 56.8	+0.9
	baz=311						
BFSC	Mount Baldy Ra	39.21	97	P	P	03 47 56.9	+0.9
	baz=312,SNR=48						
CIS	Catalina Islan	39.30	98	P	P	03 47 57.2	+0.4
	baz=313,SNR=16						
SHPR	Sheep Range	39.30	92	eP	P	03 47 57.7	+0.9
	comp=Z,43nm,1.2s						
SHPR				LR	LR		
	comp=Z,4µm,19.0s						
DGMT	Dagmar	39.36	69	eP	P	03 47 57.3	+0.2
	comp=Z,287nm,1.3s						
DGMT				LR	LR		
	comp=Z,4µm,18.0s						
DGMT	Dagmar	39.36	69	P	P	03 47 57.3	+0.2
	baz=299,SNR=25						
MPU	Maple Canyon	39.37	85	eP	P	03 47 58.3	+0.9
	comp=Z,56nm,1.0s						
SCI2	San Clemente I	39.50	99	P	P	03 47 58.7	+0.3
	baz=313						
TUQ	Turquoise Moun	39.51	94	P	P	03 47 59.1	+0.5
	baz=310						
HEC	Hector,Ludlow	39.65	95	P	P	03 48 00.5	+0.9
	baz=311,SNR=26						
BBRC	Big Bear Solar	39.65	96	P	P	03 48 00.6	+0.7
	baz=312,SNR=9.9						
TCRU	Three Creeks R	39.70	87	eP	P	03 48 02.1	+1.8
	comp=Z,114nm,1.1s						
CCUT	Cedar City	39.77	89	eP	P	03 48 02.0	+1.1
	comp=Z,119nm,1.2s						
SZCU	Shurtz Canyon	39.92	89	eP	P	03 48 02.8	+0.8
	comp=Z,64nm,1.1s						
SZCU				ePcP	PcP	03 50 06.9	-0.5
MURC	Murrieta	39.92	97	P	P	03 48 02.4	+0.5
	baz=312,SNR=23						
MSU	Marysvale	39.92	87	eP	P	03 48 03.3	+1.2
MSU				ePcP	PcP	03 50 06.1	-1.4
MSU	Marysvale	39.92	87	eP	P	03 48 03.3	+1.2
MSU				e		03 50 06.1	
TMUT	Trail Mountain	40.06	85	eP	P	03 48 04.4	+1.1
	comp=Z,98nm,0.9s						
GMRC	Granite Mounta	40.09	94	P	P	03 48 04.3	+0.8
	baz=311,SNR=87						
LCMT	Little Creek M	40.18	90	eP	P	03 48 05.3	+1.2
	comp=Z,162nm,1.1s						
MTPU	Mount Pierson	40.21	88	eP	P	03 48 05.8	+1.2
	comp=Z,102nm,1.1s						
P17A	Butcher Ranch,	40.24	85	eP	P	03 48 05.6	+0.9
	comp=Z,94nm,1.0s						
LDFC	Landfair	40.25	93	eP	P	03 48 04.3	-0.4
	comp=Z,166nm,1.0s						
Q16A	Castle Valley	40.31	86	eP	P	03 48 06.6	+1.3
	comp=Z,199nm,1.0s						
FCC	Fort Churchill	40.32	50	eP	P	03 48 05.1	+0.3
	comp=Z,218nm,0.9s						
FCC				LR	LR		
	comp=Z,3µm,21.0s						
FCC	Fort Churchill	40.32	50	eP	P	03 48 05.1	+0.3
FCC				pmax	pmax		
	comp=Z,218nm,0.9s						
FCC				MLR	MLR		
	comp=Z,3µm,21.0s						
PFO	Pinyon Flats O	40.37	96	eP	P	03 48 06.3	+0.6
	comp=Z,120nm,1.3s						
PFO				LR	LR		
	comp=Z,3µm,19.0s						
PFO	Pinyon Flats O	40.37	96	eP	P	03 48 06.3	+0.6
PFO				pmax	pmax		
	comp=Z,120nm,1.3s						
PFO				MLR	MLR		
	comp=Z,3µm,19.0s						
PFO	Pinyon Flats O	40.37	96	P	P	03 48 06.4	+0.6
	baz=312,SNR=38						
BELC	Belle Mtn. Jos	40.40	95	P	P	03 48 06.4	+0.4
	baz=312,SNR=13						
KNB	Kanab	40.44	89	eP	P	03 48 07.6	+1.2
	comp=Z,120nm,1.2s						
KNB	Kanab	40.44	89	eP	P	03 48 07.6	+1.2
KNB				pmax	pmax		
	comp=Z,120nm,1.2s						
109C	Camp Elliot, M	40.46	98	P	P	03 48 07.3	+1.1
	baz=313,SNR=21						
CPE	Camp Elliot	40.46	98	eP	P	03 48 07.4	+1.2
	comp=Z,130nm,1.0s						
CPE				LR	LR		
	comp=Z,1µm,18.0s						
PKCU	Pink Cliffs	40.49	88	eP	P	03 48 08.3	+1.3
	comp=Z,134nm,1.1s						
USA0B	Ussuriysk Arra	40.54	284	eP	P	03 48 06.3	-0.5
	comp=Z,31nm,1.1s						
USA0B				LR	LR		
	comp=Z,2µm,20.0s						
USRK	Ussuriysk Ar.	40.54	284	P	P	03 48 06.0	-0.8
	comp=Z,12nm,0.7s,baz=61,slow=6.7,SNR=16						
USRK				PcP	PcP	03 50 08.5	-0.5
	comp=Z,10nm,0.8s,baz=80,slow=1.6,SNR=4.5						
USRK				LR	LR	04 03 55.4	
	comp=Z,1µm,21.9s,baz=61,slow=35						
SRU	San Rafael Swe	40.59	85	eP	P	03 48 08.5	+0.9
	comp=Z,112nm,0.9s						
SRU	San Rafael Swe	40.59	85	eP	P	03 48 08.5	+0.9
SRU				pmax	pmax		
	comp=Z,112nm,0.9s						
NEE2	Needles Airpor	40.76	93	P	P	03 48 09.2	+0.5
	baz=311,SNR=12						
IRM	Iron Mountain	40.83	95	P	P	03 48 10.0	+0.6
	baz=312,SNR=35						
BAR	Barrett	40.87	97	eP	P	03 48 10.6	+0.9
	comp=Z,74nm,0.9s						
BAR				LR	LR		
	comp=Z,1µm,18.0s						
MONP2	Monument Peak	40.88	97	P	P	03 48 10.9	+0.9
	baz=313,SNR=36						
BC3	Big Chuckawall	40.97	95	P	P	03 48 10.6	-0.1
	baz=312,SNR=19						
W13A	Hualapai Mount	41.00	92	eP	P	03 48 11.9	+0.9
	comp=Z,141nm,1.3s						
W13A				LR	LR		
	comp=Z,2µm,19.0s						
K22A	Casper	41.01	78	eP	P	03 48 10.8	-0.2
	comp=Z,100nm,1.3s						
K22A	Casper	41.01	78	P	P	03 48 10.6	-0.4
	baz=304,SNR=34						
RWWY	Rawlins	41.13	80	eP	P	03 48 12.2	+0.1
	comp=Z,118nm,1.4s						
RWWY				LR	LR		
	comp=Z,3µm,19.0s						
U15A	North Rim	41.14	90	eP	P	03 48 13.4	+1.1
	comp=Z,267nm,1.1s						
U15A				LR	LR		
	comp=Z,3µm,19.0s						
MJAR	Matsushiro Arr	41.18	271	P	P	03 48 11.3	-1.0
	comp=Z,16nm,1.0s,baz=44,slow=6.5,SNR=28						
MJAR				PcP	PcP	03 50 11.3	+0.1
	comp=Z,7.6nm,0.9s,baz=0.0,slow=0.6,SNR=5.0						

MJAR				LR	LR	04 02 58.3	
	comp=Z,1µm,22.0s,baz=75,slow=33						
MAJO	**Matsushiro**	**41.18**	**271**	*e*P	**P**	**03 48 11.7**	**-0.6**
	comp=Z,143nm,1.4s						
MAJO				*e*PcP	**PcP**	**03 50 11.3**	**+0.1**
MAJO	**Matsushiro**	**41.18**	**271**	*d* *i*P	**P**	**03 48 11.3**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,55nm,1.1s						
MAT	**Matsushiro**	**41.18**	**271**	P	**P**	**03 48 11.5**	**-0.7**
MAT				S	**S**	**03 54 25.8**	**+0.5**
MJB9	**Matsu-Tunnel**	**41.18**	**271**	*e*P	**P**	**03 48 12.5**	**+0.2**
	comp=Z,135nm,1.4s						
VLA	**Vladivostok**	**41.19**	**283**	⇑*e*P	**P**	**03 48 12.6**	**+0.4**
VLA				pmax	pmax		
	comp=Z,231nm,1.4s						
SWSC	**Sam W. Stewart**	**41.23**	**96**	P	**P**	**03 48 13.0**	**+0.4**
	baz=313,SNR=16						
IKP	**In-Ko-Pah, Jac**	**41.23**	**97**	P	**P**	**03 48 13.7**	**+0.9**
	baz=313,SNR=40						
PDMCI	**Parker Dam,Lak**	**41.36**	**94**	P	**P**	**03 48 14.0**	**+0.3**
	baz=311,SNR=41						
O20A	**White River Ci**	**41.40**	**82**	*e*P	**P**	**03 48 14.7**	**+0.5**
	comp=Z,251nm,1.0s						
O20A				LR	LR		
	comp=Z,2µm,20.0s						
O20A	**White River Ci**	**41.40**	**82**	P	**P**	**03 48 14.6**	**+0.3**
	baz=306,SNR=166						
Y12C	**Blythe**	**41.48**	**94**	*e*P	**P**	**03 48 15.6**	**+0.9**
	comp=Z,89nm,0.8s						
Y12C				LR	LR		
	comp=Z,2µm,18.0s						
Y12C	**Blythe**	**41.48**	**94**	P	**P**	**03 48 15.5**	**+0.8**
	baz=312,SNR=57						
RSSD	**Black Hills**	**41.70**	**75**	*e*P	**P**	**03 48 16.5**	**-0.2**
	comp=Z,120nm,1.2s						
RSSD				LR	LR		
	comp=Z,2µm,20.0s						
RSSD	**Black Hills**	**41.70**	**75**	*e*P	**P**	**03 48 16.5**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,120nm,1.2s						
RSSD				MLR	MLR		
	comp=Z,2µm,20.0s						
RSSD	**Black Hills**	**41.70**	**75**	P	**P**	**03 48 16.6**	**-0.2**
	baz=304						
MDJ	**Mudanjiang**	**41.75**	**286**	*e*P	**P**	**03 48 16.3**	**-0.6**
	comp=Z,41nm,1.2s						
MDJ				LR	LR		
	comp=Z,2µm,20.0s						
MDJ	**Mudanjiang**	**41.75**	**286**	P	**P**	**03 48 16.2**	**-0.6**
MDJ				pP	pwP	03 48 20.1	-5.5
MDJ				sP	pP	03 48 21.4	+2.4
MDJ				S	**S**	**03 54 34.3**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,35nm,1.2s						
MDJ				LR	LR		
	comp=Z,3µm,15.9s						
MDJ				LR	LR		
	comp=Z,2µm,16.7s						
MDJ				LR	LR		
	comp=Z,2µm,15.5s						
GLA	**Glamis**	**41.76**	**95**	*e*P	**P**	**03 48 17.9**	**+0.8**
	comp=Z,62nm,1.1s						
GLA				*e*PcP	**PcP**	**03 50 12.8**	**-0.4**
GLA				LR	LR		
	comp=Z,2µm,21.0s						
GLA	**Glamis**	**41.76**	**95**	*e*P	**P**	**03 48 17.9**	**+0.8**
GLA				*e*		03 50 12.8	
GLA				pmax	pmax		
	comp=Z,62nm,1.1s						
GLA				MLR	MLR		
	comp=Z,2µm,21.0s						
GLA	**Glamis**	**41.76**	**95**	P	**P**	**03 48 17.7**	**+0.6**
	baz=312,SNR=9.2						
PV09	**Paradox Valley**	**41.83**	**85**	*e*P	**P**	**03 48 18.3**	**+0.4**
PV21	**Cone Mtn., Par**	**41.89**	**85**	*e*P	**P**	**03 48 18.6**	**+0.3**
	comp=Z,64nm,1.0s						
PV23	**Carpenter Ridg**	**41.93**	**85**	*e*P	**P**	**03 48 19.0**	**+0.3**
	comp=Z,183nm,1.1s						
MSHR	**Mys Shultsa**	**41.94**	**283**	⇑*i*P	**P**	**03 48 18.8**	**+0.5**
PV10	**Paradox Valley**	**41.96**	**85**	*e*P	**P**	**03 48 20.0**	**+1.1**
	comp=Z,214nm,1.0s						
PV14	**Lion Creek, Pa**	**41.97**	**85**	*e*P	**P**	**03 48 19.1**	**+0.1**
	comp=Z,160nm,1.1s						
PV22	**Blue Mesa, Par**	**42.02**	**84**	*e*P	**P**	**03 48 19.6**	**+0.2**
	comp=Z,144nm,1.0s						
PV22				LR	LR		
	comp=Z,3µm,20.0s						
PV20	**West Nyswonger**	**42.03**	**85**	*e*P	**P**	**03 48 19.7**	**+0.3**
	comp=Z,128nm,1.0s						
PV04	**Paradox Valley**	**42.03**	**85**	*e*P	**P**	**03 48 19.8**	**+0.3**
	comp=Z,154nm,1.0s						
PV04				LR	LR		
	comp=Z,3µm,22.0s						
PV19	**Morning Glory**	**42.04**	**85**	*e*P	**P**	**03 48 19.8**	**+0.2**
	comp=Z,145nm,1.0s						
PV19				*e*PcP	**PcP**	**03 50 13.2**	**-1.2**
PV19				LR	LR		
	comp=Z,2µm,19.0s						
PV17	**East Wray Mesa**	**42.07**	**85**	*e*P	**P**	**03 48 20.0**	**+0.2**
	comp=Z,226nm,1.0s						
PV16	**Nyswonger Mesa**	**42.08**	**85**	*e*P	**P**	**03 48 20.0**	**+0.2**
	comp=Z,178nm,1.0s						
PV16				LR	LR		
	comp=Z,2µm,19.0s						
PV05	**Paradox Valley**	**42.11**	**85**	*e*P	**P**	**03 48 20.6**	**+0.5**
	comp=Z,121nm,1.1s						
PV11	**David Mesa, Pa**	**42.11**	**85**	*e*P	**P**	**03 48 20.3**	**+0.2**
	comp=Z,269nm,1.1s						
PV18	**Skein Mesa, Pa**	**42.12**	**85**	*e*P	**P**	**03 48 20.5**	**+0.3**
	comp=Z,190nm,1.0s						
PV18				LR	LR		
	comp=Z,2µm,18.0s						
PV12	**Saucer Basin,**	**42.15**	**85**	*e*P	**P**	**03 48 20.7**	**+0.3**
	comp=Z,222nm,1.1s						
PV12				LR	LR		
	comp=Z,2µm,20.0s						
PV03	**Paradox Valley**	**42.16**	**85**	*e*P	**P**	**03 48 20.6**	**+0.1**
	comp=Z,195nm,1.1s						
PV07	**Paradox Valley**	**42.17**	**84**	*e*P	**P**	**03 48 20.7**	**+0.2**
	comp=Z,145nm,1.1s						
PV07				LR	LR		
	comp=Z,3µm,22.0s						
PV13	**Radium Mtn., P**	**42.23**	**85**	*e*P	**P**	**03 48 21.4**	**+0.3**
	comp=Z,351nm,1.0s						
PV13				LR	LR		
	comp=Z,3µm,21.0s						
PV02	**Paradox Valley**	**42.25**	**85**	*e*P	**P**	**03 48 21.7**	**+0.4**
	comp=Z,302nm,1.1s						
WUAZ	**Wupatki**	**42.30**	**90**	*e*P	**P**	**03 48 22.7**	**+1.1**
	comp=Z,256nm,1.0s						
WUAZ				LR	LR		
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**42.30**	**90**	P	**P**	**03 48 22.5**	**+0.9**
	baz=310,SNR=114						
Y14A	**Wickenburg**	**42.30**	**93**	*e*P	**P**	**03 48 22.0**	**+0.5**
	comp=Z,144nm,1.1s						
Y14A				LR	LR		
	comp=Z,2µm,18.0s						
MDND	**Maddock**	**42.33**	**67**	*e*P	**P**	**03 48 21.9**	**+0.3**
	comp=Z,477nm,1.0s						
MDND				LR	LR		
	comp=Z,5µm,18.0s						
MDND	**Maddock**	**42.33**	**67**	P	**P**	**03 48 21.7**	**+0.2**
	baz=301,SNR=73						
N23A	**Red Feather La**	**42.37**	**80**	*e*P	**P**	**03 48 22.6**	**+0.3**
	comp=Z,154nm,1.1s						
N23A				LR	LR		
	comp=Z,4µm,22.0s						
N23A	**Red Feather La**	**42.37**	**80**	P	**P**	**03 48 22.6**	**+0.3**
	baz=306,SNR=80						
TULEG	**Thule**	**42.39**	**20**	*e*P	**P**	**03 48 22.8**	**+1.2**
	comp=Z,204nm,1.0s						
TULEG				LR	LR		
	comp=Z,3µm,18.0s						
PV01	**Paradox Valley**	**42.40**	**85**	*e*P	**P**	**03 48 22.8**	**+0.3**
	comp=Z,225nm,1.0s						
PV01				LR	LR		
	comp=Z,2µm,21.0s						
JHJ	**Hachijo jima 2**	**42.42**	**266**	LR	LR	04 05 43.0	
	comp=Z,346nm,19.3s,baz=21,slow=36						
PHWY	**Pilot Hill**	**42.43**	**79**	*e*P	**P**	**03 48 22.8**	**0.0**
	comp=Z,48nm,1.4s						
PHWY				LR	LR		
	comp=Z,1µm,19.0s						
113A	**Mohawk Valley,**	**42.61**	**95**	*e*P	**P**	**03 48 24.4**	**+0.4**
	comp=Z,72nm,1.3s						
113A				LR	LR		
	comp=Z,3µm,20.0s						
SMCO	**Snowmass**	**42.76**	**82**	*e*P	**P**	**03 48 25.5**	**-0.1**
	comp=Z,42nm,1.0s						
MVCO	**Mesa Verde**	**43.02**	**86**	*e*P	**P**	**03 48 27.6**	**+0.1**
	comp=Z,116nm,1.3s						
MVCO				LR	LR		
	comp=Z,2µm,21.0s						
MVCO	**Mesa Verde**	**43.02**	**86**	P	**P**	**03 48 27.6**	**+0.1**
	baz=309,SNR=50						
ULM	**Lac du Bonnet**	**43.21**	**62**	P	**P**	**03 48 28.1**	**-0.5**
	comp=Z,126nm,1.0s,baz=300,slow=8.8,SNR=73						
ULM				LR	LR	04 05 09.6	
	comp=Z,2µm,18.2s,baz=322,slow=34						
ULM	**Lac du Bonnet**	**43.21**	**62**	*e*P	**P**	**03 48 28.2**	**-0.5**
	comp=Z,185nm,1.0s						
ULM				LR	LR		
	comp=Z,3µm,20.0s						
ISCO	**Idaho Springs**	**43.22**	**81**	*e*P	**P**	**03 48 29.5**	**+0.3**
	comp=Z,58nm,1.4s						
ISCO				LR	LR		
	comp=Z,4µm,19.0s						
ISCO	**Idaho Springs**	**43.22**	**81**	*e*P	**P**	**03 48 29.5**	**+0.3**
ISCO				pmax	pmax		
	comp=Z,58nm,1.4s						
ISCO				MLR	MLR		
	comp=Z,4µm,19.0s						
ISCO	**Idaho Springs**	**43.22**	**81**	P	**P**	**03 48 29.4**	**+0.1**
	baz=307,SNR=32						
W18A	**Petrified Fore**	**43.58**	**89**	*e*P	**P**	**03 48 32.9**	**+0.9**
	comp=Z,186nm,1.0s						
W18A				LR	LR		
	comp=Z,2µm,20.0s						
W18A	**Petrified Fore**	**43.58**	**89**	P	**P**	**03 48 32.7**	**+0.8**
	baz=311,SNR=48						
BOD	**Bodaibo**	**43.67**	**310**	*e*P	**P**	**03 48 32.5**	**+0.3**
BOD				*e*		03 54 59.4	
BOD				pmax	pmax		
	comp=Z,334nm,1.6s						
S22A	**4UR Ranch, Cre**	**43.72**	**84**	*e*P	**P**	**03 48 34.1**	**+0.8**
	comp=Z,137nm,1.4s						
S22A				LR	LR		
	comp=Z,2µm,19.0s						
S22A	**4UR Ranch, Cre**	**43.72**	**84**	P	**P**	**03 48 33.9**	**+0.7**
	baz=309,SNR=112						
214A	**Organ Pipe Nat**	**43.75**	**95**	P	**P**	**03 48 33.9**	**+0.6**
	baz=313,SNR=77						
X18A	**Snowflake**	**43.83**	**90**	*e*P	**P**	**03 48 35.0**	**+1.0**
	comp=Z,106nm,1.0s						
X18A				LR	LR		
	comp=Z,3µm,18.0s						
Q24A	**Divide**	**44.02**	**81**	*e*P	**P**	**03 48 36.7**	**+1.0**
	comp=Z,94nm,1.4s						
Q24A				LR	LR		
	comp=Z,2µm,20.0s						
Q24A	**Divide**	**44.02**	**81**	P	**P**	**03 48 36.0**	**+0.4**
	baz=308,SNR=11						
AGMN	**Agassiz Nation**	**44.23**	**65**	*e*P	**P**	**03 48 36.1**	**-0.8**
	comp=Z,181nm,1.0s						
AGMN				LR	LR		
	comp=Z,4µm,18.0s						
AGMN	**Agassiz Nation**	**44.23**	**65**	P	**P**	**03 48 36.1**	**-0.8**
	baz=302,SNR=72						
SDCO	**Great Sand Dun**	**44.55**	**83**	*e*P	**P**	**03 48 40.2**	**+0.4**
	comp=Z,90nm,1.1s						
SDCO				LR	LR		
	comp=Z,1µm,20.0s						
SDCO	**Great Sand Dun**	**44.55**	**83**	P	**P**	**03 48 40.4**	**+0.5**
	baz=309,SNR=76						
SUSD	**Miller**	**44.56**	**71**	P	**P**	**03 48 39.0**	**-0.5**
	baz=305,SNR=31						
CN2	**Changchun**	**44.68**	**288**	*e*P	**P**	**03 48 40.5**	**0.0**
CN2				*e*S	**S**	**03 55 14.2**	**-2.3**
CN2				SS	SS	03 58 25.6	-11
CN2				pmax	pmax		
	comp=Z,50nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
OGNE	**Ogallala**	**44.73**	**77**	*e*P	**P**	**03 48 41.6**	**+0.5**
	comp=Z,124nm,1.0s						
OGNE				LR	LR		
	comp=Z,1µm,18.0s						
OGNE	**Ogallala**	**44.73**	**77**	P	**P**	**03 48 41.3**	**+0.3**
	baz=307,SNR=17						
TUC	**Tucson**	**44.78**	**93**	*e*P	**P**	**03 48 42.2**	**+0.7**
	comp=Z,149nm,1.0s						
TUC				LR	LR		
	comp=Z,2µm,19.0s						
TUC	**Tucson**	**44.78**	**93**	*e*P	**P**	**03 48 42.2**	**+0.7**
TUC				pmax	pmax		
	comp=Z,149nm,1.0s						
TUC				MLR	MLR		
	comp=Z,2µm,19.0s						
TUC	**Tucson**	**44.78**	**93**	P	**P**	**03 48 42.2**	**+0.7**
	baz=313						
HIA	**Hailar**	**44.96**	**297**	*e*P	**P**	**03 48 43.4**	**+0.7**
	comp=Z,200nm,1.1s						
HIA				LR	LR		
	comp=Z,2µm,21.0s						
HIA	**Hailar**	**44.96**	**297**	*e*P	**P**	**03 48 43.4**	**+0.7**
HIA				pmax	pmax		
	comp=Z,200nm,1.1s						
HIA				MLR	MLR		
	comp=Z,2µm,21.0s						
KSCO	**Kaye Shedlock’**	**45.54**	**80**	*e*P	**P**	**03 48 47.1**	**-0.4**
	comp=Z,263nm,1.1s						
KSCO				LR	LR		
	comp=Z,2µm,22.0s						
KSCO	**Kaye Shedlock’**	**45.54**	**80**	P	**P**	**03 48 47.9**	**+0.3**
	baz=308,SNR=32						
T25A	**Trinidad**	**45.60**	**83**	*e*P	**P**	**03 48 48.9**	**+0.7**
	comp=Z,266nm,1.1s						
T25A				LR	LR		
	comp=Z,2µm,18.0s						
T25A	**Trinidad**	**45.60**	**83**	P	**P**	**03 48 48.7**	**+0.5**
	baz=309,SNR=240						
LAZ	**Ladron**	**45.66**	**88**	*e*P	**P**	**03 48 49.7**	**+1.0**
TASM	**ASL Pad, Albuq**	**45.73**	**87**	P	**P**	**03 48 49.5**	**+0.3**
	baz=311,SNR=70						
TASM	**ASL Pad, Albuq**	**45.73**	**87**	P	**P**	**03 48 49.4**	**+0.1**
	baz=311,SNR=60						
ANMO	**Albuquerque**	**45.73**	**87**	*e*P	**P**	**03 48 49.5**	**+0.3**
	comp=Z,88nm,1.2s						
ANMO				LR	LR		
	comp=Z,2µm,18.0s						
ANMO	**Albuquerque**	**45.73**	**87**	*d* *i*P	**P**	**03 48 49.6**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,111nm,1.7s						
ANMO	**Albuquerque**	**45.73**	**87**	P	**P**	**03 48 49.5**	**+0.3**
	baz=311						
KULLO	**Kullorsuaq**	**45.89**	**21**	⇓*i*P	**P**	**03 48 51.0**	**+1.4**
KULLO				pmax	pmax		
	comp=Z,310nm,1.1s						
KULLO				MLR	MLR		
	comp=Z,2µm,16.0s						
KULLO	**Kullorsuaq**	**45.89**	**21**	⇓*i*P	**P**	**03 48 51.0**	**+1.4**
	comp=Z,313nm,1.1s						
	comp=Z,2µm,16.0s						
Y22D	**IRIS PASSCAL I**	**46.01**	**88**	*e*P	**P**	**03 48 53.3**	**+1.9**
	comp=Z,265nm,1.1s						
Y22D				LR	LR		
	comp=Z,3µm,19.0s						
Y22D	**IRIS PASSCAL I**	**46.01**	**88**	P	**P**	**03 48 52.2**	**+0.9**
	baz=312						
LPM	**Los Pinos Moun**	**46.04**	**88**	*e*P	**P**	**03 48 52.7**	**+1.1**
BNM	**Barren Site**	**46.15**	**88**	*e*P	**P**	**03 48 53.5**	**+0.9**
ECSD	**EROS Data Cent**	**46.34**	**71**	*e*P	**P**	**03 48 52.7**	**-1.1**
	comp=Z,156nm,1.1s						
ECSD				LR	LR		
	comp=Z,2µm,20.0s						
ECSD	**EROS Data Cent**	**46.34**	**71**	P	**P**	**03 48 52.5**	**-1.2**
	baz=306,SNR=98						
121A	**Cookes Peak, D**	**46.50**	**90**	P	**P**	**03 48 55.9**	**+0.7**
	baz=313,SNR=115						
BGNE	**Belgrade**	**46.81**	**74**	*e*P	**P**	**03 48 57.0**	**-0.4**
	comp=Z,491nm,1.0s						
BGNE				LR	LR		
	comp=Z,2µm,21.0s						
BGNE	**Belgrade**	**46.81**	**74**	P	**P**	**03 48 56.8**	**-0.6**
	baz=307,SNR=34						
CIT	**Chita**	**46.81**	**304**	*e*P	**P**	**03 48 58.6**	**+1.3**
CIT				pmax	pmax		
	comp=Z,500nm,1.3s						
EYMN	**Ely**	**46.88**	**63**	*e*P	**P**	**03 48 56.8**	**-1.0**
	comp=Z,268nm,1.1s						
EYMN				LR	LR		
	comp=Z,3µm,22.0s						
EYMN	**Ely**	**46.88**	**63**	P	**P**	**03 48 56.8**	**-1.0**
	baz=304,SNR=168						
HSIG		**46.94**	**96**	*e*P	**P**	**03 48 58.8**	**+0.3**
	comp=Z,56nm,0.9s						
HSIG				LR	LR		
	comp=Z,1µm,18.0s						
SNY	**Shenyang**	**46.95**	**287**	⇓P	**P**	**03 48 58.4**	**0.0**
SNY				S	**S**	**03 55 49.3**	**+0.1**
SNY				pmax	pmax		
	comp=Z,57nm,1.5s						
SNY				pmax	pmax		
	comp=Z,2µm,7.4s						
SNY				LR	LR		
	comp=Z,2µm,17.6s						
SNY				LR	LR		
	comp=Z,1µm,15.7s						
SNY				LR	LR		
	comp=Z,3µm,17.3s						
KSRS	**Korea Array**	**47.00**	**279**	P	**P**	**03 48 58.8**	**0.0**
	comp=Z,16nm,0.9s,baz=57,slow=7.7,SNR=24						
KSRS				LR	LR	04 07 28.8	
	comp=Z,543nm,20.7s,baz=58,slow=34						
KS15	**Wonju Array Si**	**47.03**	**279**	*e*P	**P**	**03 48 59.9**	**+0.8**
	comp=Z,45nm,1.3s						
SRIG	**Santa Rosalia**	**47.35**	**99**	*e*P	**P**	**03 49 02.2**	**+0.5**
	comp=Z,70nm,0.9s						
CBKS	**Cedar Bluff**	**47.43**	**78**	*e*P	**P**	**03 49 03.0**	**+0.7**
	comp=Z,260nm,1.0s						
CBKS				LR	LR		
	comp=Z,1µm,22.0s						
CBKS	**Cedar Bluff**	**47.43**	**78**	*e*P	**P**	**03 49 03.0**	**+0.7**
CBKS				pmax	pmax		
	comp=Z,260nm,1.0s						
CBKS				MLR	MLR		
	comp=Z,1µm,22.0s						
CBKS	**Cedar Bluff**	**47.43**	**78**	P	**P**	**03 49 01.8**	**-0.5**
	baz=309,SNR=17						
KWAJ	**Kwajalein Atol**	**47.45**	**215**	PFAKE		03 49 10.0	+7.4
KWAJ				LR	LR		
	comp=Z,700nm,21.0s						
F37A	**Hinrichs Farm,**	**47.51**	**66**	P	**P**	**03 49 01.6**	**-1.1**
	baz=306,SNR=53						
E38A	**The Farm, Brul**	**47.61**	**65**	*e*P	**P**	**03 49 02.4**	**-1.1**
	comp=Z,227nm,1.1s						
E38A				LR	LR		
	comp=Z,3µm,19.0s						
E38A	**The Farm, Brul**	**47.61**	**65**	P	**P**	**03 49 02.0**	**-1.5**
	baz=305,SNR=76						
SPMN	**Marine on St.**	**47.69**	**67**	*e*P	**P**	**03 49 03.3**	**-0.9**
	comp=Z,103nm,1.1s						
SPMN				LR	LR		
	comp=Z,5µm,18.0s						
SPMN	**Marine on St.**	**47.69**	**67**	P	**P**	**03 49 03.3**	**-0.9**
	baz=306,SNR=24						
F38A	**Pierce - Schro**	**47.80**	**65**	P	**P**	**03 49 04.5**	**-0.4**
	baz=306,SNR=307						
EPT	**El Paso**	**47.81**	**90**	PFAKE		03 49 20.0	+15
EPT				LR	LR		
	comp=Z,2µm,19.0s						
JNU	**Nakatsue**	**47.98**	**273**	LR	LR	04 06 45.3	
	comp=Z,1µm,21.1s,baz=54,slow=33						
JNU	**Nakatsue**	**47.98**	**273**	*e*P	**P**	**03 49 06.2**	**-0.3**
	comp=Z,146nm,1.2s						
TJN	**Taejon**	**48.03**	**278**	⇓*i*P	**P**	**03 49 07.6**	**+0.7**
C40A	**Isle Royale Na**	**48.19**	**62**	*e*P	**P**	**03 49 07.0**	**-1.1**
	comp=Z,162nm,1.1s						
C40A				LR	LR		
	comp=Z,2µm,20.0s						
C40A	**Isle Royale Na**	**48.19**	**62**	P	**P**	**03 49 07.1**	**-0.9**
	baz=305,SNR=122						
F39A	**Loretta**	**48.37**	**65**	P	**P**	**03 49 08.4**	**-1.0**
	baz=306,SNR=34						
MNTX	**Cornudas Mount**	**48.56**	**89**	*e*P	**P**	**03 49 11.7**	**+0.6**
	comp=Z,99nm,1.1s						
MNTX				*e*PcP	**PcP**	**03 50 35.4**	**-1.3**
MNTX				LR	LR		
	comp=Z,2µm,21.0s						
MNTX	**Cornudas Mount**	**48.56**	**89**	P	**P**	**03 49 11.7**	**+0.6**
	baz=313,SNR=110						
G39A	**Holcombe**	**48.59**	**66**	P	**P**	**03 49 10.0**	**-1.2**
	baz=306,SNR=178						
CPRX	**Cap Rock**	**48.61**	**87**	*e*P	**P**	**03 49 12.4**	**+0.8**
MSTX	**Muleshoe**	**48.67**	**85**	*e*P	**P**	**03 49 11.9**	**-0.1**
	comp=Z,209nm,1.1s						
MSTX				LR	LR		
	comp=Z,1µm,20.0s						
MSTX	**Muleshoe**	**48.67**	**85**	P	**P**	**03 49 11.8**	**-0.2**
	baz=312,SNR=66						
AMTX	**Amarillo**	**48.75**	**83**	*e*P	**P**	**03 49 12.5**	**-0.1**
AMTX				LR	LR		
	comp=Z,2µm,18.0s						
AMTX	**Amarillo**	**48.75**	**83**	P	**P**	**03 49 12.5**	**-0.1**
	baz=311						
F40A	**Park Falls**	**48.81**	**65**	P	**P**	**03 49 11.8**	**-1.1**
	baz=306,SNR=188						
GDL2	**Guadalupe Moun**	**48.86**	**88**	*e*P	**P**	**03 49 13.7**	**+0.2**
D41A	**Chassel**	**49.01**	**63**	*e*P	**P**	**03 49 13.8**	**-0.5**
	comp=Z,225nm,1.0s						
D41A				LR	LR		
	comp=Z,2µm,18.0s						
D41A	**Chassel**	**49.01**	**63**	P	**P**	**03 49 13.6**	**-0.7**
	baz=306,SNR=52						
G40A	**Rib Lake**	**49.15**	**65**	*e*P	**P**	**03 49 14.3**	**-1.2**
	comp=Z,178nm,1.0s						
G40A				*e*PcP	**PcP**	**03 50 38.7**	**+0.1**
G40A				LR	LR		
	comp=Z,3µm,18.0s						
G40A	**Rib Lake**	**49.15**	**65**	P	**P**	**03 49 14.4**	**-1.1**
	baz=307,SNR=120						
KSU1	**Kansas State U**	**49.16**	**76**	PFAKE		03 49 30.0	+14
KSU1				LR	LR		
	comp=Z,2µm,18.0s						
KSU1	**Kansas State U**	**49.16**	**76**	P	**P**	**03 49 14.6**	**-1.0**
	baz=309,SNR=44						
COWI	**Conover**	**49.26**	**64**	*e*P	**P**	**03 49 15.0**	**-1.3**
	comp=Z,175nm,1.0s						
COWI				LR	LR		
	comp=Z,2µm,19.0s						
U32A	**Winter Ranch,**	**49.43**	**80**	*e*P	**P**	**03 49 17.4**	**-0.2**
	comp=Z,169nm,0.9s						
U32A				LR	LR		
	comp=Z,2µm,19.0s						
SCIA	**State Center**	**49.44**	**71**	*e*P	**P**	**03 49 17.0**	**-0.7**
	comp=Z,124nm,1.1s						
SCIA				*e*PcP	**PcP**	**03 50 37.4**	**-2.3**
SCIA				LR	LR		
	comp=Z,2µm,20.0s						
SCIA	**State Center**	**49.44**	**71**	P	**P**	**03 49 16.9**	**-0.8**
	baz=308,SNR=11						
KBS	**Kingsbay**	**49.79**	**0**	*e*P	**P**	**03 49 21.9**	**+2.0**
	comp=Z,590nm,0.9s						
KBS				LR	LR		
	comp=Z,2µm,18.0s						
KBS	**Kingsbay**	**49.79**	**0**	*d* *i*P	**P**	**03 49 21.9**	**+2.0**
KBS	**Kingsbay**	**49.79**	**0**	*e*P	**P**	**03 49 22.3**	**+2.5**
DL2	**Dalian**	**49.92**	**285**	P	**P**	**03 49 20.1**	**-1.3**
DL2				sP	**pwP**	**03 49 32.8**	**+2.6**
DL2				PcP	**PcP**	**03 50 40.2**	**-1.3**
DL2				PP	**PP**	**03 51 18.6**	**+2.6**
DL2				S	**S**	**03 56 32.9**	**+1.7**
DL2				pmax	pmax		
	comp=Z,40nm,1.1s						
DL2				pmax	pmax		
	comp=Z,560nm,3.6s						
DL2				LR	LR		
	comp=Z,930nm,17.6s						
DL2				LR	LR		
	comp=Z,670nm,12.5s						
XMAS	**Kiritimati**	**49.97**	**168**	PFAKE		03 49 30.0	+8.2
XMAS				LR	LR		
	comp=Z,4µm,22.0s						
F42A	**Maple Grove Fa**	**50.02**	**64**	P	**P**	**03 49 21.4**	**-0.7**
	baz=307,SNR=18						
I41A	**Arkdale**	**50.07**	**66**	*e*P	**P**	**03 49 21.6**	**-0.8**
	comp=Z,318nm,0.9s						
I41A				LR	LR		
	comp=Z,4µm,18.0s						
I41A	**Arkdale**	**50.07**	**66**	P	**P**	**03 49 21.5**	**-1.0**
	baz=308,SNR=47						
E43A	**Lone Tree Farm**	**50.29**	**62**	*e*P	**P**	**03 49 23.1**	**-1.0**
	comp=Z,191nm,1.0s						
E43A				LR	LR		
	comp=Z,2µm,19.0s						
E43A	**Lone Tree Farm**	**50.29**	**62**	P	**P**	**03 49 23.2**	**-0.8**

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           baz=307,SNR=106
DAG    Danmarks Havn     50.38   9⇓iP     P       03 49 25.2 +0.8
DAG                                pmax   pmax
           comp=Z,190nm,0.8s
DAG                                MLR    MLR
           comp=Z,2µm,14.0s
DAG    Danmarks Havn     50.38   9⇓iP     P       03 49 25.2 +0.8
           comp=Z,254nm,0.8s
           comp=Z,2µm,14.0s
L40A   Anamosa           50.51  69  eP    P       03 49 24.5 -1.4
           comp=Z,297nm,1.1s
L40A                               LR     LR
           comp=Z,3µm,18.0s
L40A   Anamosa           50.51  69   P    P       03 49 24.4 -1.4
           baz=309,SNR=70
SPA0   Spitsbergen Ar    50.53 359  eP    P       03 49 26.4 +0.9
           comp=Z,659nm,1.1s
SPA0   Spitsbergen Ar    50.53 359  eP    P       03 49 26.7 +1.1
SPITS  Spitsbergen Ar    50.53 359   P    P       03 49 26.5 +0.9
SPITS                              pmax   pmax
           comp=Z,16nm,0.4s
JFWS   Jewell Farm       50.55  68  eP    P       03 49 24.4 -1.7
           comp=Z,200nm,1.0s
JFWS                               LR     LR
           comp=Z,5µm,18.0s
JFWS   Jewell Farm       50.55  68  eP    P       03 49 24.4 -1.7
JFWS                               pmax   pmax
           comp=Z,200nm,1.0s
JFWS                               MLR    MLR
           comp=Z,5µm,18.0s
JFWS   Jewell Farm       50.55  68   P    P       03 49 24.4 -1.7
           baz=308,SNR=72
WMOK   Wichita Mounta    50.64  81  eP    P       03 49 26.5 -0.4
           comp=Z,138nm,1.0s
WMOK                               LR     LR
           comp=Z,3µm,18.0s
WMOK   Wichita Mounta    50.64  81  eP    P       03 49 26.5 -0.4
WMOK                               pmax   pmax
           comp=Z,138nm,1.0s
WMOK                               MLR    MLR
           comp=Z,3µm,18.0s
WMOK   Wichita Mounta    50.64  81   P    P       03 49 26.5 -0.4
           baz=312,SNR=174
I42A   Draeger Farm,     50.72  66  eP    P       03 49 26.3 -1.1
           comp=Z,173nm,0.9s
I42A                               LR     LR
           comp=Z,4µm,18.0s
I42A   Draeger Farm,     50.72  66   P    P       03 49 26.2 -1.1
           baz=308,SNR=92
E44A   Grand Marais A    50.73  62  eP    P       03 49 27.1 -0.3
           comp=Z,470nm,1.3s
E44A                               LR     LR
           comp=Z,2µm,19.0s
E44A   Grand Marais A    50.73  62   P    P       03 49 27.1 -0.3
           baz=307,SNR=69
ILULI  Ilulissat         50.78  24  eP    P       03 49 28.8 +1.4
           comp=Z,89nm,1.0s
ILULI                              LR     LR
           comp=Z,3µm,22.0s
ILULI  Ilulissat         50.78  24  eP    P       03 49 28.8 +1.4
ILULI                              pmax   pmax
           comp=Z,89nm,1.0s
ILULI                              MLR    MLR
           comp=Z,3µm,22.0s
ILULI  Ilulissat         50.78  24⇓iP     P       03 49 27.9 +0.5
           comp=Z,70nm,0.9s
ILULI                             i               03 51 29.0
           comp=Z,3µm,20.0s
H43A   Windswept, Lux    51.01  65  eP    P       03 49 28.6 -1.0
           comp=Z,325nm,0.9s
H43A                               LR     LR
           comp=Z,2µm,19.0s
H43A   Windswept, Lux    51.01  65   P    P       03 49 28.4 -1.1
           baz=308,SNR=77
N40A   Mertquake, Sal    51.04  71   P    P       03 49 28.3 -1.5
           baz=309,SNR=15
SUMG   Summit            51.13  18  eP    P       03 49 31.7 +1.2
           comp=Z,836nm,1.1s
SUMG   Summit            51.13  18  eP    P       03 49 31.7 +1.2
SUMG                               pmax   pmax
           comp=Z,836nm,1.1s
SUMG   Summit            51.13  18⇓iP     P       03 49 32.4 +1.9
           comp=Z,2µm,1.1s
SUMG                              i               03 51 29.2
           comp=Z,5µm,18.0s
TX31   Lajitas Ar. Si    51.26  90  eP    P       03 49 31.1 -0.6
           comp=Z,174nm,1.3s
TXAR   Lajitas Array     51.26  90   P    P       03 49 31.8 +0.1
           comp=Z,34nm,0.6s,baz=303,slow=5.3,SNR=197
TXAR                               PcP    PcP     03 50 46.5 -0.3
           comp=Z,24nm,0.9s,baz=289,slow=2.8,SNR=4.5
TXAR                               LR     LR      04 10 29.7
           comp=Z,823nm,18.2s,baz=0.0,slow=35
M41A   Milan             51.34  70   P    P       03 49 30.6 -1.5
           baz=309,SNR=103
IRK    Irkutsk           51.38 308  eP    P       03 49 32.9 +0.7
IRK                                 e             03 56 48.0
IRK                                 e             03 56 51.0
IRK                                pmax   pmax
           comp=Z,875nm,1.8s
L42A   Oliver, Polo      51.46  68  eP    P       03 49 31.1 -1.8
           comp=Z,220nm,0.9s
L42A                               LR     LR
           comp=Z,4µm,18.0s
L42A   Oliver, Polo      51.46  68   P    P       03 49 31.0 -1.8
           baz=309,SNR=42
ABTX   Abilene, Hawle    51.51  84  eP    P       03 49 33.3 -0.2
           comp=Z,173nm,1.1s
ABTX                               LR     LR
           comp=Z,2µm,18.0s
ABTX   Abilene, Hawle    51.51  84   P    P       03 49 33.2 -0.3
           baz=313,SNR=46
F45A   CMU Biological    51.53  62   P    P       03 49 32.3 -1.1
           baz=308,SNR=54
N41A   Harden Midland    51.58  70  eP    P       03 49 32.5 -1.3
           comp=Z,214nm,1.0s
N41A                               LR     LR
           comp=Z,3µm,18.0s
N41A   Harden Midland    51.58  70   P    P       03 49 32.3 -1.5
           baz=310,SNR=17
D46A   Sault St. Mari    51.60  60   P    P       03 49 33.0 -0.9
           baz=308,SNR=77
TUL1   Leonard           51.70  78  eP    P       03 49 34.0 -0.8
           comp=Z,107nm,1.0s
TUL1                               LR     LR
           comp=Z,1µm,18.0s
TUL1   Leonard           51.70  78   P    P       03 49 34.0 -0.8
           baz=311,SNR=20
HSPB   Hornsund (broa    51.72 359  eP    P       03 49 36.4 +2.0
HSPB                               LMZ    LR      04 05 58.1
           comp=Z,16µm,37.5s
HSPB   Hornsund (broa    51.72 359  eP    P       03 49 36.2 +1.8
E46A   Sault Ste Mari    51.77  61  eP    P       03 49 33.8 -1.4
           comp=Z,327nm,1.1s
E46A                               LR     LR
           comp=Z,2µm,20.0s
E46A   Sault Ste Mari    51.77  61   P    P       03 49 34.4 -0.8
           baz=308,SNR=120
K43A   Burlington        51.79  67  eP    P       03 49 33.9 -1.5
           comp=Z,267nm,1.0s
K43A                               LR     LR
           comp=Z,5µm,18.0s
K43A   Burlington        51.79  67   P    P       03 49 33.6 -1.8
           baz=309,SNR=32
G45A   Suttons Bay       51.85  63  eP    P       03 49 34.7 -1.1
           comp=Z,124nm,1.0s
G45A                               LR     LR
           comp=Z,2µm,19.0s
G45A   Suttons Bay       51.85  63   P    P       03 49 34.6 -1.2
           baz=308,SNR=28
H45A   Beulah            51.89  64   P    P       03 49 34.7 -1.4
           baz=309,SNR=6.9
HOPEN  Hopen             51.99 356  eP    P       03 49 38.5 +2.0
D47A   Chapleau          52.00  60   P    P       03 49 35.8 -1.1
           baz=308,SNR=65
TLY    Talaya            52.03 308  eP    P       03 49 37.9 +0.8
           comp=Z,373nm,1.0s
TLY    Talaya            52.03 308d iP    P       03 49 37.8 +0.7
TLY                                 e             03 50 43.9
TLY                                 e             03 51 41.2
TLY                                 eS    S       03 56 57.3 -2.9
TLY                                 e             03 59 30.7
TLY                                pmax   pmax
           comp=Z,1µm,1.1s
G46A   Petoskey          52.12  62   P    P       03 49 36.8 -1.0
           baz=309,SNR=35
I45A   Fountain          52.15  64  eP    P       03 49 37.0 -1.0
           comp=Z,216nm,1.0s
I45A                               LR     LR
           comp=Z,2µm,19.0s
I45A   Fountain          52.15  64   P    P       03 49 36.9 -1.2
           baz=309,SNR=19
M43A   Waltham Townsh    52.23  69   P    P       03 49 36.9 -1.7
           baz=310,SNR=25
E47A   Iron Bridge       52.28  60   P    P       03 49 38.0 -1.0
           baz=308,SNR=108
L44A   Lake County Fo    52.36  67   P    P       03 49 38.1 -1.6
           baz=310,SNR=15
H46A   Fife Lake         52.41  63   P    P       03 49 38.8 -1.2
           baz=309,SNR=14
N43A   Stutzman Famil    52.42  69   P    P       03 49 38.6 -1.5
           baz=310,SNR=15
J45A   Montague          52.44  65  eP    P       03 49 39.7 -0.5
           comp=Z,227nm,1.0s
J45A                               LR     LR
           comp=Z,3µm,20.0s
J45A   Montague          52.44  65   P    P       03 49 38.6 -1.6
           baz=309,SNR=6.0
BJI    Beijing           52.46 289   P    P       03 49 40.8 +0.4
BJI                                  S    S       03 57 06.2  0.0
BJI                                pmax   pmax
           comp=Z,10.0nm,0.9s
BJI                                LR     LR
           comp=Z,1µm,25.9s
BJI                                LR     LR
           comp=Z,740nm,25.3s
SFJD   Kangerlussuaq     52.46  26  eP    P       03 49 41.6 +1.5
           comp=Z,290nm,1.0s
SFJD                               LR     LR
           comp=Z,1µm,20.0s
SFJD   Kangerlussuaq     52.46  26⇓iP     P       03 49 41.4 +1.4
SFJD                               pmax   pmax
           comp=Z,230nm,1.0s
SFJD                               MLR    MLR
           comp=Z,1µm,16.0s
SFJD   Kangerlussuaq     52.46  26⇓iP     P       03 49 41.4 +1.4
           comp=Z,228nm,1.0s
           comp=Z,1µm,16.0s
BJT    Baijiatuau        52.47 289  eP    P       03 49 41.2 +0.7
           comp=Z,18nm,0.8s
BJT                                LR     LR
           comp=Z,2µm,20.0s
BJT    Baijiatuau        52.47 289  eP    P       03 49 41.2 +0.7
BJT                                pmax   pmax
           comp=Z,18nm,0.8s
BJT                                MLR    MLR
           comp=Z,2µm,20.0s
GLMI   Grayling          52.56  63  eP    P       03 49 40.2 -0.9
           comp=Z,354nm,1.1s
GLMI                                ePcP  PcP     03 50 50.9 -0.3
GLMI                               LR     LR
           comp=Z,1µm,18.0s
GLMI   Grayling          52.56  63   P    P       03 49 40.2 -0.9
           baz=309,SNR=34
HHAR   Hobbs             52.59  77  eP    P       03 49 39.7 -1.7
           comp=Z,89nm,1.1s
HHAR                               LR     LR
           comp=Z,1µm,21.0s
HDIL   Hopedale          52.59  70  eP    P       03 49 40.1 -1.3
           comp=Z,435nm,1.0s
HDIL                               LR     LR
           comp=Z,2µm,20.0s
HDIL   Hopedale          52.59  70   P    P       03 49 40.1 -1.3
           baz=310,SNR=68
D48A   Paudash Townsh    52.62  59   P    P       03 49 40.4 -1.1
           baz=309,SNR=52
ULN    Ulaanbaatar       52.64 302  eP    P       03 49 41.5 -0.3
           comp=Z,122nm,1.0s
ULN                                LR     LR
           comp=Z,2µm,20.0s
ULN    Ulaanbaatar       52.64 302d iP    P       03 49 42.1 +0.2
ULN                                pmax   pmax
           comp=Z,243nm,1.7s
I46A   Reed City         52.65  64   P    P       03 49 40.7 -1.1
           baz=309,SNR=27
G47A   Hillman           52.76  62   P    P       03 49 41.5 -1.1
           baz=309,SNR=20
M44A   Midewin, Midew    52.79  68  eP    P       03 49 41.8 -1.0
           comp=Z,244nm,1.0s
M44A                               LR     LR
           comp=Z,4µm,18.0s
M44A   Midewin, Midew    52.79  68   P    P       03 49 41.3 -1.5
           baz=310,SNR=16
TARA   Tarawa            52.80 206  eP    P       03 49 45.7 +2.6
           comp=Z,174nm,0.8s
TARA                               LR     LR
           comp=Z,2µm,20.0s
D49A   Beulah Townshi    52.80  58   P    P       03 49 41.8 -1.1
           baz=309,SNR=54
E48A   Lockeyer          52.86  60   P    P       03 49 42.3 -1.0
           baz=309,SNR=79
JCT    Junction City     52.88  86  eP    P       03 49 42.7 -1.0
           comp=Z,165nm,1.0s
JCT                                 ePcP  PcP     03 50 52.4 -0.4
JCT                                LR     LR
           comp=Z,2µm,18.0s
JCT    Junction City     52.88  86   P    P       03 49 42.7 -1.0
           baz=314,SNR=62
J46A   Howard City       52.91  65   P    P       03 49 42.6 -1.1
           baz=310,SNR=27
H47A   Mio               52.93  63   P    P       03 49 42.7 -1.1
           baz=309,SNR=27
PATS   Pohnpei           52.98 225  eP    P       03 49 44.4 -0.1
           comp=Z,124nm,1.1s
SONA0  Songino Array     53.01 303  eP    P       03 49 45.0 +0.5
SONM   Songino Array     53.01 303   P    P       03 49 45.0 +0.5
           comp=Z,99nm,1.1s,baz=53,slow=5.7,SNR=237
SONM                               LR     LR      04 12 02.1
           comp=Z,2µm,21.9s,baz=48,slow=36
ZAK    Zakamensk         53.02 307  eP    P       03 49 45.4 +0.9
ZAK                                 e             03 57 17.1
ZAK                                pmax   pmax
           comp=Z,213nm,1.6s
F48A   Evansville        53.03  61   P    P       03 49 43.6 -0.9
           baz=309,SNR=48
P43A   Skaggs, Pawnee    53.05  71   P    P       03 49 43.4 -1.4
           baz=310,SNR=28
CCM    Cathedral Cave    53.05  73  eP    P       03 49 42.4 -2.4
           comp=Z,95nm,1.1s
CCM                                LR     LR
           comp=Z,2µm,20.0s
CCM    Cathedral Cave    53.05  73  eP    P       03 49 42.4 -2.4
CCM                                pmax   pmax
           comp=Z,95nm,1.1s
CCM                                MLR    MLR
           comp=Z,2µm,20.0s
CCM    Cathedral Cave    53.05  73   P    P       03 49 42.2 -2.6
           baz=311
N44A   Piper City        53.11  69   P    P       03 49 43.8 -1.4
           baz=310,SNR=19
I47A   Gladwin           53.13  63  eP    P       03 49 44.8 -0.5
           comp=Z,203nm,1.1s
I47A                               LR     LR
           comp=Z,2µm,18.0s
I47A   Gladwin           53.13  63   P    P       03 49 44.3 -1.0
           baz=310,SNR=32
MATQ   Matagami          53.18  54   P    P       03 49 44.2 -1.4
           baz=309,SNR=54
U40A   Yellville         53.20  76   P    P       03 49 43.9 -2.0
           baz=312,SNR=69
M45A   Boilermakers S    53.24  68   P    P       03 49 44.6 -1.5
           baz=310
K46A   Dorr              53.26  65   P    P       03 49 44.7 -1.6
           baz=310,SNR=37
SLM    Saint Louis       53.27  72  eP    P       03 49 45.2 -1.2
           comp=Z,139nm,1.0s
SLM                                LR     LR
           comp=Z,2µm,19.0s
SLM    Saint Louis       53.27  72  eP    P       03 49 45.3 -1.2
SLM                                pmax   pmax
           comp=Z,139nm,1.0s
SLM                                MLR    MLR
           comp=Z,2µm,19.0s
WHTX   Lake Whitney,     53.30  83  eP    P       03 49 46.6 -0.1
           comp=Z,339nm,1.0s
WHTX                               LR     LR
           comp=Z,2µm,19.0s
WHTX   Lake Whitney,     53.30  83   P    P       03 49 46.6 -0.1
           baz=313,SNR=100
O44A   Mansfield         53.33  69   P    P       03 49 45.3 -1.6
           baz=310,SNR=28
MOY    Mondy             53.34 309  eP    P       03 49 47.5 +0.6
MOY                                 e             03 57 20.0
MOY                                pmax   pmax
           comp=Z,355nm,1.7s
H48A   Harrisville       53.35  62  eP    P       03 49 46.4 -0.6
           comp=Z,163nm,1.0s
H48A                               LR     LR
           comp=Z,2µm,20.0s
H48A   Harrisville       53.35  62   P    P       03 49 46.0 -1.0
           baz=310,SNR=22
F49A   Sandfield         53.38  60   P    P       03 49 46.2 -0.9
           baz=309,SNR=113
L46A   Eue Claire        53.39  66  eP    P       03 49 46.2 -1.0
           comp=Z,192nm,1.0s
L46A                               LR     LR
           comp=Z,4µm,18.0s
L46A   Eue Claire        53.39  66   P    P       03 49 45.7 -1.6
           baz=310,SNR=12
W39A   Magazine          53.40  78  eP    P       03 49 46.3 -1.1
           comp=Z,129nm,1.2s
W39A                               LR     LR
           comp=Z,1µm,18.0s
W39A   Magazine          53.40  78   P    P       03 49 46.3 -1.1
           baz=312,SNR=37
N45A   Kentland          53.44  68   P    P       03 49 46.4 -1.2
           baz=310,SNR=23
J47A   Sunmer            53.45  64  eP    P       03 49 46.5 -1.1
           comp=Z,168nm,1.1s
J47A                               LR     LR
           comp=Z,2µm,19.0s
J47A   Sunmer            53.45  64   P    P       03 49 46.5 -1.1
           baz=310,SNR=25
I48A   Sherman Twp       53.47  63   P    P       03 49 46.6 -1.2
           baz=310,SNR=24
E50A   Wahnapitae        53.67  59   P    P       03 49 48.2 -1.1
           baz=310,SNR=42
O45A   Potomac           53.70  69   P    P       03 49 48.3 -1.2
           baz=311,SNR=41
K47A   Vermontville      53.71  65   P    P       03 49 48.2 -1.3
           baz=310,SNR=54
M46A   Old House Fiel    53.75  67  eP    P       03 49 48.7 -1.2
           comp=Z,140nm,0.9s
M46A                               LR     LR
           comp=Z,5µm,18.0s
M46A   Old House Fiel    53.75  67   P    P       03 49 48.4 -1.5
           baz=310,SNR=12
N46A   Monticello        53.86  68   P    P       03 49 49.2 -1.5
           baz=311,SNR=17
FCAR   Ozark Folk Cen    53.95  76  eP    P       03 49 49.1 -2.3
           comp=Z,109nm,1.0s
FCAR                               LR     LR
           comp=Z,1µm,20.0s
LSQQ   Lebel-sur-Quev    53.96  54   P    P       03 49 49.8 -1.5
           baz=310
MIAR   Mount Ida         53.96  78  eP    P       03 49 50.7 -0.9
           comp=Z,120nm,1.1s
MIAR                               LR     LR
           comp=Z,1µm,22.0s
MIAR   Mount Ida         53.96  78  eP    P       03 49 50.7 -0.9
MIAR                               pmax   pmax
           comp=Z,120nm,1.1s
MIAR                               MLR    MLR
           comp=Z,1µm,22.0s
MIAR   Mount Ida         53.96  78   P    P       03 49 50.7 -0.9
           baz=312,SNR=63
SFIN   Lafayette         53.98  68  eP    P       03 49 50.5 -1.1
           comp=Z,152nm,0.9s
SFIN                               LR     LR
           comp=Z,4µm,19.0s
SFIN   Lafayette         53.98  68   P    P       03 49 50.4 -1.1
           baz=311,SNR=41
J48A   Bridge Port       53.99  64   PFAKE            03 50 00.0 +8.4
J48A                               LR     LR
           comp=Z,2µm,20.0s
J48A   Bridge Port       53.99  64   P    P       03 49 50.3 -1.3
           baz=310,SNR=20
TOBO   Tobermory, Bru    54.01  61   P    P       03 49 50.8 -0.9
           baz=310,SNR=51
GUMO   Guam              54.03 244   LR   LR      04 07 24.7
           comp=Z,651nm,21.9s,baz=64,slow=30
GUMO   Guam              54.03 244  eP    P       03 49 51.6 -0.6
           comp=Z,185nm,0.8s
GUMO                               LR     LR
           comp=Z,1µm,20.0s
GUMO   Guam              54.03 244  eP    P       03 49 51.6 -0.6
GUMO                               pmax   pmax
           comp=Z,185nm,0.8s
GUMO                               MLR    MLR
           comp=Z,1µm,20.0s
L47A   Sherwood          54.04  66   P    P       03 49 50.4 -1.7
           baz=310,SNR=44
435B   Jarrell           54.05  84  eP    P       03 49 51.8 -0.4
           comp=Z,134nm,1.0s
435B                               LR     LR
           comp=Z,2µm,21.0s
435B   Jarrell           54.05  84   P    P       03 49 51.8 -0.4
           baz=314,SNR=18
I49A   Point Hope        54.11  62  eP    P       03 49 52.5  0.0
           comp=Z,164nm,0.9s
I49A                               LR     LR
           comp=Z,2µm,18.0s
I49A   Point Hope        54.11  62   P    P       03 49 51.3 -1.2
           baz=310,SNR=12
K48A   Perry             54.12  64   P    P       03 49 51.2 -1.4
           baz=310,SNR=14
P45A   Graceland, Par    54.16  70  eP    P       03 49 51.6 -1.4
           comp=Z,215nm,1.1s
P45A                               LR     LR
           comp=Z,2µm,18.0s
P45A   Graceland, Par    54.16  70   P    P       03 49 51.5 -1.4
           baz=311,SNR=37
BJO1   Bjornoya          54.18 358  eP    P       03 49 54.3 +1.8
M47A   Cromwell          54.20  67   P    P       03 49 51.6 -1.6
           baz=311,SNR=19
WHAR   Wooly Hollow      54.25  76  eP    P       03 49 52.1 -1.5
           comp=Z,35nm,1.1s
WHAR                               LR     LR
           comp=Z,1µm,19.0s
KNTN   Kanton            54.26 186  eP    P       03 49 54.2 +0.4
           comp=Z,202nm,1.0s
E51A   G1948 Merrick     54.26  58   P    P       03 49 52.5 -1.1
           baz=310,SNR=115
J49A   Marlette          54.31  63   P    P       03 49 52.8 -1.1
           baz=310,SNR=28
VLDQ   Val d'Or          54.32  56  eP    P       03 49 51.4 -2.5
           comp=Z,133nm,1.1s
VLDQ                               LR     LR
           comp=Z,3µm,18.0s
Q45A   Warren Harvey,    54.33  70   P    P       03 49 52.9 -1.3
           baz=311,SNR=94
W41B   Gary Mavity, V    54.35  77  eP    P       03 49 52.6 -1.7
           comp=Z,49nm,1.1s
W41B                               LR     LR
           comp=Z,1µm,18.0s
W41B   Gary Mavity, V    54.35  77   P    P       03 49 52.6 -1.7
           baz=312,SNR=22
PBMO   Poplar Bluff      54.38  74  eP    P       03 49 52.4 -2.1
           comp=Z,102nm,1.4s
PBMO                               LR     LR
           comp=Z,2µm,19.0s
TIA    Tai'an            54.39 285   P    P       03 49 54.6 -0.1
TIA                                pmax   pmax
           comp=Z,38nm,1.1s
P46A   Rosedale          54.42  69   P    P       03 49 53.0 -1.8
           baz=311
F51A   Arnstein          54.42  59   P    P       03 49 53.4 -1.3
           baz=310,SNR=38
X40A   Basin Creek Fa    54.45  78  eP    P       03 49 53.9 -1.2
           comp=Z,59nm,1.1s
X40A                               LR     LR
           comp=Z,1µm,19.0s
X40A   Basin Creek Fa    54.45  78   P    P       03 49 53.9 -1.2
           baz=313,SNR=24
N47A   Urbana            54.47  67   P    P       03 49 53.2 -1.9
           baz=311,SNR=63
OLIL   Olney             54.47  71  eP    P       03 49 53.9 -1.3
           comp=Z,347nm,1.0s
OLIL                               LR     LR
           comp=Z,2µm,21.0s
S44A   Carbondale        54.48  72   P    P       03 49 53.3 -2.0
           baz=312,SNR=23
L48A   N Adams           54.50  65   P    P       03 49 53.9 -1.5
           baz=311,SNR=50
K49A   Clarkson          54.51  64   P    P       03 49 54.4 -1.0
           baz=311,SNR=20
D52A   ZEK Kipawa Sen    54.55  57   P    P       03 49 54.6 -1.0
           baz=310,SNR=92
UALR   University of     54.56  77  eP    P       03 49 54.9 -1.0
           comp=Z,97nm,1.4s
UALR                               LR     LR
           comp=Z,2µm,18.0s
BMRO   Meriville Lake    54.58  61   P    P       03 49 55.4 -0.5
           baz=310,SNR=85
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O47A	**Sheridan**	54.61	68	P	P	03 49 54.0	-2.3
	baz=311,SNR=27						
HHC	**Hu-ho-hao-te**	54.62	293	P	P	03 49 57.3	+0.9
HHC				S	S	03 57 37.1	+1.3
HHC				ScS	ScS	03 59 45.0	-0.4
HHC				SS	SS	04 01 20.0	+2.0
HHC				pmax	pmax		
	comp=Z,31nm,1.2s						
HHC				pmax	pmax		
	comp=Z,130nm,6.7s						
HHC				LR	LR		
	comp=Z,3µm,15.6s						
HHC				LR	LR		
	comp=Z,2µm,16.1s						
KLBO	**Killbear Provi**	54.63	60	P	P	03 49 55.5	-0.8
	baz=310,SNR=73						
833A	**Chaparral WMA,**	54.63	88	*e*P	P	03 49 56.4	-0.2
	comp=Z,216nm,1.0s						
833A				*e*PcP	PcP	03 50 58.9	-0.5
833A				LR	LR		
	comp=Z,2µm,19.0s						
833A	**Chaparral WMA,**	54.63	88	P	P	03 49 56.3	-0.2
	baz=315,SNR=43						
M48A	**Edgerton**	54.64	66	*e*P	P	03 49 55.1	-1.2
	comp=Z,358nm,1.0s						
M48A				LR	LR		
	comp=Z,3µm,19.0s						
M48A	**Edgerton**	54.64	66	P	P	03 49 54.7	-1.7
	baz=311,SNR=9.8						
R45A	**Skylar, Fairfi**	54.66	71	P	P	03 49 55.1	-1.5
	baz=312,SNR=50						
BRCO	**Bruce Peninsul**	54.68	61	P	P	03 49 55.9	-0.7
	baz=310,SNR=20						
AAM	**Ann Arbor**	54.71	65	*e*P	P	03 49 55.7	-1.2
	comp=Z,125nm,1.2s						
AAM				LR	LR		
	comp=Z,2µm,20.0s						
AAM	**Ann Arbor**	54.71	65	*e*P	P	03 49 55.7	-1.2
AAM				pmax	pmax		
	comp=Z,125nm,1.2s						
AAM				MLR	MLR		
	comp=Z,2µm,20.0s						
AAM	**Ann Arbor**	54.71	65	P	P	03 49 55.5	-1.3
	baz=311,SNR=9.1						
BASO	**Ashfield**	54.71	62	P	P	03 49 56.4	-0.5
	baz=310,SNR=54						
CHGQ	**Chibougamau**	54.72	52	P	P	03 49 54.9	-1.9
	baz=310,SNR=46						
Q46A	**CEJHS Indians,**	54.72	70	P	P	03 49 55.0	-2.0
	baz=311						
L49A	**Milan**	54.77	65	P	P	03 49 56.3	-1.0
	baz=311,SNR=30						
F52A	**Sundridge**	54.83	59	P	P	03 49 56.7	-1.0
	baz=310,SNR=111						
WLAR	**White Oak Lake**	54.83	78	*e*P	P	03 49 57.3	-0.5
	comp=Z,327nm,1.1s						
WLAR				LR	LR		
	comp=Z,1µm,19.0s						
D53A	**Lac Vacive, Po**	54.85	57	*e*P	P	03 49 57.0	-0.9
	comp=Z,183nm,1.0s						
D53A				LR	LR		
	comp=Z,2µm,19.0s						
D53A	**Lac Vacive, Po**	54.85	57	P	P	03 49 56.9	-0.9
	baz=310,SNR=89						
PARMO	**Parma**	54.86	74	*e*P	P	03 49 56.7	-1.3
	comp=Z,354nm,1.1s						
PARMO				LR	LR		
	comp=Z,2µm,19.0s						
E52A	**Mattawa**	54.86	58	P	P	03 49 56.9	-1.1
	baz=310,SNR=91						
N48A	**Decatur**	54.87	67	P	P	03 49 56.1	-2.0
	baz=311,SNR=52						
BWLO	**Walkerton**	54.93	61	P	P	03 49 57.8	-0.6
	baz=311,SNR=49						
K50A	**Casco**	54.98	63	*e*P	P	03 49 57.8	-1.0
	comp=Z,131nm,1.2s						
K50A				LR	LR		
	comp=Z,2µm,20.0s						
K50A	**Casco**	54.98	63	P	P	03 49 57.4	-1.5
	baz=311,SNR=8.8						
SCHQ	**Schefferville**	55.01	44	P	P	03 49 58.3	-0.6
	comp=Z,112nm,1.0s,baz=323,slow=7.7,SNR=43						
SCHQ				LR	LR	04 15 30.1	
	comp=Z,2µm,18.5s,baz=320,slow=38						
SCHQ	**Schefferville**	55.01	44	*e*P	P	03 49 58.4	-0.6
	comp=Z,143nm,1.0s						
SCHQ				LR	LR		
	comp=Z,2µm,18.0s						
BUKO	**Buck Lake**	55.01	59	P	P	03 49 58.1	-0.9
	baz=311,SNR=69						
P47A	**Martinsville**	55.05	69	P	P	03 49 57.6	-1.8
	baz=312,SNR=42						
HBAR	**Harrisburg**	55.06	75	*e*P	P	03 49 58.8	-0.7
	comp=Z,182nm,1.2s						
HBAR				LR	LR		
	comp=Z,1µm,20.0s						
PVMO	**Portageville**	55.06	74	PFAKE		03 50 10.0	+11
PVMO				LR	LR		
	comp=Z,2µm,18.0s						
M49A	**Liberty Center**	55.06	65	P	P	03 49 58.0	-1.4
	baz=311,SNR=76						
BLO	**Bloomington**	55.11	69	*e*P	P	03 49 58.4	-1.4
	comp=Z,212nm,1.0s						
BLO				LR	LR		
	comp=Z,2µm,21.0s						
BLO	**Bloomington**	55.11	69	*e*P	P	03 49 58.4	-1.4
BLO				pmax	pmax		
	comp=Z,212nm,1.0s						
BLO				MLR	MLR		
	comp=Z,2µm,21.0s						
R46A	**Gibon Southern**	55.16	71	P	P	03 49 58.7	-1.5
	baz=312,SNR=20						
GNAR	**Gosnell**	55.17	74	*e*P	P	03 49 59.6	-0.7
	comp=Z,136nm,1.2s						
GNAR				LR	LR		
	comp=Z,2µm,20.0s						
NATX	**Nacogdoches**	55.19	81	*e*P	P	03 50 00.5	0.0
	comp=Z,200nm,1.0s						
NATX				LR	LR		
	comp=Z,3µm,19.0s						
NATX	**Nacogdoches**	55.19	81	P	P	03 50 00.2	-0.2
	baz=314,SNR=12						
O48A	**Farmland**	55.19	67	P	P	03 49 58.2	-2.2
	baz=311,SNR=97						
I51A	**Listowel**	55.20	62	P	P	03 49 59.9	-0.4
	baz=311,SNR=107						
USIN	**University of**	55.24	71	*e*P	P	03 49 59.3	-1.4
	comp=Z,429nm,1.1s						
USIN				LR	LR		
	comp=Z,2µm,19.0s						
H52A	**Wyevale**	55.27	60	P	P	03 49 59.8	-1.0
	baz=311,SNR=30						
T45A	**Paducah**	55.28	72	*e*P	P	03 50 00.6	-0.5
	comp=Z,318nm,1.2s						
T45A				LR	LR		
	comp=Z,2µm,19.0s						
T45A	**Paducah**	55.28	72	P	P	03 49 59.5	-1.6
	baz=312,SNR=7.5						
Z41A	**Richland Creek**	55.31	79	*e*P	P	03 50 01.1	-0.2
	comp=Z,93nm,1.3s						
Z41A				LR	LR		
	comp=Z,2µm,18.0s						
Z41A	**Richland Creek**	55.31	79	P	P	03 50 00.5	-0.8
	baz=313,SNR=7.5						
N49A	**Columbus Grove**	55.31	66	*e*P	P	03 49 59.6	-1.7
	comp=Z,138nm,0.9s						
N49A				LR	LR		
	comp=Z,4µm,18.0s						
N49A	**Columbus Grove**	55.31	66	P	P	03 49 59.5	-1.8
	baz=311,SNR=33						
Q47A	**Bedord North L**	55.32	69	P	P	03 49 59.7	-1.6
	baz=312,SNR=34						
E53A	**Dumoine, Ponti**	55.33	57	P	P	03 50 00.3	-1.0
	baz=311,SNR=174						
D54A	**Lac Fusel, La**	55.35	56	P	P	03 50 00.1	-1.3
	baz=311,SNR=50						
L50A	**Kingsville**	55.35	64	P	P	03 49 60.0	-1.6
	baz=311,SNR=7.8						
SSE	**Sheshan**	55.38	278	P	P	03 50 02.3	+0.5
SSE				S	S	03 57 46.4	+0.5
SSE				pmax	pmax		
	comp=Z,46nm,1.1s						
SSE				pmax	pmax		
	comp=Z,450nm,3.5s						
SSE				LR	LR		
	comp=Z,450nm,18.2s						
SSE				LR	LR		
	comp=Z,300nm,17.7s						
S46A	**Don Dixon Farm**	55.39	71	P	P	03 50 00.1	-1.8
	baz=312,SNR=25						
ALGO	**Algonquin Park**	55.40	58	P	P	03 50 00.7	-1.1
	baz=311,SNR=127						
GLAT	**Glass**	55.40	74	*e*P	P	03 50 01.7	-0.2
	comp=Z,210nm,1.2s						
GLAT				LR	LR		
	comp=Z,2µm,19.0s						
I52A	**Shelburne**	55.49	61	P	P	03 50 01.8	-0.7
	baz=311,SNR=26						
CCAR	**Cane Creek**	55.49	77	*e*P	P	03 50 02.6	+0.1
	comp=Z,353nm,1.1s						
E54A	**Lac Daplat, Po**	55.54	57	P	P	03 50 01.7	-1.1
	baz=311,SNR=178						
P48A	**Milroy**	55.56	68	*e*P	P	03 50 00.9	-2.2
	comp=Z,171nm,1.1s						
P48A				LR	LR		
	comp=Z,4µm,18.0s						
P48A	**Milroy**	55.56	68	P	P	03 50 00.7	-2.3
	baz=312,SNR=58						
SADO	**Sadowa**	55.59	60	*e*P	P	03 50 01.9	-1.3
	comp=Z,108nm,1.0s						
SADO				LR	LR		
	comp=Z,1µm,20.0s						
UTMT	**University of**	55.61	73	*e*P	P	03 50 02.6	-0.8
	comp=Z,276nm,1.0s						
HALT	**Halls**	55.61	74	*e*P	P	03 50 03.1	-0.4
	comp=Z,407nm,1.3s						
HALT				LR	LR		
	comp=Z,2µm,20.0s						
X43A	**Marvell**	55.62	76	*e*P	P	03 50 02.6	-1.0
	comp=Z,192nm,0.9s						
X43A				LR	LR		
	comp=Z,1µm,19.0s						
X43A	**Marvell**	55.62	76	P	P	03 50 02.3	-1.2
	baz=313,SNR=32						
K51A	**Iona Station**	55.63	63	P	P	03 50 02.5	-1.0
	baz=311,SNR=15						
G53A	**Haliburton**	55.64	59	P	P	03 50 02.7	-0.8
	baz=311,SNR=85						
M50A	**Fremont**	55.64	65	*e*P	P	03 50 02.5	-1.1
	comp=Z,74nm,1.0s						
M50A				LR	LR		
	comp=Z,3µm,18.0s						
M50A	**Fremont**	55.64	65	P	P	03 50 01.9	-1.7
	baz=311,SNR=7.4						
PLIO	**Pelee Island,**	55.65	64	P	P	03 50 02.1	-1.5
	baz=311,SNR=8.4						
BTO	**Baotou**	55.66	294	*e*P	P	03 50 02.6	-1.3
R47A	**Wooly Knot Far**	55.69	70	P	P	03 50 02.3	-1.7
	baz=312,SNR=29						
SCO	**Scoresbysund**	55.69	13	*e*P	P	03 50 05.1	+1.5
	comp=Z,218nm,1.1s						
SCO				LR	LR		
	comp=Z,2µm,18.0s						
SCO	**Scoresbysund**	55.69	13	⇓*i*P	P	03 50 04.9	+1.4
SCO				pmax	pmax		
	comp=Z,220nm,1.1s						
SCO				MLR	MLR		
	comp=Z,2µm,18.0s						
SCO	**Scoresbysund**	55.69	13	⇓*i*P	P	03 50 04.9	+1.4
	comp=Z,215nm,1.1s						
	comp=Z,2µm,18.0s						
O49A	**Covington**	55.70	67	*e*P	P	03 50 02.2	-1.9
	comp=Z,159nm,0.9s						
O49A				LR	LR		
	comp=Z,5µm,18.0s						
O49A	**Covington**	55.70	67	P	P	03 50 02.1	-1.9
	baz=312,SNR=29						
HKT	**Hockley**	55.71	84	*e*P	P	03 50 04.2	0.0
	comp=Z,90nm,1.3s						
HKT				LR	LR		
	comp=Z,2µm,18.0s						
HKT	**Hockley**	55.71	84	*i* P	P	03 50 03.9	-0.3
HKT				pmax	pmax		
	comp=Z,63nm,1.2s						
T46A	**Princeton**	55.72	72	P	P	03 50 02.8	-1.4
	baz=312,SNR=66						
Q48A	**North Vernon**	55.73	69	P	P	03 50 02.3	-2.0
	baz=312,SNR=33						
MET	**Memphis--Engin**	55.79	75	*e*P	P	03 50 04.5	-0.2
	comp=Z,267nm,1.0s						
MET				LR	LR		
	comp=Z,1µm,21.0s						
ACTO	**Acton**	55.85	61	P	P	03 50 04.5	-0.6
	baz=311,SNR=24						
J52A	**Paris**	55.87	62	P	P	03 50 04.3	-0.9
	baz=311,SNR=43						
WCI	**Wyandotte Cave**	55.87	70	*e*P	P	03 50 04.1	-1.2
	comp=Z,163nm,1.0s						
WCI				LR	LR		
	comp=Z,3µm,20.0s						
WCI	**Wyandotte Cave**	55.87	70	*e*P	P	03 50 04.1	-1.2
WCI				pmax	pmax		
	comp=Z,163nm,1.0s						
WCI				MLR	MLR		
	comp=Z,3µm,20.0s						
WCI	**Wyandotte Cave**	55.87	70	P	P	03 50 03.7	-1.6
	baz=312						
P49A	**Miami Univ. Ec**	55.92	68	P	P	03 50 03.4	-2.2
	baz=312,SNR=48						
S47A	**Hartford**	55.95	71	P	P	03 50 04.2	-1.6
	baz=312,SNR=24						
I53A	**Kortright Cn E**	55.97	61	P	P	03 50 05.0	-0.9
	baz=311,SNR=6.6						
N50A	**Nevada**	56.00	66	P	P	03 50 05.0	-1.2
	baz=312,SNR=66						
R48A	**Northridge Ran**	56.00	69	P	P	03 50 04.5	-1.7
	baz=312,SNR=16						
PEMO	**Pembroke**	56.01	58	P	P	03 50 05.1	-1.0
	baz=311,SNR=179						
U46A	**Springville**	56.01	73	P	P	03 50 05.0	-1.3
	baz=313,SNR=45						
K52A	**Tillsonburg**	56.04	62	P	P	03 50 05.5	-1.0
	baz=312,SNR=44						
BANO	**Bancroft**	56.08	59	P	P	03 50 06.1	-0.6
	baz=311,SNR=90						
KVTX	**Kingsville**	56.12	87	*e*P	P	03 50 08.6	+1.4
	comp=Z,226nm,1.0s						
KVTX				LR	LR		
	comp=Z,2µm,18.0s						
O50A	**Cable**	56.14	66	P	P	03 50 05.7	-1.6
	baz=312,SNR=71						
NJ2	**Nanjing**	56.16	280	*e*P	P	03 50 06.4	-1.0
NJ2				S	S	03 57 55.4	-0.9
NJ2				pmax	pmax		
	comp=Z,35nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,630nm,5.0s						
NJ2				LR	LR		
	comp=Z,2µm,19.4s						
NJ2				LR	LR		
	comp=Z,1µm,18.0s						
NJ2				LR	LR		
	comp=Z,1µm,23.7s						
PKRO	**Pickering**	56.16	60	P	P	03 50 06.6	-0.7
	baz=312,SNR=33						
Q49A	**Aurora**	56.17	68	P	P	03 50 05.2	-2.2
	baz=312,SNR=22						
M51A	**Elyria**	56.17	65	P	P	03 50 05.6	-1.8
	baz=312,SNR=13						
TIY	**Taiyuan**	56.18	290	*e*P	P	03 50 08.4	+0.7
TIY				S	S	03 58 00.7	+4.0
TIY				SS	SS	04 01 42.2	-0.5
TIY				pmax	pmax		
	comp=Z,670nm,4.4s						
TIY				LR	LR		
	comp=Z,1µm,16.0s						
TIY				LR	LR		
	comp=Z,720nm,14.1s						
TIY				LR	LR		
	comp=Z,2µm,21.4s						
T47A	**Sharon Grove**	56.22	71	*e*P	P	03 50 06.5	-1.3
	comp=Z,234nm,1.0s						
T47A				LR	LR		
	comp=Z,2µm,20.0s						
T47A	**Sharon Grove**	56.22	71	P	P	03 50 06.5	-1.3
	baz=312,SNR=104						
TORO	**Toronto--Lesli**	56.24	61	P	P	03 50 06.8	-1.0
	baz=312						
TYNO	**Tyneside**	56.29	62	P	P	03 50 07.3	-0.9
	baz=312,SNR=44						
N51A	**Ashland**	56.34	65	*e*P	P	03 50 07.0	-1.7
	comp=Z,163nm,1.0s						
N51A				LR	LR		
	comp=Z,3µm,18.0s						
N51A	**Ashland**	56.34	65	P	P	03 50 07.0	-1.7
	baz=312,SNR=21						
WVT	**Waverly**	56.37	73	*e*P	P	03 50 07.6	-1.3
	comp=Z,217nm,1.1s						
WVT				LR	LR		
	comp=Z,2µm,18.0s						
WVT	**Waverly**	56.37	73	*e*P	P	03 50 07.6	-1.3
WVT				pmax	pmax		
	comp=Z,217nm,1.1s						
WVT				MLR	MLR		
	comp=Z,2µm,18.0s						
F55A	**Otter Lake**	56.37	57	P	P	03 50 07.7	-1.1
	baz=312,SNR=44						
S48A	**Wiedeman Farm,**	56.39	70	P	P	03 50 07.2	-1.8
	baz=312,SNR=44						
P50A	**Jamestown**	56.40	67	P	P	03 50 07.3	-1.8
	baz=312,SNR=113						
DRWO	**Darlington Wes**	56.40	60	P	P	03 50 08.5	-0.5
	baz=312,SNR=21						
DRCO	**St. Marys Ceme**	56.41	60	P	P	03 50 08.7	-0.4
	baz=312,SNR=7.0						
V46A	**Holladay**	56.42	73	P	P	03 50 07.9	-1.4
	baz=313,SNR=85						
ACSO	**Alum Creek Sta**	56.45	66	*e*P	P	03 50 08.0	-1.4
	comp=Z,131nm,1.1s						
ACSO				LR	LR		
	comp=Z,3µm,19.0s						
ACSO	**Alum Creek Sta**	56.45	66	P	P	03 50 07.8	-1.7
	baz=312,SNR=28						
U47A	**Clarksville**	56.48	72	P	P	03 50 08.2	-1.4
	baz=313,SNR=36						
R49A	**Shelbyville**	56.48	69	*e*P	P	03 50 08.1	-1.6
	comp=Z,55nm,1.0s						
R49A				LR	LR		
	comp=Z,3µm,18.0s						
R49A	**Shelbyville**	56.48	69	P	P	03 50 08.0	-1.7
	baz=312,SNR=17						
M52A	**Chesterland**	56.50	64	*e*P	P	03 50 08.4	-1.4
	comp=Z,151nm,1.0s						
M52A				LR	LR		
	comp=Z,2µm,19.0s						
M52A	**Chesterland**	56.50	64	P	P	03 50 08.4	-1.4
	baz=312,SNR=14						
PLVO	**Plevna**	56.52	58	*e*P	P	03 50 09.1	-0.7
	comp=Z,291nm,1.1s						
PLVO				LR	LR		
	comp=Z,1µm,20.0s						
PLVO	**Plevna**	56.52	58	P	P	03 50 09.2	-0.6
	baz=312,SNR=107						
OXF	**Oxford**	56.52	75	*e*P	P	03 50 08.7	-1.3
	comp=Z,608nm,1.0s						
OXF				LR	LR		
	comp=Z,2µm,19.0s						
OXF	**Oxford**	56.52	75	*e*P	P	03 50 08.7	-1.3
OXF				pmax	pmax		
	comp=Z,608nm,1.0s						
OXF				MLR	MLR		
	comp=Z,2µm,19.0s						
OXF	**Oxford**	56.52	75	P	P	03 50 08.6	-1.3
	baz=313,SNR=133						
WLVO	**Wesleyville**	56.55	60	P	P	03 50 09.5	-0.5
	baz=312,SNR=69						
T48A	**Bowling Green**	56.56	71	P	P	03 50 08.7	-1.6
	baz=313,SNR=32						
G55A	**Calabogie**	56.56	58	P	P	03 50 09.4	-0.7
	baz=312,SNR=102						
DELO	**Deloro Mine**	56.57	59	*e*P	P	03 50 09.6	-0.6
	comp=Z,154nm,1.2s						
DELO				LR	LR		
	comp=Z,1µm,21.0s						
DELO	**Deloro Mine**	56.57	59	P	P	03 50 09.5	-0.8
	baz=312,SNR=51						
STCO	**Saint Catharin**	56.60	61	P	P	03 50 09.6	-0.8
	baz=312,SNR=10						
ZAIG	**Zacatecas**	56.65	95	*e*P	P	03 50 11.2	-0.2
	comp=Z,56nm,1.1s						
ZAIG				LR	LR		
	comp=Z,1µm,20.0s						
W46A	**Michie**	56.72	74	P	P	03 50 09.8	-1.6
	baz=313,SNR=50						
O51A	**Pataskala**	56.72	66	P	P	03 50 09.8	-1.6
	baz=312,SNR=50						
I55A	**Frankford**	56.74	59	P	P	03 50 10.6	-0.8
	baz=312,SNR=46						
S49A	**Springfield**	56.76	70	P	P	03 50 09.9	-1.7
	baz=313,SNR=48						
V47A	**Nunnelly**	56.76	73	P	P	03 50 10.2	-1.5
	baz=313,SNR=60						
H55A	**Tweed**	56.78	59	P	P	03 50 11.1	-0.7
	baz=312,SNR=70						
N52A	**McGinn’s Farm,**	56.80	65	P	P	03 50 10.1	-1.8
	baz=312,SNR=44						
Q50A	**Georgetown**	56.81	68	P	P	03 50 10.3	-1.6
	baz=312,SNR=30						
L53A	**Girard**	56.84	63	P	P	03 50 11.0	-1.2
	baz=312,SNR=32						
J54A	**Appleton**	56.85	61	*e*P	P	03 50 11.6	-0.6
	comp=Z,239nm,1.0s						
J54A				LR	LR		
	comp=Z,2µm,22.0s						
J54A	**Appleton**	56.85	61	P	P	03 50 11.6	-0.6
	baz=312,SNR=34						
U48A	**Cassie Pea, Po**	56.88	72	P	P	03 50 11.3	-1.2
	baz=313,SNR=91						
ANGG	**Ammassalik, Gr**	56.89	23	*e*P	P	03 50 12.2	+0.1
	comp=Z,334nm,1.3s						
ANGG				LR	LR		
	comp=Z,2µm,18.0s						
P51A	**Williamsport**	56.91	67	*e*P	P	03 50 11.0	-1.7
	comp=Z,198nm,1.4s						
P51A				LR	LR		
	comp=Z,4µm,18.0s						
P51A	**Williamsport**	56.91	67	P	P	03 50 10.9	-1.7
	baz=312,SNR=17						
M53A	**WI Miller and**	56.95	64	P	P	03 50 11.7	-1.3
	baz=312,SNR=54						
R50A	**Paris**	56.98	69	*e*P	P	03 50 11.7	-1.5
	comp=Z,149nm,1.0s						
R50A				LR	LR		
	comp=Z,3µm,20.0s						
R50A	**Paris**	56.98	69	P	P	03 50 11.8	-1.4
	baz=313,SNR=49						
X46A	**Booneville**	56.98	75	P	P	03 50 11.8	-1.5
	baz=313,SNR=58						
PLAL	**Pickwick Lake**	57.00	74	*e*P	P	03 50 11.8	-1.5
	comp=Z,64nm,0.9s						
PLAL				LR	LR		
	comp=Z,2µm,20.0s						
MEDO	**Medina**	57.02	61	*e*P	P	03 50 13.2	-0.2
	comp=Z,286nm,1.0s						
MEDO				LR	LR		
	comp=Z,2µm,18.0s						
MEDO	**Medina**	57.02	61	P	P	03 50 12.8	-0.6
	baz=312,SNR=42						
LNIG	**Linares**	57.03	91	*e*P	P	03 50 11.3	-2.5
	comp=Z,36nm,1.0s						
LNIG				LR	LR		
	comp=Z,1µm,18.0s						
Q51A	**Peebles**	57.05	67	*e*P	P	03 50 12.6	-1.1
	comp=Z,420nm,1.0s						
Q51A				LR	LR		
	comp=Z,4µm,18.0s						
Q51A	**Peebles**	57.05	67	P	P	03 50 12.6	-1.1
	baz=312,SNR=136						
TRQ	**Mont Tremblant**	57.05	56	*e*P	P	03 50 12.3	-1.4
ORHO	**Orleans, Herit**	57.05	57	P	P	03 50 12.2	-1.4
	baz=312						
T49A	**Edmonton**	57.07	70	*e*P	P	03 50 12.1	-1.8
	comp=Z,96nm,1.0s						
T49A				LR	LR		
	comp=Z,2µm,20.0s						
T49A	**Edmonton**	57.07	70	P	P	03 50 12.2	-1.7
	baz=313,SNR=43						
ALLY	**Alegheny Colle**	57.10	63	*e*P	P	03 50 13.1	-1.0
	comp=Z,526nm,1.0s						
ALLY				LR	LR		
	comp=Z,2µm,20.0s						
W47A	**Westpoint**	57.10	73	P	P	03 50 12.5	-1.6
	baz=313,SNR=53						
L54A	**Sinclairville**	57.17	62	P	P	03 50 13.5	-1.0
	baz=312,SNR=94						
LATQ	**La Tuque**	57.17	54	P	P	03 50 12.9	-1.5
	baz=312,SNR=26						
O52A	**Adamsville**	57.18	65	*e*P	P	03 50 13.1	-1.6
	comp=Z,239nm,1.0s						
O52A				LR	LR		
	comp=Z,3µm,18.0s						
O52A	**Adamsville**	57.18	65	P	P	03 50 13.0	-1.6
	baz=312,SNR=48						
V48A	**Smith Brothers**	57.23	72	*e*P	P	03 50 13.4	-1.6

	comp=Z,132nm,1.1s						
V48A				LR	LR		
	comp=Z,2µm,18.0s						
V48A	**Smith Brothers**	57.23	72	P	P	03 50 13.3	-1.7
	baz=313,SNR=51						
H56A	**Elgin**	57.25	58	P	P	03 50 14.4	-0.6
	baz=312,SNR=125						
K54A	**Basiliko Farm,**	57.26	61	P	P	03 50 14.3	-0.9
	baz=312,SNR=72						
N53A	**Lisbon**	57.28	64	*e*P	P	03 50 13.9	-1.5
	comp=Z,175nm,1.0s						
N53A				LR	LR		
	comp=Z,2µm,18.0s						
N53A	**Lisbon**	57.28	64	P	P	03 50 13.6	-1.7
	baz=312,SNR=45						
CLTN	**Cedars of Leba**	57.28	72	*e*P	P	03 50 14.6	-0.8
	comp=Z,83nm,1.1s						
CLTN				LR	LR		
	comp=Z,1µm,20.0s						
PECO	**Prince Edward**	57.30	59	*e*P	P	03 50 14.6	-0.7
	comp=Z,180nm,1.1s						
PECO				LR	LR		
	comp=Z,1µm,22.0s						
PECO	**Prince Edward**	57.30	59	P	P	03 50 14.6	-0.7
	baz=312,SNR=53						
J55A	**Hilton**	57.30	60	*e*P	P	03 50 14.6	-0.8
	comp=Z,214nm,1.0s						
J55A				LR	LR		
	comp=Z,1µm,20.0s						
J55A	**Hilton**	57.30	60	P	P	03 50 14.5	-0.8
	baz=312,SNR=51						
U49A	**Red Boiling Sp**	57.33	71	P	P	03 50 14.2	-1.5
	baz=313,SNR=36						
P52A	**Corning**	57.34	66	P	P	03 50 13.6	-2.1
	baz=313,SNR=9.6						
S50A	**Richmond**	57.35	69	P	P	03 50 14.3	-1.5
	baz=313,SNR=42						
R51A	**Hillsboro**	57.40	68	P	P	03 50 15.2	-1.0
	baz=313,SNR=212						
VBMS	**Vicksburg**	57.42	78	*e*P	P	03 50 15.8	-0.5
	comp=Z,249nm,1.0s						
VBMS				LR	LR		
	comp=Z,1µm,18.0s						
VBMS	**Vicksburg**	57.42	78	P	P	03 50 15.6	-0.8
	baz=314,SNR=25						
O53A	**New Philadelph**	57.44	65	P	P	03 50 14.8	-1.7
	baz=313,SNR=27						
X47A	**Russelville**	57.45	74	P	P	03 50 14.6	-2.0
	baz=314,SNR=16						
M54A	**Oil Creek Stat**	57.47	63	*e*P	P	03 50 15.2	-1.4
	comp=Z,178nm,1.0s						
M54A				LR	LR		
	comp=Z,2µm,18.0s						
M54A	**Oil Creek Stat**	57.47	63	P	P	03 50 15.3	-1.4
	baz=312,SNR=47						
IVI	**Ivigtut**	57.47	30	*e*P	P	03 50 17.5	+1.3
	comp=Z,382nm,1.0s						
IVI				LR	LR		
	comp=Z,2µm,18.0s						
K55A	**Perry**	57.52	61	P	P	03 50 16.0	-1.0
	baz=312,SNR=65						
T50A	**Nancy**	57.53	70	P	P	03 50 15.6	-1.6
	baz=313,SNR=46						
W48A	**Pulaski**	57.58	73	P	P	03 50 15.8	-1.7
	baz=313,SNR=63						
MMNY	**Mt. Morris Dam**	57.61	61	*e*P	P	03 50 16.7	-0.9
	comp=Z,241nm,1.1s						
MMNY				LR	LR		
	comp=Z,1µm,20.0s						
N54A	**Moraine State**	57.65	64	*e*P	P	03 50 16.5	-1.5
	comp=Z,151nm,1.0s						
N54A				LR	LR		
	comp=Z,2µm,19.0s						
N54A	**Moraine State**	57.65	64	P	P	03 50 16.4	-1.5
	baz=313,SNR=42						
L55A	**Hinsdale**	57.69	62	P	P	03 50 17.4	-0.9
	baz=313,SNR=77						
Q52A	**Bidwell**	57.71	67	P	P	03 50 16.6	-1.7
	baz=313,SNR=21						
V49A	**McMinnville**	57.76	72	P	P	03 50 17.0	-1.7
	baz=313,SNR=59						
S51A	**Beattyville**	57.84	69	*e*P	P	03 50 17.7	-1.6
	comp=Z,144nm,0.9s						
S51A				LR	LR		
	comp=Z,3µm,19.0s						
S51A	**Beattyville**	57.84	69	P	P	03 50 17.6	-1.6
	baz=313,SNR=50						
P53A	**Whipple**	57.86	66	*e*P	P	03 50 17.9	-1.5
	comp=Z,100nm,0.9s						
P53A				LR	LR		
	comp=Z,3µm,18.0s						
P53A	**Whipple**	57.86	66	P	P	03 50 17.7	-1.6
	baz=313,SNR=40						
HAMF	**Hammerfest**	57.88	356	*e*P	P	03 50 19.4	+0.3
R52A	**Catlettsburg**	57.92	67	P	P	03 50 18.2	-1.6
	baz=313,SNR=28						
U50A	**Jamestown**	57.94	71	P	P	03 50 18.2	-1.8
	baz=313,SNR=30						
O54A	**Avella**	57.96	64	P	P	03 50 18.6	-1.5
	baz=313,SNR=75						
X48A	**Hartselle**	57.98	74	*e*P	P	03 50 18.2	-2.1
	comp=Z,69nm,1.1s						
X48A				LR	LR		
	comp=Z,2µm,20.0s						
X48A	**Hartselle**	57.98	74	P	P	03 50 18.2	-2.1
	baz=314,SNR=17						
W49A	**Belvidere**	57.99	73	P	P	03 50 18.5	-1.8
	baz=314,SNR=48						
M55A	**Ridgway**	57.99	62	P	P	03 50 19.4	-1.0
	baz=313						
T51A	**Gray**	58.10	69	P	P	03 50 19.4	-1.7
	baz=313,SNR=55						
LONY	**Lake Ozonia**	58.11	57	*e*P	P	03 50 19.9	-1.2
	comp=Z,163nm,0.9s						
LONY				LR	LR		
	comp=Z,2µm,18.0s						
LONY	**Lake Ozonia**	58.11	57	P	P	03 50 19.9	-1.2
	baz=313,SNR=81						
S52A	**Salyersville**	58.12	68	P	P	03 50 19.2	-2.0
	baz=313						
SWET	**Sewanee**	58.12	72	*e*P	P	03 50 19.3	-2.0
	comp=Z,78nm,1.1s						
SWET				LR	LR		
	comp=Z,2µm,20.0s						
Q53A	**Leroy**	58.21	66	P	P	03 50 20.4	-1.5
	baz=313,SNR=39						
Y48A	**Jasper**	58.28	74	P	P	03 50 20.1	-2.3
	baz=314,SNR=19						
P54A	**Burton**	58.30	65	P	P	03 50 20.9	-1.6
	baz=313,SNR=55						
V50A	**Pikevile**	58.30	71	P	P	03 50 20.5	-2.0
	baz=314,SNR=32						
M56A	**Emporium**	58.30	62	P	P	03 50 21.5	-1.0
	baz=313,SNR=90						
R53A	**Hurricane**	58.32	67	*e*P	P	03 50 21.5	-1.1
	comp=Z,245nm,1.1s						
R53A				LR	LR		
	comp=Z,5µm,18.0s						
R53A	**Hurricane**	58.32	67	P	P	03 50 21.4	-1.3
	baz=313,SNR=43						
N55A	**Marion Center**	58.34	63	*e*P	P	03 50 21.4	-1.4
	comp=Z,183nm,0.9s						
N55A				LR	LR		
	comp=Z,2µm,18.0s						
N55A	**Marion Center**	58.34	63	P	P	03 50 21.3	-1.5
	baz=313,SNR=66						
NRS	**Narsarsuaq**	58.35	29	*e*P	P	03 50 23.7	+1.2
	comp=Z,178nm,1.0s						
NRS				LR	LR		
	comp=Z,2µm,18.0s						
NRS	**Narsarsuaq**	58.35	29	*e*P	P	03 50 23.7	+1.2
NRS				pmax	pmax		
	comp=Z,178nm,1.0s						
NRS				MLR	MLR		
	comp=Z,2µm,18.0s						
NRS	**Narsarsuaq**	58.35	29	*i* P	P	03 50 23.3	+0.8
	comp=Z,214nm,1.1s						
	comp=Z,2µm,15.0s						
X49A	**Woodville**	58.37	73	P	P	03 50 21.1	-2.0
	baz=314,SNR=38						
U51A	**La Follette**	58.45	70	P	P	03 50 21.8	-1.8
	baz=314,SNR=27						
147A	**Livingston**	58.47	76	*e*P	P	03 50 22.5	-1.3
	comp=Z,258nm,1.1s						
147A				LR	LR		
	comp=Z,1µm,19.0s						
147A	**Livingston**	58.47	76	P	P	03 50 22.2	-1.5
	baz=314,SNR=36						
FRNY	**Flat Rock**	58.49	56	*e*P	P	03 50 22.0	-1.7
	comp=Z,169nm,1.0s						
FRNY				LR	LR		
	comp=Z,2µm,21.0s						
W50A	**Signal Mountai**	58.50	72	*e*P	P	03 50 22.3	-1.8
	comp=Z,203nm,1.0s						
W50A				LR	LR		
	comp=Z,2µm,20.0s						
W50A	**Signal Mountai**	58.50	72	P	P	03 50 22.2	-1.8
	baz=314,SNR=83						
Q54A	**Coxs Mills**	58.52	66	*e*P	P	03 50 22.7	-1.3
	comp=Z,160nm,1.1s						
Q54A				LR	LR		
	comp=Z,3µm,20.0s						
Q54A	**Coxs Mills**	58.52	66	P	P	03 50 22.6	-1.3
	baz=313,SNR=49						
O55A	**Ligonier**	58.55	64	P	P	03 50 22.6	-1.6
	baz=313,SNR=31						
T52A	**Hallie**	58.56	69	*e*P	P	03 50 23.4	-1.0
	comp=Z,232nm,1.1s						
T52A				LR	LR		
	comp=Z,4µm,19.0s						
T52A	**Hallie**	58.56	69	P	P	03 50 23.2	-1.1
	baz=314,SNR=55						
TZTN	**Tazewell**	58.62	70	*e*P	P	03 50 23.3	-1.5
	comp=Z,86nm,1.0s						
TZTN				LR	LR		
	comp=Z,3µm,19.0s						
TZTN	**Tazewell**	58.62	70	P	P	03 50 23.3	-1.5
	baz=314,SNR=22						
MCWV	**Mont Chateau**	58.62	65	*e*P	P	03 50 23.6	-1.2
	comp=Z,141nm,1.0s						
MCWV				LR	LR		
	comp=Z,1µm,18.0s						
MCWV	**Mont Chateau**	58.62	65	P	P	03 50 23.5	-1.2
	baz=313,SNR=36						
N56A	**West Decatur**	58.63	63	P	P	03 50 23.7	-1.1
	baz=313,SNR=80						
V51A	**Loudon**	58.65	71	*e*P	P	03 50 23.1	-1.8
	comp=Z,56nm,0.9s						
V51A				LR	LR		
	comp=Z,2µm,19.0s						
V51A	**Loudon**	58.65	71	P	P	03 50 23.2	-1.8
	baz=314,SNR=19						
S53A	**Williamson**	58.66	68	P	P	03 50 23.7	-1.4
	baz=314,SNR=16						
P55A	**Reedsville**	58.73	65	P	P	03 50 24.3	-1.2
	baz=313,SNR=48						
NCB	**Newcomb**	58.74	58	*e*P	P	03 50 24.9	-0.6
	comp=Z,180nm,1.0s						
NCB				LR	LR		
	comp=Z,1µm,22.0s						
Y49A	**Blount Mountai**	58.77	74	*e*P	P	03 50 23.8	-2.1
	comp=Z,83nm,1.1s						
Y49A				LR	LR		
	comp=Z,2µm,19.0s						
Y49A	**Blount Mountai**	58.77	74	P	P	03 50 23.7	-2.2
	baz=314,SNR=26						
CPCT	**Cooper Cave**	58.80	71	*e*P	P	03 50 24.4	-1.6
	comp=Z,100nm,1.2s						
CPCT				LR	LR		
	comp=Z,2µm,18.0s						
X50B	**Fort Payne**	58.81	73	P	P	03 50 24.3	-1.8
	baz=314,SNR=16						
U52A	**Thorn Hill**	58.83	70	P	P	03 50 24.6	-1.6
	baz=314						
MOQ	**Mont Orford**	58.85	55	*e*P	P	03 50 25.1	-1.2
W51A	**Cleveland**	58.85	72	P	P	03 50 24.5	-1.9
	baz=314,SNR=45						
ARA0	**ARCESS Array S**	58.90	355	*e*P	P	03 50 26.6	+0.5
ARCES	**ARCESS Array B**	58.90	355	P	P	03 50 26.6	+0.5
	comp=Z,93nm,0.8s,baz=12,slow=6.3,SNR=147						
ARCES				LR	LR	04 18 45.0	
	comp=Z,868nm,18.1s,baz=2.5,slow=39						
ARE0	**ARCESS Array S**	58.90	355	*e*P	P	03 50 26.8	+0.6
	comp=Z,9.7nm,1.0s						
ARE0				LR	LR		
	comp=Z,100nm,19.0s						
ARE0	**ARCESS Array S**	58.90	355	*e*P	P	03 50 26.8	+0.6
T53A	**Wise**	58.91	69	P	P	03 50 25.6	-1.2
	baz=314,SNR=31						
148A	**Greensboro**	58.91	76	P	P	03 50 25.0	-1.8
	baz=314,SNR=9.1						
O56A	**Blue Knob Stat**	58.92	63	*e*P	P	03 50 25.4	-1.5
	comp=Z,205nm,1.0s						
O56A				LR	LR		
	comp=Z,2µm,20.0s						
O56A	**Blue Knob Stat**	58.92	63	P	P	03 50 25.3	-1.5
	baz=313,SNR=67						
Q55A	**Buckhannon**	58.94	65	P	P	03 50 25.9	-1.1
	baz=314,SNR=67						
R54A	**Victor**	58.98	67	P	P	03 50 25.9	-1.4
	baz=314						
LRAL	**Lakeview Retre**	58.99	75	*e*P	P	03 50 25.2	-2.1
	comp=Z,42nm,1.0s						
LRAL				*e*PcP	PcP	03 51 15.2	-1.1
LRAL				LR	LR		
	comp=Z,1µm,18.0s						
LRAL	**Lakeview Retre**	58.99	75	P	P	03 50 25.2	-2.1
	baz=314,SNR=25						
BINY	**Binghamton**	59.02	60	*e*P	P	03 50 24.6	-2.8
	comp=Z,293nm,1.0s						
BINY				LR	LR		
	comp=Z,1µm,18.0s						
BINY	**Binghamton**	59.02	60	P	P	03 50 26.8	-0.7
	baz=314,SNR=64						
ZAA1	**Zalesovo Array**	59.03	319	*e*P	P	03 50 28.0	+0.6
ZAA1				*e*PcP	PcP	03 51 17.3	+1.2
ZAA0	**Zalesovo Array**	59.04	319	*e*P	P	03 50 28.0	+0.6
	comp=Z,73nm,1.0s						
ZAA0				LR	LR		
	comp=Z,2µm,21.0s						
ZALV	**Zalesovo Beam**	59.04	319	P	P	03 50 28.0	+0.6
	comp=Z,43nm,0.8s,baz=38,slow=6.5,SNR=85						
ZALV				PcP	PcP	03 51 17.3	+1.1
	comp=Z,26nm,0.8s,baz=48,slow=3.6,SNR=6.6						
ZALV				LR	LR	04 16 33.8	
	comp=Z,2µm,21.9s,baz=46,slow=37						
SSPA	**Standing Stone**	59.04	63	*e*P	P	03 50 26.4	-1.3
	comp=Z,252nm,0.9s						
SSPA				LR	LR		
	comp=Z,2µm,22.0s						
SSPA	**Standing Stone**	59.04	63	P	P	03 50 26.3	-1.3
	baz=314						
S54A	**Dingess, Beckl**	59.05	67	P	P	03 50 26.5	-1.3
	baz=314,SNR=35						
TRO	**Tromso**	59.06	358	*e*P	P	03 50 28.3	+1.0
V52A	**Sevierville**	59.07	70	*e*P	P	03 50 26.4	-1.6
	comp=Z,62nm,1.0s						
V52A				LR	LR		
	comp=Z,2µm,20.0s						
V52A	**Sevierville**	59.07	70	P	P	03 50 26.3	-1.6
	baz=314,SNR=24						
N57A	**Milroy**	59.15	62	P	P	03 50 27.2	-1.1
	baz=314,SNR=56						
Y50A	**Piedmont**	59.15	73	P	P	03 50 26.5	-2.0
	baz=314,SNR=32						
Z49A	**Columbiana**	59.16	74	P	P	03 50 26.5	-2.0
	baz=314,SNR=59						
X51A	**Calhoun**	59.21	72	*e*P	P	03 50 27.1	-1.7
	comp=Z,130nm,1.1s						
X51A				LR	LR		
	comp=Z,2µm,20.0s						
X51A	**Calhoun**	59.21	72	P	P	03 50 27.1	-1.7
	baz=314,SNR=17						
VT1	**Waterbury**	59.27	56	*e*P	P	03 50 28.5	-0.6
	comp=Z,239nm,1.1s						
VT1				LR	LR		
	comp=Z,2µm,18.0s						
P56A	**Dayton Farm, R**	59.29	64	P	P	03 50 28.3	-1.0
	baz=314,SNR=72						
U53A	**Fall Branch**	59.31	69	P	P	03 50 28.1	-1.5
	baz=314,SNR=31						
W52A	**Murphy**	59.39	71	*e*P	P	03 50 28.1	-2.1
	comp=Z,76nm,1.0s						
W52A				LR	LR		
	comp=Z,2µm,20.0s						
W52A	**Murphy**	59.39	71	P	P	03 50 28.4	-1.8
	baz=314,SNR=17						
R55A	**Marlinton**	59.40	66	*e*P	P	03 50 29.2	-1.0
	comp=Z,144nm,1.1s						
R55A				LR	LR		
	comp=Z,4µm,18.0s						
R55A	**Marlinton**	59.40	66	P	P	03 50 29.2	-1.0
	baz=314,SNR=30						
T54A	**Tazewell**	59.41	68	P	P	03 50 29.2	-1.1
	baz=314,SNR=60						
Q56A	**Snyder Ridge,**	59.41	65	P	P	03 50 29.0	-1.2
	baz=314,SNR=19						
149A	**Jones**	59.41	75	P	P	03 50 28.6	-1.7
	baz=315,SNR=78						
ACCN	**Adirondack Com**	59.44	58	*e*P	P	03 50 29.6	-0.7
	comp=Z,298nm,1.0s						
ACCN				LR	LR		
	comp=Z,2µm,22.0s						
O57A	**Amberson**	59.48	63	P	P	03 50 29.6	-1.0
	baz=314,SNR=127						
Z50A	**Ashland**	59.48	74	*e*P	P	03 50 28.7	-2.1
	comp=Z,176nm,1.0s						
Z50A				LR	LR		
	comp=Z,2µm,21.0s						
Z50A	**Ashland**	59.48	74	P	P	03 50 28.7	-2.1
	baz=314,SNR=63						
KTK1	**Kautokeino**	59.53	356	*e*P	P	03 50 31.4	+0.9
S55A	**Lewisburg**	59.54	67	P	P	03 50 30.2	-1.0
	baz=314,SNR=70						
Y51A	**Rockmart**	59.55	73	P	P	03 50 28.8	-2.5
	baz=314,SNR=28						
KSPA	**Keystone Colle**	59.57	60	*e*P	P	03 50 30.6	-0.7
	comp=Z,157nm,1.0s						
KSPA				LR	LR		
	comp=Z,2µm,18.0s						
U54A	**Nelsons Funny**	59.64	68	*e*P	P	03 50 30.9	-1.1
	comp=Z,204nm,1.1s						
U54A				LR	LR		
	comp=Z,3µm,20.0s						
U54A	**Nelsons Funny**	59.64	68	P	P	03 50 30.8	-1.1
	baz=314,SNR=39						
V53A	**Saluda**	59.65	70	*e*P	P	03 50 30.5	-1.5
	comp=Z,96nm,1.1s						
V53A				*e*PcP	PcP	03 51 18.0	-1.0
V53A				LR	LR		
	comp=Z,2µm,19.0s						
V53A	**Saluda**	59.65	70	P	P	03 50 30.5	-1.5
	baz=314,SNR=37						
249A	**Camden**	59.65	76	P	P	03 50 30.6	-1.3
	baz=315,SNR=30						
R56A	**Bull Pasture M**	59.73	65	P	P	03 50 31.3	-1.2
	baz=314,SNR=33						
X52A	**Dahlonega**	59.75	71	P	P	03 50 30.9	-1.7
	baz=314,SNR=50						
LBNH	**Lisbon**	59.76	56	*e*P	P	03 50 31.6	-0.9
	comp=Z,105nm,1.0s						
LBNH				LR	LR		
	comp=Z,2µm,18.0s						
LBNH	**Lisbon**	59.76	56	*e*P	P	03 50 31.6	-0.9
LBNH				pmax	pmax		
	comp=Z,105nm,1.0s						
LBNH				MLR	MLR		
	comp=Z,2µm,18.0s						
LBNH	**Lisbon**	59.76	56	P	P	03 50 31.6	-0.9
	baz=314,SNR=20						
P57A	**Homestead Farm**	59.77	64	P	P	03 50 31.6	-1.0
	baz=314,SNR=56						
M59A	**Waymart**	59.77	60	P	P	03 50 31.8	-0.9
	baz=314,SNR=61						
LVZ	**Lovozero**	59.79	351	*e*P	P	03 50 32.7	+0.3
	comp=Z,521nm,0.9s						
LVZ				LR	LR		
	comp=Z,2µm,20.0s						
LVZ	**Lovozero**	59.79	351	*d* *i*P	P	03 50 33.0	+0.6
LVZ				pmax	pmax		
	comp=Z,553nm,1.0s						
W53A	**Cullowhee**	59.79	70	P	P	03 50 31.3	-1.8
	baz=314,SNR=15						
T55A	**Pulaski**	59.83	67	P	P	03 50 32.2	-1.0
	baz=314,SNR=24						
Q57A	**Strasburg**	59.85	64	P	P	03 50 32.1	-1.2
	baz=314,SNR=42						
150A	**Eclectic**	59.87	75	P	P	03 50 31.5	-2.0
	baz=315,SNR=46						
Z51A	**Franklin**	59.89	73	P	P	03 50 31.1	-2.4
	baz=315,SNR=33						
TRY	**Troy**	59.89	58	*e*P	P	03 50 33.4	-0.1
	comp=Z,190nm,1.0s						
TRY				LR	LR		
	comp=Z,1µm,18.0s						
O58A	**Lewisberry**	59.93	62	P	P	03 50 32.7	-1.1
	baz=314,SNR=74						
HNH	**Hanover**	59.94	57	*e*P	P	03 50 33.5	-0.3
	comp=Z,158nm,1.1s						
HNH				LR	LR		
	comp=Z,2µm,21.0s						
WHN	**Wuhan**	59.96	282	⇑P	P	03 50 34.1	0.0
WHN				S	S	03 58 47.8	+1.7
WHN				pmax	pmax		
	comp=Z,250nm,1.3s						
WHN				pmax	pmax		
	comp=Z,1µm,4.6s						
WHN				LR	LR		
	comp=Z,1µm,13.0s						
WHN				LR	LR		
	comp=Z,1µm,12.4s						
WHN				LR	LR		
	comp=Z,2µm,21.0s						
PAGS	**Pennsylvania G**	59.97	62	*e*P	P	03 50 32.9	-1.1
	comp=Z,167nm,1.0s						
PAGS				LR	LR		
	comp=Z,2µm,19.0s						
BLA	**Blacksburg**	59.97	67	*e*P	P	03 50 33.1	-1.0
	comp=Z,249nm,1.0s						
BLA				LR	LR		
	comp=Z,4µm,18.0s						
BLA	**Blacksburg**	59.97	67	*e*P	P	03 50 33.1	-1.0
BLA				pmax	pmax		
	comp=Z,249nm,1.0s						
BLA				MLR	MLR		
	comp=Z,4µm,18.0s						
BLA	**Blacksburg**	59.97	67	P	P	03 50 33.2	-1.0
	baz=314,SNR=58						
N59A	**State Game Lan**	60.02	61	*e*P	P	03 50 33.7	-0.7
	comp=Z,149nm,1.0s						
N59A				LR	LR		
	comp=Z,2µm,19.0s						
N59A	**State Game Lan**	60.02	61	P	P	03 50 33.5	-0.9
	baz=314,SNR=48						
PQI	**Presque Isle**	60.03	52	*e*P	P	03 50 32.9	-1.4
	comp=Z,38nm,0.9s						
PQI				LR	LR		
	comp=Z,2µm,19.0s						
349A	**Repton**	60.05	76	P	P	03 50 33.6	-1.1
	baz=315,SNR=19						
BG3	**Lake Jocassee**	60.05	70	PFAKE		03 50 50.0	+15
BG3				LR	LR		
	comp=Z,1µm,20.0s						
V54A	**Nebo**	60.08	69	P	P	03 50 33.5	-1.4
	baz=314,SNR=20						
U55A	**TA2, Sparta**	60.10	68	P	P	03 50 33.9	-1.2
	baz=314,SNR=26						
S56A	**Natural Bridge**	60.14	66	P	P	03 50 34.2	-1.1
	baz=314,SNR=53						
P58A	**Pank, Wackersv**	60.16	63	P	P	03 50 33.9	-1.4
	baz=314,SNR=13						
250A	**Grady**	60.17	75	*e*P	P	03 50 33.5	-1.9
	comp=Z,145nm,0.8s						
250A				LR	LR		
	comp=Z,2µm,19.0s						
250A	**Grady**	60.17	75	P	P	03 50 33.8	-1.7
	baz=315,SNR=26						
Y52A	**Lilburn**	60.17	72	*e*P	P	03 50 33.6	-1.9
	comp=Z,78nm,0.9s						
Y52A				LR	LR		
	comp=Z,2µm,20.0s						
Y52A	**Lilburn**	60.17	72	P	P	03 50 33.6	-1.9
	baz=315,SNR=23						
X53A	**Estanollee**	60.17	71	P	P	03 50 33.9	-1.6
	baz=315,SNR=26						
O59A	**Robesonia**	60.21	62	P	P	03 50 34.7	-1.0
	baz=314						
APA	**Apatity**	60.23	351	⇓*i*P	P	03 50 36.1	+0.7
APA				pmax	pmax		
	comp=Z,11nm,1.0s						
BRAL	**Brewton**	60.26	76	*e*P	P	03 50 35.2	-1.0
	comp=Z,317nm,1.0s						
BRAL				LR	LR		
	comp=Z,900nm,18.0s						
BRAL	**Brewton**	60.26	76	P	P	03 50 35.2	-1.0
	baz=315,SNR=24						
R57A	**Stanardsville**	60.30	65	P	P	03 50 35.5	-0.8
	baz=314,SNR=93						
T56A	**Rocky Mt**	60.32	67	P	P	03 50 35.2	-1.3
	baz=314,SNR=32						
Q58A	**Fox Den Farm,**	60.33	64	P	P	03 50 35.2	-1.3
	baz=314,SNR=71						
MVL	**Millersville**	60.33	62	*e*P	P	03 50 35.4	-1.1
	comp=Z,114nm,0.9s						

MVL				LR	LR		
	comp=Z,3µm,19.0s						
151A	Opelika	60.35	74	P	P	03 50 34.1	-2.6
	baz=315,SNR=7.9						
PKME	Peaks-Kenny Pk	60.39	54	eP	P	03 50 35.6	-1.2
	comp=Z,115nm,1.0s						
PKME				LR	LR		
	comp=Z,2µm,18.0s						
PKME	Peaks-Kenny Pk	60.39	54	P	P	03 50 35.6	-1.2
	baz=315,SNR=21						
N60A	Cedar Hill Far	60.41	61	P	P	03 50 36.3	-0.7
	baz=314,SNR=46						
W54A	Cherokee Point	60.42	70	P	P	03 50 35.6	-1.7
	baz=315,SNR=16						
Z52A	Williamson	60.43	73	P	P	03 50 35.1	-2.2
	baz=315,SNR=23						
S57A	Dark Hollow, R	60.43	66	eP	P	03 50 36.4	-0.8
	comp=Z,126nm,1.1s						
S57A				LR	LR		
	comp=Z,4µm,18.0s						
S57A	Dark Hollow, R	60.43	66	P	P	03 50 36.3	-0.9
	baz=314,SNR=36						
FFD	Franklin Falls	60.44	56	eP	P	03 50 37.1	-0.1
	comp=Z,175nm,1.0s						
FFD				LR	LR		
	comp=Z,2µm,19.0s						
449A	Pace	60.45	77	P	P	03 50 36.4	-1.0
	baz=315,SNR=5.9						
LUPA	Lehigh Univers	60.45	61	eP	P	03 50 36.7	-0.6
	comp=Z,22nm,1.0s						
LUPA				LR	LR		
	comp=Z,200nm,22.0s						
V55A	Taylorsville	60.46	69	P	P	03 50 36.0	-1.4
	baz=314,SNR=29						
Y53A	Monroe	60.46	72	P	P	03 50 35.5	-2.0
	baz=315,SNR=44						
SDMD	Soldier’s Deli	60.47	63	eP	P	03 50 35.4	-2.0
	comp=Z,99nm,1.0s						
SDMD				LR	LR		
	comp=Z,1µm,20.0s						
350A	Dozier	60.52	76	P	P	03 50 36.4	-1.5
	baz=315,SNR=12						
ODNJ	Ogdensburg	60.53	60	eP	P	03 50 37.1	-0.8
	comp=Z,149nm,1.0s						
ODNJ				LR	LR		
	comp=Z,2µm,18.0s						
BATG	Bathurst New B	60.55	50	eP	P	03 50 36.9	-1.0
	comp=Z,105nm,0.9s						
BATG				LR	LR		
	comp=Z,2µm,18.0s						
P59A	Jarrettsville	60.56	63	P	P	03 50 36.8	-1.2
	baz=314,SNR=52						
R58A	Rapidan	60.59	65	P	P	03 50 37.3	-1.1
	baz=314,SNR=70						
U56A	King	60.59	68	P	P	03 50 37.1	-1.3
	baz=314,SNR=25						
251A	Midway	60.60	75	P	P	03 50 36.4	-2.1
	baz=315,SNR=28						
152A	Waverly Hall	60.61	74	eP	P	03 50 36.0	-2.5
	comp=Z,72nm,1.0s						
152A				LR	LR		
	comp=Z,2µm,20.0s						
152A	Waverly Hall	60.61	74	P	P	03 50 36.0	-2.5
	baz=315,SNR=25						
O60A	Telford	60.63	61	P	P	03 50 37.6	-0.9
	baz=314,SNR=43						
X54A	Belton	60.69	70	P	P	03 50 37.3	-1.7
	baz=315,SNR=27						
KSCT	Kent School, K	60.69	59	eP	P	03 50 38.5	-0.4
	comp=Z,216nm,0.9s						
KSCT				LR	LR		
	comp=Z,1µm,19.0s						
WVL	Waterville	60.70	54	eP	P	03 50 38.0	-0.9
	comp=Z,111nm,1.0s						
WVL				LR	LR		
	comp=Z,3µm,18.0s						
SSLB	Suanglung	60.71	272	eP	P	03 50 38.2	-1.2
	comp=Z,102nm,1.1s						
XAN	Xi'an	60.77	289	eP	P	03 50 39.8	+0.1
	comp=Z,97nm,1.4s						
XAN				LR	LR		
	comp=Z,1µm,21.0s						
XAN	Xi'an	60.77	289	P	P	03 50 39.2	-0.5
XAN				pP	pwP	03 50 45.5	-3.0
XAN				PP	PP	03 52 56.0	+2.7
XAN				S	S	03 58 57.7	+1.1
XAN				pmax	pmax		
	comp=Z,43nm,1.6s						
XAN				pmax	pmax		
	comp=Z,730nm,6.0s						
XAN				LR	LR		
	comp=Z,830nm,19.2s						
XAN				LR	LR		
	comp=Z,1µm,21.6s						
XAN				LR	LR		
	comp=Z,1µm,21.4s						
YULB	Yu-li	60.79	271	eP	P	03 50 39.1	-0.8
	comp=Z,30nm,1.0s						
YULB				LR	LR		
	comp=Z,600nm,20.0s						
T57A	Hurt	60.79	66	eP	P	03 50 38.8	-0.9
	comp=Z,98nm,1.0s						
T57A				LR	LR		
	comp=Z,4µm,19.0s						
T57A	Hurt	60.79	66	P	P	03 50 38.2	-1.5
	baz=315,SNR=29						
450A	Crestview	60.80	76	P	P	03 50 38.8	-1.0
	baz=315,SNR=11						
PAULI	Pauline	60.83	70	eP	P	03 50 38.3	-1.7
	comp=Z,81nm,1.0s						
PAULI				LR	LR		
	comp=Z,2µm,19.0s						
M61A	Granite Spring	60.83	59	P	P	03 50 39.1	-0.7
	baz=315,SNR=25						
BRNJ	Basking Ridge	60.83	60	eP	P	03 50 39.4	-0.6
	comp=Z,262nm,1.0s						
BRNJ				LR	LR		
	comp=Z,2µm,18.0s						
GOGA	Godfrey	60.84	72	eP	P	03 50 37.9	-2.2
	comp=Z,96nm,0.9s						
GOGA				LR	LR		
	comp=Z,2µm,19.0s						
GOGA	Godfrey	60.84	72	eP	P	03 50 37.9	-2.2
GOGA				pmax	pmax		
	comp=Z,96nm,0.9s						
GOGA				MLR	MLR		
	comp=Z,2µm,19.0s						
GOGA	Godfrey	60.84	72	P	P	03 50 37.9	-2.2
	baz=315,SNR=41						
STEI	Steigen	60.84	359	eP	P	03 50 40.4	+0.8
P60A	Greenville	60.86	62	P	P	03 50 39.0	-1.1
	baz=315,SNR=23						
Z53A	Monticello	60.87	72	P	P	03 50 38.0	-2.3
	baz=315,SNR=50						
PSUB	Penn St. - Bra	60.88	62	eP	P	03 50 39.4	-0.8
	comp=Z,96nm,1.1s						
PSUB				LR	LR		
	comp=Z,3µm,18.0s						
KMSC	Kings Mountain	60.88	69	eP	P	03 50 38.8	-1.6
	comp=Z,143nm,1.0s						
KMSC				LR	LR		
	comp=Z,3µm,19.0s						
KMSC	Kings Mountain	60.88	69	P	P	03 50 38.8	-1.6
	baz=315,SNR=53						
R58B	Mineral	60.90	65	eP	P	03 50 39.6	-0.8
	comp=Z,169nm,1.0s						
R58B				LR	LR		
	comp=Z,2µm,18.0s						
R58B	Mineral	60.90	65	P	P	03 50 39.6	-0.8
	baz=315,SNR=43						
V56A	Mocksville	60.90	68	eP	P	03 50 39.1	-1.4
	comp=Z,125nm,1.0s						
V56A				LR	LR		
	comp=Z,4µm,19.0s						
V56A	Mocksville	60.90	68	P	P	03 50 39.1	-1.4
	baz=315,SNR=32						
QUA2	Belchertown	60.90	58	eP	P	03 50 40.2	-0.1
	comp=Z,204nm,1.0s						
QUA2				LR	LR		
	comp=Z,1µm,19.0s						
Q59A	Harwood	60.95	63	P	P	03 50 39.7	-1.1
	baz=315						
PAL	Palisades	60.97	60	eP	P	03 50 40.5	-0.3
	comp=Z,219nm,1.0s						
PAL				LR	LR		
	comp=Z,1µm,19.0s						
PAL	Palisades	60.97	60	eP	P	03 50 40.5	-0.3
PAL				pmax	pmax		
	comp=Z,219nm,1.0s						
PAL				MLR	MLR		
	comp=Z,1µm,19.0s						
PAL	Palisades	60.97	60	P	P	03 50 40.1	-0.7
	baz=315,SNR=22						
HODGE	Hodges	60.98	71	eP	P	03 50 39.1	-1.9
	comp=Z,74nm,0.9s						
HODGE				LR	LR		
	comp=Z,2µm,20.0s						
Y54A	Tignall	60.98	71	P	P	03 50 39.2	-1.9
	baz=315,SNR=52						
CBN	Corbin Frederi	61.01	64	eP	P	03 50 40.6	-0.6
	comp=Z,172nm,0.9s						
CBN				LR	LR		
	comp=Z,2µm,19.0s						
CBN	Corbin Frederi	61.01	64	P	P	03 50 40.2	-1.0
	baz=315,SNR=11						
BORG	Borgarnes	61.03	16	P	P	03 50 42.0	+1.1
	comp=Z,63nm,0.9s,baz=308,slow=3.6,SNR=26						
BORG	Borgarnes	61.03	16	eP	P	03 50 43.2	+2.4
	comp=Z,168nm,1.3s						
BORG				LR	LR		
	comp=Z,1µm,19.0s						
BORG	Borgarnes	61.03	16	P	P	03 50 42.0	+1.1
S58A	Poland Farm, P	61.05	65	eP	P	03 50 40.5	-0.9
	comp=Z,295nm,1.0s						
S58A				LR	LR		
	comp=Z,3µm,19.0s						
S58A	Poland Farm, P	61.05	65	P	P	03 50 40.4	-1.0
	baz=315,SNR=75						
252A	Lumpkin	61.08	74	P	P	03 50 39.4	-2.3
	baz=315,SNR=25						
CPNY	Central Park	61.09	60	eP	P	03 50 41.4	-0.2
	comp=Z,205nm,1.1s						
U57A	Blanch	61.14	67	P	P	03 50 40.9	-1.2
	baz=315,SNR=46						
153A	Fort Valley	61.16	73	P	P	03 50 39.9	-2.4
	baz=315,SNR=21						
R59A	King George, V	61.16	64	P	P	03 50 41.3	-0.9
	baz=315,SNR=14						
HRV	Adam Dziewonsk	61.16	57	eP	P	03 50 41.5	-0.6
	comp=Z,201nm,1.0s						
HRV				LR	LR		
	comp=Z,1µm,19.0s						
HRV	Adam Dziewonsk	61.16	57	eP	P	03 50 41.5	-0.6
HRV				pmax	pmax		
	comp=Z,201nm,1.0s						
HRV				MLR	MLR		
	comp=Z,1µm,19.0s						
X55A	Gracelyn & Ava	61.18	70	P	P	03 50 40.7	-1.6
	baz=315,SNR=30						
T58A	Grand View Acr	61.24	66	P	P	03 50 41.3	-1.4
	baz=315,SNR=54						
O61A	Allentown	61.25	61	P	P	03 50 42.0	-0.8
	baz=315,SNR=13						
V57A	Coltrane Farms	61.27	68	P	P	03 50 41.2	-1.7
	baz=315,SNR=15						
YLE	Yale	61.27	59	eP	P	03 50 42.8	-0.1
	comp=Z,155nm,0.9s						
YLE				LR	LR		
	comp=Z,2µm,19.0s						
TPUB	Ta-pu	61.27	272	eS	S	03 59 04.4	+1.3
TPUB				LR	LR		
	comp=Z,600nm,21.0s						
Q60A	Greensboro	61.31	63	P	P	03 50 42.3	-0.8
	baz=315,SNR=5.4						
352A	Blakely	61.33	75	eP	P	03 50 41.5	-1.9
	comp=Z,411nm,1.1s						
352A				LR	LR		
	comp=Z,2µm,20.0s						
352A	Blakely	61.33	75	P	P	03 50 41.4	-1.9
	baz=315,SNR=41						
W56A	Indian Trail	61.33	69	P	P	03 50 41.7	-1.7
	baz=315,SNR=30						
Z54A	Sparta	61.33	72	P	P	03 50 41.2	-2.2
	baz=315,SNR=55						
QZH	Quanzhou	61.35	275	⇓iP	P	03 50 42.5	-1.1
QZH				S	S	03 59 04.0	+0.1
QZH				pmax	pmax		
	comp=Z,570nm,7.5s						
QZH				LR	LR		
	comp=Z,410nm,18.9s						
QZH				LR	LR		
	comp=Z,510nm,17.1s						
S59A	Mechanicsville	61.37	65	P	P	03 50 42.8	-0.7
	baz=315,SNR=59						
WES	Weston	61.37	57	eP	P	03 50 43.0	-0.6
	comp=Z,356nm,1.0s						
WES				LR	LR		
	comp=Z,1µm,18.0s						
WES	Weston	61.37	57	eP	P	03 50 43.0	-0.6
WES				pmax	pmax		
	comp=Z,356nm,1.0s						
WES				MLR	MLR		
	comp=Z,1µm,18.0s						
253A	Americus	61.39	74	eP	P	03 50 41.8	-2.0
	comp=Z,217nm,1.0s						
253A				LR	LR		
	comp=Z,2µm,20.0s						
253A	Americus	61.39	74	P	P	03 50 41.5	-2.3
	baz=315,SNR=19						
R60A	Leonardtown, M	61.41	64	P	P	03 50 42.9	-1.0
	baz=315						
P61A	Hammonton	61.42	61	P	P	03 50 42.9	-1.0
	baz=315,SNR=7.6						
Y55A	Saluda	61.42	71	P	P	03 50 42.3	-1.7
	baz=315,SNR=17						
451A	Vernon	61.44	76	PFAKE		03 51 00.0	+16
451A				LR	LR		
	comp=Z,1µm,21.0s						
451A	Vernon	61.44	76	P	P	03 50 42.5	-1.6
	baz=316						
BCX	Boston College	61.49	57	eP	P	03 50 43.9	-0.4
	comp=Z,141nm,1.2s						
X56A	White Oak	61.52	70	P	P	03 50 43.2	-1.5
	baz=315,SNR=31						
JSC	Jenkinsville	61.53	70	eP	P	03 50 43.2	-1.5
	comp=Z,103nm,0.9s						
JSC				LR	LR		
	comp=Z,3µm,20.0s						
JSC	Jenkinsville	61.53	70	eP	P	03 50 43.2	-1.5
JSC				pmax	pmax		
	comp=Z,103nm,0.9s						
JSC				MLR	MLR		
	comp=Z,3µm,20.0s						
BRYW	Bryant College	61.59	58	eP	P	03 50 44.4	-0.6
	comp=Z,187nm,1.0s						
BRYW				LR	LR		
	comp=Z,1µm,18.0s						
154A	Montrose	61.61	73	eP	P	03 50 43.1	-2.2
	comp=Z,327nm,1.1s						
154A				LR	LR		
	comp=Z,2µm,20.0s						
154A	Montrose	61.61	73	P	P	03 50 43.0	-2.4
	baz=315,SNR=24						
U58A	Oxford	61.62	66	P	P	03 50 43.7	-1.6
	baz=315,SNR=13						
452A	Marianna	61.62	75	P	P	03 50 43.5	-1.9
	baz=316						
W57A	Gilead	61.66	68	eP	P	03 50 44.0	-1.5
	comp=Z,88nm,0.9s						
W57A				LR	LR		
	comp=Z,4µm,18.0s						
W57A	Gilead	61.66	68	P	P	03 50 43.9	-1.7
	baz=315,SNR=26						
Q61A	Milford	61.68	62	P	P	03 50 45.5	-0.2
	baz=315						
EMMW	East Machias	61.70	53	eP	P	03 50 44.8	-0.9
	comp=Z,123nm,1.0s						
EMMW				ePcP	PcP	03 51 25.0	-1.9
EMMW				LR	LR		
	comp=Z,3µm,19.0s						
V58A	Windy Hill, Pi	61.71	67	P	P	03 50 44.7	-1.2
	baz=315,SNR=50						
GGN	Saint George	61.71	52	eP	P	03 50 44.5	-1.3
	comp=Z,46nm,0.8s						
GGN				LR	LR		
	comp=Z,2µm,19.0s						
Z55A	Blythe	61.76	71	P	P	03 50 44.4	-1.9
	baz=315,SNR=7.8						
S60A	Water View	61.77	64	P	P	03 50 45.6	-0.7
	baz=315,SNR=30						
T59A	Double "B" Far	61.78	65	eP	P	03 50 45.8	-0.6
	comp=Z,268nm,0.9s						
T59A				LR	LR		
	comp=Z,3µm,18.0s						
T59A	Double "B" Far	61.78	65	P	P	03 50 45.6	-0.7
	baz=315,SNR=94						
353A	Camilla	61.85	74	P	P	03 50 44.7	-2.2
	baz=316,SNR=7.7						
Y56A	Pelion	61.85	70	P	P	03 50 45.3	-1.6
	baz=315,SNR=11						
254A	Abbeville	61.98	73	P	P	03 50 45.3	-2.4
	baz=316,SNR=12						
155A	Kite	61.99	72	P	P	03 50 45.7	-2.2
	baz=316,SNR=22						
552A	Lynn Haven	62.06	76	P	P	03 50 46.8	-1.5
	baz=316						
R61A	Willards	62.06	63	P	P	03 50 46.9	-1.3
	baz=315,SNR=6.2						
U59A	Littleton	62.08	66	eP	P	03 50 47.5	-0.9
	comp=Z,95nm,1.0s						
U59A				LR	LR		
	comp=Z,3µm,19.0s						
U59A	Littleton	62.08	66	P	P	03 50 47.5	-0.9
	baz=315,SNR=35						
X57A	Johnson Farm,	62.08	69	P	P	03 50 47.1	-1.4
	baz=315,SNR=29						
T60A	Surry	62.12	65	eP	P	03 50 48.3	-0.4
	comp=Z,543nm,1.0s						
T60A				LR	LR		
	comp=Z,2µm,18.0s						
T60A	Surry	62.12	65	P	P	03 50 47.8	-0.8
	baz=315,SNR=30						
453A	Whigham	62.13	75	eP	P	03 50 47.7	-1.1
	comp=Z,145nm,0.9s						
453A				LR	LR		
	comp=Z,2µm,21.0s						
453A	Whigham	62.13	75	P	P	03 50 47.4	-1.5
	baz=316,SNR=7.6						
Z56A	Williston	62.14	71	eP	P	03 50 47.5	-1.4
	comp=Z,244nm,1.0s						
Z56A				LR	LR		
	comp=Z,2µm,19.0s						
Z56A	Williston	62.14	71	P	P	03 50 47.2	-1.6
	baz=316,SNR=18						
TIGA	Tifton	62.16	74	PFAKE		03 51 00.0	+11
TIGA				LR	LR		
	comp=Z,1µm,20.0s						
TIGA	Tifton	62.16	74	P	P	03 50 46.9	-2.1
	baz=316						
LMN	Caledonia Moun	62.18	51	eP	P	03 50 47.8	-1.1
	comp=Z,167nm,1.0s						
LMN				LR	LR		
	comp=Z,2µm,18.0s						
GTA	Gaotai	62.19	299	eP	P	03 50 49.1	-0.2
GTA				pP	pwP	03 50 53.2	-4.9
GTA				sP	pP	03 50 56.1	+4.6
GTA				S	S	03 59 12.6	-1.9
GTA				sS	pS	03 59 20.4	+3.3
GTA				SS	SS	04 03 17.5	+0.6
GTA				pmax	pmax		
	comp=Z,50nm,1.3s						
GTA				pmax	pmax		
	comp=Z,830nm,7.8s						
GTA				LR	LR		
	comp=Z,3µm,21.9s						
GTA				LR	LR		
	comp=Z,3µm,20.9s						
GTA				LR	LR		
	comp=Z,2µm,21.3s						
W58A	Raeford	62.19	68	P	P	03 50 47.9	-1.2
	baz=315,SNR=37						
Y57A	Sumter	62.23	70	eP	P	03 50 48.1	-1.3
	comp=Z,147nm,1.0s						
Y57A				LR	LR		
	comp=Z,3µm,19.0s						
Y57A	Sumter	62.23	70	P	P	03 50 48.0	-1.3
	baz=315,SNR=19						
V59A	Middlesex	62.24	67	P	P	03 50 48.4	-1.1
	baz=315,SNR=42						
LZH	Lanzhou	62.29	294	⇓P	P	03 50 51.2	+1.2
LZH				sP	pwP	03 50 56.9	-2.0
LZH				PP	PP	03 53 09.7	+3.0
LZH				S	S	03 59 14.0	-1.9
LZH				sS	pS	03 59 20.9	+2.2
LZH				SS	SS	04 03 20.9	+2.3
LZH				pmax	pmax		
	comp=Z,130nm,1.4s						
LZH				pmax	pmax		
	comp=Z,1µm,6.0s						
LZH				LR	LR		
	comp=Z,3µm,16.8s						
LZH				LR	LR		
	comp=Z,3µm,17.1s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
KONS	Konsvik	62.29	360	eP	P	03 50 50.7	+1.4
M65A	Busby, Falmout	62.31	57	P	P	03 50 49.3	-0.6
	baz=316						
S61A	Accomac	62.34	64	eP	P	03 50 50.7	+0.6
	comp=Z,298nm,0.9s						
S61A				LR	LR		
	comp=Z,2µm,21.0s						
S61A	Accomac	62.34	64	P	P	03 50 49.5	-0.6
	baz=315						
U60A	Pendleton	62.35	65	P	P	03 50 49.5	-0.7
	baz=315,SNR=37						
X58A	Rowland	62.46	68	eP	P	03 50 50.3	-0.7
	comp=Z,171nm,1.0s						
X58A				LR	LR		
	comp=Z,5µm,18.0s						
X58A	Rowland	62.46	68	P	P	03 50 49.8	-1.1
	baz=316,SNR=25						
255A	Hazlehurst	62.48	73	eP	P	03 50 49.1	-2.0
	comp=Z,66nm,0.8s						
255A				LR	LR		
	comp=Z,2µm,19.0s						
255A	Hazlehurst	62.48	73	P	P	03 50 48.7	-2.4
	baz=316,SNR=7.2						
553A	Crawfordville	62.54	75	P	P	03 50 50.1	-1.4
	baz=316						
156A	Sylvania	62.54	71	P	P	03 50 50.4	-1.1
	baz=316,SNR=16						
W59A	Clinton	62.54	67	P	P	03 50 50.3	-1.2
	baz=316,SNR=8.0						
Z57A	Bowman	62.55	70	P	P	03 50 50.5	-1.1
	baz=316,SNR=34						
MOR8	Moi Rana	62.62	359	eP	P	03 50 51.3	-0.3
454A	Quitman	62.65	74	P	P	03 50 50.3	-2.0
	baz=316						
355A	Pearson	62.67	73	P	P	03 50 50.0	-2.4
	baz=316,SNR=8.4						
Y58A	Scranton	62.73	69	eP	P	03 50 51.8	-1.0
	comp=Z,434nm,1.0s						
Y58A				LR	LR		
	comp=Z,4µm,18.0s						
Y58A	Scranton	62.73	69	P	P	03 50 51.7	-1.0
	baz=316,SNR=20						
LVIG	Laguna Verde	62.74	92	eP	P	03 50 51.5	-1.5
	comp=Z,35nm,1.0s						
LVIG				LR	LR		
	comp=Z,900nm,18.0s						
256A	Glennville	62.79	72	P	P	03 50 51.2	-2.0
	baz=316						
V60A	Jim Taylor Roa	62.80	66	eP	P	03 50 52.3	-0.9
	comp=Z,127nm,1.3s						
V60A				LR	LR		
	comp=Z,4µm,18.0s						
V60A	Jim Taylor Roa	62.80	66	P	P	03 50 52.2	-0.9
	baz=316,SNR=11						
CNNC	Cliffs of the	62.81	67	eP	P	03 50 52.8	-0.5
	comp=Z,97nm,0.9s						
CNNC				LR	LR		
	comp=Z,4µm,18.0s						
CNNC	Cliffs of the	62.81	67	P	P	03 50 52.2	-1.1
	baz=316,SNR=10						
157A	Early Branch	62.82	71	P	P	03 50 52.5	-0.9
	baz=316,SNR=15						
U61A	Possum Corner	62.86	65	eP	P	03 50 53.3	-0.3
	comp=Z,413nm,1.0s						
U61A				LR	LR		
	comp=Z,3µm,19.0s						
U61A	Possum Corner	62.86	65	P	P	03 50 52.8	-0.8
	baz=316,SNR=19						
X59A	McDuffie Farm,	62.87	68	P	P	03 50 52.5	-1.2
	baz=316,SNR=8.6						
455A	Stateville	62.99	74	P	P	03 50 52.8	-1.8
	baz=316,SNR=13						
NHSC	New Hope	63.00	70	eP	P	03 50 54.1	-0.5
	comp=Z,379nm,0.9s						
NHSC				LR	LR		
	comp=Z,2µm,20.0s						
NHSC	New Hope	63.00	70	P	P	03 50 53.6	-1.0
	baz=316,SNR=20						
DRLN	Deer Lake	63.02	44	eP	P	03 50 54.1	-0.3

	comp=Z,164nm,1.1s						
DRLN				LR	LR		
	comp=Z,4µm,20.0s						
TLIG	**Tlapa**	**63.02**	**96**	*e*P	**P**	**03 50 54.2**	**-0.9**
	comp=Z,66nm,1.2s						
TLIG				LR	LR		
	comp=Z,1µm,22.0s						
W60A	**Pink Hill**	**63.04**	**67**	P	**P**	**03 50 53.8**	**-1.1**
	baz=316,SNR=7.7						
Z58A	**St. Stephen**	**63.05**	**70**	P	**P**	**03 50 53.9**	**-1.0**
	baz=316,SNR=27						
554A	**Perry**	**63.07**	**75**	P	**P**	**03 50 53.2**	**-1.9**
	baz=316						
ENH	**Enshi**	**63.11**	**285**	*e*P	**P**	**03 50 55.0**	**-0.4**
	comp=Z,116nm,1.2s						
ENH				LR	LR		
	comp=Z,1µm,22.0s						
356A	**Blackshear**	**63.11**	**73**	P	**P**	**03 50 53.6**	**-1.8**
	baz=316						
RGRS	**Roger Stewart**	**63.13**	**70**	*e*P	**P**	**03 50 55.4**	**-0.1**
	comp=Z,821nm,0.6s						
Y59A	**Loris**	**63.13**	**69**	P	**P**	**03 50 54.3**	**-1.1**
	baz=316,SNR=7.1						
CSU	**Charleston Sou**	**63.15**	**70**	*e*P	**P**	**03 50 55.7**	**+0.1**
V61A	**Roper**	**63.17**	**66**	*e*P	**P**	**03 50 56.0**	**+0.3**
	comp=Z,384nm,1.1s						
V61A				LR	LR		
	comp=Z,3µm,18.0s						
V61A	**Roper**	**63.17**	**66**	P	**P**	**03 50 55.1**	**-0.5**
	baz=316,SNR=8.3						
X60A	**Albert Glenn T**	**63.23**	**68**	P	**P**	**03 50 55.1**	**-1.0**
	baz=316,SNR=8.8						
257A	**Skidaway Islan**	**63.30**	**72**	PFAKE		03 51 10.0	+13
257A				LR	LR		
	comp=Z,2µm,20.0s						
257A	**Skidaway Islan**	**63.30**	**72**	P	**P**	**03 50 54.8**	**-1.8**
	baz=316						
W61A	**Ground Anchor**	**63.37**	**66**	P	**P**	**03 50 56.1**	**-0.9**
	baz=316,SNR=11						
357A	**Townsend**	**63.42**	**72**	P	**P**	**03 50 56.1**	**-1.3**
	baz=316						
Z59A	**Georgetown, SC**	**63.43**	**69**	P	**P**	**03 50 56.4**	**-1.0**
	baz=316						
555A	**McAlpin**	**63.47**	**74**	*e*P	**P**	**03 50 57.1**	**-0.7**
	comp=Z,97nm,0.9s						
555A				LR	LR		
	comp=Z,1µm,18.0s						
555A	**McAlpin**	**63.47**	**74**	P	**P**	**03 50 56.1**	**-1.6**
	baz=316						
Y60A	**Bolivia**	**63.50**	**68**	*e*P	**P**	**03 50 57.5**	**-0.4**
	comp=Z,206nm,0.9s						
Y60A				LR	LR		
	comp=Z,4µm,18.0s						
Y60A	**Bolivia**	**63.50**	**68**	P	**P**	**03 50 56.5**	**-1.4**
	baz=316						
456A	**Hilliard**	**63.61**	**73**	*e*P	**P**	**03 50 57.6**	**-1.1**
	comp=Z,199nm,1.1s						
456A				LR	LR		
	comp=Z,2µm,19.0s						
456A	**Hilliard**	**63.61**	**73**	P	**P**	**03 50 57.2**	**-1.4**
	baz=316,SNR=7.7						
HAL	**Halifax**	**63.65**	**51**	*e*P	**P**	**03 50 58.1**	**-0.6**
	comp=Z,91nm,1.2s						
HAL				LR	LR		
	comp=Z,2µm,18.0s						
HAL	**Halifax**	**63.65**	**51**	*e*P	**P**	**03 50 58.1**	**-0.6**
HAL				pmax	pmax		
	comp=Z,91nm,1.2s						
HAL				MLR	MLR		
	comp=Z,2µm,18.0s						
V62A	**Hyde County Ai**	**63.69**	**65**	PFAKE		03 51 10.0	+11
V62A				LR	LR		
	comp=Z,3µm,18.0s						
V62A	**Hyde County Ai**	**63.69**	**65**	P	**P**	**03 50 57.9**	**-1.2**
	baz=316						
655A	**Horseshoe Beac**	**63.74**	**75**	P	**P**	**03 50 57.7**	**-1.8**
	baz=316						
ZSN	**Zaisan**	**63.81**	**314**	*d i*P	**P**	**03 50 59.9**	**+0.1**
ZSN				*e*S	**S**	**03 59 36.0**	**+1.6**
ZSN				pmax	pmax		
	comp=Z,142nm,2.5s						
ZSN				smax	smax		
	comp=N,131nm,5.3s						
ZSN	**Zaisan**	**63.81**	**314**	⇓*i*P	**P**	**03 50 59.1**	**-0.7**
	comp=N,142nm,2.5s						
ZSN				*e*S	**S**	**03 59 36.0**	**+1.6**
	comp=N,131nm,5.3s						
556A	**Lake Butler**	**63.90**	**74**	P	**P**	**03 50 59.1**	**-1.5**
	baz=316,SNR=14						
457A	**Yulee**	**63.96**	**73**	P	**P**	**03 50 59.1**	**-1.9**
	baz=316						
KURK	**Kurchatov**	**63.98**	**320**	*e*P	**P**	**03 51 01.1**	**+0.4**
	comp=N,221nm,0.9s						
KURK				LR	LR		
	comp=Z,3µm,22.0s						
KURK	**Kurchatov**	**63.98**	**320**	*ce*P	**P**	**03 51 01.2**	**+0.4**
KURK				pmax	pmax		
	comp=Z,268nm,1.0s						
GBN	**Guysborough**	**64.08**	**49**	*e*P	**P**	**03 51 01.4**	**-0.1**
	comp=Z,160nm,1.2s						
GBN				LR	LR		
	comp=Z,2µm,18.0s						
KURBB	**Kurchatov Arra**	**64.09**	**320**	P	**P**	**03 51 01.9**	**+0.4**
	comp=Z,148nm,0.9s,baz=47,slow=7.1,SNR=373						
PRGR	**Permogore**	**64.22**	**343**	⇓*i*P	**P**	**03 51 02.6**	**+0.4**
PRGR				pmax	pmax		
	comp=Z,292nm,1.0s						
NSS	**Namsos**	**64.27**	**1**	*e*P	**P**	**03 51 03.2**	**+0.8**
656A	**Willston**	**64.27**	**75**	*e*P	**P**	**03 51 02.7**	**-0.4**
	comp=Z,69nm,0.8s						
656A				LR	LR		
	comp=Z,2µm,19.0s						
656A	**Willston**	**64.27**	**75**	P	**P**	**03 51 01.4**	**-1.7**
	baz=317						
557A	**Orange Park**	**64.29**	**74**	P	**P**	**03 51 02.1**	**-1.1**
	baz=317,SNR=13						
TAOE	**Nuku Hiva Isla**	**64.44**	**150**	*e*LR	LR	04 10 24.4	
	comp=Z,6µm,28.0s,baz=347						
TAOE	**Nuku Hiva Isla**	**64.44**	**150**	PFAKE		03 51 20.0	+16
TAOE				LR	LR		
	comp=Z,3µm,21.0s						
657A	**Interlachen**	**64.52**	**74**	P	**P**	**03 51 03.2**	**-1.4**
	baz=317						
757A	**Oxford**	**64.86**	**75**	P	**P**	**03 51 04.7**	**-2.2**
	baz=317						
658A	**Bunnell**	**65.00**	**74**	*e*P	**P**	**03 51 07.7**	**-0.1**
	comp=Z,182nm,1.3s						
658A	**Bunnell**	**65.00**	**74**	P	**P**	**03 51 06.4**	**-1.4**
	baz=317						
SVE	**Sverdlovsk**	**65.11**	**333**	*ce*P	**P**	**03 51 09.5**	**+1.4**
SVE				*e*		03 53 34.3	
SVE				*e*PPP	PPP	03 55 05.8	
SVE				*e*S	**S**	**03 59 54.3**	**+4.2**
SVE				*e*		04 01 03.9	
SVE				*e*		04 03 57.9	
SVE				pmax	pmax		
	comp=Z,452nm,1.2s						
SVE				pmax	pmax		
	comp=Z,683nm,9.4s						
WMQ	**Urumqi**	**65.22**	**310**	*e*P	**P**	**03 51 11.1**	**+2.0**
	comp=Z,243nm,1.3s						
WMQ				LR	LR		
	comp=Z,2µm,20.0s						
WMQ	**Urumqi**	**65.22**	**310**	P	**P**	**03 51 11.0**	**+1.9**
WMQ				pP	pwP	03 51 14.0	-3.6
WMQ				PcP	**PcP**	**03 51 41.5**	**0.0**
WMQ				PP	**PP**	**03 53 37.0**	**+4.9**
WMQ				S	**S**	**03 59 53.7**	**+1.7**
WMQ				SKS	**SKSac**	**04 01 03.9**	**0.0**
WMQ				SS	**SS**	**04 04 07.7**	**+4.0**
WMQ				pmax	pmax		
	comp=Z,95nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,800nm,4.7s						
WMQ				LR	LR		
	comp=Z,570nm,24.1s						
WMQ				LR	LR		
	comp=Z,760nm,18.5s						
WMQ				LR	LR		
	comp=Z,1µm,23.7s						
BVAR	**Borovoye Array**	**65.24**	**326**	P	**P**	**03 51 09.9**	**+0.9**
	comp=Z,189nm,0.8s,baz=46,slow=6.4,SNR=425						
BRVK	**Borovoye**	**65.25**	**326**	*e*P	**P**	**03 51 10.1**	**+1.0**
	comp=Z,298nm,1.0s						
BRVK				LR	LR		
	comp=Z,2µm,20.0s						
BRVK	**Borovoye**	**65.25**	**326**	*d i*P	**P**	**03 51 10.0**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,253nm,1.0s						
857A	**Zephyrhills**	**65.25**	**75**	P	**P**	**03 51 08.0**	**-1.5**
	baz=317,SNR=7.1						
758A	**Lake Helen**	**65.37**	**74**	P	**P**	**03 51 09.3**	**-0.9**
	baz=317,SNR=8.9						
MK31	**Makanchi Array**	**65.46**	**315**	*e*P	**P**	**03 51 09.5**	**-1.1**
	comp=Z,63nm,0.9s						
MK31	**Makanchi Array**	**65.46**	**315**	*e*P	**P**	**03 51 09.5**	**-1.1**
MK31				pmax	pmax		
	comp=Z,63nm,0.9s						
MK32	**Makanchi Array**	**65.46**	**315**	*e*P	**P**	**03 51 10.2**	**-0.3**
MKAR	**Makanchi Array**	**65.46**	**315**	P	**P**	**03 51 10.2**	**-0.3**
	comp=Z,36nm,0.8s,baz=46,slow=5.2,SNR=164						
MKAR				PKPPKP		04 19 47.9	
	comp=Z,1.7nm,1.1s,baz=228,slow=1.7,SNR=3.6						
MKAR				LR	LR	04 20 03.0	
	comp=Z,604nm,21.8s,baz=28,slow=36						
RABL	**Rabaul**	**65.53**	**226**	PFAKE		03 51 20.0	+8.7
RABL				LR	LR		
	comp=Z,1µm,19.0s						
TBLU	**Trondheim**	**65.53**	**1**	*e*P	**P**	**03 51 10.9**	**+0.2**
MAKZ	**Makanchi**	**65.58**	**315**	*e*P	**P**	**03 51 11.2**	**-0.2**
	comp=Z,138nm,1.1s						
MAKZ				LR	LR		
	comp=Z,1µm,21.0s						
MAKZ	**Makanchi**	**65.58**	**315**	*e*P	**P**	**03 51 11.2**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,138nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,1µm,21.0s						
957A	**Wimauma**	**65.69**	**76**	PFAKE		03 51 20.0	+7.8
957A				LR	LR		
	comp=Z,1µm,20.0s						
957A	**Wimauma**	**65.69**	**76**	P	**P**	**03 51 10.6**	**-1.6**
	baz=317						
858A	**St. Cloud**	**65.82**	**75**	P	**P**	**03 51 11.6**	**-1.5**
	baz=317,SNR=5.5						
DWPF	**Disney Wildern**	**65.85**	**75**	*e*P	**P**	**03 51 12.0**	**-1.3**
	comp=Z,100nm,0.9s						
DWPF				LR	LR		
	comp=Z,1µm,20.0s						
DWPF	**Disney Wildern**	**65.85**	**75**	P	**P**	**03 51 11.5**	**-1.8**
	baz=317						
MANU	**Manus Island**	**65.89**	**232**	*e*P	**P**	**03 51 15.4**	**+1.7**
	comp=Z,95nm,1.0s						
MANU				LR	LR		
	comp=Z,1µm,18.0s						
MYIG	**Mrida**	**65.99**	**86**	*e*P	**P**	**03 51 14.9**	**+0.6**
	comp=Z,312nm,1.1s						
MYIG				LR	LR		
	comp=Z,600nm,18.0s						
ARU	**Arti**	**66.03**	**334**	*e*P	**P**	**03 51 15.0**	**+0.9**
	comp=Z,388nm,1.0s						
ARU				LR	LR		
	comp=Z,1µm,19.0s						
ARU	**Arti**	**66.03**	**334**	*d i*P	**P**	**03 51 14.7**	**+0.7**
ARU						03 51 43.8	
ARU				S	**S**	**04 00 03.0**	**+1.7**
ARU						04 01 09.4	
ARU				SS	**SS**	**04 04 15.6**	**+0.1**
ARU				pmax	pmax		
	comp=Z,385nm,0.9s						
958A	**Wauchula**	**66.04**	**75**	P	**P**	**03 51 12.7**	**-1.8**
	baz=317						
CD2	**Chengdu**	**66.05**	**290**	⇓*i*P	**P**	**03 51 14.8**	**+0.1**
CD2				PcP	**PcP**	**03 51 46.5**	**+1.3**
CD2				S	**S**	**04 00 01.7**	**-0.8**
CD2				sS	pS	04 00 07.6	+2.4
CD2				SS	**SS**	**04 04 14.2**	**-3.1**
CD2				pmax	pmax		
	comp=Z,130nm,1.3s						
CD2				LR	LR		
	comp=Z,2µm,37.3s						
CD2				LR	LR		
	comp=Z,2µm,30.9s						
CD2				LR	LR		
	comp=Z,1µm,24.5s						
MOL	**Molde**	**66.15**	**3**	*e*P	**P**	**03 51 14.9**	**+0.2**
859A	**Kempfer Cattle**	**66.21**	**74**	P	**P**	**03 51 14.5**	**-1.1**
	baz=317,SNR=9.4						
058A	**Arcadia**	**66.39**	**76**	P	**P**	**03 51 15.6**	**-1.2**
	baz=318,SNR=9.5						
AKN	**Aaknes**	**66.53**	**3**	*e*P	**P**	**03 51 18.4**	**+1.2**
959A	**Okeechobee**	**66.61**	**75**	P	**P**	**03 51 17.0**	**-1.2**
	baz=318,SNR=9.2						
DOMB	**Dombas**	**66.72**	**2**	*e*P	**P**	**03 51 18.4**	**-0.1**
059A	**Moore Haven**	**66.86**	**75**	*e*P	**P**	**03 51 19.6**	**-0.2**
	comp=Z,179nm,1.0s						
059A				LR	LR		
	comp=Z,1µm,20.0s						
059A	**Moore Haven**	**66.86**	**75**	P	**P**	**03 51 18.8**	**-1.0**
	baz=318,SNR=6.2						
BRZS	**Berezniki**	**66.88**	**323**	*d i*P	**P**	**03 51 19.7**	**+0.1**
BRZS				*e*S	**S**	**04 00 12.7**	**+0.8**
BRZS				pmax	pmax		
	comp=Z,308nm,1.8s						
BRZS				smax	smax		
	comp=N,242nm,4.9s						
BRZS	**Berezniki**	**66.88**	**323**	⇓*i*P	**P**	**03 51 19.7**	**+0.1**
	comp=N,308nm,1.8s						
BRZS				*e*S	**S**	**04 00 12.7**	**+0.8**
	comp=N,242nm,4.9s						
FIA1	**FINESS Array S**	**66.89**	**353**	*e*P	**P**	**03 51 19.9**	**+0.5**
	comp=N,257nm,0.9s						
FIA0	**FINESS Array S**	**66.89**	**353**	*e*P	**P**	**03 51 19.9**	**+0.5**
FIA0	**FINESS Array S**	**66.89**	**353**	*e*P	**P**	**03 51 19.9**	**+0.5**
FINES	**FINESS Array B**	**66.89**	**353**	P	**P**	**03 51 19.9**	**+0.5**
	comp=N,194nm,0.9s,baz=20,slow=6.1,SNR=286						
FINES				PKPPKP		04 19 46.4	
	comp=N,2.7nm,0.9s,baz=176,slow=4.2,SNR=5.0						
FINES				LR	LR	04 23 27.8	
	comp=N,770nm,18.8s,baz=9.0,slow=38						
059Z	**Ave Maria**	**67.14**	**76**	P	**P**	**03 51 20.2**	**-1.4**
	baz=318						
060A	**Indiantown**	**67.28**	**75**	*e*P	**P**	**03 51 22.7**	**+0.2**
	comp=N,240nm,1.4s						
060A				LR	LR		
	comp=Z,1µm,20.0s						
060A	**Indiantown**	**67.28**	**75**	P	**P**	**03 51 20.6**	**-1.9**
	baz=318						
TEIG	**Tepich**	**67.45**	**86**	*e*P	**P**	**03 51 22.7**	**-0.9**
	comp=Z,51nm,1.0s						
HYA	**Hoyanger**	**67.51**	**4**	*e*P	**P**	**03 51 24.4**	**+1.1**
NC204	**NORSAR Array S**	**67.52**	**1**	*e*P	**P**	**03 51 24.1**	**+0.6**
	comp=Z,506nm,1.1s						
SUE	**Sulen**	**67.56**	**4**	*e*P	**P**	**03 51 23.5**	**-0.2**
GYA	**Guiyang**	**67.58**	**285**	⇓*i*P	**P**	**03 51 24.0**	**-0.5**
GYA				S	**S**	**04 00 20.6**	**-0.6**
GYA				SS	**SS**	**04 04 34.1**	**-7.2**
GYA				pmax	pmax		
	comp=Z,80nm,1.3s						
GYA				pmax	pmax		
	comp=Z,440nm,4.3s						
GYA				LR	LR		
	comp=Z,690nm,18.4s						
GYA				LR	LR		
	comp=Z,510nm,19.8s						
GYA				LR	LR		
	comp=Z,690nm,17.4s						
NC303	**NORSAR Array S**	**67.58**	**1**	*e*P	**P**	**03 51 24.5**	**+0.6**
	comp=Z,371nm,0.9s						
060Z	**West Palm Beac**	**67.63**	**75**	P	**P**	**03 51 23.3**	**-1.3**
	baz=318						
NC405	**NORSAR Array S**	**67.69**	**1**	*e*P	**P**	**03 51 25.4**	**+0.8**
	comp=Z,338nm,0.9s						
NB201	**NORSAR Array S**	**67.75**	**1**	*e*P	**P**	**03 51 25.9**	**+0.9**
	comp=Z,388nm,1.0s						
NB2	**NORSAR Subarra**	**67.76**	**1**	P	**P**	**03 51 25.7**	**+0.6**
	comp=Z,254nm,1.1s,baz=360,slow=6.5						
NB2	**NORSAR Subarra**	**67.76**	**1**	P	**P**	**03 51 25.7**	**+0.6**
	baz=360,slow=6.5						
NB200	**NORSAR Array S**	**67.76**	**1**	*e*P	**P**	**03 51 25.6**	**+0.5**
NOA	**NORSAR Array B**	**67.76**	**1**	P	**P**	**03 51 25.6**	**+0.5**
	comp=Z,84nm,0.9s,baz=0.2,slow=6.3,SNR=203						
NOA				PKPPKP		04 19 44.5	
	comp=Z,1.1nm,1.0s,baz=226,slow=3.0,SNR=3.3						
NOA				LR	LR	04 23 00.1	
	comp=Z,714nm,19.1s,baz=5.0,slow=38						
NBO00	**NORSAR Array S**	**67.77**	**1**	*e*P	**P**	**03 51 26.1**	**+1.0**
	comp=Z,276nm,1.2s						
061Z	**Ochoppi**	**67.81**	**76**	*e*P	**P**	**03 51 25.9**	**0.0**
	comp=Z,183nm,0.9s						
061Z				LR	LR		
	comp=Z,1µm,18.0s						
061Z	**Ochoppi**	**67.81**	**76**	P	**P**	**03 51 24.8**	**-1.1**
	baz=318						
NAO01	**NORSAR Array S**	**67.95**	**1**	*e*P	**P**	**03 51 27.0**	**+0.7**
	comp=Z,249nm,1.3s						
CCIG	**Comitan**	**68.00**	**91**	*e*P	**P**	**03 51 27.3**	**0.0**
	comp=Z,74nm,1.2s						
SKAR	**Skarslia**	**68.07**	**3**	*e*P	**P**	**03 51 28.2**	**+1.2**
NC602	**NORSAR Array S**	**68.07**	**1**	*e*P	**P**	**03 51 27.4**	**+0.5**
	comp=Z,356nm,1.3s						
NC602	**NORSAR Array S**	**68.07**	**1**	*e*P	**P**	**03 51 27.3**	**+0.3**
NORES	**NORESS Array B**	**68.07**	**1**	P	**P**	**03 51 27.2**	**+0.3**
NORES				pmax	pmax		
	comp=Z,51nm,0.9s						
LRW	**Lerwick**	**68.09**	**8**	*e*P	**P**	**03 51 28.1**	**+1.1**
LRW				IAmb	IAmb	03 51 29.8	
	comp=Z,183nm,0.9s						
ASK	**Askoy**	**68.15**	**4**	*e*P	**P**	**03 51 29.3**	**+1.9**
PUL	**Pulkovo**	**68.17**	**351**	*e*P	**P**	**03 51 28.1**	**+0.6**
PUL				IAmb	IAmb	03 51 30.1	
	comp=Z,304nm,0.7s						
PUL				*e*PP	PP	03 53 48.3	-8.8
PUL				*e*S	**S**	**04 00 27.7**	**+0.8**
PUL	**Pulkovo**	**68.17**	**351**	*de*P	**P**	**03 51 29.0**	**+1.5**
PUL				pmax	pmax		
	comp=Z,127nm,0.4s						
BER	**Bergen**	**68.26**	**4**	*e*P	**P**	**03 51 29.0**	**+0.9**
PMOR	**Pomariorio Ree**	**68.31**	**160**	*e*P	**P**	**03 51 29.5**	**+0.6**
	comp=Z,136nm,1.1s						
OTUK	**Ortayu**	**68.43**	**322**	*i* P	**P**	**03 51 30.2**	**+0.8**
OTUK				pmax	pmax		
	comp=Z,314nm,1.1s						
TDK	**Taldyqorghan**	**68.55**	**316**	*e*P	**P**	**03 51 30.4**	**+0.2**
TDK				*e*S	**S**	**04 00 32.2**	**+0.1**
TDK				pmax	pmax		
	comp=Z,316nm,1.2s						
TDK				smax	smax		
	comp=E,274nm,8.7s						
TDK				MLR	MLR		
	comp=Z,1µm,22.0s						
TDK	**Taldyqorghan**	**68.55**	**316**	*e*P	**P**	**03 51 30.4**	**+0.2**
	comp=Z,316nm,1.2s						
TDK				*e*S	**S**	**04 00 32.3**	**+0.1**
	comp=Z,274nm,8.7s						
TDK				*e*LR	LR	04 22 52.8	
	comp=Z,1µm,22.0s						
VAH	**Vaihoa**	**68.60**	**160**	*e*P	**P**	**03 51 31.2**	**+0.6**
	comp=Z,112nm,1.0s						
ODD1	**Odda**	**68.78**	**3**	*e*P	**P**	**03 51 33.1**	**+1.6**
OSL	**Oslo**	**68.86**	**1**	*e*P	**P**	**03 51 33.9**	**+2.0**
KONO	**Kongsberg**	**69.13**	**2**	*e*P	**P**	**03 51 34.6**	**+1.1**
	comp=Z,168nm,1.0s						
KONO				LR	LR		
	comp=Z,800nm,19.0s						
KONO	**Kongsberg**	**69.13**	**2**	*d i*P	**P**	**03 51 34.5**	**+0.9**
KONO				pmax	pmax		
	comp=Z,231nm,1.3s						
KONO	**Kongsberg**	**69.13**	**2**	*e*P	**P**	**03 51 34.8**	**+1.2**
BLS5	**Blasjo**	**69.27**	**4**	*e*P	**P**	**03 51 35.6**	**+1.2**
PDGK	**Podgornoye**	**69.40**	**314**	*i* P	**P**	**03 51 36.0**	**+0.3**
PDGK				pmax	pmax		
	comp=Z,246nm,1.0s						
KMY	**Karmoy**	**69.42**	**4**	*e*P	**P**	**03 51 37.0**	**+1.7**
BIGH	**Upper Bighouse**	**69.46**	**9**	*e*P	**P**	**03 51 36.8**	**+1.2**
BIGH				IAmb	IAmb	03 51 38.5	
	comp=Z,232nm,1.0s						
BIGH				IAMs_20	IAMs_20	04 26 12.0	
	comp=Z,1µm,22.3s						
KPKS	**Kokpek**	**69.65**	**315**	*e*P	**P**	**03 51 37.4**	**+0.3**
KPKS				*e*S	**S**	**04 00 45.5**	**+0.2**
KPKS				pmax	pmax		
	comp=Z,296nm,2.1s						
KPKS				smax	smax		
	comp=E,149nm,7.2s						
KPKS	**Kokpek**	**69.65**	**315**	*e*P	**P**	**03 51 37.5**	**+0.3**
	comp=E,296nm,2.1s						
KPKS				*e*S	**S**	**04 00 45.5**	**+0.2**
	comp=E,149nm,7.2s						
JAY	**Jayapura**	**69.69**	**237**	P	**P**	**03 51 36.9**	**-0.7**
RRH	**Rhenigidale**	**69.71**	**11**	*e*P	**P**	**03 51 38.3**	**+1.1**
UZB	**Uzynbulak**	**69.75**	**315**	*d i*P	**P**	**03 51 38.0**	**+0.1**
UZB				*e*S	**S**	**04 00 47.1**	**+0.5**
UZB				pmax	pmax		
	comp=Z,152nm,2.4s						
UZB				smax	smax		
	comp=E,117nm,6.4s						
UZB	**Uzynbulak**	**69.75**	**315**	⇓*i*P	**P**	**03 51 38.1**	**+0.1**
	comp=E,152nm,2.4s						
UZB				*e*S	**S**	**04 00 47.1**	**+0.5**
	comp=E,117nm,6.4s						
VSU	**Vasula**	**69.79**	**352**	*e*P	**P**	**03 51 38.3**	**+0.7**
VSU				IAmb	IAmb	03 51 40.5	
	comp=Z,848nm,0.8s						
VSU				*e*S	**S**	**04 00 39.0**	**-7.2**
VSU				*e*S	**S**	**04 00 41.6**	**-4.5**
VSU	**Vasula**	**69.79**	**352**	*de*P	**P**	**03 51 38.4**	**+0.8**
VSU				pmax	pmax		
	comp=Z,1µm,1.0s						
RRR	**Rubha Reidh**	**69.88**	**11**	*e*P	**P**	**03 51 38.9**	**+0.7**
ZHN	**Zhinishke**	**70.00**	**315**	*e*P	**P**	**03 51 39.2**	**-0.2**
ZHN				pmax	pmax		
	comp=Z,119nm,2.2s						
ZHN	**Zhinishke**	**70.00**	**315**	*e*P	**P**	**03 51 39.2**	**-0.2**
	comp=Z,119nm,2.2s						
GENI	**Genyem**	**70.03**	**238**	P	**P**	**03 51 36.4**	**-3.3**
CHKK	**Chushkaly**	**70.08**	**316**	*e*P	**P**	**03 51 40.3**	**+0.6**
CHKK	**Chushkaly**	**70.08**	**316**	*e*P	**P**	**03 51 40.3**	**+0.6**
SATY	**Saty**	**70.09**	**315**	*d i*P	**P**	**03 51 40.2**	**+0.3**
SATY				*e*S	**S**	**04 00 52.1**	**+1.5**
SATY				pmax	pmax		
	comp=Z,231nm,1.9s						
SATY				smax	smax		
	comp=E,172nm,6.6s						
SATY	**Saty**	**70.09**	**315**	⇓*i*P	**P**	**03 51 40.3**	**+0.3**
	comp=E,231nm,1.9s						
SATY				*e*S	**S**	**04 00 52.2**	**+1.5**
	comp=E,172nm,6.6s						
KAC	**Achnashellach**	**70.28**	**10**	*e*P	**P**	**03 51 41.3**	**+0.6**
KUU	**Kurty**	**70.33**	**317**	*d i*P	**P**	**03 51 40.7**	**-0.6**
KUU				*e*S	**S**	**04 00 53.2**	**+0.1**
KUU				pmax	pmax		
	comp=Z,130nm,1.2s						
KUU				smax	smax		
	comp=E,246nm,5.6s						
KUU	**Kurty**	**70.33**	**317**	⇓*i*P	**P**	**03 51 40.7**	**-0.6**
	comp=E,130nm,1.2s						
KUU				*e*S	**S**	**04 00 53.2**	**+0.1**
	comp=E,246nm,5.5s						
BTLS	**Baital**	**70.36**	**319**	*d i*P	**P**	**03 51 41.8**	**+0.4**
BTLS				*i* S	**S**	**04 00 53.6**	**+0.3**
BTLS				pmax	pmax		
	comp=Z,107nm,1.3s						
BTLS				smax	smax		
	comp=E,136nm,6.8s						
BTLS	**Baital**	**70.36**	**319**	⇓*i*P	**P**	**03 51 41.8**	**+0.4**
	comp=E,107nm,1.2s						
BTLS				*i* S	**S**	**04 00 53.7**	**+0.3**
	comp=E,136nm,6.8s						
KPL	**Plockton**	**70.40**	**11**	*e*P	**P**	**03 51 42.4**	**+1.0**
KPL				IAmb	IAmb	03 51 43.5	
	comp=Z,92nm,1.0s						
KPL				IAMs_20	IAMs_20	04 21 02.2	
	comp=Z,2µm,19.2s						
PPT	**Papeete**	**70.47**	**162**	LR	LR	04 16 17.2	
	comp=Z,2µm,20.4s,baz=346,slow=31						
HOMB	**Homborsund**	**70.49**	**3**	*e*P	**P**	**03 51 43.1**	**+1.2**
PPT2	**Papeete2**	**70.49**	**162**	*e*P	**P**	**03 51 43.0**	**+0.6**
	comp=Z,49nm,1.2s						
PPT2				*e*S	**S**	**04 00 52.2**	**-3.1**
	comp=Z,5µm,26.0s						
PPT2				*e*SS	**SS**	**04 05 23.6**	**-3.5**
	comp=Z,737nm,31.2s						
PPT2				*e*LQ	LQ	04 09 38.3	
	comp=Z,2µm,26.0s						
PPT2				*e*LR	LR	04 12 52.1	
	comp=Z,9µm,30.8s,baz=348						
TIAR	**Tiarei**	**70.50**	**162**	*e*P	**P**	**03 51 43.0**	**+0.6**
	comp=Z,62nm,0.9s						
DAV	**Davao City (W)**	**70.55**	**256**	⇑*i*P	**P**	**03 51 43.0**	**+0.1**
PRZ	**Przheval'sk**	**70.56**	**315**	*e*P	**P**	**03 51 44.8**	**+1.9**
	comp=Z,132nm,1.0s						
PRZ				LR	LR		
	comp=Z,1µm,20.0s						
PRZ	**Przheval'sk**	**70.56**	**315**	*e*P	**P**	**03 51 44.8**	**+1.9**
PRZ				pmax	pmax		
	comp=Z,132nm,1.0s						
PRZ				MLR	MLR		
	comp=Z,1µm,20.0s						
AAA	**Alma-Ata**	**70.63**	**316**	*e*P	**P**	**03 51 44.4**	**+1.2**

AAA				*e*S	**S**	**04 01 00.7**	**+4.0**
AAA				pmax	pmax		
	comp=Z,500nm,1.7s						
AAA				smax	smax		
	comp=E,900nm,7.9s						
AAA				MLR	MLR		
	comp=Z,700nm,16.0s						
TVO	**Taravao**	**70.74**	**162**	*e*P	**P**	**03 51 44.6**	**+0.7**
	comp=Z,23nm,0.9s						
KMI	**Kunming**	**70.93**	**286**	PFAKE		03 52 00.0	+15
KMI				LR	LR		
	comp=Z,700nm,20.0s						
KMI	**Kunming**	**70.93**	**286**	P	**P**	**03 51 45.3**	**-0.1**
KMI				pP	pP	03 51 47.8	+0.1
KMI				S	**S**	**04 00 57.8**	**-3.2**
KMI				SKS	**SKSac**	**04 01 44.8**	**-3.2**
KMI				SS	**SS**	**04 05 28.0**	**-5.1**
KMI				pmax	pmax		
	comp=Z,67nm,1.4s						
KMI				pmax	pmax		
	comp=Z,520nm,7.9s						
KMI				LR	LR		
	comp=Z,560nm,19.2s						
KMI				LR	LR		
	comp=Z,810nm,15.8s						
KMI				LR	LR		
	comp=Z,640nm,20.4s						
SLIT	**Slitere, Latvi**	**70.93**	**355**	*e*P	**P**	**03 51 45.0**	**+0.4**
SLIT				IAmb	IAmb	03 51 47.2	
	comp=Z,3µm,0.9s						
SLIT				*e*PP	**PP**	**03 54 16.2**	**-4.8**
BAKI	**Biak**	**71.06**	**242**	P	**P**	**03 51 46.3**	**+0.3**
MEH	**Mehetia**	**71.07**	**161**	*e*P	**P**	**03 51 46.7**	**+0.9**
	comp=Z,23nm,1.0s						
QIZ	**Qiongzhong**	**71.15**	**277**	P	**P**	**03 51 46.0**	**-0.6**
QIZ				S	**S**	**04 01 02.1**	**-1.1**
QIZ				pmax	pmax		
	comp=Z,410nm,6.3s						
QIZ				LR	LR		
	comp=Z,500nm,17.1s						
QIZ				LR	LR		
	comp=Z,570nm,17.6s						
MOS	**Moscow**	**71.16**	**346**	*e*P	**P**	**03 51 44.7**	**-1.4**
MOS				*e*		03 54 24.2	
MOS				*e*PPP	PPP	03 56 13.0	
MOS				*e*S	**S**	**04 01 01.5**	**-0.8**
MOS				*e*		04 01 50.4	
MOS				pmax	pmax		
	comp=Z,410nm,1.4s						
MOS				pmax	pmax		
	comp=Z,900nm,2.1s						
MOS				smax	smax		
	comp=E,1µm,5.7s						
MOS				smax	smax		
	comp=N,600nm,4.3s						
KDJ	**Kajisay**	**71.38**	**315**	*e*P	**P**	**03 51 48.6**	**+0.7**
	comp=N,139nm,1.0s						
KDJ				LR	LR		
	comp=Z,1µm,20.0s						
KDJ	**Kajisay**	**71.38**	**315**	*e*P	**P**	**03 51 48.6**	**+0.7**
KDJ				pmax	pmax		
	comp=Z,139nm,1.0s						
KDJ				MLR	MLR		
	comp=Z,1µm,20.0s						
SGDS	**Sogindy**	**71.41**	**317**	⇓*i*P	**P**	**03 51 48.5**	**+0.6**
	comp=Z,171nm,1.4s						
SGDS				*e*S	**S**	**04 01 07.2**	**+1.4**
	comp=Z,156nm,7.0s						
SGDS				*e*LR	LR	04 26 49.0	
	comp=Z,413nm,12.6s						
TKM2	**Tokmak 2**	**71.43**	**317**	*i* P	**P**	**03 51 48.5**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,219nm,1.3s						
TKM2	**Tokmak 2**	**71.43**	**317**	P	**P**	**03 51 48.9**	**+0.7**
	SNR=100						
EDU	**Dundee**	**71.47**	**9**	*e*P	**P**	**03 51 48.9**	**+1.0**
AKTO	**Aktyubinsk**	**71.47**	**332**	P	**P**	**03 51 48.7**	**+0.7**
	comp=Z,115nm,0.8s,baz=39,slow=5.5,SNR=283						
AKTO	**Aktyubinsk**	**71.47**	**332**	*i* P	**P**	**03 51 48.7**	**+0.7**
AKTO				pmax	pmax		
	comp=Z,226nm,1.0s						
INVG	**Invergeldie, C**	**71.48**	**10**	*e*P	**P**	**03 51 48.7**	**+0.7**
INVG				IAmb	IAmb	03 51 50.5	
	comp=Z,111nm,1.0s						
LAWE	**Loch Awe, Argy**	**71.49**	**11**	*e*P	**P**	**03 51 48.9**	**+0.9**
LAWE				IAmb	IAmb	03 51 50.7	
	comp=Z,186nm,1.0s						
LAWE				IAMs_20	IAMs_20	04 21 54.6	
	comp=Z,2µm,20.0s						
SRPI	**Serui, Papua**	**71.55**	**242**	P	**P**	**03 51 48.9**	**-0.1**
USP	**Ospenovka**	**71.62**	**317**	P	**P**	**03 51 50.1**	**+1.0**
	SNR=125						
BOOM	**Boomskoye usch**	**71.63**	**316**	PFAKE		03 52 00.0	+11
BOOM				LR	LR		
	comp=Z,1µm,18.0s						
EAB	**Aberfoyle**	**71.68**	**10**	*e*P	**P**	**03 51 50.1**	**+0.9**
ULHL	**Ulahol**	**71.70**	**316**	P	**P**	**03 51 50.5**	**+0.6**
	SNR=108						
CHMS	**Chumysh**	**71.73**	**317**	P	**P**	**03 51 52.0**	**+2.3**
	SNR=48						
AB31	**Akbulak array**	**71.92**	**330**	⇑*e*P	**P**	**03 51 51.3**	**+0.6**
AB31				pmax	pmax		
	comp=Z,112nm,0.8s						
ABKAR	**Akbulak array**	**71.92**	**330**	*e*P	**P**	**03 51 51.5**	**+0.7**
	comp=Z,180nm,1.0s						
KBK	**Karagaybulak**	**71.92**	**317**	P	**P**	**03 51 52.2**	**+1.1**
	SNR=66						
OBN	**Obninsk**	**71.93**	**346**	*e*P	**P**	**03 51 51.2**	**+0.6**
	comp=Z,242nm,0.9s						
OBN				LR	LR		
	comp=Z,2µm,19.0s						
OBN	**Obninsk**	**71.93**	**346**	⇑*i*P	**P**	**03 51 51.1**	**+0.4**
OBN	**Obninsk**	**71.93**	**346**	*d i*P	**P**	**03 51 50.8**	**+0.1**
OBN				*e*		03 51 54.5	
OBN				*e*		03 51 59.8	
OBN				*i*		03 52 10.4	
OBN				*e*PPP	PPP	03 56 15.5	
OBN				*e*S	**S**	**04 01 12.0**	**+0.9**
OBN				*e*SS	**SS**	**04 05 48.0**	**+1.7**
OBN				pmax	pmax		
	comp=Z,506nm,1.7s						
FRU1	**Bishkek**	**71.93**	**317**	*e*P	**P**	**03 51 53.6**	**+2.6**
	comp=Z,330nm,0.9s						
FRU1				LR	LR		
	comp=Z,1µm,19.0s						
PGBU	**Glenifferbraes**	**72.03**	**10**	*e*P	**P**	**03 51 52.1**	**+0.8**
PGBU				IAmb	IAmb	03 51 54.0	
	comp=Z,194nm,0.9s						
ESY	**Stoneypath**	**72.13**	**9**	*e*P	**P**	**03 51 52.5**	**+0.7**
AAK	**Ala-Archa**	**72.13**	**317**	*e*P	**P**	**03 51 53.3**	**+0.9**
	comp=Z,166nm,0.9s						
AAK				LR	LR		
	comp=Z,1µm,18.0s						
AAK	**Ala-Archa**	**72.13**	**317**	*i* P	**P**	**03 51 53.2**	**+0.9**
	SNR=106						
AAK	**Ala-Archa**	**72.13**	**317**	*d i*P	**P**	**03 51 53.1**	**+0.7**
AAK				pmax	pmax		
	comp=Z,218nm,1.0s						
AAK	**Ala-Archa**	**72.13**	**317**	P	**P**	**03 51 53.3**	**+0.9**
	SNR=88						
EBL	**Broad Law**	**72.22**	**9**	*e*P	**P**	**03 51 53.4**	**+0.9**
KZA	**Kyzart**	**72.27**	**316**	P	**P**	**03 51 55.8**	**+2.3**
	SNR=41						
BBSR	**BB Station**	**72.31**	**60**	*e*P	**P**	**03 51 53.5**	**+0.2**
	comp=Z,90nm,1.0s						
MUD	**Monsted U'grnd**	**72.32**	**2**	*e*P	**P**	**03 51 54.3**	**+1.3**
MUD				pmax	pmax		
	comp=Z,180nm,1.1s						
MUD				MLR	MLR		
	comp=Z,1µm,26.0s						
MUD	**Monsted U'grnd**	**72.32**	**2**	*i* P	**P**	**03 51 54.3**	**+1.3**
	comp=Z,177nm,1.1s						
	comp=Z,1µm,26.0s						
IDGL	**Inch Island, C**	**72.39**	**12**	*e*P	**P**	**03 51 55.3**	**+1.8**
IDGL				IAMs_20	IAMs_20	04 23 24.7	
	comp=Z,2µm,22.1s						
RKPI	**Ransiki, Papua**	**72.40**	**244**	P	**P**	**03 51 50.1**	**-4.0**
	comp=Z,172nm,1.0s						
PMG	**Port Moresby**	**72.41**	**228**	*e*P	**P**	**03 51 54.8**	**+0.8**
	comp=Z,132nm,0.8s						
PMG				LR	LR		
	comp=Z,1µm,22.0s						
PMG	**Port Moresby**	**72.41**	**228**	⇑*e*P	**P**	**03 51 55.3**	**+1.2**
PMG				pmax	pmax		
	comp=Z,464nm,0.8s						
EKS2	**Erkin-Say**	**72.42**	**318**	P	**P**	**03 51 55.1**	**+1.1**
	SNR=130						
UCH	**Uchtor**	**72.46**	**317**	P	**P**	**03 51 55.8**	**+1.1**
	SNR=71						
IZAR	**Zarasai**	**72.52**	**352**	*e*P	**P**	**03 51 54.7**	**+0.5**
IZAR				IAmb	IAmb	03 51 56.9	
	comp=Z,132nm,0.9s						
CLGH	**Cloghs, Cushen**	**72.56**	**11**	*e*P	**P**	**03 51 55.7**	**+1.3**
CLGH				IAmb	IAmb	03 51 57.0	
	comp=Z,143nm,1.3s						
CLGH				IAMs_20	IAMs_20	04 22 28.4	
	comp=Z,3µm,21.1s						
EKA	**Eskdalemuir Ar**	**72.65**	**10**	P	**P**	**03 51 55.4**	**+0.4**
EKA				pmax	pmax		
	comp=Z,19nm,0.4s						
ESK	**Eskdalemuir**	**72.66**	**10**	*e*P	**P**	**03 51 56.1**	**+1.0**
	comp=Z,188nm,0.9s						
ESK	**Eskdalemuir**	**72.66**	**10**	*e*P	**P**	**03 51 56.3**	**+1.2**
ESK				IAmb	IAmb	03 51 57.8	
	comp=Z,187nm,0.9s						
ESK				IAMs_20	IAMs_20	04 24 46.4	
	comp=Z,5µm,16.6s						
ESK	**Eskdalemuir**	**72.66**	**10**	*i* P	**P**	**03 51 56.5**	**+1.4**
ISAL	**Salakas**	**72.71**	**352**	*e*P	**P**	**03 51 56.0**	**+0.7**
ISAL				IAmb	IAmb	03 51 58.1	
	comp=Z,134nm,1.0s						
TGUH	**Tegucigalpa,Un**	**72.72**	**89**	*e*P	**P**	**03 51 55.9**	**-0.3**
	comp=Z,138nm,1.2s						
TGUH				LR	LR		
	comp=Z,600nm,19.0s						
BHH	**Howats Hill**	**72.88**	**10**	*e*P	**P**	**03 51 57.3**	**+0.9**
AML	**Almayashu**	**72.89**	**317**	P	**P**	**03 51 59.6**	**+2.4**
	SNR=12						
IDID	**Didziasalis**	**72.91**	**352**	*e*P	**P**	**03 51 57.3**	**+0.8**
IDID				IAmb	IAmb	03 51 59.2	
	comp=Z,105nm,0.9s						
IIGN	**Ignalina**	**72.92**	**352**	*e*P	**P**	**03 51 57.5**	**+0.9**
IIGN				IAmb	IAmb	03 51 59.4	
	comp=Z,150nm,0.9s						
GAL1	**Galloway**	**72.94**	**11**	*e*P	**P**	**03 51 57.7**	**+1.0**
GAL1				IAmb	IAmb	03 51 59.2	
	comp=Z,92nm,0.9s						
GAL1				IAML		03 51 59.3	
	comp=Z,888nm,0.8s						
GAL1				IVMsBB		04 22 12.3	
	comp=Z,394nm,4.0s						
SLVN	**Son La**	**73.07**	**283**	*e*P	**P**	**03 51 58.0**	**-0.1**
	comp=Z,52nm,1.1s						
SLVN				LR	LR		
	comp=Z,800nm,21.0s						
COP	**Copenhagen**	**73.14**	**0**	*i* P	**P**	**03 51 58.9**	**+1.0**
COP				pmax	pmax		
	comp=Z,130nm,1.0s						
COP				MLR	MLR		
	comp=Z,600nm,20.0s						
COP	**Copenhagen**	**73.14**	**0**	*i* P	**P**	**03 51 58.9**	**+1.0**
	comp=Z,133nm,1.0s						
	comp=Z,590nm,20.0s						
EDMD	**Edmundbyers**	**73.26**	**9**	*e*P	**P**	**03 51 59.5**	**+0.8**
EDMD				IAmb	IAmb	03 52 01.4	
	comp=Z,191nm,0.9s						
NACGM	**Naroch**	**73.31**	**352**	*e*P	**P**	**03 51 58.0**	**-0.9**
NACGM				*e*PcP	**PcP**	**03 52 18.0**	**+2.7**
NACGM				*e*PP	**PP**	**03 54 47.0**	**+5.6**
NACGM				*e*PPP	PPP	03 56 24.0	
NACGM				*e*S	**S**	**04 01 28.0**	**+1.1**
NACGM				*e*SS	SS	04 06 18.0	+11
NACGM				*e*SSS	SSS	04 10 08.0	
NACGM				*e*LQ	LQ	04 15 24.0	
NACGM				*e*LR	LR	04 20 40.0	
NACGM				LRM	MLR	04 26 13.0	
	comp=Z,1.5nm,20.0s						
KESW	**Keswick, Cumbr**	**73.39**	**10**	*e*P	**P**	**03 52 00.5**	**+1.1**
KESW				IAmb	IAmb	03 52 02.2	
	comp=Z,214nm,1.0s						
KESW				IAMs_20	IAMs_20	04 27 21.5	
	comp=Z,1µm,21.0s						
KK31	**Karatay Array**	**73.40**	**320**	*e*P	**P**	**03 52 00.2**	**+0.5**
	comp=Z,202nm,0.9s						
KK31	**Karatay Array**	**73.40**	**320**	*e*P	**P**	**03 52 00.2**	**+0.5**
KK31				pmax	pmax		
	comp=Z,202nm,0.9s						
KKAR	**Karatay Array**	**73.40**	**320**	*e*P	**P**	**03 52 00.2**	**+0.5**
	comp=Z,202nm,0.9s						
KKAR	**Karatay Array**	**73.40**	**320**	*e*P	**P**	**03 52 00.2**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,202nm,0.9s						
SWI	**Sorong**	**73.53**	**247**	P	**P**	**03 52 00.7**	**0.0**
IOMK	**Kirk Michael**	**73.55**	**11**	*e*P	**P**	**03 52 01.0**	**+0.6**
IOMK				IAmb	IAmb	03 52 02.8	
	comp=Z,216nm,0.9s						
IOMK				IAMs_20	IAMs_20	04 22 24.4	
	comp=Z,3µm,19.2s						
MICGM	**Minsk**	**73.61**	**351**	⇑*e*P	**P**	**03 52 02.0**	**+1.3**
MICGM				*e*P	**P**	**03 52 02.0**	**+1.3**
MICGM				PM		03 52 03.0	
	comp=Z,1.3nm,1.0s						
MICGM				PM		03 52 04.0	
	comp=N,0.6nm,1.5s						
MICGM				*e*LR	LR	04 17 18.0	
MNK	**Minsk**	**73.61**	**351**	⇑*e*P	**P**	**03 52 02.0**	**+1.3**
MNK				pmax	pmax		
	comp=Z,1µm,1.0s						
MNK				pmax	pmax		
	comp=N,570nm,1.5s						
WIM	**Isle of Man**	**73.65**	**11**	*e*P	**P**	**03 52 02.0**	**+1.1**
IGLA	**Glengowla, Co**	**73.73**	**14**	*e*P	**P**	**03 52 03.0**	**+1.6**
DIBR	**DIBRUGARH**	**73.75**	**294**	*e*P	**P**	**03 52 02.5**	**+0.6**
GDLE	**Glaisdale, N Y**	**73.78**	**8**	*e*P	**P**	**03 52 03.2**	**+1.5**
GDLE				IAmb	IAmb	03 52 04.3	
	comp=Z,189nm,0.9s						
ARSB	**Arslanbob**	**73.85**	**317**	*e*P	**P**	**03 52 03.4**	**+0.8**
	comp=Z,138nm,0.9s						
ARSB				*e*PP	**PP**	**03 54 39.2**	**-7.5**
JBG	**Jabagly**	**73.95**	**319**	*e*P	**P**	**03 52 04.1**	**+1.0**
JBG				pmax	pmax		
	comp=Z,219nm,1.9s						
LPSR	**Galich'ya Gora**	**73.97**	**344**	*e*P	**P**	**03 52 03.0**	**+0.2**
LPSR				*e*S	**S**	**04 01 32.1**	**-2.3**
LPSR				pmax	pmax		
	comp=Z,170nm,1.0s						
LPSR				smax	smax		
	comp=E,550nm,3.4s						
LPSR				MLR	MLR		
	comp=Z,2µm,18.0s						
ESTN	**Estel**	**74.01**	**89**	*e*P	**P**	**03 52 03.0**	**-0.7**
	comp=Z,54nm,1.2s						
KSH	**Kashi**	**74.03**	**314**	P	**P**	**03 52 07.3**	**+3.7**
KSH				PP	PP	03 54 55.8	+7.6
KSH				S	**S**	**04 01 40.3**	**+4.4**
KSH				SKS	**SKKSac**	**04 02 11.6**	**+0.6**
KSH				ScS	**ScS**	**04 02 17.6**	**+4.0**
KSH				pmax	pmax		
	comp=Z,220nm,1.1s						
KSH				pmax	pmax		
	comp=Z,1µm,7.1s						
KSH				LR	LR		
	comp=Z,1µm,15.4s						
KSH				LR	LR		
	comp=Z,1µm,14.3s						
KSH				LR	LR		
	comp=Z,2µm,15.9s						
KLNR	**Kaliningrad**	**74.06**	**356**	*de*P	**P**	**03 52 03.9**	**+0.6**
KLNR				pmax	pmax		
	comp=Z,421nm,1.1s						
LSA	**Lhasa**	**74.16**	**298**	*e*P	**P**	**03 52 06.2**	**+1.3**
	comp=Z,93nm,0.9s						
HPK	**Haverah Park**	**74.16**	**9**	*e*P	**P**	**03 52 05.0**	**+1.1**
HPK				IAmb	IAmb	03 52 06.9	
	comp=Z,282nm,1.1s						
RGN	**Rugen**	**74.28**	**360**	*e*P	**P**	**03 52 06.6**	**+2.0**
	comp=Z,293nm,1.0s						
RGN				LR	LR		
	comp=Z,900nm,20.0s						
ZIRO	**ZIRO**	**74.31**	**294**	*e*P	**P**	**03 52 04.8**	**-0.7**
DSB	**Dublin**	**74.32**	**12**	*e*P	**P**	**03 52 05.7**	**+0.9**
	comp=Z,108nm,1.1s						
DSB				*e*PP	**PP**	**03 54 46.0**	**-4.0**
DSB				LR	LR		
	comp=Z,2µm,20.0s						
IUG	**Iuzhnay**	**74.39**	**320**	*e*P	**P**	**03 52 05.9**	**+0.3**
IUG				pmax	pmax		
	comp=Z,29nm,1.2s						
IUG	**Iuzhnay**	**74.39**	**320**	*e*P	**P**	**03 52 05.9**	**+0.3**
	comp=Z,29nm,1.2s						
WME	**Myndd Eilian**	**74.43**	**11**	*e*P	**P**	**03 52 06.3**	**+0.8**
TNTI	**Ternate**	**74.47**	**251**	P	**P**	**03 52 04.4**	**-1.9**
SUW	**Suwalki**	**74.48**	**354**	*e*P	**P**	**03 52 06.0**	**+0.3**
SUW				*e*S	**S**	**04 01 42.2**	**+2.1**
SUW				LMZ	LR	04 19 49.0	
	comp=Z,2µm,29.0s						
SUW	**Suwalki**	**74.48**	**354**	*e*P	**P**	**03 52 06.2**	**+0.4**
	comp=Z,686nm,1.0s						
SUW				LR	LR		
	comp=Z,1µm,21.0s						
SUW	**Suwalki**	**74.48**	**354**	*e*P	**P**	**03 52 06.2**	**+0.4**
SUW				pmax	pmax		
	comp=Z,686nm,1.0s						
SUW				MLR	MLR		
	comp=Z,1µm,21.0s						
WLF1	**Llynfaes**	**74.52**	**11**	*e*P	**P**	**03 52 06.1**	**0.0**
WLF1				IAmb	IAmb	03 52 08.4	
	comp=Z,202nm,1.1s						
WLF1				IAMs_20	IAMs_20	04 23 15.7	
	comp=Z,3µm,23.1s						
YRC	**Rhoscolyn**	**74.54**	**11**	*e*P	**P**	**03 52 07.6**	**+1.5**
FAKI	**Fak Fak**	**74.64**	**245**	*e*P	**P**	**03 52 07.5**	**+0.2**
	comp=Z,217nm,1.2s						
FAKI				LR	LR		
	comp=Z,800nm,18.0s						
JORH	**JORHAT**	**74.68**	**294**	*e*P	**P**	**03 52 06.7**	**-0.8**
YLL	**Llanberis**	**74.69**	**11**	*e*P	**P**	**03 52 07.8**	**+0.8**
LBWR	**Ladybower, Pea**	**74.70**	**9**	*e*P	**P**	**03 52 08.2**	**+1.1**
LBWR				IAmb	IAmb	03 52 09.8	
	comp=Z,223nm,0.9s						
LMK	**Market Rasen**	**74.78**	**8**	*e*P	**P**	**03 52 08.2**	**+0.7**
LMK				IAmb	IAmb	03 52 10.1	
	comp=Z,257nm,1.0s						
VORR	**Voronezh**	**74.81**	**343**	*e*P	**P**	**03 52 06.0**	**-1.7**
VORR				pmax	pmax		
	comp=Z,400nm,1.2s						
MOKO	**MOKOCHONG**	**74.85**	**293**	*e*P	**P**	**03 52 09.4**	**+0.8**
STNC	**Stoke**	**74.96**	**9**	*e*P	**P**	**03 52 10.1**	**+1.6**
STNC				IAmb	IAmb	03 52 11.6	
	comp=Z,340nm,0.9s						
STNC				IAMs_20	IAMs_20	04 23 11.0	
	comp=Z,1µm,22.5s						
LLW	**Llanuwychllyn**	**75.04**	**10**	*e*P	**P**	**03 52 09.5**	**+0.4**
LLW				IAmb	IAmb	03 52 11.8	
	comp=Z,116nm,0.9s						
FOEL	**Foel Wylfa**	**75.05**	**10**	*e*P	**P**	**03 52 10.2**	**+1.1**
FOEL				IAmb	IAmb	03 52 12.1	
	comp=Z,303nm,0.9s						
FOEL				IAMs_20	IAMs_20	04 30 36.6	
	comp=Z,1µm,15.4s						
IWEX	**Carrickbyrne,**	**75.12**	**12**	*e*P	**P**	**03 52 10.4**	**+0.9**
IWEX				IAMs_20	IAMs_20	04 24 36.0	
	comp=Z,3µm,21.9s						
VSR	**Storozhevoye**	**75.26**	**343**	*e*P	**P**	**03 52 10.4**	**+0.1**
VSR				*e*S	**S**	**04 01 49.2**	**+0.3**
VSR				pmax	pmax		
	comp=Z,160nm,0.9s						
VSR				smax	smax		
	comp=E,380nm,3.3s						
VSR				MLR	MLR		
	comp=Z,19µm,70.0s						
TAWA	**Tawang**	**75.38**	**296**	*e*P	**P**	**03 52 10.9**	**-1.0**
CWF	**Charnwood Fore**	**75.40**	**9**	*e*P	**P**	**03 52 11.6**	**+0.5**
CWF				IAmb	IAmb	03 52 13.8	
	comp=Z,173nm,1.1s						
HLM1	**Long Mynd**	**75.45**	**10**	*e*P	**P**	**03 52 12.2**	**+0.7**
HLM1				IAmb	IAmb	03 52 14.1	
	comp=Z,88nm,0.8s						
VORD	**Divnogorie**	**75.47**	**343**	*e*P	**P**	**03 52 12.0**	**+0.4**
VORD				*e*S	**S**	**04 01 52.6**	**+1.3**
VORD				pmax	pmax		
	comp=Z,140nm,1.0s						
VORD				smax	smax		
	comp=E,6µm,8.4s						
GKP	**Gorka Klasztor**	**75.50**	**357**	*e*P	**P**	**03 52 12.7**	**+1.0**
GKP				*e*S	**S**	**04 01 54.5**	**+2.9**
GKP				LMZ	LR	04 20 14.9	
	comp=E,2µm,29.1s						
LBMI	**Labuha**	**75.53**	**250**	P	**P**	**03 52 10.1**	**-2.3**
	comp=E,133nm,1.7s,comp=E,2µm						
KOHI	**KOHIMA**	**75.55**	**293**	*e*P	**P**	**03 52 11.8**	**-0.9**
KOHI				IAmb	IAmb	03 52 13.0	
	comp=Z,735nm,2.6s						
WACR	**West Acre**	**75.58**	**8**	*e*P	**P**	**03 52 12.8**	**+0.6**
WACR				IAmb	IAmb	03 52 14.6	
	comp=Z,452nm,0.9s						
TEZP	**TEZPUR**	**75.61**	**295**	*e*P	**P**	**03 52 11.2**	**-1.6**
ACON	**Acoyapa**	**75.62**	**89**	*e*P	**P**	**03 52 11.9**	**-1.1**
	comp=Z,38nm,1.3s						
GTBY	**Guantanamo Bay**	**75.78**	**76**	*e*P	**P**	**03 52 14.1**	**+0.3**
	comp=Z,87nm,0.9s						
RSBS	**Rosebush, Pemb**	**75.79**	**11**	*e*P	**P**	**03 52 14.4**	**+1.0**
RSBS				IAmb	IAmb	03 52 16.0	
	comp=Z,89nm,0.9s						
RSBS				IAMs_20	IAMs_20	04 24 13.9	
	comp=Z,927nm,22.3s						
PANO	**Nakornpanom**	**75.81**	**280**	P	**P**	**03 52 14.5**	**+0.5**
BTK	**Batken**	**75.82**	**318**	*e*P	**P**	**03 52 14.1**	**+0.2**
	comp=Z,268nm,1.0s						
BTK	**Batken**	**75.82**	**318**	*e*P	**P**	**03 52 14.1**	**+0.2**
BTK				pmax	pmax		
	comp=Z,268nm,1.0s						
MCH1	**Michaelchurch**	**75.95**	**10**	*e*P	**P**	**03 52 15.2**	**+0.9**
MCH1				IAmb	IAmb	03 52 16.9	
	comp=Z,151nm,1.1s						
ESPN	**Las Esperanzas**	**76.00**	**88**	*e*P	**P**	**03 52 14.1**	**-0.9**
	comp=Z,68nm,1.0s						
ESPN				LR	LR		
	comp=Z,500nm,21.0s						
NONG	**Nongkai**	**76.01**	**281**	P	**P**	**03 52 15.4**	**+0.2**
MONM	**Monmouth**	**76.13**	**10**	*e*P	**P**	**03 52 16.5**	**+1.2**
MONM				IAmb	IAmb	03 52 18.1	
	comp=Z,195nm,1.1s						
TBI	**Tubuai**	**76.13**	**163**	*e*S	**S**	**04 01 55.5**	**-3.4**
	comp=Z,3µm,31.2s						
TBI				*e*LQ	LQ	04 11 41.2	
	comp=Z,907nm,28.0s						
TBI				*e*LR	LR	04 15 34.4	
	comp=Z,5µm,30.5s,baz=344						
STRD	**Stroud**	**76.26**	**10**	*e*P	**P**	**03 52 17.3**	**+1.2**
STRD				IAmb	IAmb	03 52 18.8	
	comp=Z,305nm,1.1s						
IMP	**Imphal**	**76.32**	**293**	*e*P	**P**	**03 52 17.8**	**+0.8**
IMP				IAmb	IAmb	03 52 19.5	
	comp=Z,96nm,1.3s						
SKNT	**Sakolnakorn**	**76.33**	**280**	P	**P**	**03 52 16.9**	**-0.1**
OLDB	**Oldbury-Upon-S**	**76.33**	**10**	*e*P	**P**	**03 52 17.3**	**+0.9**
OLDB				IAmb	IAmb	03 52 19.0	
	comp=Z,156nm,1.1s						
SWN1	**Swindon**	**76.56**	**9**	*e*P	**P**	**03 52 18.9**	**+1.2**
SWN1				IAmb	IAmb	03 52 20.6	
	comp=Z,190nm,0.9s						
GUWA	**GUWAHATI**	**76.56**	**295**	*e*P	**P**	**03 52 17.5**	**-0.6**
GUWA				IAmb	IAmb	03 52 18.4	
	comp=Z,123nm,1.3s						
WTSB	**Winterswijk**	**76.73**	**4**	*e*P	**P**	**03 52 19.1**	**+0.4**
HTL	**Hartland**	**76.77**	**11**	*e*P	**P**	**03 52 20.4**	**+1.5**
HTL				IAmb	IAmb	03 52 22.6	
	comp=Z,166nm,0.3s						
HTL				IAMs_20	IAMs_20	04 24 45.0	
	comp=Z,2µm,23.9s						
BEL	**Belsk**	**76.79**	**355**	*e*P	**P**	**03 52 20.2**	**+1.2**
BEL				LMZ	LR	04 22 23.1	
	comp=Z,2µm,27.1s						
WOL	**Wolverton**	**76.81**	**9**	*e*P	**P**	**03 52 19.6**	**+0.4**
WOL				IAmb	IAmb	03 52 21.9	
	comp=Z,224nm,1.1s						
GAR	**Garm**	**76.92**	**318**	*e*P	**P**	**03 52 20.9**	**+0.7**
	comp=Z,524nm,1.0s						
GAR				LR	LR		
	comp=Z,2µm,19.0s						
PRVC	**Isla de Provid**	**76.92**	**85**	*e*P	**P**	**03 52 20.0**	**-0.4**
DZM	**Mont Dzumac**	**76.92**	**205**	*e*P	**P**	**03 52 20.9**	**+0.8**
	comp=Z,127nm,1.7s						
DZM				*e*S	**S**	**04 02 03.7**	**-4.2**
	comp=Z,501nm,24.8s						
DZM				*e*SS	**SS**	**04 07 01.0**	**-4.2**
	comp=Z,296nm,26.6s						
DZM				*e*LR	LR	04 16 09.8	
	comp=Z,2µm,22.8s						
DZM	**Mont Dzumac**	**76.92**	**205**	*e*P	**P**	**03 52 23.1**	**+3.0**
	comp=Z,105nm,1.5s						
SHL	**Shillong**	**76.94**	**295**	*e*P	**P**	**03 52 19.8**	**-0.8**
	comp=Z,124nm,1.2s						
SHL				LR	LR		
	comp=Z,1µm,20.0s						
SHL	**Shillong**	**76.94**	**295**	*e*P	**P**	**03 52 19.4**	**-1.2**
SHL				IAmb	IAmb	03 52 22.3	

	comp=Z,48nm,0.5s						
GRTK	Grand Turk	76.95	72	PFAKE		03 52 30.0	+10
GRTK				LR	LR		
	comp=Z,1µm,20.0s						
PAYA	Payao	77.02	285	P	P	03 52 20.9	0.0
JTS	Las Juntas de	77.05	90	eP	P	03 52 19.5	-1.6
	comp=Z,17nm,1.1s						
JTS				LR	LR		
	comp=Z,400nm,20.0s						
JTS	Las Juntas de	77.05	90	eP	P	03 52 19.5	-1.6
JTS				pmax	pmax		
	comp=Z,17nm,1.1s						
JTS				MLR	MLR		
	comp=Z,400nm,20.0s						
KKM	Kota Kinabalu	77.10	263	eP	P	03 52 21.5	0.0
	comp=Z,60nm,1.3s						
KKM				LR	LR		
	comp=Z,200nm,18.0s						
KKM	Kota Kinabalu	77.10	263	P	P	03 52 23.0	+1.5
ELSH	Elham, Standar	77.19	8	eP	P	03 52 22.2	+0.9
ELSH				IAmb	IAmb	03 52 23.9	
	comp=Z,222nm,1.0s						
AKASG	Malin Array Be	77.21	350	P	P	03 52 21.2	-0.3
	comp=Z,71nm,0.7s,baz=14,slow=5.9,SNR=149						
AKASG				LR	LR	04 29 12.8	
	comp=Z,1µm,21.4s,baz=15,slow=38						
AKBB	Malin Array Si	77.21	350	eP	P	03 52 21.1	-0.3
	comp=Z,124nm,0.9s						
AKBB	Malin Array Si	77.21	350	eP	P	03 52 21.2	-0.3
AKBB				pmax	pmax		
	comp=Z,124nm,0.9s						
GTK	Tadong	77.41	298	eP	P	03 52 23.1	0.0
GTK				IAmb	IAmb	03 52 25.0	
	comp=Z,71nm,0.9s						
CCA1	Carnmenellis	77.47	12	eP	P	03 52 23.9	+1.0
CCA1				IAmb	IAmb	03 52 25.5	
	comp=Z,114nm,0.8s						
CCA1				IAMs_20	IAMs_20	04 24 57.5	
	comp=Z,2µm,23.1s						
KHON	Khomkaen	77.53	280	P	P	03 52 25.0	+1.3
CLL	Collm	77.53	0	eP	P	03 52 22.6	-0.7
	comp=Z,98nm,0.9s						
CLL				LR	LR		
	comp=Z,600nm,20.0s						
CLL	Collm	77.53	0	⇓iP	P	03 52 22.8	-0.4
CLL				eS	S	04 02 12.0	-1.8
CLL				pmax	pmax		
	comp=Z,144nm,1.2s						
CLL	Collm	77.53	0	⇓iP	P	03 52 22.8	-0.4
	comp=Z,144nm,1.2s						
CLL				ePmax		03 52 27.0	
CLL				e		03 55 40.0	
CLL				ePPP	PPP	03 57 06.0	
CLL				eS	S	04 02 12.0	-1.8
CLL				ePS		04 02 49.0	
CLL				ePPS	PPS	04 03 05.0	
CLL				eSS	SS	04 07 11.0	-0.4
CLL				eSSS	SSS	04 10 36.0	
CLL				LmV		04 33 00.0	
	comp=Z,600nm,20.5s						
CHGR	Chuyangaron	77.69	318	eP	P	03 52 25.5	+1.0
	comp=Z,465nm,1.1s						
CHGR				LR	LR		
	comp=Z,5µm,22.0s						
UCC	Uccle	77.77	6	eP	P	03 52 25.7	+1.1
	comp=Z,50nm,1.0s						
UCC				LR	LR		
	comp=Z,800nm,20.0s						
UCC	Uccle	77.77	6	eP	P	03 52 25.7	+1.1
UCC				pmax	pmax		
	comp=Z,50nm,1.0s						
UCC				MLR	MLR		
	comp=Z,800nm,20.0s						
UCC	Uccle	77.77	6	⇑P	P	03 52 25.0	+0.4
LAMP	Lampang	77.80	284	P	P	03 52 27.0	+1.8
	comp=Z,41µm,0.9s,comp=Z,540µm						
UTTA	Uttaradit	77.84	283	P	P	03 52 25.9	+0.5
BEBN	Eben Emael	77.85	5	P	P	03 52 24.8	-0.2
	comp=Z,103nm,1.0s						
HGN	Heimansgroeve	77.89	5	eP	P	03 52 26.1	+0.9
HGN				epP	PP	03 54 56.8	-23
HGN				eS	S	04 02 27.5	+10
HGN				eSS	SS	04 07 04.4	-13
KSP	Ksiaz	77.96	358	eP	P	03 52 26.8	+1.1
KSP				eS	S	04 02 20.0	+1.5
KSP				LMZ	LR	04 19 06.2	
	comp=Z,2µm,36.1s						
BRG	Berggiesshubel	77.96	359	⇓iP	P	03 52 26.5	+0.9
	comp=Z,198nm,1.3s						
BRG				ePP	PP	03 55 16.6	-4.1
	comp=Z,28nm,1.6s						
BRG				S	S	04 02 24.0	+5.5
BRG				SS	SS	04 07 23.0	+5.1
	comp=N,964nm,20.7s						
	comp=E,457nm,24.2s						
	comp=Z,1µm,20.4s						
BRG	Berggiesshubel	77.96	359	⇓iP	P	03 52 26.5	+0.9
BRG				S	S	04 02 24.0	+5.5
BRG				SS	SS	04 07 23.0	+5.1
BRG				pmax	pmax		
	comp=Z,198nm,1.3s						
BRG				pmax	pmax		
	comp=Z,28nm,1.6s						
BRG				MLR	MLR		
	comp=N,964nm,20.7s						
BRG				MLR	MLR		
	comp=E,457nm,24.2s						
BRG				MLR	MLR		
	comp=Z,1µm,20.4s						
CHTO	Chiang Mai	77.99	285	eP	P	03 52 25.9	-0.5
	comp=Z,64nm,1.5s						
CHTO				LR	LR		
	comp=Z,500nm,19.0s						
CHTO	Chiang Mai	77.99	285	eP	P	03 52 25.9	-0.5
CHTO				pmax	pmax		
	comp=Z,64nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,500nm,19.0s						
MEM	Membach	78.05	5	P	P	03 52 27.3	+1.1
MEM	Membach	78.05	5	⇓P	P	03 52 27.0	+0.8
	comp=Z,70nm,0.9s						
SNF	Seneffe	78.06	6	⇑P	P	03 52 25.9	-0.3
MOX	Moxa	78.19	1	P	P	03 52 28.1	+1.2
BCLA	Clavier	78.20	5	P	P	03 52 27.7	+0.7
	comp=Z,101nm,0.8s						
BGES	Gesves	78.23	5	P	P	03 52 27.7	+0.6
OSTC	Ostas	78.25	358	eP	P	03 52 28.3	+1.0
OSTC				ex	x	03 52 32.7	
OSTC				eS	S	04 02 23.4	+1.7
OSTC				AMS	AMS	04 19 20.0	
	comp=Z,1µm,30.6s						
COEN	Coen	78.25	229	eP	P	03 52 27.7	+0.1
	comp=Z,117nm,1.5s						
CM31	Chiang Mai Arr	78.27	285	eP	P	03 52 28.4	+0.6
	comp=Z,72nm,1.1s						
CMAR	Chiang Mai Arr	78.27	285	P	P	03 52 27.4	-0.5
	comp=Z,24nm,0.8s,baz=25,slow=5.6,SNR=69						
CMAR				LR	LR	04 29 50.0	
	comp=Z,442nm,20.0s,baz=40,slow=38						
UPC	Upice	78.30	358	eP	P	03 52 28.7	+1.1
UPC				e		03 52 32.9	
UPC				eS	S	04 02 20.3	-1.9
UPC				MLR	MLR		
	comp=Z,2µm,33.3s						
UPC	Upice	78.30	358	eP	P	03 52 28.7	+1.1
UPC				epP	pwP	03 52 32.9	-3.3
UPC				eS	S	04 02 20.3	-1.9
UPC				AMS	AMS	04 19 10.0	
	comp=Z,2µm,33.3s						
PVCC	Panska Ves	78.30	359	eP	P	03 52 28.6	+1.1
PVCC				e		03 52 33.0	
PVCC				MLR	MLR		
	comp=Z,1µm,20.9s						
PVCC	Panska Ves	78.30	359	eP	P	03 52 28.6	+1.1
PVCC				ex	x	03 52 33.0	
PVCC				AMS	AMS	04 29 50.0	
	comp=Z,1µm,20.9s						
CHAI	Chaiyaphum	78.37	281	P	P	03 52 29.3	+0.9
GUN	Gumba	78.43	300	eP	P	03 52 29.1	0.0
	comp=Z,506nm,1.1s						
DPC	Dobruska-Polom	78.45	358	eP	P	03 52 29.9	+1.5
DPC				e		03 52 40.0	
DPC				eS	S	04 02 21.0	-2.9
DPC				MLR	MLR		
	comp=Z,1µm,29.4s						
DPC	Dobruska-Polom	78.45	358	eP	P	03 52 29.9	+1.5
DPC				ePCP	PcP	03 52 40.0	+2.4
DPC				eS	S	04 02 21.0	-2.9
DPC				AMS	AMS	04 20 50.0	
	comp=Z,1µm,29.4s						
OJC	Ojcow	78.46	356	eP	P	03 52 29.2	+0.8
OJC				eS	S	04 02 28.7	+4.8
OJC				LMZ	LR	04 23 29.5	
	comp=Z,2µm,26.9s						
OJC	Ojcow	78.46	356	eP	P	03 52 29.2	+0.8
	comp=Z,174nm,1.2s						
OJC	Ojcow	78.46	356	eP	P	03 52 29.2	+0.8
OJC				pmax	pmax		
	comp=Z,174nm,1.2s						
JIRN	Jiri	78.46	300	eP	P	03 52 29.3	0.0
	comp=Z,677nm,1.1s						
PBKT	Sadao Pong	78.48	282	P	P	03 52 29.2	+0.2
DOU	Dourbes	78.49	6	P	P	03 52 29.4	+0.9
DOU				x	x	03 52 30.1	
GIVF	Givet	78.50	5	eP	P	03 52 29.4	+0.8
GIVF				pmax	pmax		
	comp=Z,153nm,1.2s						
BAIF	Baives	78.50	6	eP	P	03 52 29.6	+1.0
BAIF				pmax	pmax		
	comp=Z,61nm,0.6s						
TNS	Taunus Mts	78.54	3	P	P	03 52 30.1	+1.1
LVV	L'vov	78.59	353	eP	P	03 52 30.1	+1.0
LVV				e		03 55 29.1	
LVV				e		03 57 16.7	
LVV				eS	S	04 02 25.3	0.0
LVV				e		04 02 51.0	
LVV				e		04 07 33.1	
LVV				e		04 10 48.8	
LVV				MLR	MLR		
	comp=N,600nm,17.0s						
LVV				MLR	MLR		
	comp=Z,700nm,17.0s						
LVV				MLR	MLR		
	comp=E,300nm,19.0s						
NKC	Novy Kostel	78.60	0	eP	P	03 52 30.4	+1.1
NKC				eS	S	04 02 28.0	+2.5
NKC				MLR	MLR		
	comp=Z,2µm,34.5s						
NKC	Novy Kostel	78.60	0	eP	P	03 52 30.4	+1.1
NKC				ePCP	PcP	03 52 40.5	+2.2
NKC				eS	S	04 02 28.0	+2.5
NKC				AMS	AMS	04 19 40.0	
	comp=Z,2µm,34.5s						
LUWI	Luwuk	78.66	254	eP	P	03 52 29.6	-0.4
	comp=Z,117nm,0.8s						
LUWI	Luwuk	78.66	254	P	P	03 52 28.7	-1.3
	comp=Z,159nm,0.9s,comp=Z,5µm						
RAC	Raciborz	78.66	357	eP	P	03 52 31.2	+1.7
SAIH	SAIHA	78.69	292	eP	P	03 52 29.5	-0.8
JVM	Valle D.L. Mar	78.78	10	eP	P	03 52 30.3	+0.1
SDDR	Presa de Saban	78.81	74	eP	P	03 52 30.3	-0.6
	comp=Z,95nm,1.0s						
SDDR				LR	LR		
	comp=Z,900nm,19.0s						
JSA	Saint Aubin	78.81	10	eP	P	03 52 30.2	-0.1
JSA				IAmb	IAmb	03 52 32.7	
	comp=Z,74nm,0.8s						
JSA				IAMs_20	IAMs_20	04 32 20.5	
	comp=Z,1µm,16.9s						
PRU	Pruhonice	78.84	359	eP	P	03 52 31.8	+1.3
PRU				eS	S	04 02 30.4	+2.4
PRU				MLR	MLR		
	comp=Z,1µm,21.1s						
PRU	Pruhonice	78.84	359	eP	P	03 52 31.8	+1.3
PRU				eS	S	04 02 30.4	+2.4
PRU				AMS	AMS	04 30 20.0	
	comp=Z,1µm,21.1s						
KKN	Kakani	78.85	301	eP	P	03 52 31.0	-0.2
	comp=Z,407nm,1.3s						
KWP	Kalwaria Pacla	78.87	354	eP	P	03 52 31.9	+1.1
KWP				eS	S	04 02 33.8	+5.4
KWP				LMZ	LR	04 24 28.2	
	comp=Z,2µm,25.2s						
KWP	Kalwaria Pacla	78.87	354	eP	P	03 52 31.5	+0.8
	comp=Z,2µm,1.1s						
KWP				LR	LR		
	comp=Z,10µm,21.0s						
KWP	Kalwaria Pacla	78.87	354	eP	P	03 52 31.5	+0.8
KWP				MLR	MLR		
	comp=Z,10µm,21.0s						
GOPC	GO Pecny, Ondr	78.91	359	eP	P	03 52 32.3	+1.3
GOPC				e		03 52 42.5	
GOPC				eS	S	04 02 32.6	+3.8
GOPC	GO Pecny, Ondr	78.91	359	eP	P	03 52 32.3	+1.3
GOPC				ePCP	PcP	03 52 42.5	+2.9
GOPC				eS	S	04 02 32.6	+3.8
PKI	Pulchoki	78.95	300	eP	P	03 52 31.5	-0.4
	comp=Z,563nm,1.3s						
PKIN	Phulchoki	78.96	300	eP	P	03 52 31.4	-0.5
	comp=Z,369nm,1.3s						
HORU	Horodok	78.98	351	P	P	03 52 32.1	+0.8
BELO	BELONIA	78.99	293	eP	P	03 52 31.1	-0.6
BELO				IAmb	IAmb	03 52 31.4	
	comp=Z,4µm,0.2s						
MORC	Moravsky Berou	78.99	357	eP	P	03 52 32.4	+1.0
	comp=Z,107nm,1.0s						
MORC				LR	LR		
	comp=Z,700nm,21.0s						
MORC	Moravsky Berou	78.99	357	⇓iP	P	03 52 32.9	+1.5
MORC	Moravsky Berou	78.99	357	eP	P	03 52 32.4	+1.0
MORC				pmax	pmax		
	comp=Z,107nm,1.0s						
MORC				MLR	MLR		
	comp=Z,700nm,21.0s						
MORC	Moravsky Berou	78.99	357	⇓iP	P	03 52 32.4	+1.0
MORC	Moravsky Berou	78.99	357	eS	S	04 02 34.5	+4.8
WLF	Walferdange	79.00	5	eP	P	03 52 33.2	+1.8
	comp=Z,469nm,1.1s						
WLF				LR	LR		
	comp=Z,5µm,19.0s						
WLF	Walferdange	79.00	5	eP	P	03 52 33.2	+1.8
WLF				pmax	pmax		
	comp=Z,469nm,1.1s						
WLF				MLR	MLR		
	comp=Z,5µm,19.0s						
WLF	Walferdange	79.00	5	⇓P	P	03 52 33.1	+1.8
	comp=Z,90nm,1.7s						
GKN	Gorkha	79.03	301	eP	P	03 52 31.8	-0.3
	comp=Z,612nm,1.1s						
DMN	Daman	79.09	301	eP	P	03 52 32.4	-0.2
	comp=Z,624nm,1.5s						
GRA1	Grafenberg Arr	79.14	1	eP	P	03 52 33.8	+1.6
	comp=Z,202nm,1.0s						
GRA1				LR	LR		
	comp=Z,800nm,21.0s						
GRF	Grafenberg Arr	79.14	1	eP	P	03 52 33.8	+1.6
GRF				pmax	pmax		
	comp=Z,202nm,1.0s						
GRF				MLR	MLR		
	comp=Z,800nm,21.0s						
GRFO	Grafenberg	79.14	1	eP	P	03 52 33.5	+1.3
	comp=Z,217nm,1.0s						
GRFO	Grafenberg	79.14	1	eP	P	03 52 33.5	+1.3
GRFO				pmax	pmax		
	comp=Z,217nm,1.0s						
STHS	Stebnicka Huta	79.18	355	eP	P	03 52 34.2	+1.8
STHS				pmax	pmax		
	comp=Z,140nm,0.9s						
STHS	Stebnicka Huta	79.18	355	eP	P	03 52 34.2	+1.8
DANN	Dangsing	79.22	302	eP	P	03 52 33.4	+0.1
	comp=Z,505nm,0.9s						
APSI	Ampana	79.23	255	P	P	03 52 30.9	-2.2
	comp=Z,46nm,1.4s,comp=Z,920nm						
NIE	Niedzica	79.23	355	eP	P	03 52 34.0	+1.3
NIE				eS	S	04 02 38.9	+6.7
NIE				LMZ	LR	04 24 00.0	
	comp=Z,1µm,25.9s						
FLN	La Foliniere	79.41	9	eP	P	03 52 34.0	+0.3
FLN				pmax	pmax		
	comp=Z,133nm,1.2s						
RKT	Rikitea	79.47	150	eS	S	04 02 32.3	-2.7
	comp=Z,2µm,36.5s						
RKT	Rikitea	79.47	150	eLR	LR	04 17 15.7	
	comp=Z,6µm,30.0s						
VRAC	Vranov	79.48	358	⇓iP	P	03 52 35.8	+1.7
VRAC	Vranov	79.48	358	P	P	03 52 35.8	+1.7
VRAC	Vranov	79.48	358	⇓iP	P	03 52 35.3	+1.3
VRAC	Vranov	79.48	358	eS	S	04 02 39.3	+4.4
TREC	Trest	79.52	358	eP	P	03 52 35.0	+0.7
TREC				MLR	MLR		
	comp=Z,1µm,21.5s						
TREC	Trest	79.52	358	eP	P	03 52 35.0	+0.7
TREC				AMS	AMS	04 29 50.0	
	comp=Z,1µm,21.5s						
ROSF	Rostrenen	79.53	11	eP	P	03 52 36.1	+1.8
ROSF				pmax	pmax		
	comp=Z,70nm,1.1s						
LANS	Liptovska Anna	79.54	356	eP	P	03 52 36.4	+2.0
LANS	Liptovska Anna	79.54	356	eP	P	03 52 36.4	+2.0
LDF	La Druitiere	79.61	9	eP	P	03 52 35.0	+0.2
LDF				pmax	pmax		
	comp=Z,77nm,0.7s						
SGMF	Saint Gilles	79.69	11	eP	P	03 52 35.8	+0.6
SGMF				pmax	pmax		
	comp=Z,78nm,1.0s						
WET	Wettzell	79.69	0	P	P	03 52 36.5	+1.2
KHC	Kasperske Hory	79.71	360	eP	P	03 52 36.7	+1.3
	comp=Z,74nm,1.2s						
KHC				LR	LR		
	comp=Z,400nm,20.0s						
KHC	Kasperske Hory	79.71	360	eP	P	03 52 36.7	+1.3
KHC				pmax	pmax		
	comp=Z,74nm,1.2s						
KHC				MLR	MLR		
	comp=Z,400nm,20.0s						
KHC	Kasperske Hory	79.71	360	eP	P	03 52 36.9	+1.6
KHC				eS	S	04 02 39.3	+2.0
KRUC	Moravsky	79.74	358	P	P	03 52 36.6	+1.1
KRUC	Moravsky	79.74	358	⇓iP	P	03 52 36.5	+1.1
KRUC	Moravsky	79.74	358	eS	S	04 02 40.7	+3.2
GRR	Gorron	79.74	9	eP	P	03 52 36.0	+0.5
GRR				pmax	pmax		
	comp=Z,128nm,1.2s						
KOLN	Koldanda	79.76	302	eP	P	03 52 35.9	-0.3
	comp=Z,389nm,1.0s						
BANI	BANI	79.82	73	eP	P	03 52 37.7	+1.2
PYUN	Piuthan	79.82	303	eP	P	03 52 36.3	-0.2
	comp=Z,567nm,1.1s						
DHRM	DHARAMSHALA	79.83	310	eP	P	03 52 36.2	-0.4
DHRM				IAmb	IAmb	03 52 37.9	
	comp=Z,134nm,1.1s						
UZH	Uzhgorod	79.90	354	c iP	P	03 52 37.0	+0.7
UZH				i		03 52 41.9	
UZH				e		03 55 37.7	
UZH				i PPP	PPP	03 57 23.6	
UZH				i S	S	04 02 39.0	-0.2
UZH				i PS		04 03 35.7	
UZH				i SS	SS	04 07 43.1	-3.9
JAVC	Velka Javorina	79.90	357	⇓iP	P	03 52 38.7	+2.3
JAVC	Velka Javorina	79.90	357	eS	S	04 02 42.8	+3.4
QUIF	Quistinic	79.95	11	eP	P	03 52 37.1	+0.5
QUIF				pmax	pmax		
	comp=Z,95nm,1.6s						
GEC2	GERESS Array S	79.99	360	eP	P	03 52 38.0	+1.0
	comp=Z,85nm,0.9s						
GEC2	GERESS Array S	79.99	360	eP	P	03 52 38.0	+1.0
GEC2				pmax	pmax		
	comp=Z,85nm,0.9s						
GERES	GERESS Array B	79.99	360	P	P	03 52 37.9	+0.9
	comp=Z,39nm,0.8s,baz=7.9,slow=3.5,SNR=226						
KSV	Kosov	79.99	352	P	P	03 52 37.4	+0.5
STU	Stuttgart	80.01	3	eP	P	03 52 38.3	+1.4
	comp=Z,111nm,0.9s						
STU				LR	LR		
	comp=Z,500nm,19.0s						
STU	Stuttgart	80.01	3	eP	P	03 52 38.3	+1.4
STU				pmax	pmax		
	comp=Z,111nm,0.9s						
STU				MLR	MLR		
	comp=Z,500nm,19.0s						
SDD	Santo Domingo	80.03	73	PFAKE		03 52 50.0	+13
SDD				LR	LR		
	comp=Z,2µm,22.0s						
UMPA	Umpang Tak	80.05	283	P	P	03 52 39.8	+2.2
NIL	Nilore	80.10	313	eP	P	03 52 38.5	+0.8
	comp=Z,154nm,1.0s						
NIL				LR	LR		
	comp=Z,700nm,18.0s						
NIL	Nilore	80.10	313	eP	P	03 52 38.5	+0.8
NIL				pmax	pmax		
	comp=Z,154nm,0.9s						
NIL				MLR	MLR		
	comp=Z,700nm,18.0s						
KECS	Kecovo	80.15	355	eP	P	03 52 39.1	+1.4
KECS				pmax	pmax		
	comp=Z,252nm,0.9s						
KECS	Kecovo	80.15	355	eP	P	03 52 39.1	+1.4
VYHS	Vyhne	80.22	356	eP	P	03 52 39.4	+1.3
VYHS				pmax	pmax		
	comp=Z,97nm,1.2s						
VYHS	Vyhne	80.22	356	eP	P	03 52 39.4	+1.3
VYHS	Vyhne	80.22	356	eS	S	04 02 49.7	+7.0
VYHS				eSS	SS	04 08 04.6	+13
VYHS				eL	L	04 23 55.3	
CDF	Champ du Feu	80.31	4	eP	P	03 52 39.5	+0.9
CDF				pmax	pmax		
	comp=Z,102nm,1.1s						
SMLA	Simla	80.33	308	eP	P	03 52 39.0	0.0
SMLA				IAmb	IAmb	03 52 40.4	
	comp=Z,159nm,0.6s						
GOF	Gofitskoye	80.35	339	⇓iP	P	03 52 40.1	+1.3
GOF				pmax	pmax		
	comp=Z,587nm,1.2s						
TRPA	Tarpa	80.38	354	⇓iP	P	03 52 40.1	+1.2
TRPA	Tarpa	80.38	354	⇓eP	P	03 52 39.1	+0.2
TRPA				ePP	PP	03 55 38.0	-2.9
TRPA				i S	S	04 02 47.0	+2.8
CLF	Chambon-Foret	80.39	7	eP	P	03 52 39.5	+0.6
	comp=Z,265nm,0.8s						
CLF				LR	LR		
	comp=Z,1µm,20.0s						
MODS	Modra-Piesok	80.40	357	eP	P	03 52 40.1	+1.0
MODS				pmax	pmax		
	comp=Z,285nm,1.4s						
MODS	Modra-Piesok	80.40	357	eP	P	03 52 40.1	+1.0
MODS	Modra-Piesok	80.40	357	eS	S	04 02 49.9	+5.3
MODS				eSS	SS	04 08 17.6	+23
MODS				eL	L	04 22 14.3	
BFO	Black Forest	80.43	3	eP	P	03 52 40.1	+0.9
	comp=Z,84nm,1.1s						
BFO				LR	LR		
	comp=Z,500nm,19.0s						
BFO	Black Forest	80.43	3	i P	P	03 52 40.4	+1.2
ECH	Echery	80.50	4	eP	P	03 52 40.5	+0.9
	comp=Z,129nm,1.0s						
ECH				LR	LR		
	comp=Z,700nm,19.0s						
ECH	Echery	80.50	4	eP	P	03 52 40.5	+0.9
ECH				pmax	pmax		
	comp=Z,129nm,1.0s						
ECH				MLR	MLR		
	comp=Z,700nm,19.0s						
DDI	Dehra Dun	80.55	307	eP	P	03 52 40.8	+0.6
DDI				IAmb	IAmb	03 52 41.9	
	comp=Z,218nm,0.5s						
ZST	Bratislava	80.58	357	eP	P	03 52 41.6	+1.6
ZST				eS	S	04 02 54.1	+7.6
ZST				eSS	SS	04 08 04.6	+7.3
ZST	Bratislava	80.58	357	eP	P	03 52 41.6	+1.6
BUR08	Bucovina Ar. S	80.65	352	eP	P	03 52 41.2	+0.6
	comp=Z,59nm,1.0s						
HAU	Haudompre	80.67	5	eP	P	03 52 41.3	+0.8
HAU				pmax	pmax		
	comp=Z,111nm,1.1s						
BURAR	Bucovina Array	80.67	352	⇑iP	P	03 52 41.5	+0.8
BURAR	Bucovina Array	80.67	352	P	P	03 52 41.4	+0.8
PSZ	Piszkesteto	80.75	355	eP	P	03 52 42.3	+1.3
	comp=Z,198nm,1.3s						
PSZ				LR	LR		
	comp=Z,800nm,20.0s						
PSZ	Piszkesteto	80.75	355	⇑iP	P	03 52 42.9	+1.9
PSZ	Piszkesteto	80.75	355	eP	P	03 52 42.3	+1.3
PSZ				pmax	pmax		
	comp=Z,198nm,1.3s						
PSZ				MLR	MLR		
	comp=Z,800nm,20.0s						
PSZ	Piszkesteto	80.75	355	⇓eP	P	03 52 42.0	+1.0
PSZ				ePP	PP	03 55 42.0	-2.1
PSZ				i S	S	04 02 55.0	+6.7
BMR	Baia Mare	80.76	353	⇓iP	P	03 52 41.5	+0.5
IAS	Iasi	80.86	350	⇑iP	P	03 52 40.4	-1.1
IAS	Iasi	80.86	350	P	P	03 52 43.0	+1.5
HINF	Hinteralfeld	80.88	4	eP	P	03 52 42.3	+0.6
HINF				pmax	pmax		

	comp=Z,99nm,1.2s						
CONA	Conrad Observa	80.88	358	eP	P	03 52 43.2	+1.5
	comp=Z,108nm,0.9s,SNR=111						
KIS	Kishinev	80.91	349	⇑iP	P	03 52 42.0	+0.2
	comp=Z,420nm,2.0s						
KIS	Kishinev	80.91	349	ePP	PP	03 55 32.0	-13
KIS				eS	S	04 02 52.0	+2.1
KIS				eScS	ScS	04 03 10.0	+1.3
KIS	Kishinev	80.91	349	α iP	P	03 52 42.0	+0.2
KIS				eS	S	04 02 52.0	+2.1
KIS				ePS		04 03 43.0	
KIS				pmax	pmax		
	comp=Z,420nm,2.0s						
KIS				pmax	pmax		
	comp=Z,1µm,10.0s						
KIS				MLR	MLR		
	comp=Z,2µm,22.0s						
SRO2	Moca	80.97	356	eP	P	03 52 43.2	+1.1
SRO2	Moca	80.97	356	eP	P	03 52 43.2	+1.1
MOA	Molln	80.98	359	eP	P	03 52 43.3	+1.1
	comp=Z,58nm,1.4s,SNR=36						
MILM	Milestii Mici	80.99	349	⇓iP	P	03 52 42.6	+0.4
SLE	Schleitheim	81.00	3	P	P	03 52 43.7	+1.4
BCIP	Isla Barro Col	81.11	87	eP	P	03 52 42.4	-0.9
	comp=Z,82nm,1.3s						
BCIP	Isla Barro Col	81.11	87	eP	P	03 52 42.4	-0.9
BCIP				pmax	pmax		
	comp=Z,81nm,1.3s						
BCIP	Isla Barro Col	81.11	87	eP	P	03 52 43.3	0.0
SOP	Sopron	81.11	358	P	P	03 52 44.7	+1.9
SOP	Sopron	81.11	358	⇓eP	P	03 52 44.0	+1.2
SOP				ePP	PP	03 55 47.1	+0.1
SOP				i S	S	04 02 56.0	+4.0
BUD	Budapest	81.22	356	P	P	03 52 46.3	+2.9
BUD	Budapest	81.22	356	eP	P	03 52 45.0	+1.6
KBL	Kabul	81.23	316	eP	P	03 52 43.6	-0.4
	comp=Z,134nm,1.0s						
KBL				LR	LR		
	comp=Z,800nm,20.0s						
KBL	Kabul	81.23	316	eP	P	03 52 43.6	-0.4
KBL				pmax	pmax		
	comp=Z,134nm,1.0s						
KBL				MLR	MLR		
	comp=Z,800nm,20.0s						
MAK	Makhachkala	81.24	335	eP	P	03 52 38.2	-5.4
MAK				eS	S	04 02 44.6	-8.8
MAK				eSS	SS	04 08 03.8	-3.5
MAK				pmax	pmax		
	comp=Z,553nm,1.4s						
LOR	Lormes	81.26	6	eP	P	03 52 44.4	+0.7
LOR				pmax	pmax		
	comp=Z,147nm,1.2s						
BIZ	Bicaz	81.26	351	⇑iP	P	03 52 44.8	+1.1
ARCR	ARCALIA	81.28	352	⇑iP	P	03 52 45.6	+1.9
H07N1	FLORES T-PHASE	81.31	33	eP	P	03 52 45.3	+1.2
SRDT	SRDT	81.32	282	P	P	03 52 45.4	+1.0
RETA	Reutte	81.33	2	eP	P	03 52 45.2	+1.1
	comp=Z,61nm,1.0s,SNR=47						
CSKK	Cskako	81.38	356	eP	P	03 52 46.0	+1.7
CSKK				ePP	PP	03 55 50.1	+0.9
CSKK				i S	S	04 03 00.1	+5.3
SSF	Saint Saulge	81.44	7	eP	P	03 52 45.4	+0.8
SSF				pmax	pmax		
	comp=Z,172nm,1.1s						
GROC	Groznyy	81.45	336	eP	P	03 52 44.4	-0.3
GROC				e		03 52 49.7	
GROC				eS	S	04 02 53.7	-2.0
GROC				pmax	pmax		
	comp=Z,86nm,1.4s						
KIV	Kislovodsk	81.48	339	eP	P	03 52 46.5	+1.5
	comp=Z,90nm,1.0s						
KIV				LR	LR		
	comp=Z,1µm,20.0s						
KIV	Kislovodsk	81.48	339	⇓iP	P	03 52 46.2	+1.2
KIV	Kislovodsk	81.48	339	i P	P	03 52 46.7	+1.7
	SNR=8.1						
KIV	Kislovodsk	81.48	339	eP	P	03 52 46.1	+1.1
KIV				e		03 55 51.6	
KIV				eS	S	04 02 58.3	+2.1
KIV				pmax	pmax		
	comp=Z,266nm,1.1s						
KIV				pmax	pmax		
	comp=Z,1µm,4.0s						
MOTA	Moosalm	81.48	1	eP	P	03 52 46.1	+1.0
	comp=Z,229nm,1.4s,SNR=67						
WATA	Walderalm	81.50	1	eP	P	03 52 46.1	+1.0
	comp=Z,110nm,1.0s,SNR=29						
DAVA	Damuels	81.52	2	eP	P	03 52 46.2	+1.0
	comp=Z,67nm,1.2s,SNR=23						
H07S1	FLORES T-PHASE	81.56	33	eP	P	03 52 46.7	+1.3
ARSA	Arzberg	81.57	358	eP	P	03 52 46.8	+1.5
	comp=Z,63nm,0.9s,SNR=45						
WTTA	Wattenberg	81.57	1	i P	P	03 52 46.8	+1.3
	comp=Z,65nm,0.8s,SNR=59						
MFF	Saint Martin d	81.58	9	eP	P	03 52 46.1	+0.7
MFF				pmax	pmax		
	comp=Z,198nm,1.0s						
SQTA	Sankt Quirin	81.61	1	eP	P	03 52 47.0	+1.4
	comp=Z,168nm,1.0s,SNR=72						
TESR	Tescani	81.63	351	⇑iP	P	03 52 46.5	+0.9
KBZ	Khabaz	81.65	339	P	P	03 52 48.3	+2.6
	comp=Z,44nm,0.9s,baz=39,slow=2.0,SNR=32						
BOK	Bokaro	81.69	298	eP	P	03 52 45.3	-1.0
BOK				IAmb	IAmb	03 52 47.1	
	comp=Z,51nm,0.6s						
AVF	Avril sur Loir	81.70	7	eP	P	03 52 46.0	0.0
AVF				pmax	pmax		
	comp=Z,121nm,1.0s						
DRGR		81.70	353	⇑iP	P	03 52 46.7	+0.6
DRGR		81.70	353	P	P	03 52 46.7	+0.6
CJR	Cluj-Napoca	81.71	353	⇓iP	P	03 52 47.8	+1.6
CJR	Cluj-Napoca	81.71	353	P	P	03 52 47.7	+1.6
NCK	Nalchik	81.71	338	⇓eP	P	03 52 47.4	+1.3
NCK				pmax	pmax		
	comp=Z,302nm,1.1s						
AGP	Aguadilla	81.72	71	eP	P	03 52 47.2	+0.7
	comp=Z,515nm,1.5s						
ANN	Anapa	81.75	343	eP	P	03 52 45.0	-1.2
ANN				eS	S	04 03 01.6	+2.9
ANN				pmax	pmax		
	comp=Z,312nm,1.5s						
KBA	Koelnbreinsper	81.76	360	eP	P	03 52 48.3	+1.8
	comp=Z,286nm,0.9s,SNR=238						
KBA	Koelnbreinsper	81.76	360	P	P	03 52 48.2	+1.7
FETA	Feichten	81.80	2	eP	P	03 52 48.1	+1.3
	comp=Z,150nm,1.0s,SNR=68						
TIH	Tihany	81.85	357	⇓eP	P	03 52 48.0	+1.3
TIH				ePP	PP	03 55 52.0	-1.1
TIH				i S	S	04 03 04.0	+4.4
SMF	Signal de Mont	81.88	6	eP	P	03 52 47.5	+0.6
SMF				pmax	pmax		
	comp=Z,159nm,1.0s						
BGF	Bois d'Agland	81.89	7	eP	P	03 52 47.6	+0.6
BGF				pmax	pmax		
	comp=Z,106nm,1.0s						
AZU	Azuero	81.89	88	eP	P	03 52 46.3	-1.1
AOPR	Arecibo Observ	81.99	71	eP	P	03 52 47.1	-0.9
	comp=Z,59nm,0.8s						
DAVOX	Davos/Dischmat	82.02	2	P	P	03 52 49.5	+1.6
	comp=Z,47nm,0.8s,baz=344,slow=6.6,SNR=55						
TTSI	Tana Toraja	82.02	255	P	P	03 52 47.8	-0.3
	comp=Z,62nm,2.0s,comp=Z,2µm						
CABF	La Chapelle	82.05	5	eP	P	03 52 49.2	+1.3
CABF				pmax	pmax		
	comp=Z,164nm,1.0s						
ABTA	Abfaltersbach	82.09	0	eP	P	03 52 49.2	+1.0
	comp=Z,125nm,1.3s,SNR=70						
TCF	Toulx Ste Croi	82.11	8	eP	P	03 52 48.7	+0.5
TCF				pmax	pmax		
	comp=Z,79nm,1.1s						
OZUR		82.13	351	⇑iP	P	03 52 49.5	+1.2
NEY	Neytrino	82.14	339	⇑eP	P	03 52 50.5	+1.9
NEY				pmax	pmax		
	comp=Z,18nm,1.2s						
SOKA	Soboth	82.15	359	eP	P	03 52 49.7	+1.2
	comp=Z,101nm,0.8s,SNR=109						
SIM	Simferopol'	82.18	345	d iP	P	03 52 49.8	+1.3
SIM				eS	S	04 03 05.5	+2.4
SIM				pmax	pmax		
	comp=Z,81nm,1.2s						
PERS	Pernice	82.19	359	i P	P	03 52 49.9	+1.2
PERS				eS	S	04 03 06.2	+2.9
FUORN	Ofenpass-Fuorn	82.19	2	eP	P	03 52 50.5	+1.6
	comp=Z,154nm,1.1s						
FUORN				LR	LR		
	comp=Z,900nm,22.0s						
MYKA	Terra Mystica	82.21	360	eP	P	03 52 49.5	+0.8
	comp=Z,50nm,0.9s,SNR=50						
CTAO	Charters Tower	82.23	224	eP	P	03 52 48.5	-0.5
	comp=Z,56nm,1.1s						
CTAO	Charters Tower	82.23	224	eP	P	03 52 48.5	-0.5
CTAO				pmax	pmax		
	comp=Z,56nm,1.1s						
PAYG	Puerto Ayora	82.25	101	eP	P	03 52 50.8	+1.5
	comp=Z,91nm,1.1s						
VRI	Vrincioaia	82.26	350	⇓iP	P	03 52 50.3	+1.3
VRI	Vrincioaia	82.26	350	P	P	03 52 50.2	+1.3
AMBH	Ambrzfalva	82.27	355	eP	P	03 52 50.0	+1.1
PLOR	Plostina	82.28	350	⇑iP	P	03 52 50.3	+1.2
PLOR	Plostina	82.28	350	P	P	03 52 50.3	+1.2
SIRR	Siria	82.29	354	⇓iP	P	03 52 50.7	+1.6
DOPR	Dopca	82.29	351	⇑iP	P	03 52 50.5	+1.3
ZEI	Tsey	82.30	338	eP	P	03 52 48.6	-0.9
ZEI				pmax	pmax		
	comp=Z,116nm,1.4s						
TUE	Stuetta	82.32	3	eP	P	03 52 50.6	+1.1
	comp=Z,99nm,1.1s						
TUE				LR	LR		
	comp=Z,700nm,19.0s						
BEHE	Becsehely	82.32	357	eP	P	03 52 50.3	+1.1
BEHE	Becsehely	82.32	357	⇓eP	P	03 52 50.1	+0.8
BEHE				ePP	PP	03 55 56.1	-0.9
BEHE	Becsehely	82.32	357	i S	S	04 03 06.0	+1.5
OBIP	Obispado Ponce	82.32	71	eP	P	03 52 48.9	-0.8
	comp=Z,141nm,1.1s						
OBKA	Obir	82.32	359	eP	P	03 52 50.3	+0.9
	comp=Z,108nm,0.9s,SNR=90						
SENIN	Lac Senin/Sane	82.35	4	eP	P	03 52 51.2	+1.5
	comp=Z,26nm,1.0s						
SENIN				LR	LR		
	comp=Z,900nm,20.0s						
KOGS	Kog	82.35	358	i P	P	03 52 50.4	+1.0
KOGS				ePP	PP	03 56 07.5	+10
SBUM	Sibu	82.38	264	eP	P	03 52 50.3	+0.3
	comp=Z,33nm,1.5s						
SBUM	Sibu	82.38	264	P	P	03 52 51.0	+1.0
SOC	Sochi	82.47	341	eP	P	03 52 50.6	+0.5
SOC				e		03 55 59.2	
SOC				ePPP	PPP	03 57 47.9	
SOC				eS	S	04 03 02.6	-3.6
SOC				eS	SKSac	04 03 07.9	-2.9
SOC				eSS	SS	04 08 32.5	+6.9
SOC				pmax	pmax		
	comp=Z,175nm,1.2s						
SOC				MLR	MLR		
	comp=Z,2µm,21.0s						
ICMP	Isla Caja de M	82.49	71	eP	P	03 52 50.7	+0.2
	comp=Z,153nm,1.2s						
MORH	Mrgy, Hungar	82.51	356	⇓eP	P	03 52 50.1	-0.1
MORH				ePP	PP	03 56 00.1	+1.6
MORH				i S	S	04 03 08.1	+1.7
SJG	San Juan	82.53	70	eP	P	03 52 51.0	+0.3
	comp=Z,66nm,1.0s						
SJG				LR	LR		
	comp=Z,600nm,19.0s						
SJG	San Juan	82.53	70	eP	P	03 52 51.0	+0.3
SJG				pmax	pmax		
	comp=Z,66nm,1.0s						
SJG				MLR	MLR		
	comp=Z,600nm,19.0s						
SJG	San Juan	82.53	70	eP	P	03 52 50.9	+0.1
AKT	Akhty	82.56	334	⇑iP	P	03 52 52.4	+1.6
AKT				e		03 52 57.6	
AKT				e		03 56 02.2	
AKT				pmax	pmax		
	comp=Z,198nm,1.2s						
GEYT	Alibeck	82.57	326	P	P	03 52 51.2	+0.4
	comp=Z,49nm,0.9s,baz=336,slow=3.3,SNR=72						
GEYT				PP	PP	03 56 02.9	+3.5
	comp=Z,6.6nm,1.0s,baz=13,slow=9.1,SNR=5.3						
GEYT				LR	LR	04 34 29.2	
	comp=Z,2µm,19.1s,baz=35,slow=39						
GYA0B	ALIBECK ARRAY	82.57	326	eP	P	03 52 51.9	+1.1
	comp=Z,122nm,1.1s						
GYA0B				LR	LR		
	comp=Z,2µm,20.0s						
BISRR	Bisoca	82.58	350	⇓iP	P	03 52 52.5	+1.8
CBYP	Canovanas	82.58	70	eP	P	03 52 50.1	-1.0
	comp=Z,27nm,0.9s						
CADS	Cadrg	82.61	360	i P	P	03 52 50.9	+0.1
KALN	Kalnik	82.67	358	i P	P	03 52 51.8	+0.7
HUMP	Col San Antoni	82.69	70	eP	P	03 52 50.5	-1.0
	comp=Z,62nm,1.0s						
TLCR		82.70	349	⇑iP	P	03 52 52.5	+1.3
TLCR		82.70	349	P	P	03 52 52.5	+1.3
MLR	Muntele Rosu	82.71	351	P	P	03 52 52.8	+1.4
	comp=Z,32nm,1.0s,baz=335,slow=2.1,SNR=34						
MLR	Muntele Rosu	82.71	351	eP	P	03 52 52.4	+0.9
	comp=Z,53nm,1.1s						
MLR				LR	LR		
	comp=Z,2µm,19.0s						
MLR	Muntele Rosu	82.71	351	⇓iP	P	03 52 53.3	+1.8
MLR	Muntele Rosu	82.71	351	eP	P	03 52 52.4	+0.9
MLR				pmax	pmax		
	comp=Z,53nm,1.1s						
MLR				MLR	MLR		
	comp=Z,2µm,19.0s						
CFR	Carcaliu	82.78	349	⇑iP	P	03 52 52.2	+0.5
CFR	Carcaliu	82.78	349	P	P	03 52 52.2	+0.5
LJU	Ljubljana	82.79	359	i P	P	03 52 52.2	+0.5
LJU				i PP	PP	03 56 03.3	+2.5
LJU				i S	S	04 03 11.8	+2.4
LJU	Ljubljana	82.79	359	eP	P	03 52 51.3	-0.4
VOIR		82.85	352	⇓iP	P	03 52 53.4	+1.3
VOIR		82.85	352	P	P	03 52 53.4	+1.3
MTP	Monte Pirata	82.89	70	eP	P	03 52 52.0	-0.6
	comp=Z,164nm,1.1s						
PTJ	Puntijarka	82.90	358	P	P	03 52 53.0	+0.6
BZS	Buzias	82.94	354	⇓iP	P	03 52 53.1	+0.6
BZS	Buzias	82.94	354	P	P	03 52 53.1	+0.6
PGRA	Graciosa	82.94	31	eP	P	03 52 53.8	+1.2
	comp=Z,208nm,1.7s						
LOT	Lotru	82.95	352	⇓iP	P	03 52 53.4	+0.7
ARR	Arges	82.96	352	⇓iP	P	03 52 53.7	+1.0
CRES	Cresnjev	82.99	358	eP	P	03 52 52.5	-0.3
RJF	Les Rejaudoux	83.02	8	eP	P	03 52 52.5	-0.5
RJF				pmax	pmax		
	comp=Z,177nm,1.3s						
STVI	Saint Thomas	83.05	69	eP	P	03 52 53.4	0.0
	comp=Z,97nm,1.2s						
SMRC	Santa Marta, M	83.05	81	eP	P	03 52 52.7	-0.8
MTUR	Matau	83.06	351	⇑iP	P	03 52 55.1	+1.9
PCED	Cedros	83.08	32	eP	P	03 52 54.6	+1.3
	comp=Z,118nm,1.2s						
GZR	Gura Zlata	83.08	353	⇑iP	P	03 52 54.0	+0.7
CEY	Cerknica	83.09	359	eP	P	03 52 52.8	-0.5
TBLG	Delisi	83.10	337	eP	P	03 52 54.8	+1.3
	comp=Z,159nm,1.0s						
CALA	Caldeira	83.12	32	eP	P	03 52 57.7	+4.1
TRI	Trieste	83.13	359	eP	P	03 52 53.8	+0.3
	comp=Z,32nm,0.9s						
TRI				LR	LR		
	comp=Z,700nm,20.0s						
TRI	Trieste	83.13	359	eP	P	03 52 53.8	+0.3
TRI				pmax	pmax		
	comp=Z,33nm,0.9s						
TRI				MLR	MLR		
	comp=Z,700nm,20.0s						
ROSA	Rosais	83.14	31	eP	P	03 52 55.2	+1.5
	comp=Z,130nm,1.9s						
ROSA	Rosais	83.14	31	eP	P	03 52 54.9	+1.2
	comp=Z,111nm,1.2s						
SECR		83.15	351	⇑iP	P	03 52 54.7	+1.1
LPG	La Plagne	83.19	4	eP	P	03 52 56.1	+1.9
LPG				pmax	pmax		
	comp=Z,243nm,1.8s						
OZLJ	Ozalj	83.20	358	i P	P	03 52 55.1	+1.3
PMAN	Manadas	83.27	31	eP	P	03 52 55.8	+1.5
	comp=Z,154nm,1.4s						
PICO	Pico	83.28	32	eP	P	03 52 55.4	+0.9
	comp=Z,145nm,1.5s						
SSB	Saint Sauveur	83.28	6	eP	P	03 52 55.3	+0.9
	comp=Z,114nm,1.2s						
SSB				LR	LR		
	comp=Z,800nm,21.0s						
HARR	Harsova	83.29	349	⇓iP	P	03 52 55.6	+1.3
HARR	Harsova	83.29	349	P	P	03 52 55.6	+1.3
SKDS	Skadanscina	83.29	359	i P	P	03 52 54.7	+0.3
BOJS	Bojanci	83.32	358	i P	P	03 52 55.1	+0.6
TLB	Topalu	83.38	349	⇓iP	P	03 52 55.8	+1.1
TLB	Topalu	83.38	349	P	P	03 52 55.8	+1.1
MTN	Manton Dam	83.44	240	eP	P	03 52 55.7	+0.3
	comp=Z,140nm,1.0s						
MTN				LR	LR		
	comp=Z,1µm,22.0s						
CAF	Calviac	83.45	8	eP	P	03 52 56.0	+0.8
CAF				pmax	pmax		
	comp=Z,167nm,1.2s						
TIRR	Tirgusor	83.46	349	eP	P	03 52 55.1	-0.1
	comp=Z,118nm,0.9s						
TIRR				LR	LR		
	comp=Z,4µm,20.0s						
TIRR	Tirgusor	83.46	349	⇓iP	P	03 52 55.5	+0.3
TIRR	Tirgusor	83.46	349	eP	P	03 52 55.1	-0.1
TIRR				pmax	pmax		
	comp=Z,118nm,0.9s						
TIRR				MLR	MLR		
	comp=Z,4µm,20.0s						
SULR		83.48	351	⇑iP	P	03 52 57.0	+1.7
FRGS	Fruska Gora	83.51	355	eP	P	03 52 55.4	-0.1
RIY	Rijeka	83.51	359	P	P	03 52 56.0	+0.5
RIY	Rijeka	83.51	359	eP	P	03 52 55.7	+0.3
PSCM	Serra do Cume	83.52	31	eP	P	03 52 56.3	+0.7
	comp=Z,123nm,1.7s						
HERR	Herculane	83.62	353	⇑iP	P	03 52 56.3	+0.3
KAPI	Kappang	83.62	254	eP	P	03 52 57.0	+0.6
	comp=Z,74nm,1.4s						
KAPI	Kappang	83.62	254	eP	P	03 52 57.0	+0.6
KAPI				pmax	pmax		
	comp=Z,74nm,1.4s						
BNI	Bardonecchia	83.63	5	eP	P	03 52 58.5	+2.2
	comp=Z,219nm,1.1s						
BNI				LR	LR		
	comp=Z,800nm,19.0s						
AKH	Akhalkalaki	83.71	337	eP	P	03 52 59.4	+2.6
	comp=Z,108nm,1.3s						
AKH				LR	LR		
	comp=Z,1µm,20.0s						
AKH	Akhalkalaki	83.71	337	⇓iP	P	03 52 58.3	+1.5
AKH	Akhalkalaki	83.71	337	eP	P	03 52 59.4	+2.6
AKH				pmax	pmax		
	comp=Z,108nm,1.3s						
AKH				MLR	MLR		
	comp=Z,1µm,20.0s						
VIVF	Saint-Julien-l	83.71	6	eP	P	03 52 57.7	+1.2
VIVF				pmax	pmax		
	comp=Z,100nm,1.4s						
ORIF	Oris-en-Rattie	83.72	5	eP	P	03 52 58.0	+1.3
ORIF				pmax	pmax		
	comp=Z,223nm,1.8s						
HUMR	Humele	83.76	351	⇑iP	P	03 52 57.2	+0.5
MDVR	Moldovita	83.77	354	⇓iP	P	03 52 57.3	+0.5
MBDF	Montbardon	83.96	4	eP	P	03 52 59.7	+1.7
MBDF				pmax	pmax		
	comp=Z,122nm,1.0s						
URIC	Uribia, Colomb	84.00	79	eP	P	03 52 56.3	-2.1
DOB	Doboj	84.01	356	eP	P	03 52 58.5	+0.5
BLY	Banja Luka	84.03	357	eP	P	03 52 58.6	+0.5
	comp=Z,25nm,1.1s						
BLY				LR	LR		
	comp=Z,700nm,19.0s						
BLY	Banja Luka	84.03	357	⇓iP	P	03 52 59.4	+1.3
BLY	Banja Luka	84.03	357	eP	P	03 52 58.9	+0.8
MANR	Mangalia	84.07	349	⇑iP	P	03 53 00.0	+1.7
NVLJ	Novalja	84.27	359	i P	P	03 52 59.3	0.0
UDBI	Udbina	84.28	358	i P	P	03 53 00.0	+0.5
KSM	Kuching	84.33	265	PFAKE		03 53 10.0	+10
KSM				LR	LR		
	comp=Z,300nm,19.0s						
MGRS	Mrkonjic Grad	84.36	357	eP	P	03 53 01.0	+1.2
SMRT	St. Maarten	84.38	68	eP	P	03 52 59.5	-0.7
	comp=Z,152nm,1.1s						
SMRT				LR	LR		
	comp=Z,1µm,20.0s						
CODC	Agustn Codazz	84.48	81	eP	P	03 52 59.5	-1.3
BWNR	Bhubaneshwar	84.52	296	eP	P	03 53 00.7	-0.3
BWNR				IAmb	IAmb	03 53 01.9	
	comp=Z,43nm,0.5s						
DIVS	Divibare	84.55	355	eP	P	03 53 00.7	-0.2
ZIMR		84.58	351	⇑iP	P	03 53 02.2	+1.3
GNI	Garni	84.59	336	eP	P	03 53 04.2	+2.9
	comp=Z,167nm,1.4s						
GNI				LR	LR		
	comp=Z,700nm,21.0s						
GNI	Garni	84.59	336	i P	P	03 53 02.2	+1.0
	SNR=9.2						
GNI	Garni	84.59	336	c iP	P	03 53 03.8	+2.5
GNI				pmax	pmax		
	comp=Z,468nm,1.6s						
HAPS	Han Pijesak,Bl	84.62	356	eP	P	03 53 01.4	+0.1
SABA	Saba	84.62	69	PFAKE		03 53 10.0	+8.5
SABA				LR	LR		
	comp=Z,900nm,21.0s						
VLC	Villacollemand	84.65	2	eP	P	03 53 02.2	+0.9
	comp=Z,178nm,1.4s						
VLC				LR	LR		
	comp=Z,1µm,22.0s						
VIRV	Villa del Rosa	84.68	80	eP	P	03 53 01.1	-0.8
PSET	Sete Cidades	84.76	30	eP	P	03 53 04.3	+2.3
	comp=Z,164nm,1.5s						
KIJV	Kijevo	84.79	358	i P	P	03 53 02.0	0.0
BBLS	Lazići	84.81	355	eP	P	03 53 03.0	+0.8
PRD	Provadia	84.82	350	eP	P	03 53 04.3	+2.2
DUGI	Dugi Otok	84.83	359	i P	P	03 53 02.9	+0.7
PDA	Ponta Delgada	84.85	30	eP	P	03 53 03.8	+1.4
SBF	Sospel	84.85	4	eP	P	03 53 03.1	+0.7
SBF				pmax	pmax		
	comp=Z,148nm,1.0s						
SEUS	St. Eustatius	84.87	68	PFAKE		03 53 10.0	+7.2
SEUS				LR	LR		
	comp=Z,1µm,19.0s						
CMLA	Cha da Macela	84.88	30	eP	P	03 53 04.8	+2.2
	comp=Z,190nm,1.8s						
CMLA	Cha da Macela	84.88	30	eP	P	03 53 05.5	+2.9
	comp=Z,185nm,1.3s						
CMLA	Cha da Macela	84.88	30	i P	P	03 53 05.5	+2.9
SOLC	Bahia Solano	84.89	86	eP	P	03 53 02.4	-0.5
SJPF	Ste Jean	84.92	10	eP	P	03 53 03.7	+1.0
SJPF				pmax	pmax		
	comp=Z,87nm,1.6s						
MORI	Morici	84.95	358	i P	P	03 53 03.2	+0.5
KTUT	Trabzon	84.95	340	⇑iP	P	03 53 04.8	+2.0
BART	Pico Bartolome	84.97	29	eP	P	03 53 04.1	+1.0
	comp=Z,295nm,1.3s						
DBBC	Dabeiba	85.03	85	eP	P	03 53 02.6	-1.1
MPEP	Malo Peshtene	85.03	352	P	P	03 53 04.0	+0.8
PGAV	Gavieira, Arco	85.05	16	eP	P	03 53 03.6	+0.2
	comp=Z,77nm,1.5s						
PGAV	Gavieira, Arco	85.05	16	ePP	PP	03 56 21.3	+1.8
PGAV				eS	S	04 03 38.0	+5.6
PGAV	Gavieira, Arco	85.05	16	eLQ	LQ	04 18 22.4	
PGAV				eLR	LR	04 22 05.8	
	comp=Z,1µm,20.0s						
FRF	La Foret Royal	85.12	5	eP	P	03 53 04.4	+0.8
FRF				pmax	pmax		
	comp=Z,79nm,1.1s						
SKI	Saint Kitts	85.14	68	PFAKE		03 53 20.0	+16
SKI				LR	LR		
	comp=Z,1µm,21.0s						
ZIRJ	Zirje	85.16	358	i P	P	03 53 03.8	0.0
EPF	Esparros	85.17	9	eP	P	03 53 03.9	-0.1
EPF				pmax	pmax		
	comp=Z,72nm,1.1s						
DIKM	Dikmen	85.20	343	⇑iP	P	03 53 07.2	+3.1
ETSF	Etsaut	85.20	10	eP	P	03 53 05.1	+0.9
ETSF				pmax	pmax		
	comp=Z,115nm,1.2s						
PCAB	Cabril	85.33	16	eP	P	03 53 06.0	+1.2
	comp=Z,52nm,1.6s						
PCAB	Cabril	85.33	16	ePP	PP	03 56 24.1	+2.4
LMR	La Mourre	85.34	5	eP	P	03 53 06.6	+1.9
LMR				pmax	pmax		
	comp=Z,110nm,1.4s						
PLE	Pljevlja	85.35	355	⇓iP	P	03 53 05.9	+0.9
JBP	Jabalpur	85.39	302	eP	P	03 53 04.3	-1.0
JBP				⇑ex	x	04 03 33.8	
ANWB	Willy Bob	85.42	67	PFAKE		03 53 20.0	+14
ANWB				LR	LR		
	comp=Z,1µm,20.0s						
PBRG	Braganca	85.45	15	eP	P	03 53 05.5	+0.1
	comp=Z,52nm,1.5s						
PBRG	Braganca	85.45	15	ePP	PP	03 56 24.4	+1.7
MAKA	Makarska	85.49	357	i P	P	03 53 04.7	-0.8
ZARC	Zaragoza, Cauc	85.50	84	eP	P	03 53 04.4	-1.6
UPM	Unac-Piva	85.50	356	⇓iP	P	03 53 05.7	-0.1

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POLO  Lamas de Olo      85.70  16 eP       P       03 53 07.0 +0.3
      comp=Z,24nm,1.3s
POLO  Lamas de Olo      85.70  16 ePP      PP      03 56 26.3 +1.5
PSMA  Santa Maria       85.71  30 eP       P       03 53 07.8 +1.1
      comp=Z,156nm,1.6s
PSMN  Pico do Norte,    85.72  30 eP       P       03 53 07.0 +0.2
      comp=Z,123nm,2.2s
IVA   Berane            85.78 355⇓iP       P       03 53 07.1  0.0
PTO   Porto             85.79  16 eP       P       03 53 08.4 +1.4
PGB   Panagyurishte     85.79 352 eP       P       03 53 08.8 +1.7
VTS   Vitosha           85.81 352 eP       P       03 53 07.2 -0.1
      comp=Z,43nm,1.0s
VTS                                LR      LR
      comp=Z,2µm,19.0s
VTS   Vitosha           85.81 352  P       P       03 53 06.7 -0.6
VTS   Vitosha           85.81 352⇓iP       P       03 53 07.5 +0.2
VTS   Vitosha           85.81 352 eP       P       03 53 07.2 -0.1
VTS                                pmax    pmax
      comp=Z,43nm,1.0s
VTS                                MLR     MLR
      comp=Z,2µm,19.0s
VTS   Vitosha           85.81 352 eP       P       03 53 06.9 -0.4
PVRL  Vila Real         85.81  16 eP       P       03 53 08.6 +1.4
      comp=Z,77nm,1.6s
PVRL  Vila Real         85.81  16 ePP      PP      03 56 28.8 +3.2
BRY   Bratogost         85.82 356⇓iP       P       03 53 07.0 -0.3
BRY   Bratogost         85.82 356 eP       P       03 53 07.0 -0.3
KOME  Kolasin           85.82 355⇓iP       P       03 53 07.3  0.0
OCAC  Ocana             85.87  82 eP       P       03 53 07.2 -0.8
STON  Ston              85.88 357 i P      P       03 53 06.3 -1.1
STON  Ston              85.88 357 eP       P       03 53 07.0 -0.4
NKY   Niksic            85.89 356⇓iP       P       03 53 07.5 -0.1
NKME  Niksic            85.93 356⇓iP       P       03 53 07.6 -0.2
SKLT  Songkhla          85.95 276  P       P       03 53 10.4 +2.2
TRTT  Trang             86.01 277  P       P       03 53 09.9 +1.4
TREB  Trebinje          86.01 356 eP       P       03 53 07.2 -0.9
MVO   Moncorvo          86.03  15 eP       P       03 53 09.2 +0.9
      comp=Z,56nm,1.3s
MVO   Moncorvo          86.03  15 ePP      PP      03 56 31.3 +3.9
MVO                               eS       S       04 03 44.7 +2.6
MVO   Moncorvo          86.03  15 eLQ      LQ      04 18 22.7
MVO                               eLR      LR      04 22 02.3
      comp=Z,1µm,20.0s
ILGA  Ilgaz             86.04 344  PFAKE           03 53 20.0  +11
ILGA                               LR      LR
      comp=Z,1µm,22.0s
PVY   Plav              86.05 355⇓iP       P       03 53 08.3 -0.2
DBRK  Dubrovnik         86.07 356 i P      P       03 53 07.8 -0.6
HELC  Santa Helena      86.09  85 eP       P       03 53 08.4 -0.9
CEME  Cevo              86.16 356⇓iP       P       03 53 08.5 -0.4
PLD   Plovdiv           86.19 351  P       P       03 53 10.1 +1.1
PGF   Pioggiola         86.23   3 eP       P       03 53 10.9 +1.6
PGF                                pmax    pmax
      comp=Z,176nm,1.5s
PDG   Podgorica         86.25 355⇓iP       P       03 53 09.6 +0.3
PDG   Podgorica         86.25 355 eP       P       03 53 08.8 -0.5
TTG   Podgorica         86.25 355⇓iP       P       03 53 09.1 -0.2
TTG   Podgorica         86.25 355 eP       P       03 53 09.3  0.0
      comp=Z,103nm,0.9s
TTG                                LR      LR
      comp=Z,500nm,21.0s
TTG   Podgorica         86.25 355 eP       P       03 53 09.3  0.0
TTG                                pmax    pmax
      comp=Z,103nm,0.9s
TTG                                MLR     MLR
      comp=Z,500nm,21.0s
HCY   Herceg Novi       86.27 356⇓iP       P       03 53 08.8 -0.6
PVIS  Viseu             86.33  16 eP       P       03 53 10.9 +1.1
      comp=Z,63nm,1.3s
PVIS  Viseu             86.33  16 ePP      PP      03 56 35.0 +5.2
PHSR  Pinarhisar        86.36 349⇓iP       P       03 53 11.0 +1.2
BUM   Brajici-Budva     86.40 356⇓iP       P       03 53 09.9 -0.2
PTBC  PUERTO BERRIO,    86.48  84 eP       P       03 53 09.1 -1.7
AQU   L'Aquila          86.49 360 eP       P       03 53 11.8 +1.3
      comp=Z,93nm,1.2s
AQU                                LR      LR
      comp=Z,700nm,19.0s
AQU   L'Aquila          86.49 360 eP       P       03 53 11.8 +1.3
AQU                                pmax    pmax
      comp=Z,93nm,1.2s
AQU                                MLR     MLR
      comp=Z,700nm,19.0s
AQU   L'Aquila          86.49 360 eP       P       03 53 10.7 +0.2
DRME  Dracevica, Mon    86.50 355⇓iP       P       03 53 09.7 -0.8
DRME  Dracevica, Mon    86.50 355 eP       P       03 53 09.7 -0.8
BRRC  Barranca, Sant    86.51  83 eP       P       03 53 09.6 -1.3
KLYT  Kilyos            86.54 348⇑iP       P       03 53 11.6 +0.9
KKB   Krupnik           86.56 353 eP       P       03 53 12.3 +1.4
KDZ   Kurdzhali         86.57 351 eP       P       03 53 12.7 +1.8
SKO   Skopje            86.58 354 i P      P       03 53 11.3 +0.4
RZN   Rozhen            86.60 351 eP       P       03 53 11.9 +0.7
PLMC  San Jos del P     86.62  86 eP       P       03 53 08.7 -2.9
BHPL  Bhopal            86.67 304 eP       P       03 53 11.2 -0.6
BHPL                               IAmb    IAmb    03 53 13.7
      comp=Z,4µm,3.5s
SAHE  Sakarya_HENDEK    86.69 347 i P      P       03 53 13.2 +1.7
SAHE                               IAML_P
      comp=Z,604nm,1.0s
MTE   Manteigas         86.69  16 eP       P       03 53 12.3 +0.7
      comp=Z,40nm,2.3s
MTE   Manteigas         86.69  16 ePP      PP      03 56 34.8 +2.0
MTE                               eS       S       04 03 47.6 -0.9
MTE   Manteigas         86.69  16 eLQ      LQ      04 18 27.7
MTE                               eLR      LR      04 22 55.0
      comp=Z,1µm,20.0s
MTE   Manteigas         86.69  16 eP       P       03 53 11.8 +0.2
      comp=Z,34nm,1.0s
MTE                                LR      LR
      comp=Z,1µm,20.0s
ULC   Ulcinj            86.72 355⇓iP       P       03 53 11.4 -0.2
ISK   Istanbul-Kandi    86.72 348  P       P       03 53 11.9 +0.3
COI   Coimbra           86.73  16 eP       P       03 53 11.6 -0.1
      comp=Z,110nm,1.3s
COI   Coimbra           86.73  16 ePP      PP      03 56 34.6 +1.6
COI   Coimbra           86.73  16 eP       P       03 53 12.1 +0.4
      comp=Z,84nm,1.0s
COI                                LR      LR
      comp=Z,1µm,20.0s
COI   Coimbra           86.73  16 eP       P       03 53 12.1 +0.4
COI                                pmax    pmax
      comp=Z,84nm,1.0s
COI                                MLR     MLR
      comp=Z,1µm,20.0s
CAPV  Capacho           86.78  82 eP       P       03 53 11.6 -1.0
MMB   Musomiste         86.78 352 eP       P       03 53 13.0 +1.0
CMDR  Camlidere-ANKA    86.79 345 i P      P       03 53 13.9 +1.8
CMDR                               IAML_P
      comp=Z,899nm,0.6s
STIP  Stip              86.81 353 i P      P       03 53 12.5 +0.5
PCAS  Casmilo, Conde    86.86  16 eP       P       03 53 12.8 +0.4
      comp=Z,59nm,1.4s
PCAS  Casmilo, Conde    86.86  16 ePP      PP      03 56 35.6 +1.5
GRGC  Isla de Gorgon    86.91  89 eP       P       03 53 11.6 -1.3
PHP   Peshkopia         86.93 354  P       P       03 53 12.4 -0.3
BTAS  Taskesti          86.94 346 i P      P       03 53 15.0 +2.3
BTAS                               IAML_P
      comp=Z,48nm,0.3s
GUY2C Guyana, Caldas    86.94  86 eP       P       03 53 12.6 -1.0
PAMC  Pamplona, Colo    86.95  82 eP       P       03 53 12.6 -1.1
KIBS  BOLU              86.96 346 i P      P       03 53 13.9 +1.0
KIBS                               IAML_P
      comp=Z,1µm,1.0s
NORC  Norcasia          86.99  85 eP       P       03 53 12.2 -1.1
MDUB  Mudurnu           87.01 346 eP       P       03 53 15.3 +2.2
      comp=Z,385nm,1.1s
NVR   Nevrokopi         87.01 352  P       P       03 53 13.6 +0.5
SDV   Santo Domingo     87.03  80 eP       P       03 53 13.0 -0.7
      comp=Z,52nm,1.0s
SDV                                LR      LR
      comp=Z,800nm,18.0s
SDV   Santo Domingo     87.03  80 eP       P       03 53 12.6 -1.1
RDO   Rodhopi           87.05 351  P       P       03 53 13.4 +0.2
VAY   Valandovo         87.15 353 i P      P       03 53 13.6 -0.1
YLV   Yalova            87.17 348⇑iP       P       03 53 15.1 +1.2
RREF  El Recreo         87.20  86 eP       P       03 53 14.7 -0.4
BARC  Barichara         87.23  83 eP       P       03 53 13.7 -1.1
ALN   Alexandroupoli    87.25 350 eP       P       03 53 14.9 +0.7
      comp=Z,55nm,1.1s
ALN                                LR      LR
      comp=Z,700nm,22.0s
ALN   Alexandroupoli    87.25 350  P       P       03 53 13.8 -0.4
ALN   Alexandroupoli    87.25 350 eP       P       03 53 14.9 +0.7
ALN                                pmax    pmax
      comp=Z,55nm,1.1s
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ALN                                MLR     MLR
      comp=Z,700nm,22.0s
PCBR  Castelo Branco    87.25  16 eP       P       03 53 14.9 +0.7
      comp=Z,39nm,1.4s
PCBR  Castelo Branco    87.25  16 ePP      PP      03 56 39.1 +1.9
SRS   Serrai            87.27 352  P       P       03 53 14.2 -0.1
KNT   Kendrikon         87.28 353  P       P       03 53 14.2 -0.2
YOTC  Yotoco, Valle     87.29  87 eP       P       03 53 13.0 -1.9
KAVA  Kavala            87.30 351  P       P       03 53 14.6 +0.2
TIR   Tirane            87.30 355 eP       P       03 53 15.1 +0.7
      comp=Z,96nm,1.4s
TIR   Tirane            87.30 355  P       P       03 53 14.3 -0.1
TIR   Tirane            87.30 355⇑iP       P       03 53 15.2 +0.8
TIR   Tirane            87.30 355 eP       P       03 53 15.1 +0.7
TIR                                pmax    pmax
      comp=Z,96nm,1.4s
PTOM  Tomar             87.30  16 eP       P       03 53 14.6 +0.1
      comp=Z,100nm,1.4s
PTOM  Tomar             87.30  16 ePP      PP      03 56 39.6 +2.0
SART  Tekirdag          87.33 349 i P      P       03 53 16.4 +1.8
SART                               IAML_P
      comp=Z,2µm,0.9s
BR101 Keskin Array S    87.35 344 eP       P       03 53 15.4 +0.6
BR131 Keskin Array S    87.35 344 eP       P       03 53 15.6 +0.7
      comp=Z,42nm,1.0s
ANTO  Ankara            87.35 345 eP       P       03 53 16.1 +1.3
      comp=Z,79nm,1.0s
ANTO                              ePP      PP      03 56 37.8 -0.3
ANTO                               LR      LR
      comp=Z,1µm,20.0s
BRTR  Keskin Array B    87.35 344  P       P       03 53 15.4 +0.6
      comp=Z,24nm,0.8s,baz=40,slow=1.9,SNR=79
BRTR                               PKKPbc  PKKPbc  04 11 01.9 -1.0
      comp=Z,1.4nm,0.9s,baz=132,slow=4.3,SNR=4.2
BRTR                               LR      LR      04 35 58.7
      comp=Z,1µm,21.8s,baz=360,slow=38
SOCV  Socops            87.36  80 eP       P       03 53 13.8 -1.3
BR231 Keskin MP Arra    87.38 345 eP       P       03 53 17.4 +2.4
      comp=Z,79nm,1.1s
KULM  Kulim             87.39 275  PFAKE           03 53 30.0  +15
KULM                               LR      LR
      comp=Z,300nm,22.0s
UCM   Universidad Co    87.43  12 eP       P       03 53 15.0 -0.1
UCM   Universidad Co    87.43  12  PP      PP      03 56 41.2 +2.5
OHR   Ohrid             87.48 354 i P      P       03 53 15.3 -0.1
SRCK  Saricakaya, Es    87.51 347 i P      P       03 53 17.1 +1.6
SRCK                               IAML_P
      comp=Z,12nm,0.5s
GRG   Griva             87.52 353  P       P       03 53 15.7 +0.1
NGP   Nagpur            87.53 301 eP       P       03 53 14.9 -1.0
NGP                                IAmb    IAmb    03 53 16.2
      comp=Z,56nm,0.8s
AUMIH MIHALICIK         87.56 346 i P      P       03 53 17.6 +1.7
SOH   Sokhos            87.58 352  P       P       03 53 15.3 -0.6
ULDT  Uludag            87.62 348 i P      P       03 53 17.7 +1.5
ULDT                               IAML_P
      comp=Z,3µm,1.0s
PMRV  Marv??o           87.66  16 eP       P       03 53 15.6 -0.7
      comp=Z,53nm,1.4s
PMRV  Marv??o           87.66  16 ePP      PP      03 56 42.1 +1.5
PMRV                              eS       S       04 03 57.3 -0.5
PMRV  Marv??o           87.66  16 eLQ      LQ      04 18 57.9
PMRV                              eLR      LR      04 23 32.6
      comp=Z,961nm,20.0s
THAS  Thassos island    87.67 351  P       P       03 53 16.0 -0.2
WRAB  Tennant Creek     87.67 234 eP       P       03 53 16.0 -0.3
      comp=Z,53nm,1.1s
WRAB                               LR      LR
      comp=Z,900nm,21.0s
WRAB  Tennant Creek     87.67 234ceP       P       03 53 16.1 -0.3
WRAB                               pmax    pmax
      comp=Z,127nm,2.5s
BORA  Eskisehir         87.70 347 i P      P       03 53 17.9 +1.4
BORA                               IAML_P
      comp=Z,2µm,0.9s
SMTH  Samothraki Isl    87.72 350  P       P       03 53 15.8 -0.7
ALMR  Almeirim          87.72  17 eP       P       03 53 16.2 -0.3
ALMR                              ePP      PP      03 56 42.2 +1.2
ALMR                              eSKSac   SKSac   04 03 45.0 +0.8
ALMR                               AMS     AMS     04 34 24.3
      comp=Z,1µm,20.0s
ALMR  Almeirim          87.72  17 eP       P       03 53 16.0 -0.5
      comp=Z,82nm,1.4s
ALMR  Almeirim          87.72  17 eP       P       03 53 16.1 -0.3
ALMR                              e                03 56 42.1
ALMR                              e                04 03 45.0
PMAFR Mafra             87.79  17 eP       P       03 53 16.6 -0.2
      comp=Z,185nm,1.5s
PMAFR Mafra             87.79  17 ePP      PP      03 56 43.1 +1.5
RUSC  La Rusia          87.84  83 eP       P       03 53 16.6 -1.4
PMTG  Montargil         87.87  16 eP       P       03 53 17.2  0.0
      comp=Z,42nm,1.4s
PMTG  Montargil         87.87  16 ePP      PP      03 56 43.6 +1.4
KIRS  Kırehir-Merke     87.88 344 i P      P       03 53 19.1 +1.7
KIRS                               IAML_P
      comp=Z,1µm,0.8s
ROSC  El Rosal          87.89  85  P       P       03 53 18.1  0.0
      comp=Z,21nm,0.9s,baz=149,slow=4.5,SNR=13
ROSC  El Rosal          87.89  85 eP       P       03 53 18.9 +0.8
      comp=Z,22nm,0.9s
ROSC  El Rosal          87.89  85 eP       P       03 53 17.6 -0.5
ESDC  Sonseca Array     87.95  13  P       P       03 53 17.4 -0.2
      comp=Z,34nm,1.0s,baz=347,slow=4.6,SNR=99
ESDC                               PP      PP      03 56 43.3 +0.4
      comp=Z,20nm,1.2s,baz=346,slow=7.8,SNR=13
ESDC                               PKKPbc  PKKPbc  04 11 00.2 -1.0
      comp=Z,0.3nm,0.6s,baz=155,slow=3.4,SNR=4.1
ESDC                               LR      LR      04 33 08.0
      comp=Z,902nm,20.7s,baz=330,slow=36
ESLA  Sonseca Array     87.95  13 eP       P       03 53 17.9 +0.2
      comp=Z,60nm,1.1s
OUR   Ouranopolis       88.01 352  P       P       03 53 17.2 -0.6
KKUL  Konya-Kulu        88.01 345 i P      P       03 53 20.0 +2.0
KKUL                               IAML_P
      comp=Z,658nm,0.8s
PLG   Polygyros         88.02 352  P       P       03 53 17.0 -0.9
PAB   San Pablo         88.03  13 eP       P       03 53 18.2 +0.1
      comp=Z,40nm,1.1s
PAB                                LR      LR
      comp=Z,1µm,19.0s
PAB   San Pablo         88.03  13 eP       P       03 53 18.2 +0.1
PAB                                pmax    pmax
      comp=Z,40nm,1.1s
PAB                                MLR     MLR
      comp=Z,1µm,19.0s
ORTC  Ortega, Tolima    88.03  86 eP       P       03 53 17.1 -1.2
LIS   Lisbon            88.05  17 eP       P       03 53 17.8 -0.2
LIS                               ePP      PP      03 56 44.7 +1.1
LIS                                AMS     AMS     04 39 28.2
      comp=N,1µm,24.9s
LIS   Lisbon            88.05  17 eP       P       03 53 17.8 -0.2
LIS                               e                03 56 44.7
FDF   Fort de France    88.12  69  PFAKE           03 53 30.0  +11
FDF                                LR      LR
      comp=Z,900nm,19.0s
MATE  Matera            88.13 357⇓iP       P       03 53 19.8 +1.4
POPC  Popayan, Colom    88.20  88 eP       P       03 53 18.2 -1.2
TAMC  Tame, Arauca      88.22  82 eP       P       03 53 18.7 -0.5
DURS  Dursunbey         88.24 348 i P      P       03 53 20.1 +1.1
DURS                               IAML_P
      comp=Z,589nm,0.8s
BBAC  Balboa, Cauca     88.25  89 eP       P       03 53 18.6 -1.0
EZN   Ezine             88.28 350  P       P       03 53 18.4 -0.7
EZN   Ezine             88.28 350⇑iP       P       03 53 20.0 +0.9
EZN   Ezine             88.28 350  P       P       03 53 19.9 +0.9
BALB  Balikesir         88.28 349 eP       P       03 53 20.4 +1.3
      comp=Z,149nm,1.0s
BALB                              ePP      PP      03 56 47.6 +2.2
BALB                               LR      LR
      comp=Z,3µm,22.0s
CVER  Cruz Verde, Cu    88.29  85 eP       P       03 53 18.9 -1.2
LIA   Limnos Island     88.33 351  P       P       03 53 19.1 -0.2
BAYC  CANAKKALE_Bayr88.33 350 i P      P       03 53 20.3 +0.9
BAYC                               IAML_P
      comp=Z,733nm,1.1s
LIT   Litokhoron        88.36 353 eP       P       03 53 20.1 +0.5
      comp=Z,37nm,1.1s
LIT                                LR      LR
      comp=Z,1µm,21.0s
LIT   Litokhoron        88.36 353  P       P       03 53 18.5 -1.1
LIT   Litokhoron        88.36 353 eP       P       03 53 20.1 +0.5
LIT                                pmax    pmax
      comp=Z,37nm,1.1s
LIT                                MLR     MLR
      comp=Z,1µm,21.0s
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AKSY  AKSARAY - Alti    88.38 344 i P      P       03 53 22.4 +2.7
AKSY                               IAML_P
      comp=Z,14nm,0.4s
PRAC  Prado             88.41  86 eP       P       03 53 19.0 -1.1
CHIC  Chingaza          88.42  85 eP       P       03 53 20.4 -0.2
MARP  Paez Belalcaza    88.42  87 eP       P       03 53 20.1 -0.4
PCON  Cinco Dias        88.54  88 eP       P       03 53 21.3 -0.2
SOTA  Rioblanco         88.56  88 eP       P       03 53 20.8 -0.6
GDZ   Gediz             88.61 347 i P      P       03 53 22.8 +1.8
GDZ                                IAML_P
      comp=Z,13nm,0.3s
YOPC  Yopal, Colombi    88.67  83 eP       P       03 53 21.7 +0.2
AYVA  Ayvalik           88.75 349 i P      P       03 53 23.1 +1.8
AYVA                               IAML_P
      comp=Z,46nm,0.3s
PNCL  Nicolau / Gran    88.75  17 eP       P       03 53 21.9 +0.5
      comp=Z,63nm,1.7s
PNCL  Nicolau / Gran    88.75  17 ePP      PP      03 56 51.2 +2.0
BOLV  Bolvadin          88.76 346 i P      P       03 53 23.5 +1.9
BOLV                               IAML_P
      comp=Z,1µm,0.4s
CRUC  La Cruz           88.79  89 eP       P       03 53 21.3 -1.0
VILC  Villavicencio,    88.84  85 eP       P       03 53 23.1 +0.8
PRK   Paraskevi         88.85 350  P       P       03 53 22.2 +0.4
BETC  Betania           88.86  87 eP       P       03 53 22.0 -0.3
KEK   Kerkira           88.93 355  P       P       03 53 21.4 -0.8
SIGR  SIGRI             88.93 350  P       P       03 53 21.4 -0.8
THL   Klokotos Trika    88.94 353  P       P       03 53 21.2 -1.0
PBEJ  Beja              88.95  16 eP       P       03 53 23.9 +1.6
      comp=Z,42nm,1.4s
PBEJ  Beja              88.95  16 ePP      PP      03 56 55.8 +5.0
AGZ   La Independenc    88.97  83 eP       P       03 53 22.4 -0.3
XOR   Xorichti          89.04 352  P       P       03 53 21.9 -0.9
USAK  Uak-Merkez        89.04 348 i P      P       03 53 23.6 +0.8
USAK                               IAML_P
      comp=Z,636nm,0.5s
MESJ  Messejana         89.07  17 eP       P       03 53 22.9  0.0
MESJ                              ePP      PP      03 56 52.9 +1.1
MESJ                              eSKSac   SKSac   04 03 53.3 +0.9
MESJ                               AMS     AMS     04 33 23.8
      comp=Z,1µm,17.5s
MESJ  Messejana         89.07  17 eP       P       03 53 21.5 -1.4
MESJ  Messejana         89.07  17 ePP      PP      03 56 53.4 +1.6
MESJ  Messejana         89.07  17 eP       P       03 53 22.8  0.0
MESJ                              e                03 56 52.8
MESJ                              e                04 03 53.2
IGT   Igoumenitsa       89.08 354  P       P       03 53 21.6 -1.3
IGT   Igoumenitsa       89.08 354  P       P       03 53 23.2 +0.3
NEO   Neokhori          89.09 352  P       P       03 53 22.0 -1.0
ELOV  Elorza            89.20  80 eP       P       03 53 22.9 -0.9
SKIA  Skiathos          89.21 352  P       P       03 53 22.4 -1.2
SVB   Belmont           89.22  70 eP       P       03 53 23.4 -0.6
      comp=Z,278nm,1.2s
DOGA  KONYA_Doganhis 89.25 345 i P      P       03 53 26.1 +2.1
DOGA                               IAML_P
      comp=Z,39nm,0.2s
PTEO  Sao Teotonio      89.26  17 eP       P       03 53 23.8  0.0
      comp=Z,91nm,1.9s
PTEO  Sao Teotonio      89.26  17 ePP      PP      03 56 56.8 +3.5
KULA  Kula-Manisa       89.29 348  P       P       03 53 23.4 -0.6
KONT  Konya--Tatoy      89.30 345 i P      P       03 53 25.8 +1.8
KONT                               IAML_P
      comp=Z,14nm,0.4s
PCVE  Castro Verde      89.30  17 eP       P       03 53 23.5 -0.5
      comp=Z,43nm,1.8s
PCVE  Castro Verde      89.30  17 ePP      PP      03 56 55.7 +2.0
KHAL  Karahalli         89.31 347 i P      P       03 53 25.0 +0.8
KHAL                               IAML_P
      comp=Z,513nm,0.8s
MANT  Manisa            89.32 348 eP       P       03 53 25.9 +1.5
      comp=Z,386nm,1.4s
MANT                              ePP      PP      03 56 49.8 -4.2
MANT                               LR      LR
      comp=Z,3µm,21.0s
ARMA  Armidale          89.36 215 eP       P       03 53 27.7 +3.5
      comp=Z,58nm,1.4s
AGG   Agios Georgios    89.45 353 eP       P       03 53 24.1 -0.6
      comp=Z,34nm,1.3s
AGG                                LR      LR
      comp=Z,800nm,21.0s
AGG   Agios Georgios    89.45 353  P       P       03 53 23.4 -1.3
AGG   Agios Georgios    89.45 353 eP       P       03 53 24.1 -0.6
AGG                                pmax    pmax
      comp=Z,34nm,1.3s
AGG                                MLR     MLR
      comp=Z,800nm,21.0s
KMER  Konya-Meram       89.47 345 i P      P       03 53 26.5 +1.6
KMER                               IAML_P
      comp=Z,490nm,0.8s
BAGO  Egridir - ISPA    89.50 346 i P      P       03 53 24.8 -0.2
BAGO                               IAML_P
      comp=Z,310nm,0.9s
MORF  Marmelete         89.51  17 eP       P       03 53 24.7 -0.3
MORF                              ePP      PP      03 56 56.6 +1.2
MORF                              eSKSac   SKSac   04 03 55.9 +0.8
MORF                               AMS     AMS     04 33 57.2
      comp=E,899nm,20.7s
MORF  Marmelete         89.51  17 eP       P       03 53 25.6 +0.6
      comp=E,101nm,1.5s
MORF  Marmelete         89.51  17 ePP      PP      03 56 57.2 +1.8
MORF  Marmelete         89.51  17 eP       P       03 53 24.7 -0.3
MORF                              e                03 56 56.6
MORF                              e                04 03 55.8
HORN  Hornachuelos      89.56  14  P       P       03 53 25.3 +0.1
FLOC  Florencia         89.58  88 eP       P       03 53 25.5 -0.2
EVR   Evrytania         89.59 353  P       P       03 53 25.3 -0.2
TIP   Timpagrande       89.60 357 eP       P       03 53 25.8 +0.4
      comp=E,71nm,1.4s
TIP                                LR      LR
      comp=Z,800nm,20.0s
TIP   Timpagrande       89.60 357  P       P       03 53 24.7 -0.8
TIP   Timpagrande       89.60 357⇑iP       P       03 53 25.8 +0.4
PFVI  Vila Bisbo        89.64  17  PFAKE           03 53 40.0  +14
PFVI                               LR      LR
      comp=Z,1µm,19.0s
MRKA  Markates          89.66 352  P       P       03 53 24.8 -0.9
PBDV  Barranco-do-Ve    89.70  17 eP       P       03 53 26.2 +0.3
      comp=Z,106nm,1.6s
PBDV  Barranco-do-Ve    89.70  17 ePP      PP      03 56 59.2 +2.3
ISP   Isparta           89.70 346  PFAKE           03 53 40.0  +14
ISP                                LR      LR
      comp=Z,2µm,22.0s
ISP   Isparta           89.70 346  P       P       03 53 25.3 -0.7
ISP   Isparta           89.70 346 i P      P       03 53 26.0  0.0
ISP                                pmax    pmax
      comp=Z,73nm,1.0s
ATAL  Atalanti          89.72 352  P       P       03 53 24.8 -1.1
CHOS  Chios island      89.73 350  P       P       03 53 25.7 -0.4
LKR   Lokris            89.76 352  P       P       03 53 24.6 -1.5
LKD2  Lefkada island    89.80 354  P       P       03 53 25.8 -0.6
ANX   Ano Chora         89.91 353  P       P       03 53 27.4 +0.5
PVO   Paravola          89.91 353  P       P       03 53 27.0 +0.2
DSF   Desfina           90.04 353  P       P       03 53 25.6 -1.9
EFP   Efpalio           90.07 353  P       P       03 53 27.4 -0.2
SERG  Sergoula          90.08 353  P       P       03 53 27.0 -0.6
TRIZ  Trizonia          90.12 353  P       P       03 53 26.7 -1.1
AYDN  Tasoluk           90.23 348 i P      P       03 53 29.6 +1.2
AYDN                               IAML_P
      comp=Z,26nm,0.3s
LAKA  Lakka             90.25 353  P       P       03 53 27.6 -0.9
MACC  Macarena, Meta    90.28  86 eP       P       03 53 26.8 -2.1
PTL   Penteli           90.28 351  P       P       03 53 28.1 -0.5
TRAZ  Trapeza           90.31 353  P       P       03 53 28.4 -0.4
SMG   Samos             90.31 349  P       P       03 53 28.4 -0.3
PSI   Prapat            90.40 275 eP       P       03 53 29.3 -0.3
      comp=Z,37nm,1.1s
PSI   Prapat            90.40 275 eP       P       03 53 29.3 -0.3
PSI                                pmax    pmax
      comp=Z,37nm,1.1s
THAL  Thalero           90.40 352  P       P       03 53 29.1  0.0
LOUT  Loutraki          90.42 352  P       P       03 53 26.8 -2.4
KLV   Kalavryta, Ach    90.44 353  P       P       03 53 28.2 -1.2
KEPZ  Antalya-Kepez     90.44 345 i P      P       03 53 29.2 -0.2
KEPZ                               IAML_P
      comp=Z,10nm,0.4s
KFL   Anninata          90.47 354  P       P       03 53 28.4 -1.0
ERMK  Ermenek           90.48 344 i P      P       03 53 30.2 +0.5
ERMK                               IAML_P
      comp=Z,2µm,0.8s
VLY   Voula,Athens      90.49 352  P       P       03 53 28.6 -0.9
GUR   Goura             90.53 353  P       P       03 53 28.8 -1.1
KORT  Korkueli          90.54 346 i P      P       03 53 31.9 +2.0
KORT                               IAML_P
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	comp=Z,1µm,0.5s						
CEL	Celeste	90.54	358	PFAKE		03 53 40.0	+10
CEL				LR	LR		
	comp=Z,400nm,20.0s						
DRO	Drossia	90.56	353	P	P	03 53 30.4	+0.5
YER	Yerkesik	90.69	348	P	P	03 53 30.5	-0.1
GUVC	San Jose del G	90.72	85	*e*P	P	03 53 29.6	-1.3
EMAL	Malaga-Limoner	90.75	14	*e*P	P	03 53 31.0	+0.3
EMAL	Malaga-Limoner	90.75	14	PP	PP	03 57 06.9	+1.8
SFS	San Fernando	90.75	15	*e*P	P	03 53 30.3	-0.4
SFS	San Fernando	90.75	15	PP	PP	03 57 07.7	+2.5
HYB	Hyderabad	90.85	300	*i* P	P	03 53 30.0	-1.6
	comp=Z,242nm,1.2s						
BDRM	Kayabasi	90.87	349	*i* P	P	03 53 30.0	-1.3
BDRM				IAML_P			
	comp=Z,52nm,0.2s						
DID	Didima	90.88	352	P	P	03 53 29.9	-1.5
BODT	Bodrum	90.89	349	P	P	03 53 31.0	-0.4
TURN	Turunc	90.91	348	*i* P	P	03 53 32.2	+0.8
TURN				IAML_P			
	comp=Z,534nm,0.7s						
DALY	Dalyan (Mula)	90.96	348	*i* P	P	03 53 33.1	+1.4
DALY				IAML_P			
	comp=Z,511nm,0.8s						
AMT	Artemida-Makis	90.98	353	P	P	03 53 32.6	+0.7
AS31	Alice Springs	91.03	232	*e*P	P	03 53 30.7	-1.4
	comp=Z,10nm,0.8s						
ASAR	Alice Springs	91.03	232	P	P	03 53 30.8	-1.3
	comp=Z,32nm,0.8s,baz=35,slow=4.7,SNR=112						
ASAR				PKKPbc	PKKPbc	04 10 53.8	-0.7
	comp=Z,0.4nm,0.5s,baz=211,slow=2.3,SNR=4.8						
ASAR				LR	LR	04 31 42.2	
	comp=Z,560nm,18.8s,baz=46,slow=34						
FETY	Fethiye	91.08	347	*i* P	P	03 53 32.6	+0.3
FETY				IAML_P			
	comp=Z,600nm,0.8s						
VLX	Vlachokerasia	91.09	353	P	P	03 53 33.0	+0.5
DAT	Datca	91.18	348	*i* P	P	03 53 32.5	-0.5
DAT				IAML_P			
	comp=Z,6.0nm,0.3s						
AKUM	Antalya-Kumluc	91.20	346	*i* P	P	03 53 34.2	+1.4
AKUM				IAML_P			
	comp=Z,34nm,0.1s						
PTLC	Puerto Leguiza	91.22	88	*e*P	P	03 53 33.9	+0.7
CLTB	Caltabellotta	91.26	360	*e*P	P	03 53 33.4	+0.2
	comp=Z,83nm,1.3s						
CLTB				LR	LR		
	comp=Z,900nm,18.0s						
ITM	Ithomi	91.31	353	*e*P	P	03 53 33.6	+0.2
	comp=Z,49nm,1.3s						
ITM				LR	LR		
	comp=Z,1µm,22.0s						
AKAS	Kas	91.40	347	*i* P	P	03 53 34.8	+0.8
AKAS				IAML_P			
	comp=Z,871nm,1.0s						
CEU	Ceuta	91.44	15	*e*P	P	03 53 33.8	-0.1
CEU	Ceuta	91.44	15	PP	PP	03 57 10.7	+0.1
CEUT	Ceuta	91.47	15	P	P	03 53 35.1	+1.0
KSL	Kastellorizon	91.48	347	P	P	03 53 33.6	-0.6
VLI	Veliai	91.69	352	P	P	03 53 33.3	-1.8
TAMR	Tamra	91.72	3	*e*P	P	03 53 37.0	+1.8
	comp=Z,32nm,1.0s						
PMOZ	Porto Moniz, M	91.89	25	*e*P	P	03 53 38.0	+1.7
	comp=Z,181nm,2.4s						
PMOZ	Porto Moniz, M	91.89	25	*e*S	S	04 04 13.4	-24
PMOZ	Porto Moniz, M	91.89	25	*e*LR	LR	04 28 10.3	
	comp=Z,399nm,18.0s						
LEF	Lefka	91.97	344	⇓*i*P	P	03 53 37.1	+0.7
LEF	Lefka	91.97	344	*i* P	P	03 53 37.2	+0.8
LEF				IAML_P			
	comp=Z,3µm,1.0s						
CSS	Mathiatis	92.04	343	*e*P	P	03 53 37.3	+0.5
	comp=Z,110nm,1.1s						
CSS				LR	LR		
	comp=Z,600nm,21.0s						
CSS	Mathiatis	92.04	343	P	P	03 53 36.6	-0.2
PMAR	Madeira	92.06	25	*e*P	P	03 53 38.4	+1.3
	comp=Z,234nm,1.5s						
KTHA	Kythira Island	92.13	352	P	P	03 53 36.8	-0.4
FUL	Funchal	92.14	25	*e*P	P	03 53 38.7	+1.5
	comp=Z,142nm,1.9s						
KTHR	Kythira	92.14	352	P	P	03 53 36.3	-0.9
CHEFC	Chefchaouen	92.22	15	P	P	03 53 40.0	+2.2
PVLZ	Peæn de	92.32	14	*e*P	P	03 53 23.0	-15
PVLZ	Peæn de	92.32	14	PP	PP	03 57 00.7	-17
RSA	Sarsar	92.36	15	P	P	03 53 40.1	+1.7
KARP	Karpathos	92.40	349	PFAKE		03 53 50.0	+12
KARP				LR	LR		
	comp=Z,800nm,20.0s						
MELI	Melilla	92.40	13	*e*P	P	03 53 35.9	-2.5
MELI	Melilla	92.40	13	PP	PP	03 57 17.9	-0.4
POO	Poona	92.43	304	*e*P	P	03 53 38.5	-0.4
POO				IAmb	IAmb	03 53 39.8	
ANKY	Antikythira Is	92.50	352	P	P	03 53 38.6	-0.3
IMMV	Iera Moni Meta	92.84	351	P	P	03 53 39.3	-1.2
WDD	Wied Dalam	92.98	359	*e*P	P	03 53 40.4	-0.7
	comp=Z,75nm,0.9s						
WDD				LR	LR		
	comp=Z,400nm,18.0s						
AKLM	AKL	93.04	14	P	P	03 53 41.0	-0.5
KEST	Kesra	93.04	3	P	P	03 53 42.0	+0.5
	comp=Z,22nm,1.0s,baz=251,slow=1.6,SNR=14						
KEST	Kesra	93.04	3	*e*P	P	03 53 42.6	+1.1
	comp=Z,48nm,1.3s						
KEST				LR	LR		
	comp=Z,500nm,18.0s						
RTC	Rabat Centre	93.06	16	PFAKE		03 53 50.0	+8.5
RTC				LR	LR		
	comp=Z,2µm,20.0s						
JBK	JBK	93.40	13	P	P	03 53 43.1	-0.3
IFR	Ifrane	93.81	15	*e*P	P	03 53 39.7	-5.5
IFR	Ifrane	93.81	15	PP	PP	03 57 25.8	-3.8
SHME	Shamm	93.97	322	*i* P	P	03 53 45.2	-0.6
	SNR=7.8						
CZD	Col de Zad	94.30	15	P	P	03 53 50.0	+2.4
STKA	Stephens Creek	94.55	222	P	P	03 53 47.8	-0.3
	comp=Z,5.7nm,0.9s,baz=6.2,slow=6.0,SNR=5.5						
STKA				LR	LR	04 35 36.1	
	comp=Z,536nm,18.0s,baz=23,slow=35						
STKA	Stephens Creek	94.55	222	*e*P	P	03 53 49.1	+1.0
	comp=Z,2.8nm,1.0s						
STKA	Stephens Creek	94.55	222	*e*P	P	03 53 49.1	+1.0
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MSFE	Esma-Masafi	94.58	322	*i* P	P	03 53 48.7	+0.1
	SNR=5.4						
MDH	Madha	94.58	322	P	P	03 53 48.2	-0.4
UOSS	Minazif	94.93	321	*e*P	P	03 53 49.8	-0.5
	comp=Z,22nm,0.9s						
UOSS				LR	LR		
	comp=Z,700nm,20.0s						
UOSS	Minazif	94.93	321	P	P	03 53 49.3	-1.0
HATD	Hatta, Dubai	95.07	321	P	P	03 53 50.1	-0.8
NAZ	Nazwa, Dubai	95.11	322	*i* P	P	03 53 50.3	-0.8
	SNR=7.2						
ASHO	Ashiyiah	95.23	321	*i* P	P	03 53 50.9	-0.8
	SNR=7.5						
FAQ	Al Faqa, Dubai	95.35	322	P	P	03 53 51.6	-0.6
ASUD	Al Ashush, Dub	95.56	322	*i* P	P	03 53 52.6	-0.5
	SNR=13						
ALNE	Al Ain	95.91	321	P	P	03 53 54.2	-0.6
RAYN	Ar Rayn	100.01	330	*e*Pdif	Pdif	03 54 13.3	+0.1
	comp=Z,26nm,1.0s						
RAYN				LR	LR		
	comp=Z,1µm,20.0s						
RAYN	Ar Rayn	100.01	330	*i* Pdiff	Pdif	03 54 13.4	+0.1
	SNR=16						
RAYN	Ar Rayn	100.01	330	*e*P	Pdif	03 54 13.3	+0.1
RAYN				pmax	pmax		
	comp=Z,26nm,1.0s						
RAYN				MLR	MLR		
	comp=Z,1µm,20.0s						
PTGA	Pitinga	101.09	77	*e*Pdif	Pdif	03 54 17.3	-0.7
TAM	Tamanrasset	105.70	7	PFAKE		03 59 00.0	+8.4
TAM				LR	LR		
	comp=Z,700nm,21.0s						
DAMY	Dhamar	108.73	328	PFAKE		03 59 10.0	+12
DAMY				LR	LR		
	comp=Z,800nm,21.0s						
ATD	Arta Tunnel	112.09	328	PFAKE		03 59 20.0	+16
ATD				LR	LR		
	comp=Z,600nm,22.0s						
TOA1	Torodi Ar. Sit	114.83	12	*e*PP	PP	04 00 00.6	-5.2
TORD	Torodi Ar. Bea	114.83	12	PP	PP	04 00 00.6	-5.2
	comp=Z,10nm,0.5s,baz=334,slow=4.7,SNR=5.3						
FURI	Furi	115.88	332	PFAKE		03 59 20.0	+8.8
FURI				LR	LR		
	comp=Z,600nm,22.0s						
DBIC	Dimbokro	120.02	21	PKP	PKPdf	03 59 17.4	-1.4
	comp=Z,8.7nm,0.9s,baz=340,slow=2.7,SNR=17						
BDFB	Brasilia	120.03	77	PKP	PKPdf	03 59 17.2	-1.6
	comp=Z,5.3nm,1.0s,baz=329,slow=3.6,SNR=4.3						
MSEY	Mahe Island	121.51	308	PFAKE		03 59 30.0	+8.2
MSEY				LR	LR		
	comp=Z,600nm,22.0s						
ITRB	Iturama	121.68	82	*e*P	PKPdf	03 59 21.8	+0.1
CPUP	Villa Florida	122.19	93	PKP	PKPdf	03 59 20.6	-1.9
	comp=Z,7.8nm,0.8s,baz=348,slow=2.2,SNR=9.8						
CPUP	Villa Florida	122.19	93	*e*P	PKPdf	03 59 22.1	-0.4
BB19B	Bebedouro	123.83	81	*e*P	PKiKP	03 59 26.5	+0.4
PLCA	Paso Flores	124.10	114	PKP	PKPdf	03 59 25.3	-0.5
	comp=Z,15nm,0.9s,baz=302,slow=2.0,SNR=9.8						
PLCA	Paso Flores	124.10	114	*e*P	PKiKP	03 59 26.6	+0.6
PTGB	Pitanga	124.32	87	*e*P	PKPdf	03 59 26.8	+0.1
KMBO	Kilima Mbogo	125.79	330	PKP	PKiKP	03 59 30.6	+0.1
	comp=Z,10nm,1.0s,baz=354,slow=4.3,SNR=14						
KMBO				PP	PP	04 01 20.2	-1.4
	comp=Z,5.0nm,1.1s,baz=5.5,slow=7.9,SNR=9.4						
KMBO	Kilima Mbogo	125.79	330	*e*PKPdf	PKiKP	03 59 30.4	-0.2
KMBO				*e*PP	PP	04 01 21.3	-0.3
KMBO				LR	LR		
	comp=Z,500nm,22.0s						
KMBO	Kilima Mbogo	125.79	330	*i* PKiKP	PKPdf	03 59 30.2	+0.1
	SNR=12						
KMBO	Kilima Mbogo	125.79	330	*e*PKIKP	PKiKP	03 59 30.4	-0.2
KMBO				*e*		04 01 21.3	
KMBO				MLR	MLR		
	comp=Z,500nm,22.0s						
SPB	Sao Paulo	126.38	83	*e*P	PKiKP	03 59 31.3	+0.3
BSFB	Barra de Sao F	126.81	73	*e*P	PKPdf	03 59 31.3	-0.2
MBAR	Mbarara	127.09	338	PFAKE		03 59 40.0	+7.0
MBAR				LR	LR		
	comp=Z,400nm,21.0s						
TRQA	Tornquist	127.36	106	*e*PKPdf	PKPdf	03 59 31.1	-0.9
TRQA	Tornquist	127.36	106	*e*PKIKP	PKPdf	03 59 31.1	-0.9
CPSB	Cacapava Do Su	127.49	93	*e*P	PKPdf	03 59 32.4	-0.1
VAS01	Vassouras-RJ	127.86	78	*e*P	PKPdf	03 59 33.0	-0.5
PLTB	Pedras Altas	128.31	95	*e*P	PKiKP	03 59 34.6	-0.1
CNLB	Canela	128.35	90	*e*P	PKPdf	03 59 34.5	+0.2
SBA	Scott Base	130.14	187	*e*PKPdf	PKPdf	03 59 36.5	+0.4
SBA	Scott Base	130.14	187	*e*PKIKP	PKPdf	03 59 36.5	+0.4
VNDA	Vanda	130.25	188	PKP	PKPdf	03 59 36.5	+0.1
	comp=Z,1.4nm,0.9s,baz=339,slow=6.1,SNR=6.0						
VNDA	Vanda	130.25	188	*e*PKPdf	PKPdf	03 59 36.9	+0.6
CASY	Casey	132.94	213	*e*PKPdf	PKiKP	03 59 42.7	-0.1
MRIV	Mauritius Mete	133.46	295	PFAKE		04 00 00.0	+15
MRIV				LR	LR		
	comp=Z,200nm,21.0s						
ABPO	Ambohimpanom	137.88	308	PFAKE		04 00 00.0	+5.4
ABPO				LR	LR		
	comp=Z,500nm,20.0s						
QSPA	South Pole Qui	141.30	180	PFAKE		04 00 10.0	+10
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
LSZ	Lusaka	141.84	336	*e*PKPpre	PKPpre	03 59 54.3	
LSZ				LR	LR		
	comp=Z,500nm,20.0s						
LSZ	Lusaka	141.84	336	*e*PKHKP	PKPpre	03 59 54.3	
LSZ				MLR	MLR		
	comp=Z,500nm,20.0s						
TSUM	Tsumeb	147.53	352	*e*PKPdf	PKPdf	04 00 10.4	+0.8
TSUM				LR	LR		
	comp=Z,700nm,22.0s						
WIN	Windhoek	150.91	352	*e*PKPbc	PKPbc	04 00 20.3	-0.4
MAW	Mawson	151.14	217	PKPbc	PKPbc	04 00 18.6	-1.0
	comp=Z,41nm,0.9s,baz=65,slow=1.4,SNR=39						
LBTB	Lobatse	151.83	335	*e*PKPdf	PKPdf	04 00 17.8	+1.6
LBTB	Lobatse	151.83	335	*e*PKIKP	PKPdf	04 00 17.8	+1.6
BOSA	Boshof	155.34	334	PKPbc	PKPbc	04 00 28.8	
	comp=Z,6.4nm,0.8s,baz=70,slow=0.7,SNR=7.9						
BOSA				PP	PP	04 04 23.8	+1.4
	comp=Z,14nm,0.9s,baz=6.6,slow=8.2,SNR=5.9						
BOSA	Boshof	155.34	334	*e*PKPbc	PKPbc	04 00 31.1	
VNA3	Neumayer Olymp	157.72	161	PKPdf	PKPdf	04 00 19.4	-3.4
VNA1	Neumayer--Stat	158.48	161	PKPdf	PKPdf	04 00 22.6	-1.0
SNAA	Sanae	158.58	166	PKPdf	PKPdf	04 00 21.9	-1.9
SNAA	Sanae	158.58	166	*e*PKPdf	PKPdf	04 00 23.0	-0.9
SNAA				LR	LR		
	comp=Z,1µm,22.0s						
SNAA	Sanae	158.58	166	*e*PKIKP	PKPdf	04 00 23.0	-0.9
SNAA				MLR	MLR		
	comp=Z,1µm,22.0s						

MEX 03 03:47:36.5±0.4,15°.55N×95°.03W,h16^{km}±6^{km},MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	1.06	282	*e*P	Pb	03 47 52.7	-3.7
HUIG				*e*S	Sb	03 48 05.2	-4.8
CMIG	Matias Romero	1.54	5	*i* P	Pn	03 47 59.6	-3.6
CMIG				*e*S	Sn	03 48 17.6	-5.3
TGIG		2.20	56	*e*P	Pn	03 48 09.1	-3.4
TGIG				*e*S	Sn	03 48 35.2	-4.3

MAN 03 03:49:15.4,7°.35N×124°.86E,h16^{km},mb4.2,ML3.1,MS2.8, 3C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.41	146	⇑*e*P	Pb	03 49 24.5	+0.1
KCP				*i* S	Sn	03 49 39.6	+5.6
BUKP	Musuan	0.56	21	*e*P	Pb	03 49 27.5	+0.5
BUKP				*e*S	Sn	03 49 37.7	-0.2
CTBH	Cotabato--PC H	0.62	258	⇓*i*P	Pg	03 49 27.1	-0.6
CTBH				*i* S	Sg	03 49 35.8	-0.3
DMPH	Davao City--Mi	0.69	112	⇑*e*P	Pg	03 49 28.6	-0.4
DMPH				*e*S	Sn	03 49 41.0	0.0
CGP	Cagayan de Oro	1.11	351	⇑*i*P	Pn	03 49 36.4	+0.1
CGP				*i* S	Sg	03 49 51.7	+0.2
DDMP	Don Marcelino,	1.50	146	*e*P	Pn	03 49 41.5	-0.2
DDMP				*e*S	Sb	03 50 01.9	+0.3
PAGZ	Pagadian	1.55	289	*e*P	Pn	03 49 41.5	-0.8
PAGZ				*e*S	Sn	03 50 02.4	+0.3

*ISCJB **03** 03:58:28.0±0.5,51°.58N±0°.04×167°.04W±0°.05,h10^{km}, mb3.9/12,Error ellipse: s-maj=6.3km s-min=3.9km az=152.1*

*IDC **03** 03:58:28.1±1.2,51°.32N×167°.07W,h0^{km},mb3.8/9, mb1 4.0/9,mb1mx3.7/46,mbtmp3.8/9,Error ellipse: s-maj=37.6km s-min=19.5km az=7.0*

*NEIC **03** 03:58:31.0±0.0,51°.60N×167°.00W,h27^{km},mb4.0/12, After AEIC.*

ISC 03 03:58:29.8±0.7**,51°.54N**±0°.07×**167°.08W**±0°.05**,h10^{km},n53, σ1^{s}.70**/63**,mb4.0**/12**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.81	323	*e*Pn	Pn	03 59 00.2	-0.8
NIKH				*e*Sn	Sn	03 59 21.8	-2.2
OKTU	Okmok Mt. Tuli	1.94	343	*e*Pn	Pn	03 59 02.2	-0.8
OKAK	Okmok	2.19	340	*e*Pn	Pn	03 59 03.5	-2.8
MREP	Makushin Rep't	2.29	5	*e*Pn	Pn	03 59 06.6	-1.0
UNV	Unalaska Valle	2.34	8	*e*Pn	Pn	03 59 07.3	-1.0
UNV				*e*Pg	Pb	03 59 12.8	+0.7
UNV				*e*Sn	Sn	03 59 35.6	-1.4
MSW	Makushin Switc	2.39	4	*e*Pn	Pn	03 59 08.2	-0.8
MSW				*e*Sn	Sn	03 59 37.8	-0.5
AKRB	Akutan Reef Bi	2.67	13	*e*Pn	Pn	03 59 11.8	-1.1
AKUT	Akutan	2.72	16	*e*Pn	Pn	03 59 12.4	-1.1
AKUT				*e*Sn	Sn	03 59 43.8	-2.6
WESP	Westdahl Peak	3.29	25	*e*Pn	Pn	03 59 20.3	-1.1
FALS	False Pass	3.99	32	*e*Pn	Pn	03 59 29.3	-1.6
FALS				*e*Sn	Sn	04 00 15.4	-2.3
KOFP	Korovin Flat P	4.41	282	*e*Pn	Pn	03 59 36.7	-0.1
ATKA	Atka Island	4.46	281	*e*Pn	Pn	03 59 37.1	-0.4
ATKA				*e*Sn	Sn	04 00 26.5	-2.9
SDPT	Sand Point	5.49	43	*e*Pn	Pn	03 59 51.1	-0.4
GSMY	Great Sitkin M	5.60	279	*e*Pn	Pn	03 59 53.5	+0.4
GSTR	Great Sitkin T	5.60	279	*e*Pn	Pn	03 59 52.9	-0.3
GSTR				*e*Sn	Sn	04 00 55.9	-1.7
ADAG	Mount Adagdak	5.93	278	*e*Pn	Pn	03 59 57.9	+0.2
ADK	Adak	5.99	277	*e*Pn	Pn	03 59 58.5	+0.1
ADK				*e*Sn	Sn	04 01 02.8	-4.1
KIWB	Kanaga Island	6.28	277	*e*Pn	Pn	04 00 03.8	+1.4
CHGN	Chignik	6.99	44	*e*Pn	Pn	04 00 11.6	-0.6
CHGN				*e*Sn	Sn	04 01 28.4	-3.3
OHAK	Old Harbor	9.85	49	*e*Pn	Pn	04 00 50.0	-1.3
KDAK	Kodiak Island	10.46	48	Pn	Pn	04 00 58.2	-1.5
	0.6nm,0.3s,baz=202,slow=5.6,SNR=15						
KDAK	Kodiak Island	10.46	48	*e*Pn	Pn	04 00 58.0	-1.6
KDAK				*e*		04 00 58.2	
TTA	Tatalina	12.87	23	*e*Sn	Sn	04 03 57.9	+2.0
SEW	Seward	13.07	42	*e*Pn	Pn	04 01 33.6	-1.6
RC01	Rabbit Creek A	13.52	38	*e*Pn	Pn	04 01 40.5	-1.0
PPLA	Purkeypile	13.90	29	*e*Pn	Pn	04 01 47.0	+0.2
SCM	Sheep Creek Mo	14.90	39	*e*Pn	Pn	04 01 57.6	-2.7
BPAW	Bear Paw Mtn.	15.16	28	*e*P	Pn	04 02 04.2	+0.4
	6.0nm,0.9s						
HMT	Hamilton	15.45	46	*e*Pn	Pn	04 02 05.3	-2.3
	34nm,1.2s						
ILAR	Eielson Array	16.89	31	P	Pn	04 02 21.9	-4.2
	0.1nm,0.3s,baz=228,slow=13,SNR=2.8						
ILB	Eielson Array	16.89	31	*e*P	Pn	04 02 21.9	-4.2
	1.2nm,0.7s						
HYT	Haines Junctio	18.74	49	*e*Pn	Pn	04 02 50.8	+1.7
	11nm,1.4s						
DAWY	Dawson	19.16	38	*e*P	Pn	04 02 56.7	+2.7
	10nm,0.8s						
WRAK	Wrangell Islan	20.85	63	*e*P	P	04 03 11.6	+0.1
	5.9nm,0.9s						
EPYK	Eagle Plains	21.26	34	*e*P	P	04 03 17.2	+1.3
	12nm,0.8s						
PEA1	Petropavlovsk-	21.46	288	*e*P	P	04 03 18.0	-0.1
PEA0B	Petropavlovsk-	21.46	288	*e*P	P	04 03 18.8	+0.7
	14nm,1.3s						
PETK	Petropavlovsk-	21.46	288	P	P	04 03 18.0	-0.1
	1.6nm,0.5s,baz=81,slow=14,SNR=8.8						
INK	Inuvik	23.29	31	P	P	04 03 38.7	+1.4
	4.3nm,0.6s,baz=231,slow=7.8,SNR=6.9						
INK	Inuvik	23.29	31	*e*P	P	04 03 35.9	-1.4
	6.0nm,0.8s						
PD31	Pinedale Array	39.16	80	*e*P	P	04 05 58.1	+0.3
	2.3nm,1.4s						
PDAR	Pinedale Array	39.16	80	P	P	04 05 58.1	+0.3
	0.3nm,0.5s,baz=314,slow=3.2,SNR=5.9						
LPM	Los Pinos Moun	46.11	87	*e*P	P	04 06 54.8	+0.5
TX31	Lajitas Ar. Si	51.33	90	*e*P	P	04 07 34.7	+0.3
	1.2nm,0.6s						
TXAR	Lajitas Array	51.34	90	P	P	04 07 34.1	-0.2
	0.7nm,0.5s,baz=300,slow=5.8,SNR=11						
SONA0	Songino Array	52.95	303	*e*P	P	04 07 48.4	+2.2
SONM	Songino Array	52.95	303	P	P	04 07 48.4	+2.2
	0.5nm,0.5s,baz=60,slow=8.5,SNR=3.6						
ARA0	ARCESS Array S	58.89	355	*e*P	P	04 08 29.5	+1.2
ARCES	ARCESS Array B	58.89	355	P	P	04 08 29.5	+1.2
	1.3nm,0.8s,baz=9.7,slow=8.6,SNR=5.3						
KURBB	Kurchatov Arra	64.04	320	P	P	04 09 04.5	+1.1
	0.6nm,0.3s,baz=45,slow=6.5,SNR=5.9						
MK32	Makanchi Array	65.40	315	*e*P	P	04 09 12.3	0.0
MKAR	Makanchi Array	65.40	315	P	P	04 09 12.3	0.0
	0.7nm,0.7s,baz=32,slow=5.1,SNR=4.8						
ASAR	Alice Springs	90.97	232	P	P	04 11 32.9	-1.1
	0.8nm,0.8s,baz=26,slow=4.4,SNR=4.1						

*DDA **03** 04:53:37.0,38°.84N×44°.14E,h7^{km}±1^{km},ML2.6*

*ISK **03** 04:53:37.9,38°.89N×43°.99E,h5^{km},ML2.5/3*

ISC 03 04:53:38.4±1.3**,38°.84N**±0°.04×**44°.09E**±0°.05**,h18^{km}**±7^{km}**, n12,σ1^{s}.32**/20**,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.43	290	*i* P	Pg	04 53 46.5	-0.9
VMUR				*i* S	Sg	04 53 52.3	-1.1
VANB	Van	0.60	246	PG	Pg	04 53 50.5	0.0
VANB				SG	Sb	04 53 59.7	+0.9
TVAN	Van	0.62	240	*i* P	Pg	04 53 50.1	-0.8
TVAN				IAML_P			
	comp=Z,2µm,0.2s						
DYDN	Diyadin	0.77	336	*i* P	Pg	04 53 52.2	-1.3
DYDN				*i* S	Sn	04 54 04.0	-1.8
BASK	Baskale_VAN	0.79	185	*i* P	Pb	04 53 53.1	-0.7
BASK				*i* S	Sb	04 54 04.5	+0.1
BASK				IAML_P			
	comp=Z,2µm,0.2s						
GEVA	Gevas	0.97	237	*i* P	Pb	04 53 57.0	+0.2
GEVA				IAML_P			
	comp=Z,651nm,0.2s						
ADCV	BITLIS_Adilcev	1.07	268	*i* P	Pb	04 53 58.3	-0.2
ADCV				*i* S	Sn	04 54 14.3	+1.1
AGRB	Hanur-Agry	1.12	311	PG	Pb	04 53 58.9	-0.6
AGRB				SG	Sn	04 54 14.2	-0.4
TUTA	Tutak	1.14	300	*i* P	Pb	04 53 59.2	-0.6
HAKT	HAKKARI	1.32	193	*i* P	Pn	04 54 02.1	-0.1
HAKT				IAML_P			
	comp=Z,341nm,0.2s						
GNI	Garni	1.40	21	PN	Pg	04 54 05.4	0.0
GNI				SN	Sg	04 54 25.8	+2.1
EATA	Eleskirt	1.60	310	*i* P	Pg	04 54 08.9	-0.5
EATA				*i* S	Sg	04 54 33.8	+3.5
EATA				IAML_P			
	comp=Z,191nm,0.2s						

*GUC **03** 05:27:10.4±0.7,32°.87S×72°.12W,h41^{km}±5^{km},ML3.5*

ISC 03 05:27:11.7±3.8**,32°.97S**±0°.07×**72°.0W**±0°.1**,h10^{km}**±20^{km}**, n13,σ1^{s}.58**/22**,1C-2D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEL	Peldehue	1.14	99	*e*P	Pb	05 27 32.6	-0.9
PEL				*i* S	Sb	05 27 49.2	+0.9
PEL				IAML		05 27 57.2	
	comp=N,916nm,0.3s						
STL	Santa Lucia	1.25	112	⇑*i*P	Pn	05 27 33.8	-1.4
STL				*e*S	Sb	05 27 51.7	+0.2
STL				IAML		05 28 01.6	
	comp=N,2µm,0.3s						
ANTU	Antumapu	1.31	118	*e*P	Pn	05 27 35.9	-0.2
ANTU				*i* S	Sb	05 27 54.0	+0.7
ANTU				IAML		05 27 59.4	
	comp=E,989nm,0.5s						
CLCH	Cerro Calan	1.32	109	⇓*i*P	Pn	05 27 35.3	-0.9
CLCH				*i* S	Sb	05 27 53.9	+0.4
CLCH				IAML		05 27 58.5	
	comp=N,1µm,0.5s						
FSR	Penalolen	1.35	112	*e*P	Pn	05 27 37.1	+0.4
FSR				*i* S	Sg	05 27 56.2	+0.9
FCH	Farellones	1.50	104	⇓*i*P	Pn	05 27 38.1	-0.7
FCH				*e*S	Sb	05 27 59.8	+0.8
FCH				IAML		05 28 05.0	
	comp=N,608nm,0.4s						
LMEL	Las Melosas	1.76	120	*e*P	Pn	05 27 41.7	-0.6
LMEL				*i* S	Sn	05 28 05.8	+1.0
LMEL				IAML		05 28 11.7	
	comp=N,948nm,0.4s						
LCO	Las Campanas	4.11	16	*e*P	Pn	05 28 13.6	-1.1
AGUA	GUANDACOL	4.61	42	*i* P	Pn	05 28 23.6	+2.2
APLL	PUNTA DE LOS L	5.34	63	*i* P	Pn	05 28 32.6	+1.1
APLL				IAML		05 28 38.8	
	comp=Z,21nm,0.8s						
APLL				*i* S	Sb	05 29 44.6	-4.7
VCA	Vinchina	5.35	39	*i* P	Pn	05 28 33.6	+1.9
VCA				*i* S	Sb	05 29 49.7	+0.2
TCA	Tanti	6.51	78	*i* P	Pn	05 28 46.7	-0.9
CYA	Choya	7.00	52	*i* P	Pn	05 28 55.9	+1.5
CYA				IAML		05 29 01.5	
	comp=Z,16nm,0.5s						
CYA				*i* S	Sb	05 30 27.3	-10

*ISCJB **03** 05:36:31.9±0.6,51°.51N±0°.04×167°.05W±0°.06,h10^{km}, mb3.6/7,Error ellipse: s-maj=7.2km s-min=4.8km az=144.4*

*IDC **03** 05:36:33.5±1.4,51°.93N×166°.83W,h0^{km},mb3.6/7, mb1 3.8/9,mb1mx3.6/37,mbtmp3.6/9,ML3.2/2,Error ellipse: s-maj=35.8km s-min=19.6km az=14.0*

*NEIC **03** 05:36:36.8±0.0,51°.55N×166°.98W,h27^{km},ML3.2(AEIC), After AEIC.*

ISC 03 05:36:33.6±0.9**,51°.56N**±0°.08×**167°.05W**±0°.06**,h10^{km},n36, σ0^{s}.96**/36**,mb3.6**/7**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	1.80	323	*e*Pn	Pn	05 37 05.0	+0.3
NIKH				*e*Sn	Sn	05 37 26.6	-0.9
OKTU	Okmok Mt. Tuli	1.93	342	*e*Pn	Pn	05 37 07.2	+0.7

OKER	Okmok East Rim	2.00	342	ePn	Pn	05 37 08.2	+0.8
OKER				eSn	Sn	05 37 31.9	-0.6
OKAK	Okmok	2.18	339	ePn	Pn	05 37 08.3	-1.5
MREP	Makushin Rep't	2.27	5	ePn	Pn	05 37 11.3	+0.2
UNV	Unalaska Valle	2.32	8	ePn	Pn	05 37 11.9	+0.2
UNV				eSn	Sn	05 37 40.3	+0.1
MSW	Makushin Switc	2.37	4	ePn	Pn	05 37 13.1	+0.6
MSW				eSn	Sn	05 37 42.0	+0.5
AKUT	Akutan	2.70	16	ePn	Pn	05 37 17.7	+0.8
WESP	Westdahl Peak	3.26	25	ePn	Pn	05 37 25.7	+1.0
WESP				eSn	Sn	05 38 03.5	-0.1
KOFP	Korovin Flat P	4.42	282	ePn	Pn	05 37 41.6	+0.9
ATKA	Atka Island	4.48	281	ePn	Pn	05 37 41.4	0.0
KOKL	Mount Kliuchef	4.49	283	ePn	Pn	05 37 42.4	+0.7
SDPT	Sand Point	5.46	43	ePn	Pn	05 37 55.6	+0.7
SDPT				eSn	Sn	05 38 54.3	-3.4
GSMY	Great Sitkin M	5.61	279	ePn	Pn	05 37 57.8	+0.8
GSTR	Great Sitkin T	5.62	279	ePn	Pn	05 37 57.4	+0.4
GSTD	Great Sitkin T	5.67	279	ePn	Pn	05 37 58.6	+0.8
GSTD				eSn	Sn	05 39 00.8	-2.2
ADAG	Mount Adagdak	5.95	278	ePn	Pn	05 38 01.3	-0.3
ADK	Adak	6.00	277	ePn	Pn	05 38 03.0	+0.7
ADK				e		05 38 03.2	
KIRH	Kanaga Island	6.25	277	ePn	Pn	05 38 06.0	+0.2
KIWB	Kanaga Island	6.29	277	ePn	Pn	05 38 07.7	+1.4
KIMD	Kanaga Island	6.34	276	ePn	Pn	05 38 07.0	0.0
KDAK	Kodiak Island	10.43	48	Pn	Pn	05 39 02.4	-0.5
	0.4nm,0.3s,baz=239,slow=3.5,SNR=20						
KDAK				Sn	Sn	05 40 45.9	-14
	0.1nm,0.3s,baz=231,slow=16,SNR=1.6						
ILAR	Eielson Array	16.87	31	Pn	Pn	05 40 25.0	-4.5
	0.1nm,0.3s,baz=224,slow=10.0,SNR=3.0						
PETK	Petropavlovsk-	21.47	288	P	P	05 41 22.8	+0.8
	1.4nm,0.5s,baz=91,slow=14,SNR=4.2						
NVAR	Mina Array Bea	36.21	92	P	P	05 43 36.3	-0.2
	0.1nm,0.3s,baz=283,slow=7.9,SNR=3.0						
H11N2	WAKE ISLAND Hy	37.77	223	T	T	06 25 57.1	
	baz=24						
H11N3	WAKE ISLAND Hy	37.78	222	T	T	06 25 58.9	
	baz=24						
H11N1	WAKE ISLAND Hy	37.79	222	T	T	06 25 58.9	
	baz=24						
H11S1	WAKE ISLAND Hy	38.94	222	T	T	06 27 15.4	
	baz=23,slow=76						
H11S2	WAKE ISLAND Hy	38.96	222	T	T	06 27 16.5	
	baz=23,slow=76						
H11S3	WAKE ISLAND Hy	38.96	222	T	T	06 27 17.2	
	baz=23,slow=76						
PDAR	Pinedale Array	39.14	80	P	P	05 44 01.4	0.0
	0.2nm,0.5s,baz=297,slow=4.0,SNR=3.1						
TXAR	Lajitas Array	51.32	90	P	P	05 45 38.7	+0.8
	0.4nm,0.5s,baz=299,slow=6.0,SNR=14						
ARCES	ARCESS Array B	58.87	355	P	P	05 46 31.9	+0.1
	1.8nm,0.9s,baz=24,slow=9.0,SNR=3.5						
MKAR	Makanchi Array	65.40	315	P	P	05 47 16.1	0.0
	0.5nm,0.6s,baz=46,slow=6.9,SNR=4.3						
FINES	FINESS Array B	66.86	353	P	P	05 47 24.6	-0.5
	0.9nm,0.6s,baz=27,slow=9.8,SNR=3.4						

*IDC **03** 05:41:17.4±3.2, 1°.14N×126°.64E, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.7/23, mbtmp4.2/3, Error ellipse: s-maj=400.2km s-min=26.5km az=65.0*

*ISCJB **03** 05:41:23.3±1.2, 0°.6N±0°.1×125°.47E±0°.08, h44km, mb4.2/3, Error ellipse: s-maj=15.3km s-min=11.2km az=179.1*

*DJA **03** 05:41:25.3±0.3, 1°N±4°×12°6E±°, h10km, M3.8/7, MLv3.8/7*

ISC 03 05:41:24.9±1.3, **0°.5N**±0°.1×**125°.5E**±0°.1, **h44**km, **n6**, σ**0.92**/8, **mb4.2**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.88	83	P	Pn	05 41 55.5	+0.9
TNTI				S	Sn	05 42 16.9	-0.1
LBMI	Labuha	2.31	120	P	Pn	05 42 01.3	+0.7
LBMI				S	Sn	05 42 26.9	-1.0
SANI	Sanana	2.62	169	P	Pn	05 42 05.8	+1.0
ASAR	Alice Springs	25.41	162	P	P	05 46 49.0	+0.4
	4.6nm,0.6s,baz=342,slow=11,SNR=46						
STKA	Stephens Creek	35.66	156	P	P	05 48 18.2	-0.8
	2.3nm,0.3s,baz=342,slow=6.6,SNR=12						
MKAR	Makanchi Array	59.50	327	P	P	05 51 23.4	-0.4
	0.9nm,0.8s,baz=116,slow=6.5,SNR=4.8						

SJA 03 06:05:09.9±0.7, **33°.73S**×**67°.57W**, **h207**km±50km, **ML3.4**, **MW3.5**, **Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APLL	PUNTA DE LOS L	3.44	15	iP	Pn	06 06 06.1	+0.8
APLL				IAML	S	06 06 46.9	-1.2
	comp=Z,38nm,0.7s						
APLL				iS	S	06 06 46.9	-1.2
AGUA	GUANDACOL	4.30	349	iP	Pn	06 06 16.6	+0.7
ACLC	CERRO LA CRUZ	4.33	7	iP	Pn	06 06 16.4	+0.2
ACLC				iS	S	06 07 06.7	-1.2
VCA	Vinchina	5.01	354	iP	Pn	06 06 25.4	+0.6
VCA				IAML		06 06 27.2	
	comp=Z,28nm,0.4s						
VCA				iS	S	06 07 21.2	-2.3

*KRAR **03** 06:05:42.5±0.1, 53°.59N×87°.91E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*NNC **03** 06:05:45.9±3.6, 53°.74N×88°.10E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=31.8km s-min=20.2km az=42.0, Suspected Mining explosion.*

IDC 03 06:05:47.8±2.8, **53°.63N**×**87°.96E**, **h0**km, **mb1 3.5**/2, **mb1mx3.2**/39, **mbtmp3.5**/2, **ML3.0**/2, **5C-2D**, **Error ellipse: s-maj=24.1km s-min=15.4km az=55.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.89	281	i		06 18 00.0	
	baz=96,slow=302,SNR=14						
ZAA0	Zalesovo Array	1.89	281	⇓Pg	Pn	06 06 21.0	-0.4
	0.8nm,0.6s						
ZAA0				⇑Lg	Lg	06 06 49.4	
	1.9nm,0.6s						
ZALV	Zalesovo Beam	1.89	281	Pg	Pn	06 06 21.6	+0.2
	2.0nm,0.3s,baz=100,slow=11,SNR=11						
ZALV				Lg	Lg	06 06 47.8	
	3.4nm,0.3s,baz=99,slow=25,SNR=9.0						
KURBB	Kurchatov Arra	6.54	246	Pn	Pn	06 07 26.1	+0.9
	0.2nm,0.3s,baz=61,slow=14,SNR=15						
KURBB				Sn	Sn	06 08 39.4	-1.1
	0.0nm,0.3s,baz=33,slow=38,SNR=1.2						
KURBB				Lg	Lg	06 09 15.8	
	baz=58,slow=31,SNR=3.2						
KURBB	Kurchatov Arra	6.54	246	⇑Pn	Pn	06 07 25.9	+0.7
	1.4nm,0.2s						
KURBB				⇑Sn	Sn	06 08 41.9	+1.4
	2.4nm,0.7s						
KURBB				⇑Lg	Lg	06 09 15.3	
	4.2nm,0.8s						
MK31	Makanchi Array	7.75	210	⇓Pn	Pn	06 07 42.8	+1.0
	0.1nm,0.2s,baz=29,slow=13,SNR=21						
MK31				⇑Lg	Lg	06 09 54.4	
	0.7nm,0.6s,baz=200,slow=20,SNR=2.5						
MKAR	Makanchi Array	7.75	210	Pn	Pn	06 07 42.9	+1.1
	0.3nm,0.3s,baz=28,slow=13,SNR=14						
MKAR				Sn	Sn	06 09 09.8	-0.4
	0.1nm,0.3s,baz=31,slow=28,SNR=2.9						
MKAR				Lg	Lg	06 09 52.6	
	0.0nm,0.3s,baz=31,slow=34,SNR=3.6						

*ISCJB **03** 06:14:30.7±0.3, 23°.66N±0°.02×122°.48E±0°.01, h21km±2km, Error ellipse: s-maj=2.7km s-min=1.9km az=149.6*

*JMA **03** 06:14:30.8±0.1, 23°.64N×122°.48E, h28km, M2.8*

*TAP **03** 06:14:32.0, 23°.69N×122°.48E, h39km, ML3.5, C*

ISC 03 06:14:29.1±1.1, **23°.64N**±0°.02×**122°.46E**±0°.02, **h13**km±9km, **n107**, σ**0.81**/192, **1D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.85	294	eP	Pn	06 14 47.3	+0.5
	baz=281						
HWA				eS	Sn	06 14 58.9	-0.1
	baz=281						
TWD	Chiawan	0.90	299	P	Pn	06 14 47.4	-0.1
	baz=286						
TWD				S	Sb	06 14 58.9	+0.4
	baz=286						
JYNG	Yonagunijimaku	0.93	29	P	Pb	06 14 47.6	+0.6
JYNG				eS	Sg	06 14 59.2	0.0
EGFH	Guangfu	0.94	272	P	Pn	06 14 48.5	+0.4
	baz=268						
EGFH				S	Sn	06 15 00.9	-0.5
	baz=268						
NACB	Ninganchiao	0.95	304	P	Pn	06 14 48.2	0.0
	baz=291						
NACB				S	Sg	06 14 59.9	-0.1
	baz=291						
ESL	Shilin	0.95	281	P	Pn	06 14 48.2	0.0
	baz=277						
ESL				eS	Sb	06 15 00.1	+0.1
	baz=277						
EOS1	EOS1	0.96	342	P	Pn	06 14 48.7	+0.5
	baz=330						
EOS1				eS	Sn	06 15 02.6	+1.0
	baz=330						
HGSD	Ruisui	0.96	262	⇓P	Pn	06 14 48.7	+0.5
	baz=258						
HGSD				S	Sb	06 15 00.6	+0.5
	baz=258						
YOJ	Yonaguni jima	0.96	32	P	Pg	06 14 48.4	+0.6
	baz=31						
YOJ				S	Sg	06 15 00.3	-0.2
	baz=31						
YOJ	Yonaguni jima	0.96	32	P	Pg	06 14 48.4	+0.6
YOJ				eS	Sg	06 15 00.2	-0.2
NANB	Nanao	1.02	321	P	Pn	06 14 49.8	+0.7
	baz=317						
NANB				S	Sn	06 15 03.1	-0.2
	baz=317						
ENA	Nanau	1.02	320	iP	Pn	06 14 50.0	+0.8
	baz=317						
ENA				iS	Sg	06 15 03.0	+0.7
	baz=317						
EHY	Hungye	1.05	263	P	Pn	06 14 50.5	+0.9
	baz=260						
EHY				S	Sn	06 15 03.7	-0.3
	baz=260						
ETLH	Xiulin Townshi	1.06	303	eP	Pn	06 14 50.0	+0.3
	baz=299						
ETLH				eS	Sb	06 15 03.1	0.0
	baz=299						
YULB	Yu-li	1.09	257	P	Pn	06 14 50.8	+0.7
	baz=254						
YULB				S	Sn	06 15 04.8	-0.3
	baz=254						
TWF1	Yuli	1.10	255	iP	Pn	06 14 51.0	+0.8
	baz=245						
TWF1				iS	Sn	06 15 05.0	-0.3
	baz=245						
TWC	Suao	1.12	330	iP	Pn	06 14 50.7	+0.3
	baz=328						
TWC				iS	Sb	06 15 04.4	-0.3
	baz=328						
CHKT	Chengkung	1.14	242	P	Pg	06 14 51.1	0.0
	baz=231						
CHKT				S	Sb	06 15 04.8	-0.5
	baz=231						
VWDT	VWDT	1.21	276	P	Pg	06 14 52.8	+0.3
	baz=272						
VWDT				S	Sb	06 15 07.5	+0.1
	baz=272						
OWD	Renai	1.22	285	eP	Pg	06 14 52.9	+0.3
	baz=282						
OWD				eS	Sb	06 15 07.8	+0.1
	baz=282						
CHGB	Renai	1.25	290	eP	Pb	06 14 52.9	+0.3
	baz=287						
CHGB				eS	Sb	06 15 08.4	-0.3
	baz=287						
NNSB	Datong	1.26	309	P	Pg	06 14 53.5	+0.1
	baz=306						
NNSB				S	Sb	06 15 08.5	-0.5
	baz=306						
NNS	Nan Shan	1.27	309	P	Pg	06 14 53.6	-0.1
	baz=306						
NNS				S	Sb	06 15 08.9	-0.5
	baz=306						
ENTT	Nioudou	1.29	321	eP	Pg	06 14 53.9	0.0
	baz=318						
ENTT				eS	Sb	06 15 09.6	-0.1
	baz=318						
NDT	Datong Townshi	1.29	318	P	Pg	06 14 54.0	0.0
	baz=315						
NDT				S	Sb	06 15 09.7	0.0
	baz=315						
TWE	Neicheng	1.30	326	P	Pg	06 14 54.1	0.0
	baz=324						
TWE				S	Sb	06 15 09.5	-0.5
	baz=324						
HATJ	Hateruma jima	1.30	71	P	Pn	06 14 53.3	+0.3
HATJ				eS	Sb	06 15 09.7	-0.4
TWT	Tachien	1.32	298	P	Pg	06 14 54.6	0.0
	baz=285						
TWT				eS	Sb	06 15 10.9	0.0
	baz=285						
TDCB	Techi	1.34	298	P	Pg	06 14 54.7	-0.2
	baz=287						
TDCB				S	Sb	06 15 10.4	-0.8
	baz=287						
NTC	Toucheng	1.34	335	eP	Pb	06 14 54.6	+0.5
	baz=332						
NTC				eS	Sb	06 15 10.4	-0.8
	baz=332						
IRIF	Iriomote-Funau	1.36	59	P	Pn	06 14 54.4	+0.7
IRIF				S	Sn	06 15 10.9	-0.7
SSLB	Suanglung	1.39	277	eP	Pb	06 14 55.4	+0.5
	baz=273						
SSLB				eS	Sn	06 15 11.6	-0.8
	baz=273						
YUS	Yu-Shan	1.39	264	P	Pg	06 14 55.8	-0.1
	baz=261						
YUS				S	Sn	06 15 13.1	+0.1
	baz=261						
ELDTW	Lidau	1.40	252	P	Pb	06 14 55.1	0.0
	baz=249						
ELDTW				eS	Sn	06 15 11.5	-1.2
	baz=249						
YHNB	Yeheng	1.43	316	eP	Pb	06 14 55.8	+0.2
	baz=314						
YHNB				S	Sn	06 15 12.8	-0.7
	baz=314						
TWB1	Santiao Chiao	1.43	343	eP	Pn	06 14 55.0	+0.3
	baz=341						
NSK	Sanguang	1.44	316	P	Pb	06 14 56.2	+0.3
	baz=313						
NSK				S	Sn	06 15 13.0	-0.8
	baz=313						
SMLT	Sun Moon Lake	1.45	280	P	Pb	06 14 56.3	+0.3
	baz=277						
SMLT				S	Sn	06 15 13.9	-0.1
	baz=277						
TIPB	Shuangxi	1.45	337	P	Pb	06 14 55.9	-0.1
	baz=335						
TIPB				S	Sn	06 15 12.9	-1.0
	baz=335						
DPDB	Guoxing	1.46	286	eP	Pb	06 14 56.6	+0.5
	baz=275						
DPDB				eS	Sn	06 15 14.0	-0.1
	baz=275						
WHYT	Xinyi Township	1.47	273	eP	Pg	06 14 57.0	-0.4
	baz=270						
WHYT				eS	Sb	06 15 15.3	+0.4
	baz=270						
TYC	Yuchr	1.49	281	eP	Pb	06 14 56.9	+0.2
	baz=278						
TYC				S	Sn	06 15 15.1	+0.3
	baz=278						
TTN	Taitung	1.49	234	eS	Sn	06 15 14.1	-0.8
	baz=232						
TWGBT	Beinan	1.51	237	P	Pn	06 14 56.3	+0.5
	baz=228						
TWGBT				S	Sn	06 15 14.8	-0.5
	baz=228						
TWG	Pinlang	1.51	238	P	Pn	06 14 56.4	+0.5
	baz=228						
TWG				S	Sn	06 15 14.6	-0.8
	baz=228						
ALS	Alishan	1.52	266	P	Pg	06 14 58.3	-0.1
	baz=263						
WHP	Taichung City	1.52	295	P	Pg	06 14 58.5	+0.1
	baz=292						
WHP				eS	Sn	06 15 15.4	-0.4
	baz=292						
JKRS	Kuro-shima	1.54	67	P	Pn	06 14 57.0	+0.7
JKRS				eS	Sn	06 15 15.7	-0.4
NWF	Wu-fen Shan	1.56	337	eP	Pn	06 14 57.5	+0.9
	baz=349						
NWF				eS	Sn	06 15 16.5	-0.1
	baz=349						
WFSB	Wu-fen Shan	1.56	337	eP	Pn	06 14 57.3	+0.8
	baz=349						
WFSB				eS	Sn	06 15 16.2	-0.3
	baz=349						
TWA	Mucha	1.56	329	P	Pb	06 14 58.5	+0.7
	baz=327						
TWA				S	Sn	06 15 17.1	+0.5
	baz=327						
TATO	Taipei	1.60	327	eP	Pb	06 14 59.1	+0.6
	baz=324						
TATO				eS	Sn	06 15 18.4	+0.9
	baz=324						
CHN5	Tsauling	1.63	269	P	Pg	06 14 59.9	-0.6
	baz=266						
CHN5				eS	Sb	06 15 20.1	+0.4
	baz=266						
STYT	Tauyuan	1.63	254	P	Pb	06 14 59.5	+0.4
	baz=244						
STYT				eS	Sn	06 15 19.0	+0.6
	baz=244						
WLTB	Daxi	1.64	318	eS	Sb	06 15 19.9	+0.3
	baz=315						
WNT	Mingjian	1.64	279	eP	Pg	06 15 00.4	-0.3
	baz=276						
LIOB	Emei	1.66	308	P	Pg	06 15 00.4	-0.5
	baz=296						
LIOB				S	Sb	06 15 20.1	-0.2
	baz=296						
NSTT	Nanjuang	1.66	307	P	Pb	06 15 00.1	+0.6
	baz=304						
NSTT				S	Sn	06 15 19.3	+0.3
	baz=304						
TWQ1	Liyutan	1.69	295	P	Pg	06 15 01.1	-0.6
	baz=292						
TWQ1				S	Sb	06 15 21.8	+0.4
	baz=292						
JIJ	Ishigaki jima	1.70	65	P	Pn	06 14 58.7	+0.2
JIJ				eS	Sn	06 15 18.3	-1.9
TCU	Taichung	1.71	288	P	Pg	06 15 01.6	-0.3
	baz=285						
TCU				eS	Sb	06 15 22.8	+1.0
	baz=285						
TPUB	Ta-pu	1.71	259	P	Pg	06 15 01.2	-0.8
	baz=256						
TPUB				S	Sb	06 15 22.0	+0.1
	baz=256						
YM10	YM10	1.72	332	eP	Pn	06 14 59.5	+0.7
	baz=343						
YM10				eS	Sn	06 15 19.6	-1.0
	baz=343						
YM05	YM05	1.72	332	P	Pn	06 14 59.9	+1.0
	baz=344						
YM05				eS	Sn	06 15 19.8	-1.0
	baz=344						
ECL	Taimali	1.73	233	eP	Pn	06 14 59.0	+0.1
	baz=242						
ECL				eS	Sn	06 15 19.6	-1.2
	baz=242						
YM04	YM04	1.73	331	eP	Pn	06 15 00.1	+1.2
	baz=343						
YM04				eS	Sn	06 15 19.3	-1.5
	baz=343						
NSY	Sanyi	1.73	297	eP	Pg	06 15 02.0	-0.5
	baz=282						
NSY				eS	Sb	06 15 23.1	+0.6
	baz=282						
YM08	YM08	1.73	333	eP	Pb	06 15 01.6	+0.8
	baz=345						
WTP	Ta-pu	1.74	257	P	Pb	06 15 01.7	+0.8
	baz=255						
WTP				S	Sb	06 15 23.2	+0.6
	baz=255						
TWS1	Kuangyinshan	1.74	327	eS	Sn	06 15 21.6	+0.6
	baz=325						
YM03	YM03	1.75	332	eP	Pb	06 15 00.5	-0.6
	baz=343						
WDLH	Douliu	1.76	272	eP	Pb	06 15 02.0	+0.7
	baz=269						
WDLH				eS	Sg	06 15 24.5	-1.3
	baz=269						
NMLH	Miaoli	1.77	301	eS	Sb	06 15 23.2	-0.2
	baz=285						
WCHH	Zhanghua	1.79	285	eP	Pg	06 15 02.8	-0.8
	baz=281						
WCHH				eS	Sb	06 15 24.8	+0.6
	baz=281						
LAY	Lan-yu	1.80	208	eP	Pn	06 15 00.2	+0.4
	baz=207						
WDJ	Dajia District	1.81	293	eS	Sb	06 15 25.2	+0.7
	baz=291						
SGST	Jiashian	1.81	253	eP	Pb	06 15 02.8	+0.7
	baz=242						
SGST				eS	Sb	06 15 25.8	+1.1
	baz=242						
TWY	Chenhua	1.81	335	eP	Pb	06 15 02.1	0.0
	baz=346						
CHN1	Nanshi	1.83	256	P	Pb	06 15 03.1	+0.7
	baz=254						
CHN1				S	Sg	06 15 26.7	-1.2
	baz=254						
TWK	Hsinying	1.84	259	P	Pg	06 15 03.7	-0.9
	baz=256						
TWK				S	Sb	06 15 26.6	+0.8
	baz=256						
SNST	Tainan City	1.85	257	eP	Pg	06 15 03.9	-0.7
	baz=255						
SNST				eS	Sb	06 15 26.5	+0.7
	baz=255						
CHY	Chiayi	1.87	266	eP	Pg	06 15 04.1	-0.9
	baz=263						
CHY				eS	Sb	06 15 27.2	+0.8
	baz=263						
SSD	Sandimen	1.90	243	eP	Pb	06 15 03.5	-0.1
	baz=235						
RLNB	Erlin	1.94	278	eP	Pb	06 15 04.4	+0.1
	baz=275						
RLNB				eS	Sg	06 15 30.2	-1.3
	baz=275						
JISG	Ishigakijimahi	1.94	60	P	Pn	06 15 01.7	-0.1
JISG				eS	Sn	06 15 25.4	-0.6
MASBT	Mashibuluo	1.96	239	eP	Pb	06 15 03.9	-0.8
	baz=233						
MASBT				eS	Sb	06 15 29.1	0.0
	baz=233						
PCYT	Pengchaiyu	2.02	350	eP	Pn	06 15 03.1	+0.3
	baz=349						
SSPT	Xinbi	2.08	237	eP	Pb	06 15 06.6	-0.2
	baz=231						
SCZT	Fangliau	2.11	234	eP	Pb	06 15 06.6	-0.6
	baz=228						
SCZT				eS	Sn	06 15 31.7	+1.5
	baz=228						
TSEB	Hengchuen, Pin	2.25	220	eS	Sn	06 15 35.0	+1.5
	baz=231						
WSSB	Gushan	2.25	244	eP	Pb	06 15 10.0	+0.4
	baz=243						
WSSB				eS	Sg	06 15 39.4	-2.1
	baz=243						
TWKBT	Hengchun	2.27	222	eS	Sn	06 15 34.3	+0.2
	baz=222						
JTJ	Tarama	2.28	64	P	Pn	06 15 07.6	+1.1
WLCH	Liuqiu	2.30	237	eP	Pg	06 15 12.5	-0.8
	baz=230						
WDGT	Dungji	2.59	262	P	Pn	06 15 13.2	+2.4
	baz=259						
WDGT				S	Sn	06 15 43.3	+1.1
	baz=259						
PHUB	P'eng-hu	2.65	268	P	Pn	06 15 13.8	+2.3
	baz=265						
PHUB				S	Sn	06 15 44.5	+1.0
	baz=265						
PNG	Penghu	2.66	269	P	Pn	06 15 13.8	+2.1
	baz=266						
PNG				S	Sn	06 15 45.3	+1.5
	baz=266						
JIRB	Irabujima	2.75	64	P	Pn	06 15 13.4	+0.5
VCHM	Qimei	2.81	262	P	Pn	06 15 15.9	+2.1
	baz=259						
VCHM				eS	Sn	06 15 47.8	+0.3
	baz=259						
JMJ2	Miyako jima3	2.84	67	P	Pn	06 15 15.5	+1.3
PTTC	Pingtan	3.07	308	eP	Pn	06 15 18.7	+1.4

	baz=317						
PTTC				eS	Sn	06 15 52.5	-1.3
	baz=317						
PTMZ	Houxiangcun	3.35	295	eP	Pn	06 15 21.4	+0.3
	baz=293						
MATB	Ma-tsu	3.39	318	eP	Pn	06 15 22.5	+0.8
	baz=316						
MATB				eS	Sn	06 15 59.1	-2.6
	baz=316						
LYJJ	Jianjiangzhen	3.79	320	eP	Pn	06 15 27.3	+0.1
	baz=319						
LYJJ				eS	Sn	06 16 09.7	-2.0
	baz=319						
KNMB	Chin-men Tao	3.81	283	eP	Pn	06 15 28.7	+1.2
	baz=280						
KNMB				eS	Sn	06 16 10.4	-1.7
	baz=280						
XPSS	Dashiqiu	3.87	328	eP	Pn	06 15 29.2	+1.0
	baz=317						
XPSS				eS	Sn	06 16 11.4	-2.1
	baz=317						
ZPLA	Ao Xicun	4.32	275	eP	Pn	06 15 35.5	+1.0
	baz=280						
ZPLA				eS	Sn	06 16 23.9	-0.8
	baz=280						

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*ISCJB **03** 06:29:38.5±0.9, 51°.55N±0°.02×166°.84W±0°.02, h11^{km}±5^{km}, mb4.7/122, MS3.6/10, Error ellipse: s-maj=3.6km s-min=2.5km az=9.5*

*IDC **03** 06:29:38.5±0.6, 51°.43N×167°.07W, h0^{km}, mb4.5/28, mb1 4.7/28, mb1mx4.7/33, mbtmp4.6/28, MS3.5/7, Ms1 3.5/7, ms1mx3.1/43, Error ellipse: s-maj=19.5km s-min=10.6km az=1.0*

*BJI **03** 06:29:39.6±0.0, 51°.81N×167°.39W, h8^{km}, mb4.9/39, mB5.0/27, Ms4.9/5, Ms7 4.7/1*

*MOS **03** 06:29:42.3±0.9, 51°.36N×167°.16W, h33^{km}, mb5.1/58, Error ellipse: s-maj=10.7km s-min=6.0km az=103.1*

*AEIC **03** 06:29:43.4, 51°.65N×167°.05W, h18^{km}, MB4.9(NEIC)*

*NEIC **03** 06:29:43.4±0.0, 51°.65N×167°.05W, h18^{km}, mb4.9/311, After AEIC.*

ISC 03 06:29:39.4±0.8**, 51°.56N**±0°.05×**167°.03W**±0°.04**, h3**^{km}±4^{km}**, h4**^{km}**:pP-P, n806,** σ1^{s}**45**/834**, mb4.8**/124**, MS3.5**/10**, 14C-5D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.81	322	ePn	Pn	06 30 10.7	-0.8
NIKH				eSn	Sn	06 30 32.4	-2.4
OKTU	Okmok Mt. Tuli	1.93	342	ePn	Pn	06 30 12.7	-0.5
OKAK	Okmok	2.18	339	ePn	Pn	06 30 14.2	-2.3
MREP	Makushin Rep't	2.26	4	ePn	Pn	06 30 17.2	-0.5
UNV	Unalaska Valle	2.31	8	ePn	Pn	06 30 17.8	-0.5
UNV				eSn	Sn	06 30 45.2	-2.0
MSW	Makushin Switc	2.36	3	ePn	Pn	06 30 18.7	-0.4
MSW				eSn	Sn	06 30 46.3	-2.3
MCIR	Makushin Cirqu	2.40	2	ePn	Pn	06 30 19.9	+0.3
AKRB	Akutan Reef Bi	2.64	12	ePn	Pn	06 30 22.6	-0.3
AKRB				eSn	Sn	06 30 53.5	-1.9
AHB	Akutan Harbor	2.66	16	ePn	Pn	06 30 22.7	-0.5
AKUT	Akutan	2.69	16	ePn	Pn	06 30 22.9	-0.7
AKUT				eSn	Sn	06 30 53.8	-2.7
AKSA	Akutan Strait	2.70	17	ePn	Pn	06 30 23.0	-0.7
AKSA				eSn	Sn	06 30 54.0	-2.9
WESP	Westdahl Peak	3.25	24	ePn	Pn	06 30 31.9	+0.5
WESP				eSn	Sn	06 31 08.9	-1.6
WEBT	Westdahl Beart	3.33	23	ePn	Pn	06 30 33.2	+0.8
FALS	False Pass	3.95	32	ePn	Pn	06 30 41.0	+0.2
FALS				eSn	Sn	06 31 25.8	-1.8
KOSE	Korovin Southe	4.42	283	ePn	Pn	06 30 48.3	+0.9
KOFP	Korovin Flat P	4.44	282	ePn	Pn	06 30 48.2	+0.6
ATKA	Atka Island	4.49	281	ePn	Pn	06 30 48.0	-0.2
ATKA				eSn	Sn	06 31 38.4	-2.5
KOKL	Mount Kliuchef	4.50	283	ePn	Pn	06 30 49.1	+0.5
DOL	Dolgoi Island	4.74	39	ePn	Pn	06 30 51.6	-0.2
PS4A	Pavlof South-4	4.89	37	ePn	Pn	06 30 54.4	+0.6
SDPT	Sand Point	5.45	43	ePn	Pn	06 31 01.5	+0.1
GSMY	Great Sitkin M	5.62	278	ePn	Pn	06 31 04.1	+0.2
GSTR	Great Sitkin T	5.63	279	ePn	Pn	06 31 05.2	+1.2
GSTD	Great Sitkin T	5.68	279	ePn	Pn	06 31 05.0	+0.3
ETKA	Kagalaska Isla	5.84	277	ePn	Pn	06 31 06.9	0.0
SPIA	Saint Paul Isl	5.93	343	ePn	Pn	06 31 09.4	+1.3
ADAG	Mount Adagdak	5.96	278	ePn	Pn	06 31 08.9	+0.4
ADK	Adak	6.01	277	ePn	Pn	06 31 08.7	-0.5
ADK				ePg	Pn	06 31 09.6	+0.4
ADK				e		06 32 14.5	
ADK				eSn	Sn	06 32 14.6	-3.8
ADK	Adak	6.01	277	eP	Pn	06 31 08.7	-0.5
ADK				e		06 32 14.6	
KINC	Kanaga Island	6.29	277	ePn	Pn	06 31 13.8	+0.8
KIWB	Kanaga Island	6.30	277	ePn	Pn	06 31 13.7	+0.5
KIMD	Kanaga Island	6.36	276	ePn	Pn	06 31 14.4	+0.5
VNHG	Veniaminof 1	6.58	42	ePn	Pn	06 31 17.4	+0.3
TAFP	Tanaga Falls P	6.82	277	ePn	Pn	06 31 21.1	+0.8
TASE	Tanaga Southea	6.85	277	ePn	Pn	06 31 20.9	+0.1
CHGN	Chignik	6.95	44	ePn	Pn	06 31 22.4	+0.3
AZAC	Aniakchak	7.42	41	ePn	Pn	06 31 27.4	-1.2
CHIR	Chirikof Islan	8.00	53	ePn	Pn	06 31 36.0	-0.5
CHIR				ePn	Pn	06 31 36.1	-0.3
SII	Sitkinak Islan	9.05	51	ePn	Pn	06 31 50.2	-0.7
OHAK	Old Harbor	9.81	49	ePn	Pn	06 31 59.8	-1.3
KAHC	Katmai Hardscr	9.88	39	ePn	Pn	06 32 02.4	+0.1
KDAK	Kodiak Island	10.42	48	Pn	Pn	06 32 08.1	-1.5
	4.9nm,0.3s,baz=244,slow=10,SNR=107						
KDAK				Sn	Sn	06 33 56.1	-11
	0.2nm,0.3s,baz=92,slow=23,SNR=2.7						
KDAK	Kodiak Island	10.42	48	iP	Pn	06 32 07.8	-1.7
SVW2	Sparrevohn	11.46	29	ePn	Pn	06 32 25.1	+1.3
RSO	Redoubt South	11.94	36	ePn	Pn	06 32 31.3	+0.7
CNPM	China Poot	11.96	42	ePn	Pn	06 32 30.6	0.0
TTA	Tatalina	12.84	23	ePn	Pn	06 32 39.4	-3.3
TTA	Tatalina	12.84	23	eP	Pn	06 32 39.4	-3.3
PPLA	Purkeypile	13.87	29	ePn	Pn	06 32 57.5	+0.8
GLI	Glacier Island	14.43	42	ePn	Pn	06 33 02.6	-1.8
BALM	Baldy	16.56	45	ePn	Pn	06 33 31.0	-1.5
	30nm,0.7s						
BALM	Baldy	16.56	45	eP	Pn	06 33 31.0	-1.5
BALM				pmax	pmax		
	comp=Z,30nm,0.7s						
HDA	Harding Lake	16.60	31	P	Pn	06 33 29.6	-3.3
	baz=229,SNR=11						
COLA	College	16.63	29	ePn	Pn	06 33 31.1	-2.0
	comp=Z,18nm,0.8s						
COLA	College	16.63	29	iP	Pn	06 33 30.1	-3.1
RDOG	Red Dog Mine	16.67	5	ePn	Pn	06 33 34.4	+0.7
	comp=Z,38nm,0.9s						
ILAR	Eielson Array	16.86	31	Pn	Pn	06 33 32.7	-3.4
	comp=Z,0.4nm,0.3s,baz=229,slow=12,SNR=30						
ILAR				Sn	Sn	06 36 45.3	+1.7
	comp=Z,0.1nm,0.3s,baz=230,slow=26,SNR=3.0						
ILAR				LR	LR	06 40 10.7	
	comp=Z,103nm,19.5s,baz=11,slow=37						
MENT	Mentasta	16.87	39	ePn	Pn	06 33 36.9	+0.5
	comp=Z,36nm,0.7s						
POKR	Poker Plat Res	16.93	29	P	Pn	06 33 34.3	-2.7
	baz=226						
BCPM	Bancas Point	17.44	51	eP	P	06 33 45.0	+0.2
	comp=Z,36nm,0.8s						
FYU	Fort Yukon	18.59	28	eP	P	06 33 55.3	-1.9
	comp=Z,20nm,0.8s						
HYT	Haines Junctio	18.70	49	eP	Pn	06 34 01.4	+2.2
	comp=Z,36nm,0.8s						
EGAK	Eagle	18.82	35	eP	Pn	06 34 00.2	0.0
	comp=Z,24nm,0.9s						
TOLK	Toolik Lake Re	19.08	20	P	Pn	06 34 04.6	+1.1
	baz=215,SNR=59						
SKAG	Skagway	19.45	54	eP	Pn	06 34 09.2	+1.2
	comp=Z,30nm,0.7s						
BILL	Bilibino	20.99	332	eP	Pn	06 34 24.9	-1.2
	comp=Z,24nm,1.0s						
BILL	Bilibino	20.99	332	⇓eP	P	06 34 22.5	-1.0
BILL				i		06 34 37.8	
BILL				ePPP	PPP	06 34 50.1	
BILL				S	S	06 38 07.0	-11
BILL				SSS	SSS	06 38 58.0	
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL				MLR	MLR		
	comp=Z,176nm,14.0s						
DIB	Dawson Inlet,	21.03	72	eP	P	06 34 25.0	+0.9
	comp=Z,14nm,1.0s						
EPYK	Eagle Plains	21.22	34	eP	P	06 34 26.9	+0.8
	comp=Z,90nm,0.8s						
EPYK	Eagle Plains	21.22	34	P	P	06 34 27.3	+1.2
	baz=241,SNR=104						
PEA1	Petropavlovsk-	21.48	288	eP	P	06 34 28.9	0.0
PEA0B	Petropavlovsk-	21.48	288	eP	P	06 34 29.8	+0.8
	comp=Z,38nm,1.0s						
PEA0B	Petropavlovsk-	21.48	288	eP	P	06 34 29.8	+0.8
PEA0B				pmax	pmax		
	comp=Z,38nm,1.0s						
PETK	Petropavlovsk-	21.48	288	P	P	06 34 28.9	0.0
	comp=Z,11nm,0.7s,baz=85,slow=14,SNR=15						
DLBC	Dease Lake	22.08	57	P	P	06 34 35.8	+0.4
	comp=Z,17nm,0.9s,baz=262,slow=14,SNR=26						
INK	Inuvik	23.25	31	P	P	06 34 48.2	+0.6
	comp=Z,60nm,0.8s,baz=230,slow=12,SNR=51						
INK				S	S	06 38 55.4	-4.7
	comp=Z,1.2nm,0.7s,baz=239,slow=29,SNR=5.3						
INK	Inuvik	23.25	31	eP	P	06 34 47.4	-0.2
	comp=Z,55nm,0.8s						
INK	Inuvik	23.25	31	eP	P	06 34 47.4	-0.2
INK				pmax	pmax		
	comp=Z,55nm,0.8s						
BBB	Bella Bella	23.84	73	P	P	06 34 54.4	+0.9
	comp=Z,23nm,0.9s,baz=275,slow=8.9,SNR=13						
BBB				PcP	PcP	06 38 35.9	-0.5
	comp=Z,3.9nm,1.0s,baz=235,slow=21,SNR=3.3						
SEY	Seymchan	24.28	314	P	P	06 34 58.3	+0.8
	comp=Z,6.2nm,1.0s,baz=115,slow=11,SNR=8.0						
SEY				PcP	PcP	06 38 36.6	-0.6
	comp=Z,0.9nm,0.3s,baz=89,slow=13,SNR=3.6						
D03D	Eldon	28.46	81	P	P	06 35 36.5	+1.1
	baz=295						
B05A	Bryant	28.77	79	P	P	06 35 39.7	+1.6
	baz=294,SNR=6.4						
E04D	Cinebar	29.20	82	P	P	06 35 44.0	+2.0
	baz=297,SNR=5.7						
G03D	McMinnville, O	29.39	85	P	P	06 35 45.1	+1.5
	baz=299						
YKA	Yellowknife Ar	29.69	48	P	P	06 35 46.6	+0.5
	comp=Z,4.4nm,0.7s,baz=268,slow=7.5,SNR=11						
YKA				LR	LR	06 49 00.0	
	comp=Z,6.1nm,20.7s,baz=295,slow=39						
K02D	Willamette Mer	30.41	90	P	P	06 35 54.1	+1.3
	baz=302						
G05D	Wamic, OR	30.59	84	P	P	06 35 55.7	+1.4
	baz=299						
I04A	Tendick Farm,	30.62	87	P	P	06 35 55.6	+1.0
	baz=301						
L02E	Cave Junction	30.74	91	P	P	06 35 56.3	+0.6
	baz=303						
I05D	Terrebonne, OR	31.01	85	P	P	06 35 59.4	+1.3
	baz=300						
J04D	Umpqua Nationa	31.09	88	P	P	06 35 59.8	+0.9
	baz=302						
L04D	Klamath Falls	31.52	89	P	P	06 36 03.7	+1.1
	baz=303						
J05D	Fort Rock, OR	31.62	87	P	P	06 36 04.8	+1.3
	baz=302						
M02C	Callahan	31.63	91	P	P	06 36 05.2	+1.7
	baz=304						
NEW	Newport	31.80	76	P	P	06 36 06.0	+1.0
NEW				pmax	pmax		
	comp=Z,15nm,0.9s						
NEW	Newport	31.80	76	P	P	06 36 05.6	+0.7
	baz=295,SNR=8.6						
N02D	Trinity Center	31.95	92	P	P	06 36 08.0	+1.6
	baz=305						
G08A	Pilot Rock	32.02	82	eP	P	06 36 08.3	+1.3
	comp=Z,4.9nm,1.0s						
M04C	Macdoel	32.04	90	P	P	06 36 08.1	+0.9
	baz=304						
WDC	Whiskeytown Da	32.28	92	eP	P	06 36 11.1	+1.9
	comp=Z,8.1nm,0.9s						
WDC	Whiskeytown Da	32.28	92	eP	P	06 36 11.1	+1.9
WDC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
O02D	Mt. Diablo Mer	32.36	93	P	P	06 36 11.1	+1.2
	baz=306						
F10A	Beach Ranch, E	32.76	80	ePcP	PcP	06 38 58.3	-0.3
O03E	Paynes Creek	32.91	92	P	P	06 36 15.6	+0.8
	baz=306,SNR=7.4						
J08A	Circle Bar Ran	33.30	85	eP	P	06 36 17.8	-0.4
	comp=Z,9.1nm,0.8s						
TIXI	Tiksi	34.17	330	PcP	PcP	06 39 01.5	-0.5
	comp=Z,1.3nm,0.3s,baz=94,slow=11,SNR=7.1						
TIXI	Tiksi	34.17	330	iP	P	06 36 27.1	+1.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MSO	Missoula	34.37	77	P	P	06 36 27.7	+0.2
	baz=298						
YAK	Yakutsk	34.79	312	iP	P	06 36 32.0	+1.2
HLID	Hailey	35.71	82	ePcP	PcP	06 39 07.1	-0.1
HLID	Hailey	35.71	82	P	P	06 36 39.7	+0.6
	baz=302,SNR=13						
NV01	Mina Array Sit	36.19	92	ePcP	PcP	06 39 08.2	-0.6
NVAR	Mina Array Bea	36.19	92	P	P	06 36 44.0	+0.6
	comp=Z,7.2nm,0.8s,baz=294,slow=8.8,SNR=35						
NVAR				PcP	PcP	06 39 08.2	-0.6
	comp=Z,1.7nm,0.7s,baz=312,slow=2.4,SNR=6.9						
EGMT	Eagleton	36.33	72	ePcP	PcP	06 39 08.4	-0.4
EGMT	Eagleton	36.33	72	P	P	06 36 44.6	+0.3
	baz=298,SNR=24						
BOZ	Bozeman (W)	36.37	77	ePcP	PcP	06 39 08.8	-0.3
BOZ	Bozeman (W)	36.37	77	P	P	06 36 45.0	+0.3
	baz=300,SNR=11						
QLMT	Earthquake Lak	36.88	78	ePcP	PcP	06 39 11.1	+0.3
SMMC	Simmler	37.10	97	P	P	06 36 51.7	+0.8
	baz=311						
YHH	Holmes Hill	37.26	78	eP	P	06 36 53.3	+0.8
	comp=Z,4.2nm,0.7s						
VES	Vestal, Richgr	37.33	96	P	P	06 36 53.4	+0.6
	baz=310,SNR=7.8						
PKM	Mcpherson Peak	37.49	98	P	P	06 36 55.7	+1.2
	baz=311,SNR=5.8						
CWC	Cottonwood Cre	37.57	94	P	P	06 36 56.0	+1.0
	baz=310						
H17A	Grant Village	37.63	78	P	P	06 36 56.9	+1.3
	baz=302						
GRAC	Grapevine Rang	37.66	93	P	P	06 36 56.7	+1.0
	baz=309						
H11N2	WAKE ISLAND Hy	37.78	223	T	T	07 17 02.9	
	baz=26						
H11N3	WAKE ISLAND Hy	37.79	222	T	T	07 17 01.7	
	baz=26						
H11N1	WAKE ISLAND Hy	37.80	223	T	T	07 17 07.2	
	baz=26						
ISA	Isabella, Lake	37.82	96	P	P	06 36 57.5	+0.5
	baz=310,SNR=11						
FFC	Flin Flon	37.90	59	eP	P	06 36 57.7	+0.3
	comp=Z,7.5nm,0.8s						
FFC	Flin Flon	37.90	59	iP	P	06 36 57.8	+0.4
R11A	Troy Canyon, C	37.94	90	P	P	06 36 58.8	+0.6
	baz=308,SNR=19						
ARVC	Arvin	37.95	96	P	P	06 36 58.5	+0.4
	baz=311						
RLMT	Red Lodge	38.05	76	P	P	06 36 59.7	+0.6
	baz=301,SNR=6.3						
KLR	Kul'dur	38.10	291	iP	P	06 37 00.4	+1.2
KLR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MPMC	Manual Prospec	38.18	94	P	P	06 37 01.1	+0.9
	baz=310,SNR=9.7						
SCZ2	Santa Cruz Isl	38.20	99	P	P	06 37 00.7	+0.5
	baz=312						
FURC	Furnace Creek,	38.31	93	P	P	06 37 02.1	+1.1
	baz=310,SNR=26						
TPNV	Topopah Spring	38.39	92	P	P	06 37 03.0	+1.0
	baz=309,SNR=17						
LRMC	Laurel Mtn Rad	38.43	95	P	P	06 37 02.4	+0.1
	baz=311						
BLG	Laguna Peak, P	38.47	98	P	P	06 37 02.6	+0.1
	baz=312						
DUG	Dugway, Tooele	38.57	85	P	P	06 37 04.3	+0.8
DUG				pmax	pmax		
	comp=Z,20nm,1.2s						
DUG	Dugway, Tooele	38.57	85	P	P	06 37 04.3	+0.8
	baz=306,SNR=20						
EDW2	Edwards Air Fo	38.63	96	P	P	06 37 04.4	+0.5
	baz=311						
ZEA	Zeya	38.66	300	eP	P	06 37 03.5	-0.3
ZEA				pmax	pmax		
	comp=Z,36nm,1.6s						
DECC	Green Verdugo	38.83	97	P	P	06 37 06.0	+0.5
	baz=312						
H11S1	WAKE ISLAND Hy	38.95	222	T	T	07 18 37.1	
	baz=27						
H11S2	WAKE ISLAND Hy	38.97	222	T	T	07 18 35.1	
	baz=27						
H11S3	WAKE ISLAND Hy	38.97	222	T	T	07 18 39.5	
	baz=27						
SHOC	Shoshone, Teco	39.04	93	P	P	06 37 08.1	+0.8
	baz=310,SNR=7.4						
LAO	LASA Array	39.08	72	P	P	06 37 08.2	+0.7
	baz=300,SNR=6.5						
GSC	Goldstone, Bar	39.09	95	P	P	06 37 08.6	+0.8
	baz=311,SNR=19						
BW06	Boulder Array	39.13	80	P	P	06 37 08.5	+0.4
	baz=304,SNR=14						
PD31	Pinedale Array	39.13	80	ePcP	PcP	06 39 16.2	-1.5
PDAR	Pinedale Array	39.13	80	P	P	06 37 08.6	+0.4
	comp=Z,3.6nm,0.5s,baz=304,slow=3.3,SNR=68						
PDAR				PcP	PcP	06 39 16.2	-1.5
	comp=Z,0.4nm,0.6s,baz=130,slow=1.4,SNR=3.2						
PDAR				LR	LR	06 51 07.4	
	comp=Z,59nm,19.3s,baz=267,slow=33						
FMP	Fort Macarthur	39.21	98	P	P	06 37 08.5	-0.2
	baz=312						
RRX	Edison Barstow	39.25	95	P	P	06 37 09.4	+0.3
	baz=311						
BFSC	Mount Baldy Ra	39.26	97	P	P	06 37 10.1	+0.8
	baz=312,SNR=9.2						
CIS	Catalina Islan	39.35	98	P	P	06 37 09.9	+0.1
	baz=313						
SHPR	Sheep Range	39.35	92	eP	P	06 37 11.0	+1.0
	comp=Z,3.8nm,1.0s						
DGMT	Dagmar	39.39	69	P	P	06 37 10.1	0.0
	baz=299						
SCI2	San Clemente I	39.55	99	P	P	06 37 11.9	+0.3
	baz=313						
TUQ	Turquoise Moun	39.55	94	P	P	06 37 12.2	+0.5
	baz=310						
HEC	Hector,Ludlow	39.69	95	P	P	06 37 13.1	+0.3
	baz=311						
BBRC	Big Bear Solar	39.70	96	P	P	06 37 13.9	+0.9
	baz=312,SNR=5.6						
MSU	Marysvale	39.97	87	ePcP	PcP	06 39 20.7	+0.3
MURC	Murrieta	39.97	97	P	P	06 37 15.0	-0.1
	baz=312						
GMRC	Granite Mounta	40.14	94	P	P	06 37 17.2	+0.7
	baz=311,SNR=9.7						
PFO	Pinyon Flats O	40.42	96	eP	P	06 37 19.5	+0.6
	comp=Z,10nm,1.1s						
PFO	Pinyon Flats O	40.42	96	eP	P	06 37 19.5	+0.6
PFO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PFO	Pinyon Flats O	40.42	96	P	P	06 37 19.5	+0.6
	baz=312,SNR=6.1						
BELC	Belle Mtn. Jos	40.45	95	P	P	06 37 19.4	+0.3
	baz=312,SNR=11						
USRK	Ussuriysk Ar.	40.49	284	P	P	06 37 17.9	-1.3
	comp=Z,1.8nm,0.6s,baz=46,slow=8.6,SNR=4.2						
USRK				LR	LR	06 52 45.2	
	comp=Z,56nm,20.6s,baz=53,slow=34						
109C	Camp Elliot, M	40.50	98	P	P	06 37 19.6	+0.2
	baz=313						
NEE2	Needles Airpor	40.80	93	P	P	06 37 22.3	+0.4
	baz=311						
IRM	Iron Mountain	40.87	94	P	P	06 37 23.1	+0.6
	baz=312,SNR=9.0						
MONP2	Monument Peak	40.92	97	P	P	06 37 24.1	+0.9
	baz=313,SNR=6.1						
BC3	Big Chuckawall	41.01	95	P	P	06 37 24.0	+0.2
	baz=312						
K22A	Casper	41.05	78	P	P	06 37 23.7	-0.4
	baz=304						
MJAR	Matsushiro Arr	41.13	271	P	P	06 37 23.8	-0.8
	comp=Z,1.9nm,0.6s,baz=37,slow=6.3,SNR=4.2						
MAJO	Matsushiro	41.14	271	eP	P	06 37 23.8	-0.8
MAJO	Matsushiro	41.14	271	eP	P	06 37 23.8	-0.8
MAT	Matsushiro	41.14	271	P	P	06 37 24.4	-0.3
SWSC	Sam W. Stewart	41.27	96	P	P	06 37 26.0	+0.2
	baz=313						
IKP	In-Ko-Pah, Jac	41.28	97	P	P	06 37 26.7	+0.8
	baz=313,SNR=6.2						
PDMCI	Parker Dam,Lak	41.40	93	P	P	06 37 27.4	+0.5
	baz=311,SNR=8.9						
O20A	White River Ci	41.44	82	P	P	06 37 27.6	+0.2
	baz=306,SNR=17						
Y12C	Blythe	41.53	94	P	P	06 37 28.4	+0.5
	baz=312,SNR=7.7						
RSSD	Black Hills	41.74	75	eP	P	06 37 29.6	-0.2
	comp=Z,5.5nm,0.6s						
RSSD	Black Hills	41.74	75	eP	P	06 37 29.6	-0.2
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
RSSD	Black Hills	41.74	75	P	P	06 37 28.8	-1.0
	baz=304						
GLA	Glamis	41.80	95	P	P	06 37 30.6	+0.4
	baz=312						
WUAZ	Wupatki	42.34	90	P	P	06 37 35.6	+0.9
	baz=310,SNR=16						
MDND	Maddock	42.37	67	P	P	06 37 34.8	+0.2
	baz=301,SNR=9.0						
N23A	Red Feather La	42.41	80	P	P	06 37 35.6	+0.3
	baz=306,SNR=7.6						
SMCO	Snowmass	42.80	82	ePcP	PcP	06 39 30.0	0.0
MVCO	Mesa Verde	43.06	86	P	P	06 37 40.6	0.0
	baz=309,SNR=5.3						
ULM	Lac du Bonnet	43.24	62	P	P	06 37 40.9	-0.8
	comp=Z,8.6nm,0.7s,baz=299,slow=8.0,SNR=11						
ULM				PcP	PcP	06 39 29.6	-1.1
	comp=Z,2.3nm,0.5s,baz=318,slow=3.1,SNR=2.8						
ISCO	Idaho Springs	43.26	81	P	P	06 37 44.8	+2.5
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ISCO	Idaho Springs	43.26	81	P	P	06 37 42.1	-0.2
	baz=307						
W18A	Petrified Fore	43.62	89	P	P	06 37 45.7	+0.6
	baz=311,SNR=7.9						
BOD	Bodaibo	43.63	310	eP	P	06 37 44.7	+0.1
BOD				pmax	pmax		
	comp=Z,25nm,0.8s						
S22A	4UR Ranch, Cre	43.76	84	P	P	06 37 47.2	+0.8
	baz=309,SNR=13						
214A	Organ Pipe Nat	43.80	95	P	P	06 37 46.7	+0.3
	baz=313,SNR=15						
Q24A	Divide	44.05	81	P	P	06 37 49.0	+0.3
	baz=308						
AGMN	Agassiz Nation	44.26	65	P	P	06 37 49.0	-0.9
	baz=302,SNR=8.7						
SDCO	Great Sand Dun	44.59	83	P	P	06 37 53.3	+0.3
	baz=309,SNR=14						
SUSD	Miller	44.59	71	P	P	06 37 52.0	-0.6
	baz=305,SNR=8.0						
CN2	Changchun	44.63	288	eP	P	06 37 51.8	-1.1
OGNE	Ogallala	44.77	77	P	P	06 37 54.5	+0.4
	baz=307						
TUC	Tucson	44.82	93	eP	P	06 37 55.4	+0.8
	comp=Z,20nm,1.0s						
TUC	Tucson	44.82	93	eP	P	06 37 55.4	+0.8
TUC				pmax	pmax		
	comp=Z,20nm,1.0s						
TUC	Tucson	44.82	93	P	P	06 37 54.9	+0.3
	baz=313						
KSCO	Kaye Shedlock'	45.58	80	P	P	06 38 00.6	-0.1
	baz=308						
T25A	Trinidad	45.64	83	P	P	06 38 01.6	+0.3
	baz=309,SNR=11						
TASM	ASL Pad, Albuq	45.77	87	P	P	06 38 02.4	+0.1
	baz=311,SNR=9.6						
TASM	ASL Pad, Albuq	45.77	87	P	P	06 38 02.4	+0.1
	baz=311,SNR=9.4						
ANMO	Albuquerque	45.78	87	eP	P	06 38 02.5	+0.1
	comp=Z,7.6nm,1.1s						
ANMO				ePcP	PcP	06 39 40.1	+0.2
ANMO	Albuquerque	45.78	87	ceP	P	06 38 02.3	0.0
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANMO	Albuquerque	45.78	87	P	P	06 38 02.4	+0.1
	baz=311						
Y22D	IRIS PASSCAL I	46.06	88	P	P	06 38 05.0	+0.5
	baz=312						
ECSD	EROS Data Cent	46.38	71	P	P	06 38 05.5	-1.3
	baz=306,SNR=16						
121A	Cookes Peak, D	46.54	90	P	P	06 38 09.0	+0.6
	baz=313,SNR=13						
BGNE	Belgrade	46.84	74	P	P	06 38 09.8	-0.6
	baz=307,SNR=5.3						
EYMN	Ely	46.91	63	P	P	06 38 09.8	-1.0
	baz=304,SNR=13						
KSRS	Korea Array	46.95	279	P	P	06 38 10.7	-0.6
	comp=Z,0.9nm,0.5s,baz=61,slow=7.7,SNR=4.5						
CBKS	Cedar Bluff	47.47	78	P	P	06 38 14.7	-0.7
	baz=309						
F37A	Hinrichs Farm,	47.54	66	P	P	06 38 14.8	-0.9
	baz=306,SNR=10						

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E38A  The Farm, Brul     47.63  65   P      P      06 38 15.3 -1.2
      baz=305,SNR=9.8
SPMN  Marine on St.      47.73  67   P      P      06 38 16.0 -1.2
      baz=306
F38A  Pierce - Schro     47.83  65   P      P      06 38 17.5 -0.5
      baz=306,SNR=33
C40A  Isle Royale Na     48.22  62   P      P      06 38 20.0 -1.0
      baz=305,SNR=5.2
F39A  Loretta            48.40  65   P      P      06 38 21.0 -1.5
      baz=306
MNTX  Cornudas Mount     48.61  89   P      P      06 38 24.6 +0.4
      baz=313,SNR=23
G39A  Holcombe           48.62  66   P      P      06 38 22.9 -1.3
      baz=306,SNR=11
MSTX  Muleshoe           48.71  85   P      P      06 38 24.8 -0.3
      baz=312,SNR=10
AMTX  Amarillo           48.79  83   P      P      06 38 25.4 -0.2
      baz=311
F40A  Park Falls         48.84  65   P      P      06 38 24.7 -1.2
      baz=306,SNR=17
D41A  Chassel            49.04  62   P      P      06 38 26.4 -0.9
      baz=306,SNR=6.4
G40A  Rib Lake           49.18  65   P      P      06 38 27.3 -1.1
      baz=307,SNR=12
KSU1  Kansas State U     49.19  76   P      P      06 38 27.3 -1.3
      baz=309
SCIA  State Center       49.47  71   P      P      06 38 29.7 -1.0
      baz=308
KBS   Kingsbay           49.77   0  eP      P      06 38 35.3 +2.8
      comp=Z,13nm,0.9s
KBS   Kingsbay           49.77   0  eP      P      06 38 35.3 +2.8
KBS                                  pmax   pmax
      comp=Z,13nm,0.9s
F42A  Maple Grove Fa     50.05  64   P      P      06 38 34.3 -0.8
      baz=307
I41A  Arkdale            50.10  66   P      P      06 38 34.3 -1.2
      baz=308,SNR=11
E43A  Lone Tree Farm     50.32  62   P      P      06 38 36.2 -0.9
      baz=307,SNR=11
L40A  Anamosa            50.55  69   P      P      06 38 37.3 -1.6
      baz=309,SNR=9.3
JFWS  Jewell Farm        50.59  68   P      P      06 38 37.4 -1.8
      baz=308,SNR=8.2
WMOK  Wichita Mounta     50.68  81   P      P      06 38 39.6 -0.4
      baz=312,SNR=20
I42A  Draeger Farm,      50.75  66   P      P      06 38 39.2 -1.2
      baz=308,SNR=7.8
E44A  Grand Marais A     50.76  62   P      P      06 38 39.8 -0.6
      baz=307,SNR=6.1
H43A  Windswept, Lux     51.04  65   P      P      06 38 41.4 -1.2
      baz=308,SNR=11
N40A  Mertquake, Sal     51.07  71   P      P      06 38 41.1 -1.7
      baz=309
SUMG  Summit             51.12  18  eP      P      06 38 44.9 +1.7
      comp=Z,14nm,0.8s
SUMG  Summit             51.12  18⇓iP      P      06 38 45.0 +1.7
SUMG                                 pmax   pmax
      comp=Z,33nm,0.8s
SUMG  Summit             51.12  18⇓iP      P      06 38 45.0 +1.7
      comp=Z,33nm,0.8s
TXAR  Lajitas Array      51.30  90   P      P      06 38 44.9  0.0
      comp=Z,11nm,0.6s,baz=302,slow=5.9,SNR=198
TXAR                                 PcP    PcP    06 39 59.1 -0.7
      comp=Z,4.1nm,0.8s,baz=294,slow=1.5,SNR=6.3
IRK   Irkutsk            51.33 308  eP      P      06 38 44.6 -0.1
IRK                                  pmax   pmax
      comp=Z,37nm,1.7s
M41A  Milan              51.37  69   P      P      06 38 43.4 -1.7
      baz=309,SNR=9.3
L42A  Oliver, Polo       51.49  68   P      P      06 38 44.0 -1.9
      baz=309
ABTX  Abilene, Hawle     51.55  84   P      P      06 38 46.0 -0.6
      baz=313,SNR=6.4
F45A  CMU Biological     51.56  62   P      P      06 38 45.2 -1.2
      baz=308
N41A  Harden Midland     51.61  70   P      P      06 38 45.5 -1.3
      baz=310
D46A  Sault St. Mari     51.62  60   P      P      06 38 45.9 -1.0
      baz=308,SNR=5.4
TUL1  Leonard            51.74  78   P      P      06 38 46.8 -1.1
      baz=311
E46A  Sault Ste Mari     51.80  61   P      P      06 38 47.4 -0.8
      baz=308,SNR=12
K43A  Burlington         51.82  67   P      P      06 38 46.6 -1.8
      baz=309
G45A  Suttons Bay        51.88  63   P      P      06 38 47.5 -1.3
      baz=308
H45A  Beulah             51.92  64   P      P      06 38 47.7 -1.4
      baz=309
TLY   Talaya             51.98 308  eP      P      06 38 50.5 +0.9
      comp=Z,19nm,0.8s
TLY   Talaya             51.98 308  eP      P      06 38 50.5 +0.9
TLY                                  pmax   pmax
      comp=Z,58nm,0.9s
D47A  Chapleau           52.03  60   P      P      06 38 48.7 -1.2
      baz=308,SNR=11
G46A  Petoskey           52.14  62   P      P      06 38 49.6 -1.2
      baz=309,SNR=5.4
I45A  Fountain           52.18  64   P      P      06 38 49.7 -1.3
      baz=309
M43A  Waltham Townsh     52.26  68   P      P      06 38 49.8 -1.9
      baz=310,SNR=5.3
E47A  Iron Bridge        52.30  60   P      P      06 38 50.9 -1.1
      baz=309,SNR=7.8
L44A  Lake County Fo     52.39  67   P      P      06 38 51.0 -1.7
      baz=310
H46A  Fife Lake          52.44  63   P      P      06 38 51.4 -1.6
      baz=309
N43A  Stutzman Famil     52.45  69   P      P      06 38 51.4 -1.7
      baz=310,SNR=5.1
J45A  Montague           52.47  65   P      P      06 38 51.8 -1.4
      baz=309
GLMI  Grayling           52.59  63   P      P      06 38 52.8 -1.3
      baz=309
ULN   Ulaanbaatar        52.59 302  eP      P      06 38 55.1 +0.8
      comp=Z,11nm,0.9s
ULN   Ulaanbaatar        52.59 302ceP      P      06 38 54.7 +0.4
ULN                                  pmax   pmax
      comp=Z,10.0nm,0.8s
HDIL  Hopedale           52.62  70   P      P      06 38 53.1 -1.3
      baz=310,SNR=14
D48A  Paudash Townsh     52.65  59   P      P      06 38 53.3 -1.2
      baz=309,SNR=7.1
I46A  Reed City          52.68  64   P      P      06 38 53.5 -1.3
      baz=309
G47A  Hillman            52.79  62   P      P      06 38 54.0 -1.5
      baz=309
M44A  Midewin, Midew     52.82  68   P      P      06 38 54.0 -1.9
      baz=310
D49A  Beulah Townshi     52.83  58   P      P      06 38 54.6 -1.3
      baz=309
E48A  Lockeyer           52.89  60   P      P      06 38 55.3 -1.1
      baz=309,SNR=5.1
JCT   Junction City      52.92  86  ePcP    PcP    06 40 05.3 -0.5
JCT   Junction City      52.92  86   P      P      06 38 55.6 -1.2
      baz=314,SNR=11
J46A  Howard City        52.94  65   P      P      06 38 55.3 -1.4
      baz=310
H47A  Mio                52.96  63   P      P      06 38 55.4 -1.4
      baz=309
SONA0 Songino Array      52.96 303  ePcP    PcP    06 40 05.5 -0.3
SONM  Songino Array      52.96 303   P      P      06 38 57.9 +0.9
      comp=Z,8.2nm,1.0s,baz=44,slow=8.3,SNR=13
SONM                                 PcP    PcP    06 40 05.5 -0.3
      comp=Z,1.7nm,0.7s,baz=62,slow=3.4,SNR=2.6
ZAK   Zakamensk          52.97 307  eP      P      06 38 57.2 +0.2
ZAK                                 e              06 40 05.4
ZAK                                  pmax   pmax
      comp=Z,10.0nm,1.6s
ZAK                                  pmax   pmax
      comp=Z,4.0nm,1.3s
F48A  Evansville         53.05  61   P      P      06 38 56.5 -1.0
      baz=309,SNR=5.8
P43A  Skaggs, Pawnee     53.08  71   P      P      06 38 56.3 -1.5
      baz=311,SNR=7.6
CCM   Cathedral Cave     53.09  73  eP      P      06 38 55.7 -2.2
      comp=Z,6.1nm,0.9s
CCM   Cathedral Cave     53.09  73  eP      P      06 38 55.7 -2.2
CCM                                  pmax   pmax
      comp=Z,6.0nm,0.9s
CCM   Cathedral Cave     53.09  73   P      P      06 38 55.4 -2.5
      baz=311
I47A  Gladwin            53.16  63   P      P      06 38 57.1 -1.2
      baz=310
MATQ  Matagami           53.20  54   P      P      06 38 57.1 -1.4
      baz=309
U40A  Yellville          53.23  76   P      P      06 38 56.9 -2.1
      baz=312,SNR=10
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M45A  Boilermakers S     53.28  67   P      P      06 38 57.4 -1.8
      baz=310
K46A  Dorr               53.29  65   P      P      06 38 57.4 -1.8
      baz=310
MOY   Mondy              53.29 309  eP      P      06 39 00.6 +1.3
MOY                                  pmax   pmax
      comp=Z,16nm,1.4s
WHTX  Lake Whitney,      53.34  83   P      P      06 38 59.5 -0.3
      baz=313,SNR=18
O44A  Mansfield          53.37  69   P      P      06 38 58.3 -1.6
      baz=310,SNR=6.2
H48A  Harrisville        53.38  62   P      P      06 38 59.0 -1.0
      baz=310
F49A  Sandfield          53.41  60   P      P      06 38 59.2 -1.0
      baz=309,SNR=7.6
L46A  Eue Claire         53.42  66   P      P      06 38 58.6 -1.7
      baz=310
W39A  Magazine           53.44  78   P      P      06 38 59.1 -1.3
      baz=312
N45A  Kentland           53.47  68   P      P      06 38 59.1 -1.6
      baz=310
J47A  Sunmer             53.48  64   P      P      06 38 59.4 -1.3
      baz=310
E50A  Wahnapitae         53.69  59   P      P      06 39 00.9 -1.3
      baz=310
O45A  Potomac            53.74  69   P      P      06 39 01.4 -1.3
      baz=311,SNR=8.4
K47A  Vermontville       53.74  65   P      P      06 39 01.1 -1.5
      baz=310
N46A  Monticello         53.89  68   P      P      06 39 02.0 -1.7
      baz=311
LSQQ  Lebel-sur-Quev     53.98  54   P      P      06 39 02.3 -2.0
      baz=310
MIAR  Mount Ida          54.00  78   P      P      06 39 03.7 -0.9
      baz=312,SNR=7.7
SFIN  Lafayette          54.02  68   P      P      06 39 03.5 -1.1
      baz=311,SNR=5.2
J48A  Bridge Port        54.02  64   P      P      06 39 07.0 +2.4
      baz=310
TOBO  Tobermory, Bru     54.03  61   P      P      06 39 03.9 -0.8
      baz=310,SNR=9.5
L47A  Sherwood           54.07  66   P      P      06 39 03.5 -1.6
      baz=310
435B  Jarrell            54.09  84   P      P      06 39 04.8 -0.5
      baz=314
I49A  Point Hope         54.14  62   P      P      06 39 03.8 -1.8
      baz=310
K48A  Perry              54.15  64   P      P      06 39 04.3 -1.4
      baz=310
P45A  Graceland, Par     54.20  70   P      P      06 39 04.1 -1.8
      baz=311
M47A  Cromwell           54.23  67   P      P      06 39 04.6 -1.7
      baz=311
E51A  G1948 Merrick      54.28  58   P      P      06 39 05.4 -1.2
      baz=310,SNR=10
J49A  Marlette           54.34  63   P      P      06 39 05.4 -1.6
      baz=310
Q45A  Warren Harvey,     54.37  70   P      P      06 39 05.8 -1.5
      baz=311,SNR=14
W41B  Gary Mavity, V     54.39  76   P      P      06 39 05.6 -1.8
      baz=312
F51A  Arnstein           54.45  59   P      P      06 39 06.6 -1.2
      baz=310
P46A  Rosedale           54.45  69   P      P      06 39 06.3 -1.5
      baz=311
X40A  Basin Creek Fa     54.49  78   P      P      06 39 06.8 -1.4
      baz=313
N47A  Urbana             54.50  67   P      P      06 39 06.0 -2.1
      baz=311
S44A  Carbondale         54.51  72   P      P      06 39 06.2 -2.1
      baz=312
L48A  N Adams            54.53  65   P      P      06 39 06.9 -1.5
      baz=311,SNR=5.7
K49A  Clarkson           54.54  64   P      P      06 39 06.9 -1.5
      baz=311
HHC   Hu-ho-hao-te       54.57 293  eP      P      06 39 07.3 -1.5
HHC                                  pmax   pmax
      comp=Z,8.0nm,1.1s
HHC                                  pmax   pmax
      comp=Z,27nm,6.6s
D52A  ZEK Kipawa Sen     54.57  57   P      P      06 39 07.5 -1.1
      baz=310,SNR=5.9
BMRO  Meriville Lake     54.60  61   P      P      06 39 08.2 -0.7
      baz=310,SNR=7.7
O47A  Sheridan           54.65  68   P      P      06 39 06.9 -2.4
      baz=311
KLBO  Killbear Provi     54.66  60   P      P      06 39 08.4 -0.8
      baz=310,SNR=6.1
M48A  Edgerton           54.67  66   P      P      06 39 07.5 -1.9
      baz=311,SNR=5.1
833A  Chaparral WMA,     54.68  88   P      P      06 39 09.1 -0.5
      baz=315,SNR=6.2
R45A  Skylar, Fairfi     54.69  71   P      P      06 39 07.8 -1.8
      baz=312,SNR=6.5
BRCO  Bruce Peninsul     54.71  61   P      P      06 39 08.7 -0.9
      baz=310
BASO  Ashfield           54.73  62   P      P      06 39 09.2 -0.7
      baz=311,SNR=5.9
AAM   Ann Arbor          54.74  64   P      P      06 39 08.3 -1.5
      baz=311
CHGQ  Chibougamau        54.74  52   P      P      06 39 07.9 -1.9
      baz=310
L49A  Milan              54.80  65   P      P      06 39 08.9 -1.4
      baz=311
F52A  Sundridge          54.85  59   P      P      06 39 09.6 -1.0
      baz=310,SNR=8.6
D53A  Lac Vacive, Po     54.88  57   P      P      06 39 09.8 -1.0
      baz=310,SNR=5.2
E52A  Mattawa            54.89  58   P      P      06 39 09.8 -1.1
      baz=310,SNR=8.8
N48A  Decatur            54.90  67   P      P      06 39 08.7 -2.3
      baz=311,SNR=5.2
BWLO  Walkerton          54.96  61   P      P      06 39 10.8 -0.7
      baz=311
SCHQ  Schefferville      55.02  44   P      P      06 39 11.3 -0.4
      comp=Z,6.4nm,0.7s,baz=92,slow=18,SNR=4.5
BUKO  Buck Lake          55.04  59   P      P      06 39 11.0 -1.1
      baz=311,SNR=5.6
P47A  Martinsville       55.08  69   P      P      06 39 10.4 -2.0
      baz=312,SNR=6.5
M49A  Liberty Center     55.09  65   P      P      06 39 11.0 -1.5
      baz=311,SNR=5.6
R46A  Gibon Southern     55.20  71   P      P      06 39 11.6 -1.7
      baz=312
O48A  Farmland           55.22  67   P      P      06 39 10.9 -2.5
      baz=311
I51A  Listowel           55.22  62   P      P      06 39 12.8 -0.6
      baz=311,SNR=9.7
NATX  Nacogdoches        55.23  81   P      P      06 39 13.1 -0.5
      baz=314
H52A  Wyevale            55.30  60   P      P      06 39 12.7 -1.2
      baz=311
N49A  Columbus Grove     55.34  66   P      P      06 39 12.4 -1.9
      baz=311
E53A  Dumoine, Ponti     55.35  57   P      P      06 39 13.4 -0.9
      baz=311,SNR=15
Q47A  Bedord North L     55.35  69   P      P      06 39 12.6 -1.8
      baz=312
D54A  Lac Fusel, La      55.37  56   P      P      06 39 12.5 -1.9
      baz=311
L50A  Kingsville         55.38  64   P      P      06 39 12.8 -1.8
      baz=311
ALGO  Algonquin Park     55.42  58   P      P      06 39 13.9 -0.8
      baz=311,SNR=10.0
S46A  Don Dixon Farm     55.43  71   P      P      06 39 13.1 -1.8
      baz=312
I52A  Shelburne          55.51  61   P      P      06 39 14.4 -1.1
      baz=311
E54A  Lac Daplat, Po     55.56  57   P      P      06 39 14.6 -1.2
      baz=311,SNR=11
P48A  Milroy             55.59  68   P      P      06 39 13.8 -2.3
      baz=312
X43A  Marvell            55.66  76   P      P      06 39 15.3 -1.3
      baz=313
G53A  Haliburton         55.66  59   P      P      06 39 15.7 -0.9
      baz=311,SNR=8.3
K51A  Iona Station       55.66  63   P      P      06 39 15.2 -1.4
      baz=311
PLIO  Pelee Island,      55.68  64   P      P      06 39 14.8 -1.8
      baz=311
R47A  Wooly Knot Far     55.72  70   P      P      06 39 15.2 -1.9
      baz=312
O49A  Covington          55.74  67   P      P      06 39 15.1 -2.0
      baz=312,SNR=5.3
T46A  Princeton          55.75  72   P      P      06 39 15.7 -1.5
      baz=312,SNR=7.0
Q48A  North Vernon       55.76  69   P      P      06 39 15.5 -1.8
      baz=312
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ACTO  Acton              55.88  61   P      P      06 39 17.2 -0.9
      baz=311
J52A  Paris              55.89  62   P      P      06 39 17.0 -1.2
      baz=311
WCI   Wyandotte Cave     55.90  70  eP      P      06 39 17.1 -1.2
      comp=Z,12nm,0.8s
WCI   Wyandotte Cave     55.90  70  eP      P      06 39 17.1 -1.2
WCI                                  pmax   pmax
      comp=Z,12nm,0.8s
WCI   Wyandotte Cave     55.90  70   P      P      06 39 16.6 -1.7
      baz=312
P49A  Miami Univ. Ec     55.95  68   P      P      06 39 16.1 -2.6
      baz=312
S47A  Hartford           55.98  71   P      P      06 39 17.0 -1.9
      baz=312
N50A  Nevada             56.03  66   P      P      06 39 17.7 -1.5
      baz=312,SNR=5.4
PEMO  Pembroke           56.03  58   P      P      06 39 17.9 -1.2
      baz=311,SNR=8.4
R48A  Northridge Ran     56.03  69   P      P      06 39 17.6 -1.7
      baz=312
U46A  Springville        56.04  73   P      P      06 39 18.0 -1.4
      baz=313,SNR=7.5
K52A  Tillsonburg        56.06  62   P      P      06 39 18.2 -1.2
      baz=312
BANO  Bancroft           56.10  59   P      P      06 39 19.0 -0.7
      baz=311,SNR=8.6
NJ2   Nanjing            56.11 280  eP      P      06 39 20.2 +0.3
NJ2                                  pmax   pmax
      comp=Z,10.0nm,0.9s
O50A  Cable              56.17  66   P      P      06 39 18.4 -1.8
      baz=312,SNR=7.8
Q49A  Aurora             56.20  68   P      P      06 39 18.4 -2.0
      baz=312
M51A  Elyria             56.20  64   P      P      06 39 18.5 -1.9
      baz=312
T47A  Sharon Grove       56.26  71   P      P      06 39 19.3 -1.5
      baz=313,SNR=11
TYNO  Tyneside           56.32  62   P      P      06 39 20.3 -0.9
      baz=312
N51A  Ashland            56.37  65   P      P      06 39 20.0 -1.7
      baz=312
F55A  Otter Lake         56.40  57   P      P      06 39 20.4 -1.4
      baz=312
WVT   Waverly            56.40  73  eP      P      06 39 20.6 -1.3
      comp=Z,15nm,0.9s
WVT   Waverly            56.40  73  eP      P      06 39 20.6 -1.3
WVT                                  pmax   pmax
      comp=Z,15nm,0.9s
S48A  Wiedeman Farm,     56.42  70   P      P      06 39 20.4 -1.7
      baz=312
DRWO  Darlington Wes     56.43  60   P      P      06 39 21.3 -0.7
      baz=312
P50A  Jamestown          56.43  67   P      P      06 39 20.5 -1.6
      baz=312,SNR=10
DRCO  St. Marys Ceme     56.44  60   P      P      06 39 21.4 -0.6
      baz=312
V46A  Holladay           56.45  73   P      P      06 39 20.5 -1.8
      baz=313,SNR=6.2
ACSO  Alum Creek Sta     56.48  66   P      P      06 39 20.6 -1.9
      baz=312
U47A  Clarksville        56.51  72   P      P      06 39 21.3 -1.4
      baz=313
M52A  Chesterland        56.53  64   P      P      06 39 21.1 -1.7
      baz=312
PLVO  Plevna             56.54  58   P      P      06 39 22.1 -0.7
      baz=312,SNR=8.4
OXF   Oxford             56.55  75   P      P      06 39 21.4 -1.6
      baz=313,SNR=11
WLVO  Wesleyville        56.58  60   P      P      06 39 22.5 -0.5
      baz=312,SNR=5.3
G55A  Calabogie          56.59  58   P      P      06 39 21.9 -1.2
      baz=312,SNR=9.2
T48A  Bowling Green      56.59  71   P      P      06 39 21.6 -1.7
      baz=313
DELO  Deloro Mine        56.60  59   P      P      06 39 22.2 -1.0
      baz=312
W46A  Michie             56.75  74   P      P      06 39 22.7 -1.7
      baz=313
O51A  Pataskala          56.75  66   P      P      06 39 22.8 -1.6
      baz=312,SNR=5.3
I55A  Frankford          56.77  59   P      P      06 39 23.4 -1.0
      baz=312
S49A  Springfield        56.79  70   P      P      06 39 22.8 -1.8
      baz=313,SNR=5.7
V47A  Nunnelly           56.79  73   P      P      06 39 23.1 -1.7
      baz=313,SNR=6.2
H55A  Tweed              56.81  59   P      P      06 39 23.9 -0.8
      baz=312
N52A  McGinn’s Farm,     56.83  65   P      P      06 39 23.1 -1.8
      baz=312
Q50A  Georgetown         56.84  68   P      P      06 39 23.2 -1.8
      baz=312
L53A  Girard             56.87  63   P      P      06 39 23.7 -1.4
      baz=312
J54A  Appleton           56.88  61   P      P      06 39 24.2 -1.0
      baz=312
U48A  Cassie Pea, Po     56.91  72   P      P      06 39 24.1 -1.5
      baz=313,SNR=14
P51A  Williamsport       56.94  67   P      P      06 39 23.8 -2.0
      baz=312
M53A  WI Miller and      56.98  63   P      P      06 39 24.4 -1.6
      baz=312
R50A  Paris              57.01  69   P      P      06 39 24.7 -1.5
      baz=313,SNR=8.0
X46A  Booneville         57.02  75   P      P      06 39 24.6 -1.7
      baz=313,SNR=5.4
MEDO  Medina             57.05  61   P      P      06 39 25.6 -0.8
      baz=312
Q51A  Peebles            57.08  67   P      P      06 39 25.4 -1.4
      baz=313,SNR=9.8
T49A  Edmonton           57.10  70   P      P      06 39 25.1 -1.8
      baz=313,SNR=7.0
W47A  Westpoint          57.14  73   P      P      06 39 25.5 -1.7
      baz=313,SNR=5.9
LATQ  La Tuque           57.20  54   P      P      06 39 25.5 -1.9
      baz=312
L54A  Sinclairville      57.20  62   P      P      06 39 26.5 -1.0
      baz=312,SNR=11
O52A  Adamsville         57.21  65   P      P      06 39 25.8 -1.8
      baz=312
V48A  Smith Brothers     57.27  72   P      P      06 39 26.2 -1.9
      baz=313
H56A  Elgin              57.27  58   P      P      06 39 27.2 -0.8
      baz=312,SNR=12
K54A  Basiliko Farm,     57.29  61   P      P      06 39 27.2 -1.0
      baz=312,SNR=7.9
N53A  Lisbon             57.31  64   P      P      06 39 26.6 -1.7
      baz=312
PECO  Prince Edward      57.32  59   P      P      06 39 27.2 -1.1
      baz=312
J55A  Hilton             57.33  60   P      P      06 39 27.4 -0.9
      baz=312,SNR=5.2
U49A  Red Boiling Sp     57.36  71   P      P      06 39 27.1 -1.6
      baz=313,SNR=6.0
S50A  Richmond           57.38  69   P      P      06 39 27.1 -1.7
      baz=313
R51A  Hillsboro          57.43  68   P      P      06 39 28.0 -1.2
      baz=313,SNR=29
VBMS  Vicksburg          57.45  78   P      P      06 39 28.5 -0.9
      baz=314
O53A  New Philadelph     57.47  65   P      P      06 39 27.5 -2.0
      baz=313
X47A  Russelville        57.48  74   P      P      06 39 27.4 -2.2
      baz=314
M54A  Oil Creek Stat     57.49  63   P      P      06 39 28.1 -1.5
      baz=312
K55A  Perry              57.55  61   P      P      06 39 29.0 -1.0
      baz=312
T50A  Nancy              57.57  70   P      P      06 39 28.3 -1.9
      baz=313,SNR=5.3
W48A  Pulaski            57.61  73   P      P      06 39 28.8 -1.7
      baz=314,SNR=8.6
N54A  Moraine State      57.68  64   P      P      06 39 29.2 -1.7
      baz=313
L55A  Hinsdale           57.72  62   P      P      06 39 29.9 -1.3
      baz=313,SNR=8.1
Q52A  Bidwell            57.74  67   P      P      06 39 29.4 -1.9
      baz=313
V49A  McMinnville        57.80  72   P      P      06 39 30.0 -1.8
      baz=313,SNR=6.2
S51A  Beattyville        57.88  69   P      P      06 39 30.6 -1.8
      baz=313,SNR=6.9
P53A  Whipple            57.89  66   P      P      06 39 30.6 -1.8
      baz=313
R52A  Catlettsburg       57.95  67   P      P      06 39 31.0 -1.8
      baz=313
U50A  Jamestown          57.98  70   P      P      06 39 31.0 -2.1
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	baz=313						
O54A	Avella	57.99	64	P	P	06 39 31.6	-1.5
	baz=313,SNR=7.5						
X48A	Hartselle	58.02	74	P	P	06 39 31.1	-2.2
	baz=314						
M55A	Ridgway	58.02	62	P	P	06 39 32.1	-1.2
	baz=313,SNR=11						
W49A	Belvidere	58.02	73	P	P	06 39 31.6	-1.8
	baz=314,SNR=7.2						
T51A	Gray	58.13	69	P	P	06 39 32.2	-2.0
	baz=313,SNR=6.5						
LONY	Lake Ozonia	58.14	57	P	P	06 39 32.8	-1.3
	baz=313,SNR=7.5						
Q53A	Leroy	58.24	66	P	P	06 39 33.4	-1.5
	baz=313						
Y48A	Jasper	58.31	74	P	P	06 39 33.3	-2.1
	baz=314						
P54A	Burton	58.33	65	P	P	06 39 34.0	-1.6
	baz=313,SNR=6.8						
M56A	Emporium	58.33	62	P	P	06 39 34.4	-1.1
	baz=313,SNR=11						
V50A	Pikevile	58.34	71	P	P	06 39 33.8	-1.8
	baz=314						
R53A	Hurricane	58.35	67	P	P	06 39 34.3	-1.4
	baz=313						
N55A	Marion Center	58.36	63	P	P	06 39 34.0	-1.8
	baz=313,SNR=6.2						
X49A	Woodville	58.40	73	P	P	06 39 34.0	-2.1
	baz=314,SNR=10						
U51A	La Follette	58.49	70	P	P	06 39 34.8	-1.9
	baz=314						
147A	Livingston	58.51	76	P	P	06 39 35.4	-1.4
	baz=314						
W50A	Signal Mountai	58.53	72	P	P	06 39 35.0	-2.0
	baz=314,SNR=7.4						
Q54A	Coxs Mills	58.55	66	P	P	06 39 35.4	-1.6
	baz=313						
O55A	Ligonier	58.58	64	P	P	06 39 35.5	-1.8
	baz=313						
T52A	Hallie	58.59	69	P	P	06 39 36.1	-1.3
	baz=314						
MCWV	Mont Chateau	58.65	65	P	P	06 39 36.2	-1.5
	baz=313,SNR=6.5						
TZTN	Tazewell	58.65	70	P	P	06 39 36.3	-1.5
	baz=314						
N56A	West Decatur	58.65	63	P	P	06 39 36.6	-1.2
	baz=313,SNR=10						
V51A	Loudon	58.69	71	P	P	06 39 35.8	-2.3
	baz=314						
P55A	Reedsville	58.76	65	P	P	06 39 36.9	-1.7
	baz=313						
Y49A	Blount Mountai	58.80	74	P	P	06 39 36.7	-2.2
	baz=314						
X50B	Fort Payne	58.84	73	P	P	06 39 37.2	-2.0
	baz=314,SNR=12						
U52A	Thorn Hill	58.86	70	P	P	06 39 37.7	-1.6
	baz=314						
ARA0	ARCESS Array S	58.87	355	eP	P	06 39 38.8	0.0
ARCES	ARCESS Array B	58.87	355	P	P	06 39 38.8	0.0
	comp=Z,6.5nm,0.7s,baz=8.3,slow=7.6,SNR=12						
W51A	Cleveland	58.89	71	P	P	06 39 37.5	-1.9
	baz=314						
T53A	Wise	58.94	69	P	P	06 39 38.6	-1.3
	baz=314						
148A	Greensboro	58.95	75	P	P	06 39 37.8	-2.1
	baz=314						
O56A	Blue Knob Stat	58.95	63	P	P	06 39 38.4	-1.5
	baz=314						
Q55A	Buckhannon	58.97	65	P	P	06 39 38.6	-1.4
	baz=314,SNR=6.5						
ZAA1	Zalesovo Array	58.99	319	eP	P	06 39 39.3	-0.6
ZAA1				ePcP	PcP	06 40 29.2	+0.3
ZALV	Zalesovo Beam	58.99	319	P	P	06 39 39.3	-0.6
	comp=Z,2.5nm,0.7s,baz=24,slow=5.7,SNR=5.5						
ZALV				PcP	PcP	06 40 29.2	+0.3
	comp=Z,4.7nm,0.8s,baz=43,slow=3.9,SNR=8.2						
R54A	Victor	59.01	67	P	P	06 39 39.0	-1.3
	baz=314,SNR=6.9						
LRAL	Lakeview Retre	59.02	75	P	P	06 39 38.1	-2.3
	baz=314						
BINY	Binghamton	59.04	60	P	P	06 39 39.8	-0.7
	baz=314,SNR=6.0						
SSPA	Standing Stone	59.07	63	eP	P	06 39 39.6	-1.1
	comp=Z,25nm,0.9s						
SSPA	Standing Stone	59.07	63	P	P	06 39 39.2	-1.4
	baz=314						
S54A	Dingess, Beckl	59.09	67	P	P	06 39 39.3	-1.5
	baz=314						
V52A	Sevierville	59.10	70	P	P	06 39 39.3	-1.7
	baz=314						
N57A	Milroy	59.18	62	P	P	06 39 40.4	-1.0
	baz=314,SNR=7.3						
Y50A	Piedmont	59.19	73	P	P	06 39 39.6	-2.0
	baz=314						
Z49A	Columbiana	59.19	74	P	P	06 39 39.4	-2.2
	baz=314,SNR=7.3						
X51A	Calhoun	59.24	72	P	P	06 39 40.0	-1.9
	baz=314						
P56A	Dayton Farm, R	59.32	64	P	P	06 39 41.2	-1.1
	baz=314,SNR=10.0						
U53A	Fall Branch	59.34	69	P	P	06 39 41.2	-1.5
	baz=314						
W52A	Murphy	59.43	71	P	P	06 39 41.4	-1.8
	baz=314						
R55A	Marlinton	59.43	66	P	P	06 39 42.2	-1.1
	baz=314						
T54A	Tazewell	59.44	68	P	P	06 39 42.1	-1.2
	baz=314,SNR=6.7						
149A	Jones	59.45	75	P	P	06 39 41.4	-1.9
	baz=315,SNR=9.5						
O57A	Amberson	59.50	63	P	P	06 39 42.5	-1.2
	baz=314,SNR=11						
Z50A	Ashland	59.52	74	P	P	06 39 41.6	-2.3
	baz=314,SNR=7.1						
S55A	Lewisburg	59.57	67	P	P	06 39 43.1	-1.1
	baz=314,SNR=7.5						
Y51A	Rockmart	59.58	73	P	P	06 39 41.8	-2.5
	baz=314,SNR=6.5						
U54A	Nelsons Funny	59.67	68	P	P	06 39 43.8	-1.1
	baz=314						
V53A	Saluda	59.68	70	P	P	06 39 43.6	-1.5
	baz=314						
249A	Camden	59.69	76	P	P	06 39 43.6	-1.4
	baz=315						
R56A	Bull Pasture M	59.76	65	P	P	06 39 44.0	-1.5
	baz=314						
LVZ	Lovozero	59.76	351	eP	P	06 39 45.8	+0.7
	comp=Z,21nm,0.7s						
LVZ	Lovozero	59.76	351	ceP	P	06 39 45.2	+0.1
LVZ				pmax	pmax		
	comp=Z,19nm,1.3s						
LBNH	Lisbon	59.78	56	P	P	06 39 44.2	-1.3
	baz=314						
X52A	Dahlonega	59.79	71	P	P	06 39 43.7	-2.0
	baz=314,SNR=7.0						
M59A	Waymart	59.79	60	P	P	06 39 44.8	-0.9
	baz=314						
P57A	Homestead Farm	59.80	64	P	P	06 39 44.4	-1.3
	baz=314,SNR=7.4						
W53A	Cullowhee	59.82	70	P	P	06 39 44.3	-1.8
	baz=314						
T55A	Pulaski	59.86	67	P	P	06 39 44.9	-1.3
	baz=314						
Q57A	Strasburg	59.88	64	P	P	06 39 44.9	-1.4
	baz=314						
150A	Eclectic	59.91	74	P	P	06 39 45.0	-1.6
	baz=315						
Z51A	Franklin	59.92	73	P	P	06 39 44.2	-2.4
	baz=315						
O58A	Lewisberry	59.96	62	P	P	06 39 45.7	-1.1
	baz=314						
BLA	Blacksburg	60.00	67	P	P	06 39 46.0	-1.1
	baz=314,SNR=5.3						
N59A	State Game Lan	60.04	61	P	P	06 39 46.5	-0.9
	baz=314						
349A	Repton	60.08	76	P	P	06 39 46.6	-1.1
	baz=315						
V54A	Nebo	60.11	69	P	P	06 39 46.4	-1.5
	baz=314						
U55A	TA2, Sparta	60.13	68	P	P	06 39 46.7	-1.4
	baz=314						
S56A	Natural Bridge	60.17	66	P	P	06 39 47.1	-1.2
	baz=314,SNR=5.2						
P58A	Pank, Wackersv	60.19	63	P	P	06 39 46.9	-1.4
	baz=314						
250A	Grady	60.20	75	P	P	06 39 46.8	-1.8
	baz=315,SNR=6.7						
Y52A	Lilburn	60.20	72	eP	P	06 39 46.9	-1.6
	comp=Z,8.2nm,0.8s						
Y52A	Lilburn	60.20	72	P	P	06 39 46.6	-2.0
	baz=315						
X53A	Estanollee	60.21	71	P	P	06 39 46.5	-2.0
	baz=315						
O59A	Robesonia	60.23	62	P	P	06 39 47.6	-1.1
	baz=314						
BRAL	Brewton	60.30	76	P	P	06 39 47.7	-1.5
	baz=315						
R57A	Stanardsville	60.33	65	P	P	06 39 48.3	-1.0
	baz=314,SNR=7.6						
T56A	Rocky Mt	60.35	67	P	P	06 39 48.1	-1.5
	baz=314						
Q58A	Fox Den Farm,	60.36	64	P	P	06 39 48.4	-1.1
	baz=314,SNR=10						
151A	Opelika	60.38	74	P	P	06 39 47.0	-2.8
	baz=315						
PKME	Peaks-Kenny Pk	60.41	54	P	P	06 39 48.2	-1.5
	baz=315						
N60A	Cedar Hill Far	60.44	61	P	P	06 39 49.2	-0.9
	baz=314						
W54A	Cherokee Point	60.46	70	P	P	06 39 48.7	-1.6
	baz=315						
S57A	Dark Hollow, R	60.46	66	P	P	06 39 49.0	-1.2
	baz=314						
Z52A	Williamson	60.46	73	P	P	06 39 47.8	-2.5
	baz=315,SNR=6.0						
449A	Pace	60.49	77	P	P	06 39 48.8	-1.7
	baz=315						
V55A	Taylorsville	60.49	69	P	P	06 39 48.8	-1.7
	baz=315						
Y53A	Monroe	60.49	72	P	P	06 39 48.1	-2.4
	baz=315,SNR=6.4						
350A	Dozier	60.55	76	P	P	06 39 49.3	-1.6
	baz=315						
P59A	Jarrettsville	60.59	62	P	P	06 39 49.8	-1.3
	baz=314						
R58A	Rapidan	60.62	65	P	P	06 39 50.4	-1.0
	baz=314,SNR=5.7						
U56A	King	60.62	68	P	P	06 39 50.1	-1.3
	baz=315						
251A	Midway	60.64	74	P	P	06 39 49.4	-2.1
	baz=315						
152A	Waverly Hall	60.65	74	P	P	06 39 48.9	-2.7
	baz=315						
O60A	Telford	60.66	61	P	P	06 39 50.4	-1.2
	baz=314,SNR=5.2						
X54A	Belton	60.72	70	P	P	06 39 50.5	-1.6
	baz=315						
XAN	Xi'an	60.73	289	P	P	06 39 52.0	-0.2
XAN				pP	pwP	06 40 00.7	+2.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
T57A	Hurt	60.82	66	P	P	06 39 51.3	-1.4
	baz=315						
M61A	Granite Spring	60.85	59	P	P	06 39 51.7	-1.1
	baz=315						
GOGA	Godfrey	60.87	72	eP	P	06 39 51.1	-2.0
	comp=Z,11nm,0.8s						
GOGA	Godfrey	60.87	72	eP	P	06 39 51.1	-2.0
GOGA				pmax	pmax		
	comp=Z,11nm,0.8s						
GOGA	Godfrey	60.87	72	P	P	06 39 50.7	-2.4
	baz=315,SNR=7.3						
P60A	Greenville	60.89	62	P	P	06 39 51.9	-1.2
	baz=315						
Z53A	Monticello	60.90	72	P	P	06 39 50.9	-2.4
	baz=315,SNR=10						
KMSC	Kings Mountain	60.92	69	P	P	06 39 51.6	-1.8
	baz=315,SNR=5.7						
R58B	Mineral	60.93	65	P	P	06 39 52.6	-0.8
	baz=315,SNR=6.5						
V56A	Mocksville	60.94	68	P	P	06 39 51.9	-1.6
	baz=315						
PAL	Palisades	60.99	60	P	P	06 39 52.0	-1.8
	baz=315						
HODGE	Hodges	61.01	71	eP	P	06 39 52.5	-1.6
	comp=Z,7.8nm,0.8s						
Y54A	Tignall	61.02	71	P	P	06 39 51.9	-2.2
	baz=315,SNR=7.1						
CBN	Corbin Frederi	61.04	64	P	P	06 39 52.8	-1.3
	baz=315						
S58A	Poland Farm, P	61.08	65	P	P	06 39 53.1	-1.3
	baz=315,SNR=7.4						
252A	Lumpkin	61.11	74	P	P	06 39 52.4	-2.3
	baz=315						
U57A	Blanch	61.17	67	P	P	06 39 53.8	-1.3
	baz=315,SNR=5.4						
HRV	Adam Dziewonsk	61.19	57	P	P	06 39 53.9	-1.2
	baz=315						
R59A	King George, V	61.19	64	P	P	06 39 54.0	-1.2
	baz=315						
153A	Fort Valley	61.19	73	P	P	06 39 52.6	-2.7
	baz=315						
X55A	Gracelyn & Ava	61.21	70	P	P	06 39 53.5	-1.9
	baz=315,SNR=5.1						
T58A	Grand View Acr	61.27	66	P	P	06 39 54.3	-1.5
	baz=315,SNR=5.9						
352A	Blakely	61.36	75	P	P	06 39 54.5	-2.0
	baz=315,SNR=6.1						
Z54A	Sparta	61.37	72	P	P	06 39 54.1	-2.3
	baz=315,SNR=12						
S59A	Mechanicsville	61.40	65	P	P	06 39 55.6	-1.0
	baz=315,SNR=7.1						
253A	Americus	61.43	74	P	P	06 39 54.3	-2.6
	baz=315						
Y55A	Saluda	61.45	71	P	P	06 39 55.2	-1.8
	baz=315						
X56A	White Oak	61.55	70	P	P	06 39 56.1	-1.6
	baz=315						
154A	Montrose	61.65	72	P	P	06 39 56.0	-2.4
	baz=315						
W57A	Gilead	61.69	68	P	P	06 39 57.0	-1.6
	baz=315						
V58A	Windy Hill, Pi	61.74	67	P	P	06 39 57.4	-1.6
	baz=315						
Z55A	Blythe	61.80	71	P	P	06 39 57.3	-2.0
	baz=315						
T59A	Double "B" Far	61.81	65	P	P	06 39 58.5	-0.8
	baz=315,SNR=7.9						
353A	Camilla	61.88	74	P	P	06 39 57.5	-2.4
	baz=316						
Y56A	Pelion	61.88	70	P	P	06 39 58.3	-1.6
	baz=315						
254A	Abbeville	62.01	73	P	P	06 39 58.4	-2.4
	baz=316						
155A	Kite	62.02	72	P	P	06 39 58.7	-2.2
	baz=316						
U59A	Littleton	62.11	66	P	P	06 40 00.2	-1.2
	baz=315						
X57A	Johnson Farm,	62.12	69	P	P	06 40 00.2	-1.3
	baz=315						
GTA	Gaotai	62.14	299	⇑P	P	06 40 02.1	+0.3
GTA				pP	pwP	06 40 12.4	+4.7
GTA				sP	pP	06 40 16.2	+15
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,38nm,6.4s						
GTA				LR	LR		
	comp=Z,85nm,14.9s						
GTA				LR	LR		
	comp=Z,71nm,14.9s						
453A	Whigham	62.17	75	P	P	06 40 00.3	-1.6
	baz=316						
W58A	Raeford	62.22	68	P	P	06 40 00.9	-1.3
	baz=315						
LZH	Lanzhou	62.24	294	eP	P	06 40 02.8	+0.3
LZH				pP	pwP	06 40 05.8	-2.7
LZH				sP	pP	06 40 07.5	+5.6
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
Y57A	Sumter	62.26	70	P	P	06 40 00.9	-1.5
	baz=316						
V59A	Middlesex	62.27	67	P	P	06 40 01.3	-1.2
	baz=315						
S61A	Accomac	62.37	64	P	P	06 40 01.9	-1.2
	baz=315						
U60A	Pendleton	62.38	65	P	P	06 40 02.4	-0.9
	baz=315						
255A	Hazlehurst	62.51	73	P	P	06 40 02.2	-2.0
	baz=316						
553A	Crawfordville	62.58	75	P	P	06 40 03.2	-1.4
	baz=316						
Z57A	Bowman	62.59	70	P	P	06 40 03.1	-1.5
	baz=316						
355A	Pearson	62.70	73	P	P	06 40 02.8	-2.6
	baz=316						
Y58A	Scranton	62.76	69	P	P	06 40 04.7	-1.1
	baz=316						
V60A	Jim Taylor Roa	62.83	66	P	P	06 40 05.3	-0.9
	baz=316						
157A	Early Branch	62.85	71	P	P	06 40 05.4	-1.0
	baz=316						
U61A	Possum Corner	62.89	65	P	P	06 40 05.5	-1.1
	baz=316						
455A	Stateville	63.03	74	P	P	06 40 05.8	-1.9
	baz=316						
NHSC	New Hope	63.03	70	P	P	06 40 06.6	-1.0
	baz=316						
Z58A	St. Stephen	63.08	70	P	P	06 40 07.0	-0.9
	baz=316						
456A	Hilliard	63.64	73	P	P	06 40 10.2	-1.5
	baz=316						
556A	Lake Butler	63.93	74	P	P	06 40 12.3	-1.3
	baz=316						
KURK	Kurchatov	63.94	320	eP	P	06 40 14.0	+0.6
	comp=Z,14nm,0.8s						
KURK	Kurchatov	63.94	320	i P	P	06 40 13.7	+0.4
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
PRGR	Permogore	64.19	343	eP	P	06 40 13.5	-1.3
PRGR				e		06 40 48.8	
PRGR				pmax	pmax		
	comp=Z,15nm,1.1s						
557A	Orange Park	64.33	74	P	P	06 40 14.7	-1.5
	baz=317						
SVE	Sverdlovsk	65.07	333	eP	P	06 40 22.7	+2.0
WMQ	Urumqi	65.17	310	eP	P	06 40 23.1	+1.5
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,88nm,4.7s						
BRVK	Borovoye	65.20	326	eP	P	06 40 23.1	+1.5
	comp=Z,17nm,1.0s						
BRVK	Borovoye	65.20	326d	iP	P	06 40 22.7	+1.1
BRVK				pmax	pmax		
	comp=Z,20nm,1.2s						
MKAR	Makanchi Array	65.41	315	P	P	06 40 23.0	-0.1
	comp=Z,4.9nm,0.7s,baz=49,slow=6.4,SNR=50						
MAKZ	Makanchi	65.54	315	eP	P	06 40 23.9	0.0
	comp=Z,11nm,1.1s						
MAKZ	Makanchi	65.54	315	eP	P	06 40 23.9	0.0
MAKZ				pmax	pmax		
	comp=Z,11nm,1.1s						
DWPF	Disney Wildern	65.89	75	P	P	06 40 25.2	-1.2
	baz=317						
ARU	Arti	65.99	334d	iP	P	06 40 27.6	+1.0
ARU				S	S	06 49 15.3	+0.7
ARU				pmax	pmax		
	comp=Z,22nm,0.9s						
CD2	Chengdu	66.00	290	P	P	06 40 25.3	-1.9
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
859A	Kempfer Cattle	66.25	74	P	P	06 40 27.2	-1.4
	baz=317						
FIA1	FINESS Array S	66.86	353	eP	P	06 40 33.0	+1.0
	comp=Z,14nm,0.9s						
FINES	FINESS Array B	66.86	353	P	P	06 40 32.7	+0.6
	comp=Z,7.1nm,0.7s,baz=16,slow=8.0,SNR=23						
NB2	NORSAR Subarra	67.74	1	P	P	06 40 38.4	+0.7
	comp=Z,1.9nm,0.6s,baz=358,slow=6.2						
NOA	NORSAR Array B	67.74	1	P	P	06 40 38.5	+0.7
	comp=Z,3.2nm,0.7s,baz=360,slow=6.2,SNR=10						
NOA				LR	LR	07 11 41.3	
	comp=Z,18nm,19.6s,baz=100,slow=37						
OTUK	Ortayu	68.38	322	i P	P	06 40 42.6	+0.6
OTUK				pmax	pmax		
	comp=Z,16nm,0.8s						
PDGK	Podgornoye	69.35	314	i P	P	06 40 48.8	+0.6
PDGK				pmax	pmax		
	comp=Z,12nm,0.7s						
VSU	Vasula	69.76	352	ceP	P	06 40 51.3	+1.0
VSU				pmax	pmax		
	comp=Z,59nm,1.0s						
PPT	Papeete	70.51	162	LR	LR	07 06 49.7	
	comp=Z,23nm,21.3s,baz=34,slow=32						
KMI	Kunming	70.88	286	P	P	06 40 58.6	+0.6
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
TKM2	Tokmak 2	71.38	317	i P	P	06 41 00.6	-0.2
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TKM2	Tokmak 2	71.38	317	P	P	06 41 01.8	+1.0
	SNR=12						
USP	Ospenovka	71.57	317	P	P	06 41 02.9	+1.2
	SNR=8.9						
ULHL	Ulahol	71.65	316	P	P	06 41 03.4	+1.0
	SNR=7.0						
CHMS	Chumysh	71.68	317	P	P	06 41 03.7	+1.3
	SNR=6.0						
AB31	Akbulak array	71.88	330	i P	P	06 41 04.0	+0.7
AB31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OBN	Obninsk	71.89	346⇑	eP	P	06 41 03.9	+0.6
OBN				e*SP	pwP	06 41 09.1	-0.1
OBN				S	S	06 50 30.0	+5.5
OBN				pmax	pmax		
	comp=Z,11nm,0.4s						
OBN				MLR	MLR		
	comp=Z,171nm,16.0s						
AAK	Ala-Archa	72.09	317	eP	P	06 41 06.0	+1.0
	comp=Z,15nm,0.8s						
AAK	Ala-Archa	72.09	317	i P	P	06 41 05.7	+0.7
AAK				pmax	pmax		
	comp=Z,14nm,0.7s						
AAK	Ala-Archa	72.09	317	P	P	06 41 06.2	+1.2
	SNR=8.3						
KZA	Kyzart	72.22	316	P	P	06 41 07.2	+1.2
	SNR=6.1						
EKS2	Erkin-Say	72.37	317	P	P	06 41 07.8	+1.2
	SNR=12						
UCH	Uchtor	72.41	317	P	P	06 41 08.3	+1.0
	SNR=6.8						
KK31	Karatay Array	73.35	320	i P	P	06 41 12.9	+0.6
KK31				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH	Kashi	73.99	314	P	P	06 41 20.1	+3.9
KSH				pP	pwP	06 41 25.4	+3.3
KSH				sP	PcP	06 41 27.1	-4.4
KSH				PcP	PcP	06 41 35.2	+3.7
KSH				PP	PP	06 44 07.1	+6.5
KSH				S	S	06 50 48.7	-0.5
KSH				pmax	pmax		
	comp=Z,28nm,1.2s						
KSH				pmax	pmax		
	comp=Z,77nm,4.6s						
SUW	Suwalki	74.45	354	eP	P	06 41 19.0	+0.5
AKASG	Malin Array Be	77.18	349	P	P	06 41 34.0	-0.2
	comp=Z,4.5nm,0.6s,baz=14,slow=5.9,SNR=18						
AKASG	Malin Array Be	77.18	349	P	P	06 41 34.0	-0.2
AKBB	Malin Array Si	77.18	349	eP	P	06 41 33.7	-0.4
	comp=Z,9.2nm,0.7s						
AKBB	Malin Array Si	77.18	349	eP	P	06 41 33.7	-0.4
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CLL	Collm	77.51	360	eP	P	06 41 36.0	+0.1
CLL	Collm	77.51	360	eP	P	06 41 36.0	+0.1
CLL				e		06 41 39.0	
KSP	Ksiaz	77.93	358	eP	P	06 41 39.9	+1.6
BRG	Berggiesshubel	77.94	359	eP	P	06 41 39.2	+0.8
BRG	Berggiesshubel	77.94	359	eP	P	06 41 39.2	+0.8
CMAR	Chiang Mai Arr	78.22	285	P	P	06 41 40.3	-0.1
	comp=Z,2.6nm,0.6s,baz=27,slow=5.9,SNR=13						
OSTC	Ostas	78.22	358	eP	P	06 41 41.5	+1.5
OSTC				epP	pwP	06 41 45.2	-0.7
UPC	Upice	78.28	358	eP	P	06 41 41.7	+1.4
UPC	Upice	78.28	358	eP	P	06 41 41.7	+1.4
PVCC	Panska Ves	78.28	359	eP	P	06 41 41.7	+1.4
PVCC				e		06 41 45.4	
PVCC	Panska Ves	78.28	359	eP	P	06 41 41.7	+1.4
PVCC				epP	pwP	06 41 45.4	-0.8
GUN	Gumba	78.38	300	eP	P	06 41 41.9	+0.2
	comp=Z,24nm,0.6s						
JIRN	Jiri	78.41	300	eP	P	06 41 41.8	-0.1
	comp=Z,55nm,0.8s						
DPC	Dobruska-Polom	78.42	358	eP	P	06 41 42.9	+1.7
DPC				e		06 41 51.9	
DPC	Dobruska-Polom	78.42	358	eP	P	06 41 42.9	+1.7
DPC				epP	pwP	06 41 46.5	-0.6
DPC				esP	PcP	06 41 51.9	+1.5
OJC	Ojcow	78.43	356	eP	P	06 41 42.5	+1.3
BAIF	Baives	78.48	6	eP	P	06 41 42.2	+0.8

BAIF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKN	Kakani	78.80	301	eP	P	06 41 44.0	+0.2
PRU	Pruhonice	78.82	359	eP	P	06 41 44.8	+1.5
PRU				e		06 41 50.9	
PRU	Pruhonice	78.82	359	eP	P	06 41 44.8	+1.5
PRU				epP	PcP	06 41 50.9	-1.1
KWP	Kalwaria Pacla	78.84	354	eP	P	06 41 45.1	+1.7
PKI	Pulchoki	78.91	300	eP	P	06 41 44.2	-0.3
	comp=Z,51nm,1.1s						
PKIN	Phulchoki	78.91	300	eP	P	06 41 44.1	-0.4
MORC	Moravsky Berou	78.96	357	⇑iP	P	06 41 45.7	+1.6
MORC	Moravsky Berou	78.96	357	P	P	06 41 45.7	+1.6
MORC	Moravsky Berou	78.96	357	eP	P	06 41 45.3	+1.2
DMN	Daman	79.04	301	eP	P	06 41 44.6	-0.6
	comp=Z,28nm,0.9s						
DANN	Dangsing	79.17	302	eP	P	06 41 46.0	+0.1
	comp=Z,60nm,0.8s						
NIE	Niedzica	79.20	355	eP	P	06 41 47.2	+1.7
VRAC	Vranov	79.46	358	⇑iP	P	06 41 48.6	+1.7
VRAC	Vranov	79.46	358	P	P	06 41 48.5	+1.7
VRAC	Vranov	79.46	358	eP	P	06 41 48.2	+1.4
LANS	Liptovska Anna	79.51	356	eP	P	06 41 49.4	+2.3
LANS	Liptovska Anna	79.51	356	eP	P	06 41 49.4	+2.3
LDF	La Druitiere	79.60	9	eP	P	06 41 47.7	+0.2
LDF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KHC	Kasperske Hory	79.69	360	eP	P	06 41 49.8	+1.7
KHC	Kasperske Hory	79.69	360	eP	P	06 41 49.8	+1.7
KHC				epP	pwP	06 41 53.8	-0.2
KRUC	Moravsky	79.71	358	eP	P	06 41 49.3	+1.1
KOLN	Koldanda	79.71	302	eP	P	06 41 48.6	-0.2
	comp=Z,43nm,1.0s						
PYUN	Piuthan	79.77	302	eP	P	06 41 48.9	-0.2
	comp=Z,51nm,1.0s						
JAVC	Velka Javorina	79.88	357	eP	P	06 41 51.5	+2.4
GERES	GERESS Array B	79.97	360	P	P	06 41 49.8	+0.1
	comp=Z,3.3nm,0.7s,baz=6.7,slow=4.6,SNR=17						
NIL	Nilore	80.06	313	eP	P	06 41 51.3	+1.0
	comp=Z,18nm,0.9s						
NIL	Nilore	80.06	313	eP	P	06 41 51.3	+1.0
NIL				pmax	pmax		
	comp=Z,18nm,0.9s						
KECS	Kecovo	80.13	355	eP	P	06 41 52.0	+1.6
KECS				pmax	pmax		
	comp=Z,33nm,0.7s						
KECS	Kecovo	80.13	355	eP	P	06 41 52.0	+1.6
VYHS	Vyhne	80.20	356	eP	P	06 41 52.5	+1.7
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	Vyhne	80.20	356	eP	P	06 41 52.5	+1.7
CDF	Champ du Feu	80.29	4	eP	P	06 41 52.2	+0.8
CDF				pmax	pmax		
	comp=Z,13nm,1.2s						
MODS	Modra-Piesok	80.38	357	eP	P	06 41 53.0	+1.2
MODS				pmax	pmax		
	comp=Z,18nm,1.3s						
MODS	Modra-Piesok	80.38	357	eP	P	06 41 53.0	+1.2
BFO	Black Forest	80.41	3	iP	P	06 41 53.6	+1.6
ZST	Bratislava	80.56	357	eP	P	06 41 54.1	+1.4
ZST	Bratislava	80.56	357	eP	P	06 41 54.1	+1.4
BURAR	Bucovina Array	80.65	352	⇑iP	P	06 41 53.8	+0.4
BURAR	Bucovina Array	80.65	352	P	P	06 41 53.7	+0.4
HAU	Haudompre	80.65	5	eP	P	06 41 54.8	+1.5
HAU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CONA	Conrad Observa	80.86	358	iP	P	06 41 56.1	+1.6
	comp=Z,8.9nm,0.8s						
HINF	Hinteralfeld	80.86	4	eP	P	06 41 55.0	+0.6
HINF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	Kabul	81.18	316	eP	P	06 41 56.4	-0.2
	comp=Z,11nm,0.8s						
KBL	Kabul	81.18	316	eP	P	06 41 56.4	-0.2
KBL				pmax	pmax		
	comp=Z,11nm,0.8s						
BIZ	Bicaz	81.23	351	⇑iP	P	06 41 57.5	+1.1
LOR	Lormes	81.24	6	eP	P	06 41 57.1	+0.7
LOR				pmax	pmax		
	comp=Z,12nm,1.0s						
SSF	Saint Saulge	81.42	7	eP	P	06 41 58.1	+0.7
SSF				pmax	pmax		
	comp=Z,15nm,1.0s						
MOTA	Moosalm	81.46	1	eP	P	06 41 59.2	+1.4
	comp=Z,7.6nm,0.9s						
WATA	Walderalm	81.47	1	iP	P	06 41 59.0	+1.2
	comp=Z,6.8nm,0.8s						
ARSA	Arzberg	81.54	358	eP	P	06 41 59.5	+1.4
	comp=Z,5.6nm,0.9s						
WTTA	Wattenberg	81.55	1	iP	P	06 41 59.6	+1.4
	comp=Z,5.2nm,0.6s						
MFF	Saint Martin d	81.57	9	eP	P	06 41 58.9	+0.8
MFF				pmax	pmax		
	comp=Z,14nm,0.9s						
SQTA	Sankt Quirin	81.59	1	eP	P	06 41 59.9	+1.5
	comp=Z,9.8nm,0.6s						
KBZ	Khabaz	81.61	339	P	P	06 41 58.6	+0.3
	comp=Z,4.8nm,0.9s,baz=79,slow=5.2,SNR=2.9						
KBZ				LR	LR	07 19 28.3	
	comp=Z,83nm,21.4s,baz=98,slow=37						
DRGR		81.67	353	⇑iP	P	06 41 59.1	+0.3
DRGR		81.67	353	P	P	06 41 59.0	+0.3
AVF	Avril sur Loir	81.68	7	eP	P	06 41 59.3	+0.6
AVF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBA	Koelnbreinsper	81.74	360	epP	P	06 42 01.0	+1.8
	comp=Z,19nm,0.6s						
FETA	Feichten	81.78	2	eP	P	06 42 00.9	+1.5
	comp=Z,7.8nm,0.9s						
SMF	Signal de Mont	81.86	6	eP	P	06 42 00.3	+0.6
SMF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BGF	Bois d'Agland	81.87	7	eP	P	06 42 00.4	+0.6
BGF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CABF	La Chapelle	82.03	5	eP	P	06 42 01.9	+1.2
CABF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ABTA	Abfaltersbach	82.07	0	iP	P	06 42 02.0	+1.1
	comp=Z,7.4nm,1.0s						
TCF	Toulx Ste Croi	82.09	8	eP	P	06 42 01.4	+0.4
TCF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SOKA	Soboth	82.12	359	eP	P	06 42 02.5	+1.3
	comp=Z,9.8nm,0.9s						
PERS	Pernice	82.17	359	iP	P	06 42 02.5	+1.2
FUORN	Ofenpass-Fuorn	82.17	2	eP	P	06 42 03.7	+2.0
	comp=Z,6.6nm,0.8s						
MYKA	Terra Mystica	82.19	360	ePcP	P	06 42 03.4	+1.9
	comp=Z,1.3nm,0.5s						
TUE	Stuetta	82.30	3	eP	P	06 42 04.3	+2.1
	comp=Z,4.4nm,0.7s						
OBKA	Obir	82.30	359	iP	P	06 42 03.2	+1.1
	comp=Z,6.3nm,0.7s						
GEYT	Alibeck	82.53	326	P	P	06 42 03.3	-0.1
	comp=Z,5.6nm,0.9s,baz=328,slow=5.3,SNR=7.5						
CADS	Cadrg	82.59	359	iP	P	06 42 03.8	+0.2
VOIR		82.82	351	⇑iP	P	06 42 06.4	+1.6
VOIR		82.82	351	P	P	06 42 06.3	+1.5
GZR	Gura Zlata	83.06	353	⇑iP	P	06 42 06.7	+0.7
BOJS	Bojanci	83.30	358	iP	P	06 42 07.9	+0.8
BNI	Bardonecchia	83.61	4	eP	P	06 42 11.6	+2.6
	comp=Z,16nm,1.1s						
BNI	Bardonecchia	83.61	4	eP	P	06 42 11.6	+2.6
BNI				pmax	pmax		
	comp=Z,16nm,1.1s						
VIVF	Saint-Julien-l	83.69	6	eP	P	06 42 09.6	+0.3
VIVF				pmax	pmax		
	comp=Z,29nm,2.1s						
MBDF	Montbardon	83.94	4	eP	P	06 42 12.4	+1.7
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MTLF	Montolieu	85.02	8	eP	P	06 42 16.8	+0.8
MTLF				pmax	pmax		
	comp=Z,11nm,1.1s						
EPF	Esparros	85.15	9	eP	P	06 42 16.5	-0.2
EPF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PDG	Podgorica	86.23	355	⇑iP	P	06 42 22.5	+0.5
PTBC	PUERTO BERRIO,	86.53	84	eP	P	06 42 21.4	-2.5
GUY2C	Guyana, Caldas	86.98	85	eP	P	06 42 24.6	-2.1
NORC	Norcasia	87.03	85	eP	P	06 42 24.7	-1.7
BARC	Barichara	87.28	83	eP	P	06 42 26.4	-1.4
BRTR	Keskin Array B	87.31	344	P	P	06 42 28.6	+1.0
	comp=Z,1.9nm,0.6s,baz=27,slow=1.4,SNR=7.6						
YOTC	Yotoco, Valle	87.33	87	eP	P	06 42 26.4	-1.6
RUSC	La Rusia	87.88	83	eP	P	06 42 28.1	-2.9
ESDC	Sonseca Array	87.94	13	P	P	06 42 30.1	-0.4
	comp=Z,1.3nm,0.7s,baz=350,slow=5.1,SNR=7.5						
ORTC	Ortega, Tolima	88.08	86	eP	P	06 42 29.8	-1.6
POPC	Popayan, Colom	88.25	88	eP	P	06 42 31.5	-1.0
BBAC	Balboa, Cauca	88.29	89	eP	P	06 42 31.5	-1.2
PRAC	Prado	88.45	86	eP	P	06 42 30.6	-2.6
SOTA	Rioblanco	88.60	88	eP	P	06 42 34.0	-0.5
FLOC	Florencia	89.63	88	eP	P	06 42 36.5	-2.2
AS31	Alice Springs	91.01	232	eP	P	06 42 43.8	-1.1
	comp=Z,1.8nm,0.6s						
ASAR	Alice Springs	91.01	232	P	P	06 42 43.5	-1.3
	comp=Z,6.2nm,0.8s,baz=30,slow=4.5,SNR=46						
IDI	Anoyia	92.89	350	LR	LR	07 25 04.8	
	comp=Z,51nm,20.4s,baz=102,slow=36						
PLCA	Paso Flores	124.15	114	PKP	PKPdf	06 48 37.2	-1.6
	comp=Z,1.1nm,0.6s,baz=150,slow=1.5,SNR=3.2						
TSUM	Tsumeb	147.50	352	ePKPbc	PKPbc	06 49 25.0	0.0
MAW	Mawson	151.13	217	PKPbc	PKPbc	06 49 31.0	-1.4
	comp=Z,6.5nm,0.7s,baz=103,slow=2.0,SNR=12						
LBTB	Lobatse	151.79	335	ePKPbc	PKPbc	06 49 35.1	-0.3
LBTB	Lobatse	151.79	335	ePKIKP	PKPbc	06 49 35.2	-0.3
BOSA	Boshof	155.30	333	PKPab	PKPab	06 49 58.8	-0.3
	comp=Z,4.4nm,1.0s,baz=323,slow=5.6,SNR=3.6						

MAN 03 06:34:43.5, 18°.98N×121°.30E, h14^{km}, mb4.5, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	Mt. Cagua	1.01	136	eP	Pb	06 35 02.1	-0.8
SGCP				eS	Sn	06 35 17.6	+0.2
APYP	Conner	1.11	183	eP	Pb	06 35 03.1	-1.4
APYP				eS	Sg	06 35 19.6	+0.1
CVP	Callao Caves	1.36	159	iP	Pg	06 35 09.7	0.0
CVP				iS	Sg	06 35 28.7	+1.3
ABRA	Dolores	1.44	203	eP	Pn	06 35 07.2	-1.9
ABRA				eS	Sb	06 35 28.6	+0.4
CAUP	Cauayan	2.08	166	eP	Pb	06 35 19.8	-1.2
CAUP				eS	Sg	06 35 49.5	-1.0
PALP	Palanan	2.18	151	eP	Pn	06 35 20.4	+1.0
PALP				eS	Sb	06 35 50.0	+0.3
SMPP	San Manuel, Pa	2.87	192	eP	Pn	06 35 29.5	+0.5
SMPP				eS	Sn	06 36 05.4	+2.0

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*ISCJB **03** 07:04:15.8±0.2, 36°.51N±0°.01×70°.45E±0°.02, h199^{km}±2^{km}, mb4.9/230, Error ellipse: s-maj=2.3km s-min=2.0km az=39.8*

*BJI **03** 07:04:16.0±0.0, 36°.70N×70°.35E, h200^{km}, mb4.8/50, mB4.8/31*

*NNC **03** 07:04:16.9±1.8, 36°.67N×70°.24E, h179^{km}±22^{km}, mb5.2, mpv6.3, Error ellipse: s-maj=18.7km s-min=9.5km az=164.0*

*MOS **03** 07:04:16.2±0.9, 36°.53N×70°.49E, h204^{km}, mb4.9/61, Error ellipse: s-maj=4.1km s-min=3.0km az=107.5*

*NEIC **03** 07:04:18.4±1.9, 36°.53N×70°.47E, h215^{km}±4^{km}, mb5.2/144, Error ellipse: s-maj=9.9km s-min=8.1km az=97.0*

NEIC Felt [III] at Kabul. Also felt at Charikar and Jalalabad.

*IDC **03** 07:04:18.9±0.4, 36°.51N×70°.49E, h218^{km}±3^{km}, mb4.6/40, mb1 4.7/43, mb1mx4.7/44, mbtmp5.2/43, Error ellipse: s-maj=7.0km s-min=5.4km az=180.0*

*GCMT **03** 07:04:19.4±0.2, 36°.49N±0°.01×70°.29E±0°.02, h209^{km}±1^{km}, MW5.2/103, Moment Tensor Solution. s55,c66; s103,c165; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}2.92±.16; $M_{\theta\theta}$-1.34±.16; $M_{\phi\phi}$-1.58±.15; $M_{r\theta}$5.53±.14; $M_{\theta\phi}$5.56±.15; $M_{\phi r}$0.57±.13; Best double couple: $M_0$8.26000×10^{16} NP1:ϕ_s98.00000°, δ76.00000°, λ48.00000°. NP2:ϕ_s353.00000°, δ44.00000°, λ159.00000°. Principal axes: T 8.2590, Plg43.0000°, Azm328.0000°; N 0.0020, Plg41.0000°, Azm111.0000°; P -8.2610, Plg20.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 07:04:17.7±0.2**, 36°.49N**±0°.03×**70°.47E**±0°.02**, h208^{km}**±2^{km}**, h208^{km}:pP-P, n828, σ1^{s}82**/999**, mb4.9**/252**, 60C-55D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.27	211	ePn	Pn	07 04 59.2	-0.7
KBL				eS	S	07 05 30.0	-2.2
KBL	Kabul	2.27	211	ePN	Pn	07 04 59.2	-0.7
KBL				eS	S	07 05 30.0	-2.2
GAR	Garm	2.51	357	ePn	Pn	07 05 01.3	-1.0
GAR				eS	S	07 05 33.4	-3.4
GAR	Garm	2.51	357	ePN	Pn	07 05 01.3	-1.0
GAR				eS	S	07 05 33.4	-3.4
CEP	Cherat	2.91	156	⇑P	Pn	07 05 06.9	0.0
CEP				S	S	07 05 44.0	-0.8
CHCP	Chirah Chowk	3.63	140	P	Pn	07 05 15.8	+0.4
NIL	Nilore	3.63	140	ePn	Pn	07 05 15.8	+0.5
NIL	Nilore	3.63	140	ePN	Pn	07 05 15.8	+0.5
THW	Thamme Wali	3.83	164	P	Pn	07 05 17.3	-0.5
SARP	Sargodha	4.91	158	P	Pn	07 05 30.2	-0.9
TAS	Tashkent	4.92	350	PN	Pn	07 05 30.2	-1.0
ARSB	Arslanbob	5.21	21	ePn	Pn	07 05 33.6	-1.4
ARSB				eS	S	07 06 29.2	-6.7
KSH	Kashi	5.29	54	P	Pn	07 05 30.6	-5.4
KSH				S	S	07 06 25.1	-13
KSH				pmax	pmax		
	comp=Z,10µm,0.7s						
KSH				pmax	pmax		
	comp=Z,8µm,3.2s						
KSH				smax	smax		
	comp=N,5µm,0.9s						
KSH				smax	smax		
	comp=E,6µm,1.1s						
KSH				LR	LR		
	comp=N,6µm,3.8s						
KSH				LR	LR		
	comp=E,6µm,4.0s						
IUG	Iuzhnay	5.66	357	Lg	Lg	07 06 41.9	
	9µm,0.9s						
IUG	Iuzhnay	5.66	357	iPN	Pn	07 05 39.9	-0.8
IUG				iS	S	07 06 41.8	-4.5
IUG				pmax	pmax		
	comp=Z,26nm,0.3s						
IUG				smax	smax		
	comp=E,8µm,0.9s						
IUG	Iuzhnay	5.66	357	iP	Pn	07 05 39.9	-0.8
	comp=E,26nm,0.2s						
IUG				iS	S	07 06 41.9	-4.5
	comp=E,8µm,0.9s						
THN	Thein Dam	5.92	132	eP	Pn	07 05 42.0	-2.1
THN				eS	S	07 06 48.0	-4.3
JBG	Jabagly	5.93	1	ePN	Pn	07 05 44.1	-0.1
JBG				iS	S	07 06 48.1	-4.4
AML	Almayashu	6.16	23	P	Pn	07 05 46.3	-1.1
	SNR=548						
DHRM	DHARAMSHALA	6.41	130	eP	Pn	07 05 49.9	-0.6
DHRM				eS	S	07 07 01.0	-3.1
DZA	Taraz	6.43	6	Lg	Lg	07 07 10.1	
	comp=E,17µm,1.2s						
UCH	Uchtor	6.53	27	P	Pn	07 05 51.1	-1.1
	SNR=7091						
MRKS	Merke	6.60	18	Lg	Lg	07 07 01.9	
	comp=E,5µm,0.9s						
KK31	Karatay Array	6.61	0	ePn	Pn	07 05 51.5	-1.3
KK31				eS	S	07 06 59.7	-8.5
KK31	Karatay Array	6.61	0	⇑P	Pn	07 05 50.5	-2.3
	comp=E,105nm,0.3s,baz=194,slow=15,SNR=3100						
KK31				⇑S	S	07 07 02.7	-5.5
	comp=E,3µm,0.8s,baz=198,slow=26,SNR=9.8						
KK31	Karatay Array	6.61	0	ePN	Pn	07 05 51.5	-1.3
KKAR	Karatay Array	6.61	0	ePn	Pn	07 05 51.5	-1.3
KKAR				eS	S	07 06 59.9	-8.4
KKAR	Karatay Array	6.61	0	ePN	Pn	07 05 51.5	-1.3
EKS2	Erkin-Say	6.67	21	P	Pn	07 05 52.6	-1.1
	SNR=279						
KZA	Kyzart	6.70	32	P	Pn	07 05 52.8	-1.5
	SNR=214						
AAK	Ala-Archa	6.88	26	P	Pn	07 05 55.6	-0.8
	comp=E,366nm,0.3s,baz=199,slow=15,SNR=1217						
AAK				S	S	07 07 11.1	-3.8
	comp=E,117nm,0.3s,baz=18,slow=23,SNR=17						
AAK	Ala-Archa	6.88	26	ePn	Pn	07 05 55.7	-0.8
AAK				eS	S	07 07 06.0	-8.9
AAK	Ala-Archa	6.88	26	⇓P	Pn	07 05 55.6	-0.8
	comp=E,1µm,0.6s						
AAK				⇓S	S	07 07 10.4	-4.5
	comp=E,5µm,1.1s						
AAK	Ala-Archa	6.88	26	iPn	Pn	07 05 55.6	-0.8
	SNR=1056						
AAK	Ala-Archa	6.88	26	iPN	Pn	07 05 55.5	-1.0
AAK				pmax	pmax		
	comp=Z,1µm,0.5s						
AAK	Ala-Archa	6.88	26	P	Pn	07 05 55.6	-0.8
	SNR=931						
KBK	Karagaybulak	7.06	28	P	Pn	07 05 58.3	-0.6
	SNR=1048						
BHK	Bhakra	7.07	134	eP	Pn	07 05 58.4	-0.5
BHK				eS	S	07 07 12.2	-7.0
FRU1	Bishkek	7.08	26	ePn	Pn	07 05 58.5	-0.4
FRU1				eS	S	07 07 17.7	-1.8
FRU1	Bishkek	7.08	26	ePN	Pn	07 05 58.5	-0.4
FRU1				eS	S	07 07 17.7	-1.8
ULHL	Ulahol	7.28	36	P	Pn	07 05 59.0	-2.7
	SNR=248						
CHMS	Chumysh	7.29	26	P	Pn	07 06 00.2	-1.4
	SNR=98						
BOOM	Boomskoye usch	7.33	34	ePn	Pn	07 06 01.1	-1.2
BOOM				eS	S	07 07 22.3	-3.3
BOOM	Boomskoye usch	7.33	34	ePN	Pn	07 06 01.1	-1.2
BOOM				eS	S	07 07 22.3	-3.3
USP	Ospenovka	7.44	23	P	Pn	07 06 02.2	-1.4
	SNR=20						
TKM2	Tokmak 2	7.54	30	⇓P	Pn	07 06 04.0	-1.1
	comp=Z,4µm,0.6s						
TKM2				⇑S	S	07 07 28.9	-1.6
	comp=Z,1µm,0.8s						
TKM2	Tokmak 2	7.54	30	iPN	Pn	07 06 03.9	-1.1
TKM2				pmax	pmax		
	comp=Z,4µm,0.5s						
TKM2	Tokmak 2	7.54	30	P	Pn	07 06 04.0	-1.1
	SNR=1092						
SGDS	Sogindy	7.65	23	Lg	Lg	07 07 23.4	
	comp=Z,663nm,0.8s						
SGDS	Sogindy	7.65	23	eP	Pn	07 06 04.4	-2.0
	comp=Z,437nm,0.9s						
SGDS				eS	S	07 07 27.5	-5.5
	comp=Z,214nm,1.0s						
KDJ	Kajisay	7.66	41	ePn	Pn	07 06 05.2	-1.4
KDJ	Kajisay	7.66	41	ePN	Pn	07 06 05.2	-1.4
SMLA	Simla	7.72	132	eP	Pn	07 06 05.9	-1.3
SMLA				eS	S	07 07 28.8	-5.8
SMLA				IAML		07 07 34.0	
	comp=E,3µm,0.2s						
SMLA				IAML		07 07 34.1	
	comp=N,3µm,0.2s						
KST	Kastek	7.79	31	Lg	Lg	07 07 29.4	
	comp=N,2µm,1.1s						
DGS	Degeres	7.88	29	Lg	Lg	07 07 29.8	
	comp=N,743nm,1.0s						
MTBS	Maitube	8.06	33	P	Pn	07 06 11.2	-0.5
	comp=N,904nm,0.8s						
TNSS	Tian-Shan	8.22	35	P	Pn	07 06 13.0	-1.1
	comp=N,1µm,0.5s						
TNSS	Tian-Shan	8.22	35	ePN	Pn	07 06 12.9	-1.1
TNSS	Tian-Shan	8.22	35	eP	Pn	07 06 12.9	-1.1
AAA	Alma-Ata	8.34	34	Lg	Lg	07 07 42.2	
	comp=N,276nm,0.8s						
AAA	Alma-Ata	8.34	34	dePN	Pn	07 06 14.8	-0.5
AAA				pmax	pmax		
	comp=Z,2µm,0.6s						
AAA	Alma-Ata	8.34	34	⇓eP	Pn	07 06 14.8	-0.5
	comp=Z,2µm,0.6s						
KNDC	Almaty	8.37	35	⇑P	Pn	07 06 15.3	-0.3
	comp=Z,6µm,0.9s						
KNDC				⇑S	S	07 07 50.2	+0.2
	comp=Z,2µm,1.1s						
KOTS	Kotyrbulak	8.45	35	P	Pn	07 06 16.2	-0.6
	comp=Z,2µm,0.8s						
PRZ	Przheval'sk	8.56	43	ePn	Pn	07 06 17.8	-0.5
PRZ	Przheval'sk	8.56	43	ePN	Pn	07 06 17.8	-0.5
KTBS	Karatobe	8.64	31	P	Pn	07 06 17.0	-2.2
	comp=Z,279nm,0.8s						
KUU	Kurty	8.65	29	Lg	Lg	07 07 45.6	
	comp=Z,300nm,1.5s						
KUU	Kurty	8.65	29	d iPN	Pn	07 06 16.8	-2.4
KUU				pmax	pmax		
	comp=Z,197nm,0.4s						
KUU	Kurty	8.65	29	⇓iP	Pn	07 06 16.8	-2.4
	comp=Z,197nm,0.4s						
DDI	Dehra Dun	8.83	132	eP	Pn	07 06 21.1	-0.7
CHKK	Chushkaly	8.88	32	P	Pn	07 06 20.5	-1.8
	comp=Z,459nm,0.8s						
CHKK	Chushkaly	8.88	32	ePN	Pn	07 06 20.1	-2.1
CHKK	Chushkaly	8.88	32	eP	Pn	07 06 20.2	-2.1
SATY	Saty	8.96	40	P	Pn	07 06 22.5	-0.9
	comp=Z,1µm,1.1s						
SATY	Saty	8.96	40	d iPN	Pn	07 06 21.7	-1.7
SATY				pmax	pmax		
	comp=Z,754nm,0.9s						
SATY	Saty	8.96	40	⇓iP	Pn	07 06 21.7	-1.7
	comp=Z,754nm,0.9s						
BTLS	Baital	8.96	16	Lg	Lg	07 07 53.8	
	comp=Z,741nm,0.4s						
BTLS	Baital	8.96	16	d iPN	Pn	07 06 21.4	-1.8
BTLS				pmax	pmax		
	comp=Z,61nm,0.6s						
BTLS	Baital	8.96	16	⇓iP	Pn	07 06 21.5	-1.8
	comp=Z,61nm,0.6s						
ZHN	Zhinishke	9.05	40	d iP	Pn	07 06 23.1	-1.4
ZHN				pmax	pmax		
	comp=Z,546nm,1.1s						
ZHN	Zhinishke	9.05	40	⇓iP	Pn	07 06 23.2	-1.4
	comp=Z,546nm,1.1s						
KURS	Kuram	9.15	38	P	Pn	07 06 25.3	-0.5
	comp=Z,1µm,1.3s						
UZB	Uzynbulak	9.35	42	d iP	Pn	07 06 26.8	-1.6
UZB				pmax	pmax		
	comp=Z,187nm,0.5s						
UZB	Uzynbulak	9.35	42	⇓iP	Pn	07 06 26.9	-1.6
	comp=Z,187nm,0.5s						
KPKS	Kokpek	9.39	40	d iP	Pn	07 06 27.4	-1.5
KPKS				pmax	pmax		
	comp=Z,987nm,1.0s						
KPKS	Kokpek	9.39	40	⇓iP	Pn	07 06 27.5	-1.5
	comp=Z,987nm,1.0s						
KHET	Khetri	9.52	150	eP	Pn	07 06 28.4	-2.3
KHET				eS	S	07 08 08.1	-10
KHET				AML	AML	07 08 12.2	
	comp=N,2µm,0.2s						
KHET				AML	AML	07 08 12.5	
	comp=E,2µm,0.6s						
ARXS	Arharly	9.54	34	P	Pn	07 06 28.9	-1.9
	comp=E,505nm,0.6s						
JOSI	Joshimath	9.62	125	eP	Pn	07 06 31.6	-0.4
JOSI				eS	S	07 08 13.1	-6.9
NDI	New Delhi	9.64	142	eP	Pn	07 06 32.0	-0.1
MNBS	Baschi	9.70	36	P	Pn	07 06 31.2	-1.7
	comp=E,250nm,0.9s						
PDGK	Podgornoye	9.72	43	⇓P	Pn	07 06 31.4	-1.9
	comp=E,642nm,0.8s						
PDGK				⇓S	S	07 08 24.2	+1.9
	comp=E,538nm,1.1s						
PDGK	Podgornoye	9.72	43	iP	Pn	07 06 31.4	-1.9
PDGK				pmax	pmax		
	comp=Z,642nm,0.7s						
SONA	Sohna	9.93	144	eP	Pn	07 06 34.5	-1.4
SONA				eS	S	07 08 18.3	-9.0
SONA				AML	AML	07 08 20.8	
	comp=N,676nm,0.8s						
SONA				AML	AML	07 08 21.0	
	comp=E,1µm,0.4s						
GEYT	Alibeck	9.96	282	P	Pn	07 06 33.7	-2.6
	comp=E,10nm,0.3s,baz=255,slow=17,SNR=4.3						
GEYT				S	S	07 08 24.6	-3.3
	comp=E,17nm,0.3s,baz=142,slow=12,SNR=6.6						
GYA0B	ALIBECK ARRAY	9.96	282	ePn	Pn	07 06 33.9	-2.4
GYA0B	ALIBECK ARRAY	9.96	282	⇑P	Pn	07 06 33.6	-2.7
GYA0B				⇑S	S	07 08 21.7	-6.2
KTMS	Ketmen	10.28	44	P	Pn	07 06 38.8	-1.6
	comp=E,190nm,0.5s						
TDK	Taldyqorghan	10.41	33	P	Pn	07 06 40.1	-1.9
	comp=E,830nm,1.2s						
TDK	Taldyqorghan	10.41	33	eP	Pn	07 06 39.9	-2.0
TDK				pmax	pmax		
	comp=Z,504nm,1.0s						
TDK	Taldyqorghan	10.41	33	eP	Pn	07 06 40.0	-2.0
	comp=Z,504nm,1.0s						
DJR	Jarkent	10.57	39	P	Pn	07 06 42.3	-1.7
	comp=Z,297nm,0.8s						

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PTH   Pithoragarh       10.71 127 eP     Pn     07 06 45.8 -0.3
PTH                               ex     x      07 08 23.0
KAPS  Kapalarasan       11.06  35  P     Pn     07 06 50.2 -0.1
      comp=Z,244nm,0.8s
OTUK  Ortayu            11.83   6 ⇑P     Pn     07 06 58.5 -1.5
      comp=Z,206nm,1.0s
OTUK                              ⇓S     S      07 09 06.7 -4.3
      comp=Z,395nm,1.2s
OTUK  Ortayu            11.83   6 i P    Pn     07 06 58.5 -1.5
OTUK                               pmax  pmax
      comp=Z,206nm,0.9s
BHJ   Bhuj              13.21 183 eP     Pn     07 07 17.3 -0.2
BHJ                                IAmb  IAmb   07 07 19.3
      comp=Z,202nm,0.6s
MAKZ  Makanchi          13.41  36 ePn    Pn     07 07 18.5 -1.4
MAKZ  Makanchi          13.41  36 ⇑P     Pn     07 07 18.3 -1.6
      comp=Z,723nm,0.7s
MAKZ  Makanchi          13.41  36 eP     Pn     07 07 18.5 -1.4
PYUN  Piuthan           13.48 125 eP     Pn     07 07 18.9 -2.2
      comp=Z,539nm,0.4s
PYUN                              eS     S      07 09 39.7  -11
MK31  Makanchi Array    13.55  37 ePn    Pn     07 07 20.3 -1.3
MK31  Makanchi Array    13.55  37 ⇓P     Pn     07 07 21.1 -0.5
      comp=Z,291nm,0.7s,baz=202,slow=8.0,SNR=1202
MK31  Makanchi Array    13.55  37 eP     Pn     07 07 20.3 -1.3
MKAR  Makanchi Array    13.55  37  P     Pn     07 07 20.8 -0.8
      comp=Z,23nm,0.3s,baz=235,slow=8.4,SNR=471
MKAR                               S     S      07 09 52.4 +0.6
      baz=229,slow=26,SNR=1.8
BRZS  Berezniki         13.58   6 eP     Pn     07 07 20.6 -1.3
BRZS                              eS     S      07 09 48.5 -3.9
BRZS                               pmax  pmax
      comp=Z,198nm,0.3s
BRZS  Berezniki         13.58   6 eP     Pn     07 07 20.7 -1.3
      comp=Z,198nm,0.3s
BRZS                              eS     S      07 09 48.6 -3.9
DANN  Dangsing          13.84 122 eP     Pn     07 07 23.9 -1.7
      comp=Z,515nm,0.4s
DANN                              eS     S      07 09 48.6  -11
KOLN  Koldanda          14.10 124 eP     Pn     07 07 27.1 -1.7
      comp=Z,928nm,0.8s
BHPL  Bhopal            14.51 154 eP     Pn     07 07 32.8 -0.8
GKN   Gorkha            14.66 121 eP     Pn     07 07 33.9 -1.6
      comp=Z,933nm,0.5s
GKN                               eS     S      07 10 08.9 -9.2
AB31  Akbulak array     14.89 332  P     Pn     07 07 35.0 -3.0
      comp=Z,518nm,0.7s,baz=144,slow=11,SNR=4877
AB31  Akbulak array     14.89 332 i P    Pn     07 07 36.2 -1.8
AB31                               pmax  pmax
      comp=Z,518nm,0.6s
ABKAR Akbulak array     14.89 332 eP     Pn     07 07 36.2 -1.8
WMQ   Urumqi            15.05  56  P     P      07 07 40.5  0.0
WMQ                                sP    sP     07 08 33.9 -8.6
WMQ                                S     S      07 10 23.1 -3.7
WMQ                                pmax  pmax
      comp=Z,390nm,0.9s
WMQ                                pmax  pmax
      comp=Z,1µm,3.7s
WMQ                                LR    LR
      comp=Z,550nm,5.1s
WMQ                                LR    LR
      comp=Z,1µm,5.3s
WMQ                                LR    LR
      comp=Z,740nm,9.1s
DMN   Daman             15.23 121 eP     Pn     07 07 40.8 -1.8
      comp=Z,376nm,0.4s
KKN   Kakani            15.23 121 eP     Pn     07 07 40.8 -1.8
      comp=Z,925nm,0.6s
KKN                               eS     S      07 10 22.3 -9.2
KURBB Kurchatov Arra    15.27  20  P     Pn     07 07 40.7 -1.9
      comp=Z,0.8nm,0.3s,baz=208,slow=12,SNR=43
KURBB                              S     S      07 10 21.4  -10
      baz=211,slow=15,SNR=3.1
ZSN   Zaisan            15.29  40  P     Pn     07 07 41.5 -1.4
      comp=Z,60nm,1.0s
ZSN   Zaisan            15.29  40 eP     Pn     07 07 41.1 -1.7
ZSN                               eS     S      07 10 28.2 -3.9
ZSN                                pmax  pmax
      comp=Z,27nm,0.9s
ZSN   Zaisan            15.29  40 eP     Pn     07 07 41.2 -1.7
      comp=Z,27nm,0.9s
ZSN                               eS     S      07 10 28.3 -3.9
KURK  Kurchatov         15.38  20 eP     Pn     07 07 42.1 -1.8
      comp=Z,79nm,0.8s
KURK  Kurchatov         15.38  20 ⇑P     Pn     07 07 42.4 -1.5
      comp=Z,124nm,1.1s
KURK  Kurchatov         15.38  20 i P    Pn     07 07 41.5 -2.4
KURK                               pmax  pmax
      comp=Z,124nm,1.1s
PKIN  Phulchoki         15.45 121 eP     Pn     07 07 44.3 -1.0
      comp=Z,875nm,0.6s
PKI   Pulchoki          15.46 121 eP     Pn     07 07 43.8 -1.7
      comp=Z,1µm,0.7s
GUN   Gumba             15.58 119 eP     P      07 07 45.4 -1.4
      comp=Z,2µm,0.9s
SEM   Semipalatinsk     15.60  24  P     Pn     07 07 54.7 +7.9
      comp=Z,145nm,0.6s
JBP   Jabalpur          15.62 146⇑eP     P      07 07 46.7 -0.2
JBP                               ex     x      07 10 30.1
JIRN  Jiri              15.95 119 eP     P      07 07 50.4 -0.5
      comp=Z,840nm,0.4s
JIRN                              eS     S      07 10 39.0 -8.9
MDH   Madha             16.48 231 i P    P      07 07 55.7 -0.7
      SNR=33
BVA0  Borovoye Array    16.54 360  P     P      07 07 56.8 +0.1
      comp=Z,6.7nm,0.8s,baz=168,slow=17,SNR=951
BVA0  Borovoye Array    16.54 360  P     P      07 07 56.8 +0.1
BVA0                               S     S      07 10 57.3 -1.6
BVA0                               pmax  pmax
      comp=Z,7.0nm,0.7s
BVA0                               smax  smax
      comp=N,6.0nm,1.2s
BVAR  Borovoye Array    16.54 360  P     Pn     07 07 57.3 -0.5
      comp=N,33nm,0.3s,baz=179,slow=13,SNR=320
BVAR                               S     S      07 10 57.6 -1.3
      comp=N,4.8nm,0.3s,baz=174,slow=21,SNR=4.5
BRVK  Borovoye          16.57 360 eP     P      07 07 57.5 +0.5
      comp=N,412nm,0.6s
BRVK  Borovoye          16.57 360c iP    P      07 07 57.5 +0.5
AKTO  Aktyubinsk        16.58 331  P     Pn     07 07 58.1 -0.2
      comp=N,68nm,0.3s,baz=147,slow=12,SNR=2874
AKTO                               S     S      07 10 56.0 -3.9
      baz=251,slow=23,SNR=3.1
AKTO  Aktyubinsk        16.58 331 ⇑P     P      07 07 56.3 -1.0
      comp=N,2µm,0.8s
AKTO  Aktyubinsk        16.58 331 i P    P      07 07 57.7 +0.5
AKTO                               pmax  pmax
      comp=Z,2µm,0.8s
WSAR  Wadi Sarin        16.71 221  P     Pn     07 07 59.6 -0.6
      comp=Z,25nm,0.3s,baz=58,slow=9.2,SNR=87
WSAR                               ScP   ScP    07 15 50.2 -0.4
      comp=Z,0.8nm,0.3s,baz=146,slow=1.3,SNR=5.5
UOSS  Minazif           16.80 231 eP     P      07 07 58.6 -1.3
      comp=Z,450nm,0.8s
UOSS  Minazif           16.80 231 i P    P      07 08 00.3 +0.4
      SNR=67
HATD  Hatta, Dubai      16.93 231 i Pn   P      07 08 02.0 +0.7
      SNR=54
NGP   Nagpur            17.02 152 eP     P      07 08 02.4 +0.1
NGP                               ex     x      07 11 03.8
ASHO  Ashiyiah          17.08 230 i Pn   P      07 08 03.7 +0.7
      SNR=119
NAZ   Nazwa, Dubai      17.11 232 i P    P      07 08 03.9 +0.6
      SNR=162
FAQ   Al Faqa, Dubai    17.32 232 i P    P      07 08 06.1 +0.5
      SNR=67
LKRN  Lenkeran, Azer    17.33 284  P     P      07 08 06.4 +0.8
ASUD  Al Ashush, Dub    17.58 232 i P    P      07 08 09.2 +0.8
      SNR=93
BOM   Bombay            17.65 173 i x    P      07 08 03.8 -5.3
BOM                               ex     x      07 11 04.8
GTK   Tadong            17.88 116 eP     Pn     07 08 13.6 -0.4
POO   Poona             18.14 170 eP     P      07 08 13.8 -0.7
POO                                IAmb  IAmb   07 08 16.9
      comp=Z,122nm,1.0s
BOK   Bokaro            18.35 129 eP     P      07 08 17.3 +0.6
BOK                                IAmb  IAmb   07 08 18.8
      comp=Z,103nm,0.7s
AKT   Akhty             18.35 293 eP     P      07 08 17.3 +0.5
AKT                               eS     S      07 11 36.8 +1.3
AKT                                pmax  pmax
      comp=Z,61nm,0.8s
SEKA  Sheki             18.71 292  P     P      07 08 21.9 +1.3
MNGR  Mingechevir, A    18.75 290  P     P      07 08 22.1 +1.2
MAK   Makhachkala       18.78 297 eP     P      07 08 19.7 -1.6
MAK                               eS     S      07 11 42.7 -1.0
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MAK                                pmax  pmax
      comp=Z,313nm,1.4s
MAK                                MLR   MLR
      comp=Z,200nm,13.0s
ZKTA  Zakatala          19.20 293  P     P      07 08 26.7 +0.9
GANJ  Ganja             19.32 290  P     P      07 08 27.1  0.0
DDFL  Dedoflistskaro    19.55 292 i P    P      07 08 28.2 -1.4
DHUB  DHUBRI            19.65 117 eP     P      07 08 32.1 +1.4
NAX   Nakhchivan        19.90 285  P     P      07 08 35.3 +1.9
GROC  Groznyy           20.06 297 eP     P      07 08 35.3 +0.3
GROC                              e*PP   pP     07 09 08.9 -0.5
GROC                              e*SP   sP     07 09 33.1 -3.0
GROC                              eS     S      07 12 10.5 +1.8
GROC                              e             07 12 38.8
GROC                               pmax  pmax
      comp=Z,478nm,1.3s
ZAA0  Zalesovo Array    20.10  25 eP     P      07 08 35.3 -0.1
      comp=Z,176nm,0.6s
ZAA0  Zalesovo Array    20.10  25 ⇑P     P      07 08 35.2 -0.1
      comp=Z,38nm,0.9s
ZALV  Zalesovo Beam     20.10  25  P     P      07 08 35.2 -0.1
      comp=Z,147nm,0.4s,baz=220,slow=11,SNR=347
ZALV                               S     S      07 12 07.5 -1.8
      comp=Z,78nm,0.8s,baz=216,slow=18,SNR=6.7
ZAA1  Zalesovo Array    20.11  25 eP     P      07 08 35.2 -0.2
TAWA  Tawang            20.16 110 eP     P      07 08 36.8 +0.3
HYB   Hyderabad         20.30 157⇓iP     P      07 08 38.0 +0.2
      comp=Z,300nm,1.0s
HYB                               eS     S      07 12 11.0 -2.8
HYB   Hyderabad         20.30 157 eP     P      07 08 38.6 +0.8
GNI   Garni             20.49 288 eP     P      07 08 42.4 +2.6
      comp=Z,151nm,0.9s
GNI   Garni             20.49 288 i P    P      07 08 42.0 +2.2
      SNR=18
GNI   Garni             20.49 288c iP    P      07 08 42.2 +2.4
GNI                                pmax  pmax
      comp=Z,490nm,0.9s
BTNK  Botanikuri        20.56 292  P     P      07 08 42.3 +1.9
BTNK  Botanikuri        20.56 292 i P    P      07 08 42.7 +2.3
BTNK                               IAML_P
      comp=Z,103nm,0.2s
TBLG  Delisi            20.61 293  P     P      07 08 42.7 +1.8
TBLG  Delisi            20.61 293 i P    P      07 08 43.4 +2.5
TBLG                               IAML_P
      comp=Z,4µm,0.6s
GUWA  GUWAHATI          20.79 114 eP     P      07 08 43.9 +1.1
GUWA                               IAmb  IAmb   07 08 50.5
      comp=Z,97nm,1.2s
KZRT  Kazreti           20.83 292  P     P      07 08 44.7 +1.4
KZRT  Kazreti           20.83 292 i P    P      07 08 45.5 +2.3
BWNR  Bhubaneshwar      20.98 136 eP     P      07 08 46.0 +1.0
GOA   Goa               21.12 171 eP     P      07 08 44.7 -1.7
SHL   Shillong          21.29 115 eP     P      07 08 48.9 +0.6
      comp=Z,159nm,0.6s
SHL   Shillong          21.29 115 eP     P      07 08 48.9 +0.6
SHL                                pmax  pmax
      comp=Z,159nm,0.6s
SHL   Shillong          21.29 115 eP     P      07 08 48.9 +0.6
SHL                               ex     x      07 12 32.0
ZEI   Tsey              21.36 295 eP     P      07 08 47.7 -1.2
ZEI                                pmax  pmax
      comp=Z,60nm,0.8s
TEZP  TEZPUR            21.38 111 eP     P      07 08 49.0 +0.1
HAKT  HAKKARI           21.38 281 i P    P      07 08 50.1 +0.9
HAKT                               IAML_P
      comp=Z,7.3nm,0.3s
SVE   Sverdlovsk        21.39 345d iP    P      07 08 49.1 +0.3
SVE                               eS     S      07 12 34.8 +2.3
SVE                                pmax  pmax
      comp=Z,501nm,1.1s
ARU   Arti              21.51 342  P     P      07 08 50.6 +0.6
      comp=Z,159nm,0.6s,baz=154,slow=8.5,SNR=254
ARU                                S     S      07 12 37.3 +2.9
      comp=Z,3.1nm,0.2s,baz=322,slow=23,SNR=1.2
ARU                                ScP   ScP    07 15 59.9 -0.9
      comp=Z,9.4nm,0.6s,baz=162,slow=19,SNR=3.5
ARU   Arti              21.51 342 eP     P      07 08 49.5 -0.6
      comp=Z,968nm,1.0s
ARU                               eScP   ScP    07 15 59.9 -0.9
ARU   Arti              21.51 342c iP    P      07 08 50.2 +0.2
ARU                                             07 09 25.8
ARU                                S     S      07 12 38.1 +3.8
AKH   Akhalkalaki       21.51 291 eP     P      07 08 52.6 +2.1
      comp=Z,294nm,1.4s
AKH   Akhalkalaki       21.51 291 eP     P      07 08 52.6 +2.1
AKH                                pmax  pmax
      comp=Z,294nm,1.4s
NCK   Nalchik           21.69 297⇓iP     P      07 08 52.4 +0.4
NCK                                pmax  pmax
      comp=Z,111nm,1.0s
ZIRO  ZIRO              21.70 108 eP     P      07 08 52.8 +0.3
VIS   Vishakhapatnam    21.88 145 i x    P      07 09 06.4  +12
VIS                               i x    x      07 13 03.2
EATA  Eleskirt          22.22 287 i P    P      07 09 00.5 +3.0
EATA                               IAML_P
      comp=Z,8.3nm,0.3s
KBZ   Khabaz            22.23 297  P     P      07 08 57.0 -0.1
      comp=Z,27nm,1.0s,baz=121,slow=8.7,SNR=22
KBZ                                S     S      07 12 51.0 +5.0
      comp=Z,12nm,1.1s,baz=235,slow=23,SNR=0.9
NEY   Neytrino          22.28 296⇓iP     P      07 09 00.0 +2.1
NEY                                pmax  pmax
      comp=Z,45nm,2.2s
GOF   Gofitskoye        22.39 301⇑iP     P      07 08 59.5 +0.9
GOF                                pmax  pmax
      comp=Z,479nm,1.3s
BELO  BELONIA           22.41 120 eP     P      07 09 00.1 +1.1
KVAR  Kislovodsk Arr    22.41 298  P     P      07 08 59.9 +0.9
      comp=Z,20nm,0.7s,baz=267,slow=23,SNR=4.1
KVAR                               S     S      07 12 54.0 +4.7
      comp=Z,29nm,1.0s,baz=136,slow=9.8,SNR=1.7
KIV   Kislovodsk        22.42 298 eP     P      07 08 58.5 -0.5
      comp=Z,259nm,1.3s
KIV   Kislovodsk        22.42 298 i P    P      07 08 59.7 +0.7
      SNR=7.3
KIV   Kislovodsk        22.42 298 eP     P      07 08 59.3 +0.3
KIV                               eS     S      07 12 51.4 +2.0
KIV                                pmax  pmax
      comp=Z,234nm,1.1s
KIV                                pmax  pmax
      comp=Z,198nm,3.5s
KIV                                MLR   MLR
      comp=Z,240nm,14.0s
SILR  SILCHAR           22.42 115 eP     P      07 08 59.2 +0.1
DAGI  Agillar           22.68 290 i P    P      07 09 03.4 +1.9
DAGI                               IAML_P
      comp=Z,306nm,0.6s
SRTM  Siirt_Merkez      22.75 282 i P    P      07 09 03.6 +1.5
SRTM                               IAML_P
      comp=Z,573nm,0.6s
MOKO  MOKOCHONG         22.83 110 eP     P      07 09 05.2 +2.2
DBAD  Bademkaya         22.84 290 i P    P      07 09 05.3 +2.4
DBAD                               IAML_P
      comp=Z,466nm,0.7s
KOHI  KOHIMA            22.85 111 eP     P      07 09 05.6 +2.4
BRDH  Bariadhala        22.92 121  P     P      07 09 04.4 +0.8
      comp=Z,51nm,0.4s,baz=265,slow=19,SNR=2.6
BRDH                               pP    pP     07 09 43.1 +1.6
      comp=Z,130nm,0.5s,baz=24,slow=1.8,SNR=2.8
IMP   Imphal            23.23 113 eP     P      07 09 08.6 +2.1
IMP                                IAmb  IAmb   07 09 11.9
GTA   Gaotai            23.27  74 ⇓P     P      07 09 08.7 +1.9
GTA                                pP    pP     07 09 50.1 +4.0
GTA                                sP    sP     07 10 14.2 +1.2
GTA                                S     S      07 13 03.7 +0.3
GTA                                SS    SS     07 14 12.1  -37
GTA                                pmax  pmax
      comp=Z,14nm,1.1s
GTA                                pmax  pmax
      comp=Z,140nm,8.7s
GTA                                LR    LR
      comp=Z,380nm,11.1s
GTA                                LR    LR
      comp=Z,320nm,9.5s
GTA                                LR    LR
      comp=Z,210nm,12.7s
BNGL  BINGOL            23.28 285 i P    P      07 09 09.5 +2.5
SAIH  SAIHA             23.98 119 eP     P      07 09 14.8 +1.4
SAIH                               IAmb  IAmb   07 09 17.8
      comp=Z,60nm,0.9s
SOC   Sochi             24.50 296 eP     P      07 09 16.7 -1.0
SOC                               eS     S      07 13 21.9 -0.6
TNCL  Tunceli-Merkez    24.52 286 i P    P      07 09 18.8 +0.7
TNCL                               IAML_P
      comp=Z,152nm,0.2s
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KELT  Kelkit            24.70 288 i P    P      07 09 22.7 +2.9
KELT                               IAML_P
      comp=Z,202nm,0.7s
MDRS  Chennai           24.92 157 eP     P      07 09 21.9 +0.1
RAYN  Ar Rayn           25.11 246 eP     P      07 09 23.3 -0.2
      comp=Z,204nm,1.1s
RAYN  Ar Rayn           25.11 246 i P    P      07 09 23.5 +0.1
      SNR=130
RAYN  Ar Rayn           25.11 246 eP     P      07 09 23.3 -0.2
RAYN                               pmax  pmax
      comp=Z,204nm,1.1s
KIRV  Kirov             26.07 335  P     P      07 09 32.6 +1.0
      comp=Z,468nm,0.6s,baz=133,slow=3.8,SNR=150
KIRV                               S     S      07 13 47.7 +0.8
      comp=Z,19nm,0.3s,baz=101,slow=1.2,SNR=12
ANN   Anapa             26.27 299 eP     P      07 09 33.6  0.0
ANN                               e*PP   pP     07 10 17.3 +1.9
ANN                                pmax  pmax
      comp=Z,184nm,2.4s
MOY   Mondy             26.41  45 eP     P      07 09 37.5 +2.5
MOY                               e             07 10 21.9
MOY                                pmax  pmax
      comp=Z,29nm,1.5s
VORD  Divnogorie        26.54 313 eP     P      07 09 36.0 +0.1
VORD                               pmax  pmax
      comp=Z,60nm,1.1s
VSR   Storozhevoye      26.70 313 eP     P      07 09 37.2 -0.2
VSR                                pmax  pmax
      comp=Z,110nm,1.1s
LZH   Lanzhou           26.83  81 eP     P      07 09 40.5 +1.5
LZH                                pP    pP     07 10 22.7 +0.6
LZH                                S     S      07 14 05.3 +5.5
LZH                                sS    sS     07 15 15.5 -1.3
LZH                                SS    SS     07 15 36.5  -25
LZH                                pmax  pmax
      comp=Z,17nm,1.0s
LZH                                pmax  pmax
      comp=Z,140nm,4.8s
LZH                                LR    LR
      comp=Z,380nm,13.7s
LZH                                LR    LR
      comp=Z,340nm,14.4s
LZH                                LR    LR
      comp=Z,470nm,14.6s
VORR  Voronezh          26.85 314 eP     P      07 09 39.0 +0.3
LPSR  Galich'ya Gora    27.37 316 eP     P      07 09 43.5 +0.2
LPSR                               pmax  pmax
      comp=Z,240nm,0.9s
TLY   Talaya            27.96  47 eP     P      07 09 48.6 -0.1
      comp=Z,20nm,0.6s
TLY   Talaya            27.96  47 eP     P      07 09 51.5 +2.9
TLY                               e             07 10 32.7
TLY                               eS     S      07 14 15.5 -1.4
TLY                               e             07 15 51.1
TLY                                pmax  pmax
      comp=Z,47nm,0.7s
ASF   Jabal al Asfar    27.98 271  P     P      07 09 49.6 +0.5
      comp=Z,3.1nm,0.9s,baz=43,slow=10,SNR=4.5
CD2   Chengdu           28.16  92⇑iP     P      07 09 52.8 +2.1
CD2                                pP    pP     07 10 36.9 +3.3
CD2                                S     S      07 14 22.8 +2.3
CD2                                sS    sS     07 15 36.0 -1.7
CD2                                pmax  pmax
      comp=Z,20nm,1.0s
CD2                                pmax  pmax
      comp=Z,150nm,4.6s
CD2                                LR    LR
      comp=Z,320nm,10.6s
CD2                                LR    LR
      comp=Z,220nm,7.6s
CD2                                LR    LR
      comp=Z,350nm,8.4s
TRD   Trivandrum        28.47 166 ex     P      07 09 46.4 -7.1
SIM   Simferopol'       28.63 299d iP    P      07 10 10.0  +15
SIM                                             07 10 54.3
SIM                               eS     S      07 14 33.6 +6.1
SIM                                pmax  pmax
      comp=Z,20nm,0.8s
SIM                                pmax  pmax
      comp=Z,47nm,8.9s
SONA0 Songino Array     28.69  55 eP     P      07 09 56.4 +1.1
SONA0                             epP    pP     07 10 40.0 +1.3
SONA0                             ePcP   PcP    07 12 58.7 -1.5
SONM  Songino Array     28.69  55  P     P      07 09 56.4 +1.1
      comp=Z,7.9nm,0.5s,baz=265,slow=9.2,SNR=18
SONM                               pP    pP     07 10 40.0 +1.3
      comp=Z,19nm,0.8s,baz=252,slow=9.9,SNR=7.3
SONM                               PcP   PcP    07 12 58.7 -1.5
      comp=Z,5.8nm,0.9s,baz=274,slow=4.8,SNR=2.6
MMAI  Mount Meron Ar    28.93 274  P     P      07 09 58.9 +1.4
      comp=Z,1.0nm,0.3s,baz=62,slow=10,SNR=5.6
MMAI                               PcP   PcP    07 13 01.4 +0.4
      comp=Z,5.7nm,0.4s,baz=73,slow=6.4,SNR=8.5
MMAI                               ScP   ScP    07 16 21.9 -0.6
      comp=Z,2.6nm,0.5s,baz=86,slow=5.9,SNR=4.5
BR101 Keskin Array S    29.03 288 epP    pP     07 10 42.5 +1.8
BR101                             ePP    sP     07 11 04.7 -0.2
BR101                             ePcP   PcP    07 13 00.7 -0.6
BR101                             eScP   ScP    07 16 21.8 -1.1
BR131 Keskin Array S    29.03 288 eP     P      07 09 58.4  0.0
      comp=Z,18nm,1.1s
BRTR  Keskin Array B    29.03 288  P     P      07 09 59.1 +0.6
      comp=Z,6.5nm,0.7s,baz=103,slow=9.3,SNR=23
BRTR                               pP    pP     07 10 42.5 +1.8
      comp=Z,4.8nm,0.8s,baz=99,slow=8.2,SNR=2.3
BRTR                               PP    sP     07 11 04.7 -0.2
      comp=Z,13nm,1.0s,baz=97,slow=10,SNR=5.1
BRTR                               PcP   PcP    07 13 00.7 -0.6
      comp=Z,3.1nm,0.7s,baz=151,slow=4.7,SNR=5.4
BRTR                               ScP   ScP    07 16 21.7 -1.1
      comp=Z,1.6nm,0.7s,baz=107,slow=4.8,SNR=4.3
ULN   Ulaanbaatar       29.13  56 eP     P      07 10 00.2 +1.0
ULN                               e             07 10 00.4
ULN   Ulaanbaatar       29.13  56ceP     P      07 09 59.7 +0.5
ULN                                pmax  pmax
      comp=Z,7.0nm,0.9s
MOS   Moscow            29.40 321 eP     P      07 09 59.6 -1.7
MOS                               e             07 11 02.9
MOS                               eS     S      07 14 38.0 -1.3
MOS                               e*SS   sS     07 15 50.4 -6.2
MOS                                pmax  pmax
      comp=Z,600nm,1.2s
PRGR  Permogore         29.61 336⇑iP     P      07 10 03.7 +0.7
OBN   Obninsk           29.67 320  P     P      07 10 04.2 +0.5
      comp=Z,54nm,0.6s,baz=96,slow=2.1,SNR=64
OBN   Obninsk           29.67 320 eP     P      07 10 03.7 +0.1
      comp=Z,264nm,0.7s
OBN   Obninsk           29.67 320c iP    P      07 10 04.4 +0.8
OBN                               e             07 11 06.2
OBN                               eS     S      07 14 43.7 +0.2
OBN                               e*SS   sS     07 15 59.7 -1.1
OBN                                pmax  pmax
      comp=Z,613nm,1.5s
KMI   Kunming           29.81 103  P     P      07 10 06.7 +1.2
KMI                                pmax  pmax
      comp=Z,21nm,0.5s
KMI                                LR    LR
      comp=Z,99nm,3.8s
KMI                                LR    LR
      comp=Z,120nm,4.4s
KMI                                LR    LR
      comp=Z,140nm,6.1s
HRFI  Mount Harif       30.20 268  P     P      07 10 11.3 +2.6
      comp=Z,32nm,1.9s
EIL   Elat              30.41 267  P     P      07 10 11.6 +1.1
      comp=Z,15nm,0.9s,baz=71,slow=7.0,SNR=8.3
CHTO  Chiang Mai        30.59 117 eP     P      07 10 13.7 +1.5
      comp=Z,24nm,0.7s
CHTO  Chiang Mai        30.59 117 eP     P      07 10 13.7 +1.5
CHTO                               pmax  pmax
      comp=Z,24nm,0.7s
CMMT  Chiang Mai        30.59 117  P     P      07 10 17.6 +5.4
      comp=Z,4.4nm,0.6s,comp=Z,341nm
DGPR  DIGLIPUR          30.74 133 eP     P      07 10 14.3 +0.9
CMAR  Chiang Mai Arr    30.82 118  P     P      07 10 15.0 +0.8
      comp=Z,3.1nm,0.4s,baz=297,slow=7.8,SNR=11
CMAR                               pP    pP     07 10 58.0 +0.2
      comp=Z,25nm,0.9s,baz=305,slow=9.0,SNR=5.8
CMAR                               PP    PP     07 11 26.5 -1.8
      comp=Z,18nm,0.9s,baz=327,slow=9.4,SNR=4.5
CMAR                               PcP   PcP    07 13 07.0 +0.9
      comp=Z,4.4nm,0.7s,baz=302,slow=4.6,SNR=3.3
CMAR                               ScP   ScP    07 16 27.8 -1.0
      comp=Z,7.9nm,0.8s,baz=296,slow=5.2,SNR=9.3
BTO   Baotou            31.02  70 eP     P      07 10 20.2 +4.3
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XAN	Xi'an	31.35	83	P	P	07 10 19.6	+0.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,84nm,6.9s						
XAN				LR	LR		
	comp=Z,150nm,7.8s						
XAN				LR	LR		
	comp=Z,180nm,11.3s						
XAN				LR	LR		
	comp=Z,170nm,10.2s						
HHC	Hu-ho-hao-te	32.16	69	eP	P	07 10 26.2	+0.3
HHC				S	S	07 15 23.7	+0.7
HHC				sS	sS	07 16 40.8	+0.2
HHC				SS	SS	07 17 28.1	-21
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,22nm,4.8s						
GYA	Guiyang	32.28	98	⇑iP	P	07 10 28.7	+1.6
GYA				PP	PP	07 11 47.5	+3.1
GYA				PcP	PcP	07 13 10.6	+0.5
GYA				S	S	07 15 25.6	+0.5
GYA				ScP	ScP	07 16 32.7	-1.1
GYA				SS	SS	07 17 38.9	-12
GYA				ScS	ScS	07 20 32.8	-0.8
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,80nm,4.4s						
UTTA	Uttaradit	32.44	117	P	P	07 10 30.0	+1.7
	comp=Z,33µm,0.5s,comp=Z,405µm						
MILM	Milestii Mici	32.46	302	⇓iP	P	07 10 29.7	+1.5
KIS	Kishinev	32.46	302	eP	P	07 10 27.0	-1.2
	comp=Z,150nm,1.8s						
KIS				esP	sP	07 11 34.0	-0.9
KIS	Kishinev	32.46	302	ePP	PP	07 11 42.0	-3.9
KIS				eS	S	07 15 25.0	-2.2
KIS				eSS	SS	07 17 46.0	-6.4
KIS	Kishinev	32.46	302	eP	P	07 10 27.0	-1.2
KIS				e*SP	sP	07 11 34.0	-0.9
KIS				e		07 11 42.0	
KIS				eS	S	07 15 25.0	-2.2
KIS				e		07 17 38.0	
KIS				pmax	pmax		
	comp=Z,150nm,1.8s						
AKASG	Malin Array Be	32.62	309	P	P	07 10 29.4	-0.2
	comp=Z,24nm,0.6s,baz=86,slow=7.4,SNR=92						
AKASG				pP	pP	07 11 13.8	+1.5
	comp=Z,30nm,1.1s,baz=93,slow=8.3,SNR=2.4						
AKASG				PP	PnPn	07 11 44.5	-1.7
	comp=Z,51nm,0.8s,baz=88,slow=11,SNR=7.6						
AKASG				ScP	ScP	07 16 33.0	-1.4
	comp=Z,7.5nm,0.8s,baz=77,slow=3.7,SNR=7.7						
TIRR	Tirgusor	32.68	297	⇑iP	P	07 10 30.4	+0.3
TIRR	Tirgusor	32.68	297	P	P	07 10 30.4	+0.3
SLVN	Son La	32.74	108	eP	P	07 10 32.2	+1.2
	comp=Z,11nm,0.8s						
CFR	Carcaliu	32.87	299	⇓iP	P	07 10 32.5	+0.7
CFR	Carcaliu	32.87	299	P	P	07 10 33.5	+1.7
CFR				pmax	pmax		
	comp=Z,21nm,1.4s						
TLB	Topalu	32.94	298	⇑iP	P	07 10 33.6	+1.2
TLB	Topalu	32.94	298	P	P	07 10 33.6	+1.2
PBKT	Sadao Pong	33.52	118	P	P	07 10 40.4	+2.8
	comp=Z,6.4nm,0.8s,comp=Z,873nm						
SRDT	SRDT	33.77	123	P	P	07 10 43.5	+3.6
	comp=Z,16nm,0.9s						
VRI	Vrincioaia	33.87	300	⇓iP	P	07 10 42.5	+2.1
VRI	Vrincioaia	33.87	300	P	P	07 10 42.7	+2.3
VRI				pmax	pmax		
	comp=Z,24nm,1.3s						
PLOR	Plostina	33.92	300	⇓iP	P	07 10 42.9	+2.0
PLOR	Plostina	33.92	300	P	P	07 10 42.9	+2.0
TESR	Tescani	33.93	301	⇓iP	P	07 10 42.2	+1.3
CIT	Chita	33.98	49	eP	P	07 10 42.7	+1.3
CIT				e		07 11 26.9	
CIT				e		07 12 01.1	
ISR	Istrita	34.00	299	P	P	07 10 45.7	+4.1
ISR				pmax	pmax		
	comp=Z,35nm,0.9s						
NONG	Nongkai	34.12	114	P	P	07 10 44.1	+1.2
	comp=Z,0.4nm,0.7s,comp=Z,70nm						
MICGM	Minsk	34.21	315	⇓eP	P	07 10 43.0	-0.2
MICGM				PM		07 10 44.0	
	comp=Z,0.5nm,1.0s						
MICGM				PM		07 10 44.0	
	comp=E,0.6nm,1.0s						
MNK	Minsk	34.21	315	⇓eP	P	07 10 43.0	-0.2
MNK				pmax	pmax		
	comp=E,570nm,1.0s						
MNK				pmax	pmax		
	comp=Z,510nm,1.0s						
HORU	Horodok	34.22	306	P	P	07 10 44.0	+0.6
PRAR	RASCA	34.24	303	⇑iP	P	07 10 45.3	+1.7
BIZ	Bicaz	34.31	302	⇓iP	P	07 10 45.6	+1.4
MLR	Muntele Rosu	34.42	299	P	P	07 10 47.1	+1.9
	comp=Z,35nm,0.9s,baz=62,slow=1.5,SNR=29						
MLR				PP	PP	07 12 08.2	+0.6
	comp=Z,59nm,1.1s,baz=117,slow=1.6,SNR=5.5						
MLR	Muntele Rosu	34.42	299	⇓iP	P	07 10 47.2	+1.9
PUL	Pulkovo	34.68	325	eP	P	07 10 47.2	+0.1
PUL				IAmb	IAmb	07 10 49.1	
	comp=Z,476nm,0.7s						
PUL	Pulkovo	34.68	325	ceP	P	07 10 48.3	+1.1
PUL				pmax	pmax		
	comp=Z,444nm,0.6s						
CHAI	Chaiyaphum	34.69	118	P	P	07 10 50.6	+2.9
	comp=Z,19µm,0.7s						
KARP	Karpathos	34.83	282	eP	P	07 10 48.5	-0.3
	comp=Z,125nm,0.9s						
NACGM	Naroch	34.93	316	e	P	07 10 48.0	-1.3
BURAR	Bucovina Array	34.94	303	⇓iP	P	07 10 50.9	+1.2
BURAR	Bucovina Array	34.94	303	P	P	07 10 50.9	+1.2
KHON	Khomkaen	35.00	116	P	P	07 10 53.6	+3.2
	comp=Z,62µm,0.7s						
MTUR	Matau	35.04	299	⇓iP	P	07 10 52.2	+1.6
MTUR	Matau	35.04	299	P	P	07 10 52.1	+1.5
VOIR		35.05	299	⇓iP	P	07 10 52.0	+1.4
VOIR		35.05	299	P	P	07 10 51.8	+1.2
VOIR				pmax	pmax		
	comp=Z,13nm,0.6s						
IDID	Didziasalis	35.05	317	eP	P	07 10 50.7	+0.3
IDID				IAmb	IAmb	07 10 52.7	
	comp=Z,51nm,0.7s						
KSV	Kosov	35.06	304	P	P	07 10 50.1	-0.5
PHET	Kaeng Krachan	35.15	124	P	P	07 10 54.9	+3.2
	comp=Z,44µm,0.5s,comp=Z,652µm						
ATD	Arta Tunnel	35.18	232	eP	P	07 10 53.6	+1.6
	comp=Z,78nm,1.1s						
ARR	Arges	35.34	299	⇓iP	P	07 10 54.6	+1.5
IIGN	Ignalina	35.34	316	eP	P	07 10 53.4	+0.5
IIGN				IAmb	IAmb	07 10 55.5	
	comp=Z,101nm,1.1s						
IZAR	Zarasai	35.43	317	eP	P	07 10 54.1	+0.5
IZAR				IAmb	IAmb	07 10 56.0	
	comp=Z,73nm,0.9s						
SKNT	Sakolnakorn	35.43	114	P	P	07 10 54.9	+0.8
	comp=Z,23nm,0.8s						
ISAL	Salakas	35.45	317	eP	P	07 10 53.9	+0.1
ISAL				IAmb	IAmb	07 10 56.3	
	comp=Z,49nm,0.9s						
ARCR	ARCALIA	35.51	302	⇑iP	P	07 10 56.8	+2.3
BOD	Bodaibo	35.63	39	eP	P	07 10 56.0	+0.7
BOD				e		07 11 40.7	
BOD				pmax	pmax		
	comp=Z,53nm,1.3s						
BJI	Beijing	35.76	70	P	P	07 10 58.6	+2.0
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PANO	Nakornpanom	35.78	113	P	P	07 10 58.6	+1.5
	comp=Z,0.4nm,1.0s,comp=Z,42nm						
LVV	L'vov	35.83	307	eP	P	07 10 57.6	+0.5
MORS	Morshin	35.88	306	P	P	07 10 58.2	+0.7
KAAM	Kaadhehdhoo	35.89	176	eP	P	07 10 59.5	+1.5
	comp=Z,582nm,1.8s						
VSU	Vasula	35.93	322	eP	P	07 10 57.6	-0.2
VSU				IAmb	IAmb	07 10 59.8	
	comp=Z,824nm,1.0s						
VSU	Vasula	35.93	322	⇓iP	P	07 10 57.7	-0.1
LOT	Lotru	35.95	299	⇓iP	P	07 10 59.6	+1.3
VTS	Vitosha	36.55	294	eP	P	07 11 02.6	-0.9
	comp=Z,6.0nm,0.8s						
VTS	Vitosha	36.55	294	⇑iP	P	07 11 04.8	+1.3
VTS	Vitosha	36.55	294	eP	P	07 11 02.6	-0.9
VTS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DRGR		36.64	302	⇓iP	P	07 11 05.8	+1.7
DRGR		36.64	302	P	P	07 11 05.8	+1.7
GZR	Gura Zlata	36.65	299	⇓iP	P	07 11 05.0	+0.8
KWP	Kalwaria Pacla	36.67	306	eP	P	07 11 06.0	+1.7
IDI	Anoyia	36.69	282	P	P	07 11 04.0	-0.7
	comp=Z,19nm,0.8s,baz=60,slow=10,SNR=10						
TRPA	Tarpa	36.75	304	⇑iP	P	07 11 07.2	+2.3
TRPA	Tarpa	36.75	304	⇑eP	P	07 11 05.1	+0.2
TRPA				ePP	PP	07 12 32.1	-1.0
SUW	Suwalki	36.82	314	eP	P	07 11 05.9	+0.5
UZH	Uzhgorod	36.92	305	c iP	P	07 11 06.8	+0.5
UZH				i		07 12 36.9	
UZH				i S	S	07 16 36.8	+1.5
UZH				eSSS	SSS	07 19 21.8	
FIA1	FINESS Array S	37.26	326	eP	P	07 11 09.2	+0.3
	comp=Z,266nm,0.8s						
FINES	FINESS Array B	37.26	326	P	P	07 11 09.3	+0.4
	comp=Z,193nm,0.7s,baz=108,slow=10,SNR=566						
FINES				PP	PP	07 12 37.5	-0.9
	comp=Z,33nm,0.8s,baz=110,slow=10,SNR=3.7						
TIA	Tai'an	37.28	76	P	P	07 11 12.1	+2.5
TIA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
LVZ	Lovozero	37.31	339	eP	P	07 11 09.7	+0.2
	comp=Z,296nm,0.7s						
LVZ	Lovozero	37.31	339	c iP	P	07 11 09.6	+0.2
LVZ				pmax	pmax		
	comp=Z,198nm,0.6s						
SIRR	Siria	37.38	301	⇓iP	P	07 11 12.1	+1.8
MDVR	Moldovita	37.44	298	⇓iP	P	07 11 12.2	+1.3
STIP	Stip	37.45	293	i P	P	07 11 09.8	-1.0
BZS	Buzias	37.45	300	P	P	07 11 12.5	+1.6
LIT	Litokhoron	37.47	291	eP	P	07 11 11.6	+0.4
	comp=Z,17nm,1.1s						
LIT	Litokhoron	37.47	291	eP	P	07 11 11.6	+0.4
LIT				pmax	pmax		
	comp=Z,17nm,1.1s						
APA	Apatity	37.48	338	⇓iP	P	07 11 10.5	-0.3
APA				i *PP	pP	07 11 57.8	+3.3
APA				pmax	pmax		
	comp=Z,32nm,0.6s						
AGG	Agios Georgios	37.80	289	eP	P	07 11 14.3	+0.4
	comp=Z,34nm,1.6s						
AGG	Agios Georgios	37.80	289	eP	P	07 11 14.3	+0.4
AGG				pmax	pmax		
	comp=Z,34nm,1.6s						
SLIT	Slitere, Latvi	37.99	319	eP	P	07 11 14.4	-0.7
SLIT				IAmb	IAmb	07 11 15.6	
	comp=Z,613nm,0.9s						
AMBH	Ambrzfalva	38.03	301	CeP	P	07 11 17.1	+1.4
KECS	Kecovo	38.12	304	eP	P	07 11 19.4	+3.0
KECS				e		07 12 47.6	
KECS	Kecovo	38.12	304	eP	P	07 11 19.4	+3.0
KECS				ePP	PP	07 12 47.6	-0.4
NIE	Niedzica	38.24	306	eP	P	07 11 19.0	+1.6
ITM	Ithomi	38.52	286	eP	P	07 11 20.5	+0.5
	comp=Z,28nm,1.4s						
PSZ	Piszkesteto	38.52	303	⇓iP	P	07 11 21.5	+1.6
PSZ	Piszkesteto	38.52	303	P	P	07 11 21.5	+1.6
PSZ	Piszkesteto	38.52	303	eP	P	07 11 20.1	+0.2
PSZ				ePP	PP	07 12 57.1	+4.5
OJC	Ojcow	38.57	307	eP	P	07 11 20.8	+0.6
KLNR	Kaliningrad	38.62	314	d iP	P	07 11 21.2	+0.7
KLNR				pmax	pmax		
	comp=Z,154nm,0.7s						
LANS	Liptovska Anna	38.78	305	ePP	PP	07 12 54.2	-1.1
BUD	Budapest	39.13	303	⇑eP	P	07 11 25.1	+0.3
IGT	Igoumenitsa	39.21	290	P	P	07 11 27.5	+1.9
VYHS	Vyhne	39.21	304	eP	P	07 11 27.2	+1.7
VYHS				e		07 13 02.0	
VYHS	Vyhne	39.21	304	eP	P	07 11 27.2	+1.7
VYHS				ePP	PP	07 13 01.9	+2.0
MORH	Mrgy, Hungar	39.48	301	⇑eP	P	07 11 28.1	+0.4
MORH				ePP	PP	07 13 05.0	+2.3
CSKK	Cskako	39.66	303	ePP	PP	07 13 08.1	+3.4
FURI	Furi	39.84	234	eP	P	07 11 34.9	+3.4
	comp=Z,311nm,1.7s						
NJ2	Nanjing	39.90	82	eP	P	07 11 31.1	-0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIH	Tihany	39.94	302	eP	P	07 11 31.1	-0.4
TIH				ePP	PP	07 13 10.1	+2.4
BRY	Bratogost	39.94	296	P	P	07 11 34.6	+2.8
JAVC	Velka Javorina	39.97	305	eP	P	07 11 33.5	+1.7
JAVC				ePP	PP	07 13 07.7	-0.5
MORC	Moravsky Berou	40.03	306	eP	P	07 11 30.7	-1.6
	comp=Z,20nm,0.9s						
MORC	Moravsky Berou	40.03	306	⇓iP	P	07 11 33.7	+1.4
MORC	Moravsky Berou	40.03	306	eP	P	07 11 30.7	-1.6
MORC				pmax	pmax		
	comp=Z,20nm,0.9s						
MORC	Moravsky Berou	40.03	306	eP	P	07 11 33.1	+0.8
MORC				ePP	PP	07 13 08.9	+0.2
SKLT	Songkhla	40.10	129	P	P	07 11 35.1	+1.9
	comp=Z,14nm,1.0s						
MODS	Modra-Piesok	40.26	304	eP	P	07 11 34.6	+0.5
MODS				e		07 13 13.3	
MODS	Modra-Piesok	40.26	304	eP	P	07 11 34.6	+0.5
MODS				ePP	PP	07 13 13.3	+2.1
GKP	Gorka Klasztor	40.26	312	eP	P	07 11 35.1	+1.0
VRAC	Vranov	40.66	306	P	P	07 11 38.1	+0.6
	comp=Z,11nm,0.7s,baz=92,slow=8.5,SNR=23						
VRAC				pP	pP	07 12 23.8	+2.3
	comp=Z,4.7nm,0.5s,baz=100,slow=11,SNR=2.1						
VRAC				PP	PP	07 13 19.3	+3.8
	comp=Z,16nm,1.0s,baz=63,slow=8.3,SNR=6.0						
VRAC	Vranov	40.66	306	⇑iP	P	07 11 38.9	+1.5
VRAC	Vranov	40.66	306	eP	P	07 11 38.6	+1.2
VRAC				ePP	PP	07 13 15.9	+0.4
BEHE	Becsehely	40.74	301	eP	P	07 11 40.1	+2.0
BEHE				ePP	PP	07 13 18.0	+1.6
SOP	Sopron	40.78	303	P	P	07 11 41.3	+2.9
SOP	Sopron	40.78	303	⇑eP	P	07 11 38.0	-0.4
SOP				ePP	PP	07 13 19.0	+2.2
DPC	Dobruska-Polom	40.80	307	eP	P	07 11 39.8	+1.2
DPC				eS	S	07 17 28.5	-5.0
DPC				eSS	SS	07 20 37.7	-5.4
DPC	Dobruska-Polom	40.80	307	eP	P	07 11 39.8	+1.2
DPC				eS	S	07 17 28.5	-5.0
DPC				eSS	SS	07 20 37.7	-5.4
KRUC	Moravsky	40.80	305	eP	P	07 11 39.3	+0.7
KRUC				ePP	PP	07 13 17.4	+0.4
KSP	Ksiaz	40.81	308	eP	P	07 11 39.8	+1.2
OSTC	Ostas	40.87	308	eP	P	07 11 39.8	+0.7
OSTC				eSS	SS	07 20 49.1	+4.8
ARCES	ARCESS Array B	40.99	338	P	P	07 11 40.5	+0.6
	comp=Z,252nm,0.6s,baz=112,slow=8.6,SNR=1032						
ARCES				PP	PP	07 13 22.9	+4.2
	comp=Z,39nm,0.8s,baz=121,slow=8.9,SNR=4.9						
ARE0	ARCESS Array S	40.99	338	eP	P	07 11 40.9	+1.0
UPC	Upice	41.00	308	eP	P	07 11 41.2	+1.1
UPC	Upice	41.00	308	eP	P	07 11 41.2	+1.1
UPC				eSS	SS	07 20 50.3	+3.5
CONA	Conrad Observa	41.23	304	i P	P	07 11 42.8	+0.7
	comp=Z,24nm,1.1s,SNR=20						
TREC	Trest	41.39	306	eP	P	07 11 44.9	+1.6
TREC	Trest	41.39	306	eP	P	07 11 44.9	+1.6
KTK1	Kautokeino	41.46	336	eP	P	07 11 44.6	+1.0
ARSA	Arzberg	41.52	303	eP	P	07 11 45.0	+0.5
	comp=Z,5.8nm,1.1s						
GOPC	GO Pecny, Ondr	41.81	307	eS	S	07 17 49.1	+0.9
GOPC				eSS	SS	07 21 07.8	+5.1
PERS	Pernice	41.86	302	i P	P	07 11 47.9	+0.6
BOJS	Bojanci	41.91	300	i P	P	07 11 48.1	+0.6
BOJS				eS	S	07 17 51.6	+1.8
SOKA	Soboth	41.91	302	i P	P	07 11 48.3	+0.6
	comp=Z,21nm,1.1s,SNR=14						
PRU	Pruhonice	41.96	307	eP	P	07 11 48.7	+0.8
PRU				eS	S	07 17 41.7	-8.7
PRU				smax	smax		
	comp=N,11nm,1.2s						
PRU	Pruhonice	41.96	307	eP	P	07 11 48.7	+0.8
PRU				eS	S	07 17 41.7	-8.7
PRU				eSS	SS	07 21 10.6	+5.0
CN2	Changchun	41.99	62	eP	P	07 11 48.0	-0.2
CN2				PcP	PcP	07 13 38.8	-0.5
CN2				pmax	pmax		
	comp=N,10.0nm,0.6s						
HAMF	Hammerfest	42.08	339	eP	P	07 11 49.8	+1.2
OBKA	Obir	42.27	302	i P	P	07 11 51.4	+0.8
	comp=N,17nm,1.6s,SNR=5.7						
BRG	Berggiesshubel	42.30	308	eP	P	07 11 51.2	+0.6
	comp=N,26nm,1.0s						
BRG				esP	sP	07 13 01.0	+2.2
	comp=N,15nm,0.9s						
BRG				ePP	PP	07 13 31.1	-1.8
	comp=N,22nm,1.1s						
BRG				S	S	07 17 56.0	+0.7
BRG				SS	SS	07 21 11.0	-1.2
BRG	Berggiesshubel	42.30	308	eP	P	07 11 51.2	+0.6
BRG				e*SP	sP	07 13 01.0	+2.2
BRG				e		07 13 31.1	
BRG				S	S	07 17 56.0	+0.7
BRG				SS	SS	07 21 11.0	-1.2
BRG				pmax	pmax		
	comp=Z,26nm,1.0s						
BRG				pmax	pmax		
	comp=N,15nm,0.9s						
BRG				pmax	pmax		
	comp=Z,22nm,1.1s						
BRG				smax	smax		
	comp=N,3.0nm,0.6s						
MOA	Molln	42.31	304	i P	P	07 11 51.3	+0.5
	comp=N,19nm,1.1s,SNR=10						
LJU	Ljubljana	42.34	301	i P	P	07 11 51.8	+0.7
LJU				i PP	PP	07 13 35.6	+2.1
ZEA	Zeya	42.39	47	eP	P	07 11 52.8	+1.5
ZEA				e		07 12 38.4	
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
IPM	Ipoh	42.45	131	eP	P	07 11 52.4	+0.1
	comp=Z,122nm,1.3s						
PSI	Prapat	42.57	135	eP	P	07 11 52.3	-1.1
	comp=Z,31nm,0.8s						
PSI	Prapat	42.57	135	eP	P	07 11 52.3	-1.1
PSI				pmax	pmax		
	comp=Z,31nm,0.8s						
GERES	GERESS Array B	42.59	305	P	P	07 11 52.7	-0.5
	comp=Z,2.4nm,0.8s,baz=86,slow=7.2,SNR=20						
GERES				pP	pP	07 12 39.0	+1.4
	comp=Z,1.8nm,0.7s,baz=101,slow=9.1,SNR=1.1						
GERES				PP	PP	07 13 38.1	+1.8
	comp=Z,10.0nm,1.0s,baz=72,slow=8.6,SNR=10						
GERES				ScP	ScP	07 17 11.1	-1.0
	comp=Z,1.1nm,0.5s,baz=112,slow=4.8,SNR=3.9						
KHC	Kasperske Hory	42.65	306	eP	P	07 11 53.8	+0.3
KHC				eS	S	07 18 01.4	+0.8
KHC				eSS	SS	07 21 07.2	-12
KHC	Kasperske Hory	42.65	306	eP	P	07 11 53.8	+0.3
KHC				ex	x	07 13 31.0	
KHC				eS	S	07 18 01.4	+0.8
KHC				eSS	SS	07 21 07.2	-12
HFS	Hagfors	42.81	322	P	P	07 11 55.1	+0.5
	comp=Z,124nm,0.5s,baz=98,slow=11,SNR=339						
HFS				PP	PP	07 13 39.3	+1.1
	comp=Z,86nm,1.0s,baz=93,slow=9.1,SNR=8.0						
CADS	Cadrg	42.86	301	i P	P	07 11 55.6	+0.3
CLL	Collm	42.87	309	⇑iP	P	07 11 54.3	-0.9
CLL				i		07 13 37.0	
CLL				eS	S	07 18 07.0	+3.4
CLL				pmax	pmax		
	comp=Z,18nm,1.1s						
CLL	Collm	42.87	309	⇑iP	P	07 11 54.3	-0.9
	comp=Z,18nm,1.1s						
CLL				epP	pP	07 12 40.0	+0.2
CLL				esP	sP	07 13 03.0	-0.5
CLL				i PP	PP	07 13 37.0	-2.0
CLL				i		07 13 48.7	
CLL				eS	S	07 18 07.0	+3.4
CLL				eSS	SS	07 21 21.0	-2.3
MYKA	Terra Mystica	42.87	302	eP	P	07 11 55.7	+0.3
	comp=Z,4.3nm,0.7s						
TRI	Trieste	42.91	301	eP	P	07 11 55.0	-0.7
	comp=Z,68nm,1.7s						
TRI	Trieste	42.91	301	eP	P	07 11 55.0	-0.7
TRI				pmax	pmax		
	comp=Z,68nm,1.7s						
KBA	Koelnbreinsper	43.02	303	eP	P	07 11 56.9	+0.2
	comp=Z,20nm,1.6s						
GSI	Gunungsitoli	43.06	138	eP	P	07 11 58.5	+1.4
	comp=Z,50nm,0.7s						
TRO	Tromso	43.11	336	eP	P	07 11 57.6	+0.8
COP	Copenhagen	43.15	315	⇑iP	P	07 11 58.2	+0.8
COP	Copenhagen	43.15	315	⇑iP	P	07 11 58.2	+0.8
NKC	Novy Kostel	43.29	307	eP	P	07 11 59.4	+0.8
NKC	Novy Kostel	43.29	307	eP	P	07 11 59.4	+0.8
MOR8	Moi Rana	43.62	331	eP	P	07 12 00.7	-0.3
ABTA	Abfaltersbach	43.63	302	eP	P	07 12 01.0	-0.5
	comp=Z,6.4nm,0.8s						
STEI	Steigen	43.79	333	eP	P	07 12 03.3	+1.0
JRMM	Jerantut	43.80	130	P	P	07 12 04.0	+0.9
NC602	NORSAR Array S	43.94	323	eP	P	07 12 03.5	-0.2
NORES	NORESS Array B	43.94	323	P	P	07 12 03.7	0.0
NORES				pmax	pmax		
	comp=Z,65nm,1.0s						
NB2	NORSAR Subarra	44.13	323	P	P	07 12 05.4	+0.2
	comp=Z,131nm,0.7s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.13	323	P	P	07 12 05.4	+0.2
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.13	323	P	P	07 12 05.3	+0.1
	comp=Z,96nm,0.7s,baz=97,slow=7.8,SNR=317						
NOA				PP	PP	07 13 51.9	-0.4
	comp=Z,25nm,0.8s,baz=95,slow=9.7,SNR=5.9						
WTTA	Wattenberg	44.15	303	i P	P	07 12 05.2	-0.5
	comp=Z,16nm,0.9s,SNR=6.7						
WATA	Walderalm	44.18	303	eP	P	07 12 06.0	+0.1
	comp=Z,8.9nm,0.8s						
KONS	Konsvik	44.22	331	eP	P	07 12 06.2	+0.5
VAE	Valguarnera	44.22	289	P	P	07 12 06.2	-0.1
	comp=Z,8.4nm,0.4s,baz=146,slow=22,SNR=3.1						
YAK	Yakutsk	44.22	35	eP	P	07 12 06.6	+0.8
	comp=Z,162nm,0.7s						
YAK	Yakutsk	44.22	35	d iP	P	07 12 06.4	+0.6
YAK				e*PP	pP	07 12 50.1	-1.4
YAK				e		07 13 13.8	
YAK				e		07 13 40.5	
YAK				eS	S	07 18 21.2	-1.7
YAK				e*SS	sS	07 19 43.0	-0.5
NSS	Namsos	44.28	328	eP	P	07 12 06.9	+0.7
NC204	NORSAR Array S	44.38	323	eP	P	07 12 07.5	+0.3
	comp=Z,261nm,0.8s						
SQTA	Sankt Quirin	44.44	303	eP	P	07 12 07.1	-0.8
	comp=Z,8.9nm,0.7s						
MOTA	Moosalm	44.49	303	i P	P	07 12 07.7	-0.7
	comp=Z,11nm,0.7s,SNR=7.1						
MNSI	Mandailing Nat	44.58	136	P	pP	07 12 54.4	-0.7
RETA	Reutte	44.70	304	i P	P	07 12 09.7	-0.2
	comp=Z,8.9nm,0.9s						
FETA	Feichten	44.80	303	i P	P	07 12 10.2	-0.6
	comp=Z,14nm,1.0s,SNR=8.2						
KONO	Kongsberg	44.83	321	eP	P	07 12 11.0	+0.3
	comp=Z,71nm,0.8s						
KONO	Kongsberg	44.83	321	ceP	P	07 12 10.9	+0.3
KONO				pmax	pmax		
	comp=Z,110nm,1.3s						
KONO	Kongsberg	44.83	321	eP	P	07 12 10.8	+0.2
TBLU	Trondheim	44.84	326	eP	P	07 12 11.3	+0.6
HOPEN	Hopen	44.91	346	eP	P	07 12 12.8	+1.8
MUD	Monsted U'grnd	44.98	316	i P	P	07 12 12.7	+0.8
MUD				pmax	pmax		
	comp=Z,87nm,1.1s						
MUD	Monsted U'grnd	44.98	316	i P	P	07 12 12.7	+0.8
	comp=Z,87nm,1.1s						
SSLB	Suanglung	44.99	92	eP	P	07 12 12.5	0.0
	comp=Z,27nm,1.1s						
BJO1	Bjornoya	45.15	343	eP	P	07 12 13.7	+1.1
KSRS	Korea Array	45.28	71	P	P	07 12 14.5	0.0
	comp=Z,3.5nm,0.4s,baz=273,slow=6.9,SNR=16						
KSRS				pP	pP	07 13 01.8	+0.8
	comp=Z,6.5nm,0.7s,baz=282,slow=7.3,SNR=3.4						
KSRS				ScP	ScP	07 17 21.4	-1.9
	comp=Z,2.2nm,0.9s,baz=282,slow=4.2,SNR=4.6						
DAVA	Damuels	45.33	303	i P	P	07 12 14.6	-0.4
	comp=Z,61nm,1.1s,SNR=16						
DAVOX	Davos/Dischmat	45.41	303	P	P	07 12 15.7	0.0
	comp=Z,15nm,0.8s,baz=105,slow=6.1,SNR=18						
DAVOX				pP	pP	07 13 02.1	+1.4
	comp=Z,5.3nm,0.5s,baz=86,slow=4.5,SNR=1.9						
DAVOX				sP	sP	07 13 27.4	+3.2
	comp=Z,8.3nm,0.6s,baz=87,slow=10,SNR=2.8						
DAVOX				PcP	PcP	07 13 51.0	-0.2
	comp=Z,7.8nm,0.6s,baz=48,slow=4.4,SNR=2.7						
DAVOX				PP	PP	07 14 09.2	+3.3
	comp=Z,7.7nm,0.7s,baz=101,slow=8.7,SNR=3.4						
DAVOX				ScP	ScP	07 17 22.6	-1.3

	comp=Z,2.5nm,0.5s,baz=244,slow=9.8,SNR=3.5						
KLR	**Kul'dur**	45.49	54	P	P	07 12 16.8	+0.7
	comp=Z,7.0nm,0.4s,baz=282,slow=7.2,SNR=30						
KLR				pP	pP	07 13 03.7	+1.7
	comp=Z,7.2nm,0.7s,baz=269,slow=7.3,SNR=3.0						
KLR				PcP	PcP	07 13 51.0	-0.2
	comp=Z,9.2nm,1.0s,baz=286,slow=10,SNR=1.9						
KLR	**Kul'dur**	45.49	54	*i* P	P	07 12 16.9	+0.9
KLR				pmax	pmax		
	comp=Z,38nm,1.6s						
SKAR	**Skarslia**	45.53	322	*e*P	P	07 12 16.9	+0.7
BKNI	**Bangkinang**	45.79	135	P	pP	07 13 05.2	+0.5
TIXI	**Tiksi**	45.94	22	P	P	07 12 19.6	+0.4
	comp=Z,31nm,0.3s,baz=272,slow=4.8,SNR=93						
TIXI				pP	pP	07 13 05.4	+0.1
	comp=Z,49nm,0.8s,baz=282,slow=4.3,SNR=3.4						
TIXI				ScP	ScP	07 17 23.7	-1.6
	comp=Z,3.4nm,0.6s,baz=199,slow=5.4,SNR=3.2						
TIXI	**Tiksi**	45.94	22	*e*P	P	07 12 19.4	+0.2
	comp=Z,118nm,0.9s						
TIXI	**Tiksi**	45.94	22*c*	*i*P	P	07 12 19.6	+0.4
TIXI				pmax	pmax		
	comp=Z,147nm,1.0s						
MOL	**Molde**	46.00	325	*e*P	P	07 12 21.8	+2.0
BFO	**Black Forest**	46.19	305	*e*P	P	07 12 21.9	+0.4
	comp=Z,17nm,1.3s						
BFO	**Black Forest**	46.19	305	*i* P	P	07 12 22.2	+0.6
AKN	**Aaknes**	46.23	324	*e*P	P	07 12 21.8	+0.1
MYKOM	**Kota Tinggi**	46.29	130	*e*P	P	07 12 22.9	+0.2
	comp=Z,37nm,0.9s						
MYKOM	**Kota Tinggi**	46.29	130	P	P	07 12 24.0	+1.4
BLS5	**Blasjo**	46.42	321	*e*P	P	07 12 24.6	+1.5
PDSI	**Padang**	46.48	136	P	pP	07 13 09.2	-1.0
USRK	**Ussuriysk Ar.**	46.55	61	P	P	07 12 24.8	+0.5
	comp=Z,2.7nm,0.5s,baz=263,slow=8.8,SNR=7.8						
USRK				PcP	PcP	07 13 55.2	+0.2
	comp=Z,3.5nm,0.5s,baz=301,slow=5.3,SNR=5.3						
HYA	**Hoyanger**	46.58	323	*e*P	P	07 12 25.5	+1.2
CDF	**Champ du Feu**	46.87	305	*e*P	P	07 12 27.8	+0.9
CDF				pmax	pmax		
	comp=Z,11nm,1.0s						
PGF	**Pioggiola**	46.90	297	*e*P	P	07 12 26.4	-0.8
PGF				pmax	pmax		
	comp=Z,11nm,0.7s						
BER	**Bergen**	46.99	322	*e*P	P	07 12 28.7	+1.2
HSPB	**Hornsund (broa**	47.04	345	*e*P	P	07 12 29.6	+2.0
HSPB	**Hornsund (broa**	47.04	345	*e*P	P	07 12 29.2	+1.6
ASK	**Askoy**	47.06	322	*e*P	P	07 12 28.4	+0.4
HINF	**Hinteralfeld**	47.26	305	*e*P	P	07 12 29.4	-0.4
HINF				pmax	pmax		
	comp=Z,18nm,0.9s						
MEM	**Membach**	47.34	309	⇓P	P	07 12 31.1	+0.8
	comp=Z,17nm,0.9s						
WLF	**Walferdange**	47.39	307	⇑P	P	07 12 32.1	+1.4
	comp=Z,33nm,1.0s						
SPA0	**Spitsbergen Ar**	47.41	347	*e*P	P	07 12 32.6	+2.1
SPITS	**Spitsbergen Ar**	47.41	347	P	P	07 12 31.5	+1.0
	comp=Z,92nm,0.5s,baz=116,slow=11,SNR=225						
HAU	**Haudompre**	47.55	305	*e*P	P	07 12 31.8	-0.3
HAU				pmax	pmax		
	comp=Z,14nm,0.8s						
SBF	**Sospel**	47.69	299	*e*P	P	07 12 33.1	-0.2
SBF				pmax	pmax		
	comp=Z,23nm,0.8s						
LPG	**La Plagne**	47.79	302	*e*P	P	07 12 34.3	0.0
LPG				pmax	pmax		
	comp=Z,18nm,0.9s						
LPL	**La Plagne**	47.80	302	*e*P	P	07 12 34.3	0.0
LPL				pmax	pmax		
	comp=Z,27nm,1.0s						
BNI	**Bardonecchia**	47.94	301	*e*P	P	07 12 34.7	-0.6
	comp=Z,19nm,1.1s						
BNI	**Bardonecchia**	47.94	301	*e*P	P	07 12 34.7	-0.6
BNI				pmax	pmax		
	comp=Z,19nm,1.1s						
MBDF	**Montbardon**	47.95	301	*e*P	P	07 12 34.7	-0.7
MBDF				pmax	pmax		
	comp=Z,15nm,0.6s						
KRJI	**Kerinci**	48.01	136	P	pP	07 13 23.3	+0.8
GIVF	**Givet**	48.17	308	*e*P	P	07 12 37.2	+0.5
GIVF				pmax	pmax		
	comp=Z,26nm,1.1s						
GRNR	**Gornyy**	48.24	51	*e*P	P	07 12 37.8	+0.5
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
DOU	**Dourbes**	48.31	308	⇓P	P	07 12 38.8	+1.0
FRF	**La Foret Royal**	48.32	299	*e*P	P	07 12 37.4	-0.6
FRF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMBO	**Kilima Mbogo**	48.51	227	P	P	07 12 41.0	+1.0
	comp=Z,58nm,0.6s,baz=32,slow=11,SNR=171						
KMBO				PP	PP	07 14 31.0	-4.0
	comp=Z,8.3nm,0.9s,baz=35,slow=9.7,SNR=4.6						
KMBO	**Kilima Mbogo**	48.51	227	*e*P	P	07 12 41.1	+1.0
KMBO				*e*		07 12 41.2	
KMBO	**Kilima Mbogo**	48.51	227	*i* P	P	07 12 40.9	+0.9
	SNR=62						
ORIF	**Oris-en-Rattie**	48.52	301	*e*P	P	07 12 40.7	+1.0
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KBS	**Kingsbay**	48.53	347	*e*P	P	07 12 40.2	+1.1
	comp=Z,247nm,0.8s						
KBS	**Kingsbay**	48.53	347*c*	*i*P	P	07 12 40.5	+1.4
KBS	**Kingsbay**	48.53	347	*e*P	P	07 12 40.2	+1.1
BAIF	**Baives**	48.57	308	*e*P	P	07 12 40.3	+0.5
BAIF				pmax	pmax		
	comp=Z,31nm,0.8s						
KEST	**Kesra**	48.64	288	P	P	07 12 41.4	+0.8
	comp=Z,14nm,0.6s,baz=202,slow=1.5,SNR=17						
JNU	**Nakatsue**	49.01	75	*e*P	P	07 12 44.1	+0.7
	comp=Z,61nm,1.2s						
SSB	**Saint Sauveur**	49.36	302	*e*P	P	07 12 46.1	+0.2
	comp=Z,16nm,0.7s						
SSB	**Saint Sauveur**	49.36	302	*e*P	P	07 12 46.1	+0.2
SSB				pmax	pmax		
	comp=Z,16nm,0.7s						
SMF	**Signal de Mont**	49.51	304	*e*P	P	07 12 46.7	-0.3
SMF				pmax	pmax		
	comp=Z,42nm,0.8s						
SSF	**Saint Saulge**	49.63	304	*e*P	P	07 12 47.4	-0.5
SSF				pmax	pmax		
	comp=Z,21nm,1.2s						
AVF	**Avril sur Loir**	49.80	304	*e*P	P	07 12 48.8	-0.3
AVF				pmax	pmax		
	comp=Z,30nm,0.7s						
BGF	**Bois d'Agland**	50.19	304	*e*P	P	07 12 51.6	-0.5
BGF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ELSH	**Elham, Standar**	50.28	310	*e*P	P	07 12 53.3	+0.6
ELSH				IAmb	IAmb	07 12 53.8	
	comp=Z,149nm,0.7s						
WACR	**West Acre**	50.29	312	*e*P	P	07 12 53.0	+0.3
WACR				IAmb	IAmb	07 12 54.7	
	comp=Z,135nm,0.9s						
LHSI	**Lahat**	50.60	135	P	pP	07 13 40.6	-2.0
TCF	**Toulx Ste Croi**	50.69	304	*e*P	P	07 12 55.9	0.0
TCF				pmax	pmax		
	comp=Z,22nm,0.8s						
PPBI	**Pangkal Pinang**	50.79	131	P	pP	07 13 43.9	0.0
CAF	**Calviac**	51.14	302	*e*P	P	07 12 59.4	+0.1
CAF				pmax	pmax		
	comp=Z,22nm,0.8s						
HPK	**Haverah Park**	51.39	314	*e*P	P	07 13 01.0	+0.1
HPK				IAmb	IAmb	07 13 01.6	
	comp=Z,68nm,0.6s						
RJF	**Les Rejaudoux**	51.41	303	*e*P	P	07 13 01.5	+0.3
RJF				pmax	pmax		
	comp=Z,14nm,0.8s						
EDMD	**Edmundbyers**	51.42	315	*e*P	P	07 13 01.2	+0.1
EDMD				IAmb	IAmb	07 13 01.8	
	comp=Z,51nm,0.6s						
MTLF	**Montolieu**	51.48	300	*e*P	P	07 13 01.6	-0.2
MTLF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LBWR	**Ladybower, Pea**	51.56	313	*e*P	P	07 13 01.5	-0.7
LBWR				IAmb	IAmb	07 13 03.9	
	comp=Z,23nm,0.8s						
KKM	**Kota Kinabalu**	51.59	115	P	P	07 13 05.0	+2.0
LDF	**La Druitiere**	51.65	307	*e*P	P	07 13 02.4	-0.5
LDF				pmax	pmax		
	comp=Z,8.0nm,0.5s						
EDU	**Dundee**	51.70	317	*e*P	P	07 13 03.4	+0.3
WOL	**Wolverton**	51.70	311	*e*P	P	07 13 03.4	+0.2
WOL				IAmb	IAmb	07 13 04.0	
	comp=Z,80nm,0.7s						
FLN	**La Foliniere**	51.84	307	*e*P	P	07 13 04.2	-0.1
FLN				pmax	pmax		
	comp=Z,17nm,0.6s						
ESK	**Eskdalemuir**	52.03	316	*e*P	P	07 13 05.4	-0.2
ESK	**Eskdalemuir**	52.03	316	*i* P	P	07 13 06.2	+0.6
LFF	**La Frestale**	52.04	302	*e*P	P	07 13 05.9	0.0
LFF				pmax	pmax		
	comp=Z,22nm,0.6s						
KESW	**Keswick, Cumbr**	52.12	315	*e*P	P	07 13 06.5	+0.2
MBAR	**Mbarara**	52.16	234	*e*P	P	07 13 07.7	+0.5
	comp=Z,58nm,0.6s						
MBAR	**Mbarara**	52.16	234	*e*P	P	07 13 07.7	+0.5
MBAR				pmax	pmax		
	comp=Z,58nm,0.6s						
GRR	**Gorron**	52.17	307	*e*P	P	07 13 06.0	-0.8
GRR				pmax	pmax		
	comp=Z,18nm,0.7s						
MFF	**Saint Martin d**	52.18	305	*e*P	P	07 13 07.0	+0.2
MFF				pmax	pmax		
	comp=Z,22nm,1.0s						
INVG	**Invergeldie, C**	52.28	317	*e*P	P	07 13 07.2	-0.3
INVG				IAmb	IAmb	07 13 07.2	
	comp=Z,51nm,1.4s						
HLM1	**Long Mynd**	52.43	312	*e*P	P	07 13 08.6	0.0
EAB	**Aberfoyle**	52.49	317	*e*P	P	07 13 08.8	-0.1
RSC	**Scourie**	52.52	320	*e*P	P	07 13 09.4	+0.2
KASI	**Kota Agung**	52.54	135	P	pP	07 13 54.0	-3.2
MONM	**Monmouth**	52.54	312	*e*P	P	07 13 09.2	-0.2
MONM				IAmb	IAmb	07 13 09.8	
	comp=Z,102nm,1.4s						
MCH1	**Michaelchurch**	52.62	312	*e*P	P	07 13 09.8	-0.2
MCH1				IAmb	IAmb	07 13 10.4	
	comp=Z,58nm,0.7s						
PGBU	**Glenifferbraes**	52.64	317	*e*P	P	07 13 09.6	-0.4
KAC	**Achnashellach**	52.75	319	*e*P	P	07 13 10.8	0.0
LLW	**Llanuwychllyn**	52.82	313	*e*P	P	07 13 11.3	-0.2
LLW				IAmb	IAmb	07 13 12.1	
	comp=Z,10nm,0.6s						
RRR	**Rubha Reidh**	52.95	319	*e*P	P	07 13 12.0	-0.2
KPL	**Plockton**	52.97	319	*e*P	P	07 13 12.3	-0.1
KPL				IAmb	IAmb	07 13 14.1	
	comp=Z,39nm,1.0s						
IOMK	**Kirk Michael**	53.02	315	*e*P	P	07 13 13.1	+0.2
IOMK				IAmb	IAmb	07 13 13.8	
	comp=Z,94nm,0.6s						
LAWE	**Loch Awe, Argy**	53.05	317	*e*P	P	07 13 13.5	+0.4
LAWE				IAmb	IAmb	07 13 13.9	
	comp=Z,20nm,0.7s						
WIM	**Isle of Man**	53.11	315	*e*P	P	07 13 13.8	+0.2
WLF1	**Llynfaes**	53.15	314	*e*P	P	07 13 13.9	+0.1
WLF1				IAmb	IAmb	07 13 16.1	
	comp=Z,76nm,1.2s						
YSS	**Yuzh-Sakhalins**	53.18	55	*e*P	P	07 13 14.4	+0.3
YSS				*e*		07 14 00.9	
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YRC	**Rhoscolyn**	53.26	314	*e*P	P	07 13 14.8	+0.2
SGMF	**Saint Gilles**	53.30	307	*e*P	P	07 13 14.6	-0.4
SGMF				pmax	pmax		
	comp=Z,18nm,0.7s						
MAJO	**Matsushiro**	53.35	68	*e*P	P	07 13 15.8	+0.2
MAJO				*e*pP	pP	07 14 04.2	+0.7
MAJO				*e*ScP	ScP	07 17 56.2	-1.6
MAJO	**Matsushiro**	53.35	68*d*	*i*P	P	07 13 15.6	0.0
MAJO				pmax	pmax		
	comp=Z,24nm,0.9s						
MAT	**Matsushiro**	53.35	68	P	P	07 13 14.7	-0.9
MAT				*e*S	S	07 20 33.2	+2.1
MJAR	**Matsushiro Arr**	53.35	68	P	P	07 13 15.9	+0.2
	comp=Z,14nm,0.8s,baz=288,slow=9.8,SNR=23						
MJAR				pP	pP	07 14 04.2	+0.7
	comp=Z,9.0nm,0.7s,baz=288,slow=9.8,SNR=4.9						
MJAR				ScP	ScP	07 17 56.2	-1.6
	comp=Z,2.7nm,0.6s,baz=274,slow=4.0,SNR=4.2						
ETSF	**Etsaut**	53.55	300	*e*P	P	07 13 17.0	-0.1
ETSF				pmax	pmax		
	comp=Z,20nm,0.6s						
RSBS	**Rosebush, Pemb**	53.68	312	*e*P	P	07 13 17.3	-0.4
RSBS				IAmb	IAmb	07 13 18.3	
	comp=Z,12nm,0.6s						
ROSF	**Rostrenen**	53.74	307	*e*P	P	07 13 17.6	-0.6
ROSF				pmax	pmax		
	comp=Z,39nm,0.8s						
QUIF	**Quistinic**	53.79	307	*e*P	P	07 13 17.8	-0.7
QUIF				pmax	pmax		
	comp=Z,15nm,0.7s						
SJPF	**Ste Jean**	53.95	301	*e*P	P	07 13 20.4	+0.6
SJPF				pmax	pmax		
	comp=Z,43nm,1.5s						
CGJI	**Cibinong**	54.10	135	P	P	07 13 25.2	+4.0
	comp=Z,60nm,1.1s,comp=Z,8µm						
DAG	**Danmarks Havn**	54.62	344	⇑*i*P	P	07 13 25.0	+0.9
DAG				pmax	pmax		
	comp=Z,100nm,0.7s						
DAG	**Danmarks Havn**	54.62	344	⇑*i*P	P	07 13 25.0	+0.9
	comp=Z,151nm,0.7s						
MA2	**Magadan**	54.63	38	*e*P	P	07 13 24.6	+0.2
	comp=Z,41nm,1.2s						
MA2	**Magadan**	54.63	38*c*	*e*P	P	07 13 25.0	+0.5
MA2				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SEY	**Seymchan**	54.66	34	⇑*i*P	P	07 13 25.6	+1.0
SCO	**Scoresbysund**	56.89	336	*e*P	P	07 13 40.6	+0.3
	comp=Z,41nm,1.0s						
SCO	**Scoresbysund**	56.89	336	⇑*i*P	P	07 13 42.0	+1.7
SCO				pmax	pmax		
	comp=Z,40nm,1.0s						
SCO	**Scoresbysund**	56.89	336	⇑*i*P	P	07 13 42.0	+1.7
	comp=Z,40nm,1.0s						
ESDC	**Sonseca Array**	57.09	298	P	P	07 13 42.1	-0.2
	comp=Z,5.7nm,0.6s,baz=60,slow=7.4,SNR=39						
ESLA	**Sonseca Array**	57.09	298	*e*P	P	07 13 41.9	-0.4
	comp=Z,13nm,0.9s						
TAM	**Tamanrasset**	57.12	275	P	P	07 13 42.5	-0.3
TAM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PAB	**San Pablo**	57.41	298	*e*P	P	07 13 44.0	-0.6
	comp=Z,27nm,1.4s						
PAB	**San Pablo**	57.41	298	*e*P	P	07 13 44.0	-0.6
PAB				pmax	pmax		
	comp=Z,27nm,1.4s						
FIGM	**Figuig**	58.15	288	P	P	07 13 49.1	-0.8
JBK	**JBK**	58.20	291	P	P	07 13 51.0	+0.7
PBRG	**Braganca**	58.23	301	*e*P	P	07 13 50.3	+0.1
	comp=Z,17nm,1.7s						
TDRA	**Tendrara**	58.34	290	P	P	07 13 52.0	+0.7
BORG	**Borgarnes**	58.40	330	P	P	07 13 51.3	+0.4
	comp=Z,36nm,1.0s,baz=67,slow=6.5,SNR=7.7						
BORG	**Borgarnes**	58.40	330	*e*P	P	07 13 51.7	+0.8
	comp=Z,71nm,1.4s						
BORG	**Borgarnes**	58.40	330	*i* P	P	07 13 54.9	+4.0
MVO	**Moncorvo**	58.67	300	*e*P	P	07 13 53.8	+0.5
	comp=Z,28nm,1.1s						
MVO				*e*S	S	07 21 45.3	+4.1
HORN	**Hornachuelos**	58.74	296	P	P	07 13 53.8	+0.1
BILL	**Bilibino**	58.80	26*c*	*i*P	P	07 13 54.7	+1.1
BILL				*e*		07 14 42.2	
BILL				*i* *SP	sP	07 15 04.9	-0.2
BILL						07 16 03.0	
BILL				pmax	pmax		
	comp=Z,54nm,0.8s						
PALE	**Palemas**	58.85	293	P	P	07 13 54.4	-0.1
RER	**Riviere de l'E**	59.00	196	*e*P	P	07 13 56.4	+0.8
	comp=Z,71nm,0.9s						
AKLM	**AKL**	59.10	292	P	P	07 13 57.0	+0.7
PVRL	**Vila Real**	59.11	301	*e*P	P	07 13 56.5	+0.3
PCAB	**Cabril**	59.15	301	*e*P	P	07 13 57.5	+1.0
	comp=Z,33nm,1.8s						
PGAV	**Gavieira, Arco**	59.22	302	*e*P	P	07 13 57.6	+0.5
	comp=Z,30nm,1.6s						
PGAV				*e*S	S	07 21 49.4	+1.1
MTE	**Manteigas**	59.34	300	*e*P	P	07 13 58.6	+0.8
	comp=Z,51nm,1.3s						
MTE	**Manteigas**	59.34	300	*e*P	P	07 13 57.6	-0.2
	comp=Z,24nm,0.8s						
ABPO	**Ambohimpanom**	59.42	206	*e*P	P	07 13 59.8	+1.1
	comp=Z,44nm,0.9s						
ABPO	**Ambohimpanom**	59.42	206	*e*P	P	07 13 59.8	+1.1
ABPO				pmax	pmax		
	comp=Z,44nm,0.9s						
PVIS	**Viseu**	59.45	300	*e*P	P	07 13 59.1	+0.5
	comp=Z,37nm,1.3s						
PMRV	**Marv??o**	59.62	299	*e*P	P	07 14 00.5	+0.8
	comp=Z,28nm,1.8s						
SMIR	**Smir Dam**	59.73	294	P	P	07 14 00.1	-0.4
COI	**Coimbra**	60.02	300	*e*P	P	07 14 02.2	-0.2
PTOM	**Tomar**	60.26	299	*e*P	P	07 14 04.9	+0.8
	comp=Z,40nm,1.4s						
PEA1	**Petropavlovsk-**	60.27	44	*e*P	P	07 14 03.7	-0.2
PETK	**Petropavlovsk-**	60.27	44	P	P	07 14 03.7	-0.2
	comp=Z,7.2nm,0.8s,baz=333,slow=1.2,SNR=15						
SICH	**Sidi Chahed**	60.36	292	P	P	07 14 05.0	+0.1
MDT	**Midelt**	60.39	291	P	P	07 14 05.4	+0.2
TTSI	**Tana Toraja**	60.46	119	P	P	07 14 07.4	+1.7
	comp=Z,20nm,0.9s						
PBEJ	**Beja**	60.54	297	*e*P	P	07 14 07.5	+1.5
	comp=Z,38nm,1.7s						
PET	**Petropavlovsk**	60.84	44	⇑*e*P	P	07 14 07.2	-0.5
PET				pmax	pmax		
	comp=Z,59nm,1.2s						
MESJ	**Messejana**	60.87	297	*e*P	P	07 14 08.0	-0.2
MESJ				AMb	AMB	07 14 08.8	
	comp=Z,20nm,1.0s						
MESJ	**Messejana**	60.87	297	*e*P	P	07 14 08.4	+0.2
PBDV	**Barranco-do-Ve**	60.92	297	*e*P	P	07 14 08.9	+0.3
	comp=Z,65nm,1.7s						
SUMG	**Summit**	60.93	341	*e*P	P	07 14 09.5	+0.9
	comp=Z,113nm,0.9s						
SUMG	**Summit**	60.93	341	⇑*i*P	P	07 14 09.8	+1.3
SUMG				pmax	pmax		
	comp=Z,290nm,0.9s						
SUMG	**Summit**	60.93	341	⇑*i*P	P	07 14 09.8	+1.3
	comp=Z,292nm,0.9s						
PNCL	**Nicolau / Gran**	60.98	298	*e*P	P	07 14 09.6	+0.7
	comp=Z,35nm,1.9s						
PTEO	**Sao Teotonio**	61.36	297	*e*P	P	07 14 12.0	+0.5
PFVI	**Vila Bisbo**	61.61	297	*e*P	P	07 14 14.7	+1.5
	comp=Z,115nm,1.5s						
OUZM	**OUZ**	62.89	290	P	P	07 14 22.3	+0.3
SRHM	**Skhour des Reh**	63.02	292	P	P	07 14 22.4	-0.3
KULLO	**Kullorsuaq**	63.98	346	⇑*i*P	P	07 14 28.6	+0.4
KULLO				*e*		07 15 11.6	
KULLO				pmax	pmax		
	comp=Z,45nm,0.9s						
KULLO	**Kullorsuaq**	63.98	346	⇑*i*P	P	07 14 28.6	+0.4
	comp=Z,45nm,0.9s						
KULLO				*e*		07 15 11.6	
TULEG	**Thule**	64.38	350	*e*P	P	07 14 30.9	+0.2
	comp=Z,96nm,1.2s						
LSZ	**Lusaka**	65.14	226	*e*P	P	07 14 36.7	+0.1
	comp=Z,20nm,0.7s						
LSZ	**Lusaka**	65.14	226	*e*P	P	07 14 36.7	+0.1
LSZ				pmax	pmax		
	comp=Z,20nm,0.7s						
TOA0	**Torodi Ar. Sit**	65.29	268	*e*P	P	07 14 36.2	-1.4
	comp=Z,41nm,0.8s						
TOA1	**Torodi Ar. Sit**	65.29	268	*e*P	P	07 14 37.2	-0.4
TOA1				*e*pP	pP	07 15 28.4	+2.2
TORD	**Torodi Ar. Bea**	65.29	268	P	P	07 14 37.2	-0.4
	comp=Z,48nm,0.6s,baz=56,slow=5.1,SNR=20						
TORD				pP	pP	07 15 28.4	+2.2
	comp=Z,6.2nm,0.4s,baz=34,slow=10,SNR=1.8						
WSI	**Waingapu**	65.56	124	P	P	07 14 43.4	+4.2
ILULI	**Ilulissat**	66.27	341	⇑*i*P	P	07 14 43.4	+0.5
ILULI				pmax	pmax		
	comp=Z,72nm,0.7s						
ILULI	**Ilulissat**	66.27	341	⇑*i*P	P	07 14 43.4	+0.5
	comp=Z,72nm,0.7s						
SFJD	**Kangerlussuaq**	67.61	339	*e*P	P	07 14 50.8	-0.6
	comp=Z,29nm,0.9s						
SFJD	**Kangerlussuaq**	67.61	339	*i* P	P	07 14 51.0	-0.4
SFJD	**Kangerlussuaq**	67.61	339	*i* P	P	07 14 51.0	-0.4
BATI	**Baumata**	68.22	122	P	P	07 15 00.4	+4.4
	comp=Z,32nm,0.6s						
TOLK	**Toolik Lake Re**	71.04	14	P	P	07 15 13.1	+0.6
	baz=327						
PSA00	**Pilbara Seismi**	74.22	133	*e*P	P	07 15 30.7	-1.1
	comp=Z,36nm,1.1s						
DBIC	**Dimbokro**	74.27	267	P	P	07 15 31.7	-0.7
	comp=Z,43nm,0.5s,baz=29,slow=6.8,SNR=86						
DBIC	**Dimbokro**	74.27	267	*e*P	P	07 15 31.6	-0.8
	comp=Z,50nm,0.6s						
KIC	**Kosan Boka**	74.36	266	*e*P	P	07 15 31.8	-1.1
	comp=Z,132nm,0.5s						
LBTB	**Lobatse**	74.39	222	*e*P	P	07 15 33.2	+0.5
	comp=Z,42nm,0.9s						
LBTB	**Lobatse**	74.39	222	*e*P	P	07 15 33.3	+0.5
LBTB				pmax	pmax		
	comp=Z,42nm,0.9s						
TIC	**Toumodi**	74.42	267	*e*P	P	07 15 31.6	-1.6
POKR	**Poker Plat Res**	74.49	16	P	P	07 15 33.5	+0.7
	baz=329						
TSUM	**Tsumeb**	74.58	231	*e*P	P	07 15 34.1	+0.1
	comp=Z,26nm,1.0s						
TCOL	**CIGO, UAF Yank**	74.60	16	P	P	07 15 33.7	+0.4
	baz=329						
COLA	**College**	74.61	16	*e*P	P	07 15 34.3	+0.9
	comp=Z,63nm,0.9s						
COLA	**College**	74.61	16	*e*P	P	07 15 34.3	+0.9
COLA				pmax	pmax		
	comp=Z,63nm,0.9s						
LIC	**Lamto**	74.67	266	*e*P	P	07 15 33.4	-1.2
	comp=Z,162nm,0.5s						
BWN	**Browne**	74.84	17	*e*P	P	07 15 34.9	+0.1
	comp=Z,122nm,1.2s						
ILAR	**Eielson Array**	74.91	16	P	P	07 15 35.4	+0.2
	comp=Z,28nm,1.0s,baz=320,slow=4.3,SNR=140						
ILAR				pP	pP	07 16 26.7	+1.1
	comp=Z,2.8nm,0.8s,baz=323,slow=4.3,SNR=2.1						
ILAR				sP	sP	07 16 50.8	+2.5
	comp=Z,4.7nm,0.8s,baz=312,slow=5.1,SNR=2.8						
ILAR				PP	PP	07 18 27.1	+2.2
	comp=Z,5.7nm,1.1s,baz=327,slow=7.8,SNR=4.7						
HDA	**Harding Lake**	75.20	16	P	P	07 15 35.8	-1.0
	baz=330						
EPYK	**Eagle Plains**	75.35	11	P	P	07 15 37.6	-0.1
	baz=338						
SVW2	**Sparrevohn**	75.77	21	*e*P	P	07 15 39.1	-1.1
	comp=Z,24nm,1.1s						
BOSA	**Boshof**	77.47	220	P	P	07 15 50.0	-0.2
	comp=Z,14nm,0.7s,baz=26,slow=4.5,SNR=20						
BOSA				pP	pP	07 16 42.4	+1.2
	comp=Z,6.3nm,0.7s,baz=26,slow=4.8,SNR=2.0						
BOSA	**Boshof**	77.47	220	*e*P	P	07 15 50.1	0.0
	comp=Z,51nm,1.3s						
BOSA	**Boshof**	77.47	220	*e*P	P	07 15 50.1	0.0
BOSA				pmax	pmax		
	comp=Z,51nm,1.3s						
MORW	**Morawa**	78.01	140	*e*P	P	07 15 52.2	-0.8
	comp=Z,77nm,1.8s						
CNPM	**China Poot**	78.30	20	*e*P	P	07 15 53.8	-0.4
	comp=Z,21nm,1.0s						
KDAK	**Kodiak Island**	79.37	22	*e*P	P	07 16 00.6	+0.5
	comp=Z,87nm,1.0s						
KDAK	**Kodiak Island**	79.37	22	*i* P	P	07 16 00.2	+0.2
YKA	**Yellowknife Ar**	81.28	2	P	P	07 16 10.7	+0.6
	comp=Z,15nm,0.6s,baz=351,slow=5.4,SNR=42						
YKA				pP	pP	07 17 02.9	+1.7
	comp=Z,4.4nm,0.7s,baz=350,slow=5.3,SNR=2.2						
YKA				PP	PP	07 19 17.8	0.0
	comp=Z,8.0nm,1.0s,baz=357,slow=8.2,SNR=4.6						
YKB5	**Yellowknife Ar**	81.28	2	*e*pP	pP	07 17 02.9	+1.8
SCHQ	**Schefferville**	81.94	337	P	P	07 16 13.8	0.0
	comp=Z,15nm,0.8s,baz=50,slow=4.5,SNR=12						
SCHQ				PP	PP	07 19 20.9	-2.6
	comp=Z,8.3nm,0.7s,baz=5.7,slow=5.0,SNR=4.6						
WRAB	**Tennant Creek**	82.35	122	*e*P	P	07 16 15.2	-1.1
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	82.35	122	*e*P	P	07 16 15.2	-1.1
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s						
JIS	**Juneau Island**	83.32	13	*e*P	P	07 16 21.1	+0.3
	comp=Z,24nm,1.1s						
DLBC	**Dease Lake**	83.89	11	*e*P	P	07 16 23.7	0.0
	comp=Z,19nm,0.8s						
ASAR	**Alice Springs**	84.60	125	P	P	07 16 26.2	-1.6
	comp=Z,11nm,0.5s,baz=310,slow=4.9,SNR=193						
ASAR				pP	pP	07 17 19.9	0.0
	comp=Z,4.0nm,0.6s,baz=316,slow=4.8,SNR=2.8						
ASAR				PKKPbc	PKKPbc	07 34 36.5	+0.1
	comp=Z,0.7nm,0.7s,baz=119,slow=2.6,SNR=7.6						
WRAK	**Wrangell Islan**	85.44	12	*e*P	P	07 16 31.9	+0.5
	comp=Z,21nm,0.9s						
FORT	**Forrest**	85.97	133	*e*P	P	07 16 34.1	-0.2
	comp=Z,58nm,0.7s						
CHGQ	**Chibougamau**	88.53	338	P	P	07 16 46.2	-0.2
	baz=28						
LMN	**Caledonia Moun**	88.67	331	*e*P	P	07 16 47.1	-0.1
	comp=Z,7.5nm,0.8s						
FFC	**Flin Flon**	88.92	356	*e*P	P	07 16 48.6	+0.4
	comp=Z,18nm,0.8s						
FFC	**Flin Flon**	88.92	356	*i* P	P	07 16 48.6	+0.4

MATQ	**Matagami** baz=25	**89.60**	**340**	P	**P**	**07 16 51.7**	**+0.2**
LSQQ	**Lebel-sur-Quev** baz=26	**90.05**	**339**	P	**P**	**07 16 53.6**	**+0.1**
LATQ	**La Tuque** baz=29	**90.26**	**336**	P	**P**	**07 16 54.7**	**+0.1**
PKME	**Peaks-Kenny Pk** baz=31	**90.88**	**333**	P	**P**	**07 16 57.8**	**+0.3**
D54A	**Lac Fusel, La** baz=26	**91.67**	**338**	P	**P**	**07 17 00.9**	**-0.3**
D53A	**Lac Vacive, Po** baz=25	**92.05**	**339**	P	**P**	**07 17 02.8**	**0.0**
D52A	**ZEK Kipawa Sen** baz=25	**92.35**	**339**	P	**P**	**07 17 04.2**	**0.0**
E54A	**Lac Daplat, Po** baz=26	**92.48**	**338**	P	**P**	**07 17 04.7**	**-0.2**
E53A	**Dumoine, Ponti** baz=25	**92.67**	**339**	P	**P**	**07 17 05.9**	**+0.2**
LBNH	**Lisbon** baz=29	**92.71**	**334**	P	**P**	**07 17 06.5**	**+0.5**
F55A	**Otter Lake** baz=26	**92.77**	**337**	P	**P**	**07 17 06.7**	**+0.6**
ULM	**Lac du Bonnet** comp=Z,12nm,0.7s,baz=9.7,slow=4.0,SNR=15	**92.80**	**351**	P	**P**	**07 17 06.0**	**-0.2**
ULM	comp=Z,3.3nm,0.7s,baz=14,slow=5.6,SNR=3.7			PP	**PP**	**07 20 51.2**	**+1.0**
ULM	**Lac du Bonnet**	**92.80**	**351**	P	**P**	**07 17 06.0**	**-0.2**
D49A	**Beulah Townshi** baz=22	**92.88**	**341**	P	**P**	**07 17 06.2**	**-0.5**
E52A	**Mattawa** baz=24	**93.05**	**339**	P	**P**	**07 17 07.3**	**-0.2**
E51A	**G1948 Merrick** baz=24,SNR=9.1	**93.06**	**340**	P	**P**	**07 17 07.1**	**-0.4**
D48A	**Paudash Townsh** baz=22,SNR=5.2	**93.08**	**341**	P	**P**	**07 17 07.5**	**-0.1**
ALGO	**Algonquin Park** baz=25	**93.17**	**339**	P	**P**	**07 17 07.9**	**-0.1**
PEMO	**Pembroke** baz=25	**93.18**	**338**	P	**P**	**07 17 07.9**	**-0.2**
LONY	**Lake Ozonia** baz=27	**93.28**	**336**	P	**P**	**07 17 08.8**	**+0.2**
G55A	**Calabogie** baz=26	**93.40**	**337**	P	**P**	**07 17 08.8**	**-0.3**
E50A	**Wahnapitae** baz=23,SNR=7.6	**93.50**	**341**	P	**P**	**07 17 09.8**	**+0.2**
D47A	**Chapleau** baz=21,SNR=11	**93.52**	**342**	P	**P**	**07 17 09.6**	**0.0**
F52A	**Sundridge** baz=24,SNR=8.8	**93.68**	**339**	P	**P**	**07 17 10.3**	**-0.2**
PLVO	**Plevna** baz=26	**93.70**	**338**	P	**P**	**07 17 10.4**	**-0.1**
F51A	**Arnstein** baz=23,SNR=7.1	**93.73**	**340**	P	**P**	**07 17 10.7**	**+0.1**
E48A	**Lockeyer** baz=22,SNR=9.6	**93.82**	**341**	P	**P**	**07 17 10.8**	**-0.2**
H56A	**Elgin** baz=26,SNR=5.3	**93.85**	**337**	P	**P**	**07 17 11.1**	**-0.1**
D46A	**Sault St. Mari** baz=20	**93.90**	**343**	P	**P**	**07 17 11.1**	**-0.3**
BANO	**Bancroft** baz=25	**93.98**	**338**	P	**P**	**07 17 11.8**	**0.0**
C40A	**Isle Royale Na** baz=16,SNR=22	**94.02**	**346**	P	**P**	**07 17 11.0**	**-0.9**
BUKO	**Buck Lake** baz=24	**94.03**	**339**	P	**P**	**07 17 11.8**	**-0.2**
HRV	**Adam Dziewonsk** baz=30	**94.08**	**333**	P	**P**	**07 17 12.1**	**-0.2**
G53A	**Haliburton** baz=24,SNR=7.3	**94.09**	**339**	P	**P**	**07 17 12.0**	**-0.3**
E47A	**Iron Bridge** baz=21,SNR=12	**94.12**	**342**	P	**P**	**07 17 11.9**	**-0.5**
H55A	**Tweed** baz=26	**94.18**	**337**	P	**P**	**07 17 12.7**	**+0.1**
KLBO	**Killbear Provi** baz=23	**94.34**	**340**	P	**P**	**07 17 13.1**	**-0.3**
DELO	**Deloro Mine** comp=Z,11nm,1.0s	**94.34**	**338**	*e*P	**P**	**07 17 13.5**	**+0.1**
DELO	**Deloro Mine** baz=25	**94.34**	**338**	P	**P**	**07 17 13.4**	**-0.1**
A04D	**Lummi Island** baz=349	**94.36**	**9**	P	**P**	**07 17 13.5**	**+0.1**
EYMN	**Ely** baz=14,SNR=12	**94.41**	**348**	P	**P**	**07 17 13.1**	**-0.6**
F49A	**Sandfield** baz=22,SNR=5.7	**94.45**	**341**	P	**P**	**07 17 13.8**	**-0.2**
E46A	**Sault Ste Mari** baz=20,SNR=8.8	**94.46**	**343**	P	**P**	**07 17 13.3**	**-0.6**
F48A	**Evansville** baz=21,SNR=6.9	**94.54**	**341**	P	**P**	**07 17 14.1**	**-0.2**
E44A	**Grand Marais A** baz=19	**94.59**	**344**	P	**P**	**07 17 14.5**	**-0.1**
I55A	**Frankford** baz=25	**94.63**	**338**	P	**P**	**07 17 14.5**	**-0.3**
PECO	**Prince Edward** baz=26	**94.67**	**337**	P	**P**	**07 17 14.7**	**-0.2**
AGMN	**Agassiz Nation** baz=11,SNR=5.6	**94.71**	**351**	P	**P**	**07 17 14.7**	**-0.3**
D41A	**Chassel** baz=17,SNR=5.9	**94.73**	**346**	P	**P**	**07 17 14.9**	**-0.2**
TOBO	**Tobermory, Bru** baz=22	**94.81**	**341**	P	**P**	**07 17 15.6**	**0.0**
B05A	**Bryant** baz=350	**94.88**	**8**	P	**P**	**07 17 16.1**	**+0.3**
H52A	**Wyevale** baz=24	**94.90**	**339**	P	**P**	**07 17 15.5**	**-0.4**
E43A	**Lone Tree Farm** baz=18	**95.06**	**345**	P	**P**	**07 17 16.1**	**-0.6**
WLVO	**Wesleyville** baz=25	**95.12**	**338**	P	**P**	**07 17 16.5**	**-0.4**
STKA	**Stephens Creek** comp=Z,2.8nm,0.6s,baz=335,slow=7.0,SNR=6.1	**95.12**	**126**	P	**P**	**07 17 17.4**	**+0.4**
DGMT	**Dagmar** baz=4.3	**95.28**	**356**	P	**P**	**07 17 18.2**	**+0.5**
BMRO	**Meriville Lake** baz=22	**95.31**	**340**	P	**P**	**07 17 18.0**	**+0.1**
NEW	**Newport** baz=354	**95.35**	**5**	P	**P**	**07 17 18.1**	**0.0**
F45A	**CMU Biological** baz=19	**95.38**	**343**	P	**P**	**07 17 18.0**	**-0.1**
G47A	**Hillman** baz=20,SNR=6.0	**95.47**	**342**	P	**P**	**07 17 18.4**	**-0.1**
I52A	**Shelburne** baz=23	**95.51**	**339**	P	**P**	**07 17 18.7**	**-0.1**
MDND	**Maddock** baz=8.0	**95.57**	**353**	P	**P**	**07 17 18.7**	**-0.3**
E38A	**The Farm, Brul** baz=14	**95.72**	**348**	P	**P**	**07 17 19.2**	**-0.5**
EGMT	**Eagleton** baz=360	**95.86**	**0**	P	**P**	**07 17 20.6**	**+0.2**
BINY	**Binghamton** baz=26	**95.91**	**336**	P	**P**	**07 17 20.4**	**-0.3**
BASO	**Ashfield** baz=22	**95.97**	**340**	P	**P**	**07 17 21.0**	**+0.1**
GLMI	**Grayling** baz=20	**95.98**	**342**	P	**P**	**07 17 20.9**	**0.0**
I51A	**Listowel** baz=23	**95.99**	**340**	P	**P**	**07 17 21.0**	**0.0**
G45A	**Suttons Bay** baz=19	**96.02**	**343**	P	**P**	**07 17 20.9**	**-0.2**
H47A	**Mio** baz=20	**96.09**	**342**	P	**P**	**07 17 21.1**	**-0.3**
K55A	**Perry** baz=25	**96.10**	**337**	P	**P**	**07 17 21.0**	**-0.6**
F40A	**Park Falls** baz=16	**96.12**	**347**	P	**P**	**07 17 21.0**	**-0.6**
F39A	**Loretta** baz=15,SNR=5.5	**96.27**	**347**	P	**P**	**07 17 21.7**	**-0.5**
TYNO	**Tyneside** baz=24	**96.31**	**339**	P	**P**	**07 17 22.1**	**-0.3**
I48A	**Sherman Twp** baz=21	**96.35**	**342**	P	**P**	**07 17 22.5**	**-0.1**
J52A	**Paris** baz=23	**96.35**	**339**	P	**P**	**07 17 21.9**	**-0.7**
H46A	**Fife Lake** baz=19	**96.39**	**343**	P	**P**	**07 17 22.5**	**-0.3**
F38A	**Pierce - Schro** baz=14	**96.40**	**348**	P	**P**	**07 17 22.4**	**-0.4**
E04D	**Cinebar** baz=350	**96.50**	**9**	P	**P**	**07 17 23.2**	**0.0**
L55A	**Hinsdale** baz=25	**96.71**	**337**	P	**P**	**07 17 23.9**	**-0.4**
F37A	**Hinrichs Farm,** baz=14	**96.75**	**348**	P	**P**	**07 17 24.2**	**-0.2**
G40A	**Rib Lake** baz=16,SNR=6.3	**96.77**	**346**	P	**P**	**07 17 23.9**	**-0.6**
G39A	**Holcombe** baz=15	**96.93**	**347**	P	**P**	**07 17 24.4**	**-0.7**
L54A	**Sinclairville** baz=24	**96.93**	**338**	P	**P**	**07 17 24.7**	**-0.6**
MSO	**Missoula** baz=356	**96.96**	**3**	P	**P**	**07 17 25.0**	**-0.5**
N59A	**State Game Lan** baz=27	**96.98**	**335**	P	**P**	**07 17 25.0**	**-0.5**
I46A	**Reed City** baz=19	**97.01**	**343**	P	**P**	**07 17 25.3**	**-0.3**
H43A	**Windswept, Lux** baz=17	**97.04**	**344**	P	**P**	**07 17 25.4**	**-0.3**
LAO	**LASA Array** comp=Z,9.8nm,0.9s	**97.15**	**358**	*e*P	**P**	**07 17 25.6**	**-0.7**
HRY	**Holter Researc**	**97.15**	**2**	*e*P	Pdif	07 17 26.5	+0.2
M56A	**Emporium** baz=25	**97.26**	**337**	P	**P**	**07 17 26.6**	**-0.2**
SPMN	**Marine on St.** baz=14	**97.27**	**348**	P	**P**	**07 17 26.3**	**-0.4**
N57A	**Milroy** baz=25	**97.72**	**336**	P	**P**	**07 17 28.1**	**-0.7**
N56A	**West Decatur** baz=25	**97.81**	**337**	P	**P**	**07 17 28.8**	**-0.5**
I42A	**Draeger Farm,** baz=17	**97.83**	**345**	P	**P**	**07 17 29.0**	**-0.3**
I41A	**Arkdale** baz=16	**97.86**	**346**	P	Pdif	07 17 29.5	0.0
BOZ	**Bozeman (W)** baz=358	**98.27**	**1**	P	**P**	**07 17 31.0**	**-0.4**
PLIO	**Pelee Island,** baz=22	**98.34**	**340**	P	**P**	**07 17 31.5**	**-0.1**
JFWS	**Jewell Farm** baz=16	**99.04**	**346**	P	**Pdif**	**07 17 34.4**	**-0.3**
ECSD	**EROS Data Cent** baz=10	**99.30**	**351**	P	**Pdif**	**07 17 35.4**	**-0.5**
PDAR	**Pinedale Array** comp=Z,0.4nm,0.6s,baz=38,slow=4.6,SNR=2.9	**101.12**	**0**	P	**Pdif**	**07 17 42.8**	**-1.5**
PDAR	comp=Z,2.9nm,1.1s,baz=19,slow=5.8,SNR=7.2			PP	**PP**	**07 21 53.8**	**-0.6**
PDAR	comp=Z,0.4nm,0.4s,baz=32,slow=3.6,SNR=5.3			PKiKP	**PKiKP**	**07 22 07.3**	**-0.7**
PDAR	comp=Z,0.4nm,0.5s,baz=145,slow=5.4,SNR=6.1			PKKPbc	**PKKPbc**	**07 33 53.1**	**-0.8**
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.5s,baz=2.9,slow=1.8,SNR=3.3	**105.01**	**7**	PKiKP	**PKiKP**	**07 22 14.8**	**-0.4**
NVAR	comp=Z,0.2nm,0.3s,baz=357,slow=3.8,SNR=3.1			PP	**PP**	**07 22 27.7**	**+4.4**
NVAR	comp=Z,0.7nm,0.5s,baz=181,slow=5.6,SNR=7.6			PKKPbc	**PKKPbc**	**07 33 42.4**	**-0.1**
SYO	**Syowa Base**	**107.64**	**191**	⇑*e*PKiKP	**PKiKP**	**07 22 17.9**	**-0.7**
SYO	**Syowa Base**	**107.64**	**191**	⇓*e*X	**PP**	**07 22 39.3**	**-4.0**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.5s,baz=118,slow=1.3,SNR=5.9	**114.30**	**354**	PKP	**PKiKP**	**07 22 32.0**	**-0.8**
TXAR	comp=Z,2.6nm,1.0s,baz=351,slow=5.6,SNR=8.2			PP	**PP**	**07 23 30.9**	**+0.9**
TXAR	comp=Z,0.4nm,0.8s,baz=29,slow=2.1,SNR=2.5			SKP		07 25 47.2	
TXAR	comp=Z,1.1nm,0.6s,baz=186,slow=6.0,SNR=19			PKKPbc	**PKKPbc**	**07 33 11.8**	**-0.8**
SNAA	**Sanae**	**119.24**	**200**	PKPdf	**PKPdf**	**07 22 34.9**	**-5.8**
VNA1	**Neumayer--Stat**	**120.38**	**202**	PKPdf	**PKPdf**	**07 22 42.5**	**-0.4**
VNA3	**Neumayer Olymp**	**121.04**	**202**	PKPdf	**PKPdf**	**07 22 43.0**	**-1.2**
BDFB	**Brasilia** comp=Z,1.5nm,0.4s,baz=16,slow=1.0,SNR=4.8	**121.94**	**274**	PKP	**PKPdf**	**07 22 46.7**	**-0.9**
BRRC	**Barranca, Sant**	**125.15**	**315**	*e*P	**PKPdf**	**07 22 53.6**	**-0.3**
ZARC	**Zaragoza, Cauc**	**125.49**	**316**	*e*P	**PKPdf**	**07 22 53.6**	**-1.0**
VNDA	**Vanda** comp=Z,3.1nm,0.6s,baz=303,slow=4.3,SNR=29	**125.60**	**164**	PKP	**PKiKP**	**07 22 53.3**	**+0.1**
QSPA	**South Pole Qui**	**126.28**	**180**	*e*PKPdf	**PKPdf**	**07 22 53.5**	**-1.0**
NORC	**Norcasia**	**127.07**	**315**	*e*P	**PKPdf**	**07 22 56.4**	**-1.2**
CHIC	**Chingaza**	**127.16**	**313**	*e*P	**PKPdf**	**07 22 55.3**	**-3.0**
ROSC	**El Rosal** comp=Z,12nm,0.8s,baz=193,slow=9.1,SNR=7.2	**127.34**	**314**	SKPab	SKPab	07 25 59.1	
YOTC	**Yotoco, Valle**	**129.20**	**315**	*e*P	**PKPdf**	**07 22 59.6**	**-2.1**
FLOC	**Florencia**	**130.74**	**313**	*e*P	**PKPdf**	**07 23 03.5**	**-1.0**
BBAC	**Balboa, Cauca**	**131.31**	**315**	*e*P	**PKiKP**	**07 23 09.1**	**+2.2**
CPUP	**Villa Florida** comp=Z,6.4nm,0.7s,baz=88,slow=3.5,SNR=11	**134.79**	**268**	PKP	**PKPdf**	**07 23 10.6**	**-1.1**
CPUP	comp=Z,2.8nm,0.7s,baz=75,slow=2.9,SNR=4.0			SKPbc	**SKPbc**	**07 26 19.8**	**-2.5**
LPAZ	**La Paz** comp=Z,1.4nm,0.7s,baz=234,slow=5.6,SNR=9.0	**138.21**	**288**	PKP	**PKPdf**	**07 23 18.3**	**-0.8**
LPAZ	comp=Z,1.9nm,0.8s,baz=358,slow=9.9,SNR=3.9			SKPbc	**SKPbc**	**07 26 31.1**	**-2.4**
GO02	**Mina Guanaco**	**144.13**	**277**	*e*PKPdf	**PKPab**	**07 23 27.1**	**-0.2**
LCO	**Las Campanas**	**146.68**	**272**	*e*PKPdf	**PKPdf**	**07 23 33.9**	**+0.6**
LCO	**Las Campanas**	**146.68**	**272**	*e*PKP2	**PKPdf**	**07 23 33.9**	**+0.6**
GO04	**Tololo Observa**	**147.20**	**270**	*e*PKPdf	**PKPdf**	**07 23 34.5**	**+0.4**
PEL	**Peldehue**	**148.08**	**264**	*e*PKPdf	**PKPdf**	**07 23 35.7**	**+0.5**
PEL	**Peldehue**	**148.08**	**264**	*e*PKIKP	**PKPdf**	**07 23 35.7**	**+0.5**
PLCA	**Paso Flores** comp=Z,3.2nm,0.9s,baz=27,slow=2.3,SNR=4.1	**149.42**	**250**	PKP	**PKPdf**	**07 23 36.6**	**-0.6**
PLCA	comp=Z,20nm,0.6s,baz=106,slow=1.7,SNR=22			PKPbc	**PKPbc**	**07 23 42.3**	**+0.4**

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*ATH **03** 07:08:43.5, 36°.55N×21°.30E, $h25^{km}\pm2^{km}$, ML2.0/3, Error ellipse: s-maj=5.8km s-min=1.9km az=57.0*

THE 03 07:08:44.9, 36°.54N×21°.37E, $h6^{km}\pm3^{km}$, ML2.1/3, Error ellipse: s-maj=4.3km s-min=1.5km az=116.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.46**	**40**	P	Pg	07 08 53.8	0.0
PYL				S	Sg	07 09 00.9	+1.0
PYL	**PYLOS**	**0.46**	**40**	P	Pg	07 08 53.6	-0.2
PYL				S	Sb	07 09 01.6	-1.1
PYL	comp=E,488µm,0.4s			AML	AML	07 09 04.5	
PYL	comp=N,309µm,0.3s			AML	AML	07 09 06.6	
MES3	**Kyparissia**	**0.75**	**19**	P	Pg	07 08 58.2	-1.1
ITM	**Ithomi**	**0.78**	**35**	P	Pg	07 08 59.5	-0.3
ITM				S	Sg	07 09 10.6	+0.7
ITM	**Ithomi**	**0.78**	**35**	P	Pg	07 08 59.2	-0.6
ITM				S	Sg	07 09 10.5	+0.6
ITM	comp=N,284µm,0.4s			AML	AML	07 09 13.2	
ITM	comp=E,366µm,0.6s			AML	AML	07 09 13.8	
AMT	**Artemida-Makis**	**1.02**	**15**	P	Pg	07 09 03.0	-1.6
VLX	**Vlachokerasia**	**1.16**	**44**	P	Pg	07 09 06.0	-1.1
VLX				S	Sb	07 09 23.1	+0.4
VLX	**Vlachokerasia**	**1.16**	**44**	P	Pg	07 09 06.9	-0.2
TRIP	**Tripoli**	**1.22**	**36**	P	Pg	07 09 07.3	-1.0
TRIP	**Tripoli**	**1.22**	**36**	P	Pg	07 09 06.4	-1.9
TRIP	comp=E,101µm,0.6s			AML	AML	07 09 32.3	
TRIP	comp=N,86µm,0.5s			AML	AML	07 09 37.1	
VLI	**Veliai**	**1.27**	**82**	P	Pn	07 09 08.7	-0.6
VLI	**Veliai**	**1.27**	**82**	P	Pn	07 09 08.5	-0.8
KTHA	**Kythira Island**	**1.39**	**101**	P	Pn	07 09 10.4	-0.6
GUR	**Goura**	**1.59**	**29**	P	Pn	07 09 13.8	0.0
GUR	**Goura**	**1.59**	**29**	P	Pn	07 09 13.4	-0.4
KLV	**Kalavryta, Ach**	**1.62**	**22**	P	Pn	07 09 12.8	-1.4
KLV	**Kalavryta, Ach**	**1.62**	**22**	P	Pn	07 09 12.7	-1.4
LAKA	**Lakka**	**1.76**	**16**	P	Pn	07 09 14.6	-1.4
DID	**Didima**	**1.78**	**57**	P	Pn	07 09 14.9	-1.3
DID	**Didima**	**1.78**	**57**	P	Pn	07 09 14.3	-1.9
TRIZ	**Trizonia**	**1.90**	**17**	P	Pn	07 09 16.2	-1.8
KALE	**Kalithea**	**1.94**	**18**	P	Pn	07 09 18.1	-0.5

ROM 03 07:09:21.6±0.1**, 44°.210N**±0°.004×**10°.187E**±0°.006**, $h10^{km}$, ML1.4**/5**, Error ellipse: s-maj=0.5km s-min=0.4km az=159.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T0912	**Minucciano (LU**	**0.04**	**159**	P	Pg	07 09 24.1	+0.4
T0912				S	Sg	07 09 25.2	+0.1
T0912	comp=E,1047µm,0.2s			AML	AML		
T0912	comp=N,1041µm,0.7s			AML	AML		
T0912	comp=E,1074µm,0.2s			AML	AML		
T0912	comp=N,996µm,0.1s			AML	AML		
T0912	comp=N,1041µm,0.7s			AML	AML		
T0912	comp=N,996µm,0.1s			AML	AML		
T0912	comp=E,1074µm,0.2s			AML	AML		
T0912	comp=E,1047µm,0.2s			AML	AML		
EQUI	**Equi**	**0.05**	**209**	P	Pg	07 09 24.1	+0.4
EQUI				S	Sg	07 09 25.4	+0.3
EQUI	comp=E,192µm,0.2s			AML	AML		
EQUI	comp=N,239µm,0.2s			AML	AML		
EQUI	comp=E,192µm,0.2s			AML	AML		
EQUI	comp=N,239µm,0.2s			AML	AML		
FIVI	**Fivizzano**	**0.05**	**304**	P	Pg	07 09 24.1	+0.4
FIVI				S	Sg	07 09 25.4	+0.2
T0911	**Castelpoggio (**	**0.13**	**220**	P	Pg	07 09 25.1	+0.4
T0911				S	Sg	07 09 27.9	+1.1
VLC	**Villacollemand**	**0.15**	**109**	P	Pg	07 09 25.6	+0.5
VLC				S	Sg	07 09 28.2	+0.7
VLC	comp=E,24µm,0.7s			AML	AML		
VLC	comp=N,24µm,0.7s			AML	AML		
VLC	comp=N,24µm,0.7s			AML	AML		
VLC	comp=E,24µm,0.7s			AML	AML		
ERBM	**Eremo**	**0.26**	**38**	P	Pg	07 09 27.8	+0.7
ERBM				S	Sb	07 09 32.3	-0.9
ERBM	comp=E,90µm,0.3s			AML	AML		
ERBM	comp=N,80µm,1.1s			AML	AML		
ERBM	comp=E,90µm,0.3s			AML	AML		
ERBM	comp=N,80µm,1.1s			AML	AML		
PLMA	**Palmaria, Port**	**0.29**	**237**	P	Pb	07 09 28.5	-0.4
PLMA				S	Sg	07 09 32.4	+1.1
GRAM	**Graiana**	**0.29**	**343**	P	Pg	07 09 28.2	+0.6
GRAM				S	Sg	07 09 32.8	+1.2
GRAM	comp=E,174µm,0.3s			AML	AML		
GRAM	comp=N,164µm,0.4s			AML	AML		
GRAM	comp=E,174µm,0.3s			AML	AML		
GRAM	comp=N,164µm,0.4s			AML	AML		

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*ISK **03** 07:26:47.1, 43°.72N×40°.57E, $h19^{km}$, ML3.1/1*
*TIF **03** 07:26:50.9, 43°.63N×40°.88E, $h40^{km}\pm5^{km}$*
*DDA **03** 07:27:19.6, 41°.73N×41°.89E, $h7^{km}\pm5^{km}$, ML2.9*
ISC 03 07:26:51.3±0.9**, 43°.46N**±0°.02×**41°.03E**±0°.02**, $h13^{km}\pm7^{km}$, n27, $\sigma1^{s}31$**/53**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARXR	**Arkhyz** 596nm,0.2s	**0.21**	**60**	*i* Pg	**Pg**	**07 26 56.3**	**+0.3**
ARXR				*i* Sg	**Sg**	**07 26 59.7**	**+0.6**
DOMR	**Dombai** 60nm,0.1s	**0.46**	**111**	*i* Pg	**Pg**	**07 26 59.1**	**-1.4**
DOMR	452nm,0.3s			*i* Sg	**Sg**	**07 27 05.0**	**-1.8**
RPOR	**Krasnaya Polya** 62nm,0.3s	**0.60**	**294**	*i* Pg	**Pg**	**07 27 02.4**	**-0.7**
RPOR	295nm,0.6s			*e*Sg	**Sg**	**07 27 11.1**	**0.0**
SOC	**Sochi**	**0.96**	**278**	*e*Pg	**Pb**	**07 27 07.5**	**-2.3**
SOC	329nm,0.5s			*e*Sg	**Sg**	**07 27 20.5**	**-2.0**
LABN	**Labinsk** 166nm,0.4s	**1.20**	**350**	*e*Pg	**Pn**	**07 27 12.9**	**-0.9**
LABN				*i* Sg	**Sn**	**07 27 32.0**	**+2.0**
SHA1	**Shidzhatmaz**	**1.22**	**76**	*i* Pg	**Pb**	**07 27 14.1**	**-0.2**
SHA1				*i* Sg	**Sn**	**07 27 30.4**	**-0.2**
NEY	**Neytrino**	**1.25**	**99**	*i* Pg	**Pn**	**07 27 13.7**	**-0.9**
NEY				*e*Sg	**Sb**	**07 27 30.6**	**-0.4**
LZRR	**Lazarevskoye**	**1.29**	**292**	*i* Pg	**Pb**	**07 27 15.9**	**+0.5**
LZRR				*i* Sg	**Sg**	**07 27 35.2**	**+2.4**
KIV	**Kislovodsk**	**1.30**	**67**	PN	**Pn**	**07 27 14.8**	**-0.4**
KIV				SN	**Sg**	**07 27 33.9**	**+0.7**
KIV0	**Kislovodsk Arr**	**1.31**	**67**	*i* Pg	**Pb**	**07 27 15.6**	**-0.2**
KIV0				*e*Sg	**Sg**	**07 27 33.0**	**-0.5**
NVNR	**Nevinnomyssk** 79nm,0.4s	**1.34**	**30**	*i* Pg	**Pg**	**07 27 17.0**	**0.0**
NVNR	186nm,0.2s			*i* Sg	**Sg**	**07 27 35.2**	**+0.8**
KBTC	**Kuba-Taba**	**1.76**	**77**	*e*Pg	**Pg**	**07 27 24.3**	**-0.8**
KBTC				*e*Sg	**Sg**	**07 27 48.7**	**+0.7**
TKB	**Tkibuli**	**1.82**	**127**	P	**Pb**	**07 27 24.6**	**+0.2**
TKB				S	**Sg**	**07 27 49.5**	**-0.2**
ALER	**Alexandrovskoy**	**1.88**	**45**	*e*Pg	**Pg**	**07 27 26.7**	**-0.7**
ALER				*e*Sg	**Sg**	**07 27 52.3**	**+0.5**
BATM	**Batumi**	**1.92**	**165**	PN	**Pn**	**07 27 24.9**	**+1.3**
BATM				SN	**Sb**	**07 27 51.8**	**+2.0**
BATM	**Batumi**	**1.92**	**165**	P	**Pb**	**07 27 25.3**	**-0.8**
BATM				S	**Sb**	**07 27 51.8**	**+2.0**
BATM	**Batumi**	**1.92**	**165**	*i* P	**Pb**	**07 27 26.0**	**0.0**
BATM				*i* S	**Sb**	**07 27 51.3**	**+1.5**
ONI	**Oni**	**1.98**	**115**	PN	**Pb**	**07 27 26.8**	**-0.3**
ONI				SN	**Sg**	**07 27 54.9**	**+0.1**
ONI	**Oni**	**1.98**	**115**	P	**Pg**	**07 27 28.8**	**-0.4**
ONI				S	**Sg**	**07 27 54.8**	**0.0**
BCA	**Borcka**	**2.06**	**167**	PN	**Pn**	**07 27 26.8**	**+1.2**
GOF	**Gofitskoye** 52nm,0.3s	**2.16**	**41**	*e*Pg	**Pb**	**07 27 29.6**	**-0.6**
GOF	150nm,0.3s			*e*Sg	**Sb**	**07 27 58.1**	**+1.3**
DBOC	**Borcka**	**2.16**	**167**	*i* P	**Pn**	**07 27 28.4**	**+1.4**
DBOC				*i* S	**Sn**	**07 27 52.9**	**-0.8**
ERBR	**Yeremizino-Bor**	**2.29**	**350**	*e*Pn	**Pb**	**07 27 31.2**	**-1.2**
ERBR				*e*Sn	**Sb**	**07 28 01.4**	**+0.7**
EPOS	**Posof**	**2.32**	**147**	*i* P	**Pb**	**07 27 33.2**	**+0.1**
EPOS				*i* S	**Sb**	**07 28 02.1**	**+0.4**
DAGI	**Agillar**	**2.47**	**164**	*i* P	**Pn**	**07 27 33.6**	**+2.4**
DAGI				*i* S	**Sn**	**07 28 00.1**	**-1.2**
DBAD	**Bademkaya**	**2.49**	**168**	*i* P	**Pn**	**07 27 33.8**	**+2.3**
DBAD				*i* S	**Sn**	**07 27 57.7**	**-4.1**
DBAD	comp=Z,2µm,0.2s			IAML_P			
AKH	**Akhalkalaki**	**2.74**	**137**	P	**Pn**	**07 27 37.1**	**+2.0**
AKH				S	**Sb**	**07 28 13.2**	**-0.6**

NNC 03 07:32:18.1±0.9**, 50°.96N×73°.96E, $h0^{km}$, mb4.0, mpv3.7, 3C-3D, Error ellipse: s-maj=7.5km s-min=6.0km az=157.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTUK	**Ortayu** 2.7nm,0.2s	**2.91**	**202**	Pg	Pn	07 33 08.1	+2.4
OTUK	5.5nm,1.0s			Lg	Lg	07 33 45.4	
OTUK	**Ortayu** 3.8nm,0.5s	**2.91**	**202**	⇓Pg	Pb	07 33 09.5	-1.4
OTUK	47nm,1.1s			⇓Lg	Lg	07 33 49.0	
KURBB	**Kurchatov Arra** 5.0nm,0.5s	**2.92**	**95**	⇓Pg	Pb	07 33 12.3	+1.2
KURBB	41nm,0.7s			⇑Lg	Lg	07 33 52.9	
BRVK	**Borovoye** 4.7nm,1.1s	**3.10**	**314**	⇑Pg	Pb	07 33 14.3	+0.3
BRVK	54nm,1.1s			⇑Lg	Lg	07 33 54.0	
SEM	**Semipalatinsk** 4.5nm,0.1s	**4.04**	**95**	Pg	Pb	07 33 32.2	+2.0
SEM	13nm,0.3s			Lg	Lg	07 34 27.1	
BTLS	**Baital** 4.1nm,1.2s	**5.92**	**179**	Pg	Pb	07 34 03.3	+1.2
BTLS	11nm,1.4s			Lg	Lg	07 35 21.2	
KAPS	**Kapalarasan** 0.4nm,0.1s	**6.73**	**145**	Pg	Pb	07 34 20.2	+4.3
KAPS	7.6nm,1.1s			Lg	Lg	07 35 51.0	
ARXS	**Arharly** 3.5nm,0.7s	**7.24**	**157**	Pg	Pg	07 34 30.7	-6.0
ARXS	7.3nm,1.0s			Lg	Lg	07 36 08.6	
KUU	**Kurty**	**7.25**	**166**	Pg	Pb	07 34 29.4	+4.6

	1.4nm,0.2s						
KUU				Lg	Lg	07 36 06.5	
	13nm,0.8s						
CHKK	**Chushkaly**	**7.40**	**163**	Pg	Pg	07 34 33.8	-6.0
	1.8nm,0.2s						
CHKK				Lg	Lg	07 36 13.6	
	7.3nm,0.6s						
KTBS	**Karatobe**	**7.48**	**165**	Pg	Pb	07 34 34.8	+6.0
	1.5nm,0.9s						
KTBS				Lg	Lg	07 36 15.6	
	12nm,0.7s						
MNBS	**Baschi**	**7.51**	**155**	Pg	Pg	07 34 37.3	-4.7
	0.5nm,0.2s						
MNBS				Lg	Lg	07 36 19.7	
	6.7nm,0.5s						
DJR	**Jarkent**	**7.71**	**147**	Pg	Pg	07 34 40.0	-5.8
	0.9nm,0.2s						
DJR				Lg	Lg	07 36 24.4	
	3.6nm,0.8s						
DGS	**Degeres**	**7.82**	**170**	Pg	Pb	07 34 40.3	+5.8
	1.7nm,0.4s						
DGS				Lg	Lg	07 36 25.1	
	9.3nm,0.4s						
ZSN	**Zaisan**	**7.96**	**112**	Pg	Pb	07 34 38.7	+1.8
	1.9nm,0.4s						
ZSN				Lg	Lg	07 36 21.6	
	3.0nm,0.5s						
KST	**Kastek**	**8.04**	**169**	Pg	Pb	07 34 43.6	+5.4
	3.8nm,0.2s						
KST				Lg	Lg	07 36 31.4	
	11nm,1.5s						
MRKS	**Merke**	**8.23**	**184**	Pg	Pg	07 34 50.2	-5.5
	2.2nm,0.3s						
MRKS				Lg	Lg	07 36 41.1	
	2.8nm,0.5s						
IUG	**Iuzhnay**	**9.22**	**199**	Pg	Pn	07 35 09.3	+37
	1.2nm,0.2s						
IUG				Lg	Lg	07 37 14.7	
	16nm,1.3s						

GUC ***03*** *07:43:08.0±0.8, 38°.74S×74°.08W, h16^{km}±7^{km}, ML4.0*
ISCJB ***03*** *07:43:17.4±1.4, 38°.07S±0°.07×74°.0W±0°.2, h10^{km}, mb3.3/2, Error ellipse: s-maj=18.8km s-min=9.4km az=162.2*
IDC ***03*** *07:43:18.4±2.1, 37°.97S×73°.75W, h0^{km}, mb3.3/2, mb1 3.7/4, mb1mx3.5/20, mbtmp3.4/4, ML3.7/2, Error ellipse: s-maj=51.1km s-min=16.8km az=61.0*
ISC 03 07:43:19.9±1.4, 37°.99S±0°.05×73°.8W±0°.1, h10^{km}, n6, σ2^{s}.84/10, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.28**	**27**	⇑*i*P	**Pn**	**07 43 40.8**	**-3.0**
CCSP				*e*S	**Sn**	**07 44 06.8**	**+5.8**
CCSP				IAML		07 44 10.9	
	comp=E,4μm,0.6s						
CCHI	**Chillan**	**1.97**	**46**	⇑*i*P	**Pn**	**07 43 50.6**	**-2.7**
CCHI				*e*S	**Sg**	**07 44 22.6**	**-0.6**
CCHI				IAML		07 44 37.9	
	comp=E,1μm,0.5s						
PLCA	**Paso Flores**	**3.73**	**138**	Pn	**Pn**	**07 44 17.9**	**+0.2**
	comp=E,1.2nm,0.3s,baz=319,slow=10,SNR=15						
PLCA				Pg	**Pb**	**07 44 26.2**	**+0.3**
	comp=E,3.0nm,0.3s,baz=330,slow=17,SNR=27						
PLCA				Sn	**Sn**	**07 45 01.0**	**-0.8**
	comp=E,2.3nm,0.3s,baz=339,slow=17,SNR=3.0						
PLCA				Lg	Lg	07 45 16.4	
	comp=E,2.6nm,0.3s,baz=255,slow=20,SNR=3.5						
CFA	**Coronel Fontan**	**7.86**	**37**	Pn	**Pn**	**07 45 11.9**	**-2.3**
	comp=E,1.6nm,0.3s,baz=208,slow=8.7,SNR=22						
CFA				Lg	Lg	07 47 29.7	
	baz=114,slow=14,SNR=1.1						
LPAZ	**La Paz**	**22.20**	**15**	P	**P**	**07 48 17.6**	**+0.6**
	comp=E,1.4nm,0.7s,baz=193,slow=5.3,SNR=6.9						
TXAR	**Lajitas Array**	**72.56**	**333**	P	**P**	**07 54 47.1**	**-0.1**
	comp=E,0.1nm,0.5s,baz=172,slow=7.0,SNR=3.8						

IDC 03 07:46:16.1±3.3, 53°.77N×88°.15E, h0^{km}, mb1 3.1/2, mb1mx3.0/36, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=28.0km s-min=17.5km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**277**	*i*		07 58 41.6	
	baz=92,slow=304,SNR=5.6						
ZALV	**Zalesovo Beam**	**1.98**	**277**	Pg	Pn	07 46 51.2	+0.3
	2.5nm,0.3s,baz=96,slow=13,SNR=19						
ZALV				Lg	Lg	07 47 18.4	
	5.3nm,0.3s,baz=97,slow=26,SNR=17						
KURBB	**Kurchatov Arra**	**6.70**	**246**	Pn	Pn	07 47 56.6	+0.9
	0.2nm,0.3s,baz=63,slow=14,SNR=17						
KURBB				Sn	Sn	07 49 12.7	+0.1
	0.0nm,0.3s,baz=46,slow=13,SNR=1.6						
MKAR	**Makanchi Array**	**7.92**	**211**	Pn	Pn	07 48 13.3	+0.8
	0.1nm,0.3s,baz=32,slow=13,SNR=4.2						
MKAR				Sn	Sn	07 49 41.9	-0.9
	0.1nm,0.3s,baz=34,slow=24,SNR=3.1						

ASRS ***03*** *07:47:38.4, 53°.72N×91°.01E, M3.8, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC ***03*** *07:47:44.2±3.5, 53°.83N×90°.67E, h1^{km}±15^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=25.6km s-min=22.2km az=36.0, Suspected Mining explosion.*
IDC ***03*** *07:47:46.6±2.9, 53°.47N×90°.68E, h0^{km}, mb1 3.6/4, mb1mx3.3/39, mbtmp3.6/4, ML3.1/4, Error ellipse: s-maj=25.3km s-min=18.5km az=62.0*
ISC 03 07:47:49.3±4.0, 53°.6N±0°.1×90°.2E±0°.2, h0^{km}, n12, σ1^{s}.90/13, 7C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.23**	**278**	*i*		08 09 10.2	
	baz=92,slow=303,SNR=3.9						
ZAA0	**Zalesovo Array**	**3.23**	**278**	⇑Pg	**Pb**	**07 48 46.2**	**-1.2**
	7.6nm,0.8s						
ZAA0				⇑Lg	Lg	07 49 36.9	
	22nm,0.8s						
ZALV	**Zalesovo Beam**	**3.23**	**278**	Pn	**Pn**	**07 48 44.0**	**+2.8**
	2.8nm,0.3s,baz=97,slow=15,SNR=15						
ZALV				Pg	**Pg**	**07 48 51.4**	**+0.3**
	6.2nm,0.3s,baz=97,slow=16,SNR=14						
ZALV				Lg	Lg	07 49 36.9	
	2.5nm,0.3s,baz=98,slow=23,SNR=5.3						
KURBB	**Kurchatov Arra**	**7.81**	**252**	Pn	**Pn**	**07 49 44.0**	**-0.1**
	0.3nm,0.3s,baz=64,slow=14,SNR=20						
KURBB				Sn	**Sn**	**07 51 13.9**	**+0.7**
	0.1nm,0.3s,baz=70,slow=7.3,SNR=4.3						
KURBB				Lg	Lg	07 52 00.8	
	0.2nm,0.3s,baz=65,slow=29,SNR=9.2						
KURBB	**Kurchatov Arra**	**7.81**	**252**	⇓Pn	**Pn**	**07 49 44.2**	**+0.1**
	14nm,0.9s						
KURBB				⇑Sn	**Sn**	**07 51 14.9**	**+1.7**
	108nm,0.8s						
KURBB				⇑Lg	Lg	07 52 03.1	
	137nm,0.9s						
MK31	**Makanchi Array**	**8.54**	**220**	Pn	**Pn**	**07 49 53.5**	**-0.6**
	1.8nm,0.7s,baz=35,slow=13,SNR=13						
MK31				⇓Sn	**Sn**	**07 51 34.9**	**+3.8**
	8.3nm,0.9s,baz=43,slow=21,SNR=4.0						
MK31				⇑Lg	Lg	07 52 24.6	
	27nm,0.9s,baz=31,slow=27,SNR=3.6						
MKAR	**Makanchi Array**	**8.54**	**220**	Pn	**Pn**	**07 49 52.5**	**-1.6**
	0.5nm,0.3s,baz=32,slow=12,SNR=12						
MKAR				Sn	**Sn**	**07 51 29.6**	**-1.5**
	baz=33,slow=17,SNR=2.3						
MKAR				Lg	Lg	07 52 18.4	
	0.1nm,0.3s,baz=41,slow=31,SNR=5.6						
MAKZ	**Makanchi**	**8.65**	**221**	⇓Lg	Lg	07 52 26.9	
	44nm,1.1s						
SONM	**Songino Array**	**11.76**	**113**	Lg	Lg	07 53 36.6	
	0.3nm,0.3s,baz=300,slow=25,SNR=9.5						
BVAR	**Borovoye Array**	**11.88**	**275**	Pn	**Pn**	**07 50 39.1**	**-0.8**
	0.2nm,0.3s,baz=74,slow=12,SNR=2.8						
BVAR				Sn	**Sn**	**07 52 51.1**	**-1.8**
	0.1nm,0.3s,baz=82,slow=34,SNR=2.8						
PDGK	**Podgornoye**	**12.53**	**219**	⇑Lg	Lg	07 54 31.7	
	13nm,1.0s						
TKM2	**Tokmak 2**	**14.46**	**228**	⇑Lg	Lg	07 55 33.4	
	12nm,1.0s						

IDC ***03*** *08:09:05.7±6.9, 29°.67N×141°.25E, h33^{km}±50^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.6/44, mbtmp3.7/11, ML3.2/2, MS2.9/5, Ms1 3.0/5, ms1mx2.7/39, Error ellipse: s-maj=27.4km s-min=26.7km az=127.0*
ISC 03 08:09:06.6±1.1, 29°.7N±0°.1×141°.3E±0°.2, h35^{km}, n21, σ1^{s}.67/15, mb3.7/10, MS2.9/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.61**	**340**	Pn	**Pn**	**08 09 59.1**	**-0.9**
	5.8nm,0.3s,baz=108,slow=20,SNR=4.5						
JHJ				Sn	**Sn**	**08 10 40.5**	**-0.9**
	12nm,0.3s,baz=72,slow=20,SNR=2.7						
MJAR	**Matsushiro Arr**	**7.26**	**340**	Pn	**Pn**	**08 10 51.7**	**+1.4**
	0.3nm,0.3s,baz=163,slow=12,SNR=20						
MJAR				Sn	**Sn**	**08 12 11.2**	**-0.3**
	baz=147,slow=24,SNR=2.0						
MAT	**Matsushiro**	**7.26**	**340**	P	**Pn**	**08 10 53.7**	**+3.4**
JNU	**Nakatsue**	**9.51**	**293**	LR	LR	08 14 59.0	
	comp=Z,68nm,19.8s,baz=170,slow=37						
KSRS	**Korea Array**	**13.53**	**308**	LR	LR	08 17 23.0	
	comp=Z,48nm,19.2s,baz=116,slow=37						
KLR	**Kul'dur**	**20.78**	**342**	P	Pn	08 13 47.9	+0.8
	4.5nm,0.8s,baz=142,slow=14,SNR=9.9						
H11N2	**WAKE ISLAND Hy**	**25.25**	**107**	T	T	08 40 30.1	
	baz=297,slow=74,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**25.26**	**107**	T	T	08 40 29.7	
	baz=297,slow=74,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**25.27**	**107**	T	T	08 40 24.5	
	baz=297,slow=74,SNR=4.2						
SEY	**Seymchan**	**33.98**	**9**	P	**P**	**08 15 46.2**	**-0.3**
	1.3nm,0.6s,baz=239,slow=17,SNR=4.0						
CMAR	**Chiang Mai Arr**	**40.05**	**264**	LR	LR	08 34 52.1	
	comp=Z,9.1nm,18.2s,baz=220,slow=39						
MKAR	**Makanchi Array**	**48.21**	**308**	P	**P**	**08 17 42.2**	**-1.5**
	0.2nm,0.6s,baz=79,slow=7.6,SNR=2.8						
ASAR	**Alice Springs**	**53.57**	**188**	P	P	08 18 22.7	-1.4
	0.2nm,0.4s,baz=8.9,slow=6.9,SNR=5.1						
ILAR	**Eielson Array**	**55.80**	**29**	P	**P**	**08 18 38.6**	**-1.2**
	0.4nm,0.8s,baz=260,slow=5.3,SNR=5.5						
ILAR				LR	LR	08 42 33.0	
	comp=Z,11nm,20.8s,baz=82,slow=36						
ARU	**Arti**	**61.87**	**321**	P	**P**	**08 19 21.8**	**-0.4**
	3.6nm,0.2s,baz=156,slow=4.3,SNR=3.4						
AKTO	**Aktyubinsk**	**63.60**	**315**	P	**P**	**08 19 33.8**	**-0.1**
	0.7nm,0.6s,baz=51,slow=9.7,SNR=5.7						
FINES	**FINESS Array B**	**75.24**	**333**	P	**P**	**08 20 44.9**	**-0.6**
	0.9nm,0.6s,baz=42,slow=4.3,SNR=4.5						
FINES				pP	**pP**	**08 20 58.7**	**+3.6**
	0.8nm,0.6s,baz=62,slow=6.8,SNR=1.8						
NVAR	**Mina Array Bea**	**79.51**	**52**	P	**P**	**08 21 10.1**	**-0.1**
	0.3nm,0.6s,baz=276,slow=3.5,SNR=3.3						
NOA	**NORSAR Array B**	**80.88**	**338**	LR	LR	09 01 28.1	
	comp=Z,18nm,18.1s,baz=245,slow=39						
BRTR	**Keskin Array B**	**83.64**	**312**	P	**P**	**08 21 32.0**	**+0.1**
	2.1nm,0.7s,baz=83,slow=6.0,SNR=7.0						
TXAR	**Lajitas Array**	**94.65**	**53**	P	**P**	**08 22 25.0**	**+0.6**
	0.1nm,0.5s,baz=302,slow=2.0,SNR=2.6						

NIED ***03*** *08:14:00, 24°.40N×121°.90E, h5^{km}, Mw3.7 Best double couple: M$_0$3.78000×10^{14} NP1:ϕ_s17.00000°, δ49.00000°, λ-170.00000°. NP2:ϕ_s280.00000°, δ82.00000°, λ-41.00000°.*
ISCJB ***03*** *08:14:34.2±0.3, 24°.44N±0°.01×122°.02E±0°.01, h4^{km}±2^{km}, Error ellipse: s-maj=2.5km s-min=1.9km az=156.9*
TAP ***03*** *08:14:35.0, 24°.45N×121°.94E, h12^{km}, ML3.9, B*
JMA ***03*** *08:14:35.0±0.1, 24°.42N×121°.95E, h20^{km}±5^{km}, M3.7*
ASIES ***03*** *08:14:35.3, 24°.45N×121°.89E, h12^{km}, MW3.4*
ISC 03 08:14:34.8±0.8, 24°.44N±0°.02×121°.98E±0°.02, h13^{km}±6^{km}, n104, σ0^{s}.71/154, 16C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.17**	**52**	⇓P	**Pg**	**08 14 39.5**	**+0.7**
	baz=53						
EOS1				S	**Sg**	**08 14 43.4**	**+1.8**
	baz=53						
TWC	**Suao**	**0.20**	**325**	*i* P	**Pg**	**08 14 39.1**	**-0.2**
	baz=340						
TWC				S	**Sg**	**08 14 41.8**	**-0.6**
	baz=340						
NANB	**Nanao**	**0.21**	**266**	⇓P	**Pg**	**08 14 39.1**	**-0.2**
	baz=269						
NANB				S	**Sg**	**08 14 41.9**	**-0.6**
	baz=269						
ENA	**Nanau**	**0.22**	**266**	P	**Pg**	**08 14 39.3**	**-0.2**
	baz=269						
ENA				S	**Sg**	**08 14 42.0**	**-0.7**
	baz=269						
ILA	**Ilan**	**0.38**	**327**	P	**Pb**	**08 14 43.0**	**-0.5**
	baz=320						
TWE	**Neicheng**	**0.40**	**314**	⇑*i*P	**Pg**	**08 14 42.7**	**0.0**
	baz=322						
TWE				S	**Sg**	**08 14 47.3**	**-0.8**
	baz=322						
ENTT	**Nioudou**	**0.42**	**298**	P	**Pg**	**08 14 43.2**	**0.0**
	baz=299						
ENTT				S	**Sg**	**08 14 48.4**	**-0.5**
	baz=299						
NTC	**Toucheng**	**0.43**	**342**	*e*P	**Pg**	**08 14 43.5**	**+0.2**
	baz=354						
NACB	**Ninganchiao**	**0.44**	**233**	⇓P	**Pg**	**08 14 43.2**	**-0.3**
	baz=230						
NACB				S	**Sg**	**08 14 49.2**	**-0.2**
	baz=230						
NDT	**Datong Townshi**	**0.45**	**291**	P	**Pg**	**08 14 43.9**	**+0.1**
	baz=291						
NDT				S	**Sg**	**08 14 49.3**	**-0.5**
	baz=291						
TWD	**Chiawan**	**0.50**	**224**	⇓*i*P	**Pg**	**08 14 44.6**	**-0.1**
	baz=221						
TWD				S	**Sg**	**08 14 51.5**	**+0.1**
	baz=221						
ETLH	**Xiulin Townshi**	**0.51**	**243**	⇓P	**Pg**	**08 14 44.6**	**-0.2**
	baz=241						
ETLH				*e*S	**Sg**	**08 14 51.6**	**0.0**
	baz=241						
NNSB	**Datong**	**0.54**	**269**	⇓P	**Pg**	**08 14 45.3**	**-0.2**
	baz=268						
NNSB				*e*S	**Sg**	**08 14 52.3**	**-0.4**
	baz=268						
TIPB	**Shuangxi**	**0.54**	**345**	⇑P	**Pg**	**08 14 45.5**	**0.0**
	baz=354						
TIPB				S	**Sg**	**08 14 52.7**	**0.0**
	baz=354						
NNS	**Nan Shan**	**0.55**	**270**	P	**Pg**	**08 14 45.3**	**-0.3**
	baz=269						
NNS				*e*S	**Sg**	**08 14 52.3**	**-0.7**
	baz=269						
TWB1	**Santiao Chiao**	**0.56**	**1**	*e*P	**Pg**	**08 14 46.1**	**+0.3**
	baz=354						
HWA	**Hwalien**	**0.57**	**216**	*e*P	**Pb**	**08 14 46.6**	**0.0**
	baz=221						
YHNB	**Yeheng**	**0.59**	**293**	⇑P	**Pb**	**08 14 46.5**	**-0.5**
	baz=293						
YHNB				*e*S	**Sg**	**08 14 53.1**	**-1.2**
	baz=293						
NSK	**Sanguang**	**0.61**	**292**	P	**Pb**	**08 14 46.8**	**-0.5**
	baz=293						
TWA	**Mucha**	**0.64**	**326**	⇑*i*P	**Pb**	**08 14 47.8**	**-0.1**
	baz=328						
NWF	**Wu-fen Shan**	**0.65**	**344**	⇑P	**Pb**	**08 14 48.0**	**-0.1**
	baz=334						
NWF				S	**Sb**	**08 14 56.5**	**-0.5**
	baz=334						
WFSB	**Wu-fen Shan**	**0.65**	**344**	⇑P	**Pb**	**08 14 48.0**	**0.0**
	baz=334						
WFSB				S	**Sb**	**08 14 56.5**	**-0.5**
	baz=334						
TATO	**Taipei**	**0.69**	**320**	⇑P	**Pb**	**08 14 48.7**	**0.0**
	baz=310						
TATO				S	**Sg**	**08 14 57.1**	**-0.3**
	baz=310						
TAP	**Taipei**	**0.73**	**324**	*e*P	**Pb**	**08 14 49.5**	**+0.1**
	baz=325						
TWT	**Tachien**	**0.76**	**256**	*e*P	**Pb**	**08 14 49.7**	**-0.1**
	baz=255						
TWT				*e*S	**Sb**	**08 14 59.4**	**-0.7**
	baz=255						
TDCB	**Techi**	**0.77**	**256**	P	**Pb**	**08 14 49.7**	**-0.4**
	baz=255						
TDCB				S	**Sg**	**08 14 59.2**	**-0.7**
	baz=255						
WLTB	**Daxi**	**0.78**	**302**	⇑P	**Pn**	**08 14 51.0**	**-0.4**
	baz=302						
WLTB				*e*S	**Sb**	**08 15 00.3**	**-0.2**
	baz=302						
YM01	**YM01**	**0.79**	**332**	⇑*i*P	**Pb**	**08 14 50.9**	**+0.5**
	baz=333						
YM01				*e*S	**Sb**	**08 15 01.5**	**+0.4**
	baz=333						
ESL	**Shilin**	**0.80**	**219**	⇓P	**Pg**	**08 14 49.8**	**-0.5**
	baz=224						
YM10	**YM10**	**0.80**	**332**	⇑*i*P	**Pb**	**08 14 51.2**	**+0.6**
	baz=333						
YM08	**YM08**	**0.82**	**335**	⇑*i*P	**Pb**	**08 14 51.1**	**+0.2**
	baz=335						
YM08				*e*S	**Sn**	**08 15 03.2**	**-0.8**
	baz=335						
CHGB	**Renai**	**0.83**	**243**	⇓P	**Pg**	**08 14 50.8**	**-0.1**
	baz=252						
CHGB				S	**Sb**	**08 15 02.0**	**-0.2**
	baz=252						
TWS1	**Kuangyinshan**	**0.83**	**322**	⇑*i*P	**Pn**	**08 14 52.0**	**-0.2**
	baz=316						
TWS1				*e*S	**Sn**	**08 15 04.2**	**0.0**
	baz=316						
ANP	**Anpu**	**0.85**	**331**	*e*P	**Pb**	**08 14 51.5**	**+0.1**
	baz=332						
NTST	**Danshui**	**0.86**	**326**	⇑*e*P	**Pn**	**08 14 52.5**	**-0.1**
	baz=327						
NTST				*e*S	**Sn**	**08 15 05.2**	**+0.1**
	baz=327						
JYNG	**Yonagunijimaku**	**0.88**	**89**	P	**Pg**	**08 14 51.9**	**+0.1**
JYNG				S	**Sg**	**08 15 03.7**	**+0.3**
NCU	**National Centr**	**0.89**	**306**	P	**Pn**	**08 14 53.3**	**+0.3**
	baz=307						
NCU				*e*S	**Sn**	**08 15 06.8**	**+1.1**
	baz=307						
NCUH	**Zhongli**	**0.89**	**306**	⇑P	**Pn**	**08 14 53.1**	**+0.2**
	baz=306						
NCUH				*e*S	**Sn**	**08 15 06.6**	**+0.9**
	baz=306						
TWY	**Chenhua**	**0.90**	**338**	P	**Pn**	**08 14 52.9**	**-0.2**
	baz=338						
TWY				*e*S	**Sn**	**08 15 05.4**	**-0.5**
	baz=338						
LIOB	**Emei**	**0.90**	**283**	⇑*i*P	**Pn**	**08 14 52.9**	**-0.2**
	baz=283						
LIOB				S	**Sb**	**08 15 03.5**	**-0.7**
	baz=283						
NSTT	**Nanjuang**	**0.91**	**282**	*e*P	**Pn**	**08 14 52.8**	**-0.4**
	baz=282						
EGFH	**Guangfu**	**0.92**	**213**	*e*P	**Pg**	**08 14 52.0**	**-0.6**
	baz=225						
YOJ	**Yonaguni jima**	**0.94**	**89**	⇓P	**Pb**	**08 14 52.6**	**-0.3**
	baz=89						
YOJ				*e*S	**Sg**	**08 15 04.8**	**-0.5**
	baz=89						
YOJ	**Yonaguni jima**	**0.94**	**89**	P	**Pb**	**08 14 53.0**	**+0.1**
YOJ				S	**Sg**	**08 15 05.1**	**-0.2**
WHP	**Taichung City**	**0.95**	**260**	⇓P	**Pn**	**08 14 53.6**	**-0.3**
	baz=260						
SBCB	**Hsinchu**	**0.97**	**291**	P	**Pn**	**08 14 54.7**	**+0.7**
	baz=291						
SBCB				*e*S	**Sn**	**08 15 08.8**	**+1.2**
	baz=291						
HSN	**Hsinchu**	**0.98**	**292**	*e*P	**Pn**	**08 14 54.5**	**+0.3**
	baz=294						
HSN				S	**Sn**	**08 15 07.5**	**-0.5**
	baz=294						
VWDT	**VWDT**	**1.03**	**228**	⇓P	**Pb**	**08 14 54.0**	**-0.4**
	baz=232						
VWDT				*e*S	**Sn**	**08 15 08.7**	**-0.4**
	baz=232						
DPDB	**Guoxing**	**1.04**	**247**	⇓P	**Pn**	**08 14 54.9**	**-0.2**
	baz=246						
DPDB				*e*S	**Sg**	**08 15 07.7**	**-0.8**
	baz=246						
HGSD	**Ruisui**	**1.07**	**208**	*e*P	**Pn**	**08 14 56.0**	**+0.6**
	baz=208						
HGSD				*e*S	**Sn**	**08 15 12.7**	**+2.4**
	baz=208						
NMLH	**Miaoli**	**1.08**	**275**	*e*P	**Pn**	**08 14 56.4**	**+0.7**
	baz=274						
TWQ1	**Liyutan**	**1.10**	**265**	*e*P	**Pn**	**08 14 56.7**	**+0.8**
	baz=265						
TWQ1				*e*S	**Sn**	**08 15 11.3**	**+0.3**
	baz=265						
NSY	**Sanyi**	**1.11**	**269**	*e*P	**Pb**	**08 14 55.5**	**-0.4**
	baz=283						
SMLT	**Sun Moon Lake**	**1.13**	**241**	P	**Pn**	**08 14 56.5**	**+0.1**
	baz=240						
SSLB	**Suanglung**	**1.14**	**235**	⇓P	**Pb**	**08 14 56.2**	**-0.1**
	baz=243						
SSLB				S	**Sb**	**08 15 10.1**	**-1.0**
	baz=243						
TYC	**Yuchr**	**1.16**	**243**	⇓*i*P	**Pb**	**08 14 56.4**	**-0.2**
	baz=242						
TYC				*e*S	**Sg**	**08 15 11.7**	**-0.4**
	baz=242						
PTSB	**Yuanli**	**1.16**	**270**	*e*P	**Pg**	**08 14 57.6**	**+0.5**
	baz=270						
PTSB				*e*S	**Sn**	**08 15 13.0**	**+0.6**
	baz=270						
PCYT	**Pengchaiyu**	**1.18**	**4**	*e*P	**Pn**	**08 14 56.2**	**-0.8**
	baz=5.0						
YULB	**Yu-li**	**1.22**	**211**	*e*P	**Pn**	**08 14 56.8**	**-0.7**
	baz=222						
WDJ	**Dajia District**	**1.22**	**266**	*e*P	**Pg**	**08 14 59.6**	**+1.3**
	baz=265						
TCU	**Taichung**	**1.22**	**256**	*e*P	**Pg**	**08 14 58.8**	**+0.5**
	baz=256						
TWF1	**Yuli**	**1.25**	**210**	*e*P	**Pb**	**08 14 58.3**	**+0.1**
	baz=225						
WHYT	**Xinyi Township**	**1.27**	**234**	*e*P	**Pn**	**08 14 57.4**	**-0.8**
	baz=234						
WJS	**Zhushan**	**1.30**	**242**	*e*P	**Pg**	**08 14 59.4**	**-0.4**
	baz=242						
WNT	**Mingjian**	**1.31**	**245**	*e*P	**Pg**	**08 14 59.6**	**-0.3**
	baz=245						
YUS	**Yu-Shan**	**1.33**	**225**	P	**Pb**	**08 15 00.0**	**+0.1**
	baz=225						
WCHH	**Zhanghua**	**1.34**	**255**	*e*P	**Pg**	**08 15 01.1**	**+0.5**
	baz=254						
ALS	**Alishan**	**1.42**	**229**	⇓P	**Pb**	**08 15 01.4**	**+0.2**
	baz=229						
ALS				*e*S	**Sg**	**08 15 21.9**	**+1.4**
	baz=229						
CHKT	**Chengkung**	**1.45**	**203**	*e*P	**Pn**	**08 15 00.4**	**-0.2**
	baz=186						
CHN5	**Tsauling**	**1.46**	**235**	⇑P	**Pg**	**08 15 03.4**	**+0.6**
	baz=237						
CHN5				*e*S	**Sg**	**08 15 23.8**	**+2.0**
	baz=237						
WGK	**Gukeng**	**1.50**	**240**	*e*P	**Pg**	**08 15 04.0**	**+0.4**
	baz=240						
WDLH	**Douliu**	**1.52**	**241**	*e*P	**Pg**	**08 15 04.4**	**+0.6**
	baz=241						
ELDTW	**Lidau**	**1.53**	**215**	*e*P	**Pb**	**08 15 03.0**	**0.0**
	baz=203						
IRIF	**Iriomote-Funau**	**1.60**	**93**	P	**Pn**	**08 15 02.4**	**-0.3**
IRIF				*e*S	**Sn**	**08 15 22.2**	**-1.1**
TPUB	**Ta-pu**	**1.68**	**228**	*e*P	**Pg**	**08 15 06.4**	**-0.6**
	baz=229						
CHY	**Chiayi**	**1.70**	**237**	*e*P	**Pg**	**08 15 07.4**	**-0.1**
	baz=224						
HATJ	**Hateruma jima**	**1.71**	**103**	P	**Pn**	**08 15 05.0**	**+0.8**
WTP	**Ta-pu**	**1.73**	**227**	*e*P	**Pg**	**08 15 07.2**	**-0.8**
	baz=228						
TWK	**Hsinying**	**1.80**	**230**	*e*P	**Pb**	**08 15 08.2**	**+0.6**
	baz=231						
TWGBT	**Beinan**	**1.81**	**207**	*e*P	**Pn**	**08 15 05.4**	**-0.3**
	baz=209						
TWG	**Pinlang**	**1.82**	**207**	*e*P	**Pn**	**08 15 06.2**	**+0.5**
	baz=209						
CHN1	**Nanshi**	**1.82**	**227**	*e*P	**Pb**	**08 15 08.8**	**+0.8**
	baz=229						
SGST	**Jiashian**	**1.86**	**224**	*e*P	**Pb**	**08 15 08.6**	**-0.1**
	baz=224						
JKRS	**Kuro-shima**	**1.86**	**96**	P	**Pn**	**08 15 06.5**	**+0.2**
JKRS				S	**Sn**	**08 15 29.9**	**+0.2**
JIJ	**Ishigaki jima**	**1.98**	**92**	P	**Pn**	**08 15 07.5**	**-0.4**
JIJ				S	**Sn**	**08 15 31.0**	**-1.5**
ECL	**Taimali**	**2.06**	**207**	*e*P	**Pb**	**08 15 11.6**	**-0.5**
	baz=197						
SSD	**Sandimen**	**2.09**	**216**	*e*P	**Pb**	**08 15 13.4**	**+0.8**
	baz=229						
JISG	**Ishigakijimahi**	**2.13**	**86**	P	**Pn**	**08 15 09.6**	**-0.4**
JISG				S	**Sn**	**08 15 34.8**	**-1.5**
MASBT	**Mashibuluo**	**2.20**	**214**	*e*P	**Pb**	**08 15 13.4**	**-1.1**
	baz=217						
SSPT	**Xinbi**	**2.34**	**214**	*e*P	**Pb**	**08 15 16.6**	**-0.2**
	baz=201						

PNG	Penghu	2.38	249	*e*P	Pn	08 15 15.3	+1.8
	baz=250						
PHUB	P'eng-hu	2.39	248	*e*P	Pn	08 15 15.1	+1.6
	baz=249						
SCZT	Fangliau	2.41	211	*e*P	Pb	08 15 17.3	-0.6
	baz=214						
WDGT	Dungji	2.43	241	*e*P	Pb	08 15 16.6	-1.7
	baz=251						
JTJ	Tarama	2.49	85	P	Pn	08 15 15.5	+0.6
JTJ				S	Sn	08 15 44.7	-0.5
VCHM	Qimei	2.64	243	*e*P	Pn	08 15 19.3	+2.3
	baz=245						
PTMZ	Houxiangcun	2.67	283	*e*P	Pn	08 15 19.4	+2.0
	baz=282						
TWKBT	Hengchun	2.71	204	*e*P	Pn	08 15 18.6	+0.6
	baz=194						
JIRB	Irabujima	2.93	82	P	Pn	08 15 21.6	+0.5
JIRB				*e*S	Sn	08 15 56.1	0.0
JIKM	Ikemajima	3.01	80	P	Pn	08 15 23.4	+1.2
JIKM				*e*S	Sn	08 15 58.4	+0.3
JMJ2	Miyako jima3	3.06	84	S	Sn	08 15 59.4	0.0
KNMB	Chin-men Tao	3.27	271	*e*P	Pn	08 15 25.7	0.0
	baz=269						
AXDP	Jialang	3.67	278	*e*P	Pn	08 15 32.2	+0.9
	baz=275						
ZPLA	Ao Xicun	3.89	263	*e*P	Pn	08 15 35.6	+1.3
	baz=262						

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*IDC **03** 08:21:37.5±1.5, 39°.09N×106°.19E, h0^{km}, mb3.6/5, mb1 3.6/7, mb1mx3.4/48, mbtmp3.5/7, ML3.1/2, Error ellipse: s-maj=43.7km s-min=19.7km az=69.0*

*ISCJB **03** 08:21:40.3±1.1, 39°.13N±0°.07×106°.2E±0°.2, h33^{km}, mb3.5/4, Error ellipse: s-maj=24.7km s-min=10.4km az=1.8*

ISC 03 08:21:42.8±1.2**, 39°.07N**±0°.09×**106°.1E**±0°.2**, h35^{km}, n7, σ0^{s}.98**/8**, mb3.5**/4**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	8.76	1	Pn	Pn	08 23 47.1	+0.1
	0.1nm,0.3s,baz=180,slow=12,SNR=2.3						
SONM				Sn	Sn	08 25 25.0	+0.5
	0.3nm,0.3s,baz=180,slow=22,SNR=2.6						
SONM				Lg	Lg	08 26 11.8	
	0.3nm,0.3s,baz=177,slow=28,SNR=2.2						
MKAR	Makanchi Array	19.03	302	P	P	08 26 01.5	-0.2
	0.1nm,0.3s,baz=109,slow=11,SNR=4.4						
ZALV	Zalesovo Beam	20.77	323	P	P	08 26 20.1	-0.3
	1.0nm,0.4s,baz=143,slow=10,SNR=3.1						
CMAR	Chiang Mai Arr	21.47	199	P	P	08 26 29.1	+0.8
	0.7nm,0.3s,baz=0.0,slow=9.1,SNR=4.9						
KURBB	Kurchatov Arra	22.58	310	P	P	08 26 38.1	-1.8
	0.9nm,0.6s,baz=108,slow=12,SNR=4.9						
BVAR	Borovoye Array	28.12	312	P	P	08 27 31.5	+0.2
	0.6nm,0.6s,baz=99,slow=9.3,SNR=3.8						
ASAR	Alice Springs	67.61	152	P	P	08 32 35.5	-0.6
	0.7nm,0.8s,baz=346,slow=6.8,SNR=5.3						

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*IDC **03** 08:33:06.7±1.1, 28°.37N×61°.88E, h0^{km}, mb3.8/9, mb1 3.9/10, mb1mx3.7/48, mbtmp3.8/10, ML3.7/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/43, Error ellipse: s-maj=23.8km s-min=20.8km az=146.0*

*ISCJB **03** 08:33:07.5±0.7, 28°.39N±0°.06×62°.18E±0°.07, h10^{km}, mb3.8/10, MS3.1/3, Error ellipse: s-maj=9.8km s-min=7.7km az=30.6*

*TEH **03** 08:33:09.0, 28°.46N×62°.10E, h8^{km}, ML3.8*

ISC 03 08:33:08.1±0.8**, 28°.33N**±0°.07×**62°.09E**±0°.09**, h10^{km}, n24, σ2^{s}.05**/22**, mb3.8**/10**, MS2.9**/3**, Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SZD1	Zahaedan-tmp	1.57	317	*e*Pn	Pn	08 33 36.6	+0.4
SZD1				*e*Sg	Sg	08 33 59.2	+0.6
KHNJ	Kahnooj	3.89	265	*e*Pn	Pn	08 34 10.6	+2.6
NIAN	Nian	4.71	262	*e*Pn	Pn	08 34 23.6	+4.4
NIAN				IAMB	IAmb	08 34 38.2	
	comp=Z,0.0nm,0.4s						
IDAH	Dahanechah	4.79	337	*e*Pn	Pn	08 34 23.3	+2.7
IDAH				IAMB	IAmb	08 36 04.0	
	comp=N,2µm,0.8s						
IKOO	Kooshah	4.87	328	*e*Pn	Pn	08 34 22.8	+1.1
IKOO				IAMB	IAmb	08 34 52.6	
	comp=N,482nm,0.3s						
TVBK	TV Kerman	4.94	291	*e*Pn	Pn	08 34 26.0	+3.3
TVBK				IAMB	IAmb	08 34 45.0	
	comp=Z,0.0nm,0.6s						
KHGB	Koh Gabri	5.30	294	*e*Pn	Pn	08 34 29.9	+2.3
KHGB				IAMB	IAmb	08 35 07.0	
	comp=Z,0.0nm,0.8s						
ITEG	Tejag	5.38	329	*e*Pn	Pn	08 34 29.8	+1.2
WSAR	Wadi Sarin	5.95	212	Pn	Pn	08 34 37.4	+1.0
	comp=Z,1.8nm,0.3s,baz=61,slow=6.4,SNR=12						
WSAR				Sn	Sn	08 35 41.7	-2.9
	comp=Z,0.7nm,0.3s,baz=29,slow=19,SNR=3.1						
IBAF	Bafgh	6.52	301	*e*Pn	Pn	08 34 46.5	+2.2
GEYT	Alibeck	10.13	342	LR	LR	08 39 27.4	
	comp=Z,31nm,19.1s,baz=180,slow=38						
AKTO	Aktyubinsk	22.29	353	P	P	08 38 05.2	-0.3
	comp=Z,1.8nm,0.7s,baz=170,slow=10,SNR=6.0						
MMAI	Mount Meron Ar	23.39	288	LR	LR	08 49 12.7	
	comp=Z,39nm,18.2s,baz=245,slow=42						
MKAR	Makanchi Array	24.29	35	P	P	08 38 26.7	+1.0
	comp=Z,0.6nm,0.5s,baz=219,slow=9.6,SNR=7.9						
BVAR	Borovoye Array	25.42	12	P	P	08 38 36.1	+0.4
	comp=Z,0.9nm,0.6s,baz=187,slow=10,SNR=5.5						
KURBB	Kurchatov Arra	25.51	25	P	P	08 38 36.3	-0.2
	comp=Z,0.4nm,0.4s,baz=219,slow=8.8,SNR=5.2						
PALK	Pallekele	27.36	136	LR	LR	08 52 03.1	
	comp=Z,31nm,20.0s,baz=274,slow=41						
AKASG	Malin Array Be	33.36	321	P	P	08 39 45.5	-0.8
	comp=Z,1.0nm,0.5s,baz=122,slow=8.2,SNR=2.7						
FINES	FINESS Array B	40.83	334	P	P	08 40 49.0	-0.5
	comp=Z,1.4nm,0.7s,baz=135,slow=10,SNR=7.8						
GERES	GERESS Array B	42.17	313	P	P	08 41 00.0	-0.9
	comp=Z,1.3nm,0.3s,baz=106,slow=6.2,SNR=7.1						
KSRS	Korea Array	55.04	62	P	P	08 42 40.3	+0.3
	comp=Z,1.1nm,0.8s,baz=285,slow=6.9,SNR=3.0						
TORD	Torodi Ar. Bea	57.93	268	P	P	08 42 58.2	-2.7
	comp=Z,8.8nm,0.5s,baz=67,slow=7.8,SNR=6.8						
PETK	Petropavlovsk-	71.05	39	LR	LR	09 16 23.7	
	comp=Z,24nm,21.2s,baz=101,slow=36						
ASAR	Alice Springs	86.35	119	P	P	08 45 52.3	+1.5
	comp=Z,0.5nm,0.6s,baz=307,slow=5.7,SNR=7.2						

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*ISCJB **03** 08:47:59.5±0.6, 6°.18S±0°.08×148°.6E±0°.1, h65^{km}, mb4.1/9, Error ellipse: s-maj=17.9km s-min=7.2km az=31.9*

*NEIC **03** 08:48:01.1±1.1, 6°.21S×148°.63E, h66^{km}±8^{km}, mb4.1/10, Error ellipse: s-maj=26.3km s-min=9.9km az=128.0*

*IDC **03** 08:48:02.3±2.3, 6°.18S×148°.53E, h77^{km}±18^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.7/32, mbtmp4.3/6, MS2.9/6, Ms1 2.9/6, ms1mx2.8/27, Error ellipse: s-maj=44.9km s-min=13.2km az=117.0*

ISC 03 08:48:00.9±0.6**, 6°.2S**±0°.1×**148°.6E**±0°.1**, h65^{km}, n28, σ0^{s}.91**/29**, mb4.2**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.52	204	P	Pn	08 48 53.7	+0.5
	39nm,0.3s,baz=36,slow=4.9,SNR=63						
PMG				S	Sn	08 49 34.8	+1.2
	189nm,0.3s,baz=31,slow=18,SNR=33						
PMG				LR	LR	08 50 18.2	
	comp=Z,224nm,20.0s,baz=60,slow=39						
PMG	Port Moresby	3.52	204	*e*Pn	Pn	08 48 54.2	+1.0
PMG				*e*Sn	Sn	08 49 33.6	-0.1
RABL	Rabaul	4.05	61	*e*Pn	Pn	08 49 00.6	+0.1
JAY	Jayapura	8.67	294	LR	LR	08 53 59.0	
	comp=Z,47nm,19.3s,baz=90,slow=41						
COEN	Coen	9.41	214	*e*Pn	Pn	08 50 13.6	-0.2
COEN				*e*Sn	Sn	08 51 55.5	-2.6
HNR	Honiara	11.70	107	LR	LR	08 54 39.8	
	comp=Z,49nm,19.7s,baz=276,slow=34						
SIJI	Sorong	18.08	286	LR	LR	08 58 51.6	
	comp=Z,28nm,21.8s,baz=102,slow=36						
MTN	Manton Dam	18.45	248	*e*P	Pn	08 52 11.9	-0.4
	11nm,0.9s						
EIDS	Eidsvold	19.24	173	*e*P	P	08 52 19.6	-0.4
	10.0nm,0.9s						
WRAB	Tennant Creek	19.47	224	*e*P	P	08 52 23.0	+0.4
	12nm,1.0s						
AS31	Alice Springs	22.42	218	*e*P	P	08 52 54.5	0.0
	3.9nm,0.4s						
ASAR	Alice Springs	22.42	218	P	P	08 52 54.0	-0.4
	4.8nm,0.5s,baz=52,slow=8.9,SNR=44						
ASAR				PcP	PcP	08 56 47.1	-0.1
	0.7nm,0.9s,baz=49,slow=3.9,SNR=4.4						
ASAR				S	S	08 56 56.0	-0.5
	4.1nm,1.0s,baz=34,slow=22,SNR=8.9						
ARMA	Armidale	24.29	174	*e*P	P	08 53 12.2	-0.2
	5.8nm,1.0s						
STKA	Stephens Creek	26.41	193	P	P	08 53 32.6	+1.2
	4.3nm,0.7s,baz=23,slow=7.7,SNR=5.4						
STKA				LR	LR	09 04 41.4	
	comp=Z,72nm,18.1s,baz=27,slow=38						
STKA	Stephens Creek	26.41	193	*e*P	P	08 53 32.6	+1.2
	1.2nm,0.8s						
KAPI	Kappang	28.73	271	LR	LR	09 06 37.7	
	comp=Z,24nm,20.4s,baz=116,slow=39						
FORT	Forrest	31.17	216	*e*P	P	08 54 13.7	-0.1
	32nm,1.1s						
PETK	Petropavlovsk-	59.55	6	P	P	08 57 59.2	+1.7
	1.7nm,0.7s,baz=163,slow=7.2,SNR=5.6						
PEA1	Petropavlovsk-	59.55	6	*e*P	P	08 57 59.2	+1.7
VNDA	Vanda	71.66	177	P	P	08 59 15.4	+0.2
	1.5nm,0.5s,baz=337,slow=7.4,SNR=20						
VNDA	Vanda	71.66	177	*e*P	P	08 59 15.6	+0.3
	2.0nm,0.6s						
QSPA	South Pole Qui	83.80	180	*e*P	P	09 00 22.8	-0.3
	3.8nm,0.7s						
ILAR	Eielson Array	85.01	23	P	P	09 00 27.8	-1.2
	0.8nm,0.5s,baz=247,slow=4.4,SNR=13						
DAC	Darwin (Calif)	96.67	54	*e*P	P	09 01 24.4	-0.2
LPAZ	La Paz	137.35	122	PKP	PKPdf	09 07 18.9	0.0
	0.9nm,0.8s,baz=306,slow=1.6,SNR=4.5						
TORD	Torodi Ar. Bea	146.68	285	PKPbc	PKPdf	09 07 34.8	+0.1
	2.7nm,0.3s,baz=67,slow=3.0,SNR=2.5						
TOA1	Torodi Ar. Sit	146.68	285	*e*PKPdf	PKPdf	09 07 34.8	+0.1
BDFB	Brasilia	152.79	143	PKPbc	PKPbc	09 07 50.9	-0.8
	1.6nm,0.4s,baz=304,slow=3.6,SNR=4.0						

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*KRAR **03** 08:49:03.9±0.1, 53°.62N×87°.76E, M2.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*NNC **03** 08:49:04.2±2.0, 53°.71N×88°.05E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=18.4km s-min=9.8km az=49.0, Suspected Mining explosion.*

IDC 03 08:49:05.8±2.9**, 53°.56N×87°.92E, h0^{km}, mb1 3.4**/2**, mb1mx3.2**/43**, mbtmp3.4**/2**, ML3.2**/2**, 3C-3D, Error ellipse: s-maj=27.0km s-min=18.4km az=82.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.88	283	*i*		09 00 47.9	
	baz=98,slow=308,SNR=1.9						
ZAA0	Zalesovo Array	1.88	283	⇓Pn	Pn	08 49 38.2	-1.0
	1.2nm,0.6s						
ZAA0				⇓Sn	Sn	08 50 04.3	+0.6
	4.5nm,0.5s						
ZALV	Zalesovo Beam	1.88	283	Pn	Pn	08 49 38.5	-0.7
	5.0nm,0.3s,baz=104,slow=12,SNR=30						
ZALV				Sn	Sn	08 50 04.1	+0.4
	9.3nm,0.3s,baz=102,slow=28,SNR=22						
KURBB	Kurchatov Arra	6.49	247	Pn	Pn	08 50 43.0	+0.5
	0.4nm,0.3s,baz=61,slow=14,SNR=20						
KURBB				Sn	Sn	08 51 57.4	+0.2
	baz=58,slow=27,SNR=2.1						
KURBB				Lg	Lg	08 52 30.6	
	baz=64,slow=32,SNR=3.1						
KURBB	Kurchatov Arra	6.49	247	⇑Lg	Lg	08 52 35.9	
	13nm,0.8s						
MK31	Makanchi Array	7.67	210	⇑Pn	Pn	08 51 00.4	+1.6
	0.1nm,0.3s,baz=28,slow=13,SNR=17						
MK31				⇑Sn	Sn	08 52 29.4	+3.1
	0.4nm,0.5s,baz=39,slow=28,SNR=4.2						
MK31				⇓Lg	Lg	08 53 16.3	
	9.6nm,1.1s,baz=39,slow=28,SNR=4.2						
MKAR	Makanchi Array	7.67	210	Pn	Pn	08 51 00.2	+1.5
	0.4nm,0.3s,baz=26,slow=13,SNR=9.2						
MKAR				Sn	Sn	08 52 25.7	-0.6
	0.1nm,0.3s,baz=33,slow=27,SNR=4.3						
MKAR				Lg	Lg	08 53 06.4	
	0.1nm,0.3s,baz=26,slow=28,SNR=3.2						
BVAR	Borovoye Array	10.51	274	Sn	Sn	08 53 29.8	-6.2
	0.1nm,0.3s,baz=80,slow=24,SNR=2.6						

RSNC 03 08:54:45.8±1.2**, 6°.81N×73°.13W, h150^{km}**±4^{km}**, ML3.1, Mw3.5, 1C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.22	193	*e*P	Pn	08 55 06.0	-0.4
BARC				*e*S	Sn	08 55 21.0	-1.2
BARC				*i*		08 55 22.6	
	comp=Z,88nm,0.2s						
GIRC	Giron, Santand	0.28	347	*e*P	Pn	08 55 06.2	-0.3
BRRC	Barranca, Sant	0.65	297	⇓*i*P	Pn	08 55 08.0	0.0
BRRC				*e*S	Sn	08 55 25.2	+0.4
BRRC				*i*		08 55 25.8	
	comp=N,315nm,0.2s						
PAMC	Pamplona, Colo	0.68	39	⇓*i*P	Pn	08 55 08.9	+0.1
PAMC				*e*S	Sn	08 55 26.1	-0.2
PAMC				*i*		08 55 27.3	
	comp=N,248nm,0.5s						
RUSC	La Rusia	0.91	177	*e*P	Pn	08 55 09.9	-0.6
RUSC				*e*S	Sn	08 55 28.2	-1.1
RUSC				*i*		08 55 29.1	
	comp=N,98nm,0.3s						
GRMC	Gramalote, San	0.96	20	⇓*i*P	Pn	08 55 11.9	+1.5
GRMC				*e*S	Sn	08 55 31.6	+2.3
CAPV	Capacho	1.33	38	*e*P	Pn	08 55 13.9	+0.1
CAPV				*e*S	Sn	08 55 34.4	-1.0
PTBC	PUERTO BERRIO,	1.34	259	*e*P	Pn	08 55 12.7	-1.1
PTBC				*e*S	Sn	08 55 34.1	-1.1
PTBC				*i*		08 55 35.8	
	comp=E,142nm,0.2s						
TAMC	Tame, Arauca	1.38	105	⇓*i*P	Pn	08 55 14.2	0.0
TAMC				*i*		08 55 14.3	
	comp=Z,63nm,0.2s						
TAMC				*e*S	Sn	08 55 35.7	-0.2
OCAC	Ocana	1.43	353	*e*P	Pn	08 55 14.6	-0.3
OCAC				*e*S	Sn	08 55 36.5	-0.7
YOPC	Yopal, Colombi	1.61	154	*e*P	Pn	08 55 16.4	-0.2
YOPC				*e*S	Sn	08 55 40.3	0.0
YOPC				*i*		08 55 43.7	
	comp=N,119nm,0.3s						
ZARC	Zaragoza, Cauc	1.84	292	*e*P	Pn	08 55 18.8	-0.4
ZARC				*e*S	Sn	08 55 44.2	-0.5
ZARC				*i*		08 55 50.8	
	comp=E,312nm,0.2s						
AGZ	La Independenc	1.98	160	⇑*i*P	Pn	08 55 19.9	-0.8
NORC	Norcasia	2.12	234	*e*P	Pn	08 55 21.9	-0.6
NORC				*e*S	Sn	08 55 50.3	-0.4
NORC				*i*		08 55 57.3	
	comp=E,149nm,0.2s						
SMLC	San Martn de	2.19	335	*e*P	Pn	08 55 22.5	-0.7
SMLC				*e*S	Sn	08 55 51.0	-1.0
SMLC				*i*		08 55 53.7	
	comp=E,172nm,0.3s						
CHIC	Chingaza	2.25	195	*e*P	Pn	08 55 23.8	-0.5
CHIC				*e*S	Sn	08 55 54.4	+0.5
CHIC				*i*		08 55 57.2	
	comp=N,73nm,0.2s						
ROSC	El Rosal	2.29	211	*e*P	Pn	08 55 25.3	+0.5
ROSC				*e*S	Sn	08 55 55.2	+0.6
HELC	Santa Helena	2.46	256	*e*P	Pn	08 55 26.9	+0.1
HELC				*e*S	Sn	08 55 58.4	+0.1
HELC				*i*		08 56 04.1	
	comp=N,33nm,0.3s						
SOCV	Socops	2.69	57	*e*P	Pn	08 55 28.2	-1.1
GUY2C	Guyana, Caldas	2.72	235	*e*P	Pn	08 55 30.1	0.0
GUY2C				*e*S	Sn	08 56 05.8	+1.5
GUY2C				*i*		08 56 15.2	
	comp=N,54nm,0.5s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	08 55 28.7	-1.3
VILC				*e*S	Sn	08 56 02.5	-1.7
RREF	El Recreo	2.91	229	*e*P	Pn	08 55 33.1	+0.5
RREF				*e*S	Sn	08 56 08.6	-0.1
RREF				*i*		08 56 14.5	
	comp=Z,45nm,0.2s						
DBBC	Dabeiba	3.06	274	*e*P	Pn	08 55 33.5	-0.6
CODC	Agustn Codazz	3.12	354	*e*P	Pn	08 55 34.0	-0.8
CODC				*e*S	Sn	08 56 11.3	-1.4
CODC				*i*		08 56 17.6	
	comp=N,29nm,0.5s						
PRAC	Prado	3.54	210	*e*P	Pn	08 55 39.2	-0.9
PRAC				*e*S	Sn	08 56 21.7	-0.6
PRAC				*i*		08 56 25.3	
	comp=E,61nm,0.3s						
ORTC	Ortega, Tolima	3.57	216	*e*P	Pn	08 55 40.0	-0.5
ORTC				*e*S	Sn	08 56 21.7	-1.2
ORTC				*i*		08 56 26.1	
	comp=N,63nm,0.3s						
ELOV	Elorza	3.63	87	*e*P	Pn	08 55 39.9	-1.3
VIRV	Villa del Rosa	3.74	11	*e*P	Pn	08 55 41.0	-1.8
MACC	Macarena, Meta	4.69	189	*e*P	Pn	08 55 52.6	-2.6

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*GCG **03** 08:57:19.0±0.9, 13°.67N×92°.61W, h50^{km}±993^{km}, MD4.2*

*NEIC **03** 08:57:21.2±3.0, 13°.83N×91°.99W, h4^{km}±6^{km}, mb4.0/13, MD4.0(MEX), Error ellipse: s-maj=11.8km s-min=2.3km az=76.0*

*ISCJB **03** 08:57:21.3±1.2, 13°.79N±0°.05×92°.28W±0°.03, h11^{km}±7^{km}, mb4.0/13, MS3.2/1, Error ellipse: s-maj=8.9km s-min=4.4km az=25.4*

*IDC **03** 08:57:22.2±2.0, 13°.86N×92°.24W, h0^{km}, mb3.5/5, mb1 3.9/9, mb1mx3.8/32, mbtmp3.6/9, ML3.5/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/24, Error ellipse: s-maj=43.4km s-min=22.0km az=15.0*

*MEX **03** 08:57:22.9±0.5, 13°.65N×92°.14W, h49^{km}±36^{km}, MD4.0*

*SNET **03** 08:57:24.6±0.9, 13°.89N×92°.17W, h54^{km}±110^{km}, ML3.7*

ISC 03 08:57:22.8±1.8**, 13°.85N**±0°.07×**92°.20W**±0°.05**, h13^{km}**±10^{km}**, n58, σ1^{s}.67**/75**, mb4.0**/13**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	Santiaguito 3,	1.06	36	*e*P	Pb	08 57 43.3	+0.2
THIG		1.06	357	*e*Pg	Pg	08 57 42.5	-0.8
THIG				*e*Sn	Sn	08 57 57.9	-0.1
THIG		1.06	357	*e*P	Pg	08 57 42.4	-0.8
THIG				*e*S	Sn	08 57 57.9	-0.1
FUG	Fuego 3	1.45	66	*e*P	Pb	08 57 49.9	+0.1
PCG	Pacaya	1.64	71	*e*P	Pn	08 57 52.3	+0.7
PCG				*e*S	Sg	08 58 17.2	+1.5
IXG	Ixpaco	1.74	79	*e*P	Pn	08 57 53.1	+0.1
IXG				*e*S	Sg	08 58 20.2	+1.3
NBG	Las Nubes	1.95	68	*e*P	Pb	08 57 58.4	+0.1
NBG				*e*S	Sg	08 58 28.2	+2.7
APG	El Apazote	2.04	55	Pn	Pb	08 57 58.6	-1.3
	30nm,0.3s,baz=211,slow=8.3,SNR=219						
APG				Sn	Sg	08 58 27.2	-1.3
	56nm,0.3s,baz=310,slow=17,SNR=7.9						
PCIG		2.09	332	*e*Pn	Pn	08 57 56.7	-0.8
PCIG				*e*Sn	Sn	08 58 22.1	-1.4
PCIG		2.09	332	*e*P	Pn	08 57 56.7	-0.8
PCIG				*i* S	Sn	08 58 23.3	-0.2
CCIG	Comitan	2.42	2	*e*Pn	Pb	08 58 05.0	-1.3
CCIG				*e*Pn	Pn	08 58 05.2	+2.9
CCIG				*e*Sn	Sn	08 58 32.5	+0.6
CCIG	Comitan	2.42	2	*e*P	Pn	08 58 01.9	-0.4
CCIG				*e*S	Sn	08 58 32.5	+0.6
RTR	El Retiro	2.48	89	*e*P	Pn	08 58 03.4	+0.2
CEVE	Cerro Verde	2.51	90	*e*P	Pn	08 58 03.3	-0.2
CEVE				*e*S	Sn	08 58 33.6	-0.5
CEVE				IAML		08 58 51.4	
	comp=Z,938nm,0.4s						
SNJE	San Jose	2.52	89	*e*P	Pn	08 58 03.8	+0.1
MTO3	Montecristo	2.81	78	*e*P	Pn	08 58 07.5	-0.2
TGIG		3.05	343	*e*Pn	Pn	08 58 10.0	-0.8
TGIG				*e*Sn	Sn	08 58 42.7	-4.5
TGIG		3.05	343	*e*P	Pn	08 58 10.0	-0.8
TGIG				*i* S	Sn	08 58 47.2	0.0
PAVA	Las Pavas	3.18	92	*e*P	Pn	08 58 12.3	-0.4
PAVA				IAML		08 59 17.0	
	comp=Z,75nm,0.6s						
CMIG	Matias Romero	4.13	322	Pn	Pn	08 58 24.5	-1.2
	comp=Z,0.8nm,0.3s,baz=161,slow=14,SNR=20						
CMIG				Sn	Sn	08 59 13.3	-0.7
	comp=Z,4.6nm,0.3s,baz=125,slow=16,SNR=2.9						
CMIG	Matias Romero	4.13	322	*e*Pn	Pn	08 58 25.6	-0.1
CMIG	Matias Romero	4.13	322	*e*P	Pn	08 58 25.6	-0.1
CMIG				*i* S	Sn	08 59 14.8	+0.9
LCND	La Caada	4.23	97	*e*P	Pn	08 58 26.5	-0.5
LCND				*e*S	Sn	08 59 14.9	-1.4
HUIG	Huatulco	4.23	297	*i* P	Pn	08 58 25.9	-1.2
HUIG				*i* S	Sn	08 59 14.9	-1.5
CNCH	Conchagua	4.29	97	*e*P	Pn	08 58 27.8	-0.1
CSGN	Cosiguina Volc	4.60	100	*e*Pn	Pn	08 58 33.2	+1.0
TGUH	Tegucigalpa,Un	4.79	87	*e*Pn	Pn	08 58 32.0	-2.8
ESTN	Estel	5.72	97	*e*Pn	Pn	08 58 44.2	-3.5
LVIG	Laguna Verde	7.10	326	*e*Pn	Pn	08 59 08.8	+2.3
TLIG	Tlapa	7.15	302	*e*Pn	Pn	08 59 11.1	+3.7
TEIG	Tepich	7.37	30	*e*Pn	Pn	08 59 12.6	+2.4
JTS	Las Juntas de	7.92	116	Pn	Pn	08 59 19.8	+1.9
	comp=Z,0.5nm,0.3s,baz=7.6,slow=20,SNR=5.3						
JTS				Sn	Sn	09 00 46.2	-1.3
	comp=Z,0.3nm,0.3s,baz=0.0,slow=20,SNR=1.8						
JTS	Las Juntas de	7.92	116	*e*Pn	Pn	08 59 14.6	-3.2
H06E1	SOCORRO T-PHAS	18.62	288	T	T	09 20 53.4	
	SNR=2.8						
TX31	Lajitas Ar. Si	18.72	327	*e*P	P	09 01 40.1	-1.2
	comp=Z,2.3nm,1.0s						
TXAR	Lajitas Array	18.72	327	P	Pn	09 01 43.8	+2.1
	comp=Z,0.1nm,0.3s,baz=150,slow=9.9,SNR=14						
352A	Blakely	18.78	20	*e*P	P	09 01 38.6	-3.3
	comp=Z,10nm,1.0s						
456A	Hilliard	19.24	28	*e*P	P	09 01 45.4	-1.5
	comp=Z,28nm,1.0s						
LPIG	La Paz	19.91	303	LR	LR	09 08 38.9	
	comp=Z,31nm,18.3s,baz=151,slow=34						
BANI	BANI	21.46	75	*e*P	P	09 02 08.7	-2.7
MNTX	Cornudas Mount	21.49	328	*e*P	P	09 02 12.8	+1.4
	comp=Z,2.6nm,0.8s						
AMTX	Amarillo	22.63	339	*e*P	P	09 02 23.9	+0.2
	comp=Z,9.1nm,0.6s						
BNM	Barren Site	24.07	330	*e*P	P	09 02 40.5	+2.1
LPM	Los Pinos Moun	24.21	330	*e*P	P	09 02 37.0	-2.5
ANMO	Albuquerque	24.64	331	P	P	09 02 45.3	+1.9
	comp=Z,1.4nm,0.7s,baz=150,slow=11,SNR=10						
ANMO	Albuquerque	24.64	331	*e*P	P	09 02 45.7	+2.3
	comp=Z,1.6nm,0.8s						
PV13	Radium Mtn., P	28.35	332	*e*P	P	09 03 18.7	+1.8
	comp=Z,2.6nm,0.9s						
PV12	Saucer Basin,	28.47	332	*e*P	P	09 03 20.0	+2.0
	comp=Z,4.6nm,1.0s						
PDAR	Pinedale Array	32.48	336	P	P	09 03 55.2	+1.9
	comp=Z,0.1nm,0.5s,baz=139,slow=9.2,SNR=2.2						
SNOW	Snow King Moun	33.54	335	*e*P	P	09 04 03.1	+0.5
	comp=Z,3.2nm,0.6s						
NVAR	Mina Array Bea	33.67	321	P	P	09 04 06.3	+2.5
	comp=Z,0.8nm,0.7s,baz=134,slow=8.7,SNR=5.3						
NVAR				LR	LR	09 19 43.3	
	comp=Z,40nm,18.5s,baz=280,slow=40						
MCMT	McKenzie Canyo	35.52	334	*e*P	P	09 04 21.5	+1.7
J08A	Circle Bar Ran	37.06	328	*e*P	P	09 04 34.7	+1.9
	comp=Z,4.7nm,0.8s						
F10A	Beach Ranch, E	38.35	332	*e*P	P	09 04 44.3	+0.7
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	51.13	347	P	P	09 06 24.5	-0.6
	comp=Z,1.2nm,0.9s,baz=136,slow=8.8,SNR=3.5						
ILAR	Eielson Array	62.90	337	P	P	09 07 49.1	+0.6
	comp=Z,0.3nm,0.7s,baz=126,slow=6.1,SNR=3.7						
SVW2	Sparrevohn	65.21	331	*e*P	P	09 08 05.5	+1.7
	comp=Z,13nm,0.6s						
CMAR	Chiang Mai Arr	146.07	341	PKPbc	PKPab	09 17 04.2	+0.2
	comp=Z,2.1nm,0.7s,baz=342,slow=4.4,SNR=8.7						

MEX 03 09:03:19.0±0.5**, 15°.01N×93°.13W, h70^{km}**±8^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.70	353	*i* P	Pn	09 03 32.5	-1.4
PCIG				*e*S	Sn	09 03 42.9	-1.9
THIG		0.84	97	*i* P	Pn	09 03 34.5	-1.1
THIG				*e*S	Sn	09 03 46.3	-1.5
CCIG	Comitan	1.59	37	*e*P	Pn	09 03 43.6	-1.8
CCIG				*i* S	Sn	09 04 03.3	-1.9
TGIG		1.76	0	*e*P	Pn	09 03 46.0	-1.5
TGIG				*i* S	Sn	09 04 07.8	-1.4
CMIG	Matias Romero	2.67	321	*e*P	Pn	09 03 58.4	-1.3
CMIG				*i* S	Sn	09 04 30.0	-1.0

KRNET 03 09:08:40.2±0.1**, 42°.17N×80°.32E, mb2.2, 5C-6D,**

Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**1.31**	**332**	⇑*i*P	Pg	09 09 03.3	-2.0
	baz=32						
PRZ	**Przheval'sk**	**1.46**	**283**	⇑*i*P	Pn	09 09 05.3	-2.7
	baz=83						
PRZ				⇑*i*S	Sg	09 09 23.5	-3.6
	baz=83						
KDJ	**Kajisay**	**2.34**	**270**	⇓*e*P	Pn	09 09 17.1	-3.0
	baz=70						
KDJ				⇓*i*S	Sn	09 09 44.1	-5.5
	baz=70						
ULHL	**Ulahol**	**3.03**	**273**	⇓*i*P	Pn	09 09 27.1	-2.6
	baz=73						
ULHL				⇓*i*S	Sn	09 10 01.3	-5.5
	baz=73						
BOOM	**Boomskoye usch**	**3.27**	**277**	⇓*i*P	Pn	09 09 30.5	-2.3
	baz=77						
BOOM				⇓*i*S	Sn	09 10 06.8	-5.7
	baz=77						
TKM2	**Tokmak 2**	**3.57**	**284**	⇑*i*P	Pn	09 09 34.5	-2.6
	baz=84						
TKM2				⇑*i*S	Sn	09 10 14.5	-5.6
	baz=84						

SOME ***03*** *09:08:43.8, 44°.28N×80°.28E, h10^{km}*

NNC 03 09:08:43.1±0.7**, 44°.29N×80°.34E, h3**^{km}±3^{km}**, mb2.8, mpv2.8, 4C-3D, Error ellipse: s-maj=4.8km s-min=3.0km az=82.0, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.39**	**276**	P	Pb	09 08 51.9	-0.9
	14nm,0.2s						
DJR				S	Sb	09 08 57.9	-1.3
	18nm,0.1s						
DJR	**Jarkent**	**0.39**	**276**	*e*P	Pb	09 08 51.8	-0.9
	21nm,0.1s						
DJR				*e*S	Sb	09 08 57.9	-1.4
	23nm,0.1s						
KTMS	**Ketmen**	**0.85**	**179**	P	Pg	09 08 59.7	+0.3
	5.3nm,0.1s						
KTMS				S	Sg	09 09 11.0	+0.8
	13nm,0.1s						
KTMS	**Ketmen**	**0.85**	**179**	*e*P	Pg	09 08 59.7	+0.4
	5.3nm,0.1s						
KTMS				*e*S	Sg	09 09 11.0	+0.8
	13nm,0.1s						
PDGK	**Podgornoye**	**1.14**	**213**	P	Pg	09 09 04.6	-0.3
	1.7nm,0.1s						
PDGK				S	Sg	09 09 19.6	-0.1
	3.4nm,0.1s						
PDGK	**Podgornoye**	**1.14**	**213**	⇓P	Pg	09 09 04.4	-0.6
	0.6nm,0.2s						
PDGK				⇑S	Sb	09 09 20.5	-0.3
	2.2nm,0.4s						
PDGK	**Podgornoye**	**1.14**	**213**	⇑*i*S	Sg	09 09 19.9	+0.1
	baz=32						
KAPS	**Kapalarasan**	**1.21**	**325**	P	Pg	09 09 05.8	-0.5
	1.5nm,0.3s						
KAPS				S	Sg	09 09 21.4	-0.6
	15nm,0.4s						
KAPS	**Kapalarasan**	**1.21**	**325**	⇓*i*P	Pg	09 09 05.8	-0.5
	1.4nm,0.1s						
KAPS				⇓*i*S	Sg	09 09 21.4	-0.6
	15nm,0.3s						
MNBS	**Baschi**	**1.41**	**262**	P	Pn	09 09 09.0	-0.8
	0.9nm,0.1s						
MNBS				S	Sg	09 09 27.4	-0.9
	20nm,0.2s						
MNBS	**Baschi**	**1.41**	**262**	*e*P	Pn	09 09 08.9	-0.8
	0.9nm,0.1s						
MNBS				*e*S	Sg	09 09 27.4	-0.9
	20nm,0.2s						
KPKS	**Kokpek**	**1.45**	**236**	*e*P	Pn	09 09 10.6	+0.2
	4.5nm,0.1s						
KPKS				*e*S	Sg	09 09 29.8	0.0
	39nm,0.3s						
UZB	**Uzynbulak**	**1.49**	**220**	P	Pn	09 09 11.0	+0.1
	1.7nm,0.1s						
UZB				S	Sb	09 09 30.5	-0.3
	5.1nm,0.1s						
UZB	**Uzynbulak**	**1.49**	**220**	*e*P	Pn	09 09 11.0	+0.1
	1.7nm,0.1s						
UZB				*e*S	Sb	09 09 30.5	-0.3
	5.1nm,0.1s						
KURS	**Kuram**	**1.76**	**244**	P	Pb	09 09 15.3	-0.7
	3.2nm,0.5s						
KURS				S	Sb	09 09 38.1	-0.5
	3.7nm,0.2s						
KURS	**Kuram**	**1.76**	**244**	*e*P	Pb	09 09 15.3	-0.7
	2.0nm,0.5s						
KURS				*e*S	Sb	09 09 38.1	-0.5
	3.7nm,0.2s						
ARXS	**Arharly**	**1.81**	**268**	P	Pb	09 09 16.8	0.0
	6.5nm,0.3s						
ARXS				S	Sb	09 09 40.3	+0.5
	9.6nm,0.3s						
ARXS	**Arharly**	**1.81**	**268**	*e*P	Pb	09 09 16.8	0.0
	6.5nm,0.3s						
ARXS				*e*S	Sb	09 09 40.3	+0.5
	9.6nm,0.3s						
SATY	**Saty**	**1.87**	**229**	P	Pb	09 09 17.7	-0.2
	3.1nm,0.1s						
SATY				S	Sg	09 09 42.4	-0.6
	21nm,0.2s						
SATY	**Saty**	**1.87**	**229**	*e*P	Pn	09 09 16.9	+0.9
	4.4nm,0.1s						
SATY				*e*S	Sb	09 09 41.4	-0.3
	20nm,0.2s						
CHKK	**Chushkaly**	**2.45**	**261**	Pg	Pb	09 09 27.3	-0.5
	1.6nm,0.4s						
CHKK				Lg	Lg	09 09 58.7	
	8.8nm,0.3s						
CHKK	**Chushkaly**	**2.45**	**261**	*e*P	Pb	09 09 27.3	-0.5
	1.6nm,0.4s						
CHKK				*e*S	Sb	09 09 58.7	+0.2
	8.8nm,0.3s						
KTBS	**Karatobe**	**2.70**	**259**	Pg	Pb	09 09 31.9	-0.1
	1.0nm,0.4s						
KTBS				Lg	Lg	09 10 06.6	
	9.5nm,0.5s						
KTBS	**Karatobe**	**2.70**	**259**	*e*P	Pb	09 09 31.9	-0.1
	1.0nm,0.4s						
KTBS				*e*S	Sb	09 10 06.6	+1.0
	9.5nm,0.5s						
MK31	**Makanchi Array**	**2.85**	**28**	⇑Pg	Pb	09 09 35.3	+0.6
	0.5nm,0.7s,baz=208,slow=27,SNR=6.4						
MK31				⇑Lg	Lg	09 10 12.2	
	0.3nm,0.4s,baz=210,slow=26,SNR=3.9						
KUU	**Kurty**	**2.91**	**263**	Pg	Pb	09 09 35.3	-0.3
	1.1nm,0.2s						
KUU				Lg	Lg	09 10 12.1	
	4.3nm,0.3s						
KUU	**Kurty**	**2.91**	**263**	*e*P	Pb	09 09 35.3	-0.3
	1.1nm,0.2s						
KUU				*e*S	Sb	09 10 12.1	+0.6
	4.3nm,0.3s						

ROM 03 09:19:38.6±0.1**, 43°.450N**±0°.004×**13°.135E**±0°.006**, h9**^{km}**, Md1.3**/3**, Error ellipse: s-maj=0.6km s-min=0.2km az=225.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	**Cingoli**	**0.09**	**149**	P	Pg	09 19 41.3	+0.4
CING				S	Sg	09 19 43.0	+0.4
CING				END			
CING				END			
EL6	**Elcito**	**0.12**	**191**	P	Pg	09 19 42.0	+0.5
EL6				S	Sg	09 19 44.2	+0.7
EL6				AML	AML		
	comp=E,3485µm,1.4s						
EL6				AML	AML		
	comp=N,2910µm,0.2s						
EL6				AML	AML		
	comp=E,3495µm,1.4s						
EL6				AML	AML		
	comp=N,2910µm,0.2s						
EL6				END			
EL6				END			
ARVD	**Arcevia**	**0.15**	**289**	P	Pg	09 19 42.4	+0.5
ARVD				S	Sg	09 19 45.0	+0.9
ARVD				AML	AML		
	comp=E,1120µm,0.6s						
ARVD				AML	AML		
	comp=N,1300µm,0.3s						
ARVD				AML	AML		
	comp=N,1300µm,0.3s						
ARVD				AML	AML		
	comp=E,1120µm,0.6s						
ARVD				END			
ARVD				END			
MPAG	**Monte Paganucc**	**0.33**	**303**	P	Pg	09 19 45.7	+0.6
MPAG				S	Sb	09 19 51.1	-0.9
MPAG				AML	AML		
	comp=E,418µm,0.7s						
MPAG				AML	AML		
	comp=N,398µm,0.5s						
MPAG				AML	AML		
	comp=N,397µm,0.5s						
MPAG				AML	AML		
	comp=E,418µm,0.7s						
CSP1	**Cessapalombo**	**0.36**	**172**	P	Pg	09 19 46.4	+0.7
PE3	**Peglio**	**0.53**	**298**	AML	AML		
	comp=N,432µm,0.5s						
PE3				AML	AML		
	comp=E,476µm,0.3s						
PE3				AML	AML		
	comp=N,432µm,0.5s						
PE3				AML	AML		
	comp=E,476µm,0.3s						

ROM ***03*** *09:20:38.8±0.1, 43°.436N±0°.004×13°.140E±0°.009, h9^{km}, ML2.3/28, Error ellipse: s-maj=0.8km s-min=0.3km az=235.0*

ISCJB ***03*** *09:20:39.4±0.3, 43°.43N±0°.02×13°.13E±0°.03, h10^{km}±3^{km}, Error ellipse: s-maj=4.4km s-min=3.0km az=40.7*

ISC 03 09:20:39.1±0.8**, 43°.44N**±0°.03×**13°.19E**±0°.02**, h11**^{km}±6^{km}**, n37,** σ**0^{s}.92**/54**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	**Cingoli**	**0.06**	**178**	P	**Pg**	**09 20 41.3**	**-0.1**
CING				S	**Sg**	**09 20 43.0**	**-0.1**
CING				AML	AML		
	comp=E,5545µm,0.5s						
CING				AML	AML		
	comp=N,5095µm,0.4s						
CING				AML	AML		
	comp=N,5095µm,0.4s						
CING				AML	AML		
	comp=E,5545µm,0.5s						
EL6	**Elcito**	**0.13**	**212**	P	**Pg**	**09 20 42.0**	**-0.2**
EL6				S	**Sg**	**09 20 44.3**	**-0.2**
EL6				AML	AML		
	comp=E,3505µm,1.4s						
EL6				AML	AML		
	comp=N,2910µm,0.2s						
EL6				AML	AML		
	comp=E,3505µm,1.4s						
EL6				AML	AML		
	comp=N,2910µm,0.2s						
EL6				AML	AML		
	comp=E,3485µm,1.4s						
EL6				AML	AML		
	comp=N,2910µm,0.2s						
EL6				AML	AML		
	comp=E,3495µm,1.4s						
EL6				AML	AML		
	comp=N,2910µm,0.2s						
MMUR	**Monte Murano**	**0.14**	**272**	P	**Pg**	**09 20 41.9**	**-0.6**
MMUR				S	**Sg**	**09 20 43.9**	**-1.0**
MMUR				AML	AML		
	comp=E,14550µm,0.1s						
MMUR				AML	AML		
	comp=N,8795µm,1.1s						
MMUR				AML	AML		
	comp=E,14550µm,0.1s						
MMUR				AML	AML		
	comp=N,8795µm,1.1s						
MMUR				AML	AML		
	comp=E,14550µm,0.1s						
MMUR				AML	AML		
	comp=N,8775µm,1.1s						
MMUR				AML	AML		
	comp=E,14550µm,0.1s						
MMUR				AML	AML		
	comp=N,8775µm,1.1s						
ARVD	**Arcevia**	**0.19**	**288**	P	**Pg**	**09 20 42.6**	**-0.6**
ARVD				S	**Sg**	**09 20 45.4**	**-0.7**
ARVD				AML	AML		
	comp=E,1120µm,0.6s						
ARVD				AML	AML		
	comp=N,1300µm,0.3s						
ARVD				AML	AML		
	comp=E,1120µm,0.6s						
ARVD				AML	AML		
	comp=N,1300µm,0.3s						
ARVD				AML	AML		
	comp=E,1120µm,0.6s						
ARVD				AML	AML		
	comp=N,1300µm,0.3s						
ARVD				AML	AML		
	comp=N,1300µm,0.3s						
ARVD				AML	AML		
	comp=E,1120µm,0.6s						
GAG1	**Gagliole**	**0.22**	**205**	P	**Pg**	**09 20 43.6**	**-0.1**
GAG1				S	**Sg**	**09 20 47.3**	**+0.5**
GAG1				AML	AML		
	comp=E,2890µm,1.6s						
GAG1				AML	AML		
	comp=N,2605µm,1.1s						
GAG1				AML	AML		
	comp=E,2890µm,1.6s						
GAG1				AML	AML		
	comp=N,2605µm,1.1s						
COR1	**Corinaldo**	**0.24**	**324**	P	**Pg**	**09 20 44.6**	**+0.6**
COR1				AML	AML		
	comp=E,2925µm,0.3s						
COR1				AML	AML		
	comp=N,2410µm,0.3s						
COR1				AML	AML		
	comp=E,1650µm,0.3s						
COR1				AML	AML		
	comp=N,2315µm,0.3s						
COR1				AML	AML		
	comp=E,2925µm,0.4s						
COR1				AML	AML		
	comp=N,2410µm,0.4s						
COR1				AML	AML		
	comp=E,1645µm,0.3s						
COR1				AML	AML		
	comp=N,2315µm,0.3s						
COR1				AML	AML		
	comp=E,1645µm,0.3s						
COR1				AML	AML		
	comp=N,2320µm,0.3s						
COR1				AML	AML		
	comp=N,2320µm,0.3s						
COR1				AML	AML		
	comp=E,1645µm,0.3s						
CRM1	**Catelraimondo**	**0.25**	**203**	P	**Pg**	**09 20 44.2**	**0.0**
CRM1				AML	AML		
	comp=E,2680µm,1.0s						
CRM1				AML	AML		
	comp=N,7470µm,1.2s						
CRM1				AML	AML		
	comp=E,2680µm,1.0s						
CRM1				AML	AML		
	comp=N,7470µm,1.2s						
MDAR	**Monte D'Aria**	**0.25**	**189**	P	**Pg**	**09 20 44.4**	**+0.1**
SNTG	**Esanatoglia**	**0.26**	**225**	P	**Pg**	**09 20 44.1**	**-0.3**
SNTG				S	**Sg**	**09 20 48.1**	**+0.1**
SNTG				AML	AML		
	comp=E,514µm,0.5s						
SNTG				AML	AML		
	comp=N,737µm,1.3s						
SNTG				AML	AML		
	comp=E,514µm,0.5s						
SNTG				AML	AML		
	comp=N,738µm,1.3s						
SNTG				AML	AML		
	comp=E,513µm,0.5s						
SNTG				AML	AML		
	comp=N,738µm,1.3s						
SNTG				AML	AML		
	comp=N,738µm,1.3s						
SNTG				AML	AML		
	comp=E,513µm,0.5s						
CSP1	**Cessapalombo**	**0.34**	**179**	P	**Pg**	**09 20 46.3**	**+0.2**
CSP1				S	**Sb**	**09 20 52.3**	**-0.5**
CSP1				AML	AML		
	comp=E,820µm,0.5s						
CSP1				AML	AML		
	comp=N,943µm,0.4s						
CSP1				AML	AML		
	comp=E,824µm,0.5s						
CSP1				AML	AML		
	comp=N,935µm,0.4s						
CSP1				AML	AML		
	comp=E,824µm,0.5s						
CSP1				AML	AML		
	comp=N,935µm,0.4s						
FOSV	**Fossato di Vic**	**0.34**	**246**	P	**Pg**	**09 20 45.4**	**-0.7**
FOSV				AML	AML		
	comp=E,573µm,0.3s						
FOSV				AML	AML		
	comp=N,678µm,0.3s						
FOSV				AML	AML		
	comp=E,573µm,0.3s						
FOSV				AML	AML		
	comp=N,678µm,0.3s						
FOSV				AML	AML		
	comp=E,573µm,0.3s						
FOSV				AML	AML		
	comp=N,678µm,0.3s						
FRON	**Frontone**	**0.35**	**283**	P	**Pg**	**09 20 45.5**	**-0.6**
FRON				S	**Sg**	**09 20 50.9**	**+0.1**
FRON				AML	AML		
	comp=E,472µm,0.2s						
FRON				AML	AML		
	comp=N,498µm,1.5s						
FRON				AML	AML		
	comp=E,472µm,0.2s						
FRON				AML	AML		
	comp=N,497µm,1.5s						
FRON				AML	AML		
	comp=N,497µm,1.5s						
FRON				AML	AML		
	comp=E,472µm,0.2s						
MPAG	**Monte Paganucc**	**0.37**	**301**	P	**Pg**	**09 20 45.8**	**-0.7**
MPAG				S	**Sg**	**09 20 51.3**	**-0.1**
MPAG				AML	AML		
	comp=E,418µm,0.7s						
MPAG				AML	AML		
	comp=N,398µm,0.5s						
MPAG				AML	AML		
	comp=E,418µm,0.7s						
MPAG				AML	AML		
	comp=N,398µm,0.5s						
MPAG				AML	AML		
	comp=N,397µm,0.5s						
MPAG				AML	AML		
	comp=E,418µm,0.7s						
FSSB	**Fossombrone**	**0.40**	**310**	P	**Pg**	**09 20 46.5**	**-0.4**
FSSB				AML	AML		
	comp=E,1315µm,0.3s						
FSSB				AML	AML		
	comp=N,1575µm,1.3s						
FSSB				AML	AML		
	comp=E,1315µm,0.3s						
FSSB				AML	AML		
	comp=N,1580µm,1.3s						
FSSB				AML	AML		
	comp=N,1580µm,1.3s						
FSSB				AML	AML		
	comp=E,1315µm,0.3s						
FDMO	**Fiordimonte**	**0.41**	**191**	P	**Pg**	**09 20 47.1**	**0.0**
FDMO				AML	AML		
	comp=E,673µm,0.2s						
FDMO				AML	AML		
	comp=N,473µm,0.2s						
FDMO				AML	AML		
	comp=E,673µm,0.2s						
FDMO				AML	AML		
	comp=N,473µm,0.2s						
FDMO				AML	AML		
	comp=N,473µm,0.2s						
FDMO				AML	AML		
	comp=E,673µm,0.2s						
ATFO	**Monte Foce - G**	**0.46**	**261**	P	**Pg**	**09 20 47.8**	**-0.3**
ATFO				AML	AML		
	comp=E,539µm,0.2s						
ATFO				AML	AML		
	comp=N,749µm,0.6s						
ATFO				AML	AML		
	comp=E,540µm,0.2s						
ATFO				AML	AML		
	comp=N,748µm,0.6s						
ATFO				AML	AML		
	comp=N,748µm,0.6s						
ATFO				AML	AML		
	comp=E,540µm,0.2s						
NARO	**Abbazia di Nar**	**0.48**	**292**	P	**Pg**	**09 20 47.8**	**-0.7**
NARO				S	**Sg**	**09 20 55.0**	**+0.2**
NARO				AML	AML		
	comp=E,276µm,0.2s						
NARO				AML	AML		
	comp=N,237µm,0.4s						
NARO				AML	AML		
	comp=E,276µm,0.2s						
NARO				AML	AML		
	comp=N,237µm,0.4s						
NARO				AML	AML		
	comp=N,237µm,0.4s						
NARO				AML	AML		
	comp=E,276µm,0.2s						
CESI	**CESI - Serrava**	**0.48**	**206**	P	**Pg**	**09 20 48.2**	**-0.3**
CESI				AML	AML		
	comp=E,142µm,0.3s						
CESI				AML	AML		
	comp=N,220µm,1.6s						
CESI				AML	AML		
	comp=E,142µm,0.3s						
CESI				AML	AML		
	comp=N,220µm,1.6s						
CESI				AML	AML		
	comp=E,142µm,0.3s						
CESI				AML	AML		
	comp=N,220µm,1.6s						
PIEI	**Pieia**	**0.49**	**282**	P	**Pg**	**09 20 47.8**	**-0.8**
PIEI				S	**Sg**	**09 20 55.1**	**0.0**
PIEI				AML	AML		
	comp=E,442µm,0.1s						
PIEI				AML	AML		
	comp=N,300µm,0.2s						
PIEI				AML	AML		
	comp=E,442µm,0.1s						
PIEI				AML	AML		
	comp=N,300µm,0.2s						
PIEI				AML	AML		
	comp=N,300µm,0.2s						
PIEI				AML	AML		
	comp=E,442µm,0.1s						
MURB	**Monte Urbino**	**0.52**	**251**	P	**Pg**	**09 20 49.1**	**-0.1**
MURB				AML	AML		
	comp=E,1032µm,0.2s						
MURB				AML	AML		
	comp=N,1096µm,0.4s						
MURB				AML	AML		
	comp=E,1175µm,0.2s						
MURB				AML	AML		
	comp=N,1105µm,0.4s						
MURB				AML	AML		
	comp=E,1034µm,0.2s						
MURB				AML	AML		
	comp=N,1093µm,0.4s						
MURB				AML	AML		
	comp=E,1175µm,0.2s						
MURB				AML	AML		
	comp=N,1106µm,0.4s						
MURB				AML	AML		
	comp=E,1175µm,0.2s						
MURB				AML	AML		
	comp=N,1106µm,0.4s						
MURB				AML	AML		
	comp=N,1093µm,0.4s						
MURB				AML	AML		
	comp=E,1034µm,0.2s						
ATPI	**Pietralunga -**	**0.58**	**272**	P	**Pg**	**09 20 49.6**	**-0.7**
ATPI				S	**Sb**	**09 20 58.4**	**-1.0**
ATPI				AML	AML		
	comp=E,322µm,0.3s						
ATPI				AML	AML		
	comp=N,346µm,0.2s						
ATPI				AML	AML		

	comp=E,322μm,0.3s						
ATPI				AML	AML		
	comp=N,346μm,0.2s						
ATPI				AML	AML		
	comp=N,346μm,0.2s						
ATPI				AML	AML		
	comp=E,322μm,0.3s						
ATVO	**AVT- Monte Val**	0.58	265	P	Pg	09 20 49.5	-0.8
ATVO				S	Sb	09 20 58.2	-1.2
ATVO				AML	AML		
	comp=E,200μm,0.6s						
ATVO				AML	AML		
	comp=N,224μm,0.6s						
ATVO				AML	AML		
	comp=E,200μm,0.6s						
ATVO				AML	AML		
	comp=N,224μm,0.6s						
ATVO				AML	AML		
	comp=N,224μm,0.6s						
ATVO				AML	AML		
	comp=E,200μm,0.6s						
NRCA	**Norcia**	0.61	185	P	Pg	09 20 50.8	-0.1
NRCA				AML	AML		
	comp=E,514μm,1.0s						
NRCA				AML	AML		
	comp=N,512μm,0.1s						
NRCA				AML	AML		
	comp=E,514μm,1.0s						
NRCA				AML	AML		
	comp=N,512μm,0.1s						
NRCA				AML	AML		
	comp=N,512μm,0.1s						
NRCA				AML	AML		
	comp=E,514μm,1.0s						
GUMA	**Gualdo di Mace**	0.66	124	P	Pg	09 20 47.6	-4.2
GUMA				AML	AML		
	comp=E,3295μm,0.4s						
GUMA				AML	AML		
	comp=N,1225μm,1.6s						
GUMA				AML	AML		
	comp=E,3655μm,0.4s						
GUMA				AML	AML		
	comp=N,1360μm,1.0s						
GUMA				AML	AML		
	comp=E,3295μm,0.4s						
GUMA				AML	AML		
	comp=N,1225μm,1.6s						
GUMA				AML	AML		
	comp=E,3655μm,0.4s						
GUMA				AML	AML		
	comp=N,1360μm,1.0s						
GUMA				AML	AML		
	comp=E,3655μm,0.4s						
GUMA				AML	AML		
	comp=E,3295μm,0.4s						
GUMA				AML	AML		
	comp=N,1225μm,1.6s						
GUMA				AML	AML		
	comp=N,1360μm,1.0s						
BADI	**Badiali**	0.69	276	P	Pg	09 20 51.7	-0.8
BADI				AML	AML		
	comp=E,258μm,0.2s						
BADI				AML	AML		
	comp=N,250μm,0.3s						
BADI				AML	AML		
	comp=E,258μm,0.2s						
BADI				AML	AML		
	comp=N,250μm,0.3s						
BADI				AML	AML		
	comp=N,250μm,0.3s						
BADI				AML	AML		
	comp=E,258μm,0.2s						
PARC	**Parchiule**	0.72	287	P	Pg	09 20 52.2	-0.9
PARC				AML	AML		
	comp=E,86μm,0.2s						
PARC				AML	AML		
	comp=N,96μm,0.3s						
PARC				AML	AML		
	comp=E,86μm,0.2s						
PARC				AML	AML		
	comp=N,96μm,0.3s						
PARC				AML	AML		
	comp=N,96μm,0.3s						
PARC				AML	AML		
	comp=E,86μm,0.2s						
CPGN	**Carpegna, Ital**	0.73	300	P	Pb	09 20 53.6	-0.3
CPGN				AML	AML		
	comp=E,120μm,0.3s						
CPGN				AML	AML		
	comp=N,142μm,1.1s						
MOMA	**Monte Martano**	0.78	216	P	Pg	09 20 53.5	-0.7
MOMA				AML	AML		
	comp=E,196μm,0.2s						
MOMA				AML	AML		
	comp=N,218μm,0.2s						
MOMA				AML	AML		
	comp=E,196μm,0.2s						
MOMA				AML	AML		
	comp=N,218μm,0.2s						
MOMA				AML	AML		
	comp=E,196μm,0.2s						
MOMA				AML	AML		
	comp=N,218μm,0.2s						
SMA1	**SAN MARTINO**	0.81	173	P	Pg	09 20 54.5	-0.3
SMA1				AML	AML		
	comp=E,272μm,0.3s						
SMA1				AML	AML		
	comp=N,395μm,0.3s						
SMA1				AML	AML		
	comp=E,272μm,0.3s						
SMA1				AML	AML		
	comp=N,395μm,0.3s						
SMA1				AML	AML		
	comp=E,272μm,0.3s						
SMA1				AML	AML		
	comp=N,395μm,0.3s						
LNSS	**Leonessa**	0.84	188	P	Pg	09 20 54.9	-0.4
LNSS				AML	AML		
	comp=E,219μm,0.2s						
LNSS				AML	AML		
	comp=N,180μm,1.1s						
LNSS				AML	AML		
	comp=E,219μm,0.2s						
LNSS				AML	AML		
	comp=N,179μm,1.1s						
LNSS				AML	AML		
	comp=E,219μm,0.2s						
LNSS				AML	AML		
	comp=N,179μm,1.1s						
DUGI	**Dugi Otok**	1.46	67	*e*Pn	Pb	09 21 06.6	+0.3
DUGI				Sn	Sg	09 21 26.4	+0.3
NVLJ	**Novalja**	1.65	47	*e*Pn	Pb	09 21 09.0	-0.5
NVLJ				Sn	Sb	09 21 31.0	+0.7
ZIRJ	**Zirje**	1.79	82	*e*Pn	Pb	09 21 11.2	-0.7
ZIRJ				Sn	Sb	09 21 35.5	+1.0
UDBI	**Udbina**	2.15	59	Sn	Sb	09 21 45.5	+0.7
KIJV	**Kijevo**	2.40	75	*e*Pn	Pn	09 21 20.4	+2.1
KIJV				Sn	Sb	09 21 51.3	-0.6
KOLL	**Kolacno**	6.29	33	*e*PG	Pn	09 22 13.9	+2.1
KOLL				*e*SG		09 22 17.9	
VYHS	**Vyhne**	6.41	36	*e*PG	Pn	09 22 12.8	-0.5

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*NIED **03** 09:20:00, 35°.00N×139°.50E, h20^{km}, Mw3.6 Best double couple: M$_0$2.72000×10^{14} NP1:ϕ_s87.00000°, δ42.00000°, λ133.00000°. NP2:ϕ_s216.00000°, δ60.00000°, λ58.00000°.*

*IDC **03** 09:20:47.8±0.9, 35°.03N×139°.55E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.6/39, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=27.6km s-min=16.2km az=79.0*

*ISCJB **03** 09:20:51.3±0.5, 35°.02N±0°.03×139°.49E±0°.04, h31^{km}±3^{km}, mb3.7/6, Error ellipse: s-maj=6.2km s-min=4.6km az=153.6*

*JMA **03** 09:20:51.4, 35°.03N×139°.47E, h31^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s199.00000°, δ69.00000°, λ36.00000°. NP2:ϕ_s94.00000°, δ56.00000°, λ155.00000°. Principal axes: T Plg40.0000°, Azm61.0000°; N Plg49.0000°, Azm225.0000°; P Plg8.0000°, Azm324.0000°;*

JMA Felt II J1.

ISC 03 09:20:51.8±0.8, 35°.04N±0°.03×139°.46E±0°.04, h29^{km}±6^{km}, n28, σ0^{s}67/33, mb3.6/6, 3C-5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYO	**Yokosk**	0.25	43	⇑P	Pb	09 20 58.3	-0.2
JYO				S	Sb	09 21 03.9	+0.9
JIM2	**Oshima 3**	0.33	184	⇓P	Pb	09 20 59.1	-0.4
JIM2				*e*S	Sb	09 21 04.4	-0.4
KTJ3	**Kamata3**	0.33	251	⇑P	Pb	09 20 59.4	-0.2
KTJ3				S	Sb	09 21 05.0	+0.1
JOD2	**Odawara 2**	0.37	306	⇓P	Pb	09 21 00.0	-0.3
JOD2				S	Sb	09 21 06.1	+0.1
JIZS	**Izushimoda**	0.57	236	⇑P	Pb	09 21 03.2	-0.2
JIZS				S	Sb	09 21 11.6	+0.3
JFNN	**Fujinakano**	0.65	284	P	Pb	09 21 04.4	-0.3
JFNN				S	Sb	09 21 13.9	+0.5
JYN	**Shimob**	0.87	302	⇓P	Pn	09 21 07.6	-0.7
JYN				S	Sn	09 21 20.2	+0.2
BSO3	**Boso 3**	0.90	105	⇓P	Pn	09 21 07.4	-0.9
SHZ3	**Shizuoka 3**	1.02	272	P	Pb	09 21 10.7	-0.3
JRY	**Ryogami san**	1.07	335	⇓P	Pn	09 21 10.8	-0.2
JRY				S	Sn	09 21 24.8	-0.1
JMKN	**Mikurajimanish**	1.15	174	P	Pn	09 21 11.1	-0.9
MJAR	**Matsushiro Arr**	1.81	326	Pn	Pn	09 21 21.9	+0.9
	3.5nm,0.3s,baz=135,slow=15,SNR=137						
MJAR				Sn	Sb	09 21 45.9	-0.6
	5.9nm,0.3s,baz=162,slow=21,SNR=17						
MAT	**Matsushiro**	1.81	326	P	Pn	09 21 22.6	+1.5
MAT				S	Sb	09 21 45.9	-0.6
JHJ	**Hachijo jima 2**	1.94	172	Pn	Pn	09 21 22.9	0.0
	88nm,0.3s,baz=324,slow=22,SNR=151						
JHJ				Sn	Sn	09 21 47.0	+0.8
	74nm,0.3s,baz=240,slow=20,SNR=12						
ASAJ	**Asahikawa**	9.38	14	Pn	Pn	09 23 04.7	-0.3
	0.6nm,0.3s,baz=224,slow=12,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	28.62	115	T	T	09 56 44.3	
	baz=308,slow=75,SNR=87						
H11N1	**WAKE ISLAND Hy**	28.63	115	T	T	09 56 22.6	
	baz=308,slow=75,SNR=68						
H11N3	**WAKE ISLAND Hy**	28.64	115	T	T	09 56 45.7	
	baz=308,slow=75,SNR=123						
H11S3	**WAKE ISLAND Hy**	29.24	117	T	T	09 57 09.5	
	baz=310,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	29.24	117	T	T	09 57 32.1	
	baz=310,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	29.25	117	T	T	09 57 31.1	
	baz=310,slow=76,SNR=20						
MKAR	**Makanchi Array**	43.86	304	P	P	09 28 55.3	-0.2
	0.3nm,0.5s,baz=80,slow=8.1,SNR=4.1						
KDAK	**Kodiak Island**	49.64	41	P	P	09 29 40.8	+0.3
	7.1nm,0.9s,baz=265,slow=1.4,SNR=3.6						
ILAR	**Eielson Array**	52.02	31	P	P	09 29 56.6	-1.7
	0.5nm,1.0s,baz=268,slow=6.7,SNR=5.0						
ASAR	**Alice Springs**	58.62	186	P	P	09 30 46.1	-0.2
	0.5nm,1.0s,baz=8.5,slow=13,SNR=4.2						
NVAR	**Mina Array Bea**	77.46	52	P	P	09 32 46.0	+1.1
	0.5nm,0.8s,baz=282,slow=4.5,SNR=4.8						
TXAR	**Lajitas Array**	92.60	51	P	P	09 34 01.2	+0.2
	0.2nm,0.7s,baz=318,slow=3.0,SNR=5.9						
LPAZ	**La Paz**	149.06	60	PKPbc	PKPbc	09 40 38.7	+0.2
	0.8nm,0.8s,baz=0.0,slow=3.0,SNR=3.8						

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*ISCJB **03** 09:22:22.9±0.6, 10°.50S±0°.08×161°.4E±0°.1, h62^{km}, mb4.1/12, Error ellipse: s-maj=17.5km s-min=7.7km az=145.8*

*IDC **03** 09:22:27.6±2.1, 10°.46S×161°.08E, h84^{km}±16^{km}, mb3.8/12, mb1 3.9/13, mb1mx3.8/34, mbtmp4.1/13, MS3.2/3, Ms1 3.2/3, ms1mx2.8/30, Error ellipse: s-maj=26.4km s-min=16.7km az=75.0*

ISC 03 09:22:24.6±0.7, 10°.50S±0°.09×161°.4E±0°.1, h62^{km}, n17, σ1^{s}68/20, mb4.0/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	1.76	307	P	Pn	09 22 53.4	+0.6
	100nm,0.3s,baz=141,slow=1.5,SNR=24						
HNR				S	Sn	09 23 12.5	-1.8
	951nm,0.3s,baz=156,slow=20,SNR=17						
HNR				LR	LR	09 23 32.6	
	comp=Z,96nm,20.7s,baz=358,slow=43						
HNR	**Honiara**	1.76	307	*i* P	Pn	09 22 53.5	+0.7
HNR				*i* S	Sn	09 23 14.0	-0.3
DZM	**Mont Dzumac**	12.49	158	P	P	09 25 25.9	-3.4
	0.4nm,0.3s,baz=319,slow=19,SNR=3.2						
DZM				S	Sn	09 27 39.0	+1.9
	0.2nm,0.3s,baz=270,slow=20,SNR=2.2						
DZM				LR	LR	09 29 00.4	
	comp=Z,116nm,21.0s,baz=284,slow=31						
CTA	**Charters Tower**	17.41	235	P	P	09 26 27.7	+3.9
	0.6nm,0.3s,baz=64,slow=14,SNR=7.2						
STKA	**Stephens Creek**	28.05	218	LR	LR	09 38 54.8	
	comp=Z,92nm,18.1s,baz=30,slow=35						
ASAR	**Alice Springs**	29.27	240	P	P	09 28 20.6	-0.5
	0.9nm,0.6s,baz=64,slow=9.8,SNR=13						
ASAR				pP	pwP	09 28 40.4	-0.6
	0.6nm,1.0s,baz=60,slow=9.7,SNR=2.1						
MJAR	**Matsushiro Arr**	51.62	336	P	P	09 31 23.6	-1.4
	2.7nm,0.7s,baz=166,slow=8.7,SNR=5.8						
ASAJ	**Asahikawa**	56.97	344	P	P	09 32 03.4	-0.2
	3.6nm,0.7s,baz=138,slow=14,SNR=3.1						
KSRS	**Korea Array**	57.09	328	P	P	09 32 04.5	0.0
	1.1nm,0.7s,baz=140,slow=7.5,SNR=4.1						
KSRS				LR	LR	09 55 08.5	
	comp=Z,11nm,19.6s,baz=130,slow=34						
USRK	**Ussuriysk Ar.**	60.62	336	P	P	09 32 29.4	+0.4
	6.2nm,0.9s,baz=134,slow=6.2,SNR=7.3						
VNDA	**Vanda**	67.00	180	P	P	09 33 09.6	-0.8
	0.5nm,0.5s,baz=351,slow=9.2,SNR=3.2						
SONM	**Songino Array**	75.73	325	P	P	09 34 03.9	+0.2
	2.3nm,0.6s,baz=144,slow=5.9,SNR=5.4						
KDAK	**Kodiak Island**	77.72	23	P	P	09 34 14.7	+0.3
	4.9nm,0.8s,baz=214,slow=3.6,SNR=3.6						
ILAR	**Eielson Array**	84.41	20	P	P	09 34 49.5	-0.5
	0.4nm,0.4s,baz=238,slow=5.5,SNR=8.7						
NVAR	**Mina Array Bea**	88.98	51	P	P	09 35 15.0	+1.9
	0.6nm,0.8s,baz=235,slow=7.1,SNR=4.4						
MKAR	**Makanchi Array**	90.21	318	P	P	09 35 17.4	-0.9
	0.4nm,0.5s,baz=94,slow=5.6,SNR=6.8						
PDAR	**Pinedale Array**	96.36	48	P	P	09 35 49.6	+2.5
	0.2nm,0.7s,baz=254,slow=2.6,SNR=3.1						

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*NSSC **03** 09:22:56.9±0.5, 33°.98N×35°.67E, h12^{km}±3^{km}, ML1.6*

*ISCJB **03** 09:22:57.8±1.2, 33°.93N±0°.06×35°.66E±0°.09, h28^{km}±10^{km}, Error ellipse: s-maj=12.9km s-min=10.2km az=172.7*

*GRAL **03** 09:22:59.7±0.3, 33°.91N×35°.84E, h2^{km}±18^{km}, MD2.7*

ISC 03 09:22:57.3±1.4, 33°.92N±0°.06×35°.68E±0°.09, h26^{km}±9^{km}, n7, σ0^{s}55/12, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	0.03	237	*e*P	Pb	09 23 02.3	+0.5
BHL				*e*S	Sb	09 23 04.5	-0.5
DQRL	**Deir Qamar**	0.23	204	*e*P	Pn	09 23 05.1	0.0
HWQ	**Hawqa**	0.42	31	*e*P	Pb	09 23 06.5	+0.2
RCY	**Rachaya**	0.44	163	*e*P	Pb	09 23 07.1	+0.4
RCY				*e*S	Sb	09 23 12.6	-0.5
BRBR	**Barbar**	0.55	156	*e*P	Pb	09 23 08.9	+0.3
BRBR				*e*S	Sn	09 23 17.6	-0.6
BRBR				AML	AML	09 23 20.9	
	comp=N,34nm,0.3s						
BRBR				AML	AML	09 23 21.6	
	comp=E,24nm,0.4s						
QASN	**Qassioun**	0.63	128	*e*P	Pn	09 23 10.3	-0.2
QASN				*e*S	Sn	09 23 19.4	-0.3
QASN				AML	AML	09 23 21.1	
	comp=N,59nm,0.5s						
QASN				AML	AML	09 23 26.2	
	comp=E,136nm,0.5s						
TOTH	**TOTAH**	0.83	132	*e*P	Pb	09 23 13.7	+0.5
TOTH				*e*S	Sn	09 23 25.6	+0.8
TOTH				AML	AML	09 23 28.7	
	comp=N,11nm,0.6s						
TOTH				AML	AML	09 23 33.6	
	comp=E,15nm,1.0s						

IDC 03 09:23:29.0±2.0, 17°.57S×177°.36W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.7/33, mbtmp4.0/3, Error ellipse: s-maj=243.4km s-min=34.1km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	39.66	241	P	P	09 31 03.2	+0.3
	1.4nm,0.7s,baz=55,slow=7.8,SNR=5.2						
ASAR	**Alice Springs**	45.84	254	P	P	09 31 52.9	-0.5
	4.1nm,0.5s,baz=90,slow=8.3,SNR=81						
TXAR	**Lajitas Array**	84.97	57	P	P	09 36 06.8	0.0
	0.2nm,0.8s,baz=203,slow=6.7,SNR=3.5						

DJA 03 09:35:30.1±0.6, 9°S±4°×11°4E±°, h10^{km}, M3.9/7, MLv3.9/7, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	0.58	344	P	Pg	09 35 41.3	0.0
JAGI				S	Sg	09 35 49.7	+0.7
DNP	**Denpasar**	0.96	69	P	Pg	09 35 47.0	-1.5
DNP				S	Sg	09 36 01.2	+0.2
SRBI	**Singaraja**	1.30	44	P	Pn	09 35 53.9	-0.4
SRBI				S	Sg	09 36 12.6	+0.7
KMMI	**Kalianget**	2.00	350	P	Pn	09 36 05.2	+1.3
PWJI	**Pagerwojo**	2.67	292	P	Pn	09 36 13.0	-0.2
PWJI				S	Sn	09 36 44.2	-1.5
GRJI	**Gresik**	2.78	319	P	Pn	09 36 14.9	+0.3
WOJI	**Wonogiri, Jawa**	3.55	289	P	Pg	09 37 06.3	+28

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*IDC **03** 09:41:20.9±1.3, 10°.71S×166°.40E, h0^{km}, mb4.0/6, mb1 4.3/8, mb1mx3.9/33, mbtmp4.2/8, ML4.7/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/25, Error ellipse: s-maj=32.7km s-min=26.0km az=111.0*

*ISCJB **03** 09:41:25.0±0.8, 10°.88S±0°.07×166°.24E±0°.08, h35^{km}, mb4.2/9, MS3.3/3, Error ellipse: s-maj=12.5km s-min=9.3km az=140.7*

*NEIC **03** 09:41:29.4±0.6, 10°.89S×166°.18E, h61^{km}±10^{km}, mb4.4/5, Error ellipse: s-maj=18.7km s-min=14.7km az=61.0*

ISC 03 09:41:26.7±1.0, 10°.83S±0°.09×166°.3E±0°.1, h35^{km}, n26, σ1^{s}13/21, mb4.0/9, MS3.3/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	6.42	282	Pn	Pn	09 42 59.5	+0.7
	34nm,0.3s,baz=139,slow=1.6,SNR=11						
HNR				Sn	Sn	09 44 10.5	-0.3
	8.7nm,0.3s,baz=153,slow=18,SNR=2.3						
HNR				LR	LR	09 45 25.6	
	comp=Z,483nm,18.3s,baz=116,slow=38						
HNR	**Honiara**	6.42	282	*e*Pn	Pn	09 42 59.7	+0.9
HNR	**Honiara**	6.42	282	*e*P	Pn	09 42 59.0	+0.2
DZM	**Mont Dzumac**	11.18	179	Pn	Pn	09 44 05.5	+1.3
	2.5nm,0.3s,baz=336,slow=20,SNR=9.0						
DZM				Sn	Sn	09 46 05.4	-2.7
	0.2nm,0.3s,baz=342,slow=20,SNR=3.1						
DZM				LR	LR	09 47 57.4	
	comp=Z,176nm,21.9s,baz=356,slow=35						
DZM	**Mont Dzumac**	11.18	179	*e*Pn	Pn	09 44 06.1	+1.8
DZM				*e*Sn	Sn	09 46 08.2	+0.1
PMG	**Port Moresby**	18.91	273	LR	LR	09 52 44.1	
	comp=Z,246nm,18.2s,baz=72,slow=36						
EIDS	**Eidsvold**	20.43	223	*e*P	P	09 46 01.7	+0.6
	34nm,1.0s						
CTA	**Charters Tower**	21.39	242	P	P	09 46 12.2	+0.7
	6.6nm,0.8s,baz=80,slow=12,SNR=5.1						
JAY	**Jayapura**	26.72	286	LR	LR	09 59 01.4	
	comp=Z,58nm,18.1s,baz=36,slow=40						
H11S2	**WAKE ISLAND Hy**	29.14	1	T	T	10 17 53.4	
	baz=181,slow=76,SNR=138						
H11S3	**WAKE ISLAND Hy**	29.14	1	T	T	10 17 53.7	
	baz=181,slow=76,SNR=88						
H11S1	**WAKE ISLAND Hy**	29.15	1	T	T	10 17 54.8	
	baz=181,slow=76,SNR=76						
H11N1	**WAKE ISLAND Hy**	30.36	1	T	T	10 19 24.9	
	baz=182,slow=76,SNR=66						
H11N3	**WAKE ISLAND Hy**	30.36	1	T	T	10 19 25.2	
	baz=182,slow=76,SNR=32						
H11N2	**WAKE ISLAND Hy**	30.37	1	T	T	10 19 26.2	
	baz=182,slow=76,SNR=36						
STKA	**Stephens Creek**	30.98	224	P	P	09 47 41.8	+0.9
	3.7nm,0.8s,baz=46,slow=8.9,SNR=7.9						
STKA				LR	LR	09 59 20.7	
	comp=Z,82nm,20.1s,baz=28,slow=35						
STKA	**Stephens Creek**	30.98	224	*e*P	P	09 47 39.9	-1.0
	1.8nm,1.3s						
WRAB	**Tennant Creek**	32.06	250	*e*P	P	09 47 49.5	-1.1
	14nm,0.9s						
AS31	**Alice Springs**	33.38	243	*e*P	P	09 48 00.9	-1.2
	1.2nm,0.6s						
ASAR	**Alice Springs**	33.38	243	P	P	09 48 00.8	-1.3
	3.6nm,0.7s,baz=69,slow=9.8,SNR=52						
ASAR				LR	LR	10 00 20.1	
	comp=Z,63nm,20.1s,baz=95,slow=34						
VNDA	**Vanda**	66.72	181	P	P	09 52 14.2	+0.4
	1.1nm,0.9s,baz=360,slow=6.5,SNR=2.3						
VNDA	**Vanda**	66.72	181	*e*P	P	09 52 13.7	-0.1
SVW2	**Sparrevohn**	77.74	18	*e*P	P	09 53 20.0	+0.2
	10nm,0.9s						
ILAR	**Eielson Array**	83.13	18	P	P	09 53 47.3	-1.4
	0.4nm,0.8s,baz=212,slow=6.5,SNR=5.3						
MK32	**Makanchi Array**	93.74	317	*e*P	P	09 54 40.4	+0.3
MKAR	**Makanchi Array**	93.74	317	P	P	09 54 40.4	+0.3
	0.4nm,0.8s,baz=91,slow=5.9,SNR=2.4						

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*IDC **03** 09:46:40.7±6.1, 35°.47N×70°.66E, h73^{km}±44^{km}, mb3.7/4, mb1 3.7/7, mb1mx3.3/47, mbtmp4.0/7, ML3.5/2, Error ellipse: s-maj=61.8km s-min=27.7km az=146.0*

*ISCJB **03** 09:46:50.1±1.3, 36°.47N±0°.09×70°.20E±0°.09, h110^{km}, mb4.1/4, Error ellipse: s-maj=14.6km s-min=8.7km az=151.0*

*NNC **03** 09:46:53.2±2.4, 36°.62N×70°.09E, h52^{km}±52^{km}, mb3.9, mpv4.0, Error ellipse: s-maj=18.7km s-min=15.7km az=157.0*

ISC 03 09:46:50.0±1.4, 36°.4N±0°.1×70°.13E±0°.08, h110^{km}, n16, σ2^{s}19/22, mb4.0/4, 6C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.74	2	⇑P	Pn	09 48 27.4	+1.1
	5.3nm,0.4s,baz=184,slow=13,SNR=118						
KK31				S	Sn	09 49 39.6	-1.9
	6.9nm,0.4s,baz=191,slow=18,SNR=4.4						
AAK	**Ala-Archa**	7.11	27	⇑P	Pn	09 48 31.3	-0.3
	3.2nm,0.3s						
AAK				⇓S	Sn	09 49 50.1	-0.8
	14nm,0.6s						
TKM2	**Tokmak 2**	7.79	31	⇑P	Pn	09 48 40.0	-0.8
	4.1nm,0.3s						
TKM2				⇓S	Sn	09 50 06.6	-0.7
	7.5nm,0.8s						
GEYT	**Alibeck**	9.71	283	P	Pn	09 49 06.6	-0.1
	1.1nm,0.3s,baz=101,slow=13,SNR=4.5						
GEYT				S	Sn	09 50 52.9	-1.0
	0.8nm,0.3s,baz=84,slow=24,SNR=2.9						
MK31	**Makanchi Array**	13.82	37	P	P	09 50 06.3	+0.6
	0.5nm,0.6s,baz=208,slow=8.7,SNR=4.6						
MKAR	**Makanchi Array**	13.82	37	P	Pn	09 49 58.6	-2.5
	0.1nm,0.3s,baz=214,slow=11,SNR=3.3						
AB31	**Akbulak array**	14.87	333	⇓P	P	09 50 16.2	-1.2
	3.1nm,0.4s,baz=153,slow=12,SNR=75						
AB31				⇑S	Sn	09 52 56.2	-2.4
	1.9nm,0.5s,baz=231,slow=6.6,SNR=3.5						
KURBB	**Kurchatov Arra**	15.48	20	⇑P	P	09 50 25.8	+1.6
	5.6nm,0.6s						
AKTO	**Aktyubinsk**	16.56	332	P	P	09 50 39.1	+3.1
	baz=132,slow=15						
AKTO	**Aktyubinsk**	16.56	332	⇑P	P	09 50 39.2	+3.1
	4.0nm,0.7s						
AKTO				⇓S	Sn	09 53 39.7	+0.5
	7.5nm,1.0s						
BVA0	**Borovoye Array**	16.66	1	⇓P	P	09 50 39.9	+2.8
	0.1nm,0.4s,baz=181,slow=9.2,SNR=6.5						
ZALV	**Zalesovo Beam**	20.33	26	P	P	09 51 17.8	+0.5
	10nm,0.6s,baz=220,slow=11,SNR=18						
ARU	**Arti**	21.54	342	P	P	09 51 35.1	+5.0
	1.5nm,0.5s,baz=128,slow=17,SNR=5.3						
FINES	**FINESS Array B**	37.20	326	P	P	09 53 52.6	+2.4
	1.3nm,0.7s,baz=90,slow=8.3,SNR=3.2						
ARCES	**ARCESS Array B**	41.00	338	P	P	09 54 23.4	+1.7
	1.9nm,0.7s,baz=131,slow=11,SNR=4.0						
TORD	**Torodi Ar. Bea**	65.01	268	P	P	09 57 16.1	-2.5
	8.1nm,0.4s,baz=65,slow=6.5,SNR=3.5						

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*KRAR **03** 09:56:32.5±0.1, 53°.61N×87°.80E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012.*

Obninsk, GS RAS, 224p + CD-ROM, 2014)

*NNC **03** 09:56:36.0±3.6, 53°.47N×87°.82E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=30.4km s-min=16.8km az=66.0, Suspected Mining explosion.*

IDC 03 09:56:36.6±2.7, 53°.51N×87°.78E, h0^{km}, mb1 3.2/2, mb1mx3.1/49, mbtmp3.2/2, ML3.0/2, 5C-4D, Error ellipse: s-maj=26.0km s-min=17.7km az=84.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**285**	*i*		10 08 25.0	
	baz=100,slow=300,SNR=2.9						
ZAA0	**Zalesovo Array**	**1.81**	**285**	⇑P	Pn	09 57 08.1	-0.9
	1.1nm,0.5s						
ZAA0				⇓S	Sg	09 57 34.6	-0.1
	6.9nm,0.8s						
ZALV	**Zalesovo Beam**	**1.81**	**285**	Pn	Pn	09 57 08.4	-0.6
	5.0nm,0.3s,baz=102,slow=14,SNR=38						
ZALV				Sn	Sg	09 57 34.4	-0.3
	8.5nm,0.3s,baz=105,slow=24,SNR=15						
ZALV				*i*		10 08 30.9	
	1.1nm,0.3s,baz=58,slow=18,SNR=5.6						
KURBB	**Kurchatov Arra**	**6.39**	**247**	Pn	Pn	09 58 12.7	+0.8
	0.3nm,0.3s,baz=60,slow=14,SNR=19						
KURBB				Sn	Sn	09 59 24.8	-0.7
	0.1nm,0.3s,baz=60,slow=28,SNR=4.8						
KURBB				Lg	Lg	09 59 57.2	
	0.1nm,0.3s,baz=61,slow=30,SNR=4.9						
KURBB	**Kurchatov Arra**	**6.39**	**247**	⇑Pn	Pn	09 58 12.5	+0.6
	2.1nm,0.4s						
KURBB				⇑Sn	Sn	09 59 23.9	-1.6
	5.1nm,0.5s						
KURBB				⇑Lg	Lg	09 59 58.2	
	10nm,0.8s						
MK31	**Makanchi Array**	**7.59**	**210**	⇑Pn	Pn	09 58 28.8	+0.4
	0.3nm,0.5s,baz=32,slow=13,SNR=6.8						
MK31				⇓Sn	Sn	09 59 56.6	+1.6
	0.9nm,0.8s,baz=224,slow=43,SNR=2.8						
MK31				⇓Lg	Lg	10 00 32.5	
	5.1nm,1.1s,baz=355,slow=42,SNR=4.2						
MKAR	**Makanchi Array**	**7.59**	**210**	Pn	Pn	09 58 29.4	+1.0
	0.2nm,0.3s,baz=31,slow=13,SNR=9.0						
MKAR				Sn	Sn	09 59 55.4	+0.4
	0.1nm,0.3s,baz=28,slow=23,SNR=4.0						
MKAR				Lg	Lg	10 00 35.1	
	0.2nm,0.3s,baz=25,slow=31,SNR=4.1						
MAKZ	**Makanchi**	**7.67**	**211**	⇓Lg	Lg	10 00 35.8	
	2.7nm,0.9s						

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*MOS **03** 10:01:32.2±0.9, 49°.31N×154°.23E, h150^{km}, mb3.9/3, Error ellipse: s-maj=38.2km s-min=5.8km az=65.7*

*KRSC **03** 10:01:32.3±1.6, 48°.96N×155°.45E, h157^{km}±24^{km}, ML4.4*

*IDC **03** 10:01:33.0±3.6, 49°.26N×154°.08E, h138^{km}±31^{km}, mb3.2/7, mb1 3.4/8, mb1mx3.2/34, mbtmp3.6/8, Error ellipse: s-maj=29.1km s-min=20.7km az=154.0*

ISC 03 10:01:34.0±1.0, 49°.2N±0°.1×154°.8E±0°.1, h150^{km}, n56, σ1^{s}.52/70, mb3.4/7, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.75**	**28**	*e*P	**Pn**	**10 02 05.4**	**-0.7**
SKR				*e*S	**Sn**	**10 02 31.0**	**+0.1**
SKR	**Severo-Kuril's**	**1.75**	**28**	*e*PN	**Pn**	**10 02 06.2**	**+0.1**
SKR				*e*S	**Sn**	**10 02 30.9**	**+0.1**
SKR				smax	smax		
	comp=E,122nm,0.3s						
SKR				smax	smax		
	comp=N,315nm,0.4s						
PAU	**Pauzhetka**	**2.65**	**28**	*e*P	**Pn**	**10 02 16.8**	**0.0**
PAU				*e*S	**Sn**	**10 02 50.7**	**+0.8**
PAU	**Pauzhetka**	**2.65**	**28**	PN	**Pn**	**10 02 16.8**	**0.0**
PAU				S	**Sn**	**10 02 50.7**	**+0.8**
KDTR	**Khodutka, Kamc**	**3.38**	**37**	*e*P	**Pn**	**10 02 24.9**	**-1.1**
KDTR				*e*S	**Sn**	**10 03 04.4**	**-2.0**
KDTR	**Khodutka, Kamc**	**3.38**	**37**	PN	**Pn**	**10 02 24.9**	**-1.1**
KDTR				S	**Sn**	**10 03 04.4**	**-2.0**
ASAK	**Asacha**	**3.78**	**30**	*e*P	**Pn**	**10 02 31.5**	**+0.2**
ASAK	**Asacha**	**3.78**	**30**	PN	**Pn**	**10 02 31.5**	**+0.2**
MTVR	**Mutnovka**	**3.96**	**31**	*e*P	**Pn**	**10 02 34.1**	**+0.4**
MTVR				*e*S	**Sn**	**10 03 20.3**	**+0.1**
MTVR	**Mutnovka**	**3.96**	**31**	PN	**Pn**	**10 02 34.1**	**+0.4**
MTVR				S	**Sn**	**10 03 20.3**	**+0.1**
RUS	**Russkaya**	**4.03**	**34**	*e*P	**Pn**	**10 02 34.3**	**-0.2**
RUS				*e*S	**Sn**	**10 03 19.9**	**-1.8**
RUS	**Russkaya**	**4.03**	**34**	PN	**Pn**	**10 02 34.3**	**-0.2**
RUS				S	**Sn**	**10 03 19.9**	**-1.8**
APC	**Apacha**	**4.06**	**20**	*e*P	**Pn**	**10 02 35.2**	**+0.4**
APC				*e*S	**Sn**	**10 03 23.2**	**+1.0**
APC	**Apacha**	**4.06**	**20**	PN	**Pn**	**10 02 35.2**	**+0.4**
APC				S	**Sn**	**10 03 23.2**	**+1.0**
KRMR	**Karymshinskiy**	**4.24**	**28**	*e*P	**Pn**	**10 02 38.0**	**+0.8**
KRMR				*e*S	**Sn**	**10 03 26.7**	**+0.3**
KRMR	**Karymshinskiy**	**4.24**	**28**	PN	**Pn**	**10 02 38.0**	**+0.8**
KRMR				S	**Sn**	**10 03 26.7**	**+0.3**
PETK	**Petropavlovsk-**	**4.36**	**23**	P	**Pn**	**10 02 39.1**	**+0.3**
	comp=N,2.8nm,0.3s,baz=197,slow=12,SNR=28						
DALK	**Dalny**	**4.61**	**31**	*e*P	**Pn**	**10 02 41.9**	**-0.1**
DALK				*e*S	**Sn**	**10 03 34.3**	**-0.8**
DALK	**Dalny**	**4.61**	**31**	PN	**Pn**	**10 02 41.9**	**-0.1**
DALK				S	**Sn**	**10 03 34.3**	**-0.8**
UGLR	**Uglovaya**	**4.78**	**30**	*e*P	**Pn**	**10 02 45.2**	**+0.8**
UGLR	**Uglovaya**	**4.78**	**30**	PN	**Pn**	**10 02 45.2**	**+0.8**
AVH	**Avacha**	**4.80**	**29**	*e*P	**Pn**	**10 02 46.0**	**+1.3**
AVH				*e*S	**Sn**	**10 03 39.7**	**-0.1**
AVH	**Avacha**	**4.80**	**29**	PN	**Pn**	**10 02 46.0**	**+1.3**
AVH				S	**Sn**	**10 03 39.7**	**-0.1**
SMAR	**Somma**	**4.82**	**30**	*e*P	**Pn**	**10 02 46.2**	**+1.2**
SMAR	**Somma**	**4.82**	**30**	PN	**Pn**	**10 02 46.2**	**+1.2**
KRX	**Arik**	**4.85**	**28**	*e*P	**Pn**	**10 02 45.9**	**+0.5**
KRX	**Arik**	**4.85**	**28**	PN	**Pn**	**10 02 45.9**	**+0.5**
SDLR	**Sedlovina**	**4.86**	**30**	*e*P	**Pn**	**10 02 46.0**	**+0.5**
SDLR	**Sedlovina**	**4.86**	**30**	PN	**Pn**	**10 02 46.0**	**+0.5**
GNL	**Ganaly**	**4.95**	**22**	*e*P	**Pn**	**10 02 47.2**	**+0.5**
GNL	**Ganaly**	**4.95**	**22**	PN	**Pn**	**10 02 47.2**	**+0.5**
SPN	**Mys Shipunski**	**5.13**	**38**	*e*P	**Pn**	**10 02 48.3**	**-0.7**
SPN				*e*S	**Sn**	**10 03 43.6**	**-3.9**
SPN	**Mys Shipunski**	**5.13**	**38**	PN	**Pn**	**10 02 48.3**	**-0.7**
SPN				S	**Sn**	**10 03 43.6**	**-3.9**
MKZ	**Mys Kozlova**	**6.90**	**36**	*e*P	**Pn**	**10 03 10.8**	**-1.6**
MKZ				*e*S	**Sn**	**10 04 24.5**	**-5.2**
MKZ	**Mys Kozlova**	**6.90**	**36**	PN	**Pn**	**10 03 10.8**	**-1.6**
KBTR	**Krutoberegovo**	**8.57**	**31**	*e*P	**Pn**	**10 03 34.2**	**-0.6**
KBTR	**Krutoberegovo**	**8.57**	**31**	PN	**Pn**	**10 03 34.2**	**-0.6**
BKI	**Bering**	**9.14**	**44**	*e*P	**Pn**	**10 03 42.2**	**-0.1**
BKI				*e*S	Sn	10 05 14.4	-9.1
BKI	**Bering**	**9.14**	**44**	PN	**Pn**	**10 03 42.2**	**-0.1**
SEY	**Seymchan**	**13.88**	**355**	*i* P	Pn	10 04 35.1	-9.0
BILL	**Bilibino**	**19.80**	**13**	⇑*e*P	P	10 05 40.0	-12
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**30.91**	**157**	T	T	10 39 53.8	
	baz=345,slow=76,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**30.92**	**157**	T	T	10 39 55.3	
	baz=345,slow=76,SNR=7.9						
H11N3	**WAKE ISLAND Hy**	**30.92**	**157**	T	T	10 39 55.0	
	baz=345,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**32.03**	**158**	T	T	10 41 15.9	
	baz=345,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**32.04**	**158**	T	T	10 41 15.5	
	baz=345,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy**	**32.05**	**158**	T	T	10 41 16.2	
	baz=345,slow=76,SNR=39						
ILAR	**Eielson Array**	**33.96**	**41**	P	**P**	**10 08 04.1**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=271,slow=7.8,SNR=6.1						
ILAR	**Eielson Array**	**33.96**	**41**	*e*P	**P**	**10 08 06.5**	**+3.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**39.01**	**34**	P	**P**	**10 08 47.2**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=287,slow=6.6,SNR=5.0						
MKAR	**Makanchi Array**	**46.89**	**296**	P	**P**	**10 09 45.2**	**-3.7**
	comp=Z,0.8nm,0.6s,baz=66,slow=8.7,SNR=9.9						
FINES	**FINESS Array B**	**62.36**	**335**	P	**P**	**10 11 37.9**	**-2.1**
	comp=Z,0.7nm,0.4s,baz=26,slow=7.7,SNR=6.7						
FINES	**FINESS Array B**	**62.36**	**335**	*e*P	**P**	**10 11 38.1**	**-1.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	**62.42**	**56**	P	**P**	**10 11 43.7**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=316,slow=2.5,SNR=3.7						
ASAR	**Alice Springs**	**74.85**	**200**	P	**P**	**10 12 57.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=12,slow=5.1,SNR=3.0						
TXAR	**Lajitas Array**	**75.33**	**62**	P	**P**	**10 13 03.4**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=287,slow=3.9,SNR=5.5						
TXAR				pP	**pP**	**10 13 36.5**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=321,slow=5.3,SNR=2.6						

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*NNC **03** 10:21:48.4±8.2, 35°.04N×71°.73E, h54^{km}±115^{km}, mb3.7, mpv4.0, Error ellipse: s-maj=99.1km s-min=58.9km az=103.0*

*IDC **03** 10:21:55.0±7.3, 35°.51N×71°.68E, h69^{km}±65^{km}, mb3.5/2, mb1 3.6/5, mb1mx3.2/33, mbtmp3.8/5, ML3.7/2, MS3.3/2, Ms1 3.4/2, ms1mx2.4/36, Error ellipse: s-maj=76.3km s-min=42.2km az=124.0*

ISC 03 10:21:59.2±2.3, 35°.7N±0°.2×71°.4E±0°.2, h99^{km}, n12, σ1^{s}.70/12, 3C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.29**	**18**	P	**Pn**	**10 23 41.7**	**-1.5**
	1.2nm,0.3s,baz=190,slow=10,SNR=5.8						
AAK				S	**Sn**	**10 25 03.6**	**-0.9**
	0.2nm,0.3s,baz=225,slow=13,SNR=2.2						
AAK	**Ala-Archa**	**7.29**	**18**	⇓P	**Pn**	**10 23 42.2**	**-1.0**
	3.7nm,0.7s						
AAK				⇑S	**Sn**	**10 25 07.7**	**+3.3**
	8.8nm,1.1s						
KK31	**Karatay Array**	**7.39**	**355**	P	**Pn**	**10 23 42.1**	**-2.2**
	5.4nm,0.5s,baz=184,slow=13,SNR=57						
KK31				⇑S	Sn	10 25 15.9	+9.3
	5.8nm,0.8s,baz=185,slow=23,SNR=4.3						
KURBB	**Kurchatov Arra**	**15.75**	**17**	P	**Pn**	**10 25 35.6**	**+0.4**
	baz=206,slow=11,SNR=1.9						
AB31	**Akbulak array**	**15.91**	**332**	P	**Pn**	**10 25 36.2**	**-1.1**
	0.3nm,0.3s,baz=152,slow=12,SNR=12						
BVAR	**Borovoye Array**	**17.30**	**358**	LR	LR	10 32 19.5	
	comp=Z,52nm,20.5s,baz=4.0,slow=36						
AKTO	**Aktyubinsk**	**17.61**	**331**	P	**Pn**	**10 25 58.8**	**+0.7**
	0.3nm,0.3s,baz=140,slow=14,SNR=8.3						
AKTO	**Aktyubinsk**	**17.61**	**331**	⇑P	**Pn**	**10 25 59.0**	**+0.9**
	2.3nm,0.7s						
ZALV	**Zalesovo Beam**	**20.48**	**23**	P	**P**	**10 26 27.8**	**-1.0**
	2.0nm,0.5s,baz=223,slow=11,SNR=6.7						
ARCES	**ARCESS Array B**	**41.98**	**338**	P	**P**	**10 29 41.6**	**+1.6**
	1.3nm,0.8s,baz=113,slow=8.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**66.04**	**269**	P	**P**	**10 32 35.7**	**0.0**
	7.4nm,0.5s,baz=47,slow=6.5,SNR=2.1						
ILAR	**Eielson Array**	**75.42**	**16**	LR	LR	11 09 13.1	
	comp=Z,33nm,21.2s,baz=236,slow=38						

KRSC 03 10:25:11.5±0.6, 49°.68N×156°.85E, h15^{km}±17^{km}, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.10**	**335**	*e*P	Pb	10 25 31.3	-0.9
SKR				*e*S	Sb	10 25 45.8	-0.6
PAU	**Pauzhetka**	**1.79**	**359**	*e*P	Pn	10 25 42.6	+0.9
PAU				*e*S	Sb	10 26 05.8	-0.2
KDTR	**Khodutka, Kamc**	**2.27**	**20**	*e*P	Pn	10 25 50.0	+1.7
KDTR				*e*S	Sb	10 26 18.9	-0.9
SMAR	**Somma**	**3.79**	**18**	*e*P	Pn	10 26 13.0	+3.6
SDLR	**Sedlovina**	**3.82**	**19**	*e*P	Pn	10 26 13.7	+3.9
SPN	**Mys Shipunski**	**3.96**	**29**	*e*P	Pn	10 26 15.1	+3.6
SPN				*e*S	Sn	10 27 01.8	+4.2

BER 03 10:33:50.7±1.2, 61°.09N×8°.23E, h1^{km}±4^{km}, ML1.0, Confirmed Earthquake, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKAR	**Skarslia**	**0.41**	**175**	*e*P	Pg	10 33 56.4	-2.2
SKAR				*e*S	Sg	10 34 01.1	-2.7
SKAR				IAML		10 34 02.4	
	comp=Z,11nm,0.2s						
HYA	**Hoyanger**	**1.00**	**275**	*e*P	Pg	10 34 08.0	-1.7
HYA				*e*S	Sg	10 34 21.6	-1.1
HYA				IAML		10 34 26.7	
	comp=Z,2.8nm,0.1s						
DOMB	**Dombas**	**1.04**	**22**	*e*P	Pg	10 34 10.6	0.0
DOMB				*e*S	Sg	10 34 23.3	-0.7
DOMB				IAML		10 34 30.2	
	comp=Z,3.5nm,0.1s						
NBO00	**NORSAR Array S**	**1.24**	**92**	*e*P	Pg	10 34 12.7	-1.7
NBO00				*e*S	Sg	10 34 29.2	-1.3
NBO00				IAML		10 34 33.2	
	comp=Z,7.1nm,0.1s						
NC204	**NORSAR Array S**	**1.24**	**80**	*e*P	Pg	10 34 13.2	-1.2
NC204				*e*S	Sg	10 34 29.7	-0.7
NC204				IAML		10 34 33.7	
	comp=Z,3.1nm,0.1s						
AKN	**Aaknes**	**1.24**	**332**	*e*P	Pg	10 34 13.1	-1.4
AKN				*e*S	Sg	10 34 29.8	-0.8
AKN				IAML		10 34 33.7	
	comp=Z,2.8nm,0.2s						
NAO01	**NORSAR Array S**	**1.32**	**100**	*e*P	Pg	10 34 14.0	-1.9
NAO01				*e*S	Sg	10 34 31.6	-1.4
NAO01				IAML		10 34 32.9	
	comp=Z,1.5nm,0.1s						
ODD1	**Odda**	**1.42**	**215**	*e*S	Sg	10 34 33.9	-2.4
ODD1				IAML		10 34 36.5	
	comp=Z,3.6nm,0.5s						
NB201	**NORSAR Array S**	**1.49**	**90**	*e*P	Pn	10 34 17.1	-1.5
NB201				*e*S	Sg	10 34 35.5	-2.9
NB201				IAML		10 34 40.1	
	comp=Z,1.5nm,0.2s						
MOL	**Molde**	**1.52**	**348**	*e*P	Pn	10 34 17.1	-2.0
MOL				*e*S	Sn	10 34 36.4	-3.1
MOL				IAML		10 34 41.7	
	comp=Z,3.2nm,0.2s						
KONO	**Kongsberg**	**1.59**	**154**	*e*P	Pn	10 34 18.1	-2.0
KONO				*e*S	Sn	10 34 38.2	-3.1
KONO				IAML		10 34 40.4	
	comp=Z,1.5nm,0.1s						
ASK	**Askoy**	**1.61**	**249**	*e*P	Pn	10 34 18.5	-1.7
ASK				*e*S	Sn	10 34 39.3	-2.2
ASK				IAML		10 34 40.6	
	comp=Z,5.7nm,0.0s						
NC602	**NORSAR Array S**	**1.66**	**101**	*e*P	Pn	10 34 19.6	-1.3
NC602				*e*S	Sn	10 34 39.7	-3.1
NC602				IAML		10 34 43.3	
	comp=Z,20nm,0.2s						
SUE	**Sulen**	**1.69**	**270**	*e*P	Pn	10 34 20.1	-1.2
SUE				*e*S	Sn	10 34 40.1	-3.4
SUE				IAML		10 34 47.6	
	comp=Z,7.6nm,0.7s						
BLS5	**Blasjo**	**1.89**	**209**	*e*P	Pn	10 34 23.2	-0.9
BLS5				IAML		10 34 44.0	
	comp=Z,1.2nm,0.4s						
BLS5				*e*S	Sn	10 34 45.2	-3.4

HEL 03 10:34:05.7±0.4, 61°.00N×28°.11E, h0^{km}, ML1.1, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	**FINESS Array S**	**1.08**	**295**	PG	Pg	10 34 25.4	-0.9
	baz=113						
FIA0				SB	Sg	10 34 39.6	-0.7
PVF	**Pernaja**	**1.20**	**248**	PG	Pg	10 34 27.0	-1.5
PVF				MSG		10 34 42.0	
	comp=Z,2.6nm,0.2s						
KAF	**Kangasniemi**	**1.41**	**323**	PN	Pn	10 34 32.2	-0.4
	baz=128						
KAF				MSG		10 34 48.2	
	comp=Z,1.1nm,0.2s						
SUF	**Sumiainen**	**1.96**	**333**	PG	Pn	10 34 40.7	+0.6
	baz=138						
SUF				MSG		10 35 04.0	
	comp=Z,0.6nm,0.2s						
MTSE	**Matsula**	**3.16**	**225**	PB	Pn	10 34 59.1	+2.5

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*ISCJB **03** 10:40:33.6±0.7, 19°.22S±0°.02×70°.88W±0°.03, h18^{km}±5^{km}, mb4.7/109, MS4.1/18, Error ellipse: s-maj=5.1km s-min=2.9km az=152.9*

*IDC **03** 10:40:33.6±0.6, 19°.15S×70°.60W, h0^{km}, mb4.4/11, mb1 4.6/17, mb1mx4.5/28, mbtmp4.4/17, ML4.0/6, MS4.0/23, Ms1 4.0/23, ms1mx3.9/31, Error ellipse: s-maj=20.5km s-min=14.5km az=75.0*

*GUC **03** 10:40:36.4±0.5, 19°.27S×70°.70W, h37^{km}±2^{km}, ML4.7*

*NEIC **03** 10:40:36.0±0.0, 19°.27S×70°.70W, h37^{km}, mb4.8/112, ML4.7(GUC), After GUC.*

NEIC Felt [III] at Cuya and Poconchile and [II] at Arica.

*VAO **03** 10:40:39.9±0.7, 19°.28S×70°.36W, h10^{km}, mb5.0*

*BJI **03** 10:40:40.8±0.0, 19°.30S×70°.70W, h37^{km}, mB5.2/9, Ms5.1/1*

ISC 03 10:40:35.1±1.4, 19°.28S±0°.03×70°.81W±0°.05, h14^{km}±8^{km}, n483, σ1^{s}.71/486, mb4.8/109, MS4.1/18, 4C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.72**	**116**	⇑*i*P	**Pg**	**10 40 48.8**	**-0.4**
PSGC				*i* S	**Sg**	**10 40 57.8**	**-0.8**
PSGC				IAML		10 41 00.1	
	comp=N,47µm,0.6s						
PSGCX	**Pisagua**	**0.72**	**116**	*i* P	**Pg**	**10 40 48.1**	**-1.0**
PSGCX				*i* S	**Sg**	**10 40 57.9**	**-0.7**
PB12	**IPOC Station P**	**0.80**	**35**	*i* P	**Pb**	**10 40 50.5**	**-0.3**
PB12				*i* S	**Sb**	**10 41 01.8**	**+0.2**
PB12	**IPOC Station P**	**0.80**	**35**	⇑*i*P	**Pb**	**10 40 50.6**	**-0.3**
PB12				*i* S	**Sb**	**10 41 00.2**	**-1.3**
PB12				IAML		10 41 02.4	
	comp=N,21µm,0.7s						
MNMC	**Minye Minye**	**1.15**	**83**	*e*Pn	**Pn**	**10 40 56.3**	**-0.8**
MNMC				*e*Sn	**Sb**	**10 41 11.2**	**-0.7**
MNMC	**Minye Minye**	**1.15**	**83**	⇓*i*P	**Pn**	**10 40 56.1**	**-1.0**
MNMC				*i* S	**Sb**	**10 41 10.5**	**-1.4**
MNMC				IAML		10 41 12.1	
	comp=E,47µm,0.6s						
MNMCX	**Minye Minye**	**1.15**	**83**	*i* P	**Pn**	**10 40 55.8**	**-1.2**
PB11	**IPOC Station P**	**1.19**	**114**	*e*Pn	**Pn**	**10 40 56.4**	**-1.1**
PB11				*e*Sn	**Sb**	**10 41 11.4**	**-1.3**
PB11	**IPOC Station P**	**1.19**	**114**	*i* P	**Pn**	**10 40 56.1**	**-1.3**
PB11	**IPOC Station P**	**1.19**	**114**	⇓*i*P	**Pn**	**10 40 56.3**	**-1.1**
PB11				*i* S	**Sb**	**10 41 11.1**	**-1.7**
PB11				IAML		10 41 12.5	
	comp=N,24µm,0.2s						
PB16	**IPOC Station P**	**1.55**	**53**	*i* P	**Pn**	**10 41 03.2**	**+0.5**
PB16				*i* S	**Sg**	**10 41 25.8**	**+0.7**
PB16	**IPOC Station P**	**1.55**	**53**	⇓*i*P	**Pn**	**10 41 02.9**	**+0.1**
PB16				*i* S	**Sn**	**10 41 22.5**	**-0.4**
PB16				IAML		10 41 27.3	
	comp=N,19µm,0.7s						
GO01	**Chusmiza**	**1.57**	**105**	*e*Pn	**Pn**	**10 41 03.3**	**+0.4**
GO01				*e*Sn	**Sn**	**10 41 23.4**	**+0.1**
GO01	**Chusmiza**	**1.57**	**105**	⇓*i*P	**Pn**	**10 41 02.8**	**-0.2**
GO01				*i* S	**Sn**	**10 41 23.2**	**-0.1**
GO01				IAML		10 41 27.0	
	comp=E,14µm,0.1s						
PB08	**IPOC Station P**	**1.78**	**119**	*i* P	**Pn**	**10 41 06.1**	**+0.3**
PB08				*i* S	**Sb**	**10 41 29.8**	**-0.2**
PB08	**IPOC Station P**	**1.78**	**119**	⇓*i*P	**Pn**	**10 41 05.9**	**+0.2**
PB08				*i* S	**Sn**	**10 41 28.3**	**-0.1**
PB08				IAML		10 41 39.0	
	comp=N,6µm,0.5s						
PB01	**IPOC Station P**	**2.15**	**145**	*e*Pn	**Pn**	**10 41 11.3**	**+0.6**
PB01	**IPOC Station P**	**2.15**	**145**	⇑*i*P	**Pn**	**10 41 11.0**	**+0.4**
PB01				*i* S	**Sn**	**10 41 37.5**	**+0.3**
PB01				IAML		10 41 46.2	
	comp=E,6µm,0.4s						
PB02	**IPOC Station P**	**2.20**	**157**	*i* P	**Pn**	**10 41 12.3**	**+0.9**
PB02	**IPOC Station P**	**2.20**	**157**	⇓*i*P	**Pn**	**10 41 11.9**	**+0.5**
PB02				*i* S	**Sn**	**10 41 38.9**	**+0.3**
PB02				IAML		10 41 55.1	
	comp=E,10µm,0.7s						
PB07	**IPOC Station P**	**2.58**	**161**	IAML		10 41 59.3	
	comp=E,6µm,0.8s						
PB09	**IPOC Station P**	**2.90**	**150**	⇓*i*P	**Pn**	**10 41 22.6**	**+1.5**
PB09				*i* S	**Sn**	**10 41 57.7**	**+1.8**
PB09				IAML		10 42 16.1	
	comp=N,4µm,0.8s						
PB03	**IPOC Station P**	**2.93**	**160**	*i* P	**Pn**	**10 41 22.1**	**+0.7**
PB03	**IPOC Station P**	**2.93**	**160**	IAML		10 42 13.1	
	comp=E,3µm,0.7s						
PB04	**IPOC Station P**	**3.10**	**169**	*e*Pn	**Pn**	**10 41 23.4**	**-0.4**
PB04	**IPOC Station P**	**3.10**	**169**	IAML		10 42 24.2	
	comp=N,2µm,0.6s						
PB05	**IPOC Station P**	**3.60**	**171**	*i* P	**Pn**	**10 41 29.6**	**-1.1**
PB05				*i* S	**Sn**	**10 42 12.0**	**-1.0**
LVC	**Limon Verde**	**3.76**	**152**	Pn	**Pn**	**10 41 34.4**	**+1.4**
	comp=N,27nm,0.3s,baz=340,slow=8.1,SNR=172						
LVC				Sn	**Sn**	**10 42 18.9**	**+1.6**
	comp=N,67nm,0.3s,baz=355,slow=22,SNR=3.3						
LVC				LR	LR	10 43 21.3	
	comp=N,2µm,20.8s,baz=321,slow=44						
LVC	**Limon Verde**	**3.76**	**152**	*e*Pn	**Pn**	**10 41 34.6**	**+1.6**
LVC	**Limon Verde**	**3.76**	**152**	*i* P	**Pn**	**10 41 34.3**	**+1.2**
LVC	**Limon Verde**	**3.76**	**152**	*e*P	**Pn**	**10 41 34.6**	**+1.6**
LVC				*e*S	**Sn**	**10 42 19.2**	**+1.9**
LPAZ	**La Paz**	**3.92**	**41**	Pg	**Pn**	**10 41 39.7**	**+4.3**
	comp=N,10nm,0.3s,baz=228,slow=5.6,SNR=174						
LPAZ				Lg	Lg	10 42 32.6	
	comp=N,8.5nm,0.3s,baz=197,slow=19,SNR=1.5						
LPAZ				LR	LR	10 43 03.9	
	comp=N,1µm,20.5s,baz=215,slow=41						
LPAZ	**La Paz**	**3.92**	**41**	*e*P	**Pn**	**10 41 40.1**	**+4.7**
LPAZ	**La Paz**	**3.92**	**41**	*i* P	**Pn**	**10 41 37.8**	**+2.4**
PB10	**IPOC Station P**	**4.22**	**177**	*e*Pn	**Pn**	**10 41 38.1**	**-0.9**
GO02	**Mina Guanaco**	**5.96**	**169**	*e*Pn	**Pn**	**10 42 03.4**	**+0.2**
HJA	**Humahuaca**	**6.37**	**129**	*i* P	**Pn**	**10 42 11.3**	**+2.3**
HJA				IAML		10 42 33.0	
	comp=Z,70nm,0.5s						
GO03	**Copiap**	**8.29**	**176**	*e*Pn	**Pn**	**10 42 33.0**	**-2.0**
NNA	**Nana**	**9.29**	**320**	Pn	**Pn**	**10 42 49.5**	**+0.7**
	comp=Z,5.4nm,0.3s,baz=205,slow=16,SNR=7.6						
NNA				Sn	**Sn**	**10 44 28.1**	**-5.1**
	comp=Z,2.8nm,0.3s,baz=100,slow=18,SNR=2.6						
NNA				LR	LR	10 46 33.3	
	comp=Z,614nm,18.5s,baz=176,slow=39						
NNA	**Nana**	**9.29**	**320**	*e*Pn	**Pn**	**10 42 49.6**	**+0.9**
LCO	**Las Campanas**	**9.69**	**179**	*e*Pn	**Pn**	**10 42 52.5**	**-1.9**
LCO	**Las Campanas**	**9.69**	**179**	*e*P	**Pn**	**10 42 58.8**	**+4.4**
SIV	**San Ignacio**	**9.84**	**72**	Pn	**Pn**	**10 42 55.5**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=261,slow=13,SNR=28						
SIV				Lg	Lg	10 45 38.7	
	comp=Z,0.8nm,0.3s,baz=257,slow=18,SNR=2.0						
SIV				LR	LR	10 47 10.4	
	comp=Z,2µm,19.2s,baz=266,slow=41						
GO04	**Tololo Observa**	**10.85**	**180**	*e*Pn	**Pn**	**10 43 08.9**	**-1.3**
CFA	**Coronel Fontan**	**12.49**	**170**	Pn	**Pn**	**10 43 34.9**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=8.2,slow=12,SNR=5.0						
CFA				Sn	**Sn**	**10 45 51.8**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=0.0,slow=20,SNR=2.2						
CFA				LR	LR	10 49 02.2	
	comp=Z,645nm,19.8s,baz=42,slow=40						
ATAH	**Atahualpa**	**14.14**	**328**	Pn	**Pn**	**10 43 56.7**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=104,slow=17,SNR=2.5						
ATAH				LR	LR	10 48 36.8	
	comp=Z,162nm,19.2s,baz=146,slow=34						
AQDB	**Aquidauana**	**14.26**	**97**	*e*P	**Pn**	**10 43 55.0**	**-1.7**
CPUP	**Villa Florida**	**14.27**	**122**	Pn	**Pn**	**10 43 57.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=300,slow=12,SNR=11						
CPUP				LR	LR	10 50 16.9	
	comp=Z,1µm,18.5s,baz=302,slow=41						
CPUP	**Villa Florida**	**14.27**	**122**	*e*P	**Pn**	**10 43 58.8**	**+2.0**
CLDB	**Colider**	**16.72**	**62**	*e*P	**Pn**	**10 44 28.1**	**-1.0**
TRCB	**Terra Rica**	**17.32**	**105**	*e*P	**Pn**	**10 44 36.0**	**-0.7**
PTGB	**Pitanga**	**18.20**	**111**	*e*P	**P**	**10 44 49.0**	**+1.2**
CPSB	**Cacapava Do Su**	**19.24**	**128**	*e*P	**Pn**	**10 44 59.8**	**-0.2**
ITRB	**Iturama**	**19.28**	**95**	*e*P	**P**	**10 44 59.8**	**+0.1**
FRTB	**Fartura**	**20.20**	**105**	*e*P	**P**	**10 45 10.0**	**+0.4**
TRQA	**Tornquist**	**20.23**	**159**	*e*P	**P**	**10 45 10.2**	**+0.4**
	comp=Z,33nm,0.9s						
TRQA	**Tornquist**	**20.23**	**159**	*e*P	Pn	10 45 13.5	+1.7
BB19B	**Bebedouro**	**20.99**	**99**	*e*P	**P**	**10 45 19.5**	**+1.3**
FLOC	**Florencia**	**21.27**	**347**	*e*P	**P**	**10 45 21.8**	**+0.6**
PTGA	**Pitinga**	**21.28**	**31**	P	**P**	**10 45 19.2**	**-2.0**
	comp=Z,16nm,0.4s,baz=210,slow=17,SNR=42						
PTGA				LR	LR	10 54 03.0	
	comp=Z,794nm,18.8s,baz=212,slow=38						
PTGA	**Pitinga**	**21.28**	**31**	*e*P	**P**	**10 45 19.4**	**-1.9**
	comp=Z,32nm,0.7s						
PLCA	**Paso Flores**	**21.39**	**179**	P	**P**	**10 45 24.1**	**+1.7**
	comp=Z,6.1nm,0.9s,baz=14,slow=13,SNR=6.6						
PLCA				LR	LR	10 52 54.9	
	comp=Z,352nm,19.3s,baz=22,slow=34						
PLCA	**Paso Flores**	**21.39**	**179**	*e*P	**P**	**10 45 21.7**	**-0.6**
	comp=Z,27nm,0.9s						
PLCA	**Paso Flores**	**21.39**	**179**	*e*P	**P**	**10 45 27.9**	**+5.5**
MACC	**Macarena, Meta**	**21.50**	**352**	*e*P	**P**	**10 45 28.4**	**+4.8**
RCLB	**Rio Claro- Sao**	**21.97**	**102**	*e*P	**P**	**10 45 29.8**	**+1.0**
SOTA	**Rioblanco**	**22.03**	**344**	*e*P	**P**	**10 45 32.5**	**+2.6**
BDFB	**Brasilia**	**22.04**	**84**	P	**P**	**10 45 30.7**	**+1.1**
	comp=Z,7.3nm,0.8s,baz=260,slow=6.2,SNR=7.1						

BDFB	comp=Z,668nm,19.4s,baz=250,slow=42			LR	LR	10 55 46.1	
BDFB	Brasilia	22.04	84	*e*P	P	10 45 30.7	+1.1
BDFB				*e*P	P	10 45 31.0	+1.4
BBAC	Balboa, Cauca	22.09	343	*e*P	P	10 45 33.8	+3.5
PCON	Cinco Dias	22.16	345	*e*P	P	10 45 35.1	+3.7
PCON				*e*P	P	10 45 38.4	+7.1
SPB	Sao Paulo	22.17	105	*e*P	P	10 45 32.5	+1.7
BETC	Betania	22.29	348	*e*P	P	10 45 36.4	+4.2
POPC	Popayan, Colom	22.44	344	*e*P	P	10 45 37.8	+3.8
PMNB	Patos De Minas	23.06	92	*e*P	P	10 45 41.4	+0.9
ORTC	Ortega, Tolima	23.45	349	*e*P	P	10 45 41.1	-3.2
YOTC	Yotoco, Valle	23.75	346	*e*P	P	10 45 49.8	+2.5
BSCB	Bom Sucesso	24.49	98	*e*P	P	10 45 56.2	+2.0
PLMC	San Jos del P	24.63	347	*e*P	P	10 45 50.4	-5.0
SMTB	Santa Maria do	24.75	68	*e*P	P	10 45 58.3	+1.8
GUY2C	Guyana, Caldas	24.76	349	*e*P	P	10 45 57.7	+0.8
ESAR	Angra dos Reis	24.86	103	*e*P	P	10 45 58.8	+1.5
JANB	Januaria	25.65	85	*e*P	P	10 46 06.7	+2.0
HELC	Santa Helena	25.73	349	*e*P	P	10 46 05.1	-0.6
SDV	Santo Domingo comp=Z,230nm,22.0s,baz=212,slow=35	27.99	0	LR	LR	10 56 53.0	
SDV	Santo Domingo comp=Z,11nm,0.8s	27.99	0	*e*P	P	10 46 21.6	-4.2
ALF01	Guarapari-ES	28.29	98	*e*P	P	10 46 30.9	+2.5
BSFB	Barra de Sao F	28.31	94	*e*P	P	10 46 30.9	+2.4
PCRV	Puerto La Cruz comp=Z,4.5nm,0.5s,baz=194,slow=8.3,SNR=2.9	29.89	12	P	P	10 46 43.2	+0.6
NBMO	Morrinhos-CE	33.99	66	*e*P	P	10 47 21.5	+2.9
SJG	San Juan comp=Z,41nm,0.9s	37.44	7	*e*P	P	10 47 46.0	-2.0
LNIG	Linares comp=Z,6.4nm,1.1s	52.02	326	*e*P	P	10 49 41.8	-2.6
ZAIG	Zacatecas comp=Z,13nm,1.0s	52.05	322	*e*P	P	10 49 42.8	-2.1
352A	Blakely baz=163	52.26	345	P	P	10 49 46.0	+0.1
254A	Abbeville baz=165	52.32	347	P	P	10 49 46.2	-0.2
251A	Midway baz=163	52.96	344	P	P	10 49 50.7	-0.5
Z58A	St. Stephen baz=169	53.02	351	P	P	10 49 51.5	0.0
152A	Waverly Hall comp=Z,11nm,0.9s	53.34	345	*e*P	P	10 49 51.7	-2.3
152A	Waverly Hall baz=164	53.34	345	P	P	10 49 54.0	0.0
150A	Eclectic baz=162	53.61	344	P	P	10 49 55.9	0.0
Z53A	Monticello baz=165	53.67	347	P	P	10 49 55.7	-0.7
149A	Jones baz=161	53.80	343	P	P	10 49 56.6	-0.7
Y55A	Saluda baz=167	53.96	349	P	P	10 49 58.0	-0.4
X60A	Albert Glenn T baz=172	53.99	353	P	P	10 49 57.9	-0.7
Y54A	Tignall baz=166	54.04	348	P	P	10 49 58.5	-0.5
Z50A	Ashland comp=Z,9.7nm,0.7s	54.20	344	*e*P	P	10 49 57.4	-2.9
Z50A	Ashland baz=162	54.20	344	P	P	10 49 59.7	-0.5
LRAL	Lakeview Retre baz=161	54.27	343	P	P	10 50 00.4	-0.4
Z49A	Columbiana baz=162	54.30	344	P	P	10 50 01.2	+0.2
X56A	White Oak baz=168	54.35	350	P	P	10 50 01.9	+0.6
BIRD	Birdtown, Kers comp=Z,31nm,0.9s	54.40	350	*e*P	P	10 50 03.4	+1.7
X55A	Gracelyn & Ava baz=167	54.43	349	P	P	10 50 02.5	+0.6
HKT	Hockley comp=Z,6.8nm,1.0s	54.56	333	*e*P	P	10 50 01.5	-1.3
W58A	Raeford baz=170,SNR=5.2	54.59	352	P	P	10 50 03.6	+0.6
Y51A	Rockmart baz=163	54.60	345	P	P	10 50 02.8	-0.4
X54A	Belton baz=166	54.65	348	P	P	10 50 03.6	+0.1
833A	Chaparral WMA, baz=146	54.80	329	P	P	10 50 05.7	+1.0
W57A	Gilead comp=Z,34nm,1.0s	54.83	351	*e*P	P	10 50 00.8	-3.9
Y49A	Blount Mountai baz=162	54.89	344	P	P	10 50 04.9	-0.4
W56A	Indian Trail baz=169	54.90	350	P	P	10 50 05.1	-0.2
X52A	Dahlonega baz=165	55.01	347	P	P	10 50 05.7	-0.5
W54A	Cherokee Point baz=167	55.13	349	P	P	10 50 06.1	-0.9
V59A	Middlesex baz=171	55.19	353	P	P	10 50 06.8	-0.6
X50B	Fort Payne baz=163	55.28	345	P	P	10 50 07.6	-0.5
V58A	Windy Hill, Pi baz=170	55.33	352	P	P	10 50 08.6	+0.2
W53A	Cullowhee baz=166	55.40	348	P	P	10 50 09.2	+0.1
W52A	Murphy baz=165	55.49	347	P	P	10 50 08.9	-0.7
X49A	Woodville baz=162	55.49	344	P	P	10 50 09.1	-0.5
V57A	Coltrane Farms baz=170	55.52	351	P	P	10 50 09.2	-0.5
V56A	Mocksville comp=Z,38nm,1.0s	55.55	350	*e*P	P	10 50 08.1	-1.9
V56A	Mocksville baz=169	55.55	350	P	P	10 50 09.1	-0.9
X48A	Hartselle comp=Z,12nm,1.0s	55.62	344	*e*P	P	10 50 09.2	-1.3
X48A	Hartselle baz=161	55.62	344	P	P	10 50 09.6	-0.9
V55A	Taylorsville baz=168	55.71	350	P	P	10 50 10.9	-0.2
U59A	Littleton baz=172	55.72	353	P	P	10 50 11.6	+0.4
W51A	Cleveland baz=164	55.74	346	P	P	10 50 11.2	-0.1
V54A	Nebo baz=167	55.76	349	P	P	10 50 11.4	-0.1
V53A	Saluda baz=166	55.82	348	P	P	10 50 11.8	-0.1
U58A	Oxford baz=171	55.85	352	P	P	10 50 11.3	-0.8
W50A	Signal Mountai comp=Z,8.9nm,0.8s	55.90	346	*e*P	P	10 50 10.2	-2.3
W50A	Signal Mountai baz=163	55.90	346	P	P	10 50 11.7	-0.8
X47A	Russelville baz=160	55.90	343	P	P	10 50 12.1	-0.5
W49A	Belvidere baz=162	56.05	345	P	P	10 50 12.7	-0.9
SWET	Sewanee comp=Z,9.7nm,1.0s	56.06	345	*e*P	P	10 50 12.2	-1.5
V52A	Sevierville comp=Z,20nm,1.1s	56.14	347	*e*P	P	10 50 11.8	-2.4
V52A	Sevierville baz=165	56.14	347	P	P	10 50 13.8	-0.4
W48A	Pulaski baz=162	56.24	344	P	P	10 50 14.0	-0.9
V51A	Loudon baz=164	56.26	347	P	P	10 50 14.1	-1.0
V50A	Pikevile baz=164,SNR=5.1	56.30	346	P	P	10 50 14.8	-0.6
T59A	Double "B" Far comp=Z,18nm,0.8s	56.31	354	*e*P	P	10 50 13.6	-1.8
T59A	Double "B" Far baz=172	56.31	354	P	P	10 50 15.4	+0.1
U55A	TA2, Sparta baz=168	56.31	350	P	P	10 50 15.7	+0.2
OXF	Oxford baz=159	56.34	342	P	P	10 50 14.6	-1.1
T58A	Grand View Acr baz=171	56.39	353	P	P	10 50 16.5	+0.5
PLAL	Pickwick Lake comp=Z,9.1nm,1.1s	56.40	343	*e*P	P	10 50 14.4	-1.7
U53A	Fall Branch baz=167	56.45	349	P	P	10 50 15.6	-0.8
U54A	Nelsons Funny baz=167	56.46	349	P	P	10 50 15.6	-1.0
W47A	Westpoint baz=161	56.52	344	P	P	10 50 16.4	-0.6
T57A	Hurt comp=Z,28nm,1.0s	56.54	352	*e*P	P	10 50 14.0	-3.0
T57A	Hurt baz=170	56.54	352	P	P	10 50 17.9	+0.9
V49A	McMinnville baz=163	56.58	345	P	P	10 50 17.0	-0.3
V48A	Smith Brothers comp=Z,13nm,0.9s	56.78	344	*e*P	P	10 50 16.2	-2.5
V48A	Smith Brothers baz=162	56.78	344	P	P	10 50 18.2	-0.6
JCT	Junction City comp=Z,6.0nm,1.0s	56.80	330	*e*P	P	10 50 16.1	-2.9
JCT	Junction City baz=147	56.80	330	P	P	10 50 18.0	-1.1
WLAR	White Oak Lake comp=Z,34nm,0.8s	56.80	338	*e*P	P	10 50 15.8	-3.2
T55A	Pulaski baz=169	56.88	350	P	P	10 50 19.6	+0.1
T54A	Tazewell baz=168	56.95	350	P	P	10 50 20.2	+0.2
U50A	Jamestown baz=164	56.96	347	P	P	10 50 19.6	-0.5
S58A	Poland Farm, P baz=172	56.99	353	P	P	10 50 20.3	+0.1
WHTX	Lake Whitney, comp=Z,11nm,0.8s	57.02	333	*e*P	P	10 50 17.5	-3.0
WHTX	Lake Whitney, baz=150	57.02	333	P	P	10 50 19.8	-0.7
T53A	Wise baz=167	57.04	349	P	P	10 50 20.5	-0.2
V47A	Nunnelly baz=161	57.05	344	P	P	10 50 19.9	-0.8
V46A	Holladay baz=160	57.18	343	P	P	10 50 21.1	-0.5
S56A	Natural Bridge baz=170	57.25	352	P	P	10 50 22.2	+0.1
S57A	Dark Hollow, R comp=Z,35nm,1.0s	57.25	352	*e*P	P	10 50 19.9	-2.2
S57A	Dark Hollow, R baz=171	57.25	352	P	P	10 50 22.0	0.0
U49A	Red Boiling Sp baz=163	57.27	346	P	P	10 50 21.9	-0.3
T51A	Gray baz=165	57.30	348	P	P	10 50 21.9	-0.5
R58B	Mineral baz=172	57.32	353	P	P	10 50 22.2	-0.4
WVT	Waverly comp=Z,12nm,0.9s	57.41	344	*e*P	P	10 50 21.9	-1.3
WVT	Waverly baz=161	57.41	344	P	P	10 50 22.1	-1.1
U48A	Cassie Pea, Po baz=162	57.45	345	P	P	10 50 22.7	-0.8
T50A	Nancy baz=164	57.54	347	P	P	10 50 23.2	-0.9
U47A	Clarksville baz=161	57.57	344	P	P	10 50 23.9	-0.4
S54A	Dingess, Beckl baz=168	57.63	350	P	P	10 50 24.0	-0.8
S53A	Williamson baz=167	57.65	349	P	P	10 50 23.8	-1.1
MIAR	Mount Ida comp=Z,12nm,0.8s	57.74	338	*e*P	P	10 50 25.0	-0.6
MIAR	Mount Ida baz=154,SNR=5.4	57.74	338	P	P	10 50 25.7	+0.1
T49A	Edmonton comp=Z,23nm,0.8s	57.77	346	*e*P	P	10 50 24.1	-1.7
T49A	Edmonton baz=164,SNR=7.0	57.77	346	P	P	10 50 25.4	-0.4
TXAR	Lajitas Array comp=Z,2.6nm,1.0s,baz=147,slow=9.6,SNR=21	57.80	326	P	P	10 50 26.8	+0.6
TXAR	comp=Z,132nm,18.6s,baz=0.0,slow=37			LR	LR	11 15 52.1	
TX31	Lajitas Ar. Si comp=Z,9.5nm,1.3s	57.80	326	*e*P	P	10 50 24.3	-1.9
W41B	Gary Mavity, V baz=156	57.85	339	P	P	10 50 26.0	-0.3
R54A	Victor baz=169	57.95	351	P	P	10 50 26.8	-0.2
T48A	Bowling Green baz=162	57.98	345	P	P	10 50 26.7	-0.5
T47A	Sharon Grove comp=Z,24nm,1.1s	58.04	345	*e*P	P	10 50 25.1	-2.5
T47A	Sharon Grove baz=162	58.04	345	P	P	10 50 26.7	-0.9
S50A	Richmond baz=165	58.08	347	P	P	10 50 27.7	-0.2
T46A	Princeton baz=161	58.29	344	P	P	10 50 28.5	-0.9
S49A	Springfield baz=164	58.37	347	P	P	10 50 28.5	-1.4
W39A	Magazine comp=Z,12nm,0.9s	58.40	338	*e*P	P	10 50 28.9	-1.3
W39A	Magazine baz=154	58.40	338	P	P	10 50 29.8	-0.4
S48A	Wiedeman Farm, baz=163	58.42	346	P	P	10 50 29.2	-1.1
Q57A	Strasburg baz=172	58.44	353	P	P	10 50 29.5	-1.0
ABTX	Abilene, Hawle comp=Z,13nm,0.8s	58.52	331	*e*P	P	10 50 31.4	+0.2
ABTX	Abilene, Hawle baz=148,SNR=8.2	58.52	331	P	P	10 50 31.0	-0.1
S47A	Hartford baz=162	58.56	345	P	P	10 50 30.1	-1.1
Q53A	Leroy baz=168	58.70	350	P	P	10 50 32.2	+0.1
PBMO	Poplar Bluff comp=Z,11nm,0.7s	58.75	342	*e*P	P	10 50 29.7	-2.9
S46A	Don Dixon Farm baz=161	58.85	344	P	P	10 50 32.4	-0.9
U40A	Yellville baz=156	59.13	339	P	P	10 50 34.7	-0.6
S44A	Carbondale baz=160	59.27	343	P	P	10 50 35.6	-0.6
P53A	Whipple comp=Z,14nm,0.8s	59.29	350	*e*P	P	10 50 33.7	-2.5
HHAR	Hobbs comp=Z,12nm,1.1s	59.43	338	*e*P	P	10 50 34.9	-2.5
O59A	Robesonia baz=174	59.49	355	P	P	10 50 37.4	-0.3
P51A	Williamsport baz=166	59.56	349	P	P	10 50 37.9	-0.3
R45A	Skylar, Fairfi baz=161	59.57	344	P	P	10 50 38.2	-0.1
O55A	Ligonier baz=171	59.70	352	P	P	10 50 39.6	+0.4
TUL1	Leonard comp=Z,20nm,1.2s	59.77	337	*e*P	P	10 50 37.2	-2.5
TUL1	Leonard baz=152	59.77	337	P	P	10 50 39.8	+0.1
WMOK	Wichita Mounta comp=Z,1.6nm,0.8s	59.94	333	*e*P	P	10 50 38.0	-2.9
WMOK	Wichita Mounta baz=149	59.94	333	P	P	10 50 40.5	-0.4
CCM	Cathedral Cave comp=Z,6.6nm,0.8s	60.18	341	*e*P	P	10 50 40.8	-1.7
CCM	Cathedral Cave baz=158	60.18	341	P	P	10 50 42.0	-0.5
N55A	Marion Center comp=Z,30nm,1.0s	60.23	353	*e*P	P	10 50 39.3	-3.5
N55A	Marion Center baz=171	60.23	353	P	P	10 50 43.2	+0.4
N54A	Moraine State comp=Z,13nm,1.0s	60.53	352	*e*P	P	10 50 42.4	-2.4
MNTX	Cornudas Mount comp=Z,7.7nm,1.0s	60.57	326	*e*P	P	10 50 42.9	-2.4
MNTX	Cornudas Mount baz=142,SNR=12	60.57	326	P	P	10 50 45.3	0.0
M59A	Waymart baz=175	60.66	356	P	P	10 50 45.6	-0.1
O48A	Farmland baz=164	60.72	347	P	P	10 50 45.3	-0.8
M56A	Emporium baz=172	60.84	354	P	P	10 50 46.6	-0.3
N51A	Ashland baz=167	60.84	350	P	P	10 50 46.7	-0.3
M55A	Ridgway baz=171	60.88	353	P	P	10 50 47.6	+0.4
O47A	Sheridan baz=163	60.91	347	P	P	10 50 47.1	-0.3
M54A	Oil Creek Stat comp=Z,27nm,1.1s	61.03	352	*e*P	P	10 50 46.3	-1.9
M54A	Oil Creek Stat baz=170	61.03	352	P	P	10 50 48.5	+0.3
MSTX	Muleshoe comp=Z,15nm,1.0s	61.09	330	*e*P	P	10 50 47.0	-1.9
MSTX	Muleshoe baz=145,SNR=9.5	61.09	330	P	P	10 50 48.9	0.0
M53A	WI Miller and baz=169	61.10	352	P	P	10 50 48.5	-0.2
P43A	Skaggs, Pawnee baz=160	61.16	344	P	P	10 50 48.1	-1.0
N49A	Columbus Grove comp=Z,25nm,1.0s	61.17	348	*e*P	P	10 50 47.3	-1.8
N49A	Columbus Grove baz=166	61.17	348	P	P	10 50 48.6	-0.5
SFIN	Lafayette baz=162	61.26	346	P	P	10 50 48.5	-1.2
M52A	Chesterland baz=169	61.29	351	P	P	10 50 49.5	-0.5
N47A	Urbana baz=164	61.43	347	P	P	10 50 50.0	-0.9
HRV	Adam Dziewonsk baz=179	61.48	359	P	P	10 50 50.6	-0.6
L54A	Sinclairville baz=171	61.70	353	P	P	10 50 53.0	+0.3
L48A	N Adams baz=165	62.20	349	P	P	10 50 55.1	-1.0
M45A	Boilermakers S baz=162	62.25	346	P	P	10 50 54.8	-1.7
N43A	Stutzman Famil baz=160	62.29	344	P	P	10 50 55.8	-0.9
L47A	Sherwood baz=165	62.38	348	P	P	10 50 56.4	-0.9
VNA3	Neumayer Olymp	62.74	161	P	P	10 51 00.4	+0.9
J52A	Paris baz=170	62.84	352	P	P	10 51 00.2	-0.1
N40A	Mertquake, Sal baz=158	62.89	342	P	P	10 50 59.8	-0.9
KSU1	Kansas State U baz=152	62.90	338	P	P	10 51 00.2	-0.6
VNA1	Neumayer--Stat	62.96	161	P	P	10 51 02.7	+1.9
K48A	Perry baz=166	62.98	349	P	P	10 51 00.6	-0.6
K47A	Vermontville baz=165	63.01	348	P	P	10 51 00.3	-1.2
BNM	Barren Site	63.14	327	*e*P	P	10 51 00.5	-2.4
PECO	Prince Edward comp=Z,24nm,1.3s	63.16	355	*e*P	P	10 51 00.4	-2.0
WLVO	Wesleyville baz=172	63.27	354	P	P	10 51 03.3	+0.1
L42A	Oliver, Polo baz=160	63.42	344	P	P	10 51 03.5	-0.7
I51A	Listowel baz=169	63.47	352	P	P	10 51 03.9	-0.6
I55A	Frankford baz=173	63.49	354	P	P	10 51 04.7	+0.1
J47A	Sunmer baz=165	63.53	349	P	P	10 51 04.3	-0.6
I52A	Shelburne baz=170	63.62	352	P	P	10 51 06.1	+0.6
ANMO	Albuquerque comp=Z,4.3nm,1.1s	63.68	328	*e*P	P	10 51 04.1	-2.2
ANMO	Albuquerque baz=142	63.68	328	P	P	10 51 06.9	+0.6
TASM	ASL Pad, Albuq baz=142	63.68	328	P	P	10 51 06.9	+0.6
TASM	ASL Pad, Albuq baz=142	63.68	328	P	P	10 51 06.9	+0.6
LONY	Lake Ozonia baz=176	63.68	357	P	P	10 51 06.3	+0.4
H56A	Elgin baz=174	63.75	356	P	P	10 51 06.7	+0.3
BASO	Ashfield baz=168	63.76	351	P	P	10 51 06.6	+0.2
H55A	Tweed baz=173	63.78	355	P	P	10 51 07.2	+0.7
DELO	Deloro Mine baz=173	63.79	355	P	P	10 51 06.8	+0.2
BWLO	Walkerton baz=169	63.79	352	P	P	10 51 07.1	+0.5
FRNY	Flat Rock comp=Z,21nm,1.1s	63.85	358	*e*P	P	10 51 03.5	-3.5
L40A	Anamosa comp=Z,15nm,1.0s	63.88	343	*e*P	P	10 51 05.3	-1.9
L40A	Anamosa baz=158	63.88	343	P	P	10 51 06.0	-1.3
TUC	Tucson baz=138	64.00	323	P	P	10 51 08.5	+0.2
J45A	Montague baz=164	64.03	347	P	P	10 51 09.2	+1.1
SADO	Sadowa	64.19	353	*e*pP	P	10 51 11.8	+2.6
PKME	Peaks-Kenny Pk baz=182	64.25	1	P	P	10 51 09.9	+0.4
I48A	Sherman Twp baz=166	64.25	350	P	P	10 51 09.1	-0.5
BMRO	Meriville Lake baz=169	64.27	352	P	P	10 51 10.3	+0.5
JFWS	Jewell Farm comp=Z,12nm,0.9s	64.42	344	*e*P	P	10 51 08.0	-2.8
JFWS	Jewell Farm baz=160	64.42	344	P	P	10 51 10.7	-0.1
T25A	Trinidad comp=Z,4.8nm,0.9s	64.44	331	*e*P	P	10 51 08.7	-2.6
T25A	Trinidad baz=145	64.44	331	P	P	10 51 11.7	+0.4
G53A	Haliburton baz=172	64.48	354	P	P	10 51 11.4	+0.3
H48A	Harrisville baz=167	64.69	350	P	P	10 51 12.5	+0.1
H46A	Fife Lake baz=165	64.86	349	P	P	10 51 13.2	-0.4
BUKO	Buck Lake baz=171	64.88	353	P	P	10 51 14.0	+0.3
KLBO	Killbear Provi baz=170	64.89	353	P	P	10 51 13.5	-0.3
PEMO	Pembroke baz=173	64.91	355	P	P	10 51 14.1	+0.2
214A	Organ Pipe Nat baz=136,SNR=5.2	64.92	321	P	P	10 51 15.9	+1.5
SNAA	Sanae	64.95	161	P	P	10 51 14.7	+0.7
SNAA	Sanae comp=Z,10nm,0.9s	64.95	161	*e*P	P	10 51 11.1	-2.9
I42A	Draeger Farm, baz=161	65.01	346	P	P	10 51 14.1	-0.6
LMN	Caledonia Moun comp=Z,25nm,1.4s	65.05	5	*e*P	P	10 51 11.9	-2.9
X18A	Snowflake comp=Z,8.2nm,1.3s	65.19	325	*e*P	P	10 51 13.2	-3.0
KSCO	Kaye Shedlock’ baz=147	65.19	333	P	P	10 51 16.3	+0.2
F52A	Sundridge baz=171	65.22	353	P	P	10 51 15.9	-0.1
G47A	Hillman baz=166	65.23	350	P	P	10 51 15.4	-0.6
TRQ	Mont Tremblant	65.28	357	*e*P	P	10 51 12.3	-4.1
H43A	Windswept, Lux baz=162	65.31	347	P	P	10 51 15.7	-0.8
F51A	Arnstein baz=170	65.42	353	P	P	10 51 17.4	+0.2
SDCO	Great Sand Dun comp=Z,8.3nm,0.9s	65.44	330	*e*P	P	10 51 19.4	+1.5
SDCO	Great Sand Dun baz=144,SNR=18	65.44	330	P	P	10 51 18.9	+1.0
E52A	Mattawa baz=172	65.64	354	P	P	10 51 19.2	+0.6
E54A	Lac Daplat, Po baz=173	65.65	355	P	P	10 51 19.0	+0.3
F48A	Evansville baz=168	65.68	351	P	P	10 51 19.0	+0.2
PQI	Presque Isle comp=Z,15nm,1.1s	65.69	2	*e*P	P	10 51 14.3	-4.6
E51A	G1948 Merrick baz=171	65.97	353	P	P	10 51 20.8	+0.1
E50A	Wahnapitae baz=170	66.00	352	P	P	10 51 21.2	+0.2
F45A	CMU Biological baz=165	66.02	349	P	P	10 51 20.1	-1.0
S22A	4UR Ranch, Cre comp=Z,3.9nm,1.0s	66.07	329	*e*P	P	10 51 18.6	-3.4
S22A	4UR Ranch, Cre baz=143,SNR=5.2	66.07	329	P	P	10 51 22.1	+0.1
E48A	Lockeyer baz=168	66.25	351	P	P	10 51 22.4	-0.2
Q24A	Divide comp=Z,6.5nm,0.8s	66.26	331	*e*P	P	10 51 19.5	-3.7
Q24A	Divide baz=144,SNR=5.7	66.26	331	P	P	10 51 24.1	+0.8
D52A	ZEK Kipawa Sen baz=172	66.30	354	P	P	10 51 22.9	+0.1
D54A	Lac Fusel, La baz=174	66.33	356	P	P	10 51 22.8	-0.3
D53A	Lac Vacive, Po baz=173	66.34	355	P	P	10 51 22.7	-0.4
E47A	Iron Bridge baz=167	66.39	351	P	P	10 51 23.1	-0.3
E46A	Sault Ste Mari baz=166	66.47	350	P	P	10 51 23.3	-0.6

MVCO	Mesa Verde	66.47	328	eP	P	10 51 20.2	-4.3
	comp=Z,5.3nm,1.0s						
OGNE	Ogallala	66.57	335	P	P	10 51 24.4	-0.5
	baz=148						
G40A	Rib Lake	66.62	345	P	P	10 51 24.5	-0.5
	baz=160						
WUAZ	Wupatki	66.70	325	eP	P	10 51 21.8	-4.1
	comp=Z,7.2nm,1.0s						
G39A	Holcombe	66.88	345	P	P	10 51 25.7	-0.9
	baz=159						
D48A	Paudash Townsh	66.88	352	P	P	10 51 26.2	-0.4
	baz=169						
D49A	Beulah Townshi	66.92	352	P	P	10 51 26.5	-0.3
	baz=169						
D47A	Chapleau	66.95	351	P	P	10 51 25.3	-1.7
	baz=167						
E43A	Lone Tree Farm	66.97	348	P	P	10 51 26.2	-0.9
	baz=163						
ECSD	EROS Data Cent	67.02	340	eP	P	10 51 24.6	-3.0
	comp=Z,23nm,1.5s						
ECSD	EROS Data Cent	67.02	340	P	P	10 51 27.4	-0.2
	baz=153,SNR=5.4						
ISCO	Idaho Springs	67.15	331	eP	P	10 51 26.3	-2.6
	comp=Z,4.3nm,0.9s						
ISCO	Idaho Springs	67.15	331	P	P	10 51 29.5	+0.7
	baz=144,SNR=6.0						
F40A	Park Falls	67.21	345	P	P	10 51 28.5	-0.3
	baz=160,SNR=10						
PV01	Paradox Valley	67.23	328	eP	P	10 51 26.5	-2.8
	comp=Z,14nm,1.4s						
SPMN	Marine on St.	67.25	343	eP	P	10 51 28.1	-0.8
	comp=Z,13nm,1.0s						
SPMN	Marine on St.	67.25	343	P	P	10 51 28.6	-0.4
	baz=157						
SMCO	Snowmass	67.28	330	eP	P	10 51 26.7	-3.1
	comp=Z,4.4nm,0.8s						
VLDQ	Val d'Or	67.34	355	eP	P	10 51 26.7	-2.8
	comp=Z,29nm,1.5s						
PV13	Radium Mtn., P	67.37	328	eP	P	10 51 27.4	-2.8
	comp=Z,7.1nm,1.0s						
IKP	In-Ko-Pah, Jac	67.40	319	P	P	10 51 29.7	-0.7
	baz=133						
F39A	Loretta	67.40	345	P	P	10 51 29.8	-0.2
	baz=159						
PV12	Saucer Basin,	67.48	328	eP	P	10 51 27.9	-3.0
	comp=Z,3.4nm,0.9s						
F37A	Hinrichs Farm,	67.66	344	P	P	10 51 30.9	-0.6
	baz=158						
F38A	Pierce - Schro	67.68	344	P	P	10 51 32.1	+0.4
	baz=158						
BC3	Big Chuckawall	67.70	321	P	P	10 51 32.1	-0.1
	baz=134						
MONP2	Monument Peak	67.76	319	P	P	10 51 32.8	+0.1
	baz=133						
BAR	Barrett	67.77	319	eP	P	10 51 28.5	-4.1
	comp=Z,9.1nm,0.9s						
IRM	Iron Mountain	67.86	321	P	P	10 51 33.6	+0.5
	baz=135						
U15A	North Rim	67.87	325	eP	P	10 51 31.3	-2.2
	comp=Z,6.8nm,1.1s						
D41A	Chassel	67.94	347	eP	P	10 51 30.8	-2.5
	comp=Z,13nm,0.8s						
D41A	Chassel	67.94	347	P	P	10 51 33.4	+0.1
	baz=162						
N23A	Red Feather La	68.19	332	eP	P	10 51 32.5	-2.8
	comp=Z,7.6nm,1.1s						
N23A	Red Feather La	68.19	332	P	P	10 51 36.0	+0.7
	baz=144						
E38A	The Farm, Brul	68.20	345	P	P	10 51 35.0	+0.1
	baz=159						
LSQQ	Lebel-sur-Quev	68.25	356	P	P	10 51 36.0	+0.8
	baz=174						
BELC	Belle Mtn. Jos	68.26	321	P	P	10 51 36.4	+0.6
	baz=134						
PFO	Pinyon Flats O	68.27	320	eP	P	10 51 33.4	-2.4
	comp=Z,3.2nm,0.8s						
PFO	Pinyon Flats O	68.27	320	P	P	10 51 35.7	-0.1
	baz=133						
PHWY	Pilot Hill	68.30	333	eP	P	10 51 32.6	-3.5
	comp=Z,7.4nm,1.3s						
KNB	Kanab	68.59	325	eP	P	10 51 35.0	-2.9
	comp=Z,20nm,1.3s						
O20A	White River Ci	68.63	330	eP	P	10 51 33.6	-4.5
	comp=Z,12nm,1.3s						
O20A	White River Ci	68.63	330	P	P	10 51 39.1	+1.0
	baz=142,SNR=5.0						
C40A	Isle Royale Na	68.88	347	P	P	10 51 39.7	+0.6
	baz=161						
CHGQ	Chibougamau	68.95	358	P	P	10 51 39.9	+0.3
	baz=176						
MATQ	Matagami	68.99	355	P	P	10 51 40.1	+0.3
	baz=173						
HEC	Hector,Ludlow	69.03	321	P	P	10 51 42.6	+2.0
	baz=134,SNR=5.7						
EYMN	Ely	69.44	345	P	P	10 51 42.6	-0.1
	baz=159						
SHPR	Sheep Range	69.52	323	eP	P	10 51 40.0	-3.7
	comp=Z,9.5nm,1.4s						
GSC	Goldstone, Bar	69.64	321	eP	P	10 51 41.2	-3.0
	comp=Z,8.0nm,1.3s						
GSC	Goldstone, Bar	69.64	321	P	P	10 51 45.9	+1.7
	baz=134						
SHOC	Shoshone, Teco	69.74	322	P	P	10 51 46.7	+1.9
	baz=134						
DBIC	Dimbokro	69.85	75	LR	LR	11 20 38.7	
	comp=Z,142nm,21.3s,baz=226,slow=34						
K22A	Casper	69.86	333	P	P	10 51 46.5	+0.9
	baz=144						
RSSD	Black Hills	70.04	335	eP	P	10 51 43.5	-3.1
	comp=Z,4.4nm,0.8s						
RSSD	Black Hills	70.04	335	P	P	10 51 47.5	+0.8
	baz=147						
EDW2	Edwards Air Fo	70.06	320	P	P	10 51 48.1	+1.2
	baz=133						
MPU	Maple Canyon	70.20	328	eP	P	10 51 44.6	-3.1
	comp=Z,7.7nm,1.1s						
LRMC	Laurel Mtn Rad	70.28	321	P	P	10 51 50.1	+1.8
	baz=133						
NLU	North Lily Min	70.38	327	eP	P	10 51 51.5	+2.7
	comp=Z,7.1nm,1.1s						
TPNV	Topopah Spring	70.46	323	P	P	10 51 51.6	+2.2
	baz=134,SNR=5.3						
FURC	Furnace Creek,	70.48	322	P	P	10 51 51.3	+2.1
	baz=134						
ISA	Isabella, Lake	70.88	320	P	P	10 51 53.9	+2.0
	baz=132,SNR=6.6						
DUG	Dugway, Tooele	70.93	327	P	P	10 51 53.8	+1.6
	baz=138,SNR=8.9						
R11A	Troy Canyon, C	71.07	324	P	P	10 51 55.3	+2.2
	baz=135,SNR=8.6						
GRAC	Grapevine Rang	71.13	322	P	P	10 51 55.3	+2.0
	baz=134						
CWC	Cottonwood Cre	71.17	321	P	P	10 51 55.8	+2.1
	baz=133						
PKM	Mcpherson Peak	71.19	319	P	P	10 51 55.8	+1.9
	baz=131,SNR=5.8						
BW06	Boulder Array	71.31	331	P	P	10 51 55.3	+0.8
	baz=141						
PDAR	Pinedale Array	71.31	331	P	P	10 51 55.2	+0.7
	comp=Z,1.5nm,0.7s,baz=142,slow=6.7,SNR=15						
PDAR				LR	LR	11 25 22.2	
	comp=Z,76nm,18.4s,baz=129,slow=38						
VES	Vestal, Richgr	71.37	320	P	P	10 51 56.8	+2.1
	baz=132						
SMMC	Simmler	71.58	319	P	P	10 51 58.0	+2.0
	baz=131						
MDND	Maddock	71.64	340	P	P	10 51 56.7	+0.6
	baz=151						
AHID	Auburn Hatcher	72.03	330	eP	P	10 51 56.8	-2.0
	comp=Z,7.2nm,0.8s						
SNOW	Snow King Moun	72.40	331	eP	P	10 51 57.3	-3.7
	comp=Z,3.2nm,0.8s						
TBI	Tubuai	72.53	251	eLR	LR	11 14 30.6	
	comp=Z,444nm,26.5s						
ELK	Elko	72.59	326	eP	P	10 51 59.1	-3.2
	comp=Z,2.9nm,0.8s						
MOOW	Moose Ponds	72.62	331	eP	P	10 51 59.5	-2.9
	comp=Z,4.8nm,1.3s						
NV01	Mina Array Sit	72.66	323	eP	P	10 52 04.1	+1.4
NVAR	Mina Array Bea	72.66	323	P	P	10 52 04.1	+1.4
	comp=Z,2.0nm,0.9s,baz=143,slow=6.9,SNR=13						
ULM	Lac du Bonnet	72.68	343	P	P	10 52 01.9	-0.4
	comp=Z,2.8nm,0.6s,baz=168,slow=4.2,SNR=4.5						
ULM				LR	LR	11 26 10.1	
	comp=Z,94nm,21.4s,baz=147,slow=38						
KVN	Kaiserville	72.97	323	eP	P	10 52 06.5	+2.0
	comp=Z,8.9nm,1.2s						
LAO	LASA Array	73.03	335	P	P	10 52 05.6	+1.1
	baz=145						
RLMT	Red Lodge	73.03	333	P	P	10 52 05.9	+1.2
	baz=142,SNR=5.6						
H17A	Grant Village	73.04	331	P	P	10 52 07.1	+2.2
	baz=141						
YHH	Holmes Hill	73.47	331	eP	P	10 52 09.8	+2.4
	comp=Z,6.3nm,0.9s						
YHB	Horse Butte	73.60	331	eP	P	10 52 02.5	-5.6
	comp=Z,9.3nm,0.8s						
CMB	Columbia Colle	73.60	321	eP	P	10 52 10.3	+2.3
	comp=Z,9.8nm,1.5s						
DGMT	Dagmar	73.74	338	P	P	10 52 09.6	+0.9
	baz=147						
SCHQ	Schefferville	73.89	2	P	P	10 52 09.9	+0.6
	comp=Z,3.3nm,0.9s,baz=165,slow=5.7,SNR=2.7						
SCHQ				LR	LR	11 26 38.4	
	comp=Z,56nm,20.3s,baz=262,slow=38						
SCHQ	Schefferville	73.89	2	eP	P	10 52 09.9	+0.6
	comp=Z,9.2nm,0.9s						
PPT2	Papeete2	74.10	257	eS	S	11 01 55.2	+11
	comp=Z,68nm,25.0s						
PPT2	Papeete2	74.10	257	eLR	LR	11 15 14.4	
	comp=Z,188nm,25.0s						
PAHR	Pah Rah Range	74.14	323	eP	P	10 52 13.9	+2.6
	comp=Z,13nm,1.1s						
HLID	Hailey	74.23	329	eP	P	10 52 14.0	+2.3
	comp=Z,9.6nm,1.0s						
HLID	Hailey	74.23	329	P	P	10 52 13.5	+1.7
	baz=137,SNR=16						
MCMT	McKenzie Canyo	74.42	330	eP	P	10 52 15.1	+2.2
BOZ	Bozeman (W)	74.44	332	P	P	10 52 14.1	+1.2
	baz=140,SNR=7.9						
AFDM	Forest Hills D	74.55	322	eP	P	10 52 15.6	+2.0
	comp=Z,5.7nm,1.0s						
DLMT	Dillon	74.70	331	eP	P	10 52 11.6	-2.9
	comp=Z,16nm,1.5s						
EGMT	Eagleton	75.53	334	eP	P	10 52 16.1	-2.9
	comp=Z,7.3nm,0.8s						
EGMT	Eagleton	75.53	334	P	P	10 52 20.0	+1.0
	baz=142						
PLID	Pearl Lake	76.12	329	eP	P	10 52 19.3	-3.4
	comp=Z,8.7nm,0.9s						
MSO	Missoula	76.42	331	P	P	10 52 25.9	+1.6
	baz=138						
BMO	Blue Mountains	76.59	328	eP	P	10 52 26.9	+1.7
	comp=Z,7.2nm,0.8s						
M04C	Macdoel	76.91	323	P	P	10 52 28.6	+1.5
	baz=131						
I07A	Izee	77.19	326	eP	P	10 52 30.9	+2.3
	comp=Z,5.5nm,0.9s						
F10A	Beach Ranch, E	77.35	329	eP	P	10 52 31.4	+1.9
	comp=Z,5.1nm,0.9s						
J05D	Fort Rock, OR	77.57	325	P	P	10 52 32.1	+1.2
	baz=132						
WALA	Waterton Lakes	78.08	333	eP	P	10 52 30.9	-2.6
	comp=Z,8.4nm,1.0s						
TOA1	Torodi Ar. Sit	78.31	72	eP	P	10 52 33.5	-1.9
TOA0	Torodi Ar. Sit	78.32	72	eP	P	10 52 31.9	-3.5
	comp=Z,15nm,0.8s						
TORD	Torodi Ar. Bea	78.32	72	P	P	10 52 33.5	-1.9
	comp=Z,2.5nm,0.3s,baz=248,slow=5.9,SNR=2.1						
TORD				LR	LR	11 26 25.9	
	comp=Z,228nm,19.3s,baz=295,slow=35						
I05D	Terrebonne, OR	78.33	326	P	P	10 52 36.6	+1.7
	baz=132						
VNDA	Vanda	78.72	190	P	P	10 52 38.4	+1.9
	comp=Z,1.0nm,0.8s,baz=131,slow=3.7,SNR=7.7						
VNDA	Vanda	78.72	190	eP	P	10 52 39.2	+2.7
	comp=Z,5.7nm,1.1s						
G05D	Wamic, OR	78.92	326	P	P	10 52 39.9	+1.8
	baz=132						
NEW	Newport	78.94	331	P	P	10 52 40.2	+2.0
	baz=136						
SYO	Syowa Base	79.19	160⇑	ePcP	PcP	10 52 44.5	-3.1
B05A	Bryant	81.34	328	P	P	10 52 51.7	+0.7
	baz=132						
D03D	Eldon	81.36	327	P	P	10 52 52.6	+1.4
	baz=131						
RAR	Rarotonga	82.30	250	LR	LR	11 20 48.6	
	comp=Z,220nm,18.6s,baz=143,slow=29						
ESDC	Sonseca Array	85.53	45	LR	LR	11 27 34.5	
	comp=Z,92nm,21.7s,baz=255,slow=33						
BOSA	Boshof	86.06	119	LR	LR	11 29 05.0	
	comp=Z,184nm,18.3s,baz=197,slow=34						
MAW	Mawson	86.95	164	LR	LR	11 31 16.3	
	comp=Z,111nm,21.4s,baz=220,slow=35						
YKA	Yellowknife Ar	88.52	341	P	P	10 53 27.2	+0.4
	comp=Z,6.3nm,0.7s,baz=134,slow=4.8,SNR=22						
YKA				LR	LR	11 36 33.5	
	comp=Z,13nm,20.1s,baz=124,slow=38						
YKB5	Yellowknife Ar	88.52	341	eP	P	10 53 27.2	+0.4
DLBC	Dease Lake	91.42	333	eP	P	10 53 37.2	-3.4
	comp=Z,11nm,1.4s						
KEST	Kesra	93.40	53	LR	LR	11 36 14.1	
	comp=Z,212nm,19.7s,baz=236,slow=36						
ILAR	Eielson Array	101.48	335	PP	PP	10 58 36.5	+0.5
	comp=Z,0.4nm,0.9s,baz=106,slow=6.7,SNR=3.9						
ILB	Eielson Array	101.48	335	ePP	PP	10 58 36.5	+0.5
H11S2	WAKE ISLAND Hy	125.80	279	T	T	13 18 39.2	
	baz=101,slow=75,SNR=592						
H11S1	WAKE ISLAND Hy	125.81	279	T	T	13 18 40.5	
	baz=101,slow=75,SNR=425						
H11S3	WAKE ISLAND Hy	125.82	279	T	T	13 18 40.7	
	baz=101,slow=75,SNR=468						
H11N3	WAKE ISLAND Hy	125.83	281	T	T	13 18 39.3	
	baz=100,slow=74,SNR=176						
H11N2	WAKE ISLAND Hy	125.84	281	T	T	13 18 44.2	
	baz=100,slow=74,SNR=285						
H11N1	WAKE ISLAND Hy	125.85	281	T	T	13 18 41.2	
	baz=100,slow=74,SNR=50						
AS31	Alice Springs	130.98	211	ePKPdf	PKPdf	10 59 47.1	-0.1
ASAR	Alice Springs	130.98	211	PKP	PKPdf	10 59 47.1	-0.1
	comp=Z,0.7nm,0.8s,baz=127,slow=3.3,SNR=6.1						
MK31	Makanchi Array	144.81	33	ePKPdf	PKPab	11 00 08.5	-2.1
MK32	Makanchi Array	144.81	33	ePKPdf	PKPbc	11 00 10.8	0.0
MKAR	Makanchi Array	144.81	33	PKP	PKPbc	11 00 10.8	0.0
	comp=Z,2.1nm,0.9s,baz=314,slow=4.2,SNR=11						
KSH	Kashi	145.01	48	ePKP	PKPdf	11 00 14.1	+1.7
KSH				PP	PP	11 03 33.8	+3.3
KSH				PKS	PKSdf	11 03 48.3	+0.3
KLR	Kul'dur	145.05	334	PKPbc	PKPbc	11 00 11.4	0.0
	comp=Z,1.5nm,0.8s,baz=324,slow=5.1,SNR=3.7						
USRK	Ussuriysk Ar.	148.69	328	PKPbc	PKiKP	11 00 22.9	-0.5
	comp=Z,2.8nm,0.8s,baz=43,slow=5.1,SNR=3.9						
MJAR	Matsushiro Arr	149.29	310	PKPbc	PKPbc	11 00 24.1	+0.3
	comp=Z,3.6nm,0.8s,baz=113,slow=1.7,SNR=5.6						
MAJO	Matsushiro	149.29	310	ePKPbc	PKPbc	11 00 24.1	+0.2
WMQ	Urumqi	149.61	32	ePKPbc	PKPdf	11 00 20.7	+0.8
WMQ				AMB	AMB		
	comp=Z,47nm,4.5s						
SONA0	Songino Array	151.42	4	ePKPbc	PKiKP	11 00 29.4	+0.2
SONM	Songino Array	151.42	4	PKPbc	PKiKP	11 00 29.4	+0.2
	comp=Z,1.0nm,0.6s,baz=327,slow=2.4,SNR=2.1						
NJ2	Nanjing	164.60	328	ePKP	PKPdf	11 00 39.1	+0.1
CD2	Chengdu	167.42	22	PKP	PKPdf	11 00 40.1	-1.2
CM31	Chiang Mai Arr	170.26	93	ePKPab	PKPab	11 01 59.7	+0.1
CMAR	Chiang Mai Arr	170.26	93	PKPab	PKPab	11 01 59.7	+0.1
	comp=Z,0.4nm,0.3s,baz=262,slow=5.4,SNR=3.3						

ISC 03 11:12:24.7±1.2, 48°.35N±0°.05×19°.85E±0°.04, h11^{km}±14^{km}, n5, σ0^s.48/10, 1D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.43	176⇓	ePg	Pg	11 12 33.1	0.0
PSZ				eSg	Sg	11 12 39.1	+0.3
KECS	Kecovo	0.44	72	ePG	Pg	11 12 32.7	-0.7
KECS				eSG	Sg	11 12 39.9	+0.6
KECS				eLG	Lg	11 12 51.8	
VYHS	Vyhne	0.69	283	ePG	Pg	11 12 37.7	-0.4
VYHS				eSG	Sg	11 12 47.2	+0.1
LANS	Liptovska Anna	0.84	343	ePG	Pg	11 12 40.9	0.0
LANS				eSG	Sb	11 12 53.2	+0.5
KOLL	Kolacno	0.99	284	ePG	Pg	11 12 43.5	-0.2
KOLL				eSG	Sn	11 12 58.3	-0.3

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*ISCJB **03** 11:13:37.6±0.4, 17°.77S±0°.06×177°.92W±0°.08, h450^{km}, mb4.4/36, Error ellipse: s-maj=10.5km s-min=7.4km az=0.1*

*IDC **03** 11:13:41.0±4.2, 17°.78S×177°.91W, h476^{km}±47^{km}, mb3.9/13, mb1 3.9/13, mb1mx3.6/32, mbtmp4.7/13, Error ellipse: s-maj=22.5km s-min=14.6km az=69.0*

*NEIC **03** 11:13:40.1±1.9, 17°.73S×177°.85W, h474^{km}±8^{km}, mb4.6/24, Error ellipse: s-maj=21.5km s-min=17.2km az=86.0*

ISC 03 11:13:38.7±0.5, 17°.85S±0°.07×177°.96W±0°.09, h450^{km}, n55, σ1^s.95/59, mb4.5/36, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.72	100	eP	P	11 15 31.8	+0.6
FUNA	Funafuti	9.67	343	eP	P	11 15 54.2	+1.8
DZM	Mont Dzumac	15.25	251	P	P	11 16 57.9	+5.2
	0.9nm,0.3s,baz=80,slow=17,SNR=11						
URZ	Urewera	20.79	191	P	P	11 17 46.9	-0.3
	31nm,0.3s,baz=295,slow=2.1,SNR=59						
URZ				S	S	11 21 02.8	-6.5
	2.8nm,0.7s,baz=90,slow=19,SNR=2.1						
URZ	Urewera	20.79	191	eP	P	11 17 47.6	+0.4
	43nm,0.5s						
BKZ	Black Stump Fm	21.78	192	eP	P	11 17 56.6	+0.3
	31nm,1.3s						
THZ	Tophouse	25.09	196	eP	P	11 18 27.4	+1.5
	25nm,0.7s						
OXZ	Oxford	26.77	196	eP	P	11 18 41.8	+1.1
	40nm,0.9s						
RPZ	Rata Peaks	27.41	197	P	P	11 18 46.4	+0.1
	5.6nm,0.3s,baz=27,slow=2.3,SNR=3.5						
FOZ	Fox Glacier	27.61	199	eP	P	11 18 49.3	+1.2
	73nm,0.9s						
MLZ	Mavora Lakes	29.80	200	eP	P	11 19 09.1	+1.8
	44nm,0.7s						
WHZ	Wether Hill Ro	30.32	200	eP	P	11 19 13.9	+2.2
	52nm,0.7s						
CAN	Canberra	34.08	233	eP	P	11 19 46.3	+2.1
	46nm,1.5s						
PMG	Port Moresby	34.87	279	eP	P	11 19 50.1	-1.0
	69nm,0.9s						
MANU	Manus Island	37.48	291	eP	P	11 20 13.2	+0.4
	69nm,1.0s						
TOO	Toolangi	37.54	231	eP	P	11 20 13.0	-0.1
	22nm,0.8s						
STKA	Stephens Creek	39.03	241	P	P	11 20 26.9	+1.5
	3.5nm,0.5s,baz=87,slow=7.1,SNR=22						
JAY	Jayapura	43.30	286	P	P	11 21 01.1	+1.3
	42nm,0.8s,baz=134,slow=6.3,SNR=12						
WRAB	Tennant Creek	45.05	259	eP	P	11 21 13.7	+0.3
	12nm,1.3s						
AS31	Alice Springs	45.22	254	eP	P	11 21 15.0	+0.5
	9.6nm,0.6s						
ASAR	Alice Springs	45.22	254	P	P	11 21 15.3	+0.8
	42nm,0.6s,baz=88,slow=8.4,SNR=687						
ASAR				S	S	11 27 13.4	-7.4
	3.5nm,0.9s,baz=92,slow=16,SNR=15						
MTN	Manton Dam	49.23	268	eP	P	11 21 44.7	-0.3
	16nm,0.9s						
SOEI	Soe	56.50	270	eP	P	11 22 37.8	+0.4
	32nm,0.7s						
SBA	Scott Base	60.51	184	eP	P	11 23 04.0	+0.6
	10nm,0.8s						
VNDA	Vanda	60.54	185	P	P	11 23 05.7	+2.0
	2.2nm,0.5s,baz=0.9,slow=8.1,SNR=38						
VNDA	Vanda	60.54	185	eP	P	11 23 04.5	+0.8
	3.5nm,0.8s						
CASY	Casey	66.37	205	eP	P	11 23 41.5	+0.1
	13nm,1.1s						
MJAR	Matsushiro Arr	68.11	323	P	P	11 23 51.7	-1.0
	2.8nm,0.5s,baz=160,slow=5.8,SNR=7.2						
ASAJ	Asahikawa	71.43	331	P	P	11 24 12.2	-0.1
	6.8nm,0.8s,baz=126,slow=13,SNR=4.3						
QSPA	South Pole Qui	72.21	180	eP	P	11 24 18.0	+1.3
	16nm,0.8s						
KSM	Kuching	73.10	277	eP	P	11 24 22.8	0.0
	18nm,0.8s						
PETK	Petropavlovsk-	73.73	345	P	P	11 24 24.9	-0.6
	5.0nm,0.8s,baz=126,slow=9.0,SNR=7.4						
KSRS	Korea Array	74.94	318	P	P	11 24 32.9	+0.2
	0.9nm,0.7s,baz=135,slow=5.7,SNR=3.8						
NJ2	Nanjing	78.23	309	eP	P	11 24 52.7	+1.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NVAR	Mina Array Bea	79.08	44	P	P	11 24 56.8	+1.1
	0.1nm,0.3s,baz=231,slow=8.0,SNR=2.4						
SML	Sawmill	82.81	14	eP	P	11 25 11.7	-2.6
	10nm,0.7s						
CAST	Castle Rocks	83.48	11	eP	P	11 25 15.6	-2.1
	3.9nm,0.8s						
TRF	Thorofare Moun	83.86	12	eP	P	11 25 18.5	-1.2
	1.4nm,0.8s						
MAW	Mawson	84.06	200	P	P	11 25 20.8	+0.2
	4.3nm,0.5s,baz=133,slow=5.3,SNR=12						
RND	Reindeer	84.12	13	eP	P	11 25 19.9	-0.9
	4.3nm,0.7s						
ILAR	Eielson Array	85.73	13	P	P	11 25 27.0	-1.6
	0.5nm,0.4s,baz=220,slow=5.0,SNR=8.8						
CMAR	Chiang Mai Arr	89.27	290	P	P	11 25 46.0	-0.4
	0.5nm,0.3s,baz=124,slow=3.6,SNR=6.6						
SYO	Syowa Base	89.31	193⇓	eP	P	11 25 43.2	-2.3
SYO	Syowa Base	89.31	193⇓	ePcP	P	11 25 43.9	-1.6
CD2	Chengdu	89.40	303	eP	P	11 25 45.9	-0.9
SNAA	Sanae	90.65	178	P	P	11 25 51.3	-0.5
VNA3	Neumayer Olymp	90.77	176	P	P	11 25 52.2	-0.1
VNA1	Neumayer--Stat	91.44	177	P	P	11 25 55.9	+0.5
BUR08	Bucovina Ar. S	144.75	333	ePKPdf	PKPdf	11 32 21.6	-1.9
BRTR	Keskin Array B	145.04	315	PKPbc	PKPdf	11 32 23.5	-0.8
	1.7nm,0.7s,baz=119,slow=4.5,SNR=5.4						
CLL	Collm	145.50	348	i PKPbc	PKPdf	11 32 23.3	-1.2
	comp=Z,6.0nm,0.5s						
BRG	Berggiesshubel	145.71	347	eP	PKPdf	11 32 25.1	+0.2
	comp=Z,4.6nm,0.8s						
MMAI	Mount Meron Ar	146.47	303	PKPbc	PKPdf	11 32 27.6	+0.7
	comp=Z,1.2nm,0.4s,baz=110,slow=3.8,SNR=3.0						
GERES	GERESS Array B	147.66	346	PKPbc	PKPdf	11 32 29.7	+1.3
	comp=Z,1.3nm,0.6s,baz=357,slow=2.1,SNR=10						
FUORN	Ofenpass-Fuorn	150.51	348	ePKPdf	PKPdf	11 32 30.4	-2.8
FUORN				ePKPbc	PKPbc	11 32 38.5	-0.6
FUORN				ePKPab	PKPab	11 32 45.0	-2.5

FIA0 03 11:29:11.4, 60°.42N×27°.32E, h0^{km}, ML1.0, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	FINESS Array S	1.19	330	PG	Pg	11 29 32.7	-1.6
	comp=Z,0.5nm,0.1s						
FIA0				LG	Lg	11 29 49.2	
	comp=Z,1.5nm,0.1s						

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*ISCJB **03** 11:29:39.0±0.4, 59°.32N±0°.03×10°.90E±0°.08, h0^{km}, Error ellipse: s-maj=6.5km s-min=3.2km az=153.9*

*UPP **03** 11:29:39.8±0.5, 59°.33N×10°.95E, h0^{km}, ML1.8, Suspected explosion*

*BER **03** 11:29:40.9±1.3, 59°.29N×10°.88E, h0^{km}, ML1.3, Suspected explosion*

ISC 03 11:29:39.7±1.0, 59°.32N±0°.03×10°.94E±0°.04, h0^{km}, n15, σ0^s.79/23, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STRU	Stroemstad	0.31	156	P	Pg	11 29 46.1	+0.6
	baz=253						
STRU				S	Sg	11 29 50.9	+1.3
STRU	Stroemstad	0.31	156	eP	Pg	11 29 45.6	0.0
STRU				eS	Sg	11 29 50.9	+1.3
KONO	Kongsberg	0.76	296	eP	Pg	11 29 54.4	+0.2
KONO				eS	Sg	11 30 04.7	+0.7
KONO				IAML		11 30 10.3	
	comp=Z,2.8nm,0.2s						
VANU	Vaenersborg	1.02	144	P	Pg	11 29 58.8	-0.3
VANU				S	Sg	11 30 12.5	+0.2
NASU	Vaermlandsnaes	1.22	108	P	Pg	11 30 02.4	-0.6
TJOU	Tjoern	1.34	164	P	Pg	11 30 04.5	-0.8
TJOU				S	Sg	11 30 22.7	+0.1
NC602	NORSAR Array S	1.45	12	eP	Pn	11 30 06.3	-0.9
NC602				eS	Sg	11 30 25.6	-0.7
NC602				IAML		11 30 27.7	
	comp=Z,144nm,0.2s						
NAO01	NORSAR Array S	1.53	359	eP	Pn	11 30 08.3	0.0
NAO01				eS	Sg	11 30 28.4	-0.4
UDD	Uddeholm	1.56	59	P	Pn	11 30 08.7	+0.1
HOMB	Homborsund	1.65	231	eP	Pn	11 30 07.8	-2.0
HOMB				IAML		11 30 41.8	
	comp=Z,2.9nm,0.4s						
NBO00	NORSAR Array S	1.72	357	eP	Pn	11 30 10.2	-0.6
NB201	NORSAR Array S	1.75	6	eP	Pn	11 30 10.9	-0.3
FKPU	Falk	1.86	128	P	Pn	11 30 12.6	-0.2
SKAR	Skarslia	1.90	317	eP	Pn	11 30 13.4	+0.1
SKAR				eSg	Sn	11 30 39.3	+1.2

SKAR				IAML		11 30 41.0	
	comp=Z,3.1nm,0.2s						
NC204	NORSAR Array S	1.96	358	eP	Pn	11 30 14.4	+0.2

IDC ***03*** *11:30:21.2±1.2,27°.05N×54°.46E,h0^{km},mb3.8/6, mb1 3.9/7,mb1mx3.6/48,mbtmp3.8/7,ML3.4/1,MS3.0/2, Ms1 3.0/2,ms1mx2.5/36,Error ellipse: s-maj=46.1km s-min=22.1km az=48.0*

DSN ***03*** *11:30:21.3±2.1,27°.70N×55°.35E,h10^{km},ML3.8/6,Error ellipse: s-maj=34.5km s-min=11.1km az=47.0*

THR ***03*** *11:30:23.0,27°.22N×54°.95E,h14^{km},ML3.5*

ISCJB ***03*** *11:30:25.3±0.3,27°.33N±0°.03×54°.98E±0°.04,h17^{km}, mb4.0/7,MS3.1/1,Error ellipse: s-maj=6.2km s-min=3.6km az=148.1*

TEH ***03*** *11:30:25.0,27°.30N×55°.00E,h16^{km},ML3.6*

ISC 03 11:30:23.8±0.6,**27°.19N**±0°.04×**54°.97E**±0°.04,**h17^{km},n52,** σ**1^{s}.50**/53,**mb3.9**/7,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.09	79	eAML	AML	11 30 31.1	
	comp=N,1μm,0.3s						
GENO	Geno	1.09	79	ePg	Pn	11 30 44.9	+0.4
GENO				eSg	Sg	11 31 00.8	+1.5
GENO				IAMB	IAmb	11 31 05.3	
	comp=Z,0.0nm,0.4s						
SHME	Shamm	1.55	137	eP	Pb	11 30 52.5	+0.4
	SNR=6.2						
SHME				S	Sg	11 31 16.1	+2.4
LMD1	Lamerd	1.61	276	ePn	Pg	11 30 54.8	0.0
NIAN	Nian	1.70	77	ePn	Pb	11 30 54.3	-0.3
NIAN				IAMB	IAmb	11 31 22.1	
	comp=Z,0.0nm,0.2s						
JHRM	Jahrom	1.80	317	ePn	Pb	11 30 56.7	+0.4
GHIR	Ghir-Karzin	2.07	302	ePn	Pn	11 30 59.0	+1.2
GHIR	Ghir-Karzin	2.07	302	ePn	Pn	11 30 59.0	+1.2
GHIR				eSg	Sb	11 31 27.1	+0.8
MSFE	Esma-Masafi	2.12	149	eP	Pb	11 31 01.1	-0.6
	SNR=10						
MDH	Madha	2.23	147	ePn	Pb	11 31 04.0	+0.4
NAZ	Nazwa, Dubai	2.28	164	P	Pb	11 31 04.3	-0.1
NAZ	Nazwa, Dubai	2.28	164	ePn	Pg	11 31 06.9	-0.6
UOSS	Minazif	2.50	153	P	Pb	11 31 07.7	-0.6
UOSS	Minazif	2.50	153	ePn	Pb	11 31 07.6	-0.6
FAQ	Al Faqa, Dubai	2.50	167	P	Pb	11 31 07.8	-0.4
FAQ	Al Faqa, Dubai	2.50	167	ePn	Pb	11 31 08.5	+0.3
ASUD	Al Ashush, Dub	2.57	173	P	Pb	11 31 10.9	+1.4
ASUD	Al Ashush, Dub	2.57	173	ePn	Pb	11 31 10.4	+0.9
HATD	Hatta, Dubai	2.58	156	ePn	Pb	11 31 09.9	+0.3
ASHO	Ashiyiah	2.68	158	i P	Pb	11 31 09.7	-1.7
	SNR=16						
ASHO	Ashiyiah	2.68	158	ePn	Pb	11 31 09.7	-1.7
NGRK	Negar Kerman	2.90	32	ePn	Pn	11 31 09.6	+0.1
NGRK				IAMB	IAmb	11 32 02.8	
	comp=Z,0.0nm,0.9s						
IPAR	Pars	3.13	328	ePn	Pn	11 31 14.8	+2.1
IPAR				IAMB	IAmb	11 32 25.7	
	comp=Z,1μm,1.0s						
TVBK	TV Kerman	3.20	29	ePn	Pn	11 31 15.0	+1.4
TVBK				IAMB	IAmb	11 32 09.8	
	comp=Z,0.0nm,0.7s						
KHGB	Koh Gabri	3.44	22	ePn	Pn	11 31 18.8	+2.0
KHGB				IAMB	IAmb	11 31 19.6	
	comp=Z,0.0nm,0.3s						
CHMN	Cheshme madani	3.49	40	ePn	Pn	11 31 19.9	+2.2
CHMN				IAMB	IAmb	11 32 05.2	
	comp=N,0.0nm,0.6s						
IKAZ	Kazeroun	3.77	314	ePn	Pn	11 31 24.8	+3.3
IKAZ				IAMB	IAmb	11 32 16.7	
	comp=Z,1μm,0.6s						
IMEH	Mehriz	4.20	356	ePn	Pn	11 31 29.0	+1.8
IMEH				IAMB	IAmb	11 31 29.6	
	comp=Z,452nm,0.3s						
IBAF	Bafgh	4.42	7	ePn	Pn	11 31 30.8	+0.6
IBAF				IAMB	IAmb	11 31 31.6	
	comp=Z,1μm,0.2s						
ISAD	Sadrabad	4.84	347	ePn	Pn	11 31 37.8	+1.7
ISAD				IAMB	IAmb	11 31 39.2	
	comp=Z,797nm,0.3s						
IRAM	Ramesheh	5.12	335	ePn	Pn	11 31 41.5	+1.5
IRAM				IAMB	IAmb	11 31 42.8	
	comp=Z,388nm,0.3s						
WSAR	Wadi Sarin	5.15	139	Pn	Pn	11 31 43.0	+2.9
	comp=Z,1.3nm,0.3s,baz=336,slow=7.5,SNR=9.8						
WSAR				Sn	Sn	11 32 39.5	+0.3
	comp=Z,2.3nm,0.3s,baz=216,slow=19,SNR=4.4						
YZKH	Yazd	5.19	356	ePn	Pn	11 31 42.4	+1.6
YZKH	Yazd	5.19	356	ePn	Pn	11 31 42.4	+1.6
CHBR	Chabahar	5.20	107	ePn	Pn	11 31 42.8	+2.1
CHBR	Chabahar	5.20	107	ePn	Pn	11 31 42.8	+2.1
IGAR	Gharneh	5.78	335	ePn	Pn	11 31 50.4	+1.4
NASN	Na'in	5.89	342	ePn	Pn	11 31 51.7	+1.1
NASN	Na'in	5.89	342	ePn	Pn	11 31 51.7	+1.1
ANAR	Anarak	6.08	350	ePn	Pn	11 31 53.4	+0.5
IZEF	Zefreh	6.13	339	ePn	Pn	11 31 53.6	-0.2
IZEF				IAMB	IAmb	11 31 55.0	
	comp=Z,240nm,0.4s						
ROKH	ROKH	6.17	327	ePn	Pn	11 31 55.4	+1.1
GEYT	Alibeck	11.03	13	LR	LR	11 37 29.3	
	comp=Z,38nm,18.1s,baz=15,slow=38						
BRTR	Keskin Array B	21.68	311	P	P	11 35 13.0	-0.9
	comp=Z,2.6nm,0.9s,baz=130,slow=12,SNR=6.8						
ARU	Arti	29.33	4	LR	LR	11 49 03.3	
	comp=Z,49nm,21.7s,baz=273,slow=38						
AKASG	Malin Array Be	30.57	327	P	P	11 36 35.6	-0.8
	comp=Z,0.3nm,0.4s,baz=131,slow=9.3,SNR=3.8						
FINES	FINESS Array B	39.34	339	P	P	11 37 51.3	-0.5
	comp=Z,2.4nm,1.0s,baz=149,slow=8.9,SNR=6.2						
HFS	Hagfors	43.23	331	P	P	11 38 23.0	-0.8
	comp=Z,1.4nm,0.6s,baz=111,slow=7.9,SNR=3.8						
NB2	NORSAR Subarra	44.75	331	P	P	11 38 34.2	-1.9
	comp=Z,1.5nm,0.8s,baz=118,slow=8.6						
NOA	NORSAR Array B	44.75	331	P	P	11 38 34.5	-1.6
	comp=Z,2.0nm,0.9s,baz=117,slow=7.8,SNR=4.0						
TORD	Torodi Ar. Bea	51.56	265	P	P	11 39 25.5	-3.8
	comp=Z,12nm,0.3s,baz=54,slow=8.9,SNR=6.1						
ASAR	Alice Springs	91.42	116	P	P	11 43 31.3	+2.0
	comp=Z,0.4nm,0.8s,baz=306,slow=4.7,SNR=4.7						

IDC ***03*** *11:31:54.6±4.1,36°.17N×70°.45E,h176^{km}±36^{km},mb3.7/10, mb1 3.8/13,mb1mx3.4/52,mbtmp4.3/13,Error ellipse: s-maj=26.6km s-min=19.5km az=12.0*

BJI ***03*** *11:31:56.9±0.0,36°.47N×70°.39E,h226^{km},mb4.5/10, mB4.3/7*

NEIC ***03*** *11:31:57.8±1.7,36°.53N×70°.34E,h223^{km}±15^{km},mb4.4/3, Error ellipse: s-maj=16.5km s-min=9.6km az=112.0*

ISCJB ***03*** *11:31:57.2±0.3,36°.51N±0°.02×70°.45E±0°.04,h204^{km}, mb4.0/14,Error ellipse: s-maj=4.4km s-min=2.8km az=166.4*

MOS ***03*** *11:31:58.1±1.1,36°.53N×70°.43E,h213^{km},mb4.4/3,Error ellipse: s-maj=13.4km s-min=6.0km az=81.6*

NNC ***03*** *11:32:04.7±2.1,36°.96N×70°.65E,h239^{km}±32^{km},mb3.5, mpv4.7,Error ellipse: s-maj=21.7km s-min=18.3km az=0.0*

ISC 03 11:31:57.3±0.5,**36°.44N**±0°.05×**70°.52E**±0°.05,**h204^{km},n117,** σ**2^{s}.01**/131,**mb4.1**/14,**3C-6D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.24	213	ePn	Pn	11 32 41.1	+2.2
KBL				eS	S	11 33 12.0	+1.3
KBL	Kabul	2.24	213	ePN	Pn	11 32 41.1	+2.2
KBL				eS	S	11 33 12.0	+1.3
GAR	Garm	2.56	357	ePn	Pn	11 32 43.3	+1.1
GAR				eS	S	11 33 16.2	-0.7
GAR	Garm	2.56	357	ePN	Pn	11 32 43.3	+1.1
GAR				eS	S	11 33 16.2	-0.7
CEP	Cherat	2.85	156	P	Pn	11 32 48.7	+3.1
CEP				S	S	11 33 26.0	+3.4
CHCP	Chirah Chowk	3.57	140	P	Pn	11 32 57.6	+3.5
NIL	Nilore	3.57	140	ePn	Pn	11 32 57.8	+3.7
NIL	Nilore	3.57	140	ePN	Pn	11 32 57.8	+3.7
BTK	Batken	3.62	4	ePn	Pn	11 32 56.5	+1.9
BTK	Batken	3.62	4	ePN	Pn	11 32 56.5	+1.9
THW	Thamme Wali	3.77	164	P	Pn	11 32 59.3	+2.8
ARSB	Arslanbob	5.25	21	ePn	Pn	11 33 15.6	+0.6
ARSB				eS	S	11 34 14.3	-1.7
KSH	Kashi	5.29	53	P	Pn	11 33 12.5	-3.1
KSH				sP		11 33 57.2	
KSH				S	S	11 34 06.5	-11
KSH				pmax	pmax		
	comp=Z,62nm,0.7s						
KSH				smax	smax		
	comp=N,370nm,0.4s						
KSH				smax	smax		
	comp=E,260nm,0.4s						
IUG	Iuzhnay	5.71	356	Lg	Lg	11 34 23.8	
	342nm,0.3s						
THN	Thein Dam	5.87	131	eP	Pn	11 33 21.5	-1.4
THN				eS	S	11 34 30.5	+0.2
DHRM	DHARAMSHALA	6.35	129	eP	Pn	11 33 31.0	+1.6
DHRM				eS	S	11 34 42.6	+0.6
DHRM				IAML		11 34 44.4	
	comp=N,552nm,0.5s						
DHRM				IAML		11 34 44.7	
	comp=E,559nm,0.0s						
UCH	Uchtor	6.56	27	P	Pn	11 33 33.0	+0.8
	SNR=113						
MRKS	Merke	6.64	18	Lg	Lg	11 34 44.7	
	comp=E,60nm,0.4s						
KK31	Karatay Array	6.66	360	ePn	Pn	11 33 33.3	+0.3
KK31				eS	S	11 34 46.1	-2.8
KK31	Karatay Array	6.66	360	ePN	Pn	11 33 33.3	+0.3
KK31				eS	S	11 34 46.1	-2.8
KKAR	Karatay Array	6.66	360	ePn	Pn	11 33 33.3	+0.3
KKAR	Karatay Array	6.66	360	ePN	Pn	11 33 33.3	+0.3
EKS2	Erkin-Say	6.71	21	P	Pn	11 33 34.9	+1.1
	SNR=31						
KZA	Kyzart	6.72	32	P	Pn	11 33 34.6	+0.3
	SNR=26						
AAK	Ala-Archa	6.91	25	P	Pn	11 33 37.3	+0.8
	comp=E,12nm,0.3s,baz=188,slow=6.2,SNR=50						
AAK				S	S	11 34 52.5	-2.6
	comp=E,5.7nm,0.3s,baz=311,slow=20,SNR=22						
AAK	Ala-Archa	6.91	25	ePn	Pn	11 33 37.6	+1.1
AAK				eS	S	11 34 53.3	-1.8
AAK	Ala-Archa	6.91	25	⇓P	Pn	11 33 37.5	+1.0
	comp=E,31nm,0.6s						
AAK				S	S	11 34 52.8	-2.3
	comp=E,58nm,0.5s						
AAK	Ala-Archa	6.91	25	ePN	Pn	11 33 37.6	+1.1
AAK				eS	S	11 34 53.3	-1.8
AAK	Ala-Archa	6.91	25	P	Pn	11 33 37.6	+1.1
	SNR=26						
KBK	Karagaybulak	7.09	28	P	Pn	11 33 40.2	+1.4
	SNR=19						
FRU1	Bishkek	7.11	25	ePn	Pn	11 33 40.3	+1.3
FRU1				eS	S	11 34 59.3	-0.4
FRU1	Bishkek	7.11	25	ePN	Pn	11 33 40.3	+1.3
FRU1				eS	S	11 34 59.3	-0.4
ULHL	Ulahol	7.30	36	P	Pn	11 33 42.2	+0.6
	SNR=22						
CHMS	Chumysh	7.32	25	P	Pn	11 33 42.4	+0.7
	SNR=5.7						
USP	Ospenovka	7.48	23	P	Pn	11 33 44.2	+0.5
	SNR=9.7						
TKM2	Tokmak 2	7.57	30	⇓P	Pn	11 33 45.9	+0.9
	comp=E,61nm,0.5s						
TKM2				⇓S	S	11 35 08.0	-2.7
	comp=E,32nm,1.0s						
TKM2	Tokmak 2	7.57	30	i PN	Pn	11 33 45.7	+0.7
TKM2				pmax	pmax		
	comp=Z,61nm,0.4s						
TKM2	Tokmak 2	7.57	30	P	Pn	11 33 45.9	+0.9
	SNR=104						
SMLA	Simla	7.66	132	eP	Pn	11 33 47.9	+1.8
SMLA				eS	S	11 35 10.9	-1.7
SMLA				IAML		11 35 13.2	
	comp=E,115nm,0.4s						
SMLA				IAML		11 35 14.0	
	comp=N,168nm,0.2s						
KDJ	Kajisay	7.68	40	ePn	Pn	11 33 46.8	+0.3
KDJ				eS	S	11 35 10.7	-2.7
KDJ	Kajisay	7.68	40	ePN	Pn	11 33 46.8	+0.3
SGDS	Sogindy	7.69	23	Lg	Lg	11 35 07.0	
	comp=N,15nm,0.4s						
KST	Kastek	7.82	31	Lg	Lg	11 35 11.6	
	comp=N,36nm,0.9s						
MTBS	Maitube	8.09	32	P	Pn	11 33 52.9	+1.3
	comp=N,26nm,0.2s						
KOTS	Kotyrbulak	8.47	35	P	Pn	11 33 58.6	+1.9
	comp=N,30nm,0.6s						
PRZ	Przheval'sk	8.58	43	ePn	Pn	11 33 59.8	+1.6
PRZ	Przheval'sk	8.58	43	ePN	Pn	11 33 59.8	+1.6
KTBS	Karatobe	8.67	31	P	Pn	11 33 59.6	+0.5
	comp=N,5.9nm,0.6s						
KUU	Kurty	8.68	29	Lg	Lg	11 35 32.2	
	comp=N,9.8nm,0.3s						
DDI	Dehra Dun	8.77	132	eS	S	11 35 37.1	-2.1
DDI				IAML		11 35 38.7	
	comp=N,154nm,0.5s						
DDI				IAML		11 35 42.1	
	comp=E,124nm,0.2s						
SATY	Saty	8.98	40	P	Pn	11 34 04.0	+0.7
	comp=E,20nm,0.6s						
BTLS	Baital	9.00	16	Lg	Lg	11 35 38.9	
	comp=E,4.0nm,0.8s						
KURS	Kuram	9.17	37	P	Pn	11 34 07.3	+1.6
	comp=E,15nm,0.8s						
KHET	Khetri	9.46	150	eP	Pn	11 34 07.5	-2.1
KHET				eS	S	11 35 47.3	-8.4
JOSI	Joshimath	9.56	125	eS	S	11 35 56.9	-1.4
JOSI				IAML		11 36 03.8	
JOSI				IAML		11 36 05.2	
	comp=E,89nm,0.3s						
ARXS	Arharly	9.56	33	Lg	Lg	11 35 50.3	
KUDL	Kundal	9.69	147	eP	Pn	11 34 01.7	-11
KUDL				eS	S	11 35 43.0	-18
MNBS	Baschi	9.72	36	P	Pn	11 34 12.9	+0.1
	comp=E,4.4nm,0.4s						
PDGK	Podgornoye	9.74	42	⇑P	Pn	11 34 13.3	+0.2
	comp=E,8.0nm,0.8s						
PDGK				⇓S	S	11 35 58.0	-4.2
	comp=E,6.7nm,1.1s						
PDGK	Podgornoye	9.74	42	P	Pn	11 34 13.3	+0.2
PDGK				S	S	11 35 58.3	-4.0
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PDGK				smax	smax		
	comp=N,7.0nm,1.1s						
SONA	Sohna	9.87	144	eS	S	11 35 59.1	-6.3
GYA0B	ALIBECK ARRAY	10.01	282	ePn	Pn	11 34 14.8	-1.7
KAPS	Kapalarasan	11.08	34	P	Pn	11 34 32.3	+2.0
	comp=N,2.8nm,0.4s						
PYUN	Piuthan	13.43	125	eP	P	11 35 01.6	-1.1
	comp=N,11nm,0.3s						
MAKZ	Makanchi	13.43	36	ePn	Pn	11 35 00.0	+0.1
MAKZ	Makanchi	13.43	36	eP	Pn	11 35 00.0	+0.1
MK31	Makanchi Array	13.57	37	ePn	Pn	11 35 01.6	0.0
MK31	Makanchi Array	13.57	37	⇑P	P	11 35 03.3	-0.7
	comp=N,3.0nm,0.6s,baz=220,slow=14,SNR=31						
MK31	Makanchi Array	13.57	37	eP	Pn	11 35 01.6	0.0
MKAR	Makanchi Array	13.57	37	P	P	11 35 03.1	-0.9
	comp=N,1.0nm,0.3s,baz=219,slow=12,SNR=26						
DANN	Dangsing	13.78	122	eP	P	11 35 07.1	+0.3
	comp=N,12nm,0.3s						
KOLN	Koldanda	14.05	124	eP	P	11 35 09.4	-0.2
	comp=N,7.7nm,0.3s						
BHPL	Bhopal	14.45	154	eP	P	11 35 14.8	+0.9
AB31	Akbulak array	14.95	332	P	Pn	11 35 17.9	-0.6
	comp=N,4.0nm,0.5s,baz=144,slow=12,SNR=92						
AB31	Akbulak array	14.95	332	P	Pn	11 35 18.0	-0.6
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ABKAR	Akbulak array	14.95	332	eP	Pn	11 35 17.6	-1.0
WMQ	Urumqi	15.05	55	eP	P	11 35 21.8	+1.3
WMQ				pmax	pmax		
	comp=Z,13nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,90nm,4.1s						
DMN	Daman	15.17	121	eP	P	11 35 24.7	+2.6
	comp=Z,12nm,0.4s						
KKN	Kakani	15.18	120	eP	P	11 35 25.1	+2.9
PKIN	Phulchoki	15.39	121	eP	P	11 35 27.3	+2.7
	comp=Z,8.8nm,0.3s						
PKI	Pulchoki	15.40	121	eP	P	11 35 27.4	+2.6
	comp=Z,10nm,0.2s						
JIRN	Jiri	15.90	119	eP	Pn	11 35 34.2	+3.6
	comp=Z,24nm,0.3s						
BRVK	Borovoye	16.62	360	eP	P	11 35 36.6	-0.9
	comp=Z,33nm,1.5s						
BRVK	Borovoye	16.62	360	eP	P	11 35 36.6	-0.9
BRVK				pmax	pmax		
	comp=Z,33nm,1.5s						
AKTO	Aktyubinsk	16.64	331	P	Pn	11 35 40.0	+1.1
	comp=Z,1.9nm,0.3s,baz=141,slow=11,SNR=46						
AKTO	Aktyubinsk	16.64	331	⇓P	Pn	11 35 39.3	+0.3
	comp=Z,23nm,0.8s						
ZAA0	Zalesovo Array	20.14	25	eP	P	11 36 14.1	-1.5
	comp=Z,5.4nm,0.7s						
ZALV	Zalesovo Beam	20.14	25	P	P	11 36 17.1	+1.5
	comp=Z,5.4nm,0.3s,baz=221,slow=12,SNR=19						
ARU	Arti	21.57	342	P	P	11 36 32.5	+1.9
	comp=Z,2.3nm,0.5s,baz=168,slow=8.6,SNR=12						
ARU	Arti	21.57	342	eP	P	11 36 28.4	-2.2
	comp=Z,12nm,1.0s						
ARU	Arti	21.57	342d	i P	P	11 36 31.3	+0.7
ARU						11 37 09.3	
ARU				S	S	11 40 19.8	+4.2
ARU				pmax	pmax		
	comp=Z,15nm,1.1s						
NEY	Neytrino	22.33	296	i P	P	11 36 36.1	-2.3
NEY				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA	Gaotai	23.26	74	eP	P	11 36 55.9	+9.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LZH	Lanzhou	26.80	81	eP	P	11 37 19.7	+0.9
LZH				pP	pP	11 38 02.9	+1.6
LZH				sP	sP	11 38 29.0	+3.4
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
CD2	Chengdu	28.12	92	eP	P	11 37 30.4	0.0
OBN	Obninsk	29.73	320	⇑eP	P	11 37 44.7	+0.5
OBN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KMI	Kunming	29.76	103	P	P	11 37 46.4	+1.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
FINES	FINESS Array B	37.32	326	P	P	11 38 51.1	+1.6
	comp=Z,3.9nm,0.6s,baz=112,slow=11,SNR=11						
ARCES	ARCESS Array B	41.05	338	P	P	11 39 22.4	+2.0
	comp=Z,3.6nm,0.5s,baz=111,slow=8.0,SNR=26						
ARE0	ARCESS Array S	41.05	338	eP	P	11 39 20.2	-0.2
KTK1	Kautokeino	41.52	336	eP	P	11 39 23.0	-1.1
HAMF	Hammerfest	42.14	339	eP	P	11 39 28.1	-1.0
HFS	Hagfors	42.88	322	P	P	11 39 37.0	+1.8
	comp=Z,3.6nm,0.7s,baz=90,slow=10,SNR=9.2						
TRO	Tromso	43.17	336	eP	P	11 39 35.4	-1.9
STEI	Steigen	43.85	333	eP	P	11 39 40.5	-2.3
NC602	NORSAR Array S	44.01	323	eP	P	11 39 41.6	-2.6
NB2	NORSAR Subarra	44.20	323	P	P	11 39 47.2	+1.4
	comp=Z,1.1nm,0.6s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.20	323	P	P	11 39 47.2	+1.4
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.20	323	P	P	11 39 46.6	+0.9
	comp=Z,1.4nm,0.6s,baz=96,slow=7.7,SNR=6.1						
NSS	Namsos	44.34	328	eP	P	11 39 44.4	-2.4
TIXI	Tiksi	45.98	22	P	P	11 40 01.5	+2.0
	comp=Z,1.7nm,0.3s,baz=264,slow=6.5,SNR=6.6						
AKN	Aaknes	46.30	324	eP	P	11 39 59.0	-3.2
BLS5	Blasjo	46.48	321	eP	P	11 40 00.9	-2.8
SPA0	Spitsbergen Ar	47.47	347	eP	P	11 40 09.9	-1.1
TORD	Torodi Ar. Bea	65.33	268	P	P	11 42 17.4	-0.5
	comp=Z,4.0nm,0.3s,baz=47,slow=6.8,SNR=14						
ILAR	Eielson Array	74.95	16	P	P	11 43 17.1	+1.6
	comp=Z,0.2nm,0.5s,baz=306,slow=5.2,SNR=4.7						
ASAR	Alice Springs	84.54	125	P	P	11 44 08.0	+0.4
	comp=Z,0.2nm,0.5s,baz=316,slow=5.0,SNR=7.0						

SKO 03 11:58:28.3,41°.71N×22°.27E,h15^{km},M1.6,ML1.9, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIP	Stip	0.07	256	i Pg	Pg	11 58 32.1	+0.8
STIP				i Sg	Sg	11 58 34.2	+1.0
STIP				eLg	Lg	11 58 34.4	
	comp=N,122nm,0.4s						
STIP				eLg	Lg	11 58 34.4	
	comp=E,130nm,0.3s						
VAY	Valandovo	0.45	150	i Pg	Pg	11 58 37.5	+0.2
VAY				i Sg	Sg	11 58 43.4	0.0
VAY				eLg	Lg	11 58 43.6	
	comp=E,50nm,0.5s						
VAY				eLg	Lg	11 58 43.6	
	comp=N,152nm,0.5s						
KKB	Krupnik	0.63	75	i Pg	Pb	11 58 41.1	0.0
KKB				i Sg	Sg	11 58 49.2	+0.1
KNT	Kendrikon	0.72	139	i Pg	Pb	11 58 42.7	0.0
KNT				i Sg	Sb	11 58 52.2	-0.1
GRG	Griva	0.76	172	i Pg	Pb	11 58 43.4	+0.2

MOS ***03*** *12:05:45.6±1.4,27°.14N×55°.07E,h18^{km},mb4.4/21,Error ellipse: s-maj=7.9km s-min=5.8km az=94.0*

NEIC ***03*** *12:05:47.8±0.0,27°.25N×55°.00E,h15^{km},mb4.4/31, ML4.4(THR),MN4.5(TEH),After THR.*

ISCJB ***03*** *12:05:47.2±0.2,27°.32N±0°.03×54°.91E±0°.03,h17^{km}, mb4.3/58,MS3.4/17,Error ellipse: s-maj=4.3km s-min=3.3km az=146.2*

THR ***03*** *12:05:47.8,27°.25N×55°.00E,h15^{km},ML4.4*

TEH ***03*** *12:05:48.5,27°.27N×55°.02E,h12^{km},ML4.3*

DSN ***03*** *12:05:48.8±2.3,27°.31N×54°.93E,h10^{km},ML4.5/10,Error ellipse: s-maj=29.7km s-min=10.1km az=20.0*

IDC ***03*** *12:05:53.0±2.0,27°.16N×54°.95E,h68^{km}±22^{km},mb4.0/22, mb1 4.0/28,mb1mx4.0/42,mbtmp4.2/28,MS3.5/19, Ms1 3.5/19,ms1mx3.3/49,Error ellipse: s-maj=14.4km s-min=11.2km az=19.0*

ISC 03 12:05:47.8±0.4,**27°.24N**±0°.03×**54°.95E**±0°.03,**h17^{km},n184,** σ**1^{s}.75**/184,**mb4.3**/63,**MS3.5**/17,**2C-2D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	1.10	81	IAMB	IAmb	12 06 29.9	
	comp=Z,0.0nm,0.3s						
GENO				ePg	Pb	12 06 08.3	-0.2
SHME	Shamm	1.59	138	eP	Pb	12 06 17.0	+0.2
	SNR=72						
SHME				S	Sg	12 06 40.3	+1.1
LMD1	Lamerd	1.60	274	ePn	Pg	12 06 19.0	+0.4
NIAN	Nian	1.70	79	ePn	Pb	12 06 18.0	-0.7
NIAN				IAMB	IAmb	12 06 53.4	
	comp=Z,0.0nm,0.6s						
JHRM	Jahrom	1.76	316	ePn	Pg	12 06 21.6	0.0
GHIR	Ghir-Karzin	2.03	301	eAML	AML	12 07 12.3	
	comp=N,2μm,0.5s						
GHIR				ePn	Pb	12 06 24.1	-0.3
GHIR				eSg	Sg	12 06 52.9	-0.4
MSFE	Esma-Masafi	2.16	150	eP	Pb	12 06 26.0	-0.5
	SNR=21						
MDH	Madha	2.28	148	eP	Pb	12 06 28.0	-0.5
	SNR=11						
MDH	Madha	2.28	148	ePn	Pb	12 06 27.8	-0.7
NAZ	Nazwa, Dubai	2.33	164	eP	Pb	12 06 29.4	0.0
	SNR=19						
NAZ	Nazwa, Dubai	2.33	164	ePn	Pb	12 06 29.7	+0.3
UOSS	Minazif	2.54	153	ePn	Pb	12 06 31.2	-1.8
UOSS	Minazif	2.54	153	eP	Pb	12 06 31.4	-1.7
	SNR=26						
UOSS	Minazif	2.54	153	ePn	Pb	12 06 31.5	-1.6
FAQ	Al Faqa, Dubai	2.55	167	eP	Pb	12 06 32.3	-0.8
	SNR=10						
FAQ	Al Faqa, Dubai	2.55	167	ePn	Pb	12 06 32.7	-0.4
ASUD	Al Ashush, Dub	2.62	173	eP	Pb	12 06 32.7	-1.6
	SNR=7.7						
ASUD	Al Ashush, Dub	2.62	173	ePn	Pb	12 06 34.1	-0.3
HATD	Hatta, Dubai	2.62	156	eP	Pb	12 06 32.9	-1.5
	SNR=24						
HATD	Hatta, Dubai	2.62	156	ePn	Pb	12 06 33.3	-1.1
AJN	Ajban	2.66	179	eP	Pn	12 06 31.5	+1.6
	SNR=7.8						
ASHO	Ashiyiah	2.73	158	eP	Pb	12 06 34.4	-1.8
	SNR=46						
ASHO	Ashiyiah	2.73	158	ePn	Pb	12 06 34.7	-1.5
NGRK	Negar Kerman	2.86	33	ePn	Pn	12 06 34.2	+1.1
NGRK				IAMB	IAmb	12 07 26.9	
	comp=Z,0.0nm,0.8s						
TVBK	TV Kerman	3.17	30	ePn	Pn	12 06 39.9	+2.6
TVBK				IAMB	IAmb	12 07 41.5	
	comp=Z,0.0nm,0.6s						
SHI	Shiraz	3.22	319	P	Pn	12 06 41.6	+3.8
SHI	Shiraz	3.22	319	ePn	Pb	12 06 42.1	-2.6
ALNE	Al Ain	3.25	167	i P	Pn	12 06 39.7	+1.6
	SNR=11						
KHGB	Koh Gabri	3.40	23	ePn	Pn	12 06 43.2	+2.8
KHGB				IAMB	IAmb	12 07 55.8	
	comp=Z,0.0nm,1.2s						

CHMN	Cheshme madani	3.47	40	ePn	Pn	12 06 43.9	+2.5
CHMN				IAMB	IAmb	12 07 33.5	
	comp=N,0.0nm,0.4s						
IKAZ	Kazeroun	3.73	313	ePn	Pn	12 06 48.2	+3.2
IMEH	Mehriz	4.15	356	ePn	Pn	12 06 53.9	+3.2
HOQ	Hoqain	4.22	149	ePn	Pb	12 06 57.3	-4.3
BIDO	Bidbid	4.68	141	ePn	Pb	12 07 06.7	-2.8
IRAM	Ramesheh	5.08	334	ePn	Pn	12 07 05.6	+2.2
YZKH	Yazd	5.15	357	ePn	Pn	12 07 06.8	+2.6
YZKH	Yazd	5.15	357	ePn	Pn	12 07 06.8	+2.6
WSAR	Wadi Sarin	5.19	139	P	Pn	12 07 07.1	+2.3
	comp=N,4.5nm,0.3s,baz=325,slow=8.8,SNR=24						
WSAR				S	Sn	12 08 06.3	+2.1
	comp=N,14nm,0.3s,baz=236,slow=23,SNR=7.2						
WSAR				LR	LR	12 09 41.7	
	comp=N,472nm,18.6s,baz=342,slow=45						
CHBR	Chabahar	5.22	107	ePn	Pn	12 07 07.0	+1.8
CHBR	Chabahar	5.22	107	ePn	Pn	12 07 07.0	+1.8
IGAR	Gharneh	5.74	335	ePn	Pn	12 07 15.0	+2.5
NASN	Na'in	5.85	342	ePn	Pn	12 07 16.5	+2.4
NASN	Na'in	5.85	342	ePn	Pn	12 07 16.5	+2.4
ZNGN	Zangian	6.03	325	ePn	Pn	12 07 19.8	+3.2
IZEF	Zefreh	6.08	339	ePn	Pn	12 07 18.5	+1.3
IKOO	Kooshah	6.25	33	ePn	Pn	12 07 21.0	+1.4
TKDS	Koohdasht(Taba	6.63	16	ePn	Pn	12 07 26.9	+2.3
IKLH	Kolahrood	6.73	335	ePn	Pn	12 07 28.7	+2.6
TNSJ	Nastanj	6.86	12	ePn	Pn	12 07 30.7	+3.0
IDAH	Dahanechah	6.95	37	ePn	Pn	12 07 32.2	+3.1
SHRT	Shahrakht	7.88	34	ePn	Pn	12 07 43.8	+2.1
SHRT	Shahrakht	7.88	34	ePn	Pn	12 07 43.8	+2.1
RAYN	Ar Rayn	9.31	249	ePn	Pn	12 08 00.9	-0.4
RAYN				eSn	Sn	12 09 42.0	-3.8
RAYN	Ar Rayn	9.31	249	eP	Pn	12 08 01.0	-0.4
RAYN				e		12 09 42.0	
GEYT	Alibeck	10.99	13	P	Pn	12 08 28.0	+3.7
	comp=N,0.6nm,0.3s,baz=195,slow=10,SNR=4.3						
GEYT				LR	LR	12 13 21.5	
	comp=N,475nm,19.9s,baz=225,slow=40						
KBL	Kabul	14.11	56	ePn	Pn	12 09 02.9	-4.3
KBL	Kabul	14.11	56	eP	Pn	12 09 02.9	-4.3
GNI	Garni	15.41	329	ePn	Pn	12 09 21.9	-2.8
	comp=N,39nm,0.8s						
GNI	Garni	15.41	329	i P	Pn	12 09 21.2	-3.5
DAMY	Dhamar	15.99	220	ePn	Pn	12 09 31.9	-0.5
	comp=N,28nm,1.0s						
DAMY				eS	S	12 12 45.7	+2.3
ASF	Jabal al Asfar	16.44	292	P	P	12 09 40.3	-0.3
	comp=N,0.6nm,0.3s,baz=59,slow=8.8,SNR=7.5						
CHGR	Chuyangaron	16.46	43	ePn	Pn	12 09 36.4	-1.8
	comp=N,24nm,1.0s						
NIL	Nilore	17.02	64	eP	Pn	12 09 42.5	-2.6
	comp=N,19nm,1.1s						
NIL	Nilore	17.02	64	eP	Pn	12 09 42.5	-2.6
NIL				pmax	pmax		
	comp=Z,19nm,1.1s						
GAR	Garm	17.39	44	eP	Pn	12 09 48.7	-1.1
	comp=Z,12nm,0.7s						
GAR	Garm	17.39	44	eP	Pn	12 09 48.7	-1.1
GAR				pmax	pmax		
	comp=Z,12nm,0.7s						
GROC	Groznyy	17.58	337	eP	Pn	12 09 44.4	-7.6
GROC				pmax	pmax		
	comp=Z,20nm,0.4s						
EIL	Elat	17.76	283	P	P	12 09 56.0	+1.0
	comp=Z,0.5nm,0.3s,baz=144,slow=11,SNR=4.5						
EIL				LR	LR	12 16 59.8	
	comp=Z,82nm,21.7s,baz=63,slow=38						
MMAI	Mount Meron Ar	17.86	294	P	Pn	12 09 56.3	+0.7
	baz=92,slow=19,SNR=4.3						
MMAI				LR	LR	12 18 40.6	
	comp=Z,154nm,18.3s,baz=85,slow=43						
ZEI	Tsey	17.94	333	eP	P	12 09 59.9	+2.7
ZEI				pmax	pmax		
	comp=Z,19nm,0.5s						
NEY	Neytrino	18.81	331	i P	P	12 10 02.6	-4.1
NEY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KBZ	Khabaz	19.13	332	P	Pn	12 10 11.5	+0.6
	comp=Z,0.3nm,0.3s,baz=143,slow=8.5,SNR=10						
KIV	Kislovodsk	19.40	332	eP	P	12 10 11.9	-1.2
	comp=Z,18nm,0.7s						
KIV	Kislovodsk	19.40	332	eP	P	12 10 10.7	-2.4
KIV				pmax	pmax		
	comp=Z,59nm,1.1s						
GOF	Gofitskoye	20.18	335⇑	eP	Pn	12 10 23.9	+0.5
KK31	Karatay Array	20.25	35	eP	P	12 10 21.5	-0.8
	comp=Z,8.2nm,0.9s						
KK31	Karatay Array	20.25	35	eP	P	12 10 21.5	-0.8
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	20.25	35	eP	P	12 10 21.5	-0.8
	comp=Z,8.2nm,0.9s						
KKAR	Karatay Array	20.25	35	eP	P	12 10 21.5	-0.8
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH	Kashi	21.34	50	P	P	12 10 30.8	-3.5
KSH				sP	pP	12 10 37.9	-1.4
KSH				pmax	pmax		
	comp=Z,11nm,1.2s						
KSH				pmax	pmax		
	comp=Z,66nm,4.1s						
BR101	Keskin Array S	21.64	311	eP	P	12 10 39.0	+1.4
BR131	Keskin Array S	21.64	311	eP	P	12 10 36.9	-0.6
	comp=Z,18nm,1.1s						
BRTR	Keskin Array B	21.64	311	P	P	12 10 39.0	+1.4
	comp=Z,9.8nm,0.9s,baz=131,slow=13,SNR=23						
BRTR				LR	LR	12 20 41.4	
	comp=Z,57nm,18.3s,baz=109,slow=41						
BRTR	Keskin Array B	21.64	311	P	P	12 10 39.0	+1.4
AAK	Ala-Archa	22.12	41	P	P	12 10 43.2	+0.6
	comp=Z,2.3nm,0.4s,baz=226,slow=11,SNR=7.5						
AAK				LR	LR	12 19 44.4	
	comp=Z,154nm,18.2s,baz=232,slow=38						
AAK	Ala-Archa	22.12	41	eP	P	12 10 41.7	-0.9
	comp=Z,8.1nm,0.9s						
AAK	Ala-Archa	22.12	41	eP	P	12 10 41.7	-0.9
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ABKAR	Akbulak array	22.32	9	eP	P	12 10 44.9	+0.4
	comp=Z,13nm,0.9s						
ANN	Anapa	22.46	326	eP	P	12 10 44.0	-2.0
ANN				pmax	pmax		
	comp=Z,66nm,0.7s						
AKTO	Aktyubinsk	23.29	5	P	P	12 10 55.4	+0.8
	comp=Z,3.1nm,0.5s,baz=150,slow=7.6,SNR=9.6						
AKTO				LR	LR	12 22 18.5	
	comp=Z,61nm,20.5s,baz=183,slow=42						
KDJ	Kajisay	23.46	45	eP	P	12 10 57.5	+0.9
	comp=Z,8.7nm,1.0s						
KDJ	Kajisay	23.46	45	eP	P	12 10 57.5	+0.9
KDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OTUK	Ortayu	24.97	28	P	P	12 11 10.7	+0.3
OTUK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PDGK	Podgornoye	25.54	45	P	P	12 11 15.5	-0.3
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VSR	Storozhevoye	26.77	338	eP	P	12 11 27.6	+0.9
VSR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
IDI	Anoyia	26.85	295	P	P	12 11 28.6	+1.0
	comp=Z,4.6nm,0.5s,baz=84,slow=9.2,SNR=3.5						
BRVK	Borovoye	28.21	20	i P	P	12 11 38.5	-1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	28.21	20	P	P	12 11 39.6	0.0
	comp=Z,2.2nm,0.4s,baz=207,slow=8.2,SNR=17						
MAKZ	Makanchi	28.88	40	eP	P	12 11 46.4	+0.8
	comp=Z,6.3nm,1.0s						
MAKZ	Makanchi	28.88	40	eP	P	12 11 46.4	+0.8
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	Makanchi Array	29.05	41	eP	P	12 11 47.1	0.0
	comp=Z,1.4nm,0.6s						
MK31	Makanchi Array	29.05	41	eP	P	12 11 47.1	0.0
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK32	Makanchi Array	29.05	41	eP	P	12 11 47.7	+0.5
MKAR	Makanchi Array	29.05	41	P	P	12 11 47.7	+0.5
	comp=Z,1.7nm,0.6s,baz=224,slow=8.0,SNR=12						
MKAR				LR	LR	12 23 46.4	
	comp=Z,95nm,20.5s,baz=242,slow=37						
ARU	Arti	29.29	4	P	P	12 11 49.5	+0.5
	comp=Z,0.8nm,0.3s,baz=331,slow=6.8,SNR=3.3						
ARU				LR	LR	12 25 14.0	
	comp=Z,115nm,18.3s,baz=174,slow=40						
ARU	Arti	29.29	4	eP	P	12 11 49.5	+0.5
	comp=Z,3.0nm,0.7s						
ARU	Arti	29.29	4c	iP	P	12 11 48.5	-0.6
ARU				S	S	12 16 36.8	-4.5
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MLR	Muntele Rosu	29.39	316	P	P	12 11 51.2	+0.9
	comp=Z,1.7nm,0.5s,baz=132,slow=15,SNR=3.3						
KURBB	Kurchatov Arra	29.46	31	P	P	12 11 51.2	+0.6
	comp=Z,4.2nm,0.2s,baz=232,slow=8.7,SNR=9.7						
KURK	Kurchatov	29.56	31	i P	P	12 11 51.4	-0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
VOIR		29.92	315	P	P	12 11 55.9	+0.9
VOIR				pmax	pmax		
	comp=Z,5.0nm,2.2s						
AKASG	Malin Array Be	30.53	327	P	P	12 11 59.8	-0.4
	comp=Z,1.5nm,0.6s,baz=131,slow=8.4,SNR=7.5						
AKBB	Malin Array Si	30.53	327	eP	P	12 11 59.3	-0.8
	comp=Z,5.6nm,1.0s						
AKBB	Malin Array Si	30.53	327	eP	P	12 11 59.3	-0.8
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	Obninsk	30.90	339⇓	eP	P	12 12 04.4	+1.1
OBN				e*SP	pP	12 12 07.7	-1.0
OBN				pmax	pmax		
	comp=Z,11nm,0.8s						
OBN				MLR	MLR		
	comp=Z,54nm,20.0s						
WMQ	Urumqi	31.11	49	eP	P	12 12 07.7	+2.2
WMQ				pP	sP	12 12 12.1	-1.0
WMQ				pmax	pmax		
	comp=Z,11nm,0.8s						
KMBO	Kilima Mbogo	32.95	214	LR	LR	12 26 55.4	
	comp=Z,98nm,18.9s,baz=84,slow=38						
TIP	Timpagrande	33.87	300	eP	P	12 12 30.0	+0.3
	comp=Z,11nm,1.2s						
ZAA0	Zalesovo Array	34.55	31	eP	P	12 12 35.2	-0.1
	comp=Z,6.9nm,0.6s						
ZALV	Zalesovo Beam	34.55	31	P	P	12 12 35.5	+0.2
	comp=Z,8.7nm,0.7s,baz=240,slow=9.5,SNR=16						
ZALV				LR	LR	12 28 47.1	
	comp=Z,106nm,19.2s,baz=269,slow=40						
ZAA1	Zalesovo Array	34.56	31	eP	P	12 12 35.5	+0.2
IDID	Didziasalis	34.71	332	eP	P	12 12 36.8	+0.1
IDID				IAmb	IAmb	12 12 40.5	
	comp=Z,5.8nm,1.0s						
IIGN	Ignalina	34.96	331	eP	P	12 12 38.4	-0.4
IIGN				IAmb	IAmb	12 12 41.9	
	comp=Z,5.6nm,0.7s						
LANS	Liptovska Anna	34.98	318	eP	P	12 12 40.8	+1.7
LANS	Liptovska Anna	34.98	318	eP	P	12 12 40.8	+1.7
VYHS	Vyhne	35.08	317	eP	P	12 12 43.3	+3.3
VYHS	Vyhne	35.08	317	eP	P	12 12 43.3	+3.3
ISAL	Salakas	35.14	332	eP	P	12 12 40.0	-0.4
ISAL				IAmb	IAmb	12 12 43.7	
	comp=Z,8.8nm,0.5s						
IZAR	Zarasai	35.21	332	eP	P	12 12 40.8	-0.1
IZAR				IAmb	IAmb	12 12 44.0	
	comp=Z,9.3nm,0.8s						
VRAC	Vranov	36.76	317	LR	LR	12 30 20.2	
	comp=Z,55nm,18.0s,baz=120,slow=40						
VSU	Vasula	36.90	336	eP	P	12 12 54.8	-0.6
VSU				IAmb	IAmb	12 12 58.1	
	comp=Z,27nm,0.6s						
VSU	Vasula	36.90	336	i P	P	12 12 56.7	+1.3
VSU				pmax	pmax		
	comp=Z,32nm,1.1s						
KBA	Koelnbreinsper	38.07	313	eP	P	12 13 05.5	-0.2
	comp=Z,0.6nm,0.2s						
KBA	Koelnbreinsper	38.07	313	P	P	12 13 05.2	-0.5
KBA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GEC2	GERESS Array S	38.38	315	eP	P	12 13 07.5	-0.7
	comp=Z,1.9nm,0.7s						
GEC2	GERESS Array S	38.38	315	eP	P	12 13 07.5	-0.7
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	38.38	315	P	P	12 13 07.5	-0.7
	comp=Z,0.4nm,0.4s,baz=106,slow=9.1,SNR=4.3						
KHC	Kasperske Hory	38.55	316	eP	P	12 13 09.0	-0.5
KHC	Kasperske Hory	38.55	316	eP	P	12 13 09.0	-0.5
BRG	Berggiesshubel	38.93	319	eP	P	12 13 13.0	+0.3
	comp=Z,3.2nm,0.8s						
BRG	Berggiesshubel	38.93	319	eP	P	12 13 13.0	+0.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA	Gaotai	39.03	60	eP	P	12 13 15.3	+1.4
GTA				pP	pP	12 13 19.4	+0.2
GTA				sP	sP	12 13 22.3	+0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,86nm,6.4s						
GTA				LR	LR		
	comp=N,79nm,14.3s						
GTA				LR	LR		
	comp=E,69nm,16.2s						
GTA				LR	LR		
	comp=Z,110nm,14.3s						
WTTA	Wattenberg	39.24	312	epP	P	12 13 17.2	+1.7
	comp=Z,3.1nm,0.4s						
FIA0	FINESS Array S	39.30	339	eP	P	12 13 15.6	0.0
FIA0	FINESS Array S	39.30	339	eP	P	12 13 15.6	0.0
FINES	FINESS Array B	39.30	339	P	P	12 13 15.6	0.0
	comp=Z,2.8nm,0.5s,baz=132,slow=8.1,SNR=23						
FINES				LR	LR	12 31 47.5	
	comp=Z,37nm,19.6s,baz=136,slow=40						
SQTA	Sankt Quirin	39.51	312	eP	P	12 13 15.4	-2.3
	comp=Z,6.0nm,0.4s						
CLL	Collm	39.64	319	eP	pP	12 13 25.0	+0.9
CLL	Collm	39.64	319	epP	pP	12 13 25.0	+0.9
FETA	Feichten	39.78	312	eP	P	12 13 17.7	-2.2
	comp=Z,2.0nm,0.5s						
DAVA	Damuels	40.40	312	eP	P	12 13 25.4	+0.2
	comp=Z,11nm,0.3s						
CM31	Chiang Mai Arr	41.30	93	eP	P	12 13 31.1	-1.6
	comp=Z,6.6nm,0.3s						
CMAR	Chiang Mai Arr	41.30	93	P	P	12 13 31.1	-1.6
	comp=Z,0.9nm,0.3s,baz=276,slow=34,SNR=3.6						
SENIN	Lac Senin/Sane	41.95	310	eP	P	12 13 37.4	-0.6
	comp=Z,3.8nm,0.7s						
CD2	Chengdu	42.55	73	eP	P	12 13 42.5	-0.4
KMI	Kunming	42.73	82	P	P	12 13 46.4	+1.7
KMI				pmax	pmax		
	comp=Z,21nm,0.6s						
HFS	Hagfors	43.19	331	LR	LR	12 35 14.8	
	comp=Z,40nm,19.9s,baz=135,slow=41						
TLY	Talaya	43.77	43	eP	P	12 13 52.2	-0.2
	comp=Z,6.3nm,0.6s						
TLY	Talaya	43.77	43	i P	P	12 13 54.1	+1.7
NC405	NORSAR Array S	44.53	332	eP	P	12 13 57.7	-0.6
	comp=Z,29nm,1.0s						
NB2	NORSAR Subarra	44.70	331	P	P	12 13 59.0	-0.8
	comp=Z,2.8nm,0.7s,baz=118,slow=8.6						
NB200	NORSAR Array S	44.70	331	eP	P	12 13 57.9	-1.9
NOA	NORSAR Array B	44.70	331	P	P	12 13 57.9	-1.9
	comp=Z,2.0nm,0.7s,baz=119,slow=8.0,SNR=6.9						
NOA				LR	LR	12 33 23.1	
	comp=Z,31nm,21.1s,baz=125,slow=37						
TAM	Tamanrasset	44.79	276	P	P	12 14 03.6	+2.5
TAM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARA0	ARCESS Array S	45.67	346	eP	P	12 14 08.0	+0.8
ARCES	ARCESS Array B	45.67	346	P	P	12 14 08.0	+0.8
	comp=Z,2.6nm,0.9s,baz=146,slow=9.7,SNR=5.4						
ARCES				LR	LR	12 37 01.7	
	comp=Z,60nm,18.7s,baz=270,slow=41						
LSZ	Lusaka	49.60	215	eP	P	12 14 40.3	+1.7
	comp=Z,15nm,1.5s						
LSZ	Lusaka	49.60	215	eP	P	12 14 40.3	+1.7
LSZ				pmax	pmax		
	comp=Z,15nm,1.5s						
ESDC	Sonseca Array	49.89	300	P	P	12 14 39.1	-1.4
	comp=Z,0.5nm,0.3s,baz=60,slow=8.8,SNR=4.3						
TOA0	Torodi Ar. Sit	51.56	265	eP	P	12 14 53.3	-0.1
	comp=Z,7.3nm,0.8s						
TOA1	Torodi Ar. Sit	51.56	265	eP	P	12 14 51.4	-2.0
TORD	Torodi Ar. Bea	51.56	265	P	P	12 14 51.4	-1.9
	comp=Z,4.1nm,0.7s,baz=40,slow=9.1,SNR=20						
TORD				LR	LR	12 37 08.1	
	comp=Z,48nm,19.1s,baz=330,slow=36						
TIXI	Tiksi	59.34	21	i P	P	12 15 48.5	0.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DBIC	Dimbokro	60.18	262	P	P	12 15 55.8	+0.6
	comp=Z,1.6nm,0.4s,baz=39,slow=6.5,SNR=4.4						
DBIC	Dimbokro	60.18	262	eP	P	12 15 55.8	+0.6
	comp=Z,38nm,1.5s						
KS15	Wonju Array Si	61.08	60	eP	P	12 16 01.1	+0.1
	comp=Z,18nm,1.3s						
KSRS	Korea Array	61.11	60	P	P	12 16 01.1	-0.1
	comp=Z,1.5nm,0.8s,baz=273,slow=6.5,SNR=5.8						
BOSA	Boshof	62.41	209	LR	LR	12 43 23.1	
	comp=Z,64nm,19.4s,baz=124,slow=36						
BILL	Bilibino	72.54	22⇓	eP	P	12 17 15.5	+2.0
BILL				*PP	pP	12 17 20.0	+0.7
BILL				*SP	sP	12 17 24.0	+2.6
BILL						12 17 35.0	
BILL				e		12 27 05.8	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PETK	Petropavlovsk-	75.83	37	LR	LR	12 52 03.9	
	comp=Z,32nm,19.7s,baz=253,slow=36						
ILAR	Eielson Array	86.73	9	P	P	12 18 30.3	-0.3
	comp=Z,0.2nm,0.6s,baz=324,slow=4.5,SNR=2.8						
ILB	Eielson Array	86.73	9	eP	P	12 18 30.3	-0.3
	comp=Z,7.1nm,1.6s						
ASAR	Alice Springs	91.45	116	P	P	12 18 50.9	-2.7
	comp=Z,0.7nm,0.8s,baz=300,slow=4.2,SNR=3.3						
AS31	Alice Springs	91.45	116	eP	P	12 18 50.9	-2.7
	comp=Z,1.9nm,1.4s						

IDC ***03*** *12:36:53.2±3.7, 4°.77S×100°.44E, h0^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.5/34, mbtmp3.7/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/47, Error ellipse: s-maj=200.6km s-min=25.4km az=55.0*

DJA ***03*** *12:36:58.0±0.6, 4°S±3°×10°2E±°, h10^{km}±4^{km}, M4.0/11, mb4.5/1, MLv3.8/11*

ISC 03 12:36:58.0±1.1, **4°.4S**±0°.1×**101°.65E**±0°.09, **h29^{km}, n14, σ0^{s}.95**/16, **mb3.8**/3, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.30	88	P	Pn	12 37 19.0	-1.3
MNAI				S	Sn	12 37 36.5	-0.3
LHSI	Lahat	1.96	73	P	Pn	12 37 29.7	+0.4
KRJI	Kerinci	2.31	355	P	Pb	12 37 37.9	-1.3
PPSI	Pulau Pagai	2.31	315	P	Pb	12 37 38.3	-0.8
LWLI	Liwa	2.48	104	P	Pn	12 37 36.4	-0.1
LWLI				S	Sn	12 38 06.7	+0.8
MDSI	Maura Dua	2.52	92	P	Pn	12 37 37.8	+0.7
MDSI				S	Sn	12 38 06.7	-0.2
KASI	Kota Agung	3.04	111	P	Pn	12 37 43.6	-0.7
CGJI	Cibinong	4.58	119	P	Pn	12 38 04.7	-0.7
CISI	Cisompet, Garu	6.88	117	P	Pn	12 38 35.7	-1.4
PSI	Prapat	7.67	339	LR	LR	12 41 21.6	
	comp=Z,68nm,20.3s,baz=173,slow=36						
ASAR	Alice Springs	36.52	125	P	P	12 44 08.2	+6.9
	0.5nm,0.3s,baz=300,slow=8.1,SNR=23						
ASAR				PcP	PcP	12 46 26.1	+1.3
	0.3nm,0.8s,baz=287,slow=2.4,SNR=2.7						
MKAR	Makanchi Array	53.79	344	P	P	12 46 18.2	+0.3
	0.5nm,0.5s,baz=148,slow=8.4,SNR=4.1						
ZALV	Zalesovo Beam	59.84	349	P	P	12 47 01.3	+0.6
	0.5nm,0.4s,baz=159,slow=6.2,SNR=2.9						
TXAR	Lajitas Array	145.51	41	PKPbc	PKPab	12 56 35.7	+1.1
	0.8nm,0.5s,baz=250,slow=1.0,SNR=15						

MAN 03 12:39:00.8, 7°.69N×123°.27E, h3^{km}, mb4.0, ML2.8, MS2.4, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	0.19	33	eP	Pg	12 39 04.4	-0.2
PAGZ				eS	Sg	12 39 07.0	-0.2
IPIL	Ipil	0.70	278	eP	Pg	12 39 14.5	+0.2
IPIL				eS	Sb	12 39 24.7	-1.1
DCPH	Dipolog City	0.90	5⇑	eP	Pg	12 39 16.4	-1.6
DCPH				eS	Sg	12 39 26.7	-3.0
CTBH	Cotabato--PC H	1.07	115⇑	iP	Pb	12 39 22.2	+0.3
CGP	Cagayan de Oro	1.60	61⇑	eP	Pn	12 39 29.3	-0.7
CGP				eS	Sn	12 39 47.1	-4.1
SKMP	Bagumbayan, Su	1.71	133	eP	Pn	12 39 31.0	-0.5
SKMP				eS	Sn	12 39 54.1	+0.1

KRNET ***03*** *12:49:39.7±0.1, 42°.71N×75°.66E, h21^{km}, mb2.1*

ISCJB ***03*** *12:49:40.0±0.4, 42°.67N±0°.02×75°.63E±0°.03, h0^{km}, Error ellipse: s-maj=3.3km s-min=2.6km az=165.5*

SOME ***03*** *12:49:40.0, 42°.65N×75°.72E*

NNC ***03*** *12:49:40.5±1.0, 42°.68N×75°.67E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=7.2km s-min=3.1km az=138.0, Suspected Mining explosion.*

ISC 03 12:49:40.2±0.9, **42°.68N**±0°.02×**75°.64E**±0°.02, **h0^{km}, n17, σ0^{s}.81**/34, **22C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	Tokmak 2	0.24	353	⇑P	Pg	12 49 45.3	+0.4
	3.2nm,0.2s						
TKM2				⇑S	Sg	12 49 49.2	+1.1
	21nm,0.3s						
TKM2	Tokmak 2	0.24	353⇑	iP	Pg	12 49 45.3	+0.4
	baz=47						
TKM2				⇑iS	Sg	12 49 48.7	+0.6
	baz=47						
BOOM	Boomskoye usch	0.29	130⇑	iP	Pg	12 49 46.3	+0.5
	baz=36						
BOOM				⇑iS	Sg	12 49 50.8	+1.3
	baz=36						
KST	Kastek	0.44	33	P	Pg	12 49 48.7	+0.1
	10nm,0.2s						
KST				S	Sg	12 49 54.7	+0.5
	13nm,0.2s						
KBK	Karagaybulak	0.51	268⇑	iP	Pg	12 49 50.1	+0.1
	baz=64						
KBK				⇑iS	Sg	12 49 57.6	+1.0
	baz=64						
ULHL	Ulahol	0.62	134⇑	iP	Pg	12 49 52.0	-0.1
	baz=37						
ULHL				⇑iS	Sg	12 50 00.8	+0.7
	baz=37						
KZA	Kyzart	0.67	206⇑	eP	Pg	12 49 53.4	+0.5
	baz=6.0						
KZA				⇑iS	Sg	12 50 03.2	+1.7
	baz=6.0						
CHMS	Chumysh	0.73	296⇑	iP	Pg	12 49 53.6	-0.5
	baz=94						
CHMS				⇑iS	Sg	12 50 03.7	+0.1
	baz=94						
AAK	Ala-Archa	0.84	268	P	Pb	12 49 57.6	-0.3
	1.1nm,0.3s						
AAK				⇓S	Sb	12 50 09.3	-0.6
	4.7nm,0.7s						
AAK	Ala-Archa	0.84	268⇑	iP	Pg	12 49 55.8	-0.6
	baz=65						
AAK				⇑iS	Sg	12 50 07.5	+0.2
	baz=65						
UCH	Uchtor	0.95	242⇑	iP	Pg	12 49 58.1	-0.2
	baz=41						
UCH				⇑iS	Sg	12 50 11.4	+0.8
	baz=41						
KDJ	Kajisay	1.27	115⇑	iP	Pg	12 50 03.3	-1.2
	baz=17						
KDJ				⇑iS	Sg	12 50 20.3	-0.6
	baz=17						
ARLS	Aral	1.27	231⇓	iP	Pg	12 50 03.8	-0.8
	baz=30						
ARLS				⇓iS	Sg	12 50 21.0	-0.1
	baz=30						
KTBS	Karatobe	1.28	36	P	Pg	12 50 04.3	-0.5
	3.0nm,0.3s						
KTBS				S	Sb	12 50 21.6	-0.8
	6.9nm,0.3s						
EKS2	Erkin-Say	1.37	270⇑	iP	Pg	12 50 05.5	-1.0
	baz=69						
EKS2				⇑iS	Sg	12 50 23.5	-0.8
	baz=69						
CHKK	Chushkaly	1.53	40	P	Pg	12 50 09.2	-0.4
	2.7nm,0.2s						
CHKK				S	Sn	12 50 30.2	+0.7
	5.9nm,0.2s						
MRKS	Merke	1.78	273	P	Pg	12 50 14.6	+0.3
	11nm,0.3s						
MRKS				S	Sg	12 50 39.5	+2.1
	7.7nm,0.3s						

*IDC **03** 12:54:54.6±1.4, 21°.90S×175°.60W, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.9/24, mbtmp4.1/5, Error ellipse: s-maj=53.4km s-min=24.9km az=153.0*
*ISCJB **03** 12:55:02.4±1.5, 22°.0S±0°.3×175°.7W±0°.2, h70km, mb4.2/6, Error ellipse: s-maj=48.7km s-min=23.6km az=154.7*
ISC 03 12:55:04.0±1.4, **21°.9S**±0°.3×**175°.7W**±0°.2, **h70**km, **n8**, σ1^s**05**/9, **mb4.3**/6, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	26.46	294	P	P	13 00 36.1	+1.4
	32nm,0.3s,baz=218,slow=12,SNR=8.7						
CTA	Charters Tower	35.49	266	P	P	13 01 53.5	-0.7
	2.9nm,0.4s,baz=93,slow=10,SNR=10.0						
STKA	Stephens Creek	39.13	246	P	P	13 02 24.7	-0.1
	3.2nm,0.8s,baz=91,slow=9.6,SNR=5.6						
ASAR	Alice Springs	46.29	258	P	P	13 03 22.6	-0.3
	2.9nm,0.8s,baz=93,slow=7.4,SNR=30						
ASAR				PcP	PcP	13 04 59.1	+1.7
	0.9nm,0.6s,baz=109,slow=3.4,SNR=6.5						
PETK	Petropavlovsk-	78.19	344	P	P	13 06 54.9	-0.6
	1.2nm,0.6s,baz=101,slow=7.5,SNR=2.9						
TXAR	Lajitas Array	86.04	56	P	P	13 07 37.4	+0.2
	0.1nm,0.4s,baz=277,slow=7.2,SNR=4.3						
AKASG	Malin Array Be	145.26	332	PKPbc	PKPbc	13 14 32.4	-0.9
	2.7nm,0.5s,baz=41,slow=4.4,SNR=14						
BRTR	Keskin Array B	149.36	312	PKPbc	PKiKP	13 14 46.5	+0.1
	1.0nm,0.5s,baz=142,slow=3.5,SNR=3.8						

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*IDC **03** 12:56:42.4±10.0, 23°.52S×177°.05W, h197km±80km, mb4.0/5, mb1 4.0/7, mb1mx3.6/26, mbtmp4.5/7, Error ellipse: s-maj=64.0km s-min=41.2km az=55.0*
ISC 03 12:56:38.5±2.1, **23°.7S**±0°.1×**176°.9W**±0°.3, **h167**km, **n8**, σ1^s**73**/10, **mb3.9**/5, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.39	198	P	P	13 00 10.7	+2.9
	0.8nm,0.3s,baz=104,slow=4.2,SNR=6.0						
URZ				S	Sn	13 02 55.8	-2.7
	0.2nm,0.3s,baz=356,slow=10,SNR=2.9						
DZM	Mont Dzumac	15.41	273	P	P	13 00 09.1	+0.8
	0.2nm,0.3s,baz=122,slow=18,SNR=3.9						
CTA	Charters Tower	34.30	269	P	P	13 03 10.0	+0.9
	16nm,0.4s,baz=93,slow=10,SNR=61						
PMG	Port Moresby	37.11	286	P	P	13 03 32.4	-0.7
	16nm,0.7s,baz=128,slow=13,SNR=4.0						
STKA	Stephens Creek	37.42	248	P	P	13 03 35.4	-0.2
	1.4nm,0.5s,baz=108,slow=13,SNR=3.6						
ASAR	Alice Springs	44.85	260	P	P	13 04 36.2	-0.1
	1.9nm,0.6s,baz=91,slow=8.2,SNR=12						
ASAR				PcP	PcP	13 06 16.1	+0.8
	0.4nm,0.5s,baz=108,slow=4.0,SNR=5.7						
CMAR	Chiang Mai Arr	92.11	289	P	P	13 09 28.2	-1.1
	0.4nm,0.4s,baz=134,slow=2.6,SNR=3.2						
AKASG	Malin Array Be	146.26	330	PKPbc	PKPbc	13 15 58.0	-1.1
	1.0nm,0.4s,baz=43,slow=4.5,SNR=5.4						

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*IDC **03** 13:09:07.2±0.7, 39°.79N×21°.85E, h0km, mb4.0/14, mb1 4.1/22, mb1mx4.0/38, mbtmp3.9/22, ML3.7/8, MS2.9/5, Ms1 2.9/5, ms1mx2.7/36, Error ellipse: s-maj=14.1km s-min=12.1km az=136.0*
*ATH **03** 13:09:10.8, 40°.12N×21°.86E, h20km±2km, ML3.9/16, Error ellipse: s-maj=2.0km s-min=0.8km az=277.0*
*TIR **03** 13:09:11.2, 40°.12N×21°.84E, h9km, Md4.2/8*
*BEO **03** 13:09:11.4±0.5, 40°.08N×21°.98E, h8km±2km, ML3.8/8*
*THE **03** 13:09:11.5, 40°.11N×21°.84E, h9km±1km, ML3.9/10, Error ellipse: s-maj=1.2km s-min=0.4km az=325.0*
*ISCJB **03** 13:09:12.1±0.3, 40°.12N±0°.01×21°.82E±0°.02, h25km±2km, mb4.2/22, MS2.9/2, Error ellipse: s-maj=2.5km s-min=1.9km az=27.7*
*NEIC **03** 13:09:12.9±2.0, 40°.07N×21°.94E, h22km±5km, mb4.3/7, MW3.9, MW4.1(CSEM), Error ellipse: s-maj=7.9km s-min=7.3km az=94.0 Best double couple: NP1: ϕ_s77.00000°, δ41.00000°, λ-77.00000°. NP2: ϕ_s240.00000°, δ50.00000°, λ-101.00000°. Principal axes: T 0.9800, Plg5.0000°, Azm338.0000°; N 0.0400, Plg9.0000°, Azm247.0000°; P -1.0200, Plg80.0000°, Azm96.0000°;*
*SOF **03** 13:09:15.4, 40°.26N×22°.06E, h19km*
*PDG **03** 13:09:17.9±0.2, 40°.57N×21°.76E, h12km±1km, MD4.0/3, ML3.9/11, Error ellipse: s-maj=1.2km s-min=1.5km az=0.0*
ISC 03 13:09:11.1±0.8, **40°.11N**±0°.02×**21°.85E**±0°.01, **h16**km±5km, **n238**, σ1^s**85**/313, **mb4.1**/22, **15C-23D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.21	343	P	Pg	13 09 15.8	-0.3
KZN				S	Sg	13 09 18.6	-0.8
KZN	Kozani	0.21	343	P	Pg	13 09 15.8	-0.3
KZN				S	Sg	13 09 18.7	-0.8
KZN				AML	AML	13 09 19.2	
KZN				AML	AML	13 09 19.2	
KTI	Kastanea	0.35	35	P	Pg	13 09 18.7	+0.2
KPRO	Kipourio	0.41	248	P	Pg	13 09 19.4	0.0
KPRO				S	Sb	13 09 25.6	-0.4
KPRO	Kipourio	0.41	248	P	Pg	13 09 19.4	0.0
KPRO				S	Sb	13 09 25.6	-0.4
KPRO				AML	AML	13 09 31.1	
	comp=E,63001µm,0.7s						
KPRO				AML	AML	13 09 33.7	
	comp=N,57157µm,0.4s						
LIT	Litokhoron	0.49	90	P	Pg	13 09 20.6	-0.3
LIT				S	Sb	13 09 28.5	+0.1
THL	Klokotos Trika	0.55	167	P	Pg	13 09 21.9	-0.2
THL				S	Sb	13 09 30.3	+0.2
THL	Klokotos Trika	0.55	167	P	Pg	13 09 21.9	-0.2
THL				S	Sb	13 09 30.2	0.0
THL				AML	AML	13 09 35.0	
	comp=N,42491µm,0.6s						
THL				AML	AML	13 09 35.8	
	comp=E,31171µm,0.3s						
PENT	Pentalofos	0.56	280	P	Pg	13 09 21.8	-0.4
PENT				S	Sb	13 09 30.4	+0.1
PENT	Pentalofos	0.56	280	P	Pg	13 09 21.8	-0.4
PENT				S	Sg	13 09 29.6	0.0
PENT				AML	AML	13 09 34.7	
	comp=N,57788µm,0.5s						
PENT				AML	AML	13 09 38.6	
	comp=E,41163µm,0.5s						
LRSO	Larissa Observ	0.60	136	P	Pb	13 09 23.2	0.0
LRSO	Larissa Observ	0.60	136	P	Pb	13 09 23.3	0.0
NEST	Nestorio	0.69	297	P	Pg	13 09 24.1	-0.6
NEST				S	Sg	13 09 33.9	+0.1
NEST	Nestorio	0.69	297	P	Pg	13 09 24.0	-0.6
NEST				AML	AML	13 09 40.9	
	comp=E,42479µm,0.4s						
NEST				AML	AML	13 09 43.1	
	comp=N,36483µm,0.7s						
JAN	Janina	0.89	240	P	Pb	13 09 27.6	-0.7
JAN				S	Sn	13 09 41.2	-0.5
JAN	Janina	0.89	240	P	Pb	13 09 27.9	-0.3
GRG	Griva	0.95	26	P	Pb	13 09 28.9	-0.4
GRG				S	Sn	13 09 43.4	+0.3
GRG	Griva	0.95	26	P	Pb	13 09 28.9	-0.4
GRG				S	Sb	13 09 41.6	0.0
GRG				AML	AML	13 09 46.1	
	comp=N,7240µm,0.7s						
GRG				AML	AML	13 09 50.9	
	comp=E,7683µm,0.8s						
THE	Thessaloniki	1.00	58	P	Pg	13 09 30.7	+0.2
THE	Thessaloniki	1.00	58	*i* PG	Pg	13 09 30.9	+0.4
THE				*i* SG	Sn	13 09 45.1	+0.8
THE	Thessaloniki	1.00	58	P	Pg	13 09 30.6	+0.2
FYTO	Fytoko, Volos	1.09	129	P	Pn	13 09 31.8	0.0
FYTO				S	Sn	13 09 48.5	+2.0
AGG	Agios Georgios	1.14	161	*e*Pn	Pg	13 09 32.9	-0.4
AGG	Agios Georgios	1.14	161	P	Pg	13 09 33.0	-0.2
AGG				S	Sg	13 09 49.5	+1.4
AGG	Agios Georgios	1.14	161	P	Pg	13 09 32.8	-0.4
AGG				S	Sg	13 09 49.2	+1.1
AGG				AML	AML	13 09 57.1	
	comp=E,14826µm,1.0s						
AGG				AML	AML	13 09 57.7	
	comp=N,20152µm,1.0s						
EVR	Evrytania	1.19	182	P	Pb	13 09 33.4	+0.1
EVR	Evrytania	1.19	182	P	Pn	13 09 33.1	-0.1
EVR				S	Sg	13 09 50.9	+1.4
EVR				AML	AML	13 09 53.5	
	comp=E,22787µm,0.6s						
EVR				AML	AML	13 09 53.5	
	comp=N,21112µm,0.5s						
PLG	Polygyros	1.25	77	P	Pn	13 09 34.1	+0.1
PLG	Polygyros	1.25	77	P	Pb	13 09 34.3	0.0
PLG				S	Sn	13 09 51.0	+0.5
PLG				AML	AML	13 09 54.8	
	comp=E,2673µm,1.0s						
PLG				AML	AML	13 09 55.2	
	comp=N,3332µm,0.9s						
OHR	Ohrid	1.29	322	*i* Pn	Pb	13 09 35.1	+0.1
OHR				*i* Sn	Sg	13 09 54.8	+2.1
IGT	Igoumenitsa	1.30	244	*e*Pg	Pg	13 09 36.1	-0.1
IGT				*e*Sg	Sg	13 09 55.7	+2.5
IGT	Igoumenitsa	1.30	244	*i* PN	Pg	13 09 36.5	+0.3
IGT				*i* SN	Sg	13 09 55.6	+2.4
IGT	Igoumenitsa	1.30	244	P	Pb	13 09 35.4	+0.1
IGT				S	Sg	13 09 55.3	+2.1
IGT				AML	AML	13 09 59.0	
	comp=N,6393µm,0.9s						
IGT				AML	AML	13 10 01.5	
	comp=E,7863µm,0.8s						
KNT	Kendrikon	1.32	37	P	Pb	13 09 35.6	0.0
KNT				S	Sg	13 09 54.3	+0.5
KNT				AML	AML	13 09 57.2	
	comp=E,1933µm,0.7s						
KNT				AML	AML	13 10 01.1	
	comp=N,2436µm,1.1s						
NEO	Neokhori	1.32	127	P	Pb	13 09 35.8	+0.1
NEO				S	Sg	13 09 53.9	0.0
NEO				AML	AML	13 09 59.7	
	comp=N,17160µm,0.7s						
NEO				AML	AML	13 10 04.8	
	comp=E,13096µm,0.7s						
VAY	Valandovo	1.33	24	*e*Pg	Pn	13 09 35.5	+0.4
VAY				*e*Sg	Sn	13 09 52.4	-0.1
VAY	Valandovo	1.33	24	*i* Pn	Pb	13 09 35.9	+0.1
VAY				*i* Sn	Sg	13 09 55.7	+1.6
SOH	Sokhos	1.35	57	P	Pb	13 09 36.4	+0.3
SOH	Sokhos	1.35	57	P	Pb	13 09 36.4	+0.3
SOH				S	Sg	13 09 55.2	+0.4
SOH				AML	AML	13 10 04.4	
	comp=N,2260µm,0.6s						
SOH				AML	AML	13 10 06.5	
	comp=E,4732µm,0.6s						
TPE	Tepelena	1.42	278	*i* PN	Pg	13 09 38.5	0.0
TPE				*i* SN	Sg	13 09 58.7	+1.6
SRN	Sarande	1.44	262	*i* PN	Pg	13 09 38.7	-0.2
SRN				*i* SN	Sg	13 09 59.4	+1.8
STIP	Stip	1.61	9	*i* Pn	Pg	13 09 41.6	-0.4
KEK	Kerkira	1.63	257	P	Pg	13 09 41.8	-0.6
KEK				AML	AML	13 10 15.4	
	comp=N,5014µm,0.6s						
KEK				AML	AML	13 10 15.7	
	comp=E,3754µm,0.5s						
OUR	Ouranopolis	1.65	81	P	Pb	13 09 40.4	-0.7
OUR				S	Sb	13 10 01.8	+0.2
OUR				AML	AML	13 10 22.0	
	comp=E,3100µm,1.1s						
OUR				AML	AML	13 10 28.6	
	comp=N,2474µm,0.9s						
SRS	Serrai	1.67	52	*e*Pg	Pn	13 09 40.3	+0.6
SRS				*e*Sg	Sb	13 10 03.0	+0.8
SRS	Serrai	1.67	52	P	Pn	13 09 40.3	+0.6
SRS				AML	AML	13 10 14.0	
	comp=N,1262µm,0.7s						
SRS				AML	AML	13 10 14.4	
	comp=E,1149µm,0.7s						
VLO	Vlora	1.84	282	*i* PN	Pg	13 09 46.9	+0.5
VLO				*i* SN	Sg	13 10 11.7	+1.3
SKO	Skopje	1.89	351	*e*Pg	Pb	13 09 46.3	+1.0
SKO				*e*Sg	Sg	13 10 13.6	+1.6
SKO	Skopje	1.89	351	*i* Pn	Pb	13 09 44.3	-1.0
SKO				*i* Sn	Sg	13 10 13.1	+1.1
PHP	Peshkopia	1.91	326	*i* PN	Pb	13 09 46.2	+0.6
PHP				*i* SN	Sg	13 10 13.1	+0.5
TIR	Tirane	1.96	310	*e*Pn	Pb	13 09 46.2	-0.2
TIR	Tirane	1.96	310	*e*Pg	Pb	13 09 47.4	+1.0
TIR				*e*Sg	Sg	13 10 16.9	+2.8
TIR	Tirane	1.96	310	⇓*i*P	Pb	13 09 47.2	+0.8
TIR	Tirane	1.96	310	S	Sg	13 10 13.1	-1.0
TIR	Tirane	1.96	310	*i* PN	Pb	13 09 47.4	+1.0
TIR				*i* SN	Sg	13 10 14.5	+0.5
KKB	Krupnik	1.99	27	*e*P	Pn	13 09 45.3	+1.1
MMB	Musomiste	2.06	43	*e*P	Pn	13 09 46.4	+1.3
BCI	Bajram Curri	2.63	330	*i* PN	Pn	13 09 55.4	+2.4
RZN	Rozhen	2.69	53	*e*P	Pn	13 09 55.2	+1.3
BARS	Barje	2.71	359	*e*Pn	Pn	13 09 55.8	+1.7
BARS	Barje	2.71	359	*e*Pn	Pg	13 10 12.2	+9.1
ULC	Ulcinj	2.71	314	⇑*i*Pn	Pb	13 09 57.3	-2.0
ULC				*e*Sn	Sn	13 10 27.6	+1.0
VTS	Vitosha	2.72	22	*e*Pn	Pn	13 09 55.5	+1.2
VTS	Vitosha	2.72	22	⇓*i*P	Pn	13 09 55.6	+1.2
VTS	Vitosha	2.72	22	*e*P	Pn	13 09 56.2	+1.9
PVY	Plav	2.87	331	⇑*i*Pn	Pn	13 09 58.8	+2.5
PVY				*i* Sn	Sn	13 10 30.3	-0.3
DRME	Dracevica, Mon	2.90	317	⇑*i*Pn	Pb	13 10 00.1	-2.3
DRME				*e*Sn	Sn	13 10 31.6	+0.5
DRME	Dracevica, Mon	2.90	317	*e*Pn	Pn	13 09 59.4	+2.8
ITM	Ithomi	2.92	179	*e*Pn	Pn	13 09 59.0	+2.1
PGB	Panagyurishte	3.00	35	*e*P	Pn	13 10 00.9	+2.8
PDG	Podgorica	3.04	321	*e*Pn	Pn	13 10 01.7	+3.1
PDG	Podgorica	3.04	321	⇑*i*P	Pb	13 10 02.1	-2.7
PDG	Podgorica	3.04	321	*e*Pn	Pn	13 10 01.4	+2.8
TTG	Podgorica	3.04	321	⇓*i*Pn	Pb	13 10 02.1	-2.7
TTG				*i* Sn	Sn	13 10 34.9	+0.3
TTG	Podgorica	3.04	321	*e*Pn	Pn	13 10 01.3	+2.8
KDZ	Kurdzhali	3.11	59	*e*P	Pn	13 10 01.4	+1.8
BUM	Brajici-Budva	3.13	315	⇑*i*Pn	Pn	13 10 02.5	+2.6
BUM				*e*Sn	Sn	13 10 37.6	+0.6
IVA	Berane	3.13	333	⇓*i*Pn	Pn	13 10 02.5	+2.5
IVA				*i* Sn	Sn	13 10 36.4	-0.7
SELS	Selova	3.16	350	*e*Pn	Pn	13 10 01.3	+1.0
ZAPS	Zavoj	3.22	10	*e*Pn	Pn	13 10 02.9	+1.8
KOME	Kolasin	3.26	328	⇓*i*Pn	Pn	13 10 04.8	+3.1
KOME				*e*Sn	Sn	13 10 39.9	-0.3
CEME	Cevo	3.29	319	⇓*i*Pn	Pn	13 10 05.2	+3.1
CEME				*e*Sn	Sn	13 10 41.9	+0.9
ALN	Alexandroupoli	3.29	75	*e*Pn	Pn	13 10 03.6	+1.6
CGL1	Ceglie Messapi	3.39	281	*e*Pn	Pn	13 10 05.0	+1.6
DIM	Dimitrovgrad	3.39	54	*e*P	Pb	13 10 07.9	-3.0
NKME	Niksic	3.44	322	⇑*i*Pn	Pn	13 10 07.2	+3.1
NKME				*e*Sn	Sn	13 10 44.5	-0.1
EZN	Ezine	3.45	93	⇑*i*P	Pn	13 10 06.2	+2.0
HCY	Herceg Novi	3.45	314	⇓*i*Pn	Pn	13 10 07.8	+3.6
HCY				*e*Sn	Sn	13 10 45.6	+0.9
HCY	Herceg Novi	3.45	314	*e*Pn	Pn	13 10 07.6	+3.4
SJES	Sjenica	3.45	337	*e*Pn	Pn	13 10 06.8	+2.4
NKY	Niksic	3.46	322	⇓*i*Pn	Pn	13 10 07.2	+2.8
NKY				*i* Sn	Sn	13 10 45.2	+0.1
FASA	Fasano	3.50	283	⇓*i*Pn	Pn	13 10 06.8	+1.8
TAR1	Taranto	3.52	278	⇓*i*Pn	Pn	13 10 06.5	+1.4
BOVS	Bovan	3.53	358	*e*Pn	Pn	13 10 06.9	+1.6
MPEP	Malo Peshtene	3.54	23	P	Pn	13 10 08.8	+3.3
MASS	Massafra	3.63	280	⇓*i*Pn	Pn	13 10 10.2	+3.4
IVAS	Ivanjica	3.69	340	*e*Pn	Pn	13 10 08.5	+0.8
TREB	Trebinje	3.71	316	*e*Pn	Pn	13 10 09.9	+2.1
TREB	Trebinje	3.71	316	*e*Pn	Pn	13 10 09.5	+1.7
PLE	Pljevlja	3.71	331	⇓*i*Pn	Pn	13 10 10.6	+2.6
PLE				*i* Sn	Sn	13 10 50.6	-0.8
BRY	Bratogost	3.74	319	⇑*i*Pn	Pn	13 10 11.3	+2.9
BRY				*i* Sn	Sn	13 10 51.9	-0.3
BRY	Bratogost	3.74	319	*e*Pn	Pn	13 10 11.4	+3.0
DBRK	Dubrovnik	3.79	314	*e*Pn	Pn	13 10 11.1	+2.2
DBRK				Sn	Sn	13 10 56.0	+2.9
UPM	Unac-Piva	3.80	325	⇓*i*Pn	Pn	13 10 12.3	+3.0
UPM				*i* Sn	Sn	13 10 52.9	-0.9
UPM	Unac-Piva	3.80	325	*e*Pn	Pn	13 10 12.5	+3.2
GRUS	Gruza	3.88	348	*e*Pn	Pn	13 10 11.7	+1.6
BAI	Bari	3.92	286	⇓*i*Pn	Pn	13 10 12.3	+1.7
BAI				Sn	Sn	13 10 55.8	-0.4
MATE	Matera	3.97	280	⇓*i*P	Pn	13 10 13.3	+2.0
RUDO	Rudo	3.97	333	*e*Pn	Pn	13 10 12.4	+1.0
SG1	Sgolgore (BA)	4.01	282	⇓*i*Pn	Pn	13 10 13.8	+1.8
SG1				Sn	Sn	13 10 59.9	+1.2
TIP	Timpagrande	4.04	258	*e*Pn	Pn	13 10 13.8	+1.4
TIP	Timpagrande	4.04	258	⇓*i*P	Pn	13 10 13.8	+1.4
STON	Ston	4.17	313	*e*Pn	Pn	13 10 16.0	+1.9
STON				*e*Sn	Sn	13 11 05.0	+2.6
STON	Ston	4.17	313	*e*Pn	Pn	13 10 16.2	+2.1
STON				Sn	Sn	13 11 02.6	+0.1
STON	Ston	4.17	313	*e*Pn	Pn	13 10 16.3	+2.2
BBLS	Lazići	4.18	335	*e*Pn	Pn	13 10 16.2	+1.9
BBLS	Lazići	4.18	335	*e*Pn	Pn	13 10 15.6	+1.3
APE	Apeiranthos	4.18	135	⇑*i*P	Pn	13 10 16.5	+2.2
DIVS	Divibare	4.22	341	*e*Pn	Pn	13 10 16.9	+2.0
DIVS	Divibare	4.22	341	*e*Pn	Pn	13 10 17.0	+2.0
TRUS	Trudelj	4.25	346	*e*Pn	Pn	13 10 16.7	+1.4
KUBS	Kucevo	4.31	358	*e*Pn	Pn	13 10 16.6	+0.6
HAPS	Han Pijesak,BI	4.53	332	*e*Pn	Pn	13 10 21.1	+2.0
HAPS	Han Pijesak,BI	4.53	332	*e*Pn	Pn	13 10 20.2	+1.1
BALB	Balikesir	4.66	94	*e*Pn	Pn	13 10 21.6	+0.8
MDVR	Moldovita	4.67	359	⇑*i*P	Pn	13 10 23.3	+2.2
TEKS	Tekeris	4.76	340	*e*Pn	Pn	13 10 23.5	+1.2
TEKS	Tekeris	4.76	340	*e*Pn	Pn	13 10 23.3	+1.0
MAKA	Makarska	4.82	313	*e*Pn	Pn	13 10 24.4	+1.4
MAKA				Sn	Sn	13 11 19.3	+0.8
CEL	Celeste	4.98	250	*e*Pn	Pn	13 10 26.5	+1.2
FRGS	Fruska Gora	5.27	344	*e*Pn	Pn	13 10 30.8	+1.5
FRGS				*e*Sn	Sn	13 11 30.7	+1.0
FRGS	Fruska Gora	5.27	344	*e*Pn	Pn	13 10 30.3	+1.0
GZR	Gura Zlata	5.33	7	⇑*i*P	Pn	13 10 31.7	+1.6
IDI	Anoyia	5.38	152	Pn	Pn	13 10 31.2	+0.4
	comp=E,0.2nm,0.3s,baz=322,slow=18,SNR=1.6						
IDI				Sn	Sn	13 11 33.1	+0.7
	comp=E,1.8nm,0.3s,baz=286,slow=19,SNR=2.1						
IDI				Lg	Lg	13 11 40.2	
	comp=E,4.5nm,0.3s,baz=45,slow=20,SNR=6.4						
MANT	Manisa	5.45	105	*e*Pn	Pn	13 10 30.2	-1.7
BZS	Buzias	5.51	358	⇑*i*P	Pn	13 10 34.6	+2.1
MGRS	Mrkonjic Grad	5.58	322	*e*Pn	Pn	13 10 36.1	+2.6
KIJV	Kijevo	5.62	316	*e*Pn	Pn	13 10 35.6	+1.5
KIJV				Sn	Sn	13 11 40.1	+1.7
BLY	Banja Luka	5.79	325	*e*Pn	Pn	13 10 38.4	+2.0
BLY	Banja Luka	5.79	325	⇓*i*P	Pn	13 10 39.3	+3.0
BLY	Banja Luka	5.79	325	S	Sn	13 11 40.2	-2.1
BLY	Banja Luka	5.79	325	*e*Pn	Pn	13 10 38.2	+1.9
VOIR		5.83	23	⇓*i*P	Pn	13 10 38.4	+1.5
ZIRJ	Zirje	5.83	309	*i* Pn	Pn	13 10 38.1	+1.1
ZIRJ				Sn	Sn	13 11 42.4	-1.2
MORI	Morici	5.92	311	*e*Pn	Pn	13 10 40.6	+2.5
SIRR	Siria	6.16	359	⇓*i*P	Pn	13 10 44.7	+3.2
MLR	Muntele Rosu	6.17	28	Pn	Pn	13 10 44.4	+2.7
	comp=E,1.3nm,0.3s,baz=185,slow=7.7,SNR=13						
MLR				Lg	Lg	13 12 18.6	
	comp=E,0.4nm,0.3s,baz=197,slow=17,SNR=2.0						
MLR				LR	LR	13 13 30.5	
	comp=E,169nm,18.9s,baz=141,slow=41						
MLR	Muntele Rosu	6.17	28	*e*Pn	Pn	13 10 43.8	+2.1
MLR	Muntele Rosu	6.17	28	⇓*i*P	Pn	13 10 45.8	+4.1
KARP	Karpathos	6.19	136	*e*Pn	Pn	13 10 42.6	+0.7
UDBI	Udbina	6.32	316	*e*Pn	Pn	13 10 46.1	+2.4
UDBI				Sn	Sn	13 11 56.8	+1.3
DUGI	Dugi Otok	6.38	310	*e*Pn	Pn	13 10 45.8	+1.3
VAE	Valguarnera	6.38	248	Pn	Pn	13 10 41.1	-3.4
	comp=E,1.6nm,0.3s,baz=72,slow=20,SNR=2.0						
VAE				Sn	Sn	13 11 57.5	+0.5
	comp=E,1.6nm,0.3s,baz=90,slow=20,SNR=2.6						
VAE				Lg	Lg	13 12 14.4	
	comp=E,6.1nm,0.3s,baz=72,slow=8.2,SNR=6.1						
MORH	Mrgy, Hungar	6.54	340	*e*Pn	Pn	13 10 48.0	+1.4
MORH				Sn	Sn	13 12 04.1	+3.1
MORH				*e*Sg	Sg	13 12 46.1	+5.1
PLOR	Plostina	6.73	30	⇑*i*P	Pn	13 10 52.5	+3.1
AQU	L'Aquila	6.75	292	*e*Pn	Pn	13 10 51.9	+2.2
VRI	Vrincioaia	6.78	30	⇓*i*P	Pn	13 10 53.0	+3.1
NVLJ	Novalja	6.83	313	*e*Pn	Pn	13 10 50.7	+0.2
CFR	Carcaliu	6.87	40	⇑*i*P	Pn	13 10 53.6	+2.5
ISP	Isparta	7.13	106	*e*Pn	Pn	13 10 54.1	-0.8
WDD	Wied Dalam	7.19	236	*e*Pn	Pn	13 10 58.7	+3.2
TIH	Tihany	7.38	338	*e*Pn	Pn	13 11 02.1	+3.9
TIH				Sn	Sn	13 12 23.1	+1.6
CRES	Cresnjev	7.39	323	*e*Pn	Pn	13 11 00.1	+1.7
BUD	Budapest	7.66	345	⇓*e*Pn	Pn	13 11 05.1	+3.1
CSKK	Cskako	7.71	341	*e*Pn	Pn	13 11 07.1	+4.4
CSKK				Sn	Sn	13 12 32.0	+2.4
CEY	Cerknica	7.83	318	*e*Pn	Pn	13 11 05.9	+1.4
PSZ	Piszkesteto	7.94	350	*e*Pn	Pn	13 11 08.4	+2.5
PSZ	Piszkesteto	7.94	350	⇑*i*P	Pn	13 11 07.8	+1.9
PSZ	Piszkesteto	7.94	350	*e*Pn	Pn	13 11 08.1	+2.2
PSZ				Sn	Sn	13 12 38.1	+2.7
TRPA	Tarpa	8.04	3	*e*Pn	Pn	13 11 10.1	+2.9
SOKA	Soboth	8.23	325	*e*Pn	Pn	13 11 11.7	+1.7
	comp=E,9.5nm,0.5s						
SOKA				*e*Sn	Sn	13 12 45.0	+2.4
	comp=E,1.0nm,0.2s						
OBKA	Obir	8.32	323	*e*Pn	Pn	13 11 13.2	+2.0
	comp=E,2.7nm,0.4s						
OBKA				*e*Sn	Sn	13 12 45.9	+1.0
	comp=E,24nm,0.6s						
KECS	Kecovo	8.43	354	*e*PN	Pn	13 11 17.7	+5.1
ARSA	Arzberg	8.49	329	*e*Pn	Pn	13 11 13.1	-0.3
	comp=E,1.0nm,0.2s						
VYHS	Vyhne	8.66	347	*e*PN	Pn	13 11 18.9	+3.1
VYHS				*e*SN	Sn	13 12 50.0	-3.1
MYKA	Terra Mystica	8.85	320	*e*Pn	Pn	13 11 27.2	+8.9
	comp=E,2.2nm,0.4s						
MODS	Modra-Piesok	8.89	340	*e*PN	Pn	13 11 20.9	+1.9
MODS				*e*LG	Lg	13 12 54.2	
MODS	Modra-Piesok	8.89	340	*e*SN	Sn	13 12 54.4	-4.4
CONA	Conrad Observa	8.93	333	*e*Pn	Pn	13 11 19.9	+0.3
	comp=E,0.5nm,0.3s						
CONA				*i* Sn	Sn	13 13 00.0	+0.2
	comp=E,1.4nm,0.4s						
BR101	Keskin Array S	9.07	89	*e*Pn	Pn	13 11 21.7	+0.2
BRTR	Keskin Array B	9.07	89	Pn	Pn	13 11 21.7	+0.2
	comp=E,0.2nm,0.3s,baz=263,slow=11,SNR=4.7						
KBA	Koelnbreinsper	9.31	321	*e*Pn	Pn	13 11 25.3	+0.5
	comp=E,0.7nm,0.3s						
KBA				*e*Sn	Sn	13 13 09.8	+0.6
	comp=E,4.4nm,0.6s						
MOA	Molln	9.47	327	*e*Pn	Pn	13 11 28.3	+1.4
	comp=E,1.5nm,0.3s						
MOA				*e*Sn	Sn	13 13 14.6	+1.5
	comp=E,6.3nm,0.6s						
VRAC	Vranov	9.93	340	Pn	Pn	13 11 36.9	+3.7
	comp=E,0.7nm,0.3s,baz=166,slow=15,SNR=4.0						
VRAC				LR	LR	13 15 21.0	
	comp=E,35nm,20.4s,baz=318,slow=37						
MORC	Moravsky Berou	10.14	344	*e*Pn	Pn	13 11 40.0	+3.9
WTTA	Wattenberg	10.29	317	*e*Pn	Pn	13 11 40.0	+1.8
	comp=E,1.7nm,0.3s						
WTTA				Sn	Sn	13 13 31.5	-1.7
	comp=E,24nm,0.7s						
WATA	Walderalm	10.37	318	*e*Pn	Pn	13 11 37.3	-1.9
	comp=E,1.6nm,0.2s						
SQTA	Sankt Quirin	10.48	316	*e*Pn	Pn	13 11 44.3	+3.4
	comp=E,1.3nm,0.2s						
SQTA				*e*Sn	Sn	13 13 38.9	+0.9
	comp=E,6.7nm,0.5s						
GERES	GERESS Array B	10.49	329	Pn	Pn	13 11 43.5	+2.6
	comp=E,0.2nm,0.3s,baz=157,slow=18,SNR=4.6						
GERES				LR	LR	13 16 57.2	
	comp=E,25nm,19.9s,baz=152,slow=44						
MOTA	Moosalm	10.62	316	*e*Pn	Pn	13 11 43.6	+0.9
	comp=E,0.8nm,0.2s						
FETA	Feichten	10.62	314	*e*Pn	Pn	13 11 46.2	+3.5
	comp=E,1.8nm,0.5s						
FETA				*e*Sn	Sn	13 13 41.4	0.0
	comp=E,2.6nm,0.6s						
FUORN	Ofenpass-Fuorn	10.65	311	*e*Pn	Pn	13 11 46.5	+3.2
KHC	Kasperske Hory	10.77	330	*e*Pn	Pn	13 11 47.4	+2.6
KEST	Kesra	10.80	250	Pn	Pn	13 11 43.5	-1.7
	comp=E,0.1nm,0.3s,baz=37,slow=5.1,SNR=2.7						
KEST	Kesra	10.80	250	*e*Pn	Pn	13 11 44.8	-0.4
DAVOX	Davos/Dischmat	10.96	311	Pn	Pn	13 11 49.5	+2.1
	comp=E,0.2nm,0.3s,baz=127,slow=20,SNR=2.9						
TUE	Stuetta	11.11	309	*e*Pn	Pn	13 11 53.0	+3.6
DAVA	Damuels	11.25	314	*e*Pn	Pn	13 11 52.3	+1.0
	comp=E,1.8nm,0.3s						
AKASG	Malin Array Be	11.79	24	Pn	Pn	13 12 02.0	+3.5
	baz=201,slow=9.9,SNR=3.8						
AKBB	Malin Array Si	11.79	24	*e*Pn	Pn	13 12 02.0	+3.5
GRFO	Grafenberg	12.18	325	*e*Pn	Pn	13 12 05.9	+2.0
GRA1	Grafenberg Arr	12.18	325	*e*Pn	Pn	13 12 05.9	+1.9
SENIN	Lac Senin/Sane	12.31	305	*e*Pn	Pn	13 12 09.5	+3.6
ESDC	Sonseca Array	19.80	277	P	P	13 13 39.6	-1.2
	comp=E,0.1nm,0.3s,baz=73,slow=12,SNR=7.0						
HFS	Hagfors	20.69	348	P	P	13 13 50.6	+0.3
	comp=E,3.3nm,0.5s,baz=158,slow=12,SNR=11						
FIA0	FINESS Array S	21.52	6	*e*P	P	13 13 59.5	+0.3
FINES	FINESS Array B	21.52	6	P	P	13 13 59.5	+0.3
	comp=E,2.6nm,0.7s,baz=194,slow=15,SNR=8.1						
FINES				LR	LR	13 23 12.0	
	comp=E,60nm,18.2s,baz=212,slow=39						

NB2	NORSAR Subarra	21.97	346	P	P	13 14 04.0	-0.1
	comp=Z,3.6nm,0.6s,baz=160,slow=11						
NB200	NORSAR Array S	21.97	346	*e*P	P	13 14 04.2	+0.1
NOA	NORSAR Array B	21.97	346	P	P	13 14 04.2	+0.1
	comp=Z,2.7nm,0.6s,baz=162,slow=10,SNR=8.2						
NOA				LR	LR	13 24 01.1	
	comp=Z,33nm,18.0s,baz=185,slow=40						
TAM	Tamanrasset	22.12	224	*e*P	P	13 14 08.8	+2.6
	comp=Z,3.9nm,0.7s						
MDT	Midelt	22.44	259	P	P	13 14 05.5	-4.0
	comp=Z,2.6nm,0.9s,baz=77,slow=7.9,SNR=2.6						
AKTO	Aktyubinsk	27.22	56	P	P	13 14 53.6	-0.5
	comp=Z,0.8nm,0.3s,baz=263,slow=11,SNR=3.8						
TOA1	Torodi Ar. Sit	32.17	219	*e*P	P	13 15 34.8	-3.5
TOA0	Torodi Ar. Sit	32.18	219	*e*P	P	13 15 39.1	+0.8
	comp=Z,29nm,1.9s						
TORD	Torodi Ar. Bea	32.18	219	P	P	13 15 34.8	-3.6
	comp=Z,5.1nm,0.3s,baz=31,slow=9.3,SNR=3.6						
DBIC	Dimbokro	41.01	223	P	P	13 16 50.0	-3.6
	comp=Z,7.9nm,1.1s,baz=346,slow=4.2,SNR=2.0						
MK31	Makanchi Array	43.43	60	*e*P	P	13 17 14.0	+0.8
	comp=Z,1.8nm,0.8s						
MK32	Makanchi Array	43.43	60	*e*P	P	13 17 13.2	+0.1
MKAR	Makanchi Array	43.43	60	P	P	13 17 13.2	+0.1
	comp=Z,2.0nm,0.8s,baz=276,slow=6.9,SNR=9.9						
ZAA1	Zalesovo Array	43.65	50	*e*P	P	13 17 15.2	+0.4
ZAA0	Zalesovo Array	43.65	50	*e*P	P	13 17 15.5	+0.8
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	43.65	50	P	P	13 17 15.2	+0.4
	comp=Z,0.8nm,0.3s,baz=272,slow=10,SNR=6.7						
WMQ	Urumqi	47.94	63	*e*P	P	13 17 51.7	+2.8
GTA	Gaotai	58.02	63	*e*P	P	13 19 05.6	+2.2
GTA				pP	sP	13 19 09.7	-0.8
GTA				sP	pP	13 19 12.7	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CD2	Chengdu	65.11	70	*e*P	P	13 19 50.7	-0.6
XAN	Xi'an	67.04	64	P	P	13 20 04.2	+0.6
XAN				pP	pP	13 20 08.5	-0.4
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMI	Kunming	67.60	75	P	P	13 20 09.5	+2.0
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
BOSA	Boshof	68.44	177	P	P	13 20 08.9	-3.4
	comp=Z,2.5nm,1.1s,baz=117,slow=4.5,SNR=1.9						
CM31	Chiang Mai Arr	68.62	84	*e*P	P	13 20 11.7	-2.1
	comp=Z,30nm,1.9s						
CMAR	Chiang Mai Arr	68.62	84	P	P	13 20 11.7	-2.1
	comp=Z,0.6nm,0.4s,baz=307,slow=8.2,SNR=5.2						
ILAR	Eielson Array	75.09	355	P	P	13 20 53.1	+1.3
	comp=Z,0.3nm,0.7s,baz=35,slow=3.3,SNR=3.0						
ILB	Eielson Array	75.09	355	*e*P	P	13 20 53.1	+1.3
	comp=Z,4.7nm,1.5s						
KS15	Wonju Array Si	77.30	52	*e*P	P	13 21 05.1	+0.2
	comp=Z,76nm,1.8s						
KSRS	Korea Array	77.31	52	P	P	13 21 05.1	+0.2
	comp=Z,2.2nm,0.8s,baz=304,slow=4.2,SNR=7.3						
TXAR	Lajitas Array	94.38	315	P	P	13 22 30.1	-0.4
	comp=Z,0.2nm,0.6s,baz=87,slow=4.4,SNR=4.0						
AS31	Alice Springs	121.34	96	*e*PKPdf	PKPdf	13 28 02.8	-1.0
ASAR	Alice Springs	121.34	96	PKP	PKPdf	13 28 02.8	-1.0
	comp=Z,1.0nm,1.1s,baz=340,slow=2.5,SNR=4.3						

IDC ***03*** *13:28:20.9±0.4, 40°.07N×21°.77E, h0^{km}, mb4.6/33, mb1 4.6/49, mb1mx4.6/55, mbtmp4.5/49, ML4.0/13, MS4.1/35, Ms1 4.1/35, ms1mx4.0/51, Error ellipse: s-maj=8.4km s-min=7.4km az=84.0*

SOF ***03*** *13:28:21.8, 40°.05N×21°.83E, h6^{km}*

BJI ***03*** *13:28:21.6±0.0, 40°.10N×21°.80E, h11^{km}, mb5.0/53, mB5.0/39, Ms4.8/27, Ms7 4.5/17*

MOS ***03*** *13:28:22.5±1.0, 40°.13N×21°.83E, h16^{km}, mb5.2/55, Error ellipse: s-maj=3.6km s-min=2.2km az=90.7*

PDG ***03*** *13:28:22.7±0.3, 40°.05N×21°.88E, h9^{km}±1^{km}, MD5.0/10, ML4.9/5, Error ellipse: s-maj=1.5km s-min=1.8km az=0.0*

SKO ***03*** *13:28:23.1, 40°.06N×21°.77E, h15^{km}, M4.5, ML4.9*

THE ***03*** *13:28:23.8, 40°.12N×21°.85E, h4^{km}±1^{km}, ML4.6/13, Error ellipse: s-maj=1.3km s-min=0.5km az=250.0*

TIR ***03*** *13:28:23.9, 40°.12N×21°.85E, h10^{km}, Md4.2/9*

MED_RC ***03*** *13:28:23.0±0.2, 40°.04N×21°.80E, h17^{km}, MW4.9/21, Moment Tensor Solution.Mantle waves: s21,c36; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.44±.20; M$_{\theta\theta}$1.78±.13; M$_{\phi\phi}$0.67±.12; M$_{r\theta}$-1.29±.25; M$_{\theta\phi}$1.76±.08; M$_{\phi r}$-1.15±.26; Best double couple: M$_0$3.25000×10^{16} NP1:φ$_s$50.00000°, δ61.00000°, λ-94.00000°. NP2: φ$_s$239.00000°, δ29.00000°, λ-83.00000°. Principal axes: T 3.5600, Plg16.0000°, Azm143.0000°; N -0.6100, Plg4.0000°, Azm52.0000°; P -2.9400, Plg74.0000°, Azm310.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

GCMT ***03*** *13:28:23.7±0.3, 39°.98N±0°.02×21°.79E±0°.03, h19^{km}, MW4.9/76, Moment Tensor Solution. s31,c37; s76,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.72±.17; M$_{\theta\theta}$2.01±.12; M$_{\phi\phi}$0.71±.11; M$_{r\theta}$-0.45±.25; M$_{\theta\phi}$1.65±.07; M$_{\phi r}$-1.30±.25; Best double couple: M$_0$3.24900×10^{16} NP1:φ$_s$40.00000°, δ57.00000°, λ-109.00000°. NP2: φ$_s$252.00000°, δ37.00000°, λ-63.00000°. Principal axes: T 3.3390, Plg11.0000°, Azm143.0000°; N -0.1800, Plg16.0000°, Azm50.0000°; P -3.1590, Plg71.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGS ***03*** *13:28:23.1±1.8, 40°.68N×22°.79E, h20^{km}, mb5.1, MS4.6*

ATH ***03*** *13:28:23.0, 40°.14N×21°.87E, h20^{km}, ML4.6/31, Error ellipse: s-maj=0.9km s-min=0.6km az=321.0*

BEO ***03*** *13:28:24.3±0.4, 40°.09N×21°.94E, h10^{km}±2^{km}, ML4.6/10*

NEIC ***03*** *13:28:24.7±0.6, 40°.15N×21°.83E, h18^{km}±4^{km}, mb5.2/259, MW4.8, ML4.6(THE), Error ellipse: s-maj=2.4km s-min=1.7km az=200.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.15; M$_{\theta\theta}$1.28; M$_{\phi\phi}$0.87; M$_{r\theta}$-0.60; M$_{\theta\phi}$1.10; M$_{\phi r}$0.17; Best double couple: M$_0$2.30000×10^{16} NP1:φ$_s$218.00000°, δ42.00000°, λ-109.00000°. NP2:φ$_s$63.00000°, δ51.00000°, λ-73.00000°. Principal axes: T 2.2200, Plg5.0000°, Azm141.0000°; N 0.0800, Plg13.0000°, Azm232.0000°; P -2.3000, Plg76.0000°, Azm31.0000°;*

NEIC Felt at Larisa and Velventos. Also felt at Ohrid, Macedonia.

ISCJB ***03*** *13:28:24.5±0.2, 40°.161N±0°.009×21°.824E±0°.010, h29^{km}±1^{km}, mb5.1/307, MS4.2/35 Error ellipse: s-maj=1.5km s-min=1.2km az=30.1*

PRU ***03*** *13:28:26.4±0.0, 40°.24N×21°.77E, h0^{km}, M5.2*

GII ***03*** *13:28:27.2±0.0, 38°.71N×20°.98E, h16^{km}, mb5.0/1, MD5.0/1*

ISC 03 13:28:23.6±0.6**, 40°.12N**±0°.01×**21°.85E**±0°.01**, h12**^{km}±3^{km}**, n1532,** σ1^{s}.**44**/1695**, mb5.2**/321**, MS4.4**/50**, 44C-51D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.19	341	P	Pg	13 28 27.7	-0.2
KZN				S	Sg	13 28 30.8	-0.2
KZN	Kozani	0.19	341	P	Pg	13 28 27.7	-0.2
KZN				S	Sg	13 28 30.7	-0.2
KZN	Kozani	0.19	341	P	Pg	13 28 27.8	-0.2
KZN				S	Sg	13 28 30.7	-0.2
KZN				AML	AML	13 28 31.2	
KZN				AML	AML	13 28 31.4	
KTI	Kastanea	0.34	37	P	Pg	13 28 30.7	+0.2
KPRO	Kipourio	0.41	246	P	Pg	13 28 31.6	-0.1
KPRO				S	Sg	13 28 37.8	+0.5
	125μm,1.1s						
KPRO	Kipourio	0.41	246	P	Pg	13 28 31.8	+0.1
KPRO				S	Sg	13 28 37.7	+0.5
KPRO				AML	AML	13 28 42.9	
KPRO				AML	AML	13 28 47.5	
PENT	Pentalofos	0.55	278	P	Pg	13 28 34.0	-0.4
PENT				S	Sg	13 28 41.4	-0.3
	79μm,0.6s						
PENT	Pentalofos	0.55	278	P	Pg	13 28 33.9	-0.5
PENT				AML	AML	13 28 45.5	
PENT				AML	AML	13 28 48.1	
THL	Klokotos Trika	0.57	167	P	Pg	13 28 34.3	-0.4
THL				S	Sg	13 28 42.6	+0.3
	47μm,0.7s						
THL	Klokotos Trika	0.57	167	P	Pg	13 28 34.3	-0.4
THL				AML	AML	13 28 48.5	
	comp=E,87788μm,0.5s						
THL				AML	AML	13 28 48.6	
	comp=N,98470μm,0.6s						
LRSO	Larissa Observ	0.61	137	P	Pg	13 28 35.5	0.0
LRSO	Larissa Observ	0.61	137	P	Pb	13 28 35.9	-0.2
LRSO				S	Sg	13 28 43.9	+0.3
LRSO				AML	AML	13 28 51.8	
LRSO				AML	AML	13 28 52.3	
NEST	Nestorio	0.68	296	P	Pg	13 28 36.1	-0.7
NEST				S	Sb	13 28 47.1	+0.3
	comp=N,56μm,0.6s						
NEST	Nestorio	0.68	296	P	Pg	13 28 36.2	-0.7
NEST				AML	AML	13 28 52.3	
NEST				AML	AML	13 28 54.6	
	comp=N,98244μm,0.6s						
JAN	Janina	0.90	239	P	Pg	13 28 39.7	-1.2
JAN				S	Sn	13 28 54.5	-0.4
	comp=N,19μm,1.2s						
JAN	Janina	0.90	239	P	Pg	13 28 40.3	-0.6
JAN				S	Sn	13 28 54.5	-0.4
JAN	Janina	0.90	239	P	Pg	13 28 40.3	-0.6
JAN				AML	AML	13 29 07.8	
	comp=E,29839μm,1.0s						
JAN				AML	AML	13 29 09.6	
	comp=N,32081μm,1.2s						
GRG	Griva	0.93	27	P	Pg	13 28 41.0	-0.5
GRG				S	Sn	13 28 55.1	-0.7
	comp=N,59μm,1.0s						
GRG	Griva	0.93	27	*i* Pg	Pg	13 28 41.7	+0.1
GRG				*i* Sg	Sn	13 28 55.7	-0.1
GRG	Griva	0.93	27	P	Pg	13 28 41.1	-0.5
GRG				S	Sg	13 28 53.6	-0.1
GRG	Griva	0.93	27	P	Pg	13 28 41.1	-0.5
GRG				S	Sg	13 28 53.6	-0.1
GRG				AML	AML	13 28 57.3	
GRG				AML	AML	13 29 03.4	
	comp=N,94684μm,1.0s						
THE	Thessaloniki	0.99	59	P	Pb	13 28 42.3	-0.3
THE				S	Sn	13 28 57.1	0.0
	comp=N,21μm,1.0s						
THE	Thessaloniki	0.99	59	*i* Pg	Pg	13 28 42.9	+0.2
THE				*i* Sg	Sn	13 28 57.2	+0.1
THE	Thessaloniki	0.99	59	P	Pb	13 28 42.5	-0.1
THE				S	Sn	13 28 57.1	0.0
THE	Thessaloniki	0.99	59	*i* PG	Pg	13 28 42.9	+0.2
THE				*i* SG	Sn	13 28 57.4	+0.3
THE	Thessaloniki	0.99	59	P	Pb	13 28 42.5	-0.1
THE				AML	AML	13 28 59.4	
	comp=E,42308μm,1.2s						
THE				AML	AML	13 29 00.9	
	comp=N,43392μm,0.8s						
FYTO	Fytoko, Volos	1.10	130	*e*Pn	Pb	13 28 44.0	-0.5
FYTO	Fytoko, Volos	1.10	130	P	Pb	13 28 44.0	-0.5
FYTO				S	Sn	13 29 01.1	+1.3
	comp=N,37μm,1.8s						
FYTO	Fytoko, Volos	1.10	130	P	Pb	13 28 44.5	0.0
FYTO				S	Sg	13 28 59.4	+0.4
FYTO				AML	AML	13 29 06.7	
	comp=E,60889μm,1.3s						
FYTO				AML	AML	13 29 09.2	
	comp=N,76984μm,1.1s						
AGG	Agios Georgios	1.16	161	*e*Pn	Pb	13 28 45.2	-0.3
AGG	Agios Georgios	1.16	161	P	Pb	13 28 45.5	0.0
AGG				S	Sn	13 29 02.0	+0.6
	comp=N,72μm,2.0s						
AGG	Agios Georgios	1.16	161	*e*P	Pb	13 28 45.2	-0.3
AGG	Agios Georgios	1.16	161	P	Pb	13 28 45.5	0.0
AGG				S	Sn	13 29 02.3	+1.0
AGG				AML	AML	13 29 09.9	
	comp=N,95340μm,1.5s						
AGG				AML	AML	13 29 10.5	
EVR	Evrytania	1.21	182	P	Pn	13 28 45.3	-1.0
EVR				S	Sn	13 29 04.0	+1.4
	comp=N,38μm,1.8s						
EVR	Evrytania	1.21	182	P	Pn	13 28 46.0	-0.2
EVR				S	Sn	13 29 03.0	+0.4
PLG	Polygyros	1.25	78	P	Pn	13 28 46.5	-0.3
PLG				S	Sg	13 29 05.6	+1.9
	comp=N,24μm,1.1s						
PLG	Polygyros	1.25	78	P	Pn	13 28 46.4	-0.3
PLG				S	Sg	13 29 05.6	+1.9
PLG	Polygyros	1.25	78	P	Pn	13 28 46.4	-0.3
PLG				AML	AML	13 29 06.0	
	comp=N,61556μm,1.1s						
PLG				AML	AML	13 29 06.7	
	comp=E,45702μm,0.8s						
OHR	Ohrid	1.27	321	*i* Pg	Pn	13 28 46.5	-0.7
OHR				*i* Sg	Sn	13 29 04.1	-0.1
OHR				*e*Lg	Lg	13 29 06.1	
	comp=E,21μm,0.6s						
OHR				*e*Lg	Lg	13 29 06.2	
	comp=N,18μm,0.8s						
OHR	Ohrid	1.27	321	P	Pn	13 28 46.6	-0.6
XOR	Xorichti	1.28	126	P	Pn	13 28 47.4	+0.2
XOR				S	Sg	13 29 05.0	+0.2
XOR				AML	AML	13 29 17.2	
XOR				AML	AML	13 29 17.7	
	comp=E,41801μm,1.0s						
KNT	Kendrikon	1.31	37	P	Pn	13 28 47.7	+0.1
KNT				S	Sg	13 29 07.2	+1.5
	comp=E,23μm,1.4s						
KNT	Kendrikon	1.31	37	*i* Pg	Pb	13 28 48.2	+0.1
KNT				*i* Sg	Sb	13 29 04.7	-0.1
KNT	Kendrikon	1.31	37	P	Pb	13 28 48.1	+0.1
KNT				S	Sg	13 29 07.2	+1.5
KNT	Kendrikon	1.31	37	P	Pb	13 28 48.1	+0.1
KNT				S	Sb	13 29 04.9	+0.1
KNT				AML	AML	13 29 09.9	
	comp=N,26290μm,0.4s						
KNT				AML	AML	13 29 11.0	
	comp=E,54737μm,0.8s						
IGT	Igoumenitsa	1.31	244	*e*Pg	Pg	13 28 49.5	+0.8
IGT				*e*Sg	Sg	13 29 08.4	+2.6
IGT	Igoumenitsa	1.31	244	P	Pb	13 28 47.9	-0.1
IGT	Igoumenitsa	1.31	244	*i* PN	Pg	13 28 50.1	+1.4
IGT				*i* SN	Sg	13 29 09.0	+3.3
IGT	Igoumenitsa	1.31	244	P	Pb	13 28 48.0	-0.1
IGT				S	Sg	13 29 06.9	+1.2
IGT				AML	AML	13 29 16.3	
	comp=N,23163μm,0.8s						
IGT				AML	AML	13 29 19.6	
	comp=E,25877μm,1.0s						
VAY	Valandovo	1.32	24	*e*Pg	Pb	13 28 48.0	-0.2
VAY				*e*Sg	Sg	13 29 07.1	+1.1
VAY	Valandovo	1.32	24	*i* Pg	Pb	13 28 48.1	-0.1
VAY				*i* Sg	Sg	13 29 06.6	+0.6
VAY				*e*Lg	Lg	13 29 06.8	
	comp=E,14μm,0.9s						
VAY				*e*Lg	Lg	13 29 10.7	
	comp=N,26μm,1.0s						
VAY	Valandovo	1.32	24	P	Pn	13 28 47.4	-0.3
NEO	Neokhori	1.33	127	P	Pn	13 28 48.3	+0.3
SOH	Sokhos	1.34	58	P	Pb	13 28 48.5	-0.1
SOH				S	Sg	13 29 07.7	+0.9
	comp=N,26μm,0.8s						
SOH	Sokhos	1.34	58	*i* Pg	Pb	13 28 48.8	+0.2
SOH				*i* Sg	Sg	13 29 08.8	+2.0
SOH	Sokhos	1.34	58	P	Pb	13 28 48.6	-0.1
SOH				S	Sg	13 29 07.7	+0.9
SOH	Sokhos	1.34	58	P	Pb	13 28 48.6	0.0
SOH				S	Sb	13 29 05.1	-0.7
SOH				AML	AML	13 29 12.9	
	comp=E,48206μm,0.9s						
SOH				AML	AML	13 29 14.2	
	comp=N,51853μm,0.7s						
TPE	Tepelena	1.42	278	*i* PN	Pg	13 28 51.4	+0.6
TPE				*i* SN	Sg	13 29 12.2	+2.9
SRN	Sarande	1.44	261	*i* PN	Pg	13 28 52.0	+0.8
SRN				*i* SN	Sg	13 29 14.0	+4.0
PVO	Paravola	1.52	190	P	Pn	13 28 51.0	+0.4
PVO	Paravola	1.52	190	P	Pb	13 28 51.2	-0.5
PVO				AML	AML	13 29 21.5	
	comp=E,32985μm,0.9s						
PVO				AML	AML	13 29 24.3	
	comp=N,23142μm,1.2s						
ANX	Ano Chora	1.53	178	P	Pb	13 28 51.7	-0.1
ANX				AML	AML	13 29 20.2	
	comp=E,48973μm,0.6s						
ANX				AML	AML	13 29 22.1	
	comp=N,57989μm,0.9s						
SKIA	Skiathos	1.57	127	P	Pn	13 28 51.4	+0.2
STIP	Stip	1.59	9	*i* Pn	Pg	13 28 54.8	+0.7
STIP				*i* Sn	Sg	13 29 20.9	+6.2
TSLK	Tsoukalades, L	1.59	216	P	Pb	13 28 53.4	+0.5
LKD2	Lefkada island	1.62	215	*i* PN	Pg	13 28 55.1	+0.4
LKD2				*i* SN	Sg	13 29 18.4	+2.6
LKD2	Lefkada island	1.62	215	P	Pb	13 28 53.9	+0.5
LKD2				AML	AML	13 29 26.6	
	comp=E,21733μm,0.7s						
LKD2				AML	AML	13 29 30.6	
	comp=N,18093μm,0.6s						
SMIA	Simia	1.63	139	P	Pn	13 28 52.7	+0.7
SMIA				AML	AML	13 29 27.7	
	comp=N,96770μm,0.9s						
SMIA				AML	AML	13 29 34.2	
	comp=E,59755μm,0.9s						
KEK	Kerkira	1.63	256	P	Pb	13 28 53.9	+0.4
KEK				AML	AML	13 29 25.7	
	comp=N,14659μm,1.3s						
KEK				AML	AML	13 29 29.5	
	comp=E,12638μm,0.6s						
OUR	Ouranopolis	1.64	82	*e*Pn	Pn	13 28 52.9	+0.7
OUR	Ouranopolis	1.64	82	P	Pn	13 28 52.9	+0.7
OUR	Ouranopolis	1.64	82	*e*P	Pn	13 28 52.9	+0.7
OUR	Ouranopolis	1.64	82	P	Pn	13 28 52.9	+0.7
SRS	Serrai	1.66	53	*e*Pg	Pn	13 28 52.8	+0.3
SRS				*e*Sg	Sg	13 29 16.0	-0.8
SRS	Serrai	1.66	53	*i* Pn	Pn	13 28 52.8	+0.3
SRS				*i* Sn	Sg	13 29 18.3	+1.4
SRS	Serrai	1.66	53	P	Pn	13 28 52.7	+0.3
SRS	Serrai	1.66	53	P	Pn	13 28 52.5	0.0
SRS				AML	AML	13 29 23.6	
	comp=E,24092μm,0.6s						
SRS				AML	AML	13 29 25.0	
	comp=N,25219μm,0.7s						
ATAL	Atalanti	1.69	147	P	Pn	13 28 53.6	+0.8
ATAL				AML	AML	13 29 33.0	
	comp=N,17772μm,1.4s						
ATAL				AML	AML	13 29 38.1	
	comp=E,15173μm,1.2s						
EFP	Efpalio	1.69	179	P	Pb	13 28 54.4	-0.2
EFP				S	Sb	13 29 15.9	0.0
EFP				AML	AML	13 29 30.9	
	comp=E,60853μm,1.0s						
EFP				AML	AML	13 29 35.1	
	comp=N,56375μm,1.4s						
SERG	Sergoula	1.71	175	P	Pn	13 28 54.0	+0.8
SERG				AML	AML	13 29 27.2	
	comp=E,44073μm,0.9s						
SERG				AML	AML	13 29 31.7	
	comp=N,33736μm,1.1s						
LKR	Lokris	1.72	148	P	Pn	13 28 53.6	+0.4
LKR	Lokris	1.72	148	P	Pn	13 28 54.1	+0.9
KALE	Kalithea	1.74	173	P	Pn	13 28 54.3	+0.7
KALE				AML	AML	13 29 26.6	
	comp=E,31560μm,0.6s						
KALE				AML	AML	13 29 27.8	
	comp=N,37527μm,1.2s						
EVGI	Lefkada island	1.76	212	P	Pb	13 28 55.6	-0.2
TRIZ	Trizonia	1.76	174	P	Pn	13 28 54.7	+0.9
DSF	Desfina	1.79	163	P	Pn	13 28 54.5	+0.2
VLO	Vlora	1.83	282	*i* PN	Pg	13 28 59.2	+0.4
VLO				*i* SN	Sg	13 29 26.5	+3.9
UPR	University Cam	1.84	182	P	Pb	13 28 56.8	-0.2
SKO	Skopje	1.87	351	*e*Pg	Pb	13 28 58.1	+0.4
SKO				*e*Sg	Sg	13 29 26.0	+2.2
SKO	Skopje	1.87	351	*i* Pn	Pb	13 28 56.9	-0.8
SKO				*i* Sn	Sg	13 29 24.7	+0.9
LAKA	Lakka	1.88	177	P	Pn	13 28 56.7	+1.1
LAKA				AML	AML	13 29 33.4	
	comp=E,15845μm,1.1s						
LAKA				AML	AML	13 29 35.7	
	comp=N,13418μm,1.7s						
PHP	Peshkopia	1.89	326	*i* PN	Pb	13 28 58.3	+0.3
PHP				*i* SN	Sg	13 29 26.5	+2.1
FSK	Fiskardo	1.94	211	P	Pb	13 28 57.7	-1.1
TIR	Tirane	1.94	310	*e*Pn	Pb	13 28 58.2	-0.7
TIR	Tirane	1.94	310	*e*Pn	Pb	13 28 59.6	+0.7
TIR				*e*Sn	Sb	13 29 24.1	+1.0
TIR	Tirane	1.94	310	⇑*i*P	Pb	13 28 58.5	-0.4
TIR	Tirane	1.94	310	*i* Pn	Pb	13 28 59.6	+0.7
TIR	Tirane	1.94	310	*e*P	Pb	13 28 58.2	-0.7
TIR	Tirane	1.94	310	*i* PN	Pg	13 29 00.9	+0.1
TIR				*i* SN	Sg	13 29 27.8	+1.7
MRKA	Markates	1.95	136	P	Pn	13 28 57.0	+0.6
MRKA				AML	AML	13 29 38.1	
	comp=E,26554μm,1.7s						
MRKA				AML	AML	13 29 40.2	
	comp=N,26454μm,1.5s						
NVR	Nevrokopi	1.96	51	P	Pn	13 28 57.2	+0.6
NVR				AML	AML	13 29 28.5	
	comp=N,9548μm,1.0s						
NVR				AML	AML	13 29 31.2	
	comp=E,13490μm,0.7s						
TRAZ	Trapeza	1.97	172	P	Pn	13 28 57.9	+1.1
KKB	Krupnik	1.98	28	*i* Pn	Pn	13 28 57.4	+0.6
KKB				*i* Sn	Sg	13 29 27.0	-0.1
KKB	Krupnik	1.98	28	*i* P	Pn	13 28 57.4	+0.6
PROD	Prodromos	2.03	156	P	Pn	13 28 58.1	+0.6
MMB	Musomiste	2.04	44	*i* Pn	Pn	13 28 58.1	+0.4
MMB				*i* Sn	Sg	13 29 29.3	+0.1
MMB	Musomiste	2.04	44	*i* P	Pn	13 28 58.2	+0.4
RLS	Riolos of Patr	2.08	188	P	Pb	13 29 01.1	-0.2
KLV	Kalavryta, Ach	2.09	174	P	Pn	13 28 59.5	+1.1
KLV				AML	AML	13 29 36.0	
	comp=E,10817μm,1.8s						
KLV				AML	AML	13 29 41.9	
	comp=N,8082μm,1.0s						
DRO	Drossia	2.17	183	P	Pb	13 29 01.7	-1.0
KFL	Anninata	2.17	203	P	Pb	13 29 01.8	-1.0
THAL	Thalero	2.18	163	P	Pn	13 29 00.4	+0.9
VLS	Valsamata	2.18	207	P	Pb	13 29 01.6	-1.3
VIL2	Platees	2.20	150	P	Pn	13 29 01.6	+1.6
KAVA	Kavala	2.21	66	P	Pn	13 28 60.0	0.0
KAVA				S	Sn	13 29 27.7	+0.6
GUR	Goura	2.22	170	P	Pn	13 29 00.8	+0.6
THAS	Thassos island	2.24	77	P	Pn	13 29 00.4	0.0
LOUT	Loutraki	2.30	157	P	Pn	13 29 01.7	+0.4
ACOR	Acrocorinthos	2.37	160	P	Pn	13 29 02.6	+0.4
SKY	Skiros Island	2.43	120	P	Pn	13 29 03.5	+0.5
LIA	Limnos Island	2.57	94	P	Pn	13 29 06.5	+1.6
LIA	Limnos Island	2.57	94	P	Pn	13 29 05.3	+0.4
AMT	Artemida-Makis	2.59	183	P	Pb	13 29 07.8	-2.1
ATH	Athens Observa	2.59	145	P	Pn	13 29 06.3	+1.1
ATH	Athens Observa	2.59	145	P	Pn	13 29 06.3	+1.1
ATH				AML	AML	13 29 56.2	
	comp=E,12239μm,1.2s						
ATH				AML	AML	13 30 09.9	
	comp=N,12078μm,1.3s						
PTL	Penteli	2.60	142	P	Pn	13 29 06.2	+0.8
TRIP	Tripoli	2.61	173	P	Pn	13 29 06.8	+1.2
BCI	Bajram Curri	2.62	330	*i* PN	Pb	13 29 09.2	-1.1
ATHU	Athens Univers	2.63	144	*e*Pn	Pn	13 29 07.4	+1.7
ATHU	Athens Univers	2.63	144	P	Pn	13 29 07.4	+1.7
ATHU	Athens Univers	2.63	144	P	Pn	13 29 06.9	+1.1
RZN	Rozhen	2.67	53	P	Pn	13 29 04.5	-2.1
RZN	Rozhen	2.67	53	*i* P	Pn	13 29 07.7	+1.1
BARS	Barje	2.69	359	*e*Pn	Pn	13 29 07.9	+1.2
BARS	Barje	2.69	359	*e*Pn	Pg	13 29 24.2	+9.1
BARS				*e*Sn	Sn	13 29 40.8	+1.6
ULC	Ulcinj	2.70	314	⇑*i*Pn	Pn	13 29 08.1	+1.4
ULC				*i* Sn	Sb	13 29 43.0	-1.8
ULC	Ulcinj	2.70	314	*i* Pn	Pb	13 29 09.4	-2.3
VTS	Vitosha	2.70	22	*e*Pn	Pn	13 29 07.4	+0.5
VTS	Vitosha	2.70	22	*e*Pn	Pn	13 29 07.4	+0.5
VTS				*e*Sn	Sn	13 29 41.5	+1.9
VTS	Vitosha	2.70	22	⇓*i*P	Pn	13 29 07.6	+0.7
VTS	Vitosha	2.70	22	S	Sn	13 29 42.0	+2.4
VTS	Vitosha	2.70	22	*i* Pn	Pn	13 29 07.6	+0.7
VTS	Vitosha	2.70	22	*e*P	Pn	13 29 07.4	+0.5
VTS	Vitosha	2.70	22	*e*P	Pn	13 29 07.6	+0.7
VLY	Voula,Athens	2.73	146	P	Pn	13 29 08.1	+1.0
VLX	Vlachokerasia	2.78	171	P	Pn	13 29 09.4	+1.5
SOF	Sofiya	2.79	23	P	Pb	13 29 11.7	-1.7
DID	Didima	2.83	157	P	Pn	13 29 09.0	+0.5
SMTH	Samothraki Isl	2.83	82	P	Pn	13 29 08.6	0.0
PVY	Plav	2.85	331	⇑*i*Pn	Pn	13 29 10.8	+1.8
PVY				*i* Sn	Sb	13 29 47.6	-1.7
DRME	Dracevica, Mon	2.88	317	⇓*i*Pn	Pn	13 29 11.2	+1.9
DRME				*e*Sn	Sb	13 29 47.2	-2.9
DRME	Dracevica, Mon	2.88	317	*e*Pn	Pn	13 29 11.1	+1.8
KRND	KRANIDI	2.92	159	P	Pn	13 29 10.5	+0.8
PLD	Plovdiv	2.93	46	*e*Pn	Pn	13 29 11.3	+1.4

PLD				eSn	Sn	13 29 46.1	+1.2
PLD	**Plovdiv**	2.93	46	iPn	Pn	13 29 11.3	+1.4
PLD	**Plovdiv**	2.93	46	P	Pn	13 29 11.2	+1.4
PLD	**Plovdiv**	2.93	46	iP	Pn	13 29 11.3	+1.4
ITM	**Ithomi**	2.94	179	ePn	Pn	13 29 12.9	+2.8
ITM	**Ithomi**	2.94	179	P	Pn	13 29 12.6	+2.5
RDO	**Rodhopi**	2.98	69	P	Pn	13 29 10.7	0.0
PGB	**Panagyurishte**	2.99	35	eP	Pn	13 29 11.5	+0.8
PDG	**Podgorica**	3.02	321	ePn	Pn	13 29 13.9	+2.7
PDG				eSn	Sn	13 29 49.3	+2.0
PDG	**Podgorica**	3.02	321	⇑iP	Pn	13 29 13.5	+2.3
PDG	**Podgorica**	3.02	321	S	Sn	13 29 48.5	+1.2
PDG	**Podgorica**	3.02	321	iPn	Pn	13 29 13.7	+2.5
PDG	**Podgorica**	3.02	321	ePn	Pn	13 29 13.3	+2.1
TTG	**Podgorica**	3.02	321	⇓iPn	Pn	13 29 13.5	+2.3
TTG				iSn	Sb	13 29 51.1	-3.0
TTG	**Podgorica**	3.02	321	ePn	Pn	13 29 13.1	+1.9
TTG	**Podgorica**	3.02	321	eP	Pn	13 29 13.1	+1.9
KDZ	**Kurdzhali**	3.10	59	iP	Pn	13 29 11.8	-0.5
BEY	**Berane**	3.12	332	iPn	Pn	13 29 14.5	+2.0
IVA	**Berane**	3.12	332	⇓iPn	Pn	13 29 14.6	+2.0
IVA				eSn	Sb	13 29 54.0	-2.9
BUM	**Brajici-Budva**	3.12	315	⇑iPn	Pn	13 29 14.6	+2.1
BUM				iSn	Sb	13 29 53.5	-3.4
SELS	**Selova**	3.14	350	ePn	Pn	13 29 13.8	+0.9
ZAPS	**Zavoj**	3.20	10	ePn	Pn	13 29 14.6	+0.9
SIGR	**SIGRI**	3.22	105	P	Pn	13 29 15.1	+1.2
PYL	**PYLOS**	3.22	182	P	Pn	13 29 16.1	+2.2
KOME	**Kolasin**	3.24	328	⇓iPn	Pn	13 29 16.9	+2.6
KOME				eSn	Sb	13 29 57.0	-3.5
CEME	**Cevo**	3.28	319	⇓iPn	Pn	13 29 16.3	+1.5
CEME				eSn	Sb	13 29 57.6	-3.9
ALN	**Alexandroupoli**	3.29	75	ePn	Pn	13 29 14.7	-0.1
ALN	**Alexandroupoli**	3.29	75	eP	Pn	13 29 14.7	-0.1
ALN	**Alexandroupoli**	3.29	75	P	Pn	13 29 15.1	+0.3
CGL1	**Ceglie Messapi**	3.38	280	⇓iPn	Pn	13 29 16.9	+0.8
CGL1				Sn	Sn	13 29 54.0	-2.2
DIM	**Dimitrovgrad**	3.38	54	P	Pn	13 29 16.9	+0.8
NKME	**Niksic**	3.42	321	⇑iPn	Pn	13 29 18.8	+2.0
NKME				eSn	Sn	13 30 01.1	+3.8
HCY	**Herceg Novi**	3.43	314	⇑iPn	Pn	13 29 18.3	+1.5
HCY				eSn	Sn	13 30 00.8	+3.3
HCY	**Herceg Novi**	3.43	314	P	Pn	13 29 19.0	+2.2
HCY				S	Sn	13 30 01.0	+3.5
HCY	**Herceg Novi**	3.43	314	ePn	Pn	13 29 18.1	+1.3
SJES	**Sjenica**	3.44	336	ePn	Pn	13 29 19.3	+2.3
SJES				eSn	Sn	13 29 59.0	+1.3
NKY	**Niksic**	3.44	322	⇓iPn	Pn	13 29 19.2	+2.2
NKY				iSn	Sn	13 30 01.3	+3.5
NKY	**Niksic**	3.44	322	P	Pn	13 29 19.5	+2.5
EZN	**Ezine**	3.45	93	⇓iP	Pn	13 29 18.7	+1.7
EZN	**Ezine**	3.45	93	S	Sn	13 29 58.6	+0.8
EZN	**Ezine**	3.45	93	P	Pn	13 29 18.7	+1.7
EZN				S	Sn	13 29 58.5	+0.8
FASA	**Fasano**	3.50	283	⇓iPn	Pn	13 29 18.5	+0.8
FASA				Sn	Sn	13 29 57.9	-1.1
VLI	**Veliai**	3.50	166	P	Pn	13 29 18.4	+0.5
BOVS	**Bovan**	3.51	358	ePn	Pn	13 29 18.8	+0.9
BOVS				eSn	Sn	13 30 00.9	+1.6
TAR1	**Taranto**	3.52	278	⇓iPn	Pn	13 29 18.6	+0.7
TAR1				Sn	Sn	13 30 00.6	+1.2
PRK	**Paraskevi**	3.52	103	P	Pn	13 29 19.3	+1.3
MPEP	**Malo Peshtene**	3.53	23	P	Pn	13 29 19.8	+1.7
BAYC	**CANAKKALE_Bayr**	3.63	95	iP	Pn	13 29 21.6	+2.0
BAYC				IAML_P			
	comp=Z,6µm,0.3s						
MASS	**Massafra**	3.63	280	⇓iPn	Pn	13 29 20.3	+0.7
IVAS	**Ivanjica**	3.68	340	ePn	Pn	13 29 21.1	+0.9
CHOS	**Chios island**	3.69	117	P	Pn	13 29 21.9	+1.4
TREB	**Trebinje**	3.69	316	ePn	Pn	13 29 22.4	+2.0
TREB				eSn	Sn	13 30 06.4	+2.5
TREB	**Trebinje**	3.69	316	ePn	Pn	13 29 21.4	+1.0
PLE	**Pljevlja**	3.70	331	⇓iPn	Pn	13 29 22.5	+1.9
PLE				iSn	Sn	13 30 07.7	+3.6
PLE	**Pljevlja**	3.70	331	P	Pn	13 29 23.3	+2.7
BRY	**Bratogost**	3.73	319	⇓iPn	Pn	13 29 22.8	+1.8
BRY				iSn	Sn	13 30 08.2	+3.3
BRY	**Bratogost**	3.73	319	P	Pn	13 29 22.9	+1.9
BRY	**Bratogost**	3.73	319	ePn	Pn	13 29 22.4	+1.4
KESN	**Edirne-Kesan**	3.75	78	iP	Pn	13 29 22.5	+1.0
KESN				IAML_P			
	comp=Z,2µm,0.3s						
DBRK	**Dubrovnik**	3.77	314	iPn	Pn	13 29 22.8	+1.3
DBRK				Sn	Sn	13 30 03.9	-1.9
UPM	**Unac-Piva**	3.79	325	ePn	Pn	13 29 24.3	+2.4
UPM				iSn	Sn	13 30 10.3	+3.9
UPM	**Unac-Piva**	3.79	325	ePn	Pn	13 29 24.4	+2.5
AYVA	**Ayvalik**	3.82	101	iP	Pn	13 29 24.5	+2.4
AYVA				IAML_P			
	comp=Z,2µm,0.4s						
GRUS	**Gruza**	3.86	348	ePn	Pn	13 29 23.4	+0.7
BAI	**Bari**	3.91	286	⇑iPn	Pn	13 29 24.4	+1.0
BAI				Sn	Sn	13 30 08.7	-0.4
RUDO	**Rudo**	3.95	333	ePn	Pn	13 29 25.6	+1.6
MATE	**Matera**	3.97	279	⇑iP	Pn	13 29 25.2	+1.1
MHLO	**Agia Marina, M**	3.97	149	P	Pn	13 29 25.8	+1.6
KTHA	**Kythira Island**	3.98	166	P	Pn	13 29 25.6	+1.3
SG1	**Sgolgore (BA)**	4.01	282	⇓iPn	Pn	13 29 25.5	+0.7
SG1				Sn	Sn	13 30 12.0	+0.3
TIP	**Timpagrande**	4.04	258	ePn	Pn	13 29 24.0	-1.3
TIP	**Timpagrande**	4.04	258	⇓iP	Pn	13 29 26.3	+1.0
TIP	**Timpagrande**	4.04	258	S	Sn	13 30 12.8	+0.2
PVL	**Pavlikeni**	4.04	39	P	Pn	13 29 24.3	-0.9
AMUR	**Altamura**	4.08	283	P	Pn	13 29 26.5	+0.8
AMUR				AML	AML		
	comp=E,962µm,1.0s						
AMUR				AML	AML		
	comp=N,500µm,0.5s						
AMUR				AML	AML		
	comp=E,1405µm,1.6s						
AMUR				AML	AML		
	comp=N,1530µm,0.5s						
AMUR				AML	AML		
	comp=N,1530µm,0.5s						
AMUR				AML	AML		
	comp=E,1405µm,1.6s						
URLA	**Izmir**	4.08	114	iP	Pn	13 29 27.6	+1.9
SART	**Tekirdag**	4.11	80	iP	Pn	13 29 26.1	-0.1
STON	**Ston**	4.16	313	ePn	Pn	13 29 29.3	+2.6
STON	**Ston**	4.16	313	ePn	Pn	13 29 28.1	+1.4
STON				Sn	Sn	13 30 13.4	-1.8
STON	**Ston**	4.16	313	ePn	Pn	13 29 27.7	+1.0
BBLS	**Lazići**	4.16	335	ePn	Pn	13 29 28.5	+1.6
BBLS	**Lazići**	4.16	335	ePn	Pn	13 29 28.1	+1.2
MIGL	**Miglionico**	4.16	278	P	Pn	13 29 29.5	+2.7
MIGL				AML	AML		
	comp=E,2690µm,0.9s						
MIGL				AML	AML		
	comp=N,3045µm,1.0s						
MIGL				AML	AML		
	comp=E,2630µm,0.6s						
MIGL				AML	AML		
	comp=N,2000µm,0.9s						
MIGL				AML	AML		
	comp=E,6290µm,0.7s						
MIGL				AML	AML		
	comp=N,5655µm,0.9s						
MIGL				AML	AML		
	comp=N,5655µm,0.9s						
MIGL				AML	AML		
	comp=E,6290µm,0.7s						
SVIS	**Svilajnac**	4.17	354	ePn	Pn	13 29 28.8	+1.9
APE	**Apeiranthos**	4.20	135	⇑iP	Pn	13 29 29.2	+1.9
APE	**Apeiranthos**	4.20	135	eP	Pn	13 29 28.6	+1.2
APE	**Apeiranthos**	4.20	135	P	Pn	13 29 28.4	+1.1
ZEDA	**zmir-Bergama**	4.20	104	iP	Pn	13 29 29.6	+2.2
ZEDA				IAML_P			
	comp=Z,2µm,0.2s						
DIVS	**Divibare**	4.21	341	ePn	Pn	13 29 29.1	+1.6
DIVS	**Divibare**	4.21	341	ePn	Pn	13 29 28.7	+1.2
TRUS	**Trudelj**	4.24	346	ePn	Pn	13 29 27.8	-0.1
JMB	**Yambol**	4.26	55	P	Pn	13 29 27.4	-0.8
JMB				S	Sn	13 30 17.5	-0.4
KUBS	**Kucevo**	4.29	358	ePn	Pn	13 29 28.2	-0.4
KIRK	**Kırklareli**	4.30	66	iP	Pn	13 29 29.1	+0.3
VLAD	**Vladila**	4.31	25	⇓iP	Pn	13 29 30.2	+1.3
ANKY	**Antikythira Is**	4.40	164	P	Pn	13 29 31.2	+1.1
MRVN	**Minervino Murg**	4.41	284	P	Pn	13 29 31.0	+0.7
MMN	**Mormanno**	4.51	269	AML	AML		
	comp=N,273µm,1.3s						
MMN				AML	AML		
	comp=E,238µm,1.6s						
HAPS	**Han Pijesak,BI**	4.51	332	ePn	Pn	13 29 33.2	+1.5
HAPS	**Han Pijesak,BI**	4.51	332	ePn	Pn	13 29 32.4	+0.7
PHSR	**Pinarhisar**	4.56	69	⇓iP	Pn	13 29 32.2	-0.1
ACER	**Acerenza**	4.56	280	P	Pn	13 29 34.2	+1.9
PALZ	**Palazzo San Ge**	4.56	282	AML	AML		
	comp=E,1585µm,0.9s						
PALZ				AML	AML		
	comp=E,1585µm,0.9s						
PALZ				AML	AML		
	comp=N,589µm,1.1s						
PALZ				AML	AML		
	comp=N,589µm,1.1s						
SMG	**Samos**	4.57	120	P	Pn	13 29 34.1	+1.6
STEP	**BALIKESIR_Sava**	4.58	97	iP	Pn	13 29 35.9	+3.2
STEP				IAML_P			
	comp=Z,6µm,0.4s						
SIRI	**Monte Sirino -**	4.59	273	P	Pn	13 29 34.2	+1.4
SIRI				AML	AML		
	comp=E,986µm,0.4s						
SIRI				AML	AML		
	comp=N,904µm,0.4s						
SIRI				AML	AML		
	comp=E,1022µm,0.4s						
SIRI				AML	AML		
	comp=N,931µm,0.4s						
SIRI				AML	AML		
	comp=E,984µm,0.4s						
SIRI				AML	AML		
	comp=N,899µm,0.4s						
SIRI				AML	AML		
	comp=E,1018µm,0.4s						
SIRI				AML	AML		
	comp=N,931µm,0.4s						
SIRI				AML	AML		
	comp=E,1472µm,1.0s						
SIRI				AML	AML		
	comp=N,1124µm,0.8s						
SIRI				AML	AML		
	comp=E,1485µm,1.0s						
SIRI				AML	AML		
	comp=N,1165µm,0.8s						
SIRI				AML	AML		
	comp=E,1472µm,1.0s						
SIRI				AML	AML		
	comp=N,1124µm,0.8s						
SIRI				AML	AML		
	comp=N,1165µm,0.8s						
SIRI				AML	AML		
	comp=E,1485µm,1.0s						
CUC	**Castrocucco**	4.63	270	AML	AML		
	comp=N,598µm,1.0s						
CUC				AML	AML		
	comp=E,636µm,0.7s						
CUC				AML	AML		
	comp=N,492µm,1.0s						
CUC				AML	AML		
	comp=E,766µm,0.7s						
MCEL	**Monticello**	4.64	274	P	Pn	13 29 35.0	+1.6
MCEL				AML	AML		
	comp=E,802µm,0.6s						
MCEL				AML	AML		
	comp=N,1038µm,0.6s						
MCEL				AML	AML		
	comp=E,821µm,1.0s						
MCEL				AML	AML		
	comp=N,1078µm,0.6s						
MCEL				AML	AML		
	comp=E,802µm,0.6s						
MCEL				AML	AML		
	comp=N,1042µm,0.6s						
MCEL				AML	AML		
	comp=E,820µm,1.0s						
MCEL				AML	AML		
	comp=N,1079µm,0.6s						
MCEL				AML	AML		
	comp=E,1170µm,0.6s						
MCEL				AML	AML		
	comp=N,1500µm,0.6s						
MCEL				AML	AML		
	comp=E,1178µm,1.0s						
MCEL				AML	AML		
	comp=N,1550µm,0.6s						
MCEL				AML	AML		
	comp=E,1170µm,0.6s						
MCEL				AML	AML		
	comp=E,1178µm,1.0s						
MCEL				AML	AML		
	comp=N,1550µm,0.6s						
MCEL				AML	AML		
	comp=N,1500µm,0.6s						
SRE	**Strehaia**	4.65	12	⇓iP	Pn	13 29 34.8	+1.3
SRE	**Strehaia**	4.65	12	P	Pn	13 29 34.8	+1.3
MDVR	**Moldovita**	4.66	359	⇓iP	Pn	13 29 34.5	+0.8
BALB	**Balikesir**	4.66	94	ePn	Pn	13 29 34.7	+1.0
MTSN	**Montesano sull**	4.67	274	P	Pn	13 29 35.2	+1.2
MTSN				AML	AML		
	comp=E,688µm,0.8s						
MTSN				AML	AML		
	comp=N,608µm,0.5s						
MTSN				AML	AML		
	comp=E,624µm,0.5s						
MTSN				AML	AML		
	comp=N,608µm,0.5s						
MTSN				AML	AML		
	comp=E,1335µm,0.8s						
MTSN				AML	AML		
	comp=N,1450µm,1.6s						
MTSN				AML	AML		
	comp=E,1335µm,0.8s						
MTSN				AML	AML		
	comp=N,1450µm,1.6s						
TEKS	**Tekeris**	4.75	339	ePn	Pn	13 29 35.7	+0.8
TEKS	**Tekeris**	4.75	339	ePn	Pn	13 29 35.3	+0.4
SLCN	**Sala Consilina**	4.77	275	P	Pn	13 29 37.0	+1.8
SLCN				AML	AML		
	comp=E,2005µm,0.4s						
SLCN				AML	AML		
	comp=N,1055µm,1.0s						
SLCN				AML	AML		
	comp=E,2210µm,0.4s						
SLCN				AML	AML		
	comp=N,1084µm,0.4s						
SLCN				AML	AML		
	comp=E,2515µm,0.6s						
SLCN				AML	AML		
	comp=N,2105µm,0.6s						
SLCN				AML	AML		
	comp=E,2600µm,0.6s						
SLCN				AML	AML		
	comp=N,2115µm,1.1s						
SLCN				AML	AML		
	comp=N,2115µm,1.1s						
SLCN				AML	AML		
	comp=N,2105µm,0.6s						
SLCN				AML	AML		
	comp=E,2600µm,0.6s						
SLCN				AML	AML		
	comp=E,2515µm,0.6s						
MSAG	**Monte S. Angel**	4.77	291	P	Pn	13 29 35.8	+0.5
MSAG				S	Sn	13 30 28.4	-2.1
MSAG				AML	AML		
	comp=E,1095µm,0.8s						
MSAG				AML	AML		
	comp=N,1995µm,0.4s						
MSAG				AML	AML		
	comp=E,1188µm,0.8s						
MSAG				AML	AML		
	comp=N,2060µm,0.4s						
MSAG				AML	AML		
	comp=E,1094µm,0.8s						
MSAG				AML	AML		
	comp=N,1995µm,0.4s						
MSAG				AML	AML		
	comp=E,1188µm,0.8s						
MSAG				AML	AML		
	comp=N,2060µm,0.4s						
MSAG				AML	AML		
	comp=E,3290µm,1.5s						
MSAG				AML	AML		
	comp=N,5530µm,0.9s						
MSAG				AML	AML		
	comp=E,3315µm,0.8s						
MSAG				AML	AML		
	comp=N,5630µm,1.0s						
MSAG				AML	AML		
	comp=N,5630µm,1.0s						
MSAG				AML	AML		
	comp=E,3290µm,1.5s						
MSAG				AML	AML		
	comp=E,3315µm,0.8s						
MSAG				AML	AML		
	comp=N,5530µm,0.9s						
AKHS	**Akhisar**	4.78	103	iP	Pn	13 29 39.3	+4.0
AKHS				IAML_P			
	comp=Z,2µm,0.2s						
BEO	**Beograd**	4.79	348	P	Pn	13 29 36.4	+0.9
MAKA	**Makarska**	4.80	313	ePn	Pn	13 29 36.9	+1.3
MAKA				Sn	Sn	13 30 30.3	-0.9
VULT	**Monte Vulture**	4.82	282	P	Pn	13 29 38.0	+2.0
VULT				AML	AML		
	comp=E,1705µm,0.9s						
VULT				AML	AML		
	comp=N,2120µm,0.9s						
VULT				AML	AML		
	comp=E,1725µm,0.9s						
VULT				AML	AML		
	comp=N,2130µm,0.9s						
VULT				AML	AML		
	comp=E,1725µm,0.9s						
VULT				AML	AML		
	comp=E,1705µm,0.9s						
VULT				AML	AML		
	comp=N,2130µm,0.9s						
VULT				AML	AML		
	comp=N,2120µm,0.9s						
MGR	**Morigerati**	4.83	272	P	Pn	13 29 38.1	+2.1
MGR				AML	AML		
	comp=E,860µm,0.8s						
MGR				AML	AML		
	comp=N,576µm,0.4s						
MGR				AML	AML		
	comp=E,860µm,0.8s						
MGR				AML	AML		
	comp=N,576µm,0.4s						
MGR				AML	AML		
	comp=E,1003µm,0.6s						
MGR				AML	AML		
	comp=N,1070µm,1.5s						
MGR				AML	AML		
	comp=E,1003µm,0.6s						
MGR				AML	AML		
	comp=N,1070µm,1.5s						
MRLC	**Muro Lucano**	4.90	279	P	Pn	13 29 39.2	+2.2
MRLC				AML	AML		
	comp=E,884µm,0.9s						
MRLC				AML	AML		
	comp=N,800µm,1.0s						
MRLC				AML	AML		
	comp=N,800µm,1.0s						
MRLC				AML	AML		
	comp=E,884µm,0.9s						
SGRT	**San Giovanni R**	4.91	291	P	Pn	13 29 37.5	+0.4
SGRT				S	Sn	13 30 31.6	-2.2
SGRT				AML	AML		
	comp=E,622µm,1.0s						
SGRT				AML	AML		
	comp=N,910µm,0.7s						
SGRT				AML	AML		
	comp=E,2520µm,0.5s						
SGRT				AML	AML		
	comp=N,3950µm,0.7s						
SGRT				AML	AML		
	comp=E,2520µm,0.5s						
SGRT				AML	AML		
	comp=N,3950µm,0.7s						
IMMV	**Iera Moni Meta**	4.95	159	P	Pn	13 29 39.6	+1.9
BULG	**Bulgheria - Ca**	4.96	272	P	Pn	13 29 39.9	+1.9
BULG				AML	AML		
	comp=E,680µm,0.6s						
BULG				AML	AML		
	comp=N,996µm,0.9s						
BULG				AML	AML		
	comp=E,698µm,0.6s						
BULG				AML	AML		
	comp=N,1048µm,0.9s						
BULG				AML	AML		
	comp=E,1210µm,0.7s						
BULG				AML	AML		
	comp=N,1615µm,1.5s						
BULG				AML	AML		
	comp=E,1255µm,0.7s						
BULG				AML	AML		
	comp=N,1690µm,1.5s						
BULG				AML	AML		
	comp=E,1255µm,0.7s						
BULG				AML	AML		
	comp=E,1210µm,0.7s						
BULG				AML	AML		
	comp=N,1615µm,1.5s						
BULG				AML	AML		
	comp=N,1690µm,1.5s						
HUMR	**Humele**	4.98	27	⇓iP	Pn	13 29 38.2	+0.2
CEL	**Celeste**	4.99	250	ePn	Pn	13 29 37.2	-1.0
CDRU	**Civita di Ruta**	5.02	276	P	Pn	13 29 40.0	+1.3
CDRU				AML	AML		
	comp=E,487µm,1.2s						
CDRU				AML	AML		
	comp=N,452µm,1.6s						
CDRU				AML	AML		
	comp=E,964µm,0.4s						
CDRU				AML	AML		
	comp=N,452µm,1.6s						
CDRU				AML	AML		
	comp=N,452µm,1.6s						
CDRU				AML	AML		
	comp=E,964µm,0.4s						
SGTA	**Sant Agata di**	5.04	284	P	Pn	13 29 40.8	+1.9
SGTA				AML	AML		
	comp=E,1550µm,0.8s						
SGTA				AML	AML		
	comp=N,839µm,0.9s						
SGTA				AML	AML		
	comp=E,1538µm,1.6s						
SGTA				AML	AML		
	comp=N,2910µm,1.6s						
SGTA				AML	AML		
	comp=E,1550µm,0.8s						
SGTA				AML	AML		
	comp=N,1005µm,0.9s						
SGTA				AML	AML		
	comp=N,1005µm,0.9s						
SGTA				AML	AML		
	comp=N,2910µm,1.6s						
SGTA				AML	AML		
	comp=E,1550µm,0.8s						
SGTA				AML	AML		
	comp=E,1538µm,1.6s						
VAM	**Vamos**	5.06	158	P	Pn	13 29 41.1	+1.9
SGRR	**Singureni**	5.12	35	⇑iP	Pn	13 29 40.4	+0.5
CAFE	**Carife**	5.12	282	P	Pn	13 29 41.7	+1.7
CAFE				AML	AML		
	comp=E,1160µm,0.9s						
CAFE				AML	AML		
	comp=N,608µm,0.7s						
CAFE				AML	AML		
	comp=E,1160µm,0.9s						
CAFE				AML	AML		
	comp=N,514µm,1.0s						
CAFE				AML	AML		
	comp=E,1610µm,0.7s						
CAFE				AML	AML		
	comp=N,970µm,1.4s						
CAFE				AML	AML		
	comp=E,1670µm,0.7s						
CAFE				AML	AML		
	comp=N,879µm,0.9s						
CAFE				AML	AML		
	comp=E,1670µm,0.7s						
CAFE				AML	AML		
	comp=N,970µm,1.4s						
CAFE				AML	AML		
	comp=E,1610µm,0.7s						
CAFE				AML	AML		
	comp=N,879µm,0.9s						
DURS	**Dursunbey**	5.12	94	iP	Pn	13 29 41.2	+1.1
DURS				IAML_P			
	comp=Z,1µm,0.2s						
MOCO	**Biccari - m.te**	5.24	286	P	Pn	13 29 43.3	+1.6
MOCO				AML	AML		
	comp=E,1075µm,0.7s						
MOCO				AML	AML		
	comp=N,523µm,0.6s						
MOCO				AML	AML		

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      comp=E,1128µm,0.7s
MOCO                               AML     AML
      comp=N,532µm,0.6s
MOCO                               AML     AML
      comp=E,1566µm,0.9s
MOCO                               AML     AML
      comp=N,924µm,1.5s
MOCO                               AML     AML
      comp=E,1595µm,0.9s
MOCO                               AML     AML
      comp=N,941µm,1.5s
MOCO                               AML     AML
      comp=E,1566µm,0.9s
MOCO                               AML     AML
      comp=N,941µm,1.5s
MOCO                               AML     AML
      comp=N,924µm,1.5s
MOCO                               AML     AML
      comp=E,1595µm,0.9s
GOLR                     5.25  25⇓iP     Pn        13 29 44.0 +2.3
FRGS  Fruska Gora        5.25 344 ePn    Pn        13 29 43.0 +1.2
FRGS                              eSn    Sn        13 30 42.3  0.0
FRGS  Fruska Gora        5.25 344 ePn    Pn        13 29 42.4 +0.6
AYDN  Tasoluk            5.31 116 i P    Pn        13 29 45.7 +3.0
AYDN                               IAML_P
      comp=Z,898nm,0.2s
GZR   Gura Zlata         5.31   7⇑iP     Pn        13 29 43.3 +0.6
MELA  Melanico ??? S     5.33 289  P     Pn        13 29 44.1 +1.1
MELA                               AML     AML
      comp=E,2345µm,0.6s
MELA                               AML     AML
      comp=N,1505µm,1.2s
MELA                               AML     AML
      comp=E,2385µm,0.6s
MELA                               AML     AML
      comp=N,1600µm,1.1s
MELA                               AML     AML
      comp=E,3455µm,1.0s
MELA                               AML     AML
      comp=N,3975µm,0.9s
MELA                               AML     AML
      comp=E,3565µm,1.0s
MELA                               AML     AML
      comp=N,4075µm,1.0s
MELA                               AML     AML
      comp=N,4075µm,1.0s
MELA                               AML     AML
      comp=E,3455µm,1.0s
MELA                               AML     AML
      comp=E,3565µm,1.0s
MELA                               AML     AML
      comp=N,3975µm,0.9s
BDRM  Kayabasi           5.34 123 i P    Pn        13 29 45.5 +2.4
BDRM                               IAML_P
      comp=Z,557nm,0.2s
DOB   Doboj              5.38 330 ePn    Pn        13 29 41.2 -2.3
IDI   Anoyia             5.39 153  Pn    Pn        13 29 43.6 -0.2
      comp=Z,0.3nm,0.3s,baz=300,slow=14,SNR=3.0
IDI                                Sn    Sn        13 30 46.9 +1.0
      comp=Z,1.9nm,0.3s,baz=333,slow=14,SNR=2.4
GATE  Gambatesa          5.45 287  P     Pn        13 29 47.1 +2.6
GATE                               AML     AML
      comp=E,1345µm,0.5s
GATE                               AML     AML
      comp=N,997µm,0.6s
GATE                               AML     AML
      comp=E,1285µm,0.5s
GATE                               AML     AML
      comp=N,950µm,0.8s
GATE                               AML     AML
      comp=E,1605µm,0.6s
GATE                               AML     AML
      comp=N,1710µm,1.6s
GATE                               AML     AML
      comp=E,1285µm,0.5s
GATE                               AML     AML
      comp=N,1705µm,1.6s
GATE                               AML     AML
      comp=E,1605µm,0.6s
GATE                               AML     AML
      comp=E,1285µm,0.5s
GATE                               AML     AML
      comp=N,1705µm,1.6s
GATE                               AML     AML
      comp=N,1710µm,1.6s
MANT  Manisa             5.45 105 ePn    Pn        13 29 46.3 +1.5
CIGN  Sant'Elia a Pi     5.48 288  P     Pn        13 29 46.3 +1.3
CIGN                               AML     AML
      comp=E,580µm,1.3s
CIGN                               AML     AML
      comp=N,671µm,0.7s
CIGN                               AML     AML
      comp=E,1300µm,1.0s
CIGN                               AML     AML
      comp=N,1120µm,1.4s
CIGN                               AML     AML
      comp=E,1300µm,1.0s
CIGN                               AML     AML
      comp=N,1120µm,1.4s
BZS   Buzias             5.49 358 ePn    Pn        13 29 46.9 +1.8
BZS   Buzias             5.49 358⇑iP     Pn        13 29 45.1  0.0
BZS   Buzias             5.49 358  P     Pn        13 29 46.3 +1.2
BZS                                pmax    pmax
      comp=Z,144nm,0.7s
LOT   Lotru              5.51  14⇑iP     Pn        13 29 47.6 +2.2
MGRS  Mrkonjic Grad      5.56 322 ePn    Pn        13 29 47.7 +1.6
SACR  S. Croce Del S     5.57 286  P     Pn        13 29 48.2 +1.9
SACR                               AML     AML
      comp=E,620µm,1.0s
SACR                               AML     AML
      comp=N,742µm,0.6s
SACR                               AML     AML
      comp=E,2700µm,1.6s
SACR                               AML     AML
      comp=N,950µm,0.8s
SACR                               AML     AML
      comp=E,1180µm,1.6s
SACR                               AML     AML
      comp=N,986µm,0.8s
SACR                               AML     AML
      comp=N,950µm,0.8s
SACR                               AML     AML
      comp=E,1180µm,1.6s
SACR                               AML     AML
      comp=E,2700µm,1.6s
SACR                               AML     AML
      comp=N,986µm,0.8s
KLYT  Kilyos             5.58  76⇑iP     Pn        13 29 46.9 +0.6
ULDT  Uludag             5.58  87 i P    Pn        13 29 48.8 +2.2
ULDT                               IAML_P
      comp=Z,2µm,0.3s
SULR                     5.60  34⇓iP     Pn        13 29 48.3 +1.8
KIJV  Kijevo             5.61 316 ePn    Pn        13 29 47.9 +1.2
KIJV                               Sn    Sn        13 30 51.4 +0.3
LLI   Lipari             5.61 255  S     Sn        13 30 48.0 -3.1
MTUR  Matau              5.62  24⇓iP     Pn        13 29 48.6 +1.6
ARR   Arges              5.63  20⇓iP     Pn        13 29 48.8 +1.8
BSSO  Busso              5.69 287  P     Pn        13 29 49.4 +1.5
BSSO                               AML     AML
      comp=E,999µm,0.6s
BSSO                               AML     AML
      comp=N,979µm,0.8s
BSSO                               AML     AML
      comp=E,396µm,1.2s
BSSO                               AML     AML
      comp=N,416µm,0.8s
BSSO                               AML     AML
      comp=E,1083µm,0.7s
BSSO                               AML     AML
      comp=N,1265µm,0.6s
BSSO                               AML     AML
      comp=E,443µm,1.1s
BSSO                               AML     AML
      comp=N,528µm,0.7s
BSSO                               AML     AML
      comp=E,1083µm,0.7s
BSSO                               AML     AML
      comp=E,443µm,1.1s
BSSO                               AML     AML
      comp=N,528µm,0.7s
BSSO                               AML     AML
      comp=N,1265µm,0.6s
USAK  Uak-Merkez         5.72 102 i P    Pn        13 29 51.4 +3.0
USAK                               IAML_P
      comp=Z,6µm,0.4s
BLY   Banja Luka         5.77 325 ePn    Pn        13 29 50.0 +1.0
BLY   Banja Luka         5.77 325 ePn    Pn        13 29 50.7 +1.8
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BLY   Banja Luka         5.77 325⇑iP     Pn        13 29 50.8 +1.8
BLY   Banja Luka         5.77 325 ePn    Pn        13 29 49.5 +0.6
DEV   Deva               5.81   7⇑iP     Pn        13 29 51.8 +2.3
DEV   Deva               5.81   7  P     Pn        13 29 53.0 +3.5
DEV                                pmax    pmax
      comp=Z,329nm,1.0s
VOIR                     5.81  23⇑iP     Pn        13 29 51.4 +1.9
VOIR                     5.81  23  P     Pn        13 29 51.2 +1.7
VOIR                               pmax    pmax
      comp=Z,121nm,0.6s
SGG   Gregorio Mates     5.81 285  P     Pn        13 29 51.9 +2.3
SGG                                AML     AML
      comp=E,2430µm,0.6s
SGG                                AML     AML
      comp=N,1180µm,0.5s
SGG                                AML     AML
      comp=E,2430µm,0.6s
SGG                                AML     AML
      comp=N,1365µm,1.6s
SGG                                AML     AML
      comp=E,2430µm,0.6s
SGG                                AML     AML
      comp=N,1365µm,1.6s
ZIRJ  Zirje              5.82 309 i Pn   Pn        13 29 50.0 +0.3
ZIRJ                               Sn    Sn        13 30 53.4 -2.8
MORI  Morici             5.91 311 i Pn   Pn        13 29 51.9 +1.0
MORI                               Sn    Sn        13 30 55.4 -3.1
PSN   Preselentsi        5.91  51  P     Pn        13 29 51.9 +1.0
PSN                                S     Sn        13 31 01.1 +2.6
PSN   Preselentsi        5.91  51  P     Pn        13 29 50.6 -0.3
VAGA  Valle Agricola     5.93 285  P     Pn        13 29 53.0 +1.8
MIDA  Miranda            5.96 287  P     Pn        13 29 53.0 +1.4
MIDA                               AML     AML
      comp=E,902µm,1.1s
MIDA                               AML     AML
      comp=N,596µm,0.5s
MIDA                               AML     AML
      comp=E,1380µm,0.8s
MIDA                               AML     AML
      comp=N,1562µm,1.5s
MIDA                               AML     AML
      comp=E,1460µm,1.6s
MIDA                               AML     AML
      comp=N,1495µm,1.5s
MIDA                               AML     AML
      comp=N,1495µm,1.5s
MIDA                               AML     AML
      comp=E,1460µm,1.6s
MIDA                               AML     AML
      comp=N,1562µm,1.5s
MIDA                               AML     AML
      comp=E,1380µm,0.8s
ICOR  Ion Corvin         5.96  46⇑iP     Pn        13 29 51.6 +0.1
GDZ   Gediz              5.98  97 i P    Pn        13 29 55.6 +3.6
GDZ                                IAML_P
      comp=Z,4µm,0.6s
SILT  Sile               6.02  78⇓iP     Pn        13 29 54.0 +1.7
RNI2  Rionero Sannit     6.04 288  P     Pn        13 29 55.5 +2.7
RNI2                               AML     AML
      comp=E,1750µm,1.6s
RNI2                               AML     AML
      comp=N,1735µm,1.5s
RNI2                               AML     AML
      comp=E,1815µm,1.6s
RNI2                               AML     AML
      comp=N,1790µm,1.5s
RNI2                               AML     AML
      comp=N,1790µm,1.5s
RNI2                               AML     AML
      comp=E,1750µm,1.6s
RNI2                               AML     AML
      comp=E,1815µm,1.6s
RNI2                               AML     AML
      comp=N,1735µm,1.5s
ISR   Istrita            6.07  33⇑iP     Pn        13 29 55.7 +2.5
ISR   Istrita            6.07  33  P     Pn        13 29 55.6 +2.4
ISR                                pmax    pmax
      comp=Z,405nm,0.8s
LPEL  Lama dei Pelig     6.11 291  P     Pn        13 29 56.0 +2.4
LPEL                               AML     AML
      comp=E,2610µm,1.4s
LPEL                               AML     AML
      comp=N,1710µm,1.2s
LPEL                               AML     AML
      comp=E,2610µm,1.4s
LPEL                               AML     AML
      comp=N,1710µm,1.2s
CERA  Filignano          6.12 286  P     Pn        13 29 56.4 +2.6
CERA                               AML     AML
      comp=E,2825µm,1.4s
CERA                               AML     AML
      comp=N,1990µm,0.7s
CERA                               AML     AML
      comp=E,2920µm,1.5s
CERA                               AML     AML
      comp=N,2080µm,0.7s
CERA                               AML     AML
      comp=N,1990µm,0.7s
CERA                               AML     AML
      comp=N,2080µm,0.7s
CERA                               AML     AML
      comp=E,2920µm,1.5s
CERA                               AML     AML
      comp=E,2825µm,1.4s
SIRR  Siria              6.14 359⇓iP     Pn        13 29 56.3 +2.2
MLR   Muntele Rosu       6.15  28  Pn    Pn        13 29 56.0 +1.7
      comp=E,20nm,0.3s,baz=207,slow=9.1,SNR=40
MLR                                Sn    Sn        13 31 12.5 +7.9
      comp=E,2.4nm,0.3s,baz=186,slow=18,SNR=2.5
MLR                                Lg    Lg        13 31 50.0
      comp=E,0.8nm,0.3s,baz=309,slow=18,SNR=4.0
MLR                                LR    LR        13 32 53.2
      comp=E,4µm,18.3s,baz=211,slow=44
MLR   Muntele Rosu       6.15  28 ePn    Pn        13 29 55.9 +1.6
MLR   Muntele Rosu       6.15  28⇑iP     Pn        13 29 56.2 +1.9
MLR   Muntele Rosu       6.15  28  P     Pn        13 29 56.0 +1.7
KHAL  Karahalli          6.18 104 i P    Pn        13 29 57.6 +2.9
KHAL                               IAML_P
      comp=Z,1µm,0.4s
MEU   Monte Lauro        6.20 243  S     Sn        13 31 04.0 -1.8
KARP  Karpathos          6.21 136 ePn    Pn        13 29 57.4 +2.5
MANR  Mangalia           6.23  51⇓iP     Pn        13 29 56.8 +1.6
MDB   Medias             6.29  16⇑iP     Pn        13 29 58.5 +2.4
INTR  Introdacqua        6.30 290  P     Pn        13 29 58.6 +2.4
INTR                               AML     AML
      comp=E,2120µm,0.8s
INTR                               AML     AML
      comp=N,2945µm,1.3s
INTR                               AML     AML
      comp=E,2120µm,0.8s
INTR                               AML     AML
      comp=N,2945µm,1.3s
UDBI  Udbina             6.30 316 i Pn   Pn        13 29 58.2 +1.9
UDBI                               Sn    Sn        13 31 08.1 -0.1
MFTR  Murfatlar          6.34  48⇓iP     Pn        13 29 58.4 +1.6
DUGI  Dugi Otok          6.36 310 ePn    Pn        13 29 57.6 +0.6
DUGI                               Sn    Sn        13 31 08.8 -0.8
POFI  Posta Fibreno      6.37 287  P     Pn        13 29 59.0 +1.8
POFI                               AML     AML
      comp=E,846µm,0.8s
POFI                               AML     AML
      comp=N,604µm,1.0s
POFI                               AML     AML
      comp=N,604µm,1.0s
POFI                               AML     AML
      comp=E,846µm,0.8s
VAE   Valguarnera        6.38 248  Pn    Pn        13 29 55.9 -1.6
      comp=E,0.6nm,0.3s,baz=78,slow=20,SNR=1.6
VAE                                Sn    Sn        13 31 15.8 +5.7
      comp=E,4.5nm,0.3s,baz=94,slow=19,SNR=2.7
VAE                                LR    LR        13 32 35.5
      comp=E,1µm,18.7s,baz=171,slow=40
DOPR  Dopca              6.39  23⇓iP     Pn        13 29 59.2 +1.7
TLB   Topalu             6.40  44⇑iP     Pn        13 29 58.5 +1.0
TLB   Topalu             6.40  44  P     Pn        13 29 58.5 +1.0
VVLD  Villa Vallelon     6.47 288  P     Pn        13 29 57.5 -1.1
VVLD                               AML     AML
      comp=E,898µm,1.2s
VVLD                               AML     AML
      comp=N,1150µm,0.8s
VVLD                               AML     AML
      comp=N,1150µm,0.8s
VVLD                               AML     AML
      comp=E,898µm,1.2s
BISRR Bisoca             6.49  32⇑iP     Pn        13 30 01.5 +2.6
TIRR  Tirgusor           6.51  46 ePn    Pn        13 29 59.5 +0.4
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TIRR  Tirgusor           6.51  46⇓iP     Pn        13 30 00.3 +1.2
TIRR  Tirgusor           6.51  46 eP     Pn        13 29 59.5 +0.4
MORH  Mrgy, Hungar       6.53 340 ePn    Pn        13 29 59.1 -0.2
MORH                              ePg    Pg        13 30 26.0 -2.4
MORH                               Sn    Sn        13 31 07.1 -6.5
MORH                              eSg    Sg        13 31 51.1 -1.8
FAGN  Fagnano            6.59 292  P     Pn        13 30 01.7 +1.4
FAGN                               AML     AML
      comp=E,3355µm,0.7s
FAGN                               AML     AML
      comp=N,2365µm,1.5s
FAGN                               AML     AML
      comp=N,2365µm,1.5s
FAGN                               AML     AML
      comp=E,3355µm,0.7s
OZUR                     6.63  24⇓iP     Pn        13 30 03.4 +2.7
TERO  Teramo             6.69 295  P     Pn        13 30 02.7 +1.2
TERO                               AML     AML
      comp=E,1810µm,1.6s
TERO                               AML     AML
      comp=N,1035µm,1.2s
TERO                               AML     AML
      comp=E,356µm,0.6s
TERO                               AML     AML
      comp=N,424µm,1.2s
TERO                               AML     AML
      comp=N,1035µm,1.2s
TERO                               AML     AML
      comp=E,1810µm,1.6s
TERO                               AML     AML
      comp=N,424µm,1.2s
TERO                               AML     AML
      comp=E,356µm,0.6s
DRGR                     6.70   5⇓iP     Pn        13 30 03.9 +2.2
DRGR                     6.70   5  P     Pn        13 30 04.7 +3.0
DRGR                               pmax    pmax
      comp=Z,110nm,0.7s
CJR   Cluj-Napoca        6.71  10⇑iP     Pn        13 30 06.1 +4.2
PLOR  Plostina           6.72  30⇑iP     Pn        13 30 04.0 +2.0
PLOR  Plostina           6.72  30  P     Pn        13 30 03.9 +2.0
AQU   L'Aquila           6.75 292 ePn    Pn        13 30 02.6 +0.2
AQU   L'Aquila           6.75 292 eP     Pn        13 30 02.6 +0.2
AQU   L'Aquila           6.75 292 ePn    Pn        13 30 03.8 +1.4
VRI   Vrincioaia         6.76  30⇓iP     Pn        13 30 04.5 +1.9
VRI   Vrincioaia         6.76  30  P     Pn        13 30 04.5 +1.9
VRI                                pmax    pmax
      comp=Z,303nm,1.2s
NVLJ  Novalja            6.81 313 ePn    Pn        13 30 03.8 +0.6
NVLJ                               Sn    Sn        13 31 18.5 -2.2
CFR   Carcaliu           6.85  40⇓iP     Pn        13 30 04.7 +0.9
CFR   Carcaliu           6.85  40  P     Pn        13 30 05.9 +2.1
CFR                                pmax    pmax
      comp=Z,57nm,0.9s
FIAM  Fiamignano         6.93 291  P     Pn        13 30 08.6 +3.6
NRCA  Norcia             7.10 295  P     Pn        13 30 08.9 +1.7
NRCA                               AML     AML
      comp=E,802µm,0.6s
NRCA                               AML     AML
      comp=N,888µm,1.4s
NRCA                               AML     AML
      comp=N,888µm,1.4s
NRCA                               AML     AML
      comp=E,802µm,0.6s
ISP   Isparta            7.13 106 ePn    Pn        13 30 08.9 +1.1
ISP   Isparta            7.13 106 eP     Pn        13 30 08.9 +1.1
MTCE  Montecelio         7.14 288  P     Pn        13 30 14.5 +6.8
MTCE                               S     Pg        13 30 42.0 +1.8
MDUB  Mudurnu            7.15  84 ePn    Pn        13 30 09.0 +0.9
KALN  Kalnik             7.18 328 i Pn   Pn        13 30 09.1 +0.7
ARCR  ARCALIA            7.19  14⇑iP     Pn        13 30 11.1 +2.6
WDD   Wied Dalam         7.20 236 ePn    Pn        13 30 09.2 +0.7
CLTB  Caltabellotta      7.20 252 ePn    Pn        13 30 09.7 +1.0
TLCR                     7.21  43⇑iP     Pn        13 30 11.6 +3.0
PTJ   Puntijarka         7.21 325  iPn   Pn        13 30 09.7 +0.9
OZLJ  Ozalj              7.22 322 ePn    Pn        13 30 09.7 +0.9
BOJS  Bojanci            7.24 320 i Pn   Pn        13 30 09.4 +0.3
BOJS                              i Sn   Sn        13 31 28.8 -2.5
BOJS                              e                13 32 17.5
      comp=Z,9µm,4.8s
TESR  Tescani            7.28  27⇑iP     Pn        13 30 11.4 +1.7
BEHE  Becsehely          7.34 331 ePn    Pn        13 30 11.4 +0.9
BEHE  Becsehely          7.34 331 ePn    Pn        13 30 12.0 +1.5
BEHE                              ePg    Pg        13 30 45.0 +0.9
BEHE                              eSg    Sg        13 32 28.0 +8.9
TIH   Tihany             7.36 338⇓ePn    Pn        13 30 17.0 +6.3
TIH   Tihany             7.36 338 ePn    Pn        13 30 12.0 +1.3
TIH                                Sn    Sn        13 31 33.0 -1.0
CRES  Cresnjev           7.38 323 ePn    Pn        13 30 11.2 +0.2
BIZ   Bicaz              7.48  23⇑iP     Pn        13 30 14.6 +2.2
RIY   Rijeka             7.51 316 ePn    Pn        13 30 12.8  0.0
BUD   Budapest           7.64 345  P     Pn        13 30 16.4 +1.9
BUD                                pmax    pmax
      comp=Z,258nm,0.5s
BUD   Budapest           7.64 345 eSn    Sn        13 31 44.1 +3.2
CSKK  Cskako             7.69 341 ePn    Pn        13 30 17.1 +1.8
CSKK                               Sn    Sn        13 31 43.1 +0.8
CEY   Cerknica           7.82 318 ePn    Pn        13 30 17.0 -0.1
BURAR Bucovina Array     7.87  17⇓iP     Pn        13 30 19.7 +1.8
BURAR Bucovina Array     7.87  17  P     Pn        13 30 19.7 +1.8
BUR08 Bucovina Ar. S     7.90  17 ePn    Pn        13 30 18.4 +0.1
PSZ   Piszkesteto        7.92 350 ePn    Pn        13 30 18.6 +0.1
PSZ   Piszkesteto        7.92 350⇓iP     Pn        13 30 19.9 +1.4
PSZ   Piszkesteto        7.92 350 eP     Pn        13 30 18.6 +0.1
PSZ   Piszkesteto        7.92 350 ePn    Pn        13 30 22.1 +3.6
PSZ                                Sn    Sn        13 31 51.1 +3.0
PSZ                               eSg    Sg        13 32 42.1 +4.5
LJU   Ljubljana          7.98 320 ePn    Pn        13 30 19.1 -0.2
TRPA  Tarpa              8.02   3⇓iP     Pn        13 30 21.3 +1.5
TRPA  Tarpa              8.02   3 ePn    Pn        13 30 20.1 +0.3
TRPA                               Sn    Sn        13 31 46.1 -4.3
SRO2  Moca               8.03 343 eP     Pn        13 30 22.2 +2.2
SRO2  Moca               8.03 343 ePN    Pn        13 30 22.2 +2.2
SRO   Srobarova          8.10 343 eP     Pn        13 30 24.0 +3.1
SRO   Srobarova          8.10 343 ePN    Pn        13 30 24.0 +3.1
TRI   Trieste            8.14 316 ePn    Pn        13 30 20.5 -1.0
TRI   Trieste            8.14 316 eP     Pn        13 30 20.5 -1.0
SOKA  Soboth             8.22 325 ePn    Pn        13 30 23.0 +0.4
      comp=Z,111nm,1.1s,SNR=135
SOKA                               Sn    Sn        13 31 55.4 +0.1
      comp=Z,32nm,0.9s
OBKA  Obir               8.31 323  Pn    Pn        13 30 23.7 -0.1
      comp=Z,1.0nm,0.1s,SNR=22
OBKA                              eSn    Sn        13 31 58.8 +1.2
      comp=Z,73nm,0.6s
BR231 Keskin MP Arra     8.39  88 ePn    Pn        13 30 25.9 +0.9
ANTO  Ankara             8.40  88 ePn    Pn        13 30 25.8 +0.6
ANTO  Ankara             8.40  88 eP     Pn        13 30 25.8 +0.6
KECS  Kecovo             8.42 354 eP     Pn        13 30 29.0 +3.8
KECS                              e                13 31 59.3
KECS  Kecovo             8.42 354 ePN    Pn        13 30 29.0 +3.8
KECS                              eSN    Sn        13 31 59.2 -0.9
SOP   Sopron             8.47 335  P     Pn        13 30 28.2 +2.3
SOP                                pmax    pmax
      comp=Z,116nm,0.9s
SOP   Sopron             8.47 335 ePn    Pn        13 30 30.1 +4.1
SOP   Sopron             8.47 335 ePn    Pn        13 30 26.0 +0.1
SOP   Sopron             8.47 335 ePg    Pg        13 31 06.1 +0.6
SOP                               eSg    Sg        13 32 58.0 +3.0
ARSA  Arzberg            8.47 329 ePn    Pn        13 30 27.0 +1.1
      comp=Z,16nm,0.5s,SNR=24
ARSA                               Sn    Sn        13 31 57.8 -3.7
      comp=Z,18nm,0.8s
KSV   Kosov              8.51  15  P     Pn        13 30 27.6 +1.1
UZH   Uzhgorod           8.51   2 eP     Pn        13 30 30.7 +4.2
UZH                               eS     Sn        13 32 09.0 +6.6
UZH                                MLR     MLR
      comp=N,400nm,10.0s
UZH                                MLR     MLR
      comp=E,1µm,10.0s
UZH                                MLR     MLR
      comp=Z,200nm,10.0s
KIS   Kishinev           8.53  34 eP     Pn        13 30 26.0 -0.8
KIS                               eS     Sn        13 32 04.0 +1.1
KIS                               eLi              13 33 15.0
KIS                               eLR    LR        13 33 59.0
      comp=Z,3µm,14.0s
KIS   Kishinev           8.53  34 eP     Pn        13 30 26.0 -0.8
KIS                               eS     Sn        13 32 04.0 +1.1
KIS                                pmax    pmax
      comp=Z,330nm,2.5s
KIS                                MLR     MLR
      comp=Z,3µm,14.0s
KIS                                MLR     MLR
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      comp=N,4µm,11.0s
VYHS  Vyhne              8.64 347  eP     Pn       13 30 30.3 +1.9
VYHS                               e               13 31 59.7
VYHS  Vyhne              8.64 347  ePN    Pn       13 30 30.2 +1.9
VYHS                               eSN    Sn       13 31 59.7 -6.0
ZST   Bratislava         8.76 339  eP     Pn       13 30 31.4 +1.5
ZST                                e               13 32 02.5
ZST   Bratislava         8.76 339  ePN    Pn       13 30 31.4 +1.5
ZST                                eSN    Sn       13 32 02.5 -6.1
KOLS  Kolonicke sedl     8.81   2  eP     Pn       13 30 38.7 +8.0
KOLS  Kolonicke sedl     8.81   2  e      Pn       13 30 38.7 +8.0
KOLS  Kolonicke sedl     8.81   2  eSG    Sg       13 33 13.1 +6.9
MYKA  Terra Mystica      8.83 320   Pn    Pn       13 30 33.5 +2.5
      comp=N,1.9nm,0.3s
MYKA                                Sn    Sn       13 32 09.2 -1.2
      comp=N,23nm,0.7s
MODS  Modra-Piesok       8.88 340  eP     Pn       13 30 33.7 +2.1
MODS                               e               13 32 05.0
MODS  Modra-Piesok       8.88 340  ePN    Pn       13 30 33.7 +2.1
MODS                               eSN    Sn       13 32 05.0 -6.4
CONA  Conrad Observa     8.91 333  ePn    Pn       13 30 33.4 +1.3
      comp=N,1.0nm,0.3s,SNR=22
BR101 Keskin Array S     9.07  89  ePn    Pn       13 30 35.6 +1.3
BR101                              eSn    Sn       13 32 16.2 -0.2
BR131 Keskin Array S     9.07  89  ePn    Pn       13 30 35.9 +1.5
BRTR  Keskin Array B     9.07  89   Pn    Pn       13 30 35.6 +1.3
      comp=N,1.9nm,0.3s,baz=272,slow=12,SNR=30
BRTR                                Sn    Sn       13 32 16.2 -0.2
      comp=N,0.4nm,0.3s,baz=263,slow=20,SNR=4.2
BRTR                                Lg    Lg       13 33 24.4
      baz=271,slow=21,SNR=3.1
BRTR                                LR    LR       13 34 34.7
      comp=N,1µm,21.2s,baz=268,slow=41
BRTR  Keskin Array B     9.07  89  i P    Pn       13 30 36.4 +2.1
BRTR                                pmax  pmax
      comp=Z,9.0nm,0.6s
ILGA  Ilgaz              9.08  80  ePn    Pn       13 30 34.0 -0.5
LANS  Liptovska Anna     9.19 350  eP     Pn       13 30 39.9 +4.1
LANS  Liptovska Anna     9.19 350  ePN    Pn       13 30 39.9 +4.1
JAVC  Velka Javorina     9.23 343  ePN    Pn       13 30 38.4 +2.0
ASOL  Asolo              9.24 311   P     Pn       13 31 09.6  +33
KBA   Koelnbreinsper     9.29 321   Pn    Pn       13 30 38.0 +0.6
      comp=Z,21nm,0.9s,SNR=42
KBA                                 Sn    Sn       13 32 21.8  0.0
      comp=Z,30nm,1.0s
KBA   Koelnbreinsper     9.29 321   P     Pn       13 30 38.2 +0.8
KBA                                 pmax  pmax
      comp=Z,130nm,1.5s
NIE   Niedzica           9.36 354  eP     Pn       13 30 41.0 +2.8
NIE                                eS     Sn       13 32 33.8  +10
MOA   Molln              9.46 327  ePn    Pn       13 30 40.7 +1.2
      comp=Z,20nm,0.8s,SNR=56
MOA                                 Sn    Sn       13 32 23.8 -2.0
      comp=Z,0.8nm,0.3s
ABTA  Abfaltersbach      9.48 317  ePn    Pn       13 30 39.9  0.0
      comp=Z,2.8nm,0.2s,SNR=18
ABTA                               eSn    Sn       13 32 22.5 -3.9
      comp=Z,46nm,1.0s
KWP   Kalwaria Pacla     9.53   3  eP     Pn       13 30 45.2 +4.7
KWP   Kalwaria Pacla     9.53   3  ePn    Pn       13 30 42.9 +2.5
KWP   Kalwaria Pacla     9.53   3  eP     Pn       13 30 42.9 +2.5
KRUC  Moravsky           9.74 338   P     Pn       13 30 44.6 +1.2
KRUC                                pmax  pmax
      comp=Z,59nm,1.7s
KRUC  Moravsky           9.74 338  ePN    Pn       13 30 43.5 +0.1
LVV   L'vov              9.82   8  eP     Pn       13 30 48.0 +3.6
LVV                                eS     Sn       13 32 40.0 +5.5
LVV                                 MLR   MLR
      comp=Z,1µm,11.0s
VRAC  Vranov             9.91 340   Pn    Pn       13 30 46.6 +0.9
      comp=Z,0.8nm,0.3s,baz=165,slow=13,SNR=38
VRAC                                Sn    Sn       13 32 36.9  0.0
      comp=Z,1.2nm,0.3s,baz=169,slow=10,SNR=3.1
VRAC                                LR    LR       13 34 52.6
      comp=Z,628nm,19.0s,baz=162,slow=39
VRAC  Vranov             9.91 340⇓iP    Pn       13 30 46.7 +0.9
VRAC  Vranov             9.91 340  ePN    Pn       13 30 46.6 +0.9
MORC  Moravsky Berou    10.12 344  ePn    Pn       13 30 49.5 +0.9
MORC  Moravsky Berou    10.12 344⇓iP    Pn       13 30 49.9 +1.2
MORC  Moravsky Berou    10.12 344  eP     Pn       13 30 49.5 +0.9
MORC  Moravsky Berou    10.12 344  ePN    Pn       13 30 49.4 +0.7
OJC   Ojcow             10.20 353  eP     Pn       13 30 51.8 +2.1
OJC                                eS     Sn       13 32 57.2  +13
OJC   Ojcow             10.20 353  ePn    Pn       13 30 51.7 +2.1
OJC   Ojcow             10.20 353  eP     Pn       13 30 51.7 +2.0
TREC  Trest             10.22 336  ePN    Pn       13 30 51.2 +1.2
TREC                                AMS   AMS      13 35 10.0
      comp=Z,4µm,8.7s
SIM   Simferopol'       10.25  58  eP     Pn       13 30 55.1 +4.7
SIM                                eS     Sn       13 32 47.6 +2.4
SIM                                 pmax  pmax
      comp=Z,16nm,1.3s
SIM                                 MLR   MLR
      comp=Z,170nm,12.0s
WTTA  Wattenberg        10.27 317  ePn    Pn       13 30 52.5 +1.7
      comp=Z,2.3nm,0.3s,SNR=9.9
WTTA                               eSn    Sn       13 32 43.8 -2.2
      comp=Z,135nm,1.1s
WATA  Walderalm         10.35 318  ePn    Pn       13 30 54.0 +2.1
      comp=Z,5.7nm,0.4s,SNR=7.7
WATA                               eSn    Sn       13 32 44.2 -3.6
      comp=Z,45nm,0.7s
CSS   Mathiatis         10.47 116  ePn    Pn       13 30 53.3  0.0
CSS   Mathiatis         10.47 116   Pn    Pn       13 30 57.2 +3.8
CSS                                 Sn    Sn       13 32 58.0 +7.5
CSS   Mathiatis         10.47 116   P     Pn       13 30 57.4 +4.0
SQTA  Sankt Quirin      10.47 316  ePn    Pn       13 30 54.9 +1.5
      comp=Z,6.4nm,0.4s,SNR=13
SQTA                                Sn    Sn       13 32 50.5 -0.2
      comp=Z,45nm,0.7s
GEC2  GERESS Array S    10.48 329  ePn    Pn       13 30 53.5 -0.1
GEC2                               eLg    Lg       13 34 04.3
GEC2  GERESS Array S    10.48 329  eP     Pn       13 30 53.5 -0.1
GERES GERESS Array B    10.48 329   Pn    Pn       13 30 53.5 -0.1
      comp=Z,0.7nm,0.3s,baz=149,slow=14,SNR=32
GERES                               Lg    Lg       13 34 04.3
      baz=158,slow=22,SNR=2.0
GERES                               LR    LR       13 36 11.0
      comp=Z,406nm,19.1s,baz=150,slow=45
MOTA  Moosalm           10.60 316   Pn    Pn       13 30 55.2 -0.1
      comp=Z,0.5nm,0.2s,SNR=18
MOTA                               eSn    Sn       13 32 51.9 -2.1
      comp=Z,15nm,0.4s
FETA  Feichten          10.61 314  ePn    Pn       13 30 57.0 +1.6
      comp=Z,1.6nm,0.5s,SNR=24
FETA                                Sn    Sn       13 32 51.7 -2.4
      comp=Z,17nm,0.7s
FUORN Ofenpass-Fuorn    10.64 311  ePn    Pn       13 30 56.8 +0.8
KHC   Kasperske Hory    10.76 330  ePn    Pn       13 30 56.4 -1.0
KHC   Kasperske Hory    10.76 330  i P    Pn       13 30 57.5 +0.2
KHC   Kasperske Hory    10.76 330  ePN    Pn       13 30 58.0 +0.7
KEST  Kesra             10.80 250   Pn    Pn       13 30 55.5 -2.6
      comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=2.2
KEST  Kesra             10.80 250  ePn    Pn       13 30 57.5 -0.5
RETA  Reutte            10.87 316   Pn    Pn       13 30 56.8 -2.1
      comp=Z,2.4nm,0.2s,SNR=9.4
RETA                                Sn    Sn       13 32 57.3 -3.3
      comp=Z,39nm,0.8s
DPC   Dobruska-Polom    10.94 341  eP     Pn       13 31 00.4 +0.6
DPC                                 MLR   MLR
      comp=Z,4µm,16.4s
DPC   Dobruska-Polom    10.94 341  ePN    Pn       13 31 00.4 +0.6
DPC                                 AMS   AMS      13 35 40.0
      comp=Z,4µm,16.4s
DAVOX Davos/Dischmat    10.95 311   Pn    Pn       13 30 58.6 -1.5
      comp=Z,0.7nm,0.3s,baz=168,slow=20,SNR=2.5
DAVOX                               Sn    Sn       13 33 00.3 -2.2
      comp=Z,1.3nm,0.3s,baz=340,slow=16,SNR=4.4
DAVOX                               Lg    Lg       13 34 06.0
      baz=198,slow=20,SNR=2.3
GOPC  GO Pecny, Ondr    10.99 335  eP     Pn       13 31 01.0 +0.5
GOPC  GO Pecny, Ondr    10.99 335  ePN    Pn       13 31 01.0 +0.5
WET   Wettzell          11.05 328   P     Pn       13 31 03.0 +1.7
WET                                 pmax  pmax
      comp=Z,32nm,1.0s
TUE   Stuetta           11.10 309  ePn    Pn       13 31 03.4 +1.3
PRU   Pruhonice         11.13 335   P     Pn       13 31 03.2 +0.8
PRU                                 pmax  pmax
      comp=Z,19nm,1.1s
PRU   Pruhonice         11.13 335  ePN    Pn       13 31 02.9 +0.5
PRU                                 AMS   AMS      13 35 30.0
      comp=Z,5µm,9.1s
OSTC  Ostas             11.16 341  ePN    Pn       13 31 03.6 +0.8
OSTC                                AMS   AMS      13 35 40.0
      comp=Z,3µm,10.4s
UPC   Upice             11.16 340  eP     Pn       13 31 04.4 +1.5
UPC                                 MLR   MLR
      comp=Z,3µm,16.9s
UPC   Upice             11.16 340  ePN    Pn       13 31 04.4 +1.5
UPC                                 AMS   AMS      13 35 50.0
      comp=Z,3µm,16.9s
DAVA  Damuels           11.23 314  ePn    Pn       13 31 05.1 +1.2
      comp=Z,4.7nm,0.5s,SNR=8.8
DAVA                                Sn    Sn       13 33 07.6 -1.8
      comp=Z,18nm,0.8s
KSP   Ksiaz             11.40 342  eP     Pn       13 31 09.7 +3.5
KSP                                eS     Sn       13 33 43.0  +30
KSP   Ksiaz             11.40 342   P     Pn       13 31 09.1 +3.0
PVCC  Panska Ves        11.59 336  eP     Pn       13 31 09.1 +0.4
PVCC                                MLR   MLR
      comp=Z,3µm,9.1s
PVCC  Panska Ves        11.59 336  ePN    Pn       13 31 09.1 +0.4
PVCC                                AMS   AMS      13 35 50.0
      comp=Z,3µm,9.1s
AKASG Malin Array Be    11.77  24   Pn    Pn       13 31 11.6 +0.4
      comp=Z,1.1nm,0.3s,baz=212,slow=13,SNR=16
AKASG                               Lg    Lg       13 34 42.7
      comp=Z,0.6nm,0.3s,baz=204,slow=28,SNR=3.6
AKASG                               LR    LR       13 35 54.2
      comp=Z,752nm,18.8s,baz=205,slow=38
AKASG Malin Array Be    11.77  24  i P    Pn       13 31 12.8 +1.7
AKASG                               pmax  pmax
      comp=Z,5.0nm,0.7s
AKBB  Malin Array Si    11.77  24  ePn    Pn       13 31 10.8 -0.3
AKBB  Malin Array Si    11.77  24  eP     Pn       13 31 10.8 -0.3
NKC   Novy Kostel       12.08 330  eP     Pn       13 31 15.7 +0.3
NKC                                 MLR   MLR
      comp=Z,6µm,9.2s
NKC   Novy Kostel       12.08 330  ePN    Pn       13 31 15.7 +0.3
NKC                                 AMS   AMS      13 36 10.0
      comp=Z,6µm,9.2s
BRG   Berggiesshubel    12.09 335  eP     Pn       13 31 15.7 +0.2
      comp=Z,13nm,1.2s
BRG                                 S     Sn       13 33 45.0  +15
      comp=N,3µm,8.6s
      comp=E,3µm,8.5s
      comp=Z,5µm,8.6s
BRG   Berggiesshubel    12.09 335  eP     Pn       13 31 15.7 +0.2
BRG                                 pmax  pmax
      comp=Z,13nm,1.2s
BRG                                 MLR   MLR
      comp=N,3µm,8.6s
BRG                                 MLR   MLR
      comp=E,3µm,8.5s
BRG                                 MLR   MLR
      comp=Z,5µm,8.6s
GRA1  Grafenberg Arr    12.17 325  ePn    Pn       13 31 15.4 -1.2
GRF   Grafenberg Arr    12.17 325  eP     Pn       13 31 15.4 -1.2
SLE   Schleitheim       12.28 313   P     Pn       13 31 22.1 +4.0
SLE                                 pmax  pmax
      comp=Z,46nm,1.3s
SENIN Lac Senin/Sane    12.30 305  ePn    Pn       13 31 18.0 -0.6
ANN   Anapa             12.42  63  eP     Pn       13 31 19.7 -0.3
ANN                                eS     Sn       13 33 41.0 +2.9
ANN                                 pmax  pmax
      comp=Z,97nm,1.2s
ANN                                 MLR   MLR
      comp=Z,1µm,14.0s
STU   Stuttgart         12.50 318  ePn    Pn       13 31 21.3 +0.2
STU   Stuttgart         12.50 318  eP     Pn       13 31 21.3 +0.2
BFO   Black Forest      12.69 315  ePn    Pn       13 31 22.7 -1.0
BFO   Black Forest      12.69 315  i P    Pn       13 31 23.9 +0.2
ORIF  Oris-en-Rattie    12.72 297  eP     Pn       13 31 28.2 +4.0
ORIF                                pmax  pmax
      comp=Z,4.0nm,0.4s
MOX   Moxa              12.73 329   P     Pn       13 31 27.8 +3.5
MOX                                 pmax  pmax
      comp=Z,17nm,1.1s
CLL   Collm             12.77 334  ePn    Pn       13 31 24.6 -0.2
CLL   Collm             12.77 334  eP     Pn       13 31 24.6 -0.2
CLL   Collm             12.77 334  eP     Pn       13 31 24.0 -0.8
CLL                                epP    P        13 31 27.0 -8.8
      comp=Z,23nm,1.0s
CLL                                i PP   PnPn     13 31 34.3 +1.8
      comp=Z,47nm,1.2s
CLL                                eS     Sn       13 33 46.0 -0.7
CLL                                 LH             13 35 00.0
      comp=N,900nm,20.1s
CLL                                 LH             13 35 00.0
      comp=E,2µm,20.5s
CLL                                 Lmax           13 36 00.0
OFRI  `Ofer             12.95 121   Pn    Pn       13 31 30.4 +3.0
MMA0B Mount Meron ar    12.99 119   Pn    Pn       13 31 31.6 +3.6
MMAI  Mount Meron Ar    12.99 119   Pn    Pn       13 31 28.4 +0.4
      comp=E,1.4nm,0.3s,baz=316,slow=13,SNR=20
MMAI                                LR    LR       13 38 07.6
      comp=E,242nm,19.0s,baz=325,slow=45
GEM   Giv'at Ha'Em      13.05 118   Pn    Pn       13 31 32.4 +3.7
KSDI  Kefar Szold       13.06 118   Pn    Pn       13 31 32.2 +3.4
KSDI  Kefar Szold       13.06 118   P     Pn       13 31 31.6 +2.8
NATI  Neve Ativ         13.07 117   Pn    Pn       13 31 33.5 +4.6
CABF  La Chapelle       13.16 305  eP     Pn       13 31 31.9 +1.6
CABF                                pmax  pmax
      comp=Z,44nm,1.2s
HINF  Hinteralfeld      13.25 310  eP     Pn       13 31 31.6 +0.2
HINF                                pmax  pmax
      comp=Z,18nm,0.8s
ECH   Echery            13.28 312   P     Pn       13 31 33.7 +2.0
ECH                                 pmax  pmax
      comp=Z,39nm,1.4s
KSHT  Keshet            13.28 118   Pn    Pn       13 31 35.8 +3.8
CDF   Champ du Feu      13.32 313  eP     Pn       13 31 31.1 -1.2
CDF                                 pmax  pmax
      comp=Z,44nm,1.5s
MMLI  Mount Malkishu    13.36 121   P     P        13 31 44.7 +2.2
SHMJ  Saham             13.40 119   P     Pn       13 31 37.7 +4.1
      comp=Z,153nm,1.2s
HMDT  Nahal Hemdat      13.54 121   Pn    Pn       13 31 38.0 +2.6
AMAZ  Amatzia           13.62 125   P     Pn       13 31 34.8 -1.7
HAU   Haudompre         13.63 310  eP     Pn       13 31 36.7 +0.1
HAU                                 pmax  pmax
      comp=Z,21nm,0.8s
KZIT  Kziot             13.73 128   Pn    Pn       13 31 38.7 +0.7
KZIT  Kziot             13.73 128   P     Pn       13 31 38.5 +0.5
SOC   Sochi             13.76  70  eP     Pn       13 31 39.8 +1.5
SOC                                e               13 34 18.3
SOC                                 MLR   MLR
      comp=Z,100nm,8.0s
TNS   Taunus Mts        13.81 321   P     Pn       13 31 42.4 +3.3
TNS                                 pmax  pmax
      comp=Z,44nm,0.8s
YTIR  Yattir            13.86 125   Pn    Pn       13 31 41.4 +1.6
SUW   Suwalki           13.93   3  eP     Pn       13 31 43.7 +3.2
SUW   Suwalki           13.93   3  ePn    Pn       13 31 39.0 -1.5
SUW   Suwalki           13.93   3  eP     Pn       13 31 39.0 -1.5
MZDA  Masada            14.05 125   Pn    Pn       13 31 43.5 +1.2
MZDA                                Sn    Sn       13 34 18.2 +0.1
LISJ  El Lisan          14.17 124   P     P        13 31 50.0 -1.5
      comp=Z,53nm,1.1s
ZFRI  Zfri              14.46 127   Pn    Pn       13 31 47.6 -0.3
PRNI  Paran             14.49 128   Pn    Pn       13 31 48.2 -0.3
KRMI  Paran Flat        14.50 130   Pn    Pn       13 31 48.9 +0.4
ASF   Jabal al Asfar    14.50 118   Pn    Pn       13 31 49.5 +0.8
      comp=Z,0.3nm,0.3s,baz=326,slow=3.6,SNR=8.0
ASF                                 Sn    Sn       13 34 34.3 +5.0
      comp=Z,0.2nm,0.3s,baz=25,slow=19,SNR=1.5
ASF                                 LR    LR       13 38 20.8
      comp=Z,380nm,21.8s,baz=276,slow=41
ASF   Jabal al Asfar    14.50 118   P     P        13 31 56.9 +1.6
WLF   Walferdange       14.63 316  ePn    Pn       13 31 50.0 -0.2
WLF   Walferdange       14.63 316  eP     Pn       13 31 50.0 -0.2
JDRJ  Daraweish         14.64 126   P     P        13 31 56.1 -0.8
      comp=Z,131nm,1.4s
HRFI  Mount Harif       14.74 129   Pn    Pn       13 31 51.4 -0.5
HRFI  Mount Harif       14.74 129   P     Pn       13 31 50.1 -1.8
LOR   Lormes            14.83 305   P     P        13 31 59.0 +0.2
LOR                                 pmax  pmax
      comp=Z,28nm,1.4s
MBRI  Mt Berech         14.85 130   Pn    Pn       13 31 53.4 +0.1
MBRI                                Sn    Sn       13 34 34.7 -3.0
MICGM Minsk             14.95  14  eP     P        13 32 00.0  0.0
MICGM                              eS     S        13 34 52.0 -5.7
MNK   Minsk             14.95  14  eP     P        13 32 00.0  0.0
EIL   Elat              14.96 130   Pn    Pn       13 31 53.5 -1.3
      comp=Z,0.4nm,0.3s,baz=340,slow=16,SNR=8.7
EIL                                 Sn    Sn       13 34 39.0 -1.3
      comp=Z,0.5nm,0.3s,baz=356,slow=19,SNR=2.1
EIL                                 LR    LR       13 39 32.7
      comp=Z,355nm,18.1s,baz=246,slow=45
EIL   Elat              14.96 130   Pn    Pn       13 31 54.0 -0.8
AQBJ  Aqaba             14.97 130   P     P        13 31 59.6 -0.9
      comp=Z,106nm,0.8s
MTLF  Montolieu         15.01 289  eP     P        13 32 01.8 +1.0
MTLF                                pmax  pmax
      comp=Z,17nm,0.9s
NACGM Naroch            15.15  11  eP     P        13 32 01.0 -1.3
NACGM                              eS     Sn       13 34 48.0 +3.2
NACGM                              eLQ    LQ       13 36 30.0
NACGM                              eLR    LR       13 37 43.0
BUG   Bochum--Univer    15.19 323   P     P        13 32 04.6 +1.9
BUG                                 pmax  pmax
      comp=Z,34nm,1.2s
MEM   Membach           15.26 319   P     P        13 32 05.3 +1.7
MEM                                 pmax  pmax
      comp=Z,70nm,1.1s
MEM   Membach           15.26 319⇑P     P        13 32 04.9 +1.3
      comp=Z,46nm,1.0s
CAF   Calviac           15.35 295  eP     P        13 32 06.7 +2.1
CAF                                 pmax  pmax
      comp=Z,35nm,1.3s
HGN   Heimansgroeve     15.39 319  eP     P        13 32 06.6 +1.6
BCLA  Clavier           15.51 317⇓P     P        13 32 07.7 +1.4
      comp=Z,53nm,1.4s
IDID  Didziasalis       15.55  10  eP     P        13 32 06.0 -0.7
IDID                                IAmb  IAmb     13 32 07.9
      comp=Z,34nm,0.9s
TCF   Toulx Ste Croi    15.57 300  eP     P        13 32 09.8 +2.7
TCF                                 pmax  pmax
      comp=Z,30nm,1.1s
DOU   Dourbes           15.71 315   P     P        13 32 09.3 +0.8
DOU                                 pmax  pmax
      comp=Z,59nm,1.3s
DOU   Dourbes           15.71 315⇓P     P        13 32 09.2 +0.7
      comp=Z,21nm,0.8s
ISAL  Salakas           15.72   9  eP     Pn       13 32 06.1 +1.5
ISAL                                IAmb  IAmb     13 32 09.9
      comp=Z,32nm,0.8s
NEY   Neytrino          15.90  72  i P    Pn       13 32 08.0 +0.8
NEY                                 pmax  pmax
      comp=Z,5.0nm,1.1s
IZAR  Zarasai           15.91   9  eP     Pn       13 32 08.6 +1.5
IZAR                                IAmb  IAmb     13 32 12.0
      comp=Z,32nm,1.1s
KIV   Kislovodsk        15.94  69  ePn    Pn       13 32 08.1 +0.5
      comp=Z,33nm,1.2s
KIV   Kislovodsk        15.94  69  eP     Pn       13 32 09.0 +1.4
KIV                                 pmax  pmax
      comp=Z,64nm,1.1s
KIV                                 MLR   MLR
      comp=Z,323nm,13.0s
KVAR  Kislovodsk Arr    15.95  69   Pn    Pn       13 32 08.7 +1.0
      baz=252,slow=20,SNR=2.2
KBZ   Khabaz            16.07  70   Pn    Pn       13 32 09.3 +0.2
      comp=Z,0.2nm,0.3s,baz=180,slow=18,SNR=2.0
KBZ                                 LR    LR       13 39 46.4
      comp=Z,249nm,18.7s,baz=267,slow=42
SNF   Seneffe           16.10 316⇑P     P        13 32 14.3 +1.5
      comp=Z,33nm,1.1s
CLF   Chambon-Foret     16.11 306  ePn    Pn       13 32 10.7 +1.0
      comp=Z,317nm,1.7s
UCC   Uccle             16.22 317⇓P     P        13 32 15.5 +1.3
VORD  Divnogorie        16.29  43  eP     P        13 32 14.9  0.0
VORD                                pmax  pmax
      comp=Z,50nm,0.9s
GOF   Gofitskoye        16.35  66⇓iP    P        13 32 17.4 +1.7
GOF                                 pmax  pmax
      comp=Z,75nm,0.8s
VSR   Storozhevoye      16.37  42  eP     Pn       13 32 12.4 -0.6
VSR                                 pmax  pmax
      comp=Z,40nm,1.2s
VSR                                 MLR   MLR
      comp=Z,1µm,14.0s
AKH   Akhalkalaki       16.45  78  ePn    Pn       13 32 15.3 +1.1
      comp=Z,62nm,1.5s
AKH   Akhalkalaki       16.45  78  eP     Pn       13 32 15.3 +1.1
AKH                                 pmax  pmax
      comp=Z,62nm,1.5s
VORR  Voronezh          16.66  40   P     P        13 32 18.0 -1.1
VORR                                pmax  pmax
      comp=Z,350nm,1.2s
ZEI   Tsey              16.74  74  eP     P        13 32 22.5 +2.3
ZEI                                 pmax  pmax
      comp=Z,49nm,1.4s
LPSR  Galich'ya Gora    17.11  38  eP     Pn       13 32 20.2 -2.1
LPSR                                pmax  pmax
      comp=Z,110nm,1.3s
LPSR                                MLR   MLR
      comp=Z,960nm,11.0s
MFF   Saint Martin d    17.23 299  eP     P        13 32 27.1 +1.7
MFF                                 pmax  pmax
      comp=Z,155nm,1.8s
GNI   Garni             17.50  83  eP     P        13 32 30.0 +1.4
      comp=Z,126nm,1.5s
GNI   Garni             17.50  83ceP    P        13 32 28.6  0.0
GNI                                 pmax  pmax
      comp=Z,603nm,1.7s
SLIT  Slitere, Latvi    17.52   1  eP     Pn       13 32 27.2 -0.2
LDF   La Druitiere      17.80 306  eP     P        13 32 31.4 -0.3
LDF                                 pmax  pmax
      comp=Z,98nm,1.4s
OBN   Obninsk           17.92  28   P     Pn       13 32 31.1 -1.3
      comp=Z,0.4nm,0.3s,baz=213,slow=12,SNR=8.5
OBN                                 LR    LR       13 39 49.9
      comp=Z,193nm,20.1s,baz=214,slow=38
OBN   Obninsk           17.92  28  eP     Pn       13 32 31.1 -1.3
      comp=Z,169nm,1.6s
OBN   Obninsk           17.92  28ceP    Pn       13 32 30.3 -2.1
OBN                                 S     S        13 35 59.0 +0.7
OBN                                 pmax  pmax
      comp=Z,120nm,1.6s
OBN                                 MLR   MLR
      comp=Z,1µm,15.0s
FLN   La Foliniere      18.09 306  eP     P        13 32 34.6 -0.2
FLN                                 pmax  pmax
      comp=Z,42nm,0.9s
GROC  Groznyy           18.14  72  eP     Pn       13 32 34.3 -0.9
GROC                               eS     Sn       13 35 56.2 -1.2
GROC                                pmax  pmax
      comp=Z,94nm,1.4s
GRR   Gorron            18.20 305  eP     P        13 32 36.3 +0.3
GRR                                 pmax  pmax
      comp=Z,65nm,1.1s
MUD   Monsted U'grnd    18.34 337  eP     Pn       13 32 35.7 -1.8
MUD   Monsted U'grnd    18.34 337  i P    Pn       13 32 35.7 -1.8
VSU   Vasula            18.62   8  eP     P        13 32 40.0 -0.6
VSU                                 IAmb  IAmb     13 32 42.5
      comp=Z,188nm,0.9s
VSU   Vasula            18.62   8ceP    Pn       13 32 41.3 +0.4
VSU                                 pmax  pmax
      comp=Z,307nm,1.3s
MOS   Moscow            18.79  29  eP     P        13 32 41.9 -0.6
MOS                                eS     S        13 36 16.9 +1.0
MOS                                 pmax  pmax
      comp=Z,152nm,1.3s
MOS                                 pmax  pmax
      comp=Z,200nm,1.6s
MOS                                 MLR   MLR
      comp=Z,1µm,15.0s
WACR  West Acre         19.22 318  eP     Pn       13 32 48.2  0.0
WACR                                IAMs_20 IAMs_20 13 41 01.9
      comp=Z,1µm,13.1s
JSA   Saint Aubin       19.28 306  eP     Pn       13 32 50.8 +1.9
JSA                                 IAMs_20 IAMs_20 13 41 28.1
      comp=Z,1µm,10.9s
MAK   Makhachkala       19.39  73  eP     P        13 32 47.9 -1.3
MAK                                eS     Sn       13 36 25.7 -1.8
MAK                                 pmax  pmax
      comp=Z,195nm,0.9s
MAK                                 MLR   MLR
      comp=Z,218nm,16.0s
QUIF  Quistinic         19.55 302  eP     P        13 32 51.4 +0.6
QUIF                                pmax  pmax
      comp=Z,212nm,1.3s
ROSF  Rostrenen         19.72 303  eP     Pn       13 32 54.6 +0.3
ROSF                                pmax  pmax
      comp=Z,102nm,1.6s
ESDC  Sonseca Array     19.80 277   P     P        13 32 52.4 -1.3
      comp=Z,0.3nm,0.3s,baz=73,slow=11,SNR=24
ESDC                                PcP   PcP      13 37 11.6 +0.1
      comp=Z,0.3nm,0.3s,baz=30,slow=2.6,SNR=4.0
ESLA  Sonseca Array     19.80 277  eP     P        13 32 52.5 -1.2
      comp=Z,17nm,0.9s
GUD   Guadarrama        19.80 280   P     P        13 32 53.6 -0.3
GUD                                 pmax  pmax
      comp=Z,21nm,1.4s
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PAB	San Pablo	20.11	277	eP	P	13 32 56.5	-0.7
	comp=Z,84nm,1.7s						
PAB	San Pablo	20.11	277	eP	P	13 32 56.5	-0.7
PAB				pmax	pmax		
	comp=Z,84nm,1.7s						
CWF	Charnwood Fore	20.24	316	eP	P	13 32 58.3	-0.1
CWF				IAmb	IAmb	13 33 01.9	
	comp=Z,25nm,0.6s						
CWF				IAMs_20	IAMs_20	13 41 42.1	
	comp=Z,1µm,13.5s						
STRD	Stroud	20.26	313	eP	P	13 32 59.0	+0.4
STRD				IAmb	IAmb	13 33 03.9	
	comp=Z,232nm,0.9s						
STRD				IAMs_20	IAMs_20	13 41 48.6	
	comp=Z,3µm,13.8s						
PUL	Pulkovo	20.38	12	eP	P	13 32 57.0	-2.8
PUL	Pulkovo	20.38	12	ceP	P	13 32 59.2	-0.6
PUL				pmax	pmax		
	comp=Z,143nm,0.4s						
MONM	Monmouth	20.65	313	eP	P	13 33 02.9	+0.1
MONM				IAmb	IAmb	13 33 08.0	
	comp=Z,309nm,1.5s						
MONM				IAMs_20	IAMs_20	13 42 28.3	
	comp=Z,2µm,20.6s						
HFS	Hagfors	20.67	348	P	P	13 33 01.8	-1.2
	comp=Z,27nm,0.7s,baz=159,slow=13,SNR=23						
HFS				LR	LR	13 42 12.1	
	comp=Z,518nm,20.9s,baz=166,slow=40						
LBWR	Ladybower, Pea	20.79	318	eP	P	13 33 03.7	-0.6
LBWR				IAmb	IAmb	13 33 04.8	
	comp=Z,78nm,1.0s						
LBWR				IAMs_20	IAMs_20	13 42 00.0	
	comp=Z,1µm,12.2s						
MCH1	Michaelchurch	20.82	313	eP	P	13 33 04.8	+0.1
MCH1				IAmb	IAmb	13 33 09.2	
	comp=Z,134nm,0.9s						
MCH1				IAMs_20	IAMs_20	13 42 14.0	
	comp=Z,3µm,11.3s						
STNC	Stoke	20.88	316	eP	P	13 33 05.7	+0.4
STNC				IAMs_20	IAMs_20	13 42 03.7	
	comp=Z,1µm,10.1s						
HLM1	Long Mynd	20.98	314	eP	P	13 33 06.2	-0.2
HLM1				IAmb	IAmb	13 33 11.4	
	comp=Z,53nm,0.9s						
KONO	Kongsberg	21.01	343	eP	P	13 33 05.3	-1.5
	comp=Z,66nm,1.2s						
KONO	Kongsberg	21.01	343	ceP	P	13 33 05.2	-1.5
KONO				pmax	pmax		
	comp=Z,55nm,1.3s						
KONO	Kongsberg	21.01	343	eP	P	13 33 06.5	-0.2
HPK	Haverah Park	21.02	319	eP	P	13 33 06.5	-0.3
HPK				IAMs_20	IAMs_20	13 42 45.8	
	comp=Z,1µm,12.5s						
OSL	Oslo	21.03	344	eP	P	13 33 05.9	-0.9
FOEL	Foel Wylfa	21.32	315	eP	P	13 33 10.1	0.0
FOEL				IAmb	IAmb	13 33 15.2	
	comp=Z,148nm,1.2s						
FOEL				IAMs_20	IAMs_20	13 42 18.6	
	comp=Z,1µm,13.5s						
FIA0	FINESS Array S	21.51	6	eP	P	13 33 10.7	-1.3
FIA0	FINESS Array S	21.51	6	eP	P	13 33 10.7	-1.3
FINES	FINESS Array B	21.51	6	P	P	13 33 10.7	-1.3
	comp=Z,21nm,1.0s,baz=182,slow=9.5,SNR=25						
FINES				PcP	PcP	13 37 13.4	-0.8
	comp=Z,5.4nm,1.1s,baz=282,slow=2.7,SNR=3.7						
FINES				LR	LR	13 41 45.8	
	comp=Z,740nm,18.2s,baz=188,slow=37						
FIA1	FINESS Array S	21.51	6	eP	P	13 33 11.6	-0.4
	comp=Z,77nm,1.0s						
NC602	NORSAR Array S	21.61	346	eP	P	13 33 11.7	-1.4
	comp=Z,140nm,0.8s						
NC602	NORSAR Array S	21.61	346	eP	P	13 33 12.9	-0.2
NORES	NORESS Array B	21.61	346	P	P	13 33 12.2	-0.8
NORES				pmax	pmax		
	comp=Z,55nm,0.6s						
BLS5	Blasjo	21.63	338	eP	P	13 33 13.6	+0.3
EDMD	Edmundbyers	21.66	321	eP	P	13 33 12.9	-0.8
EDMD				IAmb	IAmb	13 33 18.0	
	comp=Z,49nm,1.0s						
EDMD				IAMs_20	IAMs_20	13 43 14.3	
	comp=Z,2µm,12.9s						
KMY	Karmoy	21.81	337	eP	P	13 33 15.3	+0.1
NAO01	NORSAR Array S	21.83	345	eP	P	13 33 14.3	-1.2
	comp=Z,70nm,0.8s						
MVO	Moncorvo	21.90	282	eP	P	13 33 17.8	+1.3
	comp=Z,37nm,1.4s						
MVO				eS	S	13 37 20.6	+2.4
MVO				eLR	LR	13 42 25.4	
	comp=Z,300nm,16.0s						
NC405	NORSAR Array S	21.93	347	eP	P	13 33 15.8	-0.7
	comp=Z,169nm,0.8s						
NB201	NORSAR Array S	21.94	346	eP	P	13 33 15.8	-0.9
	comp=Z,171nm,0.9s						
NB2	NORSAR Subarra	21.95	346	P	P	13 33 15.5	-1.3
	comp=Z,57nm,0.8s,baz=160,slow=11						
NB2	NORSAR Subarra	21.95	346	P	P	13 33 15.5	-1.3
	baz=160,slow=11						
NB200	NORSAR Array S	21.95	346	eP	P	13 33 15.3	-1.5
NOA	NORSAR Array B	21.95	346	P	P	13 33 15.3	-1.5
	comp=Z,33nm,0.8s,baz=161,slow=11,SNR=46						
NOA				LR	LR	13 43 05.9	
	comp=Z,528nm,18.7s,baz=160,slow=40						
ODD1	Odda	21.99	339	eP	P	13 33 17.3	+0.1
NBO00	NORSAR Array S	22.02	346	eP	P	13 33 16.1	-1.4
	comp=Z,105nm,1.0s						
KESW	Keswick, Cumbr	22.09	319	eP	P	13 33 17.4	-0.9
KESW				IAmb	IAmb	13 33 21.2	
	comp=Z,59nm,0.9s						
NC303	NORSAR Array S	22.09	346	eP	P	13 33 17.7	-0.6
	comp=Z,185nm,0.8s						
TAM	Tamanrasset	22.13	224	eP	P	13 33 19.6	+0.4
	comp=Z,36nm,1.1s						
TAM	Tamanrasset	22.13	224	eP	P	13 33 19.6	+0.4
TAM				pmax	pmax		
	comp=Z,36nm,1.1s						
WME	Myndd Eilian	22.14	316	eP	P	13 33 18.0	-0.8
SKAR	Skarslia	22.23	342	eP	P	13 33 20.2	+0.4
BBO1	Bothel	22.24	319	eP	P	13 33 18.6	-1.3
NC204	NORSAR Array S	22.25	346	eP	P	13 33 19.1	-1.0
	comp=Z,113nm,1.0s						
MTE	Manteigas	22.39	280	eP	P	13 33 23.5	+1.7
	comp=Z,64nm,1.6s						
MTE				eS	S	13 37 28.4	+0.8
MTE				eLR	LR	13 42 12.9	
	comp=Z,283nm,16.0s						
MTE	Manteigas	22.39	280	eP	P	13 33 21.1	-0.7
	comp=Z,36nm,1.1s						
BHH	Howats Hill	22.41	320	eP	P	13 33 20.7	-1.0
PCBR	Castelo Branco	22.43	279	eP	P	13 33 23.9	+1.8
	comp=Z,34nm,1.5s						
MDT	Midelt	22.44	259	P	P	13 33 20.8	-1.6
	comp=Z,17nm,0.9s,baz=82,slow=12,SNR=12						
PMRV	Marv??o	22.45	278	eP	P	13 33 25.7	+3.4
	comp=Z,55nm,1.5s						
PMRV				eS	S	13 37 28.8	+0.3
PMRV				eLR	LR	13 41 58.4	
	comp=Z,272nm,18.0s						
ESK	Eskdalemuir	22.52	321	eP	P	13 33 22.1	-0.8
	comp=Z,76nm,0.9s						
ESK	Eskdalemuir	22.52	321	eP	P	13 33 21.8	-1.1
ESK				IAmb	IAmb	13 33 24.9	
	comp=Z,62nm,0.8s						
ESK				IAMs_20	IAMs_20	13 43 48.8	
	comp=Z,7µm,14.6s						
ESK	Eskdalemuir	22.52	321	i P	P	13 33 22.3	-0.6
WIM	Isle of Man	22.68	317	eP	P	13 33 22.8	-1.8
EBL	Broad Law	22.69	322	eP	P	13 33 22.5	-2.2
BER	Bergen	22.74	339	eP	P	13 33 25.4	+0.2
PGAV	Gavieira, Arco	22.74	284	eP	P	13 33 25.4	-0.1
	comp=Z,61nm,1.7s						
PGAV				eS	S	13 37 34.7	+0.7
PGAV				eLR	LR	13 41 50.2	
	comp=Z,386nm,18.0s						
EDI	Edinburgh	22.84	322	eP	P	13 33 24.7	-1.6
EDI				IAMs_20	IAMs_20	13 44 09.7	
	comp=Z,2µm,14.7s						
GAL1	Galloway	23.04	319	eP	P	13 33 27.2	-1.1
PMTG	Montargil	23.15	277	eP	P	13 33 31.9	+2.2
	comp=Z,30nm,1.4s						
HYA	Hoyanger	23.17	341	eP	P	13 33 29.9	+0.3
DOMB	Dombas	23.29	345	eP	P	13 33 29.9	-0.9
PCVE	Castro Verde	23.35	274	eP	P	13 33 33.2	+1.5
	comp=Z,30nm,1.4s						
PBDV	Barranco-do-Ve	23.38	273	eP	P	13 33 32.3	+0.3
MESJ	Messejana	23.44	274	eP	P	13 33 31.8	-0.8
MESJ				AMb	AMB	13 33 46.0	
	comp=Z,32nm,1.6s						
MESJ				eS	S	13 37 45.0	-0.6
INVG	Invergeldie, C	23.52	323	eP	P	13 33 31.5	-1.6
INVG				IAmb	IAmb	13 33 32.4	
	comp=Z,22nm,0.8s						
INVG				IAMs_20	IAMs_20	13 44 33.0	
	comp=Z,2µm,13.2s						
EAB	Aberfoyle	23.53	322	eP	P	13 33 31.6	-1.6
PNCL	Nicolau / Gran	23.61	275	eP	P	13 33 34.3	+0.1
	comp=Z,34nm,1.4s						
AKN	Aaknes	23.85	343	eP	P	13 33 36.0	-0.4
CLGH	Cloghs, Cushen	23.85	318	eP	P	13 33 36.0	-0.5
CLGH				IAmb	IAmb	13 33 38.1	
	comp=Z,142nm,1.6s						
MORF	Marmelete	23.91	273	eP	P	13 33 36.0	-1.2
MORF				AMb	AMB	13 33 40.8	
	comp=Z,23nm,1.6s						
MORF				eS	S	13 37 52.9	-0.4
LAWE	Loch Awe, Argy	24.07	321	eP	P	13 33 37.4	-1.1
LAWE				IAmb	IAmb	13 33 42.1	
	comp=Z,35nm,1.0s						
LAWE				IAMs_20	IAMs_20	13 44 48.0	
	comp=Z,1µm,13.7s						
MOL	Molde	24.08	344	eP	P	13 33 38.5	0.0
BIGH	Upper Bighouse	24.64	327	eP	P	13 33 41.7	-1.9
BIGH				IAmb	IAmb	13 33 43.8	
	comp=Z,65nm,1.1s						
BIGH				IAMs_20	IAMs_20	13 46 50.2	
	comp=Z,1µm,11.0s						
KAC	Achnashellach	24.68	324	eP	P	13 33 42.7	-1.3
NSS	Namsos	25.12	350	eP	P	13 33 48.2	+0.4
KIRV	Kirov	25.47	34	P	P	13 33 50.3	-0.8
	comp=Z,11nm,0.4s,baz=246,slow=5.9,SNR=27						
KIRV				LR	LR	13 45 24.7	
	comp=Z,287nm,19.1s,baz=28,slow=40						
RAYN	Ar Rayn	25.91	123	eP	P	13 33 56.1	+0.5
	comp=Z,74nm,1.5s						
RAYN	Ar Rayn	25.91	123	eP	P	13 33 56.1	+0.5
RAYN				pmax	pmax		
	comp=Z,75nm,1.5s						
PRGR	Permogore	25.96	26	⇓iP	P	13 33 57.1	+1.5
PRGR				pmax	pmax		
	comp=Z,275nm,1.0s						
AKTO	Aktyubinsk	27.21	56	P	P	13 34 07.5	+0.5
	comp=Z,9.1nm,1.0s,baz=262,slow=9.8,SNR=22						
AKTO				LR	LR	13 46 33.0	
	comp=Z,216nm,20.8s,baz=279,slow=40						
AKTO	Aktyubinsk	27.21	56	i P	P	13 34 07.1	+0.1
AKTO				pmax	pmax		
	comp=Z,36nm,1.5s						
STEI	Steigen	28.10	355	eP	P	13 34 14.2	-0.5
GEYT	Alibeck	28.14	83	P	P	13 34 16.4	+0.9
	comp=Z,7.4nm,1.0s,baz=269,slow=5.9,SNR=14						
GEYT				LR	LR	13 48 38.7	
	comp=Z,236nm,18.4s,baz=265,slow=43						
GYA0B	ALIBECK ARRAY	28.14	83	eP	P	13 34 15.4	-0.1
	comp=Z,53nm,1.6s						
APA	Apatity	28.23	9	⇑iP	P	13 34 20.2	+4.3
APA				i		13 35 13.1	
APA				i S	S	13 39 08.0	+6.8
APA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,200nm,15.0s						
AB31	Akbulak array	28.32	58	i P	P	13 34 17.1	+0.2
AB31				pmax	pmax		
	comp=Z,12nm,1.3s						
ABKAR	Akbulak array	28.32	58	eP	P	13 34 16.9	0.0
	comp=Z,9.5nm,0.9s						
ARU	Arti	28.93	43	P	P	13 34 20.3	-1.9
	comp=Z,2.0nm,0.6s,baz=240,slow=6.3,SNR=21						
ARU				LR	LR	13 46 38.3	
	comp=Z,668nm,18.2s,baz=242,slow=38						
ARU	Arti	28.93	43	eP	P	13 34 21.6	-0.6
	comp=Z,38nm,1.3s						
ARU	Arti	28.93	43	d iP	P	13 34 22.2	0.0
ARU						13 35 12.9	
ARU						13 37 25.7	
ARU				S	S	13 39 12.9	+0.5
ARU				pmax	pmax		
	comp=Z,38nm,1.4s						
ARU				MLR	MLR		
	comp=Z,912nm,15.0s						
KTK1	Kautokeino	28.96	1	eP	P	13 34 21.7	-0.7
ARA0	ARCESS Array S	29.54	3	eP	P	13 34 25.6	-1.9
ARCES	ARCESS Array B	29.54	3	P	P	13 34 25.6	-1.9
	comp=Z,6.2nm,0.7s,baz=195,slow=7.5,SNR=15						
ARCES				LR	LR	13 46 50.0	
	comp=Z,674nm,20.5s,baz=169,slow=38						
ARE0	ARCESS Array S	29.54	3	eP	P	13 34 25.8	-1.7
TRO	Tromso	29.61	358	eP	P	13 34 28.6	+0.4
SVE	Sverdlovsk	30.14	43	⇑eP	P	13 34 33.8	+0.8
SVE				pmax	pmax		
	comp=Z,60nm,1.5s						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s						
HAMF	Hammerfest	30.60	1	eP	P	13 34 36.9	0.0
TOA0	Torodi Ar. Sit	32.19	219	eP	P	13 34 51.3	-0.1
	comp=Z,24nm,0.8s						
TORD	Torodi Ar. Bea	32.19	219	P	P	13 34 48.1	-3.3
	comp=Z,5.1nm,0.3s,baz=54,slow=8.0,SNR=11						
TORD				LR	LR	13 49 03.5	
	comp=Z,249nm,20.1s,baz=0.0,slow=39						
BRVK	Borovoye	35.03	52	eP	P	13 35 16.4	+0.7
	comp=Z,23nm,0.9s						
BRVK	Borovoye	35.03	52	d iP	P	13 35 16.6	+0.8
BRVK				pmax	pmax		
	comp=Z,27nm,1.0s						
KK31	Karatay Array	36.10	69	eP	P	13 35 25.6	+0.4
	comp=Z,9.3nm,0.8s						
KK31	Karatay Array	36.10	69	eP	P	13 35 25.6	+0.4
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	Karatay Array	36.10	69	eP	P	13 35 25.4	+0.3
	comp=Z,9.3nm,0.8s						
KKAR	Karatay Array	36.10	69	eP	P	13 35 25.5	+0.3
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GAR	Garm	37.01	76	eP	P	13 35 34.0	+0.9
	comp=Z,86nm,1.1s						
GAR	Garm	37.01	76	eP	P	13 35 34.0	+0.9
GAR				pmax	pmax		
	comp=Z,86nm,1.1s						
BTK	Batken	37.08	74	eP	P	13 35 34.1	+0.5
BTK	Batken	37.08	74	eP	P	13 35 34.1	+0.5
KBL	Kabul	37.59	83	eP	P	13 35 38.7	+0.6
	comp=Z,11nm,0.9s						
KBL	Kabul	37.59	83	eP	P	13 35 38.7	+0.6
KBL				pmax	pmax		
	comp=Z,11nm,0.9s						
ARSB	Arslanbob	38.31	71	eP	P	13 35 44.6	+0.5
	comp=Z,49nm,1.4s						
AAK	Ala-Archa	39.05	69	eP	P	13 35 51.0	+0.7
	comp=Z,31nm,1.5s						
AAK	Ala-Archa	39.05	69	i P	P	13 35 50.7	+0.4
AAK				pmax	pmax		
	comp=Z,24nm,1.6s						
KBS	Kingsbay	39.12	357	ceP	P	13 35 46.1	-4.1
KBS				pmax	pmax		
	comp=Z,178nm,2.5s						
KURK	Kurchatov	40.30	55	eP	P	13 36 00.1	-0.3
	comp=Z,19nm,1.2s						
KURK	Kurchatov	40.30	55	i P	P	13 36 00.1	-0.3
KURK				pmax	pmax		
	comp=Z,19nm,1.2s						
DAG	Danmarks Havn	40.63	347	i P	P	13 36 02.1	-0.7
DAG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DAG	Danmarks Havn	40.63	347	i P	P	13 36 02.1	-0.7
	comp=Z,3.3nm,0.9s						
DBIC	Dimbokro	41.02	223	P	P	13 36 06.2	-0.5
	comp=Z,22nm,1.0s,baz=359,slow=7.9,SNR=7.5						
DBIC				LR	LR	13 54 43.3	
	comp=Z,250nm,18.1s,baz=22,slow=39						
DBIC	Dimbokro	41.02	223	eP	P	13 36 06.5	-0.1
	comp=Z,36nm,1.1s						
KSH	Kashi	41.02	73	P	P	13 36 06.4	-0.3
KSH				PP	PP	13 37 43.3	+2.1
KSH				PcP	PcP	13 38 07.6	+1.1
KSH				pmax	pmax		
	comp=Z,40nm,1.7s						
KSH				pmax	pmax		
	comp=Z,150nm,5.2s						
KSH				LR	LR		
	comp=Z,220nm,14.0s						
KSH				LR	LR		
	comp=Z,92nm,7.9s						
KDJ	Kajisay	41.11	69	eP	P	13 36 07.4	0.0
	comp=Z,20nm,1.1s						
KDJ	Kajisay	41.11	69	eP	P	13 36 07.4	0.0
KDJ				pmax	pmax		
	comp=Z,20nm,1.1s						
TIC	Toumodi	41.13	223	eP	P	13 36 07.5	-0.1
KIC	Kosan Boka	41.22	222	eP	P	13 36 08.7	+0.4
	comp=Z,94nm,1.3s						
MBAR	Mbarara	41.34	166	P	P	13 36 09.9	+0.5
	comp=Z,2.4nm,0.2s,baz=327,slow=7.2,SNR=11						
MBAR	Mbarara	41.34	166	eP	P	13 36 10.6	+1.2
	comp=Z,22nm,1.3s						
LIC	Lamto	41.49	223	eP	P	13 36 11.0	+0.5
	comp=Z,153nm,1.1s						
PDGK	Podgornoye	42.41	66	i P	P	13 36 17.5	-0.4
PDGK				pmax	pmax		
	comp=Z,24nm,1.2s						
MAKZ	Makanchi	43.21	60	eP	P	13 36 24.4	+0.1
	comp=Z,18nm,1.1s						
MAKZ	Makanchi	43.21	60	eP	P	13 36 24.4	+0.1
MAKZ				pmax	pmax		
	comp=Z,18nm,1.1s						
KMBO	Kilima Mbogo	43.40	157	P	P	13 36 25.8	-0.5
	comp=Z,2.4nm,1.1s,baz=33,slow=17,SNR=1.8						
KMBO				LR	LR	13 55 44.5	
	comp=Z,167nm,18.4s,baz=88,slow=38						
KMBO	Kilima Mbogo	43.40	157	eP	P	13 36 26.4	+0.1
	comp=Z,14nm,1.5s						
KMBO	Kilima Mbogo	43.40	157	eP	P	13 36 26.4	+0.1
KMBO				pmax	pmax		
	comp=Z,14nm,1.5s						
SUMG	Summit	43.41	338	eP	P	13 36 25.5	-0.5
	comp=Z,9.6nm,0.9s						
SUMG	Summit	43.41	338	eP	P	13 36 25.5	-0.5
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUMG	Summit	43.41	338	i P	P	13 36 25.9	-0.1
	comp=Z,19nm,0.9s						
MK31	Makanchi Array	43.42	60	eP	P	13 36 26.1	+0.1
	comp=Z,18nm,1.1s						
MK31	Makanchi Array	43.42	60	eP	P	13 36 26.1	+0.1
MK31				pmax	pmax		
	comp=Z,18nm,1.1s						
MK32	Makanchi Array	43.42	60	eP	P	13 36 26.1	0.0
MKAR	Makanchi Array	43.42	60	P	P	13 36 26.1	0.0
	comp=Z,11nm,0.8s,baz=297,slow=5.3,SNR=39						
MKAR				LR	LR	13 58 34.6	
	comp=Z,169nm,18.3s,baz=263,slow=42						
MKAR	Makanchi Array	43.42	60	i P	P	13 36 26.2	+0.2
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZAA1	Zalesovo Array	43.63	50	eP	P	13 36 27.4	-0.2
ZAA0	Zalesovo Array	43.63	50	eP	P	13 36 27.3	-0.3
	comp=Z,17nm,0.9s						
ZALV	Zalesovo Beam	43.63	50	P	P	13 36 27.4	-0.2
	comp=Z,14nm,0.8s,baz=280,slow=8.9,SNR=41						
ZALV				LR	LR	13 56 39.1	
	comp=Z,233nm,19.1s,baz=250,slow=39						
ZALV	Zalesovo Beam	43.63	50	i P	P	13 36 27.6	0.0
ZALV				pmax	pmax		
	comp=Z,14nm,0.9s						
DHRM	DHARAMSHALA	44.06	82	eP	P	13 36 31.4	-0.1
DHRM				IAmb	IAmb	13 36 33.3	
	comp=Z,25nm,0.9s						
SMLA	Simla	45.22	83	eP	P	13 36 41.5	+1.0
SMLA				IAmb	IAmb	13 36 44.8	
	comp=Z,27nm,0.9s						
DDI	Dehra Dun	46.27	84	eP	P	13 36 48.6	-0.4
DDI				IAmb	IAmb	13 36 49.2	
	comp=Z,136nm,0.1s						
WMQ	Urumqi	47.93	63	eP	P	13 37 04.6	+2.8
WMQ				pP	sP	13 37 09.7	+2.3
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.5s						
WMQ				LR	LR		
	comp=Z,170nm,11.9s						
WMQ				LR	LR		
	comp=Z,260nm,14.5s						
BHPL	Bhopal	49.41	92	eP	P	13 37 15.6	+2.2
PYUN	Piuthan	51.12	84	eP	P	13 37 26.2	-0.2
	comp=Z,120nm,1.0s						
DANN	Dangsing	51.58	83	eP	P	13 37 30.0	0.0
	comp=Z,158nm,1.0s						
KOLN	Koldanda	51.75	84	eP	P	13 37 30.7	-0.5
	comp=Z,147nm,1.2s						
NGP	Nagpur	51.83	94	eP	P	13 37 32.2	+0.6
GKN	Gorkha	52.42	83	eP	P	13 37 35.5	-0.6
DMN	Daman	52.98	83	eP	P	13 37 40.1	-0.2
	comp=Z,91nm,1.0s						
KKN	Kakani	53.02	83	eP	P	13 37 39.8	-0.8
	comp=Z,29nm,0.9s						
PKIN	Phulchoki	53.21	83	eP	P	13 37 41.3	-0.8
	comp=Z,41nm,0.9s						
PKI	Pulchoki	53.23	83	eP	P	13 37 41.3	-1.0
	comp=Z,60nm,1.1s						
GUN	Gumba	53.41	82	eP	P	13 37 43.3	-0.3
	comp=Z,146nm,1.1s						
JIRN	Jiri	53.77	82	eP	P	13 37 45.9	-0.5
	comp=Z,86nm,0.9s						
DRLN	Deer Lake	54.71	308	eP	P	13 37 52.1	-0.2
	comp=Z,189nm,1.8s						
TLY	Talaya	55.22	49	ceP	P	13 37 57.9	+1.8
TLY				pmax	pmax		
	comp=Z,39nm,2.5s						
LSZ	Lusaka	55.43	173	P	P	13 37 57.8	-0.1
	comp=Z,2.1nm,0.3s,baz=4.4,slow=13						
LSZ	Lusaka	55.43	173	eP	P	13 37 58.6	+0.7
	comp=Z,43nm,1.9s						
LSZ	Lusaka	55.43	173	eP	P	13 37 58.7	+0.7
LSZ				pmax	pmax		
	comp=Z,43nm,1.9s						
ZAK	Zakamensk	55.51	50	eP	P	13 37 58.3	0.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.9s						
BOK	Bokaro	55.59	87	eP	P	13 37 58.5	-0.6
BOK				IAmb	IAmb	13 38 00.4	
	comp=Z,103nm,2.4s						
GTK	Tadong	55.78	81	eP	P	13 37 56.9	-3.8
LSA	Lhasa	56.48	77	eP	P	13 38 06.0	0.0
LSA	Lhasa	56.48	77	eP	P	13 38 06.0	0.0
TIXI	Tiksi	57.47	21	ceP	P	13 38 11.1	-0.7
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BWNR	Bhubaneshwar	57.49	90	ex	P	13 38 01.1	-12
SCHQ	Schefferville	57.74	317	eP	P	13 38 13.7	-0.3
	comp=Z,109nm,1.8s						
GTA	Gaotai	58.01	63	⇑P	P	13 38 16.7	+0.4
GTA				pP	sP	13 38 27.8	+5.8
GTA				S	S	13 46 16.9	+0.3
GTA				pmax	pmax		
	comp=Z,15nm,1.3s						
GTA				pmax	pmax		
	comp=Z,72nm,7.0s						
GTA				LR	LR		
	comp=Z,130nm,16.8s						
GTA				LR	LR		
	comp=Z,140nm,17.8s						
GTA				LR	LR		
	comp=Z,250nm,17.8s						
TAWA	Tawang	58.11	79	eP	P	13 38 17.3	-0.1
BOD	Bodaibo	58.21	39	eP	P	13 38 15.1	-2.1
BOD				pmax	pmax		
	comp=Z,7.0nm,2.1s						
SONA0	Songino Array	58.44	52	eP	P	13 38 19.0	-0.2
SONM	Songino Array	58.44	52	P	P	13 38 19.0	-0.1
	comp=Z,8.2nm,1.1s,baz=293,slow=7.7,SNR=23						
SONM				LR	LR	14 05 53.3	
	comp=Z,268nm,18.7s,baz=277,slow=38						
SONM	Songino Array	58.44	52	P	P	13 38 19.0	-0.1
GBN	Guysborough	58.80	305	eP	P	13 38 21.0	-0.5
	comp=Z,38nm,1.1s						
ULN	Ulaanbaatar	58.82	52	ceP	P	13 38 21.8	0.0
ULN				pmax	pmax		
	comp=Z,20nm,2.5s						
SHL	Shillong	59.20	81	eP	P	13 38 23.8	-1.0
	comp=Z,53nm,1.1s						
SHL	Shillong	59.20	81	eP	P	13 38 23.8	-1.0
SHL				pmax	pmax		
	comp=Z,53nm,1.1s						
SHL	Shillong	59.20	81	eP	P	13 38 22.8	-2.0
TEZP	TEZPUR	59.33	80	eP	P	13 38 24.5	-0.9
TEZP				IAmb	IAmb	13 38 25.7	
	comp=Z,18nm,0.6s						

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ZIRO  ZIRO             59.63  78 eP     P      13 38 27.3 -0.5
ZIRO                              IAmb   IAmb   13 38 31.7
      comp=Z,27nm,1.0s
AGT   Agartala         59.64  83 eP     P      13 38 28.5 +0.9
HAL   Halifax          60.47 305 eP     P      13 38 32.9 -0.1
      comp=Z,50nm,1.2s
HAL   Halifax          60.47 305 eP     P      13 38 32.9 -0.1
HAL                               pmax   pmax
      comp=Z,50nm,1.2s
MATP  Matopo           60.55 173  P     P      13 38 33.5 -0.4
      comp=Z,20nm,0.9s,baz=351,slow=10,SNR=2.9
LMN   Caledonia Moun   60.64 307 eP     P      13 38 34.2  0.0
      comp=Z,25nm,1.1s
BATG  Bathurst New B   60.72 309 eP     P      13 38 34.7 +0.1
      comp=Z,19nm,1.0s
MOKO  MOKOCHONG        60.78  79 eP     P      13 38 34.5 -1.1
MOKO                              IAmb   IAmb   13 38 36.4
      comp=Z,30nm,0.0s
KOHI  KOHIMA           60.80  80 eP     P      13 38 35.8 +0.1
PQI   Presque Isle     62.18 309 eP     P      13 38 44.6  0.0
      comp=Z,37nm,1.4s
LZH   Lanzhou          62.42  65 eP     P      13 38 47.1 +0.5
LZH                               pP     pP     13 38 49.7 -1.0
LZH                               sP     sP     13 38 52.0 -0.3
LZH                               PP     PP     13 41 05.4 +1.8
LZH                               pmax   pmax
      comp=Z,37nm,1.3s
LZH                               pmax   pmax
      comp=Z,130nm,4.3s
LZH                               LR     LR
      comp=Z,390nm,14.2s
LZH                               LR     LR
      comp=Z,340nm,14.7s
LZH                               LR     LR
      comp=Z,500nm,15.4s
CHGQ  Chibougamau      64.16 314  P     P      13 38 57.9 +0.3
      baz=58,SNR=10
BTO   Baotou           64.23  58 eP     P      13 38 54.4 -4.0
LBTB  Lobatse          64.89 176  P     P      13 39 00.7 -2.0
      comp=Z,5.8nm,0.9s,baz=338,slow=8.4,SNR=4.1
LBTB  Lobatse          64.89 176 eP     P      13 39 03.6 +0.9
      comp=Z,25nm,1.2s
LBTB  Lobatse          64.89 176 eP     P      13 39 03.6 +0.9
LBTB                              pmax   pmax
      comp=Z,25nm,1.2s
CD2   Chengdu          65.11  70⇓iP     P      13 39 04.0 -0.2
CD2                               pmax   pmax
      comp=Z,70nm,1.0s
MOQ   Mont Orford      65.41 309 eP     P      13 39 06.2 +0.2
LBNH  Lisbon           65.80 308  P     P      13 39 07.4 -1.0
      baz=57
MATQ  Matagami         66.01 316  P     P      13 39 09.6 -0.1
      baz=56,SNR=11
LSQQ  Lebel-sur-Quev   66.05 315  P     P      13 39 09.9 -0.1
      baz=56
TRQ   Mont Tremblant   66.26 311 eP     P      13 39 11.1 -0.4
HRV   Adam Dziewonsk   66.52 306  P     P      13 39 12.9 -0.2
      baz=56
VLDQ  Val d'Or         66.84 314 eP     P      13 39 16.1 +1.2
      comp=Z,48nm,1.6s
D54A  Lac Fusel, La    66.94 313  P     P      13 39 15.5 -0.2
      baz=55,SNR=7.1
XAN   Xi'an            67.03  64 eP     P      13 39 16.4 -0.1
      comp=Z,74nm,1.3s
XAN   Xi'an            67.03  64  P     P      13 39 16.4 -0.1
XAN                               pP     sP     13 39 28.5 +6.2
XAN                               pmax   pmax
      comp=Z,25nm,1.1s
XAN                               LR     LR
      comp=Z,190nm,14.3s
XAN                               LR     LR
      comp=Z,160nm,13.5s
XAN                               LR     LR
      comp=Z,200nm,12.5s
XAN   Xi'an            67.03  64 eP     P      13 39 16.4 -0.1
XAN                               pmax   pmax
      comp=Z,74nm,1.3s
LONY  Lake Ozonia      67.17 310 eP     P      13 39 17.5 +0.3
      comp=Z,22nm,1.2s
LONY  Lake Ozonia      67.17 310  P     P      13 39 18.0 +0.7
      baz=56,SNR=9.8
ACCN  Adirondack Com   67.32 308 eP     P      13 39 18.8 +0.6
      comp=Z,16nm,1.0s
TIY   Taiyuan          67.37  59 eP     P      13 39 18.3 -0.3
TIY                               pmax   pmax
      comp=Z,500nm,8.8s
F55A  Otter Lake       67.52 312  P     P      13 39 19.9 +0.6
      baz=55
D53A  Lac Vacive, Po   67.56 313 eP     P      13 39 20.1 +0.5
      comp=Z,37nm,1.4s
D53A  Lac Vacive, Po   67.56 313  P     P      13 39 20.4 +0.7
      baz=55,SNR=8.4
KMI   Kunming          67.60  75  P     P      13 39 22.8 +2.3
KMI                               pP     pP     13 39 24.4 -0.3
KMI                               pmax   pmax
      comp=Z,23nm,0.5s
KMI                               pmax   pmax
      comp=Z,120nm,6.3s
E54A  Lac Daplat, Po   67.65 312  P     P      13 39 20.3 +0.2
      baz=55,SNR=7.2
E53A  Dumoine, Ponti   67.95 313  P     P      13 39 22.5 +0.4
      baz=55,SNR=9.5
D52A  ZEK Kipawa Sen   68.02 313  P     P      13 39 22.7 +0.2
      baz=54,SNR=7.4
G55A  Calabogie        68.06 311  P     P      13 39 23.3 +0.6
      baz=55
PEMO  Pembroke         68.12 312  P     P      13 39 23.4 +0.3
      baz=55,SNR=5.1
H56A  Elgin            68.17 310  P     P      13 39 24.0 +0.6
      baz=55,SNR=5.8
PLVO  Plevna           68.39 311 eP     P      13 39 26.0 +1.1
      comp=Z,75nm,1.3s
PLVO  Plevna           68.39 311  P     P      13 39 25.7 +0.9
      baz=54,SNR=17
CHTO  Chiang Mai       68.41  83 eP     P      13 39 24.2 -1.1
      comp=Z,12nm,1.1s
CHTO  Chiang Mai       68.41  83 eP     P      13 39 24.2 -1.1
CHTO                              pmax   pmax
      comp=Z,11nm,1.1s
ALGO  Algonquin Park   68.42 312  P     P      13 39 25.2 +0.2
      baz=54
BOSA  Boshof           68.46 177  P     P      13 39 24.2 -1.2
      comp=Z,8.6nm,1.0s,baz=349,slow=8.2,SNR=6.7
BOSA  Boshof           68.46 177 eP     P      13 39 26.1 +0.7
      comp=Z,25nm,1.1s
BOSA  Boshof           68.46 177 eP     P      13 39 26.1 +0.7
BOSA                              pmax   pmax
      comp=Z,25nm,1.1s
BJT   Baijiatuau       68.48  55 eP     P      13 39 25.4 -0.1
      comp=Z,23nm,1.1s
BJT   Baijiatuau       68.48  55 eP     P      13 39 25.4 -0.1
BJT                               pmax   pmax
      comp=Z,23nm,1.1s
M61A  Granite Spring   68.56 306  P     P      13 39 26.3 +0.3
      baz=55
E52A  Mattawa          68.56 313  P     P      13 39 26.2 +0.3
      baz=54,SNR=10
CM31  Chiang Mai Arr   68.62  84 eP     P      13 39 25.4 -1.3
      comp=Z,21nm,1.5s
CMAR  Chiang Mai Arr   68.62  84  P     P      13 39 25.4 -1.3
      comp=Z,3.3nm,0.8s,baz=306,slow=7.6,SNR=14
CMAR                              LR     LR     14 16 04.9
      comp=Z,72nm,18.1s,baz=276,slow=42
CMAR  Chiang Mai Arr   68.62  84 i P    P      13 39 27.3 +0.6
CMAR                              pmax   pmax
      comp=Z,3.0nm,0.8s
H55A  Tweed            68.73 311  P     P      13 39 27.5 +0.4
      baz=54,SNR=11
PAL   Palisades        68.82 306  P     P      13 39 28.0 +0.4
      baz=55
E51A  G1948 Merrick    68.88 313  P     P      13 39 28.3 +0.4
      baz=54,SNR=7.7
BILL  Bilibino         68.89  14 eP     P      13 39 27.4 -0.2
      comp=Z,17nm,1.1s
BILL  Bilibino         68.89  14deP     P      13 39 27.6  0.0
BILL                             e*PP    pP     13 39 31.3 -0.5
BILL                             e*SP    sP     13 39 32.8 -0.6
BILL                             eSSS    SSS    13 56 07.1
BILL                              pmax   pmax
      comp=Z,20nm,1.3s
BILL                              MLR    MLR
      comp=Z,239nm,19.0s
BANO  Bancroft         68.89 311  P     P      13 39 29.0 +1.0
      baz=54,SNR=8.1
PECO  Prince Edward    68.98 310 eP     P      13 39 28.4 -0.2
      comp=Z,79nm,2.0s
PECO  Prince Edward    68.98 310  P     P      13 39 29.1 +0.5
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      baz=54
DELO  Deloro Mine      69.01 311 eP     P      13 39 28.2 -0.5
      comp=Z,22nm,1.2s
DELO  Deloro Mine      69.01 311  P     P      13 39 29.6 +0.9
      baz=54
I55A  Frankford        69.22 311  P     P      13 39 30.6 +0.5
      baz=54
F52A  Sundridge        69.23 313  P     P      13 39 30.6 +0.5
      baz=54
G53A  Haliburton       69.23 312  P     P      13 39 30.8 +0.7
      baz=54
BINY  Binghamton       69.40 308 eP     P      13 39 30.8 -0.4
      comp=Z,67nm,1.9s
BINY  Binghamton       69.40 308  P     P      13 39 30.4 -0.8
      baz=54
M59A  Waymart          69.45 307  P     P      13 39 32.4 +0.9
      baz=54
D49A  Beulah Townshi   69.47 315  P     P      13 39 31.8 +0.3
      baz=53,SNR=9.6
BUKO  Buck Lake        69.48 313  P     P      13 39 32.1 +0.4
      baz=53
F51A  Arnstein         69.48 313  P     P      13 39 32.1 +0.5
      baz=53,SNR=11
N60A  Cedar Hill Far   69.63 307  P     P      13 39 33.3 +0.7
      baz=54
E50A  Wahnapitae       69.64 314  P     P      13 39 33.3 +0.7
      baz=53,SNR=7.5
KSPA  Keystone Colle   69.64 307 eP     P      13 39 32.9 +0.2
      comp=Z,13nm,1.0s
GYA   Guiyang          69.72  72 eP     P      13 39 33.2 -0.4
GYA                               PP     PP     13 42 09.1 +1.6
GYA                               S      S      13 48 37.9 -4.5
GYA                               pmax   pmax
      comp=Z,20nm,1.1s
GYA                               pmax   pmax
      comp=Z,110nm,5.5s
GYA                               LR     LR
      comp=Z,140nm,17.6s
GYA                               LR     LR
      comp=Z,100nm,18.2s
SADO  Sadowa           69.73 312 eP     P      13 39 33.5 +0.2
      comp=Z,28nm,1.1s
D48A  Paudash Townsh   69.77 315  P     P      13 39 33.6 +0.2
      baz=52
WLVO  Wesleyville      69.81 311  P     P      13 39 34.3 +0.6
      baz=53
J55A  Hilton           69.86 310 eP     P      13 39 34.6 +0.6
      comp=Z,35nm,1.3s
J55A  Hilton           69.86 310  P     P      13 39 34.5 +0.6
      baz=54
KLBO  Killbear Provi   69.99 313  P     P      13 39 35.3 +0.5
      baz=53,SNR=13
N59A  State Game Lan   70.02 307 eP     P      13 39 35.4 +0.4
      comp=Z,18nm,1.0s
N59A  State Game Lan   70.02 307  P     P      13 39 36.1 +1.0
      baz=54,SNR=6.6
O60A  Telford          70.14 306  P     P      13 39 36.2 +0.4
      baz=54
MMNY  Mt. Morris Dam   70.23 310 eP     P      13 39 36.8 +0.5
      comp=Z,26nm,1.1s
MEDO  Medina           70.30 310  P     P      13 39 37.1 +0.4
      baz=53
INK   Inuvik           70.32 351 eP     P      13 39 36.3 -0.1
      comp=Z,13nm,1.1s
INK   Inuvik           70.32 351 eP     P      13 39 36.3 -0.1
INK                               pmax   pmax
      comp=Z,13nm,1.1s
K55A  Perry            70.33 310  P     P      13 39 37.3 +0.4
      baz=53
J54A  Appleton         70.34 310  P     P      13 39 37.5 +0.6
      baz=53
E48A  Lockeyer         70.39 315  P     P      13 39 37.5 +0.3
      baz=52,SNR=12
D47A  Chapleau         70.54 316  P     P      13 39 38.3 +0.1
      baz=52,SNR=15
TORO  Toronto--Lesli   70.54 311  P     P      13 39 38.6 +0.5
      baz=53
O59A  Robesonia        70.63 307  P     P      13 39 38.3 -0.5
      baz=54
SLVN  Son La           70.67  78 eP     P      13 39 38.7 -0.7
      comp=Z,20nm,1.4s
F49A  Sandfield        70.76 314  P     P      13 39 40.0 +0.5
      baz=52,SNR=16
K54A  Basiliko Farm,   70.77 310  P     P      13 39 40.2 +0.5
      baz=53
TOBO  Tobermory, Bru   70.80 313  P     P      13 39 40.3 +0.5
      baz=52,SNR=7.8
L55A  Hinsdale         70.87 309  P     P      13 39 40.4 +0.1
      baz=53
ACTO  Acton            70.96 311  P     P      13 39 41.4 +0.7
      baz=52
E47A  Iron Bridge      71.01 315  P     P      13 39 41.7 +0.7
      baz=51,SNR=18
BMRO  Meriville Lake   71.02 313  P     P      13 39 42.1 +1.0
      baz=52,SNR=8.5
F48A  Evansville       71.04 314  P     P      13 39 41.8 +0.6
      baz=52,SNR=13
M56A  Emporium         71.14 309  P     P      13 39 42.8 +0.9
      baz=53,SNR=6.8
D46A  Sault St. Mari   71.14 316  P     P      13 39 42.4 +0.6
      baz=51,SNR=20
TYNO  Tyneside         71.16 311  P     P      13 39 42.4 +0.4
      baz=52
O58A  Lewisberry       71.20 307  P     P      13 39 42.5 +0.2
      baz=53
N57A  Milroy           71.20 308  P     P      13 39 42.3 +0.1
      baz=53
P59A  Jarrettsville    71.20 306  P     P      13 39 42.4 +0.1
      baz=53
BWLO  Walkerton        71.27 312  P     P      13 39 43.6 +1.0
      baz=52,SNR=7.9
TIA   Tai'an           71.30  58  P     P      13 39 42.6 -0.3
TIA                               pmax   pmax
      comp=Z,27nm,1.3s
BRCO  Bruce Peninsul   71.36 312  P     P      13 39 43.5 +0.3
      baz=52
L54A  Sinclairville    71.36 310  P     P      13 39 43.5 +0.3
      baz=52
TOLK  Toolik Lake Re   71.37 357 eP     P      13 39 43.6 +0.8
      comp=Z,12nm,1.1s
TOLK  Toolik Lake Re   71.37 357  P     P      13 39 43.7 +0.8
      baz=6.9,SNR=7.0
I51A  Listowel         71.39 312  P     P      13 39 44.4 +1.0
      baz=52,SNR=7.5
J52A  Paris            71.43 311  P     P      13 39 43.9 +0.4
      baz=52
SSPA  Standing Stone   71.48 308 eP     P      13 39 44.5 +0.6
      comp=Z,42nm,1.5s
SSPA  Standing Stone   71.48 308  P     P      13 39 44.5 +0.6
      baz=53
M55A  Ridgway          71.50 309  P     P      13 39 44.9 +0.8
      baz=52,SNR=7.5
N56A  West Decatur     71.55 308  P     P      13 39 44.8 +0.4
      baz=53
O57A  Amberson         71.58 307  P     P      13 39 45.2 +0.6
      baz=53
E46A  Sault Ste Mari   71.62 316 eP     P      13 39 44.9 +0.2
      comp=Z,41nm,1.2s
E46A  Sault Ste Mari   71.62 316  P     P      13 39 43.9 -0.7
      baz=51,SNR=10
BASO  Ashfield         71.63 312  P     P      13 39 44.1 -0.6
      baz=52
CN2   Changchun        71.81  48 eP     P      13 39 45.4 -0.4
CN2                               pmax   pmax
      comp=Z,20nm,1.0s
P58A  Pank, Wackersv   71.81 306  P     P      13 39 45.4 -0.5
      baz=53
YKW3  Yellowknife Ar   71.86 340 eP     P      13 39 45.6 -0.2
      comp=Z,22nm,1.1s
S61A  Accomac          71.88 304  P     P      13 39 46.2 -0.2
      baz=53
YKA   Yellowknife Ar   71.91 340  P     P      13 39 45.5 -0.6
      comp=Z,6.7nm,1.0s,baz=32,slow=5.8,SNR=14
YKA                               LR     LR     14 11 27.7
      comp=Z,8.6nm,18.9s,baz=38,slow=36
YKB5  Yellowknife Ar   71.91 340 eP     P      13 39 45.5 -0.6
M54A  Oil Creek Stat   72.01 309 eP     P      13 39 47.5 +0.4
      comp=Z,42nm,1.3s
M54A  Oil Creek Stat   72.01 309  P     P      13 39 47.9 +0.8
      baz=52,SNR=7.6
N55A  Marion Center    72.05 308 eP     P      13 39 47.9 +0.5
      comp=Z,22nm,0.9s
N55A  Marion Center    72.05 308  P     P      13 39 46.7 -0.7
      baz=52,SNR=6.4
L53A  Girard           72.09 310  P     P      13 39 48.0 +0.4
      baz=52,SNR=6.2
R60A  Leonardtown, M   72.10 305  P     P      13 39 48.4 +0.8
      baz=53
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O56A  Blue Knob Stat   72.11 308 eP     P      13 39 48.5 +0.6
      comp=Z,22nm,1.1s
O56A  Blue Knob Stat   72.11 308  P     P      13 39 48.2 +0.4
      baz=52
G47A  Hillman          72.13 314  P     P      13 39 48.7 +1.0
      baz=51,SNR=16
H48A  Harrisville      72.13 314 eP     P      13 39 48.7 +0.9
      comp=Z,62nm,1.4s
H48A  Harrisville      72.13 314  P     P      13 39 48.4 +0.6
      baz=51
P57A  Homestead Farm   72.25 307  P     P      13 39 48.5 -0.1
      baz=52
E44A  Grand Marais A   72.32 316  P     P      13 39 49.1 +0.2
      baz=50
I49A  Point Hope       72.33 313  P     P      13 39 48.8 -0.2
      baz=51
Q58A  Fox Den Farm,    72.38 306  P     P      13 39 49.7 +0.4
      baz=52
N54A  Moraine State    72.54 309 eP     P      13 39 51.3 +1.0
      comp=Z,25nm,1.0s
N54A  Moraine State    72.54 309  P     P      13 39 50.5 +0.2
      baz=52
DL2   Dalian           72.55  54 eP     P      13 39 43.7 -6.6
DL2                              eS     S      13 49 02.9  -12
DL2                               pmax   pmax
      comp=Z,34nm,1.4s
DL2                               pmax   pmax
      comp=Z,65nm,5.9s
DL2                               LR     LR
      comp=N,310nm,18.1s
DL2                               LR     LR
      comp=E,330nm,15.5s
DL2                               LR     LR
      comp=Z,150nm,13.5s
EPYK  Eagle Plains     72.56 351 eP     P      13 39 50.1 +0.1
      comp=Z,15nm,0.9s
EPYK  Eagle Plains     72.56 351  P     P      13 39 49.6 -0.4
      baz=17,SNR=10
O55A  Ligonier         72.59 308  P     P      13 39 51.5 +0.8
      baz=52
M53A  WI Miller and    72.65 310  P     P      13 39 51.0  0.0
      baz=52
I48A  Sherman Twp      72.67 313  P     P      13 39 51.2 +0.2
      baz=51
F45A  CMU Biological   72.70 316  P     P      13 39 50.6 -0.5
      baz=50
P56A  Dayton Farm, R   72.74 307  P     P      13 39 51.6 +0.1
      baz=52
Q57A  Strasburg        72.77 307  P     P      13 39 51.7 +0.1
      baz=52
WHN   Wuhan            72.80  64  P     P      13 39 51.6 -0.4
COLD  Coldfoot         72.81 357 eP     P      13 39 51.4  0.0
      comp=Z,9.8nm,1.2s
S59A  Mechanicsville   72.85 305  P     P      13 39 52.2  0.0
      baz=52
J49A  Marlette         72.87 313  P     P      13 39 52.7 +0.5
      baz=51
GRNR  Gornyy           72.94  37 eP     P      13 39 52.0 -0.5
GRNR                              pmax   pmax
      comp=Z,16nm,1.0s
M52A  Chesterland      72.99 310 eP     P      13 39 52.9  0.0
      comp=Z,40nm,1.2s
M52A  Chesterland      72.99 310  P     P      13 39 52.8 -0.2
      baz=51
E43A  Lone Tree Farm   73.04 317 eP     P      13 39 53.0 -0.2
      comp=Z,20nm,1.1s
E43A  Lone Tree Farm   73.04 317  P     P      13 39 53.4 +0.3
      baz=49,SNR=10
R58B  Mineral          73.09 305 eP     P      13 39 53.8 +0.2
      comp=Z,34nm,1.5s
R58B  Mineral          73.09 305  P     P      13 39 53.8 +0.2
      baz=52
C40A  Isle Royale Na   73.14 319 eP     P      13 39 53.7  0.0
      comp=Z,35nm,1.4s
C40A  Isle Royale Na   73.14 319  P     P      13 39 54.1 +0.4
      baz=48,SNR=12
N53A  Lisbon           73.14 309 eP     P      13 39 54.3 +0.4
      comp=Z,33nm,1.0s
N53A  Lisbon           73.14 309  P     P      13 39 53.4 -0.5
      baz=51
U61A  Possum Corner    73.19 303  P     P      13 39 52.5 -1.7
      baz=52
G45A  Suttons Bay      73.19 315  P     P      13 39 53.7 -0.4
      baz=50
I47A  Gladwin          73.22 314 eP     P      13 39 54.8 +0.6
      comp=Z,73nm,1.3s
I47A  Gladwin          73.22 314  P     P      13 39 54.0 -0.3
      baz=50
Q56A  Snyder Ridge,    73.24 307  P     P      13 39 55.0 +0.5
      baz=52,SNR=8.6
O54A  Avella           73.26 309  P     P      13 39 53.8 -0.7
      baz=51
MCWV  Mont Chateau     73.26 308 eP     P      13 39 54.5  0.0
      comp=Z,19nm,1.0s
MCWV  Mont Chateau     73.26 308  P     P      13 39 54.4 -0.2
      baz=52
H46A  Fife Lake        73.27 314  P     P      13 39 54.1 -0.5
      baz=50
J48A  Bridge Port      73.28 313  P     P      13 39 51.6 -3.0
      baz=50
R57A  Stanardsville    73.29 306  P     P      13 39 55.2 +0.5
      baz=52
P55A  Reedsville       73.34 308  P     P      13 39 55.6 +0.5
      baz=52
D41A  Chassel          73.41 318 eP     P      13 39 55.2 -0.2
      comp=Z,50nm,1.2s
D41A  Chassel          73.41 318  P     P      13 39 55.1 -0.2
      baz=48,SNR=9.5
K49A  Clarkson         73.42 312  P     P      13 39 55.6 +0.2
      baz=50
S58A  Poland Farm, P   73.42 305 eP     P      13 39 55.8 +0.3
      comp=Z,22nm,1.1s
S58A  Poland Farm, P   73.42 305  P     P      13 39 55.8 +0.3
      baz=52
T59A  Double "B" Far   73.50 305  P     P      13 39 56.3 +0.3
      baz=52
L50A  Kingsville       73.52 311  P     P      13 39 56.2 +0.1
      baz=51
U60A  Pendleton        73.56 304  P     P      13 39 56.4 +0.1
      baz=52
PLIO  Pelee Island,    73.60 311  P     P      13 39 56.6 +0.1
      baz=51
V61A  Roper            73.60 303  P     P      13 39 55.2 -1.4
      baz=52
M51A  Elyria           73.60 310  P     P      13 39 56.6  0.0
      baz=51
P54A  Burton           73.68 308  P     P      13 39 55.3 -1.8
      baz=51
O53A  New Philadelph   73.71 309  P     P      13 39 56.4 -0.8
      baz=51
R56A  Bull Pasture M   73.77 307  P     P      13 39 56.6 -1.1
      baz=51
K48A  Perry            73.78 313  P     P      13 39 56.9 -0.7
      baz=50
I46A  Reed City        73.79 314  P     P      13 39 57.3 -0.4
      baz=50
Q55A  Buckhannon       73.82 307  P     P      13 39 57.6 -0.4
      baz=51
AAM   Ann Arbor        73.84 312  P     P      13 39 56.7 -1.2
      baz=50
S57A  Dark Hollow, R   73.89 306  P     P      13 39 56.1 -2.2
      baz=52
J47A  Sunmer           73.90 313 eP     P      13 39 58.9 +0.6
      comp=Z,30nm,0.9s
J47A  Sunmer           73.90 313  P     P      13 39 56.2 -2.1
      baz=50
N51A  Ashland          73.98 310 eP     P      13 39 58.3 -0.5
      comp=Z,31nm,1.0s
N51A  Ashland          73.98 310  P     P      13 39 57.7 -1.1
      baz=50
FFC   Flin Flon        74.03 330 eP     P      13 39 58.8  0.0
      comp=Z,218nm,1.5s
FFC   Flin Flon        74.03 330 i P    P      13 39 59.6 +0.8
V60A  Jim Taylor Roa   74.06 303  P     P      13 39 58.1 -1.2
      baz=52
T58A  Grand View Acr   74.13 305  P     P      13 39 59.4 -0.4
      baz=52
I45A  Fountain         74.16 315  P     P      13 39 58.6 -1.2
      baz=49
O52A  Adamsville       74.17 309 eP     P      13 40 00.2 +0.3
      comp=Z,130nm,1.8s
O52A  Adamsville       74.17 309  P     P      13 39 59.0 -0.9
      baz=51
PRP   Porcupine Dome   74.24 355 eP     P      13 40 00.4 +0.4
      comp=Z,22nm,1.5s
Q54A  Coxs Mills       74.28 308 eP     P      13 40 00.6  0.0
      comp=Z,22nm,1.1s
Q54A  Coxs Mills       74.28 308  P     P      13 40 00.3 -0.3
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	baz=51						
EYMN	**Ely**	**74.28**	**320**	*e*P	**P**	**13 40 00.7**	**+0.3**
	comp=Z,37nm,1.4s						
EYMN	**Ely**	**74.28**	**320**	P	**P**	**13 39 59.6**	**-0.8**
	baz=47						
R55A	**Marlinton**	**74.28**	**307**	*e*P	**P**	**13 40 01.2**	**+0.5**
	comp=Z,25nm,1.1s						
R55A	**Marlinton**	**74.28**	**307**	P	**P**	**13 39 59.7**	**-1.0**
	baz=51						
P53A	**Whipple**	**74.30**	**309**	*e*P	**P**	**13 40 00.6**	**-0.1**
	comp=Z,76nm,1.4s						
P53A	**Whipple**	**74.30**	**309**	P	**P**	**13 40 00.8**	**+0.1**
	baz=51,SNR=7.2						
S56A	**Natural Bridge**	**74.32**	**306**	P	**P**	**13 40 00.8**	**-0.1**
	baz=51						
COWI	**Conover**	**74.34**	**318**	*e*P	**P**	**13 40 01.0**	**+0.1**
	comp=Z,31nm,1.1s						
K47A	**Vermontville**	**74.36**	**313**	P	**P**	**13 40 00.4**	**-0.6**
	baz=50						
U58A	**Oxford**	**74.48**	**305**	P	**P**	**13 40 01.3**	**-0.5**
	baz=51						
L48A	**N Adams**	**74.51**	**312**	P	**P**	**13 40 00.4**	**-1.5**
	baz=50						
N50A	**Nevada**	**74.52**	**310**	P	**P**	**13 40 01.5**	**-0.4**
	baz=50						
T57A	**Hurt**	**74.55**	**305**	*e*P	**P**	**13 40 02.4**	**+0.2**
	comp=Z,44nm,1.7s						
T57A	**Hurt**	**74.55**	**305**	P	**P**	**13 40 02.2**	**0.0**
	baz=51						
M49A	**Liberty Center**	**74.55**	**311**	P	**P**	**13 40 01.7**	**-0.4**
	baz=50						
EGAK	**Eagle**	**74.59**	**353**	*e*P	**P**	**13 40 02.0**	**+0.1**
	comp=Z,9.2nm,1.3s						
O51A	**Pataskala**	**74.60**	**310**	P	**P**	**13 40 02.8**	**+0.3**
	baz=50,SNR=7.1						
P52A	**Corning**	**74.65**	**309**	P	**P**	**13 40 02.5**	**-0.2**
	baz=50						
V59A	**Middlesex**	**74.68**	**304**	P	**P**	**13 40 02.4**	**-0.6**
	baz=51						
H43A	**Windswept, Lux**	**74.71**	**316**	*e*P	**P**	**13 40 03.5**	**+0.6**
	comp=Z,28nm,1.0s						
H43A	**Windswept, Lux**	**74.71**	**316**	P	**P**	**13 40 02.7**	**-0.3**
	baz=48						
ULM	**Lac du Bonnet**	**74.75**	**324**	P	**P**	**13 40 02.2**	**-0.9**
	comp=Z,11nm,0.9s,baz=51,slow=6.7,SNR=13						
ULM				LR	LR	14 13 28.9	
	comp=Z,172nm,18.6s,baz=62,slow=36						
ULM	**Lac du Bonnet**	**74.75**	**324**	*e*P	**P**	**13 40 02.8**	**-0.3**
	comp=Z,44nm,1.3s						
ULM	**Lac du Bonnet**	**74.75**	**324**	*e*P	**P**	**13 40 02.8**	**-0.3**
ULM				pmax	pmax		
	comp=Z,44nm,1.3s						
POKR	**Poker Plat Res**	**74.76**	**355**	P	**P**	**13 40 02.7**	**-0.3**
	baz=8.5						
ACSO	**Alum Creek Sta**	**74.77**	**310**	*e*P	**P**	**13 40 03.2**	**-0.2**
	comp=Z,32nm,1.1s						
ACSO	**Alum Creek Sta**	**74.77**	**310**	P	**P**	**13 40 03.3**	**-0.1**
	baz=50						
Q53A	**Leroy**	**74.78**	**308**	P	**P**	**13 40 02.7**	**-0.8**
	baz=50						
S55A	**Lewisburg**	**74.84**	**307**	P	**P**	**13 40 03.5**	**-0.5**
	baz=51						
R54A	**Victor**	**74.88**	**307**	P	**P**	**13 40 04.2**	**+0.1**
	baz=51						
L47A	**Sherwood**	**74.93**	**312**	P	**P**	**13 40 03.7**	**-0.6**
	baz=49						
NJ2	**Nanjing**	**74.95**	**61**	*e*P	**P**	**13 40 04.3**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,26nm,0.7s						
U57A	**Blanch**	**74.96**	**305**	P	**P**	**13 40 02.8**	**-1.7**
	baz=51						
F40A	**Park Falls**	**74.97**	**318**	P	**P**	**13 40 04.4**	**-0.1**
	baz=47,SNR=7.7						
M48A	**Edgerton**	**74.97**	**312**	P	**P**	**13 40 03.0**	**-1.6**
	baz=49						
T56A	**Rocky Mt**	**75.02**	**306**	P	**P**	**13 40 03.6**	**-1.3**
	baz=51						
MLY	**Manley**	**75.02**	**357**	*e*P	**P**	**13 40 05.3**	**+0.8**
	comp=Z,44nm,2.0s						
N49A	**Columbus Grove**	**75.03**	**311**	*e*P	**P**	**13 40 04.8**	**-0.1**
	comp=Z,36nm,1.1s						
N49A	**Columbus Grove**	**75.03**	**311**	P	**P**	**13 40 03.5**	**-1.4**
	baz=50						
TCOL	**CIGO, UAF Yank**	**75.03**	**355**	P	**P**	**13 40 03.2**	**-1.2**
	baz=8.2						
ILAR	**Eielson Array**	**75.07**	**355**	P	**P**	**13 40 04.5**	**-0.2**
	comp=Z,1.8nm,1.1s,baz=5.8,slow=4.8,SNR=12						
ILAR				LR	LR	14 17 23.0	
	comp=Z,56nm,18.4s,baz=27,slow=39						
ILB	**Eielson Array**	**75.07**	**355**	*e*P	**P**	**13 40 04.5**	**-0.2**
	comp=Z,5.3nm,1.2s						
DAWY	**Dawson**	**75.09**	**352**	*e*P	**P**	**13 40 05.2**	**+0.3**
	comp=Z,20nm,1.0s						
BLA	**Blacksburg**	**75.14**	**306**	P	**P**	**13 40 04.9**	**-0.8**
	baz=51						
Q52A	**Bidwell**	**75.16**	**309**	P	**P**	**13 40 05.6**	**0.0**
	baz=50						
USRK	**Ussuriysk Ar.**	**75.16**	**44**	P	**P**	**13 40 05.0**	**-0.6**
	comp=Z,11nm,0.9s,baz=272,slow=5.5,SNR=11						
USRK	**Ussuriysk Ar.**	**75.16**	**44**	P	**P**	**13 40 05.0**	**-0.6**
O50A	**Cable**	**75.20**	**310**	P	**P**	**13 40 05.2**	**-0.7**
	baz=50						
V58A	**Windy Hill, Pi**	**75.22**	**304**	P	**P**	**13 40 05.2**	**-0.8**
	baz=51						
E38A	**The Farm, Brul**	**75.23**	**319**	*e*P	**P**	**13 40 05.8**	**-0.2**
	comp=Z,21nm,1.1s						
E38A	**The Farm, Brul**	**75.23**	**319**	P	**P**	**13 40 05.0**	**-0.9**
	baz=47						
X60A	**Albert Glenn T**	**75.25**	**303**	P	**P**	**13 40 05.9**	**-0.3**
	baz=51						
CCB	**Clear Creek Bu**	**75.25**	**355**	*e*P	**P**	**13 40 05.7**	**0.0**
	comp=Z,20nm,1.8s						
P51A	**Williamsport**	**75.30**	**309**	P	**P**	**13 40 05.8**	**-0.7**
	baz=50						
R53A	**Hurricane**	**75.37**	**308**	*e*P	**P**	**13 40 07.1**	**+0.2**
	comp=Z,25nm,0.9s						
R53A	**Hurricane**	**75.37**	**308**	P	**P**	**13 40 07.0**	**+0.1**
	baz=50						
F39A	**Loretta**	**75.38**	**318**	P	**P**	**13 40 06.8**	**-0.1**
	baz=47,SNR=9.9						
T55A	**Pulaski**	**75.43**	**306**	P	**P**	**13 40 06.1**	**-1.2**
	baz=50						
HDA	**Harding Lake**	**75.43**	**355**	*e*P	**P**	**13 40 06.8**	**0.0**
	comp=Z,19nm,1.2s						
HDA	**Harding Lake**	**75.43**	**355**	P	**P**	**13 40 06.6**	**-0.2**
	baz=8.9,SNR=8.6						
WRH	**Wood River Hil**	**75.44**	**356**	*e*P	**P**	**13 40 06.8**	**0.0**
	comp=Z,14nm,1.2s						
G40A	**Rib Lake**	**75.45**	**317**	*e*P	**P**	**13 40 07.4**	**+0.1**
	comp=Z,34nm,1.4s						
G40A	**Rib Lake**	**75.45**	**317**	P	**P**	**13 40 06.7**	**-0.5**
	baz=47						
L46A	**Eue Claire**	**75.52**	**313**	P	**P**	**13 40 05.8**	**-1.9**
	baz=49						
N48A	**Decatur**	**75.56**	**311**	P	**P**	**13 40 07.7**	**-0.2**
	baz=49						
M47A	**Cromwell**	**75.57**	**312**	P	**P**	**13 40 07.0**	**-0.9**
	baz=49						
V57A	**Coltrane Farms**	**75.58**	**305**	P	**P**	**13 40 07.6**	**-0.5**
	baz=51						
O49A	**Covington**	**75.59**	**311**	*e*P	**P**	**13 40 08.0**	**-0.1**
	comp=Z,19nm,0.8s						
O49A	**Covington**	**75.59**	**311**	P	**P**	**13 40 07.7**	**-0.4**
	baz=49						
P50A	**Jamestown**	**75.65**	**310**	P	**P**	**13 40 07.5**	**-1.0**
	baz=50						
X59A	**McDuffie Farm,**	**75.66**	**303**	P	**P**	**13 40 07.2**	**-1.4**
	baz=51						
U56A	**King**	**75.67**	**305**	P	**P**	**13 40 07.7**	**-1.0**
	baz=50						
I42A	**Draeger Farm,**	**75.70**	**316**	*e*P	**P**	**13 40 08.8**	**+0.1**
	comp=Z,21nm,1.3s						
I42A	**Draeger Farm,**	**75.70**	**316**	P	**P**	**13 40 07.6**	**-1.1**
	baz=48						
Q51A	**Peebles**	**75.76**	**309**	*e*P	**P**	**13 40 09.0**	**-0.2**
	comp=Z,46nm,1.3s						
Q51A	**Peebles**	**75.76**	**309**	P	**P**	**13 40 07.7**	**-1.4**
	baz=50						
W58A	**Raeford**	**75.78**	**304**	P	**P**	**13 40 08.7**	**-0.6**
	baz=51						
R52A	**Catlettsburg**	**75.78**	**308**	P	**P**	**13 40 07.9**	**-1.4**
	baz=50						
F38A	**Pierce - Schro**	**75.84**	**319**	P	**P**	**13 40 09.6**	**+0.2**
	baz=46,SNR=9.3						
S53A	**Williamson**	**75.89**	**307**	P	**P**	**13 40 09.0**	**-0.9**
	baz=50						
N47A	**Urbana**	**75.92**	**312**	P	**P**	**13 40 08.5**	**-1.6**
	baz=49						
G39A	**Holcombe**	**75.94**	**318**	P	**P**	**13 40 09.9**	**-0.2**
	baz=47,SNR=14						
RIDG	**Independent Ri**	**75.94**	**354**	*e*P	**P**	**13 40 10.4**	**+0.7**
	comp=Z,33nm,1.4s						
M46A	**Old House Fiel**	**75.95**	**313**	P	**P**	**13 40 09.2**	**-0.9**
	baz=48						
T54A	**Tazewell**	**75.95**	**307**	P	**P**	**13 40 10.2**	**-0.1**
	baz=50						
BPAW	**Bear Paw Mtn.**	**75.96**	**357**	*e*P	**P**	**13 40 09.8**	**-0.1**
	comp=Z,22nm,1.7s						
DOT	**Dot Lake**	**75.97**	**354**	*e*P	**P**	**13 40 10.5**	**+0.6**
	comp=Z,14nm,1.2s						
U55A	**TA2, Sparta**	**75.98**	**306**	P	**P**	**13 40 09.2**	**-1.3**
	baz=50,SNR=6.7						
O48A	**Farmland**	**76.02**	**311**	P	**P**	**13 40 10.3**	**-0.3**
	baz=49						
V56A	**Mocksville**	**76.08**	**305**	P	**P**	**13 40 09.2**	**-1.8**
	baz=50						
AGMN	**Agassiz Nation**	**76.13**	**322**	*e*P	**P**	**13 40 10.7**	**-0.4**
	comp=Z,20nm,1.4s						
AGMN	**Agassiz Nation**	**76.13**	**322**	P	**P**	**13 40 09.9**	**-1.2**
	baz=44						
X58A	**Rowland**	**76.14**	**303**	P	**P**	**13 40 09.7**	**-1.6**
	baz=51						
W57A	**Gilead**	**76.18**	**304**	P	**P**	**13 40 10.0**	**-1.5**
	baz=50						
K43A	**Burlington**	**76.19**	**315**	P	**P**	**13 40 10.2**	**-1.3**
	baz=48						
Y59A	**Loris**	**76.19**	**303**	P	**P**	**13 40 08.9**	**-2.7**
	baz=51						
P49A	**Miami Univ. Ec**	**76.24**	**310**	P	**P**	**13 40 09.1**	**-2.8**
	baz=49						
Q50A	**Georgetown**	**76.25**	**309**	P	**P**	**13 40 10.3**	**-1.6**
	baz=49						
R51A	**Hillsboro**	**76.37**	**309**	P	**P**	**13 40 10.6**	**-2.0**
	baz=49						
F37A	**Hinrichs Farm,**	**76.38**	**319**	P	**P**	**13 40 11.0**	**-1.5**
	baz=46						
U54A	**Nelsons Funny**	**76.45**	**306**	*e*P	**P**	**13 40 13.8**	**+0.6**
	comp=Z,20nm,1.0s						
U54A	**Nelsons Funny**	**76.45**	**306**	P	**P**	**13 40 12.2**	**-1.0**
	baz=50						
M45A	**Boilermakers S**	**76.47**	**313**	P	**P**	**13 40 11.2**	**-1.9**
	baz=48						
V55A	**Taylorsville**	**76.50**	**306**	P	**P**	**13 40 11.7**	**-1.7**
	baz=50						
N46A	**Monticello**	**76.51**	**312**	P	**P**	**13 40 12.8**	**-0.6**
	baz=48						
W56A	**Indian Trail**	**76.56**	**305**	P	**P**	**13 40 12.3**	**-1.4**
	baz=50						
T53A	**Wise**	**76.59**	**307**	P	**P**	**13 40 13.0**	**-1.0**
	baz=50						
O47A	**Sheridan**	**76.62**	**312**	P	**P**	**13 40 12.8**	**-1.2**
	baz=48						
CAST	**Castle Rocks**	**76.69**	**357**	*e*P	**P**	**13 40 14.6**	**+0.6**
	comp=Z,6.1nm,1.0s						
P48A	**Milroy**	**76.70**	**311**	*e*P	**P**	**13 40 14.1**	**-0.4**
	comp=Z,24nm,1.2s						
P48A	**Milroy**	**76.70**	**311**	P	**P**	**13 40 13.6**	**-0.9**
	baz=49						
Y58A	**Scranton**	**76.76**	**303**	P	**P**	**13 40 12.9**	**-2.0**
	baz=50						
T52A	**Hallie**	**76.78**	**307**	*e*P	**P**	**13 40 15.4**	**+0.4**
	comp=Z,51nm,1.4s						
T52A	**Hallie**	**76.78**	**307**	P	**P**	**13 40 14.5**	**-0.5**
	baz=50						
DHY	**Denali Highway**	**76.79**	**355**	*e*P	**P**	**13 40 14.9**	**+0.2**
	comp=Z,24nm,1.4s						
BIRD	**Birdtown, Kers**	**76.80**	**304**	*e*P	**P**	**13 40 15.5**	**+0.4**
	comp=Z,17nm,1.1s						
S51A	**Beattyville**	**76.81**	**308**	P	**P**	**13 40 14.2**	**-0.9**
	baz=49						
SPMN	**Marine on St.**	**76.82**	**319**	*e*P	**P**	**13 40 15.3**	**+0.3**
	comp=Z,40nm,1.4s						
R50A	**Paris**	**76.83**	**309**	*e*P	**P**	**13 40 15.7**	**+0.5**
	comp=Z,37nm,1.5s						
R50A	**Paris**	**76.83**	**309**	P	**P**	**13 40 14.3**	**-0.9**
	baz=49						
Z59A	**Georgetown, SC**	**76.93**	**302**	P	**P**	**13 40 14.3**	**-1.5**
	baz=50						
V54A	**Nebo**	**77.00**	**306**	P	**P**	**13 40 14.5**	**-1.7**
	baz=50						
U53A	**Fall Branch**	**77.01**	**307**	P	**P**	**13 40 15.1**	**-1.3**
	baz=50						
KMSC	**Kings Mountain**	**77.03**	**305**	*e*P	**P**	**13 40 17.0**	**+0.6**
	comp=Z,22nm,0.5s						
KMSC	**Kings Mountain**	**77.03**	**305**	P	**P**	**13 40 15.2**	**-1.2**
	baz=50						
SFIN	**Lafayette**	**77.06**	**312**	*e*P	**P**	**13 40 16.5**	**+0.1**
	comp=Z,68nm,1.6s						
SFIN	**Lafayette**	**77.06**	**312**	P	**P**	**13 40 15.0**	**-1.4**
	baz=48						
JFWS	**Jewell Farm**	**77.08**	**316**	*e*P	**P**	**13 40 16.5**	**-0.1**
	comp=Z,33nm,1.4s						
JFWS	**Jewell Farm**	**77.08**	**316**	*e*P	**P**	**13 40 16.5**	**-0.1**
JFWS				pmax	pmax		
	comp=Z,33nm,1.4s						
JFWS	**Jewell Farm**	**77.08**	**316**	P	**P**	**13 40 15.3**	**-1.2**
	baz=47						
P47A	**Martinsville**	**77.17**	**311**	P	**P**	**13 40 15.8**	**-1.3**
	baz=48						
Z58A	**St. Stephen**	**77.22**	**303**	P	**P**	**13 40 16.4**	**-1.0**
	baz=50						
PPLA	**Purkeypile**	**77.22**	**357**	*e*P	**P**	**13 40 17.6**	**+0.5**
	comp=Z,14nm,1.3s						
Q48A	**North Vernon**	**77.23**	**310**	P	**P**	**13 40 15.7**	**-1.8**
	baz=48						
X56A	**White Oak**	**77.25**	**304**	P	**P**	**13 40 17.1**	**-0.6**
	baz=50						
S50A	**Richmond**	**77.27**	**309**	P	**P**	**13 40 16.5**	**-1.1**
	baz=49						
KS15	**Wonju Array Si**	**77.29**	**52**	*e*P	**P**	**13 40 17.4**	**-0.3**
	comp=Z,40nm,1.1s						
KSRS	**Korea Array**	**77.31**	**52**	P	**P**	**13 40 17.1**	**-0.8**
	comp=Z,16nm,0.9s,baz=313,slow=4.9,SNR=46						
R49A	**Shelbyville**	**77.32**	**310**	*e*P	**P**	**13 40 18.1**	**+0.1**
	comp=Z,67nm,1.5s						
R49A	**Shelbyville**	**77.32**	**310**	P	**P**	**13 40 17.4**	**-0.5**
	baz=49						
N44A	**Piper City**	**77.36**	**313**	P	**P**	**13 40 16.7**	**-1.4**
	baz=48						
M43A	**Waltham Townsh**	**77.39**	**314**	P	**P**	**13 40 17.0**	**-1.3**
	baz=47						
L42A	**Oliver, Polo**	**77.39**	**315**	*e*P	**P**	**13 40 18.4**	**+0.1**
	comp=Z,23nm,1.0s						
L42A	**Oliver, Polo**	**77.39**	**315**	P	**P**	**13 40 17.2**	**-1.1**
	baz=47						
T51A	**Gray**	**77.46**	**308**	P	**P**	**13 40 16.9**	**-1.9**
	baz=49						
U52A	**Thorn Hill**	**77.48**	**307**	P	**P**	**13 40 18.0**	**-0.9**
	baz=49						
TZTN	**Tazewell**	**77.49**	**307**	*e*P	**P**	**13 40 19.8**	**+0.8**
	comp=Z,16nm,1.1s						
TZTN	**Tazewell**	**77.49**	**307**	P	**P**	**13 40 16.8**	**-2.2**
	baz=49						
O45A	**Potomac**	**77.50**	**312**	P	**P**	**13 40 16.6**	**-2.3**
	baz=48						
BLO	**Bloomington**	**77.53**	**311**	*e*P	**P**	**13 40 19.3**	**+0.2**
	comp=Z,32nm,0.9s						
BLO	**Bloomington**	**77.53**	**311**	*e*P	**P**	**13 40 19.3**	**+0.2**
BLO				pmax	pmax		
	comp=Z,32nm,0.9s						
PAULI	**Pauline**	**77.54**	**305**	*e*P	**P**	**13 40 19.8**	**+0.5**
	comp=Z,47nm,1.5s						
W54A	**Cherokee Point**	**77.60**	**305**	P	**P**	**13 40 17.6**	**-1.9**
	baz=50						
V53A	**Saluda**	**77.61**	**306**	P	**P**	**13 40 17.8**	**-1.9**
	baz=49						
P46A	**Rosedale**	**77.63**	**312**	P	**P**	**13 40 18.2**	**-1.4**
	baz=48						
X55A	**Gracelyn & Ava**	**77.65**	**305**	P	**P**	**13 40 18.3**	**-1.5**
	baz=50						
R48A	**Northridge Ran**	**77.66**	**310**	P	**P**	**13 40 19.5**	**-0.4**
	baz=48						
S49A	**Springfield**	**77.72**	**309**	P	**P**	**13 40 19.2**	**-1.0**
	baz=48						
Z57A	**Bowman**	**77.81**	**303**	P	**P**	**13 40 19.5**	**-1.3**
	baz=50						
N43A	**Stutzman Famil**	**77.84**	**314**	P	**P**	**13 40 19.9**	**-0.9**
	baz=47						
U51A	**La Follette**	**77.89**	**307**	P	**P**	**13 40 19.3**	**-1.9**
	baz=49						
T50A	**Nancy**	**77.96**	**308**	P	**P**	**13 40 20.6**	**-1.0**
	baz=48						
V52A	**Sevierville**	**77.98**	**307**	P	**P**	**13 40 20.0**	**-1.7**
	baz=49						
O44A	**Mansfield**	**77.98**	**313**	P	**P**	**13 40 20.6**	**-1.1**
	baz=47						
P45A	**Graceland, Par**	**78.00**	**312**	*e*P	**P**	**13 40 21.2**	**-0.5**
	comp=Z,30nm,1.2s						
P45A	**Graceland, Par**	**78.00**	**312**	P	**P**	**13 40 20.7**	**-1.0**
	baz=48						
HYT	**Haines Junctio**	**78.00**	**350**	*e*P	**P**	**13 40 22.4**	**+0.9**
	comp=Z,14nm,1.2s						
SCM	**Sheep Creek Mo**	**78.02**	**355**	*e*P	**P**	**13 40 22.5**	**+1.0**
	comp=Z,27nm,1.4s						
WCI	**Wyandotte Cave**	**78.03**	**310**	*e*P	**P**	**13 40 22.3**	**+0.5**
	comp=Z,75nm,1.5s						
WCI	**Wyandotte Cave**	**78.03**	**310**	P	**P**	**13 40 22.4**	**+0.5**
WCI				pmax	pmax		
	comp=Z,75nm,1.5s						
WCI	**Wyandotte Cave**	**78.03**	**310**	P	**P**	**13 40 20.5**	**-1.4**
	baz=48						
X54A	**Belton**	**78.06**	**305**	P	**P**	**13 40 21.1**	**-1.1**
	baz=49						
SML	**Sawmill**	**78.11**	**355**	*e*P	**P**	**13 40 22.2**	**+0.2**
	comp=Z,30nm,1.5s						
SML	**Sawmill**	**78.11**	**355**	*e*P	**P**	**13 40 22.2**	**+0.2**
SML				pmax	pmax		
	comp=Z,30nm,1.5s						
R47A	**Wooly Knot Far**	**78.12**	**310**	P	**P**	**13 40 22.7**	**+0.3**
	baz=48,SNR=6.9						
Y55A	**Saluda**	**78.14**	**304**	P	**P**	**13 40 20.2**	**-2.4**
	baz=49						
W53A	**Cullowhee**	**78.15**	**306**	P	**P**	**13 40 20.6**	**-2.2**
	baz=49						
HDIL	**Hopedale**	**78.17**	**313**	*e*P	**P**	**13 40 22.8**	**+0.1**
	comp=Z,44nm,1.3s						
HDIL	**Hopedale**	**78.17**	**313**	P	**P**	**13 40 20.0**	**-2.7**
	baz=47						
MDND	**Maddock**	**78.17**	**324**	P	**P**	**13 40 21.3**	**-1.3**
	baz=42						
L40A	**Anamosa**	**78.19**	**316**	*e*P	**P**	**13 40 22.3**	**-0.5**
	comp=Z,40nm,1.2s						
L40A	**Anamosa**	**78.19**	**316**	P	**P**	**13 40 22.3**	**-0.5**
	baz=46,SNR=7.1						
S48A	**Wiedeman Farm,**	**78.27**	**310**	P	**P**	**13 40 22.0**	**-1.3**
	baz=48						
T49A	**Edmonton**	**78.32**	**309**	*e*P	**P**	**13 40 23.4**	**-0.1**
	comp=Z,28nm,1.1s						
T49A	**Edmonton**	**78.32**	**309**	P	**P**	**13 40 22.3**	**-1.3**
	baz=48						
U50A	**Jamestown**	**78.36**	**308**	P	**P**	**13 40 22.1**	**-1.8**
	baz=48						
157A	**Early Branch**	**78.40**	**303**	P	**P**	**13 40 21.7**	**-2.3**
	baz=50						
V51A	**Loudon**	**78.47**	**307**	*e*P	**P**	**13 40 23.5**	**-0.9**
	comp=Z,29nm,1.1s						
V51A	**Loudon**	**78.47**	**307**	P	**P**	**13 40 23.0**	**-1.3**
	baz=49						
YSS	**Yuzh-Sakhalins**	**78.59**	**37**	*e*P	**P**	**13 40 24.5**	**-0.3**
	comp=Z,35nm,0.9s						
YSS	**Yuzh-Sakhalins**	**78.59**	**37**	⇓*i*P	**P**	**13 40 24.8**	**0.0**
YSS				*e*		13 43 25.1	
YSS				*e*		13 45 07.4	
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
Q45A	**Warren Harvey,**	**78.66**	**312**	P	**P**	**13 40 25.2**	**-0.2**
	baz=47,SNR=5.7						
X53A	**Estanollee**	**78.67**	**306**	P	**P**	**13 40 25.3**	**-0.2**
	baz=49						
W52A	**Murphy**	**78.67**	**306**	*e*P	**P**	**13 40 25.4**	**-0.2**
	comp=Z,45nm,1.7s						
W52A	**Murphy**	**78.67**	**306**	P	**P**	**13 40 24.0**	**-1.6**
	baz=49						
Y54A	**Tignall**	**78.71**	**305**	P	**P**	**13 40 26.3**	**+0.6**
	baz=49,SNR=7.3						
156A	**Sylvania**	**78.73**	**303**	P	**P**	**13 40 24.0**	**-1.9**
	baz=49						
OLIL	**Olney**	**78.73**	**311**	*e*P	**P**	**13 40 25.5**	**-0.3**
	comp=Z,49nm,1.2s						
R46A	**Gibon Southern**	**78.75**	**311**	P	**P**	**13 40 24.4**	**-1.5**
	baz=47						
S47A	**Hartford**	**78.79**	**310**	P	**P**	**13 40 25.6**	**-0.5**
	baz=48						
CPCT	**Cooper Cave**	**78.81**	**307**	*e*P	**P**	**13 40 26.9**	**+0.6**
	comp=Z,46nm,1.4s						
T48A	**Bowling Green**	**78.83**	**309**	P	**P**	**13 40 26.8**	**+0.4**
	baz=48,SNR=12						
U49A	**Red Boiling Sp**	**78.86**	**309**	P	**P**	**13 40 27.0**	**+0.4**
	baz=48,SNR=12						
P43A	**Skaggs, Pawnee**	**78.92**	**313**	P	**P**	**13 40 26.0**	**-0.8**
	baz=47						
N41A	**Harden Midland**	**78.93**	**314**	P	**P**	**13 40 26.1**	**-0.7**
	baz=46						
X52A	**Dahlonega**	**78.98**	**306**	P	**P**	**13 40 27.8**	**+0.5**
	baz=49,SNR=8.0						
V50A	**Pikevile**	**79.01**	**307**	P	**P**	**13 40 27.9**	**+0.5**
	baz=48,SNR=9.9						
R45A	**Skylar, Fairfi**	**79.14**	**311**	P	**P**	**13 40 27.6**	**-0.4**
	baz=47						
W51A	**Cleveland**	**79.14**	**307**	P	**P**	**13 40 28.4**	**+0.3**
	baz=48,SNR=7.2						
N40A	**Mertquake, Sal**	**79.20**	**315**	P	**P**	**13 40 27.5**	**-0.8**
	baz=46						
Z54A	**Sparta**	**79.21**	**304**	P	**P**	**13 40 28.3**	**-0.2**
	baz=49						
S46A	**Don Dixon Farm**	**79.22**	**310**	P	**P**	**13 40 27.7**	**-0.8**
	baz=47						
Y53A	**Monroe**	**79.27**	**305**	P	**P**	**13 40 27.5**	**-1.3**
	baz=49						
U48A	**Cassie Pea, Po**	**79.32**	**309**	P	**P**	**13 40 27.4**	**-1.6**
	baz=48,SNR=7.0						
T47A	**Sharon Grove**	**79.33**	**310**	*e*P	**P**	**13 40 29.2**	**+0.1**
	comp=Z,43nm,1.1s						
T47A	**Sharon Grove**	**79.33**	**310**	P	**P**	**13 40 29.1**	**-0.1**
	baz=47,SNR=7.3						
SCIA	**State Center**	**79.36**	**317**	P	**P**	**13 40 27.1**	**-2.1**
	baz=45						
155A	**Kite**	**79.38**	**304**	P	**P**	**13 40 29.0**	**-0.4**
	baz=49						
256A	**Glennville**	**79.42**	**303**	P	**P**	**13 40 29.3**	**-0.4**
	baz=49						
V49A	**McMinnville**	**79.44**	**308**	P	**P**	**13 40 28.7**	**-1.0**
	baz=48,SNR=7.2						
W50A	**Signal Mountai**	**79.45**	**307**	*e*P	**P**	**13 40 30.5**	**+0.7**
	comp=Z,44nm,1.1s						
W50A	**Signal Mountai**	**79.45**	**307**	P	**P**	**13 40 30.1**	**+0.3**
	baz=48,SNR=10.0						
CLTN	**Cedars of Leba**	**79.48**	**308**	*e*P	**P**	**13 40 30.1**	**+0.2**
	comp=Z,23nm,1.3s						
GOGA	**Godfrey**	**79.49**	**305**	*e*P	**P**	**13 40 30.4**	**+0.4**
	comp=Z,28nm,1.3s						
GOGA	**Godfrey**	**79.49**	**305**	*e*P	**P**	**13 40 30.4**	**+0.4**
GOGA				pmax	pmax		
	comp=Z,28nm,1.3s						
GOGA	**Godfrey**	**79.49**	**305**	P	**P**	**13 40 29.4**	**-0.7**
	baz=49,SNR=6.0						
Y52A	**Lilburn**	**79.57**	**306**	*e*P	**P**	**13 40 30.9**	**+0.5**
	comp=Z,29nm,1.0s						
Y52A	**Lilburn**	**79.57**	**306**	P	**P**	**13 40 29.6**	**-0.8**
	baz=48,SNR=6.1						
PEA1	**Petropavlovsk-**	**79.60**	**25**	*e*P	**P**	**13 40 29.1**	**-1.2**
PETK	**Petropavlovsk-**	**79.61**	**25**	P	**P**	**13 40 29.1**	**-1.2**
	comp=Z,3.4nm,0.9s,baz=346,slow=3.1,SNR=4.9						
PETK				LR	LR	14 18 28.8	
	comp=Z,138nm,19.2s,baz=317,slow=38						
Z53A	**Monticello**	**79.64**	**305**	P	**P**	**13 40 31.4**	**+0.5**
	baz=49,SNR=5.6						
DGMT	**Dagmar**	**79.70**	**327**	P	**P**	**13 40 30.8**	**-0.1**
	baz=39						
T46A	**Princeton**	**79.76**	**310**	P	**P**	**13 40 29.6**	**-1.9**
	baz=47						
154A	**Montrose**	**79.79**	**304**	P	**P**	**13 40 30.5**	**-1.1**
	baz=49						
ECSD	**EROS Data Cent**	**79.79**	**320**	*e*P	**P**	**13 40 31.4**	**-0.1**
	comp=Z,16nm,1.1s						
ECSD	**EROS Data Cent**	**79.79**	**320**	P	**P**	**13 40 31.6**	**+0.1**
	baz=43,SNR=9.7						
U47A	**Clarksville**	**79.81**	**309**	P	**P**	**13 40 31.9**	**+0.2**
	baz=47,SNR=10.0						
356A	**Blackshear**	**80.00**	**303**	P	**P**	**13 40 31.3**	**-1.6**
	baz=49						
V48A	**Smith Brothers**	**80.01**	**309**	*e*P	**P**	**13 40 32.9**	**+0.1**
	comp=Z,62nm,1.5s						
V48A	**Smith Brothers**	**80.01**	**309**	P	**P**	**13 40 32.6**	**-0.2**
	baz=47,SNR=7.1						
W49A	**Belvidere**	**80.09**	**308**	P	**P**	**13 40 31.5**	**-1.7**
	baz=48						
S44A	**Carbondale**	**80.11**	**311**	P	**P**	**13 40 32.5**	**-0.8**
	baz=46						
X50B	**Fort Payne**	**80.15**	**307**	P	**P**	**13 40 33.9**	**+0.3**
	baz=48,SNR=5.6						
Y51A	**Rockmart**	**80.17**	**306**	P	**P**	**13 40 33.9**	**+0.2**
	baz=48,SNR=5.6						
Z52A	**Williamson**	**80.24**	**305**	P	**P**	**13 40 34.3**	**+0.2**

	baz=48,SNR=7.5						
WVT	**Waverly**	**80.34**	**309**	eP	**P**	**13 40 33.8**	**-0.8**
	comp=Z,25nm,1.3s						
WVT	**Waverly**	**80.34**	**309**	eP	**P**	**13 40 33.8**	**-0.8**
WVT				pmax	pmax		
	comp=Z,25nm,1.3s						
WVT	**Waverly**	**80.34**	**309**	P	**P**	**13 40 33.9**	**-0.8**
	baz=47						
254A	**Abbeville**	**80.34**	**304**	P	**P**	**13 40 34.8**	**+0.1**
	baz=48						
V47A	**Nunnelly**	**80.36**	**309**	P	**P**	**13 40 33.6**	**-1.1**
	baz=47						
SUSD	**Miller**	**80.41**	**321**	P	**P**	**13 40 34.0**	**-0.8**
	baz=42						
355A	**Pearson**	**80.46**	**303**	P	**P**	**13 40 36.0**	**+0.7**
	baz=49						
W48A	**Pulaski**	**80.48**	**308**	P	**P**	**13 40 35.2**	**-0.2**
	baz=47,SNR=7.8						
X49A	**Woodville**	**80.53**	**307**	P	**P**	**13 40 35.5**	**-0.1**
	baz=48,SNR=11						
Y50A	**Piedmont**	**80.59**	**307**	P	**P**	**13 40 35.6**	**-0.4**
	baz=48						
Z51A	**Franklin**	**80.62**	**306**	P	**P**	**13 40 36.0**	**-0.2**
	baz=48						
V46A	**Holladay**	**80.74**	**309**	P	**P**	**13 40 36.2**	**-0.5**
	baz=47,SNR=11						
152A	**Waverly Hall**	**80.77**	**305**	eP	**P**	**13 40 37.1**	**+0.1**
	comp=Z,25nm,1.0s						
152A	**Waverly Hall**	**80.77**	**305**	P	**P**	**13 40 36.7**	**-0.3**
	baz=48,SNR=7.0						
W47A	**Westpoint**	**80.80**	**309**	P	**P**	**13 40 36.3**	**-0.8**
	baz=47						
253A	**Americus**	**80.80**	**304**	P	**P**	**13 40 37.0**	**-0.2**
	baz=48						
TIGA	**Tifton**	**80.87**	**303**	P	**P**	**13 40 38.1**	**+0.6**
	baz=48						
455A	**Stateville**	**80.97**	**303**	P	**P**	**13 40 36.9**	**-1.1**
	baz=48						
657A	**Interlachen**	**80.97**	**301**	P	**P**	**13 40 38.2**	**+0.2**
	baz=49						
CCM	**Cathedral Cave**	**80.99**	**313**	eP	**P**	**13 40 38.0**	**-0.1**
	comp=Z,17nm,0.9s						
CCM	**Cathedral Cave**	**80.99**	**313**	eP	**P**	**13 40 38.0**	**-0.1**
CCM				pmax	pmax		
	comp=Z,17nm,0.9s						
CCM	**Cathedral Cave**	**80.99**	**313**	P	**P**	**13 40 38.0**	**-0.1**
	baz=46						
X48A	**Hartselle**	**81.01**	**308**	eP	**P**	**13 40 37.7**	**-0.5**
	comp=Z,134nm,1.8s						
X48A	**Hartselle**	**81.01**	**308**	P	**P**	**13 40 38.1**	**-0.1**
	baz=47,SNR=11						
Y49A	**Blount Mountai**	**81.03**	**307**	eP	**P**	**13 40 38.1**	**-0.3**
	comp=Z,26nm,1.1s						
Y49A	**Blount Mountai**	**81.03**	**307**	P	**P**	**13 40 37.7**	**-0.6**
	baz=47						
556A	**Lake Butler**	**81.05**	**302**	P	**P**	**13 40 37.9**	**-0.6**
	baz=49						
SKR	**Severo-Kuril's**	**81.10**	**27**	eP	**P**	**13 40 38.8**	**+0.5**
SKR				MLR	MLR		
	comp=Z,200nm,15.0s						
Z50A	**Ashland**	**81.13**	**306**	eP	**P**	**13 40 38.6**	**-0.3**
	comp=Z,59nm,1.6s						
Z50A	**Ashland**	**81.13**	**306**	P	**P**	**13 40 38.9**	**0.0**
	baz=48,SNR=7.7						
252A	**Lumpkin**	**81.23**	**305**	P	**P**	**13 40 38.1**	**-1.3**
	baz=48						
151A	**Opelika**	**81.25**	**305**	P	**P**	**13 40 38.6**	**-0.9**
	baz=48						
PLAL	**Pickwick Lake**	**81.27**	**309**	eP	**P**	**13 40 39.1**	**-0.4**
	comp=Z,30nm,1.1s						
W46A	**Michie**	**81.35**	**309**	P	**P**	**13 40 39.1**	**-0.9**
	baz=47						
454A	**Quitman**	**81.38**	**303**	P	**P**	**13 40 39.1**	**-1.1**
	baz=48						
Y48A	**Jasper**	**81.45**	**307**	P	**P**	**13 40 39.7**	**-0.8**
	baz=47						
X47A	**Russelville**	**81.46**	**308**	P	**P**	**13 40 39.9**	**-0.7**
	baz=47						
858A	**St. Cloud**	**81.54**	**300**	P	**P**	**13 40 40.8**	**-0.3**
	baz=49						
Z49A	**Columbiana**	**81.55**	**306**	P	**P**	**13 40 41.5**	**+0.5**
	baz=47,SNR=11						
656A	**Willston**	**81.55**	**301**	P	**P**	**13 40 40.3**	**-0.8**
	baz=48						
251A	**Midway**	**81.59**	**305**	P	**P**	**13 40 41.5**	**+0.2**
	baz=48						
150A	**Eclectic**	**81.63**	**306**	P	**P**	**13 40 41.9**	**+0.4**
	baz=47,SNR=6.5						
453A	**Whigham**	**81.73**	**303**	P	**P**	**13 40 41.1**	**-1.0**
	baz=48						
X46A	**Booneville**	**81.87**	**309**	P	**P**	**13 40 42.8**	**0.0**
	baz=46						
655A	**Horseshoe Beac**	**81.93**	**302**	P	**P**	**13 40 43.3**	**+0.1**
	baz=48						
LRAL	**Lakeview Retre**	**81.94**	**307**	eP	**P**	**13 40 42.7**	**-0.5**
	comp=Z,43nm,1.1s						
LRAL	**Lakeview Retre**	**81.94**	**307**	P	**P**	**13 40 43.3**	**+0.1**
	baz=47,SNR=12						
LAO	**LASA Array**	**81.95**	**327**	eP	**P**	**13 40 43.8**	**+0.7**
	comp=Z,50nm,1.2s						
LAO	**LASA Array**	**81.95**	**327**	P	**P**	**13 40 43.7**	**+0.7**
	baz=38,SNR=9.0						
857A	**Zephyrhills**	**82.08**	**300**	P	**P**	**13 40 43.0**	**-0.9**
	baz=48						
149A	**Jones**	**82.11**	**306**	P	**P**	**13 40 44.4**	**+0.3**
	baz=47						
059A	**Moore Haven**	**82.20**	**299**	P	**P**	**13 40 43.9**	**-0.8**
	baz=49						
250A	**Grady**	**82.20**	**305**	eP	**P**	**13 40 44.4**	**-0.2**
	comp=Z,125nm,1.5s						
250A	**Grady**	**82.20**	**305**	P	**P**	**13 40 44.7**	**+0.2**
	baz=47						
BGNE	**Belgrade**	**82.27**	**319**	eP	**P**	**13 40 44.9**	**+0.1**
	comp=Z,78nm,1.1s						
BGNE	**Belgrade**	**82.27**	**319**	P	**P**	**13 40 44.7**	**-0.1**
	baz=42						
452A	**Marianna**	**82.28**	**304**	P	**P**	**13 40 44.5**	**-0.5**
	baz=48						
EGMT	**Eagleton**	**82.30**	**330**	eP	**P**	**13 40 45.4**	**+0.5**
	comp=Z,47nm,1.2s						
EGMT	**Eagleton**	**82.30**	**330**	P	**P**	**13 40 45.4**	**+0.5**
	baz=35,SNR=17						
KDAK	**Kodiak Island**	**82.35**	**357**	i P	**P**	**13 40 45.8**	**+1.0**
OXF	**Oxford**	**82.39**	**309**	eP	**P**	**13 40 45.1**	**-0.4**
	comp=Z,64nm,1.2s						
OXF	**Oxford**	**82.39**	**309**	eP	**P**	**13 40 45.1**	**-0.4**
OXF				pmax	pmax		
	comp=Z,64nm,1.2s						
OXF	**Oxford**	**82.39**	**309**	P	**P**	**13 40 44.0**	**-1.5**
	baz=46						
249A	**Camden**	**82.74**	**306**	P	**P**	**13 40 47.7**	**+0.4**
	baz=47,SNR=5.0						
147A	**Livingston**	**82.97**	**307**	eP	**P**	**13 40 48.3**	**-0.2**
	comp=Z,61nm,1.4s						
147A	**Livingston**	**82.97**	**307**	P	**P**	**13 40 47.8**	**-0.7**
	baz=46						
WALA	**Waterton Lakes**	**82.99**	**332**	eP	**P**	**13 40 47.9**	**-0.6**
	comp=Z,19nm,1.3s						
FCAR	**Ozark Folk Cen**	**83.01**	**312**	eP	**P**	**13 40 48.2**	**-0.5**
	comp=Z,24nm,1.0s						
RSSD	**Black Hills**	**83.02**	**324**	eP	**P**	**13 40 48.9**	**0.0**
	comp=Z,12nm,1.1s						
RSSD	**Black Hills**	**83.02**	**324**	eP	**P**	**13 40 48.9**	**0.0**
RSSD				pmax	pmax		
	comp=Z,12nm,1.1s						
RSSD	**Black Hills**	**83.02**	**324**	P	**P**	**13 40 47.9**	**-1.0**
	baz=39						
U40A	**Yellville**	**83.10**	**312**	P	**P**	**13 40 49.5**	**+0.3**
	baz=44,SNR=11						
KSU1	**Kansas State U**	**83.17**	**316**	P	**P**	**13 40 48.8**	**-0.7**
	baz=43						
349A	**Repton**	**83.21**	**305**	P	**P**	**13 40 48.5**	**-1.3**
	baz=47						
WHAR	**Wooly Hollow**	**83.53**	**311**	eP	**P**	**13 40 51.2**	**-0.2**
	comp=Z,128nm,1.5s						
W41B	**Gary Mavity, V**	**83.59**	**311**	eP	**P**	**13 40 51.6**	**-0.1**
	comp=Z,85nm,1.5s						
W41B	**Gary Mavity, V**	**83.59**	**311**	P	**P**	**13 40 52.1**	**+0.4**
	baz=45,SNR=16						
HHAR	**Hobbs**	**83.77**	**313**	eP	**P**	**13 40 52.5**	**-0.2**
	comp=Z,61nm,1.6s						
MJB9	**Matsu-Tunnel**	**83.89**	**47**	eP	**P**	**13 40 52.2**	**-1.1**
	comp=Z,51nm,1.5s						
MAJO	**Matsushiro**	**83.89**	**47**	eP	**P**	**13 40 52.1**	**-1.2**
	comp=Z,50nm,1.5s						
MAJO	**Matsushiro**	**83.89**	**47**	eP	**P**	**13 40 52.1**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,50nm,1.5s						
MAT	**Matsushiro**	**83.89**	**47**	P	**P**	**13 40 52.0**	**-1.3**
MAT				eS	**S**	**13 51 12.8**	**-3.9**
MJAR	**Matsushiro Arr**	**83.89**	**47**	P	**P**	**13 40 52.3**	**-1.0**
	comp=Z,13nm,1.0s,baz=306,slow=5.2,SNR=19						
UALR	**University of**	**83.93**	**311**	eP	**P**	**13 40 53.0**	**-0.5**
	comp=Z,19nm,1.0s						
GCMT	**Greycliff**	**84.09**	**328**	eP	**P**	**13 40 54.1**	**-0.2**
HRY	**Holter Researc**	**84.18**	**330**	eP	**P**	**13 40 54.6**	**-0.1**
PTGA	**Pitinga**	**84.20**	**264**	P	**P**	**13 40 54.4**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=40,slow=8.9,SNR=5.6						
PTGA	**Pitinga**	**84.20**	**264**	eP	**P**	**13 40 55.9**	**+0.8**
	comp=Z,8.5nm,1.1s						
LLLB	**Lillooet**	**84.21**	**338**	eP	**P**	**13 40 55.4**	**+0.7**
	comp=Z,37nm,1.6s						
X40A	**Basin Creek Fa**	**84.42**	**311**	eP	**P**	**13 40 56.2**	**+0.2**
	comp=Z,30nm,1.3s						
X40A	**Basin Creek Fa**	**84.42**	**311**	P	**P**	**13 40 56.1**	**+0.2**
	baz=44,SNR=6.4						
W39A	**Magazine**	**84.46**	**312**	eP	**P**	**13 40 56.4**	**+0.3**
	comp=Z,42nm,1.4s						
W39A	**Magazine**	**84.46**	**312**	P	**P**	**13 40 56.6**	**+0.5**
	baz=44,SNR=7.6						
RLMT	**Red Lodge**	**84.47**	**328**	eP	**P**	**13 40 57.3**	**+0.9**
	comp=Z,36nm,1.5s						
RLMT	**Red Lodge**	**84.47**	**328**	P	**P**	**13 40 56.6**	**+0.2**
	baz=35,SNR=10						
OGNE	**Ogallala**	**84.54**	**321**	P	**P**	**13 40 56.4**	**-0.2**
	baz=40						
VBMS	**Vicksburg**	**84.65**	**308**	P	**P**	**13 40 57.5**	**+0.4**
	baz=45						
NEW	**Newport**	**84.78**	**334**	eP	**P**	**13 40 58.0**	**+0.4**
	comp=Z,28nm,1.5s						
NEW	**Newport**	**84.78**	**334**	eP	**P**	**13 40 58.0**	**+0.4**
NEW				pmax	pmax		
	comp=Z,28nm,1.5s						
NEW	**Newport**	**84.78**	**334**	P	**P**	**13 40 57.0**	**-0.6**
	baz=30						
MIAR	**Mount Ida**	**84.81**	**312**	eP	**P**	**13 40 58.0**	**+0.2**
	comp=Z,77nm,1.4s						
MIAR	**Mount Ida**	**84.81**	**312**	eP	**P**	**13 40 58.1**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,77nm,1.4s						
MIAR	**Mount Ida**	**84.81**	**312**	P	**P**	**13 40 57.6**	**-0.3**
	baz=44,SNR=25						
MSO	**Missoula**	**84.88**	**331**	eP	**P**	**13 40 58.4**	**+0.1**
	comp=Z,14nm,1.2s						
MSO	**Missoula**	**84.88**	**331**	P	**P**	**13 40 56.8**	**-1.4**
	baz=32						
CBKS	**Cedar Bluff**	**85.02**	**318**	eP	**P**	**13 40 59.1**	**+0.2**
	comp=Z,76nm,1.6s						
CBKS	**Cedar Bluff**	**85.02**	**318**	eP	**P**	**13 40 59.1**	**+0.2**
CBKS				pmax	pmax		
	comp=Z,75nm,1.6s						
CBKS	**Cedar Bluff**	**85.02**	**318**	P	**P**	**13 40 58.6**	**-0.3**
	baz=41						
BOZ	**Bozeman (W)**	**85.03**	**329**	eP	**P**	**13 40 59.3**	**+0.3**
	comp=Z,14nm,1.1s						
BOZ	**Bozeman (W)**	**85.03**	**329**	P	**P**	**13 40 59.3**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,14nm,1.1s						
BOZ	**Bozeman (W)**	**85.03**	**329**	P	**P**	**13 40 57.0**	**-2.0**
	baz=34,SNR=17						
TUL1	**Leonard**	**85.07**	**314**	eP	**P**	**13 40 59.3**	**+0.1**
	comp=Z,97nm,1.5s						
TUL1	**Leonard**	**85.07**	**314**	P	**P**	**13 40 59.0**	**-0.2**
	baz=43						
Z41A	**Richland Creek**	**85.28**	**310**	P	**P**	**13 40 59.9**	**-0.4**
	baz=44						
BDFB	**Brasilia**	**85.28**	**245**	P	**P**	**13 40 59.7**	**-0.8**
	comp=Z,5.3nm,0.6s,baz=50,slow=7.4,SNR=6.2						
BDFB				LR	LR	14 19 44.5	
	comp=Z,205nm,19.6s,baz=121,slow=36						
K22A	**Casper**	**85.29**	**325**	eP	**P**	**13 41 00.1**	**-0.3**
	comp=Z,22nm,1.1s						
K22A	**Casper**	**85.29**	**325**	P	**P**	**13 40 59.3**	**-1.2**
	baz=37						
YHH	**Holmes Hill**	**85.39**	**328**	eP	**P**	**13 40 59.6**	**-1.4**
	comp=Z,18nm,1.4s						
YMR	**Madison River**	**85.53**	**328**	eP	**P**	**13 41 02.4**	**+0.8**
	comp=Z,22nm,1.1s						
C09A	**Chrisman Ranch**	**85.56**	**334**	eP	**P**	**13 41 02.0**	**+0.5**
	comp=Z,33nm,1.1s						
QLMT	**Earthquake Lak**	**85.59**	**329**	eP	**P**	**13 41 02.8**	**+0.9**
DLMT	**Dillon**	**85.60**	**330**	eP	**P**	**13 41 02.4**	**+0.5**
	comp=Z,23nm,1.2s						
H17A	**Grant Village**	**85.60**	**328**	eP	**P**	**13 41 03.5**	**+1.5**
	comp=Z,23nm,1.3s						
H17A	**Grant Village**	**85.60**	**328**	P	**P**	**13 41 02.6**	**+0.5**
	baz=34,SNR=7.5						
X37A	**Clayton**	**85.79**	**313**	eP	**P**	**13 41 01.8**	**-1.1**
	comp=Z,79nm,1.5s						
YPP	**Pitchstone Pla**	**85.80**	**328**	eP	**P**	**13 41 04.1**	**+1.0**
	comp=Z,33nm,1.4s						
PHWY	**Pilot Hill**	**85.88**	**323**	eP	**P**	**13 41 03.6**	**0.0**
	comp=Z,31nm,1.5s						
FLWY	**Flagg Ranch**	**85.91**	**328**	eP	**P**	**13 41 04.6**	**+1.1**
	comp=Z,31nm,1.4s						
MCMT	**McKenzie Canyo**	**86.15**	**330**	eP	**P**	**13 41 05.5**	**+0.7**
IMW	**Indian Meadow**	**86.16**	**328**	eP	**P**	**13 41 05.8**	**+0.9**
	comp=Z,13nm,1.4s						
MOOW	**Moose Ponds**	**86.20**	**328**	eP	**P**	**13 41 05.9**	**+0.9**
	comp=Z,20nm,1.9s						
RWWY	**Rawlins**	**86.36**	**324**	eP	**P**	**13 41 05.8**	**-0.1**
	comp=Z,9.4nm,1.0s						
FXWY	**Fox Creek**	**86.41**	**328**	eP	**P**	**13 41 06.6**	**+0.6**
	comp=Z,6.6nm,1.3s						
N23A	**Red Feather La**	**86.42**	**323**	eP	**P**	**13 41 06.2**	**0.0**
	comp=Z,13nm,1.2s						
N23A	**Red Feather La**	**86.42**	**323**	P	**P**	**13 41 04.7**	**-1.5**
	baz=37,SNR=5.7						
TPAW	**Teton Pass**	**86.50**	**328**	eP	**P**	**13 41 07.1**	**+0.6**
	comp=Z,5.5nm,1.0s						
BW06	**Boulder Array**	**86.52**	**326**	eP	**P**	**13 41 06.0**	**-0.6**
	comp=Z,6.4nm,1.1s						
BW06	**Boulder Array**	**86.52**	**326**	P	**P**	**13 41 05.6**	**-1.0**
	baz=35						
PD31	**Pinedale Array**	**86.52**	**326**	eP	**P**	**13 41 05.9**	**-0.7**
	comp=Z,6.3nm,1.1s						
PDAR	**Pinedale Array**	**86.52**	**326**	P	**P**	**13 41 05.5**	**-1.0**
	comp=Z,2.7nm,1.0s,baz=56,slow=3.7,SNR=15						
PDAR				LR	LR	14 20 53.1	
	comp=Z,193nm,18.6s,baz=34,slow=36						
E09A	**Wood Farm, Sta**	**86.64**	**334**	eP	**P**	**13 41 06.6**	**-0.2**
	comp=Z,35nm,1.4s						
F10A	**Beach Ranch, E**	**86.79**	**333**	eP	**P**	**13 41 06.0**	**-1.7**
	comp=Z,22nm,1.3s						
ISCO	**Idaho Springs**	**87.14**	**322**	eP	**P**	**13 41 08.6**	**-1.2**
	comp=Z,8.7nm,1.4s						
ISCO	**Idaho Springs**	**87.14**	**322**	eP	**P**	**13 41 08.6**	**-1.2**
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ISCO	**Idaho Springs**	**87.14**	**322**	P	**P**	**13 41 08.2**	**-1.6**
	baz=37						
HAWA	**Hanford**	**87.21**	**334**	eP	**P**	**13 41 09.8**	**+0.2**
	comp=Z,13nm,0.9s						
D03D	**Eldon**	**87.32**	**337**	P	**P**	**13 41 08.6**	**-1.5**
	baz=26						
NATX	**Nacogdoches**	**87.44**	**310**	P	**P**	**13 41 10.2**	**-0.7**
	baz=43						
D04E	**Lakebay**	**87.54**	**337**	P	**P**	**13 41 09.7**	**-1.5**
	baz=26						
WMOK	**Wichita Mounta**	**87.57**	**315**	eP	**P**	**13 41 11.5**	**-0.1**
	comp=Z,12nm,1.3s						
WMOK	**Wichita Mounta**	**87.57**	**315**	eP	**P**	**13 41 11.5**	**-0.1**
WMOK				pmax	pmax		
	comp=Z,12nm,1.3s						
WMOK	**Wichita Mounta**	**87.57**	**315**	P	**P**	**13 41 11.3**	**-0.2**
	baz=41,SNR=7.0						
Q24A	**Divide**	**87.58**	**321**	P	**P**	**13 41 09.6**	**-2.3**
	baz=38						
BMO	**Blue Mountains**	**87.79**	**332**	eP	**P**	**13 41 11.7**	**-0.8**
	comp=Z,8.3nm,1.0s						
BMO	**Blue Mountains**	**87.79**	**332**	eP	**P**	**13 41 11.7**	**-0.8**
BMO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HLID	**Hailey**	**87.82**	**330**	eP	**P**	**13 41 13.1**	**+0.3**
	comp=Z,8.8nm,1.8s						
HLID	**Hailey**	**87.82**	**330**	P	**P**	**13 41 12.3**	**-0.5**
	baz=32						
E04D	**Cinebar**	**88.04**	**336**	P	**P**	**13 41 13.7**	**+0.1**
	baz=26						
O20A	**White River Ci**	**88.08**	**324**	P	**P**	**13 41 13.1**	**-1.1**
	baz=36						
HWUT	**Hardware Ranch**	**88.31**	**327**	eP	**P**	**13 41 14.2**	**-1.0**
	comp=Z,8.8nm,1.0s						
T25A	**Trinidad**	**88.66**	**320**	eP	**P**	**13 41 16.4**	**-0.5**
	comp=Z,6.1nm,1.0s						
T25A	**Trinidad**	**88.66**	**320**	P	**P**	**13 41 15.9**	**-1.1**
	baz=38						
SDCO	**Great Sand Dun**	**88.71**	**321**	eP	**P**	**13 41 16.4**	**-0.8**
	comp=Z,6.5nm,1.3s						
SDCO	**Great Sand Dun**	**88.71**	**321**	P	**P**	**13 41 16.5**	**-0.8**
	baz=38,SNR=7.3						
WHTX	**Lake Whitney,**	**88.88**	**312**	P	**P**	**13 41 17.5**	**-0.3**
	baz=42						
JLU	**Jordanelle**	**89.10**	**326**	eP	**P**	**13 41 18.6**	**-0.4**
	comp=Z,44nm,2.0s						
I07A	**Izee**	**89.23**	**333**	eP	**P**	**13 41 19.7**	**+0.3**
	comp=Z,12nm,1.4s						
S22A	**4UR Ranch, Cre**	**89.35**	**322**	eP	**P**	**13 41 19.8**	**-0.4**
	comp=Z,10nm,1.3s						
S22A	**4UR Ranch, Cre**	**89.35**	**322**	P	**P**	**13 41 19.9**	**-0.4**
	baz=37,SNR=11						
HKT	**Hockley**	**89.45**	**310**	eP	**P**	**13 41 20.9**	**+0.5**
	comp=Z,33nm,1.6s						
HKT	**Hockley**	**89.45**	**310**	eP	**P**	**13 41 20.9**	**+0.5**
HKT				pmax	pmax		
	comp=Z,33nm,1.6s						
PV22	**Blue Mesa, Par**	**89.62**	**323**	eP	**P**	**13 41 20.9**	**-0.6**
	comp=Z,16nm,1.0s						
I05D	**Terrebonne, OR**	**89.62**	**335**	P	**P**	**13 41 20.4**	**-0.7**
	baz=27						
ABTX	**Abilene, Hawle**	**89.64**	**314**	eP	**P**	**13 41 21.7**	**+0.4**
	comp=Z,17nm,1.0s						
ABTX	**Abilene, Hawle**	**89.64**	**314**	P	**P**	**13 41 21.1**	**-0.2**
	baz=41						
PV07	**Paradox Valley**	**89.64**	**323**	eP	**P**	**13 41 21.0**	**-0.5**
	comp=Z,12nm,1.0s						
PV21	**Cone Mtn., Par**	**89.69**	**324**	eP	**P**	**13 41 21.6**	**-0.2**
PV04	**Paradox Valley**	**89.79**	**323**	eP	**P**	**13 41 22.0**	**-0.2**
	comp=Z,49nm,1.5s						
PV23	**Carpenter Ridg**	**89.79**	**324**	eP	**P**	**13 41 22.1**	**-0.2**
	comp=Z,37nm,1.4s						
PV12	**Saucer Basin,**	**89.81**	**323**	eP	**P**	**13 41 22.2**	**-0.2**
	comp=Z,25nm,1.2s						
PV09	**Paradox Valley**	**89.81**	**324**	eP	**P**	**13 41 22.4**	**0.0**
PV01	**Paradox Valley**	**89.85**	**323**	eP	**P**	**13 41 22.1**	**-0.5**
	comp=Z,14nm,1.1s						
PV11	**David Mesa, Pa**	**89.85**	**323**	eP	**P**	**13 41 21.9**	**-0.6**
	comp=Z,42nm,1.2s						
PV14	**Lion Creek, Pa**	**89.86**	**324**	eP	**P**	**13 41 22.2**	**-0.4**
	comp=Z,19nm,1.0s						
PV20	**West Nyswonger**	**89.86**	**323**	eP	**P**	**13 41 22.1**	**-0.5**
	comp=Z,58nm,1.8s						
PV16	**Nyswonger Mesa**	**89.86**	**323**	eP	**P**	**13 41 22.4**	**-0.2**
	comp=Z,52nm,1.5s						
PV10	**Paradox Valley**	**89.87**	**324**	eP	**P**	**13 41 22.0**	**-0.6**
	comp=Z,33nm,1.2s						
PV03	**Paradox Valley**	**89.88**	**323**	eP	**P**	**13 41 22.3**	**-0.3**
	comp=Z,37nm,1.5s						
PV19	**Morning Glory**	**89.89**	**323**	eP	**P**	**13 41 22.1**	**-0.7**
	comp=Z,15nm,1.1s						
PV17	**East Wray Mesa**	**89.91**	**323**	eP	**P**	**13 41 21.4**	**-1.4**
	comp=Z,19nm,1.1s						
PV18	**Skein Mesa, Pa**	**89.91**	**323**	eP	**P**	**13 41 22.3**	**-0.5**
	comp=Z,19nm,1.2s						
SRU	**San Rafael Swe**	**89.93**	**325**	eP	**P**	**13 41 21.9**	**-1.0**
	comp=Z,52nm,2.0s						
SRU	**San Rafael Swe**	**89.93**	**325**	eP	**P**	**13 41 21.9**	**-1.0**
SRU				pmax	pmax		
	comp=Z,52nm,2.0s						
PV13	**Radium Mtn., P**	**89.94**	**323**	eP	**P**	**13 41 22.1**	**-0.9**
	comp=Z,12nm,1.1s						
DUG	**Dugway, Tooele**	**90.01**	**327**	P	**P**	**13 41 23.0**	**-0.1**
	baz=33,SNR=5.4						
TMUT	**Trail Mountain**	**90.08**	**325**	eP	**P**	**13 41 22.9**	**-0.8**
	comp=Z,28nm,0.8s						
PV05	**Paradox Valley**	**90.14**	**323**	eP	**P**	**13 41 22.3**	**-1.6**
	comp=Z,9.6nm,0.9s						
J05D	**Fort Rock, OR**	**90.53**	**334**	P	**P**	**13 41 25.1**	**-0.4**
	baz=27						
MVCO	**Mesa Verde**	**90.56**	**323**	P	**P**	**13 41 25.1**	**-0.8**
	baz=36						
J04D	**Umpqua Nationa**	**90.86**	**335**	P	**P**	**13 41 25.9**	**-1.2**
	baz=27						
MSU	**Marysvale**	**91.15**	**326**	eP	**P**	**13 41 28.3**	**-0.3**
MSU	**Marysvale**	**91.15**	**326**	eP	**P**	**13 41 28.3**	**-0.3**
JCT	**Junction City**	**91.34**	**313**	P	**P**	**13 41 29.3**	**-0.1**
	baz=41						
ANMO	**Albuquerque**	**91.40**	**320**	P	**P**	**13 41 30.0**	**+0.2**
	baz=37						
TASM	**ASL Pad, Albuq**	**91.40**	**320**	P	**P**	**13 41 29.7**	**-0.1**
	baz=37						
TASM	**ASL Pad, Albuq**	**91.40**	**320**	P	**P**	**13 41 30.1**	**+0.3**
	baz=37						
MOD	**Modoc Plateau**	**91.43**	**333**	eP	**P**	**13 41 29.2**	**-0.5**
	comp=Z,11nm,1.1s						
ROSC	**El Rosal**	**91.62**	**278**	LR	LR	14 23 06.2	
	comp=Z,45nm,19.7s,baz=288,slow=36						
L02E	**Cave Junction**	**92.31**	**335**	P	**P**	**13 41 32.8**	**-0.8**
	baz=26						
CCUT	**Cedar City**	**92.46**	**326**	eP	**P**	**13 41 34.5**	**-0.2**
	comp=Z,4.4nm,1.2s						
R11A	**Troy Canyon, C**	**92.72**	**328**	eP	**P**	**13 41 35.7**	**-0.1**
	comp=Z,6.1nm,1.4s						
R11A	**Troy Canyon, C**	**92.72**	**328**	P	**P**	**13 41 35.9**	**+0.1**
	baz=31						
M02C	**Callahan**	**92.76**	**334**	P	**P**	**13 41 35.6**	**-0.2**
	baz=26						
U15A	**North Rim**	**92.94**	**325**	eP	**P**	**13 41 36.7**	**-0.3**
	comp=Z,11nm,1.4s						
PAHR	**Pah Rah Range**	**93.03**	**331**	eP	**P**	**13 41 37.2**	**+0.1**
	comp=Z,17nm,1.8s						
WUAZ	**Wupatki**	**93.28**	**323**	eP	**P**	**13 41 38.2**	**-0.1**
	comp=Z,8.2nm,1.0s						
WUAZ	**Wupatki**	**93.28**	**323**	P	**P**	**13 41 38.5**	**+0.1**
	baz=34						
MNTX	**Cornudas Mount**	**93.43**	**317**	eP	**P**	**13 41 38.5**	**-0.5**
	comp=Z,3.4nm,1.0s						
MNTX	**Cornudas Mount**	**93.43**	**317**	P	**P**	**13 41 38.5**	**-0.5**
	baz=38						
YERR	**Yerington**	**93.60**	**331**	eP	**P**	**13 41 40.4**	**+0.6**
	comp=Z,31nm,1.9s						
NV01	**Mina Array Sit**	**93.73**	**330**	eP	**P**	**13 41 40.0**	**-0.4**
NVAR	**Mina Array Bea**	**93.73**	**330**	P	**P**	**13 41 40.0**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=65,slow=5.1,SNR=3.5						
NVAR				LR	LR	14 25 28.8	
	comp=Z,173nm,18.4s,baz=13,slow=37						
TX31	**Lajitas Ar. Si**	**94.37**	**315**	eP	**P**	**13 41 43.5**	**+0.1**
	comp=Z,10nm,1.3s						
TXAR	**Lajitas Array**	**94.37**	**315**	P	**P**	**13 41 43.4**	**0.0**
	comp=Z,3.5nm,0.9s,baz=67,slow=4.2,SNR=24						
TXAR				LR	LR	14 25 52.5	
	comp=Z,147nm,18.1s,baz=0.0,slow=37						
LNIG	**Linares**	**95.35**	**309**	eP	**P**	**13 41 47.5**	**-0.4**
	comp=Z,13nm,1.5s						
CWC	**Cottonwood Cre**	**95.37**	**329**	P	**P**	**13 41 47.3**	**-0.7**
	baz=30						
PDMCI	**Parker Dam,Lak**	**95.54**	**325**	P	**P**	**13 41 48.4**	**-0.2**
	baz=32						
TUC	**Tucson**	**95.64**	**321**	eP	**P**	**13 41 48.9**	**-0.3**
	comp=Z,15nm,1.8s						
TUC	**Tucson**	**95.64**	**321**	eP	**P**	**13 41 48.9**	**-0.3**
TUC				pmax	pmax		
	comp=Z,15nm,1.8s						
TUC	**Tucson**	**95.64**	**321**	P	**P**	**13 41 49.1**	**-0.1**
	baz=34						
GMRC	**Granite Mounta**	**95.79**	**326**	P	**P**	**13 41 50.1**	**+0.2**
	baz=31						
GSC	**Goldstone, Bar**	**95.83**	**327**	P	**P**	**13 41 50.0**	**0.0**
	baz=30						
IRM	**Iron Mountain**	**96.10**	**325**	P	**P**	**13 41 51.2**	**0.0**
	baz=32						
Y12C	**Blythe**	**96.17**	**325**	P	**P**	**13 41 50.8**	**-0.7**
	baz=32						
MONP2	**Monument Peak**	**97.73**	**326**	P	**P**	**13 41 58.6**	**-0.2**
	baz=31						
CPUP	**Villa Florida**	**98.86**	**243**	LR	LR	14 28 56.9	
	comp=Z,210nm,18.7s,baz=226,slow=37						
ASAR	**Alice Springs**	**121.34**	**96**	PKP	**PKPdf**	**13 47 15.4**	**-1.4**
	comp=Z,3.2nm,0.9s,baz=332,slow=2.1,SNR=19						
AS31	**Alice Springs**	**121.34**	**96**	ePKPdf	**PKPdf**	**13 47 15.4**	**-1.4**
QSPA	**South Pole Qui**	**129.97**	**180**	ePKPdf	**PKPdf**	**13 47 31.8**	**-0.2**

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*GEN **03** 13:30:22.1, 44°.18N×10°.20E, h5km±1km, Ml0.9*

ROM 03 13:30:21.4±0.1, **44°.189N**±0°.006×**10°.203E**±0°.006, **h8km, ML1.3**/4, **Error ellipse: s-maj=0.7km s-min=0.4km az=206.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.02**	**166**	P	Pg	13 30 23.3	+0.3
T0912				S	Sg	13 30 24.2	+0.1
EQUI	**Equi**	**0.04**	**237**	P	Pg	13 30 23.5	+0.3
EQUI				S	Sg	13 30 24.4	+0.1

EQUI	Equi	0.04	237	P	Pg	13 30 23.4	+0.3
EQUI				S	Sg	13 30 24.4	+0.1
EQUI				AML	AML		
	comp=E,272µm,0.1s						
EQUI				AML	AML		
	comp=N,360µm,0.3s						
EQUI				AML	AML		
	comp=E,272µm,0.1s						
EQUI				AML	AML		
	comp=N,360µm,0.3s						
EQUI				AML	AML		
	comp=N,360µm,0.3s						
EQUI				AML	AML		
	comp=E,272µm,0.1s						
FIVI	Fivizzano	0.07	313	P	Pg	13 30 23.9	+0.4
FIVI				S	Sg	13 30 25.3	+0.3
T0911	Castelpoggio (	0.12	230	P	Pg	13 30 24.9	+0.7
T0911				S	Sg	13 30 27.0	+0.9
VLC	Villacollemand	0.14	103	P	Pg	13 30 25.1	+0.7
VLC				S	Sg	13 30 27.5	+1.0
VLC				AML	AML		
	comp=E,141µm,0.7s						
VLC				AML	AML		
	comp=N,100µm,0.7s						
VLC				AML	AML		
	comp=E,140µm,0.7s						
VLC				AML	AML		
	comp=N,100µm,0.7s						
VLC				AML	AML		
	comp=N,100µm,0.7s						
VLC				AML	AML		
	comp=E,140µm,0.7s						
CARD	Cardoso	0.26	129	P	Pg	13 30 27.4	+0.8
CARD				S	Sg	13 30 31.1	+1.0
CARD	Cardoso	0.26	129	P	Pg	13 30 27.4	+0.8
CARD				S	Sg	13 30 31.2	+1.1
CARD				AML	AML		
	comp=E,90µm,0.6s						
CARD				AML	AML		
	comp=N,118µm,0.1s						
CARD				AML	AML		
	comp=E,90µm,0.6s						
CARD				AML	AML		
	comp=N,118µm,0.1s						
CARD				AML	AML		
	comp=N,118µm,0.1s						
CARD				AML	AML		
	comp=E,90µm,0.6s						
PLMA	Palmaria, Port	0.29	241	P	Pb	13 30 28.6	-0.2
PLMA				S	Sg	13 30 32.0	+1.0
GRAM	Graiana	0.32	342	P	Pg	13 30 28.6	+0.8
GRAM				S	Sb	13 30 33.8	-1.0
GRAM	Graiana	0.32	342	P	Pg	13 30 28.5	+0.8
GRAM				S	Sb	13 30 33.9	-0.9
GRAM				AML	AML		
	comp=E,120µm,0.2s						
GRAM				AML	AML		
	comp=N,164µm,1.2s						
GRAM				AML	AML		
	comp=E,157µm,0.4s						
GRAM				AML	AML		
	comp=N,164µm,1.2s						
GRAM				AML	AML		
	comp=N,164µm,1.2s						
GRAM				AML	AML		
	comp=E,157µm,0.4s						
MAIM	Mastiano	0.34	143	P	Pg	13 30 28.6	+0.3
MAIM				S	Sg	13 30 33.8	+1.0
POPM	Popiglio	0.42	110	P	Pg	13 30 30.4	+0.6
POPM				S	Sb	13 30 36.7	-1.0
POPM	Popiglio	0.42	110	P	Pb	13 30 30.5	-0.7
POPM				S	Sb	13 30 37.0	-0.8
POPM				AML	AML		
	comp=E,55µm,1.0s						
POPM				AML	AML		
	comp=N,56µm,0.2s						
POPM				AML	AML		
	comp=E,67µm,0.8s						
POPM				AML	AML		
	comp=N,66µm,1.4s						
POPM				AML	AML		
	comp=E,67µm,0.8s						
POPM				AML	AML		
	comp=N,66µm,1.4s						

DJA 03 13:46:30.1±0.9**, 1°N**±7°×**12°1E**±°**, h10km, M3.6**/6**, MLv3.6**/6**,**
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	1.26	126	P	Pn	13 46 52.3	-1.4
MRSI				S	Sb	13 47 08.7	-1.5
APSI	Ampana	2.25	161	P	Pn	13 47 07.9	+0.6
APSI				S	Sg	13 47 41.4	-0.9
LUWI	Luwuk	2.91	141	P	Pn	13 47 19.2	+2.7
LUWI				S	Sn	13 47 52.2	+0.6
TTSI	Tana Toraja	4.39	195	P	Pn	13 47 40.8	+3.9

*ATH **03** 13:59:30.8, 39°.42N×26°.20E, h30km, ML2.7/8, Error ellipse: s-maj=1.4km s-min=0.6km az=253.0*
*DDA **03** 13:59:30.2, 39°.46N×26°.25E, h7km±2km, ML3.2*
*ISK **03** 13:59:30.5, 39°.44N×26°.29E, h9km, ML3.0/16*
*ISCJB **03** 13:59:31.4±0.3, 39°.44N±0°.02×26°.25E±0°.03, h20km±4km, Error ellipse: s-maj=4.0km s-min=3.2km az=167.7*
*THE **03** 13:59:31.6, 39°.45N×26°.23E, h13km, ML2.7/8, Error ellipse: s-maj=1.5km s-min=0.7km az=96.0*
ISC 03 13:59:31.0±0.9**, 39°.44N**±0°.02×**26°.25E**±0°.02**, h16**km±8km**,**
n56, σ0.39/73**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.20	174	P	Pb	13 59 36.7	+0.5
PRK				S	Sb	13 59 39.6	-0.1
PRK	Paraskevi	0.20	174	P	Pb	13 59 36.7	+0.5
PRK				AML	AML	13 59 40.3	
	comp=E,9517µm,0.2s						
PRK				AML	AML	13 59 40.9	
	comp=N,8331µm,0.3s						
AYVA	Ayvalik	0.37	111	*i* P	Pg	13 59 38.5	0.0
AYVA				*i* S	Sg	13 59 43.9	+0.3
AYVA				IAML_P			
	comp=Z,4µm,0.1s						
BAYC	CANAKKALE_Bayr	0.38	38	*i* P	Pb	13 59 38.9	-0.5
SIGR	SIGRI	0.38	233	PG	Pg	13 59 38.9	+0.1
SIGR				SG	Sb	13 59 45.2	+0.1
SIGR	SIGRI	0.38	233	P	Pb	13 59 39.2	-0.2
SIGR				S	Sb	13 59 45.2	+0.1
SIGR	SIGRI	0.38	233	P	Pb	13 59 39.2	-0.2
SIGR				S	Sb	13 59 44.6	-0.4
SIGR				AML	AML	13 59 45.4	
	comp=E,2192µm,0.3s						
SIGR				AML	AML	13 59 46.2	
	comp=N,2934µm,0.2s						
EZN	Ezine	0.39	9	PG	Pg	13 59 38.6	-0.3
EZN				SG	Sg	13 59 44.5	+0.2
EZN	Ezine	0.39	9	P	Pg	13 59 38.7	-0.2
EZN				S	Sg	13 59 44.4	+0.2
DKL	Dikili	0.63	126	PG	Pg	13 59 43.4	0.0
GADA	Gvkgeada	0.80	340	PG	Pb	13 59 46.3	-0.2
GADA	Gvkgeada	0.80	340	P	Pg	13 59 46.1	-0.4
ZEDA	zmir-Bergama	0.80	126	*i* P	Pg	13 59 46.2	-0.4
ZEDA				*i* S	Sn	13 59 59.2	-0.1
LIA	Limnos Island	0.94	299	P	Pn	13 59 49.3	-0.2
LIA				S	Sb	14 00 01.9	+0.8
LIA	Limnos Island	0.94	299	P	Pb	13 59 48.9	0.0
LIA				S	Sn	14 00 02.3	-0.4
LIA				AML	AML	14 00 03.4	
	comp=E,654µm,0.3s						
LIA				AML	AML	14 00 05.7	
	comp=N,528µm,0.2s						
GELI	Tayfur-Gelibol	0.97	10	PG	Pg	13 59 49.5	-0.3
LPK	Lapseki	1.01	23	PG	Pb	13 59 49.9	-0.2
CHOS	Chios island	1.06	188	PG	Pn	13 59 51.6	+0.2
CHOS	Chios island	1.06	188	P	Pb	13 59 51.2	+0.1
CHOS				S	Sg	14 00 05.3	-0.2
CHOS	Chios island	1.06	188	P	Pb	13 59 51.2	+0.1
CHOS				S	Sg	14 00 05.4	-0.2
CHOS				AML	AML	14 00 09.6	
	comp=E,1542µm,0.3s						
CHOS				AML	AML	14 00 09.7	
	comp=N,1476µm,0.3s						
URLA	Izmir	1.11	166	PN	Pb	13 59 51.9	0.0
URLA	Izmir	1.11	166	*i* P	Pg	13 59 52.5	0.0
URLA				IAML_P			
	comp=Z,5µm,0.1s						
STEP	BALIKESIR_Sava	1.14	93	*i* P	Pn	13 59 52.5	+0.1
SMTH	Samothraki Isl	1.17	332	P	Pn	13 59 52.8	+0.1
SMTH				S	Sg	14 00 08.3	-0.5
SMTH	Samothraki Isl	1.17	332	P	Pn	13 59 53.0	+0.2
SMTH				S	Sn	14 00 08.9	+0.6
SMTH				AML	AML	14 00 10.4	
	comp=E,271µm,0.3s						
SMTH				AML	AML	14 00 10.8	
	comp=N,355µm,0.2s						
BLCB	Balcova	1.22	149	PN	Pb	13 59 53.9	+0.1
GONE	Gonen-Balikesi	1.26	61	PN	Pb	13 59 54.3	-0.1
BALB	Balikesir	1.28	81	PN	Pn	13 59 54.3	+0.1
ENEZ	Enez	1.29	357	PN	Pb	13 59 55.0	0.0
AKHS	Akhisar	1.34	114	*i* P	Pb	13 59 55.9	+0.1
AKHS				IAML_P			
	comp=Z,2µm,0.1s						
KESN	Edirne-Kesan	1.42	13	*i* P	Pb	13 59 57.0	-0.4
RKY	Sarkoy-Tekirda	1.44	30	PN	Pn	13 59 56.6	+0.2
SKY	Skiros Island	1.44	247	P	Pn	13 59 56.3	-0.1
SKY				S	Sn	14 00 14.7	-0.2
SKY	Skiros Island	1.44	247	P	Pn	13 59 56.5	+0.2
SKY				AML	AML	14 00 21.1	
	comp=E,501µm,0.2s						
SKY				AML	AML	14 00 22.3	
	comp=N,376µm,0.2s						
SART	Tekirdag	1.44	30	*i* P	Pb	13 59 57.4	-0.1
ALN	Alexandroupoli	1.46	354	PN	Pb	13 59 57.5	-0.3
ALN	Alexandroupoli	1.46	354	P	Pn	13 59 56.9	+0.2
ALN				S	Sb	14 00 16.3	+0.1
ALN	Alexandroupoli	1.46	354	P	Pb	13 59 57.5	-0.3
ALN				AML	AML	14 00 19.2	
	comp=E,235µm,0.5s						
ALN				AML	AML	14 00 19.4	
	comp=N,291µm,0.4s						
EDC	Edincik	1.54	53	PN	Pn	13 59 58.1	+0.3
THAS	Thassos island	1.65	315	P	Pn	13 59 59.5	+0.1
THAS	Thassos island	1.65	315	P	Pn	13 59 59.5	+0.1
RDO	Rodhopi	1.79	343	PN	Pn	14 00 01.9	+0.7
RDO	Rodhopi	1.79	343	P	Pn	14 00 01.8	+0.6
RDO	Rodhopi	1.79	343	P	Pn	14 00 01.7	+0.6
SMG	Samos	1.79	165	P	Pn	14 00 00.9	-0.4
SMG				S	Sb	14 00 25.2	-0.5
SMG	Samos	1.79	165	P	Pn	14 00 01.0	-0.2
SMG				AML	AML	14 00 33.1	
	comp=N,910µm,0.3s						
SMG				AML	AML	14 00 33.5	
	comp=E,597µm,0.4s						
KCTX	Karacabey (Bur	1.82	62	PN	Pn	14 00 01.9	+0.2
OUR	Ouranopolis	1.96	298	P	Pn	14 00 03.6	0.0
KAVA	Kavala	2.04	320	P	Pn	14 00 05.9	+1.2
EREA	Eretria	2.07	241	P	Pn	14 00 04.8	-0.4
SKIA	Skiathos	2.17	264	P	Pn	14 00 06.9	+0.4
MRKA	Markates	2.20	251	P	Pn	14 00 06.6	-0.3
KDZ	Kurdzhali	2.29	344	PN	Pn	14 00 09.7	+1.5
APE	Apeiranthos	2.44	194	P	Pn	14 00 10.2	0.0
AMGA	Amorgos Island	2.62	186	P	Pn	14 00 12.6	-0.1
NVR	Nevrokopi	2.64	317	P	Pn	14 00 14.0	+1.0

*NIED **03** 14:09:00, 38°.30N×143°.90E, h5km, Mw4.5 Best double couple: M0 6.03000×10^{15} NP1:ϕs27.00000°, δ34.00000°, λ-120.00000°. NP2:ϕs241.00000°, δ61.00000°, λ-72.00000°.*
*IDC **03** 14:09:10.5±0.5, 38°.24N×143°.99E, h0km, mb4.3/23, mb1 4.4/32, mb1mx4.3/48, mbtmp4.3/32, ML3.6/8, MS3.6/18, Ms1 3.6/18, ms1mx3.4/38, Error ellipse: s-maj=15.0km s-min=11.4km az=139.0*
*ISCJB **03** 14:09:12.3±1.0, 38°.33N±0°.03×143°.91E±0°.02, h18km±6km, mb4.6/134, MS3.9/19, Error ellipse: s-maj=4.7km s-min=3.1km az=165.4*
*MOS **03** 14:09:12.1±0.9, 38°.36N×143°.93E, h19km, mb4.9/32, Error ellipse: s-maj=7.3km s-min=4.9km az=102.3*
*JMA **03** 14:09:13.6±0.2, 38°.31N×143°.92E, h41km, M4.6*
*BJI **03** 14:09:14.4±0.0, 38°.38N×143°.82E, h27km, mb4.6/58, mB4.7/30, Ms4.3/33, Ms7 4.1/32*
*NEIC **03** 14:09:14.9±1.1, 38°.25N×143°.94E, h27km±8km, mb4.7/88, Error ellipse: s-maj=4.5km s-min=3.0km az=144.0*
ISC 03 14:09:12.5±0.8**, 38°.29N**±0°.04×**144°.00E**±0°.05**, h13**km±4km**,**
n255, σ1.62/281**, mb4.7**/134**, MS3.8**/20**, 9C-6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	1.98	294	P	Pn	14 09 45.1	-0.7
OFUJ				*e*S	Sn	14 10 08.1	-2.4
JIKH	Ishinomakikobu	1.99	271	P	Pn	14 09 45.0	-0.8
JIKH				*e*S	Sn	14 10 07.7	-2.9
JKMT	Kesennumamotoy	2.04	286	P	Pn	14 09 45.8	-0.8
JKMT				*e*S	Sn	14 10 09.5	-2.5
JIO	Ouri	2.09	275	P	Pn	14 09 46.5	-0.6
JIO				*e*S	Sn	14 10 10.6	-2.4
MIYJ	Miyakonagasawa	2.13	308	P	Pn	14 09 46.7	-1.0
MIYJ				*e*S	Sn	14 10 11.3	-2.8
JMK	Ichinoseki	2.27	288	P	Pn	14 09 49.5	-0.2
JMK				*e*S	Sn	14 10 16.2	-1.4
JOM	Ohasama	2.42	300	P	Pn	14 09 51.4	-0.3
JOM				*e*S	Sn	14 10 19.7	-1.5
JANG	Nango	2.83	318	P	Pn	14 09 56.5	-0.9
JYK	Kaneyama	2.92	284	P	Pn	14 09 58.9	+0.3
JYK				*e*S	Sn	14 10 32.9	-0.6
JFT	Otama	3.00	256	P	Pn	14 09 59.7	0.0
JFT				*e*S	Sn	14 10 33.8	-1.6
JNS	Sasagawa	3.72	264	P	Pn	14 10 10.2	+0.6
JNS				*e*S	Sn	14 10 52.2	-1.2
JAW	Awa shima	3.73	274	P	Pn	14 10 10.6	+0.8
ERM	Erimo	3.78	350	*e*Pn	Pn	14 10 10.0	-0.4
ERM	Erimo	3.78	350	*i* P	Pn	14 10 09.4	-1.0
JOT	Ohata	3.83	325	P	Pn	14 10 11.3	+0.2
JOT				*e*S	Sn	14 10 53.4	-2.7
JKB	Kayabe	4.25	329	P	Pn	14 10 16.9	0.0
JKB				*e*S	Sn	14 11 02.8	-3.6
JCH	Churui	4.35	354	P	Pn	14 10 17.0	-1.2
JCH				*e*S	Sn	14 11 04.6	-4.1
BSO1	Boso 1	4.37	215	P	Pn	14 10 16.0	-2.0
BSO1				*e*S	Sn	14 11 05.5	-3.0
JRY	Ryogami san	4.66	242	P	Pn	14 10 21.9	-0.6
JRY				*e*S	Sn	14 11 12.9	-3.6
MJAR	Matsushiro Arr	4.93	251	Pn	Pn	14 10 25.7	-0.5
	2.7nm,0.3s,baz=66,slow=9.4,SNR=119						
MJAR				LR	LR	14 12 56.7	
	comp=Z,423nm,18.2s,baz=90,slow=46						
MAJO	Matsushiro	4.93	251	*e*Pn	Pn	14 10 26.9	+0.7
MAJO	Matsushiro	4.93	251	*d i*P	Pn	14 10 26.7	+0.5
MAT	Matsushiro	4.93	251	P	Pn	14 10 27.4	+1.2
MAT				S	Sn	14 11 22.1	-1.0
MJB9	Matsu-Tunnel	4.93	251	*e*Pn	Pn	14 10 27.0	+0.8
JOD2	Odawara 2	4.96	234	P	Pn	14 10 25.4	-1.3
JOD2				*e*S	Sn	14 11 19.4	-4.6
GRPR	Tuman	5.85	13	*e*P	Pn	14 10 36.7	-2.2
GRPR				*i* S	Sn	14 11 37.9	-8.0
GRPR				pmax	pmax		
	comp=N,54nm,0.2s						
GRPR				pmax	pmax		
	comp=E,108nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,203nm,0.2s						
GRPR				smax	smax		
	comp=N,550nm,0.3s						
GRPR				smax	smax		
	comp=E,309nm,0.2s						
GRPR				MLR	MLR		
	comp=Z,3µm,12.0s						
YUK	Yuzh-Kuril'sk	5.91	13	*d i*P	Pn	14 10 37.7	-2.0
YUK				*i* S	Sn	14 11 39.9	-7.3
YUK				pmax	pmax		
	comp=N,87nm,0.2s						
YUK				pmax	pmax		
	comp=Z,249nm,0.2s						
YUK				pmax	pmax		
	comp=E,40nm,0.1s						
YUK				smax	smax		
	comp=N,196nm,0.3s						
YUK				smax	smax		
	comp=E,552nm,0.6s						
YUK				MLR	MLR		
	comp=Z,232nm,9.0s						
ASAJ	Asahikawa	5.92	350	Pn	Pn	14 10 39.5	-0.3
	comp=Z,3.7nm,0.3s,baz=196,slow=14,SNR=50						
ASAJ				Sn	Sn	14 11 45.3	-2.1
	comp=Z,2.1nm,0.3s,baz=75,slow=13,SNR=6.1						
JHJ2	Mitsune	6.18	215	*e*Pn	Pn	14 10 41.8	-1.7
JHJ	Hachijo jima 2	6.19	215	Pn	Pn	14 10 40.6	-3.0
	comp=Z,32nm,0.3s,baz=108,slow=22,SNR=20						
JHJ				Sn	Sn	14 11 48.1	-6.1
	comp=Z,71nm,0.3s,baz=90,slow=23,SNR=8.1						
INU	Inuyama	6.32	244	*e*Pn	Pn	14 10 46.1	+0.7
KUR	Kuril'sk	7.52	21	*d i*P	Pn	14 11 00.3	-1.4
KUR				*i* S	Sn	14 12 20.5	-6.3
KUR				pmax	pmax		
	comp=Z,73nm,0.6s						
KUR				pmax	pmax		
	comp=N,30nm,0.5s						
KUR				pmax	pmax		
	comp=E,23nm,0.4s						
KUR				smax	smax		
	comp=N,125nm,0.2s						
KUR				smax	smax		
	comp=E,53nm,0.2s						
KUR				MLR	MLR		
	comp=Z,300nm,9.0s						
KUR				MLR	MLR		
	comp=N,600nm,11.0s						
KUR				MLR	MLR		
	comp=E,400nm,12.0s						
YSS	Yuzh-Sakhalins	8.71	354	*e*Pn	Pn	14 11 18.8	+0.8
YSS	Yuzh-Sakhalins	8.71	354	*e*P	Pn	14 11 19.1	+1.0
YSS				*e*S	Sn	14 12 53.5	-2.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VLA	Vladivostok	10.38	302	*i* P	Pn	14 11 43.2	+2.2
VLA				pmax	pmax		
	comp=Z,65nm,1.1s						
MSHR	Mys Shultsa	10.68	298	*i* P	Pn	14 11 48.4	+3.3
USA0B	Ussuriysk Arra	10.79	307	*e*Pn	Pn	14 11 48.9	+2.3
USRK	Ussuriysk Ar.	10.79	307	Pn	Pn	14 11 47.7	+1.1
	comp=Z,1.1nm,0.3s,baz=117,slow=12,SNR=22						
USRK				LR	LR	14 15 53.7	
	comp=Z,757nm,18.3s,baz=103,slow=37						
JNU	Nakatsue	11.84	248	Pn	Pn	14 12 01.0	0.0
	comp=Z,0.3nm,0.3s,baz=104,slow=4.1,SNR=6.0						
JNU				LR	LR	14 16 45.7	
	comp=Z,116nm,20.5s,baz=353,slow=38						
JNU	Nakatsue	11.84	248	*e*Pn	Pn	14 12 00.8	-0.3
MDJ	Mudanjiang	12.51	305	*e*Pn	Pn	14 12 12.6	+2.4
MDJ	Mudanjiang	12.51	305	P	Pn	14 12 13.3	+3.2
MDJ				pmax	pmax		
	comp=Z,51nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,220nm,3.3s						
MDJ				LR	LR		
	comp=Z,580nm,5.7s						
MDJ				LR	LR		
	comp=Z,1µm,12.9s						
TYV	Tymovskoe	12.61	356	*e*P	Pn	14 12 12.8	+1.4
TYV				pmax	pmax		
	comp=Z,100nm,3.2s						
TYV				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KSRS	Korea Array	12.73	271	Pn	Pn	14 12 14.3	+1.1
	comp=Z,0.4nm,0.3s,baz=88,slow=13,SNR=19						
KSRS				LR	LR	14 16 43.6	
	comp=Z,199nm,21.4s,baz=352,slow=36						
KS15	Wonju Array Si	12.76	271	*e*Pn	Pn	14 12 15.7	+2.1
KSAR	Wonju Array Be	12.76	271	Pn	Pn	14 12 14.3	+0.7
KSAR	Wonju Array Be	12.76	271	P	Pn	14 12 14.3	+0.7
TJN	Taejon	13.38	267	*ce*P	Pn	14 12 22.1	+0.1
GRNR	Gornyy	13.59	339	*e*P	Pn	14 12 24.0	-0.8
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
KLR	Kul'dur	14.05	325	Pn	Pn	14 12 31.3	+0.2
	comp=Z,0.1nm,0.3s,baz=128,slow=9.2,SNR=10.0						
KLR				LR	LR	14 17 53.7	
	comp=Z,117nm,21.7s,baz=152,slow=37						
KLR	Kul'dur	14.05	325	*i* P	Pn	14 12 30.2	-0.9
KLR				pmax	pmax		
	comp=Z,13nm,1.3s						
CN2	Changchun	15.03	297	*e*P	Pn	14 12 44.0	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
SKR	Severo-Kuril's	15.09	31	*e*P	Pn	14 12 45.4	+0.2
SKR				MLR	MLR		
	comp=Z,100nm,19.0s						
JOW	Kunigami	17.47	234	P	P	14 13 16.7	-0.3
	comp=Z,0.1nm,0.3s,baz=88,slow=20,SNR=3.5						
DL2	Dalian	17.50	279	P	Pn	14 13 15.8	-0.3
DL2				S	Sn	14 16 25.6	-5.0
DL2				pmax	pmax		
	comp=Z,30nm,1.3s						
DL2				LR	LR		
	comp=Z,250nm,19.6s						
DL2				LR	LR		
	comp=Z,310nm,15.6s						
DL2				LR	LR		
	comp=Z,360nm,13.9s						
PETK	Petropavlovsk-	17.59	28	P	P	14 13 19.6	+1.4
	baz=225,slow=16,SNR=2.0						
PEA1	Petropavlovsk-	17.60	28	*e*Pn	P	14 13 19.6	+1.3
ZEA	Zeya	19.26	329	*e*P	P	14 13 35.8	-0.7
ZEA				pmax	pmax		
	comp=N,55nm,1.4s						
ZEA				pmax	pmax		
	comp=E,37nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						
ZEA				MLR	MLR		
	comp=N,400nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,14.0s						
NJ2	Nanjing	21.44	261	*e*P	P	14 14 00.7	+0.4
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
TIA	Tai'an	21.47	273	P	P	14 14 00.2	-0.4
TIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GUMO	Guam	24.61	178	LR	LR	14 22 26.5	
	comp=Z,85nm,21.6s,baz=297,slow=32						
TWG	Pinlang	24.95	238	*e*P	P	14 14 34.6	-1.0
	comp=Z,50nm,0.6s						
SEY	Seymchan	25.20	9	P	P	14 14 39.4	+1.9
	comp=Z,5.4nm,0.8s,baz=187,slow=5.6,SNR=11						
SEY	Seymchan	25.20	9	*i* P	P	14 14 39.2	+1.7
YAK	Yakutsk	25.36	344	*e*P	P	14 14 38.5	-0.4
	comp=Z,47nm,0.8s						
YAK	Yakutsk	25.36	344	*e*P	P	14 14 39.1	+0.2
YAK				*e**PP	pwP	14 14 46.5	-3.0
YAK				*e*S	S	14 18 59.2	-5.5
YAK				*e*SS	SnSn	14 20 00.3	+4.0
WHN	Wuhan	25.57	261	⇓P	P	14 14 42.7	+1.5
WHN				pmax	pmax		
	comp=Z,24nm,0.7s						
H11N2	WAKE ISLAND Hy	27.14	127	T	T	14 43 26.3	
	baz=318,slow=75,SNR=6.7						
H11N1	WAKE ISLAND Hy	27.14	127	T	T	14 43 27.9	
	baz=318,slow=75,SNR=2.9						
H11N3	WAKE ISLAND Hy	27.15	127	T	T	14 43 30.9	
	baz=318,slow=75,SNR=7.1						
BOD	Bodaibo	27.63	325	*e*P	P	14 14 59.7	+0.3
BOD				pmax	pmax		
	comp=Z,19nm,1.5s						
ULN	Ulaanbaatar	28.39	302	*e*P	P	14 15 07.7	+1.1
	comp=Z,6.8nm,0.8s						
ULN	Ulaanbaatar	28.39	302	*ce*P	P	14 15 07.9	+1.3
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
XAN	Xi'an	28.53	272	P	P	14 15 09.5	+1.7
XAN				pP	pwP	14 15 17.6	-1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONA0	Songino Array	28.83	302	*e*P	P	14 15 11.1	+0.6
SONM	Songino Array	28.83	302	P	P	14 15 11.1	+0.6
	comp=Z,2.8nm,0.7s,baz=103,slow=7.1,SNR=11						
SONM				LR	LR	14 27 15.8	
	comp=Z,212nm,18.0s,baz=83,slow=38						
ENH	Enshi	29.48	265	*e*P	P	14 15 16.8	+0.4
TLY	Talaya	31.10	309	*e*P	P	14 15 32.7	+2.3

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TLY                                  pmax    pmax
       comp=Z,8.0nm,0.8s
TLY                                  MLR     MLR
       comp=Z,977nm,16.0s
ZAK    Zakamensk         31.14 306  eP       P          14 15 31.7 +0.8
ZAK                                  pmax    pmax
       comp=Z,4.0nm,1.4s
LZH    Lanzhou           31.89 279  eP       P          14 15 41.0 +3.3
LZH                                  pP      pwP        14 15 50.4 +1.5
LZH                                  sP      sP         14 15 53.6  +13
LZH                                  PP      PnPn       14 16 40.9 -1.4
LZH                                  pmax    pmax
       comp=Z,19nm,1.0s
LZH                                  pmax    pmax
       comp=Z,130nm,4.3s
LZH                                  LR      LR
       comp=Z,450nm,11.9s
LZH                                  LR      LR
       comp=Z,510nm,12.6s
LZH                                  LR      LR
       comp=Z,680nm,13.0s
BILL   Bilibino          32.26  15  eP       P          14 15 40.7 +0.3
       comp=Z,6.3nm,0.9s
BILL   Bilibino          32.26  15ceP        P          14 15 40.6 +0.3
BILL                                 *SP     sP         14 15 44.0 +1.2
BILL                                i                   14 15 51.9
BILL                                 pmax    pmax
       comp=Z,1.0nm,0.4s
CD2    Chengdu           33.73 270⇓iP        P          14 15 55.6 +2.0
CD2                                  pmax    pmax
       comp=Z,30nm,0.7s
GTA    Gaotai            34.17 286  eP       P          14 15 59.3 +1.8
GTA                                  pP      pwP        14 16 11.4 +2.7
GTA                                  sP      sP         14 16 16.5  +16
GTA                                  PcP     PcP        14 18 35.5 +1.1
GTA                                  S       S          14 21 22.2 -1.4
GTA                                  ScP     ScP        14 22 18.5 -0.5
GTA                                  pmax    pmax
       comp=Z,5.0nm,1.0s
GTA                                  pmax    pmax
       comp=Z,82nm,7.3s
GTA                                  LR      LR
       comp=Z,230nm,18.7s
GTA                                  LR      LR
       comp=Z,260nm,16.2s
GTA                                  LR      LR
       comp=Z,310nm,16.2s
TIXI   Tiksi             34.32 352   P       P          14 15 58.6 +0.4
       comp=Z,2.4nm,0.8s,baz=139,slow=4.5,SNR=3.1
TIXI   Tiksi             34.32 352  eP       P          14 15 58.2  0.0
       comp=Z,6.6nm,1.0s
TIXI   Tiksi             34.32 352  i P      P          14 15 59.4 +1.2
TIXI                                 pmax    pmax
       comp=Z,4.0nm,1.1s
KMI    Kunming           37.17 262   P       P          14 16 24.6 +1.0
KMI                                  pmax    pmax
       comp=Z,37nm,0.5s
SIJI   Sorong            40.70 200   P       P          14 16 52.5 -0.3
       comp=Z,5.1nm,0.7s,baz=69,slow=2.6,SNR=5.7
JAY    Jayapura          40.71 185   LR      LR         14 33 48.1
       comp=Z,24nm,18.4s,baz=12,slow=36
NONG   Nongkai           40.85 252   P       P          14 16 56.0 +1.9
       comp=Z,0.4nm,1.9s
WMQ    Urumqi            42.12 296  eP       P          14 17 06.8 +2.4
WMQ                                  pP      pwP        14 17 17.5 +2.0
WMQ                                  pmax    pmax
       comp=Z,15nm,0.7s
WMQ                                  pmax    pmax
       comp=Z,86nm,3.8s
WMQ                                  LR      LR
       comp=Z,59nm,14.3s
WMQ                                  LR      LR
       comp=Z,76nm,22.7s
WMQ                                  LR      LR
       comp=Z,120nm,21.9s
ZAA1   Zalesovo Array    42.60 311  eP       P          14 17 08.8 +0.7
ZAA1                                ePcP     PcP        14 18 60.0 -0.1
ZAA0   Zalesovo Array    42.60 311  eP       P          14 17 08.4 +0.3
       comp=Z,4.4nm,0.7s
ZALV   Zalesovo Beam     42.60 311   P       P          14 17 08.8 +0.7
       comp=Z,1.3nm,0.5s,baz=101,slow=8.0,SNR=6.3
ZALV                                 PcP     PcP        14 18 60.0 -0.1
       comp=Z,1.7nm,0.6s,baz=103,slow=4.6,SNR=3.9
ZALV                                 LR      LR         14 35 35.3
       comp=Z,170nm,18.7s,baz=36,slow=37
CHAI   Chaiyaphum        43.06 251   P       P          14 17 13.4 +1.2
       comp=Z,20µm,1.0s
PBKT   Sadao Pong        43.40 252   P       P          14 17 16.6 +1.7
       comp=Z,5.3nm,1.0s
CMMT   Chiang Mai        43.58 257   P       P          14 17 17.5 +1.1
       comp=Z,3.2nm,1.0s
CHTO   Chiang Mai        43.58 257  eP       P          14 17 14.9 -1.5
       comp=Z,4.4nm,0.7s
CHTO   Chiang Mai        43.58 257  eP       P          14 17 14.9 -1.5
CHTO                                 pmax    pmax
       comp=Z,4.0nm,0.7s
CM31   Chiang Mai Arr    43.79 256  eP       P          14 17 19.1 +0.9
       comp=Z,18nm,1.7s
CMAR   Chiang Mai Arr    43.79 256   P       P          14 17 19.1 +0.9
       comp=Z,2.0nm,0.8s,baz=49,slow=6.9,SNR=15
CMAR                                 LR      LR         14 36 45.6
       comp=Z,33nm,18.9s,baz=38,slow=38
KDAK   Kodiak Island     44.79  43   P       P          14 17 25.4 -0.2
       comp=Z,3.7nm,0.6s,baz=292,slow=6.7,SNR=8.5
KDAK   Kodiak Island     44.79  43  eP       P          14 17 25.4 -0.2
       comp=Z,53nm,1.8s
KDAK   Kodiak Island     44.79  43  i P      P          14 17 26.1 +0.5
MK32   Makanchi Array    45.20 302  eP       P          14 17 29.9 +0.8
MKAR   Makanchi Array    45.20 302   P       P          14 17 29.9 +0.8
       comp=Z,3.2nm,0.7s,baz=83,slow=9.8,SNR=24
MKAR                                 LR      LR         14 36 55.6
       comp=Z,122nm,21.7s,baz=68,slow=37
MAKZ   Makanchi          45.41 302  eP       P          14 17 31.3 +0.6
       comp=Z,8.3nm,1.0s
MAKZ   Makanchi          45.41 302  eP       P          14 17 31.3 +0.6
MAKZ                                 pmax    pmax
       comp=Z,8.0nm,1.0s
KURK   Kurchatov         46.78 308  eP       P          14 17 41.5 +0.1
       comp=Z,25nm,1.3s
KURK   Kurchatov         46.78 308ceP        P          14 17 40.8 -0.6
KURK                                 pmax    pmax
       comp=Z,11nm,1.3s
KURBB  Kurchatov Arra    46.86 307   P       P          14 17 42.2 +0.1
       comp=Z,3.2nm,0.6s,baz=81,slow=8.1,SNR=30
COLA   College           46.92  33  i P      P          14 17 43.0 +0.7
COLA                                 pmax    pmax
       comp=Z,2.0nm,1.1s
ILAR   Eielson Array     47.33  33   P       P          14 17 46.0 +0.4
       comp=Z,1.8nm,0.9s,baz=269,slow=6.5,SNR=17
ILAR   Eielson Array     47.33  33   P       P          14 17 46.0 +0.4
ILB    Eielson Array     47.33  33  eP       P          14 17 45.6  0.0
       comp=Z,3.1nm,0.9s
SCRK   Sand Creek        48.63  34  eP       P          14 17 56.9 +1.2
       comp=Z,4.9nm,1.1s
BRVK   Borovoye          51.30 312  i P      P          14 18 16.6 +0.5
BRVK                                 pmax    pmax
       comp=Z,3.0nm,1.0s
EPYK   Eagle Plains      51.41  30  eP       P          14 18 17.8 +1.0
       comp=Z,9.9nm,1.3s
AAK    Ala-Archa         51.70 298ceP        P          14 18 19.5 +0.1
AAK                                  pmax    pmax
       comp=Z,4.0nm,1.3s
MTN    Manton Dam        52.27 196  eP       P          14 18 23.3 -0.2
       comp=Z,32nm,0.8s
ARSB   Arslanbob         53.22 297  eP       P          14 18 31.6 +0.9
       comp=Z,13nm,0.8s
KK31   Karatay Array     54.27 300  eP       P          14 18 38.7 +0.5
       comp=Z,26nm,1.9s
KK31   Karatay Array     54.27 300  eP       P          14 18 38.7 +0.5
KK31                                 pmax    pmax
       comp=Z,26nm,1.9s
KKAR   Karatay Array     54.27 300  eP       P          14 18 38.7 +0.5
       comp=Z,26nm,1.9s
KKAR   Karatay Array     54.27 300  eP       P          14 18 38.7 +0.5
KKAR                                 pmax    pmax
       comp=Z,26nm,1.9s
SVE    Sverdlovsk        55.56 319⇓eP        P          14 18 48.8 +1.5
SVE                                  pmax    pmax
       comp=Z,19nm,0.9s
SVE                                  MLR     MLR
       comp=Z,417nm,16.0s
GAR    Garm              56.01 296  eP       P          14 18 51.5 +0.6
       comp=Z,24nm,1.4s
GAR    Garm              56.01 296  eP       P          14 18 51.5 +0.6
GAR                                  pmax    pmax
       comp=Z,24nm,1.4s
NIL    Nilore            56.16 289  eP       P          14 18 51.6 -0.4
       comp=Z,31nm,1.5s
NIL    Nilore            56.16 289  eP       P          14 18 51.6 -0.4
NIL                                  pmax    pmax
       comp=Z,31nm,1.5s
DLBC   Dease Lake        56.37  39   P       P          14 18 54.5 +1.3
       comp=Z,3.3nm,0.8s,baz=298,slow=6.3,SNR=5.8
ARU    Arti              56.78 319c iP       P          14 18 56.5 +0.5
ARU                                                     14 20 57.2
ARU                                  S       S          14 26 52.1 +3.7
ARU                                  SS      SS         14 30 36.8 +1.0
ARU                                  pmax    pmax
       comp=Z,15nm,0.9s
ARU                                  MLR     MLR
       comp=Z,340nm,16.0s
WRAB   Tennant Creek     58.62 191  eP       P          14 19 08.3 -0.9
       comp=Z,17nm,0.8s
WRAB   Tennant Creek     58.62 191ceP        P          14 19 06.6 -2.6
WRAB                                 pmax    pmax
       comp=Z,19nm,0.8s
ABKAR  Akbulak array     58.70 310  eP       P          14 19 09.8 +0.2
       comp=Z,18nm,1.8s
YKA    Yellowknife Ar    61.69  31   P       P          14 19 30.2 +0.3
       comp=Z,0.7nm,0.5s,baz=298,slow=6.9,SNR=3.2
YKB5   Yellowknife Ar    61.69  31  eP       P          14 19 30.1 +0.3
LVZ    Lovozero          61.80 336  i P      P          14 19 30.7 +0.1
LVZ                                  pmax    pmax
       comp=Z,12nm,1.2s
AS31   Alice Springs     62.35 190  eP       P          14 19 34.2 -0.5
       comp=Z,1.3nm,0.6s
ASAR   Alice Springs     62.35 190   P       P          14 19 34.2 -0.5
       comp=Z,1.5nm,0.6s,baz=14,slow=14,SNR=27
ARCES  ARCESS Array B    63.54 340   LR      LR         14 51 39.9
       comp=Z,47nm,19.7s,baz=291,slow=40
GEYT   Alibeck           65.01 300   P       P          14 19 51.6 -0.7
       comp=Z,3.3nm,0.8s,baz=0.0,slow=3.1,SNR=7.2
GEYT                                 LR      LR         14 49 55.7
       comp=Z,42nm,19.0s,baz=95,slow=38
H04A   Detroit Lake      66.73  51  eP       P          14 20 04.5 +1.2
       comp=Z,16nm,1.1s
C09A   Chrisman Ranch    67.39  46  eP       P          14 20 08.2 +0.7
       comp=Z,6.0nm,0.8s
NEW    Newport           67.80  45  eP       P          14 20 10.4 +0.4
       comp=Z,5.5nm,0.9s
NEW    Newport           67.80  45  eP       P          14 20 10.4 +0.4
NEW                                  pmax    pmax
       comp=Z,5.0nm,0.9s
PINE   Pine Mountain     67.96  51  eP       P          14 20 13.2 +1.9
       comp=Z,14nm,0.8s
OBN    Obninsk           68.31 324⇑eP        P          14 20 12.3 -0.7
OBN                                 e                   14 20 16.1
OBN                                 e                   14 20 21.7
OBN                                                     14 20 43.0
OBN                                  pmax    pmax
       comp=Z,9.0nm,1.0s
OBN                                  MLR     MLR
       comp=Z,151nm,15.0s
K05A   Summer Lake       68.56  52  eP       P          14 20 16.8 +1.7
       comp=Z,14nm,0.9s
FIA1   FINESS Array S    68.65 333  eP       P          14 20 15.5 +0.5
       comp=Z,9.6nm,0.8s
FIA0   FINESS Array S    68.65 333  eP       P          14 20 15.4 +0.4
FIA0   FINESS Array S    68.65 333  eP       P          14 20 15.4 +0.4
FINES  FINESS Array B    68.65 333   P       P          14 20 15.4 +0.4
       comp=Z,4.0nm,0.7s,baz=46,slow=8.2,SNR=11
FINES                                LR      LR         14 53 55.2
       comp=Z,130nm,19.2s,baz=56,slow=39
FINES  FINESS Array B    68.65 333  i P      P          14 20 15.3 +0.3
FINES                                pmax    pmax
       comp=Z,4.0nm,0.7s
I07A   Izee              68.68  50  eP       P          14 20 17.1 +1.4
       comp=Z,4.8nm,1.1s
WALA   Waterton Lakes    69.12  44  eP       P          14 20 19.6 +1.2
       comp=Z,5.5nm,0.6s
MOD    Modoc Plateau     69.38  53  eP       P          14 20 20.9 +0.8
       comp=Z,4.1nm,0.7s
J08A   Circle Bar Ran    69.70  50  eP       P          14 20 22.8 +0.8
       comp=Z,7.3nm,0.9s
STKA   Stephens Creek    69.84 182   P       P          14 20 22.8 +0.1
       comp=Z,3.4nm,0.9s,baz=44,slow=9.1,SNR=3.3
STKA   Stephens Creek    69.84 182  eP       P          14 20 22.8 +0.1
       comp=Z,11nm,1.9s
VSU    Vasula            70.40 330ceP        P          14 20 26.0 +0.2
VSU                                  pmax    pmax
       comp=Z,45nm,1.7s
BEKR   Beckworth         70.46  54  eP       P          14 20 27.8 +0.9
       comp=Z,5.7nm,0.8s
PAHR   Pah Rah Range     71.18  54  eP       P          14 20 32.0 +0.8
       comp=Z,6.0nm,1.1s
PNTR   Pine Nut          71.39  55  eP       P          14 20 33.4 +0.8
       comp=Z,9.5nm,1.1s
CMB    Columbia Colle    71.47  56  eP       P          14 20 32.8  0.0
       comp=Z,4.9nm,0.8s
CMB    Columbia Colle    71.47  56  eP       P          14 20 32.8  0.0
CMB                                  pmax    pmax
       comp=Z,5.0nm,0.8s
FFC    Flin Flon         71.53  34  eP       P          14 20 33.3 +0.4
       comp=Z,6.7nm,0.8s
KIV    Kislovodsk        71.62 312  eP       P          14 20 35.1 +1.4
KIV                                  pmax    pmax
       comp=Z,40nm,1.1s
KBZ    Khabaz            71.63 311   P       P          14 20 33.2 -0.4
       comp=Z,3.5nm,0.9s,baz=80,slow=6.1,SNR=3.0
YERR   Yerington         71.67  55  eP       P          14 20 35.2 +0.9
       comp=Z,6.5nm,0.8s
WAKR   Walker            71.82  55  eP       P          14 20 36.0 +0.8
       comp=Z,5.6nm,1.2s
DLMT   Dillon            72.00  46  eP       P          14 20 37.0 +1.0
       comp=Z,3.3nm,0.8s
HLID   Hailey            72.01  48  eP       P          14 20 37.2 +1.0
       comp=Z,4.2nm,1.0s
BMN    Battle Mountai    72.13  52  eP       P          14 20 38.1 +1.2
       comp=Z,5.2nm,0.9s
BMN    Battle Mountai    72.13  52  eP       P          14 20 38.1 +1.2
BMN                                  pmax    pmax
       comp=Z,5.0nm,0.9s
RYN    Ryan              72.34  55  eP       P          14 20 39.4 +1.2
       comp=Z,4.9nm,1.1s
KVN    Kaiserville       72.37  54  eP       P          14 20 39.5 +1.1
       comp=Z,8.3nm,1.1s
BOZ    Bozeman (W)       72.41  46  eP       P          14 20 39.3 +0.8
       comp=Z,3.3nm,1.0s
BOZ    Bozeman (W)       72.41  46  eP       P          14 20 39.3 +0.8
BOZ                                  pmax    pmax
       comp=Z,3.0nm,1.0s
MDPB   Devils Postpil    72.55  56  eP       P          14 20 40.4 +0.8
       comp=Z,7.1nm,1.2s
GNI    Garni             72.58 308  i P      P          14 20 40.2 +0.6
GNI                                  pmax    pmax
       comp=Z,21nm,1.0s
NV01   Mina Array Sit    72.59  55  eP       P          14 20 41.4 +1.6
NVAR   Mina Array Bea    72.59  55   P       P          14 20 41.4 +1.6
       comp=Z,4.2nm,0.9s,baz=285,slow=6.5,SNR=17
OMMB   Old Mammoth Mi    72.61  56  eP       P          14 20 41.2 +1.1
       comp=Z,4.1nm,1.2s
NV11   Mina Array Sit    72.69  55  eP       P          14 20 41.1 +0.8
       comp=Z,0.5nm,1.4s
PAGB   Antelope Grade    72.87  58  eP       P          14 20 42.5 +1.2
       comp=Z,11nm,1.0s
NB2    NORSAR Subarra    73.80 338   P       P          14 20 46.8 +0.5
       comp=Z,7.5nm,1.1s,baz=37,slow=5.9
NB200  NORSAR Array S    73.80 338  eP       P          14 20 46.5 +0.2
NOA    NORSAR Array B    73.80 338   P       P          14 20 46.5 +0.2
       comp=Z,3.2nm,1.0s,baz=37,slow=5.8,SNR=3.7
NOA                                  LR      LR         14 57 13.6
       comp=Z,50nm,18.8s,baz=35,slow=39
IMW    Indian Meadow     73.83  47  eP       P          14 20 48.1 +1.0
       comp=Z,4.1nm,0.7s
FLWY   Flagg Ranch       73.85  46  eP       P          14 20 47.6 +0.5
       comp=Z,5.0nm,0.6s
FXWY   Fox Creek         73.94  47  eP       P          14 20 49.2 +1.5
       comp=Z,3.4nm,0.9s
R11A   Troy Canyon, C    74.37  53  eP       P          14 20 50.2  0.0
       comp=Z,7.5nm,1.4s
AKASG  Malin Array Be    74.54 323   P       P          14 20 49.9 -0.8
       comp=Z,2.5nm,0.7s,baz=43,slow=5.8,SNR=13
AKASG  Malin Array Be    74.54 323  i P      P          14 20 51.2 +0.5
AKASG                                pmax    pmax
       comp=Z,3.0nm,0.6s
AKBB   Malin Array Si    74.54 323  eP       P          14 20 50.4 -0.3
       comp=Z,10nm,1.1s
AKBB   Malin Array Si    74.54 323  eP       P          14 20 50.4 -0.3
AKBB                                 pmax    pmax
       comp=Z,10.0nm,1.1s
TPNV   Topopah Spring    74.78  55  eP       P          14 20 53.4 +0.8
       comp=Z,13nm,1.4s
TPNV   Topopah Spring    74.78  55  eP       P          14 20 53.4 +0.8
TPNV                                 pmax    pmax
       comp=Z,13nm,1.4s
BW06   Boulder Array     75.32  47  eP       P          14 20 56.1 +0.4
       comp=Z,4.0nm,0.6s
PD31   Pinedale Array    75.32  47  eP       P          14 20 56.0 +0.3
       comp=Z,3.5nm,0.6s
PDAR   Pinedale Array    75.32  47   P       P          14 20 56.2 +0.6
       comp=Z,2.0nm,0.5s,baz=260,slow=1.6,SNR=16
SHPR   Sheep Range       75.75  55  eP       P          14 20 59.0 +0.8
       comp=Z,4.9nm,1.1s
CCUT   Cedar City        76.25  53  eP       P          14 21 01.9 +0.8
       comp=Z,3.0nm,1.0s
LDFC   Landfair          76.64  56  eP       P          14 21 02.6 -0.6
       comp=Z,10nm,1.1s
LCMT   Little Creek M    76.66  53  eP       P          14 21 04.1 +0.8
       comp=Z,8.7nm,1.5s
MTPU   Mount Pierson     76.69  52  eP       P          14 21 04.7 +1.0
       comp=Z,2.6nm,0.7s
KNB    Kanab             76.92  53  eP       P          14 21 06.3 +1.4
       comp=Z,14nm,1.5s
KNB    Kanab             76.92  53  eP       P          14 21 06.3 +1.4
KNB                                  pmax    pmax
       comp=Z,14nm,1.5s
SRU    San Rafael Swe    77.04  50  eP       P          14 21 06.4 +0.9
       comp=Z,8.8nm,0.7s
SRU    San Rafael Swe    77.04  50   P       P          14 21 06.4 +0.9
SRU                                  pmax    pmax
       comp=Z,9.0nm,0.7s
ULM    Lac du Bonnet     77.32  35   P       P          14 21 06.3 -0.3
       comp=Z,1.8nm,0.5s,baz=256,slow=4.2,SNR=3.0
KWP    Kalwaria Pacla    78.28 325  eP       P          14 21 13.1 +1.1
       comp=Z,157nm,1.1s
KWP    Kalwaria Pacla    78.28 325  eP       P          14 21 13.1 +1.1
PV21   Cone Mtn., Par    78.32  50  eP       P          14 21 13.7 +1.0
       comp=Z,6.6nm,0.6s
PV23   Carpenter Ridg    78.37  50  eP       P          14 21 14.0 +1.0
       comp=Z,6.2nm,0.7s
PV10   Paradox Valley    78.40  50  eP       P          14 21 14.1 +0.9
       comp=Z,14nm,0.8s
PV14   Lion Creek, Pa    78.41  50  eP       P          14 21 14.2 +1.0
       comp=Z,8.9nm,0.8s
PV22   Blue Mesa, Par    78.45  50  eP       P          14 21 14.2 +0.9
       comp=Z,8.3nm,1.2s
PV20   West Nyswonger    78.47  50  eP       P          14 21 14.2 +0.7
       comp=Z,8.2nm,0.8s
PV19   Morning Glory     78.48  50  eP       P          14 21 14.3 +0.7
       comp=Z,9.6nm,0.7s
PV17   East Wray Mesa    78.51  50  eP       P          14 21 14.4 +0.7
       comp=Z,9.8nm,0.8s
PV16   Nyswonger Mesa    78.52  50  eP       P          14 21 14.8 +1.0
       comp=Z,5.7nm,0.8s
PV05   Paradox Valley    78.56  50  eP       P          14 21 15.2 +1.2
       comp=Z,17nm,1.1s
PV18   Skein Mesa, Pa    78.56  50  eP       P          14 21 15.0 +1.0
       comp=Z,5.6nm,0.8s
PV03   Paradox Valley    78.60  50  eP       P          14 21 15.0 +0.8
       comp=Z,5.0nm,0.9s
PV13   Radium Mtn., P    78.67  50  eP       P          14 21 15.5 +0.8
       comp=Z,6.2nm,0.7s
BRTR   Keskin Array B    79.53 313   LR      LR         15 00 52.7
       comp=Z,38nm,19.2s,baz=77,slow=39
VYHS   Vyhne             80.83 327  eP       P          14 21 25.8 -0.1
VYHS   Vyhne             80.83 327  eP       P          14 21 25.8 -0.1
EYMN   Ely               80.96  34  eP       P          14 21 26.1 -0.5
       comp=Z,7.4nm,1.0s
CLL    Collm             81.00 331  eP       P          14 21 26.0 -0.7
CLL                                  pmax    pmax
       comp=Z,5.0nm,1.3s
CLL    Collm             81.00 331  eP       P          14 21 26.0 -0.7
       comp=Z,5.0nm,1.3s
T25A   Trinidad          81.98  49  eP       P          14 21 32.3 -0.1
       comp=Z,5.2nm,0.8s
ANMO   Albuquerque       82.21  51  eP       P          14 21 34.8 +1.2
       comp=Z,4.1nm,1.0s
ANMO   Albuquerque       82.21  51  eP       P          14 21 34.8 +1.2
ANMO                                 pmax    pmax
       comp=Z,4.0nm,1.0s
GEC2   GERESS Array S    82.70 329  eP       P          14 21 34.9 -0.9
       comp=Z,9.8nm,0.8s
GEC2   GERESS Array S    82.70 329  eP       P          14 21 34.9 -0.9
GEC2                                 pmax    pmax
       comp=Z,10.0nm,0.8s
GERES  GERESS Array B    82.70 329   P       P          14 21 34.9 -0.9
       comp=Z,5.7nm,0.2s,baz=38,slow=5.0,SNR=3.5
GERES                                LR      LR         15 01 04.1
       comp=Z,54nm,20.4s,baz=76,slow=38
MNTX   Cornudas Mount    85.04  53  eP       P          14 21 48.5 +0.4
       comp=Z,3.6nm,1.3s
AMTX   Amarillo          85.13  49  eP       P          14 21 49.4 +0.8
       comp=Z,7.9nm,0.8s
BFO    Black Forest      85.19 332  eP       P          14 21 49.1 +0.6
       comp=Z,6.8nm,1.0s
BFO    Black Forest      85.19 332  eP       P          14 21 49.1 +0.6
BFO                                  pmax    pmax
       comp=Z,7.0nm,1.0s
FUORN  Ofenpass-Fuorn    85.86 330  eP       P          14 21 52.0 -0.1
       comp=Z,7.6nm,0.8s
WMOK   Wichita Mounta    86.93  47  eP       P          14 21 57.2 -0.1
       comp=Z,15nm,1.9s
WMOK   Wichita Mounta    86.93  47  eP       P          14 21 57.2 -0.1
WMOK                                 pmax    pmax
       comp=Z,15nm,1.9s
TXAR   Lajitas Array     87.73  54   P       P          14 22 00.9 -0.5
       comp=Z,0.4nm,0.6s,baz=295,slow=2.8,SNR=6.0
N59A   State Game Lan    93.20  29  eP       P          14 22 27.0 +0.4
       comp=Z,14nm,0.8s
ESDC   Sonseca Array     97.03 336   LR      LR         15 13 39.8
       comp=Z,22nm,19.9s,baz=165,slow=40
SNAA   Sanae            142.54 197   PKPdf   PKPdf      14 28 37.7 -6.3
LPAZ   La Paz           144.29  61   PKP     PKPbc      14 28 48.0 +0.3
       comp=Z,0.9nm,0.6s,baz=310,slow=6.9,SNR=4.6
LPAZ   La Paz           144.29  61   PKIKP   PKPbc      14 28 48.0 +0.3
VNA3   Neumayer Olymp   144.29 194   PKPdf   PKPab      14 28 44.5 -0.6
VNA1   Neumayer--Stat   144.48 195   PKPdf   PKPab      14 28 45.6 -0.1
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*ISCJB **03** 14:13:49.9±0.2, 47°.34N±0°.01×7°.35E±0°.02, h31^{km}±1^{km}, Error ellipse: s-maj=2.3km s-min=1.9km az=24.7*

*STR **03** 14:13:50.3±0.2, 47°N±2°×°±°, h23^{km}±2^{km}, MLv3.2/8, MLv3.3/7*

*LDG **03** 14:13:50.0±0.1, 47°.35N×7°.39E, h23^{km}, Md3.5/2, Ml3.5/45, Error ellipse: s-maj=1.3km s-min=1.1km az=157.0*

*BGR **03** 14:13:51.0±0.4, 47°.35N×7°.42E, h20^{km}, ML3.2/22, Error ellipse: s-maj=4.4km s-min=2.2km az=43.0*

*ZUR **03** 14:13:50.4, 47°.33N×7°.37E, h26^{km}, MLh3.3/73, Error ellipse: s-maj=1.4km s-min=0.5km az=138.0*

*PRU **03** 14:13:51.4±0.0, 47°.29N×7°.47E, h30^{km}*

*BNS **03** 14:14:02.0±0.6, 47°.30N×7°.33E, h25^{km}, ML2.7*

ISC 03 14:13:49.1±0.8, **47°.32N**±0°.01×**7°.34E**±0°.01, **h19**^{km}±1^{km}, **n267**, σ1^{s}**87**/433, **47C-32D, Switzerland**

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Code   Station Name        Δ°   AZ°     Phase ID              Time     Res
                                        Op      ISC         h  m  s   ISC
BOURR  Bourrignon         0.10 315     Sg       Sg         14 13 58.1 +2.4
BOURR  Bourrignon         0.10 315    ⇓Pg       Pg         14 13 55.4 +2.3
BOURR  Bourrignon         0.10 315⇓iPg          Pg         14 13 55.4 +2.3
BOURR                                  Sg       Sg         14 13 58.7 +2.9
SOLB   Solothurn Schu     0.17 133    ⇑Pg       Pg         14 13 55.4 +1.7
SOLZ   Solothurn, Zeu     0.18 129    ⇑Pg       Pg         14 13 55.4 +1.6
BALST  Balsthal           0.24  86     Pg       Pb         14 13 56.2 +1.5
BALST  Balsthal           0.24  86    ⇑Pg       Pb         14 13 56.2 +1.5
BALST                                  Sg       Sg         14 13 60.0 +1.2
BALST  Balsthal           0.24  86    ePg       Pb         14 13 56.2 +1.5
BALST                                 eSg       Sb         14 13 59.8 +1.5
SRER   Reinach, Raine     0.26  43    ⇓Pg       Pb         14 13 56.8 +1.7
MATTE  Schuetzenmatte     0.28  34    ⇓Pg       Pg         14 13 57.0 +1.6
MATTE                                  Sg       Sg         14 14 01.2 +1.5
SBAP   Basel-PUK          0.29  31    ⇓Pg       Pb         14 13 57.4 +1.6
SMZW   Muttenz-Waldha     0.31  43     Pg       Pg         14 13 57.3 +1.5
SMZW                                   Sg       Sg         14 14 02.0 +1.5
SFRA   Frenkendorf        0.31  54    ⇑Pg       Pg         14 13 57.2 +1.3
SFRA                                   Sg       Sg         14 14 01.9 +1.3
OTER1  Otterbach 1 (B     0.31  35    ⇓Pg       Pg         14 13 57.5 +1.5
OTER1                                  Sg       Sg         14 14 02.2 +1.6
SBAF   Basel-Friedhof     0.32  33    ⇓Pg       Pg         14 13 57.7 +1.7
OTER2  Otterbach 2 (B     0.32  35     Pg       Pg         14 13 57.0 +1.0
OTER2                                  Sg       Sg         14 14 01.4 +0.7
SRHB   Riehen-Baumlih     0.32  38    ⇑Pg       Pg         14 13 57.7 +1.7
SRHB                                   Sg       Sb         14 14 02.9 +1.9
SBEG   Bettingen Gewe     0.33  41     Pg       Pg         14 13 57.7 +1.4
SAUR   Augst-Roemermu     0.34  51    ⇑Pg       Pg         14 13 57.6 +1.2
SKAF   Kaiseraugst-Fr     0.34  50    ⇑Pg       Pg         14 13 57.6 +1.2
LOMF   Lomont             0.35 275     Pg       Pb         14 13 58.9 +2.1
LOMF                                   Sg       Sg         14 14 03.9 +2.3
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LOMF  Lomont           0.35 275⇑iPg   Pb    14 13 58.9 +2.1
LOMF                            Sg    Sb    14 14 04.6 +2.6
SBERN Bern, Kleine S   0.38 170  Pg   Pg    14 13 58.7 +1.6
ROTHE Rothenfluh       0.42  68 ⇑Pg   Pg    14 13 59.0 +1.1
DAGMA Lutertal, Dagm   0.47 101 ⇑Pg   Pg    14 13 59.6 +1.0
CHMF  Charmoille       0.47 262  Pg   Pg    14 14 00.7 +2.0
CHMF                            Sg    Sb    14 14 07.5 +2.0
CHMF  Charmoille       0.47 262 ⇑Pg   Pg    14 14 00.8 +2.0
EMMET Emmethof         0.47  75 ⇑Pg   Pg    14 13 59.7 +0.9
ENDD  Endenburg        0.48  34⇓ePg   Pg    14 13 59.8 +1.0
ENDD                            Sg    Sg    14 14 06.4 +0.9
SCOU  Cournillens      0.49 199 ⇑Pg   Pg    14 14 00.8 +1.7
STAF  Tafers           0.52 189 ⇓Pg   Pg    14 14 01.2 +1.5
MOF   Molkenrain       0.55 345  Pg   Pb    14 14 01.8 +1.7
MOF   Molkenrain       0.55 345 ⇓Pn   Pb    14 14 01.8 +1.7
MOF                             Sn    Sb    14 14 10.0 +2.4
MOF                             SmS         14 14 10.6
SULZ  Cheisacher       0.56  68 ⇑Pg   Pb    14 14 01.2 +0.9
SULZ  Cheisacher       0.56  68 ePg   Pb    14 14 01.2 +0.9
SULZ                            eSg   Sg    14 14 09.0 +0.9
HINF  Hinteralfeld     0.60 327 ePg   Pb    14 14 02.2 +1.3
      SNR=1.0
HINF                            eSg   Sb    14 14 10.5 +1.6
      934nm,0.2s,SNR=1.0
TORNY Torny/Romont     0.60 206  Pg   Pb    14 14 02.8 +1.8
TORNY                           Sg    Sg    14 14 11.3 +2.0
TORNY Torny/Romont     0.60 206 ⇑Pg   Pb    14 14 02.9 +1.8
ACHB  Acheberg         0.68  66  Pg   Pb    14 14 03.1 +0.8
WIMIS Wimmis           0.68 163 ⇓Pg   Pb    14 14 03.6 +1.2
BRANT Les Verrieres    0.70 237  Pg   Pb    14 14 04.5 +1.8
BRANT                           Sg    Sg    14 14 14.7 +2.3
BRANT Les Verrieres    0.70 237 ⇑Pg   Pb    14 14 04.6 +1.8
SLUB  Luzern Bramber   0.71 111 ⇑Pg   Pb    14 14 03.8 +1.0
SINS  Interlaken, Sc   0.73 150 ⇓Pg   Pb    14 14 04.6 +1.4
KIZ   Kirchzarten      0.75  31  Pg   Pb    14 14 03.5  0.0
KIZ                             Sg    Sb    14 14 13.8 +0.5
KIZ   Kirchzarten      0.75  31 ⇑Pn   Pb    14 14 03.5  0.0
KIZ   Kirchzarten      0.75  31 ⇑Pn   Pb    14 14 03.5  0.0
KIZ                             Pg    Pg    14 14 04.4 +0.6
KIZ                             Sg    Sb    14 14 14.0 +0.7
SARK  Sarnen Kantons   0.75 124  Pg   Pb    14 14 04.8 +1.3
FBB   Freiburg im Br   0.77  27  Pn   Pb    14 14 03.9 +0.1
FBB                             Sn    Sb    14 14 13.9 +0.1
FBB                             Sg    Sg    14 14 15.1 +0.7
EWZT2 Wettswil, ZR     0.79  88 ⇑Pn   Pb    14 14 04.6 +0.5
HASLI Hasliberg/Brie   0.79 135 ⇓Pn   Pb    14 14 05.2 +0.9
ZUR   Degenried        0.85  86 ⇑Pn   Pb    14 14 05.5 +0.3
BNALP Bannalp          0.87 121  S    Sb    14 14 17.2 +0.3
BNALP Bannalp          0.87 121  P    Pb    14 14 06.2 +0.6
BNALP                           S     Sb    14 14 17.2 +0.3
BNALP                           AML   AML
      comp=E,2105µm,0.4s
BNALP                           AML   AML
      comp=N,1555µm,0.4s
BNALP                           AML   AML
      comp=E,2105µm,0.4s
BNALP                           AML   AML
      comp=N,1555µm,0.4s
BNALP                           AML   AML
      comp=E,2105µm,0.4s
BNALP                           AML   AML
      comp=N,1555µm,0.4s
FLACH Flaach           0.87  73 ⇑Pn   Pb    14 14 05.6  0.0
SLE   Schleitheim      0.90  60  Pg   Pb    14 14 05.6 -0.4
SLE   Schleitheim      0.90  60 ⇑Pn   Pb    14 14 05.7 -0.4
SLE   Schleitheim      0.90  60 ePn   Pb    14 14 05.7 -0.4
SLE                             Pg    Pg    14 14 06.9 +0.2
SLE                             Sg    Sb    14 14 18.3 +0.6
ECH   Echery           0.90 352  Pg   Pb    14 14 06.3 +0.1
ECH   Echery           0.90 352 ⇓Pn   Pb    14 14 06.3 +0.1
ECH   Echery           0.90 352 ePn   Pb    14 14 06.3 +0.1
ECH                             ePg   Pg    14 14 07.6 +0.8
ECH                             Sn    Sb    14 14 17.6 -0.3
ECH                             eSg   Sg    14 14 19.5 +0.8
STIEG Stiegenhof Hun   0.91  78 ⇑Pn   Pb    14 14 06.2 -0.1
LAUCH Lauchernalp      0.95 162 ⇓Pn   Pb    14 14 07.7 +0.6
LKBD  Leukerbad        0.95 168 ⇓Pn   Pb    14 14 07.7 +0.6
MUO   Muotathal        0.95 111 ⇑Pn   Pb    14 14 07.5 +0.4
HAU   Haudompre        0.96 316 ePg   Pb    14 14 08.3 +1.2
      SNR=1.0
HAU                             eSn   Sb    14 14 18.3 -1.1
HAU                             eSg   Sg    14 14 21.6 +1.2
      comp=N,464nm,0.2s,SNR=1.0
SENIN Lac Senin/Sane   0.96 182 ⇓Pn   Pb    14 14 07.8 +0.6
TRULL Truellikon       0.97  70 ⇑Pn   Pb    14 14 06.8 -0.4
LKBD2 Leukerbad 2      0.97 167 ⇓Pn   Pb    14 14 08.0 +0.6
GRIMS Grimsel Gerste   1.00 138 ⇓Pn   Pb    14 14 08.4 +0.4
AIGLE Aigle            1.01 195  Pn   Pb    14 14 08.1  0.0
FIESA Fiescheralp      1.03 149 ⇓Pn   Pb    14 14 09.0 +0.5
WILA  Wila             1.07  84 ⇑Pn   Pb    14 14 08.7 -0.3
WILA  Wila             1.07  84 ePn   Pb    14 14 08.8 -0.3
WILA                            ePg   Pn    14 14 10.2 +1.1
WILA                            eSg   Sb    14 14 23.9 +1.2
GIMEL St. Georges /    1.08 223  Pg   Pb    14 14 09.5 +0.4
GIMEL                           Sg    Sb    14 14 24.7 +1.8
GIMEL St. Georges /    1.08 223  P    Pb    14 14 09.5 +0.4
GIMEL St. Georges /    1.08 223  P    Pb    14 14 09.5 +0.4
GIMEL                           S     Sb    14 14 24.2 +1.4
GIMEL                           AML   AML
      comp=E,1315µm,0.2s
GIMEL                           AML   AML
      comp=N,1510µm,0.2s
GIMEL                           AML   AML
      comp=E,1315µm,0.2s
GIMEL                           AML   AML
      comp=N,1510µm,0.2s
GIMEL                           AML   AML
      comp=N,1510µm,0.2s
GIMEL                           AML   AML
      comp=E,1315µm,0.2s
GIMEL St. Georges /    1.08 223  P    Pb    14 14 09.5 +0.4
CDF   Champ du Feu     1.09 358 ePn   Pb    14 14 08.8 -0.7
      SNR=1.0
CDF   Champ du Feu     1.09 358 ePg   Pb    14 14 10.5 +1.0
CDF                             eSg   Sb    14 14 24.3 +0.9
      comp=E,279nm,0.2s
WLS   Welschbruch      1.09   1  Pg   Pb    14 14 08.9 -0.5
WLS                             Sn    Sb    14 14 23.2 -0.2
WLS   Welschbruch      1.09   1 ⇓Pn   Pb    14 14 08.9 -0.5
STEIN Stein am Rhein   1.09  71 ⇓Pn   Pb    14 14 08.8 -0.7
CABF  La Chapelle      1.11 231 ePg   Pb    14 14 11.9 +2.1
      SNR=1.0
CABF                            eSn   Sb    14 14 23.1 -0.8
CABF                            eSg   Sn    14 14 26.3 +1.7
      comp=E,260nm,0.2s,SNR=1.0
VANNI Vissoie, Val d   1.12 171 ⇓Pn   Pn    14 14 10.4 +0.5
WEIN  Weingarten       1.14  79 ⇑Pn   Pn    14 14 09.6 -0.5
EMBD  Embd, Matterta   1.16 163  Pn   Pn    14 14 10.8 +0.4
EMBD                            Pg    Pb    14 14 12.1 +1.6
EMBD                            Sg    Sb    14 14 26.9 +1.8
EMBD  Embd, Matterta   1.16 163 ⇓Pn   Pn    14 14 10.7 +0.4
SISB  Singen-Schiene   1.16  71  Pn   Pn    14 14 09.6 -0.8
SISB                            Pg    Pb    14 14 11.5 +1.0
SIMPL Simplonpass      1.18 156 ⇓Pn   Pn    14 14 11.1 +0.3
BFO   Black Forest     1.21  33 ⇑Pn   Pn    14 14 09.6 -1.4
BFO   Black Forest     1.21  33 ePn   Pn    14 14 09.7 -1.4
BFO                             ePg   Pb    14 14 13.0 +1.5
BFO                             eSn   Sb    14 14 24.4 -2.3
BFO                             eSg   Sn    14 14 27.5 +0.6
DIX   Grande Dixence   1.24 178 ⇓Pn   Pn    14 14 12.1 +0.5
DIX   Grande Dixence   1.24 178  P    Pn    14 14 12.1 +0.5
DIX                             AML   AML
      comp=E,608µm,0.4s
DIX                             AML   AML
      comp=N,378µm,0.4s
DIX                             AML   AML
      comp=E,608µm,0.4s
DIX                             AML   AML
      comp=N,378µm,0.4s
DIX                             AML   AML
      comp=E,608µm,0.4s
DIX                             AML   AML
      comp=N,378µm,0.4s
FUSIO Fusio            1.25 133 ⇓Pn   Pn    14 14 11.9 +0.2
FUSIO Fusio            1.25 133  P    Pn    14 14 11.9 +0.2
FUSIO                           S     Sb    14 14 26.8 -1.2
FUSIO                           AML   AML
      comp=E,475µm,0.3s
FUSIO                           AML   AML
      comp=N,520µm,0.4s
FUSIO                           AML   AML
      comp=E,475µm,0.4s
FUSIO                           AML   AML
      comp=N,520µm,0.4s
FUSIO                           AML   AML
      comp=N,520µm,0.4s
FUSIO                           AML   AML
      comp=E,475µm,0.4s
OPP   Oppenau          1.31  26  Pn   Pn    14 14 11.0 -1.4
OPP   Oppenau          1.31  26 ⇑Pn   Pn    14 14 11.0 -1.4
OPP                             Sn    Sn    14 14 26.7 -2.7
OPP                             Sg    Sb    14 14 31.1 +1.6
PANIX Pigniu (Panix)   1.31 112 ⇑P    Pn    14 14 12.9 +0.4
PANIX                           ⇑Pn   Pn    14 14 12.9 +0.4
SGT02 Zihlschlacht     1.31  81 ⇑Pn   Pn    14 14 12.0 -0.4
MMK   Mattmark         1.34 161 ⇓Pn   Pn    14 14 13.7 +0.7
MMK   Mattmark         1.34 161  P    Pn    14 14 13.7 +0.7
MMK                             AML   AML
      comp=E,101µm,0.5s
MMK                             AML   AML
      comp=N,122µm,0.7s
MMK                             AML   AML
      comp=E,101µm,0.5s
MMK                             AML   AML
      comp=N,122µm,0.7s
MMK                             AML   AML
      comp=E,101µm,0.5s
MMK                             AML   AML
      comp=N,122µm,0.7s
SGT00 Sennhlsen        1.34  85 ⇑Pn   Pn    14 14 12.6 -0.2
SGT04 Schlatt-Haslen   1.37  88 ⇑Pn   Pn    14 14 13.2  0.0
OG02  Monnetier-Morn   1.40 214  Pn   Pn    14 14 14.0 +0.4
OG02                            Sg    Sb    14 14 34.4 +2.3
GUT   Gutenstein       1.42  57 ⇑Pn   Pn    14 14 12.5 -1.4
GUT   Gutenstein       1.42  57 ⇑Pn   Pn    14 14 12.4 -1.4
GUT                             Pg    Pb    14 14 16.3 +1.3
GUT                             Sg    Sb    14 14 33.9 +1.3
PLONS Plons/SG         1.42 100 ⇑Pn   Pn    14 14 14.1 +0.2
PLONS Plons/SG         1.42 100 ePn   Pn    14 14 14.2 +0.2
PLONS                           ePg   Pb    14 14 16.3 +1.3
PLONS                           eSn   Sn    14 14 30.2 -2.0
PLONS                           eSg   Sb    14 14 34.2 +1.5
PLONS Plons/SG         1.42 100  P    Pn    14 14 14.1 +0.2
PLONS                           AML   AML
      comp=E,304µm,1.4s
PLONS                           AML   AML
      comp=N,325µm,0.6s
PLONS                           AML   AML
      comp=E,304µm,1.4s
PLONS                           AML   AML
      comp=N,325µm,0.6s
PLONS                           AML   AML
      comp=N,325µm,0.6s
PLONS                           AML   AML
      comp=E,304µm,1.4s
LIENZ Kamor/St.Gall    1.47  90 ⇑Pn   Pn    14 14 14.7  0.0
LIENZ Kamor/St.Gall    1.47  90 ⇑Pn   Pn    14 14 14.7  0.0
LIENZ                           Pg    Pb    14 14 17.5 +1.7
REMY  Saint-Rhmy-en    1.49 185  P    Pn    14 14 15.5 +0.5
REMY  Saint-Rhmy-en    1.49 185  Pn   Pn    14 14 15.6 +0.5
REMY  Saint-Rhmy-en    1.49 185  P    Pn    14 14 15.5 +0.5
REMY                            AML   AML
      comp=E,448µm,0.8s
REMY                            AML   AML
      comp=N,702µm,1.0s
REMY                            AML   AML
      comp=E,448µm,0.8s
REMY                            AML   AML
      comp=N,702µm,1.0s
REMY                            AML   AML
      comp=E,448µm,0.8s
REMY                            AML   AML
      comp=N,702µm,1.0s
SATI  Passo dei Sala   1.49 166  P    Pn    14 14 15.9 +0.8
SATI                            AML   AML
      comp=E,202µm,0.6s
SATI                            AML   AML
      comp=N,172µm,0.5s
SATI                            AML   AML
      comp=E,202µm,0.6s
SATI                            AML   AML
      comp=N,172µm,0.5s
SATI                            AML   AML
      comp=E,202µm,0.6s
SATI                            AML   AML
      comp=N,172µm,0.5s
MRGE  Morge            1.56 187  P    Pn    14 14 16.4 +0.4
MRGE                            AML   AML
      comp=E,550µm,0.2s
MRGE                            AML   AML
      comp=N,352µm,0.3s
MRGE                            AML   AML
      comp=E,550µm,0.2s
MRGE                            AML   AML
      comp=N,352µm,0.3s
MRGE                            AML   AML
      comp=N,352µm,0.3s
MRGE                            AML   AML
      comp=E,550µm,0.2s
TUE   Stuetta          1.62 121  P    Pn    14 14 18.0 +1.2
TUE                             AML   AML
      comp=E,204µm,1.3s
TUE                             AML   AML
      comp=N,223µm,0.4s
TUE                             AML   AML
      comp=E,276µm,1.3s
TUE                             AML   AML
      comp=N,289µm,0.4s
TUE                             AML   AML
      comp=E,204µm,1.3s
TUE                             AML   AML
      comp=N,223µm,0.4s
TUE                             AML   AML
      comp=E,276µm,1.3s
TUE                             AML   AML
      comp=N,289µm,0.4s
TUE                             AML   AML
      comp=E,204µm,1.3s
TUE                             AML   AML
      comp=N,223µm,0.4s
TUE                             AML   AML
      comp=N,289µm,0.4s
TUE                             AML   AML
      comp=E,276µm,1.3s
PAGF  Fort de Pagny    1.64 319 ePg   Pg    14 14 21.8 +1.1
      baz=131
PAGF                            eSg   Sb    14 14 42.7 +3.6
      comp=E,71nm,0.2s,baz=134
LBG   Lerchenberg      1.66  36⇑iPn   Pn    14 14 15.5 -1.7
LBG                             Pg    Pb    14 14 21.3 +2.2
VDL   Val di Lei       1.67 119  Pn   Pn    14 14 18.9 +1.4
TUBL  Tuebingen-Lenn   1.68  44  Sg   Sb    14 14 41.1 +0.9
RSL   Roselend         1.71 197  Pn   Pn    14 14 18.1 +0.1
RSL                             Sg    Sb    14 14 43.5 +2.5
RSL   Roselend         1.71 197  Pn   Pn    14 14 18.1 +0.1
DAVA  Damuels          1.73  90 ePn   Pn    14 14 18.4 +0.1
      comp=E,2.1nm,0.1s,SNR=18
DAVA                            ePg   Pb    14 14 22.0 +1.7
      comp=E,13nm,0.1s
DAVA                            Sg    Sb    14 14 44.0 +2.3
      comp=E,17nm,0.2s
DAVA  Damuels          1.73  90 ⇑Pn   Pn    14 14 18.4 +0.1
DAVA  Damuels          1.73  90 ePn   Pn    14 14 18.5 +0.1
DAVA                            ePg   Pb    14 14 22.1 +1.7
DAVA                            eSg   Sb    14 14 43.7 +1.9
VARE  Varese           1.76 145  P    Pn    14 14 19.4 +0.8
VARE                            AML   AML
      comp=E,204µm,0.3s
VARE                            AML   AML
      comp=N,212µm,1.1s
VARE                            AML   AML
      comp=E,204µm,0.3s
VARE                            AML   AML
      comp=N,212µm,1.1s
BUCH  Bad Urach        1.77  49⇑iPn   Pn    14 14 17.0 -1.7
BUCH                            Pg    Pg    14 14 24.9 +1.9
BUCH                            Sg    Sb    14 14 44.6 +1.9
PEB   Petersbachel     1.77   8  Pn   Pn    14 14 18.0 -0.7
PEB                             Pg    Pg    14 14 24.2 +1.2
PEB                             Sg    Sg    14 14 46.2 +0.1
SFTF  Sexfontaines     1.79 301 ePn   Pn    14 14 19.0 +0.1
      baz=121
SFTF  Sexfontaines     1.79 301 ePg   Pg    14 14 24.4 +0.9
      baz=120
SFTF                            eSn   Sn    14 14 38.4 -2.7
SFTF                            eSg   Sb    14 14 47.0 +3.8
      comp=N,171nm,0.2s
DAVOX Davos/Dischmat   1.82 106  P    Pn    14 14 20.4 +0.9
DAVOX                           AML   AML
      comp=E,106µm,1.1s
DAVOX                           AML   AML
      comp=N,160µm,0.4s
DAVOX                           AML   AML
      comp=N,160µm,0.4s
DAVOX                           AML   AML
      comp=E,106µm,1.1s
MUGIO Muggio           1.83 139  P    Pn    14 14 20.2 +0.6
MUGIO                           AML   AML
      comp=E,590µm,0.4s
MUGIO                           AML   AML
      comp=N,715µm,0.4s
MUGIO                           AML   AML
      comp=E,590µm,0.4s
MUGIO                           AML   AML
      comp=N,715µm,0.4s
TRAV  Traversella      1.83 171  P    Pn    14 14 20.8 +1.3
TRAV  Traversella      1.83 171  Pn   Pn    14 14 21.0 +1.4
TRAV  Traversella      1.83 171  P    Pn    14 14 20.9 +1.3
TRAV                            AML   AML
      comp=E,124µm,0.2s
TRAV                            AML   AML
      comp=N,134µm,0.4s
TRAV                            AML   AML
      comp=N,134µm,0.4s
TRAV                            AML   AML
      comp=E,124µm,0.2s
LPL   La Plagne        1.85 193 ePn   Pn    14 14 20.0  0.0
      SNR=1.0
LPL   La Plagne        1.85 193 ePg   Pg    14 14 25.4 +0.7
LPL                             eSn   Sn    14 14 40.9 -2.1
      SNR=1.0
LPL                             eSg   Sg    14 14 50.6 +1.8
      comp=E,86nm,0.4s,SNR=1.0
LSD   Lago del Serru   1.87 184  P    Pn    14 14 21.1 +0.9
LSD   Lago del Serru   1.87 184  Pn   Pn    14 14 21.3 +1.0
LSD   Lago del Serru   1.87 184  P    Pn    14 14 21.1 +0.9
LSD                             AML   AML
      comp=E,178µm,1.0s
LSD                             AML   AML
      comp=N,134µm,1.3s
LSD                             AML   AML
      comp=N,134µm,1.3s
LSD                             AML   AML
      comp=E,178µm,1.0s
LPG   La Plagne        1.87 193 ePn   Pn    14 14 20.4 +0.1
      SNR=1.0
LPG   La Plagne        1.87 193 ePg   Pb    14 14 25.5 +2.7
LPG                             eSg   Sg    14 14 50.3 +1.0
      comp=E,39nm,0.2s,SNR=1.0
UBR   Ueberruh         1.91  78 ⇑Pn   Pn    14 14 20.5 -0.2
UBR   Ueberruh         1.91  78 ePn   Pn    14 14 20.5 -0.2
UBR                             ePg   Pb    14 14 25.8 +2.4
UBR                             eSg   Sg    14 14 50.7  0.0
STU   Stuttgart        1.91  40 ePg   Pg    14 14 27.4 +1.5
STU                             eSg   Sb    14 14 49.1 +2.2
BRET  Bretten          1.92  28 ⇓Pn   Pn    14 14 19.5 -1.3
BRET                            Sn    Sn    14 14 41.7 -2.7
MEZF  Maizieres J’vi   1.94 308 ePn   Pn    14 14 20.1 -0.9
      SNR=1.0
MEZF  Maizieres J’vi   1.94 308 ePg   Pb    14 14 26.4 +2.6
      baz=126
MEZF                            eSn   Sn    14 14 41.9 -3.0
MEZF                            eSg   Sb    14 14 51.7 +4.1
      comp=E,181nm,0.4s,baz=128,SNR=1.0
FUORN Ofenpass-Fuorn   2.12 108  Pn   Pn    14 14 25.1 +1.3
FUORN Ofenpass-Fuorn   2.12 108  P    Pn    14 14 25.0 +1.3
FUORN                           AML   AML
      comp=E,93µm,0.7s
FUORN                           AML   AML
      comp=N,108µm,0.4s
FUORN                           AML   AML
      comp=E,93µm,0.7s
FUORN                           AML   AML
      comp=N,108µm,0.4s
DUP   Duppenweiler     2.12 350  Sg   Sg    14 14 59.2 +1.8
RSP   Reno Superiore   2.17 181  P    Pn    14 14 25.1 +0.7
RSP   Reno Superiore   2.17 181  P    Pn    14 14 25.3 +1.0
RSP   Reno Superiore   2.17 181  P    Pn    14 14 25.1 +0.7
RSP                             AML   AML
      comp=E,114µm,0.7s
RSP                             AML   AML
      comp=N,108µm,0.7s
RSP                             AML   AML
      comp=E,114µm,0.7s
RSP                             AML   AML
      comp=N,108µm,0.7s
GDM   Grand'Maison     2.28 202  Pn   Pn    14 14 25.7 -0.2
HDH   Heidenheim-Cha   2.31  56  Pg   Pg    14 14 33.8 +0.4
HDH                             Sg    Sb    14 15 00.7 +2.6
IMS   Imsbach          2.31   9  Pg   Pg    14 14 34.0 +0.6
IMS                             Sg    Sg    14 15 02.8 -0.5
RETA  Reutte           2.33  85 ePg   Pb    14 14 33.2 +2.7
      comp=N,1.3nm,0.1s,SNR=30
RETA                            eSg   Sg    14 15 03.2 -0.9
      comp=N,17nm,0.3s
FETA  Feichten         2.33  96 ePn   Pn    14 14 26.1 -0.4
      comp=N,0.2nm,0.1s,SNR=14
FETA                            Pg    Pb    14 14 33.4 +2.7
      comp=N,14nm,0.5s
FETA                            Sg    Sg    14 15 04.5 +0.4
      comp=N,4.7nm,0.2s
SWS   Schriesheim-Wi   2.35  22  Sn   Sn    14 14 50.9 -4.0
SWS                             Sg    Sg    14 15 04.3 -0.3
LOR   Lormes           2.37 270 ePn   Pn    14 14 26.2 -0.7
      baz=90,SNR=1.0
LOR   Lormes           2.37 270 ePg   Pg    14 14 35.1 +0.6
      baz=90,SNR=1.0
LOR                             eSn   Sn    14 14 52.9 -2.6
LOR                             eSg   Sb    14 15 04.6 +4.6
      comp=N,113nm,0.2s,baz=89,SNR=1.0
RUP   Ruppelstein      2.39 356  Sg   Sg    14 15 06.3 +0.3
RIVT  Riveris          2.42 351  Pn   Pn    14 14 28.1 +0.5
WLF   Walferdange      2.48 342 ⇑Pn   Pn    14 14 32.2 +3.8
WLF                             ⇑Sg   Sg    14 15 10.6 +1.9
      comp=N,45nm,0.0s
WLF   Walferdange      2.48 342 ePn   Pn    14 14 28.1 -0.2
WLF                             ePg   Pg    14 14 38.0 +1.5
WLF                             eSg   Sg    14 15 09.2 +0.6
BHB   Bricherasio      2.48 181  P    Pn    14 14 29.1 +0.6
BHB   Bricherasio      2.48 181  P    Pn    14 14 28.9 +0.5
BHB                             AML   AML
      comp=E,89µm,0.5s
BHB                             AML   AML
      comp=N,56µm,0.7s
BHB                             AML   AML
      comp=E,89µm,0.5s
BHB                             AML   AML
      comp=N,56µm,0.7s
SMF   Signal de Mont   2.49 256 ePn   Pn    14 14 27.8 -0.8
      SNR=1.0
SMF   Signal de Mont   2.49 256 ePg   Pg    14 14 37.2 +0.4
SMF                             eSn   Sn    14 14 55.1 -3.3
SMF                             eSg   Sg    14 15 10.2 +1.1
      comp=N,68nm,0.2s,SNR=1.0
SIND  Sindeldorf       2.53  36  Pn   Pn    14 14 26.7 -2.5
MOTA  Moosalm          2.56  88 ePn   Pn    14 14 29.2 -0.5
      comp=N,0.7nm,0.1s,SNR=13
MOTA                            ePg   Pb    14 14 37.7 +3.2
      comp=N,2.7nm,0.1s
MOTA                            Sg    Sb    14 15 07.7 +2.1
      comp=N,7.0nm,0.2s
ABH   Alteburg         2.57   3  Pn   Pn    14 14 29.6 -0.1
ABH                             Sg    Sg    14 15 11.2 -0.4
PART  Garmisch-Parte   2.57  85 ePg   Pg    14 14 38.1 -0.3
PART                            eSg   Sg    14 15 11.3 -0.4
ORIF  Oris-en-Rattie   2.61 203 ePn   Pn    14 14 29.5 -0.8
ORIF  Oris-en-Rattie   2.61 203 ePg   Pg    14 14 39.3 +0.2
      SNR=1.0
ORIF                            eSn   Sn    14 14 58.4 -3.1
      SNR=1.0
ORIF                            eSg   Sg    14 15 13.2 +0.3
      comp=N,58nm,0.3s,SNR=1.0
NORI  Noerdlinger Ri   2.61  56 ePg   Pg    14 14 39.5 +0.3
NORI                            eSn   Sn    14 14 58.2 -3.3
NORI                            eSg   Sb    14 15 11.2 +4.2
MBDF  Montbardon       2.62 189 ePn   Pn    14 14 31.3 +0.7
      SNR=1.0
MBDF                            eSg   Sg    14 15 13.6 +0.1
      comp=N,29nm,0.5s,SNR=1.0
SSF   Saint Saulge     2.63 266 ePn   Pn    14 14 29.6 -0.9
      SNR=1.0
SSF   Saint Saulge     2.63 266 ePg   Pg    14 14 39.7 +0.3
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	SNR=1.0						
SSF				eSg	Sg	14 15 14.1	+0.6
	comp=N,74nm,0.4s,SNR=1.0						
SQTA	Sankt Quirin	2.64	91	ePn	Pn	14 14 29.9	-0.8
	comp=N,1.4nm,0.2s,SNR=12						
SQTA				ePg	Pb	14 14 38.9	+3.1
	comp=N,38nm,0.3s,SNR=13						
SQTA				Sg	Sg	14 15 14.6	+0.7
	comp=N,23nm,0.3s						
AVF	Avril sur Loir	2.78	260	ePn	Pn	14 14 31.9	-0.6
	SNR=1.0						
AVF	Avril sur Loir	2.78	260	ePg	Pg	14 14 43.2	+0.9
	SNR=1.0						
AVF				eSn	Sn	14 15 02.1	-3.4
	SNR=1.0						
AVF				eSg	Sg	14 15 17.8	-0.5
	comp=N,25nm,0.3s,SNR=1.0						
ABSI	Aberstueckl	2.79	101	Pn	Pn	14 14 35.3	+2.4
ABSI	Aberstueckl	2.79	101	P	Pn	14 14 35.2	+2.4
ABSI	Aberstueckl	2.79	101	P	Pn	14 14 35.2	+2.4
ABSI				AML	AML		
	comp=E,146µm,0.7s						
ABSI				AML	AML		
	comp=N,150µm,0.6s						
ABSI				AML	AML		
	comp=N,150µm,0.6s						
ABSI				AML	AML		
	comp=E,146µm,0.7s						
ABSI	Aberstueckl	2.79	101	P	Pn	14 14 35.2	+2.4
ROSI	Rosskopf	2.81	97	P	Pn	14 14 35.1	+2.0
ROSI				AML	AML		
	comp=E,336µm,0.6s						
ROSI				AML	AML		
	comp=N,150µm,0.6s						
ROSI				AML	AML		
	comp=N,150µm,0.6s						
ROSI				AML	AML		
	comp=E,336µm,0.6s						
WATA	Walderalm	2.88	88	ePn	Pn	14 14 33.8	-0.3
	comp=E,2.1nm,0.1s						
WATA				Sn	Sn	14 15 06.3	-2.0
	comp=E,7.8nm,0.3s						
BGG	Burgeitz	2.89	360	ePg	Pg	14 14 45.4	+0.9
BGG				eSg	Sb	14 15 18.5	+3.6
	comp=E,18nm,0.3s						
PCP	Piancastagn	2.90	163	P	Pn	14 14 35.7	+1.4
PCP				AML	AML		
	comp=E,132µm,1.5s						
PCP				AML	AML		
	comp=N,191µm,0.5s						
PCP				AML	AML		
	comp=E,132µm,1.5s						
PCP				AML	AML		
	comp=N,191µm,0.5s						
WTTA	Wattenberg	2.93	90	ePn	Pn	14 14 34.1	-0.6
	comp=N,5.7nm,0.2s,SNR=12						
WTTA				eSg	Sg	14 15 24.4	+1.3
	comp=N,9.7nm,0.3s						
WTTA	Wattenberg	2.93	90	Pn	Pn	14 14 36.4	+1.7
WTTA	Wattenberg	2.93	90	ePn	Pn	14 14 36.6	+1.8
WTTA				eSg	Sg	14 15 22.5	-0.6
WTTA	Wattenberg	2.93	90	P	Pn	14 14 36.4	+1.7
WTTA				AML	AML		
	comp=E,76µm,0.9s						
WTTA				AML	AML		
	comp=N,68µm,0.6s						
WTTA				AML	AML		
	comp=N,68µm,0.6s						
WTTA				AML	AML		
	comp=E,76µm,0.9s						
BLI	Bleialf	3.00	347	Pn	Pn	14 14 36.6	+1.0
TNS	Taunus Mts	3.00	14	ePn	Pn	14 14 35.9	+0.3
TNS				eSg	Sg	14 15 24.7	-0.6
HILG	Hillesheim	3.01	352	ePg	Pg	14 14 47.2	+0.5
HILG				eSg	Sb	14 15 21.3	+3.0
	comp=E,34nm,1.0s						
VIVF	Saint-Julien-l	3.08	218	ePn	Pn	14 14 36.0	-0.8
VIVF	Saint-Julien-l	3.08	218	ePg	Pg	14 14 48.2	0.0
VIVF				eSn	Sn	14 15 10.3	-2.9
VIVF				eSg	Sb	14 15 26.3	+5.7
	comp=E,37nm,0.2s,SNR=1.0						
GRC2	Grafenberg Arr	3.12	59	ePg	Pg	14 14 48.6	-0.3
KOE	Koeppel	3.12	5	eSg	Sb	14 15 24.4	+2.9
	comp=E,31nm,0.4s						
BGF	Bois d'Agland	3.17	258	ePn	Pn	14 14 37.3	-0.7
	SNR=1.0						
BGF	Bois d'Agland	3.17	258	ePg	Pg	14 14 50.1	+0.3
BGF				eSn	Sn	14 15 12.3	-2.9
BGF				eSg	Sg	14 15 30.9	0.0
	comp=E,60nm,0.3s,SNR=1.0						
HYF	Humbligny	3.20	271	ePn	Pn	14 14 37.2	-1.1
HYF	Humbligny	3.20	271	ePg	Pg	14 14 50.2	-0.2
HYF				eSn	Sn	14 15 12.7	-3.2
HYF				eSg	Sg	14 15 31.7	-0.1
GIVF	Givet	3.24	330	ePn	Pn	14 14 37.3	-1.6
	SNR=1.0						
GIVF	Givet	3.24	330	eP	Pn	14 14 40.7	+1.8
GIVF	Givet	3.24	330	ePg	Pb	14 14 50.5	+4.5
GIVF				eSn	Sn	14 15 12.9	-4.1
	SNR=1.0						
GIVF				eSg	Sg	14 15 31.7	-1.6
	comp=E,55nm,0.6s,SNR=1.0						
GRC3	Grafenberg Arr	3.25	60	ePg	Pg	14 14 50.9	-0.4
GRC3				eSg	Sg	14 15 31.7	-1.8
GRC1	Grafenberg Arr	3.26	58	ePg	Pg	14 14 51.2	-0.5
STB	Steinbach	3.29	354	ePg	Pb	14 14 51.1	+4.2
STB				eSg	Sb	14 15 28.4	+1.9
	comp=E,12nm,0.5s						
DOU	Dourbes	3.32	328	Pn	Pn	14 14 40.1	+0.1
DOU	Dourbes	3.32	328	⇓Pn	Pn	14 14 41.4	+1.4
DOU				⇓Sn	Sn	14 15 19.0	+0.1
	comp=N,31nm,0.0s						
SAOF	Saorge	3.34	177	Pn	Pn	14 14 40.2	0.0
MEM	Membach	3.41	346	⇑Pn	Pn	14 14 42.4	+1.2
MEM				⇓Sn	Sn	14 15 20.1	-0.9
	comp=N,19nm,0.0s						
BAIF	Baives	3.44	324	ePn	Pn	14 14 40.1	-1.5
BAIF				eSn	Sn	14 15 17.3	-4.5
	SNR=1.0						
BAIF				eSg	Sg	14 15 37.8	-1.6
	comp=N,22nm,0.4s,SNR=1.0						
SBF	Sospel	3.46	179	ePn	Pn	14 14 41.2	-0.8
	SNR=1.0						
SBF	Sospel	3.46	179	ePg	Pg	14 14 55.0	-0.3
SBF				eSn	Sn	14 15 19.0	-3.4
SBF				eSg	Sg	14 15 39.7	-0.4
	comp=N,59nm,0.5s,SNR=1.0						
GRF	Grafenberg Arr	3.51	46	ePg	Pg	14 14 55.8	-0.4
GRF				eSg	Sg	14 15 40.3	-1.4
SMRF	Simiane la Rot	3.57	201	ePn	Pn	14 14 42.7	-0.7
	SNR=1.0						
SMRF	Simiane la Rot	3.57	201	ePg	Pg	14 14 57.0	-0.4
SMRF				eSn	Sn	14 15 20.9	-4.1
	SNR=1.0						
SMRF				eSg	Sg	14 15 43.3	-0.3
	comp=N,13nm,0.5s,SNR=1.0						
CALF	Calern	3.58	185	Pn	Pn	14 14 44.4	+0.7
ABTA	Abfaltersbach	3.58	97	i Pn	Pn	14 14 45.6	+1.9
	comp=N,3.3nm,0.2s						
ABTA				ePg	Pg	14 14 56.9	-0.8
	comp=N,6.6nm,0.2s						
ABTA				eSn	Sn	14 15 26.1	+0.6
	comp=N,5.3nm,0.2s						
TCF	Toulx Ste Croi	3.67	256	ePn	Pn	14 14 44.3	-0.5
	SNR=1.0						
TCF				eSn	Sn	14 15 24.2	-3.4
	SNR=1.0						
TCF				eSg	Sg	14 15 46.2	-0.7
	comp=N,9.8nm,0.2s,SNR=1.0						
RJOB	Jochberg	3.72	82	ePn	Pn	14 14 46.5	+1.0
FRF	La Foret Royal	3.79	188	ePn	Pn	14 14 45.4	-1.1
FRF	La Foret Royal	3.79	188	ePg	Pg	14 15 00.9	-0.8
FRF				eSn	Sn	14 15 26.8	-3.7
	SNR=1.0						
FRF				eSg	Sg	14 15 50.1	-0.7
	comp=N,10.0nm,0.2s,SNR=1.0						
LMR	La Mourre	4.03	189	ePn	Pn	14 14 48.8	-0.9
	SNR=1.0						
LMR	La Mourre	4.03	189	ePg	Pg	14 15 05.0	-1.2
LMR				eSn	Sn	14 15 32.5	-3.9
LMR				eSg	Sg	14 15 57.6	-0.8
	comp=N,5.9nm,0.2s,SNR=1.0						
LASF	Ste Croix	4.06	218	ePn	Pn	14 14 49.4	-0.8
	SNR=1.0						
LASF	Ste Croix	4.06	218	ePg	Pg	14 15 06.0	-0.8
LASF				eSn	Sn	14 15 33.4	-3.8
	SNR=1.0						
LASF				eSg	Sg	14 15 58.8	-0.6
	comp=N,18nm,0.3s,SNR=1.0						
KBA	Koelnbreinsper	4.10	91	ePn	Pn	14 14 49.7	-1.2
	comp=N,1.7nm,0.2s,SNR=6.7						
KBA				Pg	Pg	14 15 06.2	-1.4
	comp=N,4.2nm,0.3s						
KBA				eSn	Sn	14 15 37.1	-1.4
	comp=N,1.5nm,0.2s						
MOX	Moxa	4.36	39	eSn	Sn	14 15 40.9	-3.7
CAF	Calviac	4.38	239	ePn	Pn	14 14 53.6	-1.0
CAF				eSn	Sn	14 15 40.9	-4.2
	SNR=1.0						
CAF				eSg	Sg	14 16 08.9	-0.7
	comp=N,7.9nm,0.2s,SNR=1.0						
NKC	Novy Kostel	4.46	47	ePG	Pb	14 15 11.4	+4.6
NKC				eSG	Sg	14 16 10.8	-1.4
	comp=N,48nm,0.9s						
RJF	Les Rejaudoux	4.51	246	ePn	Pn	14 14 55.2	-1.2
RJF	Les Rejaudoux	4.51	246	ePg	Pg	14 15 14.5	-0.9
RJF				eSn	Sn	14 15 44.1	-4.2
RJF				eSg	Sg	14 16 11.9	-1.9
	comp=N,11nm,0.3s,SNR=1.0						
KHC	Kasperske Hory	4.55	64	ePN	Pn	14 14 57.0	+0.1
KHC				ePG	Pb	14 15 12.2	+3.9
KHC				eSG	Sg	14 16 13.4	-1.6
PGF	Pioggiola	4.92	166	ePn	Pn	14 15 00.0	-2.0
LFF	La Frestale	5.17	245	ePn	Pn	14 15 04.1	-1.3
LFF	La Frestale	5.17	245	ePg	Pg	14 15 26.9	-1.1
LFF				eSn	Sn	14 15 59.7	-4.7
LFF				eSg	Sg	14 16 32.9	-2.0
	comp=N,10nm,0.3s						
LDF	La Druitiere	5.17	287	ePn	Pn	14 15 04.5	-0.9
LDF	La Druitiere	5.17	287	ePg	Pg	14 15 26.2	-1.9
LDF				eSn	Sn	14 15 59.4	-5.1
LDF				eSg	Sg	14 16 32.7	-2.3
	comp=N,26nm,0.4s						
MFF	Saint Martin d	5.17	265	ePn	Pn	14 15 04.5	-1.0
	SNR=1.0						
MFF				eSn	Sn	14 15 59.3	-5.3
	SNR=1.0						
MFF				eSg	Sg	14 16 33.0	-2.1
	comp=N,6.3nm,0.4s						
MTLF	Montolieu	5.37	224	ePn	Pn	14 15 07.6	-0.6
MTLF	Montolieu	5.37	224	ePg	Pg	14 15 30.3	-1.6
MTLF				eSn	Sn	14 16 05.4	-4.1
	SNR=1.0						
MTLF				eSg	Sg	14 16 39.6	-1.8
	comp=N,5.5nm,0.3s,SNR=1.0						
FLN	La Foliniere	5.44	288	ePn	Pn	14 15 07.7	-1.4
	baz=108						
FLN	La Foliniere	5.44	288	ePg	Pg	14 15 30.5	-2.7
	baz=109						
FLN				eSn	Sn	14 16 05.8	-5.3
	baz=116,SNR=1.0						
FLN				eSg	Sg	14 16 40.9	-2.7
	comp=N,27nm,0.4s,baz=111						
CLL	Collm	5.44	41	ePg	Pg	14 15 31.0	-2.2
CLL				eSg	Sg	14 16 38.0	-5.7
	comp=Z,15nm,0.7s						
PRU	Pruhonice	5.47	58	eSG	Sg	14 16 42.6	-1.9
	comp=Z,15nm,0.9s						
GOPC	GO Pecny, Ondr	5.58	60	eSG	Sg	14 16 46.4	-1.6
BRG	Berggiesshubel	5.61	48	PG	Pg	14 15 36.9	+0.5
BRG				SG	Sg	14 16 46.9	-2.0
	comp=Z,21nm,1.0s						
GRR	Gorron	5.62	284	ePn	Pn	14 15 10.2	-1.4
GRR				eSn	Sn	14 16 09.9	-5.7
GRR				eSg	Sg	14 16 46.8	-2.5
	comp=Z,14nm,0.3s						
CONA	Conrad Observa	5.79	81	ePn	Pn	14 15 13.7	-0.4
	comp=Z,0.4nm,0.1s						
EPF	Esparros	6.54	232	eSg	Sg	14 17 15.7	-3.3
	comp=Z,2.6nm,0.3s						
UPC	Upice	6.54	58	eSG	Sg	14 17 17.3	-1.7
	comp=Z,13nm,0.9s						
DPC	Dobruska-Polom	6.66	60	eSG	Sg	14 17 21.1	-1.5
	comp=Z,7.3nm,0.6s						
OSTC	Ostas	6.68	58	eSG	Sg	14 17 22.0	-1.4
	comp=Z,7.7nm,0.7s						
SGMF	Saint Gilles	6.73	282	ePn	Pn	14 15 25.6	-1.3
SGMF				eSn	Sn	14 16 36.8	-6.2
	comp=Z,3.4nm,0.3s						
SGMF				eSg	Sg	14 17 21.7	-3.3
	comp=Z,6.4nm,0.4s						
QUIF	Quistinic	7.13	279	ePn	Pn	14 15 31.3	-0.9
QUIF	Quistinic	7.13	279	ePg	Pg	14 16 02.3	-3.1
QUIF				eSn	Sn	14 16 46.4	-6.2
	comp=Z,2.5nm,0.2s						
ROSF	Rostrenen	7.22	282	ePg	Pg	14 16 03.6	-3.5
ROSF				eSn	Sn	14 16 48.1	-6.8
	comp=Z,5.1nm,0.3s,SNR=1.0						
ROSF				eSg	Sg	14 17 36.5	-4.0
	comp=Z,11nm,0.5s						
SJPF	Ste Jean	7.36	238	ePn	Pn	14 15 34.7	-0.9
SJPF	Ste Jean	7.36	238	ePg	Pg	14 16 07.0	-3.0
SJPF				eSn	Sn	14 16 52.4	-6.2
SJPF				eSg	Sg	14 17 42.1	-3.1
	comp=Z,2.9nm,0.5s						

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*NEIC **03** 14:15:56.0±0.0, 40°.37S×174°.75E, h34^{km}, ML4.0(WEL), After WEL.*

WEL 03 14:15:54.7, 40°S±1°×**17°5E**±°**, h70**^{km}±2^{km}**, M4.0**/57, **ML4.3**/43, **MLv4.0**/57, **Error ellipse: s-maj=0.0km s-min=0.0km az=53.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHWZ	Ohakea	0.46	68	P	Pn	14 16 07.3	+0.2
OHWZ				S	Sn	14 16 17.0	+0.8
OGWZ	Otaki Gorge	0.54	144	P	Pn	14 16 08.1	+0.2
OGWZ				S	Sn	14 16 18.3	+0.8
WAZ	Wanganui	0.65	16	P	Pn	14 16 09.1	0.0
WAZ				S	Sn	14 16 20.1	+0.5
MRZ	Mangatainoka R	0.68	114	P	Pn	14 16 09.6	+0.2
MRZ				S	Sn	14 16 21.4	+1.2
CAW	Cannon Point	0.76	162	P	Pn	14 16 10.7	+0.4
DUWZ	D'Urville Isla	0.77	236	P	Pn	14 16 10.0	-0.4
POWZ	Post Office Ro	0.77	91	P	Pn	14 16 10.7	+0.2
HOWZ	Holdsworth Sta	0.77	132	P	Pn	14 16 10.7	+0.2
TCW	Tory Channel	0.91	204	P	Pn	14 16 12.6	+0.5
SNZO	South Karori	0.93	183	ePn	Pn	14 16 12.3	0.0
PRWZ	Pori Road	0.94	101	P	Pn	14 16 13.0	+0.6
TIWZ	Tintock	0.94	115	P	Pn	14 16 13.4	+0.9
MTW	Mount Morrison	0.96	144	P	Pn	14 16 13.0	+0.3
LREZ	Lake Rotokare	0.96	343	P	Pn	14 16 13.0	+0.3
BHW	Baring Head	1.03	175	P	Pn	14 16 14.1	+0.6
DVHZ	Dannevirke	1.08	86	P	Pn	14 16 14.0	-0.3
MSWZ	Moikau Station	1.10	160	P	Pn	14 16 15.5	+1.0
PAWZ	Paruwai Farm	1.12	153	P	Pn	14 16 15.7	+1.0
TMWZ	Te Maipa	1.12	131	P	Pn	14 16 15.6	+0.8
MTVZ	Mangateitei	1.14	29	P	Pn	14 16 15.7	+0.7
PREZ	Palmer Road	1.14	336	P	Pn	14 16 15.7	+0.8
BFZ	Birch Farm	1.17	105	ePn	Pn	14 16 16.0	+0.6
BFZ	Birch Farm	1.17	105	P	Pn	14 16 15.6	+0.3
PKVZ	Pokaka	1.18	23	P	Pn	14 16 15.4	-0.1
NMEZ	Namu Road	1.18	325	P	Pn	14 16 16.1	+0.7
PNHZ	Pukenui	1.20	68	P	Pn	14 16 15.8	+0.1
CPWZ	Castlepoint	1.22	116	P	Pn	14 16 17.3	+1.4
TUWZ	Tuamarina	1.22	210	P	Pn	14 16 16.5	+0.6
KHEZ	Kahui Hut	1.23	332	P	Pn	14 16 16.8	+0.6
TRWZ	Traveller	1.24	146	P	Pn	14 16 18.5	+2.2
MOVZ	Moawhango	1.24	38	P	Pn	14 16 16.6	+0.3
PLWZ	Palliser	1.25	163	P	Pn	14 16 17.5	+1.1
VRZ	Vera Road	1.25	360	P	Pn	14 16 16.7	+0.3
DREZ	Durham Road	1.27	340	P	Pn	14 16 17.5	+0.9
DRZ	Dome Shelter	1.27	30	P	Pn	14 16 18.2	+1.2
WHVZ	Whangaehu Hut	1.27	30	P	Pn	14 16 17.4	+0.5
FWVZ	Far West T-bar	1.28	29	P	Pn	14 16 17.1	+0.1
NBEZ	Newall Road No	1.31	328	P	Pn	14 16 17.7	+0.6
TUVZ	Tukino	1.31	32	P	Pn	14 16 18.1	+0.8
ANWZ	Angora Road	1.31	94	P	Pn	14 16 17.3	+0.1
WPHZ	Waipukurau	1.32	77	P	Pn	14 16 18.2	+0.8
PKE	Pukeiti	1.33	333	P	Pn	14 16 18.0	+0.5
BHHZ	Black Hill Sta	1.34	49	P	Pn	14 16 18.1	+0.4
NNZ	Nelson	1.34	231	P	Pn	14 16 17.9	+0.4
MHEZ	Mangahewa	1.35	345	P	Pn	14 16 18.8	+1.1
NGZ	Ngauruhoe	1.37	29	P	Pn	14 16 18.8	+0.7
TWVZ	Taurewa	1.41	22	P	Pn	14 16 18.8	+0.2
WTVZ	West Tongariro	1.42	27	P	Pn	14 16 19.1	+0.4
CMWZ	Cape Campbell	1.43	197	P	Pn	14 16 20.0	+1.3
PRHZ	Porangahau	1.44	86	P	Pn	14 16 19.8	+1.0
KRHZ	Kereru	1.44	60	P	Pn	14 16 18.9	0.0
KRVZ	Karewarewa	1.45	28	P	Pn	14 16 19.8	+0.6
BSWZ	Blackbirch Sta	1.49	206	P	Pn	14 16 20.4	+0.9
KATZ	Kakaramea	1.58	27	P	Pn	14 16 21.9	+1.0
KWHZ	Kaweka Forest	1.60	54	P	Pn	14 16 21.2	+0.2
RITZ	Rihia Road	1.64	32	P	Pn	14 16 22.4	+0.9
PXZ	Pawanui	1.65	78	P	Pn	14 16 21.8	+0.2
RATZ	Rangitukua	1.70	28	P	Pn	14 16 23.5	+1.1
KAHZ	Kahuranaki	1.73	71	P	Pn	14 16 22.6	-0.1
QRZ	Quartz Range	1.76	255	P	Pn	14 16 23.0	-0.1
MCHZ	McNeill Hill	1.76	58	P	Pn	14 16 23.3	+0.2
BKZ	Black Stump Fm	1.80	48	ePn	Pn	14 16 23.4	-0.4
BKZ	Black Stump Fm	1.80	48	P	Pn	14 16 23.7	-0.1
HATZ	Hinemaiaia	1.81	35	P	Pn	14 16 25.2	+1.3
WATZ	Wairara	1.83	25	P	Pn	14 16 24.9	+0.7
HIZ	Hauiti	1.87	2	ePn	Pn	14 16 25.1	+0.5
HIZ	Hauiti	1.87	2	P	Pn	14 16 25.3	+0.7
THZ	Tophouse	1.97	225	ePn	Pn	14 16 26.4	+0.4
THZ	Tophouse	1.97	225	P	Pn	14 16 27.0	+1.0
MRHZ	Matea Rd	2.01	40	P	Pn	14 16 26.1	-0.4
NMHZ	Naumai	2.03	52	P	Pn	14 16 26.9	0.0
ARHZ	Aropaoanui	2.05	58	P	Pn	14 16 26.5	-0.5
KUTZ	Kaahu Road	2.06	24	P	Pn	14 16 28.3	+1.1
TLZ	Tolley Road	2.14	17	P	Pn	14 16 28.4	+0.2
WPRZ	Whakapapatarin	2.15	31	P	Pn	14 16 28.5	0.0
ALRZ	Allen Road	2.19	35	P	Pn	14 16 28.8	-0.2
MTHZ	Maungataniwha	2.22	47	P	Pn	14 16 28.9	-0.4
KHZ	Kahutara	2.23	204	ePn	Pn	14 16 29.4	-0.1
KHZ	Kahutara	2.23	204	P	Pn	14 16 29.7	+0.3
PRRZ	Plateau Road	2.27	34	P	Pn	14 16 29.7	-0.2
GRRZ	Galatos Road	2.28	28	P	Pn	14 16 30.7	+0.5
WHHZ	Waihua	2.31	56	P	Pn	14 16 30.0	-0.6
RAHZ	Arahi	2.32	52	P	Pn	14 16 29.9	-0.8
TARZ	Mount Tarawera	2.53	33	P	Pn	14 16 35.3	+1.6
SNGZ	Shannon Statio	2.55	52	P	Pn	14 16 32.8	-1.1
OMRZ	Omania	2.59	29	P	Pn	14 16 36.2	+1.8
DSZ	Denniston Nort	2.62	238	P	Pn	14 16 34.9	+0.1
KNZ	Kokohu	2.63	60	P	Pn	14 16 33.3	-1.5
KMRZ	Kaimai	2.69	20	P	Pn	14 16 36.9	+1.1
TOZ	Tahuroa Road	2.71	13	P	Pn	14 16 36.4	+0.4
MHGZ	Mahia Peninsul	2.72	64	P	Pn	14 16 35.0	-1.0
URZ	Urewera	2.79	41	ePn	Pn	14 16 35.5	-1.6
URZ	Urewera	2.79	41	P	Pn	14 16 35.7	-1.5
PRGZ	Paritu Road	2.82	60	P	Pn	14 16 35.9	-1.6
RIGZ	Rimuhau	2.86	55	P	Pn	14 16 36.6	-1.5
GVZ	Greta Valley S	2.89	206	P	Pn	14 16 38.0	-0.4
OPRZ	Ohinepanea	2.89	29	P	Pn	14 16 38.1	-0.4
TGRZ	Tauranga	2.89	24	P	Pn	14 16 39.0	+0.5
MWZ	Matawai	2.96	47	P	Pn	14 16 38.1	-1.4
LTZ	Lake Taylor	3.04	217	ePn	Pn	14 16 38.9	-1.6
LTZ	Lake Taylor	3.04	217	P	Pn	14 16 40.2	-0.3
TKGZ	Te Karaka	3.08	52	P	Pn	14 16 39.3	-1.7
CNGZ	Carnagh Statio	3.27	56	P	Pn	14 16 41.7	-1.9
KBAZ	Karaka Road Bo	3.28	2	P	Pn	14 16 45.0	+1.2
MKAZ	Moumakai	3.29	6	P	Pn	14 16 44.5	+0.7
RUGZ	Raukumara Rang	3.31	44	P	Pn	14 16 42.4	-1.8
AWAZ	Awhitu Peninsu	3.31	358	P	Pn	14 16 45.1	+0.9
TWGZ	Tauwhareparae	3.33	50	P	Pn	14 16 43.2	-1.3
INZ	Inchbonnie	3.42	226	P	Pn	14 16 44.9	-0.7
ETAZ	East Tamaki Re	3.42	2	P	Pn	14 16 46.8	+1.1
WTAZ	Waiatarua	3.45	358	P	Pn	14 16 46.9	+0.9
HAZ	Te Kaha	3.52	43	P	Pn	14 16 46.1	-0.9
HBAZ	Herne Bay Bore	3.52	360	P	Pn	14 16 48.1	+1.0
PUZ	Puketiti	3.56	51	P	Pn	14 16 45.1	-2.5
CRLZ	Canterbury Las	3.57	206	ePn	Pn	14 16 46.5	-1.1
OKCZ	Okains Bay	3.57	200	P	Pn	14 16 46.2	-1.5
OXZ	Oxford	3.58	214	ePn	Pn	14 16 46.1	-1.6
OXZ	Oxford	3.58	214	P	Pn	14 16 45.9	-1.8
PKGZ	Pakihiroa	3.58	47	P	Pn	14 16 45.9	-2.0
WIAZ	Waiheke Island	3.59	5	P	Pn	14 16 49.1	+1.1
MBAZ	Motutapu North	3.61	2	P	Pn	14 16 49.1	+0.9
MQZ	McQueen's Vall	3.67	205	ePn	Pn	14 16 47.9	-1.2
MQZ	McQueen's Vall	3.67	205	P	Pn	14 16 47.0	-2.1
KUZ	Kuaotunu	3.71	12	P	Pn	14 16 49.8	+0.2
AKCZ	Akaroa Harbour	3.75	201	P	Pn	14 16 48.9	-1.2
ABAZ	Army Bay	3.77	1	P	Pn	14 16 51.7	+1.2
WMGZ	Waiomatatini S	3.82	49	P	Pn	14 16 48.9	-2.2
MXZ	Matakaoa Point	3.94	46	ePn	Pn	14 16 50.6	-2.2
GRZ	Great Barrier	4.16	8	P	Pn	14 16 55.7	-0.1
RPZ	Rata Peaks	4.33	218	ePn	Pn	14 16 58.1	+0.1
WCZ	Waipu Caves	4.45	356	P	Pn	14 16 59.7	+0.1
FOZ	Fox Glacier	4.85	228	ePn	Pn	14 17 03.7	-1.4
FOZ	Fox Glacier	4.85	228	P	Pn	14 17 05.5	+0.4
LBZ	Lake Benmore	5.24	219	ePn	Pn	14 17 09.9	-0.7
ODZ	Otahua Downs	5.56	212	ePn	Pn	14 17 12.9	-1.9
ODZ	Otahua Downs	5.56	212	P	Pn	14 17 13.1	-1.7
JCZ	Jackson Bay	5.77	228	P	Pn	14 17 18.7	+0.9
WKZ	Wanaka	6.14	222	ePn	Pn	14 17 23.6	+0.8
RAO	Raoul Island	12.62	31	ePn	Pn	14 18 52.0	+0.7

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*ISCJB **03** 14:18:55.1±0.4, 27°.79N±0°.05×127°.70E±0°.07, h125^{km}±5^{km}, mb3.9/15, Error ellipse: s-maj=12.4km s-min=5.0km az=38.4*

*IDC **03** 14:18:55.2±0.7, 27°.85N×127°.71E, h113^{km}±9^{km}, mb3.7/15, mb1 3.8/17, mb1mx3.6/47, mbtmp4.0/17, MS3.4/1, Ms1 3.4/1, ms1mx2.6/36, Error ellipse: s-maj=17.4km s-min=14.3km az=83.0*

*JMA **03** 14:18:57.2±0.1, 27°.77N×127°.76E, h113^{km}±3^{km}, M3.7*

ISC 03 14:18:56.0±0.7**, 27°.80N**±0°.06×**127°.70E**±0°.07**, h121**^{km}±7^{km}**, n33,** σ0^{s}**85**/49**, mb3.8**/15**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	Iheya	0.80	162	P	Pn	14 19 16.7	+0.5
JIH				S	Sn	14 19 31.0	-0.4
JOKE	Okinoerabujima	0.89	119	P	Pn	14 19 17.1	+0.1
JOKE				S	Sn	14 19 32.3	-0.6
JYRO	Yoronjima	1.02	139	P	Pn	14 19 18.3	0.0
JYRO				S	Sn	14 19 33.9	-1.2
JOW	Kunigami	1.09	152	P	Pn	14 19 19.3	+0.3
	39nm,0.3s,baz=117,slow=14,SNR=675						
JOW				S	Sn	14 19 34.8	-1.6
	164nm,0.3s,baz=142,slow=12,SNR=62						
JOW	Kunigami	1.09	152	P	Pn	14 19 19.2	+0.2
JOW				S	Sn	14 19 35.5	-0.9
JTK	Tokunoshima	1.11	90	P	Pn	14 19 19.5	+0.3
JTK				S	Sn	14 19 35.7	-1.0
JAGN	Aguni-jima	1.27	199	P	Pn	14 19 21.5	+0.6
JAGN				S	Sn	14 19 39.7	-0.1
JNTH	Nagotoyohara	1.30	167	P	Pn	14 19 21.8	+0.5
JNTH				S	Sn	14 19 39.4	-1.1
JAMN	Amaminishikomi	1.38	71	P	Pn	14 19 22.2	+0.1
JAMN				S	Sn	14 19 42.3	+0.4
JJT3	Tamagusuku3	1.65	177	P	Pn	14 19 26.4	+1.1
JJT3				S	Sn	14 19 48.1	+0.6
JKE	Kume jima 2	1.68	209	P	Pn	14 19 26.3	+0.7
JKE				S	Sn	14 19 47.9	-0.2
JAM	Amami Oshima	1.79	70	P	Pn	14 19 27.2	+0.3
JAM				S	Sn	14 19 49.7	-0.8
JTAJ	Takarajima	1.89	44	P	Pn	14 19 29.2	+1.0
JTAJ				eS	Sn	14 19 53.2	+0.5
JZK	Kikaishima	2.07	75	P	Pn	14 19 31.7	+1.3
JZK				eS	Sn	14 19 57.8	+1.0
JNU	Nakatsue	5.97	27	P	Pn	14 20 22.3	+0.2
	0.3nm,0.3s,baz=214,slow=11,SNR=2.9						
KSRS	Korea Array	9.63	1	P	Pn	14 21 11.1	-0.3
	0.1nm,0.3s,baz=180,slow=13,SNR=6.8						
MJAR	Matsushiro Arr	12.45	43	P	Pn	14 21 51.3	+2.2
	0.0nm,0.3s,baz=172,slow=9.8,SNR=3.0						
ASAJ	Asahikawa	20.21	32	LR	LR	14 31 01.1	
	comp=Z,110nm,18.3s,baz=330,slow=36						
SONM	Songino Array	25.99	326	P	P	14 24 18.2	+0.6
	5.3nm,0.7s,baz=134,slow=10,SNR=17						
CMAR	Chiang Mai Arr	27.97	257	P	P	14 24 36.8	+1.3
	0.4nm,0.4s,baz=237,slow=24,SNR=3.2						
MKAR	Makanchi Array	40.15	311	P	P	14 26 19.9	-0.3
	1.0nm,0.6s,baz=100,slow=11,SNR=10						
MKAR				PcP	PcP	14 28 22.2	+0.1
	0.7nm,0.5s,baz=55,slow=2.9,SNR=6.0						
ZALV	Zalesovo Beam	40.72	322	P	P	14 26 23.0	-1.7
	0.6nm,0.4s,baz=98,slow=7.4,SNR=3.2						
KURBB	Kurchatov Arra	43.40	315	P	P	14 26 45.5	-1.0
	2.3nm,0.4s,baz=102,slow=9.1,SNR=31						
KURBB				PcP	PcP	14 28 32.0	-0.8
	0.9nm,0.8s,baz=116,slow=3.4,SNR=6.6						
ASAR	Alice Springs	51.51	173	P	P	14 27 50.6	+1.1
	0.3nm,0.6s,baz=357,slow=7.5,SNR=8.1						
ASAR				pP	pP	14 28 18.5	+0.9
	0.5nm,0.6s,baz=2.6,slow=14,SNR=7.1						

KDAK	Kodiak Island	61.55	37	P	P	14 29 00.4	+0.3
	3.4nm,0.6s,baz=226,slow=2.7,SNR=6.0						
ILAR	Eielson Array	63.29	29	P	P	14 29 10.8	-0.8
	0.5nm,0.6s,baz=289,slow=10,SNR=12						
FINES	FINESS Array B	71.27	330	P	P	14 30 00.8	-1.2
	0.6nm,0.4s,baz=85,slow=5.4,SNR=8.0						
BRTR	Keskin Array B	75.70	307	P	P	14 30 28.7	+0.2
	0.6nm,0.6s,baz=70,slow=6.3,SNR=3.7						
YKA	Yellowknife Ar	77.31	25	P	P	14 30 37.2	+0.3
	2.5nm,0.7s,baz=304,slow=5.5,SNR=6.6						
NOA	NORSAR Array B	77.70	334	P	P	14 30 38.5	-0.8
	0.7nm,0.7s,baz=48,slow=5.5,SNR=3.0						
KMBO	Kilima Mbogo	90.92	269	P	P	14 31 47.1	0.0
	0.7nm,0.3s,baz=83,slow=3.4,SNR=3.7						
PDAR	Pinedale Array	92.24	38	P	P	14 31 52.4	-0.4
	0.4nm,0.7s,baz=317,slow=0.9,SNR=6.1						
ULM	Lac du Bonnet	93.23	26	P	P	14 31 56.1	-0.7
	1.3nm,0.3s,baz=305,slow=1.3,SNR=3.0						

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*ISCJB **03** 14:19:47.6±1.4, 14°.7S±0°.2×167°.5E±0°.2, h150^{km}, mb3.7/4, Error ellipse: s-maj=29.6km s-min=22.5km az=10.9*

*IDC **03** 14:19:51.0±4.6, 14°.78S×167°.46E, h166^{km}±39^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.3/32, mbtmp3.9/6, Error ellipse: s-maj=32.9km s-min=27.5km az=163.0*

ISC 03 14:19:49.1±1.2**, 14°.7S**±0°.2×**167°.5E**±0°.2**, h150**^{km}**, n7, σ0**^{s}**.76**/8**, mb3.8**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.41	187	P	Pn	14 21 35.3	+0.5
	1.5nm,0.3s,baz=353,slow=13,SNR=13						
CTA	Charters Tower	20.95	252	P	P	14 24 21.1	+0.8
	2.9nm,0.8s,baz=56,slow=17,SNR=3.9						
STKA	Stephens Creek	29.18	230	P	P	14 25 36.8	+0.4
	1.5nm,0.4s,baz=43,slow=8.1,SNR=10						
ASAR	Alice Springs	32.88	249	P	P	14 26 08.1	-1.0
	0.6nm,0.3s,baz=76,slow=9.5,SNR=34						
ASAR				PcP	PcP	14 28 50.4	0.0
	0.6nm,0.9s,baz=87,slow=2.6,SNR=4.7						
VNDA	Vanda	62.91	181	P	P	14 29 58.0	-0.9
	0.9nm,0.9s,baz=0.7,slow=4.5,SNR=6.7						
ILAR	Eielson Array	86.42	18	P	P	14 32 14.6	+0.3
	0.3nm,0.7s,baz=248,slow=4.9,SNR=4.1						
ARCES	ARCESS Array B	120.26	345	PKP	PKPdf	14 38 21.9	+0.1
	1.5nm,0.7s,baz=72,slow=2.9,SNR=6.9						

MEX 03 14:43:24.4±0.9**, 19°.08N**×**104°.17W, h5**^{km}**, MD3.6, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZ5V		0.66	53	*e*P	Pg	14 43 35.8	-1.4
EZ5V				*e*S	Sg	14 43 45.8	-0.1
CJM	Chamela	0.93	297	*e*P	Pg	14 43 40.7	-1.5
CJM				*e*S	Sg	14 43 53.2	-1.1
MMIG	Aquila	1.11	135	*e*P	Pg	14 43 42.9	-2.7
MMIG				*i* S	Sg	14 43 56.7	-3.3

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*SOF **03** 14:54:14.0, 40°.12N×21°.85E, h4^{km}*

*PDG **03** 14:54:14.9±0.5, 40°.12N×21°.89E, h13^{km}, ML3.2/8, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

*TIR **03** 14:54:14.2, 40°.15N×21°.85E, h1^{km}, Md3.6/9*

*ISCJB **03** 14:54:14.3±0.4, 40°.14N±0°.01×21°.87E±0°.02, h2^{km}±3^{km}, Error ellipse: s-maj=2.5km s-min=2.2km az=28.3*

*ATH **03** 14:54:14.2, 40°.12N×21°.85E, h19^{km}, ML3.1/20, Error ellipse: s-maj=0.7km s-min=0.4km az=3.0*

*THE **03** 14:54:15.1, 40°.12N×21°.82E, h8^{km}±1^{km}, ML3.1/12, Error ellipse: s-maj=1.1km s-min=0.5km az=327.0*

ISC 03 14:54:14.6±1.0**, 40°.13N**±0°.02×**21°.88E**±0°.02**, h7**^{km}±8^{km}**, n111, σ1**^{s}**.23**/156**, 10C-13D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	Kozani	0.19	336	P	Pg	14 54 18.7	+0.2
KZN				S	Sg	14 54 22.0	+0.8
KZN	Kozani	0.19	336	P	Pg	14 54 18.8	+0.2
KZN				S	Sg	14 54 22.1	+1.0
KZN				AML	AML	14 54 22.3	
KZN				AML	AML	14 54 22.3	
	comp=N,88811µm,0.2s						
KPRO	Kipourio	0.43	246	P	Pg	14 54 22.4	-0.5
KPRO				S	Sg	14 54 28.8	+0.2
KPRO	Kipourio	0.43	246	P	Pg	14 54 22.6	-0.4
KPRO				S	Sg	14 54 28.8	+0.2
KPRO				AML	AML	14 54 32.6	
	comp=N,7332µm,0.5s						
KPRO				AML	AML	14 54 35.1	
	comp=E,5444µm,0.4s						
LIT	Litokhoron	0.47	93	P	Pg	14 54 24.0	+0.3
LIT				S	Sb	14 54 32.6	+0.1
LIT	Litokhoron	0.47	93	P	Pg	14 54 24.1	+0.3
LIT				S	Sb	14 54 31.8	-0.7
LIT				AML	AML	14 54 34.5	
	comp=N,11075µm,0.3s						
LIT				AML	AML	14 54 34.8	
	comp=E,10153µm,0.2s						
PENT	Pentalofos	0.57	277	P	Pg	14 54 24.8	-0.8
PENT				S	Sg	14 54 32.7	-0.3
PENT	Pentalofos	0.57	277	P	Pg	14 54 24.9	-0.6
PENT				S	Sg	14 54 32.9	-0.1
PENT				AML	AML	14 54 37.8	
	comp=E,4919µm,0.8s						
PENT				AML	AML	14 54 38.7	
	comp=N,6103µm,0.3s						
THL	Klokotos Trika	0.57	169	P	Pg	14 54 25.3	-0.3
THL				S	Sb	14 54 34.3	-1.1
THL	Klokotos Trika	0.57	169	P	Pg	14 54 25.4	-0.2
THL				S	Sb	14 54 34.2	-1.1
THL				AML	AML	14 54 35.8	
	comp=E,5606µm,0.4s						
THL				AML	AML	14 54 36.7	
	comp=N,4266µm,0.2s						
LRSO	Larissa Observ	0.61	139	P	Pb	14 54 27.0	-0.5
LRSO				S	Sb	14 54 37.0	+0.7
LRSO	Larissa Observ	0.61	139	P	Pg	14 54 26.4	+0.1
LRSO				S	Sb	14 54 35.2	-1.1
LRSO				AML	AML	14 54 38.5	
	comp=E,14487µm,0.2s						
LRSO				AML	AML	14 54 40.0	
	comp=N,11876µm,0.3s						
NEST	Nestorio	0.69	294	P	Pg	14 54 27.3	-0.6
NEST				S	Sg	14 54 36.8	-0.2
NEST	Nestorio	0.69	294	P	Pg	14 54 27.2	-0.8
GRG	Griva	0.92	26	P	Pg	14 54 32.1	-0.1
GRG				S	Sn	14 54 47.1	-0.4
GRG	Griva	0.92	26	P	Pg	14 54 32.3	+0.1
GRG				S	Sb	14 54 46.0	+0.7
GRG				AML	AML	14 54 50.5	
	comp=N,2799µm,0.7s						
GRG				AML	AML	14 54 51.0	
	comp=E,2034µm,0.4s						
JAN	Janina	0.92	239	P	Pb	14 54 32.0	-0.9
JAN				S	Sb	14 54 44.4	-1.0
JAN	Janina	0.92	239	P	Pb	14 54 32.1	-0.9
JAN				AML	AML	14 54 52.3	
	comp=E,939µm,0.4s						
JAN				AML	AML	14 54 52.4	
	comp=N,880µm,0.3s						
THE	Thessaloniki	0.97	59	P	Pn	14 54 34.2	-0.5
THE				S	Sn	14 54 49.2	+0.5
THE	Thessaloniki	0.97	59	*i* PG	Pb	14 54 33.9	+0.1
THE				*i* SG	Sn	14 54 48.8	+0.1
THE	Thessaloniki	0.97	59	P	Pb	14 54 33.6	-0.2
THE				AML	AML	14 54 50.5	
	comp=E,945µm,0.5s						
THE				AML	AML	14 54 51.3	
	comp=N,857µm,0.7s						
FYTO	Fytoko, Volos	1.09	131	P	Pb	14 54 35.6	-0.2
AGG	Agios Georgios	1.16	162	P	Pb	14 54 36.6	-0.4
AGG	Agios Georgios	1.16	162	P	Pg	14 54 36.4	-0.5
AGG				AML	AML	14 54 59.1	
	comp=N,2018µm,0.6s						
AGG				AML	AML	14 55 00.8	
	comp=E,1756µm,0.3s						
EVR	Evrytania	1.21	182	P	Pg	14 54 36.8	-1.0
EVR				S	Sn	14 54 55.0	+0.1
EVR	Evrytania	1.21	182	P	Pn	14 54 37.5	-0.7
EVR				S	Sb	14 54 53.3	-0.6
EVR				AML	AML	14 54 57.1	
	comp=E,1727µm,0.5s						
EVR				AML	AML	14 54 57.6	
	comp=N,2429µm,0.6s						
PLG	Polygyros	1.23	78	P	Pn	14 54 37.8	-0.4
PLG				S	Sb	14 54 49.6	-4.6
PLG	Polygyros	1.23	78	P	Pn	14 54 37.9	-0.4
PLG				AML	AML	14 54 57.9	
	comp=N,439µm,0.5s						
PLG				AML	AML	14 54 58.0	
	comp=E,482µm,0.6s						
XOR	Xorichti	1.27	127	P	Pn	14 54 38.5	-0.3
XOR	Xorichti	1.27	127	P	Pb	14 54 38.6	-0.2
XOR				S	Sn	14 54 56.4	+0.2
XOR				AML	AML	14 55 00.5	
	comp=E,1447µm,0.5s						
XOR				AML	AML	14 55 00.5	
	comp=N,2157µm,0.5s						
OHR	Ohrid	1.28	320	*i* Pn	Pg	14 54 38.6	-0.4
OHR				*i* Sn	Sn	14 54 59.0	+2.6
KNT	Kendrikon	1.29	37	P	Pg	14 54 39.3	0.0
KNT	Kendrikon	1.29	37	P	Pg	14 54 39.4	+0.1
VAY	Valandovo	1.30	24	P	Pn	14 54 38.8	-0.4
VAY	Valandovo	1.30	24	*i* Pn	Pn	14 54 38.9	-0.3
SOH	Sokhos	1.32	58	P	Pg	14 54 39.9	-0.1
SOH	Sokhos	1.32	58	P	Pg	14 54 39.8	-0.1
SOH				AML	AML	14 55 01.9	
	comp=N,1102µm,0.5s						
SOH				AML	AML	14 55 02.7	
	comp=E,1332µm,0.4s						
NEO	Neokhori	1.33	128	P	Pb	14 54 39.6	-0.2
NEO	Neokhori	1.33	128	P	Pb	14 54 39.6	-0.2
NEO				S	Sn	14 54 58.0	+0.4
NEO				AML	AML	14 55 01.4	
	comp=E,3350µm,0.3s						
NEO				AML	AML	14 55 03.4	
	comp=N,4288µm,0.5s						
IGT	Igoumenitsa	1.33	244	P	Pg	14 54 39.2	-0.8
IGT	Igoumenitsa	1.33	244	*i* PN	Pg	14 54 41.0	+0.9
IGT				*i* SN	Sn	14 55 00.8	+3.2
IGT	Igoumenitsa	1.33	244	P	Pg	14 54 39.3	-0.8
IGT				AML	AML	14 55 04.2	
	comp=N,662µm,0.6s						
IGT				AML	AML	14 55 06.3	
	comp=E,592µm,0.7s						
TPE	Tepelena	1.44	277	*i* PN	Pg	14 54 42.2	0.0
TPE				*i* SN	Sg	14 55 03.5	+2.7
SRN	Sarande	1.46	261	*i* PN	Pg	14 54 43.1	+0.5
SRN				*i* SN	Sg	14 55 04.3	+2.7
SKIA	Skiathos	1.56	128	P	Pn	14 54 42.5	-0.3
STIP	Stip	1.58	8	*i* Pn	Pg	14 54 44.9	0.0
TSLK	Tsoukalades, L	1.61	216	P	Pb	14 54 43.4	-1.3
OUR	Ouranopolis	1.62	82	P	Pn	14 54 44.0	+0.4
SRS	Serrai	1.64	52	P	Pn	14 54 44.3	+0.5
SRS				AML	AML	14 55 10.8	
	comp=E,393µm,0.4s						
SRS				AML	AML	14 55 13.9	
	comp=N,537µm,0.6s						
LKD2	Lefkada island	1.64	216	*i* PN	Pg	14 54 46.3	+0.3
LKD2				*i* SN	Sg	14 55 10.7	+3.5
LKD2	Lefkada island	1.64	216	P	Pb	14 54 44.6	-0.5
KEK	Kerkira	1.65	256	P	Pb	14 54 44.3	-1.0
KEK				S	Sg	14 55 06.1	-1.5
KEK				AML	AML	14 55 16.5	
	comp=N,562µm,0.5s						
KEK				AML	AML	14 55 17.8	
	comp=E,395µm,0.4s						
LKR	Lokris	1.71	149	P	Pb	14 54 45.4	-1.0
EVGI	Lefkada island	1.78	212	P	Pb	14 54 46.5	-1.0
VLO	Vlora	1.85	281	*i* PN	Pg	14 54 49.5	-0.6
VLO				*i* SN	Sg	14 55 15.0	+1.0
SKO	Skopje	1.87	350	*i* Pn	Pn	14 54 47.6	+0.6
PHP	Peshkopia	1.90	325	*i* PN	Pb	14 54 48.9	-0.7
PHP				*i* SN	Sg	14 55 17.2	+1.7
NVR	Nevrokopi	1.94	50	P	Pn	14 54 48.5	+0.5
NVR				AML	AML	14 55 21.8	
	comp=N,335µm,0.6s						
NVR				AML	AML	14 55 22.8	
	comp=E,215µm,0.4s						
TIR	Tirane	1.95	309	⇑*i*P	Pb	14 54 49.4	-1.1
TIR	Tirane	1.95	309	S	Sg	14 55 16.9	-0.4
TIR	Tirane	1.95	309	*i* PN	Pg	14 54 51.8	-0.2
TIR				*i* SN	Sg	14 55 20.8	+3.5
KKB	Krupnik	1.96	27	*e*P	Pn	14 54 48.9	+0.6
MMB	Musomiste	2.02	43	*e*P	Pn	14 54 49.8	+0.6
RLS	Riolos of Patr	2.09	189	P	Pn	14 54 50.7	+0.6
KLV	Kalavryta, Ach	2.10	174	P	Pn	14 54 50.6	+0.4
KLV				AML	AML	14 55 28.1	
	comp=E,387µm,0.7s						
KLV				AML	AML	14 55 29.1	
	comp=N,289µm,1.3s						
KAVA	Kavala	2.19	66	P	Pn	14 54 51.6	+0.2
VLS	Valsamata	2.19	208	P	Pn	14 54 51.9	+0.4
THAS	Thassos island	2.22	77	P	Pn	14 54 52.3	+0.4
SKY	Skiros Island	2.42	120	P	Pn	14 54 55.0	+0.4
RZN	Rozhen	2.66	53	*e*P	Pn	14 54 58.9	+0.9
VTS	Vitosha	2.69	22	⇓*i*P	Pn	14 54 59.1	+0.7
VTS	Vitosha	2.69	22	S	Sn	14 55 31.3	0.0
VTS	Vitosha	2.69	22	*e*P	Pn	14 54 58.8	+0.4
ULC	Ulcinj	2.70	313	⇓*i*Pn	Pn	14 54 59.8	+1.2
ULC				*e*Sn	Sn	14 55 33.4	+1.8
VLY	Voula,Athens	2.72	146	P	Pn	14 54 59.6	+0.8
PVY	Plav	2.85	330	⇓*i*Pn	Pn	14 55 01.7	+1.0
PVY				*e*Sn	Sn	14 55 37.5	+2.1
DRME	Dracevica, Mon	2.89	316	⇑*i*Pn	Pn	14 55 02.4	+1.3
DRME				*e*Sn	Sb	14 55 38.6	-3.4
DRME	Dracevica, Mon	2.89	316	*e*Pn	Pb	14 55 03.5	-3.0
PDG	Podgorica	3.03	320	S	Sb	14 55 42.2	-3.8
PDG	Podgorica	3.03	320	*e*Pn	Pn	14 55 04.5	+1.5
TTG	Podgorica	3.03	320	⇓*i*Pn	Pn	14 55 04.7	+1.7
TTG				*e*Sn	Sn	14 55 41.8	+2.3
IVA	Berane	3.12	332	⇑*i*Pn	Pn	14 55 05.4	+1.1
IVA				*e*Sn	Sn	14 55 42.9	+1.0
BUM	Brajici-Budva	3.12	315	⇑*i*Pn	Pn	14 55 05.5	+1.1
BUM				*e*Sn	Sn	14 55 43.7	+1.7
KOME	Kolasin	3.25	328	⇓*i*Pn	Pn	14 55 07.7	+1.7
KOME				*e*Sn	Sn	14 55 46.7	+1.7
CEME	Cevo	3.28	318	⇓*i*Pn	Pn	14 55 07.9	+1.3
CEME				*e*Sn	Sn	14 55 47.4	+1.5
NKME	Niksic	3.43	321	⇓*i*Pn	Pn	14 55 10.3	+1.8
NKME				*e*Sn	Sn	14 55 51.4	+1.9
HCY	Herceg Novi	3.44	313	⇓*i*Pn	Pn	14 55 09.9	+1.2
HCY				*e*Sn	Sn	14 55 51.8	+2.1
MPEP	Malo Peshtene	3.51	23	P	Pn	14 55 11.5	+1.9
BRY	Bratogost	3.73	319	⇑*i*Pn	Pn	14 55 13.9	+1.1
BRY				*e*Sn	Sn	14 55 58.1	+1.0
DBRK	Dubrovnik	3.78	313	*i* Pn	Pn	14 55 13.3	0.0
UPM	Unac-Piva	3.79	325	⇑*i*Pn	Pn	14 55 14.9	+1.3
UPM				*e*Sn	Sn	14 56 00.2	+1.6
MATE	Matera	3.98	279	⇑*i*P	Pn	14 55 17.6	+1.5
TIP	Timpagrande	4.06	258	⇓*i*P	Pn	14 55 19.6	+2.3
BBLS	Lazići	4.16	335	*e*Pn	Pn	14 55 19.6	+1.0
STON	Ston	4.16	312	*e*Pn	Pn	14 55 18.6	+0.1
STON	Ston	4.16	312	*e*Pn	Pn	14 55 19.7	+1.2
DIVS	Divibare	4.21	341	*e*Pn	Pn	14 55 20.1	+0.9
MDVR	Moldovita	4.65	359	⇓*i*P	Pn	14 55 26.2	+0.9
MAKA	Makarska	4.81	313	*e*Pn	Pn	14 55 27.3	-0.2
FRGS	Fruska Gora	5.25	344	*e*Pn	Pn	14 55 33.9	+0.4
GZR	Gura Zlata	5.30	7	⇑*i*P	Pn	14 55 34.4	+0.1
BZS	Buzias	5.49	358	⇓*i*P	Pn	14 55 37.5	+0.8
KIJV	Kijevo	5.62	315	*e*Pn	Pn	14 55 39.3	+0.7
VOIR		5.79	23	⇑*i*P	Pn	14 55 40.8	-0.3
ZIRJ	Zirje	5.83	309	*e*Pn	Pn	14 55 41.2	-0.2
MLR	Muntele Rosu	6.14	28	⇓*i*P	Pn	14 55 45.8	0.0
UDBI	Udbina	6.31	316	*e*Pn	Pn	14 55 48.9	+0.8
DUGI	Dugi Otok	6.37	309	*i* Pn	Pn	14 55 48.7	-0.2
PLOR	Plostina	6.70	30	⇓*i*P	Pn	14 55 53.0	-0.5
VRI	Vrincioaia	6.75	30	⇑*i*P	Pn	14 55 53.2	-0.8
NVLJ	Novalja	6.82	313	*e*Pn	Pn	14 55 55.2	+0.1
NVLJ				Sn	Sn	14 57 10.9	-2.0

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*NIED **03** 15:06:00, 37°.20N×141°.60E, h5^{km}, Mw4.8 Best double couple: M$_0$1.63000×10^{16} NP1:φ$_s$31.00000°, δ34.00000°, λ-105.00000°. NP2:φ$_s$228.00000°, δ57.00000°, λ-80.00000°.*

*BJI **03** 15:06:07.7±0.0, 37°.09N×141°.48E, h10^{km}, mb4.6/66, mB4.9/47, Ms4.6/72, Ms7 4.4/66*

*IDC **03** 15:06:08.6±0.6, 37°.32N×141°.42E, h0^{km}, mb4.6/26, mb1 4.7/31, mb1mx4.7/48, mbtmp4.6/31, ML3.7/5, MS4.1/23, Ms1 4.2/23, ms1mx4.0/32, Error ellipse: s-maj=15.4km s-min=11.4km az=137.0*

*ISCJB **03** 15:06:09.0±0.6, 37°.29N±0°.02×141°.49E±0°.02, h11^{km}±3^{km}, mb4.9/264, MS4.4/47, Error ellipse: s-maj=3.3km s-min=2.2km az=156.9*

*NEIC **03** 15:06:10.7±1.1, 37°.32N×141°.45E, h12^{km}±4^{km}, mb5.0/207, Error ellipse: s-maj=11.8km s-min=7.4km az=130.0*

NEIC Felt at Tendo. Recorded [2 JMA] in Fukushima, Miyagi and Tochigi.

*JMA **03** 15:06:10.0±0.1, 37°.26N×141°.49E, h27^{km}±2^{km}, M5.0*

JMA Felt II J1.

*MOS **03** 15:06:11.2±0.9, 37°.60N×141°.37E, h18^{km}, mb5.1/73, MS4.6/12, Error ellipse: s-maj=6.4km s-min=4.2km az=95.9*

*GCMT **03** 15:06:13.6±0.4, 37°.31N±0°.04×141°.41E±0°.04, h13^{km}±1^{km}, MW4.8/60, Moment Tensor Solution. s9,c9; s60,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.82±.20; M$_{\theta\theta}$0.73±.12; M$_{\phi\phi}$1.08±.11; M$_{r\theta}$-0.04±.33; M$_{\theta\phi}$1.17±.07; M$_{\phi r}$0.02±.26; Best double couple: M$_0$1.95500×10^{16} NP1:φ$_s$42.00000°, δ45.00000°, λ-88.00000°. NP2: φ$_s$219.00000°, δ45.00000°, λ-92.00000°. Principal axes: T 2.0890, Plg0.0000°, Azm131.0000°; N -0.2760, Plg2.0000°, Azm221.0000°; P -1.8210, Plg88.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 15:06:10.6±0.5**, 37°.30N**±0°.03×**141°.52E**±0°.03**, h16**^{km}±2^{km}**, h16**^{km}**:pP-P, n732, σ1**^{s}**.54**/770**, mb5.0**/279**, MS4.5**/47**, 41C-17D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.52	278	⇑P	Pg	15 06 19.9	-1.0
JFK				*e*S	Sb	15 06 26.8	-1.9
ONAJ	Iwakimizuishiy	0.61	251	⇑P	Pg	15 06 21.2	-1.4
ONAJ				*e*S	Sg	15 06 29.3	-1.4
JMST	Minamisoumatoc	0.66	310	P	Pg	15 06 22.7	-0.8
JMST				S	Sb	15 06 32.0	-0.6
JFFD	Fukushimafurud	0.79	255	⇑P	Pg	15 06 24.4	-1.6
JFFD				*e*S	Sg	15 06 34.7	-1.8
JMM	Marumori	0.81	315	⇑P	Pg	15 06 25.3	-1.0
JMM				S	Sb	15 06 36.5	-0.5
JFT	Otama	0.96	283	⇑P	Pg	15 06 28.0	-1.3
JFT				*e*S	Sb	15 06 40.8	-0.7
JIKH	Ishinomakikobu	1.01	358	P	Pb	15 06 28.6	-1.2
JHO	Hitachi	1.02	228	P	Pb	15 06 27.2	-2.8
JHO				*e*S	Sb	15 06 40.8	-2.4
JIO	Ouri	1.16	353	⇓P	Pb	15 06 30.9	-1.4
JIO				S	Sb	15 06 46.9	-0.3
JYAR	Yonezawaarcadi	1.25	300	P	Pn	15 06 32.9	-0.6
JOU	Okura	1.26	328	⇑P	Pb	15 06 33.5	-0.6
JOU				S	Sg	15 06 50.5	-0.9
JSB	Shiboa	1.32	256	⇑P	Pn	15 06 33.7	-0.7
JFY	Yanaizu	1.45	275	⇑P	Pn	15 06 35.4	-0.8
JYS	Shirataka	1.47	309	⇑P	Pb	15 06 36.6	-1.1
JKMT	Kesennumamotoy	1.51	359	P	Pn	15 06 36.4	-0.6
OFUJ	Ofunato	1.78	4	P	Pn	15 06 40.2	-0.6
JYK	Kaneyama	1.86	331	⇑P	Pn	15 06 42.3	+0.5
JAG	Ashikaga	1.87	243	⇑P	Pn	15 06 40.5	-1.5
JYA	Atsumi	1.92	313	P	Pn	15 06 43.2	+0.5
JHK	Hiroka	2.00	269	⇑P	Pn	15 06 43.4	-0.3
JOM	Ohasama	2.18	355	⇓P	Pn	15 06 46.4	+0.2
JRG	Rokugo	2.21	342	⇓P	Pn	15 06 47.5	+0.9
MIYJ	Miyakonagasawa	2.29	6	⇓P	Pn	15 06 47.1	-0.6
JGK	Kuni	2.42	253	P	Pn	15 06 50.0	+0.4
JRY	Ryogami san	2.46	239	P	Pn	15 06 48.6	-1.6
JSZI	Iwateshizukuis	2.48	350	P	Pn	15 06 51.2	+0.8
JSGW	Sagamiharawaka	2.52	228	P	Pn	15 06 49.4	-1.5
MJAR	Matsushiro Arr	2.76	255	Pn	Pn	15 06 53.6	-0.6
	6.2nm,0.3s,baz=209,slow=11,SNR=186						
MJAR				Sn	Sn	15 07 29.2	+2.0
	15nm,0.3s,baz=96,slow=23,SNR=11						
MAJO	Matsushiro	2.76	255	*e*Pn	Pn	15 06 54.5	+0.3
MAJO				*e*Sn	Sn	15 07 29.2	+1.9
MAJO	Matsushiro	2.76	255	*c* *i*P	Pn	15 06 54.5	+0.3
MAT	Matsushiro	2.76	255	P	Pn	15 06 54.5	+0.3
MAT				S	Sn	15 07 27.7	+0.5
MAT	Matsushiro	2.76	255	P	Pn	15 06 54.5	+0.3
MJB9	Matsu-Tunnel	2.76	255	*e*Pn	Pn	15 06 54.5	+0.2
JNG	Nsakai	2.88	253	P	Pn	15 06 56.2	+0.2
JKEN	Kujiedanarisaw	2.91	3	P	Pn	15 06 56.2	0.0
JAH	Hinai	2.97	347	P	Pn	15 06 58.5	+1.4
JYN	Shimob	3.00	234	P	Pn	15 06 56.8	-0.8
JTM	Tenmabayashi	3.50	354	P	Pn	15 07 05.4	+1.0
INU	Inuyama	4.12	243	*e*Pn	Pn	15 07 13.5	+0.6
JHJ2	Mitsune	4.40	199	*e*Pn	Pn	15 07 17.1	+0.3
JHJ	Hachijo jima 2	4.41	199	Pn	Pn	15 07 16.7	-0.1
	23nm,0.3s,baz=145,slow=23,SNR=28						
JHJ				Sn	Sn	15 08 06.8	-1.0
	104nm,0.3s,baz=205,slow=22,SNR=5.6						
ERM	Erimo	4.88	15	*e*Pn	Pn	15 07 23.1	-0.2
ERM	Erimo	4.88	15	*ce*P	Pn	15 07 22.7	-0.6
ERM				pmax	pmax		
	comp=Z,78nm,1.0s						
ASAJ	Asahikawa	6.86	7	Pn	Pn	15 07 50.4	-0.2
	comp=Z,6.6nm,0.3s,baz=209,slow=10,SNR=41						
ASAJ				Sn	Sn	15 09 08.8	+0.5
	comp=Z,5.7nm,0.3s,baz=295,slow=33,SNR=4.1						
ASAJ				LR	LR	15 10 41.4	
	comp=Z,1µm,19.5s,baz=202,slow=40						
GRPR	Tuman	7.43	24	*e*P	Pn	15 07 56.6	-1.7
GRPR				*e*S	Sn	15 09 16.3	-5.9
GRPR				pmax	pmax		
	comp=Z,68nm,0.3s						
YUK	Yuzh-Kuril'sk	7.49	25	*e*P	Pn	15 07 57.8	-1.4
YUK				*e*S	Sn	15 09 17.8	-6.0
YUK				pmax	pmax		
	comp=N,74nm,0.3s						
YUK				pmax	pmax		
	comp=Z,158nm,0.3s						
TEY	Ternei	8.57	336	*e*P	Pn	15 08 22.5	+8.5
KUR	Kuril'sk	9.25	29	*e*P	Pn	15 08 24.8	+1.5
KUR				*i* S	Sn	15 10 02.0	-5.1
KUR				pmax	pmax		
	comp=Z,75nm,0.7s						
KUR				pmax	pmax		
	comp=N,19nm,0.5s						
KUR				pmax	pmax		
	comp=E,18nm,0.8s						
KUR				smax	smax		
	comp=N,131nm,0.7s						
KUR				smax	smax		
	comp=E,57nm,0.6s						
KUR				smax	smax		
	comp=N,1µm,3.1s						
KUR				smax	smax		
	comp=E,600nm,5.7s						
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
KUR				MLR	MLR		
	comp=N,1µm,11.0s						
VLA	Vladivostok	9.38	311	*i* P	Pn	15 08 25.9	+0.8
MSHR	Mys Shultsa	9.54	307	*i* P	Pn	15 08 26.1	-1.2
JNU	Nakatsue	9.65	248	Pn	Pn	15 08 28.9	0.0
	comp=N,0.4nm,0.3s,baz=27,slow=16,SNR=5.6						
JNU				LR	LR	15 12 36.1	
	comp=N,718nm,20.1s,baz=338,slow=40						
JNU	Nakatsue	9.65	248	*e*Pn	Pn	15 08 29.2	+0.3
YSS	Yuzh-Sakhalins	9.69	5	*e*Pn	Pn	15 08 28.9	-0.4
YSS	Yuzh-Sakhalins	9.69	5	⇑*e*P	Pn	15 08 29.0	-0.4
YSS				*e*S	Sn	15 10 16.1	-1.7
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				MLR	MLR		
	comp=N,800nm,13.0s						
YSS				MLR	MLR		
	comp=Z,2µm,13.0s						
YSS				MLR	MLR		
	comp=E,900nm,12.0s						
USA0B	Ussuriysk Arra	9.98	317	*e*Pn	Pn	15 08 33.2	-0.1
USRK	Ussuriysk Ar.	9.98	317	Pn	Pn	15 08 36.0	+2.7
	comp=E,0.7nm,0.3s,baz=140,slow=12,SNR=24						
USRK				LR	LR	15 12 07.1	
	comp=E,2µm,19.3s,baz=141,slow=36						
KSRS	Korea Array	10.82	275	Pn	Pn	15 08 46.9	+2.0
	comp=E,0.3nm,0.3s,baz=89,slow=13,SNR=27						
KSRS				LR	LR	15 12 44.1	
	comp=E,913nm,19.0s,baz=81,slow=37						
KS15	Wonju Array Si	10.85	275	*e*Pn	Pn	15 08 46.1	+0.8
TJN	Taejon	11.38	270	*i* P	Pn	15 08 54.4	+1.9
MDJ	Mudanjiang	11.60	313	P	Pn	15 09 01.4	+5.9
MDJ				pP		15 09 07.1	

MDJ				sP		15 09 08.6	
MDJ				PP	**PnPn**	**15 09 12.2**	**+9.0**
MDJ				S	**Sn**	**15 11 07.7**	**+3.1**
MDJ				SS	**SnSn**	**15 11 24.6**	**+8.1**
MDJ				pmax	pmax		
	comp=E,35nm,0.9s						
MDJ				pmax	pmax		
	comp=E,350nm,2.8s						
MDJ				LR	LR		
	comp=E,1µm,9.4s						
MDJ				LR	LR		
	comp=E,1µm,14.3s						
MDJ				LR	LR		
	comp=E,2µm,18.4s						
TYV	**Tymovskoe**	**13.59**	**3**	*e*P	**Pn**	**15 09 19.7**	**-2.8**
TYV				*e*S	**Sn**	**15 11 47.9**	**-5.2**
TYV				pmax	pmax		
	comp=Z,100nm,4.9s						
TYV				pmax	pmax		
	comp=Z,14nm,1.0s						
TYV				smax	smax		
	comp=E,10.0nm,1.4s						
TYV				MLR	MLR		
	comp=N,2µm,14.0s						
TYV				MLR	MLR		
	comp=Z,2µm,14.0s						
CN2	**Changchun**	**13.83**	**303**	*e*P	**Pn**	**15 09 25.9**	**0.0**
CN2				*e*S	**Sn**	**15 11 59.6**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,400nm,9.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
KLR	**Kul'dur**	**13.87**	**332**	Pn	**Pn**	**15 09 28.4**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=140,slow=12,SNR=7.4						
KLR				LR	LR	15 14 40.9	
	comp=Z,1µm,18.9s,baz=146,slow=37						
KLR	**Kul'dur**	**13.87**	**332**	*i* P	**Pn**	**15 09 26.9**	**+0.4**
KLR				pmax	pmax		
	comp=Z,12nm,1.3s						
GRNR	**Gornyy**	**13.95**	**346**	*e*P	**Pn**	**15 09 23.0**	**-4.6**
SNY	**Shenyang**	**14.55**	**294**	⇓P	**Pn**	**15 09 38.4**	**+2.5**
SNY				pmax	pmax		
	comp=Z,31nm,1.9s						
SNY				pmax	pmax		
	comp=Z,420nm,8.2s						
SNY				LR	LR		
	comp=Z,2µm,17.1s						
SNY				LR	LR		
	comp=Z,2µm,17.8s						
SNY				LR	LR		
	comp=Z,3µm,15.7s						
DL2	**Dalian**	**15.74**	**282**	P	**Pn**	**15 09 49.7**	**-1.9**
DL2				sP	**sP**	**15 10 01.1**	**-0.9**
DL2				S	**Sn**	**15 12 39.2**	**-6.5**
DL2				SS	**S**	**15 13 00.9**	**+0.5**
DL2				pmax	pmax		
	comp=Z,33nm,1.4s						
DL2				pmax	pmax		
	comp=Z,210nm,6.7s						
DL2				LR	LR		
	comp=Z,1µm,12.6s						
DL2				LR	LR		
	comp=Z,700nm,18.7s						
DL2				LR	LR		
	comp=Z,910nm,17.0s						
NKL	**Nikolayevsk**	**15.86**	**358**	⇑*i*P	**Pn**	**15 09 48.5**	**-4.6**
NKL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NKL				pmax	pmax		
	comp=N,15nm,1.3s						
NKL				pmax	pmax		
	comp=E,4.0nm,1.2s						
NKL				MLR	MLR		
	comp=Z,773nm,15.0s						
NKL				MLR	MLR		
	comp=N,765nm,14.0s						
NKL				MLR	MLR		
	comp=E,438nm,13.0s						
OKH	**Okha**	**16.28**	**3**	*de*P	Pn	15 09 46.5	-12
OKH				MLR	MLR		
	comp=Z,900nm,16.0s						
SKR	**Severo-Kuril's**	**16.97**	**33**	*i* P	**Pn**	**15 10 07.1**	**-0.1**
SSE	**Sheshan**	**17.91**	**256**	P	**Pn**	**15 10 18.4**	**-0.6**
SSE				S	**Sn**	**15 13 38.8**	**+0.5**
SSE				pmax	pmax		
	comp=Z,26nm,0.6s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=Z,670nm,16.8s						
SSE				LR	LR		
	comp=Z,480nm,18.0s						
ZEA	**Zeya**	**19.18**	**334**	*e*P	**P**	**15 10 31.0**	**-2.4**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
ZEA				MLR	MLR		
	comp=N,2µm,15.0s						
ZEA				MLR	MLR		
	comp=E,800nm,15.0s						
NJ2	**Nanjing**	**19.34**	**261**	*e*P	**P**	**15 10 34.1**	**-1.3**
NJ2				pmax	pmax		
	comp=E,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=E,150nm,3.5s						
NJ2				LR	LR		
	comp=E,740nm,15.6s						
NJ2				LR	LR		
	comp=E,990nm,12.3s						
NJ2				LR	LR		
	comp=E,900nm,14.7s						
PEA0B	**Petropavlovsk-**	**19.42**	**30**	*e*P	**P**	**15 10 36.5**	**+0.5**
	comp=E,65nm,1.4s						
PETK	**Petropavlovsk-**	**19.42**	**30**	P	**P**	**15 10 36.0**	**0.0**
	comp=E,0.2nm,0.3s,baz=210,slow=8.0,SNR=19						
PETK				LR	LR	15 17 58.4	
	comp=E,163nm,20.6s,baz=212,slow=36						
PEA1	**Petropavlovsk-**	**19.42**	**30**	*e*P	**P**	**15 10 36.0**	**0.0**
TIA	**Tai'an**	**19.57**	**274**	P	**P**	**15 10 36.6**	**-1.2**
TIA				pmax	pmax		
	comp=E,9.0nm,0.9s						
PET	**Petropavlovsk**	**19.75**	**32**	*e*P	**P**	**15 10 38.9**	**-0.6**
	comp=E,70nm,1.3s						
PET	**Petropavlovsk**	**19.75**	**32**	*e*P	**P**	**15 10 38.2**	**-1.4**
PET				*e*S	**S**	**15 14 12.8**	**-8.7**
PET				pmax	pmax		
	comp=Z,300nm,4.4s						
PET				pmax	pmax		
	comp=Z,46nm,1.4s						
PET				pmax	pmax		
	comp=Z,100nm,5.8s						
BJI	**Beijing**	**19.96**	**286**	P	**P**	**15 10 41.7**	**-0.3**
BJI				S	**S**	**15 14 24.6**	**-1.3**
BJI				LR	LR		
	comp=Z,290nm,13.9s						
BJI				LR	LR		
	comp=Z,250nm,12.8s						
TPUB	**Ta-pu**	**22.73**	**238**	*e*P	**P**	**15 11 08.4**	**-3.7**
	comp=Z,18nm,0.8s						
TWG	**Pinlang**	**22.77**	**236**	*e*P	**P**	**15 11 08.8**	**-3.5**
	comp=Z,65nm,0.9s						
MA2	**Magadan**	**23.08**	**12**	P	**P**	**15 11 15.1**	**-0.2**
	comp=Z,13nm,0.8s,baz=151,slow=19,SNR=4.4						
MA2				LR	LR	15 21 10.4	
	comp=Z,296nm,19.0s,baz=210,slow=39						
MA2	**Magadan**	**23.08**	**12**	*e*P	**P**	**15 11 15.4**	**+0.1**
	comp=Z,29nm,0.8s						
MA2	**Magadan**	**23.08**	**12**	*ce*P	**P**	**15 11 14.8**	**-0.5**
MA2				pmax	pmax		
	comp=Z,68nm,1.7s						
QZH	**Quanzhou**	**23.10**	**244**	*e*P	**P**	**15 11 15.1**	**-0.7**
QZH				LR	LR		
	comp=Z,300nm,9.0s						
QZH				LR	LR		
	comp=Z,690nm,12.6s						
QZH				LR	LR		
	comp=Z,460nm,12.3s						
WHN	**Wuhan**	**23.48**	**261**	⇓P	**P**	**15 11 20.6**	**+1.0**
WHN				S	**S**	**15 15 32.3**	**-0.3**
WHN				LR	LR		
	comp=Z,2µm,10.9s						
WHN				LR	LR		
	comp=Z,2µm,16.0s						
WHN				LR	LR		
	comp=Z,1µm,12.2s						
GUMO	**Guam**	**23.80**	**172**	LR	LR	15 21 47.4	
	comp=Z,46nm,19.4s,baz=334,slow=39						
BTO	**Baotou**	**24.65**	**287**	*e*P	**P**	**15 11 27.8**	**-2.8**
YAK	**Yakutsk**	**25.83**	**347**	*e*P	**P**	**15 11 41.0**	**+0.1**
	comp=Z,84nm,1.1s						
YAK	**Yakutsk**	**25.83**	**347**	*e*P	**P**	**15 11 39.9**	**-1.0**
YAK				*e**PP	**sP**	**15 11 50.9**	**+3.3**
YAK				*e*S	**S**	**15 16 06.3**	**-3.3**
YAK				*e*SS	**SnSn**	**15 17 05.7**	**+0.2**
SEY	**Seymchan**	**26.52**	**11**	P	**P**	**15 11 47.4**	**+0.3**
	comp=Z,22nm,1.0s,baz=200,slow=9.1,SNR=22						
SEY	**Seymchan**	**26.52**	**11**	*i* P	**P**	**15 11 47.7**	**+0.6**
XAN	**Xi'an**	**26.61**	**273**	P	**P**	**15 11 52.9**	**+4.5**
XAN				pmax	pmax		
	comp=Z,11nm,1.6s						
XAN				pmax	pmax		
	comp=Z,150nm,3.7s						
XAN				LR	LR		
	comp=Z,1µm,16.6s						
XAN				LR	LR		
	comp=Z,440nm,18.0s						
XAN				LR	LR		
	comp=Z,490nm,12.0s						
ULN	**Ulaanbaatar**	**27.27**	**304**	*e*P	**P**	**15 11 53.9**	**-0.5**
	comp=Z,62nm,2.0s						
ULN	**Ulaanbaatar**	**27.27**	**304**	*ce*P	**P**	**15 11 54.0**	**-0.4**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BOD	**Bodaibo**	**27.35**	**327**	*e*P	**P**	**15 11 53.6**	**-1.1**
BOD				pmax	pmax		
	comp=Z,15nm,1.6s						
SONA0	**Songino Array**	**27.71**	**304**	*e*P	**P**	**15 11 57.9**	**-0.3**
SONM	**Songino Array**	**27.71**	**304**	P	**P**	**15 11 57.9**	**-0.3**
	comp=Z,8.6nm,0.9s,baz=101,slow=8.5,SNR=26						
SONM				LR	LR	15 23 18.6	
	comp=Z,300nm,19.4s,baz=82,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.21**	**121**	T	T	15 41 29.9	
	baz=314,slow=75,SNR=2982						
H11N1	**WAKE ISLAND Hy**	**28.22**	**121**	T	T	15 41 30.5	
	baz=314,slow=75,SNR=3648						
H11N3	**WAKE ISLAND Hy**	**28.23**	**121**	T	T	15 41 31.3	
	baz=314,slow=75,SNR=4365						
LZH	**Lanzhou**	**30.11**	**279**	*e*P	**P**	**15 12 21.1**	**+1.4**
LZH				pP	sP	15 12 26.6	+0.2
LZH				sP	pP	15 12 28.9	+4.5
LZH				PP	**PP**	**15 13 22.9**	**-4.7**
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,87nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
LZH				LR	LR		
	comp=Z,930nm,14.3s						
LZH				LR	LR		
	comp=Z,960nm,14.6s						
ZAK	**Zakamensk**	**30.17**	**308**	*e*P	**P**	**15 12 20.0**	**0.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
TLY	**Talaya**	**30.22**	**311**	*e*P	**P**	**15 12 21.1**	**+0.8**
TLY				*e*SS	SS	15 18 55.1	-33
TLY				*e*SSS	SSS	15 19 11.6	
TLY				pmax	pmax		
	comp=Z,26nm,1.1s						
TLY				MLR	MLR		
	comp=Z,1µm,13.0s						
GYA	**Guiyang**	**31.35**	**260**	*e*P	**P**	**15 12 30.5**	**-0.2**
GYA				pP	sP	15 12 36.8	-0.6
GYA				PP	**PnPn**	**15 13 28.3**	**-4.8**
GYA				S	**S**	**15 17 33.4**	**-4.0**
GYA				SS	**SnSn**	**15 19 23.0**	**+2.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,590nm,14.0s						
GYA				LR	LR		
	comp=Z,520nm,13.7s						
GYA				LR	LR		
	comp=Z,300nm,14.3s						
CD2	**Chengdu**	**31.76**	**270**	P	**P**	**15 12 38.1**	**+4.0**
CD2				PP	**PnPn**	**15 13 36.5**	**-1.8**
CD2				S	**S**	**15 17 37.4**	**-6.2**
CD2				sS	sS	15 17 53.1	+1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,190nm,5.7s						
CD2				LR	LR		
	comp=Z,3µm,11.4s						
CD2				LR	LR		
	comp=Z,1µm,12.4s						
CD2				LR	LR		
	comp=Z,2µm,18.0s						
MOY	**Mondy**	**31.83**	**310**	*e*P	**P**	**15 12 35.9**	**+1.2**
MOY				pmax	pmax		
	comp=Z,17nm,2.3s						
GTA	**Gaotai**	**32.56**	**287**	*e*P	**P**	**15 12 41.2**	**-0.1**
GTA				pP	pP	15 12 45.0	-1.0
GTA				sP	sP	15 12 47.7	-0.3
GTA				PcP	**PcP**	**15 15 33.0**	**+5.5**
GTA				S	**S**	**15 17 57.3**	**+1.1**
GTA				sS	sS	15 18 04.3	+0.2
GTA				SS	**SnSn**	**15 19 53.4**	**+3.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,73nm,6.7s						
GTA				LR	LR		
	comp=Z,500nm,14.6s						
GTA				LR	LR		
	comp=Z,350nm,13.3s						
GTA				LR	LR		
	comp=Z,420nm,16.2s						
QIZ	**Qiongzhong**	**33.11**	**245**	P	**P**	**15 12 46.3**	**+0.2**
QIZ				S	**S**	**15 18 06.3**	**+1.6**
QIZ				LR	LR		
	comp=Z,410nm,14.8s						
QIZ				LR	LR		
	comp=Z,470nm,16.6s						
QIZ				LR	LR		
	comp=Z,250nm,15.7s						
BILL	**Bilibino**	**33.75**	**16**	*de*P	**P**	**15 12 51.2**	**+0.1**
BILL				*e**PP	**pP**	**15 12 54.9**	**-1.0**
BILL				*e**SP	**sP**	**15 12 58.7**	**+0.9**
BILL				*e*S	**S**	**15 18 08.5**	**-5.2**
BILL				SSS	SSS	15 20 38.0	
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
BILL				MLR	MLR		
	comp=Z,442nm,15.0s						
TIXI	**Tiksi**	**35.04**	**353**	P	**P**	**15 13 00.9**	**-1.3**
	comp=Z,4.7nm,0.9s,baz=182,slow=5.8,SNR=4.0						
TIXI	**Tiksi**	**35.04**	**353**	*e*P	**P**	**15 13 02.0**	**-0.1**
TIXI	**Tiksi**	**35.04**	**353**	*ce*P	**P**	**15 13 02.5**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI	**Kunming**	**35.08**	**261**	P	**P**	**15 13 05.7**	**+2.3**
KMI				pP	sP	15 13 09.2	-0.9
KMI				sP	pP	15 13 11.2	+3.0
KMI				S	**S**	**15 18 33.0**	**-2.6**
KMI				pmax	pmax		
	comp=Z,49nm,1.3s						
KMI				pmax	pmax		
	comp=Z,85nm,3.1s						
KMI				LR	LR		
	comp=Z,430nm,13.3s						
KMI				LR	LR		
	comp=Z,300nm,15.7s						
KMI				LR	LR		
	comp=Z,440nm,15.1s						
SLVN	**Son La**	**36.18**	**255**	*e*P	**P**	**15 13 11.9**	**-0.8**
	comp=Z,14nm,1.4s						
SGSI	**Sangihe**	**36.53**	**208**	P	**P**	**15 13 15.5**	**0.0**
NONG	**Nongkai**	**38.67**	**251**	P	**P**	**15 13 37.9**	**+4.2**
	comp=Z,0.4nm,1.1s						
SKNT	**Sakolnakorn**	**38.72**	**249**	P	**P**	**15 13 36.7**	**+2.6**
	comp=Z,28nm,1.5s						
DLV	**T Lat**	**38.89**	**238**	*e*P	**P**	**15 13 35.7**	**-0.1**
	comp=Z,28nm,1.0s						
SIJI	**Sorong**	**39.15**	**196**	P	**P**	**15 13 37.1**	**-0.6**
	comp=Z,7.6nm,0.8s,baz=24,slow=8.7,SNR=8.6						
GENI	**Genyem**	**39.71**	**182**	P	P	15 13 47.7	+5.4
	comp=Z,35nm,1.6s						
LBMI	**Labuha**	**39.92**	**202**	P	**P**	**15 13 45.7**	**+1.6**
WMQ	**Urumqi**	**40.80**	**297**	*e*P	**P**	**15 13 53.5**	**+2.3**
WMQ				pP	sP	15 13 57.1	-0.9
WMQ				sP	pP	15 13 59.3	+3.2
WMQ				S	**S**	**15 20 02.0**	**+0.5**
WMQ				sS	sS	15 20 12.0	+2.5
WMQ				SS	**SS**	**15 22 57.4**	**-4.9**
WMQ				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.3s						
WMQ				LR	LR		
	comp=Z,290nm,17.5s						
WMQ				LR	LR		
	comp=Z,210nm,16.7s						
WMQ				LR	LR		
	comp=Z,460nm,19.5s						
UTTA	**Uttaradit**	**40.83**	**253**	P	P	15 13 58.7	+7.0
CHAI	**Chaiyaphum**	**40.88**	**249**	P	**P**	**15 13 53.0**	**+0.9**
	comp=Z,30µm,1.2s						
PBKT	**Sadao Pong**	**41.23**	**251**	P	**P**	**15 13 57.3**	**+2.4**
	comp=Z,6.4nm,1.9s						
CMMT	**Chiang Mai**	**41.44**	**256**	P	P	15 14 05.6	+8.9
CM31	**Chiang Mai Arr**	**41.64**	**255**	*e*P	**P**	**15 13 57.5**	**-0.9**
	comp=Z,24nm,1.7s						
CM31				*e*PcP	**PcP**	**15 15 57.1**	**+1.9**
CMAR	**Chiang Mai Arr**	**41.64**	**255**	P	**P**	**15 13 57.5**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=46,slow=6.1,SNR=8.9						
CMAR				PcP	**PcP**	**15 15 57.1**	**+1.9**
	comp=Z,0.8nm,0.4s,baz=57,slow=3.3,SNR=6.3						
CMAR				LR	LR	15 33 25.0	
	comp=Z,159nm,18.2s,baz=42,slow=39						
ZAA0	**Zalesovo Array**	**41.80**	**312**	*e*P	**P**	**15 13 59.0**	**-0.2**
	comp=Z,32nm,1.0s						
ZAA1	**Zalesovo Array**	**41.80**	**312**	*e*P	**P**	**15 13 58.4**	**-0.9**
ZALV	**Zalesovo Beam**	**41.80**	**312**	P	**P**	**15 13 58.4**	**-0.9**
	comp=Z,28nm,1.0s,baz=90,slow=7.4,SNR=50						
ZALV				LR	LR	15 32 16.7	
	comp=Z,494nm,18.4s,baz=67,slow=38						
APSI	**Ampana**	**42.24**	**210**	P	**P**	**15 14 02.9**	**-0.3**
	comp=Z,60nm,1.3s,comp=Z,732nm						
RDOG	**Red Dog Mine**	**43.23**	**27**	*e*P	**P**	**15 14 12.2**	**+1.5**
	comp=Z,38nm,1.2s						
SBUM	**Sibu**	**43.91**	**225**	*e*P	**P**	**15 14 17.0**	**+0.3**
	comp=Z,18nm,1.2s						
MK31	**Makanchi Array**	**44.05**	**302**	*e*P	**P**	**15 14 17.4**	**-0.2**
	comp=Z,13nm,1.0s						
MK31	**Makanchi Array**	**44.05**	**302**	*e*P	**P**	**15 14 17.4**	**-0.2**
MK31				pmax	pmax		
	comp=Z,13nm,1.0s						
MK32	**Makanchi Array**	**44.05**	**302**	*e*P	**P**	**15 14 17.9**	**+0.3**
MKAR	**Makanchi Array**	**44.05**	**302**	P	**P**	**15 14 17.9**	**+0.3**
	comp=Z,9.6nm,0.8s,baz=90,slow=9.7,SNR=65						
MKAR				LR	LR	15 35 07.4	
	comp=Z,120nm,18.3s,baz=79,slow=40						
MKAR	**Makanchi Array**	**44.05**	**302**	*i* P	**P**	**15 14 17.8**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAKZ	**Makanchi**	**44.26**	**302**	*e*P	**P**	**15 14 19.1**	**-0.2**
	comp=Z,20nm,1.1s						
MAKZ	**Makanchi**	**44.26**	**302**	*e*P	**P**	**15 14 19.1**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,21nm,1.1s						
PHET	**Kaeng Krachan**	**44.54**	**248**	P	P	15 14 28.2	+6.4
	comp=Z,39µm,0.8s						
SVW2	**Sparrevohn**	**45.26**	**38**	*e*P	**P**	**15 14 28.2**	**+1.1**
	comp=Z,13nm,0.8s						
SPSI	**Sidrap Palu**	**45.77**	**211**	P	**P**	**15 14 31.7**	**+0.1**
	comp=Z,15nm,1.1s						
KURK	**Kurchatov**	**45.83**	**308**	*e*P	**P**	**15 14 31.3**	**-0.4**
	comp=Z,39nm,0.8s						
KURK	**Kurchatov**	**45.83**	**308**	*i* P	**P**	**15 14 31.3**	**-0.4**
KURK				pmax	pmax		
	comp=Z,35nm,0.9s						
KURBB	**Kurchatov Arra**	**45.90**	**308**	P	**P**	**15 14 32.6**	**+0.4**
	comp=Z,20nm,0.8s,baz=83,slow=8.2,SNR=92						
OHAK	**Old Harbor**	**46.50**	**43**	*e*P	**P**	**15 14 37.5**	**+0.6**
	comp=Z,17nm,0.9s						
RSO	**Redoubt South**	**46.64**	**38**	*e*P	**P**	**15 14 38.5**	**+0.3**
PDGK	**Podgornoye**	**46.72**	**298**	*i* P	**P**	**15 14 38.4**	**-0.6**
PDGK				pmax	pmax		
	comp=Z,32nm,1.3s						
KDAK	**Kodiak Island**	**46.85**	**42**	P	**P**	**15 14 39.7**	**+0.2**
	comp=Z,23nm,0.8s,baz=290,slow=4.2,SNR=18						
KDAK	**Kodiak Island**	**46.85**	**42**	*e*P	**P**	**15 14 40.4**	**+0.8**
	comp=Z,38nm,0.9s						
KDAK	**Kodiak Island**	**46.85**	**42**	*i* P	**P**	**15 14 40.4**	**+0.8**
SPU	**Mount Spurr**	**46.97**	**37**	*e*P	**P**	**15 14 41.6**	**+1.0**
JIRN	**Jiri**	**47.08**	**275**	*e*P	**P**	**15 14 43.0**	**+0.8**
	comp=Z,86nm,1.0s						
GUN	**Gumba**	**47.21**	**275**	*e*P	**P**	**15 14 44.0**	**+0.7**
	comp=Z,63nm,0.9s						
MLY	**Manley**	**47.58**	**32**	*e*P	**P**	**15 14 46.1**	**+0.8**
	comp=Z,20nm,1.1s						
PRZ	**Przheval'sk**	**47.72**	**297**	*e*P	**P**	**15 14 46.7**	**-0.1**
	comp=Z,26nm,1.1s						
PRZ	**Przheval'sk**	**47.72**	**297**	*e*P	**P**	**15 14 46.7**	**-0.1**
PRZ				pmax	pmax		
	comp=Z,27nm,1.1s						
PKI	**Pulchoki**	**47.74**	**275**	*e*P	**P**	**15 14 47.3**	**0.0**
	comp=Z,58nm,1.1s						
KKN	**Kakani**	**47.74**	**276**	*e*P	**P**	**15 14 47.6**	**+0.4**
	comp=Z,74nm,1.2s						
PKIN	**Phulchoki**	**47.74**	**275**	*e*P	**P**	**15 14 47.6**	**+0.3**
	comp=Z,17nm,0.8s						
DMN	**Daman**	**47.96**	**276**	*e*P	**P**	**15 14 49.2**	**+0.2**
RC01	**Rabbit Creek A**	**48.10**	**37**	*e*P	**P**	**15 14 49.9**	**+0.6**
	comp=Z,28nm,1.1s						
BWN	**Browne**	**48.12**	**33**	*e*P	**P**	**15 14 48.8**	**-0.6**
	comp=Z,60nm,1.1s						
GKN	**Gorkha**	**48.16**	**276**	*e*P	**P**	**15 14 50.7**	**+0.3**
TOLK	**Toolik Lake Re**	**48.20**	**27**	P	**P**	**15 14 50.0**	**0.0**
	baz=266						
SEW	**Seward**	**48.30**	**39**	*e*P	**P**	**15 14 51.5**	**+0.7**
	comp=Z,30nm,1.2s						
PMR	**Palmer**	**48.36**	**37**	*e*P	**P**	**15 14 52.1**	**+0.8**
	comp=Z,18nm,1.0s						
PMR	**Palmer**	**48.36**	**37**	*e*P	**P**	**15 14 52.1**	**+0.8**
PMR				pmax	pmax		
	comp=Z,18nm,1.0s						
MCK	**McKinley**	**48.37**	**34**	*e*P	**P**	**15 14 51.6**	**+0.3**
	comp=Z,14nm,0.8s						
MCK	**McKinley**	**48.37**	**34**	*e*P	**P**	**15 14 51.7**	**+0.3**
MCK				pmax	pmax		
	comp=Z,14nm,0.8s						
KNK	**Knik Glacier**	**48.70**	**37**	*e*P	**P**	**15 14 54.3**	**+0.4**
	comp=Z,13nm,0.9s						
DANN	**Dangsing**	**48.70**	**277**	*e*P	**P**	**15 14 55.4**	**+0.7**
	comp=Z,105nm,0.8s						
SML	**Sawmill**	**48.73**	**36**	*e*P	**P**	**15 14 55.3**	**+1.1**
	comp=Z,24nm,0.8s						
SML	**Sawmill**	**48.73**	**36**	*e*P	**P**	**15 14 55.3**	**+1.1**
SML				pmax	pmax		
	comp=Z,24nm,0.8s						
TCOL	**CIGO, UAF Yank**	**48.81**	**32**	P	**P**	**15 14 55.6**	**+1.0**
	baz=272						
COLA	**College**	**48.81**	**32**	*d i*P	**P**	**15 14 56.0**	**+1.3**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
POKR	**Poker Plat Res**	**48.98**	**32**	P	**P**	**15 14 56.0**	**0.0**
	baz=272						
KOLN	**Koldanda**	**49.08**	**277**	*e*P	**P**	**15 14 58.2**	**+0.6**
	comp=Z,38nm,0.8s						
SCM	**Sheep Creek Mo**	**49.20**	**36**	*e*P	**P**	**15 14 59.0**	**+1.2**
	comp=Z,28nm,0.9s						
SCM	**Sheep Creek Mo**	**49.20**	**36**	*e*P	**P**	**15 14 59.0**	**+1.2**
SCM				pmax	pmax		
	comp=Z,28nm,0.9s						
HDA	**Harding Lake**	**49.22**	**33**	*e*P	**P**	**15 14 58.6**	**+0.8**
	comp=Z,18nm,1.0s						
ILAR	**Eielson Array**	**49.23**	**32**	P	**P**	**15 14 58.8**	**+0.9**
	comp=Z,9.8nm,0.9s,baz=268,slow=6.0,SNR=121						
ILAR				LR	LR	15 37 56.5	
	comp=Z,98nm,18.8s,baz=294,slow=39						
ILB	**Eielson Array**	**49.23**	**32**	*e*P	**P**	**15 14 58.8**	**+0.9**
	comp=Z,17nm,0.9s						
IPM	**Ipoh**	**49.35**	**239**	*e*P	**P**	**15 14 59.0**	**-0.5**
	comp=Z,18nm,0.9s						
PYUN	**Piuthan**	**49.42**	**277**	*e*P	**P**	**15 15 00.2**	**+0.1**
	comp=Z,124nm,1.1s						
SOEI	**Soe**	**49.52**	**203**	*e*P	**P**	**15 15 01.2**	**+0.4**

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       comp=Z,48nm,0.8s
SOEI   Soe              49.52 203   P       P        15 15 01.8 +1.0
TKM2   Tokmak 2         49.58 298 i P       P        15 15 01.7 +0.5
TKM2                                pmax    pmax
       comp=Z,16nm,1.2s
PAX    Paxson           49.97  35  eP       P        15 15 04.7 +1.0
       comp=Z,6.1nm,0.8s
PAX    Paxson           49.97  35  eP       P        15 15 04.7 +1.0
PAX                                 pmax    pmax
       comp=Z,6.0nm,0.8s
RIDG   Independent Ri   50.18  34  eP       P        15 15 06.1 +0.9
       comp=Z,12nm,1.0s
OTUK   Ortayu           50.34 306 i P       P        15 15 06.5 -0.1
OTUK                                pmax    pmax
       comp=Z,21nm,1.1s
KSH    Kashi            50.37 294   P       P        15 15 12.2 +5.0
KSH                                 sP      sP       15 15 18.9 +4.9
KSH                                 PP      PP       15 17 08.6 +6.1
KSH                                 S       S        15 22 25.9 +6.1
KSH                                 pmax    pmax
       comp=Z,21nm,1.3s
KSH                                 pmax    pmax
       comp=Z,100nm,4.0s
KSH                                 LR      LR
       comp=Z,680nm,16.2s
KSH                                 LR      LR
       comp=Z,780nm,17.6s
KSH                                 LR      LR
       comp=Z,670nm,15.3s
AAK    Ala-Archa        50.44 298  eP       P        15 15 06.9 -0.7
       comp=Z,17nm,1.4s
AAK    Ala-Archa        50.44 298 i P       P        15 15 07.4 -0.2
AAK                                 pmax    pmax
       comp=Z,5.0nm,0.9s
BRVK   Borovoye         50.51 312  eP       P        15 15 07.7 -0.1
       comp=Z,9.2nm,0.9s
BRVK   Borovoye         50.51 312 i P       P        15 15 07.9 +0.1
BRVK                                pmax    pmax
       comp=Z,6.0nm,1.0s
DOT    Dot Lake         50.54  34  eP       P        15 15 08.8 +0.9
       comp=Z,8.5nm,1.0s
SCRK   Sand Creek       50.54  33  eP       P        15 15 08.7 +0.6
       comp=Z,24nm,1.0s
EGAK   Eagle            51.67  32  eP       P        15 15 17.5 +1.1
       comp=Z,9.2nm,1.1s
DAWY   Dawson           52.53  33  eP       P        15 15 24.0 +1.2
       comp=Z,4.6nm,1.0s
KK31   Karatay Array    53.06 300  eP       P        15 15 27.1  0.0
       comp=Z,12nm,1.1s
KK31   Karatay Array    53.06 300  eP       P        15 15 27.1  0.0
KK31                                pmax    pmax
       comp=Z,12nm,1.1s
KKAR   Karatay Array    53.06 300  eP       P        15 15 27.2 +0.1
       comp=Z,12nm,1.1s
KKAR   Karatay Array    53.06 300  eP       P        15 15 27.2 +0.1
KKAR                                pmax    pmax
       comp=Z,12nm,1.1s
EPYK   Eagle Plains     53.26  30  eP       P        15 15 29.9 +1.8
       comp=Z,57nm,0.9s
EPYK   Eagle Plains     53.26  30   P       P        15 15 29.7 +1.6
       baz=280
HYT    Haines Junctio   54.04  37  eP       P        15 15 36.3 +2.2
       comp=Z,45nm,1.2s
INK    Inuvik           54.11  27   P       P        15 15 34.9 +0.6
       comp=Z,13nm,1.0s,baz=282,slow=6.8,SNR=13
INK    Inuvik           54.11  27  eP       P        15 15 35.8 +1.5
       comp=Z,15nm,0.9s
NIL    Nilore           54.61 288  eP       P        15 15 38.3 -0.2
       comp=Z,16nm,0.9s
GAR    Garm             54.66 295  eP       P        15 15 38.1 -0.8
       comp=Z,22nm,1.1s
GAR    Garm             54.66 295  eP       P        15 15 38.1 -0.8
GAR                                 pmax    pmax
       comp=Z,22nm,1.1s
SVE    Sverdlovsk       55.00 319⇑eP        P        15 15 42.1 +1.1
SVE                                 pmax    pmax
       comp=Z,27nm,1.1s
SVE                                 MLR     MLR
       comp=Z,511nm,19.0s
WHY    Whitehorse       55.33  37  eP       P        15 15 43.6 +0.2
       comp=Z,17nm,1.0s
ARU    Arti             56.22 318  eP       P        15 15 49.5 -0.2
       comp=Z,40nm,1.3s
ARU    Arti             56.22 318d iP       P        15 15 49.6 -0.1
ARU                                                  15 16 46.5
ARU                                                  15 17 52.8
ARU                                 S       S        15 23 39.9 +1.5
ARU                                 SS      SS       15 27 23.0 -1.5
ARU                                 pmax    pmax
       comp=Z,25nm,1.1s
ARU                                 MLR     MLR
       comp=Z,484nm,18.0s
JIS    Juneau Island    56.25  39  eP       P        15 15 50.5 +0.7
       comp=Z,27nm,1.1s
WRAB   Tennant Creek    57.32 188ceP        P        15 15 57.2 -0.7
WRAB                                pmax    pmax
       comp=Z,29nm,1.7s
KBL    Kabul            57.40 291   P       P        15 16 01.1 +2.4
KBL                                 pmax    pmax
       comp=Z,9.0nm,1.2s
ABKAR  Akbulak array    57.83 310  eP       P        15 16 00.7 -0.5
       comp=Z,6.3nm,0.8s
WRAK   Wrangell Islan   57.89  41  eP       P        15 16 02.3 +0.8
       comp=Z,17nm,1.1s
DIB    Dawson Inlet,    58.97  44  eP       P        15 16 09.3 +0.2
       comp=Z,21nm,1.5s
KBS    Kingsbay         60.41 350  eP       P        15 16 19.9 +1.3
       comp=Z,31nm,1.1s
KBS    Kingsbay         60.41 350  eP       P        15 16 20.0 +1.3
KBS                                 pmax    pmax
       comp=Z,31nm,1.1s
PRGR   Permogore        60.59 327  eP       P        15 16 18.5 -1.6
PRGR                                pmax    pmax
       comp=Z,19nm,0.8s
ASAR   Alice Springs    61.06 188   P       P        15 16 23.7  0.0
       comp=Z,3.6nm,0.8s,baz=9.2,slow=6.6,SNR=28
APA    Apatity          62.48 336⇑iP        P        15 16 35.5 +2.7
APA                                 pmax    pmax
       comp=Z,2.0nm,0.9s
YKA    Yellowknife Ar   63.54  30   P       P        15 16 41.1 +1.2
       comp=Z,3.1nm,0.8s,baz=298,slow=6.9,SNR=6.8
YKB5   Yellowknife Ar   63.54  30  eP       P        15 16 41.1 +1.2
ARA0   ARCESS Array S   63.78 339  eP       P        15 16 41.8 +0.4
ARCES  ARCESS Array B   63.78 339   P       P        15 16 41.8 +0.4
       comp=Z,3.5nm,0.8s,baz=53,slow=7.7,SNR=11
ARCES                               LR      LR       15 49 55.1
       comp=Z,216nm,18.0s,baz=78,slow=41
GEYT   Alibeck          63.78 299   P       P        15 16 41.9  0.0
       comp=Z,7.8nm,1.0s,baz=36,slow=5.5,SNR=10
GEYT                                LR      LR       15 45 42.4
       comp=Z,118nm,18.4s,baz=15,slow=37
GYA0B  ALIBECK ARRAY    63.78 299  eP       P        15 16 41.2 -0.7
       comp=Z,11nm,1.0s
DAG    Danmarks Havn    65.52 355 i P       P        15 16 52.5 -0.1
DAG                                 pmax    pmax
       comp=Z,9.0nm,0.9s
DAG    Danmarks Havn    65.52 355 i P       P        15 16 52.5 -0.1
       comp=Z,11nm,0.9s
LLLB   Lillooet         66.00  44  eP       P        15 16 56.0 -0.3
       comp=Z,24nm,1.4s
D03D   Eldon            66.86  47   P       P        15 17 03.3 +1.6
       baz=300
B05A   Bryant           67.07  46   P       P        15 17 03.8 +0.8
       baz=301
MOS    Moscow           67.09 323  eP       P        15 17 04.8 +1.8
MOS                                 pmax    pmax
       comp=Z,51nm,1.4s
E04D   Cinebar          67.67  48   P       P        15 17 08.3 +1.5
       baz=301
SUF    Sumiainen        67.78 333   P       P        15 17 11.6 +4.3
SUF                                 pmax    pmax
       comp=Z,16nm,0.8s
OBN    Obninsk          67.93 323ceP        P        15 17 08.4 +0.1
OBN                                 *PP     pP       15 17 12.0 -1.4
OBN                                 *SP     pP       15 17 12.0 -1.4
OBN                                 S       S        15 26 07.0 +0.8
OBN                                e                 15 27 04.7
OBN                                eSS      SS       15 30 24.1 -3.2
OBN                                 pmax    pmax
       comp=Z,44nm,1.7s
OBN                                 MLR     MLR
       comp=Z,193nm,15.0s
LPSR   Galich'ya Gora   68.15 320  eP       P        15 17 09.4 -0.4
LPSR                                pmax    pmax
       comp=Z,20nm,0.8s
LPSR                                MLR     MLR
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       comp=Z,860nm,19.0s
LTY    Liberty          68.41  47  eP       P        15 17 12.2 +0.6
       comp=Z,5.4nm,0.6s
J01E   Myrtle Point     68.59  52   P       P        15 17 14.6 +1.9
       baz=302
FIA1   FINESS Array S   68.62 332  eP       P        15 17 12.6 +0.1
       comp=Z,25nm,0.9s
FIA0   FINESS Array S   68.62 332  eP       P        15 17 12.8 +0.3
FIA0   FINESS Array S   68.62 332  eP       P        15 17 12.8 +0.3
FINES  FINESS Array B   68.62 332   P       P        15 17 12.8 +0.3
       comp=Z,14nm,0.8s,baz=66,slow=6.5,SNR=21
FINES                               LR      LR       15 49 35.9
       comp=Z,261nm,18.1s,baz=26,slow=38
I03D   Drain, OR        68.68  51   P       P        15 17 14.3 +1.1
       baz=302
VSR    Storozhevoye     68.79 319  eP       P        15 17 13.5 -0.3
VSR                                 pmax    pmax
       comp=Z,10.0nm,0.8s
VSR                                 MLR     MLR
       comp=Z,540nm,18.0s
H04A   Detroit Lake     68.87  49  eP       P        15 17 15.6 +1.1
       comp=Z,20nm,0.9s
K02D   Willamette Mer   69.00  52   P       P        15 17 16.8 +1.4
       baz=302
G05D   Wamic, OR        69.10  49   P       P        15 17 17.5 +1.6
       baz=302
I04A   Tendick Farm,    69.20  50   P       P        15 17 18.2 +1.6
       baz=302,SNR=7.4
L02E   Cave Junction    69.33  52   P       P        15 17 18.6 +1.2
       baz=302
C09A   Chrisman Ranch   69.49  45  eP       P        15 17 19.3 +1.0
       comp=Z,29nm,1.5s
D08A   Wollman Farm,    69.53  46  eP       P        15 17 19.4 +0.9
       comp=Z,13nm,1.3s
I05D   Terrebonne, OR   69.57  49   P       P        15 17 19.3 +0.5
       baz=302
J04D   Umpqua Nationa   69.68  51   P       P        15 17 20.4 +0.6
       baz=302
NEW    Newport          69.88  44  eP       P        15 17 22.0 +1.3
       comp=Z,11nm,1.0s
NEW    Newport          69.88  44  eP       P        15 17 22.0 +1.3
NEW                                 pmax    pmax
       comp=Z,11nm,1.0s
NEW    Newport          69.88  44   P       P        15 17 21.8 +1.1
       baz=304
GOF    Gofitskoye       69.98 312⇑eP        P        15 17 22.1 +0.8
GOF                                 pmax    pmax
       comp=Z,25nm,0.6s
PINE   Pine Mountain    70.10  50  eP       P        15 17 24.0 +1.7
       comp=Z,37nm,0.9s
L04D   Klamath Falls    70.11  52   P       P        15 17 23.7 +1.4
       baz=303,SNR=8.3
YBH    Yreka Blue Hor   70.12  52  eP       P        15 17 22.5 +0.2
       comp=Z,11nm,1.1s
YBH    Yreka Blue Hor   70.12  52  eP       P        15 17 22.5 +0.2
YBH                                 pmax    pmax
       comp=Z,11nm,1.1s
J05D   Fort Rock, OR    70.20  50   P       P        15 17 24.4 +1.6
       baz=303,SNR=5.7
M02C   Callahan         70.21  53   P       P        15 17 24.0 +1.2
       baz=303
VSU    Vasula           70.27 330  eP       P        15 17 22.4 -0.3
VSU                                 IAmb    IAmb     15 17 28.1
       comp=Z,43nm,0.6s
VSU    Vasula           70.27 330ceP        P        15 17 22.9 +0.2
VSU                                 pmax    pmax
       comp=Z,66nm,1.0s
E09A   Wood Farm, Sta   70.27  46  eP       P        15 17 24.2 +1.2
       comp=Z,13nm,1.0s
SUMG   Summit           70.42 360  eP       P        15 17 24.6 +0.6
       comp=Z,17nm,1.2s
SUMG   Summit           70.42 360  eP       P        15 17 24.6 +0.6
SUMG                                pmax    pmax
       comp=Z,17nm,1.2s
SUMG   Summit           70.42 360 i P       P        15 17 25.5 +1.5
G08A   Pilot Rock       70.47  48  eP       P        15 17 25.6 +1.2
       comp=Z,6.3nm,1.0s
N02D   Trinity Center   70.53  53   P       P        15 17 26.7 +1.9
       baz=303
M04C   Macdoel          70.64  52   P       P        15 17 27.9 +2.3
       baz=303,SNR=6.7
K05A   Summer Lake      70.71  51  eP       P        15 17 27.8 +1.7
       comp=Z,30nm,1.0s
KBZ    Khabaz           70.79 311   P       P        15 17 26.4 +0.2
       comp=Z,7.0nm,0.9s,baz=345,slow=0.8,SNR=6.6
KBZ                                 LR      LR       15 53 11.3
       comp=Z,245nm,18.8s,baz=52,slow=40
KIV    Kislovodsk       70.80 311  eP       P        15 17 27.3 +0.9
       comp=Z,38nm,1.0s
KIV    Kislovodsk       70.80 311⇑iP        P        15 17 28.0 +1.6
KIV    Kislovodsk       70.80 311  eP       P        15 17 27.6 +1.2
KIV                                 pmax    pmax
       comp=Z,118nm,1.1s
KIV                                 MLR     MLR
       comp=Z,358nm,18.0s
I07A   Izee             70.81  49  eP       P        15 17 27.7 +1.1
       comp=Z,8.6nm,1.0s
O02D   Mt. Diablo Mer   70.91  54   P       P        15 17 28.1 +0.9
       baz=303
F10A   Beach Ranch, E   71.10  46  eP       P        15 17 29.8 +1.6
       comp=Z,6.1nm,1.0s
NEY    Neytrino         71.16 310 i P       P        15 17 28.9 +0.1
NEY                                 pmax    pmax
       comp=Z,3.0nm,1.0s
O03E   Paynes Creek     71.47  53   P       P        15 17 32.2 +1.6
       baz=304
MOD    Modoc Plateau    71.53  51  eP       P        15 17 31.5 +0.5
       comp=Z,7.5nm,0.9s
GNI    Garni            71.61 307 i P       P        15 17 32.8 +1.3
GNI                                 pmax    pmax
       comp=Z,29nm,1.2s
BMO    Blue Mountains   71.69  47  eP       P        15 17 33.1 +1.3
       comp=Z,12nm,0.9s
BMO    Blue Mountains   71.69  47  eP       P        15 17 33.1 +1.3
BMO                                 pmax    pmax
       comp=Z,12nm,0.9s
AKH    Akhalkalaki      71.71 308⇑iP        P        15 17 33.9 +1.8
AKH    Akhalkalaki      71.71 308   P       P        15 17 33.9 +1.8
J08A   Circle Bar Ran   71.84  49  eP       P        15 17 33.6 +0.8
       comp=Z,17nm,1.0s
IDID   Didziasalis      72.30 327  eP       P        15 17 35.6 +0.5
IDID                                IAmb    IAmb     15 17 40.5
       comp=Z,11nm,1.2s
PLID   Pearl Lake       72.31  47  eP       P        15 17 36.1 +0.3
       comp=Z,6.8nm,0.9s
ISAL   Salakas          72.40 327  eP       P        15 17 36.3 +0.6
ISAL                                IAmb    IAmb     15 17 42.0
       comp=Z,12nm,0.7s
MSO    Missoula         72.47  44  eP       P        15 17 37.3 +0.8
       comp=Z,11nm,1.1s
MSO    Missoula         72.47  44   P       P        15 17 37.6 +1.1
       baz=306
IIGN   Ignalina         72.50 327  eP       P        15 17 37.1 +0.8
IIGN                                IAmb    IAmb     15 17 41.7
       comp=Z,13nm,1.1s
BEKR   Beckworth        72.63  53  eP       P        15 17 38.6 +1.0
       comp=Z,10nm,0.9s
AFDM   Forest Hills D   72.75  54  eP       P        15 17 39.1 +0.9
       comp=Z,6.3nm,1.0s
PAHR   Pah Rah Range    73.34  53  eP       P        15 17 42.4 +0.6
       comp=Z,13nm,1.0s
FFC    Flin Flon        73.44  33  eP       P        15 17 42.5 +0.6
       comp=Z,17nm,1.0s
FFC    Flin Flon        73.44  33  eP       P        15 17 42.5 +0.6
FFC                                 pmax    pmax
       comp=Z,17nm,1.0s
PNTR   Pine Nut         73.56  53  eP       P        15 17 44.9 +1.7
       comp=Z,8.6nm,1.1s
CMB    Columbia Colle   73.65  55  eP       P        15 17 45.0 +1.5
       comp=Z,14nm,1.0s
CMB    Columbia Colle   73.65  55  eP       P        15 17 45.0 +1.5
CMB                                 pmax    pmax
       comp=Z,14nm,1.0s
HRY    Holter Researc   73.70  43  eP       P        15 17 45.0 +1.2
NC405  NORSAR Array S   73.76 337  eP       P        15 17 44.0 +0.2
       comp=Z,36nm,1.0s
YERR   Yerington        73.84  53  eP       P        15 17 45.7 +0.8
       comp=Z,18nm,1.0s
NC204  NORSAR Array S   73.93 338  eP       P        15 17 44.7  0.0
       comp=Z,36nm,0.9s
NB201  NORSAR Array S   73.94 337  eP       P        15 17 45.2 +0.4
       comp=Z,69nm,1.2s
NB2    NORSAR Subarra   73.97 337   P       P        15 17 44.8 -0.2
       comp=Z,61nm,1.7s,baz=39,slow=6.2
NB2    NORSAR Subarra   73.97 337   P       P        15 17 48.7 +3.7
NB2                                 pmax    pmax
       comp=Z,61nm,1.7s
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NB2    NORSAR Subarra   73.97 337   P       P        15 17 44.8 -0.2
       baz=39,slow=6.2
NB200  NORSAR Array S   73.97 337  eP       P        15 17 45.1 +0.1
NOA    NORSAR Array B   73.97 337   P       P        15 17 45.1 +0.1
       comp=Z,6.9nm,0.9s,baz=39,slow=5.8,SNR=9.7
NOA                                 LR      LR       15 53 05.4
       comp=Z,198nm,18.9s,baz=55,slow=38
WAKR   Walker           73.99  54  eP       P        15 17 47.1 +1.3
       comp=Z,7.4nm,0.9s
EGMT   Eagleton         74.02  41   P       P        15 17 46.5 +0.9
       baz=308
DLMT   Dillon           74.09  45  eP       P        15 17 46.9 +0.8
       comp=Z,18nm,0.9s
HLID   Hailey           74.13  47  eP       P        15 17 46.9 +0.5
       comp=Z,8.5nm,1.0s
HLID   Hailey           74.13  47   P       P        15 17 47.8 +1.4
       baz=307
AKASG  Malin Array Be   74.14 322   P       P        15 17 46.1 +0.1
       comp=Z,7.5nm,0.6s,baz=46,slow=6.0,SNR=21
AKASG                               LR      LR       15 52 15.1
       comp=Z,202nm,21.3s,baz=30,slow=37
AKASG  Malin Array Be   74.14 322 i P       P        15 17 46.0 -0.1
AKASG                               pmax    pmax
       comp=Z,8.0nm,0.6s
AKBB   Malin Array Si   74.14 322  eP       P        15 17 45.4 -0.6
       comp=Z,21nm,1.0s
AKBB   Malin Array Si   74.14 322  eP       P        15 17 45.4 -0.6
AKBB                                pmax    pmax
       comp=Z,21nm,1.0s
MCMT   McKenzie Canyo   74.28  45  eP       P        15 17 48.2 +0.9
BMN    Battle Mountai   74.28  51  eP       P        15 17 48.5 +1.2
       comp=Z,12nm,1.0s
BMN    Battle Mountai   74.28  51  eP       P        15 17 48.5 +1.2
BMN                                 pmax    pmax
       comp=Z,11nm,1.0s
BOZ    Bozeman (W)      74.49  44  eP       P        15 17 49.4 +1.0
       comp=Z,15nm,0.9s
BOZ    Bozeman (W)      74.49  44  eP       P        15 17 49.4 +1.0
BOZ                                 pmax    pmax
       comp=Z,15nm,0.9s
BOZ    Bozeman (W)      74.49  44   P       P        15 17 49.5 +1.0
       baz=308
RYN    Ryan             74.51  53  eP       P        15 17 50.2 +1.5
       comp=Z,11nm,1.0s
KVN    Kaiserville      74.53  53  eP       P        15 17 50.3 +1.5
       comp=Z,15nm,1.0s
KVN    Kaiserville      74.53  53  eP       P        15 17 50.3 +1.5
KVN                                 pmax    pmax
       comp=Z,15nm,1.0s
SUW    Suwalki          74.71 327  eP       P        15 17 54.4 +5.1
MDPB   Devils Postpil   74.73  54  eP       P        15 17 51.2 +1.2
       comp=Z,7.2nm,1.0s
NV01   Mina Array Sit   74.76  53  eP       P        15 17 51.5 +1.3
NVAR   Mina Array Bea   74.76  53   P       P        15 17 51.5 +1.3
       comp=Z,8.2nm,0.9s,baz=284,slow=6.0,SNR=49
OMMB   Old Mammoth Mi   74.79  54  eP       P        15 17 51.7 +1.2
       comp=Z,9.2nm,1.2s
NV11   Mina Array Sit   74.86  53  eP       P        15 17 51.9 +1.2
       comp=Z,1.0nm,1.2s
PAGB   Antelope Grade   75.05  56  eP       P        15 17 52.9 +1.2
       comp=Z,29nm,1.1s
QLMT   Earthquake Lak   75.07  45  eP       P        15 17 53.3 +1.4
YHB    Horse Butte      75.25  45  eP       P        15 17 54.3 +1.4
       comp=Z,12nm,1.0s
ELK    Elko             75.31  50  eP       P        15 17 54.8 +1.4
       comp=Z,5.0nm,1.1s
ELK    Elko             75.31  50  eP       P        15 17 54.8 +1.4
ELK                                 pmax    pmax
       comp=Z,5.0nm,1.1s
YHH    Holmes Hill      75.42  45  eP       P        15 17 55.5 +1.5
       comp=Z,9.8nm,1.1s
GCMT   Greycliff        75.45  43  eP       P        15 17 54.9 +0.9
SMMC   Simmler          75.46  57   P       P        15 17 55.7 +1.6
       baz=306
YFT    Old Faithful     75.64  45  eP       P        15 17 56.5 +1.2
       comp=Z,12nm,1.0s
VES    Vestal, Richgr   75.76  56   P       P        15 17 56.7 +1.0
       baz=306
YPP    Pitchstone Pla   75.77  45  eP       P        15 17 56.8 +0.7
       comp=Z,8.4nm,1.0s
H17A   Grant Village    75.82  45   P       P        15 17 59.3 +3.0
       baz=309
PKM    Mcpherson Peak   75.83  57   P       P        15 17 57.7 +1.3
       baz=306
FLWY   Flagg Ranch      75.95  45  eP       P        15 17 57.9 +0.9
       comp=Z,22nm,1.3s
FXWY   Fox Creek        76.04  46  eP       P        15 17 59.3 +1.8
       comp=Z,12nm,1.0s
CWC    Cottonwood Cre   76.07  55   P       P        15 17 58.7 +1.0
       baz=306
RLMT   Red Lodge        76.09  44  eP       P        15 17 58.9 +1.2
       comp=Z,14nm,1.2s
RLMT   Red Lodge        76.09  44   P       P        15 17 59.2 +1.4
       baz=309
MOOW   Moose Ponds      76.13  45  eP       P        15 17 59.1 +1.1
       comp=Z,16nm,1.3s
TPAW   Teton Pass       76.17  46  eP       P        15 17 59.9 +1.6
       comp=Z,12nm,1.0s
GRAC   Grapevine Rang   76.20  54   P       P        15 17 59.9 +1.6
       baz=306
ISA    Isabella, Lake   76.27  56  eP       P        15 17 59.5 +0.7
       comp=Z,8.1nm,1.1s
ISA    Isabella, Lake   76.27  56  eP       P        15 17 59.5 +0.7
ISA                                 pmax    pmax
       comp=Z,8.0nm,1.1s
ISA    Isabella, Lake   76.27  56   P       P        15 17 59.4 +0.7
       baz=306
LOHW   Long Hollow      76.30  45  eP       P        15 17 59.7 +0.7
       comp=Z,6.6nm,1.0s
SCZ2   Santa Cruz Isl   76.47  58   P       P        15 18 00.6 +0.8
       baz=306
R11A   Troy Canyon, C   76.53  52  eP       P        15 18 01.3 +1.0
       comp=Z,14nm,1.1s
R11A   Troy Canyon, C   76.53  52   P       P        15 18 02.2 +1.8
       baz=307
DGMT   Dagmar           76.58  39   P       P        15 18 00.9 +0.7
       baz=312
MPMC   Manual Prospec   76.68  55   P       P        15 18 02.6 +1.4
       baz=307
LAO    LASA Array       76.72  41  eP       P        15 18 02.7 +1.7
       comp=Z,28nm,1.1s
LAO    LASA Array       76.72  41   P       P        15 18 02.2 +1.2
       baz=311
OSI    Osito Audit: C   76.72  57   P       P        15 18 02.7 +1.4
       baz=306
KIS    Kishinev         76.75 320  eP       P        15 18 04.0 +2.9
KIS                                 LRM     MLR      15 54 23.0
       comp=Z,600nm,17.0s
KIS    Kishinev         76.75 320  eP       P        15 18 04.0 +2.9
KIS                                 MLR     MLR
       comp=Z,600nm,17.0s
BLG    Laguna Peak, P   76.79  57   P       P        15 18 02.4 +0.8
       baz=306
FURC   Furnace Creek,   76.84  54   P       P        15 18 03.2 +1.4
       baz=307
TPNV   Topopah Spring   76.95  53  eP       P        15 18 04.2 +1.5
       comp=Z,14nm,1.0s
TPNV   Topopah Spring   76.95  53  eP       P        15 18 04.2 +1.5
TPNV                                pmax    pmax
       comp=Z,14nm,1.0s
TPNV   Topopah Spring   76.95  53   P       P        15 18 04.2 +1.5
       baz=307
HWUT   Hardware Ranch   76.99  47  eP       P        15 18 04.6 +1.8
       comp=Z,13nm,1.2s
EDW2   Edwards Air Fo   77.05  56   P       P        15 18 04.8 +1.7
       baz=307
DUG    Dugway, Tooele   77.12  49  eP       P        15 18 05.0 +1.5
       comp=Z,11nm,0.9s
DUG    Dugway, Tooele   77.12  49  eP       P        15 18 05.0 +1.5
DUG                                 pmax    pmax
       comp=Z,11nm,0.9s
DUG    Dugway, Tooele   77.12  49   P       P        15 18 05.3 +1.7
       baz=308
DECC   Green Verdugo    77.19  57   P       P        15 18 05.4 +1.5
       baz=307
TCUT   Toone Canyon     77.39  48  eP       P        15 18 06.4 +1.3
       comp=Z,47nm,1.5s
BW06   Boulder Array    77.42  46  eP       P        15 18 06.0 +0.7
       comp=Z,6.0nm,0.9s
BW06   Boulder Array    77.42  46   P       P        15 18 06.5 +1.2
       baz=310
PD31   Pinedale Array   77.42  46  eP       P        15 18 06.4 +1.1
       comp=Z,5.1nm,0.9s
PDAR   Pinedale Array   77.42  46   P       P        15 18 06.5 +1.1
       comp=Z,3.8nm,0.9s,baz=279,slow=2.9,SNR=29
PSUT   Pine Spring      77.50  51  eP       P        15 18 07.2 +1.4
       comp=Z,12nm,1.1s
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SHOC  Shoshone, Teco    77.56  54   P      P       15 18 07.2 +1.3
      baz=307
GSC   Goldstone, Bar    77.58  55  eP      P       15 18 07.2 +1.1
      comp=Z,12nm,1.3s
GSC   Goldstone, Bar    77.58  55  eP      P       15 18 07.2 +1.1
GSC                                 pmax   pmax
      comp=Z,12nm,1.3s
GSC   Goldstone, Bar    77.58  55   P      P       15 18 07.2 +1.1
      baz=307
CIS   Catalina Islan    77.64  57   P      P       15 18 07.7 +1.2
      baz=307
BFSC  Mount Baldy Ra    77.65  56   P      P       15 18 07.9 +1.3
      baz=307
JLU   Jordanelle        77.68  48  eP      P       15 18 08.5 +1.7
      comp=Z,11nm,1.2s
SHPR  Sheep Range       77.92  53  eP      P       15 18 08.9 +0.8
      comp=Z,12nm,1.1s
KWP   Kalwaria Pacla    77.96 324  eP      P       15 18 09.6 +1.7
KWP   Kalwaria Pacla    77.96 324  eP      P       15 18 08.8 +0.9
      comp=Z,499nm,1.1s
KWP   Kalwaria Pacla    77.96 324  eP      P       15 18 08.8 +0.9
TUQ   Turquoise Moun    78.07  55   P      P       15 18 10.3 +1.4
      baz=308
BUR08 Bucovina Ar. S    78.14 322  eP      P       15 18 09.5 +0.4
      comp=Z,8.1nm,0.9s
BURAR Bucovina Array    78.16 322⇑iP      P       15 18 10.0 +0.8
BURAR Bucovina Array    78.16 322   P      P       15 18 09.9 +0.8
HEC   Hector,Ludlow     78.17  55   P      P       15 18 11.0 +1.6
      baz=307
BIZ   Bicaz             78.17 321⇓iP      P       15 18 10.2 +1.1
TESR  Tescani           78.18 320⇓iP      P       15 18 10.0 +0.8
CFR   Carcaliu          78.30 318⇑iP      P       15 18 11.0 +1.1
CFR   Carcaliu          78.30 318   P      P       15 18 10.9 +1.1
CCUT  Cedar City        78.41  52  eP      P       15 18 11.8 +0.9
      comp=Z,12nm,1.2s
MSU   Marysvale         78.55  50  eP      P       15 18 13.0 +1.4
MSU   Marysvale         78.55  50  eP      P       15 18 13.0 +1.4
VRI   Vrincioaia        78.58 320⇑iP      P       15 18 12.9 +1.5
VRI   Vrincioaia        78.58 320   P      P       15 18 12.9 +1.5
PLOR  Plostina          78.63 320⇑iP      P       15 18 12.9 +1.2
PLOR  Plostina          78.63 320   P      P       15 18 12.9 +1.2
GMRC  Granite Mounta    78.64  55   P      P       15 18 13.4 +1.4
      baz=308
KOLS  Kolonicke sedl    78.66 324  eP      P       15 18 13.3 +1.5
KOLS                                pmax   pmax
      comp=Z,8.0nm,1.1s
KOLS  Kolonicke sedl    78.66 324  eP      P       15 18 13.3 +1.5
BR101 Keskin Array S    78.74 312  eP      P       15 18 12.5  -0.1
BRTR  Keskin Array B    78.74 312   P      P       15 18 12.5  -0.1
      comp=Z,2.2nm,0.9s,baz=72,slow=5.3,SNR=6.1
BRTR                                LR     LR      15 58 25.7
      comp=Z,86nm,18.0s,baz=36,slow=40
P17A  Butcher Ranch,    78.82  49  eP      P       15 18 14.1 +1.1
      comp=Z,31nm,1.3s
LCMT  Little Creek M    78.82  52  eP      P       15 18 14.5 +1.4
      comp=Z,14nm,1.1s
PFO   Pinyon Flats O    78.82  56   P      P       15 18 14.1 +0.9
      baz=308
MTPU  Mount Pierson     78.84  51  eP      P       15 18 13.6 +0.2
      comp=Z,9.8nm,1.0s
UZH   Uzhgorod          78.86 324  eP      P       15 18 09.6  -3.2
UZH                                e               15 18 14.4
UZH                                eS      S       15 28 01.9  -8.3
UZH                                i SP    SKSac   15 28 26.5  -1.1
OJC   Ojcow             78.87 326  eP      P       15 18 13.5 +0.6
OJC   Ojcow             78.87 326  eP      P       15 18 13.4 +0.6
      comp=Z,31nm,1.2s
OJC   Ojcow             78.87 326  eP      P       15 18 13.4 +0.6
OJC                                 pmax   pmax
      comp=Z,31nm,1.2s
BELC  Belle Mtn. Jos    78.89  56   P      P       15 18 14.5 +1.0
      baz=308
OZUR                    78.91 320⇑iP      P       15 18 14.1 +0.9
KNB   Kanab             79.08  52  eP      P       15 18 16.0 +1.5
      comp=Z,27nm,1.3s
TRPA  Tarpa             79.10 323⇑iP      P       15 18 15.3 +1.2
TRPA  Tarpa             79.10 323  eP      P       15 18 18.0 +3.9
SRU   San Rafael Swe    79.17  49  eP      P       15 18 16.1 +1.0
      comp=Z,14nm,1.0s
SRU   San Rafael Swe    79.17  49   P      P       15 18 16.1 +1.0
SRU                                 pmax   pmax
      comp=Z,14nm,1.0s
K22A  Casper            79.20  44  eP      P       15 18 15.2 +0.1
      comp=Z,16nm,1.1s
K22A  Casper            79.20  44   P      P       15 18 16.4 +1.3
      baz=311
NIE   Niedzica          79.22 325  eP      P       15 18 16.4 +1.5
MLR   Muntele Rosu      79.24 320  eP      P       15 18 15.5 +0.3
      comp=Z,23nm,1.6s
MLR   Muntele Rosu      79.24 320⇓iP      P       15 18 15.9 +0.7
ULM   Lac du Bonnet     79.24  33   P      P       15 18 15.2 +0.3
      comp=Z,4.4nm,0.6s,baz=303,slow=7.0,SNR=5.6
ULM   Lac du Bonnet     79.24  33  eP      P       15 18 15.4 +0.5
      comp=Z,15nm,1.1s
ULM   Lac du Bonnet     79.24  33  eP      P       15 18 15.4 +0.5
ULM                                 pmax   pmax
      comp=Z,15nm,1.1s
BAR   Barrett           79.25  57  eP      P       15 18 16.1 +0.8
      comp=Z,13nm,1.1s
MDND  Maddock           79.25  37   P      P       15 18 16.0 +1.0
      baz=315
MONP2 Monument Peak     79.28  57   P      P       15 18 17.1 +1.3
      baz=308
IRM   Iron Mountain     79.36  55   P      P       15 18 17.3 +1.4
      baz=308
RWWY  Rawlins           79.45  45  eP      P       15 18 17.4 +0.9
      comp=Z,11nm,0.9s
BC3   Big Chuckawall    79.46  56   P      P       15 18 17.7 +1.1
      baz=308
RSSD  Black Hills       79.58  42  eP      P       15 18 17.6 +0.5
      comp=Z,8.0nm,1.0s
RSSD  Black Hills       79.58  42  eP      P       15 18 17.6 +0.5
RSSD                                pmax   pmax
      comp=Z,8.0nm,1.0s
RSSD  Black Hills       79.58  42   P      P       15 18 18.1 +1.0
      baz=313
IKP   In-Ko-Pah, Jac    79.64  57   P      P       15 18 18.8 +1.2
      baz=308
SWSC  Sam W. Stewart    79.67  56   P      P       15 18 18.1 +0.6
      baz=308
VOIR                    79.73 320⇓iP      P       15 18 19.3 +1.5
VOIR                    79.73 320   P      P       15 18 19.3 +1.5
LANS  Liptovska Anna    79.79 326  eP      P       15 18 21.3 +3.3
LANS  Liptovska Anna    79.79 326  eP      P       15 18 21.3 +3.3
O20A  White River Ci    79.87  47  eP      P       15 18 20.1 +1.3
      comp=Z,12nm,1.1s
O20A  White River Ci    79.87  47   P      P       15 18 19.7 +0.9
      baz=311
KSP   Ksiaz             79.92 328  eP      P       15 18 19.6 +1.0
PDMCI Parker Dam,Lak    79.92  55   P      P       15 18 20.2 +1.3
      baz=308
ARR   Arges             79.99 320⇑iP      P       15 18 20.8 +1.6
Y12C  Blythe            80.01  55  eP      P       15 18 20.5 +1.1
      comp=Z,17nm,1.3s
Y12C  Blythe            80.01  55   P      P       15 18 20.4 +1.0
      baz=308
OSTC  Ostas             80.17 328   AMS    AMS     16 01 10.0
      comp=Z,300nm,13.7s
MORC  Moravsky Berou    80.18 327  eP      P       15 18 21.0 +0.9
      comp=Z,18nm,1.1s
MORC  Moravsky Berou    80.18 327⇑iP      P       15 18 21.2 +1.1
MORC  Moravsky Berou    80.18 327  eP      P       15 18 21.0 +0.9
MORC                                pmax   pmax
      comp=Z,18nm,1.1s
MORC  Moravsky Berou    80.18 327  eP      P       15 18 21.1 +1.0
GLA   Glamis            80.25  56   P      P       15 18 21.8 +1.0
      baz=308
DPC   Dobruska-Polom    80.28 328  eP      P       15 18 21.7 +1.1
DPC                                e               15 18 26.6
DPC                                 MLR    MLR
      comp=Z,300nm,14.3s
DPC   Dobruska-Polom    80.28 328  eP      P       15 18 21.7 +1.1
DPC                                epP     sP      15 18 26.6  -1.0
DPC                                 AMS    AMS     16 00 20.0
      comp=Z,300nm,14.3s
UPC   Upice             80.29 328  eP      P       15 18 21.6 +1.0
UPC                                e               15 18 25.9
UPC                                 MLR    MLR
      comp=Z,300nm,14.2s
UPC   Upice             80.29 328  eP      P       15 18 21.6 +1.0
UPC                                epP     pP      15 18 25.9 +0.1
UPC                                 AMS    AMS     16 01 20.0
      comp=Z,300nm,14.2s
PV21  Cone Mtn., Par    80.45  49  eP      P       15 18 23.3 +1.2
      comp=Z,12nm,0.9s
PSZ   Piszkesteto       80.49 324  eP      P       15 18 21.6  -0.3
      comp=Z,25nm,1.2s
PSZ   Piszkesteto       80.49 324⇑iP      P       15 18 22.3 +0.5
PSZ   Piszkesteto       80.49 324  eP      P       15 18 21.6  -0.3
PSZ                                 pmax   pmax
      comp=Z,25nm,1.2s
PSZ   Piszkesteto       80.49 324  eP      P       15 18 25.1 +3.2
PV23  Carpenter Ridg    80.50  49  eP      P       15 18 24.0 +1.6
      comp=Z,26nm,1.1s
PV10  Paradox Valley    80.54  49  eP      P       15 18 24.1 +1.6
      comp=Z,35nm,0.9s
PV14  Lion Creek, Pa    80.55  49  eP      P       15 18 24.0 +1.4
      comp=Z,25nm,1.0s
VYHS  Vyhne             80.55 325  eP      P       15 18 27.2 +5.1
VYHS                                pmax   pmax
      comp=Z,6.0nm,1.1s
VYHS  Vyhne             80.55 325  eP      P       15 18 27.2 +5.1
PV20  West Nyswonger    80.60  49  eP      P       15 18 24.2 +1.4
      comp=Z,22nm,1.1s
PV19  Morning Glory     80.61  49  eP      P       15 18 23.9 +1.0
      comp=Z,23nm,1.0s
RAYN  Ar Rayn           80.63 292  eP      P       15 18 22.6  -0.4
      comp=Z,14nm,1.2s
RAYN  Ar Rayn           80.63 292  eP      P       15 18 22.6  -0.4
RAYN                                pmax   pmax
      comp=Z,14nm,1.2s
PV17  East Wray Mesa    80.65  49  eP      P       15 18 24.0 +0.9
      comp=Z,26nm,1.0s
PV16  Nyswonger Mesa    80.65  49  eP      P       15 18 23.7 +0.6
      comp=Z,58nm,1.7s
AGMN  Agassiz Nation    80.67  35  eP      P       15 18 22.9 +0.2
      comp=Z,12nm,1.0s
AGMN  Agassiz Nation    80.67  35   P      P       15 18 22.9 +0.2
      baz=317
N23A  Red Feather La    80.69  45  eP      P       15 18 24.3 +1.0
      comp=Z,17nm,1.1s
N23A  Red Feather La    80.69  45   P      P       15 18 23.7 +0.4
      baz=312
PHWY  Pilot Hill        80.69  45  eP      P       15 18 24.5 +1.1
      comp=Z,20nm,1.6s
PV05  Paradox Valley    80.69  49  eP      P       15 18 24.6 +1.3
      comp=Z,35nm,1.0s
PV18  Skein Mesa, Pa    80.70  49  eP      P       15 18 24.7 +1.3
      comp=Z,23nm,1.1s
PV03  Paradox Valley    80.73  49  eP      P       15 18 24.9 +1.4
      comp=Z,18nm,1.1s
JAVC  Velka Javorina    80.81 326  eP      P       15 18 25.3 +1.8
PV13  Radium Mtn., P    80.81  49  eP      P       15 18 25.4 +1.5
      comp=Z,30nm,1.1s
PV02  Paradox Valley    80.83  49  eP      P       15 18 25.1 +1.0
      comp=Z,15nm,1.1s
SIRR  Siria             80.84 322⇑iP      P       15 18 24.6 +0.9
BRG   Berggiesshubel    80.87 329  ePKP    P       15 18 24.3 +0.6
      comp=Z,5.7nm,1.1s
BRG                                e               15 18 28.4
      comp=Z,12nm,1.0s
BRG   Berggiesshubel    80.87 329  eP      P       15 18 24.3 +0.6
BRG                                e               15 18 28.4
BRG                                 pmax   pmax
      comp=Z,6.0nm,1.2s
PVCC  Panska Ves        80.88 329  eP      P       15 18 25.6 +1.9
PVCC                               e               15 18 28.0
PVCC                                MLR    MLR
      comp=Z,300nm,17.3s
PVCC  Panska Ves        80.88 329  eP      P       15 18 25.6 +1.9
PVCC                               epP     pP      15 18 28.0  -0.9
PVCC                                AMS    AMS     15 56 40.0
      comp=Z,300nm,17.3s
Y14A  Wickenburg        80.89  54  eP      P       15 18 25.2 +1.0
      comp=Z,12nm,1.1s
CLL   Collm             80.91 330  eP      P       15 18 23.0  -0.9
CLL                                i               15 18 27.1
CLL                                 pmax   pmax
      comp=Z,23nm,1.0s
CLL   Collm             80.91 330  eP      P       15 18 23.0  -0.9
      comp=Z,7.0nm,1.1s
CLL                                i pP    pP      15 18 27.1  -1.9
      comp=Z,23nm,1.0s
CLL                                 LmH            15 55 00.0
      comp=N,100nm,20.4s
CLL                                 LmH            15 55 00.0
      comp=E,300nm,20.4s
GZR   Gura Zlata        80.91 321⇓iP      P       15 18 24.5 +0.4
GZR   Gura Zlata        80.91 321   P      P       15 18 24.5 +0.4
WUAZ  Wupatki           80.93  52  eP      P       15 18 26.0 +1.4
      comp=E,12nm,1.0s
WUAZ  Wupatki           80.93  52   P      P       15 18 26.5 +2.0
      baz=310
VRAC  Vranov            80.94 327  eP      P       15 18 25.1 +0.9
113A  Mohawk Valley,    81.12  56  eP      P       15 18 26.3 +1.0
      comp=E,6.3nm,1.0s
KRUC  Moravsky          81.22 327  eP      P       15 18 26.5 +0.9
AMBH  Ambrzfalva        81.23 323  eP      P       15 18 18.1  -7.6
SMCO  Snowmass          81.23  47  eP      P       15 18 27.3 +0.9
      comp=E,8.4nm,1.1s
PRU   Pruhonice         81.30 329  eP      P       15 18 26.9 +0.9
PRU                                e               15 18 30.7
PRU                                 MLR    MLR
      comp=Z,300nm,16.0s
PRU   Pruhonice         81.30 329  eP      P       15 18 26.9 +0.9
PRU                                epP     pP      15 18 30.7  -0.5
PRU                                 AMS    AMS     15 57 10.0
      comp=Z,300nm,16.0s
BZS   Buzias            81.33 322⇑iP      P       15 18 27.4 +1.2
BZS   Buzias            81.33 322   P      P       15 18 27.3 +1.1
MODS  Modra-Piesok      81.34 326  eP      P       15 18 30.7 +4.4
MODS                                pmax   pmax
      comp=Z,22nm,1.4s
MODS  Modra-Piesok      81.34 326  eP      P       15 18 30.7 +4.4
TREC  Trest             81.43 328  eP      P       15 18 28.1 +1.3
TREC                               e               15 18 31.7
TREC                                MLR    MLR
      comp=Z,300nm,13.3s
TREC  Trest             81.43 328  eP      P       15 18 28.1 +1.3
TREC                               epP     pP      15 18 31.7  -0.2
TREC                                AMS    AMS     15 58 50.0
      comp=Z,300nm,13.3s
ISCO  Idaho Springs     81.61  46  eP      P       15 18 29.6 +1.3
      comp=Z,5.3nm,1.1s
ISCO  Idaho Springs     81.61  46  eP      P       15 18 29.6 +1.3
ISCO                                pmax   pmax
      comp=Z,5.0nm,1.1s
ISCO  Idaho Springs     81.61  46   P      P       15 18 28.9 +0.7
      baz=312
MVCO  Mesa Verde        81.62  49   P      P       15 18 28.7 +0.4
      baz=311
MDVR  Moldovita         81.88 321⇑iP      P       15 18 30.1 +0.9
NKC   Novy Kostel       81.97 330  eP      P       15 18 30.7 +1.1
NKC                                e               15 18 34.8
NKC                                 MLR    MLR
      comp=Z,300nm,12.7s
NKC   Novy Kostel       81.97 330  eP      P       15 18 30.7 +1.1
NKC                                epP     PcP     15 18 34.8  -0.3
NKC                                 AMS    AMS     16 01 10.0
      comp=Z,300nm,12.7s
SOP   Sopron            82.18 326  eP      P       15 18 33.1 +2.4
S22A  4UR Ranch, Cre    82.27  48  eP      P       15 18 32.9 +1.2
      comp=Z,11nm,1.0s
S22A  4UR Ranch, Cre    82.27  48   P      P       15 18 33.5 +1.7
      baz=312
CONA  Conrad Observa    82.30 327  epP     P       15 18 32.9 +1.5
      comp=Z,10nm,1.1s,SNR=5.1
MORH  Mrgy, Hungar      82.32 324  eP      P       15 18 36.1 +4.6
KHC   Kasperske Hory    82.36 328  eP      P       15 18 32.1 +0.5
      comp=Z,9.1nm,1.3s
KHC   Kasperske Hory    82.36 328  eP      P       15 18 31.8 +0.1
KHC                                e               15 18 36.9
KHC   Kasperske Hory    82.36 328  eP      P       15 18 31.8 +0.1
KHC                                epP     PcP     15 18 36.9   0.0
Q24A  Divide            82.43  46   P      P       15 18 33.8 +1.2
      baz=313
GERES GERESS Array B    82.53 328   P      P       15 18 32.8 +0.1
      comp=Z,1.2nm,0.6s,baz=45,slow=5.8,SNR=9.6
GERES                               LR     LR      15 58 46.3
      comp=Z,176nm,18.8s,baz=20,slow=38
VTS   Vitosha           82.64 319  eP      P       15 18 33.2  -0.2
      comp=Z,12nm,1.0s
VTS   Vitosha           82.64 319⇓iP      P       15 18 33.7 +0.3
VTS   Vitosha           82.64 319  eP      P       15 18 33.2  -0.2
VTS                                 pmax   pmax
      comp=Z,12nm,1.0s
EYMN  Ely               82.87  33  eP      P       15 18 34.5 +0.2
      comp=Z,17nm,1.0s
EYMN  Ely               82.87  33   P      P       15 18 35.0 +0.7
      baz=320
ARSA  Arzberg           82.97 326  epP     P       15 18 35.7 +0.9
      comp=Z,7.1nm,0.9s
BEHE  Becsehely         82.99 325  eP      P       15 18 41.0 +6.1
SDCO  Great Sand Dun    83.05  47  eP      P       15 18 36.6 +0.8
      comp=Z,7.3nm,1.0s
SDCO  Great Sand Dun    83.05  47   P      P       15 18 36.7 +0.9
      baz=312
MOA   Molln             83.06 327  epP     P       15 18 36.9 +1.6
      comp=Z,11nm,1.3s,SNR=5.1
TUC   Tucson            83.36  54  eP      P       15 18 38.2 +1.0
      comp=Z,8.3nm,1.3s
TUC   Tucson            83.36  54  eP      P       15 18 38.2 +1.0
TUC                                 pmax   pmax
      comp=Z,8.0nm,1.3s
TUC   Tucson            83.36  54   P      P       15 18 38.2 +1.0
      baz=310
SOKA  Soboth            83.62 326  i pP    P       15 18 38.8 +0.5
      comp=Z,18nm,1.0s,SNR=6.1
ECSD  EROS Data Cent    83.66  38  eP      P       15 18 39.2 +0.7
      comp=Z,14nm,1.0s
ECSD  EROS Data Cent    83.66  38   P      P       15 18 39.0 +0.5
      baz=317
E38A  The Farm, Brul    83.87  34  eP      P       15 18 39.9 +0.4
      comp=Z,16nm,0.8s
E38A  The Farm, Brul    83.87  34   P      P       15 18 40.1 +0.6
      baz=320
C40A  Isle Royale Na    83.89  32  eP      P       15 18 39.8 +0.3
      comp=Z,20nm,1.6s
C40A  Isle Royale Na    83.89  32   P      P       15 18 39.9 +0.3
      baz=322
OBKA  Obir              83.96 326  eP      P       15 18 37.7  -2.4
      comp=Z,1.0nm,0.4s
KBA   Koelnbreinsper    84.05 327  epP     P       15 18 42.5 +1.9
      comp=Z,15nm,1.8s
T25A  Trinidad          84.10  47  eP      P       15 18 41.5 +0.4
      comp=Z,16nm,0.9s
T25A  Trinidad          84.10  47   P      P       15 18 42.3 +1.2
      baz=313
PMOR  Pomariorio Ree    84.21 114  eT      T       16 51 17.7
      comp=Z,28nm,0.2s
F38A  Pierce - Schro    84.22  34   P      P       15 18 41.9 +0.6
      baz=320
MYKA  Terra Mystica     84.27 327  eP      P       15 18 40.3  -1.4
      comp=Z,4.3nm,0.9s
TASM  ASL Pad, Albuq    84.35  50   P      P       15 18 44.1 +1.6
      baz=312
TASM  ASL Pad, Albuq    84.35  50   P      P       15 18 44.3 +1.9
      baz=312
ANMO  Albuquerque       84.35  50  eP      P       15 18 43.0 +0.6
      comp=Z,9.7nm,1.0s
ANMO  Albuquerque       84.35  50ceP      P       15 18 43.2 +0.8
ANMO                                pmax   pmax
      comp=Z,12nm,1.3s
ANMO  Albuquerque       84.35  50   P      P       15 18 44.2 +1.7
      baz=312
BGNE  Belgrade          84.57  41   P      P       15 18 43.7 +0.5
      baz=316
WATA  Walderalm         84.60 328  epP     pP      15 18 49.3 +0.8
      comp=Z,1.9nm,0.4s
WTTA  Wattenberg        84.63 328   PcP    P       15 18 44.4 +0.9
      comp=Z,9.0nm,1.4s
ABTA  Abfaltersbach     84.67 328  eP      P       15 18 42.9  -0.7
      comp=Z,3.5nm,1.1s
PPT   Papeete           84.68 117   LR     LR      15 57 24.2
      comp=Z,86nm,19.0s,baz=7.5,slow=36
F39A  Loretta           84.69  34   P      P       15 18 44.1 +0.4
      baz=321
PPT2  Papeete2          84.69 117  eLR     LR      15 45 12.0
      comp=Z,279nm,28.0s
MOTA  Moosalm           84.79 329  ePcP    P       15 18 45.6 +1.3
      comp=Z,7.3nm,1.0s
D41A  Chassel           84.81  32  eP      P       15 18 44.5 +0.3
      comp=Z,17nm,1.0s
D41A  Chassel           84.81  32   P      P       15 18 45.2 +1.0
      baz=322
PDG   Podgorica         84.81 321⇓iP      P       15 18 44.4 +0.1
RETA  Reutte            84.82 329  ePcP    P       15 18 45.1 +0.7
      comp=Z,21nm,1.4s,SNR=5.5
TIAR  Tiarei            84.84 116  eT      T       16 52 03.7
      comp=Z,3.7nm,0.3s
SQTA  Sankt Quirin      84.84 329  epP     pP      15 18 47.7  -2.1
      comp=Z,1.5nm,0.4s
F40A  Park Falls        85.03  33   P      P       15 18 45.5 +0.1
      baz=321
G39A  Holcombe          85.06  34   P      P       15 18 45.4  -0.1
      baz=321
BFO   Black Forest      85.11 331  i P     P       15 18 47.2 +1.4
121A  Cookes Peak, D    85.13  52   P      P       15 18 47.4 +1.0
      baz=312
FETA  Feichten          85.20 329   PcP    P       15 18 46.8 +0.4
      comp=Z,7.5nm,1.0s
DAVA  Damuels           85.34 329  ePcP    P       15 18 48.1 +1.0
      comp=Z,13nm,1.0s
G40A  Rib Lake          85.51  34  eP      P       15 18 47.9 +0.1
      comp=Z,12nm,0.8s
G40A  Rib Lake          85.51  34   P      P       15 18 47.9 +0.1
      baz=321
CBKS  Cedar Bluff       85.58  43   P      P       15 18 48.6 +0.3
      baz=316
ECH   Echery            85.66 331  eP      P       15 18 48.3  -0.2
      comp=Z,17nm,1.3s
ECH   Echery            85.66 331  eP      P       15 18 48.3  -0.2
ECH                                 pmax   pmax
      comp=Z,17nm,1.3s
FUORN Ofenpass-Fuorn    85.71 329  eP      P       15 18 48.8  -0.3
      comp=Z,37nm,1.4s
MEH   Mehetia           85.96 116  eT      T       16 53 28.0
      comp=Z,53nm,0.3s
E43A  Lone Tree Farm    86.01  31  eP      P       15 18 50.5 +0.3
      comp=Z,8.3nm,0.6s
E43A  Lone Tree Farm    86.01  31   P      P       15 18 50.5 +0.3
      baz=323
TAOE  Nuku Hiva Isla    86.15 104  eT      T       16 53 47.2
      comp=Z,26nm,0.2s
TUE   Stuetta           86.21 329  eP      P       15 18 51.5   0.0
      comp=Z,17nm,1.4s
D46A  Sault St. Mari    86.78  29   P      P       15 18 54.3 +0.3
      baz=325
D47A  Chapleau          87.01  29   P      P       15 18 55.0  -0.2
      baz=326
KSU1  Kansas State U    87.06  41   P      P       15 18 55.8 +0.3
      baz=318
E46A  Sault Ste Mari    87.11  30  eP      P       15 18 56.2 +0.6
      comp=Z,31nm,1.4s
E46A  Sault Ste Mari    87.11  30   P      P       15 18 55.9 +0.3
      baz=325
I42A  Draeger Farm,     87.16  34  eP      P       15 18 56.3 +0.4
      comp=Z,16nm,0.9s
I42A  Draeger Farm,     87.16  34   P      P       15 18 56.2 +0.4
      baz=322
F45A  CMU Biological    87.17  31   P      P       15 18 56.5 +0.6
      baz=324
H43A  Windswept, Lux    87.20  33  eP      P       15 18 56.6 +0.5
      comp=Z,24nm,1.0s
H43A  Windswept, Lux    87.20  33   P      P       15 18 57.1 +1.0
      baz=323
MNTX  Cornudas Mount    87.20  52  eP      P       15 18 57.3 +0.9
      comp=Z,20nm,1.8s
MNTX  Cornudas Mount    87.20  52   P      P       15 18 57.1 +0.8
      baz=313
MSTX  Muleshoe          87.24  49   P      P       15 18 56.9 +0.2
      baz=314
AMTX  Amarillo          87.25  47  eP      P       15 18 57.6 +1.0
      comp=Z,17nm,0.9s
AMTX  Amarillo          87.25  47   P      P       15 18 57.7 +1.0
      baz=315
D48A  Paudash Townsh    87.40  28   P      P       15 18 57.2 +0.2
      baz=327
E47A  Iron Bridge       87.44  29   P      P       15 18 57.2   0.0
      baz=326
LSQQ  Lebel-sur-Quev    87.48  24   P      P       15 18 58.0 +0.6
      baz=330
D49A  Beulah Townshi    87.48  28   P      P       15 18 57.4  -0.1
      baz=327
GDL2  Guadalupe Moun    87.49  51  eP      P       15 18 58.6 +0.7
L40A  Anamosa           87.52  36  eP      P       15 18 58.1 +0.4
      comp=Z,20nm,1.0s
L40A  Anamosa           87.52  36   P      P       15 18 58.5 +0.8
      baz=321
CHGQ  Chibougamau       87.55  22   P      P       15 18 58.1 +0.4
      baz=332
E48A  Lockeyer          87.84  29   P      P       15 18 59.6 +0.4
      baz=327
VLDQ  Val d'Or          88.14  25  eP      P       15 19 00.2  -0.3
      comp=Z,14nm,1.0s
F48A  Evansville        88.21  29   P      P       15 19 01.7 +0.8
      baz=326
N40A  Mertquake, Sal    88.26  37   P      P       15 19 01.8 +0.6
      baz=320
L42A  Oliver, Polo      88.30  36   P      P       15 19 01.6 +0.2
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	baz=322						
M41A	**Milan**	**88.38**	**36**	P	**P**	**15 19 01.5**	**-0.3**
	baz=321						
E50A	**Wahnapitae**	**88.43**	**28**	P	**P**	**15 19 02.4**	**+0.5**
	baz=328						
F49A	**Sandfield**	**88.49**	**29**	P	**P**	**15 19 02.8**	**+0.5**
	baz=327						
TBI	**Tubuai**	**88.59**	**121**	*e*LR	LR	15 47 01.9	
	comp=Z,264nm,30.0s,baz=309						
TBI	**Tubuai**	**88.59**	**121**	*e*T	T	16 56 43.4	
	comp=Z,70nm,0.3s						
E51A	**G1948 Merrick**	**88.79**	**27**	P	**P**	**15 19 03.6**	**-0.1**
	baz=329						
D52A	**ZEK Kipawa Sen**	**88.80**	**26**	P	**P**	**15 19 04.3**	**+0.6**
	baz=329						
D53A	**Lac Vacive, Po**	**88.95**	**26**	*e*P	**P**	**15 19 04.8**	**+0.4**
	comp=Z,11nm,0.9s						
D53A	**Lac Vacive, Po**	**88.95**	**26**	P	**P**	**15 19 04.7**	**+0.3**
	baz=330						
WMOK	**Wichita Mounta**	**89.03**	**46**	*e*P	**P**	**15 19 05.8**	**+0.7**
	comp=Z,11nm,1.3s						
WMOK	**Wichita Mounta**	**89.03**	**46**	*e*P	**P**	**15 19 05.8**	**+0.7**
WMOK				pmax	pmax		
	comp=Z,11nm,1.3s						
WMOK	**Wichita Mounta**	**89.03**	**46**	P	**P**	**15 19 06.0**	**+1.0**
	baz=316						
M43A	**Waltham Townsh**	**89.07**	**35**	P	**P**	**15 19 05.6**	**+0.6**
	baz=322						
TOBO	**Tobermory, Bru**	**89.14**	**29**	P	**P**	**15 19 06.2**	**+0.9**
	baz=327						
I48A	**Sherman Twp**	**89.14**	**31**	P	**P**	**15 19 06.0**	**+0.7**
	baz=326						
F51A	**Arnstein**	**89.15**	**28**	P	**P**	**15 19 05.6**	**+0.3**
	baz=328						
D54A	**Lac Fusel, La**	**89.25**	**25**	P	**P**	**15 19 05.7**	**-0.1**
	baz=331						
E52A	**Mattawa**	**89.30**	**27**	P	**P**	**15 19 06.0**	**-0.1**
	baz=329						
F52A	**Sundridge**	**89.48**	**27**	P	**P**	**15 19 07.6**	**+0.7**
	baz=329						
M44A	**Midewin, Midew**	**89.53**	**35**	P	**P**	**15 19 07.9**	**+0.7**
	baz=323						
E53A	**Dumoine, Ponti**	**89.57**	**26**	P	**P**	**15 19 07.8**	**+0.5**
	baz=330						
E54A	**Lac Daplat, Po**	**89.69**	**26**	P	**P**	**15 19 08.2**	**+0.4**
	baz=330						
J48A	**Bridge Port**	**89.84**	**31**	*e*P	**P**	**15 19 10.3**	**+1.7**
	comp=Z,26nm,0.9s						
J48A	**Bridge Port**	**89.84**	**31**	P	**P**	**15 19 10.0**	**+1.4**
	baz=326						
TX31	**Lajitas Ar. Si**	**89.89**	**52**	*e*P	**P**	**15 19 10.0**	**+0.7**
	comp=Z,11nm,1.3s						
TXAR	**Lajitas Array**	**89.89**	**52**	P	**P**	**15 19 10.7**	**+1.4**
	comp=Z,3.8nm,0.7s,baz=294,slow=3.7,SNR=32						
N44A	**Piper City**	**89.96**	**35**	P	**P**	**15 19 09.7**	**+0.4**
	baz=323						
ABTX	**Abilene, Hawle**	**90.05**	**48**	*e*P	**P**	**15 19 10.9**	**+1.0**
	comp=Z,12nm,1.0s						
ABTX	**Abilene, Hawle**	**90.05**	**48**	P	**P**	**15 19 10.8**	**+1.0**
	baz=316						
J49A	**Marlette**	**90.05**	**31**	P	**P**	**15 19 10.7**	**+1.1**
	baz=326						
K48A	**Perry**	**90.11**	**32**	P	**P**	**15 19 10.1**	**+0.2**
	baz=325						
N45A	**Kentland**	**90.20**	**35**	P	**P**	**15 19 10.9**	**+0.6**
	baz=323						
M46A	**Old House Fiel**	**90.28**	**34**	P	**P**	**15 19 10.7**	**0.0**
	baz=324						
G53A	**Haliburton**	**90.31**	**27**	P	**P**	**15 19 10.9**	**+0.1**
	baz=329						
O44A	**Mansfield**	**90.31**	**36**	P	**P**	**15 19 11.9**	**+1.0**
	baz=322						
L47A	**Sherwood**	**90.32**	**33**	P	**P**	**15 19 11.3**	**+0.4**
	baz=325						
PEMO	**Pembroke**	**90.33**	**26**	P	**P**	**15 19 10.6**	**-0.2**
	baz=330						
F55A	**Otter Lake**	**90.50**	**25**	P	**P**	**15 19 12.7**	**+1.0**
	baz=331						
I51A	**Listowel**	**90.53**	**29**	P	**P**	**15 19 12.7**	**+0.8**
	baz=328						
HHAR	**Hobbs**	**90.56**	**42**	*e*P	**P**	**15 19 12.3**	**+0.2**
	comp=Z,5.0nm,0.7s						
O45A	**Potomac**	**90.58**	**35**	P	**P**	**15 19 13.0**	**+0.9**
	baz=323						
CCM	**Cathedral Cave**	**90.60**	**39**	*e*P	**P**	**15 19 12.6**	**+0.3**
	comp=Z,14nm,1.3s						
CCM	**Cathedral Cave**	**90.60**	**39**	*e*P	**P**	**15 19 12.6**	**+0.3**
CCM				pmax	pmax		
	comp=Z,14nm,1.3s						
CCM	**Cathedral Cave**	**90.60**	**39**	P	**P**	**15 19 12.6**	**+0.3**
	baz=321						
L48A	**N Adams**	**90.68**	**32**	P	**P**	**15 19 13.8**	**+1.2**
	baz=325						
SFIN	**Lafayette**	**90.77**	**35**	P	**P**	**15 19 13.9**	**+0.9**
	baz=323						
G55A	**Calabogie**	**90.88**	**26**	P	**P**	**15 19 13.5**	**+0.1**
	baz=331						
PLVO	**Plevna**	**90.94**	**26**	*e*P	**P**	**15 19 14.3**	**+0.6**
PLVO	**Plevna**	**90.94**	**26**	P	**P**	**15 19 13.9**	**+0.2**
	baz=330						
N47A	**Urbana**	**90.99**	**34**	P	**P**	**15 19 14.1**	**+0.1**
	baz=324						
U40A	**Yellville**	**91.08**	**41**	P	**P**	**15 19 14.8**	**+0.2**
	baz=320						
P45A	**Graceland, Par**	**91.15**	**36**	P	**P**	**15 19 15.4**	**+0.7**
	baz=323						
DELO	**Deloro Mine**	**91.20**	**27**	P	**P**	**15 19 15.4**	**+0.5**
	baz=330						
O47A	**Sheridan**	**91.30**	**34**	P	**P**	**15 19 16.1**	**+0.6**
	baz=324						
N48A	**Decatur**	**91.31**	**33**	P	**P**	**15 19 16.2**	**+0.7**
	baz=325						
H55A	**Tweed**	**91.32**	**27**	P	**P**	**15 19 16.1**	**+0.6**
	baz=330						
P46A	**Rosedale**	**91.32**	**35**	P	**P**	**15 19 16.0**	**+0.4**
	baz=323						
WLVO	**Wesleyville**	**91.42**	**28**	P	**P**	**15 19 15.4**	**-0.5**
	baz=329						
I55A	**Frankford**	**91.43**	**27**	P	**P**	**15 19 16.1**	**+0.1**
	baz=330						
W39A	**Magazine**	**91.47**	**42**	*e*P	**P**	**15 19 16.9**	**+0.5**
	comp=Z,22nm,1.6s						
W39A	**Magazine**	**91.47**	**42**	P	**P**	**15 19 16.7**	**+0.4**
	baz=319						
O48A	**Farmland**	**91.74**	**34**	P	**P**	**15 19 17.9**	**+0.4**
	baz=325						
WHTX	**Lake Whitney,**	**91.78**	**47**	P	**P**	**15 19 19.0**	**+1.1**
	baz=317						
FCAR	**Ozark Folk Cen**	**91.82**	**41**	*e*P	**P**	**15 19 18.4**	**+0.4**
	comp=Z,7.1nm,0.9s						
PECO	**Prince Edward**	**91.93**	**27**	P	**P**	**15 19 18.5**	**+0.2**
	baz=330						
MIAR	**Mount Ida**	**92.07**	**43**	*e*P	**P**	**15 19 19.8**	**+0.6**
	comp=Z,12nm,1.0s						
MIAR	**Mount Ida**	**92.07**	**43**	*e*P	**P**	**15 19 19.8**	**+0.6**
MIAR				pmax	pmax		
	comp=Z,12nm,1.0s						
MIAR	**Mount Ida**	**92.07**	**43**	P	**P**	**15 19 20.0**	**+0.8**
	baz=319						
WHAR	**Wooly Hollow**	**92.19**	**41**	*e*P	**P**	**15 19 20.3**	**+0.6**
	comp=Z,17nm,1.0s						
W41B	**Gary Mavity, V**	**92.30**	**41**	P	**P**	**15 19 20.7**	**+0.5**
	baz=320						
O50A	**Cable**	**92.50**	**33**	P	**P**	**15 19 21.6**	**+0.6**
	baz=326						
X40A	**Basin Creek Fa**	**92.51**	**42**	P	**P**	**15 19 21.7**	**+0.5**
	baz=320						
K55A	**Perry**	**92.57**	**28**	P	**P**	**15 19 22.1**	**+0.7**
	baz=330						
PKME	**Peaks-Kenny Pk**	**93.24**	**21**	P	**P**	**15 19 24.9**	**+0.6**
	baz=336						
KEST	**Kesra**	**94.86**	**323**	LR	LR	16 08 24.3	
	comp=Z,145nm,18.4s,baz=312,slow=39						
Q61A	**Milford**	**96.94**	**28**	P	**P**	**15 19 40.2**	**-1.1**
	baz=331						
ESDC	**Sonseca Array**	**97.09**	**334**	LR	LR	16 07 25.7	
	comp=Z,119nm,19.6s,baz=135,slow=38						
QSPA	**South Pole Qui**	**127.04**	**180**	*e*PKPdf	**PKPdf**	**15 25 13.4**	**+0.4**
SYO	**Syowa Base**	**128.48**	**207**⇑	*e*PP	PP	15 27 23.3	+1.9
LPAZ	**La Paz**	**146.49**	**59**	PKPbc	**PKPbc**	**15 25 52.4**	**+0.1**
	comp=Z,9.5nm,0.9s,baz=352,slow=5.4,SNR=14						
MNMC	**Minye Minye**	**147.36**	**65**	*e*PKPbc	**PKPbc**	**15 25 54.8**	**+0.5**
PB11	**IPOC Station P**	**147.72**	**66**	*e*PKPbc	**PKPbc**	**15 25 55.4**	**+0.3**
LCO	**Las Campanas**	**151.89**	**82**	*e*PKPbc	**PKiKP**	**15 26 06.0**	**+0.4**
LCO	**Las Campanas**	**151.89**	**82**	PKIKP	**PKiKP**	**15 26 06.0**	**+0.4**

ISCJB ***03*** *15:08:54.0±1.1, 30°.86S±0°.02×178°.13W±0°.04, h7^{km}±6^{km}, mb5.2/109, MS4.6/24, Error ellipse: s-maj=6.2km s-min=3.0km az=29.1*

MOS ***03*** *15:09:00.7±0.7, 30°.56S×178°.12W, h51^{km}, mb5.4/22, Error ellipse: s-maj=11.9km s-min=9.7km az=64.7*

IDC ***03*** *15:09:01.9±2.4, 30°.69S×178°.02W, h52^{km}±19^{km}, mb4.6/18, mb1 4.7/19, mb1mx4.6/32, mbtmp4.8/19, ML3.5/1, MS4.5/18, Ms1 4.5/18, ms1mx4.4/23, Error ellipse: s-maj=18.4km s-min=15.7km az=45.0*

GCMT ***03*** *15:09:02.0±0.2, 30°.70S±0°.02×177°.94W±0°.01, h56^{km}±2^{km}, MW5.2/95, Moment Tensor Solution. s79,c116; s95,c141; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.63±.23; $M_{\theta\theta}$-0.07±.20; $M_{\phi\phi}$0.69±.17; $M_{r\theta}$1.57±.16; $M_{\theta\phi}$-4.29±.17; $M_{\phi r}$6.68±.20; Best double couple: $M_0$8.05300×10^{16} NP1:ϕ_s185.00000°, δ88.00000°, λ-57.00000°. NP2:ϕ_s279.00000°, δ33.00000°, λ-176.00000°. Principal axes: T 7.4550, Plg35.0000°, Azm247.0000°; N 1.1960, Plg32.0000°, Azm3.0000°; P -8.6510, Plg39.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***03*** *15:09:02.1±0.0, 30°.60S×178°.40W, h60^{km}, mb5.1/17, mB5.6/13, Ms5.1/7, Ms7 4.8/7*

NEIC ***03*** *15:09:03.0±0.1, 30°.61S×178°.11W, mb5.3/85, Error ellipse: s-maj=6.1km s-min=4.3km az=158.0*

ISC 03 15:09:01.1±0.3, **30°.74S**±0°.04×**178°.01W**±0°.06, **h48**^{km}±2^{km}, **h48**^{km}**:pP-P, n548,** σ**1^{s}75**/556, **mb5.2**/108, **MS4.7**/24, **16C-15D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.48**	**3**	P	**Pn**	**15 09 23.7**	**-1.6**
GLKZ				S	**Sn**	**15 09 39.8**	**-3.6**
RAO	**Raoul Island**	**1.48**	**3**	*e*Pn	**Pn**	**15 09 23.4**	**-2.0**
RAO	**Raoul Island**	**1.48**	**3**	*e*P	**Pn**	**15 09 23.4**	**-2.0**
RIZ	**Raoul Island**	**1.49**	**3**	P	**Pn**	**15 09 23.9**	**-1.6**
RIZ				S	**Sn**	**15 09 41.3**	**-2.4**
MXZ	**Matakaoa Point**	**7.46**	**203**	*e*Pn	**Pn**	**15 10 43.8**	**-3.5**
MXZ	**Matakaoa Point**	**7.46**	**203**	P	**Pn**	**15 10 43.2**	**-4.1**
WMGZ	**Waiomatatini S**	**7.66**	**202**	P	**Pn**	**15 10 48.0**	**-2.0**
WMGZ	**Waiomatatini S**	**7.66**	**202**	P	**Sn**	**15 12 17.8**	**+2.5**
GRZ	**Great Barrier**	**7.74**	**223**	P	**Pn**	**15 10 55.7**	**+4.5**
HAZ	**Te Kaha**	**7.82**	**205**	P	**Pn**	**15 10 49.8**	**-2.4**
HAZ	**Te Kaha**	**7.82**	**205**	P	**Sn**	**15 12 24.1**	**+4.8**
PKGZ	**Pakihiroa**	**7.83**	**203**	P	**Pn**	**15 10 49.3**	**-3.1**
PUZ	**Puketiti**	**7.94**	**202**	P	**Pn**	**15 10 49.9**	**-4.0**
PUZ				S	**Sn**	**15 12 18.2**	**-4.1**
PUZ	**Puketiti**	**7.94**	**202**	P	**Sn**	**15 12 21.3**	**-1.0**
KUZ	**Kuaotunu**	**7.95**	**219**	P	**Pn**	**15 10 55.4**	**+1.5**
RUGZ	**Raukumara Rang**	**8.04**	**205**	P	**Pn**	**15 10 51.9**	**-3.4**
RUGZ				S	**Sn**	**15 12 24.7**	**-0.3**
RUGZ	**Raukumara Rang**	**8.04**	**205**	P	**Sn**	**15 12 29.4**	**+4.4**
TWGZ	**Tauwhareparae**	**8.12**	**203**	P	**Pn**	**15 10 52.7**	**-3.8**
TWGZ				S	**Sn**	**15 12 24.8**	**-2.2**
TWGZ	**Tauwhareparae**	**8.12**	**203**	P	**Sn**	**15 12 26.2**	**-0.7**
WHRZ	**Whale Island**	**8.22**	**209**	P	**Pn**	**15 10 56.8**	**-1.0**
WCZ	**Waipu Caves**	**8.23**	**229**	P	Pn	15 11 04.2	+6.3
WIAZ	**Waiheke Island**	**8.31**	**222**	P	Pn	15 11 04.8	+5.9
CNGZ	**Carnagh Statio**	**8.33**	**201**	P	**Pn**	**15 10 55.4**	**-3.8**
CNGZ	**Carnagh Statio**	**8.33**	**201**	P	**Sn**	**15 12 30.0**	**-1.9**
OUZ	**Omahuta**	**8.35**	**235**	*e*Pn	Pn	15 11 04.9	+5.4
OUZ	**Omahuta**	**8.35**	**235**	P	Pn	15 11 04.9	+5.5
OPRZ	**Ohinepanea**	**8.39**	**211**	P	**Pn**	**15 10 57.5**	**-2.5**
TKGZ	**Te Karaka**	**8.40**	**203**	P	**Pn**	**15 10 56.2**	**-4.0**
TKGZ				S	**Sn**	**15 12 29.8**	**-3.9**
TKGZ	**Te Karaka**	**8.40**	**203**	P	**Sn**	**15 12 32.9**	**-0.8**
MWZ	**Matawai**	**8.42**	**205**	P	**Pn**	**15 10 56.0**	**-4.5**
MARZ	**Manawahe**	**8.46**	**210**	P	**Pn**	**15 10 59.1**	**-1.9**
MKAZ	**Moumakai**	**8.51**	**220**	P	**Pn**	**15 11 04.6**	**+2.9**
URZ	**Urewera**	**8.51**	**207**	P	**Pn**	**15 10 58.3**	**-3.4**
	3.8nm,0.3s,baz=273,slow=4.5,SNR=92						
URZ				S	**Sn**	**15 12 31.9**	**-4.5**
	118nm,0.3s,baz=33,slow=22,SNR=16						
URZ	**Urewera**	**8.51**	**207**	*e*Pn	**Pn**	**15 10 57.6**	**-4.1**
URZ				S	**Sn**	**15 12 31.9**	**-4.5**
URZ	**Urewera**	**8.51**	**207**	P	**Pn**	**15 10 57.7**	**-4.0**
URZ				S	**Sn**	**15 12 32.2**	**-4.2**
URZ	**Urewera**	**8.51**	**207**	P	**Sn**	**15 12 35.7**	**-0.7**
EDRZ	**Edgecumbe**	**8.53**	**209**	P	**Pn**	**15 11 02.5**	**+0.5**
EDRZ	**Edgecumbe**	**8.53**	**209**	P	**Sn**	**15 12 39.3**	**+2.4**
ETAZ	**East Tamaki Re**	**8.54**	**222**	P	**Pn**	**15 11 05.7**	**+3.6**
RAGZ	**Rawiri**	**8.61**	**205**	P	**Pn**	**15 10 59.8**	**-3.2**
RAGZ	**Rawiri**	**8.61**	**205**	P	**Sn**	**15 12 39.3**	**+0.5**
KBAZ	**Karaka Road Bo**	**8.66**	**221**	P	Pn	15 11 12.0	+8.3
RIGZ	**Rimuhau**	**8.68**	**203**	P	**Pn**	**15 11 01.0**	**-3.0**
KARZ	**Kaharoa**	**8.68**	**212**	P	**Pn**	**15 11 04.6**	**+0.6**
OMRZ	**Omania**	**8.69**	**211**	P	**Pn**	**15 11 02.8**	**-1.4**
TARZ	**Mount Tarawera**	**8.74**	**210**	P	**Pn**	**15 11 06.3**	**+1.4**
AWAZ	**Awhitu Peninsu**	**8.78**	**222**	P	Pn	15 11 14.0	+8.6
TOZ	**Tahuroa Road**	**8.80**	**216**	P	**Pn**	**15 11 08.0**	**+2.3**
HLRZ	**Highlands Stat**	**8.82**	**210**	P	**Pn**	**15 11 04.3**	**-1.6**
RRRZ	**Republican Roa**	**8.82**	**209**	P	**Pn**	**15 11 05.7**	**-0.3**
PRGZ	**Paritu Road**	**8.83**	**201**	P	**Pn**	**15 11 02.1**	**-4.0**
SNGZ	**Shannon Statio**	**8.89**	**204**	P	**Pn**	**15 11 03.0**	**-3.8**
HRRZ	**Handcock Road**	**8.96**	**210**	P	**Pn**	**15 11 08.0**	**+0.1**
KNZ	**Kokohu**	**8.99**	**202**	P	Pn	15 11 03.2	-5.0
GRRZ	**Galatos Road**	**9.01**	**211**	P	**Pn**	**15 11 10.8**	**+2.3**
PRRZ	**Plateau Road**	**9.01**	**209**	P	**Pn**	**15 11 07.0**	**-1.5**
MHGZ	**Mahia Peninsul**	**9.04**	**201**	P	Pn	15 11 04.0	-4.9
ALRZ	**Allen Road**	**9.08**	**209**	P	**Pn**	**15 11 06.2**	**-3.3**
RAHZ	**Arahi**	**9.10**	**205**	P	**Pn**	**15 11 06.1**	**-3.6**
MTHZ	**Maungataniwha**	**9.13**	**206**	P	**Pn**	**15 11 07.0**	**-3.2**
WHHZ	**Waihua**	**9.19**	**204**	P	**Pn**	**15 11 07.0**	**-4.0**
TLZ	**Tolley Road**	**9.25**	**213**	P	**Pn**	**15 11 10.6**	**-1.3**
MRHZ	**Matea Rd**	**9.28**	**208**	P	**Pn**	**15 11 08.2**	**-4.1**
NMHZ	**Naumai**	**9.36**	**206**	P	**Pn**	**15 11 09.3**	**-4.1**
ARHZ	**Aropaoanui**	**9.44**	**204**	P	**Pn**	**15 11 09.7**	**-4.6**
WATZ	**Wairara**	**9.47**	**211**	P	**Pn**	**15 11 13.5**	**-1.3**
BKZ	**Black Stump Fm**	**9.54**	**207**	*e*Pn	Pn	15 11 10.8	-5.0
BKZ	**Black Stump Fm**	**9.54**	**207**	P	Pn	15 11 10.7	-5.1
RATZ	**Rangitukua**	**9.58**	**211**	P	**Pn**	**15 11 16.0**	**-0.4**
RITZ	**Rihia Road**	**9.64**	**210**	P	**Pn**	**15 11 16.8**	**-0.3**
MCHZ	**McNeill Hill**	**9.71**	**205**	P	**Pn**	**15 11 14.1**	**-3.9**
HIZ	**Hauiti**	**9.73**	**215**	*e*Pn	**Pn**	**15 11 14.8**	**-3.6**
CKHZ	**Cape Kidnapper**	**9.76**	**203**	P	Pn	15 11 13.2	-5.7
KWHZ	**Kaweka Forest**	**9.79**	**206**	P	Pn	15 11 13.7	-5.5
KRVZ	**Karewarewa**	**9.83**	**210**	P	**Pn**	**15 11 16.0**	**-3.8**
WTVZ	**West Tongariro**	**9.87**	**210**	P	**Pn**	**15 11 15.9**	**-4.5**
OTVZ	**Oturere**	**9.88**	**210**	P	**Pn**	**15 11 16.5**	**-4.1**
NGZ	**Ngauruhoe**	**9.91**	**210**	P	Pn	15 11 16.1	-4.9
KAHZ	**Kahuranaki**	**9.95**	**203**	P	Pn	15 11 15.6	-5.9
TUVZ	**Tukino**	**9.97**	**210**	P	Pn	15 11 16.5	-5.3
BHHZ	**Black Hill Sta**	**9.99**	**207**	P	**Pn**	**15 11 17.5**	**-4.5**
FWVZ	**Far West T-bar**	**10.00**	**210**	P	Pn	15 11 16.1	-6.2
KRHZ	**Kereru**	**10.00**	**206**	P	Pn	15 11 16.2	-5.9
MOVZ	**Moawhango**	**10.04**	**209**	P	Pn	15 11 16.6	-6.1
MTVZ	**Mangateitei**	**10.14**	**210**	P	Pn	15 11 16.2	-7.9
PNHZ	**Pukenui**	**10.30**	**206**	P	Pn	15 11 20.1	-6.1
WPHZ	**Waipukurau**	**10.35**	**204**	P	**Pn**	**15 11 22.5**	**-4.3**
OHWZ	**Ohakea**	**10.90**	**208**	P	Pn	15 11 22.2	-12
BFZ	**Birch Farm**	**10.96**	**204**	*e*P	Pn	15 11 25.2	-10
BFZ	**Birch Farm**	**10.96**	**204**	P	Pn	15 11 26.3	-8.9
SNZO	**South Karori**	**12.08**	**207**	*e*Pn	Pn	15 11 41.7	-8.8
THZ	**Tophouse**	**13.21**	**211**	*e*Pn	Pn	15 11 58.9	-7.1
KHZ	**Kahutara**	**13.48**	**208**	*e*Pn	Pn	15 12 00.8	-8.8
LTZ	**Lake Taylor**	**14.31**	**210**	*e*Pn	Pn	15 12 13.1	-7.8
OXZ	**Oxford**	**14.85**	**209**	*e*Pn	Pn	15 12 22.3	-5.6
RPZ	**Rata Peaks**	**15.59**	**211**	P	**Pn**	**15 12 31.2**	**-6.4**
	2.4nm,0.3s,baz=7.8,slow=1.2,SNR=6.4						
RPZ				S	Sn	15 15 14.2	-15
	13nm,0.3s,baz=340,slow=16,SNR=12						
RPZ				LR	LR	15 18 40.3	
	comp=Z,2μm,18.8s,baz=43,slow=37						
RPZ	**Rata Peaks**	**15.59**	**211**	*e*Pn	**Pn**	**15 12 33.0**	**-4.6**
	69nm,0.7s						
RPZ				S	Sn	15 15 14.2	-15
DZM	**Mont Dzumac**	**16.38**	**298**	*e*P	**P**	**15 12 50.8**	**+0.8**
	206nm,1.4s						
DZM				*e*LQ	LQ	15 15 49.0	
	3μm,27.7s						
DZM				*e*LR	LR	15 16 28.6	
	comp=Z,9μm,25.2s						
DZM	**Mont Dzumac**	**16.38**	**298**	P	**Pn**	**15 12 47.6**	**-0.2**
	0.2nm,0.3s,baz=98,slow=18,SNR=7.7						
DZM				LR	LR	15 17 48.1	
	comp=Z,4μm,20.8s,baz=126,slow=32						
DZM	**Mont Dzumac**	**16.38**	**298**	*e*P	**P**	**15 12 50.2**	**+0.2**
	176nm,1.5s						
RAR	**Rarotonga**	**18.92**	**64**	LR	LR	15 20 16.4	
	comp=Z,560nm,18.8s,baz=240,slow=36						
ARMA	**Armidale**	**26.11**	**263**	*e*P	**P**	**15 14 34.2**	**+3.5**
	29nm,0.8s						
ARMA	**Armidale**	**26.11**	**263**	P	**P**	**15 14 31.2**	**+0.5**
	baz=26,SNR=27						
MGCD	**Mangrove Creek**	**26.27**	**256**	P	**P**	**15 14 33.2**	**+1.2**
	baz=26,SNR=11						
TBI	**Tubuai**	**26.42**	**81**	*e*LQ	LQ	15 19 46.7	
	2μm,28.0s						
TBI				*e*LR	LR	15 21 14.9	
	comp=Z,4μm,27.5s,baz=244						
TBI	**Tubuai**	**26.42**	**81**	*e*T	T	15 41 57.2	
	123nm,0.3s						
CNB	**Canberra Magne**	**27.66**	**252**	P	**P**	**15 14 45.8**	**+1.2**
	baz=28,SNR=21						
EIDS	**Eidsvold**	**27.75**	**273**	*e*P	**P**	**15 14 46.5**	**+1.2**
	20nm,1.0s						
EIDS	**Eidsvold**	**27.75**	**273**	P	**P**	**15 14 45.5**	**+0.1**
	baz=28,SNR=5.6						
MILA	**Mila**	**27.88**	**248**	P	**P**	**15 14 48.9**	**+2.3**
	baz=28,SNR=13						
CAN	**Canberra**	**27.96**	**252**	*e*P	**P**	**15 14 48.9**	**+1.7**
	38nm,1.2s						
CAN	**Canberra**	**27.96**	**252**	*e*P	**P**	**15 14 48.9**	**+1.7**
CAN				pmax	pmax		
	comp=Z,38nm,1.2s						
PAE	**Paea**	**28.92**	**70**	*e*T	T	15 45 02.6	
	comp=Z,51nm,0.3s						
PPT2	**Papeete2**	**28.96**	**70**	*e*P	**P**	**15 14 57.5**	**+1.2**
	comp=Z,83nm,1.2s						
PPT2				*e*LQ	LQ	15 20 56.1	
	comp=Z,859nm,24.2s						
PPT2				*e*LR	LR	15 22 19.7	
	comp=Z,4μm,27.5s,baz=234						
PPT2	**Papeete2**	**28.96**	**70**	*e*T	T	15 45 06.7	
	comp=Z,31nm,0.3s						
PPT	**Papeete**	**28.97**	**70**	LR	LR	15 24 00.1	
	comp=Z,362nm,20.7s,baz=242,slow=31						
TVO	**Taravao**	**29.12**	**70**	*e*T	T	15 45 18.2	
	comp=Z,12nm,0.3s						
TIAR	**Tiarei**	**29.16**	**70**	*e*P	**P**	**15 14 59.1**	**+1.1**
	comp=Z,32nm,1.0s						
TIAR	**Tiarei**	**29.16**	**70**	*e*T	T	15 45 20.8	
	comp=Z,8.5nm,0.3s						
RMQ	**Roma**	**29.42**	**270**	P	**P**	**15 15 03.0**	**+2.8**
	baz=29,SNR=34						
HNR	**Honiara**	**29.52**	**311**	LR	LR	15 24 58.7	
	comp=Z,768nm,21.4s,baz=157,slow=32						
MEH	**Mehetia**	**30.04**	**72**	*e*T	T	15 46 26.8	
	comp=Z,76nm,0.3s						
TOO	**Toolangi**	**30.82**	**247**	*e*P	**P**	**15 15 14.1**	**+1.5**
	comp=Z,40nm,1.1s						
TOO	**Toolangi**	**30.82**	**247**	P	**P**	**15 15 14.3**	**+1.7**
	baz=31,SNR=16						
TOO	**Toolangi**	**30.82**	**247**	*e*P	**P**	**15 15 14.1**	**+1.5**
TOO				pmax	pmax		
	comp=Z,40nm,1.1s						
CMSA	**Cobar Meteorol**	**30.99**	**259**	P	**P**	**15 15 16.0**	**+1.9**
	baz=31,SNR=182						
PMOR	**Pomariorio Ree**	**31.73**	**67**	*e*T	T	15 48 32.2	
	comp=Z,12nm,0.4s						
VAH	**Vaihoa**	**31.81**	**68**	*e*T	T	15 48 38.5	
	comp=Z,224nm,0.2s						
ARPS	**Mount Arapiles**	**33.74**	**249**	P	**P**	**15 15 39.3**	**+1.3**
	baz=34,SNR=13						
CTA	**Charters Tower**	**33.85**	**280**	P	**P**	**15 15 40.2**	**+1.0**
	comp=Z,45nm,0.7s,baz=104,slow=11,SNR=71						
CTA				LR	LR	15 28 44.6	
	comp=Z,2μm,18.3s,baz=118,slow=35						
CTAO	**Charters Tower**	**33.85**	**280**	*e*P	**P**	**15 15 40.6**	**+1.4**
	comp=Z,51nm,0.7s						
CTAO	**Charters Tower**	**33.85**	**280**	*e*P	**P**	**15 15 40.6**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,51nm,0.7s						
STKA	**Stephens Creek**	**34.40**	**257**	P	**P**	**15 15 45.1**	**+1.3**
	comp=Z,107nm,0.8s,baz=102,slow=11,SNR=201						
STKA	**Stephens Creek**	**34.40**	**257**	*e*P	**P**	**15 15 45.4**	**+1.6**
	comp=Z,30nm,1.0s						
STKA	**Stephens Creek**	**34.40**	**257**	P	**P**	**15 15 45.5**	**+1.6**
	baz=34,SNR=142						
STKA	**Stephens Creek**	**34.40**	**257**	*e*P	**P**	**15 15 45.5**	**+1.6**
HTT	**Hallett**	**36.40**	**254**	P	**P**	**15 16 02.0**	**+0.9**
	baz=36,SNR=39						
PMG	**Port Moresby**	**38.75**	**296**	LR	LR	15 31 33.6	
	comp=Z,703nm,18.3s,baz=123,slow=35						
BBOO	**Buckleboo**	**38.87**	**255**	*e*P	**P**	**15 16 21.8**	**-0.1**
	comp=Z,58nm,0.9s						
BBOO	**Buckleboo**	**38.87**	**255**	P	**P**	**15 16 21.9**	**-0.1**
	baz=39,SNR=53						
RKT	**Rikitea**	**38.92**	**89**	*e*LR	LR	15 26 58.9	
	comp=Z,3μm,27.5s						
RKT	**Rikitea**	**38.92**	**89**	*e*T	T	15 57 35.3	
	comp=Z,8.1nm,0.3s						
QIS	**Mount Isa**	**39.33**	**275**	P	**P**	**15 16 26.1**	**+0.2**
	baz=39,SNR=9.0						
COEN	**Coen**	**39.36**	**286**	*e*P	**P**	**15 16 26.7**	**+0.5**
	comp=Z,38nm,1.1s						
COEN	**Coen**	**39.36**	**286**	P	**P**	**15 16 27.2**	**+1.0**
	baz=39,SNR=26						
TAOE	**Nuku Hiva Isla**	**41.45**	**66**	*e*LR	LR	15 28 05.0	
	comp=Z,3μm,27.9s						
AS31	**Alice Springs**	**43.09**	**267**	*e*P	**P**	**15 16 56.1**	**-0.6**
	comp=Z,12nm,0.9s						
AS31				*e*ScP	**ScP**	**15 22 32.5**	**-0.9**
AS31				*e*S	**S**	**15 23 18.5**	**-1.1**
ASAR	**Alice Springs**	**43.09**	**267**	P	**P**	**15 16 56.2**	**-0.5**
	comp=Z,37nm,0.8s,baz=106,slow=7.4,SNR=96						
ASAR				ScP	**ScP**	**15 22 32.5**	**-0.9**
	comp=Z,3.5nm,1.0s,baz=114,slow=4.2,SNR=5.3						
ASAR				S	**S**	**15 23 18.5**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=105,slow=14,SNR=4.4						
ASAR				LR	LR	15 34 14.1	
	comp=Z,2μm,20.9s,baz=147,slow=35						
PATS	**Pohnpei**	**43.71**	**325**	P	**P**	**15 16 59.9**	**-1.8**
	baz=44,SNR=3.7						
WRAB	**Tennant Creek**	**44.10**	**273**	*ce*P	**P**	**15 17 04.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,50nm,1.0s						
FORT	**Forrest**	**45.95**	**255**	*e*P	**P**	**15 17 18.9**	**-0.6**
	comp=Z,76nm,0.6s						
FORT	**Forrest**	**45.95**	**255**	P	**P**	**15 17 17.4**	**-2.1**
	baz=46,SNR=21						
WRKA	**Warakurna**	**47.43**	**263**	P	**P**	**15 17 29.8**	**-1.4**
	baz=48,SNR=6.2						
SBA	**Scott Base**	**47.70**	**184**	*e*P	**P**	**15 17 35.9**	**+3.5**
	comp=Z,48nm,1.2s						
SBA	**Scott Base**	**47.70**	**184**	P	**P**	**15 17 35.9**	**+3.5**
SBA				pmax	pmax		
	comp=Z,48nm,1.2s						
VNDA	**Vanda**	**47.76**	**186**	P	**P**	**15 17 34.3**	**+1.4**
	comp=Z,4.0nm,0.8s,baz=5.7,slow=8.4,SNR=23						
VNDA	**Vanda**	**47.76**	**186**	*e*P	**P**	**15 17 35.2**	**+2.3**
	comp=Z,12nm,1.1s						
VNDA	**Vanda**	**47.76**	**186**	*e*P	**P**	**15 17 35.2**	**+2.3**
VNDA				pmax	pmax		
	comp=Z,12nm,1.1s						
JAY	**Jayapura**	**48.05**	**298**	P	**P**	**15 17 35.5**	**-0.5**
	comp=Z,9.4nm,0.8s,baz=170,slow=9.8,SNR=4.2						
KDU	**Kakadu**	**48.97**	**280**	P	**P**	**15 17 42.1**	**-1.0**
	baz=49,SNR=10						
MTN	**Manton Dam**	**50.03**	**279**	*e*P	**P**	**15 17 50.5**	**-0.6**
	comp=Z,38nm,1.4s						
MTN	**Manton Dam**	**50.03**	**279**	P	**P**	**15 17 50.6**	**-0.6**
	baz=50,SNR=5.8						
KNRA	**Kununurra**	**50.73**	**275**	P	**P**	**15 17 57.2**	**+0.8**
	baz=51,SNR=7.4						
KMBL	**Kambalda**	**50.92**	**253**	P	**P**	**15 17 56.5**	**-1.2**
	baz=51,SNR=7.2						
BAKI	**Biak**	**52.43**	**295**	P	**P**	**15 18 09.2**	**0.0**
HMH	**Humu‘ula Sheep**	**54.54**	**26**	*e*P	**P**	**15 18 25.0**	**+0.3**
	comp=Z,174nm,1.0s						
CASY	**Casey**	**54.84**	**208**	*e*P	**P**	**15 18 25.6**	**-0.5**
	comp=Z,40nm,0.8s						
MEEK	**Meekatharra**	**55.10**	**257**	P	**P**	**15 18 27.4**	**-1.3**
	baz=55,SNR=4.0						
MORW	**Morawa**	**56.43**	**254**	P	**P**	**15 18 36.7**	**-1.4**
	baz=56,SNR=7.9						
SIJI	**Sorong**	**56.45**	**292**	P	**P**	**15 18 37.9**	**-0.5**
	comp=Z,7.6nm,0.6s,baz=101,slow=7.1,SNR=9.6						
QSPA	**South Pole Qui**	**59.37**	**180**	*e*P	**P**	**15 18 59.8**	**+1.5**
	comp=Z,93nm,0.8s						
MAW	**Mawson**	**71.99**	**201**	P	**P**	**15 20 19.7**	**+0.4**
	comp=Z,5.1nm,0.4s,baz=142,slow=6.6,SNR=19						
MAW	**Mawson**	**71.99**	**201**	*e*P	**P**	**15 20 19.7**	**+0.4**
	comp=Z,8.2nm,1.5s						
MAW	**Mawson**	**71.99**	**201**	P	**P**	**15 20 20.0**	**+0.7**
	baz=72,SNR=9.5						

MAW	Mawson	71.99	201	eP	P	15 20 19.7	+0.4
MAW				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GO10	Punta Arenas	75.24	143	eP	P	15 20 40.5	+1.8
	comp=Z,150nm,1.1s						
SYO	Syowa Base	76.78	193⇑	iP	P	15 20 45.8	-1.4
SYO	Syowa Base	76.78	193⇓	iPcP	PcP	15 20 57.0	-1.3
SYO	Syowa Base	76.78	193⇑	epP	pP	15 21 04.2	+4.3
SYO	Syowa Base	76.78	193⇓	esP	sP	15 21 12.0	+7.1
MDSI	Maura Dua	77.25	272	P	P	15 20 47.6	-3.1
SNAA	Sanae	77.82	178	P	P	15 20 53.6	+0.5
SNAA	Sanae	77.82	178	eP	P	15 20 53.3	+0.3
	comp=Z,54nm,1.1s						
SNAA	Sanae	77.82	178⇓	iP	P	15 20 53.5	+0.5
VNA3	Neumayer Olymp	77.97	176	P	P	15 20 54.3	+0.5
MJAR	Matsushiro Arr	78.52	325	P	P	15 20 58.2	+0.9
	comp=Z,2.0nm,0.8s,baz=164,slow=5.9,SNR=3.4						
MJAR				LR	LR	15 50 10.2	
	comp=Z,117nm,21.9s,baz=125,slow=32						
MAJO	Matsushiro	78.52	325	eP	P	15 20 58.2	+1.0
MAJO	Matsushiro	78.52	325	eP	P	15 20 58.2	+1.0
VNA1	Neumayer--Stat	78.63	177	P	P	15 20 58.3	+0.9
TPUB	Ta-pu	79.67	305	eP	P	15 21 01.4	-2.4
	comp=Z,17nm,0.8s						
SSLB	Suanglung	79.75	305	eP	P	15 21 01.4	-2.9
	comp=Z,10nm,0.8s						
MYKOM	Kota Tinggi	80.73	278	eP	P	15 21 08.2	-1.6
	comp=Z,11nm,0.9s						
PLCA	Paso Flores	82.28	133	P	P	15 21 18.2	+0.5
	comp=Z,24nm,1.1s,baz=240,slow=6.8,SNR=14						
PLCA				LR	LR	15 49 13.5	
	comp=Z,348nm,20.7s,baz=244,slow=29						
PLCA	Paso Flores	82.28	133	eP	P	15 21 19.2	+1.4
	comp=Z,42nm,1.0s						
PLCA	Paso Flores	82.28	133	eP	P	15 21 19.5	+1.8
KSRS	Korea Array	84.60	320	P	P	15 21 28.9	-0.3
	comp=Z,1.5nm,0.8s,baz=136,slow=5.0,SNR=6.2						
KSRS				LR	LR	15 56 43.7	
	comp=Z,101nm,19.6s,baz=144,slow=34						
KS15	Wonju Array Si	84.61	320	eP	P	15 21 28.9	-0.4
	comp=Z,96nm,1.9s						
KSAR	Wonju Array Be	84.61	320	P	P	15 21 28.9	-0.4
KSAR	Wonju Array Be	84.61	320	P	P	15 21 29.0	-0.4
YSS	Yuzh-Sakhalins	85.05	334	eP	P	15 21 31.0	-0.3
YSS	Yuzh-Sakhalins	85.05	334	eP	P	15 21 34.4	+3.1
YSS				e		15 21 47.7	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
PKM	Mcpherson Peak	85.21	45	P	P	15 21 34.3	+1.6
	baz=227						
PAGB	Antelope Grade	85.52	44	eP	P	15 21 34.9	+0.9
	comp=Z,70nm,1.7s						
SAO	San Andreas Ge	85.53	42	eP	P	15 21 34.3	+0.3
	comp=Z,21nm,1.1s						
SAO	San Andreas Ge	85.53	42	eP	P	15 21 34.3	+0.3
SAO				pmax	pmax		
	comp=Z,21nm,1.1s						
MWC	Mount Wilson	85.84	46	eP	P	15 21 36.0	+0.2
	comp=Z,35nm,1.4s						
MWC	Mount Wilson	85.84	46	eP	P	15 21 36.0	+0.2
MWC				pmax	pmax		
	comp=Z,35nm,1.4s						
MURC	Murrieta	85.97	47	P	P	15 21 37.7	+1.4
	baz=229						
MONP2	Monument Peak	86.00	48	P	P	15 21 37.6	+0.9
	baz=229						
IKP	In-Ko-Pah, Jac	86.04	48	P	P	15 21 37.6	+0.9
	baz=230						
BFSC	Mount Baldy Ra	86.10	46	P	P	15 21 38.4	+1.3
	baz=229						
PEA0B	Petropavlovsk-	86.14	346	eP	P	15 21 36.4	-0.2
	comp=Z,42nm,1.0s						
PETK	Petropavlovsk-	86.14	346	P	P	15 21 36.5	-0.1
	comp=Z,29nm,0.8s,baz=108,slow=7.2,SNR=19						
PETK				LR	LR	15 56 46.8	
	comp=Z,136nm,18.8s,baz=169,slow=33						
VES	Vestal, Richgr	86.30	44	P	P	15 21 39.1	+1.3
	baz=228						
EDW2	Edwards Air Fo	86.32	46	P	P	15 21 38.8	+0.7
	baz=228						
SWSC	Sam W. Stewart	86.43	48	P	P	15 21 40.0	+1.5
	baz=230						
PFO	Pinyon Flats O	86.44	47	i P	P	15 21 40.6	+1.9
PFO	Pinyon Flats O	86.44	47	P	P	15 21 39.5	+0.7
	baz=229						
NJ2	Nanjing	86.46	311	eP	P	15 21 38.8	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PEL	Peldehue	86.46	127	eP	P	15 21 40.1	+1.1
PEL				epP	sP	15 21 57.5	+0.8
PEL	Peldehue	86.46	127	eP	P	15 21 40.1	+1.1
PEL				e*PP	sP	15 21 57.5	+0.8
ISA	Isabella, Lake	86.54	45	eP	P	15 21 39.8	+0.7
ISA				epP	sP	15 21 57.0	+0.1
ISA	Isabella, Lake	86.54	45	eP	P	15 21 39.8	+0.7
ISA				e*PP	sP	15 21 57.0	+0.1
ISA	Isabella, Lake	86.54	45	P	P	15 21 40.1	+1.0
	baz=228						
LRMC	Laurel Mtn Rad	86.90	45	P	P	15 21 42.4	+1.4
	baz=228						
BELC	Belle Mtn. Jos	86.98	47	P	P	15 21 43.1	+1.6
	baz=230						
CMB	Columbia Colle	87.02	42	eP	P	15 21 41.9	+0.5
CMB				epP	sP	15 21 59.2	+0.1
CMB	Columbia Colle	87.02	42	eP	P	15 21 41.9	+0.5
CMB				e*PP	sP	15 21 59.2	+0.1
BC3	Big Chuckawall	87.11	48	P	P	15 21 43.9	+1.9
	baz=230						
GLA	Glamis	87.12	49	eP	P	15 21 42.7	+0.7
GLA				epP	sP	15 22 00.8	+1.0
GLA	Glamis	87.12	49	eP	P	15 21 42.7	+0.7
GLA				e*PP	sP	15 22 00.8	+1.0
GLA	Glamis	87.12	49	P	P	15 21 43.5	+1.5
	baz=230						
O02D	Mt. Diablo Mer	87.16	39	P	P	15 21 43.7	+1.6
	baz=225						
CWC	Cottonwood Cre	87.30	44	P	P	15 21 44.1	+1.2
	baz=228						
HEC	Hector,Ludlow	87.31	46	P	P	15 21 43.8	+0.9
	baz=229						
AFDM	Forest Hills D	87.31	41	eP	P	15 21 43.5	+0.7
	comp=Z,18nm,1.3s						
GSC	Goldstone, Bar	87.33	46	eP	P	15 21 43.1	+0.1
	comp=Z,30nm,1.1s						
GSC	Goldstone, Bar	87.33	46	eP	P	15 21 43.1	+0.1
GSC				pmax	pmax		
	comp=Z,30nm,1.1s						
GSC	Goldstone, Bar	87.33	46	P	P	15 21 44.3	+1.3
	baz=229						
MPMC	Manual Prospec	87.40	45	P	P	15 21 44.7	+1.2
	baz=229						
USRK	Ussuriysk Ar.	87.44	327	P	P	15 21 43.0	-0.1
	comp=Z,8.0nm,1.0s,baz=151,slow=4.4,SNR=7.0						
USRK				LR	LR	15 56 49.4	
	comp=Z,174nm,19.4s,baz=142,slow=33						
OMMB	Old Mammoth Mi	87.54	43	eP	P	15 21 43.8	-0.4
	comp=Z,38nm,1.7s						
WDC	Whiskeytown Da	87.58	39	eP	P	15 21 43.4	-0.6
	comp=Z,26nm,1.3s						
WDC	Whiskeytown Da	87.58	39	eP	P	15 21 43.4	-0.6
WDC				pmax	pmax		
	comp=Z,27nm,1.3s						
IRM	Iron Mountain	87.63	48	P	P	15 21 46.0	+1.6
	baz=230						
113A	Mohawk Valley,	87.63	49	eP	P	15 21 44.9	+0.5
	comp=Z,24nm,1.3s						
GMRC	Granite Mounta	87.70	47	P	P	15 21 46.1	+1.2
	baz=230						
214A	Organ Pipe Nat	87.76	51	P	P	15 21 46.5	+1.4
	baz=232						
Y12C	Blythe	87.76	48	eP	P	15 21 46.1	+1.1
	comp=Z,34nm,1.4s						
Y12C	Blythe	87.76	48	P	P	15 21 47.0	+2.0
	baz=230						
N02D	Trinity Center	87.77	39	P	P	15 21 46.1	+1.2
	baz=225						
O03E	Paynes Creek	87.78	40	P	P	15 21 45.4	+0.3
	baz=226						
WAKR	Walker	87.88	42	eP	P	15 21 46.2	+0.5
	comp=Z,31nm,1.2s						
TUQ	Turquoise Moun	87.96	46	P	P	15 21 47.4	+1.3
	baz=230						
M02C	Callahan	87.99	38	P	P	15 21 47.0	+1.0
	baz=225						
FURC	Furnace Creek,	88.05	45	P	P	15 21 47.7	+1.5
	baz=229						
GRAC	Grapevine Rang	88.10	44	P	P	15 21 47.8	+1.3
	baz=229						
PNTR	Pine Nut	88.19	42	eP	P	15 21 47.4	+0.2
	comp=Z,21nm,1.1s						
LDFC	Landfair	88.24	47	eP	P	15 21 47.9	+0.5
	comp=Z,52nm,1.0s						
BEKR	Beckworth	88.29	41	eP	P	15 21 47.7	+0.1
	comp=Z,11nm,1.1s						
YBH	Yreka Blue Hor	88.30	38	eP	P	15 21 48.2	+0.7
YBH				epP	pwP	15 22 04.7	-0.3
YBH	Yreka Blue Hor	88.30	38	eP	P	15 21 48.2	+0.7
YBH				e*PP	pwP	15 22 04.7	-0.3
YERR	Yerington	88.32	42	eP	P	15 21 47.9	+0.1
	comp=Z,17nm,1.1s						
NEE2	Needles Airpor	88.35	47	P	P	15 21 49.9	+2.1
	baz=230						
PDMCI	Parker Dam,Lak	88.36	48	P	P	15 21 49.6	+1.8
	baz=231						
TYV	Tymovskoe	88.36	336	eP	P	15 21 50.8	+3.4
TYV				pmax	pmax		
	comp=Z,400nm,7.5s						
TYV				pmax	pmax		
	comp=Z,12nm,1.0s						
NV01	Mina Array Sit	88.49	43	eP	P	15 21 49.6	+1.0
NVAR	Mina Array Bea	88.49	43	P	P	15 21 49.6	+1.0
	comp=Z,5.3nm,0.8s,baz=222,slow=8.0,SNR=29						
NVAR				LR	LR	15 58 18.9	
	comp=Z,308nm,18.0s,baz=254,slow=33						
RYN	Ryan	88.50	42	eP	P	15 21 48.3	-0.2
	comp=Z,22nm,1.5s						
NV11	Mina Array Sit	88.58	43	eP	P	15 21 48.8	-0.1
	comp=Z,1.2nm,1.1s						
PAHR	Pah Rah Range	88.73	41	eP	P	15 21 49.6	0.0
	comp=Z,15nm,1.1s						
TPNV	Topopah Spring	88.74	45	eP	P	15 21 49.6	-0.2
	comp=Z,17nm,1.1s						
TPNV	Topopah Spring	88.74	45	eP	P	15 21 49.6	-0.2
TPNV				pmax	pmax		
	comp=Z,17nm,1.1s						
TPNV	Topopah Spring	88.74	45	P	P	15 21 50.9	+1.1
	baz=229						
HUMO	Hull Mountain	88.79	37	eP	P	15 21 50.0	+0.3
	comp=Z,73nm,1.9s						
LCO	Las Campanas	88.79	123	eP	P	15 21 51.2	+0.7
LCO				epP	sP	15 22 09.1	+0.9
LCO	Las Campanas	88.79	123	eP	P	15 21 52.5	+2.0
M04C	Macdoel	88.80	38	P	P	15 21 51.0	+1.1
	baz=226						
L04D	Klamath Falls	88.86	38	P	P	15 21 51.5	+1.3
	baz=225						
Y14A	Wickenburg	88.86	49	eP	P	15 21 51.0	+0.7
	comp=Z,23nm,1.0s						
KVN	Kaiserville	89.03	42	eP	P	15 21 50.9	-0.2
	comp=Z,14nm,1.0s						
KVN	Kaiserville	89.03	42	eP	P	15 21 50.9	-0.2
KVN				pmax	pmax		
	comp=Z,14nm,1.0s						
W13A	Hualapai Mount	89.03	48	eP	P	15 21 50.9	-0.3
	comp=Z,25nm,1.2s						
SHPR	Sheep Range	89.12	46	eP	P	15 21 52.1	+0.6
SHPR				epP	sP	15 22 09.8	+0.5
DL2	Dalian	89.19	317	eP	P	15 21 56.0	+4.4
DL2				pmax	pmax		
	comp=Z,18nm,1.2s						
DL2				pmax	pmax		
	comp=Z,420nm,5.6s						
DL2				LR	LR		
	comp=Z,200nm,22.4s						
DL2				LR	LR		
	comp=Z,240nm,18.0s						
DL2				LR	LR		
	comp=Z,310nm,22.9s						
TRQA	Tornquist	89.20	135	eP	P	15 21 53.1	+1.2
	comp=Z,72nm,1.5s						
TRQA	Tornquist	89.20	135	eP	P	15 21 53.2	+1.2
TRQA				pmax	pmax		
	comp=Z,72nm,1.5s						
TUC	Tucson	89.33	51	eP	P	15 21 53.5	+1.0
TUC				epP	sP	15 22 11.6	+1.2
TUC	Tucson	89.33	51	P	P	15 21 54.2	+1.7
	baz=233						
MOD	Modoc Plateau	89.71	39	eP	P	15 21 54.2	0.0
MOD				epP	pwP	15 22 11.6	-0.1
I04A	Tendick Farm,	89.91	37	P	P	15 21 55.3	+0.4
	baz=225						
K05A	Summer Lake	89.96	38	eP	P	15 21 55.5	+0.1
K05A				epP	sP	15 22 13.5	+0.1
R11A	Troy Canyon, C	90.05	44	P	P	15 21 56.2	+0.4
	baz=230						
J05D	Fort Rock, OR	90.17	38	P	P	15 21 56.8	+0.6
	baz=226						
H04D	Lebanon	90.26	36	P	P	15 21 57.5	+1.0
	baz=225						
CN2	Changchun	90.41	323	eP	P	15 21 56.7	-0.5
CN2				epP	pwP	15 22 13.6	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BMN	Battle Mountai	90.45	42	eP	P	15 21 57.6	0.0
BMN				epP	pwP	15 22 14.9	-0.3
BMN	Battle Mountai	90.45	42	eP	P	15 21 57.6	0.0
BMN				e*PP	pwP	15 22 14.9	-0.3
G03D	McMinnville, O	90.48	35	P	P	15 21 58.4	+1.0
	baz=225						
GRNR	Gornyy	90.58	333	eP	P	15 21 57.8	0.0
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LCMT	Little Creek M	90.63	46	eP	P	15 21 58.9	+0.4
	comp=Z,13nm,1.1s						
H04A	Detroit Lake	90.65	36	eP	P	15 21 58.7	+0.4
	comp=Z,31nm,1.1s						
PINE	Pine Mountain	90.67	37	eP	P	15 21 59.0	+0.3
PINE				epP	pwP	15 22 16.3	+0.5
I05D	Terrebonne, OR	90.84	37	P	P	15 22 00.4	+1.1
	baz=226						
U15A	North Rim	90.87	47	eP	P	15 22 00.9	+1.0
U15A				epP	sP	15 22 18.3	+0.7
WUAZ	Wupatki	90.89	49	eP	P	15 22 01.0	+1.2
WUAZ				epP	sP	15 22 18.3	+0.7
WUAZ	Wupatki	90.89	49	P	P	15 22 01.4	+1.5
	baz=232						
CCUT	Cedar City	90.89	46	eP	P	15 22 01.2	+1.3
	comp=Z,16nm,1.3s						
KNB	Kanab	90.90	47	eP	P	15 22 00.7	+0.8
	comp=Z,27nm,1.2s						
KNB	Kanab	90.90	47	eP	P	15 22 00.7	+0.8
KNB				pmax	pmax		
	comp=Z,27nm,1.2s						
SZCU	Shurtz Canyon	91.09	46	eP	P	15 22 01.8	+1.0
SZCU				epP	sP	15 22 18.8	+0.2
PSUT	Pine Spring	91.21	45	eP	P	15 22 02.4	+1.0
	comp=Z,10nm,1.1s						
KLR	Kul'dur	91.33	330	i P	P	15 22 00.5	-0.8
KLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PKCU	Pink Cliffs	91.48	47	eP	P	15 22 04.4	+1.6
	comp=Z,61nm,1.7s						
G05D	Wamic, OR	91.48	36	P	P	15 22 03.2	+1.1
	baz=226						
121A	Cookes Peak, D	91.50	53	P	P	15 22 04.6	+1.8
	baz=234						
I07A	Izee	91.63	38	eP	P	15 22 03.8	+0.8
	comp=Z,15nm,1.1s						
J08A	Circle Bar Ran	91.69	39	eP	P	15 22 03.3	0.0
	comp=Z,30nm,1.4s						
GYA	Guiyang	91.71	300	P	P	15 22 01.3	-2.5
GYA				pP	sP	15 22 21.9	0.0
GYA				PP	PP	15 25 43.5	+0.2
GYA				SKS	SKSac	15 32 25.7	-7.2
GYA				S	SKKSac	15 32 53.8	+4.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.9s						
W18A	Petrified Fore	91.72	50	eP	P	15 22 03.3	-0.4
	comp=Z,28nm,1.4s						
W18A	Petrified Fore	91.72	50	P	P	15 22 05.1	+1.4
	baz=233						
E04D	Cinebar	91.78	35	P	P	15 22 04.8	+1.4
	baz=225						
ENH	Enshi	91.79	304	eP	P	15 22 02.5	-1.4
	comp=Z,10.0nm,0.8s						
ELK	Elko	91.80	43	eP	P	15 22 04.3	+0.3
ELK				epP	pwP	15 22 20.8	-0.7
ELK	Elko	91.80	43	eP	P	15 22 04.3	+0.3
ELK				e*PP	pwP	15 22 20.8	-0.7
GO02	Mina Guanaco	91.80	121	eP	P	15 22 05.6	+1.0
GO02				epP	sP	15 22 23.4	+1.0
G06A	Carlson Farm,	91.83	37	eP	P	15 22 03.5	-0.3
	comp=Z,27nm,1.3s						
MTPU	Mount Pierson	91.93	46	eP	P	15 22 05.6	+0.8
	comp=Z,24nm,1.3s						
D03D	Eldon	92.22	34	P	P	15 22 06.7	+1.3
	baz=225						
MSU	Marysvale	92.23	46	eP	P	15 22 06.0	0.0
MSU				epP	sP	15 22 24.5	+0.7
MSU	Marysvale	92.23	46	eP	P	15 22 06.1	0.0
MSU				e*PP	sP	15 22 24.5	+0.7
DIB	Dawson Inlet,	92.49	25	eP	P	15 22 06.7	+0.2
	comp=Z,17nm,1.3s						
TX31	Lajitas Ar. Si	92.58	57	eP	P	15 22 07.1	-0.7
TX31				epP	sP	15 22 25.8	+0.3
TXAR	Lajitas Array	92.58	57	P	P	15 22 07.8	+0.1
	comp=Z,2.8nm,1.1s,baz=216,slow=5.6,SNR=7.7						
MNTX	Cornudas Mount	92.68	55	eP	P	15 22 07.8	-0.3
	comp=Z,20nm,1.8s						
MNTX	Cornudas Mount	92.68	55	P	P	15 22 08.8	+0.8
	baz=235						
G08A	Pilot Rock	92.73	37	eP	P	15 22 08.2	+0.2
G08A				epP	pwP	15 22 25.4	+0.2
LAZ	Ladron	93.02	51	eP	P	15 22 09.7	-0.1
LAZ				epP	sP	15 22 28.2	+0.6
LNIG	Linares	93.30	63	eP	P	15 22 10.7	-0.3
	comp=Z,20nm,1.5s						
TMUT	Trail Mountain	93.30	46	eP	P	15 22 11.8	+0.7
	comp=Z,8.6nm,1.2s						
BMO	Blue Mountains	93.31	38	eP	P	15 22 10.8	+0.1
	comp=Z,17nm,1.8s						
BMO	Blue Mountains	93.31	38	eP	P	15 22 10.8	+0.1
BMO				pmax	pmax		
	comp=Z,17nm,1.8s						
CM31	Chiang Mai Arr	93.51	289	eP	P	15 22 12.8	+0.6
	comp=Z,11nm,1.4s						
CMAR	Chiang Mai Arr	93.51	289	P	P	15 22 12.8	+0.6
	comp=Z,1.2nm,0.9s,baz=149,slow=4.0,SNR=5.9						
CMAR				PP	PP	15 25 58.1	+0.7
	comp=Z,0.6nm,0.6s,baz=150,slow=5.0,SNR=5.8						
CMAR				LR	LR	16 05 09.1	
	comp=Z,107nm,21.5s,baz=174,slow=36						
SRU	San Rafael Swe	93.61	46	eP	P	15 22 12.8	+0.4
SRU				epP	sP	15 22 30.2	0.0
SRU	San Rafael Swe	93.61	46	eP	P	15 22 12.8	+0.4
SRU				e*PP	sP	15 22 30.2	0.0
MVCO	Mesa Verde	93.76	49	P	P	15 22 13.6	+0.5
	baz=234						
LVC	Limon Verde	93.78	119	eP	P	15 22 15.1	+1.2
	comp=Z,26nm,1.4s						
LVC	Limon Verde	93.78	119	eP	P	15 22 15.1	+1.2
LVC				pmax	pmax		
	comp=Z,26nm,1.4s						
ANMO	Albuquerque	93.79	51	eP	P	15 22 13.6	+0.3
ANMO				epP	sP	15 22 31.1	0.0
ANMO	Albuquerque	93.79	51c	eP	P	15 22 13.2	-0.1
ANMO				pmax	pmax		
	comp=Z,13nm,2.5s						
PV05	Paradox Valley	93.89	48	eP	P	15 22 13.8	0.0
	comp=Z,9.4nm,1.1s						
KMI	Kunming	93.97	297	P	P	15 22 13.8	-0.6
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
E09A	Wood Farm, Sta	93.97	37	eP	P	15 22 13.4	-0.2
	comp=Z,11nm,1.1s						
HLID	Hailey	94.07	41	eP	P	15 22 14.8	+0.4
	comp=Z,8.8nm,1.0s						
HLID	Hailey	94.07	41	P	P	15 22 15.2	+0.8
	baz=231						
F10A	Beach Ranch, E	94.09	38	eP	P	15 22 13.9	-0.4
	comp=Z,7.9nm,1.1s						
PLID	Pearl Lake	94.17	39	eP	P	15 22 14.8	0.0
	comp=Z,16nm,1.2s						
PV12	Saucer Basin,	94.22	48	eP	P	15 22 14.4	-0.9
	comp=Z,16nm,1.6s						
TCUT	Toone Canyon	94.29	44	eP	P	15 22 15.9	+0.3
	comp=Z,35nm,1.4s						
PB11	IPOC Station P	94.84	116	eP	P	15 22 19.3	+0.8
	comp=Z,34nm,0.9s						
S22A	4UR Ranch, Cre	95.15	49	eP	P	15 22 20.0	+0.4
	comp=Z,4.9nm,1.1s						
S22A	4UR Ranch, Cre	95.15	49	P	P	15 22 20.5	+0.9
	baz=235						
MNMC	Minye Minye	95.25	116	eP	P	15 22 21.8	+1.3
	comp=Z,22nm,0.8s						
MCMT	McKenzie Canyo	95.74	40	eP	P	15 22 22.1	0.0
MCMT				epP	sP	15 22 39.7	-0.1
MSTX	Muleshoe	95.77	54	P	P	15 22 23.0	+0.7
	baz=237						
REDW	Red Top Meadow	95.98	43	eP	P	15 22 23.3	+0.1
	comp=Z,14nm,1.2s						
SDCO	Great Sand Dun	96.02	49	P	P	15 22 22.6	-1.0
	baz=236						
FXWY	Fox Creek	96.05	42	eP	P	15 22 24.2	+0.7
FXWY				epP	sP	15 22 41.2	0.0
CAST	Castle Rocks	96.08	11	eP	P	15 22 21.4	-1.4
	comp=Z,10nm,1.5s						
IMW	Indian Meadow	96.25	42	eP	P	15 22 24.7	+0.2
IMW				epP	sP	15 22 42.2	-0.1
CD2	Chengdu	96.26	302	P	P	15 22 24.5	0.0
LOHW	Long Hollow	96.28	42	eP	P	15 22 24.4	-0.1
LOHW				epP	pwP	15 22 42.1	+0.1
SEY	Seymchan	96.31	347	P	P	15 22 25.3	+1.5
	comp=Z,3.9nm,0.8s,baz=187,slow=7.6,SNR=8.5						
PDAR	Pinedale Array	96.39	44	LR	LR	15 57 53.9	
	comp=Z,247nm,21.9s,baz=240,slow=30						
ZEA	Zeya	96.54	331	eP	P	15 22 28.0	+2.9
RND	Reindeer	96.65	13	eP	P	15 22 24.9	-0.5
	comp=Z,10nm,1.3s						
RND	Reindeer	96.65	13	eP	P	15 22 25.0	-0.5
RND				pmax	pmax		
	comp=Z,11nm,1.3s						
YHH	Holmes Hill	96.84	41	eP	P	15 22 27.5	+0.4
	comp=Z,13nm,1.5s						
BOZ	Bozeman (W)	96.89	40	eP	P	15 22 27.3	+0.2
BOZ				epP	sP	15 22 45.0	+0.1
BOZ	Bozeman (W)	96.89	40	eP	P	15 22 27.3	+0.2
BOZ				e*PP	sP	15 22 45.0	+0.1
BOZ	Bozeman (W)	96.89	40	P	P	15 22 27.9	+0.8
	baz=233						
WRH	Wood River Hil	97.76	13	eP	P	15 22 30.0	-0.4
	comp=Z,5.3nm,1.2s						
DOT	Dot Lake	97.84	15	eP	P	15 22 30.0	-0.8
	comp=Z,4.1nm,0.9s						
LPAZ	La Paz	98.01	114	P	Pdif	15 22 34.1	+0.5
	comp=Z,1.1nm,0.7s,baz=246,slow=4.3,SNR=3.2						
LPAZ				LR	LR	15 56 18.9	
	comp=Z,102nm,21.9s,baz=205,slow=29						
ILAR	Eielson Array	98.26	13	P	P	15 22 32.0	-0.6
	comp=Z,0.8nm,1.0s,baz=223,slow=4.3,SNR=6.5						
ILB	Eielson Array	98.26	13	eP	P	15 22 32.0	-0.6
	comp=Z,4.1nm,1.3s						
BILL	Bilibino	99.18	354⇑	eP	Pdif	15 22 34.8	-1.9
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s						
BILL				MLR	MLR		
	comp=Z,260nm,19.0s						
RSSD	Black Hills	100.47	45	P	Pdif	15 22 43.1	-0.1
	baz=237						
YKA	Yellowknife Ar	105.75	26	PKKPbc	PKKPbc	15 38 43.5	-0.6
	comp=Z,0.6nm,0.5s,baz=41,slow=3.1,SNR=4.5						
YKB5	Yellowknife Ar	105.75	26	ePKKPbc	PKKPbc	15 38 43.5	-0.6
WMQ	Urumqi	113.43	308	ePKP	PKiKP	15 27 33.2	-0.5
WMQ				LR	LR		
	comp=Z,380nm,29.9s						
WMQ				LR	LR		
	comp=Z,130nm,28.9s						
OPO	Ambohidratompo	114.49	228	PKP	PKiKP	15 27 35.5	-1.2
	comp=Z,1.6nm,0.6s,baz=82,slow=7.1,SNR=4.0						
MK31	Makanchi Array	117.99	310	ePKPdf	PKPdf	15 27 40.7	-1.6
MK31	Makanchi Array	117.99	310	ePKIKP	PKPdf	15 27 40.7	-1.6
MK32	Makanchi Array	117.99	310	ePKPdf	PKPdf	15 27 40.8	-1.5
MKAR	Makanchi Array	117.99	310	PKP	PKPdf	15 27 40.8	-1.5
	comp=Z,2.1nm,0.6s,baz=208,slow=1.2,SNR=9.7						
MAKZ	Makanchi	118.20	310	ePKPdf	PKPdf	15 27 40.8	-1.9
MAKZ	Makanchi	118.20	310	ePKIKP	PKPdf	15 27 40.8	-1.9
ZALV	Zalesovo Beam	118.28	318	PKP	PKPdf	15 27 41.3	-1.2
	comp=Z,1.1nm,0.6s,baz=152,slow=1.7,SNR=4.4						
ZAA1	Zalesovo Array	118.28	318	ePKPdf	PKPdf	15 27 41.3	-1.2
KURK	Kurchatov	121.28	314	ePKPdf	PKPdf	15 27 46.6	-1.8
KURK	Kurchatov	121.28	314c	iPKIKP	PKPdf	15 27 46.7	-1.7
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AAK	Ala-Archa	122.30	304c	iPKIKP	PKPdf	15 27 49.5	-1.4
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						

PQI	Presque Isle	124.85	52	ePKPdf	PKPdf	15 27 54.7	-0.8
KK31	Karatay Array	125.25	303	ePKPdf	PKPdf	15 27 55.3	-1.1
KK31	Karatay Array	125.25	303	ePKIKP	PKPdf	15 27 55.3	-1.1
KKAR	Karatay Array	125.25	303	ePKPdf	PKPdf	15 27 55.3	-1.1
KKAR	Karatay Array	125.25	303	ePKIKP	PKPdf	15 27 55.3	-1.1
BATG	Bathurst New B	126.27	52	ePKPdf	PKPdf	15 27 57.5	-0.7
BRVK	Borovoye	126.71	316	i PKIKP	PKPdf	15 27 56.6	-2.2
LMN	Caledonia Moun	126.93	53	ePKPdf	PKPdf	15 27 58.7	-0.7
SPA0	Spitsbergen Ar	132.04	356	ePKPdf	PKPdf	15 28 08.5	+0.2
ABKAR	Akbulak array	133.12	310	ePKPdf	PKPdf	15 28 10.9	-0.2
ARU	Arti	133.35	320	ePKPdf	PKPdf	15 28 10.6	-0.6
ARU	Arti	133.35	320	i PKIKP	PKPdf	15 28 11.1	-0.2
ARU				MLR	MLR		
	comp=Z,223nm,21.0s						
GEYT	Alibeck	133.70	295	PKP	PKPdf	15 28 12.5	-0.1
	comp=Z,6.1nm,0.9s,baz=48,slow=2.2,SNR=4.2						
GEYT				SKPbc	SKPbc	15 31 37.0	-0.5
	comp=Z,2.8nm,0.8s,baz=166,slow=3.1,SNR=5.2						
PRGR	Permogore	138.11	330	ePKIKP	PKPdf	15 28 18.1	-1.9
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
APA	Apatity	138.73	342	⇓iPKHKP	PKPpre	15 28 08.1	
APA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARA0	ARCESS Array S	138.92	348	ePKPpre	PKPpre	15 28 13.8	
ARCES	ARCESS Array B	138.92	348	PKhKP	PKPpre	15 28 13.8	
	comp=Z,2.8nm,0.6s,baz=73,slow=2.0,SNR=17						
KTK1	Kautokeino	139.78	348	ePKPdf	PKPdf	15 28 22.6	-0.3
TRO	Tromso	139.89	351	ePKPdf	PKPdf	15 28 23.3	+0.3
KONS	Konsvik	143.58	353	ePKPdf	PKPdf	15 28 29.7	0.0
MOS	Moscow	144.61	325	ePKIKP	PKiKP	15 28 33.6	-1.9
MOS				e		15 31 51.1	
MOS				pmax	pmax		
	comp=Z,82nm,0.7s						
ZEI	Tsey	144.68	302	i PKIKP	PKPab	15 28 30.1	-1.4
ZEI				pmax	pmax		
	comp=Z,20nm,0.9s						
AKH	Akhalkalaki	145.10	299	⇑iP	PKPbc	15 28 31.9	-1.1
KBZ	Khabaz	145.29	304	PKPbc	PKPbc	15 28 32.6	-0.6
	comp=Z,7.0nm,0.8s,baz=197,slow=3.8,SNR=6.0						
PUL	Pulkovo	145.30	335	eP	PKPab	15 28 34.5	+1.6
LPSR	Galich'ya Gora	145.37	320	ePKP2	PKPbc	15 28 31.9	-1.3
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
KIV	Kislovodsk	145.41	304	⇑iP	PKPdf	15 28 25.2	-8.5
KIV	Kislovodsk	145.41	304	i PKIKP	PKiKP	15 28 36.4	-1.3
KIV				pmax	pmax		
	comp=Z,85nm,1.1s						
OBN	Obninsk	145.45	325	ePKPbc	PKPdf	15 28 32.0	-1.2
OBN	Obninsk	145.45	325	⇑iP	PKPdf	15 28 32.1	-1.2
OBN	Obninsk	145.45	325	d iPKIKP	PKPdf	15 28 32.1	-1.2
OBN				i		15 28 48.7	
OBN				pmax	pmax		
	comp=Z,128nm,2.1s						
OBN				pmax	pmax		
	comp=Z,65nm,1.0s						
OBN				MLR	MLR		
	comp=Z,112nm,21.0s						
FIA1	FINESS Array S	145.46	340	ePKPbc	PKPdf	15 28 31.7	-1.4
FIA0	FINESS Array S	145.46	340	ePKPbc	PKPdf	15 28 31.9	-1.2
FIA0	FINESS Array S	145.46	340	ePKIKP	PKPdf	15 28 31.9	-1.2
FINES	FINESS Array B	145.46	340	PKPbc	PKPdf	15 28 31.9	-1.2
	comp=Z,28nm,0.5s,baz=60,slow=3.8,SNR=268						
NSS	Namsos	145.62	352	ePKPbc	PKPdf	15 28 32.6	-0.7
VSR	Storozhevoye	145.78	317	ePKIKP	PKPdf	15 28 32.9	-1.1
VSR				pmax	pmax		
	comp=Z,30nm,0.7s						
VORD	Divnogorie	145.80	317	ePKP2	PKPdf	15 28 33.3	-0.7
VORD				pmax	pmax		
	comp=Z,70nm,1.2s						
TBLU	Trondheim	147.04	353	ePKPbc	PKPbc	15 28 37.1	-0.8
TBLU				ePKPab	PKPab	15 28 38.6	-0.9
VSU	Vasula	147.53	336	eP	PKPdf	15 28 37.7	+1.0
VSU				IAmb	IAmb	15 28 44.1	
	comp=Z,156nm,0.8s						
MOL	Molde	147.96	355	ePKPbc	PKPbc	15 28 40.0	-0.4
DOMB	Dombas	148.35	354	ePKPbc	PKPbc	15 28 40.8	-0.7
AKN	Aaknes	148.38	356	ePKPbc	PKPbc	15 28 41.4	-0.2
AKN				ePKPab	PKPab	15 28 45.0	+0.1
NC303	NORSAR Array S	148.89	351	ePKPbc	PKPbc	15 28 42.0	-0.9
NC204	NORSAR Array S	148.91	352	ePKPbc	PKPbc	15 28 42.2	-0.8
NC405	NORSAR Array S	148.95	351	ePKPbc	PKPbc	15 28 42.1	-1.0
NB201	NORSAR Array S	149.07	351	ePKPdf	PKPdf	15 28 38.6	-0.6
NB201				ePKPbc	PKPbc	15 28 42.6	-0.8
NB2	NORSAR Subarra	149.09	351	PKP	PKPbc	15 28 42.1	-1.3
	comp=Z,68nm,1.4s,baz=12,slow=2.7						
NB2	NORSAR Subarra	149.09	351	PKP	PKPbc	15 28 42.1	-1.3
	baz=12,slow=2.7						
NB200	NORSAR Array S	149.09	351	ePKPbc	PKPbc	15 28 42.5	-0.9
NOA	NORSAR Array B	149.09	351	PKPbc	PKPbc	15 28 42.5	-0.9
	comp=Z,8.2nm,0.7s,baz=14,slow=4.2,SNR=24						
NBO00	NORSAR Array S	149.15	352	ePKPbc	PKPbc	15 28 42.9	-0.7
NAO01	NORSAR Array S	149.32	351	ePKPbc	PKPbc	15 28 43.3	-0.7
NC602	NORSAR Array S	149.34	351	ePKPbc	PKPbc	15 28 43.0	-0.9
NC602	NORSAR Array S	149.34	351	ePKPbc	PKPbc	15 28 43.1	-0.8
NC602				ePKPab	PKPab	15 28 48.1	-0.6
SUE	Sulen	149.62	357	ePKPdf	PKPdf	15 28 40.1	+0.2
SUE				ePKPab	PKPab	15 28 49.5	-0.4
IZAR	Zarasai	149.69	333	eP	PKiKP	15 28 47.9	+1.9
IZAR				IAmb	IAmb	15 28 50.3	
	comp=Z,20nm,0.8s						
SKAR	Skarslia	149.76	354	ePKPdf	PKPdf	15 28 40.0	-0.4
SKAR				ePKPbc	PKPbc	15 28 45.1	0.0
SKAR				ePKPab	PKPab	15 28 50.2	-0.3
IDID	Didziasalis	149.80	332	eP	PKPbc	15 28 44.4	-0.9
IDID				IAmb	IAmb	15 28 54.4	
	comp=Z,11nm,0.7s						
ISAL	Salakas	149.87	332	eP	PKPbc	15 28 44.1	-1.4
ISAL				IAmb	IAmb	15 28 55.8	
	comp=Z,28nm,1.3s						
MICGM	Minsk	149.87	330	e	PKPbc	15 28 43.0	-2.5
MNK	Minsk	149.87	330	ePKHKP	PKPbc	15 28 43.0	-2.5
IIGN	Ignalina	149.99	332	eP	PKPbc	15 28 44.7	-1.0
IIGN				IAmb	IAmb	15 28 55.1	
	comp=Z,14nm,0.7s						
ASK	Askoy	150.18	357	ePKPdf	PKPdf	15 28 40.8	-0.1
ASK				epPKPbc	sPKPbc	15 29 03.2	-1.1
BER	Bergen	150.27	357	ePKPbc	PKPbc	15 28 46.0	-0.2
KONO	Kongsberg	150.64	352	ePKPbc	PKPbc	15 28 46.6	-0.5
KONO	Kongsberg	150.64	352	ePKIKP	PKPbc	15 28 46.6	-0.5
KONO	Kongsberg	150.64	352	ePKPbc	PKPbc	15 28 46.6	-0.5
ODD1	Odda	150.66	355	ePKPbc	PKPbc	15 28 47.1	-0.1
ODD1				epPKPbc	sPKPbc	15 29 04.9	-0.7
SIM	Simferopol'	151.15	308	i PKIKP	PKPbc	15 28 48.6	-0.3
SIM				e		15 29 03.0	
SIM				pmax	pmax		
	comp=Z,25nm,0.7s						
BLS5	Blasjo	151.16	355	ePKPdf	PKPdf	15 28 42.3	-0.2
BLS5				ePKPbc	PKPbc	15 28 47.9	-0.5
BLS5				ePKPab	pPKPdf	15 28 55.8	-0.3
KMY	Karmoy	151.44	356	ePKPbc	PKPbc	15 28 48.6	-0.4
KMY				ePKPab	PKPab	15 28 57.2	-0.2
AKASG	Malin Array Be	151.56	322	PKPbc	PKPbc	15 28 48.5	-1.1
	comp=Z,8.0nm,0.5s,baz=48,slow=2.8,SNR=31						
AKBB	Malin Array Si	151.56	322	ePKPbc	PKPbc	15 28 48.4	-1.2
AKBB	Malin Array Si	151.56	322	ePKIKP	PKPbc	15 28 48.4	-1.2
HOMB	Homborsund	152.11	353	ePKPbc	PKPbc	15 28 50.4	-0.2
SUW	Suwalki	152.18	333	ePKP	PKPbc	15 28 50.6	-0.3
ILGA	Ilgaz	152.45	301	ePKPbc	PKPbc	15 28 51.9	-0.3
BR101	Keskin Array S	152.75	298	ePKPbc	PKPbc	15 28 51.7	-1.2
BRTR	Keskin Array B	152.75	298	PKPbc	PKPbc	15 28 51.7	-1.2
	comp=Z,16nm,1.0s,baz=137,slow=4.6,SNR=13						
ANTO	Ankara	153.37	298	⇑iP	PKiKP	15 28 57.4	+3.2
ANTO	Ankara	153.37	298	⇑PKIKP	PKiKP	15 28 57.4	+3.2
CSS	Mathiatis	153.40	287	ePKPbc	PKPbc	15 28 52.7	-1.6
MILM	Milestii Mici	153.77	316	⇓iP	PKiKP	15 28 57.6	+2.9
LIC	Lamto	154.74	163	eP	PKiKP	15 28 58.1	+0.4
	comp=Z,125nm,1.2s						
KIC	Kosan Boka	154.94	164	eP	PKiKP	15 28 58.6	+0.5
	comp=Z,108nm,1.3s						
CFR	Carcaliu	154.99	313	⇓iP	PKiKP	15 28 59.7	+2.4
CFR	Carcaliu	154.99	313	⇓PKIKP	PKiKP	15 28 59.7	+2.4
TIC	Toumodi	155.14	163	eP	PKPbc	15 29 01.9	
DBIC	Dimbokro	155.21	164	PKP	PKPdf	15 28 50.1	+0.4
	comp=Z,5.2nm,0.8s,baz=126,slow=1.8,SNR=5.8						
DBIC				PKPbc	PKPbc	15 29 00.3	
	comp=Z,4.1nm,0.7s,baz=159,slow=5.6,SNR=5.7						
TLB	Topalu	155.31	311	⇓iP	PKPab	15 29 01.8	-13
TLB	Topalu	155.31	311	⇓PKIKP	PKPab	15 29 01.8	-13
BIZ	Bicaz	155.36	318	⇓iP	PKPdf	15 28 57.3	+8.3
BURAR	Bucovina Array	155.49	320	⇑iP	PKPdf	15 28 57.1	+7.9
BURAR	Bucovina Array	155.49	320	⇑PKIKP	PKPdf	15 28 57.1	+7.9
KOLS	Kolonicke sedl	156.20	326	ePKIKP	PKPdf	15 28 53.9	+3.9
KOLS	Kolonicke sedl	156.20	326	ePKP	PKPdf	15 28 53.9	+3.9
MLR	Muntele Rosu	156.21	315	⇓iP	PKPdf	15 29 02.2	+12
MLR	Muntele Rosu	156.21	315	⇓PKIKP	PKPdf	15 29 02.2	+12
UZH	Uzhgorod	156.39	325	ePKIKP	PKPab	15 29 04.5	-14
UZH				e		15 29 17.9	
VOIR		156.77	316	⇓iP	PKPdf	15 28 58.2	+7.2
VOIR		156.77	316	⇓PKIKP	PKPdf	15 28 58.2	+7.2
UPC	Upice	157.64	336	ePKP2	PKPab	15 29 27.5	+3.4
UPC	Upice	157.64	336	ePKPAB	PKPab	15 29 27.5	+3.4
UPC				epPKP	sPKPab	15 29 40.7	-1.5
DPC	Dobruska-Polom	157.66	335	ePKP2	PKPab	15 29 24.0	-0.3
DPC	Dobruska-Polom	157.66	335	ePKPAB	PKPab	15 29 24.0	-0.3
DPC				ex	x	15 29 27.7	
DPC				ex	x	15 29 41.1	
CLL	Collm	157.88	341	ePKIKP	PKPdf	15 29 05.0	+13
CLL				e		15 29 23.0	
CLL				i		15 29 26.6	
CLL				pmax	pmax		
	comp=Z,16nm,0.8s						
CLL	Collm	157.88	341	ePKPdiff	PKPdf	15 29 05.0	+13
CLL				e		15 29 23.0	
CLL				i PKPab	PKPab	15 29 26.6	+1.5
	comp=Z,16nm,0.8s						
CLL				epPKPab	sPKPab	15 29 46.0	+2.8
BRG	Berggiesshubel	158.00	339	ePKP	PKPdf	15 28 51.8	-0.4
	comp=Z,3.6nm,0.9s						
BRG				epPKP	pPKPdf	15 29 08.2	+2.4
	comp=Z,4.3nm,0.9s						
BRG				i		15 29 28.8	
	comp=Z,11nm,0.9s						
BRG	Berggiesshubel	158.00	339	i PKP	PKPab	15 29 36.2	+11
	comp=Z,7.8nm,1.0s comp=N,237nm,13.0s comp=E,187nm,13.3s comp=Z,187nm,13.3s						
BRG	Berggiesshubel	158.00	339	ePKIKP	PKPdf	15 28 51.8	-0.4
BRG				e		15 29 08.2	
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG				MLR	MLR		
	comp=N,237nm,13.0s						
BRG				MLR	MLR		
	comp=E,187nm,13.3s						
BRG				MLR	MLR		
	comp=Z,187nm,13.3s						
PVCC	Panska Ves	158.11	338	ePKP2	PKPab	15 29 29.7	+3.6
PVCC	Panska Ves	158.11	338	ePKPAB	PKPab	15 29 29.7	+3.6
PVCC				ex	x	15 29 38.2	
VYHS	Vyhne	158.11	329	ePKP2	PKPab	15 29 29.4	+3.1
VYHS	Vyhne	158.11	329	ePKP	PKPab	15 29 29.4	+3.1
VRAC	Vranov	158.41	333	⇑iP	PKPdf	15 29 08.6	+16
VRAC	Vranov	158.41	333	⇑PKIKP	PKPdf	15 29 08.6	+16
PRU	Pruhonice	158.58	337	ePKP2	PKPab	15 29 30.1	+1.9
PRU	Pruhonice	158.58	337	ePKPAB	PKPab	15 29 30.1	+1.9
MODS	Modra-Piesok	158.88	331	ePKP2	PKPab	15 29 32.0	+2.4
MODS	Modra-Piesok	158.88	331	ePKP	PKPab	15 29 32.0	+2.4
NKC	Novy Kostel	159.01	341	ePKP2	PKPab	15 29 33.8	+3.7
NKC	Novy Kostel	159.01	341	ePKPAB	PKPab	15 29 33.8	+3.7
KHC	Kasperske Hory	159.64	338	ePKP2	PKPab	15 29 35.0	+2.1
KHC	Kasperske Hory	159.64	338	ePKPAB	PKPab	15 29 35.0	+2.1
CONA	Conrad Observa	159.81	332	i PKPab	PKPab	15 29 33.7	-0.1
	comp=Z,3.3nm,0.7s						
ARSA	Arzberg	160.49	331	PKPab	PKPab	15 29 36.4	-0.3
	comp=Z,3.5nm,0.7s						
MOA	Molln	160.49	335	PKPab	PKPab	15 29 35.8	-0.9
	comp=Z,5.1nm,0.9s						
SOKA	Soboth	161.15	331	ePKPab	PKPab	15 29 39.4	-0.3
	comp=Z,3.5nm,0.6s						
MYKA	Terra Mystica	161.75	334	ePKPab	PKPab	15 29 40.6	-1.6
	comp=Z,5.8nm,1.0s						
WTTA	Wattenberg	161.90	338	ePKPab	PKPab	15 29 42.1	-0.9
	comp=Z,6.5nm,0.7s						
RETA	Reutte	161.97	340	ePKPab	PKPab	15 29 42.5	-0.7
	comp=Z,13nm,0.9s						
MOTA	Moosalm	161.99	340	ePKPab	PKPab	15 29 43.3	0.0
	comp=Z,15nm,0.9s						
ABTA	Abfaltersbach	162.06	336	ePKPab	PKPab	15 29 44.5	+0.9
	comp=Z,6.7nm,0.9s						
SQTA	Sankt Quirin	162.07	339	ePKPab	PKPab	15 29 43.9	+0.2
	comp=Z,12nm,1.0s						
DAVA	Damuels	162.39	342	ePKPab	PKPab	15 29 44.8	-0.3
	comp=Z,15nm,0.8s						
FETA	Feichten	162.40	340	ePKPab	PKPab	15 29 44.4	-0.8
	comp=Z,8.0nm,1.0s						
TOA0	Torodi Ar. Sit	162.49	179	ePKPdf	PKPdf	15 28 58.1	-0.2
TOA0				ePKPab	PKPab	15 29 46.1	+0.1
TORD	Torodi Ar. Bea	162.49	179	PKP	PKPdf	15 28 58.0	-0.3
	comp=Z,3.7nm,1.1s,baz=142,slow=0.4,SNR=12						
TORD				PKPab	PKPab	15 29 45.3	-0.7
	comp=Z,13nm,0.8s,baz=171,slow=3.9,SNR=15						
TORD				PP	PP	15 33 30.8	+1.8
	comp=Z,3.1nm,1.1s,baz=173,slow=6.3,SNR=4.4						
TOA1	Torodi Ar. Sit	162.49	179	ePKPdf	PKPdf	15 28 58.0	-0.3
TOA1				ePKPab	PKPab	15 29 45.3	-0.7
FUORN	Ofenpass-Fuorn	162.90	340	ePKPdf	PKPdf	15 28 57.0	-1.1
FUORN				ePKPab	PKPab	15 29 46.9	-0.5
PAB	San Pablo	169.80	29	ePKPdf	PKPdf	15 29 03.7	+0.2
PAB	San Pablo	169.80	29	ePKIKP	PKPdf	15 29 03.7	+0.2
ESDC	Sonseca Array	169.84	27	PKP	PKPdf	15 29 03.5	0.0
	comp=Z,0.6nm,0.6s,baz=349,slow=1.8,SNR=11						

MAN 03 15:11:30.1, 17°.59N×122°.65E, h33km, mb4.2, ML3.0, MS2.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALP	Palanan	0.57	202	eP	Pn	15 11 42.4	+0.5
PALP				eS	Sn	15 11 51.2	+1.1
CVP	Callao Caves	0.80	278	⇓iP	Pb	15 11 47.0	+1.4
CVP				i S	Sb	15 11 57.3	+1.2
SGCP	Mt. Cagua	0.87	318	eP	Pn	15 11 45.5	-0.5
SGCP				eS	Sn	15 11 57.4	-0.1
CAUP	Cauayan	1.02	231	eP	Pb	15 11 49.8	+0.5
CAUP				eS	Sb	15 12 05.5	+3.0
APYP	Conner	1.37	282	eP	Pn	15 11 53.4	+0.4
APYP				eS	Sn	15 12 10.3	+0.4
ABRA	Dolores	1.85	272	eP	Pn	15 12 00.6	+1.0
ABRA				eS	Sn	15 12 22.8	+0.9
BALP	Baler	2.11	209	eP	Pn	15 12 04.5	+1.3
BALP				eS	Sn	15 12 28.6	+0.4

MEX 03 15:13:05.0±0.6, 14°.67N×91°.82W, h88km±5km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.49	299	i P	Pn	15 13 17.8	-1.6
THIG				i S	Sn	15 13 28.8	-1.4
CCIG	Comitan	1.63	349	i P	Pn	15 13 30.7	-1.8
CCIG				i S	Sn	15 13 51.4	-1.9
PCIG		1.70	307	eP	Pn	15 13 32.3	-0.9
PCIG				i S	Sn	15 13 52.8	-1.7
TGIG		2.44	329	i P	Pn	15 13 42.1	-1.0
TGIG				i S	Sn	15 14 11.2	-1.0
CMIG	Matias Romero	3.80	310	i P	Pn	15 14 01.2	-0.2
CMIG				i S	Sn	15 14 44.7	-0.3

TAP 03 15:14:24.6, 24°.59N×121°.07E, h9km, ML1.0, 1C-1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIOB	Emei	0.07	318	⇓iP	Pg	15 14 27.3	+0.5
	baz=318						
LIOB				i S	Sg	15 14 29.3	+0.9
	baz=318						
NSTT	Nanjuang	0.07	302	⇑iP	Pg	15 14 27.2	+0.4
	baz=304						
NSTT				i S	Sg	15 14 29.1	+0.8
	baz=304						
SBCB	Hsinchu	0.21	339	S	Sg	15 14 33.8	+1.8
	baz=339						
HSN	Hsinchu	0.23	337	eP	Pg	15 14 30.5	+1.2
	baz=347						
YHNB	Yeheng	0.29	74	eS	Sb	15 14 36.3	-0.6
	baz=74						

JMA 03 15:14:58.3±0.1, 24°.80N×123°.18E, h26km±4km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.37	205	P	Pb	15 15 06.1	-0.4
YOJ				eS	Sb	15 15 11.7	-0.3
JYNG	Yonagunijimaku	0.41	212	P	Pb	15 15 06.8	-0.2
JYNG				S	Sb	15 15 12.6	-0.4
IRIF	Iriomote-Funau	0.68	133	P	Pb	15 15 11.2	-0.4
IRIF				eS	Sb	15 15 20.0	-0.6
JKRS	Kuro-shima	0.94	126	P	Pn	15 15 15.4	-0.4
JKRS				eS	Sn	15 15 28.4	0.0
JISG	Ishigakijimahi	1.05	101	P	Pn	15 15 16.9	-0.4
JISG				eS	Sn	15 15 31.1	0.0

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*IDC **03** 15:19:26.9±0.6, 48°.98S×121°.46E, h0km, mb4.6/12, mb1 4.6/13, mb1mx4.5/25, mbtmp4.6/13, ML2.6/1, MS4.3/3, Ms1 4.3/3, ms1mx3.7/14, Error ellipse: s-maj=32.0km s-min=14.6km az=106.0*

*ISCJB **03** 15:19:27.5±0.4, 48°.98S±0°.06×121°.5E±0°.1, h13km, mb4.4/22, MS4.3/2, Error ellipse: s-maj=12.8km s-min=7.7km az=15.1*

*GCMT **03** 15:19:28.4±0.4, 48°.95S±0°.02×121°.48E±0°.06, h12km±1km, MW4.9/62, Moment Tensor Solution. s16,c19; s62,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.21±.22; $M_{\theta\theta}$2.11±.15; $M_{\phi\phi}$0.09±.14; $M_{r\theta}$1.05±.38; $M_{\theta\phi}$-0.87±.09; $M_{\phi r}$1.85±.51; Best double couple: $M_0$3.01200×10^{16} NP1:ϕ_s260.00000°, δ59.00000°, λ-128.00000°. NP2: ϕ_s136.00000°, δ48.00000°, λ-45.00000°. Principal axes: T 2.4710, Plg6.0000°, Azm15.0000°; N 1.0820, Plg32.0000°, Azm282.0000°; P -3.5540, Plg58.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **03** 15:19:28.4±0.2, 48°.96S×121°.35E, h10km, mb4.9/13 Error ellipse: s-maj=11.1km s-min=6.8km az=104.0*

ISC 03 15:19:28.9±0.4, 48°.97S±0°.08×121°.5E±0°.1, h13km, n80, σ0s.86/68, mb4.6/22, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	15.07	336	T	T	15 38 25.7	
	baz=160,slow=74,SNR=95						
H01W2	Cape Leeuwin H	15.07	336	T	T	15 38 26.0	
	baz=160,slow=74,SNR=93						
H01W3	Cape Leeuwin H	15.09	336	T	T	15 38 26.8	
	baz=160,slow=74,SNR=79						
NWAO	Narrogin (SRO)	16.34	347	Pn	Pn	15 23 18.6	+0.7
	1.2nm,0.3s,baz=178,slow=8.1,SNR=8.4						
NWAO				LR	LR	15 27 58.9	
	comp=Z,1µm,21.3s,baz=148,slow=31						
CASY	Casey	18.27	194	ePn	Pn	15 23 41.5	-0.2
	32nm,1.2s						
TAU	Tasmania Unive	18.92	81	eP	Pn	15 23 51.0	+1.2
	210nm,1.9s						
BBOO	Buckleboo	19.49	39	eP	P	15 23 55.3	-0.2
	85nm,1.5s						
TOO	Toolangi	20.78	66	eP	Pn	15 24 10.6	-1.3
	49nm,1.3s						
STKA	Stephens Creek	22.82	49	P	P	15 24 31.0	-0.4
	8.7nm,1.0s,baz=222,slow=13,SNR=5.6						
STKA	Stephens Creek	22.82	49	eP	P	15 24 32.5	+1.1
	3.7nm,1.0s						
STKA				eS	S	15 28 38.1	-2.2
ASAR	Alice Springs	27.09	26	P	P	15 25 10.9	-0.4
	9.0nm,0.9s,baz=192,slow=9.1,SNR=26						
ASAR				PcP	PcP	15 28 31.5	-0.5
	0.9nm,0.7s,baz=188,slow=2.2,SNR=6.6						
AS31	Alice Springs	27.09	26	eP	P	15 25 10.3	-1.1
	3.0nm,1.1s						
VNDA	Vanda	32.50	165	P	P	15 25 59.3	+0.6
	4.3nm,0.7s,baz=309,slow=8.3,SNR=18						
VNDA				LR	LR	15 38 30.7	
	comp=Z,455nm,18.3s,baz=332,slow=35						
VNDA	Vanda	32.50	165	eP	P	15 25 59.0	+0.4
SBA	Scott Base	33.56	164	eP	P	15 26 09.2	+1.3
	29nm,1.5s						
MAW	Mawson	34.28	216	P	P	15 26 14.0	-0.2
	11nm,0.9s,baz=82,slow=10,SNR=11						
MAW	Mawson	34.28	216	eP	P	15 26 14.1	-0.1
	6.0nm,1.1s						
CTA	Charters Tower	35.00	43	P	P	15 26 20.8	-0.1
	5.6nm,0.9s,baz=14,slow=20,SNR=3.5						
BATI	Baumata	38.68	3	P	P	15 26 53.6	+1.3
	45nm,0.9s,baz=178,slow=3.0,SNR=6.6						
QSPA	South Pole Qui	41.15	180	eP	P	15 27 12.8	+0.3
	60nm,1.2s						
SNAA	Sanae	53.41	199	P	P	15 28 47.9	+0.1
	8.7nm,0.8s,baz=145,slow=8.9,SNR=22						
SNAA	Sanae	53.41	199	eP	P	15 28 47.6	-0.1
	25nm,1.1s						
SKNT	Sakolnakorn	67.47	342	P	P	15 30 27.2	+2.9
	14nm,1.5s,0.2nm						
PANO	Nakornpanom	67.51	343	P	P	15 30 34.1	+10
	0.4nm,1.4s,136nm0.0nm						
NONG	Nongkai	68.70	341	P	P	15 30 35.0	+3.0
	0.2nm,1.5s,0.0nm						
CM31	Chiang Mai Arr	70.06	337	eP	P	15 30 40.3	-0.1
	25nm,1.8s						
CMAR	Chiang Mai Arr	70.06	337	P	P	15 30 40.6	+0.2
	2.3nm,0.8s,baz=190,slow=4.9,SNR=9.2						
CMMT	Chiang Mai	70.40	337	P	P	15 30 50.2	+7.7
	3.5nm,1.8s,0.0nm						
SHL	Shillong	78.77	333	eP	P	15 31 30.8	-0.4
	23nm,1.1s						
LSA	Lhasa	82.87	334	eP	P	15 31 52.8	-0.6
	8.8nm,1.0s						
KSAR	Wonju Array Be	86.22	5	P	P	15 32 10.3	+0.8
KSRS	Korea Array	86.24	5	P	P	15 32 10.3	+0.7
	1.0nm,0.8s,baz=193,slow=3.9,SNR=5.2						
MAJO	Matsushiro	86.43	13	eP	P	15 32 09.8	-0.8
MJAR	Matsushiro Arr	86.43	13	P	P	15 32 09.8	-0.8
	2.7nm,0.7s,baz=184,slow=5.7,SNR=6.6						
PLCA	Paso Flores	90.05	171	P	P	15 32 28.2	0.0
	2.4nm,0.8s,baz=206,slow=2.3,SNR=3.9						
PLCA				LR	LR	16 11 20.5	
	comp=Z,132nm,18.4s,baz=238,slow=35						
PLCA	Paso Flores	90.05	171	eP	P	15 32 28.8	+0.6
	30nm,1.4s						
USRK	Ussuriysk Ar.	93.24	8	P	P	15 32 43.0	+0.6
	2.3nm,0.9s,baz=121,slow=14,SNR=3.7						
TORD	Torodi Ar. Bea	119.27	256	PKP	PKPdf	15 38 16.5	-1.4
	8.8nm,0.4s,baz=156,slow=1.4,SNR=3.4						
TOA1	Torodi Ar. Sit	119.27	256	ePKPdf	PKPdf	15 38 16.5	-1.4
AKASG	Malin Array Be	126.65	308	PKP	PKPdf	15 38 29.1	-1.8
	0.2nm,0.3s,baz=103,slow=1.6,SNR=4.4						
ILAR	Eielson Array	133.45	36	PKP	PKPdf	15 38 43.1	-0.3
	0.4nm,0.7s,baz=262,slow=3.6,SNR=4.6						
FIA0	FINESS Array S	133.59	319	ePKPdf	PKiKP	15 38 44.4	-0.6
FINES	FINESS Array B	133.59	319	PKP	PKiKP	15 38 44.4	-0.6
	2.2nm,0.8s,baz=357,slow=2.8,SNR=4.3						
NVAR	Mina Array Bea	136.56	81	PKP	PKiKP	15 38 51.6	-0.5
	0.9nm,0.9s,baz=226,slow=5.9,SNR=4.1						
NV01	Mina Array Sit	136.56	81	ePKPdf	PKiKP	15 38 51.6	-0.5
ARA0	ARCESS Array S	136.74	329	ePKPdf	PKiKP	15 38 50.6	-0.6
ARCES	ARCESS Array B	136.74	329	PKP	PKiKP	15 38 50.6	-0.6
	3.1nm,0.8s,baz=28,slow=4.1,SNR=3.2						
TXAR	Lajitas Array	140.57	103	PKhKP	PKPpre	15 38 51.5	
	0.4nm,0.7s,baz=193,slow=4.9,SNR=4.9						
MNTX	Cornudas Mount	141.02	99	ePKPdf	PKPdf	15 38 59.1	+0.6
REDW	Red Top Meadow	143.93	79	ePKPdf	PKPbc	15 39 02.1	+0.7
FXWY	Fox Creek	143.95	78	ePKPdf	PKPbc	15 39 02.2	+0.7
LRM	Limekiln Ridge	144.00	74	ePKPdf	PKPdf	15 39 03.6	-0.1
IMW	Indian Meadow	144.12	78	ePKPdf	PKPbc	15 39 02.8	+0.7
MOOW	Moose Ponds	144.18	78	ePKPdf	PKPbc	15 39 02.9	+0.7
FLWY	Flagg Ranch	144.36	78	ePKPdf	PKPdf	15 39 03.6	-0.6
WALA	Waterton Lakes	144.37	68	ePKPdf	PKPdf	15 39 03.5	-0.5
YPP	Pitchstone Pla	144.38	77	ePKPdf	PKPdf	15 39 03.8	-0.6
BOZ	Bozeman (W)	144.43	75	ePKPdf	PKPdf	15 39 03.8	-0.5
YFT	Old Faithful	144.44	77	ePKPdf	PKPdf	15 39 04.5	0.0
BW06	Boulder Array	144.49	80	ePKPdf	PKPbc	15 39 03.1	-0.1
PD31	Pinedale Array	144.49	80	ePKPdf	PKPbc	15 39 03.0	-0.2
PDAR	Pinedale Array	144.49	80	PKP	PKPbc	15 39 03.0	-0.2
	1.8nm,0.9s,baz=205,slow=2.5,SNR=14						
YHH	Holmes Hill	144.57	76	ePKPdf	PKPdf	15 39 05.4	+0.6
HRY	Holter Researc	144.76	73	ePKPdf	PKPdf	15 39 04.3	-0.5
T25A	Trinidad	144.96	92	ePKPbc	PKPab	15 39 04.7	-0.1
Q24A	Divide	145.47	89	ePKPdf	PKPab	15 39 07.0	+0.2
RWWY	Rawlins	145.51	83	ePKPdf	PKPab	15 39 06.8	0.0
ISCO	Idaho Springs	145.61	87	ePKPdf	PKPab	15 39 07.4	+0.1
RLMT	Red Lodge	145.73	77	ePKPdf	PKPab	15 39 07.4	-0.1
HKT	Hockley	145.94	110	ePKPdf	PKPab	15 39 08.4	+0.1
N23A	Red Feather La	145.95	86	ePKPdf	PKPab	15 39 08.9	+0.4

WHTX	**Lake Whitney,**	**146.32**	**106**	*e*PKPdf	**PKPbc**	**15 39 08.9**	**0.0**
K22A	**Casper**	**146.41**	**82**	*e*PKPdf	**PKPab**	**15 39 09.7**	**-0.4**
PHWY	**Pilot Hill**	**146.47**	**85**	*e*PKPbc	**PKPab**	**15 39 10.2**	**-0.3**
YKA	**Yellowknife Ar**	**146.82**	**45**	PKPbc	**PKPbc**	**15 39 09.6**	**+0.2**
	2.3nm,0.7s,baz=277,slow=2.8,SNR=9.1						
YKB5	**Yellowknife Ar**	**146.82**	**45**	*e*PKPdf	**PKPbc**	**15 39 09.6**	**+0.2**
WMOK	**Wichita Mounta**	**147.23**	**101**	*e*PKPbc	**PKPbc**	**15 39 11.5**	**-0.1**
LAO	**LASA Array**	**148.31**	**76**	*e*PKPbc	**PKPbc**	**15 39 14.7**	**+0.6**
RSSD	**Black Hills**	**148.69**	**81**	*e*PKPbc	**PKPbc**	**15 39 15.3**	**-0.1**
RES	**Resolute Bay**	**150.01**	**18**	*e*PKPbc	**PKPbc**	**15 39 17.2**	**-0.2**

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*GEN **03** 15:26:52.5, 44°.17N×10°.13E, h4^{km}, Ml1.8*

ROM 03 15:26:51.9±0.1,**44°.169N**±0°.007×**10°.130E**±0°.005, **h8^{km},ML1.9**/8,**Error ellipse: s-maj=0.8km s-min=0.3km az=170.0,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.02**	**101**	P	Pg	15 26 53.4	0.0
EQUI				S	Sg	15 26 53.9	-0.5
EQUI	**Equi**	**0.02**	**101**	P	Pg	15 26 53.4	0.0
EQUI				S	Sg	15 26 54.3	-0.2
T0912	**Minucciano (LU**	**0.06**	**91**	P	Pg	15 26 54.2	+0.4
T0912				S	Sg	15 26 55.6	+0.4
T0912				AML	AML		
	comp=E,10500µm,1.0s						
T0912				AML	AML		
	comp=N,20350µm,0.2s						
T0912				AML	AML		
	comp=E,10250µm,0.2s						
T0912				AML	AML		
	comp=N,20200µm,0.2s						
T0911	**Castelpoggio (**	**0.07**	**215**	P	Pg	15 26 54.4	+0.5
T0911				S	Sg	15 26 55.9	+0.6
T0911				AML	AML		
	comp=E,4155µm,0.2s						
T0911				AML	AML		
	comp=N,4165µm,0.2s						
T0911				AML	AML		
	comp=E,4150µm,0.2s						
T0911				AML	AML		
	comp=N,4160µm,0.3s						
FOSD	**Fosdinovo**	**0.11**	**237**	P	Pg	15 26 55.1	+0.6
FOSD				S	Sg	15 26 57.3	+1.0
VLC	**Villacollemand**	**0.18**	**93**	P	Pg	15 26 56.4	+0.7
VLC				S	Sg	15 26 59.6	+1.3
VLC				AML	AML		
	comp=E,336µm,1.6s						
VLC				AML	AML		
	comp=N,418µm,0.1s						
VLC				AML	AML		
	comp=E,328µm,1.6s						
VLC				AML	AML		
	comp=N,438µm,0.3s						
VLC				AML	AML		
	comp=E,336µm,1.6s						
VLC				AML	AML		
	comp=N,418µm,0.1s						
VLC				AML	AML		
	comp=E,328µm,1.6s						
VLC				AML	AML		
	comp=N,438µm,0.3s						
VLC				AML	AML		
	comp=N,418µm,0.1s						
VLC				AML	AML		
	comp=N,438µm,0.3s						
VLC				AML	AML		
	comp=E,328µm,1.6s						
VLC				AML	AML		
	comp=E,336µm,1.6s						
PLMA	**Palmaria, Port**	**0.23**	**239**	P	Pg	15 26 57.2	+0.7
PLMA				S	Sg	15 27 00.7	+0.9
PLMA				AML	AML		
	comp=E,768µm,0.3s						
PLMA				AML	AML		
	comp=N,949µm,0.4s						
CARD	**Cardoso**	**0.29**	**119**	P	Pb	15 26 58.6	-0.7
CARD				S	Sg	15 27 02.7	+1.2
CARD	**Cardoso**	**0.29**	**119**	P	Pb	15 26 58.7	-0.6
CARD				S	Sb	15 27 03.0	-1.3
CARD				AML	AML		
	comp=E,762µm,0.1s						
CARD				AML	AML		
	comp=N,908µm,0.9s						
CARD				AML	AML		
	comp=E,762µm,0.1s						
CARD				AML	AML		
	comp=N,908µm,0.9s						
CARD				AML	AML		
	comp=E,762µm,0.1s						
CARD				AML	AML		
	comp=N,908µm,0.9s						
GRAM	**Graiana**	**0.33**	**352**	P	Pg	15 26 59.0	+0.7
GRAM				S	Sg	15 27 04.0	+1.3
GRAM	**Graiana**	**0.33**	**352**	P	Pg	15 26 59.0	+0.7
GRAM				AML	AML		
	comp=E,1245µm,0.3s						
GRAM				AML	AML		
	comp=N,932µm,0.6s						
GRAM				AML	AML		
	comp=E,1240µm,0.3s						
GRAM				AML	AML		
	comp=N,932µm,0.6s						
GRAM				AML	AML		
	comp=E,1240µm,0.3s						
GRAM				AML	AML		
	comp=N,932µm,0.6s						
BDI	**Bagni Di Lucca**	**0.35**	**107**	P	Pg	15 26 59.6	+0.8
BDI				AML	AML		
	comp=E,232µm,0.7s						
BDI				AML	AML		
	comp=N,188µm,0.3s						
BDI				AML	AML		
	comp=E,239µm,0.8s						
BDI				AML	AML		
	comp=N,233µm,0.3s						
BDI				AML	AML		
	comp=E,232µm,0.7s						
BDI				AML	AML		
	comp=E,239µm,0.8s						
BDI				AML	AML		
	comp=N,233µm,0.3s						
BDI				AML	AML		
	comp=N,188µm,0.3s						
MAIM	**Mastiano**	**0.36**	**134**	P	Pb	15 27 00.1	-0.5
MAIM				S	Sg	15 27 04.9	+1.1
MAIM	**Mastiano**	**0.36**	**134**	P	Pb	15 27 00.0	-0.6
MAIM				S	Sg	15 27 05.0	+1.2
MAIM				AML	AML		
	comp=E,408µm,0.3s						
MAIM				AML	AML		
	comp=N,486µm,0.5s						
MAIM				AML	AML		
	comp=E,407µm,0.3s						
MAIM				AML	AML		
	comp=N,486µm,0.5s						
MAIM				AML	AML		
	comp=N,486µm,0.5s						
MAIM				AML	AML		
	comp=E,407µm,0.3s						
MSSA	**Maissana**	**0.46**	**289**	P	Pg	15 27 01.4	+0.4
MSSA				AML	AML		
	comp=E,152µm,0.6s						
MSSA				AML	AML		
	comp=N,122µm,0.9s						
MSSA				AML	AML		
	comp=N,122µm,0.9s						
MSSA				AML	AML		
	comp=E,152µm,0.6s						
POPM	**Popiglio**	**0.47**	**105**	P	Pg	15 27 01.6	+0.6
POPM				S	Sb	15 27 08.8	-0.7
POPM	**Popiglio**	**0.47**	**105**	P	Pg	15 27 01.6	+0.6
POPM				S	Sb	15 27 09.0	-0.4
POPM				AML	AML		
	comp=E,292µm,1.5s						
POPM				AML	AML		
	comp=N,359µm,1.4s						
POPM				AML	AML		
	comp=E,292µm,1.5s						
POPM				AML	AML		
	comp=N,359µm,1.4s						
POPM				AML	AML		
	comp=N,359µm,1.4s						
POPM				AML	AML		
	comp=E,292µm,1.5s						
MTCR	**Monte La Croce**	**0.64**	**103**	P	Pb	15 27 05.4	0.0
GROG	**Isola di Gorgo**	**0.76**	**193**	P	Pb	15 27 07.3	-0.1
GROG				AML	AML		
	comp=E,152µm,0.6s						
GROG				AML	AML		
	comp=N,110µm,1.6s						
GROG				AML	AML		
	comp=E,152µm,0.6s						
GROG				AML	AML		
	comp=N,110µm,1.6s						

MAN 03 15:34:10.6,7°.26N×124°.82E,h9^{km},mb4.3,ML3.1,MS2.8, 2C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.36**	**132**	⇓*i*P	Pb	15 34 19.3	0.0
KCP				*i* S	Sb	15 34 25.6	+0.5
CTBH	**Cotabato--PC H**	**0.57**	**267**	⇓*i*P	Pb	15 34 22.6	-0.2
CTBH				*i* S	Sb	15 34 31.5	+0.4
BUKP	**Musuan**	**0.66**	**21**	*e*P	Pg	15 34 23.1	-0.4
BUKP				*e*S	Sg	15 34 33.0	+0.8
DMPH	**Davao City--Mi**	**0.70**	**104**	⇑*e*P	Pg	15 34 24.6	+0.4
DMPH				*e*S	Sn	15 34 38.6	+0.8
SKMP	**Bagumbayan, Su**	**0.78**	**201**	*e*P	Pg	15 34 24.7	-1.0
SKMP				*e*S	Sn	15 34 39.9	+0.2
GSPH	**General Santos**	**1.17**	**174**	⇓*i*P	Sg	15 34 55.4	+7.1
CGP	**Cagayan de Oro**	**1.20**	**354**	⇑*i*P	Pb	15 34 32.2	-1.4
CGP				*i* S	Sb	15 34 47.0	-2.1
DDMP	**Don Marcelino,**	**1.45**	**142**	*e*P	Pn	15 34 36.0	-1.0
DDMP				*e*S	Sg	15 35 00.4	+3.2
MATI	**Mati**	**1.46**	**102**	*e*P	Pn	15 34 36.1	-1.1
MATI				*e*S	Sg	15 35 00.0	+2.4
PAGZ	**Pagadian**	**1.54**	**293**	*e*P	Pn	15 34 37.0	-1.4
PAGZ				*e*S	Sb	15 34 59.0	0.0
BUTP	**Butuan**	**1.88**	**25**	*e*P	Pn	15 34 43.2	+0.3
BUTP				*e*S	Sg	15 35 11.4	+0.3
IPIL	**Ipil**	**2.29**	**283**	*e*P	Pn	15 34 49.8	+1.2
IPIL				*e*S	Sb	15 35 19.3	-1.3

NNC 03 15:44:37.9±3.1,**37°.71N×71°.73E,h137^{km}**±57^{km}**,mb2.9, mpv3.6,2C-3D,Error ellipse: s-maj=27.9km s-min=19.3km az=16.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.36**	**22**	⇓P	Pn	15 45 55.7	-0.2
	7.0nm,0.7s						
AAK				⇓S	Sn	15 46 57.7	+0.9
	8.7nm,0.5s						
KK31	**Karatay Array**	**5.46**	**351**	P	Pn	15 45 57.8	+0.5
	5.6nm,0.3s,baz=182,slow=19,SNR=76						
KK31				S	Sn	15 47 00.2	+1.0
	7.6nm,0.2s,baz=172,slow=23,SNR=31						
TKM2	**Tokmak 2**	**5.98**	**28**	⇓P	Pn	15 46 03.7	-0.7
	1.0nm,0.5s						
TKM2				⇑S	Sn	15 47 12.1	+0.2
	2.8nm,0.7s						
AB31	**Akbulak array**	**14.34**	**327**	P	Pn	15 47 54.5	0.0
	0.5nm,0.3s,baz=134,slow=15,SNR=32						
AB31				S	Sn	15 50 29.7	-3.4
	1.2nm,0.5s,baz=145,slow=22,SNR=6.3						
AKTO	**Aktyubinsk**	**16.05**	**327**	⇑P	P	15 48 18.1	+1.5
	1.4nm,0.8s						

MAN 03 15:54:36.7,15°.02N×122°.86E,h44^{km},mb4.4,ML3.2, MS3.0,1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.93**	**252**	*e*P	Pn	15 54 53.2	-0.2
POLP				*e*S	Sn	15 55 07.3	+1.7
GQP	**Guinayangan**	**1.17**	**200**	⇑*e*P	Pn	15 54 57.1	+0.4
GQP				*i* S	Sn	15 55 12.9	+1.4
BALP	**Baler**	**1.43**	**300**	*e*P	Pn	15 55 00.1	-0.2
BALP				*e*S	Sn	15 55 19.6	+1.7
BOAC	**Boac**	**1.83**	**213**	*e*P	Pn	15 55 06.9	+1.1
BOAC				*e*S	Sn	15 55 34.7	+6.9
PVCP	**Virac**	**1.89**	**138**	*e*P	Pn	15 55 06.7	+0.2
PVCP				*e*S	Sn	15 55 30.9	+1.7
CAUP	**Cauayan**	**2.16**	**333**	*e*P	Pn	15 55 11.2	+1.0
CAUP				*e*S	Sn	15 55 39.1	+3.3

WEL 03 15:58:49.2±0.8,**33°S**±6°×**17°8W**±1°5,**h33^{km},M4.4**/24, **mB5.0**/10,**ML4.8**/24,**MLv4.6**/24,**Mw(mB)4.2**/10,**Error ellipse: s-maj=0.0km s-min=0.0km az=106.4,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.96**	**2**	P	Pn	15 59 47.8	+0.1
GLKZ				S	Sn	16 00 32.6	-0.5
MXZ	**Matakaoa Point**	**5.22**	**213**	P	Pn	16 00 04.9	0.0
MXZ				S	Sn	16 01 02.8	-1.2
WMGZ	**Waiomatatini S**	**5.38**	**211**	P	Pn	16 00 08.1	+0.9
PKGZ	**Pakihiroa**	**5.59**	**213**	P	Pn	16 00 09.7	-0.4
HAZ	**Te Kaha**	**5.62**	**216**	P	Pn	16 00 10.6	+0.1
HAZ				S	Sn	16 01 13.0	-0.8
PUZ	**Puketiti**	**5.66**	**211**	P	Pn	16 00 10.6	-0.5
RUGZ	**Raukumara Rang**	**5.84**	**215**	P	Pn	16 00 14.3	+0.8
TWGZ	**Tauwhareparae**	**5.87**	**212**	P	Pn	16 00 14.6	+0.6
CNGZ	**Carnagh Statio**	**6.03**	**209**	P	Pn	16 00 16.3	+0.2
GRZ	**Great Barrier**	**6.10**	**239**	P	Pn	16 00 16.3	-0.7
TKGZ	**Te Karaka**	**6.15**	**211**	P	Pn	16 00 16.9	-0.8
KUZ	**Kuaotunu**	**6.16**	**234**	P	Pn	16 00 20.9	+3.0
MWZ	**Matawai**	**6.21**	**214**	P	Pn	16 00 17.9	-0.6
OPRZ	**Ohinepanea**	**6.33**	**222**	P	Pn	16 00 20.4	+0.1
URZ	**Urewera**	**6.35**	**217**	P	Pn	16 00 19.1	-1.3
MARZ	**Manawahe**	**6.37**	**220**	P	Pn	16 00 21.2	+0.4
RAGZ	**Rawiri**	**6.39**	**213**	P	Pn	16 00 21.6	+0.5
RIGZ	**Rimuhau**	**6.41**	**210**	P	Pn	16 00 22.7	+1.4
PRGZ	**Paritu Road**	**6.54**	**209**	P	Pn	16 00 23.9	+0.8
WIAZ	**Waiheke Island**	**6.59**	**236**	P	Pn	16 00 25.9	+2.2
KARZ	**Kaharoa**	**6.63**	**222**	P	Pn	16 00 24.7	+0.3
SNGZ	**Shannon Statio**	**6.65**	**212**	P	Pn	16 00 24.8	+0.2
KNZ	**Kokohu**	**6.71**	**209**	P	Pn	16 00 23.8	-1.6
MHGZ	**Mahia Peninsul**	**6.73**	**208**	P	Pn	16 00 25.2	-0.4
MKAZ	**Moumakai**	**6.73**	**233**	P	Pn	16 00 27.2	+1.5
WCZ	**Waipu Caves**	**6.79**	**245**	P	Pn	16 00 24.8	-1.7
RAHZ	**Arahi**	**6.88**	**213**	P	Pn	16 00 28.0	+0.2
TOZ	**Tahuroa Road**	**6.88**	**228**	P	Pn	16 00 28.2	+0.5
MTHZ	**Maungataniwha**	**6.94**	**215**	P	Pn	16 00 28.9	+0.3
WHHZ	**Waihua**	**6.94**	**212**	P	Pn	16 00 28.5	0.0
MRHZ	**Matea Rd**	**7.14**	**217**	P	Pn	16 00 29.7	-1.6
NMHZ	**Naumai**	**7.15**	**214**	P	Pn	16 00 31.5	-0.1
OUZ	**Omahuta**	**7.16**	**252**	P	Pn	16 00 29.1	-2.5
ARHZ	**Aropaoanui**	**7.20**	**212**	P	Pn	16 00 31.3	-0.8
TLZ	**Tolley Road**	**7.25**	**224**	P	Pn	16 00 32.8	-0.1
BKZ	**Black Stump Fm**	**7.36**	**215**	P	Pn	16 00 31.4	-2.9
MCHZ	**McNeill Hill**	**7.48**	**213**	P	Pn	16 00 34.8	-1.2
CKHZ	**Cape Kidnapper**	**7.49**	**210**	P	Pn	16 00 35.9	-0.2
RATZ	**Rangitukua**	**7.50**	**220**	P	Pn	16 00 35.4	-0.8
KAHZ	**Kahuranaki**	**7.69**	**210**	P	Pn	16 00 38.4	-0.5
HIZ	**Hauiti**	**7.77**	**225**	P	Pn	16 00 41.3	+1.3
KRHZ	**Kereru**	**7.79**	**213**	P	Pn	16 00 37.9	-2.4
BHHZ	**Black Hill Sta**	**7.82**	**215**	P	Pn	16 00 38.5	-2.1
TWVZ	**Taurewa**	**7.82**	**220**	P	Pn	16 00 39.5	-1.2
TUVZ	**Tukino**	**7.85**	**218**	P	Pn	16 00 40.1	-1.2
FWVZ	**Far West T-bar**	**7.90**	**219**	P	Pn	16 00 41.1	-0.8
PXZ	**Pawanui**	**7.90**	**209**	P	Pn	16 00 39.7	-1.9
MOVZ	**Moawhango**	**7.91**	**217**	P	Pn	16 00 40.3	-1.6
PNHZ	**Pukenui**	**8.09**	**213**	P	Pn	16 00 41.4	-2.9
PRHZ	**Porangahau**	**8.19**	**210**	P	Pn	16 00 43.5	-2.1

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*BJI **03** 15:59:41.1±0.0, 1°.95N×127°.40E, h105^{km}, mb4.8/42, mB5.0/27*

*DJA **03** 15:59:43.8±1.0, 2°N±3°×12°7E±°, h21^{km}±9^{km}, M4.8/14, mB5.2/6, mb4.8/13, MLv4.9/14, Mw(mB)4.6/6*

*ISCJB **03** 15:59:43.8±0.3, 2°.32N±0°.02×127°.16E±0°.04, h104^{km}±3^{km}, mb4.7/80, Error ellipse: s-maj=6.3km s-min=3.4km az=164.3*

*IDC **03** 15:59:44.8±1.9, 2°.29N×127°.19E, h95^{km}±18^{km}, mb4.2/20, mb1 4.2/24, mb1mx4.1/36, mbtmp4.5/24, MS3.4/5, Ms1 3.4/5, ms1mx2.9/35, Error ellipse: s-maj=18.3km s-min=10.2km az=76.0*

*MOS **03** 15:59:44.2±0.8, 2°.36N×127°.18E, h107^{km}, mb4.9/32, Error ellipse: s-maj=12.1km s-min=6.6km az=109.1*

*NEIC **03** 15:59:45.1±0.6, 2°.31N×127°.19E, h101^{km}±5^{km}, mb4.7/40, Error ellipse: s-maj=6.8km s-min=4.6km az=76.0*

ISC 03 15:59:44.6±0.6,**2°.30N**±0°.03×**127°.09E**±0°.06,**h97^{km}**±5^{km}**, n175,**σ1^s**59**/197,**mb4.7**/80,**8C-2D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.54**	**169**	*e*Pn	**Pn**	**16 00 12.5**	**+1.3**
TNTI	**Ternate**	**1.54**	**169**	P	**Pn**	**16 00 12.5**	**+1.3**
TNTI				S	**Sn**	**16 00 33.2**	**+1.8**
SGSI	**Sangihe**	**2.08**	**312**	P	**Pn**	**16 00 18.0**	**-0.1**
SGSI				S	**Sn**	**16 00 45.0**	**+1.4**
LBMI	**Labuha**	**2.94**	**172**	P	**Pn**	**16 00 31.2**	**+1.6**
LBMI				S	**Sn**	**16 01 06.3**	**+2.1**
DDMP	**Don Marcelino,**	**4.02**	**340**	*e*P	**Pn**	**16 00 43.0**	**-1.1**
DDMP				*e*S	**Sn**	**16 01 26.4**	**-3.7**
GSPH	**General Santos**	**4.33**	**331**	⇓*i*P	**Pn**	**16 00 49.5**	**+1.2**
SANI	**Sanana**	**4.46**	**194**	P	**Pn**	**16 00 49.6**	**-0.3**
SANI				S	**Sn**	**16 01 35.4**	**-5.2**
MATI	**Mati**	**4.69**	**350**	*e*P	**Pn**	**16 00 52.6**	**-0.5**
MATI				*e*S	**Sn**	**16 01 48.0**	**+1.6**
SKMP	**Bagumbayan, Su**	**4.90**	**329**	*e*P	**Pn**	**16 00 54.8**	**-1.2**
SKMP				*e*S	**Sn**	**16 01 48.1**	**-3.4**
DAV	**Davao City (W)**	**4.97**	**342**	P	**Pn**	**16 00 56.9**	**-0.1**
	107nm,0.3s,baz=238,slow=8.7,SNR=3.7						
DAV				S	**Sn**	**16 01 56.2**	**+3.0**
	58nm,0.3s,baz=243,slow=21,SNR=7.3						
DMPH	**Davao City--Mi**	**5.01**	**342**	*e*S	**Sn**	**16 02 00.9**	**+6.8**
SWI	**Sorong**	**5.22**	**127**	P	**Pn**	**16 00 59.6**	**-0.7**
SIJI	**Sorong**	**5.23**	**127**	P	**Pn**	**16 00 58.8**	**-1.6**
	5.2nm,0.3s,baz=306,slow=15,SNR=31						
SIJI				LR	LR	16 03 11.4	
	comp=Z,336nm,21.0s,baz=244,slow=40						
LUWI	**Luwuk**	**5.44**	**232**	*e*Pn	**Pn**	**16 01 06.2**	**+2.9**
LUWI	**Luwuk**	**5.44**	**232**	P	**Pn**	**16 01 05.3**	**+2.0**
NLAI	**Namlea**	**5.50**	**180**	P	**Pn**	**16 01 04.7**	**+0.6**
	52nm,0.6s						
CTBH	**Cotabato--PC H**	**5.65**	**330**	⇑*i*P	**Pn**	**16 01 06.0**	**-0.1**
BUKP	**Musuan**	**5.90**	**340**	*e*P	**Pn**	**16 01 10.1**	**+0.5**
BUKP				*e*S	**Sn**	**16 02 16.7**	**+0.8**
AAI	**Ambon**	**6.05**	**169**	P	**Pn**	**16 01 11.7**	**+0.1**
APSI	**Ampana**	**6.30**	**240**	P	**Pn**	**16 01 16.9**	**+1.9**
CGP	**Cagayan de Oro**	**6.56**	**339**	*e*P	**Pn**	**16 01 21.7**	**+3.2**
PAGZ	**Pagadian**	**6.63**	**326**	*e*P	**Pn**	**16 01 17.6**	**-2.0**
PAGZ				*e*S	**Sn**	**16 02 32.3**	**-1.4**
BUTP	**Butuan**	**6.79**	**348**	*e*P	**Pn**	**16 01 22.8**	**+1.2**
BUTP				*e*S	**Sn**	**16 02 42.9**	**+5.5**
IPIL	**Ipil**	**7.07**	**321**	*e*P	**Pn**	**16 01 25.1**	**-0.4**
IPIL				*e*S	**Sn**	**16 02 39.9**	**-4.4**
FAKI	**Fak Fak**	**7.31**	**135**	*e*Pn	**Pn**	**16 01 29.9**	**+1.1**
FAKI	**Fak Fak**	**7.31**	**135**	P	**Pn**	**16 01 29.4**	**+0.6**
TTSI	**Tana Toraja**	**8.99**	**234**	P	**Pn**	**16 01 51.0**	**-0.7**
GUIM	**Jordan**	**9.40**	**332**	*e*P	**Pn**	**16 01 58.0**	**+0.8**
SPSI	**Sidrap Palu**	**9.60**	**230**	P	**Pn**	**16 02 01.1**	**+1.2**
BAKI	**Biak**	**9.66**	**111**	P	**Pn**	**16 02 03.3**	**+2.5**
KAPI	**Kappang**	**10.32**	**225**	P	**Pn**	**16 02 11.7**	**+2.0**
	1.7nm,0.3s,baz=106,slow=15,SNR=3.4						
KAPI				S	**Sn**	**16 04 03.1**	**-0.4**
	2.9nm,0.3s,baz=106,slow=19,SNR=5.0						
KAPI	**Kappang**	**10.32**	**225**	*e*Pn	**Pn**	**16 02 11.4**	**+1.7**
KAPI				S	**Sn**	**16 04 03.1**	**-0.4**
BATI	**Baumata**	**12.88**	**195**	P	**P**	**16 02 49.7**	**-1.4**
	2.8nm,0.3s,baz=101,slow=5.7,SNR=4.0						
JAY	**Jayapura**	**14.43**	**109**	P	**Pn**	**16 03 03.7**	**-0.6**
	0.1nm,0.3s,baz=319,slow=14,SNR=1.8						
MTN	**Manton Dam**	**15.57**	**165**	*e*Pn	**Pn**	**16 03 16.7**	**-2.1**
	37nm,0.8s						
UGM	**Wanagama**	**19.39**	**238**	*e*P	**Pn**	**16 04 04.2**	**-0.9**
	386nm,1.6s						
GUMO	**Guam**	**20.86**	**57**	LR	LR	16 11 21.7	
	comp=Z,28nm,20.4s,baz=222,slow=34						
TWG	**Pinlang**	**21.22**	**345**	*e*P	**P**	**16 04 21.2**	**-1.5**
	47nm,0.5s						
TPUB	**Ta-pu**	**21.80**	**344**	*e*P	**P**	**16 04 27.7**	**-1.2**
	28nm,0.9s						
SSLB	**Suanglung**	**22.17**	**345**	*e*P	**P**	**16 04 31.6**	**-1.3**
	14nm,0.8s						
YHNB	**Yeheng**	**22.91**	**347**	*e*P	**P**	**16 04 40.0**	**-0.6**
	32nm,1.2s						
WRAB	**Tennant Creek**	**23.21**	**162**	*e*P	**P**	**16 04 42.5**	**-0.9**
	38nm,0.6s						
WRAB	**Tennant Creek**	**23.21**	**162**	*e*P	**P**	**16 04 42.5**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,38nm,0.6s						
MYKOM	**Kota Tinggi**	**23.23**	**269**	*e*P	**P**	**16 04 44.8**	**+1.2**
	comp=Z,13nm,1.0s						
JOW	**Kunigami**	**24.42**	**3**	P	**P**	**16 04 55.0**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=126,slow=12,SNR=4.9						
JOW	**Kunigami**	**24.42**	**3**	*e*P	**P**	**16 04 55.0**	**+0.7**
	comp=Z,70nm,1.7s						
PSA00	**Pilbara Seismi**	**24.76**	**196**	*e*P	**P**	**16 04 57.5**	**+0.2**
	comp=Z,16nm,1.0s						
CHBT	**CHBT**	**26.62**	**294**	P	**P**	**16 05 19.1**	**+4.8**
	comp=Z,16nm,0.5s						
AS31	**Alice Springs**	**26.65**	**166**	*e*P	**P**	**16 05 13.7**	**-0.7**
	comp=Z,3.0nm,0.8s						
AS31				*e*PcP	**PcP**	**16 08 36.9**	**+0.7**
ASAR	**Alice Springs**	**26.65**	**166**	P	**P**	**16 05 14.0**	**-0.5**
	comp=Z,2.3nm,0.4s,baz=345,slow=7.5,SNR=84						
ASAR				PcP	**PcP**	**16 08 36.9**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=349,slow=3.2,SNR=4.2						
ASAR				S	**S**	**16 09 39.0**	**-3.7**
	comp=Z,2.1nm,0.8s,baz=353,slow=22,SNR=6.9						
SKNT	**Sakolnakorn**	**26.99**	**304**	P	**P**	**16 05 19.6**	**+2.0**
	comp=Z,18nm,1.3s,comp=Z,3µm						
KHON	**Khomkaen**	**27.66**	**302**	P	**P**	**16 05 25.8**	**+2.2**
PSI	**Prapat**	**28.14**	**272**	LR	LR	16 17 52.5	
	comp=Z,68nm,19.9s,baz=132,slow=38						
CHAI	**Chaiyaphum**	**28.18**	**300**	P	**P**	**16 05 28.6**	**+0.4**
	comp=Z,37µm,0.7s						
NONG	**Nongkai**	**28.23**	**305**	P	**P**	**16 05 31.0**	**+2.4**
	comp=Z,0.2nm,0.7s,comp=Z,100nm						
PBKT	**Sadao Pong**	**29.34**	**301**	P	**P**	**16 05 39.6**	**+1.1**
	comp=Z,4.6nm,0.7s						
UTTA	**Uttaradit**	**30.23**	**302**	P	**P**	**16 05 47.5**	**+1.2**
	comp=Z,18µm,0.9s,comp=Z,180µm						
NJ2	**Nanjing**	**30.60**	**346**	*e*P	**P**	**16 05 51.9**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
CM31	**Chiang Mai Arr**	**31.91**	**302**	*e*P	**P**	**16 06 01.5**	**+0.3**
	comp=Z,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**31.91**	**302**	P	**P**	**16 06 02.3**	**+1.1**
	comp=Z,6.9nm,0.9s,baz=118,slow=7.0,SNR=46						
CMMT	**Chiang Mai**	**32.07**	**303**	P	**P**	**16 06 03.4**	**+0.8**
	comp=Z,8.2nm,0.9s						
CHTO	**Chiang Mai**	**32.08**	**303**	*e*P	**P**	**16 06 02.9**	**+0.3**
	comp=Z,9.8nm,0.8s						
CHTO	**Chiang Mai**	**32.08**	**303**	*e*P	**P**	**16 06 02.9**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	**Enshi**	**32.44**	**331**	*e*P	**P**	**16 06 05.9**	**+0.2**
	comp=Z,6.9nm,0.6s						
TJN	**Taejon**	**33.91**	**0**	*i* P	**P**	**16 06 18.6**	**+0.2**
KS15	**Wonju Array Si**	**34.98**	**1**	*e*P	**P**	**16 06 28.4**	**+0.8**
	comp=Z,74nm,1.7s						
KSAR	**Wonju Array Be**	**34.98**	**1**	P	**P**	**16 06 28.4**	**+0.8**
KSAR	**Wonju Array Be**	**34.98**	**1**	P	**P**	**16 06 28.4**	**+0.8**
KSRS	**Korea Array**	**34.99**	**1**	P	**P**	**16 06 28.4**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=180,slow=10,SNR=14						
MAJO	**Matsushiro**	**35.59**	**15**	*e*P	**P**	**16 06 31.6**	**-1.2**
MAJO	**Matsushiro**	**35.59**	**15**	*i* P	**P**	**16 06 32.2**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAT	**Matsushiro**	**35.59**	**15**	P	**P**	**16 06 31.9**	**-1.0**
MJAR	**Matsushiro Arr**	**35.59**	**15**	P	**P**	**16 06 31.6**	**-1.2**
	comp=Z,3.5nm,0.8s,baz=184,slow=9.9,SNR=11						
CD2	**Chengdu**	**36.01**	**325**	*e*P	**P**	**16 06 37.3**	**+0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
STKA	**Stephens Creek**	**36.67**	**159**	P	**P**	**16 06 42.4**	**+0.2**
	comp=Z,9.8nm,0.3s,baz=330,slow=9.2,SNR=75						
STKA	**Stephens Creek**	**36.67**	**159**	*e*P	**P**	**16 06 42.1**	**0.0**
	comp=Z,4.6nm,0.9s						
STKA	**Stephens Creek**	**36.67**	**159**	*e*P	**P**	**16 06 42.1**	**0.0**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJT	**Baijiatuau**	**38.83**	**347**	*e*P	**P**	**16 07 00.9**	**+0.7**
	comp=Z,23nm,0.8s						
BJT	**Baijiatuau**	**38.83**	**347**	*e*P	**P**	**16 07 00.9**	**+0.7**
BJT				pmax	pmax		
	comp=Z,23nm,0.8s						
BJI	**Beijing**	**38.85**	**347**	P	**P**	**16 07 00.9**	**+0.5**
BJI				pmax	pmax		

	comp=Z,23nm,0.8s						
LZH	Lanzhou	39.91	330	eP	P	16 07 12.6	+3.1
LZH				pP	pwP	16 07 37.9	+4.0
LZH				sP	sP	16 07 50.5	+8.4
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
SHL	Shillong	41.02	307	eP	P	16 07 18.6	-0.1
	comp=Z,17nm,0.6s						
SHL	Shillong	41.02	307	eP	P	16 07 18.6	-0.1
SHL				pmax	pmax		
	comp=Z,17nm,0.6s						
CN2	Changchun	41.35	358	eP	P	16 07 19.5	-1.5
USRK	Ussuriysk Ar.	41.95	5	P	P	16 07 26.7	+0.9
	comp=Z,9.9nm,0.8s,baz=178,slow=6.7,SNR=16						
ERM	Erimo	42.09	18	i P	P	16 07 24.8	-2.2
ERM				pmax	pmax		
	comp=Z,54nm,1.3s						
MDJ	Mudanjiang	42.20	3	P	P	16 07 29.6	+1.7
MDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.2s						
LSA	Lhasa	43.65	312	eP	P	16 07 41.2	+0.8
	comp=Z,7.1nm,0.6s						
LSA	Lhasa	43.65	312	eP	P	16 07 41.2	+0.8
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GTA	Gaotai	44.50	330	eP	P	16 07 45.6	-1.1
GTA				PcP	PcP	16 09 29.7	+1.2
DZM	Mont Dzumac	45.43	124	LR	LR	16 26 24.3	
	comp=Z,130nm,19.2s,baz=336,slow=35						
JIRN	Jiri	46.50	307	eP	P	16 08 03.4	+0.5
	comp=Z,21nm,0.6s						
GUN	Gumba	46.86	307	eP	P	16 08 06.1	+0.4
	comp=Z,22nm,0.6s						
KLR	Kul'dur	46.93	4	i P	P	16 08 03.4	-2.0
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PKI	Pulchoki	47.09	306	eP	P	16 08 07.4	-0.1
	comp=Z,5.0nm,0.5s						
HIA	Hailar	47.22	353	i P	P	16 08 06.7	-1.0
HIA				pmax	pmax		
	comp=Z,25nm,1.3s						
KKN	Kakani	47.29	307	eP	P	16 08 09.0	+0.1
	comp=Z,7.4nm,0.5s						
DMN	Daman	47.35	306	eP	P	16 08 09.6	+0.2
	comp=Z,14nm,0.8s						
ULN	Ulaanbaatar	48.58	342	eP	P	16 08 19.2	+0.8
	comp=Z,19nm,1.1s						
ULN	Ulaanbaatar	48.58	342	ceP	P	16 08 18.0	-0.4
ULN				pmax	pmax		
	comp=Z,27nm,1.7s						
KOLN	Koldanda	48.63	306	eP	P	16 08 19.7	+0.4
	comp=Z,38nm,0.8s						
DANN	Dangsing	48.74	306	eP	P	16 08 20.6	+0.4
	comp=Z,32nm,0.6s						
SONM	Songino Array	48.76	342	P	P	16 08 21.1	+1.4
	comp=Z,4.6nm,0.6s,baz=157,slow=8.7,SNR=16						
PYUN	Piuthan	49.26	306	eP	P	16 08 24.6	+0.6
	comp=Z,25nm,0.7s						
NKL	Nikolayevsk	51.92	10	eP	P	16 08 31.7	-12
NKL				e		16 09 55.0	
NKL				eS	S	16 15 55.5	-3.3
NKL				e		16 18 18.9	
NKL				pmax	pmax		
	comp=N,3.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,15nm,1.5s						
NKL				pmax	pmax		
	comp=Z,35nm,3.0s						
ZAK	Zakamensk	51.98	341	eP	P	16 08 44.9	+0.9
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
TLY	Talaya	52.99	342	eP	P	16 08 52.8	+1.5
TLY				pmax	pmax		
	comp=Z,5.0nm,0.4s						
WMQ	Urumqi	54.10	325	eP	P	16 09 01.1	+1.5
WMQ				pP	pwP	16 09 27.2	+2.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,81nm,4.9s						
BOD	Bodaibo	56.32	352	eP	P	16 09 16.0	+0.8
BOD				pmax	pmax		
	comp=Z,11nm,1.6s						
PETK	Petropavlovsk-	56.62	22	P	P	16 09 18.4	+0.9
	comp=Z,3.9nm,0.6s,baz=173,slow=2.5,SNR=11						
PEA1	Petropavlovsk-	56.62	22	eP	P	16 09 18.4	+0.9
PDGK	Podgornoye	58.74	321	P	P	16 09 34.5	+1.8
PDGK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK31	Makanchi Array	58.93	326	eP	P	16 09 34.9	+1.1
	comp=Z,14nm,0.8s						
MK31	Makanchi Array	58.93	326	eP	P	16 09 34.9	+1.1
MK31				pmax	pmax		
	comp=Z,14nm,0.8s						
MK32	Makanchi Array	58.93	326	eP	P	16 09 35.2	+1.5
MK32				ePcP	PcP	16 10 22.3	+0.3
MKAR	Makanchi Array	58.93	326	P	P	16 09 35.2	+1.5
	comp=Z,16nm,0.7s,baz=122,slow=8.3,SNR=127						
MKAR				PcP	PcP	16 10 22.3	+0.3
	comp=Z,3.2nm,0.7s,baz=122,slow=4.4,SNR=5.2						
MAKZ	Makanchi	59.11	325	eP	P	16 09 36.1	+1.0
	comp=Z,30nm,1.0s						
MAKZ	Makanchi	59.11	325	eP	P	16 09 36.1	+1.0
MAKZ				pmax	pmax		
	comp=Z,30nm,1.0s						
KSH	Kashi	59.30	316	P	P	16 09 39.4	+2.8
KSH				pmax	pmax		
	comp=Z,13nm,1.3s						
KSH				pmax	pmax		
	comp=Z,92nm,4.0s						
YAK	Yakutsk	59.62	1	eP	P	16 09 38.4	+0.2
	comp=Z,52nm,0.8s						
YAK	Yakutsk	59.62	1	eP	P	16 09 37.8	-0.4
YAK				e		16 10 17.8	
YAK				e		16 11 46.0	
YAK				eS	S	16 17 40.1	-0.7
YAK				e*SS	pS	16 18 02.2	-5.2
KDJ	Kajisay	59.65	319	eP	P	16 09 40.7	+1.7
	comp=Z,7.7nm,0.7s						
KDJ	Kajisay	59.65	319	eP	P	16 09 40.7	+1.7
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RPZ	Rata Peaks	60.39	145	LR	LR	16 35 31.9	
	comp=Z,71nm,18.9s,baz=316,slow=36						
AAK	Ala-Archa	61.65	318	P	P	16 09 52.7	+0.1
	comp=Z,2.0nm,0.4s,baz=134,slow=7.4,SNR=6.0						
AAK	Ala-Archa	61.65	318	ceP	P	16 09 52.4	-0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ZAA0	Zalesovo Array	62.02	333	eP	P	16 09 54.1	-0.4
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	62.02	333	P	P	16 09 54.6	+0.1
	comp=Z,4.3nm,0.8s,baz=114,slow=6.3,SNR=16						
ZAA1	Zalesovo Array	62.02	333	eP	P	16 09 54.6	+0.1
KBL	Kabul	62.67	308	eP	P	16 10 00.5	+0.8
	comp=Z,8.6nm,0.6s						
KBL	Kabul	62.67	308	eP	P	16 10 00.5	+0.8
KBL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KURBB	Kurchatov Arra	63.13	328	P	P	16 10 02.9	+0.8
	comp=Z,32nm,0.6s,baz=128,slow=6.1,SNR=25						
KURK	Kurchatov	63.13	328	eP	P	16 10 03.0	+1.0
	comp=Z,47nm,0.8s						
KURK	Kurchatov	63.13	328	eP	P	16 10 03.0	+1.0
KURK				pmax	pmax		
	comp=Z,47nm,0.8s						
GAR	Garm	63.15	313	eP	P	16 10 03.4	+0.8
	comp=Z,31nm,0.9s						
GAR	Garm	63.15	313	eP	P	16 10 03.4	+0.8
GAR				pmax	pmax		
	comp=Z,31nm,0.9s						
SEY	Seymchan	63.34	13	i P	P	16 10 00.9	-2.3
KK31	Karatay Array	64.52	317	eP	P	16 10 12.3	+1.0
	comp=Z,16nm,0.9s						
KK31	Karatay Array	64.52	317	eP	P	16 10 12.3	+1.0
KK31				pmax	pmax		
	comp=Z,16nm,0.9s						
KKAR	Karatay Array	64.52	317	eP	P	16 10 12.3	+1.0
	comp=Z,16nm,0.9s						
KKAR	Karatay Array	64.52	317	eP	P	16 10 12.3	+1.0
KKAR				pmax	pmax		
	comp=Z,16nm,0.9s						
BRVK	Borovoye	68.78	327	eP	P	16 10 38.9	+0.7
	comp=Z,20nm,1.1s						
BRVK	Borovoye	68.78	327	c iP	P	16 10 38.6	+0.4
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
TIXI	Tiksi	69.26	1	eP	P	16 10 40.6	-0.3
	comp=Z,5.0nm,0.7s						
TIXI	Tiksi	69.26	1	ceP	P	16 10 40.1	-0.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
BILL	Bilibino	70.84	15	⇑eP	P	16 10 49.2	-1.4
BILL				e		16 11 25.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,125nm,21.0s						
GEYT	Alibeck	72.06	309	P	P	16 10 59.8	+1.1
	comp=Z,4.0nm,0.6s,baz=151,slow=3.4,SNR=11						
GYA0B	ALIBECK ARRAY	72.06	309	eP	P	16 10 59.2	+0.6
	comp=Z,7.6nm,0.8s						
ABKAR	Akbulak array	73.48	321	eP	P	16 11 07.0	+0.3
	comp=Z,7.7nm,1.1s						
SVE	Sverdlovsk	75.36	329	⇓eP	P	16 11 17.7	+0.3
SVE				pmax	pmax		
	comp=Z,15nm,0.9s						
ARU	Arti	76.33	328	eP	P	16 11 22.6	-0.4
	comp=Z,6.6nm,0.7s						
ARU	Arti	76.33	328	c iP	P	16 11 22.8	-0.1
ARU				S	S	16 21 01.5	+1.5
ARU				SS	SS	16 25 54.0	-2.0
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RAYN	Ar Rayn	81.37	293	eP	P	16 11 51.6	+0.3
	comp=Z,9.4nm,1.1s						
RAYN	Ar Rayn	81.37	293	eP	P	16 11 51.6	+0.3
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VNDA	Vanda	81.97	173	P	P	16 11 53.8	+0.6
	comp=Z,0.6nm,0.7s,baz=328,slow=8.2,SNR=3.1						
MAW	Mawson	82.54	200	P	P	16 11 57.1	+0.7
	comp=Z,2.0nm,0.7s,baz=85,slow=12,SNR=4.7						
MAW	Mawson	82.54	200	eP	P	16 11 57.1	+0.7
	comp=Z,4.0nm,1.6s						
MAW	Mawson	82.54	200	eP	P	16 11 57.1	+0.7
MAW				pmax	pmax		
	comp=Z,4.0nm,1.6s						
PRGR	Permogore	83.92	332	eP	P	16 12 00.3	-3.3
PRGR				pmax	pmax		
	comp=Z,13nm,0.9s						
ILAR	Eielson Array	86.24	25	P	P	16 12 14.4	-0.8
	comp=Z,0.4nm,0.8s,baz=264,slow=3.2,SNR=3.4						
ILB	Eielson Array	86.24	25	eP	P	16 12 14.4	-0.8
	comp=Z,5.8nm,1.6s						
OBN	Obninsk	88.43	325	⇑eP	P	16 12 24.5	-1.3
OBN				*PP	pwP	16 12 53.5	-0.4
OBN				S	SKSac	16 22 48.0	+2.0
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMBO	Kilima Mbogo	89.88	269	P	P	16 12 34.0	+0.1
	comp=Z,1.7nm,0.8s,baz=69,slow=7.7,SNR=4.3						
KMBO	Kilima Mbogo	89.88	269	eP	P	16 12 34.0	+0.1
	comp=Z,14nm,1.9s						
KMBO	Kilima Mbogo	89.88	269	eP	P	16 12 34.0	+0.1
KMBO				pmax	pmax		
	comp=Z,14nm,1.9s						
ARA0	ARCESS Array S	91.91	340	eP	P	16 12 41.2	-0.6
ARCES	ARCESS Array B	91.91	340	P	P	16 12 41.2	-0.6
	comp=Z,3.3nm,0.7s,baz=54,slow=6.3,SNR=8.3						
AKASG	Malin Array Be	93.22	321	P	P	16 12 50.2	+2.0
	comp=Z,0.6nm,0.4s,baz=73,slow=4.1,SNR=3.7						
AKBB	Malin Array Si	93.22	321	eP	P	16 12 50.2	+2.0
	comp=Z,7.1nm,1.4s						
FIA0	FINESS Array S	93.25	332	eP	P	16 12 47.5	-0.7
FIA0	FINESS Array S	93.25	332	eP	P	16 12 47.5	-0.7
FINES	FINESS Array B	93.25	332	P	P	16 12 47.5	-0.7
	comp=Z,1.0nm,0.7s,baz=12,slow=8.5,SNR=4.4						
TXAR	Lajitas Array	122.18	53	PKP	PKiKP	16 18 29.4	+0.2
	comp=Z,0.4nm,0.7s,baz=191,slow=1.4,SNR=5.4						
TORD	Torodi Ar. Bea	123.69	287	PKP	PKPdf	16 18 31.2	-0.9
	comp=Z,1.5nm,0.9s,baz=64,slow=2.6,SNR=5.5						
TOA1	Torodi Ar. Sit	123.69	287	ePKPdf	PKPdf	16 18 31.2	-0.9

ISCJB ***03*** *16:10:30.9±0.5, 9°.52S±0°.05×117°.54E±0°.03, h71^{km}, Error ellipse: s-maj=7.1km s-min=3.9km az=4.1*

DJA ***03*** *16:10:32.4±0.5, 10°S±3°×11°8E±°, h35^{km}±8^{km}, M4.1/14, mb4.0/4, MLv4.2/14*

IDC ***03*** *16:10:33.1±4.0, 9°.47S×117°.61E, h88^{km}±32^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.4/36, mbtmp4.0/6, MS2.8/2, Ms1 2.8/2, ms1mx2.5/27, Error ellipse: s-maj=35.8km s-min=11.5km az=52.0*

ISC 03 16:10:31.7±0.9**, 9°.53S**±0°.06×**117°.54E**±0°.04**, h71^{km}, n21, σ1^s.16**/30**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.73	18	P	Pn	16 10 45.8	-1.3
PLAI				S	Sn	16 10 56.5	-2.0
WBSI	Waikabubak, Su	1.83	94	P	Pn	16 11 01.4	+0.3
WBSI				S	Sn	16 11 23.4	0.0
DNP	Denpasar	2.45	290	P	Pn	16 11 10.7	+1.1
DNP				S	Sn	16 11 38.9	+0.4
SRBI	Singaraja	2.71	302	P	Pn	16 11 14.5	+1.4
SRBI				S	Sn	16 11 46.0	+1.2
WSI	Waingapu	2.72	93	P	Pn	16 11 14.9	+1.7
JAGI	Jajag, Banyuwa	3.51	287	P	Pn	16 11 24.2	+0.2
JAGI				S	Sn	16 12 03.9	-0.5
EDFI	Ende, Flores	4.17	80	P	Pn	16 11 34.1	+1.1
BSSI	Bau Bau, Buton	4.46	41	P	Pn	16 11 37.7	+0.8
BSSI				S	Sn	16 12 28.3	+0.8
MMRI	Maumere	4.72	80	P	Pn	16 11 42.0	+1.5
BKSI	Bulukumba	4.90	32	P	Pn	16 11 44.5	+1.6
BKSI				S	Sn	16 12 39.8	+1.4
KAPI	Kappang	4.99	26	P	Pn	16 11 45.0	+0.8
	4.1nm,0.3s,baz=42,slow=1.9,SNR=9.4						
KAPI				S	Sn	16 12 41.6	+1.0
	8.1nm,0.3s,baz=279,slow=22,SNR=5.7						
KAPI				LR	LR	16 13 57.2	
	comp=Z,76nm,19.8s,baz=128,slow=42						
PWJI	Pagerwojo	5.87	284	P	Pn	16 11 55.5	-0.6
SPSI	Sidrap Palu	5.95	22	P	Pn	16 11 58.5	+1.2
BATI	Baumata	6.07	97	P	Pn	16 11 58.8	-0.2
	2.7nm,0.3s,baz=222,slow=1.8,SNR=4.3						
BATI				S	Sn	16 13 06.2	-0.8
	3.9nm,0.3s,baz=241,slow=22,SNR=5.7						
BATI	Baumata	6.07	97	P	Pn	16 11 59.1	+0.2
TTSI	Tana Toraja	6.83	19	P	Pn	16 12 11.3	+2.0
DAV	Davao City (W)	18.33	26	LR	LR	16 22 00.9	
	comp=Z,36nm,21.8s,baz=131,slow=38						
ASAR	Alice Springs	21.02	134	P	P	16 15 11.5	+1.7
	1.1nm,0.5s,baz=309,slow=10,SNR=30						
ASAR				S	S	16 19 00.0	-0.2
	0.6nm,0.6s,baz=304,slow=23,SNR=4.9						
CMAR	Chiang Mai Arr	33.32	327	P	P	16 17 02.2	-0.9
	0.5nm,0.8s,baz=160,slow=6.8,SNR=5.2						
USRK	Ussuriysk Ar.	55.06	13	P	P	16 19 55.2	-1.0
	2.8nm,0.5s,baz=200,slow=7.6,SNR=12						
MKAR	Makanchi Array	64.28	334	P	P	16 20 58.9	-0.8
	1.0nm,0.4s,baz=151,slow=6.7,SNR=23						

MAN 03 16:12:14.3, 9°.95N×124°.33E, h34^{km}, mb3.9, ML2.6, MS2.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.51	316	⇑ip	Pn	16 12 26.5	+1.4
LLP				i S	Sn	16 12 34.5	+1.8
TBP	Tagbilaran	0.53	240	eP	Pn	16 12 26.2	+0.8
TBP				i S	Sn	16 12 35.0	+1.8
MSLP	Maasin	0.56	71	eP	Pb	16 12 26.6	+0.7
MSLP				eS	Sn	16 12 34.1	+0.2
OCLP	Ormoc	1.12	14	eP	Pn	16 12 33.6	-0.1
OCLP				eS	Sb	16 12 53.1	+3.4
GUIM	Jordan	1.83	292	eP	Pn	16 12 44.0	+0.6

IDC 03 16:25:51.1±13.0**, 26°.63S**×**177°.36W, h375^{km}**±149^{km}**, mb3.3**/5**, mb1 3.5**/6**, mb1mx3.2**/28**, mbtmp4.2**/6**, Error ellipse: s-maj=70.3km s-min=31.1km az=177.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	12.49	201	P	P	16 28 36.2	-0.7
	2.4nm,0.3s,baz=299,slow=1.9,SNR=17						
URZ				S	S	16 30 48.7	-5.7
	1.4nm,0.3s,baz=78,slow=21,SNR=12						
STKA	Stephens Creek	36.03	252	P	P	16 32 19.6	+1.1
	2.3nm,0.9s,baz=95,slow=12,SNR=5.9						
ASAR	Alice Springs	44.01	263	P	P	16 33 23.1	-0.2
	0.8nm,0.4s,baz=90,slow=7.6,SNR=38						
PETK	Petropavlovsk-	82.32	345	P	P	16 37 29.6	-1.9
	2.9nm,0.7s,baz=126,slow=7.5,SNR=5.3						
NVAR	Mina Array Bea	85.10	43	P	P	16 37 46.9	+0.9
	0.8nm,0.6s,baz=221,slow=8.8,SNR=7.8						
ELK	Elko	88.39	42	P	P	16 38 02.1	+0.4
	0.3nm,0.3s,baz=292,slow=5.4,SNR=3.6						

ISCJB ***03*** *16:33:54.0±0.6, 47°.58N±0°.04×92°.75W±0°.05, h0^{km}, Error ellipse: s-maj=6.1km s-min=4.8km az=19.2*

NEIC ***03*** *16:33:55.2±0.7, 47°.61N×92°.67W, h0^{km}, MN2.5, Error ellipse: s-maj=10.3km s-min=7.7km az=36.0, Suspected Mining explosion.*

NEIC 14 km [9 miles] NW of Virginia.

IDC ***03*** *16:33:56.6±3.7, 47°.43N×92°.79W, h0^{km}, mb1 2.6/1, mb1mx2.5/36, mbtmp2.6/1, ML1.1/1, Error ellipse: s-maj=78.1km s-min=27.1km az=56.0*

ISC 03 16:33:53.5±0.9**, 47°.51N**±0°.05×**92°.78W**±0°.04**, h0^{km}, n13, σ1^s.55**/19**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	Ely	0.97	63	ePg	Pg	16 34 12.0	0.0
EYMN				Sg	Sg	16 34 24.7	+0.1
E38A	The Farm, Brul	1.23	137	Pg	Pn	16 34 19.1	+1.1
AGMN	Agassiz Nation	2.22	292	Pn	Pb	16 34 34.3	-0.2
AGMN				Sn	Sb	16 35 01.0	-1.5
SPMN	Marine on St.	2.29	180	Pn	Pb	16 34 35.5	-0.2
SPMN				Sn	Sb	16 35 02.5	-1.9
C40A	Isle Royale Na	2.48	79	Pn	Pn	16 34 36.6	+1.5
C40A				Sn	Sn	16 35 06.7	+0.6
G40A	Rib Lake	2.87	141	Pn	Pn	16 34 42.5	+2.1
G40A				Sn	Sb	16 35 19.4	-1.8
COWI	Conover	2.87	118	Pn	Pn	16 34 40.4	-0.1
COWI				Sn	Sb	16 35 19.0	-2.3
D41A	Chassel	2.90	97	Pn	Pn	16 34 41.2	+0.3
ULM	Lac du Bonnet	3.42	324	Pn	Pn	16 34 50.6	+2.5
	0.3nm,0.3s,baz=166,slow=8.3,SNR=1.8						
ULM				Pg	Pg	16 34 58.6	-0.4
	0.7nm,0.3s,baz=146,slow=15,SNR=3.5						
ULM				Lg	Lg	16 35 44.0	
	4.0nm,0.3s,baz=155,slow=3.8,SNR=18						
ULM	Lac du Bonnet	3.42	324	Pn	Pn	16 34 48.0	0.0
ULM				Pg	Pg	16 34 58.6	-0.4
ULM				Lg	Lg	16 35 44.0	
I10CA	LAC DU BONNET	3.44	323	i		16 54 00.0	
	baz=141,slow=311,SNR=8.4						
I42A	Draeger Farm,	4.52	142	Pn	Pn	16 35 06.3	+3.1
I56US	NEWPORT INFRAS	16.34	282	i		18 13 30.0	
	baz=84,slow=311,SNR=3.5						

IDC ***03*** *16:53:44.9±0.5, 58°.73S×25°.48W, h0^{km}, mb4.5/11, mb1 4.6/13, mb1mx4.4/29, mbtmp4.6/13, ML4.3/2, MS4.0/12, Ms1 4.0/12, ms1mx3.9/19, Error ellipse: s-maj=18.5km s-min=16.0km az=35.0*

ISCJB ***03*** *16:53:48.6±0.4, 58°.84S±0°.07×25°.3W±0°.1, h35^{km}, mb4.7/17, MS4.1/11, Error ellipse: s-maj=11.7km s-min=7.8km az=142.6*

NEIC ***03*** *16:53:52.3±0.7, 58°.82S×25°.30W, h51^{km}±5^{km}, mb4.8/14, Error ellipse: s-maj=8.9km s-min=6.5km az=51.0*

GCMT ***03*** *16:53:54.3±0.4, 59°.22S±0°.03×24°.83W±0°.04, h36^{km}, MW5.0/67, Moment Tensor Solution. s34,c37; s67,c76; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.12±.27; M$_{\theta\theta}$0.45±.18; M$_{\phi\phi}$-4.57±.16; M$_{r\theta}$-0.84±.21; M$_{\theta\phi}$-0.21±.12; M$_{\phi r}$0.49±.13; Best double couple: M$_0$4.46800×10^{16} NP1:φ$_s$350.00000°,δ49.00000°,λ74.00000°. NP2: φ$_s$195.00000°,δ43.00000°,λ108.00000°. Principal axes: T 4.3320, Plg77.0000°, Azm195.0000°; N 0.2730, Plg12.0000°, Azm1.0000°; P -4.6030, Plg3.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 16:53:50.1±0.4**, 58°.97S**±0°.07×**25°.14W**±0°.09**, h35^{km}, n115, σ1^s.68**/112**, mb4.6**/17**, MS4.0**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.82	302	ePn	Pn	16 55 42.8	+1.6
VNA1	Neumayer--Stat	13.67	156	P	Pn	16 57 03.0	+2.0
VNA1				S	Sn	16 59 28.2	-3.1
VNA3	Neumayer Olymp	13.86	159	P	Pn	16 57 05.4	+1.6
VNA3				S	Sn	16 59 26.6	-10
SNAA	Sanae	15.62	154	P	Pn	16 57 29.5	+2.2
SNAA				S	Sn	17 00 12.8	-6.1
SNAA	Sanae	15.62	154	Pn	Pn	16 57 29.1	+1.8
	4.7nm,0.3s,baz=320,slow=14,SNR=133						
SNAA				Sn	Sn	17 00 11.4	-7.5
	0.9nm,0.3s,baz=324,slow=18,SNR=5.1						
SNAA				LR	LR	17 02 12.3	
	comp=Z,652nm,21.6s,baz=302,slow=32						
SNAA	Sanae	15.62	154	ePn	Pn	16 57 28.8	+1.5
	25nm,0.6s						
SNAA				eSn	Sn	17 00 11.4	-7.5
PMSA	Palmer Station	18.99	236	P	P	16 58 08.4	+0.2
	0.2nm,0.3s,baz=68,slow=5.4,SNR=1.9						
PMSA	Palmer Station	18.99	236	eP	Pn	16 58 09.9	+0.8
	44nm,0.7s						
EFI	East Falkland	19.94	277	eP	P	16 58 16.1	-2.5
	115nm,1.3s						
USHA	Ushuaia	23.68	261	P	P	16 58 57.5	-0.7
	21nm,0.9s,baz=153,slow=6.9,SNR=11						
QSPA	South Pole Qui	31.27	180	eP	P	17 00 09.2	+2.9
	56nm,1.5s						
MAW	Mawson	37.16	141	P	P	17 00 59.2	+2.3
	4.2nm,0.9s,baz=252,slow=7.7,SNR=5.7						
MAW				LR	LR	17 14 38.3	
	comp=Z,359nm,19.7s,baz=252,slow=34						
MAW	Mawson	37.16	141	eP	P	17 00 59.1	+2.2
	3.0nm,1.3s						
CPUP	Villa Florida	39.58	311	LR	LR	17 19 59.1	
	comp=Z,125nm,18.3s,baz=202,slow=40						
PEL	Peldehue	39.66	290	eP	P	17 01 18.1	-0.4
	69nm,1.2s						
CFA	Coronel Fontan	39.75	294	P	P	17 01 17.0	-2.3
	7.0nm,0.6s,baz=152,slow=8.3,SNR=11						
SBA	Scott Base	43.23	184	eP	P	17 01 50.6	+3.4
	12nm,1.0s						
SBA				eS	S	17 08 09.5	-1.6
VNDA	Vanda	43.69	182	P	P	17 01 54.0	+3.1
	10nm,0.9s,baz=189,slow=7.2,SNR=54						
VNDA				LR	LR	17 18 51.9	
	comp=Z,142nm,20.9s,baz=165,slow=34						
VNDA	Vanda	43.69	182	eP	P	17 01 53.6	+2.8
	11nm,0.8s						
BOSA	Boshof	45.74	71	P	P	17 02 08.0	+0.1
	1.8nm,0.8s,baz=205,slow=6.7,SNR=3.4						
BOSA				LR	LR	17 17 38.6	
	comp=Z,165nm,18.5s,baz=216,slow=31						
GO02	Mina Guanaco	45.83	298	epP	pP	17 02 22.3	+3.7
BDFB	Brasilia	46.45	329	LR	LR	17 18 32.4	
	comp=Z,174nm,20.6s,baz=157,slow=32						
LVC	Limon Verde	47.73	300	P	P	17 02 19.4	-4.4
	1.2nm,0.4s,baz=216,slow=17,SNR=9.0						
H10S2	ASCENSION HYDR	50.54	13	T	T	17 57 13.1	
	baz=188,slow=75,SNR=216						
H10S3	ASCENSION HYDR	50.54	13	T	T	17 57 15.0	
	baz=188,slow=75,SNR=45						
H10S1	ASCENSION HYDR	50.56	13	T	T	17 57 16.0	
	baz=188,slow=75,SNR=210						
MNMC	Minye Minye	51.08	302	eP	P	17 02 47.3	-2.0
	44nm,1.9s						
H10N1	ASCENSION HYDR	51.66	14	T	T	17 58 37.4	
	baz=188,slow=75,SNR=17						
H10N3	ASCENSION HYDR	51.66	13	T	T	17 58 38.8	
	baz=188,slow=75,SNR=117						
H10N2	ASCENSION HYDR	51.67	13	T	T	17 58 38.5	
	baz=188,slow=75,SNR=29						
LPAZ	La Paz	52.97	305	P	P	17 03 01.9	-1.8
	1.9nm,0.6s,baz=137,slow=5.2,SNR=10						
LPAZ	La Paz	52.97	305	eP	P	17 03 01.3	-2.4
	18nm,2.0s						
DBIC	Dimbokro	67.42	22	P	P	17 04 42.5	+0.6

	3.5nm,0.5s,baz=157,slow=5.0,SNR=8.9						
DBIC				LR	LR	17 28 00.6	
	comp=Z,56nm,19.9s,baz=178,slow=31						
DBIC	Dimbokro	67.42	22	*e*P	P	17 04 42.0	+0.2
	21nm,1.3s						
TOA0	Torodi Ar. Sit	75.11	27	*e*P	P	17 05 28.0	-0.2
	8.7nm,0.8s						
TORD	Torodi Ar. Bea	75.11	27	P	P	17 05 28.8	+0.5
	14nm,0.5s,baz=183,slow=5.9,SNR=10						
TORD				LR	LR	17 32 48.7	
	comp=Z,114nm,19.1s,baz=295,slow=31						
TOA1	Torodi Ar. Sit	75.11	27	*e*P	P	17 05 28.8	+0.5
STKA	Stephens Creek	88.82	169	P	P	17 06 40.5	+0.3
	5.2nm,0.9s,baz=180,slow=5.6,SNR=5.0						
STKA				LR	LR	17 44 38.0	
	comp=Z,129nm,19.4s,baz=204,slow=34						
STKA	Stephens Creek	88.82	169	*e*P	P	17 06 41.0	+0.8
	7.5nm,1.7s						
ASAR	Alice Springs	95.86	161	P	P	17 07 13.5	+0.6
	1.7nm,0.8s,baz=185,slow=3.7,SNR=12						
ASAR				LR	LR	17 48 38.1	
	comp=Z,128nm,19.0s,baz=214,slow=34						
AS31	Alice Springs	95.86	161	*e*P	P	17 07 12.7	-0.2
	2.4nm,1.4s						
KEST	Kesra	98.62	28	LR	LR	17 49 17.2	
	comp=Z,74nm,18.1s,baz=253,slow=34						
ESDC	Sonseca Array	99.85	16	LR	LR	17 47 28.3	
	comp=Z,46nm,20.0s,baz=280,slow=32						
KNB	Kanab	119.74	293	*e*PKPdf	PKPdf	17 12 35.5	-0.3
MSU	Marysvale	120.63	294	*e*PKPdf	PKiKP	17 12 38.0	+0.4
TPNV	Topopah Spring	121.33	290	*e*PKPdf	PKiKP	17 12 39.3	+0.3
ISA	Isabella, Lake	121.40	288	*e*PKPdf	PKiKP	17 12 39.8	+0.7
TCUT	Toone Canyon	122.34	297	*e*PKPdf	PKiKP	17 12 41.2	+0.2
PDAR	Pinedale Array	122.79	299	PKP	PKPdf	17 12 40.6	-0.9
	0.9nm,0.6s,baz=137,slow=5.0,SNR=6.3						
HWUT	Hardware Ranch	122.80	297	*e*PKPdf	PKiKP	17 12 41.5	-0.2
CMAR	Chiang Mai Arr	123.00	110	PKP	PKiKP	17 12 43.0	+0.4
	1.5nm,0.9s,baz=231,slow=3.1,SNR=7.7						
ULM	Lac du Bonnet	123.10	314	PKP	PKPdf	17 12 39.7	-1.9
	2.4nm,0.3s,baz=140,slow=2.4,SNR=4.7						
NV11	Mina Array Sit	123.43	290	*e*PKPdf	PKiKP	17 12 43.6	+0.6
NV01	Mina Array Sit	123.50	290	*e*PKPdf	PKPdf	17 12 42.6	-0.4
NVAR	Mina Array Bea	123.50	290	PKP	PKPdf	17 12 42.6	-0.4
	1.8nm,0.7s,baz=163,slow=3.3,SNR=14						
ELK	Elko	123.84	294	PKP	PKiKP	17 12 43.9	0.0
	1.4nm,0.9s,baz=49,slow=1.6,SNR=5.3						
ELK	Elko	123.84	294	*e*PKPdf	PKiKP	17 12 44.0	+0.1
MOOW	Moose Ponds	124.10	299	*e*PKPdf	PKPdf	17 12 43.7	-0.3
FXWY	Fox Creek	124.14	299	*e*PKPdf	PKiKP	17 12 44.4	0.0
IMW	Indian Meadow	124.31	299	*e*PKPdf	PKiKP	17 12 44.7	-0.1
FLWY	Flagg Ranch	124.34	300	*e*PKPdf	PKiKP	17 12 45.0	+0.3
YERR	Yerington	124.39	290	*e*PKPdf	PKiKP	17 12 45.8	+0.7
LAO	LASA Array	124.41	304	*e*PKPdf	PKPdf	17 12 44.2	-0.1
BMN	Battle Mountai	124.54	292	*e*PKPdf	PKiKP	17 12 45.3	+0.1
FIA0	FINESS Array S	126.46	28	*e*PKPdf	PKPdf	17 12 47.2	-0.4
FINES	FINESS Array B	126.46	28	PKP	PKPdf	17 12 47.2	-0.4
	1.4nm,0.6s,baz=216,slow=1.6,SNR=11						
J08A	Circle Bar Ran	127.39	294	*e*PKPdf	PKiKP	17 12 51.4	+0.7
MSO	Missoula	127.91	300	*e*PKPdf	PKPdf	17 12 51.2	+0.1
BMO	Blue Mountains	127.97	296	*e*PKPdf	PKPdf	17 12 51.3	+0.1
ABKAR	Akbulak array	128.10	56	*e*PKPdf	PKPdf	17 12 51.1	-0.1
PINE	Pine Mountain	128.89	292	*e*PKPdf	PKiKP	17 12 54.5	+0.6
G08A	Pilot Rock	129.07	295	*e*PKPdf	PKiKP	17 12 54.6	+0.5
ARA0	ARCESS Array S	133.25	22	*e*PKPdf	PKPdf	17 13 00.3	-0.1
ARCES	ARCESS Array B	133.25	22	PKP	PKPdf	17 13 00.3	-0.1
	3.5nm,0.8s,baz=204,slow=3.1,SNR=11						
YKA	Yellowknife Ar	139.06	315	PKP	PKPdf	17 13 11.4	+0.1
	8.4nm,0.8s,baz=129,slow=2.3,SNR=19						
YKB5	Yellowknife Ar	139.06	315	*e*PKPdf	PKPdf	17 13 11.4	+0.1
YKW3	Yellowknife Ar	139.10	315	*e*PKPdf	PKPdf	17 13 11.9	+0.5
DIB	Dawson Inlet,	140.91	294	*e*PKPdf	PKiKP	17 13 16.3	-1.3
ZALV	Zalesovo Beam	142.60	66	PKhKP	PKPpre	17 13 13.7	
	0.6nm,0.3s,baz=227,slow=5.0,SNR=2.9						
ZALV				PKP	PKiKP	17 13 19.9	-1.2
	0.6nm,0.3s,baz=222,slow=4.4,SNR=4.1						
ZAA1	Zalesovo Array	142.60	66	*e*PKPpre	PKPpre	17 13 13.7	
ZAA1				*e*PKPdf	PKiKP	17 13 19.9	-1.2
INK	Inuvik	148.74	317	*e*PKPbc	PKPbc	17 13 31.5	-0.4
EPYK	Eagle Plains	149.27	313	*e*PKPdf	PKPdf	17 13 27.3	-1.7
DAWY	Dawson	149.52	308	*e*PKPbc	PKPbc	17 13 33.4	-0.7
SONA0	Songino Array	149.71	90	*e*PKPbc	PKPbc	17 13 34.8	-0.4
SONM	Songino Array	149.71	90	PKPbc	PKPbc	17 13 34.8	-0.4
	1.5nm,0.3s,baz=208,slow=2.1,SNR=13						
EGAK	Eagle	150.49	309	*e*PKPbc	PKPbc	17 13 35.9	-0.3
DOT	Dot Lake	151.32	306	*e*PKPbc	PKiKP	17 13 38.6	-0.2
SCRK	Sand Creek	151.39	306	*e*PKPbc	PKiKP	17 13 38.9	-0.1
RIDG	Independent Ri	151.68	305	*e*PKPbc	PKiKP	17 13 39.8	+0.2
PAX	Paxson	151.69	304	*e*PKPbc	PKPbc	17 13 38.9	-0.3
SCM	Sheep Creek Mo	152.12	301	*e*PKPbc	PKiKP	17 13 40.5	-0.1
KS15	Wonju Array Si	152.28	129	*e*PKPbc	PKPbc	17 13 41.4	+0.1
KSAR	Wonju Array Be	152.28	129	PKPbc	PKiKP	17 13 41.7	+0.1
KSAR				PKPab	pPKPbc	17 13 53.4	+1.6
KSRS	Korea Array	152.31	129	PKPbc	PKiKP	17 13 41.7	+0.1
	0.8nm,0.7s,baz=45,slow=2.2,SNR=3.9						
KSRS				PKPab	pPKPbc	17 13 53.4	+1.5
	1.9nm,0.9s,baz=220,slow=3.9,SNR=5.8						
SEW	Seward	152.45	297	*e*PKPbc	PKPbc	17 13 40.8	-0.1
PRP	Porcupine Dome	152.47	309	*e*PKPbc	PKPbc	17 13 40.8	-0.2
KNK	Knik Glacier	152.47	300	*e*PKPbc	PKiKP	17 13 41.0	-0.2
DHY	Denali Highway	152.55	303	*e*PKPbc	PKiKP	17 13 41.5	0.0
SML	Sawmill	152.55	300	*e*PKPbc	PKiKP	17 13 41.2	-0.3
HDA	Harding Lake	152.76	306	*e*PKPbc	PKiKP	17 13 41.5	-0.3
ILAR	Eielson Array	152.83	307	PKP	PKPdf	17 13 32.5	-1.9
	0.4nm,0.8s,baz=324,slow=1.3,SNR=4.1						
ILAR				PKPbc	PKPbc	17 13 41.5	-0.1
	18nm,0.9s,baz=150,slow=2.4,SNR=94						
ILB	Eielson Array	152.83	307	*e*PKPbc	PKPbc	17 13 41.2	-0.4
CCB	Clear Creek Bu	153.18	307	*e*PKPbc	PKPbc	17 13 41.8	-0.6
WRH	Wood River Hil	153.25	306	*e*PKPbc	PKPbc	17 13 42.3	-0.3
RND	Reindeer	153.28	304	*e*PKPbc	PKiKP	17 13 42.8	-0.2
MCK	McKinley	153.41	304	*e*PKPbc	PKPbc	17 13 42.9	-0.1
BWN	Browne	153.75	305	*e*PKPbc	PKiKP	17 13 44.3	+0.5
TRF	Thorofare Moun	153.92	303	*e*PKPbc	PKPbc	17 13 44.1	-0.2
KTH	Kantishna Hill	154.22	303	*e*PKPbc	PKPbc	17 13 44.7	-0.2
BPAW	Bear Paw Mtn.	154.38	305	*e*PKPbc	PKPbc	17 13 44.8	-0.3
MLY	Manley	154.49	307	*e*PKPbc	PKPbc	17 13 44.2	-1.1
PPLA	Purkeypile	154.60	302	*e*PKPbc	PKPbc	17 13 45.6	-0.2
COLD	Coldfoot	154.66	312	*e*PKPbc	PKiKP	17 13 46.0	+0.4
PETK	Petropavlovsk-	173.91	196	PKPab	PKPab	17 15 26.4	+1.0
	3.3nm,0.8s,baz=141,slow=5.7,SNR=5.0						
PEA1	Petropavlovsk-	173.92	196	*e*PKPab	PKPab	17 15 26.4	+1.0

MEX 03 16:59:44.1±0.3, 25°.08N×109°.54W, h10^{km}, MD3.8, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	La Paz	1.20	216	*e*P	Pb	17 00 03.2	-3.8
LPIG				*i* S	Sb	17 00 18.1	-4.4

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*ISCJB **03** 17:02:03.8±0.3, 24°.28N±0°.01×121°.80E±0°.01, h7^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=1.8km az=39.7*

*JMA **03** 17:02:03.7, 24°.23N×121°.71E, h24^{km}±1^{km}, M2.5*

*TAP **03** 17:02:03.6, 24°.29N×121°.79E, h14^{km}, ML3.3, B*

ISC 03 17:02:03.3±0.9, 24°.28N±0°.02×121°.82E±0°.02, h18^{km}±2^{km}, n102, σ0.75/145, 5C-19D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	Nanao	0.16	335	⇓P	Pg	17 02 07.4	-0.2
	baz=345						
NANB				S	Sg	17 02 10.0	-0.6
	baz=345						
ENA	Nanau	0.16	332	⇓*i*P	Pg	17 02 07.4	-0.3
	baz=345						
ENA				S	Sg	17 02 10.1	-0.6
	baz=345						
NACB	Ninganchiao	0.24	242	⇓P	Pb	17 02 08.3	-0.5
	baz=232						
NACB				S	Sb	17 02 11.7	-0.8
	baz=232						
TWD	Chiawan	0.29	226	⇓*i*P	Pg	17 02 09.5	-0.2
	baz=224						
TWD				S	Sg	17 02 13.6	-0.4
	baz=224						
ETLH	Xiulin Townshi	0.32	256	⇓*e*P	Pg	17 02 10.0	-0.3
	baz=254						
ETLH				*e*S	Sg	17 02 14.2	-0.8
	baz=254						
TWC	Suao	0.32	4	⇓*i*P	Pb	17 02 10.4	-0.2
	baz=7.0						
TWC				S	Sg	17 02 14.7	-0.3
	baz=7.0						
HWA	Hwalien	0.36	213	*e*P	Pb	17 02 11.7	+0.4
	baz=215						
EOS1	EOS1	0.38	46	⇓P	Pn	17 02 12.3	-1.5
	baz=42						
EOS1				S	Sn	17 02 19.2	-1.5
	baz=42						
ENTT	Nioudou	0.42	327	⇓*i*P	Pb	17 02 12.1	-0.2
	baz=330						
ENTT				S	Sg	17 02 17.6	-0.4
	baz=330						
NDT	Datong Townshi	0.42	318	⇓P	Pb	17 02 12.2	-0.1
	baz=321						
NDT				S	Sg	17 02 17.7	-0.2
	baz=321						
NNSB	Datong	0.43	290	⇓P	Pg	17 02 12.0	-0.1
	baz=291						
NNSB				S	Sg	17 02 17.2	-0.9
	baz=291						
NNS	Nan Shan	0.44	291	⇑P	Pg	17 02 12.2	-0.1
	baz=292						
NNS				S	Sg	17 02 17.6	-0.9
	baz=292						
ILA	Ilan	0.48	352	⇓*i*P	Pb	17 02 13.6	+0.4
	baz=349						
ILA				*i* S	Sb	17 02 20.5	+0.5
	baz=349						
YHNB	Yeheng	0.56	313	⇑P	Pg	17 02 14.5	0.0
	baz=315						
YHNB				S	Sb	17 02 21.4	-0.8
	baz=315						
NTC	Toucheng	0.57	1	⇓P	Pg	17 02 14.8	+0.1
	baz=3.0						
NTC				*e*S	Sg	17 02 22.6	+0.4
	baz=3.0						
NSK	Sanguang	0.58	313	⇓*i*P	Pg	17 02 14.9	+0.1
	baz=314						
NSK				S	Sb	17 02 21.9	-0.8
	baz=314						
ESL	Shilin	0.59	217	P	Pb	17 02 14.7	-0.3
	baz=222						
TWT	Tachien	0.59	267	*e*P	Pg	17 02 15.2	+0.1
	baz=266						
TWT				S	Sb	17 02 22.7	-0.5
	baz=266						
TDCB	Techi	0.61	267	⇑P	Pg	17 02 15.5	+0.1
	baz=267						
TDCB				S	Sb	17 02 22.6	-1.0
	baz=267						
CHGB	Renai	0.63	250	⇑P	Pb	17 02 15.8	-0.1
	baz=244						
CHGB				*e*S	Sb	17 02 23.3	-1.1
	baz=244						
TIPB	Shuangxi	0.69	0	⇓*i*P	Pg	17 02 17.1	+0.3
	baz=2.0						
TIPB				S	Sg	17 02 25.6	-0.4
	baz=2.0						
EGFH	Guangfu	0.71	211	*e*P	Pg	17 02 17.4	+0.1
	baz=215						
TWA	Mucha	0.73	343	*e*P	Pn	17 02 18.4	-0.2
	baz=345						
TWB1	Santiao Chiao	0.74	12	*e*P	Pn	17 02 18.7	-0.1
	baz=14						
TATO	Taipei	0.75	336	P	Pn	17 02 18.4	-0.5
	baz=337						
TATO				S	Sb	17 02 27.4	-0.3
	baz=337						
WLTB	Daxi	0.77	318	*e*P	Pn	17 02 19.4	+0.2
	baz=319						
WLTB				*e*S	Sn	17 02 29.6	-0.7
	baz=319						
NWF	Wu-fen Shan	0.78	357	*e*P	Pn	17 02 19.1	-0.4
	baz=351						
NWF				S	Sg	17 02 29.3	+0.2
	baz=351						
WFSB	Wu-fen Shan	0.78	357	⇓P	Pn	17 02 19.1	-0.3
	baz=351						
WFSB				S	Sg	17 02 29.3	+0.2
	baz=351						
WHP	Taichung City	0.80	270	*e*P	Pg	17 02 19.3	+0.3
	baz=270						
WHP				S	Sb	17 02 29.2	0.0
	baz=270						
TAP	Taipei	0.81	339	*e*P	Pn	17 02 20.3	+0.6
	baz=340						
TAP				*e*S	Sn	17 02 30.2	-1.0
	baz=340						
VWDT	VWDT	0.82	230	⇓P	Pg	17 02 19.5	+0.2
	baz=229						
VWDT				*e*S	Sg	17 02 30.5	+0.4
	baz=229						
LIOB	Emei	0.82	296	⇑P	Pn	17 02 19.6	-0.3
	baz=297						
LIOB				*e*S	Sg	17 02 30.4	+0.2
	baz=297						
NSTT	Nanjuang	0.82	295	*e*P	Pg	17 02 19.5	+0.1
	baz=296						
NSTT				*e*S	Sg	17 02 30.1	-0.3
	baz=296						
DPDB	Guoxing	0.86	253	*e*P	Pg	17 02 19.9	-0.1
	baz=253						
DPDB				*e*S	Sb	17 02 30.7	-0.1
	baz=253						
HGSD	Ruisui	0.87	205	P	Pn	17 02 20.6	0.0
	baz=193						
HGSD				*e*S	Sn	17 02 34.0	+1.2
	baz=193						
YM01	YM01	0.89	345	P	Pn	17 02 21.2	+0.3
	baz=346						
TWS1	Kuangyinshan	0.89	336	*e*P	Pn	17 02 21.7	+0.7
	baz=337						
NCU	National Centr	0.90	320	*e*P	Pn	17 02 21.3	+0.4
	baz=321						
NCUH	Zhongli	0.90	320	*e*P	Pn	17 02 21.9	+1.0
	baz=321						
YM10	YM10	0.90	345	*e*P	Pn	17 02 21.5	+0.4
	baz=346						
EHY	Hungye	0.90	211	*e*P	Pb	17 02 19.8	-0.5
	baz=221						
SBCB	Hsinchu	0.92	304	*e*P	Pg	17 02 23.1	+2.0
	baz=304						
YM08	YM08	0.93	347	*e*P	Pg	17 02 21.8	+0.5
	baz=348						
HSN	Hsinchu	0.93	304	*e*P	Pg	17 02 22.2	+0.8
	baz=297						
SMLT	Sun Moon Lake	0.93	245	⇓P	Pn	17 02 21.5	-0.1
	baz=236						
SMLT				*e*S	Sg	17 02 34.3	+0.5
	baz=236						
SSLB	Suanglung	0.94	238	⇓P	Pb	17 02 21.2	+0.2
	baz=238						
SSLB				*e*S	Sb	17 02 32.8	-0.3
	baz=238						
ANP	Anpu	0.94	343	*e*P	Pg	17 02 21.9	+0.3
	baz=345						
NTST	Danshui	0.94	339	*e*P	Pg	17 02 21.9	+0.3
	baz=351						
TYC	Yuchr	0.96	247	⇓P	Pn	17 02 21.7	-0.1
	baz=246						
NMLH	Miaoli	0.97	285	*e*P	Pg	17 02 23.4	+1.2
	baz=285						
NSY	Sanyi	0.98	278	*e*P	Pg	17 02 23.1	+0.8
	baz=278						
TWY	Chenhua	1.01	348	*e*P	Pg	17 02 23.8	+0.9
	baz=350						
YULB	Yu-li	1.01	209	*e*P	Pb	17 02 21.3	-1.0
	baz=219						
PTSB	Yuanli	1.03	279	P	Pg	17 02 24.1	+0.8
	baz=280						
PTSB				*e*S	Sg	17 02 37.9	+0.9
	baz=280						
JYNG	Yonagunijimaku	1.04	81	P	Pg	17 02 24.2	+0.8
JYNG				*e*S	Sg	17 02 39.1	+2.1
TWF1	Yuli	1.05	208	*e*P	Pb	17 02 21.9	-0.9
	baz=219						
TCU	Taichung	1.06	263	*e*P	Pg	17 02 25.3	+1.5
	baz=263						
WHYT	Xinyi Township	1.06	237	*e*P	Pg	17 02 24.4	+0.5
	baz=236						
WDJ	Dajia District	1.08	274	*e*P	Pg	17 02 24.8	+0.5
	baz=274						
YOJ	Yonaguni jima	1.10	80	*e*P	Pg	17 02 24.9	+0.3
	baz=70						
YOJ	Yonaguni jima	1.10	80	P	Pg	17 02 25.2	+0.7
YOJ				*e*S	Sg	17 02 41.5	+2.5
WJS	Zhushan	1.10	246	*e*P	Pg	17 02 25.7	+1.1
	baz=238						
WNT	Mingjian	1.12	249	*e*P	Pg	17 02 25.6	+0.7
	baz=240						
YUS	Yu-Shan	1.12	225	*e*P	Pn	17 02 24.2	-0.3
	baz=225						
ALS	Alishan	1.21	231	*e*P	Pg	17 02 26.5	-0.2
	baz=218						
CHKT	Chengkung	1.25	200	*e*P	Pn	17 02 25.2	-0.7
	baz=188						
CHN5	Tsauling	1.25	237	*e*P	Pg	17 02 27.6	+0.1
	baz=239						
CHN5				*e*S	Sg	17 02 44.4	+0.5
	baz=239						
WGK	Gukeng	1.30	243	*e*P	Pg	17 02 28.5	+0.1
	baz=244						
ELDTW	Lidau	1.32	214	*e*P	Pn	17 02 26.7	-0.2
	baz=201						
WDLH	Douliu	1.32	244	*e*P	Pg	17 02 28.9	+0.2
	baz=245						
PCYT	Pengchaiyu	1.36	9	*e*P	Pb	17 02 28.2	+0.1
	baz=9.0						
RLNB	Erlin	1.39	254	*e*P	Pg	17 02 29.6	-0.6
	baz=255						
TPUB	Ta-pu	1.47	228	*e*P	Pb	17 02 30.6	+0.5
	baz=230						
WTCT	Ta-ch'eng	1.47	254	*e*P	Pb	17 02 30.8	+0.7
	baz=255						
CHY	Chiayi	1.50	239	*e*P	Pb	17 02 31.3	+0.7
	baz=227						
WTP	Ta-pu	1.52	227	*e*P	Pb	17 02 31.4	+0.5
	baz=229						
TWK	Hsinying	1.59	231	*e*P	Pb	17 02 32.9	+0.8
	baz=234						
TWK				*e*S	Sg	17 02 54.0	-0.6
	baz=234						
WSF	Szhu	1.60	247	*e*P	Pb	17 02 32.5	+0.2
	baz=258						
WSF				*e*S	Sg	17 02 54.5	-0.4
	baz=258						
WLGB	Puzi	1.61	240	*e*P	Pb	17 02 32.6	+0.2
	baz=241						
SNST	Tainan City	1.61	229	*e*P	Pb	17 02 33.3	+0.8
	baz=232						
TWG	Pinlang	1.61	205	*e*P	Pn	17 02 29.8	-1.0
	baz=192						
TWGBT	Beinan	1.61	205	*e*P	Pn	17 02 29.9	-0.9
	baz=192						
CHN1	Nanshi	1.61	228	*e*P	Pb	17 02 33.4	+0.9
	baz=230						
SGST	Jiashian	1.65	224	*e*P	Pb	17 02 33.7	+0.6
	baz=227						
SGST				*e*S	Sg	17 02 56.7	+0.1
	baz=227						
IRIF	Iriomote-Funau	1.74	88	P	Pb	17 02 35.1	+0.4
IRIF				*e*S	Sg	17 02 57.8	-1.6
CHN8	Yiju	1.75	238	*e*P	Pb	17 02 34.3	-0.4
	baz=240						
ECL	Taimali	1.86	206	*e*P	Pn	17 02 34.8	+0.6
	baz=195						
SSD	Sandimen	1.88	216	*e*P	Pb	17 02 36.8	-0.3
	baz=230						
MASBT	Mashibuluo	1.99	214	*e*P	Pb	17 02 38.1	-0.9
	baz=217						
JKRS	Kuro-shima	2.00	91	P	Pb	17 02 39.3	+0.3
JKRS				*e*S	Sb	17 03 04.5	+1.0
EAST	Anshuo	2.09	206	*e*P	Pn	17 02 39.0	+1.5
	baz=197						
TAW	Tawu	2.10	204	*e*P	Pn	17 02 38.4	+0.9
	baz=195						
JIJ	Ishigaki jima	2.12	87	P	Pb	17 02 40.1	-1.0
JIJ				*e*S	Sb	17 03 06.8	-0.2
PNG	Penghu	2.19	251	*e*P	Pn	17 02 39.0	+0.2
	baz=253						
PHUB	P'eng-hu	2.20	250	*e*P	Pn	17 02 39.3	+0.4
	baz=252						
SCZT	Fangliau	2.20	210	*e*P	Pn	17 02 40.5	+1.6
	baz=197						
WDGT	Dungji	2.23	243	*e*P	Pn	17 02 40.5	+1.3
	baz=246						
JISG	Ishigakijimahi	2.29	82	P	Pb	17 02 42.4	-1.6
JISG				*e*S	Sb	17 03 11.6	-0.3
PTMZ	Houxiangcun	2.57	288	*e*P	Pn	17 02 44.8	+0.8
	baz=288						
KNMB	Chin-men Tao	3.14	274	*e*P	Pn	17 02 52.2	+0.4
	baz=274						
AXDP	Jialang	3.56	281	*e*P	Pn	17 02 59.7	+2.1
	baz=281						
ZPLA	Ao Xicun	3.74	265	*e*P	Pn	17 03 01.2	+1.1
	baz=265						

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*ISCJB **03** 17:13:23.7±0.8, 47°.56N±0°.06×92°.41W±0°.07, h0^{km}, Error ellipse: s-maj=8.8km s-min=6.2km az=157.8*

*NEIC **03** 17:13:24.3±0.6, 47°.53N×92°.41W, h0^{km}, MN1.9, Error ellipse: s-maj=8.3km s-min=6.8km az=33.0, Suspected Mining explosion.*

NEIC 10 km [6 miles] E of Virginia.

*IDC **03** 17:13:26.0±4.0, 47°.53N×92°.60W, h0^{km}, mb1 2.6/1, mb1mx2.6/30, mbtmp2.6/1, ML0.9/1, Error ellipse: s-maj=78.7km s-min=27.7km az=53.0*

ISC 03 17:13:23.1±1.1, 47°.55N±0°.05×92°.44W±0°.05, h0^{km}, n11, σ1.48/12, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYMN	Ely	0.75	58	Pg	Pb	17 13 38.6	-0.4
EYMN				Sg	Sb	17 13 48.4	-1.4
E38A	The Farm, Brul	1.12	147	Pg	Pb	17 13 44.9	-0.5
C40A	Isle Royale Na	2.25	79	Pn	Pn	17 14 02.1	+0.6
C40A				Sg	Sg	17 14 37.1	+1.9
SPMN	Marine on St.	2.34	186	Pn	Pn	17 14 03.8	+1.0
AGMN	Agassiz Nation	2.42	289	Pn	Pn	17 14 05.5	+1.6
D41A	Chassel	2.68	99	Pn	Pn	17 14 08.8	+1.3
COWI	Conover	2.69	121	Pn	Pn	17 14 08.5	+0.9
G40A	Rib Lake	2.76	145	Pn	Pb	17 14 11.9	-1.3
ULM	Lac du Bonnet	3.53	321	Pn	Pn	17 14 20.4	+1.3
	0.2nm,0.3s,baz=131,slow=11,SNR=1.5						
ULM				Sn	Sn	17 14 59.4	-2.1
	0.4nm,0.3s,baz=180,slow=6.1,SNR=2.0						
ULM				Lg	Lg	17 15 14.5	
	0.5nm,0.3s,baz=34,slow=5.6,SNR=4.6						
I10CA	LAC DU BONNET	3.56	320	*i*		17 34 10.0	
	baz=138,slow=318,SNR=6.8						
I56US	NEWPORT INFRAS	16.56	282	*i*		18 55 50.0	
	baz=85,slow=314,SNR=3.3						

MEX 03 17:15:35.2±0.5, 16°.62N×99°.42W, h10^{km}±6^{km}, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	Acapulco	0.51	299	*e*P	Pg	17 15 43.9	-1.3
ACP2				*e*S	Sg	17 15 51.9	0.0
CAIG	El Cayaco	0.91	298	*i* P	Pg	17 15 50.6	-2.3
CAIG				*i* S	Sg	17 16 01.8	-3.0
TLIG	Tlapa	1.24	41	*e*P	Pn	17 15 54.8	-4.0
TLIG				*e*S	Sb	17 16 10.3	-4.6
MEIG	Mezcala	1.31	352	*e*P	Pn	17 15 56.0	-3.6
MEIG				*i* S	Sb	17 16 11.5	-5.3
HMTT	Tlapaneco	1.43	35	*e*P	Pn	17 15 57.6	-3.7
HMTT				*i* S	Sn	17 16 15.7	-4.5
PLIG	Platanillo	1.76	357	*e*P	Pn	17 16 02.8	-3.1
PLIG				*i* S	Sn	17 16 23.8	-4.6
ARIG	Puente Sto Nin	1.87	332	*e*P	Pn	17 16 04.3	-3.0
ARIG				*e*S	Sn	17 16 25.7	-5.3
ZIIG	Zihuatanejo	2.19	297	*e*P	Pn	17 16 08.7	-2.9
ZIIG				*i* S	Sn	17 16 34.0	-4.7

MAN 03 17:21:11.4, 9°.96N×124°.39E, h18^{km}, mb4.0, ML2.8, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	0.50	70	*e*P	Pb	17 21 22.6	+1.0
MSLP				*e*S	Sn	17 21 30.9	-0.8
LLP	Lapu-Lapu	0.55	311	*e*P	Pg	17 21 22.2	-0.1
LLP				*e*S	Sb	17 21 30.2	+0.4
TBP	Tagbilaran	0.58	243	*e*P	Pg	17 21 21.9	-1.1
TBP				*i* S	Sg	17 21 30.6	-0.2
OCLP	Ormoc	1.10	11	*e*P	Pg	17 21 33.9	+1.1
OCLP				*e*S	Sn	17 21 47.0	+0.2
SNPH	Sibulan	1.29	242	⇑*i*P	Pb	17 21 35.2	+0.1
SNPH				*i* S	Sb	17 21 51.6	+0.1

RSNC 03 17:34:27.5±1.2**,6°.77N×73°.15W,h142**^{km}±7^{km}**,ML1.8,4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.18	190	*e*P	Pn	17 34 46.4	-0.7
BARC				*e*S	Sn	17 35 01.5	-0.4
BARC				*i*		17 35 03.1	
	comp=Z,12nm,0.3s						
BARC	**Barichara**	0.18	190	*e*P	Pn	17 34 46.4	-0.7
BARC				*e*S	Sn	17 35 01.6	-0.3
BARC				*i*		17 35 03.1	
	comp=Z,12nm,0.3s						
GIRC	**Giron, Santand**	0.31	352	*e*P	Pn	17 34 46.6	-0.7
GIRC				*e*S	Sn	17 35 02.0	-0.3
GIRC				*i*		17 35 04.0	
	comp=Z,14nm,0.1s						
BRRC	**Barranca, Sant**	0.65	301	⇓*i*P	Pn	17 34 48.4	-0.4
BRRC				*e*S	Sn	17 35 05.0	0.0
BRRC				*i*		17 35 08.1	
	comp=Z,22nm,0.3s						
BRRC	**Barranca, Sant**	0.65	301	⇓*i*P	Pn	17 34 48.4	-0.4
BRRC				*e*S	Sn	17 35 04.7	-0.2
BRRC				*i*		17 35 08.1	
	comp=Z,22nm,0.3s						
PAMC	**Pamplona, Colo**	0.72	38	⇓*i*P	Pn	17 34 49.3	-0.6
PAMC				*e*S	Sn	17 35 06.3	-0.6
PAMC				*i*		17 35 10.5	
	comp=Z,5.6nm,0.5s						
PAMC	**Pamplona, Colo**	0.72	38	⇓*i*P	Pn	17 34 49.3	-0.6
PAMC				*e*S	Sn	17 35 06.4	-0.4
PAMC				*i*		17 35 10.5	
	comp=Z,5.6nm,0.5s						
RUSC	**La Rusia**	0.87	176	*e*P	Pn	17 34 50.7	-0.3
RUSC				*e*S	Sn	17 35 09.0	+0.1
RUSC				*i*		17 35 10.0	
	comp=Z,7.4nm,0.3s						
RUSC	**La Rusia**	0.87	176	*e*P	Pn	17 34 50.6	-0.4
RUSC				*e*S	Sn	17 35 08.9	0.0
RUSC				*i*		17 35 10.0	
	comp=Z,7.4nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.32	260	*e*P	Pn	17 34 53.4	-1.1
PTBC				*e*S	Sn	17 35 14.5	-0.6
PTBC				*i*		17 35 16.5	
	comp=Z,13nm,0.1s						
PTBC	**PUERTO BERRIO,**	1.32	260	*e*P	Pn	17 34 53.2	-1.3
PTBC				*e*S	Sn	17 35 14.5	-0.6
PTBC				*i*		17 35 16.5	
	comp=Z,13nm,0.1s						
ZARC	**Zaragoza, Cauc**	1.84	293	*e*P	Pn	17 34 58.9	-1.4
ZARC				*e*S	Sn	17 35 24.5	-0.9
ZARC				*i*		17 35 31.5	
	comp=Z,11nm,0.3s						
ZARC	**Zaragoza, Cauc**	1.84	293	*e*P	Pn	17 35 01.4	+1.1
ZARC				*e*S	Sn	17 35 24.5	-0.9
ZARC				*i*		17 35 31.5	
	comp=Z,11nm,0.3s						

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*ISCJB **03** 17:46:22.3±0.4,36°.25N±0°.03×69°.68E±0°.04,h150*^{km}*,*
Error ellipse: s-maj=5.7km s-min=3.6km az=136.8

*IDC **03** 17:46:25.2±5.9,36°.53N×69°.59E,h130*^{km}*±44*^{km}*,mb3.8/1, mb1 3.5/7,mb1mx3.1/53,mbtmp4.0/7,Error ellipse: s-maj=73.7km s-min=18.4km az=158.0*

*NNC **03** 17:46:27.7±1.9,36°.68N×69°.46E,h133*^{km}*±32*^{km}*,mb3.5, mpv4.2,Error ellipse: s-maj=19.1km s-min=8.1km az=157.0*

ISC 03 17:46:23.1±0.8**,36°.35N**±0°.06×**69°.64E**±0°.06**,h150**^{km}**,n38, σ2**^{s}**03**/44**,6C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	6.36	126	*e*P	Pn	17 47 54.5	-0.1
THN				*e*S	Sn	17 49 03.2	-3.1
AML	**Almayashu**	6.57	27	P	Pn	17 47 59.4	+1.7
	SNR=14						
KK31	**Karatay Array**	6.77	5	P	Pn	17 48 01.7	+1.6
	2.9nm,0.5s,baz=171,slow=11,SNR=45						
KK31				S	Sn	17 49 13.6	-2.5
	6.3nm,0.5s,baz=192,slow=21,SNR=8.2						
DHRM	**DHARAMSHALA**	6.86	125	*e*P	Pn	17 48 01.4	-0.1
DHRM				*e*S	Sn	17 49 14.0	-4.6
DHRM				IAML		17 49 17.8	
	comp=E,105nm,0.5s						
DHRM				IAML		17 49 18.6	
	comp=N,87nm,0.8s						
UCH	**Uchtor**	6.97	31	P	Pn	17 48 04.5	+1.4
	SNR=71						
EKS2	**Erkin-Say**	7.06	26	P	Pn	17 48 05.8	+1.7
	SNR=12						
KZA	**Kyzart**	7.18	36	P	Pn	17 48 06.8	+0.9
	SNR=8.9						
AAK	**Ala-Archa**	7.31	29	P	Pn	17 48 08.1	+0.8
	comp=N,7.7nm,0.3s,baz=207,slow=5.7,SNR=29						
AAK				S	Sn	17 49 28.7	-0.4
	comp=N,2.4nm,0.3s,baz=131,slow=23,SNR=18						
AAK	**Ala-Archa**	7.31	29	⇑P	Pn	17 48 08.8	+1.5
	comp=N,12nm,0.5s						
AAK				⇓S	Sn	17 49 29.8	+0.7
	comp=N,33nm,0.7s						
AAK	**Ala-Archa**	7.31	29	P	Pn	17 48 10.0	+2.7
	SNR=21						
KBK	**Karagaybulak**	7.51	31	P	Pn	17 48 12.3	+2.3
	SNR=19						
CHMS	**Chumysh**	7.71	29	P	Pn	17 48 13.9	+1.3
	SNR=43						
USP	**Ospenovka**	7.85	27	P	Pn	17 48 15.7	+1.2
	SNR=14						
TKM2	**Tokmak 2**	8.01	33	⇑P	Pn	17 48 17.7	+1.0
	comp=N,39nm,1.6s						
TKM2				⇓S	Sn	17 49 46.3	+0.4
	comp=N,12nm,0.9s						
TKM2	**Tokmak 2**	8.01	33	P	Pn	17 48 17.8	+1.2
	SNR=25						
SMLA	**Simla**	8.15	128	*e*P	Pn	17 48 17.3	-1.1
SMLA				*e*S	Sn	17 49 44.2	-5.0
SMLA				IAML		17 49 47.2	
	comp=E,54nm,0.4s						
SMLA				IAML		17 49 47.9	
	comp=N,49nm,0.1s						
GEYT	**Alibeck**	9.34	283	P	Pn	17 48 36.3	+2.0
	comp=N,0.8nm,0.3s,baz=116,slow=10,SNR=8.2						
GEYT				S	Sn	17 50 17.0	-0.9
	comp=N,0.7nm,0.3s,baz=88,slow=34,SNR=4.2						
GYA0	**ALIBECK ARRAY**	9.34	283	⇑P	Pn	17 48 36.1	+1.8
GYA0B	**ALIBECK ARRAY**	9.34	283	⇑S	Sn	17 50 18.1	+0.2
KUDL	**Kundal**	10.03	143	*e*P	Pn	17 48 30.1	-13
KUDL				*e*S	Sn	17 50 12.5	-22
KUDL				IAML		17 50 16.1	
	comp=N,8.9nm,0.4s						
KUDL				IAML		17 50 16.6	
	comp=E,14nm,0.3s						
JOSI	**Joshimath**	10.10	122	*e*P	Pn	17 48 44.7	+0.1
JOSI				*e*S	Sn	17 50 32.9	-3.6
JOSI				IAML		17 50 38.2	
	comp=E,50nm,0.5s						
PYUN	**Piuthan**	13.97	122	*e*P	Pn	17 49 32.6	-2.2
	comp=E,29nm,0.6s						
MK31	**Makanchi Array**	14.07	38	P	Pn	17 49 37.6	+1.9
	comp=E,3.0nm,0.6s,baz=224,slow=16,SNR=30						
MKAR	**Makanchi Array**	14.07	38	P	Pn	17 49 36.4	+0.7
	comp=E,0.8nm,0.3s,baz=222,slow=9.7,SNR=32						
AB31	**Akbulak array**	14.71	334	P	P	17 49 45.7	-0.2
	comp=E,1.5nm,0.5s,baz=149,slow=12,SNR=38						
AB31				⇑S	Sn	17 52 20.6	-6.3
	comp=E,1.6nm,0.6s,baz=157,slow=24,SNR=4.0						
GKN	**Gorkha**	15.17	119	*e*P	Pn	17 49 48.3	-1.5
	comp=E,33nm,0.5s						
KURBB	**Kurchatov Arra**	15.63	21	P	Pn	17 49 54.7	-0.4
	comp=E,0.2nm,0.3s,baz=207,slow=11,SNR=12						
DMN	**Daman**	15.74	119	*e*P	Pn	17 49 56.1	-0.8
	comp=E,19nm,0.6s						
KURK	**Kurchatov**	15.74	21	⇑P	P	17 50 00.1	+2.8
	comp=E,6.5nm,0.9s						
KKN	**Kakani**	15.75	118	*e*P	Pn	17 49 55.9	-1.1
	comp=E,44nm,0.7s						
PKIN	**Phulchoki**	15.96	119	*e*P	Pn	17 49 59.1	-0.6
	comp=E,22nm,0.4s						
PKI	**Pulchoki**	15.97	119	*e*P	Pn	17 49 58.7	-1.2
	comp=E,15nm,0.3s						
GUN	**Gumba**	16.11	117	*e*P	Pn	17 50 01.2	-0.3
	comp=E,20nm,0.4s						
AKTO	**Aktyubinsk**	16.39	333	P	P	17 50 06.7	+2.2
	comp=E,0.1nm,0.3s,baz=123,slow=9.2,SNR=6.3						
AKTO				S	S	17 53 01.3	-4.9
	comp=E,0.2nm,0.3s,baz=30,slow=18,SNR=3.6						
JIRN	**Jiri**	16.48	117	*e*P	P	17 50 05.9	-0.2
	comp=E,36nm,0.4s						
BVA0	**Borovoye Array**	16.68	2	⇓P	Pn	17 50 10.5	+2.6
	comp=E,2.3nm,0.7s,baz=164,slow=13,SNR=16						
BVAR	**Borovoye Array**	16.68	2	P	Pn	17 50 08.5	+0.7
	comp=E,0.6nm,0.3s,baz=175,slow=9.9,SNR=14						
ZALV	**Zalesovo Beam**	20.52	26	P	P	17 50 51.8	+2.5
	comp=E,4.9nm,0.4s,baz=220,slow=11,SNR=23						

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*SOME **03** 17:50:03.5,43°.67N×84°.32E,h10*^{km}

*NNC **03** 17:50:05.5±1.4,43°.77N×84°.19E,h16*^{km}*±7*^{km}*,mb3.8, mpv3.5,Error ellipse: s-maj=11.4km s-min=4.7km az=131.0*

ISC 03 17:50:05.5±1.9**,43°.80N**±0°.08×**84°.17E**±0°.08**,h10**^{km}**,n20, σ2**^{s}**09**/30**,1C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	2.79	264	Pg	Pb	17 50 56.9	+1.3
	9.6nm,0.2s						
KTMS				Lg	Lg	17 51 35.4	
	32nm,0.2s						
KTMS	**Ketmen**	2.79	264	*e*P	Pb	17 50 56.9	+1.3
	9.6nm,0.2s						
KTMS				*e*S	Sg	17 51 35.4	+0.1
	32nm,0.2s						
DJR	**Jarkent**	3.20	281	Pg	Pb	17 51 04.6	+2.1
	15nm,0.3s						
DJR				Lg	Lg	17 51 48.7	
	16nm,0.3s						
DJR	**Jarkent**	3.20	281	*e*P	Pb	17 51 04.6	+2.1
	15nm,0.3s						
DJR				*e*S	Sg	17 51 48.6	+0.4
	16nm,0.3s						
MK31	**Makanchi Array**	3.27	337	Pn	Pn	17 50 56.2	-0.6
	0.1nm,0.2s,baz=151,slow=16,SNR=52						
MK31				Pg	Pb	17 51 04.9	+1.2
	2.0nm,0.3s,baz=143,slow=17,SNR=19						
MK31				⇓Lg	Lg	17 51 50.3	
	3.1nm,0.2s,baz=148,slow=29,SNR=12						
PDGK	**Podgornoye**	3.43	264	Pg	Pb	17 51 07.6	+1.1
	2.6nm,0.4s						
PDGK				Lg	Lg	17 51 53.5	
	10nm,0.5s						
PDGK	**Podgornoye**	3.43	264	⇓Pn	Pn	17 50 59.3	+0.1
	2.4nm,0.4s						
PDGK				⇑Lg	Lg	17 51 54.9	
	17nm,0.6s						
ZSN	**Zaisan**	3.68	7	Pg	Pg	17 51 14.0	-1.9
	1.6nm,0.3s						
ZSN				Lg	Lg	17 52 04.6	
	9.5nm,0.5s						
ZSN	**Zaisan**	3.68	7	*e*P	Pg	17 51 14.0	-1.9
	1.6nm,0.3s						
ZSN				*e*S	Sg	17 52 04.7	+1.0
	9.5nm,0.5s						
KAPS	**Kapalarasan**	3.75	295	Pg	Pb	17 51 14.6	+2.8
	4.3nm,0.3s						
KAPS				Lg	Lg	17 52 05.5	
	16nm,0.5s						
KAPS	**Kapalarasan**	3.75	295	*e*P	Pb	17 51 14.6	+2.8
	4.3nm,0.3s						
KAPS				*e*S	Sg	17 52 05.5	-0.3
	16nm,0.5s						
UZB	**Uzynbulak**	3.80	262	Pg	Pb	17 51 14.9	+2.1
	6.4nm,0.4s						
UZB				Lg	Lg	17 52 06.1	
	12nm,0.5s						
UZB	**Uzynbulak**	3.80	262	*e*P	Pb	17 51 14.9	+2.1
	6.4nm,0.4s						
UZB				*e*S	Sg	17 52 06.1	-1.5
	12nm,0.5s						
KPKS	**Kokpek**	4.00	267	*e*P	Pb	17 51 19.1	+3.1
	13nm,0.4s						
KPKS				*e*S	Sg	17 52 13.7	-0.1
	29nm,0.5s						
MNBS	**Baschi**	4.17	276	Pg	Pb	17 51 21.9	+2.8
	7.5nm,0.3s						
MNBS				Lg	Lg	17 52 18.1	
	17nm,0.3s						
MNBS	**Baschi**	4.17	276	*e*P	Pb	17 51 21.9	+2.8
	7.5nm,0.3s						
MNBS				*e*S	Sg	17 52 18.1	-1.4
	17nm,0.3s						
SATY	**Saty**	4.26	262	Pg	Pb	17 51 23.5	+2.9
	5.8nm,0.2s						
SATY				Lg	Lg	17 52 21.0	
	21nm,0.4s						
SATY	**Saty**	4.26	262	*e*P	Pb	17 51 23.5	+2.9
	5.8nm,0.2s						
SATY				*e*S	Sg	17 52 21.0	-1.4
	21nm,0.4s						
TDK	**Taldyqorghan**	4.30	288	Pg	Pb	17 51 24.7	+3.6
	37nm,0.3s						
TDK				Lg	Lg	17 52 23.5	
	46nm,0.7s						
TDK	**Taldyqorghan**	4.30	288	*e*P	Pg	17 51 25.2	-2.6
	37nm,0.3s						
TDK				*e*S	Sg	17 52 23.5	-0.1
	46nm,0.7s						

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*SKHL **03** 17:57:30.4±0.1,42°.94N×147°.07E,h40*^{km}*,mb3.5/3*

*ISCJB **03** 17:57:32.7±1.2,44°.25N±0°.08×145°.63E±0°.08, h152*^{km}*±10*^{km}*,Error ellipse: s-maj=14.2km s-min=7.1km az=150.8*

*JMA **03** 17:57:32.4±0.2,44°.30N×145°.68E,h154*^{km}*±2*^{km}*,M2.8*

ISC 03 17:57:33.6±2.1**,44°.26N**±0°.08×**145°.64E**±0°.06**, h149**^{km}±15^{km}**,n17,σ0**^{s}**66**/25**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	0.28	144	*e*P	Pn	17 57 53.0	-0.9
YUK				AMB	AMB	17 57 54.0	
	10.0nm,0.2s						
YUK				*e*S	Sn	17 58 10.0	+0.7
YUK				A	A	17 58 18.0	
	50nm,0.4s						
YUK				A	A	17 58 18.0	
	90nm,0.4s						
GRPR	**Tuman**	0.28	160	*e*P	Pn	17 57 53.0	-1.0
GRPR				AMB	AMB	17 57 56.0	
	120nm,0.3s						
GRPR				AMB	AMB	17 57 56.0	
	70nm,0.3s						
GRPR				AMB	AMB	17 57 56.0	
	20nm,0.3s						
GRPR				*e*S	Sn	17 58 10.0	+0.6
GRPR				A	A	17 58 11.0	
	40nm,0.1s						
GRPR				A	A	17 58 11.0	
	30nm,0.1s						
JRA	**Rausu**	0.49	229	P	Pn	17 57 54.4	-0.3
JNSB	**Nemuroshibetsu**	0.66	224	P	Pn	17 57 55.7	0.0
JNSB				*e*S	Sn	17 58 13.3	+0.8
NEM2	**Nemuro 2**	0.90	175	P	Pn	17 57 56.7	-0.7
NEM2				*e*S	Sn	17 58 15.1	-0.4
JNK	**Nakash**	0.94	225	P	Pn	17 57 57.7	-0.1
JKHN	**Kushirohamanak**	1.22	197	*e*S	Sn	17 58 21.4	+0.8
JTKR	**Abashiri--Toko**	1.28	258	P	Pn	17 58 00.3	-0.5
JTKR				*e*S	Sn	17 58 21.3	-0.2
JAK	**Akkeshi**	1.43	209	P	Pn	17 58 02.0	-0.4
JAK				*e*S	Sn	17 58 24.9	+0.6
JAR	**Ashorobuto**	1.66	235	P	Pn	17 58 05.0	+0.2
JMP	**Maruseppu**	1.66	262	P	Pn	17 58 04.3	-0.5
KUR	**Kuril'sk**	1.87	58	*e*P	Pn	17 58 06.7	-0.3
KUR				AMB	AMB	17 58 07.1	
	30nm,0.5s						
KUR				AMB	AMB	17 58 07.1	
	40nm,0.5s						
KUR				AMB	AMB	17 58 07.1	
	10.0nm,0.5s						
KUR				*e*S	Sn	17 58 33.9	+1.2
KUR				A	A	17 58 37.4	
	10.0nm,0.2s						
KUR				A	A	17 58 37.4	
	20nm,0.2s						
JOB	**Onbets**	1.88	225	*e*S	Sn	17 58 33.9	+0.8
JKK2	**Kamakawa 2**	2.12	261	P	Pn	17 58 09.9	-0.1
JKK2				*e*S	Sn	17 58 38.6	+0.6
ASAJ	**Asahikawa**	2.19	267	P	Pn	17 58 10.9	0.0
JSE	**Soyaes**	2.29	289	P	Pn	17 58 11.1	-0.9
JCH	**Churui**	2.33	226	*e*S	Sn	17 58 42.0	-0.6

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*PRU **03** 17:59:01.9±0.0,43°.35N×12°.01E,h0*^{km}

*ROM **03** 17:59:07.6±0.1,43°.437N±0°.003×13°.126E±0°.005, h9*^{km}*,ML3.3/56,Error ellipse: s-maj=0.4km s-min=0.2km az=61.0*

*ISCJB **03** 17:59:08.2±0.2,43°.41N±0°.02×13°.06E±0°.02,h21*^{km}*±2*^{km}*, Error ellipse: s-maj=2.8km s-min=2.1km az=19.5*

*LDG **03** 17:59:09.1±0.1,43°.40N×13°.14E,h2*^{km}*,Ml2.7/22,Error ellipse: s-maj=3.5km s-min=2.9km az=34.0*

ISC 03 17:59:07.8±0.8**,43°.41N**±0°.02×**13°.10E**±0°.02**,h12**^{km}±4^{km}**, n115,σ1**^{s}**64**/160**,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	**Cingoli**	0.08	116	*e*P	Pg	17 59 10.1	-0.4
CING				S	Sg	17 59 11.9	-0.5
CING				AML	AML		
	comp=E,54900μm,0.6s						
CING				AML	AML		
	comp=N,72850μm,0.4s						
CING				AML	AML		
	comp=N,72850μm,0.4s						
CING				AML	AML		
	comp=E,54900μm,0.6s						
MMUR	**Monte Murano**	0.08	293	P	Pg	17 59 10.4	-0.1
MMUR				S	Sg	17 59 12.5	0.0
MMUR				AML	AML		
	comp=E,42250μm,0.6s						
MMUR				AML	AML		
	comp=N,57700μm,0.3s						
MMUR				AML	AML		
	comp=E,42250μm,0.6s						
MMUR				AML	AML		
	comp=N,57650μm,0.3s						
MMUR				AML	AML		
	comp=E,42300μm,0.6s						
MMUR				AML	AML		
	comp=N,57700μm,0.3s						
MMUR				AML	AML		
	comp=N,57700μm,0.3s						
MMUR				AML	AML		
	comp=E,42300μm,0.6s						
ARVD	**Arcevia**	0.14	308	P	Pg	17 59 11.2	-0.2
ARVD				S	Sg	17 59 13.9	+0.1
ARVD				AML	AML		
	comp=E,7245μm,0.1s						
ARVD				AML	AML		
	comp=N,6645μm,0.3s						
ARVD				AML	AML		
	comp=E,7245μm,0.1s						
ARVD				AML	AML		
	comp=N,6645μm,0.3s						
ARVD				AML	AML		
	comp=E,7250μm,0.1s						
ARVD				AML	AML		
	comp=N,6645μm,0.3s						
ARVD				AML	AML		
	comp=E,7250μm,0.1s						
ARVD				AML	AML		
	comp=N,6645μm,0.3s						
MTL1	**Matelica**	0.17	203	P	Pg	17 59 12.4	+0.8
MTL1				S	Sb	17 59 16.2	+1.9
MTL1				AML	AML		
	comp=E,23850μm,0.5s						
MTL1				AML	AML		
	comp=N,19450μm,0.5s						
MTL1				AML	AML		
	comp=E,23900μm,0.5s						
MTL1				AML	AML		
	comp=N,19400μm,0.5s						
MTL1				AML	AML		
	comp=E,23850μm,0.5s						
MTL1				AML	AML		
	comp=N,19450μm,0.5s						
MTL1				AML	AML		
	comp=E,23850μm,0.5s						
MTL1				AML	AML		
	comp=N,19450μm,0.5s						
GAG1	**Gagliole**	0.17	188	P	Pg	17 59 12.4	+0.7
GAG1				S	Sb	17 59 16.0	+1.5
GAG1				AML	AML		
	comp=E,30700μm,0.5s						
GAG1				AML	AML		
	comp=N,30850μm,0.4s						
GAG1				AML	AML		
	comp=E,30700μm,0.5s						
GAG1				AML	AML		
	comp=N,30850μm,0.4s						
GAG1				AML	AML		
	comp=E,30650μm,0.5s						
GAG1				AML	AML		
	comp=N,30850μm,0.4s						
GAG1				AML	AML		
	comp=E,30650μm,0.5s						
GAG1				AML	AML		
	comp=N,30850μm,0.4s						
SNTG	**Esanatoglia**	0.19	217	*e*P	Pg	17 59 12.8	+0.7
SNTG				S	Sb	17 59 16.9	+1.9
SNTG				AML	AML		
	comp=E,1172μm,0.8s						
SNTG				AML	AML		
	comp=N,1190μm,1.1s						
SNTG				AML	AML		
	comp=E,10040μm,0.8s						
SNTG				AML	AML		
	comp=N,9160μm,1.1s						
SNTG				AML	AML		
	comp=E,1172μm,0.8s						
SNTG				AML	AML		
	comp=N,1185μm,1.1s						
SNTG				AML	AML		
	comp=E,10040μm,0.8s						
SNTG				AML	AML		
	comp=N,9160μm,1.1s						
SNTG				AML	AML		
	comp=E,1169μm,0.8s						
SNTG				AML	AML		
	comp=N,1185μm,1.1s						
SNTG				AML	AML		
	comp=E,10040μm,0.8s						
SNTG				AML	AML		
	comp=N,9160μm,1.1s						
SNTG				AML	AML		
	comp=E,1169μm,0.8s						
SNTG				AML	AML		
	comp=E,10040μm,0.8s						
SNTG				AML	AML		
	comp=N,1185μm,1.1s						
SNTG				AML	AML		
	comp=N,9160μm,1.1s						
CRM1	**Catelraimondo**	0.20	189	P	Pg	17 59 13.0	+0.8
CRM1				S	Sb	17 59 17.4	+2.2
CRM1				AML	AML		
	comp=E,33300μm,0.4s						
CRM1				AML	AML		
	comp=N,42500μm,0.3s						
CRM1				AML	AML		
	comp=E,33300μm,0.4s						
CRM1				AML	AML		
	comp=N,42500μm,0.3s						
CRM1				AML	AML		
	comp=E,33300μm,0.4s						
CRM1				AML	AML		
	comp=N,42550μm,0.3s						
CRM1				AML	AML		
	comp=E,33300μm,0.4s						
CRM1				AML	AML		
	comp=N,42550μm,0.3s						
MDAR	**Monte D'Aria**	0.22	172	P	Pg	17 59 13.2	+0.6
MDAR				S	Sb	17 59 17.4	+1.6
MDAR				AML	AML		
	comp=E,15850μm,0.6s						
MDAR				AML	AML		
	comp=N,10780μm,0.7s						
MDAR				AML	AML		
	comp=E,15850μm,0.6s						
MDAR				AML	AML		
	comp=N,10760μm,0.7s						
MDAR				AML	AML		
	comp=E,15850μm,0.6s						
MDAR				AML	AML		
	comp=N,10765μm,0.7s						
MDAR				AML	AML		
	comp=E,15850μm,0.6s						
MDAR				AML	AML		
	comp=N,10765μm,0.7s						

COR1	**Corinaldo**	**0.23**	**342**	P	**Pg**	**17 59 13.2**	**+0.4**
COR1	comp=E,21500µm,0.9s			AML	AML		
COR1	comp=N,16050µm,1.5s			AML	AML		
COR1	comp=E,11250µm,0.9s			AML	AML		
COR1	comp=N,14565µm,0.3s			AML	AML		
COR1	comp=E,21450µm,0.9s			AML	AML		
COR1	comp=N,16000µm,1.5s			AML	AML		
COR1	comp=E,11200µm,0.9s			AML	AML		
COR1	comp=N,14535µm,0.3s			AML	AML		
COR1	comp=E,21450µm,0.9s			AML	AML		
COR1	comp=N,16000µm,1.5s			AML	AML		
COR1	comp=E,11250µm,0.9s			AML	AML		
COR1	comp=N,14550µm,0.3s			AML	AML		
COR1	comp=E,21450µm,0.9s			AML	AML		
COR1	comp=N,16000µm,1.5s			AML	AML		
COR1	comp=N,14550µm,0.3s			AML	AML		
COR1	comp=E,11250µm,0.9s			AML	AML		
FOSV	**Fossato di Vic**	**0.27**	**245**	P	**Pg**	**17 59 14.0**	**+0.5**
FOSV				S	**Sb**	**17 59 19.2**	**-0.1**
FOSV	comp=E,6195µm,0.7s			AML	AML		
FOSV	comp=N,6465µm,0.6s			AML	AML		
FOSV	comp=E,6195µm,0.7s			AML	AML		
FOSV	comp=N,6465µm,0.6s			AML	AML		
FOSV	comp=E,6195µm,0.7s			AML	AML		
FOSV	comp=N,6465µm,0.6s			AML	AML		
FRON	**Frontone**	**0.29**	**292**	P	**Pg**	**17 59 14.1**	**+0.2**
FRON				S	**Sb**	**17 59 19.5**	**-0.4**
FRON	comp=E,3915µm,0.1s			AML	AML		
FRON	comp=N,4980µm,0.7s			AML	AML		
FRON	comp=E,3915µm,0.1s			AML	AML		
FRON	comp=N,4980µm,0.7s			AML	AML		
FRON	comp=N,4980µm,0.7s			AML	AML		
FRON	comp=E,3915µm,0.1s			AML	AML		
SENI	**Senigallia**	**0.31**	**18**	P	**Pg**	**17 59 14.5**	**+0.3**
SENI	comp=E,11125µm,0.6s			AML	AML		
SENI	comp=N,14300µm,0.6s			AML	AML		
SENI	comp=E,4430µm,1.0s			AML	AML		
SENI	comp=N,5465µm,0.8s			AML	AML		
SENI	comp=E,4450µm,1.0s			AML	AML		
SENI	comp=N,5470µm,0.8s			AML	AML		
SENI	comp=N,5470µm,0.8s			AML	AML		
SENI	comp=E,4450µm,1.0s			AML	AML		
CSP1	**Cessapalombo**	**0.33**	**166**	P	**Pg**	**17 59 15.0**	**+0.5**
CSP1				S	**Sb**	**17 59 21.0**	**+0.1**
CSP1	comp=E,14950µm,0.5s			AML	AML		
CSP1	comp=N,18000µm,0.4s			AML	AML		
CSP1	comp=E,14950µm,0.5s			AML	AML		
CSP1	comp=N,18000µm,0.4s			AML	AML		
CSP1	comp=N,18000µm,0.4s			AML	AML		
CSP1	comp=E,14950µm,0.5s			AML	AML		
MPAG	**Monte Paganucc**	**0.33**	**312**	P	**Pg**	**17 59 14.3**	**-0.3**
MPAG				S	**Sg**	**17 59 19.9**	**+0.8**
MPAG	comp=E,2355µm,0.6s			AML	AML		
MPAG	comp=N,3525µm,0.7s			AML	AML		
MPAG	comp=E,2360µm,0.6s			AML	AML		
MPAG	comp=N,3525µm,0.7s			AML	AML		
MPAG	comp=E,2360µm,0.6s			AML	AML		
MPAG	comp=N,3525µm,0.7s			AML	AML		
FSSB	**Fossombrone**	**0.37**	**320**	P	**Pg**	**17 59 15.0**	**-0.2**
FSSB	comp=E,6925µm,0.1s			AML	AML		
FSSB	comp=N,11200µm,0.3s			AML	AML		
FSSB	comp=E,6930µm,0.1s			AML	AML		
FSSB	comp=N,11200µm,0.3s			AML	AML		
FSSB	comp=E,6930µm,0.1s			AML	AML		
FSSB	comp=N,11200µm,0.3s			AML	AML		
PCRO	**Pietralacroce**	**0.37**	**58**	P	**Pg**	**17 59 15.4**	**+0.1**
PCRO	comp=E,15850µm,0.5s			AML	AML		
PCRO	comp=N,14200µm,0.5s			AML	AML		
PCRO	comp=E,15850µm,0.5s			AML	AML		
PCRO	comp=N,14250µm,0.5s			AML	AML		
PCRO	comp=E,15850µm,0.5s			AML	AML		
PCRO	comp=N,14250µm,0.5s			AML	AML		
FDMO	**Fiordimonte**	**0.37**	**181**	P	**Pg**	**17 59 15.9**	**+0.6**
FDMO				S	**Sb**	**17 59 22.7**	**+0.5**
FDMO	comp=E,7600µm,0.8s			AML	AML		
FDMO	comp=N,6060µm,1.1s			AML	AML		
FDMO	comp=E,7600µm,0.8s			AML	AML		
FDMO	comp=N,6060µm,1.1s			AML	AML		
FDMO	comp=N,6060µm,1.1s			AML	AML		
FDMO	comp=E,7600µm,0.8s			AML	AML		
MNTP	**Montappone**	**0.38**	**135**	P	**Pg**	**17 59 16.3**	**+0.8**
MNTP	comp=E,11350µm,0.8s			AML	AML		
MNTP	comp=N,11250µm,0.3s			AML	AML		
MNTP	comp=E,11355µm,0.8s			AML	AML		
MNTP	comp=N,11300µm,0.3s			AML	AML		
MNTP	comp=N,11300µm,0.3s			AML	AML		
MNTP	comp=E,11355µm,0.8s			AML	AML		
ATFO	**Monte Foce - G**	**0.39**	**264**	P	**Pg**	**17 59 16.1**	**+0.5**
ATFO	comp=E,7295µm,0.5s			AML	AML		
ATFO	comp=N,14000µm,0.6s			AML	AML		
ATFO	comp=E,7295µm,0.5s			AML	AML		
ATFO	comp=N,14000µm,0.6s			AML	AML		
ATFO	comp=N,14000µm,0.6s			AML	AML		
ATFO	comp=E,7295µm,0.5s			AML	AML		
AOI	**Ancona**	**0.39**	**69**	P	**Pg**	**17 59 15.4**	**-0.3**
AOI	comp=E,8210µm,0.5s			AML	AML		
AOI	comp=N,7600µm,0.4s			AML	AML		
AOI	comp=E,8205µm,0.5s			AML	AML		
AOI	comp=N,7600µm,0.4s			AML	AML		
AOI	comp=E,8205µm,0.5s			AML	AML		
AOI	comp=N,7600µm,0.4s			AML	AML		
CESI	**CESI - Serrava**	**0.43**	**199**	P	**Pg**	**17 59 17.0**	**+0.7**
CESI				S	**Sb**	**17 59 24.8**	**+1.0**
CESI	comp=E,1910µm,0.4s			AML	AML		
CESI	comp=N,2380µm,0.4s			AML	AML		
CESI	comp=E,1910µm,0.4s			AML	AML		
CESI	comp=N,2380µm,0.4s			AML	AML		
CESI	comp=E,1910µm,0.4s			AML	AML		
CESI	comp=N,2380µm,0.4s			AML	AML		
PIEI	**Pieia**	**0.43**	**287**	P	**Pg**	**17 59 16.4**	**0.0**
PIEI				S	**Sb**	**17 59 23.6**	**-0.2**
PIEI	comp=E,4665µm,0.1s			AML	AML		
PIEI	comp=N,2390µm,0.5s			AML	AML		
PIEI	comp=E,4665µm,0.1s			AML	AML		
PIEI	comp=N,2390µm,0.5s			AML	AML		
PIEI	comp=E,4665µm,0.1s			AML	AML		
PIEI	comp=N,2390µm,0.5s			AML	AML		
MURB	**Monte Urbino**	**0.44**	**251**	P	**Pb**	**17 59 17.5**	**-0.2**
MURB				S	**Sb**	**17 59 25.3**	**+1.0**
MURB	comp=E,11750µm,0.3s			AML	AML		
MURB	comp=N,10935µm,0.4s			AML	AML		
MURB	comp=E,12600µm,0.3s			AML	AML		
MURB	comp=N,11100µm,0.4s			AML	AML		
MURB	comp=E,11800µm,0.3s			AML	AML		
MURB	comp=N,10950µm,0.4s			AML	AML		
MURB	comp=E,12600µm,0.3s			AML	AML		
MURB	comp=N,11100µm,0.4s			AML	AML		
MURB	comp=N,11100µm,0.4s			AML	AML		
MURB	comp=E,12600µm,0.3s			AML	AML		
MURB	comp=E,11800µm,0.3s			AML	AML		
MURB	comp=N,10950µm,0.4s			AML	AML		
FEMA	**Monte Fema**	**0.45**	**185**	P	**Pg**	**17 59 17.4**	**+0.6**
ATVO	**AVT- Monte Val**	**0.51**	**267**	P	**Pg**	**17 59 18.1**	**+0.4**
ATVO				S	**Sb**	**17 59 26.7**	**+0.7**
ATVO	comp=E,2035µm,0.9s			AML	AML		
ATVO	comp=N,3500µm,0.5s			AML	AML		
ATVO	comp=E,2035µm,0.9s			AML	AML		
ATVO	comp=N,3495µm,0.5s			AML	AML		
ATVO	comp=N,3495µm,0.5s			AML	AML		
ATVO	comp=E,2035µm,0.9s			AML	AML		
ATPI	**Pietralunga -**	**0.51**	**275**	P	**Pg**	**17 59 18.2**	**+0.4**
ATPI	comp=E,3505µm,0.7s			AML	AML		
ATPI	comp=N,2580µm,0.6s			AML	AML		
ATPI	comp=E,3500µm,0.7s			AML	AML		
ATPI	comp=N,2575µm,0.6s			AML	AML		
ATPI	comp=N,2575µm,0.6s			AML	AML		
ATPI	comp=E,3500µm,0.7s			AML	AML		
PE3	**Peglio**	**0.52**	**303**	P	**Pg**	**17 59 18.4**	**+0.3**
PE3	comp=E,4215µm,0.9s			AML	AML		
PE3	comp=N,5115µm,0.4s			AML	AML		
PE3	comp=N,5115µm,0.4s			AML	AML		
PE3	comp=E,4215µm,0.9s			AML	AML		
PESA	**Pesaro**	**0.56**	**341**	P	**Pg**	**17 59 18.8**	**0.0**
PESA	comp=E,3820µm,0.8s			AML	AML		
PESA	comp=N,3125µm,1.4s			AML	AML		
PESA	comp=E,3820µm,0.8s			AML	AML		
PESA	comp=N,3125µm,1.4s			AML	AML		
PESA	comp=N,3125µm,1.4s			AML	AML		
PESA	comp=E,3820µm,0.8s			AML	AML		
NRCA	**Norcia**	**0.58**	**179**	P	**Pg**	**17 59 19.5**	**+0.4**
NRCA	comp=E,4170µm,0.1s			AML	AML		
NRCA	comp=N,4025µm,1.1s			AML	AML		
NRCA	comp=E,4485µm,0.1s			AML	AML		
NRCA	comp=N,4340µm,1.1s			AML	AML		
NRCA	comp=E,4485µm,0.1s			AML	AML		
NRCA	comp=E,4170µm,0.1s			AML	AML		
NRCA	comp=N,4025µm,1.1s			AML	AML		
NRCA	comp=N,4340µm,1.1s			AML	AML		
ATTE	**AVT- Monte Tez**	**0.58**	**249**	P	**Pg**	**17 59 19.4**	**+0.2**
ATTE	comp=E,1204µm,1.5s			AML	AML		
ATTE	comp=N,1016µm,0.4s			AML	AML		
ATTE	comp=E,1204µm,1.5s			AML	AML		
ATTE	comp=N,1016µm,0.4s			AML	AML		
ATTE	comp=N,1016µm,0.4s			AML	AML		
ATTE	comp=E,1204µm,1.5s			AML	AML		
ATMI	**Monte Miggiano**	**0.61**	**263**	P	**Pb**	**17 59 20.5**	**0.0**
ATMI	comp=E,1560µm,0.9s			AML	AML		
ATMI	comp=N,1545µm,0.9s			AML	AML		
ATMI	comp=E,1560µm,0.9s			AML	AML		
ATMI	comp=N,1550µm,0.9s			AML	AML		
ATMI	comp=N,1550µm,0.9s			AML	AML		
ATMI	comp=E,1560µm,0.9s			AML	AML		
BADI	**Badiali**	**0.63**	**279**	P	**Pg**	**17 59 20.3**	**+0.2**
BADI	comp=E,1800µm,1.3s			AML	AML		
BADI	comp=N,3770µm,0.4s			AML	AML		
BADI	comp=E,1800µm,1.3s			AML	AML		
BADI	comp=N,3770µm,0.4s			AML	AML		
BADI	comp=N,3770µm,0.4s			AML	AML		
BADI	comp=E,1800µm,1.3s			AML	AML		
CDCA	**Citt‘ di Caste**	**0.63**	**275**	P	**Pg**	**17 59 20.5**	**+0.4**
CDCA	comp=E,1360µm,0.7s			AML	AML		
CDCA	comp=N,1540µm,1.6s			AML	AML		
CDCA	comp=E,3515µm,0.8s			AML	AML		
CDCA	comp=N,4340µm,0.9s			AML	AML		
CDCA	comp=E,1365µm,0.7s			AML	AML		
CDCA	comp=N,1577µm,1.6s			AML	AML		
CDCA	comp=N,4340µm,0.9s			AML	AML		
CDCA	comp=E,1365µm,0.7s			AML	AML		
CDCA	comp=E,3515µm,0.8s			AML	AML		
CDCA	comp=N,1577µm,1.6s			AML	AML		
PARC	**Parchiule**	**0.67**	**291**	P	**Pg**	**17 59 20.8**	**0.0**
PARC	comp=E,1047µm,0.3s			AML	AML		
PARC	comp=N,909µm,0.3s			AML	AML		
PARC	comp=E,1047µm,0.3s			AML	AML		
PARC	comp=N,909µm,0.3s			AML	AML		
PARC	comp=E,1047µm,0.3s			AML	AML		
PARC	comp=N,909µm,0.3s			AML	AML		
CPGN	**Carpegna, Ital**	**0.69**	**305**	P	**Pg**	**17 59 21.6**	**+0.4**
CPGN	comp=E,1445µm,1.1s			AML	AML		
CPGN	comp=N,1610µm,1.1s			AML	AML		
CPGN	comp=E,1370µm,0.7s			AML	AML		
CPGN	comp=N,1595µm,1.1s			AML	AML		
CPGN	comp=E,1440µm,1.1s			AML	AML		
CPGN	comp=N,1610µm,1.1s			AML	AML		
CPGN	comp=E,1368µm,0.7s			AML	AML		
CPGN	comp=N,1578µm,1.1s			AML	AML		
CPGN	comp=N,1610µm,1.1s			AML	AML		
CPGN	comp=N,1578µm,1.1s			AML	AML		
CPGN	comp=E,1368µm,0.7s			AML	AML		
CPGN	comp=E,1440µm,1.1s			AML	AML		
GUMA	**Gualdo di Mace**	**0.70**	**119**	P	Pg	17 59 16.4	-5.1
GUMA	comp=E,64350µm,0.4s			AML	AML		
GUMA	comp=N,34500µm,0.3s			AML	AML		
GUMA	comp=E,80150µm,0.3s			AML	AML		
GUMA	comp=N,25400µm,0.3s			AML	AML		
GUMA	comp=E,64400µm,0.4s			AML	AML		
GUMA	comp=N,34500µm,0.3s			AML	AML		
GUMA	comp=E,80150µm,0.3s			AML	AML		
GUMA	comp=N,25400µm,0.3s			AML	AML		
GUMA	comp=E,80150µm,0.3s			AML	AML		
GUMA	comp=N,25400µm,0.3s			AML	AML		
GUMA	comp=N,34500µm,0.3s			AML	AML		
GUMA	comp=E,64400µm,0.4s			AML	AML		
SSP9	**Sansepolcro**	**0.72**	**283**	P	**Pg**	**17 59 22.1**	**+0.2**
SSP9	comp=E,640µm,1.6s			AML	AML		
SSP9	comp=N,974µm,0.7s			AML	AML		
SMA1	**SAN MARTINO**	**0.80**	**167**	P	**Pg**	**17 59 23.3**	**0.0**
SMA1	comp=E,4310µm,0.3s			AML	AML		
SMA1	comp=N,5950µm,0.3s			AML	AML		
SMA1	comp=N,5950µm,0.3s			AML	AML		
SMA1	comp=E,4310µm,0.3s			AML	AML		
LNSS	**Leonessa**	**0.81**	**183**	P	**Pg**	**17 59 23.5**	**+0.1**
LNSS	comp=E,3255µm,1.0s			AML	AML		
LNSS	comp=N,2845µm,0.4s			AML	AML		
LNSS	comp=E,3260µm,1.0s			AML	AML		
LNSS	comp=N,2845µm,0.4s			AML	AML		
LNSS	comp=N,2845µm,0.4s			AML	AML		
LNSS	comp=E,3260µm,1.0s			AML	AML		
CAFI	**Castiglion Fio**	**0.83**	**265**	P	**Pg**	**17 59 24.2**	**+0.3**
CAFI	comp=E,1350µm,0.7s			AML	AML		
CAFI	comp=N,952µm,0.5s			AML	AML		
CAFI	comp=E,1350µm,0.7s			AML	AML		
CAFI	comp=N,952µm,0.5s			AML	AML		
CRE	**Caprese Michel**	**0.86**	**284**	P	**Pg**	**17 59 24.4**	**-0.1**
CRE	comp=E,526µm,0.6s			AML	AML		
CRE	comp=N,488µm,0.7s			AML	AML		
CRE	comp=E,526µm,0.6s			AML	AML		
CRE	comp=N,488µm,0.7s			AML	AML		
CRE	comp=E,526µm,0.6s			AML	AML		
CRE	comp=N,488µm,0.7s			AML	AML		
ARRO	**Arrone**	**0.87**	**197**	P	**Pg**	**17 59 24.6**	**0.0**
ARRO	comp=E,1480µm,0.2s			AML	AML		
ARRO	comp=N,930µm,0.8s			AML	AML		
ARRO	comp=N,930µm,0.8s			AML	AML		
ARRO	comp=E,1480µm,0.2s			AML	AML		
TERO	**Teramo**	**0.87**	**155**	P	**Pg**	**17 59 24.3**	**-0.3**
TERO	comp=E,3860µm,0.4s			AML	AML		
TERO	comp=N,3180µm,0.7s			AML	AML		
TERO	comp=E,1540µm,0.4s			AML	AML		
TERO	comp=N,1335µm,0.7s			AML	AML		
TERO	comp=E,3860µm,0.4s			AML	AML		
TERO	comp=E,1540µm,0.4s			AML	AML		
TERO	comp=N,3180µm,0.7s			AML	AML		
TERO				AML	AML		

	comp=N,1335µm,0.7s						
CESX	**Cesi**	**0.89**	**206**	P	**Pg**	**17 59 24.9**	**0.0**
CESX				AML	AML		
	comp=E,1385µm,0.7s						
CESX				AML	AML		
	comp=N,1540µm,0.4s						
CESX				AML	AML		
	comp=N,1540µm,0.4s						
CESX				AML	AML		
	comp=E,1385µm,0.7s						
ASQU	**Asqua**	**1.03**	**293**	P	**Pb**	**17 59 27.1**	**-0.5**
ASQU				AML	AML		
	comp=E,541µm,1.2s						
ASQU				AML	AML		
	comp=N,638µm,0.9s						
ASQU				AML	AML		
	comp=N,638µm,0.9s						
ASQU				AML	AML		
	comp=E,541µm,1.2s						
SFI	**Santa Sofia**	**1.03**	**299**	P	**Pb**	**17 59 27.3**	**-0.4**
SFI				AML	AML		
	comp=E,644µm,0.8s						
SFI				AML	AML		
	comp=N,804µm,1.0s						
SFI				AML	AML		
	comp=E,644µm,0.8s						
SFI				AML	AML		
	comp=N,804µm,1.0s						
SACS	**San Casciano d**	**1.04**	**238**	AML	AML		
	comp=N,1016µm,0.7s						
SACS				AML	AML		
	comp=E,761µm,1.5s						
SACS				AML	AML		
	comp=E,816µm,1.5s						
SACS				AML	AML		
	comp=N,1034µm,0.7s						
SACS				AML	AML		
	comp=N,1034µm,0.7s						
SACS				AML	AML		
	comp=E,816µm,1.5s						
SACS				AML	AML		
	comp=E,761µm,1.5s						
SACS				AML	AML		
	comp=N,1016µm,0.7s						
T0104	**Madonna delle**	**1.06**	**170**	AML	AML		
	comp=N,3280µm,0.4s						
T0104				AML	AML		
	comp=E,3075µm,0.7s						
T0104				AML	AML		
	comp=N,3280µm,0.4s						
T0104				AML	AML		
	comp=E,3000µm,0.7s						
T0104				AML	AML		
	comp=N,3520µm,0.4s						
T0104				AML	AML		
	comp=E,3075µm,0.7s						
T0104				AML	AML		
	comp=E,3000µm,0.7s						
T0104				AML	AML		
	comp=N,3520µm,0.4s						
AQU	**L'Aquila**	**1.08**	**168**	*e*Pn	**Pb**	**17 59 26.4**	**-2.1**
FIAM	**Fiamignano**	**1.14**	**179**	AML	AML		
	comp=E,1014µm,0.4s						
FIAM				AML	AML		
	comp=N,1180µm,0.5s						
FIAM				AML	AML		
	comp=E,1014µm,0.4s						
FIAM				AML	AML		
	comp=N,1180µm,0.5s						
VCEL	**Villa Celiera**	**1.15**	**152**	AML	AML		
	comp=N,2195µm,0.5s						
VCEL				AML	AML		
	comp=E,2455µm,1.2s						
VCEL				AML	AML		
	comp=N,2195µm,0.5s						
VCEL				AML	AML		
	comp=E,2455µm,1.2s						
FAGN	**Fagnano**	**1.20**	**163**	AML	AML		
	comp=E,6860µm,0.5s						
FAGN				AML	AML		
	comp=N,4040µm,0.6s						
FAGN				AML	AML		
	comp=N,4040µm,0.6s						
FAGN				AML	AML		
	comp=E,6860µm,0.5s						
BRIS	**BRISIGHELLA**	**1.37**	**303**	AML	AML		
	comp=E,712µm,0.6s						
BRIS				AML	AML		
	comp=E,712µm,0.6s						
BRIS				AML	AML		
	comp=N,792µm,1.0s						
BRIS				AML	AML		
	comp=N,792µm,1.0s						
INTR	**Introdacqua**	**1.52**	**157**	AML	AML		
	comp=N,1092µm,0.7s						
INTR				AML	AML		
	comp=E,876µm,0.8s						
INTR				AML	AML		
	comp=N,1092µm,0.7s						
INTR				AML	AML		
	comp=E,876µm,0.8s						
DUGI	**Dugi Otok**	**1.54**	**67**	*e*Pn	**Pn**	**17 59 35.6**	**+0.5**
DUGI				Sn	**Sb**	**17 59 55.7**	**+0.1**
NVLJ	**Novalja**	**1.72**	**47**	*i* Pn	**Pn**	**17 59 37.6**	**0.0**
NVLJ				Sn	**Sn**	**17 59 59.9**	**+0.4**
ZIRJ	**Zirje**	**1.87**	**82**	*e*Pn	**Pn**	**17 59 39.6**	**0.0**
ZIRJ				Sn	**Sn**	**18 00 04.2**	**+1.1**
MORI	**Morici**	**1.95**	**76**	*e*Pn	**Pn**	**17 59 41.4**	**+0.7**
MORI				Sn	**Sn**	**18 00 05.8**	**+0.7**
RIY	**Rijeka**	**2.16**	**27**	*e*Pn	**Pn**	**17 59 42.4**	**-1.2**
UDBI	**Udbina**	**2.23**	**59**	*e*Pn	**Pb**	**17 59 46.6**	**-1.4**
UDBI				Sn	**Sb**	**18 00 14.2**	**-1.4**
KIJV	**Kijevo**	**2.47**	**75**	*i* Pn	**Pn**	**17 59 49.5**	**+1.6**
KIJV				Sn	**Sn**	**18 00 20.0**	**+2.0**
SGRT	**San Giovanni R**	**2.56**	**129**	AML	AML		
	comp=N,186µm,1.2s						
SGRT				AML	AML		
	comp=E,232µm,0.5s						
SGRT				AML	AML		
	comp=E,232µm,0.5s						
SGRT				AML	AML		
	comp=N,186µm,1.2s						
SABO	**M.te Sabotino**	**2.59**	**8**	AML	AML		
	comp=E,156µm,0.6s						
SABO				AML	AML		
	comp=E,156µm,0.6s						
SABO				AML	AML		
	comp=N,214µm,0.7s						
SABO				AML	AML		
	comp=N,214µm,0.7s						
MSAG	**Monte S. Angel**	**2.68**	**128**	AML	AML		
	comp=E,222µm,0.6s						
MSAG				AML	AML		
	comp=E,222µm,0.6s						
MSAG				AML	AML		
	comp=N,348µm,0.4s						
MSAG				AML	AML		
	comp=N,348µm,0.4s						
OZLJ	**Ozalj**	**2.78**	**37**	*e*Pn	**Pn**	**17 59 52.4**	**+0.3**
LJU	**Ljubljana**	**2.82**	**21**	*e*Pn	**Pn**	**17 59 53.4**	**+0.6**
MAKA	**Makarska**	**2.86**	**91**	*e*Pn	**Pn**	**17 59 54.1**	**+0.9**
STAL	**STALIGIAL**	**2.86**	**355**	AML	AML		
	comp=E,118µm,1.0s						
STAL				AML	AML		
	comp=N,88µm,0.7s						
STAL				AML	AML		
	comp=E,118µm,1.0s						
STAL				AML	AML		
	comp=N,88µm,0.7s						
CRES	**Cresnjev**	**2.94**	**34**	*e*Pn	**Pn**	**17 59 54.7**	**+0.3**
PTCC	**Patocco-Chiusa**	**3.00**	**3**	AML	AML		
	comp=E,55µm,0.7s						
PTCC				AML	AML		
	comp=E,55µm,0.7s						
PTCC				AML	AML		
	comp=N,52µm,0.6s						
PTCC				AML	AML		
	comp=N,52µm,0.6s						
PGF	**Pioggiola**	**3.13**	**255**	*e*Pn	**Pn**	**17 59 58.2**	**+1.1**
PGF				*e*Sn	**Sn**	**18 00 33.3**	**-1.1**
	comp=N,4.8nm,0.5s						
BLY	**Banja Luka**	**3.23**	**64**	*e*Pn	**Pg**	**18 00 08.2**	**-1.6**
MYKA	**Terra Mystica**	**3.24**	**7**	*e*Pn	**Pn**	**17 59 59.4**	**+0.8**
	comp=N,3.0nm,0.4s						
MYKA				Sg	**Sg**	**18 00 52.5**	**+0.5**
	comp=N,3.5nm,0.3s						
OBKA	**Obir**	**3.27**	**18**	*e*Pn	**Pn**	**17 59 59.3**	**+0.3**
	comp=N,0.9nm,0.2s						
OBKA				Sg	**Sg**	**18 00 50.7**	**-2.0**
	comp=N,34nm,0.8s						
ABTA	**Abfaltersbach**	**3.36**	**353**	*e*Pn	**Pn**	**18 00 01.9**	**+1.6**
	comp=N,1.2nm,0.1s,SNR=9.7						
ABTA				Sg	**Sg**	**18 00 54.4**	**-1.4**
	comp=N,13nm,0.7s						
STON	**Ston**	**3.41**	**98**	*e*Pn	**Pn**	**18 00 01.1**	**+0.3**
STON				Sn	**Sn**	**18 00 41.7**	**+0.6**
STON	**Ston**	**3.41**	**98**	*e*Pn	**Pn**	**18 00 00.8**	**0.0**
SOKA	**Soboth**	**3.54**	**22**	*e*Pn	**Pn**	**18 00 03.7**	**+1.0**
	comp=N,0.5nm,0.3s						
SOKA				Sg	**Sg**	**18 01 07.2**	**+5.6**
	comp=N,1.9nm,0.4s						
KBA	**Koelnbreinsper**	**3.67**	**3**	*e*Pn	**Pn**	**18 00 06.0**	**+1.4**
	comp=N,1.8nm,0.2s,SNR=7.4						
KBA				Sn	**Sn**	**18 00 48.1**	**+0.2**
	comp=N,8.6nm,0.5s						
DBRK	**Dubrovnik**	**3.77**	**100**	*e*Pn	**Pn**	**18 00 06.8**	**+1.0**
TREB	**Trebinje**	**3.91**	**98**	*e*Pn	**Pn**	**18 00 08.0**	**+0.3**
FETA	**Feichten**	**3.98**	**336**	*e*Pn	**Pn**	**18 00 11.3**	**+2.5**
	comp=N,8.0nm,0.7s						
FETA				Sn	**Sb**	**18 01 01.8**	**-4.3**
	comp=N,7.0nm,0.9s						
WTTA	**Wattenberg**	**3.99**	**346**	*e*Pn	**Pn**	**18 00 11.1**	**+2.2**
	comp=N,1.7nm,0.2s						
WTTA				*e*Sn	**Sn**	**18 01 00.8**	**+5.1**
	comp=N,21nm,0.9s						
BRY	**Bratogost**	**4.01**	**95**	*e*Pn	**Pn**	**18 00 10.1**	**+0.9**
SQTA	**Sankt Quirin**	**4.04**	**341**	*e*Pn	**Pn**	**18 00 11.5**	**+1.9**
	comp=N,2.9nm,0.2s						
SQTA				*e*Sn	**Sn**	**18 01 01.1**	**+4.2**
	comp=N,4.6nm,0.4s						
WATA	**Walderalm**	**4.07**	**345**	*e*Pn	**Pn**	**18 00 12.6**	**+2.6**
	comp=N,4.2nm,0.4s,SNR=8.0						
WATA				Sn	**Sn**	**18 01 01.5**	**+3.9**
	comp=N,1.6nm,0.2s						
SBF	**Sospel**	**4.14**	**278**	*e*Pn	**Pn**	**18 00 12.2**	**+1.3**
SBF				*e*Sn	**Sn**	**18 00 58.8**	**-0.4**
	comp=N,2.5nm,0.2s						
MOTA	**Moosalm**	**4.18**	**341**	*e*Pn	**Pn**	**18 00 13.6**	**+2.1**
	comp=N,0.4nm,0.1s,SNR=7.6						
MOTA				*e*Sn	**Sn**	**18 01 03.3**	**+2.9**
	comp=N,2.3nm,0.4s						
ARSA	**Arzberg**	**4.20**	**23**	*e*Pn	**Pn**	**18 00 12.7**	**+0.9**
	comp=N,1.7nm,0.3s						
ARSA				Sn	**Sn**	**18 01 05.0**	**+4.2**
	comp=N,2.7nm,0.6s						
HAPS	**Han Pijesak,Bl**	**4.29**	**79**	*e*Pn	**Pn**	**18 00 14.6**	**+1.5**
DAVA	**Damuels**	**4.49**	**331**	*e*Pn	**Pn**	**18 00 18.9**	**+3.1**
	comp=N,4.4nm,0.4s,SNR=5.4						
DAVA				*e*Sn	**Sn**	**18 01 10.4**	**+2.4**
	comp=N,16nm,0.8s						
MOA	**Molln**	**4.51**	**10**	*e*Pn	**Pn**	**18 00 17.1**	**+1.0**
	comp=N,1.4nm,0.2s						
MOA				*e*Sn	**Sn**	**18 01 12.7**	**+4.3**
	comp=N,1.1nm,0.2s						
RUDO	**Rudo**	**4.57**	**85**	*e*Pn	**Pn**	**18 00 18.7**	**+2.0**
PDG	**Podgorica**	**4.63**	**100**	*e*Pn	**Pn**	**18 00 18.6**	**+1.1**
DRME	**Dracevica, Mon**	**4.64**	**103**	*e*Pn	**Pn**	**18 00 18.9**	**+1.2**
FRF	**La Foret Royal**	**4.70**	**274**	*e*Pn	**Pn**	**18 00 19.8**	**+1.3**
FRF				*e*Sn	**Sn**	**18 01 12.3**	**-0.6**
	comp=N,1.4nm,0.3s						
MBDF	**Montbardon**	**4.75**	**288**	*e*Pn	**Pn**	**18 00 19.9**	**+0.6**
MBDF				*e*Sn	**Sn**	**18 01 12.2**	**-2.1**
	comp=N,0.9nm,0.2s						
LMR	**La Mourre**	**4.80**	**271**	*e*Pn	**Pn**	**18 00 21.2**	**+1.2**
LMR				*e*Sn	**Sn**	**18 01 13.2**	**-2.3**
	comp=N,0.8nm,0.3s						
CONA	**Conrad Observa**	**4.92**	**22**	*e*Pn	**Pn**	**18 00 22.3**	**+0.8**
	comp=N,0.6nm,0.2s						
CONA				*i* Sn	**Sn**	**18 01 16.9**	**-1.5**
	comp=N,2.5nm,0.6s						
LPG	**La Plagne**	**5.00**	**297**	*e*Pn	**Pn**	**18 00 24.0**	**+1.1**
LPG				*e*Sn	**Sn**	**18 01 18.9**	**-1.9**
	comp=N,1.5nm,0.3s						
LPL	**La Plagne**	**5.02**	**297**	*e*Pn	**Pn**	**18 00 24.7**	**+1.6**
LPL				*e*Sn	**Sn**	**18 01 19.6**	**-1.6**
	comp=N,3.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**5.41**	**289**	*e*Pn	**Pn**	**18 00 29.6**	**+1.2**
ORIF				*e*Sn	**Sn**	**18 01 28.5**	**-2.1**
	comp=N,1.1nm,0.3s						
SMRF	**Simiane la Rot**	**5.49**	**279**	*e*Pn	**Pn**	**18 00 30.2**	**+0.8**
SMRF				*e*Sn	**Sn**	**18 01 31.0**	**-1.4**
	comp=N,0.6nm,0.2s						
KHC	**Kasperske Hory**	**5.73**	**3**	*e*PN	**Pn**	**18 00 29.5**	**-3.2**
KHC				*e*SN	**Sn**	**18 01 36.1**	**-2.3**
CABF	**La Chapelle**	**5.91**	**305**	*e*Pn	**Pn**	**18 00 36.7**	**+1.4**
CABF				*e*Sn	**Sn**	**18 01 41.6**	**-1.3**
	comp=N,0.3nm,0.2s						
HINF	**Hinteralfeld**	**6.21**	**317**	*e*Pn	**Pn**	**18 00 40.1**	**+0.7**
HINF				*e*Sn	**Sn**	**18 01 48.0**	**-2.3**
	comp=N,3.1nm,0.3s						
CDF	**Champ du Feu**	**6.44**	**323**	*e*Pn	**Pn**	**18 00 43.4**	**+0.8**
CDF				*e*Sn	**Sn**	**18 01 53.5**	**-2.5**
	comp=N,1.9nm,0.3s						
HAU	**Haudompre**	**6.59**	**317**	*e*Pn	**Pn**	**18 00 45.5**	**+1.0**
HAU				*e*Sn	**Sn**	**18 01 57.0**	**-2.6**
	comp=N,4.1nm,0.3s						
PAGF	**Fort de Pagny**	**7.27**	**318**	*e*Pn	**Pn**	**18 00 54.5**	**+0.7**
PAGF				*e*Sn	**Sn**	**18 02 13.6**	**-2.6**
	comp=N,2.0nm,0.3s						
SMF	**Signal de Mont**	**7.31**	**299**	*e*Pn	**Pn**	**18 00 55.1**	**+0.7**
SMF				*e*Sn	**Sn**	**18 02 14.0**	**-3.3**
	comp=N,1.1nm,0.3s						
SFTF	**Sexfontaines**	**7.39**	**313**	*e*Pn	**Pn**	**18 00 56.3**	**+0.8**
	baz=135						
SFTF				*e*Sn	**Sn**	**18 02 15.3**	**-4.0**
	comp=N,1.8nm,0.2s						
LOR	**Lormes**	**7.57**	**304**	*e*Pn	**Pn**	**18 00 58.1**	**+0.2**
LOR				*e*Sn	**Sn**	**18 02 20.4**	**-3.2**
	comp=N,0.9nm,0.2s						
AVF	**Avril sur Loir**	**7.68**	**299**	*e*Pn	**Pn**	**18 00 59.8**	**+0.4**
AVF				*e*Sn	**Sn**	**18 02 22.7**	**-3.6**
	comp=N,0.7nm,0.3s						
SSF	**Saint Saulge**	**7.69**	**302**	*e*Pn	**Pn**	**18 00 59.9**	**+0.3**
SSF				*e*Sn	**Sn**	**18 02 23.8**	**-2.8**
	comp=N,2.0nm,0.4s						
CLL	**Collm**	**7.90**	**360**	*e*Sb	**Sb**	**18 03 01.0**	**+2.4**

ROM 03 17:59:15.3±0.1**,44°.189N**±0°.004×**10°.192E**±0°.006**,**
h7^{km},ML1.3/3**,Error ellipse: s-maj=0.5km s-min=0.4km**
az=227.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T0912	**Minucciano (LU**	**0.02**	**148**	P	Pg	17 59 16.9	+0.2
T0912				S	Sg	17 59 17.7	0.0
T0912				AML	AML		
	comp=E,1945µm,0.2s						
T0912				AML	AML		
	comp=N,3805µm,0.4s						
T0912				AML	AML		
	comp=E,1942µm,0.2s						
T0912				AML	AML		
	comp=N,3785µm,0.4s						
T0912				AML	AML		
	comp=N,3805µm,0.4s						
T0912				AML	AML		
	comp=N,3785µm,0.4s						
T0912				AML	AML		
	comp=E,1945µm,0.2s						
T0912				AML	AML		
	comp=E,1942µm,0.2s						
EQUI	**Equi**	**0.04**	**231**	P	Pg	17 59 17.0	+0.2
EQUI				S	Sg	17 59 17.7	0.0
EQUI				AML	AML		
	comp=E,2350µm,0.3s						
EQUI				AML	AML		
	comp=N,1580µm,0.3s						
EQUI				AML	AML		
	comp=E,2350µm,0.3s						
EQUI				AML	AML		
	comp=N,1580µm,0.3s						
FIVI	**Fivizzano**	**0.07**	**317**	P	Pg	17 59 17.6	+0.4
FIVI				S	Sg	17 59 18.8	+0.4
T0911	**Castelpoggio (**	**0.12**	**228**	P	Pg	17 59 18.4	+0.6
T0911				S	Sg	17 59 20.4	+0.8
VLC	**Villacollemand**	**0.14**	**102**	P	Pg	17 59 19.0	+0.7
VLC				S	Sg	17 59 21.4	+1.1
VLC				AML	AML		
	comp=E,110µm,1.1s						
VLC				AML	AML		
	comp=N,102µm,0.9s						
VLC				AML	AML		
	comp=E,86µm,1.2s						
VLC				AML	AML		
	comp=N,89µm,1.6s						
VLC				AML	AML		
	comp=N,89µm,1.6s						
VLC				AML	AML		
	comp=N,102µm,0.9s						
VLC				AML	AML		
	comp=E,110µm,1.1s						
VLC				AML	AML		
	comp=E,86µm,1.2s						
GRAM	**Graiana**	**0.32**	**343**	P	Pb	17 59 22.5	-0.8
GRAM				S	Sb	17 59 27.5	-1.2
GRAM				AML	AML		
	comp=E,420µm,0.3s						
GRAM				AML	AML		
	comp=N,396µm,0.2s						
GRAM				AML	AML		
	comp=E,420µm,0.3s						
GRAM				AML	AML		
	comp=N,396µm,0.2s						
POPM	**Popiglio**	**0.43**	**109**	P	Pg	17 59 24.2	+0.5
POPM				S	Sb	17 59 31.3	-0.6
POPM				AML	AML		
	comp=E,107µm,0.7s						
POPM				AML	AML		
	comp=N,142µm,0.8s						
POPM				AML	AML		
	comp=E,107µm,0.7s						
POPM				AML	AML		
	comp=N,142µm,0.8s						

*GEN **03** 18:00:11.0, 44°.17N×10°.14E, h4^{km}, Ml1.3*
ROM 03 18:00:10.6±0.2**,44°.168N**±0°.007×**10°.135E**±0°.006**,**
h6^{km}±1^{km}**,ML1.8**/3**,Error ellipse: s-maj=0.7km**
s-min=0.3km az=162.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	**Equi**	**0.01**	**98**	P	Pg	18 00 11.9	+0.1
EQUI				S	Sg	18 00 12.4	-0.2
EQUI	**Equi**	**0.01**	**98**	P	Pg	18 00 11.8	+0.1
EQUI				S	Sg	18 00 12.5	-0.1
T0912	**Minucciano (LU**	**0.05**	**89**	P	Pg	18 00 12.6	+0.4
T0912				S	Sg	18 00 13.8	+0.5
T0911	**Castelpoggio (**	**0.07**	**218**	P	Pg	18 00 12.9	+0.5
T0911				S	Sg	18 00 14.4	+0.7
T0911				AML	AML		
	comp=E,2060µm,0.2s						
T0911				AML	AML		
	comp=N,1500µm,0.6s						
T0911				AML	AML		
	comp=E,2010µm,0.2s						
T0911				AML	AML		
	comp=N,1474µm,0.6s						
T0911				AML	AML		
	comp=E,2060µm,0.2s						
T0911				AML	AML		
	comp=E,2010µm,0.2s						
T0911				AML	AML		
	comp=N,1500µm,0.6s						
T0911				AML	AML		
	comp=N,1474µm,0.6s						
FIVI	**Fivizzano**	**0.07**	**355**	P	Pg	18 00 12.6	+0.1
FIVI				S	Sg	18 00 14.1	+0.4
VLC	**Villacollemand**	**0.18**	**93**	P	Pg	18 00 15.1	+0.8
VLC				S	Sg	18 00 18.1	+1.4
PLMA	**Palmaria, Port**	**0.24**	**240**	P	Pg	18 00 16.1	+0.8
PLMA				S	Sg	18 00 19.3	+0.9
PLMA				AML	AML		
	comp=E,238µm,0.3s						
PLMA				AML	AML		
	comp=N,280µm,0.4s						
PLMA				AML	AML		
	comp=N,280µm,0.4s						
PLMA				AML	AML		
	comp=E,238µm,0.3s						
CARD	**Cardoso**	**0.29**	**119**	P	Pg	18 00 16.8	+0.5
CARD				S	Sg	18 00 20.9	+0.9
CARD	**Cardoso**	**0.29**	**119**	P	Pg	18 00 16.9	+0.7
CARD				S	Sg	18 00 21.2	+1.2
CARD				AML	AML		
	comp=E,206µm,1.5s						
CARD				AML	AML		
	comp=N,230µm,0.7s						
CARD				AML	AML		
	comp=E,206µm,1.5s						
CARD				AML	AML		
	comp=N,230µm,0.7s						
GRAM	**Graiana**	**0.33**	**351**	P	Pg	18 00 17.6	+0.6
GRAM				S	Sg	18 00 22.6	+1.2

IDC 03 18:18:46.2±7.6**,20°.45S**×**168°.16E,h0^{km},mb4.1**/3**,**
mb1 4.2/4**,mb1mx3.8**/24**,mbtmp4.0**/4**,ML3.2**/1**,MS3.0**/3**,**
Ms1 3.0/3**,ms1mx2.6**/26**,Error ellipse: s-maj=183.0km**
s-min=34.9km az=115.0,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.27**	**224**	Pn	Pn	18 19 25.1	0.0
	6.2nm,0.3s,baz=61,slow=19,SNR=93						
DZM				Sn	Sn	18 19 52.8	-1.0
	17nm,0.3s,baz=75,slow=19,SNR=8.4						
DZM				LR	LR	18 20 15.9	
	comp=Z,165nm,21.5s,baz=42,slow=40						
STKA	**Stephens Creek**	**26.34**	**239**	P	P	18 24 24.9	+0.8
	2.7nm,0.9s,baz=88,slow=14,SNR=2.8						
STKA				LR	LR	18 34 10.9	
	comp=Z,41nm,21.5s,baz=29,slow=35						
RAR	**Rarotonga**	**29.96**	**97**	LR	LR	18 34 15.4	
	comp=Z,56nm,21.4s,baz=148,slow=31						
ASAR	**Alice Springs**	**31.86**	**258**	P	P	18 25 13.4	+0.1
	3.3nm,0.7s,baz=87,slow=9.1,SNR=48						
CMAR	**Chiang Mai Arr**	**78.08**	**295**	P	P	18 30 47.0	-0.4
	0.6nm,0.7s,baz=101,slow=4.9,SNR=5.5						

*IDC **03** 18:22:34.6±1.3, 2°.88S×129°.30E, h0^{km}, mb3.7/3,*
mb1 3.9/4, mb1mx3.6/29, mbtmp3.8/4, ML4.0/1, MS3.3/1,
Ms1 3.3/1, ms1mx2.6/33, Error ellipse: s-maj=35.2km
s-min=22.0km az=88.0
*ISCJB **03** 18:22:36.4±1.3, 2°.74S±0°.04×129°.31E±0°.04, h4^{km}±9^{km},*
mb3.7/3, MS3.2/1, Error ellipse: s-maj=7.6km s-min=5.4km
az=141.6
*DJA **03** 18:22:38.0±0.2, 3°S±2°×12°9E±°, h10^{km}, M4.1/10, mb4.5/1,*
MLv3.9/10
ISC 03 18:22:34.2±1.5**,2°.73S**±0°.04×**129°.39E**±0°.04**,h1^{km}**±12^{km}**,**
n14,σ**1^{s}.01**/20**,mb3.8**/3**,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.77**	**217**	P	**Pb**	**18 22 50.1**	**-0.3**
MSAI				S	**Sg**	**18 22 59.7**	**+0.7**
AAI	**Ambon**	**1.53**	**231**	P	**Pg**	**18 23 04.3**	**+0.7**
AAI				S	**Sg**	**18 23 23.6**	**+0.1**
BNDI	**Bandanaira**	**1.85**	**164**	P	**Pg**	**18 23 10.2**	**+0.4**
BNDI				S	**Sb**	**18 23 32.6**	**-0.1**
NLAI	**Namlea**	**2.35**	**257**	P	**Pb**	**18 23 15.8**	**-1.5**
NLAI				S	**Sn**	**18 23 44.3**	**+0.9**
SWI	**Sorong**	**2.63**	**45**	P	**Pb**	**18 23 22.7**	**+0.6**
SWI				S	**Sb**	**18 23 56.2**	**+1.2**
SIJI	**Sorong**	**2.63**	**45**	Pn	**Pb**	**18 23 21.7**	**-0.5**
	26nm,0.3s,baz=236,slow=11,SNR=74						
SIJI				Sn	**Sb**	**18 23 54.7**	**-0.3**
	14nm,0.3s,baz=221,slow=22,SNR=12						
LBMI	**Labuha**	**2.81**	**318**	P	**Pb**	**18 23 23.2**	**-2.0**
LBMI				S	**Sn**	**18 23 55.7**	**+0.8**
FAKI	**Fak Fak**	**2.86**	**94**	P	**Pb**	**18 23 24.3**	**-1.8**
SANI	**Sanana**	**3.47**	**281**	P	**Pn**	**18 23 29.8**	**+0.4**
TNTI	**Ternate**	**4.02**	**330**	P	**Pn**	**18 23 36.5**	**-0.5**
ASAR	**Alice Springs**	**21.27**	**169**	P	**P**	**18 27 21.4**	**-0.8**
	1.9nm,0.4s,baz=351,slow=11,SNR=30						
HNR	**Honiara**	**31.08**	**104**	LR	LR	18 42 36.9	
	comp=Z,46nm,18.3s,baz=64,slow=39						
STKA	**Stephens Creek**	**31.19**	**160**	P	**P**	**18 28 54.6**	**-0.5**
	3.5nm,1.1s,baz=330,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**64.35**	**326**	P	**P**	**18 33 12.6**	**+0.8**
	0.2nm,0.6s,baz=113,slow=5.5,SNR=3.0						

*ISCJB **03** 18:36:49.6±0.4, 37°.15N±0°.06×135°.30E±0°.07, h350^{km},*
mb3.2/8, Error ellipse: s-maj=8.2km s-min=7.4km az=36.1

*IDC **03** 18:36:49.9±1.0, 36°.98N×135°.34E, h362km±11km, mb3.1/8, mb1 3.1/13, mb1mx2.9/53, mbtmp3.8/13, Error ellipse: s-maj=16.4km s-min=14.9km az=115.0*
*JMA **03** 18:36:50.7±0.1, 36°.96N×135°.41E, h355km±2km, M3.1*
ISC 03 18:36:49.4±0.8, **37°.03N**±0°.09×**135°.36E**±0°.07, **h350**km, **n31**, σ**1s.45**/34, **mb3.2**/8, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**1.08**	**133**	P	**Pn**	**18 37 37.0**	**+1.5**
JKG				*e*S	**S**	**18 38 13.9**	**+1.4**
JJH	**Hakui**	**1.15**	**95**	P	**Pn**	**18 37 37.7**	**+2.0**
JSZ	**Suzu**	**1.66**	**75**	P	**Pn**	**18 37 40.5**	**+2.1**
JWT	**Wachi**	**1.74**	**179**	P	**Pn**	**18 37 40.6**	**+1.5**
JWT				*e*S	**S**	**18 38 19.4**	**+0.5**
JYTA	**Yamagatataniai**	**1.81**	**142**	P	**Pn**	**18 37 40.8**	**+1.3**
JYTA				*e*S	**S**	**18 38 20.1**	**+0.4**
JOI	**OKI**	**1.85**	**247**	P	**Pn**	**18 37 42.0**	**+2.3**
MAT	**Matsushiro**	**2.34**	**101**	P	**Pn**	**18 37 44.4**	**+1.2**
MAT	**Matsushiro**	**2.34**	**101**	P	**Pn**	**18 37 44.6**	**+1.4**
MJAR	**Matsushiro Arr**	**2.34**	**101**	P	**Pn**	**18 37 44.6**	**+1.4**
	1.3nm,0.3s,baz=277,slow=10,SNR=78						
JSD	**Sado**	**2.52**	**66**	P	**Pn**	**18 37 46.3**	**+1.8**
JHS	**Saijyo**	**2.72**	**223**	P	**Pn**	**18 37 47.9**	**+1.5**
JWY	**Kouya**	**2.81**	**176**	P	**Pn**	**18 37 48.4**	**+1.1**
JIE	**Ise**	**2.85**	**157**	P	**Pn**	**18 37 48.9**	**+1.4**
JGT2	**ShimaneMisato**	**3.03**	**231**	P	**Pn**	**18 37 50.9**	**+1.9**
JRY	**Ryogami san**	**3.03**	**108**	P	**Pn**	**18 37 50.8**	**+1.7**
JTNC	**Tanabenakahech**	**3.21**	**176**	P	**Pn**	**18 37 51.6**	**+0.8**
JFNN	**Fujinakano**	**3.26**	**123**	P	**Pn**	**18 37 52.3**	**+1.2**
JOD2	**Odawara 2**	**3.50**	**119**	P	**Pn**	**18 37 54.4**	**+1.0**
JMK	**Ichinoseki**	**5.01**	**66**	P	**Pn**	**18 38 09.9**	**+0.8**
JNU	**Nakatsue**	**5.35**	**225**	P	**Pn**	**18 38 14.8**	**+1.7**
	0.3nm,0.3s,baz=14,slow=8.3,SNR=2.8						
KSRS	**Korea Array**	**5.95**	**276**	P	**Pn**	**18 38 21.1**	**+1.6**
	0.2nm,0.3s,baz=92,slow=12,SNR=6.3						
USRK	**Ussuriysk Ar.**	**7.61**	**341**	P	**Pn**	**18 38 40.9**	**+2.2**
	0.3nm,0.3s,baz=161,slow=11,SNR=5.9						
ASAJ	**Asahikawa**	**8.97**	**36**	P	**Pn**	**18 38 54.8**	**-0.1**
	1.9nm,0.3s,baz=227,slow=12,SNR=21						
CMAR	**Chiang Mai Arr**	**36.87**	**250**	P	**P**	**18 43 23.4**	**-2.4**
	0.3nm,0.3s,baz=50,slow=8.5,SNR=3.1						
ZALV	**Zalesovo Beam**	**38.34**	**313**	P	**P**	**18 43 36.7**	**-0.8**
	0.3nm,0.3s,baz=102,slow=10,SNR=2.4						
MKAR	**Makanchi Array**	**40.00**	**301**	P	**P**	**18 43 50.5**	**-0.7**
	0.9nm,0.5s,baz=86,slow=9.8,SNR=14						
KURBB	**Kurchatov Arra**	**42.17**	**307**	P	**P**	**18 44 08.5**	**-0.1**
	2.0nm,0.2s,baz=89,slow=8.4,SNR=5.1						
BVAR	**Borovoye Array**	**46.97**	**312**	P	**P**	**18 44 46.6**	**+0.4**
	0.6nm,0.4s,baz=80,slow=7.9,SNR=6.3						
ILAR	**Eielson Array**	**52.09**	**32**	P	**P**	**18 45 24.0**	**-0.2**
	0.3nm,0.6s,baz=253,slow=6.2,SNR=3.1						
ASAR	**Alice Springs**	**60.38**	**182**	P	**P**	**18 46 22.3**	**-0.5**
	0.4nm,0.5s,baz=15,slow=13,SNR=7.8						
FINES	**FINESS Array B**	**66.49**	**330**	P	**P**	**18 47 01.1**	**-0.8**
	0.6nm,0.4s,baz=74,slow=6.1,SNR=9.0						

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*ISCJB **03** 18:38:52.5±0.4, 24°.50N±0°.03×122°.80E±0°.01, h80km±4km, Error ellipse: s-maj=4.2km s-min=2.2km az=174.4*
*JMA **03** 18:38:52.2±0.1, 24°.55N×122°.82E, h87km±1km, M2.6*
*TAP **03** 18:38:52.9, 24°.50N×122°.78E, h77km, ML3.4, C*
ISC 03 18:38:52.7±1.3, **24°.51N**±0°.04×**122°.81E**±0°.02, **h83**km±7km, **n70**, σ**0s.49**/140, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.14**	**114**	P	**Pn**	**18 39 04.8**	**+0.2**
JYNG				S	**Sn**	**18 39 14.0**	**+0.6**
YOJ	**Yonaguni jima**	**0.19**	**104**	*i* P	**Pn**	**18 39 04.7**	**0.0**
	baz=98						
YOJ				S	**Sn**	**18 39 13.2**	**-0.5**
	baz=98						
YOJ	**Yonaguni jima**	**0.19**	**104**	P	**Pn**	**18 39 04.9**	**+0.1**
YOJ				S	**Sn**	**18 39 14.1**	**+0.4**
EOS1	**EOS1**	**0.62**	**274**	*i* P	**Pn**	**18 39 07.8**	**+0.1**
	baz=274						
EOS1				*e*S	**Sn**	**18 39 18.5**	**-0.4**
	baz=274						
IRIF	**Iriomote-Funau**	**0.86**	**101**	P	**Pn**	**18 39 10.1**	**-0.2**
IRIF				S	**Sn**	**18 39 23.7**	**+0.3**
TWC	**Suao**	**0.88**	**277**	*i* P	**Pn**	**18 39 10.4**	**0.0**
	baz=277						
TWC				*e*S	**Sn**	**18 39 23.2**	**-0.6**
	baz=277						
NTC	**Toucheng**	**0.95**	**291**	*e*P	**Pn**	**18 39 11.5**	**+0.2**
	baz=292						
NTC				*e*S	**Sn**	**18 39 25.3**	**0.0**
	baz=292						
NANB	**Nanao**	**0.97**	**265**	*e*P	**Pn**	**18 39 11.6**	**+0.1**
	baz=265						
NANB				*e*S	**Sn**	**18 39 25.2**	**-0.3**
	baz=265						
ENA	**Nanau**	**0.97**	**265**	P	**Pn**	**18 39 11.6**	**0.0**
	baz=265						
ENA				*e*S	**Sn**	**18 39 25.5**	**-0.3**
	baz=265						
ILA	**Ilan**	**1.00**	**285**	*e*P	**Pn**	**18 39 11.9**	**+0.1**
	baz=285						
ILA				*e*S	**Sn**	**18 39 26.2**	**0.0**
	baz=285						
TIPB	**Shuangxi**	**1.00**	**298**	*e*P	**Pn**	**18 39 11.9**	**-0.1**
	baz=298						
TIPB				*e*S	**Sn**	**18 39 25.4**	**-1.0**
	baz=298						
HATJ	**Hateruma jima**	**1.02**	**116**	P	**Pn**	**18 39 12.7**	**+0.6**
HATJ				*e*S	**Sn**	**18 39 27.1**	**+0.5**
TWE	**Neicheng**	**1.06**	**282**	P	**Pn**	**18 39 12.6**	**0.0**
	baz=282						
TWE				*e*S	**Sn**	**18 39 27.0**	**-0.5**
	baz=282						
NWF	**Wu-fen Shan**	**1.09**	**301**	*e*P	**Pn**	**18 39 13.3**	**+0.3**
	baz=302						
NWF				*e*S	**Sn**	**18 39 28.2**	**0.0**
	baz=302						
WFSB	**Wu-fen Shan**	**1.09**	**301**	*e*P	**Pn**	**18 39 13.2**	**+0.3**
	baz=302						
WFSB				*e*S	**Sn**	**18 39 28.2**	**+0.1**
	baz=302						
JKRS	**Kuro-shima**	**1.13**	**104**	P	**Pn**	**18 39 13.7**	**+0.3**
JKRS				*e*S	**Sn**	**18 39 29.7**	**+0.7**
ENTT	**Nioudou**	**1.14**	**277**	*e*P	**Pn**	**18 39 14.0**	**+0.4**
	baz=277						
ENTT				*e*S	**Sn**	**18 39 28.9**	**-0.4**
	baz=277						
NACB	**Ninganchiao**	**1.16**	**253**	*e*P	**Pn**	**18 39 13.8**	**+0.1**
	baz=253						
NACB				*e*S	**Sn**	**18 39 29.6**	**0.0**
	baz=253						
NDT	**Datong Townshi**	**1.18**	**275**	*e*P	**Pn**	**18 39 14.7**	**+0.6**
	baz=275						
NDT				*e*S	**Sn**	**18 39 30.1**	**-0.1**
	baz=275						
TWD	**Chiawan**	**1.19**	**249**	*e*P	**Pn**	**18 39 14.3**	**+0.2**
	baz=248						
TWD				*e*S	**Sn**	**18 39 29.9**	**-0.3**
	baz=248						
TWA	**Mucha**	**1.21**	**293**	*e*P	**Pn**	**18 39 14.6**	**+0.2**
	baz=293						
TWA				*e*S	**Sn**	**18 39 30.2**	**-0.6**
	baz=293						
JIJ	**Ishigaki jima**	**1.23**	**97**	P	**Pn**	**18 39 14.2**	**-0.4**
JIJ				S	**Sn**	**18 39 30.5**	**-0.6**
ETLH	**Xiulin Townshi**	**1.25**	**256**	*e*P	**Pn**	**18 39 15.1**	**+0.1**
	baz=256						
ETLH				*e*S	**Sn**	**18 39 31.4**	**-0.3**
	baz=256						
ENLB	**Shoufeng**	**1.25**	**242**	*e*P	**Pn**	**18 39 14.8**	**-0.2**
	baz=241						
ENLB				*e*S	**Sn**	**18 39 29.4**	**-2.4**
	baz=241						
TATO	**Taipei**	**1.29**	**291**	*e*P	**Pn**	**18 39 15.5**	**+0.1**
	baz=292						
TATO				*e*S	**Sn**	**18 39 32.2**	**-0.3**
	baz=292						
YM01	**YM01**	**1.29**	**300**	*e*P	**Pn**	**18 39 15.7**	**+0.2**
	baz=300						
YM01				*e*S	**Sn**	**18 39 32.4**	**-0.2**
	baz=300						
NNSB	**Datong**	**1.30**	**267**	*e*P	**Pn**	**18 39 15.9**	**+0.2**
	baz=266						
NNSB				*e*S	**Sn**	**18 39 33.0**	**0.0**
	baz=266						
YHNB	**Yeheng**	**1.31**	**277**	*e*P	**Pn**	**18 39 16.2**	**+0.4**
	baz=277						
YHNB				*e*S	**Sn**	**18 39 32.8**	**-0.4**
	baz=277						
YM04	**YM04**	**1.32**	**299**	*e*P	**Pn**	**18 39 16.0**	**+0.1**
	baz=300						
YM04				*e*S	**Sn**	**18 39 33.0**	**-0.4**
	baz=300						
NSK	**Sanguang**	**1.33**	**277**	*e*P	**Pn**	**18 39 16.1**	**+0.1**
	baz=277						
NSK				*e*S	**Sn**	**18 39 33.4**	**-0.1**
	baz=277						
JISG	**Ishigakijimahi**	**1.37**	**86**	P	**Pn**	**18 39 15.9**	**-0.6**
JISG				*e*S	**Sn**	**18 39 33.9**	**-0.5**
TWS1	**Kuangyinshan**	**1.39**	**295**	*e*P	**Pn**	**18 39 17.1**	**+0.4**
	baz=296						
TWS1				*e*S	**Sn**	**18 39 35.1**	**+0.2**
	baz=296						
ESL	**Shilin**	**1.43**	**241**	*e*P	**Pn**	**18 39 17.4**	**+0.1**
	baz=240						
ESL				*e*S	**Sn**	**18 39 35.5**	**-0.4**
	baz=240						
EGFH	**Guangfu**	**1.51**	**237**	*e*P	**Pn**	**18 39 18.8**	**+0.5**
	baz=236						
EGFH				*e*S	**Sn**	**18 39 37.6**	**-0.1**
	baz=236						
TDCB	**Techi**	**1.52**	**261**	*e*P	**Pn**	**18 39 19.1**	**+0.5**
	baz=260						
TDCB				*e*S	**Sn**	**18 39 38.2**	**+0.1**
	baz=260						
CHGB	**Renai**	**1.56**	**254**	P	**Pn**	**18 39 19.2**	**+0.1**
	baz=253						
CHGB				*e*S	**Sn**	**18 39 38.8**	**-0.2**
	baz=253						
HGSD	**Ruisui**	**1.62**	**232**	*e*P	**Pn**	**18 39 20.1**	**+0.4**
	baz=231						
HGSD				*e*S	**Sn**	**18 39 39.5**	**-0.7**
	baz=231						
LIOB	**Emei**	**1.64**	**275**	*e*P	**Pn**	**18 39 20.3**	**+0.4**
	baz=275						
LIOB				*e*S	**Sn**	**18 39 40.0**	**-0.5**
	baz=275						
NSTT	**Nanjuang**	**1.65**	**275**	*e*P	**Pn**	**18 39 20.4**	**+0.3**
	baz=274						
NSTT				*e*S	**Sn**	**18 39 40.4**	**-0.4**
	baz=274						
EHY	**Hungye**	**1.69**	**234**	*e*P	**Pn**	**18 39 20.8**	**+0.2**
	baz=233						
EHY				*e*S	**Sn**	**18 39 41.0**	**-0.6**
	baz=233						
VWDT	**VWDT**	**1.70**	**244**	*e*P	**Pn**	**18 39 21.2**	**+0.5**
	baz=243						
VWDT				*e*S	**Sn**	**18 39 42.1**	**+0.2**
	baz=243						
WHP	**Taichung City**	**1.71**	**263**	*e*P	**Pn**	**18 39 21.8**	**+0.8**
	baz=262						
WHP				*e*S	**Sn**	**18 39 43.2**	**+0.7**
	baz=262						
JTJ	**Tarama**	**1.73**	**85**	P	**Pn**	**18 39 20.8**	**-0.3**
JTJ				S	**Sn**	**18 39 42.5**	**-0.2**
YULB	**Yu-li**	**1.77**	**231**	*e*P	**Pn**	**18 39 21.8**	**+0.1**
	baz=230						
YULB				*e*S	**Sn**	**18 39 43.3**	**-0.4**
	baz=230						
DPDB	**Guoxing**	**1.78**	**255**	*e*P	**Pn**	**18 39 22.4**	**+0.6**
	baz=254						
DPDB				*e*S	**Sn**	**18 39 43.9**	**0.0**
	baz=254						
TWF1	**Yuli**	**1.80**	**231**	*e*P	**Pn**	**18 39 22.4**	**+0.4**
	baz=229						
TWF1				*e*S	**Sn**	**18 39 44.2**	**-0.1**
	baz=229						
SSLB	**Suanglung**	**1.84**	**247**	*e*P	**Pn**	**18 39 23.1**	**+0.6**
	baz=246						
SSLB				*e*S	**Sn**	**18 39 44.9**	**-0.4**
	baz=246						
SMLT	**Sun Moon Lake**	**1.85**	**251**	*e*P	**Pn**	**18 39 22.8**	**0.0**
	baz=250						
SMLT				*e*S	**Sn**	**18 39 45.1**	**-0.6**
	baz=250						
TWQ1	**Liyutan**	**1.86**	**265**	*e*P	**Pn**	**18 39 23.1**	**+0.2**
	baz=265						
TWQ1				*e*S	**Sn**	**18 39 45.7**	**-0.1**
	baz=265						
CHKT	**Chengkung**	**1.93**	**224**	*e*P	**Pn**	**18 39 23.9**	**+0.2**
	baz=222						
CHKT				*e*S	**Sn**	**18 39 46.4**	**-0.9**
	baz=222						
WHYT	**Xinyi Township**	**1.96**	**246**	*e*P	**Pn**	**18 39 24.9**	**+0.8**
	baz=245						
WHYT				*e*S	**Sn**	**18 39 47.5**	**-0.6**
	baz=245						
YUS	**Yu-Shan**	**1.98**	**239**	*e*P	**Pn**	**18 39 24.9**	**+0.1**
	baz=238						
YUS				*e*S	**Sn**	**18 39 49.3**	**0.0**
	baz=238						
WJS	**Zhushan**	**2.02**	**251**	*e*P	**Pn**	**18 39 25.6**	**+0.6**
	baz=250						
WJS				*e*S	**Sn**	**18 39 48.9**	**-0.6**
	baz=250						
WNT	**Mingjian**	**2.04**	**252**	*e*P	**Pn**	**18 39 26.2**	**+1.0**
	baz=251						
WNT				*e*S	**Sn**	**18 39 50.1**	**+0.2**
	baz=251						
ELDTW	**Lidau**	**2.10**	**232**	P	**Pn**	**18 39 26.4**	**+0.3**
	baz=230						
ELDTW				*e*S	**Sn**	**18 39 51.5**	**-0.1**
	baz=230						
JIRB	**Irabujima**	**2.18**	**81**	P	**Pn**	**18 39 26.7**	**-0.3**
JIRB				S	**Sn**	**18 39 53.2**	**0.0**
WGK	**Gukeng**	**2.21**	**249**	P	**Pn**	**18 39 27.9**	**+0.5**
	baz=248						
WGK				*e*S	**Sn**	**18 39 55.0**	**+1.0**
	baz=248						
WDLH	**Douliu**	**2.23**	**249**	*e*P	**Pn**	**18 39 28.3**	**+0.6**
	baz=248						
WDLH				*e*S	**Sn**	**18 39 54.3**	**-0.2**
	baz=248						
JMJ2	**Miyako jima3**	**2.31**	**84**	P	**Pn**	**18 39 28.8**	**+0.1**
JMJ2				*e*S	**Sn**	**18 39 56.5**	**+0.2**
TWGBT	**Beinan**	**2.31**	**224**	*e*P	**Pn**	**18 39 29.4**	**+0.5**
	baz=222						
TWGBT				*e*S	**Sn**	**18 39 56.1**	**-0.4**
	baz=222						
TWG	**Pinlang**	**2.31**	**224**	*e*P	**Pn**	**18 39 29.3**	**+0.4**
	baz=222						
TWG				*e*S	**Sn**	**18 39 56.1**	**-0.5**
	baz=222						
TPUB	**Ta-pu**	**2.33**	**239**	*e*P	**Pn**	**18 39 29.6**	**+0.6**
	baz=238						
TPUB				*e*S	**Sn**	**18 39 56.2**	**-0.7**
	baz=238						
WTP	**Ta-pu**	**2.37**	**238**	*e*P	**Pn**	**18 39 30.1**	**+0.5**
	baz=237						
WTP				*e*S	**Sn**	**18 39 57.2**	**-0.7**
	baz=237						
TWK	**Hsinying**	**2.46**	**240**	*e*P	**Pn**	**18 39 31.9**	**+1.0**
	baz=239						
TWK				*e*S	**Sn**	**18 39 59.4**	**-0.6**
	baz=239						
CHN1	**Nanshi**	**2.47**	**238**	*e*P	**Pn**	**18 39 31.6**	**+0.6**
	baz=237						
CHN1				*e*S	**Sn**	**18 40 00.1**	**-0.1**
	baz=237						
SGST	**Jiashian**	**2.48**	**236**	*e*P	**Pn**	**18 39 31.5**	**+0.4**
	baz=234						
SGST				*e*S	**Sn**	**18 40 00.1**	**-0.5**
	baz=234						
WSF	**Szhu**	**2.52**	**250**	*e*P	**Pn**	**18 39 32.2**	**+0.7**
	baz=249						
WSF				*e*S	**Sn**	**18 40 00.6**	**-0.8**
	baz=249						
ECL	**Taimali**	**2.55**	**222**	*e*P	**Pn**	**18 39 32.1**	**+0.1**
	baz=221						
ECL				*e*S	**Sn**	**18 40 01.4**	**-0.9**
	baz=221						
SSD	**Sandimen**	**2.66**	**229**	*e*P	**Pn**	**18 39 34.1**	**+0.6**
	baz=228						
SSD				*e*S	**Sn**	**18 40 04.5**	**-0.3**
	baz=228						
MASBT	**Mashibuluo**	**2.75**	**227**	*e*P	**Pn**	**18 39 35.3**	**+0.6**
	baz=226						
MASBT				*e*S	**Sn**	**18 40 06.8**	**-0.1**
	baz=226						

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*IDC **03** 18:58:58.3±1.0, 34°.64S×179°.56W, h0km, mb4.4/5, mb1 4.4/6, mb1mx4.1/19, mbtmp4.4/6, ML4.3/1, MS3.3/5, Ms1 3.3/5, ms1mx3.1/21, Error ellipse: s-maj=33.1km s-min=27.6km az=40.0*
*ISCJB **03** 18:59:04.3±1.0, 35°.00S±0°.05×179°.8W±0°.1, h43km, mb4.3/5, MS3.1/4, Error ellipse: s-maj=12.7km s-min=7.7km az=2.5*
*WEL **03** 18:59:06.1±1.4, 35°S±7°×18°0W±1°2, h33km, M4.5/28, ML4.8/24, MLv4.5/28, Error ellipse: s-maj=0.0km s-min=0.0km az=79.0*
ISC 03 18:59:05.8±1.0, **35°.00S**±0°.08×**179°.8W**±0°.1, **h43**km, **n45**, σ**1s.16**/47, **mb4.2**/5, **MS3.1**/4, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.98**	**211**	P	**Pn**	**18 59 51.9**	**+1.3**
WMGZ	**Waiomatatini S**	**3.16**	**207**	P	**Pn**	**18 59 53.8**	**+0.7**
WMGZ				S	**Sn**	**19 00 31.0**	**+1.5**
PKGZ	**Pakihiroa**	**3.36**	**210**	P	**Pn**	**18 59 55.7**	**0.0**
HAZ	**Te Kaha**	**3.38**	**215**	P	**Pn**	**18 59 55.9**	**-0.1**
PUZ	**Puketiti**	**3.44**	**207**	P	**Pn**	**18 59 57.1**	**+0.1**
WIZ	**White Island**	**3.51**	**223**	P	**Pn**	**18 59 56.7**	**-1.1**
RUGZ	**Raukumara Rang**	**3.59**	**214**	P	**Pn**	**18 59 59.6**	**+0.5**
RUGZ				S	**Sn**	**19 00 39.3**	**-1.0**
TWGZ	**Tauwhareparae**	**3.64**	**209**	P	**Pn**	**19 00 00.3**	**+0.6**
TWGZ				S	**Sn**	**19 00 41.3**	**-0.1**
CNGZ	**Carnagh Statio**	**3.83**	**204**	P	**Pn**	**19 00 02.5**	**+0.3**
CNGZ				S	**Sn**	**19 00 46.8**	**+0.9**
WHRZ	**Whale Island**	**3.86**	**222**	P	**Pn**	**19 00 04.9**	**+2.2**
TKGZ	**Te Karaka**	**3.92**	**208**	P	**Pn**	**19 00 04.0**	**+0.5**
MYRZ	**Mayor Island**	**3.94**	**234**	P	**Pn**	**19 00 05.6**	**+1.8**
MWZ	**Matawai**	**3.96**	**212**	P	**Pn**	**19 00 03.3**	**-0.8**
KUZ	**Kuaotunu**	**4.04**	**243**	P	**Pn**	**19 00 04.8**	**-0.3**
GRZ	**Great Barrier**	**4.07**	**251**	P	**Pn**	**19 00 05.2**	**-0.3**
OPRZ	**Ohinepanea**	**4.09**	**225**	P	**Pn**	**19 00 06.0**	**+0.2**
URZ	**Urewera**	**4.10**	**217**	Pn	**Pn**	**19 00 05.7**	**-0.2**
	15nm,0.3s,baz=272,slow=4.1,SNR=81						
URZ				Sn	**Sn**	**19 00 48.3**	**-4.3**
	15nm,0.3s,baz=120,slow=20,SNR=4.4						
URZ	**Urewera**	**4.10**	**217**	P	**Pn**	**19 00 06.2**	**+0.3**
MARZ	**Manawahe**	**4.12**	**223**	P	**Pn**	**19 00 05.6**	**-0.7**
RAGZ	**Rawiri**	**4.15**	**212**	P	**Pn**	**19 00 07.0**	**+0.3**
RIGZ	**Rimuhau**	**4.19**	**207**	P	**Pn**	**19 00 07.5**	**+0.4**
PRGZ	**Paritu Road**	**4.33**	**205**	P	**Pn**	**19 00 08.4**	**-0.8**
MUGZ	**Murupara**	**4.44**	**218**	P	**Pn**	**19 00 10.9**	**+0.4**
WIAZ	**Waiheke Island**	**4.50**	**245**	P	**Pn**	**19 00 11.6**	**+0.3**
KNZ	**Kokohu**	**4.50**	**206**	P	**Pn**	**19 00 09.6**	**-1.8**
MHGZ	**Mahia Peninsul**	**4.53**	**203**	P	**Pn**	**19 00 10.4**	**-1.4**
MKAZ	**Moumakai**	**4.60**	**241**	P	**Pn**	**19 00 13.5**	**+0.7**
TOZ	**Tahuroa Road**	**4.68**	**233**	P	**Pn**	**19 00 14.4**	**+0.6**
ETAZ	**East Tamaki Re**	**4.71**	**244**	P	**Pn**	**19 00 15.5**	**+1.2**
WCZ	**Waipu Caves**	**4.88**	**257**	P	**Pn**	**19 00 17.0**	**+0.3**
TLZ	**Tolley Road**	**5.02**	**227**	P	**Pn**	**19 00 18.9**	**+0.4**
BKZ	**Black Stump Fm**	**5.11**	**215**	P	**Pn**	**19 00 18.5**	**-1.4**
OUZ	**Omahuta**	**5.43**	**266**	P	**Pn**	**19 00 24.2**	**0.0**
DZM	**Mont Dzumac**	**17.65**	**313**	LR	LR	19 08 36.1	
	comp=Z,132nm,21.9s,baz=176,slow=33						
RAR	**Rarotonga**	**22.31**	**57**	LR	LR	19 12 29.5	
	comp=Z,37nm,18.4s,baz=264,slow=37						
PPT	**Papeete**	**32.00**	**65**	LR	LR	19 17 41.4	
	comp=Z,29nm,18.0s,baz=90,slow=36						
STKA	**Stephens Creek**	**32.25**	**264**	P	**P**	**19 05 31.4**	**+1.3**
	1.0nm,0.5s,baz=128,slow=19,SNR=3.3						
STKA				LR	LR	19 16 42.3	
	comp=Z,52nm,20.6s,baz=34,slow=33						
ASAR	**Alice Springs**	**41.60**	**273**	P	**P**	**19 06 49.8**	**0.0**
	5.7nm,0.6s,baz=115,slow=7.7,SNR=75						
ASAR				LR	LR	19 24 17.4	
	comp=Z,68nm,18.4s,baz=100,slow=36						
MAW	**Mawson**	**67.48**	**202**	P	**P**	**19 09 57.9**	**+1.1**
	2.2nm,0.9s,baz=144,slow=8.7,SNR=3.1						
PMSA	**Palmer Station**	**68.70**	**156**	P	**P**	**19 10 05.7**	**+1.3**
	27nm,1.0s,baz=168,slow=19,SNR=4.0						
CMAR	**Chiang Mai Arr**	**93.53**	**290**	P	**P**	**19 12 15.5**	**-1.8**
	0.4nm,0.8s,baz=142,slow=4.5,SNR=3.8						
FINES	**FINESS Array B**	**148.84**	**336**	PKPbc	**PKPdf**	**19 18 44.8**	**+0.9**
	0.8nm,0.6s,baz=38,slow=4.5,SNR=6.4						
DBIC	**Dimbokro**	**151.42**	**169**	PKPbc	**PKPbc**	**19 18 54.8**	**-0.8**
	2.9nm,0.7s,baz=212,slow=10,SNR=3.6						
NOA	**NORSAR Array B**	**153.01**	**348**	PKPbc	**PKPbc**	**19 18 56.0**	**-1.7**
	0.5nm,0.7s,baz=54,slow=6.6,SNR=3.2						
AKASG	**Malin Array Be**	**153.80**	**316**	PKPbc	**PKPbc**	**19 18 59.3**	**-0.4**
	0.3nm,0.4s,baz=60,slow=2.4,SNR=4.5						

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*SJA **03** 19:07:00.6±0.9, 23°.51S×69°.35W, h81km±8km, ML2.9, MW3.2*
*GUC **03** 19:07:00.7±0.7, 23°.52S×69°.27W, h79km±3km, ML3.5*
*ISCJB **03** 19:07:01.2±0.6, 23°.50S±0°.03×69°.33W±0°.06, h89km±8km, Error ellipse: s-maj=8.5km s-min=4.9km az=5.3*
ISC 03 19:07:02.7±1.3, **23°.51S**±0°.03×**69°.35W**±0°.05, **h71**km±11km, **n29**, σ**0s.87**/42, **2C-1D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	**0.32**	**339**	*e*P	**Pn**	**19 07 14.0**	**-0.4**
PB15				*e*S	**Sn**	**19 07 23.7**	**+0.8**
PB06	**IPOC Station P**	**0.82**	**345**	*e*P	**Pn**	**19 07 18.9**	**-0.4**
PB06				*e*S	**Sn**	**19 07 32.4**	**+0.9**
PB06	**IPOC Station P**	**0.82**	**345**	*e*P	**Pn**	**19 07 18.5**	**-0.8**
PB06				*e*S	**Sn**	**19 07 31.9**	**+0.3**
LVC	**Limon Verde**	**0.98**	**24**	*e*P	**Pn**	**19 07 20.8**	**-0.6**
LVC				*e*S	**Sn**	**19 07 35.6**	**+0.4**
LVC				IAML		19 07 37.0	
	comp=Z,383nm,0.2s						
LVC	**Limon Verde**	**0.98**	**24**	*e*P	**Pn**	**19 07 20.4**	**-1.0**
LVC				*e*S	**Sn**	**19 07 34.4**	**-0.8**
PB05	**IPOC Station P**	**1.02**	**309**	*e*P	**Pn**	**19 07 21.2**	**-0.5**
PB05	**IPOC Station P**	**1.02**	**309**	*e*P	**Pn**	**19 07 21.3**	**-0.5**
PB05				*e*S	**Sn**	**19 07 36.9**	**+1.1**
PB05				IAML		19 07 41.7	
	comp=E,1µm,0.2s						
PB10	**IPOC Station P**	**1.11**	**269**	*e*P	**Pn**	**19 07 22.8**	**+0.2**
PB10	**IPOC Station P**	**1.11**	**269**	⇑*i*P	**Pn**	**19 07 22.5**	**-0.2**
PB10				*e*S	**Sn**	**19 07 38.8**	**+1.3**
PB10				IAML		19 07 41.8	
	comp=N,984nm,0.2s						
PB04	**IPOC Station P**	**1.38**	**327**	*e*P	**Pn**	**19 07 26.1**	**-0.3**
PB04	**IPOC Station P**	**1.38**	**327**	*e*P	**Pn**	**19 07 25.7**	**-0.6**
PB04				*e*S	**Sn**	**19 07 44.9**	**+0.8**
PB04				IAML		19 07 51.5	
	comp=N,1µm,0.3s						
PB14	**IPOC Station P**	**1.48**	**221**	*e*P	**Pn**	**19 07 26.8**	**-0.9**
PB14	**IPOC Station P**	**1.48**	**221**	⇑*i*P	**Pn**	**19 07 26.9**	**-0.9**
PB14				*e*S	**Sn**	**19 07 47.6**	**+1.1**
PB14				IAML		19 07 53.1	
	comp=E,1µm,0.3s						
PB03	**IPOC Station P**	**1.50**	**345**	*e*P	**Pn**	**19 07 27.5**	**-0.4**
PB03	**IPOC Station P**	**1.50**	**345**	*e*P	**Pn**	**19 07 27.4**	**-0.4**
PB03				*e*S	**Sn**	**19 07 47.1**	**+0.3**
PB03				IAML		19 07 51.2	
	comp=N,1µm,0.1s						
GO02	**Mina Guanaco**	**1.66**	**188**	⇓*e*P	**Pn**	**19 07 28.9**	**-1.4**
GO02				*e*S	**Sn**	**19 07 51.3**	**+0.4**
GO02				IAML		19 07 58.7	
	comp=E,1µm,0.1s						
PB09	**IPOC Station P**	**1.70**	**3**	*e*P	**Pn**	**19 07 31.3**	**+0.6**
PB09	**IPOC Station P**	**1.70**	**3**	*e*P	**Pn**	**19 07 30.1**	**-0.6**
PB09				*e*S	**Sn**	**19 07 51.9**	**+0.2**
PB09				IAML		19 07 59.4	
	comp=N,425nm,0.3s						
PB07	**IPOC Station P**	**1.84**	**344**	*e*P	**Pn**	**19 07 32.0**	**-0.4**
PB07	**IPOC Station P**	**1.84**	**344**	*e*P	**Pn**	**19 07 31.9**	**-0.6**
PB07				*e*S	**Sn**	**19 07 55.5**	**+0.5**
PB07				IAML		19 08 01.1	
	comp=E,658nm,0.2s						
PB02	**IPOC Station P**	**2.23**	**347**	*e*P	**Pn**	**19 07 37.2**	**-0.5**
PB08	**IPOC Station P**	**3.35**	**3**	*e*P	**Pn**	**19 07 52.9**	**-0.3**
PB11	**IPOC Station P**	**3.74**	**356**	*e*P	**Pn**	**19 07 56.5**	**-1.7**
YJA	**Yavi**	**3.77**	**70**	*e*P	**Pn**	**19 07 59.9**	**+1.0**
PSGCX	**Pisagua**	**3.96**	**349**	*e*P	**Pn**	**19 08 00.1**	**-1.0**
AZAP	**Zapla**	**3.98**	**101**	*e*P	**Pn**	**19 08 02.0**	**+0.4**
AZAP				IAML		19 08 03.9	
	comp=Z,8.5nm,0.3s						
PB12	**IPOC Station P**	**4.95**	**349**	*e*P	**Pn**	**19 08 12.4**	**-2.3**
VCA	**Vinchina**	**5.31**	**169**	*e*P	**Pn**	**19 08 18.6**	**-1.0**
CYA	**Choya**	**5.86**	**148**	*e*P	**Pn**	**19 08 26.2**	**-0.8**

IDC 03 19:07:35.0±1.6, **15°.31S**×**165°.65E**, **h0**km, **mb3.8**/3, **mb1 4.0**/4, **mb1mx3.6**/25, **mbtmp3.8**/4, **ML3.4**/1, **Error ellipse: s-maj=40.7km s-min=29.5km az=127.0**, **Vanuatu Islands**

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

DZM	Mont Dzumac	6.77	174	Pn	Pn	19 09 16.1	+0.4
	0.7nm,0.3s,baz=350,slow=18,SNR=6.6						
DZM				Sn	Sn	19 10 33.5	-0.1
	0.4nm,0.3s,baz=311,slow=19,SNR=2.3						
STKA	Stephens Creek	27.43	229	P	P	19 13 22.8	+0.2
	5.1nm,1.1s,baz=72,slow=6.4,SNR=2.8						
ASAR	Alice Springs	31.00	249	P	P	19 13 54.3	-0.2
	0.4nm,0.5s,baz=77,slow=9.2,SNR=10						
NVAR	Mina Array Bea	88.84	50	P	P	19 20 31.4	-0.1
	0.2nm,0.6s,baz=224,slow=5.0,SNR=2.7						

LSZ ***03*** *19:21:39.3±1.7, 1°.89N×31°.15E, h0km±8km*

EAF ***03*** *19:21:43.9±2.9, 1°.90N×30°.52E, h18km±96km, MD4.3*

IDC ***03*** *19:21:44.0±0.4, 1°.56N×30°.83E, h0km, mb5.1/28, mb1 5.2/31, mb1mx5.2/34, mbtmp5.1/31, ML4.9/4, MS5.4/42, Ms1 5.4/42, ms1mx5.3/47, Error ellipse: s-maj=14.2km s-min=8.8km az=96.0*

ISCJB ***03*** *19:21:44.7±0.5, 1°.60N±0°.02×30°.89E±0°.02, h12km±3km, mb5.6/336, MS5.6/717, Error ellipse: s-maj=3.3km s-min=3.0km az=153.9*

BJI ***03*** *19:21:44.1±0.0, 2°.11N×30°.62E, h6km, mb5.3/71, mB5.7/66, Ms5.5/80, Ms7 5.3/73*

NEIC ***03*** *19:21:46.0±1.7, 1°.54N×30°.89E, h10km±1km, mb5.8/151, MS5.7/674, MW5.7, MW5.7, Error ellipse: s-maj=12.1km s-min=8.8km az=114.0, Moment Tensor Solution. s73 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-3.98;* $M_{\theta\theta}$*2.46;* $M_{\phi\phi}$*1.52;* $M_{r\theta}$*2.58;* $M_{\theta\phi}$*2.64;* $M_{\phi r}$*-0.17; Best double couple:* M_0*5.10000×*10^{17} *NP1:*ϕ_s*251.00000°, δ60.00000°, λ-66.00000°. NP2:*ϕ_s*29.00000°, δ37.00000°, λ-125.00000°. Principal axes: T 5.0800, Plg12.0000°, Azm324.0000°; N -0.0100, Plg20.0000°, Azm59.0000°; P -5.0600, Plg66.0000°, Azm205.0000°;*

NEIC Felt [IV] at Kampala. Also felt at Bombo, Busia, Bweyogerere, Entebbe, Fort Portal, Gulu, Kajansi, Kireka, Masaka and Mukono. Felt at Mwanza, Tanzania; Kigali, Rwanda; Bunia, Democratic Republic of the Congo.

NEIC ***03*** *19:21:46.0±0.0, 1°.46N×30°.95E, h13km, Moment Tensor Solution. s58 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-3.23;* $M_{\theta\theta}$*2.20;* $M_{\phi\phi}$*1.03;* $M_{r\theta}$*3.25;* $M_{\theta\phi}$*1.70;* $M_{\phi r}$*1.55; Best double couple:* M_0*4.90000×*10^{17} *NP1:*ϕ_s*242.00000°, δ69.00000°, λ-84.00000°. NP2:*ϕ_s*46.00000°, δ22.00000°, λ-104.00000°. Principal axes: T 4.9600, Plg23.0000°, Azm327.0000°; N -0.1200, Plg5.0000°, Azm59.0000°; P -4.8400, Plg65.0000°, Azm161.0000°;*

GCMT ***03*** *19:21:47.0±0.1, 1°.69N±0°.01×30°.76E±0°.01, h19km, MW5.7/128, Moment Tensor Solution. s121,c235; s128,c346; Duration: 1*^{s}*7 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*-3.14±.04;* $M_{\theta\theta}$*2.05±.03;* $M_{\phi\phi}$*1.10±.03;* $M_{r\theta}$*2.08±.08;* $M_{\theta\phi}$*2.46±.03;* $M_{\phi r}$*-0.51±.08; Best double couple:* M_0*4.27400×*10^{17} *NP1:*ϕ_s*255.00000°, δ60.00000°, λ-60.00000°. NP2:*ϕ_s*25.00000°, δ41.00000°, λ-132.00000°. Principal axes: T 4.3180, Plg10.0000°, Azm324.0000°; N -0.0770, Plg26.0000°, Azm59.0000°; P -4.2310, Plg62.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

MOS ***03*** *19:21:47.5±1.1, 1°.65N×30°.88E, h31km, mb5.9/152, MS5.4/84 Error ellipse: s-maj=6.3km s-min=2.7km az=94.4*

ISC 03 19:21:46.6±0.4**, 1°.55N**±0°.03×**30°.89E**±0°.03**, h16**km±2km**, h16**km**:pP-P, n1674,** σ1^s**67**/1413**, mb5.7**/368**, MS5.7**/740**, 57C-83D, Uganda**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	Mbarara	2.14	184	Pn	Pn	19 22 21.5	-0.5
	3µm,0.3s,baz=5.3,slow=19,SNR=914						
MBAR				Pg	Pb	19 22 22.8	-2.4
	4µm,0.3s,baz=6.5,slow=19,SNR=927						
MBAR				Lg	Lg	19 22 47.3	
	19µm,0.3s,baz=336,slow=20,SNR=12						
MBAR				LR	LR	19 23 25.3	
	comp=Z,210µm,18.9s,baz=60,slow=47						
MBAR	Mbarara	2.14	184	⇓eP	Pn	19 22 23.2	+1.3
MBAR				⇓eS	Sb	19 22 50.7	-1.0
I32KE	NAIROBI INFRAS	6.55	115	Pn	Pn	19 23 24.6	+1.9
	baz=267,slow=41,SNR=2.3						
I32KE				i		20 06 40.0	
	baz=296,slow=325,SNR=0.4						
KMBO	Kilima Mbogo	6.89	113	i P	Pn	19 23 29.9	+2.5
KMBO	Kilima Mbogo	6.89	113	Pn	Pn	19 23 27.0	-0.4
	16nm,0.3s,baz=280,slow=16,SNR=113						
KMBO				Pg	Pb	19 23 48.5	+2.2
	26nm,0.3s,baz=283,slow=15,SNR=10.0						
KMBO				Lg	Lg	19 25 20.1	
	178nm,0.3s,baz=284,slow=17,SNR=11						
KMBO				LR	LR	19 26 25.1	
	comp=Z,62µm,19.3s,baz=290,slow=40						
KMBO	Kilima Mbogo	6.89	113	ePn	Pn	19 23 26.8	-0.6
KMBO				e		19 23 27.0	
KMBO	Kilima Mbogo	6.89	113	i P	Pn	19 23 27.4	+0.1
	SNR=138						
KMBO	Kilima Mbogo	6.89	113	i P	Pn	19 23 27.5	+0.1
KMBO				pmax	pmax		
	comp=Z,130nm,0.6s						
KMBO	Kilima Mbogo	6.89	113	i P	Pn	19 23 29.9	+2.5
KMBO	Kilima Mbogo	6.89	113	i P	Pn	19 23 29.9	+2.5
KMBO	Kilima Mbogo	6.89	113	eP	Pn	19 23 27.7	+0.3
KMBO				eS	Sn	19 24 25.9	-20
KOND	Kondoa	8.07	143	i P	Pn	19 23 42.0	-1.5
KOND				i S	Sn	19 25 08.9	-5.7
KIBA	Kibaya	8.87	140	i P	Pn	19 23 52.3	-2.1
FURI	Furi	10.65	46	ePn	Pn	19 24 19.8	+0.8
FURI	Furi	10.65	46	eP	Pn	19 24 21.4	+2.4
FURI				eS		19 27 51.9	
AAE	Adis Abeba	10.80	46	i P	Pn	19 24 23.6	+2.5
AAE				eS		19 27 31.2	
ANKE	Ethiopia-Afar	11.88	47	eP	Pn	19 24 47.5	+12
ANKE				eS		19 27 55.5	
DESE	Dese	12.88	42	eP	Pn	19 24 48.7	-0.8
DESE				eS	Sn	19 28 03.7	+51
HARA	HARA	14.52	58	eP	Pn	19 25 01.8	-10
HARA				eS	S	19 28 41.5	+29
HARA	HARA	14.52	58	eP	Pn	19 24 57.4	-15
HARA				eS	Sn	19 27 40.3	-13
HARA	HARA	14.52	58	eP	Pn	19 25 01.8	-10
HARA				eS	S	19 28 41.5	+29
ATD	Arta Tunnel	15.46	50	Pn	Pn	19 25 25.3	+0.9
	comp=Z,0.6nm,0.3s,baz=259,slow=12,SNR=5.6						
ATD				Lg	Lg	19 29 51.2	
	comp=Z,0.8nm,0.3s,baz=180,slow=20,SNR=3.3						
ATD				LR	LR	19 31 35.3	
	comp=Z,37µm,20.2s,baz=216,slow=38						
ATD	Arta Tunnel	15.46	50	ePn	P	19 25 26.7	-2.1
	comp=Z,402nm,1.8s						
LSZ	Lusaka	16.93	189	i P	Pn	19 25 44.1	+0.9
LSZ				i S	Sn	19 28 55.7	+4.5
LSZ	Lusaka	16.93	189	Pn	Pn	19 25 41.9	-1.3
	comp=Z,2.0nm,0.3s,baz=15,slow=12,SNR=32						
LSZ				Sn	Sn	19 28 45.1	-6.2
	comp=Z,3.1nm,0.3s,baz=357,slow=19,SNR=2.1						
LSZ				Lg	Lg	19 30 29.9	
	comp=Z,11nm,0.3s,baz=299,slow=19,SNR=12						
LSZ				LR	LR	19 31 43.8	
	comp=Z,12µm,20.8s,baz=12,slow=35						
LSZ	Lusaka	16.93	189	ePn	Pn	19 25 41.5	-1.7
LSZ				eP	P	19 25 41.8	-3.4
LSZ	Lusaka	16.93	189	eP	Pn	19 25 41.5	-1.7
LSZ	Lusaka	16.93	189	i P	Pn	19 25 44.1	+0.9
LSZ				i S	Sn	19 28 55.7	+4.5
LSZ	Lusaka	16.93	189	i P	Pn	19 25 44.1	+0.9
LSZ				i S	Sn	19 28 55.7	+4.5
ITZ	Itezhi-Tezhi	17.85	195	i P	Pn	19 25 53.9	-0.8
ITZ				i		19 25 54.0	
	baz=7.8,slow=18						
ITZ				IAmb	IAmb	19 26 10.0	
	comp=Z,3µm,2.2s						
ITZ				eSN5		19 29 15.3	
ITZ				eSG		19 31 00.3	
ITZ				i Sg		19 31 00.4	
ITZ				IAMs_20	IAMs_20	19 31 04.2	
	comp=Z,20µm,8.1s						
ITZ	Itezhi-Tezhi	17.85	195	i P	Pn	19 25 49.8	-4.8
ITZ				i		19 25 51.3	
	baz=84,slow=2.7						
ITZ				i S	S	19 29 25.0	+4.9
ITZ	Itezhi-Tezhi	17.85	195	⇓iP	Pn	19 25 53.3	-1.3
ITZ				i		19 25 56.4	
	baz=17,slow=16						
ITZ				Sn	S	19 29 19.9	-0.2
ITZ				i S	Sn	19 29 20.3	+6.8
ITZ				Sn	Sn	19 29 20.7	+7.2
ITZ				Lg	Lg	19 31 03.5	
ITZ	Itezhi-Tezhi	17.85	195	i P	Pn	19 25 54.0	-0.6
ITZ				IAmb	IAmb	19 26 07.2	
	comp=Z,17µm,4.8s						
ITZ				i S	S	19 29 29.2	+9.1
MONG	Mongu	18.30	205	ePN5		19 25 59.2	
MONG				⇓iP	Pn	19 25 59.5	-0.6
MONG				i		19 25 59.8	
	baz=122,slow=3.0						
MONG				e		19 26 00.7	
MONG				e		19 26 00.7	
MONG				eSN5		19 29 30.5	
MONG				eSN5		19 29 32.0	
MONG				eSN5		19 29 32.0	
MONG	Mongu	18.30	205	⇑iP	Pn	19 25 59.5	-0.6
MONG				⇑iP	Pn	19 25 59.9	-0.3
MONG				⇓iP	pP	19 26 00.1	-4.8
MONG				i		19 26 06.3	
	baz=19,slow=14						
MONG				Sn	Sn	19 29 19.9	-4.5
MONG				i Sg		19 31 12.9	
MONG	Mongu	18.30	205	⇓iP	Pn	19 25 59.9	-0.3
MONG				i S	S	19 29 32.0	+2.8
MONG				Lg	Lg	19 31 17.2	
DAMY	Dhamar	18.59	45	ePn	Pn	19 26 05.7	+1.8
	comp=Z,194nm,1.4s						
BLWY	Bulawayo	21.67	186	i P	P	19 26 36.6	-0.3
BLWY	Bulawayo	21.67	186	i P	P	19 26 36.6	-0.3
BLWY	Bulawayo	21.67	186	i P	P	19 26 36.6	-0.3
MATP	Matopo	21.96	186	i P	P	19 26 39.4	-0.7
MATP	Matopo	21.96	186	P	P	19 26 39.1	-1.0
	comp=Z,105nm,1.1s,baz=7.5,slow=11,SNR=89						
MATP				Lg	Lg	19 33 01.7	
	comp=Z,248nm,1.0s,baz=91,slow=23,SNR=7.0						
MATP				LR	LR	19 35 29.0	
	comp=Z,35µm,18.7s,baz=9.5,slow=38						
MATP	Matopo	21.96	186	i P	P	19 26 39.4	-0.7
MATP	Matopo	21.96	186	i P	P	19 26 39.4	-0.7
MSNA	Messina	23.76	182	i P	P	19 26 59.0	+0.3
MSNA	Messina	23.76	182	i P	P	19 26 59.0	+0.3
MSNA	Messina	23.76	182	i P	P	19 26 59.0	+0.3
TSUM	Tsumeb	24.42	212	i P	P	19 27 03.0	-1.9
TSUM	Tsumeb	24.42	212	P	P	19 27 04.7	-0.2
	comp=Z,181nm,1.1s,baz=27,slow=8.9,SNR=76						
TSUM				Lg	Lg	19 34 28.7	
	comp=Z,60nm,0.9s,baz=110,slow=21,SNR=3.9						
TSUM				LR	LR	19 37 23.8	
	comp=Z,13µm,19.7s,baz=34,slow=38						
TSUM	Tsumeb	24.42	212	eP	P	19 27 04.4	-0.4
	comp=Z,426nm,1.3s						
TSUM				LR	LR		
	comp=Z,22µm,18.0s						
TSUM	Tsumeb	24.42	212	i P	P	19 27 03.0	-1.9
TSUM	Tsumeb	24.42	212	i P	P	19 27 03.0	-1.9
MSEY	Mahe Island	25.33	104	eP	P	19 27 14.0	+0.9
	comp=Z,833nm,1.9s						
MSEY				LR	LR		
	comp=Z,11µm,19.0s						
MSEY	Mahe Island	25.33	104	i P	P	19 27 15.7	+2.6
	SNR=7.7						
MSEY	Mahe Island	25.33	104	eP	P	19 27 14.0	+0.9
MSEY				pmax	pmax		
	comp=Z,833nm,1.9s						
MSEY				MLR	MLR		
	comp=Z,11µm,19.0s						
OPO	Ambohidratompo	25.63	142	P	P	19 27 16.0	+0.1
	comp=Z,69nm,1.1s,baz=312,slow=9.5,SNR=44						
OPO				LR	LR	19 37 22.4	
	comp=Z,5µm,19.1s,baz=198,slow=37						
ABPO	Ambohimpanom	25.99	143	eP	P	19 27 20.3	+1.1
	comp=Z,173nm,1.2s						
ABPO	Ambohimpanom	25.99	143	eP	P	19 27 20.3	+1.1
ABPO				pmax	pmax		
	comp=Z,173nm,1.2s						
RAYN	Ar Rayn	26.04	32	eP	P	19 27 20.4	+1.0
	comp=Z,76nm,1.4s						
RAYN				LR	LR		
	comp=Z,23µm,19.0s						
RAYN	Ar Rayn	26.04	32	i P	P	19 27 21.2	+1.8
	SNR=22						
RAYN	Ar Rayn	26.04	32	eP	P	19 27 20.4	+1.0
RAYN				pmax	pmax		
	comp=Z,76nm,1.4s						
RAYN				MLR	MLR		
	comp=Z,23µm,19.0s						
LBTB	Lobatse	26.90	191	P	P	19 27 25.4	-1.8
	comp=Z,64nm,1.0s,baz=5.7,slow=11,SNR=22						
LBTB				Lg	Lg	19 35 42.4	
	comp=Z,36nm,0.8s,baz=288,slow=19,SNR=5.9						
LBTB				LR	LR	19 38 41.8	
	comp=Z,12µm,18.3s,baz=15,slow=38						
LBTB	Lobatse	26.90	191	eP	P	19 27 26.6	-0.6
	comp=Z,155nm,1.1s						
WIN	Windhoek	27.48	209	eP	P	19 27 33.2	+0.5
	comp=Z,190nm,1.4s						
WIN				LR	LR		
	comp=Z,23µm,18.0s						
WIN	Windhoek	27.48	209	eP	P	19 27 33.2	+0.5
WIN				pmax	pmax		
	comp=Z,190nm,1.4s						
WIN				MLR	MLR		
	comp=Z,23µm,18.0s						
EIL	Elat	28.23	7	P	P	19 27 39.4	+0.4
	comp=Z,14nm,1.1s,baz=178,slow=7.0,SNR=8.0						
EIL				Lg	Lg	19 36 36.4	
	comp=Z,3.4nm,0.9s,baz=96,slow=19,SNR=2.0						
EIL				LR	LR	19 38 46.4	
	comp=Z,9µm,18.2s,baz=182,slow=36						
HRFI	Mount Harif	28.60	8	P	P	19 27 42.4	0.0
	comp=Z,97nm,1.5s						
HRFI	Mount Harif	28.60	8	P	P	19 27 42.4	0.0
JDRJ	Daraweish	29.37	8	P	P	19 27 50.2	+0.9
	comp=Z,113nm,1.7s						
JDRJ	Daraweish	29.37	8	P	P	19 27 50.2	+0.9
KZIT	Kziot	29.39	6	P	P	19 27 51.1	+1.8
	comp=Z,64nm,0.9s						
KZIT	Kziot	29.39	6	P	P	19 27 51.1	+1.8
LISJ	El Lisan	29.85	8	P	P	19 27 55.8	+2.5
	comp=Z,101nm,1.1s						
LISJ	El Lisan	29.85	8	P	P	19 27 55.8	+2.5
AMAZ	Amatzia	30.06	7	P	P	19 27 58.4	+3.1
	comp=Z,162nm,1.2s						
AMAZ	Amatzia	30.06	7	P	P	19 27 58.4	+3.1
WALJ	Wala	30.21	8	P	P	19 27 57.9	+1.3
	comp=Z,68nm,1.2s						
WALJ	Wala	30.21	8	P	P	19 27 57.9	+1.3
BOSA	Boshof	30.47	190	i P	P	19 27 58.9	-0.2
BOSA	Boshof	30.47	190	P	P	19 27 58.3	-0.8
	comp=Z,33nm,1.1s,baz=8.8,slow=10,SNR=13						
BOSA				Lg	Lg	19 37 34.9	
	comp=Z,179nm,1.2s,baz=84,slow=12,SNR=3.8						
BOSA				LR	LR	19 40 31.8	
	comp=Z,20µm,19.2s,baz=13,slow=37						
BOSA	Boshof	30.47	190	eP	P	19 27 58.6	-0.5
	comp=Z,134nm,1.5s						
BOSA	Boshof	30.47	190	i P	P	19 27 58.9	-0.2
BOSA	Boshof	30.47	190	i P	P	19 27 58.9	-0.2
ASF	Jabal al Asfar	30.98	10	P	P	19 28 06.1	+2.6
	comp=Z,51nm,2.3s						
ASF	Jabal al Asfar	30.98	10	P	P	19 28 06.1	+2.6
TOC3	Torodi Ar. Sit	31.09	293	PFAKE		19 28 20.0	+15
TOC3				LR	LR		
	comp=Z,17µm,20.0s						
TOC2	Torodi Ar. Sit	31.09	293	PFAKE		19 28 20.0	+15
TOC2				LR	LR		
	comp=Z,17µm,20.0s						
TOC4	Torodi Ar. Sit	31.10	293	PFAKE		19 28 20.0	+15
TOC4				LR	LR		
	comp=Z,18µm,20.0s						
TOB3	Torodi Ar. Sit	31.10	293	PFAKE		19 28 20.0	+15
TOB3				LR	LR		
	comp=Z,18µm,20.0s						
TOA2	Torodi Ar. Sit	31.11	293	PFAKE		19 28 20.0	+15
TOA2				LR	LR		
	comp=Z,17µm,20.0s						
TOA0	Torodi Ar. Sit	31.11	293	eP	P	19 28 03.5	-1.2
	comp=Z,93nm,0.8s						
TOA0				LR	LR		
	comp=Z,18µm,20.0s						
TORD	Torodi Ar. Bea	31.11	293	P	P	19 28 02.9	-1.9
	comp=Z,22nm,0.4s,baz=119,slow=6.8,SNR=128						
TORD				Lg	Lg	19 37 50.9	
	comp=Z,85nm,1.1s,baz=126,slow=28,SNR=5.0						
TORD				LR	LR	19 40 34.4	
	comp=Z,14µm,18.2s,baz=35,slow=36						
TOC1	Torodi Ar. Sit	31.11	293	PFAKE		19 28 20.0	+15
TOC1				LR	LR		
	comp=Z,19µm,20.0s						
TOA1	Torodi Ar. Sit	31.12	293	eP	P	19 28 02.9	-2.0
TOA1				LR	LR		
	comp=Z,17µm,20.0s						
TOB4	Torodi Ar. Sit	31.12	293	PFAKE		19 28 20.0	+15
TOB4				LR	LR		
	comp=Z,17µm,20.0s						
TOC5	Torodi Ar. Sit	31.12	293	PFAKE		19 28 20.0	+15
TOC5				LR	LR		
	comp=Z,20µm,20.0s						
TOB5	Torodi Ar. Sit	31.13	293	PFAKE		19 28 20.0	+15
TOB5				LR	LR		
	comp=Z,19µm,20.0s						
TOC7	Torodi Ar. Sit	31.13	293	PFAKE		19 28 20.0	+15
TOC7				LR	LR		
	comp=Z,17µm,20.0s						
SHMJ	Saham	31.35	8	P	P	19 28 11.9	+5.3
SHMJ	Saham	31.35	8	P	P	19 28 11.9	+5.3
TAM	Tamanrasset	32.44	313	eP	P	19 28 17.9	+1.3
	comp=Z,110nm,1.5s						
TAM				LR	LR		
	comp=Z,8µm,18.0s						
TAM	Tamanrasset	32.44	313	eP	P	19 28 17.9	+1.3
TAM				pmax	pmax		
	comp=Z,110nm,1.5s						
TAM				MLR	MLR		
	comp=Z,8µm,18.0s						
ALNE	Al Ain	32.86	45	i P	P	19 28 21.9	+1.9
	SNR=11						
ASUD	Al Ashush, Dub	32.92	44	P	P	19 28 22.1	+1.5
SZAC	Souni	33.09	3	P	P	19 28 25.0	+3.1
RER	Riviere de l'E	33.18	134	PFAKE		19 28 40.0	+17
RER				LR	LR		
	comp=Z,9µm,20.0s						
FAQ	Al Faqa, Dubai	33.18	44	P	P	19 28 24.0	+1.2
PPCY	Paphos	33.19	2	P	P	19 28 24.7	+2.0
CSS	Mathiatis	33.32	4	eP	P	19 28 25.0	+1.1
	comp=Z,471nm,1.5s						
CSS				LR	LR		
	comp=Z,7µm,21.0s						
CSS	Mathiatis	33.32	4	P	P	19 28 24.2	+0.3
CSS	Mathiatis	33.32	4	P	P	19 28 25.4	+1.5
NAZ	Nazwa, Dubai	33.39	44	i P	P	19 28 25.8	+1.2
	SNR=6.4						
PHNC	Paralimni	33.41	5	P	P	19 28 25.9	+1.2
ASHO	Ashiyiah	33.47	45	i P	P	19 28 26.6	+1.2
	SNR=28						
ALFC	Alefka	33.47	3	P	P	19 28 26.1	+0.8
HATD	Hatta, Dubai	33.61	44	i P	P	19 28 27.9	+1.3
	SNR=17						
UOSS	Minazif	33.74	44	eP	P	19 28 28.4	+0.7
	comp=Z,186nm,1.5s						
UOSS				LR	LR		
	comp=Z,22µm,20.0s						
UOSS	Minazif	33.74	44	i P	P	19 28 28.3	+0.7
	SNR=9.1						
NPS	Neapolis	33.90	352	P	P	19 28 30.5	+1.6
MRIV	Mauritius Mete	33.93	131	eP	P	19 28 30.2	+0.7
	comp=Z,17nm,1.0s						
MRIV				LR	LR		
	comp=Z,2µm,19.0s						
MSFE	Esma-Masafi	33.97	44	P	P	19 28 31.2	+1.5
KARP	Karpathos	34.00	355	eP	P	19 28 30.6	+0.7
	comp=Z,439nm,1.4s						
KARP				LR	LR		
	comp=Z,8µm,18.0s						
MDH	Madha	34.03	44	i P	P	19 28 31.5	+1.3
	SNR=5.4						
IMMV	Iera Moni Meta	34.35	350	P	P	19 28 32.4	-0.4
SHME	Shamm	34.41	43	i P	P	19 28 34.6	+1.1
	SNR=12						
ANKY	Antikythira Is	34.86	349	eP	P	19 28 38.0	+0.7
ANKY	Antikythira Is	34.86	349	P	P	19 28 38.0	+0.7
SUR	Sutherland	35.07	195	eP	P	19 28 39.5	+0.1
	comp=Z,92nm,1.1s						
SUR				LR	LR		
	comp=Z,8µm,18.0s						
KTHA	Kythira Island	35.29	349	P	P	19 28 41.7	+0.8
YER	Yerkesik	35.49	356	eP	P	19 28 44.0	+1.3
YER	Yerkesik	35.49	356	P	P	19 28 44.0	+1.3
YER	Yerkesik	35.49	356	eP	P	19 28 44.0	+1.3
APE	Apeiranthos	35.69	353	i P	P	19 28 44.4	0.0
APE				pmax	pmax		
	comp=Z,55nm,1.2s						
VLI	Veliai	35.76	349	eP	P	19 28 44.7	-0.3
VLI	Veliai	35.76	349	P	P	19 28 44.7	-0.3
KIC	Kosan Boka	35.85	279	eP	P	19 28 44.6	-1.5
	comp=Z,785nm,1.6s						
DBIC	Dimbokro	36.00	279	P	P	19 28 46.5	-0.8
	comp=Z,85nm,1.1s,baz=82,slow=8.9,SNR=53						
DBIC				Lg	Lg	19 40 31.2	
	comp=Z,43nm,1.1s,baz=158,slow=19,SNR=4.5						
DBIC				LR	LR	19 44 13.5	
	comp=Z,5µm,18.7s,baz=86,slow=38						
DBIC	Dimbokro	36.00	279	eP	P	19 28 46.4	-1.0
	comp=Z,215nm,1.2s						
DBIC	Dimbokro	36.00	279	eP	P	19 28 46.4	-1.0
DBIC				pmax	pmax		
	comp=Z,215nm,1.2s						
ISP	Isparta	36.10	360	eP	P	19 28 49.5	+1.5
	comp=Z,653nm,1.7s						
ISP				LR	LR		
	comp=Z,4µm,19.0s						
ISP	Isparta	36.10	360	eP	P	19 28 49.5	+1.5
ISP				pmax	pmax		
	comp=Z,653nm,1.7s						
ISP				MLR	MLR		
	comp=Z,4µm,19.0s						
LIC	Lamto	36.12	278	eP	P	19 28 46.8	-1.6
	comp=Z,488nm,1.8s						
TIC	Toumodi	36.16	279	eP	P	19 28 47.4	-1.4
ITM	Ithomi	36.41	348	eP	P	19 28 51.5	+0.9
	comp=Z,714nm,1.7s						
ITM				LR	LR		
	comp=Z,7µm,20.0s						
VLX	Vlachokerasia	36.50	349	eP	P	19 28 52.8	+1.4
VLX	Vlachokerasia	36.50	349	P	P	19 28 52.8	+1.4
MANT	Manisa	36.83	357	eP	P	19 28 55.9	+1.6
	comp=Z,619nm,1.3s						
CHOS	Chios island	36.93	354	P	P	19 28 56.2	+1.2
VILL	Villia	37.10	350	P	P	19 28 56.7	+0.3
KLV	Kalavryta, Ach	37.20	349	P	P	19 28 57.5	+0.2
DRO	Drossia	37.20	348	P	P	19 28 58.4	+1.1
EREA	Eretria	37.24	351	P	P	19 28 58.7	+1.0
WDD	Wied Dalam	37.34	338	eP	P	19 28 57.6	-0.9
	comp=Z,147nm,1.0s						
WDD				LR	LR		
	comp=Z,13µm,20.0s						
RLS	Riolos of Patr	37.35	348	P	P	19 29 00.0	+1.5
LAKA	Lakka	37.42	348	eP	P	19 29 01.1	+1.9
LAKA	Lakka	37.42	348	P	P	19 29 01.1	+1.9
TRIZ	Trizonia	37.52	349	P	P	19 29 00.6	+0.7
SERG	Sergoula	37.57	349	P	P	19 29 00.7	+0.3
SMIA	Simia	37.81	350	P	P	19 29 03.0	+0.6
BALB	Balikesir	38.01	356	eP	P	19 29 05.8	+1.7
	comp=Z,460nm,1.3s						
BALB				LR	LR		
	comp=Z,12µm,19.0s						
BRTR	Keskin Array B	38.08	3	P	P	19 29 05.6	+0.7
	comp=Z,36nm,1.1s,baz=182,slow=8.7,SNR=94						
BRTR				PcP	PcP	19 31 19.0	-1.0
	comp=Z,15nm,0.9s,baz=190,slow=7.4,SNR=3.6						
BR101	Keskin Array S	38.08	3	eP	P	19 29 05.6	+0.7
BR101				ePcP	PcP	19 31 19.0	-1.0
BR131	Keskin Array S	38.08	3	eP	P	19 29 05.7	+0.9
	comp=Z,410nm,1.8s						
AGG	Agios Georgios	38.11	349	eP	P	19 29 05.1	+0.1
	comp=Z,162nm,1.0s						
AGG	Agios Georgios	38.11	349	eP	P	19 29 05.1	+0.1
AGG				pmax	pmax		
	comp=Z,162nm,1.0s						
NEO	Neokhori	38.23	350	P	P	19 29 06.1	+0.1
LKD2	Lefkada island	38.23	347	P	P	19 29 06.8	+0.8
LIA	Limnos Island	38.52	353	P	P	19 29 08.2	-0.2
THL	Klokotos Trika	38.69	349	P	P	19 29 10.0	+0.2
MDUB	Mudurnu	38.74	0	eP	P	19 29 11.3	+0.9
	comp=Z,2µm,1.5s						

MDUB				LR	LR		
	comp=Z,9µm,22.0s						
YLV	Yalova	38.86	358⇑	*i*P	P	19 29 13.1	+1.8
IGT	Igoumenitsa	39.01	347	P	P	19 29 13.4	+0.9
JAN	Janina	39.02	348	P	P	19 29 14.1	+1.5
CEL	Celeste	39.04	341	*e*P	P	19 29 13.9	+1.1
	comp=Z,184nm,1.2s						
CEL				LR	LR		
	comp=Z,11µm,20.0s						
LIT	Litokhoron	39.12	350	*e*P	P	19 29 13.4	-0.1
	comp=Z,350nm,1.7s						
LIT	Litokhoron	39.12	350	*e*P	P	19 29 13.4	-0.1
LIT				pmax	pmax		
	comp=Z,350nm,1.7s						
PLG	Polygyros	39.23	351	P	P	19 29 15.1	+0.7
THAS	Thassos island	39.28	353	P	P	19 29 15.1	+0.4
KEK	Kerkira	39.31	346	*e*P	P	19 29 15.1	+0.1
KEK	Kerkira	39.31	346	P	P	19 29 15.1	+0.1
CLTB	Caltabellotta	39.37	338	*e*P	P	19 29 16.7	+1.0
	comp=Z,163nm,1.4s						
CLTB				LR	LR		
	comp=Z,10µm,18.0s						
ILGA	Ilgaz	39.41	3	*e*P	P	19 29 16.7	+0.6
	comp=Z,150nm,1.4s						
ALN	Alexandroupoli	39.41	354	*e*P	P	19 29 16.6	+0.8
	comp=Z,114nm,1.4s						
ALN				LR	LR		
	comp=Z,3µm,21.0s						
ALN	Alexandroupoli	39.41	354	P	P	19 29 16.6	+0.8
ALN	Alexandroupoli	39.41	354	*e*P	P	19 29 16.6	+0.8
ALN				pmax	pmax		
	comp=Z,115nm,1.4s						
ALN				MLR	MLR		
	comp=Z,3µm,21.0s						
SRN	Sarande	39.42	347	*i* P	P	19 29 18.2	+2.3
KEST	Kesra	39.45	332	P	P	19 29 15.0	-1.4
	comp=Z,26nm,1.1s,baz=123,slow=2.4,SNR=21						
KEST				LR	LR	19 46 27.2	
	comp=Z,7µm,19.2s,baz=80,slow=38						
KEST	Kesra	39.45	332	*e*P	P	19 29 17.1	+0.7
	comp=Z,239nm,1.8s						
KEST				LR	LR		
	comp=Z,12µm,20.0s						
TIP	Timpagrande	39.61	343	*e*P	P	19 29 17.7	0.0
	comp=Z,275nm,1.7s						
TIP	Timpagrande	39.61	343⇓	*i*P	P	19 29 18.3	+0.7
SOH	Sokhos	39.68	351	P	P	19 29 18.4	+0.2
SOH	Sokhos	39.68	351	P	P	19 29 18.9	+0.7
SOH				pmax	pmax		
	comp=Z,87nm,1.3s						
TPE	Tepelena	39.81	347	P	P	19 29 20.1	+0.9
TPE	Tepelena	39.81	347	*i* P	P	19 29 21.0	+1.8
SRS	Serrai	39.94	351	P	P	19 29 20.1	-0.1
SRS				pmax	pmax		
	comp=Z,127nm,1.5s						
GRG	Griva	39.97	350	P	P	19 29 20.5	-0.1
GRG	Griva	39.97	350	P	P	19 29 21.4	+0.8
GRG				pmax	pmax		
	comp=Z,69nm,1.7s						
KNT	Kendrikon	40.09	351	P	P	19 29 22.2	+0.7
KNT				pmax	pmax		
	comp=Z,138nm,1.5s						
VLO	Vlora	40.10	346	*i* P	P	19 29 32.5	+11
SHEL	Horse Pasture	40.16	243	*e*P	P	19 29 22.7	+0.3
	comp=Z,1µm,2.0s						
SHEL				LR	LR		
	comp=Z,10µm,20.0s						
SHEL	Horse Pasture	40.16	243	*e*P	P	19 29 22.7	+0.3
SHEL				pmax	pmax		
	comp=Z,1µm,2.0s						
SHEL				MLR	MLR		
	comp=Z,10µm,20.0s						
VAY	Valandovo	40.30	350	*e*P	P	19 29 24.1	+0.9
VAY	Valandovo	40.30	350	P	P	19 29 24.1	+0.9
VAY	Valandovo	40.30	350	*e*P	P	19 29 24.1	+0.9
RZN	Rozhen	40.34	353	P	P	19 29 24.4	+0.6
GNI	Garni	40.43	16	*e*P	P	19 29 25.6	+1.1
	comp=Z,107nm,1.4s						
GNI				LR	LR		
	comp=Z,7µm,18.0s						
GNI	Garni	40.43	16	*i* P	P	19 29 26.7	+2.2
	SNR=7.1						
GNI	Garni	40.43	16*d*	*i*P	P	19 29 24.4	-0.1
GNI				pmax	pmax		
	comp=Z,118nm,1.0s						
DIM	Dimitrovgrad	40.61	354	P	P	19 29 26.0	+0.3
TAMR	Tamra	40.64	333	*e*P	P	19 29 27.1	+1.0
	comp=Z,142nm,1.2s						
TAMR				LR	LR		
	comp=Z,100nm,18.0s						
KKB	Krupnik	40.75	351	P	P	19 29 27.0	+0.1
PLD	Plovdiv	40.76	353	P	P	19 29 27.8	+0.8
PLD				pmax	pmax		
	comp=Z,11nm,1.7s						
ABSA	Djebel Ababsia	40.79	331	P	P	19 29 27.8	+0.3
TIR	Tirane	40.85	347	*e*P	P	19 29 28.7	+0.9
	comp=Z,609nm,1.3s						
TIR	Tirane	40.85	347	P	P	19 29 28.7	+0.9
TIR	Tirane	40.85	347⇑	*i*P	P	19 29 29.2	+1.4
TIR	Tirane	40.85	347	*e*P	P	19 29 28.7	+0.9
TIR				pmax	pmax		
	comp=Z,609nm,1.3s						
TIR	Tirane	40.85	347	*i* P	P	19 29 30.0	+2.2
MATE	Matera	40.99	343⇓	*i*P	P	19 29 29.3	+0.4
PHP	Peshkopia	41.05	348	*i* P	P	19 29 31.1	+1.6
CMAH	Djebel Manchou	41.10	331	P	P	19 29 30.6	+0.6
CTEI	Djebel Teioual	41.16	329	P	P	19 29 30.8	+0.2
CKFL	Kef-Lekhel	41.27	330	P	P	19 29 31.6	+0.2
AKH	Akhalkalaki	41.28	14	*e*P	P	19 29 32.5	+1.0
	comp=Z,178nm,1.6s						
AKH				LR	LR		
	comp=Z,6µm,18.0s						
AKH	Akhalkalaki	41.28	14⇑	*i*P	P	19 29 33.5	+2.0
AKH	Akhalkalaki	41.28	14	P	P	19 29 32.5	+1.0
VTS	Vitosha	41.46	351	*e*P	P	19 29 32.4	-0.6
VTS				*e*P	P	19 29 33.2	+0.3
VTS	Vitosha	41.46	351	P	P	19 29 32.4	-0.6
VTS	Vitosha	41.46	351⇑	*i*P	P	19 29 33.4	+0.4
VTS	Vitosha	41.46	351	*e*P	P	19 29 32.4	-0.6
VTS	Vitosha	41.46	351	P	P	19 29 23.5	-9.5
ULC	Ulcinj	41.58	347⇑	*i*P	P	19 29 34.3	+0.5
PRD	Provadia	41.59	356	P	P	19 29 34.0	+0.2
CKHR	Kef el Ahmar	41.59	328	P	P	19 29 33.6	-0.5
BCI	Bajram Curri	41.78	348	*i* P	P	19 29 36.9	+1.4
SET	Setif	41.78	329	P	P	19 29 31.0	-4.7
DRME	Dracevica, Mon	41.80	347⇑	*i*P	P	19 29 36.7	+1.1
DRME	Dracevica, Mon	41.80	347	*e*P	P	19 29 36.5	+0.9
DFRA	Djebel Bou Aff	41.80	329	P	P	19 29 35.9	+0.1
TBLG	Delisi	41.90	16	*e*P	P	19 29 37.8	+1.3
	comp=Z,280nm,1.6s						
TBLG	Delisi	41.90	16	*e*P	P	19 29 37.8	+1.3
TBLG				pmax	pmax		
	comp=Z,280nm,1.6s						
BUM	Brajici-Budva	41.98	347⇑	*i*P	P	19 29 38.0	+0.9
PDG	Podgorica	42.02	347⇓	*i*P	P	19 29 38.5	+1.1
PDG	Podgorica	42.02	347	*e*P	P	19 29 38.2	+0.9
TTG	Podgorica	42.02	347⇑	*i*P	P	19 29 38.4	+1.1
TTG	Podgorica	42.02	347	*e*P	P	19 29 38.0	+0.7
	comp=Z,405nm,1.5s						
TTG				LR	LR		
	comp=Z,6µm,20.0s						
TTG	Podgorica	42.02	347	*e*P	P	19 29 38.0	+0.7
TTG				pmax	pmax		
	comp=Z,405nm,1.5s						
TTG				MLR	MLR		
	comp=Z,6µm,20.0s						
PVY	Plav	42.02	348⇑	*i*P	P	19 29 38.2	+0.7
MPEP	Malo Peshtene	42.11	352	P	P	19 29 38.5	+0.4
CEME	Cevo	42.20	347⇑	*i*P	P	19 29 39.6	+0.6
HCY	Herceg Novi	42.21	346⇑	*i*P	P	19 29 39.4	+0.5
HCY	Herceg Novi	42.21	346	*e*P	P	19 29 40.6	+1.7
IVA	Berane	42.30	348⇑	*i*P	P	19 29 40.2	+0.4
KOME	Kolasin	42.36	348⇑	*i*P	P	19 29 41.7	+1.4
NKME	Niksic	42.41	347⇑	*i*P	P	19 29 41.2	+0.6
DGAR	Diego Garcia	42.41	103	PFAKE		19 29 50.0	+9.0
DGAR				LR	LR		
	comp=Z,6µm,19.0s						
ICOR	Ion Corvin	42.47	357⇑	*i*P	P	19 29 42.1	+1.1
TREB	Trebinje	42.50	346	*e*P	P	19 29 42.3	+1.0
SOC	Sochi	42.59	9	*e*P	P	19 29 39.7	-2.2
SOC				*e*		19 31 16.9	
SOC				*e*PPP	PPP	19 31 57.5	
SOC				*e*S	S	19 35 58.6	-5.5
SOC				pmax	pmax		
	comp=Z,86nm,0.9s						
SOC				MLR	MLR		
	comp=Z,3µm,12.0s						
BRY	Bratogost	42.63	347⇑	*i*P	P	19 29 42.8	+0.3
BRY	Bratogost	42.63	347	*e*P	P	19 29 43.4	+0.9
ZEI	Tsey	42.68	14	*e*P	P	19 29 42.4	-0.6
ZEI				pmax	pmax		
	comp=Z,68nm,1.1s						
ZEI				MLR	MLR		
	comp=Z,5µm,11.0s						
TIRR	Tirgusor	42.78	357	*e*P	P	19 29 43.4	-0.1
	comp=Z,381nm,1.5s						
TIRR				LR	LR		
	comp=Z,6µm,20.0s						
TIRR	Tirgusor	42.78	357⇑	*i*P	P	19 29 44.0	+0.5
TIRR	Tirgusor	42.78	357	*e*P	P	19 29 43.4	-0.1
TIRR				pmax	pmax		
	comp=Z,381nm,1.5s						
TIRR				MLR	MLR		
	comp=Z,6µm,20.0s						
STON	Ston	42.80	346	*e*P	P	19 29 44.3	+0.6
UPM	Unac-Piva	42.83	347⇑	*i*P	P	19 29 44.5	+0.3
UPM	Unac-Piva	42.83	347	*e*P	P	19 29 45.7	+1.5
PLE	Pljevlja	42.85	348⇑	*i*P	P	19 29 45.0	+0.8
TLB	Topalu	42.93	357⇓	*i*P	P	19 29 45.0	+0.3
TLB	Topalu	42.93	357	P	P	19 29 45.0	+0.3
HARR	Harsova	43.04	357⇑	*i*P	P	19 29 46.5	+0.9
HARR	Harsova	43.04	357	P	P	19 29 46.5	+0.9
HUMR	Humele	43.12	354⇑	*i*P	P	19 29 47.1	+0.9
RUDO	Rudo	43.13	348	*e*P	P	19 29 45.4	-1.0
SULR		43.14	355⇑	*i*P	P	19 29 48.1	+1.7
NCK	Nalchik	43.27	14*d*	*i*P	P	19 29 48.9	+1.3
NCK				pmax	pmax		
	comp=Z,66nm,1.1s						
SIM	Simferopol'	43.31	3*c*	*i*P	P	19 29 49.0	+1.2
SIM						19 31 37.2	
SIM				*e*S	S	19 36 14.0	-0.7
SIM				*e*SS	SS	19 39 20.0	-8.6
SIM				pmax	pmax		
	comp=Z,97nm,1.3s						
KBZ	Khabaz	43.34	13	P	P	19 29 47.1	-0.9
	comp=Z,13nm,0.9s,baz=176,slow=5.7,SNR=12						
KBZ				LR	LR	19 48 40.5	
	comp=Z,5µm,19.0s,baz=190,slow=37						
BBLS	Lazići	43.36	348	*e*P	P	19 29 49.1	+0.8
ANN	Anapa	43.46	7	*e*P	P	19 29 55.8	+6.9
ANN				*e*		19 31 44.8	
ANN				*e*S	S	19 36 22.9	+6.1
ANN				*e*SS	ScS	19 39 43.9	-4.5
ANN				pmax	pmax		
	comp=Z,201nm,2.5s						
ANN				MLR	MLR		
	comp=Z,2µm,18.0s						
DIVS	Divibare	43.46	349	*e*P	P	19 29 50.0	+0.9
SRE	Strehaia	43.47	352⇓	*i*P	P	19 29 50.3	+1.2
SRE	Strehaia	43.47	352	P	P	19 29 50.3	+1.2
TLCR		43.49	358⇑	*i*P	P	19 29 49.8	+0.5
TLCR		43.49	358	P	P	19 29 49.7	+0.5
KIV	Kislovodsk	43.51	12	*e*P	P	19 29 50.1	+0.6
	comp=Z,120nm,1.6s						
KIV				LR	LR		
	comp=Z,4µm,18.0s						
KIV	Kislovodsk	43.51	12⇓	*i*P	P	19 29 51.2	+1.7
KIV	Kislovodsk	43.51	12	*i* P	P	19 29 50.5	+1.0
	SNR=8.0						
KIV	Kislovodsk	43.51	12	*e*P	P	19 29 50.2	+0.6
KIV				*e*		19 31 31.5	
KIV				*e*S	S	19 36 17.1	-0.7
KIV				pmax	pmax		
	comp=Z,369nm,4.8s						
KIV				pmax	pmax		
	comp=Z,106nm,1.0s						
KIV				MLR	MLR		
	comp=Z,9µm,16.0s						
SECR		43.51	355⇑	*i*P	P	19 29 51.4	+1.9
CFR	Carcaliu	43.51	357⇓	*i*P	P	19 29 49.7	+0.3
CFR	Carcaliu	43.51	357	P	P	19 29 49.8	+0.3
CFR				pmax	pmax		
	comp=Z,173nm,1.8s						
AQU	L'Aquila	43.55	341	*e*P	P	19 29 50.1	+0.2
	comp=Z,114nm,1.2s						
AQU				LR	LR		
	comp=Z,7µm,21.0s						
AQU	L'Aquila	43.55	341	*e*P	P	19 29 50.1	+0.2
AQU				pmax	pmax		
	comp=Z,115nm,1.2s						
AQU				MLR	MLR		
	comp=Z,7µm,21.0s						
AQU	L'Aquila	43.55	341	*e*P	P	19 29 49.9	0.0
GROC	Groznyy	43.56	16	*e*P	P	19 29 48.7	-1.1
GROC				*e*		19 31 35.2	
GROC				*e*S	S	19 36 15.5	-2.9
GROC				pmax	pmax		
	comp=Z,180nm,1.6s						
ISR	Istrita	43.56	356⇓	*i*P	P	19 29 51.8	+1.9
ISR	Istrita	43.56	356	P	P	19 29 51.7	+1.9
ISR				pmax	pmax		
	comp=Z,366nm,1.4s						
HAPS	Han Pijesak,BI	43.66	348	*e*P	P	19 29 48.4	-2.4
MTUR	Matau	43.80	354⇓	*i*P	P	19 29 52.8	+1.0
MTUR	Matau	43.80	354	P	P	19 29 52.8	+1.0
MDVR	Moldovita	43.81	351⇓	*i*P	P	19 29 52.0	+0.1
MAK	Makhachkala	43.83	18	*e*P	P	19 29 48.2	-3.8
MAK				*e*S	S	19 36 18.1	-4.2
MAK				pmax	pmax		
	comp=Z,168nm,1.1s						
MAK				MLR	MLR		
	comp=Z,5µm,11.0s						
BISRR	Bisoca	43.97	356⇑	*i*P	P	19 29 55.1	+1.9
MLR	Muntele Rosu	43.98	355	*e*P	P	19 29 53.8	+0.5
	comp=Z,720nm,1.9s						
MLR				LR	LR		
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	43.98	355⇑	*i*P	P	19 29 54.2	+0.9
MLR	Muntele Rosu	43.98	355	*e*P	P	19 29 53.8	+0.5
MLR				pmax	pmax		
	comp=Z,720nm,1.9s						
MLR				MLR	MLR		
	comp=Z,2µm,20.0s						
ARR	Arges	43.98	354⇑	*i*P	P	19 29 53.9	+0.6
TEKS	Tekeris	43.98	348	*e*P	P	19 29 53.2	-0.1
GEYT	Alibeck	44.00	31	P	P	19 29 53.2	-0.4
	comp=Z,7.4nm,0.8s,baz=224,slow=6.2,SNR=16						
GEYT				PcP	PcP	19 31 39.2	0.0
	comp=Z,6.0nm,1.0s,baz=186,slow=6.8,SNR=3.9						
GEYT				LR	LR	19 49 22.7	
	comp=Z,10µm,18.5s,baz=225,slow=38						
GYA0B	ALIBECK ARRAY	44.00	31	*e*P	P	19 29 53.8	+0.2
	comp=Z,38nm,1.3s						
GYA0B				LR	LR		
	comp=Z,9µm,18.0s						
VOIR		44.01	354⇓	*i*P	P	19 29 53.6	0.0
VOIR		44.01	354	P	P	19 29 53.5	0.0
VOIR				pmax	pmax		
	comp=Z,138nm,1.7s						
BEO	Beograd	44.05	349	P	P	19 29 55.1	+1.3
ODBI	Odobesti	44.16	356⇑	*i*P	P	19 29 56.8	+2.2
LOT	Lotru	44.16	353⇓	*i*P	P	19 29 55.4	+0.6
GZR	Gura Zlata	44.24	352⇓	*i*P	P	19 29 55.7	+0.3
PLOR	Plostina	44.28	356⇑	*i*P	P	19 29 55.9	+0.3
PLOR	Plostina	44.28	356	P	P	19 29 55.9	+0.3
VRI	Vrincioaia	44.29	356⇑	*i*P	P	19 29 56.7	+1.0
VRI	Vrincioaia	44.29	356	P	P	19 29 56.2	+0.5
VRI				pmax	pmax		
	comp=Z,193nm,1.5s						
MGRS	Mrkonjic Grad	44.41	346	*e*P	P	19 29 58.4	+1.7
DOPR	Dopca	44.50	355⇑	*i*P	P	19 29 57.2	-0.2
FRGS	Fruska Gora	44.51	349	*e*P	P	19 29 58.6	+1.1
BOM	Bombay	44.53	64	*i* P	P	19 29 56.5	-1.5
BOM				*e*x	x	19 36 28.9	
OZUR		44.59	355⇓	*i*P	P	19 29 57.6	-0.5
GOF	Gofitskoye	44.64	12⇑	*i*P	P	19 29 59.1	+0.6
GOF				pmax	pmax		
	comp=Z,328nm,1.5s						
BZS	Buzias	44.64	351⇓	*i*P	P	19 29 58.9	+0.5
BZS	Buzias	44.64	351	P	P	19 29 58.6	+0.1
BZS				pmax	pmax		
	comp=Z,59nm,1.8s						
BLY	Banja Luka	44.69	346	*e*P	P	19 29 59.3	+0.4
	comp=Z,99nm,1.4s						
BLY	Banja Luka	44.69	346⇑	*i*P	P	19 29 59.8	+0.9
BLY	Banja Luka	44.69	346	*e*P	P	19 29 59.4	+0.5
DEV	Deva	44.71	352⇓	*i*P	P	19 30 00.0	+1.0
DEV	Deva	44.71	352	P	P	19 29 59.9	+1.0
DEV				pmax	pmax		
	comp=Z,102nm,1.4s						
TESR	Tescani	44.93	356⇓	*i*P	P	19 30 00.6	-0.2
SIRR	Siria	45.27	351⇑	*i*P	P	19 30 04.7	+1.2
PGF	Pioggiola	45.29	337	P	P	19 30 04.6	+0.8
PGF				pmax	pmax		
	comp=Z,112nm,1.9s						
KIS	Kishinev	45.30	358	*e*P	P	19 30 02.0	-1.7
	comp=Z,170nm,2.0s						
KIS	Kishinev	45.30	358	*e*PcP	PcP	19 31 48.0	+4.7
KIS	Kishinev	45.30	358	*e*PP	PP	19 32 00.0	+10
KIS				*e*S	S	19 36 38.0	-5.6
	comp=Z,1µm,8.0s						
KIS				*e*SS	SS	19 40 15.0	+8.1
KIS				LRM	MLR	19 53 42.0	
	comp=Z,2µm,17.0s						
KIS	Kishinev	45.30	358	*e*P	P	19 30 02.0	-1.7
KIS				*e*		19 30 10.0	
KIS				*e*		19 31 48.0	
KIS				*e*S	S	19 36 38.0	-5.6
KIS				pmax	pmax		
	comp=Z,170nm,2.0s						
KIS				pmax	pmax		
	comp=Z,900nm,8.0s						
KIS				smax	smax		
	comp=N,1µm,8.0s						
POO	Poona	45.36	65	*e*P	P	19 30 04.9	+0.1
POO				IAmb	IAmb	19 30 07.2	
	comp=Z,57nm,1.0s						
BIZ	Bicaz	45.40	355⇑	*i*P	P	19 30 05.7	+1.2
CJR	Cluj-Napoca	45.43	353⇓	*i*P	P	19 30 06.2	+1.4
CJR	Cluj-Napoca	45.43	353	P	P	19 30 06.2	+1.4
AMBH	Ambrzfalva	45.50	350	*e*P	P	19 30 06.1	+0.8
IAS	Iasi	45.55	357⇓	*i*P	P	19 30 06.3	+0.6
IAS	Iasi	45.55	357	P	P	19 30 06.7	+1.0
IAS				pmax	pmax		
	comp=Z,92nm,1.1s						
DRGR		45.62	352⇑	*i*P	P	19 30 07.6	+1.2
DRGR		45.62	352	P	P	19 30 07.2	+0.8
DRGR				pmax	pmax		
	comp=Z,296nm,1.6s						
ARCR	ARCALIA	45.71	354⇑	*i*P	P	19 30 08.1	+1.1
MORH	Mrgy, Hungar	45.76	348⇓	*e*P	P	19 30 07.1	-0.3
MORH				*e*PP	PP	19 32 06.0	+11
MORH				*e*S	S	19 36 51.0	+0.8
MORH				*e*SS	SS	19 40 24.1	+9.2
BOJS	Bojanci	45.89	345	*i* P	P	19 30 08.6	+0.2
BOJS				*e*PP	PP	19 32 04.7	+8.6
BOJS				*i* S	S	19 36 52.5	+0.4
BOJS				*e*SS	SS	19 40 24.9	+7.8
RIY	Rijeka	45.93	344	*e*P	P	19 30 09.3	+0.6
MELI	Melilla	45.99	321	*i* P	P	19 30 12.5	+3.1
MELI				*e*S	S	19 36 53.6	-0.3
GBRS	Gornja Briga	46.03	344	*i* P	P	19 30 10.2	+0.7
ASCN	Ascension	46.10	258	PFAKE		19 30 20.0	+9.4
ASCN				LR	LR		
	comp=Z,6µm,18.0s						
CRES	Cresnjev	46.13	345	*e*P	P	19 30 10.7	+0.4
BURAR	Bucovina Array	46.15	355⇑	*i*P	P	19 30 12.5	+1.9
BURAR	Bucovina Array	46.15	355	P	P	19 30 12.4	+1.9
VLC	Villacollemand	46.17	340	*e*P	P	19 30 08.5	-2.2
	comp=Z,87nm,1.1s						
VLC				LR	LR		
	comp=Z,3µm,18.0s						
BUR08	Bucovina Ar. S	46.18	355	*e*P	P	19 30 11.5	+0.7
	comp=Z,448nm,1.4s						
CEY	Cerknica	46.33	344	*e*P	P	19 30 12.0	+0.1
IFR	Ifrane	46.35	317	*i* P	P	19 30 14.2	+1.7
IFR				*e*S	S	19 36 58.2	-1.4
BMR	Baia Mare	46.39	353⇑	*i*P	P	19 30 13.8	+1.5
BEHE	Becsehely	46.41	347	*e*P	P	19 30 13.9	+1.4
BEHE	Becsehely	46.41	347	*e*P	P	19 30 13.0	+0.5
BEHE				*e*PP	PP	19 32 14.0	+12
BEHE				*e*S	S	19 37 00.1	+0.4
TRI	Trieste	46.48	343	*e*P	P	19 30 12.9	-0.2
	comp=Z,158nm,1.2s						
TRI				LR	LR		
	comp=Z,3µm,20.0s						
TRI	Trieste	46.48	343	*e*P	P	19 30 12.9	-0.2
TRI				pmax	pmax		
	comp=Z,158nm,1.2s						
TRI				MLR	MLR		
	comp=Z,3µm,20.0s						
KOGS	Kog	46.52	346	*i* P	P	19 30 14.2	+0.9
TIH	Tihany	46.57	348	*e*P	P	19 30 14.1	+0.3
TIH				*e*S	S	19 37 05.1	+3.2
TIH				*e*SS	SS	19 40 34.1	+5.9
LJU	Ljubljana	46.58	344	*i* P	P	19 30 13.9	+0.1
LJU				*i* PP	PP	19 32 11.4	+7.9
LJU				*i* S	S	19 37 02.0	-0.1
LJU	Ljubljana	46.58	344	*e*P	P	19 30 14.1	+0.3
GROS	Grobnik	46.71	345	*i* P	P	19 30 15.5	+0.5
PVLZ	Peæn de	46.79	320	*i* P	P	19 30 19.1	+3.4
PVLZ				*e*S	S	19 37 04.2	-1.2
BUD	Budapest	46.90	349	P	P	19 30 17.1	+0.8
BUD				pmax	pmax		
	comp=Z,212nm,1.6s						
BUD	Budapest	46.90	349	*e*P	P	19 30 17.0	+0.8
CSKK	Cskako	46.94	348	*e*P	P	19 30 17.1	+0.5
CSKK				*e*S	S	19 37 09.1	+1.9
LMR	La Mourre	46.94	336	*e*P	P	19 30 16.8	+0.1
LMR				pmax	pmax		
	comp=Z,122nm,1.4s						
TRPA	Tarpa	46.96	352⇓	*e*P	P	19 30 17.1	+0.3
TRPA				*e*S	S	19 37 07.1	-0.3
TRPA				*e*SS	SS	19 40 21.1	-13
CADS	Cadrg	46.97	344	*i* P	P	19 30 16.8	-0.1
OBKA	Obir	47.00	345	*i* P	P	19 30 17.8	+0.6
	comp=Z,79nm,1.1s,SNR=36						
SBF	Sospel	47.01	337	*e*P	P	19 30 16.0	-1.3
SBF				pmax	pmax		
	comp=Z,104nm,1.3s						
SOKA	Soboth	47.03	345	*i* P	P	19 30 18.0	+0.5
	comp=Z,132nm,1.8s,SNR=40						
FRF	La Foret Royal	47.07	336	*e*P	P	19 30 16.6	-1.1
FRF				pmax	pmax		
	comp=Z,98nm,1.2s						
PSZ	Piszkesteto	47.16	350	*e*P	P	19 30 18.3	-0.1
	comp=Z,687nm,1.5s						
PSZ	Piszkesteto	47.16	350	*e*P	P	19 30 18.3	-0.1
PSZ				pmax	pmax		
	comp=Z,687nm,1.5s						
PSZ	Piszkesteto	47.16	350	*e*P	P	19 30 18.1	-0.3
PSZ				*e*PP	PP	19 32 16.0	+6.6
PSZ				*e*S	S	19 37 11.0	+0.6
SRO2	Moca	47.29	349	*e*P	P	19 30 19.2	-0.1
SRO2	Moca	47.29	349	*e*P	P	19 30 19.2	-0.1
MYKA	Terra Mystica	47.36	344	*i* P	P	19 30 20.3	+0.3
	comp=Z,92nm,2.2s,SNR=15						
ISO	Isola	47.43	337	P	P	19 30 20.8	+0.2
ISO				pmax	pmax		
	comp=Z,75nm,1.7s						
ARSA	Arzberg	47.44	346	*i* P	P	19 30 21.6	+1.0
	comp=Z,241nm,1.6s,SNR=48						
UZH	Uzhgorod	47.48	352*d*	*i*P	P	19 30 20.8	0.0
UZH				*e*		19 30 28.4	
UZH				*e*		19 30 35.3	
UZH				*i* S	S	19 37 12.5	-2.3
UZH				*i* PS		19 37 26.8	
UZH				*e*SS	SS	19 40 13.4	-29
UZH				MLR	MLR		
	comp=N,400nm,16.0s						
UZH				MLR	MLR		
	comp=E,500nm,16.0s						
UZH				MLR	MLR		
	comp=Z,300nm,16.0s						
SOP	Sopron	47.60	347	P	P	19 30 22.6	+0.8
SOP				pmax	pmax		
	comp=Z,111nm,1.7s						
SOP	Sopron	47.60	347⇓	*e*P	P	19 30 22.0	+0.2
SOP				*e*PP	PP	19 32 19.0	+5.6
SOP				*e*S	S	19 37 16.1	-0.6
SOP				*e*SS	SS	19 40 47.0	+2.1
KECS	Kecovo	47.61	351	*e*P	P	19 30 22.9	+1.1
KECS				pmax	pmax		
	comp=Z,1µm,1.5s						
KECS	Kecovo	47.61	351	*e*P	P	19 30 22.9	+1.1
KOLS	Kolonicke sedl	47.78	352	*e*P	P	19 30 24.4	+1.2
KOLS				pmax	pmax		
	comp=Z,291nm,1.6s						
KOLS	Kolonicke sedl	47.78	352	*e*P	P	19 30 24.3	+1.1
KOLS				*e*S	S	19 37 17.4	-1.8
KOLS				*e*SS	SS	19 40 52.5	+4.7

KOLS				*e*L	L	19 54 52.3	
ABTA	**Abfaltersbach**	**47.79**	**343**	*i* P	**P**	**19 30 23.6**	**+0.3**
	comp=Z,74nm,1.4s,SNR=39						
RTC	**Rabat Centre**	**47.80**	**317**	PFAKE		19 30 40.0	+16
RTC				LR	LR		
	comp=Z,63µm,20.0s						
EMAL	**Malaga-Limoner**	**47.85**	**321**	*i* P	**P**	**19 30 25.5**	**+1.5**
EMAL				*e*S	**S**	**19 37 19.8**	**-0.7**
KBA	**Koelnbreinsper**	**47.85**	**344**	*i* P	**P**	**19 30 24.3**	**+0.4**
	comp=Z,78nm,1.4s,SNR=53						
KBA	**Koelnbreinsper**	**47.85**	**344**	P	**P**	**19 30 24.1**	**+0.1**
KBA				pmax	pmax		
	comp=Z,94nm,1.3s						
VYHS	**Vyhne**	**47.91**	**349**	*e*P	**P**	**19 30 24.6**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,287nm,1.5s						
VYHS	**Vyhne**	**47.91**	**349**	*e*P	**P**	**19 30 24.6**	**+0.5**
VYHS				*e*PP	**PP**	**19 32 23.8**	**+7.6**
VYHS				*e*S	**S**	**19 37 20.9**	**0.0**
VYHS				*e*SS	SS	19 41 04.3	+14
VYHS				*e*L	L	19 52 04.2	
CEU	**Ceuta**	**47.92**	**320**	*i* P	**P**	**19 30 25.6**	**+1.2**
CEU				*e*S	**S**	**19 37 20.5**	**-1.0**
ZST	**Bratislava**	**47.97**	**348**	*e*P	**P**	**19 30 24.2**	**-0.4**
ZST				*e*S	**S**	**19 37 20.3**	**-1.5**
ZST	**Bratislava**	**47.97**	**348**	*e*P	**P**	**19 30 24.2**	**-0.4**
ZST				*e*PP	**PP**	**19 32 23.3**	**+6.5**
ZST				*e*S	**S**	**19 37 20.3**	**-1.5**
MBDF	**Montbardon**	**47.99**	**337**	*e*P	**P**	**19 30 24.4**	**-0.7**
MBDF				pmax	pmax		
	comp=Z,121nm,1.1s						
CONA	**Conrad Observa**	**48.00**	**346**	*i* P	**P**	**19 30 25.6**	**+0.7**
	comp=Z,68nm,1.5s,SNR=47						
MODS	**Modra-Piesok**	**48.10**	**348**	*e*P	**P**	**19 30 25.3**	**-0.4**
MODS				pmax	pmax		
	comp=Z,618nm,1.6s						
MODS	**Modra-Piesok**	**48.10**	**348**	*e*P	**P**	**19 30 25.2**	**-0.4**
MODS				*e*PP	**PP**	**19 32 18.4**	**+0.4**
MODS				*e*S	**S**	**19 37 22.2**	**-1.5**
MODS				*e*SS	SS	19 41 10.3	+17
MODS				*e*L	L	19 52 23.4	
BNI	**Bardonecchia**	**48.30**	**337**	*e*P	**P**	**19 30 26.8**	**-0.6**
	comp=Z,227nm,1.3s						
BNI				LR	LR		
	comp=Z,4µm,19.0s						
BNI	**Bardonecchia**	**48.30**	**337**	*e*P	**P**	**19 30 26.8**	**-0.6**
BNI				pmax	pmax		
	comp=Z,227nm,1.3s						
BNI				MLR	MLR		
	comp=Z,4µm,19.0s						
MOA	**Molln**	**48.32**	**345**	*i* P	**P**	**19 30 27.6**	**+0.3**
	comp=Z,52nm,0.8s,SNR=76						
FUORN	**Ofenpass-Fuorn**	**48.37**	**341**	*e*P	**P**	**19 30 28.2**	**+0.2**
	comp=Z,119nm,1.3s						
FUORN				LR	LR		
	comp=Z,3µm,22.0s						
KBL	**Kabul**	**48.39**	**43**	*e*P	**P**	**19 30 28.5**	**+0.1**
	comp=Z,65nm,1.7s						
KBL				LR	LR		
	comp=Z,3µm,18.0s						
KBL	**Kabul**	**48.39**	**43**	*e*P	**P**	**19 30 28.5**	**+0.1**
KBL				pmax	pmax		
	comp=Z,65nm,1.7s						
KBL				MLR	MLR		
	comp=Z,3µm,18.0s						
KWP	**Kalwaria Pacla**	**48.41**	**353**	*e*P	**P**	**19 30 28.9**	**+0.9**
KWP				*e*S	**S**	**19 37 28.4**	**+0.3**
KWP				LMZ	LR	19 55 04.7	
	comp=Z,4µm,19.9s						
KWP	**Kalwaria Pacla**	**48.41**	**353**	*e*P	**P**	**19 30 28.5**	**+0.5**
	comp=Z,6µm,1.4s						
KWP				LR	LR		
	comp=Z,22µm,21.0s						
KWP	**Kalwaria Pacla**	**48.41**	**353**	*e*P	**P**	**19 30 28.5**	**+0.5**
KWP				MLR	MLR		
	comp=Z,22µm,21.0s						
LANS	**Liptovska Anna**	**48.42**	**350**	*e*P	**P**	**19 30 29.4**	**+1.2**
LANS	**Liptovska Anna**	**48.42**	**350**	*e*P	**P**	**19 30 29.4**	**+1.2**
LVV	**L'vov**	**48.45**	**354**	*e*P	**P**	**19 30 27.7**	**-0.6**
LVV				*e*		19 31 55.1	
LVV				*e*		19 33 11.0	
LVV				*e*S	**S**	**19 37 25.4**	**-3.1**
LVV				*e*		19 37 46.2	
JAVC	**Velka Javorina**	**48.48**	**348⇓**	*i*P	**P**	**19 30 29.4**	**+0.8**
JAVC				*e*PP	**PP**	**19 32 26.7**	**+5.2**
JAVC				*e*S	**S**	**19 37 30.2**	**+1.0**
JAVC				*e*SS	SS	19 41 17.1	+18
ORIF	**Oris-en-Rattie**	**48.51**	**336**	P	**P**	**19 30 29.0**	**0.0**
ORIF				pmax	pmax		
	comp=Z,77nm,1.5s						
WTTA	**Wattenberg**	**48.52**	**343**	*i* P	**P**	**19 30 29.0**	**0.0**
	comp=Z,68nm,1.1s,SNR=32						
NIE	**Niedzica**	**48.54**	**351**	*e*P	**P**	**19 30 29.9**	**+0.8**
NIE				*e*S	**S**	**19 37 30.4**	**+0.4**
NIE				LMZ	LR	19 53 18.9	
	comp=Z,1µm,20.7s						
NIE	**Niedzica**	**48.54**	**351**	P	**P**	**19 30 29.8**	**+0.8**
NIE				pmax	pmax		
	comp=Z,109nm,1.4s						
TUE	**Stuetta**	**48.54**	**340**	*e*P	**P**	**19 30 28.2**	**-1.2**
	comp=Z,199nm,1.3s						
TUE				LR	LR		
	comp=Z,3µm,20.0s						
FETA	**Feichten**	**48.58**	**342**	*i* P	**P**	**19 30 29.5**	**0.0**
	comp=Z,70nm,1.3s,SNR=32						
WATA	**Walderalm**	**48.60**	**343**	*i* P	**P**	**19 30 29.6**	**0.0**
	comp=Z,80nm,1.2s,SNR=18						
SQTA	**Sankt Quirin**	**48.61**	**342**	*i* P	**P**	**19 30 29.5**	**-0.2**
	comp=Z,140nm,1.6s,SNR=37						
LPG	**La Plagne**	**48.65**	**337**	*e*P	**P**	**19 30 28.6**	**-1.7**
LPG				pmax	pmax		
	comp=Z,70nm,1.1s						
LPL	**La Plagne**	**48.67**	**337**	*e*P	**P**	**19 30 28.7**	**-1.7**
LPL				pmax	pmax		
	comp=Z,79nm,1.2s						
MOTA	**Moosalm**	**48.75**	**342**	*i* P	**P**	**19 30 30.4**	**-0.4**
	comp=Z,26nm,1.0s,SNR=29						
SFS	**San Fernando**	**48.80**	**320**	PFAKE		19 30 40.0	+8.8
SFS				LR	LR		
	comp=Z,5µm,21.0s						
SFS	**San Fernando**	**48.80**	**320**	*i* P	**P**	**19 30 32.7**	**+1.5**
SFS				*e*S	**S**	**19 37 36.7**	**+2.8**
MTLF	**Montolieu**	**48.83**	**332**	*e*P	**P**	**19 30 31.4**	**0.0**
MTLF				pmax	pmax		
	comp=Z,54nm,1.5s						
KRUC	**Moravsky**	**48.94**	**347**	P	**P**	**19 30 31.7**	**-0.4**
KRUC				pmax	pmax		
	comp=Z,211nm,1.4s						
KRUC	**Moravsky**	**48.94**	**347⇓**	*i*P	**P**	**19 30 31.7**	**-0.4**
KRUC				*e*PP	**PP**	**19 32 29.5**	**+3.8**
KRUC				*e*S	**S**	**19 37 33.4**	**-2.1**
KRUC				*e*SS	SS	19 41 23.0	+16
VIVF	**Saint-Julien-l**	**48.95**	**335**	*e*P	**P**	**19 30 31.4**	**-0.9**
VIVF				pmax	pmax		
	comp=Z,66nm,1.4s						
RETA	**Reutte**	**48.98**	**342**	*i* P	**P**	**19 30 31.9**	**-0.7**
	comp=Z,135nm,1.4s,SNR=34						
AKASG	**Malin Array Be**	**48.99**	**359**	P	**P**	**19 30 31.8**	**-0.7**
	comp=Z,19nm,0.9s,baz=181,slow=6.5,SNR=75						
AKASG				PcP	**PcP**	**19 31 56.2**	**-0.1**
	comp=Z,14nm,0.8s,baz=184,slow=4.5,SNR=8.3						
AKASG				LR	LR	19 52 04.2	
	comp=Z,2µm,21.9s,baz=170,slow=37						
AKBB	**Malin Array Si**	**48.99**	**359**	*e*P	**P**	**19 30 31.8**	**-0.7**
AKBB				*e*PcP	**PcP**	**19 31 56.2**	**-0.1**
AKBB	**Malin Array Si**	**48.99**	**359**	*e*P	**P**	**19 30 31.8**	**-0.7**
AKBB				*e*		19 31 56.2	
DAVA	**Damuels**	**49.08**	**341**	*i* P	**P**	**19 30 32.5**	**-0.9**
	comp=Z,324nm,1.6s,SNR=52						
VRAC	**Vranov**	**49.13**	**348⇓**	*i*P	**P**	**19 30 33.5**	**-0.1**
VRAC	**Vranov**	**49.13**	**348**	P	**P**	**19 30 33.3**	**-0.3**
VRAC				pmax	pmax		
	comp=Z,196nm,1.5s						
VRAC	**Vranov**	**49.13**	**348⇓**	*i*P	**P**	**19 30 33.3**	**-0.3**
VRAC				*e*PP	**PP**	**19 32 32.0**	**+4.6**
VRAC				*e*S	**S**	**19 37 36.3**	**-1.9**
VRAC				*e*SS	SS	19 41 27.2	+18
SENIN	**Lac Senin/Sane**	**49.17**	**339**	*e*P	**P**	**19 30 32.7**	**-1.5**
	comp=Z,132nm,1.4s						
SENIN				LR	LR		
	comp=Z,3µm,19.0s						
SSB	**Saint Sauveur**	**49.35**	**336**	*e*P	**P**	**19 30 34.6**	**-0.8**
	comp=Z,268nm,1.9s						
SSB				LR	LR		
	comp=Z,3µm,21.0s						
SSB	**Saint Sauveur**	**49.35**	**336**	*e*P	**P**	**19 30 34.6**	**-0.8**
SSB				pmax	pmax		
	comp=Z,268nm,1.9s						
SSB				MLR	MLR		
	comp=Z,3µm,21.0s						
TREC	**Trest**	**49.36**	**347**	*e*P	**P**	**19 30 35.2**	**-0.2**
TREC				*e*		19 30 42.1	
TREC				MLR	MLR		
	comp=Z,6µm,18.8s						
TREC	**Trest**	**49.36**	**347**	*e*P	**P**	**19 30 35.2**	**-0.2**
TREC				*e*x	x	19 30 42.1	
TREC				AMS	AMS	19 54 30.0	
	comp=Z,6µm,18.8s						
GEC2	**GERESS Array S**	**49.38**	**345**	*e*P	**P**	**19 30 35.3**	**-0.2**
	comp=Z,180nm,1.1s						
GERES	**GERESS Array B**	**49.38**	**345**	P	**P**	**19 30 35.4**	**-0.2**
	comp=Z,29nm,0.8s,baz=157,slow=7.2,SNR=161						
GERES				LR	LR	19 52 53.2	
	comp=Z,2µm,21.5s,baz=156,slow=38						
MORC	**Moravsky Berou**	**49.38**	**349**	*e*P	**P**	**19 30 34.9**	**-0.6**
	comp=Z,384nm,1.5s						
MORC	**Moravsky Berou**	**49.38**	**349⇓**	*i*P	**P**	**19 30 35.8**	**+0.3**
MORC	**Moravsky Berou**	**49.38**	**349**	*e*P	**P**	**19 30 34.9**	**-0.6**
MORC				pmax	pmax		
	comp=Z,384nm,1.5s						
MORC	**Moravsky Berou**	**49.38**	**349⇓**	*i*P	**P**	**19 30 35.5**	**0.0**
MORC				*e*PP	**PP**	**19 32 33.9**	**+4.2**
MORC				*e*S	**S**	**19 37 41.5**	**-0.3**
MORC				*e*SS	SS	19 41 33.1	+19
HYB	**Hyderabad**	**49.40**	**68**	*i* P	**P**	**19 30 36.0**	**-0.2**
HYB				*e*S	**S**	**19 37 42.0**	**-1.0**
OJC	**Ojcow**	**49.40**	**351**	*e*P	**P**	**19 30 35.4**	**-0.3**
OJC				*e*S	**S**	**19 37 41.4**	**-0.6**
OJC				*e*SS	SS	19 41 36.2	+22
OJC				LMZ	LR	19 50 14.2	
	comp=Z,2µm,26.6s						
OJC	**Ojcow**	**49.40**	**351**	*e*P	**P**	**19 30 35.2**	**-0.4**
	comp=Z,412nm,1.6s						
OJC	**Ojcow**	**49.40**	**351**	*e*P	**P**	**19 30 35.2**	**-0.4**
OJC				pmax	pmax		
	comp=Z,412nm,1.6s						
FUR	**Furstenfeldbru**	**49.43**	**343**	P	**P**	**19 30 35.4**	**-0.5**
FUR				pmax	pmax		
	comp=Z,127nm,1.5s						
ESDC	**Sonseca Array**	**49.44**	**325**	P	**P**	**19 30 35.9**	**-0.3**
	comp=Z,22nm,1.0s,baz=132,slow=7.6,SNR=88						
ESDC				PcP	**PcP**	**19 31 58.2**	**-0.1**
	comp=Z,8.4nm,0.8s,baz=129,slow=5.6,SNR=5.2						
ESDC				LR	LR	19 53 38.3	
	comp=Z,10µm,20.6s,baz=135,slow=39						
ESLA	**Sonseca Array**	**49.44**	**325**	*e*P	**P**	**19 30 36.2**	**0.0**
	comp=Z,102nm,1.3s						
ESLA				LR	LR		
	comp=Z,15µm,19.0s						
UCM	**Universidad Co**	**49.45**	**326**	*i* P	**P**	**19 30 39.0**	**+2.7**
UCM				*e*S	**S**	**19 37 37.3**	**-5.8**
EPF	**Esparros**	**49.49**	**331**	*e*P	**P**	**19 30 35.6**	**-0.9**
EPF				pmax	pmax		
	comp=Z,107nm,1.6s						
RAC	**Raciborz**	**49.55**	**349**	*e*P	**P**	**19 30 37.3**	**+0.6**
RAC				*e*S	**S**	**19 37 45.0**	**+1.0**
RAC				MLR	MLR		
	comp=Z,2µm,23.3s						
PAB	**San Pablo**	**49.58**	**324**	*e*P	**P**	**19 30 37.5**	**+0.2**
	comp=Z,99nm,1.6s						
PAB				LR	LR		
	comp=Z,13µm,20.0s						
KHC	**Kasperske Hory**	**49.67**	**345**	*e*P	**P**	**19 30 37.1**	**-0.7**
	comp=Z,130nm,1.2s						
KHC	**Kasperske Hory**	**49.67**	**345**	*e*P	**P**	**19 30 37.1**	**-0.7**
KHC				pmax	pmax		
	comp=Z,130nm,1.2s						
KHC	**Kasperske Hory**	**49.67**	**345**	*e*P	**P**	**19 30 36.8**	**-1.0**
KHC				*e*pP	**pP**	**19 30 42.9**	**0.0**
KHC				*e*S	**S**	**19 37 39.8**	**-6.1**
KHC				*e*SS	**SS**	**19 41 12.2**	**-6.3**
VORD	**Divnogorie**	**49.75**	**7**	*e*P	**P**	**19 30 37.8**	**-0.4**
VORD				*e*S	**S**	**19 37 40.8**	**-5.9**
VORD				pmax	pmax		
	comp=Z,50nm,1.0s						
VORD				smax	smax		
	comp=N,1µm,11.6s						
CABF	**La Chapelle**	**49.83**	**338**	*e*P	**P**	**19 30 37.1**	**-2.0**
CABF				pmax	pmax		
	comp=Z,81nm,1.5s						
ETSF	**Etsaut**	**49.84**	**330**	*e*P	**P**	**19 30 38.4**	**-0.8**
ETSF				pmax	pmax		
	comp=Z,109nm,1.4s						
WET	**Wettzell**	**49.87**	**345**	P	**P**	**19 30 38.5**	**-0.7**
WET				pmax	pmax		
	comp=Z,111nm,1.6s						
SLE	**Schleitheim**	**49.96**	**340**	P	**P**	**19 30 43.3**	**+3.4**
SLE				pmax	pmax		
	comp=Z,53nm,1.8s						
PALK	**Pallekele**	**49.96**	**82**	PFAKE		19 30 50.0	+9.5
PALK				LR	LR		
	comp=Z,2µm,20.0s						
BHPL	**Bhopal**	**49.98**	**61**	*e*P	**P**	**19 30 39.9**	**-0.6**
BHPL				IAmb	IAmb	19 30 42.5	
	comp=Z,484nm,2.7s						
VSR	**Storozhevoye**	**49.98**	**7**	*e*P	**P**	**19 30 38.7**	**-1.3**
VSR				*e*		19 32 35.4	
VSR				*e*S	**S**	**19 37 43.6**	**-6.4**
VSR				pmax	pmax		
	comp=Z,80nm,1.5s						
VSR				smax	smax		
	comp=N,590nm,10.6s						
VSR				MLR	MLR		
	comp=Z,1µm,11.0s						
GOPC	**GO Pecny, Ondr**	**50.11**	**346**	*e*P	**P**	**19 30 40.2**	**-0.8**
GOPC				*e*		19 30 47.4	
GOPC				*e*S	S	19 37 40.7	-11
GOPC	**GO Pecny, Ondr**	**50.11**	**346**	*e*P	**P**	**19 30 40.2**	**-0.8**
GOPC				*e*x	x	19 30 47.4	
GOPC				*e*S	S	19 37 40.7	-11
GOPC				*e*SS	SS	19 41 36.7	+11
GRC1	**Grafenberg Arr**	**50.11**	**343**	P	**P**	**19 30 40.9**	**-0.1**
CAF	**Calviac**	**50.13**	**333**	*e*P	**P**	**19 30 40.5**	**-0.8**
CAF				pmax	pmax		
	comp=Z,98nm,1.5s						
MDRS	**Chennai**	**50.17**	**74**	*e*P	**P**	**19 30 39.8**	**-2.2**
DPC	**Dobruska-Polom**	**50.17**	**348**	*e*P	**P**	**19 30 41.3**	**-0.3**
DPC				*e*S	**S**	**19 37 45.9**	**-7.0**
DPC				MLR	MLR		
	comp=Z,3µm,15.2s						
DPC	**Dobruska-Polom**	**50.17**	**348**	*e*P	**P**	**19 30 41.3**	**-0.3**
DPC				*e*pP	**pP**	**19 30 44.7**	**-2.0**
DPC				*e*S	**S**	**19 37 45.9**	**-7.0**
DPC				*e*SS	SS	19 41 38.1	+12
DPC				AMS	AMS	19 56 30.0	
	comp=Z,3µm,15.2s						
GUD	**Guadarrama**	**50.19**	**325**	P	**P**	**19 30 41.1**	**-0.9**
PRU	**Pruhonice**	**50.23**	**346**	*e*P	**P**	**19 30 40.6**	**-1.3**
PRU				*e*		19 30 48.4	
PRU				*e*S	**S**	**19 37 46.0**	**-7.6**
PRU				MLR	MLR		
	comp=Z,4µm,18.3s						
PRU	**Pruhonice**	**50.23**	**346**	*e*P	**P**	**19 30 40.6**	**-1.3**
PRU				*e*pP	**sP**	**19 30 48.4**	**-0.7**
PRU				*e*S	**S**	**19 37 46.0**	**-7.6**
PRU				*e*SS	**SS**	**19 41 28.3**	**+1.1**
PRU				AMS	AMS	19 55 00.0	
	comp=Z,4µm,18.3s						
SJPF	**Ste Jean**	**50.33**	**330**	*e*P	**P**	**19 30 42.5**	**-0.4**
SJPF				pmax	pmax		
	comp=Z,147nm,1.3s						
PBDV	**Barranco-do-Ve**	**50.38**	**319**	*e*P	**P**	**19 30 43.5**	**+0.2**
	comp=Z,105nm,1.4s						
UPC	**Upice**	**50.39**	**348**	*e*P	**P**	**19 30 42.9**	**-0.2**
UPC				*e*S	**S**	**19 37 50.3**	**-5.5**
UPC				MLR	MLR		
	comp=Z,3µm,14.5s						
UPC	**Upice**	**50.39**	**348**	*e*P	**P**	**19 30 42.9**	**-0.2**
UPC				*e*pP	**pP**	**19 30 48.2**	**-0.1**
UPC				*e*S	**S**	**19 37 50.3**	**-5.5**
UPC				*e*SS	SS	19 41 51.1	+21
UPC				AMS	AMS	19 57 30.0	
	comp=Z,3µm,14.5s						
OSTC	**Ostas**	**50.39**	**348**	*e*P	**P**	**19 30 43.1**	**-0.1**
OSTC				*e*x	x	19 30 48.1	
OSTC				*e*S	**S**	**19 37 50.3**	**-5.5**
OSTC				*e*SS	SS	19 41 51.2	+21
OSTC				AMS	AMS	19 56 40.0	
	comp=Z,2µm,15.5s						
VORR	**Voronezh**	**50.43**	**7**	*e*P	**P**	**19 30 44.0**	**+0.6**
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
BFO	**Black Forest**	**50.50**	**341**	*e*P	**P**	**19 30 43.1**	**-0.9**
	comp=Z,138nm,1.3s						
BFO				LR	LR		
	comp=Z,4µm,18.0s						
BFO	**Black Forest**	**50.50**	**341**	*i* P	**P**	**19 30 43.7**	**-0.3**
STU	**Stuttgart**	**50.61**	**342**	*e*P	**P**	**19 30 44.5**	**-0.3**
	comp=Z,104nm,1.3s						
STU	**Stuttgart**	**50.61**	**342**	*e*P	**P**	**19 30 44.5**	**-0.3**
STU				pmax	pmax		
	comp=Z,105nm,1.3s						
KSP	**Ksiaz**	**50.65**	**348**	*e*P	**P**	**19 30 44.6**	**-0.5**
KSP				*e*S	**S**	**19 37 57.4**	**-1.9**
KSP				*e*SS	SS	19 41 59.0	+25
KSP				LMZ	LR	19 53 20.2	
	comp=Z,2µm,21.1s						
RJF	**Les Rejaudoux**	**50.67**	**333**	*e*P	**P**	**19 30 44.4**	**-0.9**
RJF				pmax	pmax		
	comp=Z,103nm,1.4s						
PVCC	**Panska Ves**	**50.73**	**347**	*e*P	**P**	**19 30 45.1**	**-0.6**
PVCC				*e*		19 30 52.6	
PVCC				MLR	MLR		
	comp=Z,3µm,17.8s						
PVCC	**Panska Ves**	**50.73**	**347**	*e*P	**P**	**19 30 45.1**	**-0.6**
PVCC				*e*pP	**sP**	**19 30 52.6**	**-0.2**
PVCC				*e*SS	SS	19 41 53.0	+18
PVCC				AMS	AMS	19 55 20.0	
	comp=Z,3µm,17.8s						
SMF	**Signal de Mont**	**50.74**	**336**	*e*P	**P**	**19 30 44.6**	**-1.3**
SMF				pmax	pmax		
	comp=Z,117nm,1.2s						
LFF	**La Frestale**	**50.74**	**333**	*e*P	**P**	**19 30 45.0**	**-0.9**
LFF				pmax	pmax		
	comp=Z,60nm,0.9s						
PBEJ	**Beja**	**50.79**	**320**	*e*P	**P**	**19 30 47.0**	**+0.6**
	comp=Z,79nm,1.7s						
NGP	**Nagpur**	**50.80**	**64**	*e*P	**P**	**19 30 47.4**	**+0.6**
NGP				IAmb	IAmb	19 30 48.5	
	comp=Z,133nm,1.6s						
ECH	**Echery**	**50.80**	**340**	*e*P	**P**	**19 30 45.3**	**-1.0**
	comp=Z,136nm,1.4s						
ECH				LR	LR		
	comp=Z,3µm,20.0s						
ECH	**Echery**	**50.80**	**340**	*e*P	**P**	**19 30 45.3**	**-1.0**
ECH				pmax	pmax		
	comp=Z,136nm,1.4s						
ECH				MLR	MLR		
	comp=Z,3µm,20.0s						
GRA1	**Grafenberg Arr**	**50.82**	**344**	*e*P	**P**	**19 30 45.4**	**-1.0**
	comp=Z,147nm,1.2s						
GRF	**Grafenberg Arr**	**50.82**	**344**	*e*P	**P**	**19 30 45.4**	**-1.0**
GRF				pmax	pmax		
	comp=Z,147nm,1.2s						
GRFO	**Grafenberg**	**50.82**	**344**	*e*P	**P**	**19 30 45.7**	**-0.7**
	comp=Z,184nm,1.3s						
GRFO	**Grafenberg**	**50.82**	**344**	*e*P	**P**	**19 30 45.7**	**-0.7**
GRFO				pmax	pmax		
	comp=Z,184nm,1.3s						
BEL	**Belsk**	**50.82**	**352**	*e*P	**P**	**19 30 45.7**	**-0.6**
BEL				*e*S	**S**	**19 38 00.8**	**-0.8**
BEL				LMZ	LR	19 55 34.9	
	comp=Z,3µm,19.2s						
CHGR	**Chuyangaron**	**50.86**	**39**	*e*P	**P**	**19 30 44.6**	**-2.4**
	comp=Z,157nm,0.9s						
CHGR				LR	LR		
	comp=Z,22µm,18.0s						
NIL	**Nilore**	**50.88**	**46**	*e*P	**P**	**19 30 48.2**	**+1.1**
	comp=Z,64nm,0.9s						
NIL				LR	LR		
	comp=Z,3µm,19.0s						
NIL	**Nilore**	**50.88**	**46**	*e*P	**P**	**19 30 48.3**	**+1.1**
NIL				pmax	pmax		
	comp=Z,65nm,0.9s						
NIL				MLR	MLR		
	comp=Z,3µm,19.0s						
MORF	**Marmelete**	**50.88**	**319**	*e*P	**P**	**19 30 46.8**	**-0.4**
MORF				*e*S	**S**	**19 38 04.0**	**+0.8**
MORF				*e*SS	**SS**	**19 41 39.4**	**+1.2**
MORF				AMS	AMS	19 55 41.5	
	comp=Z,4µm,18.1s						
HAU	**Haudompre**	**50.91**	**339**	*e*P	**P**	**19 30 45.7**	**-1.4**
HAU				pmax	pmax		
	comp=Z,120nm,1.4s						
MESJ	**Messejana**	**50.91**	**320**	*e*P	**P**	**19 30 46.8**	**-0.5**
MESJ				*e*S	**S**	**19 38 04.2**	**+0.8**
MESJ				*e*SS	**SS**	**19 41 40.2**	**+1.7**
MESJ				AMS	AMS	19 55 50.8	
	comp=Z,5µm,14.8s						
MESJ	**Messejana**	**50.91**	**320**	*e*P	**P**	**19 30 47.5**	**+0.2**
	comp=Z,90nm,1.6s						
CDF	**Champ du Feu**	**50.93**	**340**	*e*P	**P**	**19 30 45.7**	**-1.6**
CDF				pmax	pmax		
	comp=Z,124nm,1.4s						
NKC	**Novy Kostel**	**50.98**	**345**	*e*P	**P**	**19 30 47.1**	**-0.5**
NKC				*e*		19 30 52.2	
NKC				*e*S	**S**	**19 38 01.7**	**-2.3**
NKC				MLR	MLR		
	comp=Z,4µm,13.8s						
NKC	**Novy Kostel**	**50.98**	**345**	*e*P	**P**	**19 30 47.1**	**-0.5**
NKC				*e*pP	**pP**	**19 30 52.2**	**-0.6**
NKC				*e*S	**S**	**19 38 01.7**	**-2.3**
NKC				*e*SS	**SS**	**19 41 46.2**	**+7.0**
NKC				AMS	AMS	19 59 10.0	
	comp=Z,4µm,13.8s						
AVF	**Avril sur Loir**	**51.06**	**336**	*e*P	**P**	**19 30 47.0**	**-1.2**
AVF				pmax	pmax		
	comp=Z,137nm,1.3s						
PTEO	**Sao Teotonio**	**51.07**	**319**	*e*P	**P**	**19 30 49.1**	**+0.6**
	comp=Z,84nm,1.5s						
BRG	**Berggiesshubel**	**51.20**	**346**	*i* P	**P**	**19 30 48.5**	**-0.7**
	comp=Z,81nm,1.6s						
BRG				*i*		19 30 56.0	
	comp=Z,196nm,1.6s						
BRG				*i* PCP	**PcP**	**19 32 04.8**	**+0.3**
	comp=Z,54nm,1.6s						
BRG				PP	**PP**	**19 32 48.0**	**+1.9**
BRG				SCP	**ScP**	**19 35 56.0**	**-4.5**
BRG				S	**S**	**19 38 07.0**	**+0.1**
BRG				SS	**SS**	**19 41 48.0**	**+5.5**
BRG				*e*PKPPKP	P'P'df	20 01 50.1	+19
	comp=Z,7.5nm,1.3s						
	comp=N,4µm,14.2s						
	comp=E,2µm,13.6s						
	comp=Z,3µm,14.6s						
BRG	**Berggiesshubel**	**51.20**	**346**	*i* P	**P**	**19 30 48.5**	**-0.7**
BRG				*i*		19 30 56.0	
BRG				*i*		19 32 04.8	
BRG						19 32 48.0	
BRG				S	**S**	**19 38 07.0**	**+0.1**
BRG				pmax	pmax		
	comp=Z,81nm,1.6s						
BRG				MLR	MLR		
	comp=N,4µm,14.2s						
BRG				MLR	MLR		
	comp=E,2µm,13.6s						
BRG				MLR	MLR		
	comp=Z,3µm,14.6s						
CRZF	**Crozet Islands**	**51.23**	**161**	PFAKE		19 31 00.0	+11
CRZF				LR	LR		
	comp=Z,5µm,21.0s						
PNCL	**Nicolau / Gran**	**51.27**	**320**	*e*P	**P**	**19 30 50.0**	**+0.1**
	comp=Z,136nm,1.5s						
LPSR	**Galich'ya Gora**	**51.32**	**6**	*e*P	**P**	**19 30 49.4**	**-0.6**
LPSR				*e*		19 32 47.8	
LPSR				*e*S	**S**	**19 38 05.5**	**-3.0**
LPSR				pmax	pmax		
	comp=Z,90nm,1.2s						
LPSR				smax	smax		
	comp=N,930nm,10.2s						
LPSR				MLR	MLR		
	comp=Z,2µm,13.0s						
PMRV	**Marv??o**	**51.34**	**322**	*e*P	**P**	**19 30 50.0**	**-0.5**
	comp=Z,188nm,1.4s						
PMRV				*e*S	**S**	**19 38 11.0**	**+1.7**
PMRV	**Marv??o**	**51.34**	**322**	*e*LQ	LQ	19 49 28.1	
PMRV				*e*LR	LR	19 51 32.7	
	comp=Z,4µm,18.0s						
MOX	**Moxa**	**51.58**	**344**	P	**P**	**19 30 51.5**	**-0.6**
MOX				pmax	pmax		
	comp=Z,60nm,1.9s						
PMTG	**Montargil**	**51.64**	**321**	*e*P	**P**	**19 30 53.0**	**+0.3**
	comp=Z,113nm,1.6s						
PCBR	**Castelo Branco**	**51.64**	**322**	*e*P	**P**	**19 30 52.2**	**-0.5**
	comp=Z,108nm,1.7s						

NDI	**New Delhi**	**51.73**	**54**	*e*P	**P**	**19 30 53.5**	**-0.1**
GAR	**Garm**	**51.79**	**39**	*e*P	**P**	**19 30 55.1**	**+1.1**
	comp=Z,246nm,1.2s						
GAR				LR	LR		
	comp=Z,10µm,18.0s						
CLL	**Collm**	**51.83**	**346**	*e*P	**P**	**19 30 52.2**	**-1.6**
	comp=Z,212nm,1.6s						
CLL	**Collm**	**51.83**	**346**	*e*P	**P**	**19 30 52.3**	**-1.6**
CLL				pmax	pmax		
	comp=Z,212nm,1.6s						
CLL	**Collm**	**51.83**	**346**	⇓*i*P	**P**	**19 30 51.8**	**-2.1**
	comp=Z,221nm,1.6s						
CLL				*e*Pmax		19 30 57.0	
CLL				*i*		19 30 59.0	
	comp=Z,221nm,1.6s						
CLL				*e*PcP	**PcP**	**19 32 07.0**	**+0.2**
	comp=Z,80nm,1.8s						
CLL				*e*PP	**PP**	**19 32 50.0**	**-1.8**
CLL				*e*PcS	**PcS**	**19 36 06.0**	**+1.4**
CLL				*e*S	**S**	**19 38 18.0**	**+2.4**
CLL				*e*SS	**SS**	**19 41 53.0**	**+0.5**
CLL				Lm	MLR	19 56 00.0	
	comp=N,2µm,20.9s						
CLL				Lm	MLR	19 56 00.0	
	comp=E,2µm,19.9s						
CLL				Lm	MLR	19 56 00.0	
	comp=Z,3µm,20.0s						
CLL				Lmax		20 00 00.0	
CLL				Lm(360		22 12 00.0	
	comp=N,100nm,19.7s						
CLL				Lm(360		22 12 00.0	
	comp=E,100nm,19.3s						
CLL				Lm(360		22 12 00.0	
	comp=Z,200nm,20.1s						
ALMR	**Almeirim**	**51.91**	**321**	*e*P	**P**	**19 30 54.3**	**-0.4**
ALMR				*e*S	**S**	**19 38 18.2**	**+1.0**
ALMR				*e*SS	**SS**	**19 41 55.9**	**+1.7**
ALMR				AMS	AMS	19 56 07.2	
	comp=Z,7µm,18.6s						
ALMR	**Almeirim**	**51.91**	**321**	*e*P	**P**	**19 30 55.2**	**+0.5**
	comp=Z,217nm,1.8s						
LIS	**Lisbon**	**52.02**	**320**	*e*P	**P**	**19 30 55.3**	**-0.2**
LIS				AMS	AMS	19 55 40.8	
	comp=Z,6µm,17.0s						
MTE	**Manteigas**	**52.02**	**323**	*e*P	**P**	**19 30 55.5**	**-0.2**
	comp=Z,95nm,1.7s						
MTE				*e*S	**S**	**19 38 20.8**	**+2.0**
MTE	**Manteigas**	**52.02**	**323**	*e*LQ	LQ	19 49 40.9	
MTE				*e*LR	LR	19 53 31.8	
	comp=Z,16µm,16.0s						
MTE	**Manteigas**	**52.02**	**323**	*e*P	**P**	**19 30 55.5**	**-0.2**
	comp=Z,43nm,1.1s						
MTE				LR	LR		
	comp=Z,12µm,20.0s						
TNS	**Taunus Mts**	**52.12**	**342**	P	**P**	**19 30 55.7**	**-0.4**
TNS				pmax	pmax		
	comp=Z,117nm,1.4s						
MVO	**Moncorvo**	**52.19**	**324**	*e*P	**P**	**19 30 57.4**	**+0.5**
	comp=Z,201nm,1.7s						
MVO				*e*S	**S**	**19 38 23.6**	**+2.5**
MVO	**Moncorvo**	**52.19**	**324**	*e*LQ	LQ	19 49 42.8	
MVO				*e*LR	LR	19 52 06.8	
	comp=Z,14µm,16.0s						
PMAFR	**Mafra**	**52.24**	**320**	*e*P	**P**	**19 30 58.0**	**+0.8**
	comp=Z,196nm,1.5s						
WLF	**Walferdange**	**52.38**	**340**	*e*P	**P**	**19 30 57.5**	**-0.6**
	comp=Z,447nm,1.2s						
WLF				LR	LR		
	comp=Z,16µm,21.0s						
WLF	**Walferdange**	**52.38**	**340**	*e*P	**P**	**19 30 57.5**	**-0.6**
WLF				pmax	pmax		
	comp=Z,447nm,1.2s						
WLF				MLR	MLR		
	comp=Z,16µm,21.0s						
WLF	**Walferdange**	**52.38**	**340**	⇑P	**P**	**19 30 57.4**	**-0.6**
WLF				⇑sP	**sP**	**19 31 05.2**	**0.0**
	comp=Z,72nm,1.6s						
PCAS	**Casmilo, Conde**	**52.39**	**322**	*e*P	**P**	**19 30 58.5**	**+0.2**
	comp=Z,140nm,1.6s						
PVIS	**Viseu**	**52.43**	**323**	*e*P	**P**	**19 30 58.7**	**+0.1**
	comp=Z,113nm,1.6s						
PBRG	**Braganca**	**52.43**	**325**	*e*P	**P**	**19 30 58.1**	**-0.5**
	comp=Z,116nm,1.5s						
COI	**Coimbra**	**52.43**	**322**	*e*P	**P**	**19 30 58.4**	**-0.2**
	comp=Z,218nm,1.6s						
COI	**Coimbra**	**52.43**	**322**	*e*P	**P**	**19 30 58.2**	**-0.4**
	comp=Z,128nm,1.1s						
COI				LR	LR		
	comp=Z,9µm,20.0s						
COI	**Coimbra**	**52.43**	**322**	*e*P	**P**	**19 30 58.2**	**-0.4**
COI				pmax	pmax		
	comp=Z,128nm,1.1s						
COI				MLR	MLR		
	comp=Z,9µm,20.0s						
CLF	**Chambon-Foret**	**52.49**	**336**	*e*P	**P**	**19 30 58.9**	**0.0**
	comp=Z,340nm,1.3s						
CLF				LR	LR		
	comp=Z,3µm,21.0s						
DHRM	**DHARAMSHALA**	**52.49**	**50**	*e*P	**P**	**19 30 59.4**	**0.0**
DHRM				IAmb	IAmb	19 31 01.9	
	comp=Z,470nm,1.7s						
TAS	**Tashkent**	**52.58**	**36**	P	**P**	**19 31 01.5**	**+1.8**
TAS				pmax	pmax		
	comp=Z,156nm,0.9s						
PVRL	**Vila Real**	**52.67**	**324**	*e*P	**P**	**19 31 00.7**	**+0.3**
	comp=Z,176nm,1.6s						
SUW	**Suwalki**	**52.67**	**354**	*e*P	**P**	**19 30 59.7**	**-0.4**
SUW				*e*S	**S**	**19 38 27.1**	**0.0**
SUW				LMZ	LR	19 56 10.3	
	comp=Z,2µm,21.0s						
SUW	**Suwalki**	**52.67**	**354**	*e*P	**P**	**19 30 59.0**	**-1.1**
	comp=Z,1µm,1.2s						
SUW				LR	LR		
	comp=Z,2µm,21.0s						
SUW	**Suwalki**	**52.67**	**354**	*e*P	**P**	**19 30 59.0**	**-1.1**
SUW				MLR	MLR		
	comp=Z,2µm,21.0s						
SMLA	**Simla**	**52.68**	**51**	*e*P	**P**	**19 31 00.9**	**+0.4**
SMLA				IAmb	IAmb	19 31 01.8	
	comp=Z,865nm,2.5s						
BTK	**Batken**	**52.73**	**38**	*e*P	**P**	**19 31 01.6**	**+0.7**
	comp=Z,152nm,1.3s						
BTK				LR	LR		
	comp=Z,6µm,19.0s						
BTK	**Batken**	**52.73**	**38**	*e*P	**P**	**19 31 01.6**	**+0.7**
BTK				pmax	pmax		
	comp=Z,152nm,1.3s						
BTK				MLR	MLR		
	comp=Z,6µm,19.0s						
POLO	**Lamas de Olo**	**52.77**	**324**	*e*P	**P**	**19 31 01.2**	**0.0**
	comp=Z,96nm,1.6s						
GKP	**Gorka Klasztor**	**52.78**	**350**	*e*P	**P**	**19 31 00.5**	**-0.4**
GKP				*e*S	**S**	**19 38 25.8**	**-2.7**
GKP				LMZ	LR	19 56 49.7	
	comp=Z,3µm,20.6s						
MICGM	**Minsk**	**52.84**	**358**	⇑*e*P	**P**	**19 30 59.0**	**-2.3**
MICGM				PM		19 31 01.0	
	comp=Z,0.4nm,1.5s						
MICGM				*e*LR	LR	19 49 05.0	
MNK	**Minsk**	**52.84**	**358**	⇑*e*P	**P**	**19 30 59.0**	**-2.3**
MNK				pmax	pmax		
	comp=Z,380nm,1.5s						
DDI	**Dehra Dun**	**53.05**	**53**	*e*P	**P**	**19 31 04.0**	**+0.6**
DDI				IAmb	IAmb	19 31 04.9	
	comp=Z,41nm,1.0s						
PCAB	**Cabril**	**53.12**	**324**	*e*P	**P**	**19 31 04.1**	**+0.4**
	comp=Z,109nm,1.9s						
MEM	**Membach**	**53.24**	**340**	P	**P**	**19 31 04.8**	**+0.4**
MEM				pmax	pmax		
	comp=Z,78nm,1.4s						
MEM	**Membach**	**53.24**	**340**	⇓P	**P**	**19 31 04.2**	**-0.1**
	comp=Z,41nm,1.4s						
NACGM	**Naroch**	**53.29**	**357**	*e*P	**P**	**19 31 04.0**	**-0.6**
NACGM				*e*P	**pP**	**19 31 05.0**	**-4.8**
NACGM				*e*PP	**PP**	**19 33 10.0**	**+5.0**
NACGM				*e*S	**S**	**19 38 32.0**	**-3.4**
NACGM				*e*ScS	**ScS**	**19 40 52.0**	**-1.6**
NACGM				*e*SS	**SS**	**19 42 16.0**	**+0.6**
NACGM				*e*LQ	LQ	19 50 04.0	
NACGM				*e*LR	LR	19 52 10.0	
DOU	**Dourbes**	**53.29**	**339**	⇓P	**P**	**19 31 03.8**	**-0.9**
	comp=Z,21nm,1.4s						
BCLA	**Clavier**	**53.32**	**340**	⇓P	**P**	**19 31 04.6**	**-0.4**
	comp=Z,113nm,1.6s						
CHM	**Chimkent**	**53.38**	**35**	*e*P	**P**	**19 31 05.7**	**+0.1**
CHM				*e*S	**S**	**19 38 34.8**	**-2.4**
CHM				pmax	pmax		
	comp=Z,423nm,2.1s						
CHM				smax	smax		
	comp=E,217nm,5.0s						
CHM				MLR	MLR		
	comp=Z,2µm,17.0s						
CHM	**Chimkent**	**53.38**	**35**	*e*P	**P**	**19 31 05.8**	**+0.1**
	comp=Z,423nm,2.1s						
CHM				*e*S	**S**	**19 38 34.8**	**-2.4**
	comp=Z,217nm,5.0s						
CHM				*e*LR	LR	19 55 36.4	
	comp=Z,2µm,17.0s						
HGN	**Heimansgroeve**	**53.39**	**340**	*e*P	**P**	**19 31 05.3**	**-0.2**
HGN				*e*pP	**PP**	**19 33 13.6**	**+7.6**
HGN				*e*S	**S**	**19 38 39.5**	**+2.5**
HGN				*e*SS	**SS**	**19 42 25.4**	**+8.2**
BAIF	**Baives**	**53.40**	**339**	*e*P	**P**	**19 31 04.0**	**-1.6**
BAIF				pmax	pmax		
	comp=Z,123nm,1.5s						
PGAV	**Gavieira, Arco**	**53.42**	**324**	*e*P	**P**	**19 31 06.3**	**+0.3**
	comp=Z,115nm,1.5s						
PGAV				*e*S	**S**	**19 38 40.9**	**+3.0**
PGAV	**Gavieira, Arco**	**53.42**	**324**	*e*LQ	LQ	19 50 02.3	
PGAV				*e*LR	LR	19 52 45.7	
	comp=Z,15µm,16.0s						
BEBN	**Eben Emael**	**53.51**	**340**	⇓P	**P**	**19 31 06.2**	**-0.2**
IUG	**Iuzhnay**	**53.52**	**36**	*d i*P	**P**	**19 31 07.3**	**+0.6**
IUG				*e*S	**S**	**19 38 40.9**	**+1.6**
IUG				pmax	pmax		
	comp=Z,20nm,1.8s						
IUG				smax	smax		
	comp=E,146nm,4.9s						
IUG				MLR	MLR		
	comp=Z,133nm,17.0s						
IUG	**Iuzhnay**	**53.52**	**36**	⇓*i*P	**P**	**19 31 07.4**	**+0.6**
	comp=Z,20nm,1.8s						
IUG				*e*S	**S**	**19 38 40.9**	**+1.6**
	comp=Z,146nm,4.9s						
IUG				*e*LR	LR	19 55 44.3	
	comp=Z,133nm,16.6s						
OBN	**Obninsk**	**53.59**	**4**	LR	LR	19 56 53.2	
	comp=Z,340nm,18.2s,baz=191,slow=39						
OBN	**Obninsk**	**53.59**	**4**	*e*P	**P**	**19 31 07.0**	**+0.1**
	comp=Z,220nm,1.5s						
OBN	**Obninsk**	**53.59**	**4**	*d i*P	**P**	**19 31 06.5**	**-0.4**
OBN				*i* *PP	**sP**	**19 31 14.4**	**+0.4**
OBN				*SP	pP	19 31 20.0	+7.9
OBN				*e*		19 32 07.6	
OBN				*e*		19 33 05.2	
OBN				*i* S	**S**	**19 38 38.7**	**-0.8**
OBN				*e*SSS	SSS	19 44 06.7	
OBN				pmax	pmax		
	comp=Z,123nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,15.0s						
KLNR	**Kaliningrad**	**53.60**	**352**	*d i*P	**P**	**19 31 06.3**	**-0.6**
KLNR				pmax	pmax		
	comp=Z,136nm,1.3s						
ABKAR	**Akbulak array**	**53.64**	**23**	*e*P	**P**	**19 31 07.2**	**-0.1**
	comp=Z,202nm,2.0s						
IDID	**Didziasalis**	**53.70**	**357**	*e*P	**P**	**19 31 07.8**	**+0.2**
IDID				IAmb	IAmb	19 31 17.3	
	comp=Z,163nm,1.5s						
SNF	**Seneffe**	**53.75**	**339**	⇓P	**P**	**19 31 07.5**	**-0.5**
UCC	**Uccle**	**53.96**	**339**	*e*P	**P**	**19 31 09.3**	**-0.4**
	comp=Z,213nm,1.2s						
UCC				LR	LR		
	comp=Z,2µm,22.0s						
UCC	**Uccle**	**53.96**	**339**	*e*P	**P**	**19 31 09.3**	**-0.4**
UCC				pmax	pmax		
	comp=Z,213nm,1.2s						
UCC				MLR	MLR		
	comp=Z,2µm,22.0s						
UCC	**Uccle**	**53.96**	**339**	⇓P	**P**	**19 31 09.4**	**-0.2**
UCC				⇑sP	**sP**	**19 31 16.6**	**-0.3**
	comp=Z,78nm,1.4s						
ISAL	**Salakas**	**53.99**	**357**	*e*P	**P**	**19 31 10.1**	**+0.3**
ISAL				IAmb	IAmb	19 31 19.4	
	comp=Z,120nm,1.4s						
JBG	**Jabagly**	**53.99**	**36**	*d i*P	**P**	**19 31 10.1**	**-0.1**
JBG				*e*S	**S**	**19 38 45.6**	**-0.1**
JBG				pmax	pmax		
	comp=Z,91nm,1.9s						
GRR	**Gorron**	**54.08**	**334**	*e*P	**P**	**19 31 09.0**	**-1.6**
GRR				pmax	pmax		
	comp=Z,107nm,1.3s						
WTSB	**Winterswijk**	**54.15**	**342**	*e*P	**P**	**19 31 10.6**	**-0.4**
IZAR	**Zarasai**	**54.16**	**357**	*e*P	**P**	**19 31 11.2**	**+0.2**
IZAR				IAmb	IAmb	19 31 20.6	
	comp=Z,340nm,1.9s						
FLN	**La Foliniere**	**54.20**	**335**	*e*P	**P**	**19 31 09.8**	**-1.7**
FLN				pmax	pmax		
	comp=Z,52nm,1.2s						
MOS	**Moscow**	**54.30**	**5**	*e*P	**P**	**19 31 11.3**	**-0.7**
MOS				*e*		19 32 12.4	
MOS				*e*		19 33 22.4	
MOS				*e*S	**S**	**19 38 47.3**	**-1.7**
MOS				*e*		19 40 57.9	
MOS				*e*SS	**SS**	**19 42 27.7**	**-3.6**
MOS				pmax	pmax		
	comp=Z,239nm,1.5s						
MOS				pmax	pmax		
	comp=Z,900nm,2.3s						
MOS				smax	smax		
	comp=E,1µm,4.8s						
MOS				smax	smax		
	comp=N,2µm,5.6s						
MOS				MLR	MLR		
	comp=Z,2µm,15.0s						
KK31	**Karatay Array**	**54.39**	**35**	*e*P	**P**	**19 31 13.4**	**+0.4**
	comp=Z,127nm,1.2s						
KK31	**Karatay Array**	**54.39**	**35**	*e*P	**P**	**19 31 13.4**	**+0.4**
KK31				pmax	pmax		
	comp=Z,127nm,1.2s						
KKAR	**Karatay Array**	**54.39**	**35**	*e*P	**P**	**19 31 13.6**	**+0.6**
	comp=Z,127nm,1.2s						
KKAR	**Karatay Array**	**54.39**	**35**	*e*P	**P**	**19 31 13.6**	**+0.6**
KKAR				pmax	pmax		
	comp=Z,127nm,1.2s						
QUIF	**Quistinic**	**54.76**	**333**	*e*P	**P**	**19 31 14.3**	**-1.2**
QUIF				pmax	pmax		
	comp=Z,112nm,1.3s						
PMOZ	**Porto Moniz, M**	**54.78**	**310**	*e*P	**P**	**19 31 16.8**	**+0.7**
	comp=Z,295nm,1.5s						
PMOZ				*e*S	S	19 39 22.8	+26
PMOZ	**Porto Moniz, M**	**54.78**	**310**	*e*LQ	LQ	19 51 20.1	
PMOZ				*e*LR	LR	19 54 03.4	
	comp=Z,5µm,18.0s						
ROSF	**Rostrenen**	**55.12**	**333**	*e*P	**P**	**19 31 16.3**	**-1.8**
ROSF				pmax	pmax		
	comp=Z,54nm,1.2s						
SACV	**Santiago Islan**	**55.39**	**287**	*e*P	**P**	**19 31 21.0**	**+0.3**
	comp=Z,169nm,1.3s						
SACV				LR	LR		
	comp=Z,5µm,20.0s						
AML	**Almayashu**	**55.70**	**38**	P	**P**	**19 31 24.3**	**+1.4**
	SNR=8.6						
KSH	**Kashi**	**55.74**	**42**	P	**P**	**19 31 19.5**	**-3.4**
KSH				sP	pP	19 31 27.5	-0.7
KSH				PcP	**PcP**	**19 32 21.7**	**-0.4**
KSH				PP	**PP**	**19 33 24.7**	**-2.8**
KSH				S	S	19 38 59.9	-9.4
KSH				ScS	**ScS**	**19 41 05.6**	**-6.4**
KSH				pmax	pmax		
	comp=Z,32nm,1.2s						
KSH				pmax	pmax		
	comp=Z,380nm,9.3s						
KSH				LR	LR		
	comp=Z,2µm,16.6s						
KSH				LR	LR		
	comp=Z,2µm,17.9s						
KSH				LR	LR		
	comp=Z,3µm,24.2s						
COP	**Copenhagen**	**56.00**	**348**	*i* P	**P**	**19 31 27.9**	**+3.6**
COP				MLR	MLR		
	comp=Z,1µm,14.0s						
COP	**Copenhagen**	**56.00**	**348**	*i* P	**P**	**19 31 27.9**	**+3.6**
	comp=Z,1µm,14.0s						
EKS2	**Erkin-Say**	**56.05**	**37**	P	**P**	**19 31 25.8**	**+0.7**
	SNR=32						
UCH	**Uchtor**	**56.26**	**38**	P	**P**	**19 31 27.8**	**+0.7**
	SNR=91						
PYUN	**Piuthan**	**56.28**	**57**	*e*P	**P**	**19 31 26.7**	**-0.5**
	comp=Z,402nm,1.3s						
SLIT	**Slitere, Latvi**	**56.33**	**354**	*e*P	**P**	**19 31 25.8**	**-0.8**
SLIT				IAmb	IAmb	19 31 35.5	
	comp=Z,2µm,1.4s						
SLIT				*e*S	**S**	**19 39 13.8**	**-2.4**
WOL	**Wolverton**	**56.47**	**336**	*e*P	**P**	**19 31 27.9**	**+0.1**
AAK	**Ala-Archa**	**56.48**	**38**	*e*P	**P**	**19 31 28.8**	**+0.7**
	comp=Z,132nm,1.4s						
AAK				LR	LR		
	comp=Z,5µm,19.0s						
AAK	**Ala-Archa**	**56.48**	**38**	*i* P	**P**	**19 31 29.2**	**+1.0**
	SNR=31						
AAK	**Ala-Archa**	**56.48**	**38**	*ce*P	**P**	**19 31 28.9**	**+0.7**
AAK				pmax	pmax		
	comp=Z,91nm,1.3s						
AAK	**Ala-Archa**	**56.48**	**38**	P	**P**	**19 31 29.2**	**+1.0**
	SNR=25						
KZA	**Kyzart**	**56.63**	**39**	P	**P**	**19 31 30.6**	**+1.0**
	SNR=16						
FRU1	**Bishkek**	**56.66**	**38**	*e*P	**P**	**19 31 29.9**	**+0.5**
	comp=Z,124nm,1.3s						
FRU1				LR	LR		
	comp=Z,3µm,20.0s						
FRU1	**Bishkek**	**56.66**	**38**	*e*P	**P**	**19 31 29.9**	**+0.5**
FRU1				pmax	pmax		
	comp=Z,124nm,1.3s						
FRU1				MLR	MLR		
	comp=Z,3µm,20.0s						
KOLN	**Koldanda**	**56.70**	**58**	*e*P	**P**	**19 31 29.5**	**-0.6**
	comp=Z,394nm,1.5s						
BWNR	**Bhubaneshwar**	**56.73**	**67**	*e*P	**P**	**19 31 30.1**	**0.0**
BWNR				IAmb	IAmb	19 31 32.2	
	comp=Z,129nm,0.2s						
KBK	**Karagaybulak**	**56.77**	**38**	P	**P**	**19 31 31.4**	**+1.1**
	SNR=41						
CHMS	**Chumysh**	**56.84**	**37**	P	**P**	**19 31 31.1**	**+0.5**
	SNR=32						
USP	**Ospenovka**	**56.84**	**37**	P	**P**	**19 31 31.0**	**+0.4**
	SNR=46						
VSU	**Vasula**	**56.84**	**357**	*e*P	**P**	**19 31 29.6**	**-0.7**
VSU				IAmb	IAmb	19 31 39.3	
	comp=Z,183nm,1.0s						
VSU				*e*S	**S**	**19 39 14.9**	**-8.1**
VSU	**Vasula**	**56.84**	**357**	*ce*P	**P**	**19 31 29.4**	**-0.9**
VSU				pmax	pmax		
	comp=Z,186nm,1.7s						
SWN1	**Swindon**	**56.86**	**336**	*e*P	**P**	**19 31 30.9**	**+0.4**
SWN1				IAmb	IAmb	19 31 31.6	
	comp=Z,202nm,1.1s						
SWN1				IAMs_20	IAMs_20	19 58 21.2	
	comp=Z,4µm,16.6s						
WACR	**West Acre**	**56.88**	**339**	*e*P	**P**	**19 31 30.7**	**+0.1**
WACR				IAmb	IAmb	19 31 35.6	
	comp=Z,297nm,1.0s						
WACR				IAMs_20	IAMs_20	20 02 31.7	
	comp=Z,3µm,12.8s						
DANN	**Dangsing**	**57.01**	**57**	*e*P	**P**	**19 31 31.8**	**-0.6**
	comp=Z,131nm,0.8s						
SGDS	**Sogindy**	**57.02**	**37**	⇓*i*P	**P**	**19 31 32.0**	**+0.1**
	comp=Z,169nm,1.7s						
SGDS				*e*S	**S**	**19 39 25.9**	**-0.1**
	comp=Z,108nm,7.4s						
SGDS				*e*LR	LR	19 58 10.9	
	comp=Z,2µm,17.9s						
STRD	**Stroud**	**57.21**	**336**	*e*P	**P**	**19 31 32.3**	**-0.7**
BOOM	**Boomskoye usch**	**57.29**	**38**	*e*P	**P**	**19 31 34.7**	**+0.7**
	comp=Z,186nm,1.4s						
BOOM				LR	LR		
	comp=Z,5µm,18.0s						
BOOM	**Boomskoye usch**	**57.29**	**38**	*e*P	**P**	**19 31 34.7**	**+0.7**
BOOM				pmax	pmax		
	comp=Z,186nm,1.4s						
BOOM				MLR	MLR		
	comp=Z,5µm,18.0s						
TKM2	**Tokmak 2**	**57.31**	**38**	P	**P**	**19 31 34.6**	**+0.4**
	SNR=58						
ULHL	**Ulahol**	**57.34**	**39**	P	**P**	**19 31 35.3**	**+0.9**
	SNR=20						
MUD	**Monsted U'grnd**	**57.46**	**346**	⇓*i*P	**P**	**19 31 34.6**	**0.0**
MUD				pmax	pmax		
	comp=Z,430nm,1.4s						
MUD				MLR	MLR		
	comp=Z,2µm,12.0s						
MUD	**Monsted U'grnd**	**57.46**	**346**	⇓*i*P	**P**	**19 31 34.6**	**0.0**
	comp=Z,426nm,1.4s						
	comp=Z,2µm,12.0s						
MONM	**Monmouth**	**57.52**	**336**	*e*P	**P**	**19 31 34.8**	**-0.4**
BOK	**Bokaro**	**57.59**	**63**	*e*P	**P**	**19 31 36.2**	**0.0**
BOK				IAmb	IAmb	19 31 37.5	
BTLS	**Baital**	**57.59**	**35**	*d i*P	**P**	**19 31 35.7**	**-0.1**
BTLS				*e*S	**S**	**19 39 29.5**	**-3.8**
BTLS				pmax	pmax		
	comp=Z,89nm,1.6s						
BTLS				smax	smax		
	comp=E,57nm,5.0s						
BTLS				MLR	MLR		
	comp=Z,773nm,15.0s						
BTLS	**Baital**	**57.59**	**35**	⇓*i*P	**P**	**19 31 35.7**	**-0.1**
	comp=Z,89nm,1.6s						
BTLS				*e*S	**S**	**19 39 29.6**	**-3.8**
	comp=Z,57nm,5.0s						
BTLS				*e*LR	LR	19 58 09.4	
	comp=Z,773nm,14.8s						
CWF	**Charnwood Fore**	**57.61**	**337**	*e*P	**P**	**19 31 35.5**	**-0.3**
CWF				IAmb	IAmb	19 31 36.3	
	comp=Z,58nm,1.3s						
CWF				IAMs_20	IAMs_20	20 00 08.4	
	comp=Z,4µm,14.9s						
GKN	**Gorkha**	**57.64**	**58**	*e*P	**P**	**19 31 36.0**	**-0.7**
	comp=Z,144nm,0.9s						
MCH1	**Michaelchurch**	**57.71**	**336**	*e*P	**P**	**19 31 35.8**	**-0.8**
MCH1				IAmb	IAmb	19 31 39.1	
	comp=Z,101nm,1.2s						
MCH1				IAMs_20	IAMs_20	19 58 26.9	
	comp=Z,4µm,19.2s						
KDJ	**Kajisay**	**57.87**	**39**	*e*P	**P**	**19 31 38.1**	**0.0**
	comp=Z,120nm,1.5s						
KDJ				LR	LR		
	comp=Z,6µm,20.0s						
KDJ	**Kajisay**	**57.87**	**39**	*e*P	**P**	**19 31 38.1**	**0.0**
KDJ				pmax	pmax		
	comp=Z,120nm,1.5s						
KDJ				MLR	MLR		
	comp=Z,6µm,20.0s						
DMN	**Daman**	**57.92**	**58**	*e*P	**P**	**19 31 38.3**	**-0.5**
	comp=Z,130nm,1.1s						
HLM1	**Long Mynd**	**58.06**	**336**	*e*P	**P**	**19 31 38.5**	**-0.5**
HLM1				IAmb	IAmb	19 31 39.2	
	comp=Z,62nm,1.2s						
HLM1				IAMs_20	IAMs_20	20 03 30.7	
	comp=Z,4µm,13.0s						
PUL	**Pulkovo**	**58.07**	**360**	*i* P	**P**	**19 31 39.4**	**+0.5**
PUL				pmax	pmax		
	comp=Z,71nm,1.2s						
KKN	**Kakani**	**58.12**	**58**	*e*P	**P**	**19 31 39.7**	**-0.5**
	comp=Z,106nm,0.9s						
PKIN	**Phulchoki**	**58.16**	**58**	*e*P	**P**	**19 31 39.5**	**-1.0**
PKI	**Pulchoki**	**58.17**	**58**	*e*P	**P**	**19 31 39.6**	**-1.0**
	comp=Z,59nm,0.9s						
AAA	**Alma-Ata**	**58.28**	**38**	*e*P	**P**	**19 31 39.5**	**-1.3**
AAA				*e*S	**S**	**19 39 39.4**	**-3.1**
AAA				pmax	pmax		
	comp=Z,30nm,1.2s						
AAA				MLR	MLR		
	comp=Z,1µm,18.0s						
AAA	**Alma-Ata**	**58.28**	**38**	*e*P	**P**	**19 31 39.6**	**-1.3**
	comp=Z,30nm,1.2s						
AAA				*e*S	**S**	**19 39 39.4**	**-3.1**
AAA				*e*LR	LR	19 57 01.0	
	comp=Z,1µm,18.2s						
KUU	**Kurty**	**58.29**	**37**	*e*P	**P**	**19 31 40.3**	**-0.5**
KUU				*e*S	**S**	**19 39 40.8**	**-1.8**
KUU				pmax	pmax		
	comp=Z,236nm,2.5s						
KUU				smax	smax		
	comp=E,360nm,7.2s						
KUU				MLR	MLR		
	comp=Z,1µm,13.0s						
KUU	**Kurty**	**58.29**	**37**	*e*P	**P**	**19 31 40.4**	**-0.5**
	comp=Z,236nm,2.5s						
KUU				*e*S	**S**	**19 39 40.8**	**-1.8**
	comp=Z,360nm,7.2s						
KUU				*e*LR	LR	19 58 59.0	
	comp=Z,1µm,12.8s						
RSBS	**Rosebush, Pemb**	**58.41**	**335**	*e*P	**P**	**19 31 41.0**	**-0.5**
FOEL	**Foel Wylfa**	**58.47**	**337**	*e*P	**P**	**19 31 41.8**	**-0.1**
FOEL				IAmb	IAmb	19 31 42.9	
	comp=Z,104nm,0.8s						
FOEL				IAMs_20	IAMs_20	19 59 29.6	
	comp=Z,4µm,16.5s						

LLW	**Llanuwychllyn**	58.62	336	*e*P	P	19 31 42.0	-0.9
LLW				IAmb	IAmb	19 31 43.8	
	comp=Z,39nm,1.0s						
GUN	**Gumba**	58.66	58	*e*P	P	19 31 43.5	-0.6
	comp=Z,501nm,1.4s						
HPK	**Haverah Park**	58.68	338	*e*P	P	19 31 43.3	0.0
HPK				IAmb	IAmb	19 31 44.1	
	comp=Z,133nm,1.3s						
HPK				IAMs_20	IAMs_20	20 02 00.4	
	comp=Z,3µm,12.7s						
KIRV	**Kirov**	58.71	11	LR	LR	19 59 19.2	
	comp=Z,1µm,18.5s,baz=222,slow=38						
PRZ	**Przheval'sk**	58.83	40	*e*P	P	19 31 45.2	+0.4
	comp=Z,272nm,1.7s						
PRZ				LR	LR		
	comp=Z,5µm,18.0s						
PRZ	**Przheval'sk**	58.83	40	*e*P	P	19 31 45.2	+0.4
PRZ				pmax	pmax		
	comp=Z,272nm,1.7s						
PRZ				MLR	MLR		
	comp=Z,5µm,18.0s						
JIRN	**Jiri**	58.86	58	*e*P	P	19 31 44.8	-0.7
	comp=Z,89nm,0.6s						
YLL	**Llanberis**	59.04	336	*e*P	P	19 31 45.8	0.0
ARU	**Arti**	59.06	18	LR	LR	19 59 28.0	
	comp=Z,4µm,20.7s,baz=220,slow=38						
ARU	**Arti**	59.06	18	*e*P	P	19 31 45.9	0.0
	comp=Z,128nm,0.8s						
ARU				LR	LR		
	comp=Z,4µm,20.0s						
ARU	**Arti**	59.06	18	*d i*P	P	19 31 44.4	-1.5
ARU						19 32 29.9	
ARU						19 33 56.3	
ARU				S	S	19 39 50.7	-1.4
ARU						19 41 29.5	
ARU				SS	SS	19 43 43.5	-2.8
ARU				pmax	pmax		
	comp=Z,311nm,1.7s						
ARU				MLR	MLR		
	comp=Z,4µm,20.0s						
SATY	**Saty**	59.13	39	*d i*P	P	19 31 46.7	-0.1
SATY				*e*S	S	19 39 54.6	+0.8
SATY				pmax	pmax		
	comp=Z,190nm,2.3s						
SATY				smax	smax		
	comp=E,131nm,6.3s						
SATY				MLR	MLR		
	comp=Z,2µm,17.0s						
SATY	**Saty**	59.13	39	⇓*i*P	P	19 31 46.8	-0.1
	comp=Z,190nm,2.2s						
SATY				*e*S	S	19 39 54.6	+0.8
	comp=Z,131nm,6.3s						
SATY				*e*LR	LR	19 59 09.4	
	comp=Z,2µm,16.8s						
ZHN	**Zhinishke**	59.20	39	*d i*P	P	19 31 47.2	-0.1
ZHN				pmax	pmax		
	comp=Z,50nm,1.0s						
ZHN	**Zhinishke**	59.20	39	⇓*i*P	P	19 31 47.2	-0.1
	comp=Z,50nm,1.0s						
WLF1	**Llynfaes**	59.24	336	*e*P	P	19 31 47.1	-0.1
WME	**Myndd Eilian**	59.29	336	*e*P	P	19 31 47.6	+0.1
WPS	**Cemaes, Angles**	59.37	336	*e*P	P	19 31 48.1	+0.1
WPS				IAmb	IAmb	19 31 53.1	
	comp=Z,135nm,1.3s						
WPS				IAMs_20	IAMs_20	19 59 46.6	
	comp=Z,4µm,20.6s						
EDMD	**Edmundbyers**	59.48	339	*e*P	P	19 31 48.9	0.0
EDMD				IAmb	IAmb	19 31 50.6	
	comp=Z,142nm,1.6s						
EDMD				IAMs_20	IAMs_20	20 02 36.2	
	comp=Z,4µm,13.6s						
KPKS	**Kokpek**	59.51	39	*d i*P	P	19 31 48.7	-0.7
KPKS				*i* S	S	19 39 56.5	-2.1
KPKS				pmax	pmax		
	comp=Z,105nm,2.5s						
KPKS				smax	smax		
	comp=E,93nm,7.0s						
KPKS				MLR	MLR		
	comp=Z,2µm,17.0s						
KPKS	**Kokpek**	59.51	39	⇓*i*P	P	19 31 48.8	-0.7
	comp=Z,105nm,2.5s						
KPKS				*i* S	S	19 39 56.6	-2.1
	comp=Z,93nm,7.0s						
KPKS				*e*LR	LR	19 59 25.2	
	comp=Z,2µm,17.5s						
UZB	**Uzynbulak**	59.56	39	*d i*P	P	19 31 49.4	-0.4
UZB				*e*S	S	19 39 57.2	-2.2
UZB				pmax	pmax		
	comp=Z,47nm,1.2s						
UZB				smax	smax		
	comp=E,109nm,8.3s						
UZB				MLR	MLR		
	comp=Z,989nm,16.0s						
UZB	**Uzynbulak**	59.56	39	⇓*i*P	P	19 31 49.4	-0.4
	comp=Z,47nm,1.2s						
UZB				*e*S	S	19 39 57.3	-2.2
	comp=Z,109nm,8.3s						
UZB				*e*LR	LR	19 59 17.6	
	comp=Z,989nm,15.8s						
KESW	**Keswick, Cumbr**	59.72	338	*e*P	P	19 31 50.8	+0.3
KESW				IAmb	IAmb	19 31 51.6	
	comp=Z,75nm,0.8s						
KESW				IAMs_20	IAMs_20	20 04 12.7	
	comp=Z,4µm,13.6s						
FIA0	**FINESS Array S**	59.85	357	*e*P	P	19 31 51.1	-0.2
FIA0	**FINESS Array S**	59.85	357	*e*P	P	19 31 51.1	-0.2
FINES	**FINESS Array B**	59.85	357	P	P	19 31 51.1	-0.2
	comp=Z,14nm,0.8s,baz=145,slow=7.0,SNR=46						
FINES				LR	LR	19 59 41.5	
	comp=Z,2µm,20.6s,baz=174,slow=38						
FIA1	**FINESS Array S**	59.86	357	*e*P	P	19 31 50.9	-0.3
	comp=Z,374nm,1.5s						
BRZS	**Berezniki**	59.89	30	*d i*P	P	19 31 51.4	-0.3
BRZS				pmax	pmax		
	comp=Z,120nm,2.3s						
BRZS				MLR	MLR		
	comp=Z,3µm,18.0s						
BRZS	**Berezniki**	59.89	30	⇓*i*P	P	19 31 51.5	-0.3
	comp=Z,120nm,2.3s						
BRZS				*e*LR	LR	19 59 27.5	
	comp=Z,3µm,18.4s						
HFS	**Hagfors**	59.92	350	LR	LR	20 00 15.0	
	comp=Z,1µm,19.9s,baz=158,slow=39						
PDGK	**Podgornoye**	59.95	39	P	P	19 31 51.9	-0.6
PDGK				pmax	pmax		
	comp=Z,29nm,1.7s						
WIM	**Isle of Man**	59.99	337	*e*P	P	19 31 52.6	+0.3
DSB	**Dublin**	60.03	335	*e*P	P	19 31 52.7	+0.1
	comp=Z,93nm,1.3s						
DSB				LR	LR		
	comp=Z,4µm,18.0s						
SVE	**Sverdlovsk**	60.03	18	*c i*P	P	19 31 52.6	0.0
SVE				*e*S	S	19 40 02.6	-2.0
SVE				pmax	pmax		
	comp=Z,118nm,1.5s						
SVE				MLR	MLR		
	comp=Z,5µm,20.0s						
IOMK	**Kirk Michael**	60.03	337	*e*P	P	19 31 52.8	+0.1
IOMK				IAmb	IAmb	19 31 53.7	
	comp=Z,331nm,1.6s						
IOMK				IAMs_20	IAMs_20	20 03 45.8	
	comp=Z,9µm,13.8s						
TDK	**Taldyqorghan**	60.14	37	*e*P	P	19 31 52.6	-1.0
TDK				*e*S	S	19 40 04.5	-2.0
TDK				pmax	pmax		
	comp=Z,174nm,2.2s						
TDK				smax	smax		
	comp=E,213nm,8.9s						
TDK				MLR	MLR		
	comp=Z,3µm,15.0s						
TDK	**Taldyqorghan**	60.14	37	*e*P	P	19 31 52.6	-1.0
	comp=Z,174nm,2.2s						
TDK				*e*S	S	19 40 04.6	-2.0
	comp=Z,213nm,8.9s						
TDK				*e*LR	LR	20 00 13.4	
	comp=Z,3µm,15.3s						
BHH	**Howats Hill**	60.15	338	*e*P	P	19 31 53.3	-0.1
KONO	**Kongsberg**	60.26	348	*e*P	P	19 31 53.8	-0.2
	comp=Z,232nm,1.5s						
KONO				LR	LR		
	comp=Z,2µm,20.0s						
KONO	**Kongsberg**	60.26	348	*ce*P	P	19 31 53.3	-0.7
KONO				pmax	pmax		
	comp=Z,85nm,1.7s						
KONO	**Kongsberg**	60.26	348	*e*P	P	19 31 53.6	-0.5
OSL	**Oslo**	60.29	348	*e*P	P	19 31 53.1	-1.1
ESK	**Eskdalemuir**	60.31	338	*e*P	P	19 31 54.0	-0.5
	comp=Z,146nm,1.4s						
ESK				LR	LR		
	comp=Z,3µm,20.0s						
ESK	**Eskdalemuir**	60.31	338	*e*P	P	19 31 54.6	+0.1
ESK				IAmb	IAmb	19 31 56.2	
	comp=Z,251nm,2.0s						
ESK				IAMs_20	IAMs_20	20 02 59.4	
	comp=Z,15µm,13.0s						
ESK	**Eskdalemuir**	60.31	338	*i* P	P	19 31 54.9	+0.4
GAL1	**Galloway**	60.54	337	*e*P	P	19 31 56.2	+0.1
GAL1				IAmb	IAmb	19 32 01.4	
	comp=Z,52nm,1.4s						
GAL1				IAMs_20	IAMs_20	20 02 59.3	
	comp=Z,2µm,12.2s						
ESY	**Stoneypath**	60.56	339	*e*P	P	19 31 56.7	+0.4
GMM	**Mts of Mourne**	60.57	336	*e*P	P	19 31 56.6	+0.3
EBL	**Broad Law**	60.61	339	*e*P	P	19 31 56.8	+0.3
EDI	**Edinburgh**	60.77	339	*e*P	P	19 31 57.9	+0.3
EDI				IAmb	IAmb	19 31 59.5	
	comp=Z,131nm,1.3s						
EDI				IAMs_20	IAMs_20	20 03 24.5	
	comp=Z,4µm,14.2s						
BRVK	**Borovoye**	60.81	26	*e*P	P	19 31 57.1	-0.9
	comp=Z,47nm,1.1s						
BRVK				LR	LR		
	comp=Z,4µm,18.0s						
BRVK	**Borovoye**	60.81	26	*d i*P	P	19 31 57.2	-0.8
BRVK				pmax	pmax		
	comp=Z,25nm,1.2s						
GTK	**Tadong**	60.83	59	*e*P	P	19 31 58.4	-0.4
NC602	**NORSAR Array S**	60.87	349	*e*P	P	19 31 57.4	-0.9
	comp=Z,319nm,1.4s						
NC602	**NORSAR Array S**	60.87	349	*e*P	P	19 31 57.3	-0.9
NORES	**NORESS Array B**	60.87	349	P	P	19 31 57.8	-0.4
NORES				pmax	pmax		
	comp=Z,18nm,0.9s						
PRGR	**Permogore**	60.97	8	⇓*i*P	P	19 31 57.9	-1.0
PRGR				*e**PP	pP	19 32 04.9	+0.8
PRGR				*e*		19 32 40.6	
PRGR				pmax	pmax		
	comp=Z,63nm,0.9s						
NAO01	**NORSAR Array S**	61.09	349	*e*P	P	19 31 59.5	-0.2
	comp=Z,489nm,1.5s						
SUF	**Sumiainen**	61.13	358	P	P	19 31 59.7	-0.2
SUF				pmax	pmax		
	comp=Z,173nm,1.8s						
NC405	**NORSAR Array S**	61.19	350	*e*P	P	19 31 59.7	-0.7
	comp=Z,451nm,1.4s						
EDU	**Dundee**	61.19	339	*e*P	P	19 32 00.7	+0.2
NB201	**NORSAR Array S**	61.21	349	*e*P	P	19 32 00.3	-0.3
	comp=Z,660nm,1.4s						
NB2	**NORSAR Subarra**	61.21	349	P	P	19 31 59.8	-0.8
	comp=Z,423nm,1.7s,baz=160,slow=6.9						
NB2	**NORSAR Subarra**	61.21	349	P	P	19 31 57.2	-3.4
NB2				pmax	pmax		
	comp=Z,98nm,1.1s						
NB2	**NORSAR Subarra**	61.21	349	P	P	19 31 59.8	-0.8
	baz=160,slow=6.9						
NB200	**NORSAR Array S**	61.21	349	*e*P	P	19 31 59.9	-0.8
NOA	**NORSAR Array B**	61.21	349	P	P	19 31 59.9	-0.8
	comp=Z,22nm,1.0s,baz=159,slow=6.7,SNR=33						
NOA				LR	LR	20 03 38.1	
	comp=Z,949nm,18.2s,baz=160,slow=41						
NBO00	**NORSAR Array S**	61.28	349	*e*P	P	19 32 01.1	0.0
	comp=Z,674nm,1.5s						
NC303	**NORSAR Array S**	61.35	349	*e*P	P	19 32 00.5	-1.0
	comp=Z,540nm,1.5s						
EAB	**Aberfoyle**	61.40	338	*e*P	P	19 32 02.1	+0.2
INVG	**Invergeldie, C**	61.47	339	*e*P	P	19 32 01.6	-0.8
INVG				IAmb	IAmb	19 32 07.7	
	comp=Z,82nm,1.1s						
INVG				IAMs_20	IAMs_20	20 06 14.4	
	comp=Z,3µm,12.3s						
NC204	**NORSAR Array S**	61.52	349	*e*P	P	19 32 02.4	-0.3
	comp=Z,445nm,1.4s						
LAWE	**Loch Awe, Argy**	61.84	338	*e*P	P	19 32 05.2	+0.3
LAWE				IAmb	IAmb	19 32 10.1	
	comp=Z,93nm,1.2s						
LAWE				IAMs_20	IAMs_20	20 01 38.4	
	comp=Z,3µm,15.6s						
PBA	**Port Blair**	62.14	78	PFAKE		19 32 20.0	+12
PBA				LR	LR		
	comp=Z,7µm,19.0s						
PBA	**Port Blair**	62.14	78	*e*P	P	19 32 07.5	-0.1
PBA				IAmb	IAmb	19 32 10.9	
	comp=Z,172nm,1.2s						
PSMN	**Pico do Norte,**	62.35	312	*e*P	P	19 32 06.3	-2.4
	comp=Z,129nm,1.8s						
PSMA	**Santa Maria**	62.39	311	*e*P	P	19 32 08.5	-0.5
	comp=Z,125nm,1.9s						
DGPR	**DIGLIPUR**	62.45	76	*e*x	P	19 31 56.7	-13
DGPR				IAmb	IAmb	19 32 12.6	
	comp=Z,3µm,3.7s						
BELO	**BELONIA**	62.45	65	*e*P	P	19 32 09.1	-0.5
DOMB	**Dombas**	62.55	349	*e*P	P	19 32 07.1	-2.5
BART	**Pico Bartolome**	62.70	312	*e*P	P	19 32 07.2	-3.9
	comp=Z,143nm,1.5s						
KPL	**Plockton**	62.74	339	*e*P	P	19 32 11.1	+0.2
KPL				IAmb	IAmb	19 32 12.7	
	comp=Z,111nm,1.4s						
KPL				IAMs_20	IAMs_20	20 04 33.1	
	comp=Z,3µm,13.8s						
CMLA	**Cha da Macela**	62.96	312	*e*P	P	19 32 13.1	+0.3
	comp=Z,259nm,1.4s						
CMLA	**Cha da Macela**	62.96	312	*e*P	P	19 32 14.2	+1.4
	comp=Z,263nm,1.0s						
CMLA				LR	LR		
	comp=Z,4µm,20.0s						
CMLA	**Cha da Macela**	62.96	312	*i* P	P	19 32 14.7	+1.9
BIGH	**Upper Bighouse**	63.00	340	*e*P	P	19 32 12.3	-0.3
BIGH				IAmb	IAmb	19 32 13.9	
	comp=Z,121nm,1.3s						
BIGH				IAMs_20	IAMs_20	20 03 35.7	
	comp=Z,3µm,15.8s						
PSET	**Sete Cidades**	63.12	312	*e*P	P	19 32 14.0	+0.1
	comp=Z,419nm,1.9s						
MAKZ	**Makanchi**	63.20	37	*e*P	P	19 32 14.2	-0.1
	comp=Z,210nm,1.8s						
MAKZ				LR	LR		
	comp=Z,5µm,20.0s						
MAKZ	**Makanchi**	63.20	37	*e*P	P	19 32 14.2	-0.1
MAKZ				pmax	pmax		
	comp=Z,210nm,1.8s						
MAKZ				MLR	MLR		
	comp=Z,5µm,20.0s						
SIMRM	**Sittwe**	63.24	68	PFAKE		19 32 30.0	+15
SIMRM				LR	LR		
	comp=Z,600nm,19.0s						
SHL	**Shillong**	63.30	62	*e*P	P	19 32 15.0	-0.5
	comp=Z,178nm,1.5s						
SHL				LR	LR		
	comp=Z,2µm,20.0s						
SHL	**Shillong**	63.30	62	*e*P	P	19 32 15.0	-0.5
SHL				pmax	pmax		
	comp=Z,178nm,1.5s						
SHL				MLR	MLR		
	comp=Z,2µm,20.0s						
SHL	**Shillong**	63.30	62	*e*P	P	19 32 14.9	-0.5
SHL				IAmb	IAmb	19 32 16.0	
	comp=Z,175nm,1.7s						
RSC	**Scourie**	63.32	340	*e*P	P	19 32 14.3	-0.4
KURK	**Kurchatov**	63.37	32	*e*P	P	19 32 15.1	-0.2
	comp=Z,127nm,1.6s						
KURK				LR	LR		
	comp=Z,6µm,19.0s						
KURK	**Kurchatov**	63.37	32	*ce*P	P	19 32 15.3	+0.1
KURK				pmax	pmax		
	comp=Z,96nm,1.7s						
MK31	**Makanchi Array**	63.38	37	*e*P	P	19 32 15.0	-0.4
	comp=Z,190nm,2.0s						
MK31	**Makanchi Array**	63.38	37	*e*P	P	19 32 15.0	-0.4
MK31				pmax	pmax		
	comp=Z,190nm,2.0s						
MK32	**Makanchi Array**	63.38	37	*e*P	P	19 32 15.4	-0.1
MKAR	**Makanchi Array**	63.38	37	P	P	19 32 15.4	-0.1
	comp=Z,14nm,0.7s,baz=239,slow=5.9,SNR=107						
MKAR				LR	LR	20 02 59.9	
	comp=Z,5µm,18.9s,baz=244,slow=39						
TBLU	**Trondheim**	63.43	350	*e*P	P	19 32 15.4	+0.1
OUL	**Oulu**	63.50	358	P	P	19 32 15.5	-0.3
OUL				pmax	pmax		
	comp=Z,80nm,1.6s						
LSA	**Lhasa**	63.60	58	*e*P	P	19 32 17.8	0.0
	comp=Z,170nm,1.8s						
LSA				LR	LR		
	comp=Z,1µm,20.0s						
LSA	**Lhasa**	63.60	58	*i* P	P	19 32 18.2	+0.5
	SNR=18						
LSA	**Lhasa**	63.60	58	*e*P	P	19 32 17.8	0.0
LSA				pmax	pmax		
	comp=Z,170nm,1.8s						
LSA				MLR	MLR		
	comp=Z,1µm,20.0s						
TAWA	**Tawang**	63.72	60	*e*P	P	19 32 18.0	-0.4
TEZP	**TEZPUR**	64.32	61	*e*P	P	19 32 21.7	-0.3
NSS	**Namsos**	64.33	351	*e*P	P	19 32 20.8	-0.5
PSCM	**Serra do Cume**	64.46	313	*e*P	P	19 32 22.6	-0.1
	comp=Z,94nm,1.2s						
PGRA	**Graciosa**	65.21	313	*e*P	P	19 32 26.5	-1.0
	comp=Z,142nm,1.3s						
PPNO	**Prainha do Nor**	65.23	312	*e*P	P	19 32 23.2	-4.6
	comp=Z,177nm,1.2s						
ROSA	**Rosais**	65.30	312	*e*P	P	19 32 29.0	+0.9
	comp=Z,156nm,1.4s						
ROSA	**Rosais**	65.30	312	*e*P	P	19 32 27.8	-0.3
	comp=Z,155nm,1.2s						
ROSA				LR	LR		
	comp=Z,4µm,20.0s						
KOHI	**KOHIMA**	65.30	62	*e*P	P	19 32 29.1	+0.5
KOHI				IAmb	IAmb	19 32 30.1	
	comp=Z,32nm,0.8s						
PICO	**Pico**	65.36	312	*e*P	P	19 32 28.7	+0.1
	comp=Z,161nm,1.2s						
PCAN	**Candelaria**	65.39	312	*e*P	P	19 32 27.1	-1.7
	comp=Z,119nm,1.3s						
ZIRO	**ZIRO**	65.42	60	*e*P	P	19 32 29.2	-0.1
WMQ	**Urumqi**	65.50	42	*e*P	P	19 32 30.1	+0.7
	comp=Z,256nm,1.9s						
WMQ				LR	LR		
	comp=Z,2µm,21.0s						
WMQ	**Urumqi**	65.50	42	P	P	19 32 30.3	+0.9
WMQ				pP	sP	19 32 37.0	+0.3
WMQ				PcP	PcP	19 33 03.3	+2.1
WMQ				S	S	19 41 15.0	+1.1
WMQ				SKS	ScS	19 42 25.9	+1.2
WMQ				SS	SS	19 45 30.0	+2.3
WMQ				pmax	pmax		
	comp=Z,33nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.9s						
WMQ				LR	LR		
	comp=Z,790nm,23.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
WMQ				LR	LR		
	comp=Z,2µm,19.3s						
WMQ	**Urumqi**	65.50	42	*e*P	P	19 32 30.1	+0.7
WMQ				pmax	pmax		
	comp=Z,257nm,1.9s						
WMQ				MLR	MLR		
	comp=Z,2µm,21.0s						
PCED	**Cedros**	65.61	312	*e*P	P	19 32 29.0	-1.1
	comp=Z,136nm,1.6s						
JORH	**JORHAT**	65.62	61	*e*P	P	19 32 29.8	-0.6
MOKO	**MOKOCHONG**	65.77	62	*e*P	P	19 32 31.6	0.0
MOKO				IAmb	IAmb	19 32 33.8	
	comp=Z,146nm,0.2s						
APA	**Apatity**	65.92	1	⇓*i*P	P	19 32 24.6	-6.9
SALU	**Saltoluokta**	66.27	355	*e*P	P	19 32 33.4	-0.5
LVZ	**Lovozero**	66.28	2	PFAKE		19 32 50.0	+16
LVZ				LR	LR		
	comp=Z,2µm,18.0s						
LVZ	**Lovozero**	66.28	2	*i* P	P	19 32 33.5	-0.4
LVZ				pmax	pmax		
	comp=Z,12nm,1.2s						
GSI	**Gunungsitoli**	66.66	89	PFAKE		19 32 50.0	+13
GSI				LR	LR		
	comp=Z,3µm,18.0s						
RCBR	**Riachuelo**	67.09	263	*e*P	P	19 32 40.7	+0.5
	comp=Z,132nm,1.4s						
RCBR				LR	LR		
	comp=Z,4µm,18.0s						
RCBR	**Riachuelo**	67.09	263	*e*P	P	19 32 40.7	+0.5
RCBR				pmax	pmax		
	comp=Z,132nm,1.4s						
RCBR				MLR	MLR		
	comp=Z,4µm,18.0s						
RCBR	**Riachuelo**	67.09	263	*e*P	P	19 32 41.6	+1.5
STEI	**Steigen**	67.13	354	*e*P	P	19 32 38.9	-0.3
KTK1	**Kautokeino**	67.54	357	*e*P	P	19 32 41.3	-0.6
ARA0	**ARCESS Array S**	67.97	358	*e*P	P	19 32 44.0	-0.6
ARCES	**ARCESS Array B**	67.97	358	P	P	19 32 44.0	-0.6
	comp=Z,8.9nm,0.7s,baz=162,slow=6.9,SNR=38						
ARCES				LR	LR	20 06 22.4	
	comp=Z,2µm,19.1s,baz=177,slow=39						
ARCES	**ARCESS Array B**	67.97	358	P	P	19 32 44.0	-0.6
ARE0	**ARCESS Array S**	67.97	358	*e*P	P	19 32 44.3	-0.2
	comp=Z,12nm,1.8s						
ARE0				LR	LR		
	comp=Z,200nm,19.0s						
ARE0	**ARCESS Array S**	67.97	358	*e*P	P	19 32 44.1	-0.4
PSI	**Prapat**	67.99	88	PFAKE		19 33 00.0	+14
PSI				LR	LR		
	comp=Z,2µm,18.0s						
NBLI	**Livramento-PB**	68.25	261	*e*P	P	19 32 50.8	+3.3
ZAA0	**Zalesovo Array**	68.31	31	*e*P	P	19 32 45.9	-1.1
	comp=Z,144nm,1.5s						
ZAA0				LR	LR		
	comp=Z,4µm,20.0s						
ZALV	**Zalesovo Beam**	68.31	31	P	P	19 32 46.5	-0.5
	comp=Z,23nm,0.7s,baz=254,slow=5.9,SNR=90						
ZALV				LR	LR	20 05 17.8	
	comp=Z,3µm,19.1s,baz=244,slow=38						
ZAA1	**Zalesovo Array**	68.31	31	*e*P	P	19 32 46.5	-0.6
UMPA	**Umpang Tak**	68.43	73	P	P	19 32 50.0	+1.5
TRO	**Tromso**	68.44	356	*e*P	P	19 32 47.3	-0.1
SRDT	**SRDT**	68.54	75	P	P	19 32 50.5	+1.4
CM31	**Chiang Mai Arr**	68.71	71	*e*P	P	19 32 50.3	+0.1
	comp=Z,107nm,1.3s						
CMAR	**Chiang Mai Arr**	68.71	71	P	P	19 32 50.5	+0.3
	comp=Z,28nm,1.1s,baz=267,slow=7.1,SNR=92						
CMAR				PKP2bc		20 01 05.2	
	comp=Z,0.8nm,1.0s,baz=308,slow=0.5,SNR=4.9						
CMAR				LR	LR	20 02 32.7	
	comp=Z,1µm,19.2s,baz=256,slow=36						
CHTO	**Chiang Mai**	68.75	71	*e*P	P	19 32 50.2	-0.2
	comp=Z,84nm,1.6s						
CHTO				LR	LR		
	comp=Z,1µm,21.0s						
CHTO	**Chiang Mai**	68.75	71	*e*P	P	19 32 50.2	-0.2
CHTO				pmax	pmax		
	comp=Z,84nm,1.6s						
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
CMMT	**Chiang Mai**	68.75	71	P	P	19 32 50.5	0.0
PHET	**Kaeng Krachan**	68.94	77	P	P	19 32 53.6	+1.9
LAMP	**Lampang**	69.37	71	P	P	19 32 56.0	+1.7
PAYA	**Payao**	69.67	70	P	P	19 32 57.1	+0.9
	comp=Z,58µm,1.2s,comp=Z,607µm						
KULM	**Kulim**	69.71	85	PFAKE		19 33 10.0	+14
KULM				LR	LR		
	comp=Z,2µm,18.0s						
IPM	**Ipoh**	70.08	86	*e*P	P	19 32 58.8	0.0
	comp=Z,47nm,1.1s						
IPM				LR	LR		
	comp=Z,2µm,20.0s						
IPM	**Ipoh**	70.08	86	P	P	19 32 59.0	+0.2
BKNI	**Bangkinang**	70.15	90	PFAKE		19 33 10.0	+11
BKNI				LR	LR		
	comp=Z,2µm,19.0s						
UTTA	**Uttaradit**	70.17	72	P	P	19 33 00.0	+0.8
PBKT	**Sadao Pong**	70.47	73	P	P	19 33 01.7	+0.6
SYO	**Syowa Base**	70.67	177	⇑*i*P	P	19 33 01.4	+0.2
SYO	**Syowa Base**	70.67	177	⇓*e*P	P	19 33 07.5	+6.3
NBMO	**Morrinhos-CE**	71.06	266	*e*P	P	19 33 05.8	+1.0
CHAI	**Chaiyaphum**	71.40	74	P	P	19 33 07.9	+1.1
KHON	**Khomkaen**	72.23	73	P	P	19 33 12.5	+0.8
MNAI	**Manna**	72.25	95	PFAKE		19 33 20.0	+8.1
MNAI				LR	LR		
	comp=Z,2µm,21.0s						
MAW	**Mawson**	72.54	168	P	P	19 33 13.7	+1.2
	comp=Z,24nm,1.0s,baz=319,slow=7.6,SNR=27						
MAW				LR	LR	20 02 53.7	
	comp=Z,3µm,18.5s,baz=329,slow=34						
MAW	**Mawson**	72.54	168	P	P	19 33 13.9	+1.4
	baz=73,SNR=26						
NONG	**Nongkai**	72.66	72	P	P	19 33 14.7	+0.4
GTA	**Gaotai**	72.81	49	⇓P	P	19 33 15.3	+0.3
GTA				pP	pP	19 33 19.9	-0.5
GTA				sP	sP	19 33 22.4	+0.1

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GTA                               S        S        19 42 39.8 -0.9
GTA                               sS       pS       19 42 47.7 +0.3
GTA                               SKS      SKSac    19 43 16.6 -3.6
GTA                               pmax     pmax
      comp=Z,45nm,1.4s
GTA                               pmax     pmax
      comp=Z,540nm,7.8s
GTA                               LR       LR
      comp=Z,1µm,17.5s
GTA                               LR       LR
      comp=Z,1µm,16.8s
GTA                               LR       LR
      comp=Z,2µm,18.7s
RIB01 Linhares ES       72.90 249 eP       P        19 33 16.9 +1.2
MYKOM Kota Tinggi       72.92  89 eP       P        19 33 15.9  0.0
      comp=Z,137nm,1.7s
MYKOM                             LR       LR
      comp=Z,1µm,18.0s
MYKOM Kota Tinggi       72.92  89 P        P        19 33 17.0 +1.1
KMI   Kunming           72.93  64 PFAKE             19 33 30.0  +14
KMI                               LR       LR
      comp=Z,1µm,20.0s
KMI   Kunming           72.93  64 P        P        19 33 16.3 +0.3
KMI                               pP       pP       19 33 20.4 -1.0
KMI                               sP       sP       19 33 22.2 -1.2
KMI                               PP       PP       19 36 03.2 +4.7
KMI                               S        S        19 42 42.0 -0.7
KMI                               sS       pS       19 42 48.6 -0.8
KMI                               SKS      SKSac    19 43 17.8 -4.0
KMI                               SS       SS       19 47 28.1 +4.8
KMI                               pmax     pmax
      comp=Z,25nm,1.0s
KMI                               pmax     pmax
      comp=Z,540nm,6.9s
KMI                               LR       LR
      comp=Z,560nm,21.1s
KMI                               LR       LR
      comp=Z,730nm,19.6s
KMI                               LR       LR
      comp=Z,1µm,20.7s
BSFB  Barra de Sao F    73.26 250 eP       P        19 33 18.8 +1.0
BORG  Borgarnes         73.32 339 LR       LR       20 08 13.0
      comp=Z,2µm,18.1s,baz=143,slow=38
BORG  Borgarnes         73.32 339 PFAKE             19 33 30.0  +13
BORG                              LR       LR
      comp=Z,2µm,18.0s
SKNT  Sakolnakorn       73.38  73 P        P        19 33 19.8 +1.2
      comp=Z,81nm,1.6s
LWLI  Liwa              73.38  96 P        P        19 33 19.8 +1.0
ALF01 Guarapari-ES      73.39 248 eP       P        19 33 20.4 +1.9
MDSI  Maura Dua         73.47  95 P        P        19 33 19.3 +0.1
SJMB  Sao Joao De Ma    73.56 250 eP       P        19 33 19.7 +0.1
SLVN  Son La            73.62  68 eP       P        19 33 20.2 +0.2
      comp=Z,60nm,1.5s
SLVN                              LR       LR
      comp=Z,800nm,19.0s
JMIC  Jan Mayen         73.83 347 LR       LR       20 07 53.2
      comp=Z,546nm,19.9s,baz=110,slow=38
KASI  Kota Agung        73.84  96 P        P        19 33 21.3 -0.1
PANO  Nakornpanom       73.99  73 P        P        19 33 23.2 +1.0
CAM01 Campos-RJ         74.42 247 eP       P        19 33 26.2 +1.7
CD2   Chengdu           74.53  58⇑iP       P        19 33 26.0 +0.9
CD2                               S        S        19 42 56.2 -4.0
CD2                               sS       sS       19 43 13.8 +4.8
CD2                               ScS      ScS      19 43 37.6 +1.3
CD2                               SS       SS       19 47 41.9 -5.3
CD2                               pmax     pmax
      comp=Z,60nm,0.6s
CD2                               pmax     pmax
      comp=Z,1µm,11.0s
CD2                               LR       LR
      comp=Z,3µm,22.2s
CD2                               LR       LR
      comp=Z,3µm,18.6s
CD2                               LR       LR
      comp=Z,3µm,20.2s
DUB01 Friburgo-RJ       75.11 247 eP       P        19 33 29.9 +1.3
XMIS  Christmas Isla    75.31 101 PFAKE             19 33 40.0  +10
XMIS                              LR       LR
      comp=Z,2µm,20.0s
LZH   Lanzhou           75.34  53 eP       P        19 33 30.6 +0.7
LZH                               pP       sP       19 33 36.3 -0.9
LZH                               sP       pP       19 33 38.3 +3.1
LZH                               PP       PP       19 36 21.6 +2.9
LZH                               S        S        19 43 09.5 +0.2
LZH                               sS       sS       19 43 21.1 +2.9
LZH                               SS       SS       19 48 00.4 +0.8
LZH                               pmax     pmax
      comp=Z,59nm,1.2s
LZH                               pmax     pmax
      comp=Z,470nm,4.8s
LZH                               LR       LR
      comp=Z,1µm,15.7s
LZH                               LR       LR
      comp=Z,1µm,15.3s
LZH                               LR       LR
      comp=Z,2µm,16.8s
VAS01 Vassouras-RJ      76.12 247 eP       P        19 33 36.0 +1.6
JANB  Januaria          76.13 254 eP       P        19 33 35.8 +1.2
SNAA  Sanae             76.26 190 P        P        19 33 36.1 +1.9
SNAA  Sanae             76.26 190 eP       P        19 33 35.6 +1.4
      comp=Z,84nm,1.6s
SNAA                              LR       LR
      comp=Z,5µm,21.0s
SNAA  Sanae             76.26 190d iP      P        19 33 35.1 +0.9
VNA1  Neumayer--Stat    76.52 192 P        P        19 33 38.1 +2.4
MOY   Mondy             76.53  37 eP       P        19 33 37.0 +0.7
MOY                               pmax     pmax
      comp=Z,151nm,3.0s
GYA   Guiyang           76.58  63⇓iP       P        19 33 37.3 +0.2
GYA                               PP       PP       19 36 25.6 -3.8
GYA                               S        S        19 43 18.1 -5.2
GYA                               SKS      SKSac    19 43 48.8 -0.1
GYA                               SS       SS       19 48 23.6 +4.9
GYA                               pmax     pmax
      comp=Z,60nm,1.4s
GYA                               pmax     pmax
      comp=Z,310nm,5.5s
GYA                               LR       LR
      comp=Z,660nm,17.7s
GYA                               LR       LR
      comp=Z,570nm,18.0s
GYA                               LR       LR
      comp=Z,810nm,19.6s
SCO   Scoresbysund      76.81 344 PFAKE             19 33 50.0  +13
SCO                               LR       LR
      comp=Z,900nm,20.0s
SCO   Scoresbysund      76.81 344⇓iP       P        19 33 38.4 +1.1
SCO                               MLR      MLR
      comp=Z,1µm,15.0s
SCO   Scoresbysund      76.81 344⇓iP       P        19 33 38.4 +1.1
      comp=Z,1µm,15.0s
ESAR  Angra dos Reis    77.13 246 eP       P        19 33 41.2 +1.2
BSCB  Bom Sucesso       77.19 248 eP       P        19 33 41.7 +1.1
CISI  Cisompet, Garu    77.25  98 PFAKE             19 33 50.0 +9.0
CISI                              LR       LR
      comp=Z,2µm,21.0s
VNA3  Neumayer Olymp    77.28 192 P        P        19 33 41.5 +1.6
DLV   T  Lat            77.55  78 PFAKE             19 33 50.0 +7.2
DLV                               LR       LR
      comp=Z,2µm,20.0s
ZAK   Zakamensk         77.63  39 eP       P        19 33 41.5 -1.0
ZAK                               pmax     pmax
      comp=Z,23nm,1.7s
KBS   Kingsbay          77.93 356 eP       P        19 33 44.5 +1.1
      comp=Z,181nm,1.9s
KBS                               LR       LR
      comp=Z,1µm,22.0s
KBS   Kingsbay          77.93 356ceP       P        19 33 43.6 +0.2
KBS                               pmax     pmax
      comp=Z,186nm,1.7s
TLY   Talaya            78.14  37 PFAKE             19 34 00.0  +15
TLY                               LR       LR
      comp=Z,3µm,19.0s
TLY   Talaya            78.14  37d iP      P        19 33 45.7 +0.5
TLY                               e                 19 33 56.3
TLY                               ePPP     PPP      19 38 37.3
TLY                               eS       S        19 43 36.1 -3.0
TLY                               e                 19 44 20.1
TLY                               eSS      SS       19 48 43.4 +2.5
TLY                               pmax     pmax
      comp=Z,97nm,1.5s
TLY                               MLR      MLR
      comp=Z,6µm,19.0s
PARB  Paraibuna         78.24 246 eP       P        19 33 48.4 +2.0
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HOPE  Hope Point        78.25 214 eP       P        19 33 46.5 +0.9
      comp=Z,248nm,1.5s
HOPE                              LR       LR
      comp=Z,7µm,18.0s
PMNB  Patos De Minas    78.49 251 eP       P        19 33 49.3 +1.5
IRK   Irkutsk           78.64  37 eP       P        19 33 47.6 -0.3
IRK                               pmax     pmax
      comp=Z,165nm,3.4s
SMTB  Santa Maria do    78.86 261 eP       P        19 33 51.5 +1.6
QIZ   Qiongzhong        79.05  71 PFAKE             19 34 00.0 +9.2
QIZ                               LR       LR
      comp=Z,800nm,19.0s
QIZ   Qiongzhong        79.05  71 P        P        19 33 51.0 +0.2
QIZ                               S        S        19 43 50.5 +0.5
QIZ                               SS       SS       19 48 57.7 +1.7
QIZ                               pmax     pmax
      comp=Z,17nm,1.5s
QIZ                               pmax     pmax
      comp=Z,520nm,5.0s
QIZ                               LR       LR
      comp=Z,350nm,15.8s
QIZ                               LR       LR
      comp=Z,620nm,21.4s
QIZ                               LR       LR
      comp=Z,650nm,17.4s
SONA0 Songino Array     79.14  42 eP       P        19 33 51.9 +1.0
SONM  Songino Array     79.14  42 P        P        19 33 51.9 +1.0
      comp=Z,9.9nm,0.9s,baz=249,slow=4.9,SNR=46
SONM                              LR       LR       20 13 04.4
      comp=Z,3µm,19.7s,baz=270,slow=39
XAN   Xi'an             79.22  56 eP       P        19 33 51.3 -0.2
      comp=Z,69nm,1.5s
XAN                               LR       LR
      comp=Z,1µm,20.0s
XAN   Xi'an             79.22  56 P        P        19 33 51.6 +0.1
XAN                               pP       PcP      19 34 01.9 +2.1
XAN                               PP       PP       19 36 54.6 +3.4
XAN                               S        S        19 43 50.2 -1.1
XAN                               pmax     pmax
      comp=Z,25nm,1.5s
XAN                               pmax     pmax
      comp=Z,460nm,6.0s
XAN                               LR       LR
      comp=Z,970nm,21.4s
XAN                               LR       LR
      comp=Z,680nm,23.0s
XAN                               LR       LR
      comp=Z,1µm,16.0s
XAN   Xi'an             79.22  56 eP       P        19 33 51.3 -0.2
XAN                               pmax     pmax
      comp=Z,69nm,1.5s
XAN                               MLR      MLR
      comp=Z,1µm,20.0s
ENH   Enshi             79.37  60 eP       P        19 33 52.3 -0.1
      comp=Z,99nm,1.3s
ENH                               LR       LR
      comp=Z,1µm,20.0s
KSM   Kuching           79.39  89 PFAKE             19 34 00.0 +7.2
KSM                               LR       LR
      comp=Z,1µm,20.0s
ULN   Ulaanbaatar       79.58  42 eP       P        19 33 54.0 +0.7
      comp=Z,48nm,1.4s
ULN                               LR       LR
      comp=Z,3µm,20.0s
ULN   Ulaanbaatar       79.58  42ceP       P        19 33 54.2 +0.9
ULN                               pmax     pmax
      comp=Z,61nm,2.5s
BDFB  Brasilia          79.74 254 P        P        19 33 56.0 +1.2
      comp=Z,31nm,0.9s,baz=70,slow=7.1,SNR=26
BDFB                              LR       LR       20 06 02.2
      comp=Z,3µm,19.0s,baz=85,slow=33
BDFB  Brasilia          79.74 254 eP       P        19 33 56.0 +1.2
BDFB                              eP       P        19 33 56.0 +1.2
BDFB                              LR       LR
      comp=Z,4µm,19.0s
BDFB  Brasilia          79.74 254 P        P        19 33 56.0 +1.2
PEXB  Peixe             79.76 257 eP       P        19 33 56.5 +1.7
ANGG  Ammassalik, Gr    79.84 337 eP       P        19 33 55.4 +1.2
      comp=Z,145nm,1.4s
ANGG                              LR       LR
      comp=Z,3µm,19.0s
DAG   Danmarks Havn     79.89 350⇓iP       P        19 33 54.3 +0.1
DAG                               pmax     pmax
      comp=Z,240nm,1.4s
DAG                               MLR      MLR
      comp=Z,1µm,20.0s
DAG   Danmarks Havn     79.89 350⇓iP       P        19 33 54.3 +0.1
      comp=Z,103nm,1.4s
      comp=Z,1µm,20.0s
RCLB  Rio Claro- Sao    79.89 247 eP       P        19 33 56.9 +1.5
SPB   Sao Paulo         79.92 246 eP       P        19 33 56.9 +1.4
      comp=Z,156nm,1.3s
SPB                               LR       LR
      comp=Z,4µm,19.0s
SPB   Sao Paulo         79.92 246 eP       P        19 33 57.6 +2.1
UGM   Wanagama          79.95  98 PFAKE             19 34 10.0  +14
UGM                               LR       LR
      comp=Z,3µm,21.0s
BB19B Bebedouro         80.68 248 eP       P        19 34 01.2 +1.6
BTO   Baotou            80.74  49 eP       P        19 33 59.1 -0.6
SBUM  Sibu              81.28  88 eP       P        19 34 04.1 +1.2
      comp=Z,66nm,1.9s
SBUM                              LR       LR
      comp=Z,600nm,20.0s
SBUM  Sibu              81.28  88 P        P        19 34 05.0 +2.1
FRTB  Fartura           81.85 246 eP       P        19 34 07.6 +1.7
NRS   Narsarsuaq        82.06 332 PFAKE             19 34 20.0  +14
NRS                               LR       LR
      comp=Z,4µm,18.0s
NRS   Narsarsuaq        82.06 332 eP       P        19 34 06.7 +0.7
NRS                               MLR      MLR
      comp=Z,4µm,16.0s
NRS   Narsarsuaq        82.06 332 i P      P        19 34 06.7 +0.7
      comp=Z,4µm,16.0s
ITRB  Iturama           82.28 250 eP       P        19 34 09.5 +1.4
SUMG  Summit            82.42 343 eP       P        19 34 08.8 +0.5
      comp=Z,286nm,1.8s
SUMG                              LR       LR
      comp=Z,2µm,20.0s
SUMG  Summit            82.42 343⇓iP       P        19 34 08.9 +0.6
SUMG                              pmax     pmax
      comp=Z,680nm,1.8s
SUMG                              MLR      MLR
      comp=Z,6µm,16.0s
SUMG  Summit            82.42 343⇓iP       P        19 34 08.9 +0.6
      comp=Z,675nm,1.8s
      comp=Z,6µm,16.0s
GZH   Guangzhou         82.45  67 P        P        19 34 11.2 +2.3
GZH                               S        S        19 44 32.2 +6.9
GZH                               pmax     pmax
      comp=Z,730nm,6.4s
GZH                               LR       LR
      comp=Z,940nm,18.8s
GZH                               LR       LR
      comp=Z,610nm,18.2s
HKPS  Hong Kong Po S    83.17  68 PFAKE             19 34 20.0 +7.3
HKPS                              LR       LR
      comp=Z,700nm,19.0s
IVI   Ivigtut           83.38 331 PFAKE             19 34 20.0 +7.1
IVI                               LR       LR
      comp=Z,3µm,18.0s
JAGI  Jajag, Banyuwa    83.56  99 PFAKE             19 34 30.0  +15
JAGI                              LR       LR
      comp=Z,2µm,20.0s
WHN   Wuhan             83.58  60 ⇓P       P        19 34 15.5 +0.9
WHN                               S        S        19 44 37.7 +1.1
WHN                               pmax     pmax
      comp=Z,95nm,1.2s
WHN                               pmax     pmax
      comp=Z,900nm,3.4s
WHN                               LR       LR
      comp=Z,2µm,22.1s
WHN                               LR       LR
      comp=Z,3µm,21.3s
WHN                               LR       LR
      comp=Z,3µm,17.7s
PTGB  Pitanga           84.24 245 eP       P        19 34 19.7 +1.5
GIRL  Giralia           84.45 113 PFAKE             19 34 30.0  +11
GIRL                              LR       LR
      comp=Z,3µm,18.0s
GIRL  Giralia           84.45 113 P        P        19 34 16.5 -2.7
      baz=84,SNR=3.1
TRCB  Terra Rica        84.62 247 eP       P        19 34 21.5 +1.3
BOD   Bodaibo           85.02  32 eP       P        19 34 20.9 -0.5
BOD                               pmax     pmax
      comp=Z,154nm,1.7s
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KKM   Kota Kinabalu     85.19  84 eP       P        19 34 23.3  0.0
      comp=Z,46nm,1.3s
KKM                               LR       LR
      comp=Z,900nm,19.0s
SFJD  Kangerlussuaq     85.26 337 eP       P        19 34 22.7 +0.4
      comp=Z,206nm,1.4s
SFJD                              LR       LR
      comp=Z,2µm,19.0s
SFJD  Kangerlussuaq     85.26 337 eP       P        19 34 22.7 +0.4
SFJD                              pmax     pmax
      comp=Z,206nm,1.4s
SFJD                              MLR      MLR
      comp=Z,2µm,19.0s
SFJD  Kangerlussuaq     85.26 337 i P      P        19 34 22.9 +0.6
      comp=Z,189nm,1.5s
      comp=Z,2µm,15.0s
BJT   Baijiatuau        85.39  50 PFAKE             19 34 40.0  +16
BJT                               LR       LR
      comp=Z,1µm,19.0s
BJI   Beijing           85.39  50 P        P        19 34 24.5 +0.9
BJI                               S        S        19 44 58.1 +3.8
BJI                               pmax     pmax
      comp=Z,9.0nm,1.3s
BJI                               LR       LR
      comp=Z,480nm,21.4s
BJI                               LR       LR
      comp=Z,450nm,18.9s
BJI                               LR       LR
      comp=Z,530nm,27.8s
ILULI Ilulissat         85.71 339 eP       P        19 34 25.2 +0.7
      comp=Z,217nm,1.7s
ILULI                             LR       LR
      comp=Z,3µm,20.0s
ILULI Ilulissat         85.71 339 eP       P        19 34 25.0 +0.4
ILULI                             MLR      MLR
      comp=Z,2µm,19.0s
ILULI Ilulissat         85.71 339 i P      P        19 34 25.0 +0.4
      comp=Z,3µm,19.0s
CPSB  Cacapava Do Su    85.88 240 eP       P        19 34 27.4 +1.1
TIA   Tai'an            86.05  54 P        P        19 34 27.5 +0.5
TIA                               pmax     pmax
      comp=Z,30nm,1.1s
PLTB  Pedras Altas      86.12 238 eP       P        19 34 28.2 +0.8
MORW  Morawa            86.50 119 PFAKE             19 34 40.0  +11
MORW                              LR       LR
      comp=Z,2µm,20.0s
MORW  Morawa            86.50 119 P        P        19 34 28.9 -0.5
      baz=86,SNR=5.1
CLDB  Colider           87.03 259 eP       P        19 34 33.9 +1.6
KNMB  Chin-men Tao      87.09  66 PFAKE             19 34 40.0 +7.7
KNMB                              LR       LR
      comp=Z,1µm,19.0s
OGAUY Aigu              87.23 236 eP       P        19 34 34.3 +1.5
CASY  Casey             87.24 157 eP       P        19 34 33.6 +1.5
      comp=Z,162nm,1.9s
CASY                              LR       LR
      comp=Z,4µm,19.0s
QZH   Quanzhou          87.27  65⇓iP       P        19 34 32.9 -0.3
QZH                               S        SKSac    19 45 04.4 +3.7
QZH                               pmax     pmax
      comp=Z,410nm,6.6s
QZH                               LR       LR
      comp=Z,900nm,17.5s
QZH                               LR       LR
      comp=Z,670nm,18.8s
QZH                               LR       LR
      comp=Z,750nm,18.2s
AQDB  Aquidauana        87.34 250 eP       P        19 34 35.8 +2.2
NJ2   Nanjing           87.46  58 eP       P        19 34 34.7 +0.8
NJ2                               S        S        19 45 17.6 +2.9
NJ2                               pmax     pmax
      comp=Z,13nm,0.5s
NJ2                               pmax     pmax
      comp=Z,390nm,3.5s
NJ2                               LR       LR
      comp=Z,1µm,18.0s
NJ2                               LR       LR
      comp=Z,1µm,19.4s
NJ2                               LR       LR
      comp=Z,1µm,17.1s
KULLO Kullorsuaq        88.01 344 eP       P        19 34 33.0 -2.7
KULLO                             MLR      MLR
      comp=Z,2µm,17.0s
KULLO Kullorsuaq        88.01 344 i P      P        19 34 33.0 -2.7
      comp=Z,2µm,17.0s
HIA   Hailar            88.09  41 PFAKE             19 34 50.0  +13
HIA                               LR       LR
      comp=Z,3µm,19.0s
KAPI  Kappang           89.00  95 eP       P        19 34 41.8 +0.1
      comp=Z,96nm,1.4s
KAPI                              LR       LR
      comp=Z,2µm,22.0s
KAPI  Kappang           89.00  95 eP       P        19 34 41.8 +0.1
KAPI                              pmax     pmax
      comp=Z,96nm,1.4s
KAPI                              MLR      MLR
      comp=Z,2µm,22.0s
CPUP  Villa Florida     89.08 244 P        P        19 34 42.0 +0.3
      comp=Z,36nm,1.1s,baz=88,slow=5.5,SNR=18
CPUP                              LR       LR       20 10 09.0
      comp=Z,4µm,19.8s,baz=90,slow=33
CPUP  Villa Florida     89.08 244 eP       P        19 34 42.9 +1.1
TPUB  Ta-pu             89.16  67 PFAKE             19 34 50.0 +7.8
TPUB                              LR       LR
      comp=Z,600nm,20.0s
SSLB  Suanglung         89.44  66 PFAKE             19 34 50.0 +6.4
SSLB                              LR       LR
      comp=Z,800nm,19.0s
SSE   Sheshan           89.46  59 PFAKE             19 34 50.0 +6.5
SSE                               LR       LR
      comp=Z,900nm,19.0s
SSE   Sheshan           89.46  59 P        P        19 34 44.0 +0.5
SSE                               S        S        19 45 34.9 +1.1
SSE                               pmax     pmax
      comp=Z,12nm,0.7s
SSE                               pmax     pmax
      comp=Z,210nm,8.2s
SSE                               LR       LR
      comp=Z,360nm,19.8s
SSE                               LR       LR
      comp=Z,390nm,22.7s
MBWA  Marble Bar        89.47 111 PFAKE             19 35 00.0  +16
MBWA                              LR       LR
      comp=Z,1µm,18.0s
PSAD3 Pilbara Seismi    89.53 112 PFAKE             19 35 00.0  +16
PSAD3                             LR       LR
      comp=Z,2µm,21.0s
PSAC1 Pilbara Seismi    89.56 111 PFAKE             19 35 00.0  +16
PSAC1                             LR       LR
      comp=Z,2µm,19.0s
TWG   Pinlang           89.58  67 PFAKE             19 35 00.0  +16
TWG                               LR       LR
      comp=Z,4µm,21.0s
PSAC3 Pilbara Seismi    89.58 112 PFAKE             19 35 00.0  +16
PSAC3                             LR       LR
      comp=Z,2µm,21.0s
PSAA2 Pilbara Seismi    89.59 111 PFAKE             19 35 00.0  +16
PSAA2                             LR       LR
      comp=Z,2µm,19.0s
PSAB3 Pilbara Seismi    89.60 111 PFAKE             19 35 00.0  +16
PSAB3                             LR       LR
      comp=Z,2µm,19.0s
PSAB2 Pilbara Seismi    89.61 111 PFAKE             19 35 00.0  +16
PSAB2                             LR       LR
      comp=Z,2µm,19.0s
DL2   Dalian            89.61  51⇓iP       P        19 34 42.8 -1.2
DL2                               SKS      SKSac    19 45 06.7 -7.5
DL2                               S        S        19 45 33.8 -1.1
DL2                               pmax     pmax
      comp=Z,23nm,1.5s
DL2                               pmax     pmax
      comp=Z,340nm,10.5s
DL2                               LR       LR
      comp=Z,770nm,20.7s
DL2                               LR       LR
      comp=Z,620nm,19.0s
DL2                               LR       LR
      comp=Z,1µm,18.5s
YULB  Yu-li             89.77  67 PFAKE             19 35 00.0  +15
YULB                              LR       LR
      comp=Z,700nm,20.0s
YHNB  Yeheng            89.80  65 PFAKE             19 35 00.0  +15
YHNB                              LR       LR
      comp=Z,800nm,19.0s
TATO  Taipei            89.90  65 PFAKE             19 35 00.0  +14
TATO                              LR       LR
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      comp=Z,900nm,21.0s
NACB  Ninganchiao       90.02  66  PFAKE              19 35 00.0  +14
NACB                               LR        LR
      comp=Z,1µm,21.0s
EFI   East Falkland     90.55 219  PFAKE              19 35 00.0  +12
EFI                                LR        LR
      comp=Z,5µm,19.0s
GBN   Guysborough       90.60 315 eP         P        19 34 49.7 +1.3
      comp=Z,59nm,1.4s
GBN                                LR        LR
      comp=Z,3µm,20.0s
TULEG Thule             90.77 347  PFAKE              19 35 00.0  +11
TULEG                              LR        LR
      comp=Z,2µm,18.0s
PTGA  Pitinga           90.88 269 eP         P        19 34 51.3 +0.9
      comp=Z,183nm,1.4s
PTGA                               LR        LR
      comp=Z,3µm,20.0s
SNY   Shenyang          90.98  48 ⇑P         P        19 34 49.8 -0.5
SNY                                S         S        19 45 47.0 -0.4
SNY                                pmax      pmax
      comp=Z,31nm,2.2s
SNY                                pmax      pmax
      comp=Z,470nm,3.5s
SNY                                LR        LR
      comp=Z,1µm,24.9s
SNY                                LR        LR
      comp=Z,560nm,16.5s
SNY                                LR        LR
      comp=Z,2µm,21.0s
TIXI  Tiksi             91.06  18 eP         P        19 34 49.5 -0.5
      comp=Z,32nm,1.3s
TIXI                               LR        LR
      comp=Z,2µm,19.0s
TIXI  Tiksi             91.06  18d iP        P        19 34 49.5 -0.5
TIXI                               pmax      pmax
      comp=Z,18nm,1.2s
YOJ   Yonaguni jima     91.30  66  PFAKE              19 35 00.0 +7.9
YOJ                                LR        LR
      comp=Z,700nm,19.0s
MMRI  Maumere           91.56  99  PFAKE              19 35 00.0 +6.4
MMRI                               LR        LR
      comp=Z,800nm,20.0s
QSPA  South Pole Qui    91.57 180 eP         P        19 34 53.5 +0.9
      comp=Z,63nm,1.3s
QSPA                               LR        LR
      comp=Z,2µm,19.0s
FDF   Fort de France    91.58 285  PFAKE              19 35 10.0  +16
FDF                                LR        LR
      comp=Z,1µm,20.0s
LUWI  Luwuk             91.91  91  PFAKE              19 35 10.0  +15
LUWI                               LR        LR
      comp=Z,1µm,21.0s
ANWB  Willy Bob         92.08 288  PFAKE              19 35 10.0  +14
ANWB                               LR        LR
      comp=Z,2µm,19.0s
HAL   Halifax           92.12 315 eP         P        19 34 55.5  0.0
      comp=Z,39nm,1.2s
HAL                                LR        LR
      comp=Z,3µm,22.0s
HAL   Halifax           92.12 315 eP         P        19 34 55.5  0.0
HAL                                pmax      pmax
      comp=Z,39nm,1.2s
HAL                                MLR       MLR
      comp=Z,3µm,22.0s
GRGR  Grenville         92.17 282  PFAKE              19 35 10.0  +14
GRGR                               LR        LR
      comp=Z,900nm,18.0s
CN2   Changchun         92.23  46 eP         P        19 34 55.6 -0.5
CN2                               ePP        PP       19 38 38.9 +2.5
CN2                                SKS       SKSac    19 45 26.3 -2.7
CN2                               eS         S        19 45 54.5 -4.2
CN2                                pmax      pmax
      comp=Z,10.0nm,0.9s
CN2                                pmax      pmax
      comp=Z,200nm,8.0s
CN2                                LR        LR
      comp=Z,1µm,21.0s
CN2                                LR        LR
      comp=Z,1µm,21.0s
CN2                                LR        LR
      comp=Z,1µm,22.0s
ZEA   Zeya              92.53  36 eP         P        19 34 57.6 +0.4
ZEA                                pmax      pmax
      comp=Z,64nm,1.8s
ZEA                                pmax      pmax
      comp=Z,300nm,11.0s
ZEA                                pmax      pmax
      comp=Z,400nm,8.0s
YAK   Yakutsk           92.77  28 eP         P        19 34 57.7 -0.4
      comp=Z,50nm,1.0s
YAK                                LR        LR
      comp=Z,2µm,18.0s
YAK   Yakutsk           92.77  28 eP         P        19 34 57.7 -0.4
YAK                               e*PP       sP       19 35 05.1 -0.4
YAK                               ePPP       PPP      19 38 41.8
YAK                               eS         SKSac    19 45 28.4 -2.8
LMN   Caledonia Moun    92.87 316 eP         P        19 34 59.0  0.0
      comp=Z,17nm,1.0s
LMN                                LR        LR
      comp=Z,2µm,20.0s
SKI   Saint Kitts       93.01 287  PFAKE              19 35 10.0  +10
SKI                                LR        LR
      comp=Z,3µm,20.0s
SCHQ  Schefferville     93.20 325  P         P        19 34 59.6 -0.7
      comp=Z,12nm,0.9s,baz=63,slow=3.1,SNR=5.7
SCHQ                               LR        LR       20 15 51.2
      comp=Z,2µm,19.6s,baz=97,slow=35
SCHQ  Schefferville     93.20 325 eP         P        19 35 00.4 +0.1
      comp=Z,35nm,1.3s
SCHQ                               LR        LR
      comp=Z,2µm,20.0s
TRQA  Tornquist         93.21 232 eP         P        19 35 02.2 +1.4
      comp=Z,118nm,1.8s
TRQA  Tornquist         93.21 232 eP         P        19 35 02.2 +1.4
TRQA                               pmax      pmax
      comp=Z,118nm,1.8s
TRQA  Tornquist         93.21 232 eP         P        19 35 03.2 +2.5
SEUS  St. Eustatius     93.23 288  PFAKE              19 35 10.0 +8.8
SEUS                               LR        LR
      comp=Z,2µm,20.0s
SMRT  St. Maarten       93.30 288  PFAKE              19 35 10.0 +8.5
SMRT                               LR        LR
      comp=Z,2µm,21.0s
SABA  Saba              93.47 288  PFAKE              19 35 10.0 +7.6
SABA                               LR        LR
      comp=Z,2µm,20.0s
PMSA  Palmer Station    93.51 205  LR        LR       20 12 19.0
      comp=Z,2µm,21.2s,baz=92,slow=32
SOEI  Soe               93.59 100 eP         P        19 35 03.6 +0.5
      comp=Z,267nm,1.6s
SOEI                               LR        LR
      comp=Z,4µm,22.0s
BATG  Bathurst New B    93.59 317 eP         P        19 35 03.4 +1.1
      comp=Z,34nm,1.3s
BATG                               LR        LR
      comp=Z,2µm,18.0s
BBSR  BB Station        93.90 302  PFAKE              19 35 20.0  +16
BBSR                               LR        LR
      comp=Z,4µm,18.0s
GGN   Saint George      94.37 315  PFAKE              19 35 20.0  +14
GGN                                LR        LR
      comp=Z,2µm,21.0s
DAV   Davao City (W)    94.46  83  PFAKE              19 35 20.0  +13
DAV                                LR        LR
      comp=Z,800nm,21.0s
KS15  Wonju Array Si    94.62  52 eP         P        19 35 06.7 -0.5
      comp=Z,58nm,1.6s
KSRS  Korea Array       94.66  52  P         P        19 35 06.7 -0.7
      comp=Z,4.4nm,0.9s,baz=273,slow=4.3,SNR=14
KSRS                               LR        LR       20 19 46.7
      comp=Z,465nm,21.9s,baz=284,slow=37
EMMW  East Machias      94.86 315  PFAKE              19 35 20.0  +12
EMMW                               LR        LR
      comp=Z,3µm,20.0s
PQI   Presque Isle      95.00 317  PFAKE              19 35 20.0  +11
PQI                                LR        LR
      comp=Z,3µm,18.0s
MDJ   Mudanjiang        95.12  45  PFAKE              19 35 20.0  +11
MDJ                                LR        LR
      comp=Z,2µm,18.0s
JOW   Kunigami          95.90  63  PFAKE              19 35 20.0 +6.7
JOW                                LR        LR
      comp=Z,600nm,19.0s
KLR   Kul'dur           95.92  40 i P        P        19 35 11.9 -1.0
KLR                                pmax      pmax
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      comp=Z,7.0nm,1.2s
PKME  Peaks-Kenny Pk    96.07 316  PFAKE              19 35 30.0  +16
PKME                               LR        LR
      comp=Z,2µm,21.0s
SJG   San Juan          96.21 288  PFAKE              19 35 30.0  +15
SJG                                LR        LR
      comp=Z,2µm,21.0s
WVL   Waterville        96.43 315  PFAKE              19 35 30.0  +15
WVL                                LR        LR
      comp=Z,3µm,20.0s
USA0B Ussuriysk Arra    96.88  45  PFAKE              19 35 30.0  +13
USA0B                              LR        LR
      comp=Z,2µm,18.0s
USRK  Ussuriysk Ar.     96.88  45  LR        LR       20 25 00.3
      comp=Z,2µm,18.2s,baz=282,slow=39
FORT  Forrest           96.95 121  PFAKE              19 35 30.0  +12
FORT                               LR        LR
      comp=Z,2µm,20.0s
WRKA  Warakurna         97.37 115  P         P        19 35 18.1 -1.9
      baz=97,SNR=4.6
RES   Resolute Bay      97.44 347  PFAKE              19 35 30.0  +11
RES                                LR        LR
      comp=Z,1µm,20.0s
WES   Weston            97.97 313  PFAKE              19 35 30.0 +7.7
WES                                LR        LR
      comp=Z,2µm,20.0s
KNRA  Kununurra         98.00 106  P         P        19 35 15.3 -7.7
      baz=98,SNR=5.8
FFD   Franklin Falls    98.03 314  PFAKE              19 35 30.0 +7.4
FFD                                LR        LR
      comp=Z,3µm,20.0s
LBNH  Lisbon            98.09 315  PFAKE              19 35 30.0 +7.1
LBNH                               LR        LR
      comp=Z,2µm,22.0s
HRV   Adam Dziewonsk    98.12 313  PFAKE              19 35 30.0 +7.0
HRV                                LR        LR
      comp=Z,2µm,19.0s
BRYW  Bryant College    98.20 313  PFAKE              19 35 30.0 +6.6
BRYW                               LR        LR
      comp=Z,2µm,20.0s
HNH   Hanover           98.44 314  PFAKE              19 35 40.0  +16
HNH                                LR        LR
      comp=Z,2µm,18.0s
CFA   Coronel Fontan    98.59 238  LR        LR       20 15 53.0
      comp=Z,974nm,20.7s,baz=83,slow=33
VT1   Waterbury         98.66 315  PFAKE              19 35 40.0  +15
VT1                                LR        LR
      comp=Z,2µm,21.0s
QUA2  Belchertown       98.74 313  PFAKE              19 35 40.0  +14
QUA2                               LR        LR
      comp=Z,2µm,20.0s
LPAZ  La Paz            99.09 254  P         Pdif     19 35 27.5 -1.1
      comp=Z,4.0nm,1.1s,baz=53,slow=4.7,SNR=11
LPAZ                               LR        LR       20 19 15.7
      comp=Z,1µm,19.4s,baz=101,slow=35
LPAZ  La Paz            99.09 254 eP         Pdif     19 35 28.2 -0.4
      comp=Z,13nm,1.4s
LPAZ  La Paz            99.09 254 eP         Pdif     19 35 28.3 -0.4
FRNY  Flat Rock         99.14 316  PFAKE              19 35 40.0  +12
FRNY                               LR        LR
      comp=Z,3µm,22.0s
ACCN  Adirondack Com    99.48 314  PFAKE              19 35 40.0  +11
ACCN                               LR        LR
      comp=Z,3µm,19.0s
TRY   Troy              99.61 314  PFAKE              19 35 40.0  +10
TRY                                LR        LR
      comp=Z,1µm,20.0s
KSCT  Kent School, K    99.67 313  PFAKE              19 35 40.0  +10
KSCT                               LR        LR
      comp=Z,2µm,19.0s
PLCA  Paso Flores       99.68 229  LR        LR       20 16 20.9
      comp=Z,1µm,18.2s,baz=127,slow=33
PLCA  Paso Flores       99.68 229 eP         Pdif     19 35 30.7 +0.5
VNDA  Vanda             99.72 170  LR        LR       20 20 01.0
      comp=Z,3µm,18.8s,baz=226,slow=35
SDD   Santo Domingo     99.75 289  PFAKE              19 35 40.0 +9.2
SDD                                LR        LR
      comp=Z,3µm,21.0s
NCB   Newcomb           99.76 315  PFAKE              19 35 40.0  +10
NCB                                LR        LR
      comp=Z,1µm,19.0s
LONY  Lake Ozonia       99.88 316  PFAKE              19 35 40.0 +9.1
LONY                               LR        LR
      comp=Z,2µm,22.0s
GO01  Chusmiza         100.02 250  PFAKE              19 35 40.0 +7.4
GO01                               LR        LR
      comp=Z,6µm,20.0s
PAL   Palisades        100.12 312  PFAKE              19 35 40.0 +8.1
PAL                                LR        LR
      comp=Z,2µm,20.0s
SBA   Scott Base       100.27 171  PFAKE              19 35 40.0 +8.2
SBA                                LR        LR
      comp=Z,4µm,20.0s
MTN   Manton Dam       100.33 103  PFAKE              19 35 40.0 +6.6
MTN                                LR        LR
      comp=Z,1µm,20.0s
PB11  IPOC Station P   100.45 250  PFAKE              19 35 50.0  +16
PB11                               LR        LR
      comp=Z,3µm,21.0s
GRTK  Grand Turk       100.61 292  PFAKE              19 35 50.0  +15
GRTK                               LR        LR
      comp=Z,2µm,20.0s
ODNJ  Ogdensburg       100.62 312  PFAKE              19 35 50.0  +16
ODNJ                               LR        LR
      comp=Z,2µm,18.0s
BRNJ  Basking Ridge    100.67 312  PFAKE              19 35 50.0  +16
BRNJ                               LR        LR
      comp=Z,2µm,22.0s
SDDR  Presa de Saban   101.00 290  PFAKE              19 35 50.0  +14
SDDR                               LR        LR
      comp=Z,1µm,19.0s
VLDQ  Val d'Or         101.00 320  PFAKE              19 35 50.0  +14
VLDQ                               LR        LR
      comp=Z,1µm,20.0s
SDV   Santo Domingo    101.14 279  PFAKE              19 35 50.0  +13
SDV                                LR        LR
      comp=Z,800nm,20.0s
LUPA  Lehigh Univers   101.29 312  PFAKE              19 35 50.0  +13
LUPA                               LR        LR
      comp=Z,100nm,19.0s
KSPA  Keystone Colle   101.38 313  PFAKE              19 35 50.0  +12
KSPA                               LR        LR
      comp=Z,2µm,21.0s
BINY  Binghamton       101.40 314  PFAKE              19 35 50.0  +12
BINY                               LR        LR
      comp=Z,2µm,20.0s
D53A  Lac Vacive, Po   101.43 319  PFAKE              19 35 50.0  +12
D53A                               LR        LR
      comp=Z,2µm,18.0s
PSUB  Penn St. - Bra   101.48 311  PFAKE              19 35 50.0  +12
PSUB                               LR        LR
      comp=Z,1µm,20.0s
N59A  State Game Lan   101.52 312  PFAKE              19 35 50.0  +12
N59A                               LR        LR
      comp=Z,2µm,22.0s
PLVO  Plevna           101.52 317  PFAKE              19 35 50.0  +12
PLVO                               LR        LR
      comp=Z,3µm,22.0s
PECO  Prince Edward    101.72 315  PFAKE              19 35 50.0  +11
PECO                               LR        LR
      comp=Z,2µm,18.0s
DELO  Deloro Mine      102.02 316  PFAKE              19 35 50.0  +10
DELO                               LR        LR
      comp=Z,2µm,19.0s
S61A  Accomac          102.11 309  PFAKE              19 35 50.0 +9.1
S61A                               LR        LR
      comp=Z,3µm,20.0s
INU   Inuyama          102.21  53  PFAKE              19 35 50.0 +8.6
INU                                LR        LR
      comp=Z,800nm,21.0s
PAGS  Pennsylvania G   102.37 312  PFAKE              19 35 50.0 +8.0
PAGS                               LR        LR
      comp=Z,2µm,22.0s
J55A  Hilton           102.47 315  PFAKE              19 35 50.0 +7.7
J55A                               LR        LR
      comp=Z,2µm,20.0s
ASAR  Alice Springs    102.54 114  P         Pdif     19 35 42.2 -1.0
      comp=Z,1.4nm,1.0s,baz=272,slow=4.7,SNR=5.7
ASAR                               PKiKP     PKiKP    19 40 04.4 -0.2
      comp=Z,2.9nm,1.2s,baz=222,slow=1.2,SNR=3.4
AS31  Alice Springs    102.54 114 ePdif      Pdif     19 35 42.2 -1.0
AS31                              ePKiKP     PKiKP    19 40 04.4 -0.2
SDMD  Soldier's Deli   102.64 311  PFAKE              19 35 50.0 +6.8
SDMD                               LR        LR
      comp=Z,800nm,20.0s
MMNY  Mt. Morris Dam   102.66 314  PFAKE              19 35 50.0 +6.8
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MMNY                               LR        LR
      comp=Z,2µm,20.0s
V62A  Hyde County Ai   102.75 307  PFAKE              19 36 00.0  +16
V62A                               LR        LR
      comp=Z,3µm,20.0s
MJB9  Matsu-Tunnel     102.92  52  PFAKE              19 36 00.0  +15
MJB9                               LR        LR
      comp=Z,900nm,19.0s
MAJO  Matsushiro       102.93  52  PFAKE              19 36 00.0  +15
MAJO                               LR        LR
      comp=Z,900nm,19.0s
MEDO  Medina           102.94 315  PFAKE              19 36 00.0  +16
MEDO                               LR        LR
      comp=Z,2µm,19.0s
U61A  Possum Corner    102.98 308  PFAKE              19 36 00.0  +15
U61A                               LR        LR
      comp=Z,3µm,18.0s
SADO  Sadowa           103.01 317  PFAKE              19 36 00.0  +15
SADO                               LR        LR
      comp=Z,2µm,20.0s
J54A  Appleton         103.05 315  PFAKE              19 36 00.0  +15
J54A                               LR        LR
      comp=Z,2µm,19.0s
T60A  Surry            103.05 309  PFAKE              19 36 00.0  +15
T60A                               LR        LR
      comp=Z,3µm,19.0s
SSPA  Standing Stone   103.15 312  PFAKE              19 36 00.0  +15
SSPA                               LR        LR
      comp=Z,2µm,22.0s
WRAB  Tennant Creek    103.18 110  PFAKE              19 36 00.0  +14
WRAB                               LR        LR
      comp=Z,2µm,18.0s
V61A  Roper            103.20 307  PFAKE              19 36 00.0  +14
V61A                               LR        LR
      comp=Z,2µm,21.0s
CBN   Corbin Frederi   103.31 310  PFAKE              19 36 00.0  +14
CBN                                LR        LR
      comp=Z,2µm,20.0s
MA2   Magadan          103.32  27  PFAKE              19 36 00.0  +14
MA2                                LR        LR
      comp=Z,2µm,19.0s
YSS   Yuzh-Sakhalins   103.62  41  PFAKE              19 36 00.0  +13
YSS                                LR        LR
      comp=Z,2µm,19.0s
YSS   Yuzh-Sakhalins   103.62  41 eP         Pdif     19 35 50.9 +3.5
YSS                               e                   19 40 06.4
YSS                               e                   19 46 29.4
YSS                               eS         Sdif     19 47 34.4 -1.3
YSS                                pmax      pmax
      comp=Z,100nm,8.0s
T59A  Double "B" Far   103.72 309  PFAKE              19 36 00.0  +12
T59A                               LR        LR
      comp=Z,2µm,19.0s
O56A  Blue Knob Stat   103.74 312  PFAKE              19 36 00.0  +12
O56A                               LR        LR
      comp=Z,2µm,22.0s
V60A  Jim Taylor Roa   103.75 307  PFAKE              19 36 00.0  +12
V60A                               LR        LR
      comp=Z,3µm,19.0s
R58B  Mineral          103.75 310  PFAKE              19 36 00.0  +12
R58B                               LR        LR
      comp=Z,3µm,20.0s
N55A  Marion Center    103.92 313  PFAKE              19 36 00.0  +11
N55A                               LR        LR
      comp=Z,2µm,18.0s
S58A  Poland Farm, P   103.97 309  PFAKE              19 36 00.0  +11
S58A                               LR        LR
      comp=Z,3µm,20.0s
U59A  Littleton        104.04 308  PFAKE              19 36 00.0  +10
U59A                               LR        LR
      comp=Z,2µm,18.0s
M54A  Oil Creek Stat   104.23 313  PFAKE              19 36 00.0  +10
M54A                               LR        LR
      comp=Z,2µm,20.0s
CNNC  Cliffs of the    104.36 307  PFAKE              19 36 00.0 +9.1
CNNC                               LR        LR
      comp=Z,3µm,19.0s
GTBY  Guantanamo Bay   104.49 291  PFAKE              19 36 00.0 +8.2
GTBY                               LR        LR
      comp=Z,2µm,19.0s
ALLY  Alegheny Colle   104.54 314  PFAKE              19 36 00.0 +8.3
ALLY                               LR        LR
      comp=Z,2µm,18.0s
N54A  Moraine State    104.61 313  PFAKE              19 36 00.0 +8.0
N54A                               LR        LR
      comp=Z,2µm,19.0s
S57A  Dark Hollow, R   104.63 310  PFAKE              19 36 00.0 +7.9
S57A                               LR        LR
      comp=Z,2µm,20.0s
MCWV  Mont Chateau     104.84 312  PFAKE              19 36 00.0 +7.0
MCWV                               LR        LR
      comp=Z,1µm,18.0s
Y60A  Bolivia          104.88 306  PFAKE              19 36 00.0 +6.7
Y60A                               LR        LR
      comp=Z,2µm,19.0s
ROSC  El Rosal         105.02 275  PFAKE              19 40 20.0  +10
ROSC                               LR        LR
      comp=Z,1µm,18.0s
N53A  Lisbon           105.27 313  PFAKE              19 40 20.0  +11
N53A                               LR        LR
      comp=Z,2µm,20.0s
ERM   Erimo            105.33  46  PFAKE              19 40 20.0  +11
ERM                                LR        LR
      comp=Z,2µm,19.0s
R55A  Marlinton        105.39 310  PFAKE              19 40 20.0  +11
R55A                               LR        LR
      comp=Z,3µm,21.0s
M52A  Chesterland      105.45 314  PFAKE              19 40 20.0  +11
M52A                               LR        LR
      comp=Z,2µm,20.0s
X58A  Rowland          105.67 306  PFAKE              19 40 20.0  +10
X58A                               LR        LR
      comp=Z,2µm,18.0s
Q54A  Coxs Mills       105.76 311  PFAKE              19 40 20.0  +10
Q54A                               LR        LR
      comp=Z,2µm,19.0s
I49A  Point Hope       105.77 317  PFAKE              19 40 20.0  +10
I49A                               LR        LR
      comp=Z,2µm,19.0s
H48A  Harrisville      105.88 317  PFAKE              19 40 20.0  +10
H48A                               LR        LR
      comp=Z,2µm,19.0s
BLA   Blacksburg       105.89 309  PFAKE              19 40 20.0  +10
BLA                                LR        LR
      comp=Z,2µm,19.0s
E46A  Sault Ste Mari   105.98 319  PFAKE              19 40 20.0  +10
E46A                               LR        LR
      comp=Z,3µm,19.0s
K50A  Casco            105.99 315  PFAKE              19 40 20.0  +10
K50A                               LR        LR
      comp=Z,3µm,20.0s
FCC   Fort Churchill   106.00 334  PFAKE              19 40 20.0  +10
FCC                                LR        LR
      comp=Z,2µm,18.0s
P53A  Whipple          106.04 312  PFAKE              19 40 20.0  +10
P53A                               LR        LR
      comp=Z,2µm,19.0s
W57A  Gilead           106.06 307  PFAKE              19 40 20.0 +9.4
W57A                               LR        LR
      comp=Z,3µm,21.0s
Y58A  Scranton         106.08 306  PFAKE              19 40 20.0 +9.3
Y58A                               LR        LR
      comp=Z,2µm,19.0s
O52A  Adamsville       106.19 313  PFAKE              19 40 20.0 +9.2
O52A                               LR        LR
      comp=Z,2µm,22.0s
V56A  Mocksville       106.30 308  PFAKE              19 40 20.0 +8.9
V56A                               LR        LR
      comp=Z,2µm,20.0s
N51A  Ashland          106.36 313  PFAKE              19 40 20.0 +8.9
N51A                               LR        LR
      comp=Z,2µm,18.0s
BIRD  Birdtown, Kers   106.55 307  PFAKE              19 40 20.0 +8.4
BIRD                               LR        LR
      comp=Z,2µm,21.0s
J48A  Bridge Port      106.64 316  PFAKE              19 40 20.0 +8.5
J48A                               LR        LR
      comp=Z,2µm,20.0s
Y57A  Sumter           106.64 306  PFAKE              19 40 20.0 +8.3
Y57A                               LR        LR
      comp=Z,3µm,18.0s
NHSC  New Hope         106.68 305  PFAKE              19 40 20.0 +8.2
NHSC                               LR        LR
      comp=Z,2µm,18.0s
M50A  Fremont          106.70 314  PFAKE              19 40 20.0 +8.4
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M50A                                LR        LR
      comp=Z,2µm,20.0s
GLMI  Grayling          106.71 318  PFAKE               19 40 20.0 +8.4
GLMI                                LR        LR
      comp=Z,2µm,22.0s
R53A  Hurricane         106.77 311  PFAKE               19 40 20.0 +8.1
R53A                                LR        LR
      comp=Z,3µm,21.0s
AAM   Ann Arbor         106.86 315  PFAKE               19 40 20.0 +8.1
AAM                                 LR        LR
      comp=Z,4µm,20.0s
I47A  Gladwin           106.90 317  PFAKE               19 40 20.0 +8.0
I47A                                LR        LR
      comp=Z,2µm,19.0s
E44A  Grand Marais A    106.94 320  PFAKE               19 40 20.0 +8.1
E44A                                LR        LR
      comp=Z,2µm,18.0s
MTDJ  Mount Denham      106.97 289  PFAKE               19 40 20.0 +7.1
MTDJ                                LR        LR
      comp=Z,1µm,19.0s
ACSO  Alum Creek Sta    107.00 313  PFAKE               19 40 20.0 +7.7
ACSO                                LR        LR
      comp=Z,2µm,20.0s
KMSC  Kings Mountain    107.12 307  PFAKE               19 40 20.0 +7.4
KMSC                                LR        LR
      comp=Z,3µm,21.0s
U54A  Nelsons Funny     107.16 309  PFAKE               19 40 20.0 +7.2
U54A                                LR        LR
      comp=Z,2µm,21.0s
JSC   Jenkinsville      107.28 307  PFAKE               19 40 20.0 +7.1
JSC                                 LR        LR
      comp=Z,3µm,20.0s
P51A  Williamsport      107.28 312  PFAKE               19 40 20.0 +7.2
P51A                                LR        LR
      comp=Z,2µm,18.0s
G45A  Suttons Bay       107.33 318  PFAKE               19 40 20.0 +7.3
G45A                                LR        LR
      comp=Z,2µm,20.0s
J47A  Sunmer            107.37 316  PFAKE               19 40 20.0 +7.1
J47A                                LR        LR
      comp=Z,2µm,20.0s
PAULI Pauline           107.59 307  PFAKE               19 40 30.0  +16
PAULI                               LR        LR
      comp=Z,3µm,20.0s
Z56A  Williston         107.60 306  PFAKE               19 40 30.0  +16
Z56A                                LR        LR
      comp=Z,2µm,18.0s
Q51A  Peebles           107.62 312  PFAKE               19 40 30.0  +17
Q51A                                LR        LR
      comp=Z,2µm,20.0s
257A  Skidaway Islan    107.63 304  PFAKE               19 40 30.0  +16
257A                                LR        LR
      comp=Z,2µm,20.0s
NNA   Nana              107.66 258  PFAKE               19 40 30.0  +16
NNA                                 LR        LR
      comp=Z,3µm,20.0s
N49A  Columbus Grove    107.67 314  PFAKE               19 40 30.0  +17
N49A                                LR        LR
      comp=Z,1µm,20.0s
E43A  Lone Tree Farm    107.72 320  PFAKE               19 40 30.0  +17
E43A                                LR        LR
      comp=Z,2µm,20.0s
M48A  Edgerton          107.87 315  PFAKE               19 40 30.0  +16
M48A                                LR        LR
      comp=Z,2µm,18.0s
T52A  Hallie            107.90 310  PFAKE               19 40 30.0  +16
T52A                                LR        LR
      comp=Z,2µm,18.0s
O49A  Covington         108.00 313  PFAKE               19 40 30.0  +16
O49A                                LR        LR
      comp=Z,2µm,21.0s
I45A  Fountain          108.06 318  PFAKE               19 40 30.0  +16
I45A                                LR        LR
      comp=Z,2µm,19.0s
HODGE Hodges            108.09 307  PFAKE               19 40 30.0  +16
HODGE                               LR        LR
      comp=Z,2µm,19.0s
060A  Indiantown        108.12 299  PFAKE               19 40 30.0  +15
060A                                LR        LR
      comp=Z,3µm,20.0s
V53A  Saluda            108.16 308  PFAKE               19 40 30.0  +15
V53A                                LR        LR
      comp=Z,2µm,19.0s
S51A  Beattyville       108.21 310  PFAKE               19 40 30.0  +15
S51A                                LR        LR
      comp=Z,3µm,21.0s
STKA  Stephens Creek    108.35 123  PFAKE               19 40 30.0  +15
STKA                                LR        LR
      comp=Z,300nm,18.0s
J45A  Montague          108.38 317  PFAKE               19 40 30.0  +15
J45A                                LR        LR
      comp=Z,1µm,18.0s
BG3   Lake Jocassee     108.43 308  PFAKE               19 40 30.0  +15
BG3                                 LR        LR
      comp=Z,2µm,20.0s
D41A  Chassel           108.45 321  PFAKE               19 40 30.0  +15
D41A                                LR        LR
      comp=Z,2µm,21.0s
C40A  Isle Royale Na    108.47 322  PFAKE               19 40 30.0  +15
C40A                                LR        LR
      comp=Z,1µm,20.0s
TZTN  Tazewell          108.49 309  PFAKE               19 40 30.0  +15
TZTN                                LR        LR
      comp=Z,2µm,20.0s
R50A  Paris             108.58 311  PFAKE               19 40 30.0  +15
R50A                                LR        LR
      comp=Z,2µm,21.0s
V52A  Sevierville       108.72 309  PFAKE               19 40 30.0  +14
V52A                                LR        LR
      comp=Z,2µm,19.0s
456A  Hilliard          108.75 303  PFAKE               19 40 30.0  +14
456A                                LR        LR
      comp=Z,3µm,18.0s
L46A  Eue Claire        108.81 316  PFAKE               19 40 30.0  +14
L46A                                LR        LR
      comp=Z,2µm,20.0s
059A  Moore Haven       108.82 299  PFAKE               19 40 30.0  +14
059A                                LR        LR
      comp=Z,2µm,22.0s
061Z  Ochoppi           108.83 298  PFAKE               19 40 30.0  +14
061Z                                LR        LR
      comp=Z,3µm,20.0s
DWPF  Disney Wildern    108.83 300  PFAKE               19 40 30.0  +14
DWPF                                LR        LR
      comp=Z,3µm,20.0s
255A  Hazlehurst        108.84 304  PFAKE               19 40 30.0  +14
255A                                LR        LR
      comp=Z,2µm,21.0s
H43A  Windswept, Lux    108.94 318  PFAKE               19 40 30.0  +14
H43A                                LR        LR
      comp=Z,2µm,21.0s
P48A  Milroy            109.03 313  PFAKE               19 40 30.0  +14
P48A                                LR        LR
      comp=Z,2µm,21.0s
M46A  Old House Fiel    109.06 315  PFAKE               19 40 30.0  +14
M46A                                LR        LR
      comp=Z,2µm,20.0s
154A  Montrose          109.19 305  PFAKE               19 40 30.0  +13
154A                                LR        LR
      comp=Z,2µm,18.0s
W52A  Murphy            109.19 308  PFAKE               19 40 30.0  +13
W52A                                LR        LR
      comp=Z,3µm,21.0s
COWI  Conover           109.19 320  PFAKE               19 40 30.0  +14
COWI                                LR        LR
      comp=Z,2µm,19.0s
R49A  Shelbyville       109.21 312  PFAKE               19 40 30.0  +14
R49A                                LR        LR
      comp=Z,3µm,20.0s
GOGA  Godfrey           109.28 306  PFAKE               19 40 30.0  +13
GOGA                                LR        LR
      comp=Z,2µm,19.0s
V51A  Loudon            109.32 309  PFAKE               19 40 30.0  +13
V51A                                LR        LR
      comp=Z,2µm,19.0s
INK   Inuvik            109.45 354  PKKPbc    PKKPbc    19 51 20.9 -2.9
      comp=Z,3.8nm,1.1s,baz=101,slow=14,SNR=4.6
INK   Inuvik            109.45 354  ePKKPbc   PKKPbc    19 51 20.9 -2.9
INK                                 LR        LR
      comp=Z,1µm,19.0s
656A  Willston          109.50 302  PFAKE               19 40 30.0  +13
656A                                LR        LR
      comp=Z,4µm,20.0s
CPCT  Cooper Cave       109.56 308  PFAKE               19 40 30.0  +13
CPCT                                LR        LR
      comp=Z,2µm,20.0s
957A  Wimauma           109.62 300  PFAKE               19 40 30.0  +13
957A                                LR        LR
      comp=Z,2µm,20.0s
Y52A  Lilburn           109.63 307  PFAKE               19 40 30.0  +13
Y52A                                LR        LR
      comp=Z,2µm,19.0s
555A  McAlpin           109.69 303  PFAKE               19 40 30.0  +12
555A                                LR        LR
      comp=Z,3µm,19.0s
T49A  Edmonton          109.85 310  PFAKE               19 40 30.0  +12
T49A                                LR        LR
      comp=Z,2µm,21.0s
PEA0B Petropavlovsk-    109.86  31  PFAKE               19 40 30.0  +13
PEA0B                               LR        LR
      comp=Z,1µm,21.0s
RDOG  Red Dog Mine      109.88   5  PFAKE               19 40 30.0  +13
RDOG                                LR        LR
      comp=Z,700nm,21.0s
EYMN  Ely               109.88 323  PFAKE               19 40 30.0  +13
EYMN                                LR        LR
      comp=Z,2µm,20.0s
TIGA  Tifton            109.88 304  PFAKE               19 40 30.0  +12
TIGA                                LR        LR
      comp=Z,2µm,19.0s
I42A  Draeger Farm,     109.92 318  PFAKE               19 40 30.0  +12
I42A                                LR        LR
      comp=Z,2µm,20.0s
BLO   Bloomington       109.93 313  PFAKE               19 40 30.0  +12
BLO                                 LR        LR
      comp=Z,2µm,18.0s
SFIN  Lafayette         109.94 314  PFAKE               19 40 30.0  +12
SFIN                                LR        LR
      comp=Z,2µm,18.0s
TOLK  Toolik Lake Re    109.95   0  PFAKE               19 40 30.0  +13
TOLK                                LR        LR
      comp=Z,700nm,21.0s
K43A  Burlington        109.97 317  PFAKE               19 40 30.0  +12
K43A                                LR        LR
      comp=Z,3µm,20.0s
WCI   Wyandotte Cave    110.07 312  PFAKE               19 40 30.0  +12
WCI                                 LR        LR
      comp=Z,3µm,20.0s
X51A  Calhoun           110.07 308  PFAKE               19 40 30.0  +12
X51A                                LR        LR
      comp=Z,2µm,21.0s
253A  Americus          110.17 305  PFAKE               19 40 30.0  +12
253A                                LR        LR
      comp=Z,2µm,18.0s
BCIP  Isla Barro Col    110.19 280  PFAKE               19 40 30.0  +11
BCIP                                LR        LR
      comp=Z,700nm,20.0s
G40A  Rib Lake          110.21 320  PFAKE               19 40 30.0  +12
G40A                                LR        LR
      comp=Z,2µm,20.0s
W50A  Signal Mountai    110.25 308  PFAKE               19 40 30.0  +11
W50A                                LR        LR
      comp=Z,3µm,21.0s
M44A  Midewin, Midew    110.25 315  PFAKE               19 40 30.0  +12
M44A                                LR        LR
      comp=Z,3µm,20.0s
PET   Petropavlovsk     110.39  31  PFAKE               19 40 30.0  +12
PET                                 LR        LR
      comp=Z,1µm,20.0s
I41A  Arkdale           110.48 319  PFAKE               19 40 30.0  +11
I41A                                LR        LR
      comp=Z,2µm,21.0s
152A  Waverly Hall      110.49 306  PFAKE               19 40 30.0  +11
152A                                LR        LR
      comp=Z,2µm,18.0s
E38A  The Farm, Brul    110.50 322  PFAKE               19 40 30.0  +11
E38A                                LR        LR
      comp=Z,3µm,20.0s
453A  Whigham           110.64 304  PFAKE               19 40 30.0  +11
453A                                LR        LR
      comp=Z,3µm,20.0s
P45A  Graceland, Par    110.70 313  PFAKE               19 40 30.0  +11
P45A                                LR        LR
      comp=Z,2µm,20.0s
SWET  Sewanee           110.73 309  PFAKE               19 40 30.0  +11
SWET                                LR        LR
      comp=Z,3µm,18.0s
CLTN  Cedars of Leba    110.77 310  PFAKE               19 40 30.0  +11
CLTN                                LR        LR
      comp=Z,1µm,21.0s
YKW3  Yellowknife Ar    110.97 344  PFAKE               19 40 30.0  +11
YKW3                                LR        LR
      comp=Z,2µm,20.0s
352A  Blakely           110.98 305  PFAKE               19 40 30.0  +10
352A                                LR        LR
      comp=Z,2µm,21.0s
YKA   Yellowknife Ar    111.02 344  PP        PP        19 40 55.8 -1.2
      comp=Z,1.2nm,0.7s,baz=30,slow=7.4,SNR=5.0
YKB5  Yellowknife Ar    111.02 344  ePP       PP        19 40 55.8 -1.2
T47A  Sharon Grove      111.08 311  PFAKE               19 40 30.0  +10
T47A                                LR        LR
      comp=Z,2µm,19.0s
L42A  Oliver, Polo      111.15 317  PFAKE               19 40 30.0  +10
L42A                                LR        LR
      comp=Z,2µm,20.0s
USIN  University of     111.17 312  PFAKE               19 40 30.0  +10
USIN                                LR        LR
      comp=Z,3µm,18.0s
JFWS  Jewell Farm       111.19 318  PFAKE               19 40 30.0  +10
JFWS                                LR        LR
      comp=Z,1µm,22.0s
OLIL  Olney             111.23 313  PFAKE               19 40 30.0  +10
OLIL                                LR        LR
      comp=Z,2µm,19.0s
V48A  Smith Brothers    111.26 309  PFAKE               19 40 30.0  +10
V48A                                LR        LR
      comp=Z,2µm,20.0s
Z50A  Ashland           111.30 307  PFAKE               19 40 30.0 +9.4
Z50A                                LR        LR
      comp=Z,2µm,18.0s
ULM   Lac du Bonnet     111.32 326  PFAKE               19 40 30.0  +10
ULM                                 LR        LR
      comp=Z,2µm,18.0s
COLD  Coldfoot          111.37   0  PFAKE               19 40 30.0  +10
COLD                                LR        LR
      comp=Z,600nm,21.0s
HDIL  Hopedale          111.44 315  PFAKE               19 40 30.0 +9.4
HDIL                                LR        LR
      comp=Z,2µm,19.0s
Y49A  Blount Mountai    111.51 307  PFAKE               19 40 30.0 +9.1
Y49A                                LR        LR
      comp=Z,2µm,19.0s
EPYK  Eagle Plains      111.65 355  PFAKE               19 40 30.0  +10
EPYK                                LR        LR
      comp=Z,2µm,18.0s
X48A  Hartselle         111.83 308  PFAKE               19 40 30.0 +8.5
X48A                                LR        LR
      comp=Z,2µm,20.0s
FFC   Flin Flon         111.88 333  PFAKE               19 40 30.0 +9.0
FFC                                 LR        LR
      comp=Z,1µm,20.0s
451A  Vernon            111.89 304  PFAKE               19 40 30.0 +8.3
451A                                LR        LR
      comp=Z,3µm,20.0s
SPMN  Marine on St.     111.89 321  PFAKE               19 40 30.0 +8.7
SPMN                                LR        LR
      comp=Z,2µm,19.0s
WVT   Waverly           111.91 310  PFAKE               19 40 30.0 +8.4
WVT                                 LR        LR
      comp=Z,3µm,19.0s
250A  Grady             111.94 305  PFAKE               19 40 30.0 +8.2
250A                                LR        LR
      comp=Z,2µm,18.0s
FYU   Fort Yukon        111.98 358  PFAKE               19 40 30.0 +9.2
FYU                                 LR        LR
      comp=Z,800nm,21.0s
COEN  Coen              111.99 104  PFAKE               19 40 30.0 +7.7
COEN                                LR        LR
      comp=Z,1µm,18.0s
L40A  Anamosa           112.19 317  PFAKE               19 40 30.0 +8.0
L40A                                LR        LR
      comp=Z,2µm,20.0s
LRAL  Lakeview Retre    112.22 307  PFAKE               19 40 30.0 +7.7
LRAL                                LR        LR
      comp=Z,2µm,19.0s
T45A  Paducah           112.23 311  PFAKE               19 40 30.0 +7.8
T45A                                LR        LR
      comp=Z,2µm,20.0s
AGMN  Agassiz Nation    112.30 325  PFAKE               19 40 30.0 +8.0
AGMN                                LR        LR
      comp=Z,2µm,18.0s
PLAL  Pickwick Lake     112.47 309  PFAKE               19 40 30.0 +7.3
PLAL                                LR        LR
      comp=Z,3µm,21.0s
N41A  Harden Midland    112.48 316  PFAKE               19 40 30.0 +7.4
N41A                                LR        LR
      comp=Z,2µm,20.0s
GAMB  Gambell           112.70  11  PFAKE               19 40 30.0 +7.8
GAMB                                LR        LR
      comp=Z,1µm,19.0s
BRAL  Brewton           112.81 305  PFAKE               19 40 40.0  +17
BRAL                                LR        LR
      comp=Z,2µm,20.0s
SLM   Saint Louis       112.83 313  PFAKE               19 40 40.0  +17
SLM                                 LR        LR
      comp=Z,2µm,20.0s
ANM   Nome              112.97   8  PFAKE               19 40 30.0 +7.2
ANM                                 LR        LR
      comp=Z,800nm,21.0s
GLAT  Glass             112.97 311  PFAKE               19 40 40.0  +16
GLAT                                LR        LR
      comp=Z,3µm,19.0s
PRP   Porcupine Dome    113.04 358  PFAKE               19 40 30.0 +6.9
PRP                                 LR        LR
      comp=Z,800nm,21.0s
449A  Pace              113.06 304  P         PKiKP     19 40 23.4 -0.6
      baz=73
HALT  Halls             113.13 310  PFAKE               19 40 40.0  +16
HALT                                LR        LR
      comp=Z,3µm,19.0s
PARMO Parma             113.18 311  PFAKE               19 40 40.0  +16
PARMO                               LR        LR
      comp=Z,2µm,20.0s
PVMO  Portageville      113.23 311  PFAKE               19 40 40.0  +16
PVMO                                LR        LR
      comp=Z,3µm,18.0s
147A  Livingston        113.35 307  PFAKE               19 40 40.0  +16
147A                                LR        LR
      comp=Z,2µm,18.0s
POKR  Poker Plat Res    113.48 359  P         PKiKP     19 40 24.2 +0.4
      baz=1.8
MLY   Manley            113.57   1  PFAKE               19 40 40.0  +16
MLY                                 LR        LR
      comp=Z,900nm,19.0s
EGAK  Eagle             113.57 356  PFAKE               19 40 40.0  +16
EGAK                                LR        LR
      comp=Z,1µm,19.0s
SCIA  State Center      113.61 318  PFAKE               19 40 40.0  +15
SCIA                                LR        LR
      comp=Z,2µm,20.0s
GNAR  Gosnell           113.63 311  PFAKE               19 40 40.0  +15
GNAR                                LR        LR
      comp=Z,3µm,18.0s
MDM   Murphy Dome       113.65 360  PFAKE               19 40 40.0  +16
MDM                                 LR        LR
      comp=Z,300nm,21.0s
PBMO  Poplar Bluff      113.65 312  PFAKE               19 40 40.0  +15
PBMO                                LR        LR
      comp=Z,2µm,19.0s
OXF   Oxford            113.66 309  PFAKE               19 40 40.0  +15
OXF                                 LR        LR
      comp=Z,2µm,20.0s
COLA  College           113.73 359  PFAKE               19 40 40.0  +16
COLA                                LR        LR
      comp=Z,800nm,20.0s
CCM   Cathedral Cave    113.78 313  PFAKE               19 40 40.0  +15
CCM                                 LR        LR
      comp=Z,2µm,20.0s
CCM   Cathedral Cave    113.78 313  P         PKiKP     19 40 24.9 -0.2
      baz=68
ILAR  Eielson Array     113.82 359  PKiKP     PKiKP     19 40 23.8 -0.6
      comp=Z,1.7nm,0.9s,baz=329,slow=3.5,SNR=5.1
ILAR                                PP        PP        19 41 16.9 +0.1
      comp=Z,1.2nm,0.9s,baz=353,slow=6.6,SNR=4.6
ILAR                                PKKPbc    PKKPbc    19 51 06.2 -3.1
      comp=Z,1.5nm,1.1s,baz=212,slow=3.8,SNR=7.0
ILB   Eielson Array     113.82 359  ePKiKP    PKiKP     19 40 23.8 -0.6
ILB                                 ePP       PP        19 41 16.9 +0.1
ILB                                 ePKKPbc   PKKPbc    19 51 06.2 -3.1
MET   Memphis--Engin    113.86 310  PFAKE               19 40 40.0  +15
MET                                 LR        LR
      comp=Z,3µm,18.0s
CCB   Clear Creek Bu    113.96 359  PFAKE               19 40 40.0  +15
CCB                                 LR        LR
      comp=Z,700nm,19.0s
WRH   Wood River Hil    114.14 360  PFAKE               19 40 40.0  +15
WRH                                 LR        LR
      comp=Z,700nm,20.0s
HDA   Harding Lake      114.18 359  PFAKE               19 40 40.0  +15
HDA                                 LR        LR
      comp=Z,1µm,20.0s
HBAR  Harrisburg        114.26 310  PFAKE               19 40 40.0  +14
HBAR                                LR        LR
      comp=Z,3µm,19.0s
HDC   Heredia           114.30 282  PFAKE               19 40 40.0  +13
HDC                                 LR        LR
      comp=Z,1µm,19.0s
CTAO  Charters Tower    114.31 111  PFAKE               19 40 40.0  +13
CTAO                                LR        LR
      comp=Z,2µm,19.0s
BWN   Browne            114.44   0  PFAKE               19 40 40.0  +14
BWN                                 LR        LR
      comp=Z,900nm,19.0s
BPAW  Bear Paw Mtn.     114.50   1  PFAKE               19 40 40.0  +14
BPAW                                LR        LR
      comp=Z,600nm,20.0s
SCRK  Sand Creek        114.53 358  PFAKE               19 40 40.0  +14
SCRK                                LR        LR
      comp=Z,1µm,19.0s
MDND  Maddock           114.67 326  PFAKE               19 40 40.0  +13
MDND                                LR        LR
      comp=Z,2µm,20.0s
RIDG  Independent Ri    114.80 358  PFAKE               19 40 40.0  +14
RIDG                                LR        LR
      comp=Z,1µm,20.0s
X43A  Marvell           114.80 309  PFAKE               19 40 40.0  +13
X43A                                LR        LR
      comp=Z,3µm,19.0s
DOT   Dot Lake          114.86 358  PFAKE               19 40 40.0  +14
DOT                                 LR        LR
      comp=Z,1µm,19.0s
MCK   McKinley          114.88 360  PFAKE               19 40 40.0  +13
MCK                                 LR        LR
      comp=Z,700nm,20.0s
ECSD  EROS Data Cent    115.00 321  PFAKE               19 40 40.0  +13
ECSD                                LR        LR
      comp=Z,2µm,19.0s
ECSD  EROS Data Cent    115.00 321  P         PKiKP     19 40 26.6 -0.7
      baz=61
KTH   Kantishna Hill    115.05   1  PFAKE               19 40 40.0  +13
KTH                                 LR        LR
      comp=Z,600nm,21.0s
JTS   Las Juntas de     115.09 282  PFAKE               19 40 40.0  +12
JTS                                 LR        LR
      comp=Z,2µm,19.0s
CAST  Castle Rocks      115.16   1  PFAKE               19 40 40.0  +13
CAST                                LR        LR
      comp=Z,900nm,21.0s
FCAR  Ozark Folk Cen    115.25 311  PFAKE               19 40 40.0  +12
FCAR                                LR        LR
      comp=Z,2µm,19.0s
VBMS  Vicksburg         115.30 307  PFAKE               19 40 40.0  +12
VBMS                                LR        LR
      comp=Z,3µm,19.0s
TTA   Tatalina          115.48   3  PFAKE               19 40 40.0  +12
TTA                                 LR        LR
      comp=Z,700nm,20.0s
DHY   Denali Highway    115.53 359  PFAKE               19 40 40.0  +12
DHY                                 LR        LR
      comp=Z,900nm,18.0s
MENT  Mentasta          115.55 357  PFAKE               19 40 40.0  +12
MENT                                LR        LR
      comp=Z,1µm,19.0s
PAX   Paxson            115.59 358  PFAKE               19 40 40.0  +12
PAX                                 LR        LR
      comp=Z,1µm,21.0s
WHAR  Wooly Hollow      115.60 311  PFAKE               19 40 40.0  +11
WHAR                                LR        LR
      comp=Z,3µm,18.0s
W41B  Gary Mavity, V    115.61 310  PFAKE               19 40 40.0  +11
W41B                                LR        LR
      comp=Z,3µm,18.0s
W41B  Gary Mavity, V    115.61 310  P         PKiKP     19 40 28.0 -0.7
      baz=68
U40A  Yellville         115.62 312  P         PKiKP     19 40 28.5 -0.2
      baz=67
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CCAR	**Cane Creek**	**115.70**	**309**	PFAKE		19 40 40.0	+11
CCAR				LR	LR		
	comp=Z,3μm,20.0s						
UALR	**University of**	**115.83**	**310**	PFAKE		19 40 40.0	+11
UALR				LR	LR		
	comp=Z,3μm,21.0s						
PMG	**Port Moresby**	**116.16**	**100**	PFAKE		19 40 40.0	+10
PMG				LR	LR		
	comp=Z,900nm,19.0s						
X40A	**Basin Creek Fa**	**116.31**	**310**	PFAKE		19 40 40.0	+10
X40A				LR	LR		
	comp=Z,3μm,21.0s						
HHAR	**Hobbs**	**116.45**	**312**	PFAKE		19 40 40.0	+10
HHAR				LR	LR		
	comp=Z,3μm,19.0s						
TEIG	**Tepich**	**116.63**	**293**	PFAKE		19 40 40.0	+8.9
TEIG				LR	LR		
	comp=Z,2μm,21.0s						
Z41A	**Richland Creek**	**116.74**	**309**	PFAKE		19 40 40.0	+9.1
Z41A				LR	LR		
	comp=Z,3μm,20.0s						
W39A	**Magazine**	**116.77**	**311**	PFAKE		19 40 40.0	+9.1
W39A				LR	LR		
	comp=Z,2μm,20.0s						
SCM	**Sheep Creek Mo**	**116.77**	**359**	PFAKE		19 40 40.0	+10
SCM				LR	LR		
	comp=Z,1μm,20.0s						
DGMT	**Dagmar**	**116.81**	**328**	PFAKE		19 40 40.0	+9.3
DGMT				LR	LR		
	comp=Z,2μm,18.0s						
DGMT	**Dagmar**	**116.81**	**328**	P	**PKiKP**	**19 40 31.1**	**+0.4**
	baz=52						
WLAR	**White Oak Lake**	**116.83**	**309**	PFAKE		19 40 40.0	+8.9
WLAR				LR	LR		
	comp=Z,3μm,20.0s						
TGUH	**Tegucigalpa,Un**	**116.83**	**287**	PFAKE		19 40 40.0	+8.3
TGUH				LR	LR		
	comp=Z,2μm,20.0s						
MIAR	**Mount Ida**	**116.86**	**310**	PFAKE		19 40 40.0	+8.8
MIAR				LR	LR		
	comp=Z,3μm,20.0s						
MIAR	**Mount Ida**	**116.86**	**310**	P	**PKiKP**	**19 40 31.4**	**+0.2**
	baz=67						
WHY	**Whitehorse**	**116.99**	**352**	PFAKE		19 40 40.0	+9.2
WHY				LR	LR		
	comp=Z,1μm,19.0s						
PMR	**Palmer**	**117.03**	**0**	PFAKE		19 40 40.0	+9.4
PMR				LR	LR		
	comp=Z,600nm,21.0s						
ARMA	**Armidale**	**117.06**	**124**	PFAKE		19 40 40.0	+8.2
ARMA				LR	LR		
	comp=Z,1μm,20.0s						
BGNE	**Belgrade**	**117.12**	**319**	PFAKE		19 40 40.0	+8.5
BGNE				LR	LR		
	comp=Z,2μm,20.0s						
HYT	**Haines Junctio**	**117.15**	**354**	PFAKE		19 40 40.0	+8.9
HYT				LR	LR		
	comp=Z,700nm,20.0s						
KSU1	**Kansas State U**	**117.17**	**316**	PFAKE		19 40 40.0	+8.4
KSU1				LR	LR		
	comp=Z,1μm,19.0s						
KSU1	**Kansas State U**	**117.17**	**316**	P	**PKPdf**	**19 40 31.4**	**-0.2**
	baz=63						
KNK	**Knik Glacier**	**117.21**	**360**	PFAKE		19 40 40.0	+8.9
KNK				LR	LR		
	comp=Z,900nm,19.0s						
SVW2	**Sparrevohn**	**117.33**	**4**	PFAKE		19 40 40.0	+8.7
SVW2				LR	LR		
	comp=Z,800nm,19.0s						
BALM	**Baldy**	**117.37**	**356**	PFAKE		19 40 40.0	+8.5
BALM				LR	LR		
	comp=Z,700nm,20.0s						
RC01	**Rabbit Creek A**	**117.53**	**0**	PFAKE		19 40 40.0	+8.3
RC01				LR	LR		
	comp=Z,900nm,20.0s						
GLI	**Glacier Island**	**117.73**	**359**	PFAKE		19 40 40.0	+7.9
GLI				LR	LR		
	comp=Z,1μm,20.0s						
SMY	**Shemya**	**117.75**	**24**	PFAKE		19 40 40.0	+7.7
SMY				LR	LR		
	comp=Z,1μm,19.0s						
EIDS	**Eidsvold**	**117.79**	**118**	PFAKE		19 40 50.0	+17
EIDS				LR	LR		
	comp=Z,2μm,19.0s						
MYIG	**Mrida**	**117.80**	**295**	PFAKE		19 40 50.0	+17
MYIG				LR	LR		
	comp=Z,2μm,20.0s						
TUL1	**Leonard**	**117.97**	**313**	PFAKE		19 40 50.0	+17
TUL1				LR	LR		
	comp=Z,3μm,19.0s						
TUL1	**Leonard**	**117.97**	**313**	P	**PKPdf**	**19 40 33.1**	**-0.2**
	baz=65						
EYAK	**Cordova Ski Ar**	**118.02**	**358**	PFAKE		19 40 40.0	+7.4
EYAK				LR	LR		
	comp=Z,2μm,18.0s						
PCA	**Pinnacle**	**118.14**	**355**	PFAKE		19 40 40.0	+7.0
PCA				LR	LR		
	comp=Z,1μm,19.0s						
HMT	**Hamilton**	**118.17**	**357**	PFAKE		19 40 40.0	+7.0
HMT				LR	LR		
	comp=Z,1μm,18.0s						
X37A	**Clayton**	**118.20**	**311**	PFAKE		19 40 50.0	+16
X37A				LR	LR		
	comp=Z,3μm,20.0s						
SKAG	**Skagway**	**118.21**	**352**	PFAKE		19 40 40.0	+7.0
SKAG				LR	LR		
	comp=Z,1μm,21.0s						
BCPM	**Bancas Point**	**118.23**	**355**	PFAKE		19 40 40.0	+6.9
BCPM				LR	LR		
	comp=Z,900nm,21.0s						
DLBC	**Dease Lake**	**118.30**	**349**	PFAKE		19 40 50.0	+17
DLBC				LR	LR		
	comp=Z,2μm,18.0s						
SEW	**Seward**	**118.52**	**0**	PFAKE		19 40 50.0	+16
SEW				LR	LR		
	comp=Z,800nm,18.0s						
NATX	**Nacogdoches**	**118.75**	**308**	PFAKE		19 40 50.0	+15
NATX				LR	LR		
	comp=Z,2μm,18.0s						
BRLK	**Bradley Lake**	**118.85**	**1**	PFAKE		19 40 50.0	+16
BRLK				LR	LR		
	comp=Z,700nm,19.0s						
HOM	**Homer**	**118.94**	**1**	PFAKE		19 40 50.0	+16
HOM				LR	LR		
	comp=Z,700nm,20.0s						
LAO	**LASA Array**	**118.99**	**328**	*e*PKPdf	**PKPdf**	**19 40 34.8**	**-0.2**
LAO				LR	LR		
	comp=Z,2μm,21.0s						
LAO	**LASA Array**	**118.99**	**328**	P	**PKiKP**	**19 40 35.5**	**+0.4**
	baz=51						
SPIA	**Saint Paul Isl**	**119.03**	**13**	PFAKE		19 40 50.0	+15
SPIA				LR	LR		
	comp=Z,2μm,19.0s						
CNPM	**China Poot**	**119.08**	**1**	PFAKE		19 40 50.0	+15
CNPM				LR	LR		
	comp=Z,1μm,19.0s						
JIS	**Juneau Island**	**119.21**	**351**	PFAKE		19 40 50.0	+15
JIS				LR	LR		
	comp=Z,1μm,18.0s						
RSSD	**Black Hills**	**119.33**	**324**	PFAKE		19 40 50.0	+14
RSSD				LR	LR		
	comp=Z,2μm,19.0s						
RSSD	**Black Hills**	**119.33**	**324**	P	**PKPdf**	**19 40 35.8**	**-0.1**
	baz=54						
CBKS	**Cedar Bluff**	**119.45**	**317**	PFAKE		19 40 50.0	+14
CBKS				LR	LR		
	comp=Z,2μm,20.0s						
OGNE	**Ogallala**	**119.88**	**320**	PFAKE		19 40 50.0	+13
OGNE				LR	LR		
	comp=Z,2μm,19.0s						
OGNE	**Ogallala**	**119.88**	**320**	P	**PKPdf**	**19 40 36.6**	**-0.3**
	baz=58						
EGMT	**Eagleton**	**119.93**	**331**	PFAKE		19 40 50.0	+13
EGMT				LR	LR		
	comp=Z,2μm,20.0s						
EGMT	**Eagleton**	**119.93**	**331**	P	**PKiKP**	**19 40 37.2**	**+0.3**
	baz=47						
U32A	**Winter Ranch,**	**120.10**	**314**	PFAKE		19 40 50.0	+13
U32A				LR	LR		
	comp=Z,2μm,21.0s						
HKT	**Hockley**	**120.36**	**306**	PFAKE		19 40 50.0	+12
HKT				LR	LR		
	comp=Z,2μm,20.0s						
WRAK	**Wrangell Islan**	**120.63**	**349**	PFAKE		19 40 50.0	+12
WRAK				LR	LR		
	comp=Z,1μm,18.0s						
WMOK	**Wichita Mounta**	**120.68**	**313**	*e*PKPdf	**PKiKP**	**19 40 38.7**	**0.0**
WMOK				LR	LR		
	comp=Z,3μm,19.0s						
WMOK	**Wichita Mounta**	**120.68**	**313**	*e*PKIKP	**PKiKP**	**19 40 38.7**	**0.0**
WMOK				MLR	MLR		
	comp=Z,3μm,19.0s						
WMOK	**Wichita Mounta**	**120.68**	**313**	P	**PKiKP**	**19 40 38.6**	**0.0**
	baz=63						
KDAK	**Kodiak Island**	**120.79**	**2**	PFAKE		19 40 50.0	+12
KDAK				LR	LR		
	comp=Z,900nm,22.0s						
WHTX	**Lake Whitney,**	**120.85**	**309**	PFAKE		19 40 50.0	+11
WHTX				LR	LR		
	comp=Z,2μm,20.0s						
WHTX	**Lake Whitney,**	**120.85**	**309**	P	**PKPdf**	**19 40 38.7**	**-0.2**
	baz=66						
CCIG	**Comitan**	**121.05**	**290**	PFAKE		19 40 50.0	+10
CCIG				LR	LR		
	comp=Z,2μm,21.0s						
WALA	**Waterton Lakes**	**121.14**	**334**	PFAKE		19 40 50.0	+11
WALA				LR	LR		
	comp=Z,2μm,20.0s						
KSCO	**Kaye Shedlock'**	**121.29**	**319**	P	**PKiKP**	**19 40 40.1**	**+0.3**
	baz=58						
OHAK	**Old Harbor**	**121.32**	**3**	PFAKE		19 40 50.0	+11
OHAK				LR	LR		
	comp=Z,1μm,19.0s						
435B	**Jarrell**	**121.44**	**308**	PFAKE		19 40 50.0	+10
435B				LR	LR		
	comp=Z,3μm,19.0s						
435B	**Jarrell**	**121.44**	**308**	P	**PKPdf**	**19 40 39.9**	**-0.2**
	baz=66						
RLMT	**Red Lodge**	**121.63**	**328**	PFAKE		19 40 50.0	+10
RLMT				LR	LR		
	comp=Z,2μm,20.0s						
RLMT	**Red Lodge**	**121.63**	**328**	P	**PKiKP**	**19 40 40.8**	**+0.3**
	baz=49						
K22A	**Casper**	**121.66**	**324**	PFAKE		19 40 50.0	+9.5
K22A				LR	LR		
	comp=Z,2μm,21.0s						
K22A	**Casper**	**121.66**	**324**	P	**PKPdf**	**19 40 39.9**	**-0.5**
	baz=52						
CRAG	**Craig**	**121.68**	**349**	PFAKE		19 40 50.0	+10
CRAG				LR	LR		
	comp=Z,2μm,19.0s						
PHWY	**Pilot Hill**	**121.82**	**322**	PFAKE		19 40 50.0	+8.9
PHWY				LR	LR		
	comp=Z,2μm,18.0s						
CHGN	**Chignik**	**121.84**	**6**	PFAKE		19 40 50.0	+10
CHGN				LR	LR		
	comp=Z,1μm,18.0s						
ADK	**Adak**	**121.88**	**20**	PFAKE		19 40 50.0	+10
ADK				LR	LR		
	comp=Z,1μm,20.0s						
SII	**Sitkinak Islan**	**121.93**	**3**	PFAKE		19 40 50.0	+10
SII				LR	LR		
	comp=Z,1μm,20.0s						
ABTX	**Abilene, Hawle**	**122.26**	**311**	*e*PKPdf	**PKiKP**	**19 40 42.3**	**+0.5**
ABTX				LR	LR		
	comp=Z,2μm,20.0s						
ABTX	**Abilene, Hawle**	**122.26**	**311**	P	**PKiKP**	**19 40 42.1**	**+0.3**
	baz=64						
N23A	**Red Feather La**	**122.36**	**322**	*e*PKPdf	**PKiKP**	**19 40 42.3**	**+0.2**
N23A				LR	LR		
	comp=Z,2μm,20.0s						
N23A	**Red Feather La**	**122.36**	**322**	P	**PKPdf**	**19 40 41.5**	**-0.4**
	baz=54						
ATKA	**Atka Island**	**122.41**	**18**	PFAKE		19 40 50.0	+8.6
ATKA				LR	LR		
	comp=Z,1μm,18.0s						
BOZ	**Bozeman (W)**	**122.54**	**330**	*e*PKPdf	**PKiKP**	**19 40 43.0**	**+0.9**
BOZ				LR	LR		
	comp=Z,2μm,20.0s						
BOZ	**Bozeman (W)**	**122.54**	**330**	P	**PKiKP**	**19 40 42.7**	**+0.5**
	baz=46						
CHIA	**Chirikof Islan**	**122.56**	**4**	PFAKE		19 40 50.0	+8.4
CHIA				LR	LR		
	comp=Z,2μm,21.0s						
LKWY	**Lake**	**122.60**	**328**	PFAKE		19 40 50.0	+7.5
LKWY				LR	LR		
	comp=Z,3μm,20.0s						
RWWY	**Rawlins**	**122.65**	**324**	PFAKE		19 40 50.0	+7.4
RWWY				LR	LR		
	comp=Z,3μm,20.0s						
YHH	**Holmes Hill**	**122.69**	**328**	*e*PKPdf	**PKiKP**	**19 40 43.6**	**+1.0**
AMTX	**Amarillo**	**122.73**	**314**	*e*PKPdf	**PKiKP**	**19 40 42.8**	**0.0**
AMTX				LR	LR		
	comp=Z,2μm,19.0s						
AMTX	**Amarillo**	**122.73**	**314**	P	**PKPdf**	**19 40 42.1**	**-0.5**
	baz=61						
ISCO	**Idaho Springs**	**122.79**	**321**	*e*PKPdf	**PKPdf**	**19 40 42.4**	**-0.4**
ISCO				LR	LR		
	comp=Z,2μm,19.0s						
ISCO	**Idaho Springs**	**122.79**	**321**	*e*PKIKP	**PKPdf**	**19 40 42.4**	**-0.4**
ISCO				MLR	MLR		
	comp=Z,2μm,19.0s						
ISCO	**Idaho Springs**	**122.79**	**321**	P	**PKiKP**	**19 40 43.1**	**+0.1**
	baz=55						
MSO	**Missoula**	**122.79**	**332**	*e*PKPdf	**PKiKP**	**19 40 42.6**	**0.0**
MSO				LR	LR		
	comp=Z,2μm,21.0s						
MSO	**Missoula**	**122.79**	**332**	P	**PKPdf**	**19 40 41.8**	**-0.5**
	baz=43						
H17A	**Grant Village**	**122.81**	**328**	*e*PKPdf	**PKiKP**	**19 40 44.2**	**+1.3**
H17A				LR	LR		
	comp=Z,3μm,19.0s						
YMR	**Madison River**	**122.83**	**328**	*e*PKPdf	**PKiKP**	**19 40 43.6**	**+0.7**
YFT	**Old Faithful**	**122.91**	**328**	*e*PKPdf	**PKiKP**	**19 40 44.5**	**+1.4**
UNV	**Unalaska Valle**	**122.93**	**12**	PFAKE		19 40 50.0	+7.6
UNV				LR	LR		
	comp=Z,1μm,19.0s						
Q24A	**Divide**	**122.97**	**320**	*e*PKPdf	**PKPdf**	**19 40 42.5**	**-0.7**
Q24A				LR	LR		
	comp=Z,2μm,19.0s						
Q24A	**Divide**	**122.97**	**320**	P	**PKPdf**	**19 40 43.1**	**-0.1**
	baz=56						
YPP	**Pitchstone Pla**	**123.01**	**328**	*e*PKPdf	**PKiKP**	**19 40 43.9**	**+0.6**
LLLB	**Lillooet**	**123.07**	**340**	PFAKE		19 40 50.0	+7.1
LLLB				LR	LR		
	comp=Z,2μm,20.0s						
FLWY	**Flagg Ranch**	**123.08**	**328**	*e*PKPdf	**PKiKP**	**19 40 44.3**	**+1.0**
FLWY				LR	LR		
	comp=Z,2μm,21.0s						
NEW	**Newport**	**123.13**	**335**	*e*PKPdf	**PKiKP**	**19 40 43.1**	**0.0**
NEW				LR	LR		
	comp=Z,2μm,20.0s						
NEW	**Newport**	**123.13**	**335**	*e*PKIKP	**PKiKP**	**19 40 43.1**	**0.0**
NEW				MLR	MLR		
	comp=Z,2μm,20.0s						
NEW	**Newport**	**123.13**	**335**	P	**PKPdf**	**19 40 42.7**	**-0.2**
	baz=39						
DLMT	**Dillon**	**123.19**	**330**	*e*PKPdf	**PKiKP**	**19 40 44.5**	**+1.0**
DLMT				LR	LR		
	comp=Z,2μm,20.0s						
NIKH	**Nikolski High**	**123.20**	**14**	PFAKE		19 40 50.0	+7.0
NIKH				LR	LR		
	comp=Z,1μm,19.0s						
JCT	**Junction City**	**123.31**	**308**	*e*PKPdf	**PKiKP**	**19 40 43.9**	**-0.1**
JCT				LR	LR		
	comp=Z,2μm,19.0s						
JCT	**Junction City**	**123.31**	**308**	*e*PKIKP	**PKiKP**	**19 40 43.9**	**-0.1**
JCT				MLR	MLR		
	comp=Z,2μm,19.0s						
JCT	**Junction City**	**123.31**	**308**	P	**PKPdf**	**19 40 43.7**	**-0.1**
	baz=65						
BW06	**Boulder Array**	**123.33**	**326**	*e*PKPdf	**PKPdf**	**19 40 43.1**	**-0.6**
BW06				LR	LR		
	comp=Z,3μm,21.0s						
BW06	**Boulder Array**	**123.33**	**326**	P	**PKPdf**	**19 40 43.3**	**-0.3**
	baz=50						
PD31	**Pinedale Array**	**123.33**	**326**	*e*PKPdf	**PKPdf**	**19 40 43.1**	**-0.6**
PD31				*e*PKKPab	**PKKPab**	**19 50 31.7**	**-2.1**
PDAR	**Pinedale Array**	**123.33**	**326**	PKP	**PKPdf**	**19 40 43.0**	**-0.6**
	comp=Z,7.5nm,1.1s,baz=96,slow=3.0,SNR=29						
PDAR				PKKPbc	**PKKPab**	**19 50 31.7**	**-2.1**
	comp=Z,0.3nm,0.6s,baz=207,slow=1.7,SNR=3.4						
MOOW	**Moose Ponds**	**123.33**	**327**	*e*PKPdf	**PKiKP**	**19 40 44.5**	**+0.6**
MOOW				LR	LR		
	comp=Z,2μm,20.0s						
IMW	**Indian Meadow**	**123.34**	**328**	*e*PKPdf	**PKiKP**	**19 40 44.9**	**+0.9**
IMW				LR	LR		
	comp=Z,2μm,21.0s						
T25A	**Trinidad**	**123.48**	**318**	*e*PKPdf	**PKiKP**	**19 40 44.4**	**+0.1**
T25A				LR	LR		
	comp=Z,2μm,21.0s						
T25A	**Trinidad**	**123.48**	**318**	P	**PKiKP**	**19 40 44.5**	**+0.1**
	baz=57						
SNOW	**Snow King Moun**	**123.53**	**327**	PFAKE		19 41 00.0	+16
SNOW				LR	LR		
	comp=Z,2μm,22.0s						
FXWY	**Fox Creek**	**123.56**	**327**	*e*PKPdf	**PKiKP**	**19 40 44.4**	**+0.1**
BBB	**Bella Bella**	**123.60**	**345**	PFAKE		19 41 00.0	+16
BBB				LR	LR		
	comp=Z,2μm,18.0s						
TPAW	**Teton Pass**	**123.62**	**327**	*e*PKPdf	**PKiKP**	**19 40 45.1**	**+0.6**
TPAW				LR	LR		
	comp=Z,2μm,22.0s						
MOBC	**Moresby Island**	**123.64**	**348**	PFAKE		19 41 00.0	+16
MOBC				LR	LR		
	comp=Z,2μm,18.0s						
MCMT	**McKenzie Canyo**	**123.69**	**330**	*e*PKPdf	**PKiKP**	**19 40 45.5**	**+0.9**
DIB	**Dawson Inlet,**	**123.69**	**348**	PFAKE		19 41 00.0	+16
DIB				LR	LR		
	comp=Z,1μm,20.0s						
833A	**Chaparral WMA,**	**123.86**	**306**	PFAKE		19 41 00.0	+15
833A				LR	LR		
	comp=Z,2μm,20.0s						
SDCO	**Great Sand Dun**	**123.88**	**319**	*e*PKPdf	**PKiKP**	**19 40 45.2**	**0.0**
SDCO				LR	LR		
	comp=Z,2μm,22.0s						
SDCO	**Great Sand Dun**	**123.88**	**319**	P	**PKiKP**	**19 40 45.3**	**0.0**
	baz=56						
MSTX	**Muleshoe**	**123.96**	**314**	*e*PKPdf	**PKPdf**	**19 40 44.7**	**-0.3**
MSTX				LR	LR		
	comp=Z,2μm,18.0s						
MSTX	**Muleshoe**	**123.96**	**314**	P	**PKPdf**	**19 40 44.2**	**-0.7**
	baz=61						
C09A	**Chrisman Ranch**	**123.97**	**335**	*e*PKPdf	**PKiKP**	**19 40 45.5**	**+0.7**
C09A				LR	LR		
	comp=Z,2μm,19.0s						
SMCO	**Snowmass**	**124.00**	**321**	*e*PKPdf	**PKiKP**	**19 40 45.9**	**+0.4**
SMCO				LR	LR		
	comp=Z,2μm,21.0s						
LVIG	**Laguna Verde**	**124.18**	**295**	PFAKE		19 41 00.0	+14
LVIG				LR	LR		
	comp=Z,1μm,21.0s						
AHID	**Auburn Hatcher**	**124.18**	**327**	*e*PKPdf	**PKiKP**	**19 40 45.5**	**-0.1**
AHID				LR	LR		
	comp=Z,3μm,21.0s						
O20A	**White River Ci**	**124.22**	**323**	*e*PKPdf	**PKPdf**	**19 40 45.1**	**-0.3**
O20A				LR	LR		
	comp=Z,2μm,19.0s						
O20A	**White River Ci**	**124.22**	**323**	P	**PKPdf**	**19 40 45.5**	**+0.1**
	baz=52						
B06A	**Marblemount**	**124.67**	**338**	PFAKE		19 41 00.0	+14
B06A				LR	LR		
	comp=Z,2μm,18.0s						
S22A	**4UR Ranch, Cre**	**124.74**	**320**	*e*PKPdf	**PKiKP**	**19 40 47.1**	**+0.1**
S22A				LR	LR		
	comp=Z,2μm,20.0s						
S22A	**4UR Ranch, Cre**	**124.74**	**320**	P	**PKiKP**	**19 40 47.0**	**+0.1**
	baz=55						
D08A	**Wollman Farm,**	**124.83**	**335**	*e*PKPdf	**PKiKP**	**19 40 47.0**	**+0.5**
D08A				LR	LR		
	comp=Z,2μm,19.0s						
E09A	**Wood Farm, Sta**	**124.93**	**334**	*e*PKPdf	**PKiKP**	**19 40 46.6**	**0.0**
E09A				LR	LR		
	comp=Z,2μm,20.0s						
C06D	**Leavenworth**	**124.93**	**337**	P	**PKPdf**	**19 40 46.0**	**-0.3**
	baz=35						
F10A	**Beach Ranch, E**	**124.94**	**333**	*e*PKPdf	**PKPdf**	**19 40 46.3**	**-0.2**
F10A				LR	LR		
	comp=Z,2μm,18.0s						
A04D	**Lummi Island**	**124.95**	**339**	P	**PKiKP**	**19 40 46.7**	**+0.2**
	baz=33						
B05A	**Bryant**	**125.11**	**338**	P	**PKPdf**	**19 40 46.6**	**0.0**
	baz=34						
LNIG	**Linares**	**125.21**	**302**	*e*PKPdf	**PKPdf**	**19 40 46.4**	**-1.1**
LNIG				LR	LR		
	comp=Z,1μm,21.0s						
HWUT	**Hardware Ranch**	**125.21**	**326**	*e*PKPdf	**PKPdf**	**19 40 45.5**	**-1.8**
E08A	**Dider Farm, El**	**125.34**	**335**	*e*PKPdf	**PKPdf**	**19 40 47.0**	**-0.1**
E08A				LR	LR		
	comp=Z,2μm,20.0s						
HLID	**Hailey**	**125.38**	**330**	*e*PKPdf	**PKiKP**	**19 40 48.0**	**+0.1**
HLID				LR	LR		
	comp=Z,2μm,19.0s						
HLID	**Hailey**	**125.38**	**330**	P	**PKiKP**	**19 40 48.0**	**+0.1**
	baz=44						
LTY	**Liberty**	**125.39**	**337**	*e*PKPdf	**PKPdf**	**19 40 47.0**	**-0.3**
LTY				LR	LR		
	comp=Z,2μm,19.0s						
TCUT	**Toone Canyon**	**125.45**	**325**	*e*PKPdf	**PKPdf**	**19 40 47.4**	**-0.4**
PV07	**Paradox Valley**	**125.50**	**321**	*e*PKPdf	**PKiKP**	**19 40 48.4**	**+0.1**
PV22	**Blue Mesa, Par**	**125.52**	**321**	*e*PKPdf	**PKPdf**	**19 40 48.1**	**+0.1**
HAWA	**Hanford**	**125.61**	**335**	*e*PKPdf	**PKPdf**	**19 40 45.8**	**-1.8**
HAWA				LR	LR		
	comp=Z,2μm,20.0s						
PV21	**Cone Mtn., Par**	**125.62**	**322**	*e*PKPdf	**PKiKP**	**19 40 48.8**	**+0.2**
PV01	**Paradox Valley**	**125.63**	**321**	*e*PKPdf	**PKiKP**	**19 40 48.7**	**+0.1**
PV01				LR	LR		
	comp=Z,2μm,21.0s						
PV12	**Saucer Basin,**	**125.67**	**321**	*e*PKPdf	**PKiKP**	**19 40 49.2**	**+0.5**
PV04	**Paradox Valley**	**125.68**	**321**	*e*PKPdf	**PKiKP**	**19 40 49.0**	**+0.4**
PV23	**Carpenter Ridg**	**125.71**	**321**	PFAKE		19 41 00.0	+11
PV23				LR	LR		
	comp=Z,3μm,22.0s						
PV11	**David Mesa, Pa**	**125.72**	**321**	*e*PKPdf	**PKPdf**	**19 40 47.7**	**-0.7**
PV03	**Paradox Valley**	**125.73**	**321**	*e*PKPdf	**PKPdf**	**19 40 47.8**	**-0.6**
PV03				LR	LR		
	comp=Z,2μm,22.0s						
PV16	**Nyswonger Mesa**	**125.74**	**321**	*e*PKPdf	**PKPdf**	**19 40 48.5**	**+0.1**
PV20	**West Nyswonger**	**125.75**	**321**	*e*PKPdf	**PKPdf**	**19 40 48.1**	**-0.3**
PV20				LR	LR		
	comp=Z,2μm,22.0s						
PV09	**Paradox Valley**	**125.76**	**322**	*e*PKPdf	**PKiKP**	**19 40 49.3**	**+0.4**
PV14	**Lion Creek, Pa**	**125.77**	**321**	*e*PKPdf	**PKiKP**	**19 40 49.3**	**+0.4**
PV18	**Skein Mesa, Pa**	**125.78**	**321**	*e*PKPdf	**PKPdf**	**19 40 48.6**	**+0.2**
PV10	**Paradox Valley**	**125.78**	**321**	*e*PKPdf	**PKiKP**	**19 40 49.2**	**+0.3**
PV10				LR	LR		
	comp=Z,3μm,21.0s						
JLU	**Jordanelle**	**125.81**	**325**	*e*PKPdf	**PKiKP**	**19 40 49.0**	**+0.1**
BMO	**Blue Mountains**	**125.83**	**332**	*e*PKPdf	**PKPdf**	**19 40 48.3**	**+0.1**
BMO				LR	LR		
	comp=Z,1μm,20.0s						
BMO	**Blue Mountains**	**125.83**	**332**	*e*PKIKP	**PKPdf**	**19 40 48.3**	**+0.1**
BMO				MLR	MLR		
	comp=Z,1μm,20.0s						
OXZ	**Oxford**	**125.91**	**146**	PFAKE		19 41 00.0	+11
OXZ				LR	LR		
	comp=Z,3μm,19.0s						
D05A	**Enumclaw**	**125.96**	**337**	PFAKE		19 41 00.0	+11
D05A				LR	LR		
	comp=Z,2μm,18.0s						
PV05	**Paradox Valley**	**126.00**	**321**	*e*PKPdf	**PKPdf**	**19 40 49.0**	**+0.1**
PV05				LR	LR		
	comp=Z,2μm,18.0s						
ANMO	**Albuquerque**	**126.06**	**316**	*e*PKPdf	**PKPdf**	**19 40 49.0**	**-0.1**
ANMO				LR	LR		
	comp=Z,2μm,19.0s						
ANMO	**Albuquerque**	**126.06**	**316**	P	**PKPdf**	**19 40 49.2**	**+0.1**
	baz=57						
TASM	**ASL Pad, Albuq**	**126.06**	**316**	P	**PKPdf**	**19 40 49.1**	**0.0**
	baz=57						
TASM	**ASL Pad, Albuq**	**126.06**	**316**	P	**PKPdf**	**19 40 49.2**	**+0.1**
	baz=57						
D03D	**Eldon**	**126.08**	**338**	P	**PKiKP**	**19 40 49.4**	**+0.5**
	baz=33						
P17A	**Butcher Ranch,**	**126.13**	**323**	*e*PKPdf	**PKPdf**	**19 40 48.4**	**-0.7**
MVCO	**Mesa Verde**	**126.13**	**320**	*e*PKPdf	**PKPdf**	**19 40 49.3**	**+0.1**
MVCO				LR	LR		
	comp=Z,1μm,19.0s						
MVCO	**Mesa Verde**	**126.13**	**320**	P	**PKPdf**	**19 40 49.3**	**+0.1**
	baz=54						
F07A	**Phinny Hill Vi**	**126.18**	**335**	PFAKE		19 41 00.0	+11
F07A				LR	LR		
	comp=Z,2μm,19.0s						
SRU	**San Rafael Swe**	**126.23**	**323**	*e*PKPdf	**PKPdf**	**19 40 48.9**	**-0.4**
SRU	**San Rafael Swe**	**126.23**	**323**	*e*PKIKP	**PKPdf**	**19 40 48.9**	**-0.4**
G08A	**Pilot Rock**	**126.24**	**334**	*e*PKPdf	**PKPdf**	**19 40 49.0**	**0.0**
G08A				LR	LR		
	comp=Z,2μm,19.0s						
LON	**Longmire**	**126.25**	**337**	*e*PKPdf	**PKPdf**	**19 40 49.0**	**+0.2**
LON				LR	LR		
	comp=Z,2μm,18.0s						
LON	**Longmire**	**126.25**	**337**	*e*PKIKP	**PKPdf**	**19 40 49.1**	**+0.2**
LON				MLR	MLR		
	comp=Z,2μm,18.0s						
D04E	**Lakebay**	**126.26**	**338**	P	**PKiKP**	**19 40 49.3**	**0.0**
	baz=33						
MPU	**Maple Canyon**	**126.30**	**325**	*e*PKPdf	**PKiKP**	**19 40 49.9**	**+0.1**

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BGU   Big Grassy Mou  126.49 326 ePKPdf  PKiKP   19 40 50.2 +0.1
NLWA  Neilton Lookou  126.49 339 ePKPdf  PKiKP   19 40 50.3 +0.5
NLWA                              LR      LR
      comp=Z,4µm,19.0s
TMUT  Trail Mountain  126.52 324 ePKPdf  PKPdf   19 40 50.0  0.0
NLU   North Lily Min  126.60 325 ePKPdf  PKiKP   19 40 50.3 -0.2
BNM   Barren Site     126.61 316 ePKPdf  PKiKP   19 40 50.5 -0.2
E04D  Cinebar         126.70 337  P      PKiKP   19 40 50.4 +0.3
      baz=34,SNR=7.5
TLIG  Tlapa           126.72 293  PFAKE          19 41 00.0 +8.9
TLIG                              LR      LR
      comp=Z,1µm,21.0s
F05D  White Salmon    126.82 336  P      PKiKP   19 40 50.5 +0.1
      baz=35
TXAR  Lajitas Array   126.82 309  PKP    PKiKP   19 40 51.1 +0.1
      comp=Z,8.8nm,0.9s,baz=108,slow=2.8,SNR=48
TX31  Lajitas Ar. Si  126.82 309 ePKPdf  PKPdf   19 40 50.2 -0.4
LAZ   Ladron          126.83 316 ePKPdf  PKiKP   19 40 51.6 +0.5
LENM  Lemitar         126.84 316 ePKPdf  PKiKP   19 40 51.3 +0.2
Y22D  IRIS PASSCAL I  126.86 316  PFAKE          19 41 00.0 +8.9
Y22D                              LR      LR
      comp=Z,2µm,19.0s
Y22D  IRIS PASSCAL I  126.86 316  P      PKPdf   19 40 50.7 +0.1
      baz=57
DUG   Dugway, Tooele  126.86 325 ePKPdf  PKPdf   19 40 50.6 +0.2
DUG                               LR      LR
      comp=Z,1µm,20.0s
DUG   Dugway, Tooele  126.86 325 ePKIKP  PKPdf   19 40 50.6 +0.2
DUG                               MLR     MLR
      comp=Z,1µm,20.0s
DUG   Dugway, Tooele  126.86 325  P      PKiKP   19 40 50.7 -0.2
      baz=48
MNTX  Cornudas Mount  126.99 312 ePKPdf  PKPdf   19 40 50.9 +0.1
MNTX                              LR      LR
      comp=Z,2µm,19.0s
MNTX  Cornudas Mount  126.99 312  P      PKPdf   19 40 50.8 +0.1
      baz=60
G06A  Carlson Farm,   127.00 335  PFAKE          19 41 00.0 +9.1
G06A                              LR      LR
      comp=Z,1µm,20.0s
F04D  Rainier, OR     127.27 337  P      PKiKP   19 40 51.6 +0.3
      baz=34
G05D  Wamic, OR       127.28 336  P      PKiKP   19 40 51.5 +0.1
      baz=36
THZ   Tophouse        127.39 145  PFAKE          19 41 00.0 +8.2
THZ                               LR      LR
      comp=Z,3µm,18.0s
I07A  Izee            127.43 333 ePKPdf  PKiKP   19 40 52.5 +0.6
J08A  Circle Bar Ran  127.52 332 ePKPdf  PKiKP   19 40 52.3 +0.2
J08A                              LR      LR
      comp=Z,2µm,20.0s
MSU   Marysvale       127.60 323 ePKPdf  PKiKP   19 40 52.9 +0.4
TCRU  Three Creeks R  127.70 324 ePKPdf  PKiKP   19 40 54.0 +1.3
EPT   El Paso         127.78 313  PFAKE          19 41 00.0 +7.1
EPT                               LR      LR
      comp=Z,2µm,19.0s
ELK   Elko            127.82 328 ePKPdf  PKPdf   19 40 52.3 -0.1
ELK                               LR      LR
      comp=Z,2µm,21.0s
ELK   Elko            127.82 328 ePKIKP  PKPdf   19 40 52.3 -0.1
ELK                               MLR     MLR
      comp=Z,2µm,21.0s
MTPU  Mount Pierson   127.91 323 ePKPdf  PKiKP   19 40 53.6 +0.2
I05D  Terrebonne, OR  128.02 335  P      PKiKP   19 40 53.2 +0.3
      baz=36
G03D  McMinnville, O  128.09 337  P      PKiKP   19 40 53.1 +0.1
      baz=34
H04A  Detroit Lake    128.10 336 ePKPdf  PKiKP   19 40 53.0  0.0
H04A                              LR      LR
      comp=Z,2µm,19.0s
W18A  Petrified Fore  128.18 319  PFAKE          19 41 00.0 +6.3
W18A                              LR      LR
      comp=Z,2µm,21.0s
W18A  Petrified Fore  128.18 319  P      PKiKP   19 40 53.5 -0.2
      baz=54
PINE  Pine Mountain   128.29 334 ePKPdf  PKiKP   19 40 54.8 +1.1
PINE                              LR      LR
      comp=Z,1µm,18.0s
121A  Cookes Peak, D  128.30 315  P      PKiKP   19 40 54.6 +0.6
      baz=57
WVOR  Wild Horse Val  128.30 331  PFAKE          19 41 00.0 +6.3
WVOR                              LR      LR
      comp=Z,2µm,21.0s
H04D  Lebanon         128.45 336  P      PKiKP   19 40 53.8 +0.1
      baz=34,SNR=7.1
PSUT  Pine Spring     128.57 325 ePKPdf  PKiKP   19 40 54.8 +0.3
COR   Corvallis       128.63 337  PFAKE          19 41 10.0  +16
COR                               LR      LR
      comp=Z,1µm,20.0s
ZAIG  Zacatecas       128.63 301 ePKPdf  PKiKP   19 40 55.8 +0.8
ZAIG                              LR      LR
      comp=Z,1µm,19.0s
HNR   Honiara         128.74 101  PFAKE          19 41 10.0  +15
HNR                               LR      LR
      comp=Z,700nm,20.0s
SZCU  Shurtz Canyon   128.75 323 ePKPdf  PKiKP   19 40 55.9 +1.0
J05D  Fort Rock, OR   128.82 334  P      PKiKP   19 40 55.3 +0.5
      baz=37
I04A  Tendick Farm,   128.92 335  P      PKPdf   19 40 54.2 +0.2
      baz=35,SNR=6.2
CCUT  Cedar City      128.94 323 ePKPdf  PKiKP   19 40 55.6 +0.4
KNB   Kanab           128.96 322 ePKPdf  PKiKP   19 40 55.6 +0.3
WUAZ  Wupatki         129.00 320 ePKPdf  PKiKP   19 40 55.7 +0.4
WUAZ                              LR      LR
      comp=Z,2µm,22.0s
WUAZ  Wupatki         129.00 320  P      PKiKP   19 40 55.8 +0.5
      baz=52
U15A  North Rim       129.01 322 ePKPdf  PKiKP   19 40 55.9 +0.4
U15A                              LR      LR
      comp=Z,2µm,18.0s
BMN   Battle Mountai  129.09 329 ePKPdf  PKiKP   19 40 55.5 +0.1
BMN                               LR      LR
      comp=Z,2µm,21.0s
BMN   Battle Mountai  129.09 329 ePKIKP  PKiKP   19 40 55.5 +0.1
BMN                               MLR     MLR
      comp=Z,2µm,21.0s
K05A  Summer Lake     129.12 333 ePKPdf  PKiKP   19 40 55.7 +0.3
K05A                              LR      LR
      comp=Z,2µm,20.0s
LCMT  Little Creek M  129.22 323 ePKPdf  PKiKP   19 40 56.1 +0.4
J04D  Umpqua Nationa  129.24 335  P      PKiKP   19 40 55.4 -0.3
      baz=36
I02D  Swisshome       129.24 337  P      PKiKP   19 40 55.5 +0.2
      baz=33
I03D  Drain, OR       129.38 336  P      PKiKP   19 40 55.3 -0.3
      baz=34
MOD   Modoc Plateau   129.50 332 ePKPdf  PKiKP   19 40 56.2 +0.1
MOD                               LR      LR
      comp=Z,1µm,22.0s
K04D  Chiloquin, OR   129.58 334  P      PKPdf   19 40 55.7 +0.2
      baz=36
R11A  Troy Canyon, C  129.69 326 ePKPdf  PKiKP   19 40 56.5 -0.2
R11A                              LR      LR
      comp=Z,1µm,20.0s
R11A  Troy Canyon, C  129.69 326  P      PKPdf   19 40 56.2 +0.3
      baz=46
J01E  Myrtle Point    130.06 336  P      PKiKP   19 40 57.1 +0.2
      baz=34
HUMO  Hull Mountain   130.12 335 ePKPdf  PKiKP   19 40 56.8 -0.4
HUMO                              LR      LR
      comp=Z,2µm,20.0s
L04D  Klamath Falls   130.15 334  P      PKPdf   19 40 56.9 +0.3
      baz=36,SNR=9.5
M04C  Macdoel         130.29 333  P      PKiKP   19 40 57.6 -0.1
      baz=37
K02D  Willamette Mer  130.34 335  P      PKiKP   19 40 57.7  0.0
      baz=34
TUC   Tucson          130.52 316 ePKPdf  PKiKP   19 40 58.3 -0.1
TUC                               LR      LR
      comp=Z,2µm,19.0s
TUC   Tucson          130.52 316  P      PKiKP   19 40 58.6 +0.3
      baz=54
KVN   Kaiserville     130.56 328 ePKPdf  PKiKP   19 40 58.5 +0.1
KVN                               LR      LR
      comp=Z,2µm,20.0s
SHPR  Sheep Range     130.71 324 ePKPdf  PKPdf   19 40 58.1 +0.3
SHPR                              LR      LR
      comp=Z,2µm,18.0s
YBH   Yreka Blue Hor  130.72 334 ePKPdf  PKPdf   19 40 57.7 +0.1
YBH                               LR      LR
      comp=Z,2µm,20.0s
YBH   Yreka Blue Hor  130.72 334 ePKIKP  PKPdf   19 40 57.7 +0.1
YBH                               MLR     MLR
      comp=Z,2µm,20.0s
PAHR  Pah Rah Range   130.74 330 ePKPdf  PKiKP   19 40 58.5 -0.1
PAHR                              LR      LR
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      comp=Z,1µm,18.0s
L02E  Cave Junction   130.76 335  P      PKiKP   19 40 58.6 +0.1
      baz=34
W13A  Hualapai Mount  130.86 321 ePKPdf  PKiKP   19 40 59.2  0.0
W13A                              LR      LR
      comp=Z,1µm,18.0s
Y14A  Wickenburg      131.03 319 ePKPdf  PKiKP   19 40 58.9 -0.5
Y14A                              LR      LR
      comp=Z,3µm,20.0s
TPNV  Topopah Spring  131.04 325 ePKPdf  PKiKP   19 40 59.9 +0.5
TPNV                              LR      LR
      comp=Z,2µm,21.0s
TPNV  Topopah Spring  131.04 325  P      PKiKP   19 40 59.7 +0.3
      baz=46
NV11  Mina Array Sit  131.04 328 ePKPdf  PKiKP   19 40 59.3  0.0
NV11                              LR      LR
      comp=Z,200nm,19.0s
M02C  Callahan        131.06 334  P      PKiKP   19 40 58.8 -0.4
      baz=36,SNR=9.0
RYN   Ryan            131.10 328 ePKPdf  PKiKP   19 40 60.0 +0.5
RYN                               LR      LR
      comp=Z,2µm,20.0s
BEKR  Beckworth       131.10 331 ePKPdf  PKPdf   19 40 59.0 +0.4
BEKR                              LR      LR
      comp=Z,1µm,19.0s
NV01  Mina Array Sit  131.12 328 ePKPdf  PKiKP   19 40 59.8 +0.2
NVAR  Mina Array Bea  131.12 328  PKP    PKiKP   19 40 59.8 +0.2
      comp=Z,21nm,1.1s,baz=89,slow=1.6,SNR=42
VCNR  Virginia City   131.18 330 ePKPdf  PKiKP   19 40 59.6 -0.1
VCNR                              LR      LR
      comp=Z,1µm,22.0s
YERR  Yerington       131.21 329 ePKPdf  PKiKP   19 40 59.5 -0.2
YERR                              LR      LR
      comp=Z,2µm,22.0s
PNTR  Pine Nut        131.31 329 ePKPdf  PKPdf   19 40 59.5 +0.4
PNTR                              LR      LR
      comp=Z,2µm,22.0s
N02D  Trinity Center  131.33 333  P      PKiKP   19 40 59.5 -0.3
      baz=36,SNR=8.5
KRMB  Red Mountain    131.41 335  PFAKE          19 41 10.0  +10
KRMB                              LR      LR
      comp=Z,1µm,20.0s
O03E  Paynes Creek    131.46 332  P      PKPdf   19 40 59.1  0.0
      baz=38
NEE2  Needles Airpor  131.53 321  P      PKiKP   19 40 59.9 -0.3
      baz=49
PDMCI Parker Dam,Lak  131.53 321  P      PKiKP   19 41 00.3 +0.1
      baz=50
WDC   Whiskeytown Da  131.57 333 ePKPdf  PKiKP   19 40 59.7 -0.4
WDC                               LR      LR
      comp=Z,2µm,21.0s
WDC   Whiskeytown Da  131.57 333 ePKIKP  PKiKP   19 40 59.7 -0.4
WDC                               MLR     MLR
      comp=Z,2µm,21.0s
RUBR  Rubicon Trail   131.62 330  PFAKE          19 41 10.0 +9.4
RUBR                              LR      LR
      comp=Z,1µm,19.0s
LDFC  Landfair        131.63 322  PFAKE          19 41 10.0 +9.4
LDFC                              LR      LR
      comp=Z,2µm,19.0s
GRAC  Grapevine Rang  131.64 326  P      PKiKP   19 41 01.2 +0.8
      baz=45
WAKR  Walker          131.67 329 ePKPdf  PKiKP   19 41 01.9 +1.2
WAKR                              LR      LR
      comp=Z,2µm,19.0s
FURC  Furnace Creek,  131.73 325  P      PKiKP   19 41 01.3 +0.8
      baz=46
SHOC  Shoshone, Teco  131.78 324  P      PKiKP   19 41 01.1 +0.4
      baz=46
KHMM  Horse Mountain  131.86 334 ePKPdf  PKiKP   19 41 01.4 +0.5
KHMM                              LR      LR
      comp=Z,2µm,20.0s
TUQ   Turquoise Moun  131.89 323  P      PKiKP   19 41 01.7 +0.6
      baz=47
ORV   Oroville        131.90 331 ePKPdf  PKPdf   19 41 00.1 +0.4
ORV                               LR      LR
      comp=Z,2µm,18.0s
ORV   Oroville        131.90 331 ePKIKP  PKPdf   19 41 00.2 +0.4
ORV                               MLR     MLR
      comp=Z,2µm,18.0s
MLAC  Mammoth, Mammo132.00 327    P      PKiKP   19 41 01.7 +0.3
      baz=43
O02D  Mt. Diablo Mer  132.01 333  P      PKiKP   19 41 01.0 -0.1
      baz=36
JCC   Jacoby Creek,   132.04 334  PFAKE          19 41 10.0 +9.0
JCC                               LR      LR
      comp=Z,2µm,18.0s
TIN   Tinemaha, Big   132.09 326  P      PKiKP   19 41 01.5  0.0
      baz=44
OMMB  Old Mammoth Mi  132.10 328 ePKPdf  PKPdf   19 41 01.1 +0.4
OMMB                              LR      LR
      comp=Z,2µm,21.0s
AFDM  Forest Hills D  132.11 330 ePKPdf  PKiKP   19 41 01.3  0.0
AFDM                              LR      LR
      comp=Z,1µm,18.0s
214A  Organ Pipe Nat  132.12 317  P      PKiKP   19 41 01.4 -0.1
      baz=53
MDPB  Devils Postpil  132.13 328 ePKPdf  PKiKP   19 41 01.3 -0.4
MDPB                              LR      LR
      comp=Z,2µm,21.0s
Y12C  Blythe          132.13 320 ePKPdf  PKiKP   19 41 02.0 +0.6
Y12C                              LR      LR
      comp=Z,2µm,20.0s
Y12C  Blythe          132.13 320  P      PKiKP   19 41 01.4  0.0
      baz=50
GMRC  Granite Mounta  132.16 322  P      PKiKP   19 41 02.2 +0.5
      baz=48
DZM   Mont Dzumac     132.22 119 eSS     SS      20 01 06.0 +4.7
      comp=Z,1µm,37.9s
DZM   Mont Dzumac     132.22 119 eLR     LR      20 23 08.4
      comp=Z,960nm,22.6s
IRM   Iron Mountain   132.26 321  P      PKiKP   19 41 02.0 +0.2
      baz=49
113A  Mohawk Valley,  132.26 319  PFAKE          19 41 10.0 +8.3
113A                              LR      LR
      comp=Z,1µm,19.0s
DAC   Darwin (Calif)  132.28 325  PFAKE          19 41 10.0 +8.0
DAC                               LR      LR
      comp=Z,2µm,22.0s
MPMC  Manual Prospec  132.38 325  P      PKiKP   19 41 02.5 +0.4
      baz=45
KMRM  Mail Ridge      132.39 334  PFAKE          19 41 10.0 +8.1
KMRM                              LR      LR
      comp=Z,2µm,20.0s
CWC   Cottonwood Cre  132.44 326  P      PKiKP   19 41 02.5 +0.3
      baz=44
HSIG                  132.49 313  PFAKE          19 41 10.0 +7.7
HSIG                              LR      LR
      comp=Z,1µm,19.0s
GSC   Goldstone, Bar  132.50 324 ePKPdf  PKiKP   19 41 02.7 +0.5
GSC                               LR      LR
      comp=Z,2µm,18.0s
GSC   Goldstone, Bar  132.50 324  P      PKiKP   19 41 02.8 +0.5
      baz=46
CMB   Columbia Colle  132.51 329 ePKPdf  PKiKP   19 41 02.1 -0.1
CMB                               LR      LR
      comp=Z,2µm,20.0s
CMB   Columbia Colle  132.51 329 ePKIKP  PKiKP   19 41 02.1 -0.1
CMB                               MLR     MLR
      comp=Z,2µm,20.0s
HEC   Hector,Ludlow   132.54 323  P      PKiKP   19 41 02.9 +0.5
      baz=47
KCPM  Cahto Peak      132.76 333  PFAKE          19 41 10.0 +7.3
KCPM                              LR      LR
      comp=Z,2µm,19.0s
GLA   Glamis          132.77 320  PFAKE          19 41 10.0 +7.2
GLA                               LR      LR
      comp=Z,2µm,20.0s
GLA   Glamis          132.77 320  P      PKiKP   19 41 02.9 +0.1
      baz=50
BC3   Big Chuckawall  132.78 321  P      PKiKP   19 41 02.9  0.0
      baz=49
BELC  Belle Mtn. Jos  132.89 322  P      PKiKP   19 41 03.5 +0.3
      baz=48
LRMC  Laurel Mtn Rad  132.89 324  P      PKiKP   19 41 03.6 +0.5
      baz=45
RRX   Edison Barstow  132.91 323  P      PKiKP   19 41 03.2 +0.2
      baz=46
HOPS  Hopland Field   133.09 332 ePKPdf  PKiKP   19 41 03.2  0.0
HOPS                              LR      LR
      comp=Z,2µm,19.0s
GDXM  Geysers         133.10 332  PFAKE          19 41 10.0 +6.6
GDXM                              LR      LR
      comp=Z,3µm,18.0s
ISA   Isabella, Lake  133.22 325 ePKPdf  PKiKP   19 41 03.2 -0.5
ISA                               LR      LR
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      comp=Z,2µm,22.0s
ISA   Isabella, Lake  133.22 325 ePKIKP  PKiKP   19 41 03.2 -0.5
ISA                               MLR     MLR
      comp=Z,2µm,22.0s
ISA   Isabella, Lake  133.22 325  P      PKiKP   19 41 03.7  0.0
      baz=44
VES   Vestal, Richgr  133.44 326  P      PKPdf   19 41 03.2 +0.4
      baz=43
PFO   Pinyon Flats O  133.44 322  PFAKE          19 41 10.0 +5.7
PFO                               LR      LR
      comp=Z,2µm,20.0s
PFO   Pinyon Flats O  133.44 322  P      PKiKP   19 41 04.5 +0.2
      baz=48
SWSC  Sam W. Stewart  133.47 320  P      PKiKP   19 41 04.4 +0.2
      baz=49
EDW2  Edwards Air Fo  133.50 324  P      PKiKP   19 41 04.4 +0.2
      baz=45
MCCM  Marconi Confer  133.67 331  PFAKE          19 41 10.0 +5.6
MCCM                              LR      LR
      comp=Z,2µm,21.0s
BFSC  Mount Baldy Ra  133.74 323  P      PKiKP   19 41 05.0 +0.1
      baz=46
ARVC  Arvin           133.81 325  P      PKiKP   19 41 04.7 -0.1
      baz=44
IKP   In-Ko-Pah, Jac  133.85 320  P      PKiKP   19 41 04.6 -0.5
      baz=49
MONP2 Monument Peak   133.89 321  P      PKiKP   19 41 05.5 +0.1
      baz=48
MURC  Murrieta        133.90 322  P      PKiKP   19 41 04.8 -0.3
      baz=47
MWC   Mount Wilson    133.99 324  PFAKE          19 41 20.0  +15
MWC                               LR      LR
      comp=Z,2µm,18.0s
SAO   San Andreas Ge  134.03 329  PFAKE          19 41 20.0  +15
SAO                               LR      LR
      comp=Z,2µm,22.0s
PASC  Pasadena Art C  134.10 324  PFAKE          19 41 20.0  +15
PASC                              LR      LR
      comp=Z,2µm,18.0s
OSI   Osito Audit: C  134.11 324  PFAKE          19 41 20.0  +14
OSI                               LR      LR
      comp=Z,2µm,20.0s
PAGB  Antelope Grade  134.16 327  PFAKE          19 41 20.0  +14
PAGB                              LR      LR
      comp=Z,1µm,20.0s
BAR   Barrett         134.19 321  PFAKE          19 41 20.0  +14
BAR                               LR      LR
      comp=Z,2µm,20.0s
CPE   Camp Elliot     134.32 321  PFAKE          19 41 20.0  +14
CPE                               LR      LR
      comp=Z,2µm,21.0s
SMMC  Simmler         134.33 326  P      PKiKP   19 41 06.3 +0.4
      baz=43
SRIG  Santa Rosalia   134.37 312  PFAKE          19 41 20.0  +14
SRIG                              LR      LR
      comp=Z,2µm,18.0s
PKM   Mcpherson Peak  134.54 326  P      PKiKP   19 41 07.2 +0.7
      baz=43
CIS   Catalina Islan  134.78 323  P      PKiKP   19 41 07.1 +0.2
      baz=46
SCZ2  Santa Cruz Isl  135.08 325  P      PKiKP   19 41 07.8 +0.3
      baz=44
SCI2  San Clemente I  135.15 323  P      PKiKP   19 41 07.4 -0.2
      baz=46
TBI   Tubuai          158.33 179 eSS     SS      20 05 55.3 -0.3
      comp=Z,215nm,35.0s
TBI   Tubuai          158.33 179 eLR     LR      20 35 14.0
      comp=Z,3µm,23.8s
PPT2  Papeete2        164.05 178 eSS     SS      20 07 01.0 +5.3
      comp=Z,791nm,27.5s
PPT2  Papeete2        164.05 178 eLR     LR      20 37 51.5
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*ISCJB **03** 19:33:60.0±0.2, 62°.16N±0°.02×149°.53W±0°.05, h65^{km}±7^{km},*
Error ellipse: s-maj=4.3km s-min=3.0km az=13.1

*NEIC **03** 19:34:01.9±0.0, 62°.16N×149°.50W, h50^{km}, MW3.9, ML3.8(AEIC), Moment Tensor Solution. s24 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.05; $M_{\theta\theta}$-2.16; $M_{\phi\phi}$6.21; $M_{r\theta}$3.95; $M_{\theta\phi}$-1.37; $M_{\phi r}$3.39; Best double couple: $M_0$7.70000×10^{14} NP1:ϕ_s320.00000°, δ42.00000°, λ-148.00000°. NP2:ϕ_s205.00000°, δ69.00000°, λ-53.00000°. Principal axes: T 7.2300, Plg16.0000°, Azm269.0000°; N 0.8000, Plg34.0000°, Azm10.0000°; P -8.0300, Plg51.0000°, Azm157.0000°; After AEIC.*

NEIC Felt at Anchorage, Eagle River and Talkeetna.

*AEIC **03** 19:34:01.9, 62°.16N×149°.50W, h50^{km}, ML3.8, MW3.9(NEIC)*

ISC 03 19:34:01.4±1.1, **62°.16N**±0°.03×**149°.54W**±0°.04, **h45**^{km}±16^{km}, **n77**, σ**0^{s}.59**/86, **Central Alaska**

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Code  Station Name     Δ°   AZ°    Phase ID          Time       Res
                                 Op      ISC       h  m  s     ISC
PMR   Palmer           0.60 161 ePn      Pn       19 34 12.9  -0.7
PMR                             eSn      Sn       19 34 22.7  +0.3
HUR   Hurricane        0.82 357 ePn      Pn       19 34 16.5  -0.1
KNK   Knik Glacier     0.91 145 ePn      Pn       19 34 17.3  -0.4
SKT   Skwentna         0.95 260 ePn      Pn       19 34 17.8  -0.6
RC01  Rabbit Creek A   1.08 185 ePn      Pn       19 34 19.5  -0.5
RC01                            eSn      Sn       19 34 34.7  +0.9
SCM   Sheep Creek Mo   1.09 106 ePn      Pn       19 34 19.6  -0.7
RND   Reindeer         1.29  14 ePn      Pn       19 34 22.9  -0.1
TRF   Thorofare Moun   1.34 345 ePn      Pn       19 34 23.6  -0.2
TRF                             eSn      Sn       19 34 40.4  -0.1
DHY   Denali Highway   1.36  46 ePn      Pn       19 34 23.1  -0.9
PPLA  Purkeypile       1.44 302 ePn      Pn       19 34 25.1   0.0
KTH   Kantishna Hill   1.54 336 ePn      Pn       19 34 26.3  -0.1
MCK   McKinley         1.60  10 ePn      Pn       19 34 27.3   0.0
SPWE  Spurr West       1.69 240 ePn      Pn       19 34 29.0  +0.5
CAST  Castle Rocks     1.72 318 ePn      Pn       19 34 28.7  -0.2
GLI   Glacier Island   1.74 137 ePn      Pn       19 34 28.7  -0.3
JPK   Jack Peak        1.79 127 ePn      Pn       19 34 29.4  -0.4
VMT   TAPS TI Valdez   1.86 124 ePn      Pn       19 34 30.4  -0.3
PS11  TAPS Pump St11   1.91  91 ePn      Pn       19 34 32.8  +1.3
BWN   Browne           2.02   1 ePn      Pn       19 34 33.0   0.0
BWN                             ePn      Pn       19 34 33.0   0.0
PAX   Paxson           2.05  65 ePn      Pn       19 34 33.8  +0.4
BPAW  Bear Paw Mtn.    2.06 342 ePn      Pn       19 34 32.8  -0.6
SEW   Seward           2.06 179 ePn      Pn       19 34 33.7  +0.3
PS10  TAPS Pump St10   2.15  52 ePn      Pn       19 34 36.0  +1.2
PS12  TAPS Pump St12   2.19 106 ePn      Pn       19 34 35.2  -0.2
RDJH  Redoubt Jeurge   2.22 226 ePn      Pn       19 34 36.2  +0.4
RSO   Redoubt South    2.30 224 ePn      Pn       19 34 37.0  +0.1
WRH   Wood River Hil   2.41  15 ePn      Pn       19 34 37.9  -0.4
EYAK  Cordova Ski Ar   2.44 130 ePn      Pn       19 34 37.6  -1.0
BRLK  Bradley Lake     2.49 196 ePn      Pn       19 34 39.5  +0.1
HDA   Harding Lake     2.54  26 ePn      Pn       19 34 39.8  -0.3
HDA   Harding Lake     2.54  26  P       Pn       19 34 40.3  +0.2
      baz=208
HDA                              S       Sn       19 35 10.7  +0.9
      baz=208
CCB   Clear Creek Bu   2.62  17 ePn      Pn       19 34 40.6  -0.5
RIDG  Independent Ri   2.67  51 ePn      Pn       19 34 42.8  +1.0
SGAM  Sherman Glacie   2.67 127 ePn      Pn       19 34 41.5  -0.3
PS08  TAPS Pump Stn8   2.69  26 ePn      Pn       19 34 42.2  +0.2
HOM   Homer            2.71 203 ePn      Pn       19 34 42.5  +0.1
IVE   Iliamna Volcan   2.73 220 ePn      Pn       19 34 43.3  +0.5
CNPM  China Poot       2.77 198 ePn      Pn       19 34 42.6  -0.6
ILS   Iliamna Low So   2.80 219 ePn      Pn       19 34 44.2  +0.5
MENT  Mentasta         2.81  71 ePn      Pn       19 34 43.5  -0.2
TCOL  CIGO, UAF Yank   2.83  15  P       Pn       19 34 44.0  +0.1
      baz=196
TCOL                             S       Sn       19 35 17.2  +0.5
      baz=196
COLA  College          2.83  15 ePn      Pn       19 34 43.5  -0.5
MDM   Murphy Dome      2.87  11 ePn      Pn       19 34 44.6   0.0
ILB   Eielson Array    2.88  23 ePn      Pn       19 34 44.3  -0.4
DOT   Dot Lake         2.92  57 ePn      Pn       19 34 45.2  -0.1
MLY   Manley           2.93 350 ePn      Pn       19 34 44.9  -0.6
SVW2  Sparrevohn       3.08 252 ePn      Pn       19 34 46.8  -0.7
TT01  Tatalina         3.10 287 ePn      Pn       19 34 47.2  -0.4
TTA   Tatalina         3.10 287 ePn      Pn       19 34 46.9  -0.9
POKR  Poker Plat Res   3.12  17  P       Pn       19 34 48.0  +0.1
      baz=198
POKR                             S       Sn       19 35 23.4  -0.5
      baz=198
SCRK  Sand Creek       3.12  52 ePn      Pn       19 34 47.7  -0.3
HMT   Hamilton         3.14 123 ePn      Pn       19 34 47.4  -0.9
AUW   Augustine West   3.40 216 ePn      Pn       19 34 53.4  +1.6
BCA3  Beaver Creek A   3.70  72 ePn      Pn       19 34 55.8  -0.2
PS06  TAPS Pump Stn6   3.71 359 ePn      Pn       19 34 56.1   0.0
PRP   Porcupine Dome   3.81  26 ePn      Pn       19 34 57.4  -0.2
FONW  Fourpeaked Sta   3.98 215 ePn      Pn       19 34 59.3  -0.5
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IM3	Indian Mountai	4.26	336	ePn	Pn	19 35 03.7	+0.1
KAHC	Katmai Hardscr	4.44	220	ePn	Pn	19 35 06.0	-0.2
EGAK	Eagle	4.58	51	ePn	Pn	19 35 07.5	-0.5
KDAK	Kodiak Island	4.65	201	ePn	Pn	19 35 07.1	-1.9
FYU	Fort Yukon	4.80	21	ePn	Pn	19 35 11.6	+0.6
KELA	Mount Kelaz	4.84	222	ePn	Pn	19 35 11.6	-0.1
PCA	Pinnacle	4.95	111	ePn	Pn	19 35 12.3	-0.9
DAWY	Dawson	4.99	63	ePn	Pn	19 35 13.1	-0.5
COLD	Coldfoot	5.10	357	ePn	Pn	19 35 15.3	+0.2
OHAK	Old Harbor	5.30	203	ePn	Pn	19 35 17.8	-0.1
PNL	Peninsula	5.54	112	ePn	Pn	19 35 20.7	-0.5
BM3	Burnt Mountain	5.69	20	ePn	Pn	19 35 22.9	-0.3
HYT	Haines Junctio	5.92	98	ePn	Pn	19 35 26.9	+0.4
TOLK	Toolik Lake Re	6.51	360	P	Pn	19 35 35.2	+0.7
	baz=180						
TOLK				S	Sn	19 36 47.2	-0.2
	baz=180						
EPYK	Eagle Plains	6.99	47	ePn	Pn	19 35 42.2	+1.1
EPYK	Eagle Plains	6.99	47	P	Pn	19 35 41.8	+0.7
	baz=239						
EPYK				S	Sn	19 36 59.5	+0.3
	baz=239						
WHY	Whitehorse	7.19	96	ePn	Pn	19 35 44.1	+0.2
INK	Inuvik	9.10	40	ePn	Pn	19 36 10.8	+0.9
NV11	Mina Array Sit	30.53	126	eP	P	19 40 10.4	+0.1
PV13	Radium Mtn., P	34.54	115	eP	P	19 40 45.0	-0.5

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*IDC **03** 19:41:05.0±0.6, 44°.69S×167°.86E, h0^{km}, mb4.4/10, mb1 4.5/11, mb1mx4.5/24, mbtmp4.4/11, ML4.9/1, MS5.2/2, Ms1 5.2/2, ms1mx4.1/22, Error ellipse: s-maj=21.9km s-min=18.1km az=40.0*

*BJI **03** 19:41:04.5±0.0, 45°.11S×167°.29E, h5^{km}, mb5.2/5, mB5.3/1, Ms5.3/2, Ms7 5.0/2*

*NEIC **03** 19:41:06.0±0.0, 44°.47S×167°.84E, h5^{km}, mb5.0/7, MW4.6, ML5.3(WEL) Best double couple: NP1:ϕ_s81.00000°, δ33.00000°, λ-58.00000°. NP2:ϕ_s223.00000°, δ62.00000°, λ-110.00000°. Principal axes: T 0.9200, Plg15.0000°, Azm328.0000°; N 0.2100, Plg17.0000°, Azm233.0000°; P -1.1400, Plg67.0000°, Azm97.0000°; After WEL.*

*WEL **03** 19:41:07.4, 45°S±2°×16°8E±°, h5^{km}±1^{km}, M5.1/35, mB5.4/5, ML5.4/26, MLv5.2/35, Mw(mB)4.8/5 Error ellipse: s-maj=0.0km s-min=0.0km az=96.8*

*ISCJB **03** 19:41:08.2±0.3, 44°.43S±0°.02×167°.96E±0°.04, h33^{km}, mb4.7/19, Error ellipse: s-maj=4.4km s-min=2.9km az=38.6*

ISC 03 19:41:05.8±1.4**, 44°.49S**±0°.04×**167°.81E**±0°.04**, h3**^{km}±9^{km}**, n190, σ1^{s}14**/186**, mb4.7**/19**, 5C-2D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.20	156	P	Pg	19 41 10.7	+1.0
MSZ				S	Sg	19 41 13.4	+1.0
JCZ	Jackson Bay	0.81	60	P	Pg	19 41 21.3	-0.1
JCZ				S	Sg	19 41 31.8	-0.2
MLZ	Mavora Lakes	0.90	166	ePg	Pg	19 41 22.9	-0.2
MLZ	Mavora Lakes	0.90	166	P	Pg	19 41 23.1	0.0
WKZ	Wanaka	0.92	112	ePg	Pg	19 41 23.1	-0.4
WKZ	Wanaka	0.92	112	P	Pg	19 41 23.5	0.0
WKZ				S	Sg	19 41 35.3	-0.2
DCZ	Deep Cove	1.08	205	ePg	Pg	19 41 25.5	-1.0
DCZ	Deep Cove	1.08	205	P	Pg	19 41 26.6	+0.1
EAZ	Earnscleugh	1.30	125	P	Pg	19 41 29.9	-0.7
WHZ	Wether Hill Ro	1.41	176	ePn	Pn	19 41 30.9	-1.4
WHZ	Wether Hill Ro	1.41	176	P	Pn	19 41 31.4	-0.9
WHZ				S	Sg	19 41 50.6	-0.3
LBZ	Lake Benmore	1.70	87	ePn	Pn	19 41 36.1	-0.3
LBZ	Lake Benmore	1.70	87	P	Pb	19 41 37.4	-0.3
LBZ				S	Sn	19 41 58.9	+0.2
FOZ	Fox Glacier	1.73	57	ePn	Pn	19 41 35.4	-1.4
FOZ	Fox Glacier	1.73	57	P	Pn	19 41 35.7	-1.1
PYZ	Puysegur Point	1.86	205	ePn	Pn	19 41 37.1	-1.3
PYZ	Puysegur Point	1.86	205	P	Pn	19 41 39.0	+0.5
TUZ	Tuapeka	1.95	139	P	Pn	19 41 40.5	+0.8
ODZ	Otahua Downs	2.09	106	ePn	Pn	19 41 41.4	-0.3
ODZ	Otahua Downs	2.09	106	P	Pn	19 41 41.6	-0.1
SYZ	Scrubby Hill	2.25	156	P	Pn	19 41 44.3	+0.5
APZ	The Paps	2.34	177	P	Pn	19 41 45.7	+0.5
HHSZ	Highcliff Hill	2.41	126	P	Pn	19 41 47.1	+0.9
RPZ	Rata Peaks	2.46	73	Pn	Pn	19 41 46.2	-0.6
	246nm,0.3s,baz=233,slow=6.1,SNR=458						
RPZ				Sn	Sn	19 42 17.6	+0.2
	586nm,0.3s,baz=331,slow=17,SNR=11						
RPZ	Rata Peaks	2.46	73	P	Pn	19 41 47.1	+0.3
WVZ	Waitaha Valley	2.55	57	P	Pn	19 41 46.5	-1.5
INZ	Inchbonnie	3.17	57	P	Pn	19 41 55.3	-1.3
OXZ	Oxford	3.27	71	ePn	Pn	19 41 56.5	-1.4
OXZ	Oxford	3.27	71	P	Pn	19 41 56.8	-1.0
MQZ	McQueen's Vall	3.58	79	ePn	Pn	19 42 01.0	-1.1
MQZ	McQueen's Vall	3.58	79	P	Pn	19 42 01.1	-1.0
CRLZ	Canterbury Las	3.59	77	ePn	Pn	19 42 01.0	-1.2
CRLZ	Canterbury Las	3.59	77	P	Pn	19 42 01.9	-0.4
LTZ	Lake Taylor	3.66	64	ePn	Pn	19 42 02.1	-1.2
LTZ	Lake Taylor	3.66	64	P	Pn	19 42 02.5	-0.8
AKCZ	Akaroa Harbour	3.72	82	P	Pn	19 42 03.5	-0.6
AMCZ	Amberley	3.74	71	P	Pn	19 42 04.1	-0.3
OKCZ	Okains Bay	3.86	80	P	Pn	19 42 05.7	-0.3
DSZ	Denniston Nort	4.01	48	P	Pn	19 42 07.1	-1.0
GVZ	Greta Valley S	4.08	70	P	Pn	19 42 08.2	-0.9
THZ	Tophouse	4.62	56	ePn	Pn	19 42 15.4	-1.1
THZ	Tophouse	4.62	56	P	Pn	19 42 15.8	-0.7
KHZ	Kahutara	4.66	66	ePn	Pn	19 42 15.9	-1.0
KHZ	Kahutara	4.66	66	P	Pn	19 42 16.8	-0.1
QRZ	Quartz Range	5.05	45	P	Pn	19 42 21.3	-1.1
BSWZ	Blackbirch Sta	5.23	60	P	Pn	19 42 25.2	+0.3
NNZ	Nelson	5.24	53	P	Pn	19 42 24.9	0.0
CMWZ	Cape Campbell	5.43	62	P	Pn	19 42 29.6	+2.0
TUWZ	Tuamarina	5.44	58	P	Pn	19 42 28.9	+1.2
TCW	Tory Channel	5.77	58	P	Pn	19 42 33.3	+1.0
DUWZ	D'Urville Isla	5.82	53	P	Pn	19 42 32.9	-0.1
SNZO	South Karori	5.98	60	ePn	Pn	19 42 34.8	-0.2
BHW	Baring Head	6.03	62	P	Pn	19 42 35.2	-0.5
PLWZ	Palliser	6.19	64	P	Pn	19 42 36.3	-1.7
MSWZ	Moikau Station	6.26	63	P	Pn	19 42 37.7	-1.4
CAW	Cannon Point	6.32	60	P	Pn	19 42 38.2	-1.6
PAWZ	Paruwai Farm	6.39	64	P	Pn	19 42 39.4	-1.5
OGWZ	Otaki Gorge	6.55	58	P	Pn	19 42 42.5	-0.5
TRWZ	Traveller	6.55	65	P	Pn	19 42 43.1	+0.1
MTW	Mount Morrison	6.56	62	P	Pn	19 42 42.3	-0.8
HOWZ	Holdsworth Sta	6.71	60	P	Pn	19 42 44.8	-0.4
NMEZ	Namu Road	6.79	44	P	Pn	19 42 46.5	+0.2
MRZ	Mangatainoka R	6.89	59	P	Pn	19 42 46.3	-1.4
NBEZ	Newall Road No	6.90	43	P	Pn	19 42 46.8	-1.0
KHEZ	Kahui Hut	6.95	44	P	Pn	19 42 48.0	-0.6
PREZ	Palmer Road	6.99	45	P	Pn	19 42 48.4	-0.6
TIWZ	Tintock	7.01	61	P	Pn	19 42 48.7	-0.7
PKE	Pukeiti	7.02	43	P	Pn	19 42 48.6	-0.8
LREZ	Lake Rotokare	7.03	47	P	Pn	19 42 49.7	+0.2
DREZ	Durham Road	7.13	44	P	Pn	19 42 50.6	-0.3
WAZ	Wanganui	7.13	51	P	Pn	19 42 51.1	+0.2
PRWZ	Pori Road	7.20	60	P	Pn	19 42 51.2	-0.6
BFZ	Birch Farm	7.29	61	ePn	Pn	19 42 52.4	-0.8
BFZ	Birch Farm	7.29	61	P	Pn	19 42 51.8	-1.4
VRZ	Vera Road	7.46	46	P	Pn	19 42 55.4	-0.1
PKVZ	Pokaka	7.65	50	P	Pn	19 42 58.2	0.0
DRZ	Dome Shelter	7.78	51	P	Pn	19 43 02.2	+2.0
FWVZ	Far West T-bar	7.79	50	P	Pn	19 43 01.8	+1.5
WHVZ	Whangaehu Hut	7.79	51	P	Pn	19 43 01.3	+1.1
MOVZ	Moawhango	7.80	52	P	Pn	19 42 59.2	-0.9
TUVZ	Tukino	7.84	51	P	Pn	19 43 02.2	+1.4
TWVZ	Taurewa	7.86	49	P	Pn	19 43 00.9	-0.1
NGZ	Ngauruhoe	7.87	50	P	Pn	19 43 03.1	+1.8
WTVZ	West Tongariro	7.91	50	P	Pn	19 43 02.4	+0.6
BHHZ	Black Hill Sta	7.92	54	P	Pn	19 43 00.1	-1.7
KRVZ	Karewarewa	7.95	50	P	Pn	19 43 03.3	+1.0
HIZ	Hauiti	7.97	44	ePn	Pn	19 43 01.9	-0.6
HIZ	Hauiti	7.97	44	P	Pn	19 43 01.6	-0.9
KRHZ	Kereru	8.00	56	P	Pn	19 43 03.3	+0.5
KATZ	Kakaramea	8.07	50	P	Pn	19 43 04.8	+0.8
KWHZ	Kaweka Forest	8.17	55	P	Pn	19 43 05.9	+0.6
RATZ	Rangitukua	8.19	49	P	Pn	19 43 04.8	-0.6
KAHZ	Kahuranaki	8.21	58	P	Pn	19 43 06.6	+0.9
BKZ	Black Stump Fm	8.38	54	ePn	Pn	19 43 07.9	-0.2
BKZ	Black Stump Fm	8.38	54	P	Pn	19 43 10.4	+2.2
TLZ	Tolley Road	8.46	46	P	Pn	19 43 08.0	-1.2
MTHZ	Maungataniwha	8.79	53	P	Pn	19 43 14.4	+0.6
HRRZ	Handcock Road	8.81	49	P	Pn	19 43 16.9	+2.9
WHHZ	Waihua	8.87	56	P	Pn	19 43 18.3	+3.5
TOZ	Tahuroa Road	8.90	43	P	Pn	19 43 14.2	-1.0
AWAZ	Awhitu Peninsu	9.05	37	P	Pn	19 43 17.0	-0.2
WTAZ	Waiatarua	9.13	36	P	Pn	19 43 17.1	-1.2
MHGZ	Mahia Peninsul	9.23	58	P	Pn	19 43 20.6	+0.8
MKAZ	Moumakai	9.24	40	P	Pn	19 43 19.7	-0.2
ETAZ	East Tamaki Re	9.26	38	P	Pn	19 43 21.6	+1.4
URZ	Urewera	9.36	51	Pn	Pn	19 43 18.5	-2.9
	0.8nm,0.3s,baz=236,slow=3.6,SNR=4.0						
URZ				Sn	Sn	19 44 57.1	-10
	2.9nm,0.3s,baz=240,slow=20,SNR=2.9						
URZ	Urewera	9.36	51	ePn	Pn	19 43 21.0	-0.4
URZ	Urewera	9.36	51	P	Pn	19 43 20.2	-1.2
RAGZ	Rawiri	9.37	54	P	Pn	19 43 24.6	+2.9
MBAZ	Motutapu North	9.40	37	P	Pn	19 43 21.5	-0.6
WIAZ	Waiheke Island	9.49	38	P	Pn	19 43 23.8	+0.5
RUGZ	Raukumara Rang	9.88	52	P	Pn	19 43 29.8	+1.0
TWGZ	Tauwhareparae	9.91	54	P	Pn	19 43 28.7	-0.4
PUZ	Puketiti	10.14	54	P	Pn	19 43 33.0	+0.8
OUZ	Omahuta	10.27	28	ePn	Pn	19 43 33.5	-0.5
OUZ	Omahuta	10.27	28	P	Pn	19 43 33.4	-0.6
WMGZ	Waiomatatini S	10.40	54	P	Pn	19 43 35.2	-0.6
DZM	Mont Dzumac	22.39	357	LR	LR	19 53 46.6	
	comp=Z,161nm,20.3s,baz=248,slow=34						
STKA	Stephens Creek	24.03	293	P	P	19 46 21.6	-0.3
	6.1nm,1.1s,baz=112,slow=12,SNR=3.7						
STKA				PcP	PcP	19 50 02.9	-0.7
	3.7nm,1.2s,baz=32,slow=3.3,SNR=3.1						
CTA	Charters Tower	30.22	317	P	P	19 47 18.2	+0.6
	2.1nm,0.4s,baz=163,slow=14,SNR=3.2						
VNDA	Vanda	33.23	182	P	P	19 47 40.0	-3.4
	0.5nm,0.6s,baz=101,slow=16,SNR=6.1						
VNDA	Vanda	33.23	182	eP	P	19 47 40.4	-3.0
VNDA				esP	P	19 47 40.5	-2.9
SBA	Scott Base	33.48	180	eP	P	19 47 46.4	+0.7
	31nm,1.1s						
AS31	Alice Springs	34.57	296	eP	P	19 47 56.2	+0.4
	2.3nm,1.0s						
ASAR	Alice Springs	34.57	296	P	P	19 47 56.5	+0.7
	1.3nm,0.6s,baz=126,slow=7.5,SNR=16						
ASAR				PcP	PcP	19 50 29.4	-1.1
	2.7nm,0.8s,baz=136,slow=3.9,SNR=7.4						
WRAB	Tennant Creek	37.02	301	eP	P	19 48 16.7	-0.1
H01W1	Cape Leeuwin H	41.72	264	T	T	20 33 15.4	
	baz=120,slow=75,SNR=22						
H01W2	Cape Leeuwin H	41.74	264	T	T	20 33 14.8	
	baz=120,slow=75,SNR=18						
H01W3	Cape Leeuwin H	41.74	264	T	T	20 33 13.8	
	baz=120,slow=75,SNR=19						
MTN	Manton Dam	44.43	304	eP	P	19 49 18.5	+0.5
	82nm,2.0s						
QSPA	South Pole Qui	45.63	180	eP	P	19 49 29.0	+1.8
	19nm,1.0s						
SIJI	Sorong	54.16	313	P	P	19 50 33.6	+1.2
	15nm,1.1s,baz=142,slow=16,SNR=3.0						
MAW	Mawson	54.95	207	P	P	19 50 36.2	-1.2
	6.9nm,1.0s,baz=186,slow=9.9,SNR=2.5						
SYO	Syowa Base	60.53	199⇑	eP	P	19 51 16.0	-0.7
SNAA	Sanae	63.95	183	P	P	19 51 40.2	+0.5
SNAA	Sanae	63.95	183	eP	P	19 51 39.4	-0.3
	6.1nm,1.1s						
VNA3	Neumayer Olymp	64.56	181	P	P	19 51 46.2	+2.5
USHA	Ushuaia	70.15	149	LR	LR	20 17 19.3	
	comp=Z,3µm,19.0s,baz=126,slow=31						
PLCA	Paso Flores	80.29	139	P	P	19 53 17.8	-0.2
	3.8nm,0.8s,baz=284,slow=3.6,SNR=4.6						
MJAR	Matsushiro Arr	85.00	336	P	P	19 53 42.5	+0.3
	2.8nm,0.9s,baz=187,slow=5.4,SNR=5.6						
MJAR				LR	LR	20 29 22.1	
	comp=Z,515nm,19.7s,baz=270,slow=34						
MAJO	Matsushiro	85.00	336	eP	P	19 53 42.5	+0.3
PBKT	Sadao Pong	85.87	298	P	P	19 53 49.9	+3.0
	8.7nm,0.8s						
NJ2	Nanjing	88.27	320	eP	P	19 53 59.3	+1.1
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
H08S2	Diego Garcia H	88.48	261	T	T	21 31 31.8	
	baz=135,slow=76,SNR=4394						
H08S1	Diego Carcia H	88.49	261	T	T	21 31 33.4	
	baz=135,slow=76,SNR=4707						
H08S3	Diego Garcia H	88.50	261	T	T	21 31 31.9	
	baz=135,slow=76,SNR=4775						
CM31	Chiang Mai Arr	88.56	298	eP	P	19 53 59.6	-0.4
	11nm,0.9s						
CMAR	Chiang Mai Arr	88.56	298	P	P	19 54 01.4	+1.4
	7.8nm,0.8s,baz=155,slow=3.5,SNR=31						
CHTO	Chiang Mai	88.82	298	eP	P	19 54 02.2	+1.0
	7.4nm,0.9s						
KSRS	Korea Array	89.19	329	P	P	19 54 04.5	+2.1
	4.3nm,1.0s,baz=154,slow=5.6,SNR=9.1						
H08N1	Diego Carcia H	90.43	261	T	T	21 33 56.8	
	baz=132,slow=75,SNR=18						
H08N3	Diego Garcia H	90.45	261	T	T	21 33 58.1	
	baz=132,slow=75,SNR=408						
H08N2	Diego Garcia H	90.45	261	T	T	21 33 58.0	
	baz=132,slow=75,SNR=103						
KMI	Kunming	91.23	305	P	P	19 54 14.4	+1.8
CD2	Chengdu	95.04	309	eP	P	19 54 30.5	+0.7
TXAR	Lajitas Array	108.92	67	Pdiff	Pdif	19 55 32.5	+0.5
	0.1nm,0.6s,baz=205,slow=4.0,SNR=3.5						
WMQ	Urumqi	113.14	309	ePKP	PKiKP	19 59 44.1	0.0
ILAR	Eielson Array	114.53	20	PKP	PKiKP	19 59 47.3	+1.3
	0.4nm,0.7s,baz=206,slow=3.9,SNR=3.6						
MK32	Makanchi Array	117.97	309	ePKPdf	PKiKP	19 59 53.5	+0.2
MKAR	Makanchi Array	117.97	309	PKP	PKiKP	19 59 53.5	+0.2
	0.6nm,0.8s,baz=153,slow=1.3,SNR=4.0						
W52A	Murphy	125.70	74	ePKPdf	PKPdf	20 00 07.2	-1.2
WCI	Wyandotte Cave	125.78	69	ePKPdf	PKPdf	20 00 06.0	-2.5
BVAR	Borovoye Array	127.77	311	PKP	PKPdf	20 00 10.2	-1.6
	0.4nm,0.6s,baz=98,slow=5.1,SNR=2.9						
O49A	Covington	128.10	68	ePKPdf	PKPdf	20 00 10.6	-2.2
GEYT	Alibeck	128.19	289	PKP	PKiKP	20 00 14.2	+0.4
	1.3nm,0.8s,baz=27,slow=4.2,SNR=3.2						
ACSO	Alum Creek Sta	129.02	69	ePKPpre	PKPpre	20 00 07.3	
DBIC	Dimbokro	141.79	192	PKhKP	PKPpre	20 00 34.5	
	4.7nm,1.0s,baz=180,slow=1.0,SNR=2.6						
SPITS	Spitsbergen Ar	144.39	350	PKP	PKPab	20 00 38.9	-1.2
	29nm,1.0s,baz=64,slow=3.4,SNR=3.8						
BR101	Keskin Array S	146.02	278	ePKPdf	PKPdf	20 00 45.8	-0.2
BR131	Keskin Array S	146.02	278	ePKPdf	PKPdf	20 00 46.3	+0.3
BRTR	Keskin Array B	146.02	278	PKPbc	PKPdf	20 00 45.8	-0.2
	8.6nm,0.9s,baz=134,slow=4.7,SNR=19						
TOA0	Torodi Ar. Sit	146.58	205	ePKPdf	PKPdf	20 00 47.8	+0.4
TORD	Torodi Ar. Bea	146.58	205	PKPbc	PKPdf	20 00 47.6	+0.2
	6.9nm,0.7s,baz=124,slow=1.6,SNR=26						
TOA1	Torodi Ar. Sit	146.59	205	ePKPdf	PKPdf	20 00 47.6	+0.2
ARA0	ARCESS Array S	148.53	336	ePKPbc	PKPbc	20 00 51.9	-0.8
ARCES	ARCESS Array B	148.53	336	PKPbc	PKPbc	20 00 51.9	-0.8
	12nm,1.0s,baz=82,slow=2.8,SNR=12						
MILM	Milestii Mici	151.49	290⇓	iP	PKPbc	20 01 00.4	-0.1
TLB	Topalu	151.53	285⇑	iP	PKPbc	20 01 00.4	-0.2
CFR	Carcaliu	151.60	286⇑	iP	PKPbc	20 01 00.8	0.0
AKASG	Malin Array Be	151.68	298	PKPbc	PKPbc	20 01 00.4	-0.4
	1.5nm,0.4s,baz=75,slow=2.5,SNR=5.9						
AKBB	Malin Array Si	151.68	298	ePKPbc	PKPbc	20 00 60.0	-0.9
FIA0	FINESS Array S	151.95	321	ePKPbc	PKPbc	20 01 00.8	-0.3
FINES	FINESS Array B	151.95	321	PKPbc	PKPbc	20 01 00.8	-0.3
	2.2nm,0.6s,baz=58,slow=3.9,SNR=17						
VRI	Vrincioaia	152.71	287⇓	iP	PKPbc	20 01 00.6	-2.7
MLR	Muntele Rosu	153.18	286⇑	iP	PKPbc	20 01 03.4	-1.1
VTS	Vitosha	154.38	278⇑	iP	PKPbc	20 01 07.0	-0.3
HFS	Hagfors	157.96	324	PKPab	PKPab	20 01 35.5	-0.6
	2.8nm,1.0s,baz=14,slow=3.0,SNR=3.9						
GERES	GERESS Array B	161.74	293	PKPab	PKPab	20 01 52.8	-0.3
	0.8nm,0.9s,baz=90,slow=3.9,SNR=5.0						
CLL	Collm	161.84	301	ePKPab	PKPab	20 01 55.0	+1.7
CLL				e		20 02 10.0	
DAVOX	Davos/Dischmat	164.40	286	PKPab	PKPab	20 02 05.2	+0.1
	0.8nm,0.4s,baz=16,slow=4.8,SNR=4.4						

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*ISCJB **03** 19:41:53.8±1.1, 12°.53S±0°.08×167°.0E±0°.3, h220^{km}, mb3.7/6, Error ellipse: s-maj=34.8km s-min=11.5km az=2.2*

*IDC **03** 19:41:57.1±5.4, 12°.43S×166°.85E, h230^{km}±55^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.4/34, mbtmp4.1/7, Error ellipse: s-maj=42.4km s-min=24.4km az=147.0*

ISC 03 19:41:54.6±1.0**, 12°.69S**±0°.10×**167°.2E**±0°.2**, h220**^{km}**, n9, σ1^{s}56**/10**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.36	184	P	P	19 44 11.7	-1.8
	1.3nm,0.3s,baz=75,slow=12,SNR=12						
DZM				S	S	19 45 51.6	+0.8
	baz=45,slow=16,SNR=2.3						
STKA	Stephens Creek	30.27	227	P	P	19 47 46.6	+1.3
	1.6nm,0.3s,baz=57,slow=11,SNR=16						
ASAR	Alice Springs	33.35	246	P	P	19 48 11.4	-0.9
	1.8nm,0.7s,baz=74,slow=9.3,SNR=21						
CMAR	Chiang Mai Arr	74.03	294	P	P	19 53 07.9	+1.0
	0.9nm,1.0s,baz=134,slow=4.6,SNR=7.1						
SEY	Seymchan	76.25	353	P	P	19 53 18.2	-0.3
	1.4nm,0.6s,baz=351,slow=23,SNR=4.7						
ILAR	Eielson Array	84.63	18	P	P	19 54 02.5	-0.5
	0.8nm,0.6s,baz=237,slow=5.1,SNR=9.4						
MKAR	Makanchi Array	95.66	317	P	P	19 54 54.5	-0.8
	0.5nm,0.6s,baz=86,slow=7.4,SNR=5.2						
ARCES	ARCESS Array B	118.26	346	PKP	PKPdf	20 00 14.7	-0.4
	2.8nm,0.8s,baz=62,slow=1.9,SNR=5.2						
ROSC	El Rosal	118.86	91	PKP	PKiKP	20 00 21.3	+2.9
	6.2nm,0.6s,baz=223,slow=23,SNR=3.7						

WEL 03 19:46:58.4, 45°S±2°×**16°8E**±°**, h5**^{km}±1^{km}**, M3.4**/14**, ML3.5**/13**, MLv3.4**/14**, Error ellipse: s-maj=0.0km s-min=0.0km az=91.2, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.06	264	P	Pg	19 47 00.8	+1.0
MSZ				S	Sg	19 47 03.2	+2.4
MLZ	Mavora Lakes	0.70	173	P	Pb	19 47 13.3	+0.2
WKZ	Wanaka	0.74	103	P	Pb	19 47 13.8	+0.1
WKZ				S	Sb	19 47 25.2	+1.0
JCZ	Jackson Bay	0.82	44	P	Pg	19 47 11.8	-2.2
DCZ	Deep Cove	1.00	217	P	Pg	19 47 16.5	-1.0
EAZ	Earnscleugh	1.08	122	P	Pb	19 47 19.9	+0.3
WHZ	Wether Hill Ro	1.23	182	P	Pg	19 47 21.7	-0.2
WHZ				S	Sn	19 47 39.4	+0.3
LBZ	Lake Benmore	1.58	81	P	Pn	19 47 27.4	+0.3
TUZ	Tuapeka	1.72	139	P	Pb	19 47 30.4	0.0
FOZ	Fox Glacier	1.73	50	P	Pn	19 47 29.0	0.0
PYZ	Puysegur Point	1.77	211	P	Pn	19 47 30.3	+0.7
ODZ	Otahua Downs	1.92	102	P	Pn	19 47 32.0	+0.4
SYZ	Scrubby Hill	2.03	157	P	Pb	19 47 34.5	-1.2
GCSZ	Gaunt Creek Bo	2.15	52	P	Pn	19 47 34.4	-0.5
APZ	The Paps	2.17	180	P	Pn	19 47 36.3	+1.2
HHSZ	Highcliff Hill	2.20	125	P	Pn	19 47 37.0	+1.5
RPZ	Rata Peaks	2.39	68	P	Pn	19 47 37.4	-0.7
WVZ	Waitaha Valley	2.54	52	P	Pn	19 47 40.0	-0.1

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*ROM **03** 19:50:31.5±0.1, 43°.433N±0°.004×13°.131E±0°.007, h9^{km}, ML2.5/30, Error ellipse: s-maj=0.6km s-min=0.2km az=61.0*

*ISCJB **03** 19:50:32.0±0.3, 43°.44N±0°.02×13°.14E±0°.03, h10^{km}±3^{km}, Error ellipse: s-maj=4.0km s-min=2.7km az=143.8*

ISC 03 19:50:32.0±0.8**, 43°.44N**±0°.02×**13°.14E**±0°.02**, h9**^{km}±5^{km}**, n44, σ0^{s}92**/61**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	Cingoli	0.07	145	P	Pg	19 50 33.9	-0.2
CING				S	Sg	19 50 35.5	-0.2
CING				AML	AML		
	comp=E,9575µm,0.6s						
CING				AML	AML		
	comp=N,8565µm,0.5s						
CING				AML	AML		
	comp=E,9575µm,0.6s						
CING				AML	AML		
	comp=N,8570µm,0.5s						
CING				AML	AML		
	comp=E,9575µm,0.6s						
CING				AML	AML		
	comp=N,8570µm,0.5s						
MMUR	Monte Murano	0.10	274	P	Pg	19 50 34.4	-0.2
MMUR				S	Sg	19 50 36.4	0.0
MMUR				AML	AML		
	comp=E,15700µm,0.2s						
MMUR				AML	AML		
	comp=N,12400µm,0.2s						
MMUR				AML	AML		
	comp=E,15650µm,0.2s						
MMUR				AML	AML		
	comp=N,12450µm,0.2s						
MMUR				AML	AML		
	comp=N,12450µm,0.2s						
MMUR				AML	AML		
	comp=E,15650µm,0.2s						
ARVD	Arcevia	0.16	294	P	Pg	19 50 35.2	-0.2
ARVD				S	Sg	19 50 37.9	+0.1
ARVD				AML	AML		
	comp=E,1098µm,0.5s						
ARVD				AML	AML		
	comp=N,1020µm,0.2s						
ARVD				AML	AML		
	comp=E,1098µm,0.5s						
ARVD				AML	AML		
	comp=N,1020µm,0.2s						
ARVD				AML	AML		
	comp=E,1098µm,0.5s						
ARVD				AML	AML		
	comp=N,1020µm,0.2s						
GAG1	Gagliole	0.20	195	P	Pg	19 50 36.2	-0.1
GAG1				S	Sg	19 50 39.9	+0.8
GAG1				AML	AML		
	comp=E,4620µm,1.2s						
GAG1				AML	AML		
	comp=N,3880µm,0.4s						
GAG1				AML	AML		
	comp=E,4620µm,1.3s						
GAG1				AML	AML		
	comp=N,3880µm,0.4s						
GAG1				AML	AML		
	comp=N,3880µm,0.4s						
GAG1				AML	AML		
	comp=E,4620µm,1.3s						
COR1	Corinaldo	0.22	333	P	Pg	19 50 37.2	+0.6
COR1				AML	AML		
	comp=E,3960µm,0.4s						
COR1				AML	AML		
	comp=N,3795µm,0.3s						
COR1				AML	AML		
	comp=E,2265µm,0.4s						
COR1				AML	AML		
	comp=N,3730µm,0.3s						
COR1				AML	AML		
	comp=E,3960µm,0.4s						
COR1				AML	AML		
	comp=N,3795µm,0.3s						
COR1				AML	AML		
	comp=N,3795µm,0.3s						
COR1				AML	AML		
	comp=E,3960µm,0.4s						
SNTG	Esanatoglia	0.23	219	P	Pg	19 50 36.7	-0.1
SNTG				S	Sg	19 50 40.6	+0.7
SNTG				AML	AML		
	comp=E,814µm,1.4s						
SNTG				AML	AML		
	comp=N,1120µm,1.3s						
SNTG				AML	AML		
	comp=E,814µm,1.4s						
SNTG				AML	AML		
	comp=N,1120µm,1.3s						
SNTG				AML	AML		
	comp=N,1120µm,1.3s						
SNTG				AML	AML		
	comp=E,814µm,1.4s						
CRM1	Catelraimondo	0.23	195	P	Pg	19 50 36.8	+0.1
CRM1				S	Sg	19 50 41.0	+1.1
CRM1				AML	AML		
	comp=E,3620µm,0.4s						
CRM1				AML	AML		
	comp=N,4515µm,0.4s						
CRM1				AML	AML		
	comp=E,3620µm,0.4s						
CRM1				AML	AML		
	comp=N,4515µm,0.4s						
CRM1				AML	AML		
	comp=N,4515µm,0.4s						
CRM1				AML	AML		
	comp=E,3620µm,0.4s						
SENI	Senigallia	0.28	14	P	Pb	19 50 38.5	-0.7
FOSV	Fossato di Vic	0.31	243	P	Pg	19 50 38.0	-0.2
FOSV				S	Sb	19 50 43.0	-1.9
FOSV				AML	AML		
	comp=E,934µm,0.3s						
FOSV				AML	AML		
	comp=N,1004µm,0.9s						
FOSV				AML	AML		

	comp=E,934µm,0.3s						
FOSV				AML	AML		
	comp=N,1003µm,0.9s						
FOSV				AML	AML		
	comp=N,1003µm,0.9s						
FOSV				AML	AML		
	comp=E,934µm,0.3s						
FRON	**Frontone**	**0.31**	**286**	P	**Pg**	**19 50 38.1**	**-0.2**
FRON				S	**Sb**	**19 50 43.4**	**-1.6**
FRON				AML	AML		
	comp=E,763µm,0.5s						
FRON				AML	AML		
	comp=N,692µm,0.3s						
FRON				AML	AML		
	comp=E,762µm,0.5s						
FRON				AML	AML		
	comp=N,692µm,0.3s						
FRON				AML	AML		
	comp=E,762µm,0.5s						
FRON				AML	AML		
	comp=N,692µm,0.3s						
FRON				AML	AML		
	comp=E,762µm,0.5s						
FRON				AML	AML		
	comp=N,692µm,0.3s						
MPAG	**Monte Paganucc**	**0.34**	**305**	P	**Pg**	**19 50 38.3**	**-0.4**
MPAG				S	**Sb**	**19 50 43.9**	**-1.9**
MPAG				AML	AML		
	comp=E,391µm,0.7s						
MPAG				AML	AML		
	comp=N,487µm,0.7s						
MPAG				AML	AML		
	comp=E,391µm,0.7s						
MPAG				AML	AML		
	comp=N,488µm,0.7s						
MPAG				AML	AML		
	comp=N,488µm,0.7s						
MPAG				AML	AML		
	comp=E,391µm,0.7s						
CSP1	**Cessapalombo**	**0.35**	**172**	P	**Pg**	**19 50 38.8**	**-0.1**
CSP1				S	**Sb**	**19 50 44.8**	**-1.3**
CSP1				AML	AML		
	comp=E,1575µm,0.5s						
CSP1				AML	AML		
	comp=N,1755µm,0.5s						
CSP1				AML	AML		
	comp=E,1582µm,0.5s						
CSP1				AML	AML		
	comp=N,1770µm,0.5s						
CSP1				AML	AML		
	comp=N,1770µm,0.5s						
CSP1				AML	AML		
	comp=E,1582µm,0.5s						
FSSB	**Fossombrone**	**0.37**	**315**	P	**Pg**	**19 50 39.1**	**-0.2**
FSSB				S	**Sb**	**19 50 45.2**	**-1.4**
FDMO	**Fiordimonte**	**0.40**	**185**	P	**Pg**	**19 50 39.7**	**-0.2**
FDMO				S	**Sb**	**19 50 46.5**	**-1.0**
FDMO				AML	AML		
	comp=E,856µm,0.5s						
FDMO				AML	AML		
	comp=N,752µm,0.2s						
FDMO				AML	AML		
	comp=E,856µm,0.5s						
FDMO				AML	AML		
	comp=N,752µm,0.2s						
FDMO				AML	AML		
	comp=E,856µm,0.5s						
FDMO				AML	AML		
	comp=N,751µm,0.2s						
FDMO				AML	AML		
	comp=E,856µm,0.5s						
FDMO				AML	AML		
	comp=N,751µm,0.2s						
ATFO	**Monte Foce - G**	**0.42**	**261**	P	**Pg**	**19 50 40.1**	**-0.1**
ATFO				S	**Sb**	**19 50 47.2**	**-0.9**
ATFO				AML	AML		
	comp=E,951µm,0.4s						
ATFO				AML	AML		
	comp=N,1665µm,0.6s						
ATFO				AML	AML		
	comp=E,952µm,0.4s						
ATFO				AML	AML		
	comp=N,1665µm,0.6s						
ATFO				AML	AML		
	comp=E,951µm,0.4s						
ATFO				AML	AML		
	comp=N,1665µm,0.6s						
ATFO				AML	AML		
	comp=N,1665µm,0.6s						
ATFO				AML	AML		
	comp=E,951µm,0.4s						
PIEI	**Pieia**	**0.45**	**283**	P	**Pg**	**19 50 40.4**	**-0.5**
PIEI				S	**Sb**	**19 50 47.7**	**-1.3**
PIEI				AML	AML		
	comp=E,480µm,0.8s						
PIEI				AML	AML		
	comp=N,335µm,0.2s						
PIEI				AML	AML		
	comp=E,480µm,0.8s						
PIEI				AML	AML		
	comp=N,335µm,0.2s						
PIEI				AML	AML		
	comp=E,480µm,0.8s						
PIEI				AML	AML		
	comp=N,336µm,0.2s						
PIEI				AML	AML		
	comp=E,480µm,0.8s						
PIEI				AML	AML		
	comp=N,336µm,0.2s						
CESI	**CESI - Serrava**	**0.46**	**202**	P	**Pg**	**19 50 40.9**	**-0.2**
CESI				S	**Sb**	**19 50 48.9**	**-0.5**
CESI				AML	AML		
	comp=E,204µm,0.3s						
CESI				AML	AML		
	comp=N,322µm,0.4s						
CESI				AML	AML		
	comp=E,205µm,0.3s						
CESI				AML	AML		
	comp=N,322µm,0.4s						
CESI				AML	AML		
	comp=E,205µm,0.3s						
CESI				AML	AML		
	comp=N,322µm,0.4s						
CESI				AML	AML		
	comp=E,205µm,0.3s						
CESI				AML	AML		
	comp=N,322µm,0.4s						
MURB	**Monte Urbino**	**0.48**	**249**	P	**Pb**	**19 50 42.2**	**-0.5**
MURB				AML	AML		
	comp=E,1900µm,0.3s						
MURB				AML	AML		
	comp=N,2065µm,0.3s						
MURB				AML	AML		
	comp=E,2010µm,0.3s						
MURB				AML	AML		
	comp=N,2130µm,0.3s						
MURB				AML	AML		
	comp=E,1900µm,0.3s						
MURB				AML	AML		
	comp=N,2065µm,0.3s						
MURB				AML	AML		
	comp=E,2010µm,0.3s						
MURB				AML	AML		
	comp=N,2130µm,0.3s						
MURB				AML	AML		
	comp=E,1900µm,0.3s						
MURB				AML	AML		
	comp=N,2065µm,0.3s						
MURB				AML	AML		
	comp=E,2010µm,0.3s						
MURB				AML	AML		
	comp=N,2135µm,0.3s						
MURB				AML	AML		
	comp=E,1900µm,0.3s						
MURB				AML	AML		
	comp=N,2065µm,0.3s						
MURB				AML	AML		
	comp=N,2135µm,0.3s						
MURB				AML	AML		
	comp=E,2010µm,0.3s						
PE3	**Peglio**	**0.54**	**299**	P	**Pg**	**19 50 42.4**	**0.0**
PE3				AML	AML		
	comp=E,733µm,0.3s						
PE3				AML	AML		
	comp=N,1365µm,0.4s						
PE3				AML	AML		
	comp=E,734µm,0.3s						
PE3				AML	AML		
	comp=N,1365µm,0.4s						
PE3				AML	AML		
	comp=N,1365µm,0.4s						
PE3				AML	AML		
	comp=E,734µm,0.3s						
ATPI	**Pietralunga -**	**0.54**	**272**	P	**Pg**	**19 50 42.2**	**-0.3**
ATPI				S	**Sb**	**19 50 51.0**	**-0.5**
ATPI				AML	AML		
	comp=E,586µm,0.7s						
ATPI				AML	AML		
	comp=N,720µm,0.3s						
ATPI				AML	AML		
	comp=E,585µm,0.7s						
ATPI				AML	AML		
	comp=N,720µm,0.3s						
ATPI				AML	AML		
	comp=E,585µm,0.7s						
ATPI				AML	AML		
	comp=N,720µm,0.3s						
ATVO	**AVT- Monte Val**	**0.54**	**265**	P	**Pg**	**19 50 42.1**	**-0.3**
ATVO				S	**Sb**	**19 50 50.6**	**-0.9**
ATVO				AML	AML		
	comp=E,358µm,0.9s						
ATVO				AML	AML		
	comp=N,534µm,0.5s						
ATVO				AML	AML		
	comp=E,358µm,0.9s						
ATVO				AML	AML		
	comp=N,534µm,0.5s						
ATVO				AML	AML		
	comp=E,358µm,0.9s						
ATVO				AML	AML		
	comp=N,534µm,0.5s						
ATVO				AML	AML		
	comp=N,534µm,0.5s						
ATVO				AML	AML		
	comp=E,358µm,0.9s						
PESA	**Pesaro**	**0.55**	**337**	P	**Pb**	**19 50 42.9**	**-1.0**
PESA				AML	AML		
	comp=E,698µm,0.7s						
PESA				AML	AML		
	comp=N,641µm,1.3s						
PESA				AML	AML		
	comp=E,697µm,0.7s						
PESA				AML	AML		
	comp=N,640µm,1.3s						
PESA				AML	AML		
	comp=N,640µm,1.3s						
PESA				AML	AML		
	comp=E,697µm,0.7s						
NRCA	**Norcia**	**0.60**	**182**	P	**Pg**	**19 50 43.3**	**-0.4**
NRCA				AML	AML		
	comp=E,693µm,1.3s						
NRCA				AML	AML		
	comp=N,836µm,0.1s						
NRCA				AML	AML		
	comp=E,693µm,1.3s						
NRCA				AML	AML		
	comp=N,836µm,0.1s						
NRCA				AML	AML		
	comp=E,693µm,1.3s						
NRCA				AML	AML		
	comp=N,836µm,0.1s						
BADI	**Badiali**	**0.66**	**277**	P	**Pg**	**19 50 44.3**	**-0.4**
BADI				AML	AML		
	comp=E,444µm,0.2s						
BADI				AML	AML		
	comp=N,630µm,0.3s						
BADI				AML	AML		
	comp=E,444µm,0.2s						
BADI				AML	AML		
	comp=N,630µm,0.3s						
BADI				AML	AML		
	comp=N,630µm,0.3s						
BADI				AML	AML		
	comp=E,444µm,0.2s						
PARC	**Parchiule**	**0.69**	**288**	P	**Pg**	**19 50 44.8**	**-0.5**
PARC				AML	AML		
	comp=E,154µm,0.5s						
PARC				AML	AML		
	comp=N,171µm,0.4s						
PARC				AML	AML		
	comp=E,154µm,0.5s						
PARC				AML	AML		
	comp=N,171µm,0.4s						
PARC				AML	AML		
	comp=N,171µm,0.4s						
PARC				AML	AML		
	comp=E,154µm,0.5s						
GUMA	**Gualdo di Mace**	**0.69**	**122**	P	Pg	19 50 40.2	-5.2
GUMA				AML	AML		
	comp=E,5950µm,0.4s						
GUMA				AML	AML		
	comp=N,3270µm,0.4s						
GUMA				AML	AML		
	comp=E,7435µm,0.3s						
GUMA				AML	AML		
	comp=N,2590µm,0.3s						
GUMA				AML	AML		
	comp=E,5950µm,0.4s						
GUMA				AML	AML		
	comp=N,3265µm,0.3s						
GUMA				AML	AML		
	comp=E,7435µm,0.3s						
GUMA				AML	AML		
	comp=N,2590µm,0.3s						
GUMA				AML	AML		
	comp=N,3265µm,0.3s						
GUMA				AML	AML		
	comp=E,5950µm,0.4s						
GUMA				AML	AML		
	comp=N,2590µm,0.3s						
GUMA				AML	AML		
	comp=E,7435µm,0.3s						
SMA1	**SAN MARTINO**	**0.82**	**170**	P	**Pg**	**19 50 47.1**	**-0.7**
SMA1				AML	AML		
	comp=E,498µm,0.3s						
SMA1				AML	AML		
	comp=N,494µm,0.3s						
SMA1				AML	AML		
	comp=E,498µm,0.3s						
SMA1				AML	AML		
	comp=N,494µm,0.3s						
SMA1				AML	AML		
	comp=E,498µm,0.3s						
SMA1				AML	AML		
	comp=N,494µm,0.3s						
LNSS	**Leonessa**	**0.83**	**185**	P	**Pg**	**19 50 47.3**	**-0.8**
LNSS				AML	AML		
	comp=E,352µm,0.2s						
LNSS				AML	AML		
	comp=N,318µm,1.1s						
LNSS				AML	AML		
	comp=E,352µm,0.2s						
LNSS				AML	AML		
	comp=N,318µm,1.1s						
LNSS				AML	AML		
	comp=N,318µm,1.1s						
LNSS				AML	AML		
	comp=E,352µm,0.2s						
TERO	**Teramo**	**0.88**	**157**	P	**Pg**	**19 50 48.4**	**-0.5**
TERO				AML	AML		
	comp=E,186µm,0.3s						
TERO				AML	AML		
	comp=N,138µm,0.8s						
TERO				AML	AML		
	comp=E,186µm,0.3s						
TERO				AML	AML		
	comp=N,138µm,0.8s						
TERO				AML	AML		
	comp=E,186µm,0.3s						
TERO				AML	AML		
	comp=N,138µm,0.8s						
ARRO	**Arrone**	**0.90**	**198**	AML	AML		
	comp=N,121µm,0.8s						
ARRO				AML	AML		
	comp=E,158µm,0.3s						
ARRO				AML	AML		
	comp=N,121µm,0.8s						
ARRO				AML	AML		
	comp=E,158µm,0.3s						
ARRO				AML	AML		
	comp=N,121µm,0.8s						
ARRO				AML	AML		
	comp=E,158µm,0.3s						
FIAM	**Fiamignano**	**1.17**	**181**	AML	AML		
	comp=E,101µm,0.4s						
FIAM				AML	AML		
	comp=N,116µm,0.7s						
FIAM				AML	AML		
	comp=N,116µm,0.7s						
FIAM				AML	AML		
	comp=E,101µm,0.4s						
FAGN	**Fagnano**	**1.21**	**164**	AML	AML		
	comp=N,335µm,0.4s						
FAGN				AML	AML		
	comp=E,466µm,0.5s						
FAGN				AML	AML		
	comp=N,335µm,0.4s						
FAGN				AML	AML		
	comp=E,466µm,0.5s						
DUGI	**Dugi Otok**	**1.50**	**68**	*i* Pn	**Pb**	**19 50 59.3**	**-0.7**
NVLJ	**Novalja**	**1.68**	**47**	*e*Pn	**Pn**	**19 51 01.3**	**-0.3**
NVLJ				Sn	**Sn**	**19 51 23.3**	**0.0**
ZIRJ	**Zirje**	**1.83**	**82**	*i* Pn	**Pn**	**19 51 04.1**	**+0.4**
ZIRJ				Sn	**Sb**	**19 51 28.0**	**-0.8**
MORI	**Morici**	**1.91**	**76**	*e*Pn	**Pg**	**19 51 07.8**	**-0.9**
MORI				Sn	**Sb**	**19 51 30.0**	**-1.1**
KIJV	**Kijevo**	**2.44**	**75**	*e*Pn	**Pn**	**19 51 13.2**	**+1.2**
KIJV				Sn	**Sn**	**19 51 43.1**	**+1.2**
MAKA	**Makarska**	**2.83**	**92**	Sn	**Sn**	**19 51 53.3**	**+1.6**
OBKA	**Obir**	**3.23**	**18**	*e*Pn	**Pb**	**19 51 30.4**	**+0.8**
	comp=E,0.6nm,0.2s						
ABTA	**Abfaltersbach**	**3.34**	**353**	*e*Pn	**Pn**	**19 51 25.6**	**+1.1**
	comp=E,0.3nm,0.1s						
KBA	**Koelnbreinsper**	**3.65**	**2**	*e*Pn	**Pn**	**19 51 29.9**	**+1.1**
	comp=E,0.3nm,0.2s						
FETA	**Feichten**	**3.97**	**335**	*i* Pn	**Pn**	**19 51 35.4**	**+2.2**
SQTA	**Sankt Quirin**	**4.02**	**341**	*e*Pn	**Pn**	**19 51 36.0**	**+2.1**
	comp=E,0.7nm,0.2s						
MOTA	**Moosalm**	**4.16**	**341**	*e*Pn	**Pn**	**19 51 35.2**	**-0.7**
	comp=E,1.0nm,0.4s						

WEL 03 19:59:24.6, 45°S±2°×**16°8E**±°**, h6**^{km}±1^{km}**, M3.8**/19**, ML3.9**/14**, MLv3.8**/19**, Error ellipse: s-maj=0.0km s-min=0.0km az=94.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.09**	**205**	P	Pg	19 59 28.1	+1.5
MSZ				S	Sg	19 59 30.7	+2.6
JCZ	**Jackson Bay**	**0.77**	**48**	P	Pg	19 59 38.6	-0.8
JCZ				S	Sg	19 59 48.8	-0.6
WKZ	**Wanaka**	**0.78**	**108**	P	Pb	19 59 40.8	+0.3
WKZ				S	Sb	19 59 51.8	+0.5
MLZ	**Mavora Lakes**	**0.78**	**173**	P	Pb	19 59 40.7	+0.1
MLZ				S	Sb	19 59 52.9	+1.4
DCZ	**Deep Cove**	**1.05**	**214**	P	Pg	19 59 43.9	-0.8
DCZ				S	Sb	19 59 59.0	-0.2
EAZ	**Earnscleugh**	**1.14**	**125**	P	Pn	19 59 47.2	+0.1
WHZ	**Wether Hill Ro**	**1.30**	**181**	P	Pn	19 59 49.1	-0.2
LBZ	**Lake Benmore**	**1.59**	**83**	P	Pb	19 59 54.4	+0.1
FOZ	**Fox Glacier**	**1.69**	**52**	P	Pn	19 59 53.6	-1.0
FOZ				S	Sb	20 00 17.5	-0.1
TUZ	**Tuapeka**	**1.79**	**140**	P	Pb	19 59 57.9	+0.1
PYZ	**Puysegur Point**	**1.82**	**210**	P	Pn	19 59 55.7	-0.7
ODZ	**Otahua Downs**	**1.95**	**104**	P	Pn	19 59 59.0	+0.8
SYZ	**Scrubby Hill**	**2.11**	**158**	P	Pn	20 00 01.7	+1.3
GCSZ	**Gaunt Creek Bo**	**2.12**	**54**	P	Pb	20 00 02.6	-0.7
APZ	**The Paps**	**2.24**	**180**	P	Pb	20 00 03.9	-1.6
HHSZ	**Highcliff Hill**	**2.26**	**126**	P	Pb	20 00 04.3	-1.4
RPZ	**Rata Peaks**	**2.38**	**70**	P	Pn	20 00 04.8	+0.7
WVZ	**Waitaha Valley**	**2.50**	**54**	P	Pn	20 00 05.8	0.0
INZ	**Inchbonnie**	**3.13**	**55**	P	Pn	20 00 13.1	-1.3
EYCZ	**Eyrewell**	**3.37**	**71**	P	Pn	20 00 17.1	-0.5
MQZ	**McQueen's Vall**	**3.48**	**77**	P	Pn	20 00 18.4	-0.7
LTZ	**Lake Taylor**	**3.60**	**61**	P	Pn	20 00 20.5	-0.4
AKCZ	**Akaroa Harbour**	**3.61**	**80**	P	Pn	20 00 20.2	-0.9
AMCZ	**Amberley**	**3.66**	**69**	P	Pn	20 00 21.2	-0.5
OKCZ	**Okains Bay**	**3.75**	**78**	P	Pn	20 00 22.9	-0.1
DSZ	**Denniston Nort**	**3.99**	**46**	P	Pn	20 00 26.2	0.0
GVZ	**Greta Valley S**	**4.00**	**68**	P	Pn	20 00 26.0	-0.4
THZ	**Tophouse**	**4.58**	**54**	P	Pn	20 00 34.1	-0.2
QRZ	**Quartz Range**	**5.04**	**43**	P	Pn	20 00 39.2	-1.4
NNZ	**Nelson**	**5.20**	**52**	P	Pn	20 00 43.0	+0.1
TUWZ	**Tuamarina**	**5.39**	**56**	P	Pn	20 00 46.4	+0.9
TCW	**Tory Channel**	**5.72**	**56**	P	Pn	20 00 51.3	+1.3
DUWZ	**D'Urville Isla**	**5.79**	**51**	P	Pn	20 00 50.3	-0.6
KHEZ	**Kahui Hut**	**6.94**	**42**	P	Pn	20 01 06.9	0.0
PKE	**Pukeiti**	**7.01**	**42**	P	Pn	20 01 07.5	-0.2

IDC ***03*** *20:01:47.5±2.1, 2°.11N×31°.26E, h0*^{km}*, mb3.5/4, mb1 3.7/5, mb1mx3.4/28, mbtmp3.5/5, ML3.5/1, MS4.4/2, Ms1 4.3/2, ms1mx3.5/30, Error ellipse: s-maj=54.0km s-min=25.9km az=30.0*

ISC 03 20:01:49.0±1.4**, 2°.1N**±0°.2×**31°.3E**±0°.2**, h10**^{km}**, n11,** σ**0^{s}.54**/7**, mb3.7**/5**, 1C-1D, Uganda**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**2.75**	**191**	⇑*e*P	Pn	20 02 21.7	-12
MBAR				⇓*e*S	Sn	20 02 47.2	-20
KMBO	**Kilima Mbogo**	**6.80**	**118**	Pn	**Pn**	**20 03 28.9**	**-0.3**
	0.9nm,0.3s,baz=282,slow=15,SNR=8.5						
KMBO				Sn	**Sn**	**20 04 47.1**	**+0.2**
	4.6nm,0.3s,baz=249,slow=14,SNR=4.1						
KMBO				Lg	Lg	20 05 19.2	
	6.7nm,0.3s,baz=207,slow=22,SNR=10						
KOND	**Kondoa**	**8.32**	**147**	*i* S	Sn	20 05 06.7	-17
KIBA	**Kibaya**	**9.09**	**144**	*i* P	Pn	20 03 52.4	-8.1
KIBA				*i* S	Sn	20 05 23.3	-20
TORD	**Torodi Ar. Bea**	**31.24**	**292**	P	**P**	**20 08 09.4**	**+0.3**
	6.4nm,0.3s,baz=125,slow=11,SNR=3.8						
SUR	**Sutherland**	**35.71**	**195**	LR	LR	20 24 18.6	
	comp=Z,452nm,20.2s,baz=344,slow=38						
AKASG	**Malin Array Be**	**48.44**	**358**	P	**P**	**20 10 31.8**	**+0.3**
	0.1nm,0.3s,baz=186,slow=7.4,SNR=2.8						
GERES	**GERESS Array B**	**48.93**	**345**	P	**P**	**20 10 34.9**	**-0.5**
	0.5nm,0.7s,baz=170,slow=7.0,SNR=3.7						
FINES	**FINESS Array B**	**59.31**	**357**	P	**P**	**20 11 50.3**	**-0.5**
	0.8nm,0.8s,baz=172,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**62.71**	**37**	P	**P**	**20 12 14.8**	**+0.6**
	0.3nm,0.6s,baz=230,slow=8.3,SNR=4.1						
MAW	**Mawson**	**73.01**	**168**	LR	LR	20 42 13.3	
	comp=Z,304nm,20.0s,baz=285,slow=33						

MAN 03 20:07:04.3, 13°.22N×120°.74E, h37^{km}**, mb3.6, ML2.3, MS1.7, 1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.35**	**37**	⇓*e*P	Pn	20 07 14.4	+1.7
LUBP	**Lubang**	**0.70**	**317**	*e*P	Pn	20 07 18.4	+0.7
LUBP				*e*S	Sn	20 07 29.1	+1.9
SJMP	**San Jose**	**0.84**	**154**	*e*P	Pn	20 07 20.4	+0.8
SJMP				*e*S	Sn	20 07 32.2	+1.4

MEX 03 20:12:17.0±0.7**, 19°.10N×104°.16W, h5**^{km}**, MD3.9, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EZ5V		**0.65**	**54**	*e*P	Pg	20 12 28.8	-0.6
EZ5V				*e*S	Sg	20 12 38.0	+0.2
CJM	**Chamela**	**0.93**	**295**	*e*P	Pg	20 12 33.3	-1.5
CJM				*e*S	Sg	20 12 45.7	-1.1
MMIG	**Aquila**	**1.12**	**136**	*e*P	Pg	20 12 35.5	-2.9
MMIG				*e*S	Sg	20 12 49.9	-3.0
ARIG	**Puente Sto Nin**	**3.70**	**102**	*e*P	Pn	20 13 12.6	-2.4
ARIG				*i* S	Sn	20 13 54.7	-4.3

WEL ***03*** *20:13:31.3±0.5, 33°S±5°×17°9W±1°2, h5*^{km}*, M5.6/39, mB5.9/24, ML6.4/30, MLv6.1/39, Mw(mB)5.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=108.9*

MOS ***03*** *20:13:32.0±0.9, 32°.14S×179°.94E, h206*^{km}*, mb5.3/27, Error ellipse: s-maj=9.9km s-min=8.7km az=86.4*

BJI ***03*** *20:13:33.1±0.0, 32°.12S×179°.84W, h225*^{km}*, mb5.0/25, mB5.5/17*

ISCJB ***03*** *20:13:35.6±0.1, 32°.53S±0°.02×179°.87E±0°.03, h250*^{km}*, mb5.0/153, Error ellipse: s-maj=4.1km s-min=2.0km az=22.5*

IDC ***03*** *20:13:35.3±0.9, 32°.25S×179°.95W, h231*^{km}*±7*^{km}*, mb4.7/23, mb1 4.7/24, mb1mx4.6/34, mbtmp5.3/24, Error ellipse: s-maj=13.2km s-min=9.6km az=6.0*

GCMT **03** *20:13:36.3±0.2,32°.05S±0°.01×179°.86W±0°.01, h222km±1km,MW5.4/118,Moment Tensor Solution. s84,c123; s118,c180; Duration: 1s.2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.84±.03; $M_{\theta\theta}$-0.29±.03; $M_{\phi\phi}$1.13±.03; $M_{r\theta}$-0.65±.03; $M_{\theta\phi}$-0.12±.03; $M_{\phi r}$-0.94±.03; Best double couple: $M_0$1.53700×10^{17} NP1:ϕ_s24.00000°,δ72.00000°, λ-65.00000°. NP2:ϕ_s148.00000°,δ30.00000°, λ-142.00000°. Principal axes: T 1.5190, Plg23.0000°, Azm95.0000°; N 0.0350, Plg23.0000°, Azm195.0000°; P -1.5550, Plg56.0000°, Azm326.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **03** *20:13:37.3±1.5,32°.23S×179°.90E,h250km±4km, mb5.1/127 Error ellipse: s-maj=15.1km s-min=12.9km az=97.0*

ISC 03 20:13:36.7±0.2**,32°.38S**±0°.04×**179°.96W**±0°.05**,h250km, n722,**σ1s.**76**/741**,mb5.1**/148**,25C-21D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.57	30	S	S	20 15 07.5	-15
RAO	Raoul Island	3.58	30	eP	Pn	20 14 27.1	-8.6
RAO	Raoul Island	3.58	30	eP	Pn	20 14 27.1	-8.5
RIZ	Raoul Island	3.58	30	S	S	20 15 10.0	-12
MXZ	Matakaoa Point	5.37	195	eP	Pn	20 14 52.7	-4.2
MXZ	Matakaoa Point	5.37	195	P	Pn	20 14 52.8	-4.0
GRZ	Great Barrier	5.41	223	P	Pn	20 14 58.7	+1.2
WMGZ	Waiomatatini S	5.59	193	P	Pn	20 14 57.5	-2.1
KUZ	Kuaotunu	5.63	218	P	Pn	20 15 01.3	+1.2
HAZ	Te Kaha	5.68	198	P	Pn	20 14 58.3	-2.3
PKGZ	Pakihiroa	5.73	196	P	Pn	20 14 58.3	-3.1
PUZ	Puketiti	5.87	194	P	Pn	20 14 59.1	-4.0
PUZ				S	S	20 16 07.7	-4.4
RUGZ	Raukumara Rang	5.90	198	P	Pn	20 15 01.7	-1.9
RUGZ				S	S	20 16 08.4	-4.7
WCZ	Waipu Caves	5.91	231	P	Pn	20 15 05.0	+1.4
WIAZ	Waiheke Island	5.98	221	P	Pn	20 15 06.6	+2.1
WHRZ	Whale Island	6.01	204	P	Pn	20 15 03.8	-1.1
TWGZ	Tauwhareparae	6.03	196	P	Pn	20 15 02.3	-2.8
TWGZ				S	S	20 16 13.1	-2.8
OUZ	Omahuta	6.07	240	ePn	Pn	20 15 06.4	+0.8
OUZ	Omahuta	6.07	240	P	Pn	20 15 06.5	+0.9
OPRZ	Ohinepanea	6.16	207	P	Pn	20 15 04.4	-2.3
MKAZ	Moumakai	6.19	219	P	Pn	20 15 09.1	+2.0
MARZ	Manawahe	6.24	205	P	Pn	20 15 08.0	+0.3
CNGZ	Carnagh Statio	6.27	193	P	Pn	20 15 04.6	-3.5
MWZ	Matawai	6.29	198	P	Pn	20 15 04.8	-3.5
MWZ	Matawai	6.29	198	P	S	20 16 23.3	+1.5
TKGZ	Te Karaka	6.31	196	P	Pn	20 15 04.3	-4.3
TKGZ				S	S	20 16 20.1	-2.0
EDRZ	Edgecumbe	6.32	204	P	Pn	20 15 09.3	+0.5
EDRZ	Edgecumbe	6.32	204	P	S	20 16 26.1	+3.5
URZ	Urewera	6.34	201	P	Pn	20 15 05.8	-3.1
	21nm,0.3s,baz=320,slow=4.9,SNR=24						
URZ				S	S	20 16 15.0	-7.8
	90nm,0.3s,baz=316,slow=4.0,SNR=4.4						
URZ	Urewera	6.34	201	ePn	Pn	20 15 05.1	-3.8
URZ	Urewera	6.34	201	P	Pn	20 15 06.1	-2.8
URZ	Urewera	6.34	201	P	S	20 16 23.7	+0.9
LIRZ	Lichensteins R	6.36	207	P	Pn	20 15 12.1	+2.9
OMRZ	Omania	6.46	207	P	Pn	20 15 07.3	-3.2
RAGZ	Rawiri	6.47	199	P	Pn	20 15 07.1	-3.5
TOZ	Tahuroa Road	6.51	214	P	Pn	20 15 11.7	+0.6
RIGZ	Rimuhau	6.58	196	P	Pn	20 15 07.9	-4.1
RIGZ	Rimuhau	6.58	196	P	S	20 16 29.4	+0.9
HLRZ	Highlands Stat	6.59	206	P	Pn	20 15 12.8	+0.7
HSRZ	Hossack Road	6.68	207	P	Pn	20 15 14.4	+1.1
SNGZ	Shannon Statio	6.76	198	P	Pn	20 15 10.2	-4.0
PRGZ	Paritu Road	6.76	194	P	Pn	20 15 10.5	-3.8
ALRZ	Allen Road	6.87	205	P	Pn	20 15 12.6	-3.0
WPRZ	Whakapapatarin	6.90	206	P	Pn	20 15 17.7	+1.8
KNZ	Kokohu	6.90	196	P	Pn	20 15 09.7	-6.3
MHGZ	Mahia Peninsul	6.98	194	P	Pn	20 15 11.8	-5.2
TLZ	Tolley Road	6.98	211	P	Pn	20 15 19.6	+2.5
MRHZ	Matea Rd	7.08	204	P	Pn	20 15 16.2	-2.1
WHTZ	Whakaora	7.10	207	P	Pn	20 15 19.0	+0.4
NMHZ	Naumai	7.20	200	P	Pn	20 15 17.3	-2.5
NMHZ	Naumai	7.20	200	P	Pn	20 15 17.9	-2.0
WATZ	Wairara	7.22	208	P	Pn	20 15 21.5	+1.4
ARHZ	Aropaoanui	7.30	199	P	Pn	20 15 18.3	-2.7
RATZ	Rangitukua	7.35	207	P	Pn	20 15 22.9	+1.2
BKZ	Black Stump Fm	7.36	202	ePn	Pn	20 15 20.4	-1.4
BKZ	Black Stump Fm	7.36	202	P	Pn	20 15 21.3	-0.5
BKZ	Black Stump Fm	7.36	202	P	Pn	20 15 20.5	-1.3
RITZ	Rihia Road	7.41	206	P	Pn	20 15 22.7	+0.3
RITZ	Rihia Road	7.41	206	P	Pn	20 15 21.5	-0.9
HIZ	Hauiti	7.44	213	ePn	Pn	20 15 22.3	-0.5
KATZ	Kakaramea	7.47	207	P	Pn	20 15 23.7	+0.4
MCHZ	McNeill Hill	7.55	200	P	Pn	20 15 21.3	-2.9
MCHZ	McNeill Hill	7.55	200	P	Pn	20 15 23.0	-1.3
KRVZ	Karewarewa	7.59	207	P	Pn	20 15 24.6	-0.3
KWHZ	Kaweka Forest	7.62	202	P	Pn	20 15 21.8	-3.3
KWHZ	Kaweka Forest	7.62	202	P	Pn	20 15 24.0	-1.1
WTVZ	West Tongariro	7.63	207	P	Pn	20 15 25.2	-0.1
CKHZ	Cape Kidnapper	7.65	197	P	Pn	20 15 21.2	-4.3
CKHZ	Cape Kidnapper	7.65	197	P	Pn	20 15 24.0	-1.5
TWVZ	Taurewa	7.65	208	P	Pn	20 15 25.3	-0.3
NGZ	Ngauruhoe	7.68	207	P	Pn	20 15 24.6	-1.4
NGZ	Ngauruhoe	7.68	207	P	Pn	20 15 25.7	-0.3
TUVZ	Tukino	7.74	206	P	Pn	20 15 25.5	-1.3
FWVZ	Far West T-bar	7.77	207	P	Pn	20 15 24.0	-3.2
BHHZ	Black Hill Sta	7.79	203	P	Pn	20 15 23.3	-4.1
BHHZ	Black Hill Sta	7.79	203	P	Pn	20 15 24.0	-3.4
MOVZ	Moawhango	7.83	205	P	Pn	20 15 24.9	-2.9
KAHZ	Kahuranaki	7.83	198	P	Pn	20 15 22.9	-4.8
KRHZ	Kereru	7.83	201	P	Pn	20 15 22.9	-4.9
KRHZ	Kereru	7.83	201	P	Pn	20 15 24.0	-3.9
PXZ	Pawanui	8.06	198	P	Pn	20 15 26.1	-4.4
PXZ	Pawanui	8.06	198	P	Pn	20 15 27.6	-2.9
PNHZ	Pukenui	8.13	201	P	Pn	20 15 26.7	-4.9
PNHZ	Pukenui	8.13	201	P	Pn	20 15 27.9	-3.7
WPHZ	Waipukurau	8.20	200	P	Pn	20 15 30.1	-2.4
PRHZ	Porangahau	8.34	198	P	Pn	20 15 30.1	-4.0
DVHZ	Dannevirke	8.50	200	P	Pn	20 15 32.5	-3.7
ANWZ	Angora Road	8.56	199	P	Pn	20 15 35.0	-2.0
OHWZ	Ohakea	8.69	205	P	Pn	20 15 35.0	-3.6
POWZ	Post Office Ro	8.71	202	P	Pn	20 15 35.0	-3.8
PRWZ	Pori Road	8.79	201	P	Pn	20 15 38.2	-1.7
BFZ	Birch Farm	8.83	199	eP	Pn	20 15 34.2	-6.2
BFZ	Birch Farm	8.83	199	P	Pn	20 15 38.2	-2.2
MRZ	Mangatainoka R	9.01	202	P	Pn	20 15 38.2	-4.5
TIWZ	Tintock	9.02	201	P	Pn	20 15 39.1	-3.7
CPWZ	Castlepoint	9.05	199	P	Pn	20 15 40.6	-2.6
HOWZ	Holdsworth Sta	9.25	202	P	Pn	20 15 40.6	-5.0
MTW	Mount Morrison	9.49	201	P	Pn	20 15 44.8	-3.9
TRWZ	Traveller	9.65	200	P	Pn	20 15 47.0	-3.8
PAWZ	Paruwai Farm	9.71	201	P	Pn	20 15 46.7	-4.8
MSWZ	Moikau Station	9.80	202	P	Pn	20 15 48.4	-4.2
WEL	Wellington	9.84	204	P	Pn	20 15 49.6	-3.4
WEL	Wellington	9.84	204	P	S	20 17 37.5	-6.3
SNZO	South Karori	9.88	204	eP	Pn	20 15 47.2	-6.4
BHW	Baring Head	9.91	203	P	Pn	20 15 48.4	-5.6
PLWZ	Palliser	9.94	201	P	Pn	20 15 50.2	-4.2
TCW	Tory Channel	9.95	206	P	Pn	20 15 50.2	-4.3
TUWZ	Tuamarina	10.27	207	P	Pn	20 15 53.8	-4.6
NNZ	Nelson	10.31	209	P	Pn	20 15 54.8	-4.2
CMWZ	Cape Campbell	10.44	205	P	Pn	20 15 58.2	-2.5
CMWZ	Cape Campbell	10.44	205	P	Pn	20 15 58.5	-2.2
BSWZ	Blackbirch Sta	10.54	206	P	Pn	20 15 57.7	-4.2
BSWZ	Blackbirch Sta	10.54	206	P	Pn	20 15 58.5	-3.4
THZ	Tophouse	10.96	209	ePn	Pn	20 16 03.0	-4.3
THZ	Tophouse	10.96	209	P	Pn	20 16 03.1	-4.1
THZ	Tophouse	10.96	209	P	Pn	20 16 04.6	-2.6
KHZ	Kahutara	11.27	205	eP	Pn	20 16 04.9	-6.1
KHZ	Kahutara	11.27	205	P	Pn	20 16 05.1	-5.9
DSZ	Denniston Nort	11.43	213	P	Pn	20 16 11.3	-1.7
GVZ	Greta Valley S	11.93	206	P	Pn	20 16 14.8	-4.5
LTZ	Lake Taylor	12.07	208	ePn	Pn	20 16 16.6	-4.4
LTZ	Lake Taylor	12.07	208	P	Pn	20 16 17.3	-3.8
AMCZ	Amberley	12.26	206	P	Pn	20 16 20.8	-2.5
INZ	Inchbonnie	12.37	211	P	Pn	20 16 21.3	-3.4
OKCZ	Okains Bay	12.59	204	P	Pn	20 16 23.8	-3.5
CRLZ	Canterbury Las	12.61	205	P	Pn	20 16 26.4	-1.3
OXZ	Oxford	12.62	208	ePn	Pn	20 16 23.2	-4.5
OXZ	Oxford	12.62	208	P	Pn	20 16 24.1	-3.7
MQZ	McQueen’s Vall	12.71	205	ePn	Pn	20 16 24.7	-4.2
MQZ	McQueen’s Vall	12.71	205	P	Pn	20 16 23.8	-5.1
AKCZ	Akaroa Harbour	12.77	204	P	Pn	20 16 26.6	-3.0
RPZ	Rata Peaks	13.34	209	P	Pn	20 16 32.0	-4.6
	7.1nm,0.3s,baz=81,slow=0.3,SNR=18						
RPZ				S	S	20 18 51.6	-13
	15nm,0.3s,baz=123,slow=23,SNR=14						
RPZ	Rata Peaks	13.34	209	ePn	Pn	20 16 31.9	-4.8
RPZ	Rata Peaks	13.34	209	P	Pn	20 16 33.5	-3.2
FOZ	Fox Glacier	13.74	213	ePn	Pn	20 16 37.6	-3.9
LBZ	Lake Benmore	14.25	210	ePn	Pn	20 16 43.5	-4.2
ODZ	Otahua Downs	14.61	207	eP	P	20 16 49.2	-2.8
PINNC	Pines Island,	14.80	308	eP	P	20 16 53.6	-0.7
MARNC	Mare, Loyalty	15.23	312	eP	P	20 16 56.5	-2.6
MARNC				ePn	Pn	20 17 05.9	+6.1
ONTNC	Ouen Toro	15.68	306	eP	P	20 17 01.4	-2.7
	166nm,0.8s						
DZM	Mont Dzumac	15.85	307	eP	P	20 17 06.0	0.0
	310nm,0.9s						
DZM	Mont Dzumac	15.85	307	P	Pn	20 17 06.4	-0.7
	4.5nm,0.3s,baz=134,slow=6.8,SNR=54						
DZM	Mont Dzumac	15.85	307	eP	Pn	20 17 06.2	-0.9
	209nm,1.1s						
RAR	Rarotonga	21.14	63	P	P	20 18 02.2	-0.4
	16nm,0.5s,baz=231,slow=13,SNR=1.8						
ARMA	Armidale	24.30	267	eP	P	20 18 34.6	+2.8
	208nm,1.7s						
ARMA	Armidale	24.30	267	P	P	20 18 34.9	+3.2
	baz=25,SNR=33						
MGCD	Mangrove Creek	24.30	260	P	P	20 18 35.2	+3.5
	baz=25,SNR=21						
CNB	Canberra Magne	25.60	255	P	P	20 18 46.3	+3.0
	baz=26,SNR=19						
CAN	Canberra	25.89	255	eP	P	20 18 48.0	+2.0
	34nm,0.9s						
CAN	Canberra	25.89	255	eP	P	20 18 48.0	+2.0
CAN				pmax	pmax		
	comp=Z,34nm,0.9s						
EIDS	Eidsvold	26.25	278	eP	P	20 18 49.9	+0.7
	comp=Z,57nm,0.7s						
EIDS	Eidsvold	26.25	278	P	P	20 18 50.1	+0.9
	baz=27,SNR=22						
YNG	Young	26.45	257	P	P	20 18 52.7	+1.8
	baz=27,SNR=12						
RMQ	Roma	27.81	274	P	P	20 19 04.0	+1.0
	baz=28,SNR=29						
TOO	Toolangi	28.68	250	eP	P	20 19 12.4	+1.7
	comp=Z,73nm,1.1s						
TOO	Toolangi	28.68	250	P	P	20 19 12.8	+2.1
	baz=29,SNR=7.5						
TOO	Toolangi	28.68	250	eP	P	20 19 12.4	+1.7
TOO				pmax	pmax		
	comp=Z,73nm,1.1s						
CMSA	Cobar Meteorol	29.08	262	P	P	20 19 16.2	+2.0
	baz=30,SNR=115						
HNR	Honiara	29.45	316	P	P	20 19 16.1	-1.4
	comp=Z,309nm,0.8s,baz=218,slow=4.9,SNR=6.3						
HNR	Honiara	29.45	316	eP	P	20 19 16.2	-1.4
	comp=Z,420nm,0.9s						
HNR	Honiara	29.45	316	eP	P	20 19 16.2	-1.4
HNR				pmax	pmax		
	comp=Z,420nm,0.9s						
HNR	Honiara	29.45	316	eP	P	20 19 16.0	-1.6
KNTN	Kanton	30.45	16	eP	P	20 19 24.8	-1.6
	comp=Z,41nm,0.7s						
PAE	Paea	31.05	69	eP	P	20 19 32.3	+0.7
	comp=Z,29nm,1.4s						
PPT2	Papeete2	31.09	69	eP	P	20 19 33.3	+1.2
	comp=Z,26nm,0.7s						
TVO	Taravao	31.25	70	eP	P	20 19 34.3	+0.9
	comp=Z,11nm,0.7s						
TIAR	Tiarei	31.30	69	eP	P	20 19 34.8	+1.0
	comp=Z,37nm,0.7s						
ARPS	Mount Arapiles	31.62	251	P	P	20 19 39.0	+2.6
	baz=32,SNR=15						
STKA	Stephens Creek	32.45	260	P	P	20 19 45.2	+1.4
	comp=Z,46nm,0.8s,baz=100,slow=10,SNR=70						
STKA	Stephens Creek	32.45	260	eP	P	20 19 45.1	+1.4
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	32.45	260	P	P	20 19 45.7	+2.0
	baz=33,SNR=41						
STKA	Stephens Creek	32.45	260	eP	P	20 19 45.1	+1.4
STKA				pmax	pmax		
	comp=Z,14nm,0.9s						
CTA	Charters Tower	32.55	284	P	P	20 19 45.8	+1.1
	comp=Z,88nm,0.9s,baz=106,slow=10,SNR=62						
CTAO	Charters Tower	32.55	284	eP	P	20 19 45.3	+0.6
	comp=Z,126nm,1.1s						
CTAO	Charters Tower	32.55	284	eP	P	20 19 45.3	+0.6
CTAO				pmax	pmax		
	comp=Z,126nm,1.1s						
TARA	Tarawa	34.22	347	eP	P	20 19 56.5	-2.6
	comp=Z,140nm,1.0s						
HTT	Hallett	34.38	257	P	P	20 20 01.4	+1.0
	baz=35,SNR=32						
BBOO	Buckleboo	36.86	257	eP	P	20 20 22.0	+0.6
	comp=Z,112nm,0.9s						
BBOO	Buckleboo	36.86	257	P	P	20 20 21.8	+0.5
	baz=37,SNR=89						
QIS	Mount Isa	37.85	278	P	P	20 20 30.2	+0.3
	baz=38,SNR=34						
PMG	Port Moresby	38.03	300	P	P	20 20 31.3	+0.1
	comp=Z,40nm,0.6s,baz=90,slow=4.4,SNR=12						
PMG	Port Moresby	38.03	300	eP	P	20 20 31.4	+0.1
	comp=Z,142nm,1.1s						
PMG	Port Moresby	38.03	300	ceP	P	20 20 31.1	-0.2
PMG				pmax	pmax		
	comp=Z,370nm,1.1s						
COEN	Coen	38.28	290	eP	P	20 20 33.9	+0.5
	comp=Z,136nm,1.4s						
COEN	Coen	38.28	290	P	P	20 20 33.9	+0.5
	baz=39,SNR=29						
RABL	Rabaul	38.31	311	eP	P	20 20 33.0	-0.6
	comp=Z,691nm,1.0s						
AS31	Alice Springs	41.38	270	eP	P	20 20 58.5	-0.4
	comp=Z,44nm,0.7s						
ASAR	Alice Springs	41.38	270	P	P	20 20 59.2	+0.3
	comp=Z,132nm,0.7s,baz=105,slow=7.5,SNR=1217						
ASAR				S	S	20 26 56.0	+1.4
	comp=Z,2.9nm,0.8s,baz=110,slow=15,SNR=6.1						
WRAB	Tennant Creek	42.55	275	eP	P	20 21 08.0	-0.2
	comp=Z,287nm,0.9s						
WRAB	Tennant Creek	42.55	275	ceP	P	20 21 08.1	-0.2
WRAB				pmax	pmax		
	comp=Z,289nm,1.1s						
KWAJ	Kwajalein Atol	42.63	342	eP	P	20 21 08.0	-0.9
	comp=Z,102nm,0.8s						
KWAJ	Kwajalein Atol	42.63	342	eP	P	20 21 08.0	-0.9
KWAJ				pmax	pmax		
	comp=Z,102nm,0.8s						
MANU	Manus Island	43.06	308	eP	P	20 21 12.2	-0.2
	comp=Z,227nm,1.0s						
FORT	Forrest	43.95	258	eP	P	20 21 19.3	0.0
	comp=Z,162nm,1.0s						
FORT	Forrest	43.95	258	P	P	20 21 19.8	+0.5
	baz=44,SNR=8.2						
PATS	Pohnpei	44.15	328	eP	P	20 21 19.1	-1.8
	comp=Z,51nm,0.8s						
PATS	Pohnpei	44.15	328	P	P	20 21 19.1	-1.8
	baz=44,SNR=9.5						
WRKA	Warakurna	45.61	265	P	P	20 21 32.0	-0.4
	baz=46,SNR=330						
SBA	Scott Base	45.95	184	eP	P	20 21 38.4	+4.1
	comp=Z,25nm,0.9s						
SBA	Scott Base	45.95	184	P	P	20 21 38.4	+4.1
SBA				pmax	pmax		
	comp=Z,25nm,1.0s						
VNDA	Vanda	45.97	185	P	P	20 21 37.8	+3.4
	comp=Z,0.8nm,0.5s,baz=7.1,slow=5.8,SNR=7.0						
VNDA	Vanda	45.97	185	eP	P	20 21 37.6	+3.2
	comp=Z,20nm,1.3s						
VNDA	Vanda	45.97	185	eP	P	20 21 37.6	+3.2
VNDA				pmax	pmax		
	comp=Z,20nm,1.3s						
JAY	Jayapura	47.38	301	P	P	20 21 46.1	-0.2
	comp=Z,270nm,1.0s,baz=182,slow=11,SNR=56						
JAY	Jayapura	47.38	301	P	P	20 21 46.0	-0.2
	comp=Z,2µm,1.1s,comp=Z,21µm						
KDU	Kakadu	47.66	283	P	P	20 21 47.8	-0.5
	baz=48,SNR=42						
GENI	Genyem	47.73	300	P	P	20 21 48.4	-0.4
	comp=Z,487nm,1.0s,comp=Z,5µm						
MTN	Manton Dam	48.69	282	eP	P	20 21 55.5	-0.7
	comp=Z,185nm,0.9s						
MTN	Manton Dam	48.69	282	P	P	20 21 55.9	-0.3
	baz=49,SNR=45						
KMBL	Kambalda	48.86	255	P	P	20 21 57.4	+0.1
	baz=49,SNR=6.5						
KNRA	Kununurra	49.23	277	P	P	20 22 00.6	+0.3
	baz=50,SNR=23						
JOHN	Johnston Islan	49.84	13	eP	P	20 22 04.3	-0.4
	comp=Z,166nm,0.9s						
SRPI	Serui, Papua	51.12	297	P	P	20 22 14.1	-0.3
BAKI	Biak	51.67	298	P	P	20 22 18.4	-0.1
NWAO	Narrogin (SRO)	52.15	251	P	P	20 22 21.5	-0.4
	comp=Z,10nm,0.6s,baz=114,slow=8.6,SNR=5.7						
CASY	Casey	52.61	208	eP	P	20 22 24.8	+0.1
	comp=Z,9.0nm,0.7s						
MEEK	Meekatharra	53.14	259	P	P	20 22 28.8	-0.4
	baz=54,SNR=7.3						
MUN	Mundaring	53.27	252	P	P	20 22 30.6	+0.5
	baz=54,SNR=3.1						
FAKI	Fak Fak	53.51	293	eP	P	20 22 31.1	-0.9
	comp=Z,168nm,0.9s						
FAKI	Fak Fak	53.51	293	P	P	20 22 30.6	-1.4
MORW	Morawa	54.39	255	P	P	20 22 37.8	-0.3
	baz=55,SNR=10						
SWI	Sorong	55.56	294	P	P	20 22 46.0	-0.7
	comp=Z,71nm,1.4s,comp=Z,2µm						
MSAI	Masohi	55.86	290	P	P	20 22 48.5	-0.3
	comp=Z,22nm,0.8s						
SOEI	Soe	56.02	281	eP	P	20 22 49.3	-0.8
	comp=Z,222nm,1.1s						
SOEI	Soe	56.02	281	P	P	20 22 48.7	-1.4
BATI	Baumata	56.29	280	P	P	20 22 53.7	+1.8
	comp=Z,80nm,0.9s,baz=92,slow=2.6,SNR=9.5						
BATI	Baumata	56.29	280	P	P	20 22 53.6	+1.8
	comp=Z,65nm,1.4s,comp=Z,799nm						
KHLU	Kahalu`u	56.58	27	eP	P	20 22 54.5	+0.7
	comp=Z,356nm,1.4s						
PUH	Pauahi	56.65	28	eP	P	20 22 55.4	+1.1
	comp=Z,189nm,0.8s						
MLH	Mauna Loa	56.69	28	eP	P	20 22 56.1	+1.5
	comp=Z,139nm,0.7s						
MLH	Mauna Loa	56.69	28	eP	P	20 22 56.2	+1.5
MLH				pmax	pmax		
	comp=Z,139nm,0.7s						
HMH	Humu‘ula Sheep	56.75	28	eP	P	20 22 56.7	+1.5
	comp=Z,298nm,0.8s						
POHA	Pohakuloa	56.87	28	eP	P	20 22 57.3	+1.4
	comp=Z,100nm,0.7s						
HPAH	Hawaii Prepara	57.05	27	eP	P	20 22 57.9	+0.9
	comp=Z,217nm,0.6s						
NLAI	Namlea	57.38	289	P	P	20 22 58.8	-0.7
	comp=Z,110nm,1.5s						
MMRI	Maumere	58.31	280	eP	P	20 23 05.5	-0.4
	comp=Z,320nm,1.2s						
MMRI	Maumere	58.31	280	P	P	20 23 06.3	+0.4
	comp=Z,226nm,1.3s,comp=Z,3µm						
GIRL	Giralia	58.37	262	P	P	20 23 08.6	+2.3
	baz=59,SNR=3.3						
LBMI	Labuha	58.63	292	P	P	20 23 06.6	-1.5
PALU	Palau	58.67	304	P	P	20 23 07.9	-0.5
	baz=59,SNR=6.1						
EDFI	Ende, Flores	58.70	280	P	P	20 23 07.0	-1.8
	comp=Z,50nm,1.7s,comp=Z,895nm						
SANI	Sanana	58.98	289	P	P	20 23 10.2	-0.3
	comp=Z,130nm,1.5s,comp=Z,2µm						
WSI	Waingapu	59.38	278	P	P	20 23 13.6	+0.3
WBSI	Waikabubak, Su	60.16	278	P	P	20 23 17.9	-0.7
BKSI	Bulukumba	61.87	282	P	P	20 23 28.1	-1.9
PLAI	Plampang	61.94	278	P	P	20 23 30.3	-0.2
LUWI	Luwuk	62.16	288	eP	P	20 23 32.0	+0.1
	comp=Z,119nm,1.0s						
LUWI	Luwuk	62.16	288	P	P	20 23 31.8	-0.1
	comp=Z,128nm,1.3s,comp=Z,7µm						
KAPI	Kappang	62.35	282	eP	P	20 23 33.5	+0.3
	comp=Z,141nm,1.8s						
KAPI	Kappang	62.35	282	eP	P	20 23 33.5	+0.3
KAPI				pmax	pmax		
	comp=Z,141nm,1.8s						
SGSI	Sangihe	62.86	294	P	P	20 23 35.6	-0.9
SPSI	Sidrap Palu	62.92	283	P	P	20 23 37.0	0.0
	comp=Z,28nm,1.3s,comp=Z,405nm						
APSI	Ampana	63.14	287	P	P	20 23 39.8	+1.4
	comp=Z,33nm,1.4s,comp=Z,684nm						
TTSI	Tana Toraja	63.40	284	P	P	20 23 39.0	-1.1
	comp=Z,37nm,1.6s,comp=Z,607nm						
WOJI	Wonogiri, Jawa	68.22	275	P	P	20 24 09.2	-1.6
PMSA	Palmer Station	71.15	156	eP	P	20 24 28.2	+0.5
	comp=Z,50nm,0.8s						
KKM	Kota Kinabalu	71.61	290	eP	P	20 24 31.0	-0.5
	comp=Z,136nm,2.0s						
KKM	Kota Kinabalu	71.61	290	P	P	20 24 32.0	+0.5
SBUM	Sibu	72.75	284	eP	P	20 24 37.6	-0.5
	comp=Z,17nm,1.2s						
SBUM	Sibu	72.75	284	P	P	20 24 39.0	+0.9
SYO	Syowa Base	74.81	194	⇓iP	P	20 24 48.0	-1.1
SYO	Syowa Base	74.81	194	⇑iPcP	PcP	20 25 01.5	-0.3
MDSI	Maura Dua	75.67	274	P	P	20 24 52.0	-3.0
SNAA	Sanae	76.22	179	P	P	20 24 59.3	+2.1
SNAA	Sanae	76.22	179	P	P	20 24 58.5	+1.4
	comp=Z,100nm,1.0s,baz=192,slow=5.5,SNR=20						
SNAA				S	S	20 34 23.7	+3.7
	comp=Z,0.7nm,0.5s,baz=343,slow=20,SNR=1.9						
SNAA	Sanae	76.22	179	eP	P	20 24 58.8	+1.6
	comp=Z,142nm,1.1s						
SNAA	Sanae	76.22	179	eP	P	20 24 58.8	+1.6
SNAA				pmax	pmax		
	comp=Z,142nm,1.1s						
VNA3	Neumayer Olymp	76.44	177	P	P	20 25 00.2	+1.9
VNA1	Neumayer--Stat	77.09	177	P	P	20 25 04.2	+2.3
INU	Inuyama	78.54	325	eP	P	20 25 10.8	+0.5
	comp=Z,47nm,1.0s						
MJAR	Matsushiro Arr	78.94	327	P	P	20 25 10.8	-1.8
	comp=Z,24nm,0.9s,baz=166,slow=5.2,SNR=35						
MAJO	Matsushiro	78.94	327	eP	P	20 25 10.9	-1.6
	comp=Z,42nm,1.0s						
MAJO	Matsushiro	78.94	327	d iP	P	20 25 11.8	-0.7
MAJO				pmax	pmax		
	comp=Z,40nm,1.0s						
MAT	Matsushiro	78.94	327	P	P	20 25 10.6	-1.9
MJB9	Matsu-Tunnel	78.95	327	eP	P	20 25 11.3	-1.3
	comp=Z,40nm,1.0s						
JNU	Nakatsue	79.95	320	P	P	20 25 17.6	-0.4
	comp=Z,29nm,0.9s,baz=92,slow=3.5,SNR=8.0						
JNU	Nakatsue	79.95	320	eP	P	20 25 17.7	-0.3
	comp=Z,46nm,1.1s						
ERM	Erimo	81.43	333	eP	P	20 25 26.3	+0.7
	comp=Z,79nm,0.8s						
ERM	Erimo	81.43	333	ceP	P	20 25 25.8	+0.2
ERM				pmax	pmax		
	comp=Z,75nm,0.9s						
PLCA	Paso Flores	82.37	134	P	P	20 25 34.0	+3.0
	comp=Z,6.3nm,0.9s,baz=236,slow=5.9,SNR=4.0						
PLCA	Paso Flores	82.37	134	eP	P	20 25 33.8	+2.9
	comp=Z,19nm,1.3s						
PLCA	Paso Flores	82.37	134	eP	P	20 25 33.8	+2.9
PLCA				pmax	pmax		
	comp=Z,19nm,1.3s						
ASAJ	Asahikawa	83.44	334	P	P	20 25 37.9	+1.9
	comp=Z,49nm,1.0s,baz=190,slow=6.7,SNR=23						
KIWB	Kanaga Island	83.91	2	eP	P	20 25 38.0	-0.1
ADK	Adak	83.95	2	eP	P	20 25 37.5	-0.7
	comp=Z,275nm,1.4s						
ADK	Adak	83.95	2	eP	P	20 25 37.5	-0.7
ADK				pmax	pmax		
	comp=Z,275nm,1.4s						
TJN	Taejon	84.30	320	ceP	P	20 25 40.8	+0.4
ATKA	Atka Island	84.37	4	eP	P	20 25 40.6	+0.3
	comp=Z,171nm,1.3s						
KSRS	Korea Array	84.79	321	P	P	20 25 42.9	0.0
	comp=Z,16nm,0.8s,baz=138,slow=5.4,SNR=50						
KS15	Wonju Array Si	84.80	321	eP	P	20 25 44.5	+1.6
	comp=Z,23nm,0.9s						
SMY	Shemya	84.91	356	eP	P	20 25 42.8	-0.2
	comp=Z,129nm,1.0s						
SMY	Shemya	84.91	356	eP	P	20 25 42.8	-0.2
SMY				pmax	pmax		
	comp=Z,129nm,1.0s						
YSS	Yuzh-Sakhalins	85.82	335	eP	P	20 25 48.1	+0.4
	comp=Z,173nm,1.0s						
YSS	Yuzh-Sakhalins	85.82	335	eP	P	20 25 48.1	+0.4
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
NJ2	Nanjing	86.28	312	eP	P	20 25 51.1	+0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
UNV	Unalaska Valle	86.66	8	eP	P	20 25 52.1	+0.5
	comp=Z,40nm,1.0s						
PET	Petropavlovsk	87.06	347	eP	P	20 25 53.6	+0.1
	comp=Z,66nm,1.2s						
PET	Petropavlovsk	87.06	347	⇑iP	P	20 25 53.9	+0.4
PET				pmax	pmax		
	comp=Z,53nm,1.1s						
PEA0B	Petropavlovsk-	87.33	347	eP	P	20 25 55.3	+0.5

	comp=Z,316nm,1.4s						
PETK	**Petropavlovsk-**	87.33	347	P	P	20 25 54.9	+0.1
	comp=Z,97nm,1.0s,baz=119,slow=6.6,SNR=91						
CIS	**Catalina Islan**	87.41	47	P	P	20 25 56.7	+0.9
	baz=228						
BLG	**Laguna Peak, P**	87.48	47	P	P	20 25 58.2	+2.2
	baz=228						
PKM	**Mcpherson Peak**	87.55	46	P	P	20 25 58.4	+1.8
	baz=227						
PAGB	**Antelope Grade**	87.86	45	*e*P	P	20 25 58.6	+0.8
	comp=Z,60nm,1.7s						
USRK	**Ussuriysk Ar.**	87.90	328	P	P	20 25 59.3	+1.5
	comp=Z,27nm,1.0s,baz=144,slow=3.2,SNR=19						
HOPE	**Hope Point**	88.11	160	*e*P	P	20 26 00.5	+1.8
	comp=Z,130nm,1.4s						
MURC	**Murrieta**	88.30	48	P	P	20 26 02.1	+2.1
	baz=229						
MONP2	**Monument Peak**	88.33	49	P	P	20 26 02.2	+1.9
	baz=229						
IKP	**In-Ko-Pah, Jac**	88.37	49	P	P	20 26 02.6	+2.2
	baz=230						
BFSC	**Mount Baldy Ra**	88.43	47	P	P	20 26 02.2	+1.5
	baz=229						
VES	**Vestal, Richgr**	88.63	45	P	P	20 26 03.4	+2.1
	baz=228						
EDW2	**Edwards Air Fo**	88.65	47	P	P	20 26 03.5	+1.9
	baz=228						
SWSC	**Sam W. Stewart**	88.76	49	P	P	20 26 04.2	+2.2
	baz=230						
PFO	**Pinyon Flats O**	88.77	48	*e*P	P	20 26 03.0	+0.7
	comp=Z,17nm,1.4s						
PFO	**Pinyon Flats O**	88.77	48	*e*P	P	20 26 03.0	+0.7
PFO				pmax	pmax		
	comp=Z,17nm,1.4s						
PFO	**Pinyon Flats O**	88.77	48	P	P	20 26 03.9	+1.6
	baz=229						
TPFO	**Pinon Flats**	88.77	48	P	P	20 26 04.1	+1.8
	baz=229						
ISA	**Isabella, Lake**	88.88	46	*e*P	P	20 26 03.7	+1.0
	comp=Z,16nm,1.0s						
ISA	**Isabella, Lake**	88.88	46	*e*P	P	20 26 03.7	+1.0
ISA				pmax	pmax		
	comp=Z,16nm,1.0s						
ISA	**Isabella, Lake**	88.88	46	P	P	20 26 04.3	+1.6
	baz=228						
SDPT	**Sand Point**	88.96	11	*e*P	P	20 26 03.1	+0.7
	comp=Z,213nm,1.1s						
TYV	**Tymovskoe**	89.21	337	*e*P	P	20 26 05.7	+2.0
TYV				pmax	pmax		
	comp=Z,115nm,1.1s						
TYV				pmax	pmax		
	comp=Z,800nm,7.6s						
DL2	**Dalian**	89.28	318	P	P	20 26 03.2	-1.2
DL2				pmax	pmax		
	comp=Z,23nm,0.9s						
BELC	**Belle Mtn. Jos**	89.32	48	P	P	20 26 06.6	+1.8
	baz=230						
MDJ	**Mudanjiang**	89.33	327	*e*P	P	20 26 04.7	+0.3
	comp=Z,34nm,1.1s						
MDJ	**Mudanjiang**	89.33	327	P	P	20 26 05.4	+1.0
MDJ				pmax	pmax		
	comp=Z,34nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,270nm,3.6s						
CMB	**Columbia Colle**	89.35	43	*e*P	P	20 26 05.7	+0.9
	comp=Z,8.9nm,1.0s						
BC3	**Big Chuckawall**	89.44	49	P	P	20 26 07.5	+2.2
	baz=230						
GLA	**Glamis**	89.45	50	*e*P	P	20 26 04.7	-0.7
	comp=Z,21nm,0.8s						
GLA	**Glamis**	89.45	50	*e*P	P	20 26 04.7	-0.7
GLA				pmax	pmax		
	comp=Z,21nm,0.8s						
GLA	**Glamis**	89.45	50	P	P	20 26 07.8	+2.4
	baz=230						
O02D	**Mt. Diablo Mer**	89.48	40	P	P	20 26 07.3	+1.9
	baz=225						
SPIA	**Saint Paul Isl**	89.58	5	*e*P	P	20 26 06.5	+1.2
	comp=Z,724nm,1.5s						
CWC	**Cottonwood Cre**	89.63	45	P	P	20 26 07.3	+1.0
	baz=228						
AFDM	**Forest Hills D**	89.64	42	*e*P	P	20 26 06.7	+0.6
	comp=Z,16nm,1.4s						
HEC	**Hector,Ludlow**	89.64	47	P	P	20 26 07.8	+1.5
	baz=229						
GSC	**Goldstone, Bar**	89.66	47	*e*P	P	20 26 07.2	+0.8
	comp=Z,17nm,1.4s						
GSC	**Goldstone, Bar**	89.66	47	*e*P	P	20 26 07.2	+0.8
GSC				pmax	pmax		
	comp=Z,17nm,1.4s						
GSC	**Goldstone, Bar**	89.66	47	P	P	20 26 08.1	+1.7
	baz=229						
MPMC	**Manual Prospec**	89.74	46	P	P	20 26 08.3	+1.4
	baz=229						
OMMB	**Old Mammoth Mi**	89.87	44	*e*P	P	20 26 08.5	+0.9
	comp=Z,13nm,1.5s						
WDC	**Whiskeytown Da**	89.90	40	*e*P	P	20 26 08.5	+1.3
	comp=Z,37nm,1.5s						
WDC	**Whiskeytown Da**	89.90	40	*e*P	P	20 26 08.5	+1.3
WDC				pmax	pmax		
	comp=Z,37nm,1.5s						
IRM	**Iron Mountain**	89.96	49	P	P	20 26 10.1	+2.4
	baz=230						
113A	**Mohawk Valley,**	89.96	50	*e*P	P	20 26 07.8	+0.2
	comp=Z,16nm,1.3s						
GMRC	**Granite Mounta**	90.04	48	P	P	20 26 09.5	+1.3
	baz=230						
214A	**Organ Pipe Nat**	90.08	52	P	P	20 26 10.2	+1.8
	baz=231						
N02D	**Trinity Center**	90.09	40	P	P	20 26 10.1	+1.9
	baz=225						
Y12C	**Blythe**	90.09	49	*e*P	P	20 26 10.7	+2.5
	comp=Z,9.4nm,0.8s						
Y12C	**Blythe**	90.09	49	P	P	20 26 10.4	+2.1
	baz=230						
O03E	**Paynes Creek**	90.11	41	P	P	20 26 09.5	+1.2
	baz=226						
WAKR	**Walker**	90.21	43	*e*P	P	20 26 10.1	+1.1
	comp=Z,24nm,1.5s						
CHGN	**Chignik**	90.22	12	*e*P	P	20 26 08.6	+0.4
	comp=Z,84nm,0.7s						
TUQ	**Turquoise Moun**	90.29	47	P	P	20 26 11.2	+1.8
	baz=230						
M02C	**Callahan**	90.30	39	P	P	20 26 11.1	+1.9
	baz=225						
SHOC	**Shoshone, Teco**	90.38	47	P	P	20 26 10.7	+1.1
	baz=229						
FURC	**Furnace Creek,**	90.39	46	P	P	20 26 10.6	+1.0
	baz=229						
GRAC	**Grapevine Rang**	90.43	45	P	P	20 26 11.6	+1.8
	baz=229						
PNTR	**Pine Nut**	90.52	43	*e*P	P	20 26 11.4	+1.0
	comp=Z,9.8nm,0.9s						
LDFC	**Landfair**	90.57	48	*e*P	P	20 26 12.5	+1.9
	comp=Z,20nm,1.0s						
BEKR	**Beckworth**	90.61	42	*e*P	P	20 26 11.5	+0.7
	comp=Z,13nm,1.5s						
YBH	**Yreka Blue Hor**	90.62	39	*e*P	P	20 26 11.7	+1.1
	comp=Z,20nm,1.3s						
YBH	**Yreka Blue Hor**	90.62	39	*e*P	P	20 26 11.7	+1.1
YBH				pmax	pmax		
	comp=Z,20nm,1.3s						
YERR	**Yerington**	90.65	43	*e*P	P	20 26 11.6	+0.6
	comp=Z,30nm,1.9s						
PDMCI	**Parker Dam,Lak**	90.69	49	P	P	20 26 13.2	+2.1
	baz=231						
CN2	**Changchun**	90.72	324	*e*P	P	20 26 10.5	-0.4
CN2				*e*pP	pP	20 27 05.3	-5.4
CN2				*e*S	S	20 36 45.7	+0.7
CN2				pmax	pmax		
	comp=Z,50nm,1.1s						
K02D	**Willamette Mer**	90.80	38	P	P	20 26 13.4	+1.9
	baz=225						
NV01	**Mina Array Sit**	90.82	44	*e*pP	pP	20 27 06.5	-5.2
NVAR	**Mina Array Bea**	90.82	44	P	P	20 26 12.7	+0.8
	comp=Z,2.7nm,0.8s,baz=219,slow=7.7,SNR=20						
NVAR				pP	pP	20 27 06.5	-5.2
	comp=Z,2.4nm,0.9s,baz=224,slow=8.2,SNR=2.5						
RYN	**Ryan**	90.83	43	*e*P	P	20 26 12.6	+0.8
	comp=Z,11nm,1.6s						
NV11	**Mina Array Sit**	90.91	44	*e*P	P	20 26 12.5	+0.3
	comp=Z,1.4nm,1.7s						
PAHR	**Pah Rah Range**	91.06	42	*e*P	P	20 26 11.7	-1.1
	comp=Z,13nm,1.5s						
TPNV	**Topopah Spring**	91.07	46	*e*P	P	20 26 14.1	+1.1
	comp=Z,4.3nm,0.7s						
TPNV	**Topopah Spring**	91.07	46	*e*P	P	20 26 14.1	+1.1
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TPNV	**Topopah Spring**	91.07	46	P	P	20 26 14.3	+1.3
	baz=229						
HUMO	**Hull Mountain**	91.10	38	*e*P	P	20 26 14.2	+1.4
	comp=Z,15nm,0.9s						
M04C	**Macdoel**	91.12	39	P	P	20 26 14.7	+1.6
	baz=226						
L04D	**Klamath Falls**	91.17	39	P	P	20 26 14.8	+1.5
	baz=226						
Y14A	**Wickenburg**	91.19	50	*e*P	P	20 26 14.0	+0.5
	comp=Z,7.0nm,1.0s						
GRNR	**Gornyy**	91.30	334	*e*P	P	20 26 13.5	0.0
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
ENH	**Enshi**	91.35	305	*e*P	P	20 26 13.6	-0.6
	comp=Z,40nm,1.4s						
KVN	**Kaiserville**	91.36	43	*e*P	P	20 26 14.6	+0.3
	comp=Z,12nm,1.3s						
KVN	**Kaiserville**	91.36	43	*e*P	P	20 26 14.6	+0.3
KVN				pmax	pmax		
	comp=Z,12nm,1.3s						
TUC	**Tucson**	91.65	52	*e*P	P	20 26 16.2	+0.6
	comp=Z,8.4nm,1.0s						
TUC	**Tucson**	91.65	52	*e*P	P	20 26 16.3	+0.6
TUC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TUC	**Tucson**	91.65	52	P	P	20 26 18.3	+2.6
	baz=232						
I03D	**Drain, OR**	91.67	37	P	P	20 26 16.0	+0.7
	baz=225						
KLR	**Kul'dur**	91.91	331	P	P	20 26 17.6	+1.3
	comp=Z,10nm,1.0s,baz=78,slow=2.1,SNR=19						
KLR	**Kul'dur**	91.91	331	*i* P	P	20 26 15.8	-0.5
KLR				pmax	pmax		
	comp=Z,19nm,1.0s						
J04D	**Umpqua Nationa**	91.99	38	P	P	20 26 19.0	+1.9
	baz=226						
MOD	**Modoc Plateau**	92.03	40	*e*P	P	20 26 17.7	+0.4
	comp=Z,27nm,1.5s						
OHAK	**Old Harbor**	92.06	14	*e*P	P	20 26 16.9	+0.2
	comp=Z,30nm,0.8s						
I04A	**Tendick Farm,**	92.22	38	P	P	20 26 19.0	+1.1
	baz=226						
K05A	**Summer Lake**	92.28	39	*e*P	P	20 26 20.0	+1.6
	comp=Z,21nm,1.0s						
R11A	**Troy Canyon, C**	92.38	45	*e*P	P	20 26 20.0	+1.0
	comp=Z,4.1nm,1.3s						
R11A	**Troy Canyon, C**	92.38	45	P	P	20 26 19.8	+0.7
	baz=230						
J05D	**Fort Rock, OR**	92.48	39	P	P	20 26 20.6	+1.3
	baz=226						
CMAR	**Chiang Mai Arr**	92.49	290	P	P	20 26 20.7	+1.0
	comp=Z,1.7nm,1.0s,baz=161,slow=4.1,SNR=7.4						
CMAR				pP	pP	20 27 15.1	-4.5
	comp=Z,1.2nm,0.9s,baz=146,slow=3.5,SNR=2.4						
CMAR				PP	PP	20 30 00.2	-4.7
	comp=Z,7.6nm,1.1s,baz=138,slow=6.2,SNR=19						
CMAR				PKKPbc	PKKPbc	20 43 34.9	+3.8
	comp=Z,0.3nm,0.4s,baz=234,slow=3.0,SNR=4.5						
H04D	**Lebanon**	92.56	37	P	P	20 26 21.6	+2.2
	baz=226						
KDAK	**Kodiak Island**	92.72	14	*i* P	P	20 26 21.1	+1.3
BMN	**Battle Mountai**	92.78	43	*e*P	P	20 26 21.5	+0.8
	comp=Z,7.8nm,1.1s						
BMN	**Battle Mountai**	92.78	43	*e*P	P	20 26 21.5	+0.8
BMN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PINE	**Pine Mountain**	92.99	38	*e*P	P	20 26 22.5	+0.8
	comp=Z,19nm,0.8s						
I05D	**Terrebonne, OR**	93.15	38	P	P	20 26 23.8	+1.6
	baz=226						
U15A	**North Rim**	93.20	48	*e*P	P	20 26 24.1	+1.2
	comp=Z,4.8nm,0.9s						
WUAZ	**Wupatki**	93.22	50	*e*P	P	20 26 24.3	+1.4
	comp=Z,9.9nm,1.3s						
WUAZ	**Wupatki**	93.22	50	P	P	20 26 24.6	+1.7
	baz=232						
KNB	**Kanab**	93.23	48	*e*P	P	20 26 24.1	+1.1
	comp=Z,16nm,1.7s						
KNB	**Kanab**	93.23	48	*e*P	P	20 26 24.1	+1.1
KNB				pmax	pmax		
	comp=Z,16nm,1.7s						
KMI	**Kunming**	93.23	298	P	P	20 26 23.1	-0.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=Z,190nm,17.5s						
KMI				LR	LR		
	comp=Z,180nm,16.2s						
KMI				LR	LR		
	comp=Z,180nm,16.9s						
PSUT	**Pine Spring**	93.55	46	*e*P	P	20 26 23.5	-0.9
	comp=Z,9.3nm,1.5s						
I07A	**Izee**	93.94	39	*e*P	P	20 26 27.0	+1.0
	comp=Z,19nm,1.6s						
J08A	**Circle Bar Ran**	94.01	40	*e*P	P	20 26 27.2	+0.9
	comp=Z,15nm,1.4s						
ELK	**Elko**	94.13	44	*e*P	P	20 26 27.8	+0.8
	comp=Z,7.7nm,1.5s						
ELK	**Elko**	94.13	44	*e*P	P	20 26 27.8	+0.8
ELK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MTPU	**Mount Pierson**	94.26	47	*e*P	P	20 26 29.1	+1.2
	comp=Z,5.2nm,1.2s						
CNPM	**China Poot**	94.61	14	*e*P	P	20 26 29.4	+1.0
	comp=Z,23nm,0.8s						
TX31	**Lajitas Ar. Si**	94.86	58	*e*P	P	20 26 31.5	+1.0
	comp=Z,4.4nm,1.4s						
TXAR	**Lajitas Array**	94.86	58	P	P	20 26 31.4	+1.0
	comp=Z,1.6nm,1.1s,baz=210,slow=7.2,SNR=9.1						
BRLK	**Bradley Lake**	94.90	14	*e*P	P	20 26 30.4	+0.6
	comp=Z,13nm,1.0s						
MNTX	**Cornudas Mount**	94.98	56	P	P	20 26 31.7	+0.8
	baz=235						
G08A	**Pilot Rock**	95.04	38	*e*P	P	20 26 31.3	+0.3
	comp=Z,8.4nm,1.1s						
SVW2	**Sparrevohn**	95.24	12	*e*P	P	20 26 31.2	-0.1
	comp=Z,6.2nm,0.6s						
CD2	**Chengdu**	95.74	303	P	P	20 26 34.6	+0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
ANMO	**Albuquerque**	96.11	52	*ce*P	P	20 26 29.3	-6.9
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HVU	**Hansel Valley**	96.22	44	*e*P	P	20 26 37.2	+0.8
	comp=Z,4.4nm,1.0s						
HVU	**Hansel Valley**	96.22	44	*e*P	P	20 26 37.3	+0.8
HVU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
D08A	**Wollman Farm,**	96.25	37	*e*P	P	20 26 37.1	+0.9
	comp=Z,7.1nm,1.0s						
RC01	**Rabbit Creek A**	96.34	14	*e*P	P	20 26 36.9	+0.6
	comp=Z,14nm,1.0s						
HLID	**Hailey**	96.39	42	*e*P	P	20 26 37.9	+0.6
	comp=Z,2.4nm,0.5s						
HLID	**Hailey**	96.39	42	P	P	20 26 38.8	+1.6
	baz=231						
PV21	**Cone Mtn., Par**	96.59	48	*e*P	P	20 26 37.7	-0.6
	comp=Z,9.9nm,0.8s						
SCM	**Sheep Creek Mo**	97.53	15	*e*P	Pdif	20 26 43.6	+1.9
	comp=Z,12nm,0.7s						
SCM	**Sheep Creek Mo**	97.53	15	*e*P	Pdif	20 26 43.6	+1.8
SCM				pmax	pmax		
	comp=Z,13nm,0.7s						
SEY	**Seymchan**	97.53	348	P	P	20 26 41.1	-0.5
	comp=Z,5.4nm,0.9s,baz=140,slow=1.4,SNR=8.8						
CAST	**Castle Rocks**	98.02	12	*e*P	P	20 26 42.8	-1.0
	comp=Z,7.6nm,0.9s						
KTH	**Kantishna Hill**	98.35	13	*e*P	Pdif	20 26 44.9	-0.4
	comp=Z,7.0nm,1.1s						
TRF	**Thorofare Moun**	98.38	13	*e*P	Pdif	20 26 45.5	-0.1
	comp=Z,3.1nm,0.7s						
DHY	**Denali Highway**	98.62	14	*e*P	P	20 26 46.9	+0.2
	comp=Z,14nm,0.5s						
PDAR	**Pinedale Array**	98.72	45	P	P	20 26 48.6	+0.9
	comp=Z,0.5nm,0.6s,baz=160,slow=4.7,SNR=4.5						
MCK	**McKinley**	98.89	13	*e*P	Pdif	20 26 47.6	-0.1
	comp=Z,15nm,1.0s						
MCK	**McKinley**	98.89	13	*e*P	Pdif	20 26 47.6	-0.1
MCK				pmax	pmax		
	comp=Z,15nm,1.0s						
WRH	**Wood River Hil**	99.72	13	*e*Pdif	Pdif	20 26 51.5	+0.2
	comp=Z,9.9nm,1.0s						
MLY	**Manley**	99.73	12	*e*Pdif	Pdif	20 26 51.2	-0.2
	comp=Z,4.4nm,1.3s						
RIDG	**Independent Ri**	99.75	15	*e*Pdif	Pdif	20 26 52.1	+0.5
	comp=Z,5.0nm,1.0s						
DOT	**Dot Lake**	99.85	15	*e*Pdif	Pdif	20 26 52.9	+0.9
	comp=Z,4.3nm,0.7s						
HDA	**Harding Lake**	99.90	14	P	Pdif	20 26 53.4	+1.2
	baz=208						
CCB	**Clear Creek Bu**	99.94	13	*e*Pdif	Pdif	20 26 52.4	+0.1
	comp=Z,5.1nm,0.9s						
ILAR	**Eielson Array**	100.23	14	P	Pdif	20 26 54.0	+0.3
	comp=Z,2.9nm,0.8s,baz=221,slow=4.9,SNR=16						
ILAR				PP	PP	20 30 59.6	-3.9
	comp=Z,0.8nm,0.9s,baz=227,slow=7.9,SNR=4.3						
ILAR				PKiKP	PKiKP	20 31 19.7	+0.3
	comp=Z,2.1nm,0.8s,baz=268,slow=3.3,SNR=11						
ILAR	**Eielson Array**	100.23	14	P	Pdif	20 26 54.0	+0.3
ILB	**Eielson Array**	100.23	14	*e*Pdif	Pdif	20 26 53.5	-0.2
BILL	**Bilibino**	100.64	355	⇑*e*P	Pdif	20 26 57.9	+2.5
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAWY	**Dawson**	101.30	17	*e*Pdif	Pdif	20 26 59.4	+1.0
EGAK	**Eagle**	101.48	16	*e*Pdif	Pdif	20 26 60.0	+0.8
SONM	**Songino Array**	103.49	318	PP	PKiKP	20 31 24.8	-1.2
	comp=Z,1.6nm,1.0s,baz=142,slow=7.2,SNR=2.5						
SONM				PKKPbc	PKKPbc	20 43 01.7	-0.4
	comp=Z,1.0nm,0.6s,baz=308,slow=7.1,SNR=4.8						
WMQ	**Urumqi**	113.13	308	*e*PKP	PKiKP	20 31 44.2	+0.1
BOSA	**Boshof**	114.78	204	PKP	PKPdf	20 31 49.0	+1.0
	comp=Z,5.1nm,0.9s,baz=121,slow=1.1,SNR=4.7						
MK31	**Makanchi Array**	117.75	310	*e*PKPdf	PKPdf	20 31 51.3	-1.6
MK31	**Makanchi Array**	117.75	310	*e*PKIKP	PKPdf	20 31 51.3	-1.6
MKAR	**Makanchi Array**	117.75	310	PKP	PKPdf	20 31 51.6	-1.2
	comp=Z,2.2nm,0.6s,baz=210,slow=0.7,SNR=21						
MKAR				pPKP	pPKPdf	20 32 53.1	-2.3
	comp=Z,0.7nm,0.6s,baz=123,slow=4.5,SNR=3.0						
MKAR				PP	PP	20 33 06.3	-4.2
	comp=Z,1.5nm,0.8s,baz=98,slow=6.5,SNR=4.7						
MKAR				PKKPbc	PKKPab	20 42 17.2	+0.5
	comp=Z,1.0nm,0.5s,baz=275,slow=3.5,SNR=10						
MAKZ	**Makanchi**	117.96	310	*e*PKPdf	PKPdf	20 31 52.0	-1.3
MAKZ	**Makanchi**	117.96	310	*e*PKIKP	PKPdf	20 31 52.0	-1.3
ZAA0	**Zalesovo Array**	118.38	318	*e*PKPdf	PKPdf	20 31 53.0	-0.8
ZALV	**Zalesovo Beam**	118.38	318	PKP	PKPdf	20 31 52.8	-1.0
	comp=Z,2.9nm,0.5s,baz=158,slow=2.4,SNR=14						
RES	**Resolute Bay**	119.63	18	*e*PKPdf	PKPdf	20 31 55.4	-0.2
RES	**Resolute Bay**	119.63	18	*e*PKIKP	PKPdf	20 31 55.4	-0.2
KSH	**Kashi**	119.79	300	*e*PKP	PKiKP	20 31 58.7	+1.5
KSH				sPKP		20 33 21.1	
KSH				PP	sPKPdf	20 33 29.6	+5.0
KSH				PKS	PKSdf	20 35 33.3	-0.6
KSH				AMB	AMB		
	comp=Z,180nm,6.2s						
D53A	**Lac Vacive, Po**	120.79	51	*e*PKPdf	PKPdf	20 31 58.6	0.0
KURK	**Kurchatov**	121.19	313	*e*PKPdf	PKPdf	20 31 58.5	-0.8
KURK	**Kurchatov**	121.19	313	*c i*PKIKP	PKPdf	20 31 58.6	-0.7
KURK				pmax	pmax		
	comp=Z,23nm,1.3s						
KURBB	**Kurchatov Arra**	121.22	313	PKP	PKPdf	20 31 58.2	-1.2
	comp=Z,13nm,1.0s,baz=106,slow=2.0,SNR=65						
KURBB				PP	PP	20 33 32.5	-1.6
	comp=Z,2.4nm,1.0s,baz=108,slow=6.8,SNR=5.9						
AAK	**Ala-Archa**	121.80	303	*e*PKPdf	PKPdf	20 32 00.4	-0.5
AAK	**Ala-Archa**	121.80	303	*i* PKIKP	PKPdf	20 31 58.4	-2.6
KBL	**Kabul**	123.44	293	*e*PKPdf	PKPdf	20 32 04.3	-0.1
KBL	**Kabul**	123.44	293	*e*PKIKP	PKPdf	20 32 04.3	-0.1
BTK	**Batken**	123.74	299	*e*PKPdf	PKPdf	20 32 04.4	-0.3
BTK	**Batken**	123.74	299	*e*PKIKP	PKPdf	20 32 04.4	-0.3
GAR	**Garm**	123.82	298	*e*PKPdf	PKPdf	20 32 04.6	-0.3
GAR	**Garm**	123.82	298	*e*PKIKP	PKPdf	20 32 04.6	-0.3
KK31	**Karatay Array**	124.75	303	*e*PKPdf	PKPdf	20 32 06.4	0.0
KK31	**Karatay Array**	124.75	303	*e*PKIKP	PKPdf	20 32 06.4	0.0
KKAR	**Karatay Array**	124.75	303	*e*PKPdf	PKPdf	20 32 06.5	+0.1
KKAR	**Karatay Array**	124.75	303	*e*PKIKP	PKPdf	20 32 06.5	+0.1
LSZ	**Lusaka**	125.49	214	*e*PKPdf	PKiKP	20 32 09.4	+0.2
LSZ	**Lusaka**	125.49	214	*e*PKIKP	PKiKP	20 32 09.4	+0.2
WVL	**Waterville**	125.63	56	*e*PKPdf	PKiKP	20 32 08.5	+0.1
TSUM	**Tsumeb**	126.03	201	*e*PKPdf	PKiKP	20 32 11.2	+1.0
PKME	**Peaks-Kenny Pk**	126.03	55	*e*PKPdf	PKiKP	20 32 09.6	+0.4
BRVK	**Borovoye**	126.69	315	*i* PKIKP	PKPdf	20 32 08.4	-1.4
PQI	**Presque Isle**	127.17	53	*e*PKPdf	PKPdf	20 32 11.1	+0.2
BATG	**Bathurst New B**	128.59	53	*e*PKPdf	PKPdf	20 32 13.9	+0.3
SCHQ	**Schefferville**	128.83	43	PKP	PKPdf	20 32 13.9	+0.1
	comp=Z,7.4nm,0.8s,baz=14,slow=3.9,SNR=5.7						
SCHQ	**Schefferville**	128.83	43	*e*PKPdf	PKPdf	20 32 14.0	+0.2
LMN	**Caledonia Moun**	129.24	55	*e*PKPdf	PKPdf	20 32 15.3	+0.5
KMBO	**Kilima Mbogo**	131.56	234	SKPbc	SKPab	20 35 23.0	-0.1
	comp=Z,12nm,1.0s,baz=50,slow=2.2,SNR=19						
GEYT	**Alibeck**	132.85	294	PKP	PKPdf	20 32 21.9	-0.2
	comp=Z,3.8nm,0.9s,baz=108,slow=4.8,SNR=6.3						
GEYT				SKPbc	SKPab	20 35 26.8	-0.8
	comp=Z,4.6nm,0.9s,baz=116,slow=3.4,SNR=6.7						
ABKAR	**Akbulak array**	132.89	309	*e*PKPdf	PKPdf	20 32 21.0	-0.6
ARU	**Arti**	133.52	319	*e*PKPdf	PKPdf	20 32 22.6	0.0
ARU	**Arti**	133.52	319	*i* PKIKP	PKPdf	20 32 22.6	0.0
ARU						20 34 55.6	
ARU				SS	SS	20 52 27.8	+8.6
AKTO	**Aktyubinsk**	134.16	311	PP	PP	20 34 54.0	-4.8
	comp=Z,0.8nm,0.5s,baz=95,slow=12,SNR=3.3						
AKTO				SKPbc	SKPbc	20 35 30.6	+1.0
	comp=Z,1.1nm,0.4s,baz=90,slow=8.1,SNR=4.0						
SUMG	**Summit**	135.05	15	*e*PKPdf	PKiKP	20 32 26.9	-0.2
SUMG	**Summit**	135.05	15	*e*PKIKP	PKiKP	20 32 26.9	-0.2
PRGR	**Permogore**	138.68	329	*e*PKHKP	PKPpre	20 32 22.2	
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RAYN	**Ar Rayn**	139.13	269	PKIKP	PKiKP	20 32 37.5	+1.1
ARA0	**ARCESS Array S**	140.14	346	*e*PKPdf	PKPdf	20 32 35.6	+1.1
ARCES	**ARCESS Array B**	140.14	346	PKhKP	PKPpre	20 32 27.0	
	comp=Z,7.5nm,0.8s,baz=63,slow=1.9,SNR=14						
ARCES				PKP	PKPdf	20 32 35.6	+1.1
	comp=Z,8.6nm,0.8s,baz=73,slow=2.4,SNR=10.0						
STEI	**Steigen**	143.32	350	*e*PKPdf	PKPab	20 32 37.1	+0.4
GNI	**Garni**	143.44	295	*e*PKPdf	PKPdf	20 32 41.0	-0.5
GNI	**Garni**	143.44	295	*i* PKIKP	PKPbc	20 32 40.1	+0.6
TBLG	**Delisi**	143.48	298	*e*PKPpre	PKPab	20 32 38.4	+0.1
ZEI	**Tsey**	144.08	300	*i* PKHKP	PKPab	20 32 38.8	-2.1
ZEI				pmax	pmax		
	comp=Z,25nm,0.9s						
AKH	**Akhalkalaki**	144.41	297	*e*PKPdf	PKPab	20 32 42.1	0.0
AKH	**Akhalkalaki**	144.41	297	⇓*i*P	PKPab	20 32 41.3	-0.9
AKH	**Akhalkalaki**	144.41	297	*e*PKIKP	PKPab	20 32 42.1	0.0
GOF	**Gofitskoye**	144.54	304	⇑*i*PKIKP	PKPab	20 32 41.9	-0.4
GOF				pmax	pmax		
	comp=Z,124nm,1.0s						
KBZ	**Khabaz**	144.76	301	PKP	PKPbc	20 32 42.1	-0.9
	comp=Z,41nm,1.1s,baz=65,slow=1.2,SNR=22						
KIV	**Kislovodsk**	144.90	302	*e*PKPbc	PKPbc	20 32 42.9	-0.7
KIV	**Kislovodsk**	144.90	302	⇓*i*P	PKPbc	20 32 38.7	-4.9
KIV	**Kislovodsk**	144.90	302	*e*PKIKP	PKPdf	20 32 44.1	+0.3
KIV				pmax	pmax		
	comp=Z,80nm,1.1s						
TUTA	**Tutak**	144.90	294	*i* P	PKPbc	20 32 43.7	-0.3
TUTA				IAML_P			
	comp=Z,11nm,0.1s						
KONS	**Konsvik**	144.96	351	*e*PKPbc	PKPbc	20 32 42.8	-0.2
MOS	**Moscow**	144.96	323	*e*PKHKP	PKPbc	20 32 40.5	-2.8
MOS				*e*		20 36 01.6	
MOS				pmax	pmax		
	comp=Z,286nm,1.5s						
BORG	**Borgarnes**	145.03	16	*e*PKPbc	PKPab	20 32 44.1	+0.6
BORG	**Borgarnes**	145.03	16	*e*PKIKP	PKPab	20 32 44.1	+0.6
LPSR	**Galich'ya Gora**	145.49	317	*e*PKIKP	PKPdf	20 32 44.1	-0.3
LPSR				pmax	pmax		
	comp=Z,150nm,1.2s						
DAGI	**Agillar**	145.61	297	*i* P	PKPdf	20 32 43.7	-1.4
DAGI				IAML_P			
	comp=Z,28nm,0.3s						
DBAD	**Bademkaya**	145.77	297	*i* P	PKPdf	20 32 45.7	+0.3
DBAD				IAML_P			
	comp=Z,168nm,0.7s						
OBN	**Obninsk**	145.78	323	*e*PKPdf	PKPdf	20 32 45.0	+0.2
OBN	**Obninsk**	145.78	323	*de*PKIKP	PKPdf	20 32 44.5	-0.2
OBN				*e*		20 33 39.6	
OBN				*e*		20 33 55.7	
OBN				pmax	pmax		
	comp=Z,206nm,1.7s						
OBN				pmax	pmax		
	comp=Z,58nm,1.9s						
DBOC	**Borcka**	145.79	297	*i* P	PKPdf	20 32 36.5	-8.9
DBOC				IAML_P			
	comp=Z,21nm,0.1s						
VSR	**Storozhevoye**	145.81	315	*e*PKIKP	PKPdf	20 32 44.8	-0.2
VSR				pmax	pmax		
	comp=Z,100nm,1.4s						
VORD	**Divnogorie**	145.81	315	*e*PKIKP	PKPdf	20 32 44.4	-0.6
VORD				pmax	pmax		
	comp=Z,60nm,1.4s						
BCA	**Borcka**	145.82	297	⇓*i*P	PKPab	20 32 47.2	-0.1

MUSM	Mu-Merkez	145.89	293	iP	PKPdf	20 32 46.2	+0.5
MUSM				IAML_P			
	comp=Z,399nm,0.8s						
PUL	Pulkovo	146.04	333c	iPKP2	PKPab	20 32 46.9	-0.6
PUL				pmax	pmax		
	comp=Z,136nm,0.7s						
FIA1	FINESS Array S	146.38	338	ePKPdf	PKPdf	20 32 46.3	+0.7
FINES	FINESS Array B	146.38	338	PKPbc	PKPbc	20 32 46.8	-0.6
	comp=Z,128nm,0.8s,baz=52,slow=3.8,SNR=480						
KOPT	Kop Dagi	146.70	295	iP	PKPbc	20 32 48.5	-0.9
KOPT				IAML_P			
	comp=Z,59nm,0.1s						
NSS	Namsos	146.98	351	ePKPdf	PKPdf	20 32 47.6	+1.1
KELT	Kelkit	147.65	295	iP	PKPbc	20 32 52.0	+0.1
KELT				IAML_P			
	comp=Z,596nm,1.0s						
KEMA	Kemaliye	148.25	293	iP	PKPbc	20 32 53.2	0.0
KEMA				IAML_P			
	comp=Z,529nm,0.8s						
VSU	Vasula	148.29	333	eP	PKPbc	20 32 51.8	-0.8
VSU				IAmb	IAmb	20 32 54.9	
	comp=Z,158nm,0.8s						
VSU	Vasula	148.29	333c	iPKP2	PKPbc	20 32 52.8	+0.2
VSU				pmax	pmax		
	comp=Z,326nm,1.3s						
TBLU	Trondheim	148.44	351	ePKPbc	PKPbc	20 32 52.2	-0.6
SUSE	Susehri	148.45	295	iP	PKPbc	20 32 54.5	+0.7
SUSE				IAML_P			
	comp=Z,33nm,0.5s						
ANN	Anapa	148.52	304	iPKIKP	PKPbc	20 32 51.8	-1.8
ANN				pmax	pmax		
	comp=Z,58nm,1.0s						
CUKAN	kangal_SIVAS	149.04	294	iP	PKPbc	20 32 55.0	-0.4
MOL	Molde	149.41	353	ePKPbc	PKPbc	20 32 54.8	-0.5
DOMB	Dombas	149.75	352	ePKPbc	PKPbc	20 32 55.8	-0.4
AKN	Aaknes	149.85	354	ePKPbc	PKPbc	20 32 56.8	+0.4
NC303	NORSAR Array S	150.21	349	ePKPbc	PKPbc	20 32 57.3	0.0
NC204	NORSAR Array S	150.26	350	ePKPbc	PKPbc	20 32 57.2	-0.2
NC405	NORSAR Array S	150.26	349	ePKPbc	PKPbc	20 32 56.9	-0.5
IZAR	Zarasai	150.32	330	eP	PKPbc	20 32 57.9	+0.2
IZAR				IAmb	IAmb	20 33 00.1	
	comp=Z,20nm,1.0s						
NB201	NORSAR Array S	150.39	349	ePKPbc	PKPbc	20 32 57.4	-0.4
IDID	Didziasalis	150.39	329	eP	PKPbc	20 32 57.9	+0.1
IDID				IAmb	IAmb	20 33 00.2	
	comp=Z,34nm,1.1s						
NB2	NORSAR Subarra	150.41	349	PKP	PKPbc	20 32 57.1	-0.7
	comp=Z,153nm,1.4s,baz=30,slow=2.9						
NB2	NORSAR Subarra	150.41	349	PKP	PKPbc	20 32 57.1	-0.7
	baz=30,slow=2.9						
NOA	NORSAR Array B	150.41	349	PKP	PKPdf	20 32 52.0	-0.2
	comp=Z,4.9nm,1.1s,baz=15,slow=4.1,SNR=15						
NOA				PKPbc	PKPbc	20 32 57.7	-0.1
	comp=Z,8.9nm,0.4s,baz=15,slow=4.1,SNR=62						
NBO00	NORSAR Array S	150.49	349	ePKPbc	PKPbc	20 32 58.0	+0.1
ISAL	Salakas	150.49	330	eP	PKPbc	20 32 58.3	+0.2
ISAL				IAmb	IAmb	20 33 00.4	
	comp=Z,26nm,1.1s						
SLIT	Slitere, Latvi	150.52	336	eP	PKPbc	20 32 56.7	-1.3
SLIT				IAmb	IAmb	20 32 58.2	
	comp=Z,90nm,0.7s						
IIGN	Ignalina	150.59	329	eP	PKPbc	20 32 58.6	+0.2
IIGN				IAmb	IAmb	20 33 00.8	
	comp=Z,50nm,1.1s						
NC602	NORSAR Array S	150.64	348	ePKPbc	PKPbc	20 32 57.9	-0.4
NAO01	NORSAR Array S	150.65	349	ePKPbc	PKPbc	20 32 58.4	+0.1
HYA	Hoyanger	150.92	354	ePKPbc	PKiKP	20 32 59.6	+0.2
SUE	Sulen	151.14	355	ePKPbc	PKiKP	20 32 59.7	-0.1
SKAR	Skarslia	151.17	352	ePKPbc	PKiKP	20 32 59.9	-0.2
OSL	Oslo	151.53	349	eP	PKiKP	20 33 01.0	+0.3
ASK	Askoy	151.68	355	ePKPbc	PKiKP	20 33 01.1	+0.2
BER	Bergen	151.77	354	ePKPbc	PKiKP	20 33 01.4	+0.2
AKASG	Malin Array Be	151.77	319	PKP	PKPdf	20 32 55.1	+0.5
	comp=Z,0.5nm,0.4s,baz=50,slow=1.9,SNR=5.1						
AKASG				PKPbc	PKPbc	20 33 00.7	-0.4
	comp=Z,15nm,0.8s,baz=63,slow=2.1,SNR=36						
AKBB	Malin Array Si	151.77	319	ePKPdf	PKPdf	20 32 53.8	-0.8
AKBB				ePKPbc	PKPbc	20 33 00.6	-0.6
AKBB	Malin Array Si	151.77	319	ePKIKP	PKPdf	20 32 53.8	-0.8
ILGA	Ilgaz	151.79	297	ePKPbc	PKPbc	20 33 01.8	0.0
BRTR	Keskin Array B	151.98	295	PKP	PKPdf	20 32 55.4	-0.1
	comp=Z,3.3nm,1.2s,baz=35,slow=4.5,SNR=5.6						
BRTR				PKPbc	PKPbc	20 33 01.4	-0.8
	comp=Z,5.9nm,0.5s,baz=149,slow=4.2,SNR=38						
KONO	Kongsberg	151.99	350	ePKPbc	PKiKP	20 33 01.8	+0.1
KONO				ePKPab	PKPab	20 33 11.6	-0.1
KONO	Kongsberg	151.99	350	PKIKP	PKiKP	20 33 02.0	+0.3
KONO	Kongsberg	151.99	350	ePKPbc	PKPbc	20 33 00.6	-0.8
ODD1	Odda	152.11	353	ePKPbc	PKiKP	20 33 02.2	+0.2
CSS	Mathiatis	152.24	285	ePKPbc	PKiKP	20 33 03.2	+0.1
BLS5	Blasjo	152.61	353	ePKPbc	PKiKP	20 33 03.9	+0.9
ANTO	Ankara	152.62	295	⇓iP	PKiKP	20 33 04.0	+0.3
ANTO	Ankara	152.62	295	⇓PKIKP	PKiKP	20 33 04.0	+0.3
SUW	Suwalki	152.80	330	ePKP	PKPab	20 33 13.5	-1.9
SUW	Suwalki	152.80	330	ePKPbc	PKPbc	20 33 03.2	-0.1
SUW				ePKPab	PKPab	20 33 15.0	-0.4
KMY	Karmoy	152.93	354	ePKPbc	PKiKP	20 33 03.9	+0.3
LIC	Lamto	153.55	169	ePKP2	PKPdf	20 32 58.7	+0.4
	comp=Z,189nm,0.9s						
KIS	Kishinev	153.66	312	eP	PKPab	20 33 18.0	-1.3
	comp=Z,72nm,1.5s						
KIS	Kishinev	153.66	312	eP	PKPab	20 33 18.0	-1.3
	comp=Z,72nm,1.5s						
KIS	Kishinev	153.66	312	ePKP2	PKPab	20 33 18.0	-1.3
KIS				pmax	pmax		
	comp=Z,72nm,1.5s						
KIC	Kosan Boka	153.73	169	ePKP2	PKPdf	20 32 59.3	+0.7
	comp=Z,201nm,1.1s						
MDUB	Mudurnu	153.76	297	ePKPbc	PKPbc	20 33 05.2	-0.8
TIC	Toumodi	153.97	168	ePKP2	PKPdf	20 33 00.4	+1.4
DBIC	Dimbokro	154.02	169	PKP	PKPdf	20 32 59.1	+0.1
	comp=Z,34nm,1.1s,baz=182,slow=3.5,SNR=11						
DBIC				PKPbc	PKiKP	20 33 08.0	+0.7
	comp=Z,27nm,1.1s,baz=150,slow=3.3,SNR=18						
DBIC				PKPab	PKPab	20 33 23.3	+1.8
	comp=Z,29nm,0.8s,baz=164,slow=5.2,SNR=11						
DBIC	Dimbokro	154.02	169	ePKPdf	PKPdf	20 32 59.0	0.0
DBIC				ePKPbc	PKPbc	20 33 07.2	0.0
DBIC				ePKPab	PKPab	20 33 23.4	+1.9
CFR	Carcaliu	154.78	309	⇓iP	PKPdf	20 32 59.0	-0.1
CFR	Carcaliu	154.78	309	⇓PKIKP	PKPdf	20 32 59.0	-0.1
LVV	L'vov	155.06	321	ePKP2	PKPab	20 33 24.6	-0.6
MUD	Monsted U'grnd	155.10	348	iPKIKP	PKPbc	20 33 08.4	
MUD				e		20 33 22.6	
MUD	Monsted U'grnd	155.10	348	iP	PKPbc	20 33 08.4	
MUD				e		20 33 22.6	
BIZ	Bicaz	155.37	314	⇑iP	PKPdf	20 32 53.4	-6.4
VRI	Vrincioaia	155.44	311	⇑iP	PKPdf	20 33 07.6	+7.6
VRI	Vrincioaia	155.44	311	⇑PKIKP	PKPdf	20 33 07.6	+7.6
PLOR	Plostina	155.49	311	⇓iP	PKPdf	20 33 04.8	+4.7
PLOR	Plostina	155.49	311	⇓PKIKP	PKPdf	20 33 04.8	+4.7
BUR08	Bucovina Ar. S	155.58	316	ePKPab	PKPab	20 33 28.4	+0.8
BURAR	Bucovina Array	155.58	316	⇓iP	PKPdf	20 33 00.4	+0.2
BURAR	Bucovina Array	155.58	316	⇓PKIKP	PKPdf	20 33 00.4	+0.2
KWP	Kalwaria Pacla	155.87	322	ePKPab	PKPab	20 33 28.0	-0.7
MLR	Muntele Rosu	156.09	311	ePKPdf	PKPdf	20 32 59.9	-1.2
MLR	Muntele Rosu	156.09	311	⇑iP	PKPdf	20 32 59.8	-1.2
MLR	Muntele Rosu	156.09	311	ePKIKP	PKPdf	20 32 59.9	-1.2
DOPR	Dopca	156.24	312	⇓iP	PKPdf	20 33 01.9	+0.8
BALB	Balikesir	156.40	296	ePKPab	PKPab	20 33 30.9	-0.4
KOLS	Kolonicke sedl	156.51	321	ePKIKP	PKPdf	20 33 01.9	+0.6
KOLS	Kolonicke sedl	156.51	321	ePKP	PKPdf	20 33 01.9	+0.6
UZH	Uzhgorod	156.68	321c	iPKP2	PKPab	20 33 32.4	+0.2
VOIR		156.69	311	⇓iP	PKPdf	20 33 05.8	+4.1
VOIR		156.69	311	⇓PKIKP	PKPdf	20 33 05.8	+4.1
OJC	Ojcow	156.92	326	ePKPab	PKPab	20 33 32.6	-0.6
ESK	Eskdalemuir	156.95	5	ePKPab	PKPab	20 33 32.2	-0.8
LOT	Lotru	157.49	312	⇑iP	PKPdf	20 33 06.1	+3.3
LANS	Liptovska Anna	157.81	325	ePKP2	PKPab	20 33 37.7	+0.6
LANS	Liptovska Anna	157.81	325	ePKP	PKPab	20 33 37.7	+0.6
OSTC	Ostas	158.25	331	ePKPDF	PKPdf	20 33 03.5	+0.1
OSTC				ePKPAB	PKPab	20 33 39.1	+0.2
MORC	Moravsky Berou	158.27	328	ePKPdf	PKPdf	20 33 03.8	+0.3
MORC				ePKPab	PKPab	20 33 38.5	-0.6
MORC	Moravsky Berou	158.27	328	⇑iP	PKPdf	20 33 04.1	+0.6
MORC	Moravsky Berou	158.27	328	ePKIKP	PKPdf	20 33 03.8	+0.3
MORC				e		20 33 38.5	
MORC	Moravsky Berou	158.27	328	ePKP	PKPdf	20 33 03.3	-0.2
MORC				e		20 33 38.4	
DPC	Dobruska-Polom	158.36	331	ePKIKP	PKPdf	20 33 03.8	+0.2
DPC				e		20 33 39.8	
DPC	Dobruska-Polom	158.36	331	ePKPDF	PKPdf	20 33 03.8	+0.2
DPC				ePKPAB	PKPab	20 33 39.8	+0.3
UPC	Upice	158.37	332	ePKIKP	PKPdf	20 33 03.1	-0.4
UPC				e		20 33 39.3	
UPC	Upice	158.37	332	ePKPDF	PKPdf	20 33 03.1	-0.4
UPC				ePKPAB	PKPab	20 33 39.3	-0.1
VYHS	Vyhne	158.56	324	ePKIKP	PKPdf	20 33 05.0	+1.2
VYHS				e		20 33 40.7	
VYHS	Vyhne	158.56	324	ePKP	PKPdf	20 33 05.0	+1.2
VYHS				e		20 33 40.7	
BZS	Buzias	158.73	315	⇓iP	PKPdf	20 33 05.3	+1.2
BZS	Buzias	158.73	315	⇓PKIKP	PKPdf	20 33 05.3	+1.2
CLL	Collm	158.82	337	ePKPab	PKPab	20 33 39.4	-2.0
CLL	Collm	158.82	337	iPKP2	PKPab	20 33 39.1	-2.2
CLL				pmax	pmax		
	comp=Z,69nm,1.1s						
CLL	Collm	158.82	337	iPKPab	PKPab	20 33 39.1	-2.2
	comp=Z,69nm,1.1s						
CLL				ePP	PP	20 37 22.0	-0.6
BRG	Berggiesshubel	158.86	335	eP	PKPdf	20 33 04.0	-0.1
	comp=Z,9.1nm,1.1s						
BRG				ipP	PKPab	20 33 40.8	-0.7
	comp=Z,69nm,1.4s						
BRG	Berggiesshubel	158.86	335	ePKIKP	PKPdf	20 33 04.0	-0.1
BRG				i*PP	PKPab	20 33 40.8	-0.7
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
JAVC	Velka Javorina	158.87	326	ePKP	PKPdf	20 33 04.7	+0.4
JAVC				e		20 33 42.4	
PVCC	Panska Ves	158.92	334	ePKIKP	PKPdf	20 33 04.1	-0.1
PVCC				e		20 33 42.0	
PVCC	Panska Ves	158.92	334	ePKPDF	PKPdf	20 33 04.1	-0.1
PVCC				ePKPAB	PKPab	20 33 42.0	+0.2
VRAC	Vranov	159.03	329	ePKP	PKPdf	20 33 03.9	-0.5
VRAC				e		20 33 42.0	
MDVR	Moldovita	159.09	313	⇑iP	PKPdf	20 33 04.3	-0.3
KRUC	Moravsky	159.30	328	ePKP	PKPdf	20 33 04.1	-0.6
KRUC				e		20 33 42.9	
PRU	Pruhonice	159.36	333	ePKP2	PKPab	20 33 43.8	+0.1
PRU	Pruhonice	159.36	333	ePKPAB	PKPab	20 33 43.8	+0.1
MODS	Modra-Piesok	159.39	326	ePKIKP	PKPdf	20 33 03.6	-1.2
MODS				e		20 33 43.8	
MODS	Modra-Piesok	159.39	326	ePKP	PKPdf	20 33 03.6	-1.2
MODS				e		20 33 43.8	
TREC	Trest	159.52	330	ePKP2	PKPab	20 33 44.5	0.0
TREC	Trest	159.52	330	ePKPAB	PKPab	20 33 44.5	0.0
WTSB	Winterswijk	159.81	348	ePKPdf	PKPab	20 33 43.5	-2.1
NKC	Novy Kostel	159.92	336	ePKP2	PKPab	20 33 46.4	+0.2
NKC	Novy Kostel	159.92	336	ePKPAB	PKPab	20 33 46.4	+0.2
CONA	Conrad Observa	160.38	327	iPKPdf	PKPdf	20 33 05.9	-0.1
	comp=Z,5.9nm,1.2s						
CONA				iPKPab	PKPab	20 33 48.3	-0.1
	comp=Z,27nm,1.3s,SNR=13						
KHC	Kasperske Hory	160.42	333	ePKPdf	PKPdf	20 33 05.6	-0.4
KHC				ePKPab	PKPab	20 33 48.6	+0.1
KHC	Kasperske Hory	160.42	333	ePKIKP	PKPdf	20 33 05.6	-0.4
KHC				e		20 33 48.6	
KHC	Kasperske Hory	160.42	333	ePKPDF	PKPdf	20 33 06.8	+0.8
KHC				ePKPAB	PKPab	20 33 47.8	-0.7
GEC2	GERESS Array S	160.60	332	ePKPdf	PKPdf	20 33 05.7	-0.6
GEC2				ePKPab	PKPab	20 33 49.3	0.0
GEC2	GERESS Array S	160.60	332	ePKIKP	PKPdf	20 33 05.7	-0.6
GEC2				e		20 33 49.3	
GERES	GERESS Array B	160.60	332	PKP	PKPdf	20 33 05.8	-0.5
	comp=Z,1.0nm,0.8s,baz=270,slow=0.8,SNR=12						
GERES				PKPab	PKPab	20 33 49.7	+0.3
	comp=Z,6.2nm,0.9s,baz=46,slow=5.8,SNR=26						
GRA1	Grafenberg Arr	160.79	337	ePKPab	PKPab	20 33 50.5	+0.5
GRFO	Grafenberg	160.79	337	ePKPab	PKPab	20 33 50.8	+0.8
TOA0	Torodi Ar. Sit	160.80	185	ePKPdf	PKPdf	20 33 08.0	+0.6
TOA0				ePKPab	PKPab	20 33 51.8	+1.0
TORD	Torodi Ar. Bea	160.80	185	PKP	PKPdf	20 33 07.0	-0.4
	comp=Z,8.7nm,0.4s,baz=347,slow=2.6,SNR=23						
TORD				PKPab	PKPab	20 33 51.0	+0.2
	comp=Z,15nm,0.8s,baz=181,slow=1.2,SNR=27						
TORD				PP	PP	20 37 32.4	-0.5
	comp=Z,1.4nm,1.1s,baz=158,slow=4.5,SNR=4.3						
ARSA	Arzberg	161.03	326	iPKPdf	PKPdf	20 33 06.3	-0.4
	comp=Z,3.6nm,0.9s						
ARSA				iPKPab	PKPab	20 33 51.7	+0.5
	comp=Z,8.9nm,1.2s						
HGN	Heimansgroeve	161.12	348	ePKPdf	PKPab	20 33 50.6	-0.7
	comp=Z,75nm,1.1s						
BEBN	Eben Emael	161.13	349	⇑PKPab	PKPab	20 33 51.4	0.0
MOA	Molln	161.15	329	iPKPab	PKPab	20 33 51.2	-0.5
	comp=Z,20nm,1.5s,SNR=7.3						
MEM	Membach	161.26	348	⇑PKPab	PKPab	20 33 51.8	-0.1
UCC	Uccle	161.32	351	⇑PKPab	PKPab	20 33 51.6	-0.6
BCLA	Clavier	161.56	349	⇓PKPab	PKPab	20 33 53.2	-0.1
SNF	Seneffe	161.61	351	⇓PKPab	PKPab	20 33 53.6	+0.1
SOKA	Soboth	161.67	326	iPKPdf	PKPdf	20 33 06.4	-1.1
	comp=Z,6.8nm,1.1s,SNR=8.1						
SOKA				iPKPab	PKPab	20 33 54.2	+0.1
	comp=Z,17nm,1.6s,SNR=8.1						
DOU	Dourbes	161.98	350	⇑PKPab	PKPab	20 33 54.5	-0.6
OBKA	Obir	162.02	326	iPKPab	PKPab	20 33 55.0	-0.6
	comp=Z,3.7nm,0.9s						
WLF	Walferdange	162.14	347	ePKPab	PKPab	20 33 56.2	+0.4
WLF	Walferdange	162.14	347	⇑PKPab	PKPab	20 33 56.4	+0.6
KBA	Koelnbreinsper	162.14	329	iPKPdf	PKPdf	20 33 06.7	-1.3
	comp=Z,6.0nm,1.4s						
KBA				iPKPab	PKPab	20 33 55.8	-0.5
	comp=Z,8.6nm,1.0s						
MYKA	Terra Mystica	162.35	328	iPKPab	PKPab	20 33 54.7	-2.4
	comp=Z,8.0nm,1.0s						
WATA	Walderalm	162.66	333	iPKPdf	PKPdf	20 33 08.0	-0.5
	comp=Z,2.2nm,0.6s						
WATA				iPKPab	PKPab	20 33 58.8	+0.4
	comp=Z,7.6nm,0.9s						
WTTA	Wattenberg	162.70	333	iPKPdf	PKPdf	20 33 08.5	-0.1
	comp=Z,10nm,1.1s						
WTTA				iPKPab	PKPab	20 33 58.6	0.0
	comp=Z,18nm,1.2s,SNR=5.5						
ABTA	Abfaltersbach	162.76	330	iPKPdf	PKPdf	20 33 07.6	-1.0
	comp=Z,7.5nm,1.0s,SNR=5.1						
ABTA				iPKPab	PKPab	20 33 58.1	-0.7
	comp=Z,16nm,1.1s,SNR=7.0						
MOTA	Moosalm	162.84	334	iPKPdf	PKPdf	20 33 08.6	-0.1
	comp=Z,5.9nm,1.0s						
MOTA				iPKPab	PKPab	20 33 59.1	-0.1
	comp=Z,20nm,1.0s,SNR=11						
RETA	Reutte	162.84	335	iPKPdf	PKPdf	20 33 07.2	-1.3
	comp=Z,4.0nm,1.0s						
RETA				iPKPab	PKPab	20 33 58.7	-0.4
	comp=Z,48nm,1.3s,SNR=19						
BFO	Black Forest	162.88	341	ePKPab	PKPab	20 33 59.0	-0.2
SQTA	Sankt Quirin	162.90	333	iPKPdf	PKPdf	20 33 08.6	-0.1
	comp=Z,9.1nm,1.1s						
SQTA				iPKPab	PKPab	20 33 59.6	+0.1
	comp=Z,27nm,1.1s,SNR=11						
FETA	Feichten	163.25	334	iPKPdf	PKPdf	20 33 08.9	-0.2
	comp=Z,10nm,1.1s						
FETA				iPKPab	PKPab	20 34 01.3	+0.2
	comp=Z,27nm,1.1s,SNR=10.0						
ECH	Echery	163.29	343	ePKPab	PKPab	20 34 00.4	-0.5
DAVA	Damuels	163.32	336	iPKPdf	PKPdf	20 33 04.5	-4.7
	comp=Z,9.8nm,1.4s						
DAVA				iPKPab	PKPab	20 34 01.7	+0.3
	comp=Z,51nm,1.2s,SNR=16						
FUORN	Ofenpass-Fuorn	163.76	334	ePKPab	PKPab	20 34 03.2	-0.2
TUE	Stuetta	164.21	336	ePKPab	PKPab	20 34 05.6	+0.2
CLF	Chambon-Foret	164.28	354	ePKPdf	PKPdf	20 33 09.7	0.0
CLF				ePKPab	PKPab	20 34 05.5	+0.2
SENIN	Lac Senin/Sane	164.96	340	ePKPdf	PKPdf	20 33 07.8	-3.0
SENIN				ePKPab	PKPab	20 34 08.4	-0.3
BNI	Bardonecchia	166.33	340	ePKPab	PKPab	20 34 15.4	+0.7
SSB	Saint Sauveur	166.65	346	ePKPab	PKPab	20 34 16.1	+0.3
POLO	Lamas de Olo	169.05	33	ePKPab	PKPab	20 34 27.6	+0.8
PBRG	Braganca	169.15	28	ePKPab	PKPab	20 34 28.1	+1.0
PVRL	Vila Real	169.17	33	ePKPab	PKPab	20 34 27.9	+0.7
TAM	Tamanrasset	169.29	208	ePKPdf	PKPdf	20 33 16.1	+1.5
TAM	Tamanrasset	169.29	208	ePKIKP	PKPdf	20 33 16.1	+1.5
PVIS	Viseu	169.52	35	ePKPab	PKPab	20 34 29.8	+1.0
MVO	Moncorvo	169.56	31	ePKPdf	PKPdf	20 33 15.3	+1.3
MVO	Moncorvo	169.56	31	ePKPab	PKPab	20 34 30.1	+1.1
MTE	Manteigas	169.93	35	ePKPdf	PKPdf	20 33 14.8	+0.5
PCBR	Castelo Branco	170.39	37	ePKPdf	PKPdf	20 33 15.9	+1.5
PCBR	Castelo Branco	170.39	37	ePKPab	PKPab	20 34 33.8	+1.2
PNCL	Nicolau / Gran	170.96	48	ePKPdf	PKPdf	20 33 17.1	+2.3
MESJ	Messejana	171.31	49	ePKPdf	PKPdf	20 33 15.1	+0.1
MORF	Marmelete	171.33	53	ePKPdf	PKPdf	20 33 15.2	+0.1
PBEJ	Beja	171.42	47	ePKPdf	PKPdf	20 33 18.4	+3.3
PCVE	Castro Verde	171.55	49	ePKPdf	PKPdf	20 33 16.6	+1.5
KEST	Kesra	171.59	296	PKP	PKPdf	20 33 16.3	+1.0
	comp=Z,7.5nm,0.9s,baz=170,slow=3.5,SNR=5.7						
PBDV	Barranco-do-Ve	171.85	51	ePKPdf	PKPdf	20 33 18.0	+2.7
PAB	San Pablo	172.01	25	ePKPdf	PKPdf	20 33 16.9	+1.5
PAB	San Pablo	172.01	25	ePKIKP	PKPdf	20 33 16.9	+1.5
ESDC	Sonseca Array	172.03	23	PKP	PKPdf	20 33 16.6	+1.3
	comp=Z,3.9nm,0.9s,baz=353,slow=2.6,SNR=26						
ESDC				PKPab	PKPab	20 34 40.7	+0.8
	comp=Z,6.5nm,0.9s,baz=334,slow=4.1,SNR=21						
ESDC				PP	PP	20 38 29.8	-1.1
	comp=Z,0.4nm,0.7s,baz=319,slow=5.1,SNR=3.9						
ESLA	Sonseca Array	172.03	23	ePKPdf	PKPdf	20 33 16.6	+1.3
ESLA				ePKPab	PKPab	20 34 40.5	+0.6

NEIC 03 20:15:44.7±0.0**, 60°.03N**×**152°.71W, h99^{km}, ML2.9**(AEIC)**,**
After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVE	Iliamna Volcan	0.15	266	ePn	Pn	20 15 58.3	-0.5
ILS	Iliamna Low So	0.19	248	ePn	Pn	20 15 58.2	-0.7
RSO	Redoubt South	0.43	357	ePn	Pn	20 15 59.6	-0.7
RDJH	Redoubt Jeurge	0.57	355	ePn	Pn	20 16 00.4	-0.7
RDJH				eSn	Sn	20 16 12.8	-0.5
HOM	Homer	0.66	124	ePn	Pn	20 15 59.8	-1.8
HOM				eSn	Sn	20 16 14.3	0.0
AUL	Augustine Lava	0.75	210	ePn	Pn	20 16 02.1	-0.4
AUL				eSn	Sn	20 16 15.9	+0.2
AUH	Augustine H	0.76	209	ePn	Pn	20 16 02.2	-0.5
AUW	Augustine West	0.77	211	ePn	Pn	20 16 02.2	-0.5
AUI	Augustine Isla	0.79	208	ePn	Pn	20 16 02.1	-0.8
CNPM	China Poot	0.90	123	ePn	Pn	20 16 03.2	-0.9
CNPM				eSn	Sn	20 16 17.6	-0.9
BRLK	Bradley Lake	0.96	105	ePn	Pn	20 16 03.6	-1.0
BRLK				eSn	Sn	20 16 18.1	-1.5
SPWE	Spurr West	1.25	3	ePn	Pn	20 16 08.0	0.0
FONW	Fourpeaked Sta	1.35	208	ePn	Pn	20 16 08.2	-1.0
SEW	Seward	1.64	86	ePn	Pn	20 16 11.3	-1.3
SEW				eSn	Sn	20 16 31.7	-2.1
SVW2	Sparrevohn	1.78	308	ePn	Pn	20 16 13.3	-1.1
SVW2				eSn	Sn	20 16 35.5	-1.4
KAHG	Katmai Hook Gl	1.81	212	ePn	Pn	20 16 14.3	-0.5
RC01	Rabbit Creek A	1.81	53	ePn	Pn	20 16 13.8	-1.0
RC01				eSn	Sn	20 16 36.1	-1.6
KAHC	Katmai Hardscr	1.82	221	ePn	Pn	20 16 14.2	-0.7
KARR	Katmai Rainbow	1.85	215	ePn	Pn	20 16 14.7	-0.6
KELA	Mount Kelaz	2.23	226	ePn	Pn	20 16 19.4	-0.9
KDAK	Kodiak Island	2.25	178	ePn	Pn	20 16 18.2	-2.3
PMR	Palmer	2.35	47	ePn	Pn	20 16 20.4	-1.4
KNK	Knik Glacier	2.51	55	ePn	Pn	20 16 23.1	-0.7
SML	Sawmill	2.79	48	ePn	Pn	20 16 26.1	-1.5
OHAK	Old Harbor	2.83	186	ePn	Pn	20 16 25.6	-2.5
PPLA	Purkeypile	2.89	5	ePn	Pn	20 16 28.9	-0.1
GLI	Glacier Island	2.91	71	ePn	Pn	20 16 27.1	-2.0
SCM	Sheep Creek Mo	3.19	53	ePn	Pn	20 16 31.5	-1.5
JPK	Jack Peak	3.19	69	ePn	Pn	20 16 30.3	-2.6
TT01	Tatalina	3.29	333	ePn	Pn	20 16 33.3	-1.0
HUR	Hurricane	3.31	25	ePn	Pn	20 16 34.4	-0.1
CAST	Castle Rocks	3.42	5	ePn	Pn	20 16 35.4	-0.6
EYAK	Cordova Ski Ar	3.50	78	ePn	Pn	20 16 36.1	-1.0
SII	Sitkinak Islan	3.57	193	ePn	Pn	20 16 36.5	-1.5
TRF	Thorofare Moun	3.62	17	ePn	Pn	20 16 38.8	0.0
KTH	Kantishna Hill	3.64	13	ePn	Pn	20 16 38.2	-0.8
RND	Reindeer	3.85	27	ePn	Pn	20 16 41.1	-0.8
DHY	Denali Highway	3.98	38	ePn	Pn	20 16 42.4	-1.3
MCK	McKinley	4.12	24	ePn	Pn	20 16 45.0	-0.5
BPAW	Bear Paw Mtn.	4.17	10	ePn	Pn	20 16 45.9	-0.1
HMT	Hamilton	4.23	82	ePn	Pn	20 16 47.7	+0.8
BWN	Browne	4.43	19	ePn	Pn	20 16 49.3	-0.2
BWN				ePn	Pn	20 16 49.5	-0.1
WRH	Wood River Hil	4.95	24	ePn	Pn	20 16 55.3	-1.3
MLY	Manley	5.10	9	ePn	Pn	20 16 58.4	-0.3
HDA	Harding Lake	5.16	29	ePn	Pn	20 16 57.9	-1.5
CCB	Clear Creek Bu	5.17	24	ePn	Pn	20 16 58.0	-1.5
RIDG	Independent Ri	5.26	42	ePn	Pn	20 17 00.2	-0.7
ILB	Eielson Array	5.47	27	ePn	Pn	20 17 02.1	-1.6
PS07	TAPS Pump Stn7	5.68	19	ePn	Pn	20 17 05.6	-0.9
SCRK	Sand Creek	5.71	42	ePn	Pn	20 17 06.3	-0.7
IM3	Indian Mountai	6.00	356	ePn	Pn	20 17 09.9	-0.8
PS06	TAPS Pump Stn6	6.00	12	ePn	Pn	20 17 10.4	-0.5
PCA	Pinnacle	6.24	84	ePn	Pn	20 17 13.1	-1.0
PRP	Porcupine Dome	6.42	28	ePn	Pn	20 17 16.1	-0.5
PNL	Peninsula	6.72	87	ePn	Pn	20 17 19.2	-1.4
EGAK	Eagle	7.17	43	ePn	Pn	20 17 25.9	-0.7
COLD	Coldfoot	7.31	8	ePn	Pn	20 17 28.5	-0.1
BLA	Blacksburg	50.01	83	eP	P	20 24 28.4	-0.2
YLE	Yale	50.51	74	eP	P	20 24 31.4	-0.9

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*ISCJB **03** 20:16:39.1±1.2, 58°.36S±0°.05×26°.4W±0°.1, h152^{km}±11^{km}, mb5.1/32, Error ellipse: s-maj=11.3km s-min=6.2km az=149.5*

*GCMT **03** 20:16:39.9±0.2, 58°.82S±0°.01×26°.14W±0°.03, h124^{km}±2^{km}, MW5.2/104, Moment Tensor Solution. s50,c60; s104,c163; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.22±.03; $M_{\theta\theta}$-0.27±.03; $M_{\phi\phi}$0.48±.03; $M_{r\theta}$0.60±.02; $M_{\theta\phi}$0.62±.02; $M_{\phi r}$-0.05±.02; Best double couple: $M_0$0.95600×10^{17} NP1:ϕ_s250.00000°, δ77.00000°, λ-38.00000°. NP2:ϕ_s350.00000°, δ53.00000°, λ-163.00000°. Principal axes: T 0.9000, Plg15.0000°, Azm305.0000°; N 0.1100, Plg50.0000°, Azm54.0000°; P -1.0110, Plg36.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **03** 20:16:39.9±1.4, 58°.38S×26°.33W, h147^{km}±4^{km}, mb5.3/24 Error ellipse: s-maj=19.5km s-min=13.3km az=52.0*

*IDC **03** 20:16:39.5±0.5, 58°.37S×26°.48W, h142^{km}±3^{km}, mb4.7/16, mb1 4.8/18, mb1mx4.6/26, mbtmp5.2/18, MS4.3/6, Ms1 4.3/6, ms1mx4.0/22, Error ellipse: s-maj=12.4km s-min=8.8km az=43.0*

ISC 03 20:16:39.0±0.5**, 58°.55S**±0°.06×**26°.34W**±0°.07**, h143^{km}**±3^{km}**,**
h143^{km}:pP-P, n151, σ1^{s}**49**/180**, mb5.0**/32**, 2C, South**
Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.06	303	ePn	Pn	20 18 20.4	+0.7
VNA1	Neumayer--Stat	14.32	155	P	P	20 19 58.7	+1.0
VNA1				S	Sn	20 22 28.7	-4.2
VNA3	Neumayer Olymp	14.49	158	P	P	20 20 00.4	+0.8
VNA3				S	Sn	20 22 28.7	-8.4
SNAA	Sanae	16.28	153	P	P	20 20 21.2	+1.7
SNAA				S	Sn	20 23 11.9	-8.4
SNAA	Sanae	16.28	153	P	P	20 20 20.9	+1.4
	4.1nm,0.3s,baz=305,slow=11,SNR=79						
SNAA				S	Sn	20 23 08.0	-12
	1.7nm,0.3s,baz=342,slow=20,SNR=3.0						
SNAA				ScP	ScP	20 28 25.6	+1.5
	0.3nm,0.3s,baz=291,slow=2.2,SNR=4.8						
SNAA	Sanae	16.28	153	eP	P	20 20 20.6	+1.1
	506nm,1.2s						
PMSA	Palmer Station	18.71	235	P	Pn	20 20 48.6	+0.5
	5.5nm,0.3s,baz=72,slow=7.3,SNR=18						
PMSA	Palmer Station	18.71	235	eP	Pn	20 20 48.2	+0.1
	292nm,1.2s						
PMSA	Palmer Station	18.71	235	eP	Pn	20 20 48.0	-0.1
EFI	East Falkland	19.26	277	eP	P	20 20 53.2	+1.1
	250nm,1.2s						
USHA	Ushuaia	23.13	261	P	P	20 21 32.6	+0.5
	23nm,0.5s,baz=228,slow=2.9,SNR=38						
USHA				LR	LR	20 28 30.5	
	comp=Z,1μm,18.4s,baz=163,slow=31						
SYO	Syowa Base	29.39	138	⇑iP	P	20 22 27.0	-1.1
SYO	Syowa Base	29.39	138	⇑ipP	pP	20 23 01.4	+4.2
TRQA	Tornquist	30.78	296	eP	P	20 22 41.0	+0.3
QSPA	South Pole Qui	31.70	180	eP	P	20 22 50.7	+2.0
	166nm,0.8s						
PLTB	Pedras Altas	32.53	313	eP	P	20 22 55.4	-0.7
PLCA	Paso Flores	32.95	283	P	P	20 22 59.9	+0.1
	12nm,0.9s,baz=183,slow=7.6,SNR=19						
PLCA	Paso Flores	32.95	283	eP	P	20 22 59.7	-0.1
	51nm,1.5s						
PLCA	Paso Flores	32.95	283	eP	P	20 22 59.1	-0.6
CPSB	Cacapava Do Su	33.68	315	eP	P	20 23 04.5	-1.6
CNLB	Canela	33.75	319	eP	P	20 23 05.3	-1.5
MAW	Mawson	37.88	141	P	P	20 23 43.3	+1.9
	34nm,1.0s,baz=244,slow=9.2,SNR=25						
MAW	Mawson	37.88	141	eP	P	20 23 43.2	+1.7
	9.0nm,1.0s						
SPB	Sao Paulo	38.03	328	eP	P	20 23 41.1	-2.1
PTGB	Pitanga	38.40	321	eP	P	20 23 45.5	-0.9

CPUP	Villa Florida	38.82	313	P	P	20 23 48.6	-1.2
	7.0nm,0.5s,baz=158,slow=6.3,SNR=22						
CPUP				pP	pP	20 24 18.3	-1.7
	23nm,1.0s,baz=146,slow=14,SNR=4.7						
CPUP				ScP	ScP	20 29 31.7	-0.7
	7.6nm,0.9s,baz=145,slow=3.7,SNR=5.2						
CPUP	Villa Florida	38.82	313	eP	P	20 23 48.2	-1.6
FRTB	Fartura	38.88	325	eP	P	20 23 48.9	-1.4
PEL	Peldehue	38.92	291	eP	P	20 23 51.4	+0.8
	477nm,1.4s						
CFA	Coronel Fontan	39.00	295	P	P	20 23 50.0	-1.3
	16nm,0.7s,baz=154,slow=8.9,SNR=15						
CFA				ScP	ScP	20 29 32.5	-0.6
	1.8nm,0.3s,baz=127,slow=4.3,SNR=3.5						
TRCB	Terra Rica	40.37	321	eP	P	20 24 00.9	-1.7
LCO	Las Campanas	42.33	295	eP	P	20 24 18.4	-0.5
	62nm,1.4s						
LCO	Las Campanas	42.33	295	eP	P	20 24 19.0	+0.2
ITRB	Iturama	42.55	325	eP	P	20 24 19.2	-1.2
PMNB	Patos De Minas	42.58	331	eP	P	20 24 21.3	+0.6
AQDB	Aquidauana	43.56	318	eP	P	20 24 27.1	-1.4
SBA	Scott Base	43.62	184	eP	P	20 24 30.6	+2.3
	111nm,1.3s						
VNDA	Vanda	44.09	183	P	P	20 24 34.5	+2.4
	54nm,0.8s,baz=186,slow=7.0,SNR=102						
VNDA				ScP	ScP	20 29 54.2	+1.6
	5.8nm,0.9s,baz=230,slow=4.3,SNR=8.4						
VNDA	Vanda	44.09	183	eP	P	20 24 34.1	+2.0
	54nm,0.7s						
GO02	Mina Guanaco	45.07	299	eP	P	20 24 40.1	-0.7
	19nm,0.6s						
JANB	Januaria	45.43	335	eP	P	20 24 43.7	+0.3
BDFB	Brasilia	45.76	330	P	P	20 24 45.4	-0.7
	23nm,0.5s,baz=166,slow=3.3,SNR=39						
BDFB	Brasilia	45.76	330	eP	P	20 24 45.1	-1.0
	23nm,0.5s						
BDFB				eP	P	20 24 45.4	-0.7
BOSA	Boshof	46.21	73	P	P	20 24 50.1	+0.6
	5.1nm,0.6s,baz=219,slow=7.0,SNR=15						
LVC	Limon Verde	46.97	301	ScP	ScP	20 30 05.3	-0.6
	3.3nm,0.5s,baz=178,slow=4.9,SNR=3.0						
PEXB	Peixe	49.23	331	eP	P	20 25 13.2	+0.5
SIV	San Ignacio	49.64	314	ScP	ScP	20 30 16.1	-0.6
	4.5nm,1.0s,baz=179,slow=5.5,SNR=8.0						
SIV				S	S	20 32 09.7	-3.6
	1.1nm,0.9s,baz=222,slow=16,SNR=2.6						
GO01	Chusmiza	49.67	303	eP	P	20 25 16.1	-0.5
	31nm,1.4s						
H10S2	ASCENSION HYDR	50.28	15	T	T	21 20 04.1	
	baz=188,slow=74,SNR=4.5						
H10S3	ASCENSION HYDR	50.28	15	T	T	21 19 58.7	
	baz=188,slow=74,SNR=54						
H10S1	ASCENSION HYDR	50.30	15	T	T	21 20 08.8	
	baz=188,slow=74,SNR=3.1						
H10N1	ASCENSION HYDR	51.40	15	T	T	21 21 28.0	
	baz=181,slow=72,SNR=13						
H10N3	ASCENSION HYDR	51.40	15	T	T	21 21 22.6	
	baz=181,slow=72,SNR=25						
CASY	Casey	51.40	159	eP	P	20 25 30.2	+1.8
	66nm,1.0s						
H10N2	ASCENSION HYDR	51.41	15	T	T	21 21 23.8	
	baz=181,slow=72,SNR=29						
NBLI	Livramento-PB	51.71	347	eP	P	20 25 31.9	+0.5
SMTB	Santa Maria do	52.17	333	eP	P	20 25 35.2	+0.5
LPAZ	La Paz	52.20	306	P	P	20 25 35.4	-0.3
	4.4nm,0.4s,baz=141,slow=6.1,SNR=27						
LPAZ				pP	pP	20 26 08.7	+1.0
	3.4nm,0.4s,baz=142,slow=9.3,SNR=3.0						
LPAZ				ScP	ScP	20 30 28.6	0.0
	2.1nm,0.9s,baz=97,slow=4.0,SNR=3.7						
LPAZ				S	S	20 32 47.7	-2.1
	0.4nm,0.4s,baz=252,slow=20,SNR=2.7						
LPAZ	La Paz	52.20	306	eP	P	20 25 34.7	-1.0
LPAZ				eScP	ScP	20 30 28.6	0.0
LPAZ				eS	S	20 32 47.7	-2.1
LPAZ	La Paz	52.20	306	eP	P	20 25 35.7	0.0
CLDB	Colider	52.55	323	eP	P	20 25 36.5	-1.1
RCBR	Riachuelo	53.10	348	eP	P	20 25 41.7	0.0
MATP	Matopo	54.65	70	LR	LR	20 45 18.3	
	comp=Z,201nm,19.2s,baz=237,slow=31						
LSZ	Lusaka	58.90	67	LR	LR	20 50 44.2	
	comp=Z,182nm,18.6s,baz=198,slow=35						
PTGA	Pitinga	63.42	322	eP	P	20 26 52.3	-1.0
LIC	Lamto	66.80	23	eP	P	20 27 15.6	+0.6
	34nm,0.5s						
KIC	Kosan Boka	66.99	23	eP	P	20 27 16.8	+0.6
	20nm,0.7s						
TIC	Toumodi	67.21	23	eP	P	20 27 18.1	+0.5
DBIC	Dimbokro	67.27	23	P	P	20 27 18.4	+0.6
	4.2nm,0.5s,baz=164,slow=7.2,SNR=16						
DBIC	Dimbokro	67.27	23	eP	P	20 27 18.5	+0.6
	36nm,1.4s						
ROSC	El Rosal	73.83	310	LR	LR	21 01 45.4	
	comp=Z,180nm,20.0s,baz=165,slow=37						
TOA0	Torodi Ar. Sit	75.02	28	eP	P	20 28 05.6	+1.1
	11nm,0.6s						
TORD	Torodi Ar. Bea	75.02	28	P	P	20 28 04.1	-0.4
	9.1nm,0.3s,baz=199,slow=7.0,SNR=49						
TOA1	Torodi Ar. Sit	75.03	28	eP	P	20 28 04.1	-0.5
WHZ	Wether Hill Ro	75.26	190	eP	P	20 28 07.0	+1.3
	175nm,0.5s						
MLZ	Mavora Lakes	75.76	190	eP	P	20 28 09.7	+1.1
	498nm,0.8s						
SDV	Santo Domingo	76.10	315	eP	P	20 28 10.8	-0.2
RPZ	Rata Peaks	77.08	193	P	P	20 28 17.6	+1.6
	31nm,0.9s,baz=207,slow=5.9,SNR=6.4						
RPZ	Rata Peaks	77.08	193	eP	P	20 28 17.5	+1.5
	133nm,1.0s						
LTZ	Lake Taylor	77.86	194	eP	P	20 28 22.1	+1.7
	87nm,1.1s						
THZ	Tophouse	78.78	195	eP	P	20 28 26.9	+1.5
	70nm,1.2s						
BKZ	Black Stump Fm	80.80	198	eP	P	20 28 37.9	+1.5
	31nm,1.2s						
URZ	Urewera	81.58	198	P	P	20 28 42.0	+1.6
	21nm,0.9s,baz=92,slow=1.1,SNR=4.8						
NWAO	Narrogin (SRO)	83.93	150	P	P	20 28 53.2	+0.5
	15nm,0.6s,baz=167,slow=2.8,SNR=15						
FORT	Forrest	88.48	158	eP	P	20 29 16.2	+1.3
	64nm,0.9s						
STKA	Stephens Creek	89.36	170	P	P	20 29 20.4	+1.4
	14nm,0.8s,baz=154,slow=5.2,SNR=16						
STKA	Stephens Creek	89.36	170	eP	P	20 29 20.2	+1.2
	8.3nm,1.2s						
ASAR	Alice Springs	96.47	162	P	P	20 29 52.2	+0.3
	9.9nm,0.8s,baz=187,slow=4.0,SNR=46						
ASAR				PP	PP	20 33 42.6	-4.1
	2.6nm,0.9s,baz=192,slow=6.6,SNR=7.7						
ASAR				LR	LR	21 11 14.4	
	comp=Z,203nm,19.8s,baz=138,slow=34						
AS31	Alice Springs	96.47	162	eP	P	20 29 51.8	-0.2
KEST	Kesra	98.54	29	LR	LR	21 12 03.3	
	comp=Z,145nm,18.0s,baz=342,slow=34						
PDAR	Pinedale Array	122.04	300	PKP	PKPdf	20 35 15.6	-0.2
	0.2nm,0.4s,baz=118,slow=4.4,SNR=4.7						
NV01	Mina Array Sit	122.76	291	ePKPdf	PKiKP	20 35 19.1	+1.6
NVAR	Mina Array Bea	122.76	291	PKP	PKiKP	20 35 19.1	+1.6
	0.2nm,0.4s,baz=115,slow=4.8,SNR=3.8						
NB200	NORSAR Array S	122.79	21	ePKPdf	PKiKP	20 35 17.5	+0.9
NOA	NORSAR Array B	122.79	21	PKP	PKiKP	20 35 17.5	+0.9
	1.0nm,0.7s,baz=204,slow=2.0,SNR=2.3						
CM31	Chiang Mai Arr	123.74	111	ePKPdf	PKiKP	20 35 20.4	+0.6
CMAR	Chiang Mai Arr	123.74	111	PKP	PKiKP	20 35 20.1	+0.4
	3.0nm,0.9s,baz=236,slow=3.8,SNR=15						
CMAR				pPKP	pPKPdf	20 35 56.4	-0.4
	1.1nm,0.7s,baz=221,slow=4.2,SNR=4.0						
FIA0	FINESS Array S	126.38	28	ePKPdf	PKPdf	20 35 23.3	+0.2
FIA0				epPKPdf	pPKPdf	20 36 00.3	-0.5
FINES	FINESS Array B	126.38	28	PKP	PKPdf	20 35 23.3	+0.2
	2.0nm,0.5s,baz=269,slow=1.6,SNR=2.2						
FINES				pPKP	pPKPdf	20 36 00.3	-0.5
	2.5nm,0.5s,baz=132,slow=2.1,SNR=2.0						
FINES				SKPbc	SKPbc	20 38 24.9	
	1.0nm,0.4s,baz=176,slow=3.8,SNR=5.1						
ABKAR	Akbulak array	128.39	57	ePKPdf	PKPdf	20 35 25.2	-2.2
AKTO	Aktyubinsk	128.44	54	PKP	PKiKP	20 35 27.9	-0.2
	1.2nm,0.5s,baz=135,slow=2.9,SNR=2.7						
KSH	Kashi	128.77	76	ePKP	PKPdf	20 35 28.6	0.0
ARA0	ARCESS Array S	133.09	22	ePKPdf	PKPdf	20 35 34.4	-1.3
ARA0				epPKPdf	pPKPdf	20 36 12.7	-0.6
ARA0				eSKPbc	SKPbc	20 38 49.6	-0.4
ARCES	ARCESS Array B	133.09	22	PKhKP	PKPdf	20 35 34.4	-1.3
	2.8nm,0.6s,baz=224,slow=3.8,SNR=5.7						
ARCES				PKP	PKiKP	20 35 36.7	-0.2
	2.9nm,0.6s,baz=225,slow=1.5,SNR=8.0						
ARCES				pPKP	pPKPdf	20 36 12.7	-0.6
	1.8nm,0.5s,baz=169,slow=0.9,SNR=2.2						
ARCES				SKPbc	SKPbc	20 38 49.6	-0.4
	2.6nm,0.5s,baz=220,slow=3.6,SNR=15						
GYA	Guiyang	134.26	114	ePKP	PKPdf	20 35 37.5	-1.9
GYA				sPKP		20 36 37.2	
GYA				PP	PP	20 38 13.7	+1.0
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
BVAR	Borovoye Array	135.70	59	PKP	PKiKP	20 35 42.0	-0.7
	1.5nm,0.7s,baz=190,slow=3.0,SNR=5.5						
BVAR				SKPbc	SKPbc	20 38 58.5	-0.4
	4.3nm,0.8s,baz=222,slow=2.0,SNR=14						
CD2	Chengdu	136.51	107	Pdif	Pdif	20 32 50.5	+0.8
MK32	Makanchi Array	137.21	73	ePKPpre	PKPpre	20 35 36.1	
MK32				ePKPdf	PKPdf	20 35 43.3	-0.8
MK32				eSKPbc	SKPbc	20 39 03.0	-0.7
MKAR	Makanchi Array	137.21	73	PKhKP	PKPpre	20 35 36.1	
	0.2nm,0.4s,baz=240,slow=1.2,SNR=3.8						
MKAR				PKP	PKPdf	20 35 43.3	-0.8
	0.4nm,0.5s,baz=197,slow=0.7,SNR=4.2						
MKAR				SKPbc	SKPbc	20 39 03.0	-0.7
	2.0nm,0.9s,baz=245,slow=2.0,SNR=8.3						
WMQ	Urumqi	137.91	80	ePKP	PKiKP	20 35 46.9	-0.7
KURBB	Kurchatov Arra	137.91	67	PKhKP	PKPpre	20 35 37.6	
	0.3nm,0.5s,baz=232,slow=3.5,SNR=3.5						
KURBB				PKP	PKiKP	20 35 46.5	-0.7
	0.9nm,0.7s,baz=233,slow=3.1,SNR=4.3						
YKA	Yellowknife Ar	138.31	316	PKP	PKPdf	20 35 45.4	-0.1
	3.0nm,0.7s,baz=126,slow=2.2,SNR=7.3						
YKA				pPKP	pPKPdf	20 36 23.5	+0.3
	1.9nm,0.5s,baz=127,slow=2.4,SNR=3.9						
YKA				SKPbc	SKPbc	20 39 05.3	-1.0
	2.6nm,0.5s,baz=130,slow=3.1,SNR=15						
YKB5	Yellowknife Ar	138.31	316	ePKPdf	PKPdf	20 35 45.4	-0.1
YKB5				epPKPdf	pPKPdf	20 36 23.5	+0.3
YKB5				eSKPbc	SKPbc	20 39 05.3	-1.0
LZH	Lanzhou	140.66	103	ePKP	PKPdf	20 35 50.3	-0.7
LZH				sPKP		20 36 48.6	
LZH				LR	LR		
	comp=N,240nm,14.1s						
LZH				LR	LR		
	comp=E,280nm,17.4s						
LZH				LR	LR		
	comp=Z,260nm,17.7s						
GTA	Gaotai	141.09	95	ePKP	PKPdf	20 35 50.6	-1.0
GTA				sPKP		20 36 45.6	
XAN	Xi'an	141.61	110	PKP	PKPdf	20 35 48.3	-4.3
ZALV	Zalesovo Beam	143.01	66	PKhKP	PKPbc	20 35 51.3	-0.4
	1.5nm,0.3s,baz=231,slow=4.6,SNR=11						
ZALV				SKPbc	SKPbc	20 39 16.1	-2.7
	1.3nm,0.6s,baz=242,slow=3.2,SNR=5.3						
ZAA1	Zalesovo Array	143.01	66	ePKPpre	PKPbc	20 35 51.3	-0.4
ZAA1				eSKPdf	SKPdf	20 39 16.1	+1.0
NJ2	Nanjing	144.62	123	i PKP	PKPdf	20 35 58.7	+0.9
BTO	Baotou	147.25	104	ePKPbc	PKPbc	20 36 05.5	+0.8
TIA	Tai'an	147.31	117	PKPbc	PKPbc	20 36 05.9	+1.0
INK	Inuvik	148.00	318	PKPbc	PKPbc	20 36 04.1	-1.6
	2.2nm,0.4s,baz=84,slow=3.1,SNR=7.5						
INK				PKPab	PKiKP	20 36 07.7	+0.3
	2.9nm,0.4s,baz=95,slow=3.6,SNR=9.3						
INK				SKPbc	SKiKP	20 39 30.1	+0.3
	6.4nm,0.9s,baz=118,slow=3.7,SNR=4.9						
INK	Inuvik	148.00	318	ePKPbc	PKiKP	20 36 06.8	-0.6
EPYK	Eagle Plains	148.52	314	ePKPbc	PKPbc	20 36 07.3	+0.1
DAWY	Dawson	148.76	309	ePKPbc	PKPbc	20 36 08.3	+0.4
BJT	Baijiatuau	149.87	111	ePKPdf	PKPdf	20 36 07.4	+1.1
SONA0	Songino Array	150.34	90	ePKPbc	PKiKP	20 36 13.2	+0.2
SONM	Songino Array	150.34	90	PKPbc	PKiKP	20 36 13.2	+0.2
	9.0nm,0.7s,baz=231,slow=2.3,SNR=30						
SONM				pPKPbc	pPKPbc	20 36 51.5	+1.9
	3.4nm,0.5s,baz=218,slow=3.5,SNR=3.8						
DOT	Dot Lake	150.56	307	ePKPbc	PKiKP	20 36 12.9	0.0
SCRK	Sand Creek	150.63	307	ePKPbc	PKiKP	20 36 13.3	+0.1
RIDG	Independent Ri	150.92	306	ePKPbc	PKiKP	20 36 14.1	+0.4
TLY	Talaya	151.18	82	ePKPbc	PKiKP	20 36 15.1	+0.6
DL2	Dalian	151.58	120	PKPbc	PKiKP	20 36 15.9	+0.2
DHY	Denali Highway	151.79	304	ePKPbc	PKiKP	20 36 16.5	+0.9
ILAR	Eielson Array	152.07	308	PKPbc	PKPbc	20 36 15.8	+0.1
	2.6nm,0.4s,baz=139,slow=3.7,SNR=49						
ILAR				pPKPbc	pPKPbc	20 36 54.1	+1.0
	1.9nm,0.6s,baz=113,slow=1.3,SNR=3.1						
ILB	Eielson Array	152.07	308	ePKPbc	PKiKP	20 36 16.2	+0.3
KDAK	Kodiak Island	152.26	292	PKPbc	PKiKP	20 36 16.5	0.0
	7.4nm,0.4s,baz=181,slow=1.4,SNR=32						
KDAK	Kodiak Island	152.26	292	ePKPbc	PKiKP	20 36 16.6	+0.1
CCB	Clear Creek Bu	152.42	308	ePKPbc	PKPbc	20 36 16.3	-0.1
WRH	Wood River Hil	152.49	307	ePKPbc	PKiKP	20 36 17.0	+0.2
MCK	McKinley	152.65	305	ePKPbc	PKiKP	20 36 17.7	+0.5
KSRS	Korea Array	153.07	130	PKPbc	PKiKP	20 36 19.6	+0.8
	1.5nm,0.9s,baz=215,slow=1.5,SNR=6.4						
KSRS				PKPab	PKPab	20 36 32.5	+1.7
	9.4nm,1.0s,baz=215,slow=4.2,SNR=17						
TRF	Thorofare Moun	153.16	304	ePKPbc	PKiKP	20 36 18.8	+0.3
BPAW	Bear Paw Mtn.	153.62	306	ePKPbc	PKiKP	20 36 19.4	+0.2
MAJO	Matsushiro	155.76	148	ePKPab	PKPab	20 36 42.7	+0.4
MJAR	Matsushiro Arr	155.76	149	PKPab	PKPab	20 36 42.7	+0.4
	2.6nm,0.8s,baz=198,slow=4.7,SNR=4.8						
CN2	Changchun	157.20	118	ePKP	PKPdf	20 36 14.2	-2.5
CN2				ePP	PP	20 40 29.4	+1.3
USRK	Ussuriysk Ar.	160.40	128	PKPab	PKPab	20 37 02.6	+0.4
	1.9nm,0.5s,baz=233,slow=6.9,SNR=7.7						
KLR	Kul'dur	164.14	116	PKPab	PKPab	20 37 18.8	+0.2
	3.0nm,0.8s,baz=243,slow=5.2,SNR=6.2						
PETK	Petropavlovsk-	174.09	204	PKP	PKPdf	20 36 30.1	0.0
	3.9nm,0.9s,baz=104,slow=6.3,SNR=5.2						
PETK				PKPab	PKPab	20 38 02.7	+0.3
	10nm,0.9s,baz=128,slow=6.5,SNR=13						
PEA1	Petropavlovsk-	174.10	204	ePKPdf	PKPdf	20 36 30.1	0.0
PEA1				ePKPab	PKPab	20 38 02.7	+0.2

WEL 03 20:28:17.1, 45˚S±2˚×16˚8E±˚, h5^{km}±1^{km}, M3.6/18, ML3.7/14, MLv3.6/18, Error ellipse: s-maj=0.0km s-min=0.0km az=101.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.07	231	P	Pg	20 28 20.2	+1.4
MSZ				S	Sg	20 28 22.5	+2.5
MLZ	Mavora Lakes	0.74	174	P	Pb	20 28 32.9	+0.3
MLZ				S	Sn	20 28 45.2	-0.8
WKZ	Wanaka	0.75	106	P	Pb	20 28 32.9	+0.3
WKZ				S	Sb	20 28 44.1	+1.0
JCZ	Jackson Bay	0.79	46	P	Pg	20 28 30.9	-1.2
DCZ	Deep Cove	1.03	216	P	Pg	20 28 36.2	-0.8
DCZ				S	Sg	20 28 50.7	+0.4
EAZ	Earnscleugh	1.10	124	P	Pn	20 28 39.3	+0.1
EAZ				S	Sn	20 28 54.5	-0.3
WHZ	Wether Hill Ro	1.27	182	P	Pg	20 28 41.2	-0.2
WHZ				S	Sn	20 28 59.2	+0.3
LBZ	Lake Benmore	1.58	82	P	Pb	20 28 46.6	-0.1
LBZ				S	Sg	20 29 07.9	+0.2
FOZ	Fox Glacier	1.70	51	P	Pn	20 28 45.0	-2.3
FOZ				S	Sb	20 29 10.1	-0.4
TUZ	Tuapeka	1.75	140	P	Pb	20 28 50.1	+0.4
PYZ	Puysegur Point	1.80	211	P	Pb	20 28 49.9	-0.6
ODZ	Otahua Downs	1.92	103	P	Pn	20 28 51.2	+0.8
SYZ	Scrubby Hill	2.07	158	P	Pn	20 28 53.6	+1.1
APZ	The Paps	2.21	180	P	Pn	20 28 55.4	+1.0
HHSZ	Highcliff Hill	2.22	125	P	Pb	20 28 56.3	-1.4
RPZ	Rata Peaks	2.37	68	P	Pn	20 28 56.7	0.0
WVZ	Waitaha Valley	2.51	53	P	Pn	20 28 59.9	+1.4
INZ	Inchbonnie	3.13	54	P	Pn	20 29 05.3	-1.8
MQZ	McQueen's Vall	3.47	76	P	Pn	20 29 10.7	-0.9
AKCZ	Akaroa Harbour	3.60	80	P	Pn	20 29 12.4	-1.1
OKCZ	Okains Bay	3.75	78	P	Pn	20 29 14.7	-0.8
GVZ	Greta Valley S	4.00	67	P	Pn	20 29 17.9	-1.1
QRZ	Quartz Range	5.05	43	P	Pn	20 29 30.7	-2.7

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*ISCJB **03** 20:41:10.7±0.5, 1°.58N±0°.05×30°.94E±0°.08, h10^{km}, mb4.0/10, Error ellipse: s-maj=11.4km s-min=6.6km az=176.1*

*IDC **03** 20:41:11.6±1.0, 1°.60N×30°.82E, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.6/31, mbtmp3.7/7, ML4.3/3, MS3.1/2, Ms1 3.1/2, ms1mx2.9/35, Error ellipse: s-maj=27.8km s-min=18.4km az=84.0*

*NEIC **03** 20:41:12.7±2.8, 1°.55N×30°.98E, h11^{km}±4^{km}, mb4.4/4, Error ellipse: s-maj=11.4km s-min=7.6km az=162.0*

ISC 03 20:41:12.4±0.6, 1°.49N±0°.05×31°.11E±0°.08, h10^{km}, n24, σ1^s.96/27, mb3.8/10, 2C, Uganda

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	2.11	190	Pn	Pn	20 41 49.6	+1.7
	383nm,0.3s,baz=354,slow=23,SNR=110						
MBAR				Sn	Sb	20 42 17.4	+0.1
	3µm,0.3s,baz=115,slow=24,SNR=24						
MBAR				LR	LR	20 42 39.5	
	comp=Z,335nm,21.0s,baz=0.0,slow=40						
MBAR	Mbarara	2.11	190	ePn	Pn	20 41 49.5	+1.5
MBAR				eSn	Sn	20 42 14.4	0.0
MBAR	Mbarara	2.11	190	⇑eP	Pn	20 41 49.7	+1.7
MBAR				⇑eS	Sn	20 42 15.6	+1.1
KMBO	Kilima Mbogo	6.67	113	Pn	Pn	20 42 57.0	+6.2
	1.0nm,0.3s,baz=270,slow=15,SNR=11						
KMBO				Lg	Lg	20 44 44.8	
	6.7nm,0.3s,baz=246,slow=19,SNR=5.9						
KMBO				LR	LR	20 45 31.3	
	comp=Z,197nm,20.4s,baz=282,slow=37						
KMBO	Kilima Mbogo	6.67	113	ePn	Pn	20 42 52.2	+1.5
KMBO				e		20 42 52.4	
KOND	Kondoa	7.89	144	i P	Pn	20 43 09.3	+1.8
KOND				i S	Sn	20 44 34.2	-2.8
KIBA	Kibaya	8.68	141	i P	Pn	20 43 20.3	+2.0
KIBA	Kibaya	8.68	141	i P	Sn	20 44 51.1	-5.4
LSZ	Lusaka	16.91	190	Pn	P	20 45 10.9	-0.5
	0.3nm,0.3s,baz=22,slow=17,SNR=3.1						
LSZ				Lg	Lg	20 49 58.4	
	0.3nm,0.3s,baz=109,slow=17,SNR=4.9						
DAMY	Dhamar	18.47	45	eP	P	20 45 29.1	+0.3
	12nm,1.2s						
MATP	Matopo	21.93	187	P	P	20 46 04.9	-1.4
	1.8nm,0.9s,baz=8.1,slow=7.1,SNR=3.1						
MSEY	Mahe Island	25.11	104	eP	P	20 46 40.4	+2.7
	41nm,1.0s						
TORD	Torodi Ar. Bea	31.34	293	P	P	20 47 31.4	-2.0
	8.9nm,0.3s,baz=100,slow=8.2,SNR=6.7						
TOA1	Torodi Ar. Sit	31.34	293	eP	P	20 47 31.4	-2.0
BR101	Keskin Array S	38.12	3	eP	P	20 48 33.1	+1.3
BRTR	Keskin Array B	38.12	3	P	P	20 48 33.1	+1.3
	0.8nm,0.9s,baz=182,slow=9.8,SNR=3.9						
GERES	GERESS Array B	49.49	345	P	P	20 50 01.6	-1.5
	0.6nm,0.7s,baz=152,slow=6.0,SNR=5.5						
ESDC	Sonseca Array	49.62	324	P	P	20 50 03.8	-0.4
	0.1nm,0.3s,baz=132,slow=8.7,SNR=4.6						
KHC	Kasperske Hory	49.79	345	eP	P	20 50 02.4	-2.9
	1.2nm,1.0s						
ARU	Arti	59.05	17	eP	P	20 51 13.2	+0.8
	5.0nm,0.7s						
MK32	Makanchi Array	63.30	37	eP	P	20 51 43.0	+1.5
MKAR	Makanchi Array	63.30	37	P	P	20 51 43.0	+1.5
	0.5nm,0.8s,baz=240,slow=2.8,SNR=3.7						
ZALV	Zalesovo Beam	68.25	31	P	P	20 52 13.6	+0.3
	0.6nm,0.5s,baz=248,slow=7.6,SNR=3.3						
ZAA1	Zalesovo Array	68.25	31	eP	P	20 52 13.6	+0.3

WEL 03 21:02:21.9, 45˚S±2˚×16˚8E±˚, h5^{km}±1^{km}, M3.7/20, ML3.8/18, MLv3.7/20, Error ellipse: s-maj=0.0km s-min=0.0km az=79.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.09	208	P	Pg	21 02 25.3	+1.5
MSZ				S	Sg	21 02 27.7	+2.6
WKZ	Wanaka	0.77	108	P	Pb	21 02 38.2	+0.3
WKZ				S	Sb	21 02 49.5	+0.8
MLZ	Mavora Lakes	0.78	173	P	Pb	21 02 37.8	-0.2
MLZ				S	Sn	21 02 50.8	-0.8
JCZ	Jackson Bay	0.78	48	P	Pg	21 02 36.4	-0.5
DCZ	Deep Cove	1.05	214	P	Pg	21 02 41.0	-1.1
EAZ	Earnscleugh	1.14	124	P	Pn	21 02 44.7	+0.2
WHZ	Wether Hill Ro	1.30	181	P	Pn	21 02 46.2	-0.5
LBZ	Lake Benmore	1.59	83	P	Pb	21 02 52.1	+0.3
LBZ				S	Sg	21 03 13.4	+0.4
FOZ	Fox Glacier	1.70	52	P	Pn	21 02 50.6	-1.5
FOZ				S	Sb	21 03 15.4	+0.2
TUZ	Tuapeka	1.79	140	P	Pg	21 02 55.9	-0.3
TUZ				S	Sb	21 03 18.4	+0.5
PYZ	Puysegur Point	1.82	210	P	Pn	21 02 54.2	+0.3
ODZ	Otahua Downs	1.95	104	P	Pn	21 02 56.5	+0.9
SYZ	Scrubby Hill	2.10	158	P	Pb	21 02 59.3	-1.3
APZ	The Paps	2.24	180	P	Pn	21 03 01.0	+1.4
HHSZ	Highcliff Hill	2.25	126	P	Pn	21 03 01.5	+1.6
RPZ	Rata Peaks	2.38	69	P	Pn	21 03 01.9	+0.3
WVZ	Waitaha Valley	2.51	54	P	Pn	21 03 03.4	+0.1
INZ	Inchbonnie	3.13	55	P	Pn	21 03 12.6	+0.7
OXZ	Oxford	3.19	68	P	Pn	21 03 11.9	-0.8
MQZ	McQueen's Vall	3.48	77	P	Pn	21 03 15.9	-0.8
LTZ	Lake Taylor	3.60	61	P	Pn	21 03 17.7	-0.7
AKCZ	Akaroa Harbour	3.61	80	P	Pn	21 03 18.0	-0.6
AMCZ	Amberley	3.66	69	P	Pn	21 03 18.7	-0.5
DSZ	Denniston Nort	3.99	46	P	Pn	21 03 22.1	-1.7
GVZ	Greta Valley S	4.00	68	P	Pn	21 03 22.8	-1.1

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*ATH **03** 21:03:35.0, 35°.04N×23°.15E, h39^{km}±3^{km}, ML2.4/4, Error ellipse: s-maj=6.4km s-min=1.4km az=50.0*

*THE **03** 21:03:35.6, 35°.03N×23°.12E, h24^{km}±1^{km}, ML2.4/5, Error ellipse: s-maj=2.2km s-min=0.6km az=184.0*

*ISK **03** 21:03:36.2, 35°.09N×23°.28E, h26^{km}, ML3.5/3*

ISC 03 21:03:35.9±1.8, 35°.06N±0°.07×23°.16E±0°.07, h23^{km}±15^{km}, n35, σ0^s.64/45, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMMV	Iera Moni Meta	0.78	59	PG	Pb	21 03 50.3	-0.5
IMMV	Iera Moni Meta	0.78	59	P	Pb	21 03 50.8	0.0
IMMV				S	Sn	21 04 02.8	+0.4
	285nm,0.4s						
IMMV	Iera Moni Meta	0.78	59	P	Pb	21 03 50.8	0.0
IMMV				AML	AML	21 04 07.6	
	comp=N,622µm,0.4s						
IMMV				AML	AML	21 04 09.5	
	comp=E,531µm,0.4s						
GVD	Gavdhos	0.79	106	PG	Pb	21 03 50.7	-0.2
GVD				SG	Sb	21 04 01.4	+0.2
GVD	Gavdhos	0.79	106	P	Pb	21 03 50.9	0.0
GVD				S	Sn	21 04 02.8	+0.2
	comp=E,495nm,0.3s						
GVD	Gavdhos	0.79	106	P	Pb	21 03 50.9	0.0
GVD				S	Sn	21 04 02.3	-0.3
GVD				AML	AML	21 04 09.8	
	comp=N,838µm,0.4s						
GVD				AML	AML	21 04 10.3	
	comp=E,1135µm,0.4s						
GVDS	Gavdos	0.79	105	P	Pb	21 03 50.6	-0.3
GVDS				S	Sb	21 04 01.5	+0.3
ANKY	Antikythira Is	0.81	8	P	Pb	21 03 51.2	-0.2
ANKY				S	Sn	21 04 03.3	0.0
	comp=E,215nm,0.5s						
ANKY	Antikythira Is	0.81	8	P	Pb	21 03 51.5	+0.1
ANKY				S	Sn	21 04 03.2	0.0
ANKY				AML	AML	21 04 06.6	
	comp=N,391µm,0.4s						
ANKY				AML	AML	21 04 07.0	
	comp=E,487µm,0.6s						
CHAN	Chania	0.85	57	P	Pb	21 03 52.0	0.0
VAM	Vamos	0.92	67	P	Pb	21 03 52.6	-0.5
VAM				S	Sn	21 04 05.8	0.0
	comp=E,190nm,0.6s						
VAM	Vamos	0.92	67	P	Pb	21 03 52.6	-0.5
VAM				AML	AML	21 04 08.3	
	comp=E,343µm,0.6s						
VAM				AML	AML	21 04 11.1	
	comp=N,418µm,0.5s						
KTHA	Kythira Island	1.20	356	P	Pn	21 03 57.3	+0.1
KTHR	Kythira	1.21	354	P	Pn	21 03 55.7	-1.6
KTHR				S	Sn	21 04 12.5	-0.5
SIVA	Sivas	1.35	91	P	Pn	21 03 59.1	-0.2
IDI	Anoyia	1.43	80	PN	Pn	21 03 59.6	-0.9
IDI	Anoyia	1.43	80	P	Pn	21 04 00.3	-0.2
VLI	Veliai	1.67	354	P	Pn	21 04 04.3	+0.6
LAST	Lasithi	1.90	86	P	Pn	21 04 07.2	+0.3
NPS	Neapolis	2.02	84	P	Pn	21 04 08.9	+0.4
PYL	PYLOS	2.17	328	P	Pn	21 04 09.6	-0.9
KRND	KRANIDI	2.32	360	P	Pn	21 04 13.1	+0.5
ITM	Ithomi	2.34	335	PN	Pn	21 04 14.3	+1.3
ITM	Ithomi	2.34	335	P	Pn	21 04 12.6	-0.3
DID	Didima	2.44	1	P	Pn	21 04 13.8	-0.6
DID				S	Sn	21 04 43.1	-0.4
	comp=N,28nm,0.2s						
DID	Didima	2.44	1	P	Pn	21 04 14.2	-0.2
EPID	Epidavros	2.55	359	P	Pn	21 04 17.2	+1.3
VLY	Voula,Athens	2.83	10	P	Pn	21 04 19.2	-0.5
ACOR	Acrocorinthos	2.84	355	P	Pn	21 04 21.0	+1.2

GUR	Goura	2.95	347	P	Pn	21 04 22.1	+0.7
PTL	Penteli	3.04	10	P	Pn	21 04 21.8	-0.7
KLV	Kalavryta, Ach	3.09	345	P	Pn	21 04 23.0	-0.2
KALE	Kalithea	3.43	346	P	Pn	21 04 27.7	-0.2
AGG	Agios Georgios	4.01	351	PN	Pn	21 04 37.5	+1.6
ARG	Arkhangelos	4.20	73	PN	Pn	21 04 39.1	+0.6

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*ANF **03** 21:04:59.7±0.6, 36.°47N×121.°24W, ML3.6/22, Error ellipse: s-maj=4.3km s-min=4.0km az=152.0*

*NEIC **03** 21:05:00.1±0.0, 36.°64N×121.°26W, h6^{km}, MW3.7(BRK), After NCEDC.*

*NCEDC **03** 21:05:00.1, 36.°64N×121.°26W, h6^{km}, MW3.7(BRK)*

ISC 03 21:04:58.9±1.3**, 36.°58N**±0.°04×**121.°37W**±0.°05**, h11**^{km}±10^{km}**, n58, σ1^{s}.28**/65**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAO	San Andreas Ge	0.19	341	*e*Pg	Pg	21 05 04.0	+0.9
PAGB	Antelope Grade	1.24	133	*e*Pn	Pg	21 05 22.1	-0.7
VOG	Valley Oaks Go	1.62	99	P	Pn	21 05 27.2	-0.2
	baz=282						
VOG				S	Sn	21 05 48.1	-0.2
	baz=282						
CMB	Columbia Colle	1.65	28	*e*Pn	Pn	21 05 27.4	-0.4
CMB				*e*Sn	Sn	21 05 47.1	-2.0
SMMC	Simmler	1.69	138	P	Pn	21 05 28.5	+0.2
	baz=323,SNR=11						
MCCM	Marconi Confer	1.97	323	*e*Pn	Pn	21 05 31.6	-0.5
MCCM				*e*Sn	Sn	21 05 56.3	-0.6
VES	Vestal, Richgr	1.99	111	S	Sn	21 05 57.5	+0.2
	baz=295						
MDPB	Devils Postpil	2.11	59	*e*Pn	Pn	21 05 34.1	-0.2
PKM	Mcpherson Peak	2.11	143	P	Pn	21 05 34.0	-0.3
	baz=327,SNR=12						
PKM				Sb	Sn	21 06 03.5	+2.9
	baz=327						
OMMB	Old Mammoth Mi	2.16	61	*e*Pn	Pn	21 05 35.7	+0.7
MLAC	Mammoth, Mammo	2.28	62	Sb	Sg	21 06 10.6	-1.6
	baz=244						
AFDM	Forest Hills D	2.38	7	*e*Pn	Pn	21 05 38.1	+0.2
WAKR	Walker	2.46	38	*e*Pn	Pn	21 05 40.4	+1.3
GDXM	Geysers	2.49	333	*e*Pn	Pn	21 05 41.0	+1.6
ISA	Isabella, Lake	2.52	110	*e*Pn	Pn	21 05 40.7	+1.0
ISA	Isabella, Lake	2.52	110	P	Pn	21 05 40.2	+0.4
	baz=294,SNR=13						
ISA				S	Sn	21 06 11.2	+0.7
	baz=294						
ARVC	Arvin	2.52	124	P	Pn	21 05 40.1	+0.3
	baz=308						
RUBR	Rubicon Trail	2.65	21	*e*Pn	Pn	21 05 41.4	-0.4
HOPS	Hopland Field	2.76	331	*e*Pn	Pn	21 05 43.6	+0.5
PNTR	Pine Nut	2.87	29	*e*Pn	Pn	21 05 44.9	+0.1
OSI	Osito Audit: C	2.92	132	*e*Pn	Pn	21 05 47.7	+2.5
OSI	Osito Audit: C	2.92	132	Pb	Pb	21 05 49.5	-1.4
	baz=315						
YERR	Yerington	2.93	34	*e*Pn	Pn	21 05 45.8	+0.1
SCZ2	Santa Cruz Isl	2.94	151	P	Pn	21 05 45.8	+0.2
	baz=334						
ORV	Oroville	2.97	358	*e*Pn	Pn	21 05 47.5	+1.6
VCNR	Virginia City	3.03	26	*e*Pn	Pn	21 05 46.5	-0.5
RYN	Ryan	3.05	47	*e*Pn	Pn	21 05 47.3	+0.1
DAC	Darwin (Calif)	3.06	95	*e*Pn	Pn	21 05 48.5	+1.1
BLG	Laguna Peak, P	3.10	142	P	Pn	21 05 47.9	+0.1
	baz=325						
BLG				S	Sn	21 06 25.1	+0.2
	baz=325						
NV11	Mina Array Sit	3.15	53	*e*Pn	Pn	21 05 49.5	+0.9
MPMC	Manual Prospec	3.18	98	P	Pn	21 05 49.6	+0.6
	baz=282,SNR=13						
EDW2	Edwards Air Fo	3.23	121	P	Pn	21 05 49.1	-0.4
	baz=304,SNR=18						
GRAC	Grapevine Rang	3.24	81	Pb	Pb	21 05 56.7	+0.2
	baz=265						
BEKR	Beckworth	3.38	13	*e*Pn	Pn	21 05 53.4	+1.7
PAHR	Pah Rah Range	3.49	26	*e*Pn	Pn	21 05 55.4	+2.1
PASC	Pasadena Art C	3.54	132	*e*Pn	Pn	21 05 54.2	+0.4
MWC	Mount Wilson	3.58	130	*e*Pn	Pn	21 05 55.5	+0.9
O03E	Paynes Creek	3.72	355	P	Pn	21 06 00.6	+4.2
	baz=173						
BFSC	Mount Baldy Ra	3.83	127	P	Pn	21 05 57.9	0.0
	baz=310,SNR=11						
GSC	Goldstone, Bar	3.92	108	*e*Pn	Pn	21 05 59.8	+0.8
GSC	Goldstone, Bar	3.92	108	P	Pn	21 05 58.8	-0.3
	baz=292,SNR=13						
GSC				Sb	Sb	21 06 56.3	+0.9
	baz=292						
RRX	Edison Barstow	3.94	114	Sb	Sb	21 06 57.5	+1.3
	baz=298						
CIS	Catalina Islan	3.99	142	S	Sn	21 06 45.6	-1.2
	baz=325						
TPNV	Topopah Spring	4.13	83	*e*Pn	Pn	21 06 03.5	+1.5
TPNV	Topopah Spring	4.13	83	P	Pn	21 06 03.6	+1.6
	baz=267,SNR=6.3						
HEC	Hector,Ludlow	4.45	112	P	Pn	21 06 06.3	-0.2
	baz=296,SNR=7.7						
TUQ	Turquoise Moun	4.56	103	P	Pn	21 06 08.8	+0.8
	baz=287						
R11A	Troy Canyon, C	4.93	67	*e*Pn	Pn	21 06 11.6	-1.5
GMRC	Granite Mounta	4.98	109	P	Pn	21 06 13.4	-0.3
	baz=294,SNR=8.3						
PFO	Pinyon Flats O	5.00	125	*e*Pn	Pn	21 06 15.3	+1.3
LDFC	Landfair	5.30	105	*e*Pn	Pn	21 06 18.9	+0.8
MOD	Modoc Plateau	5.38	9	*e*Pn	Pn	21 06 20.3	+1.1
W13A	Hualapai Mount	6.26	101	*e*Pn	Pn	21 06 30.6	-0.7
PSUT	Pine Spring	6.28	70	*e*Pn	Pn	21 06 28.1	-3.5
Y14A	Wickenburg	7.33	109	*e*Pn	Pn	21 06 45.4	-0.5
I07A	Izee	7.63	10	*e*Pn	Pn	21 06 50.3	+0.3
WUAZ	Wupatki	8.16	95	*e*Pn	Pn	21 06 59.9	+2.5
BNM	Barren Site	12.28	97	*e*Pn	Pn	21 07 55.1	+1.3

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*NIED **03** 21:13:00, 46.°40N×153.°20E, h35^{km}, Mw4.4 Best double couple: M$_0$4.99000×10^{15} NP1:ϕ_s309.00000°, δ21.00000°, λ-42.00000°. NP2:ϕ_s80.00000°, δ76.00000°, λ-106.00000°.*

*ISCJB **03** 21:13:19.9±1.2, 46.°08N±0.°04×153.°18E±0.°04, h0^{km}±7^{km}, mb4.7/112, MS3.7/1, Error ellipse: s-maj=6.8km s-min=3.4km az=145.9*

*IDC **03** 21:13:22.0±0.7, 46.°20N×153.°08E, h0^{km}, mb4.2/21, mb1 4.4/25, mb1mx4.3/34, mbtmp4.2/25, ML3.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.8/43, Error ellipse: s-maj=20.1km s-min=12.5km az=149.0*

*JMA **03** 21:13:23.3±0.8, 46.°37N×153.°17E, h30^{km}, M4.6*

*BJI **03** 21:13:23.7±0.0, 46.°43N×153.°32E, h35^{km}, mb4.7/48, mB4.8/31, Ms4.4/16, Ms7 4.1/16*

*SKHL **03** 21:13:24.3±0.3, 45.°96N×153.°46E, h52^{km}±1^{km}, mb4.9/13*

*NEIC **03** 21:13:26.6±3.0, 46.°25N×152.°96E, h35^{km}±7^{km}, mb4.6/69, Error ellipse: s-maj=19.0km s-min=11.9km az=143.0*

*MOS **03** 21:13:26.5±1.8, 46.°12N×152.°97E, h40^{km}, mb4.9/56, MS3.6/4, Error ellipse: s-maj=7.6km s-min=5.3km az=112.6*

ISC 03 21:13:26.3±0.9**, 46.°04N**±0.°05×**153.°20E**±0.°05**, h34**^{km}±3^{km}**, n301, σ1^{s}.84**/318**, mb4.6**/124**, 23C-11D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.82	260*c*	*i*PN	Pn	21 14 24.0	+1.3
KUR				*i* S	Sn	21 15 08.1	+1.6
KUR				pmax	pmax		
	comp=N,270nm,0.3s						
KUR				pmax	pmax		
	comp=E,176nm,0.3s						
KUR				pmax	pmax		
	comp=Z,349nm,0.3s						
KUR				smax	smax		
	comp=E,481nm,0.7s						
KUR				smax	smax		
	comp=N,258nm,0.9s						
KUR				MLR	MLR		
	comp=Z,600nm,11.0s						
KUR	Kuril'sk	3.82	260	*i* P	Pn	21 14 23.7	+1.0
KUR				AMB	AMB	21 14 25.6	
	comp=Z,280nm,0.4s						
KUR				AMB	AMB	21 14 25.6	
	comp=Z,180nm,0.4s						
KUR				AMB	AMB	21 14 25.6	
	comp=Z,350nm,0.4s						
KUR				*i* S	Sn	21 15 08.0	+1.6
KUR				A	A	21 15 20.0	
	comp=Z,260nm,0.7s						
KUR				A	A	21 15 20.0	
	comp=Z,480nm,0.7s						
SKR	Severo-Kuril's	5.04	22	*i* PN	Pn	21 14 33.1	-6.3
SKR	Severo-Kuril's	5.04	22	*e*P	Pn	21 14 37.8	-1.6
SKR				AMB	AMB	21 14 43.9	
	comp=Z,290nm,0.6s						
YUK	Yuzh-Kuril'sk	5.57	252	*e*PN	Pn	21 14 47.3	+0.6
YUK				*e*S	Sn	21 15 50.1	+0.6
YUK				pmax	pmax		
	comp=N,52nm,0.5s						
YUK				pmax	pmax		
	comp=E,129nm,0.5s						
YUK				pmax	pmax		
	comp=Z,173nm,0.5s						
YUK				smax	smax		
	comp=E,328nm,0.8s						
YUK				smax	smax		
	comp=N,123nm,0.3s						
YUK	Yuzh-Kuril'sk	5.57	252	*e*P	Pn	21 14 47.5	+0.8
YUK				AMB	AMB	21 14 51.0	
	comp=N,50nm,0.5s						
YUK				AMB	AMB	21 14 51.0	
	comp=N,130nm,0.5s						
YUK				AMB	AMB	21 14 51.0	
	comp=N,170nm,0.5s						
YUK				*e*S	Sn	21 15 50.0	+0.6
YUK				A	A	21 15 55.0	
	comp=N,120nm,0.3s						
YUK				A	A	21 15 55.0	
	comp=N,330nm,0.8s						
GRPR	Tuman	5.64	251	*e*PN	Pn	21 14 48.3	+0.6
GRPR				*e*S	Sn	21 15 51.3	0.0
GRPR				pmax	pmax		
	comp=Z,228nm,0.5s						
GRPR				pmax	pmax		
	comp=N,98nm,0.1s						
GRPR				pmax	pmax		
	comp=E,169nm,0.4s						
GRPR				smax	smax		
	comp=E,52nm,0.2s						
GRPR				smax	smax		
	comp=N,246nm,0.4s						
GRPR	Tuman	5.64	251	*e*P	Pn	21 14 48.0	+0.3
GRPR				AMB	AMB	21 14 56.0	
	comp=N,100nm,0.5s						
GRPR				AMB	AMB	21 14 56.0	
	comp=N,170nm,0.5s						
GRPR				AMB	AMB	21 14 56.0	
	comp=N,230nm,0.5s						
GRPR				*e*S	Sn	21 15 51.0	-0.3
GRPR				A	A	21 16 01.0	
	comp=N,250nm,0.4s						
GRPR				A	A	21 16 01.0	
	comp=N,50nm,0.4s						
PAU	Pauzhetka	5.94	22	*e*P	Pn	21 14 51.4	-0.3
PAU				AMB	AMB	21 14 55.3	
	comp=N,190nm,0.8s						
PAU				*e*S	Sn	21 15 56.2	-2.3
NEM2	Nemuro 2	5.95	246	P	Pn	21 14 50.2	-1.6
NEM2				*e*S	Sn	21 15 54.6	-4.1
JRA	Rausu	6.10	253	P	Pn	21 14 54.8	+0.9
JNK	Nakash	6.51	251	P	Pn	21 14 59.9	+0.3
JAK	Akkeshi	6.79	246	P	Pn	21 15 02.1	-1.4
JAK				*e*S	Sn	21 16 14.7	-4.9
JTKR	Abashiri--Toko	6.90	256	P	Pn	21 15 05.8	+0.8
JAR	Ashorobuto	7.26	251	P	Pn	21 15 09.2	-0.7
YSS	Yuzh-Sakhalins	7.26	281	*e*Pn	Pn	21 15 05.3	-4.6
YSS	Yuzh-Sakhalins	7.26	281	*e*PN	Pn	21 15 13.4	+3.4
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	Yuzh-Sakhalins	7.26	281	*e*P	Pn	21 15 12.5	+2.5
YSS				AMB	AMB	21 15 14.1	
	comp=Z,50nm,0.9s						
YSS				AMS	AMS	21 17 54.0	
	comp=Z,600nm,16.0s						
YSS				AMS	AMS	21 17 54.0	
	comp=Z,700nm,16.0s						
PEA0B	Petropavlovsk-	7.66	21	*e*Pn	Pn	21 15 10.4	-4.9
PETK	Petropavlovsk-	7.66	21	Pn	Pn	21 15 14.3	-1.1
	comp=Z,0.7nm,0.3s,baz=182,slow=12,SNR=19						
PETK				Sn	Sn	21 16 41.8	+1.0
	baz=163,slow=15,SNR=2.1						
PEA1	Petropavlovsk-	7.66	21	*e*Pn	Pn	21 15 14.3	-1.2
PEA1				*e*Sn	Sn	21 16 41.8	+0.9
JKK2	Kamakawa 2	7.72	257	P	Pn	21 15 17.6	+1.3
ASAJ	Asahikawa	7.74	259	Pn	Pn	21 15 18.4	+1.8
	comp=Z,3.3nm,0.3s,baz=75,slow=19,SNR=14						
ASAJ	Asahikawa	7.74	259	P	Pn	21 15 18.2	+1.6
JCH	Churui	7.83	248	P	Pn	21 15 16.4	-1.4
JCH				*e*S	Sn	21 16 41.3	-3.9
PET	Petropavlovsk	7.84	25	*e*Pn	Pn	21 15 13.4	-4.4
PET				*e*Sn	Sn	21 16 30.5	-15
PET	Petropavlovsk	7.84	25	*e*PN	Pn	21 15 13.4	-4.4
PET	Petropavlovsk	7.84	25	*e*P	Pn	21 15 16.4	-1.4
PET				AMB	AMB	21 15 20.7	
	comp=Z,30nm,0.6s						
UGL	Uglegorsk	8.12	296	*e*PN	Pn	21 15 26.0	+4.3
UGL				S	Sn	21 16 55.3	+3.1
UGL				pmax	pmax		
	comp=Z,92nm,0.7s						
UGL				smax	smax		
	comp=N,89nm,0.4s						
UGL				MLR	MLR		
	comp=Z,700nm,11.0s						
ERM	Erimo	8.27	245	*e*Pn	Pn	21 15 22.1	-1.7
ERM				*e*Sn	Sn	21 16 43.4	-13
ERM	Erimo	8.27	245	*i* PN	Pn	21 15 23.3	-0.5
JNBK	Urakawa-nobuka	8.39	247	P	Pn	21 15 23.9	-1.6
TYV	Tymovskoe	8.51	308	*e*PN	Pn	21 15 29.2	+2.2
TYV				pmax	pmax		
	comp=Z,26nm,0.7s						
TYV	Tymovskoe	8.51	308	*e*P	Pn	21 15 29.2	+2.2
TYV				AMB	AMB	21 15 30.1	
	comp=Z,30nm,0.7s						
TYV				*e*S	Sn	21 17 00.6	-1.1
TYV				A	A	21 17 02.1	
	comp=Z,8.0nm,0.9s						
JKB	Kayabe	9.70	249	P	Pn	21 15 41.8	-1.5
JKB				*e*S	Sn	21 17 23.9	-7.1
OKH	Okha	10.02	322	*e*P	Pn	21 15 50.0	+2.3
OKH				*e*S	Sn	21 17 40.7	+1.9
JYM2	Yakumo 2	10.03	252	P	Pn	21 15 47.1	-0.7
JANG	Nango	10.23	241	P	Pn	21 15 46.8	-3.8
JANG				*e*S	Sn	21 17 33.4	-11
JTM	Tenmabayashi	10.26	244	P	Pn	21 15 48.6	-2.5
JTM				*e*S	Sn	21 17 37.3	-7.5
NKL	Nikolayevsk	10.79	316	*e*P	Pn	21 15 59.1	+0.9
NKL				AMB	AMB	21 16 00.5	
	comp=Z,5.0nm,0.4s						
OFUJ	Ofunato	10.97	235	*e*S	Sn	21 17 52.2	-10
GRNR	Gornyy	12.11	299	*e*P	Pn	21 16 16.0	-0.2
GRNR				AMB	AMB	21 16 18.0	
	comp=Z,5.0nm,0.5s						
MJAR	Matsushiro Arr	14.71	235	Pn	Pn	21 16 49.7	-2.1
	comp=Z,0.0nm,0.3s,baz=20,slow=13,SNR=6.4						
MJB9	Matsu-Tunnel	14.71	235	*e*Pn	Pn	21 16 48.8	-3.0
MAJO	Matsushiro	14.71	235	*e*Pn	Pn	21 16 48.8	-3.0
MAJO	Matsushiro	14.71	235	*i* P	Pn	21 16 51.2	-0.6
MAT	Matsushiro	14.71	235	P	Pn	21 16 52.1	+0.3
KLR	Kul'dur	14.80	290	Pn	Pn	21 16 54.4	+1.5
	comp=Z,0.1nm,0.3s,baz=100,slow=15,SNR=7.6						
KLR				LR	LR	21 22 43.4	
	comp=Z,179nm,19.3s,baz=61,slow=38						
KLR	Kul'dur	14.80	290	*i* P	Pn	21 16 53.0	+0.1
KLR				pmax	pmax		
	comp=Z,15nm,1.3s						
KLR	Kul'dur	14.80	290	*e*P	Pn	21 16 53.0	+0.1
EKMR	Ekimchan	14.88	306	*e*P	Pn	21 16 52.0	-2.0
EKMR				AMB	AMB	21 17 01.8	
	comp=Z,10.0nm,0.8s						
USRK	Ussuriysk Ar.	15.08	271	Pn	Pn	21 16 55.7	-1.0
	comp=Z,1.0nm,0.3s,baz=64,slow=11,SNR=15						
INU	Inuyama	16.23	235	*e*Pn	Pn	21 17 09.8	-1.8
	comp=Z,10nm,0.8s						
JHJ2	Mitsune	16.49	223	*e*Pn	Pn	21 17 13.7	-1.3
	comp=Z,267nm,1.1s						
MDJ	Mudanjiang	16.65	274	*e*Pn	Pn	21 17 16.4	-0.5
	comp=Z,18nm,0.9s						
MDJ	Mudanjiang	16.65	274	P	Pn	21 17 17.0	+0.1
MDJ				pmax	pmax		
	comp=Z,26nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.2s						
SEY	Seymchan	16.94	359	Pn	Pn	21 17 19.1	-1.3
	comp=Z,0.2nm,0.3s,baz=68,slow=16,SNR=2.4						
SEY	Seymchan	16.94	359	*i* P	Pn	21 17 17.1	-3.3
SEY	Seymchan	16.94	359	*e*P	Pn	21 17 17.1	-3.3
ZEA	Zeya	18.33	304	*e*P	Pn	21 17 38.6	+1.0
KROS	Kirovskiy	18.67	306	*e*P	Pn	21 17 43.7	+1.9
KROS				AMB	AMB	21 17 47.0	
	comp=Z,10.0nm,0.6s						
CN2	Changchun	19.74	274	*e*P	P	21 17 53.0	0.0
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
KSRS	Korea Array	20.65	254	P	P	21 18 04.2	+1.3
	comp=Z,8.1nm,0.8s,baz=56,slow=11,SNR=16						
KS15	Wonju Array Si	20.68	254	*e*P	P	21 18 04.2	+1.0
	comp=Z,14nm,1.0s						
YAK	Yakutsk	20.96	328	*e*P	P	21 18 02.8	-3.2
	comp=Z,14nm,0.7s						
YAK	Yakutsk	20.96	328	*e*P	P	21 18 04.5	-1.5
YAK				*e*		21 18 41.3	
YAK				*e*S	S	21 21 47.6	-10
YAK				*e**SS	sS	21 22 14.5	+3.0
YAK	Yakutsk	20.96	328	*e*P	P	21 18 05.0	-1.0
JNU	Nakatsue	21.41	241	P	P	21 18 12.3	+1.1
	comp=Z,11nm,0.9s,baz=78,slow=16,SNR=4.2						
JNU	Nakatsue	21.41	241	*e*P	P	21 18 12.3	+1.1
	comp=Z,18nm,1.1s						
ATKA	Atka Island	22.09	62	*e*P	P	21 18 18.2	0.0
	comp=Z,28nm,1.2s						
HIA	Hailar	22.66	290	*e*P	P	21 18 21.4	-3.0
	comp=Z,7.5nm,0.4s						
HIA	Hailar	22.66	290	*e*P	P	21 18 21.4	-3.0
HIA				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BILL	Bilibino	23.08	13	*e*P	P	21 18 26.9	-1.6
	comp=Z,5.8nm,1.0s						
BILL	Bilibino	23.08	13	⇓*e*P	P	21 18 25.5	-3.0
BILL				*e*		21 18 34.9	
BILL				PPP	PPP	21 19 00.0	
BILL				S	S	21 22 39.0	+2.2
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,365nm,21.0s						
BILL	Bilibino	23.08	13	*e*P	P	21 18 26.9	-1.6
DL2	Dalian	24.24	264	P	P	21 18 41.0	+1.1
DL2				*e*S	S	21 22 59.7	+3.6
DL2				pmax	pmax		
	comp=Z,18nm,1.1s						
DL2				LR	LR		
	comp=Z,200nm,18.9s						
DL2				LR	LR		
	comp=Z,190nm,19.4s						
DL2				LR	LR		
	comp=Z,170nm,16.5s						
NIKH	Nikolski High	25.37	60	*e*P	P	21 18 49.8	-0.2
	comp=Z,33nm,1.0s						
BOD	Bodaibo	26.49	311	*e*P	P	21 18 57.0	-3.1
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
UNV	Unalaska Valle	26.78	58	*e*P	P	21 19 01.8	-0.9
	comp=Z,26nm,1.0s						
AKUT	Akutan	27.21	58	*e*P	P	21 19 05.2	-1.4
	comp=Z,34nm,1.0s						
BJT	Baijiatuau	27.55	271	*e*P	P	21 19 07.7	-2.1
	comp=Z,9.7nm,0.9s						
BJT	Baijiatuau	27.55	271	*e*P	P	21 19 07.7	-2.1
BJT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H11N2	WAKE ISLAND Hy	28.56	152	T	T	21 51 02.7	
	baz=340,slow=75,SNR=8.4						
H11N1	WAKE ISLAND Hy	28.57	152	T	T	21 51 05.5	
	baz=340,slow=75,SNR=8.3						
H11N3	WAKE ISLAND Hy	28.58	152	T	T	21 51 08.1	
	baz=340,slow=75,SNR=8.7						
ANM	Nome	29.23	36	*e*P	P	21 19 21.8	-2.7
	comp=Z,34nm,1.2s						
ANM	Nome	29.23	36	*e*P	P	21 19 21.8	-2.7
ANM				pmax	pmax		
	comp=Z,34nm,1.2s						
H11S1	WAKE ISLAND Hy	29.64	153	T	T	21 52 28.9	
	baz=342,slow=76						
H11S3	WAKE ISLAND Hy	29.65	153	T	T	21 52 20.6	
	baz=342						
H11S2	WAKE ISLAND Hy	29.66	153	T	T	21 52 22.8	
	baz=342,slow=76						
NJ2	Nanjing	29.85	254	*e*P	P	21 19 31.7	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ULN	Ulaanbaatar	31.19	290*c*	*e*P	P	21 19 40.6	-1.6
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	31.19	290	*e*P	P	21 19 40.6	-1.6
SONA0	Songino Array	31.63	291	*e*P	P	21 19 45.0	-1.0
SONM	Songino Array	31.63	291	P	P	21 19 45.0	-1.0
	comp=Z,0.8nm,0.6s,baz=75,slow=8.0,SNR=5.1						
TLY	Talaya	32.56	298	*e*P	P	21 19 53.2	-0.9
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,340nm,14.0s						
TLY	Talaya	32.56	298	*e*P	P	21 19 53.2	-0.9
WHN	Wuhan	33.81	257	⇑P	P	21 20 06.0	+0.9
KTH	Kantishna Hill	35.27	40	*e*P	P	21 20 16.0	-1.4
	comp=Z,7.8nm,1.0s						
MLY	Manley	35.45	37	*e*P	P	21 20 18.9	0.0
	comp=Z,2.2nm,0.9s						
TOLK	Toolik Lake Re	36.32	31	*e*P	P	21 20 25.7	-0.7
	comp=Z,3.4nm,0.6s						
COLA	College	36.66	38	*e*P	P	21 20 28.8	-0.4
	comp=Z,8.6nm,0.6s						
COLA	College	36.66	38	*i* P	P	21 20 24.2	-5.0
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HDA	Harding Lake	37.04	39	*e*P	P	21 20 30.8	-1.7
	comp=Z,6.8nm,1.1s						
ILAR	Eielson Array	37.07	38	P	P	21 20 32.5	-0.2
	comp=Z,2.1nm,1.1s,baz=267,slow=8.3,SNR=14						
ENH	Enshi	37.30	261	*e*P	P	21 20 34.4	-0.8
	comp=Z,7.5nm,0.8s						
ENH				*e*PP	PP	21 21 52.8	-7.6
LZH	Lanzhou	37.97	273	*e*P	P	21 20 42.5	+1.6
LZH				pP	sP	21 20 52.6	+0.7
LZH				sP	pwP	21 20 56.8	-0.5
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				LR	LR		
	comp=Z,140nm,13.0s						
LZH				LR	LR		
	comp=Z,140nm,13.6s						
LZH				LR	LR		
	comp=Z,260nm,14.6s						
GTA	Gaotai	39.14	280	⇓P	P	21 20 51.8	+1.1
GTA				pP	sP	21 21 01.5	-0.3
GTA				sP	pwP	21 21 05.6	-1.7
GTA				PcP	PcP	21 23 01.7	+2.0
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
EGAK	Eagle	39.53	38	*e*P	P	21 20 52.3	-1.1
	comp=Z,5.8nm,1.0s						
CD2	Chengdu	40.88	266	⇑*i*P	P	21 21 03.8	-1.3
CD2				S	S	21 27 16.6	+2.4
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				pmax	pmax		
	comp=Z,150nm,5.1s						
CD2				LR	LR		
	comp=Z,260nm,15.3s						
CD2				LR	LR		
	comp=Z,450nm,19.2s						
CD2				LR	LR		
	comp=Z,620nm,19.6s						
INK	Inuvik	42.22	32	P	P	21 21 15.2	-0.3
	comp=Z,2.0nm,0.6s,baz=319,slow=4.3,SNR=3.5						
INK	Inuvik	42.22	32	*e*P	P	21 21 15.2	-0.3
	comp=Z,2.5nm,0.8s						
ZAA0	Zalesovo Array	43.08	306	*e*P	P	21 21 19.7	-3.0
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	43.08	306	P	P	21 21 20.4	-2.3
	comp=Z,2.7nm,0.8s,baz=64,slow=6.8,SNR=9.1						
ZALV				PcP	PcP	21 23 12.7	+0.7
	comp=Z,1.3nm,0.6s,baz=80,slow=1.8,SNR=5.3						
KMI	Kunming	45.17	260	P	P	21 21 41.5	+1.4
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
WMQ	Urumqi	45.24	292	*e*P	P	21 21 40.8	+0.6

WMQ				pP	sP	21 21 50.7	-0.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,61nm,4.1s						
MKAR	Makanchi Array	47.32	298	P	P	21 21 55.3	-1.2
	comp=Z,6.4nm,0.7s,baz=64,slow=8.2,SNR=17						
MKAR				PcP	PcP	21 23 27.1	+0.2
	comp=Z,1.2nm,0.8s,baz=47,slow=2.6,SNR=3.5						
MKAR	Makanchi Array	47.32	298	*i* P	P	21 21 55.5	-1.0
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	47.32	298	*e*P	P	21 21 55.5	-1.0
MAKZ	Makanchi	47.51	298	*e*P	P	21 21 56.0	-1.9
	comp=Z,6.1nm,1.0s						
MAKZ	Makanchi	47.51	298	*e*P	P	21 21 56.0	-1.9
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	Kurchatov	47.81	304	*e*P	P	21 21 58.4	-1.7
	comp=Z,9.9nm,0.8s						
KURK	Kurchatov	47.81	304	*ce*P	P	21 21 58.0	-2.1
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
KURK	Kurchatov	47.81	304	*e*P	P	21 21 58.0	-2.1
NONG	Nongkai	49.71	253	P	P	21 22 17.2	+2.1
	comp=Z,0.3nm,1.1s,comp=Z,123nm						
PDGK	Podgornoye	50.72	295	P	P	21 22 22.5	-0.1
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRVK	Borovoye	51.40	310	*e*P	P	21 22 25.6	-1.8
	comp=Z,5.4nm,0.6s						
BRVK	Borovoye	51.40	310	*i* P	P	21 22 26.1	-1.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	Borovoye	51.40	310	*e*P	P	21 22 26.1	-1.3
YKA	Yellowknife Ar	51.46	36	P	P	21 22 28.6	+0.9
	comp=Z,1.7nm,0.7s,baz=288,slow=7.2,SNR=4.0						
YKB5	Yellowknife Ar	51.46	36	*e*P	P	21 22 28.6	+0.9
CMMT	Chiang Mai	52.01	257	P	P	21 22 34.4	+1.9
	comp=Z,4.4nm,0.8s						
CHTO	Chiang Mai	52.01	257	*e*P	P	21 22 33.1	+0.6
	comp=Z,5.2nm,0.8s						
CHTO	Chiang Mai	52.01	257	*e*P	P	21 22 33.1	+0.6
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CM31	Chiang Mai Arr	52.26	257	*e*P	P	21 22 33.7	-0.6
	comp=Z,6.2nm,1.0s						
CM31				*e*PcP	PcP	21 23 46.2	+0.9
CMAR	Chiang Mai Arr	52.26	257	P	P	21 22 35.6	+1.4
	comp=Z,2.4nm,0.8s,baz=35,slow=7.5,SNR=29						
CMAR				PcP	PcP	21 23 46.2	+0.9
	comp=Z,0.6nm,0.6s,baz=7.9,slow=2.1,SNR=4.1						
SHL	Shillong	52.41	269	*e*P	P	21 22 34.7	-0.9
	comp=Z,12nm,0.8s						
SHL				*e*PcP	PcP	21 23 38.5	-7.6
SHL	Shillong	52.41	269	*e*P	P	21 22 34.7	-0.9
SHL				pmax	pmax		
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	54.20	297	*e*P	P	21 22 47.1	-1.4
	comp=Z,8.2nm,0.8s						
AAK	Ala-Archa	54.20	297	*ce*P	P	21 22 46.2	-2.3
AAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AAK	Ala-Archa	54.20	297	*e*P	P	21 22 46.2	-2.3
KSH	Kashi	54.98	293	P	P	21 22 58.4	+4.2
KSH				PcP	PcP	21 24 00.8	+5.2
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,83nm,5.9s						
JIRN	Jiri	55.06	275	*e*P	P	21 22 56.3	+1.1
	comp=Z,24nm,0.5s						
GUN	Gumba	55.12	276	*e*P	P	21 22 57.1	+1.5
ARU	Arti	55.58	318	*e*P	P	21 22 55.7	-2.3
	comp=Z,6.0nm,0.7s						
ARU	Arti	55.58	318	*c i*P	P	21 22 56.4	-1.6
ARU						21 23 53.4	
ARU				S	S	21 30 38.6	-2.4
ARU				SS	SS	21 34 23.1	-2.5
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARU	Arti	55.58	318	*e*P	P	21 22 56.4	-1.6
KKN	Kakani	55.61	276	*e*P	P	21 23 00.1	+1.1
	comp=Z,21nm,0.7s						
PKI	Pulchoki	55.66	276	*e*P	P	21 23 00.1	+0.7
	comp=Z,8.7nm,0.5s						
PKIN	Phulchoki	55.66	276	*e*P	P	21 23 00.3	+0.9
	comp=Z,13nm,0.6s						
DMN	Daman	55.85	276	*e*P	P	21 23 01.7	+1.0
	comp=Z,33nm,0.9s						
GKN	Gorkha	55.93	276	*e*P	P	21 23 02.2	+1.1
	comp=Z,42nm,0.8s						
DANN	Dangsing	56.32	277	*e*P	P	21 23 05.4	+1.3
	comp=Z,45nm,0.5s						
KK31	Karatay Array	56.40	299	*e*P	P	21 23 03.5	-0.6
	comp=Z,4.7nm,0.8s						
KK31	Karatay Array	56.40	299	*e*P	P	21 23 03.5	-0.6
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KOLN	Koldanda	56.79	277	*e*P	P	21 23 07.4	+0.1
	comp=Z,36nm,0.8s						
PYUN	Piuthan	57.01	278	*e*P	P	21 23 09.7	+0.8
	comp=Z,46nm,0.9s						
PRGR	Permogore	58.00	328	*e*P	P	21 23 11.6	-3.5
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARA0	ARCESS Array S	58.55	341	*e*P	P	21 23 18.4	-0.4
ARCES	ARCESS Array B	58.55	341	P	P	21 23 18.4	-0.4
	comp=Z,1.9nm,0.7s,baz=33,slow=7.6,SNR=9.5						
NIL	Nilore	60.19	289	*e*P	P	21 23 31.4	+0.7
	comp=Z,34nm,0.8s						
NIL	Nilore	60.19	289	*e*P	P	21 23 31.5	+0.7
NIL				pmax	pmax		
	comp=Z,34nm,0.8s						
SUMG	Summit	61.41	4	*e*P	P	21 23 37.6	-1.2
	comp=Z,12nm,0.9s						
SUMG	Summit	61.41	4	*i* P	P	21 23 38.8	-0.1
SUMG				pmax	pmax		
	comp=Z,29nm,0.9s						
SUMG	Summit	61.41	4	*i* P	P	21 23 38.8	-0.1
	comp=Z,29nm,0.9s						
LRM	Limekiln Ridge	61.58	52	*e*P	P	21 23 37.8	-2.6
KBL	Kabul	62.39	292	*e*P	P	21 23 44.9	-0.9
	comp=Z,14nm,0.8s						
KBL	Kabul	62.39	292	*e*P	P	21 23 44.9	-0.9
KBL				pmax	pmax		
	comp=Z,14nm,0.8s						
KVN	Kaiserville	62.46	61	*e*P	P	21 23 46.1	-0.1
	comp=Z,1.8nm,0.9s						
KVN	Kaiserville	62.46	61	*e*P	P	21 23 46.1	-0.1
KVN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	62.72	62	P	P	21 23 49.3	+1.3
	comp=Z,1.2nm,0.8s,baz=286,slow=8.1,SNR=6.9						
FINES	FINESS Array B	64.71	335	P	P	21 23 59.8	-0.7
	comp=Z,8.4nm,0.6s,baz=34,slow=7.8,SNR=55						
PDAR	Pinedale Array	65.12	54	P	P	21 24 04.5	+0.7
	comp=Z,1.3nm,0.9s,baz=292,slow=0.8,SNR=4.8						
OBN	Obninsk	65.93	326	⇑*e*P	P	21 24 09.5	+1.1
OBN				*e*		21 24 40.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN	Obninsk	65.93	326	*e*P	P	21 24 07.6	-0.8
LPSR	Galich'ya Gora	66.80	323	*e*P	P	21 24 12.5	-1.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSU	Vasula	66.88	333	*ce*P	P	21 24 10.6	-3.8
VSU				pmax	pmax		
	comp=Z,23nm,2.5s						
GEYT	Alibeck	67.02	301	P	P	21 24 16.8	+1.0
	comp=Z,3.2nm,0.7s,baz=0.0,slow=4.4,SNR=9.2						
VSR	Storozhevoye	67.70	322	*e*P	P	21 24 18.7	-1.1
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VORD	Divnogorie	67.83	321	*e*P	P	21 24 19.3	-1.3
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NB2	NORSAR Subarra	68.92	341	P	P	21 24 26.5	-0.8
	comp=Z,1.2nm,0.5s,baz=26,slow=6.5						
NB2	NORSAR Subarra	68.92	341	P	P	21 24 25.2	-2.1
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	68.92	341	P	P	21 24 26.9	-0.5
	comp=Z,1.5nm,0.6s,baz=28,slow=6.4,SNR=15						
NORES	NORESS Array B	69.12	341	P	P	21 24 27.9	-0.6
KIV	Kislovodsk	71.34	314	⇑*i*P	P	21 24 43.9	+1.4
KIV	Kislovodsk	71.34	314	*e*P	P	21 24 41.3	-1.2
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV				MLR	MLR		
	comp=Z,239nm,18.0s						
KIV	Kislovodsk	71.34	314	*e*P	P	21 24 41.3	-1.2
KBZ	Khabaz	71.40	314	P	P	21 24 44.0	+1.3
	comp=Z,9.5nm,0.8s,baz=52,slow=3.2,SNR=14						
KBZ	Khabaz	71.40	314	P	P	21 24 44.0	+1.3
AS31	Alice Springs	71.55	199	*e*P	P	21 24 44.3	+0.6
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	71.55	199	P	P	21 24 44.3	+0.6
	comp=Z,0.9nm,0.9s,baz=9.9,slow=6.2,SNR=7.8						
AKASG	Malin Array Be	72.17	326	P	P	21 24 46.5	-0.7
	comp=Z,7.2nm,0.4s,baz=34,slow=6.3,SNR=36						
AKH	Akhalkalaki	72.78	312	⇑*i*P	P	21 24 52.8	+1.5
AKH	Akhalkalaki	72.78	312	P	P	21 24 52.8	+1.5
GNI	Garni	73.04	311	*e*P	P	21 24 51.7	-1.1
	comp=Z,13nm,0.9s						
GNI	Garni	73.04	311	*ce*P	P	21 24 50.7	-2.1
GNI				pmax	pmax		
	comp=Z,106nm,1.3s						
CBKS	Cedar Bluff	73.25	51	*e*P	P	21 24 55.1	+1.1
	comp=Z,82nm,0.3s						
CBKS	Cedar Bluff	73.25	51	*e*P	P	21 24 55.1	+1.1
MILM	Milestii Mici	75.36	324	⇑*i*P	P	21 25 05.7	-0.3
KOLS	Kolonicke sedl	76.21	329	*e*P	P	21 25 10.9	+0.1
KOLS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KOLS	Kolonicke sedl	76.21	329	*e*P	P	21 25 10.9	+0.1
BURAR	Bucovina Array	76.22	327	⇓*i*P	P	21 25 11.0	0.0
BURAR	Bucovina Array	76.22	327	P	P	21 25 11.0	0.0
BIZ	Bicaz	76.43	326	⇑*i*P	P	21 25 12.4	+0.3
TESR	Tescani	76.56	325	⇓*i*P	P	21 25 12.8	-0.1
TRPA	Tarpa	76.78	329	⇑*i*P	P	21 25 14.4	+0.3
ARCR	ARCALIA	76.98	327	⇓*i*P	P	21 25 15.9	+0.6
LANS	Liptovska Anna	77.00	331	*e*P	P	21 25 16.9	+1.5
LANS	Liptovska Anna	77.00	331	*e*P	P	21 25 16.9	+1.5
CFR	Carcaliu	77.05	324	⇓*i*P	P	21 25 16.8	+1.2
CFR	Carcaliu	77.05	324	P	P	21 25 16.7	+1.2
VRI	Vrincioaia	77.06	325	⇑*i*P	P	21 25 16.5	+0.7
VRI	Vrincioaia	77.06	325	P	P	21 25 16.4	+0.7
MORC	Moravsky Berou	77.10	332	⇓*i*P	P	21 25 15.9	0.0
MORC	Moravsky Berou	77.10	332	P	P	21 25 16.8	+0.9
MORC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MORC	Moravsky Berou	77.10	332	*e*P	P	21 25 16.3	+0.4
PLOR	Plostina	77.10	325	⇑*i*P	P	21 25 16.4	+0.4
PLOR	Plostina	77.10	325	P	P	21 25 16.3	+0.3
CLL	Collm	77.14	336	*i* P	P	21 25 14.6	-1.4
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL	Collm	77.14	336	*i* P	P	21 25 14.6	-1.4
	comp=Z,8.0nm,1.1s						
DOPR	Dopca	77.51	326	⇑*i*P	P	21 25 19.2	+0.9
TLB	Topalu	77.57	323	⇑*i*P	P	21 25 19.4	+0.9
TLB	Topalu	77.57	323	P	P	21 25 19.3	+0.8
MLR	Muntele Rosu	77.68	325	⇑*i*P	P	21 25 20.2	+0.8
MLR	Muntele Rosu	77.68	325	P	P	21 25 20.2	+0.8
VYHS	Vyhne	77.78	331	*e*P	P	21 25 20.6	+0.9
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VYHS	Vyhne	77.78	331	*e*P	P	21 25 20.6	+0.9
TXAR	Lajitas Array	77.79	60	P	P	21 25 21.1	+0.9
	comp=Z,1.1nm,0.6s,baz=305,slow=4.4,SNR=20						
VRAC	Vranov	77.81	333	⇓*i*P	P	21 25 20.7	+0.8
VRAC	Vranov	77.81	333	P	P	21 25 20.6	+0.7
VRAC	Vranov	77.81	333	*e*P	P	21 25 20.4	+0.5
JAVC	Velka Javorina	77.85	332	*e*P	P	21 25 21.6	+1.4
PRU	Pruhonice	77.85	334	*e*P	P	21 25 20.1	0.0
PRU	Pruhonice	77.85	334	*e*P	P	21 25 20.1	0.0
VOIR		78.08	326	⇓*i*P	P	21 25 22.3	+0.7
VOIR		78.08	326	P	P	21 25 22.2	+0.7
KRUC	Moravsky	78.09	333	*e*P	P	21 25 21.8	+0.4
MOX	Moxa	78.13	336	P	P	21 25 23.3	+1.7
MOX				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MODS	Modra-Piesok	78.40	332	*e*P	P	21 25 23.5	+0.3
MODS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MODS	Modra-Piesok	78.40	332	*e*P	P	21 25 23.5	+0.3
KHC	Kasperske Hory	78.91	334	*e*P	P	21 25 26.3	+0.4
KHC	Kasperske Hory	78.91	334	*e*P	P	21 25 26.3	+0.4
BRTR	Keskin Array B	78.95	317	P	P	21 25 26.6	+0.1
	comp=Z,1.6nm,0.9s,baz=52,slow=2.4,SNR=5.3						
GZR	Gura Zlata	79.00	327	⇑*i*P	P	21 25 26.3	-0.3
GZR	Gura Zlata	79.00	327	P	P	21 25 26.3	-0.3
WET	Wettzell	79.10	335	P	P	21 25 28.2	+1.2
WET				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GERES	GERESS Array B	79.12	334	P	P	21 25 27.4	+0.2
	comp=Z,1.3nm,0.6s,baz=35,slow=5.3,SNR=14						
SOP	Sopron	79.24	332	P	P	21 25 29.6	+1.9
SOP				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BZS	Buzias	79.25	328	⇓*i*P	P	21 25 28.0	+0.1
BZS	Buzias	79.25	328	P	P	21 25 27.9	+0.1
CONA	Conrad Observa	79.25	332	*i* PcP	P	21 25 29.0	+1.1
	comp=Z,3.3nm,0.8s						
MEM	Membach	79.64	339	⇑P	P	21 25 31.8	+1.9
MOA	Molln	79.83	333	*i* PcP	P	21 25 31.8	+0.8
	comp=Z,2.9nm,0.9s						
ARSA	Arzberg	79.96	332	*i* PcP	P	21 25 32.5	+0.8
	comp=Z,4.6nm,1.2s						
BCLA	Clavier	79.98	340	⇓P	P	21 25 33.3	+1.6
GIVF	Givet	80.39	340	*e*P	P	21 25 36.1	+2.2
GIVF				pmax	pmax		
	comp=Z,15nm,1.2s						
BAIF	Baives	80.58	340	*e*P	P	21 25 35.9	+1.0
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SOKA	Soboth	80.62	332	*i* PcP	P	21 25 35.7	+0.4
	comp=Z,6.3nm,1.0s						
KBA	Koelnbreinsper	80.80	333	*i* PcP	P	21 25 37.7	+1.3
	comp=Z,11nm,0.7s						
KBA	Koelnbreinsper	80.80	333	P	P	21 25 37.5	+1.1
KBA				pmax	pmax		
	comp=Z,16nm,0.8s						
OBKA	Obir	80.93	332	*i* PcP	P	21 25 38.5	+1.5
	comp=Z,2.1nm,0.8s						
MYKA	Terra Mystica	81.11	333	*i* PcP	P	21 25 38.8	+0.9
	comp=Z,1.7nm,0.4s						
WATA	Walderalm	81.11	335	*i* PcP	P	21 25 39.1	+1.1
	comp=Z,4.6nm,0.5s						
BFO	Black Forest	81.13	337	*e*P	P	21 25 37.9	-0.1
	comp=Z,4.3nm,0.8s						
BFO	Black Forest	81.13	337	*e*P	P	21 25 37.9	-0.1
BFO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VTS	Vitosha	81.16	325	⇑*i*P	P	21 25 39.0	+0.6
VTS	Vitosha	81.16	325	P	P	21 25 39.3	+0.9
VTS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WTTA	Wattenberg	81.16	335	*i* PcP	P	21 25 39.2	+0.8
	comp=Z,12nm,0.6s						
RETA	Reutte	81.22	335	*i* PcP	P	21 25 40.0	+1.5
	comp=Z,3.3nm,0.5s						
MOTA	Moosalm	81.24	335	*i* PcP	P	21 25 39.7	+1.0
	comp=Z,9.9nm,1.0s						
SQTA	Sankt Quirin	81.33	335	*i* PcP	P	21 25 40.4	+1.3
	comp=Z,7.7nm,1.1s						
CDF	Champ du Feu	81.34	338	*e*P	P	21 25 39.3	+0.2
CDF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ABTA	Abfaltersbach	81.36	334	*i* P	P	21 25 38.8	-0.5
	comp=Z,2.2nm,1.0s						
FETA	Feichten	81.65	335	*i* P	P	21 25 39.0	-1.9
	comp=Z,3.6nm,1.1s						
DAVA	Damuels	81.65	336	*i* PcP	P	21 25 41.0	+0.1
	comp=Z,3.8nm,0.8s						
HAU	Haudompre	81.95	338	*e*P	P	21 25 43.8	+1.5
HAU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HINF	Hinteralfeld	82.00	338	*e*P	P	21 25 43.6	+1.0
HINF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FUORN	Ofenpass-Fuorn	82.14	335	*e*P	P	21 25 42.8	-0.8
	comp=Z,3.3nm,0.7s						
SRS	Serrai	82.27	324	P	P	21 25 46.8	+2.7
TUE	Stuetta	82.55	336	*e*P	P	21 25 45.4	-0.3
	comp=Z,6.6nm,1.0s						
FLN	La Foliniere	82.83	343	*e*P	P	21 25 49.7	+2.9
FLN				pmax	pmax		
	comp=Z,20nm,1.3s						
LDF	La Druitiere	82.92	343	*e*P	P	21 25 51.8	+4.5
LDF				pmax	pmax		
	comp=Z,29nm,1.7s						
LOR	Lormes	83.27	340	*e*P	P	21 25 50.8	+1.7
LOR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GRR	Gorron	83.27	343	*e*P	P	21 25 51.4	+2.3
GRR				pmax	pmax		
	comp=Z,23nm,1.4s						
SSF	Saint Saulge	83.54	340	*e*P	P	21 25 53.3	+2.7
SSF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SGMF	Saint Gilles	83.73	344	*e*P	P	21 25 53.8	+2.3
SGMF				pmax	pmax		
	comp=Z,47nm,1.6s						
SMF	Signal de Mont	83.85	339	*e*P	P	21 25 52.8	+0.6
SMF				pmax	pmax		
	comp=Z,13nm,1.1s						
LPG	La Plagne	84.16	337	*e*P	P	21 25 56.4	+2.3
LPG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BGF	Bois d'Agland	84.17	340	*e*P	P	21 25 56.7	+2.9
BGF				pmax	pmax		
	comp=Z,13nm,1.2s						
TCF	Toulx Ste Croi	84.58	340	*e*P	P	21 25 57.6	+1.7
TCF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RAYN	Ar Rayn	84.81	299	*e*P	P	21 25 56.9	-0.6
	comp=Z,4.5nm,1.1s						
RAYN	Ar Rayn	84.81	299	*e*P	P	21 25 56.9	-0.6
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MFF	Saint Martin d	84.81	342	*e*P	P	21 25 59.8	+2.8
MFF				pmax	pmax		
	comp=Z,43nm,1.7s						
ORIF	Oris-en-Rattie	84.93	337	*e*P	P	21 26 00.3	+2.5
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VIVF	Saint-Julien-l	85.31	338	*e*P	P	21 25 59.8	+0.2
VIVF				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RJF	Les Rejaudoux	85.67	340	*e*P	P	21 26 02.3	+1.0
RJF				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CAF	Calviac	85.90	340	*e*P	P	21 26 05.7	+3.2
CAF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LFF	La Frestale	86.19	341	*e*P	P	21 26 07.2	+3.3
LFF				pmax	pmax		
	comp=Z,17nm,1.5s						
EPF	Esparros	88.09	340	*e*P	P	21 26 16.2	+3.0
EPF				pmax	pmax		
	comp=Z,14nm,1.4s						
ETSF	Etsaut	88.43	341	*e*P	P	21 26 14.4	-0.4
ETSF				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SNAA	Sanae	151.88	196	PKPdf	PKPbc	21 33 16.0	-0.2

IGQ 03 21:24:46.2±0.6,3°S±4°×8°1W±°,h10^{km},MLv3.5,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLA	Playas - Guaya	0.40	25	P	Pb	21 24 55.2	-0.1
APLA				S	Sb	21 25 00.7	-0.7
MORR	Playas El Morr	0.42	32	P	Pb	21 24 55.9	+0.3
MORR				S	Sb	21 25 01.8	-0.2
SALI	Salinas	0.91	332	P	Pg	21 25 00.9	-2.8
SALI				S	Sg	21 25 09.6	-6.0
MILO	Milagro-Astudi	1.23	55	P	Pn	21 25 08.4	-1.1
MILO				S	Sb	21 25 24.7	-0.8
COHC	Cochancay	1.41	68	P	Pn	21 25 10.9	-1.0
COHC				S	Sn	21 25 29.6	-0.9
MCRA	Macar, Loja	1.49	156	P	Pn	21 25 12.3	-0.9
GONZ	Gonzanam	1.69	137	P	Pg	21 25 20.0	+1.3
ZUMB	Zumba	2.33	143	P	Pb	21 25 29.4	+0.9
BPAT	Tungurahua Vol	2.59	55	P	Pn	21 25 28.8	+0.2
BPAT				S	Sn	21 25 59.2	-1.2
PIS1	Pisayambo	2.90	49	P	Pn	21 25 34.2	+1.3
PISA	Pisayambo	2.90	49	P	Pn	21 25 34.0	+1.0
ILLI	Illinizas Sur	2.91	39	P	Pn	21 25 32.5	-0.6
ILLI				S	Sn	21 26 06.2	-2.3
BMOR	Cotopaxi Volca	3.08	43	P	Pn	21 25 35.7	+0.2
BNAS	Cotopaxi Volca	3.11	42	P	Pn	21 25 35.5	-0.3
BREF	Cotopaxi Volca	3.13	43	P	Pn	21 25 38.1	+1.8
BTAM	Cotopaxi Volca	3.16	43	P	Pn	21 25 37.0	+0.5
BVC2	Cotopaxi Volca	3.16	43	P	Pn	21 25 37.6	+1.0
ANTS	Antisana-Sarah	3.44	44	P	Pn	21 25 40.2	-0.3
YANA	Yana	3.48	35	P	Pn	21 25 39.7	-1.2

MAN 03 21:32:48.0,6°.15N×125°.10E,h61^{km},mb3.5,ML2.2,MS1.7,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.16	246	⇓*i*P	Pn	21 32 58.1	+0.5
GSPH				*i* S	Sn	21 33 04.9	+0.4
DDMP	Don Marcelino,	0.61	94	*e*P	Pn	21 33 03.0	+1.7
DDMP				*e*S	Sn	21 33 15.0	+4.0
SKMP	Bagumbayan, Su	0.66	304	*e*P	Pn	21 33 03.7	+1.8
SKMP				*e*S	Sn	21 33 15.1	+3.0

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*BGS **03** 21:37:01.0±1.2,48°.54N×1°.89W,h8^{km}±5^{km},ML2.0*
*LDG **03** 21:37:01.6±0.1,48°.56N×1°.88W,h5^{km},Md2.8/2,Ml2.8/20,*
Error ellipse: s-maj=1.7km s-min=1.3km az=27.0
*STR **03** 21:37:02.0±0.4,49°N±2°×°±°,h7^{km}±5^{km},MLv2.8/5*

ISC 03 21:36:59.9±1.1,48°.58N±0°.02×1°.83W±0°.02,h12^{km}±10^{km},n49,σ1^s.15/91,France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RENF	Rennes	0.47	164	*e*P	Pn	21 37 11.9	-0.6
RENF				*e*S	Sb	21 37 18.3	+1.2
RENF	Rennes	0.47	164	*e*P	Pn	21 37 11.9	-0.6
RENF				*e*S	Sb	21 37 18.3	+1.2
RENF	Rennes	0.47	164	Pg	Pn	21 37 11.9	-0.6
RENF				Sg	Sb	21 37 18.6	+1.5
SGMF	Saint Gilles	0.58	237	*e*Pg	Pb	21 37 12.3	+0.3
SGMF				*e*Sg	Sg	21 37 19.6	+0.7
	39nm,0.2s						
JQE	Queens East	0.64	348	*e*P	Pb	21 37 13.7	+0.7
JQE	Queens East	0.64	348	*e*P	Pb	21 37 13.7	+0.7
JRS	Jersey	0.64	344	*e*P	Pb	21 37 13.7	+0.6
JRS				*e*S	Sb	21 37 21.8	-0.2
JRS				IAML		21 37 22.1	
	comp=E,114nm,0.2s						
JRS				IAML		21 37 25.1	
	comp=N,80nm,0.1s						
JRS	Jersey	0.64	344	*e*P	Pb	21 37 13.7	+0.6
JRS				*e*S	Sb	21 37 21.8	-0.2
JRS				IAML		21 37 22.1	
	comp=E,114nm,0.2s						
JRS				IAML		21 37 25.1	
	comp=N,80nm,0.1s						
JSA	Saint Aubin	0.65	340	*e*P	Pb	21 37 13.7	+0.5
JSA				*e*S	Sb	21 37 22.1	-0.2
JSA				IAML		21 37 24.5	
	comp=E,41nm,0.2s						
JSA				IAML		21 37 25.4	
	comp=N,76nm,0.2s						
JSA	Saint Aubin	0.65	340	*e*P	Pb	21 37 13.7	+0.5
JSA				*e*S	Sb	21 37 22.1	-0.2
JSA				IAML		21 37 24.5	
	comp=E,41nm,0.2s						
JSA				IAML		21 37 25.4	
	comp=N,76nm,0.2s						
JSA	Saint Aubin	0.65	340	Pg	Pb	21 37 13.8	+0.5
JSA				Sg	Sb	21 37 22.2	-0.2
GRR	Gorron	0.67	106	*e*Pg	Pn	21 37 15.5	+0.2
GRR	Gorron	0.67	106	*e*Pn	Pn	21 37 16.6	+1.3
GRR				*e*Sg	Sb	21 37 24.7	+1.8
	comp=N,89nm,0.2s						
GRR				*e*Sn	Sn	21 37 27.3	+1.6
	comp=N,93nm,0.2s						
JVM	Valle D.L. Mar	0.69	339	*e*P	Pb	21 37 14.3	+0.5
JVM	Valle D.L. Mar	0.69	339	*e*P	Pb	21 37 14.3	+0.5
JLP	Les Platons	0.69	345	*e*P	Pb	21 37 14.6	+0.7
JLP	Les Platons	0.69	345	*e*P	Pb	21 37 14.6	+0.7
FLN	La Foliniere	0.91	78	*e*Pg	Pn	21 37 19.5	+0.9
	baz=258						
FLN				*e*Sg	Sn	21 37 31.9	+0.2

	comp=N,77nm,0.2s,baz=264						
ROSF	**Rostrenen**	0.99	257	*e*Pg	Pb	21 37 19.5	+0.5
ROSF				*e*Sg	Sg	21 37 32.0	+0.2
	comp=N,90nm,0.2s						
QUIF	**Quistinic**	1.11	234	*e*Pn	Pb	21 37 21.3	+0.3
QUIF	**Quistinic**	1.11	234	*e*Pg	Pn	21 37 22.2	+0.9
QUIF				*e*Sg	Sg	21 37 36.1	+0.5
	comp=N,16nm,0.2s						
LDF	**La Druitiere**	1.13	88	*e*Pn	Pn	21 37 23.1	+1.5
LDF				*e*Sg	Sn	21 37 38.8	+1.7
	comp=N,92nm,0.3s						
MFF	**Saint Martin d**	2.28	149	*e*Pn	Pn	21 37 38.1	+0.7
MFF	**Saint Martin d**	2.28	149	*e*P	Pb	21 37 40.3	-0.7
MFF	**Saint Martin d**	2.28	149	*e*Pg	Pg	21 37 42.8	-0.7
MFF				*e*Sg	Sg	21 38 12.5	-0.6
	comp=N,18nm,0.2s						
DYA	**Yadsworthy**	2.31	324	Pn	Pn	21 37 38.2	+0.4
DYA				Pg	Pg	21 37 43.3	-0.9
CHIF	**Chize**	2.63	158	Pn	Pn	21 37 44.0	+1.9
CHIF				Pg	Pb	21 37 48.6	+1.7
CCA1	**Carnmenellis**	2.74	307	Pn	Pn	21 37 44.3	+0.5
ELSH	**Elham, Standar**	3.21	36	Pn	Pn	21 37 51.4	+1.2
HYF	**Humbligny**	3.28	112	*e*Pn	Pn	21 37 52.7	+1.6
HYF	**Humbligny**	3.28	112	*e*Pg	Pg	21 38 03.7	+1.1
HYF				*e*Sn	Sn	21 38 29.9	-0.1
HYF				*e*Sg	Sg	21 38 45.5	+0.4
TCF	**Toulx Ste Croi**	3.57	128	*e*Pn	Pn	21 37 56.0	+0.9
TCF				*e*Sn	Sn	21 38 36.7	-0.6
TCF				*e*Sg	Sg	21 38 52.9	-1.6
	comp=N,1.2nm,0.2s						
BGF	**Bois d'Agland**	3.75	121	*e*Pn	Pn	21 37 58.7	+1.1
BGF	**Bois d'Agland**	3.75	121	*e*Pg	Pg	21 38 12.1	+0.3
BGF				*e*Sn	Sn	21 38 41.6	-0.2
BGF				*e*Sg	Sg	21 39 00.1	-0.3
	comp=N,5.4nm,0.3s						
SSF	**Saint Saulge**	3.90	111	*e*Pn	Pn	21 38 00.7	+1.1
SSF	**Saint Saulge**	3.90	111	*e*Pg	Pg	21 38 14.9	+0.3
SSF				*e*Sn	Sn	21 38 43.7	-1.7
SSF				*e*Sg	Sg	21 39 03.4	-1.7
	comp=N,1.2nm,0.2s						
AVF	**Avril sur Loir**	3.93	115	*e*Pn	Pn	21 38 00.8	+0.8
AVF				*e*Sn	Sn	21 38 44.4	-1.7
AVF				*e*Sg	Sg	21 39 06.0	0.0
	comp=N,2.0nm,0.3s						
RJF	**Les Rejaudoux**	4.00	144	*e*Pn	Pn	21 38 01.6	+0.7
RJF	**Les Rejaudoux**	4.00	144	*e*Pg	Pg	21 38 14.9	-1.5
RJF				*e*Sn	Sn	21 38 47.3	-0.4
RJF				*e*Sg	Sg	21 39 07.2	-0.9
	comp=N,3.7nm,0.2s						
LOR	**Lormes**	4.04	107	*e*Pn	Pn	21 38 02.5	+0.9
	baz=283						
LOR	**Lormes**	4.04	107	*e*Pg	Pg	21 38 16.8	-0.5
	baz=282						
LOR				*e*Sn	Sn	21 38 47.3	-1.6
LOR				*e*Sg	Sg	21 39 08.0	-1.6
	comp=N,1.7nm,0.2s,baz=297						
LFF	**La Frestale**	4.04	153	*e*Pn	Pn	21 38 02.1	+0.5
LFF	**La Frestale**	4.04	153	*e*Pg	Pg	21 38 17.4	+0.1
LFF				*e*Sn	Sn	21 38 48.6	-0.3
LFF				*e*Sg	Sg	21 39 09.3	-0.3
	comp=N,8.2nm,0.3s						
BAIF	**Baives**	4.22	67	*e*Pn	Pn	21 38 05.1	+1.1
BAIF	**Baives**	4.22	67	*e*Pg	Pg	21 38 20.6	0.0
BAIF				*e*Sn	Sn	21 38 51.2	-2.0
BAIF				*e*Sg	Sg	21 39 13.7	-1.5
	comp=N,1.1nm,0.2s						
SMF	**Signal de Mont**	4.29	115	*e*Pn	Pn	21 38 05.7	+0.6
SMF				*e*Sn	Sn	21 38 54.4	-0.7
SMF				*e*Sg	Sg	21 39 17.2	-0.5
	comp=N,1.2nm,0.2s						
CAF	**Calviac**	4.53	142	*e*Pn	Pn	21 38 09.1	+0.8
CAF	**Calviac**	4.53	142	*e*Pg	Pg	21 38 25.2	-1.3
CAF				*e*Sn	Sn	21 38 56.6	-4.3
CAF				*e*Sg	Sg	21 39 23.2	-1.9
	comp=N,1.7nm,0.2s						
SFTF	**Sexfontaines**	4.59	92	*e*Pn	Pn	21 38 10.1	+1.0
	baz=272						
SFTF				*e*Sn	Sn	21 38 58.8	-3.6
SFTF				*e*Sg	Sg	21 39 25.5	-1.7
	comp=N,4.0nm,0.3s						

KRSC 03 21:50:21.4±1.0**, 52°.38N×159°.56E, h50^{km}**±15^{km}**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	0.64	275	*e*P	Pn	21 50 35.3	+0.9
RUS				*e*S	Sn	21 50 44.0	+0.3
SPN	**Mys Shipunski**	0.78	21	*e*P	Pn	21 50 38.2	+2.1
SPN				*e*S	Sn	21 50 48.7	+1.9
NLC	**Nalytchevo**	0.80	351	*e*P	Pn	21 50 37.7	+1.2
NLC				*e*S	Sn	21 50 48.2	+0.7
DALK	**Dalny**	0.82	324	*e*P	Pn	21 50 37.7	+1.1
DALK				*e*S	Sn	21 50 48.5	+0.8
MTVR	**Mutnovka**	0.85	278	*e*P	Pn	21 50 38.4	+1.2
MTVR				*e*S	Sn	21 50 49.4	+0.7
PET	**Petropavlovsk**	0.85	320	*e*P	Pn	21 50 38.4	+1.3
UGLR	**Uglovaya**	0.94	332	*i* P	Pn	21 50 40.2	+1.7
KRMR	**Karymshinskiy**	0.98	298	*i* P	Pn	21 50 40.1	+1.3
KRMR				*e*S	Sn	21 50 52.4	+0.7
SDLR	**Sedlovina**	0.99	336	*e*P	Pn	21 50 40.5	+1.4
SDLR				*e*S	Sn	21 50 52.9	+0.8
SMAR	**Somma**	1.00	333	*e*P	Pn	21 50 40.7	+1.4
ASAK	**Asacha**	1.01	271	*e*P	Pn	21 50 41.2	+1.8
AVH	**Avacha**	1.02	331	*e*P	Pn	21 50 41.1	+1.7
AVH				*e*S	Sn	21 50 54.1	+1.4
KRER	**Koryakskii**	1.05	332	*e*P	Pn	21 50 41.5	+1.5
KOK	**Koryaka**	1.07	329	*e*P	Pn	21 50 41.9	+1.7
KDTR	**Khodutka, Kamc**	1.08	239	*e*P	Pn	21 50 41.6	+1.5
KDTR				*e*S	Sn	21 50 54.5	+0.6
KRX	**Arik**	1.13	331	*e*P	Pn	21 50 42.5	+1.6
APC	**Apacha**	1.56	291	*e*P	Pn	21 50 49.5	+2.8
APC				*e*S	Sn	21 51 09.4	+3.7
GNL	**Ganaly**	1.64	324	*e*P	Pn	21 50 50.2	+2.3
PAU	**Pauzhetka**	1.93	243	*e*P	Pn	21 50 54.4	+2.7
MKZ	**Mys Kozlova**	2.54	30	S	Sn	21 51 33.1	+3.4
TUMD	**Tumrok D**	2.87	10	*e*P	Pn	21 51 08.5	+3.8
ALID	**Alaid**	2.92	240	*e*P	Pn	21 51 07.5	+2.1
TUMR	**Tumrok**	2.93	7	*e*P	Pn	21 51 08.7	+3.1
KBTR	**Krutoberegovo**	4.29	25	*e*P	Pn	21 51 28.9	+4.9
KBTR				*e*S	Sn	21 52 18.2	+5.5
BKI	**Bering**	4.74	51	*e*P	Pn	21 51 33.3	+3.1
BKI				*e*S	Sn	21 52 23.9	+0.1

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*SOME **03** 21:57:25.6, 39°.23N×73°.08E, h0^{km}*
*KRNET **03** 21:57:33.2±0.1, 39°.21N×73°.42E, mb3.7*
*NNC **03** 21:57:37.8±4.1, 39°.47N×73°.51E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=34.6km s-min=19.7km az=6.0*

ISC 03 21:57:37.2±1.8**, 39°.26N**±0°.10×**73°.45E**±0°.05**, h29^{km}, n29, σ3^{s}.17**/48**, 19C-19D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	2.18	292	⇓*e*P	Pn	21 58 12.6	+1.0
	baz=94						
BTK				⇓*i*S	Sb	21 58 41.3	-1.4
	baz=94						
ARLS	**Aral**	2.68	14	⇓*i*P	Pn	21 58 20.3	+1.7
	baz=14						
ARLS				⇓*i*S	Sb	21 58 55.4	-1.7
	baz=14						
ARK	**Arkit**	2.78	336	⇓*e*P	Pn	21 58 21.3	+1.5
	baz=37						
ARK				⇓*i*S	Sb	21 58 55.4	-4.4
	baz=37						
AML	**Almayashu**	2.87	4	⇑*i*P	Pn	21 58 23.2	+1.8
	baz=4.0						
AML				⇑*i*S	Sb	21 58 59.5	-3.4
	baz=4.0						
UCH	**Uchtor**	3.07	15	⇓*e*P	Pn	21 58 26.1	+1.9
	baz=15						
UCH				⇓*i*S	Sb	21 59 04.5	-4.1
	baz=15						
UCH	**Uchtor**	3.07	15	P	Pn	21 58 26.3	+2.1
	SNR=42						
KZA	**Kyzart**	3.13	25	⇓*i*P	Pn	21 58 26.6	+1.7
	baz=25						
KZA				⇓*i*S	Sb	21 59 05.7	-4.5
	baz=25						
KZA	**Kyzart**	3.13	25	P	Pn	21 58 26.6	+1.7
	SNR=6.1						
EKS2	**Erkin-Say**	3.41	4	⇑*i*P	Pn	21 58 30.4	+1.9
	baz=4.0						
EKS2				⇑*i*S	Sb	21 59 12.1	-5.8
	baz=4.0						
EKS2	**Erkin-Say**	3.41	4	P	Pn	21 58 31.7	+3.2
	SNR=8.1						
AAK	**Ala-Archa**	3.46	13	Pn	Pn	21 58 31.7	+2.4
	12nm,0.5s						
AAK				⇑Lg	Lg	21 59 17.0	
	66nm,0.7s						
AAK	**Ala-Archa**	3.46	13	⇑*i*P	Pn	21 58 31.2	+1.9
	baz=13						
AAK				⇑*i*S	Sb	21 59 13.7	-5.9
	baz=13						
AAK	**Ala-Archa**	3.46	13	P	Pn	21 58 32.1	+2.8
	SNR=13						
MRKS	**Merke**	3.48	357	*e*P	Pn	21 58 32.4	+2.9
	8.0nm,0.2s						
MRKS				*e*S	Sb	21 59 21.9	+1.8
	36nm,0.4s						
KBK	**Karagaybulak**	3.58	18	⇑*i*P	Pn	21 58 32.8	+1.9
	baz=18						
KBK				⇑*i*S	Sb	21 59 16.3	-6.6
	baz=18						
KBK	**Karagaybulak**	3.58	18	P	Pn	21 58 34.4	+3.5
	SNR=9.2						
FRU1	**Bishkek**	3.66	14	⇑*i*P	Pn	21 58 34.2	+2.3
	baz=14						
FRU1				⇑*i*S	Sn	21 59 17.4	+3.3
	baz=14						
ULHL	**Ulahol**	3.66	35	⇓*i*P	Pn	21 58 34.0	+2.0
	baz=34						
ULHL				⇓*i*S	Sn	21 59 18.5	+4.2
	baz=34						
ULHL	**Ulahol**	3.66	35	P	Pb	21 58 39.9	-1.4
	SNR=8.7						
BOOM	**Boomskoye usch**	3.74	30	⇑*i*P	Pn	21 58 34.9	+1.8
	baz=29						
BOOM				⇑*i*S	Sn	21 59 20.5	+4.3
	baz=29						
CHMS	**Chumysh**	3.86	14	⇓*i*P	Pn	21 58 36.4	+1.7
	baz=14						
CHMS				⇓*i*S	Sn	21 59 22.9	+3.8
	baz=14						
CHMS	**Chumysh**	3.86	14	P	Pn	21 58 36.9	+2.2
	SNR=8.9						
TKM2	**Tokmak 2**	4.00	23	⇑Pn	Pn	21 58 37.0	+0.3
	3.8nm,0.7s						
TKM2				⇓Pg	Pb	21 58 48.3	+1.3
	9.3nm,0.7s						
TKM2				⇑Lg	Lg	21 59 39.4	
	30nm,0.8s						
TKM2	**Tokmak 2**	4.00	23	P	Pn	21 58 39.1	+2.3
	SNR=5.8						
KDJ	**Kajisay**	4.03	44	⇓*e*P	Pn	21 58 38.5	+1.4
	baz=43						
KDJ				⇓*i*S	Sn	21 59 27.2	+3.7
	baz=43						
KST	**Kastek**	4.23	26	*e*P	Pb	21 58 47.5	-3.4
	6.7nm,0.3s						
KST				*e*S	Sb	21 59 47.5	+5.9
	34nm,0.6s						
KK31	**Karatay Array**	4.43	331	Pn	Pn	21 58 43.8	+1.3
	3.1nm,0.6s,baz=141,slow=12,SNR=32						
KK31				⇑Pg	Pb	21 58 56.9	+2.5
	13nm,0.8s,baz=160,slow=17,SNR=6.8						
KK31				⇑Sn	Sn	21 59 36.1	+3.0
	6.0nm,0.6s,baz=51,slow=55,SNR=5.1						
KK31				⇓Lg	Lg	21 59 53.9	
	14nm,0.8s,baz=144,slow=14,SNR=3.7						
PDGK	**Podgornoye**	6.10	46	⇑Pg	Pb	21 59 21.5	-1.3
	5.0nm,0.6s						
PDGK				⇓Lg	Lg	22 00 46.4	
	13nm,0.9s						
AB31	**Akbulak array**	13.89	320	⇑Pn	Pn	22 00 48.3	-3.7
	0.6nm,0.6s,baz=131,slow=13,SNR=10						

JMA 03 22:17:25.9±0.1**, 25°.62N×125°.55E, h79^{km}**±3^{km}**, M3.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	0.74	202	P	Pn	22 17 42.2	+0.2
JIKM				S	Sn	22 17 53.9	0.0
JIRB	**Irabujima**	0.86	204	P	Pn	22 17 43.2	0.0
JIRB				S	Sn	22 17 55.7	-0.4
JOGS	**Gusukube**	0.87	189	P	Pn	22 17 43.5	+0.2
JOGS				S	Sn	22 17 55.9	-0.4
JMJ2	**Miyako jima3**	0.90	193	P	Pn	22 17 43.9	+0.2
JMJ2				S	Sn	22 17 56.8	-0.1
JTJ	**Tarama**	1.24	218	P	Pn	22 17 48.1	+0.2
JTJ				S	Sn	22 18 04.4	+0.1
JKE	**Kume jima 2**	1.32	57	P	Pn	22 17 49.2	+0.4
JKE				S	Sn	22 18 06.1	+0.1
JISG	**Ishigakijimahi**	1.52	228	P	Pn	22 17 51.9	+0.4
JISG				S	Sn	22 18 11.1	+0.3
JIJ	**Ishigaki jima**	1.79	226	P	Pn	22 17 54.9	-0.1
JIJ				S	Sn	22 18 15.6	-1.4
JAGN	**Aguni-jima**	1.80	57	P	Pn	22 17 55.7	+0.6
JAGN				S	Sn	22 18 18.0	+0.7
JKRS	**Kuro-shima**	1.96	226	P	Pn	22 17 57.5	+0.2
JKRS				*e*S	Sn	22 18 21.0	-0.1
JJT3	**Tamagusuku3**	2.08	75	P	Pn	22 17 59.4	+0.6
JJT3				*e*S	Sn	22 18 24.6	+0.7
IRIF	**Iriomote-Funau**	2.09	233	P	Pn	22 17 59.3	+0.3
IRIF				*e*S	Sn	22 18 24.5	+0.3
HATJ	**Hateruma jima**	2.22	226	P	Pn	22 18 00.8	+0.1
HATJ				*e*S	Sn	22 18 27.5	+0.2
JNTH	**Nagotoyohara**	2.40	68	P	Pn	22 18 01.4	-1.7
YOJ	**Yonaguni jima**	2.58	244	P	Pn	22 18 06.7	+1.2
YOJ				*e*S	Sn	22 18 37.0	+1.1
JIH	**Iheya**	2.59	56	P	Pn	22 18 05.7	+0.1
JIH				S	Sn	22 18 34.6	-1.5
JYNG	**Yonagunijimaku**	2.63	244	P	Pn	22 18 07.5	+1.2
JYNG				S	Sn	22 18 38.1	+0.8
JOW	**Kunigami**	2.73	63	P	Pn	22 18 07.5	-0.1
JOW				*e*S	Sn	22 18 39.9	+0.3
JYRO	**Yoronjima**	2.96	61	P	Pn	22 18 10.2	-0.4
JYRO				*e*S	Sn	22 18 43.4	-1.6
JOKE	**Okinoerabujima**	3.21	57	P	Pn	22 18 13.2	-0.9

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*IDC **03** 22:20:05.2±12.0, 35°.04N×72°.00E, h56^{km}±47^{km}, mb3.2/3, mb1 3.4/7, mb1mx3.1/46, mbtmp3.6/7, ML3.8/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/27, Error ellipse: s-maj=170.3km s-min=34.0km az=156.0*
*ISCJB **03** 22:20:16.8±0.5, 36°.18N±0°.06×71°.18E±0°.06, h114^{km}, mb3.3/2, Error ellipse: s-maj=9.8km s-min=5.3km az=30.9*
*NNC **03** 22:20:23.5±4.5, 36°.74N×70°.95E, h70^{km}±130^{km}, mb3.4, mpv3.6, Error ellipse: s-maj=46.7km s-min=24.9km az=142.0*

ISC 03 22:20:19.1±0.9**, 36°.40N**±0°.08×**71°.26E**±0°.06**, h114^{km}, n23, σ3^{s}.26**/29**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	6.71	21	P	Pn	22 21 56.8	+1.6
	1.2nm,0.3s,baz=207,slow=7.1,SNR=5.1						
AAK				S	Sn	22 23 07.4	-2.9
	0.5nm,0.3s,baz=317,slow=19,SNR=1.8						
AAK	**Ala-Archa**	6.71	21	⇑P	Pn	22 21 56.7	+1.5
	1.5nm,0.3s						
AAK				⇓S	Sn	22 23 07.5	-2.9
	4.1nm,0.7s						
KK31	**Karatay Array**	6.72	355	P	Pn	22 21 56.3	+1.2
	2.6nm,0.5s,baz=177,slow=12,SNR=31						
KK31				⇑S	Sn	22 23 08.1	-2.1
	1.1nm,0.3s,baz=150,slow=58,SNR=4.7						
TKM2	**Tokmak 2**	7.32	26	⇑P	Pn	22 22 04.9	+1.4
	3.1nm,0.9s						
GEYT	**Alibeck**	10.60	282	P	Pn	22 22 47.9	+0.2
	0.7nm,0.3s,baz=112,slow=13,SNR=13						
GEYT				S	Sn	22 24 41.6	-2.8
	0.8nm,0.3s,baz=39,slow=29,SNR=6.4						
GYA0B	**ALIBECK ARRAY**	10.60	282	⇓P	Pn	22 22 47.6	-0.1
GYA0B				⇑S	Sn	22 24 41.1	-3.3
PYUN	**Piuthan**	12.92	127	*e*P	Pn	22 23 15.9	-2.8
	13nm,0.4s						
MKAR	**Makanchi Array**	13.25	35	P	P	22 23 30.0	+1.6
	0.1nm,0.3s,baz=207,slow=9.9,SNR=1.8						
DANN	**Dangsing**	13.26	124	*e*P	Pn	22 23 21.0	-2.2
	12nm,0.4s						
KOLN	**Koldanda**	13.54	126	*e*P	Pn	22 23 23.2	-3.5
	8.8nm,0.4s						
GKN	**Gorkha**	14.07	123	*e*P	Pn	22 23 31.0	-2.6
	16nm,0.4s						
DMN	**Daman**	14.65	123	*e*P	Pn	22 23 38.7	-2.3
	7.0nm,0.4s						
PKIN	**Phulchoki**	14.86	122	*e*P	Pn	22 23 41.3	-2.4
	5.5nm,0.4s						
PKI	**Pulchoki**	14.88	122	*e*P	Pn	22 23 41.5	-2.4
	3.2nm,0.2s						
KURBB	**Kurchatov Arra**	15.15	18	P	P	22 23 49.5	+0.2
	0.0nm,0.3s,baz=204,slow=11,SNR=2.1						
AB31	**Akbulak array**	15.27	331	P	Pn	22 23 49.2	+0.8
	0.2nm,0.3s,baz=155,slow=12,SNR=19						
AB31				⇓S	Sn	22 26 28.7	-8.4
	0.7nm,0.6s,baz=157,slow=22,SNR=2.9						
JIRN	**Jiri**	15.36	120	*e*P	Pn	22 23 47.3	-2.7
	14nm,0.4s						
AKTO	**Aktyubinsk**	16.97	330	P	Pn	22 24 14.7	+5.3
	0.4nm,0.3s,baz=137,slow=8.4,SNR=6.6						
AKTO				LR	LR	22 32 17.4	
	comp=Z,96nm,21.0s,baz=319,slow=40						
AKTO	**Aktyubinsk**	16.97	330	⇓P	Pn	22 24 14.5	+5.1
	0.9nm,0.4s						
ZALV	**Zalesovo Beam**	19.92	24	P	Pn	22 24 43.4	-0.9
	0.7nm,0.3s,baz=204,slow=9.4,SNR=4.5						
FINES	**FINESS Array B**	37.68	326	P	P	22 27 26.9	+3.9
	0.3nm,0.6s,baz=125,slow=9.0,SNR=3.6						
NB2	**NORSAR Subarra**	44.58	323	P	P	22 28 23.1	+3.6
	comp=Z,0.3nm,0.5s,baz=97,slow=7.4						
NOA	**NORSAR Array B**	44.58	323	P	P	22 28 23.4	+4.0
	comp=Z,0.3nm,0.5s,baz=96,slow=7.7,SNR=4.7						

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*IDC **03** 22:20:44.7±9.0, 23°.38N×109°.13W, h0^{km}, mb3.2/1, mb1 3.6/4, mb1mx3.5/30, mbtmp3.1/4, ML3.3/2, Error ellipse: s-maj=137.1km s-min=34.0km az=171.0*
*MEX **03** 22:20:54.7±0.3, 24°.56N×109°.46W, h10^{km}, MD3.8*

ISC 03 22:20:50.9±4.9**, 23°.9N**±0°.5×**109°.3W**±0°.1**, h10^{km}, n7, σ0^{s}.62**/7**, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	0.94	284	Pg	Pg	22 21 09.5	+0.4
	62nm,0.3s,baz=116,slow=1.6,SNR=19						
LPIG				Lg	Lg	22 21 23.4	
	87nm,0.3s,baz=27,slow=18,SNR=5.5						
LPIG				LR	LR	22 21 37.4	
	comp=Z,103nm,19.4s,baz=222,slow=41						
LPIG	**La Paz**	0.94	284	*e*P	Pg	22 21 09.5	+0.4
	baz=59,slow=6.2						
LPIG				*e*S	Sg	22 21 21.0	-0.4
TXAR	**Lajitas Array**	7.42	42	Pn	Pn	22 22 39.6	+0.2
	0.1nm,0.3s,baz=209,slow=14,SNR=3.9						
TXAR				Pg	Pb	22 23 04.8	+4.9
	0.0nm,0.3s,baz=220,slow=15,SNR=5.1						
ANMO	**Albuquerque**	11.31	12	Sn	Sn	22 25 57.7	+18
	0.2nm,0.3s,baz=14,slow=12,SNR=3.0						
NVAR	**Mina Array Bea**	16.42	334	Pn	P	22 24 45.1	+0.6
	baz=176,slow=14,SNR=2.0						
PDAR	**Pinedale Array**	18.85	359	P	Pn	22 25 11.8	-0.1
	0.0nm,0.3s,baz=200,slow=19,SNR=1.9						
ILAR	**Eielson Array**	47.59	339	P	P	22 29 25.8	-0.8
	0.4nm,0.9s,baz=156,slow=6.8,SNR=2.1						

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*LSZ **03** 22:21:58.9±0.9, 2°.50N×32°.98E, h10^{km}±41^{km}*
*AAE **03** 22:22:00.1±34.0, 1°.39N×29°.04E, h21^{km}±999^{km}*
*IDC **03** 22:22:17.1±0.4, 1°.55N×30°.78E, h0^{km}, mb4.6/31, mb1 4.7/34, mb1mx4.6/44, mbtmp4.7/34, ML5.3/3, MS4.7/35, Ms1 4.7/35, ms1mx4.7/38, Error ellipse: s-maj=14.8km s-min=9.7km az=102.0*
*ISCJB **03** 22:22:17.5±0.9, 1°.51N±0°.02×30°.78E±0°.03, h15^{km}±6^{km}, mb5.1/174, MS4.9/450, Error ellipse: s-maj=4.5km s-min=3.8km az=152.2*
*NEIC **03** 22:22:18.4±2.2, 1°.55N×30°.82E, h10^{km}±2^{km}, mb5.4/106, MS5.0/431, MW5.1, Error ellipse: s-maj=11.3km s-min=10.8km az=134.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.19; $M_{\theta\theta}$2.34; $M_{\phi\phi}$1.84; $M_{r\theta}$-3.66; $M_{\theta\phi}$1.83; $M_{\phi r}$0.95; Best double couple: $M_0$5.60000×10^{16} NP1:ϕ_s213.00000°, δ33.00000°, λ-131.00000°. NP2:ϕ_s79.00000°, δ66.00000°, λ-67.00000°. Principal axes: T 4.6300, Plg17.0000°, Azm152.0000°; N 1.5300, Plg21.0000°, Azm249.0000°; P -6.1600, Plg62.0000°, Azm25.0000°;*
NEIC Felt [III] at Kampala. Also felt at Bombo and Fort Portal. Felt at Kigali, Rwanda.
*MOS **03** 22:22:18.7±1.0, 1°.55N×30°.73E, h25^{km}, mb5.4/75, MS4.6/25 Error ellipse: s-maj=8.2km s-min=3.1km az=97.2*
*BJI **03** 22:22:19.9±0.0, 2°.11N×31°.05E, h10^{km}, mb4.9/42, mB5.1/35, Ms5.0/31, Ms7 4.7/32*
*GCMT **03** 22:22:21.5±0.2, 1°.66N±0°.01×30°.61E±0°.01, h23^{km}, MW5.2/110, Moment Tensor Solution. s77,c104; s110,c183; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.24±.18; $M_{\theta\theta}$-0.27±.11; $M_{\phi\phi}$5.51±.13; $M_{r\theta}$-3.96±.20; $M_{\theta\phi}$2.04±.08; $M_{\phi r}$-0.52±.17; Best double couple: $M_0$6.95000×10^{16} NP1:ϕ_s45.00000°, δ60.00000°, λ-58.00000°. NP2:ϕ_s173.00000°, δ43.00000°, λ-133.00000°. Principal axes: T 6.4480, Plg10.0000°, Azm112.0000°; N 1.0050, Plg28.0000°, Azm208.0000°; P -7.4530, Plg60.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 22:22:19.6±0.5**, 1°.52N**±0°.03×**30°.91E**±0°.04**, h17^{km}**±2^{km}**, h17^{km}:pP-P, n980, σ1^{s}.65**/679**, mb5.2**/186**, MS5.0**/455**, 34C-52D, Uganda**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	**Mbarara**	2.11	185	Pn	Pn	22 22 54.7	+0.3
	2μm,0.3s,baz=181,slow=23,SNR=1448						
MBAR				Lg	Lg	22 23 23.2	
	27μm,0.3s,baz=234,slow=22,SNR=13						
MBAR				LR	LR	22 23 53.8	
	comp=Z,43μm,19.5s,baz=2.0,slow=45						
MBAR	**Mbarara**	2.11	185	*e*Pn	Pn	22 22 54.7	+0.3
MBAR				*e*Sn	Sn	22 23 16.4	-3.9
MBAR	**Mbarara**	2.11	185	⇓*e*P	Pn	22 22 55.6	+1.2
MBAR				⇓*e*S	Sb	22 23 23.9	+0.3
I32KE	**NAIROBI INFRAS**	6.52	115	Pn	Pn	22 24 00.0	+5.0
	baz=274,slow=38,SNR=0.5						
I32KE				*i*		23 05 40.0	
	baz=290,slow=312,SNR=0.4						
KMBO	**Kilima Mbogo**	6.86	112	*i* P	Pn	22 24 01.6	+1.8
KMBO	**Kilima Mbogo**	6.86	112	Pn	Pn	22 24 01.2	+1.4
	33nm,0.3s,baz=278,slow=16,SNR=163						
KMBO				Lg	Lg	22 25 53.0	
	93nm,0.3s,baz=216,slow=21,SNR=8.4						
KMBO				LR	LR	22 26 57.9	
	comp=Z,14μm,18.5s,baz=280,slow=40						
KMBO	**Kilima Mbogo**	6.86	112	*e*Pn	Pn	22 24 01.2	+1.4
KMBO				*e*Sn	Sn	22 25 07.0	-11
KMBO	**Kilima Mbogo**	6.86	112	*i* P	Pn	22 24 01.1	+1.4
	SNR=222						
KMBO	**Kilima Mbogo**	6.86	112	*i* P	Pn	22 24 01.6	+1.8
KMBO	**Kilima Mbogo**	6.86	112	*e*P	Pn	22 24 01.2	+1.4
KMBO				*e*S	Sn	22 25 21.5	+3.8
KOND	**Kondoa**	8.03	143	*i* P	Pn	22 24 15.3	-0.5
KOND				*i* S	Sn	22 25 42.6	-3.8
KIBA	**Kibaya**	8.83	140	*i* P	Pn	22 24 25.8	-0.9
KIBA	**Kibaya**	8.83	140	*i* P	Sn	22 25 59.0	-7.0
FURI	**Furi**	10.65	46	*e*Pn	Pn	22 24 55.4	+3.5
FURI	**Furi**	10.65	46	*e*P	Pn	22 24 50.8	-1.1
FURI				*e*S	Sn	22 26 30.7	-20
AAE	**Adis Abeba**	10.81	46	*i* P	Pn	22 24 56.9	+2.9
AAE				*e*S	Sn	22 27 48.6	+54
AAE	**Adis Abeba**	10.81	46	*e*P	Pn	22 24 56.9	+2.9
AAE				*e*S	Sn	22 26 34.6	-20
ANKE	**Ethiopia-Afar**	11.89	47	*e*P	Pn	22 24 48.5	-20
ANKE				*e*S	Sn	22 28 04.5	+43
ANKE	**Ethiopia-Afar**	11.89	47	*e*P	Pn	22 24 48.5	-20
ANKE				*e*S	Sn	22 28 04.5	+43
ANKE	**Ethiopia-Afar**	11.89	47	*i* P	Pn	22 25 11.8	+2.9
ANKE				*e*S	Sn	22 27 39.3	+18
DESE	**Dese**	12.88	42	*e*P	Pn	22 25 24.2	+1.8
DESE				*e*S	Sn	22 28 35.2	+49
HARA	**HARA**	14.52	57	*e*P	P	22 25 52.1	+0.7
HARA				*e*P	Sn	22 27 46.9	-39
HARA	**HARA**	14.52	57	*e*P	P	22 25 52.1	+0.7
HARA				*e*P	Sn	22 27 46.9	-39

ATD	**Arta Tunnel**	**15.47**	**49**	Pn	**Pn**	**22 25 59.3**	**+2.0**
	0.1nm,0.3s,baz=240,slow=5.6,SNR=3.6						
ATD				Lg	Lg	22 30 36.4	
	0.3nm,0.3s,baz=88,slow=11,SNR=7.5						
ATD				LR	LR	22 31 27.2	
	comp=Z,2µm,21.8s,baz=226,slow=35						
ATD	**Arta Tunnel**	**15.47**	**49**	*e*Pn	**Pn**	**22 25 57.6**	**+0.4**
	91nm,1.6s						
ATD				*e*Sn	Sn	22 28 35.8	-13
LSZ	**Lusaka**	**16.90**	**189**	*i* P	**Pn**	**22 26 15.6**	**0.0**
LSZ	**Lusaka**	**16.90**	**189**	Pn	**Pn**	**22 26 14.1**	**-1.6**
	1.5nm,0.3s,baz=15,slow=11,SNR=23						
LSZ				Lg	Lg	22 31 01.4	
	3.8nm,0.3s,baz=263,slow=14,SNR=5.4						
LSZ				LR	LR	22 32 53.3	
	comp=Z,6µm,19.2s,baz=9.5,slow=38						
LSZ	**Lusaka**	**16.90**	**189**	*e*Pn	**Pn**	**22 26 14.0**	**-1.7**
	39nm,0.9s						
LSZ	**Lusaka**	**16.90**	**189**	*i* P	**Pn**	**22 26 15.6**	**0.0**
ITZ	**Itezhi-Tezhi**	**17.82**	**196**	*i* P	**Pn**	**22 26 26.3**	**-0.8**
ITZ				*i*		22 26 27.6	
	baz=288,slow=4.6						
ITZ				*i* S	S	22 30 10.1	+18
ITZ	**Itezhi-Tezhi**	**17.82**	**196**	*i* P	**Pn**	**22 26 25.3**	**-1.8**
ITZ				*i*	**P**	**22 26 27.5**	**-0.3**
	baz=18,slow=8.6						
ITZ				*i* S	S	22 30 05.2	+13
ITZ	**Itezhi-Tezhi**	**17.82**	**196**	*i* P	**P**	**22 26 27.5**	**-0.3**
MONG	**Mongu**	**18.28**	**205**	*i* P	**P**	**22 26 33.2**	**+0.3**
MONG				*i* S	S	22 30 19.8	+18
MONG	**Mongu**	**18.28**	**205**	*i* P	**Pn**	**22 26 31.8**	**-1.0**
MONG				*i*		22 26 32.2	
	baz=86,slow=7.4						
MONG				*i* S	**S**	**22 30 11.0**	**+9.5**
MONG				Lg	Lg	22 31 47.4	
MONG	**Mongu**	**18.28**	**205**	*i*	**P**	**22 26 36.6**	**+3.8**
	baz=71,slow=6.9						
MONG				*i* P	**sP**	**22 26 42.1**	**+2.0**
MONG				*i* S	**Sn**	**22 29 53.4**	**-3.3**
MONG				Lg	Lg	22 31 59.9	
MONG	**Mongu**	**18.28**	**205**	*i* P	**P**	**22 26 38.7**	**+5.9**
DAMY	**Dhamar**	**18.59**	**45**	*e*P	**Pn**	**22 26 36.6**	**-0.1**
	95nm,1.6s						
BLWY	**Bulawayo**	**21.64**	**186**	*i* P	**P**	**22 27 09.6**	**+0.1**
BLWY	**Bulawayo**	**21.64**	**186**	*i* P	**P**	**22 27 09.6**	**+0.1**
MATP	**Matopo**	**21.93**	**186**	*i* P	**P**	**22 27 12.5**	**-0.1**
MATP	**Matopo**	**21.93**	**186**	P	**P**	**22 27 12.1**	**-0.5**
	41nm,0.7s,baz=7.9,slow=11,SNR=111						
MATP				Lg	Lg	22 33 42.1	
	80nm,0.8s,baz=263,slow=23,SNR=6.6						
MATP				LR	LR	22 36 23.2	
	comp=Z,1µm,20.4s,baz=11,slow=38						
MATP	**Matopo**	**21.93**	**186**	*i* P	**P**	**22 27 12.5**	**-0.1**
MSNA	**Messina**	**23.73**	**182**	*i* P	**P**	**22 27 32.0**	**+0.9**
MSNA	**Messina**	**23.73**	**182**	*i* P	**P**	**22 27 32.0**	**+0.9**
TSUM	**Tsumeb**	**24.40**	**212**	*i* P	**P**	**22 27 39.9**	**+2.4**
TSUM	**Tsumeb**	**24.40**	**212**	P	**P**	**22 27 37.5**	**0.0**
	7.5nm,0.9s,baz=16,slow=8.5,SNR=6.8						
TSUM				Lg	Lg	22 34 55.4	
	32nm,1.0s,baz=317,slow=5.5,SNR=3.9						
TSUM				LR	LR	22 37 51.4	
	comp=Z,2µm,19.6s,baz=28,slow=38						
TSUM	**Tsumeb**	**24.40**	**212**	*e*P	**P**	**22 27 38.0**	**+0.5**
	59nm,1.3s						
TSUM				LR	LR		
	comp=Z,4µm,20.0s						
TSUM	**Tsumeb**	**24.40**	**212**	*i* P	**P**	**22 27 39.9**	**+2.4**
MSEY	**Mahe Island**	**25.31**	**104**	*e*P	**P**	**22 27 46.0**	**+0.3**
	comp=Z,91nm,1.0s						
MSEY				LR	LR		
	comp=Z,2µm,20.0s						
MSEY	**Mahe Island**	**25.31**	**104**	*e*P	**P**	**22 27 46.0**	**+0.3**
MSEY				pmax	pmax		
	comp=Z,91nm,1.0s						
MSEY				MLR	MLR		
	comp=Z,2µm,20.0s						
OPO	**Ambohidratompo**	**25.59**	**142**	P	**P**	**22 27 51.9**	**+3.5**
	comp=Z,15nm,0.9s,baz=322,slow=8.8,SNR=17						
OPO				LR	LR	22 37 30.5	
	comp=Z,1µm,20.4s,baz=194,slow=36						
ABPO	**Ambohimpanom**	**25.95**	**143**	*e*P	**P**	**22 27 54.1**	**+2.4**
	comp=Z,28nm,1.0s						
ABPO				LR	LR		
	comp=Z,2µm,19.0s						
ABPO	**Ambohimpanom**	**25.95**	**143**	*i* P	**P**	**22 27 55.4**	**+3.8**
RAYN	**Ar Rayn**	**26.05**	**32**	*e*P	**P**	**22 27 52.4**	**+0.1**
	comp=Z,33nm,1.3s						
RAYN				LR	LR		
	comp=Z,3µm,21.0s						
RAYN	**Ar Rayn**	**26.05**	**32**	*i* P	**P**	**22 27 54.4**	**+2.1**
	SNR=14						
RAYN	**Ar Rayn**	**26.05**	**32**	*e*P	**P**	**22 27 52.4**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,33nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,3µm,21.0s						
LBTB	**Lobatse**	**26.87**	**191**	P	**P**	**22 28 00.5**	**+0.7**
	comp=Z,19nm,1.0s,baz=2.9,slow=11,SNR=14						
LBTB				PP	**PnPn**	**22 28 42.0**	**+0.1**
	comp=Z,9.1nm,0.6s,baz=10,slow=16,SNR=6.0						
LBTB				Lg	Lg	22 36 10.8	
	comp=Z,25nm,0.8s,baz=325,slow=18,SNR=3.8						
LBTB				LR	LR	22 38 52.1	
	comp=Z,5µm,18.0s,baz=14,slow=37						
LBTB	**Lobatse**	**26.87**	**191**	*e*P	**P**	**22 27 59.4**	**-0.4**
	comp=Z,27nm,0.9s						
WIN	**Windhoek**	**27.47**	**209**	*e*P	**P**	**22 28 03.4**	**-1.9**
	comp=Z,15nm,0.9s						
WIN				LR	LR		
	comp=Z,7µm,18.0s						
WIN	**Windhoek**	**27.47**	**209**	*e*P	**P**	**22 28 03.4**	**-1.9**
WIN				pmax	pmax		
	comp=Z,15nm,0.9s						
WIN				MLR	MLR		
	comp=Z,7µm,18.0s						
EIL	**Elat**	**28.26**	**7**	P	**P**	**22 28 12.3**	**+0.2**
	comp=Z,8.0nm,1.1s,baz=186,slow=4.1,SNR=7.1						
EIL				Lg	Lg	22 37 15.9	
	comp=Z,3.6nm,0.9s,baz=277,slow=17,SNR=2.6						
EIL				LR	LR	22 39 16.2	
	comp=Z,2µm,18.6s,baz=185,slow=36						
HRFI	**Mount Harif**	**28.63**	**7**	P	**P**	**22 28 16.6**	**+1.2**
	comp=Z,48nm,1.6s						
AMAZ	**Amatzia**	**30.09**	**7**	P	**P**	**22 28 29.8**	**+1.4**
	comp=Z,105nm,1.6s						
BOSA	**Boshof**	**30.45**	**190**	*i* P	**P**	**22 28 33.6**	**+2.0**
BOSA	**Boshof**	**30.45**	**190**	P	**P**	**22 28 31.4**	**-0.2**
	comp=Z,4.1nm,0.9s,baz=358,slow=8.5,SNR=4.0						
BOSA				Lg	Lg	22 38 03.8	
	comp=Z,14nm,0.8s,baz=270,slow=20,SNR=2.9						
BOSA				LR	LR	22 40 59.9	
	comp=Z,4µm,18.6s,baz=16,slow=37						
BOSA	**Boshof**	**30.45**	**190**	*i* P	**P**	**22 28 33.6**	**+2.0**
ASF	**Jabal al Asfar**	**31.01**	**10**	P	**P**	**22 28 38.5**	**+2.0**
MMLI	**Mount Malkishu**	**31.05**	**7**	P	**P**	**22 28 38.5**	**+1.7**
	comp=Z,23nm,1.5s						
TOC3	**Torodi Ar. Sit**	**31.12**	**293**	PFAKE		22 28 50.0	+12
TOC3				LR	LR		
	comp=Z,500nm,20.0s						
TOC2	**Torodi Ar. Sit**	**31.12**	**293**	PFAKE		22 28 50.0	+12
TOC2				LR	LR		
	comp=Z,2µm,18.0s						
TOC4	**Torodi Ar. Sit**	**31.13**	**293**	PFAKE		22 28 50.0	+12
TOC4				LR	LR		
	comp=Z,700nm,19.0s						
TOB3	**Torodi Ar. Sit**	**31.13**	**293**	PFAKE		22 28 50.0	+12
TOB3				LR	LR		
	comp=Z,700nm,19.0s						
TOB2	**Torodi Ar. Sit**	**31.14**	**293**	PFAKE		22 28 50.0	+12
TOB2				LR	LR		
	comp=Z,2µm,18.0s						
TOA2	**Torodi Ar. Sit**	**31.14**	**293**	PFAKE		22 28 50.0	+12
TOA2				LR	LR		
	comp=Z,2µm,22.0s						
TOA0	**Torodi Ar. Sit**	**31.15**	**293**	*e*P	**P**	**22 28 36.2**	**-1.7**
	comp=Z,20nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.15**	**293**	P	**P**	**22 28 36.1**	**-1.7**
	comp=Z,17nm,0.8s,baz=88,slow=8.1,SNR=76						
TORD				Lg	Lg	22 38 28.8	
	comp=Z,45nm,1.1s,baz=120,slow=28,SNR=4.8						
TORD				LR	LR	22 40 45.4	
	comp=Z,1µm,18.7s,baz=25,slow=36						
TOC1	**Torodi Ar. Sit**	**31.15**	**293**	PFAKE		22 28 50.0	+12
TOC1				LR	LR		
	comp=Z,2µm,21.0s						
TOA1	**Torodi Ar. Sit**	**31.15**	**293**	*e*P	**P**	**22 28 36.1**	**-1.8**
TOA1				LR	LR		
	comp=Z,300nm,19.0s						
TOB5	**Torodi Ar. Sit**	**31.16**	**293**	PFAKE		22 28 50.0	+12
TOB5				LR	LR		
	comp=Z,2µm,18.0s						
TOC7	**Torodi Ar. Sit**	**31.17**	**293**	PFAKE		22 28 50.0	+12
TOC7				LR	LR		
	comp=Z,2µm,18.0s						
SHMJ	**Saham**	**31.38**	**8**	P	**P**	**22 28 43.4**	**+3.7**
BRBR	**Barbar**	**32.08**	**8**	*e*P	**P**	**22 28 47.6**	**+1.6**
TOTH	**TOTAH**	**32.10**	**9**	*e*P	**P**	**22 28 46.2**	**+0.1**
QASN	**Qassioun**	**32.24**	**8**	*e*P	**P**	**22 28 42.7**	**-4.7**
TAM	**Tamanrasset**	**32.48**	**313**	*e*P	**P**	**22 28 49.3**	**-0.4**
	comp=Z,34nm,1.6s						
TAM				LR	LR		
	comp=Z,1µm,19.0s						
TAM	**Tamanrasset**	**32.48**	**313**	*e*P	**P**	**22 28 49.3**	**-0.4**
TAM				pmax	pmax		
	comp=Z,34nm,1.6s						
TAM				MLR	MLR		
	comp=Z,1µm,19.0s						
ALNE	**Al Ain**	**32.87**	**45**	*i* P	**P**	**22 28 55.2**	**+2.3**
	SNR=11						
ASUD	**Al Ashush, Dub**	**32.93**	**44**	P	**P**	**22 28 55.8**	**+2.3**
FAQ	**Al Faqa, Dubai**	**33.19**	**44**	P	**P**	**22 28 57.4**	**+1.7**
CSS	**Mathiatis**	**33.35**	**4**	*e*P	**P**	**22 28 57.6**	**+0.6**
	comp=Z,93nm,1.3s						
CSS				LR	LR		
	comp=Z,800nm,19.0s						
CSS	**Mathiatis**	**33.35**	**4**	P	**P**	**22 28 57.6**	**+0.6**
CSS	**Mathiatis**	**33.35**	**4**	P	**P**	**22 28 58.1**	**+1.1**
	comp=Z,14nm,1.3s						
NAZ	**Nazwa, Dubai**	**33.40**	**44**	P	**P**	**22 28 59.2**	**+1.7**
ASHO	**Ashiyiah**	**33.48**	**44**	*i* P	**P**	**22 29 00.0**	**+1.8**
	SNR=12						
HATD	**Hatta, Dubai**	**33.62**	**44**	*i* P	**P**	**22 29 01.5**	**+2.0**
	SNR=12						
UOSS	**Minazif**	**33.75**	**44**	*e*P	**P**	**22 29 00.2**	**-0.4**
	comp=Z,104nm,1.6s						
UOSS				*e*PP	**PnPn**	**22 30 05.1**	**-7.9**
UOSS				LR	LR		
	comp=Z,4µm,18.0s						
UOSS	**Minazif**	**33.75**	**44**	*i* P	**P**	**22 29 02.2**	**+1.7**
	SNR=6.6						
MRIV	**Mauritius Mete**	**33.90**	**131**	*e*P	**P**	**22 29 01.7**	**-0.3**
	comp=Z,7.1nm,1.0s						
MSFE	**Esma-Masafi**	**33.98**	**44**	P	**P**	**22 29 04.6**	**+2.0**
KARP	**Karpathos**	**34.04**	**355**	*e*P	**P**	**22 29 00.3**	**-2.7**
	comp=Z,100nm,1.1s						
KARP				LR	LR		
	comp=Z,2µm,19.0s						
MDH	**Madha**	**34.04**	**44**	P	**P**	**22 29 05.2**	**+2.1**
IDI	**Anoyia**	**34.06**	**351**	P	**P**	**22 29 04.1**	**+0.9**
	comp=Z,24nm,0.8s,baz=184,slow=14,SNR=12						
SHME	**Shamm**	**34.42**	**43**	*i* P	**P**	**22 29 08.1**	**+1.7**
	SNR=5.3						
WSAR	**Wadi Sarin**	**34.48**	**49**	P	**P**	**22 29 05.3**	**-1.7**
	comp=Z,15nm,1.3s,baz=240,slow=8.3,SNR=4.6						
ARG	**Arkhangelos**	**34.62**	**356**	P	**P**	**22 29 08.7**	**+0.7**
ARG	**Arkhangelos**	**34.62**	**356**	P	**P**	**22 29 10.9**	**+2.9**
ARG				pmax	pmax		
	comp=Z,86nm,1.6s						
SUR	**Sutherland**	**35.04**	**195**	*e*P	**P**	**22 29 11.8**	**0.0**
	comp=Z,101nm,1.7s						
SUR				LR	LR		
	comp=Z,4µm,19.0s						
KTHA	**Kythira Island**	**35.32**	**349**	P	**P**	**22 29 14.1**	**+0.1**
KTHR	**Kythira**	**35.34**	**349**	P	**P**	**22 29 14.4**	**+0.2**
VLI	**Veliai**	**35.80**	**349**	*e*P	**P**	**22 29 17.4**	**-0.7**
VLI	**Veliai**	**35.80**	**349**	P	**P**	**22 29 17.4**	**-0.7**
KIC	**Kosan Boka**	**35.88**	**279**	*e*P	**P**	**22 29 17.1**	**-2.0**
	comp=Z,115nm,1.4s						
SERI	**Serifos**	**35.96**	**351**	P	**P**	**22 29 19.6**	**+0.1**
DBIC	**Dimbokro**	**36.03**	**279**	P	**P**	**22 29 18.9**	**-1.5**
	comp=Z,13nm,0.7s,baz=82,slow=8.2,SNR=25						
DBIC				Lg	Lg	22 40 59.0	
	comp=Z,4.3nm,0.8s,baz=163,slow=19,SNR=4.2						
DBIC				LR	LR	22 44 37.2	
	comp=Z,891nm,18.9s,baz=108,slow=37						
DBIC	**Dimbokro**	**36.03**	**279**	*e*P	**P**	**22 29 18.5**	**-1.9**
	comp=Z,16nm,0.8s						
ISP	**Isparta**	**36.13**	**359**	*e*P	**P**	**22 29 21.7**	**+0.6**
	comp=Z,40nm,0.8s						
ISP				*e*P	**P**	**22 29 22.0**	**+0.9**
ISP				LR	LR		
	comp=Z,800nm,18.0s						
ISP	**Isparta**	**36.13**	**359**	P	**P**	**22 29 22.0**	**+0.9**
ISP	**Isparta**	**36.13**	**359**	*e*P	**P**	**22 29 21.7**	**+0.6**
ISP				pmax	pmax		
	comp=Z,40nm,0.8s						
ISP				MLR	MLR		
	comp=Z,800nm,18.0s						
LIC	**Lamto**	**36.15**	**278**	*e*P	**P**	**22 29 20.1**	**-1.3**
	comp=Z,50nm,0.8s						
TIC	**Toumodi**	**36.19**	**279**	*e*P	**P**	**22 29 20.6**	**-1.2**
ITM	**Ithomi**	**36.44**	**348**	PFAKE		22 29 30.0	+6.4
ITM				LR	LR		
	comp=Z,1µm,19.0s						
ITM	**Ithomi**	**36.44**	**348**	P	**P**	**22 29 23.3**	**-0.3**
DID	**Didima**	**36.51**	**350**	*e*P	**P**	**22 29 23.6**	**-0.6**
DID	**Didima**	**36.51**	**350**	P	**P**	**22 29 23.6**	**-0.6**
VLX	**Vlachokerasia**	**36.53**	**349**	*e*P	**P**	**22 29 25.2**	**+0.7**
VLX	**Vlachokerasia**	**36.53**	**349**	P	**P**	**22 29 25.2**	**+0.7**
TRIP	**Tripoli**	**36.71**	**348**	P	**P**	**22 29 26.9**	**+0.9**
AMT	**Artemida-Makis**	**36.83**	**348**	P	**P**	**22 29 26.8**	**-0.1**
MANT	**Manisa**	**36.86**	**357**	*e*P	**P**	**22 29 29.1**	**+1.7**
	comp=Z,306nm,1.5s						
MANT				LR	LR		
	comp=Z,3µm,19.0s						
KULA	**Kula-Manisa**	**36.88**	**357**	P	**P**	**22 29 28.7**	**+1.3**
LOUT	**Loutraki**	**37.02**	**350**	P	**P**	**22 29 28.1**	**-0.4**
GUR	**Goura**	**37.09**	**349**	*e*P	**P**	**22 29 29.1**	**-0.1**
GUR	**Goura**	**37.09**	**349**	P	**P**	**22 29 29.1**	**-0.1**
THAL	**Thalero**	**37.13**	**349**	P	**P**	**22 29 28.6**	**-0.8**
VILL	**Villia**	**37.13**	**350**	P	**P**	**22 29 29.4**	**-0.1**
KLV	**Kalavryta, Ach**	**37.23**	**349**	P	**P**	**22 29 30.2**	**-0.2**
DRO	**Drossia**	**37.23**	**348**	P	**P**	**22 29 31.1**	**+0.7**
EREA	**Eretria**	**37.28**	**351**	P	**P**	**22 29 31.4**	**+0.6**
WDD	**Wied Dalam**	**37.38**	**338**	*e*P	**P**	**22 29 30.0**	**-1.6**
	comp=Z,46nm,0.9s						
WDD				LR	LR		
	comp=Z,3µm,20.0s						
RLS	**Riolos of Patr**	**37.39**	**348**	P	**P**	**22 29 32.5**	**+0.9**
DSF	**Desfina**	**37.51**	**349**	P	**P**	**22 29 30.9**	**-1.9**
TRIZ	**Trizonia**	**37.56**	**349**	P	**P**	**22 29 32.8**	**-0.2**
KALE	**Kalithea**	**37.57**	**349**	*e*P	**P**	**22 29 33.4**	**+0.1**
KALE	**Kalithea**	**37.57**	**349**	P	**P**	**22 29 33.4**	**+0.1**
KFL	**Anninata**	**37.59**	**347**	P	**P**	**22 29 33.6**	**+0.3**
SERG	**Sergoula**	**37.61**	**349**	P	**P**	**22 29 33.2**	**-0.3**
MRKA	**Markates**	**37.62**	**351**	P	**P**	**22 29 33.8**	**+0.2**
EFP	**Efpalio**	**37.65**	**348**	P	**P**	**22 29 34.6**	**+0.8**
LKR	**Lokris**	**37.66**	**350**	P	**P**	**22 29 33.6**	**-0.3**
ATAL	**Atalanti**	**37.70**	**350**	*e*P	**P**	**22 29 34.1**	**-0.2**
ATAL	**Atalanti**	**37.70**	**350**	P	**P**	**22 29 34.1**	**-0.2**
ANX	**Ano Chora**	**37.81**	**348**	P	**P**	**22 29 35.5**	**+0.2**
SMIA	**Simia**	**37.85**	**350**	P	**P**	**22 29 35.8**	**+0.3**
PVO	**Paravola**	**37.91**	**348**	P	**P**	**22 29 36.8**	**+0.7**
BALB	**Balikesir**	**38.05**	**356**	*e*P	**P**	**22 29 38.3**	**+1.1**
	comp=Z,81nm,1.1s						
BALB				LR	LR		
	comp=Z,2µm,20.0s						
SKIA	**Skiathos**	**38.08**	**351**	P	**P**	**22 29 37.5**	**0.0**
BRTR	**Keskin Array B**	**38.11**	**3**	P	**P**	**22 29 38.9**	**+1.0**
	comp=Z,10nm,0.9s,baz=180,slow=8.4,SNR=49						
BRTR				LR	LR	22 47 29.4	
	comp=Z,296nm,20.1s,baz=175,slow=40						
EVR	**Evrytania**	**38.14**	**348**	P	**P**	**22 29 38.5**	**+0.4**
AGG	**Agios Georgios**	**38.14**	**349**	*e*P	**P**	**22 29 36.5**	**-1.6**
	comp=Z,162nm,1.7s						
AGG				*e*PP	**PP**	**22 30 57.4**	**-8.0**
AGG				LR	LR		
	comp=Z,600nm,19.0s						
AGG	**Agios Georgios**	**38.14**	**349**	P	**P**	**22 29 37.9**	**-0.2**
AGG	**Agios Georgios**	**38.14**	**349**	*e*P	**P**	**22 29 36.5**	**-1.6**
AGG				pmax	pmax		
	comp=Z,162nm,1.7s						
AGG				MLR	MLR		
	comp=Z,600nm,19.0s						
ANTO	**Ankara**	**38.21**	**2**	PFAKE		22 29 50.0	+11
ANTO				LR	LR		
	comp=Z,500nm,21.0s						
NEO	**Neokhori**	**38.26**	**350**	P	**P**	**22 29 38.6**	**-0.4**
LKD2	**Lefkada island**	**38.26**	**347**	P	**P**	**22 29 39.6**	**+0.5**
XOR	**Xorichti**	**38.33**	**350**	P	**P**	**22 29 38.4**	**-1.2**
THL	**Klokotos Trika**	**38.73**	**349**	P	**P**	**22 29 42.9**	**0.0**
MDUB	**Mudurnu**	**38.78**	**0**	PFAKE		22 29 50.0	+6.6
MDUB				LR	LR		
	comp=Z,2µm,20.0s						
YLV	**Yalova**	**38.90**	**358**	⇓*i*P	**P**	**22 29 45.5**	**+1.1**
IGT	**Igoumenitsa**	**39.05**	**347**	P	**P**	**22 29 46.7**	**+1.1**
JAN	**Janina**	**39.05**	**348**	P	**P**	**22 29 46.7**	**+1.0**
CEL	**Celeste**	**39.08**	**341**	*e*P	**P**	**22 29 45.5**	**-0.4**
	comp=Z,37nm,1.0s						
CEL				LR	LR		
	comp=Z,2µm,20.0s						
OUR	**Ouranopolis**	**39.15**	**352**	*e*P	**P**	**22 29 46.7**	**+0.3**
OUR	**Ouranopolis**	**39.15**	**352**	P	**P**	**22 29 46.7**	**+0.3**
OUR	**Ouranopolis**	**39.15**	**352**	*e*P	**P**	**22 29 46.7**	**+0.3**
LIT	**Litokhoron**	**39.16**	**350**	PFAKE		22 30 00.0	+13
LIT				LR	LR		
	comp=Z,600nm,20.0s						
LIT	**Litokhoron**	**39.16**	**350**	P	**P**	**22 29 46.0**	**-0.6**
KPRO	**Kipourio**	**39.23**	**348**	P	**P**	**22 29 47.6**	**+0.4**
PLG	**Polygyros**	**39.27**	**351**	P	**P**	**22 29 46.7**	**-0.8**
THAS	**Thassos island**	**39.31**	**353**	P	**P**	**22 29 47.3**	**-0.5**
KEK	**Kerkira**	**39.34**	**346**	*e*P	**P**	**22 29 47.5**	**-0.6**
KEK	**Kerkira**	**39.34**	**346**	P	**P**	**22 29 47.5**	**-0.6**
CLTB	**Caltabellotta**	**39.41**	**338**	*e*P	**P**	**22 29 48.5**	**-0.3**
	comp=Z,57nm,1.5s						
CLTB				LR	LR		
	comp=Z,3µm,20.0s						
ALN	**Alexandroupoli**	**39.45**	**354**	PFAKE		22 30 00.0	+11
ALN				LR	LR		
	comp=Z,500nm,21.0s						
ALN	**Alexandroupoli**	**39.45**	**354**	P	**P**	**22 29 48.0**	**-0.9**
SRN	**Sarande**	**39.45**	**347**	P	**P**	**22 29 48.3**	**-0.7**
KZN	**Kozani**	**39.49**	**349**	P	**P**	**22 29 49.2**	**-0.2**
KEST	**Kesra**	**39.49**	**332**	P	**P**	**22 29 49.3**	**-0.2**
	comp=Z,3.6nm,0.8s,baz=96,slow=6.4,SNR=6.8						
KEST				LR	LR	22 45 57.7	
	comp=Z,1µm,18.2s,baz=106,slow=36						
KEST	**Kesra**	**39.49**	**332**	PFAKE		22 30 00.0	+10
KEST				LR	LR		
	comp=Z,2µm,20.0s						
TIP	**Timpagrande**	**39.65**	**343**	PFAKE		22 30 00.0	+9.3
TIP				LR	LR		
	comp=Z,700nm,18.0s						
TIP	**Timpagrande**	**39.65**	**343**	P	**P**	**22 29 50.8**	**+0.1**
TIP	**Timpagrande**	**39.65**	**343**	⇑*i*P	**P**	**22 29 50.9**	**+0.2**
SOH	**Sokhos**	**39.72**	**351**	P	**P**	**22 29 51.3**	**0.0**
RDO	**Rodhopi**	**39.75**	**354**	*e*P	**P**	**22 29 51.6**	**+0.2**
RDO	**Rodhopi**	**39.75**	**354**	P	**P**	**22 29 51.6**	**+0.2**
TPE	**Tepelena**	**39.85**	**347**	P	**P**	**22 29 52.8**	**+0.5**
SRS	**Serrai**	**39.97**	**351**	P	**P**	**22 29 52.8**	**-0.6**
SRS	**Serrai**	**39.97**	**351**	P	**P**	**22 29 52.7**	**-0.6**
GRG	**Griva**	**40.01**	**350**	P	**P**	**22 29 53.2**	**-0.4**
KNT	**Kendrikon**	**40.12**	**351**	P	**P**	**22 29 54.8**	**+0.2**
NVR	**Nevrokopi**	**40.16**	**352**	P	**P**	**22 29 54.5**	**-0.4**
EDRB	**Edirne**	**40.33**	**355**	P	**P**	**22 29 56.6**	**+0.4**
VAY	**Valandovo**	**40.33**	**350**	*i* P	**P**	**22 29 57.0**	**+0.7**
RZN	**Rozhen**	**40.38**	**353**	P	**P**	**22 29 56.4**	**-0.5**
MMB	**Musomiste**	**40.41**	**352**	P	**P**	**22 29 55.5**	**-1.5**
GNI	**Garni**	**40.46**	**16**	*e*P	**P**	**22 29 57.4**	**-0.1**
	comp=Z,30nm,1.1s						
GNI				LR	LR		
	comp=Z,1µm,20.0s						
GNI	**Garni**	**40.46**	**16**	*i* P	**P**	**22 29 57.6**	**+0.1**
GNI				pmax	pmax		
	comp=Z,36nm,1.1s						
OHR	**Ohrid**	**40.46**	**348**	*i* P	**P**	**22 29 57.7**	**+0.3**
STIP	**Stip**	**40.76**	**350**	*i* P	**P**	**22 30 00.6**	**+0.8**
KKB	**Krupnik**	**40.78**	**351**	P	**P**	**22 29 59.0**	**-1.0**
PLD	**Plovdiv**	**40.79**	**353**	P	**P**	**22 30 01.3**	**+1.2**
PLD	**Plovdiv**	**40.79**	**353**	P	**P**	**22 30 00.0**	**-0.1**
TIR	**Tirane**	**40.89**	**347**	*e*P	**P**	**22 30 01.4**	**+0.5**
	comp=Z,191nm,1.5s						
TIR				*e*PP	**PP**	**22 31 34.6**	**-0.7**
TIR				LR	LR		
	comp=Z,800nm,18.0s						
TIR	**Tirane**	**40.89**	**347**	⇑*i*P	**P**	**22 30 01.5**	**+0.6**
TIR	**Tirane**	**40.89**	**347**	*e*P	**P**	**22 30 01.4**	**+0.5**
TIR				*e*		22 31 34.6	
TIR				pmax	pmax		
	comp=Z,191nm,1.5s						
TIR				MLR	MLR		
	comp=Z,800nm,18.0s						
MATE	**Matera**	**41.03**	**343**	⇑*i*P	**P**	**22 30 01.8**	**-0.2**
PHP	**Peshkopia**	**41.09**	**348**	P	**P**	**22 30 02.9**	**+0.3**
SKO	**Skopje**	**41.17**	**349**	*e*P	**P**	**22 30 03.5**	**+0.3**
SKO	**Skopje**	**41.17**	**349**	P	**P**	**22 30 03.5**	**+0.3**
SKO	**Skopje**	**41.17**	**349**	*i* P	**P**	**22 30 03.8**	**+0.6**
SKO	**Skopje**	**41.17**	**349**	*e*P	**P**	**22 30 03.5**	**+0.3**
PGB	**Panagyurishte**	**41.30**	**352**	P	**P**	**22 30 04.0**	**-0.3**
AKH	**Akhalkalaki**	**41.31**	**14**	PFAKE		22 30 20.0	+15
AKH				LR	LR		
	comp=Z,1µm,18.0s						
AKH	**Akhalkalaki**	**41.31**	**14**	⇓*i*P	**P**	**22 30 05.7**	**+1.2**
AKH	**Akhalkalaki**	**41.31**	**14**	P	**P**	**22 30 05.7**	**+1.2**
VTS	**Vitosha**	**41.49**	**351**	*e*P	**P**	**22 30 05.8**	**-0.2**
VTS				LR	LR		
	comp=Z,500nm,18.0s						
VTS	**Vitosha**	**41.49**	**351**	P	**P**	**22 30 05.8**	**-0.2**
VTS	**Vitosha**	**41.49**	**351**	⇓*i*P	**P**	**22 30 05.9**	**-0.1**
VTS	**Vitosha**	**41.49**	**351**	*e*P	**P**	**22 30 05.8**	**-0.2**
VTS				MLR	MLR		
	comp=Z,500nm,18.0s						
VTS	**Vitosha**	**41.49**	**351**	P	**P**	**22 30 04.7**	**-1.3**
PRD	**Provadia**	**41.62**	**356**	P	**P**	**22 30 06.0**	**-0.8**
DRME	**Dracevica, Mon**	**41.84**	**347**	*e*P	**P**	**22 30 09.2**	**+0.5**
PSN	**Preselentsi**	**42.05**	**357**	P	**P**	**22 30 06.5**	**-3.9**
PDG	**Podgorica**	**42.05**	**347**	⇓*i*P	**P**	**22 30 11.0**	**+0.6**
PDG	**Podgorica**	**42.05**	**347**	*e*P	**P**	**22 30 10.8**	**+0.4**
TTG	**Podgorica**	**42.05**	**347**	PFAKE		22 30 20.0	+10
TTG				LR	LR		
	comp=Z,1µm,19.0s						
MPEP	**Malo Peshtene**	**42.15**	**352**	P	**P**	**22 30 11.2**	**0.0**
HCY	**Herceg Novi**	**42.25**	**346**	*e*P	**P**	**22 30 13.1**	**+1.1**
ICOR	**Ion Corvin**	**42.51**	**357**	⇓*i*P	**P**	**22 30 14.3**	**+0.2**
TREB	**Trebinje**	**42.53**	**346**	*e*P	**P**	**22 30 14.4**	**0.0**
SOC	**Sochi**	**42.62**	**9**	*e*P	**P**	**22 30 12.9**	**-2.1**
SOC				*e*		22 31 55.4	
SOC				*e*S	**S**	**22 36 37.2**	**0.0**
SOC				*e*SSS	SSS	22 40 16.9	
SOC				MLR	MLR		
	comp=Z,472nm,12.0s						
BRY	**Bratogost**	**42.67**	**347**	*e*P	**P**	**22 30 16.0**	**+0.4**
VLAD	**Vladila**	**42.69**	**353**	⇓*i*P	**P**	**22 30 15.7**	**+0.1**
ZEI	**Tsey**	**42.71**	**14**	*e*P	**P**	**22 30 16.3**	**+0.3**
ZEI				pmax	pmax		
	comp=Z,54nm,1.6s						
TIRR	**Tirgusor**	**42.82**	**357**	PFAKE		22 30 30.0	+13
TIRR				LR	LR		
	comp=Z,1µm,21.0s						
TIRR	**Tirgusor**	**42.82**	**357**	P	**P**	**22 30 17.7**	**+1.1**
STON	**Ston**	**42.84**	**346**	*e*P	**P**	**22 30 17.0**	**+0.2**
UPM	**Unac-Piva**	**42.87**	**347**	*e*P	**P**	**22 30 18.3**	**+1.0**
NEY	**Neytrino**	**42.87**	**13**	*i* P	**P**	**22 30 17.9**	**+0.6**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
FIGM	**Figuig**	**42.96**	**318**	P	**P**	**22 30 19.0**	**+0.8**
TLB	**Topalu**	**42.96**	**357**	⇓*i*P	**P**	**22 30 17.7**	**0.0**
TLB	**Topalu**	**42.96**	**357**	P	**P**	**22 30 17.7**	**0.0**
HARR	**Harsova**	**43.07**	**357**	⇓*i*P	**P**	**22 30 18.3**	**-0.4**
HARR	**Harsova**	**43.07**	**357**	P	**P**	**22 30 18.2**	**-0.4**
HUMR	**Humele**	**43.15**	**354**	⇓*i*P	**P**	**22 30 19.4**	**+0.1**
SULR		**43.18**	**355**	⇑*i*P	**P**	**22 30 20.5**	**+1.0**
NCK	**Nalchik**	**43.30**	**13**	*i* P	**P**	**22 30 20.7**	**+0.1**
NCK				pmax	pmax		
	comp=Z,13nm,1.0s						
SIM	**Simferopol'**	**43.34**	**3**	*c* *i*P	**P**	**22 30 22.1**	**+1.2**
SIM				*e*S	**S**	**22 36 45.6**	**-2.3**
SIM				*e*SS	**SS**	**22 39 52.0**	**-10**
SIM				pmax	pmax		
	comp=Z,32nm,0.9s						
KBZ	**Khabaz**	**43.37**	**13**	P	**P**	**22 30 22.0**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=206,slow=10,SNR=3.5						
KBZ				LR	LR	22 49 19.4	
	comp=Z,840nm,18.0s,baz=200,slow=37						
BBLS	**Lazići**	**43.39**	**348**	*e*P	**P**	**22 30 21.5**	**+0.1**
DIVS	**Divibare**	**43.50**	**349**	*e*P	**P**	**22 30 22.8**	**+0.6**
SRE	**Strehaia**	**43.50**	**352**	⇑*i*P	**P**	**22 30 22.6**	**+0.4**
SRE	**Strehaia**	**43.50**	**352**	P	**P**	**22 30 22.5**	**+0.4**
TLCR		**43.53**	**358**	⇑*i*P	**P**	**22 30 22.9**	**+0.6**
TLCR		**43.53**	**358**	P	**P**	**22 30 22.8**	**+0.5**
KIV	**Kislovodsk**	**43.54**	**12**	*e*P	**P**	**22 30 22.8**	**+0.2**
	comp=Z,46nm,1.6s						
KIV				LR	LR		
	comp=Z,800nm,18.0s						

KIV	**Kislovodsk**	**43.54**	**12**	⇑*i*P	**P**	**22 30 23.3**	**+0.7**
KIV	**Kislovodsk**	**43.54**	**12**	*e*P	**P**	**22 30 23.6**	**+1.0**
KIV				pmax	pmax		
	comp=Z,46nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,16.0s						
KVAR	**Kislovodsk Arr**	**43.54**	**12**	P	**P**	**22 30 23.7**	**+1.1**
	comp=Z,2.9nm,0.7s,baz=282,slow=19,SNR=3.6						
CFR	**Carcaliu**	**43.55**	**357**	⇑*i*P	**P**	**22 30 22.6**	**+0.1**
CFR	**Carcaliu**	**43.55**	**357**	P	**P**	**22 30 22.6**	**+0.1**
GROC	**Groznyy**	**43.58**	**16**	*e*P	**P**	**22 30 21.0**	**-1.8**
GROC				*e*		22 32 08.1	
GROC				*e*S	**S**	**22 36 49.7**	**-1.7**
GROC				pmax	pmax		
	comp=Z,64nm,1.5s						
AQU	**L'Aquila**	**43.59**	**341**	PFAKE		22 30 30.0	+7.0
AQU				LR	LR		
	comp=Z,1µm,21.0s						
AQU	**L'Aquila**	**43.59**	**341**	P	**P**	**22 30 22.5**	**-0.5**
HAPS	**Han Pijesak,BI**	**43.70**	**348**	*e*P	**P**	**22 30 24.0**	**+0.1**
MDVR	**Moldovita**	**43.84**	**351**	⇑*i*P	**P**	**22 30 24.7**	**-0.3**
MLR	**Muntele Rosu**	**44.01**	**355**	PFAKE		22 30 40.0	+14
MLR				LR	LR		
	comp=Z,600nm,18.0s						
MLR	**Muntele Rosu**	**44.01**	**355**	⇑*i*P	**P**	**22 30 27.1**	**+0.7**
MLR	**Muntele Rosu**	**44.01**	**355**	P	**P**	**22 30 27.0**	**+0.7**
ARR	**Arges**	**44.02**	**354**	⇑*i*P	**P**	**22 30 26.5**	**+0.1**
GEYT	**Alibeck**	**44.02**	**31**	P	**P**	**22 30 26.8**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=218,slow=9.4,SNR=11						
GEYT				LR	LR	22 50 01.3	
	comp=Z,2µm,18.6s,baz=225,slow=38						
GYA0B	**ALIBECK ARRAY**	**44.02**	**31**	*e*P	**P**	**22 30 26.3**	**-0.2**
	comp=Z,24nm,1.4s						
GYA0B				LR	LR		
	comp=Z,2µm,18.0s						
VOIR		**44.04**	**354**	⇓*i*P	**P**	**22 30 26.5**	**-0.1**
VOIR		**44.04**	**354**	P	**P**	**22 30 26.4**	**-0.1**
ODBI	**Odobesti**	**44.20**	**356**	⇓*i*P	**P**	**22 30 29.1**	**+1.4**
LOT	**Lotru**	**44.20**	**353**	⇑*i*P	**P**	**22 30 28.1**	**+0.2**
GZR	**Gura Zlata**	**44.28**	**352**	⇓*i*P	**P**	**22 30 28.6**	**+0.1**
GZR	**Gura Zlata**	**44.28**	**352**	P	**P**	**22 30 28.5**	**+0.1**
PLOR	**Plostina**	**44.31**	**356**	⇓*i*P	**P**	**22 30 29.1**	**+0.4**
PLOR	**Plostina**	**44.31**	**356**	P	**P**	**22 30 29.0**	**+0.4**
VRI	**Vrincioaia**	**44.32**	**356**	⇑*i*P	**P**	**22 30 29.0**	**+0.3**
VRI	**Vrincioaia**	**44.32**	**356**	P	**P**	**22 30 29.0**	**+0.3**
MGRS	**Mrkonjic Grad**	**44.44**	**346**	*e*P	**P**	**22 30 30.7**	**+0.9**
DOPR	**Dopca**	**44.53**	**355**	⇓*i*P	**P**	**22 30 29.9**	**-0.5**
FRGS	**Fruska Gora**	**44.55**	**349**	*e*P	**P**	**22 30 31.2**	**+0.6**
OZUR		**44.62**	**355**	⇑*i*P	**P**	**22 30 30.8**	**-0.4**
GOF	**Gofitskoye**	**44.66**	**12**	⇑*e*P	**P**	**22 30 31.8**	**+0.3**
GOF				pmax	pmax		
	comp=Z,119nm,1.6s						
BZS	**Buzias**	**44.67**	**351**	⇓*i*P	**P**	**22 30 31.4**	**-0.1**
BZS	**Buzias**	**44.67**	**351**	P	**P**	**22 30 31.3**	**-0.2**
BLY	**Banja Luka**	**44.73**	**346**	PFAKE		22 30 40.0	+8.0
BLY				LR	LR		
	comp=Z,1µm,21.0s						
BLY	**Banja Luka**	**44.73**	**346**	⇓*i*P	**P**	**22 30 31.9**	**-0.1**
TESR	**Tescani**	**44.97**	**356**	⇓*i*P	**P**	**22 30 33.1**	**-0.8**
JBK	**JBK**	**45.19**	**320**	P	**P**	**22 30 36.5**	**+0.4**
GOLM	**Goulmima**	**45.23**	**315**	P	**P**	**22 30 38.0**	**+1.6**
MILM	**Milestii Mici**	**45.26**	**358**	⇓*i*P	**P**	**22 30 35.5**	**-0.6**
SIRR	**Siria**	**45.30**	**351**	⇑*i*P	**P**	**22 30 37.0**	**+0.5**
PGF	**Pioggiola**	**45.33**	**337**	*e*P	**P**	**22 30 38.8**	**+1.9**
PGF				pmax	pmax		
	comp=Z,40nm,1.3s						
KIS	**Kishinev**	**45.34**	**358**	*e*P	**P**	**22 30 36.0**	**-0.8**
	comp=Z,100nm,2.0s						
KIS	**Kishinev**	**45.34**	**358**	*e*PcP	**PcP**	**22 32 15.0**	**-1.2**
KIS	**Kishinev**	**45.34**	**358**	*e*PP	PP	22 32 24.0	+1.0
KIS				LRM	MLR	22 54 00.0	
	comp=Z,500nm,17.0s						
KIS	**Kishinev**	**45.34**	**358**	*e*P	**P**	**22 30 36.0**	**-0.8**
KIS				*e*		22 30 40.0	
KIS				*e*		22 32 15.0	
KIS				*e*		22 32 24.0	
KIS				pmax	pmax		
	comp=Z,100nm,2.0s						
KIS				MLR	MLR		
	comp=Z,500nm,17.0s						
POO	**Poona**	**45.36**	**65**	*e*P	**P**	**22 30 36.8**	**-0.7**
TAF	**Taforalt**	**45.40**	**321**	P	**P**	**22 30 38.1**	**+0.5**
BIZ	**Bicaz**	**45.44**	**355**	⇑*i*P	**P**	**22 30 38.0**	**+0.4**
CJR	**Cluj-Napoca**	**45.47**	**353**	⇓*i*P	**P**	**22 30 38.5**	**+0.6**
CJR	**Cluj-Napoca**	**45.47**	**353**	P	**P**	**22 30 38.4**	**+0.6**
AMBH	**Ambrzfalva**	**45.53**	**350**	⇓*e*P	**P**	**22 30 40.0**	**+1.7**
MDT	**Midelt**	**45.62**	**317**	P	**P**	**22 30 39.5**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=133,slow=12,SNR=9.7						
MDT	**Midelt**	**45.62**	**317**	P	**P**	**22 30 40.2**	**+0.7**
DRGR		**45.66**	**352**	⇓*i*P	**P**	**22 30 39.9**	**+0.5**
DRGR		**45.66**	**352**	P	**P**	**22 30 39.8**	**+0.4**
ARCR	**ARCALIA**	**45.75**	**354**	⇓*i*P	**P**	**22 30 40.3**	**+0.3**
MORH	**Mrgy, Hungar**	**45.80**	**348**	⇓*e*P	**P**	**22 30 40.0**	**-0.4**
MORH				*e*S	**S**	**22 37 22.1**	**-1.4**
PRAR	**RASCA**	**45.84**	**356**	⇑*i*P	**P**	**22 30 40.6**	**-0.2**
RIY	**Rijeka**	**45.97**	**344**	*e*P	**P**	**22 30 41.7**	**-0.1**
ASCN	**Ascension**	**46.11**	**258**	PFAKE		22 30 50.0	+6.5
ASCN				LR	LR		
	comp=Z,63µm,20.0s						
AKLM	**AKL**	**46.14**	**319**	P	**P**	**22 30 44.1**	**+0.6**
CRES	**Cresnjev**	**46.17**	**345**	*e*P	**P**	**22 30 43.2**	**-0.2**
BURAR	**Bucovina Array**	**46.18**	**355**	⇓*i*P	**P**	**22 30 44.8**	**+1.2**
BURAR	**Bucovina Array**	**46.18**	**355**	P	**P**	**22 30 44.7**	**+1.2**
VLC	**Villacollemand**	**46.21**	**340**	PFAKE		22 30 50.0	+6.2
VLC				LR	LR		
	comp=Z,600nm,18.0s						
CEY	**Cerknica**	**46.36**	**344**	*e*P	**P**	**22 30 44.8**	**-0.2**
BMR	**Baia Mare**	**46.42**	**353**	⇓*i*P	**P**	**22 30 46.3**	**+0.9**
BMR	**Baia Mare**	**46.42**	**353**	P	**P**	**22 30 46.3**	**+0.9**
BEHE	**Becsehely**	**46.45**	**347**	⇓*e*P	**P**	**22 30 46.0**	**+0.4**
TRI	**Trieste**	**46.52**	**343**	PFAKE		22 31 00.0	+14
TRI				LR	LR		
	comp=Z,500nm,20.0s						
TRI	**Trieste**	**46.52**	**343**	P	**P**	**22 30 46.3**	**+0.2**
TIH	**Tihany**	**46.61**	**348**	*e*P	**P**	**22 30 47.1**	**+0.3**
TIH				*e*S	**S**	**22 37 34.0**	**-1.0**
LJU	**Ljubljana**	**46.62**	**344**	*i* P	**P**	**22 30 46.9**	**0.0**
LJU				*i* PP	**PP**	**22 32 38.1**	**+1.4**
GROS	**Grobnik**	**46.75**	**345**	*i* P	**P**	**22 30 48.4**	**+0.4**
GROS				*i* PP	**PP**	**22 32 41.2**	**+3.0**
KSV	**Kosov**	**46.89**	**355**	P	**P**	**22 30 49.0**	**0.0**
BUD	**Budapest**	**46.94**	**349**	P	**P**	**22 30 50.6**	**+1.2**
BUD	**Budapest**	**46.94**	**349**	⇓*e*P	**P**	**22 30 50.0**	**+0.7**
CSKK	**Cskako**	**46.97**	**348**	*e*P	**P**	**22 30 49.1**	**-0.6**
LMR	**La Mourre**	**46.98**	**336**	P	**P**	**22 30 49.1**	**-0.7**
LMR				pmax	pmax		
	comp=Z,34nm,1.4s						
TRPA	**Tarpa**	**46.99**	**352**	⇓*i*P	**P**	**22 30 50.5**	**+0.7**
TRPA	**Tarpa**	**46.99**	**352**	⇓*e*P	**P**	**22 30 49.1**	**-0.7**
TRPA				*e*S	**S**	**22 37 42.1**	**+1.5**
OBKA	**Obir**	**47.04**	**345**	*i* P	**P**	**22 30 50.4**	**+0.1**
	comp=Z,46nm,1.7s,SNR=28						
SBF	**Sospel**	**47.05**	**337**	*e*P	**P**	**22 30 49.4**	**-1.0**
SBF				pmax	pmax		
	comp=Z,30nm,1.0s						
SOKA	**Soboth**	**47.07**	**345**	*i* P	**P**	**22 30 50.9**	**+0.4**
	comp=Z,25nm,1.3s,SNR=23						
PSZ	**Piszkesteto**	**47.20**	**350**	PFAKE		22 31 00.0	+8.5
PSZ				LR	LR		
	comp=Z,400nm,21.0s						
PSZ	**Piszkesteto**	**47.20**	**350**	⇑*i*P	**P**	**22 30 51.5**	**0.0**
PSZ	**Piszkesteto**	**47.20**	**350**	P	**P**	**22 30 51.4**	**0.0**
PSZ	**Piszkesteto**	**47.20**	**350**	*e*P	**P**	**22 30 51.0**	**-0.5**
PSZ				*e*S	**S**	**22 37 47.1**	**+3.4**
SRO2	**Moca**	**47.33**	**349**	*e*P	**P**	**22 30 52.1**	**-0.3**
SRO2	**Moca**	**47.33**	**349**	*e*P	**P**	**22 30 52.1**	**-0.3**
ZHG	**ZHG**	**47.39**	**316**	P	**P**	**22 30 54.0**	**+0.8**
MYKA	**Terra Mystica**	**47.40**	**344**	*i* P	**P**	**22 30 52.7**	**-0.4**
	comp=Z,11nm,1.2s,SNR=5.3						
ARSA	**Arzberg**	**47.48**	**346**	*i* P	**P**	**22 30 54.4**	**+0.8**
	comp=Z,44nm,1.3s,SNR=22						
UZH	**Uzhgorod**	**47.52**	**352**	*d i*P	**P**	**22 30 54.1**	**+0.2**
UZH				*e*		22 30 59.6	
UZH				*i* S	**S**	**22 37 46.0**	**-2.0**
UZH				*e*PS		22 38 02.8	
UZH				*e*SS	SS	22 41 05.3	-11
SESP	**Santiago Espad**	**47.62**	**324**	P	**P**	**22 30 55.0**	**-0.1**
SOP	**Sopron**	**47.64**	**347**	P	**P**	**22 30 55.9**	**+1.0**
SOP	**Sopron**	**47.64**	**347**	⇑*e*P	**P**	**22 30 50.1**	**-4.8**
SOP				*e*S	**S**	**22 37 51.0**	**+1.2**
KECS	**Kecovo**	**47.64**	**351**	*e*P	**P**	**22 30 55.9**	**+1.0**
KECS				pmax	pmax		
	comp=Z,406nm,1.4s						
KECS	**Kecovo**	**47.64**	**351**	*e*P	**P**	**22 30 55.9**	**+1.0**
HORU	**Horodok**	**47.67**	**356**	P	**P**	**22 30 52.9**	**-2.2**
KOLS	**Kolonicke sedl**	**47.82**	**352**	*e*P	**P**	**22 30 57.2**	**+1.0**
KOLS				pmax	pmax		
	comp=Z,66nm,1.5s						
KOLS	**Kolonicke sedl**	**47.82**	**352**	*e*P	**P**	**22 30 57.2**	**+1.0**
ABTA	**Abfaltersbach**	**47.83**	**343**	*i* P	**P**	**22 30 56.5**	**+0.1**
	comp=Z,40nm,2.0s,SNR=19						
RTC	**Rabat Centre**	**47.84**	**317**	PFAKE		22 31 10.0	+13
RTC				LR	LR		
	comp=Z,10µm,18.0s						
KBA	**Koelnbreinsper**	**47.89**	**344**	*i* P	**P**	**22 30 57.2**	**+0.2**
	comp=Z,47nm,1.4s,SNR=28						
KBA	**Koelnbreinsper**	**47.89**	**344**	P	**P**	**22 30 57.2**	**+0.2**
VYHS	**Vyhne**	**47.94**	**349**	*e*P	**P**	**22 30 57.1**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,62nm,1.5s						
VYHS	**Vyhne**	**47.94**	**349**	*e*P	**P**	**22 30 57.1**	**-0.1**
VYHS				*e*PP	**PP**	**22 32 49.6**	**+0.2**
ZST	**Bratislava**	**48.01**	**348**	*e*P	**P**	**22 30 56.6**	**-1.1**
ZST				*e*		22 32 50.4	
ZST	**Bratislava**	**48.01**	**348**	*e*P	**P**	**22 30 56.6**	**-1.1**
ZST				*e*PP	**PP**	**22 32 50.4**	**+0.5**
CONA	**Conrad Observa**	**48.03**	**346**	*i* P	**P**	**22 30 58.3**	**+0.3**
	comp=Z,33nm,1.3s,SNR=23						
MBDF	**Montbardon**	**48.03**	**337**	*e*P	**P**	**22 30 57.3**	**-0.9**
MBDF				pmax	pmax		
	comp=Z,48nm,1.2s						
MODS	**Modra-Piesok**	**48.14**	**348**	*e*P	**P**	**22 30 57.8**	**-0.9**
MODS				pmax	pmax		
	comp=Z,122nm,1.6s						
MODS	**Modra-Piesok**	**48.14**	**348**	*e*P	**P**	**22 30 57.8**	**-0.9**
MODS				*e*PP	**PP**	**22 32 50.5**	**-0.6**
BNI	**Bardonecchia**	**48.34**	**337**	*e*P	**P**	**22 31 00.1**	**-0.3**
	comp=Z,123nm,1.8s						
BNI				*e*PcP	**PcP**	**22 32 25.5**	**-1.6**
BNI				LR	LR		
	comp=Z,600nm,18.0s						
BNI	**Bardonecchia**	**48.34**	**337**	*e*P	**P**	**22 31 00.2**	**-0.3**
BNI				*e*		22 32 25.5	
BNI				pmax	pmax		
	comp=Z,123nm,1.8s						
BNI				MLR	MLR		
	comp=Z,600nm,18.0s						
MOA	**Molln**	**48.35**	**345**	*i* P	**P**	**22 31 00.3**	**-0.1**
	comp=Z,41nm,1.0s,SNR=28						
KBL	**Kabul**	**48.40**	**43**	*e*P	**P**	**22 31 01.6**	**+0.3**
	comp=Z,5.3nm,0.8s						
KBL				LR	LR		
	comp=Z,500nm,19.0s						
KBL	**Kabul**	**48.40**	**43**	*e*P	**P**	**22 31 01.6**	**+0.3**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBL				MLR	MLR		
	comp=Z,500nm,19.0s						
FUORN	**Ofenpass-Fuorn**	**48.41**	**341**	PFAKE		22 31 10.0	+8.8
FUORN				LR	LR		
	comp=Z,500nm,22.0s						
KWP	**Kalwaria Pacla**	**48.45**	**353**	*e*P	**P**	**22 31 01.7**	**+0.6**
KWP				LMZ	LR	22 52 01.7	
	comp=Z,600nm,23.6s						
KWP	**Kalwaria Pacla**	**48.45**	**353**	PFAKE		22 31 10.0	+8.9
KWP				LR	LR		
	comp=Z,5µm,22.0s						
LANS	**Liptovska Anna**	**48.46**	**350**	*e*P	**P**	**22 31 02.2**	**+1.0**
LANS	**Liptovska Anna**	**48.46**	**350**	*e*P	**P**	**22 31 02.2**	**+1.0**
LVV	**L'vov**	**48.48**	**354**	*e*P	**P**	**22 31 00.3**	**-1.0**
LVV				*e*		22 32 55.1	
LVV				*e*S	**S**	**22 37 56.3**	**-5.4**
LVV				MLR	MLR		
	comp=N,100nm,18.0s						
LVV				MLR	MLR		
	comp=E,200nm,18.0s						
LVV				MLR	MLR		
	comp=Z,300nm,18.0s						
JAVC	**Velka Javorina**	**48.52**	**348**	⇓*i*P	**P**	**22 31 02.2**	**+0.5**
JAVC				*e*PP	**PP**	**22 33 00.2**	**+5.5**
ORIF	**Oris-en-Rattie**	**48.55**	**336**	*e*P	**P**	**22 31 00.5**	**-1.5**
ORIF				pmax	pmax		
	comp=Z,27nm,1.3s						
WTTA	**Wattenberg**	**48.55**	**343**	*i* P	**P**	**22 31 02.0**	**-0.1**
	comp=Z,36nm,1.4s,SNR=15						
NIE	**Niedzica**	**48.58**	**351**	*i* P	**P**	**22 31 02.8**	**+0.6**
NIE				LMZ	LR	22 53 56.1	
	comp=Z,200nm,21.0s						
TUE	**Stuetta**	**48.58**	**340**	PFAKE		22 31 10.0	+7.6
TUE				LR	LR		
	comp=Z,700nm,19.0s						
FETA	**Feichten**	**48.61**	**342**	*i* P	**P**	**22 31 02.3**	**-0.3**
	comp=Z,37nm,1.7s,SNR=11						
WATA	**Walderalm**	**48.63**	**343**	*i* P	**P**	**22 31 02.3**	**-0.5**
	comp=Z,19nm,1.1s						
SQTA	**Sankt Quirin**	**48.64**	**342**	*i* P	**P**	**22 31 02.5**	**-0.3**
	comp=Z,28nm,1.1s,SNR=21						
LPG	**La Plagne**	**48.69**	**337**	*e*P	**P**	**22 31 01.4**	**-1.9**
LPG				pmax	pmax		
	comp=Z,33nm,1.1s						
LPL	**La Plagne**	**48.71**	**337**	*e*P	**P**	**22 31 01.5**	**-1.9**
LPL				pmax	pmax		
	comp=Z,80nm,1.6s						
MOTA	**Moosalm**	**48.79**	**342**	*i* P	**P**	**22 31 03.1**	**-0.9**
	comp=Z,8.4nm,0.7s,SNR=11						
SFS	**San Fernando**	**48.84**	**320**	PFAKE		22 31 20.0	+16
SFS				LR	LR		
	comp=Z,1µm,19.0s						
KRUC	**Moravsky**	**48.98**	**347**	⇓*i*P	**P**	**22 31 04.5**	**-0.7**
KRUC				*e*PP	**PP**	**22 33 01.7**	**+2.9**
VIVF	**Saint-Julien-l**	**48.99**	**335**	*e*P	**P**	**22 31 04.2**	**-1.2**
VIVF				pmax	pmax		
	comp=Z,27nm,1.7s						
RETA	**Reutte**	**49.02**	**342**	*i* P	**P**	**22 31 04.6**	**-1.0**
	comp=Z,46nm,1.5s,SNR=16						
AKASG	**Malin Array Be**	**49.03**	**359**	P	**P**	**22 31 04.9**	**-0.6**
	comp=Z,7.6nm,0.7s,baz=182,slow=6.6,SNR=43						
AKASG				PcP	**PcP**	**22 32 28.9**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=182,slow=3.3,SNR=5.6						
AKASG				PP	**PP**	**22 32 58.6**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=186,slow=7.2,SNR=3.0						
AKASG				LR	LR	22 54 15.6	
	comp=Z,226nm,18.7s,baz=195,slow=39						
AKBB	**Malin Array Si**	**49.03**	**359**	*e*P	**P**	**22 31 04.3**	**-1.2**
	comp=Z,42nm,1.2s						
AKBB				*e*PcP	**PcP**	**22 32 28.9**	**-0.3**
AKBB	**Malin Array Si**	**49.03**	**359**	*e*P	**P**	**22 31 04.3**	**-1.2**
AKBB				*e*		22 32 28.9	
AKBB				pmax	pmax		
	comp=Z,42nm,1.2s						
DAVA	**Damuels**	**49.12**	**341**	*i* P	**P**	**22 31 05.5**	**-1.0**
	comp=Z,81nm,1.3s,SNR=26						
VRAC	**Vranov**	**49.17**	**348**	⇓*i*P	**P**	**22 31 06.1**	**-0.6**
VRAC	**Vranov**	**49.17**	**348**	P	**P**	**22 31 06.0**	**-0.6**
VRAC	**Vranov**	**49.17**	**348**	⇓*i*P	**P**	**22 31 06.1**	**-0.6**
VRAC				*e*PP	**PP**	**22 33 02.2**	**+1.7**
SENIN	**Lac Senin/Sane**	**49.21**	**339**	PFAKE		22 31 20.0	+13
SENIN				LR	LR		
	comp=Z,900nm,21.0s						
SSB	**Saint Sauveur**	**49.38**	**336**	*e*P	**P**	**22 31 06.3**	**-2.1**
	comp=Z,114nm,2.0s						
SSB				LR	LR		
	comp=Z,600nm,19.0s						
SSB	**Saint Sauveur**	**49.38**	**336**	*e*P	**P**	**22 31 06.3**	**-2.1**
SSB				pmax	pmax		
	comp=Z,114nm,2.0s						
SSB				MLR	MLR		
	comp=Z,600nm,19.0s						
TREC	**Trest**	**49.40**	**347**	*e*P	**P**	**22 31 07.9**	**-0.5**
TREC				*e*		22 31 13.2	
TREC				MLR	MLR		
	comp=Z,900nm,20.4s						
TREC	**Trest**	**49.40**	**347**	*e*P	**P**	**22 31 07.9**	**-0.5**
TREC				*e*pP	**pP**	**22 31 13.2**	**-0.8**
TREC				AMS	AMS	22 55 00.0	
	comp=Z,900nm,20.4s						
GEC2	**GERESS Array S**	**49.42**	**345**	PFAKE		22 31 20.0	+11
GEC2				LR	LR		
	comp=Z,500nm,19.0s						
GERES	**GERESS Array B**	**49.42**	**345**	P	**P**	**22 31 08.2**	**-0.5**
	comp=Z,8.2nm,0.7s,baz=160,slow=7.2,SNR=70						
GERES				LR	LR	22 53 35.3	
	comp=Z,504nm,19.3s,baz=148,slow=38						
MORC	**Moravsky Berou**	**49.42**	**349**	PFAKE		22 31 20.0	+11
MORC				LR	LR		
	comp=Z,600nm,21.0s						
MORC	**Moravsky Berou**	**49.42**	**349**	⇓*i*P	**P**	**22 31 08.4**	**-0.2**
MORC	**Moravsky Berou**	**49.42**	**349**	P	**P**	**22 31 08.4**	**-0.2**
MORC	**Moravsky Berou**	**49.42**	**349**	⇓*i*P	**P**	**22 31 08.3**	**-0.3**
MORC				*e*PP	**PP**	**22 33 03.7**	**+0.9**
OJC	**Ojcow**	**49.44**	**351**	*e*P	**P**	**22 31 08.3**	**-0.4**
OJC				*e*S	**S**	**22 38 22.9**	**+7.8**
OJC				LMZ	LR	22 56 06.8	
	comp=Z,300nm,21.9s						
ESDC	**Sonseca Array**	**49.48**	**325**	P	**P**	**22 31 08.4**	**-0.9**
	comp=Z,3.1nm,0.7s,baz=130,slow=7.4,SNR=33						
ESDC				LR	LR	22 54 05.5	
	comp=Z,1µm,20.2s,baz=130,slow=39						
ESLA	**Sonseca Array**	**49.48**	**325**	PFAKE		22 31 20.0	+11
ESLA				LR	LR		
	comp=Z,2µm,20.0s						
EPF	**Esparros**	**49.53**	**331**	*e*P	**P**	**22 31 08.3**	**-1.3**
EPF				pmax	pmax		
	comp=Z,70nm,2.0s						
PAB	**San Pablo**	**49.62**	**324**	PFAKE		22 31 20.0	+10
PAB				LR	LR		
	comp=Z,2µm,20.0s						
KHC	**Kasperske Hory**	**49.71**	**345**	PFAKE		22 31 20.0	+9.2
KHC				LR	LR		
	comp=Z,300nm,19.0s						
KHC	**Kasperske Hory**	**49.71**	**345**	*e*P	**P**	**22 31 10.1**	**-0.7**
KHC				*e*		22 31 16.1	
KHC				*e*S	**S**	**22 38 15.8**	**-3.3**
KHC	**Kasperske Hory**	**49.71**	**345**	*e*P	**P**	**22 31 10.1**	**-0.7**
KHC				*e*pP	**pP**	**22 31 16.1**	**-0.3**
KHC				*e*S	**S**	**22 38 15.8**	**-3.3**
KHC				*e*SS	SS	22 42 04.5	+13
VORD	**Divnogorie**	**49.78**	**7**	*e*P	**P**	**22 31 10.9**	**-0.3**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CABF	**La Chapelle**	**49.87**	**338**	*e*P	**P**	**22 31 11.7**	**-0.5**
CABF				pmax	pmax		
	comp=Z,18nm,1.2s						
ETSF	**Etsaut**	**49.88**	**330**	*e*P	**P**	**22 31 11.1**	**-1.2**
ETSF				pmax	pmax		
	comp=Z,15nm,1.0s						
BHPL	**Bhopal**	**49.98**	**61**	*e*P	**P**	**22 31 14.6**	**+1.2**
BHPL				IAmb	IAmb	22 31 25.7	
	comp=Z,26nm,0.2s						
SLE	**Schleitheim**	**49.99**	**340**	P	**P**	**22 31 12.2**	**-0.8**
VSR	**Storozhevoye**	**50.01**	**7**	*e*P	**P**	**22 31 12.5**	**-0.5**
VSR				pmax	pmax		
	comp=Z,20nm,1.6s						
GOPC	**GO Pecny, Ondr**	**50.14**	**346**	*e*P	**P**	**22 31 13.2**	**-0.9**
GOPC	**GO Pecny, Ondr**	**50.14**	**346**	*e*P	**P**	**22 31 13.2**	**-0.9**
GOPC				*e*SS	SS	22 42 20.8	+22
GRC1	**Grafenberg Arr**	**50.15**	**343**	P	**P**	**22 31 13.7**	**-0.4**
CAF	**Calviac**	**50.17**	**333**	*e*P	**P**	**22 31 13.2**	**-1.2**
CAF				pmax	pmax		
	comp=Z,11nm,0.8s						
DPC	**Dobruska-Polom**	**50.21**	**348**	*e*P	**P**	**22 31 13.9**	**-0.7**
DPC				*e*S	S	22 38 41.2	+15
DPC				MLR	MLR		
	comp=Z,600nm,15.9s						
DPC	**Dobruska-Polom**	**50.21**	**348**	*e*P	**P**	**22 31 13.9**	**-0.7**
DPC				*e*pP	**pP**	**22 31 20.1**	**-0.1**
DPC				*e*x	x	22 31 29.7	
DPC				*e*S	S	22 38 41.2	+15
DPC				*e*SS	SS	22 42 12.8	+13
DPC				AMS	AMS	22 56 50.0	
	comp=Z,600nm,15.9s						
PRU	**Pruhonice**	**50.27**	**346**	*e*P	**P**	**22 31 13.7**	**-1.3**
PRU				*e*		22 31 19.3	
PRU				*e*S	S	22 38 36.9	+10
PRU				MLR	MLR		
	comp=Z,600nm,18.6s						
PRU	**Pruhonice**	**50.27**	**346**	*e*P	**P**	**22 31 13.7**	**-1.3**
PRU				*e*pP	**pP**	**22 31 19.3**	**-1.2**
PRU				*e*S	S	22 38 36.9	+10
PRU				*e*SS	SS	22 42 11.6	+11
PRU				AMS	AMS	22 55 30.0	
	comp=Z,600nm,18.6s						
SJPF	**Ste Jean**	**50.37**	**330**	*e*P	**P**	**22 31 14.8**	**-1.1**
SJPF				pmax	pmax		
	comp=Z,18nm,0.9s						
PBDV	**Barranco-do-Ve**	**50.42**	**320**	*e*P	**P**	**22 31 16.0**	**-0.4**
	comp=Z,38nm,1.9s						
UPC	**Upice**	**50.43**	**348**	*e*P	**P**	**22 31 16.0**	**-0.2**
UPC				*e*		22 31 21.7	
UPC				*e*S	**S**	**22 38 29.0**	**+0.1**
UPC				MLR	MLR		
	comp=Z,600nm,14.3s						
UPC	**Upice**	**50.43**	**348**	*e*P	**P**	**22 31 16.0**	**-0.2**
UPC				*e*pP	**pP**	**22 31 21.7**	**0.0**
UPC				*e*S	**S**	**22 38 29.0**	**+0.1**
UPC				*e*SS	SS	22 42 16.0	+13
UPC				AMS	AMS	22 58 00.0	
	comp=Z,600nm,14.3s						
OSTC	**Ostas**	**50.43**	**348**	*e*P	**P**	**22 31 15.9**	**-0.3**
OSTC				*e*x	x	22 31 21.6	
OSTC				*e*SS	SS	22 42 25.3	+22
OSTC				AMS	AMS	22 57 00.0	
	comp=Z,500nm,17.4s						
VORR	**Voronezh**	**50.46**	**7**	P	**P**	**22 31 18.0**	**+1.6**
VORR				pmax	pmax		
	comp=Z,250nm,2.0s						
MOF	**Molkenrain**	**50.54**	**339**	P	**P**	**22 31 16.7**	**-0.5**
BFO	**Black Forest**	**50.54**	**341**	*e*P	**P**	**22 31 15.5**	**-1.7**
	comp=Z,59nm,1.6s						
BFO				LR	LR		
	comp=Z,500nm,20.0s						
BFO	**Black Forest**	**50.54**	**341**	*i* P	**P**	**22 31 16.5**	**-0.6**
HINF	**Hinteralfeld**	**50.61**	**339**	*e*P	**P**	**22 31 16.0**	**-1.7**
HINF				pmax	pmax		
	comp=Z,127nm,1.9s						
STU	**Stuttgart**	**50.65**	**342**	PFAKE		22 31 30.0	+12
STU				LR	LR		
	comp=Z,700nm,19.0s						
STU	**Stuttgart**	**50.65**	**342**	P	**P**	**22 31 18.0**	**+0.1**
KSP	**Ksiaz**	**50.68**	**348**	*e*P	**P**	**22 31 17.3**	**-0.9**
KSP				LMZ	LR	22 58 12.9	
	comp=Z,700nm,16.3s						
RJF	**Les Rejaudoux**	**50.71**	**333**	*e*P	**P**	**22 31 17.1**	**-1.3**
RJF				pmax	pmax		
	comp=Z,78nm,1.7s						
PVCC	**Panska Ves**	**50.77**	**347**	*e*P	**P**	**22 31 18.0**	**-0.7**
PVCC				MLR	MLR		
	comp=Z,500nm,15.8s						
PVCC	**Panska Ves**	**50.77**	**347**	*e*P	**P**	**22 31 18.0**	**-0.7**
PVCC				AMS	AMS	22 56 00.0	
	comp=Z,500nm,15.8s						
SMF	**Signal de Mont**	**50.78**	**336**	*e*P	**P**	**22 31 17.4**	**-1.5**
SMF				pmax	pmax		
	comp=Z,56nm,1.4s						
LFF	**La Frestale**	**50.78**	**333**	*e*P	**P**	**22 31 17.8**	**-1.1**
LFF				pmax	pmax		
	comp=Z,19nm,0.7s						
NGP	**Nagpur**	**50.79**	**64**	*e*P	**P**	**22 31 20.8**	**+1.3**
NGP				IAmb	IAmb	22 31 22.3	
	comp=Z,15nm,0.9s						
ECH	**Echery**	**50.84**	**340**	PFAKE		22 31 30.0	+11
ECH				LR	LR		
	comp=Z,400nm,19.0s						
ECH	**Echery**	**50.84**	**340**	P	**P**	**22 31 18.8**	**-0.6**
GRFO	**Grafenberg**	**50.86**	**344**	PFAKE		22 31 30.0	+11
GRFO				LR	LR		
	comp=Z,400nm,20.0s						
BEL	**Belsk**	**50.86**	**352**	*e*P	**P**	**22 31 18.2**	**-1.2**
BEL				LMZ	LR	22 55 36.7	
	comp=Z,400nm,20.8s						
GRF	**Grafenberg Arr**	**50.86**	**344**	P	**P**	**22 31 18.8**	**-0.7**
CHGR	**Chuyangaron**	**50.88**	**39**	PFAKE		22 31 30.0	+10
CHGR				LR	LR		
	comp=Z,4µm,18.0s						
NIL	**Nilore**	**50.89**	**46**	*e*P	**P**	**22 31 21.6**	**+1.6**
	comp=Z,122nm,1.8s						
NIL				LR	LR		
	comp=Z,400nm,19.0s						
NIL	**Nilore**	**50.89**	**46**	*e*P	**P**	**22 31 21.6**	**+1.6**
NIL				pmax	pmax		
	comp=Z,122nm,1.8s						
NIL				MLR	MLR		
	comp=Z,400nm,19.0s						
PFVI	**Vila Bisbo**	**50.94**	**319**	PFAKE		22 31 30.0	+10
PFVI				LR	LR		
	comp=Z,700nm,21.0s						
HAU	**Haudompre**	**50.95**	**339**	*e*P	**P**	**22 31 18.9**	**-1.3**
HAU				pmax	pmax		
	comp=Z,57nm,1.5s						
CDF	**Champ du Feu**	**50.97**	**340**	*e*P	**P**	**22 31 18.5**	**-1.9**
CDF				pmax	pmax		

	comp=Z,59nm,1.6s						
NKC	**Novy Kostel**	**51.02**	**345**	*e*P	**P**	**22 31 20.0**	**-0.7**
NKC				*e*S	S	22 38 48.6	+11
NKC				MLR	MLR		
	comp=Z,700nm,18.0s						
NKC	**Novy Kostel**	**51.02**	**345**	*e*P	**P**	**22 31 20.0**	**-0.7**
NKC				*e*pP	**pP**	**22 31 25.8**	**-0.4**
NKC				*e*S	S	22 38 48.6	+11
NKC				*e*SS	SKiKP	22 42 36.7	-15
NKC				AMS	AMS	22 56 30.0	
	comp=Z,700nm,18.0s						
AVF	**Avril sur Loir**	**51.09**	**336**	*e*P	**P**	**22 31 19.8**	**-1.5**
AVF				pmax	pmax		
	comp=Z,32nm,1.2s						
TCF	**Toulx Ste Croi**	**51.17**	**335**	*e*P	**P**	**22 31 21.2**	**-0.7**
TCF				pmax	pmax		
	comp=Z,81nm,1.5s						
BRG	**Berggiesshubel**	**51.23**	**346**	*e*P	**P**	**22 31 21.4**	**-0.9**
	comp=Z,40nm,1.6s						
BRG				PP	**PP**	**22 33 19.0**	**-0.3**
BRG				S	**S**	**22 38 45.0**	**+4.9**
BRG				SS	**SS**	**22 42 15.0**	**-0.8**
	comp=N,611nm,14.5s						
	comp=E,409nm,14.8s						
	comp=Z,666nm,16.6s						
BRG	**Berggiesshubel**	**51.23**	**346**	*e*P	**P**	**22 31 21.4**	**-0.9**
BRG						22 33 19.0	
BRG				S	**S**	**22 38 45.0**	**+4.9**
BRG				SS	**SS**	**22 42 15.0**	**-0.8**
BRG				pmax	pmax		
	comp=Z,40nm,1.6s						
BRG				MLR	MLR		
	comp=N,611nm,14.5s						
BRG				MLR	MLR		
	comp=E,409nm,14.8s						
BRG				MLR	MLR		
	comp=Z,666nm,16.6s						
SSF	**Saint Saulge**	**51.25**	**336**	*e*P	**P**	**22 31 20.6**	**-1.9**
SSF				pmax	pmax		
	comp=Z,11nm,1.0s						
LOR	**Lormes**	**51.28**	**337**	*e*P	**P**	**22 31 20.9**	**-1.8**
LOR				pmax	pmax		
	comp=Z,21nm,1.1s						
LANF	**Langenberg**	**51.28**	**341**	P	**P**	**22 31 22.1**	**-0.6**
PNCL	**Nicolau / Gran**	**51.31**	**320**	*e*P	**P**	**22 31 22.7**	**-0.3**
	comp=Z,30nm,1.7s						
LPSR	**Galich'ya Gora**	**51.35**	**6**	*e*P	**P**	**22 31 26.6**	**+3.6**
LPSR				pmax	pmax		
	comp=Z,40nm,1.4s						
PMRV	**Marv??o**	**51.38**	**322**	*e*P	**P**	**22 31 23.0**	**-0.6**
	comp=Z,36nm,1.7s						
PMRV				*e*S	**S**	**22 38 46.8**	**+4.3**
PMRV				*e*LQ	LQ	22 48 21.8	
PMRV				*e*LR	LR	22 50 36.1	
	comp=Z,598nm,18.0s						
KTD	**Kalmit**	**51.48**	**341**	P	**P**	**22 31 24.3**	**+0.1**
PMTG	**Montargil**	**51.68**	**321**	*e*P	**P**	**22 31 25.3**	**-0.5**
	comp=Z,19nm,1.3s						
PCBR	**Castelo Branco**	**51.68**	**322**	*e*P	**P**	**22 31 24.9**	**-0.9**
	comp=Z,26nm,2.0s						
GAR	**Garm**	**51.80**	**39**	PFAKE		22 31 40.0	+13
GAR				LR	LR		
	comp=Z,2µm,20.0s						
CLL	**Collm**	**51.86**	**346**	PFAKE		22 31 40.0	+13
CLL				LR	LR		
	comp=Z,700nm,20.0s						
CLL	**Collm**	**51.86**	**346**	⇓*i*P	**P**	**22 31 24.7**	**-2.2**
CLL				*i*		22 31 30.0	
CLL				pmax	pmax		
	comp=Z,59nm,1.7s						
CLL				MLR	MLR		
	comp=Z,600nm,19.8s						
CLL	**Collm**	**51.86**	**346**	⇓*i*P	**P**	**22 31 24.7**	**-2.2**
	comp=Z,59nm,1.7s						
CLL				*i* pP	**pP**	**22 31 30.0**	**-2.5**
CLL				*e*PcP	**PcP**	**22 32 39.0**	**-0.7**
CLL				*e*PP	**PP**	**22 33 26.0**	**+1.1**
CLL				*e*S	**S**	**22 38 48.0**	**-0.7**
CLL				*e*SS	**SS**	**22 42 36.0**	**+10**
CLL				Lm	MLR	22 57 00.0	
	comp=Z,600nm,19.8s						
MTE	**Manteigas**	**52.06**	**323**	*e*P	**P**	**22 31 28.0**	**-0.7**
	comp=Z,38nm,2.1s						
MTE				*e*S	**S**	**22 38 55.0**	**+3.0**
MTE				*e*LQ	LQ	22 48 05.1	
MTE				*e*LR	LR	22 52 00.3	
	comp=Z,3µm,16.0s						
MTE	**Manteigas**	**52.06**	**323**	PFAKE		22 31 40.0	+11
MTE				LR	LR		
	comp=Z,2µm,20.0s						
PTOM	**Tomar**	**52.12**	**322**	*e*P	**P**	**22 31 28.4**	**-0.7**
	comp=Z,33nm,2.1s						
THN	**Thein Dam**	**52.13**	**49**	*e*x	P	22 31 39.0	+10
MVO	**Moncorvo**	**52.23**	**324**	*e*P	**P**	**22 31 29.5**	**-0.5**
	comp=Z,45nm,1.7s						
MVO	**Moncorvo**	**52.23**	**324**	*e*LQ	LQ	22 48 55.7	
MVO				*e*LR	LR	22 52 37.3	
	comp=Z,2µm,16.0s						
WLF	**Walferdange**	**52.42**	**340**	PFAKE		22 31 40.0	+8.9
WLF				LR	LR		
	comp=Z,3µm,20.0s						
WLF	**Walferdange**	**52.42**	**340**	⇑P	**P**	**22 31 30.1**	**-1.0**
MFF	**Saint Martin d**	**52.45**	**333**	*e*P	**P**	**22 31 29.9**	**-1.5**
MFF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PVIS	**Viseu**	**52.47**	**323**	*e*P	**P**	**22 31 30.9**	**-0.8**
	comp=Z,32nm,1.6s						
PBRG	**Braganca**	**52.47**	**325**	*e*P	**P**	**22 31 31.0**	**-0.7**
	comp=Z,32nm,1.9s						
COI	**Coimbra**	**52.47**	**322**	PFAKE		22 31 40.0	+8.3
COI				LR	LR		
	comp=Z,2µm,20.0s						
DHRM	**DHARAMSHALA**	**52.49**	**49**	*e*P	**P**	**22 31 32.8**	**+0.5**
DHRM				IAmb	IAmb	22 31 35.7	
	comp=Z,378nm,2.3s						
CLF	**Chambon-Foret**	**52.53**	**336**	PFAKE		22 31 40.0	+8.1
CLF				LR	LR		
	comp=Z,500nm,21.0s						
SMLA	**Simla**	**52.68**	**51**	*e*P	**P**	**22 31 33.7**	**+0.3**
SMLA				IAmb	IAmb	22 31 35.8	
	comp=Z,52nm,1.4s						
SUW	**Suwalki**	**52.71**	**354**	*e*P	**P**	**22 31 32.6**	**-0.6**
SUW				LMZ	LR	22 56 12.7	
	comp=Z,500nm,20.1s						
SUW	**Suwalki**	**52.71**	**354**	PFAKE		22 31 40.0	+6.8
SUW				LR	LR		
	comp=Z,500nm,19.0s						
BTK	**Batken**	**52.74**	**38**	PFAKE		22 31 50.0	+16
BTK				LR	LR		
	comp=Z,1µm,18.0s						
POLO	**Lamas de Olo**	**52.81**	**324**	*e*P	**P**	**22 31 34.1**	**-0.2**
	comp=Z,23nm,1.6s						
GKP	**Gorka Klasztor**	**52.81**	**350**	*e*P	**P**	**22 31 33.3**	**-0.7**
GKP				LMZ	LR	22 58 46.0	
	comp=Z,800nm,17.9s						
MICGM	**Minsk**	**52.87**	**358**	*e*	**P**	**22 31 34.0**	**-0.4**
MNK	**Minsk**	**52.87**	**358**	*e*P	**P**	**22 31 34.0**	**-0.4**
GIVF	**Givet**	**53.25**	**339**	*e*P	**P**	**22 31 35.5**	**-1.8**
GIVF				pmax	pmax		
	comp=Z,42nm,1.4s						
MEM	**Membach**	**53.28**	**340**	P	**P**	**22 31 37.7**	**+0.3**
MEM	**Membach**	**53.28**	**340**	⇓P	**P**	**22 31 37.0**	**-0.4**
DOU	**Dourbes**	**53.33**	**339**	⇓P	**P**	**22 31 36.5**	**-1.3**
	comp=Z,11nm,1.5s						
BCLA	**Clavier**	**53.35**	**340**	⇓P	**P**	**22 31 37.4**	**-0.6**
	comp=Z,29nm,1.7s						
HGN	**Heimansgroeve**	**53.43**	**340**	*e*P	**P**	**22 31 38.2**	**-0.4**
HGN				*e*S	**S**	**22 39 16.3**	**+6.1**
BAIF	**Baives**	**53.44**	**339**	*e*P	**P**	**22 31 36.8**	**-1.8**
BAIF				pmax	pmax		
	comp=Z,55nm,1.7s						
PGAV	**Gavieira, Arco**	**53.46**	**324**	*e*S	**S**	**22 39 15.2**	**+4.1**
PGAV	**Gavieira, Arco**	**53.46**	**324**	*e*LQ	LQ	22 50 39.0	
PGAV				*e*LR	LR	22 52 36.8	
	comp=Z,3µm,16.0s						
OBN	**Obninsk**	**53.63**	**4**	*e*P	**P**	**22 31 39.2**	**-0.7**
	comp=Z,102nm,1.8s						
OBN	**Obninsk**	**53.63**	**4**	*d* *i*P	**P**	**22 31 39.5**	**-0.4**
OBN				*i*		22 31 45.5	
OBN				*e*S	**S**	**22 39 18.2**	**+5.6**
OBN				pmax	pmax		
	comp=Z,77nm,2.5s						
OBN				MLR	MLR		
	comp=Z,230nm,16.0s						
IDID	**Didziasalis**	**53.74**	**357**	*e*P	**P**	**22 31 40.3**	**-0.4**
IDID				IAmb	IAmb	22 31 48.7	
	comp=Z,31nm,1.4s						
IIGN	**Ignalina**	**53.80**	**357**	*e*P	**P**	**22 31 41.3**	**+0.1**
IIGN				IAmb	IAmb	22 31 49.2	
	comp=Z,25nm,1.0s						
AKTO	**Aktyubinsk**	**53.90**	**21**	P	**P**	**22 31 42.0**	**0.0**
	comp=Z,17nm,0.9s,baz=212,slow=8.1,SNR=46						
AKTO	**Aktyubinsk**	**53.90**	**21**	P	**P**	**22 31 42.0**	**0.0**
LDF	**La Druitiere**	**53.96**	**335**	*e*P	**P**	**22 31 40.8**	**-1.7**
LDF				pmax	pmax		
	comp=Z,34nm,1.1s						
UCC	**Uccle**	**54.00**	**339**	PFAKE		22 31 50.0	+7.3
UCC				LR	LR		
	comp=Z,500nm,20.0s						
UCC	**Uccle**	**54.00**	**339**	⇑P	**P**	**22 31 41.6**	**-1.1**
ISAL	**Salakas**	**54.02**	**357**	*e*P	**P**	**22 31 42.6**	**-0.2**
ISAL				IAmb	IAmb	22 31 50.8	
	comp=Z,46nm,1.5s						
GRR	**Gorron**	**54.12**	**334**	*e*P	**P**	**22 31 41.8**	**-1.8**
GRR				pmax	pmax		
	comp=Z,30nm,1.2s						
WTSB	**Winterswijk**	**54.19**	**342**	*e*P	**P**	**22 31 43.2**	**-0.8**
FLN	**La Foliniere**	**54.24**	**335**	*e*P	**P**	**22 31 42.5**	**-2.1**
FLN				pmax	pmax		
	comp=Z,25nm,1.0s						
MOS	**Moscow**	**54.33**	**5**	*e*P	**P**	**22 31 43.9**	**-1.1**
MOS				pmax	pmax		
	comp=Z,186nm,1.7s						
MOS				pmax	pmax		
	comp=Z,300nm,2.0s						
SGMF	**Saint Gilles**	**54.77**	**333**	*e*P	**P**	**22 31 47.3**	**-1.1**
SGMF				pmax	pmax		
	comp=Z,95nm,2.0s						
PMOZ	**Porto Moniz, M**	**54.81**	**310**	*e*LR	LR	22 53 59.2	
	comp=Z,914nm,18.0s						
ROSF	**Rostrenen**	**55.16**	**333**	*e*P	**P**	**22 31 50.4**	**-0.8**
ROSF				pmax	pmax		
	comp=Z,54nm,1.5s						
KSH	**Kashi**	**55.75**	**41**	P	**P**	**22 31 53.1**	**-2.7**
KSH				PcP	**PcP**	**22 32 55.3**	**+0.4**
KSH				PP	**PP**	**22 34 00.0**	**-0.4**
KSH				S	**S**	**22 39 34.4**	**-7.7**
KSH				ScS	**ScS**	**22 41 40.9**	**-3.8**
KSH				pmax	pmax		
	comp=Z,150nm,6.0s						
KSH				LR	LR		
	comp=Z,450nm,20.5s						
KSH				LR	LR		
	comp=Z,470nm,13.3s						
KSH				LR	LR		
	comp=Z,670nm,16.2s						
EKS2	**Erkin-Say**	**56.07**	**37**	P	**P**	**22 31 59.0**	**+1.0**
	SNR=14						
UCH	**Uchtor**	**56.27**	**38**	P	**P**	**22 32 01.0**	**+1.1**
	SNR=34						
PYUN	**Piuthan**	**56.28**	**57**	*e*P	**P**	**22 32 00.2**	**+0.2**
	comp=Z,90nm,1.1s						
SLIT	**Slitere, Latvi**	**56.37**	**354**	*e*P	**P**	**22 31 58.0**	**-1.7**
SLIT				IAmb	IAmb	22 32 06.9	
	comp=Z,241nm,1.1s						
AAK	**Ala-Archa**	**56.49**	**38**	*e*P	**P**	**22 32 01.4**	**+0.3**
	comp=Z,46nm,1.4s						
AAK				LR	LR		
	comp=Z,700nm,18.0s						
AAK	**Ala-Archa**	**56.49**	**38**	*i* P	**P**	**22 32 02.5**	**+1.4**
	SNR=9.5						
AAK	**Ala-Archa**	**56.49**	**38**	*ce*P	**P**	**22 32 02.4**	**+1.3**
AAK				pmax	pmax		
	comp=Z,33nm,1.3s						
AAK	**Ala-Archa**	**56.49**	**38**	P	**P**	**22 32 02.5**	**+1.3**
	SNR=8.3						
KZA	**Kyzart**	**56.65**	**39**	P	**P**	**22 32 04.4**	**+1.8**
	SNR=9.6						
FRU1	**Bishkek**	**56.67**	**37**	PFAKE		22 32 10.0	+7.7
FRU1				LR	LR		
	comp=Z,500nm,18.0s						
KOLN	**Koldanda**	**56.70**	**57**	*e*P	**P**	**22 32 03.0**	**+0.1**
	comp=Z,54nm,1.0s						
KBK	**Karagaybulak**	**56.78**	**38**	P	**P**	**22 32 04.7**	**+1.6**
	SNR=15						
USP	**Ospenovka**	**56.85**	**37**	P	**P**	**22 32 04.3**	**+0.8**
	SNR=18						
CHMS	**Chumysh**	**56.85**	**37**	P	**P**	**22 32 04.4**	**+0.9**
	SNR=18						
VSU	**Vasula**	**56.88**	**357**	*e*P	**P**	**22 32 01.8**	**-1.5**
VSU	**Vasula**	**56.88**	**357**	*ce*P	**P**	**22 32 00.9**	**-2.4**
VSU				pmax	pmax		
	comp=Z,82nm,1.7s						
DANN	**Dangsing**	**57.01**	**57**	*e*P	**P**	**22 32 05.3**	**+0.1**
	comp=Z,39nm,0.7s						
BOOM	**Boomskoye usch**	**57.30**	**38**	PFAKE		22 32 20.0	+13
BOOM				LR	LR		
	comp=Z,1µm,18.0s						
TKM2	**Tokmak 2**	**57.32**	**38**	P	**P**	**22 32 07.8**	**+0.7**
	SNR=20						
ULHL	**Ulahol**	**57.36**	**39**	P	**P**	**22 32 08.3**	**+1.0**
	SNR=11						
MUD	**Monsted U'grnd**	**57.49**	**346**	⇓*i*P	**P**	**22 32 07.5**	**-0.2**
MUD				pmax	pmax		
	comp=Z,100nm,1.4s						
MUD	**Monsted U'grnd**	**57.49**	**346**	⇓*i*P	**P**	**22 32 07.5**	**-0.2**
	comp=Z,104nm,1.4s						
GKN	**Gorkha**	**57.64**	**58**	*e*P	**P**	**22 32 09.4**	**-0.1**
KDJ	**Kajisay**	**57.89**	**39**	PFAKE		22 32 20.0	+9.0
KDJ				LR	LR		
	comp=Z,1µm,18.0s						
DMN	**Daman**	**57.92**	**58**	*e*P	**P**	**22 32 11.7**	**+0.1**
	comp=Z,37nm,0.9s						
KKN	**Kakani**	**58.12**	**58**	*e*P	**P**	**22 32 13.1**	**+0.1**
PKIN	**Phulchoki**	**58.16**	**58**	*e*P	**P**	**22 32 13.0**	**-0.3**
	comp=Z,13nm,0.7s						
PKI	**Pulchoki**	**58.17**	**58**	*e*P	**P**	**22 32 13.1**	**-0.3**
	comp=Z,19nm,0.8s						
GUN	**Gumba**	**58.66**	**58**	*e*P	**P**	**22 32 16.9**	**0.0**
	comp=Z,184nm,1.5s						
PRZ	**Przheval'sk**	**58.84**	**40**	PFAKE		22 32 30.0	+12
PRZ				LR	LR		
	comp=Z,800nm,19.0s						
JIRN	**Jiri**	**58.86**	**58**	*e*P	**P**	**22 32 18.2**	**-0.1**
	comp=Z,39nm,0.6s						
ARU	**Arti**	**59.08**	**17**	P	**P**	**22 32 19.1**	**+0.2**
	comp=Z,18nm,0.6s,baz=207,slow=6.2,SNR=108						
ARU	**Arti**	**59.08**	**17**	*e*P	**P**	**22 32 19.0**	**+0.2**
	comp=Z,46nm,0.6s						
ARU				LR	LR		
	comp=Z,800nm,20.0s						
ARU	**Arti**	**59.08**	**17**	*d* *i*P	**P**	**22 32 18.9**	**+0.1**
ARU						22 33 03.9	
ARU				S	**S**	**22 40 26.8**	**+1.7**
ARU				SS	**SS**	**22 44 17.6**	**-1.7**
ARU				pmax	pmax		
	comp=Z,47nm,0.7s						
ARU				MLR	MLR		
	comp=Z,782nm,20.0s						
FINES	**FINESS Array B**	**59.89**	**357**	P	**P**	**22 32 23.8**	**-0.4**
	comp=Z,6.8nm,0.7s,baz=143,slow=6.7,SNR=28						
FINES				LR	LR	23 01 20.6	
	comp=Z,279nm,18.2s,baz=205,slow=39						
FINES	**FINESS Array B**	**59.89**	**357**	*i* P	**P**	**22 32 23.7**	**-0.6**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SVE	**Sverdlovsk**	**60.05**	**18**	⇑*e*P	**P**	**22 32 25.5**	**0.0**
SVE				*e*S	**S**	**22 40 40.7**	**+3.1**
SVE				pmax	pmax		
	comp=Z,45nm,1.5s						
SVE				MLR	MLR		
	comp=Z,946nm,16.0s						
KONO	**Kongsberg**	**60.29**	**348**	*e*P	**P**	**22 32 25.9**	**-1.1**
	comp=Z,34nm,1.3s						
KONO	**Kongsberg**	**60.29**	**348**	*ce*P	**P**	**22 32 26.0**	**-1.1**
KONO				pmax	pmax		
	comp=Z,26nm,1.3s						
EKA	**Eskdalemuir Ar**	**60.35**	**338**	P	**P**	**22 32 27.0**	**-0.6**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**60.83**	**26**	*e*P	**P**	**22 32 30.5**	**-0.4**
	comp=Z,63nm,1.8s						
BRVK				LR	LR		
	comp=Z,500nm,20.0s						
BRVK	**Borovoye**	**60.83**	**26**	*d* *i*P	**P**	**22 32 30.8**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,25nm,1.6s						
BVAR	**Borovoye Array**	**60.85**	**26**	P	**P**	**22 32 30.9**	**-0.2**
	comp=Z,8.5nm,0.7s,baz=225,slow=6.1,SNR=32						
NORES	**NORESS Array B**	**60.90**	**349**	P	**P**	**22 32 32.3**	**+1.0**
PRGR	**Permogore**	**61.00**	**8**	*e*P	**P**	**22 32 30.0**	**-1.9**
PRGR				*e**PP	**pP**	**22 32 35.7**	**-1.8**
PRGR				*e*		22 33 13.2	
PRGR				pmax	pmax		
	comp=Z,18nm,1.0s						
NB2	**NORSAR Subarra**	**61.25**	**349**	P	**P**	**22 32 32.4**	**-1.2**
	comp=Z,90nm,1.7s,baz=160,slow=6.9						
NB2	**NORSAR Subarra**	**61.25**	**349**	P	**P**	**22 32 32.4**	**-1.2**
	baz=160,slow=6.9						
NOA	**NORSAR Array B**	**61.25**	**349**	P	**P**	**22 32 32.7**	**-1.0**
	comp=Z,7.2nm,1.0s,baz=160,slow=6.7,SNR=16						
NOA				LR	LR	23 03 07.8	
	comp=Z,212nm,18.6s,baz=160,slow=40						
NBO00	**NORSAR Array S**	**61.32**	**349**	*e*P	**P**	**22 32 32.9**	**-1.2**
	comp=Z,88nm,1.3s						
NBO00				*e*PcP	**PcP**	**22 33 16.1**	**-0.3**
PBA	**Port Blair**	**62.12**	**78**	PFAKE		22 32 50.0	+10
PBA				LR	LR		
	comp=Z,1µm,21.0s						
DGPR	**DIGLIPUR**	**62.44**	**76**	*e*P	**P**	**22 32 42.8**	**+0.4**
DGPR				IAmb	IAmb	22 32 53.3	
	comp=Z,49nm,1.1s						
MAKZ	**Makanchi**	**63.22**	**37**	*e*P	**P**	**22 32 46.6**	**-0.4**
	comp=Z,72nm,1.7s						
MAKZ				LR	LR		
	comp=Z,1µm,18.0s						
MAKZ	**Makanchi**	**63.22**	**37**	*e*P	**P**	**22 32 46.7**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,72nm,1.7s						
MAKZ				MLR	MLR		
	comp=Z,1µm,18.0s						
KURBB	**Kurchatov Arra**	**63.29**	**32**	P	**P**	**22 32 48.0**	**+0.5**
	comp=Z,3.5nm,0.6s,baz=239,slow=6.9,SNR=40						
KURBB				PP	**PP**	**22 35 09.6**	**+2.8**
	comp=Z,0.4nm,0.4s,baz=238,slow=7.7,SNR=4.6						
SHL	**Shillong**	**63.30**	**62**	*e*P	**P**	**22 32 47.3**	**-0.9**
	comp=Z,91nm,1.8s						
SHL	**Shillong**	**63.30**	**62**	*e*P	**P**	**22 32 47.3**	**-0.9**
SHL				pmax	pmax		
	comp=Z,91nm,1.8s						
SHL	**Shillong**	**63.30**	**62**	*e*P	**P**	**22 32 48.1**	**-0.1**
SHL				IAmb	IAmb	22 32 49.7	
	comp=Z,57nm,1.8s						
KURK	**Kurchatov**	**63.39**	**32**	*e*P	**P**	**22 32 48.6**	**+0.5**
	comp=Z,55nm,1.7s						
KURK				*e*PP	PP	22 34 58.1	-10
KURK				LR	LR		
	comp=Z,1µm,18.0s						
KURK	**Kurchatov**	**63.39**	**32**	*ce*P	**P**	**22 32 48.5**	**+0.4**
KURK				pmax	pmax		
	comp=Z,34nm,1.7s						
MKAR	**Makanchi Array**	**63.40**	**37**	P	**P**	**22 32 48.6**	**+0.3**
	comp=Z,6.8nm,0.6s,baz=235,slow=6.3,SNR=55						
MKAR				PP	**PP**	**22 35 08.4**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=238,slow=5.4,SNR=2.5						
MKAR				LR	LR	23 03 08.6	
	comp=Z,931nm,18.7s,baz=237,slow=39						
MKAR	**Makanchi Array**	**63.40**	**37**	*i* P	**P**	**22 32 48.5**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**63.60**	**57**	PFAKE		22 33 00.0	+9.5
LSA				LR	LR		
	comp=Z,200nm,19.0s						
TEZP	**TEZPUR**	**64.32**	**61**	*e*P	**P**	**22 32 54.6**	**-0.1**
TEZP				IAmb	IAmb	22 32 56.0	
	comp=Z,29nm,1.4s						
KOHI	**KOHIMA**	**65.29**	**62**	*e*P	**P**	**22 33 02.4**	**+1.1**
KOHI				IAmb	IAmb	22 33 03.5	
	comp=Z,12nm,1.0s						
ZIRO	**ZIRO**	**65.42**	**60**	*e*P	**P**	**22 33 01.9**	**-0.2**
WMQ	**Urumqi**	**65.51**	**42**	PFAKE		22 33 10.0	+7.7
WMQ				LR	LR		
	comp=Z,700nm,21.0s						
WMQ	**Urumqi**	**65.51**	**42**	*e*P	**P**	**22 33 03.1**	**+0.8**
WMQ				pP	sP	22 33 09.4	-0.7
WMQ				ScP		22 37 37.6	
WMQ				S	**S**	**22 41 48.2**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.1s						
WMQ				LR	LR		
	comp=Z,100nm,15.9s						
WMQ				LR	LR		
	comp=Z,350nm,21.7s						
WMQ				LR	LR		
	comp=Z,440nm,19.3s						
MOKO	**MOKOCHONG**	**65.77**	**62**	*e*P	**P**	**22 33 04.3**	**-0.1**
MOKO				IAmb	IAmb	22 33 06.5	
	comp=Z,27nm,1.1s						
APA	**Apatity**	**65.95**	**1**	⇑*i*P	**P**	**22 33 03.7**	**-0.8**
ARCES	**ARCESS Array B**	**68.00**	**358**	P	**P**	**22 33 17.1**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=162,slow=6.3,SNR=21						
ARCES				LR	LR	23 07 08.2	
	comp=Z,280nm,19.2s,baz=183,slow=40						
ZAA0	**Zalesovo Array**	**68.33**	**31**	PFAKE		22 33 30.0	+10
ZAA0				LR	LR		
	comp=Z,600nm,19.0s						
ZALV	**Zalesovo Beam**	**68.33**	**31**	P	**P**	**22 33 19.6**	**-0.3**
	comp=Z,11nm,0.7s,baz=250,slow=5.5,SNR=47						
ZALV				LR	LR	23 06 52.9	
	comp=Z,558nm,18.4s,baz=248,slow=39						
CMAR	**Chiang Mai Arr**	**68.70**	**71**	P	**P**	**22 33 24.0**	**+1.1**
	comp=Z,3.0nm,0.3s,baz=265,slow=7.5,SNR=16						
CMAR				LR	LR	23 03 51.8	
	comp=Z,149nm,18.6s,baz=262,slow=36						
CHTO	**Chiang Mai**	**68.74**	**70**	*e*P	**P**	**22 33 22.5**	**-0.7**
	comp=Z,6.3nm,0.9s						
CHTO	**Chiang Mai**	**68.74**	**70**	*e*P	**P**	**22 33 22.5**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PAYA	**Payao**	**69.66**	**70**	P	P	22 33 38.1	+9.2
	comp=Z,16µm,1.1s						
BKNI	**Bangkinang**	**70.13**	**90**	PFAKE		22 33 40.0	+8.1
BKNI				LR	LR		
	comp=Z,300nm,20.0s						
SYO	**Syowa Base**	**70.64**	**177**	⇑*e*P	**P**	**22 33 34.3**	**+0.5**
SYO	**Syowa Base**	**70.64**	**177**	⇑*e*pP	pP	22 33 37.0	-2.5
MAW	**Mawson**	**72.50**	**168**	P	**P**	**22 33 46.1**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=322,slow=12,SNR=5.1						
MAW				LR	LR	23 02 54.5	
	comp=Z,413nm,19.2s,baz=330,slow=34						
GTA	**Gaotai**	**72.82**	**49**	*e*P	**P**	**22 33 48.7**	**+0.9**
GTA				pP	pP	22 33 53.0	-0.6
GTA				sP	sP	22 33 55.8	+0.1
GTA				S	**S**	**22 43 17.0**	**+3.5**
GTA				pmax	pmax		
	comp=Z,13nm,1.5s						
GTA				pmax	pmax		
	comp=Z,130nm,6.7s						
GTA				LR	LR		
	comp=Z,230nm,17.1s						
GTA				LR	LR		
	comp=Z,210nm,17.1s						
GTA				LR	LR		
	comp=Z,250nm,15.2s						
KMI	**Kunming**	**72.92**	**64**	P	**P**	**22 33 50.1**	**+1.3**
KMI				pP	pP	22 33 53.4	-1.1
KMI				sP	sP	22 33 54.8	-1.9
KMI				LR	LR		
	comp=Z,120nm,14.3s						
KMI				LR	LR		
	comp=Z,140nm,15.3s						
KMI				LR	LR		
	comp=Z,200nm,17.2s						
CD2	**Chengdu**	**74.53**	**58**	P	**P**	**22 33 57.4**	**-0.5**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
LZH	**Lanzhou**	**75.34**	**53**	*e*P	**P**	**22 34 04.2**	**+1.5**
LZH				pP	sP	22 34 09.8	-0.7
LZH				sP	PcP	22 34 12.6	-3.3
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,96nm,4.3s						
LZH				LR	LR		
	comp=Z,360nm,16.3s						
LZH				LR	LR		
	comp=Z,380nm,15.2s						
LZH				LR	LR		
	comp=Z,360nm,16.1s						
SNAA	**Sanae**	**76.23**	**190**	PFAKE		22 34 20.0	+13
SNAA				LR	LR		
	comp=Z,900nm,22.0s						
MOY	**Mondy**	**76.55**	**37**	*e*P	**P**	**22 34 10.7**	**+1.6**
GYA	**Guiyang**	**76.58**	**63**	*e*P	**P**	**22 34 10.8**	**+1.0**
GYA				PP	**PP**	**22 37 01.1**	**-1.0**

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GYA                                S      S       22 43 55.2 -0.7
GYA                                SKS    SKSac   22 44 13.7 -7.8
GYA                                SS     SS      22 48 51.2 -0.1
GYA                                pmax   pmax
     comp=Z,20nm,0.7s
GYA                                pmax   pmax
     comp=Z,150nm,5.4s
GYA                                LR     LR
     comp=Z,90nm,17.4s
GYA                                LR     LR
     comp=Z,170nm,16.2s
GYA                                LR     LR
     comp=Z,240nm,16.8s
ZAK  Zakamensk        77.64  39  eP     P       22 34 15.5 +0.2
ZAK                                pmax   pmax
     comp=Z,6.0nm,1.5s
TLY  Talaya           78.15  37   PFAKE          22 34 30.0  +12
TLY                                LR     LR
     comp=Z,500nm,19.0s
TLY  Talaya           78.15  37  eP     P       22 34 19.3 +1.3
TLY                                pmax   pmax
     comp=Z,27nm,1.5s
QIZ  Qiongzhong       79.04  71   P      P       22 34 18.5 -5.1
QIZ  Qiongzhong       79.04  71   S      S       22 44 19.0 -3.5
QIZ                                LR     LR
     comp=N,290nm,18.6s
QIZ                                LR     LR
     comp=E,380nm,18.2s
QIZ                                LR     LR
     comp=Z,140nm,22.1s
SONM Songino Array    79.15  42   P      P       22 34 25.3 +1.5
     comp=Z,1.1nm,0.4s,baz=246,slow=3.7,SNR=19
SONM                               LR     LR      23 13 34.5
     comp=Z,510nm,19.1s,baz=265,slow=39
XAN  Xi'an            79.22  56   P      P       22 34 25.0 +0.7
XAN                                pP     PcP     22 34 37.8 +5.2
XAN                                pmax   pmax
     comp=Z,7.0nm,1.4s
XAN  Xi'an            79.22  56   P      P       22 34 24.9 +0.7
XAN                                pmax   pmax
     comp=Z,7.0nm,1.4s
XAN                                LR     LR
     comp=Z,170nm,14.6s
XAN                                LR     LR
     comp=Z,200nm,15.4s
XAN                                LR     LR
     comp=Z,210nm,14.2s
ULN  Ulaanbaatar      79.59  42  eP     P       22 34 26.4 +0.2
     comp=Z,18nm,1.5s
ULN                                LR     LR
     comp=Z,400nm,20.0s
ULN  Ulaanbaatar      79.59  42ceP     P       22 34 27.4 +1.2
ULN                                pmax   pmax
     comp=Z,22nm,2.5s
BDFB Brasilia         79.75 254   P      P       22 34 27.8 +0.2
     comp=Z,1.5nm,0.5s,baz=69,slow=5.6,SNR=3.6
BDFB                               LR     LR      23 06 21.1
     comp=Z,768nm,19.0s,baz=91,slow=33
ANGG Ammassalik, Gr   79.88 337   PFAKE          22 34 40.0  +13
ANGG                               LR     LR
     comp=Z,600nm,18.0s
DAG  Danmarks Havn    79.93 350⇓iP     P       22 34 27.0 -0.2
DAG                                pmax   pmax
     comp=Z,10.0nm,1.0s
DAG  Danmarks Havn    79.93 350⇓iP     P       22 34 27.0 -0.2
     comp=Z,9.7nm,1.0s
NRS  Narsarsuaq       82.09 332   PFAKE          22 34 50.0  +11
NRS                                LR     LR
     comp=Z,700nm,18.0s
SUMG Summit           82.46 343  eP     P       22 34 41.6 +0.4
     comp=Z,20nm,1.2s
SUMG Summit           82.46 343⇓iP     P       22 34 41.6 +0.4
SUMG                               pmax   pmax
     comp=Z,53nm,1.2s
SUMG Summit           82.46 343⇓iP     P       22 34 41.6 +0.4
     comp=Z,53nm,1.2s
IVI  Ivigtut          83.42 331   PFAKE          22 35 00.0  +14
IVI                                LR     LR
     comp=Z,700nm,19.0s
WHN  Wuhan            83.58  60 ⇑P      P       22 34 49.7 +2.3
BOD  Bodaibo          85.04  32  eP     P       22 34 54.6 +0.4
BOD                                pmax   pmax
     comp=Z,56nm,1.7s
BJT  Baijiatuau       85.39  50   PFAKE          22 35 10.0  +14
BJT                                LR     LR
     comp=Z,200nm,19.0s
NJ2  Nanjing          87.46  58  eP     P       22 35 08.4 +1.7
NJ2                                pmax   pmax
     comp=Z,9.0nm,0.9s
DRLN Deer Lake        87.82 319   PFAKE          22 35 20.0  +12
DRLN                               LR     LR
     comp=Z,700nm,20.0s
HIA  Hailar           88.10  41   PFAKE          22 35 20.0  +11
HIA                                LR     LR
     comp=Z,500nm,18.0s
KAPI Kappang          88.98  95   PFAKE          22 35 30.0  +16
KAPI                               LR     LR
     comp=Z,400nm,21.0s
CPUP Villa Florida    89.08 244   P      P       22 35 14.6  0.0
     comp=Z,4.7nm,1.0s,baz=122,slow=9.5,SNR=2.9
CPUP                               LR     LR      23 13 28.4
     comp=Z,426nm,18.1s,baz=93,slow=34
PTGA Pitinga          90.90 269  eP     P       22 35 23.4 +0.1
     comp=Z,34nm,1.5s
TIXI Tiksi            91.08  18   PFAKE          22 35 30.0 +7.1
TIXI                               LR     LR
     comp=Z,300nm,20.0s
TIXI Tiksi            91.08  18ceP     P       22 35 21.7 -1.2
TIXI                               pmax   pmax
     comp=Z,5.0nm,1.3s
QSPA South Pole Qui   91.54 180  eP     P       22 35 25.8 +0.5
     comp=Z,11nm,1.0s
HAL  Halifax          92.16 315   PFAKE          22 35 40.0  +12
HAL                                LR     LR
     comp=Z,500nm,19.0s
CN2  Changchun        92.24  46  eP     P       22 35 29.1 +0.2
YAK  Yakutsk          92.79  28   PFAKE          22 35 40.0 +9.0
YAK                                LR     LR
     comp=Z,199nm,20.0s
YAK  Yakutsk          92.79  28  eP     P       22 35 30.1 -0.9
YAK                               e*PP    sP      22 35 38.6 -0.3
YAK                               e               22 39 13.4
YAK                               ePPP    PPP     22 41 11.9
YAK                               eS      SKSac   22 46 00.1 -3.8
YAK                               e               22 46 34.0
YAK                               eSS     SS      22 52 45.2 -3.0
YAK                               eSSS    SSS     22 56 26.9
LMN  Caledonia Moun   92.91 316   PFAKE          22 35 40.0 +8.0
LMN                                LR     LR
     comp=Z,400nm,19.0s
SCHQ Schefferville    93.24 325   LR     LR      23 16 18.2
     comp=Z,258nm,19.9s,baz=100,slow=35
SCHQ Schefferville    93.24 325   PFAKE          22 35 40.0 +6.7
SCHQ                               LR     LR
     comp=Z,400nm,22.0s
SMRT St. Maarten      93.33 288   PFAKE          22 35 50.0  +16
SMRT                               LR     LR
     comp=Z,300nm,22.0s
SABA Saba             93.50 288   PFAKE          22 35 50.0  +15
SABA                               LR     LR
     comp=Z,400nm,18.0s
BATG Bathurst New B   93.63 317   PFAKE          22 35 50.0  +15
BATG                               LR     LR
     comp=Z,600nm,19.0s
GGN  Saint George     94.41 315   PFAKE          22 35 50.0  +11
GGN                                LR     LR
     comp=Z,600nm,19.0s
KSRS Korea Array      94.66  52   LR     LR      23 23 52.3
     comp=Z,129nm,18.3s,baz=290,slow=39
EMMW East Machias     94.89 315   PFAKE          22 35 50.0 +8.9
EMMW                               LR     LR
     comp=Z,600nm,21.0s
PQI  Presque Isle     95.03 317   PFAKE          22 35 50.0 +8.3
PQI                                LR     LR
     comp=Z,400nm,20.0s
CUPR Culebra, Puert   95.41 288   PFAKE          22 35 50.0 +6.0
CUPR                               LR     LR
     comp=Z,600nm,21.0s
CBYP Canovanas        95.95 288   PFAKE          22 36 00.0  +13
CBYP                               LR     LR
     comp=Z,400nm,21.0s
PKME Peaks-Kenny Pk   96.11 316   PFAKE          22 36 00.0  +13
PKME                               LR     LR
     comp=Z,600nm,22.0s
WVL  Waterville       96.47 315   PFAKE          22 36 00.0  +12
WVL                                LR     LR
     comp=Z,700nm,20.0s
ICMP Isla Caja de M   96.61 288   PFAKE          22 36 00.0  +11
ICMP                               LR     LR
     comp=Z,600nm,22.0s
USRK Ussuriysk Ar.    96.89  45   LR     LR      23 25 37.9
     comp=Z,321nm,18.1s,baz=288,slow=39
WES  Weston           98.00 313   PFAKE          22 36 10.0  +15
WES                                LR     LR
     comp=Z,400nm,19.0s
FFD  Franklin Falls   98.06 314   PFAKE          22 36 10.0  +14
FFD                                LR     LR
     comp=Z,500nm,19.0s
LBNH Lisbon           98.13 315   PFAKE          22 36 10.0  +14
LBNH                               LR     LR
     comp=Z,300nm,20.0s
HRV  Adam Dziewonsk   98.16 313   PFAKE          22 36 10.0  +14
HRV                                LR     LR
     comp=Z,400nm,18.0s
HNH  Hanover          98.48 314   PFAKE          22 36 10.0  +13
HNH                                LR     LR
     comp=Z,300nm,20.0s
VT1  Waterbury        98.69 315   PFAKE          22 36 10.0  +12
VT1                                LR     LR
     comp=Z,500nm,20.0s
QUA2 Belchertown      98.78 313   PFAKE          22 36 10.0  +11
QUA2                               LR     LR
     comp=Z,400nm,18.0s
LPAZ La Paz           99.10 254   LR     LR      23 19 42.7
     comp=Z,306nm,18.9s,baz=88,slow=35
FRNY Flat Rock        99.18 316   PFAKE          22 36 10.0  +10
FRNY                               LR     LR
     comp=Z,500nm,21.0s
TRY  Troy             99.65 314   PFAKE          22 36 10.0 +7.4
TRY                                LR     LR
     comp=Z,300nm,19.0s
PLCA Paso Flores      99.67 229   LR     LR      23 14 55.4
     comp=Z,223nm,21.6s,baz=100,slow=32
VNDA Vanda            99.68 170   LR     LR      23 20 38.6
     comp=Z,448nm,19.1s,baz=226,slow=35
KSCT Kent School, K   99.71 313   PFAKE          22 36 10.0 +7.1
KSCT                               LR     LR
     comp=Z,500nm,20.0s
SDD  Santo Domingo    99.78 289   PFAKE          22 36 10.0 +6.3
SDD                                LR     LR
     comp=Z,800nm,19.0s
NCB  Newcomb          99.80 315   PFAKE          22 36 10.0 +6.7
NCB                                LR     LR
     comp=Z,200nm,18.0s
LONY Lake Ozonia      99.92 316   PFAKE          22 36 10.0 +6.2
LONY                               LR     LR
     comp=Z,400nm,20.0s
PAL  Palisades       100.16 312   PFAKE          22 36 20.0  +15
PAL                                LR     LR
     comp=Z,300nm,21.0s
ODNJ Ogdensburg      100.66 312   PFAKE          22 36 20.0  +13
ODNJ                               LR     LR
     comp=Z,300nm,20.0s
BRNJ Basking Ridge   100.71 312   PFAKE          22 36 20.0  +13
BRNJ                               LR     LR
     comp=Z,400nm,20.0s
VLDQ Val d'Or        101.04 320   PFAKE          22 36 20.0  +11
VLDQ                               LR     LR
     comp=Z,300nm,20.0s
KSPA Keystone Colle  101.42 313   PFAKE          22 36 20.0 +9.5
KSPA                               LR     LR
     comp=Z,400nm,20.0s
BINY Binghamton      101.44 313   PFAKE          22 36 20.0 +9.4
BINY                               LR     LR
     comp=Z,400nm,21.0s
D53A Lac Vacive, Po  101.47 319   PFAKE          22 36 20.0 +9.4
D53A                               LR     LR
     comp=Z,400nm,18.0s
N59A State Game Lan  101.55 312   PFAKE          22 36 20.0 +8.8
N59A                               LR     LR
     comp=Z,400nm,21.0s
PLVO Plevna          101.56 317   PFAKE          22 36 20.0 +9.0
PLVO                               LR     LR
     comp=Z,600nm,21.0s
PAGS Pennsylvania G  102.41 312   PFAKE          22 36 30.0  +15
PAGS                               LR     LR
     comp=Z,400nm,20.0s
J55A Hilton          102.50 315   PFAKE          22 36 30.0  +15
J55A                               LR     LR
     comp=Z,500nm,18.0s
ASAR Alice Springs   102.51 114   P      Pdif    22 36 17.7 +1.9
     comp=Z,0.3nm,0.7s,baz=276,slow=4.0,SNR=3.1
AS31 Alice Springs   102.51 114  ePdif   Pdif    22 36 17.7 +1.9
MMNY Mt. Morris Dam  102.70 314   PFAKE          22 36 30.0  +14
MMNY                               LR     LR
     comp=Z,300nm,20.0s
MEDO Medina          102.98 315   PFAKE          22 36 30.0  +13
MEDO                               LR     LR
     comp=Z,400nm,19.0s
U61A Possum Corner   103.02 308   PFAKE          22 36 30.0  +12
U61A                               LR     LR
     comp=Z,500nm,20.0s
SADO Sadowa          103.04 317   PFAKE          22 36 30.0  +12
SADO                               LR     LR
     comp=Z,500nm,20.0s
T60A Surry           103.08 309   PFAKE          22 36 30.0  +12
T60A                               LR     LR
     comp=Z,500nm,20.0s
J54A Appleton        103.08 315   PFAKE          22 36 30.0  +12
J54A                               LR     LR
     comp=Z,300nm,20.0s
SSPA Standing Stone  103.18 312   PFAKE          22 36 30.0  +12
SSPA                               LR     LR
     comp=Z,400nm,20.0s
V61A Roper           103.23 307   PFAKE          22 36 30.0  +11
V61A                               LR     LR
     comp=Z,500nm,20.0s
MA2  Magadan         103.34  27   PFAKE          22 36 30.0  +11
MA2                                LR     LR
     comp=Z,500nm,20.0s
CBN  Corbin Frederi  103.35 310   PFAKE          22 36 30.0  +11
CBN                                LR     LR
     comp=Z,400nm,20.0s
T59A Double "B" Far  103.76 309   PFAKE          22 36 30.0 +9.0
T59A                               LR     LR
     comp=Z,500nm,19.0s
V60A Jim Taylor Roa  103.78 307   PFAKE          22 36 30.0 +8.9
V60A                               LR     LR
     comp=Z,500nm,21.0s
R58B Mineral         103.79 310   PFAKE          22 36 30.0 +8.9
R58B                               LR     LR
     comp=Z,600nm,20.0s
N55A Marion Center   103.96 313   PFAKE          22 36 30.0 +8.1
N55A                               LR     LR
     comp=Z,400nm,20.0s
S58A Poland Farm, P  104.00 309   PFAKE          22 36 30.0 +7.9
S58A                               LR     LR
     comp=Z,500nm,19.0s
U59A Littleton       104.08 308   PFAKE          22 36 30.0 +7.6
U59A                               LR     LR
     comp=Z,500nm,19.0s
M54A Oil Creek Stat  104.27 313   PFAKE          22 36 30.0 +6.8
M54A                               LR     LR
     comp=Z,400nm,20.0s
N54A Moraine State   104.65 313   PFAKE          22 36 40.0  +15
N54A                               LR     LR
     comp=Z,400nm,19.0s
S57A Dark Hollow, R  104.67 310   PFAKE          22 36 40.0  +15
S57A                               LR     LR
     comp=Z,500nm,19.0s
MCWV Mont Chateau    104.88 312   PFAKE          22 36 40.0  +14
MCWV                               LR     LR
     comp=Z,200nm,20.0s
Y60A Bolivia         104.92 306   PFAKE          22 36 40.0  +14
Y60A                               LR     LR
     comp=Z,500nm,21.0s
T57A Hurt            105.08 309   PFAKE          22 36 40.0  +13
T57A                               LR     LR
     comp=Z,300nm,20.0s
N53A Lisbon          105.31 313   PFAKE          22 40 50.0 +8.1
N53A                               LR     LR
     comp=Z,400nm,20.0s
R55A Marlinton       105.43 310   PFAKE          22 40 50.0 +7.7
R55A                               LR     LR
     comp=Z,500nm,19.0s
M52A Chesterland     105.48 314   PFAKE          22 40 50.0 +7.8
M52A                               LR     LR
     comp=Z,300nm,19.0s
X58A Rowland         105.71 306   PFAKE          22 40 50.0 +7.2
X58A                               LR     LR
     comp=Z,400nm,20.0s
Q54A Coxs Mills      105.79 311   PFAKE          22 40 50.0 +7.2
Q54A                               LR     LR
     comp=Z,400nm,20.0s
I49A Point Hope      105.81 317   PFAKE          22 40 50.0 +7.3
I49A                               LR     LR
     comp=Z,400nm,19.0s
H48A Harrisville     105.92 317   PFAKE          22 40 50.0 +7.1
H48A                               LR     LR
     comp=Z,400nm,21.0s
BLA  Blacksburg      105.93 309   PFAKE          22 40 50.0 +6.8
BLA                                LR     LR
     comp=Z,300nm,19.0s
E46A Sault Ste Mari  106.02 319   PFAKE          22 40 50.0 +7.0
E46A                               LR     LR
     comp=Z,500nm,20.0s
K50A Casco           106.03 315   PFAKE          22 40 50.0 +6.9
K50A                               LR     LR
     comp=Z,600nm,19.0s
FCC  Fort Churchill  106.04 334   PFAKE          22 40 50.0 +7.4
FCC                                LR     LR
     comp=Z,500nm,21.0s
P53A Whipple         106.08 312   PFAKE          22 40 50.0 +6.7
P53A                               LR     LR
     comp=Z,400nm,20.0s
W57A Gilead          106.09 307   PFAKE          22 40 50.0 +6.5
W57A                               LR     LR
     comp=Z,400nm,20.0s
Y58A Scranton        106.12 306   PFAKE          22 40 50.0 +6.5
Y58A                               LR     LR
     comp=Z,400nm,20.0s
O52A Adamsville      106.23 313   PFAKE          22 40 50.0 +6.4
O52A                               LR     LR
     comp=Z,400nm,21.0s
V56A Mocksville      106.33 308   PFAKE          22 41 00.0  +16
V56A                               LR     LR
     comp=Z,400nm,20.0s
N51A Ashland         106.40 313   PFAKE          22 41 00.0  +16
N51A                               LR     LR
     comp=Z,500nm,18.0s
BIRD Birdtown, Kers  106.59 307   PFAKE          22 41 00.0  +16
BIRD                               LR     LR
     comp=Z,400nm,20.0s
J48A Bridge Port     106.68 316   PFAKE          22 40 50.0 +5.7
J48A                               LR     LR
     comp=Z,400nm,18.0s
Y57A Sumter          106.68 306   PFAKE          22 41 00.0  +15
Y57A                               LR     LR
     comp=Z,400nm,21.0s
M50A Fremont         106.74 314   PFAKE          22 41 00.0  +16
M50A                               LR     LR
     comp=Z,300nm,19.0s
GLMI Grayling        106.74 318   PFAKE          22 41 00.0  +16
GLMI                               LR     LR
     comp=Z,500nm,22.0s
R53A Hurricane       106.81 311   PFAKE          22 41 00.0  +15
R53A                               LR     LR
     comp=Z,500nm,20.0s
AAM  Ann Arbor       106.90 315   PFAKE          22 41 00.0  +15
AAM                                LR     LR
     comp=Z,500nm,20.0s
I47A Gladwin         106.94 317   PFAKE          22 41 00.0  +15
I47A                               LR     LR
     comp=Z,400nm,19.0s
ACSO Alum Creek Sta  107.04 313   PFAKE          22 41 00.0  +15
ACSO                               LR     LR
     comp=Z,400nm,19.0s
KMSC Kings Mountain  107.16 307   PFAKE          22 41 00.0  +15
KMSC                               LR     LR
     comp=Z,400nm,20.0s
U54A Nelsons Funny   107.19 309   PFAKE          22 41 00.0  +14
U54A                               LR     LR
     comp=Z,300nm,20.0s
JSC  Jenkinsville    107.31 307   PFAKE          22 41 00.0  +14
JSC                                LR     LR
     comp=Z,300nm,20.0s
P51A Williamsport    107.32 312   PFAKE          22 41 00.0  +14
P51A                               LR     LR
     comp=Z,500nm,18.0s
G45A Suttons Bay     107.36 318   PFAKE          22 41 00.0  +14
G45A                               LR     LR
     comp=Z,500nm,20.0s
J47A Sunmer          107.41 316   PFAKE          22 41 00.0  +14
J47A                               LR     LR
     comp=Z,400nm,20.0s
PAULI Pauline        107.62 307   PFAKE          22 41 00.0  +14
PAULI                              LR     LR
     comp=Z,400nm,19.0s
Z56A Williston       107.63 306   PFAKE          22 41 00.0  +14
Z56A                               LR     LR
     comp=Z,400nm,20.0s
Q51A Peebles         107.66 312   PFAKE          22 41 00.0  +14
Q51A                               LR     LR
     comp=Z,400nm,20.0s
N49A Columbus Grove  107.70 314   PFAKE          22 41 00.0  +14
N49A                               LR     LR
     comp=Z,400nm,19.0s
E43A Lone Tree Farm  107.75 320   PFAKE          22 41 00.0  +14
E43A                               LR     LR
     comp=Z,400nm,20.0s
M48A Edgerton        107.91 315   PFAKE          22 41 00.0  +13
M48A                               LR     LR
     comp=Z,400nm,20.0s
T52A Hallie          107.93 310   PFAKE          22 41 00.0  +13
T52A                               LR     LR
     comp=Z,400nm,19.0s
O49A Covington       108.04 313   PFAKE          22 41 00.0  +13
O49A                               LR     LR
     comp=Z,400nm,18.0s
I45A Fountain        108.10 318   PFAKE          22 41 00.0  +13
I45A                               LR     LR
     comp=Z,400nm,22.0s
V53A Saluda          108.19 308   PFAKE          22 41 00.0  +13
V53A                               LR     LR
     comp=Z,400nm,20.0s
S51A Beattyville     108.25 310   PFAKE          22 41 00.0  +13
S51A                               LR     LR
     comp=Z,400nm,20.0s
J45A Montague        108.42 317   PFAKE          22 41 00.0  +12
J45A                               LR     LR
     comp=Z,7µm,21.0s
BG3  Lake Jocassee   108.47 308   PFAKE          22 41 00.0  +12
BG3                                LR     LR
     comp=Z,300nm,20.0s
D41A Chassel         108.49 321   PFAKE          22 41 00.0  +12
D41A                               LR     LR
     comp=Z,400nm,22.0s
TZTN Tazewell        108.53 309   PFAKE          22 41 00.0  +12
TZTN                               LR     LR
     comp=Z,400nm,20.0s
R50A Paris           108.62 311   PFAKE          22 41 00.0  +12
R50A                               LR     LR
     comp=Z,500nm,20.0s
V52A Sevierville     108.76 309   PFAKE          22 41 00.0  +12
V52A                               LR     LR
     comp=Z,400nm,20.0s
L46A Eue Claire      108.85 316   PFAKE          22 41 00.0  +12
L46A                               LR     LR
     comp=Z,400nm,20.0s
DWPF Disney Wildern  108.87 300   PFAKE          22 41 00.0  +11
DWPF                               LR     LR
     comp=Z,700nm,20.0s
H43A Windswept, Lux  108.97 318   PFAKE          22 41 00.0  +11
H43A                               LR     LR
     comp=Z,500nm,20.0s
P48A Milroy          109.07 313   PFAKE          22 41 00.0  +11
P48A                               LR     LR
     comp=Z,400nm,20.0s
M46A Old House Fiel  109.09 315   PFAKE          22 41 00.0  +11
M46A                               LR     LR
     comp=Z,400nm,20.0s
154A Montrose        109.22 305   PFAKE          22 41 00.0  +11
154A                               LR     LR
     comp=Z,400nm,20.0s
W52A Murphy          109.23 308   PFAKE          22 41 00.0  +11
W52A                               LR     LR
     comp=Z,500nm,21.0s
COWI Conover         109.23 320   PFAKE          22 41 00.0  +11
COWI                               LR     LR
     comp=Z,500nm,18.0s
R49A Shelbyville     109.25 312   PFAKE          22 41 00.0  +11
R49A                               LR     LR
     comp=Z,600nm,20.0s
GOGA Godfrey         109.31 306   PFAKE          22 41 00.0  +10
GOGA                               LR     LR
     comp=Z,400nm,22.0s
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V51A  Loudon           109.36 309  PFAKE                 22 41 00.0  +10
V51A                               LR         LR
      comp=Z,400nm,21.0s
INK   Inuvik           109.49 354  PFAKE                 22 41 00.0  +11
INK                                LR         LR
      comp=Z,300nm,22.0s
656A  Willston         109.53 302  PFAKE                 22 41 00.0  +10
656A                               LR         LR
      comp=Z,700nm,20.0s
CPCT  Cooper Cave      109.59 308  PFAKE                 22 41 00.0  +10
CPCT                               LR         LR
      comp=Z,400nm,20.0s
Y52A  Lilburn          109.67 307  PFAKE                 22 41 00.0  +10
Y52A                               LR         LR
      comp=Z,400nm,20.0s
555A  McAlpin          109.72 303  PFAKE                 22 41 00.0  +10
555A                               LR         LR
      comp=Z,600nm,19.0s
PEA0B Petropavlovsk-   109.87  31  PFAKE                 22 41 00.0  +10
PEA0B                              LR         LR
      comp=Z,200nm,20.0s
T49A  Edmonton         109.88 310  PFAKE                 22 41 00.0 +9.5
T49A                               LR         LR
      comp=Z,400nm,19.0s
EYMN  Ely              109.92 323  PFAKE                 22 41 00.0  +10
EYMN                               LR         LR
      comp=Z,300nm,21.0s
I42A  Draeger Farm,    109.95 318  PFAKE                 22 41 00.0  +10
I42A                               LR         LR
      comp=Z,500nm,21.0s
BLO   Bloomington      109.97 313  PFAKE                 22 41 00.0 +9.4
BLO                                LR         LR
      comp=Z,500nm,20.0s
SFIN  Lafayette        109.98 314  PFAKE                 22 41 00.0 +9.4
SFIN                               LR         LR
      comp=Z,300nm,20.0s
K43A  Burlington       110.01 317  PFAKE                 22 41 00.0 +9.4
K43A                               LR         LR
      comp=Z,500nm,19.0s
WCI   Wyandotte Cave   110.10 312  PFAKE                 22 41 00.0 +9.1
WCI                                LR         LR
      comp=Z,600nm,19.0s
X51A  Calhoun          110.11 308  PFAKE                 22 41 00.0 +9.0
X51A                               LR         LR
      comp=Z,300nm,19.0s
253A  Americus         110.20 305  PFAKE                 22 41 00.0 +8.7
253A                               LR         LR
      comp=Z,500nm,21.0s
G40A  Rib Lake         110.25 320  PFAKE                 22 41 00.0 +9.0
G40A                               LR         LR
      comp=Z,300nm,22.0s
W50A  Signal Mountai   110.28 308  PFAKE                 22 41 00.0 +8.6
W50A                               LR         LR
      comp=Z,500nm,20.0s
M44A  Midewin, Midew   110.29 315  PFAKE                 22 41 00.0 +8.8
M44A                               LR         LR
      comp=Z,500nm,19.0s
PET   Petropavlovsk    110.41  31  PFAKE                 22 41 00.0 +9.0
PET                                LR         LR
      comp=Z,200nm,22.0s
152A  Waverly Hall     110.52 306  PFAKE                 22 41 00.0 +8.1
152A                               LR         LR
      comp=Z,400nm,20.0s
I41A  Arkdale          110.52 319  PFAKE                 22 41 00.0 +8.5
I41A                               LR         LR
      comp=Z,400nm,21.0s
E38A  The Farm, Brul   110.54 322  PFAKE                 22 41 00.0 +8.5
E38A                               LR         LR
      comp=Z,400nm,19.0s
453A  Whigham          110.67 304  PFAKE                 22 41 00.0 +7.8
453A                               LR         LR
      comp=Z,700nm,20.0s
P45A  Graceland, Par   110.74 313  PFAKE                 22 41 00.0 +8.0
P45A                               LR         LR
      comp=Z,300nm,21.0s
SWET  Sewanee          110.76 309  PFAKE                 22 41 00.0 +7.7
SWET                               LR         LR
      comp=Z,400nm,20.0s
CLTN  Cedars of Leba   110.81 310  PFAKE                 22 41 00.0 +7.7
CLTN                               LR         LR
      comp=Z,300nm,19.0s
YKW3  Yellowknife Ar   111.01 344  PFAKE                 22 41 00.0 +8.1
YKW3                               LR         LR
      comp=Z,300nm,20.0s
T47A  Sharon Grove     111.11 311  PFAKE                 22 41 00.0 +7.2
T47A                               LR         LR
      comp=Z,400nm,20.0s
L42A  Oliver, Polo     111.19 317  PFAKE                 22 41 00.0 +7.2
L42A                               LR         LR
      comp=Z,400nm,19.0s
USIN  University of    111.21 312  PFAKE                 22 41 00.0 +7.0
USIN                               LR         LR
      comp=Z,500nm,20.0s
JFWS  Jewell Farm      111.23 318  PFAKE                 22 41 00.0 +7.1
JFWS                               LR         LR
      comp=Z,300nm,20.0s
OLIL  Olney            111.27 313  PFAKE                 22 41 00.0 +6.9
OLIL                               LR         LR
      comp=Z,500nm,20.0s
V48A  Smith Brothers   111.29 309  PFAKE                 22 41 00.0 +6.8
V48A                               LR         LR
      comp=Z,500nm,18.0s
Z50A  Ashland          111.33 307  PFAKE                 22 41 00.0 +6.6
Z50A                               LR         LR
      comp=Z,300nm,18.0s
ULM   Lac du Bonnet    111.36 326  PFAKE                 22 41 00.0 +7.1
ULM                                LR         LR
      comp=Z,400nm,20.0s
HDIL  Hopedale         111.48 315  PFAKE                 22 41 00.0 +6.6
HDIL                               LR         LR
      comp=Z,400nm,19.0s
Y49A  Blount Mountai   111.55 307  PFAKE                 22 41 10.0  +16
Y49A                               LR         LR
      comp=Z,300nm,19.0s
X48A  Hartselle        111.87 308  PFAKE                 22 41 10.0  +16
X48A                               LR         LR
      comp=Z,400nm,19.0s
FFC   Flin Flon        111.92 333  PFAKE                 22 41 10.0  +16
FFC                                LR         LR
      comp=Z,3µm,19.0s
SPMN  Marine on St.    111.93 321  PFAKE                 22 41 10.0  +16
SPMN                               LR         LR
      comp=Z,400nm,20.0s
WVT   Waverly          111.94 310  PFAKE                 22 41 10.0  +16
WVT                                LR         LR
      comp=Z,500nm,20.0s
250A  Grady            111.97 305  PFAKE                 22 41 10.0  +15
250A                               LR         LR
      comp=Z,400nm,20.0s
L40A  Anamosa          112.23 317  PFAKE                 22 41 10.0  +15
L40A                               LR         LR
      comp=Z,400nm,20.0s
LRAL  Lakeview Retre   112.26 307  PFAKE                 22 41 10.0  +15
LRAL                               LR         LR
      comp=Z,300nm,18.0s
T45A  Paducah          112.27 311  PFAKE                 22 41 10.0  +15
T45A                               LR         LR
      comp=Z,500nm,20.0s
AGMN  Agassiz Nation   112.34 325  PFAKE                 22 41 10.0  +15
AGMN                               LR         LR
      comp=Z,300nm,18.0s
PLAL  Pickwick Lake    112.51 309  PFAKE                 22 41 10.0  +14
PLAL                               LR         LR
      comp=Z,600nm,22.0s
N41A  Harden Midland   112.52 316  PFAKE                 22 41 10.0  +15
N41A                               LR         LR
      comp=Z,400nm,21.0s
SLM   Saint Louis      112.87 313  PFAKE                 22 41 10.0  +14
SLM                                LR         LR
      comp=Z,500nm,21.0s
PRP   Porcupine Dome   113.07 358  PFAKE                 22 41 10.0  +14
PRP                                LR         LR
      comp=Z,200nm,19.0s
SARN  Sarigan          113.29  71  PFAKE                 22 41 10.0  +12
SARN                               LR         LR
      comp=Z,800nm,19.0s
147A  Livingston       113.39 307  PFAKE                 22 41 10.0  +13
147A                               LR         LR
      comp=Z,6938µm,20.0s
MLY   Manley           113.60   1  PFAKE                 22 41 10.0  +13
MLY                                LR         LR
      comp=Z,200nm,19.0s
SCIA  State Center     113.65 318  PFAKE                 22 41 10.0  +12
SCIA                               LR         LR
      comp=Z,400nm,21.0s
GNAR  Gosnell          113.67 311  PFAKE                 22 41 10.0  +12
GNAR                               LR         LR
      comp=Z,500nm,19.0s
PBMO  Poplar Bluff     113.69 312  PFAKE                 22 41 10.0  +12
PBMO                               LR         LR
      comp=Z,500nm,19.0s
OXF   Oxford           113.70 309  PFAKE                 22 41 10.0  +12
OXF                                LR         LR
      comp=Z,400nm,20.0s
COLA  College          113.76 359  PFAKE                 22 41 10.0  +13
COLA                               LR         LR
      comp=Z,200nm,22.0s
CCM   Cathedral Cave   113.82 313  PFAKE                 22 41 10.0  +12
CCM                                LR         LR
      comp=Z,500nm,20.0s
ILAR  Eielson Array    113.85 359  PKiKP      PKiKP      22 40 57.0 -0.3
      comp=Z,0.4nm,0.6s,baz=316,slow=2.7,SNR=4.3
ILAR                               PP         PP         22 41 49.6 -0.2
      comp=Z,0.3nm,0.6s,baz=11,slow=4.6,SNR=6.1
ILAR  Eielson Array    113.85 359 i PKIKP     PKiKP      22 40 57.0 -0.3
HBAR  Harrisburg       114.30 310  PFAKE                 22 41 10.0  +11
HBAR                               LR         LR
      comp=Z,500nm,20.0s
MDND  Maddock          114.71 326  PFAKE                 22 41 10.0  +11
MDND                               LR         LR
      comp=Z,400nm,20.0s
X43A  Marvell          114.84 309  PFAKE                 22 41 10.0  +10
X43A                               LR         LR
      comp=Z,500nm,19.0s
ECSD  EROS Data Cent   115.04 321  PFAKE                 22 41 10.0  +10
ECSD                               LR         LR
      comp=Z,300nm,19.0s
CAST  Castle Rocks     115.19   1  PFAKE                 22 41 10.0  +10
CAST                               LR         LR
      comp=Z,300nm,22.0s
FCAR  Ozark Folk Cen   115.29 311  PFAKE                 22 41 10.0 +9.2
FCAR                               LR         LR
      comp=Z,500nm,20.0s
VBMS  Vicksburg        115.33 307  PFAKE                 22 41 10.0 +9.0
VBMS                               LR         LR
      comp=Z,400nm,21.0s
DHY   Denali Highway   115.56 359  PFAKE                 22 41 10.0 +9.2
DHY                                LR         LR
      comp=Z,200nm,20.0s
WHAR  Wooly Hollow     115.64 311  PFAKE                 22 41 10.0 +8.5
WHAR                               LR         LR
      comp=Z,400nm,20.0s
W41B  Gary Mavity, V   115.65 310  PFAKE                 22 41 10.0 +8.5
W41B                               LR         LR
      comp=Z,400nm,20.0s
CCAR  Cane Creek       115.74 309  PFAKE                 22 41 10.0 +8.2
CCAR                               LR         LR
      comp=Z,500nm,20.0s
UALR  University of    115.87 310  PFAKE                 22 41 10.0 +8.0
UALR                               LR         LR
      comp=Z,500nm,20.0s
X40A  Basin Creek Fa   116.35 310  PFAKE                 22 41 10.0 +7.1
X40A                               LR         LR
      comp=Z,600nm,21.0s
HHAR  Hobbs            116.49 312  PFAKE                 22 41 10.0 +6.8
HHAR                               LR         LR
      comp=Z,400nm,20.0s
Z41A  Richland Creek   116.78 309  PFAKE                 22 41 20.0  +16
Z41A                               LR         LR
      comp=Z,500nm,19.0s
W39A  Magazine         116.80 311  PFAKE                 22 41 20.0  +16
W39A                               LR         LR
      comp=Z,400nm,19.0s
SCM   Sheep Creek Mo   116.81 359  PFAKE                 22 41 10.0 +6.9
SCM                                LR         LR
      comp=Z,200nm,19.0s
SML   Sawmill          116.84 360  PFAKE                 22 41 10.0 +6.8
SML                                LR         LR
      comp=Z,200nm,20.0s
DGMT  Dagmar           116.85 328  PFAKE                 22 41 10.0 +6.5
DGMT                               LR         LR
      comp=Z,300nm,21.0s
TGUH  Tegucigalpa,Un   116.86 286  PFAKE                 22 41 20.0  +15
TGUH                               LR         LR
      comp=Z,300nm,19.0s
WLAR  White Oak Lake   116.86 309  PFAKE                 22 41 20.0  +16
WLAR                               LR         LR
      comp=Z,400nm,19.0s
MIAR  Mount Ida        116.90 310  PFAKE                 22 41 20.0  +16
MIAR                               LR         LR
      comp=Z,500nm,20.0s
BGNE  Belgrade         117.16 319  PFAKE                 22 41 20.0  +16
BGNE                               LR         LR
      comp=Z,300nm,19.0s
KNK   Knik Glacier     117.24 360  PFAKE                 22 41 20.0  +16
KNK                                LR         LR
      comp=Z,200nm,18.0s
CSGN  Cosiguina Volc   117.30 285  PFAKE                 22 41 20.0  +15
CSGN                               LR         LR
      comp=Z,100nm,20.0s
RC01  Rabbit Creek A   117.56   0  PFAKE                 22 41 20.0  +15
RC01                               LR         LR
      comp=Z,200nm,22.0s
MYIG  Mrida            117.84 295  PFAKE                 22 41 20.0  +14
MYIG                               LR         LR
      comp=Z,300nm,20.0s
TUL1  Leonard          118.01 313  PFAKE                 22 41 20.0  +14
TUL1                               LR         LR
      comp=Z,500nm,18.0s
X37A  Clayton          118.24 311  PFAKE                 22 41 20.0  +13
X37A                               LR         LR
      comp=Z,600nm,20.0s
NATX  Nacogdoches      118.79 308  PFAKE                 22 41 20.0  +12
NATX                               LR         LR
      comp=Z,400nm,20.0s
LAO   LASA Array       119.03 328  PFAKE                 22 41 20.0  +12
LAO                                LR         LR
      comp=Z,500nm,22.0s
JIS   Juneau Island    119.25 351  PFAKE                 22 41 20.0  +12
JIS                                LR         LR
      comp=Z,300nm,21.0s
RSSD  Black Hills      119.36 324  PFAKE                 22 41 20.0  +11
RSSD                               LR         LR
      comp=Z,300nm,18.0s
OGNE  Ogallala         119.92 320  PFAKE                 22 41 20.0  +10
OGNE                               LR         LR
      comp=Z,400nm,18.0s
U32A  Winter Ranch,    120.14 314  PFAKE                 22 41 20.0  +10
U32A                               LR         LR
      comp=Z,500nm,20.0s
HKT   Hockley          120.40 306  PFAKE                 22 41 20.0 +9.2
HKT                                LR         LR
      comp=Z,400nm,21.0s
WMOK  Wichita Mounta   120.72 313  PFAKE                 22 41 20.0 +8.5
WMOK                               LR         LR
      comp=Z,300nm,19.0s
WHTX  Lake Whitney,    120.89 309  PFAKE                 22 41 20.0 +8.1
WHTX                               LR         LR
      comp=Z,500nm,19.0s
WALA  Waterton Lakes   121.18 334  PFAKE                 22 41 20.0 +7.9
WALA                               LR         LR
      comp=Z,400nm,21.0s
KSCO  Kaye Shedlock'   121.33 319  PFAKE                 22 41 20.0 +7.3
KSCO                               LR         LR
      comp=Z,300nm,19.0s
435B  Jarrell          121.47 308  PFAKE                 22 41 20.0 +6.9
435B                               LR         LR
      comp=Z,500nm,19.0s
RLMT  Red Lodge        121.67 328  PFAKE                 22 41 20.0 +6.7
RLMT                               LR         LR
      comp=Z,400nm,19.0s
K22A  Casper           121.70 324  PFAKE                 22 41 20.0 +6.6
K22A                               LR         LR
      comp=Z,400nm,22.0s
PHWY  Pilot Hill       121.86 322  PFAKE                 22 41 30.0  +16
PHWY                               LR         LR
      comp=Z,300nm,22.0s
N23A  Red Feather La   122.40 322  PFAKE                 22 41 30.0  +15
N23A                               LR         LR
      comp=Z,300nm,18.0s
BOZ   Bozeman (W)      122.58 330  PFAKE                 22 41 30.0  +15
BOZ                                LR         LR
      comp=Z,300nm,20.0s
LKWY  Lake             122.64 328  PFAKE                 22 41 30.0  +15
LKWY                               LR         LR
      comp=Z,600nm,20.0s
RWWY  Rawlins          122.69 324  PFAKE                 22 41 30.0  +15
RWWY                               LR         LR
      comp=Z,400nm,19.0s
AMTX  Amarillo         122.77 314  PFAKE                 22 41 30.0  +14
AMTX                               LR         LR
      comp=Z,400nm,18.0s
ISCO  Idaho Springs    122.83 321  PFAKE                 22 41 30.0  +14
ISCO                               LR         LR
      comp=Z,300nm,18.0s
H17A  Grant Village    122.85 328  PFAKE                 22 41 30.0  +14
H17A                               LR         LR
      comp=Z,600nm,19.0s
Q24A  Divide           123.00 320  PFAKE                 22 41 30.0  +14
Q24A                               LR         LR
      comp=Z,300nm,20.0s
FLWY  Flagg Ranch      123.12 328  PFAKE                 22 41 30.0  +14
FLWY                               LR         LR
      comp=Z,400nm,20.0s
DLMT  Dillon           123.22 330  PFAKE                 22 41 30.0  +14
DLMT                               LR         LR
      comp=Z,400nm,21.0s
JCT   Junction City    123.34 308  PFAKE                 22 41 30.0  +13
JCT                                LR         LR
      comp=Z,400nm,20.0s
BW06  Boulder Array    123.37 326  PFAKE                 22 41 30.0  +13
BW06                               LR         LR
      comp=Z,500nm,21.0s
PDAR  Pinedale Array   123.37 326  PKP        PKPdf      22 41 15.3 -1.2
      comp=Z,0.6nm,0.5s,baz=131,slow=4.1,SNR=4.6
MOOW  Moose Ponds      123.37 327  PFAKE                 22 41 30.0  +13
MOOW                               LR         LR
      comp=Z,400nm,19.0s
IMW   Indian Meadow    123.38 328  PFAKE                 22 41 30.0  +13
IMW                                LR         LR
      comp=Z,400nm,21.0s
T25A  Trinidad         123.52 318  PFAKE                 22 41 30.0  +13
T25A                               LR         LR
      comp=Z,400nm,19.0s
SNOW  Snow King Moun   123.57 327  PFAKE                 22 41 30.0  +13
SNOW                               LR         LR
      comp=Z,400nm,20.0s
FXWY  Fox Creek        123.60 327 ePKPdf      PKiKP      22 41 18.0 +0.8
TPAW  Teton Pass       123.66 327  PFAKE                 22 41 30.0  +13
TPAW                               LR         LR
      comp=Z,400nm,22.0s
833A  Chaparral WMA,   123.89 306  PFAKE                 22 41 30.0  +12
833A                               LR         LR
      comp=Z,300nm,18.0s
SDCO  Great Sand Dun   123.91 319 ePKPdf      PKPdf      22 41 17.4 -0.4
SDCO                               LR         LR
      comp=Z,300nm,22.0s
MSTX  Muleshoe         124.00 314  PFAKE                 22 41 30.0  +12
MSTX                               LR         LR
      comp=Z,500nm,21.0s
SMCO  Snowmass         124.04 321  PFAKE                 22 41 30.0  +12
SMCO                               LR         LR
      comp=Z,300nm,21.0s
AHID  Auburn Hatcher   124.22 327  PFAKE                 22 41 30.0  +12
AHID                               LR         LR
      comp=Z,500nm,20.0s
S22A  4UR Ranch, Cre   124.78 320  PFAKE                 22 41 30.0  +10
S22A                               LR         LR
      comp=Z,300nm,18.0s
E09A  Wood Farm, Sta   124.97 334  PFAKE                 22 41 30.0  +11
E09A                               LR         LR
      comp=Z,300nm,18.0s
F10A  Beach Ranch, E   124.98 333  PFAKE                 22 41 30.0  +10
F10A                               LR         LR
      comp=Z,300nm,21.0s
LNIG  Linares          125.25 302  PFAKE                 22 41 30.0 +9.3
LNIG                               LR         LR
      comp=Z,200nm,20.0s
HWUT  Hardware Ranch   125.25 326  PFAKE                 22 41 30.0  +10
HWUT                               LR         LR
      comp=Z,300nm,22.0s
HLID  Hailey           125.42 330  PFAKE                 22 41 30.0 +9.3
HLID                               LR         LR
      comp=Z,400nm,19.0s
HAWA  Hanford          125.65 335  PFAKE                 22 41 30.0 +9.1
HAWA                               LR         LR
      comp=Z,300nm,20.0s
PV01  Paradox Valley   125.67 321  PFAKE                 22 41 30.0 +8.5
PV01                               LR         LR
      comp=Z,300nm,18.0s
PV04  Paradox Valley   125.72 321  PFAKE                 22 41 30.0 +8.5
PV04                               LR         LR
      comp=Z,500nm,21.0s
PV23  Carpenter Ridg   125.75 321  PFAKE                 22 41 30.0 +8.3
PV23                               LR         LR
      comp=Z,700nm,20.0s
PV11  David Mesa, Pa   125.76 321  PFAKE                 22 41 30.0 +8.4
PV11                               LR         LR
      comp=Z,300nm,19.0s
PV14  Lion Creek, Pa   125.81 321  PFAKE                 22 41 30.0 +8.3
PV14                               LR         LR
      comp=Z,400nm,22.0s
PV13  Radium Mtn., P   125.81 321  PFAKE                 22 41 30.0 +8.3
PV13                               LR         LR
      comp=Z,400nm,20.0s
PV18  Skein Mesa, Pa   125.81 321  PFAKE                 22 41 30.0 +8.3
PV18                               LR         LR
      comp=Z,300nm,19.0s
PV19  Morning Glory    125.82 321  PFAKE                 22 41 30.0 +8.3
PV19                               LR         LR
      comp=Z,300nm,20.0s
BMO   Blue Mountains   125.87 332  PFAKE                 22 41 30.0 +8.5
BMO                                LR         LR
      comp=Z,300nm,20.0s
ANMO  Albuquerque      126.10 316  PFAKE                 22 41 30.0 +7.6
ANMO                               LR         LR
      comp=Z,500nm,19.0s
MVCO  Mesa Verde       126.17 320  PFAKE                 22 41 30.0 +7.5
MVCO                               LR         LR
      comp=Z,300nm,20.0s
G08A  Pilot Rock       126.28 334 ePKPdf      PKiKP      22 41 23.2 +0.9
G08A                               LR         LR
      comp=Z,400nm,18.0s
LON   Longmire         126.29 337  PFAKE                 22 41 30.0 +7.8
LON                                LR         LR
      comp=Z,300nm,19.0s
TXAR  Lajitas Array    126.86 309  PKP        PKiKP      22 41 24.1 +0.2
      comp=Z,1.0nm,0.7s,baz=98,slow=3.1,SNR=17
Y22D  IRIS PASSCAL I   126.89 316  PFAKE                 22 41 30.0 +6.1
Y22D                               LR         LR
      comp=Z,300nm,21.0s
DUG   Dugway, Tooele   126.90 325  PFAKE                 22 41 30.0 +6.3
DUG                                LR         LR
      comp=Z,300nm,18.0s
MNTX  Cornudas Mount   127.03 312 ePKPdf      PKiKP      22 41 24.1  0.0
MNTX                               LR         LR
      comp=Z,300nm,19.0s
MSU   Marysvale        127.64 323 ePKPdf      PKiKP      22 41 26.3 +0.9
MSU   Marysvale        127.64 323 ePKIKP      PKiKP      22 41 26.3 +0.9
EPT   El Paso          127.82 313  PFAKE                 22 41 40.0  +14
EPT                                LR         LR
      comp=Z,300nm,21.0s
ELK   Elko             127.86 328  PFAKE                 22 41 40.0  +14
ELK                                LR         LR
      comp=Z,500nm,22.0s
W18A  Petrified Fore   128.22 319  PFAKE                 22 41 40.0  +13
W18A                               LR         LR
      comp=Z,300nm,18.0s
WVOR  Wild Horse Val   128.34 331  PFAKE                 22 41 40.0  +13
WVOR                               LR         LR
      comp=Z,300nm,20.0s
WUAZ  Wupatki          129.04 320  PFAKE                 22 41 40.0  +12
WUAZ                               LR         LR
      comp=Z,200nm,18.0s
U15A  North Rim        129.05 322  PFAKE                 22 41 40.0  +12
U15A                               LR         LR
      comp=Z,300nm,19.0s
BMN   Battle Mountai   129.13 329  PFAKE                 22 41 40.0  +12
BMN                                LR         LR
      comp=Z,400nm,21.0s
HPIG                   129.52 307  PFAKE                 22 41 40.0  +11
HPIG                               LR         LR
      comp=Z,300nm,20.0s
R11A  Troy Canyon, C   129.73 326  PFAKE                 22 41 40.0  +10
R11A                               LR         LR
      comp=Z,300nm,18.0s
TUC   Tucson           130.56 316  PFAKE                 22 41 40.0 +8.8
TUC                                LR         LR
      comp=Z,300nm,20.0s
KVN   Kaiserville      130.60 328  PFAKE                 22 41 40.0 +8.7
KVN                                LR         LR
      comp=Z,400nm,20.0s
SHPR  Sheep Range      130.75 324  PFAKE                 22 41 40.0 +8.4
SHPR                               LR         LR
      comp=Z,400nm,18.0s
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Y14A	Wickenburg	131.07	319	PFAKE		22 41 40.0	+7.8
Y14A				LR	LR		
	comp=Z,400nm,20.0s						
TPNV	Topopah Spring	131.08	325	PFAKE		22 41 40.0	+7.8
TPNV				LR	LR		
	comp=Z,300nm,20.0s						
RYN	Ryan	131.13	328	PFAKE		22 41 40.0	+7.7
RYN				LR	LR		
	comp=Z,400nm,18.0s						
BEKR	Beckworth	131.14	331	PFAKE		22 41 40.0	+7.7
BEKR				LR	LR		
	comp=Z,300nm,18.0s						
NVAR	Mina Array Bea	131.16	328	PKP	PKiKP	22 41 32.6	+0.1
	comp=Z,1.0nm,0.6s,baz=66,slow=2.2,SNR=8.4						
YERR	Yerington	131.24	329	PFAKE		22 41 40.0	+7.4
YERR				LR	LR		
	comp=Z,400nm,21.0s						
PNTR	Pine Nut	131.35	329	PFAKE		22 41 40.0	+7.2
PNTR				LR	LR		
	comp=Z,400nm,22.0s						
RUBR	Rubicon Trail	131.66	330	PFAKE		22 41 40.0	+6.6
RUBR				LR	LR		
	comp=Z,300nm,19.0s						
WAKR	Walker	131.71	329	PFAKE		22 41 40.0	+6.5
WAKR				LR	LR		
	comp=Z,400nm,21.0s						
WAKE	Wake Island	131.89	62	PFAKE		22 41 40.0	+5.9
WAKE				LR	LR		
	comp=Z,800nm,18.0s						
OMMB	Old Mammoth Mi	132.14	328	PFAKE		22 41 40.0	+5.4
OMMB				LR	LR		
	comp=Z,500nm,20.0s						
MDPB	Devils Postpil	132.16	328	PFAKE		22 41 40.0	+5.5
MDPB				LR	LR		
	comp=Z,400nm,21.0s						
Y12C	Blythe	132.17	320	PFAKE		22 41 40.0	+5.7
Y12C				LR	LR		
	comp=Z,300nm,19.0s						
DZM	Mont Dzumac	132.19	119	eLR	LR	23 23 47.5	
	comp=Z,197nm,21.3s						
DAC	Darwin (Calif)	132.32	325	PFAKE		22 41 50.0	+15
DAC				LR	LR		
	comp=Z,300nm,19.0s						
HSIG		132.53	313	PFAKE		22 41 50.0	+15
HSIG				LR	LR		
	comp=Z,200nm,20.0s						
BAR	Barrett	134.23	321	PFAKE		22 41 50.0	+11
BAR				LR	LR		
	comp=Z,300nm,20.0s						
CPE	Camp Elliot	134.36	321	PFAKE		22 41 50.0	+11
CPE				LR	LR		
	comp=Z,300nm,21.0s						
TBI	Tubuai	158.29	179	eLR	LR	23 35 43.4	
	comp=Z,406nm,23.0s						
PPT2	Papeete2	164.02	178	eLR	LR	23 38 21.2	
	comp=Z,377nm,24.2s						
PPT	Papeete	164.04	178	PKP	PKPdf	22 42 23.1	0.0
	comp=Z,70nm,0.7s,baz=99,slow=20,SNR=3.8						

DDA 03 22:28:01.0,38°.78N×30°.28E,h12^{km},ML1.9,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFYO	Afyonkarahisar	0.01	77	i P	Pg	22 28 03.7	+0.4
AFYO				i S	Sg	22 28 05.0	+0.2
BOLV	Bolvadin	0.53	97	i P	Pb	22 28 12.1	-0.2
BOLV				IAML_P			
	comp=Z,327nm,0.1s						
KHAL	Karahalli	0.74	237	i P	Pb	22 28 16.0	+0.1
KHAL				IAML_P			
	comp=Z,85nm,0.2s						

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*SOME **03** 22:43:16.4,41°.15N×83°.40E,h5^{km}*
*NNC **03** 22:43:17.4±1.7,41°.11N×83°.34E,h9^{km}±12^{km},mb3.9, mpv3.5,Error ellipse: s-maj=14.9km s-min=11.0km az=26.0*
ISC 03 22:43:19.4±2.7,**41°.2N**±0°.1×**83°.29E**±0°.09,**h10^{km},n27, σ2^{s}.53**/38,**4C-4D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.10	316	Pg	Pb	22 44 15.6	+0.8
	12nm,0.3s						
KTMS				Lg	Lg	22 44 59.2	
	70nm,0.5s						
KTMS	Ketmen	3.10	316	eP	Pb	22 44 15.6	+0.8
	12nm,0.3s						
KTMS				eS	Sg	22 44 59.2	+0.1
	70nm,0.5s						
PDGK	Podgornoye	3.51	308	Pg	Pb	22 44 21.4	-0.3
	2.8nm,0.3s						
PDGK				Lg	Lg	22 45 09.4	
	34nm,0.6s						
PDGK	Podgornoye	3.51	308	⇑Pg	Pb	22 44 24.0	+2.2
	9.6nm,0.6s						
PDGK				⇓Lg	Lg	22 45 13.1	
	85nm,0.8s						
UZB	Uzynbulak	3.70	302	Pg	Pb	22 44 26.7	+1.6
	3.2nm,0.4s						
UZB				Lg	Lg	22 45 18.4	
	54nm,0.4s						
UZB	Uzynbulak	3.70	302	eP	Pb	22 44 26.7	+1.6
	3.2nm,0.4s						
UZB				eS	Sg	22 45 18.4	0.0
	54nm,0.4s						
DJR	Jarkent	4.03	321	Pg	Pg	22 44 34.0	-2.5
	13nm,0.7s						
DJR				Lg	Lg	22 45 31.4	
	9.3nm,0.5s						
DJR	Jarkent	4.03	321	eP	Pg	22 44 34.0	-2.5
	13nm,0.7s						
DJR				eS	Sg	22 45 31.4	+2.6
	9.3nm,0.5s						
SATY	Saty	4.06	298	Pg	Pg	22 44 33.9	-3.4
	20nm,0.7s						
SATY				Lg	Lg	22 45 31.1	
	52nm,0.4s						
SATY	Saty	4.06	298	eP	Pg	22 44 33.9	-3.4
	20nm,0.7s						
SATY				eS	Sg	22 45 31.1	+1.2
	52nm,0.4s						
KPKS	Kokpek	4.08	305	eP	Pb	22 44 32.9	+1.5
	17nm,0.3s						
KPKS				eS	Sg	22 45 29.2	-1.2
	74nm,0.5s						
ZHN	Zhinishke	4.09	300	Pg	Pb	22 44 34.0	+2.3
	2.2nm,0.3s						
ZHN				Lg	Lg	22 45 31.2	
	20nm,0.5s						
ZHN	Zhinishke	4.09	300	eP	Pb	22 44 34.0	+2.3
	2.2nm,0.3s						
ZHN				eS	Sg	22 45 31.2	+0.3
	20nm,0.5s						
KURS	Kuram	4.41	302	Pg	Pb	22 44 39.9	+2.8
	5.9nm,0.6s						
KURS				Lg	Lg	22 45 41.4	
	20nm,0.4s						
KURS	Kuram	4.41	302	eP	Pb	22 44 39.9	+2.8
	5.9nm,0.6s						
KURS				eS	Sg	22 45 41.4	+0.3
	20nm,0.4s						
MNBS	Baschi	4.59	310	Pg	Pb	22 44 43.5	+3.4
	5.9nm,0.4s						
MNBS				Lg	Lg	22 45 47.9	
	17nm,0.3s						
MNBS	Baschi	4.59	310	eP	Pb	22 44 43.5	+3.4
	5.9nm,0.4s						
MNBS				eS	Sg	22 45 47.9	+1.0
	17nm,0.3s						
ARXS	Arharly	5.01	308	Pg	Pb	22 44 49.9	+2.7
	2.0nm,0.5s						
ARXS				Lg	Lg	22 45 58.6	
	14nm,0.6s						
ARXS	Arharly	5.01	308	eP	Pb	22 44 49.9	+2.7
	2.0nm,0.5s						
ARXS				eS	Sg	22 45 58.6	-1.6
	14nm,0.6s						
CHKK	Chushkaly	5.34	301	Pg	Pb	22 44 55.9	+3.1
	0.7nm,0.1s						
CHKK				Lg	Lg	22 46 09.2	
	12nm,0.4s						
CHKK	Chushkaly	5.34	301	eP	Pb	22 44 55.9	+3.1
	0.7nm,0.1s						
CHKK				eS	Sg	22 46 09.2	-1.7
	12nm,0.4s						
KTBS	Karatobe	5.48	299	Pg	Pb	22 44 58.3	+3.1
	2.9nm,0.7s						
KTBS				Lg	Lg	22 46 13.2	
	16nm,0.5s						
MK31	Makanchi Array	5.60	353	⇓Pn	Pn	22 44 43.1	+0.3
	0.2nm,0.3s,baz=190,slow=14,SNR=4.4						
MK31				⇑Pg	Pg	22 45 02.7	-4.0
	0.8nm,0.3s,baz=169,slow=16,SNR=8.4						
MK31				⇓Sn	Sn	22 45 49.5	+2.2
	2.0nm,0.5s,baz=168,slow=27,SNR=4.3						
MK31				Lg	Lg	22 46 19.3	
	14nm,0.7s,baz=164,slow=27,SNR=6.1						
KST	Kastek	5.74	291	Pg	Pg	22 45 04.9	-4.5
	3.5nm,0.7s						
KST				Lg	Lg	22 46 24.3	
	25nm,0.8s						
KUU	Kurty	5.78	300	Pg	Pb	22 45 03.4	+3.0
	1.0nm,0.5s						
KUU				Lg	Lg	22 46 22.1	
	13nm,0.5s						
TKM2	Tokmak 2	5.97	289	⇑Pg	Pb	22 45 07.5	+3.9
	4.6nm,1.1s						
TKM2				⇓Lg	Lg	22 46 30.0	
	22nm,0.7s						
KURBB	Kurchatov Arra	9.96	342	⇑Lg	Lg	22 48 37.0	
	12nm,0.8s						

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*IDC **03** 23:10:30.9±4.2,37°.07N×71°.35E,h58^{km}±29^{km},mb3.7/12, mb1 4.0/18,mb1mx3.7/44,mbtmp4.1/18,ML4.3/5,MS3.3/1, Ms1 3.3/1,ms1mx2.5/35,Error ellipse: s-maj=46.8km s-min=15.7km az=170.0*
*ISCJB **03** 23:10:33.1±0.3,37°.03N±0°.02×71°.56E±0°.04,h106^{km}, mb4.0/22,Error ellipse: s-maj=4.8km s-min=2.9km az=158.4*
*MOS **03** 23:10:34.7±1.0,37°.19N×71°.34E,h106^{km},mb4.0/4,Error ellipse: s-maj=10.7km s-min=5.5km az=84.0*
*NEIC **03** 23:10:35.4±1.9,37°.17N×71°.30E,h97^{km}±10^{km},mb4.2/14, Error ellipse: s-maj=14.8km s-min=13.7km az=224.0*
*NNC **03** 23:10:36.8±2.1,37°.44N×70°.99E,h118^{km}±29^{km},mb3.6, mpv4.4,Error ellipse: s-maj=19.1km s-min=12.2km az=171.0*
ISC 03 23:10:34.4±0.5,**37°.09N**±0°.05×**71°.48E**±0°.06,**h106^{km},n137, σ1^{s}.99**/131,**mb4.0**/22,**11C-3D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.12	335	ePn	Pn	23 11 08.0	-0.8
GAR	Garm	2.12	335	ePN	Pn	23 11 08.0	-0.8
CHGR	Chuyangaron	2.42	311	eSn	Sn	23 11 28.1	-14
BTK	Batken	3.01	350	ePn	Pn	23 11 21.4	+0.9
BTK	Batken	3.01	350	ePN	Pn	23 11 21.4	+0.9
KBL	Kabul	3.23	219	ePn	Pn	23 11 24.1	+0.6
KBL	Kabul	3.23	219	ePN	Pn	23 11 24.1	+0.6
CEP	Cherat	3.28	174	P	Pn	23 11 26.4	+2.3
CHCP	Chirah Chowk	3.72	156	P	Pn	23 11 33.3	+3.4
NIL	Nilore	3.72	157	ePn	Pn	23 11 33.4	+3.4
NIL	Nilore	3.72	157	ePN	Pn	23 11 33.4	+3.4
THW	Thamme Wali	4.29	177	P	Pn	23 11 38.8	+1.2
IUG	Iuzhnay	5.17	348	Pg	Pn	23 11 49.2	-0.4
	3.5nm,0.3s						
IUG				Lg	Lg	23 12 44.4	
	104nm,0.3s						
IUG				Lg	Lg	23 12 44.5	
	301nm,0.3s						
SARP	Sargodha	5.25	169	P	Pn	23 11 51.2	+0.7
AML	Almayashu	5.32	18	P	Pn	23 11 52.7	+1.0
	SNR=32						
UCH	Uchtor	5.64	24	P	Pn	23 11 57.2	+1.1
	SNR=69						
KZA	Kyzart	5.77	29	P	Pn	23 11 58.9	+1.1
	SNR=6.6						
MRKS	Merke	5.80	13	Lg	Lg	23 13 01.1	
	58nm,0.2s						
THN	Thein Dam	5.80	142	eP	Pn	23 12 10.0	+12
THN				eS	Sn	23 13 01.5	-1.8
EKS2	Erkin-Say	5.84	17	P	Pn	23 11 59.7	+1.1
	SNR=47						
AAK	Ala-Archa	6.00	22	P	Pn	23 12 02.5	+1.6
	18nm,0.3s,baz=188,slow=6.8,SNR=67						
AAK				S	Sn	23 13 06.5	-1.8
	6.4nm,0.3s,baz=327,slow=23,SNR=10						
AAK	Ala-Archa	6.00	22	⇑P	Pn	23 12 02.1	+1.2
	18nm,0.3s						
AAK				S	Sn	23 13 06.8	-1.5
	37nm,0.5s						
AAK	Ala-Archa	6.00	22	cePN	Pn	23 12 02.3	+1.5
AAK				pmax	pmax		
	comp=Z,28nm,0.6s						
AAK	Ala-Archa	6.00	22	P	Pn	23 12 02.3	+1.5
	SNR=39						
KK31	Karatay Array	6.05	353	ePn	Pn	23 12 01.2	-0.1
KK31	Karatay Array	6.05	353	⇓P	Pn	23 12 00.9	-0.4
	comp=Z,12nm,0.4s,baz=202,slow=17,SNR=164						
KK31				S	Sn	23 13 03.9	-5.4
	comp=Z,16nm,0.3s,baz=188,slow=25,SNR=7.3						
KK31	Karatay Array	6.05	353	ePN	Pn	23 12 01.2	-0.1
KKAR	Karatay Array	6.05	353	ePn	Pn	23 12 01.2	-0.1
KKAR	Karatay Array	6.05	353	ePN	Pn	23 12 01.2	-0.1
KBK	Karagaybulak	6.17	25	P	Pn	23 12 04.7	+1.7
	SNR=16						
FRU1	Bishkek	6.20	22	ePn	Pn	23 12 05.5	+2.1
FRU1	Bishkek	6.20	22	ePN	Pn	23 12 05.5	+2.1
DHRM	DHARAMSHALA	6.25	139	eP	Pn	23 12 05.2	+0.9
DHRM				eS	Sn	23 13 13.2	-1.2
DHRM				IAML		23 13 17.5	
	comp=N,303nm,0.2s						
ULHL	Ulahol	6.32	34	P	Pn	23 12 06.6	+1.4
	SNR=12						
BOOM	Boomskoye usch	6.39	31	ePn	Pn	23 12 07.6	+1.5
BOOM	Boomskoye usch	6.39	31	ePN	Pn	23 12 07.6	+1.5
CHMS	Chumysh	6.41	22	P	Pn	23 12 07.3	+1.1
	SNR=91						
USP	Ospenovka	6.59	20	P	Pn	23 12 09.2	+0.5
	SNR=40						
TKM2	Tokmak 2	6.62	27	⇓P	Pn	23 12 10.3	+1.0
	comp=N,26nm,0.5s						
TKM2				⇓S	Sn	23 13 22.6	-0.8
	comp=N,11nm,0.6s						
TKM2	Tokmak 2	6.62	27	PN	Pn	23 12 10.3	+1.0
TKM2				pmax	pmax		
	comp=Z,26nm,0.5s						
TKM2	Tokmak 2	6.62	27	P	Pn	23 12 10.5	+1.2
	SNR=70						
KDJ	Kajisay	6.68	39	ePn	Pn	23 12 11.3	+1.2
KDJ	Kajisay	6.68	39	ePN	Pn	23 12 11.3	+1.2
SGDS	Sogindy	6.79	20	Lg	Lg	23 13 23.6	
	comp=Z,16nm,0.5s						
KST	Kastek	6.87	29	Lg	Lg	23 13 27.2	
	comp=Z,24nm,0.6s						
DGS	Degeres	6.97	27	P	Pn	23 12 14.7	+0.9
DGS				Lg	Lg	23 13 28.8	
	comp=Z,18nm,0.6s						
MTBS	Maitube	7.12	31	Lg	Lg	23 13 33.3	
	comp=Z,10nm,0.3s						
KNDC	Almaty	7.42	33	⇑P	Pn	23 12 22.1	+2.1
	comp=Z,46nm,0.5s						
KOTS	Kotyrbulak	7.50	33	P	Pn	23 12 23.1	+2.0
KOTS				Lg	Lg	23 13 42.1	
	comp=Z,26nm,0.5s						
PRZ	Przheval'sk	7.57	43	ePn	Pn	23 12 25.0	+2.9
PRZ	Przheval'sk	7.57	43	ePN	Pn	23 12 25.0	+2.9
SMLA	Simla	7.58	140	eP	Pn	23 12 22.6	+0.4
SMLA				eS	Sn	23 13 43.9	-2.6
SMLA				IAML		23 13 49.5	
	comp=N,131nm,0.1s						
SMLA				IAML		23 13 50.5	
	comp=E,138nm,0.4s						
KTBS	Karatobe	7.71	29	Lg	Lg	23 13 43.6	
	comp=E,3.8nm,0.9s						
KUU	Kurty	7.74	27	Lg	Lg	23 13 44.6	
	comp=E,6.8nm,0.3s						
BTLS	Baital	8.18	13	Lg	Lg	23 13 53.7	
	comp=E,4.3nm,0.5s						
ARXS	Arharly	8.59	32	P	Pn	23 12 35.3	-0.6
DDI	Dehra Dun	8.69	139	eS	Sn	23 14 10.4	-3.1
MNBS	Baschi	8.74	35	P	Pn	23 12 38.3	+0.4
JOSI	Joshimath	9.36	132	eP	Pn	23 12 50.5	+4.1
JOSI				eS	Sn	23 14 25.6	-4.3
JOSI				IAML		23 14 33.5	
	comp=N,131nm,0.4s						
JOSI				IAML		23 14 35.9	
	comp=E,108nm,1.0s						
KALG	Kalgarh	9.70	139	ex	Pn	23 12 49.5	-1.4
KALG				ex	x	23 14 16.1	
KUDL	Kundal	9.87	153	eP	Pn	23 12 38.7	-14
KUDL				eS	Sn	23 14 21.2	-21
GEYT	Alibeck	10.65	279	P	Pn	23 12 58.1	-5.7
	comp=E,5.5nm,0.3s,baz=102,slow=11,SNR=58						
GEYT				S	Sn	23 14 48.6	-13
	comp=E,5.0nm,0.3s,baz=124,slow=18,SNR=11						
GYA0B	ALIBECK ARRAY	10.65	279	ePn	Pn	23 12 58.5	-5.3
GYA0B	ALIBECK ARRAY	10.65	279	⇑S	Sn	23 14 50.8	-10
MAKZ	Makanchi	12.45	35	ePn	Pn	23 13 27.3	-0.4
MAKZ	Makanchi	12.45	35	eP	Pn	23 13 27.3	-0.4
MK31	Makanchi Array	12.59	36	ePn	Pn	23 13 29.4	-0.1
MK31	Makanchi Array	12.59	36	⇑P	Pn	23 13 29.6	+0.1
	comp=E,3.3nm,0.6s,baz=223,slow=15,SNR=30						
MK31	Makanchi Array	12.59	36	eP	Pn	23 13 29.4	-0.1
MK32	Makanchi Array	12.59	36	ePn	Pn	23 13 29.7	+0.2
MKAR	Makanchi Array	12.59	36	P	Pn	23 13 29.7	+0.2
	comp=E,0.9nm,0.3s,baz=225,slow=15,SNR=35						
MKAR	Makanchi Array	12.59	36	ceP	P	23 13 38.7	+2.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PYUN	Piuthan	13.20	129	eP	Pn	23 13 35.7	-2.1
	comp=Z,27nm,0.4s						
DANN	Dangsing	13.51	127	eP	Pn	23 13 40.0	-2.0
	comp=Z,16nm,0.3s						
KOLN	Koldanda	13.81	129	eP	Pn	23 13 43.5	-2.3
	comp=Z,21nm,0.5s						
GKN	Gorkha	14.31	126	eP	Pn	23 13 50.4	-1.8
	comp=Z,28nm,0.3s						
KURBB	Kurchatov Arra	14.44	18	P	Pn	23 13 50.8	-2.7
	comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=4.5						
KURK	Kurchatov	14.55	18	ePn	Pn	23 13 54.1	-0.8
KURK	Kurchatov	14.55	18	⇑P	P	23 13 57.1	-1.4
	comp=Z,3.9nm,0.9s						
KURK	Kurchatov	14.55	18	ceP	P	23 13 57.5	-0.9
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AB31	Akbulak array	14.77	329	P	Pn	23 13 54.1	-3.6
	comp=Z,3.2nm,0.3s,baz=135,slow=13,SNR=207						
AB31				⇑S	Sn	23 16 27.1	-13
	comp=Z,5.8nm,0.7s,baz=148,slow=24,SNR=6.5						
AB31	Akbulak array	14.77	329	P	Pn	23 13 54.1	-3.6
AB31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ABKAR	Akbulak array	14.77	329	ePn	Pn	23 13 54.2	-3.5
KKN	Kakani	14.87	125	eP	Pn	23 13 56.7	-2.7
	comp=Z,15nm,0.4s						
DMN	Daman	14.88	126	eP	Pn	23 13 57.2	-2.4
	comp=Z,9.3nm,0.3s						
PKIN	Phulchoki	15.09	125	eP	Pn	23 14 00.1	-2.1
	comp=Z,14nm,0.4s						
PKI	Pulchoki	15.11	125	eP	Pn	23 13 59.6	-2.9
	comp=Z,12nm,0.4s						
GUN	Gumba	15.19	123	eP	Pn	23 14 00.6	-3.0
	comp=Z,23nm,0.4s						
JIRN	Jiri	15.56	123	eP	Pn	23 14 06.0	-2.3
	comp=Z,46nm,0.4s						
BVA0	Borovoye Array	15.95	358	P	Pn	23 14 10.6	-1.9
	comp=Z,0.1nm,0.3s,baz=139,slow=7.9,SNR=4.6						
BVA0	Borovoye Array	15.95	358	P	Pn	23 14 10.6	-1.9
BVAR	Borovoye Array	15.95	358	P	Pn	23 14 12.3	-0.2
	comp=Z,0.6nm,0.3s,baz=164,slow=9.4,SNR=8.8						
BVAR				S	Sn	23 16 56.6	-12
	comp=Z,0.2nm,0.3s,baz=158,slow=20,SNR=2.8						
BRVK	Borovoye	15.99	357	i P	P	23 14 25.2	+11
AKTO	Aktyubinsk	16.47	328	P	Pn	23 14 17.3	-1.7
	comp=Z,3.1nm,0.3s,baz=132,slow=12,SNR=35						
AKTO				S	Sn	23 17 03.9	-18
	comp=Z,0.1nm,0.3s,baz=156,slow=20,SNR=3.4						
AKTO	Aktyubinsk	16.47	328	⇑P	Pn	23 14 14.1	-4.9
	comp=Z,31nm,0.8s						
LSA	Lhasa	17.98	108	eP	P	23 14 34.7	-2.4
	comp=Z,2.7nm,0.6s						
LSA	Lhasa	17.98	108	eP	P	23 14 34.7	-2.4
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAA0	Zalesovo Array	19.22	24	⇑P	P	23 14 50.1	+0.3
	comp=Z,0.9nm,0.5s						
ZALV	Zalesovo Beam	19.22	24	P	P	23 14 50.6	+0.8
	comp=Z,4.3nm,0.3s,baz=224,slow=11,SNR=33						
ZALV	Zalesovo Beam	19.22	24	eP	Pn	23 14 57.2	+5.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GNI	Garni	21.09	287	eP	P	23 15 13.2	+2.8
	comp=Z,10nm,0.8s						
GNI	Garni	21.09	287	eP	P	23 15 13.2	+2.8
GNI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TBLG	Delisi	21.14	291	eP	P	23 15 11.5	+0.7
	comp=Z,7.7nm,0.7s						
TBLG	Delisi	21.14	291	eP	P	23 15 11.5	+0.7
TBLG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ARU	Arti	21.21	340	LR	LR	23 24 46.8	
	comp=Z,75nm,18.3s,baz=262,slow=40						
ARU	Arti	21.21	340	P	P	23 15 11.4	+0.1
ARU				S	S	23 18 55.7	-5.1
ARU				SS	Sn	23 19 09.4	-5.5
KBZ	Khabaz	22.68	296	P	P	23 15 25.9	-1.0
	comp=Z,2.1nm,0.6s,baz=117,slow=6.8,SNR=3.0						
KVAR	Kislovodsk Arr	22.86	296	P	P	23 15 31.1	+2.4
	comp=Z,1.3nm,0.5s,baz=61,slow=19,SNR=2.3						
KIV	Kislovodsk	22.86	296	eP	P	23 15 26.8	-2.0
	comp=Z,3.8nm,0.8s						
KIV	Kislovodsk	22.86	296	eP	P	23 15 26.8	-2.0
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAYN	Ar Rayn	26.09	246	eP	P	23 15 59.3	+1.0
	comp=Z,0.8nm,0.6s						
RAYN	Ar Rayn	26.09	246	eP	P	23 15 59.3	+1.0
TLY	Talaya	26.95	47	eP	P	23 16 04.2	-1.5
	comp=Z,3.0nm,0.6s						
TLY	Talaya	26.95	47	eP	P	23 16 04.2	-1.5
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONA0	Songino Array	27.68	56	eP	P	23 16 15.0	+2.6
SONM	Songino Array	27.68	56	P	P	23 16 15.0	+2.6
	comp=Z,0.9nm,0.5s,baz=268,slow=8.6,SNR=4.6						
BRTR	Keskin Array B	29.63	287	P	P	23 16 31.5	+1.7
	comp=Z,0.5nm,0.5s,baz=86,slow=9.4,SNR=3.2						
AKASG	Malin Array Be	32.88	308	P	P	23 16 58.4	+0.3
	comp=Z,1.0nm,0.4s,baz=78,slow=7.0,SNR=6.6						
FIA1	FINESS Array S	37.21	326	eP	P	23 17 36.0	+0.9
	comp=Z,4.5nm,0.5s						
FIA0	FINESS Array S	37.22	326	eP	P	23 17 36.4	+1.3
FIA0	FINESS Array S	37.22	326	eP	P	23 17 36.4	+1.3
FINES	FINESS Array B	37.22	326	P	P	23 17 36.4	+1.3
	comp=Z,2.4nm,0.3s,baz=120,slow=8.5,SNR=49						
ARCES	ARCESS Array B	40.75	337	P	P	23 18 06.0	+1.5
	comp=Z,0.8nm,0.5s,baz=114,slow=8.9,SNR=12						
ARCES	ARCESS Array B	40.75	337	P	P	23 18 06.0	+1.5
NB2	NORSAR Subarra	44.15	323	P	P	23 18 32.4	+0.3
	comp=Z,1.6nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.15	323	P	P	23 18 32.6	+0.5
	comp=Z,2.3nm,0.6s,baz=95,slow=7.8,SNR=18						
NAO01	NORSAR Array S	44.29	322	eP	P	23 18 33.3	+0.1
	comp=Z,5.2nm,0.8s						
NBO00	NORSAR Array S	44.36	323	eP	P	23 18 34.5	+0.7
	comp=Z,8.7nm,1.1s						
NC204	NORSAR Array S	44.38	323	eP	P	23 18 34.9	+0.9
	comp=Z,7.1nm,0.6s						
KLR	Kul'dur	44.48	54	P	P	23 18 36.9	+2.0
	comp=Z,1.3nm,0.5s,baz=280,slow=7.4,SNR=5.7						
ESDC	Sonseca Array	57.53	298	P	P	23 20 13.5	+0.8
	comp=Z,0.6nm,0.5s,baz=56,slow=7.6,SNR=9.7						
INK	Inuvik	73.26	9	P	P	23 21 55.6	+2.1
	comp=Z,1.9nm,0.5s,baz=320,slow=2.8,SNR=5.4						
INK	Inuvik	73.26	9	eP	P	23 21 55.6	+2.1
	comp=Z,2.6nm,0.6s						
ILAR	Eielson Array	74.11	16	P	P	23 22 00.3	+1.8
	comp=Z,0.4nm,0.4s,baz=339,slow=4.8,SNR=6.6						
ILB	Eielson Array	74.11	16	eP	P	23 22 00.3	+1.8
	comp=Z,0.8nm,0.8s						
YKA	Yellowknife Ar	80.64	3	P	P	23 22 36.1	+1.2
	comp=Z,2.4nm,0.7s,baz=354,slow=4.9,SNR=4.5						
YKB5	Yellowknife Ar	80.64	3	eP	P	23 22 36.1	+1.2

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*NIC **03** 23:11:56.9±0.3,35°.01N×34°.53E,h15^{km},ML3.2*
*DDA **03** 23:11:57.8,34°.88N×34°.35E,h8^{km}±2^{km},ML2.8*
*ISK **03** 23:11:58.4,34°.73N×34°.33E,h23^{km},ML2.7/15*
*GRAL **03** 23:11:58.9±0.4,34°.89N×34°.44E,h18^{km}±4^{km},MD3.4*
*ISCJB **03** 23:11:59.0±0.5,34°.72N±0°.02×34°.34E±0°.04,h26^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=3.0km az=159.8*

*GII **03** 23:11:59.7±0.0, 34°.69N×34°.30E, h18^{km}, MD3.0/2*
*NSSC **03** 23:12:04.8±0.8, 34°.77N×35°.34E, h14^{km}±11^{km}, ML1.9*
ISC 03 23:11:57.9±1.4, **34°.74N**±0°.03×**34°.41E**±0°.03, **h14**^{km}±11^{km}, **n61**, σ**1^{s}.38**/80, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHNC	**Paralimni**	**0.41**	**310**	P	**Pg**	**23 12 05.6**	**-0.5**
	baz=88						
PHNC				S	**Sb**	**23 12 12.1**	**-0.8**
EREN	**Erenkoy**	**0.81**	**346**	PG	**Pb**	**23 12 14.5**	**+0.7**
EREN				SG	**Sn**	**23 12 26.6**	**-0.1**
EREN	**Erenkoy**	**0.81**	**346**	*i* P	**Pb**	**23 12 14.5**	**+0.7**
EREN				IAML_P			
	comp=Z,5µm,0.3s						
AKIN	**Akıncılar- Kıb**	**0.82**	**289**	PG	**Pb**	**23 12 13.9**	**-0.1**
CSS	**Mathiatis**	**0.92**	**284**	PG	**Pb**	**23 12 15.4**	**-0.2**
CSS				SG	**Sb**	**23 12 27.8**	**+0.2**
CSS	**Mathiatis**	**0.92**	**284**	P	**Pg**	**23 12 15.1**	**-0.5**
	baz=86						
CSS				S	**Sn**	**23 12 29.3**	**-0.1**
CSS	**Mathiatis**	**0.92**	**284**	Pg	**Pg**	**23 12 15.1**	**-0.5**
SZAC	**Souni**	**1.26**	**271**	P	**Pn**	**23 12 20.7**	**-0.4**
	baz=78						
LEF	**Lefka**	**1.30**	**287**	PN	**Pn**	**23 12 21.4**	**-0.3**
LEF	**Lefka**	**1.30**	**287**	*i* P	**Pg**	**23 12 22.6**	**-0.5**
LEF				IAML_P			
	comp=Z,676nm,0.2s						
BHL	**Bhannes**	**1.33**	**129**	*e*P	**Pn**	**23 12 22.6**	**+0.5**
BHL				*e*S	**Sb**	**23 12 40.4**	**+0.8**
HWQ	**Hawqa**	**1.35**	**110**	*e*P	**Pn**	**23 12 22.5**	**0.0**
HWQ				*e*S	**Sb**	**23 12 39.9**	**-0.4**
DQRL	**Deir Qamar**	**1.41**	**137**	*e*P	**Pn**	**23 12 24.1**	**+0.8**
ALFC	**Alefka**	**1.54**	**286**	P	**Pn**	**23 12 24.3**	**-0.8**
	baz=94						
AKKU	**Akkuyu-Mersin**	**1.58**	**334**	PN	**Pn**	**23 12 25.2**	**-0.3**
GULN	**MERSIN_Gulnar**	**1.60**	**334**	*i* P	**Pn**	**23 12 25.2**	**-0.6**
GULN				*i* S	**Sn**	**23 12 46.4**	**+0.1**
IKL	**Isikli**	**1.60**	**339**	PN	**Pn**	**23 12 25.8**	**0.0**
SILI	**Silifke-Mersin**	**1.67**	**346**	PN	**Pn**	**23 12 26.9**	**+0.2**
RCY	**Rachaya**	**1.72**	**136**	*e*P	**Pn**	**23 12 28.3**	**+0.7**
RCY				*e*S	**Sn**	**23 12 50.1**	**+0.8**
KIZK	**Mersin**	**1.75**	**353**	PN	**Pn**	**23 12 28.3**	**+0.5**
KIZK	**Mersin**	**1.75**	**353**	*i* P	**Pn**	**23 12 28.8**	**+1.0**
TEKE	**Tekeli-Mersin**	**1.75**	**323**	PN	**Pn**	**23 12 27.6**	**-0.3**
HNTI	**Hanita**	**1.77**	**159**	Pn	**Pn**	**23 12 29.2**	**+1.0**
SHBL	**Chebaa**	**1.78**	**141**	*e*P	**Pn**	**23 12 29.2**	**+0.8**
KEBE	**Keben-Mersin**	**1.79**	**342**	PN	**Pn**	**23 12 28.6**	**+0.1**
NATI	**Neve Ativ**	**1.84**	**143**	Pn	**Pn**	**23 12 29.9**	**+0.8**
BRBR	**Barbar**	**1.84**	**136**	*e*P	**Pn**	**23 12 30.8**	**+1.4**
BRBR				*e*S	**Sn**	**23 12 49.0**	**-3.6**
BRBR				AML	AML	23 12 56.0	
	comp=N,18nm,0.4s						
BRBR				AML	AML	23 13 01.8	
	comp=E,10nm,0.5s						
GEM	**Giv'at Ha'Em**	**1.85**	**145**	Pn	**Pn**	**23 12 30.5**	**+1.3**
KSDI	**Kefar Szold**	**1.86**	**146**	Pn	**Pn**	**23 12 30.5**	**+1.1**
TEVE	**Tevekalti-Mers**	**1.86**	**335**	PN	**Pn**	**23 12 29.6**	**+0.1**
BERE	**Bereket-Mersin**	**1.87**	**329**	PN	**Pn**	**23 12 29.2**	**-0.5**
MMA0B	**Mount Meron ar**	**1.91**	**154**	Pn	**Pn**	**23 12 30.4**	**+0.3**
QASN	**Qassioun**	**1.96**	**127**	*e*P	**Pn**	**23 12 30.6**	**-0.3**
QASN				*e*S	**Sn**	**23 12 49.6**	**-5.7**
QASN				AML	AML	23 12 52.7	
	comp=E,63nm,0.5s						
QASN				AML	AML	23 12 53.8	
	comp=N,38nm,0.7s						
KRTS	**Karatas**	**1.99**	**23**	PN	**Pn**	**23 12 32.1**	**+1.0**
KSHT	**Keshet**	**2.11**	**146**	Pn	**Pn**	**23 12 34.4**	**+1.6**
MERS	**Mersin**	**2.12**	**2**	PN	**Pn**	**23 12 33.9**	**+0.9**
TOTH	**TOTAH**	**2.17**	**129**	*e*P	**Pn**	**23 12 34.4**	**+0.8**
TOTH				*e*S	**Sn**	**23 12 54.4**	**-6.0**
TOTH				AML	AML	23 13 04.4	
	comp=E,20nm,0.5s						
TOTH				AML	AML	23 13 07.0	
	comp=N,19nm,0.6s						
OFRI	**\`Ofer**	**2.17**	**167**	Pn	**Pn**	**23 12 34.3**	**+0.6**
OFRI				Sn	**Sn**	**23 13 00.3**	**-0.1**
ERMK	**Ermenek**	**2.25**	**328**	*i* P	**Pn**	**23 12 36.7**	**+1.8**
GAZI	**Gazipasa**	**2.27**	**312**	PN	**Pn**	**23 12 34.6**	**-0.4**
GAZI	**Gazipasa**	**2.27**	**312**	*i* P	**Pn**	**23 12 35.8**	**+0.8**
GAZI				IAML_P			
	comp=Z,355nm,0.2s						
MMLI	**Mount Malkishu**	**2.45**	**160**	PN	**Pn**	**23 12 38.5**	**+1.0**
MMLI	**Mount Malkishu**	**2.45**	**160**	Pn	**Pn**	**23 12 38.8**	**+1.3**
MMLI				Sn	**Sn**	**23 13 08.1**	**+0.8**
SLTI	**Sal'it**	**2.55**	**168**	Pn	**Pn**	**23 12 39.4**	**+0.5**
SLTI				Sn	**Sn**	**23 13 09.1**	**-0.6**
KARA	**Karaisali**	**2.56**	**12**	PN	**Pn**	**23 12 40.0**	**+0.9**
HMDT	**Nahal Hemdat**	**2.65**	**159**	Pn	**Pn**	**23 12 41.3**	**+1.0**
HMDT				Sn	**Sn**	**23 13 13.6**	**+1.4**
KERG	**Konya-Eregli**	**2.67**	**355**	*i* P	**Pn**	**23 12 42.4**	**+1.7**
KOZT	**Kozan**	**2.96**	**22**	PN	**Pn**	**23 12 45.7**	**+1.2**
KEPZ	**Antalya-Kepez**	**3.14**	**314**	*i* P	**Pn**	**23 12 48.2**	**+1.2**
KEPZ				IAML_P			
	comp=Z,135nm,0.3s						
AMAZ	**Amatzia**	**3.23**	**172**	Pn	**Pn**	**23 12 49.0**	**+0.8**
AMAZ				Sn	**Sn**	**23 13 26.6**	**+0.1**
DSI	**Dead Sea**	**3.27**	**165**	Pn	**Pn**	**23 12 49.8**	**+1.1**
YTIR	**Yattir**	**3.42**	**170**	Pn	**Pn**	**23 12 52.3**	**+1.3**
YAHY	**KAYSERI_Yahyal**	**3.43**	**13**	*i* P	**Pn**	**23 12 53.4**	**+2.3**
YAHY				IAML_P			
	comp=Z,138nm,0.5s						
KONT	**Konya--Tatoy**	**3.60**	**333**	PN	**Pn**	**23 12 54.3**	**+1.0**
KZIT	**Kziot**	**3.83**	**180**	Pn	**Pn**	**23 12 57.4**	**+1.0**
KZIT				Sn	**Sn**	**23 13 41.1**	**-0.1**
ZFRI	**Zfri**	**4.23**	**171**	Pn	**Pn**	**23 13 03.3**	**+1.4**
PRNI	**Paran**	**4.41**	**173**	Pn	**Pn**	**23 13 05.8**	**+1.4**
PRNI				Sn	**Sn**	**23 13 55.8**	**+0.2**
KRMI	**Paran Flat**	**4.62**	**177**	Pn	**Pn**	**23 13 08.6**	**+1.2**
HRFI	**Mount Harif**	**4.72**	**173**	Pn	**Pn**	**23 13 10.1**	**+1.3**
MBRI	**Mt Berech**	**4.95**	**175**	Pn	**Pn**	**23 13 14.1**	**+2.1**
EIL	**Elat**	**5.08**	**175**	Pn	**Pn**	**23 13 14.8**	**+1.1**
EIL				Sn	**Sn**	**23 14 11.4**	**-0.7**

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*ISK **03** 23:16:42.3, 34°.75N×34°.36E, h20^{km}, ML2.8/15*
*ISCJB **03** 23:16:43.5±0.7, 34°.75N±0°.04×34°.39E±0°.05, h28^{km}±8^{km}, Error ellipse: s-maj=8.7km s-min=3.8km az=141.7*
*DDA **03** 23:16:44.8, 35°.02N×34°.17E, h13^{km}±1^{km}, ML2.9*
*GRAL **03** 23:16:44.1±0.3, 34°.78N×34°.46E, h18^{km}±1^{km}, MD3.4*
ISC 03 23:16:43.0±4.0, **34°.73N**±0°.04×**34°.39E**±0°.04, **h18**^{km}±18^{km}, **n36**, σ**0^{s}.75**/44, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKIN	**Akıncılar- Kıb**	**0.81**	**291**	PG	**Pb**	**23 16 57.8**	**-0.8**
EREN	**Erenkoy**	**0.82**	**348**	PG	**Pb**	**23 16 58.5**	**-0.2**
EREN				SG	**Sb**	**23 17 09.9**	**+0.5**
EREN	**Erenkoy**	**0.82**	**348**	*i* P	**Pb**	**23 16 59.2**	**+0.5**
EREN				IAML_P			
	comp=Z,7µm,0.3s						
CSS	**Mathiatis**	**0.90**	**285**	PG	**Pb**	**23 16 59.7**	**-0.4**
CSS				SG	**Sb**	**23 17 12.3**	**+0.5**
LEF	**Lefka**	**1.29**	**288**	PN	**Pn**	**23 17 05.9**	**-0.2**
LEF	**Lefka**	**1.29**	**288**	*i* P	**Pn**	**23 17 06.3**	**+0.2**
LEF				IAML_P			
	comp=Z,633nm,0.3s						
BHL	**Bhannes**	**1.33**	**128**	*e*P	**Pn**	**23 17 06.7**	**-0.2**
BHL				*e*S	**Sn**	**23 17 23.4**	**-0.8**
HWQ	**Hawqa**	**1.36**	**109**	*e*P	**Pn**	**23 17 06.7**	**-0.7**
HWQ				*e*S	**Sn**	**23 17 23.6**	**-1.4**
DQRL	**Deir Qamar**	**1.42**	**136**	*e*P	**Pn**	**23 17 07.9**	**-0.1**
TISA	**Tisan-Mersin**	**1.54**	**338**	PN	**Pn**	**23 17 08.5**	**-1.1**
AKKU	**Akkuyu-Mersin**	**1.58**	**335**	PN	**Pn**	**23 17 09.5**	**-0.7**
YESI	**Yesilovacik-Me**	**1.58**	**338**	PN	**Pn**	**23 17 09.7**	**-0.5**
GULN	**MERSIN_Gulnar**	**1.60**	**335**	*i* P	**Pn**	**23 17 09.1**	**-1.4**
GULN				IAML_P			
	comp=Z,1µm,0.2s						
IKL	**Isikli**	**1.61**	**339**	PN	**Pn**	**23 17 09.9**	**-0.7**
SILI	**Silifke-Mersin**	**1.68**	**347**	PN	**Pn**	**23 17 11.3**	**-0.2**
RCY	**Rachaya**	**1.72**	**135**	*e*P	**Pn**	**23 17 12.2**	**-0.1**
RCY				*e*S	**Sn**	**23 17 32.9**	**-0.9**
TEKE	**Tekeli-Mersin**	**1.75**	**324**	PN	**Pn**	**23 17 12.1**	**-0.4**
KIZK	**Mersin**	**1.76**	**354**	PN	**Pn**	**23 17 12.3**	**-0.3**
KIZK	**Mersin**	**1.76**	**354**	*i* P	**Pn**	**23 17 13.2**	**+0.6**
SHBL	**Chebaa**	**1.78**	**140**	*e*P	**Pn**	**23 17 13.1**	**0.0**
KEBE	**Keben-Mersin**	**1.80**	**342**	PN	**Pn**	**23 17 12.6**	**-0.6**
BRBR	**Barbar**	**1.85**	**135**	*e*P	**Pn**	**23 17 15.3**	**+1.2**
BRBR				*e*S	**Sn**	**23 17 36.4**	**-0.7**
TEVE	**Tevekalti-Mers**	**1.87**	**336**	PN	**Pn**	**23 17 13.8**	**-0.4**
BERE	**Bereket-Mersin**	**1.87**	**330**	PN	**Pn**	**23 17 13.7**	**-0.6**
QASN	**Qassioun**	**1.97**	**127**	*e*P	**Pb**	**23 17 18.5**	**+0.1**
QASN				*e*S	Sn	23 17 29.4	-11
MERS	**Mersin**	**2.13**	**3**	PN	**Pn**	**23 17 17.7**	**-0.2**
TOTH	**TOTAH**	**2.18**	**128**	*e*P	**Pn**	**23 17 19.8**	**+1.3**
TOTH				*e*S	**Sn**	**23 17 45.7**	**+0.7**
ERMK	**Ermenek**	**2.25**	**328**	*i* P	**Pn**	**23 17 21.1**	**+1.5**
ERMK				IAML_P			
	comp=Z,822nm,0.2s						
GAZI	**Gazipasa**	**2.26**	**312**	PN	**Pn**	**23 17 19.3**	**-0.3**
GAZI	**Gazipasa**	**2.26**	**312**	*i* P	**Pn**	**23 17 19.2**	**-0.3**
GAZI				*i* S	**Sn**	**23 17 47.7**	**+0.7**
GAZI				IAML_P			
	comp=Z,478nm,0.3s						
MMLI	**Mount Malkishu**	**2.44**	**159**	PN	**Pn**	**23 17 22.7**	**+0.6**
KARA	**Karaisali**	**2.58**	**12**	PN	**Pn**	**23 17 23.8**	**-0.2**
KERG	**Konya-Eregli**	**2.69**	**356**	*i* P	**Pn**	**23 17 26.2**	**+0.7**
KOZT	**Kozan**	**2.98**	**23**	PN	**Pn**	**23 17 29.7**	**+0.2**
KEPZ	**Antalya-Kepez**	**3.13**	**315**	*i* P	**Pn**	**23 17 33.1**	**+1.5**
KEPZ				IAML_P			
	comp=Z,207nm,0.2s						
YAHY	**KAYSERI_Yahyal**	**3.45**	**13**	*i* P	**Pn**	**23 17 36.6**	**+0.7**
YAHY				IAML_P			
	comp=Z,152nm,0.5s						

MAN 03 23:27:53.8, 7°.39N×124°.80E, h4^{km}, mb4.4, ML3.2, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.47**	**143**	⇑*i*P	Pg	23 28 02.3	-0.6
KCP				*i* S	Sg	23 28 08.6	-0.5
BUKP	**Musuan**	**0.55**	**28**	*e*P	Pb	23 28 06.2	0.0
BUKP				*e*S	Sb	23 28 15.9	+1.5
CTBH	**Cotabato--PC H**	**0.58**	**253**	⇓*i*P	Pg	23 28 05.5	+0.6
CTBH				*i* S	Sb	23 28 14.6	-0.5
DMPH	**Davao City--Mi**	**0.76**	**113**	*e*P	Pb	23 28 09.4	-0.3
DMPH				*e*S	Sb	23 28 19.9	-0.5
SKMP	**Bagumbayan, Su**	**0.90**	**197**	*e*P	Pg	23 28 07.8	-3.3
SKMP				*e*S	Sg	23 28 17.8	-5.0
CGP	**Cagayan de Oro**	**1.06**	**354**	*i* P	Pg	23 28 13.2	-1.1
CGP				*i* S	Sn	23 28 30.7	-0.1
PAGZ	**Pagadian**	**1.48**	**288**	*e*P	Pn	23 28 21.2	-0.1
PAGZ				*e*S	Sg	23 28 45.3	+3.8
MATI	**Mati**	**1.51**	**107**	*e*P	Pn	23 28 20.7	-0.9
MATI				*e*S	Sg	23 28 48.8	+6.4
DDMP	**Don Marcelino,**	**1.56**	**145**	*e*P	Pn	23 28 22.3	-0.1
DDMP				*e*S	Sg	23 28 44.5	+0.4
IPIL	**Ipil**	**2.25**	**280**	*e*P	Pn	23 28 33.0	+1.1
IPIL				*e*S	Sb	23 29 01.7	-1.5

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*ISK **03** 23:37:19.4, 35°.84N×27°.10E, h7^{km}, ML2.4/11*
*ATH **03** 23:37:19.2, 35°.86N×27°.18E, h16^{km}±5^{km}, ML2.4/2, Error ellipse: s-maj=7.6km s-min=2.0km az=140.0*
*DDA **03** 23:38:09.5, 36°.28N×27°.63E, h10^{km}, ML2.2*
ISC 03 23:37:19.7±1.0, **35°.84N**±0°.04×**27°.20E**±0°.04, **h13**^{km}±10^{km}, **n24**, σ**0^{s}.98**/31, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.30**	**186**	PG	**Pg**	**23 37 25.9**	**+0.1**
KARP				SG	**Sg**	**23 37 30.4**	**+0.5**
KARP	**Karpathos**	**0.30**	**186**	P	**Pg**	**23 37 26.1**	**+0.2**
KARP				S	**Sg**	**23 37 30.4**	**+0.5**
KARP				AML	AML	23 37 30.8	
	comp=E,2579µm,0.3s						
KARP				AML	AML	23 37 31.4	
	comp=N,1726µm,0.2s						
ARG	**Arkhangelos**	**0.84**	**63**	PG	**Pn**	**23 37 37.1**	**-0.1**
ARG				SG	**Sn**	**23 37 50.6**	**+1.3**
ARG	**Arkhangelos**	**0.84**	**63**	P	**Pg**	**23 37 35.6**	**-0.2**
ARG				S	**Sg**	**23 37 46.4**	**-0.4**
ARG				AML	AML	23 37 51.4	
	comp=N,493µm,0.4s						
ARG				AML	AML	23 37 51.5	
	comp=E,513µm,0.3s						
DAT	**Datca**	**0.94**	**19**	PG	**Pn**	**23 37 38.6**	**0.0**
DAT	**Datca**	**0.94**	**19**	*i* P	**Pn**	**23 37 39.9**	**+1.3**
DAT				*i* S	**Sn**	**23 37 52.7**	**+0.7**
ZKR	**Zakros**	**1.08**	**228**	PG	**Pb**	**23 37 39.3**	**-1.0**
ZKR	**Zakros**	**1.08**	**228**	P	**Pb**	**23 37 38.4**	**-1.8**
BBRN	**Bozburun-Marma**	**1.08**	**39**	PN	**Pn**	**23 37 41.8**	**+1.2**
NPS	**Neapolis**	**1.42**	**246**	P	**Pg**	**23 37 46.4**	**-0.5**
DALY	**Dalyan (Mula)**	**1.52**	**50**	PN	**Pg**	**23 37 48.8**	**-0.2**
DALY	**Dalyan (Mula)**	**1.52**	**50**	*i* P	**Pg**	**23 37 48.7**	**-0.2**
DALY				*i* S	**Sg**	**23 38 09.6**	**+0.9**
TURN	**Turunc**	**1.53**	**47**	PN	**Pn**	**23 37 44.8**	**-1.8**
TURN	**Turunc**	**1.53**	**47**	*i* P	**Pn**	**23 37 44.4**	**-2.3**
YER	**Yerkesik**	**1.56**	**34**	PN	**Pb**	**23 37 48.6**	**+0.2**
LAST	**Lasithi**	**1.56**	**245**	P	**Pb**	**23 37 48.6**	**+0.1**
FETY	**Fethiye**	**1.71**	**62**	PN	**Pb**	**23 37 51.7**	**+0.7**
FETY	**Fethiye**	**1.71**	**62**	*i* P	**Pg**	**23 37 52.6**	**0.0**
FETY				*i* S	**Sg**	**23 38 15.6**	**+0.8**
APE	**Apeiranthos**	**1.82**	**313**	PN	**Pn**	**23 37 51.2**	**+0.5**
AYDN	**Tasoluk**	**1.89**	**16**	*i* P	**Pg**	**23 37 55.5**	**-0.6**
AYDN				IAML_P			
	comp=Z,165nm,0.2s						
IDI	**Anoyia**	**1.96**	**254**	P	**Pn**	**23 37 53.5**	**+0.8**
AKAS	**Kas**	**1.99**	**78**	PN	**Pb**	**23 37 55.4**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**2.17**	**15**	PN	**Pb**	**23 37 57.5**	**-1.4**
ELL	**Elmali**	**2.37**	**67**	PN	**Pb**	**23 38 00.9**	**-1.3**

KRSC 04 00:29:16.5±2.1, **49°.62N**×**156°.58E**, **h67**^{km}±32^{km}, **ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.11**	**344**	*e*P	Pn	00 29 36.8	+0.7
SKR				*e*S	Sn	00 29 52.6	+1.8
ALID	**Alaid**	**1.42**	**332**	*e*P	Pn	00 29 40.4	0.0
ALID				*e*S	Sn	00 29 59.3	+1.0
PAU	**Pauzhetka**	**1.86**	**4**	*e*P	Pn	00 29 48.1	+2.0
PAU				*e*S	Sn	00 30 12.7	+4.2
KDTR	**Khodutka, Kamc**	**2.39**	**23**	*e*P	Pn	00 29 55.3	+2.0
KDTR				*e*S	Sn	00 30 24.8	+3.4
ASAK	**Asacha**	**2.89**	**16**	*e*P	Pn	00 30 03.4	+3.2
RUS	**Russkaya**	**3.07**	**23**	*e*P	Pn	00 30 04.3	+1.8
RUS				*e*S	Sn	00 30 40.4	+2.4
DALK	**Dalny**	**3.68**	**21**	*e*P	Pn	00 30 13.4	+2.6
DALK				*e*S	Sn	00 30 56.0	+3.1
AVH	**Avacha**	**3.89**	**19**	*e*P	Pn	00 30 18.7	+4.9
SMAR	**Somma**	**3.90**	**20**	*e*P	Pn	00 30 18.7	+4.6
SDLR	**Sedlovina**	**3.94**	**21**	*e*P	Pn	00 30 19.1	+4.6
KRX	**Arik**	**3.96**	**18**	*e*P	Pn	00 30 18.5	+3.7
SPN	**Mys Shipunski**	**4.10**	**30**	*e*P	Pn	00 30 18.4	+1.9
SPN				*e*S	Sn	00 31 05.5	+2.3

JMA 04 01:00:29.6±0.2, **37°.36N**×**142°.04E**, **h28**^{km}±4^{km}, **M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.93**	**271**	P	Pn	01 00 46.7	-0.1
JFK				S	Sb	01 00 58.2	-0.9
JMST	**Minamisoumatoc**	**0.99**	**292**	P	Pn	01 00 47.4	-0.2
JMST				S	Sn	01 00 59.8	-0.8
ONAJ	**Iwakimizuishiy**	**1.02**	**256**	P	Pn	01 00 48.1	0.0
ONAJ				S	Sn	01 01 00.4	-1.2
JIKH	**Ishinomakikobu**	**1.05**	**335**	P	Pn	01 00 48.2	-0.3
JIKH				S	Sn	01 01 01.0	-1.2
JMM	**Marumori**	**1.11**	**297**	P	Pn	01 00 49.6	+0.3
JMM				*e*S	Sn	01 01 03.4	-0.3
JIO	**Ouri**	**1.22**	**334**	P	Pn	01 00 50.9	+0.1
JIO				S	Sn	01 01 05.3	-1.1
JFT	**Otama**	**1.36**	**277**	P	Pb	01 00 54.0	-0.5
JFT				S	Sb	01 01 10.8	-0.8
JOU	**Okura**	**1.48**	**313**	P	Pb	01 00 55.6	-0.9
JOU				*e*S	Sb	01 01 14.0	-0.9
JMK	**Ichinoseki**	**1.72**	**338**	P	Pn	01 00 58.8	+1.2
JYS	**Shirataka**	**1.79**	**299**	P	Pb	01 01 01.0	-0.6
JYS				S	Sb	01 01 23.2	-0.4
JFY	**Yanaizu**	**1.86**	**272**	P	Pb	01 01 02.2	-0.7
JFY				*e*S	Sb	01 01 24.3	-1.5
JYK	**Kaneyama**	**2.04**	**320**	P	Pn	01 01 03.3	+1.2

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*IDC **04** 01:09:05.3±0.9, 28°.93S×177°.79W, h0^{km}, mb3.9/3, mb1 4.0/3, mb1mx3.7/18, mbtmp3.9/3, MS3.3/2, Ms1 3.3/2, ms1mx2.8/18, Error ellipse: s-maj=37.1km s-min=32.3km az=109.0*
*ISCJB **04** 01:09:12.3±1.6, 29°.2S±0°.1×177°.9W±0°.3, h64^{km}±8^{km}, mb4.1/5, Error ellipse: s-maj=40.1km s-min=24.2km az=170.2*
*NEIC **04** 01:09:12.9±1.7, 29°.08S×177°.83W, h56^{km}±3^{km}, mb4.3/5, Error ellipse: s-maj=28.5km s-min=15.9km az=129.0*
ISC 04 01:09:13.6±1.0, **29°.1S**±0°.2×**178°.1W**±0°.2, **h53**^{km}±9^{km}, **n30**, σ**1^{s}.14**/30, **mb3.9**/5, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.17**	**133**	*e*Pn	**Pn**	**01 09 22.1**	**0.0**
RAO				*e*Sn	**Sn**	**01 09 28.3**	**+0.2**
OUZ	**Omahuta**	**9.31**	**227**	*e*Pn	Pn	01 11 29.6	+4.4
BKZ	**Black Stump Fm**	**10.97**	**203**	*e*Pn	**Pn**	**01 11 47.2**	**-0.6**
THZ	**Tophouse**	**14.58**	**208**	*e*Pn	**Pn**	**01 12 37.0**	**+0.2**
LHI	**Lord Howe Isla**	**19.89**	**257**	*e*P	**P**	**01 13 39.6**	**-1.0**
	81nm,1.3s						
STKA	**Stephens Creek**	**34.73**	**255**	P	**P**	**01 16 00.6**	**+1.9**
	1.7nm,0.4s,baz=68,slow=11,SNR=5.1						
STKA				LR	LR	01 27 40.9	
	comp=Z,40nm,20.8s,baz=28,slow=32						
STKA	**Stephens Creek**	**34.73**	**255**	*e*P	**P**	**01 16 00.6**	**+1.9**
	3.0nm,1.4s						
BBOO	**Buckleboo**	**39.28**	**253**	*e*P	**P**	**01 16 36.5**	**-0.8**
	39nm,1.3s						
AS31	**Alice Springs**	**43.14**	**266**	*e*P	**P**	**01 17 09.4**	**+0.3**
	0.9nm,0.6s						
ASAR	**Alice Springs**	**43.14**	**266**	P	**P**	**01 17 09.4**	**+0.3**
	1.3nm,0.6s,baz=101,slow=7.6,SNR=13						
ASAR				LR	LR	01 34 34.6	
	comp=Z,47nm,18.1s,baz=102,slow=35						
VNDA	**Vanda**	**49.34**	**186**	P	**P**	**01 17 57.0**	**0.0**
	0.4nm,0.7s,baz=18,slow=6.0,SNR=3.4						
VNDA	**Vanda**	**49.34**	**186**	*e*P	**P**	**01 17 56.6**	**-0.4**
	2.7nm,1.4s						
MK32	**Makanchi Array**	**116.92**	**311**	*e*PKPdf	**PKPdf**	**01 27 51.6**	**-0.5**
MKAR	**Makanchi Array**	**116.92**	**311**	PKP	**PKPdf**	**01 27 51.6**	**-0.5**
	0.1nm,0.4s,baz=110,slow=3.8,SNR=2.4						
KURBB	**Kurchatov Arra**	**120.18**	**314**	PKP	**PKPdf**	**01 27 56.3**	**-1.9**
	0.2nm,0.3s,baz=115,slow=1.8,SNR=5.2						
ARA0	**ARCESS Array S**	**137.35**	**348**	*e*PKPdf	**PKPdf**	**01 28 30.6**	**+0.3**
ARCES	**ARCESS Array B**	**137.35**	**348**	PKP	**PKPdf**	**01 28 30.6**	**+0.3**
	1.0nm,0.7s,baz=29,slow=2.1,SNR=3.9						
FIA0	**FINESS Array S**	**143.95**	**340**	*e*PKPdf	**PKPab**	**01 28 39.8**	**+0.1**
FINES	**FINESS Array B**	**143.95**	**340**	PKP	**PKPab**	**01 28 39.8**	**+0.1**
	1.1nm,0.5s,baz=50,slow=3.2,SNR=13						
NB2	**NORSAR Subarra**	**147.50**	**352**	PKP	**PKPdf**	**01 28 50.5**	**+2.0**
	comp=Z,0.8nm,0.6s,baz=11,slow=2.9						
NB200	**NORSAR Array S**	**147.50**	**352**	*e*PKPbc	**PKPdf**	**01 28 50.5**	**+2.0**
NOA	**NORSAR Array B**	**147.50**	**352**	PKPbc	**PKPdf**	**01 28 50.5**	**+2.0**
	comp=Z,1.2nm,0.7s,baz=14,slow=4.3,SNR=5.7						
HFS	**Hagfors**	**148.00**	**349**	PKPbc	**PKPbc**	**01 28 51.7**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=40,slow=5.8,SNR=7.1						
AKASG	**Malin Array Be**	**150.26**	**324**	PKPbc	**PKPbc**	**01 28 57.3**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=50,slow=2.7,SNR=4.6						
AKBB	**Malin Array Si**	**150.26**	**324**	*e*PKPbc	**PKPbc**	**01 28 57.3**	**-1.1**
MMAI	**Mount Meron Ar**	**151.15**	**286**	PKPbc	**PKPbc**	**01 29 01.1**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=90,slow=7.5,SNR=4.9						
BR101	**Keskin Array S**	**151.94**	**301**	*e*PKPbc	**PKPbc**	**01 29 01.6**	**-1.3**
BRTR	**Keskin Array B**	**151.94**	**301**	PKPbc	**PKPbc**	**01 29 01.6**	**-1.3**
	comp=Z,0.8nm,1.0s,baz=64,slow=3.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**164.09**	**179**	PKPab	**PKPab**	**01 30 05.8**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=150,slow=3.2,SNR=12						
TOA1	**Torodi Ar. Sit**	**164.09**	**179**	*e*PKPab	**PKPab**	**01 30 05.8**	**+0.9**

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*SKHL **04** 01:26:59.4±0.3, 44°.88N×151°.36E, h57^{km}±2^{km}, mb4.6/6*
*ISCJB **04** 01:27:00.5±0.6, 45°.12N±0°.07×151°.10E±0°.07, h42^{km}, mb4.0/19, MS3.2/2, Error ellipse: s-maj=10.9km s-min=3.7km az=147.8*
*JMA **04** 01:27:00.7±0.5, 45°.56N×151°.01E, h30^{km}, M4.6*
*NIED **04** 01:27:00, 45°.60N×151°.00E, h20^{km}, Mw3.9 Best double couple: M$_0$8.82000×10^{14} NP1:φ$_s$231.00000°, δ33.00000°, λ161.00000°. NP2:φ$_s$338.00000°, δ80.00000°, λ58.00000°.*
*IDC **04** 01:27:06.1±2.9, 45°.46N×150°.93E, h65^{km}±24^{km}, mb3.7/13, mb1 3.8/17, mb1mx3.6/37, mbtmp3.9/17, MS3.0/6, Ms1 3.0/6, ms1mx2.8/37, Error ellipse: s-maj=24.6km s-min=17.6km az=143.0*
ISC 04 01:27:02.2±0.8, **45°.11N**±0°.10×**151°.09E**±0°.08, **h42**^{km}, **n73**, σ**1^{s}.46**/72, **mb4.1**/19, **2C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.29**	**274**	*i* P	**Pn**	**01 27 37.0**	**-0.3**
KUR				AMB	AMB	01 27 38.6	
	60nm,0.2s						
KUR				AMB	AMB	01 27 38.6	
	50nm,0.2s						
KUR				*i* S	**Sn**	**01 28 05.0**	**+0.8**
KUR				A	A	01 28 11.0	
	600nm,0.4s						
KUR				A	A	01 28 11.0	
	210nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.89**	**256**	*e*P	**Pn**	**01 27 59.0**	**-0.3**
YUK				*e*S	**Sn**	**01 28 44.0**	**+0.3**
YUK				A	A	01 28 54.0	
	190nm,0.5s						
YUK				A	A	01 28 54.0	
	270nm,0.5s						
GRPR	**Tuman**	**3.96**	**256**	*e*P	**Pn**	**01 28 01.0**	**+0.6**
GRPR				AMB	AMB	01 28 07.0	
	3µm,0.2s						
GRPR				AMB	AMB	01 28 07.0	
	30nm,0.2s						
GRPR				*e*S	**Sn**	**01 28 45.0**	**-0.6**
GRPR				A	A	01 28 50.0	
	150nm,0.4s						
GRPR				A	A	01 28 50.0	
	140nm,0.4s						
NEM2	**Nemuro 2**	**4.22**	**248**	P	**Pn**	**01 28 03.9**	**0.0**
NEM2				*e*S	**Sn**	**01 28 51.0**	**-0.9**
JRA	**Rausu**	**4.43**	**257**	P	**Pn**	**01 28 08.8**	**+2.1**
JRA				*e*S	**Sn**	**01 29 00.0**	**+3.0**
JNK	**Nakash**	**4.82**	**254**	P	**Pn**	**01 28 13.4**	**+1.3**
JNK				*e*S	**Sn**	**01 29 07.4**	**+0.8**
JAK	**Akkeshi**	**5.07**	**248**	P	**Pn**	**01 28 15.6**	**0.0**
JAK				*e*S	**Sn**	**01 29 11.2**	**-1.6**
JTKR	**Abashiri--Toko**	**5.26**	**260**	P	**Pn**	**01 28 19.9**	**+1.7**
JAR	**Ashorobuto**	**5.57**	**254**	P	**Pn**	**01 28 24.2**	**+1.8**
JAR				*e*S	**Sn**	**01 29 26.6**	**+1.5**
JMP	**Maruseppu**	**5.63**	**261**	P	**Pn**	**01 28 25.7**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.09**	**291**	*e*P	**Pn**	**01 28 31.9**	**+2.3**
YSS				AMB	AMB	01 28 32.5	
	20nm,0.3s						
JKK2	**Kamakawa 2**	**6.09**	**261**	P	**Pn**	**01 28 31.9**	**+2.2**
JCH	**Churui**	**6.12**	**249**	P	**Pn**	**01 28 30.9**	**+0.9**
JCH				*e*S	**Sn**	**01 29 37.0**	**-1.6**
ASAJ	**Asahikawa**	**6.14**	**264**	P	**Pn**	**01 28 33.6**	**+3.3**
	2.5nm,0.3s,baz=78,slow=19,SNR=6.0						
ASAJ				LR	LR	01 31 08.5	
	comp=Z,136nm,18.8s,baz=138,slow=40						
SKR	**Severo-Kuril's**	**6.52**	**29**	*e*P	**Pn**	**01 28 35.3**	**-0.2**
SKR				AMB	AMB	01 28 38.4	
	30nm,0.8s						
JBT2	**Biratori 2**	**6.72**	**253**	P	**Pn**	**01 28 38.7**	**+0.5**
JKB	**Kayabe**	**7.99**	**250**	P	**Pn**	**01 28 55.8**	**+0.2**
JKB				*e*S	**Sn**	**01 30 19.4**	**-5.2**
JANG	**Nango**	**8.48**	**239**	P	**Pn**	**01 29 00.5**	**-1.9**
PETK	**Petropavlovsk-**	**9.10**	**26**	P	**Pn**	**01 29 11.6**	**+0.7**
	0.8nm,0.3s,baz=206,slow=13,SNR=4.1						
OKH	**Okha**	**9.98**	**331**	*e*P	Pn	01 29 26.1	+3.3
NKL	**Nikolayevsk**	**10.54**	**323**	*e*P	Pn	01 29 33.0	+2.5
MJAR	**Matsushiro Arr**	**12.96**	**233**	LR	LR	01 35 35.2	
	comp=Z,37nm,21.4s,baz=15,slow=39						
USRK	**Ussuriysk Ar.**	**13.63**	**273**	P	**Pn**	**01 30 13.6**	**+0.8**
	0.2nm,0.3s,baz=85,slow=17,SNR=5.4						
USRK				LR	LR	01 35 47.0	
	comp=Z,85nm,21.5s,baz=124,slow=39						
KLR	**Kul'dur**	**13.78**	**294**	*e*P	**Pn**	**01 30 15.1**	**+0.3**
EKMR	**Ekimchan**	**14.28**	**310**	*e*P	**Pn**	**01 30 19.5**	**-2.1**
BMKR	**Bomnak**	**17.19**	**312**	*e*P	**P**	**01 30 57.5**	**-2.6**
ZEA	**Zeya**	**17.68**	**308**	*e*P	**P**	**01 31 03.4**	**-2.2**
KROS	**Kirovskiy**	**18.08**	**310**	*e*P	**P**	**01 31 12.2**	**+2.2**
KROS				AMB	AMB	01 31 16.0	
	10.0nm,0.3s						
KSRS	**Korea Array**	**18.98**	**254**	P	**Pn**	**01 31 22.5**	**+1.7**
	0.2nm,0.3s,baz=67,slow=9.7,SNR=3.7						
KSRS				LR	LR	01 38 42.2	
	comp=Z,34nm,18.3s,baz=45,slow=37						
BILL	**Bilibino**	**24.32**	**14**	*e*P	**P**	**01 32 15.9**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**28.50**	**147**	T	T	02 03 33.6	
	baz=336						

H11N1	WAKE ISLAND Hy	28.51	147	T	T	02 03 39.2	
	baz=336						
H11N3	WAKE ISLAND Hy	28.52	147	T	T	02 03 51.0	
	baz=336						
TIXI	Tiksi	28.68	346	eP	P	01 32 54.1	-0.5
H11S1	WAKE ISLAND Hy	29.54	149	T	T	02 05 13.6	
	baz=337,slow=76,SNR=92						
H11S3	WAKE ISLAND Hy	29.55	149	T	T	02 05 07.0	
	baz=337,slow=76,SNR=83						
H11S2	WAKE ISLAND Hy	29.56	149	T	T	02 05 14.7	
	baz=337,slow=76,SNR=84						
ULN	Ulaanbaatar	30.14	291	eP	P	01 33 07.9	-0.2
SONM	Songino Array	30.58	291	LR	LR	01 46 21.5	
	comp=Z,46nm,18.3s,baz=68,slow=38						
ILAR	Eielson Array	38.71	37	P	P	01 34 21.6	-0.1
	0.3nm,0.6s,baz=257,slow=8.2,SNR=3.2						
ZALV	Zalesovo Beam	42.45	307	LR	LR	01 53 36.2	
	comp=Z,27nm,18.2s,baz=70,slow=38						
MKAR	Makanchi Array	46.45	298	P	P	01 35 24.7	0.0
	1.1nm,0.7s,baz=74,slow=7.4,SNR=9.8						
MKAR				PcP	PcP	01 36 59.1	+0.3
	0.5nm,0.6s,baz=56,slow=2.3,SNR=4.7						
MKAR	Makanchi Array	46.45	298	eP	P	01 35 24.6	-0.1
KURBB	Kurchatov Arra	47.20	304	P	P	01 35 29.0	-1.4
	0.7nm,0.4s,baz=73,slow=8.4,SNR=5.6						
AAK	Ala-Archa	53.30	296	eP	P	01 36 15.5	-1.4
ARCES	ARCESS Array B	58.94	340	P	P	01 36 55.4	-1.2
	2.6nm,0.9s,baz=35,slow=8.0,SNR=3.9						
FINES	FINESS Array B	64.92	334	P	P	01 37 35.0	-1.8
	1.0nm,0.5s,baz=29,slow=8.7,SNR=12						
GEYT	Alibeck	66.23	300	P	P	01 37 46.0	+0.3
	2.5nm,0.6s,baz=35,slow=5.4,SNR=5.7						
NB2	NORSAR Subarra	69.32	340	P	P	01 38 03.5	-1.3
	comp=Z,0.5nm,0.5s,baz=27,slow=6.5						
NOA	NORSAR Array B	69.32	340	P	P	01 38 03.7	-1.1
	comp=Z,1.3nm,0.5s,baz=28,slow=6.4,SNR=8.7						
ASAR	Alice Springs	70.21	197	P	P	01 38 13.6	+3.0
	comp=Z,0.5nm,0.6s,baz=15,slow=5.7,SNR=4.9						
KBZ	Khabaz	70.97	313	P	P	01 38 15.4	+0.3
	comp=Z,4.8nm,0.9s,baz=39,slow=4.8,SNR=6.3						
AKASG	Malin Array Be	72.11	325	P	P	01 38 21.0	-0.9
	comp=Z,1.4nm,0.5s,baz=42,slow=5.0,SNR=4.3						
BURAR	Bucovina Array	76.17	326	⇓iP	P	01 38 46.3	+0.6
TRPA	Tarpa	76.79	327	⇑iP	P	01 38 49.3	+0.2
MORC	Moravsky Berou	77.22	331	⇓iP	P	01 38 50.8	-0.7
MORC	Moravsky Berou	77.22	331	eP	P	01 38 51.4	-0.1
CLL	Collm	77.36	335	i P	P	01 38 50.5	-1.7
	comp=Z,4.0nm,0.7s						
HARR	Harsova	77.38	322	⇓iP	P	01 39 07.5	+15
VRAC	Vranov	77.94	331	⇑iP	P	01 38 55.8	+0.3
VRAC	Vranov	77.94	331	eP	P	01 38 55.4	-0.1
JAVC	Velka Javorina	77.95	331	eP	P	01 38 56.6	+0.9
KRUC	Moravsky	78.22	331	eP	P	01 38 56.9	-0.2
BRTR	Keskin Array B	78.60	316	P	P	01 38 59.6	+0.1
	comp=Z,0.7nm,0.8s,baz=23,slow=4.7,SNR=4.4						
KHC	Kasperske Hory	79.09	333	eP	P	01 39 01.5	-0.4
GERES	GERESS Array B	79.30	333	P	P	01 39 02.1	-1.0
	comp=Z,0.9nm,0.6s,baz=38,slow=6.8,SNR=8.8						
CONA	Conrad Observa	79.38	331	eP	P	01 39 03.4	-0.1
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	79.54	59	P	P	01 39 05.8	+1.1
	comp=Z,0.2nm,0.5s,baz=277,slow=3.7,SNR=5.4						
SOKA	Soboth	80.74	331	eP	P	01 39 10.5	-0.4
	comp=Z,1.5nm,0.9s						
KBA	Koelnbreinsper	80.96	332	eP	P	01 39 12.0	-0.2
	comp=Z,2.8nm,0.7s						
VTS	Vitosha	81.05	324	⇓iP	P	01 39 13.3	+0.5
WATA	Walderalm	81.30	333	i P	P	01 39 12.6	-1.4
	comp=Z,1.6nm,0.7s						
WTTA	Wattenberg	81.35	333	eP	P	01 39 13.1	-1.1
	comp=Z,4.9nm,1.6s						

ISCJB ***04*** *01:50:15.8±0.4, 4°.82S±0°.05×153°.26E±0°.05, h56^{km}, mb4.5/31, MS3.2/4, Error ellipse: s-maj=8.4km s-min=6.2km az=38.6*

IDC ***04*** *01:50:17.0±5.1, 4°.79S×153°.40E, h47^{km}±44^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.8/33, mbtmp4.2/10, ML2.4/1, MS3.2/4, Ms1 3.3/4, ms1mx2.8/25, Error ellipse: s-maj=37.6km s-min=20.3km az=90.0*

NEIC ***04*** *01:50:16.0±2.4, 4°.79S×153°.32E, h45^{km}±7^{km}, mb4.8/27, Error ellipse: s-maj=11.0km s-min=10.1km az=120.0*

ISC 04 01:50:17.7±0.6**, 4°.76S**±0°.06×**153°.27E**±0°.08**, h56**^{km}**, n51, σ1^{s}.18**/53**, mb4.8**/31**, MS3.1**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.23	297	ePn	Pn	01 50 37.8	-1.0
RABL				eSn	Sn	01 50 53.7	-0.7
MANU	Manus Island	6.48	294	ePn	Pn	01 51 51.3	+0.8
PMG	Port Moresby	7.62	232	P	Pn	01 52 07.9	+1.8
	2.8nm,0.3s,baz=34,slow=4.0,SNR=4.1						
PMG				S	Sn	01 53 30.1	-1.0
	4.1nm,0.3s,baz=350,slow=18,SNR=4.7						
PMG	Port Moresby	7.62	232	ePn	Pn	01 52 04.8	-1.2
PMG				eSn	Sn	01 53 30.0	-1.0
PATS	Pohnpei	12.57	24	ePn	Pn	01 53 13.1	-0.8
PATS				eSn	Sn	01 55 30.9	-1.5
FAKI	Fak Fak	21.05	274	eP	P	01 54 55.5	-1.7
	31nm,1.2s						
SIJI	Sorong	22.30	279	P	P	01 55 10.6	-0.2
	19nm,0.4s,baz=110,slow=6.5,SNR=6.6						
MTN	Manton Dam	23.28	248	eP	P	01 55 20.5	-0.3
	28nm,0.9s						
WRAB	Tennant Creek	23.80	229	eP	P	01 55 27.3	+1.7
AS31	Alice Springs	26.49	223	eP	P	01 55 51.1	+1.1
	2.2nm,1.0s						
ASAR	Alice Springs	26.49	223	P	P	01 55 50.6	+0.6
	1.3nm,0.5s,baz=52,slow=8.8,SNR=33						
DAV	Davao City (W)	30.03	293	LR	LR	02 07 29.1	
	comp=Z,18nm,19.0s,baz=340,slow=34						
FORT	Forrest	35.11	220	eP	P	01 57 04.6	-1.2
	40nm,1.0s						
PSAD2	Pilbara Seismi	36.37	240	eP	P	01 57 15.7	-1.1
	24nm,1.4s						
PSAD1	Pilbara Seismi	36.42	240	eP	P	01 57 15.3	-1.8
	14nm,0.8s						
PSAB2	Pilbara Seismi	36.43	240	eP	P	01 57 16.4	-0.8
	20nm,1.3s						
PSAA3	Pilbara Seismi	36.44	240	eP	P	01 57 16.6	-0.8
	37nm,1.5s						
PSAA2	Pilbara Seismi	36.44	240	eP	P	01 57 17.1	-0.3
	19nm,1.1s						
PSA00	Pilbara Seismi	36.45	240	eP	P	01 57 16.5	-0.9
	9.8nm,0.7s						
PSAA1	Pilbara Seismi	36.46	240	eP	P	01 57 15.9	-1.6
	11nm,0.8s						
PSAC1	Pilbara Seismi	36.47	240	eP	P	01 57 15.5	-2.1
	22nm,1.2s						
PSAB1	Pilbara Seismi	36.47	240	eP	P	01 57 16.5	-1.1
	12nm,0.8s						
PSAC3	Pilbara Seismi	36.48	240	eP	P	01 57 16.2	-1.6
	19nm,1.1s						
THZ	Tophouse	40.81	157	eP	P	01 57 53.2	-0.6
	8.1nm,0.9s						
MORW	Morawa	42.73	231	eP	P	01 58 10.8	+1.2
	46nm,1.5s						
MJAR	Matsushiro Arr	43.43	342	LR	LR	02 14 58.9	
	comp=Z,15nm,21.2s,baz=270,slow=34						
KULM	Kulim	53.49	280	eP	P	01 59 32.7	-0.2
	7.9nm,0.8s						
PEA0B	Petropavlovsk-	57.77	3	eP	P	02 00 04.2	+1.3
	21nm,1.4s						
PETK	Petropavlovsk-	57.77	3	P	P	02 00 03.5	+0.5
	1.5nm,0.5s,baz=166,slow=5.9,SNR=6.9						
PEA1	Petropavlovsk-	57.78	3	eP	P	02 00 03.5	+0.5
CM31	Chiang Mai Arr	58.28	295	eP	P	02 00 08.8	+1.6
	12nm,0.4s						
CMAR	Chiang Mai Arr	58.28	295	P	P	02 00 08.8	+1.6
	1.1nm,0.3s,baz=123,slow=5.3,SNR=5.6						
CMAR				LR	LR	02 24 42.1	
	comp=Z,23nm,20.2s,baz=173,slow=35						
SONA0	Songino Array	66.54	328	eP	P	02 01 03.5	+1.5
SONM	Songino Array	66.54	328	P	P	02 01 03.4	+1.5
	0.9nm,0.5s,baz=154,slow=6.8,SNR=4.7						
VNDA	Vanda	72.85	178	P	P	02 01 40.9	+0.8
	0.4nm,0.6s,baz=342,slow=7.8,SNR=4.1						
CNPM	China Poot	77.48	25	eP	P	02 02 07.2	+0.2
	12nm,1.0s						
EYAK	Cordova Ski Ar	80.37	26	eP	P	02 02 23.7	+0.9
EYAK				ePcP	PcP	02 02 30.9	+1.2
MK31	Makanchi Array	80.60	319	eP	P	02 02 25.6	+1.1
	1.1nm,0.9s						
MK32	Makanchi Array	80.60	319	eP	P	02 02 25.3	+0.9
MKAR	Makanchi Array	80.60	319	P	P	02 02 25.3	+0.9
	0.6nm,0.5s,baz=100,slow=7.1,SNR=11						
MLY	Manley	80.68	21	eP	P	02 02 24.0	-0.5
	1.3nm,0.8s						
ILAR	Eielson Array	81.95	22	P	P	02 02 29.6	-1.5
	0.5nm,0.8s,baz=243,slow=6.3,SNR=4.3						
ILB	Eielson Array	81.95	22	eP	P	02 02 29.6	-1.5
	3.6nm,1.5s						
MAW	Mawson	85.78	203	P	P	02 02 49.9	-0.8
	2.2nm,1.0s,baz=68,slow=5.4,SNR=2.9						
MAW	Mawson	85.78	203	eP	P	02 02 49.9	-0.8
	0.8nm,1.0s						
NVAR	Mina Array Bea	91.70	52	LR	LR	02 37 55.4	
	comp=Z,39nm,20.7s,baz=142,slow=31						
LRM	Limekiln Ridge	96.37	45	eP	P	02 03 39.3	-1.7
GEC2	GERESS Array S	124.26	329	ePKPdf	PKiKP	02 09 12.1	+1.3
GERES	GERESS Array B	124.26	329	PKP	PKiKP	02 09 12.1	+1.3
	0.5nm,0.5s,baz=79,slow=2.1,SNR=5.6						
TORD	Torodi Ar. Bea	150.73	288	PKPbc	PKiKP	02 10 05.2	-0.3
	1.6nm,0.6s,baz=54,slow=2.0,SNR=23						
TOA1	Torodi Ar. Sit	150.74	288	ePKPbc	PKiKP	02 10 05.2	-0.2

IDC ***04*** *01:53:45.5±0.9, 15°.13S×174°.00W, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.9/30, mbtmp4.0/5, MS3.6/1, Ms1 3.6/1, ms1mx2.7/25, Error ellipse: s-maj=38.1km s-min=22.4km az=151.0*

NEIC ***04*** *01:53:53.5±2.2, 15°.27S×173°.98W, h62^{km}±7^{km}, mb4.7/15, Error ellipse: s-maj=17.7km s-min=7.7km az=140.0*

ISCJB ***04*** *01:53:55.2±0.4, 15°.31S±0°.08×173°.96W±0°.09, h100^{km}, mb4.6/19, Error ellipse: s-maj=14.1km s-min=8.8km az=35.0*

ISC 04 01:53:56.6±0.6**, 15°.35S**±0°.08×**173°.80W**±0°.10**, h100**^{km}**, n30, σ1^{s}.99**/26**, mb4.7**/19**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.24	136	ePn	Pn	01 55 12.2	-0.4
NIUE				eSn	Sn	01 56 06.8	-5.0
KNTN	Kanton	12.66	10	ePn	Pn	01 56 51.0	-2.2
URZ	Urewera	24.19	198	eP	P	01 59 03.0	-0.8
	22nm,1.2s						
BKZ	Black Stump Fm	25.21	198	eP	P	01 59 12.6	-0.5
	13nm,1.2s						
BFZ	Birch Farm	26.69	197	eP	P	01 59 26.1	-0.2
	51nm,1.3s						
THZ	Tophouse	28.72	201	eP	P	01 59 43.7	-0.8
	20nm,1.1s						
TAOE	Nuku Hiva Isla	33.50	83	eP	P	02 00 29.1	+2.2
	90nm,1.0s						
WHZ	Wether Hill Ro	34.09	203	eP	P	02 00 33.8	+2.2
	34nm,1.1s						
H11S2	WAKE ISLAND Hy	38.72	330	T	T	02 41 44.9	
	baz=146,slow=76,SNR=6.5						
H11S3	WAKE ISLAND Hy	38.73	330	T	T	02 41 54.2	
	baz=146,slow=76,SNR=6.4						
H11S1	WAKE ISLAND Hy	38.74	330	T	T	02 41 50.3	
	baz=146,slow=76,SNR=5.0						
SDHHI	Sand Hill	39.03	28	eP	P	02 01 12.4	-1.4
	377nm,1.4s						
STKA	Stephens Creek	43.73	240	P	P	02 01 52.6	+0.4
	1.3nm,0.5s,baz=44,slow=6.9,SNR=3.7						
STKA	Stephens Creek	43.73	240	eP	P	02 01 50.3	-1.8
	1.6nm,1.2s						
BBOO	Buckleboo	48.51	240	eP	P	02 02 29.5	-0.1
	36nm,1.4s						
AS31	Alice Springs	49.76	252	eP	P	02 02 37.9	-1.4
	1.2nm,0.5s						
ASAR	Alice Springs	49.76	252	P	P	02 02 39.4	+0.1
	2.2nm,0.3s,baz=88,slow=7.5,SNR=32						
FORT	Forrest	55.09	243	eP	P	02 03 18.4	-0.2
	47nm,1.1s						
SIJI	Sorong	56.07	279	LR	LR	02 27 28.4	
	comp=Z,47nm,18.9s,baz=188,slow=36						
RPN	Rapa Nui	60.66	113	P	P	02 04 01.3	+3.7
	77nm,0.3s,baz=255,slow=4.6,SNR=6.5						
RPN	Rapa Nui	60.66	113	eP	P	02 04 00.3	+2.7
	90nm,0.8s						
SBA	Scott Base	63.27	185	eP	P	02 04 16.5	+2.3
	1.8nm,0.8s						
VNDA	Vanda	63.39	186	P	P	02 04 16.9	+2.0
	1.4nm,1.0s,baz=15,slow=8.2,SNR=5.7						
BEKR	Beckworth	74.08	40	eP	P	02 05 23.4	+1.3
	11nm,0.7s						
NV01	Mina Array Sit	74.55	42	eP	P	02 05 26.6	+1.7
NVAR	Mina Array Bea	74.55	42	P	P	02 05 26.6	+1.7
	0.7nm,0.6s,baz=230,slow=9.3,SNR=3.7						
TXAR	Lajitas Array	80.90	56	P	P	02 06 01.9	+1.6
	0.4nm,0.9s,baz=222,slow=3.6,SNR=2.7						
YMR	Madison River	82.53	40	eP	P	02 06 07.5	-1.1
	11nm,0.4s						
BR101	Keskin Array S	145.87	321	ePKPdf	PKiKP	02 13 25.6	-2.7
BRTR	Keskin Array B	145.87	321	PKPbc	PKiKP	02 13 25.6	-2.7
	1.3nm,0.7s,baz=77,slow=2.4,SNR=6.9						

UCR 04 02:10:47.0±1.4**, 8°.82N**×**84°.08W, h4**^{km}**, MW3.8, 2C-3D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	Dominical	0.48	27	⇓iP	Pg	02 10 56.2	0.0
EDDO				eS	Sb	02 11 04.8	-0.5
EDPN	Palmar Norte	0.63	77	eP	Pg	02 10 59.8	+0.6
EDPN				eS	Sb	02 11 09.4	-0.3
EDLM	Las Mercedes	0.66	47	eP	Pg	02 10 59.5	-0.3
EDBA	Buenos Aires	0.86	67	eP	Pg	02 11 03.8	+0.2
EDBA				eS	Sb	02 11 16.1	-0.4
LCR2	La Lucha 2	0.92	5	eP	Pg	02 11 03.8	-0.8
LCR2				eS	Sg	02 11 17.2	+0.7
DRK0	Durika	0.93	62	⇑eP	Pg	02 11 04.5	-0.4
DRK0				eS	Sb	02 11 18.3	-0.4
HDC	Heredia	1.17	358	eP	Pg	02 11 08.2	-1.3
HDC				eS	Sg	02 11 24.4	-0.3
CVTR	Volcan Turrial	1.23	15	⇓eP	Pg	02 11 09.8	-0.9
CVTR				eS	Sg	02 11 26.6	0.0
SRA1	San Ramn	1.31	343	eP	Pg	02 11 10.8	-1.4
SRA1				eS	Sb	02 11 29.8	+0.3
BRU2	Volcan	1.37	91	⇑iP	Pn	02 11 12.6	-0.5
JTS	Las Juntas de	1.69	330	eP	Pn	02 11 15.8	-1.6
ARE1	Arenal 1	1.74	339	⇓eP	Pb	02 11 18.9	-0.7
ARE1				eS	Sg	02 11 43.1	0.0
CEDE	Laguna Cedeo	1.76	340	eP	Pn	02 11 18.3	-0.1
CEDE				eS	Sg	02 11 44.0	+0.2
MESS	Mesas	2.20	330	eP	Pn	02 11 25.4	+1.0

DDA ***04*** *02:37:00.8, 39°.95N×39°.79E, h7^{km}±2^{km}, ML2.9*

ISK ***04*** *02:37:00.2, 39°.99N×39°.78E, h6^{km}, ML2.3/9*

ISCJB ***04*** *02:37:01.4±0.4, 39°.98N±0°.03×39°.82E±0°.04, h12^{km}, Error ellipse: s-maj=4.3km s-min=4.0km az=169.6*

ISC 04 02:37:01.1±0.9**, 39°.98N**±0°.03×**39°.79E**±0°.03**, h12**^{km}**, n19, σ0^{s}.52**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERZN	Erzincan	0.40	187	PG	Pg	02 37 08.7	-0.4
ERZN				SG	Sg	02 37 14.4	0.0
KELT	Kelkit	0.44	292	i P	Pb	02 37 10.7	-0.2
KELT				i S	Sb	02 37 17.8	+0.2
BAYT	Aydıntepe-Bayb	0.49	34	PG	Pg	02 37 10.4	-0.4
BAYT				SG	Sg	02 37 16.9	-0.5
KOPT	Kop Dagi	0.55	86	i P	Pg	02 37 12.1	+0.2
YEDI	Yedisu-Bingol	0.80	133	PG	Pg	02 37 16.1	-0.5
YEDI				SG	Sb	02 37 27.8	-0.1
TNCL	Tunceli-Merkez	0.89	192	i P	Pb	02 37 18.6	+0.1
TNCL					IAML_P		
	comp=Z,199nm,0.2s						
MACK	Trabzon	0.96	359	i P	Pn	02 37 20.4	0.0
ECAT	Cat-ERZURUM	0.99	112	i P	Pb	02 37 20.4	0.0
KTUT	Trabzon	1.00	359	PG	Pb	02 37 19.9	-0.5
BNGB	Bingl	1.21	145	PN	Pg	02 37 24.0	-0.4
KEMA	Kemaliye	1.23	235	i P	Pg	02 37 24.7	0.0
SUSE	Susehri	1.23	281	i P	Pg	02 37 24.8	-0.1
SUSE					IAML_P		
	comp=Z,2μm,0.2s						
VRTB	Varto-Mus	1.53	122	PN	Pb	02 37 29.2	-0.3
CUZAR	Zara_SIVAS	1.55	267	i P	Pg	02 37 30.7	-0.2
SVRC	Sivrice-ELAZID	1.65	193	PN	Pn	02 37 30.0	0.0
DBAD	Bademkaya	1.79	54	i P	Pb	02 37 33.5	-0.4
DBAD					IAML_P		
	comp=Z,865nm,0.2s						
BCA	Borcka	2.02	43	PN	Pn	02 37 36.1	+1.1
SVSK	Karacayir	2.14	269	PN	Pn	02 37 37.2	+0.5
BATM	Batumi	2.17	41	PN	Pn	02 37 38.6	+1.5

IDC ***04*** *02:59:01.6±0.8, 62°.69N×152°.47W, h0^{km}, mb3.8/12, mb1 4.0/16, mb1mx3.8/42, mbtmp3.8/16, ML3.5/4, MS2.7/6, Ms1 2.7/6, ms1mx2.5/36, Error ellipse: s-maj=15.4km s-min=11.3km az=131.0*

ISCJB ***04*** *02:59:03.1±0.5, 62°.61N±0°.02×152°.11W±0°.05, h22^{km}±4^{km}, mb3.8/12, MS2.8/1, Error ellipse: s-maj=3.6km s-min=2.7km az=9.3*

AEIC ***04*** *02:59:03.2, 62°.58N×152°.03W, h10^{km}, ML3.9, MW3.7(SLM)*

NEIC ***04*** *02:59:03.2±0.0, 62°.58N×152°.03W, h10^{km}, ML3.9(AEIC), MW3.7(SLM), After AEIC.*

ANF ***04*** *02:59:07.4±4.0, 62°.78N×151°.55W, h10^{km}, ML4.3/3, Error ellipse: s-maj=41.2km s-min=35.0km az=120.0*

ISC 04 02:59:02.7±1.2**, 62°.58N**±0°.02×**152°.09W**±0°.03**, h12**^{km}±8^{km}**, n91, σ1^{s}.19**/114**, mb3.9**/12**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLA	Purkeypile	0.32	352	ePg	Pg	02 59 08.9	-0.3
PPLA				eSg	Sg	02 59 14.0	+0.4
SKT	Skwentna	0.66	156	ePg	Pb	02 59 15.4	-0.8
SKT				eSg	Sb	02 59 23.5	-1.8
CAST	Castle Rocks	0.84	0	ePg	Pb	02 59 18.2	-1.0
CAST				eSg	Sb	02 59 29.1	-1.4
KTH	Kantishna Hill	1.11	28	ePn	Pb	02 59 22.9	-0.9
KTH				eSg	Sb	02 59 37.6	-0.6
HUR	Hurricane	1.20	70	ePn	Pn	02 59 24.9	-0.4
TRF	Thorofare Moun	1.20	43	ePn	Pn	02 59 25.1	-0.4
SPWE	Spurr West	1.33	190	ePn	Pn	02 59 26.7	-0.5
SPU	Mount Spurr	1.41	179	ePn	Pn	02 59 28.2	0.0
SPU				eSn	Sn	02 59 46.7	0.0
BPAW	Bear Paw Mtn.	1.60	18	ePn	Pn	02 59 31.2	+0.3
BPAW				eSn	Sb	02 59 51.9	-0.5
RND	Reindeer	1.69	59	ePn	Pn	02 59 33.0	+0.9
RND				eSn	Sn	02 59 53.6	-0.2
PMR	Palmer	1.71	124	ePn	Pn	02 59 32.5	+0.2
PMR				eSn	Sn	02 59 54.4	+0.4
TT01	Tatalina	1.84	282	ePn	Pn	02 59 34.1	+0.1
TTA	Tatalina	1.84	283	ePn	Pn	02 59 34.1	-0.1
TTA				eSn	Sn	02 59 57.8	+0.4
MCK	McKinley	1.84	50	ePn	Pb	02 59 35.6	-0.7
MCK				eSn	Sn	02 59 56.9	-0.4
RC01	Rabbit Creek A	1.87	142	ePn	Pn	02 59 34.9	+0.4
RC01				eSg	Sb	03 00 00.2	+0.2
BWN	Browne	1.98	35	ePn	Pn	02 59 37.2	+1.1
BWN				ePn	Pb	02 59 37.5	-1.2
BWN				eSn	Sb	03 00 02.5	-0.8
RDJH	Redoubt Jeurge	2.03	190	ePn	Pn	02 59 37.5	+0.7
KNK	Knik Glacier	2.08	123	ePn	Pn	02 59 38.5	+1.1
KNK				eSn	Sn	03 00 00.8	-2.4
RSO	Redoubt South	2.15	189	ePn	Pn	02 59 39.6	+1.1
DHY	Denali Highway	2.22	75	ePn	Pn	02 59 39.4	-0.1
DHY				eSn	Sn	03 00 05.1	-1.7
SVW2	Sparrevohn	2.23	230	ePn	Pn	02 59 39.0	-0.5
SVW2				eSn	Sn	03 00 06.2	-0.6
SCM	Sheep Creek Mo	2.35	107	eSn	Sn	03 00 08.3	-1.8
MLY	Manley	2.53	13	ePn	Pn	02 59 43.5	-0.1
MLY				eSn	Sn	03 00 14.3	-0.1
WRH	Wood River Hil	2.61	42	ePn	Pn	02 59 44.6	0.0
WRH				eSn	Sn	03 00 15.6	-0.6
IVE	Iliamna Volcan	2.61	190	ePn	Pn	02 59 46.8	+2.0
SEW	Seward	2.79	152	ePn	Pn	02 59 49.1	+1.9
GLI	Glacier Island	2.93	124	ePn	Pn	02 59 49.7	+0.7
MDM	Murphy Dome	2.94	34	ePn	Pn	02 59 50.0	+0.8
HDA	Harding Lake	2.94	49	P	Pn	02 59 50.1	+0.9
	baz=233						
HDA				S	Sn	03 00 22.3	-2.2
	baz=233						
TCOL	CIGO, UAF Yank	2.97	37	P	Pn	02 59 50.9	+1.3
	baz=221						
TCOL				S	Sn	03 00 24.1	-1.0
	baz=221						
COLA	College	2.97	37	ePn	Pn	02 59 51.3	+1.7
JPK	Jack Peak	3.02	118	ePn	Pn	02 59 51.7	+1.3
PAX	Paxson	3.07	80	ePn	Pn	02 59 52.0	+1.0
PS08	TAPS Pump Stn8	3.07	48	ePn	Pn	02 59 51.9	+0.9
CNPM	China Poot	3.10	172	ePn	Pn	02 59 52.8	+1.4
ILAR	Eielson Array	3.19	44	Pn	Pn	02 59 52.3	-0.4
	3.9nm,0.3s,baz=237,slow=14,SNR=29						
ILAR				Pg	Pb	02 59 59.5	+0.3
	27nm,0.3s,baz=228,slow=18,SNR=106						
ILAR				Lg	Lg	03 00 41.9	
	32nm,0.3s,baz=229,slow=30,SNR=10						
ILAR				LR	LR	03 01 28.9	
	comp=Z,190nm,18.9s,baz=336,slow=45						
POKR	Poker Plat Res	3.27	37	P	Pn	02 59 54.1	+0.3
	baz=221						
POKR				S	Sn	03 00 30.5	-2.1
	baz=221						
PS06	TAPS Pump Stn6	3.44	16	ePn	Pn	02 59 56.8	+0.8
RIDG	Independent Ri	3.49	67	ePn	Pn	02 59 58.0	+1.3
IM3	Indian Mountai	3.49	349	ePn	Pn	02 59 57.2	+0.5
EYAK	Cordova Ski Ar	3.66	121	ePn	Pn	02 59 59.5	+0.5
DOT	Dot Lake	3.80	70	ePn	Pn	03 00 02.3	+1.2
FONW	Fourpeaked Sta	3.87	194	ePn	Pn	03 00 03.7	+1.7
SGAM	Sherman Glacie	3.90	119	ePn	Pn	03 00 02.8	+0.4
SCRK	Sand Creek	3.92	66	ePn	Pn	03 00 03.0	+0.3
KAHC	Katmai Hardscr	4.20	201	ePn	Pn	03 00 07.6	+1.0
PS05	TAPS Pump Stn5	4.29	8	ePn	Pn	03 00 08.6	+0.9
HMT	Hamilton	4.38	117	ePn	Pn	03 00 09.7	+0.7
COLD	Coldfoot	4.73	9	ePn	Pn	03 00 14.5	+0.7
BCA3	Beaver Creek A	4.75	80	ePn	Pn	03 00 15.5	+1.4
KDAK	Kodiak Island	4.82	183	Pn	Pn	03 00 15.3	+0.3
	1.8nm,0.3s,baz=43,slow=7.0,SNR=41						
KDAK				Sn	Sb	03 01 20.9	-4.0
	2.3nm,0.3s,baz=190,slow=14,SNR=3.8						
KDAK				LR	LR	03 02 29.5	
	comp=Z,41nm,20.1s,baz=143,slow=42						
KDAK	Kodiak Island	4.82	183	ePn	Pn	03 00 16.1	+1.0
OHAK	Old Harbor	5.41	187	ePn	Pn	03 00 24.6	+1.5
BM3	Burnt Mountain	5.80	30	ePn	Pn	03 00 28.4	-0.1
DAWY	Dawson	5.91	70	ePn	Pn	03 00 31.0	+1.0
TOLK	Toolik Lake Re	6.17	9	P	Pn	03 00 35.0	+1.5
	baz=191						
TOLK				S	Sn	03 01 43.9	-0.1
	baz=191						
RDOG	Red Dog Mine	7.11	325	ePn	Pn	03 00 49.4	+3.0
HYT	Haines Junctio	7.15	98	ePn	Pn	03 00 47.9	+0.7
EPYK	Eagle Plains	7.64	53	P	Pn	03 00 52.9	-0.8
	baz=247						
EPYK				S	Sn	03 02 17.9	-2.2
	baz=247						
INK	Inuvik	9.60	45	Pn	Pn	03 01 20.8	+0.4
	0.3nm,0.3s,baz=229,slow=11,SNR=4.7						
INK				Sn	Sn	03 03 06.0	-2.0
	0.1nm,0.3s,baz=122,slow=19,SNR=2.5						
INK				Lg	Lg	03 04 11.6	
	0.1nm,0.3s,baz=204,slow=20,SNR=6.0						
INK				LR	LR	03 05 41.6	
	comp=Z,50nm,20.2s,baz=106,slow=42						
DLBC	Dease Lake	11.61	101	LR	LR	03 06 18.2	
	comp=Z,88nm,19.6s,baz=280,slow=37						
YKA	Yellowknife Ar	17.13	74	P	P	03 03 03.5	+0.3
	0.2nm,0.3s,baz=284,slow=9.8,SNR=3.8						
YKA				LR	LR	03 10 02.0	
	comp=Z,5.8nm,18.8s,baz=234,slow=38						
YKB5	Yellowknife Ar	17.13	74	eP	P	03 03 03.5	+0.3
RES	Resolute Bay	22.90	35	P	P	03 04 05.7	-0.1
	1.7nm,0.7s,baz=239,slow=15,SNR=3.0						
NEW	Newport	24.08	110	LR	LR	03 13 41.6	
	comp=Z,32nm,19.1s,baz=294,slow=36						
WALA	Waterton Lakes	24.91	105	eP	P	03 04 26.8	+1.5
ELK	Elko	30.93	118	eP	P	03 05 23.0	+3.5
PDAR	Pinedale Array	31.69	109	P	P	03 05 27.3	+1.2
	0.3nm,0.4s,baz=335,slow=6.2,SNR=3.2						
NV01	Mina Array Sit	31.70	124	eP	P	03 05 28.0	+1.8
NVAR	Mina Array Bea	31.70	124	P	P	03 05 28.0	+1.8
	1.0nm,0.6s,baz=306,slow=9.4,SNR=6.2						
EYMN	Ely	36.00	85	eP	P	03 06 03.8	+0.6
MSTX	Muleshoe	41.95	109	eP	P	03 06 54.6	+1.4
WMOK	Wichita Mounta	43.06	105	eP	P	03 07 03.1	+0.9
TXAR	Lajitas Array	45.55	114	P	P	03 07 23.5	+1.3
	0.6nm,0.6s,baz=316,slow=5.5,SNR=16						
N55A	Marion Center	47.24	82	epP	pP	03 07 39.2	-0.1
ARA0	ARCESS Array S	48.16	1	eP	P	03 07 43.3	+1.3
ARCES	ARCESS Array B	48.16	1	P	P	03 07 43.3	+1.3
	4.1nm,1.1s,baz=8.9,slow=6.4,SNR=2.6						
SONA0	Songino Array	53.65	305	eP	P	03 08 24.4	+0.7
SONM	Songino Array	53.65	305	P	P	03 08 24.4	+0.7
	1.2nm,0.9s,baz=54,slow=7.3,SNR=4.1						
ZAA1	Zalesovo Array	55.55	323	eP	P	03 08 36.7	-0.6

ZALV	**Zalesovo Beam**	**55.56**	**323**	P	**P**	**03 08 36.7**	**-0.6**
	1.1nm,0.5s,baz=18,slow=5.2,SNR=2.5						
FIA0	**FINESS Array S**	**56.28**	**1**	*e*P	**P**	**03 08 42.1**	**-0.2**
FINES	**FINESS Array B**	**56.28**	**1**	P	**P**	**03 08 42.1**	**-0.2**
	1.1nm,0.8s,baz=12,slow=7.7,SNR=3.5						
MK32	**Makanchi Array**	**62.69**	**321**	*e*P	**P**	**03 09 25.8**	**-1.1**
MKAR	**Makanchi Array**	**62.69**	**321**	P	**P**	**03 09 25.8**	**-1.1**
	0.6nm,0.5s,baz=37,slow=6.7,SNR=5.3						
AKASG	**Malin Array Be**	**67.06**	**359**	P	**P**	**03 09 54.0**	**-1.2**
	0.5nm,0.4s,baz=359,slow=6.1,SNR=4.4						
AKBB	**Malin Array Si**	**67.06**	**359**	*e*P	**P**	**03 09 54.0**	**-1.2**
GEC2	**GERESS Array S**	**68.34**	**10**	*e*P	**P**	**03 10 03.0**	**-0.5**
GERES	**GERESS Array B**	**68.34**	**10**	P	**P**	**03 10 03.0**	**-0.5**
	0.2nm,0.3s,baz=336,slow=6.6,SNR=4.3						
BR101	**Keskin Array S**	**77.93**	**355**	*e*P	**P**	**03 10 59.7**	**-0.7**
BRTR	**Keskin Array B**	**77.93**	**355**	P	**P**	**03 10 59.7**	**-0.7**
	0.7nm,0.7s,baz=18,slow=5.2,SNR=3.3						

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*ISCJB **04** 02:59:22.7±0.2, 6°.40S±0°.03×80°.71W±0°.05, h34km, mb4.6/59, MS3.8/21, Error ellipse: s-maj=7.2km s-min=3.9km az=156.3*

*BJI **04** 02:59:23.0±0.0, 6°.40S×80°.80W, h27km, mB5.3/2*

*IDC **04** 02:59:25.8±2.7, 6°.45S×80°.77W, h45km±25km, mb4.1/11, mb1 4.2/16, mb1mx4.0/38, mbtmp4.3/16, ML4.2/4, MS3.8/22, Ms1 3.8/22, ms1mx3.8/30, Error ellipse: s-maj=25.5km s-min=15.7km az=69.0*

*NEIC **04** 02:59:25.9±1.5, 6°.48S×80°.76W, h48km±6km, mb4.6/63, Error ellipse: s-maj=20.7km s-min=10.1km az=53.0*

ISC 04 02:59:24.5±0.4**, 6°.46S**±0°.06×**80°.75W**±0°.07**, h34km, n341,** σ**0ˢ.97**/324**, mb4.7**/59**, MS3.7**/21**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.44**	**106**	P	**Pn**	**03 00 05.1**	**+2.8**
	104nm,0.3s,baz=316,slow=4.6,SNR=288						
ATAH				S	**Sb**	**03 00 39.2**	**+1.4**
	312nm,0.3s,baz=9.9,slow=16,SNR=9.2						
NNA	**Nana**	**6.71**	**145**	P	**Pn**	**03 01 01.3**	**+0.5**
	2.8nm,0.3s,baz=323,slow=12,SNR=5.3						
NNA				S	**Sn**	**03 02 13.6**	**-2.5**
	6.0nm,0.3s,baz=273,slow=19,SNR=2.6						
NNA				LR	LR	03 03 32.5	
	comp=Z,832nm,18.2s,baz=293,slow=37						
NNA	**Nana**	**6.71**	**145**	*e*Pn	**Pn**	**03 01 01.5**	**+0.7**
NNA				*e*Sn	**Sn**	**03 02 16.4**	**+0.2**
CRUC	**La Cruz**	**8.83**	**26**	*e*P	**Pn**	**03 01 27.9**	**-2.4**
PTLC	**Puerto Leguiza**	**8.87**	**42**	*e*P	**Pn**	**03 01 28.5**	**-1.9**
BBAC	**Balboa, Cauca**	**9.12**	**23**	*e*P	**Pn**	**03 01 36.9**	**+2.8**
SOTA	**Rioblanco**	**9.49**	**26**	*e*P	**Pn**	**03 01 41.2**	**+1.8**
PCON	**Cinco Dias**	**9.76**	**27**	*e*P	**Pn**	**03 01 41.3**	**-1.8**
POPC	**Popayan, Colom**	**9.82**	**25**	*e*P	**Pn**	**03 01 42.4**	**-1.3**
MARP	**Paez Belalcaza**	**10.41**	**28**	*e*P	**Pn**	**03 01 50.5**	**-1.3**
MACC	**Macarena, Meta**	**10.98**	**39**	*e*P	**Pn**	**03 01 55.6**	**-3.8**
PAYG	**Puerto Ayora**	**11.11**	**301**	*e*Pn	**Pn**	**03 02 01.5**	**+0.3**
ORTC	**Ortega, Tolima**	**11.68**	**28**	*e*P	**Pn**	**03 02 10.3**	**+1.4**
GUY2C	**Guyana, Caldas**	**12.79**	**25**	*e*P	**Pn**	**03 02 29.2**	**+4.6**
DBBC	**Dabeiba**	**14.14**	**19**	*e*P	**Pn**	**03 02 44.2**	**+1.6**
RUSC	**La Rusia**	**14.46**	**32**	*e*P	**P**	**03 02 51.9**	**-1.9**
LPAZ	**La Paz**	**15.75**	**129**	P	**Pn**	**03 03 05.5**	**+0.9**
	0.9nm,0.3s,baz=316,slow=10,SNR=49						
LPAZ				LR	LR	03 10 13.5	
	comp=Z,304nm,19.4s,baz=293,slow=41						
LPAZ	**La Paz**	**15.75**	**129**	*e*Pn	**Pn**	**03 03 04.2**	**-0.4**
	36nm,0.9s						
CAPV	**Capacho**	**16.54**	**31**	*e*P	**Pn**	**03 03 14.8**	**+0.6**
MNMC	**Minye Minye**	**16.63**	**140**	*e*Pn	**Pn**	**03 03 15.1**	**-0.3**
	30nm,1.2s						
PB11	**IPOC Station P**	**17.06**	**142**	*e*Pn	**Pn**	**03 03 19.2**	**-1.5**
	30nm,0.9s						
GO01	**Chusmiza**	**17.28**	**141**	*e*P	**P**	**03 03 27.6**	**+2.7**
	59nm,1.4s						
ELOV	**Elorza**	**17.47**	**40**	*e*P	**Pn**	**03 03 24.2**	**-1.5**
PB01	**IPOC Station P**	**18.14**	**144**	*e*P	**P**	**03 03 34.6**	**+0.5**
	6.4nm,0.9s						
SDV	**Santo Domingo**	**18.28**	**34**	P	**P**	**03 03 34.8**	**-1.0**
	0.2nm,0.3s,baz=218,slow=8.3,SNR=6.2						
SDV	**Santo Domingo**	**18.28**	**34**	*e*P	**P**	**03 03 35.8**	**0.0**
	14nm,1.1s						
VIRV	**Villa del Rosa**	**18.79**	**26**	*e*P	**P**	**03 03 40.4**	**-0.8**
LVC	**Limon Verde**	**19.70**	**146**	P	**P**	**03 03 52.5**	**+1.0**
	0.3nm,0.3s,baz=306,slow=9.0,SNR=4.8						
LVC				LR	LR	03 10 52.7	
	comp=Z,349nm,21.8s,baz=286,slow=35						
GO02	**Mina Guanaco**	**21.45**	**151**	*e*P	**P**	**03 04 12.6**	**+2.2**
	20nm,0.8s						
SIV	**San Ignacio**	**21.48**	**118**	P	**P**	**03 04 10.9**	**+0.4**
	22nm,0.8s,baz=304,slow=11,SNR=110						
SIV				LR	LR	03 13 34.5	
	comp=Z,370nm,20.8s,baz=306,slow=40						
PTGA	**Pitinga**	**21.50**	**75**	P	**P**	**03 04 10.1**	**-0.6**
	32nm,0.8s,baz=257,slow=12,SNR=86						
PTGA				LR	LR	03 13 09.7	
	comp=Z,458nm,21.9s,baz=249,slow=38						
PTGA	**Pitinga**	**21.50**	**75**	*e*P	**P**	**03 04 10.5**	**-0.2**
	33nm,0.8s						
CFA	**Coronel Fontan**	**27.62**	**156**	P	**P**	**03 05 09.4**	**+0.4**
	2.2nm,0.8s,baz=354,slow=6.1,SNR=5.0						
CFA				LR	LR	03 14 03.5	
	comp=Z,146nm,19.1s,baz=337,slow=32						
SJG	**San Juan**	**28.35**	**30**	*e*P	**P**	**03 05 17.0**	**+1.4**
	28nm,0.8s						
CPUP	**Villa Florida**	**29.82**	**134**	LR	LR	03 20 08.6	
	comp=Z,341nm,21.6s,baz=313,slow=42						
MDP	**Montagnes des**	**30.32**	**68**	LR	LR	03 18 30.4	
	comp=Z,551nm,20.8s,baz=246,slow=38						
BDFB	**Brasilia**	**33.36**	**109**	P	**P**	**03 06 00.4**	**+0.4**
	2.8nm,0.7s,baz=204,slow=7.3,SNR=4.4						
BDFB				LR	LR	03 20 28.3	
	comp=Z,817nm,20.5s,baz=267,slow=38						
SPB	**Sao Paulo**	**36.27**	**122**	*e*P	**P**	**03 06 24.6**	**-0.3**
	18nm,0.8s						
557A	**Orange Park**	**36.28**	**359**	P	**P**	**03 06 24.6**	**-0.3**
	baz=178						
555A	**McAlpin**	**36.44**	**357**	P	**P**	**03 06 26.6**	**+0.5**
	baz=176						
452A	**Marianna**	**37.34**	**354**	P	**P**	**03 06 34.9**	**+1.0**
	baz=173						
355A	**Pearson**	**37.65**	**357**	P	**P**	**03 06 37.4**	**+0.9**
	baz=177						
251A	**Midway**	**38.60**	**354**	P	**P**	**03 06 44.3**	**-0.1**
	baz=173						
150A	**Eclectic**	**39.17**	**353**	P	**P**	**03 06 50.4**	**+1.1**
	baz=172						
Z56A	**Williston**	**39.57**	**359**	P	**P**	**03 06 52.6**	**0.0**
	baz=179						
Z52A	**Williamson**	**39.59**	**355**	P	**P**	**03 06 53.2**	**+0.5**
	baz=174						
Y54A	**Tignall**	**40.15**	**358**	P	**P**	**03 06 57.5**	**+0.2**
	baz=177						
Y53A	**Monroe**	**40.19**	**356**	P	**P**	**03 06 58.1**	**+0.4**
	baz=176						
Y55A	**Saluda**	**40.19**	**359**	P	**P**	**03 06 57.8**	**0.0**
	baz=178						
X55A	**Gracelyn & Ava**	**40.72**	**359**	P	**P**	**03 07 02.5**	**+0.4**
	baz=179						
X56A	**White Oak**	**40.73**	**360**	P	**P**	**03 07 02.1**	**-0.1**
	baz=180						
X53A	**Estanollee**	**40.81**	**357**	P	**P**	**03 07 02.8**	**-0.1**
	baz=176						
X54A	**Belton**	**40.82**	**358**	P	**P**	**03 07 03.5**	**+0.6**
	baz=178						
X58A	**Rowland**	**40.82**	**2**	P	**P**	**03 07 03.9**	**+1.0**
	baz=182						
X60A	**Albert Glenn T**	**40.90**	**3**	P	**P**	**03 07 03.4**	**-0.2**
	baz=184						
X52A	**Dahlonega**	**40.95**	**356**	P	**P**	**03 07 04.3**	**+0.2**
	baz=175						
KMSC	**Kings Mountain**	**41.38**	**359**	P	**P**	**03 07 07.9**	**+0.3**
	baz=179						
W57A	**Gilead**	**41.40**	**1**	P	**P**	**03 07 07.1**	**-0.6**
	baz=181						
W52A	**Murphy**	**41.44**	**356**	P	**P**	**03 07 07.9**	**-0.2**
	baz=175						
W53A	**Cullowhee**	**41.47**	**357**	P	**P**	**03 07 08.4**	**0.0**
	baz=176						
W51A	**Cleveland**	**41.57**	**355**	P	**P**	**03 07 09.4**	**+0.3**
	baz=174						
TX31	**Lajitas Ar. Si**	**41.86**	**329**	*e*P	**P**	**03 07 10.6**	**-1.1**
	2.6nm,1.3s						
TXAR	**Lajitas Array**	**41.86**	**329**	P	**P**	**03 07 12.9**	**+1.2**
	0.2nm,0.8s,baz=152,slow=8.2,SNR=4.0						
TXAR				LR	LR	03 22 52.2	
	comp=Z,41nm,19.2s,baz=0.0,slow=34						
V53A	**Saluda**	**41.95**	**357**	P	**P**	**03 07 11.9**	**-0.4**
	baz=177						
W47A	**Westpoint**	**41.99**	**352**	P	**P**	**03 07 12.6**	**+0.1**
	baz=170						
V56A	**Mocksville**	**42.05**	**0**	P	**P**	**03 07 12.8**	**-0.1**
	baz=180						
V58A	**Windy Hill, Pi**	**42.06**	**2**	P	**P**	**03 07 13.3**	**+0.2**
	baz=182						
V59A	**Middlesex**	**42.07**	**3**	P	**P**	**03 07 13.1**	**0.0**
	baz=184						
V55A	**Taylorsville**	**42.09**	**359**	P	**P**	**03 07 13.9**	**+0.6**
	baz=179						
V50A	**Pikevile**	**42.11**	**355**	P	**P**	**03 07 14.1**	**+0.6**
	baz=174						
V60A	**Jim Taylor Roa**	**42.13**	**4**	*e*P	**P**	**03 07 14.6**	**+0.9**
	16nm,0.8s						
V60A	**Jim Taylor Roa**	**42.13**	**4**	P	**P**	**03 07 13.7**	**+0.1**
	baz=185						
V57A	**Coltrane Farms**	**42.13**	**1**	P	**P**	**03 07 14.0**	**+0.3**
	baz=181						
V52A	**Sevierville**	**42.16**	**357**	P	**P**	**03 07 13.7**	**-0.2**
	baz=176						
V49A	**McMinnville**	**42.28**	**354**	P	**P**	**03 07 14.8**	**-0.1**
	baz=172						
V47A	**Nunnelly**	**42.54**	**352**	P	**P**	**03 07 17.6**	**+0.6**
	baz=170						
MIAR	**Mount Ida**	**42.55**	**344**	P	**P**	**03 07 18.0**	**+0.9**
	baz=161						
U56A	**King**	**42.59**	**0**	P	**P**	**03 07 17.8**	**+0.4**
	baz=180						
U59A	**Littleton**	**42.68**	**4**	P	**P**	**03 07 18.2**	**+0.1**
	baz=184						
U57A	**Blanch**	**42.69**	**2**	P	**P**	**03 07 18.7**	**+0.6**
	baz=182						
U50A	**Jamestown**	**42.82**	**355**	P	**P**	**03 07 19.2**	**-0.1**
	baz=174						
ABTX	**Abilene, Hawle**	**42.83**	**336**	*e*P	**P**	**03 07 20.6**	**+1.2**
	11nm,1.1s						
U60A	**Pendleton**	**42.84**	**4**	P	**P**	**03 07 19.9**	**+0.5**
	baz=185						
U47A	**Clarksville**	**43.12**	**352**	P	**P**	**03 07 22.6**	**+1.0**
	baz=170						
W39A	**Magazine**	**43.22**	**344**	P	**P**	**03 07 23.5**	**+1.0**
	baz=161						
T58A	**Grand View Acr**	**43.23**	**3**	P	**P**	**03 07 22.2**	**-0.4**
	baz=183						
T57A	**Hurt**	**43.26**	**2**	*e*P	**P**	**03 07 22.8**	**0.0**
	12nm,0.8s						
T57A	**Hurt**	**43.26**	**2**	P	**P**	**03 07 22.4**	**-0.4**
	baz=182						
T56A	**Rocky Mt**	**43.27**	**1**	P	**P**	**03 07 23.3**	**+0.4**
	baz=181						
T59A	**Double "B" Far**	**43.31**	**4**	*e*P	**P**	**03 07 23.5**	**+0.3**
	8.8nm,0.9s						
T59A	**Double "B" Far**	**43.31**	**4**	P	**P**	**03 07 23.2**	**0.0**
	baz=185						
T55A	**Pulaski**	**43.35**	**360**	P	**P**	**03 07 24.1**	**+0.5**
	baz=180						
T52A	**Hallie**	**43.39**	**357**	P	**P**	**03 07 24.3**	**+0.4**
	baz=177						
FCAR	**Ozark Folk Cen**	**43.46**	**347**	*e*P	**P**	**03 07 25.5**	**+1.1**
	5.0nm,0.8s						
T49A	**Edmonton**	**43.57**	**354**	P	**P**	**03 07 25.3**	**0.0**
	baz=173						
T46A	**Princeton**	**43.79**	**352**	P	**P**	**03 07 27.1**	**+0.1**
	baz=170						
S51A	**Beattyville**	**43.95**	**357**	P	**P**	**03 07 28.1**	**-0.2**
	baz=176						
S55A	**Lewisburg**	**44.01**	**0**	P	**P**	**03 07 28.9**	**+0.1**
	baz=180						
S54A	**Dingess, Beckl**	**44.04**	**359**	P	**P**	**03 07 28.8**	**-0.3**
	baz=179						
S50A	**Richmond**	**44.04**	**356**	P	**P**	**03 07 28.7**	**-0.4**
	baz=175						
S48A	**Wiedeman Farm,**	**44.17**	**354**	P	**P**	**03 07 28.9**	**-1.2**
	baz=172						
S47A	**Hartford**	**44.20**	**353**	P	**P**	**03 07 29.5**	**-0.9**
	baz=171						
S49A	**Springfield**	**44.22**	**355**	P	**P**	**03 07 29.9**	**-0.6**
	baz=174						
R58B	**Mineral**	**44.28**	**3**	*e*P	**P**	**03 07 31.5**	**+0.6**
	10nm,0.9s						
R58B	**Mineral**	**44.28**	**3**	P	**P**	**03 07 30.7**	**-0.2**
	baz=184,SNR=5.2						
R54A	**Victor**	**44.41**	**360**	P	**P**	**03 07 31.7**	**-0.4**
	baz=180						
TUL1	**Leonard**	**44.46**	**342**	*e*P	**P**	**03 07 34.2**	**+1.7**
	7.4nm,0.9s						
R59A	**King George, V**	**44.56**	**4**	P	**P**	**03 07 33.1**	**-0.1**
	baz=185						
R58A	**Rapidan**	**44.60**	**3**	P	**P**	**03 07 34.0**	**+0.4**
	baz=184						
R51A	**Hillsboro**	**44.61**	**357**	P	**P**	**03 07 33.4**	**-0.3**
	baz=176						
WCI	**Wyandotte Cave**	**44.76**	**354**	P	**P**	**03 07 34.1**	**-0.7**
	baz=172						
R45A	**Skylar, Fairfi**	**45.07**	**352**	P	**P**	**03 07 36.9**	**-0.4**
	baz=169						
Q53A	**Leroy**	**45.10**	**359**	P	**P**	**03 07 37.1**	**-0.4**
	baz=179						
Q54A	**Coxs Mills**	**45.22**	**360**	*e*P	**P**	**03 07 37.3**	**-1.1**
	9.9nm,0.9s						
Q54A	**Coxs Mills**	**45.22**	**360**	P	**P**	**03 07 37.8**	**-0.6**
	baz=180						
Q55A	**Buckhannon**	**45.23**	**1**	P	**P**	**03 07 38.4**	**-0.2**
	baz=181						
Q58A	**Fox Den Farm,**	**45.26**	**3**	P	**P**	**03 07 38.8**	**0.0**
	baz=184						
CCM	**Cathedral Cave**	**45.35**	**348**	*e*P	**P**	**03 07 40.7**	**+1.2**
	5.2nm,0.8s						
CCM	**Cathedral Cave**	**45.35**	**348**	P	**P**	**03 07 39.7**	**+0.1**
	baz=165						
P55A	**Reedsville**	**45.75**	**1**	P	**P**	**03 07 42.6**	**-0.1**
	baz=181						
P56A	**Dayton Farm, R**	**45.77**	**2**	P	**P**	**03 07 43.2**	**+0.4**
	baz=183						
P57A	**Homestead Farm**	**45.78**	**3**	P	**P**	**03 07 43.5**	**+0.6**
	baz=184						
P58A	**Pank, Wackersv**	**45.83**	**4**	P	**P**	**03 07 43.5**	**+0.2**
	baz=185						
P52A	**Corning**	**45.88**	**359**	P	**P**	**03 07 43.7**	**0.0**
	baz=178						
P48A	**Milroy**	**45.90**	**355**	P	**P**	**03 07 43.5**	**-0.4**
	baz=174						
P45A	**Graceland, Par**	**46.21**	**353**	P	**P**	**03 07 46.1**	**-0.2**
	baz=170						
P60A	**Greenville**	**46.28**	**5**	P	**P**	**03 07 46.7**	**-0.1**
	baz=187						
O52A	**Adamsville**	**46.36**	**359**	P	**P**	**03 07 46.7**	**-0.7**
	baz=178						
O51A	**Pataskala**	**46.41**	**358**	P	**P**	**03 07 47.2**	**-0.6**
	baz=178						
O55A	**Ligonier**	**46.46**	**2**	P	**P**	**03 07 47.9**	**-0.4**
	baz=182						
O58A	**Lewisberry**	**46.49**	**4**	P	**P**	**03 07 48.6**	**+0.1**
	baz=185						
ACSO	**Alum Creek Sta**	**46.51**	**358**	*e*P	**P**	**03 07 48.9**	**+0.3**
	10nm,0.8s						
ACSO	**Alum Creek Sta**	**46.51**	**358**	P	**P**	**03 07 49.0**	**+0.3**
	baz=177						
O57A	**Amberson**	**46.53**	**3**	P	**P**	**03 07 49.0**	**+0.2**
	baz=184						
O60A	**Telford**	**46.81**	**6**	P	**P**	**03 07 50.7**	**-0.2**
	baz=187						
SSPA	**Standing Stone**	**46.94**	**3**	P	**P**	**03 07 51.9**	**-0.1**
	baz=184						
SFIN	**Lafayette**	**46.97**	**353**	P	**P**	**03 07 51.3**	**-0.9**
	baz=171						
N55A	**Marion Center**	**47.04**	**2**	P	**P**	**03 07 52.5**	**-0.3**
	baz=182						
N50A	**Nevada**	**47.05**	**358**	P	**P**	**03 07 52.1**	**-0.8**
	baz=177						
N51A	**Ashland**	**47.17**	**358**	P	**P**	**03 07 53.7**	**-0.1**
	baz=178						
N54A	**Moraine State**	**47.20**	**1**	P	**P**	**03 07 53.7**	**-0.3**
	baz=181						
N56A	**West Decatur**	**47.20**	**3**	P	**P**	**03 07 53.8**	**-0.3**
	baz=183						
N49A	**Columbus Grove**	**47.26**	**356**	P	**P**	**03 07 53.8**	**-0.7**
	baz=175						
N59A	**State Game Lan**	**47.37**	**5**	*e*P	**P**	**03 07 56.5**	**+1.1**
	12nm,1.1s						
N59A	**State Game Lan**	**47.37**	**5**	P	**P**	**03 07 55.5**	**+0.2**
	baz=187						
HDIL	**Hopedale**	**47.44**	**351**	P	**P**	**03 07 55.3**	**-0.6**
	baz=168						
N46A	**Monticello**	**47.44**	**354**	P	**P**	**03 07 55.5**	**-0.4**
	baz=172						
N45A	**Kentland**	**47.49**	**353**	P	**P**	**03 07 55.7**	**-0.6**
	baz=171						
M51A	**Elyria**	**47.58**	**359**	P	**P**	**03 07 56.3**	**-0.7**
	baz=178						
KSU1	**Kansas State U**	**47.66**	**343**	P	**P**	**03 07 57.4**	**-0.2**
	baz=158						
M50A	**Fremont**	**47.68**	**358**	P	**P**	**03 07 57.3**	**-0.5**
	baz=177						
M55A	**Ridgway**	**47.73**	**2**	P	**P**	**03 07 58.0**	**-0.2**
	baz=183						
M54A	**Oil Creek Stat**	**47.75**	**1**	P	**P**	**03 07 58.2**	**-0.1**
	baz=182						
M56A	**Emporium**	**47.77**	**3**	P	**P**	**03 07 58.5**	**0.0**
	baz=183						
ANMO	**Albuquerque**	**47.79**	**331**	*e*P	**P**	**03 07 58.9**	**-0.2**
	3.3nm,1.1s						
ANMO	**Albuquerque**	**47.79**	**331**	P	**P**	**03 07 58.8**	**-0.2**
	baz=145						
M49A	**Liberty Center**	**47.80**	**357**	P	**P**	**03 07 57.9**	**-0.7**
	baz=176						
TASM	**ASL Pad, Albuq**	**47.80**	**331**	P	**P**	**03 07 59.2**	**+0.2**
	baz=145						
TASM	**ASL Pad, Albuq**	**47.80**	**331**	P	**P**	**03 07 58.8**	**-0.2**
	baz=145						
N43A	**Stutzman Famil**	**47.80**	**351**	P	**P**	**03 07 58.3**	**-0.4**
	baz=169						
M48A	**Edgerton**	**47.85**	**356**	*e*P	**P**	**03 07 59.2**	**+0.1**
	7.8nm,0.7s						
M48A	**Edgerton**	**47.85**	**356**	P	**P**	**03 07 58.1**	**-0.9**
	baz=175						
M46A	**Old House Fiel**	**47.91**	**354**	P	**P**	**03 07 58.7**	**-0.8**
	baz=172						
N40A	**Mertquake, Sal**	**48.15**	**349**	P	**P**	**03 08 01.2**	**-0.2**
	baz=166						
L53A	**Girard**	**48.18**	**0**	P	**P**	**03 08 01.0**	**-0.7**
	baz=181						
M43A	**Waltham Townsh**	**48.26**	**352**	P	**P**	**03 08 01.3**	**-0.8**
	baz=169						
L48A	**N Adams**	**48.29**	**356**	P	**P**	**03 08 01.6**	**-0.8**
	baz=175						
L50A	**Kingsville**	**48.31**	**358**	P	**P**	**03 08 01.7**	**-0.9**
	baz=177						
L47A	**Sherwood**	**48.38**	**356**	P	**P**	**03 08 02.2**	**-1.0**
	baz=174,SNR=7.1						
L49A	**Milan**	**48.41**	**357**	P	**P**	**03 08 03.2**	**-0.2**
	baz=176						
M41A	**Milan**	**48.44**	**350**	P	**P**	**03 08 03.3**	**-0.3**
	baz=167						
L55A	**Hinsdale**	**48.46**	**2**	P	**P**	**03 08 03.3**	**-0.5**
	baz=183						
L54A	**Sinclairville**	**48.48**	**1**	P	**P**	**03 08 04.0**	**0.0**
	baz=182						
AAM	**Ann Arbor**	**48.60**	**357**	P	**P**	**03 08 04.4**	**-0.4**
	baz=176						
BINY	**Binghamton**	**48.62**	**5**	P	**P**	**03 08 04.2**	**-0.8**
	baz=186						
K54A	**Basiliko Farm,**	**48.87**	**2**	P	**P**	**03 08 06.5**	**-0.5**
	baz=183						
L42A	**Oliver, Polo**	**48.92**	**351**	*e*P	**P**	**03 08 07.7**	**+0.5**
	15nm,0.9s						
L42A	**Oliver, Polo**	**48.92**	**351**	P	**P**	**03 08 07.0**	**-0.3**
	baz=168						
K51A	**Iona Station**	**48.95**	**359**	P	**P**	**03 08 07.4**	**-0.1**
	baz=179						
K52A	**Tillsonburg**	**49.01**	**0**	P	**P**	**03 08 07.5**	**-0.4**
	baz=180						
K55A	**Perry**	**49.02**	**3**	P	**P**	**03 08 07.0**	**-1.0**
	baz=184						
K50A	**Casco**	**49.03**	**358**	*e*P	**P**	**03 08 07.8**	**-0.4**
	33nm,0.8s						
K50A	**Casco**	**49.03**	**358**	P	**P**	**03 08 06.8**	**-1.3**
	baz=178						
K47A	**Vermontville**	**49.05**	**356**	P	**P**	**03 08 07.2**	**-1.1**
	baz=174,SNR=6.0						
K49A	**Clarkson**	**49.07**	**357**	P	**P**	**03 08 07.3**	**-1.1**
	baz=176						
K48A	**Perry**	**49.13**	**357**	P	**P**	**03 08 08.2**	**-0.7**
	baz=176,SNR=5.2						
K46A	**Dorr**	**49.13**	**355**	P	**P**	**03 08 07.6**	**-1.3**
	baz=173						
L40A	**Anamosa**	**49.23**	**350**	*e*P	**P**	**03 08 09.9**	**+0.3**
	15nm,0.8s						
L40A	**Anamosa**	**49.23**	**350**	P	**P**	**03 08 09.6**	**-0.1**
	baz=166,SNR=6.0						
K43A	**Burlington**	**49.42**	**353**	P	**P**	**03 08 10.5**	**-0.6**
	baz=170						
J52A	**Paris**	**49.47**	**0**	P	**P**	**03 08 10.5**	**-1.0**
	baz=180						
W18A	**Petrified Fore**	**49.56**	**329**	*e*P	**P**	**03 08 11.3**	**-1.3**
	11nm,1.3s						
J48A	**Bridge Port**	**49.60**	**357**	*e*P	**P**	**03 08 12.2**	**-0.3**
	24nm,0.8s						
J48A	**Bridge Port**	**49.60**	**357**	P	**P**	**03 08 11.9**	**-0.6**
	baz=176,SNR=7.5						
J47A	**Sunmer**	**49.60**	**356**	*e*P	**P**	**03 08 12.2**	**-0.3**
	25nm,0.8s						
J47A	**Sunmer**	**49.60**	**356**	P	**P**	**03 08 11.7**	**-0.8**
	baz=175,SNR=5.7						
J49A	**Marlette**	**49.63**	**358**	P	**P**	**03 08 11.5**	**-1.2**
	baz=177						
SDCO	**Great Sand Dun**	**49.67**	**334**	*e*P	**P**	**03 08 15.5**	**+2.0**
	2.6nm,0.9s						
SDCO	**Great Sand Dun**	**49.67**	**334**	P	**P**	**03 08 14.1**	**+0.7**
	baz=147,SNR=5.9						
J46A	**Howard City**	**49.77**	**355**	P	**P**	**03 08 12.7**	**-1.1**
	baz=174						
ACTO	**Acton**	**49.84**	**1**	P	**P**	**03 08 13.1**	**-1.2**
	baz=181						
JFWS	**Jewell Farm**	**49.90**	**351**	P	**P**	**03 08 13.7**	**-1.1**
	baz=168						
I51A	**Listowel**	**50.03**	**360**	P	**P**	**03 08 14.6**	**-1.1**
	baz=180						
WLVO	**Wesleyville**	**50.20**	**2**	P	**P**	**03 08 16.0**	**-1.0**
	baz=183						
I49A	**Point Hope**	**50.20**	**358**	P	**P**	**03 08 15.8**	**-1.2**
	baz=177						
BASO	**Ashfield**	**50.25**	**359**	P	**P**	**03 08 16.5**	**-0.9**
	baz=179						
PECO	**Prince Edward**	**50.28**	**4**	P	**P**	**03 08 16.6**	**-1.0**
	baz=185						
I52A	**Shelburne**	**50.30**	**1**	P	**P**	**03 08 16.4**	**-1.4**
	baz=181						
BWLO	**Walkerton**	**50.35**	**360**	P	**P**	**03 08 17.1**	**-1.0**
	baz=180,SNR=6.2						
I46A	**Reed City**	**50.35**	**356**	P	**P**	**03 08 16.9**	**-1.3**
	baz=174						
I48A	**Sherman Twp**	**50.48**	**357**	P	**P**	**03 08 18.4**	**-0.7**
	baz=176						
I42A	**Draeger Farm,**	**50.66**	**352**	*e*P	**P**	**03 08 20.6**	**+0.1**
	9.5nm,0.8s						
I42A	**Draeger Farm,**	**50.66**	**352**	P	**P**	**03 08 19.1**	**-1.4**
	baz=170,SNR=5.9						
DELO	**Deloro Mine**	**50.82**	**3**	P	**P**	**03 08 20.8**	**-0.9**
	baz=184						
BMRO	**Meriville Lake**	**50.82**	**360**	P	**P**	**03 08 20.6**	**-1.1**
	baz=179						
H52A	**Wyevale**	**50.88**	**1**	P	**P**	**03 08 20.8**	**-1.3**
	baz=181						
H55A	**Tweed**	**50.88**	**3**	P	**P**	**03 08 20.9**	**-1.2**
	baz=185						
H48A	**Harrisville**	**50.98**	**358**	P	**P**	**03 08 21.7**	**-1.2**
	baz=177						
H56A	**Elgin**	**50.98**	**4**	P	**P**	**03 08 22.2**	**-0.7**
	baz=186						
OGNE	**Ogallala**	**51.06**	**339**	P	**P**	**03 08 22.8**	**-0.9**
	baz=152						
H45A	**Beulah**	**51.07**	**355**	P	**P**	**03 08 23.0**	**-0.6**
	baz=173						
H43A	**Windswept, Lux**	**51.09**	**354**	*e*P	**P**	**03 08 23.6**	**-0.2**
	22nm,0.8s						
H43A	**Windswept, Lux**	**51.09**	**354**	P	**P**	**03 08 23.0**	**-0.7**
	baz=171,SNR=11						
LBNH	**Lisbon**	**51.09**	**8**	P	**P**	**03 08 23.6**	**-0.1**
	baz=191						
LONY	**Lake Ozonia**	**51.15**	**6**	P	**P**	**03 08 23.9**	**-0.3**
	baz=188						
PLVO	**Plevna**	**51.37**	**3**	P	**P**	**03 08 25.1**	**-0.7**
	baz=185						
G53A	**Haliburton**	**51.38**	**2**	P	**P**	**03 08 25.1**	**-0.8**
	baz=183						
ISCO	**Idaho Springs**	**51.44**	**336**	P	**P**	**03 08 27.2**	**+0.4**
	baz=148						
TOBO	**Tobermory, Bru**	**51.46**	**359**	P	**P**	**03 08 24.9**	**-1.5**
	baz=179						
KLBO	**Killbear Provi**	**51.59**	**0**	P	**P**	**03 08 26.0**	**-1.4**
	baz=181						
G55A	**Calabogie**	**51.61**	**4**	P	**P**	**03 08 26.4**	**-1.2**
	baz=185						

BUKO	**Buck Lake** baz=182,SNR=5.9	**51.68**	**1**	P	**P**	**03 08 26.7**	**-1.5**
BC3	**Big Chuckawall** baz=134	**51.70**	**323**	P	**P**	**03 08 26.6**	**-2.1**
PEMO	**Pembroke** baz=184	**52.00**	**3**	P	**P**	**03 08 29.6**	**-0.9**
F49A	**Sandfield** baz=178	**52.00**	**359**	P	**P**	**03 08 28.7**	**-1.8**
F52A	**Sundridge** baz=182	**52.04**	**1**	P	**P**	**03 08 29.7**	**-1.1**
F48A	**Evansville** baz=178	**52.08**	**358**	P	**P**	**03 08 29.6**	**-1.5**
F51A	**Arnstein** baz=181	**52.16**	**1**	P	**P**	**03 08 30.2**	**-1.5**
ALGO	**Algonquin Park** baz=183	**52.24**	**2**	P	**P**	**03 08 31.3**	**-0.9**
G39A	**Holcombe** baz=167,SNR=7.1	**52.35**	**351**	P	**P**	**03 08 33.0**	**-0.2**
F42A	**Maple Grove Fa** baz=171	**52.40**	**353**	P	**P**	**03 08 33.3**	**-0.2**
PKME	**Peaks-Kenny Pk** baz=194	**52.51**	**10**	P	**P**	**03 08 35.3**	**+1.0**
E52A	**Mattawa** baz=183	**52.55**	**2**	P	**P**	**03 08 33.6**	**-0.9**
SPMN	**Marine on St.** 10nm,0.6s	**52.58**	**349**	*e*P	**P**	**03 08 34.9**	**+0.1**
SPMN	**Marine on St.** baz=165,SNR=6.6	**52.58**	**349**	P	**P**	**03 08 33.8**	**-1.0**
E50A	**Wahnapitae** baz=180	**52.65**	**0**	P	**P**	**03 08 34.2**	**-1.2**
E53A	**Dumoine, Ponti** baz=184	**52.68**	**3**	P	**P**	**03 08 34.6**	**-0.9**
E46A	**Sault Ste Mari** baz=176	**52.69**	**357**	P	**P**	**03 08 34.4**	**-1.2**
E48A	**Lockeyer** baz=178,SNR=6.4	**52.72**	**359**	P	**P**	**03 08 34.5**	**-1.4**
E47A	**Iron Bridge** baz=177,SNR=5.4	**52.73**	**358**	P	**P**	**03 08 33.8**	**-2.1**
E54A	**Lac Daplat, Po** baz=184	**52.76**	**3**	P	**P**	**03 08 34.6**	**-1.6**
E51A	**G1948 Merrick** baz=182,SNR=7.8	**52.77**	**1**	P	**P**	**03 08 35.0**	**-1.2**
F40A	**Park Falls** baz=168	**52.81**	**352**	P	**P**	**03 08 36.1**	**-0.5**
COWI	**Conover** 3.6nm,0.9s	**52.86**	**353**	*e*P	**P**	**03 08 36.5**	**-0.4**
COWI				*e*ScP	**ScP**	**03 13 38.5**	**-2.3**
E43A	**Lone Tree Farm** 6.3nm,0.8s	**52.90**	**355**	*e*P	**P**	**03 08 37.0**	**-0.2**
E43A	**Lone Tree Farm** baz=172	**52.90**	**355**	P	**P**	**03 08 36.6**	**-0.6**
F39A	**Loretta** baz=167	**52.93**	**351**	P	**P**	**03 08 37.3**	**-0.1**
F38A	**Pierce - Schro** baz=166,SNR=12	**53.12**	**350**	P	**P**	**03 08 39.0**	**+0.1**
D46A	**Sault St. Mari** baz=176	**53.20**	**357**	P	**P**	**03 08 38.4**	**-1.0**
D52A	**ZEK Kipawa Sen** baz=183	**53.24**	**2**	P	**P**	**03 08 38.5**	**-1.2**
D47A	**Chapleau** baz=177,SNR=5.3	**53.32**	**358**	P	**P**	**03 08 38.7**	**-1.6**
D53A	**Lac Vacive, Po** 4.2nm,0.9s	**53.38**	**3**	*e*P	**P**	**03 08 39.9**	**-0.7**
D53A	**Lac Vacive, Po** baz=184	**53.38**	**3**	P	**P**	**03 08 39.7**	**-0.9**
D48A	**Paudash Townsh** baz=179	**53.41**	**359**	P	**P**	**03 08 39.5**	**-1.5**
D49A	**Beulah Townshi** baz=179	**53.50**	**359**	P	**P**	**03 08 40.3**	**-1.3**
D54A	**Lac Fusel, La** baz=185	**53.50**	**3**	P	**P**	**03 08 40.3**	**-1.3**
RWWY	**Rawlins** 8.2nm,1.2s	**53.68**	**336**	*e*P	**P**	**03 08 42.7**	**-0.6**
E38A	**The Farm, Brul** 11nm,1.0s	**53.70**	**351**	*e*P	**P**	**03 08 43.5**	**+0.4**
E38A	**The Farm, Brul** baz=167,SNR=5.6	**53.70**	**351**	P	**P**	**03 08 43.0**	**0.0**
D41A	**Chassel** 18nm,0.8s	**53.74**	**353**	*e*P	**P**	**03 08 43.8**	**+0.5**
D41A	**Chassel** baz=170,SNR=6.5	**53.74**	**353**	P	**P**	**03 08 43.4**	**+0.1**
LATQ	**La Tuque** baz=190	**54.07**	**7**	P	**P**	**03 08 46.5**	**+0.8**
K22A	**Casper** baz=148	**54.22**	**337**	P	**P**	**03 08 47.6**	**+0.5**
RSSD	**Black Hills** baz=151	**54.56**	**340**	P	**P**	**03 08 49.5**	**-0.2**
C40A	**Isle Royale Na** 7.4nm,0.8s	**54.65**	**353**	*e*P	**P**	**03 08 50.4**	**+0.5**
C40A	**Isle Royale Na** baz=170,SNR=6.9	**54.65**	**353**	P	**P**	**03 08 49.6**	**-0.3**
RKT	**Rikitea** 5.7nm,0.2s	**54.65**	**246**	*e*T	T	04 07 18.9	
EYMN	**Ely** 9.1nm,0.9s	**55.00**	**351**	*e*P	**P**	**03 08 52.8**	**+0.3**
EYMN	**Ely** baz=167,SNR=6.8	**55.00**	**351**	P	**P**	**03 08 52.2**	**-0.3**
LSQQ	**Lebel-sur-Quev** baz=185	**55.39**	**3**	P	**P**	**03 08 54.5**	**-0.7**
PDAR	**Pinedale Array** 1.8nm,0.8s,baz=140,slow=9.5,SNR=7.6	**55.56**	**335**	P	**P**	**03 08 55.8**	**-1.2**
MATQ	**Matagami** baz=184	**56.05**	**2**	P	**P**	**03 08 58.4**	**-1.7**
AGMN	**Agassiz Nation** 13nm,0.8s	**56.12**	**348**	*e*P	**P**	**03 09 01.4**	**+0.8**
AGMN	**Agassiz Nation** baz=162	**56.12**	**348**	P	**P**	**03 08 59.8**	**-0.8**
CHGQ	**Chibougamau** baz=188	**56.41**	**5**	P	**P**	**03 09 01.8**	**-0.8**
NVAR	**Mina Array Bea** comp=Z,50nm,19.1s,baz=84,slow=33	**56.66**	**325**	LR	LR	03 30 37.9	
FXWY	**Fox Creek** 1.8nm,1.0s	**56.89**	**334**	*e*P	**P**	**03 09 07.8**	**+1.4**
RLMT	**Red Lodge** baz=146	**57.37**	**336**	P	**P**	**03 09 09.9**	**+0.1**
ULM	**Lac du Bonnet** 5.8nm,0.7s,baz=175,slow=7.4,SNR=7.6	**57.98**	**349**	P	**P**	**03 09 13.4**	**-0.3**
ULM	**Lac du Bonnet** 6.9nm,0.8s	**57.98**	**349**	*e*P	**P**	**03 09 13.6**	**-0.1**
HLID	**Hailey** 5.1nm,1.3s	**58.37**	**332**	*e*P	**P**	**03 09 18.3**	**+1.5**
HLID	**Hailey** baz=140	**58.37**	**332**	P	**P**	**03 09 17.7**	**+0.9**
BOZ	**Bozeman (W)** 5.7nm,1.3s	**58.72**	**335**	*e*P	**P**	**03 09 20.1**	**+0.9**
BOZ	**Bozeman (W)** baz=144	**58.72**	**335**	P	**P**	**03 09 20.3**	**+1.1**
DLMT	**Dillon** 6.1nm,1.2s	**58.95**	**334**	*e*P	**P**	**03 09 19.9**	**-0.8**
MSO	**Missoula** baz=142	**60.68**	**334**	P	**P**	**03 09 33.6**	**+1.1**
F10A	**Beach Ranch, E** 4.3nm,0.8s	**61.50**	**332**	*e*P	**P**	**03 09 38.0**	**-0.1**
G08A	**Pilot Rock** 5.2nm,0.9s	**61.84**	**330**	*e*P	**P**	**03 09 42.2**	**+1.8**
G03D	**McMinnville, O** baz=132	**63.98**	**328**	P	**P**	**03 09 55.4**	**+0.9**
PPT2	**Papeete2** comp=Z,231nm,24.8s	**67.92**	**254**	*e*LR	LR	03 30 57.8	
TBI	**Tubuai** 4.7nm,0.2s	**67.93**	**248**	*e*T	T	04 23 59.4	
YKA	**Yellowknife Ar** comp=Z,5.1nm,19.1s,baz=144,slow=37	**73.49**	**344**	LR	LR	03 44 18.8	
SFJD	**Kangerlussuaq** comp=Z,43nm,21.3s,baz=224,slow=35	**76.41**	**12**	LR	LR	03 44 06.1	
DBIC	**Dimbokro** 7.8nm,0.8s,baz=227,slow=7.2,SNR=6.5	**76.84**	**82**	P	**P**	**03 11 14.4**	**+0.7**
DBIC	comp=Z,268nm,19.5s,baz=236,slow=34			LR	LR	03 43 36.6	
DBIC	**Dimbokro** 9.5nm,0.8s	**76.84**	**82**	*e*P	**P**	**03 11 14.4**	**+0.7**
VNA3	**Neumayer Olymp**	**77.88**	**162**	P	**P**	**03 11 18.2**	**-0.3**
VNA1	**Neumayer--Stat**	**78.17**	**161**	P	**P**	**03 11 20.0**	**0.0**
SNAA	**Sanae**	**80.10**	**162**	P	**P**	**03 11 30.2**	**-0.5**
SNAA	**Sanae** 2.9nm,0.9s,baz=284,slow=4.3,SNR=11	**80.10**	**162**	P	**P**	**03 11 30.2**	**-0.5**
RES	**Resolute Bay** comp=Z,44nm,18.9s,baz=151,slow=36	**81.47**	**356**	LR	LR	03 48 24.2	
BORG	**Borgarnes** comp=Z,24nm,19.7s,baz=239,slow=35	**83.35**	**22**	LR	LR	03 47 46.6	
SUMG	**Summit** 11nm,1.1s	**83.41**	**12**	*e*P	**P**	**03 11 48.4**	**0.0**
QSPA	**South Pole Qui** 5.7nm,0.9s	**83.63**	**180**	*e*P	**P**	**03 11 49.4**	**-0.1**
EGAK	**Eagle** 3.2nm,0.9s	**83.73**	**338**	*e*P	**P**	**03 11 49.9**	**+0.2**
ESDC	**Sonseca Array** 2.8nm,0.8s,baz=269,slow=4.6,SNR=18	**84.02**	**49**	P	**P**	**03 11 53.4**	**+1.5**
TOA1	**Torodi Ar. Sit**	**84.14**	**76**	*e*P	**P**	**03 11 52.3**	**-0.6**
TORD	**Torodi Ar. Bea** 11nm,0.3s,baz=242,slow=7.4,SNR=7.1	**84.15**	**76**	P	**P**	**03 11 52.3**	**-0.7**
TORD	comp=Z,186nm,21.7s,baz=305,slow=34			LR	LR	03 47 36.5	
ILAR	**Eielson Array** comp=Z,29nm,19.7s,baz=144,slow=36	**85.91**	**337**	LR	LR	03 51 41.3	
ILB	**Eielson Array** 4.8nm,1.5s	**85.91**	**337**	*e*P	**P**	**03 11 59.3**	**-1.4**
VNDA	**Vanda** 0.9nm,0.8s,baz=126,slow=2.5,SNR=6.2	**89.45**	**191**	P	**P**	**03 12 18.1**	**+0.5**
VNDA	comp=Z,42nm,20.2s,baz=130,slow=29			LR	LR	03 42 37.4	
JMIC	**Jan Mayen** comp=Z,18nm,18.7s,baz=282,slow=36	**90.36**	**18**	LR	LR	03 53 54.4	
DAVOX	**Davos/Dischmat** comp=Z,26nm,20.7s,baz=262,slow=33	**95.09**	**44**	LR	LR	03 52 18.7	
NOA	**NORSAR Array B** comp=Z,25nm,19.6s,baz=235,slow=35	**96.56**	**29**	LR	LR	03 56 01.1	
GEC2	**GERESS Array S** 1.0nm,0.8s	**97.75**	**42**	*e*P	**P**	**03 12 55.7**	**-0.7**
GERES	**GERESS Array B** 0.2nm,0.3s,baz=186,slow=1.3,SNR=3.6	**97.75**	**42**	P	**P**	**03 12 55.7**	**-0.7**
VRAC	**Vranov** comp=Z,21nm,21.5s,baz=274,slow=32	**99.65**	**41**	LR	LR	03 52 34.6	
H11N3	**WAKE ISLAND Hy** baz=91,slow=74,SNR=23	**13.16**	**289**	T	T	05 20 48.5	
H11N2	**WAKE ISLAND Hy** baz=91,slow=74,SNR=19	**13.17**	**289**	T	T	05 20 51.6	
H11N1	**WAKE ISLAND Hy** baz=91,slow=74,SNR=29	**13.18**	**289**	T	T	05 20 50.5	
H11S2	**WAKE ISLAND Hy** baz=89,slow=75,SNR=21	**13.38**	**287**	T	T	05 21 05.1	
H11S1	**WAKE ISLAND Hy** baz=89,slow=75,SNR=37	**13.38**	**287**	T	T	05 21 01.8	
H11S3	**WAKE ISLAND Hy** baz=89,slow=75,SNR=24	**13.39**	**287**	T	T	05 21 02.7	
AS31	**Alice Springs**	**134.82**	**227**	*e*PKPdf	**PKPdf**	**03 18 39.2**	**-1.6**
ASAR	**Alice Springs** 0.7nm,0.8s,baz=137,slow=1.8,SNR=5.4	**134.82**	**227**	PKP	**PKPdf**	**03 18 39.2**	**-1.6**
MK32	**Makanchi Array**	**137.25**	**17**	*e*PKPdf	**PKPdf**	**03 18 43.9**	**-0.7**
MKAR	**Makanchi Array** 0.7nm,0.8s,baz=101,slow=1.2,SNR=5.1	**137.25**	**17**	PKP	**PKPdf**	**03 18 43.9**	**-0.7**
WMQ	**Urumqi**	**141.43**	**13**	*e*PKP	**PKPdf**	**03 18 52.6**	**+0.2**
HHC	**Hu-ho-hao-te**	**144.03**	**344**	PKP	**PKPab**	**03 18 54.7**	**+0.2**
GTA	**Gaotai**	**147.19**	**359**	*e*PKPbc	**PKPdf**	**03 19 02.5**	**-0.1**
GTA				pPKP	pPKPdf	03 19 12.9	-0.9
GTA				sPKP		03 19 16.7	
NJ2	**Nanjing**	**148.65**	**327**	*e*PKPbc	**PKPdf**	**03 19 06.0**	**+1.0**
CD2	**Chengdu**	**155.31**	**351**	PKP	**PKPdf**	**03 19 12.8**	**-2.3**

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*ISCJB **04** 04:17:44.3±0.1, 23°.80S±0°.02×179°.95E±0°.03, h526^{km}, mb4.7/53, Error ellipse: s-maj=4.5km s-min=2.8km az=27.5*

*IDC **04** 04:17:44.9±1.2, 23°.75S×179°.98W, h523^{km}±11^{km}, mb4.1/21, mb1 4.2/23, mb1mx4.1/29, mbtmp5.0/23, Error ellipse: s-maj=12.5km s-min=11.4km az=102.0*

*BJI **04** 04:17:45.5±0.0, 23°.80S×180°.00E, h541^{km}, mb4.7/19, mB4.8/10*

*NEIC **04** 04:17:45.4±1.8, 23°.75S×179°.99E, h530^{km}±6^{km}, mb4.7/147, Error ellipse: s-maj=16.6km s-min=12.0km az=101.0*

ISC 04 04:17:44.5±0.3**, 23°.83S**±0°.05×**179°.92W**±0°.06**, h526**^{km}**, n250,** σ1^{s}**33**/264**, mb4.8**/53**, 2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.68**	**162**	P	**P**	**04 19 20.5**	**+1.6**
RAO	**Raoul Island**	**5.69**	**162**	*e*P	**P**	**04 19 20.6**	**+1.6**
GLKZ	**Green Lake**	**5.70**	**162**	P	**P**	**04 19 19.4**	**+0.3**
GLKZ				S	**S**	**04 20 31.2**	**-5.3**
NIUE	**Niue** baz=10,SNR=3.7	**10.44**	**65**	P	**P**	**04 20 06.9**	**+0.1**
MARNC	**Mare, Loyalty**	**11.37**	**280**	*e*P	**P**	**04 20 16.5**	**0.0**
PINNC	**Pines Island,**	**11.68**	**273**	*e*P	**P**	**04 20 21.9**	**+2.2**
OUZ	**Omahuta**	**12.67**	**205**	P	**P**	**04 20 32.1**	**+2.3**
DZM	**Mont Dzumac** 3.4nm,0.3s,baz=226,slow=14,SNR=25	**12.69**	**275**	P	**P**	**04 20 31.5**	**+1.1**
DZM	**Mont Dzumac**	**12.69**	**275**	*e*P	**P**	**04 20 31.6**	**+1.3**
WCZ	**Waipu Caves**	**13.04**	**201**	P	**P**	**04 20 36.2**	**+2.4**
KUZ	**Kuaotunu**	**13.40**	**195**	P	**P**	**04 20 38.4**	**+0.9**
WIAZ	**Waiheke Island**	**13.60**	**197**	P	**P**	**04 20 42.8**	**+3.2**
MXZ	**Matakaoa Point**	**13.77**	**186**	P	**P**	**04 20 43.7**	**+2.4**
ETAZ	**East Tamaki Re**	**13.81**	**198**	P	**P**	**04 20 43.0**	**+1.3**
WTAZ	**Waiatarua**	**13.89**	**199**	P	**P**	**04 20 42.3**	**-0.3**
WMGZ	**Waiomatatini S**	**14.01**	**185**	P	**P**	**04 20 44.6**	**+0.7**
HAZ	**Te Kaha**	**14.02**	**188**	P	**P**	**04 20 43.6**	**-0.3**
PKGZ	**Pakihiroa**	**14.11**	**187**	P	**P**	**04 20 44.6**	**-0.5**
RUGZ	**Raukumara Rang**	**14.23**	**188**	P	**P**	**04 20 46.8**	**+0.4**
PUZ	**Puketiti**	**14.28**	**186**	P	**P**	**04 20 46.6**	**-0.1**
OPRZ	**Ohinepanea**	**14.29**	**191**	P	**P**	**04 20 47.0**	**+0.2**
URZ	**Urewera** 12nm,0.3s,baz=294,slow=2.7,SNR=47	**14.60**	**189**	P	**P**	**04 20 49.7**	**-0.3**
URZ	4.7nm,0.3s,baz=45,slow=23,SNR=15			S	**S**	**04 23 20.4**	**-2.6**
URZ	**Urewera**	**14.60**	**189**	*e*P	**P**	**04 20 48.3**	**-1.7**
URZ				*e*S	**S**	**04 23 23.1**	**+0.1**
URZ	**Urewera**	**14.60**	**189**	P	**P**	**04 20 47.0**	**-3.0**
TKGZ	**Te Karaka**	**14.68**	**187**	P	**P**	**04 20 50.5**	**-0.3**
MTHZ	**Maungataniwha**	**15.22**	**190**	P	**P**	**04 20 56.8**	**+0.2**
MRHZ	**Matea Rd**	**15.27**	**191**	P	**P**	**04 20 55.6**	**-1.5**
MRHZ				S	**S**	**04 23 33.1**	**-2.6**
HIZ	**Hauiti** 106nm,1.2s	**15.29**	**196**	*e*P	**P**	**04 20 58.4**	**+1.2**
RATZ	**Rangitukua**	**15.43**	**193**	P	**P**	**04 20 59.5**	**+0.8**
KATZ	**Kakaramea**	**15.55**	**193**	P	**P**	**04 21 01.0**	**+1.0**
BKZ	**Black Stump Fm** 47nm,0.6s	**15.59**	**190**	*e*P	**P**	**04 20 59.3**	**-1.1**
BKZ				*e*S	**S**	**04 23 39.3**	**-2.1**
BKZ	**Black Stump Fm**	**15.59**	**190**	P	**P**	**04 20 57.6**	**-2.8**
BKZ				S	**S**	**04 23 36.2**	**-5.1**
ARHZ	**Aropaoanui**	**15.60**	**189**	P	**P**	**04 21 00.0**	**-0.4**
WTVZ	**West Tongariro**	**15.70**	**193**	P	**P**	**04 21 01.5**	**-0.2**
OTVZ	**Oturere**	**15.73**	**193**	P	**P**	**04 20 59.7**	**-2.3**
OTVZ				S	**S**	**04 23 40.2**	**-4.1**
NGZ	**Ngauruhoe**	**15.76**	**193**	P	**P**	**04 21 02.7**	**+0.5**
NGZ				S	**S**	**04 23 44.6**	**0.0**
WNVZ	**Wahianoa**	**15.91**	**193**	P	**P**	**04 21 03.6**	**-0.2**
MOVZ	**Moawhango**	**15.95**	**192**	P	**P**	**04 21 02.8**	**-1.3**
BHHZ	**Black Hill Sta**	**15.97**	**191**	P	**P**	**04 21 00.9**	**-3.4**
KRHZ	**Kereru**	**16.07**	**190**	P	**P**	**04 21 04.5**	**-0.7**
BFZ	**Birch Farm** 36nm,0.5s	**17.11**	**190**	*e*P	**P**	**04 21 13.8**	**-1.4**
SNZO	**South Karori** 45nm,0.8s	**18.00**	**193**	*e*P	**P**	**04 21 22.1**	**-1.3**
THZ	**Tophouse** 66nm,1.3s	**18.85**	**197**	*e*P	**P**	**04 21 31.3**	**0.0**
KHZ	**Kahutara** 26nm,0.6s	**19.31**	**195**	*e*P	**P**	**04 21 34.5**	**-0.8**
LTZ	**Lake Taylor** 54nm,0.5s	**19.97**	**197**	*e*P	**P**	**04 21 40.5**	**-0.9**
LHI	**Lord Howe Isla** 94nm,0.7s	**20.11**	**243**	*e*P	**P**	**04 21 43.4**	**+0.7**
OXZ	**Oxford** 46nm,0.7s	**20.54**	**197**	*e*P	**P**	**04 21 45.2**	**-1.4**
RPZ	**Rata Peaks** 28nm,0.5s,baz=328,slow=0.6,SNR=13	**21.18**	**198**	P	**P**	**04 21 53.4**	**+1.1**
RPZ	3.6nm,0.4s,baz=242,slow=6.3,SNR=3.7			S	**S**	**04 25 10.1**	**-2.6**
RPZ	**Rata Peaks** 26nm,0.6s	**21.18**	**198**	*e*P	**P**	**04 21 53.7**	**+1.5**
KNTN	**Kanton** 52nm,0.9s	**22.39**	**22**	*e*P	**P**	**04 22 02.0**	**-1.5**
HNR	**Honiara** 47nm,0.4s,baz=352,slow=2.7,SNR=4.2	**23.98**	**303**	P	**P**	**04 22 16.7**	**-1.0**
ARMA	**Armidale** baz=26,SNR=42	**26.11**	**249**	P	**P**	**04 22 38.0**	**+1.4**
EIDS	**Eidsvold** baz=26,SNR=35	**26.39**	**261**	P	**P**	**04 22 39.4**	**+0.5**
MGCD	**Mangrove Creek** baz=27,SNR=10	**27.04**	**243**	P	**P**	**04 22 46.1**	**+1.5**
RMQ	**Roma** baz=28,SNR=15	**28.44**	**258**	P	**P**	**04 22 58.4**	**+1.5**
CNB	**Canberra Magne** baz=29,SNR=15	**28.95**	**240**	P	**P**	**04 23 02.7**	**+1.4**
CAN	**Canberra** 48nm,0.7s	**29.24**	**240**	*e*P	**P**	**04 23 04.9**	**+1.1**
YNG	**Young** baz=30,SNR=7.7	**29.48**	**242**	P	**P**	**04 23 07.3**	**+1.5**
CMSA	**Cobar Meteorol** baz=31,SNR=54	**31.31**	**248**	P	**P**	**04 23 22.1**	**+0.5**
CTA	**Charters Tower** 181nm,0.5s,baz=95,slow=11,SNR=302	**31.55**	**270**	P	**P**	**04 23 24.2**	**+0.4**
CTA	3.4nm,0.6s,baz=34,slow=1.3,SNR=4.3			ScP	**ScP**	**04 28 54.6**	**+0.7**
CTAO	**Charters Tower** 143nm,0.6s	**31.55**	**270**	*e*P	**P**	**04 23 24.2**	**+0.4**
TOO	**Toolangi** 29nm,0.6s	**32.54**	**237**	*e*P	**P**	**04 23 33.0**	**+0.9**
TOO	**Toolangi** baz=33,SNR=19	**32.54**	**237**	P	**P**	**04 23 32.9**	**+0.9**
PMG	**Port Moresby** 130nm,0.8s,baz=111,slow=5.7,SNR=28	**34.54**	**289**	P	**P**	**04 23 48.8**	**-0.3**
PMG	**Port Moresby** 132nm,0.8s	**34.54**	**289**	*e*P	**P**	**04 23 49.0**	**-0.2**
STKA	**Stephens Creek** 16nm,0.5s,baz=95,slow=11,SNR=39	**34.81**	**248**	P	**P**	**04 23 51.8**	**+0.5**
STKA	**Stephens Creek** baz=35,SNR=21	**34.81**	**248**	P	**P**	**04 23 51.8**	**+0.5**
ARPS	**Mount Arapiles** baz=35,SNR=16	**35.21**	**240**	P	**P**	**04 23 55.0**	**+0.5**
COEN	**Coen** baz=36,SNR=32	**36.17**	**279**	P	**P**	**04 24 02.8**	**0.0**
PATS	**Pohnpei** baz=37,SNR=3.3	**37.16**	**322**	P	**P**	**04 24 10.8**	**-0.1**
HTT	**Hallett** baz=37,SNR=29	**37.16**	**246**	P	**P**	**04 24 10.9**	**+0.1**
QIS	**Mount Isa** baz=38,SNR=8.9	**37.53**	**267**	P	**P**	**04 24 13.6**	**-0.3**
BBOO	**Buckleboo** 46nm,0.8s	**39.54**	**247**	*e*P	**P**	**04 24 29.0**	**-1.0**
BBOO	**Buckleboo** baz=40,SNR=40	**39.54**	**247**	P	**P**	**04 24 29.5**	**-0.5**
AS31	**Alice Springs**	**42.12**	**261**	*e*ScP	**ScP**	**04 29 35.1**	**+1.4**
ASAR	**Alice Springs** 76nm,0.8s,baz=99,slow=7.2,SNR=377	**42.12**	**261**	P	**P**	**04 24 50.4**	**-0.3**
ASAR	18nm,0.7s,baz=107,slow=4.1,SNR=33			ScP	**ScP**	**04 29 34.5**	**+0.8**
WRAB	**Tennant Creek** 97nm,0.9s	**42.48**	**266**	*e*P	**P**	**04 24 52.6**	**-1.0**
JAY	**Jayapura** 51nm,0.5s,baz=126,slow=4.2,SNR=45	**43.55**	**293**	P	**P**	**04 25 01.2**	**-0.9**
KDU	**Kakadu** baz=46,SNR=37	**46.35**	**275**	P	**P**	**04 25 22.5**	**-1.0**
FORT	**Forrest** 263nm,0.6s	**46.40**	**250**	*e*P	**P**	**04 25 23.0**	**-0.7**
FORT	**Forrest** baz=46,SNR=101	**46.40**	**250**	P	**P**	**04 25 23.0**	**-0.7**
WRKA	**Warakurna** baz=47,SNR=58	**46.92**	**257**	P	**P**	**04 25 27.3**	**-0.5**
MTN	**Manton Dam** baz=48,SNR=17	**47.52**	**274**	P	**P**	**04 25 31.0**	**-1.4**
KNRA	**Kununurra** baz=49,SNR=28	**48.76**	**270**	P	**P**	**04 25 41.3**	**-0.3**
HMH	**Humu‘ula Sheep** 82nm,0.9s	**49.31**	**31**	*e*P	**P**	**04 25 46.6**	**+0.7**
HPAH	**Hawaii Prepara** 119nm,0.8s	**49.58**	**30**	*e*P	**P**	**04 25 48.1**	**+0.5**
KMBL	**Kambalda** baz=52,SNR=6.0	**51.62**	**248**	P	**P**	**04 26 01.5**	**-0.8**
SBA	**Scott Base** 8.7nm,0.9s	**54.45**	**183**	*e*P	**P**	**04 26 24.4**	**+2.7**
VNDA	**Vanda** 0.8nm,0.6s,baz=49,slow=6.6,SNR=3.7	**54.45**	**185**	P	**P**	**04 26 23.2**	**+1.5**
VNDA	1.0nm,0.7s,baz=24,slow=4.7,SNR=3.1			PcP	**PcP**	**04 27 18.1**	**+0.9**
VNDA	1.0nm,0.6s,baz=334,slow=4.4,SNR=5.6			ScP	**ScP**	**04 30 25.0**	**0.0**
MEEK	**Meekatharra** baz=55,SNR=23	**55.20**	**253**	P	**P**	**04 26 26.8**	**-1.1**
BATI	**Baumata** 82nm,0.5s,baz=144,slow=4.2,SNR=9.2	**55.29**	**274**	P	**P**	**04 26 29.7**	**+1.0**
RKGY	**Rocky Gully** baz=55,SNR=5.2	**55.33**	**243**	P	**P**	**04 26 28.5**	**-0.1**
NWAO	**Narrogin (SRO)** 9.0nm,0.4s,baz=110,slow=7.8,SNR=14	**55.33**	**245**	P	**P**	**04 26 28.1**	**-0.5**
NWAO	**Narrogin (SRO)** baz=55,SNR=9.6	**55.33**	**245**	P	**P**	**04 26 28.3**	**-0.4**
BLDU	**Ballidu** baz=56,SNR=37	**56.12**	**248**	P	**P**	**04 26 33.5**	**-0.7**
MUN	**Mundaring** baz=56,SNR=5.8	**56.32**	**246**	P	**P**	**04 26 35.4**	**-0.1**
TNTI	**Ternate** 59nm,0.9s	**56.68**	**288**	*e*P	**P**	**04 26 37.8**	**-0.4**
MORW	**Morawa** 46nm,0.6s	**56.96**	**250**	*e*P	**P**	**04 26 39.6**	**-0.4**
MORW	**Morawa** baz=57,SNR=30	**56.96**	**250**	P	**P**	**04 26 39.6**	**-0.4**
GIRL	**Giralia** baz=60,SNR=6.4	**60.00**	**257**	P	**P**	**04 27 00.6**	**0.0**
KAPI	**Kappang** 9.8nm,0.5s,baz=91,slow=9.8,SNR=5.0	**60.89**	**278**	P	**P**	**04 27 05.9**	**-0.7**
KAPI	**Kappang** 95nm,1.8s	**60.89**	**278**	*e*P	**P**	**04 27 06.2**	**-0.4**
QSPA	**South Pole Qui** 16nm,0.8s	**66.25**	**180**	*e*P	**P**	**04 27 41.5**	**+1.4**
MJAR	**Matsushiro Arr** 4.2nm,0.8s,baz=168,slow=6.1,SNR=12	**71.88**	**326**	P	**P**	**04 28 13.9**	**-0.4**
MAJO	**Matsushiro**	**71.89**	**326**	*e*P	**P**	**04 28 13.9**	**-0.4**
MAT	**Matsushiro**	**71.89**	**326**	P	**P**	**04 28 13.9**	**-0.4**
KSM	**Kuching** 43nm,0.6s	**72.17**	**280**	*e*P	**P**	**04 28 15.5**	**-0.9**
TPUB	**Ta-pu** 45nm,1.4s	**74.34**	**305**	*e*P	**P**	**04 28 26.6**	**-2.0**
MAW	**Mawson** 1.8nm,0.4s,baz=294,slow=12,SNR=4.1	**77.84**	**200**	P	**P**	**04 28 48.2**	**+1.1**
MAW	**Mawson** 2.7nm,1.4s	**77.84**	**200**	*e*P	**P**	**04 28 48.2**	**+1.1**
KSRS	**Korea Array** 3.2nm,0.7s,baz=132,slow=5.7,SNR=14	**78.24**	**320**	P	**P**	**04 28 50.2**	**+0.5**
KS15	**Wonju Array Si** 74nm,1.9s	**78.26**	**320**	*e*P	**P**	**04 28 50.2**	**+0.4**
PETK	**Petropavlovsk-** 1.8nm,0.5s,baz=117,slow=5.2,SNR=9.3	**79.05**	**346**	P	**P**	**04 28 53.9**	**+0.2**
PEA1	**Petropavlovsk-**	**79.06**	**346**	*e*P	**P**	**04 28 53.9**	**+0.2**
NJ2	**Nanjing**	**80.67**	**311**	*e*P	**P**	**04 29 03.8**	**+1.1**
NJ2	comp=Z,12nm,0.5s			pmax	pmax		
USRK	**Ussuriysk Ar.** 3.0nm,0.6s,baz=172,slow=4.3,SNR=9.4	**80.75**	**327**	P	**P**	**04 29 03.7**	**+0.8**
SCZ2	**Santa Cruz Isl** baz=234	**81.17**	**47**	P	**P**	**04 29 06.2**	**+0.8**
PKM	**Mcpherson Peak** baz=233	**81.58**	**46**	P	**P**	**04 29 08.8**	**+1.2**
IPM	**Ipoh** 25nm,0.6s	**81.83**	**279**	*e*P	**P**	**04 29 09.1**	**-0.1**
109C	**Camp Elliot, M** baz=235	**82.25**	**49**	P	**P**	**04 29 11.7**	**+0.9**
ARVC	**Arvin** baz=234	**82.38**	**46**	P	**P**	**04 29 12.2**	**+0.7**
MURC	**Murrieta** baz=235	**82.59**	**48**	P	**P**	**04 29 13.5**	**+0.9**
VES	**Vestal, Richgr** baz=234,SNR=5.7	**82.63**	**46**	P	**P**	**04 29 13.1**	**+0.5**
BFSC	**Mount Baldy Ra** baz=235,SNR=8.1	**82.64**	**48**	P	**P**	**04 29 13.2**	**+0.3**
MONP2	**Monument Peak** baz=236,SNR=9.6	**82.73**	**49**	P	**P**	**04 29 14.7**	**+1.2**
EDW2	**Edwards Air Fo** baz=234,SNR=6.5	**82.79**	**47**	P	**P**	**04 29 14.4**	**+0.8**
IKP	**In-Ko-Pah, Jac** baz=236,SNR=7.3	**82.81**	**50**	P	**P**	**04 29 15.1**	**+1.3**
ISA	**Isabella, Lake** baz=234,SNR=16	**82.92**	**46**	P	**P**	**04 29 15.2**	**+0.9**
O02D	**Mt. Diablo Mer** baz=231,SNR=8.7	**82.96**	**40**	P	**P**	**04 29 15.9**	**+1.5**
WHN	**Wuhan**	**83.02**	**308**	⇓P	**P**	**04 29 14.5**	**-0.2**
SYO	**Syowa Base**	**83.09**	**193**	⇓*e*PcP	**P**	**04 29 17.9**	**+3.5**
PFO	**Pinyon Flats O** 17nm,1.4s	**83.11**	**49**	*e*P	**P**	**04 29 16.5**	**+1.2**
PFO	**Pinyon Flats O** baz=236	**83.11**	**49**	P	**P**	**04 29 16.1**	**+0.8**
SWSC	**Sam W. Stewart** baz=236	**83.19**	**50**	P	**P**	**04 29 16.7**	**+1.2**
LRMC	**Laurel Mtn Rad** baz=235	**83.34**	**47**	P	**P**	**04 29 17.2**	**+0.8**
N02D	**Trinity Center** baz=231	**83.51**	**40**	P	**P**	**04 29 18.6**	**+1.5**
O03E	**Paynes Creek** baz=232,SNR=5.3	**83.62**	**41**	P	**P**	**04 29 18.3**	**+0.6**
CWC	**Cottonwood Cre** baz=234	**83.64**	**46**	P	**P**	**04 29 18.5**	**+0.6**
BELC	**Belle Mtn. Jos** baz=236,SNR=13	**83.64**	**49**	P	**P**	**04 29 19.0**	**+1.0**
M02C	**Callahan** baz=231	**83.69**	**39**	P	**P**	**04 29 19.4**	**+1.4**
MPMC	**Manual Prospec** baz=235,SNR=8.5	**83.81**	**46**	P	**P**	**04 29 19.5**	**+0.7**
BC3	**Big Chuckawall** baz=236,SNR=5.9	**83.83**	**49**	P	**P**	**04 29 20.2**	**+1.3**
GSC	**Goldstone, Bar**	**83.83**	**47**	P	**P**	**04 29 19.3**	**+0.5**

	baz=235,SNR=9.1						
MLAC	**Mammoth, Mammo**	**83.84**	**44**	P	**P**	**04 29 20.0**	**+0.9**
	baz=234						
CN2	**Changchun**	**83.88**	**324**	*e*P	**P**	**04 29 18.8**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HEC	**Hector,Ludlow**	**83.88**	**48**	P	**P**	**04 29 19.5**	**+0.4**
	baz=236,SNR=6.6						
TIN	**Tinemaha, Big**	**83.90**	**45**	P	**P**	**04 29 19.8**	**+0.7**
	baz=234						
GLA	**Glamis**	**83.93**	**50**	P	**P**	**04 29 21.0**	**+1.7**
	baz=237						
YBH	**Yreka Blue Hor**	**83.99**	**39**	*e*P	**P**	**04 29 20.8**	**+1.3**
	8.8nm,1.0s						
K02D	**Willamette Mer**	**84.06**	**38**	P	**P**	**04 29 21.7**	**+2.0**
	baz=230						
J01E	**Myrtle Point**	**84.21**	**38**	P	**P**	**04 29 21.9**	**+1.5**
	baz=230						
TIA	**Tai'an**	**84.24**	**314**	P	**P**	**04 29 21.3**	**+0.6**
TIA				pmax	pmax		
	comp=Z,17nm,0.8s						
GMRC	**Granite Mounta**	**84.31**	**48**	P	**P**	**04 29 22.2**	**+0.9**
	baz=236,SNR=9.0						
IRM	**Iron Mountain**	**84.32**	**49**	P	**P**	**04 29 22.4**	**+1.2**
	baz=236						
HUMO	**Hull Mountain**	**84.40**	**38**	*e*P	**P**	**04 29 23.2**	**+1.8**
	20nm,1.3s						
GRAC	**Grapevine Rang**	**84.43**	**46**	P	**P**	**04 29 22.5**	**+0.9**
	baz=235,SNR=6.6						
FURC	**Furnace Creek,**	**84.45**	**46**	P	**P**	**04 29 23.2**	**+1.5**
	baz=235						
TUQ	**Turquoise Moun**	**84.50**	**48**	P	**P**	**04 29 23.1**	**+0.9**
	baz=236						
SHOC	**Shoshone, Teco**	**84.52**	**47**	P	**P**	**04 29 23.1**	**+1.0**
	baz=236						
Y12C	**Blythe**	**84.52**	**50**	P	**P**	**04 29 23.2**	**+1.0**
	baz=237,SNR=5.8						
M04C	**Macdoel**	**84.53**	**40**	P	**P**	**04 29 23.2**	**+1.0**
	baz=231						
L04D	**Klamath Falls**	**84.53**	**39**	P	**P**	**04 29 23.0**	**+0.8**
	baz=231						
SKNT	**Sakolnakorn**	**84.61**	**291**	P	**P**	**04 29 23.3**	**+0.4**
NVAR	**Mina Array Bea**	**84.66**	**44**	P	**P**	**04 29 23.5**	**+0.5**
	4.3nm,0.7s,baz=224,slow=8.0,SNR=31						
SNAA	**Sanae**	**84.73**	**179**	P	**P**	**04 29 22.2**	**-0.5**
214A	**Organ Pipe Nat**	**84.77**	**52**	P	**P**	**04 29 24.5**	**+1.0**
	baz=238,SNR=5.4						
I03D	**Drain, OR**	**84.88**	**37**	P	**P**	**04 29 24.8**	**+1.2**
	baz=230						
VNA3	**Neumayer Olymp**	**84.94**	**177**	P	**P**	**04 29 23.2**	**-0.4**
NEE2	**Needles Airpor**	**85.02**	**49**	P	**P**	**04 29 25.7**	**+1.2**
	baz=237						
PDMCI	**Parker Dam,Lak**	**85.09**	**49**	P	**P**	**04 29 25.9**	**+1.0**
	baz=237,SNR=7.3						
TPNV	**Topopah Spring**	**85.13**	**46**	P	**P**	**04 29 25.9**	**+0.6**
	baz=236,SNR=10.0						
J04D	**Umpqua Nationa**	**85.29**	**38**	P	**P**	**04 29 26.8**	**+0.9**
	baz=231						
I04A	**Tendick Farm,**	**85.47**	**38**	P	**P**	**04 29 27.0**	**+0.5**
	baz=231						
VNA1	**Neumayer--Stat**	**85.59**	**177**	P	**P**	**04 29 25.5**	**-1.2**
H04D	**Lebanon**	**85.75**	**37**	P	**P**	**04 29 27.9**	**+0.1**
	baz=230						
J05D	**Fort Rock, OR**	**85.81**	**39**	P	**P**	**04 29 29.4**	**+1.1**
	baz=232						
G03D	**McMinnville, O**	**85.90**	**36**	P	**P**	**04 29 30.0**	**+1.6**
	baz=230						
R11A	**Troy Canyon, C**	**86.36**	**45**	P	**P**	**04 29 31.4**	**+0.3**
	baz=236						
I05D	**Terrebonne, OR**	**86.41**	**38**	P	**P**	**04 29 31.9**	**+0.9**
	baz=232						
TUC	**Tucson**	**86.42**	**52**	*e*P	**P**	**04 29 33.2**	**+1.7**
	16nm,0.9s						
TUC	**Tucson**	**86.42**	**52**	P	**P**	**04 29 33.1**	**+1.6**
	baz=239						
PHET	**Kaeng Krachan**	**86.62**	**286**	P	**P**	**04 29 34.7**	**+2.1**
PBKT	**Sadao Pong**	**87.02**	**289**	P	**P**	**04 29 39.1**	**+4.7**
BJI	**Beijing**	**87.03**	**316**	P	**P**	**04 29 33.4**	**-0.6**
D03D	**Eldon**	**87.48**	**35**	P	**P**	**04 29 37.1**	**+1.2**
	baz=230						
WUAZ	**Wupatki**	**87.66**	**49**	P	**P**	**04 29 38.2**	**+0.9**
	baz=238						
BBB	**Bella Bella**	**88.17**	**29**	P	**P**	**04 29 39.1**	**+0.1**
	4.8nm,0.6s,baz=290,slow=6.4,SNR=3.6						
PLCA	**Paso Flores**	**88.26**	**134**	P	**P**	**04 29 41.2**	**+1.2**
	2.1nm,0.9s,baz=248,slow=5.4,SNR=3.0						
PLCA	**Paso Flores**	**88.26**	**134**	*e*P	**P**	**04 29 41.2**	**+1.2**
	58nm,2.0s						
G08A	**Pilot Rock**	**88.33**	**38**	*e*P	**P**	**04 29 40.9**	**+0.8**
	14nm,0.9s						
B05A	**Bryant**	**88.46**	**34**	P	**P**	**04 29 41.4**	**+1.0**
	baz=231						
W18A	**Petrified Fore**	**88.61**	**50**	P	**P**	**04 29 42.3**	**+0.6**
	baz=240						
121A	**Cookes Peak, D**	**88.73**	**54**	P	**P**	**04 29 43.7**	**+1.4**
	baz=241						
XAN	**Xi'an**	**88.76**	**308**	*e*P	**P**	**04 29 43.3**	**+1.0**
	9.4nm,0.7s						
XAN	**Xi'an**	**88.76**	**308**	P	**P**	**04 29 42.8**	**+0.5**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DUG	**Dugway, Tooele**	**89.17**	**45**	P	**P**	**04 29 44.4**	**+0.3**
	baz=238						
CMAR	**Chiang Mai Arr**	**89.57**	**290**	P	**P**	**04 29 47.2**	**+0.8**
	4.8nm,0.8s,baz=135,slow=3.2,SNR=24						
CMAR				PP	**PP**	04 33 24.3	-3.5
	1.1nm,0.3s,baz=120,slow=5.3,SNR=5.5						
CMMT	**Chiang Mai**	**89.72**	**291**	P	**P**	**04 29 48.7**	**+1.7**
CHTO	**Chiang Mai**	**89.72**	**291**	*e*P	**P**	**04 29 48.4**	**+1.4**
	13nm,1.0s						
HLID	**Hailey**	**90.00**	**41**	P	**P**	**04 29 49.1**	**+1.1**
	baz=236						
MNTX	**Cornudas Mount**	**90.12**	**55**	P	**P**	**04 29 49.5**	**+0.9**
	baz=242						
TXAR	**Lajitas Array**	**90.34**	**58**	P	**P**	**04 29 50.8**	**+1.0**
	6.2nm,0.7s,baz=215,slow=6.4,SNR=99						
HHC	**Hu-ho-hao-te**	**90.42**	**315**	P	**P**	**04 29 51.0**	**+1.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,35nm,5.9s						
MVCO	**Mesa Verde**	**90.52**	**49**	P	**P**	**04 29 50.8**	**+0.2**
	baz=240						
TASM	**ASL Pad, Albuq**	**90.86**	**52**	P	**P**	**04 29 52.6**	**+0.4**
	baz=241						
TASM	**ASL Pad, Albuq**	**90.86**	**52**	P	**P**	**04 29 52.6**	**+0.4**
	baz=241						
ANMO	**Albuquerque**	**90.86**	**52**	*e*P	**P**	**04 29 52.9**	**+0.6**
	8.2nm,1.1s						
ANMO	**Albuquerque**	**90.86**	**52**	P	**P**	**04 29 52.5**	**+0.3**
	baz=241						
CD2	**Chengdu**	**91.10**	**303**	P	**P**	**04 29 54.5**	**+1.3**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
NEW	**Newport**	**91.10**	**36**	P	**P**	**04 29 54.8**	**+2.0**
	baz=235						
S22A	**4UR Ranch, Cre**	**91.94**	**49**	P	**P**	**04 29 57.8**	**+0.6**
	baz=241						
ILAR	**Eielson Array**	**91.95**	**14**	P	**P**	**04 29 55.0**	**-1.3**
	0.7nm,0.7s,baz=235,slow=5.7,SNR=7.6						
ILAR				PP	**PP**	04 33 41.1	-4.2
	0.5nm,0.9s,baz=219,slow=7.6,SNR=4.2						
POKR	**Poker Plat Res**	**92.14**	**13**	P	**P**	**04 29 57.8**	**+0.7**
	baz=210						
O20A	**White River Ci**	**92.14**	**47**	P	**P**	**04 29 58.4**	**+0.4**
	baz=240						
BW06	**Boulder Array**	**92.59**	**44**	P	**P**	**04 30 00.5**	**+0.4**
	baz=240						
PDAR	**Pinedale Array**	**92.59**	**44**	P	**P**	**04 30 00.1**	**0.0**
	2.9nm,0.8s,baz=219,slow=3.6,SNR=17						
BOZ	**Bozeman (W)**	**92.77**	**41**	P	**P**	**04 30 01.2**	**+0.5**
	baz=238						
SDCO	**Great Sand Dun**	**92.86**	**50**	P	**P**	**04 30 01.7**	**+0.3**
	baz=242						
MSTX	**Muleshoe**	**93.11**	**54**	P	**P**	**04 30 03.0**	**+0.5**
	baz=243						
833A	**Chaparral WMA,**	**93.26**	**61**	P	**P**	**04 30 03.4**	**+0.3**
	baz=245						
T25A	**Trinidad**	**93.35**	**51**	P	**P**	**04 30 03.8**	**+0.1**
	baz=243						
LZH	**Lanzhou**	**93.39**	**308**	*e*P	**P**	**04 30 05.1**	**+1.3**
LZH				pP	pwP	04 32 07.4	+3.0
LZH				sP	sP	04 33 01.2	+10
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
JCT	**Junction City**	**93.85**	**58**	P	**P**	**04 30 05.7**	**-0.2**
	baz=245						
RLMT	**Red Lodge**	**93.96**	**42**	P	**P**	**04 30 06.9**	**+0.7**
	baz=240						
KSCO	**Kaye Shedlock'**	**95.45**	**50**	P	**P**	**04 30 13.6**	**+0.5**
	baz=244						
EPYK	**Eagle Plains**	**95.66**	**16**	P	**P**	**04 30 12.9**	**-0.3**
	baz=219						
SONM	**Songino Array**	**97.10**	**319**	PP	**PP**	**04 34 25.1**	**-0.2**
	0.7nm,0.7s,baz=104,slow=6.1,SNR=2.7						
MKAR	**Makanchi Array**	**112.16**	**313**	PKKPbc	PKKPbc	04 46 12.9	-0.7
	0.4nm,0.6s,baz=278,slow=4.2,SNR=3.5						
MATP	**Matopo**	**128.02**	**215**	SKPbc	SKPbc	04 38 21.5	
	3.2nm,0.6s,baz=149,slow=4.4,SNR=9.9						
GEYT	**Alibeck**	**129.00**	**300**	SKPbc	SKPbc	04 38 24.4	
	3.9nm,0.7s,baz=122,slow=1.9,SNR=7.5						
ARA0	**ARCESS Array S**	**131.84**	**348**	*e*PKPdf	**PKPdf**	**04 35 57.3**	**+0.2**
ARCES	**ARCESS Array B**	**131.84**	**348**	PKP	**PKPdf**	**04 35 57.3**	**+0.2**
	1.6nm,0.7s,baz=7.4,slow=1.3,SNR=9.6						
ARCES				SKPbc	**SKPbc**	**04 38 33.3**	**-0.6**
	4.3nm,0.8s,baz=28,slow=4.1,SNR=7.4						
LSZ	**Lusaka**	**132.40**	**218**	SKPbc	**SKPbc**	**04 38 37.2**	**-0.5**
	3.4nm,0.6s,baz=106,slow=2.6,SNR=8.0						
KMBO	**Kilima Mbogo**	**136.19**	**241**	SKPbc	**SKPbc**	**04 38 50.4**	**+0.4**
	0.8nm,0.6s,baz=78,slow=1.7,SNR=6.2						
FIA0	**FINESS Array S**	**138.41**	**342**	*e*PKPpre	PKPpre	04 36 00.6	
FIA0				*e*PKPdf	**PKPdf**	**04 36 09.8**	**+0.3**
FINES	**FINESS Array B**	**138.41**	**342**	PKhKP	PKPpre	04 36 00.6	
	0.4nm,0.3s,baz=29,slow=4.4,SNR=6.2						
FINES				PKP	**PKPdf**	**04 36 09.8**	**+0.3**
	0.9nm,0.4s,baz=50,slow=3.2,SNR=4.3						
FINES				SKPbc	**SKPbc**	**04 38 53.8**	**-0.6**
	6.7nm,0.6s,baz=50,slow=3.0,SNR=23						
NB2	**NORSAR Subarra**	**142.03**	**351**	PKP	**PKPdf**	**04 36 10.5**	**-5.6**
	comp=Z,0.4nm,0.6s,baz=11,slow=3.1						
NB2	**NORSAR Subarra**	**142.03**	**351**	PKP	**SKPbc**	**04 39 03.3**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=17,slow=2.6						
NB200	**NORSAR Array S**	**142.03**	**351**	*e*PKPpre	PKPpre	04 36 11.4	
NOA	**NORSAR Array B**	**142.03**	**351**	PKhKP	PKPpre	04 36 11.4	
	comp=Z,0.3nm,0.6s,baz=16,slow=4.5,SNR=4.3						
NOA				SKPbc	**SKPbc**	**04 39 03.4**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=15,slow=4.2,SNR=8.4						
AKASG	**Malin Array Be**	**144.96**	**327**	PKP	**PKPdf**	**04 36 21.2**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=50,slow=4.9,SNR=27						
AKASG				SKPbc	**SKPbc**	**04 39 10.9**	**-0.3**
	comp=Z,8.8nm,0.7s,baz=44,slow=2.9,SNR=15						
AKBB	**Malin Array Si**	**144.96**	**327**	*e*PKPdf	**PKPdf**	**04 36 21.2**	**-0.3**
BR131	**Keskin Array S**	**147.59**	**307**	*e*PKPbc	**PKPbc**	**04 36 29.7**	**-0.3**
BRTR	**Keskin Array B**	**147.59**	**307**	PKPbc	**PKPbc**	**04 36 29.6**	**-0.5**
	comp=Z,6.3nm,0.6s,baz=98,slow=4.4,SNR=10.0						
CLL	**Collm**	**150.81**	**343**	*i* PKPbc	**PKPbc**	**04 36 36.0**	**-1.2**
	comp=Z,6.0nm,0.8s						
VYHS	**Vyhne**	**151.26**	**334**	*e*PKP	**PKPab**	**04 36 48.9**	**+0.1**
VTS	**Vitosha**	**153.20**	**320**	*e*PKPab	**PKPab**	**04 36 58.3**	**+0.9**
ESDC	**Sonseca Array**	**163.84**	**11**	PKPab	**PKPab**	**04 37 43.2**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=357,slow=6.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**169.26**	**188**	PKPab	**PKPab**	**04 38 08.0**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=235,slow=1.6,SNR=6.7						
TOA1	**Torodi Ar. Sit**	**169.27**	**188**	*e*PKPab	**PKPab**	**04 38 08.0**	**+0.1**

MEX 04 04:58:46.4±0.5**, 17°.02N**×**99°.67W, h32**^{km}±6^{km}**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.26**	**235**	*e*P	Pb	04 58 51.7	-1.8
ACP2				*e*S	Sb	04 58 57.0	-1.3
CAIG	**El Cayaco**	**0.57**	**273**	*i* P	Pb	04 58 55.9	-2.2
CAIG				*e*S	Sb	04 59 04.0	-2.2
MEIG	**Mezcala**	**0.90**	**3**	*e*P	Pn	04 59 00.6	-2.4
MEIG				*e*S	Sn	04 59 11.9	-3.1
TLIG	**Tlapa**	**1.18**	**63**	*e*P	Pn	04 59 04.9	-2.0
TLIG				*e*S	Sn	04 59 19.4	-2.6
PLIG	**Platanillo**	**1.37**	**7**	*e*P	Pn	04 59 07.3	-2.2
PLIG				*e*S	Sn	04 59 24.3	-2.4
ARIG	**Puente Sto Nin**	**1.41**	**333**	*e*P	Pn	04 59 08.1	-1.8
ARIG				*e*S	Sn	04 59 25.0	-2.5

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*ISCJB **04** 05:25:57.4±1.0, 28°.3S±0°.2×62°.4E±0°.2, h10^{km}, mb4.2/8, Error ellipse: s-maj=29.7km s-min=15.0km az=140.5*

*IDC **04** 05:25:57.9±1.2, 28°.45S×62°.43E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.8/38, mbtmp4.0/6, ML3.7/1, Error ellipse: s-maj=42.4km s-min=27.9km az=66.0*

*NEIC **04** 05:25:59.0±1.5, 28°.29S×62°.42E, h10^{km}±3^{km}, mb4.2/3, Error ellipse: s-maj=30.5km s-min=8.6km az=52.0*

ISC 04 05:25:59.0±1.0**, 28°.3S**±0°.2×**62°.4E**±0°.2**, h10**^{km}**, n18, σ0**^{s}**.81**/15**, mb4.3**/8**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRIV	**Mauritius Mete**	**9.15**	**330**	*e*Pn	**Pn**	**05 28 11.0**	**-0.3**
OPO	**Ambohidratompo**	**16.97**	**302**	P	**P**	**05 29 58.9**	**+0.1**
	0.3nm,0.3s,baz=123,slow=15,SNR=2.9						
OPO				S	Sn	05 32 54.7	-11
	0.3nm,0.3s,baz=135,slow=20,SNR=2.9						
H08S1	**Diego Carcia H**	**22.69**	**27**	T	T	05 54 31.5	
	baz=203						
H08S2	**Diego Garcia H**	**22.70**	**27**	T	T	05 54 33.6	
	baz=203						
H08S3	**Diego Garcia H**	**22.71**	**27**	T	T	05 54 34.4	
	baz=203						
CM31	**Chiang Mai Arr**	**58.45**	**42**	*e*P	**P**	**05 35 54.1**	**-1.2**
	10.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**58.45**	**42**	P	**P**	**05 35 56.9**	**+1.6**
	1.0nm,0.3s,baz=233,slow=7.2,SNR=6.2						
ASAR	**Alice Springs**	**63.61**	**104**	P	**P**	**05 36 30.4**	**-0.2**
	1.7nm,0.7s,baz=247,slow=6.2,SNR=15						
AS31	**Alice Springs**	**63.61**	**104**	*e*P	**P**	**05 36 30.0**	**-0.5**
	2.2nm,1.2s						
VNDA	**Vanda**	**64.57**	**166**	P	**P**	**05 36 35.9**	**-0.1**
	0.6nm,0.7s,baz=260,slow=6.2,SNR=4.7						
VNDA	**Vanda**	**64.57**	**166**	*e*P	**P**	**05 36 36.0**	**+0.1**
BTK	**Batken**	**68.50**	**7**	*e*P	**P**	**05 37 00.7**	**-0.9**
	11nm,0.7s						
MK32	**Makanchi Array**	**76.92**	**14**	*e*P	**P**	**05 37 51.9**	**+0.6**
MKAR	**Makanchi Array**	**76.92**	**14**	P	**P**	**05 37 51.9**	**+0.6**
	0.2nm,0.3s,baz=193,slow=5.9,SNR=3.8						
ZALV	**Zalesovo Beam**	**84.23**	**13**	P	**P**	**05 38 31.3**	**+1.0**
	0.6nm,0.3s,baz=270,slow=4.3,SNR=4.3						
ZAA1	**Zalesovo Array**	**84.23**	**13**	*e*P	**P**	**05 38 31.3**	**+0.9**
YKA	**Yellowknife Ar**	**145.79**	**358**	PKPbc	**PKPbc**	**05 45 37.7**	**+0.1**
	1.1nm,0.5s,baz=350,slow=3.3,SNR=5.2						
YKB5	**Yellowknife Ar**	**145.79**	**358**	*e*PKPdf	**PKPbc**	**05 45 37.7**	**+0.1**

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*SJA **04** 05:30:39.9±0.7, 21°.16S×68°.60W, h140^{km}±8^{km}, ML2.5, MW3.8*

*ISCJB **04** 05:30:41.4±0.9, 21°.18S±0°.03×68°.7W±0°.1, h135^{km}±11^{km}, Error ellipse: s-maj=15.6km s-min=5.2km az=2.9*

*GUC **04** 05:30:41.4±0.8, 21°.16S×68°.75W, h132^{km}±5^{km}, ML3.2*

ISC 04 05:30:41.6±1.8**, 21°.17S**±0°.04×**68°.67W**±0°.09**, h132**^{km}±16^{km}**, n21, σ0**^{s}**.47**/35**, 4C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.78**	**279**	⇓*i*P	**Pn**	**05 31 02.6**	**-0.3**
PB01				*i* S	**Sn**	**05 31 18.3**	**-0.7**
PB01				IAML		05 31 20.5	
	comp=N,877nm,0.2s						
PB09	**IPOC Station P**	**0.82**	**221**	*i* P	**Pn**	**05 31 03.5**	**+0.1**
PB09				*i* S	**Sn**	**05 31 20.7**	**+0.9**
PB09	**IPOC Station P**	**0.82**	**221**	⇑*i*P	**Pn**	**05 31 03.4**	**+0.1**
PB09				*i* S	**Sn**	**05 31 20.1**	**+0.3**
PB09				IAML		05 31 22.4	
	comp=E,332nm,0.4s						
PB08	**IPOC Station P**	**1.12**	**336**	*i* P	**Pn**	**05 31 06.2**	**-0.1**
PB08	**IPOC Station P**	**1.12**	**336**	⇓*i*P	**Pn**	**05 31 06.5**	**+0.2**
PB08				*i* S	**Sn**	**05 31 25.4**	**+0.3**
PB08				IAML		05 31 27.4	
	comp=E,188nm,0.3s						
PB02	**IPOC Station P**	**1.16**	**263**	*i* P	**Pn**	**05 31 06.7**	**+0.4**
PB02	**IPOC Station P**	**1.16**	**263**	*e*P	**Pn**	**05 31 06.3**	**0.0**
PB02				*i* S	**Sn**	**05 31 24.4**	**-0.6**
PB02				IAML		05 31 27.8	
	comp=E,1μm,0.2s						
PB07	**IPOC Station P**	**1.26**	**244**	*i* P	**Pn**	**05 31 07.4**	**0.0**
PB07	**IPOC Station P**	**1.26**	**244**	⇑*i*P	**Pn**	**05 31 07.5**	**0.0**
PB07				*i* S	**Sn**	**05 31 26.7**	**-0.4**
PB07				IAML		05 31 29.1	
	comp=E,466nm,0.4s						
PB03	**IPOC Station P**	**1.33**	**229**	*i* P	**Pn**	**05 31 07.8**	**-0.4**
PB03				*i* S	**Sn**	**05 31 29.9**	**+1.4**
PB03	**IPOC Station P**	**1.33**	**229**	⇑*i*P	**Pn**	**05 31 08.2**	**-0.1**
PB03				*i* S	**Sn**	**05 31 28.3**	**-0.2**
PB03				IAML		05 31 30.0	
	comp=N,313nm,0.3s						
LVC	**Limon Verde**	**1.45**	**189**	*i* P	**Pn**	**05 31 09.2**	**-0.4**
GO01	**Chusmiza**	**1.58**	**342**	*e*P	**Pn**	**05 31 11.3**	**+0.1**
GO01				*e*S	**Sn**	**05 31 34.1**	**+0.3**
GO01				IAML		05 31 38.5	
	comp=E,503nm,0.1s						
PB11	**IPOC Station P**	**1.68**	**326**	*i* P	**Pn**	**05 31 11.9**	**-0.2**
PB11	**IPOC Station P**	**1.68**	**326**	⇓*i*P	**Pn**	**05 31 12.1**	**0.0**
PB11				*i* S	**Sn**	**05 31 34.5**	**-0.9**
PB11				IAML		05 31 37.6	
	comp=E,650nm,0.3s						
PB06	**IPOC Station P**	**1.74**	**209**	⇑*i*P	**Pn**	**05 31 12.6**	**-0.2**
PB06				*i* S	**Sn**	**05 31 36.3**	**-0.3**
PB06				IAML		05 31 37.4	
	comp=N,221nm,0.2s						
PB04	**IPOC Station P**	**1.80**	**230**	*e*P	**Pn**	**05 31 13.5**	**0.0**
PB04				*i* S	**Sn**	**05 31 37.6**	**-0.2**
PB04				IAML		05 31 44.4	
	comp=N,183nm,0.2s						
PB15	**IPOC Station P**	**2.16**	**200**	*i* P	**Pn**	**05 31 18.1**	**+0.3**
PB15				*i* S	**Sn**	**05 31 46.1**	**+0.5**
MNMC	**Minye Minye**	**2.21**	**337**	*e*P	**Pn**	**05 31 18.9**	**+0.4**
MNMC				*e*S	**Sn**	**05 31 47.5**	**+0.6**
MNMC				IAML		05 31 56.2	
	comp=E,435nm,0.2s						
MNMCX	**Minye Minye**	**2.21**	**337**	*i* P	**Pn**	**05 31 18.4**	**-0.2**
HJA	**Humahuaca**	**3.63**	**124**	*i* P	**Pn**	**05 31 36.6**	**-0.3**
HJA				IAML		05 31 37.4	
	comp=Z,8.2nm,0.5s						

MEX 04 05:42:10.9±0.5**, 15°.07N**×**93°.10W, h73**^{km}±6^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.65**	**350**	*i* P	Pn	05 42 24.1	-1.3
PCIG				*e*S	Sn	05 42 34.2	-2.0
THIG		**0.82**	**101**	*e*P	Pn	05 42 26.2	-1.2
THIG				*e*S	Sn	05 42 38.1	-1.6
CCIG	**Comitan**	**1.53**	**37**	*i* P	Pn	05 42 35.5	-1.0
CCIG				*i* S	Sn	05 42 53.6	-2.2
TGIG		**1.70**	**359**	*e*P	Pn	05 42 37.4	-1.4
TGIG				*e*S	Sn	05 42 58.0	-1.9
CMIG	**Matias Romero**	**2.64**	**320**	*e*P	Pn	05 42 50.3	-1.0
CMIG				*i* S	Sn	05 43 21.1	-1.2

OTT 04 05:42:13.6±0.6**, 77°.31N**×**106°.28W, h18**^{km}**, ML3.7**/2**, 177km southwest from Isachsen, Nu Gustaf-Lougheed Arch Seismic Zone., Queen Elizabeth Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**3.82**	**128**	PN	Pn	05 43 10.5	-0.9
RES				SN	Sn	05 43 55.0	-0.6
RES				Trac		05 44 19.9	
	comp=Z,145nm,1.0s						
EUNU	**Eureka**	**4.76**	**45**	PN	Pn	05 43 24.4	0.0
EUNU				SN	Sn	05 44 15.3	-3.6
EUNU				Trac		05 44 21.1	
	comp=Z,29nm,0.9s						
CB09	**Cambridge Bay**	**8.15**	**177**	PN	Pn	05 44 09.5	-1.3
CB09				SN	Sn	05 45 37.4	-4.9
CB09				LG	Lg	05 46 29.2	
CB31	**Cambridge Bay**	**8.24**	**177**	PN	Pn	05 44 10.7	-1.3
CB31				SN	Sn	05 45 37.1	-7.3
CB31				Trac		05 46 33.5	
	comp=Z,21nm,0.7s						
TULEG	**Thule**	**8.42**	**77**	PN	Pn	05 44 11.6	-2.8
TULEG				SN	Sn	05 45 38.5	-10
KUKN	**Kugluktuk,NWT**	**9.88**	**200**	SN	Sn	05 46 19.8	-4.9
KUKN				LG	Lg	05 47 24.8	
ILON	**Igloolik, Nuna**	**10.49**	**126**	PN	Pn	05 44 39.5	-3.3
ILON				SN	Sn	05 46 33.1	-6.6
INK	**Inuvik**	**11.92**	**235**	PN	Pn	05 45 02.4	0.0
YKB0	**Yellowknife Ar**	**15.02**	**195**	PN	Pn	05 45 43.0	-1.6
YKB0				SN	Sn	05 48 20.1	-10
YKW3	**Yellowknife Ar**	**15.07**	**195**	SN	Sn	05 48 21.5	-10

SVSA 04 06:57:51.9±0.7**, 39°.97N**×**29°.52W, h10**^{km}**, MD3.6, ML2.4, Error ellipse: s-maj=9.2km s-min=4.3km az=79.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.48**	**155**	*e*S	Sn	06 58 30.2	-7.9
PCED				A	A	06 58 33.0	
	16nm,0.3s						
PGRA	**Graciosa**	**1.52**	**128**	*e*S	Sn	06 58 31.2	-7.7
CALA	**Caldeira**	**1.53**	**155**	*e*S	Sn	06 58 31.6	-7.7
ROSA	**Rosais**	**1.59**	**141**	*e*P	Pn	06 58 15.7	-4.5
ROSA				*e*S	Sn	06 58 33.5	-7.3
ROSA				A	A	06 58 34.0	
	5.8nm,0.3s						
PICO	**Pico**	**1.70**	**150**	*e*P	Pn	06 58 17.4	-4.2
PICO				*e*S	Sn	06 58 36.1	-7.3
PICO				A	A	06 58 38.4	
	24nm,0.3s						
PCAN	**Candelaria**	**1.71**	**152**	*e*P	Pn	06 58 17.1	-4.6
PCAN				*e*S	Sn	06 58 36.0	-7.6
PCAN				A	A	06 58 38.8	
	22nm,0.2s						
PMAN	**Manadas**	**1.74**	**140**	*e*P	Pn	06 58 17.2	-4.9
PMAN				*e*S	Sn	06 58 37.0	-7.3
ADH	**Angra Heroismo**	**2.21**	**126**	*e*P	Pn	06 58 24.0	-4.5
PSCM	**Serra do Cume**	**2.25**	**124**	*e*P	Pn	06 58 24.7	-4.5

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*NEIC **04** 07:03:40.8±0.0, 15°.30N×93°.51W, h79^{km}, MD4.0(MEX), After MEX.*

MEX 04 07:03:40.9±0.6**, 15°.32N**×**93°.50W, h80**^{km}±7^{km}**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.47**	**36**	*e*Pn	Pn	07 03 52.9	-1.5
PCIG				*e*Sn	Sn	07 04 02.9	-1.4
PCIG		**0.47**	**36**	*i* P	Pn	07 03 52.9	-1.5
PCIG				*e*S	Sn	07 04 02.9	-1.4
THIG		**1.26**	**109**	*e*Pn	Pn	07 04 01.5	-1.7
THIG				*e*Sn	Sn	07 04 18.6	-1.3
THIG		**1.26**	**109**	*e*P	Pn	07 04 01.5	-1.7
THIG				*e*S	Sn	07 04 18.6	-1.3
TGIG		**1.49**	**14**	*e*Pn	Pn	07 04 04.7	-1.5
TGIG				*e*Sn	Sn	07 04 22.0	-3.3
TGIG		**1.49**	**14**	*i* P	Pn	07 04 04.7	-1.5
TGIG				*i* S	Sn	07 04 22.7	-2.5
CCIG	**Comitan**	**1.62**	**54**	*e*Pn	Pn	07 04 06.9	-1.1
CCIG				*e*Pn	Pn	07 04 06.9	-1.1
CCIG				*e*Sn	Sn	07 04 25.2	-3.3
CCIG				*e*Sn	Sn	07 04 25.5	-2.9
CCIG	**Comitan**	**1.62**	**54**	*e*P	Pn	07 04 06.9	-1.1
CCIG				*i* S	Sn	07 04 27.3	-1.1
CMIG	**Matias Romero**	**2.20**	**323**	*e*Pn	Pn	07 04 14.8	-0.8
CMIG	**Matias Romero**	**2.20**	**323**	*e*P	Pn	07 04 14.8	-0.8
CMIG				*i* S	Sn	07 04 40.1	-1.9
HUIG	**Huatulco**	**2.55**	**280**	*e*Pn	Pn	07 04 18.5	-1.7
HUIG				*e*Sn	Sn	07 04 45.1	-5.3
HUIG	**Huatulco**	**2.55**	**280**	*e*P	Pn	07 04 18.5	-1.7
HUIG				*i* S	Sn	07 04 49.0	-1.4
VHO	**Vista Hermosa**	**3.56**	**300**	*e*Pn	Pn	07 04 33.6	-0.5
VHO	**Vista Hermosa**	**3.56**	**300**	*e*P	Pn	07 04 33.6	-0.5
VHO				*i* S	Sn	07 05 13.2	-1.9
LVIG	**Laguna Verde**	**5.18**	**328**	*e*Pn	Pn	07 04 54.6	-1.4
LVIG				*e*Sn	Sn	07 05 52.9	-1.6
TLIG	**Tlapa**	**5.35**	**295**	*e*Pn	Pn	07 05 00.5	+2.2
TLIG				*e*Sn	Sn	07 05 56.0	-2.6
MYIG	**Mrida**	**6.65**	**32**	*e*Pn	Pn	07 05 16.6	+0.6
MYIG				*e*Sn	Sn	07 06 27.3	-3.0
TEIG	**Tepich**	**6.97**	**45**	*e*Pn	Pn	07 05 17.4	-2.9
TEIG				*e*Sn	Sn	07 06 33.9	-4.2
JTS	**Las Juntas de**	**9.72**	**120**	*e*Pn	Pn	07 05 58.5	+0.5
JTS				*e*Sn	Sn	07 07 43.1	-2.4

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*ISCJB **04** 07:18:25.5±0.4, 18°.91N±0°.10×68°.84W±0°.04, h150^{km}, Error ellipse: s-maj=14.6km s-min=3.5km az=18.1*

*NEIC **04** 07:18:26.3±0.0, 19°.06N×68°.60W, h176^{km}, MD3.9(RSPR), After RSPR.*

*RSPR **04** 07:18:26.3, 19°.06N×68°.60W, h176^{km}±4^{km}, MD3.9/10*
*OSPL **04** 07:18:30.2, 18°.07N×69°.10W, h100^{km}, MD3.8, ML3.4*
ISC 04 07:18:26.1±1.2**, 18°.97N**±0°.09×**68°.79W**±0°.04**, h150^{km}, n41, σ1^{s}.90**/59**, 8C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGY1	Higuey	0.38	169	iP	Pn	07 18 44.2	-2.7
HGY1				eS	Sn	07 18 57.6	-5.2
HGY1				IAML		07 18 60.0	
	comp=Z,871μm,0.1s						
PCDR	Punta Cana, DR	0.59	139	eP	Pn	07 18 45.6	-2.3
PCDR				e		07 19 02.9	
SDD	Santo Domingo	1.18	245	ePn	Pn	07 18 54.5	+2.1
SDD				eSn	Sn	07 19 18.8	+6.3
SDD	Santo Domingo	1.18	245	iP	Pn	07 18 47.1	-5.3
SDD				eS	Sn	07 19 03.0	-9.5
BANI	BANI	1.59	249	iP	Pn	07 18 51.9	-4.8
BANI				IAML		07 19 13.1	
	comp=Z,93nm,0.2s						
AGP	Aguadilla	1.66	109	ePn	Pn	07 18 58.4	+1.0
AGP				eSn	Sn	07 19 23.6	+2.3
AGPR	Aguadilla, PR	1.67	107	⇑eP	Pn	07 18 58.5	+1.0
AGPR	Aguadilla, PR	1.67	107	eS	Sn	07 19 23.6	+2.2
AGPR	Aguadilla, PR	1.67	107	iP	Pn	07 18 58.7	+1.2
AGPR				eS	Sn	07 19 23.7	+2.2
AGPR				IAML		07 19 27.6	
	comp=Z,110nm,0.2s						
MPR	Mayaguez	1.74	115	ePn	Pn	07 18 58.5	+0.3
MPR				eSn	Sn	07 19 25.1	+2.3
MPR	Mayaguez	1.74	115	iP	Pn	07 18 59.5	+1.3
MPR				eS	Sn	07 19 25.2	+2.4
MPR				IAML		07 19 26.6	
	comp=Z,30nm,0.3s						
LSP	Las Mesas	1.80	116	⇓eP	Pn	07 18 59.2	+0.3
LSP	Las Mesas	1.80	116	eS	Sn	07 19 26.4	+2.3
LSP	Las Mesas	1.80	116	ePn	Pn	07 18 59.2	+0.3
LSP				eSn	Sn	07 19 26.4	+2.3
SC01	Santiago de lo	1.89	284	iP	Pn	07 18 59.3	-0.6
SC01				eS	Sn	07 19 25.9	+0.1
AOPR	Arecibo Observ	2.03	107	⇓eP	Pn	07 19 01.8	+0.3
AOPR	Arecibo Observ	2.03	107	eS	Sn	07 19 29.5	+0.7
AOPR	Arecibo Observ	2.03	107	ePn	Pn	07 19 01.9	+0.3
AOPR				eSn	Sn	07 19 29.1	+0.3
EMPR	Esperanza - Ma	2.20	102	ePn	Pn	07 19 06.3	+2.8
EMPR				eSn	Sn	07 19 34.4	+2.0
OBIP	Obispado Ponce	2.27	114	eS	Sn	07 19 35.4	+1.6
OBIP	Obispado Ponce	2.27	114	⇑eP	Pn	07 19 04.4	0.0
OBIP	Obispado Ponce	2.27	114	ePn	Pn	07 19 04.2	-0.2
OBIP				eSn	Sn	07 19 33.6	-0.2
SDDR	Presa de Saban	2.36	271	ePn	Pn	07 19 04.6	-1.0
SDDR				eSn	Sn	07 19 35.0	-0.9
SDDR	Presa de Saban	2.36	271	iP	Pn	07 19 04.3	-1.3
SDDR				eS	Sn	07 19 34.6	-1.4
SDDR				IAML		07 19 36.6	
	comp=Z,34nm,0.4s						
SJG	San Juan	2.65	108	⇑eP	Pn	07 19 10.2	+1.2
SJG	San Juan	2.65	108	ePn	Pn	07 19 09.6	+0.6
SJG				eSn	Sn	07 19 41.2	-0.9
IGPR	InterUniversit	2.74	111	⇑eP	Pn	07 19 10.6	+0.5
PDPR	Patillas Dam,	2.79	109	⇑eP	Pn	07 19 11.0	+0.2
CBYP	Canovanas	2.87	103	⇑eP	Pn	07 19 12.1	+0.3
CBYP	Canovanas	2.87	103	eS	Sn	07 19 47.1	0.0
CBYP	Canovanas	2.87	103	ePn	Pn	07 19 11.8	0.0
CBYP				ePn	Pn	07 19 12.1	+0.3
CBYP				eSn	Sn	07 19 45.9	-1.2
CBYP				eSn	Sn	07 19 47.1	0.0
HUMP	Col San Antoni	2.91	106	⇑eP	Pn	07 19 12.4	+0.1
HUMP	Col San Antoni	2.91	106	ePn	Pn	07 19 12.6	+0.3
HUMP				eSn	Sn	07 19 47.6	-0.3
GRTK	Grand Turk	3.35	319	ePn	Pn	07 19 19.0	+1.1
GRTK				eSn	Sn	07 19 58.6	+0.5
CUPR	Culebra, Puert	3.39	101	⇓eP	Pn	07 19 18.5	0.0
CUPR	Culebra, Puert	3.39	101	eS	Sn	07 19 58.7	-0.3
CUPR	Culebra, Puert	3.39	101	ePn	Pn	07 19 17.8	-0.7
CUPR				eSn	Sn	07 19 56.2	-2.8
STVI	Saint Thomas	3.69	99	⇑eP	Pn	07 19 23.4	+1.1
STVI	Saint Thomas	3.69	99	eS	Sn	07 20 05.7	-0.2
STVI	Saint Thomas	3.69	99	ePn	Pn	07 19 23.9	+1.6
STVI				eSn	Sn	07 20 06.2	+0.3
SABA	Saba	5.44	103	ePn	Pn	07 19 43.6	-1.8
SABA				eSn	Sn	07 20 41.4	-5.8

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*ISCJB **04** 07:35:12.5±1.1, 8°.04N±0°.05×127°.26E±0°.06, h10^{km}, mb3.6/4, Error ellipse: s-maj=9.2km s-min=7.5km az=162.8*
*MAN **04** 07:35:15.2, 7°.93N×127°.17E, h24^{km}, MS3.6*
*IDC **04** 07:35:28.3±1.7, 7°.22N×124°.94E, h117^{km}±17^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.2/34, mbtmp3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.2/23, Error ellipse: s-maj=67.7km s-min=24.8km az=70.0*
ISC 04 07:35:12.8±1.1**, 7°.99N**±0°.06×**127°.23E**±0°.07**, h10^{km}, n16, σ1^{s}.55**/24**, mb3.6**/4**, 2C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.88	283	⇓iP	Pg	07 35 30.2	+0.5
BIPH				iS	Sg	07 35 40.0	-1.2
MATI	Mati	1.42	223	eP	Pn	07 35 37.1	-1.5
MATI				eS	Sb	07 35 55.7	-1.8
BUTP	Butuan	1.86	302	eP	Pn	07 35 44.9	+0.1
BUTP				eS	Sn	07 36 09.4	+1.0
DAV	Davao City (W)	1.87	241	P	Pb	07 35 47.5	+0.4
	82nm,0.3s,baz=297,slow=2.3,SNR=5.5						
DAV				S	Sg	07 36 13.6	+0.5
	140nm,0.3s,baz=258,slow=20,SNR=4.6						
DMPH	Davao City--Mi	1.93	242	⇑eP	Pb	07 35 48.7	+0.6
DMPH				eS	Sb	07 36 13.3	+1.0
BUKP	Musuan	2.15	267	eP	Pn	07 35 50.1	+1.4
BUKP				eS	Sn	07 36 16.0	+0.5
KCP	Kidapawan	2.33	245	⇓iP	Pn	07 35 52.8	+1.5
KCP				iS	Sn	07 36 15.7	-4.5
DDMP	Don Marcelino,	2.40	219	eP	Pn	07 35 53.9	+1.6
DDMP				eS	Sb	07 36 26.1	+0.2
CGP	Cagayan de Oro	2.55	281	⇓eP	Pn	07 35 55.1	+0.9
SKMP	Bagumbayan, Su	3.04	241	eP	Pn	07 36 00.8	-0.2
SKMP				eS	Sn	07 36 38.3	+0.9
CTBH	Cotabato--PC H	3.05	256	⇑iP	Pn	07 36 02.4	+1.2
TGY	Tagaytay City	8.66	315	LR	LR	07 41 27.9	
	comp=Z,98nm,20.5s,baz=163,slow=46						
ASAR	Alice Springs	32.13	168	P	P	07 41 43.0	+2.4
	0.3nm,0.5s,baz=350,slow=8.6,SNR=3.4						
MKAR	Makanchi Array	54.41	323	P	P	07 44 38.5	-1.7
	0.5nm,0.5s,baz=120,slow=7.8,SNR=7.6						
MKAR				PcP	PcP	07 45 43.3	-0.6
	0.5nm,0.8s,baz=116,slow=3.4,SNR=3.6						
ILAR	Eielson Array	81.07	26	P	P	07 47 39.3	+11
	0.3nm,0.7s,baz=257,slow=5.4,SNR=4.1						
FINES	FINESS Array B	88.33	332	P	P	07 48 03.4	-1.3
	0.9nm,0.6s,baz=77,slow=6.3,SNR=5.3						

SVSA 04 07:35:52.5±0.8**, 39°.96N×29°.35W, h10^{km}, MD3.5, ML2.3, Error ellipse: s-maj=9.0km s-min=4.2km az=82.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGRA	Graciosa	1.41	131	eP	Pn	07 36 13.3	-4.9
PGRA				eS	Sn	07 36 29.6	-7.2
PGRA				A	A	07 36 30.6	
	23nm,0.4s						
PCED	Cedros	1.42	159	eP	Pn	07 36 14.2	-4.2
PCED				eS	Sn	07 36 29.5	-7.6
PCED				A	A	07 36 31.8	
	17nm,0.2s						
CALA	Caldeira	1.47	160	eS	Sn	07 36 30.8	-7.5
ROSA	Rosais	1.51	145	eP	Pn	07 36 14.7	-4.9
ROSA				eS	Sn	07 36 31.4	-7.9
ROSA				A	A	07 36 34.7	
	10nm,0.3s						
PICO	Pico	1.62	154	eP	Pn	07 36 16.8	-4.4
PICO				eS	Sn	07 36 34.9	-7.3
PICO				A	A	07 36 38.4	
	57nm,0.2s						
PCAN	Candelaria	1.64	156	eP	Pn	07 36 16.8	-4.6
PCAN				eS	Sn	07 36 34.9	-7.6
PCAN				A	A	07 36 37.6	
	34nm,0.2s						
PMAN	Manadas	1.65	143	eP	Pn	07 36 16.5	-5.0
PMAN				eS	Sn	07 36 35.2	-7.5
PMAN				A	A	07 36 35.3	
	16nm,0.4s						
PPNO	Prainha do Nor	1.71	150	eS	Sn	07 36 36.5	-7.8
PPNO				A	A	07 36 38.4	
	9.4nm,0.2s						
ADH	Angra Heroismo	2.09	128	eP	Pn	07 36 23.3	-4.3
PSCM	Serra do Cume	2.14	125	eP	Pn	07 36 23.6	-4.7

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*ISCJB **04** 07:49:50.5±0.7, 19°.12S±0°.05×169°.01E±0°.08, h10^{km}, mb4.3/12, MS3.4/2, Error ellipse: s-maj=11.0km s-min=7.7km az=176.0*
*IDC **04** 07:49:52.6±5.3, 18°.76S×168°.69E, h0^{km}, mb4.0/3, mb1 4.0/4, mb1mx3.8/25, mbtmp4.0/4, ML3.6/1, MS3.1/4, Ms1 3.2/4, ms1mx2.9/20, Error ellipse: s-maj=132.9km s-min=41.1km az=111.0*
*NEIC **04** 07:49:52.0±1.8, 19°.11S×169°.02E, h10^{km}±2^{km}, mb4.5/13, Error ellipse: s-maj=15.4km s-min=11.5km az=87.0*
ISC 04 07:49:52.3±0.9**, 19°.16S**±0°.08×**169°.0E**±0°.1**, h10^{km}, n23, σ1^{s}.65**/25**, mb4.3**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.50	202	ePn	Pn	07 50 33.0	-0.1
MARNC				eSn	Sn	07 50 59.3	-4.3
PINNC	Pines Island,	3.75	203	ePn	Pn	07 50 52.6	+2.4
PINNC				eSn	Sn	07 51 35.4	+0.9
DZM	Mont Dzumac	3.79	220	Pn	Pn	07 50 53.7	+2.8
	4.0nm,0.3s,baz=88,slow=11,SNR=15						
DZM				Sn	Sn	07 51 34.2	-1.3
	11nm,0.3s,baz=319,slow=23,SNR=3.7						
DZM				LR	LR	07 52 04.6	
	comp=Z,65nm,18.8s,baz=37,slow=34						
DZM	Mont Dzumac	3.79	220	ePn	Pn	07 50 53.7	+2.8
DZM				eSn	Sn	07 51 33.5	-2.1
HNR	Honiara	13.07	316	LR	LR	07 57 27.5	
	comp=Z,117nm,19.7s,baz=151,slow=36						
HNR	Honiara	13.07	316	ePn	Pn	07 52 57.3	-0.9
RAO	Raoul Island	15.56	133	ePn	Pn	07 53 31.4	-0.4
	640nm,0.9s						
BKZ	Black Stump Fm	20.96	164	eP	P	07 54 35.2	-0.3
	21nm,1.4s						
CTAO	Charters Tower	21.48	264	eP	P	07 54 41.1	-0.2
	12nm,1.0s						
SNZO	South Karori	22.61	169	eP	P	07 54 53.0	-0.1
	31nm,1.1s						
THZ	Tophouse	22.77	173	eP	P	07 54 54.6	-0.3
	6.8nm,1.1s						
PMG	Port Moresby	23.29	292	eP	P	07 54 60.0	-0.5
	23nm,1.1s						
STKA	Stephens Creek	27.73	237	P	P	07 55 43.0	+1.9
	1.9nm,0.8s,baz=82,slow=12,SNR=2.7						
STKA	Stephens Creek	27.73	237	eP	P	07 55 42.8	+1.7
	3.6nm,1.4s						
BBOO	Buckleboo	32.47	239	eP	P	07 56 22.8	-0.2
	56nm,1.3s						
WRAB	Tennant Creek	32.67	263	eP	P	07 56 23.7	-1.3
	5.2nm,1.2s						
AS31	Alice Springs	32.97	256	eP	P	07 56 26.8	-0.8
	3.0nm,1.0s						
ASAR	Alice Springs	32.97	256	P	P	07 56 27.1	-0.5
	0.9nm,0.4s,baz=84,slow=8.5,SNR=15						
ASAR				LR	LR	08 08 54.1	
	comp=Z,57nm,20.0s,baz=98,slow=35						
FAKI	Fak Fak	39.42	290	eP	P	07 57 23.7	+0.9
	29nm,1.1s						
QSPA	South Pole Qui	70.90	180	eP	P	08 01 10.5	+1.0
	3.0nm,0.9s						
SONA0	Songino Array	87.04	323	eP	P	08 02 37.6	-0.5
SONM	Songino Array	87.04	323	P	P	08 02 37.6	-0.5
	0.5nm,0.6s,baz=117,slow=5.0,SNR=2.3						
NVAR	Mina Array Bea	88.88	49	LR	LR	08 35 45.9	
	comp=Z,20nm,18.6s,baz=304,slow=31						

UCR 04 08:18:04.4±2.4**, 8°.95N×82°.94W, h4^{km}±6^{km}, MW3.5, 4C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDSV	San Vito	0.13	195	⇑iP	Pg	08 18 08.6	+1.5
EDSV				eS	Sg	08 18 11.8	+3.0
BRU2	Volcan	0.29	122	⇑iP	Pg	08 18 10.6	+0.6
BRU2				eS	Sb	08 18 16.1	-1.4
EDBA	Buenos Aires	0.40	303	eP	Pb	08 18 13.1	-0.9
EDBA				eS	Sb	08 18 20.6	+0.1
DRK0	Durika	0.44	316	eP	Pg	08 18 12.0	-0.8
DRK0				eS	Sg	08 18 19.6	+1.0
EDPN	Palmar Norte	0.51	272	eP	Pb	08 18 16.3	+0.3
EDPN				eS	Sb	08 18 22.6	-1.3
PTJ1	Puerto Jimnez	0.55	221	eP	Pg	08 18 14.5	-0.4
PTJ1				eS	Sb	08 18 23.7	-1.0
EDLM	Las Mercedes	0.72	297	⇑eP	Pg	08 18 18.1	-0.2
EDLM				eS	Sg	08 18 28.7	+1.0
EDDO	Dominical	0.96	288	eP	Pg	08 18 21.7	-1.2
EDDO				eS	Sg	08 18 36.1	+0.7
LCR2	La Lucha 2	1.31	307	⇑eP	Pg	08 18 27.8	-1.8
LCR2				eS	Sg	08 18 45.8	-0.9
CVTR	Volcan Turrial	1.34	323	⇓iP	Pg	08 18 29.0	-1.1
CVTR				eS	Sn	08 18 48.8	0.0
SJS	Escuela Geolog	1.48	312	eP	Pn	08 18 31.9	0.0
SJS				eS	Sg	08 18 52.6	+0.7
HDC	Heredia	1.56	312	eP	Pn	08 18 31.6	-1.6
HDC				eS	Sn	08 18 53.6	-0.3
SRA1	San Ramn	1.90	307	eP	Pn	08 18 37.7	0.0
SRA1				eS	Sn	08 19 02.1	-0.1
ARE1	Arenal 1	2.31	311	eP	Pn	08 18 44.2	+0.9
JTS	Las Juntas de	2.39	304	eP	Pn	08 18 44.6	+0.2

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*ISCJB **04** 08:32:03.6±0.3, 32°.27S±0°.03×179°.76E±0°.06, h344^{km}, mb4.2/29, Error ellipse: s-maj=7.5km s-min=2.9km az=17.2*
*WEL **04** 08:32:03.0, 32°.29S×179°.76E, h345^{km}, M4.4/39, mB4.9/18, ML5.3/1, MLv5.2/39, Mw(mB)4.2/18*
*NEIC **04** 08:32:04.0±2.2, 32°.29S×179°.76E, h345^{km}±3^{km}, mb4.5/26, Error ellipse: s-maj=15.6km s-min=10.6km az=111.0*
*IDC **04** 08:32:05.5±2.3, 32°.20S×179°.94W, h357^{km}±20^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.8/31, mbtmp4.6/14, Error ellipse: s-maj=20.3km s-min=12.7km az=59.0*
ISC 04 08:32:04.3±0.4**, 32°.33S**±0°.05×**179°.86E**±0°.07**, h344^{km}, n165, σ1^{s}.92**/186**, mb4.4**/29**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.61	33	P	Pn	08 33 09.1	+0.1
GLKZ				S	S	08 33 58.5	-2.6
RAO	Raoul Island	3.62	33	ePn	Pn	08 33 09.0	-0.1
RAO				eS	S	08 34 00.6	-0.8
RIZ	Raoul Island	3.62	32	P	Pn	08 33 09.6	+0.4
GRZ	Great Barrier	5.34	222	P	Pn	08 33 32.6	+5.3
MXZ	Matakaoa Point	5.37	193	ePn	Pn	08 33 28.9	+1.3
MXZ				eS	S	08 34 38.6	+3.5
MXZ	Matakaoa Point	5.37	193	P	Pn	08 33 31.4	+3.8
KUZ	Kuaotunu	5.57	217	P	Pn	08 33 35.1	+5.2
WMGZ	Waiomatatini S	5.60	192	P	Pn	08 33 34.2	+4.0
HAZ	Te Kaha	5.67	197	P	Pn	08 33 34.7	+3.7
PKGZ	Pakihiroa	5.73	194	P	Pn	08 33 35.0	+3.2
WCZ	Waipu Caves	5.81	230	P	Pn	08 33 38.2	+5.5
PUZ	Puketiti	5.87	192	P	Pn	08 33 36.5	+3.1
WIAZ	Waiheke Island	5.91	220	P	Pn	08 33 39.6	+5.8
OUZ	Omahuta	5.95	239	ePn	Pn	08 33 34.1	-0.1
OUZ	Omahuta	5.95	239	P	Pn	08 33 40.1	+5.9
OPRZ	Ohinepanea	6.13	205	P	Pn	08 33 40.5	+4.3
MKAZ	Moumakai	6.13	218	P	Pn	08 33 41.7	+5.5
ETAZ	East Tamaki Re	6.14	220	P	Pn	08 33 41.6	+5.2
MWZ	Matawai	6.28	197	P	Pn	08 33 40.4	+2.3
TKGZ	Te Karaka	6.31	194	P	Pn	08 33 40.7	+2.4
URZ	Urewera	6.33	200	P	Pn	08 33 40.8	+2.4
	21nm,0.3s,baz=292,slow=3.6,SNR=98						
URZ				S	S	08 34 54.8	-0.1
	60nm,0.3s,baz=260,slow=23,SNR=27						
URZ	Urewera	6.33	200	ePn	Pn	08 33 39.3	+0.8
URZ				eS	S	08 34 55.1	+0.2
URZ	Urewera	6.33	200	P	Pn	08 33 40.9	+2.4
WTAZ	Waiatarua	6.33	222	P	Pn	08 33 44.3	+5.8
OMRZ	Omania	6.43	205	P	Pn	08 33 45.2	+5.5
TOZ	Tahuroa Road	6.46	212	P	Pn	08 33 43.6	+3.6
RAGZ	Rawiri	6.46	197	P	Pn	08 33 43.2	+3.0
TARZ	Mount Tarawera	6.50	204	P	Pn	08 33 45.2	+4.6
RIGZ	Rimuhau	6.58	194	P	Pn	08 33 43.8	+2.2
WPRZ	Whakapapatarin	6.87	205	P	Pn	08 33 50.6	+5.7
KNZ	Kokohu	6.91	194	P	Pn	08 33 45.8	+0.5
WATZ	Wairara	7.19	207	P	Pn	08 33 52.8	+4.1
RATZ	Rangitukua	7.32	206	P	Pn	08 33 53.7	+3.5
BKZ	Black Stump Fm	7.35	201	ePn	Pn	08 33 49.9	-0.6
BKZ				eS	S	08 35 16.7	-0.3
BKZ	Black Stump Fm	7.35	201	P	Pn	08 33 50.4	-0.1
BKZ				S	S	08 35 14.7	-2.2
HIZ	Hauiti	7.39	212	ePn	Pn	08 33 52.5	+1.5
KRVZ	Karewarewa	7.57	206	P	Pn	08 33 56.1	+2.9
KWHZ	Kaweka Forest	7.61	201	P	Pn	08 33 54.1	+0.5
KWHZ				S	S	08 35 21.2	-1.3
WTVZ	West Tongariro	7.61	206	P	Pn	08 33 56.3	+2.7
TWVZ	Taurewa	7.62	207	P	Pn	08 33 56.6	+2.8
NGZ	Ngauruhoe	7.65	206	P	Pn	08 33 56.6	+2.4
TUVZ	Tukino	7.71	205	P	Pn	08 33 57.0	+2.1
FWVZ	Far West T-bar	7.74	206	P	Pn	08 33 55.7	+0.3
BHHZ	Black Hill Sta	7.78	202	P	Pn	08 33 54.6	-1.0
BHHZ				S	S	08 35 23.5	-2.8
MOVZ	Moawhango	7.80	204	P	Pn	08 33 57.2	+1.2
KRHZ	Kereru	7.82	200	P	Pn	08 33 56.6	+0.5
PKVZ	Pokaka	7.85	207	P	Pn	08 33 57.6	+1.1
MTVZ	Mangateitei	7.88	206	P	Pn	08 33 58.9	+2.0
VRZ	Vera Road	7.94	210	P	Pn	08 34 00.9	+3.4
PNHZ	Pukenui	8.12	200	P	Pn	08 33 58.7	-1.0
WPHZ	Waipukurau	8.19	199	P	P	08 34 02.9	-0.8
DREZ	Durham Road	8.24	212	P	P	08 34 05.2	+1.0
PKE	Pukeiti	8.34	213	P	P	08 34 07.3	+1.9
LREZ	Lake Rotokare	8.37	210	P	P	08 34 06.0	+0.3
PREZ	Palmer Road	8.38	212	P	P	08 34 07.1	+1.2
KHEZ	Kahui Hut	8.41	213	P	P	08 34 09.1	+2.8
NBEZ	Newall Road No	8.46	213	P	P	08 34 10.1	+3.5
DVHZ	Dannevirke	8.49	199	P	Pn	08 34 04.2	+0.2
ANWZ	Angora Road	8.56	198	P	Pn	08 34 05.1	+0.3
OHWZ	Ohakea	8.67	204	P	P	08 34 07.8	-1.2
OHWZ	Ohakea	8.67	204	P	P	08 34 10.0	+1.0
POWZ	Post Office Ro	8.69	201	P	Pn	08 34 07.5	+1.0
PRWZ	Pori Road	8.78	200	P	P	08 34 09.0	-1.2
BFZ	Birch Farm	8.82	198	ePn	Pn	08 34 09.1	+1.1
BFZ				eS	S	08 35 48.3	-0.8
BFZ	Birch Farm	8.82	198	P	Pn	08 34 07.6	-0.4
MRZ	Mangatainoka R	8.99	201	P	Pn	08 34 08.4	-1.6
TIWZ	Tintock	9.01	200	P	Pn	08 34 09.4	-0.8
CPWZ	Castlepoint	9.05	198	P	P	08 34 13.4	+0.2
HOWZ	Holdsworth Sta	9.23	201	P	Pn	08 34 11.4	-1.5
OGWZ	Otaki Gorge	9.27	203	P	Pn	08 34 12.7	-0.6
TMWZ	Te Maipa	9.32	199	P	P	08 34 15.7	-0.5
MTW	Mount Morrison	9.47	200	P	P	08 34 16.7	-1.3
CAW	Cannon Point	9.56	202	P	Pn	08 34 15.3	-1.5
TRWZ	Traveller	9.64	199	P	P	08 34 18.6	-1.2
PAWZ	Paruwai Farm	9.70	200	P	Pn	08 34 19.0	+0.5
DUWZ	D'Urville Isla	9.70	208	P	Pn	08 34 16.9	-1.7
MSWZ	Moikau Station	9.79	201	P	Pn	08 34 19.2	-0.3
SNZO	South Karori	9.86	203	eP	P	08 34 21.1	-1.1
SNZO				eS	S	08 36 09.2	-2.8
BHW	Baring Head	9.90	202	P	Pn	08 34 20.5	-0.4
TCW	Tory Channel	9.92	205	P	Pn	08 34 19.7	-1.4
PLWZ	Palliser	9.93	200	P	Pn	08 34 20.9	-0.3
TUWZ	Tuamarina	10.24	206	P	Pn	08 34 22.5	-2.4
QRZ	Quartz Range	10.32	213	P	Pn	08 34 24.1	-1.8
THZ	Tophouse	10.92	209	eP	Pn	08 34 31.5	-1.7
THZ				eS	S	08 36 32.2	-3.4
KHZ	Kahutara	11.25	205	eP	Pn	08 34 35.1	-1.8
KHZ				eS	S	08 36 37.3	-5.4
LTZ	Lake Taylor	12.04	208	eP	Pn	08 34 43.6	-2.8
LTZ				eS	S	08 36 55.9	-4.3
CRLZ	Canterbury Las	12.58	205	eP	P	08 34 52.1	-0.3
CRLZ				eS	S	08 37 06.0	-5.5
OXZ	Oxford	12.59	207	eP	P	08 34 49.8	-2.7
OXZ				eS	S	08 37 07.7	-4.0
MQZ	McQueen's Vall	12.69	204	eP	P	08 34 51.0	-2.6
MQZ				eS	S	08 37 08.8	-4.9
RPZ	Rata Peaks	13.30	209	P	P	08 34 58.2	-2.1
	2.6nm,0.3s,baz=351,slow=18,SNR=9.2						
RPZ				S	S	08 37 18.8	-7.5
	7.5nm,0.3s,baz=136,slow=23,SNR=20						
RPZ	Rata Peaks	13.30	209	eP	P	08 34 59.8	-0.6
RPZ				eS	S	08 37 22.4	-3.9
FOZ	Fox Glacier	13.69	212	eP	P	08 35 04.2	-0.5
FOZ				eS	S	08 37 33.4	-0.7
LBZ	Lake Benmore	14.21	209	eP	P	08 35 10.2	-0.2
LBZ				eS	S	08 37 44.2	-0.5
ODZ	Otahua Downs	14.57	207	eP	P	08 35 14.9	+0.6
ODZ				eS	S	08 37 50.8	-1.1
PINNC	Pines Island,	14.65	308	eP	P	08 35 15.5	+0.1
WKZ	Wanaka	15.06	211	eP	P	08 35 19.7	0.0
	32nm,1.3s						
WKZ				eS	S	08 38 02.4	+0.6
DZM	Mont Dzumac	15.69	307	P	Pn	08 35 28.8	-0.7
	0.5nm,0.3s,baz=212,slow=16,SNR=7.3						
DZM	Mont Dzumac	15.69	307	eP	P	08 35 26.5	-0.4
	19nm,0.8s						
MLZ	Mavora Lakes	15.88	212	eP	P	08 35 27.5	-1.1
	58nm,1.4s						
MLZ				eS	S	08 38 17.8	-0.3
WHZ	Wether Hill Ro	16.37	211	eP	P	08 35 33.2	-0.7
	35nm,1.3s						
WHZ				eS	S	08 38 27.6	0.0
ARMA	Armidale	24.15	267	eP	P	08 36 54.6	+4.0
	7.4nm,0.6s						
EIDS	Eidsvold	26.09	278	eP	P	08 37 10.0	+2.2
	16nm,1.1s						
STKA	Stephens Creek	32.30	260	P	P	08 38 04.7	+2.4
	11nm,0.7s,baz=102,slow=11,SNR=22						
STKA	Stephens Creek	32.30	260	eP	P	08 38 04.9	+2.7
	2.8nm,0.8s						
CTA	Charters Tower	32.38	284	P	P	08 38 04.5	+1.4
	9.3nm,0.4s,baz=113,slow=10,SNR=25						
CTAO	Charters Tower	32.38	284	eP	P	08 38 04.1	+1.0
	13nm,0.6s						
BBOO	Buckleboo	36.71	257	eP	P	08 38 40.9	+1.1
	60nm,1.4s						
COEN	Coen	38.12	290	eP	P	08 38 50.5	-1.1
	8.1nm,1.0s						
AS31	Alice Springs	41.22	270	eP	P	08 39 16.9	0.0
	5.5nm,0.6s						
ASAR	Alice Springs	41.22	270	P	P	08 39 17.9	+1.0
	16nm,0.6s,baz=105,slow=7.5,SNR=191						
ASAR				PcP	PcP	08 41 07.8	-0.7
	0.9nm,0.5s,baz=119,slow=4.4,SNR=4.4						
ASAR				S	S	08 45 03.0	-1.5
	1.6nm,1.2s,baz=102,slow=16,SNR=4.7						
WRAB	Tennant Creek	42.39	275	eP	P	08 39 27.1	+0.8
	36nm,0.6s						
KWAJ	Kwajalein Atol	42.54	342	eP	P	08 39 25.5	-1.8
	36nm,0.6s						
FORT	Forrest	43.81	258	eP	P	08 39 37.9	+0.5
	45nm,1.0s						
SBA	Scott Base	45.99	184	eP	P	08 39 54.2	+0.6
	3.0nm,0.6s						
VNDA	Vanda	46.00	185	P	P	08 39 56.1	+2.3
	1.5nm,0.5s,baz=5.2,slow=8.5,SNR=31						
VNDA				PcP	PcP	08 41 24.4	+0.6
	1.6nm,0.8s,baz=326,slow=4.6,SNR=5.6						
VNDA				ScP	ScP	08 44 42.3	-1.1
	0.5nm,0.8s,baz=11,slow=3.0,SNR=3.7						
VNDA	Vanda	46.00	185	eP	P	08 39 55.5	+1.7
	1.6nm,0.8s						
VNDA				ePcP	PcP	08 41 24.4	+0.6
MTN	Manton Dam	48.53	282	eP	P	08 40 12.5	-1.4
	22nm,1.1s						
NWAO	Narrogin (SRO)	52.02	251	eP	P	08 40 38.8	-0.9
	54nm,1.4s						
CASY	Casey	52.58	208	eP	P	08 40 43.5	+0.4
	11nm,0.6s						
MORW	Morawa	54.25	255	eP	P	08 40 56.0	+0.2
	17nm,1.3s						
BATI	Baumata	56.12	280	P	P	08 41 10.6	+1.3
	24nm,0.4s,baz=124,slow=7.8,SNR=3.1						
QSPA	South Pole Qui	57.78	180	eP	P	08 41 23.0	+2.7
	44nm,0.8s						
GIRL	Giralia	58.23	262	eP	P	08 41 24.3	+0.5
	49nm,1.2s						
MAW	Mawson	69.85	201	P	P	08 42 38.1	+0.2
	2.7nm,0.6s,baz=137,slow=6.4,SNR=5.9						
MAW	Mawson	69.85	201	eP	P	08 42 36.2	-1.7
	1.0nm,0.9s						
SNAA	Sanae	76.27	179	P	P	08 43 16.2	+0.9
SNAA	Sanae	76.27	179	eP	P	08 43 15.7	+0.4
	14nm,0.9s						
VNA3	Neumayer Olymp	76.49	177	P	P	08 43 17.4	+0.9
VNA1	Neumayer--Stat	77.15	177	P	P	08 43 20.8	+0.8
MJAR	Matsushiro Arr	78.82	327	P	P	08 43 28.9	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.5nm,0.6s,baz=152,slow=4.3,SNR=4.0						
MAJO	Matsushiro	78.82	327	eP	P	08 43 28.9	-0.8
PLCA	Paso Flores	82.52	134	P	P	08 43 49.0	-0.4
	2.8nm,0.9s,baz=250,slow=6.9,SNR=6.1						
PLCA	Paso Flores	82.52	134	eP	P	08 43 49.1	-0.3
	11nm,1.4s						
KSRS	Korea Array	84.66	321	P	P	08 44 00.1	+0.4
	1.2nm,0.6s,baz=142,slow=5.7,SNR=5.0						
PETK	Petropavlovsk-	87.25	347	P	P	08 44 12.2	+0.3
	4.3nm,0.5s,baz=128,slow=6.8,SNR=12						
PEA1	Petropavlovsk-	87.25	347	eP	P	08 44 12.2	+0.3
USRK	Ussuriysk Ar.	87.78	328	P	P	08 44 14.7	0.0
	0.7nm,0.5s,baz=152,slow=6.5,SNR=3.3						
NV01	Mina Array Sit	90.90	44	eP	P	08 44 28.6	-1.0
NVAR	Mina Array Bea	90.90	44	P	P	08 44 28.6	-1.0
	0.2nm,0.5s,baz=243,slow=5.0,SNR=4.0						
HHC	Hu-ho-hao-te	96.27	315	P	P	08 44 57.9	+3.8
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,24nm,7.5s						
BOSA	Boshof	114.76	205	PKP	PKiKP	08 50 04.6	-0.2
	comp=Z,3.8nm,0.9s,baz=117,slow=2.3,SNR=3.1						
MK32	Makanchi Array	117.60	310	ePKPdf	PKPdf	08 50 08.5	-0.8
MKAR	Makanchi Array	117.60	310	PKP	PKPdf	08 50 08.5	-0.8
	comp=Z,0.4nm,0.5s,baz=90,slow=0.7,SNR=2.9						
LBTB	Lobatse	117.91	206	PKP	PKiKP	08 50 11.3	+0.4
	comp=Z,1.5nm,0.6s,baz=124,slow=3.6,SNR=2.8						
ZALV	Zalesovo Beam	118.25	318	PKP	PKPdf	08 50 09.1	-1.2
	comp=Z,0.6nm,0.4s,baz=80,slow=1.6,SNR=2.7						
ZAA1	Zalesovo Array	118.25	318	ePKPdf	PKPdf	08 50 09.1	-1.2
MATP	Matopo	120.81	212	PKP	PKPdf	08 50 16.1	-0.5
	comp=Z,1.4nm,0.5s,baz=209,slow=0.6,SNR=5.8						
ARA0	ARCESS Array S	140.05	346	ePKPpre	PKPpre	08 50 43.4	
ARCES	ARCESS Array B	140.05	346	PKhKP	PKPpre	08 50 43.4	
	comp=Z,1.1nm,0.6s,baz=46,slow=3.5,SNR=5.9						
KBZ	Khabaz	144.60	301	PKP	PKPbc	08 50 59.5	-0.1
	comp=Z,7.2nm,1.0s,baz=96,slow=2.1,SNR=6.0						
FIA1	FINESS Array S	146.27	338	ePKPbc	PKPbc	08 51 03.4	-0.6
FIA0	FINESS Array S	146.27	338	ePKPbc	PKPdf	08 51 03.1	+1.0
FINES	FINESS Array B	146.27	338	PKPbc	PKPdf	08 51 03.1	+1.0
	comp=Z,4.9nm,0.4s,baz=48,slow=4.6,SNR=38						
NB2	NORSAR Subarra	150.33	349	PKP	PKPbc	08 51 13.5	-1.0
	comp=Z,0.9nm,0.5s,baz=17,slow=2.6						
NB200	NORSAR Array S	150.33	349	ePKPbc	PKPbc	08 51 13.5	-1.0
NOA	NORSAR Array B	150.33	349	PKPbc	PKPbc	08 51 13.5	-1.0
	comp=Z,1.6nm,0.6s,baz=15,slow=4.1,SNR=9.8						
AKASG	Malin Array Be	151.63	319	PKPbc	PKPbc	08 51 16.9	-0.9
	comp=Z,0.9nm,0.4s,baz=46,slow=3.0,SNR=5.3						
AKBB	Malin Array Si	151.63	319	ePKPbc	PKPbc	08 51 16.6	-1.1
BR101	Keskin Array S	151.82	295	ePKPbc	PKPbc	08 51 17.7	-1.0
BR101				ePKPab	PKPab	08 51 28.1	-1.2
BR131	Keskin Array S	151.82	295	ePKPbc	PKPbc	08 51 18.3	-0.5
BRTR	Keskin Array B	151.82	295	PKPbc	PKPbc	08 51 17.7	-1.0
	comp=Z,1.8nm,0.5s,baz=147,slow=3.8,SNR=9.6						
BRTR				PKPab	PKPab	08 51 28.2	-1.2
	comp=Z,1.5nm,0.8s,baz=100,slow=5.3,SNR=5.7						
DBIC	Dimbokro	154.09	169	PKPbc	PKiKP	08 51 24.4	+0.1
	comp=Z,4.6nm,0.5s,baz=189,slow=2.6,SNR=9.7						
DBIC				PKPab	PKPab	08 51 38.7	-0.5
	comp=Z,5.1nm,0.8s,baz=198,slow=6.4,SNR=2.8						
CLL	Collm	158.72	337	ePKPab	PKPab	08 51 59.0	+0.8
TORD	Torodi Ar. Bea	160.83	185	PKP	PKPdf	08 51 23.9	-0.3
	comp=Z,5.4nm,0.3s,baz=160,slow=3.2,SNR=5.5						
TORD				PKPab	PKPab	08 52 08.0	-0.3
	comp=Z,2.4nm,0.6s,baz=169,slow=4.2,SNR=12						
TOA1	Torodi Ar. Sit	160.84	185	ePKPdf	PKPdf	08 51 23.9	-0.3
TOA1				ePKPab	PKPab	08 52 08.0	-0.3

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*JMA **04** 09:00:27.8±0.2, 24°.23N×121°.94E, h0^{km}, M2.0*

*ISCJB **04** 09:00:28.8±0.4, 24°.29N±0°.02×121°.93E±0°.02, h11^{km}±3^{km}, Error ellipse: s-maj=4.2km s-min=3.0km az=137.5*

*TAP **04** 09:00:28.5, 24°.30N×121°.90E, h12^{km}, ML2.5, C*

ISC 04 09:00:28.5±1.0, **24°.27N**±0°.03×**121°.93E**±0°.03, **h13**^{km}±8^{km}, **n36**, σ**0^s.35**/55, **1C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao	0.23	313	i P	Pg	09 00 33.4	-0.1
	baz=311						
NANB				S	Sg	09 00 36.9	+0.1
	baz=311						
ENA	Nanau	0.23	312	i P	Pg	09 00 33.4	-0.2
	baz=311						
ENA				S	Sg	09 00 37.0	0.0
	baz=311						
NACB	Ninganchiao	0.32	253	P	Pg	09 00 34.8	-0.3
	baz=245						
NACB				S	Sb	09 00 41.0	-0.3
	baz=245						
EOS1	EOS1	0.33	33	P	Pg	09 00 35.7	+0.5
	baz=39						
EOS1				S	Sb	09 00 41.3	-0.1
	baz=39						
TWC	Suao	0.35	347	P	Pg	09 00 35.4	-0.2
	baz=352						
TWC				eS	Sg	09 00 40.3	0.0
	baz=352						
TWD	Chiawan	0.36	238	eP	Pg	09 00 35.7	-0.1
	baz=231						
TWD				eS	Sb	09 00 42.3	0.0
	baz=231						
ETLH	Xiulin Townshi	0.41	261	⇑iP	Pg	09 00 36.6	-0.2
	baz=256						
ETLH				eS	Sb	09 00 44.2	+0.2
	baz=256						
ENLB	Shoufeng	0.47	220	eP	Pb	09 00 39.0	+0.3
	baz=214						
ENTT	Nioudou	0.50	318	P	Pg	09 00 38.5	+0.2
	baz=317						
ENTT				eS	Sg	09 00 45.4	+0.4
	baz=317						
NDT	Datong Townshi	0.51	311	P	Pg	09 00 38.5	0.0
	baz=309						
NDT				S	Sg	09 00 45.4	+0.2
	baz=309						
TWE	Neicheng	0.51	332	eP	Pg	09 00 38.6	0.0
	baz=334						
TWE				eS	Sg	09 00 44.9	-0.5
	baz=334						
NNSB	Datong	0.53	288	P	Pg	09 00 38.9	+0.1
	baz=284						
NNS	Nan Shan	0.54	289	eP	Pg	09 00 39.4	+0.3
	baz=285						
NNS				eS	Sg	09 00 46.3	0.0
	baz=285						
EGS		0.57	0	eP	Pg	09 00 39.6	-0.1
	baz=3.0						
WHF	Hehuan Shan	0.62	259	P	Pg	09 00 40.4	-0.4
	baz=254						
WHF				eS	Sb	09 00 50.6	+0.3
	baz=254						
ESL	Shilin	0.64	225	eP	Pb	09 00 41.7	+0.1
	baz=220						
ESL				eS	Sb	09 00 51.3	+0.9
	baz=220						
YHNB	Yeheng	0.64	308	P	Pg	09 00 41.2	+0.1
	baz=307						
YHNB				eS	Sg	09 00 49.8	+0.1
	baz=307						
TWT	Tachien	0.69	269	eP	Pb	09 00 42.3	-0.2
	baz=265						
TDCB	Techi	0.71	269	eP	Pb	09 00 42.6	-0.1
	baz=265						
TDCB				eS	Sb	09 00 52.1	-0.3
	baz=265						
TIPB	Shuangxi	0.71	352	P	Pg	09 00 42.4	+0.1
	baz=353						
TIPB				eS	Sg	09 00 51.5	-0.1
	baz=353						
CHGB	Renai	0.72	253	eP	Pg	09 00 42.6	0.0
	baz=250						
CHGB				eS	Sb	09 00 53.8	+0.8
	baz=250						
NWF	Wu-fen Shan	0.81	350	eP	Pg	09 00 43.8	-0.4
	baz=351						
VWDT	VWDT	0.89	235	eP	Pg	09 00 45.4	-0.3
	baz=231						
HGSD	Ruisui	0.90	211	eP	Pn	09 00 47.0	+0.2
	baz=208						
NSTT	Nanjuang	0.92	293	eP	Pb	09 00 46.7	+0.3
	baz=291						
YM01	YM01	0.93	339	eP	Pb	09 00 46.8	+0.2
	baz=340						
JYNG	Yonagunijimaku	0.94	79	P	Pb	09 00 46.4	-0.3
YM05	YM05	0.95	340	eP	Pg	09 00 46.1	-0.8
	baz=340						
YOJ	Yonaguni jima	1.00	79	P	Pb	09 00 47.4	-0.3
YOJ				S	Sn	09 01 01.8	-0.4
SSLB	Suanglung	1.01	242	eP	Pb	09 00 47.8	-0.2
	baz=239						
SMLT	Sun Moon Lake	1.02	248	eP	Pb	09 00 47.2	-0.9
	baz=245						
TYC	Yuchr	1.05	250	eP	Pb	09 00 48.3	-0.2
	baz=247						
YULB	Yu-li	1.05	214	eP	Pb	09 00 48.0	-0.6
	baz=211						
TWQ1	Liyutan	1.06	274	eP	Pg	09 00 49.0	0.0
	baz=272						
TWQ1				eS	Sn	09 01 03.3	-0.4
	baz=272						
TWF1	Yuli	1.08	213	eP	Pg	09 00 49.6	+0.2
	baz=210						
IRIF	Iriomote-Funau	1.64	87	P	Pn	09 00 57.6	+0.6

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*ISCJB **04** 09:31:25.0±0.5, 30°.65S±0°.04×177°.76W±0°.09, h100^{km}, mb4.6/21, Error ellipse: s-maj=11.9km s-min=4.5km az=16.3*

*NEIC **04** 09:31:25.7±2.6, 30°.36S×177°.99W, h72^{km}±2^{km}, mb4.8/22, Error ellipse: s-maj=18.9km s-min=7.8km az=100.0*

*IDC **04** 09:31:29.4±0.7, 30°.22S×177°.91W, h98^{km}±5^{km}, mb4.1/8, mb1 4.2/9, mb1mx3.9/29, mbtmp4.4/9, MS3.7/6, Ms1 3.7/6, ms1mx3.2/28, Error ellipse: s-maj=22.3km s-min=18.6km az=144.0*

ISC 04 09:31:27.2±0.4, **30°.45S**±0°.05×**177°.91W**±0°.09, **h100**^{km}, **n134**, σ**2^s.66**/115, **mb4.6**/21, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.18	359	P	Pn	09 31 46.3	-3.3
GLKZ				S	Sn	09 32 00.8	-5.8
RAO	Raoul Island	1.19	360	ePn	Pn	09 31 46.8	-3.0
RAO				eSn	Sn	09 32 00.9	-5.8
RIZ	Raoul Island	1.20	359	P	Pn	09 31 46.6	-3.2
RIZ				S	Sn	09 32 01.5	-5.4
WMGZ	Waiomatatini S	7.96	202	P	Pn	09 33 18.6	-1.5
WMGZ				S	Sn	09 34 46.9	-1.6
HAZ	Te Kaha	8.12	205	P	Pn	09 33 21.4	-0.8
PKGZ	Pakihiroa	8.13	203	P	Pn	09 33 20.2	-2.3
PKGZ				S	Sn	09 34 49.9	-2.9
PUZ	Puketiti	8.24	202	P	Pn	09 33 21.4	-2.5
PUZ				S	Sn	09 34 52.0	-3.4
RUGZ	Raukumara Rang	8.34	205	P	Pn	09 33 23.4	-2.1
TWGZ	Tauwhareparae	8.43	203	P	Pn	09 33 24.2	-2.3
WCZ	Waipu Caves	8.49	228	P	Pn	09 33 32.4	+5.0
WIAZ	Waiheke Island	8.59	221	P	Pn	09 33 29.8	+1.2
OUZ	Omahuta	8.59	234	ePn	Pn	09 33 32.2	+3.5
OUZ	Omahuta	8.59	234	P	Pn	09 33 37.7	+9.1
CNGZ	Carnagh Statio	8.64	201	P	Pn	09 33 27.1	-2.1
OPRZ	Ohinepanea	8.69	210	P	Pn	09 33 28.2	-1.8
TKGZ	Te Karaka	8.71	203	P	Pn	09 33 26.7	-3.6
MWZ	Matawai	8.72	204	P	Pn	09 33 27.9	-2.7
MWZ				S	Sn	09 35 07.6	+0.5
MKAZ	Moumakai	8.79	219	P	Pn	09 33 35.1	+3.6
URZ	Urewera	8.81	206	P	Pn	09 33 29.0	-2.7
	2.7nm,0.3s,baz=281,slow=4.0,SNR=41						
URZ				S	Sn	09 35 06.5	-2.7
	25nm,0.3s,baz=263,slow=5.8,SNR=17						
URZ	Urewera	8.81	206	ePn	Pn	09 33 29.9	-1.8
URZ				eSn	Sn	09 35 08.7	-0.6
URZ	Urewera	8.81	206	P	Pn	09 33 29.6	-2.1
RAGZ	Rawiri	8.91	204	P	Pn	09 33 30.3	-2.7
RIGZ	Rimuhau	8.98	202	P	Pn	09 33 30.6	-3.5
PRGZ	Paritu Road	9.14	201	P	Pn	09 33 33.4	-2.7
RTZ	Ruatahuna	9.18	206	P	Pn	09 33 33.5	-3.2
SNGZ	Shannon Statio	9.19	204	P	Pn	09 33 33.4	-3.5
KNZ	Kokohu	9.29	202	P	Pn	09 33 32.9	-5.3
MHGZ	Mahia Peninsul	9.34	200	P	Pn	09 33 34.8	-4.1
RAHZ	Arahi	9.40	205	P	Pn	09 33 36.3	-3.4
MTHZ	Maungataniwha	9.44	206	P	Pn	09 33 37.0	-3.2
WHHZ	Waihua	9.49	204	P	Pn	09 33 37.4	-3.5
MRHZ	Matea Rd	9.58	208	P	Pn	09 33 39.1	-3.1
NMHZ	Naumai	9.66	205	P	Pn	09 33 40.0	-3.3
ARHZ	Aropaoanui	9.74	204	P	Pn	09 33 41.3	-3.0
BKZ	Black Stump Fm	9.84	206	ePn	Pn	09 33 42.3	-3.4
BKZ				eSn	Sn	09 35 35.7	+1.4
BKZ	Black Stump Fm	9.84	206	P	Pn	09 33 42.5	-3.3
MCHZ	McNeill Hill	10.01	205	P	Pn	09 33 46.1	-1.8
HIZ	Hauiti	10.02	215	ePn	Pn	09 33 47.3	-0.8
HIZ	Hauiti	10.02	215	P	Pn	09 33 51.8	+3.7
KWHZ	Kaweka Forest	10.09	206	P	Pn	09 33 45.5	-3.6
NGZ	Ngauruhoe	10.21	210	P	Pn	09 33 47.9	-3.0
KAHZ	Kahuranaki	10.26	203	P	Pn	09 33 47.4	-3.9
BHHZ	Black Hill Sta	10.29	207	P	Pn	09 33 47.1	-4.7
FWVZ	Far West T-bar	10.30	210	P	Pn	09 33 49.6	-2.5
PXZ	Pawanui	10.47	203	P	Pn	09 33 48.5	-5.8
PNHZ	Pukenui	10.60	205	P	Pn	09 33 51.0	-5.1
PRHZ	Porangahau	10.76	203	P	Pn	09 33 52.0	-6.2
PRWZ	Pori Road	11.25	205	P	Pn	09 34 00.4	-4.4
BFZ	Birch Farm	11.27	203	ePn	Pn	09 34 02.2	-2.8
BFZ	Birch Farm	11.27	203	P	Pn	09 33 58.4	-6.6
TIWZ	Tintock	11.47	204	P	Pn	09 34 01.3	-6.6
MRZ	Mangatainoka R	11.49	206	P	Pn	09 34 00.8	-7.2
SNZO	South Karori	12.38	207	ePn	Pn	09 34 14.2	-5.7
SNZO				eSn	Sn	09 36 28.5	-7.4
TCW	Tory Channel	12.47	208	P	Pn	09 34 13.4	-7.6
THZ	Tophouse	13.51	211	ePn	Pn	09 34 33.6	-1.1
KHZ	Kahutara	13.78	208	ePn	Pn	09 34 34.3	-3.8
LTZ	Lake Taylor	14.61	210	ePn	Pn	09 34 49.3	+0.4
OXZ	Oxford	15.15	209	ePn	Pn	09 34 54.2	-1.6
	26nm,0.5s						
RPZ	Rata Peaks	15.88	210	P	Pn	09 35 04.7	-0.2
	1.5nm,0.3s,baz=274,slow=0.5,SNR=5.1						
RPZ				S	Sn	09 37 46.8	-14
	3.3nm,0.3s,baz=118,slow=18,SNR=8.2						
RPZ	Rata Peaks	15.88	210	ePn	Pn	09 35 03.8	-1.1
	91nm,1.7s						
DZM	Mont Dzumac	16.32	297	eLR	LR	09 38 48.7	
	comp=Z,371nm,28.6s						
DZM	Mont Dzumac	16.32	297	P	P	09 35 10.5	-1.2
	0.1nm,0.3s,baz=127,slow=20,SNR=1.8						
DZM				LR	LR	09 39 19.1	
	comp=Z,107nm,19.6s,baz=76,slow=29						
DZM	Mont Dzumac	16.32	297	eP	P	09 35 10.5	-1.2
	20nm,0.7s						
ODZ	Otahua Downs	17.13	209	eP	P	09 35 21.8	+1.4
	173nm,2.0s						
RAR	Rarotonga	18.71	65	P	P	09 35 36.5	-1.4
	1.2nm,0.3s,baz=238,slow=19,SNR=2.6						
RAR	Rarotonga	18.71	65	eP	P	09 35 37.1	-0.8
	352nm,1.8s						
WHZ	Wether Hill Ro	18.97	212	eP	Pn	09 35 42.2	-0.1
	298nm,1.9s						
ARMA	Armidale	26.23	262	eP	P	09 36 51.6	-1.4
	40nm,1.8s						
TBI	Tubuai	26.29	81	eLR	LR	09 43 28.0	
	comp=Z,321nm,32.5s						
TBI	Tubuai	26.29	81	eT	T	10 04 14.7	
	60nm,0.4s						
EIDS	Eidsvold	27.82	273	eP	P	09 37 05.3	-1.9
	20nm,1.4s						
PAE	Paea	28.74	70	eT	T	10 07 14.0	
	14nm,0.3s						
PPT2	Papeete2	28.78	70	eLR	LR	09 43 48.6	
	comp=Z,166nm,33.0s						
PPT2	Papeete2	28.78	70	eT	T	10 07 18.9	
	8.6nm,0.3s						
TVO	Taravao	28.94	71	eT	T	10 07 30.6	
	3.8nm,0.4s						
TIAR	Tiarei	28.98	70	eT	T	10 07 32.6	
	2.5nm,0.3s						
PMOR	Pomariorio Ree	31.53	68	eT	T	10 10 42.1	
	3.6nm,0.4s						
VAH	Vaihoa	31.62	68	eT	T	10 10 48.8	
	65nm,0.3s						
CTA	Charters Tower	33.88	279	P	P	09 38 03.0	+2.4
	3.8nm,0.4s,baz=111,slow=10,SNR=6.4						
CTAO	Charters Tower	33.88	279	eP	P	09 38 03.2	+2.6
	65nm,2.0s						
STKA	Stephens Creek	34.55	257	P	P	09 38 09.3	+3.1
	8.5nm,0.4s,baz=102,slow=11,SNR=33						
STKA				LR	LR	09 50 08.3	
	comp=Z,87nm,20.0s,baz=30,slow=32						
STKA	Stephens Creek	34.55	257	eP	P	09 38 09.3	+3.1
	2.6nm,0.6s						
BBOO	Buckleboo	39.03	254	eP	P	09 38 46.4	+2.2
	164nm,1.6s						
AS31	Alice Springs	43.19	267	eP	P	09 39 19.2	+0.8
	1.9nm,0.9s						
ASAR	Alice Springs	43.19	267	P	P	09 39 20.2	+1.8
	4.8nm,0.8s,baz=101,slow=6.4,SNR=46						
ASAR				ScP	ScP	09 44 52.9	+4.5
	0.8nm,0.7s,baz=112,slow=4.2,SNR=5.2						
ASAR				LR	LR	09 56 23.0	
	comp=Z,76nm,18.3s,baz=72,slow=35						
WRAB	Tennant Creek	44.17	272	eP	P	09 39 28.3	+1.9
	12nm,0.6s						
JAY	Jayapura	47.99	297	LR	LR	09 56 39.5	
	comp=Z,769nm,19.1s,baz=72,slow=32						
SBA	Scott Base	48.00	184	eP	P	09 39 58.8	+3.3
	9.8nm,1.1s						
VNDA	Vanda	48.06	186	P	P	09 40 00.5	+4.5
	0.5nm,0.5s,baz=41,slow=6.2,SNR=4.1						
VNDA				PcP	PcP	09 41 25.6	+3.5
	1.5nm,1.0s,baz=14,slow=7.9,SNR=3.6						
CASY	Casey	55.14	208	eP	P	09 40 52.0	+3.2
	19nm,0.6s						
BATI	Baumata	57.73	277	LR	LR	10 04 11.3	
	comp=Z,110nm,21.6s,baz=156,slow=34						
QSPA	South Pole Qui	59.66	180	eP	P	09 41 25.7	+4.9
	16nm,1.1s						
MAW	Mawson	72.29	201	P	P	09 42 45.1	+3.7
	3.5nm,0.7s,baz=142,slow=7.9,SNR=9.9						
MAW	Mawson	72.29	201	eP	P	09 42 45.1	+3.7
	1.0nm,0.8s						
SNAA	Sanae	78.11	178	P	P	09 43 18.0	+3.1
SNAA	Sanae	78.11	178	eP	P	09 43 17.9	+3.1
	4.8nm,0.9s						
VNA3	Neumayer Olymp	78.25	176	P	P	09 43 18.5	+2.9
VNA1	Neumayer--Stat	78.92	176	P	P	09 43 22.6	+3.5
PETK	Petropavlovsk-	85.88	346	P	P	09 43 56.9	+1.5
	9.7nm,0.7s,baz=123,slow=6.7,SNR=21						
PEA1	Petropavlovsk-	85.88	346	eP	P	09 43 56.9	+1.5
NV01	Mina Array Sit	88.22	43	eP	P	09 44 09.0	+1.7
NVAR	Mina Array Bea	88.22	43	P	P	09 44 09.0	+1.7
	1.6nm,0.7s,baz=221,slow=7.8,SNR=3.8						
NVAR				pP	pwP	09 44 35.6	-1.4
	2.7nm,0.8s,baz=223,slow=7.8,SNR=11						
Y14A	Wickenburg	88.60	49	eP	P	09 44 12.1	+3.0
	4.7nm,0.8s						
PINE	Pine Mountain	90.39	37	eP	P	09 44 20.0	+2.7
	11nm,1.3s						
U15A	North Rim	90.60	47	eP	P	09 44 17.3	-1.4
	5.5nm,1.0s						
TXAR	Lajitas Array	92.34	57	P	P	09 44 27.9	+1.2
	0.5nm,0.9s,baz=202,slow=6.8,SNR=4.1						
TXAR				pP	pwP	09 44 54.9	-1.8
	0.9nm,0.9s,baz=215,slow=6.3,SNR=6.8						
CMAR	Chiang Mai Arr	93.49	289	LR	LR	10 32 10.0	
	comp=Z,14nm,18.4s,baz=197,slow=39						
JLU	Jordanelle	93.68	44	epP	pP	09 44 51.0	-6.9
TTA	Tatalina	94.69	10	eP	P	09 44 39.2	+2.6
	18nm,0.5s						
MK32	Makanchi Array	117.86	310	ePKPdf	PKiKP	09 50 02.7	+0.9
MKAR	Makanchi Array	117.86	310	PKP	PKiKP	09 50 02.7	+0.9
	1.3nm,0.7s,baz=147,slow=0.6,SNR=10						
KURK	Kurchatov	121.14	314	ePKPdf	PKiKP	09 50 09.1	+1.2
GAR	Garm	124.45	299	ePKPdf	PKiKP	09 50 16.7	+1.6
BRVK	Borovoye	126.56	316	ePKPdf	PKiKP	09 50 19.9	+1.3
GEYT	Alibeck	133.65	295	PKP	PKiKP	09 50 35.0	+1.5
	2.8nm,0.7s,baz=128,slow=2.4,SNR=4.3						
ARA0	ARCESS Array S	138.65	348	ePKPpre	PKPpre	09 50 34.3	
ARA0				ePKPdf	PKiKP	09 50 41.4	-1.2
ARCES	ARCESS Array B	138.65	348	PKhKP	PKPpre	09 50 34.3	
	1.6nm,0.7s,baz=20,slow=3.9,SNR=4.7						
ARCES				PKP	PKiKP	09 50 41.4	-1.2
	1.1nm,0.5s,baz=29,slow=2.8,SNR=9.9						
AKH	Akhalkalaki	145.03	300	ePKPbc	PKiKP	09 50 54.0	-2.8
KBZ	Khabaz	145.20	304	PKPbc	PKiKP	09 50 54.6	-2.2
	3.6nm,0.9s,baz=68,slow=2.0,SNR=5.3						
FIA1	FINESS Array S	145.21	340	ePKPbc	PKiKP	09 50 53.1	-3.2
FIA0	FINESS Array S	145.22	340	ePKPbc	PKiKP	09 50 53.2	-3.0
FINES	FINESS Array B	145.22	340	PKPbc	PKiKP	09 50 53.2	-3.0
	28nm,0.7s,baz=64,slow=4.4,SNR=108						
FINES				pPKPbc	pPKPdf	09 51 19.2	+0.4
	5.9nm,0.5s,baz=57,slow=3.4,SNR=4.5						
NB2	NORSAR Subarra	148.81	351	PKP	PKPab	09 51 03.4	-3.2
	comp=Z,2.8nm,0.6s,baz=11,slow=2.6						
NOA	NORSAR Array B	148.81	351	PKPbc	PKPab	09 51 03.6	-2.9
	comp=Z,4.1nm,0.6s,baz=14,slow=4.2,SNR=21						
NOA				pPKPbc	pPKPab	09 51 29.7	-2.7
	comp=Z,2.1nm,0.6s,baz=15,slow=4.3,SNR=4.2						
AKASG	Malin Array Be	151.38	323	PKPbc	PKiKP	09 51 10.3	+1.0
	comp=Z,15nm,0.8s,baz=48,slow=2.9,SNR=30						
AKBB	Malin Array Si	151.38	323	ePKPbc	PKiKP	09 51 10.6	+1.3
ILGA	Ilgaz	152.38	301	ePKPbc	PKiKP	09 51 14.4	+2.4
BR101	Keskin Array S	152.69	298	ePKPbc	PKiKP	09 51 14.1	+1.5
BRTR	Keskin Array B	152.69	298	PKPbc	PKiKP	09 51 14.1	+1.5
	comp=Z,3.6nm,0.6s,baz=61,slow=0.3,SNR=15						
CLL	Collm	157.63	342	i PKPab	PKPab	09 51 45.1	+1.1
	comp=Z,6.0nm,0.8s						
BRG	Berggiesshubel	157.75	340	ePKP	PKPab	09 51 46.0	+1.5
	comp=Z,5.2nm,0.7s						
GERES	GERESS Array B	159.61	338	PKPab	PKPab	09 51 54.5	+1.8
	comp=Z,0.5nm,0.3s,baz=27,slow=4.5,SNR=6.5						
TORD	Torodi Ar. Bea	162.78	179	PKPab	PKPab	09 52 09.6	+2.3
	comp=Z,2.7nm,0.9s,baz=175,slow=5.5,SNR=8.1						
TORD				pPKPab	pPKPab	09 52 36.4	+3.8
	comp=Z,1.7nm,0.8s,baz=170,slow=3.2,SNR=3.3						
TOA1	Torodi Ar. Sit	162.79	179	ePKPab	PKPab	09 52 09.6	+2.3

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*ISCJB **04** 09:39:11.6±0.5, 38°.84N±0°.03×122°.85W±0°.05, h7^{km}, Error ellipse: s-maj=6.3km s-min=3.3km az=139.7*

*NEIC **04** 09:39:14.2±0.0, 38°.81N×122°.82W, h3^{km}, ML3.2(NCEDC), After NCEDC.*

NEIC Felt at Cloverdale, Kelseyville, Middletown and Rocklin.

*NCEDC **04** 09:39:14.2, 38°.81N×122°.82W, h3^{km}, ML3.2*

*IDC **04** 09:39:15.9±2.7, 38°.89N×122°.68W, h0^{km}, mb1 3.4/5, mb1mx3.3/36, mbtmp3.0/5, ML2.9/5, Error ellipse: s-maj=33.4km s-min=12.0km az=33.0*

*ANF **04** 09:39:17.6±1.9, 39°.32N×122°.30W, h2^{km}±12^{km}, ML2.8/8, Error ellipse: s-maj=16.0km s-min=10.7km az=26.0*

ISC 04 09:39:11.5±0.8, **38°.96N**±0°.03×**122°.75W**±0°.03, **h7**^{km}, **n50**, σ**2^s.49**/50, **Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDXM	Geysers	0.16	194	ePg	Pg	09 39 10.0	-4.8
GDXM				eSg	Sg	09 39 14.9	-2.1
HOPS	Hopland Field	0.26	278	ePg	Pg	09 39 15.0	-1.6
HOPS				eSg	Sg	09 39 20.2	+0.2
MCCM	Marconi Confer	0.82	187	ePg	Pg	09 39 23.1	-4.1
KCPM	Cahto Peak	0.97	318	ePg	Pg	09 39 31.0	+0.8
ORV	Oroville	1.13	58	ePg	Pn	09 39 35.7	+1.9
O02D	Mt. Diablo Mer	1.22	358	P	Pn	09 39 35.6	+0.5
	baz=181						
KMRM	Mail Ridge	1.46	330	ePn	Pg	09 39 40.8	+1.2
O03E	Paynes Creek	1.52	28	P	Pn	09 39 38.0	-1.2
	baz=208						
O03E				S	Sb	09 39 51.5	-8.1
	baz=208						
WDC	Whiskeytown Da	1.63	5	ePn	Pg	09 39 46.2	+3.5
N02D	Trinity Center	2.01	1	P	Pb	09 39 48.1	-0.4
	baz=182						
RUBR	Rubicon Trail	2.02	87	ePn	Pn	09 39 46.3	0.0
BEKR	Beckworth	2.06	63	ePn	Pn	09 39 47.1	+0.4
SAO	San Andreas Ge	2.42	154	ePn	Pn	09 39 51.2	-0.4
VCNR	Virginia City	2.43	81	ePn	Pn	09 39 52.9	+1.0
M02C	Callahan	2.43	358	P	Pb	09 39 55.2	-0.5
	baz=179						
M02C				S	Sn	09 40 21.5	-0.3
	baz=179						
PNTR	Pine Nut	2.45	86	ePn	Pn	09 39 53.2	+1.0
WAKR	Walker	2.63	99	ePn	Pn	09 39 54.9	+0.4
PAHR	Pah Rah Range	2.71	73	ePn	Pb	09 39 58.0	-2.4
YERR	Yerington	2.73	88	ePn	Pn	09 39 56.6	+0.6
YBH	Yreka Blue Hor	2.77	1	Pn	Pg	09 40 03.8	-0.8
	0.7nm,0.3s,baz=177,slow=11,SNR=16						
YBH				Lg	Lg	09 40 47.4	
	baz=150,slow=16,SNR=1.7						
YBH	Yreka Blue Hor	2.77	1	ePn	Pb	09 40 02.2	+0.8
M04C	Macdoel	2.90	14	Pb	Pb	09 40 02.8	-0.9
	baz=194						
MDPB	Devils Postpil	3.17	114	ePn	Pn	09 40 01.8	-0.3
OMMB	Old Mammoth Mi	3.24	113	ePn	Pn	09 40 02.9	-0.2
L02E	Cave Junction	3.26	349	Pb	Pg	09 40 12.2	-1.8
	baz=170						
L04D	Klamath Falls	3.27	6	Pb	Pb	09 40 10.9	+0.9
	baz=187						
MLAC	Mammoth, Mammo	3.35	112	P	Pn	09 40 08.1	+3.6
	baz=292						

MLAC				Sb	Sg	09 40 58.0	-1.1
	baz=292						
MOD	Modoc Plateau	3.48	32	ePn	Pb	09 40 11.8	-1.8
NVAR	Mina Array Bea	3.52	97	Pn	Pn	09 40 10.5	+3.7
	0.3nm,0.3s,baz=271,slow=14,SNR=5.0						
NVAR				Sn	Sb	09 40 53.5	-3.7
	baz=278,slow=19,SNR=2.5						
NVAR				Lg	Lg	09 41 04.3	
	1.1nm,0.3s,baz=277,slow=31,SNR=1.3						
HUMO	Hull Mountain	3.65	358	ePn	Pb	09 40 13.6	-2.8
PAGB	Antelope Grade	3.79	148	ePn	Pn	09 40 12.2	+1.8
K02D	Willamette Mer	3.80	350	Pb	Pb	09 40 19.8	+0.8
	baz=170						
K05A	Summer Lake	4.02	20	ePn	Pb	09 40 18.9	-3.8
TIN	Tinemaha, Big	4.04	117	Pb	Pg	09 40 27.7	-1.3
	baz=297						
TIN				Sb	Sg	09 41 19.2	-2.2
	baz=297						
J05D	Fort Rock, OR	4.47	14	Pb	Pb	09 40 30.8	+0.4
	baz=195						
WVOR	Wild Horse Val	4.67	41	ePn	Pb	09 40 28.6	-5.2
ISA	Isabella, Lake	4.74	133	ePn	Pn	09 40 25.3	+1.9
PINE	Pine Mountain	5.01	15	ePn	Pn	09 40 32.1	+4.7
TPNV	Topopah Spring	5.51	109	ePn	Pn	09 40 37.1	+2.9
R11A	Troy Canyon, C	5.64	94	ePn	Pn	09 40 39.5	+3.5
GSC	Goldstone, Bar	5.99	126	ePn	Pn	09 40 43.1	+2.4
ELK	Elko	6.04	70	Pn	Pn	09 40 47.5	+5.9
	0.2nm,0.3s,baz=253,slow=13,SNR=8.4						
ELK				Sn	Sn	09 41 56.0	+4.9
	0.1nm,0.3s,baz=345,slow=22,SNR=1.2						
ELK				Lg	Lg	09 42 29.2	
	0.1nm,0.3s,baz=106,slow=18,SNR=1.4						
MWC	Mount Wilson	6.05	140	ePn	Pn	09 40 42.5	+0.9
SHPR	Sheep Range	6.49	110	ePn	Pn	09 40 50.9	+3.3
PSUT	Pine Spring	6.96	91	ePn	Pn	09 40 59.2	+5.1
PFO	Pinyon Flats O	7.36	135	ePn	Pn	09 41 01.1	+1.5
MSU	Marysvale	8.27	90	ePn	Pn	09 41 15.3	+3.1
PD31	Pinedale Array	10.69	65	ePn	Pn	09 41 53.8	+8.6
PDAR	Pinedale Array	10.69	65	Pn	Pn	09 41 53.8	+8.6
	0.0nm,0.3s,baz=246,slow=11,SNR=8.7						
TXAR	Lajitas Array	18.45	116	P	Pn	09 43 33.2	+5.3
	0.0nm,0.3s,baz=311,slow=9.5,SNR=5.8						

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*ISCJB **04** 09:48:09.0±0.5, 39°.52N±0°.03×28°.30E±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=3.8km az=168.9*
*ISK **04** 09:48:08.2, 39°.51N×28°.30E, h8^{km}, ML2.4/11*
*DDA **04** 09:48:08.3, 39°.47N×28°.33E, h7^{km}±5^{km}, ML2.7*
ISC 04 09:48:08.7±0.9**, 39°.52N**±0°.03×**28°.30E**±0°.03**, h15**^{km}±7^{km}**, n20, σ0^{s}.54**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DURS	Dursunbey	0.16	57	iP	Pg	09 48 13.1	+0.2
DURS				iS	Sg	09 48 15.3	-0.3
DURS				IAML_P			
	comp=Z,11µm,0.1s						
BALB	Balikesir	0.35	291	PG	Pg	09 48 16.1	+0.2
BALB				SG	Sb	09 48 21.8	-0.2
STEP	BALIKESIR_Sava	0.47	253	iP	Pg	09 48 18.1	-0.1
STEP				iS	Sb	09 48 25.9	+0.3
STEP				IAML_P			
	comp=Z,3µm,0.2s						
GONE	Gonen-Balikesi	0.71	318	PG	Pg	09 48 21.7	-0.9
GONE				SG	Sg	09 48 32.2	+0.1
KCTX	Karacabey (Bur	0.75	3	PG	Pg	09 48 23.1	-0.3
KCTX				SG	Sb	09 48 33.9	+0.4
ULDT	Uludag	0.90	45	iP	Pn	09 48 27.3	+0.4
ULDT				iS	Sg	09 48 38.1	+0.2
ULDT				IAML_P			
	comp=Z,596nm,0.1s						
TVSB	Tavsanli	0.90	94	PG	Pg	09 48 26.2	0.0
MDNY	Mudanya-Bursa	0.96	27	PG	Pg	09 48 27.4	0.0
USAK	Uak-Merkez	0.98	145	iP	Pn	09 48 29.4	+1.5
USAK				iS	Sg	09 48 40.3	-0.1
GDZ	Gediz	1.01	115	iP	Pn	09 48 29.0	+0.6
GDZ				iS	Sn	09 48 42.0	-0.5
GDZ				IAML_P			
	comp=Z,993nm,0.2s						
KULA	Kula-Manisa	1.04	164	PG	Pb	09 48 27.9	-0.6
MANT	Manisa	1.04	169	iP	Pb	09 48 28.2	-0.4
MANT				iS	Sb	09 48 41.1	-1.1
ZEDA	zmir-Bergama	1.10	240	iP	Pg	09 48 30.2	+0.2
ZEDA				iS	Sn	09 48 44.3	-0.2
ZEDA				IAML_P			
	comp=Z,508nm,0.2s						
ARMT	Armutlu	1.13	22	PN	Pg	09 48 30.6	0.0
MRMT	Marmara Adasi	1.21	334	PN	Pg	09 48 31.9	-0.3
YLV	Yalova	1.33	38	PN	Pn	09 48 33.1	+0.3
RKY	Sarkoy-Tekirda	1.45	324	PN	Pb	09 48 35.4	-0.1
KHAL	Karahalli	1.47	141	iP	Pg	09 48 37.2	+0.1
KHAL				iS	Sg	09 48 55.8	-0.4
BORA	Eskisehir	1.70	77	iP	Pg	09 48 41.1	-0.3
BORA				iS	Sn	09 48 50.3	-9.1
BORA				IAML_P			
	comp=Z,925nm,0.1s						
SRCK	Saricakaya, Es	1.86	73	PN	Pn	09 48 41.3	+1.2

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*ISCJB **04** 09:55:36.6±0.7, 2°.55S±0°.08×140°.97E±0°.07, h10^{km}, mb4.2/9, MS3.2/4, Error ellipse: s-maj=12.8km s-min=8.6km az=33.3*
*IDC **04** 09:55:37.8±0.8, 2°.52S×140°.77E, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.8/25, mbtmp3.8/5, MS3.2/6, Ms1 3.2/6, ms1mx2.8/35, Error ellipse: s-maj=25.3km s-min=7.4km az=7.0*
*NEIC **04** 09:55:39.0±2.8, 2°.49S×141°.22E, h24^{km}±7^{km}, mb3.8/8, Error ellipse: s-maj=17.7km s-min=11.5km az=190.0*
NEIC Felt [III] at Jayapura and Sentani, Indonesia.
ISC 04 09:55:37.5±0.7**, 2°.5S**±0°.1×**141°.15E**±0°.06**, h10**^{km}**, n29, σ1^{s}.40**/19**, mb4.0**/9**, MS3.2**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.45	266	Pn	Pg	09 55 46.5	+0.2
	643nm,0.3s,baz=98,slow=17,SNR=1898						
JAY				Sn	Sg	09 55 51.2	-1.1
	2µm,0.3s,baz=244,slow=24,SNR=35						
MANU	Manus Island	6.22	86	ePn	Pn	09 57 07.6	-1.9
FAKI	Fak Fak	8.91	267	ePn	Pn	09 57 47.4	+1.0
PMG	Port Moresby	9.11	139	LR	LR	10 02 23.6	
	comp=Z,302nm,18.3s,baz=285,slow=44						
COEN	Coen	11.57	170	ePn	Pn	09 58 25.6	+2.7
MTN	Manton Dam	14.29	223	ePn	Pn	09 58 57.4	-2.7
DAV	Davao City (W)	18.21	302	LR	LR	10 06 59.4	
	comp=Z,38nm,19.2s,baz=120,slow=38						
SOEI	Soe	18.27	246	eP	Pn	09 59 50.3	-1.1
	29nm,0.5s						
WRAB	Tennant Creek	18.57	200	eP	P	09 59 54.6	-0.2
	6.0nm,0.8s						
AS31	Alice Springs	22.20	198	eP	P	10 00 33.7	-0.5
	1.5nm,0.7s						
ASAR	Alice Springs	22.20	198	P	P	10 00 33.4	-0.8
	3.6nm,0.7s,baz=30,slow=10,SNR=51						
EIDS	Eidsvold	24.68	158	eP	P	10 00 58.5	-0.3
	19nm,1.1s						
STKA	Stephens Creek	29.24	179	LR	LR	10 15 43.3	
	comp=Z,84nm,19.2s,baz=27,slow=41						
FORT	Forrest	30.75	202	eP	P	10 01 53.6	+0.5
	46nm,0.9s						
PINNC	Pines Island,	32.42	130	eP	P	10 02 06.4	-1.5
	22nm,1.0s						
H11S3	WAKE ISLAND Hy	32.66	49	T	T	10 36 45.4	
	baz=232,slow=76,SNR=686						
H11S2	WAKE ISLAND Hy	32.67	49	T	T	10 36 46.2	
	baz=232,slow=76,SNR=626						
H11S1	WAKE ISLAND Hy	32.67	49	T	T	10 36 46.8	
	baz=232,slow=76,SNR=498						
H11N1	WAKE ISLAND Hy	33.55	48	T	T	10 37 53.5	
	baz=229,slow=76,SNR=33						
H11N2	WAKE ISLAND Hy	33.56	48	T	T	10 37 58.7	
	baz=229,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	33.56	48	T	T	10 37 59.1	
	baz=229,slow=76,SNR=21						
MJAR	Matsushiro Arr	38.92	356	LR	LR	10 17 32.2	
	comp=Z,24nm,20.7s,baz=130,slow=34						
CMAR	Chiang Mai Arr	46.46	298	P	P	10 04 04.3	-0.8
	0.7nm,0.4s,baz=119,slow=7.7,SNR=2.8						
CMAR				LR	LR	10 22 34.6	
	comp=Z,12nm,20.4s,baz=100,slow=35						
MK32	Makanchi Array	71.12	322	eP	P	10 06 56.9	+0.6
MKAR	Makanchi Array	71.12	322	P	P	10 06 56.9	+0.6
	0.2nm,0.4s,baz=116,slow=8.8,SNR=2.5						
ZALV	Zalesovo Beam	72.98	329	LR	LR	10 39 07.0	
	comp=Z,22nm,20.1s,baz=70,slow=36						
VNDA	Vanda	75.80	175	P	P	10 07 24.6	+1.4
	1.0nm,0.7s,baz=325,slow=7.6,SNR=9.3						
ILAR	Eielson Array	84.62	24	P	P	10 08 12.7	+1.7
	0.7nm,0.9s,baz=252,slow=5.6,SNR=5.3						
LPAZ	La Paz	145.57	124	PKPbc	PKiKP	10 15 21.8	-0.2
	0.8nm,0.7s,baz=270,slow=4.0,SNR=4.4						

ATH 04 09:57:25.8, 40°.12N×21°.78E, h19^{km}±6^{km}**, ML1.3**/3**, Error ellipse: s-maj=6.5km s-min=1.4km az=339.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	Kozani	0.19	358	P	Pg	09 57 30.9	+0.2
KZN				S	Sg	09 57 33.7	-0.3
KZN				AML	AML	09 57 34.1	
	comp=E,554µm,0.3s						
KZN				AML	AML	09 57 34.2	
	comp=N,172µm,0.1s						
KPRO	Kipourio	0.36	243	P	Pg	09 57 32.9	-0.6
LIT	Litokhoron	0.55	92	P	Pb	09 57 36.3	-0.4
LIT				AML	AML	09 57 46.5	
	comp=N,102µm,0.2s						
LIT				AML	AML	09 57 46.8	
	comp=E,127µm,0.2s						
THL	Klokotos Trika	0.58	162	P	Pg	09 57 37.6	+0.2
THL				S	Sg	09 57 45.2	0.0
THL				AML	AML	09 57 47.8	
	comp=E,46µm,0.3s						
THL				AML	AML	09 57 51.2	
	comp=N,30µm,0.4s						
NEST	Nestorio	0.63	298	P	Pb	09 57 37.3	-0.9

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*ISK **04** 10:05:50.7, 38°.26N×39°.69E, h5^{km}, ML2.0/3*
*DDA **04** 10:05:51.7, 38°.20N×39°.62E, h7^{km}±3^{km}, ML2.5*
*ISCJB **04** 10:05:52.6±0.7, 38°.22N±0°.05×39°.66E±0°.05, h7^{km}, Error ellipse: s-maj=7.3km s-min=5.0km az=24.8*
ISC 04 10:05:51.3±1.0**, 38°.24N**±0°.06×**39°.67E**±0°.04**, h7**^{km}**, n8, σ0^{s}.58**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVRC	Sivrice-ELAZID	0.32	295	PG	Pg	10 05 57.9	+0.3
SVRC				SG	Sb	10 06 04.3	-0.6
DIYA	Diyarbakir	0.48	132	iP	Pb	10 06 01.7	-0.4
DIYA				IAML_P			
	comp=Z,2µm,0.2s						
HANI	Diyarbakir_Han	0.60	73	iP	Pn	10 06 05.7	-0.6
HANI				IAML_P			
	comp=Z,488nm,0.2s						
MAZI	Mazidag	0.99	142	PG	Pg	10 06 10.5	+0.1
MAZI				SG	Sn	10 06 26.3	+0.1
URFA	Urfa	1.05	220	PG	Pb	10 06 11.8	0.0
URFA				SG	Sn	10 06 28.1	+0.7
MARD	Mardin	1.28	136	iP	Pn	10 06 15.7	-0.1
ATAB	Bozova	1.33	235	iP	Sn	10 06 34.9	+0.5
MUSM	Mu-Merkez	1.52	71	iP	Pg	10 06 21.5	+1.0
MUSM				IAML_P			
	comp=Z,555nm,0.3s						

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*NSSC **04** 10:11:44.1±0.3, 33°.35N×35°.56E, h8^{km}±4^{km}, ML1.5*
*GRAL **04** 10:11:46.2±0.3, 33°.49N×35°.70E, h9^{km}±1^{km}, MD2.5*
ISC 04 10:11:46.5±1.9**, 33°.5N**±0°.1×**35°.7E**±0°.1**, h9**^{km}±12^{km}**, n7, σ0^{s}.61**/12**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRWL	Qaraoun	0.03	297	eP	Pg	10 11 48.1	-0.2
QRWL				eS	Sg	10 11 49.6	0.0
RCY	Rachaya	0.11	110	eP	Pg	10 11 48.8	-0.3
DQRL	Deir Qamar	0.21	325	eP	Pg	10 11 50.9	0.0
DQRL				eS	Sg	10 11 54.3	+0.5
BRBR	Barbar	0.23	122	eP	Pg	10 11 50.6	-0.6
BRBR				eS	Sg	10 11 55.5	+1.0
BRBR				AML	AML	10 11 57.4	
	comp=N,34nm,0.4s						
BRBR				AML	AML	10 12 00.4	
	comp=E,24nm,0.4s						
QASN	Qassioun	0.47	90	eP	Pb	10 11 56.5	-0.4
QASN				eS	Sb	10 12 04.9	+0.9
QASN				AML	AML	10 12 09.4	
	comp=E,81nm,0.6s						
QASN				AML	AML	10 12 10.9	
	comp=N,64nm,0.3s						
TOTH	TOTAH	0.62	106	eP	Pg	10 11 58.5	+0.1
TOTH				eS	Sb	10 12 08.1	-0.2
TOTH				AML	AML	10 12 12.0	
	comp=N,12nm,0.7s						
TOTH				AML	AML	10 12 16.2	
	comp=E,13nm,0.4s						
HWQ	Hawqa	0.77	14	eP	Pg	10 12 00.8	-0.5

IDC 04 10:15:04.5±4.4**, 9°.07N×124°.14E, h542**^{km}±60^{km}**, mb3.2**/4**, mb1 3.5**/5**, mb1mx2.8**/58**, mbtmp4.3**/5**, Error ellipse: s-maj=38.4km s-min=15.6km az=79.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	19.16	181	P	P	10 18 52.9	-0.6
	6.9nm,0.3s,baz=339,slow=18,SNR=3.5						
ASAR	Alice Springs	33.91	164	P	P	10 21 02.9	0.0
	4.0nm,0.3s,baz=338,slow=7.1,SNR=134						
ASAR				PcP	PcP	10 23 25.0	-0.7
	0.2nm,0.4s,baz=344,slow=3.1,SNR=3.3						
STKA	Stephens Creek	44.01	158	P	P	10 22 24.4	+0.3
	2.7nm,0.5s,baz=342,slow=9.7,SNR=6.8						
PETK	Petropavlovsk-	51.60	25	P	P	10 23 20.3	-0.3
	0.5nm,0.5s,baz=193,slow=5.2,SNR=4.5						
MKAR	Makanchi Array	51.73	324	P	P	10 23 21.8	+0.1
	0.9nm,0.4s,baz=123,slow=6.8,SNR=7.5						

UCR 04 10:16:26.2±1.0**, 9°.01N×82°.90W, h1**^{km}±4^{km}**, MW2.7, 2C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDSV	San Vito	0.20	200	⇑iP	Pg	10 16 31.2	+1.1
EDSV				eS	Sg	10 16 34.5	+1.9
EDSV	San Vito	0.20	200	⇑iP	Pg	10 16 31.6	+1.5
EDSV				eS	Sg	10 16 34.5	+1.9
BRU2	Volcan	0.30	136	eP	Pg	10 16 33.1	+1.2
BRU2				eS	Sb	10 16 38.8	-1.2
BRU2	Volcan	0.30	136	eP	Pg	10 16 33.1	+1.2
BRU2				eS	Sb	10 16 38.8	-1.2
DRK0	Durika	0.42	307	eP	Pg	10 16 34.8	+0.5
DRK0				eS	Sb	10 16 42.5	-1.1
DRK0	Durika	0.42	307	eP	Pb	10 16 35.8	-0.8
DRK0				eS	Sb	10 16 42.5	-1.1
EDLM	Las Mercedes	0.73	292	eP	Pg	10 16 40.0	-0.2
EDLM				eS	Sb	10 16 52.3	-0.1
LCR2	La Lucha 2	1.31	304	eP	Pg	10 16 51.4	+0.1

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*NNC **04** 10:20:42.0±4.4, 41°.03N×69°.56E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=30.8km s-min=16.8km az=26.0*
*SOME **04** 10:20:44.2, 40°.88N×69°.78E, h20^{km}*
ISC 04 10:20:43.3±3.5**, 40°.9N**±0°.2×**69°.6E**±0°.2**, h10**^{km}**, n10, σ1^{s}.49**/13**, 4C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	1.33	14	eP	Pn	10 21 07.8	-0.3
	5.8nm,0.3s						
IUG				eS	Sb	10 21 22.1	-3.4
	96nm,0.4s						
KK31	Karatay Array	2.34	17	⇑Pg	Pn	10 21 23.2	+1.2
	4.6nm,0.5s,baz=202,slow=16,SNR=52						
KK31				⇑Lg	Lg	10 21 52.7	
	27nm,0.6s,baz=204,slow=26,SNR=23						
MRKS	Merke	3.31	54	Pg	Pb	10 21 42.1	-0.1
	4.3nm,0.4s						
MRKS				Lg	Lg	10 22 22.0	
	10nm,0.4s						
MRKS	Merke	3.31	54	eP	Pb	10 21 42.1	-0.1
	4.3nm,0.4s						
MRKS				⇓iS	Sb	10 22 22.0	-0.6
	10nm,0.5s						
AAK	Ala-Archa	4.08	63	⇓Pg	Pb	10 21 54.5	-0.8
	2.8nm,0.8s						
AAK				⇓Lg	Lg	10 22 51.1	
	5.9nm,0.8s						
SGDS	Sogindy	4.55	54	Pg	Pb	10 22 02.8	-0.6
	5.6nm,0.8s						
SGDS				Lg	Lg	10 22 59.9	
	3.5nm,0.5s						
TKM2	Tokmak 2	4.94	63	⇑Pg	Pb	10 22 09.6	-0.4
	2.6nm,0.9s						
TKM2				⇑Lg	Lg	10 23 19.0	
	11nm,1.1s						
DGS	Degeres	5.18	61	Pg	Pb	10 22 14.1	0.0
	2.3nm,0.5s						
DGS				Lg	Lg	10 23 19.2	
	6.9nm,0.6s						
BTLS	Baital	5.30	37	Pg	Pb	10 22 16.8	+0.7
	2.6nm,0.4s						
BTLS				Lg	Lg	10 23 22.1	
	3.1nm,0.6s						
BTLS	Baital	5.30	37	eP	Pb	10 22 17.4	+1.3
	2.6nm,0.4s						
BTLS				eS	Sb	10 23 22.1	+2.3
	3.1nm,0.6s						

IDC 04 10:22:38.3±6.6**, 25°.42S×177°.68W, h0**^{km}**, mb3.6**/1**, mb1 3.8**/1**, mb1mx3.3**/45**, mbtmp3.6**/1**, Error ellipse: s-maj=412.9km s-min=53.1km az=156.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.89	262	P	P	10 30 46.7	-0.2
	0.5nm,0.5s,baz=96,slow=7.1,SNR=14						
NOA	NORSAR Array B	143.88	353	PKP	PKPbc	10 42 13.7	+0.9
	0.1nm,0.3s,baz=5.7,slow=2.7,SNR=3.8						
HFS	Hagfors	144.42	350	PKP	PKPdf	10 42 15.3	-0.7
	2.0nm,0.8s,baz=48,slow=2.1,SNR=5.2						
AKASG	Malin Array Be	147.38	328	PKPbc	PKPbc	10 42 23.6	-0.1
	0.6nm,0.5s,baz=43,slow=3.6,SNR=1.8						
BRTR	Keskin Array B	150.18	306	PKPbc	PKPbc	10 42 31.0	-0.5
	0.4nm,0.5s,baz=75,slow=4.0,SNR=1.7						

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*IDC **04** 10:27:25.1±1.4, 13°.42N×88°.61W, h0^{km}, mb3.8/3, mb1 4.2/6, mb1mx3.7/41, mbtmp3.9/6, ML3.6/3, MS3.5/2, Ms1 3.5/2, ms1mx2.7/28, Error ellipse: s-maj=78.1km s-min=23.6km az=42.0*
*ISCJB **04** 10:27:31.5±0.8, 13°.00N±0°.06×89°.57W±0°.04, h44^{km}±9^{km}, mb4.0/5, MS3.7/1, Error ellipse: s-maj=10.2km s-min=4.8km az=28.4*
*SNET **04** 10:27:31.8±1.1, 13°.08N×89°.60W, h41^{km}±18^{km}, ML4.2*
*NEIC **04** 10:27:32.2±2.8, 12°.92N×89°.51W, h52^{km}±14^{km}, mb4.2/6, MD4.2(SNET), Error ellipse: s-maj=12.2km s-min=7.9km az=196.0*
NEIC Felt [II] at San Salvador.
*GCG **04** 10:27:32.5±0.7, 13°.10N×89°.73W, h89^{km}±42^{km}, MD4.1*
ISC 04 10:27:34.1±1.2**, 13°.17N**±0°.08×**89°.51W**±0°.05**, h52**^{km}±10^{km}**, n58, σ1^{s}.73**/63**, mb4.1**/5**, 8D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNET	Serv Nac Est T	0.58	28	⇓iP	Pn	10 27 45.6	-1.1
SNET				eS	Sn	10 27 56.0	+0.3
SNET				IAML		10 27 58.2	
	comp=Z,10µm,0.3s						
UEES	Universidad Ev	0.60	26	eS	Sn	10 27 56.5	+0.2
UEES				IAML		10 27 57.2	
	comp=Z,10µm,0.5s						
OPAM	Oficina de Pla	0.62	29	⇓iP	Pn	10 27 46.3	-0.8
OPAM				eS	Sn	10 27 57.1	+0.6
OPAM				IAML		10 27 58.5	
	comp=Z,11µm,0.2s						
UESS	Universidad de	0.62	29	IAML		10 27 46.6	
	comp=Z,14µm,0.2s						
UDBS	Universidad Do	0.64	32	eP	Pn	10 27 46.5	-0.9
UDBS				eS	Sn	10 27 57.7	+0.6
CEVE	Cerro Verde	0.67	350	⇓iP	Pn	10 27 46.4	-1.5
CEVE				eS	Sn	10 27 58.8	+1.1
CEVE				IAML		10 27 59.2	
	comp=Z,18µm,0.3s						
SBLS	San Blas	0.68	351	⇓iP	Pn	10 27 46.5	-1.5
LFU	La Fuente	0.69	34	⇓iP	Pn	10 27 47.5	-0.5
SNJE	San Jose	0.70	352	⇓iP	Pn	10 27 46.8	-1.4
RTR	El Retiro	0.74	350	⇓iP	Pn	10 27 47.2	-1.4
PAVA	Las Pavas	0.78	46	iP	Pn	10 27 49.0	-0.1
PAVA				eS	Sn	10 28 02.0	+2.0
PAVA				IAML		10 28 03.5	
	comp=Z,12µm,0.3s						
SNVI	San Vicente	0.79	56	eP	Pn	10 27 48.5	-0.8
UNIC	Universidad Ca	0.81	357	⇓iP	Pn	10 27 48.4	-1.2
UNIC				eS	Sn	10 28 01.6	+0.7
UESV	Universidad de	0.84	56	eP	Pn	10 27 49.1	+0.7
UESV				eS	Sn	10 28 02.0	+3.1
UESV				IAML		10 28 07.4	
	comp=Z,3µm,0.6s						
TECA	Tecapa	1.03	72	eP	Pn	10 27 51.6	-1.0
LLGN	La Laguna	1.13	29	eP	Pn	10 27 53.5	-0.4
VICT	Victoria	1.16	47	iP	Pn	10 27 54.1	0.0
LCY	Lacayo	1.21	78	eP	Pn	10 27 54.4	-0.5
VSM	San Miguel	1.23	78	eP	Pn	10 27 54.7	-0.5
PCG	Pacaya	1.62	319	eP	Pn	10 27 59.5	-1.0
NBG	Las Nubes	1.63	330	eP	Pn	10 28 00.8	+0.1
NBG				eS	Sn	10 28 22.5	+1.8
FUG	Fuego 3	1.81	315	eP	Pn	10 28 01.6	-1.6
MRL	Marmol	1.91	355	eP	Pn	10 28 05.1	+0.6
CSGN	Cosiguina Volc	1.91	96	ePn	Pn	10 28 03.3	-1.0
APG	El Apazote	2.05	333	Pn	Pn	10 28 05.5	-0.9
	comp=Z,12nm,0.3s,baz=133,slow=12,SNR=56						
APG				Sn	Sn	10 28 34.0	+3.1
	comp=Z,69nm,0.3s,baz=61,slow=14,SNR=10						
TGUH	Tegucigalpa,Un	2.35	68	ePn	Pn	10 28 10.1	-0.3
STG3	Santiaguito 3,	2.52	308	eP	Pn	10 28 11.4	-1.4
STG3				eS	Sn	10 28 40.7	-1.7
ESTN	Estel	3.06	91	ePn	Pn	10 28 19.4	-0.8
CCIG	Comitan	4.00	321	ePn	Pn	10 28 34.0	+0.8
ACON	Acoyapa	4.40	105	ePn	Pn	10 28 35.2	-3.2
HDC	Heredia	6.15	120	ePn	Pn	10 28 56.4	-6.3
CMIG	Matias Romero	6.49	308	Pn	Pn	10 29 08.0	+0.8
	comp=Z,2.6nm,0.3s,baz=128,slow=9.9,SNR=39						
CMIG				Sn	Sn	10 30 26.2	+6.3
	comp=Z,5.0nm,0.3s,baz=213,slow=8.1,SNR=5.6						
CMIG				LR	LR	10 32 04.4	
	comp=Z,167nm,19.9s,baz=122,slow=40						
TEIG	Tepich	7.12	9	ePn	Pn	10 29 16.9	+1.2
GUY2C	Guyana, Caldas	16.03	118	eP	Pn	10 31 17.3	+0.6
BBAC	Balboa, Cauca	16.43	131	eP	P	10 31 27.9	+4.3
POPC	Popayan, Colom	16.51	129	eP	P	10 31 25.8	+1.3
ORTC	Ortega, Tolima	16.83	122	eP	P	10 31 29.5	+1.7
SOTA	Rioblanco	16.83	130	eP	P	10 31 31.1	+2.9
MARP	Paez Belalcaza	16.88	126	eP	P	10 31 30.9	+2.3
PRAC	Prado	17.23	122	eP	P	10 31 56.0	+24
CAPV	Capacho	17.70	106	eP	Pn	10 31 36.3	-1.1
CHIC	Chingaza	17.73	117	eP	Pn	10 31 30.3	-7.6
MACC	Macarena, Meta	18.98	124	eP	Pn	10 31 52.9	+0.2
SDV	Santo Domingo	19.01	101	eP	P	10 31 49.9	-2.1
TXAR	Lajitas Array	20.77	323	P	P	10 32 11.9	+1.0
	comp=Z,1.7nm,0.6s,baz=144,slow=11,SNR=37						
TXAR				PcP	PcP	10 36 18.8	+0.1
	comp=Z,0.2nm,0.5s,baz=139,slow=4.8,SNR=3.2						
TX31	Lajitas Ar. Si	20.77	323	eP	Pn	10 32 12.3	-1.5
	comp=Z,1.6nm,0.6s						
WMOK	Wichita Mounta	23.06	340	eP	P	10 32 45.0	+10
	comp=Z,3.8nm,1.0s						
PBMO	Poplar Bluff	23.52	358	eP	P	10 32 39.3	-0.2
	comp=Z,4.1nm,0.6s						
PCRV	Puerto La Cruz	24.54	94	LR	LR	10 43 29.4	
	comp=Z,245nm,20.5s,slow=41						
COWI	Conover	32.83	0	eP	P	10 34 00.5	-2.2
	comp=Z,4.0nm,0.6s						
PDAR	Pinedale Array	34.21	333	PcP	PcP	10 36 48.8	-2.1
	comp=Z,0.2nm,0.5s,baz=123,slow=6.7,SNR=3.6						
NV01	Mina Array Sit	35.85	320	eP	P	10 34 30.1	+0.9
NVAR	Mina Array Bea	35.85	320	P	P	10 34 30.1	+0.9
	comp=Z,0.9nm,0.7s,baz=126,slow=9.3,SNR=8.1						
NVAR				PcP	PcP	10 36 55.1	-0.7
	comp=Z,0.5nm,0.7s,baz=145,slow=3.3,SNR=3.4						
PB04	IPOC Station P	40.06	152	epP	pP	10 35 14.2	-4.3
YKA	Yellowknife Ar	52.41	346	P	P	10 36 38.6	-2.3
	comp=Z,1.0nm,0.4s,baz=132,slow=7.7,SNR=9.9						
YKB5	Yellowknife Ar	52.41	346	eP	P	10 36 38.6	-2.3
ASAR	Alice Springs	137.66	249	PKP	PKPdf	10 46 53.1	-0.2
	comp=Z,0.3nm,0.9s,baz=108,slow=3.0,SNR=2.9						

CMAR	**Chiang Mai Arr**	**147.49**	**345**	PKPbc	**PKPdf**	**10 47 11.8**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=341,slow=2.6,SNR=5.5						

UCR 04 10:28:17.2±1.0, 9°.75N×85°.91W, h10^{km}±8^{km}, MW3.0, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	**Las Juntas de**	**1.08**	**60**	Pn	Pb	10 28 36.7	-1.3
	1.5nm,0.3s,baz=294,slow=18,SNR=10.0						
JTS				Lg	Lg	10 30 05.0	
	0.9nm,0.3s,baz=38,slow=23,SNR=3.0						
JTS	**Las Juntas de**	**1.08**	**60**	*e*P	Pb	10 28 37.0	-1.1
JTS				*e*		10 28 37.2	
JTS	**Las Juntas de**	**1.08**	**60**	*e*P	Pb	10 28 36.5	-1.6
BUEV	**Buena Vista**	**1.15**	**25**	*e*P	Pb	10 28 37.8	-1.5
BUEV				*e*S	Sb	10 28 53.1	-1.2
CUI	**Cuipilapa**	**1.16**	**39**	*e*P	Pb	10 28 38.8	-0.7
CUI				*e*S	Sn	10 28 55.3	-0.3
GB1A	**Borinquen Arri**	**1.18**	**25**	*e*P	Pb	10 28 38.0	-1.7
GB1A				*e*S	Sb	10 28 53.5	-1.5
MESS	**Mesas**	**1.21**	**35**	*e*P	Pn	10 28 38.6	-1.6
MESS				*e*S	Sn	10 28 56.7	0.0
ARE1	**Arenal 1**	**1.37**	**59**	*e*P	Pn	10 28 42.0	-0.4
CEDE	**Laguna Cedeo**	**1.40**	**58**	*e*P	Pn	10 28 42.6	-0.2

MEX 04 10:34:47.4±0.5, 17°.73N×97°.05W, h62^{km}±5^{km}, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**0.72**	**155**	*e*P	Pn	10 35 00.5	-1.8
VHO				*e*S	Sn	10 35 11.7	-1.5
TLIG	**Tlapa**	**1.45**	**264**	*e*P	Pn	10 35 10.2	-1.4
TLIG				*e*S	Sn	10 35 28.7	-1.2
CMIG	**Matias Romero**	**2.17**	**107**	*i* P	Pn	10 35 19.7	-1.5
CMIG				*e*S	Sn	10 35 44.9	-2.1

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*IDC **04** 10:35:05.4±1.1, 6°.15N×127°.91E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.5/33, mbtmp3.8/4, MS2.2/1, Ms1 2.2/1, ms1mx1.9/38, Error ellipse: s-maj=95.0km s-min=23.1km az=75.0*

*ISCJB **04** 10:35:08.6±0.9, 6°.1N±0°.1×127°.72E±0°.07, h33^{km}, mb3.7/4, Error ellipse: s-maj=16.2km s-min=8.3km az=19.9*

ISC 04 10:35:10.5±0.9, 6°.2N±0°.1×127°.70E±0°.10, h35^{km}, n10, σ0^{s}88/12, mb3.7/4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.64**	**299**	*e*P	**Pn**	**10 35 36.3**	**-0.6**
MATI				*e*S	**Sn**	**10 35 55.8**	**-0.9**
DDMP	**Don Marcelino,**	**1.98**	**269**	*e*P	**Pn**	**10 35 41.9**	**+0.4**
DDMP				*e*S	**Sn**	**10 36 05.0**	**0.0**
DAV	**Davao City (W)**	**2.30**	**294**	LR	LR	10 37 42.8	
	comp=Z,51nm,19.2s,baz=118,slow=63						
KCP	**Kidapawan**	**2.73**	**288**	⇓*i*P	Pn	10 36 02.9	+11
SKMP	**Bagumbayan, Su**	**3.16**	**277**	*e*P	**Pn**	**10 35 58.0**	**+0.2**
SKMP				*e*S	**Sn**	**10 36 33.8**	**-0.5**
ASAR	**Alice Springs**	**30.24**	**169**	P	**P**	**10 41 18.0**	**-0.3**
	0.5nm,0.3s,baz=354,slow=7.2,SNR=15						
ASAR				PcP	**PcP**	**10 44 19.0**	**+0.5**
	0.2nm,0.5s,baz=340,slow=2.2,SNR=1.8						
STKA	**Stephens Creek**	**40.07**	**161**	P	**P**	**10 42 42.1**	**-0.5**
	4.0nm,1.0s,baz=325,slow=7.4,SNR=4.0						
KLR	**Kul'dur**	**43.07**	**4**	P	**P**	**10 43 06.8**	**-0.2**
	0.4nm,0.4s,baz=198,slow=5.4,SNR=2.1						
MKAR	**Makanchi Array**	**56.16**	**324**	P	**P**	**10 44 48.7**	**+1.9**
	0.4nm,0.6s,baz=115,slow=8.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**123.05**	**290**	PKP	**PKPdf**	**10 54 03.2**	**-1.1**
	0.6nm,1.0s,baz=80,slow=4.2,SNR=2.4						

IDC 04 10:54:28.2±3.5, 25°.52S×179°.41W, h0^{km}, mb3.8/4, mb1 4.1/4, mb1mx3.7/21, mbtmp3.8/4, Error ellipse: s-maj=251.2km s-min=29.3km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**32.05**	**273**	P	P	11 00 57.8	+0.9
	1.5nm,0.5s,baz=78,slow=9.3,SNR=1.4						
ASAR	**Alice Springs**	**42.32**	**262**	P	P	11 02 23.5	-0.7
	0.6nm,0.5s,baz=92,slow=7.5,SNR=13						
NVAR	**Mina Array Bea**	**85.55**	**44**	P	P	11 07 08.2	-0.4
	0.3nm,0.7s,baz=222,slow=9.3,SNR=4.0						
TXAR	**Lajitas Array**	**90.83**	**58**	P	P	11 07 34.3	+0.4
	0.3nm,0.9s,baz=198,slow=5.7,SNR=3.6						

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*NIED **04** 11:08:00, 46°.80N×142°.10E, h14^{km}, Mw4.8 Best double couple: M$_0$1.62000×10^{16} NP1:φ$_s$77.00000°, δ62.00000°, λ165.00000°. NP2:φ$_s$174.00000°, δ77.00000°, λ29.00000°.*

*BJI **04** 11:08:26.7±0.0, 46°.86N×141°.83E, h10^{km}, mb4.6/43, mB4.9/38, Ms5.1/46, Ms7 5.0/41*

*JMA **04** 11:08:26.7±0.3, 46°.90N×141°.69E, h14^{km}, M5.1*

JMA Felt I J1.

*SKHL **04** 11:08:26.5±0.4, 46°.68N×141°.67E, h10^{km}, mb5.8/1, Ms4.3/2, msh5.2/3*

SKHL Felt (II) at Korsakov, Dachnoe. Felt (II-III) at Aniva, Troitskoye, Sanatornyi, Yuzhno-Sakhalinsk. Felt (III-IV) at Kholmsk, Kostromskoye; (III) at Chaplanovo. Felt (IV-V) at Nevel'sk, Gornozavodsk, Shebunino; (VI) at Pravda.

*MOS **04** 11:08:27.9±1.0, 46°.79N×141°.80E, h14^{km}, mb4.8/39, MS4.7/12, Error ellipse: s-maj=7.3km s-min=4.8km az=96.5*

MOS Felt (IV-V) at Gornozavodsk, Nevel'sk; (IV) at Shebunino; (III-IV) at Kholmsk; (III) at Aniva; (II-III) at Sanatornoye, Yuzhno-Sakhalinsk; (II) at Korsakov.

*IDC **04** 11:08:27.3±0.5, 46°.78N×141°.88E, h0^{km}, mb4.2/26, mb1 4.3/31, mb1mx4.3/48, mbtmp4.2/31, ML3.5/5, MS4.2/26, Ms1 4.2/26, ms1mx4.2/32, Error ellipse: s-maj=13.0km s-min=11.4km az=96.0*

*ISCJB **04** 11:08:28.1±0.6, 46°.78N±0°.01×141°.83E±0°.03, h14^{km}±3^{km}, mb4.5/120, MS4.5/41, Error ellipse: s-maj=3.1km s-min=2.5km az=8.2*

*NEIC **04** 11:08:29.0±0.9, 46°.80N×141°.77E, h10^{km}±2^{km}, mb4.7/68, Error ellipse: s-maj=7.7km s-min=5.0km az=167.0*

NEIC Recorded [1 JMA] in northern Hokkaido.

*GCMT **04** 11:08:31.0±0.2, 46°.83N±0°.02×141°.62E±0°.02, h18^{km}, MW5.0/96, Moment Tensor Solution. s55,c62; s96,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.27±.15; M$_{θθ}$-0.18±.09; M$_{φφ}$-3.08±.10; M$_{rθ}$-1.28±.26; M$_{θφ}$0.30±.07; M$_{φr}$-3.19±.25; Best double couple: M$_0$4.67100×10^{16} NP1:φ$_s$193.00000°, δ69.00000°, λ103.00000°. NP2: φ$_s$341.00000°, δ24.00000°, λ60.00000°. Principal axes: T 4.9250, Plg64.0000°, Azm124.0000°; N -0.5030, Plg12.0000°, Azm8.0000°; P -4.4170, Plg23.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 11:08:30.4±0.8, 46°.72N±0°.02×141°.84E±0°.03, h17^{km}±4^{km}, n249, σ1^{s}77/290, mb4.6/129, MS4.5/42, 15C-15D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**0.67**	**69**	*e*Pg	**Pg**	**11 08 42.2**	**-1.4**
YSS				*e*Sg	**Sg**	**11 08 51.5**	**-0.9**
YSS	**Yuzh-Sakhalins**	**0.67**	**69**	⇑*i*PN	**Pg**	**11 08 42.1**	**-1.4**
YSS				*i*		11 08 52.7	
YSS				pmax	pmax		
	comp=Z,380nm,0.4s						
YSS				smax	smax		
	comp=N,16µm,0.2s						
YSS	**Yuzh-Sakhalins**	**0.67**	**69**	⇑*i*Pg	**Pg**	**11 08 42.1**	**-1.4**
YSS				AMB	AMB	11 08 44.7	
	comp=N,1µm,0.4s						
YSS				*i* Sg	**Sb**	**11 08 53.2**	**+0.6**
YSS				A	A	11 08 54.9	
	comp=N,15µm,0.2s						
YSS				AMS	AMS	11 09 07.0	
	comp=N,88µm,11.0s						
YSS				AMS	AMS	11 09 07.0	
	comp=N,81µm,11.0s						
YSS				AMS	AMS	11 09 07.0	
	comp=N,101µm,11.0s						
JWK2	**Keihoku**	**1.40**	**178**	⇑P	**Pn**	**11 08 54.6**	**-0.5**
JWK2				*e*S	**Sb**	**11 09 14.9**	**+1.2**
JRBN	**Rebuntou**	**1.40**	**203**	P	**Pn**	**11 08 53.7**	**-1.4**
JRBN				*e*S	**Sn**	**11 09 12.7**	**-0.5**
JRR	**Rishiri**	**1.62**	**193**	P	**Pn**	**11 08 58.2**	**0.0**
JRR				*e*S	**Sg**	**11 09 21.7**	**-1.0**
JSE	**Soyaes**	**1.83**	**163**	⇑P	**Pn**	**11 09 00.6**	**-0.5**
JSE				*e*S	**Sn**	**11 09 25.2**	**+1.3**
JYG	**Yagishiri**	**2.31**	**187**	P	**Pn**	**11 09 08.1**	**+0.5**
JYG				*e*S	**Sb**	**11 09 38.1**	**-1.7**
JSS	**Shosan**	**2.32**	**180**	P	**Pn**	**11 09 08.0**	**+0.3**
UGL	**Uglegorsk**	**2.37**	**4**	⇑*i*PN	**Pn**	**11 09 07.6**	**-0.8**
UGL				*e*S	**Sn**	**11 09 35.9**	**-1.1**
UGL				pmax	pmax		
	comp=Z,361nm,1.0s						
UGL				smax	smax		
	comp=E,2µm,0.7s						
UGL				smax	smax		
	comp=N,2µm,1.0s						
UGL				MLR	MLR		
	comp=N,8µm,11.0s						
UGL				MLR	MLR		
	comp=Z,8µm,11.0s						
UGL	**Uglegorsk**	**2.37**	**4**	*e*P	**Pn**	**11 09 07.6**	**-0.8**
UGL				*e*Pg	**Pg**	**11 09 15.1**	**-0.6**
UGL				*e*S	**Sn**	**11 09 35.9**	**-1.1**
UGL				*e*Sg	**Sg**	**11 09 47.2**	**+0.8**
UGL				A	A	11 09 47.6	
	comp=Z,3µm,0.6s						
UGL				A	A	11 09 51.2	
	comp=Z,9µm,3.0s						
UGL				AMS	AMS	11 11 28.5	
	comp=Z,8µm,11.0s						
UGL				AMS	AMS	11 11 28.5	
	comp=Z,8µm,11.0s						
ASAJ	**Asahikawa**	**2.66**	**168**	Pn	**Pn**	**11 09 12.4**	**0.0**
	comp=Z,28nm,0.3s,baz=16,slow=12,SNR=158						
ASAJ				Sn	**Sn**	**11 09 45.4**	**+1.3**
	comp=Z,106nm,0.3s,baz=169,slow=5.8,SNR=8.8						
ASAJ				Lg	Lg	11 09 54.4	
	comp=Z,151nm,0.3s,baz=163,slow=33,SNR=6.7						
ASAJ				LR	LR	11 10 12.2	
	comp=Z,1µm,19.0s,baz=42,slow=39						
ASAJ	**Asahikawa**	**2.66**	**168**	P	**Pn**	**11 09 12.2**	**-0.2**
JMP	**Maruseppu**	**2.92**	**158**	P	**Pn**	**11 09 14.8**	**-1.2**
JKK2	**Kamakawa 2**	**2.92**	**167**	P	**Pn**	**11 09 15.7**	**-0.3**
JTKR	**Abashiri--Toko**	**3.11**	**151**	P	**Pn**	**11 09 17.6**	**-1.0**
GRPR	**Tuman**	**3.89**	**133**	*e*PN	**Pn**	**11 09 28.7**	**-0.6**
GRPR				pmax	pmax		
	comp=N,102nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,297nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.90**	**132**	*e*PN	**Pn**	**11 09 29.5**	**0.0**
YUK				pmax	pmax		
	comp=N,107nm,0.5s						
YUK				pmax	pmax		
	comp=Z,219nm,0.5s						
YUK				pmax	pmax		
	comp=E,114nm,0.4s						
YUK				pmax	pmax		
	comp=E,3µm,2.5s						
YUK				pmax	pmax		
	comp=N,2µm,1.8s						
YUK				MLR	MLR		
	comp=Z,10µm,11.0s						
YUK				MLR	MLR		
	comp=E,6µm,10.0s						
YUK	**Yuzh-Kuril'sk**	**3.90**	**132**	*e*P	**Pn**	**11 09 29.0**	**-0.5**
YUK				AMB	AMB	11 09 30.6	
	comp=E,107nm,0.5s						
YUK				AMB	AMB	11 09 30.6	
	comp=E,219nm,0.5s						
YUK				*e*S	**Sn**	**11 10 15.2**	**+0.4**
YUK				A	A	11 10 19.0	
	comp=E,254nm,0.3s						
YUK				A	A	11 10 28.8	
	comp=E,516nm,2.5s						
YUK				A	A	11 10 28.8	
	comp=E,3µm,2.5s						
TEY	**Ternei**	**4.03**	**247**	⇓*e*PN	**Pn**	**11 09 30.1**	**-1.1**
TEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TYV	**Tymovskoe**	**4.18**	**7**	*e*PN	**Pn**	**11 09 33.0**	**-0.3**
TYV				*e*S	**Sn**	**11 10 20.4**	**-1.4**
TYV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TYV				smax	smax		
	comp=N,139nm,1.2s						
TYV				MLR	MLR		
	comp=Z,10µm,10.0s						
TYV	**Tymovskoe**	**4.18**	**7**	*e*P	**Pn**	**11 09 33.2**	**-0.1**
TYV				*e*Pg	**Pg**	**11 09 51.5**	**+1.1**
TYV				AMB	AMB	11 09 54.3	
	comp=Z,80nm,1.0s						
TYV				*e*S	**Sn**	**11 10 22.0**	**+0.2**
TYV				*e*Sg	**Sg**	**11 10 51.0**	**+6.4**
TYV				A	A	11 10 53.6	
	comp=Z,160nm,1.0s						
TYV				A	A	11 10 53.6	
	comp=Z,200nm,1.0s						
TYV				AMS	AMS	11 11 49.8	
	comp=Z,10µm,12.0s						
KUR	**Kuril'sk**	**4.45**	**107**	*e*PN	**Pn**	**11 09 36.8**	**-0.3**
KUR				pmax	pmax		
	comp=Z,81nm,0.7s						
KUR				pmax	pmax		
	comp=N,54nm,0.5s						
KUR				pmax	pmax		
	comp=E,69nm,0.5s						
KUR				MLR	MLR		
	comp=N,6µm,11.0s						
KUR				MLR	MLR		
	comp=E,3µm,11.0s						
KUR				MLR	MLR		
	comp=Z,6µm,11.0s						
KUR	**Kuril'sk**	**4.45**	**107**	*e*P	**Pn**	**11 09 37.2**	**+0.1**
KUR				AMB	AMB	11 09 40.3	
	comp=Z,100nm,0.7s						
KUR				*e*S	**Sn**	**11 10 28.5**	**0.0**
KUR				A	A	11 10 31.5	
	comp=Z,543nm,2.0s						
KUR				A	A	11 10 31.5	
	comp=Z,879nm,2.0s						
KUR				A	A	11 10 33.1	
	comp=Z,290nm,0.7s						
KUR				A	A	11 10 33.1	
	comp=Z,230nm,0.7s						
ERM	**Erimo**	**4.80**	**168**	*e*Pn	**Pn**	**11 09 44.6**	**+2.8**
ERM	**Erimo**	**4.80**	**168**	*de*PN	**Pn**	**11 09 46.2**	**+4.4**
ERM				pmax	pmax		
	comp=Z,197nm,1.3s						
GRNR	**Gornyy**	**5.41**	**320**	*e*PN	**Pn**	**11 09 48.7**	**-1.5**
GRNR				*e*		11 11 02.2	
GRNR				pmax	pmax		
	comp=Z,23nm,0.2s						
GRNR				smax	smax		
	comp=N,120nm,0.2s						
GRNR	**Gornyy**	**5.41**	**320**	*e*P	**Pn**	**11 09 48.5**	**-1.7**
GRNR				AMB	AMB	11 09 49.2	
	comp=N,23nm,0.2s						
GRNR				*e*Pg	**Pg**	**11 10 10.5**	**-3.4**
GRNR				AMB	AMB	11 10 11.0	
	comp=N,27nm,0.4s						
GRNR				*e*Sg	**Sg**	**11 11 25.0**	**+1.1**
GRNR				A	A	11 11 31.0	
	comp=N,150nm,0.3s						
NKL	**Nikolayevsk**	**6.48**	**354**	*e*PN	**Pn**	**11 10 04.0**	**-0.8**
NKL				pmax	pmax		
	comp=Z,43nm,0.6s						
NKL				pmax	pmax		
	comp=N,18nm,0.5s						
NKL				pmax	pmax		
	comp=E,8.0nm,0.2s						
NKL				MLR	MLR		
	comp=Z,2µm,10.0s						
NKL				MLR	MLR		
	comp=N,1µm,11.0s						
NKL	**Nikolayevsk**	**6.48**	**354**	*e*P	**Pn**	**11 10 04.1**	**-0.8**
NKL				AMB	AMB	11 10 08.6	
	comp=N,420nm,0.8s						
NKL				*e*S	**Sn**	**11 11 17.3**	**-1.1**
NKL				*e*Sg	**Sg**	**11 12 05.0**	**+6.8**
NKL				A	A	11 12 14.9	
	comp=N,940nm,0.8s						
KLR	**Kul'dur**	**7.23**	**294**	Pn	**Pn**	**11 10 14.2**	**-0.9**
	comp=N,1.7nm,0.3s,baz=106,slow=12,SNR=21						
KLR				Sn	**Sn**	**11 11 32.1**	**-4.6**
	comp=N,3.6nm,0.3s,baz=290,slow=17,SNR=8.4						
KLR				Lg	Lg	11 12 05.8	
	comp=N,1.8nm,0.3s,baz=114,slow=15,SNR=3.9						
KLR				LR	LR	11 13 01.8	
	comp=N,2µm,20.5s,baz=104,slow=38						
KLR	**Kul'dur**	**7.23**	**294**	*de*PN	**Pn**	**11 10 13.9**	**-1.2**
USA0B	**Ussuriysk Arra**	**7.37**	**254**	*e*Pn	**Pn**	**11 10 16.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**7.37**	**254**	Pn	**Pn**	**11 10 16.5**	**-0.7**
	comp=N,1.0nm,0.3s,baz=69,slow=13,SNR=18						
USRK				Lg	Lg	11 12 27.4	
	comp=N,3.5nm,0.3s,baz=74,slow=26,SNR=4.6						
EKMR	**Ekimchan**	**8.56**	**321**	*e*P	**Pn**	**11 10 34.0**	**+0.5**
EKMR				AMB	AMB	11 10 47.4	
	comp=N,8.0nm,0.6s						
EKMR				*e*Sg		11 13 20.0	
EKMR				A	A	11 13 28.0	
	comp=N,790nm,1.6s						
EKMR				A	A	11 13 28.0	
	comp=N,670nm,1.6s						
EKMR				A	A	11 13 28.0	
	comp=N,820nm,1.6s						
MSHR	**Mys Shultsa**	**8.67**	**245**	⇓*e*PN	**Pn**	**11 10 35.8**	**+0.9**
MDJ	**Mudanjiang**	**8.83**	**261**	P	**Pn**	**11 10 37.5**	**+0.3**
MDJ				sP		11 10 44.2	
MDJ				S	Sn	11 12 25.8	+10
MDJ				pmax	pmax		
	comp=N,15nm,1.3s						
MDJ				pmax	pmax		
	comp=N,220nm,5.7s						
MDJ				LR	LR		
	comp=N,5µm,9.8s						
MDJ				LR	LR		
	comp=N,3µm,10.7s						
MDJ				LR	LR		
	comp=N,8µm,12.0s						
SKR	**Severo-Kuril's**	**10.23**	**62**	*e*PN	Pn	11 10 51.2	-5.1
SKR				*e*S	Sn	11 13 02.7	+12
SKR				MLR	MLR		
	comp=Z,6µm,11.0s						
SKR				MLR	MLR		
	comp=Z,5µm,11.0s						
MJB9	**Matsu-Tunnel**	**10.52**	**196**	*e*Pn	**Pn**	**11 11 00.8**	**+0.5**
MAJO	**Matsushiro**	**10.52**	**196**	*e*Pn	**Pn**	**11 11 01.2**	**+0.8**
MAJO	**Matsushiro**	**10.52**	**196**	⇓*e*PN	**Pn**	**11 11 02.3**	**+1.9**
MAJO				pmax	pmax		
	comp=Z,26nm,1.5s						
MAT	**Matsushiro**	**10.52**	**196**	P	**Pn**	**11 11 02.4**	**+2.0**
MAT				S	**Sn**	**11 13 01.6**	**+3.8**
MJAR	**Matsushiro Arr**	**10.52**	**196**	Pn	**Pn**	**11 11 01.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=98,slow=36,SNR=5.9						
MJAR				LR	LR	11 14 56.3	
	comp=Z,1µm,19.4s,baz=35,slow=37						
BMKR	**Bomnak**	**11.47**	**319**	*e*P	**Pn**	**11 11 12.0**	**-1.3**
BMKR				*e*Sg		11 14 49.5	
BMKR				A	A	11 14 54.6	
	comp=Z,20nm,0.5s						
ZEA	**Zeya**	**11.68**	**312**	*e*PN	**Pn**	**11 11 15.8**	**-0.3**
ZEA				pmax	pmax		
	comp=N,18nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s						
ZEA				MLR	MLR		
	comp=E,7µm,12.0s						
ZEA				MLR	MLR		
	comp=Z,8µm,12.0s						
ZEA				MLR	MLR		
	comp=N,3µm,11.0s						
ZEA	**Zeya**	**11.68**	**312**	*e*P	**Pn**	**11 11 14.5**	**-1.6**
ZEA				AMB	AMB	11 11 17.1	
	comp=N,21nm,1.2s						
ZEA				*e*Sg		11 14 51.4	
ZEA				A	A	11 15 04.0	
	comp=N,177nm,1.0s						
CN2	**Changchun**	**11.92**	**262**	*e*P	**Pn**	**11 11 22.0**	**+2.6**
CN2				*e*S	**Sn**	**11 13 37.0**	**+5.1**
CN2				pmax	pmax		
	comp=N,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=N,200nm,4.0s						
CN2				LR	LR		
	comp=N,3µm,11.0s						
CN2				LR	LR		
	comp=N,4µm,11.0s						
CN2				LR	LR		
	comp=N,4µm,12.0s						
INU	**Inuyama**	**11.93**	**199**	*e*Pn	**Pn**	**11 11 19.5**	**0.0**
PEA0B	**Petropavlovsk-**	**12.04**	**52**	*e*Pn	**Pn**	**11 11 21.1**	**0.0**
PETK	**Petropavlovsk-**	**12.04**	**52**	Pn	**Pn**	**11 11 23.3**	**+2.2**
	comp=N,0.4nm,0.3s,baz=236,slow=8.3,SNR=11						
PETK				LR	LR	11 16 36.7	
	comp=N,605nm,18.3s,baz=238,slow=41						
PEA1	**Petropavlovsk-**	**12.04**	**52**	*e*Pn	**Pn**	**11 11 23.3**	**+2.2**
KROS	**Kirovskiy**	**12.19**	**315**	*e*P	**Pn**	**11 11 21.8**	**-1.3**
KROS				AMB	AMB	11 11 25.5	
	comp=N,3.0nm,0.5s						
KROS				*e*Sg		11 15 13.5	
KROS				A	A	11 15 22.0	
	comp=N,15nm,0.7s						
PET	**Petropavlovsk**	**12.53**	**54**	*e*PN	**Pn**	**11 11 30.3**	**+2.6**
PET				pmax	pmax		
	comp=Z,400nm,9.8s						
PET				pmax	pmax		
	comp=Z,400nm,10.7s						
PET				MLR	MLR		
	comp=Z,5µm,12.0s						
PET				MLR	MLR		
	comp=Z,6µm,12.0s						
KSRS	**Korea Array**	**13.86**	**233**	Pn	**Pn**	**11 11 48.0**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=44,slow=13,SNR=9.5						
KSRS				LR	LR	11 16 31.5	
	comp=Z,1µm,18.6s,baz=54,slow=35						
MA2	**Magadan**	**13.93**	**19**	⇑*e*P	**Pn**	**11 11 44.3**	**-2.5**
MA2				pmax	pmax		
	comp=Z,33nm,1.3s						
SNY	**Shenyang**	**13.96**	**256**	⇓P	**Pn**	**11 11 48.9**	**+1.6**
SNY				pmax	pmax		
	comp=Z,500nm,13.6s						
SNY				LR	LR		
	comp=Z,5µm,9.6s						
SNY				LR	LR		
	comp=Z,910nm,7.4s						
SNY				LR	LR		
	comp=Z,5µm,10.8s						
DL2	**Dalian**	**16.73**	**249**	⇓P	**P**	**11 12 25.3**	**-0.7**
DL2				S	**S**	**11 15 35.2**	**-4.9**
DL2				pmax	pmax		
	comp=Z,21nm,0.8s						
DL2				pmax	pmax		
	comp=Z,590nm,5.8s						
DL2				LR	LR		
	comp=Z,5µm,11.5s						
DL2				LR	LR		
	comp=Z,3µm,12.7s						
DL2				LR	LR		
	comp=Z,7µm,12.2s						
YAK	**Yakutsk**	**16.85**	**340**	*e*P	**P**	**11 12 31.2**	**+4.0**
YAK				*e*S	**S**	**11 15 37.8**	**-4.4**
BJI	**Beijing**	**19.76**	**260**	⇓*i*P	**P**	**11 12 57.6**	**-1.8**
BJI				S	**S**	**11 16 41.1**	**-0.3**
BJI				pmax	pmax		
	comp=Z,140nm,12.1s						
BJI				LR	LR		
	comp=Z,1µm,11.0s						
BJI				LR	LR		
	comp=Z,680nm,16.0s						
TIA	**Tai'an**	**21.21**	**249**	P	**P**	**11 13 10.6**	**-4.5**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SSE	**Sheshan**	**22.30**	**233**	P	**P**	**11 13 28.3**	**+1.5**
SSE				S	**S**	**11 17 33.9**	**+2.6**
SSE				pmax	pmax		
	comp=Z,13nm,0.7s						
SSE				pmax	pmax		
	comp=Z,87nm,3.5s						
SSE				LR	LR		
	comp=Z,610nm,11.9s						
SSE				LR	LR		
	comp=Z,350nm,10.8s						
HHC	**Hu-ho-hao-te**	**22.55**	**266**	P	**P**	**11 13 29.3**	**-0.3**
HHC				PP	sP	11 13 58.4	+22
HHC				S	**S**	**11 17 33.3**	**-2.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,73nm,5.7s						

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HHC                                      LR      LR
        comp=Z,2µm,9.4s
HHC                                      LR      LR
        comp=Z,3µm,10.8s
NJ2     Nanjing            22.91 238    ePP      P          11 13 30.5  -2.8
NJ2                                      S       S          11 17 35.9  -6.5
NJ2                                      pmax    pmax
        comp=Z,19nm,0.5s
NJ2                                      pmax    pmax
        comp=Z,170nm,4.4s
NJ2                                      LR      LR
        comp=Z,1µm,16.6s
NJ2                                      LR      LR
        comp=Z,2µm,12.8s
NJ2                                      LR      LR
        comp=Z,2µm,12.3s
ULN     Ulaanbaatar        23.51 286⇑eP          P          11 13 39.2  -0.3
ULN                                      pmax    pmax
        comp=Z,5.0nm,1.3s
SONA0   Songino Array      23.95 286    eP       P          11 13 43.0  -0.6
SONM    Songino Array      23.95 286     P       P          11 13 43.0  -0.6
        comp=Z,4.9nm,1.1s,baz=81,slow=9.2,SNR=12
SONM                                     LR      LR         11 23 34.8
        comp=Z,965nm,20.8s,baz=92,slow=38
BILL    Bilibino           24.77  22    eP       P          11 13 50.9  +0.2
        comp=Z,25nm,1.1s
BILL    Bilibino           24.77  22deP          P          11 13 52.0  +1.2
BILL                                    e                   11 14 26.2
BILL                                    ePPP     PPP        11 14 32.9
BILL                                    eS       S          11 18 15.6  +3.6
BILL                                    eSS      SnSn       11 19 02.8  +4.1
BILL                                     pmax    pmax
        comp=Z,19nm,1.0s
BILL                                     MLR     MLR
        comp=Z,1µm,16.0s
IRK     Irkutsk            24.82 297    eP       P          11 13 50.8  -0.7
IRK                                      pmax    pmax
        comp=Z,52nm,2.3s
TLY     Talaya             25.24 295    eP       P          11 13 54.2  -1.0
        comp=Z,19nm,1.6s
TLY     Talaya             25.24 295    eP       P          11 13 55.5  +0.2
TLY                                     eS       S          11 18 22.6  +2.7
TLY                                     eSS      SnSn       11 19 10.3  -0.4
TLY                                     eSSS     SSS        11 19 32.1
TLY                                      pmax    pmax
        comp=Z,25nm,1.4s
TLY                                      MLR     MLR
        comp=Z,7µm,13.0s
ZAK     Zakamensk          25.59 292    eP       P          11 13 58.2  -0.3
ZAK                                      pmax    pmax
        comp=Z,12nm,1.2s
TIXI    Tiksi              25.75 351     P       P          11 13 59.4  -0.3
        comp=Z,2.1nm,0.5s,baz=149,slow=6.2,SNR=7.0
TIXI    Tiksi              25.75 351    eP       P          11 13 58.4  -1.2
        comp=Z,6.3nm,1.1s
TIXI    Tiksi              25.75 351⇓eP          P          11 13 58.6  -1.0
TIXI                                     pmax    pmax
        comp=Z,7.0nm,1.3s
WHN     Wuhan              26.68 242 ⇓P          P          11 14 10.1  +1.7
XAN     Xi'an              27.88 255     P       P          11 14 20.5  +1.3
XAN                                      pP      sP         11 14 27.9  +1.4
XAN                                      S       S          11 19 03.8  +1.9
XAN                                      pmax    pmax
        comp=Z,120nm,3.8s
XAN                                      LR      LR
        comp=Z,2µm,19.2s
XAN                                      LR      LR
        comp=Z,1µm,17.3s
XAN                                      LR      LR
        comp=Z,1µm,14.0s
QZH     Quanzhou           28.57 229⇑iP          P          11 14 32.2  +6.8
QZH                                      S       S          11 19 16.1  +3.3
QZH                                      pmax    pmax
        comp=Z,140nm,4.3s
QZH                                      LR      LR
        comp=N,680nm,11.0s
QZH                                      LR      LR
        comp=E,460nm,9.7s
QZH                                      LR      LR
        comp=Z,650nm,13.6s
LZH     Lanzhou            30.15 263    eP       P          11 14 40.9  +1.4
LZH                                      pP      pP         11 14 44.5  -0.2
LZH                                      sP      sP         11 14 47.1  +0.3
LZH                                      PP      PnPn       11 15 40.7  +3.9
LZH                                      S       S          11 19 39.7  +1.9
LZH                                      sS      sS         11 19 49.5  +3.2
LZH                                      SS      SnSn       11 21 13.9  +3.0
LZH                                      pmax    pmax
        comp=Z,17nm,1.1s
LZH                                      pmax    pmax
        comp=Z,110nm,5.5s
LZH                                      LR      LR
        comp=Z,1µm,12.8s
LZH                                      LR      LR
        comp=Z,2µm,13.1s
LZH                                      LR      LR
        comp=Z,2µm,13.5s
GTA     Gaotai             31.26 272    eP       P          11 14 56.6  +7.3
GTA                                      pP      sP         11 15 00.9  +4.3
GTA                                      sP      pP         11 15 04.0   +10
GTA                                      S       S          11 20 00.5  +5.4
GTA                                      pmax    pmax
        comp=Z,3.0nm,0.8s
GTA                                      pmax    pmax
        comp=Z,80nm,7.1s
GTA                                      LR      LR
        comp=N,1µm,11.4s
GTA                                      LR      LR
        comp=E,2µm,12.1s
GTA                                      LR      LR
        comp=Z,3µm,13.0s
GYA     Guiyang            34.34 246    eP       P          11 15 15.9  -0.4
GYA                                      S       S          11 20 40.2  -2.9
GYA                                      pmax    pmax
        comp=Z,10.0nm,0.6s
GYA                                      pmax    pmax
        comp=Z,60nm,4.6s
GYA                                      LR      LR
        comp=Z,870nm,13.1s
GYA                                      LR      LR
        comp=Z,670nm,13.4s
GYA                                      LR      LR
        comp=Z,370nm,10.6s
ZAA1    Zalesovo Array     36.23 303    eP       P          11 15 31.2  -0.9
ZAA0    Zalesovo Array     36.23 303    eP       P          11 15 31.1  -1.0
        comp=Z,8.8nm,1.4s
ZALV    Zalesovo Beam      36.23 303     P       P          11 15 31.2  -0.9
        comp=Z,0.5nm,0.3s,baz=77,slow=6.5,SNR=3.1
ZALV                                     LR      LR         11 32 12.6
        comp=Z,91nm,19.2s,baz=64,slow=39
WMQ     Urumqi             37.59 286    eP       P          11 15 43.5  -0.4
WMQ                                      pP      pP         11 15 49.4  +0.3
WMQ                                      pmax    pmax
        comp=Z,13nm,0.7s
KMI     Kunming            37.78 249     P       P          11 15 46.7  +0.9
KMI                                      pP      pP         11 15 48.3  -2.7
KMI                                      sP      sP         11 15 50.8  -2.4
KMI                                      S       S          11 21 37.9  +1.9
KMI                                      sS      pS         11 21 41.3  -0.8
KMI                                      pmax    pmax
        comp=Z,10.0nm,0.7s
KMI                                      pmax    pmax
        comp=Z,170nm,4.2s
KMI                                      LR      LR
        comp=Z,1µm,12.3s
KMI                                      LR      LR
        comp=Z,1µm,13.2s
KMI                                      LR      LR
        comp=Z,1µm,11.9s
QIZ     Qiongzhong         38.08 234     P       P          11 15 48.0  -0.1
QIZ                                      PP      PnPn       11 17 18.4  +1.7
QIZ                                      S       S          11 21 42.2  +2.1
QIZ                                      LR      LR
        comp=Z,590nm,12.7s
QIZ                                      LR      LR
        comp=Z,600nm,10.3s
QIZ                                      LR      LR
        comp=Z,490nm,11.8s
CAST    Castle Rocks       39.32  40    eP       P          11 15 58.4  +0.2
        comp=Z,10.0nm,0.7s
PPLA    Purkeypile         39.34  41    eP       P          11 15 58.3  -0.1
        comp=Z,36nm,1.4s
SPU     Mount Spurr        39.66  44    eP       P          11 16 00.7  -0.3
BPAW    Bear Paw Mtn.      39.72  39    eP       P          11 16 01.0  -0.4
        comp=Z,5.5nm,0.8s
SLVN    Son La             39.79 244    eP       P          11 16 02.3  -0.3
        comp=Z,19nm,1.1s
KTH     Kantishna Hill     39.82  40    eP       P          11 16 02.3  -0.1
        comp=Z,47nm,1.3s
TOLK    Toolik Lake Re     39.89  32    eP       P          11 16 02.0  -0.9
        comp=Z,17nm,1.3s
MK31    Makanchi Array     39.93 293    eP       P          11 16 02.4  -1.1
        comp=Z,5.0nm,0.9s
MK31    Makanchi Array     39.93 293    eP       P          11 16 02.4  -1.1
MK31                                     pmax    pmax
        comp=Z,5.0nm,0.9s
MK32    Makanchi Array     39.93 293    eP       P          11 16 02.6  -0.9
MKAR    Makanchi Array     39.93 293     P       P          11 16 02.6  -0.9
        comp=Z,1.6nm,0.6s,baz=79,slow=9.0,SNR=18
MKAR                                     LR      LR         11 33 09.3
        comp=Z,773nm,21.5s,baz=64,slow=37
MKAR    Makanchi Array     39.93 293    i P      P          11 16 02.9  -0.5
MKAR                                     pmax    pmax
        comp=Z,2.0nm,0.7s
KDAK    Kodiak Island      40.08  49     P       P          11 16 02.8  -1.6
        comp=Z,6.5nm,0.8s,baz=335,slow=2.2,SNR=7.5
KDAK    Kodiak Island      40.08  49    i P      P          11 16 03.7  -0.7
MAKZ    Makanchi           40.12 293    eP       P          11 16 03.9  -1.1
        comp=Z,5.5nm,0.8s
MAKZ    Makanchi           40.12 293    eP       P          11 16 03.9  -1.1
MAKZ                                     pmax    pmax
        comp=Z,6.0nm,0.8s
BWN     Browne             40.37  39    eP       P          11 16 03.3  -3.5
        comp=Z,204nm,1.5s
MCK     McKinley           40.67  40    eP       P          11 16 08.7  -0.6
        comp=Z,8.4nm,0.7s
MCK     McKinley           40.67  40    eP       P          11 16 08.7  -0.6
MCK                                      pmax    pmax
        comp=Z,8.0nm,0.7s
RND     Reindeer           40.76  40    eP       P          11 16 07.7  -2.4
        comp=Z,15nm,1.0s
RND     Reindeer           40.76  40    eP       P          11 16 07.7  -2.4
RND                                      pmax    pmax
        comp=Z,15nm,1.0s
KURK    Kurchatov          40.78 300    eP       P          11 16 09.1  -1.2
        comp=Z,3.9nm,0.8s
KURK    Kurchatov          40.78 300⇓iP          P          11 16 09.3  -1.0
KURK                                     pmax    pmax
        comp=Z,10.0nm,1.7s
WRH     Wood River Hil     40.92  38    eP       P          11 16 10.8  -0.6
        comp=Z,25nm,1.3s
COLA    College            40.96  38    eP       P          11 16 10.2  -1.4
        comp=Z,23nm,1.2s
COLA    College            40.96  38ceP          P          11 16 11.8  +0.2
COLA                                     pmax    pmax
        comp=Z,13nm,1.2s
PMR     Palmer             40.97  43    eP       P          11 16 10.2  -1.5
        comp=Z,26nm,1.3s
PMR     Palmer             40.97  43    eP       P          11 16 10.2  -1.5
PMR                                      pmax    pmax
        comp=Z,26nm,1.3s
CCB     Clear Creek Bu     41.01  38    eP       P          11 16 11.4  -0.7
        comp=Z,18nm,1.4s
SML     Sawmill            41.30  42    eP       P          11 16 13.9  -0.6
        comp=Z,32nm,1.0s
SML     Sawmill            41.30  42    eP       P          11 16 13.9  -0.6
SML                                      pmax    pmax
        comp=Z,32nm,1.0s
KNK     Knik Glacier       41.32  43    eP       P          11 16 14.0  -0.7
        comp=Z,22nm,0.6s
ILAR    Eielson Array      41.38  38     P       P          11 16 14.3  -0.8
        comp=Z,1.4nm,0.3s,baz=268,slow=6.3,SNR=28
ILAR                                     LR      LR         11 34 33.5
        comp=Z,206nm,18.6s,baz=294,slow=38
ILB     Eielson Array      41.38  38    eP       P          11 16 14.3  -0.8
        comp=Z,7.4nm,0.9s
HDA     Harding Lake       41.42  38    eP       P          11 16 14.7  -0.8
        comp=Z,25nm,1.5s
FYU     Fort Yukon         41.76  35    eP       P          11 16 17.8  -0.4
        comp=Z,27nm,1.4s
PRP     Porcupine Dome     41.82  37    eP       P          11 16 18.8  -0.1
        comp=Z,34nm,1.4s
NONG    Nongkai            42.74 241     P       P          11 16 30.6  +3.9
        comp=Z,0.2nm,1.7s
EYAK    Cordova Ski Ar     42.81  44    eP       P          11 16 24.9  -1.9
        comp=Z,7.7nm,0.7s
DOT     Dot Lake           42.81  39    eP       P          11 16 25.4  -1.4
        comp=Z,4.2nm,0.7s
MENT    Mentasta           43.13  40    eP       P          11 16 30.0  +0.5
        comp=Z,6.6nm,0.6s
EGAK    Eagle              43.78  37    eP       P          11 16 33.9  -0.7
        comp=Z,15nm,0.8s
BALM    Baldy              44.27  43    eP       P          11 16 38.7  -0.1
        comp=Z,14nm,0.9s
BALM    Baldy              44.27  43    eP       P          11 16 38.7  -0.1
BALM                                     pmax    pmax
        comp=Z,14nm,0.9s
DAWY    Dawson             44.71  38    eP       P          11 16 41.2  -0.9
        comp=Z,8.3nm,1.5s
BRVK    Borovoye           44.77 306    eP       P          11 16 40.9  -1.8
        comp=Z,8.9nm,1.2s
BRVK    Borovoye           44.77 306    eP       P          11 16 40.9  -1.8
BRVK                                     pmax    pmax
        comp=Z,9.0nm,1.2s
CMAR    Chiang Mai Arr     45.03 246     P       P          11 16 44.9  -0.2
        comp=Z,0.8nm,0.4s,baz=30,slow=7.5,SNR=3.6
CMAR                                     LR      LR         11 36 49.0
        comp=Z,297nm,18.1s,baz=42,slow=38
EPYK    Eagle Plains       45.14  34    eP       P          11 16 44.6  -0.9
        comp=Z,30nm,1.4s
KDJ     Kajisay            45.25 289    eP       P          11 16 46.5  -0.4
        comp=Z,5.5nm,0.8s
KDJ     Kajisay            45.25 289    eP       P          11 16 46.5  -0.4
KDJ                                      pmax    pmax
        comp=Z,6.0nm,0.8s
OTUK    Ortayu             45.51 299     P       P          11 16 51.6  +2.9
OTUK                                     pmax    pmax
        comp=Z,4.0nm,0.7s
INK     Inuvik             45.77  31     P       P          11 16 49.6  -0.7
        comp=Z,1.9nm,0.6s,baz=258,slow=5.2,SNR=10
INK     Inuvik             45.77  31    eP       P          11 16 49.2  -1.2
        comp=Z,5.9nm,0.9s
INK     Inuvik             45.77  31    eP       P          11 16 49.2  -1.2
INK                                      pmax    pmax
        comp=Z,6.0nm,0.9s
HYT     Haines Junctio     46.58  42    eP       P          11 16 56.4  -0.7
        comp=Z,20nm,1.0s
AAK     Ala-Archa          46.74 291⇑eP          P          11 16 59.3  +0.7
AAK                                      pmax    pmax
        comp=Z,6.0nm,1.7s
KSH     Kashi              47.35 286    eP       P          11 17 06.7  +3.3
KSH                                      pmax    pmax
        comp=Z,23nm,1.6s
SIJI    Sorong             48.29 194     LR      LR         11 34 15.9
        comp=Z,182nm,20.8s,baz=350,slow=32
SVE     Sverdlovsk         48.39 313    eP       P          11 17 15.3  +4.3
SVE                                      pmax    pmax
        comp=Z,30nm,1.3s
SVE                                      MLR     MLR
        comp=Z,862nm,15.0s
ARU     Arti               49.60 314d iP         P          11 17 19.6  -0.7
ARU                                                         11 19 11.8
ARU                                      S       S          11 24 28.4  +1.0
ARU                                      SS      SS         11 27 54.8  -4.2
ARU                                      pmax    pmax
        comp=Z,13nm,1.4s
ARU                                      MLR     MLR
        comp=Z,533nm,16.0s
RABL    Rabaul             51.51 167    eP       P          11 17 35.6  +0.5
        comp=Z,158nm,0.5s
ABKAR   Akbulak array      52.28 305    eP       P          11 17 40.1  -0.5
        comp=Z,9.5nm,1.0s
PRGR    Permogore          52.98 324    eP       P          11 17 44.0  -1.5
PRGR                                     pmax    pmax
        comp=Z,14nm,0.8s
ARA0    ARCESS Array S     55.11 337    eP       P          11 18 01.0   0.0
ARCES   ARCESS Array B     55.11 337     P       P          11 18 01.0   0.0
        comp=Z,4.5nm,1.1s,baz=39,slow=7.8,SNR=5.5
ARCES                                    LR      LR         11 45 01.1
        comp=Z,210nm,18.4s,baz=32,slow=40
YKA     Yellowknife Ar     55.40  33     P       P          11 18 02.5  -0.6
        comp=Z,1.0nm,0.6s,baz=305,slow=6.8,SNR=5.4
YKA                                      LR      LR         11 43 16.6
        comp=Z,13nm,18.5s,baz=308,slow=38
YKB5    Yellowknife Ar     55.40  33    eP       P          11 18 02.5  -0.6
DAG     Danmarks Havn      56.16 355     P       P          11 18 08.4   0.0
DAG                                      pmax    pmax
        comp=Z,14nm,1.1s
GEYT    Alibeck            59.76 295     LR      LR         11 46 07.2
        comp=Z,434nm,18.2s,baz=330,slow=38
FIA1    FINESS Array S     60.48 330    eP       P          11 18 38.1  -0.6
        comp=Z,15nm,1.2s
FIA0    FINESS Array S     60.48 330    eP       P          11 18 38.2  -0.5
FIA0    FINESS Array S     60.48 330    eP       P          11 18 38.3  -0.5
FINES   FINESS Array B     60.48 330     P       P          11 18 38.2  -0.5
        comp=Z,1.9nm,0.5s,baz=53,slow=7.4,SNR=14
FINES                                    LR      LR         11 48 13.0
        comp=Z,279nm,18.4s,baz=50,slow=40
OBN     Obninsk            60.67 321⇑eP          P          11 18 40.6  +0.5
OBN                                     e                   11 19 25.5
OBN                                     e                   11 20 54.2
OBN                                     ePPP     PPP        11 22 19.9
OBN                                      pmax    pmax
        comp=Z,4.0nm,0.5s
OBN                                      MLR     MLR
        comp=Z,596nm,14.0s
SUMG    Summit             61.01   0    eP       P          11 18 42.3  -0.4
        comp=Z,23nm,1.2s
SUMG    Summit             61.01   0    eP       P          11 18 42.3  -0.4
SUMG                                     pmax    pmax
        comp=Z,23nm,1.2s
LPSR    Galich'ya Gora     61.23 317    eP       P          11 18 42.2  -1.8
LPSR                                     pmax    pmax
        comp=Z,10.0nm,0.8s
LPSR                                     MLR     MLR
        comp=Z,960nm,13.0s
VSR     Storozhevoye       62.02 316    eP       P          11 18 48.6  -0.7
VSR                                      pmax    pmax
        comp=Z,10.0nm,1.1s
VSR                                      MLR     MLR
        comp=Z,650nm,12.0s
VSU     Vasula             62.36 328⇓eP          P          11 18 50.8  -0.7
VSU                                      pmax    pmax
        comp=Z,28nm,1.5s
MAK     Makhachkala        62.96 305    eP       P          11 18 49.8  -6.0
MAK                                     eS       S          11 27 16.2  -8.8
PINE    Pine Mountain      64.03  53    eP       P          11 19 03.1   0.0
        comp=Z,5.5nm,0.9s
NCK     Nalchik            64.79 307⇑eP          P          11 19 05.8  -2.1
NCK                                      pmax    pmax
        comp=Z,18nm,0.4s
KIV     Kislovodsk         64.98 308    eP       P          11 19 10.3  +1.1
KIV                                     eS       S          11 27 52.5  +2.2
KIV                                     eSS      SS         11 32 03.0  +1.6
KIV                                      pmax    pmax
        comp=Z,139nm,4.9s
KIV                                      pmax    pmax
        comp=Z,37nm,1.1s
KIV                                      MLR     MLR
        comp=Z,1µm,17.0s
KBZ     Khabaz             65.02 308     LR      LR         11 52 33.4
        comp=Z,537nm,18.1s,baz=26,slow=41
NB2     NORSAR Subarra     65.42 336     P       P          11 19 11.1  -0.7
        comp=Z,4.7nm,0.8s,baz=34,slow=6.9
NB200   NORSAR Array S     65.42 336    eP       P          11 19 11.1  -0.7
NOA     NORSAR Array B     65.42 336     P       P          11 19 11.1  -0.7
        comp=Z,2.4nm,0.7s,baz=35,slow=6.5,SNR=4.1
NOA                                      LR      LR         11 52 43.1
        comp=Z,223nm,19.0s,baz=25,slow=41
NEY     Neytrino           65.43 308⇓eP          P          11 19 13.5  +1.2
NEY                                      pmax    pmax
        comp=Z,5.0nm,1.4s
HFS     Hagfors            65.45 334     P       P          11 19 11.2  -0.6
        comp=Z,2.0nm,0.5s,baz=54,slow=7.5,SNR=9.8
EGMT    Eagleton           66.92  44    eP       P          11 19 20.9  -0.7
        comp=Z,6.4nm,1.0s
AKASG   Malin Array Be     66.93 320     P       P          11 19 19.6  -1.9
        comp=Z,8.3nm,1.0s,baz=41,slow=7.0,SNR=12
AKASG                                    LR      LR         11 50 46.6
        comp=Z,105nm,19.1s,baz=60,slow=38
AKASG   Malin Array Be     66.93 320    i P      P          11 19 23.0  +1.5
AKASG                                    pmax    pmax
        comp=Z,8.0nm,1.0s
AKBB    Malin Array Si     66.93 320    eP       P          11 19 19.6  -1.9
        comp=Z,6.4nm,0.9s
AKBB    Malin Array Si     66.93 320    eP       P          11 19 19.6  -1.9
AKBB                                     pmax    pmax
        comp=Z,6.0nm,0.9s
DLMT    Dillon             67.39  47    eP       P          11 19 24.1  -0.5
PAHR    Pah Rah Range      67.62  56    eP       P          11 19 26.3  +0.1
        comp=Z,9.5nm,1.5s
BOZ     Bozeman (W)        67.71  47    eP       P          11 19 26.0  -0.7
        comp=Z,2.2nm,0.9s
BOZ     Bozeman (W)        67.71  47    eP       P          11 19 26.0  -0.7
BOZ                                      pmax    pmax
        comp=Z,2.0nm,0.9s
CMB     Columbia Colle     68.17  57     P       P          11 19 29.2  -0.4
CMB                                      pmax    pmax
        comp=Z,4.0nm,1.0s
YERR    Yerington          68.19  56    eP       P          11 19 29.8  -0.1
        comp=Z,6.5nm,1.0s
SIM     Simferopol'        68.77 313    eP       P          11 19 34.1  +1.0
SIM                                     eS       S          11 28 35.3  -0.4
SIM                                      MLR     MLR
        comp=Z,300nm,12.0s
KVN     Kaiserville        68.79  55    eP       P          11 19 33.0  -0.7
        comp=Z,6.1nm,1.2s
KVN     Kaiserville        68.79  55    eP       P          11 19 33.0  -0.7
KVN                                      pmax    pmax
        comp=Z,6.0nm,1.2s
NV01    Mina Array Sit     69.10  56    eP       P          11 19 35.4  -0.2
NVAR    Mina Array Bea     69.10  56     P       P          11 19 35.4  -0.2
        comp=Z,1.2nm,0.8s,baz=302,slow=6.2,SNR=7.1
NVAR                                     LR      LR         11 45 21.5
        comp=Z,56nm,20.8s,baz=270,slow=32
NV11    Mina Array Sit     69.18  56    eP       P          11 19 36.1  +0.1
        comp=Z,0.3nm,1.1s
AS31    Alice Springs      70.42 188    eP       P          11 19 43.5   0.0
        comp=Z,1.4nm,0.8s
ASAR    Alice Springs      70.42 188     P       P          11 19 43.1  -0.3
        comp=Z,1.8nm,0.9s,baz=5.6,slow=6.3,SNR=16
PD31    Pinedale Array     70.77  48    eP       P          11 19 45.0  -0.9
PDAR    Pinedale Array     70.77  48     P       P          11 19 45.0  -0.9
        comp=Z,0.6nm,0.6s,baz=274,slow=1.0,SNR=7.0
TPNV    Topopah Spring     71.30  56    eP       P          11 19 49.1   0.0
        comp=Z,4.5nm,1.0s
TPNV    Topopah Spring     71.30  56    eP       P          11 19 49.1   0.0
TPNV                                     pmax    pmax
        comp=Z,5.0nm,1.0s
ULM     Lac du Bonnet      71.31  35     P       P          11 19 46.4  -2.3
        comp=Z,1.9nm,0.4s,baz=343,slow=6.3,SNR=2.9
ULM                                      LR      LR         11 56 18.7
        comp=Z,97nm,18.2s,baz=341,slow=40
SHPR    Sheep Range        72.23  56    eP       P          11 19 54.6  -0.1
        comp=Z,3.9nm,1.4s
MLR     Muntele Rosu       72.28 318     P       P          11 19 54.4  -0.3
        comp=Z,1.8nm,0.5s,baz=67,slow=16,SNR=3.2
BR101   Keskin Array S     72.77 310    eP       P          11 19 57.5  -0.3
BRTR    Keskin Array B     72.77 310     P       P          11 19 57.5  -0.3
        comp=Z,0.7nm,0.8s,baz=64,slow=3.4,SNR=3.3
BRTR                                     LR      LR         11 58 03.8
        comp=Z,238nm,18.4s,baz=57,slow=41
MTPU    Mount Pierson      72.79  53    eP       P          11 19 58.4  +0.2
        comp=Z,7.1nm,1.5s
CLL     Collm              72.90 329⇑iP          P          11 19 57.7  -0.4
CLL                                     i                   11 20 02.7
CLL                                     eS       S          11 29 22.0  -1.5
CLL                                      pmax    pmax
        comp=Z,5.0nm,0.8s
CLL                                      MLR     MLR
        comp=Z,400nm,18.3s
CLL     Collm              72.90 329⇑iP          P          11 19 57.7  -0.4
        comp=Z,5.0nm,0.8s
CLL                                     i pP     pP         11 20 02.7  -1.0
CLL                                     eS       S          11 29 22.0  -1.5
CLL                                      LmV                11 54 00.0
        comp=Z,400nm,18.3s
SRU     San Rafael Swe     72.92  51    eP       P          11 19 58.0  -0.7
        comp=Z,3.6nm,1.0s
SRU     San Rafael Swe     72.92  51    eP       P          11 19 58.0  -0.7
SRU                                      pmax    pmax
        comp=Z,4.0nm,1.0s
BRG     Berggiesshubel     72.92 328    eP       P          11 20 03.9  +5.6
        comp=Z,4.7nm,1.0s
BRG     Berggiesshubel     72.92 328    eP       P          11 20 03.9  +5.6
BRG                                      pmax    pmax
        comp=Z,5.0nm,1.0s
VYHS    Vyhne              72.99 324    eP       P          11 20 04.0  +5.2
VRAC    Vranov             73.22 326     P       P          11 20 00.3  +0.2
        comp=Z,3.8nm,0.7s,baz=21,slow=8.5,SNR=3.0
PV17    East Wray Mesa     74.36  51    eP       P          11 20 06.9  -0.3
        comp=Z,4.6nm,0.9s
PV05    Paradox Valley     74.43  51    eP       P          11 20 06.8  -0.9
        comp=Z,5.1nm,0.8s
KHC     Kasperske Hory     74.50 328    eP       P          11 20 07.0  -0.7
        comp=Z,2.7nm,1.1s
KHC     Kasperske Hory     74.50 328    eP       P          11 20 07.0  -0.7
KHC                                      pmax    pmax
        comp=Z,3.0nm,1.1s
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PV13	Radium Mtn., P	74.52	51	*e*P	P	11 20 07.5	-0.8
	comp=Z,9.5nm,1.5s						
CONA	Conrad Observa	74.62	326	*i* P	P	11 20 05.3	-3.2
	comp=Z,5.1nm,0.7s						
GERES	GERESS Array B	74.69	327	P	P	11 20 08.3	-0.6
	comp=Z,0.7nm,0.2s,baz=121,slow=13,SNR=3.3						
GERES				LR	LR	11 56 13.8	
	comp=Z,703nm,18.2s,baz=32,slow=38						
SCHQ	Schefferville	75.96	17	P	P	11 20 15.6	-0.3
	comp=Z,3.3nm,0.5s,baz=304,slow=15,SNR=1.7						
SCHQ				LR	LR	11 56 42.3	
	comp=Z,194nm,18.6s,baz=59,slow=38						
SOKA	Soboth	75.97	325	*i* pP	P	11 20 15.8	-0.4
	comp=Z,5.9nm,1.1s						
ECSD	EROS Data Cent	76.17	40	*e*P	P	11 20 15.6	-1.8
	comp=Z,6.1nm,1.3s						
KBA	Koelnbreinsper	76.29	327	*i* pP	P	11 20 18.8	+0.7
	comp=Z,25nm,1.2s						
OBKA	Obir	76.30	326	*e*pP	P	11 20 18.4	+0.3
	comp=Z,6.5nm,1.0s						
MYKA	Terra Mystica	76.55	326	*i* pP	P	11 20 20.2	+0.7
	comp=Z,14nm,1.6s						
WATA	Walderalm	76.73	328	*i* P	P	11 20 18.7	-1.9
	comp=Z,2.3nm,0.4s						
WTTA	Wattenberg	76.77	328	*i* pP	P	11 20 21.7	+0.8
	comp=Z,16nm,1.3s						
MOTA	Moosalm	76.90	328	*i* pP	P	11 20 22.4	+0.9
	comp=Z,11nm,0.8s						
RETA	Reutte	76.90	328	*i* pP	P	11 20 22.1	+0.7
	comp=Z,9.1nm,1.3s						
SQTA	Sankt Quirin	76.96	328	*i* P	P	11 20 19.6	-2.3
	comp=Z,17nm,1.0s						
BFO	Black Forest	77.04	330	*i* P	P	11 20 23.5	+1.3
FETA	Feichten	77.31	328	*i* pP	P	11 20 23.8	-0.1
	comp=Z,12nm,1.2s						
DAVA	Damuels	77.39	329	*i* pP	P	11 20 24.1	-0.2
	comp=Z,10nm,1.1s						
G40A	Rib Lake	77.58	35	*e*P	P	11 20 23.6	-1.7
	comp=Z,3.0nm,0.8s						
FUORN	Ofenpass-Fuorn	77.82	328	*e*P	P	11 20 27.3	+0.4
	comp=Z,11nm,0.9s						
DAVOX	Davos/Dischmat	77.82	328	P	P	11 20 27.1	+0.3
	comp=Z,2.9nm,0.7s,baz=17,slow=9.0,SNR=3.3						
ANMO	Albuquerque	78.18	51	⇑*e*P	P	11 20 30.0	+1.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.5s						
STKA	Stephens Creek	78.23	180	LR	LR	11 56 11.2	
	comp=Z,88nm,20.4s,baz=22,slow=37						
VLDQ	Val d'Or	79.53	26	*e*P	P	11 20 33.6	-2.3
	comp=Z,11nm,0.8s						
TX31	Lajitas Ar. Si	83.99	53	*e*P	P	11 20 59.4	-0.5
	comp=Z,5.4nm,1.3s						
TXAR	Lajitas Array	83.99	53	P	P	11 20 59.6	-0.3
	comp=Z,0.7nm,0.6s,baz=294,slow=4.2,SNR=18						
TXAR				LR	LR	11 59 10.2	
	comp=Z,65nm,19.5s,baz=0.0,slow=36						
KEST	Kesra	87.49	323	LR	LR	12 05 44.8	
	comp=Z,331nm,18.3s,baz=292,slow=39						
ESDC	Sonseca Array	88.73	334	P	P	11 21 23.1	+0.2
	comp=Z,1.3nm,0.7s,baz=356,slow=5.9,SNR=4.3						
PPT	Papeete	88.74	117	LR	LR	11 52 09.3	
	comp=Z,89nm,21.7s,baz=4.0,slow=30						
Z50A	Ashland	89.51	38	*e*P	P	11 21 25.9	-0.7
	comp=Z,7.4nm,0.8s						
SNAA	Sanae	150.00	201	PKPab	PKPab	11 28 23.7	-0.7
VNA1	Neumayer--Stat	152.01	201	PKPab	PKPab	11 28 32.2	-0.4

WEL 04 11:09:21.8,44°S±1°×**17°2E**±°**,h8**^{km}±1^{km}**,M3.0**/19,
ML3.1/17**,MLv3.0**/19**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=133.5,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYCZ	Eyrewell	0.27	48	P	Pb	11 09 28.6	-0.2
EYCZ				S	Sb	11 09 32.3	-1.3
OXZ	Oxford	0.28	353	P	Pb	11 09 28.4	-0.6
OXZ				S	Sg	11 09 32.3	+1.5
MHCZ	Mount Hutt	0.38	280	P	Pb	11 09 31.0	+0.2
WACZ	Wakanui South	0.39	207	P	Pb	11 09 31.6	+0.8
CRLZ	Canterbury Las	0.39	87	P	Pb	11 09 31.1	+0.1
MQZ	McQueen's Vall	0.43	105	P	Pb	11 09 31.5	0.0
AMCZ	Amberley	0.59	45	P	Pb	11 09 35.2	+0.8
AKCZ	Akaroa Harbour	0.66	115	P	Pb	11 09 36.1	+0.6
OKCZ	Okains Bay	0.72	100	P	Pb	11 09 37.3	+0.7
RPZ	Rata Peaks	0.76	261	P	Pb	11 09 37.8	+0.7
LTZ	Lake Taylor	0.83	10	P	Pb	11 09 39.1	+0.6
GVZ	Greta Valley S	0.94	48	P	Pn	11 09 41.3	0.0
INZ	Inchbonnie	0.99	332	P	Pn	11 09 41.9	-0.1
WVZ	Waitaha Valley	1.11	298	P	Pn	11 09 44.3	+0.6
LBZ	Lake Benmore	1.58	240	P	Pb	11 09 51.1	-0.1
KHZ	Kahutara	1.59	43	P	Pn	11 09 49.7	-0.5
FOZ	Fox Glacier	1.65	272	P	Pb	11 09 52.8	+0.4
ODZ	Otahua Downs	1.77	215	P	Pn	11 09 53.0	+0.2
DSZ	Denniston Nort	1.86	354	P	Pn	11 09 55.1	+1.0
THZ	Tophouse	1.93	19	P	Pn	11 09 54.8	-0.2
BSWZ	Blackbirch Sta	2.30	36	P	Pn	11 10 00.7	+0.6
JCZ	Jackson Bay	2.43	258	P	Pn	11 10 03.3	+1.4
NNZ	Nelson	2.57	22	P	Pn	11 10 04.2	+0.6
TUWZ	Tuamarina	2.57	33	P	Pn	11 10 04.9	+1.3
EAZ	Earnscleugh	2.57	230	P	Pn	11 10 03.9	+0.2
QRZ	Quartz Range	2.79	7	P	Pn	11 10 06.6	-0.1

MEX 04 11:12:33.2±0.8**,14°.85N**×**93°.23W,h16**^{km}±32^{km}**,MD3.6,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.85	1	*e*P	Pb	11 12 46.6	-3.0
PCIG				*e*S	Sb	11 12 56.6	-4.2
CCIG	Comitan	1.77	36	*e*P	Pn	11 12 59.3	-4.1
CCIG				*i* S	Sn	11 13 21.8	-3.9
TGIG		1.92	3	*i* P	Pn	11 13 02.3	-3.0
TGIG				*i* S	Sn	11 13 24.1	-5.1

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*ISCJB **04** 11:15:38.3±0.6, 17°.94S±0°.03×178°.50W±0°.03, h580^{km}±8^{km}, mb5.0/117, Error ellipse: s-maj=5.4km s-min=3.7km az=146.2*

*BJI **04** 11:15:39.7±0.0, 17°.87S×178°.41W, h595^{km}, mb4.8/30, mB5.1/16*

*NEIC **04** 11:15:40.9±1.8, 17°.89S×178°.48W, h603^{km}±5^{km}, mb4.9/260, Error ellipse: s-maj=12.6km s-min=8.1km az=89.0*

*IDC **04** 11:15:41.3±1.4, 18°.05S×178°.45W, h610^{km}±17^{km}, mb4.3/24, mb1 4.4/26, mb1mx4.4/28, mbtmp5.2/26, Error ellipse: s-maj=9.8km s-min=8.5km az=163.0*

*MOS **04** 11:15:41.8±1.6, 17°.62S×178°.72W, h602^{km}, mb5.0/30, Error ellipse: s-maj=10.9km s-min=9.6km az=140.4*

*GCMT **04** 11:15:45.9±0.5, 18°.07S±0°.06×178°.56W±0°.04, h594^{km}±4^{km}, MW5.4/58, Moment Tensor Solution. s58,c83; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.70±.07; M$_{\theta\theta}$0.57±.12; M$_{\phi\phi}$-1.27±.09; M$_{r\theta}$0.73±.10; M$_{\theta\phi}$0.11±.10; M$_{\phi r}$-0.83±.10; Best double couple: M$_0$1.56000×10^{17} NP1:φ$_s$146.00000°,δ74.00000°, λ58.00000°. NP2:φ$_s$31.00000°,δ35.00000°,λ151.00000°. Principal axes: T 1.4850, Plg51.0000°, Azm19.0000°; N 0.1510, Plg30.0000°, Azm156.0000°; P -1.6350, Plg22.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 04 11:15:40.4±0.4**,17°.88S**±0°.05×**178°.46W**±0°.04**,**
h597^{km}±5^{km}**,h594**^{km}**:pP-P,n575,**σ**1**^{s}**20**/591**,mb5.0**/117**,**
40C-37D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	8.19	100	*e*P	P	11 17 40.8	-0.6
NIUE				*e*S	S	11 19 26.5	+5.9
NIUE	Niue	8.19	100	P	P	11 17 41.6	+0.2
	baz=8.2,SNR=13						
GLKZ	Green Lake	11.34	178	P	P	11 18 08.3	-4.0
GLKZ				S	S	11 20 14.9	-2.3
MARNC	Mare, Loyalty	13.21	252	*e*P	P	11 18 29.9	-1.5
MARNC				*e*S	S	11 20 54.6	+2.7
PINNC	Pines Island,	14.03	248	*e*P	P	11 18 39.1	-0.5
DZM	Mont Dzumac	14.79	251	P	P	11 18 45.4	-1.4
	7.4nm,0.3s,baz=94,slow=15,SNR=66						
DZM				S	S	11 21 20.1	+1.1
	0.3nm,0.3s,baz=90,slow=21,SNR=2.0						
DZM	Mont Dzumac	14.79	251	*e*P	P	11 18 45.9	-0.9
DZM				*e*S	S	11 21 20.1	+1.1
KNTN	Kanton	16.41	25	*e*P	P	11 19 00.9	-0.8
	286nm,0.8s						
RAR	Rarotonga	17.92	104	P	P	11 19 15.5	0.0
	0.8nm,0.3s,baz=237,slow=11,SNR=5.3						
OUZ	Omahuta	18.66	201	*e*P	P	11 19 23.8	+1.8
	34nm,0.7s						
OUZ	Omahuta	18.66	201	P	P	11 19 24.1	+2.2
WCZ	Waipu Caves	19.08	198	P	P	11 19 27.7	+2.0
KUZ	Kuaotunu	19.48	194	P	P	11 19 32.2	+2.8
WIAZ	Waiheke Island	19.67	195	P	P	11 19 32.5	+1.4
ETAZ	East Tamaki Re	19.87	196	P	P	11 19 30.6	-2.3
WTAZ	Waiatarua	19.95	197	P	P	11 19 29.3	-4.3
MKAZ	Moumakai	19.96	195	P	P	11 19 34.6	+1.0
WMGZ	Waiomatatini S	20.05	187	P	P	11 19 32.7	-1.9
WMGZ				S	S	11 22 48.2	+4.5
HAZ	Te Kaha	20.07	189	P	P	11 19 33.8	-0.8
PKGZ	Pakihiroa	20.16	188	P	P	11 19 35.6	+0.1
PKGZ				S	S	11 22 48.4	+2.8
RUGZ	Raukumara Rang	20.29	189	P	P	11 19 35.5	-1.3
PUZ	Puketiti	20.32	187	P	P	11 19 36.4	-0.5
PUZ				S	S	11 22 57.0	+9.0
OPRZ	Ohinepanea	20.36	191	P	P	11 19 40.0	+2.7
TWGZ	Tauwhareparae	20.46	188	P	P	11 19 38.3	0.0
TOZ	Tahuroa Road	20.47	194	P	P	11 19 39.2	+0.9
KARZ	Kaharoa	20.59	192	P	P	11 19 42.7	+3.2
URZ	Urewera	20.67	190	P	P	11 19 37.6	-2.5
	7.6nm,0.3s,baz=280,slow=3.7,SNR=13						
URZ				S	S	11 22 47.7	-5.8
	10nm,0.8s,baz=211,slow=20,SNR=2.6						
URZ	Urewera	20.67	190	*e*P	P	11 19 38.9	-1.2
	54nm,0.5s						
URZ	Urewera	20.67	190	P	P	11 19 37.7	-2.3
MWZ	Matawai	20.68	189	P	P	11 19 39.1	-1.1
CNGZ	Carnagh Statio	20.73	187	P	P	11 19 40.9	+0.2
TKGZ	Te Karaka	20.74	188	P	P	11 19 40.2	-0.4
RAGZ	Rawiri	20.85	189	P	P	11 19 41.0	-0.8
RIGZ	Rimuhau	21.01	188	P	P	11 19 42.5	-0.7
RTZ	Ruatahuna	21.04	190	P	P	11 19 41.1	-2.4
TLZ	Tolley Road	21.04	193	P	P	11 19 47.6	+4.2
SNGZ	Shannon Statio	21.14	189	P	P	11 19 42.9	-1.5
PRGZ	Paritu Road	21.21	188	P	P	11 19 45.3	+0.3
MTHZ	Maungataniwha	21.29	190	P	P	11 19 44.8	-0.9
RAHZ	Arahi	21.32	190	P	P	11 19 44.6	-1.3
KNZ	Kokohu	21.33	188	P	P	11 19 45.9	-0.1
MRHZ	Matea Rd	21.35	191	P	P	11 19 45.7	-0.5
MHGZ	Mahia Peninsul	21.43	188	P	P	11 19 50.0	+3.1
WHHZ	Waihua	21.45	189	P	P	11 19 50.3	+3.2
NMHZ	Naumai	21.54	190	P	P	11 19 45.1	-2.8
BKZ	Black Stump Fm	21.66	191	*e*P	P	11 19 46.7	-2.3
	16nm,0.5s						
BKZ	Black Stump Fm	21.66	191	P	P	11 19 45.8	-3.2
ARHZ	Aropaoanui	21.67	190	P	P	11 19 48.5	-0.5
OTVZ	Oturere	21.81	192	P	P	11 19 48.5	-2.0
NGZ	Ngauruhoe	21.84	192	P	P	11 19 50.7	0.0
KWHZ	Kaweka Forest	21.92	191	P	P	11 19 49.4	-1.9
FWVZ	Far West T-bar	21.93	193	P	P	11 19 51.2	-0.3
WHVZ	Whangaehu Hut	21.94	192	P	P	11 19 50.7	-1.1
VRZ	Vera Road	21.98	194	P	P	11 19 55.5	+3.8
BHHZ	Black Hill Sta	22.05	191	P	P	11 19 49.0	-3.5
KRHZ	Kereru	22.14	191	P	P	11 19 52.0	-1.3
KAHZ	Kahuranaki	22.21	190	P	P	11 19 53.3	-0.6
PNHZ	Pukenui	22.44	191	P	P	11 19 54.7	-1.2
PXZ	Pawanui	22.44	189	P	P	11 19 53.5	-2.3
HNR	Honiara	22.58	289	P	P	11 19 57.3	-0.1
	47nm,0.6s,baz=19,slow=5.8,SNR=11						
HNR	Honiara	22.58	289	*e*P	P	11 19 57.4	-0.1
	99nm,0.6s						
HNR	Honiara	22.58	289	*e*P	P	11 19 57.4	-0.1
HNR				pmax	pmax		
	comp=Z,99nm,0.6s						
HNR	Honiara	22.58	289	P	P	11 19 56.0	-1.5
BFZ	Birch Farm	23.18	190	*e*P	P	11 20 01.6	-0.8
	comp=Z,54nm,1.3s						
BFZ	Birch Farm	23.18	190	P	P	11 20 00.8	-1.6
THZ	Tophouse	24.92	195	*e*P	P	11 20 17.0	-0.9
	comp=Z,86nm,1.8s						
KHZ	Kahutara	25.39	194	*e*P	P	11 20 20.5	-1.4
	comp=Z,14nm,0.8s						
LTZ	Lake Taylor	26.04	196	*e*P	P	11 20 28.5	+0.8
	comp=Z,126nm,2.0s						
OXZ	Oxford	26.61	196	*e*P	P	11 20 31.5	-1.2
	comp=Z,61nm,1.5s						
FOZ	Fox Glacier	27.43	199	*e*P	P	11 20 38.2	-1.5
	comp=Z,73nm,1.3s						
PPT	Papeete	27.51	94	P	P	11 20 40.2	-0.7
	comp=Z,39nm,0.6s,baz=54,slow=18,SNR=5.9						
PPT	Papeete	27.51	94	*e*P	P	11 20 40.2	-0.7
PPT				*e*P	P	11 20 41.9	+1.0
PPTF	Pamatai, Papee	27.52	94	*e*P	P	11 20 41.9	+0.8
	comp=Z,696nm,1.9s						
LBZ	Lake Benmore	28.10	197	*e*P	P	11 20 43.4	-2.2
	comp=Z,127nm,1.7s						
XMAS	Kiritimati	28.65	48	*e*P	P	11 20 49.2	-1.7
	comp=Z,96nm,1.1s						
WKZ	Wanaka	28.84	199	*e*P	P	11 20 51.1	-0.9
	comp=Z,338nm,2.0s						
EIDS	Eidsvold	29.23	250	P	P	11 20 55.3	-0.4
	baz=29,SNR=35						
MLZ	Mavora Lakes	29.61	199	*e*P	P	11 20 58.6	-0.1
	comp=Z,182nm,1.9s						
ARMA	Armidale	29.91	240	P	P	11 21 02.3	+0.7
	baz=30,SNR=60						
WHZ	Wether Hill Ro	30.13	199	*e*P	P	11 21 02.9	-0.3
	comp=Z,139nm,1.6s						
MGCD	Mangrove Creek	31.27	235	P	P	11 21 13.7	+0.7
	baz=31,SNR=21						
RMQ	Roma	31.46	248	P	P	11 21 15.5	+0.6
	baz=32,SNR=32						
RABL	Rabaul	31.80	292	*e*P	P	11 21 17.1	-0.8
	comp=Z,115nm,0.6s						
CTA	Charters Tower	33.40	260	P	P	11 21 31.2	0.0
	comp=Z,80nm,0.6s,baz=95,slow=10,SNR=138						
CTAO	Charters Tower	33.40	260	*e*P	P	11 21 31.2	0.0
	comp=Z,99nm,0.8s						
CTAO	Charters Tower	33.40	260	*e*P	P	11 21 31.2	0.0
CTAO				pmax	pmax		
	comp=Z,99nm,0.8s						
CNB	Canberra Magne	33.40	232	P	P	11 21 31.8	+0.7
	baz=34,SNR=150						
PATS	Pohnpei	33.60	315	*e*P	P	11 21 33.4	+0.4
	comp=Z,124nm,1.5s						
CAN	Canberra	33.68	232	*e*P	P	11 21 33.3	-0.1
	comp=Z,54nm,0.8s						
CAN	Canberra	33.68	232	*e*P	P	11 21 33.3	-0.1
CAN				pmax	pmax		
	comp=Z,54nm,0.8s						
YNG	Young	33.77	235	P	P	11 21 35.0	+0.9
	baz=34,SNR=7.1						
PMG	Port Moresby	34.40	280	P	P	11 21 40.8	+1.2
	comp=Z,301nm,0.8s,baz=70,slow=5.5,SNR=61						
PMG	Port Moresby	34.40	280	*e*P	P	11 21 40.9	+1.2
	comp=Z,332nm,0.9s						
PMG	Port Moresby	34.40	280	*d i*P	P	11 21 40.7	+1.0
PMG				pmax	pmax		
	comp=Z,1µm,0.9s						
CMSA	Cobar Meteorol	35.12	240	P	P	11 21 45.7	+0.3
	baz=35,SNR=107						
JOHN	Johnston Islan	35.50	15	*e*P	P	11 21 48.4	-0.2
	comp=Z,137nm,0.8s						
COEN	Coen	37.05	270	P	P	11 22 02.2	+0.7
	baz=37,SNR=272						
TOO	Toolangi	37.15	231	*e*P	P	11 22 02.5	+0.5
	comp=Z,92nm,0.9s						
TOO	Toolangi	37.15	231	P	P	11 22 02.5	+0.5
	baz=37,SNR=25						
TOO	Toolangi	37.15	231	*e*P	P	11 22 02.5	+0.5
TOO				pmax	pmax		
	comp=Z,93nm,0.9s						
MOO	Moorlands	38.08	223	P	P	11 22 09.9	+0.5
	baz=38,SNR=3.7						
TAU	Tasmania Unive	38.23	222	*e*P	P	11 22 10.4	-0.2
	comp=Z,120nm,1.6s						
TAU	Tasmania Unive	38.23	222	*e*P	P	11 22 10.4	-0.2
TAU				pmax	pmax		
	comp=Z,120nm,1.6s						
STKA	Stephens Creek	38.60	241	P	P	11 22 14.5	+0.7
	comp=Z,92nm,0.7s,baz=90,slow=9.4,SNR=69						
STKA	Stephens Creek	38.60	241	*e*P	P	11 22 14.6	+0.7
	comp=Z,25nm,0.9s						
STKA	Stephens Creek	38.60	241	P	P	11 22 14.5	+0.7
	baz=39,SNR=16						
STKA	Stephens Creek	38.60	241	*e*P	P	11 22 14.6	+0.8
STKA				pmax	pmax		
	comp=Z,25nm,0.9s						
QIS	Mount Isa	39.61	259	P	P	11 22 21.3	-0.8
	baz=40,SNR=21						
ARPS	Mount Arapiles	39.62	234	P	P	11 22 21.9	0.0
	baz=40,SNR=9.7						
HTT	Hallett	41.11	239	P	P	11 22 34.0	+0.1
	baz=41,SNR=21						
JAY	Jayapura	42.85	286	P	P	11 22 48.5	+0.8
	comp=Z,149nm,0.7s,baz=101,slow=2.8,SNR=54						
JAY	Jayapura	42.85	286	P	P	11 22 48.5	+0.8
JAY				pmax	pmax		
	comp=Z,121nm,0.9s						
KHU	Kahuku	43.19	32	*e*P	P	11 22 49.9	-0.5
	comp=Z,187nm,1.3s						
KHU	Kahuku	43.19	32	*e*P	P	11 22 49.9	-0.5
KHU				pmax	pmax		
	comp=Z,187nm,1.3s						
KHLU	Kahalu`u	43.34	32	*e*P	P	11 22 51.8	+0.4
	comp=Z,185nm,0.9s						
AIN	Ainahou	43.37	32	*e*P	P	11 22 52.6	+0.9
	comp=Z,84nm,0.8s						
BBOO	Buckleboo	43.37	241	*e*P	P	11 22 51.6	+0.1
	comp=Z,129nm,0.8s						
BBOO	Buckleboo	43.37	241	P	P	11 22 51.5	+0.1
	baz=43,SNR=106						
MWH	Moku'aweowe	43.40	32	*e*P	P	11 22 52.7	+0.3
	comp=Z,116nm,1.2s						
HUH	Hualalai	43.44	32	*e*P	P	11 22 53.0	+0.6
	comp=Z,147nm,1.1s						
MLOA	Mauna Loa Obse	43.45	32	*e*P	P	11 22 53.3	+0.6
	comp=Z,80nm,0.9s						
HMH	Humu'ula Sheep	43.55	32	*e*P	P	11 22 54.5	+1.2
	comp=Z,254nm,0.8s						
POHA	Pohakuloa	43.66	32	*e*P	P	11 22 54.7	+0.7
	comp=Z,170nm,1.3s						
KEKH	Kekaha	43.66	26	*e*P	P	11 22 54.6	+0.8
	comp=Z,301nm,1.4s						
MHA	Mahukona	43.83	31	*e*P	P	11 22 55.6	+0.5
MHA	Mahukona	43.83	31	*e*P	P	11 22 55.6	+0.5
KIP	Kipapa	43.90	28	*e*P	P	11 22 55.9	+0.3
	comp=Z,100nm,1.3s						
KIP	Kipapa	43.90	28	*e*P	P	11 22 55.9	+0.3
KIP				pmax	pmax		
	comp=Z,100nm,1.3s						
OPA	Opana	44.13	28	*e*P	P	11 22 58.3	+0.9
	comp=Z,157nm,1.4s						
OPA	Opana	44.13	28	*e*P	P	11 22 58.3	+0.9
OPA				pmax	pmax		
	comp=Z,157nm,1.4s						
HLK	Haleakala	44.15	31	*e*P	P	11 22 58.5	+0.6
	comp=Z,152nm,0.9s						
KHLH	Kahului Airpor	44.18	30	*e*P	P	11 22 58.5	+0.7
	comp=Z,179nm,1.0s						
WRAB	Tennant Creek	44.58	260	*e*P	P	11 23 00.3	-0.7
	comp=Z,97nm,0.6s						
WRAB	Tennant Creek	44.58	260	*d i*P	P	11 23 00.1	-0.9
WRAB				pmax	pmax		
	comp=Z,90nm,0.7s						
ASAR	Alice Springs	44.75	254	P	P	11 23 02.1	-0.2
	comp=Z,432nm,0.6s,baz=87,slow=8.5,SNR=5146						
ASAR				PcP	PcP	11 24 31.1	-0.2
	comp=Z,10.0nm,0.6s,baz=100,slow=4.0,SNR=2.1						
ASAR				S	S	11 28 54.5	-2.5
	comp=Z,6.7nm,0.8s,baz=91,slow=15,SNR=14						
KDU	Kakadu	47.51	269	P	P	11 23 22.7	-0.4
	baz=48,SNR=51						
GUMO	Guam	47.82	308	*e*P	P	11 23 25.6	+0.2
	comp=Z,151nm,0.8s						
GUMO	Guam	47.82	308	*e*P	P	11 23 25.6	+0.2
GUMO				pmax	pmax		
	comp=Z,151nm,0.8s						
MTN	Manton Dam	48.75	268	P	P	11 23 31.6	-0.7
	baz=49,SNR=22						
WRKA	Warakurna	49.80	252	P	P	11 23 39.8	-0.2
	baz=50,SNR=602						
FORT	Forrest	49.97	245	*e*P	P	11 23 40.3	-0.8
	comp=Z,218nm,0.6s						
FORT	Forrest	49.97	245	P	P	11 23 40.5	-0.6
	baz=50,SNR=49						
KNRA	Kununurra	50.44	264	P	P	11 23 44.3	-0.4
	baz=50,SNR=37						
FAKI	Fak Fak	50.52	281	*e*P	P	11 23 45.4	+0.1
	comp=Z,70nm,1.4s						
SIJI	Sorong	52.18	283	P	P	11 23 57.6	+0.4
	comp=Z,228nm,0.7s,baz=113,slow=4.5,SNR=53						
SWI	Sorong	52.19	283	P	P	11 23 57.9	+0.6
SWI				pmax	pmax		
	comp=Z,263nm,0.7s						
PALU	Palau	52.79	294	P	P	11 24 01.1	-0.5
	baz=53,SNR=6.8						
AAI	Ambon	54.06	279	P	P	11 24 11.5	+0.9
AAI				pmax	pmax		
	comp=Z,165nm,0.5s						
KMBL	Kambalda	55.28	244	P	P	11 24 17.7	-1.1
	baz=55,SNR=27						
TNTI	Ternate	56.40	283	*e*P	P	11 24 27.2	+0.4
	comp=Z,77nm,0.8s						
BATI	Baumata	56.48	269	P	P	11 24 28.8	+1.4
	comp=Z,66nm,0.6s,baz=295,slow=0.6,SNR=9.4						
MEEK	Meekatharra	58.39	249	P	P	11 24 39.2	-1.0
	baz=58,SNR=18						
NWAO	Narrogin (SRO)	59.18	242	P	P	11 24 44.8	-0.6
	comp=Z,23nm,0.7s,baz=109,slow=5.2,SNR=23						
NWAO	Narrogin (SRO)	59.18	242	P	P	11 24 44.7	-0.6
	baz=59,SNR=20						
BLDU	Ballidu	59.74	245	P	P	11 24 48.3	-0.9
	baz=60,SNR=43						
MUN	Mundaring	60.09	243	P	P	11 24 51.2	-0.1
	baz=60,SNR=9.8						
SBA	Scott Base	60.44	184	*e*P	P	11 24 54.9	+2.1
	comp=Z,42nm,1.8s						
SBA	Scott Base	60.44	184	*e*P	P	11 24 54.9	+2.1
SBA				pmax	pmax		
	comp=Z,42nm,1.8s						
MORW	Morawa	60.44	246	*e*P	P	11 24 52.9	-0.8
	comp=Z,28nm,0.8s						
MORW	Morawa	60.44	246	P	P	11 24 52.8	-1.0
	baz=60,SNR=24						
VNDA	Vanda	60.47	185	P	P	11 24 53.5	+0.5
	comp=Z,1.2nm,0.6s,baz=352,slow=7.9,SNR=20						
KAPI	Kappang	61.64	274	*e*P	P	11 25 01.9	+0.1
	comp=Z,20nm,0.6s						
KAPI	Kappang	61.64	274	*e*P	P	11 25 01.9	+0.1
KAPI				pmax	pmax		
	comp=Z,20nm,0.6s						
GIRL	Giralia	62.85	253	P	P	11 25 09.5	0.0
	baz=63,SNR=18						
CASY	Casey	66.14	205	*e*P	P	11 25 29.5	+0.1
	comp=Z,20nm,1.2s						
MJAR	Matsushiro Arr	67.85	323	P	P	11 25 40.4	+0.1
	comp=Z,10nm,0.8s,baz=165,slow=6.3,SNR=20						
MAJO	Matsushiro	67.86	323	*e*P	P	11 25 40.7	+0.4
	comp=Z,11nm,0.6s						
MAJO	Matsushiro	67.86	323	*c i*P	P	11 25 40.5	+0.2
MAJO				pmax	pmax		
	comp=Z,12nm,0.7s						
MAT	Matsushiro	67.86	323	P	P	11 25 40.4	+0.1
ADK	Adak	69.48	1	*e*P	P	11 25 49.1	-0.6
	comp=Z,47nm,0.8s						
ADK	Adak	69.48	1	*e*P	P	11 25 49.1	-0.6
ADK				pmax	pmax		
	comp=Z,47nm,0.8s						
SBUM	Sibu	71.15	279	P	P	11 26 01.0	+0.6
QSPA	South Pole Qui	72.17	180	*e*P	P	11 26 06.0	+0.4
	comp=Z,21nm,1.2s						
SSLB	Suanglung	72.18	303	*e*P	P	11 26 05.2	-1.0
	comp=Z,21nm,1.0s						
TPUB	Ta-pu	72.20	302	*e*P	P	11 26 05.6	-0.7
	comp=Z,45nm,0.7s						
KSM	Kuching	72.63	277	P	P	11 26 10.0	+1.0
LEM	Lembang	72.66	268	P	P	11 26 09.7	+0.3
	comp=Z,111nm,0.7s,baz=38,slow=5.7,SNR=23						
LEM	Lembang	72.66	268	P	P	11 26 09.8	+0.4
LEM				pmax	pmax		
	comp=Z,100nm,0.8s						
PET	Petropavlovsk	73.33	346	*i* P	P	11 26 11.6	-0.5
PET				pmax	pmax		
	comp=Z,16nm,0.8s						
PEA0B	Petropavlovsk-	73.64	345	*e*P	P	11 26 14.2	+0.4
	comp=Z,102nm,1.4s						
PEA0B	Petropavlovsk-	73.64	345	*e*P	P	11 26 14.2	+0.4
PEA0B				pmax	pmax		
	comp=Z,102nm,1.4s						
PETK	Petropavlovsk-	73.64	345	P	P	11 26 14.0	+0.1
	comp=Z,21nm,0.8s,baz=125,slow=8.5,SNR=54						
PEA1	Petropavlovsk-	73.64	345	*e*P	P	11 26 14.0	+0.1
KSRS	Korea Array	74.64	318	P	P	11 26 21.2	+1.4
	comp=Z,2.5nm,0.7s,baz=134,slow=7.0,SNR=11						
SCZ2	Santa Cruz Isl	76.13	47	P	P	11 26 29.5	+1.2

	baz=237,SNR=7.0						
SBC	**Santa Barbara**	76.32	47	P	P	11 26 30.4	+1.2
	baz=237						
SCI2	**San Clemente I**	76.36	48	P	P	11 26 30.6	+1.1
	baz=238,SNR=5.8						
PKM	**Mcpherson Peak**	76.50	46	P	P	11 26 31.8	+1.3
	baz=237,SNR=17						
USRK	**Ussuriysk Ar.**	76.56	326	P	P	11 26 31.5	+1.2
	comp=Z,3.9nm,0.9s,baz=105,slow=7.4,SNR=5.2						
BLG	**Laguna Peak, P**	76.59	47	P	P	11 26 31.5	+0.7
	baz=237						
SMMC	**Simmler**	76.60	46	P	P	11 26 32.2	+1.4
	baz=236,SNR=10						
CIS	**Catalina Islan**	76.67	48	P	P	11 26 31.8	+0.6
	baz=238						
FMP	**Fort Macarthur**	76.92	48	P	P	11 26 33.3	+0.8
	baz=238						
OSI	**Osito Audit: C**	77.10	47	P	P	11 26 34.4	+0.9
	baz=237						
DECC	**Green Verdugo**	77.18	47	P	P	11 26 34.4	+0.4
	baz=238,SNR=5.2						
ARVC	**Arvin**	77.30	46	P	P	11 26 35.6	+1.0
	baz=237,SNR=6.2						
109C	**Camp Elliot, M**	77.34	49	P	P	11 26 35.7	+0.9
	baz=239						
VES	**Vestal, Richgr**	77.51	46	P	P	11 26 36.2	+0.5
	baz=237,SNR=27						
O02D	**Mt. Diablo Mer**	77.57	40	P	P	11 26 37.5	+1.6
	baz=234,SNR=12						
VOG	**Valley Oaks Go**	77.57	45	P	P	11 26 36.5	+0.5
	baz=237						
MURC	**Murrieta**	77.64	49	P	P	11 26 37.3	+0.8
	baz=239,SNR=9.8						
BFSC	**Mount Baldy Ra**	77.65	48	P	P	11 26 37.3	+0.7
	baz=238,SNR=20						
EDW2	**Edwards Air Fo**	77.75	47	P	P	11 26 38.1	+1.0
	baz=238,SNR=46						
ISA	**Isabella, Lake**	77.83	46	P	P	11 26 38.7	+1.1
	baz=237,SNR=44						
MONP2	**Monument Peak**	77.84	49	P	P	11 26 38.9	+1.2
	baz=239,SNR=35						
NJ2	**Nanjing**	77.88	309	P	P	11 26 39.2	+1.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
IKP	**In-Ko-Pah, Jac**	77.94	50	P	P	11 26 39.5	+1.3
	baz=240,SNR=24						
N02D	**Trinity Center**	78.09	40	P	P	11 26 40.1	+1.3
	baz=234,SNR=8.7						
MDJ	**Mudanjiang**	78.13	325	P	P	11 26 40.6	+1.8
MDJ				pP	pwP	11 28 45.3	-0.5
MDJ				sP	PP	11 29 47.2	+0.3
MDJ				S	S	11 35 46.6	+1.3
MDJ				pmax	pmax		
	comp=Z,35nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,260nm,6.3s						
PFO	**Pinyon Flats O**	78.18	49	eP	P	11 26 40.4	+0.9
	comp=Z,15nm,1.0s						
PFO	**Pinyon Flats O**	78.18	49	eP	P	11 26 40.4	+0.9
PFO				pmax	pmax		
	comp=Z,15nm,1.0s						
PFO	**Pinyon Flats O**	78.18	49	P	P	11 26 40.4	+0.9
	baz=239,SNR=9.0						
BBRC	**Big Bear Solar**	78.18	48	P	P	11 26 40.6	+1.0
	baz=239						
O03E	**Paynes Creek**	78.25	41	P	P	11 26 40.3	+0.6
	baz=234,SNR=10						
M02C	**Callahan**	78.25	39	P	P	11 26 41.1	+1.5
	baz=233,SNR=12						
L02E	**Cave Junction**	78.26	38	P	P	11 26 40.8	+1.2
	baz=233						
LRMC	**Laurel Mtn Rad**	78.28	47	P	P	11 26 40.9	+0.9
	baz=238,SNR=20						
SWSC	**Sam W. Stewart**	78.31	50	P	P	11 26 41.1	+1.1
	baz=240						
KDAK	**Kodiak Island**	78.39	14	i P	P	11 26 39.9	+0.1
RRX	**Edison Barstow**	78.45	48	P	P	11 26 41.6	+0.8
	baz=238						
CWC	**Cottonwood Cre**	78.52	46	P	P	11 26 42.1	+0.8
	baz=238						
K02D	**Willamette Mer**	78.55	38	P	P	11 26 42.3	+1.1
	baz=232,SNR=6.0						
MLAC	**Mammoth, Mammo**	78.65	44	P	P	11 26 43.2	+1.2
	baz=237						
J01E	**Myrtle Point**	78.68	37	P	P	11 26 42.9	+1.2
	baz=232						
BELC	**Belle Mtn. Jos**	78.70	49	P	P	11 26 43.4	+1.1
	baz=239,SNR=21						
MPMC	**Manual Prospec**	78.72	46	P	P	11 26 43.4	+1.0
	baz=238,SNR=43						
TIN	**Tinemaha, Big**	78.75	45	P	P	11 26 43.7	+1.3
	baz=237,SNR=5.3						
GSC	**Goldstone, Bar**	78.80	47	P	P	11 26 43.6	+0.9
	baz=239,SNR=14						
HEC	**Hector,Ludlow**	78.89	48	P	P	11 26 44.0	+0.8
	baz=239,SNR=7.4						
BC3	**Big Chuckawall**	78.92	49	P	P	11 26 44.6	+1.2
	baz=240,SNR=5.5						
L04D	**Klamath Falls**	79.07	39	P	P	11 26 45.0	+1.0
	baz=234,SNR=14						
GLA	**Glamis**	79.08	50	P	P	11 26 45.6	+1.5
	baz=240,SNR=10						
M04C	**Macdoel**	79.09	39	P	P	11 26 45.3	+1.2
	baz=234,SNR=14						
GRAC	**Grapevine Rang**	79.30	46	P	P	11 26 46.6	+1.4
	baz=238,SNR=5.9						
I02D	**Swisshome**	79.31	37	P	P	11 26 46.4	+1.4
	baz=232						
I03D	**Drain, OR**	79.34	37	P	P	11 26 46.3	+1.2
	baz=233						
GMRC	**Granite Mounta**	79.34	48	P	P	11 26 46.5	+0.9
	baz=239,SNR=17						
FURC	**Furnace Creek,**	79.37	46	P	P	11 26 46.5	+1.0
	baz=238,SNR=24						
IRM	**Iron Mountain**	79.39	49	P	P	11 26 47.0	+1.2
	baz=240,SNR=16						
NVAR	**Mina Array Bea**	79.44	44	P	P	11 26 47.1	+1.0
	comp=Z,21nm,0.8s,baz=225,slow=8.8,SNR=154						
SHOC	**Shoshone, Teco**	79.48	47	P	P	11 26 47.0	+0.8
	baz=239,SNR=18						
TUQ	**Turquoise Moun**	79.49	47	P	P	11 26 47.3	+0.9
	baz=239,SNR=11						
K04D	**Chiloquin, OR**	79.64	39	P	P	11 26 47.9	+1.0
	baz=234						
Y12C	**Blythe**	79.64	50	P	P	11 26 48.2	+1.1
	baz=240,SNR=7.3						
J04D	**Umpqua Nationa**	79.79	38	P	P	11 26 49.0	+1.2
	baz=234,SNR=26						
I04A	**Tendick Farm,**	79.94	38	P	P	11 26 49.1	+0.6
	baz=233,SNR=13						
CN2	**Changchun**	79.97	322	eP	P	11 26 49.3	+0.8
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
214A	**Organ Pipe Nat**	80.04	52	P	P	11 26 50.7	+1.5
	baz=242						
TPNV	**Topopah Spring**	80.04	46	P	P	11 26 50.4	+1.1
	baz=239,SNR=33						
KLR	**Kul'dur**	80.06	329⇑	eP	P	11 26 49.8	+1.0
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NEE2	**Needles Airpor**	80.08	49	P	P	11 26 50.5	+1.2
	baz=240						
PDMCI	**Parker Dam,Lak**	80.19	49	P	P	11 26 51.1	+1.3
	baz=240,SNR=10						
H04D	**Lebanon**	80.19	37	P	P	11 26 50.5	+0.9
	baz=233,SNR=5.5						
G03D	**McMinnville, O**	80.31	36	P	P	11 26 51.3	+1.1
	baz=232,SNR=5.2						
J05D	**Fort Rock, OR**	80.33	39	P	P	11 26 52.0	+1.4
	baz=234,SNR=64						
WHN	**Wuhan**	80.55	306	P	P	11 26 53.4	+1.6
SHPR	**Sheep Range**	80.56	47	eP	P	11 26 52.7	+0.7
	comp=Z,20nm,1.0s						
I05D	**Terrebonne, OR**	80.89	38	P	P	11 26 54.3	+0.9
	baz=234,SNR=13						
F04D	**Rainier, OR**	80.98	35	P	P	11 26 55.0	+1.3
	baz=232						
DIB	**Dawson Inlet,**	81.13	26	eP	P	11 26 54.3	+0.1
	comp=Z,29nm,0.9s						
MA2	**Magadan**	81.16	345⇑	eP	P	11 26 52.4	-1.8
MA2				pmax	pmax		
	comp=Z,16nm,0.9s						
R11A	**Troy Canyon, C**	81.21	45	P	P	11 26 55.9	+0.6
	baz=239,SNR=22						
G05D	**Wamic, OR**	81.43	37	P	P	11 26 56.9	+0.9
	baz=234,SNR=6.5						
E04D	**Cinebar**	81.51	35	P	P	11 26 57.6	+1.3
	baz=233,SNR=10						
TUC	**Tucson**	81.72	52	eP	P	11 26 58.6	+0.7
	comp=Z,45nm,1.1s						
TUC	**Tucson**	81.72	52	eP	P	11 26 58.6	+0.7
TUC				pmax	pmax		
	comp=Z,45nm,1.1s						
TUC	**Tucson**	81.72	52	P	P	11 26 59.6	+1.7
	baz=243						
F05D	**White Salmon**	81.73	36	P	P	11 26 58.2	+0.7
	baz=234						
D04E	**Lakebay**	81.78	35	P	P	11 26 59.4	+1.8
	baz=233,SNR=8.5						
G06A	**Carlson Farm,**	81.82	37	eP	P	11 26 58.7	+0.6
	comp=Z,27nm,0.9s						
D03D	**Eldon**	81.82	34	P	P	11 26 59.1	+1.1
	baz=232,SNR=16						
ELK	**Elko**	82.67	43	eP	P	11 27 02.8	+0.1
	comp=Z,31nm,1.1s						
ELK	**Elko**	82.67	43	eP	P	11 27 02.8	+0.1
ELK				pmax	pmax		
	comp=Z,31nm,1.1s						
A04D	**Lummi Island**	82.75	33	P	P	11 27 03.6	+1.1
	baz=232						
WUAZ	**Wupatki**	82.77	49	eP	P	11 27 04.0	+0.8
	comp=Z,40nm,1.0s						
WUAZ	**Wupatki**	82.77	49	P	P	11 27 04.4	+1.2
	baz=242						
B05A	**Bryant**	82.80	34	P	P	11 27 03.5	+0.7
	baz=233,SNR=14						
G08A	**Pilot Rock**	82.82	38	eP	P	11 27 03.6	+0.5
	comp=Z,68nm,1.4s						
C06D	**Leavenworth**	83.24	35	P	P	11 27 05.5	+0.5
	baz=234						
PANO	**Nakornpanom**	83.31	290	P	P	11 27 07.2	+1.2
PANO	**Nakornpanom**	83.31	290	P	P	11 27 07.2	+1.2
	comp=Z,0.5nm,0.8s,comp=Z,0.0nm						
X18A	**Snowflake**	83.35	51	eP	P	11 27 04.8	-1.4
	comp=Z,16nm,0.9s						
CAST	**Castle Rocks**	83.61	12	eP	P	11 27 05.3	-1.3
	comp=Z,51nm,0.8s						
BJI	**Beijing**	83.73	315	eP	P	11 27 08.6	+1.0
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
W18A	**Petrified Fore**	83.77	50	P	P	11 27 09.3	+1.0
	baz=243						
SKNT	**Sakolnakorn**	83.81	290	P	P	11 27 09.3	+0.8
SKNT	**Sakolnakorn**	83.81	290	P	P	11 27 09.3	+0.8
	comp=Z,27nm,0.9s,comp=Z,0.3nm						
PSI	**Prapat**	83.83	275	eP	P	11 27 08.3	-0.6
	comp=Z,36nm,0.9s						
PSI	**Prapat**	83.83	275	eP	P	11 27 08.3	-0.6
PSI				pmax	pmax		
	comp=Z,36nm,0.9s						
MAW	**Mawson**	83.87	200	P	P	11 27 08.0	+0.1
	comp=Z,6.4nm,0.4s,baz=140,slow=5.0,SNR=24						
MAW	**Mawson**	83.87	200	P	P	11 27 07.9	+0.1
	baz=84,SNR=9.2						
MAW	**Mawson**	83.87	200	P	P	11 27 08.1	+0.3
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DUG	**Dugway, Tooele**	84.00	45	P	P	11 27 09.8	+0.6
	baz=241						
121A	**Cookes Peak, D**	84.10	53	P	P	11 27 11.4	+1.5
	baz=244,SNR=17						
HLID	**Hailey**	84.64	41	P	P	11 27 13.5	+1.2
	baz=239						
TRTT	**Trang**	84.69	280	P	P	11 27 15.1	+2.1
NONG	**Nongkai**	84.94	291	P	P	11 27 15.1	+1.1
NONG	**Nongkai**	84.94	291	P	P	11 27 15.1	+1.1
	comp=Z,0.4nm,0.8s,comp=Z,0.0nm						
CHAI	**Chaiyaphum**	85.23	288	P	P	11 27 17.9	+2.4
Y22D	**IRIS PASSCAL I**	85.41	52	P	P	11 27 17.0	+0.8
	baz=245						
NEW	**Newport**	85.52	36	P	P	11 27 16.3	+0.1
	baz=237,SNR=17						
HDA	**Harding Lake**	85.54	13	P	P	11 27 15.2	-0.7
	baz=210						
MNTX	**Cornudas Mount**	85.60	55	P	P	11 27 18.2	+1.2
	baz=246,SNR=25						
BNM	**Barren Site**	85.66	52	eP	P	11 27 19.0	+1.5
TCOL	**CIGO, UAF Yank**	85.76	13	P	P	11 27 16.1	-0.7
	baz=209						
COLA	**College**	85.76	13	eP	P	11 27 16.8	-0.1
	comp=Z,89nm,1.4s						
COLA	**College**	85.76	13	i P	P	11 27 15.8	-1.0
COLA				pmax	pmax		
	comp=Z,59nm,1.4s						
ILAR	**Eielson Array**	85.87	13	P	P	11 27 16.6	-0.8
	comp=Z,12nm,0.8s,baz=230,slow=5.5,SNR=115						
ILAR				PP	PP	11 30 44.9	-4.0
	comp=Z,2.0nm,1.1s,baz=214,slow=7.2,SNR=4.4						
TXAR	**Lajitas Array**	86.03	58	P	P	11 27 20.9	+1.8
	comp=Z,28nm,0.8s,baz=221,slow=5.9,SNR=322						
POKR	**Poker Plat Res**	86.06	13	P	P	11 27 17.4	-0.9
	baz=210						
TLIG	**Tlapa**	86.11	70	eP	P	11 27 19.1	-0.7
	comp=Z,14nm,0.9s						
TASM	**ASL Pad, Albuq**	86.12	52	P	P	11 27 20.4	+0.8
	baz=245,SNR=29						
TASM	**ASL Pad, Albuq**	86.12	52	P	P	11 27 20.3	+0.8
	baz=245,SNR=28						
ANMO	**Albuquerque**	86.12	52	eP	P	11 27 20.5	+0.9
	comp=Z,19nm,1.0s						
ANMO	**Albuquerque**	86.12	52c	iP	P	11 27 20.3	+0.7
ANMO				pmax	pmax		
	comp=Z,21nm,1.1s						
ANMO	**Albuquerque**	86.12	52	P	P	11 27 20.3	+0.7
	baz=245						
XAN	**Xi'an**	86.20	307	P	P	11 27 21.3	+1.5
XAN				pmax	pmax		
	comp=Z,27nm,1.0s						
PBKT	**Sadao Pong**	86.38	289	P	P	11 27 23.2	+2.3
PHET	**Kaeng Krachan**	86.39	285	P	P	11 27 23.2	+2.2
BILL	**Bilibino**	86.40	354⇓	iP	P	11 27 20.0	+0.1
BILL				e*PP	pP	11 29 25.1	-2.0
BILL				e*SP	sP	11 30 25.8	-0.8
BILL				e		11 30 52.3	
BILL				pmax	pmax		
	comp=Z,18nm,1.1s						
MSO	**Missoula**	86.59	38	P	P	11 27 21.3	-0.2
	baz=239,SNR=6.3						
S22A	**4UR Ranch, Cre**	87.03	49	P	P	11 27 24.8	+0.9
	baz=245,SNR=21						
O20A	**White River Ci**	87.07	46	P	P	11 27 24.7	+0.8
	baz=244,SNR=12						
EGAK	**Eagle**	87.20	15	eP	P	11 27 24.2	+0.5
	comp=Z,36nm,1.3s						
HHC	**Hu-ho-hao-te**	87.22	314	P	P	11 27 16.2	-8.3
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,29nm,7.7s						
HHC				LR	LR		
	comp=N,110nm,18.1s						
HHC				LR	LR		
	comp=E,98nm,18.2s						
HHC	**Hu-ho-hao-te**	87.22	314	P	P	11 27 24.6	+0.1
HHC				pmax	pmax		
	comp=E,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=E,240nm,6.8s						
FLWY	**Flagg Ranch**	87.24	42	eP	P	11 27 24.6	-0.1
	comp=E,46nm,1.0s						
YHB	**Horse Butte**	87.25	41	eP	P	11 27 24.9	+0.2
	comp=E,44nm,1.0s						
YPP	**Pitchstone Pla**	87.26	42	eP	P	11 27 25.7	+0.8
	comp=E,24nm,1.6s						
BW06	**Boulder Array**	87.37	43	P	P	11 27 25.7	+0.3
	baz=243,SNR=34						
PDAR	**Pinedale Array**	87.37	43	P	P	11 27 25.6	+0.3
	comp=E,14nm,0.7s,baz=218,slow=3.1,SNR=118						
PDAR				PP	PP	11 30 59.2	-2.3
	comp=E,1.5nm,0.9s,baz=255,slow=5.8,SNR=8.1						
BOZ	**Bozeman (W)**	87.38	40	P	P	11 27 26.1	+0.9
	baz=241,SNR=35						
H17A	**Grant Village**	87.47	42	P	P	11 27 27.7	+1.9
	baz=242,SNR=24						
WALA	**Waterton Lakes**	87.75	36	eP	P	11 27 26.3	-0.5
	comp=E,17nm,0.9s						
KMI	**Kunming**	87.77	297	P	P	11 27 28.5	+0.9
KMI				pmax	pmax		
	comp=E,12nm,0.5s						
KMI				pmax	pmax		
	comp=E,76nm,4.3s						
SDCO	**Great Sand Dun**	87.98	49	P	P	11 27 28.8	+0.4
	baz=246,SNR=11						
LAMP	**Lampang**	88.23	290	P	P	11 27 31.6	+2.0
LAMP	**Lampang**	88.23	290	P	P	11 27 31.6	+2.0
	comp=E,30µm,0.8s,comp=E,90nm						
PAYA	**Payao**	88.30	291	P	P	11 27 32.2	+2.3
PAYA	**Payao**	88.30	291	P	P	11 27 32.2	+2.3
MSTX	**Muleshoe**	88.52	54	P	P	11 27 31.3	+0.5
	baz=247						
T25A	**Trinidad**	88.53	50	P	P	11 27 31.2	+0.3
	baz=246,SNR=5.8						
RLMT	**Red Lodge**	88.63	41	P	P	11 27 32.2	+1.1
	baz=243,SNR=16						
Q24A	**Divide**	88.74	48	P	P	11 27 32.7	+0.8
	baz=246,SNR=6.5						
ISCO	**Idaho Springs**	88.75	47	P	P	11 27 32.8	+0.9
	baz=245,SNR=7.3						
TOLK	**Toolik Lake Re**	88.77	10	P	P	11 27 30.9	-0.1
	baz=207						
CMAR	**Chiang Mai Arr**	88.83	290	P	P	11 27 33.6	+1.3
	comp=E,6.6nm,0.9s,baz=108,slow=2.9,SNR=38						
CMAR				PP	PP	11 31 16.6	+3.5
	comp=E,0.8nm,0.3s,baz=216,slow=49,SNR=2.9						
CMAR	**Chiang Mai Arr**	88.83	290	i P	P	11 27 33.9	+1.6
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMMT	**Chiang Mai**	88.94	290	P	P	11 27 34.0	+1.1
CMMT	**Chiang Mai**	88.94	290	P	P	11 27 34.0	+1.1
	comp=Z,6.8nm,0.8s						
CHTO	**Chiang Mai**	88.94	290	eP	P	11 27 33.8	+0.9
	comp=Z,9.3nm,0.8s						
CHTO	**Chiang Mai**	88.94	290	eP	P	11 27 33.8	+0.9
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
N23A	**Red Feather La**	88.98	46	P	P	11 27 33.9	+1.0
	baz=245,SNR=19						
CD2	**Chengdu**	89.01	303	P	P	11 27 32.6	-0.4
833A	**Chaparral WMA,**	89.13	60	P	P	11 27 34.5	+1.0
	baz=249						
SYO	**Syowa Base**	89.17	193⇑	iP	P	11 27 31.0	-1.9
SYO	**Syowa Base**	89.17	193⇓	ePcP	P	11 27 32.6	-0.3
K22A	**Casper**	89.32	45	P	P	11 27 34.8	+0.5
	baz=245,SNR=10.0						
YAK	**Yakutsk**	89.53	338	eP	P	11 27 33.9	-0.7
JCT	**Junction City**	89.56	58	P	P	11 27 35.9	+0.3
	baz=249						
EPYK	**Eagle Plains**	89.59	16	P	P	11 27 34.6	-0.3
	baz=219						
EGMT	**Eagleton**	89.66	39	P	P	11 27 36.0	+0.4
	baz=242						
AMTX	**Amarillo**	89.70	53	P	P	11 27 36.4	+0.2
	baz=248						
ABTX	**Abilene, Hawle**	90.45	56	P	P	11 27 40.3	+0.7
	baz=249						
KSCO	**Kaye Shedlock'**	90.56	49	P	P	11 27 40.8	+0.7
	baz=247						
SNAA	**Sanae**	90.63	179	P	P	11 27 39.1	-0.6
SNAA	**Sanae**	90.63	179	eP	P	11 27 39.2	-0.6
	comp=Z,9.6nm,1.3s						
SNAA	**Sanae**	90.63	179c	iP	P	11 27 38.9	-0.9
VNA3	**Neumayer Olymp**	90.77	176	P	P	11 27 40.2	-0.2
LZH	**Lanzhou**	90.83	308	eP	P	11 27 42.6	+1.1
LZH				pP	pP	11 29 52.7	+1.9
LZH				sP	sP	11 30 50.1	-0.1
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,4.6s						
LAO	**LASA Array**	91.23	41	P	P	11 27 44.3	+1.4
	baz=245						
PLCA	**Paso Flores**	91.39	134	P	P	11 27 44.3	+0.4
	comp=Z,3.4nm,1.0s,baz=247,slow=3.5,SNR=2.9						
VNA1	**Neumayer--Stat**	91.44	177	P	P	11 27 43.9	+0.5
435B	**Jarrell**	91.46	58	P	P	11 27 44.9	+0.6
	baz=250						
RSSD	**Black Hills**	91.58	44	eP	P	11 27 45.3	+0.5
	comp=Z,19nm,0.9s						
RSSD	**Black Hills**	91.58	44	eP	P	11 27 45.3	+0.5
RSSD				pmax	pmax		
	comp=Z,19nm,0.9s						
RSSD	**Black Hills**	91.58	44	P	P	11 27 44.8	0.0
	baz=246						
OGNE	**Ogallala**	91.72	47	P	P	11 27 45.4	+0.1
	baz=248						
WMOK	**Wichita Mounta**	91.87	54	P	P	11 27 45.9	-0.2
	baz=250						
WHTX	**Lake Whitney,**	91.97	57	P	P	11 27 47.0	+0.4
	baz=250						
CBKS	**Cedar Bluff**	92.58	50	P	P	11 27 49.7	+0.4
	baz=249						
HKT	**Hockley**	92.61	60⇓	eP	P	11 27 51.0	+1.5
HKT				pmax	pmax		
	comp=Z,14nm,1.9s						
ULN	**Ulaanbaatar**	93.10	319⇓	eP	P	11 27 52.3	+0.7
ULN				pmax	pmax		
	comp=Z,8.0nm,1.8s						
DGMT	**Dagmar**	93.21	40	P	P	11 27 52.7	+0.8
	baz=247						
SONM	**Songino Array**	93.50	319	P	P	11 27 53.3	-0.1
	comp=Z,0.8nm,0.6s,baz=125,slow=3.2,SNR=5.0						
NATX	**Nacogdoches**	94.14	58	P	P	11 27 57.3	+0.8
	baz=252						
YKA	**Yellowknife Ar**	94.33	25	P	P	11 27 56.3	-0.2
	comp=Z,3.6nm,0.7s,baz=240,slow=4.3,SNR=14						
TUL1	**Leonard**	94.56	54	P	P	11 27 58.7	+0.4
	baz=251						
BGNE	**Belgrade**	94.62	48	P	P	11 27 59.1	+0.6
	baz=250						
KSU1	**Kansas State U**	94.97	51	P	P	11 28 01.0	+0.9
	baz=251						
TIXI	**Tiksi**	96.12	345⇑	eP	P	11 28 03.6	-0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ECSD	**EROS Data Cent**	96.45	46	P	P	11 28 06.5	-0.2
	baz=252						
U40A	**Yellville**	96.97	54	P	P	11 28 09.0	-0.2
	baz=253						
JFWS	**Jewell Farm**	100.68	48	P	Pdif	11 28 26.3	+0.9
	baz=256						
F39A	**Loretta**	100.95	45	P	Pdif	11 28 26.9	+0.2
	baz=256						
150A	**Eclectic**	101.42	59	P	Pdif	11 28 28.8	-0.2
	baz=256						
F40A	**Park Falls**	101.50	45	P	Pdif	11 28 29.3	+0.2
	baz=256						
ZALV	**Zalesovo Beam**	108.18	322	PKiKP	PKiKP	11 33 00.2	-0.9
	comp=Z,1.5nm,0.6s,baz=187,slow=1.4,SNR=5.6						
MK32	**Makanchi Array**	109.08	314	ePdif	Pdif	11 29 04.8	+2.0
MKAR	**Makanchi Array**	109.08	314	Pdiff	Pdif	11 29 04.8	+2.0
	comp=Z,0.3nm,0.6s,baz=103,slow=6.2,SNR=2.9						
MKAR				PKiKP	PKiKP	11 33 02.2	-0.9
	comp=Z,1.6nm,0.5s,baz=217,slow=0.5,SNR=17						
KURK	**Kurchatov**	111.77	318⇓	iPKIKP	PKiKP	11 33 07.2	-0.8
KURK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
BRVK	**Borovoye**	116.85	321⇓	iPKIKP	PKPdf	11 33 16.8	-0.9
GBN	**Guysborough**	121.38	47	ePKPdf	PKPdf	11 33 26.3	-0.4
ARU	**Arti**	122.80	326	i PKIKP	PKPdf	11 33 28.6	-0.5
ARU						11 35 16.7	
ARU						11 39 43.6	
ARU				SS	SS	11 51 09.5	-6.0
ARA0	**ARCESS Array S**	126.28	350	ePKPdf	PKPdf	11 33 35.0	-0.4
ARCES	**ARCESS Array B**	126.28	350	PKP	PKPdf	11 33 35.0	-0.4
	comp=Z,7.7nm,0.9s,baz=333,slow=1.4,SNR=19						
PRGR	**Permogore**	126.49	336	ePKIKP	PKPdf	11 33 34.9	-1.1
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GEYT	**Alibeck**	126.98	304	PKP	PKPdf	11 33 37.6	-0.1
	comp=Z,2.2nm,0.3s,baz=215,slow=1.8,SNR=5.4						
FIA0	**FINESS Array S**	133.15	344	ePKPdf	PKPdf	11 33 47.4	-1.2
FIA0	**FINESS Array S**	133.15	344	ePKIKP	PKPdf	11 33 47.4	-1.2
FINES	**FINESS Array B**	133.15	344	PKP	PKPdf	11 33 47.4	-1.2
	comp=Z,3.7nm,0.9s,baz=90,slow=3.8,SNR=7.0						
FINES				PP	PP	11 36 22.8	-1.1
	comp=Z,2.5nm,0.8s,baz=270,slow=1.9,SNR=5.5						
OBN	**Obninsk**	134.25	333	ePKIKP	PKPdf	11 33 50.0	-0.8
OBN				e		11 36 08.3	
OBN				e		11 36 30.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSU	**Vasula**	135.44	341⇑	iPKIKP	PKPdf	11 33 53.1	+0.2
NB2	**NORSAR Subarra**	136.34	353	PKP	PKPdf	11 33 54.1	-0.6
	comp=Z,0.8nm,0.6s,baz=14,slow=2.5						
NB200	**NORSAR Array S**	136.34	353	ePKPdf	PKPdf	11 33 53.8	-0.8
NOA	**NORSAR Array B**	136.34	353	PKP	PKPdf	11 33 53.8	-0.8
	comp=Z,0.9nm,0.7s,baz=13,slow=4.1,SNR=4.0						
GNI	**Garni**	136.72	310d	iPKIKP	PKiKP	11 33 58.1	0.0
HFS	**Hagfors**	136.90	351	PKhKP	PKPpre	11 33 47.9	
	comp=Z,1.0nm,0.3s,baz=60,slow=3.6,SNR=5.4						
NEY	**Neytrino**	137.05	315⇓	iPKIKP	PKiKP	11 33 58.2	-0.5

AKASG	Malin Array Be	140.51	332	PKhKP	PKPpre	11 33 54.8	
	comp=Z,0.8nm,0.4s,baz=49,slow=3.6,SNR=7.4						
BEL	Belsk	142.86	340	*e*PKP	PKPdf	11 34 05.8	-0.8
KIS	Kishinev	143.30	328	*e*PKP	PKPab	11 34 05.0	-0.9
MILM	Milestii Mici	143.36	328	⇑*i*P	PKPab	11 34 05.8	-0.3
LVV	L'vov	143.36	335	*e*PKIKP	PKPab	11 34 05.9	-0.2
KWP	Kalwaria Pacla	144.02	336	*e*PKP	PKPbc	11 34 08.3	0.0
TLCR		144.52	326	⇑*i*P	PKPab	11 34 11.0	+0.4
TLCR		144.52	326	⇑PKIKP	PKPab	11 34 11.0	+0.4
BUR08	Bucovina Ar. S	144.55	332	*e*PKPdf	PKPdf	11 34 10.0	+0.1
BURAR	Bucovina Array	144.56	332	⇑*i*P	PKPab	11 34 11.4	+0.5
BURAR	Bucovina Array	144.56	332	⇑PKIKP	PKPab	11 34 11.4	+0.5
OJC	Ojcow	144.57	340	*e*PKP	PKPbc	11 34 10.3	+0.3
BIZ	Bicaz	144.66	330	⇓*i*P	PKPab	11 34 11.6	+0.4
TESR	Tescani	144.71	330	⇓*i*P	PKPab	11 34 11.2	-0.2
BR131	Keskin Array S	144.72	315	*e*PKPdf	PKPbc	11 34 11.2	+0.2
BR131	Keskin Array S	144.72	315	*e*PKIKP	PKPbc	11 34 11.2	+0.2
BRTR	Keskin Array B	144.72	315	PKP	PKPbc	11 34 11.0	-0.1
	comp=Z,15nm,0.9s,baz=134,slow=3.6,SNR=49						
KOLS	Kolonicke sedl	144.76	336	*e*PKIKP	PKPbc	11 34 10.8	+0.2
KOLS	Kolonicke sedl	144.76	336	*e*PKP	PKPbc	11 34 10.8	+0.2
CFR	Carcaliu	144.88	327	⇑*i*P	PKPab	11 34 12.1	+0.1
CFR	Carcaliu	144.88	327	⇑PKIKP	PKPab	11 34 12.1	+0.1
UZH	Uzhgorod	144.99	336	*e*PKIKP	PKPbc	11 34 11.0	-0.3
UZH				*e*		11 36 25.1	
KSP	Ksiaz	145.07	344	*e*PKP	PKPbc	11 34 11.9	+0.4
NIE	Niedzica	145.08	338	*e*PKP	PKPab	11 34 12.3	-0.4
VRI	Vrincioaia	145.13	329	⇑*i*P	PKPbc	11 34 12.0	+0.2
VRI	Vrincioaia	145.13	329	⇑PKIKP	PKPbc	11 34 12.0	+0.2
PLOR	Plostina	145.18	329	⇓*i*P	PKPbc	11 34 12.1	+0.1
PLOR	Plostina	145.18	329	⇓PKIKP	PKPbc	11 34 12.2	+0.2
BMR	Baia Mare	145.27	334	⇑*i*P	PKPab	11 34 13.2	-0.3
BMR	Baia Mare	145.27	334	⇑PKIKP	PKPab	11 34 13.2	-0.3
TRPA	Tarpa	145.30	335	*e*P	PKPdf	11 34 11.1	+0.1
TLB	Topalu	145.33	326	⇑*i*P	PKPab	11 34 13.5	-0.3
TLB	Topalu	145.33	326	⇑PKIKP	PKPab	11 34 13.5	-0.3
ARCR	ARCALIA	145.35	332	⇑*i*P	PKPbc	11 34 13.1	+0.7
OSTC	Ostas	145.35	343	*e*PKP	PKPbc	11 34 12.9	+0.6
CHVC	Chvalec	145.36	344	*e*PKP	PKPab	11 34 13.2	-0.6
OZUR		145.42	330	⇑*i*P	PKPbc	11 34 12.6	-0.1
CLL	Collm	145.43	347	*e*PKPdf	PKPdf	11 34 11.7	+0.6
CLL	Collm	145.43	347	*e*PKIKP	PKPdf	11 34 11.7	+0.6
CLL	Collm	145.43	347	⇑*i*PKPbc	PKPbc	11 34 12.7	+0.2
	comp=Z,72nm,1.0s						
CLL				*e*pPKPdf	pPKPdf	11 36 33.0	+3.7
UPC	Upice	145.45	344	*e*PKIKP	PKPbc	11 34 13.2	+0.6
UPC	Upice	145.45	344	*e*PKP	PKPbc	11 34 13.2	+0.6
DPC	Dobruska-Polom	145.51	343	*e*PKIKP	PKPbc	11 34 12.3	-0.5
DPC	Dobruska-Polom	145.51	343	*e*PKP	PKPbc	11 34 12.3	-0.5
MANR	Mangalia	145.53	324	⇓*i*P	PKPab	11 34 14.2	-0.4
LANS	Liptovska Anna	145.59	339	*e*PKP2	PKPab	11 34 14.3	-0.5
LANS	Liptovska Anna	145.59	339	*e*PKP	PKPab	11 34 14.3	-0.5
BRG	Berggiesshubel	145.63	346	*e*PKP	PKPbc	11 34 13.3	+0.2
	comp=Z,31nm,1.0s						
BRG	Berggiesshubel	145.63	346	*e*PKIKP	PKPbc	11 34 13.3	+0.2
BRG				pmax	pmax		
	comp=Z,31nm,1.0s						
MORC	Moravsky Berou	145.67	342	⇓*i*P	PKPbc	11 34 14.0	+0.7
MORC	Moravsky Berou	145.67	342	⇓PKP2	PKPbc	11 34 14.0	+0.7
MORC	Moravsky Berou	145.67	342	*e*PKP	PKPbc	11 34 13.5	+0.2
DOPR	Dopca	145.71	330	⇓*i*P	PKPab	11 34 14.6	-0.7
WTSB	Winterswijk	145.74	354	*e*PKP	PKPbc	11 34 12.7	-0.6
ISR	Istrita	145.75	328	⇑*i*P	PKPab	11 34 14.7	-0.8
ISR	Istrita	145.75	328	⇑PKP2	PKPab	11 34 14.7	-0.8
MLR	Muntele Rosu	145.78	329	PKPbc	PKPdf	11 34 12.7	+0.7
	comp=Z,32nm,1.2s,baz=0.5,slow=5.1,SNR=16						
MLR	Muntele Rosu	145.78	329	⇓*i*P	PKPbc	11 34 14.2	+0.3
MLR	Muntele Rosu	145.78	329	⇓PKIKP	PKPbc	11 34 14.2	+0.3
PVCC	Panska Ves	145.80	345	*e*PKP2	PKPbc	11 34 14.3	+0.7
PVCC	Panska Ves	145.80	345	*e*PKP	PKPbc	11 34 14.3	+0.7
KECS	Kecovo	145.80	337	*e*PKP2	PKPbc	11 34 14.3	+0.6
KECS	Kecovo	145.80	337	*e*PKP	PKPbc	11 34 14.3	+0.6
CJR	Cluj-Napoca	145.97	332	⇑*i*P	PKPbc	11 34 14.9	+0.6
CJR	Cluj-Napoca	145.97	332	⇑PKP2	PKPbc	11 34 14.9	+0.6
SECR		146.04	328	⇑*i*P	PKPbc	11 34 14.5	0.0
VOIR		146.26	330	⇑*i*P	PKPbc	11 34 15.8	+0.7
VOIR		146.26	330	⇑PKP2	PKPbc	11 34 15.8	+0.7
DRGR		146.29	333	⇓*i*P	PKPbc	11 34 15.8	+0.6
DRGR		146.29	333	⇓PKP2	PKPbc	11 34 15.8	+0.6
PRU	Pruhonice	146.30	345	*e*PKIKP	PKPbc	11 34 15.4	+0.4
PRU				*e*		11 34 18.1	
PRU				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PRU	Pruhonice	146.30	345	*e*PKP	PKPbc	11 34 15.4	+0.4
PRU				*e*x	x	11 34 18.1	
GOPC	GO Pecny, Ondr	146.31	345	*e*PKIKP	PKPbc	11 34 15.2	+0.1
GOPC	GO Pecny, Ondr	146.31	345	*e*PKP	PKPbc	11 34 15.2	+0.1
MOX	Moxa	146.33	348	PKP2	PKPbc	11 34 15.7	+0.6
VRAC	Vranov	146.37	342	⇑*i*P	PKiKP	11 34 16.4	-1.0
VRAC	Vranov	146.37	342	⇑PKP2	PKiKP	11 34 16.4	-1.0
VRAC	Vranov	146.37	342	*e*PKP	PKPbc	11 34 15.6	+0.4
VYHS	Vyhne	146.37	339	*e*PKP2	PKPbc	11 34 15.8	+0.5
VYHS	Vyhne	146.37	339	*e*PKP	PKPbc	11 34 15.8	+0.5
JAVC	Velka Javorina	146.44	341	*e*PKP	PKiKP	11 34 16.9	-0.7
PSZ	Piszkesteto	146.49	337	*e*P	PKPdf	11 34 14.1	+1.0
ARR	Arges	146.51	330	⇓*i*P	PKPbc	11 34 16.8	+1.0
NKC	Novy Kostel	146.56	347	*e*PKIKP	PKPbc	11 34 15.8	+0.1
NKC	Novy Kostel	146.56	347	*e*PKP	PKPbc	11 34 15.8	+0.1
KRUC	Moravsky	146.65	342	PKIKP	PKPbc	11 34 16.3	+0.3
KRUC	Moravsky	146.65	342	*e*PKP	PKPbc	11 34 16.2	+0.3
TREC	Trest	146.69	343	*e*PKP2	PKPbc	11 34 16.6	+0.5
TREC	Trest	146.69	343	*e*PKP	PKPbc	11 34 16.6	+0.5
MODS	Modra-Piesok	146.99	341	*e*PKIKP	PKPbc	11 34 17.0	+0.1
MODS	Modra-Piesok	146.99	341	*e*PKP	PKPbc	11 34 17.0	+0.1
HGN	Heimansgroeve	147.00	355	*e*PKP	PKPbc	11 34 16.8	0.0
CSS	Mathiatis	147.02	307	*e*PKPdf	PKPdf	11 34 14.2	-0.1
SIRR	Siria	147.15	334	⇑*i*P	PKPbc	11 34 17.9	+0.5
MEM	Membach	147.15	355	⇓PKP	PKPbc	11 34 17.6	+0.4
BUD	Budapest	147.17	338	*e*P	PKPbc	11 34 17.0	-0.3
ZST	Bratislava	147.20	341	*e*PKIKP	PKPbc	11 34 17.6	+0.1
ZST	Bratislava	147.20	341	*e*PKP	PKPbc	11 34 17.5	+0.1
LEF	Lefka	147.29	308	⇓*i*P	PKPbc	11 34 18.3	+0.2
KHC	Kasperske Hory	147.34	345	*e*PKP	PKPdf	11 34 14.0	-0.4
KHC				*e*x	x	11 34 18.1	
KHC				*e*x	x	11 34 22.1	
GZR	Gura Zlata	147.35	332	⇓*i*P	PKPbc	11 34 18.1	+0.1
SNF	Seneffe	147.37	357	⇑PKPbc	PKPbc	11 34 17.8	+0.1
SNF				⇓PKPab	PKPab	11 34 21.8	+0.1
BCLA	Clavier	147.40	356	⇑PKPbc	PKPbc	11 34 17.7	-0.2
BCLA				⇓PKPab	PKPab	11 34 21.7	-0.2
AMBH	Ambrzfalva	147.47	335	*e*P	PKiKP	11 34 19.0	-0.7
PHSR	Pinarhisar	147.53	322	⇓*i*P	PKPbc	11 34 19.0	+0.5
CSKK	Cskako	147.54	339	*e*P	PKPbc	11 34 18.1	-0.3
GERES	GERESS Array B	147.57	345	PKPbc	PKPbc	11 34 18.4	-0.1
	comp=Z,14nm,0.8s,baz=29,slow=3.0,SNR=22						
BZS	Buzias	147.68	333	⇑*i*P	PKPbc	11 34 18.7	-0.1
BZS	Buzias	147.68	333	⇑PKIKP	PKPbc	11 34 18.7	-0.1
SRE	Strehaia	147.71	330	⇓*i*P	PKiKP	11 34 19.7	-0.6
SRE	Strehaia	147.71	330	⇓PKP2	PKiKP	11 34 19.7	-0.6
DOU	Dourbes	147.77	356	⇑PKPbc	PKPbc	11 34 18.9	+0.1
DOU				⇓PKPab	PKPab	11 34 23.1	-0.3
CONA	Conrad Observa	147.82	342	*i* PKiKP	PKPbc	11 34 19.8	+0.6
	comp=Z,46nm,1.4s,SNR=16						
SOP	Sopron	147.83	341	*e*P	PKPbc	11 34 19.0	0.0
WLF	Walferdange	148.07	354	⇓PKPbc	PKiKP	11 34 20.3	-0.5
MDVR	Moldovita	148.30	332	⇓*i*P	PKPbc	11 34 20.6	+0.2
MOA	Molln	148.34	344	*i* PKiKP	PKPbc	11 34 20.9	+0.5
	comp=Z,21nm,1.2s,SNR=8.2						
ARSA	Arzberg	148.53	342	*i* PKPbc	PKPbc	11 34 19.5	-1.4
	comp=Z,17nm,1.2s,SNR=5.1						
BEHE	Becsehely	148.82	339	*e*P	PKPdf	11 34 19.1	+2.2
CMLA	Cha da Macela	149.12	45	*i* PKP2	PKiKP	11 34 25.1	+1.7
BFO	Black Forest	149.13	351	*e*PKPdf	PKPdf	11 34 17.4	+0.1
BFO	Black Forest	149.13	351	*e*PKIKP	PKPdf	11 34 17.4	+0.1
SOKA	Soboth	149.19	342	*i* PKiKP	PKPbc	11 34 22.5	0.0
	comp=Z,28nm,1.2s,SNR=13						
VTS	Vitosha	149.21	328	⇓*i*P	PKiKP	11 34 23.4	-0.2
KBA	Koelnbreinsper	149.30	344	*i* PKiKP	PKPbc	11 34 22.0	-0.9
	comp=Z,23nm,1.0s,SNR=9.0						
EZN	Ezine	149.37	321	⇓*i*P	PKPbc	11 34 23.3	+0.2
WATA	Walderalm	149.49	346	*i* PKiKP	PKPbc	11 34 22.9	-0.4
	comp=Z,17nm,0.8s						
OBKA	Obir	149.49	342	*i* PKiKP	PKPbc	11 34 22.7	-0.6
	comp=Z,14nm,1.2s						
RETA	Reutte	149.51	348	*i* PKiKP	PKPbc	11 34 23.1	-0.2
	comp=Z,22nm,1.2s,SNR=6.1						
WTTA	Wattenberg	149.54	346	*i* PKiKP	PKPbc	11 34 23.6	0.0
	comp=Z,36nm,0.8s,SNR=11						
MOTA	Moosalm	149.58	347	*i* PKiKP	PKPbc	11 34 23.5	-0.1
	comp=Z,22nm,0.9s,SNR=9.5						
MYKA	Terra Mystica	149.63	343	*i* PKiKP	PKPbc	11 34 22.6	-1.0
	comp=Z,37nm,1.6s,SNR=6.5						
SQTA	Sankt Quirin	149.68	347	*i* PKiKP	PKPbc	11 34 23.7	-0.1
	comp=Z,29nm,0.9s,SNR=9.1						
ABTA	Abfaltersbach	149.82	345	*i* PKiKP	PKPbc	11 34 23.5	-0.6
	comp=Z,51nm,1.0s,SNR=12						
DAVA	Damuels	149.88	349	*i* PKiKP	PKPbc	11 34 24.4	+0.1
	comp=Z,42nm,1.1s,SNR=12						
FETA	Feichten	149.97	347	*i* PKPdf	PKPdf	11 34 18.9	0.0
	comp=Z,37nm,1.0s,SNR=8.8						
VISS	Visnje	150.04	341	*i* PKPbc	PKPbc	11 34 24.4	-0.1
BLY	Banja Luka	150.17	337	⇓*i*P	PKiKP	11 34 25.6	+0.2
BOJS	Bojanci	150.18	340	*i* PKPbc	PKPbc	11 34 25.1	+0.2
JAVS	Javornik	150.19	342	*i* PKPbc	PKPbc	11 34 24.5	-0.5
SENIN	Lac Senin/Sane	151.20	352	*e*PKPbc	PKiKP	11 34 27.9	+0.2
PDG	Podgorica	151.25	332	⇑*i*P	PKPbc	11 34 27.1	-0.2
IDI	Anoyia	152.97	314	PKPbc	PKiKP	11 34 31.7	+0.2
	comp=Z,6.9nm,0.6s,baz=6.2,slow=11,SNR=5.1						
PBRG	Braganca	155.12	15	*e*PKPab	PKPab	11 34 54.9	+0.1
POLO	Lamas de Olo	155.25	17	*e*PKPab	PKPab	11 34 55.9	+0.5
PVRL	Vila Real	155.37	17	*e*PKPab	PKPab	11 34 56.5	+0.7
MVO	Moncorvo	155.66	16	*e*PKPab	PKPab	11 34 56.9	-0.2
MTE	Manteigas	156.23	17	*e*PKPab	PKPab	11 35 00.1	+0.5
PTOM	Tomar	156.68	20	*e*PKPab	PKPab	11 35 01.6	+0.1
PCBR	Castelo Branco	156.76	18	*e*PKPab	PKPab	11 35 02.7	+0.9
ESDC	Sonseca Array	157.76	11	PKP	PKPdf	11 34 28.8	-1.0
	comp=Z,0.5nm,0.6s,baz=334,slow=2.9,SNR=6.5						
ESDC				PKPab	PKPab	11 35 05.7	-0.6
	comp=Z,2.1nm,0.7s,baz=345,slow=4.1,SNR=16						
PNCL	Nicolau / Gran	158.00	22	*e*PKPab	PKPab	11 35 07.3	0.0
MESJ	Messejana	158.35	21	*e*PKPab	PKPab	11 35 08.7	-0.1
PCVE	Castro Verde	158.60	21	*e*PKPab	PKPab	11 35 10.2	+0.3
TORD	Torodi Ar. Bea	175.29	182	PKP	PKPdf	11 34 41.5	-2.0
	comp=Z,2.2nm,0.9s,baz=336,slow=7.0,SNR=8.8						
TORD				PKPab	PKPab	11 36 23.0	-1.0
	comp=Z,0.4nm,0.7s,baz=192,slow=5.4,SNR=2.1						
TORD				pPKP	pPKPdf	11 37 03.9	+0.7
	comp=Z,1.3nm,1.0s,baz=354,slow=4.0,SNR=4.0						
TORD				pPKPab	pPKPab	11 38 35.0	+1.3
	comp=Z,0.9nm,0.9s,baz=180,slow=5.7,SNR=3.7						
TOA1	Torodi Ar. Sit	175.30	182	*e*PKPdf	PKPdf	11 34 41.5	-2.0
TOA1				*e*PKPab	PKPab	11 36 23.0	-1.1
TOA1				*e*pPKPdf	pPKPdf	11 37 03.9	+0.7
TOA1				*e*pPKPab	pPKPab	11 38 35.0	+1.3

IDC 04 11:16:18.0±8.4, 34°.90N×53°.12E, h0^{km}, mb3.0/1, mb1 3.6/4, mb1mx3.3/41, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=137.5km s-min=37.3km az=178.0, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEYT	Alibeck	5.04	52	Pn	Pn	11 17 34.3	-0.6
	0.7nm,0.3s,baz=213,slow=15,SNR=2.0						
KBZ	Khabaz	11.84	321	Pn	Pn	11 19 09.4	+1.4
	0.0nm,0.3s,baz=135,slow=9.6,SNR=2.8						
BRTR	Keskin Array B	16.22	293	Pn	Pn	11 20 07.5	+0.1
	0.2nm,0.3s,baz=104,slow=5.2,SNR=4.5						
AKASG	Malin Array Be	23.45	320	P	P	11 21 30.1	+1.3
	0.2nm,0.4s,baz=106,slow=9.0,SNR=5.5						

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*ISCJB **04** 11:21:31.7±0.2, 24°.34N±0°.02×122°.87E±0°.01, h56^{km}±5^{km}, Error ellipse: s-maj=3.5km s-min=1.8km az=173.6*

*JMA **04** 11:21:31.4±0.1, 24°.39N×122°.86E, h62^{km}±1^{km}, M3.4*

*TAP **04** 11:21:31.6, 24°.37N×122°.87E, h59^{km}, ML3.9, C*

ISC 04 11:21:32.4±1.2, **24°.34N**±0°.03×**122°.86E**±0°.02, **h54**^{km}±7^{km}, **n110**, σ1^{s}**04**/198, **1C-8D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.14	34	P	Pn	11 21 40.8	0.0
JYNG				S	Sn	11 21 47.5	+0.7
YOJ	Yonaguni jima	0.18	47	⇑*i*P	Pn	11 21 41.0	-0.1
	baz=44						
YOJ				*i* S	Sn	11 21 47.5	+0.3
	baz=44						
YOJ	Yonaguni jima	0.18	47	P	Pn	11 21 40.9	-0.1
YOJ				S	Sn	11 21 47.4	+0.2
EOS1	EOS1	0.70	288	⇓*i*P	Pn	11 21 45.9	-0.3
	baz=292						
EOS1				*i* S	Sn	11 21 56.9	+0.5
	baz=292						
IRIF	Iriomote-Funau	0.79	90	P	Pn	11 21 46.9	-0.5
IRIF				S	Sn	11 21 58.5	0.0
HATJ	Hateruma jima	0.91	108	P	Pn	11 21 49.0	+0.1
HATJ				*e*S	Sn	11 22 02.0	+0.9
TWC	Suao	0.96	287	*i* P	Pn	11 21 48.9	-0.8
	baz=284						
TWC				*e*S	Sn	11 22 01.4	-1.1
	baz=284						
EGS		0.99	301	*e*P	Pn	11 21 49.4	-0.6
	baz=299						
EGS				*e*S	Sn	11 22 02.0	-1.0
	baz=299						
NANB	Nanao	1.02	275	P	Pn	11 21 49.9	-0.5
	baz=280						
NANB				*e*S	Sn	11 22 04.2	+0.4
	baz=280						
ENA	Nanau	1.03	275	*e*P	Pn	11 21 50.2	-0.3
	baz=281						
ENA				*e*S	Sn	11 22 05.1	+1.1
	baz=281						
TWB1	Santiao Chiao	1.04	310	*e*P	Pn	11 21 49.8	-0.9
	baz=309						
JKRS	Kuro-shima	1.05	95	P	Pn	11 21 50.6	-0.3
JKRS				S	Sn	11 22 05.3	+0.7
NTC	Toucheng	1.07	299	P	Pn	11 21 50.4	-0.8
	baz=297						
NTC				*e*S	Sn	11 22 03.9	-1.2
	baz=297						
ILA	Ilan	1.10	293	*e*S	Sn	11 22 06.6	+0.9
	baz=299						
TIPB	Shuangxi	1.14	304	*i* P	Pn	11 21 51.2	-0.9
	baz=302						
TIPB				S	Sn	11 22 05.4	-1.3
	baz=302						
TWE	Neicheng	1.15	290	P	Pn	11 21 51.5	-0.7
	baz=294						
TWE				*e*S	Sn	11 22 06.7	-0.3
	baz=294						
JIJ	Ishigaki jima	1.17	88	P	Pn	11 21 51.6	-0.8
JIJ				S	Sn	11 22 06.6	-0.8
NACB	Ninganchiao	1.17	262	⇓*i*P	Pn	11 21 51.8	-0.6
	baz=261						
NACB				*e*S	Sn	11 22 06.6	-0.8
	baz=261						
TWD	Chiawan	1.19	258	P	Pn	11 21 51.8	-0.9
	baz=245						
TWD				*e*S	Sn	11 22 06.7	-1.0
	baz=245						
SLBB	Yuanshan	1.19	291	*e*P	Pn	11 21 52.5	-0.3
	baz=295						
SLBB				*e*S	Sn	11 22 07.2	-0.8
	baz=295						
HWA	Hwalien	1.20	253	*e*P	Pn	11 21 52.7	-0.2
	baz=251						
ENTT	Nioudou	1.22	285	*e*P	Pn	11 21 53.1	-0.1
	baz=291						
ENTT				*e*S	Sn	11 22 09.6	+0.9
	baz=291						
NWF	Wu-fen Shan	1.23	307	P	Pn	11 21 52.8	-0.5
	baz=305						
NWF				*e*S	Sn	11 22 08.3	-0.5
	baz=305						
WFSB	Wu-fen Shan	1.23	307	*e*P	Pn	11 21 52.6	-0.6
	baz=305						
WFSB				S	Sn	11 22 08.1	-0.7
	baz=305						
NDT	Datong Townshi	1.26	282	P	Pn	11 21 54.1	+0.4
	baz=289						
NDT				*e*S	Sn	11 22 09.6	0.0
	baz=289						
ETLH	Xiulin Townshi	1.27	264	P	Pn	11 21 53.2	-0.7
	baz=263						
ETLH				*e*S	Sn	11 22 09.4	-0.5
	baz=263						
NWLT	Wulai	1.31	290	⇓*i*P	Pn	11 21 54.1	-0.4
	baz=288						
NWLT				S	Sn	11 22 10.4	-0.6
	baz=288						
TWA	Mucha	1.33	299	P	Pn	11 21 54.2	-0.4
	baz=298						
TWA				*e*S	Sn	11 22 10.2	-1.0
	baz=298						
JISG	Ishigakijimahi	1.34	79	P	Pn	11 21 53.8	-1.0
JISG				*e*S	Sn	11 22 11.1	-0.5
NNSB	Datong	1.35	274	P	Pn	11 21 54.7	-0.3
	baz=273						
NNSB				*e*S	Sn	11 22 11.7	-0.3
	baz=273						
NNS	Nan Shan	1.36	275	P	Pn	11 21 55.0	-0.2
	baz=273						
NNS				*e*S	Sn	11 22 12.5	+0.2
	baz=273						
YHNB	Yeheng	1.39	284	⇓*i*P	Pn	11 21 55.6	+0.1
	baz=289						
YHNB				*e*S	Sn	11 22 13.2	+0.3
	baz=289						
TATO	Taipei	1.40	297	*e*P	Pn	11 21 54.6	-1.0
	baz=296						
TATO				*e*S	Sn	11 22 12.3	-0.8
	baz=296						
ESL	Shilin	1.41	249	*i* P	Pn	11 21 54.6	-1.1
	baz=239						
ESL				*e*S	Sn	11 22 11.9	-1.3
	baz=239						
NSK	Sanguang	1.41	284	⇓*i*P	Pn	11 21 55.9	0.0
	baz=289						
NSK				*e*S	Sn	11 22 13.7	+0.4
	baz=289						
YM01	YM01	1.43	305	*e*P	Pn	11 21 55.3	-0.7
	baz=303						
YM08	YM08	1.43	306	*e*P	Pn	11 21 55.0	-1.1
	baz=305						
YM10	YM10	1.44	305	*e*P	Pn	11 21 55.3	-0.8
	baz=303						
YM05	YM05	1.44	305	*e*P	Pn	11 21 55.4	-0.8
	baz=304						
YM04	YM04	1.45	304	*e*P	Pn	11 21 55.4	-0.9
	baz=303						
WHF	Hehuan Shan	1.47	263	⇓*i*P	Pn	11 21 56.2	-0.7
	baz=262						
WHF				*e*S	Sn	11 22 15.0	-0.4
	baz=262						
EGFH	Guangfu	1.47	243	P	Pn	11 21 55.6	-0.9
	baz=242						
EGFH				*e*S	Sn	11 22 13.0	-1.8
	baz=242						
PCYT	Pengchaiyu	1.47	331	*e*P	Pn	11 21 56.5	-0.1
	baz=321						
TWY	Chenhua	1.48	309	*e*P	Pn	11 21 56.5	-0.2
	baz=308						
TWS1	Kuangyinshan	1.52	300	*e*P	Pn	11 21 56.1	-1.1
	baz=299						
TWS1				*e*S	Sn	11 22 15.8	-0.1
	baz=299						
NTST	Danshui	1.53	303	*e*P	Pn	11 21 56.1	-1.1
	baz=302						
TWT	Tachien	1.54	267	*e*P	Pn	11 21 58.4	+0.7
	baz=266						
TWT				*e*S	Sn	11 22 16.9	+0.2
	baz=266						
WLTB	Daxi	1.55	290	*e*P	Pn	11 21 57.6	-0.1
	baz=298						
TDCB	Techi	1.56	267	P	Pn	11 21 57.8	0.0
	baz=266						
TDCB				*e*S	Sn	11 22 16.8	-0.3
	baz=266						
HGSD	Ruisui	1.56	238	*e*P	Pn	11 21 56.7	-1.1
	baz=237						
HGSD				*e*S	Sn	11 22 15.4	-1.5
	baz=237						
CHGB	Renai	1.57	260	P	Pn	11 21 57.7	-0.4
	baz=250						
CHGB				*e*S	Sn	11 22 15.7	-1.6
	baz=250						
EHY	Hungye	1.64	240	*e*P	Pn	11 21 57.7	-1.1
	baz=250						
EHY				*e*S	Sn	11 22 18.1	-0.6
	baz=250						
VWDT	VWDT	1.68	250	⇓*i*P	Pn	11 21 59.3	-0.1
	baz=249						
VWDT				S	Sn	11 22 19.2	-0.5
	baz=249						
JTJ	Tarama	1.70	79	P	Pn	11 21 59.2	-0.5
JTJ				S	Sn	11 22 19.8	-0.6
LIOB	Emei	1.71	281	P	Pn	11 22 00.1	+0.3
	baz=280						
LIOB				*e*S	Sn	11 22 21.4	+0.8
	baz=280						
YULB	Yu-li	1.71	237	P	Pn	11 21 59.1	-0.8
	baz=249						
YULB				*e*S	Sn	11 22 19.0	-1.7
	baz=249						
NSTT	Nanjuang	1.72	280	P	Pn	11 22 00.2	+0.2
	baz=279						
NSTT				*e*S	Sn	11 22 21.2	+0.4
	baz=279						
TWF1	Yuli	1.74	236	P	Pn	11 21 59.5	-0.6
	baz=235						
TWF1				*e*S	Sn	11 22 20.1	-1.1
	baz=235						
WHP	Taichung City	1.75	268	P	Pn	11 22 01.1	+0.7
	baz=259						
WHP				*e*S	Sn	11 22 21.6	-0.1
	baz=259						
DPDB	Guoxing	1.79	261	P	Pn	11 22 01.1	+0.1
	baz=253						
DPDB				*e*S	Sn	11 22 23.4	+0.7
	baz=253						
SSLB	Suanglung	1.83	253	P	Pn	11 22 01.3	-0.2
	baz=252						
SSLB				*e*S	Sn	11 22 22.2	-1.3
	baz=252						
CHKT	Chengkung	1.84	228	*e*P	Pn	11 22 00.2	-1.4
	baz=227						
CHKT				*e*S	Sn	11 22 21.1	-2.7
	baz=227						
SMLT	Sun Moon Lake	1.85	256	P	Pn	11 22 02.0	+0.2
	baz=255						
SMLT				*e*S	Sn	11 22 23.4	-0.8
	baz=255						
TYC	Yuchr	1.88	257	⇓*i*P	Pn	11 22 02.3	+0.1
	baz=249						
TYC				*e*S	Sn	11 22 23.6	-1.1
	baz=249						
NMLH	Miaoli	1.90	276	*e*P	Pn	11 22 02.7	+0.3
	baz=275						
NMLH				*e*S	Sn	11 22 27.0	+1.8
	baz=275						
TWQ1	Liyutan	1.91	271	*e*P	Pn	11 22 03.1	+0.6
	baz=270						
TWQ1				*e*S	Sn	11 22 26.8	+1.4
	baz=270						
NSY	Sanyi	1.92	273	*e*P	Pn	11 22 03.4	+0.8
	baz=272						
NSY				*e*S	Sn	11 22 26.5	+0.8
	baz=272						
YUS	Yu-Shan	1.94	245	*e*P	Pn	11 22 03.4	-0.1
	baz=244						
YUS				*e*S	Sn	11 22 25.6	-1.3
	baz=244						
WHYT	Xinyi Township	1.94	251	P	Pn	11 22 03.5	+0.5
	baz=244						
WHYT				*e*S	Sn	11 22 26.7	+0.3
	baz=244						
PTSB	Yuanli	1.97	274	*e*P	Pn	11 22 03.7	+0.3
	baz=273						
TCU	Taichung	2.00	265	*e*P	Pn	11 22 04.7	+0.9
	baz=278						
TCU				*e*S	Sn	11 22 29.9	+2.1
	baz=278						
WJS	Zhushan	2.02	256	P	Pn	11 22 05.3	+1.3
	baz=255						
WJS				*e*S	Sn	11 22 29.3	+1.2
	baz=255						
WDJ	Dajia District	2.03	271	*e*P	Pn	11 22 04.4	+0.3
	baz=270						
ELDTW	Lidau	2.04	236	*e*P	Pn	11 22 03.5	-0.9
	baz=235						
ELDTW				*e*S	Sn	11 22 26.4	-2.4
	baz=235						
WNT	Mingjian	2.04	258	*e*P	Pn	11 22 05.9	+1.6
	baz=257						
WCHH	Zhanghua	2.12	264	*e*P	Pn	11 22 05.7	+0.3
	baz=274						
CHN5	Tsauling	2.13	250	*e*P	Pn	11 22 06.5	+0.9
	baz=250						
CHN5				*e*S	Sn	11 22 31.9	+0.9
	baz=250						
JIRB	Irabujima	2.16	76	P	Pn	11 22 05.5	-0.4
JIRB				*e*S	Sn	11 22 30.2	-1.3
WGK	Gukeng	2.20	253	*e*P	Pn	11 22 07.7	+1.2

	baz=243						
WGK				eS	Sn	11 22 33.6	+1.0
	baz=243						
WDLH	Douliu	2.22	254	eP	Pn	11 22 07.4	+0.7
	baz=243						
WDLH				eS	Sn	11 22 34.2	+1.2
	baz=243						
TWGBT	Beinan	2.23	228	eP	Pn	11 22 05.8	-1.0
	baz=237						
TWGBT				eS	Sn	11 22 31.3	-1.9
	baz=237						
TWG	Pinlang	2.23	228	eP	Pn	11 22 05.9	-1.0
	baz=237						
TWG				eS	Sn	11 22 31.5	-1.9
	baz=237						
JIKM	Ikemajima	2.25	74	P	Pn	11 22 07.0	-0.1
JIKM				eS	Sn	11 22 34.1	+0.4
STYT	Tauyuan	2.26	239	eP	Pn	11 22 07.8	+0.4
	baz=238						
STYT				eS	Sn	11 22 33.7	-0.3
	baz=238						
JMJ	Miyako jima 2	2.26	77	eP	Pn	11 22 07.9	+0.6
	baz=78						
JMJ				eS	Sn	11 22 33.8	-0.3
	baz=78						
JMJ2	Miyako jima3	2.28	79	P	Pn	11 22 08.8	+1.2
JMJ2				eS	Sn	11 22 34.7	+0.2
TPUB	Ta-pu	2.29	244	eP	Pn	11 22 09.1	+1.3
	baz=243						
TPUB				eS	Sn	11 22 35.5	+0.7
	baz=243						
WTP	Ta-pu	2.33	243	eP	Pn	11 22 09.3	+1.0
	baz=242						
WTP				eS	Sn	11 22 37.5	+1.7
	baz=242						
RLNB	Erlin	2.33	260	eP	Pn	11 22 09.0	+0.8
	baz=259						
RLNB				eS	Sn	11 22 36.9	+1.2
	baz=259						
JOGS	Gusukube	2.35	79	P	Pn	11 22 08.2	-0.4
JOGS				S	Sn	11 22 37.2	+0.9
CHY	Chiayi	2.38	250	eP	Pn	11 22 10.4	+1.4
	baz=249						
CHY				eS	Sn	11 22 37.6	+0.6
	baz=249						
WTCT	Ta-ch'eng	2.41	259	eS	Sn	11 22 38.0	+0.5
	baz=259						
TWK	Hsinying	2.42	244	eP	Pn	11 22 10.9	+1.3
	baz=244						
TWK				eS	Sn	11 22 39.0	+0.9
	baz=244						
CHN1	Nanshi	2.43	242	eP	Pn	11 22 11.0	+1.3
	baz=242						
CHN1				eS	Sn	11 22 39.9	+1.7
	baz=242						
SLGT	Liugui	2.43	237	eP	Pn	11 22 10.4	+0.7
	baz=231						
SLGT				eS	Sn	11 22 39.7	+1.4
	baz=231						
SGST	Jiashian	2.43	240	eP	Pn	11 22 11.0	+1.3
	baz=239						
SGST				eS	Sn	11 22 40.5	+2.2
	baz=239						
SNST	Tainan City	2.44	243	eP	Pn	11 22 11.3	+1.6
	baz=243						
SNST				eS	Sn	11 22 39.0	+0.7
	baz=243						
ECL	Taimali	2.46	226	eP	Pn	11 22 08.7	-1.4
	baz=233						
ECL				eS	Sn	11 22 35.8	-3.2
	baz=233						
WSF	Szhu	2.51	254	eS	Sn	11 22 41.8	+1.6
	baz=267						
SSD	Sandimen	2.59	233	eP	Pn	11 22 12.5	+0.7
	baz=229						
SSD				eS	Sn	11 22 42.8	+0.7
	baz=229						
CHN8	Yiju	2.62	248	eS	Sn	11 22 44.4	+1.5
	baz=248						
MASBT	Mashibuluo	2.67	230	eP	Pn	11 22 13.1	+0.1
	baz=228						
MASBT				eS	Sn	11 22 45.5	+1.4
	baz=228						
EAST	Anshuo	2.69	224	eP	Pn	11 22 12.4	-0.7
	baz=230						
TWM1	Shoushan	2.70	237	eP	Pn	11 22 16.0	+2.7
	baz=235						
TWM1				eS	Sn	11 22 49.2	+4.4
	baz=235						
SSPT	Xinbi	2.80	229	eP	Pn	11 22 16.9	+2.1
	baz=224						
SCZT	Fangliau	2.84	227	eP	Pn	11 22 16.4	+1.2
	baz=222						
SCZT				eS	Sn	11 22 48.4	+0.1
	baz=222						
TSEB	Hengchuen, Pin	3.02	217	eP	Pn	11 22 18.5	+0.7
	baz=223						
TSEB				eS	Sn	11 22 54.2	+1.4
	baz=223						
TWK1	Hengchun	3.04	219	eP	Pn	11 22 17.9	-0.2
	baz=212						
TWK1				eS	Sn	11 22 52.2	-1.1
	baz=212						
PHUB	P'eng-hu	3.12	255	eP	Pn	11 22 18.6	-0.5
	baz=256						
PHUB				eS	Sn	11 22 52.7	-2.4
	baz=256						
WDGT	Dungji	3.12	251	eP	Pn	11 22 19.0	-0.1
	baz=250						

*ISCJB **04** 11:29:05.4±1.1, 35°.11N±0°.07×33°.12E±0°.06, h53^{km}±10^{km}, Error ellipse: s-maj=11.0km s-min=7.7km az=5.2*
*ISK **04** 11:29:06.3, 35°.32N×33°.21E, h17^{km}, ML2.5/12*
*NIC **04** 11:29:07.2±0.2, 35°.08N×33°.09E, h35^{km}, ML2.6*
*DDA **04** 11:29:07.3, 35°.35N×33°.12E, h7^{km}±1^{km}, ML2.8*
ISC 04 11:29:06.4±1.6**, 35°.12N**±0°.06×**33°.13E**±0°.04**, h44**^{km}±12^{km}**, n21, σ0^{s}.89**/28**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEF	Lefka	0.19	270	PG	Pn	11 29 14.1	0.0
LEF				SG	Sn	11 29 20.3	+0.8
LEF	Lefka	0.19	270	i P	Pn	11 29 14.2	+0.1
CSS	Mathiatis	0.23	133	PG	Pn	11 29 13.7	-0.7
CSS				SG	Sn	11 29 20.5	+0.4
CSS	Mathiatis	0.23	133	P	Pn	11 29 14.2	-0.2
	baz=299						
CSS				S	Sn	11 29 19.8	-0.3
AKIN	Akıncılar- Kıb	0.30	111	PG	Pn	11 29 14.2	-0.8
SZAC	Souni	0.42	209	P	Pn	11 29 16.2	-0.2
	baz=28						
SZAC				S	Sn	11 29 22.7	-0.7
ALFC	Alefka	0.43	275	P	Pn	11 29 16.6	0.0
	baz=101						
ALFC				S	Sn	11 29 24.3	+0.5
PPCY	Paphos	0.68	250	P	Pn	11 29 19.5	-0.2
	baz=72						
EREN	Erenkoy	0.95	64	PG	Pn	11 29 22.7	-0.6
EREN	Erenkoy	0.95	64	i P	Pn	11 29 24.9	+1.6
EREN				i S	Sn	11 29 37.5	+1.9
TEKE	Tekeli-Mersin	1.02	359	PG	Pn	11 29 23.4	-0.9
AKKU	Akkuyu-Mersin	1.09	18	PG	Pn	11 29 23.1	-2.2
GULN	MERSIN_Gulnar	1.11	18	i P	Pn	11 29 26.2	+0.6
GULN				IAML_P			
	comp=Z,1μm,0.2s						
KARG	Kargicak-Mersi	1.18	24	PG	Pn	11 29 25.5	-1.0
IKL	Isikli	1.21	22	PG	Pn	11 29 26.2	-0.6
BERE	Bereket-Mersin	1.23	4	PG	Pn	11 29 26.6	-0.7
GAZI	Gazipasa	1.29	330	PN	Pn	11 29 28.2	+0.1
GAZI	Gazipasa	1.29	330	i P	Pn	11 29 28.1	+0.1
GAZI				i S	Sn	11 29 44.3	+0.1
TEVE	Tevekalti-Mers	1.34	11	PN	Pn	11 29 27.9	-0.8
KEBE	Keben-Mersin	1.41	20	PN	Pn	11 29 28.8	-0.9
KIZK	Mersin	1.59	31	PN	Pn	11 29 31.8	-0.3

*NNC **04** 11:33:47.6±7.9, 37°.54N×71°.34E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=62.9km s-min=48.2km az=1.0*
ISC 04 11:33:47.2±3.7**, 37°.4N**±0°.2×**71°.6E**±0°.1**, h10**^{km}**, n12, σ1^{s}.41**/15**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.99	18	P	Pn	11 35 03.8	+1.2
	SNR=7.7						
UCH	Uchtor	5.32	24	P	Pn	11 35 07.8	+0.7
	SNR=75						
KZA	Kyzart	5.46	30	P	Pn	11 35 08.2	-0.7
	SNR=8.6						
EKS2	Erkin-Say	5.51	17	P	Pn	11 35 11.0	+1.6
	SNR=11						
AAK	Ala-Archa	5.68	22	⇓P	Pn	11 35 12.6	+0.8
	13nm,0.4s						
AAK				⇑S	Sn	11 36 18.1	+0.9
	5.2nm,0.6s						
AAK	Ala-Archa	5.68	22	P	Pn	11 35 12.9	+1.1
	SNR=16						
KK31	Karatay Array	5.75	352	P	Pn	11 35 14.2	+1.7
	1.0nm,0.2s,baz=183,slow=14,SNR=56						
KK31				⇓S	Sn	11 36 18.9	+0.5
	6.7nm,0.4s,baz=177,slow=24,SNR=4.7						
KBK	Karagaybulak	5.85	25	P	Pn	11 35 12.8	-1.2
	SNR=5.7						
CHMS	Chumysh	6.09	23	P	Pn	11 35 17.9	+0.7
	SNR=5.2						
TKM2	Tokmak 2	6.31	28	⇑P	Pn	11 35 19.8	-0.6
	3.4nm,0.6s						
TKM2	Tokmak 2	6.31	28	P	Pn	11 35 20.0	-0.4
	SNR=6.0						
AB31	Akbulak array	14.53	328	⇑P	Pn	11 37 13.0	+0.2
	0.7nm,0.3s,baz=75,slow=11,SNR=75						
AB31				⇑S	Sn	11 39 50.6	-3.2
	1.7nm,0.6s,baz=46,slow=45,SNR=5.8						

*IDC **04** 12:24:40.5±0.9, 3°.42S×140°.11E, h0^{km}, mb4.0/7, mb1 4.4/8, mb1mx4.1/20, mbtmp4.2/8, ML4.9/1, MS3.5/9, Ms1 3.5/9, ms1mx3.2/24, Error ellipse: s-maj=27.6km s-min=11.1km az=122.0*
*DJA **04** 12:24:41.5±2.5, 4°S±3°×14°0E±°, h26^{km}±25^{km}, M5.0/7, mB5.2/1, mb4.8/7, MLv5.1/6, Mw(mB)4.5/1*
*ISCJB **04** 12:24:43.7±0.4, 3°.55S±0°.04×140°.22E±0°.05, h35^{km}, mb4.5/18, MS3.5/9, Error ellipse: s-maj=7.7km s-min=5.7km az=5.6*
*BJI **04** 12:24:43.6±0.0, 3°.43S×140°.23E, h32^{km}, mb4.9/14, mB4.9/11, Ms4.0/3, Ms7 3.8/2*
*NEIC **04** 12:24:45.0±1.1, 3°.56S×140°.00E, h35^{km}±3^{km}, mb4.6/12, Error ellipse: s-maj=12.1km s-min=2.3km az=123.0*
ISC 04 12:24:45.4±0.5**, 3°.52S**±0°.06×**140°.24E**±0°.08**, h35**^{km}**, n48, σ1^{s}.73**/44**, mb4.6**/18**, MS3.5**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.93	355	P	Pn	12 24 59.7	-2.2
GENI				S	Sn	12 25 13.9	-0.1
JAY	Jayapura	1.10	25	Pg	Pn	12 25 01.9	-2.5
	90nm,0.3s,baz=211,slow=10.0,SNR=441						
JAY				Lg	Lg	12 25 15.3	
	274nm,0.3s,baz=101,slow=20,SNR=50						
JAY	Jayapura	1.10	25	P	Pn	12 25 01.5	-2.9
JAY				S	Sn	12 25 14.8	-3.6
SRPI	Serui, Papua	4.32	292	P	Pn	12 25 49.1	+0.5
BAKI	Biak	4.74	299	P	Pn	12 25 55.5	+1.2
FAKI	Fak Fak	8.00	274	ePn	Pn	12 26 35.5	-3.8
FAKI	Fak Fak	8.00	274	P	Pn	12 26 40.0	+0.7
PMG	Port Moresby	9.02	131	ePn	Pn	12 26 55.1	+1.9
SIJI	Sorong	9.35	286	LR	LR	12 31 19.6	
	comp=Z,246nm,19.2s,baz=141,slow=43						
SAUI	Saumlaki	9.94	243	ePn	Pn	12 27 02.2	-3.7
COEN	Coen	10.77	165	ePn	Pn	12 27 19.8	+2.6
MTN	Manton Dam	12.92	224	ePn	Pn	12 27 43.5	-3.1
LBMI	Labuha	13.05	282	P	Pn	12 27 48.8	+0.4
SOEI	Soe	17.03	248	eP	Pn	12 28 39.4	-1.6
	126nm,1.2s						
SOEI	Soe	17.03	248	P	Pn	12 28 41.0	-0.1
WRAB	Tennant Creek	17.30	199	ePn	Pn	12 28 42.2	-2.1
	37nm,0.9s						
BATI	Baumata	17.74	247	P	Pn	12 28 49.8	-0.1
	4.0nm,0.3s,baz=71,slow=2.5,SNR=6.9						
TTSI	Tana Toraja	20.39	271	P	Pn	12 29 28.1	+6.4
PATS	Pohnpei	20.77	60	eP	Pn	12 29 25.6	-0.4
	82nm,1.4s						
AS31	Alice Springs	20.94	196	eP	P	12 29 24.8	-0.6
	8.3nm,0.8s						
ASAR	Alice Springs	20.94	196	P	P	12 29 25.2	-0.2
	23nm,0.8s,baz=23,slow=9.5,SNR=56						
ASAR				LR	LR	12 37 55.6	
	comp=Z,259nm,18.0s,baz=24,slow=38						
STKA	Stephens Creek	28.24	178	LR	LR	12 43 20.7	
	comp=Z,219nm,18.1s,baz=5.2,slow=40						
MJAR	Matsushiro Arr	39.90	357	LR	LR	12 47 02.1	
	comp=Z,24nm,19.9s,baz=50,slow=34						
NJ2	Nanjing	40.80	332	eP	P	12 32 25.3	+1.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PSI	Prapat	41.77	278	eP	P	12 32 30.3	-1.7
	35nm,1.0s						
KSRS	Korea Array	42.35	345	P	P	12 32 35.4	-0.7
	0.8nm,0.6s,baz=153,slow=8.3,SNR=4.6						
KSRS				LR	LR	12 49 34.8	
	comp=Z,38nm,18.1s,baz=138,slow=35						
CMAR	Chiang Mai Arr	46.16	300	P	P	12 33 05.8	-1.2
	0.6nm,0.3s,baz=113,slow=6.4,SNR=5.6						
CMAR				LR	LR	12 52 11.7	
	comp=Z,12nm,20.3s,baz=230,slow=36						
KMI	Kunming	46.21	310	P	P	12 33 08.1	+0.6
KMI				pmax	pmax		
	comp=Z,12nm,0.7s						
KMI				pmax	pmax		
	comp=Z,57nm,4.2s						
BJI	Beijing	48.66	335	eP	P	12 33 31.1	+5.1
HHC	Hu-ho-hao-te	51.35	332	P	P	12 33 48.7	+2.1
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
LZH	Lanzhou	52.05	322	eP	P	12 33 54.3	+2.3
LZH				pP	pP	12 34 03.6	+0.9
LZH				sP	sP	12 34 08.0	+1.2
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA	Gaotai	56.63	323	eP	P	12 34 26.4	+1.1
GTA				pP	pP	12 34 37.1	+1.1
GTA				sP	sP	12 34 41.3	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,51nm,6.8s						
GTA				LR	LR		
	comp=N,35nm,15.2s						
GTA				LR	LR		
	comp=E,42nm,15.6s						
GTA				LR	LR		
	comp=Z,67nm,15.2s						
PETK	Petropavlovsk-	58.31	12	P	P	12 34 37.8	+1.1
	2.2nm,1.0s,baz=158,slow=4.8,SNR=3.5						
PETK				LR	LR	12 56 07.4	
	comp=Z,38nm,21.9s,baz=212,slow=32						
PEA1	Petropavlovsk-	58.31	12	eP	P	12 34 37.8	+1.1
WMQ	Urumqi	66.59	321	eP	P	12 35 33.2	+0.9
MK31	Makanchi Array	71.36	322	eP	P	12 36 01.1	-0.7
	3.7nm,0.9s						
MK32	Makanchi Array	71.36	322	eP	P	12 36 01.1	-0.8
MKAR	Makanchi Array	71.36	322	P	P	12 36 01.1	-0.8
	1.4nm,0.8s,baz=115,slow=8.7,SNR=5.8						
MKAR				LR	LR	13 10 07.7	
	comp=Z,17nm,18.2s,baz=22,slow=38						
KSH	Kashi	72.75	313	P	P	12 36 12.1	+1.6
VNDA	Vanda	74.85	175	P	P	12 36 22.6	+0.7
	0.8nm,0.8s,baz=333,slow=6.9,SNR=5.8						
VNDA				LR	LR	13 08 37.9	
	comp=Z,79nm,19.9s,baz=336,slow=35						
VNDA	Vanda	74.85	175	eP	P	12 36 21.9	0.0
CAST	Castle Rocks	83.33	25	eP	P	12 37 08.7	+0.2
	4.1nm,1.0s						
SML	Sawmill	84.42	27	eP	P	12 37 13.6	-0.5
	7.0nm,0.9s						
CCB	Clear Creek Bu	85.52	24	eP	P	12 37 18.7	-0.8
	4.6nm,1.0s						
ILAR	Eielson Array	85.94	24	P	P	12 37 20.2	-1.4
	1.5nm,0.9s,baz=263,slow=4.9,SNR=16						
TOLK	Toolik Lake Re	86.15	20	eP	P	12 37 23.6	+1.0
	5.5nm,1.0s						
QSPA	South Pole Qui	86.43	180	eP	P	12 37 24.4	+0.1
	6.3nm,0.9s						
LPAZ	La Paz	145.73	126	PKPbc	PKiKP	12 44 25.0	-1.2
	0.9nm,0.9s,baz=215,slow=3.2,SNR=3.3						

WBNET 04 12:29:47.3, 50°.24N×12°.45E, h7^{km}, Ml1.5, 9C-12D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKC	Novy Kostel	0.01	214	⇓P	Pg	12 29 48.2	-0.4
NKC				S	Sg	12 29 49.0	-0.5
NKC	Novy Kostel	0.01	214	⇓P	Pg	12 29 48.6	-0.1
NKC				S	Sg	12 29 49.4	-0.1
LBCW	Luby	0.04	317	⇓P	Pg	12 29 48.5	-0.4
LBCW				S	Sg	12 29 49.6	-0.3
LBCW	Luby	0.04	317	⇓P	Pg	12 29 48.8	0.0
LBCW				S	Sg	12 29 50.0	+0.1
STCW	Studenec	0.05	64	⇑P	Pg	12 29 48.4	-0.5
STCW				S	Sg	12 29 49.4	-0.6
STCW	Studenec	0.05	64	⇑P	Pg	12 29 48.8	-0.1
STCW				S	Sg	12 29 49.8	-0.3
VAC	Vackov	0.05	267	⇓P	Pg	12 29 48.5	-0.4
VAC				S	Sg	12 29 49.5	-0.5
VAC	Vackov	0.05	267	⇓P	Pg	12 29 48.9	0.0
VAC				S	Sg	12 29 49.9	-0.1
KVC	Kvetna	0.05	129	⇑P	Pg	12 29 48.4	-0.5
KVC				S	Sg	12 29 49.4	-0.7
KVC	Kvetna	0.05	129	S	Sg	12 29 49.8	-0.3
POCW	Potky	0.08	349	⇓P	Pg	12 29 49.1	-0.3
POCW				S	Sg	12 29 50.5	-0.4
POCW	Potky	0.08	349	⇓P	Pg	12 29 49.5	+0.1
POCW				S	Sg	12 29 50.9	0.0
SKC	Skalna	0.09	221	⇑P	Pg	12 29 49.0	-0.4
SKC				S	Sg	12 29 50.5	-0.5
SKC	Skalna	0.09	221	⇑P	Pg	12 29 49.4	0.0
SKC				S	Sg	12 29 50.9	-0.1
KRCW	Kraslice	0.11	28	⇑P	Pg	12 29 49.3	-0.4
KRCW				S	Sg	12 29 50.9	-0.5
KRCW	Kraslice	0.11	28	⇑P	Pg	12 29 49.7	-0.1
KRCW				S	Sg	12 29 51.3	-0.1
KOCW	Kopaniny	0.14	281	⇓P	Pg	12 29 49.9	-0.4
KOCW				S	Sg	12 29 52.0	-0.4
KOCW	Kopaniny	0.14	281	⇓P	Pg	12 29 50.3	0.0
KOCW				S	Sg	12 29 52.4	0.0
ZHC	Zelena Hora	0.19	209	⇑P	Pg	12 29 50.7	-0.4
ZHC				S	Sg	12 29 53.3	-0.5
ZHC	Zelena Hora	0.19	209	⇑P	Pg	12 29 51.1	0.0
ZHC				S	Sg	12 29 53.7	0.0
LACW	Lazy	0.22	149	⇓P	Pg	12 29 51.3	-0.4
LACW				S	Sg	12 29 54.3	-0.3
LACW	Lazy	0.22	149	⇓P	Pg	12 29 51.7	0.0
LACW				S	Sg	12 29 54.7	+0.1
CLL	Collm	1.13	18	i Pg	Pg	12 30 08.4	-0.5
CLL				i Sg	Sg	12 30 23.2	-0.3

*ISK **04** 12:33:33.6, 39°.33N×30°.08E, h5^{km}, ML1.8/4*
DDA 04 12:33:35.0, 39°.30N×30°.06E, h7^{km}±5^{km}**, ML2.4, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.49	288	PG	Pg	12 33 43.7	-0.8
TVSB				SG	Sg	12 33 51.1	+0.2
GDZ	Gediz	0.50	245	i P	Pg	12 33 44.9	+0.3
GDZ				i S	Sg	12 33 52.4	+1.2
GDZ				IAML_P			
	comp=Z,362nm,0.1s						
BORA	Eskisehir	0.65	28	PG	Pg	12 33 45.9	-1.7
BORA				SG	Sg	12 33 55.3	-0.8
BORA	Eskisehir	0.65	28	i P	Pg	12 33 47.1	-0.5
BORA				i S	Sb	12 33 57.8	-0.3
BORA				IAML_P			
	comp=Z,803nm,0.1s						
SRCK	Saricakaya, Es	0.86	30	PG	Pg	12 33 49.2	-2.3
USAK	Uak-Merkez	1.00	235	i P	Pn	12 33 55.8	+0.2
USAK				i S	Sb	12 34 08.2	+0.1
USAK				IAML_P			
	comp=Z,634nm,0.1s						
KHAL	Karahalli	1.03	206	i P	Pb	12 33 55.3	+0.1
KHAL				i S	Sg	12 34 08.3	+0.1
ULDT	Uludag	1.10	320	i P	Pn	12 33 57.9	+0.8
ULDT				i S	Sn	12 34 13.7	+1.1
ULDT				IAML_P			
	comp=Z,786nm,0.2s						
AUMIH	MIHALICIK	1.24	62	PN	Pg	12 33 57.7	-1.0
DURS	Dursunbey	1.27	284	i P	Pg	12 33 59.4	+0.1
DURS				i S	Sn	12 34 18.4	+1.9
DURS				IAML_P			
	comp=Z,446nm,0.1s						
ARMT	Armutlu	1.56	324	PN	Pn	12 34 02.6	-0.6

WEL 04 12:49:59.3, 40°S±2°×**17°6E**±°**, h66**^{km}±3^{km}**, M3.3**/80**, ML3.6**/61**, MLv3.3**/80**, Error ellipse: s-maj=0.0km s-min=0.0km az=44.6, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOVZ	Moawhango	0.25	27	P	Pn	12 50 09.6	-0.2
MOVZ				S	Sn	12 50 16.8	-0.7
MTVZ	Mangateitei	0.27	337	P	Pn	12 50 10.0	+0.1
MTVZ				S	Sn	12 50 17.7	+0.1
WHVZ	Whangaehu Hut	0.35	358	P	Pn	12 50 10.8	+0.1
WHVZ				S	Sn	12 50 18.7	-0.3
DRZ	Dome Shelter	0.36	355	P	Pn	12 50 11.1	+0.2
TUVZ	Tukino	0.36	6	P	Pn	12 50 10.9	+0.2
TUVZ				S	Sn	12 50 19.2	+0.1
FWVZ	Far West T-bar	0.38	354	P	Pn	12 50 11.1	+0.1
BHHZ	Black Hill Sta	0.38	68	P	Pn	12 50 10.7	0.0
PKVZ	Pokaka	0.40	329	P	Pn	12 50 11.0	+0.1
NGZ	Ngauruhoe	0.45	359	P	Pn	12 50 11.9	+0.3
WAZ	Wanganui	0.50	255	P	Pn	12 50 12.3	+0.6
WTVZ	West Tongariro	0.51	358	P	Pn	12 50 12.3	+0.2
KRVZ	Karewarewa	0.54	3	P	Pn	12 50 12.5	+0.2
PNHZ	Pukenui	0.54	122	P	Pn	12 50 13.0	+0.7
TWVZ	Taurewa	0.57	347	P	Pn	12 50 12.5	-0.2
KRHZ	Kereru	0.59	92	P	Pn	12 50 13.9	+1.1
KRHZ				S	Sn	12 50 25.1	+2.5
OHWZ	Ohakea	0.62	201	P	Pn	12 50 13.9	+0.9
OHWZ				S	Sn	12 50 24.7	+1.7
KATZ	Kakaramea	0.66	6	P	Pn	12 50 13.9	+0.3
KWHZ	Kaweka Forest	0.66	72	P	Pn	12 50 14.8	+1.2
RITZ	Rihia Road	0.68	17	P	Pn	12 50 14.3	+0.5
POWZ	Post Office Ro	0.77	171	P	Pn	12 50 15.1	+0.3
RATZ	Rangitukua	0.77	10	P	Pn	12 50 15.2	+0.3
WPHZ	Waipukurau	0.77	124	P	Pn	12 50 16.2	+1.4
DVHZ	Dannevirke	0.79	147	P	Pn	12 50 15.4	+0.3
BKZ	Black Stump Fm	0.83	56	P	Pn	12 50 16.1	+0.6
HATZ	Hinemaiaia	0.83	27	P	Pn	12 50 15.5	0.0
VRZ	Vera Road	0.83	307	P	Pn	12 50 15.5	0.0
MCHZ	McNeill Hill	0.86	78	P	Pn	12 50 17.6	+1.7
WATZ	Wairara	0.93	6	P	Pn	12 50 17.0	+0.3
LREZ	Lake Rotokare	0.95	280	P	Pn	12 50 17.4	+0.5
PRWZ	Pori Road	0.96	163	P	Pn	12 50 17.6	+0.5
KAHZ	Kahuranaki	0.99	100	P	Pn	12 50 19.2	+1.7
WHTZ	Whakaora	1.00	16	P	Pn	12 50 18.3	+0.6
MRHZ	Matea Rd	1.01	39	P	Pn	12 50 18.0	+0.1
PRHZ	Porangahau	1.01	129	P	Pn	12 50 18.8	+0.9
MRZ	Mangatainoka R	1.03	181	P	Pn	12 50 18.1	+0.1
PXZ	Pawanui	1.05	113	P	Pn	12 50 20.0	+1.8
ANWZ	Angora Road	1.06	141	P	Pn	12 50 18.9	+0.5
NMHZ	Naumai	1.07	61	P	Pn	12 50 20.5	+1.9
ARHZ	Aropaoanui	1.14	72	P	Pn	12 50 20.7	+1.3
CKHZ	Cape Kidnapper	1.14	92	P	Pn	12 50 21.1	+1.8
MHEZ	Mangahewa	1.14	299	P	Pn	12 50 19.9	+0.5
KUTZ	Kaahu Road	1.15	8	P	Pn	12 50 19.8	+0.2
PREZ	Palmer Road	1.16	284	P	Pn	12 50 20.7	+1.0
BFZ	Birch Farm	1.16	155	P	Pn	12 50 19.9	+0.2
TIWZ	Tintock	1.16	170	P	Pn	12 50 19.9	+0.1
DREZ	Durham Road	1.18	292	P	Pn	12 50 20.6	+0.7
WPRZ	Whakapapatarin	1.19	21	P	Pn	12 50 20.5	+0.4
ALRZ	Allen Road	1.21	28	P	Pn	12 50 20.7	+0.3
MTHZ	Maungataniwha	1.23	51	P	Pn	12 50 21.5	+0.8
HIZ	Hauiti	1.26	332	P	Pn	12 50 21.1	+0.1
HOWZ	Holdsworth Sta	1.27	183	P	Pn	12 50 21.0	-0.2
KHEZ	Kahui Hut	1.28	285	P	Pn	12 50 22.4	+1.1
PRRZ	Plateau Road	1.28	29	P	Pn	12 50 21.7	+0.4
TLZ	Tolley Road	1.30	358	P	Pn	12 50 21.5	0.0
PKE	Pukeiti	1.33	289	P	Pn	12 50 22.8	+0.9
GRRZ	Galatos Road	1.34	17	P	Pn	12 50 22.5	+0.4
HRRZ	Handcock Road	1.35	23	P	Pn	12 50 22.7	+0.6
RAHZ	Arahi	1.35	59	P	Pn	12 50 23.5	+1.3
NMEZ	Namu Road	1.35	279	P	Pn	12 50 22.9	+0.7
CPWZ	Castlepoint	1.36	161	P	Pn	12 50 23.6	+1.4
WHHZ	Waihua	1.38	67	P	Pn	12 50 23.9	+1.4
NBEZ	Newall Road No	1.40	284	P	Pn	12 50 23.8	+1.1
HSRZ	Hossack Road	1.41	21	P	Pn	12 50 23.6	+0.6
RRRZ	Republican Roa	1.47	29	P	Pn	12 50 24.2	+0.4

RTZ	Ruatahuna	1.47	47	P	Pn	12 50 24.3	+0.4
TMWZ	Te Maipa	1.49	172	P	Pn	12 50 23.8	-0.3
HLRZ	Highlands Stat	1.49	23	P	Pn	12 50 24.9	+0.8
MTW	Mount Morrison	1.53	183	P	Pn	12 50 24.0	-0.5
CAW	Cannon Point	1.53	195	P	Pn	12 50 24.3	-0.3
TARZ	Mount Tarawera	1.56	27	P	Pn	12 50 25.8	+0.8
SNGZ	Shannon Statio	1.59	58	P	Pn	12 50 26.7	+1.3
KARZ	Kaharoa	1.68	17	P	Pn	12 50 28.0	+1.4
KNZ	Kokohu	1.71	70	P	Pn	12 50 27.1	+0.1
DUWZ	D'Urville Isla	1.74	227	P	Pn	12 50 27.3	-0.1
PAWZ	Paruwai Farm	1.75	184	P	Pn	12 50 26.8	-0.9
TRWZ	Traveller	1.77	178	P	Pn	12 50 27.0	-0.7
KMRZ	Kaimai	1.80	8	P	Pn	12 50 28.5	+0.3
URZ	Urewera	1.80	41	P	Pn	12 50 28.4	+0.2
MSWZ	Moikau Station	1.81	189	P	Pn	12 50 27.3	-0.9
RAGZ	Rawiri	1.81	52	P	Pn	12 50 29.4	+1.1
MARZ	Manawahe	1.84	27	P	Pn	12 50 29.4	+0.6
MHGZ	Mahia Peninsul	1.84	76	P	Pn	12 50 29.2	+0.4
BHW	Baring Head	1.86	197	P	Pn	12 50 28.1	-0.9
TCW	Tory Channel	1.88	212	P	Pn	12 50 28.6	-0.6
TOZ	Tahuroa Road	1.90	357	P	Pn	12 50 29.7	+0.2
PRGZ	Paritu Road	1.90	69	P	Pn	12 50 30.3	+0.7
RIGZ	Rimuhau	1.91	62	P	Pn	12 50 30.7	+0.9
OPRZ	Ohinepanea	1.93	23	P	Pn	12 50 30.5	+0.5
PLWZ	Palliser	1.96	188	P	Pn	12 50 29.2	-1.2
TGRZ	Tauranga	1.97	15	P	Pn	12 50 32.1	+1.7
MWZ	Matawai	1.98	50	P	Pn	12 50 31.1	+0.5
TKGZ	Te Karaka	2.11	56	P	Pn	12 50 33.0	+0.7
TUWZ	Tuamarina	2.20	215	P	Pn	12 50 32.8	-0.7
RUGZ	Raukumara Rang	2.32	45	P	Pn	12 50 35.3	-0.1
CNGZ	Carnagh Statio	2.33	61	P	Pn	12 50 35.6	+0.3
NNZ	Nelson	2.33	226	P	Pn	12 50 34.5	-0.7
TWGZ	Tauwhareparae	2.35	53	P	Pn	12 50 36.6	+0.9
BSWZ	Blackbirch Sta	2.46	212	P	Pn	12 50 36.0	-1.2
HAZ	Te Kaha	2.53	43	P	Pn	12 50 37.5	-0.6
MKAZ	Moumakai	2.55	352	P	Pn	12 50 38.7	+0.4
PUZ	Puketiti	2.59	54	P	Pn	12 50 38.6	-0.3
KBAZ	Karaka Road Bo	2.59	347	P	Pn	12 50 39.7	+0.8
PKGZ	Pakihiroa	2.60	49	P	Pn	12 50 39.2	+0.2
QRZ	Quartz Range	2.64	242	P	Pn	12 50 38.5	-1.1
AWAZ	Awhitu Peninsu	2.67	343	P	Pn	12 50 40.7	+0.7
ETAZ	East Tamaki Re	2.73	348	P	Pn	12 50 41.1	+0.4
WTAZ	Waiatarua	2.81	343	P	Pn	12 50 42.9	+0.9
EPAZ	Eden Park BICE	2.83	346	P	Pn	12 50 42.8	+0.6
WMGZ	Waiomatatini S	2.84	51	P	Pn	12 50 42.2	-0.1
WIAZ	Waiheke Island	2.86	352	P	Pn	12 50 42.7	+0.2
HBAZ	Herne Bay Bore	2.86	346	P	Pn	12 50 43.3	+0.7
KUZ	Kuaotunu	2.88	2	P	Pn	12 50 42.5	-0.4
MBAZ	Motutapu North	2.91	349	P	Pn	12 50 43.7	+0.4
THZ	Tophouse	2.96	223	P	Pn	12 50 43.1	-0.8
RVAZ	Riverhead Bore	2.97	344	P	Pn	12 50 44.9	+0.9
ABAZ	Army Bay	3.09	348	P	Pn	12 50 46.1	+0.4
KHZ	Kahutara	3.19	209	P	Pn	12 50 45.1	-1.9
DSZ	Denniston Nort	3.58	233	P	Pn	12 50 51.4	-1.0
WCZ	Waipu Caves	3.82	344	P	Pn	12 50 56.3	+0.6
GVZ	Greta Valley S	3.86	209	P	Pn	12 50 53.6	-2.6
LTZ	Lake Taylor	4.03	218	P	Pn	12 50 56.0	-2.6
INZ	Inchbonnie	4.41	224	P	Pn	12 51 01.0	-2.7
OKCZ	Okains Bay	4.51	204	P	Pn	12 51 01.9	-3.2
CRLZ	Canterbury Las	4.53	209	P	Pn	12 51 02.4	-2.9
OXZ	Oxford	4.56	215	P	Pn	12 51 01.9	-3.9
AKCZ	Akaroa Harbour	4.69	205	P	Pn	12 51 04.4	-3.2
CTZ	Chatham Island	7.12	128	P	Pn	12 51 39.7	-1.0

MEX 04 13:17:14.3±0.5, 17°.01N×100°.64W, h17^{km}±6^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.36	84	*i* P	Pg	13 17 20.8	-1.0
CAIG				*e*S	Sg	13 17 25.3	-1.6
ZIIG	Zihuatanejo	0.98	307	*i* P	Pb	13 17 29.9	-3.0
ZIIG				*e*S	Sb	13 17 41.3	-4.3
ARIG	Puente Sto Nin	1.29	13	*e*P	Pn	13 17 34.2	-3.5
ARIG				*e*S	Sb	13 17 48.9	-5.7
MEIG	Mezcala	1.33	47	*e*P	Pn	13 17 34.2	-4.1
MEIG				*i* S	Sn	13 17 51.1	-4.6
PLIG	Platanillo	1.75	38	*i* P	Pn	13 17 41.2	-2.8
PLIG				*e*S	Sn	13 18 01.7	-4.3
TLIG	Tlapa	2.06	74	*i* P	Pn	13 17 44.5	-3.8
TLIG				*i* S	Sn	13 18 09.4	-4.3

MAN 04 13:19:34.9, 18°.16N×122°.13E, h15^{km}, MS3.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	Mt. Cagua	0.12	316	*e*P	Pb	13 19 39.0	+0.1
SGCP				*e*S	Sb	13 19 42.2	+0.7
CVP	Callao Caves	0.54	213	⇑*i*P	Pn	13 19 47.4	-0.7
CVP				*i* S	Sb	13 19 54.8	+1.2
APYP	Conner	0.90	251	*e*P	Pb	13 19 51.2	-1.0
APYP				*e*S	Sb	13 20 03.5	-0.4
PALP	Palanan	1.12	166	*e*P	Pb	13 19 55.6	-0.4
PALP				*e*S	Sb	13 20 10.8	+0.3
CAUP	Cauayan	1.24	194	*e*P	Pb	13 19 58.2	+0.1
CAUP				*e*S	Sg	13 20 23.9	+8.9
ABRA	Dolores	1.44	250	*e*P	Pn	13 20 00.1	-0.4
ABRA				*e*S	Sn	13 20 18.9	-0.3
SMPP	San Manuel, Pa	2.43	215	*e*P	Pn	13 20 15.0	+0.8
SMPP				*e*S	Sn	13 20 45.1	+1.5
BALP	Baler	2.46	193	*e*P	Pn	13 20 14.7	+0.1
BALP				*e*S	Sn	13 20 43.4	-1.0

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*NIED **04** 13:43:00, 32°.10N×131°.90E, h23^{km}, Mw3.8 Best double couple: $M_0$4.91000×10^{14} NP1:ϕ_s169.00000°, δ38.00000°, λ35.00000°. NP2:ϕ_s51.00000°, δ70.00000°, λ122.00000°.*

*IDC **04** 13:43:47.9±4.0, 31°.39N×131°.74E, h0^{km}, mb3.5/2, mb1 3.4/4, mb1mx3.3/35, mbtmp3.4/4, ML3.1/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/27, Error ellipse: s-maj=73.3km s-min=41.7km az=84.0*

*ISCJB **04** 13:43:55.7±0.8, 32°.06N±0°.05×131°.96E±0°.05, h16^{km}±8^{km}, mb3.4/2, MS2.7/1, Error ellipse: s-maj=9.0km s-min=5.4km az=150.4*

*JMA **04** 13:43:56.5±0.1, 32°.09N×131°.89E, h24^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s38.00000°, δ73.00000°, λ82.00000°. NP2:ϕ_s243.00000°, δ18.00000°, λ114.00000°. Principal axes: T Plg61.0000°, Azm297.0000°; N Plg7.0000°, Azm40.0000°; P Plg28.0000°, Azm134.0000°;*

JMA Felt I J1.

ISC 04 13:43:55.2±1.4, 32°.09N±0°.06×131°.97E±0°.04, h14^{km}±9^{km}, n17, σ1^{s}.30/23, 3C-5D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTSN	Tsuno	0.42	291	⇓P	Pg	13 44 03.9	+0.3
JTSN				*e*S	Sg	13 44 09.6	+0.3
JHHC	Hyugahichiya	0.45	322	⇓P	Pb	13 44 05.1	+0.2
JHHC				S	Sb	13 44 11.6	+0.2
JNKG	Nichinankitago	0.66	230	P	Pg	13 44 08.5	+0.4
JKIT	Kitakata	0.69	321	⇓P	Pb	13 44 09.2	+0.3
JTZ	Takazaki	0.77	256	⇓P	Pg	13 44 09.7	-0.5
JNAR	Kushima--Naru	0.82	227	⇑P	Pg	13 44 11.4	+0.4
JUS	Usuki	0.99	349	⇓P	Pn	13 44 15.0	+0.4
JTO	Tosashimizu	1.04	43	P	Pb	13 44 15.3	+0.3
JTO				S	Sb	13 44 29.4	+0.9
JIU3	Izumi3	1.08	295	P	Pg	13 44 15.4	-0.6
JIU3				S	Sg	13 44 29.7	-0.4
JZO	Okuchi	1.16	273	⇑P	Pg	13 44 16.3	-1.3
JZO				S	Sg	13 44 31.8	-0.9
UWA2	Uwa jima 2	1.25	26	⇑P	Pg	13 44 18.4	-0.9
UWA2				S	Sb	13 44 34.8	+0.3
JNU	Nakatsue	1.38	318	Pn	Pn	13 44 21.0	+0.9
	159nm,0.3s,baz=136,slow=4.4,SNR=421						
JNU				Sn	Sn	13 44 40.4	+2.3
	32nm,0.3s,baz=229,slow=6.9,SNR=4.4						
JNU				LR	LR	13 45 16.0	
	comp=Z,232nm,19.6s,baz=171,slow=47						
KSRS	Korea Array	6.30	329	Pn	Pn	13 45 30.3	+2.7
	0.2nm,0.3s,baz=149,slow=15,SNR=2.8						
KSRS				Lg	Lg	13 47 24.8	
	0.2nm,0.3s,baz=153,slow=31,SNR=4.8						
MJAR	Matsushiro Arr	6.81	48	LR	LR	13 48 31.6	
	comp=Z,34nm,19.2s,baz=140,slow=38						
KLR	Kul'dur	17.12	360	P	P	13 47 56.8	+1.2
	0.1nm,0.3s,baz=172,slow=13,SNR=2.3						
SONM	Songino Array	24.96	316	P	P	13 49 16.6	-1.7
	1.2nm,0.8s,baz=129,slow=10.0,SNR=5.2						
SONM				LR	LR	13 58 31.5	
	comp=Z,23nm,19.1s,baz=96,slow=35						
MKAR	Makanchi Array	40.40	306	P	P	13 51 29.8	-2.9
	0.2nm,0.3s,baz=87,slow=10,SNR=1.6						

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*IDC **04** 13:58:39.8±1.4, 39°.32N×20°.92E, h0^{km}, mb3.7/7, mb1 3.8/11, mb1mx3.6/38, mbtmp3.7/11, ML3.6/4, Error ellipse: s-maj=20.3km s-min=17.9km az=153.0*

*ATH **04** 13:58:41.0, 39°.46N×20°.98E, h20^{km}, ML3.1/20, Error ellipse: s-maj=1.0km s-min=0.5km az=289.0*

*ISCJB **04** 13:58:41.8±0.5, 39°.44N±0°.01×20°.97E±0°.02, h13^{km}±3^{km}, mb3.6/7, Error ellipse: s-maj=2.8km s-min=2.3km az=159.1*

*THE **04** 13:58:41.6, 39°.42N×21°.04E, h5^{km}±1^{km}, ML3.1/17, Error ellipse: s-maj=1.6km s-min=0.5km az=355.0*

*BEO **04** 13:58:42.6±0.6, 39°.25N×20°.86E, h18^{km}±3^{km}, ML3.6/6*

ISC 04 13:58:41.0±1.1, 39°.42N±0°.02×20°.99E±0°.02, h4^{km}±8^{km}, n137, σ1^{s}.10/173, mb3.6/7, 14C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	Janina	0.26	337	P	Pg	13 58 45.8	-0.3
JAN				S	Sb	13 58 51.2	-2.1
JAN	Janina	0.26	337	P	Pg	13 58 45.9	-0.3
JAN				S	Sg	13 58 50.3	+0.7
JAN				AML	AML	13 58 53.1	
	comp=E,18735µm,0.3s						
JAN				AML	AML	13 58 54.5	
	comp=N,22345µm,0.3s						
MEV	Metsovon	0.41	27	P	Pg	13 58 48.6	-0.4
MEV	Metsovon	0.41	27	P	Pg	13 58 49.0	0.0
IGT	Igoumenitsa	0.52	283	*e*Pg	Pb	13 58 51.7	-1.0
IGT				*e*Sg	Sb	13 59 01.0	+0.4
IGT	Igoumenitsa	0.52	283	P	Pb	13 58 51.5	-1.2
IGT				S	Sb	13 59 00.0	-0.6
IGT	Igoumenitsa	0.52	283	P	Pg	13 58 51.2	+0.2
IGT				S	Sg	13 58 58.4	+0.6
IGT				AML	AML	13 59 04.8	
	comp=E,4664µm,0.3s						
IGT				AML	AML	13 59 05.3	
	comp=N,4459µm,0.7s						
KPRO	Kipourio	0.61	28	P	Pg	13 58 52.2	-0.6
KPRO				S	Sg	13 59 01.8	+1.1
KPRO	Kipourio	0.61	28	P	Pg	13 58 52.7	0.0
KPRO				S	Sg	13 59 00.4	-0.3
KPRO				AML	AML	13 59 09.6	
	comp=E,7151µm,0.4s						
KPRO				AML	AML	13 59 12.2	
	comp=N,6011µm,1.5s						
TSLK	Tsoukalades, L	0.64	204	P	Pb	13 58 54.6	-0.2
TSLK				S	Sb	13 59 04.7	+0.5
LKD2	Lefkada island	0.68	202	P	Pb	13 58 55.2	-0.2
LKD2				S	Sb	13 59 05.7	+0.5
LKD2	Lefkada island	0.68	202	P	Pb	13 58 55.2	-0.2
LKD2				S	Sb	13 59 04.3	-0.9
LKD2				AML	AML	13 59 10.7	
	comp=E,4135µm,0.7s						
LKD2				AML	AML	13 59 11.1	
	comp=N,3360µm,0.8s						
PENT	Pentalofos	0.79	9	P	Pg	13 58 55.5	-0.7
PENT				S	Sb	13 59 08.0	-0.5
PENT	Pentalofos	0.79	9	P	Pg	13 58 55.5	-0.7
PENT				S	Sg	13 59 06.8	+0.4
PENT				AML	AML	13 59 18.0	
	comp=E,1686µm,0.4s						
PENT				AML	AML	13 59 23.5	
	comp=N,2210µm,0.6s						
THL	Klokotos Trika	0.81	79	P	Pg	13 58 55.8	-0.8
THL				S	Sg	13 59 06.7	-0.4
THL	Klokotos Trika	0.81	79	P	Pg	13 58 56.5	-0.1
THL				S	Sg	13 59 07.7	+0.7
THL				AML	AML	13 59 16.3	
	comp=E,1472µm,0.7s						
THL				AML	AML	13 59 18.1	
	comp=N,1371µm,0.6s						
EVR	Evrytania	0.81	128	P	Pg	13 58 56.4	-0.2
EVR				S	Sb	13 59 08.8	-0.3
EVR	Evrytania	0.81	128	P	Pb	13 58 57.9	+0.1
EVR				S	Sb	13 59 08.8	-0.3
EVR				AML	AML	13 59 14.6	
	comp=E,1915µm,0.7s						
EVR				AML	AML	13 59 16.9	
	comp=N,1973µm,0.4s						
EVGI	Lefkada island	0.83	198	P	Pb	13 58 57.8	-0.3
SRN	Sarande	0.89	302	P	Pb	13 58 58.4	-0.7
SRN				S	Sn	13 59 12.8	-0.9
PVO	Paravola	0.90	152	P	Pg	13 58 57.8	-0.5
PVO				S	Sb	13 59 10.8	-0.9
KEK	Kerkira	0.96	288	P	Pb	13 58 59.9	-0.4
KEK				S	Sn	13 59 15.8	+0.2
KEK	Kerkira	0.96	288	P	Pg	13 58 59.0	-0.5
KEK				S	Sb	13 59 13.0	-0.4
KEK				AML	AML	13 59 19.4	
	comp=N,1800µm,0.6s						
KEK				AML	AML	13 59 21.8	
	comp=E,3658µm,0.5s						
NEST	Nestorio	1.00	3	P	Pb	13 59 00.8	-0.2
NEST				S	Sb	13 59 15.2	+0.6
NEST	Nestorio	1.00	3	P	Pg	13 59 00.0	-0.1
NEST				AML	AML	13 59 26.2	
	comp=E,974µm,1.0s						
NEST				AML	AML	13 59 29.3	
	comp=N,1368µm,0.7s						
KZN	Kozani	1.07	34	P	Pg	13 59 01.7	+0.1
KZN				S	Sb	13 59 16.8	+0.1
KZN	Kozani	1.07	34	P	Pg	13 59 01.3	-0.4
AGG	Agios Georgios	1.12	110	P	Pg	13 59 01.8	-0.6
AGG				S	Sb	13 59 18.2	+0.3
AGG	Agios Georgios	1.12	110	P	Pb	13 59 03.1	+0.2
AGG				S	Sn	13 59 19.4	0.0
AGG				AML	AML	13 59 30.4	
	comp=E,1309µm,0.5s						
AGG				AML	AML	13 59 32.7	
	comp=N,1657µm,0.6s						
LRSO	Larissa Observ	1.12	76	P	Pg	13 59 02.0	-0.4
LRSO				AML	AML	13 59 26.4	
	comp=N,3183µm,0.8s						
LRSO				AML	AML	13 59 28.1	
	comp=E,4030µm,0.5s						
TPE	Tepelena	1.16	320	P	Pn	13 59 03.5	-0.5
TPE				S	Sn	13 59 20.6	+0.3
VLS	Valsamata	1.27	194	P	Pn	13 59 05.2	-0.5
VLS				S	Sn	13 59 24.4	+1.1
VLS	Valsamata	1.27	194	P	Pn	13 59 05.2	-0.5
VLS				AML	AML	13 59 31.6	
	comp=E,1836µm,0.5s						
VLS				AML	AML	13 59 33.1	
	comp=N,2155µm,0.8s						
KFL	Anninata	1.31	187	P	Pg	13 59 05.7	-0.5
KFL				S	Sn	13 59 24.5	+0.3
LIT	Litokhoron	1.35	59	P	Pn	13 59 06.0	-0.7
LIT				S	Sg	13 59 24.2	-0.1
LIT	Litokhoron	1.35	59	P	Pn	13 59 06.1	-0.7
LIT				AML	AML	13 59 29.8	
	comp=N,1493µm,0.5s						
LIT				AML	AML	13 59 31.4	
	comp=E,1864µm,0.6s						
RLS	Riolos of Patr	1.41	164	P	Pb	13 59 07.5	-0.4
KLV	Kalavryta, Ach	1.65	146	P	Pb	13 59 11.9	-0.1
KLV				AML	AML	13 59 44.8	
	comp=N,557µm,1.0s						
KLV				AML	AML	13 59 45.8	
	comp=E,572µm,1.1s						
OHR	Ohrid	1.70	355	*i* Pn	Pg	13 59 13.6	0.0
XOR	Xorichti	1.71	91	P	Pn	13 59 12.0	+0.3
XOR				AML	AML	13 59 45.6	
	comp=N,1052µm,0.9s						
XOR				AML	AML	13 59 48.4	
	comp=E,748µm,0.7s						
NEO	Neokhori	1.74	93	P	Pn	13 59 11.8	-0.3
NEO				AML	AML	13 59 45.6	
	comp=E,801µm,0.6s						
NEO				AML	AML	13 59 46.3	
	comp=N,1313µm,0.7s						
LKR	Lokris	1.75	115	P	Pn	13 59 12.5	+0.4
LKR				AML	AML	13 59 43.9	
	comp=N,242µm,0.6s						
LKR				AML	AML	13 59 44.4	
	comp=E,240µm,0.3s						
GRG	Griva	1.88	35	P	Pn	13 59 14.4	+0.3
GRG				AML	AML	13 59 47.5	
	comp=N,599µm,0.5s						
GRG				AML	AML	13 59 47.7	
	comp=E,331µm,1.0s						
THE	Thessaloniki	1.94	51	P	Pn	13 59 15.3	+0.4
THE				AML	AML	13 59 47.6	
	comp=E,185µm,0.6s						
THE				AML	AML	13 59 48.9	
	comp=N,153µm,0.5s						
TIR	Tirane	2.11	336	*e*Pn	Pb	13 59 20.1	+0.2
TIR	Tirane	2.11	336	⇑*i*P	Pb	13 59 20.2	+0.3
PLG	Polygyros	2.12	62	P	Pn	13 59 17.0	-0.4
VAY	Valandovo	2.25	32	*e*Pn	Pb	13 59 22.5	+0.2
VAY	Valandovo	2.25	32	*i* Pn	Pn	13 59 19.5	+0.4
KNT	Kendrikon	2.28	39	P	Pn	13 59 19.5	0.0
SOH	Sokhos	2.29	52	P	Pn	13 59 20.2	+0.4
SOH				AML	AML	13 59 57.3	
	comp=N,384µm,0.6s						
SOH				AML	AML	13 59 57.6	
	comp=E,618µm,0.8s						
STIP	Stip	2.45	22	*i* Pn	Pb	13 59 24.2	-1.5
OUR	Ouranopolis	2.48	67	P	Pn	13 59 22.6	+0.4
SKO	Skopje	2.58	8	*e*Pn	Pb	13 59 27.1	-0.8
SKO	Skopje	2.58	8	*i* Pn	Pb	13 59 27.1	-0.8
SRS	Serrai	2.62	49	*e*Pn	Pb	13 59 26.9	-1.7
SRS	Serrai	2.62	49	P	Pn	13 59 24.3	+0.1
KRND	KRANIDI	2.65	139	P	Pn	13 59 25.9	+1.3
VLY	Voula,Athens	2.70	124	P	Pn	13 59 26.6	+1.4
KKB	Krupnik	2.92	32	P	Pn	13 59 29.0	+0.7
NVR	Nevrokopi	2.92	48	P	Pn	13 59 28.5	+0.1
MMB	Musomiste	3.01	43	P	Pn	13 59 29.9	+0.3
DRME	Dracevica, Mon	3.09	334	*e*Pn	Pn	13 59 31.7	+1.1
THAS	Thassos island	3.10	66	P	Pn	13 59 30.6	-0.2
KAVA	Kavala	3.13	59	P	Pn	13 59 31.4	+0.3
PDG	Podgorica	3.28	337	*e*Pn	Pn	13 59 36.1	+2.8
PDG	Podgorica	3.28	337	⇑*i*P	Pn	13 59 35.5	+2.2
PDG	Podgorica	3.28	337	*e*Pn	Pn	13 59 35.0	+1.7
TIP	Timpagrande	3.29	267	⇑*i*P	Pn	13 59 34.9	+1.5
BARS	Barje	3.45	10	*e*Pn	Pn	13 59 37.5	+1.9
BARS	Barje	3.45	10	*e*Pn	Pg	13 59 56.3	+9.1
MATE	Matera	3.51	292	⇑*i*P	Pn	13 59 38.5	+2.1
HCY	Herceg Novi	3.57	329	*e*Pn	Pn	13 59 37.9	+0.7
VTS	Vitosha	3.62	27	*e*Pn	Pn	13 59 38.8	+0.7
VTS				*e*Sn	Sn	14 00 22.4	+1.0
VTS	Vitosha	3.62	27	⇑*i*P	Pn	13 59 38.9	+0.8
VTS	Vitosha	3.62	27	S	Sn	14 00 22.2	+0.8
VTS	Vitosha	3.62	27	P	Pn	13 59 38.6	+0.5
RZN	Rozhen	3.64	50	P	Pn	13 59 39.0	+0.7
TREB	Trebinje	3.85	330	*e*Pn	Pn	13 59 41.6	+0.5
TREB	Trebinje	3.85	330	*e*Pn	Pn	13 59 41.4	+0.3
DBRK	Dubrovnik	3.89	327	*e*Pn	Pn	13 59 42.3	+0.6
DBRK				Sn	Sn	14 00 27.3	-0.6
SJES	Sjenica	3.92	349	*e*Pn	Pn	13 59 44.7	+2.6
BRY	Bratogost	3.94	333	*e*Pn	Pn	13 59 43.0	+0.5
ZAPS	Zavoj	4.05	17	*e*Pn	Pn	13 59 47.0	+3.2
UPM	Unac-Piva	4.09	338	*e*Pn	Pn	13 59 37.7	-6.9
EZN	Ezine	4.14	83	⇑*i*P	Pb	13 59 50.8	-3.7
IVAS	Ivanjica	4.20	352	*e*Pn	Pn	13 59 48.4	+2.4
BOVS	Bovan	4.25	7	*e*Pn	Pn	13 59 49.3	+2.7
STON	Ston	4.25	325	*e*Pn	Pn	13 59 46.8	+0.3
STON				*e*Sn	Sn	14 00 36.4	-0.2
STON	Ston	4.25	325	*e*Pn	Pn	13 59 46.9	+0.4
STON				Sn	Sn	14 00 36.3	-0.2
STON	Ston	4.25	325	*e*Pn	Pn	13 59 46.4	-0.1
RUDO	Rudo	4.37	344	*e*Pn	Pn	13 59 49.4	+1.2
GRUS	Gruza	4.47	357	*e*Pn	Pn	13 59 52.0	+2.4
ZAGS	Zajecar	4.49	12	*e*Pn	Pn	13 59 51.2	+1.3
BBLS	Lazići	4.60	346	*e*Pn	Pn	13 59 52.5	+1.0
BBLS	Lazići	4.60	346	*e*Pn	Pn	13 59 52.8	+1.3
DIVS	Divibare	4.74	351	*e*Pn	Pn	13 59 54.8	+1.5
DIVS				*e*Sn	Sn	14 00 50.3	+1.5
DIVS	Divibare	4.74	351	*e*Pn	Pn	13 59 55.0	+1.7
TRUS	Trudelj	4.82	355	*e*Pn	Pn	13 59 56.3	+1.9
MAKA	Makarska	4.88	324	*e*Pn	Pn	13 59 55.6	+0.3
MAKA				Sn	Sn	14 00 51.6	-0.7
HAPS	Han Pijesak,BI	4.91	343	*e*Pn	Pn	13 59 56.7	+1.0
HAPS				*e*Sn	Sn	14 00 53.2	+0.2
HAPS	Han Pijesak,BI	4.91	343	*e*Pn	Pn	13 59 56.8	+1.0
IDI	Anoyia	5.16	142	Pn	Pn	13 59 59.7	+0.5
	comp=E,0.4nm,0.3s,baz=168,slow=24,SNR=1.3						
TEKS	Tekeris	5.24	349	*e*Pn	Pn	14 00 00.4	+0.2
MDVR	Moldovita	5.39	6	⇑*i*P	Pn	14 00 04.8	+2.5
KIJV	Kijevo	5.72	325	*e*Pn	Pn	14 00 07.9	+1.1
FRGS	Fruska Gora	5.80	352	*e*Sn	Sn	14 01 14.2	-0.7
FRGS	Fruska Gora	5.80	352	*e*Pn	Pn	14 00 09.1	+1.2
ZIRJ	Zirje	5.83	318	*e*Pn	Pn	14 00 09.0	+0.7
ZIRJ				Sn	Sn	14 01 14.6	-0.9
MORI	Morici	5.95	320	*e*Pn	Pn	14 00 10.6	+0.7
BLY	Banja Luka	6.03	333	⇑*i*P	Pn	14 00 12.4	+1.4
GZR	Gura Zlata	6.12	12	⇑*i*P	Pn	14 00 14.5	+2.2
DUGI	Dugi Otok	6.37	318	*e*Pn	Pn	14 00 16.5	+0.8
UDBI	Udbina	6.42	324	*e*Pn	Pn	14 00 18.4	+2.0
ARR	Arges	6.53	23	⇑*i*P	Pn	14 00 19.0	+1.0
VOIR		6.72	25	⇑*i*P	Pn	14 00 22.9	+2.3
NVLJ	Novalja	6.87	320	*e*Pn	Pn	14 00 23.3	+0.8
MLR	Muntele Rosu	7.09	30	Pn	Pn	14 00 28.8	+3.1
	comp=E,1.1nm,0.3s,baz=209,slow=12,SNR=12						
MLR				Sn	Sn	14 01 49.5	+2.7
	comp=E,0.1nm,0.3s,baz=210,slow=22,SNR=2.1						
MLR	Muntele Rosu	7.09	30	⇑*i*P	Pn	14 00 26.4	+0.7
CRES	Cresnjev	7.59	329	*e*Pn	Pn	14 00 31.8	-0.7
PLOR	Plostina	7.67	31	⇑*i*P	Pn	14 00 34.7	+1.2
VRI	Vrincioaia	7.71	31	⇑*i*P	Pn	14 00 34.7	+0.6
SOKA	Soboth	8.46	331	*e*Pn	Pn	14 00 44.5	0.0
	comp=E,1.7nm,0.5s						
OBKA	Obir	8.51	328	Pn	Pn	14 00 46.2	+1.0
	comp=E,2.1nm,0.3s						
VYHS	Vyhne	9.21	351	*e*PN	Pn	14 00 48.7	-5.9
KBA	Koelnbreinsper	9.47	326	Pn	Pn	14 00 57.5	-0.8
	comp=E,0.5nm,0.3s						
BRTR	Keskin Array B	9.78	84	Pn	Pn	14 01 05.1	+2.5
	comp=E,0.1nm,0.3s,baz=273,slow=13,SNR=2.7						
BRTR				Sn	Sn	14 02 52.2	-0.7
	comp=E,0.6nm,0.3s,baz=188,slow=20,SNR=7.5						
DAVOX	Davos/Dischmat	10.95	316	Pn	Pn	14 01 20.5	+1.8
	comp=E,0.8nm,0.3s,baz=173,slow=16,SNR=3.6						
DAVOX				Sn	Sn	14 03 19.5	-2.2
	comp=E,0.4nm,0.3s,baz=320,slow=21,SNR=2.0						
ESDC	Sonseca Array	19.23	279	P	Pn	14 03 08.1	+0.9
	comp=E,0.1nm,0.3s,baz=75,slow=11,SNR=5.3						
HFS	Hagfors	21.24	350	P	P	14 03 27.3	-0.5
	comp=E,1.6nm,0.6s,baz=170,slow=10,SNR=7.7						
MDT	Midelt	21.66	260	P	P	14 03 31.2	-1.5
	comp=E,1.8nm,0.7s,baz=242,slow=6.4,SNR=4.7						
FINES	FINESS Array B	22.28	6	P	P	14 03 38.8	-0.2
	comp=E,0.8nm,0.6s,baz=188,slow=8.4,SNR=2.8						
NB2	NORSAR Subarra	22.48	348	P	P	14 03 41.0	-0.2
	comp=Z,1.4nm,0.6s,baz=164,slow=11						
NOA	NORSAR Array B	22.48	348	P	P	14 03 41.0	-0.2
	comp=Z,1.7nm,0.9s,baz=165,slow=10,SNR=6.2						
ARCES	ARCESS Array B	30.28	3	P	P	14 04 52.8	-0.1
	comp=Z,1.0nm,0.8s,baz=190,slow=14,SNR=6.3						
MKAR	Makanchi Array	44.35	60	P	P	14 06 52.1	-0.2
	comp=Z,0.9nm,0.5s,baz=274,slow=8.0,SNR=12						
ZALV	Zalesovo Beam	44.60	49	P	P	14 06 54.1	-0.1
	comp=Z,1.5nm,0.5s,baz=264,slow=7.6,SNR=8.6						

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*JMA **04** 14:04:34.8±0.6, 46°.73N×141°.64E, h0^{km}, M3.4*

*SKHL **04** 14:04:35.0±0.4, 46°.73N×141°.77E, h10^{km}, mb4.2/3*

SKHL Felt (II) at Nevel'sk.

ISC 04 14:04:34.2±2.6, 46°.8N±0°.1×141°.6E±0°.1, h11^{km}, n5, σ0^{s}.61/9, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	Yuzh-Sakhalins	0.79	78	⇓*e*Pg	Pg	14 04 49.0	-0.4
YSS				AMB	AMB	14 04 49.4	
	30nm,0.4s						
YSS				*e*Sg	Sg	14 04 59.3	-0.3
YSS				A	A	14 04 59.8	
	670nm,0.6s						
YSS				A	A	14 04 59.8	
	330nm,0.6s						
YSS				AMS	AMS	14 05 13.0	
	600nm,8.0s						
JRBN	Rebuntou	1.43	196	P	Pn	14 05 00.0	0.0
JRBN				*e*S	Sn	14 05 18.2	-0.6
JWK2	Keihoku	1.49	173	P	Pn	14 05 01.4	+0.5
JWK2				*e*S	Sb	14 05 20.6	-0.2
JRR	Rishiri	1.67	188	P	Pb	14 05 05.6	+0.6
JRR				*e*S	Sg	14 05 27.3	-0.7

JSE	Soyaes	1.95	160	P	Pn	14 05 08.0	+0.8

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*JMA **04** 14:15:56.5±0.5, 46°.76N×141°.60E, h0^{km}, M3.1*
*SKHL **04** 14:15:57.1±0.5, 46°.73N×141°.74E, h10^{km}, mb3.7/2*
ISC 04 14:15:56.1±2.8**, 46°.8N**±0°.2×**141°.6E**±0°.1**, h9^{km}, n5, σ0^{s}.49**/9**,**
Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.81	80	ePg	Pg	14 16 11.4	-0.3
YSS				AMB	AMB	14 16 14.3	
	40nm,0.6s						
YSS				eSg	Sg	14 16 21.9	-0.3
YSS				A	A	14 16 22.1	
	490nm,0.7s						
YSS				A	A	14 16 22.1	
	240nm,0.7s						
JRBN	Rebuntou	1.44	195	P	Pn	14 16 22.4	+0.1
JRBN				eS	Sn	14 16 40.8	-0.5
JWK2	Keihoku	1.51	172	P	Pn	14 16 23.7	+0.4
JWK2				eS	Sn	14 16 42.9	-0.2
JRR	Rishiri	1.69	187	P	Pb	14 16 27.6	+0.3
JRR				eS	Sg	14 16 49.9	-0.4
JSE	Soyaes	1.98	159	P	Pn	14 16 30.5	+0.7

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*ISCJB **04** 14:18:40.8±0.8, 10°.15S±0°.09×161°.4E±0°.1, h67^{km}, mb3.8/6, Error ellipse: s-maj=17.8km s-min=8.5km az=142.9*
*IDC **04** 14:18:44.7±2.1, 10°.23S×161°.08E, h84^{km}±16^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.6/30, mbtmp4.1/7, MS3.3/2, Ms1 3.3/2, ms1mx2.7/20, Error ellipse: s-maj=33.5km s-min=15.6km az=68.0*
ISC 04 14:18:43.1±0.9**, 10°.1S**±0°.1×**161°.3E**±0°.1**, h67^{km}, n10,**
σ1^{s}.71/11**, mb3.9**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.48	298	P	Pn	14 19 08.5	+0.9
	63nm,0.3s,baz=140,slow=6.7,SNR=22						
HNR				S	Sn	14 19 26.4	+0.2
	122nm,0.3s,baz=358,slow=22,SNR=30						
HNR	Honiara	1.48	298	eP	Pn	14 19 18.0	+10
DZM	Mont Dzumac	12.87	158	P	Pn	14 21 46.1	+2.8
	0.8nm,0.3s,baz=26,slow=10,SNR=28						
DZM				S	Sn	14 24 03.1	-1.8
	0.4nm,0.3s,baz=137,slow=22,SNR=5.9						
DZM				LR	LR	14 25 19.2	
	comp=Z,70nm,18.2s,baz=26,slow=31						
CTA	Charters Tower	17.54	234	P	P	14 22 45.0	+1.5
	0.5nm,0.3s,baz=61,slow=12,SNR=11						
ASAR	Alice Springs	29.37	239	P	P	14 24 37.9	-2.2
	1.5nm,0.9s,baz=83,slow=8.6,SNR=8.0						
ASAR				LR	LR	14 34 57.1	
	comp=Z,102nm,20.4s,baz=213,slow=33						
USRK	Ussuriysk Ar.	60.24	336	P	P	14 28 45.3	+1.0
	2.7nm,0.7s,baz=111,slow=6.4,SNR=5.2						
VNDA	Vanda	67.38	180	P	P	14 29 29.9	-0.9
	1.8nm,0.8s,baz=344,slow=6.7,SNR=13						
SONM	Songino Array	75.37	325	P	P	14 30 19.7	+0.1
	1.5nm,0.6s,baz=144,slow=5.5,SNR=6.3						
ILAR	Eielson Array	84.09	20	P	P	14 31 05.7	-0.6
	0.3nm,0.4s,baz=242,slow=4.8,SNR=7.5						
MKAR	Makanchi Array	89.86	318	P	P	14 31 33.3	-1.4
	0.2nm,0.4s,baz=100,slow=7.5,SNR=2.8						

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*NEIC **04** 14:33:25.7±0.0, 19°.28N×64°.43W, h33^{km}, MD3.6(RSPR), After RSPR.*
RSPR 04 14:33:25.7, 19°.28N×64°.43W, h33^{km}±14^{km}**, MD3.6**/15**,**
14C-7D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STVI	Saint Thomas	1.04	208	⇓eP	Pn	14 33 42.5	-1.6
STVI	Saint Thomas	1.04	208	⇑eP	Pn	14 33 42.5	-1.5
STVI				eS	Sn	14 33 55.7	-1.8
STVI	Saint Thomas	1.04	208	ePn	Pn	14 33 42.6	-1.5
STVI				eSn	Sn	14 33 56.8	-0.7
CUPR	Culebra, Puert	1.26	220	⇓eP	Pn	14 33 45.5	-1.5
CUPR	Culebra, Puert	1.26	220	eS	Sn	14 34 01.2	-1.6
CUPR	Culebra, Puert	1.26	220	ePn	Pn	14 33 45.3	-1.6
CUPR				eSn	Sn	14 34 02.1	-0.7
MTP	Monte Pirata	1.58	222	⇓eP	Pn	14 33 50.3	-1.2
MTP	Monte Pirata	1.58	222	eS	Sn	14 34 09.4	-1.3
MTP	Monte Pirata	1.58	222	ePn	Pn	14 33 50.2	-1.3
MTP				eSn	Sn	14 34 10.1	-0.7
CBYP	Canovanas	1.68	234	⇓eP	Pn	14 33 51.2	-1.6
CBYP	Canovanas	1.68	234	⇓eP	Pn	14 33 51.4	-1.4
CBYP	Canovanas	1.68	234	ePn	Pn	14 33 51.3	-1.5
CBYP				ePn	Pb	14 33 51.4	-4.7
CBYP				eSn	Sn	14 34 13.0	-0.3
HUMP	Col San Antoni	1.75	230	⇓eP	Pn	14 33 52.9	-0.9
HUMP	Col San Antoni	1.75	230	⇑eP	Pn	14 33 52.6	-1.2
HUMP	Col San Antoni	1.75	230	eS	Sn	14 34 13.7	-1.4
HUMP	Col San Antoni	1.75	230	ePn	Pn	14 33 52.1	-1.7
PDPR	Patillas Dam,	1.96	230	⇑eP	Pn	14 33 55.3	-1.4
PDPR	Patillas Dam,	1.96	230	eS	Sn	14 34 18.5	-1.6
SJG	San Juan	2.00	235	⇑eP	Pn	14 33 55.9	-1.3
SJG	San Juan	2.00	235	eS	Sn	14 34 19.3	-1.8
SJG	San Juan	2.00	235	ePn	Pn	14 33 56.0	-1.2
IGPR	InterUniversit	2.06	231	⇑eP	Pn	14 33 57.0	-1.0
IGPR	InterUniversit	2.06	231	⇑eP	Pn	14 33 57.0	-0.9
IGPR	InterUniversit	2.06	231	eS	Sn	14 34 20.9	-1.5
EMPR	Esperanza - Ma	2.14	248	⇑eP	Pn	14 33 58.0	-1.1
EMPR	Esperanza - Ma	2.14	248	ePn	Pn	14 33 57.7	-1.4
AOPR	Arecibo Observ	2.38	248	⇑eP	Pn	14 34 01.3	-1.2
AOPR	Arecibo Observ	2.38	248	ePn	Pn	14 34 01.3	-1.2
OBIP	Obispado Ponce	2.40	240	⇑eP	Pn	14 34 01.8	-0.9
OBIP	Obispado Ponce	2.40	240	eS	Sn	14 34 30.0	-0.9
OBIP	Obispado Ponce	2.40	240	ePn	Pn	14 34 01.8	-0.9
GBPR	Guanica, Bosqu	2.66	241	⇑eP	Pn	14 34 05.9	-0.3
GBPR	Guanica, Bosqu	2.66	241	ePn	Pn	14 34 05.9	-0.3
AGPR	Aguadilla, PR	2.66	253	⇑eP	Pn	14 34 05.1	-1.2
AGP	Aguadilla	2.71	252	ePn	Pn	14 34 05.1	-1.9
LSP	Las Mesas	2.74	247	⇓eP	Pn	14 34 06.8	-0.6
LSP	Las Mesas	2.74	247	ePn	Pn	14 34 06.8	-0.6
MPR	Mayaguez	2.77	248	ePn	Pn	14 34 07.2	-0.6
MLPR	Magueyes Islan	2.80	243	eS	Sn	14 34 39.5	-1.3
MLPR	Magueyes Islan	2.80	243	⇑eP	Pn	14 34 07.6	-0.6
IDE	Isla Desecheo	3.01	253	⇑eP	Pn	14 34 09.1	-2.0
IDE	Isla Desecheo	3.01	253	ePn	Pn	14 34 09.1	-2.0
DR12	Loma Pena Alta	4.71	265	⇑eP	Pn	14 34 32.7	-1.7
SDDR	Presa de Saban	6.49	269	ePn	Pn	14 34 58.8	-0.1
SDDR				eSn	Sn	14 36 11.3	-0.6
CAPV	Capacho	13.68	215	eP	P	14 36 45.2	-0.9
BARC	Barichara	15.21	215	eP	Pn	14 36 56.6	-1.8
RUSC	La Rusia	15.75	213	eP	P	14 37 08.1	-1.2
PTBC	PUERTO BERRIO,	15.98	219	eP	Pn	14 37 07.3	-0.9
GUY2C	Guyana, Caldas	17.57	219	eP	Pn	14 37 27.0	-1.7
RREF	El Recreo	17.82	218	eP	P	14 37 32.8	+0.4

IDC 04 15:00:19.8±1.1**, 6°.08S×127°.78E, h380^{km}**±16^{km}**, mb3.0**/2**,**
mb1 3.3/5**, mb1mx2.9**/39**, mbtmp4.1**/5**, Error ellipse:**
s-maj=23.8km s-min=14.0km az=116.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.78	224	P	Pn	15 01 49.9	+0.5
	32nm,0.3s,baz=35,slow=3.3,SNR=40						
BATI				S	S	15 03 01.4	-0.8
	6.2nm,0.3s,baz=56,slow=21,SNR=3.6						
SIJI	Sorong	6.23	34	P	Pn	15 01 56.3	+1.9
	4.8nm,0.3s,baz=236,slow=22,SNR=24						
SIJI				S	S	15 03 10.0	-1.4
	3.3nm,0.3s,baz=96,slow=24,SNR=14						
ASAR	Alice Springs	18.46	162	P	P	15 04 10.2	0.0
	0.5nm,0.3s,baz=346,slow=12,SNR=19						
CMAR	Chiang Mai Arr	37.45	311	P	P	15 06 59.6	+0.9
	1.0nm,0.6s,baz=138,slow=7.0,SNR=9.9						
MKAR	Makanchi Array	66.26	328	P	P	15 10 27.1	-1.2
	0.5nm,0.5s,baz=115,slow=7.7,SNR=5.5						

IDC 04 15:43:00.8±3.7**, 1°.19N×127°.37E, h0^{km}, mb3.7**/3**,**
mb1 3.8/3**, mb1mx3.4**/21**, mbtmp3.7**/3**, Error ellipse:**
s-maj=419.6km s-min=28.0km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	25.52	166	P	P	15 48 31.4	+0.1
	0.5nm,0.3s,baz=343,slow=11,SNR=23						
STKA	Stephens Creek	35.55	159	P	P	15 49 59.6	-0.3
	3.1nm,1.0s,baz=317,slow=13,SNR=1.4						
MKAR	Makanchi Array	59.99	326	P	P	15 53 09.3	0.0
	0.2nm,0.4s,baz=135,slow=6.8,SNR=4.1						

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*ISCJB **04** 16:07:02.6±0.2, 39°.69S±0°.02×174°.38E±0°.03, h137^{km}±2^{km}, Error ellipse: s-maj=4.6km s-min=2.7km az=32.6*
*NEIC **04** 16:07:03.5±3.1, 39°.71S×174°.36E, h114^{km}±10^{km}, mb4.3/4, ML4.0(WEL), Error ellipse: s-maj=9.6km s-min=7.4km az=69.0*
*IDC **04** 16:07:03.2±1.6, 39°.60S×174°.53E, h119^{km}±18^{km}, mb3.1/2, mb1 3.4/4, mb1mx3.3/21, mbtmp3.6/4, Error ellipse: s-maj=32.6km s-min=17.0km az=134.0*
*WEL **04** 16:07:03.4, 40°S±1°×17°4E±°, h138^{km}±3^{km}, M4.0/73, MLv4.0/73, Error ellipse: s-maj=0.0km s-min=0.0km az=72.5*
ISC 04 16:07:04.8±0.7**, 39°.74S**±0°.03×**174°.42E**±0°.04**, h136^{km}**±5^{km}**,**
n172, σ2^{s}.12/197**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LREZ	Lake Rotokare	0.28	358	P	Pn	16 07 22.4	-1.2
LREZ				S	Sn	16 07 36.1	-1.7
WAZ	Wanganui	0.44	92	P	Pn	16 07 23.7	-0.5
WAZ				S	Sn	16 07 38.4	-0.5
PREZ	Palmer Road	0.44	333	P	Pn	16 07 23.0	-1.3
PREZ				S	Sn	16 07 37.3	-1.7
NMEZ	Namu Road	0.53	308	P	Pn	16 07 23.6	-1.0
NMEZ				S	Sn	16 07 38.2	-1.5
KHEZ	Kahui Hut	0.54	325	P	Pn	16 07 23.7	-1.2
KHEZ				S	Sn	16 07 38.1	-2.0
DREZ	Durham Road	0.57	343	P	Pn	16 07 23.6	-1.4
DREZ				S	Sn	16 07 37.8	-2.4
NBEZ	Newall Road No	0.63	318	P	Pn	16 07 24.3	-1.0
PKE	Pukeiti	0.64	328	P	Pn	16 07 24.0	-1.4
MHEZ	Mangahewa	0.66	354	P	Pn	16 07 24.3	-1.3
VRZ	Vera Road	0.67	23	P	Pn	16 07 23.7	-1.8
VRZ				S	Sn	16 07 38.4	-2.8
OHWZ	Ohakea	0.83	124	P	Pn	16 07 27.0	+0.3
PKVZ	Pokaka	0.85	58	P	Pn	16 07 25.4	-1.6
PKVZ				S	Sn	16 07 41.2	-2.6
MTVZ	Mangateitei	0.89	67	P	Pn	16 07 25.8	-1.5
DRZ	Dome Shelter	1.00	63	P	Pn	16 07 27.1	-1.5
FWVZ	Far West T-bar	1.00	62	P	Pn	16 07 26.8	-1.7
WHVZ	Whangaehu Hut	1.01	64	P	Pn	16 07 27.0	-1.7
TWVZ	Taurewa	1.03	50	P	Pn	16 07 26.7	-1.9
TUVZ	Tukino	1.06	64	P	Pn	16 07 27.8	-1.2
NGZ	Ngauruhoe	1.07	59	P	Pn	16 07 27.5	-1.6
MOVZ	Moawhango	1.08	73	P	Pn	16 07 27.5	-1.6
WTVZ	West Tongariro	1.10	56	P	Pn	16 07 27.6	-1.7
WTVZ				S	Sn	16 07 44.5	-3.4
DUWZ	D'Urville Isla	1.13	199	P	Pn	16 07 29.5	0.0
KRVZ	Karewarewa	1.15	56	P	Pn	16 07 28.0	-1.7
POWZ	Post Office Ro	1.23	123	P	Pn	16 07 29.9	-0.5
KATZ	Kakaramea	1.25	53	P	Pn	16 07 29.3	-1.5
HIZ	Hauiti	1.27	16	ePn	Pn	16 07 28.7	-2.2
HIZ				eSn	Sn	16 07 47.0	-3.7
HIZ	Hauiti	1.27	16	P	Pn	16 07 28.7	-2.2
MRZ	Mangatainoka R	1.28	136	P	Pn	16 07 30.8	-0.2
BHHZ	Black Hill Sta	1.29	80	P	Pn	16 07 29.3	-1.9
RITZ	Rihia Road	1.35	56	P	Pn	16 07 30.5	-1.3
RATZ	Rangitukua	1.36	51	P	Pn	16 07 30.5	-1.4
PNHZ	Pukenui	1.38	98	P	Pn	16 07 31.1	-1.0
HOWZ	Holdsworth Sta	1.43	144	P	Pn	16 07 32.3	-0.2
PRWZ	Pori Road	1.44	125	P	Pn	16 07 32.5	-0.2
WATZ	Wairara	1.45	45	P	Pn	16 07 31.4	-1.4
CAW	Cannon Point	1.46	160	P	Pn	16 07 32.9	+0.1
DVHZ	Dannevirke	1.46	113	P	Pn	16 07 32.0	-0.8
TCW	Tory Channel	1.48	184	P	Pn	16 07 33.1	+0.1
KRHZ	Kereru	1.51	87	P	Pn	16 07 32.1	-1.3
TIWZ	Tintock	1.53	133	P	Pn	16 07 33.4	-0.2
HATZ	Hinemaiaia	1.55	57	P	Pn	16 07 32.7	-1.2
KWHZ	Kaweka Forest	1.58	79	P	Pn	16 07 33.1	-1.2
SNZO	South Karori	1.59	172	ePn	Pn	16 07 34.1	-0.1
SNZO				eSn	Sn	16 07 53.9	-2.8
WPHZ	Waipukurau	1.59	103	P	Pn	16 07 33.6	-0.7
WHTZ	Whakaora	1.60	49	P	Pn	16 07 33.5	-1.1
MTW	Mount Morrison	1.64	150	P	Pn	16 07 34.6	-0.3
TLZ	Tolley Road	1.65	32	P	Pn	16 07 32.9	-2.2
KUTZ	Kaahu Road	1.66	42	P	Pn	16 07 33.8	-1.3
NNZ	Nelson	1.68	208	P	Pn	16 07 35.1	-0.2
BFZ	Birch Farm	1.69	125	ePn	Pn	16 07 34.7	-0.7
BFZ				eSn	Sn	16 07 54.0	-4.9
BFZ	Birch Farm	1.69	125	P	Pn	16 07 34.7	-0.7
BHW	Baring Head	1.71	168	P	Pn	16 07 35.4	-0.2
BKZ	Black Stump Fm	1.71	71	ePn	Pn	16 07 33.5	-2.2
BKZ	Black Stump Fm	1.71	71	P	Pn	16 07 33.6	-2.0
TUWZ	Tuamarina	1.73	192	P	Pn	16 07 35.5	-0.3
ANWZ	Angora Road	1.73	115	P	Pn	16 07 35.5	-0.4
TMWZ	Te Maipa	1.77	141	P	Pn	16 07 36.1	-0.3
PRHZ	Porangahau	1.78	108	P	Pn	16 07 35.8	-0.7
MCHZ	McNeill Hill	1.79	81	P	Pn	16 07 35.6	-0.9
MSWZ	Moikau Station	1.79	160	P	Pn	16 07 36.4	-0.2
MRHZ	Matea Rd	1.79	60	P	Pn	16 07 34.4	-2.3
CPWZ	Castlepoint	1.80	131	P	Pn	16 07 36.9	+0.2
QRZ	Quartz Range	1.81	232	P	Pn	16 07 36.0	-0.7
PAWZ	Paruwai Farm	1.81	155	P	Pn	16 07 36.6	-0.3
WPRZ	Whakapapatarin	1.82	49	P	Pn	16 07 35.1	-1.9
KAHZ	Kahuranaki	1.90	93	P	Pn	16 07 36.6	-1.2
ALRZ	Allen Road	1.90	53	P	Pn	16 07 35.6	-2.3
PXZ	Pawanui	1.90	100	P	Pn	16 07 36.9	-1.0
GRRZ	Galatos Road	1.91	44	P	Pn	16 07 36.8	-1.3
TRWZ	Traveller	1.92	150	P	Pn	16 07 37.7	-0.4
PLWZ	Palliser	1.94	161	P	Pn	16 07 37.9	-0.5
NMHZ	Naumai	1.96	72	P	Pn	16 07 37.8	-0.9
PRRZ	Plateau Road	1.97	52	P	Pn	16 07 36.6	-2.1
HRRZ	Handcock Road	1.98	48	P	Pn	16 07 37.0	-1.9
HSRZ	Hossack Road	2.01	46	P	Pn	16 07 37.6	-1.7
CMWZ	Cape Campbell	2.02	184	P	Pn	16 07 39.9	+0.6
BSWZ	Blackbirch Sta	2.02	192	P	Pn	16 07 39.3	+0.1
ARHZ	Aropaoanui	2.05	77	P	Pn	16 07 38.5	-1.2
CKHZ	Cape Kidnapper	2.05	89	P	Pn	16 07 38.8	-0.9
MTHZ	Maungataniwha	2.08	66	P	Pn	16 07 37.8	-2.2
UTU	Utuhina	2.08	42	P	Pn	16 07 38.3	-1.8
HLRZ	Highlands Stat	2.12	46	P	Pn	16 07 39.6	-0.9
NGRZ	Ngongotaha	2.14	41	P	Pn	16 07 39.3	-1.5
RRRZ	Republican Roa	2.15	50	P	Pn	16 07 38.8	-2.2
TOZ	Tahuroa Road	2.17	23	P	Pn	16 07 38.6	-2.6
RAHZ	Arahi	2.23	69	P	Pn	16 07 40.1	-1.8
KARZ	Kaharoa	2.23	40	P	Pn	16 07 40.3	-1.6
OMRZ	Omania	2.23	44	P	Pn	16 07 40.1	-1.9
KMRZ	Kaimai	2.23	33	P	Pn	16 07 40.0	-2.0
WHHZ	Waihua	2.28	74	P	Pn	16 07 40.9	-1.5
RTZ	Ruatahuna	2.29	61	P	Pn	16 07 40.1	-2.6
THZ	Tophouse	2.33	209	ePn	Pn	16 07 42.5	-0.6
THZ				eSn	Sn	16 08 12.0	-0.6
THZ	Tophouse	2.33	209	P	Pn	16 07 42.6	-0.5
SNGZ	Shannon Statio	2.46	68	P	Pn	16 07 42.9	-1.8
TGRZ	Tauranga	2.47	36	P	Pn	16 07 43.1	-1.7
MARZ	Manawahe	2.48	46	P	Pn	16 07 43.2	-1.8
OPRZ	Ohinepanea	2.52	42	P	Pn	16 07 44.3	-1.2
URZ	Urewera	2.56	56	P	Pn	16 07 43.0	-3.0
	12nm,0.3s,baz=250,slow=3.8,SNR=175						
URZ				S	Sn	16 08 11.9	-5.8
	66nm,0.3s,baz=192,slow=3.0,SNR=35						
URZ	Urewera	2.56	56	ePn	Pn	16 07 43.1	-3.0
URZ	Urewera	2.56	56	P	Pn	16 07 43.1	-2.9
KNZ	Kokohu	2.62	75	P	Pn	16 07 44.4	-2.4
RAGZ	Rawiri	2.64	63	P	Pn	16 07 44.6	-2.5
KBAZ	Karaka Road Bo	2.66	8	P	Pn	16 07 45.7	-1.6
AWAZ	Awhitu Peninsu	2.67	4	P	Pn	16 07 45.7	-1.8
MKAZ	Moumakai	2.69	13	P	Pn	16 07 45.9	-1.7
KHZ	Kahutara	2.76	194	ePn	Pn	16 07 48.2	-0.3
KHZ	Kahutara	2.76	194	P	Pn	16 07 48.2	-0.3
MHGZ	Mahia Peninsul	2.76	79	P	Pn	16 07 46.6	-2.0
RIGZ	Rimuhau	2.79	69	P	Pn	16 07 46.5	-2.5
MWZ	Matawai	2.80	61	P	Pn	16 07 46.2	-2.8
ETAZ	East Tamaki Re	2.81	8	P	Pn	16 07 47.4	-1.8
PRGZ	Paritu Road	2.81	74	P	Pn	16 07 46.9	-2.3
DSZ	Denniston Nort	2.82	224	P	Pn	16 07 48.5	-0.9
RVAZ	Riverhead Bore	2.96	3	P	Pn	16 07 50.0	-1.1
TKGZ	Te Karaka	2.97	65	P	Pn	16 07 48.6	-2.5
MBAZ	Motutapu North	2.99	7	P	Pn	16 07 49.8	-1.7
WIAZ	Waiheke Island	2.99	11	P	Pn	16 07 49.9	-1.6
RUGZ	Raukumara Rang	3.10	56	P	Pn	16 07 49.5	-3.5
ABAZ	Army Bay	3.15	6	P	Pn	16 07 51.9	-1.6
KUZ	Kuaotunu	3.16	19	P	Pn	16 07 51.2	-2.4
TWGZ	Tauwhareparae	3.18	62	P	Pn	16 07 51.4	-2.7
CNGZ	Carnagh Statio	3.20	68	P	Pn	16 07 51.8	-2.4
HAZ	Te Kaha	3.29	54	P	Pn	16 07 51.8	-3.6
GVZ	Greta Valley S	3.39	197	P	Pn	16 07 55.5	-1.1
PKGZ	Pakihiroa	3.40	58	P	Pn	16 07 54.0	-2.9
PUZ	Puketiti	3.43	62	P	Pn	16 07 53.8	-3.4
LTZ	Lake Taylor	3.44	207	ePn	Pn	16 07 55.6	-1.8
LTZ	Lake Taylor	3.44	207	P	Pn	16 07 55.9	-1.5
WMGZ	Waiomatatini S	3.66	60	P	Pn	16 07 56.8	-3.4
AMCZ	Amberley	3.68	201	P	Pn	16 07 58.8	-1.6
INZ	Inchbonnie	3.73	216	P	Pn	16 07 59.7	-1.4
MXZ	Matakaoa Point	3.74	56	ePn	Pn	16 07 57.8	-3.5
MXZ	Matakaoa Point	3.74	56	P	Pn	16 07 58.2	-3.0
WCZ	Waipu Caves	3.79	359	P	Pn	16 08 00.3	-1.6
OXZ	Oxford	4.01	206	ePn	Pn	16 08 02.3	-2.4
OXZ				eSn	Sn	16 08 47.1	-4.1
OXZ	Oxford	4.01	206	P	Pn	16 08 02.4	-2.3
CRLZ	Canterbury Las	4.06	199	ePn	Pn	16 08 02.7	-2.7
CRLZ				eSn	Sn	16 08 48.5	-4.1
OKCZ	Okains Bay	4.11	194	P	Pn	16 08 04.1	-2.0
MQZ	McQueen's Vall	4.18	198	ePn	Pn	16 08 04.1	-2.9
MQZ				eSn	Sn	16 08 50.5	-4.8
AKCZ	Akaroa Harbour	4.28	195	P	Pn	16 08 06.1	-2.3
WVZ	Waitaha Valley	4.33	219	P	Pn	16 08 07.1	-1.9
OUZ	Omahuta	4.56	352	ePn	Pn	16 08 11.5	-0.6
OUZ	Omahuta	4.56	352	P	Pn	16 08 11.3	-0.8
RPZ	Rata Peaks	4.70	211	P	Pn	16 08 12.8	-1.2
	4.8nm,0.3s,baz=202,slow=2.6,SNR=12						
RPZ				S	Sn	16 09 02.9	-4.9
	12nm,0.3s,baz=293,slow=3.3,SNR=5.6						
RPZ	Rata Peaks	4.70	211	ePn	Pn	16 08 12.6	-1.3
RPZ				eSn	Sn	16 09 03.1	-4.7
RPZ	Rata Peaks	4.70	211	P	Pn	16 08 12.5	-1.5
FOZ	Fox Glacier	5.12	221	ePn	Pn	16 08 17.2	-2.3
FOZ				eSn	Sn	16 09 13.2	-4.6
FOZ	Fox Glacier	5.12	221	P	Pn	16 08 17.1	-2.5
LBZ	Lake Benmore	5.61	213	ePn	Pn	16 08 24.3	-1.8
LBZ				eSn	Sn	16 09 24.2	-5.3
LBZ	Lake Benmore	5.61	213	P	Pn	16 08 24.2	-1.8
ODZ	Otahua Downs	5.99	207	ePn	Pn	16 08 29.0	-2.2
ODZ				eSn	Sn	16 09 32.9	-5.8
ODZ	Otahua Downs	5.99	207	P	Pn	16 08 29.0	-2.2
WKZ	Wanaka	6.47	216	ePn	Pn	16 08 35.0	-2.6
WKZ				eSn	Sn	16 09 45.0	-5.2
EAZ	Earnscleugh	6.66	213	P	Pn	16 08 37.1	-3.0
HHSZ	Highcliff Hill	6.75	203	P	Pn	16 08 39.3	-2.1
TUZ	Tuapeka	7.14	208	P	Pn	16 08 45.0	-1.5
MLZ	Mavora Lakes	7.30	218	ePn	Pn	16 08 44.7	-4.0
WHZ	Wether Hill Ro	7.77	216	ePn	Pn	16 08 54.5	-0.6
CTZ	Chatham Island	7.80	124	P	Pn	16 08 54.7	-0.7
SYZ	Scrubby Hill	7.81	208	P	Pn	16 08 53.4	-2.1
PYZ	Puysegur Point	8.57	219	ePn	Pn	16 09 04.1	-1.7
ASAR	Alice Springs	37.66	283	P	P	16 14 07.6	+0.7
	0.5nm,0.5s,baz=128,slow=7.1,SNR=6.8						
VNDA	Vanda	38.26	184	P	P	16 14 14.0	+2.8
	0.4nm,0.7s,baz=317,slow=3.8,SNR=3.7						
WRAB	Tennant Creek	39.56	288	eP	P	16 14 23.5	+0.8
	14nm,1.5s						
WRAB				epP	pP	16 14 53.2	+0.5
CASY	Casey	43.98	212	eP	P	16 14 58.8	+0.8
	5.8nm,1.4s						
QSPA	South Pole Qui	50.39	180	eP	P	16 15 50.7	+2.8
	6.7nm,1.3s						
QSPA				epP	pP	16 16 21.0	+1.9
SNAA	Sanae	68.88	181	P	P	16 17 55.4	+1.2
SNAA	Sanae	68.88	181	eP	P	16 17 55.5	+1.2
	0.3nm,0.5s						
VNA3	Neumayer Olymp	69.29	179	P	P	16 17 57.6	+0.9
VNA1	Neumayer--Stat	69.91	179	P	P	16 18 01.8	+1.4
ARCES	ARCESS Array B	145.92	341	PKPbc	PKPbc	16 26 26.9	-0.3
	0.6nm,0.6s,baz=16,slow=2.2,SNR=6.9						
TORD	Torodi Ar. Bea	152.75	196	PKPbc	PKPbc	16 26 45.1	-0.8
	0.4nm,0.8s,baz=156,slow=3.3,SNR=2.4						

NEIC 04 16:08:14.4±0.0**, 55°.43N×158°.92W, h18^{km}, ML2.6**(AEIC)**,**
After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNWF	Veniaminof 8	0.81	334	ePg	Pg	16 08 30.5	+0.1
VNWF				eSn	Sg	16 08 41.6	+0.5
SDPT	Sand Point	0.89	266	ePg	Pb	16 08 31.5	+0.2
SDPT				eSn	Sg	16 08 43.9	+0.3
CHGN	Chignik	0.92	18	ePg	Pb	16 08 31.4	-0.4
CHGN				eSg	Sb	16 08 43.0	-0.6
PVV	Pavlof Volcano	1.64	269	ePn	Pn	16 08 41.8	-0.4
CHIR	Chirikof Islan	1.91	77	ePn	Pn	16 08 45.8	-0.1
CHIA	Chirikof Islan	1.94	76	ePn	Pn	16 08 44.4	-1.9
SII	Sitkinak Islan	2.89	65	ePn	Pn	16 08 57.1	-2.4
OHAK	Old Harbor	3.62	58	ePn	Pn	16 09 08.8	-0.6
AKUT	Akutan	4.17	255	ePn	Pn	16 09 16.4	-0.7
KDAK	Kodiak Island	4.22	53	ePn	Pn	16 09 16.5	-1.2
UNV	Unalaska Valle	4.68	253	ePn	Pn	16 09 23.4	-0.7
SVW2	Sparrevohn	5.95	16	ePn	Pn	16 09 39.4	-2.1

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*MOS **04** 16:10:33.0±1.0, 16°.13N×93°.94W, h80^{km}, mb5.0/26, Error ellipse: s-maj=10.8km s-min=5.6km az=98.7*
*IDC **04** 16:10:35.7±0.8, 16°.08N×93°.91W, h95^{km}±5^{km}, mb4.2/16, mb1 4.4/19, mb1mx4.2/35, mbtmp4.5/19, MS3.2/4, Ms1 3.2/4, ms1mx2.8/26, Error ellipse: s-maj=22.4km s-min=6.5km az=39.0*
*NEIC **04** 16:10:36.5±2.8, 16°.07N×93°.96W, h105^{km}±5^{km}, mb4.8/259, MD4.5(MEX), Error ellipse: s-maj=8.4km s-min=5.5km az=211.0*
*ISCJB **04** 16:10:36.2±0.3, 16°.19N±0°.02×93°.83W±0°.02, h109^{km}±2^{km}, mb4.6/198, Error ellipse: s-maj=4.4km s-min=2.7km az=38.8*
*MEX **04** 16:10:37.5±0.6, 16°.06N×93°.98W, h96^{km}±6^{km}, MD4.5*
*GCG **04** 16:11:06.2±0.5, 15°.74N×91°.70W, h33^{km}, MD4.5*
ISC 04 16:10:35.2±0.5**, 16°.04N**±0°.04×**94°.02W**±0°.03**, h99^{km}**±3^{km}**,**
h99^{km}:pP-P, n636, σ1^{s}.31/661**, mb4.7**/213**, 5C-2D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.83	113	ePn	Pn	16 10 54.0	+0.2
PCIG				eSn	Sn	16 11 08.0	+0.3
PCIG		0.83	113	i P	Pn	16 10 54.0	+0.2
PCIG				eS	Sn	16 11 08.0	+0.3
TGIG		1.13	49	ePn	Pn	16 10 57.5	+0.4
TGIG				eSn	Sn	16 11 13.2	-0.3
TGIG		1.13	49	i P	Pn	16 10 57.5	+0.4
TGIG				eS	Sn	16 11 13.1	-0.4
CMIG	Matias Romero	1.34	322	P	Pn	16 11 00.1	+0.6
	264nm,0.3s,baz=153,slow=9.0,SNR=2692						
CMIG				S	Sn	16 11 18.1	+0.3
	2μm,0.3s,baz=197,slow=18,SNR=96						
CMIG	Matias Romero	1.34	322	eP	Pn	16 11 00.1	+0.6
CMIG				eS	Sn	16 11 17.9	+0.1
CCIG	Comitan	1.82	82	ePn	Pn	16 11 05.7	+0.1
CCIG				ePn	Pn	16 11 06.0	+0.4
CCIG				eSn	Sn	16 11 26.5	-2.3
CCIG	Comitan	1.82	82	eP	Pn	16 11 06.0	+0.4
CCIG				i S	Sn	16 11 28.1	-0.6
THIG		2.03	123	ePn	Pn	16 11 09.1	+1.0
THIG				eSn	Sn	16 11 33.9	+0.7
THIG		2.03	123	eP	Pn	16 11 09.1	+1.0
THIG				eS	Sn	16 11 33.9	+0.7
HUIG	Huatulco	2.03	263	ePn	Pn	16 11 06.7	-1.5
HUIG				eSn	Sn	16 11 28.7	-4.6
HUIG	Huatulco	2.03	263	i P	Pn	16 11 06.7	-1.5
HUIG				i S	Sn	16 11 31.9	-1.5
VHO	Vista Hermosa	2.80	292	ePn	Pn	16 11 20.3	+1.8
VHO				eSn	Sn	16 11 49.0	-2.8
VHO	Vista Hermosa	2.80	292	eP	Pn	16 11 20.3	+1.8
VHO				eS	Sn	16 11 53.5	+1.7
FUG	Fuego 3	3.45	117	eP	Pn	16 11 31.6	+4.5
APG	El Apazote	3.57	106	P	Pn	16 11 28.4	-0.5
	25nm,0.3s,baz=196,slow=17,SNR=118						
APG				S	Sn	16 12 09.5	-0.9
	285nm,0.3s,baz=85,slow=15,SNR=18						
APG				LR	LR	16 12 27.2	
	comp=Z,440nm,19.2s,baz=286,slow=32						
PCG	Pacaya	3.67	116	eP	Pn	16 11 34.9	+4.6
NBG	Las Nubes	3.82	112	eP	Pn	16 11 34.9	+2.6
MRL	Marmol	4.28	102	eP	Pn	16 11 39.3	+0.9
LVIG	Laguna Verde	4.32	328	ePn	Pn	16 11 37.8	-1.0
TLIG	Tlapa	4.62	290	ePn	Pn	16 11 44.7	+1.8
MYIG	Mrida	6.36	39	ePn	Pn	16 12 07.6	+1.3

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TGUH  Tegucigalpa,Un    6.80 106 ePn    Pn     16 12 13.4 +0.8
TEIG  Tepich            6.87  52 ePn    Pn     16 12 12.1 -1.1
CSGN  Cosiguina Volc    6.95 115 ePn    Pn     16 12 14.9 +0.3
ESTN  Estel             7.96 111 ePn    Pn     16 12 28.5 +0.3
ACON  Acoyapa           9.48 114 ePn    Pn     16 12 49.3 +0.3
ESPN  Las Esperanzas   10.17 111 ePn    Pn     16 12 58.2 -0.1
LNIG  Linares          10.19 331 ePn    Pn     16 13 00.3 +1.8
ZAIG  Zacatecas        10.48 311 ePn    Pn     16 13 05.1 +2.3
JTS   Las Juntas de    10.51 122  P     Pn     16 13 03.3 +0.4
      6.4nm,0.3s,baz=27,slow=8.6,SNR=17
JTS   Las Juntas de    10.51 122 ePn    Pn     16 13 03.0  0.0
JTS   Las Juntas de    10.51 122ceP     Pn     16 13 02.9  0.0
JTS                               pmax  pmax
      comp=Z,26nm,0.9s
FSCY  Frank Sound, G   12.66  73 ePn    Pn     16 13 32.6 +0.9
833A  Chaparral WMA,   13.20 339 ePn    P      16 13 42.0 -3.0
833A  Chaparral WMA,   13.20 339  P     Pn     16 13 41.7 +2.9
      baz=157,SNR=6.7
HKT   Hockley          13.95 353 eP     P      16 13 51.5 -1.8
HKT   Hockley          13.95 353 eP     P      16 13 51.5 -1.8
CBCY  The Bluff, Cay   14.06  73 ePn    Pn     16 13 52.1 +2.0
435B  Jarrell          15.04 348 eP     P      16 14 04.6 -0.9
      comp=Z,111nm,0.7s
435B  Jarrell          15.04 348  P     P      16 14 04.7 -0.8
      baz=166
HPIG                   15.32 317 eP     P      16 14 10.4 +1.5
      comp=Z,6.8nm,0.7s
JCT   Junction City    15.32 341 eP     P      16 14 08.4 -0.3
      comp=Z,35nm,0.7s
JCT   Junction City    15.32 341  P     P      16 14 08.4 -0.3
      baz=158,SNR=12
BCIP  Isla Barro Col   15.42 115 ePn    Pn     16 14 07.6 +0.1
      comp=Z,153nm,1.8s
BCIP  Isla Barro Col   15.42 115 eP     Pn     16 14 07.6 +0.1
BCIP                              pmax  pmax
      comp=Z,153nm,1.8s
NATX  Nacogdoches      15.66 358 eP     P      16 14 11.9 -0.5
      comp=Z,35nm,1.0s
ETX01 County Road 47   15.77 359 eP     P      16 14 14.4 +0.7
MTDJ  Mount Denham     15.90  80 eP     Pn     16 14 12.8 -0.8
      comp=Z,170nm,1.4s
957A  Wimauma          15.91  41 eP     Pn     16 14 14.0 +0.5
      comp=Z,240nm,0.4s
TX31  Lajitas Ar. Si   15.94 328 eP     P      16 14 17.0 +1.4
      comp=Z,11nm,1.1s
TXAR  Lajitas Array    15.94 328  P     P      16 14 16.8 +1.1
      comp=Z,0.2nm,0.3s,baz=148,slow=13,SNR=38
059A  Moore Haven      16.16  46 eP     Pn     16 14 17.3 +0.7
      comp=Z,160nm,1.3s
WHTX  Lake Whitney,    16.19 349 eP     Pn     16 14 17.5 +0.6
      comp=Z,125nm,1.3s
WHTX                             eSn    Sn     16 17 13.8 -2.5
WHTX  Lake Whitney,    16.19 349  P     P      16 14 17.8 -0.5
      baz=168
BRAL  Brewton          16.35  22 eP     P      16 14 20.3 +0.2
      comp=Z,336nm,1.7s
451A  Vernon           16.37  26 eP     P      16 14 20.1 -0.1
      comp=Z,337nm,1.1s
VBMS  Vicksburg        16.42  11 eP     Pn     16 14 19.3 -0.5
      comp=Z,57nm,1.0s
VBMS  Vicksburg        16.42  11  P     P      16 14 20.9 +0.1
      baz=192
349A  Repton           16.47  21  P     P      16 14 21.7 +0.4
      baz=204
DWPF  Disney Wildern   16.73  42 eP     Pn     16 14 23.6  0.0
      comp=Z,418nm,1.8s
DWPF  Disney Wildern   16.73  42  P     Pn     16 14 21.9 -1.7
      baz=226
060A  Indiantown       16.75  47 eP     Pn     16 14 22.1 -1.7
      comp=Z,360nm,1.2s
350A  Dozier           16.84  23  P     P      16 14 25.7 +0.3
      baz=206
656A  Willston         16.96  37 eP     Pn     16 14 25.8 -0.6
LPIG  La Paz           17.27 300  LR    LR     16 21 09.6
      comp=Z,52nm,19.5s,baz=102,slow=37
ABTX  Abilene, Hawle   17.29 344 eP     Pn     16 14 30.9 +0.5
      comp=Z,53nm,0.8s
ABTX  Abilene, Hawle   17.29 344  P     Pn     16 14 31.1 +0.7
      baz=161,SNR=6.2
555A  McAlpin          17.30  34 eP     P      16 14 29.6 -0.9
      comp=Z,124nm,1.2s
250A  Grady            17.37  23 eP     P      16 14 31.3 +0.1
      comp=Z,31nm,0.9s
454A  Quitman          17.43  31  P     P      16 14 30.8 -1.1
      baz=215
352A  Blakely          17.46  27 eP     Pn     16 14 33.5 +1.0
      comp=Z,47nm,0.9s
352A  Blakely          17.46  27  P     P      16 14 32.0 -0.3
      baz=210
556A  Lake Butler      17.51  35  P     P      16 14 31.0 -1.9
      baz=220
WLAR  White Oak Lake   17.59   2 eP     Pn     16 14 35.0 +0.9
      comp=Z,107nm,1.0s
353A  Camilla          17.67  29  P     P      16 14 31.6 -3.0
      baz=212
149A  Jones            17.74  20  P     P      16 14 35.6 +0.2
      baz=203
251A  Midway           17.80  25  P     P      16 14 35.8 -0.2
      baz=208
557A  Orange Park      17.91  37  P     P      16 14 34.2 -3.0
      baz=222
252A  Lumpkin          17.99  26  P     P      16 14 38.5 +0.4
      baz=210
150A  Eclectic         18.02  22  P     Pn     16 14 39.2 -0.1
      baz=205,SNR=10.0
TIGA  Tifton           18.04  30  P     P      16 14 38.1 -0.6
      baz=214
LRAL  Lakeview Retre   18.08  19 eP     Pn     16 14 40.7 +0.7
      comp=Z,14nm,0.8s
LRAL  Lakeview Retre   18.08  19  P     Pn     16 14 40.0 +0.1
      baz=202
151A  Opelika          18.21  24  P     P      16 14 40.7 +0.2
      baz=208
Z49A  Columbiana       18.38  20  P     Pn     16 14 43.4 -0.1
      baz=203
GTBY  Guantanamo Bay   18.39  75 eP     P      16 14 42.1 -0.5
      comp=Z,65nm,1.0s
X40A  Basin Creek Fa   18.41   3  P     Pn     16 14 44.1 +0.3
      baz=183
MIAR  Mount Ida        18.44   1 eP     Pn     16 14 43.7 -0.5
      comp=Z,55nm,0.8s
MIAR  Mount Ida        18.44   1 eP     Pn     16 14 43.7 -0.5
MIAR                              pmax  pmax
      comp=Z,55nm,0.8s
MIAR  Mount Ida        18.44   1  P     Pn     16 14 44.4 +0.1
      baz=181,SNR=12
CLNB  Carlsbad         18.48 333 eP     P      16 14 44.1 +0.6
X37A  Clayton          18.52 356 eP     Pn     16 14 45.3 +0.1
152A  Waverly Hall     18.58  25 eP     Pn     16 14 46.1 +0.1
      comp=Z,16nm,0.8s
152A  Waverly Hall     18.58  25  P     P      16 14 45.2 +0.6
      baz=209,SNR=7.3
254A  Abbeville        18.60  30  P     P      16 14 45.0 +0.2
      baz=214
GDL2  Guadalupe Moun   18.64 332 eP     Pn     16 14 48.6 +1.9
Z50A  Ashland          18.64  22 eP     Pn     16 14 46.9 +0.2
      comp=Z,41nm,1.0s
Z50A  Ashland          18.64  22  P     P      16 14 45.8 +0.6
      baz=205,SNR=14
MNTX  Cornudas Mount   18.72 328 eP     Pn     16 14 48.4 +0.8
      comp=Z,6.4nm,1.0s
MNTX  Cornudas Mount   18.72 328  P     P      16 14 46.3 +0.2
      baz=144
UALR  University of    18.72   4 eP     Pn     16 14 47.3 -0.3
      comp=Z,58nm,0.8s
Y48A  Jasper           18.84  18  P     P      16 14 47.9 +0.5
      baz=201,SNR=5.8
OXF   Oxford           18.86  12 eP     P      16 14 47.6  0.0
      comp=Z,34nm,0.9s
OXF   Oxford           18.86  12 eP     P      16 14 47.6  0.0
OXF                               pmax  pmax
      comp=Z,34nm,0.9s
OXF   Oxford           18.86  12  P     P      16 14 48.0 +0.5
      baz=194
Z51A  Franklin         18.97  23  P     P      16 14 49.2 +0.4
      baz=207
255A  Hazlehurst       18.99  32  P     P      16 14 48.7 -0.3
      baz=216
Y49A  Blount Mountai   19.02  20 eP     P      16 14 49.8 +0.4
      comp=Z,61nm,0.8s
Y49A  Blount Mountai   19.02  20  P     P      16 14 50.3 +0.9
      baz=203
W39A  Magazine         19.08   1 eP     Pn     16 14 51.1 -0.7
      comp=Z,154nm,1.8s
W39A  Magazine         19.08   1  P     Pn     16 14 51.1 -0.7
      baz=180
WMOK  Wichita Mounta   19.11 348 eP     P      16 14 51.0 +0.6
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      comp=Z,18nm,0.6s
WMOK  Wichita Mounta   19.11 348 eP     P      16 14 51.0 +0.6
WMOK                              pmax  pmax
      comp=Z,18nm,0.6s
WMOK  Wichita Mounta   19.11 348  P     P      16 14 50.8 +0.5
      baz=166,SNR=18
W41B  Gary Mavity, V   19.12   4 eP     P      16 14 51.1 +0.7
      comp=Z,54nm,1.3s
W41B  Gary Mavity, V   19.12   4  P     P      16 14 51.1 +0.7
      baz=185
CPRX  Cap Rock         19.13 334 eP     Pn     16 14 51.9 -0.7
Z52A  Williamson       19.16  25  P     P      16 14 50.6 -0.3
      baz=209
X47A  Russelville      19.22  16  P     P      16 14 52.0 +0.5
      baz=198
WHAR  Wooly Hollow     19.24   4 eP     P      16 14 52.0 +0.2
      comp=Z,25nm,0.9s
154A  Montrose         19.24  29 eP     Pn     16 14 53.3 -0.5
      comp=Z,52nm,0.9s
Y50A  Piedmont         19.28  21  P     P      16 14 52.2 -0.1
      baz=205,SNR=9.2
X48A  Hartselle        19.38  18 eP     P      16 14 53.7 +0.4
      comp=Z,38nm,0.8s
X48A  Hartselle        19.38  18  P     P      16 14 53.7 +0.4
      baz=200,SNR=6.3
MSTX  Muleshoe         19.52 338 eP     Pn     16 14 56.3 -0.9
      comp=Z,37nm,1.0s
MSTX  Muleshoe         19.52 338  P     P      16 14 55.6 +0.6
      baz=154,SNR=14
Y51A  Rockmart         19.53  23  P     P      16 14 54.9  0.0
      baz=206
155A  Kite             19.55  30  P     P      16 14 54.2 -1.0
      baz=215,SNR=7.4
Z53A  Monticello       19.59  27  P     P      16 14 55.4 -0.2
      baz=211
PLAL  Pickwick Lake    19.61  15 eP     P      16 14 55.2 -0.5
      comp=Z,26nm,1.0s
X49A  Woodville        19.65  19  P     P      16 14 56.8 +0.5
      baz=202
HBAR  Harrisburg       19.67   8 eP     P      16 14 57.0 +0.6
      comp=Z,58nm,0.9s
W46A  Michie           19.68  14  P     P      16 14 57.2 +0.7
      baz=196
GOGA  Godfrey          19.75  27 eP     P      16 14 58.0 +0.7
      comp=Z,146nm,1.9s
GOGA  Godfrey          19.75  27 eP     P      16 14 58.0 +0.7
GOGA                              pmax  pmax
      comp=Z,146nm,1.9s
GOGA  Godfrey          19.75  27  P     P      16 14 57.0 -0.3
      baz=211
X50B  Fort Payne       19.83  21  P     P      16 14 58.2  0.0
      baz=204,SNR=7.3
TUL1  Leonard          19.86 356 eP     P      16 14 59.5 +1.1
      comp=Z,64nm,1.0s
TUL1  Leonard          19.86 356  P     P      16 14 59.5 +1.1
      baz=175,SNR=5.5
Z54A  Sparta           19.88  29  P     P      16 14 58.2 -0.5
      baz=213
Y52A  Lilburn          19.89  25 eP     P      16 14 59.7 +0.8
      comp=Z,48nm,0.9s
Y52A  Lilburn          19.89  25  P     P      16 14 58.4 -0.4
      baz=209
W47A  Westpoint        19.98  16  P     P      16 14 59.8  0.0
      baz=198
AMTX  Amarillo         19.99 341 eP     Pn     16 15 01.4 -1.2
      comp=Z,64nm,0.6s
AMTX  Amarillo         19.99 341  P     Pn     16 15 01.4 -1.2
      baz=158
W48A  Pulaski          20.05  17  P     P      16 15 00.9 +0.3
      baz=200,SNR=7.1
Y53A  Monroe           20.08  26  P     P      16 15 00.1 -0.8
      baz=210
HHAR  Hobbs            20.16   0 eP     P      16 15 02.2 +0.5
      comp=Z,98nm,1.0s
GNAR  Gosnell          20.17   9 eP     P      16 15 02.6 +0.9
      comp=Z,236nm,1.3s
X51A  Calhoun          20.20  22 eP     P      16 15 03.4 +1.2
      comp=Z,32nm,0.8s
X51A  Calhoun          20.20  22  P     P      16 15 02.0 -0.2
      baz=206
HALT  Halls            20.23  11 eP     P      16 15 02.8 +0.3
      comp=Z,112nm,1.3s
W49A  Belvidere        20.23  19  P     P      16 15 02.8 +0.2
      baz=202
HSIG                   20.26 313 eP     Pn     16 15 05.1 -0.5
      comp=Z,8.6nm,1.0s
U40A  Yellville        20.27   3  P     P      16 15 03.5 +0.6
      baz=183
V46A  Holladay         20.38  14  P     P      16 15 04.3 +0.2
      baz=196,SNR=7.4
SWET  Sewanee          20.43  19 eP     P      16 15 04.1 -0.6
      comp=Z,75nm,0.7s
Y54A  Tignall          20.48  28  P     P      16 15 04.5 -0.7
      baz=212
V47A  Nunnelly         20.55  15  P     P      16 15 06.4 +0.5
      baz=198
ZARC  Zaragoza, Cauc   20.57 112 eP     P      16 15 03.9 -2.5
GLAT  Glass            20.59  11 eP     P      16 15 06.5 +0.2
      comp=Z,72nm,0.8s
X52A  Dahlonega        20.60  24  P     P      16 15 05.4 -1.2
      baz=208
W50A  Signal Mountai   20.61  21 eP     P      16 15 06.1 -0.6
      comp=Z,25nm,0.8s
W50A  Signal Mountai   20.61  21  P     P      16 15 06.8 +0.1
      baz=204
121A  Cookes Peak, D   20.63 325  P     P      16 15 05.1 -2.0
      baz=140
V48A  Smith Brothers   20.65  17 eP     P      16 15 06.2 -0.8
      comp=Z,144nm,1.2s
V48A  Smith Brothers   20.65  17  P     P      16 15 06.6 -0.4
      baz=200
Z56A  Williston        20.66  31 eP     P      16 15 06.2 -1.0
      comp=Z,59nm,0.8s
U32A  Winter Ranch,    20.74 349 eP     P      16 15 08.7 +0.7
      comp=Z,64nm,1.0s
X53A  Estanollee       20.76  26  P     P      16 15 08.2 +0.1
      baz=210
WVT   Waverly          20.76  14 eP     P      16 15 07.6 -0.6
      comp=Z,142nm,2.0s
WVT   Waverly          20.76  14 eP     P      16 15 07.6 -0.6
WVT                               pmax  pmax
      comp=Z,142nm,2.0s
W51A  Cleveland        20.77  22  P     P      16 15 08.0 -0.3
      baz=206
U46A  Springville      20.90  13  P     P      16 15 09.9 +0.2
      baz=196
PBMO  Poplar Bluff     20.90   8 eP     P      16 15 09.7  0.0
      comp=Z,44nm,1.0s
Y55A  Saluda           20.92  29  P     P      16 15 10.6 +0.7
      baz=214
V49A  McMinnville      20.94  19  P     P      16 15 10.8 +0.7
      baz=202
Z57A  Bowman           20.98  33  P     P      16 15 10.6  0.0
      baz=218
W52A  Murphy           21.02  24 eP     P      16 15 09.7 -1.3
      comp=Z,68nm,0.2s
YOTC  Yotoco, Valle    21.10 123 eP     P      16 15 12.2  0.0
V50A  Pikevile         21.11  21  P     P      16 15 12.3 +0.3
      baz=204
CLTN  Cedars of Leba   21.12  17 eP     P      16 15 11.6 -0.4
      comp=Z,38nm,0.9s
CPCT  Cooper Cave      21.12  22 eP     P      16 15 10.6 -1.4
      comp=Z,25nm,0.7s
X54A  Belton           21.19  27  P     P      16 15 12.1 -0.8
      baz=212
GUY2C Guyana, Caldas   21.22 118 eP     P      16 15 13.1 -0.8
BNM   Barren Site      21.31 330 eP     P      16 15 16.9 +2.6
BG3   Lake Jocassee    21.33  26 eP     P      16 15 14.1 -0.2
      comp=Z,23nm,0.9s
BG3                              ePcP   PcP    16 19 11.9 -3.0
PTBC  PUERTO BERRIO,   21.36 114 eP     P      16 15 14.4 -0.4
W53A  Cullowhee        21.39  25  P     P      16 15 14.6 -0.5
      baz=210
Y22D  IRIS PASSCAL I   21.39 329 eP     P      16 15 15.9 +0.8
      comp=Z,60nm,0.3s
Y22D  IRIS PASSCAL I   21.39 329  P     P      16 15 14.8 -0.3
      baz=144
RREF  El Recreo        21.41 119 eP     P      16 15 17.8 +1.8
U48A  Cassie Pea, Po   21.45  17  P     P      16 15 15.9 +0.3
      baz=200
X55A  Gracelyn & Ava   21.47  29  P     P      16 15 15.0 -0.7
      baz=214
NORC  Norcasia         21.47 117 eP     P      16 15 16.5 +0.4
JSC   Jenkinsville     21.49  30 eP     P      16 15 16.5 +0.5
      comp=Z,25nm,0.8s
JSC   Jenkinsville     21.49  30 eP     P      16 15 16.5 +0.5
JSC                               pmax  pmax
      comp=Z,25nm,0.8s
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LENM  Lemitar          21.49 330 eP     P      16 15 19.1 +2.9
V51A  Loudon           21.49  22 eP     P      16 15 17.1 +1.1
      comp=Z,156nm,1.9s
V51A  Loudon           21.49  22  P     P      16 15 16.1  0.0
      baz=206
BBAC  Balboa, Cauca    21.61 128 eP     P      16 15 19.3 +1.7
T46A  Princeton        21.62  13  P     P      16 15 17.4 +0.1
      baz=196
OCAC  Ocana            21.65 109 eP     P      16 15 19.0 +0.9
U49A  Red Boiling Sp   21.67  18  P     P      16 15 17.7 -0.2
      baz=202,SNR=5.2
PAULI Pauline          21.67  28 eP     P      16 15 18.4 +0.4
      comp=Z,20nm,0.9s
POPC  Popayan, Colom   21.71 126 eP     P      16 15 19.7 +1.0
W54A  Cherokee Point   21.73  27  P     P      16 15 17.8 -0.7
      baz=212
T47A  Sharon Grove     21.75  15 eP     P      16 15 19.0 +0.2
      comp=Z,68nm,0.8s
T47A  Sharon Grove     21.75  15  P     P      16 15 18.6 -0.1
      baz=198
LAZ   Ladron           21.76 330 eP     P      16 15 20.0 +0.9
X56A  White Oak        21.77  30  P     P      16 15 18.3 -0.7
      baz=215
V52A  Sevierville      21.81  23 eP     P      16 15 19.3 -0.1
      comp=Z,120nm,1.6s
V52A  Sevierville      21.81  23  P     P      16 15 18.3 -1.1
      baz=208
U50A  Jamestown        21.88  20  P     P      16 15 19.7 -0.5
      baz=204
ANMO  Albuquerque      21.89 332  P     P      16 15 23.2 +2.8
      comp=Z,4.8nm,0.7s,baz=154,slow=12,SNR=19
ANMO  Albuquerque      21.89 332 eP     P      16 15 22.6 +2.2
      comp=Z,7.1nm,0.7s
ANMO  Albuquerque      21.89 332c iP    P      16 15 23.2 +2.8
ANMO                              pmax  pmax
      comp=Z,6.0nm,0.8s
ANMO  Albuquerque      21.89 332  P     P      16 15 21.7 +1.2
      baz=146
TASM  ASL Pad, Albuq   21.89 332  P     P      16 15 21.9 +1.5
      baz=146
TASM  ASL Pad, Albuq   21.89 332  P     P      16 15 22.6 +2.2
      baz=146
V53A  Saluda           21.96  25 eP     P      16 15 22.1 +1.0
      comp=Z,48nm,1.0s
V53A  Saluda           21.96  25  P     P      16 15 20.4 -0.7
      baz=210
Y58A  Scranton         22.00  33 eP     P      16 15 21.9 +0.5
      comp=Z,66nm,1.3s
SOTA  Rioblanco        22.02 127 eP     P      16 15 22.3 -0.1
ORTC  Ortega, Tolima   22.04 121 eP     P      16 15 21.8 -0.2
T48A  Bowling Green    22.05  16  P     P      16 15 20.6 -1.3
      baz=200
PCON  Cinco Dias       22.06 126 eP     P      16 15 24.5 +1.7
CCM   Cathedral Cave   22.07   6 eP     P      16 15 20.8 -1.3
      comp=Z,22nm,1.0s
CCM   Cathedral Cave   22.07   6 eP     P      16 15 20.8 -1.3
CCM                               pmax  pmax
      comp=Z,23nm,1.0s
CCM   Cathedral Cave   22.07   6  P     P      16 15 21.6 -0.5
      baz=187
MARP  Paez Belalcaza   22.09 125 eP     P      16 15 24.6 +1.8
U51A  La Follette      22.13  22  P     P      16 15 22.2 -0.6
      baz=206
KMSC  Kings Mountain   22.16  28 eP     P      16 15 20.5 -2.6
      comp=Z,25nm,0.8s
BIRD  Birdtown, Kers   22.17  31 eP     P      16 15 22.9 -0.3
      comp=Z,54nm,1.4s
TUC   Tucson           22.23 320 eP     P      16 15 24.9 +0.9
      comp=Z,22nm,1.0s
TUC   Tucson           22.23 320 eP     P      16 15 24.9 +0.9
TUC                               pmax  pmax
      comp=Z,22nm,1.0s
TUC   Tucson           22.23 320  P     P      16 15 22.5 -1.5
      baz=133
S46A  Don Dixon Farm   22.27  13  P     P      16 15 24.5 +0.3
      baz=196
T49A  Edmonton         22.29  18 eP     P      16 15 23.9 -0.6
      comp=Z,36nm,1.1s
T49A  Edmonton         22.29  18  P     P      16 15 23.6 -0.9
      baz=202
ROSC  El Rosal         22.31 118  P     P      16 15 25.9 +0.6
      comp=Z,3.3nm,0.3s,baz=110,slow=14,SNR=5.7
ROSC  El Rosal         22.31 118 eP     P      16 15 25.2 -0.1
      comp=Z,9.4nm,0.9s
U52A  Thorn Hill       22.38  23  P     P      16 15 25.0 -0.4
      baz=208
S47A  Hartford         22.38  15  P     P      16 15 23.9 -1.5
      baz=198
T50A  Nancy            22.43  20  P     P      16 15 24.8 -1.2
      baz=204
PRAC  Prado            22.44 121 eP     P      16 15 25.5 -0.8
TZTN  Tazewell         22.45  23 eP     P      16 15 26.5 +0.4
      comp=Z,83nm,1.1s
USIN  University of    22.55  13 eP     P      16 15 26.7 -0.5
      comp=Z,104nm,0.9s
S48A  Wiedeman Farm,   22.66  17  P     P      16 15 26.7 -1.5
      baz=200
U53A  Fall Branch      22.66  25  P     P      16 15 27.5 -0.9
      baz=210
X58A  Rowland          22.67  33 eP     P      16 15 29.5 +1.2
      comp=Z,13nm,0.8s
T51A  Gray             22.68  21  P     P      16 15 27.5 -1.0
      baz=206,SNR=6.6
CAPV  Capacho          22.71 108 eP     P      16 15 30.6 +1.3
R45A  Skylar, Fairfi   22.74  12  P     P      16 15 28.4 -0.6
      baz=194,SNR=5.8
RUSC  La Rusia         22.86 114 eP     P      16 15 31.7 +0.6
CHIC  Chingaza         22.92 117 eP     P      16 15 31.3 -0.2
T25A  Trinidad         22.95 338 eP     P      16 15 32.3 +0.8
      comp=Z,26nm,0.9s
S49A  Springfield      23.00  18  P     P      16 15 30.1 -1.5
      baz=202
KSU1  Kansas State U   23.09 355  P     P      16 15 31.9 -0.6
      baz=174
V56A  Mocksville       23.09  29 eP     P      16 15 33.8 +1.2
      comp=Z,71nm,1.9s
FLOC  Florencia        23.10 127 eP     P      16 15 35.2 +2.3
U54A  Nelsons Funny    23.11  26 eP     P      16 15 33.4 +0.6
      comp=Z,53nm,0.9s
WCI   Wyandotte Cave   23.13  16 eP     P      16 15 31.9 -0.9
      comp=Z,60nm,0.8s
WCI   Wyandotte Cave   23.13  16 eP     P      16 15 31.9 -0.9
WCI                               pmax  pmax
      comp=Z,60nm,0.8s
WCI   Wyandotte Cave   23.13  16  P     P      16 15 30.8 -2.0
      baz=199
R47A  Wooly Knot Far   23.14  15  P     P      16 15 31.7 -1.2
      baz=198
T52A  Hallie           23.15  23 eP     P      16 15 32.6 -0.5
      comp=Z,55nm,0.9s
S50A  Richmond         23.17  20  P     P      16 15 32.3 -0.9
      baz=204
OLIL  Olney            23.20  12 eP     P      16 15 32.8 -0.7
      comp=Z,56nm,0.9s
CBKS  Cedar Bluff      23.24 349 eP     P      16 15 34.2 +0.2
      comp=Z,33nm,0.6s
CBKS  Cedar Bluff      23.24 349 eP     P      16 15 34.2 +0.2
CBKS                              pmax  pmax
      comp=Z,33nm,0.6s
CBKS  Cedar Bluff      23.24 349  P     P      16 15 34.1 +0.1
      baz=166
X18A  Snowflake        23.32 325 eP     P      16 15 36.2 +1.3
      comp=Z,20nm,1.1s
Q45A  Warren Harvey,   23.35  12  P     P      16 15 34.1 -0.8
      baz=194
R48A  Northridge Ran   23.40  16  P     P      16 15 34.1 -1.3
      baz=200
S51A  Beattyville      23.41  21 eP     P      16 15 35.6 +0.2
      comp=Z,58nm,0.8s
R49A  Shelbyville      23.50  18 eP     P      16 15 34.7 -1.5
      comp=Z,47nm,1.0s
R49A  Shelbyville      23.50  18  P     P      16 15 35.2 -1.0
      baz=202
U56A  King             23.59  28  P     P      16 15 35.3 -1.8
      baz=214
W18A  Petrified Fore   23.65 326 eP     P      16 15 38.1 +0.2
      comp=Z,12nm,1.0s
R50A  Paris            23.75  19 eP     P      16 15 38.2 -0.3
      comp=Z,86nm,1.4s
P43A  Skaggs, Pawnee   23.84   9  P     P      16 15 39.3  0.0
      baz=191
SDCO  Great Sand Dun   23.89 337 eP     P      16 15 39.2 -0.9
      comp=Z,14nm,1.3s
SDV   Santo Domingo    23.89 105  P     P      16 15 40.5 +0.2
      comp=Z,8.1nm,0.7s,baz=306,slow=6.9,SNR=7.9
SDV   Santo Domingo    23.89 105 eP     P      16 15 40.0 -0.2
      comp=Z,17nm,1.0s
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SDV   Santo Domingo   23.89 105 eP      P       16 15 39.8 -0.5
Q48A  North Vernon    23.94  16  P      P       16 15 39.2 -1.0
      baz=200
BLO   Bloomington     23.97  14 eP      P       16 15 40.0 -0.5
      comp=Z,89nm,0.9s
BLO   Bloomington     23.97  14 eP      P       16 15 40.0 -0.5
BLO                              pmax   pmax
      comp=Z,89nm,0.9s
R51A  Hillsboro       24.01  20  P      P       16 15 40.3 -0.5
      baz=205
P45A  Graceland, Par  24.04  12  P      P       16 15 41.0  0.0
      baz=195
KSCO  Kaye Shedlock’  24.10 343 eP      P       16 15 41.7 -0.1
      comp=Z,23nm,0.7s
BLA   Blacksburg      24.29  27 eP      P       16 15 44.5 +1.1
      comp=Z,73nm,0.9s
BLA   Blacksburg      24.29  27 eP      P       16 15 44.5 +1.1
BLA                              pmax   pmax
      comp=Z,73nm,0.9s
S22A  4UR Ranch, Cre  24.41 335 eP      P       16 15 45.5 +0.7
      comp=Z,14nm,1.1s
S22A  4UR Ranch, Cre  24.41 335  P      P       16 15 44.0 -0.8
      baz=149
P48A  Milroy          24.52  16 eP      P       16 15 43.7 -1.7
      comp=Z,72nm,0.9s
P48A  Milroy          24.52  16  P      P       16 15 44.0 -1.4
      baz=200
R53A  Hurricane       24.62  23 eP      P       16 15 45.5 -0.9
      comp=Z,79nm,0.8s
R53A  Hurricane       24.62  23  P      P       16 15 45.8 -0.6
      baz=209
MVCO  Mesa Verde      24.69 331 eP      P       16 15 49.2 +1.9
      comp=Z,17nm,1.0s
V60A  Jim Taylor Roa  24.69  34 eP      P       16 15 45.9 -1.2
      comp=Z,55nm,0.9s
V60A  Jim Taylor Roa  24.69  34  P      P       16 15 45.5 -1.5
      baz=221
Y14A  Wickenburg      24.70 320 eP      P       16 15 49.9 +2.6
      comp=Z,25nm,1.7s
N41A  Harden Midland  24.74   6 eP      P       16 15 46.2 -1.2
      comp=Z,23nm,0.8s
N41A  Harden Midland  24.74   6  P      P       16 15 46.7 -0.7
      baz=187
O45A  Potomac         24.74  12  P      P       16 15 47.0 -0.5
      baz=194
Q51A  Peebles         24.74  20 eP      P       16 15 46.7 -0.8
      comp=Z,127nm,0.9s
Q51A  Peebles         24.74  20  P      P       16 15 47.1 -0.4
      baz=205
HDIL  Hopedale        24.77   9 eP      P       16 15 48.1 +0.4
      comp=Z,47nm,1.1s
P49A  Miami Univ. Ec  24.78  17  P      P       16 15 47.0 -0.8
      baz=202
WUAZ  Wupatki         24.84 325 eP      P       16 15 50.8 +2.2
      comp=Z,44nm,1.5s
N40A  Mertquake, Sal  24.85   4  P      P       16 15 48.2 -0.2
      baz=185
U59A  Littleton       24.86  32 eP      P       16 15 47.8 -0.7
      comp=Z,42nm,1.0s
SFIN  Lafayette       24.99  13 eP      P       16 15 49.6 -0.1
      comp=Z,36nm,0.8s
SFIN  Lafayette       24.99  13  P      P       16 15 48.2 -1.6
      baz=196
Q52A  Bidwell         25.06  22  P      P       16 15 49.1 -1.3
      baz=207
O47A  Sheridan        25.06  14  P      P       16 15 48.5 -1.9
      baz=198
P50A  Jamestown       25.12  19  P      P       16 15 49.8 -1.1
      baz=204
N43A  Stutzman Famil  25.17   9  P      P       16 15 51.0 -0.3
      baz=191
N44A  Piper City      25.19  11  P      P       16 15 50.5 -1.1
      baz=193
Q53A  Leroy           25.24  23  P      P       16 15 50.8 -1.2
      baz=209
P51A  Williamsport    25.25  20 eP      P       16 15 50.9 -1.2
      comp=Z,112nm,0.8s
P51A  Williamsport    25.25  20  P      P       16 15 50.0 -2.0
      baz=205
U60A  Pendleton       25.28  33  P      P       16 15 49.3 -3.0
      baz=221
R55A  Marlinton       25.31  26 eP      P       16 15 50.8 -2.0
      comp=Z,75nm,0.9s
GLA   Glamis          25.32 316  P      P       16 15 48.6 -4.3
      baz=127
O48A  Farmland        25.34  16  P      P       16 15 51.2 -1.7
      baz=200
N45A  Kentland        25.36  12  P      P       16 15 52.3 -0.8
      baz=195
S57A  Dark Hollow, R  25.40  29 eP      P       16 15 54.7 +1.2
      comp=Z,27nm,1.5s
M41A  Milan           25.43   6  P      P       16 15 52.4 -1.3
      baz=188
T59A  Double "B" Far  25.45  32 eP      P       16 15 53.5 -0.4
      comp=Z,11nm,0.9s
PV01  Paradox Valley  25.48 333 eP      P       16 15 56.2 +1.7
      comp=Z,27nm,1.0s
O49A  Covington       25.50  17 eP      P       16 15 52.6 -1.7
      comp=Z,75nm,0.8s
O49A  Covington       25.50  17  P      P       16 15 53.4 -1.0
      baz=202
Y12C  Blythe          25.55 317 eP      P       16 15 57.4 +2.5
      comp=Z,5.2nm,0.6s
N46A  Monticello      25.56  13  P      P       16 15 53.6 -1.3
      baz=196
PV13  Radium Mtn., P  25.61 332 eP      P       16 15 55.3 -0.3
      comp=Z,36nm,1.0s
PV02  Paradox Valley  25.61 332 eP      P       16 15 56.0 +0.3
      comp=Z,34nm,1.0s
Q54A  Coxs Mills      25.62  24 eP      P       16 15 54.4 -1.0
      comp=Z,26nm,0.9s
Q54A  Coxs Mills      25.62  24  P      P       16 15 53.9 -1.5
      baz=210
PV05  Paradox Valley  25.67 332 eP      P       16 15 57.2 +1.0
      comp=Z,24nm,1.0s
O50A  Cable           25.67  19  P      P       16 15 54.8 -1.2
      baz=203
M43A  Waltham Townsh  25.69   9  P      P       16 15 55.7 -0.3
      baz=191
SMCO  Snowmass        25.70 336 eP      P       16 15 57.8 +1.2
      comp=Z,13nm,0.9s
PV03  Paradox Valley  25.70 332 eP      P       16 15 57.2 +0.8
      comp=Z,35nm,1.0s
P52A  Corning         25.70  22  P      P       16 15 55.6 -0.6
      baz=207
PV18  Skein Mesa, Pa  25.72 332 eP      P       16 15 58.4 +1.7
      comp=Z,37nm,1.1s
PV12  Saucer Basin,   25.73 332 eP      P       16 15 59.2 +2.4
      comp=Z,78nm,1.3s
PV11  David Mesa, Pa  25.75 332 eP      P       16 15 57.3 +0.4
      comp=Z,39nm,1.0s
ISCO  Idaho Springs   25.75 339 eP      P       16 15 58.6 +1.6
      comp=Z,5.5nm,0.8s
ISCO  Idaho Springs   25.75 339 eP      P       16 15 58.6 +1.6
ISCO                             pmax   pmax
      comp=Z,5.0nm,0.8s
ISCO  Idaho Springs   25.75 339  P      P       16 15 58.8 +1.8
      baz=154
PV07  Paradox Valley  25.76 333 eP      P       16 15 59.0 +2.0
      comp=Z,36nm,1.2s
PV17  East Wray Mesa  25.77 332 eP      P       16 15 57.9 +0.8
      comp=Z,41nm,1.2s
OGNE  Ogallala        25.77 346 eP      P       16 15 58.0 +1.1
      comp=Z,28nm,0.8s
OGNE  Ogallala        25.77 346  P      P       16 15 58.0 +1.1
      baz=162
PV16  Nyswonger Mesa  25.78 332 eP      P       16 15 59.5 +2.3
      comp=Z,33nm,1.0s
M44A  Midewin, Midew  25.79  10 eP      P       16 15 56.2 -0.8
      comp=Z,44nm,0.9s
M44A  Midewin, Midew  25.79  10  P      P       16 15 56.3 -0.6
      baz=193
N47A  Urbana          25.79  15  P      P       16 15 56.4 -0.5
      baz=198
PV19  Morning Glory   25.80 332 eP      P       16 15 59.0 +1.6
      comp=Z,40nm,1.3s
PV20  West Nyswonger  25.82 332 eP      P       16 15 59.6 +2.0
      comp=Z,50nm,1.4s
PV04  Paradox Valley  25.84 332 eP      P       16 15 59.4 +1.8
      comp=Z,60nm,1.0s
P53A  Whipple         25.84  23 eP      P       16 15 58.1 +0.6
      comp=Z,51nm,0.8s
PV14  Lion Creek, Pa  25.88 332 eP      P       16 15 58.6 +0.5
      comp=Z,72nm,1.5s
PV10  Paradox Valley  25.89 332 eP      P       16 15 59.1 +0.9
      comp=Z,56nm,1.3s
PV22  Blue Mesa, Par  25.90 333 eP      P       16 16 00.0 +1.8
      comp=Z,35nm,1.0s
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Q55A  Buckhannon      25.93  25  P      P       16 15 57.1 -1.3
      baz=212
N48A  Decatur         25.93  16  P      P       16 15 57.0 -1.2
      baz=200
PV23  Carpenter Ridg  25.93 332 eP      P       16 16 00.3 +1.7
      comp=Z,50nm,1.0s
ACSO  Alum Creek Sta  25.95  20 eP      P       16 15 57.5 -0.9
      comp=Z,69nm,1.0s
ACSO  Alum Creek Sta  25.95  20  P      P       16 15 57.3 -1.1
      baz=205
PV21  Cone Mtn., Par  26.01 333 eP      P       16 15 59.5 +0.2
PV21                            epP     pP      16 16 25.5 +4.3
W13A  Hualapai Mount  26.02 321 eP      P       16 16 00.2 +0.9
      comp=Z,7.7nm,1.5s
PV09  Paradox Valley  26.03 332 eP      P       16 15 59.3 -0.3
L40A  Anamosa         26.05   5 eP      P       16 15 58.4 -0.9
      comp=Z,27nm,0.8s
L40A  Anamosa         26.05   5  P      P       16 15 58.4 -0.9
      baz=186
BC3   Big Chuckawall  26.11 316  P      P       16 15 58.2 -1.8
      baz=127
AOPR  Arecibo Observ  26.14  81 eP      P       16 15 59.8 -0.6
      comp=Z,31nm,1.0s
L42A  Oliver, Polo    26.15   7 eP      P       16 15 59.5 -0.7
      comp=Z,46nm,0.9s
L42A  Oliver, Polo    26.15   7  P      P       16 15 59.6 -0.6
      baz=189
N49A  Columbus Grove  26.22  17 eP      P       16 15 59.4 -1.4
      comp=Z,50nm,1.1s
N49A  Columbus Grove  26.22  17  P      P       16 15 59.9 -1.0
      baz=202
O52A  Adamsville      26.23  21 eP      P       16 16 00.1 -0.8
O52A                            epP     pP      16 16 23.6 +0.5
O52A  Adamsville      26.23  21  P      P       16 15 59.1 -1.9
      baz=207
OBIP  Obispado Ponce  26.27  82 eP      P       16 16 00.1 -1.5
      comp=Z,30nm,1.1s
M48A  Edgerton        26.60  16 eP      P       16 16 01.9 -2.4
      comp=Z,29nm,0.8s
M48A  Edgerton        26.60  16  P      P       16 16 03.1 -1.1
      baz=200
L46A  Eue Claire      26.73  13 eP      P       16 16 03.9 -1.5
      comp=Z,29nm,0.7s
KNB   Kanab           26.73 325 eP      P       16 16 06.0 +0.3
      comp=Z,5.5nm,0.8s
PFO   Pinyon Flats O  26.76 315 eP      P       16 16 05.7 -0.2
      comp=Z,6.4nm,1.1s
PFO   Pinyon Flats O  26.76 315 eP      P       16 16 05.7 -0.2
PFO                              pmax   pmax
      comp=Z,6.0nm,1.1s
M49A  Liberty Center  26.79  17  P      P       16 16 05.1 -0.8
      baz=202
N23A  Red Feather La  26.84 340 eP      P       16 16 06.4 -0.4
      comp=Z,5.3nm,1.0s
LCMT  Little Creek M  26.96 324 eP      P       16 16 10.0 +2.3
      comp=Z,4.7nm,1.3s
JFWS  Jewell Farm     26.98   6 eP      P       16 16 06.7 -1.0
      comp=Z,27nm,0.8s
JFWS  Jewell Farm     26.98   6 eP      P       16 16 06.7 -1.0
JFWS                             pmax   pmax
      comp=Z,27nm,0.8s
JFWS  Jewell Farm     26.98   6  P      P       16 16 07.3 -0.4
      baz=188
O20A  White River Ci  27.02 335 eP      P       16 16 10.3 +2.0
      comp=Z,10nm,1.0s
O20A  White River Ci  27.02 335  P      P       16 16 10.0 +1.7
      baz=149
K43A  Burlington      27.02   9 eP      P       16 16 06.9 -1.1
      comp=Z,30nm,0.9s
L48A  N Adams         27.11  16  P      P       16 16 06.8 -2.1
      baz=200
MTPU  Mount Pierson   27.15 327 eP      P       16 16 10.9 +1.3
      comp=Z,6.1nm,0.7s
SRU   San Rafael Swe  27.16 331 eP      P       16 16 10.5 +1.0
      comp=Z,4.1nm,0.7s
SRU   San Rafael Swe  27.16 331 eP      P       16 16 10.5 +1.0
SRU                              pmax   pmax
      comp=Z,4.0nm,0.7s
N53A  Lisbon          27.20  22 eP      P       16 16 09.5 -0.2
      comp=Z,41nm,1.1s
SZCU  Shurtz Canyon   27.30 326 eP      P       16 16 13.0 +2.1
      comp=Z,6.0nm,1.2s
CCUT  Cedar City      27.41 325 eP      P       16 16 14.2 +2.3
      comp=Z,5.0nm,1.1s
L49A  Milan           27.44  17  P      P       16 16 09.7 -2.1
      baz=202
P17A  Butcher Ranch,  27.55 331 eP      P       16 16 14.5 +1.5
      comp=Z,5.2nm,0.9s
TMUT  Trail Mountain  27.63 330 eP      P       16 16 14.2 +0.3
      comp=Z,7.1nm,1.1s
K47A  Vermontville    27.65  14  P      P       16 16 12.6 -1.1
      baz=199
N54A  Moraine State   27.65  23 eP      P       16 16 12.8 -0.9
      comp=Z,38nm,1.4s
ECSD  EROS Data Cent  27.70 356 eP      P       16 16 13.4 -0.7
      comp=Z,7.6nm,0.6s
ECSD  EROS Data Cent  27.70 356  P      P       16 16 14.5 +0.4
      baz=174
SHPR  Sheep Range     27.73 321 eP      P       16 16 16.1 +1.5
      comp=Z,3.7nm,1.0s
RWWY  Rawlins         27.98 339 eP      P       16 16 18.6 +1.7
      comp=Z,25nm,1.5s
I42A  Draeger Farm,   28.10   8 eP      P       16 16 16.1 -1.6
      comp=Z,21nm,1.0s
I42A  Draeger Farm,   28.10   8  P      P       16 16 16.3 -1.3
      baz=190
I41A  Arkdale         28.15   6 eP      P       16 16 16.6 -1.5
      comp=Z,9.8nm,0.8s
PSUT  Pine Spring     28.39 326 eP      P       16 16 21.5 +0.9
      comp=Z,4.8nm,1.0s
K22A  Casper          28.61 341 eP      P       16 16 23.5 +1.1
      comp=Z,7.4nm,1.1s
SUSD  Miller          28.62 353  P      P       16 16 22.5 +0.2
      baz=170
TPNV  Topopah Spring  28.67 321 eP      P       16 16 24.8 +1.7
      comp=Z,9.5nm,1.4s
TPNV  Topopah Spring  28.67 321 eP      P       16 16 24.8 +1.7
TPNV                             pmax   pmax
      comp=Z,10.0nm,1.4s
I46A  Reed City       28.75  13  P      P       16 16 22.8 -0.6
      baz=197
MPMC  Manual Prospec  28.89 318  P      P       16 16 21.1 -3.9
      baz=128
SPMN  Marine on St.   29.12   2 eP      P       16 16 25.9 -0.8
      comp=Z,26nm,0.8s
SPMN  Marine on St.   29.12   2  P      P       16 16 26.4 -0.3
      baz=182
TCUT  Toone Canyon    29.18 332 eP      P       16 16 28.3 +0.7
      comp=Z,35nm,1.4s
RSSD  Black Hills     29.26 345 eP      P       16 16 27.1 -1.1
      comp=Z,3.1nm,0.8s
RSSD  Black Hills     29.26 345 eP      P       16 16 27.1 -1.1
RSSD                             pmax   pmax
      comp=Z,3.0nm,0.8s
RSSD  Black Hills     29.26 345  P      P       16 16 27.6 -0.6
      baz=160
G39A  Holcombe        29.26   4  P      P       16 16 27.2 -0.7
      baz=186
G40A  Rib Lake        29.32   6 eP      P       16 16 27.3 -1.1
      comp=Z,5.7nm,1.0s
G40A  Rib Lake        29.32   6  P      P       16 16 28.0 -0.5
      baz=187
HWUT  Hardware Ranch  29.64 333 eP      P       16 16 32.0 +0.4
      comp=Z,13nm,1.8s
BW06  Boulder Array   29.78 337 eP      P       16 16 34.2 +1.3
      comp=Z,4.4nm,1.3s
BW06  Boulder Array   29.78 337  P      P       16 16 34.2 +1.3
      baz=149
PD31  Pinedale Array  29.78 337 eP      P       16 16 34.9 +2.0
PD31                            epP     pP      16 16 56.4 +1.2
PD31                            esP     sP      16 17 04.9 -1.8
PDAR  Pinedale Array  29.78 337  P      P       16 16 34.9 +2.0
      comp=Z,1.4nm,0.9s,baz=141,slow=9.6,SNR=11
PDAR                             pP     pP      16 16 56.4 +1.2
      comp=Z,0.2nm,0.4s,baz=128,slow=17,SNR=2.0
PDAR                             sP     sP      16 17 04.9 -1.8
      comp=Z,0.5nm,0.6s,baz=141,slow=11,SNR=2.9
I51A  Listowel        29.80  19  P      P       16 16 32.2 -0.6
      baz=206
F38A  Pierce - Schro  29.89   3  P      P       16 16 32.7 -0.7
      baz=184
F39A  Loretta         29.90   4  P      P       16 16 32.9 -0.7
      baz=186
F40A  Park Falls      29.97   5  P      P       16 16 33.6 -0.6
      baz=187
COWI  Conover         30.25   7 eP      P       16 16 35.6 -1.1
      comp=Z,6.1nm,0.9s
HVU   Hansel Valley   30.32 332 eP      P       16 16 39.4 +1.8
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      comp=Z,5.0nm,0.9s
HVU   Hansel Valley   30.32 332 eP      P       16 16 39.4 +1.8
HVU                              pmax   pmax
      comp=Z,5.0nm,0.9s
BINY  Binghamton      30.33  27  P      P       16 16 36.3 -1.1
      baz=216
AHID  Auburn Hatcher  30.39 335 eP      P       16 16 39.6 +1.4
      comp=Z,12nm,0.4s
E38A  The Farm, Brul  30.55   3 eP      P       16 16 37.8 -1.5
      comp=Z,9.3nm,0.9s
E38A  The Farm, Brul  30.55   3  P      P       16 16 38.0 -1.3
      baz=185
ELK   Elko            30.74 327 eP      P       16 16 43.1 +1.8
      comp=Z,3.4nm,1.0s
ELK   Elko            30.74 327 eP      P       16 16 43.1 +1.8
ELK                              pmax   pmax
      comp=Z,3.0nm,1.0s
NV11  Mina Array Sit  30.79 321 eP      P       16 16 45.0 +3.4
      comp=Z,1.7nm,1.6s
OMMB  Old Mammoth Mi  30.80 319 eP      P       16 16 44.9 +2.9
      comp=Z,6.2nm,1.4s
E43A  Lone Tree Farm  30.81  10 eP      P       16 16 39.8 -1.8
      comp=Z,11nm,1.0s
E43A  Lone Tree Farm  30.81  10  P      P       16 16 40.1 -1.5
      baz=193
SNOW  Snow King Moun  30.83 336 eP      P       16 16 44.4 +2.2
      comp=Z,25nm,0.8s
NV01  Mina Array Sit  30.87 321 eP      P       16 16 46.0 +3.4
NV01                            epP     pP      16 17 06.5 +1.7
NVAR  Mina Array Bea  30.87 321  P      P       16 16 46.0 +3.4
      comp=Z,1.8nm,0.8s,baz=137,slow=8.6,SNR=13
NVAR                             pP     pP      16 17 06.5 +1.7
      comp=Z,3.2nm,0.8s,baz=132,slow=8.3,SNR=9.3
LOHW  Long Hollow     30.90 336 eP      P       16 16 44.5 +1.8
      comp=Z,11nm,1.0s
TPAW  Teton Pass      30.93 336 eP      P       16 16 45.5 +2.4
      comp=Z,12nm,1.0s
MOOW  Moose Ponds     31.07 336 eP      P       16 16 46.7 +2.5
      comp=Z,7.7nm,0.9s
FXWY  Fox Creek       31.09 336 eP      P       16 16 46.3 +1.9
      comp=Z,5.2nm,0.9s
KVN   Kaiserville     31.15 322 eP      P       16 16 47.4 +2.5
      comp=Z,2.6nm,0.9s
KVN   Kaiserville     31.15 322 eP      P       16 16 47.4 +2.5
KVN                              pmax   pmax
      comp=Z,3.0nm,0.9s
E44A  Grand Marais A  31.23  11  P      P       16 16 44.7 -0.5
      baz=195
IMW   Indian Meadow   31.27 336 eP      P       16 16 48.5 +2.4
      comp=Z,6.3nm,1.0s
FLWY  Flagg Ranch     31.34 337 eP      P       16 16 49.0 +2.5
      comp=Z,5.8nm,0.8s
KLBO  Killbear Provi  31.45  19  P      P       16 16 45.7 -1.6
      baz=206
H17A  Grant Village   31.55 337 eP      P       16 16 51.2 +2.7
      comp=Z,22nm,1.7s
DELO  Deloro Mine     31.60  23 eP      P       16 16 47.4 -1.1
      comp=Z,9.9nm,0.8s
DELO  Deloro Mine     31.60  23  P      P       16 16 46.8 -1.8
      baz=211
E47A  Iron Bridge     31.62  14  P      P       16 16 48.0 -0.7
      baz=200
RLMT  Red Lodge       31.71 339 eP      P       16 16 51.6 +1.8
      comp=Z,18nm,1.5s
RLMT  Red Lodge       31.71 339  P      P       16 16 51.0 +1.1
      baz=151
BUKO  Buck Lake       31.79  20  P      P       16 16 48.1 -2.1
      baz=207
D46A  Sault St. Mari  31.86  13  P      P       16 16 49.4 -1.5
      baz=198
EYMN  Ely             31.89   3 eP      P       16 16 49.6 -1.5
      comp=Z,4.8nm,1.0s
EYMN  Ely             31.89   3  P      P       16 16 49.7 -1.3
      baz=184
BANO  Bancroft        31.92  22  P      P       16 16 49.1 -2.2
      baz=210
E48A  Lockeyer        31.92  16  P      P       16 16 50.1 -1.3
      baz=202
YHH   Holmes Hill     31.99 337 eP      P       16 16 55.5 +3.1
      comp=Z,5.8nm,1.1s
C40A  Isle Royale Na  32.04   6  P      P       16 16 51.6 -0.8
      baz=189
MDND  Maddock         32.06 353 eP      P       16 16 52.6 +0.1
      comp=Z,38nm,0.6s
MDND  Maddock         32.06 353  P      P       16 16 53.1 +0.6
      baz=170
F52A  Sundridge       32.12  19  P      P       16 16 51.3 -1.8
      baz=207
AGMN  Agassiz Nation  32.21 358 eP      P       16 16 53.2 -0.7
      comp=Z,15nm,0.8s
AGMN  Agassiz Nation  32.21 358  P      P       16 16 53.1 -0.8
      baz=177
LAO   LASA Array      32.21 344  P      P       16 16 54.2 +0.3
      baz=158
D47A  Chapleau        32.23  14  P      P       16 16 52.5 -1.6
      baz=200
QLMT  Earthquake Lak  32.25 336 eP      P       16 16 56.8 +2.2
GCMT  Greycliff       32.44 339 eP      P       16 16 57.5 +1.5
HLID  Hailey          32.47 332 eP      P       16 16 58.8 +2.3
      comp=Z,4.9nm,1.1s
HLID  Hailey          32.47 332  P      P       16 16 58.4 +2.0
      baz=141
D48A  Paudash Townsh  32.66  16  P      P       16 16 55.7 -2.1
      baz=202
PEMO  Pembroke        32.73  22  P      P       16 16 57.0 -1.4
      baz=211
E51A  G1948 Merrick   32.73  19  P      P       16 16 56.8 -1.6
      baz=206
MCMT  McKenzie Canyo  32.81 335 eP      P       16 17 02.6 +3.2
BOZ   Bozeman (W)     32.97 337 eP      P       16 17 03.1 +2.4
      comp=Z,8.9nm,1.4s
BOZ   Bozeman (W)     32.97 337 eP      P       16 17 03.1 +2.4
BOZ                              pmax   pmax
      comp=Z,9.0nm,1.4s
BOZ   Bozeman (W)     32.97 337  P      P       16 17 02.8 +2.0
      baz=148
DLMT  Dillon          33.15 336 eP      P       16 17 05.0 +2.7
      comp=Z,16nm,0.9s
E54A  Lac Daplat, Po  33.40  21  P      P       16 17 03.4 -0.9
      baz=210
DGMT  Dagmar          33.41 348  P      P       16 17 05.4 +1.0
      baz=162
D52A  ZEK Kipawa Sen  33.46  20  P      P       16 17 03.4 -1.4
      baz=208
WVOR  Wild Horse Val  33.73 326 eP      P       16 17 09.0 +1.7
      comp=Z,9.4nm,1.1s
WVOR  Wild Horse Val  33.73 326 eP      P       16 17 09.0 +1.7
WVOR                             pmax   pmax
      comp=Z,9.0nm,1.1s
D53A  Lac Vacive, Po  33.79  20  P      P       16 17 06.2 -1.4
      baz=209
HRY   Holter Researc  33.99 338 eP      P       16 17 11.6 +2.1
ULM   Lac du Bonnet   34.16 358  P      P       16 17 09.6 -1.2
      comp=Z,15nm,0.9s,baz=195,slow=7.3,SNR=12
ULM   Lac du Bonnet   34.16 358 eP      P       16 17 09.5 -1.3
      comp=Z,17nm,0.9s
ULM   Lac du Bonnet   34.16 358 eP      P       16 17 09.5 -1.3
ULM                              pmax   pmax
      comp=Z,17nm,0.9s
J08A  Circle Bar Ran  34.29 328 eP      P       16 17 14.9 +2.8
      comp=Z,16nm,1.0s
EGMT  Eagleton        34.43 341 eP      P       16 17 15.2 +1.9
      comp=Z,23nm,1.3s
EGMT  Eagleton        34.43 341  P      P       16 17 14.5 +1.2
      baz=152
BMO   Blue Mountains  34.80 330 eP      P       16 17 18.2 +1.7
      comp=Z,5.5nm,1.4s
BMO   Blue Mountains  34.80 330 eP      P       16 17 18.2 +1.7
BMO                              pmax   pmax
      comp=Z,6.0nm,1.4s
MSO   Missoula        34.88 336 eP      P       16 17 19.2 +2.0
      comp=Z,11nm,1.0s
MSO   Missoula        34.88 336  P      P       16 17 18.5 +1.3
      baz=145
F10A  Beach Ranch, E  35.60 332 eP      P       16 17 25.1 +1.7
      comp=Z,9.9nm,0.9s
MATQ  Matagami        36.17  18  P      P       16 17 26.3 -1.7
      baz=207
C09A  Chrisman Ranch  37.46 333 eP      P       16 17 40.8 +1.8
      comp=Z,14nm,1.4s
PTGA  Pitinga         37.52 113 eP      P       16 17 39.3 -0.7
      comp=Z,11nm,0.8s
FFC   Flin Flon       39.10 353 eP      P       16 17 53.0 +0.3
      comp=Z,149nm,0.6s
FFC   Flin Flon       39.10 353ceP      P       16 17 53.4 +0.7
FFC                              pmax   pmax
      comp=Z,58nm,1.3s
LPAZ  La Paz          41.03 140  P      P       16 18 08.9 -1.0
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	comp=Z,1.4nm,0.6s,baz=328,slow=8.9,SNR=7.2						
LPAZ	La Paz	41.03	140	*e*P	P	16 18 09.7	-0.2
LPAZ	La Paz	41.03	140	*e*P	P	16 18 09.7	-0.2
RPN	Rapa Nui	45.41	199	LR	LR	16 32 10.8	
	comp=Z,43nm,19.6s,baz=294,slow=28						
YKA	Yellowknife Ar	48.62	347	P	P	16 19 09.5	+0.8
	comp=Z,12nm,0.6s,baz=150,slow=7.4,SNR=61						
YKA				pP	pP	16 19 32.2	-0.3
	comp=Z,2.2nm,0.6s,baz=153,slow=7.3,SNR=3.4						
YKB5	Yellowknife Ar	48.62	347	*e*P	P	16 19 09.5	+0.8
YKB5				*e*pP	pP	16 19 32.2	-0.3
YKW3	Yellowknife Ar	48.68	347	*e*P	P	16 19 09.6	+0.5
	comp=Z,17nm,0.7s						
DLBC	Dease Lake	50.01	336	*e*P	P	16 19 22.7	+3.2
	comp=Z,9.2nm,0.8s						
FRB	Frobisher Bay	50.80	14	P	P	16 19 24.5	-0.7
	comp=Z,8.0nm,0.8s,baz=220,slow=9.0,SNR=5.2						
BDFB	Brasilia	55.25	122	P	P	16 19 58.3	-0.4
	comp=Z,22nm,0.9s,baz=284,slow=5.5,SNR=16						
EPYK	Eagle Plains	57.58	341	*e*P	P	16 20 15.9	+1.4
	comp=Z,4.8nm,1.0s						
EPYK	Eagle Plains	57.58	341	P	P	16 20 13.8	-0.7
	baz=129						
INK	Inuvik	57.95	344	*e*P	P	16 20 18.0	+1.1
	comp=Z,17nm,1.0s						
INK	Inuvik	57.95	344	*e*P	P	16 20 18.0	+1.1
INK				pmax	pmax		
	comp=Z,17nm,1.0s						
EGAK	Eagle	58.11	338	*e*P	P	16 20 19.2	+1.1
	comp=Z,2.6nm,0.8s						
DOT	Dot Lake	58.58	336	*e*P	P	16 20 23.6	+2.1
	comp=Z,6.4nm,1.0s						
HDA	Harding Lake	60.07	336	*e*P	P	16 20 32.7	+1.1
	comp=Z,4.6nm,1.0s						
HDA	Harding Lake	60.07	336	P	P	16 20 31.5	-0.1
	baz=118						
PRP	Porcupine Dome	60.07	338	*e*P	P	16 20 33.1	+1.3
	comp=Z,6.0nm,0.8s						
ILAR	Eielson Array	60.21	337	P	P	16 20 34.0	+1.3
	comp=Z,3.0nm,1.0s,baz=136,slow=4.8,SNR=19						
ILB	Eielson Array	60.21	337	*e*P	P	16 20 33.9	+1.3
	comp=Z,5.2nm,0.9s						
RND	Reindeer	60.37	335	*e*P	P	16 20 35.4	+1.6
	comp=Z,18nm,1.2s						
RND	Reindeer	60.37	335	*e*P	P	16 20 35.4	+1.6
RND				pmax	pmax		
	comp=Z,18nm,1.2s						
PLCA	Paso Flores	60.54	160	P	P	16 20 36.7	+1.5
	comp=Z,1.4nm,0.8s,baz=297,slow=4.5,SNR=2.6						
PLCA	Paso Flores	60.54	160	*e*P	P	16 20 36.2	+1.0
	comp=Z,56nm,2.0s						
PLCA	Paso Flores	60.54	160	*e*P	P	16 20 36.2	+1.0
PLCA				pmax	pmax		
	comp=Z,56nm,2.0s						
POKR	Poker Plat Res	60.58	337	P	P	16 20 34.5	-0.6
	baz=118						
COLA	College	60.63	337⇓	*e*P	P	16 20 36.9	+1.5
COLA				pmax	pmax		
	comp=Z,16nm,3.0s						
TCOL	CIGO, UAF Yank	60.63	337	P	P	16 20 36.2	+0.8
	baz=117						
BWN	Browne	60.94	336	*e*P	P	16 20 38.5	+0.9
	comp=Z,40nm,1.0s						
KTH	Kantishna Hill	61.28	335	*e*P	P	16 20 41.0	+1.0
	comp=Z,6.0nm,1.0s						
BPAW	Bear Paw Mtn.	61.52	335	*e*P	P	16 20 42.6	+1.1
	comp=Z,8.5nm,1.2s						
CAST	Castle Rocks	61.71	334	*e*P	P	16 20 43.6	+0.8
	comp=Z,10nm,1.2s						
MLY	Manley	61.80	336	*e*P	P	16 20 44.9	+1.4
	comp=Z,5.8nm,0.8s						
TOLK	Toolik Lake Re	62.96	340	P	P	16 20 52.5	+1.4
	baz=117						
KBS	Kingsbay	77.39	11	*e*P	P	16 22 20.9	+2.0
	comp=Z,34nm,0.9s						
KBS	Kingsbay	77.39	11	*e*P	P	16 22 21.0	+2.0
KBS				pmax	pmax		
	comp=Z,34nm,0.9s						
BILL	Bilibino	78.85	338	*e*P	P	16 22 28.2	+1.1
	comp=Z,22nm,1.5s						
BILL	Bilibino	78.85	338⇓	*e*P	P	16 22 27.7	+0.5
BILL				*e*		16 22 33.0	
BILL				*e*		16 22 53.3	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ESDC	Sonseca Array	79.99	52	P	P	16 22 34.0	0.0
	comp=Z,2.7nm,0.8s,baz=293,slow=5.9,SNR=14						
NAO01	NORSAR Array S	83.21	28	*e*P	P	16 22 51.5	+1.1
	comp=Z,86nm,1.5s						
NB2	NORSAR Subarra	83.29	28	P	P	16 22 51.8	+0.9
	comp=Z,3.8nm,0.9s,baz=293,slow=5.3						
NB2	NORSAR Subarra	83.29	28	P	P	16 22 52.1	+1.2
NB2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NOA	NORSAR Array B	83.29	28	P	P	16 22 52.2	+1.3
	comp=Z,5.4nm,0.8s,baz=290,slow=5.2,SNR=16						
NOA				LR	LR	16 57 47.5	
	comp=Z,7.3nm,21.5s,baz=275,slow=34						
NB201	NORSAR Array S	83.32	28	*e*P	P	16 22 52.0	+0.9
	comp=Z,71nm,1.5s						
NC405	NORSAR Array S	83.49	28	*e*P	P	16 22 52.7	+0.8
	comp=Z,30nm,0.9s						
NORES	NORESS Array B	83.55	28	P	P	16 22 53.9	+1.7
NORES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARA0	ARCESS Array S	84.82	18	*e*P	P	16 22 59.1	+0.7
ARA0				*e*pP	pP	16 23 24.3	-0.2
ARCES	ARCESS Array B	84.82	18	P	P	16 22 59.1	+0.7
	comp=Z,8.0nm,0.8s,baz=306,slow=5.4,SNR=43						
ARCES				pP	pP	16 23 24.3	-0.2
	comp=Z,2.7nm,0.7s,baz=286,slow=8.7,SNR=3.4						
ARCES	ARCESS Array B	84.82	18	*e*P	P	16 22 58.7	+0.3
ARE0	ARCESS Array S	84.82	18	*e*P	P	16 22 59.6	+1.2
	comp=Z,0.5nm,0.8s						
ECH	Echery	85.44	41	*e*P	P	16 23 02.0	0.0
	comp=Z,11nm,1.0s						
ECH	Echery	85.44	41	*e*P	P	16 23 02.0	0.0
ECH				pmax	pmax		
	comp=Z,11nm,1.0s						
SENIN	Lac Senin/Sane	86.14	43	*e*P	P	16 23 06.4	+0.6
	comp=Z,10nm,1.0s						
BFO	Black Forest	86.14	41	*e*P	P	16 23 05.7	+0.2
	comp=Z,10nm,1.1s						
BFO	Black Forest	86.14	41	*ce*P	P	16 23 06.2	+0.7
BFO				pmax	pmax		
	comp=Z,2.0nm,2.5s						
DAVA	Damuels	87.48	41	*e*PcP	P	16 23 12.7	+0.5
	comp=Z,10.0nm,1.0s						
CLL	Collm	87.88	37	*e*P	P	16 23 14.0	+0.3
CLL				*e**PP	pP	16 23 38.0	-2.0
CLL	Collm	87.88	37	*e*P	P	16 23 14.0	+0.3
FUORN	Ofenpass-Fuorn	87.97	42	*e*P	P	16 23 15.0	+0.3
	comp=Z,7.7nm,0.9s						
NKC	Novy Kostel	87.97	38	*e*P	P	16 23 15.2	+0.9
NKC	Novy Kostel	87.97	38	*e*P	P	16 23 15.2	+0.9
RETA	Reutte	87.97	41	*e*PcP	P	16 23 15.2	+0.7
	comp=Z,4.1nm,0.7s						
FETA	Feichten	88.12	41	*e*PcP	P	16 23 16.1	+0.9
	comp=Z,5.5nm,1.1s						
MOTA	Moosalm	88.24	41	*e*PcP	P	16 23 16.7	+1.0
	comp=Z,3.0nm,0.6s						
MA2	Magadan	88.41	333⇑	*e*P	P	16 23 14.7	-1.4
MA2				pmax	pmax		
	comp=Z,46nm,2.5s						
BRG	Berggiesshubel	88.59	37	*e*P	P	16 23 17.7	+0.5
	comp=Z,6.2nm,0.9s						
BRG	Berggiesshubel	88.59	37	*e*P	P	16 23 17.7	+0.5
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KHC	Kasperske Hory	89.08	39	*e*P	P	16 23 19.9	+0.4
	comp=Z,2.1nm,0.9s						
KHC	Kasperske Hory	89.08	39	*e*P	P	16 23 20.4	+0.9
KHC	Kasperske Hory	89.08	39	*e*P	P	16 23 20.4	+0.9
GEC2	GERESS Array S	89.27	39	*e*P	P	16 23 20.8	+0.3
	comp=Z,5.1nm,0.9s						
GERES	GERESS Array B	89.27	39	P	P	16 23 20.5	0.0
	comp=Z,1.6nm,0.3s,baz=316,slow=3.7,SNR=12						
PRU	Pruhonice	89.30	38	*e*P	P	16 23 20.5	0.0
PRU	Pruhonice	89.30	38	*e*P	P	16 23 20.5	0.0
ABTA	Abfaltersbach	89.36	41	*e*PcP	P	16 23 21.4	+0.4
	comp=Z,5.2nm,0.8s						
FIA0	FINESS Array S	89.48	25	*e*P	P	16 23 20.6	-0.4
FIA0	FINESS Array S	89.48	25	*e*P	P	16 23 20.6	-0.4
FINES	FINESS Array B	89.48	25	P	P	16 23 20.6	-0.4
	comp=Z,1.7nm,0.6s,baz=299,slow=3.5,SNR=15						
KBA	Koelnbreinsper	89.75	41	*e*PcP	P	16 23 23.3	+0.4
	comp=Z,4.8nm,1.1s						
CHVC	Chvalec	89.93	37	*e*P	P	16 23 24.6	+1.1
UPC	Upice	89.94	37	*e*P	P	16 23 24.6	+1.1
UPC	Upice	89.94	37	*e*P	P	16 23 24.6	+1.1
MOA	Molln	90.01	40	*e*PcP	P	16 23 24.5	+0.6
	comp=Z,4.4nm,0.8s						
OSTC	Ostas	90.04	37	*e*P	P	16 23 24.8	+0.8
DPC	Dobruska-Polom	90.19	37	*e*P	P	16 23 25.8	+1.1
DPC	Dobruska-Polom	90.19	37	*e*P	P	16 23 25.8	+1.1
OBKA	Obir	90.74	41	*e*PcP	P	16 23 28.6	+1.1
	comp=Z,2.9nm,0.8s						
CONA	Conrad Observa	90.96	39	*e*PcP	P	16 23 29.1	+0.7
	comp=Z,2.9nm,0.7s						
SOKA	Soboth	90.97	41	*e*PcP	P	16 23 29.3	+0.8
	comp=Z,3.6nm,0.8s						
ARSA	Arzberg	91.04	40	*e*PcP	P	16 23 29.0	+0.3
	comp=Z,1.3nm,0.4s						
MORC	Moravsky Berou	91.15	37	*e*P	P	16 23 30.1	+0.9
	comp=Z,4.9nm,1.0s						
MORC	Moravsky Berou	91.15	37	*e*P	P	16 23 30.1	+0.9
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MODS	Modra-Piesok	91.62	38	*e*P	P	16 23 31.2	-0.1
MODS	Modra-Piesok	91.62	38	*e*P	P	16 23 31.2	-0.1
TOA1	Torodi Ar. Sit	91.78	76	*e*P	P	16 23 30.3	-2.4
TORD	Torodi Ar. Bea	91.78	76	P	P	16 23 30.3	-2.4
	comp=Z,6.1nm,0.3s,baz=290,slow=4.3,SNR=2.7						
OJC	Ojcow	92.24	36	*e*P	P	16 23 34.6	+0.5
	comp=Z,11nm,0.8s						
OJC	Ojcow	92.24	36	*e*P	P	16 23 34.6	+0.5
OJC				pmax	pmax		
	comp=Z,11nm,0.8s						
VYHS	Vyhne	92.49	38	*e*P	P	16 23 36.9	+1.5
VYHS	Vyhne	92.49	38	*e*P	P	16 23 36.9	+1.5
PRGR	Permogore	96.24	18	*e*P	P	16 23 48.8	-3.4
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN	Obninsk	97.74	26	*e*P	Pdif	16 24 00.9	+1.8
OBN				*e*		16 28 03.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK32	Makanchi Array	117.38	3	*e*PKPdf	PKPdf	16 29 08.7	-0.8
MKAR	Makanchi Array	117.38	3	PKP	PKPdf	16 29 08.7	-0.8
	comp=Z,0.6nm,0.8s,baz=27,slow=8.7,SNR=4.0						
BOSA	Boshof	122.97	114	PKP	PKiKP	16 29 22.4	+1.5
	comp=Z,3.4nm,0.9s,baz=196,slow=2.5,SNR=4.0						
CMAR	Chiang Mai Arr	143.43	339	PKhKP	PKPab	16 29 56.7	+1.3
	comp=Z,0.7nm,0.9s,baz=334,slow=1.9,SNR=4.4						

ISCJB ***04*** *16:16:19.2±1.1, 44°.12N±0°.08×147°.4E±0°.1, h63km, Error ellipse: s-maj=15.5km s-min=5.8km az=137.3*
JMA ***04*** *16:16:19.4±0.3, 44°.11N×147°.40E, h62km, M3.5*
SKHL ***04*** *16:16:20.5±0.3, 44°.07N×147°.38E, h35km±2km, mb3.8/2*
ISC 04 16:16:20.0±1.9**, 44°.2N**±0°.1×**147°.4E**±0°.1**, h63**km**, n13, σ0s.57**/21**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.08	265	*i* P	Pn	16 16 39.1	-0.1
YUK				AMB	AMB	16 16 40.0	
	10.0nm,0.3s						
YUK				AMB	AMB	16 16 40.0	
	50nm,0.3s						
YUK				AMB	AMB	16 16 40.0	
	30nm,0.3s						
YUK				*i* S	Sn	16 16 53.1	-0.3
YUK				A	A	16 16 54.0	
	510nm,0.3s						
YUK				A	A	16 16 54.0	
	350nm,0.3s						
KUR	Kuril'sk	1.15	18	*i* P	Pn	16 16 40.1	0.0
KUR				AMB	AMB	16 16 40.5	
	20nm,0.4s						
KUR				AMB	AMB	16 16 40.5	
	50nm,0.4s						
KUR				*i* S	Sn	16 16 55.0	0.0
KUR				A	A	16 16 55.0	
	330nm,0.3s						
KUR				A	A	16 16 55.0	
	340nm,0.3s						
GRPR	Tuman	1.15	263	*i* P	Pn	16 16 39.0	-1.1
GRPR				*i* S	Sn	16 16 54.0	-1.1
GRPR				A	A	16 16 55.0	
	550nm,0.3s						
GRPR				A	A	16 16 55.0	
	380nm,0.3s						
NEM2	Nemuro 2	1.40	237	P	Pn	16 16 43.3	-0.1
NEM2				*e*S	Sn	16 17 00.5	-0.5
JRA	Rausu	1.62	263	P	Pn	16 16 46.4	0.0
JRA				*e*S	Sn	16 17 07.2	+0.9
JNSB	Nemuroshibetsu	1.73	259	P	Pn	16 16 48.4	+0.5
JNSB				*e*S	Sn	16 17 09.7	+0.7
JKHN	Kushirohamanak	1.91	237	P	Pn	16 16 50.3	0.0
JNK	Nakash	1.98	255	P	Pn	16 16 51.4	+0.1
JNK				*e*S	Sn	16 17 15.1	0.0
JAK	Akkeshi	2.25	240	P	Pn	16 16 54.4	-0.4
JAK				*e*S	Sn	16 17 21.4	0.0
JTKR	Abashiri--Toko	2.49	267	P	Pn	16 16 57.9	-0.2
JAR	Ashorobuto	2.73	253	P	Pn	16 17 02.4	+0.9
JOB	Onbets	2.84	245	P	Pn	16 17 03.4	+0.4
JCH	Churui	3.29	244	P	Pn	16 17 09.5	+0.5

ISCJB ***04*** *16:30:06.8±0.9, 33°.79N±0°.04×35°.69E±0°.07, h11km±8km, Error ellipse: s-maj=10.3km s-min=5.9km az=173.1*
NSSC ***04*** *16:30:06.0±0.4, 33°.76N×35°.61E, h13km±2km, MD1.1, ML2.0*
GRAL ***04*** *16:30:07.5±0.3, 33°.78N×35°.76E, h0km±20km, MD2.8*
ISC 04 16:30:06.8±1.2**, 33°.79N**±0°.04×**35°.7E**±0°.1**, h11**km±17km**, n8, σ0s.50**/14**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.14	330	*e*P	Pg	16 30 10.1	0.0
BHL				*e*S	Sg	16 30 12.3	-0.2
DQRL	Deir Qamar	0.16	241	*e*P	Pg	16 30 10.7	+0.3
DQRL				*e*S	Sg	16 30 13.0	0.0
QRWL	Qaraoun	0.24	191	*e*P	Pg	16 30 11.8	0.0
QRWL				*e*S	Sg	16 30 15.1	-0.1
RCY	Rachaya	0.30	164	*e*P	Pg	16 30 12.7	-0.2
BRBR	Barbar	0.41	154	*e*P	Pg	16 30 15.0	-0.1
BRBR				*e*S	Sb	16 30 21.5	-1.1
BRBR				AML	AML	16 30 26.2	
	comp=N,163nm,0.6s						
BRBR				AML	AML	16 30 26.5	
	comp=E,93nm,0.7s						
QASN	Qassioun	0.52	119	*e*P	Pb	16 30 18.0	+0.1
QASN				*e*S	Sb	16 30 26.2	+0.7
QASN				AML	AML	16 30 31.4	
	comp=E,211nm,0.5s						
QASN				AML	AML	16 30 33.6	
	comp=N,152nm,0.4s						
HWQ	Hawqa	0.52	19	*e*P	Pg	16 30 16.8	-0.2
TOTH	TOTAH	0.71	126	*e*P	Pb	16 30 21.4	0.0
TOTH				*e*S	Sb	16 30 31.9	+0.8
TOTH				AML	AML	16 30 38.0	
	comp=E,26nm,0.5s						
TOTH				AML	AML	16 30 40.0	
	comp=N,39nm,0.5s						

KLM ***04*** *16:32:33.0, 8°.63N×127°.67E, h65km, mb5.0*
DJA ***04*** *16:32:45.9±0.7, 8°N±6°×12°7E±°, h88km±6km, M4.8/22, mB5.2/13, mb4.8/22, MLv5.1/6, Mw(mB)4.7/13*
BJI ***04*** *16:32:46.0±0.0, 8°.32N×126°.39E, h91km, mb4.4/17, mB4.8/15*
ISCJB ***04*** *16:32:46.3±0.3, 8°.11N±0°.02×126°.45E±0°.03, h107km±2km, mb4.6/89, Error ellipse: s-maj=4.9km s-min=2.7km az=163.5*
MAN ***04*** *16:32:46.6, 8°.07N×126°.32E, h117km, MS4.6*
IDC ***04*** *16:32:46.9±0.5, 8°.05N×126°.43E, h98km±4km, mb4.0/15, mb1 4.1/18, mb1mx4.0/35, mbtmp4.5/18, MS2.9/5, Ms1 2.9/5, ms1mx2.6/39, Error ellipse: s-maj=16.6km s-min=9.2km az=86.0*
NEIC ***04*** *16:32:47.4±1.9, 8°.13N×126°.38E, h102km±4km, mb4.6/82, Error ellipse: s-maj=9.4km s-min=5.9km az=150.0*
NEIC Felt [III PIVS] at Bayugan and Compostela and [II PIVS] at Bislig.
ISC 04 16:32:47.2±0.3**, 8°.10N**±0°.03×**126°.41E**±0°.04**, h99**km±3km**, h99**km**:pP-P, n199, σ1s.44**/242**, mb4.6**/90**, 7C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.10	328⇑	*i*P	Pn	16 33 04.2	+3.2
BIPH				*i* S	Sn	16 33 14.4	+3.2
MATI	Mati	1.16	188	*e*P	Pn	16 33 10.2	+0.9
MATI				*e*S	Sn	16 33 27.2	+1.2
BUTP	Butuan	1.17	318	*e*P	Pn	16 33 11.4	+2.1
BUTP				*e*S	Sn	16 33 29.2	+3.1
DAV	Davao City (W)	1.32	219	P	Pn	16 33 12.2	+1.0
	710nm,0.3s,baz=259,slow=7.0,SNR=45						
DAV				LR	LR	16 33 36.9	
	comp=Z,359nm,20.9s,baz=138,slow=39						
DMPH	Davao City--Mi	1.35	222⇑	*e*P	Pn	16 33 11.1	-0.5
DMPH				*i* S	Sn	16 33 30.9	+0.9
BUKP	Musuan	1.36	261	*e*P	Pn	16 33 12.2	+0.6
BUKP				*e*S	Sn	16 33 30.4	+0.2
KCP	Kidapawan	1.70	230⇓	*e*P	Pn	16 33 16.3	+0.3
KCP				*i* S	Sn	16 33 38.2	+0.4
CGP	Cagayan de Oro	1.74	282⇑	*i*P	Pn	16 33 17.0	+0.6
CGP				*i* S	Sn	16 33 38.4	-0.1
SCPH	Surigao	1.90	331⇓	*e*P	Pn	16 33 29.4	+11
SCPH				*e*S	Sn	16 33 54.8	+13
DDMP	Don Marcelino,	2.10	199	*e*P	Pn	16 33 20.6	-0.5
DDMP				*e*S	Sn	16 33 44.3	-2.6
CTBH	Cotabato--PC H	2.32	248⇓	*i*P	Pn	16 33 23.6	-0.3
SKMP	Bagumbayan, Su	2.43	230	*e*P	Pn	16 33 24.5	-0.9
SKMP				*e*S	Sn	16 33 53.7	-1.0
GSPH	General Santos	2.47	216⇑	*i*P	Pn	16 33 27.0	+0.9
GSPH				*i* S	Sn	16 33 53.4	-2.4
MSLP	Maasin	2.54	323	*e*P	Pn	16 33 27.9	+1.2
MSLP				*e*S	Sn	16 33 57.3	+0.2
TBP	Tagbilaran	2.98	302	*e*P	Pn	16 33 33.0	+0.4
TBP				*e*S	Sn	16 34 07.7	+0.1
DCPH	Dipolog City	3.07	279⇑	*e*P	Pn	16 33 36.4	+2.6
DCPH				*e*S	Sn	16 34 11.7	+1.9
LLP	Lapu-Lapu	3.27	313⇑	*e*P	Pn	16 33 38.0	+1.4
LLP				*e*S	Sn	16 34 16.1	+1.5
PLP	Palo	3.36	335⇑	*e*P	Pn	16 33 39.1	+1.4
PLP				*e*S	Sn	16 34 21.3	+4.6
SNPH	Sibulan	3.38	292⇓	*i*P	Pn	16 33 39.1	+1.1
SNPH				*i* S	Sn	16 34 16.1	-1.2
OCLP	Ormoc	3.43	329	*e*P	Pn	16 33 40.6	+1.9
OCLP				*e*S	Sn	16 34 19.5	+1.0
BESP	Borongan	3.61	345	*e*P	Pn	16 33 41.8	+0.7
BESP				*e*S	Sn	16 34 20.9	-1.9
IPIL	Ipil	3.82	266	*e*P	Pn	16 33 45.3	+1.4
IPIL				*e*S	Sn	16 34 19.4	-8.4
SGSI	Sangihe	4.47	191	P	Pn	16 33 53.9	+1.1
CNP	Catarman	4.71	339	*e*P	Pn	16 33 55.4	-0.6
CNP				*e*S	Sn	16 34 48.5	-0.9
TNTI	Ternate	7.34	173	*e*Pn	Pn	16 34 31.7	-0.1
TNTI				*e*Sn	Sn	16 35 49.4	-4.2
TNTI	Ternate	7.34	173	P	Pn	16 34 30.8	-1.0
TGY	Tagaytay City	8.03	318	P	Pn	16 34 45.0	+3.8
	74nm,0.3s,baz=167,slow=2.2,SNR=12						
LBMI	Labuha	8.75	173	P	Pn	16 34 50.9	-0.1
LUWI	Luwuk	9.78	202	*e*Pn	Pn	16 35 07.8	+2.8
LUWI				*e*Sn	Sn	16 36 56.2	+3.2
LUWI	Luwuk	9.78	202	P	Pn	16 35 06.7	+1.7
SWI	Sorong	10.13	151	P	Pn	16 35 07.0	-2.8
APSI	Ampana	10.13	208	P	Pn	16 35 11.5	+1.7
SIJI	Sorong	10.14	151	P	Pn	16 35 09.1	-0.8
	16nm,0.3s,baz=253,slow=22,SNR=104						
FAKI	Fak Fak	12.40	152	*e*Pn	Pn	16 35 40.5	+0.2
FAKI				*e*Sn	Sn	16 37 48.0	-8.7
SMKI	Samarinda	12.50	228	P	P	16 35 53.8	+4.4
TTSI	Tana Toraja	12.88	211	P	Pn	16 35 47.8	+1.2
BAKI	Biak	13.37	133	P	Pn	16 35 52.2	-0.8
SPSI	Sidrap Palu	13.70	209	P	Pn	16 35 57.8	+0.5
SRPI	Serui, Papua	13.93	135	P	Pn	16 35 57.5	-2.9
KAPI	Kappang	14.62	207	P	Pn	16 36 09.3	-0.1
	0.5nm,0.3s,baz=26,slow=6.1,SNR=6.6						
SBUM	Sibu	15.20	249	*e*P	Pn	16 36 18.0	+1.3
	15nm,0.6s						
SBUM	Sibu	15.20	249	P	P	16 36 21.0	+1.6
YULB	Yu-li	15.98	343	*e*Pn	Pn	16 36 24.3	-2.0
	18nm,1.4s						
TPUB	Ta-pu	16.10	340	*e*Pn	Pn	16 36 25.9	-2.0
	42nm,1.5s						
SSLB	Suanglung	16.45	342	*e*Pn	Pn	16 36 31.0	-1.3
	13nm,1.1s						
YHNB	Yeheng	17.16	344	*e*P	Pn	16 36 39.6	-1.4
	22nm,1.1s						
KSM	Kuching	17.34	249	*e*Pn	Pn	16 36 44.7	+1.5
	52nm,1.2s						
KSM	Kuching	17.34	249	P	Pn	16 36 46.0	+2.8
GENI	Genyem	17.35	127	P	Pn	16 36 49.8	+6.5
JAY	Jayapura	17.73	126	LR	LR	16 43 13.8	
	comp=Z,48nm,19.6s,baz=188,slow=35						
SOEI	Soe	17.87	187	*e*P	Pn	16 36 50.2	+0.5
	21nm,0.7s						
BATI	Baumata	18.39	189	P	P	16 36 55.6	+1.0
	9.9nm,0.3s,baz=36,slow=1.3,SNR=16						
BATI	Baumata	18.39	189	P	P	16 36 55.3	+0.7
JOW	Kunigami	18.71	5	P	Pn	16 37 00.6	+1.1
	1.0nm,0.3s,baz=184,slow=15,SNR=19						
JOW	Kunigami	18.71	5	*e*P	Pn	16 36 58.8	-0.7
	53nm,0.7s						
QIZ	Qiongzhong	19.41	306	*e*P	Pn	16 37 06.9	-0.9
	42nm,0.9s						
JAGI	Jajag, Banyuwa	20.50	217	*e*P	P	16 37 19.9	+2.4
	55nm,1.0s						
MTN	Manton Dam	21.33	167	*e*P	P	16 37 26.5	+0.1
	15nm,1.1s						
TPI	Tanjungpandan	21.60	241	P	P	16 37 28.8	-0.5
	20nm,1.5s						
UGM	Wanagama	22.45	225	*e*P	P	16 37 37.7	-0.6
	343nm,1.5s						
PANO	Nakornpanom	23.07	295	P	P	16 37 45.8	+1.3
	0.4nm,0.9s						
MYKOM	Kota Tinggi	23.33	256	*e*P	P	16 37 46.7	-0.2
	14nm,0.7s						
SKNT	Sakolnakorn	23.58	294	P	P	16 37 50.3	+1.1
	22nm,0.9s						
JRMM	Jerantut	24.17	261	P	P	16 37 56.0	+1.5
KHON	Khomkaen	24.45	292	P	P	16 38 00.0	+3.0
	32µm,0.8s						
JMBI	JAMBI	24.68	248	P	P	16 38 02.2	+3.0
NONG	Nongkai	24.70	296	P	P	16 38 00.8	+1.5
	0.4nm,0.9s,79nm						
JNU	Nakatsue	25.24	9	LR	LR	16 47 29.9	
	comp=Z,21nm,21.1s,baz=359,slow=35						
JNU	Nakatsue	25.24	9	*e*P	P	16 38 04.1	+0.1
	23nm,1.1s						
SLVN	Son La	25.39	304	*e*P	P	16 38 05.8	+0.2
	12nm,1.1s						
MDSI	Maura Dua	25.46	241	P	P	16 38 06.4	+0.1
IPM	Ipoh	25.49	263	*e*P	P	16 38 06.3	-0.2
	29nm,1.3s						
KULM	Kulim	25.74	265	*e*P	P	16 38 09.9	+1.1
	35nm,1.3s						
LWLI	Liwa	25.83	240	P	P	16 38 10.2	+0.5
PBKT	Sadao Pong	26.22	291	P	P	16 38 17.3	+4.3
	4.4nm,0.8s,321nm						
MNAI	Manna	26.47	243	*e*P	P	16 38 14.9	-0.5
	442nm,1.3s						
PMG	Port Moresby	27.01	130	*e*P	P	16 38 20.8	+0.6
	18nm,1.0s						
COEN	Coen	27.51	143	*e*P	P	16 38 24.0	-0.7
	25nm,1.4s						
PAYA	Payao	28.06	296	P	P	16 38 35.3	+5.7
	24µm,0.8s,495µm						
RABL	Rabaul	28.44	115	*e*P	P	16 38 33.9	+0.9
	16nm,1.2s						
CMAR	Chiang Mai Arr	28.61	294	P	P	16 38 34.8	+0.3
	0.5nm,0.6s,baz=89,slow=7.6,SNR=3.7						
CMAR				pP	pP	16 38 57.1	+0.6
	3.4nm,1.0s,baz=112,slow=8.0,SNR=5.9						
CMAR				PcP	PcP	16 41 44.0	+0.5
	2.2nm,0.7s,baz=96,slow=0.6,SNR=12						
CMAR				LR	LR	16 49 53.9	
	comp=Z,24nm,19.4s,baz=120,slow=36						
CHTO	Chiang Mai	28.71	295	*e*P	P	16 38 36.1	+0.8
	1.4nm,0.8s						
INU	Inuyama	28.81	18	*e*P	P	16 38 36.0	0.0
	14nm,0.8s						
WRAB	Tennant Creek	28.93	164	*e*P	P	16 38 37.0	-0.3
	15nm,1.4s						
KS15	Wonju Array Si	29.24	2	*e*P	P	16 38 38.4	-1.3
	6.5nm,0.8s						
KSRS	Korea Array	29.25	2	LR	LR	16 49 46.3	
	comp=Z,14nm,21.3s,baz=192,slow=35						
GSI	Gunungsitoli	29.51	258	*e*P	P	16 38 42.3	-0.2
	32nm,0.7s						

PSA00	Pilbara Seismi	30.19	192	eP	P	16 38 47.4	-0.9
	7.1nm,0.9s						
MAJO	Matsushiro	30.28	19	eP	P	16 38 48.0	-1.0
MAJO				e		16 38 48.2	
MAJO				epP	pP	16 39 11.1	+0.6
MAJO				eScS	ScS	16 49 15.8	-1.1
MJAR	Matsushiro Arr	30.28	19	P	P	16 38 48.2	-0.9
	4.1nm,0.7s,baz=199,slow=10.0,SNR=14						
MJAR				pP	pP	16 39 11.1	+0.6
	2.7nm,0.7s,baz=196,slow=9.3,SNR=5.0						
MJAR				LR	LR	16 49 15.8	
	comp=Z,26nm,21.9s,baz=105,slow=33						
MJB9	Matsu-Tunnel	30.28	19	eP	P	16 38 47.7	-1.3
	20nm,1.4s						
XAN	Xi'an	30.44	330	eP	P	16 38 48.5	-2.0
	9.6nm,0.4s						
XAN	Xi'an	30.44	330	P	P	16 38 48.8	-1.7
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AS31	Alice Springs	32.41	167	eP	P	16 39 06.8	-1.1
	3.3nm,1.4s						
AS31				ePcP	PcP	16 41 52.6	-0.6
ASAR	Alice Springs	32.41	167	P	P	16 39 06.9	-1.0
	0.7nm,0.3s,baz=348,slow=6.7,SNR=33						
ASAR				PcP	PcP	16 41 53.1	-0.1
	3.8nm,0.6s,baz=349,slow=2.6,SNR=16						
ASAR				S	S	16 44 10.7	-4.7
	0.8nm,0.8s,baz=0.6,slow=19,SNR=2.8						
CTA	Charters Tower	34.15	145	P	P	16 39 23.6	+0.6
	6.2nm,0.6s,baz=329,slow=11,SNR=11						
CTAO	Charters Tower	34.15	145	eP	P	16 39 23.6	+0.6
	6.8nm,0.7s						
HHC	Hu-ho-hao-te	35.19	340	P	P	16 39 35.1	+3.2
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,19nm,5.9s						
USA0B	Ussuriysk Arra	36.29	7	eP	P	16 39 41.7	+0.6
	10nm,0.8s						
USRK	Ussuriysk Ar.	36.29	7	P	P	16 39 41.5	+0.4
	11nm,0.9s,baz=185,slow=7.9,SNR=16						
ERM	Erimo	36.88	21	eP	P	16 39 47.9	+1.8
	92nm,1.4s						
SHL	Shillong	37.17	302	eP	P	16 39 48.9	-0.1
	9.8nm,0.6s						
SHL	Shillong	37.17	302	eP	P	16 39 49.0	-0.1
MORW	Morawa	38.28	195	eP	P	16 39 57.8	-0.4
	31nm,1.3s						
ASAJ	Asahikawa	38.55	19	P	P	16 40 01.9	+1.7
	4.9nm,0.4s,baz=230,slow=7.5,SNR=21						
ASAJ				pP	pwP	16 40 25.2	-0.8
	10nm,0.7s,baz=269,slow=4.1,SNR=3.2						
FORT	Forrest	38.69	178	eP	P	16 40 01.9	+0.4
	36nm,1.0s						
GTA	Gaotai	39.25	327	eP	P	16 40 05.9	-0.4
GTA				PcP	PcP	16 42 14.6	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,51nm,6.5s						
GTA				LR	LR		
	comp=N,56nm,16.5s						
GTA				LR	LR		
	comp=E,35nm,15.9s						
GTA				LR	LR		
	comp=Z,95nm,17.1s						
LSA	Lhasa	39.43	308	eP	P	16 40 09.1	+0.8
LSA				e		16 40 09.2	
H11S3	WAKE ISLAND Hy	40.44	71	T	T	17 23 45.4	
	baz=262,slow=75,SNR=77						
H11S1	WAKE ISLAND Hy	40.46	71	T	T	17 23 44.9	
	baz=262,slow=75,SNR=62						
H11S2	WAKE ISLAND Hy	40.46	71	T	T	17 23 46.7	
	baz=262,slow=75,SNR=64						
H11N1	WAKE ISLAND Hy	40.84	69	T	T	17 24 27.0	
	baz=266,slow=74,SNR=51						
H11N2	WAKE ISLAND Hy	40.85	69	T	T	17 24 25.8	
	baz=266,slow=74,SNR=34						
H11N3	WAKE ISLAND Hy	40.86	69	T	T	17 24 28.4	
	baz=266,slow=74,SNR=60						
EIDS	Eidsvold	41.03	145	eP	P	16 40 20.4	-0.5
	13nm,1.3s						
BBOO	Buckleboo	41.71	168	eP	P	16 40 26.0	-0.4
	52nm,1.4s						
BBOO				ePcP	PcP	16 42 21.4	+0.1
NWAO	Narrogin (SRO)	41.73	192	eP	P	16 40 26.2	-0.3
	55nm,1.5s						
STKA	Stephens Creek	42.32	161	P	P	16 40 30.4	-1.0
	2.3nm,0.7s,baz=343,slow=11,SNR=4.2						
STKA				PcP	PcP	16 42 23.4	+0.1
	3.2nm,0.6s,baz=313,slow=8.9,SNR=2.9						
STKA	Stephens Creek	42.32	161	eP	P	16 40 30.6	-0.8
	4.4nm,1.4s						
STKA				ePcP	PcP	16 42 22.9	-0.4
JIRN	Jiri	42.67	302	eP	P	16 40 35.8	+0.9
	18nm,0.4s						
SONA0	Songino Array	43.09	340	eP	P	16 40 36.9	-0.7
SONM	Songino Array	43.09	340	P	P	16 40 36.9	-0.7
	0.7nm,0.5s,baz=145,slow=5.4,SNR=3.6						
PKI	Pulchoki	43.30	302	eP	P	16 40 41.0	+1.1
PKIN	Phulchoki	43.31	302	eP	P	16 40 40.5	+0.6
	6.3nm,0.6s						
DMN	Daman	43.57	302	eP	P	16 40 43.0	+1.1
KOLN	Koldanda	44.89	301	eP	P	16 40 52.5	+0.1
	14nm,0.6s						
DANN	Dangsing	44.93	302	eP	P	16 40 53.2	+0.4
	20nm,0.5s						
ARMA	Armidale	45.31	149	eP	P	16 40 55.5	-0.1
	3.9nm,1.0s						
ARMA				ePcP	PcP	16 42 35.2	+1.5
PYUN	Piuthan	45.50	302	eP	P	16 40 58.3	+1.0
	10nm,0.5s						
TLY	Talaya	47.31	341	eP	P	16 41 10.2	-0.7
	4.9nm,0.7s						
CAN	Canberra	48.16	155	ePcP	PcP	16 42 44.7	+1.1
TOO	Toolangi	48.81	160	eP	P	16 41 23.3	+0.7
	28nm,1.5s						
DZM	Mont Dzumac	49.39	128	eP	P	16 41 27.9	+0.7
	15nm,1.3s						
PEA0B	Petropavlovsk-	51.55	24	eP	P	16 41 43.0	+0.1
	7.4nm,1.1s						
PETK	Petropavlovsk-	51.55	24	P	P	16 41 43.4	+0.4
	1.1nm,0.6s,baz=215,slow=2.4,SNR=6.8						
PETK				pP	pwP	16 42 08.0	-1.5
	4.7nm,0.8s,baz=191,slow=5.0,SNR=7.7						
PEA1	Petropavlovsk-	51.55	24	eP	P	16 41 43.4	+0.4
PEA1				epP	pwP	16 42 08.0	-1.5
MK31	Makanchi Array	53.84	324	eP	P	16 41 59.8	-0.2
	3.6nm,0.8s						
MK31				ePcP	PcP	16 43 04.0	-0.5
MK32	Makanchi Array	53.84	324	eP	P	16 42 00.1	+0.1
MKAR	Makanchi Array	53.84	324	P	P	16 42 00.1	+0.1
	20nm,0.5s,baz=123,slow=7.9,SNR=66						
MAKZ	Makanchi	54.03	324	eP	P	16 42 01.7	+0.3
	4.6nm,0.5s						
KDJ	Kajisay	54.94	317	eP	P	16 42 07.7	-0.6
	13nm,1.5s						
NIL	Nilore	55.08	305	eP	P	16 42 08.3	-0.9
	6.5nm,0.6s						
NIL				epP	pP	16 42 33.6	+0.3
ZAA0	Zalesovo Array	56.59	332	eP	P	16 42 18.6	-1.0
	3.3nm,0.8s						
ZALV	Zalesovo Beam	56.59	332	P	P	16 42 18.8	-0.8
	3.1nm,0.4s,baz=116,slow=7.2,SNR=12						
ZAA1	Zalesovo Array	56.59	332	eP	P	16 42 18.8	-0.8
KURK	Kurchatov	57.93	326	eP	P	16 42 28.6	-0.5
	3.9nm,0.8s						
GAR	Garm	58.80	311	eP	P	16 42 34.6	-0.9
	17nm,1.4s						
GAR				epP	pP	16 42 59.8	-0.1
KK31	Karatay Array	59.88	315	eP	P	16 42 42.5	-0.3
	1.9nm,0.7s						
KK31				epP	pP	16 43 07.2	+0.1
KKAR	Karatay Array	59.88	315	eP	P	16 42 42.2	-0.6
	1.9nm,0.7s						
KKAR				epP	pP	16 43 07.0	-0.2
VRZ	Vera Road	64.92	140	P	P	16 43 18.0	+1.7
ATKA	Atka Island	65.13	36	eP	P	16 43 18.3	+0.8
	43nm,1.4s						
ATKA				epP	pwP	16 43 42.8	-2.6
THZ	Tophouse	65.35	143	eP	P	16 43 19.2	+0.1
	22nm,0.6s						
THZ				epP	PcP	16 43 47.2	-3.3
WTVZ	West Tongariro	65.44	140	P	P	16 43 21.8	+2.0
LBZ	Lake Benmore	65.48	147	eP	P	16 43 20.7	+0.9
	124nm,1.6s						
FWVZ	Far West T-bar	65.50	140	P	P	16 43 22.2	+1.8
RPZ	Rata Peaks	65.52	146	eP	P	16 43 21.0	+0.9
	37nm,0.7s						
OXZ	Oxford	65.82	145	eP	P	16 43 22.2	+0.2
	21nm,0.6s						
TCW	Tory Channel	65.84	142	P	P	16 43 22.2	+0.1
BHHZ	Black Hill Sta	65.96	140	P	P	16 43 23.4	+0.3
URZ	Urewera	65.96	138	eP	P	16 43 23.4	+0.3
	40nm,1.2s						
BKZ	Black Stump Fm	66.05	139	eP	P	16 43 23.5	-0.2
	27nm,0.8s						
KHZ	Kahutara	66.12	144	eP	P	16 43 24.0	+0.1
	42nm,1.4s						
KWHZ	Kaweka Forest	66.15	140	P	P	16 43 25.2	+0.8
ODZ	Otahua Downs	66.16	147	eP	P	16 43 24.1	0.0
	16nm,1.1s						
SNZO	South Karori	66.16	142	eP	P	16 43 23.8	-0.4
	90nm,1.4s						
KRHZ	Kereru	66.24	140	P	P	16 43 25.3	+0.5
MCHZ	McNeill Hill	66.34	139	P	P	16 43 26.7	+1.2
MQZ	McQueen’s Vall	66.41	145	eP	P	16 43 26.7	+0.9
	140nm,1.6s						
HOWZ	Holdsworth Sta	66.41	141	P	P	16 43 25.6	-0.3
MTW	Mount Morrison	66.56	142	P	P	16 43 26.6	-0.2
PLWZ	Palliser	66.64	142	P	P	16 43 27.3	-0.1
BFZ	Birch Farm	66.75	141	eP	P	16 43 27.9	-0.2
	75nm,1.4s						
TRWZ	Traveller	66.81	142	P	P	16 43 29.4	+1.0
GEYT	Alibeck	67.96	308	pP	pP	16 44 01.4	+0.7
	2.2nm,0.6s,baz=170,slow=4.4,SNR=3.6						
ABKAR	Akbulak array	68.61	320	eP	P	16 43 39.1	-0.5
	2.2nm,1.4s						
CASY	Casey	75.09	187	eP	P	16 44 18.1	+0.1
	10nm,1.4s						
KDAK	Kodiak Island	78.39	33	eP	P	16 44 37.3	+0.5
	16nm,1.4s						
RAYN	Ar Rayn	78.51	292	eP	P	16 44 37.5	-0.8
	4.7nm,0.8s						
RAYN				epP	pP	16 45 02.8	-1.0
CAST	Castle Rocks	79.00	27	eP	P	16 44 40.5	+0.5
	3.6nm,1.2s						
BPAW	Bear Paw Mtn.	79.53	26	eP	P	16 44 43.5	+0.6
	1.6nm,0.6s						
BPAW				epP	pP	16 45 09.0	+0.8
MLY	Manley	79.68	25	eP	P	16 44 44.5	+0.7
	4.1nm,1.2s						
MLY				epP	pP	16 45 10.4	+1.3
TOLK	Toolik Lake Re	80.32	22	eP	P	16 44 45.2	-2.0
	2.0nm,0.8s						
TOLK				epP	pwP	16 45 13.5	+1.1
MCK	McKinley	80.42	27	eP	P	16 44 47.6	-0.1
	8.7nm,1.4s						
MCK				epP	pP	16 45 12.3	-0.9
ILAR	Eielson Array	81.32	26	P	P	16 44 52.5	0.0
	0.5nm,0.5s,baz=245,slow=4.7,SNR=9.5						
ILAR				pP	pP	16 45 17.4	-0.6
	1.9nm,0.7s,baz=240,slow=5.2,SNR=12						
ILB	Eielson Array	81.32	26	eP	P	16 44 51.7	-0.8
	1.0nm,0.7s						
ILB				epP	pwP	16 45 17.7	-0.3
DAWY	Dawson	84.61	26	eP	P	16 45 10.8	+1.2
	2.6nm,1.0s						
DAWY				epP	pwP	16 45 36.2	+1.0
ARA0	ARCESS Array S	86.26	340	eP	P	16 45 17.5	-0.1
ARA0				epP	pP	16 45 41.8	-1.8
ARCES	ARCESS Array B	86.26	340	P	P	16 45 17.5	-0.1
	1.1nm,0.8s,baz=64,slow=5.5,SNR=5.2						
ARCES				pP	pP	16 45 41.8	-1.8
	2.0nm,0.7s,baz=72,slow=7.8,SNR=4.2						
VNDA	Vanda	87.77	173	eP	P	16 45 24.6	-0.1
	2.3nm,0.8s						
FIA0	FINESS Array S	87.86	332	eP	P	16 45 24.4	-1.0
FIA0				epP	pP	16 45 50.0	-1.4
FINES	FINESS Array B	87.86	332	P	P	16 45 24.4	-1.0
	1.7nm,0.4s,baz=83,slow=5.0,SNR=40						
FINES				pP	pP	16 45 50.0	-1.4
	0.9nm,0.5s,baz=66,slow=4.6,SNR=2.1						
AKASG	Malin Array Be	88.32	321	P	P	16 45 27.1	-0.8
	1.2nm,0.6s,baz=61,slow=5.9,SNR=3.6						
TXAR	Lajitas Array	119.12	50	PKP	PKPdf	16 51 25.2	-0.2
	0.3nm,0.7s,baz=266,slow=1.2,SNR=4.2						
TORD	Torodi Ar. Bea	121.18	291	PKP	PKPdf	16 51 28.3	-1.3
	1.8nm,0.5s,baz=65,slow=2.1,SNR=18						
TORD				pPKP	pPKPdf	16 51 54.6	-2.2
	1.7nm,0.9s,baz=3.7,slow=2.5,SNR=5.4						
TOA1	Torodi Ar. Sit	121.18	291	ePKPdf	PKPdf	16 51 28.3	-1.3
TOA1				epPKPdf	pPKPdf	16 51 54.6	-2.2
PLCA	Paso Flores	144.16	158	PKP	PKPbc	16 52 10.8	+0.5
	6.9nm,0.8s,baz=258,slow=4.0,SNR=16						
PLCA	Paso Flores	144.16	158	ePKPdf	PKPbc	16 52 10.7	+0.4
LPAZ	La Paz	163.63	121	PKP	PKPdf	16 52 41.0	+0.6
	1.5nm,0.7s,baz=351,slow=0.2,SNR=7.7						
LPAZ	La Paz	163.63	121	ePKPdf	PKPdf	16 52 40.0	-0.4

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*ISK **04** 16:44:29.9, 38°.30N×38°.55E, h10^{km}, ML2.0/4*

*ISCJB **04** 16:44:30.8±0.7, 38°.27N±0°.04×38°.59E±0°.04, h3^{km}±8^{km}, Error ellipse: s-maj=6.4km s-min=4.9km az=7.5*

*DDA **04** 16:44:30.6, 38°.27N×38°.59E, h7^{km}±2^{km}, ML2.5*

ISC 04 16:44:30.7±1.4**, 38°.31N**±0°.04×**38°.58E**±0°.03**, h13**^{km}±12^{km}**, n9, σ0ˢ.72**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	Akcadag	0.52	269	i P	Pb	16 44 41.4	-0.4
AKCD				i S	Sb	16 44 49.4	+0.2
SVRC	Sivrice-ELAZID	0.57	83	PG	Pg	16 44 41.7	-0.3
SVRC				SG	Sb	16 44 51.0	+0.1
HEKM	Malatya_Hekimh	0.75	320	i P	Pb	16 44 46.6	+0.9
HEKM				i S	Sn	16 44 58.3	-0.2
HEKM				IAML_P			
	comp=Z,1μm,0.1s						
URFA	Urfa	0.89	168	PG	Pb	16 44 47.5	-0.5
DARE	Darende-Malaty	0.90	287	PG	Pg	16 44 46.9	-1.2
DARE				SG	Sb	16 45 00.1	-0.1
KEMA	Kemaliye	0.96	356	i P	Pb	16 44 49.9	+0.7
KEMA				i S	Sn	16 45 03.6	+0.1
KEMA				IAML_P			
	comp=Z,493nm,0.1s						
GZT	Gaziantep	1.25	221	i P	Pg	16 44 56.2	+1.5
GZT				i S	Sn	16 45 10.5	-0.2
DYBB	Diyarbakir	1.28	106	PN	Pg	16 44 55.4	+0.1
MAZI	Mazidag	1.70	119	PN	Pn	16 44 59.9	-0.3

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*ISCJB **04** 16:50:05.5±2.3, 46°.8N±0°.1×141°.7E±0°.2, h9^{km}, Error ellipse: s-maj=22.5km s-min=6.4km az=135.9*

*JMA **04** 16:50:05.5±0.4, 46°.78N×141°.64E, h0^{km}, M2.6*

*SKHL **04** 16:50:06.6±0.4, 46°.75N×141°.75E, h10^{km}, mb3.4/2*

ISC 04 16:50:05.6±3.0**, 46°.8N**±0°.1×**141°.7E**±0°.2**, h9**^{km}**, n3, σ0ˢ.17**/6**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.74	76	ePg	Pb	16 50 20.7	0.0
YSS				AMB	AMB	16 50 21.4	
	10.0nm,0.4s						
YSS				eSg	Sb	16 50 31.1	+0.1
YSS				A	A	16 50 31.8	
	130nm,0.4s						
YSS				A	A	16 50 31.8	
	80nm,0.4s						
JRBN	Rebuntou	1.42	198	P	Pb	16 50 32.4	+0.1
JRBN				eS	Sn	16 50 50.2	-0.2
JWK2	Keihoku	1.47	175	P	Pb	16 50 33.1	+0.1
JWK2				eS	Sg	16 50 52.7	0.0

DJA 04 17:15:52.5±1.1**, 3°N**±6°×**9°4E**±°**, h10**^{km}**, M4.0**/7**, mB5.1**/1**, MLv4.0**/7**, Mw(mB)4.4**/1**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	1.99	111	P	Pn	17 16 25.6	-0.7
SNSI				S	Sn	17 16 51.2	-0.1
MLSI	Meulaboh, Aceh	2.23	60	P	Pn	17 16 28.5	-1.1
TPTI		2.71	87	P	Pn	17 16 35.5	-0.6
LHMI	Lhok Sumawe	3.23	50	P	Pn	17 16 42.8	-0.5
KCSI	Kotacane, Aceh	3.32	83	P	Pn	17 16 45.6	+1.1
KCSI				S	Sn	17 17 25.3	+1.2
GSI	Gunungsitoli	3.60	120	P	Pn	17 16 48.3	-0.1
MNSI	Mandailing Nat	5.61	114	P	Pn	17 17 15.8	-0.3

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*NEIC **04** 17:15:54.5±1.8, 7°.03S×155°.73E, h29^{km}, mb5.7/232, ME5.5, MS6.0/729, MW5.9, MW6.1, MW6.1, Error ellipse: s-maj=11.1km s-min=10.0km az=22.0, Moment Tensor Solution. s75 Moment tensor: Scale 10^{17}Nm; M_{rr}8.32; $M_{\theta\theta}$-3.78; $M_{\phi\phi}$-4.54; $M_{r\theta}$0.64; $M_{\theta\phi}$4.12; $M_{\phi r}$-1.33; Best double couple: $M_0$8.40000×10^{17} NP1:ϕ_s141.00000°, δ50.00000°, λ94.00000°. NP2:ϕ_s315.00000°, δ40.00000°, λ86.00000°. Principal axes: T 8.4600, Plg84.0000°, Azm78.0000°; N -0.0400, Plg3.0000°, Azm318.0000°; P -8.4200, Plg5.0000°, Azm228.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s320.00000°, δ40.00000°, λ90.00000°. NP2:ϕ_s140.00000°, δ50.00000°, λ90.00000°. Principal axes: T Plg85.0000°, Azm50.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm230.0000°; Apparent Stress 0.26 MPa Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*MOS **04** 17:15:54.7±1.2, 6°.90S×155°.62E, h33^{km}, mb6.0/68, MS5.7/55 Error ellipse: s-maj=6.3km s-min=4.7km az=117.9*

*ISCJB **04** 17:15:56.1±0.6, 6°.99S±0°.02×155°.64E±0°.02, h51^{km}±5^{km}, mb5.8/307, MS5.9/750, Error ellipse: s-maj=3.6km s-min=2.7km az=14.0*

*BJI **04** 17:15:57.6±0.0, 6°.95S×155°.70E, h65^{km}, mb5.5/70, mB5.7/73, Ms5.7/93, Ms7 5.7/81*

*NEIC **04** 17:15:57.1±0.0, 7°.00S×155°.69E, h40^{km}, Moment Tensor Solution. s140 Moment tensor: Scale 10^{18}Nm; M_{rr}1.36; $M_{\theta\theta}$-0.92; $M_{\phi\phi}$-0.45; $M_{r\theta}$0.04; $M_{\theta\phi}$0.67; $M_{\phi r}$-0.62; Best double couple: $M_0$1.50000×10^{18} NP1:ϕ_s142.00000°, δ55.00000°, λ110.00000°. NP2:ϕ_s289.00000°, δ39.00000°, λ63.00000°. Principal axes: T 1.5600, Plg71.0000°, Azm102.0000°; N -0.1100, Plg16.0000°, Azm310.0000°; P -1.4500, Plg8.0000°, Azm218.0000°;*

*DJA **04** 17:15:57.9±0.5, 7°S±3°×15°6E±°, h53^{km}±4^{km}, M6.0/92, mb5.9/92, mB6.3/81, MLv6.4/1, Mw(mB)6.0/81, Mwp5.9/13*

*IDC **04** 17:15:58.2±1.1, 6°.98S×155°.60E, h53^{km}±9^{km}, mb5.2/35, mb1 5.2/40, mb1mx5.2/43, mbtmp5.5/40, MS5.5/27, Ms1 5.5/27, ms1mx5.4/33, Error ellipse: s-maj=10.6km s-min=7.7km az=51.0*

*GCMT **04** 17:16:00.5±0.1, 7°.22S×155°.68E, h41^{km}, MW6.0/135, Moment Tensor Solution. s135,c307; s135,c464; Duration: 2ˢ5 Moment tensor: Scale 10^{18}Nm; M_{rr}1.26±.01; $M_{\theta\theta}$-0.91±.01; $M_{\phi\phi}$-0.35±.01; $M_{r\theta}$-0.11±.01; $M_{\theta\phi}$0.78±.01; $M_{\phi r}$-0.38±.01; Best double couple: $M_0$1.42100×10^{18} NP1:ϕ_s142.00000°, δ50.00000°, λ113.00000°. NP2:ϕ_s289.00000°, δ45.00000°, λ65.00000°. Principal axes: T 1.3800, Plg73.0000°, Azm117.0000°; N 0.0800, Plg17.0000°, Azm307.0000°; P -1.4620, Plg3.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **04** 17:16:10.7±0.0, 6°.98S×155°.24E, h42^{km}, Moment Tensor Solution. s54 Moment tensor: Scale 10^{18}Nm; M_{rr}1.60; $M_{\theta\theta}$-1.03; $M_{\phi\phi}$-0.57; $M_{r\theta}$-0.11; $M_{\theta\phi}$0.88; $M_{\phi r}$-0.27; Best double couple: $M_0$1.70000×10^{18} NP1:ϕ_s298.00000°, δ45.00000°, λ75.00000°. NP2:ϕ_s138.00000°, δ47.00000°, λ104.00000°. Principal axes: T 1.6500, Plg80.0000°, Azm120.0000°; N 0.0600, Plg10.0000°, Azm308.0000°; P -1.7100, Plg1.0000°, Azm218.0000°;*

ISC 04 17:15:57.7±0.3**, 7°.00S**±0°.03×**155°.71E**±0°.03**, h55**^{km}±2^{km}**, h56**^{km}**:pP-P, n1967, σ1ˢ.53**/1649**, mb5.7**/310**, MS6.0**/776**, 83C-26D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	4.50	308	ePn	Pn	17 17 01.3	-2.1
HNR	Honiara	4.84	120	P	Pn	17 17 10.2	+2.2
	121nm,0.3s,baz=221,slow=3.2,SNR=52						
HNR				S	Sn	17 18 09.4	+6.7
	467nm,0.3s,baz=263,slow=16,SNR=5.8						
HNR				LR	LR	17 19 10.0	
	comp=Z,171μm,18.1s,baz=303,slow=39						
HNR	Honiara	4.84	120	ePn	Pn	17 17 07.1	-0.9
HNR	Honiara	4.84	120	eP	Pn	17 17 07.1	-0.9
HNR	Honiara	4.84	120	eP	Pn	17 17 10.0	+2.0
HNR				eS	Sn	17 18 27.0	+24
PMG	Port Moresby	8.79	254	P	Pn	17 18 02.8	+0.6
	50nm,0.3s,baz=59,slow=7.1,SNR=50						
PMG				S	Sn	17 19 45.6	+5.6
	40nm,0.3s,baz=326,slow=22,SNR=8.3						
PMG				LR	LR	17 21 17.5	
	comp=Z,80μm,21.3s,baz=52,slow=37						
PMG	Port Moresby	8.79	254	d iP	Pn	17 18 03.5	+1.3
PMG				pmax	pmax		
	comp=Z,4μm,0.8s						
MANU	Manus Island	9.67	300	ePn	Pn	17 18 15.9	+1.7
PATS	Pohnpei	13.99	11	ePn	Pn	17 19 11.9	-1.4
PATS	Pohnpei	13.99	11	P	Pn	17 19 12.9	-0.4
	baz=14,SNR=18						
COEN	Coen	14.12	240	ePn	Pn	17 19 14.9	-0.1
COEN	Coen	14.12	240	P	Pn	17 19 16.6	+1.6
	baz=14,SNR=51						
MMPI	Merauke	15.26	264	P	Pn	17 19 29.2	-0.6
JAY	Jayapura	15.60	286	P	Pn	17 19 34.5	+0.2
	comp=Z,1.6nm,0.3s,baz=160,slow=3.7,SNR=13						
JAY				S	Sn	17 22 27.8	+1.5
	baz=180,slow=20,SNR=1.3						
JAY				LR	LR	17 25 58.9	
	comp=Z,21μm,21.0s,baz=98,slow=39						
JAY	Jayapura	15.60	286	P	Pn	17 19 34.3	0.0
CTA	Charters Tower	15.92	214	P	P	17 19 39.5	-1.4
	comp=Z,2.7nm,0.3s,baz=37,slow=14,SNR=56						
CTA				S	S	17 22 43.1	-2.2
	comp=Z,0.5nm,0.3s,baz=76,slow=19,SNR=1.9						
CTA				LR	LR	17 25 14.2	
	comp=Z,42μm,19.4s,baz=68,slow=35						
CTAO	Charters Tower	15.92	214	eP	P	17 19 39.4	-1.5
	comp=Z,378nm,1.1s						
CTAO	Charters Tower	15.92	214	eP	P	17 19 39.4	-1.5
CTAO				pmax	pmax		
	comp=Z,378nm,1.1s						
GENI	Genyem	16.09	285	P	Pn	17 19 41.3	+0.8
DZM	Mont Dzumac	18.21	146	eP	Pn	17 20 07.7	+0.9
	comp=Z,718nm,1.3s						
DZM				eLQ	LQ	17 23 41.5	
	comp=Z,52μm,31.9s						
DZM				eLR	LR	17 24 26.8	
	comp=Z,62μm,26.2s						
DZM	Mont Dzumac	18.21	146	P	Pn	17 20 08.7	+1.9
	comp=Z,4.6nm,0.3s,baz=5.4,slow=9.7,SNR=31						
DZM				LR	LR	17 26 54.7	
	comp=Z,14μm,18.0s,baz=320,slow=36						
DZM	Mont Dzumac	18.21	146	eP	Pn	17 20 06.9	+0.1
	comp=Z,1μm,1.9s						
MARNC	Mare, Loyalty	18.68	142	eP	Pn	17 20 12.9	+0.6
	comp=Z,1μm,1.3s						
EIDS	Eidsvold	18.79	193	eP	P	17 20 12.4	-0.2
	comp=Z,268nm,1.3s						
EIDS	Eidsvold	18.79	193	P	Pn	17 20 14.2	+0.5
	baz=19,SNR=3.4						
TARA	Tarawa	19.08	65	eP	Pn	17 20 15.8	-1.3
	comp=Z,1μm,1.1s						
PINNC	Pines Island,	19.20	145	eP	P	17 20 16.9	-0.2
	comp=Z,512nm,1.1s						
KWAJ	Kwajalein Atol	19.68	37	eP	P	17 20 22.1	-0.3
	comp=Z,3μm,1.6s						
KWAJ	Kwajalein Atol	19.68	37	eP	P	17 20 22.1	-0.3
KWAJ				pmax	pmax		
	comp=Z,3μm,1.6s						
SRPI	Serui, Papua	20.07	284	P	P	17 20 27.3	+0.6
BAKI	Biak	20.38	286	P	P	17 20 29.9	-0.2
RMQ	Roma	20.47	198	P	Pn	17 20 32.6	-1.0
	baz=21,SNR=86						
QIS	Mount Isa	20.61	228	P	Pn	17 20 35.5	+0.2
	baz=21,SNR=22						
GUMO	Guam	23.12	332	P	P	17 20 59.1	-0.1
	comp=Z,75nm,0.8s,baz=137,slow=6.7,SNR=6.3						
GUMO				S	Sn	17 25 18.0	-9.1
	comp=Z,19nm,0.5s,baz=3.5,slow=19,SNR=2.3						
GUMO				LR	LR	17 29 01.4	
	comp=Z,9μm,21.7s,baz=148,slow=34						
GUMO	Guam	23.12	332	eP	P	17 20 58.9	-0.3
	comp=Z,1μm,1.4s						
GUMO				LR	LR		
	comp=Z,10μm,22.0s						
GUMO	Guam	23.12	332	eP	P	17 20 58.9	-0.3
GUMO				pmax	pmax		

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      comp=Z,1µm,1.4s
GUMO                              MLR      MLR
      comp=Z,10µm,22.0s
FUNA  Funafuti          23.32  95 eP       P         17 21 03.0 +1.8
      comp=Z,2µm,1.4s
KDU   Kakadu            23.57 254  P       P         17 21 03.4  -0.2
      baz=24,SNR=5.1
ARMA  Armidale          23.61 189 eP       P         17 21 04.4 +0.6
      comp=Z,990nm,1.8s
ARMA                              LR       LR
      comp=Z,42µm,20.0s
ARMA  Armidale          23.61 189  P       P         17 21 04.6 +0.7
      baz=24,SNR=51
FAKI  Fak Fak           23.72 279 eP       P         17 21 03.6  -1.3
      comp=Z,311nm,1.0s
FAKI  Fak Fak           23.72 279  P       P         17 21 05.3 +0.3
SAUI  Saumlaki          24.22 266 eP       P         17 21 10.5 +0.9
      comp=Z,2µm,1.3s
SAUI  Saumlaki          24.22 266  P       P         17 21 10.3 +0.8
WRAB  Tennant Creek     24.39 236 eP       P         17 21 10.4  -0.6
      comp=Z,2µm,2.0s
WRAB                              LR       LR
      comp=Z,32µm,19.0s
WRAB  Tennant Creek     24.39 236ceP       P         17 21 11.0   0.0
WRAB                              pmax     pmax
      comp=Z,198nm,1.3s
LHI   Lord Howe Isla    24.59 173 eP       P         17 21 10.6  -2.1
      comp=Z,419nm,1.4s
LHI                               LR       LR
      comp=Z,28µm,22.0s
MTN   Manton Dam        24.88 255 eP       P         17 21 15.3  -0.3
      comp=Z,444nm,1.1s
MTN                               LR       LR
      comp=Z,36µm,20.0s
MTN   Manton Dam        24.88 255  P       P         17 21 16.1 +0.5
      baz=25,SNR=39
SIJI  Sorong            25.12 283  P       P         17 21 16.9  -0.9
      comp=Z,130nm,0.7s,baz=82,slow=7.3,SNR=56
SIJI                               S       S         17 25 48.8  +10
      comp=Z,14nm,0.9s,baz=127,slow=20,SNR=3.4
SWI   Sorong            25.13 283  P       P         17 21 21.5 +3.7
SWI                               pmax     pmax
      comp=Z,666nm,0.8s
SWI   Sorong            25.13 283  P       P         17 21 18.7 +0.9
PALU  Palau             25.53 304  P       P         17 21 21.6 +0.2
      baz=26,SNR=18
CMSA  Cobar Meteorol    26.14 200  P       P         17 21 26.6  -0.2
      baz=26,SNR=173
MGCD  Mangrove Creek    26.42 189  P       P         17 21 30.6 +1.3
      baz=26,SNR=18
AS31  Alice Springs     26.70 229 eP       P         17 21 30.1  -1.9
      comp=Z,20nm,0.8s
AS31                              LR       LR
      comp=Z,400nm,19.0s
ASAR  Alice Springs     26.70 229  P       P         17 21 31.2  -0.7
      comp=Z,12nm,0.9s,baz=59,slow=9.8,SNR=105
ASAR                              PcP      PcP       17 24 55.6 +1.1
      comp=Z,16nm,0.6s,baz=66,slow=2.8,SNR=10
ASAR                              ScP      ScP       17 28 33.1 +3.0
      comp=Z,5.6nm,0.9s,baz=46,slow=5.3,SNR=5.5
ASAR                              LR       LR        17 31 58.9
      comp=Z,25µm,18.2s,baz=106,slow=36
ASAR                              PKiKP    PKiKP     17 32 31.7  -1.4
      comp=Z,1.3nm,1.0s,baz=91,slow=1.5,SNR=4.1
ASAR                              P3KPbc             17 54 14.7
      comp=Z,0.5nm,0.8s,baz=213,slow=6.6,SNR=4.8
RIV   Riverview         27.02 188  P       P         17 21 37.0 +2.3
      baz=27,SNR=6.0
H11S3 WAKE ISLAND Hy    27.55  23  T       T         17 50 07.3
      baz=202,slow=75,SNR=140
H11S2 WAKE ISLAND Hy    27.56  23  T       T         17 50 13.4
      baz=202,slow=75,SNR=80
H11S1 WAKE ISLAND Hy    27.57  23  T       T         17 50 08.8
      baz=202,slow=75,SNR=38
AAI   Ambon             27.59 275  P       P         17 21 39.3  -0.7
AAI                               pmax     pmax
      comp=Z,229nm,0.8s
AAI   Ambon             27.59 275  P       P         17 21 40.9 +0.9
KNRA  Kununurra         27.76 250  P       P         17 21 41.9 +0.4
      baz=28,SNR=14
YNG   Young             27.99 193  P       P         17 21 45.3 +2.0
      baz=28,SNR=7.9
STKA  Stephens Creek    28.03 206  P       P         17 21 45.0 +1.3
      comp=Z,26nm,0.5s,baz=18,slow=11,SNR=17
STKA                              PcP      PcP       17 24 59.0 +1.4
      comp=Z,16nm,0.6s,baz=18,slow=3.0,SNR=4.3
STKA                              ScP      ScP       17 28 37.0 +3.1
      comp=Z,10nm,0.9s,baz=0.0,slow=3.0,SNR=4.8
STKA                              LR       LR        17 33 04.9
      comp=Z,35µm,18.2s,baz=29,slow=37
STKA  Stephens Creek    28.03 206 eP       P         17 21 43.5  -0.3
      comp=Z,216nm,1.9s
STKA                              LR       LR
      comp=Z,8µm,19.0s
STKA  Stephens Creek    28.03 206  P       P         17 21 44.9 +1.1
      baz=28,SNR=27
WAKE  Wake Island       28.26  22  PFAKE             17 22 00.0  +14
WAKE                              LR       LR
      comp=Z,26µm,20.0s
NLAI  Namlea            28.73 276  P       P         17 21 51.1 +0.9
H11N1 WAKE ISLAND Hy    28.74  22  T       T         17 51 45.6
      baz=202,slow=76,SNR=76
H11N3 WAKE ISLAND Hy    28.75  22  T       T         17 51 31.9
      baz=202,slow=76,SNR=46
H11N2 WAKE ISLAND Hy    28.76  22  T       T         17 51 41.6
      baz=202,slow=76,SNR=40
CNB   Canberra Magne    28.77 191  P       P         17 21 51.1 +0.7
      baz=29,SNR=37
LBMI  Labuha            28.83 281  P       P         17 21 52.0 +0.9
CAN   Canberra          28.85 191 eP       P         17 21 51.7 +0.7
      comp=Z,285nm,1.7s
CAN                               LR       LR
      comp=Z,38µm,18.0s
CAN   Canberra          28.85 191 eP       P         17 21 51.7 +0.7
CAN                               pmax     pmax
      comp=Z,285nm,1.7s
CAN                               MLR      MLR
      comp=Z,38µm,18.0s
TNTI  Ternate           29.32 284 eP       P         17 21 53.9  -1.4
      comp=Z,516nm,2.0s
TNTI                              LR       LR
      comp=Z,7µm,21.0s
TNTI  Ternate           29.32 284  P       P         17 21 56.4 +1.0
SANI  Sanana            30.03 278  P       P         17 22 02.6 +0.9
MILA  Mila              30.50 190  P       P         17 22 07.8 +2.1
      baz=31,SNR=6.2
HTT   Hallett           30.56 208  P       P         17 22 05.9  -0.3
      baz=31,SNR=8.8
SOEI  Soe               31.22 263 eP       P         17 22 09.7  -2.7
      comp=Z,244nm,1.0s
SOEI                              LR       LR
      comp=Z,23µm,19.0s
SOEI  Soe               31.22 263  P       P         17 22 13.0 +0.6
BBOO  Buckleboo         31.51 213 eP       P         17 22 15.5 +0.9
      comp=Z,326nm,1.8s
BBOO                              LR       LR
      comp=Z,18µm,20.0s
BBOO  Buckleboo         31.51 213  P       P         17 22 16.0 +1.5
      baz=32,SNR=6.6
WRKA  Warakurna         31.75 233  P       P         17 22 16.1  -0.7
      baz=32,SNR=78
TOO   Toolangi          31.82 196 eP       P         17 22 17.0  -0.2
      comp=Z,105nm,1.5s
TOO                               LR       LR
      comp=Z,26µm,20.0s
TOO   Toolangi          31.82 196  P       P         17 22 17.7 +0.5
      baz=32,SNR=14
TOO   Toolangi          31.82 196 eP       P         17 22 17.0  -0.2
TOO                               pmax     pmax
      comp=Z,105nm,1.5s
TOO                               MLR      MLR
      comp=Z,26µm,20.0s
BATI  Baumata           31.84 262  P       P         17 22 18.1 +0.5
      comp=Z,69nm,0.8s,baz=123,slow=2.3,SNR=12
BATI                              LR       LR        17 37 20.2
      comp=Z,27µm,18.8s,baz=114,slow=40
BATI  Baumata           31.84 262  P       P         17 22 18.4 +0.7
MNI   Manado            31.93 284  P       P         17 22 19.0 +0.5
MNI                               pmax     pmax
      comp=Z,477nm,1.0s
SGSI  Sangihe           31.94 289  P       P         17 22 19.4 +0.8
ARPS  Mount Arapiles    32.22 201  P       P         17 22 20.7   0.0
      baz=32,SNR=15
MATI  Mati              32.48 295 eP       P         17 22 21.7  -1.6
OUZ   Omahuta           32.54 152 eP       P         17 22 24.5 +1.0
      comp=Z,128nm,1.3s
OUZ                               LR       LR
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      comp=Z,11µm,18.0s
DDMP  Don Marcelino,    32.64 293 eP       P         17 22 23.7  -1.0
KNTN  Kanton            32.71  84 eP       P         17 22 26.0 +0.7
      comp=Z,736nm,2.0s
KNTN                              LR       LR
      comp=Z,6µm,18.0s
DAV   Davao City (W)    33.15 294 LR       LR        17 33 57.8
      comp=Z,6µm,21.3s,baz=98,slow=33
DAV   Davao City (W)    33.15 294 PFAKE              17 22 40.0  +11
DAV                               LR       LR
      comp=Z,7µm,18.0s
DAV   Davao City (W)    33.15 294⇑iP       P         17 22 28.3  -0.8
MMRI  Maumere           33.20 265 eP       P         17 22 28.9  -0.6
      comp=Z,367nm,0.7s
MMRI                              LR       LR
      comp=Z,9µm,18.0s
MMRI  Maumere           33.20 265  P       P         17 22 29.2  -0.4
RAO   Raoul Island      33.27 135 eP       P         17 22 29.4  -0.6
      comp=Z,2µm,1.1s
RAO                               LR       LR
      comp=Z,8µm,20.0s
RAO   Raoul Island      33.27 135 eP       P         17 22 29.4  -0.6
RAO                               pmax     pmax
      comp=Z,2µm,1.1s
RAO                               MLR      MLR
      comp=Z,8µm,20.0s
GSPH  General Santos    33.34 292⇓iP       P         17 22 33.0 +2.1
LUWI  Luwuk             33.37 279 eP       P         17 22 30.9  -0.1
      comp=Z,312nm,1.0s
LUWI                              LR       LR
      comp=Z,5µm,21.0s
LUWI  Luwuk             33.37 279  P       P         17 22 31.9 +0.8
KCP   Kidapawan         33.57 294⇑iP       P         17 22 33.6 +0.8
EDFI  Ende, Flores      33.74 265  P       P         17 22 34.1  -0.3
SKMP  Bagumbayan, Su    33.87 293 eP       P         17 22 35.8 +0.4
CTBH  Cotabato--PC H    34.42 294⇑iP       P         17 22 41.1 +0.9
APSI  Ampana            34.50 279  P       P         17 22 41.8 +0.9
CGP   Cagayan de Oro    34.52 296⇓eP       P         17 22 43.0 +2.0
BSSI  Bau Bau, Buton    34.99 269  P       P         17 22 45.6 +0.4
FORT  Forrest           35.07 224 eP       P         17 22 44.7  -0.9
      comp=Z,149nm,0.6s
FORT                              LR       LR
      comp=Z,24µm,19.0s
FORT  Forrest           35.07 224  P       P         17 22 45.6   0.0
      baz=35,SNR=22
MSLP  Maasin            35.13 299 eP       P         17 22 46.7 +0.5
WSI   Waingapu          35.13 263  P       P         17 22 47.0 +0.7
BKSI  Bulukumba         35.42 271  P       P         17 22 49.1 +0.3
PAGZ  Pagadian          35.45 294 eP       P         17 22 49.1 +0.1
NIUE  Niue              35.48 113  PFAKE             17 23 00.0  +11
NIUE                              LR       LR
      comp=Z,14µm,21.0s
BNSI  Bone              35.52 272  P       P         17 22 50.0 +0.4
OCLP  Ormoc             35.77 300 eP       P         17 22 52.4 +0.6
KAPI  Kappang           35.81 271 eP       P         17 22 51.9  -0.3
      comp=Z,142nm,0.8s
KAPI  Kappang           35.81 271 eP       P         17 22 51.9  -0.3
KAPI                              pmax     pmax
      comp=Z,142nm,0.8s
HIZ   Hauiti            35.83 154 eP       P         17 22 53.8 +1.8
      comp=Z,575nm,1.4s
HIZ                               LR       LR
      comp=Z,11µm,19.0s
SPSI  Sidrap Palu       35.90 273  P       P         17 22 53.3 +0.4
TTSI  Tana Toraja       35.96 274  P       P         17 22 54.2 +0.8
WBSI  Waikabubak, Su    36.02 263  P       P         17 22 54.6 +0.6
MOO   Moorlands         36.09 191  P       P         17 22 57.6 +3.4
      baz=36,SNR=3.8
CNP   Catarman          36.45 302 eP       P         17 22 57.5   0.0
TAU   Tasmania Unive    36.52 190 eP       P         17 22 57.8   0.0
      comp=Z,199nm,1.2s
TAU   Tasmania Unive    36.52 190 eP       P         17 22 57.8   0.0
TAU                               pmax     pmax
      comp=Z,199nm,1.2s
URZ   Urewera           36.65 151  P       P         17 23 00.1 +1.0
      comp=Z,34nm,0.5s,baz=319,slow=4.0,SNR=31
URZ                               ScP      ScP       17 29 04.8 +1.5
      comp=Z,15nm,0.8s,baz=331,slow=9.5,SNR=4.0
URZ   Urewera           36.65 151 eP       P         17 22 58.9  -0.1
      comp=Z,110nm,1.0s
URZ                               LR       LR
      comp=Z,12µm,18.0s
MXZ   Matakaoa Point    36.70 149  PFAKE             17 23 10.0  +11
MXZ                               LR       LR
      comp=Z,12µm,22.0s
BKZ   Black Stump Fm    37.09 153 eP       P         17 23 03.9 +1.0
      comp=Z,88nm,0.9s
BKZ                               LR       LR
      comp=Z,12µm,22.0s
GUIM  Jordan            37.34 298 eP       P         17 23 05.0  -0.1
PVCP  Virac             37.42 303 eP       P         17 23 07.6 +1.7
PSAD2 Pilbara Seismi    37.44 243  PFAKE             17 23 20.0  +14
PSAD2                             LR       LR
      comp=Z,16µm,18.0s
PSAC2 Pilbara Seismi    37.48 244  PFAKE             17 23 20.0  +14
PSAC2                             LR       LR
      comp=Z,16µm,18.0s
PSAD1 Pilbara Seismi    37.51 244  PFAKE             17 23 20.0  +13
PSAD1                             LR       LR
      comp=Z,17µm,19.0s
PSAB2 Pilbara Seismi    37.51 244  PFAKE             17 23 20.0  +13
PSAB2                             LR       LR
      comp=Z,17µm,19.0s
MBWA  Marble Bar        37.51 244  PFAKE             17 23 20.0  +13
MBWA                              LR       LR
      comp=Z,17µm,20.0s
PSAA3 Pilbara Seismi    37.52 244  PFAKE             17 23 20.0  +13
PSAA3                             LR       LR
      comp=Z,17µm,18.0s
PSAA2 Pilbara Seismi    37.52 244  PFAKE             17 23 20.0  +13
PSAA2                             LR       LR
      comp=Z,16µm,18.0s
PSAB3 Pilbara Seismi    37.53 243  PFAKE             17 23 20.0  +13
PSAB3                             LR       LR
      comp=Z,17µm,18.0s
PSA00 Pilbara Seismi    37.53 244 eP       P         17 23 06.0  -0.7
      comp=Z,374nm,1.4s
PSA00                             LR       LR
      comp=Z,16µm,18.0s
PSAA1 Pilbara Seismi    37.54 244  PFAKE             17 23 20.0  +13
PSAA1                             LR       LR
      comp=Z,17µm,18.0s
PSAB1 Pilbara Seismi    37.55 244  PFAKE             17 23 20.0  +13
PSAB1                             LR       LR
      comp=Z,16µm,18.0s
PSAC1 Pilbara Seismi    37.55 244  PFAKE             17 23 20.0  +13
PSAC1                             LR       LR
      comp=Z,18µm,19.0s
PSAC3 Pilbara Seismi    37.56 243  PFAKE             17 23 20.0  +13
PSAC3                             LR       LR
      comp=Z,15µm,18.0s
PLAI  Plampang          37.61 265  P       P         17 23 07.4  -0.1
PSAD3 Pilbara Seismi    37.61 243  PFAKE             17 23 20.0  +13
PSAD3                             LR       LR
      comp=Z,15µm,20.0s
THZ   Tophouse          37.83 159 eP       P         17 23 09.0  -0.1
      comp=Z,404nm,1.0s
THZ                               LR       LR
      comp=Z,12µm,19.0s
SNZO  South Karori      38.12 157 eP       P         17 23 12.1 +0.7
      comp=Z,569nm,1.4s
SNZO                              LR       LR
      comp=Z,10µm,18.0s
BFZ   Birch Farm        38.23 154 eP       P         17 23 13.2 +0.9
      comp=Z,464nm,1.7s
BFZ                               LR       LR
      comp=Z,10µm,18.0s
FOZ   Fox Glacier       38.44 163 eP       P         17 23 13.8  -0.2
      comp=Z,242nm,1.3s
FOZ                               LR       LR
      comp=Z,15µm,22.0s
LTZ   Lake Taylor       38.51 160 eP       P         17 23 14.8 +0.1
      comp=Z,932nm,1.6s
LTZ                               LR       LR
      comp=Z,25µm,20.0s
OTRP  Odiongan          38.62 300 eP       P         17 23 16.6 +0.6
KHZ   Kahutara          38.63 159 eP       P         17 23 14.5  -1.2
      comp=Z,466nm,1.0s
KHZ                               LR       LR
      comp=Z,16µm,18.0s
OXZ   Oxford            38.92 161 eP       P         17 23 18.2 +0.1
      comp=Z,620nm,1.3s
OXZ                               LR       LR
      comp=Z,24µm,19.0s
RPZ   Rata Peaks        38.97 162  P       P         17 23 18.8 +0.3
      comp=Z,227nm,1.0s,baz=236,slow=1.8,SNR=27
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RPZ   Rata Peaks        38.97 162 eP       P         17 23 18.6 +0.1
      comp=Z,312nm,1.0s
RPZ                               LR       LR
      comp=Z,18µm,21.0s
LBZ   Lake Benmore      39.33 164 eP       P         17 23 22.0 +0.5
      comp=Z,206nm,1.2s
LBZ                               LR       LR
      comp=Z,24µm,18.0s
CRLZ  Canterbury Las    39.34 161 eP       P         17 23 22.4 +0.9
      comp=Z,914nm,1.2s
CRLZ                              LR       LR
      comp=Z,20µm,18.0s
WKZ   Wanaka            39.42 165 eP       P         17 23 23.1 +0.8
      comp=Z,214nm,1.3s
WKZ                               LR       LR
      comp=Z,36µm,20.0s
SJMP  San Jose          39.45 299 eP       P         17 23 24.0 +1.2
MQZ   McQueen's Vall    39.46 161 eP       P         17 23 23.2 +0.6
      comp=Z,765nm,1.5s
MQZ                               LR       LR
      comp=Z,17µm,19.0s
MLZ   Mavora Lakes      39.71 166 eP       P         17 23 25.8 +1.2
      comp=Z,437nm,1.2s
MLZ                               LR       LR
      comp=Z,26µm,20.0s
KMBL  Kambalda          39.82 228  P       P         17 23 25.8   0.0
      baz=40,SNR=25
ODZ   Otahua Downs      40.06 164 eP       P         17 23 28.1 +0.5
      comp=Z,198nm,1.5s
ODZ                               LR       LR
      comp=Z,19µm,18.0s
PYZ   Puysegur Point    40.15 168  PFAKE             17 23 40.0  +12
PYZ                               LR       LR
      comp=Z,17µm,22.0s
WHZ   Wether Hill Ro    40.16 167  PFAKE             17 23 40.0  +12
WHZ                               LR       LR
      comp=Z,19µm,22.0s
MEEK  Meekatharra       40.30 237  P       P         17 23 29.7  -0.2
      baz=40,SNR=29
TGY   Tagaytay City     40.38 301  P       P         17 23 31.8 +1.1
      comp=Z,269nm,0.6s,baz=292,slow=3.4,SNR=10
TGY                               LR       LR        17 40 59.7
      comp=Z,3µm,19.1s,baz=118,slow=37
ENPP  El Nido           40.39 296 eP       P         17 23 28.5  -2.1
ENPP                              eS       S         17 29 33.8  -1.4
BALP  Baler             40.66 304 eP       P         17 23 33.3 +0.4
LUBP  Lubang            40.79 300 eP       P         17 23 32.5  -1.5
SPMM  Sapulut           40.86 285  P       P         17 23 37.0 +2.3
BATP  Bataraza          40.92 292 eP       P         17 23 34.7  -0.4
CAUP  Cauayan           41.10 306 eP       P         17 23 38.1 +1.6
MTKI  Muara Teweh, K    41.14 277  P       P         17 23 55.1  +18
KDM   Kudat             41.17 289  P       P         17 23 39.0 +1.8
JAGI  Jajag, Banyuwa    41.19 265 eP       P         17 23 37.4   0.0
      comp=Z,136nm,1.0s
JAGI                              LR       LR
      comp=Z,6µm,22.0s
JAGI  Jajag, Banyuwa    41.19 265  P       P         17 23 38.0 +0.6
KKM   Kota Kinabalu     41.49 287 eP       P         17 23 39.0  -0.8
      comp=Z,240nm,0.8s
KKM                               LR       LR
      comp=Z,7µm,22.0s
SMPP  San Manuel, Pa    41.61 304 eP       P         17 23 38.7  -2.0
JOHN  Johnston Islan    41.69  55  PFAKE             17 23 50.0 +8.7
JOHN                              LR       LR
      comp=Z,12µm,21.0s
APYP  Conner            42.06 306 eP       P         17 23 44.2  -0.1
BOLP  Bolinao           42.36 304 eP       P         17 23 43.8  -3.0
ABRA  Dolores           42.37 306 eP       P         17 23 46.3  -0.5
GIRL  Giralia           42.83 244  PFAKE             17 24 00.0 +9.4
GIRL                              LR       LR
      comp=Z,18µm,18.0s
GIRL  Giralia           42.83 244  P       P         17 23 52.4 +1.9
      baz=43,SNR=7.5
JOW   Kunigami          42.88 323 eP       P         17 23 52.5 +1.6
      comp=Z,75nm,1.4s
MORW  Morawa            43.33 235 eP       P         17 23 54.0  -0.6
      comp=Z,47nm,0.8s
MORW                              LR       LR
      comp=Z,31µm,18.0s
MORW  Morawa            43.33 235  P       P         17 23 54.6   0.0
      baz=43,SNR=29
BLDU  Ballidu           43.41 232  P       P         17 23 56.6 +1.4
      baz=44,SNR=5.6
PWJI  Pagerwojo         43.53 266  P       P         17 23 57.0 +0.7
MIDW  Midway            43.61  35  PFAKE             17 24 10.0  +13
MIDW                              LR       LR
      comp=Z,22µm,22.0s
NWAO  Narrogin (SRO)    44.02 229  P       P         17 23 59.4  -0.6
      comp=Z,22nm,0.7s,baz=77,slow=7.6,SNR=8.6
NWAO  Narrogin (SRO)    44.02 229 eP       P         17 23 59.4  -0.6
NWAO                              eP       P         17 24 00.5 +0.4
NWAO                              LR       LR
      comp=Z,18µm,20.0s
NWAO  Narrogin (SRO)    44.02 229  P       P         17 24 01.2 +1.2
      baz=44,SNR=6.6
PBKI  Pangkalan Bun     44.07 273  P       P         17 24 01.8 +1.0
MUN   Mundaring         44.38 231  P       P         17 24 02.9   0.0
      baz=44,SNR=4.3
WOJI  Wonogiri, Jawa    44.40 266  P       P         17 24 04.1 +0.7
SBUM  Sibu              44.41 281 eP       P         17 24 02.6  -0.8
      comp=Z,41nm,1.1s
SBUM  Sibu              44.41 281  P       P         17 24 06.0 +2.6
YOJ   Yonaguni jima     44.66 316 eP       P         17 24 05.6 +0.4
      comp=Z,190nm,0.9s
YOJ                               LR       LR
      comp=Z,6µm,20.0s
YOJ   Yonaguni jima     44.66 316 eP       P         17 24 05.6 +0.4
YOJ                               pmax     pmax
      comp=Z,190nm,0.9s
YOJ                               MLR      MLR
      comp=Z,6µm,20.0s
UGM   Wanagama          44.80 266 eP       P         17 24 06.3  -0.2
      comp=Z,581nm,1.4s
UGM                               LR       LR
      comp=Z,3µm,22.0s
UGM   Wanagama          44.80 266  P       P         17 24 07.2 +0.6
TWG   Pinlang           45.02 312 eP       P         17 24 07.7  -0.5
      comp=Z,173nm,0.5s
TWG                               LR       LR
      comp=Z,20µm,21.0s
YULB  Yu-li             45.20 313 eP       P         17 24 10.7 +1.1
      comp=Z,303nm,1.8s
YULB                              LR       LR
      comp=Z,6µm,22.0s
RAR   Rarotonga         45.25 113  P       P         17 24 11.4 +1.4
      comp=Z,121nm,1.1s,baz=276,slow=22,SNR=5.8
NACB  Ninganchiao       45.47 314 eP       P         17 24 12.2 +0.5
      comp=Z,150nm,1.1s
NACB                              LR       LR
      comp=Z,5µm,20.0s
TPUB  Ta-pu             45.64 312 eP       P         17 24 13.1 +0.1
      comp=Z,79nm,0.9s
TPUB                              LR       LR
      comp=Z,6µm,22.0s
INU   Inuyama           45.66 339 eP       P         17 24 13.6 +0.6
      comp=Z,201nm,2.0s
INU                               LR       LR
      comp=Z,6µm,22.0s
SSLB  Suanglung         45.70 313 eP       P         17 24 14.3 +0.8
      comp=Z,54nm,0.8s
SSLB                              LR       LR
      comp=Z,5µm,22.0s
YHNB  Yeheng            45.94 314 eP       P         17 24 16.1 +0.7
      comp=Z,117nm,0.8s
YHNB                              LR       LR
      comp=Z,6µm,22.0s
TATO  Taipei            46.05 315  PFAKE             17 24 30.0  +14
TATO                              LR       LR
      comp=Z,8µm,20.0s
KSM   Kuching           46.08 279 eP       P         17 24 16.4  -0.3
      comp=Z,78nm,0.6s
KSM   Kuching           46.08 279  P       P         17 24 19.0 +2.3
MJAR  Matsushiro Arr    46.32 340  P       P         17 24 18.1  -0.1
      comp=Z,19nm,0.5s,baz=170,slow=7.6,SNR=58
MJAR                              PcP      PcP       17 25 53.7 +0.9
      comp=Z,5.3nm,0.5s,baz=166,slow=3.4,SNR=6.2
MJAR                              ScP      ScP       17 29 41.3  -0.3
      comp=Z,11nm,1.1s,baz=161,slow=4.1,SNR=7.0
MJAR                              LR       LR        17 45 45.2
      comp=Z,880nm,18.0s,baz=165,slow=39
MAJO  Matsushiro        46.33 340 eP       P         17 24 18.4 +0.2
      comp=Z,47nm,0.6s
MAJO                             ePcP      PcP       17 25 53.7 +0.9
MAJO                              LR       LR
      comp=Z,3µm,22.0s
MAJO  Matsushiro        46.33 340c iP      P         17 24 18.7 +0.5
MAT   Matsushiro        46.33 340  P       P         17 24 17.3  -0.9
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MAT				S	**S**	**17 30 58.0**	**-3.5**
MJB9	**Matsu-Tunnel**	**46.33**	**340**	*e*P	**P**	**17 24 17.9**	**-0.4**
	comp=Z,49nm,0.5s						
MJB9				LR	LR		
	comp=Z,6μm,22.0s						
JNU	**Nakatsue**	**46.36**	**331**	P	**P**	**17 24 19.0**	**+0.4**
	comp=Z,30nm,0.8s,baz=225,slow=2.6,SNR=11						
JNU	**Nakatsue**	**46.36**	**331**	*e*P	**P**	**17 24 18.8**	**+0.2**
	comp=Z,82nm,1.1s						
JNU				LR	LR		
	comp=Z,2μm,20.0s						
JCJI	**Jatiwangi**	**47.10**	**268**	P	P	17 24 38.6	+14
CISI	**Cisompet, Garu**	**47.49**	**266**	*e*P	**P**	**17 24 27.0**	**-0.8**
	comp=Z,268nm,0.6s						
CISI	**Cisompet, Garu**	**47.49**	**266**	P	**P**	**17 24 26.9**	**-0.9**
XMAS	**Kiritimati**	**47.61**	**81**	PFAKE		17 24 40.0	+11
XMAS				LR	LR		
	comp=Z,7μm,22.0s						
LEM	**Lembang**	**47.73**	**267**	P	**P**	**17 24 29.9**	**+0.2**
	comp=Z,56nm,0.7s,baz=59,slow=11,SNR=6.4						
LEM				LR	LR	17 46 33.5	
	comp=Z,4μm,21.9s,baz=86,slow=38						
KNMB	**Chin-men Tao**	**47.98**	**312**	PFAKE		17 24 40.0	+8.8
KNMB				LR	LR		
	comp=Z,3μm,22.0s						
TPI	**Tanjungpandan**	**48.05**	**273**	P	**P**	**17 24 32.3**	**+0.3**
QZH	**Quanzhou**	**48.11**	**313**⇑	*i*P	**P**	**17 24 33.2**	**+0.9**
QZH				S	**S**	**17 31 27.4**	**+0.2**
QZH				pmax	pmax		
	comp=Z,71nm,1.0s						
QZH				LR	LR		
	comp=Z,3μm,22.3s						
QZH				LR	LR		
	comp=Z,2μm,20.4s						
QZH				LR	LR		
	comp=Z,6μm,28.0s						
CBJI	**Citeko**	**48.51**	**268**	P	**P**	**17 24 36.0**	**+0.4**
PPBI	**Pangkal Pinang**	**49.63**	**273**	P	**P**	**17 24 44.0**	**-0.1**
CGJI	**Cibinong**	**49.65**	**267**	P	**P**	**17 24 42.1**	**-2.2**
HKPS	**Hong Kong Po S**	**50.04**	**307**	*e*P	**P**	**17 24 47.4**	**+0.3**
	comp=Z,95nm,1.0s						
HKPS				LR	LR		
	comp=Z,8μm,21.0s						
ERM	**Erimo**	**50.12**	**348**	PFAKE		17 25 00.0	+13
ERM				LR	LR		
	comp=Z,9μm,22.0s						
SSE	**Sheshan**	**50.26**	**321**	PFAKE		17 25 00.0	+11
SSE				LR	LR		
	comp=Z,5μm,21.0s						
SSE	**Sheshan**	**50.26**	**321**	P	**P**	**17 24 49.8**	**+1.2**
SSE				S	**S**	**17 31 58.2**	**+1.0**
SSE				pmax	pmax		
	comp=Z,19nm,0.7s						
SSE				pmax	pmax		
	comp=Z,410nm,3.8s						
SSE				LR	LR		
	comp=Z,1μm,22.3s						
SSE				LR	LR		
	comp=Z,1μm,23.5s						
DLV	**T Lat**	**50.59**	**292**	*e*P	**P**	**17 24 50.6**	**-1.0**
	comp=Z,404nm,0.8s						
DLV				LR	LR		
	comp=Z,4μm,22.0s						
TJN	**Taejon**	**50.69**	**330***d*	*i*P	**P**	**17 24 53.5**	**+1.7**
KASI	**Kota Agung**	**50.91**	**269**	P	**P**	**17 24 51.7**	**-2.1**
GZH	**Guangzhou**	**51.09**	**307**	P	**P**	**17 24 56.0**	**+1.0**
GZH				PcP	**PcP**	**17 26 13.1**	**+2.9**
GZH				S	**S**	**17 32 08.7**	**-0.2**
GZH				LR	LR		
	comp=Z,2μm,19.0s						
GZH				LR	LR		
	comp=Z,2μm,18.4s						
KSRS	**Korea Array**	**51.28**	**332**	P	**P**	**17 24 56.4**	**+0.2**
	comp=Z,24nm,0.8s,baz=149,slow=8.1,SNR=80						
KSRS				PcP	**PcP**	**17 26 12.7**	**+2.1**
	comp=Z,20nm,0.6s,baz=143,slow=4.4,SNR=15						
KSRS				ScP	**ScP**	**17 30 05.8**	**+3.1**
	comp=Z,3.9nm,1.0s,baz=140,slow=4.9,SNR=4.4						
KSRS				LR	LR	17 47 24.4	
	comp=Z,2μm,18.3s,baz=138,slow=37						
KS15	**Wonju Array Si**	**51.29**	**332**	*e*P	**P**	**17 24 56.7**	**+0.5**
	comp=Z,40nm,1.0s						
MDSI	**Maura Dua**	**51.31**	**270**	P	**P**	**17 24 54.8**	**-2.1**
YUK	**Yuzh-Kuril'sk**	**51.58**	**351**	*e*P	**P**	**17 24 54.2**	**-4.0**
YUK				*e*PPP	PPP	17 27 59.4	
YUK				*e*S	**S**	**17 32 12.0**	**-3.0**
YUK				*e*SS	**SS**	**17 35 53.1**	**+1.1**
YUK				*e*SSS	SSS	17 37 32.1	
YUK				pmax	pmax		
	comp=Z,412nm,1.3s						
YUK				pmax	pmax		
	comp=N,246nm,1.4s						
YUK				pmax	pmax		
	comp=E,276nm,1.3s						
YUK				pmax	pmax		
	comp=Z,510nm,2.7s						
YUK				MLR	MLR		
	comp=Z,3μm,16.0s						
YUK				MLR	MLR		
	comp=E,1μm,17.0s						
YUK				MLR	MLR		
	comp=N,5μm,18.0s						
TPRI	**Tanjung Pinang**	**51.67**	**277**	P	**P**	**17 24 59.2**	**-0.3**
LHSI	**Lahat**	**52.03**	**271**	P	**P**	**17 25 02.3**	**+0.1**
QIZ	**Qiongzhong**	**52.08**	**301**	*e*P	**P**	**17 25 04.1**	**+1.7**
	comp=N,139nm,0.8s						
QIZ				LR	LR		
	comp=Z,4μm,21.0s						
QIZ	**Qiongzhong**	**52.08**	**301**	P	**P**	**17 25 05.2**	**+2.7**
QIZ				PP	**PP**	**17 27 04.2**	**+3.0**
QIZ				S	**S**	**17 32 23.3**	**+0.6**
QIZ				pmax	pmax		
	comp=Z,150nm,0.8s						
QIZ				LR	LR		
	comp=Z,2μm,23.0s						
QIZ				LR	LR		
	comp=Z,3μm,25.0s						
QIZ				LR	LR		
	comp=Z,7μm,28.4s						
JMBI	**JAMBI**	**52.17**	**273**	P	**P**	**17 25 03.7**	**+0.5**
ASAJ	**Asahikawa**	**52.25**	**348**	P	**P**	**17 25 05.4**	**+2.2**
	comp=Z,72nm,0.6s,baz=216,slow=8.9,SNR=48						
KEKH	**Kekaha**	**52.33**	**55**	PFAKE		17 25 20.0	+16
KEKH				LR	LR		
	comp=Z,8μm,20.0s						
NJ2	**Nanjing**	**52.38**	**320**	*e*P	**P**	**17 25 06.1**	**+1.7**
NJ2				pP	sP	17 25 24.4	-1.1
NJ2				sP	pP	17 25 33.6	+14
NJ2				S	**S**	**17 32 28.3**	**+1.9**
NJ2				sS	**sS**	**17 32 53.0**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,43nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,970nm,7.9s						
NJ2				LR	LR		
	comp=Z,3μm,22.7s						
NJ2				LR	LR		
	comp=Z,3μm,21.8s						
NJ2				LR	LR		
	comp=Z,5μm,23.7s						
KUR	**Kuril'sk**	**52.47**	**353***c*	*i*P	**P**	**17 25 06.6**	**+1.7**
KUR				*i* *PP	**sP**	**17 25 24.4**	**-1.6**
KUR				*e*S	**S**	**17 32 29.2**	**+2.0**
KUR				*e*SS	**SS**	**17 36 06.1**	**-0.1**
KUR				pmax	pmax		
	comp=Z,2μm,3.5s						
KUR				MLR	MLR		
	comp=Z,4μm,17.0s						
KUR				MLR	MLR		
	comp=N,3μm,18.0s						
KUR				MLR	MLR		
	comp=E,1μm,20.0s						
MYKOM	**Kota Tinggi**	**52.48**	**278**	*e*P	**P**	**17 25 05.1**	**-0.5**
	comp=E,70nm,0.8s						
MYKOM	**Kota Tinggi**	**52.48**	**278**	P	**P**	**17 25 07.0**	**+1.4**
HON	**Honolulu**	**53.43**	**57**	PFAKE		17 25 20.0	+7.6
HON				LR	LR		
	comp=Z,7μm,19.0s						
KIP	**Kipapa**	**53.47**	**57**	PFAKE		17 25 20.0	+7.3
KIP				LR	LR		
	comp=Z,7μm,19.0s						
OPA	**Opana**	**53.59**	**57**	*e*P	**P**	**17 25 14.1**	**+0.5**
	comp=Z,280nm,1.0s						
OPA				LR	LR		
	comp=Z,8μm,20.0s						
OPA	**Opana**	**53.59**	**57**	*e*P	**P**	**17 25 14.1**	**+0.5**
OPA				pmax	pmax		
	comp=Z,280nm,1.0s						
OPA				MLR	MLR		
	comp=Z,8μm,20.0s						
MSHR	**Mys Shultsa**	**54.18**	**338**⇓	*e*P	**P**	**17 25 19.5**	**+2.0**
JRMM	**Jerantut**	**54.22**	**280**	P	**P**	**17 25 20.0**	**+1.6**
KRJI	**Kerinci**	**54.27**	**272**	P	**P**	**17 25 18.0**	**-0.8**
PPT	**Papeete**	**54.31**	**107**	P	**P**	**17 25 22.0**	**+3.0**
	comp=Z,199nm,0.8s,baz=320,slow=7.0,SNR=12						
PPT				LR	LR	17 43 50.8	
	comp=Z,4μm,21.8s,baz=274,slow=31						
PPT	**Papeete**	**54.31**	**107**	*e*P	**P**	**17 25 19.1**	**+0.1**
PPT				*e*P	**P**	**17 25 22.0**	**+3.0**
PPT2	**Papeete2**	**54.31**	**107**	*e*P	**P**	**17 25 21.7**	**+2.6**
	comp=Z,310nm,1.2s						
PPT2				*e*S	**S**	**17 32 54.0**	**+0.6**
	comp=Z,3μm,25.5s						
PPT2				*e*LQ	LQ	17 38 48.2	
	comp=Z,7μm,25.0s						
PPT2				*e*LR	LR	17 41 07.0	
	comp=Z,7μm,22.2s,baz=280						
PAE	**Paea**	**54.32**	**107**	*e*P	**P**	**17 25 21.2**	**+2.2**
	comp=Z,54nm,1.1s						
PPTF	**Pamatai, Papee**	**54.33**	**107**	*e*P	**P**	**17 25 19.9**	**+0.8**
	comp=Z,712nm,1.4s						
VLA	**Vladivostok**	**54.38**	**339***c*	*i*P	**P**	**17 25 20.8**	**+1.9**
VLA				pmax	pmax		
	comp=Z,83nm,1.0s						
WHN	**Wuhan**	**54.44**	**316** ⇓	P	**P**	**17 25 21.4**	**+1.8**
WHN				pP	**sP**	**17 25 37.6**	**-3.2**
WHN				S	**S**	**17 32 56.9**	**+2.4**
WHN				pmax	pmax		
	comp=Z,100nm,0.9s						
WHN				pmax	pmax		
	comp=Z,1μm,5.2s						
WHN				LR	LR		
	comp=Z,7μm,20.6s						
WHN				LR	LR		
	comp=Z,6μm,18.5s						
WHN				LR	LR		
	comp=Z,17μm,24.6s						
SDSI	**Sungai Dareh**	**54.45**	**274**	P	**P**	**17 25 20.1**	**+0.1**
KHLU	**Kahalu`u**	**54.48**	**60**	PFAKE		17 25 30.0	+10
KHLU				LR	LR		
	comp=Z,5μm,19.0s						
TIAR	**Tiarei**	**54.53**	**106**	*e*P	**P**	**17 25 23.2**	**+2.6**
	comp=Z,180nm,1.1s						
KHLH	**Kahului Airpor**	**54.57**	**58**	PFAKE		17 25 30.0	+9.3
KHLH				LR	LR		
	comp=Z,11μm,20.0s						
TEY	**Ternei**	**54.58**	**343**	*e*P	**P**	**17 25 23.8**	**+3.5**
KHU	**Kahuku**	**54.58**	**61**	*e*P	**P**	**17 25 21.7**	**+0.6**
	comp=Z,305nm,1.0s						
KHU				LR	LR		
	comp=Z,6μm,22.0s						
KHU	**Kahuku**	**54.58**	**61**	*e*P	**P**	**17 25 21.7**	**+0.6**
KHU				pmax	pmax		
	comp=Z,305nm,1.0s						
KHU				MLR	MLR		
	comp=Z,6μm,22.0s						
TVO	**Taravao**	**54.64**	**107**	*e*P	**P**	**17 25 23.9**	**+2.5**
	comp=Z,130nm,1.1s						
HLK	**Haleakala**	**54.66**	**59**	PFAKE		17 25 30.0	+8.3
HLK				LR	LR		
	comp=Z,10μm,21.0s						
MLOA	**Mauna Loa Obse**	**54.73**	**60**	PFAKE		17 25 30.0	+7.6
MLOA				LR	LR		
	comp=Z,5μm,19.0s						
HPAH	**Hawaii Prepara**	**54.83**	**60**	PFAKE		17 25 30.0	+7.3
HPAH				LR	LR		
	comp=Z,6μm,20.0s						
POHA	**Pohakuloa**	**54.86**	**60**	PFAKE		17 25 40.0	+17
POHA				LR	LR		
	comp=Z,6μm,20.0s						
YSS	**Yuzh-Sakhalins**	**54.94**	**349**	*e*P	**P**	**17 25 23.0**	**+0.1**
	comp=Z,165nm,1.0s						
YSS				LR	LR		
	comp=Z,5μm,20.0s						
YSS	**Yuzh-Sakhalins**	**54.94**	**349**α	*i*P	**P**	**17 25 25.2**	**+2.3**
YSS				*e*		17 25 34.8	
YSS				*e*S	**S**	**17 32 58.8**	**-1.8**
YSS				pmax	pmax		
	comp=Z,150nm,1.0s						
YSS				pmax	pmax		
	comp=Z,900nm,5.0s						
YSS				MLR	MLR		
	comp=N,2μm,16.0s						
BKNI	**Bangkinang**	**55.02**	**275**	*e*P	**P**	**17 25 22.2**	**-2.0**
	comp=N,194nm,0.9s						
BKNI				LR	LR		
	comp=Z,4μm,21.0s						
BKNI	**Bangkinang**	**55.02**	**275**	P	**P**	**17 25 24.1**	**0.0**
TBI	**Tubuai**	**55.02**	**114**	*e*P	**P**	**17 25 26.4**	**+2.4**
	comp=Z,838nm,1.4s						
TBI				*e*S	**S**	**17 33 03.0**	**+0.4**
	comp=Z,3μm,29.8s						
TBI				*e*LQ	LQ	17 39 10.7	
	comp=Z,7μm,38.8s						
TBI				*e*LR	LR	17 41 22.4	
	comp=Z,20μm,28.8s,baz=285						
LPH	**Laupahoehoe**	**55.06**	**60**	*e*P	**P**	**17 25 24.7**	**+0.4**
USA0B	**Ussuriysk Arra**	**55.29**	**339**	*e*P	**P**	**17 25 27.5**	**+2.0**
	comp=Z,224nm,1.5s						
USA0B				LR	LR		
	comp=Z,4μm,21.0s						
USRK	**Ussuriysk Ar.**	**55.29**	**339**	P	**P**	**17 25 27.4**	**+2.0**
	comp=Z,55nm,0.9s,baz=164,slow=7.2,SNR=56						
USRK				LR	LR	17 46 43.7	
	comp=Z,2μm,21.7s,baz=137,slow=33						
PDSI	**Padang**	**55.41**	**274**	P	**P**	**17 25 25.9**	**-1.1**
DL2	**Dalian**	**55.55**	**328**	P	**P**	**17 25 27.2**	**-0.3**
DL2				S	**S**	**17 33 08.6**	**-0.4**
DL2				sS	**sS**	**17 33 34.4**	**-0.1**
DL2				pmax	pmax		
	comp=Z,63nm,0.9s						
DL2				pmax	pmax		
	comp=Z,640nm,8.4s						
DL2				LR	LR		
	comp=Z,2μm,26.0s						
DL2				LR	LR		
	comp=Z,3μm,24.5s						
DL2				LR	LR		
	comp=Z,7μm,25.1s						
IPM	**Ipoh**	**55.76**	**280**	*e*P	**P**	**17 25 28.7**	**-0.8**
	comp=Z,128nm,0.8s						
IPM	**Ipoh**	**55.76**	**280**	P	**P**	**17 25 30.0**	**+0.5**
MEH	**Mehetia**	**55.77**	**107**	*e*P	**P**	**17 25 31.8**	**+2.3**
	comp=Z,138nm,1.2s						
PMOR	**Pomariorio Ree**	**55.80**	**103**	*e*P	**P**	**17 25 32.3**	**+2.6**
	comp=Z,953nm,1.1s						
PMOR				*e*pP	**sP**	**17 25 44.8**	**-6.0**
	comp=Z,351nm,0.9s						
PANO	**Nakornpanom**	**55.91**	**296**	P	**P**	**17 25 31.3**	**+0.9**
	comp=Z,5.5nm,0.9s,comp=Z,101nm						
VAH	**Vaihoa**	**56.07**	**104**	*e*P	**P**	**17 25 34.0**	**+2.4**
	comp=Z,446nm,1.1s						
VAH				*e*pP	**pP**	**17 25 45.4**	**-1.1**
	comp=Z,275nm,1.0s						
TIA	**Tai'an**	**56.20**	**323**	P	**P**	**17 25 32.9**	**+0.7**
TIA				pmax	pmax		
	comp=Z,23nm,1.0s						
TIA				pmax	pmax		
	comp=Z,610nm,6.9s						
TIA				LR	LR		
	comp=Z,2μm,20.6s						
TIA				LR	LR		
	comp=Z,2μm,17.7s						
TIA				LR	LR		
	comp=Z,4μm,21.6s						
KULM	**Kulim**	**56.29**	**281**	*e*P	**P**	**17 25 32.5**	**-0.8**
	comp=Z,205nm,1.3s						
KULM				LR	LR		
	comp=Z,4μm,20.0s						
KULM	**Kulim**	**56.29**	**281**	P	**P**	**17 25 34.0**	**+0.7**
SKNT	**Sakolnakorn**	**56.41**	**296**	P	**P**	**17 25 34.3**	**+0.2**
	comp=Z,365nm,0.9s,comp=Z,6μm						
MDJ	**Mudanjiang**	**56.51**	**338**	*e*P	**P**	**17 25 34.8**	**+0.5**
	comp=Z,123nm,1.2s						
MDJ				LR	LR		
	comp=Z,2μm,20.0s						
MDJ	**Mudanjiang**	**56.51**	**338**	P	**P**	**17 25 35.3**	**+1.0**
MDJ				pP	sP	17 25 53.0	-2.5
MDJ				S	**S**	**17 33 24.4**	**+2.7**
MDJ				pmax	pmax		
	comp=Z,54nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,880nm,4.7s						
MDJ				LR	LR		
	comp=Z,2μm,21.4s						
MDJ				LR	LR		
	comp=Z,1μm,18.5s						
MDJ				LR	LR		
	comp=Z,4μm,29.9s						
MNSI	**Mandailing Nat**	**56.53**	**276**	P	**P**	**17 25 33.7**	**-1.3**
CHBT	**CHBT**	**56.56**	**290**	P	**P**	**17 25 37.4**	**+2.3**
	comp=Z,184nm,0.5s,comp=Z,2μm						
SKLT	**Songkhla**	**56.73**	**283**	P	**P**	**17 25 38.1**	**+1.8**
	comp=Z,76nm,0.9s,comp=Z,2μm						
SNY	**Shenyang**	**56.79**	**332** ⇑	P	**P**	**17 25 34.6**	**-1.6**
SNY				PP	**PP**	**17 27 45.1**	**+2.0**
SNY				S	**S**	**17 33 24.0**	**-1.3**
SNY				pmax	pmax		
	comp=Z,21nm,0.8s						
SNY				pmax	pmax		
	comp=Z,2μm,14.9s						
SNY				LR	LR		
	comp=Z,3μm,17.8s						
SNY				LR	LR		
	comp=Z,3μm,20.4s						
SNY				LR	LR		
	comp=Z,7μm,26.5s						
KHON	**Khomkaen**	**57.23**	**294**	P	**P**	**17 25 40.7**	**+0.8**
	comp=Z,652μm,0.7s						
SKR	**Severo-Kuril's**	**57.45**	**0**	*e*P	**P**	**17 25 42.3**	**+1.6**
SKR				*e*		17 26 32.9	
SKR				*e*S	**S**	**17 33 31.9**	**-1.8**
SKR				pmax	pmax		
	comp=Z,111nm,1.2s						
SKR				pmax	pmax		
	comp=Z,2μm,4.5s						
CN2	**Changchun**	**57.51**	**334**	*e*P	**P**	**17 25 41.3**	**0.0**
CN2				*e*pP	sP	17 25 58.2	-4.3
CN2				*e*PP	**PP**	**17 27 53.9**	**+4.4**
CN2				*e*S	**S**	**17 33 30.9**	**-3.8**
CN2				pmax	pmax		
	comp=Z,700nm,6.0s						
CN2				LR	LR		
	comp=Z,3μm,24.0s						
CN2				LR	LR		
	comp=Z,3μm,24.0s						
CN2				LR	LR		
	comp=Z,3μm,26.0s						
PSI	**Prapat**	**57.51**	**278**	*e*P	**P**	**17 25 40.4**	**-1.6**
	comp=Z,298nm,1.9s						
PSI	**Prapat**	**57.51**	**278**	*e*P	**P**	**17 25 40.4**	**-1.6**
PSI				pmax	pmax		
	comp=Z,298nm,1.9s						
NONG	**Nongkai**	**57.54**	**296**	P	**P**	**17 25 42.2**	**+0.2**
	comp=Z,11nm,0.9s,comp=Z,138nm						
ENH	**Enshi**	**57.77**	**312**	*e*P	**P**	**17 25 43.0**	**-0.5**
	comp=Z,88nm,1.0s						
ENH				LR	LR		
	comp=Z,5μm,22.0s						
TRTT	**Trang**	**57.77**	**284**	P	**P**	**17 25 45.1**	**+1.4**
	comp=Z,122nm,1.7s,comp=Z,3μm						
CHAI	**Chaiyaphum**	**57.85**	**294**	P	**P**	**17 25 44.3**	**+0.1**
	comp=Z,493μm,0.7s						
TSI	**Tuntungan**	**57.98**	**279**	P	P	17 25 58.3	+13
GYA	**Guiyang**	**58.02**	**307**⇓	*i*P	**P**	**17 25 44.9**	**-0.5**
GYA				pP	sP	17 26 04.4	-2.3
GYA				sP	pP	17 26 12.7	+12
GYA				PP	**PP**	**17 27 53.9**	**-0.7**
GYA				S	**S**	**17 33 37.4**	**-5.0**
GYA				pmax	pmax		
	comp=Z,30nm,0.7s						
GYA				pmax	pmax		
	comp=Z,690nm,9.3s						
SLVN	**Son La**	**58.10**	**300**	*e*P	**P**	**17 25 46.5**	**+0.6**
	comp=Z,342nm,2.0s						
SLVN				LR	LR		
	comp=Z,3μm,22.0s						
TMDB	**BangkokBB_BH_I**	**58.43**	**291**	P	**P**	**17 25 52.6**	**+4.3**
	comp=Z,100nm,1.3s						
GSI	**Gunungsitoli**	**58.59**	**276**	*e*P	**P**	**17 25 48.5**	**-0.9**
	comp=Z,183nm,0.8s						
GSI	**Gunungsitoli**	**58.59**	**276**	P	**P**	**17 25 48.7**	**-0.8**
TYV	**Tymovskoe**	**58.73**	**350**	*e*P	**P**	**17 25 52.1**	**+2.4**
TYV				*e*		17 33 52.6	
TYV				pmax	pmax		
	comp=Z,54nm,1.4s						
KCSI	**Kotacane, Aceh**	**58.77**	**278**	P	**P**	**17 25 48.7**	**-2.0**
PBKT	**Sadao Pong**	**58.99**	**294**	P	**P**	**17 25 52.8**	**+0.7**
	comp=Z,141nm,0.8s,comp=Z,2μm						
PKDT	**Phuket**	**59.09**	**283**	P	**P**	**17 25 54.8**	**+1.9**
	comp=Z,193nm,1.0s,comp=Z,4μm						
PHET	**Kaeng Krachan**	**59.12**	**289**	P	**P**	**17 25 54.4**	**+1.3**
	comp=Z,845μm,0.8s						
BJT	**Baijiatuau**	**59.32**	**325**	*e*P	**P**	**17 25 53.3**	**-0.7**
	comp=Z,26nm,0.9s						
BJT				LR	LR		
	comp=Z,4μm,22.0s						
BJT	**Baijiatuau**	**59.32**	**325**	*e*P	**P**	**17 25 53.3**	**-0.7**
BJT				pmax	pmax		
	comp=Z,27nm,0.9s						
BJT				MLR	MLR		
	comp=Z,4μm,22.0s						
BJI	**Beijing**	**59.33**	**325**⇑	*i*P	**P**	**17 25 54.8**	**+0.7**
BJI				sP	**sP**	**17 26 19.2**	**+3.8**
BJI				S	**S**	**17 33 52.7**	**-5.9**
BJI				pmax	pmax		
	comp=Z,480nm,9.6s						
BJI				LR	LR		
	comp=Z,1μm,19.0s						
UTTA	**Uttaradit**	**59.75**	**295**	P	**P**	**17 25 58.1**	**+0.7**
	comp=Z,569μm,0.8s						
KLR	**Kul'dur**	**59.79**	**342**	P	**P**	**17 25 57.0**	**-0.1**
	comp=Z,48nm,1.0s,baz=147,slow=4.1,SNR=72						
KLR				PKPPKP		17 55 25.2	
	comp=Z,5.3nm,1.0s,baz=311,slow=6.6,SNR=7.5						
KLR	**Kul'dur**	**59.79**	**342**⇓	*e*P	**P**	**17 25 55.8**	**-1.3**
KLR				pmax	pmax		
	comp=Z,115nm,1.5s						
PET	**Petropavlovsk**	**59.85**	**2**	*e*P	**P**	**17 25 57.4**	**0.0**
	comp=Z,97nm,1.2s						
PET				LR	LR		
	comp=Z,5μm,21.0s						
PET	**Petropavlovsk**	**59.85**	**2**	*e*P	**P**	**17 25 57.3**	**0.0**
PET				*e*		17 26 10.3	
PET				*e*S	**S**	**17 34 03.0**	**-1.8**
PET				*e*PS	**PnS**	**17 34 25.8**	**+1.1**
PET				*e**SS	sS	17 34 35.1	+5.0
PET				pmax	pmax		
	comp=Z,56nm,0.7s						
PET				pmax	pmax		
	comp=Z,900nm,8.4s						
PET				pmax	pmax		
	comp=Z,1μm,19.7s						
LHMI	**Lhok Sumawe**	**59.89**	**280**	*e*P	**P**	**17 25 57.3**	**-1.2**
	comp=Z,254nm,1.1s						
LHMI	**Lhok Sumawe**	**59.89**	**280**	P	**P**	**17 25 59.0**	**+0.6**
PEA0B	**Petropavlovsk-**	**59.91**	**1**	*e*P	**P**	**17 25 59.7**	**+1.9**
	comp=Z,239nm,1.1s						
PEA0B				LR	LR		
	comp=Z,6μm,22.0s						
PETK	**Petropavlovsk-**	**59.91**	**1**	P	**P**	**17 25 58.5**	**+0.7**
	comp=Z,28nm,0.6s,baz=151,slow=6.2,SNR=59						
PETK				ScP	**ScP**	**17 30 43.0**	**+2.9**
	comp=Z,4.7nm,1.0s,baz=82,slow=2.2,SNR=4.0						
PETK				LR	LR	17 48 05.8	
	comp=Z,4μm,21.6s,baz=177,slow=32						
PETK				PKP2bc		17 55 32.4	
	comp=Z,7.8nm,1.0s,baz=90,slow=7.4,SNR=7.9						
PEA1	**Petropavlovsk-**	**59.91**	**1**	*e*P	**P**	**17 25 58.5**	**+0.7**
PEA1				*e*ScP	**ScP**	**17 30 43.0**	**+2.8**
SNSI	**Sinabang, Aceh**	**60.00**	**277**	P	**P**	**17 25 58.3**	**-0.9**
SRDT	**SRDT**	**60.01**	**291**	P	**P**	**17 26 00.1**	**+0.9**
	comp=Z,283nm,0.9s,comp=Z,4μm						
TIY	**Taiyuan**	**60.04**	**321**	*e*P	**P**	**17 26 00.7**	**+1.6**
TIY				S	**S**	**17 34 07.9**	**-0.2**
TIY				sS	sS	17 34 40.2	+6.8
TIY				LR	LR		
	comp=Z,2μm,18.4s						
TIY				LR	LR		
	comp=Z,1μm,17.4s						
TIY				LR	LR		
	comp=Z,3μm,20.0s						
XAN	**Xi'an**	**60.21**	**316**	*e*P	**P**	**17 25 59.3**	**-1.0**
	comp=Z,42nm,0.8s						
XAN				LR	LR		
	comp=Z,4μm,20.0s						
XAN	**Xi'an**	**60.21**	**316**	P	**P**	**17 25 59.7**	**-0.6**
XAN				S	**S**	**17 34 07.9**	**-2.4**
XAN				pmax	pmax		

	comp=Z,760nm,8.8s						
XAN				LR	LR		
	comp=Z,2µm,22.4s						
XAN				LR	LR		
	comp=Z,2µm,25.0s						
XAN				LR	LR		
	comp=Z,5µm,24.9s						
XAN	**Xi'an**	**60.21**	**316**	*e*P	**P**	**17 25 59.3**	**-1.0**
XAN				pmax	pmax		
	comp=Z,42nm,0.8s						
XAN				MLR	MLR		
	comp=Z,4µm,20.0s						
MLSI	**Meulaboh, Aceh**	**60.24**	**279**	P	**P**	**17 25 59.0**	**-1.9**
KMI	**Kunming**	**60.61**	**304**	*e*P	**P**	**17 26 02.2**	**-1.2**
	comp=Z,164nm,1.4s						
KMI				LR	LR		
	comp=Z,3µm,22.0s						
KMI	**Kunming**	**60.61**	**304**	P	**P**	**17 26 05.3**	**+1.8**
KMI				sP	sP	17 26 29.5	+4.7
KMI				PP	**PP**	**17 28 21.6**	**+3.9**
KMI				S	**S**	**17 34 13.8**	**-2.3**
KMI				sS	sS	17 34 41.4	0.0
KMI				SS	**SS**	**17 38 18.5**	**+3.0**
KMI				pmax	pmax		
	comp=Z,53nm,0.8s						
KMI				pmax	pmax		
	comp=Z,1µm,4.4s						
KMI				LR	LR		
	comp=Z,2µm,22.4s						
KMI				LR	LR		
	comp=Z,4µm,23.5s						
KMI				LR	LR		
	comp=Z,6µm,23.3s						
KMI	**Kunming**	**60.61**	**304**	*e*P	**P**	**17 26 02.2**	**-1.2**
KMI				pmax	pmax		
	comp=Z,164nm,1.4s						
KMI				MLR	MLR		
	comp=Z,3µm,22.0s						
UMPA	**Umpang Tak**	**60.80**	**293**	P	**P**	**17 26 06.2**	**+1.6**
	comp=Z,350µm,0.9s						
LAMP	**Lampang**	**60.83**	**296**	P	**P**	**17 26 06.1**	**+1.3**
	comp=Z,661µm,0.7s						
PAYA	**Payao**	**60.90**	**297**	P	**P**	**17 26 06.0**	**+0.7**
	comp=Z,560µm,0.8s						
NKL	**Nikolayevsk**	**61.27**	**350**	*e*P	**P**	**17 26 09.0**	**+2.0**
NKL				*e*		17 26 46.5	
NKL				*e*		17 34 57.9	
NKL				*e*SS	SS	17 38 21.6	-2.7
NKL				pmax	pmax		
	comp=Z,12nm,0.6s						
NKL				pmax	pmax		
	comp=N,13nm,0.9s						
NKL				pmax	pmax		
	comp=E,35nm,0.9s						
NKL				pmax	pmax		
	comp=Z,318nm,2.5s						
CM31	**Chiang Mai Arr**	**61.43**	**295**	*e*P	**P**	**17 26 09.1**	**+0.2**
	comp=Z,216nm,0.8s						
CMAR	**Chiang Mai Arr**	**61.43**	**295**	P	**P**	**17 26 09.4**	**+0.5**
	comp=Z,135nm,0.7s,baz=122,slow=5.2,SNR=314						
CMAR				LR	LR	17 52 55.2	
	comp=Z,1µm,19.9s,baz=112,slow=36						
CMAR				PKPPKP		17 55 20.6	
	comp=Z,1.2nm,0.9s,baz=271,slow=5.0,SNR=5.7						
SMY	**Shemya**	**61.53**	**13**	*e*P	**P**	**17 26 10.2**	**+1.4**
	comp=Z,135nm,1.2s						
SMY				LR	LR		
	comp=Z,10µm,21.0s						
CMMT	**Chiang Mai**	**61.54**	**296**	P	**P**	**17 26 10.0**	**+0.4**
	comp=Z,93nm,1.2s,comp=Z,2µm						
CHTO	**Chiang Mai**	**61.55**	**296**	*e*P	**P**	**17 26 08.9**	**-0.7**
	comp=Z,293nm,1.4s						
CHTO	**Chiang Mai**	**61.55**	**296**	*e*P	**P**	**17 26 08.9**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,293nm,1.4s						
CD2	**Chengdu**	**62.36**	**310**	P	**P**	**17 26 16.0**	**+1.0**
CD2				pP	sP	17 26 35.9	-0.4
CD2				sP	PcP	17 26 42.9	-11
CD2				PP	**PP**	**17 28 30.8**	**-2.0**
CD2				S	**S**	**17 34 33.4**	**-4.4**
CD2				sS	sS	17 35 09.2	+6.0
CD2				SS	**SS**	**17 38 37.5**	**-4.9**
CD2				pmax	pmax		
	comp=Z,290nm,0.6s						
CD2				pmax	pmax		
	comp=Z,2µm,7.1s						
CD2				LR	LR		
	comp=Z,6µm,20.8s						
CD2				LR	LR		
	comp=Z,8µm,23.3s						
CD2				LR	LR		
	comp=Z,13µm,25.7s						
HHC	**Hu-ho-hao-te**	**62.52**	**323**	P	**P**	**17 26 19.3**	**+3.4**
HHC				PP	**PP**	**17 28 39.8**	**+5.7**
HHC				S	**S**	**17 34 40.8**	**+1.2**
HHC				SS	**SS**	**17 38 48.9**	**+4.2**
HHC				LR	LR		
	comp=Z,4µm,17.1s						
HHC				LR	LR		
	comp=Z,2µm,17.8s						
KIWB	**Kanaga Island**	**63.07**	**19**	*e*P	**P**	**17 26 20.3**	**+1.1**
ADK	**Adak**	**63.25**	**19**	*e*P	**P**	**17 26 21.6**	**+1.3**
	comp=Z,354nm,1.8s						
ADK				LR	LR		
	comp=Z,17µm,22.0s						
ADK	**Adak**	**63.25**	**19**	*e*P	**P**	**17 26 21.6**	**+1.3**
ADK				pmax	pmax		
	comp=Z,354nm,1.8s						
ADK				MLR	MLR		
	comp=Z,17µm,22.0s						
BTO	**Baotou**	**63.30**	**322**	*e*P	**P**	**17 26 21.6**	**+0.6**
TAOE	**Nuku Hiva Isla**	**63.49**	**96**	*e*LR	LR	17 45 26.1	
	comp=Z,7µm,22.2s						
TAOE	**Nuku Hiva Isla**	**63.49**	**96**	PFAKE		17 26 30.0	+7.2
TAOE				LR	LR		
	comp=Z,6µm,22.0s						
GSTR	**Great Sitkin T**	**63.63**	**19**	*e*P	**P**	**17 26 24.0**	**+1.1**
HIA	**Hailar**	**64.23**	**335**	*e*P	**P**	**17 26 27.4**	**+0.5**
	comp=Z,70nm,1.0s						
HIA				LR	LR		
	comp=Z,4µm,22.0s						
HIA	**Hailar**	**64.23**	**335**	*e*P	**P**	**17 26 27.4**	**+0.5**
HIA				pmax	pmax		
	comp=Z,69nm,1.0s						
HIA				MLR	MLR		
	comp=Z,4µm,22.0s						
ATKA	**Atka Island**	**64.34**	**20**	*e*P	**P**	**17 26 28.1**	**+0.6**
	comp=Z,68nm,1.1s						
ATKA				LR	LR		
	comp=Z,18µm,21.0s						
LZH	**Lanzhou**	**64.82**	**315**	*e*P	**P**	**17 26 33.0**	**+1.8**
LZH				pP	sP	17 26 52.4	-0.2
LZH				sP	PcP	17 27 01.6	-2.7
LZH				PP	**PP**	**17 29 00.9**	**+6.4**
LZH				S	**S**	**17 35 07.8**	**-0.6**
LZH				sS	sS	17 35 41.5	+7.5
LZH				SS	**SS**	**17 39 20.4**	**-0.5**
LZH				pmax	pmax		
	comp=Z,76nm,1.0s						
LZH				pmax	pmax		
	comp=Z,280nm,5.6s						
LZH				LR	LR		
	comp=Z,2µm,17.0s						
LZH				LR	LR		
	comp=Z,2µm,17.4s						
LZH				LR	LR		
	comp=Z,3µm,18.1s						
ZEA	**Zeya**	**65.10**	**342**	*e*P	**P**	**17 26 33.4**	**+0.9**
ZEA				*e*		17 26 44.0	
ZEA				*e*		17 26 52.0	
ZEA				*e*S	**S**	**17 35 08.0**	**-2.8**
ZEA				*e*PS		17 35 32.0	
ZEA				*e*		17 35 46.0	
ZEA				pmax	pmax		
	comp=E,44nm,0.9s						
ZEA				pmax	pmax		
	comp=N,110nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,230nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,9.0s						
ZEA				pmax	pmax		
	comp=E,200nm,8.0s						
ZEA				pmax	pmax		
	comp=N,500nm,7.0s						
ZEA				smax	smax		
	comp=E,600nm,8.0s						
ZEA				smax	smax		
	comp=N,700nm,11.0s						
DGPR	**DIGLIPUR**	**65.49**	**288**	*e*P	**P**	**17 26 37.0**	**+1.3**
MA2	**Magadan**	**66.48**	**357**	P	**P**	**17 26 41.7**	**+0.5**
	comp=N,30nm,0.8s,baz=158,slow=5.1,SNR=12						
MA2	**Magadan**	**66.48**	**357**	*e*P	**P**	**17 26 41.5**	**+0.3**
	comp=N,86nm,1.0s						
MA2				LR	LR		
	comp=Z,4µm,21.0s						
MA2	**Magadan**	**66.48**	**357***c*	*e*P	**P**	**17 26 42.1**	**+0.9**
MA2				pmax	pmax		
	comp=Z,68nm,1.7s						
CASY	**Casey**	**66.80**	**198**	*e*P	**P**	**17 26 42.6**	**-0.6**
	comp=Z,188nm,1.4s						
CASY				LR	LR		
	comp=Z,9µm,20.0s						
NIKH	**Nikolski High**	**66.88**	**22**	*e*P	**P**	**17 26 43.2**	**-0.7**
	comp=Z,85nm,0.8s						
NIKH				LR	LR		
	comp=Z,11µm,21.0s						
MOKO	**MOKOCHONG**	**67.92**	**302**	*e*P	**P**	**17 26 51.7**	**+0.5**
MOKO				IAmb	IAmb	17 26 54.3	
	comp=Z,70nm,0.3s						
MOKO				IAMs_20	IAMs_20	17 52 02.8	
	comp=Z,4µm,23.2s						
KOHI	**KOHIMA**	**68.06**	**301**	*e*P	**P**	**17 26 50.8**	**-1.3**
KOHI				IAMs_20	IAMs_20	17 51 10.4	
	comp=Z,3µm,23.7s						
RKT	**Rikitea**	**68.28**	**112**	*e*P	**P**	**17 26 55.1**	**+1.7**
	comp=Z,283nm,1.1s						
RKT				*e*S	**S**	**17 35 51.7**	**+1.3**
	comp=Z,4µm,32.0s						
RKT				*e*LQ	LQ	17 44 41.3	
	comp=Z,5µm,33.8s						
RKT				*e*LR	LR	17 47 33.0	
	comp=Z,19µm,28.5s						
JORH	**JORHAT**	**68.29**	**302**	*e*x	P	17 27 01.4	+8.0
UNV	**Unalaska Valle**	**68.45**	**23**	*e*P	**P**	**17 26 54.1**	**+0.4**
	comp=Z,38nm,0.9s						
UNV				LR	LR		
	comp=Z,9µm,22.0s						
ZIRO	**ZIRO**	**68.90**	**303**	*e*P	**P**	**17 26 58.3**	**+0.9**
ZIRO				IAmb	IAmb	17 26 59.5	
	comp=Z,52nm,0.3s						
CIT	**Chita**	**68.93**	**334**	*e*P	**P**	**17 26 57.9**	**+1.0**
CIT				*e*		17 27 09.4	
CIT				*e*		17 27 16.5	
CIT				pmax	pmax		
	comp=Z,121nm,1.1s						
AKUT	**Akutan**	**68.96**	**23**	*e*P	**P**	**17 26 57.5**	**+0.7**
	comp=Z,161nm,1.4s						
AKUT				LR	LR		
	comp=Z,6µm,22.0s						
GTA	**Gaotai**	**69.23**	**317**	⇑P	**P**	**17 26 58.9**	**-0.2**
GTA				S	**S**	**17 36 00.2**	**-1.2**
GTA				sS	SKiKP	17 36 35.4	-9.2
GTA				SS	**SS**	**17 40 31.1**	**+2.0**
GTA				pmax	pmax		
	comp=Z,740nm,7.9s						
GTA				LR	LR		
	comp=Z,2µm,21.9s						
GTA				LR	LR		
	comp=Z,3µm,23.5s						
GTA				LR	LR		
	comp=Z,5µm,24.4s						
ULN	**Ulaanbaatar**	**69.39**	**327**	*e*P	**P**	**17 27 00.3**	**+0.3**
	comp=Z,83nm,1.0s						
ULN				LR	LR		
	comp=Z,3µm,22.0s						
ULN	**Ulaanbaatar**	**69.39**	**327***c*	*i*P	**P**	**17 27 00.1**	**+0.1**
ULN				pmax	pmax		
	comp=Z,159nm,1.7s						
TEZP	**TEZPUR**	**69.47**	**302**	*e*P	**P**	**17 27 01.5**	**+0.9**
TEZP				IAmb	IAmb	17 27 12.3	
	comp=Z,57nm,2.3s						
BELO	**BELONIA**	**69.58**	**298**	*e*P	**P**	**17 27 01.4**	**0.0**
SONA0	**Songino Array**	**69.73**	**327**	*e*P	**P**	**17 27 02.5**	**+0.5**
SONM	**Songino Array**	**69.73**	**327**	P	**P**	**17 27 02.5**	**+0.5**
	comp=Z,67nm,0.8s,baz=141,slow=7.6,SNR=110						
SONM				PKPPKP		17 55 08.2	
	comp=Z,11nm,1.1s,baz=291,slow=3.1,SNR=22						
SONM				LR	LR	17 57 45.1	
	comp=Z,2µm,20.6s,baz=131,slow=36						
SPIA	**Saint Paul Isl**	**69.73**	**19**	PFAKE		17 27 10.0	+8.4
SPIA				LR	LR		
	comp=Z,20µm,22.0s						
SHL	**Shillong**	**69.91**	**300**	*e*P	**P**	**17 27 02.8**	**-0.8**
	comp=Z,579nm,1.9s						
SHL	**Shillong**	**69.91**	**300**	*e*P	**P**	**17 27 02.8**	**-0.8**
SHL				pmax	pmax		
	comp=Z,579nm,1.9s						
SHL	**Shillong**	**69.91**	**300**	*e*P	**P**	**17 27 02.9**	**-0.7**
SHL				*e*P	**P**	**17 27 04.0**	**+0.3**
	comp=Z,10.0nm,0.9s						
SHL				IAmb	IAmb	17 27 16.2	
	comp=Z,63nm,2.3s						
SHL				*i* x	x	17 31 10.0	
FALS	**False Pass**	**70.42**	**24**	*e*P	**P**	**17 27 06.8**	**+0.9**
	comp=Z,64nm,0.8s						
VNDA	**Vanda**	**70.55**	**179**	P	**P**	**17 27 06.6**	**+0.2**
	comp=Z,35nm,1.0s,baz=336,slow=6.5,SNR=100						
VNDA				LR	LR	17 52 30.0	
	comp=Z,6µm,20.8s,baz=6.5,slow=31						
VNDA	**Vanda**	**70.55**	**179**	*e*P	**P**	**17 27 06.0**	**-0.4**
VNDA				*e*pP	**P**	**17 27 06.2**	**-0.3**
TAWA	**Tawang**	**70.58**	**302**	*e*P	**P**	**17 27 08.0**	**+0.1**
TAWA				IAMs_20	IAMs_20	17 53 55.4	
	comp=Z,5µm,29.0s						
SBA	**Scott Base**	**71.05**	**178**	*e*P	**P**	**17 27 10.5**	**+1.1**
	comp=Z,294nm,1.6s						
SBA				LR	LR		
	comp=Z,6µm,20.0s						
SBA	**Scott Base**	**71.05**	**178**	*e*P	**P**	**17 27 10.5**	**+1.1**
SBA				pmax	pmax		
	comp=Z,294nm,1.6s						
SBA				MLR	MLR		
	comp=Z,6µm,20.0s						
TURI	**Tura**	**71.24**	**300**	*e*P	**P**	**17 27 12.0**	**+0.5**
TURI				IAmb	IAmb	17 27 13.4	
	comp=Z,98nm,1.9s						
YAK	**Yakutsk**	**71.72**	**347**	*e*P	**P**	**17 27 14.0**	**+0.4**
	comp=Z,136nm,0.9s						
YAK				LR	LR		
	comp=Z,3µm,20.0s						
YAK	**Yakutsk**	**71.72**	**347***c*	*i*P	**P**	**17 27 14.8**	**+1.2**
YAK				e*PP	**pP**	**17 27 26.1**	**-2.9**
YAK				*e*		17 27 35.6	
YAK				*e*		17 29 57.0	
YAK				*e*PPP	PPP	17 31 37.7	
YAK				*e*S	**S**	**17 36 31.2**	**+2.1**
YAK				e*SS	**SKiKP**	**17 36 56.8**	**+10**
YAK				*e*		17 37 17.1	
YAK				*e*SS	**SS**	**17 41 13.2**	**+7.1**
LSA	**Lhasa**	**71.86**	**304**	*e*P	**P**	**17 27 16.2**	**+0.4**
	comp=Z,51nm,0.9s						
LSA	**Lhasa**	**71.86**	**304**	P	**P**	**17 27 17.6**	**+1.8**
LSA				S	S	17 36 24.0	-9.1
LSA				pmax	pmax		
	comp=Z,3µm,5.3s						
LSA				LR	LR		
	comp=Z,5µm,22.5s						
LSA				LR	LR		
	comp=Z,8µm,25.6s						
LSA				LR	LR		
	comp=Z,16µm,23.9s						
LSA	**Lhasa**	**71.86**	**304**	*i* P	**P**	**17 27 17.6**	**+1.8**
	SNR=18						
LSA	**Lhasa**	**71.86**	**304**	*e*P	**P**	**17 27 16.2**	**+0.4**
LSA				pmax	pmax		
	comp=Z,51nm,0.9s						
SDPT	**Sand Point**	**71.96**	**25**	*e*P	**P**	**17 27 15.4**	**+0.3**
	comp=Z,65nm,0.9s						
SDPT				LR	LR		
	comp=Z,4µm,21.0s						
ZAK	**Zakamensk**	**72.88**	**328**	*e*P	**P**	**17 27 20.1**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,67nm,1.2s						
BOD	**Bodaibo**	**72.89**	**338**	*e*P	**P**	**17 27 21.9**	**+1.2**
BOD				pmax	pmax		
	comp=Z,79nm,1.2s						
GTK	**Tadong**	**73.25**	**301**	*e*P	**P**	**17 27 24.6**	**+1.0**
GTK				IAmb	IAmb	17 27 26.5	
	comp=Z,51nm,0.0s						
TLY	**Talaya**	**73.43**	**329**	*e*P	**P**	**17 27 23.8**	**-0.3**
	comp=Z,62nm,1.1s						
TLY				LR	LR		
	comp=Z,2µm,20.0s						
TLY	**Talaya**	**73.43**	**329***c*	*i*P	**P**	**17 27 23.8**	**-0.3**
TLY				*e*		17 27 36.3	
TLY				*e*S	**S**	**17 36 49.9**	**+0.7**
TLY				*e*		17 37 29.5	
TLY				*e*PS	PnS	17 37 44.5	+16
TLY				*e*SS	**SS**	**17 41 30.9**	**-1.9**
TLY				pmax	pmax		
	comp=Z,165nm,1.1s						
TLY				MLR	MLR		
	comp=Z,5µm,19.0s						
IRK	**Irkutsk**	**73.44**	**330**	*e*P	**P**	**17 27 22.3**	**-1.8**
IRK				*e*		17 36 52.4	
IRK				pmax	pmax		
	comp=Z,149nm,2.3s						
CHGN	**Chignik**	**73.46**	**25**	*e*P	**P**	**17 27 23.3**	**-0.8**
	comp=Z,43nm,1.0s						
BWNR	**Bhubaneshwar**	**73.84**	**293**	*e*P	**P**	**17 27 26.7**	**-0.3**
CHIA	**Chirikof Islan**	**74.37**	**26**	PFAKE		17 27 40.0	+11
CHIA				LR	LR		
	comp=Z,6µm,20.0s						
BOK	**Bokaro**	**74.63**	**297**	*e*P	**P**	**17 27 31.9**	**+0.2**
BOK				IAmb	IAmb	17 27 35.4	
	comp=Z,106nm,1.9s						
GAMB	**Gambell**	**74.75**	**14**	*e*P	**P**	**17 27 31.9**	**+0.5**
	comp=Z,44nm,1.2s						
GAMB				LR	LR		
	comp=Z,10µm,22.0s						
MOY	**Mondy**	**74.79**	**328**	*e*P	**P**	**17 27 32.3**	**+0.2**
MOY				pmax	pmax		
	comp=Z,91nm,1.4s						
BILL	**Bilibino**	**75.24**	**4***c*	*i*P	**P**	**17 27 33.7**	**-0.5**
BILL				*e*		17 27 46.5	
BILL				*e*		17 30 25.2	
BILL				*e*PPP	PPP	17 32 10.4	
BILL				*e*S	**S**	**17 37 11.0**	**+2.2**
BILL				*e*SS	**SS**	**17 42 01.8**	**+2.2**
BILL				pmax	pmax		
	comp=Z,138nm,1.0s						
BILL				MLR	MLR		
	comp=Z,4µm,19.0s						
JIRN	**Jiri**	**75.40**	**301**	*e*P	**P**	**17 27 36.8**	**+0.3**
	comp=Z,168nm,0.8s						
SII	**Sitkinak Islan**	**75.43**	**26**	PFAKE		17 27 50.0	+14
SII				LR	LR		
	comp=Z,6µm,20.0s						
VIS	**Vishakhapatnam**	**75.54**	**290**	*i* P	**P**	**17 27 36.8**	**-0.2**
VIS				*i* x	x	17 28 29.0	
GUN	**Gumba**	**75.73**	**301**	*e*P	**P**	**17 27 38.4**	**+0.1**
	comp=Z,171nm,0.7s						
PKI	**Pulchoki**	**76.04**	**301**	*e*P	**P**	**17 27 39.6**	**-0.5**
	comp=Z,226nm,1.2s						
PKIN	**Phulchoki**	**76.05**	**301**	*e*P	**P**	**17 27 39.5**	**-0.6**
	comp=Z,169nm,1.2s						
PALK	**Pallekele**	**76.14**	**279**	*e*P	**P**	**17 27 41.2**	**+0.6**
	comp=Z,342nm,1.4s						
PALK				LR	LR		
	comp=Z,2µm,20.0s						
PALK	**Pallekele**	**76.14**	**279**	P	**P**	**17 27 42.2**	**+1.7**
PALK	**Pallekele**	**76.14**	**279**	*e*P	**P**	**17 27 41.2**	**+0.6**
PALK				pmax	pmax		
	comp=Z,342nm,1.4s						
PALK				MLR	MLR		
	comp=Z,2µm,20.0s						
KKN	**Kakani**	**76.21**	**301**	*e*P	**P**	**17 27 41.0**	**+0.1**
	comp=Z,176nm,1.1s						
OHAK	**Old Harbor**	**76.22**	**26**	*e*P	**P**	**17 27 41.2**	**+1.2**
	comp=Z,32nm,0.8s						
OHAK				LR	LR		
	comp=Z,4µm,20.0s						
DMN	**Daman**	**76.31**	**301**	*e*P	**P**	**17 27 41.2**	**-0.3**
	comp=Z,244nm,1.0s						
GKN	**Gorkha**	**76.81**	**301**	*e*P	**P**	**17 27 43.8**	**-0.4**
	comp=Z,238nm,0.8s						
KDAK	**Kodiak Island**	**76.87**	**26**	P	**P**	**17 27 43.8**	**+0.2**
	comp=Z,8.8nm,0.5s,baz=266,slow=1.9,SNR=26						
KDAK	**Kodiak Island**	**76.87**	**26**	*e*P	**P**	**17 27 43.9**	**+0.2**
	comp=Z,36nm,1.0s						
KDAK				LR	LR		
	comp=Z,3µm,20.0s						
KDAK	**Kodiak Island**	**76.87**	**26**	*i* P	**P**	**17 27 44.5**	**+0.9**
ANM	**Nome**	**77.04**	**16**	*e*P	**P**	**17 27 45.8**	**+1.3**
	comp=Z,233nm,1.9s						
ANM				LR	LR		
	comp=Z,12µm,20.0s						
ANM	**Nome**	**77.04**	**16**	*e*P	**P**	**17 27 45.8**	**+1.3**
ANM				pmax	pmax		
	comp=Z,233nm,1.9s						
ANM				MLR	MLR		
	comp=Z,12µm,20.0s						
MDRS	**Chennai**	**77.55**	**285**	*e*P	**P**	**17 27 47.8**	**-0.6**
KOLN	**Koldanda**	**77.64**	**300**	*e*P	**P**	**17 27 48.1**	**-0.8**
	comp=Z,309nm,1.2s						
DANN	**Dangsing**	**77.65**	**301**	*e*P	**P**	**17 27 48.3**	**-0.8**
SVW2	**Sparrevohn**	**77.74**	**22**	*e*P	**P**	**17 27 48.9**	**+0.4**
	comp=Z,225nm,1.8s						
SVW2				LR	LR		
	comp=Z,10µm,22.0s						
PYUN	**Piuthan**	**78.25**	**300**	*e*P	**P**	**17 27 51.3**	**-1.0**
	comp=Z,251nm,1.0s						
HOM	**Homer**	**78.38**	**24**	*e*P	**P**	**17 27 53.3**	**+1.2**
	comp=Z,141nm,0.8s						
HOM				LR	LR		
	comp=Z,6µm,20.0s						
CNPM	**China Poot**	**78.47**	**25**	*e*P	**P**	**17 27 53.1**	**+0.5**
	comp=Z,76nm,0.8s						
CNPM				LR	LR		
	comp=Z,6µm,20.0s						
BRLK	**Bradley Lake**	**78.75**	**24**	*e*P	**P**	**17 27 54.8**	**+0.7**
	comp=Z,69nm,1.2s						
BRLK				LR	LR		
	comp=Z,6µm,20.0s						
TTA	**Tatalina**	**78.78**	**20**	*e*P	**P**	**17 27 53.5**	**-0.8**
	comp=Z,28nm,1.0s						
TTA				LR	LR		
	comp=Z,12µm,20.0s						
TTA	**Tatalina**	**78.78**	**20**	*e*P	**P**	**17 27 53.5**	**-0.8**
TTA				pmax	pmax		
	comp=Z,28nm,1.0s						
TTA				MLR	MLR		
	comp=Z,12µm,20.0s						
WMQ	**Urumqi**	**79.32**	**317**	PFAKE		17 28 10.0	+12
WMQ				LR	LR		
	comp=Z,2µm,21.0s						
WMQ	**Urumqi**	**79.32**	**317**	P	**P**	**17 27 59.2**	**+1.5**
WMQ				PcP	**PcP**	**17 28 07.5**	**+1.8**
WMQ				pP	sP	17 28 15.8	-3.6
WMQ				sP	pP	17 28 27.2	+14
WMQ				S	**S**	**17 37 53.8**	**-0.3**
WMQ				SKS	**SKSac**	**17 38 01.3**	**-8.1**
WMQ				ScS	**SKKSac**	**17 38 08.4**	**-2.5**
WMQ				pmax	pmax		
	comp=Z,760nm,4.7s						
WMQ				LR	LR		
	comp=Z,630nm,22.5s						
WMQ				LR	LR		
	comp=Z,1µm,23.9s						
WMQ				LR	LR		
	comp=Z,4µm,26.7s						
SEW	**Seward**	**79.54**	**25**	*e*P	**P**	**17 27 59.6**	**+1.2**
	comp=Z,79nm,1.2s						
SEW				LR	LR		
	comp=Z,6µm,20.0s						
JBP	**Jabalpur**	**79.76**	**295**	*e*P	**P**	**17 28 01.0**	**+0.6**
JBP				*e*x	x	17 37 54.7	
SUA	**Susitna One**	**79.81**	**23**	PFAKE		17 28 10.0	+10
SUA				LR	LR		
	comp=Z,100nm,19.0s						
HYB	**Hyderabad**	**79.94**	**289**	*i* P	**P**	**17 28 02.0**	**+0.4**
	comp=Z,200nm,1.0s						
HYB				*e*		17 28 12.0	
HYB				*e*		17 28 17.5	
HYB				*e*S	**S**	**17 38 00.0**	**-1.6**
RC01	**Rabbit Creek A**	**79.99**	**24**	*e*P	**P**	**17 28 01.0**	**+0.2**
	comp=Z,78nm,1.2s						
RC01				LR	LR		
	comp=Z,5µm,21.0s						
TRD	**Trivandrum**	**80.00**	**280**	*e*P	**P**	**17 28 02.8**	**+1.0**
PPLA	**Purkeypile**	**80.12**	**22**	*e*P	**P**	**17 28 02.0**	**+0.3**
	comp=Z,67nm,1.3s						
PPLA				LR	LR		
	comp=Z,14µm,22.0s						
NGP	**Nagpur**	**80.19**	**293**	*i* P	**P**	**17 28 03.8**	**+0.9**
NGP				IAmb	IAmb	17 28 04.2	
	comp=Z,146nm,0.5s						

NGP				*e*x	x	17 38 04.3	
RDOG	**Red Dog Mine**	**80.34**	**15**	PFAKE		17 28 10.0	+7.4
RDOG				LR	LR		
	comp=Z,8µm,22.0s						
CAST	**Castle Rocks**	**80.47**	**21**	*e*P	**P**	**17 28 02.4**	**-1.0**
	comp=Z,81nm,1.1s						
CAST				LR	LR		
	comp=Z,12µm,21.0s						
PMR	**Palmer**	**80.51**	**23**	PFAKE		17 28 20.0	+16
PMR				LR	LR		
	comp=Z,5µm,20.0s						
KNK	**Knik Glacier**	**80.68**	**24**	*e*P	**P**	**17 28 05.3**	**+0.7**
	comp=Z,113nm,1.4s						
KNK				LR	LR		
	comp=Z,3µm,20.0s						
GLI	**Glacier Island**	**80.94**	**25**	*e*P	**P**	**17 28 06.5**	**+0.6**
	comp=Z,122nm,1.4s						
GLI				LR	LR		
	comp=Z,5µm,21.0s						
KTH	**Kantishna Hill**	**80.97**	**21**	*e*P	**P**	**17 28 06.3**	**+0.2**
	comp=Z,41nm,1.0s						
KTH				LR	LR		
	comp=Z,14µm,22.0s						
TRF	**Thorofare Moun**	**81.14**	**22**	*e*P	**P**	**17 28 07.2**	**+0.1**
	comp=Z,34nm,0.8s						
TRF				LR	LR		
	comp=Z,18µm,22.0s						
BPAW	**Bear Paw Mtn.**	**81.28**	**21**	*e*P	**P**	**17 28 07.5**	**-0.2**
	comp=Z,28nm,1.2s						
BPAW				LR	LR		
	comp=Z,11µm,21.0s						
EYAK	**Cordova Ski Ar**	**81.33**	**25**	*e*P	**P**	**17 28 08.6**	**+0.7**
	comp=Z,30nm,1.0s						
EYAK				LR	LR		
	comp=Z,4µm,20.0s						
DGZ	**Jazzator, Alta**	**81.58**	**322**	*ce*P	**P**	**17 28 09.1**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,11nm,0.7s						
RND	**Reindeer**	**81.65**	**22**	*e*P	**P**	**17 28 10.1**	**+0.4**
	comp=Z,58nm,1.0s						
RND				LR	LR		
	comp=Z,10µm,21.0s						
MCK	**McKinley**	**81.80**	**22**	*e*P	**P**	**17 28 09.5**	**-1.0**
	comp=Z,126nm,1.1s						
MCK				LR	LR		
	comp=Z,14µm,21.0s						
MCK	**McKinley**	**81.80**	**22**	*e*P	**P**	**17 28 09.5**	**-1.0**
MCK				pmax	pmax		
	comp=Z,125nm,1.1s						
MCK				MLR	MLR		
	comp=Z,14µm,21.0s						
BWN	**Browne**	**81.86**	**21**	*e*P	**P**	**17 28 10.6**	**-0.2**
	comp=Z,113nm,0.9s						
BWN				LR	LR		
	comp=Z,11µm,21.0s						
HMT	**Hamilton**	**81.86**	**26**	*e*P	**P**	**17 28 11.3**	**+0.4**
	comp=Z,31nm,0.5s						
HMT				LR	LR		
	comp=Z,4µm,19.0s						
MLY	**Manley**	**81.92**	**20**	*e*P	**P**	**17 28 10.4**	**-0.7**
	comp=Z,143nm,2.0s						
MLY				LR	LR		
	comp=Z,14µm,22.0s						
DHY	**Denali Highway**	**82.02**	**23**	PFAKE		17 28 20.0	+8.2
DHY				LR	LR		
	comp=Z,3µm,20.0s						
BHPL	**Bhopal**	**82.08**	**295**	*e*P	**P**	**17 28 12.2**	**-0.6**
ZSN	**Zaisan**	**82.41**	**320**	*e*P	**P**	**17 28 14.7**	**+0.7**
ZSN				pmax	pmax		
	comp=Z,154nm,3.6s						
ZSN	**Zaisan**	**82.41**	**320**	*e*P	**P**	**17 28 14.8**	**+0.7**
	comp=Z,154nm,3.6s						
DGAR	**Diego Garcia**	**82.47**	**263**	PFAKE		17 28 30.0	+15
DGAR				LR	LR		
	comp=Z,4µm,21.0s						
WRH	**Wood River Hil**	**82.52**	**21**	*e*P	**P**	**17 28 14.4**	**+0.2**
	comp=Z,89nm,1.4s						
WRH				LR	LR		
	comp=Z,11µm,20.0s						
PAX	**Paxson**	**82.70**	**23**	PFAKE		17 28 30.0	+15
PAX				LR	LR		
	comp=Z,4µm,20.0s						
CCB	**Clear Creek Bu**	**82.72**	**21**	*e*P	**P**	**17 28 15.2**	**0.0**
	comp=Z,31nm,1.0s						
CCB				LR	LR		
	comp=Z,11µm,21.0s						
MDM	**Murphy Dome**	**82.75**	**21**	PFAKE		17 28 30.0	+15
MDM				LR	LR		
	comp=Z,9µm,22.0s						
TCOL	**CIGO, UAF Yank**	**82.83**	**21**	P	**P**	**17 28 15.3**	**-0.5**
	baz=236,SNR=12						
COLA	**College**	**82.83**	**21**	*e*P	**P**	**17 28 15.8**	**+0.1**
COLA				LR	LR		
	comp=Z,10µm,21.0s						
COLA	**College**	**82.83**	**21**	*c i*P	**P**	**17 28 15.8**	**+0.1**
COLA				pmax	pmax		
	comp=Z,56nm,0.8s						
HDA	**Harding Lake**	**82.90**	**22**	*e*P	**P**	**17 28 15.7**	**-0.5**
	comp=Z,46nm,1.2s						
HDA				LR	LR		
	comp=Z,14µm,22.0s						
HDA	**Harding Lake**	**82.90**	**22**	P	**P**	**17 28 15.8**	**-0.4**
	baz=237,SNR=30						
DDI	**Dehra Dun**	**82.95**	**302**	*e*P	**P**	**17 28 16.4**	**-0.9**
QSPA	**South Pole Qui**	**82.97**	**180**	*e*P	**P**	**17 28 16.4**	**-0.4**
	comp=Z,308nm,1.3s						
QSPA				LR	LR		
	comp=Z,5µm,21.0s						
BALM	**Baldy**	**83.03**	**26**	PFAKE		17 28 30.0	+13
BALM				LR	LR		
	comp=Z,3µm,20.0s						
POKR	**Poker Plat Res**	**83.12**	**21**	P	**P**	**17 28 17.1**	**-0.2**
	baz=237,SNR=6.5						
ILAR	**Eielson Array**	**83.12**	**21**	P	**P**	**17 28 15.6**	**-1.8**
	comp=Z,17nm,0.5s,baz=236,slow=4.9,SNR=123						
ILAR				PKKPbc	**PKKPbc**	**17 46 39.2**	**-2.5**
	comp=Z,1.0nm,0.5s,baz=354,slow=1.6,SNR=14						
ILAR				LR	LR	18 00 31.6	
	comp=Z,10µm,21.9s,baz=250,slow=32						
ILB	**Eielson Array**	**83.12**	**21**	*e*P	**P**	**17 28 16.1**	**-1.2**
	comp=Z,28nm,0.9s						
NDI	**New Delhi**	**83.33**	**300**	*e*P	**P**	**17 28 18.5**	**-0.7**
MENT	**Mentasta**	**83.38**	**24**	PFAKE		17 28 30.0	+11
MENT				LR	LR		
	comp=Z,4µm,20.0s						
COLD	**Coldfoot**	**83.39**	**19**	*e*P	**P**	**17 28 19.9**	**+1.2**
	comp=Z,23nm,1.1s						
COLD				LR	LR		
	comp=Z,8µm,22.0s						
PCA	**Pinnacle**	**83.52**	**27**	*e*P	**P**	**17 28 20.5**	**+1.0**
	comp=Z,51nm,1.0s						
PCA				LR	LR		
	comp=Z,3µm,22.0s						
YKU2	**Yakutat**	**83.53**	**28**	PFAKE		17 28 30.0	+11
YKU2				LR	LR		
	comp=Z,3µm,20.0s						
DOT	**Dot Lake**	**83.59**	**23**	*e*P	**P**	**17 28 20.0**	**+0.2**
	comp=Z,40nm,0.9s						
DOT				LR	LR		
	comp=Z,4µm,20.0s						
BCPM	**Bancas Point**	**83.73**	**27**	PFAKE		17 28 30.0	+9.5
BCPM				LR	LR		
	comp=Z,3µm,19.0s						
SMLA	**Simla**	**83.87**	**302**	*e*P	**P**	**17 28 20.5**	**-1.4**
MK31	**Makanchi Array**	**83.88**	**319**	*e*P	**P**	**17 28 20.9**	**-0.7**
	comp=Z,52nm,1.0s						
MK31	**Makanchi Array**	**83.88**	**319**	P	**P**	**17 28 22.1**	**+0.5**
MK31				pmax	pmax		
	comp=Z,40nm,0.7s						
MK32	**Makanchi Array**	**83.88**	**319**	*e*P	**P**	**17 28 22.3**	**+0.7**
MKAR	**Makanchi Array**	**83.88**	**319**	P	**P**	**17 28 22.3**	**+0.7**
	comp=Z,42nm,0.6s,baz=102,slow=6.1,SNR=172						
MKAR				LR	LR	18 05 59.1	
	comp=Z,2µm,20.3s,baz=94,slow=36						
PRP	**Porcupine Dome**	**84.01**	**21**	PFAKE		17 28 30.0	+8.0
PRP				LR	LR		
	comp=Z,10µm,20.0s						
MAKZ	**Makanchi**	**84.09**	**318**	*e*P	**P**	**17 28 22.0**	**-0.7**
	comp=Z,75nm,1.0s						
MAKZ				LR	LR		
	comp=Z,2µm,21.0s						
MAKZ	**Makanchi**	**84.09**	**318**	*e*P	**P**	**17 28 22.0**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,75nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,2µm,21.0s						
GOA	**Goa**	**84.09**	**286**	*e*P	**P**	**17 28 23.8**	**+0.5**
GOA				IAMs_20	IAMs_20	18 02 42.5	
	comp=Z,3µm,30.4s						
TOLK	**Toolik Lake Re**	**84.42**	**17**	*e*P	**P**	**17 28 24.2**	**+0.3**
	comp=Z,43nm,0.9s						
TOLK				LR	LR		
	comp=Z,12µm,22.0s						
TOLK	**Toolik Lake Re**	**84.42**	**17**	P	**P**	**17 28 24.9**	**+1.0**
	baz=234						
POO	**Poona**	**84.55**	**289**	*e*P	**P**	**17 28 25.3**	**-0.3**
POO				IAmb	IAmb	17 28 26.6	
	comp=Z,117nm,0.6s						
ZAA0	**Zalesovo Array**	**84.58**	**326**	*e*P	**P**	**17 28 23.7**	**-1.3**
	comp=Z,91nm,1.5s						
ZAA0				LR	LR		
	comp=Z,2µm,22.0s						
ZALV	**Zalesovo Beam**	**84.58**	**326**	P	**P**	**17 28 24.0**	**-1.0**
	comp=Z,34nm,0.5s,baz=108,slow=4.4,SNR=111						
ZALV				PKiKP	**PKiKP**	**17 33 37.8**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=121,slow=4.2,SNR=2.1						
ZALV				S	**SKSac**	**17 38 39.2**	**-5.0**
	comp=Z,0.6nm,0.5s,baz=116,slow=6.6,SNR=3.4						
ZALV				PKKPbc	**PKKPbc**	**17 46 34.6**	**-3.2**
	comp=Z,1.1nm,0.6s,baz=291,slow=4.0,SNR=5.7						
ZALV				PKPPKP		17 54 42.3	
	comp=Z,0.5nm,0.3s,baz=318,slow=4.1,SNR=3.9						
ZALV				LR	LR	18 07 05.9	
	comp=Z,2µm,20.9s,baz=94,slow=36						
ZAA1	**Zalesovo Array**	**84.59**	**326**	*e*P	**P**	**17 28 24.0**	**-1.0**
ZAA1				*e*PKiKP	**PKiKP**	**17 33 37.8**	**-0.4**
FYU	**Fort Yukon**	**84.66**	**20**	*e*P	**P**	**17 28 25.2**	**+0.1**
	comp=Z,162nm,1.8s						
FYU				LR	LR		
	comp=Z,10µm,22.0s						
MAW	**Mawson**	**84.66**	**203**	P	**P**	**17 28 25.5**	**+0.4**
	comp=Z,78nm,0.9s,baz=100,slow=5.7,SNR=84						
MAW				LR	LR	18 04 27.8	
	comp=Z,2µm,18.6s,baz=81,slow=34						
MAW	**Mawson**	**84.66**	**203**	*e*P	**P**	**17 28 25.1**	**0.0**
	comp=Z,59nm,1.4s						
MAW				LR	LR		
	comp=Z,500nm,19.0s						
MAW	**Mawson**	**84.66**	**203**	P	**P**	**17 28 25.3**	**+0.2**
	baz=85,SNR=48						
DHRM	**DHARAMSHALA**	**84.82**	**303**	*e*P	**P**	**17 28 25.9**	**-1.1**
DHRM				IAMs_20	IAMs_20	18 03 52.4	
	comp=Z,3µm,25.9s						
PDGK	**Podgornoye**	**84.85**	**315**	P	**P**	**17 28 25.8**	**-1.0**
PDGK				pmax	pmax		
	comp=Z,35nm,1.1s						
DIB	**Dawson Inlet,**	**84.86**	**35**	*e*P	**P**	**17 28 26.1**	**-0.2**
	comp=Z,70nm,1.4s						
DIB				LR	LR		
	comp=Z,9µm,22.0s						
HYT	**Haines Junctio**	**85.06**	**27**	*e*P	**P**	**17 28 27.9**	**+0.5**
	comp=Z,43nm,1.0s						
HYT				LR	LR		
	comp=Z,4µm,19.0s						
UZB	**Uzynbulak**	**85.14**	**314**	*e*P	**P**	**17 28 27.9**	**-0.3**
UZB				pmax	pmax		
	comp=Z,243nm,4.0s						
UZB	**Uzynbulak**	**85.14**	**314**	*e*P	**P**	**17 28 27.9**	**-0.3**
	comp=Z,243nm,4.0s						
EGAK	**Eagle**	**85.25**	**23**	*e*P	**P**	**17 28 28.0**	**-0.1**
	comp=Z,34nm,0.9s						
EGAK				LR	LR		
	comp=Z,7µm,22.0s						
THN	**Thein Dam**	**85.34**	**303**	*e*P	**P**	**17 28 30.0**	**+0.7**
PRZ	**Przheval'sk**	**85.42**	**314**	PFAKE		17 28 40.0	+10
PRZ				LR	LR		
	comp=Z,2µm,20.0s						
BESE	**Bessie Mountai**	**85.44**	**29**	*e*P	**P**	**17 28 29.3**	**0.0**
	comp=Z,118nm,1.7s						
BESE				LR	LR		
	comp=Z,5µm,20.0s						
SKAG	**Skagway**	**85.54**	**29**	PFAKE		17 28 40.0	+10
SKAG				LR	LR		
	comp=Z,5µm,22.0s						
SATY	**Saty**	**85.56**	**314**	*e*P	**P**	**17 28 31.4**	**+1.1**
SATY				pmax	pmax		
	comp=Z,397nm,3.7s						
SATY	**Saty**	**85.56**	**314**	*e*P	**P**	**17 28 31.4**	**+1.1**
	comp=Z,397nm,3.7s						
JIS	**Juneau Island**	**85.56**	**30**	*e*P	**P**	**17 28 29.9**	**+0.1**
	comp=Z,85nm,1.6s						
JIS				LR	LR		
	comp=Z,4µm,20.0s						
BOM	**Bombay**	**85.57**	**290**	*e*x	P	17 28 22.8	-7.9
BOM				IAMs_20	IAMs_20	17 59 13.9	
	comp=Z,2µm,16.2s						
DAWY	**Dawson**	**85.62**	**24**	*e*P	**P**	**17 28 30.2**	**+0.2**
	comp=Z,177nm,2.0s						
DAWY				LR	LR		
	comp=Z,6µm,22.0s						
WRAK	**Wrangell Islan**	**85.97**	**32**	*e*P	**P**	**17 28 32.7**	**+0.9**
	comp=Z,133nm,1.5s						
WRAK				LR	LR		
	comp=Z,6µm,20.0s						
TDK	**Taldyqorghan**	**86.02**	**316**	*e*P	**P**	**17 28 32.6**	**+0.2**
TDK				pmax	pmax		
	comp=Z,648nm,4.0s						
TDK	**Taldyqorghan**	**86.02**	**316**	*e*P	**P**	**17 28 32.7**	**+0.2**
	comp=Z,648nm,4.0s						
WHY	**Whitehorse**	**86.19**	**28**	*e*P	**P**	**17 28 33.9**	**+0.9**
	comp=Z,26nm,1.3s						
WHY				LR	LR		
	comp=Z,6µm,20.0s						
KDJ	**Kajisay**	**86.22**	**313**	*e*P	**P**	**17 28 33.6**	**0.0**
	comp=Z,52nm,1.0s						
KDJ	**Kajisay**	**86.22**	**313**	*e*P	**P**	**17 28 33.7**	**0.0**
KDJ				pmax	pmax		
	comp=Z,52nm,1.0s						
KSH	**Kashi**	**86.56**	**310**	P	**P**	**17 28 36.8**	**+1.5**
KSH				pP	sP	17 28 58.0	+0.8
KSH				sP	pP	17 29 05.1	+14
KSH				PP	**PP**	**17 32 03.4**	**+5.6**
KSH				SKS	**SKSac**	**17 38 49.3**	**-8.3**
KSH				S	**SKKSac**	**17 39 03.9**	**-1.9**
KSH				SS	**SS**	**17 44 49.7**	**-0.2**
KSH				pmax	pmax		
	comp=Z,55nm,1.0s						
KSH				pmax	pmax		
	comp=Z,970nm,7.2s						
KSH				LR	LR		
	comp=Z,840nm,15.2s						
KSH				LR	LR		
	comp=Z,1µm,16.3s						
KSH				LR	LR		
	comp=Z,2µm,20.3s						
TNSS	**Tian-Shan**	**86.59**	**314**	*e*P	**P**	**17 28 34.8**	**-0.9**
TNSS	**Tian-Shan**	**86.59**	**314**	*e*P	**P**	**17 28 34.9**	**-0.9**
AAA	**Alma-Ata**	**86.65**	**314**	*e*P	**P**	**17 28 34.5**	**-1.1**
AAA	**Alma-Ata**	**86.65**	**314**	*e*P	**P**	**17 28 34.5**	**-1.1**
CHKK	**Chushkaly**	**86.74**	**315**	*e*P	**P**	**17 28 34.7**	**-1.3**
CHKK	**Chushkaly**	**86.74**	**315**	*e*P	**P**	**17 28 34.7**	**-1.3**
BBB	**Bella Bella**	**87.10**	**37**	PFAKE		17 28 50.0	+13
BBB				LR	LR		
	comp=Z,10µm,20.0s						
BOOM	**Boomskoye usch**	**87.20**	**313**	*e*P	**P**	**17 28 38.2**	**-0.2**
	comp=Z,47nm,0.8s						
KUU	**Kurty**	**87.21**	**315**	*e*P	**P**	**17 28 37.3**	**-0.9**
KUU				pmax	pmax		
	comp=Z,674nm,3.9s						
KUU	**Kurty**	**87.21**	**315**	*e*P	**P**	**17 28 37.3**	**-0.9**
	comp=Z,674nm,3.9s						
JCC	**Jacoby Creek,**	**87.22**	**48**	PFAKE		17 28 50.0	+12
JCC				LR	LR		
	comp=Z,6µm,22.0s						
KURK	**Kurchatov**	**87.28**	**322**	*e*P	**P**	**17 28 37.1**	**-1.2**
	comp=Z,158nm,1.8s						
KURK				LR	LR		
	comp=Z,2µm,21.0s						
KURK	**Kurchatov**	**87.28**	**322**	*c i*P	**P**	**17 28 38.5**	**+0.1**
KURK				pmax	pmax		
	comp=Z,84nm,2.5s						
KURBB	**Kurchatov Arra**	**87.31**	**322**	P	**P**	**17 28 37.7**	**-0.8**
	comp=Z,8.0nm,0.6s,baz=97,slow=4.9,SNR=104						
KURBB				PKiKP	**PKiKP**	**17 33 41.7**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=111,slow=1.1,SNR=2.8						
KCPM	**Cahto Peak**	**87.33**	**50**	PFAKE		17 28 50.0	+11
KCPM				LR	LR		
	comp=Z,8µm,22.0s						
KMRM	**Mail Ridge**	**87.34**	**49**	PFAKE		17 28 50.0	+11
KMRM				LR	LR		
	comp=Z,7µm,20.0s						
KEBM	**Edson Butte**	**87.41**	**46**	PFAKE		17 28 50.0	+11
KEBM				LR	LR		
	comp=Z,5µm,21.0s						
KRMB	**Red Mountain**	**87.45**	**48**	PFAKE		17 28 50.0	+10
KRMB				LR	LR		
	comp=Z,8µm,20.0s						
KHMM	**Horse Mountain**	**87.45**	**48**	PFAKE		17 28 50.0	+10
KHMM				LR	LR		
	comp=Z,6µm,21.0s						
TKM2	**Tokmak 2**	**87.54**	**314**	P	**P**	**17 28 40.1**	**0.0**
TKM2				pmax	pmax		
	comp=Z,16nm,0.7s						
MCCM	**Marconi Confer**	**87.57**	**51**	PFAKE		17 28 50.0	+10
MCCM				LR	LR		
	comp=Z,5µm,21.0s						
HOPS	**Hopland Field**	**87.58**	**50**	PFAKE		17 28 50.0	+10
HOPS				LR	LR		
	comp=Z,5µm,21.0s						
NIL	**Nilore**	**87.60**	**304**	*e*P	**P**	**17 28 39.0**	**-1.4**
	comp=Z,65nm,0.8s						
NIL				LR	LR		
	comp=Z,900nm,22.0s						
NIL	**Nilore**	**87.60**	**304**	*e*P	**P**	**17 28 39.0**	**-1.4**
NIL				pmax	pmax		
	comp=Z,65nm,0.8s						
NIL				MLR	MLR		
	comp=Z,900nm,22.0s						
EPYK	**Eagle Plains**	**87.60**	**22**	*e*P	**P**	**17 28 39.5**	**-0.2**
	comp=Z,69nm,0.7s						
EPYK				LR	LR		
	comp=Z,9µm,21.0s						
EPYK	**Eagle Plains**	**87.60**	**22**	P	**P**	**17 28 40.5**	**+0.9**
	baz=247,SNR=91						
GDXM	**Geysers**	**87.76**	**51**	PFAKE		17 28 50.0	+8.9
GDXM				LR	LR		
	comp=Z,6µm,20.0s						
J01E	**Myrtle Point**	**87.76**	**46**	P	**P**	**17 28 41.6**	**+0.7**
	baz=258						
DLBC	**Dease Lake**	**87.79**	**30**	*e*P	**P**	**17 28 41.2**	**+0.4**
	comp=Z,157nm,1.6s						
DLBC				LR	LR		
	comp=Z,4µm,22.0s						
L02E	**Cave Junction**	**87.80**	**47**	P	**P**	**17 28 42.3**	**+1.2**
	baz=258						
K02D	**Willamette Mer**	**87.86**	**47**	P	**P**	**17 28 42.3**	**+0.8**
	baz=258						
I02D	**Swisshome**	**88.01**	**45**	P	**P**	**17 28 43.1**	**+1.1**
	baz=258						
O02D	**Mt. Diablo Mer**	**88.02**	**49**	P	**P**	**17 28 43.3**	**+1.0**
	baz=259						
M02C	**Callahan**	**88.20**	**48**	P	**P**	**17 28 43.6**	**+0.5**
	baz=259						
FRU1	**Bishkek**	**88.21**	**313**	*e*P	**P**	**17 28 41.6**	**-1.5**
	comp=Z,51nm,1.3s						
FRU1				LR	LR		
	comp=Z,2µm,21.0s						
FRU1	**Bishkek**	**88.21**	**313**	*e*P	**P**	**17 28 41.6**	**-1.5**
FRU1				pmax	pmax		
	comp=Z,51nm,1.3s						
FRU1				MLR	MLR		
	comp=Z,2µm,21.0s						
N02D	**Trinity Center**	**88.23**	**49**	P	**P**	**17 28 43.9**	**+0.6**
	baz=259						
AAK	**Ala-Archa**	**88.28**	**313**	*e*P	**P**	**17 28 43.1**	**-0.5**
	comp=Z,21nm,0.7s						
AAK				LR	LR		
	comp=Z,2µm,20.0s						
AAK	**Ala-Archa**	**88.28**	**313**	*i* P	**P**	**17 28 45.1**	**+1.5**
	SNR=23						
AAK	**Ala-Archa**	**88.28**	**313**	*c i*P	**P**	**17 28 44.8**	**+1.2**
AAK				pmax	pmax		
	comp=Z,17nm,0.6s						
WDC	**Whiskeytown Da**	**88.28**	**49**	PFAKE		17 28 50.0	+6.6
WDC				LR	LR		
	comp=Z,7µm,22.0s						
I03D	**Drain, OR**	**88.28**	**46**	P	**P**	**17 28 43.6**	**+0.3**
	baz=259						
SGDS	**Sogindy**	**88.33**	**314**	*e*P	**P**	**17 28 42.2**	**-1.4**
	comp=Z,265nm,4.0s						
HUMO	**Hull Mountain**	**88.35**	**47**	PFAKE		17 29 00.0	+16
HUMO				LR	LR		
	comp=Z,7µm,22.0s						
YBH	**Yreka Blue Hor**	**88.37**	**48**	P	**P**	**17 28 45.4**	**+1.4**
	comp=Z,5.6nm,1.0s,baz=25,slow=3.2,SNR=8.6						
YBH	**Yreka Blue Hor**	**88.37**	**48**	PFAKE		17 29 00.0	+16
YBH				LR	LR		
	comp=Z,8µm,20.0s						
SAO	**San Andreas Ge**	**88.44**	**53**	PFAKE		17 29 00.0	+16
SAO				LR	LR		
	comp=Z,5µm,20.0s						
COR	**Corvallis**	**88.49**	**45**	PFAKE		17 29 00.0	+16
COR				LR	LR		
	comp=Z,6µm,20.0s						
G03D	**McMinnville, O**	**88.64**	**44**	P	**P**	**17 28 45.9**	**+1.0**
	baz=259						
NLWA	**Neilton Lookou**	**88.66**	**42**	PFAKE		17 29 00.0	+15
NLWA				LR	LR		
	comp=Z,7µm,20.0s						
E03A	**Lebam**	**88.70**	**43**	PFAKE		17 29 00.0	+15
E03A				LR	LR		
	comp=Z,12µm,21.0s						
L04D	**Klamath Falls**	**88.76**	**47**	P	**P**	**17 28 46.2**	**+0.4**
	baz=259						
O03E	**Paynes Creek**	**88.78**	**49**	P	**P**	**17 28 46.5**	**+0.6**
	baz=260						
H04D	**Lebanon**	**88.87**	**45**	P	**P**	**17 28 46.7**	**+0.6**
	baz=259						
ORV	**Oroville**	**88.88**	**50**	PFAKE		17 29 00.0	+14
ORV				LR	LR		
	comp=Z,4µm,21.0s						
I04A	**Tendick Farm,**	**88.97**	**46**	P	**P**	**17 28 46.8**	**+0.1**
	baz=259						
F04D	**Rainier, OR**	**88.98**	**43**	P	**P**	**17 28 47.3**	**+0.7**
	baz=259						
M04C	**Macdoel**	**89.02**	**48**	P	**P**	**17 28 47.6**	**+0.5**
	baz=260						
BTLS	**Baital**	**89.05**	**315**	*e*P	**P**	**17 28 45.7**	**-1.2**
BTLS				*e*S	**SKSac**	**17 39 06.5**	**-5.6**
BTLS				pmax	pmax		
	comp=Z,138nm,3.9s						
BTLS				smax	smax		
	comp=E,54nm,4.8s						
BTLS	**Baital**	**89.05**	**315**	*e*P	**P**	**17 28 45.8**	**-1.2**
	comp=E,138nm,3.9s						
BTLS				*e*S	**SKSac**	**17 39 06.6**	**-5.6**
	comp=E,54nm,4.8s						
J04D	**Umpqua Nationa**	**89.08**	**46**	P	**P**	**17 28 48.0**	**+0.6**
	baz=260						
ARSB	**Arslanbob**	**89.14**	**312**	*e*P	**P**	**17 28 47.6**	**-0.1**
	comp=E,179nm,1.5s						
AFDM	**Forest Hills D**	**89.19**	**51**	*e*P	**P**	**17 28 48.1**	**+0.3**
	comp=E,24nm,1.4s						
AFDM				LR	LR		
	comp=Z,5µm,22.0s						
PGC	**Sidney**	**89.19**	**41**	PFAKE		17 29 00.0	+13
PGC				LR	LR		
	comp=Z,7µm,22.0s						
D03D	**Eldon**	**89.21**	**42**	P	**P**	**17 28 48.1**	**+0.5**
	baz=259						
K04D	**Chiloquin, OR**	**89.23**	**47**	P	**P**	**17 28 48.8**	**+0.8**
	baz=260						
PAGB	**Antelope Grade**	**89.23**	**54**	PFAKE		17 29 00.0	+12
PAGB				LR	LR		
	comp=Z,4µm,22.0s						
H04A	**Detroit Lake**	**89.29**	**45**	PFAKE		17 29 00.0	+12
H04A				LR	LR		
	comp=Z,4µm,21.0s						
D04E	**Lakebay**	**89.35**	**42**	P	**P**	**17 28 49.5**	**+1.3**
	baz=259						
SMMC	**Simmler**	**89.37**	**54**	P	**P**	**17 28 49.6**	**+0.9**
	baz=261						
E04D	**Cinebar**	**89.37**	**43**	P	**P**	**17 28 48.8**	**+0.4**
	baz=259						
PKM	**Mcpherson Peak**	**89.45**	**55**	P	**P**	**17 28 49.8**	**+0.5**
	baz=261,SNR=12						
SCZ2	**Santa Cruz Isl**	**89.46**	**56**	P	**P**	**17 28 49.5**	**+0.3**
	baz=261						
SBC	**Santa Barbara**	**89.47**	**55**	P	**P**	**17 28 50.2**	**+1.1**
	baz=261						
INK	**Inuvik**	**89.48**	**21**	P	**P**	**17 28 48.9**	**+0.5**
	comp=Z,21nm,0.5s,baz=277,slow=4.1,SNR=83						
INK				LR	LR	18 04 42.1	
	comp=Z,10µm,21.9s,baz=222,slow=33						
INK	**Inuvik**	**89.48**	**21**	*e*P	**P**	**17 28 48.3**	**-0.1**
	comp=Z,91nm,1.4s						
INK				LR	LR		
	comp=Z,13µm,22.0s						
CMB	**Columbia Colle**	**89.49**	**52**	*e*P	**P**	**17 28 50.6**	**+1.4**
	comp=Z,9.2nm,1.3s						
CMB				LR	LR		

	comp=Z,5µm,22.0s						
J05D	Fort Rock, OR	89.72	46	P	P	17 28 50.4	+0.1
	baz=260						
BEKR	Beckworth	89.80	50	*e*P	P	17 28 52.0	+1.2
	comp=Z,69nm,2.0s						
BEKR				LR	LR		
	comp=Z,5µm,21.0s						
I05D	Terrebonne, OR	89.83	45	P	P	17 28 50.7	0.0
	baz=260						
RUBR	Rubicon Trail	89.83	51	PFAKE		17 29 00.0	+9.0
RUBR				LR	LR		
	comp=Z,6µm,22.0s						
K05A	Summer Lake	89.87	47	*e*P	P	17 28 52.5	+1.5
	comp=Z,21nm,1.1s						
K05A				LR	LR		
	comp=Z,5µm,22.0s						
D05A	Enumclaw	89.88	43	*e*P	P	17 28 51.4	+0.7
	comp=Z,56nm,1.4s						
D05A				LR	LR		
	comp=Z,11µm,22.0s						
LON	Longmire	89.92	43	PFAKE		17 29 00.0	+8.9
LON				LR	LR		
	comp=Z,10µm,22.0s						
BLG	Laguna Peak, P	89.94	56	P	P	17 28 51.5	+0.1
	baz=262						
G05D	Wamic, OR	90.00	45	P	P	17 28 52.1	+0.7
	baz=260						
B05A	Bryant	90.00	41	P	P	17 28 51.8	+0.6
	baz=260						
F05D	White Salmon	90.01	44	P	P	17 28 52.4	+1.0
	baz=260						
PINE	Pine Mountain	90.02	46	*e*P	P	17 28 52.6	+0.9
	comp=Z,11nm,1.0s						
PINE				LR	LR		
	comp=Z,7µm,20.0s						
VOG	Valley Oaks Go	90.02	54	P	P	17 28 52.1	+0.5
	baz=261						
MOD	Modoc Plateau	90.17	48	*e*P	P	17 28 52.3	-0.1
	comp=Z,12nm,1.1s						
MOD				LR	LR		
	comp=Z,9µm,20.0s						
VES	Vestal, Richgr	90.18	54	P	P	17 28 52.5	+0.1
	baz=262						
SCI2	San Clemente I	90.21	57	P	P	17 28 54.0	+1.4
	baz=262						
VCNR	Virginia City	90.25	51	PFAKE		17 29 00.0	+7.0
VCNR				LR	LR		
	comp=Z,5µm,21.0s						
PNTR	Pine Nut	90.26	51	*e*P	P	17 28 54.3	+1.2
	comp=Z,84nm,1.8s						
PNTR				LR	LR		
	comp=Z,6µm,22.0s						
ARVC	Arvin	90.28	55	P	P	17 28 54.6	+1.6
	baz=262						
OSI	Osito Audit: C	90.30	55	PFAKE		17 29 00.0	+6.9
OSI				LR	LR		
	comp=Z,7µm,19.0s						
OSI	Osito Audit: C	90.30	55	P	P	17 28 53.6	+0.5
	baz=262						
WAKR	Walker	90.30	51	*e*P	P	17 28 51.7	-1.5
	comp=Z,56nm,1.9s						
WAKR				LR	LR		
	comp=Z,4µm,20.0s						
CIS	Catalina Islan	90.38	57	P	P	17 28 54.0	+0.5
	baz=262						
B06A	Marblemount	90.45	41	PFAKE		17 29 00.0	+6.7
B06A				LR	LR		
	comp=Z,4µm,18.0s						
MDPB	Devils Postpil	90.45	52	*e*P	P	17 28 54.4	+0.4
	comp=Z,48nm,1.9s						
MDPB				LR	LR		
	comp=Z,4µm,21.0s						
G06A	Carlson Farm,	90.47	45	PFAKE		17 29 10.0	+16
G06A				LR	LR		
	comp=Z,4µm,22.0s						
OMMB	Old Mammoth Mi	90.51	52	*e*P	P	17 28 55.4	+1.0
	comp=Z,42nm,1.9s						
OMMB				LR	LR		
	comp=Z,4µm,21.0s						
PAHR	Pah Rah Range	90.52	50	*e*P	P	17 28 55.2	+1.1
	comp=Z,36nm,1.5s						
PAHR				LR	LR		
	comp=Z,4µm,21.0s						
YERR	Yerington	90.52	51	*e*P	P	17 28 54.1	-0.1
	comp=Z,28nm,1.5s						
YERR				LR	LR		
	comp=Z,6µm,22.0s						
FMP	Fort Macarthur	90.52	56	P	P	17 28 55.1	+1.0
	baz=262						
LLLB	Lillooet	90.56	39	PFAKE		17 29 10.0	+16
LLLB				LR	LR		
	comp=Z,14µm,22.0s						
BTK	Batken	90.56	310	*e*P	P	17 28 53.2	-1.1
	comp=Z,56nm,1.0s						
BTK	Batken	90.56	310	*e*P	P	17 28 53.2	-1.1
BTK				pmax	pmax		
	comp=Z,56nm,1.0s						
DECC	Green Verdugo	90.57	56	P	P	17 28 55.2	+0.9
	baz=262						
MLAC	Mammoth, Mammo	90.64	52	P	P	17 28 55.3	+0.5
	baz=262						
ISA	Isabella, Lake	90.65	54	*e*P	P	17 28 55.0	+0.2
	comp=Z,27nm,1.4s						
ISA				LR	LR		
	comp=Z,6µm,22.0s						
ISA	Isabella, Lake	90.65	54	P	P	17 28 55.5	+0.7
	baz=262						
PASC	Pasadena Art C	90.68	56	PFAKE		17 29 10.0	+15
PASC				LR	LR		
	comp=Z,4µm,19.0s						
OTUK	Ortayu	90.78	318	P	P	17 28 55.1	+0.2
OTUK				pmax	pmax		
	comp=Z,15nm,1.4s						
LTY	Liberty	90.78	43	PFAKE		17 29 10.0	+15
LTY				LR	LR		
	comp=Z,10µm,21.0s						
MWC	Mount Wilson	90.79	56	*e*P	P	17 28 55.7	+0.2
	comp=Z,48nm,1.1s						
MWC				LR	LR		
	comp=Z,4µm,20.0s						
GAR	Garm	90.79	309	*e*P	P	17 28 54.7	-0.7
	comp=Z,81nm,1.2s						
GAR				LR	LR		
	comp=Z,5µm,21.0s						
GAR	Garm	90.79	309	*e*P	P	17 28 54.7	-0.7
GAR				pmax	pmax		
	comp=Z,81nm,1.2s						
GAR				MLR	MLR		
	comp=Z,5µm,21.0s						
BRZS	Berezniki	90.85	320	*e*P	P	17 28 54.5	-0.7
BRZS				pmax	pmax		
	comp=Z,145nm,3.7s						
BRZS	Berezniki	90.85	320	*e*P	P	17 28 54.5	-0.7
	comp=Z,144nm,3.7s						
EDW2	Edwards Air Fo	90.93	55	P	P	17 28 57.1	+1.1
	baz=262,SNR=8.4						
RYN	Ryan	91.03	51	*e*P	P	17 28 56.7	+0.1
	comp=Z,53nm,1.8s						
RYN				LR	LR		
	comp=Z,5µm,22.0s						
TIN	Tinemaha, Big	91.04	53	P	P	17 28 57.3	+0.7
	baz=262						
F07A	Phinny Hill Vi	91.06	44	PFAKE		17 29 10.0	+14
F07A				LR	LR		
	comp=Z,7µm,22.0s						
CWC	Cottonwood Cre	91.07	54	P	P	17 28 57.9	+1.1
	baz=262						
I07A	Izee	91.09	46	*e*P	P	17 28 57.7	+1.1
	comp=Z,8.8nm,1.0s						
JBG	Jabagly	91.12	312	*e*P	P	17 28 57.5	+0.7
JBG				pmax	pmax		
	comp=Z,126nm,2.5s						
BFSC	Mount Baldy Ra	91.12	56	P	P	17 28 58.0	+1.0
	baz=262						
NV01	Mina Array Sit	91.17	52	*e*P	P	17 28 58.4	+1.1
NVAR	Mina Array Bea	91.17	52	P	P	17 28 58.4	+1.1
	comp=Z,4.2nm,1.0s,baz=254,slow=5.8,SNR=19						
NVAR				PP	PP	17 32 38.7	+3.9
	comp=Z,0.2nm,0.4s,baz=249,slow=7.5,SNR=3.0						
NVAR				PKPPKP	P'P'df	17 54 29.3	-0.7
	comp=Z,0.2nm,0.4s,baz=123,slow=4.1,SNR=3.7						
NVAR				LR	LR	18 04 32.3	
	comp=Z,3µm,19.9s,baz=274,slow=32						
KBL	Kabul	91.19	304	*e*P	P	17 28 56.4	-1.1
	comp=Z,42nm,0.6s						
KBL				LR	LR		
	comp=Z,2µm,22.0s						
KBL	Kabul	91.19	304	P	P	17 28 56.0	-1.4
KBL				pmax	pmax		
	comp=Z,64nm,0.8s						
KK31	Karatay Array	91.24	313	*e*P	P	17 28 56.5	-0.8
	comp=Z,81nm,1.8s						
KK31	Karatay Array	91.24	313	*i* P	P	17 28 56.6	-0.6
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	Karatay Array	91.24	313	*e*P	P	17 28 56.3	-0.9
	comp=Z,81nm,1.8s						
KKAR	Karatay Array	91.24	313	*e*P	P	17 28 56.3	-0.9
KKAR				pmax	pmax		
	comp=Z,81nm,1.8s						
LRMC	Laurel Mtn Rad	91.26	55	P	P	17 28 58.4	+0.8
	baz=262,SNR=9.0						
NV11	Mina Array Sit	91.28	52	*e*P	P	17 28 58.5	+0.8
	comp=Z,2.9nm,1.4s						
NV11				LR	LR		
	comp=Z,300nm,22.0s						
109C	Camp Elliot, M	91.40	57	P	P	17 28 59.1	+1.0
	baz=263						
CPE	Camp Elliot	91.40	57	PFAKE		17 29 10.0	+12
CPE				LR	LR		
	comp=Z,5µm,20.0s						
HAWA	Hanford	91.41	44	PFAKE		17 29 10.0	+12
HAWA				LR	LR		
	comp=Z,7µm,22.0s						
KVN	Kaiserville	91.41	51	*e*P	P	17 28 59.1	+0.8
	comp=Z,60nm,1.8s						
KVN				LR	LR		
	comp=Z,4µm,21.0s						
MURC	Murrieta	91.42	56	P	P	17 28 59.3	+1.1
	baz=262						
DAC	Darwin (Calif)	91.44	54	*e*P	P	17 28 58.9	+0.4
	comp=Z,48nm,1.8s						
DAC				LR	LR		
	comp=Z,6µm,21.0s						
IUG	Iuzhnay	91.45	312	*e*P	P	17 28 58.6	+0.3
IUG				pmax	pmax		
	comp=Z,21nm,3.1s						
IUG	Iuzhnay	91.45	312	*e*P	P	17 28 58.6	+0.3
	comp=Z,21nm,3.1s						
WVOR	Wild Horse Val	91.47	48	*e*P	P	17 28 58.8	+0.3
	comp=Z,42nm,1.4s						
WVOR				LR	LR		
	comp=Z,7µm,20.0s						
WVOR	Wild Horse Val	91.47	48	*e*P	P	17 28 58.8	+0.3
WVOR				pmax	pmax		
	comp=Z,43nm,1.4s						
WVOR				MLR	MLR		
	comp=Z,7µm,20.0s						
MPMC	Manual Prospec	91.50	54	P	P	17 28 59.0	+0.2
	baz=262						
G08A	Pilot Rock	91.65	45	*e*P	P	17 28 59.7	+0.5
	comp=Z,11nm,1.3s						
G08A				LR	LR		
	comp=Z,5µm,20.0s						
GRAC	Grapevine Rang	91.72	53	P	P	17 29 00.7	+1.1
	baz=262						
BRLS	Borolday	91.72	313	*e*S	SKSac	17 39 23.4	-4.4
J08A	Circle Bar Ran	91.72	47	*e*P	P	17 28 58.8	-0.8
	comp=Z,18nm,1.4s						
J08A				LR	LR		
	comp=Z,7µm,21.0s						
BBRC	Big Bear Solar	91.73	56	P	P	17 28 59.4	-0.6
	baz=263						
BAR	Barrett	91.74	57	PFAKE		17 29 10.0	+10
BAR				LR	LR		
	comp=Z,6µm,20.0s						
RRX	Edison Barstow	91.74	55	P	P	17 28 59.4	-0.4
	baz=263						
E08A	Dider Farm, El	91.75	44	PFAKE		17 29 10.0	+11
E08A				LR	LR		
	comp=Z,10µm,22.0s						
TAS	Tashkent	91.89	311	P	P	17 29 02.1	+1.8
D08A	Wollman Farm,	91.92	43	PFAKE		17 29 10.0	+10
D08A				LR	LR		
	comp=Z,10µm,21.0s						
GSC	Goldstone, Bar	91.95	55	*e*P	P	17 29 02.3	+1.5
	comp=Z,16nm,1.2s						
GSC				LR	LR		
	comp=Z,5µm,22.0s						
GSC	Goldstone, Bar	91.95	55	P	P	17 29 01.6	+0.8
	baz=263						
MONP2	Monument Peak	91.97	57	P	P	17 29 01.9	+0.8
	baz=263						
PFO	Pinyon Flats O	92.03	57	*e*P	P	17 29 01.7	+0.4
	comp=Z,22nm,1.4s						
PFO				LR	LR		
	comp=Z,6µm,19.0s						
PFO	Pinyon Flats O	92.03	57	*e*P	P	17 29 01.7	+0.4
PFO				pmax	pmax		
	comp=Z,22nm,1.4s						
PFO				MLR	MLR		
	comp=Z,6µm,19.0s						
PFO	Pinyon Flats O	92.03	57	P	P	17 29 01.8	+0.6
	baz=263						
FURC	Furnace Creek,	92.05	54	P	P	17 29 02.1	+1.1
	baz=263						
IKP	In-Ko-Pah, Jac	92.20	58	P	P	17 29 03.3	+1.3
	baz=263						
BMN	Battle Mountai	92.26	50	*e*P	P	17 29 03.2	+1.0
	comp=Z,19nm,1.2s						
BMN				LR	LR		
	comp=Z,5µm,22.0s						
HEC	Hector,Ludlow	92.28	55	P	P	17 29 03.3	+1.0
	baz=263						
E09A	Wood Farm, Sta	92.38	44	PFAKE		17 29 10.0	+7.6
E09A				LR	LR		
	comp=Z,10µm,22.0s						
SHOC	Shoshone, Teco	92.45	54	P	P	17 29 04.0	+1.0
	baz=263						
BELC	Belle Mtn. Jos	92.45	56	P	P	17 29 04.3	+1.1
	baz=263						
C09A	Chrisman Ranch	92.46	42	PFAKE		17 29 10.0	+7.2
C09A				LR	LR		
	comp=Z,7µm,21.0s						
SWSC	Sam W. Stewart	92.50	57	P	P	17 29 04.0	+0.7
	baz=263						
SYO	Syowa Base	92.55	199	⇓*i*P	P	17 29 02.2	-0.5
TPNV	Topopah Spring	92.60	53	*e*P	P	17 29 04.2	+0.4
	comp=Z,16nm,1.0s						
TPNV				LR	LR		
	comp=Z,7µm,21.0s						
TPNV	Topopah Spring	92.60	53	P	P	17 29 04.6	+0.7
	baz=263,SNR=8.0						
TUQ	Turquoise Moun	92.68	55	P	P	17 29 04.9	+0.7
	baz=263						
BVAR	Borovoye Array	92.73	323	P	P	17 29 02.2	-1.6
	comp=Z,25nm,0.6s,baz=113,slow=5.6,SNR=141						
BMO	Blue Mountains	92.75	45	*e*P	P	17 29 04.2	-0.1
	comp=Z,9.4nm,1.1s						
BMO				LR	LR		
	comp=Z,4µm,20.0s						
BRVK	Borovoye	92.80	323	*e*P	P	17 29 02.6	-1.5
	comp=Z,26nm,0.7s						
BRVK				LR	LR		
	comp=Z,3µm,21.0s						
BRVK	Borovoye	92.80	323	*ce*P	P	17 29 02.4	-1.8
BRVK				pmax	pmax		
	comp=Z,64nm,1.5s						
GMRC	Granite Mounta	92.82	55	P	P	17 29 05.5	+0.6
	baz=263						
BC3	Big Chuckawall	92.87	57	P	P	17 29 06.2	+1.1
	baz=264						
F10A	Beach Ranch, E	92.94	44	*e*P	P	17 29 05.0	-0.1
	comp=Z,12nm,1.1s						
F10A				LR	LR		
	comp=Z,4µm,22.0s						
IRM	Iron Mountain	93.18	56	P	P	17 29 07.4	+1.0
	baz=264						
R11A	Troy Canyon, C	93.28	52	*e*P	P	17 29 08.1	+1.2
	comp=Z,34nm,1.6s						
R11A				LR	LR		
	comp=Z,2µm,18.0s						
R11A	Troy Canyon, C	93.28	52	P	P	17 29 07.5	+0.5
	baz=264,SNR=10						
NEW	Newport	93.29	42	*e*P	P	17 29 06.7	+0.1
	comp=Z,13nm,1.4s						
NEW				LR	LR		
	comp=Z,8µm,20.0s						
NEW	Newport	93.29	42	*e*P	P	17 29 06.7	+0.1
NEW				pmax	pmax		
	comp=Z,13nm,1.4s						
NEW				MLR	MLR		
	comp=Z,8µm,20.0s						
NEW	Newport	93.29	42	P	P	17 29 06.6	+0.1
	baz=263						
LDFC	Landfair	93.31	55	PFAKE		17 29 20.0	+13
LDFC				LR	LR		
	comp=Z,4µm,19.0s						
GLA	Glamis	93.32	57	PFAKE		17 29 20.0	+13
GLA				LR	LR		
	comp=Z,5µm,20.0s						
GLA	Glamis	93.32	57	P	P	17 29 07.3	+0.2
	baz=264						
SHPR	Sheep Range	93.42	54	*e*P	P	17 29 08.7	+1.1
	comp=Z,20nm,1.3s						
SHPR				LR	LR		
	comp=Z,5µm,22.0s						
Y12C	Blythe	93.65	57	PFAKE		17 29 20.0	+11
Y12C				LR	LR		
	comp=Z,4µm,18.0s						
Y12C	Blythe	93.65	57	P	P	17 29 08.7	+0.1
	baz=264						
NEE2	Needles Airpor	93.67	56	P	P	17 29 08.3	-0.3
	baz=264						
ELK	Elko	93.80	50	*e*P	P	17 29 10.0	+0.6
	comp=Z,19nm,1.3s						
ELK				LR	LR		
	comp=Z,6µm,22.0s						
ELK	Elko	93.80	50	*e*P	P	17 29 10.0	+0.6
ELK				pmax	pmax		
	comp=Z,19nm,1.3s						
ELK				MLR	MLR		
	comp=Z,6µm,22.0s						
PDMCI	Parker Dam,Lak	94.02	56	P	P	17 29 10.6	+0.4
	baz=264						
113A	Mohawk Valley,	94.18	58	PFAKE		17 29 20.0	+9.0
113A				LR	LR		
	comp=Z,5µm,19.0s						
W13A	Hualapai Mount	94.31	55	*e*P	P	17 29 11.9	+0.1
	comp=Z,9.5nm,1.0s						
W13A				LR	LR		
	comp=Z,4µm,19.0s						
PSUT	Pine Spring	94.65	52	*e*P	P	17 29 14.2	+0.8
	comp=Z,39nm,1.7s						
HLID	Hailey	94.68	47	*e*P	P	17 29 13.3	0.0
	comp=Z,12nm,1.6s						
HLID				LR	LR		
	comp=Z,6µm,21.0s						
HLID	Hailey	94.68	47	P	P	17 29 13.5	+0.2
	baz=265						
214A	Organ Pipe Nat	94.91	59	P	P	17 29 14.5	+0.1
	baz=265						
Y14A	Wickenburg	94.92	57	PFAKE		17 29 30.0	+16
Y14A				LR	LR		
	comp=Z,4µm,19.0s						
CCUT	Cedar City	94.95	53	*e*P	P	17 29 16.5	+1.8
	comp=Z,44nm,1.9s						
SRIG	Santa Rosalia	94.98	63	PFAKE		17 29 30.0	+15
SRIG				LR	LR		
	comp=Z,4µm,20.0s						
LCMT	Little Creek M	95.00	53	*e*P	P	17 29 15.6	+0.8
	comp=Z,12nm,1.2s						
SZCU	Shurtz Canyon	95.17	53	*e*P	P	17 29 16.9	+1.2
	comp=Z,14nm,1.3s						
MRIV	Mauritius Mete	95.24	249	PFAKE		17 29 30.0	+14
MRIV				LR	LR		
	comp=Z,1µm,20.0s						
MSO	Missoula	95.29	44	PFAKE		17 29 30.0	+14
MSO				LR	LR		
	comp=Z,9µm,22.0s						
MSO	Missoula	95.29	44	P	P	17 29 15.2	-0.7
	baz=265						
KNB	Kanab	95.33	53	*e*P	P	17 29 16.2	-0.2
	comp=Z,56nm,1.8s						
BGU	Big Grassy Mou	95.48	50	*e*P	P	17 29 17.3	+0.3
	comp=Z,21nm,1.7s						
DUG	Dugway, Tooele	95.59	50	*e*P	P	17 29 15.5	-2.0
	comp=Z,16nm,1.5s						
DUG				LR	LR		
	comp=Z,5µm,22.0s						
DUG	Dugway, Tooele	95.59	50	*e*P	P	17 29 15.5	-2.0
DUG				pmax	pmax		
	comp=Z,16nm,1.5s						
DUG				MLR	MLR		
	comp=Z,5µm,22.0s						
DUG	Dugway, Tooele	95.59	50	P	P	17 29 16.6	-0.9
	baz=266						
U15A	North Rim	95.71	54	*e*P	P	17 29 17.3	-1.0
	comp=Z,11nm,1.1s						
U15A				LR	LR		
	comp=Z,5µm,22.0s						
HVU	Hansel Valley	95.74	49	*e*P	P	17 29 18.7	+0.5
	comp=Z,17nm,1.5s						
HVU	Hansel Valley	95.74	49	*e*P	P	17 29 18.7	+0.5
HVU				pmax	pmax		
	comp=Z,17nm,1.5s						
MTPU	Mount Pierson	95.92	52	*e*P	P	17 29 19.0	-0.4
MSU	Marysvale	95.96	52	*e*P	P	17 29 21.5	+2.2
MSU	Marysvale	95.96	52	*e*P	P	17 29 21.5	+2.2
YKW3	Yellowknife Ar	96.01	28	*e*P	P	17 29 19.4	+0.7
	comp=Z,18nm,1.1s						
YKW3				LR	LR		
	comp=Z,5µm,21.0s						
YKA	Yellowknife Ar	96.01	28	P	P	17 29 18.0	-0.7
	comp=Z,7.9nm,0.6s,baz=267,slow=4.5,SNR=46						
YKA				PKKP	PKKPbc	17 46 05.7	-3.5
	comp=Z,1.4nm,0.5s,baz=83,slow=2.7,SNR=12						
YKA				LR	LR	18 09 08.5	
	comp=Z,364nm,19.7s,baz=292,slow=33						
YKA	Yellowknife Ar	96.01	28	P	P	17 29 18.0	-0.7
YKB5	Yellowknife Ar	96.01	28	*e*P	P	17 29 18.0	-0.7
DLMT	Dillon	96.12	45	PFAKE		17 29 30.0	+10
DLMT				LR	LR		
	comp=Z,4µm,21.0s						
HSIG		96.27	62	PFAKE		17 29 30.0	+9.4
HSIG				LR	LR		
	comp=Z,6µm,19.0s						
WUAZ	Wupatki	96.39	55	PFAKE		17 29 30.0	+8.7
WUAZ				LR	LR		
	comp=Z,5µm,22.0s						
WUAZ	Wupatki	96.39	55	P	P	17 29 20.6	-0.6
	baz=266						
HWUT	Hardware Ranch	96.63	49	PFAKE		17 29 30.0	+7.7
HWUT				LR	LR		
	comp=Z,3µm,22.0s						
TUC	Tucson	96.65	58	PFAKE		17 29 30.0	+7.6
TUC				LR	LR		
	comp=Z,6µm,20.0s						
TUC	Tucson	96.65	58	P	P	17 29 21.6	-0.8
	baz=266						
TMUT	Trail Mountain	96.77	51	*e*P	P	17 29 23.9	+0.9
	comp=Z,14nm,1.2s						
BOZ	Bozeman (W)	96.81	45	*e*P	P	17 29 23.2	+0.3
	comp=Z,3.8nm,1.1s						
BOZ				LR	LR		
	comp=Z,6µm,22.0s						
BOZ	Bozeman (W)	96.81	45	*e*P	P	17 29 23.2	+0.3
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOZ				MLR	MLR		
	comp=Z,6µm,22.0s						
BOZ	Bozeman (W)	96.81	45	P	P	17 29 22.7	-0.3
	baz=267						
AHID	Auburn Hatcher	97.04	48	PFAKE		17 29 40.0	+16
AHID				LR	LR		
	comp=Z,5µm,20.0s						
P17A	Butcher Ranch,	97.14	51	*e*P	Pdif	17 29 25.7	+1.0
	comp=Z,10nm,1.3s						
FXWY	Fox Creek	97.14	47	*e*P	Pdif	17 29 25.5	+0.9
	comp=Z,4.1nm,1.1s						
TPAW	Teton Pass	97.19	47	PFAKE		17 29 40.0	+15
TPAW				LR	LR		
	comp=Z,6µm,20.0s						
IMW	Indian Meadow	97.22	47	*e*P	Pdif	17 29 25.8	+0.7
	comp=Z,19nm,1.8s						
IMW				LR	LR		
	comp=Z,5µm,20.0s						
SNOW	Snow King Moun	97.33	47	PFAKE		17 29 40.0	+14
SNOW				LR	LR		
	comp=Z,6µm,20.0s						
MOOW	Moose Ponds	97.35	47	PFAKE		17 29 40.0	+14
MOOW				LR	LR		
	comp=Z,6µm,21.0s						
FLWY	Flagg Ranch	97.40	46	PFAKE		17 29 40.0	+14
FLWY				LR	LR		
	comp=Z,5µm,20.0s						
LOHW	Long Hollow	97.45	47	PFAKE		17 29 40.0	+14
LOHW				LR	LR		
	comp=Z,6µm,21.0s						
X18A	Snowflake	97.49	56	PFAKE		17 29 40.0	+14
X18A				LR	LR		
	comp=Z,4µm,20.0s						

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H17A  Grant Village      97.50  46  PFAKE               17 29 40.0 +14
H17A                                LR        LR
      comp=Z,9µm,21.0s
H17A  Grant Village      97.50  46  P         P         17 29 26.1 -0.1
      baz=268
LKWY  Lake               97.63  46  PFAKE               17 29 40.0 +13
LKWY                                LR        LR
      comp=Z,8µm,21.0s
W18A  Petrified Fore     97.70  56  PFAKE               17 29 40.0 +13
W18A                                LR        LR
      comp=Z,4µm,19.0s
W18A  Petrified Fore     97.70  56  P         Pdif      17 29 27.3  0.0
      baz=267
BW06  Boulder Array      98.18  48 eP         P         17 29 29.1 -0.1
      comp=Z,7.0nm,1.1s
BW06                                LR        LR
      comp=Z,6µm,20.0s
PD31  Pinedale Array     98.18  48 eP         P         17 29 28.9 -0.4
PDAR  Pinedale Array     98.18  48  P         P         17 29 28.9 -0.4
      comp=Z,2.5nm,0.9s,baz=218,slow=1.7,SNR=12
PDAR                                PKKP      PKKPbc    17 45 59.1 -3.6
      comp=Z,0.4nm,0.6s,baz=111,slow=4.9,SNR=5.7
PDAR                                PKPPKP              17 54 16.1
      comp=Z,1.3nm,1.1s,baz=90,slow=1.0,SNR=7.5
EGMT  Eagleton           98.19  43  PFAKE               17 29 40.0 +11
EGMT                                LR        LR
      comp=Z,6µm,21.0s
EGMT  Eagleton           98.19  43  P         P         17 29 28.8 -0.2
      baz=269
PV10  Paradox Valley     98.41  52  PFAKE               17 29 40.0 +10
PV10                                LR        LR
      comp=Z,6µm,21.0s
PV14  Lion Creek, Pa     98.42  52  PFAKE               17 29 40.0 +9.5
PV14                                LR        LR
      comp=Z,6µm,22.0s
PV23  Carpenter Ridg     98.44  52  PFAKE               17 29 40.0 +9.4
PV23                                LR        LR
      comp=Z,5µm,21.0s
PV19  Morning Glory      98.45  52  PFAKE               17 29 40.0 +9.4
PV19                                LR        LR
      comp=Z,5µm,21.0s
RLMT  Red Lodge          98.46  45  PFAKE               17 29 40.0 +10
RLMT                                LR        LR
      comp=Z,4µm,22.0s
RLMT  Red Lodge          98.46  45  P         P         17 29 29.7 -0.7
      baz=269
PV20  West Nyswonger     98.47  52  PFAKE               17 29 40.0 +9.4
PV20                                LR        LR
      comp=Z,5µm,21.0s
PV21  Cone Mtn., Par     98.47  52  PFAKE               17 29 40.0 +9.3
PV21                                LR        LR
      comp=Z,4µm,20.0s
PV17  East Wray Mesa     98.47  52  PFAKE               17 29 40.0 +9.3
PV17                                LR        LR
      comp=Z,6µm,19.0s
PV16  Nyswonger Mesa     98.51  52  PFAKE               17 29 40.0 +9.2
PV16                                LR        LR
      comp=Z,5µm,21.0s
PV18  Skein Mesa, Pa     98.51  52  PFAKE               17 29 40.0 +9.2
PV18                                LR        LR
      comp=Z,5µm,22.0s
PV04  Paradox Valley     98.52  52  PFAKE               17 29 40.0 +9.2
PV04                                LR        LR
      comp=Z,6µm,22.0s
PV11  David Mesa, Pa     98.54  52  PFAKE               17 29 40.0 +9.0
PV11                                LR        LR
      comp=Z,5µm,20.0s
PV03  Paradox Valley     98.56  52  PFAKE               17 29 40.0 +8.9
PV03                                LR        LR
      comp=Z,5µm,21.0s
PV13  Radium Mtn., P     98.58  53  PFAKE               17 29 40.0 +8.8
PV13                                LR        LR
      comp=Z,5µm,21.0s
SVE   Sverdlovsk         98.59 326 eP         P         17 29 30.1 -0.3
SVE                                eS         SKSac     17 39 59.6 -4.1
SVE                                 pmax      pmax
      comp=Z,16nm,0.9s
PV12  Saucer Basin,      98.60  52  PFAKE               17 29 40.0 +8.8
PV12                                LR        LR
      comp=Z,6µm,21.0s
PV22  Blue Mesa, Par     98.61  52  PFAKE               17 29 40.0 +8.7
PV22                                LR        LR
      comp=Z,5µm,22.0s
PV07  Paradox Valley     98.72  52  PFAKE               17 29 40.0 +8.2
PV07                                LR        LR
      comp=Z,4µm,20.0s
MVCO  Mesa Verde         98.80  53  PFAKE               17 29 40.0 +7.8
MVCO                                LR        LR
      comp=Z,4µm,21.0s
MVCO  Mesa Verde         98.80  53  P         P         17 29 31.9 -0.2
      baz=268
AB31  Akbulak array      99.03 319  P         Pdif      17 29 30.2 -2.4
AB31                                pmax      pmax
      comp=Z,5.0nm,0.7s
ABKAR Akbulak array      99.03 319 eP         Pdif      17 29 30.8 -1.8
      comp=Z,6.5nm,0.8s
O20A  White River Ci     99.09  51  PFAKE               17 29 40.0 +6.6
O20A                                LR        LR
      comp=Z,6µm,21.0s
O20A  White River Ci     99.09  51  P         Pdif      17 29 33.1 -0.3
      baz=268
121A  Cookes Peak, D     99.20  58  P         Pdif      17 29 33.0 -1.0
      baz=268
MSEY  Mahe Island        99.55 264  PFAKE               17 29 50.0 +14
MSEY                                LR        LR
      comp=Z,2µm,20.0s
ARU   Arti               99.75 326  P         Pdif      17 29 35.1 -0.5
      comp=Z,6.4nm,0.5s,baz=127,slow=2.9,SNR=32
ARU   Arti               99.75 326 ePdif      Pdif      17 29 35.3 -0.3
      comp=Z,21nm,0.6s
ARU                                 LR        LR
      comp=Z,2µm,20.0s
ARU   Arti               99.75 326c iP        Pdif      17 29 34.8 -0.8
ARU                                                     17 33 39.5
ARU                                 PPP       PPP       17 35 45.8
ARU                                 S         SKSac     17 40 05.8 -3.7
ARU                                 PS        PS        17 42 33.4 -6.3
ARU                                 SSS       SSS       17 51 41.3
ARU                                 pmax      pmax
      comp=Z,17nm,0.6s
ARU                                 MLR       MLR
      comp=Z,2µm,19.0s
RWWY  Rawlins            99.90  49  PFAKE               17 29 50.0 +13
RWWY                                LR        LR
      comp=Z,4µm,19.0s
Y22D  IRIS PASSCAL I     99.98  57  PFAKE               17 29 50.0 +13
Y22D                                LR        LR
      comp=Z,4µm,19.0s
Y22D  IRIS PASSCAL I     99.98  57  P         Pdif      17 29 36.6 -0.8
      baz=268
SMCO  Snowmass          100.05  52  PFAKE               17 29 50.0 +12
SMCO                                LR        LR
      comp=Z,4µm,21.0s
S22A  4UR Ranch, Cre    100.14  53  PFAKE               17 29 50.0 +12
S22A                                LR        LR
      comp=Z,6µm,21.0s
S22A  4UR Ranch, Cre    100.14  53  P         Pdif      17 29 37.2 -1.0
      baz=269
SNAA  Sanae             100.22 187  P         Pdif      17 29 41.6 +4.0
SNAA  Sanae             100.22 187  PKiKP     PKiKP     17 34 06.1 +1.5
SNAA  Sanae             100.22 187 ePdif      Pdif      17 29 37.8 +0.2
SNAA                                LR        LR
      comp=Z,6µm,18.0s
SNAA  Sanae             100.22 187⇑eP         Pdif      17 29 38.2 +0.6
GEYT  Alibeck           100.25 307  P         Pdif      17 29 38.0 -0.4
      comp=Z,4.8nm,0.8s,baz=113,slow=3.3,SNR=14
GEYT                                PP        PP        17 33 38.7 -6.3
      comp=Z,2.2nm,0.8s,baz=64,slow=6.6,SNR=3.2
GYA0B ALIBECK ARRAY     100.25 307 ePdif      Pdif      17 29 37.4 -1.0
EPT   El Paso           100.25  59  PFAKE               17 29 50.0 +11
EPT                                 LR        LR
      comp=Z,8µm,20.0s
AKTO  Aktyubinsk        100.26 320  P         Pdif      17 29 37.4 -0.6
      comp=Z,3.5nm,0.6s,baz=98,slow=6.2,SNR=11
TASM  ASL Pad, Albuq    100.38  56  P         Pdif      17 29 38.7 -0.5
      baz=269
TASM  ASL Pad, Albuq    100.38  56  P         Pdif      17 29 38.8 -0.4
      baz=269
ANMO  Albuquerque       100.38  56  PFAKE               17 29 50.0 +11
ANMO                                LR        LR
      comp=Z,3µm,20.0s
ANMO  Albuquerque       100.38  56  P         Pdif      17 29 38.7 -0.5
      baz=269
K22A  Casper            100.41  48  PFAKE               17 29 50.0 +11
K22A                                LR        LR
      comp=Z,3µm,20.0s
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K22A  Casper            100.41  48  P         Pdif      17 29 38.7 -0.4
      baz=270
LAO   LASA Array        100.59  44 ePdif      Pdif      17 29 39.8 +0.1
LAO                                 LR        LR
      comp=Z,5µm,22.0s
LAO   LASA Array        100.59  44  P         Pdif      17 29 38.9 -0.8
      baz=271
HPIG                    100.81  64  PFAKE               17 29 50.0 +8.7
HPIG                                LR        LR
      comp=Z,5µm,21.0s
N23A  Red Feather La    100.85  50  PFAKE               17 29 50.0 +8.7
N23A                                LR        LR
      comp=Z,4µm,22.0s
N23A  Red Feather La    100.85  50  P         Pdif      17 29 39.9 -1.4
      baz=270
ISCO  Idaho Springs     101.10  51  PFAKE               17 29 50.0 +7.5
ISCO                                LR        LR
      comp=Z,4µm,20.0s
ISCO  Idaho Springs     101.10  51  P         Pdif      17 29 41.1 -1.4
      baz=270
SDCO  Great Sand Dun    101.19  53  PFAKE               17 29 50.0 +7.1
SDCO                                LR        LR
      comp=Z,6µm,21.0s
SDCO  Great Sand Dun    101.19  53  P         Pdif      17 29 41.7 -1.2
      baz=270
MNTX  Cornudas Mount    101.21  59  PFAKE               17 29 50.0 +7.3
MNTX                                LR        LR
      comp=Z,8µm,22.0s
MNTX  Cornudas Mount    101.21  59  P         Pdif      17 29 41.7 -1.1
      baz=269
PHWY  Pilot Hill        101.21  49  PFAKE               17 29 50.0 +7.1
PHWY                                LR        LR
      comp=Z,4µm,22.0s
VNA3  Neumayer Olymp    101.31 185  P         Pdif      17 29 43.0 +0.7
VNA3  Neumayer Olymp    101.31 185  PKiKP     PKiKP     17 34 07.1 +0.6
VNA2  Neumayer--Watz    101.41 186  PKiKP     PKiKP     17 34 02.3 -4.3
Q24A  Divide            101.47  52  PFAKE               17 30 00.0 +16
Q24A                                LR        LR
      comp=Z,3µm,19.0s
Q24A  Divide            101.47  52  P         Pdif      17 29 43.4 -0.7
      baz=270
BANOM Banah             101.47 295  P         Pdif      17 29 45.2 +1.1
UOSS  Minazif           101.52 294  PFAKE               17 30 00.0 +16
UOSS                                LR        LR
      comp=Z,900nm,21.0s
UOSS  Minazif           101.52 294  P         Pdif      17 29 44.2  0.0
HATD  Hatta, Dubai      101.58 294  P         Pdif      17 29 45.3 +0.8
SHME  Shamm             101.62 295  P         Pdif      17 29 44.4 -0.3
ASHO  Ashiyiah          101.64 294  P         Pdif      17 29 45.2 +0.4
VNA1  Neumayer--Stat    101.76 185  P         Pdif      17 29 44.9 +0.6
VNA1  Neumayer--Stat    101.76 185  PKiKP     PKiKP     17 34 09.5 +2.2
RES   Resolute Bay      101.79  15  PFAKE               17 30 00.0 +16
RES                                 LR        LR
      comp=Z,3µm,22.0s
DGMT  Dagmar            101.90  42  P         Pdif      17 29 45.1 -0.4
      baz=273
T25A  Trinidad          102.06  54  PFAKE               17 30 00.0 +13
T25A                                LR        LR
      comp=Z,5µm,22.0s
T25A  Trinidad          102.06  54  P         Pdif      17 29 45.3 -1.3
      baz=270
FAQ   Al Faqa, Dubai    102.06 294  P         Pdif      17 29 47.1 +0.4
RSSD  Black Hills       102.20  46  PFAKE               17 30 00.0 +13
RSSD                                LR        LR
      comp=Z,6µm,20.0s
ASUD  Al Ashush, Dub    102.30 294  P         Pdif      17 29 48.7 +1.1
PMSA  Palmer Station    102.56 164  PFAKE               17 30 00.0 +12
PMSA                                LR        LR
      comp=Z,6µm,20.0s
PMSA  Palmer Station    102.56 164 eP         Pdif      17 29 47.8 -0.2
TXAR  Lajitas Array     102.64  62  PP        PKiKP     17 34 07.4 -2.8
      comp=Z,0.8nm,1.0s,baz=285,slow=7.2,SNR=3.2
TXAR                                PKKPbc    PKKPbc    17 45 47.8 -1.5
      comp=Z,1.1nm,0.6s,baz=87,slow=4.0,SNR=10.0
FFC   Flin Flon         102.79  36  PFAKE               17 30 00.0 +11
FFC                                 LR        LR
      comp=Z,6µm,21.0s
MSTX  Muleshoe          103.42  57  PFAKE               17 30 00.0 +7.4
MSTX                                LR        LR
      comp=Z,3µm,21.0s
MSTX  Muleshoe          103.42  57  P         Pdif      17 29 51.8 -0.8
      baz=270
KSCO  Kaye Shedlock’    103.43  52  PFAKE               17 30 00.0 +7.4
KSCO                                LR        LR
      comp=Z,4µm,19.0s
KSCO  Kaye Shedlock’    103.43  52  P         Pdif      17 29 52.7 +0.1
      baz=272
ZAIG  Zacatecas         103.46  68  PFAKE               17 30 00.0 +6.7
ZAIG                                LR        LR
      comp=Z,5µm,20.0s
OGNE  Ogallala          103.81  50  PFAKE               17 30 10.0 +16
OGNE                                LR        LR
      comp=Z,6µm,22.0s
OGNE  Ogallala          103.81  50  P         Pdif      17 29 53.9 -0.3
      baz=273
AMTX  Amarillo          104.31  56  PFAKE               17 30 10.0 +13
AMTX                                LR        LR
      comp=Z,4µm,21.0s
AMTX  Amarillo          104.31  56  P         Pdif      17 29 56.2 -0.3
      baz=271
KIRV  Kirov             104.42 329  Pdiff     Pdif      17 29 55.9 -0.4
      comp=Z,6.3nm,0.5s,baz=112,slow=3.6,SNR=4.0
ABPO  Ambohimpanom      104.98 248  PFAKE               17 30 10.0 +10
ABPO                                LR        LR
      comp=Z,3µm,19.0s
MDND  Maddock           105.01  42  PFAKE               17 34 30.0 +16
MDND                                LR        LR
      comp=Z,6µm,21.0s
MDND  Maddock           105.01  42  P         PKiKP     17 34 14.1 +0.3
      baz=276
PRGR  Permogore         105.62 332 eP         Pdif      17 30 00.6 -1.0
PRGR                                pmax      pmax
      comp=Z,31nm,0.8s
CBKS  Cedar Bluff       105.69  52  PFAKE               17 34 30.0 +15
CBKS                                LR        LR
      comp=Z,3µm,20.0s
SUSD  Miller            105.82  46  P         PKiKP     17 34 14.0 -1.5
      baz=276
KBS   Kingsbay          105.88 353  PFAKE               17 34 30.0 +15
KBS                                 LR        LR
      comp=Z,3µm,22.0s
SPA0  Spitsbergen Ar    105.89 352 ePdif      Pdif      17 30 02.1 -0.5
JCT   Junction City     105.99  60  PFAKE               17 34 30.0 +14
JCT                                 LR        LR
      comp=Z,4µm,21.0s
JCT   Junction City     105.99  60  P         PKiKP     17 34 15.1 -1.1
      baz=271
ABTX  Abilene, Hawle    106.07  58  PFAKE               17 34 30.0 +14
ABTX                                LR        LR
      comp=Z,7µm,22.0s
ABTX  Abilene, Hawle    106.07  58  P         PKiKP     17 34 15.0 -1.3
      baz=272
LNIG  Linares           106.34  66  PFAKE               17 34 30.0 +13
LNIG                                LR        LR
      comp=Z,6µm,20.0s
FCC   Fort Churchill    106.38  31  PFAKE               17 34 30.0 +14
FCC                                 LR        LR
      comp=Z,4µm,20.0s
833A  Chaparral WMA,    106.39  63  PFAKE               17 34 30.0 +13
833A                                LR        LR
      comp=Z,6µm,21.0s
U32A  Winter Ranch,     106.42  54  PFAKE               17 34 30.0 +13
U32A                                LR        LR
      comp=Z,4µm,20.0s
TULEG Thule             106.47  10  PFAKE               17 34 30.0 +14
TULEG                               LR        LR
      comp=Z,5µm,22.0s
WMOK  Wichita Mounta    106.70  56  PFAKE               17 34 30.0 +13
WMOK                                LR        LR
      comp=Z,4µm,20.0s
WMOK  Wichita Mounta    106.70  56  P         PKiKP     17 34 16.0 -1.3
      baz=273
BGNE  Belgrade          106.70  49  PFAKE               17 34 30.0 +13
BGNE                                LR        LR
      comp=Z,5µm,22.0s
TLIG  Tlapa             107.03  74  PFAKE               17 34 30.0 +11
TLIG                                LR        LR
      comp=Z,6µm,20.0s
ULM   Lac du Bonnet     107.11  40  PFAKE               17 34 30.0 +12
ULM                                 LR        LR
      comp=Z,12µm,22.0s
AGMN  Agassiz Nation    107.44  42  PFAKE               17 34 30.0 +12
AGMN                                LR        LR
      comp=Z,5µm,20.0s
ECSD  EROS Data Cent    107.57  46  PFAKE               17 34 30.0 +11
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ECSD                                LR        LR
      comp=Z,5µm,21.0s
KVTX  Kingsville        107.73  63  PFAKE               17 34 30.0 +11
KVTX                                LR        LR
      comp=Z,5µm,19.0s
LVZ   Lovozero          107.81 340  PFAKE               17 34 30.0 +12
LVZ                                 LR        LR
      comp=Z,3µm,22.0s
435B  Jarrell           107.89  60  PFAKE               17 34 30.0 +10
435B                                LR        LR
      comp=Z,6µm,21.0s
435B  Jarrell           107.89  60  P         PKiKP     17 34 18.2 -1.5
      baz=272
WHTX  Lake Whitney,     107.95  59  PFAKE               17 34 30.0 +10
WHTX                                LR        LR
      comp=Z,6µm,22.0s
WHTX  Lake Whitney,     107.95  59  P         PKiKP     17 34 18.3 -1.4
      baz=273
KSU1  Kansas State U    108.10  51  PFAKE               17 34 30.0 +10
KSU1                                LR        LR
      comp=Z,4µm,22.0s
TUL1  Leonard           109.05  55  PFAKE               17 34 30.0 +8.3
TUL1                                LR        LR
      comp=Z,5µm,20.0s
LVIG  Laguna Verde      109.12  72  PFAKE               17 34 30.0 +7.8
LVIG                                LR        LR
      comp=Z,4µm,22.0s
HKT   Hockley           109.45  61  PFAKE               17 34 30.0 +7.5
HKT                                 LR        LR
      comp=Z,6µm,18.0s
X37A  Clayton           109.51  56  PFAKE               17 34 30.0 +7.4
X37A                                LR        LR
      comp=Z,4µm,20.0s
ARA0  ARCESS Array S    109.80 343 ePdif      Pdif      17 30 19.8 -0.3
ARA0                               ePKiKP     PKiKP     17 34 21.4 -0.8
ARCES ARCESS Array B    109.80 343  Pdiff     Pdif      17 30 19.8 -0.3
      comp=Z,2.0nm,0.7s,baz=64,slow=4.1,SNR=12
ARCES                               PKiKP     PKiKP     17 34 21.4 -0.8
      comp=Z,9.8nm,0.4s,baz=98,slow=1.9,SNR=113
ARCES                               PKKPbc    PKKPbc    17 45 23.1 -5.3
      comp=Z,2.5nm,0.6s,baz=252,slow=1.8,SNR=14
ARE0  ARCESS Array S    109.80 343  PFAKE               17 34 30.0 +7.9
ARE0                                LR        LR
      comp=Z,100nm,20.0s
ARE0  ARCESS Array S    109.80 343 ePdif      Pdif      17 30 20.2 +0.1
SPMN  Marine on St.     110.04  44  PFAKE               17 34 40.0 +17
SPMN                                LR        LR
      comp=Z,3µm,21.0s
SPMN  Marine on St.     110.04  44  P         PKiKP     17 34 22.9 -0.4
      baz=280
DAG   Danmarks Havn     110.20 359 ePKIKP     PKiKP     17 34 22.4 -0.3
DAG                                 MLR       MLR
      comp=Z,4µm,23.0s
DAG   Danmarks Havn     110.20 359 i P        PKiKP     17 34 22.4 -0.3
      comp=Z,4µm,23.0s
SCIA  State Center      110.31  48  PFAKE               17 34 40.0 +16
SCIA                                LR        LR
      comp=Z,3µm,18.0s
NATX  Nacogdoches       110.33  59  PFAKE               17 34 40.0 +16
NATX                                LR        LR
      comp=Z,6µm,20.0s
EYMN  Ely               110.38  41  PFAKE               17 34 40.0 +16
EYMN                                LR        LR
      comp=Z,5µm,22.0s
EYMN  Ely               110.38  41  P         PKiKP     17 34 23.5 -0.4
      baz=282
HHAR  Hobbs             110.50  54  PFAKE               17 34 40.0 +16
HHAR                                LR        LR
      comp=Z,6µm,20.0s
F38A  Pierce - Schro    110.54  44  P         PKiKP     17 34 24.0 -0.1
      baz=282
E38A  The Farm, Brul    110.62  43  PFAKE               17 34 40.0 +16
E38A                                LR        LR
      comp=Z,6µm,21.0s
E38A  The Farm, Brul    110.62  43  P         PKiKP     17 34 24.2 -0.1
      baz=282
W39A  Magazine          110.75  55  PFAKE               17 34 40.0 +15
W39A                                LR        LR
      comp=Z,4µm,22.0s
MIAR  Mount Ida         110.99  56  PFAKE               17 34 40.0 +15
MIAR                                LR        LR
      comp=Z,4µm,22.0s
MIAR  Mount Ida         110.99  56  P         PKiKP     17 34 24.7 -0.7
      baz=276
G39A  Holcombe          111.16  44  P         PKiKP     17 34 25.1 -0.3
      baz=282
F39A  Loretta           111.20  43  P         PKiKP     17 34 25.2 -0.2
      baz=282
RAYN  Ar Rayn           111.27 292  PFAKE               17 34 40.0 +14
RAYN                                LR        LR
      comp=Z,1µm,22.0s
KIV   Kislovodsk        111.36 314  PFAKE               17 34 40.0 +14
KIV                                 LR        LR
      comp=Z,900nm,20.0s
KIV   Kislovodsk        111.36 314 i P        Pdif      17 30 26.5 -1.2
KIV                                i                    17 34 25.9
KIV                                e                    17 35 05.9
KIV                                e                    17 40 59.3
KIV                                ePS        PS        17 44 38.8 -0.6
KIV                                 pmax      pmax
      comp=Z,10.0nm,1.0s
KIV                                 MLR       MLR
      comp=Z,3µm,22.0s
MOS   Moscow            111.36 328 i P        Pdif      17 30 25.3 -1.9
MOS                                e                    17 35 05.4
MOS                                ePS        SP        17 44 28.3 -2.9
U40A  Yellville         111.37  54  P         PKiKP     17 34 26.1  0.0
      baz=277
WLAR  White Oak Lake    111.46  57  PFAKE               17 34 40.0 +14
WLAR                                LR        LR
      comp=Z,3µm,20.0s
X40A  Basin Creek Fa    111.60  56  PFAKE               17 34 40.0 +13
X40A                                LR        LR
      comp=Z,3µm,22.0s
LPSR  Galich'ya Gora    111.64 324 i PKIKP    PKiKP     17 34 27.0 +1.0
LPSR                               e                    17 35 07.3
LPSR                                pmax      pmax
      comp=Z,20nm,1.3s
F40A  Park Falls        111.74  43  P         PKiKP     17 34 26.1 -0.4
      baz=283
L40A  Anamosa           111.75  48  PFAKE               17 34 40.0 +13
L40A                                LR        LR
      comp=Z,4µm,22.0s
Z41A  Richland Creek    111.76  57  PFAKE               17 34 40.0 +13
Z41A                                LR        LR
      comp=Z,5µm,21.0s
G40A  Rib Lake          111.83  44  PFAKE               17 34 40.0 +13
G40A                                LR        LR
      comp=Z,5µm,20.0s
VSR   Storozhevoye      111.91 323 i PKIKP    PKiKP     17 34 27.0 +0.4
VSR                                e                    17 35 08.2
VSR                                eSP        SP        17 44 29.6 -7.0
VSR                                 pmax      pmax
      comp=Z,20nm,1.5s
C40A  Isle Royale Na    111.92  41  PFAKE               17 34 40.0 +13
C40A                                LR        LR
      comp=Z,5µm,21.0s
C40A  Isle Royale Na    111.92  41  P         PKiKP     17 34 25.7 -1.0
      baz=284
WHAR  Wooly Hollow      111.95  55  PFAKE               17 34 40.0 +13
WHAR                                LR        LR
      comp=Z,3µm,20.0s
UALR  University of     111.97  55  PFAKE               17 34 40.0 +13
UALR                                LR        LR
      comp=Z,4µm,20.0s
W41B  Gary Mavity, V    112.00  55  PFAKE               17 34 40.0 +13
W41B                                LR        LR
      comp=Z,4µm,18.0s
FCAR  Ozark Folk Cen    112.01  54  PFAKE               17 34 40.0 +13
FCAR                                LR        LR
      comp=Z,6µm,20.0s
OBN   Obninsk           112.14 327  PFAKE               17 34 40.0 +13
OBN                                 LR        LR
      comp=Z,3µm,20.0s
OBN   Obninsk           112.14 327c iPKIKP    PKiKP     17 34 27.7 +0.8
OBN                                e                    17 35 09.8
OBN                                ePPP       PPP       17 37 34.5
OBN                                e                    17 41 08.8
OBN                                 pmax      pmax
      comp=Z,10.0nm,0.5s
N41A  Harden Midland    112.26  49  PFAKE               17 34 40.0 +12
N41A                                LR        LR
      comp=Z,4µm,22.0s
N41A  Harden Midland    112.26  49  P         PKiKP     17 34 27.2 -0.5
      baz=280
```

JFWS	**Jewell Farm**	**112.29**	**46**	PFAKE		17 34 40.0	+12
JFWS				LR	LR		
	comp=Z,3µm,21.0s						
JFWS	**Jewell Farm**	**112.29**	**46**	P	**PKiKP**	**17 34 27.3**	**-0.3**
	baz=282						
DAMY	**Dhamar**	**112.31**	**283**	PFAKE		17 34 40.0	+11
DAMY				LR	LR		
	comp=Z,2µm,22.0s						
I41A	**Arkdale**	**112.32**	**45**	PFAKE		17 34 40.0	+12
I41A				LR	LR		
	comp=Z,6µm,18.0s						
COWI	**Conover**	**112.37**	**43**	PFAKE		17 34 40.0	+12
COWI				LR	LR		
	comp=Z,5µm,21.0s						
CCM	**Cathedral Cave**	**112.40**	**52**	PFAKE		17 34 40.0	+12
CCM				LR	LR		
	comp=Z,4µm,19.0s						
D41A	**Chassel**	**112.52**	**42**	PFAKE		17 34 40.0	+12
D41A				LR	LR		
	comp=Z,5µm,20.0s						
CCAR	**Cane Creek**	**112.55**	**56**	PFAKE		17 34 40.0	+12
CCAR				LR	LR		
	comp=Z,3µm,21.0s						
L42A	**Oliver, Polo**	**112.89**	**47**	PFAKE		17 34 40.0	+11
L42A				LR	LR		
	comp=Z,4µm,20.0s						
I42A	**Draeger Farm,**	**113.03**	**45**	PFAKE		17 34 40.0	+11
I42A				LR	LR		
	comp=Z,5µm,21.0s						
SLM	**Saint Louis**	**113.09**	**51**	PFAKE		17 34 40.0	+11
SLM				LR	LR		
	comp=Z,5µm,20.0s						
CCIG	**Comitan**	**113.16**	**75**	PFAKE		17 34 40.0	+10
CCIG				LR	LR		
	comp=Z,3µm,21.0s						
X43A	**Marvell**	**113.20**	**56**	PFAKE		17 34 40.0	+10
X43A				LR	LR		
	comp=Z,3µm,20.0s						
PBMO	**Poplar Bluff**	**113.24**	**53**	PFAKE		17 34 40.0	+10
PBMO				LR	LR		
	comp=Z,5µm,21.0s						
HDIL	**Hopedale**	**113.45**	**49**	PFAKE		17 34 40.0	+10
HDIL				LR	LR		
	comp=Z,4µm,22.0s						
P43A	**Skaggs, Pawnee**	**113.46**	**50**	P	**PKiKP**	**17 34 29.9**	**0.0**
	baz=281						
SOC	**Sochi**	**113.54**	**315**	*i* P	**Pdif**	**17 30 30.9**	**-6.3**
SOC				*i*		17 34 28.2	
SOC				*e*		17 35 19.4	
SOC				*e*PS	**PS**	**17 44 48.3**	**-11**
SOC				*e*SS	SS	17 50 59.6	-5.7
SOC				MLR	MLR		
	comp=Z,1µm,21.0s						
STEI	**Steigen**	**113.67**	**345**	*e*PKPdf	**PKiKP**	**17 34 29.0**	**-0.5**
GNAR	**Gosnell**	**113.69**	**54**	PFAKE		17 34 40.0	+10
GNAR				LR	LR		
	comp=Z,5µm,22.0s						
H43A	**Windswept, Lux**	**113.70**	**44**	PFAKE		17 34 40.0	+10
H43A				LR	LR		
	comp=Z,5µm,20.0s						
ATD	**Arta Tunnel**	**113.71**	**279**	PFAKE		17 34 40.0	+8.8
ATD				LR	LR		
	comp=Z,1µm,21.0s						
K43A	**Burlington**	**113.71**	**46**	PFAKE		17 34 40.0	+10
K43A				LR	LR		
	comp=Z,4µm,20.0s						
E43A	**Lone Tree Farm**	**113.74**	**42**	PFAKE		17 34 40.0	+10
E43A				LR	LR		
	comp=Z,4µm,20.0s						
E43A	**Lone Tree Farm**	**113.74**	**42**	P	**PKiKP**	**17 34 30.2**	**-0.1**
	baz=286						
VBMS	**Vicksburg**	**113.79**	**58**	PFAKE		17 34 40.0	+9.2
VBMS				LR	LR		
	comp=Z,5µm,20.0s						
PARMO	**Parma**	**113.80**	**53**	PFAKE		17 34 40.0	+9.4
PARMO				LR	LR		
	comp=Z,4µm,20.0s						
PVMO	**Portageville**	**113.88**	**53**	PFAKE		17 34 40.0	+9.2
PVMO				LR	LR		
	comp=Z,4µm,21.0s						
MET	**Memphis--Engin**	**113.89**	**55**	PFAKE		17 34 40.0	+9.1
MET				LR	LR		
	comp=Z,5µm,20.0s						
SUMG	**Summit**	**113.92**	**5**	PFAKE		17 34 40.0	+10
SUMG				LR	LR		
	comp=Z,2µm,22.0s						
SUMG	**Summit**	**113.92**	**5**	*e*PKIKP	**PKiKP**	**17 34 31.8**	**+1.4**
SUMG	**Summit**	**113.92**	**5**	*i* P	**PKiKP**	**17 34 31.8**	**+1.4**
L44A	**Lake County Fo**	**114.13**	**47**	P	PKPdf	17 34 31.1	0.0
	baz=283						
M44A	**Midewin, Midew**	**114.21**	**48**	PFAKE		17 34 40.0	+8.7
M44A				LR	LR		
	comp=Z,4µm,20.0s						
M44A	**Midewin, Midew**	**114.21**	**48**	P	PKPdf	17 34 31.0	-0.3
	baz=283						
GLAT	**Glass**	**114.23**	**53**	PFAKE		17 34 40.0	+8.5
GLAT				LR	LR		
	comp=Z,5µm,21.0s						
FIA0	**FINESS Array S**	**114.23**	**336**	*e*PKiKP	PKPdf	17 34 30.0	-0.8
FIA0				*e*PKKPbc	**PKKPbc**	**17 45 11.3**	**-2.1**
FIA0	**FINESS Array S**	**114.23**	**336**	*e*PKIKP	PKPdf	17 34 30.0	-0.7
FINES	**FINESS Array B**	**114.23**	**336**	PKP	PKPdf	17 34 30.0	-0.8
	comp=Z,10nm,0.5s,baz=62,slow=2.3,SNR=88						
FINES				PKKPbc	**PKKPbc**	**17 45 11.3**	**-2.1**
	comp=Z,3.7nm,0.6s,baz=168,slow=3.7,SNR=15						
FINES	**FINESS Array B**	**114.23**	**336**	PKIKP	PKPdf	17 34 30.0	-0.7
HALT	**Halls**	**114.25**	**54**	PFAKE		17 34 40.0	+8.5
HALT				LR	LR		
	comp=Z,4µm,22.0s						
N44A	**Piper City**	**114.27**	**48**	P	PKPdf	17 34 31.4	0.0
	baz=282						
E44A	**Grand Marais A**	**114.38**	**42**	PFAKE		17 34 40.0	+8.5
E44A				LR	LR		
	comp=Z,6µm,21.0s						
OXF	**Oxford**	**114.41**	**55**	PFAKE		17 34 40.0	+8.1
OXF				LR	LR		
	comp=Z,4µm,19.0s						
T45A	**Paducah**	**114.61**	**53**	PFAKE		17 34 40.0	+7.8
T45A				LR	LR		
	comp=Z,5µm,22.0s						
Q45A	**Warren Harvey,**	**114.64**	**50**	P	PKPdf	17 34 32.0	-0.2
	baz=281						
R45A	**Skylar, Fairfi**	**114.66**	**51**	P	PKPdf	17 34 31.8	-0.4
	baz=281						
OLIL	**Olney**	**114.72**	**51**	PFAKE		17 34 40.0	+7.6
OLIL				LR	LR		
	comp=Z,5µm,19.0s						
ANN	**Anapa**	**114.83**	**316**	*e*P	**Pdif**	**17 30 32.8**	**-10**
ANN				*e*		17 35 29.2	
ANN				pmax	pmax		
	comp=Z,44nm,1.5s						
ANN				pmax	pmax		
	comp=Z,58nm,1.4s						
ANN				MLR	MLR		
	comp=N,1µm,24.0s						
ANN				MLR	MLR		
	comp=E,618nm,24.0s						
ANN				MLR	MLR		
	comp=Z,1µm,24.0s						
P45A	**Graceland, Par**	**114.83**	**50**	PFAKE		17 34 40.0	+7.4
P45A				LR	LR		
	comp=Z,4µm,21.0s						
H45A	**Beulah**	**114.85**	**44**	P	PKPdf	17 34 32.7	+0.2
	baz=286						
I45A	**Fountain**	**114.87**	**45**	PFAKE		17 34 40.0	+7.5
I45A				LR	LR		
	comp=Z,5µm,20.0s						
J45A	**Montague**	**114.92**	**45**	PFAKE		17 34 40.0	+7.4
J45A				LR	LR		
	comp=Z,6µm,21.0s						
J45A	**Montague**	**114.92**	**45**	P	**PKiKP**	**17 34 32.7**	**+0.1**
	baz=285						
G45A	**Suttons Bay**	**115.00**	**43**	PFAKE		17 34 40.0	+7.3
G45A				LR	LR		
	comp=Z,5µm,21.0s						
G45A	**Suttons Bay**	**115.00**	**43**	P	**PKiKP**	**17 34 32.6**	**-0.1**
	baz=286						
SFIN	**Lafayette**	**115.13**	**49**	PFAKE		17 34 50.0	+17
SFIN				LR	LR		
	comp=Z,4µm,22.0s						
SFIN	**Lafayette**	**115.13**	**49**	P	**PKiKP**	**17 34 33.1**	**-0.1**
	baz=283						
MOR8	**Moi Rana**	**115.17**	**344**	*e*PKPdf	**PKiKP**	**17 34 31.8**	**-0.6**
USIN	**University of**	**115.20**	**51**	PFAKE		17 34 50.0	+17
USIN				LR	LR		
	comp=Z,5µm,20.0s						
P46A	**Rosedale**	**115.22**	**49**	P	**PKiKP**	**17 34 33.1**	**-0.2**
	baz=282						
V46A	**Holladay**	**115.24**	**54**	P	**PKiKP**	**17 34 32.9**	**-0.5**
	baz=280						
R46A	**Gibon Southern**	**115.27**	**51**	P	**PKiKP**	**17 34 33.1**	**-0.4**
	baz=282						
KONS	**Konsvik**	**115.29**	**344**	*e*PKPdf	**PKPdf**	**17 34 32.9**	**+0.3**
L46A	**Eue Claire**	**115.34**	**47**	PFAKE		17 34 50.0	+17
L46A				LR	LR		
	comp=Z,5µm,19.0s						
WVT	**Waverly**	**115.42**	**53**	PFAKE		17 34 50.0	+16
WVT				LR	LR		
	comp=Z,4µm,21.0s						
WVT	**Waverly**	**115.42**	**53**	P	**PKiKP**	**17 34 33.2**	**-0.6**
	baz=280						
PLAL	**Pickwick Lake**	**115.42**	**55**	PFAKE		17 34 50.0	+16
PLAL				LR	LR		
	comp=Z,4µm,20.0s						
ILULI	**Ilulissat**	**115.43**	**10**	PFAKE		17 34 40.0	+7.2
ILULI				LR	LR		
	comp=Z,5µm,21.0s						
M46A	**Old House Fiel**	**115.44**	**47**	PFAKE		17 34 50.0	+16
M46A				LR	LR		
	comp=Z,4µm,19.0s						
G46A	**Petoskey**	**115.46**	**43**	P	**PKiKP**	**17 34 33.2**	**-0.4**
	baz=287						
E46A	**Sault Ste Mari**	**115.53**	**42**	*e*PKiKP	**PKiKP**	**17 34 33.2**	**-0.5**
E46A				LR	LR		
	comp=Z,5µm,20.0s						
E46A	**Sault Ste Mari**	**115.53**	**42**	P	**PKiKP**	**17 34 33.5**	**-0.2**
	baz=288						
VSU	**Vasula**	**115.55**	**333**	*e*P	**PKPdf**	**17 34 33.8**	**+0.5**
VSU				IAmb	IAmb	17 34 34.6	
	comp=Z,66nm,0.6s						
VSU				*e*PP	**PP**	**17 35 36.8**	**+1.2**
VSU	**Vasula**	**115.55**	**333c**	*i*PKIKP	**PKPdf**	**17 34 34.1**	**+0.8**
VSU				pmax	pmax		
	comp=Z,33nm,0.7s						
V47A	**Nunnelly**	**115.72**	**54**	P	**PKPdf**	**17 34 33.9**	**-0.5**
	baz=280						
GLMI	**Grayling**	**115.77**	**43**	PFAKE		17 34 50.0	+16
GLMI				LR	LR		
	comp=Z,4µm,19.0s						
T47A	**Sharon Grove**	**115.83**	**52**	PFAKE		17 34 50.0	+15
T47A				LR	LR		
	comp=Z,6µm,22.0s						
T47A	**Sharon Grove**	**115.83**	**52**	P	**PKPdf**	**17 34 34.1**	**-0.4**
	baz=281						
BLO	**Bloomington**	**115.83**	**50**	PFAKE		17 34 50.0	+15
BLO				LR	LR		
	comp=Z,6µm,21.0s						
P47A	**Martinsville**	**115.95**	**49**	P	**PKPdf**	**17 34 34.7**	**0.0**
	baz=283						
R47A	**Wooly Knot Far**	**116.01**	**51**	P	**PKPdf**	**17 34 34.7**	**-0.2**
	baz=282						
J47A	**Sunmer**	**116.08**	**45**	PFAKE		17 34 50.0	+15
J47A				LR	LR		
	comp=Z,7µm,20.0s						
I47A	**Gladwin**	**116.08**	**44**	PFAKE		17 34 50.0	+15
I47A				LR	LR		
	comp=Z,5µm,20.0s						
D47A	**Chapleau**	**116.09**	**41**	P	**PKPdf**	**17 34 34.6**	**-0.2**
	baz=289						
E47A	**Iron Bridge**	**116.17**	**41**	P	**PKPdf**	**17 34 34.6**	**-0.3**
	baz=289						
G47A	**Hillman**	**116.19**	**43**	P	**PKiKP**	**17 34 35.2**	**+0.2**
	baz=288						
WCI	**Wyandotte Cave**	**116.21**	**51**	PFAKE		17 34 50.0	+15
WCI				LR	LR		
	comp=Z,4µm,19.0s						
PLCA	**Paso Flores**	**116.28**	**142**	PKP	**PKiKP**	**17 34 36.0**	**+0.5**
	comp=Z,2.5nm,0.4s,baz=262,slow=3.3,SNR=19						
PLCA				PKKPbc	**PKKPbc**	**17 45 04.6**	**-1.3**
	comp=Z,6.4nm,0.6s,baz=78,slow=3.8,SNR=28						
PLCA	**Paso Flores**	**116.28**	**142**	PKIKP	**PKiKP**	**17 34 36.0**	**+0.5**
V48A	**Smith Brothers**	**116.29**	**54**	PFAKE		17 34 50.0	+14
V48A				LR	LR		
	comp=Z,4µm,20.0s						
V48A	**Smith Brothers**	**116.29**	**54**	P	**PKPdf**	**17 34 34.9**	**-0.6**
	baz=281						
X48A	**Hartselle**	**116.34**	**55**	PFAKE		17 34 50.0	+14
X48A				LR	LR		
	comp=Z,3µm,20.0s						
T48A	**Bowling Green**	**116.36**	**52**	P	**PKPdf**	**17 34 35.1**	**-0.5**
	baz=282						
U48A	**Cassie Pea, Po**	**116.37**	**53**	P	**PKPdf**	**17 34 35.3**	**-0.3**
	baz=281						
Q48A	**North Vernon**	**116.48**	**50**	P	**PKPdf**	**17 34 35.6**	**-0.1**
	baz=283						
S48A	**Wiedeman Farm,**	**116.51**	**51**	P	**PKPdf**	**17 34 35.9**	**0.0**
	baz=282						
SCO	**Scoresbysund**	**116.58**	**359**	*e*PKPdf	**PKiKP**	**17 34 35.7**	**+0.7**
SCO				LR	LR		
	comp=Z,2µm,20.0s						
SCO	**Scoresbysund**	**116.58**	**359**	*e*PKIKP	**PKiKP**	**17 34 35.7**	**+0.7**
SCO				MLR	MLR		
	comp=Z,2µm,20.0s						
SCO	**Scoresbysund**	**116.58**	**359**	*i* P	**PKiKP**	**17 34 36.4**	**+1.4**
P48A	**Milroy**	**116.59**	**49**	PFAKE		17 34 50.0	+14
P48A				LR	LR		
	comp=Z,5µm,21.0s						
O48A	**Farmland**	**116.60**	**48**	P	**PKPdf**	**17 34 35.4**	**-0.5**
	baz=284						
CLTN	**Cedars of Leba**	**116.61**	**53**	PFAKE		17 34 50.0	+14
CLTN				LR	LR		
	comp=Z,4µm,22.0s						
M48A	**Edgerton**	**116.62**	**47**	PFAKE		17 34 50.0	+14
M48A				LR	LR		
	comp=Z,5µm,18.0s						
LRAL	**Lakeview Retre**	**116.62**	**57**	PFAKE		17 34 50.0	+14
LRAL				LR	LR		
	comp=Z,5µm,22.0s						
H48A	**Harrisville**	**116.69**	**43**	PFAKE		17 34 50.0	+14
H48A				LR	LR		
	comp=Z,4µm,20.0s						
K48A	**Perry**	**116.69**	**45**	P	**PKPdf**	**17 34 36.2**	**+0.1**
	baz=286						
L48A	**N Adams**	**116.70**	**46**	P	**PKPdf**	**17 34 36.2**	**+0.1**
	baz=286						
TEIG	**Tepich**	**116.77**	**71**	PFAKE		17 34 50.0	+13
TEIG				LR	LR		
	comp=Z,4µm,22.0s						
J48A	**Bridge Port**	**116.78**	**45**	PFAKE		17 34 50.0	+14
J48A				LR	LR		
	comp=Z,7µm,21.0s						
F48A	**Evansville**	**116.81**	**42**	P	**PKPdf**	**17 34 35.7**	**-0.4**
	baz=289						
W49A	**Belvidere**	**116.85**	**54**	P	**PKPdf**	**17 34 35.7**	**-0.9**
	baz=281						
BRAL	**Brewton**	**116.86**	**59**	PFAKE		17 34 50.0	+13
BRAL				LR	LR		
	comp=Z,4µm,22.0s						
D48A	**Paudash Townsh**	**116.89**	**40**	P	**PKPdf**	**17 34 35.8**	**-0.5**
	baz=290						
E48A	**Lockeyer**	**116.89**	**41**	P	**PKPdf**	**17 34 36.2**	**-0.1**
	baz=290						
Y49A	**Blount Mountai**	**116.96**	**56**	PFAKE		17 34 50.0	+13
Y49A				LR	LR		
	comp=Z,5µm,20.0s						
V49A	**McMinnville**	**117.02**	**53**	P	**PKPdf**	**17 34 36.4**	**-0.5**
	baz=281						
T49A	**Edmonton**	**117.04**	**52**	PFAKE		17 34 50.0	+13
T49A				LR	LR		
	comp=Z,5µm,20.0s						
T49A	**Edmonton**	**117.04**	**52**	P	**PKPdf**	**17 34 36.3**	**-0.6**
	baz=282						
R49A	**Shelbyville**	**117.06**	**51**	PFAKE		17 34 50.0	+13
R49A				LR	LR		
	comp=Z,4µm,19.0s						
NSS	**Namsos**	**117.09**	**343**	*e*PKPdf	**PKiKP**	**17 34 36.4**	**+0.3**
SWET	**Sewanee**	**117.10**	**54**	PFAKE		17 34 50.0	+13
SWET				LR	LR		
	comp=Z,4µm,19.0s						
P49A	**Miami Univ. Ec**	**117.11**	**49**	P	**PKPdf**	**17 34 37.0**	**0.0**
	baz=284						
N49A	**Columbus Grove**	**117.15**	**47**	PFAKE		17 34 50.0	+13
N49A				LR	LR		
	comp=Z,4µm,21.0s						
N49A	**Columbus Grove**	**117.15**	**47**	P	**PKPdf**	**17 34 36.9**	**-0.1**
	baz=285						
M49A	**Liberty Center**	**117.16**	**47**	P	**PKiKP**	**17 34 37.2**	**+0.2**
	baz=286						
AAM	**Ann Arbor**	**117.16**	**46**	PFAKE		17 34 50.0	+13
AAM				LR	LR		
	comp=Z,4µm,22.0s						
IZAR	**Zarasai**	**117.17**	**331**	*e*P	**PKiKP**	**17 34 37.6**	**+1.1**
IZAR				IAmb	IAmb	17 34 38.8	
	comp=Z,11nm,0.5s						
F49A	**Sandfield**	**117.21**	**42**	P	**PKPdf**	**17 34 36.8**	**-0.1**
	baz=289						
O49A	**Covington**	**117.23**	**48**	PFAKE		17 34 50.0	+13
O49A				LR	LR		
	comp=Z,4µm,19.0s						
O49A	**Covington**	**117.23**	**48**	P	**PKPdf**	**17 34 37.1**	**0.0**
	baz=285						
I49A	**Point Hope**	**117.26**	**44**	PFAKE		17 34 50.0	+13
I49A				LR	LR		
	comp=Z,4µm,21.0s						
I49A	**Point Hope**	**117.26**	**44**	P	**PKiKP**	**17 34 37.3**	**+0.2**
	baz=288						
ISAL	**Salakas**	**117.32**	**330**	*e*P	**PKiKP**	**17 34 38.1**	**+1.3**
ISAL				IAmb	IAmb	17 34 38.6	
	comp=Z,11nm,0.6s						
IIGN	**Ignalina**	**117.38**	**330**	*e*P	**PKiKP**	**17 34 38.4**	**+1.4**
IIGN				IAmb	IAmb	17 34 39.5	
	comp=Z,15nm,0.7s						
250A	**Grady**	**117.40**	**58**	PFAKE		17 34 50.0	+12
250A				LR	LR		
	comp=Z,6µm,22.0s						
SFJD	**Kangerlussuaq**	**117.45**	**11**	PFAKE		17 34 50.0	+13
SFJD				LR	LR		
	comp=Z,4µm,21.0s						
Z50A	**Ashland**	**117.47**	**56**	PFAKE		17 34 50.0	+12
Z50A				LR	LR		
	comp=Z,6µm,22.0s						
X50B	**Fort Payne**	**117.47**	**55**	P	**PKPdf**	**17 34 37.5**	**-0.3**
	baz=281						
150A	**Eclectic**	**117.50**	**57**	P	**PKPdf**	**17 34 37.5**	**-0.4**
	baz=280						
T50A	**Nancy**	**117.60**	**52**	P	**PKPdf**	**17 34 37.9**	**-0.1**
	baz=283						
W50A	**Signal Mountai**	**117.60**	**54**	PFAKE		17 34 50.0	+12
W50A				LR	LR		
	comp=Z,4µm,20.0s						
W50A	**Signal Mountai**	**117.60**	**54**	P	**PKPdf**	**17 34 38.0**	**-0.1**
	baz=282						
FURI	**Furi**	**117.67**	**276**	PFAKE		17 34 50.0	+11
FURI				LR	LR		
	comp=Z,2µm,21.0s						
V50A	**Pikevile**	**117.68**	**53**	P	**PKPdf**	**17 34 37.8**	**-0.3**
	baz=282						
R50A	**Paris**	**117.70**	**50**	PFAKE		17 34 50.0	+12
R50A				LR	LR		
	comp=Z,4µm,22.0s						
U50A	**Jamestown**	**117.72**	**53**	P	**PKPdf**	**17 34 38.2**	**-0.1**
	baz=282						
TOBO	**Tobermory, Bru**	**117.73**	**42**	P	**PKiKP**	**17 34 38.2**	**+0.2**
	baz=290						
K50A	**Casco**	**117.75**	**45**	PFAKE		17 34 50.0	+12
K50A				LR	LR		
	comp=Z,7µm,20.0s						
P50A	**Jamestown**	**117.78**	**49**	P	**PKPdf**	**17 34 37.7**	**-0.6**
	baz=285						
S50A	**Richmond**	**117.79**	**51**	P	**PKPdf**	**17 34 38.3**	**0.0**
	baz=283						
TGUH	**Tegucigalpa,Un**	**117.83**	**78**	PFAKE		17 34 50.0	+11
TGUH				LR	LR		
	comp=Z,2µm,20.0s						
E50A	**Wahnapitae**	**117.84**	**41**	P	**PKiKP**	**17 34 38.4**	**+0.2**
	baz=291						
M50A	**Fremont**	**117.85**	**47**	PFAKE		17 34 50.0	+12
M50A				LR	LR		
	comp=Z,3µm,18.0s						
AKASG	**Malin Array Be**	**117.96**	**325**	PKP	**PKPdf**	**17 34 37.5**	**-0.7**
	comp=Z,14nm,0.6s,baz=49,slow=2.6,SNR=56						
AKASG				PKKPbc	**PKKPbc**	**17 44 59.2**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=255,slow=4.5,SNR=9.9						
AKBB	**Malin Array Si**	**117.96**	**325**	*e*PKPdf	**PKPdf**	**17 34 37.6**	**-0.6**
AKBB	**Malin Array Si**	**117.96**	**325**	*e*PKIKP	**PKPdf**	**17 34 37.6**	**-0.6**
SLIT	**Slitere, Latvi**	**117.98**	**334**	*e*P	**PKPdf**	**17 34 37.8**	**-0.2**
SLIT				IAmb	IAmb	17 34 38.5	
	comp=Z,117nm,0.4s						
SLIT				*e*PP	**PP**	**17 35 51.2**	**-1.3**
BZK	**Bozkurt**	**118.02**	**314**	⇑*i*P	**PKiKP**	**17 34 39.9**	**+1.3**
451A	**Vernon**	**118.05**	**59**	PFAKE		17 34 50.0	+11
451A				LR	LR		
	comp=Z,4µm,22.0s						
451A	**Vernon**	**118.05**	**59**	P	**PKPdf**	**17 34 38.8**	**-0.2**
	baz=279						
KMBO	**Kilima Mbogo**	**118.07**	**265**	PKP	**PKiKP**	**17 34 40.6**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=43,slow=6.7,SNR=10						
KMBO	**Kilima Mbogo**	**118.07**	**265**	*e*PKPdf	**PKPdf**	**17 34 38.3**	**-1.6**
KMBO				LR	LR		
	comp=Z,2µm,20.0s						
HOPE	**Hope Point**	**118.08**	**172**	*e*PKPdf	**PKiKP**	**17 34 38.6**	**+0.2**
HOPE				LR	LR		
	comp=Z,6µm,21.0s						
X51A	**Calhoun**	**118.10**	**55**	PFAKE		17 34 50.0	+11
X51A				LR	LR		
	comp=Z,3µm,20.0s						
BMRO	**Meriville Lake**	**118.15**	**43**	P	**PKPdf**	**17 34 38.9**	**+0.1**
	baz=289						
CPCT	**Cooper Cave**	**118.19**	**54**	PFAKE		17 34 50.0	+11
CPCT				LR	LR		
	comp=Z,4µm,19.0s						
ACSO	**Alum Creek Sta**	**118.22**	**48**	PFAKE		17 34 50.0	+11
ACSO				LR	LR		
	comp=Z,5µm,18.0s						
V51A	**Loudon**	**118.25**	**53**	PFAKE		17 34 50.0	+11
V51A				LR	LR		
	comp=Z,7µm,22.0s						
Q51A	**Peebles**	**118.26**	**49**	PFAKE		17 34 50.0	+11
Q51A				LR	LR		
	comp=Z,5µm,21.0s						
Q51A	**Peebles**	**118.26**	**49**	P	**PKPdf**	**17 34 38.2**	**-1.0**
	baz=285						
R51A	**Hillsboro**	**118.27**	**50**	P	**PKPdf**	**17 34 38.5**	**-0.8**
	baz=284						
T51A	**Gray**	**118.31**	**52**	P	**PKPdf**	**17 34 38.4**	**-1.0**
	baz=283						
BWLO	**Walkerton**	**118.36**	**43**	P	**PKPdf**	**17 34 38.7**	**-0.5**
	baz=289						
P51A	**Williamsport**	**118.36**	**49**	PFAKE		17 34 50.0	+11
P51A				LR	LR		
	comp=Z,4µm,20.0s						
P51A	**Williamsport**	**118.36**	**49**	P	**PKPdf**	**17 34 38.9**	**-0.5**
	baz=285						
U51A	**La Follette**	**118.38**	**52**	P	**PKPdf**	**17 34 39.3**	**-0.3**
	baz=283						
S51A	**Beattyville**	**118.42**	**51**	PFAKE		17 34 50.0	+10
S51A				LR	LR		
	comp=Z,4µm,22.0s						
S51A	**Beattyville**	**118.42**	**51**	P	**PKPdf**	**17 34 39.3**	**-0.2**
	baz=284						
D51A	**Lot 18 Range I**	**118.47**	**40**	P	**PKPdf**	**17 34 39.2**	**-0.1**
	baz=292						
N51A	**Ashland**	**118.47**	**47**	PFAKE		17 34 50.0	+10
N51A				LR	LR		
	comp=Z,4µm,22.0s						
N51A	**Ashland**	**118.47**	**47**	P	**PKPdf**	**17 34 39.3**	**-0.2**
	baz=287						
ILGA	**Ilgaz**	**118.49**	**313**	*e*PKPdf	**PKiKP**	**17 34 40.2**	**+0.3**
ILGA				LR	LR		
	comp=Z,700nm,22.0s						
M51A	**Elyria**	**118.49**	**47**	P	**PKPdf**	**17 34 39.5**	**-0.1**
	baz=287						
I51A	**Listowel**	**118.54**	**44**	P	**PKPdf**	**17 34 39.3**	**-0.3**
	baz=289						
F51A	**Arnstein**	**118.55**	**41**	P	**PKPdf**	**17 34 39.0**	**-0.5**
	baz=291						
TBLU	**Trondheim**	**118.55**	**343**	*e*PKPdf	**PKiKP**	**17 34 39.5**	**+0.4**
KLBO	**Killbear Provi**	**118.56**	**42**	P	**PKPdf**	**17 34 39.3**	**-0.2**
	baz=291						
152A	**Waverly Hall**	**118.57**	**57**	PFAKE		17 34 50.0	+10
152A				LR	LR		
	comp=Z,7µm,21.0s						
152A	**Waverly Hall**	**118.57**	**57**	P	**PKPdf**	**17 34 39.5**	**-0.5**
	baz=281						
E51A	**G1948 Merrick**	**118.60**	**40**	P	**PKPdf**	**17 34 39.6**	**-0.1**
	baz=292						
352A	**Blakely**	**118.61**	**58**	PFAKE		17 34 50.0	+10
352A				LR	LR		
	comp=Z,4µm,22.0s						
352A	**Blakely**	**118.61**	**58**	P	**PKPdf**	**17 34 39.4**	**-0.7**
	baz=280						
252A	**Lumpkin**	**118.68**	**57**	P	**PKPdf**	**17 34 39.4**	**-0.8**
	baz=280						
ESTN	**Estel**	**118.69**	**79**	PFAKE		17 34 50.0	+9.2
ESTN				LR	LR		
	comp=Z,1µm,19.0s						
TZTN	**Tazewell**	**118.71**	**52**	PFAKE		17 34 50.0	+10

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TZTN                                LR        LR
       comp=Z,7µm,22.0s
TZTN   Tazewell         118.71  52  P         PKPdf    17 34 40.1 -0.1
       baz=283
W52A   Murphy           118.74  54  PFAKE              17 34 50.0 +10
W52A                                LR        LR
       comp=Z,5µm,20.0s
W52A   Murphy           118.74  54  P         PKPdf    17 34 39.8 -0.5
       baz=282
V52A   Sevierville      118.84  53  PFAKE              17 34 50.0 +10
V52A                                LR        LR
       comp=Z,7µm,22.0s
V52A   Sevierville      118.84  53  P         PKPdf    17 34 39.8 -0.6
       baz=283
X52A   Dahlonega        118.87  54  P         PKPdf    17 34 40.3 -0.2
       baz=282
Y52A   Lilburn          118.88  55  PFAKE              17 34 50.0 +9.4
Y52A                                LR        LR
       comp=Z,4µm,21.0s
BR101  Keskin Array S   118.92 312 ePKPdf     PKPdf    17 34 40.6  0.0
BR101                              ePKKPab    PKKPab   17 44 58.3 +0.5
BR131  Keskin Array S   118.92 312 ePKPdf     PKPdf    17 34 40.1 -0.5
BRTR   Keskin Array B   118.92 312  PKP       PKPdf    17 34 40.6  0.0
       comp=Z,4.8nm,0.7s,baz=121,slow=2.2,SNR=26
BRTR                                PKKPbc    PKKPab   17 44 58.3 +0.5
       comp=Z,1.3nm,0.8s,baz=236,slow=3.1,SNR=4.4
R52A   Catlettsburg     118.97  50  P         PKPdf    17 34 40.0 -0.6
       baz=285
P52A   Corning          119.01  48  P         PKPdf    17 34 40.0 -0.7
       baz=286
T52A   Hallie           119.02  51  PFAKE              17 34 50.0 +9.2
T52A                                LR        LR
       comp=Z,4µm,20.0s
T52A   Hallie           119.02  51  P         PKPdf    17 34 40.2 -0.5
       baz=284
M52A   Chesterland      119.02  46  PFAKE              17 34 50.0 +9.4
M52A                                LR        LR
       comp=Z,6µm,20.0s
M52A   Chesterland      119.02  46  P         PKPdf    17 34 40.7 +0.1
       baz=288
I52A   Shelburne        119.03  43  P         PKPdf    17 34 40.2 -0.3
       baz=290
BUKO   Buck Lake        119.06  41  P         PKPdf    17 34 40.4 -0.2
       baz=291
O52A   Adamsville       119.09  48  PFAKE              17 34 50.0 +9.2
O52A                                LR        LR
       comp=Z,4µm,19.0s
J52A   Paris            119.10  44  P         PKiKP    17 34 41.0 +0.3
       baz=289
D52A   ZEK Kipawa Sen   119.12  39  P         PKPdf    17 34 40.2 -0.4
       baz=293
253A   Americus         119.17  57  PFAKE              17 34 50.0 +8.8
253A                                LR        LR
       comp=Z,5µm,21.0s
453A   Whigham          119.23  59  PFAKE              17 34 50.0 +8.7
453A                                LR        LR
       comp=Z,5µm,22.0s
453A   Whigham          119.23  59  P         PKPdf    17 34 41.1 -0.2
       baz=280
E52A   Mattawa          119.23  40  P         PKPdf    17 34 40.5 -0.3
       baz=292
VLDQ   Val d'Or         119.26  38  PFAKE              17 34 50.0 +9.2
VLDQ                                LR        LR
       comp=Z,9µm,19.0s
GOGA   Godfrey          119.46  56  PFAKE              17 34 50.0 +8.3
GOGA                                LR        LR
       comp=Z,4µm,22.0s
SADO   Sadowa           119.48  42  PFAKE              17 34 50.0 +8.6
SADO                                LR        LR
       comp=Z,4µm,21.0s
V53A   Saluda           119.50  53  PFAKE              17 34 50.0 +8.2
V53A                                LR        LR
       comp=Z,7µm,22.0s
V53A   Saluda           119.50  53  P         PKPdf    17 34 41.3 -0.4
       baz=284
R53A   Hurricane        119.50  50  PFAKE              17 34 50.0 +8.3
R53A                                LR        LR
       comp=Z,7µm,22.0s
ANTO   Ankara           119.50 312 ePKPdf     PKiKP    17 34 42.6 +0.9
ANTO                                LR        LR
       comp=Z,900nm,21.0s
ANTO   Ankara           119.50 312⇑iP         PKiKP    17 34 42.9 +1.2
ANTO   Ankara           119.50 312 ⇑PKIKP     PKiKP    17 34 42.9 +1.2
O53A   New Philadelph   119.51  47  P         PKiKP    17 34 41.8 +0.2
       baz=287
U53A   Fall Branch      119.52  52  P         PKPdf    17 34 41.9 +0.1
       baz=284
D53A   Lac Vacive, Po   119.53  39 ePKPdf     PKPdf    17 34 40.9 -0.5
D53A                                LR        LR
       comp=Z,12µm,20.0s
D53A   Lac Vacive, Po   119.53  39  P         PKPdf    17 34 41.1 -0.2
       baz=294
S53A   Williamson       119.54  51  P         PKPdf    17 34 41.5 -0.3
       baz=285
M53A   WI Miller and    119.54  46  P         PKPdf    17 34 41.2 -0.4
       baz=288
BG3    Lake Jocassee    119.56  54  PFAKE              17 34 50.0 +8.1
BG3                                 LR        LR
       comp=Z,3µm,19.0s
SUW    Suwalki          119.59 330 eP         PKiKP    17 34 42.8 +1.5
SUW    Suwalki          119.59 330 ePKPdf     PKPdf    17 34 41.0 -0.3
SUW                                 LR        LR
       comp=Z,3µm,20.0s
SUW    Suwalki          119.59 330 ePKIKP     PKPdf    17 34 41.0 -0.3
SUW                                 MLR       MLR
       comp=Z,3µm,20.0s
P53A   Whipple          119.60  48  PFAKE              17 34 50.0 +8.2
P53A                                LR        LR
       comp=Z,5µm,19.0s
P53A   Whipple          119.60  48  P         PKPdf    17 34 41.4 -0.3
       baz=287
N53A   Lisbon           119.62  47 ePKPdf     PKPdf    17 34 41.1 -0.6
N53A                                LR        LR
       comp=Z,4µm,18.0s
N53A   Lisbon           119.62  47  P         PKPdf    17 34 41.8  0.0
       baz=288
L53A   Girard           119.67  45  P         PKPdf    17 34 41.5 -0.3
       baz=289
Q53A   Leroy            119.68  49  P         PKPdf    17 34 41.9  0.0
       baz=286
G53A   Haliburton       119.69  41  P         PKPdf    17 34 41.6 -0.1
       baz=292
NC405  NORSAR Array S   119.72 341 ePKPdf     PKiKP    17 34 41.7 +0.2
TIGA   Tifton           119.74  58  PFAKE              17 34 50.0 +7.7
TIGA                                LR        LR
       comp=Z,4µm,20.0s
TIGA   Tifton           119.74  58  P         PKPdf    17 34 41.8 -0.4
       baz=281
ALGO   Algonquin Park   119.75  40  P         PKPdf    17 34 41.7 -0.2
       baz=293
KIS    Kishinev         119.75 321 ePKP       PKPdf    17 34 41.0 -0.8
KIS    Kishinev         119.75 321 ePP        PP       17 36 04.0 -1.2
KIS    Kishinev         119.75 321 ePS        SP       17 45 48.0  0.0
KIS    Kishinev         119.75 321 ePKIKP     PKPdf    17 34 41.0 -0.8
KIS                                e                   17 34 53.0
KIS                                e                   17 36 04.0
KIS                                ePS        SP       17 45 48.0  0.0
KIS                                ePPS       PPS      17 47 10.0
KIS                                eSS        SS       17 52 20.0 -5.8
NC303  NORSAR Array S   119.75 341 ePKPdf     PKiKP    17 34 41.8 +0.3
MILM   Milestii Mici    119.78 321⇑iP         PKPdf    17 34 42.0 +0.2
E53A   Dumoine, Ponti   119.83  40  P         PKPdf    17 34 41.6 -0.3
       baz=293
DOMB   Dombas           119.84 343 ePKPdf     PKiKP    17 34 41.9 +0.2
ALLY   Alegheny Colle   119.85  46  PFAKE              17 34 50.0 +7.7
ALLY                                LR        LR
       comp=Z,5µm,20.0s
MOL    Molde            119.86 344 ePKPdf     PKiKP    17 34 42.1 +0.5
NB201  NORSAR Array S   119.91 341 ePKPdf     PKPdf    17 34 41.7  0.0
NC204  NORSAR Array S   119.91 341 ePKPdf     PKPdf    17 34 41.7  0.0
154A   Montrose         119.92  56  PFAKE              17 34 50.0 +7.4
154A                                LR        LR
       comp=Z,6µm,20.0s
NB2    NORSAR Subarra119.94 341     PKPdf     PKPdf    17 34 41.6 -0.2
       comp=Z,16nm,0.6s,baz=40,slow=1.8
NB2    NORSAR Subarra119.94 341     PKIKP     PKPdf    17 34 39.2 -2.6
NB2                                 pmax      pmax
       comp=Z,16nm,0.5s
NB2    NORSAR Subarra119.94 341     PKPdf     PKPdf    17 34 41.6 -0.2
       baz=40,slow=1.8
NB200  NORSAR Array S   119.94 341 ePKPdf     PKPdf    17 34 41.5 -0.3
NB200                              ePKKPab    PKKPab   17 44 50.4 -2.3
NOA    NORSAR Array B   119.94 341  PKP       PKPdf    17 34 41.5 -0.3
       comp=Z,12nm,0.5s,baz=44,slow=1.9,SNR=114
NOA                                 PKKPbc    PKKPab   17 44 50.4 -2.3
       comp=Z,4.2nm,0.8s,baz=41,slow=3.6,SNR=16
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JTS    Las Juntas de    120.01  82  PFAKE              17 35 00.0 +17
JTS                                 LR        LR
       comp=Z,2µm,20.0s
NC602  NORSAR Array S   120.06 341 ePKPdf     PKPdf    17 34 41.9 -0.1
NC602  NORSAR Array S   120.06 341 ePKPdf     PKPdf    17 34 42.1 +0.1
NORES  NORESS Array B   120.06 341  PKIKP     PKPdf    17 34 41.6 -0.4
NORES                               pmax      pmax
       comp=Z,24nm,0.5s
U54A   Nelsons Funny    120.07  52  PFAKE              17 34 50.0 +7.1
U54A                                LR        LR
       comp=Z,5µm,21.0s
U54A   Nelsons Funny    120.07  52  P         PKPdf    17 34 42.7 -0.2
       baz=285
X54A   Belton           120.10  54  P         PKPdf    17 34 42.3 -0.6
       baz=283
E54A   Lac Daplat, Po   120.11  40  P         PKPdf    17 34 42.2 -0.3
       baz=294
T54A   Tazewell         120.12  51  P         PKPdf    17 34 42.6 -0.3
       baz=285
S54A   Dingess, Beckl   120.13  50  P         PKPdf    17 34 42.4 -0.5
       baz=286
W54A   Cherokee Point   120.13  53  P         PKPdf    17 34 42.4 -0.5
       baz=284
O54A   Avella           120.14  47  P         PKPdf    17 34 42.4 -0.3
       baz=288
D54A   Lac Fusel, La    120.15  39  P         PKPdf    17 34 42.4 -0.2
       baz=295
Q54A   Coxs Mills       120.16  49 ePKPdf     PKPdf    17 34 42.7 -0.2
Q54A                                LR        LR
       comp=Z,3µm,19.0s
Q54A   Coxs Mills       120.16  49  P         PKPdf    17 34 42.4 -0.4
       baz=287
N54A   Moraine State    120.18  46  PFAKE              17 34 50.0 +7.1
N54A                                LR        LR
       comp=Z,4µm,19.0s
N54A   Moraine State    120.18  46  P         PKPdf    17 34 42.6 -0.3
       baz=288
BANO   Bancroft         120.19  41  P         PKPdf    17 34 42.5 -0.2
       baz=292
NAO01  NORSAR Array S   120.19 341 ePKPdf     PKPdf    17 34 42.5 +0.2
M54A   Oil Creek Stat   120.24  46 ePKPdf     PKPdf    17 34 43.0  0.0
M54A                                LR        LR
       comp=Z,4µm,20.0s
M54A   Oil Creek Stat   120.24  46  P         PKPdf    17 34 42.6 -0.3
       baz=289
L54A   Sinclairville    120.24  45  P         PKPdf    17 34 42.5 -0.5
       baz=290
CHGQ   Chibougamau      120.28  35  P         PKPdf    17 34 42.6 -0.2
       baz=298
WLVO   Wesleyville      120.28  43  P         PKPdf    17 34 42.4 -0.5
       baz=291
AKN    Aaknes           120.33 344 ePKPdf     PKiKP    17 34 43.3 +0.7
J54A   Appleton         120.35  43  PFAKE              17 34 50.0 +6.9
J54A                                LR        LR
       comp=Z,6µm,22.0s
PEMO   Pembroke         120.37  40  P         PKPdf    17 34 43.0  0.0
       baz=293
CSS    Mathiatis        120.38 306 ePKPdf     PKPdf    17 34 43.5  0.0
CSS                                 LR        LR
       comp=Z,1µm,21.0s
TLCR                    120.47 319⇑iP         PKiKP    17 34 43.7 +0.4
TLCR                    120.47 319 ⇑PKIKP     PKiKP    17 34 43.7 +0.4
PAULI  Pauline          120.49  54  PFAKE              17 35 00.0 +16
PAULI                               LR        LR
       comp=Z,4µm,19.0s
MDUB   Mudurnu          120.49 313 ePKPdf     PKPdf    17 34 42.2 -1.4
MDUB                                LR        LR
       comp=Z,1µm,20.0s
555A   McAlpin          120.50  59  PFAKE              17 35 00.0 +16
555A                                LR        LR
       comp=Z,5µm,21.0s
MEDO   Medina           120.52  44  PFAKE              17 35 00.0 +17
MEDO                                LR        LR
       comp=Z,6µm,22.0s
K54A   Basiliko Farm,   120.55  44  P         PKPdf    17 34 42.9 -0.6
       baz=290
BOSA   Boshof           120.57 231  PKP       PKiKP    17 34 45.4 +1.1
       comp=Z,11nm,0.8s,baz=117,slow=1.8,SNR=23
BOSA   Boshof           120.57 231 ePKPdf     PKiKP    17 34 44.9 +0.7
255A   Hazlehurst       120.58  57  PFAKE              17 35 00.0 +16
255A                                LR        LR
       comp=Z,4µm,21.0s
255A   Hazlehurst       120.58  57  P         PKPdf    17 34 43.2 -0.6
       baz=282
DELO   Deloro Mine      120.58  42  PFAKE              17 35 00.0 +16
DELO                                LR        LR
       comp=Z,8µm,22.0s
DELO   Deloro Mine      120.58  42  P         PKPdf    17 34 43.0 -0.5
       baz=292
I55A   Frankford        120.65  42  P         PKPdf    17 34 43.6  0.0
       baz=292
U55A   TA2, Sparta      120.68  52  P         PKPdf    17 34 44.1  0.0
       baz=285
MCWV   Mont Chateau     120.69  48  PFAKE              17 35 00.0 +16
MCWV                                LR        LR
       comp=Z,2µm,19.0s
KLNR   Kaliningrad      120.69 332⇓iPKIKP     PKiKP    17 34 44.0 +0.6
ESPN   Las Esperanzas   120.70  80  PFAKE              17 35 00.0 +15
ESPN                                LR        LR
       comp=Z,2µm,18.0s
Q55A   Buckhannon       120.72  49  P         PKiKP    17 34 44.2 +0.1
       baz=287
PLVO   Plevna           120.73  41 ePKPdf     PKPdf    17 34 43.7  0.0
PLVO                                LR        LR
       comp=Z,13µm,22.0s
PLVO   Plevna           120.73  41  P         PKPdf    17 34 43.8  0.0
       baz=293
ANGG   Ammassalik, Gr   120.74   6 ePKPdf     PKPdf    17 34 42.4 -0.7
ANGG                                LR        LR
       comp=Z,4µm,22.0s
P55A   Reedsville       120.75  48  P         PKPdf    17 34 43.5 -0.5
       baz=288
S55A   Lewisburg        120.75  50  P         PKPdf    17 34 44.2 +0.1
       baz=286
KMSC   Kings Mountain   120.79  53  PFAKE              17 35 00.0 +16
KMSC                                LR        LR
       comp=Z,6µm,20.0s
HDC    Heredia          120.82  83  PFAKE              17 35 00.0 +15
HDC                                 LR        LR
       comp=Z,2µm,19.0s
H55A   Tweed            120.86  42  P         PKPdf    17 34 44.2 +0.2
       baz=293
L55A   Hinsdale         120.87  45  P         PKPdf    17 34 44.2  0.0
       baz=290
G55A   Calabogie        120.88  41  P         PKPdf    17 34 44.1  0.0
       baz=294
M55A   Ridgway          120.89  45  P         PKPdf    17 34 44.4 +0.1
       baz=290
R55A   Marlinton        120.90  49  PFAKE              17 35 00.0 +16
R55A                                LR        LR
       comp=Z,5µm,20.0s
R55A   Marlinton        120.90  49  P         PKPdf    17 34 44.2 -0.2
       baz=287
CFR    Carcaliu         120.91 319⇑iP         PKPdf    17 34 44.1  0.0
CFR    Carcaliu         120.91 319 ⇑PKIKP     PKPdf    17 34 44.1  0.0
J55A   Hilton           120.91  43  PFAKE              17 35 00.0 +16
J55A                                LR        LR
       comp=Z,4µm,22.0s
J55A   Hilton           120.91  43  P         PKPdf    17 34 44.2 +0.1
       baz=292
O55A   Ligonier         120.92  47  P         PKPdf    17 34 44.3  0.0
       baz=289
OSL    Oslo             120.93 340 ePKPdf     PKiKP    17 34 44.2 +0.5
K55A   Perry            120.94  44  P         PKPdf    17 34 44.4 +0.1
       baz=291
N55A   Marion Center    120.96  46  PFAKE              17 35 00.0 +16
N55A                                LR        LR
       comp=Z,5µm,19.0s
N55A   Marion Center    120.96  46  P         PKPdf    17 34 44.6 +0.2
       baz=289
BLA    Blacksburg       120.97  51  PFAKE              17 35 00.0 +15
BLA                                 LR        LR
       comp=Z,6µm,22.0s
656A   Willston         121.00  60  PFAKE              17 35 00.0 +15
656A                                LR        LR
       comp=Z,3µm,22.0s
TIRR   Tirgusor         121.02 318 ePKPdf     PKiKP    17 34 45.3 +0.9
TIRR                                LR        LR
       comp=Z,4µm,22.0s
TIRR   Tirgusor         121.02 318⇑iP         PKPdf    17 34 44.3  0.0
TIRR   Tirgusor         121.02 318 ⇑PKIKP     PKPdf    17 34 44.3  0.0
MMNY   Mt. Morris Dam   121.05  44 ePKPdf     PKPdf    17 34 43.4 -1.0
MMNY                                LR        LR
       comp=Z,7µm,21.0s
JSC    Jenkinsville     121.06  54  PFAKE              17 35 00.0 +15
JSC                                 LR        LR
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       comp=Z,3µm,20.0s
SKAR   Skarslia         121.14 342 ePKPdf     PKiKP    17 34 44.8 +0.5
PRAR   RASCA            121.19 322⇑iP         PKPdf    17 34 43.8 -0.8
Z56A   Williston        121.19  55  PFAKE              17 35 00.0 +15
Z56A                                LR        LR
       comp=Z,4µm,20.0s
456A   Hilliard         121.19  58  PFAKE              17 35 00.0 +15
456A                                LR        LR
       comp=Z,3µm,20.0s
TLB    Topalu           121.21 319⇑iP         PKiKP    17 34 45.7 +0.9
TLB    Topalu           121.21 319 ⇑PKIKP     PKiKP    17 34 45.7 +0.9
PECO   Prince Edward    121.22  42  PFAKE              17 35 00.0 +15
PECO                                LR        LR
       comp=Z,4µm,21.0s
HARR   Harsova          121.24 319⇓iP         PKiKP    17 34 45.5 +0.7
HARR   Harsova          121.24 319 ⇓PKIKP     PKiKP    17 34 45.5 +0.7
V56A   Mocksville       121.29  52  PFAKE              17 35 00.0 +15
V56A                                LR        LR
       comp=Z,6µm,22.0s
M56A   Emporium         121.30  45  P         PKPdf    17 34 45.1 +0.1
       baz=290
TESR   Tescani          121.31 321⇑iP         PKPdf    17 34 44.6 -0.2
LVV    L'vov            121.32 326 ePKIKP     PKiKP    17 34 45.6 +0.7
LVV                                e                   17 36 13.6
LVV                                e                   17 38 49.4
LVV                                e                   17 41 39.2
LVV                                e                   17 52 42.4
LVV                                 MLR       MLR
       comp=N,1µm,23.0s
LVV                                 MLR       MLR
       comp=E,1µm,23.0s
LVV                                 MLR       MLR
       comp=Z,2µm,23.0s
Q56A   Snyder Ridge,    121.37  48  P         PKPdf    17 34 44.9 -0.3
       baz=288
HYA    Hoyanger         121.38 343 ePKPdf     PKiKP    17 34 45.5 +0.9
W56A   Indian Trail     121.39  53  P         PKPdf    17 34 45.1 -0.2
       baz=285
R56A   Bull Pasture M   121.40  49  P         PKPdf    17 34 45.1 -0.3
       baz=288
N56A   West Decatur     121.41  46  P         PKPdf    17 34 45.2 -0.1
       baz=290
O56A   Blue Knob Stat   121.43  47  PFAKE              17 35 00.0 +15
O56A                                LR        LR
       comp=Z,4µm,20.0s
O56A   Blue Knob Stat   121.43  47  P         PKPdf    17 34 45.1 -0.2
       baz=289
H56A   Elgin            121.44  41  P         PKPdf    17 34 45.0 -0.1
       baz=294
BIZ    Bicaz            121.46 322⇑iP         PKPdf    17 34 45.4 +0.3
SCHQ   Schefferville    121.46  27  PFAKE              17 35 00.0 +15
SCHQ                                LR        LR
       comp=Z,6µm,22.0s
KONO   Kongsberg        121.52 341 ePKPdf     PKPdf    17 34 44.7 -0.1
KONO                                LR        LR
       comp=Z,3µm,21.0s
KONO   Kongsberg        121.52 341 ePKIKP     PKPdf    17 34 44.7 -0.1
KONO                                MLR       MLR
       comp=Z,3µm,21.0s
KONO   Kongsberg        121.52 341 ePKPdf     PKPdf    17 34 45.0 +0.2
VRI    Vrincioaia       121.53 320⇑iP         PKiKP    17 34 46.0 +0.6
VRI    Vrincioaia       121.53 320 ⇑PKIKP     PKiKP    17 34 46.0 +0.6
957A   Wimauma          121.55  62  PFAKE              17 35 00.0 +14
957A                                LR        LR
       comp=Z,3µm,21.0s
PLOR   Plostina         121.59 320⇓iP         PKiKP    17 34 46.5 +0.9
PLOR   Plostina         121.59 320 ⇓PKIKP     PKiKP    17 34 46.5 +0.9
457A   Yulee            121.61  58  P         PKPdf    17 34 45.7 -0.1
       baz=281
BIRD   Birdtown, Kers   121.61  54  PFAKE              17 35 00.0 +14
BIRD                                LR        LR
       comp=Z,5µm,19.0s
BUR08  Bucovina Ar. S   121.69 323 ePKPdf     PKiKP    17 34 46.6 +0.8
BURAR  Bucovina Array   121.69 323⇑iP         PKiKP    17 34 46.8 +1.0
BURAR  Bucovina Array   121.69 323⇓iP         PKKPbc   17 44 47.4 +1.0
BURAR  Bucovina Array   121.69 323 ⇑PKIKP     PKiKP    17 34 46.8 +1.0
Z57A   Bowman           121.74  55  P         PKPdf    17 34 45.7 -0.3
       baz=284
257A   Skidaway Islan   121.77  57  PFAKE              17 35 00.0 +14
257A                                LR        LR
       comp=Z,5µm,20.0s
SSPA   Standing Stone   121.80  46  PFAKE              17 35 00.0 +14
SSPA                                LR        LR
       comp=Z,4µm,20.0s
SSPA   Standing Stone   121.80  46  P         PKPdf    17 34 45.9  0.0
       baz=290
ISP    Isparta          121.80 310  PFAKE              17 35 00.0 +14
ISP                                 LR        LR
       comp=Z,1µm,22.0s
Y57A   Sumter           121.82  54  PFAKE              17 35 00.0 +14
Y57A                                LR        LR
       comp=Z,5µm,20.0s
W57A   Gilead           121.86  53  PFAKE              17 35 00.0 +14
W57A                                LR        LR
       comp=Z,6µm,22.0s
SUE    Sulen            121.87 344 ePKPdf     PKiKP    17 34 45.9 +0.3
SUR    Sutherland       121.89 225  PFAKE              17 35 00.0 +13
SUR                                 LR        LR
       comp=Z,6µm,20.0s
T57A   Hurt             121.92  51  PFAKE              17 35 00.0 +14
T57A                                LR        LR
       comp=Z,6µm,21.0s
T57A   Hurt             121.92  51  P         PKPdf    17 34 46.2 -0.1
       baz=287
S57A   Dark Hollow, R   121.93  50  PFAKE              17 35 00.0 +14
S57A                                LR        LR
       comp=Z,6µm,20.0s
LBTB   Lobatse          121.96 235 ePKPdf     PKiKP    17 34 48.1 +1.1
N57A   Milroy           121.99  46  P         PKPdf    17 34 46.0 -0.3
       baz=290
BEL    Belsk            122.00 329 eP         PKiKP    17 34 48.2 +2.1
R57A   Stanardsville    122.09  49  P         PKPdf    17 34 46.8 +0.2
       baz=288
O57A   Amberson         122.12  47  P         PKPdf    17 34 46.6  0.0
       baz=290
KWP    Kalwaria Pacla   122.16 326 eP         PKiKP    17 34 48.0 +1.5
KWP    Kalwaria Pacla   122.16 326 ePKPdf     PKiKP    17 34 47.3 +0.8
KWP                                 LR        LR
       comp=Z,25µm,22.0s
DWPF   Disney Wildern   122.17  61  PFAKE              17 35 00.0 +13
DWPF                                LR        LR
       comp=Z,3µm,20.0s
MLR    Muntele Rosu     122.19 320 ePKPdf     PKiKP    17 34 47.1 +0.2
MLR                                 LR        LR
       comp=Z,2µm,21.0s
MLR    Muntele Rosu     122.19 320⇑iP         PKPdf    17 34 46.5 -0.2
MLR    Muntele Rosu     122.19 320⇓iP         PKKPbc   17 44 44.1 -0.4
MLR    Muntele Rosu     122.19 320 ⇑PKIKP     PKPdf    17 34 46.5 -0.2
NHSC   New Hope         122.21  55  PFAKE              17 35 00.0 +13
NHSC                                LR        LR
       comp=Z,5µm,20.0s
ASK    Askoy            122.22 343 ePKPdf     PKPdf    17 34 46.2 +0.1
858A   St. Cloud        122.22  61  P         PKPdf    17 34 46.8 -0.3
       baz=280
ODD1   Odda             122.26 342 ePKPdf     PKiKP    17 34 46.8 +0.3
158A   Hollywood        122.29  56  P         PKPdf    17 34 46.7 -0.4
       baz=284
SECR                    122.31 320⇑iP         PKiKP    17 34 47.5 +0.5
DOPR   Dopca            122.33 321⇑iP         PKiKP    17 34 48.2 +1.2
V58A   Windy Hill, Pi   122.37  52  P         PKPdf    17 34 47.3 +0.1
       baz=286
LATQ   La Tuque         122.41  37  P         PKPdf    17 34 46.9  0.0
       baz=298
Y58A   Scranton         122.43  54  PFAKE              17 35 00.0 +12
Y58A                                LR        LR
       comp=Z,6µm,20.0s
Z58A   St. Stephen      122.46  55  P         PKPdf    17 34 47.0 -0.4
       baz=284
T58A   Grand View Acr   122.49  50  P         PKPdf    17 34 47.1 -0.3
       baz=287
Q58A   Fox Den Farm,    122.51  48  P         PKPdf    17 34 47.3 -0.1
       baz=289
LONY   Lake Ozonia      122.53  41  PFAKE              17 35 00.0 +13
LONY                                LR        LR
       comp=Z,11µm,21.0s
LONY   Lake Ozonia      122.53  41  P         PKPdf    17 34 47.0 -0.3
       baz=295
X58A   Rowland          122.53  53  PFAKE              17 35 00.0 +12
X58A                                LR        LR
       comp=Z,7µm,22.0s
BINY   Binghamton       122.56  44  PFAKE              17 35 00.0 +12
BINY                                LR        LR
       comp=Z,5µm,21.0s
BINY   Binghamton       122.56  44  P         PKPdf    17 34 47.3 -0.1
       baz=292
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P58A	Pank, Wackersv	122.61	47	P	PKPdf	17 34 47.6	0.0
	baz=290						
059A	Moore Haven	122.62	63	PFAKE		17 35 00.0	+12
059A				LR	LR		
	comp=Z,3µm,22.0s						
059A	Moore Haven	122.62	63	P	PKPdf	17 34 47.6	-0.3
	baz=279						
S58A	Poland Farm, P	122.66	50	PFAKE		17 35 00.0	+12
S58A				LR	LR		
	comp=Z,6µm,20.0s						
O58A	Lewisberry	122.66	46	P	PKPdf	17 34 47.7	0.0
	baz=290						
R58B	Mineral	122.68	49	PFAKE		17 35 00.0	+12
R58B				LR	LR		
	comp=Z,6µm,19.0s						
BLS5	Blasjo	122.70	342	ePKPdf	PKiKP	17 34 48.8	+1.4
LCO	Las Campanas	122.75	131	eP	PKPdf	17 34 47.1	-1.4
KOLS	Kolonicke sedl	122.76	325	ePKIKP	PKiKP	17 34 48.5	+0.7
KOLS				e		17 36 27.0	
KOLS	Kolonicke sedl	122.76	325	ePKP	PKiKP	17 34 48.5	+0.7
KOLS				ePP	PP	17 36 27.0	+1.4
PAGS	Pennsylvania G	122.77	46	PFAKE		17 35 00.0	+12
PAGS				LR	LR		
	comp=Z,5µm,22.0s						
VOIR		122.78	321	⇑iP	PKiKP	17 34 49.4	+1.4
VOIR		122.78	321	⇑PKIKP	PKiKP	17 34 49.4	+1.4
UZH	Uzhgorod	122.91	325	i PKIKP	PKPdf	17 34 46.5	-1.3
UZH				i		17 34 55.4	
UZH				e		17 35 01.4	
UZH				ePPP	PPP	17 39 04.2	
UZH				e		17 41 45.8	
UZH				e		17 46 10.2	
UZH				ePS	PS	17 46 27.7	+4.3
HOMB	Homborsund	122.94	340	ePKPdf	PKPdf	17 34 47.9	+0.3
KSPA	Keystone Colle	122.96	44	PFAKE		17 35 00.0	+12
KSPA				LR	LR		
	comp=Z,6µm,20.0s						
SDMD	Soldier's Deli	122.97	47	PFAKE		17 35 00.0	+12
SDMD				LR	LR		
	comp=Z,2µm,20.0s						
CBN	Corbin Frederi	122.98	49	PFAKE		17 35 00.0	+12
CBN				LR	LR		
	comp=Z,4µm,21.0s						
061Z	Ochoppi	123.00	64	PFAKE		17 35 00.0	+11
061Z				LR	LR		
	comp=Z,4µm,21.0s						
TRPA	Tarpa	123.02	324	⇓iP	PKiKP	17 34 48.9	+0.7
TRPA	Tarpa	123.02	324	⇓iP	PKKPbc	17 44 38.2	-2.9
TRPA	Tarpa	123.02	324	⇑eP	PKPdf	17 34 48.1	+0.1
TRPA				ePP	PP	17 36 35.1	+7.7
TRPA				eS	PS	17 46 28.1	+3.7
NCB	Newcomb	123.03	41	ePKPdf	PKPdf	17 34 48.3	+0.1
NCB				LR	LR		
	comp=Z,10µm,22.0s						
IVI	Ivigtut	123.05	14	PFAKE		17 35 00.0	+12
IVI				LR	LR		
	comp=Z,5µm,21.0s						
MANT	Manisa	123.06	312	PFAKE		17 35 00.0	+11
MANT				LR	LR		
	comp=Z,3µm,22.0s						
FRNY	Flat Rock	123.07	40	ePKPdf	PKPdf	17 34 48.4	+0.1
FRNY				LR	LR		
	comp=Z,11µm,21.0s						
ARR	Arges	123.07	321	⇑iP	PKiKP	17 34 48.8	+0.2
TRQA	Tornquist	123.07	145	ePKPdf	PKPdf	17 34 48.6	+0.1
X59A	McDuffie Farm,	123.11	53	P	PKPdf	17 34 48.0	-0.6
	baz=286						
O59A	Robesonia	123.12	46	P	PKPdf	17 34 47.7	-0.8
	baz=291						
CFA	Coronel Fontan	123.14	135	PKP	PKPdf	17 34 48.4	-0.5
	comp=Z,4.1nm,0.5s,baz=229,slow=2.2,SNR=8.4						
CFA				PP	PP	17 36 24.5	-4.0
	comp=Z,17nm,1.2s,baz=229,slow=8.0,SNR=8.2						
EDRB	Edirne	123.16	316	P	PKPdf	17 34 48.7	+0.2
BALB	Balikesir	123.17	313	PFAKE		17 35 00.0	+11
BALB				LR	LR		
	comp=Z,3µm,21.0s						
N59A	State Game Lan	123.20	45	ePKPdf	PKPdf	17 34 48.6	0.0
N59A				LR	LR		
	comp=Z,7µm,22.0s						
N59A	State Game Lan	123.20	45	P	PKPdf	17 34 47.8	-0.8
	baz=292						
M59A	Waymart	123.20	44	P	PKPdf	17 34 48.3	-0.3
	baz=293						
HUMR	Humele	123.22	320	⇑iP	PKiKP	17 34 49.1	+0.3
T59A	Double "B" Far	123.23	50	PFAKE		17 35 00.0	+11
T59A				LR	LR		
	comp=Z,5µm,20.0s						
U59A	Littleton	123.24	51	PFAKE		17 35 00.0	+11
U59A				LR	LR		
	comp=Z,4µm,20.0s						
KMY	Karmoy	123.24	342	ePKPdf	PKPdf	17 34 48.4	+0.3
060A	Indiantown	123.30	62	PFAKE		17 35 00.0	+11
060A				LR	LR		
	comp=Z,4µm,20.0s						
COP	Copenhagen	123.40	336	ePKIKP	PKiKP	17 34 50.2	+1.5
COP	Copenhagen	123.40	336	i P	PKiKP	17 34 50.2	+1.5
OJC	Ojcow	123.42	328	eP	PKiKP	17 34 50.5	+1.4
OJC	Ojcow	123.42	328	ePKPdf	PKPdf	17 34 48.5	-0.3
OJC	Ojcow	123.42	328	ePKIKP	PKPdf	17 34 48.5	-0.3
CNNC	Cliffs of the	123.49	52	PFAKE		17 35 00.0	+10
CNNC				LR	LR		
	comp=Z,5µm,20.0s						
LSZ	Lusaka	123.49	247	ePKPdf	PKiKP	17 34 50.8	+0.6
LSZ				LR	LR		
	comp=Z,4µm,20.0s						
Y60A	Bolivia	123.57	54	PFAKE		17 35 00.0	+10
Y60A				LR	LR		
	comp=Z,5µm,18.0s						
DRGR		123.58	323	⇑iP	PKiKP	17 34 50.3	+0.8
DRGR		123.58	323	⇑PKIKP	PKiKP	17 34 50.3	+0.8
LUPA	Lehigh Univers	123.60	45	PFAKE		17 35 00.0	+10
LUPA				LR	LR		
	comp=Z,400nm,22.0s						
NIE	Niedzica	123.60	327	eP	PKiKP	17 34 50.1	+0.7
NIE	Niedzica	123.60	327	PKIKP	PKiKP	17 34 51.6	+2.2
X60A	Albert Glenn T	123.61	53	P	PKPdf	17 34 49.0	-0.6
	baz=286						
ACCN	Adirondack Com	123.65	42	PFAKE		17 35 00.0	+10
ACCN				LR	LR		
	comp=Z,10µm,22.0s						
O60A	Telford	123.68	46	P	PKPdf	17 34 49.7	+0.1
	baz=292						
S60A	Water View	123.68	49	P	PKPdf	17 34 49.0	-0.6
	baz=289						
W60A	Pink Hill	123.68	52	P	PKPdf	17 34 49.5	-0.2
	baz=287						
N60A	Cedar Hill Far	123.69	45	P	PKPdf	17 34 49.7	+0.1
	baz=292						
U60A	Pendleton	123.69	51	P	PKPdf	17 34 49.3	-0.4
	baz=288						
P60A	Greenville	123.70	46	P	PKPdf	17 34 49.0	-0.6
	baz=291						
MOQ	Mont Orford	123.70	39	ePKPdf	PKPdf	17 34 49.4	-0.2
NRS	Narsarsuaq	123.70	12	ePKPdf	PKPdf	17 34 48.5	-0.4
NRS				LR	LR		
	comp=Z,4µm,21.0s						
NRS	Narsarsuaq	123.70	12	ePKIKP	PKPdf	17 34 48.5	-0.4
NRS				MLR	MLR		
	comp=Z,4µm,21.0s						
NRS	Narsarsuaq	123.70	12	i P	PKiKP	17 34 49.3	+0.1
	comp=Z,6µm,24.0s						
PSUB	Penn St. - Bra	123.79	46	ePKPdf	PKPdf	17 34 49.0	-0.8
PSUB				LR	LR		
	comp=Z,6µm,19.0s						
T60A	Surry	123.80	50	PFAKE		17 35 00.0	+10
T60A				LR	LR		
	comp=Z,6µm,20.0s						
RGN	Rugen	123.82	335	PFAKE		17 35 00.0	+10
RGN				LR	LR		
	comp=Z,2µm,21.0s						
V60A	Jim Taylor Roa	123.82	51	PFAKE		17 35 00.0	+10
V60A				LR	LR		
	comp=Z,7µm,22.0s						
V60A	Jim Taylor Roa	123.82	51	P	PKPdf	17 34 49.6	-0.4
	baz=288						
VT1	Waterbury	123.83	40	PFAKE		17 35 00.0	+10
VT1				LR	LR		
	comp=Z,12µm,21.0s						
TRY	Troy	123.92	42	PFAKE		17 35 00.0	+10
TRY				LR	LR		
	comp=Z,6µm,22.0s						
ODNJ	Ogdensburg	123.95	45	PFAKE		17 35 00.0	+10
ODNJ				LR	LR		
	comp=Z,8µm,22.0s						
ALN	Alexandroupoli	124.01	315	PFAKE		17 35 00.0	+10
ALN				LR	LR		
	comp=Z,700nm,21.0s						
MUD	Monsted U'grnd	124.09	338	i PKIKP	PKiKP	17 34 51.3	+1.2
MUD				MLR	MLR		
	comp=Z,3µm,24.0s						
MUD	Monsted U'grnd	124.09	338	i P	PKiKP	17 34 51.3	+1.2
	comp=Z,3µm,24.0s						
BRNJ	Basking Ridge	124.13	45	PFAKE		17 35 00.0	+9.3
BRNJ				LR	LR		
	comp=Z,7µm,22.0s						
LRW	Lerwick	124.18	346	eP	PKiKP	17 34 50.3	+0.1
LRW				IAMs_20	IAMs_20	18 26 04.2	
	comp=Z,2µm,16.2s						
LANS	Liptovska Anna	124.20	327	ePKIKP	PKiKP	17 34 52.6	+1.9
LANS	Liptovska Anna	124.20	327	ePKP	PKiKP	17 34 52.6	+1.9
GZR	Gura Zlata	124.22	321	⇑iP	PKPdf	17 34 50.4	-0.1
GZR	Gura Zlata	124.22	321	⇑PKIKP	PKPdf	17 34 50.4	-0.1
RDO	Rodhopi	124.26	316	ePKPdf	PKPdf	17 34 51.0	+0.4
RDO	Rodhopi	124.26	316	P	PKPdf	17 34 51.0	+0.4
U61A	Possum Corner	124.28	51	PFAKE		17 35 00.0	+8.9
U61A				LR	LR		
	comp=Z,4µm,20.0s						
U61A	Possum Corner	124.28	51	P	PKPdf	17 34 49.6	-1.2
	baz=288						
V61A	Roper	124.35	51	PFAKE		17 35 00.0	+8.8
V61A				LR	LR		
	comp=Z,4µm,21.0s						
V61A	Roper	124.35	51	P	PKPdf	17 34 50.5	-0.4
	baz=288						
LBNH	Lisbon	124.40	40	ePKPdf	PKPdf	17 34 51.1	+0.3
LBNH				LR	LR		
	comp=Z,11µm,21.0s						
LBNH	Lisbon	124.40	40	P	PKPdf	17 34 50.9	+0.1
	baz=297						
HNH	Hanover	124.41	41	PFAKE		17 35 00.0	+8.8
HNH				LR	LR		
	comp=Z,13µm,21.0s						
S61A	Accomac	124.42	49	PFAKE		17 35 00.0	+8.7
S61A				LR	LR		
	comp=Z,4µm,21.0s						
M61A	Granite Spring	124.44	44	P	PKPdf	17 34 50.9	-0.1
	baz=294						
KSCT	Kent School, K	124.46	43	PFAKE		17 35 00.0	+8.7
KSCT				LR	LR		
	comp=Z,4µm,22.0s						
PAL	Palisades	124.46	44	PFAKE		17 35 00.0	+8.7
PAL				LR	LR		
	comp=Z,7µm,22.0s						
PAL	Palisades	124.46	44	P	PKPdf	17 34 50.6	-0.4
	baz=294						
SIRR	Siria	124.47	323	⇑iP	PKPdf	17 34 51.3	+0.4
SMTH	Samothraki Isl	124.53	315	ePKPdf	PKPdf	17 34 51.0	-0.2
SMTH	Samothraki Isl	124.53	315	P	PKPdf	17 34 51.0	-0.2
MBAR	Mbarara	124.59	264	PFAKE		17 35 00.0	+7.4
MBAR				LR	LR		
	comp=Z,2µm,20.0s						
PSZ	Piszkesteto	124.64	325	PFAKE		17 35 00.0	+8.4
PSZ				LR	LR		
	comp=Z,3µm,22.0s						
PSZ	Piszkesteto	124.64	325	⇓iP	PKiKP	17 34 51.8	+0.2
PSZ	Piszkesteto	124.64	325	⇓PKIKP	PKiKP	17 34 51.8	+0.2
PSZ	Piszkesteto	124.64	325	⇑eP	PKiKP	17 34 52.0	+0.4
PSZ				ePP	PP	17 36 44.0	+5.7
PSZ				eS	PS	17 46 46.0	+7.1
BZS	Buzias	124.82	322	⇑iP	PKPdf	17 34 51.5	-0.1
BZS	Buzias	124.82	322	⇑PKIKP	PKPdf	17 34 51.5	-0.1
KSP	Ksiaz	124.86	330	eP	PKiKP	17 34 53.5	+1.6
MORC	Moravsky Berou	124.87	328	ePKPdf	PKPdf	17 34 51.5	-0.1
MORC				LR	LR		
	comp=Z,3µm,21.0s						
MORC	Moravsky Berou	124.87	328	⇑iP	PKiKP	17 34 52.3	+0.3
MORC	Moravsky Berou	124.87	328	⇓iP	PKKPbc	17 44 34.5	+0.6
MORC	Moravsky Berou	124.87	328	⇑PKIKP	PKiKP	17 34 52.3	+0.3
MORC	Moravsky Berou	124.87	328	ePKP	PKPdf	17 34 51.8	+0.2
MORC				e		17 35 04.4	
V62A	Hyde County Ai	124.90	51	PFAKE		17 35 00.0	+7.7
V62A				LR	LR		
	comp=Z,4µm,20.0s						
VYHS	Vyhne	124.92	326	ePKIKP	PKiKP	17 34 52.7	+0.7
VYHS				e		17 36 43.4	
VYHS	Vyhne	124.92	326	ePKP	PKiKP	17 34 52.7	+0.7
VYHS				ePP	PP	17 36 43.4	+3.3
FFD	Franklin Falls	124.93	41	PFAKE		17 35 00.0	+7.8
FFD				LR	LR		
	comp=Z,13µm,21.0s						
QUA2	Belchertown	125.00	42	PFAKE		17 35 00.0	+7.6
QUA2				LR	LR		
	comp=Z,8µm,22.0s						
LIA	Limnos Island	125.00	314	P	PKPdf	17 34 52.2	+0.1
BCIP	Isla Barro Col	125.00	84	PFAKE		17 35 00.0	+6.8
BCIP				LR	LR		
	comp=Z,2µm,19.0s						
YLE	Yale	125.01	44	PFAKE		17 35 00.0	+7.6
YLE				LR	LR		
	comp=Z,4µm,20.0s						
KAVA	Kavala	125.03	316	ePKPdf	PKPdf	17 34 51.9	-0.2
KAVA	Kavala	125.03	316	P	PKPdf	17 34 51.9	-0.2
THAS	Thassos island	125.05	315	P	PKPdf	17 34 52.1	-0.1
OSTC	Ostas	125.08	330	ePKP	PKiKP	17 34 53.5	+1.2
OSTC				ex	x	17 46 29.6	
OSTC				AMS	AMS	18 29 20.0	
	comp=Z,4µm,21.6s						
CHVC	Chvalec	125.14	330	AMS	AMS	18 29 30.0	
	comp=Z,4µm,22.4s						
DPC	Dobruska-Polom	125.15	329	ePKIKP	PKiKP	17 34 54.0	+1.5
DPC				e		17 46 31.6	
DPC				MLR	MLR		
	comp=Z,4µm,22.8s						
DPC	Dobruska-Polom	125.15	329	ePKP	PKiKP	17 34 54.0	+1.5
DPC				ex	x	17 46 31.6	
DPC				AMS	AMS	18 29 20.0	
	comp=Z,4µm,22.8s						
MDVR	Moldovita	125.18	321	⇑iP	PKPdf	17 34 50.3	-2.1
VTS	Vitosha	125.20	318	ePKPdf	PKPdf	17 34 51.1	-1.5
VTS				ePKPdf	PKiKP	17 34 52.6	-0.3
VTS				LR	LR		
	comp=Z,2µm,21.0s						
VTS	Vitosha	125.20	318	P	PKPdf	17 34 51.1	-1.5
VTS	Vitosha	125.20	318	⇑iP	PKPdf	17 34 53.0	+0.4
VTS	Vitosha	125.20	318	⇑PKIKP	PKPdf	17 34 53.0	+0.4
UPC	Upice	125.21	330	ePKIKP	PKiKP	17 34 53.4	+0.8
UPC				e		17 36 42.3	
UPC				e		17 46 32.1	
UPC				MLR	MLR		
	comp=Z,4µm,21.8s						
UPC	Upice	125.21	330	ePKP	PKiKP	17 34 53.4	+0.8
UPC				ePP	PP	17 36 42.3	+0.4
UPC				ex	x	17 46 32.1	
UPC				AMS	AMS	18 29 40.0	
	comp=Z,4µm,21.8s						
NVR	Nevrokopi	125.33	317	P	PKPdf	17 34 52.8	0.0
JAVC	Velka Javorina	125.34	327	ePKP	PKiKP	17 34 53.5	+0.6
JAVC				e		17 35 06.3	
HRV	Adam Dziewonsk	125.42	42	PFAKE		17 35 00.0	+6.8
HRV				LR	LR		
	comp=Z,8µm,21.0s						
HRV	Adam Dziewonsk	125.42	42	P	PKPdf	17 34 53.1	+0.2
	baz=297						
PKME	Peaks-Kenny Pk	125.55	38	ePKPdf	PKiKP	17 34 53.4	0.0
PKME				LR	LR		
	comp=Z,8µm,19.0s						
PKME	Peaks-Kenny Pk	125.55	38	P	PKPdf	17 34 52.8	-0.2
	baz=300						
PQI	Presque Isle	125.58	36	ePKPdf	PKPdf	17 34 52.9	-0.1
PQI				LR	LR		
	comp=Z,5µm,22.0s						
SRS	Serrai	125.61	316	P	PKPdf	17 34 53.0	-0.3
WES	Weston	125.64	42	PFAKE		17 35 10.0	+16
WES				LR	LR		
	comp=Z,8µm,22.0s						
VRAC	Vranov	125.65	328	⇑iP	PKiKP	17 34 54.7	+1.2
VRAC	Vranov	125.65	328	⇑PKIKP	PKiKP	17 34 54.7	+1.2
VRAC	Vranov	125.65	328	ePKP	PKPdf	17 34 53.2	+0.1
VRAC				e		17 35 05.7	
OUR	Ouranopolis	125.67	315	ePKPdf	PKPdf	17 34 52.9	-0.5
OUR	Ouranopolis	125.67	315	P	PKPdf	17 34 52.9	-0.5
OUR	Ouranopolis	125.67	315	ePKIKP	PKPdf	17 34 52.9	-0.5
WVL	Waterville	125.68	39	PFAKE		17 35 10.0	+16
WVL				LR	LR		
	comp=Z,11µm,22.0s						
BRYW	Bryant College	125.70	42	PFAKE		17 35 10.0	+16
BRYW				LR	LR		
	comp=Z,8µm,22.0s						
BCX	Boston College	125.76	42	PFAKE		17 35 10.0	+16
BCX				LR	LR		
	comp=Z,8µm,22.0s						
MODS	Modra-Piesok	125.84	327	ePKIKP	PKiKP	17 34 54.0	+0.1
MODS				e		17 36 46.4	
MODS	Modra-Piesok	125.84	327	ePKP	PKiKP	17 34 54.0	+0.1
MODS				ePP	PP	17 36 46.4	+0.2
CSKK	Cskako	125.87	325	eP	PKiKP	17 34 54.0	+0.1
CSKK				ePP	PP	17 36 54.0	+7.6
CSKK				eS	PS	17 46 54.0	+4.5
KRUC	Moravsky	125.90	328	ePKP	PKPdf	17 34 53.4	-0.2
KRUC				e		17 35 06.2	
PVCC	Panska Ves	125.92	330	ePKIKP	PKiKP	17 34 55.0	+1.1
PVCC				MLR	MLR		
	comp=Z,2µm,20.9s						
PVCC	Panska Ves	125.92	330	ePKP	PKiKP	17 34 55.0	+1.1
PVCC				AMS	AMS	18 33 30.0	
	comp=Z,2µm,20.9s						
BRG	Berggiesshubel	126.00	331	PDIFF	Pdif	17 31 43.0	+11
BRG	Berggiesshubel	126.00	331	ePKP	PKPdf	17 34 53.3	-0.4
	comp=Z,4.6nm,1.1s						
BRG				i		17 35 05.9	
	comp=Z,77nm,1.5s						
BRG				PP	PP	17 36 43.0	-4.1
BRG				e		17 41 13.3	
	comp=Z,7.9nm,1.7s						
BRG				eSKKP		17 48 19.7	
	comp=Z,22nm,2.0s						
BRG				SS	SS	17 53 52.0	+7.6
	comp=N,2µm,23.7s						
	comp=E,2µm,29.5s						
	comp=Z,2µm,22.4s						
BRG	Berggiesshubel	126.00	331	ePKIKP	PKPdf	17 34 53.3	-0.4
BRG				i		17 35 05.9	
BRG				SS	SS	17 53 52.0	+7.6
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BRG				pmax	pmax		
	comp=Z,23nm,2.0s						
BRG				MLR	MLR		
	comp=N,2µm,23.7s						
BRG				MLR	MLR		
	comp=E,2µm,29.5s						
ZST	Bratislava	126.03	327	ePKIKP	PKiKP	17 34 54.8	+0.6
ZST				e		17 36 52.1	
ZST	Bratislava	126.03	327	ePKP	PKiKP	17 34 54.8	+0.6
ZST				ePP	PP	17 36 52.1	+4.6
KNT	Kendrikon	126.07	317	P	PKPdf	17 34 53.4	-0.7
FRGS	Fruska Gora	126.16	322	eP	PKiKP	17 34 55.2	+0.6
CLL	Collm	126.16	332	ePKPdf	PKPdf	17 34 53.5	-0.4
CLL				LR	LR		
	comp=Z,2µm,20.0s						
CLL	Collm	126.16	332	ePKIKP	PKPdf	17 34 53.5	-0.4
CLL				MLR	MLR		
	comp=Z,2µm,20.0s						
CLL	Collm	126.16	332	ePdif	Pdif	17 31 32.0	-1.2
CLL				i PKPdf	PKiKP	17 34 55.4	+1.0
	comp=Z,44nm,0.8s						
CLL				epPKPdf	pPKPdf	17 35 05.0	-5.4
CLL				e		17 35 21.0	
CLL				ePP	PP	17 36 48.0	-0.1
CLL				e		17 38 18.0	
CLL				e(PPP)		17 39 18.0	
CLL				eSKSac	SKSac	17 41 50.0	-4.5
CLL				eSKKSac	SKKSac	17 43 42.0	+0.2
CLL				e		17 45 38.0	
CLL				eSKSP		17 46 43.0	
CLL				ePS	PS	17 46 59.0	+7.2
CLL				ePKKSbc	PKKSbc	17 48 19.0	-3.2
CLL				ePPS	PPS	17 48 25.0	
CLL				ePPPrev		17 51 50.0	
CLL				eSS	SS	17 53 45.0	-1.3
CLL				ePSPS		17 54 36.0	
CLL				eSSS	SSS	17 58 24.0	
CLL				eSSSS		18 02 06.0	
CLL				e		18 08 24.0	
CLL				LmH		18 33 00.0	
	comp=N,2µm,20.4s						
CLL				LmH		18 33 00.0	
	comp=E,1µm,20.7s						
CLL				LmV		18 35 00.0	
	comp=Z,2µm,20.5s						
GOPC	GO Pecny, Ondr	126.20	330	ePKIKP	PKiKP	17 34 55.4	+0.8
GOPC				MLR	MLR		
	comp=Z,2µm,21.9s						
GOPC	GO Pecny, Ondr	126.20	330	ePKP	PKiKP	17 34 55.4	+0.8
GOPC				AMS	AMS	18 30 10.0	
	comp=Z,2µm,21.9s						
VAY	Valandovo	126.22	317	i P	PKiKP	17 34 55.0	+0.2
TREC	Trest	126.23	329	ePKIKP	PKiKP	17 34 56.0	+1.3
TREC				MLR	MLR		
	comp=Z,4µm,20.2s						
TREC	Trest	126.23	329	ePKP	PKiKP	17 34 56.0	+1.3
TREC				AMS	AMS	18 33 10.0	
	comp=Z,4µm,20.2s						
THE	Thessaloniki	126.25	316	P	PKPdf	17 34 54.0	-0.5
PRU	Pruhonice	126.27	330	ePKIKP	PKiKP	17 34 55.5	+0.8
PRU				e		17 35 06.9	
PRU				MLR	MLR		
	comp=Z,2µm,22.2s						
PRU	Pruhonice	126.27	330	ePKP	PKiKP	17 34 55.5	+0.8
PRU				epPKP	pPKPdf	17 35 06.9	-3.8
PRU				ePP	PP	17 36 43.9	-5.0
PRU				AMS	AMS	18 30 10.0	
	comp=Z,2µm,22.2s						
MORH	Mrgy, Hungar	126.29	324	eP	PKiKP	17 34 55.0	+0.2
MORH				ePP	PP	17 36 57.0	+7.8
MORH				eS	PS	17 46 59.1	+5.9
STIP	Stip	126.31	318	i P	PKPdf	17 34 54.6	0.0
TIH	Tihany	126.34	325	eP	PKiKP	17 34 55.0	+0.1
TIH				eS	PS	17 46 56.0	+2.4
BATG	Bathurst New B	126.36	34	ePKPdf	PKPdf	17 34 54.2	-0.3
BATG				LR	LR		
	comp=Z,5µm,22.0s						
GRG	Griva	126.50	317	P	PKPdf	17 34 54.5	-0.5
DIVS	Divibare	126.58	321	eP	PKPdf	17 34 55.5	+0.4
XOR	Xorichti	126.62	315	P	PKPdf	17 34 54.5	-0.8
NEO	Neokhori	126.63	315	P	PKPdf	17 34 54.9	-0.4
SOP	Sopron	126.63	327	eP	PKPdf	17 34 55.1	+0.1
SOP				⇓ePP	PP	17 36 55.1	+3.6
SOP				eS	SP	17 46 49.1	+0.5
SKO	Skopje	126.69	318	ePKPdf	PKiKP	17 34 55.9	+0.1
SKO	Skopje	126.69	318	P	PKiKP	17 34 55.9	+0.1
SKO	Skopje	126.69	318	i P	PKPdf	17 34 55.7	+0.4
ATHU	Athens Univers	126.76	313	P	PKPdf	17 34 50.9	-4.6
FYTO	Fytoko, Volos	126.78	315	P	PKiKP	17 35 06.9	+11
LIT	Litokhoron	126.81	316	ePKPdf	PKPdf	17 34 55.6	0.0
LIT				LR	LR		
	comp=Z,1µm,22.0s						
LIT	Litokhoron	126.81	316	P	PKPdf	17 34 54.9	-0.7
LIT	Litokhoron	126.81	316	ePKIKP	PKPdf	17 34 55.6	0.0
LIT				MLR	MLR		
	comp=Z,1µm,22.0s						
SMIA	Simia	126.81	314	P	PKPdf	17 34 55.9	+0.3
CONA	Conrad Observa	126.86	327	i PKiKP	PKiKP	17 34 56.6	+0.6
	comp=Z,17nm,0.7s,SNR=24						
CONA				SKKPbc	SKKPbc	17 48 14.5	+0.5
	comp=Z,3.6nm,1.0s						
EMMW	East Machias	126.95	38	PFAKE		17 35 10.0	+14
EMMW				LR	LR		
	comp=Z,7µm,19.0s						
BBAC	Balboa, Cauca	127.00	93	eP	PKPdf	17 34 56.5	-0.4
ATAL	Atalanti	127.02	314	ePKPdf	PKPdf	17 34 55.2	-0.8
ATAL	Atalanti	127.02	314	P	PKPdf	17 34 55.2	-0.8
MTDJ	Mount Denham	127.03	73	PFAKE		17 35 10.0	+13
MTDJ				LR	LR		
	comp=Z,1µm,22.0s						
LKR	Lokris	127.05	314	P	PKPdf	17 34 55.4	-0.7
SIVA	Sivas	127.06	309	P	PKiKP	17 34 57.0	+0.3
BBLS	Lazići	127.07	321	eP	PKiKP	17 34 57.6	+1.0
GGN	Saint George	127.11	37	PFAKE		17 35 10.0	+14
GGN				LR	LR		
	comp=Z,6µm,19.0s						
NKC	Novy Kostel	127.14	331	ePKIKP	PKiKP	17 34 57.7	+1.3
NKC				MLR	MLR		
	comp=Z,3µm,21.0s						
NKC	Novy Kostel	127.14	331	ePKP	PKiKP	17 34 57.7	+1.3
NKC				ePP	PP	17 36 42.3	-12
NKC				AMS	AMS	18 31 20.0	
	comp=Z,3µm,21.0s						
KZN	Kozani	127.21	316	P	PKPdf	17 34 55.9	-0.5

BEHE	Becsehely	127.22	325	eP	PKiKP	17 34 57.0	+0.4
RUDO	Rudo	127.22	321	eP	PKiKP	17 34 57.2	+0.4
HAPS	Han Pijesak,BI	127.23	322	eP	PKiKP	17 34 57.4	+0.5
MOX	Moxa	127.25	332	PKIKP	PKiKP	17 34 57.8	+1.2
RRR	Rubha Reidh	127.28	348	eP	PKiKP	17 34 56.6	+0.2
KHC	Kasperske Hory	127.31	330	ePKPdf	PKPdf	17 34 56.4	+0.1
KHC				LR	LR		
	comp=Z,2µm,22.0s						
KHC	Kasperske Hory	127.31	330	ePKIKP	PKPdf	17 34 56.7	+0.4
KHC				e		17 35 09.0	
KHC				e		17 36 51.8	
KHC				MLR	MLR		
	comp=Z,4µm,22.2s						
KHC	Kasperske Hory	127.31	330	ePKP	PKPdf	17 34 56.7	+0.4
KHC				epPKP	pPKPdf	17 35 09.0	-3.8
KHC				ePP	PP	17 36 51.8	-4.0
KHC				ex	x	17 47 35.0	
KHC				AMS	AMS	18 30 40.0	
	comp=Z,4µm,22.2s						
DID	Didima	127.34	312	ePKPdf	PKPdf	17 34 55.6	-1.1
DID	Didima	127.34	312	P	PKPdf	17 34 55.6	-1.1
LOUT	Loutraki	127.34	313	P	PKPdf	17 34 56.1	-0.6
LVC	Limon Verde	127.34	125	PKP	PKiKP	17 34 59.3	+1.2
	comp=Z,3.8nm,0.7s,baz=287,slow=2.4,SNR=3.6						
THL	Klokotos Trika	127.37	315	P	PKPdf	17 34 56.1	-0.5
AGG	Agios Georgios	127.38	315	ePKPdf	PKPdf	17 34 56.3	-0.4
AGG				LR	LR		
	comp=Z,1µm,21.0s						
AGG	Agios Georgios	127.38	315	P	PKPdf	17 34 56.3	-0.4
AGG	Agios Georgios	127.38	315	ePKIKP	PKPdf	17 34 56.3	-0.4
AGG				MLR	MLR		
	comp=Z,1µm,21.0s						
GEC2	GERESS Array S	127.43	329	ePKPdf	PKPdf	17 34 56.8	+0.2
GEC2				LR	LR		
	comp=Z,4µm,21.0s						
GEC2	GERESS Array S	127.43	329	ePKIKP	PKPdf	17 34 56.8	+0.2
GEC2				MLR	MLR		
	comp=Z,4µm,21.0s						
GERES	GERESS Array B	127.43	329	PKP	PKPdf	17 34 56.9	+0.2
	comp=Z,13nm,0.5s,baz=64,slow=2.3,SNR=94						
ARSA	Arzberg	127.45	327	ePKiKP	PKiKP	17 34 57.2	0.0
	comp=Z,12nm,1.1s,SNR=6.3						
ARSA				SKKPbc	SKKPbc	17 48 11.7	-0.2
	comp=Z,8.1nm,1.6s						
PHP	Peshkopia	127.48	318	P	PKPdf	17 34 56.8	-0.1
DSF	Desfina	127.49	314	P	PKPdf	17 34 57.0	0.0
OHR	Ohrid	127.51	318	i P	PKiKP	17 34 58.3	+0.8
PB01	IPOC Station P	127.60	123	PFAKE		17 35 10.0	+12
PB01				LR	LR		
	comp=Z,4µm,20.0s						
POPC	Popayan, Colom	127.63	92	eP	PKPdf	17 34 57.1	-1.1
WET	Wettzell	127.65	330	PKIKP	PKiKP	17 34 58.7	+1.2
KPRO	Kipourio	127.65	316	P	PKPdf	17 34 57.2	-0.1
NEST	Nestorio	127.66	317	P	PKPdf	17 34 57.7	+0.4
UPM	Unac-Piva	127.72	321	eP	PKiKP	17 34 58.8	+0.8
KPL	Plockton	127.72	347	eP	PKiKP	17 34 58.1	+0.8
KPL				IAMs_20	IAMs_20	18 31 13.9	
	comp=Z,3µm,25.6s						
MOA	Molln	127.76	328	ePKiKP	PKiKP	17 34 57.8	0.0
	comp=Z,12nm,0.7s,SNR=8.9						
MOA				SKKPbc	SKKPbc	17 48 09.7	-1.2
	comp=Z,12nm,1.3s						
KALE	Kalithea	127.77	314	ePKPdf	PKPdf	17 34 57.3	-0.3
KALE	Kalithea	127.77	314	P	PKPdf	17 34 57.3	-0.3
EVR	Evrytania	127.79	315	P	PKPdf	17 34 58.0	+0.4
GUR	Goura	127.81	313	ePKPdf	PKPdf	17 34 58.0	+0.3
GUR	Goura	127.81	313	P	PKPdf	17 34 58.0	+0.3
EDU	Dundee	127.82	345	eP	PKiKP	17 34 58.2	+0.6
MEV	Metsovon	127.82	316	ePKPdf	PKiKP	17 34 58.3	0.0
MEV	Metsovon	127.82	316	P	PKiKP	17 34 58.3	0.0
LMN	Caledonia Moun	127.88	35	ePKPdf	PKPdf	17 34 57.6	+0.2
LMN				LR	LR		
	comp=Z,6µm,22.0s						
PDG	Podgorica	127.89	320	⇓iP	PKiKP	17 34 58.1	0.0
PDG	Podgorica	127.89	320	eP	PKPdf	17 34 57.9	+0.4
TTG	Podgorica	127.89	320	ePKPdf	PKiKP	17 34 58.1	0.0
TTG				LR	LR		
	comp=Z,2µm,22.0s						
KLV	Kalavryta, Ach	127.91	314	P	PKPdf	17 34 57.8	0.0
EFP	Efpalio	127.93	314	P	PKiKP	17 34 58.6	+0.3
BLY	Banja Luka	127.95	323	ePKPdf	PKPdf	17 34 57.1	-0.5
BLY				LR	LR		
	comp=Z,2µm,21.0s						
BLY	Banja Luka	127.95	323	⇑iP	PKiKP	17 34 58.5	+0.3
LAKA	Lakka	127.95	314	ePKPdf	PKPdf	17 34 56.9	-1.0
LAKA	Lakka	127.95	314	P	PKPdf	17 34 56.9	-1.0
TIR	Tirane	128.02	318	ePKPdf	PKPdf	17 34 57.2	-0.6
TIR				LR	LR		
	comp=Z,2µm,22.0s						
TIR	Tirane	128.02	318	⇑iP	PKiKP	17 34 58.6	+0.2
TIR	Tirane	128.02	318	ePKIKP	PKPdf	17 34 57.2	-0.6
TIR				MLR	MLR		
	comp=Z,2µm,22.0s						
DRME	Dracevica, Mon	128.05	320	eP	PKiKP	17 34 58.5	0.0
SOKA	Soboth	128.07	326	i PKiKP	PKPdf	17 34 58.3	+0.4
	comp=Z,30nm,1.5s,SNR=18						
SOKA				SKKPbc	SKKPbc	17 48 09.1	-0.7
	comp=Z,5.7nm,1.4s						
GRA1	Grafenberg Arr	128.09	331	ePKPdf	PKPdf	17 34 57.2	-0.5
GRA1				LR	LR		
	comp=Z,2µm,22.0s						
GRFO	Grafenberg	128.09	331	ePKPdf	PKPdf	17 34 57.2	-0.5
GRFO	Grafenberg	128.09	331	ePKIKP	PKPdf	17 34 57.2	-0.5
BRY	Bratogost	128.10	321	eP	PKiKP	17 34 59.4	+0.6
YOTC	Yotoco, Valle	128.12	90	eP	PKPdf	17 34 58.5	-0.5
ESY	Stoneypath	128.27	345	eP	PKiKP	17 34 59.2	+0.7
CRES	Cresnjev	128.34	325	eP	PKiKP	17 34 59.0	0.0
MNMC	Minye Minye	128.36	121	ePKPdf	PKPdf	17 34 57.8	-1.7
HCY	Herceg Novi	128.37	320	eP	PKPdf	17 34 58.6	+0.1
MARP	Paez Belalcaza	128.38	92	eP	PKPdf	17 34 59.4	-0.3
WTSB	Winterswijk	128.40	336	ePKP	PKiKP	17 34 58.9	+0.1
ITM	Ithomi	128.42	313	ePKPdf	PKPdf	17 34 58.4	-0.3
ITM				LR	LR		
	comp=Z,1µm,22.0s						
ITM	Ithomi	128.42	313	P	PKPdf	17 34 58.7	-0.1
OBKA	Obir	128.43	326	ePKiKP	PKPdf	17 34 59.1	+0.5
	comp=Z,7.9nm,0.8s						
OBKA				SKKPbc	SKKPbc	17 48 01.3	-7.3
	comp=Z,5.4nm,1.1s						
DBBC	Dabeiba	128.49	87	eP	PKPdf	17 34 60.0	+0.4
BOJS	Bojanci	128.64	325	i PKPdf	PKiKP	17 35 00.3	+0.7
BOJS				i		17 35 11.4	
BOJS				i		17 38 30.6	
STON	Ston	128.65	321	eP	PKPdf	17 34 58.4	-0.5
LAWE	Loch Awe, Argy	128.65	347	eP	PKPdf	17 34 58.1	-0.5
LAWE				IAMs_20	IAMs_20	18 27 51.5	
	comp=Z,3µm,29.4s						
PYL	PYLOS	128.67	312	ePKPdf	PKPdf	17 34 59.1	-0.1
PYL	PYLOS	128.67	312	P	PKPdf	17 34 59.1	-0.1
VISS	Visnje	128.70	326	i PKPdf	PKiKP	17 35 00.0	+0.4
VISS				i		17 35 10.6	
VISS				i		17 38 31.3	
LJU	Ljubljana	128.73	326	eP	PKPdf	17 34 59.4	+0.3
KBA	Koelnbreinsper	128.73	328	ePKiKP	PKiKP	17 34 59.9	0.0
	comp=Z,24nm,1.2s,SNR=11						
KBA	Koelnbreinsper	128.73	328	PKIKP	PKPdf	17 34 59.7	+0.4
KEK	Kerkira	128.83	316	ePKPdf	PKPdf	17 34 59.7	+0.3
KEK	Kerkira	128.83	316	P	PKPdf	17 34 59.7	+0.3
MYKA	Terra Mystica	128.85	327	i PKiKP	PKPdf	17 34 59.6	+0.2
	comp=Z,19nm,1.1s,SNR=7.3						
MYKA				eSKKPbc	SKKPbc	17 48 06.9	-0.2
	comp=Z,3.6nm,0.9s						
EKA	Eskdalemuir Ar	128.94	345	PKIKP	PKPdf	17 34 59.4	+0.3
EKA				pmax	pmax		
	comp=Z,24nm,0.4s						
ESK	Eskdalemuir	128.96	345	ePKPdf	PKiKP	17 34 60.0	+0.1
ESK				LR	LR		
	comp=Z,2µm,19.0s						
ESK	Eskdalemuir	128.96	345	eP	PKPdf	17 34 59.5	+0.3
CEY	Cerknica	128.97	326	eP	PKPdf	17 34 59.4	-0.2
EDMD	Edmundbyers	129.06	344	eP	PKPdf	17 34 59.8	+0.4
EDMD				IAMs_20	IAMs_20	18 33 20.2	
	comp=Z,3µm,27.2s						
JAVS	Javornik	129.08	326	i PKPdf	PKiKP	17 35 00.6	+0.1
JAVS				i		17 35 12.0	
JAVS				i		17 38 32.6	
GTBY	Guantanamo Bay	129.13	70	PFAKE		17 35 10.0	+8.8
GTBY				LR	LR		
	comp=Z,2µm,20.0s						
RREF	El Recreo	129.19	89	eP	PKiKP	17 35 04.6	+2.2
ORTC	Ortega, Tolima	129.20	91	eP	PKPdf	17 34 57.4	-3.6
GUY2C	Guyana, Caldas	129.20	89	eP	PKPdf	17 35 01.2	-0.3
HAL	Halifax	129.29	36	PFAKE		17 35 10.0	+9.2
HAL				LR	LR		
	comp=Z,4µm,20.0s						
TRI	Trieste	129.35	326	PFAKE		17 35 10.0	+9.0
TRI				LR	LR		
	comp=Z,1µm,20.0s						
ABTA	Abfaltersbach	129.38	328	i PKiKP	PKPdf	17 35 00.8	+0.4
	comp=Z,53nm,1.4s,SNR=10						
ABTA				SKPdf	SKPbc	17 38 22.4	+4.8
	comp=Z,10nm,1.3s						
ABTA				SKKPbc	SKKPbc	17 47 55.5	-10
	comp=Z,5.1nm,1.2s						
DRLN	Deer Lake	129.47	28	PFAKE		17 35 10.0	+8.9
DRLN				LR	LR		
	comp=Z,10µm,22.0s						
BBO1	Bothel	129.49	344	eP	PKiKP	17 35 01.2	+0.3
WATA	Walderalm	129.49	329	ePKiKP	PKiKP	17 35 01.4	0.0
	comp=Z,8.0nm,0.5s,SNR=11						
WATA				SKPdf	SKPbc	17 38 25.0	+7.0
	comp=Z,4.2nm,0.8s						
WTTA	Wattenberg	129.51	329	i PKiKP	PKiKP	17 35 01.8	+0.3
	comp=Z,81nm,1.1s,SNR=16						
WTTA				SKPdf	SKPbc	17 38 23.7	+5.6
	comp=Z,6.6nm,0.5s						
WTTA				SKKPbc	SKKPbc	17 48 01.1	-3.9
	comp=Z,7.8nm,1.0s						
PRAC	Prado	129.54	91	eP	PKPdf	17 35 01.4	-0.2
KESW	Keswick, Cumbr	129.58	344	eP	PKiKP	17 35 01.1	0.0
KESW				IAMs_20	IAMs_20	18 32 43.3	
	comp=Z,3µm,25.5s						
HGN	Heimansgroeve	129.66	335	ePKP	PKiKP	17 35 02.0	+0.6
STU	Stuttgart	129.68	332	PFAKE		17 35 10.0	+8.5
STU				LR	LR		
	comp=Z,2µm,21.0s						
HPK	Haverah Park	129.72	343	eP	PKiKP	17 35 01.8	+0.4
HPK				IAMs_20	IAMs_20	18 33 19.6	
	comp=Z,2µm,23.8s						
MOTA	Moosalm	129.72	329	ePKiKP	PKPdf	17 35 01.5	+0.4
	comp=Z,10nm,0.5s,SNR=10						
MOTA				SKPdf	SKPbc	17 38 25.3	+6.5
	comp=Z,2.2nm,0.5s						
MOTA				SKKPbc	SKKPbc	17 47 58.3	-5.8
	comp=Z,1.5nm,0.6s						
BEBN	Eben Emael	129.74	336	⇑PKP	PKiKP	17 35 02.2	+0.6
BEBN				⇑x	x	17 35 13.7	
MEM	Membach	129.75	335	⇓PKP	PKiKP	17 35 01.6	0.0
GAL1	Galloway	129.75	345	eP	PKiKP	17 35 01.5	0.0
GAL1				IAMs_20	IAMs_20	18 31 10.8	
	comp=Z,1µm,27.7s						
SQTA	Sankt Quirin	129.75	329	ePKiKP	PKPdf	17 35 01.7	+0.6
	comp=Z,47nm,1.1s,SNR=12						
SQTA				SKPdf	SKPbc	17 38 23.1	+4.2
	comp=Z,5.0nm,0.9s						
SQTA				SKKPbc	SKKPbc	17 47 56.1	-7.9
	comp=Z,19nm,1.8s						
RETA	Reutte	129.80	330	i PKiKP	PKiKP	17 35 02.0	0.0
	comp=Z,9.4nm,0.6s,SNR=6.7						
RETA				SKKPbc	SKKPbc	17 47 58.5	-5.3
	comp=Z,9.8nm,1.7s						
OGAUY	Aigu	129.82	147	eP	PKPdf	17 35 01.2	-0.3
ZARC	Zaragoza, Cauc	129.86	86	eP	PKPdf	17 35 02.6	+0.5
CLGH	Cloghs, Cushen	129.89	346	eP	PKPdf	17 35 01.2	+0.2
WIN	Windhoek	129.95	233	ePKPdf	PKiKP	17 35 04.5	+1.3
WIN				LR	LR		
	comp=Z,3µm,19.0s						
GBN	Guysborough	130.00	34	ePKPdf	PKPdf	17 35 01.9	+0.5
GBN				LR	LR		
	comp=Z,6µm,22.0s						
WACR	West Acre	130.07	340	eP	PKPdf	17 35 01.8	+0.5
FETA	Feichten	130.13	329	ePKiKP	PKiKP	17 35 03.1	+0.4
	comp=Z,44nm,1.0s,SNR=11						
FETA				eSKPab	SKPab	17 38 21.2	+1.1
	comp=Z,8.2nm,0.8s						
FETA				SKKPbc	SKKPbc	17 47 57.0	-5.7
	comp=Z,11nm,1.4s						
BCLA	Clavier	130.19	336	⇑PKP	PKiKP	17 35 02.8	+0.3
BCLA				⇓x	x	17 35 15.1	
PTBC	PUERTO BERRIO,	130.20	87	eP	PKPdf	17 35 02.5	-0.3
ROSC	El Rosal	130.21	90	PKP	PKiKP	17 35 04.1	0.0
	comp=Z,4.4nm,0.4s,baz=263,slow=23,SNR=4.3						
ROSC	El Rosal	130.21	90	ePKPdf	PKiKP	17 35 04.1	0.0
ROSC				LR	LR		
	comp=Z,700nm,19.0s						
IOMK	Kirk Michael	130.26	345	eP	PKiKP	17 35 02.9	+0.3
IOMK				IAMs_20	IAMs_20	18 33 18.4	
	comp=Z,5µm,19.4s						
UCC	Uccle	130.27	336	ePKPdf	PKPdf	17 35 02.0	+0.2
UCC				LR	LR		
	comp=Z,3µm,22.0s						
UCC	Uccle	130.27	336	⇑PKP	PKiKP	17 35 03.1	+0.4
UCC				⇑x	x	17 35 14.8	
CTAB	Cerro Tablazo,	130.34	89	eP	PKPdf	17 35 02.2	-1.4
DAVA	Damuels	130.38	330	ePKiKP	PKiKP	17 35 03.3	+0.1
	comp=Z,13nm,0.7s						
DAVA				SKPab	SKPbc	17 38 25.3	+4.1
	comp=Z,20nm,1.4s						
DAVA				SKKPbc	SKKPbc	17 47 58.1	-3.7
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	130.40	332	ePKPdf	PKPdf	17 35 02.3	+0.1
BFO				LR	LR		
	comp=Z,1µm,20.0s						
BFO	Black Forest	130.40	332	i PKIKP	PKiKP	17 35 04.1	+1.1
WLF	Walferdange	130.40	334	ePKPdf	PKiKP	17 35 03.4	+0.4
WLF				LR	LR		
	comp=Z,11µm,20.0s						
WLF	Walferdange	130.40	334	⇑PKP	PKiKP	17 35 04.3	+1.4
WLF				⇑x	x	17 35 16.1	
SNF	Seneffe	130.53	336	⇑PKP	PKiKP	17 35 03.4	+0.2
SNF				⇓x	x	17 35 16.3	
GMM	Mts of Mourne	130.63	346	eP	PKiKP	17 35 03.1	-0.1
FUORN	Ofenpass-Fuorn	130.64	329	PFAKE		17 35 10.0	+6.1
FUORN				LR	LR		
	comp=Z,2µm,22.0s						
DOU	Dourbes	130.72	336	⇑PKP	PKiKP	17 35 04.2	+0.6
DOU				⇑x	x	17 35 16.0	
CHIC	Chingaza	130.77	90	eP	PKiKP	17 35 08.0	+2.7
LPAZ	La Paz	130.83	118	PKP	PKiKP	17 35 05.7	+0.2
	comp=Z,2.5nm,0.6s,baz=297,slow=2.3,SNR=15						
LPAZ				SKPbc	SKPab	17 38 25.7	+1.3
	comp=Z,6.8nm,0.9s,baz=359,slow=0.8,SNR=4.8						
LPAZ	La Paz	130.83	118	ePKPdf	PKPdf	17 35 04.4	-0.3
LPAZ				eSKPbc	SKPab	17 38 25.7	+1.3
LPAZ	La Paz	130.83	118	eP	PKPdf	17 35 03.6	-1.0
WME	Myndd Eilian	130.97	344	eP	PKiKP	17 35 04.1	+0.1
WPS	Cemaes, Angles	131.02	344	eP	PKiKP	17 35 04.0	0.0
ECH	Echery	131.03	332	ePKPdf	PKPdf	17 35 00.9	-2.5
ECH				LR	LR		
	comp=Z,2µm,20.0s						
WLF1	Llynfaes	131.09	344	eP	PKPdf	17 35 03.7	+0.4
WLF1				IAMs_20	IAMs_20	18 34 01.2	
	comp=Z,5µm,26.1s						
FOEL	Foel Wylfa	131.11	343	eP	PKiKP	17 35 04.6	+0.3
FOEL				IAMs_20	IAMs_20	18 34 12.7	
	comp=Z,3µm,22.2s						
TIP	Timpagrande	131.15	317	ePKPdf	PKPdf	17 35 02.7	-1.3
TIP				LR	LR		
	comp=Z,2µm,22.0s						
TIP	Timpagrande	131.15	317	P	PKPdf	17 35 02.9	-1.1
TIP	Timpagrande	131.15	317	⇑iP	PKiKP	17 35 04.9	0.0
YLL	Llanberis	131.16	344	eP	PKPdf	17 35 04.1	+0.7
YRC	Rhoscolyn	131.17	344	eP	PKiKP	17 35 04.2	-0.2
TUE	Stuetta	131.20	329	ePKPdf	PKPdf	17 34 56.6	-7.4
TUE				LR	LR		
	comp=Z,3µm,20.0s						
TSUM	Tsumeb	131.22	237	ePKPdf	PKPdf	17 35 03.6	-1.2
TSUM				LR	LR		
	comp=Z,6µm,20.0s						
HLM1	Long Mynd	131.35	343	eP	PKiKP	17 35 04.7	-0.1
HLM1				IAMs_20	IAMs_20	18 25 10.2	
	comp=Z,3µm,29.2s						
BARC	Barichara	131.47	87	eP	PKiKP	17 35 08.4	+2.0
RUSC	La Rusia	131.52	88	eP	PKPdf	17 35 03.5	-2.4
AQU	L'Aquila	131.57	323	PFAKE		17 35 20.0	+14
AQU				LR	LR		
	comp=Z,2µm,22.0s						
DSB	Dublin	131.64	346	PFAKE		17 35 20.0	+15
DSB				LR	LR		
	comp=Z,2µm,21.0s						
STRD	Stroud	131.78	342	eP	PKiKP	17 35 05.7	0.0
STRD				IAMs_20	IAMs_20	18 34 32.5	
	comp=Z,3µm,22.8s						
MCH1	Michaelchurch	131.84	342	eP	PKPdf	17 35 05.2	+0.4
MCH1				IAMs_20	IAMs_20	18 32 51.9	
	comp=Z,2µm,25.6s						
WOL	Wolverton	131.88	341	eP	PKiKP	17 35 06.5	+0.7
WOL				IAMs_20	IAMs_20	18 32 55.7	
	comp=Z,4µm,23.6s						
SWN1	Swindon	131.89	341	eP	PKiKP	17 35 06.8	+0.9
SWN1				IAMs_20	IAMs_20	18 34 50.1	
	comp=Z,3µm,25.1s						
MONM	Monmouth	131.92	342	eP	PKiKP	17 35 06.5	+0.6
MONM				IAMs_20	IAMs_20	18 26 11.1	
	comp=Z,3µm,29.1s						
VLC	Villacollemand	132.19	326	PFAKE		17 35 20.0	+13
VLC				LR	LR		
	comp=Z,3µm,22.0s						
CEL	Celeste	132.20	317	PFAKE		17 35 20.0	+13
CEL				LR	LR		
	comp=Z,1µm,20.0s						
SENIN	Lac Senin/Sane	132.29	331	PFAKE		17 35 20.0	+13
SENIN				LR	LR		
	comp=Z,2µm,22.0s						
PLTB	Pedras Altas	132.36	146	eP	PKPdf	17 35 05.7	-0.8
GRTK	Grand Turk	132.56	67	PFAKE		17 35 20.0	+12
GRTK				LR	LR		
	comp=Z,2µm,22.0s						
SDDR	Presa de Saban	132.83	71	PFAKE		17 35 20.0	+11
SDDR				LR	LR		
	comp=Z,2µm,20.0s						
CLF	Chambon-Foret	133.30	336	ePKPdf	PKiKP	17 35 08.5	-0.4
CLF				LR	LR		
	comp=Z,3µm,22.0s						
CPSB	Cacapava Do Su	133.47	145	eP	PKPdf	17 35 08.3	-0.2
BNI	Bardonecchia	133.53	330	ePKPpre	PKPpre	17 34 58.0	
BNI				ePKPdf	PKPdf	17 35 08.8	+0.5
BNI				LR	LR		
	comp=Z,2µm,20.0s						
BNI	Bardonecchia	133.53	330	PKIKP	PKiKP	17 35 09.7	+0.1
CPUP	Villa Florida	133.89	137	PKP	PKiKP	17 35 10.3	-0.4
	comp=Z,8.4nm,1.0s,baz=231,slow=0.4,SNR=5.1						
CPUP				PP	PP	17 37 38.2	-0.7
	comp=Z,11nm,1.2s,baz=288,slow=6.4,SNR=3.8						
CPUP				SKPbc	SKPbc	17 38 34.4	+0.4
	comp=Z,6.2nm,1.0s,baz=264,slow=1.2,SNR=4.7						
CPUP	Villa Florida	133.89	137	eP	PKPdf	17 35 08.1	-1.4
SDV	Santo Domingo	134.09	84	PKP	PKPdf	17 35 10.7	+0.4
	comp=Z,8.9nm,0.7s,baz=272,slow=5.3,SNR=12						
SDV	Santo Domingo	134.09	84	ePKPdf	PKPdf	17 35 08.6	-1.7
SDV				LR	LR		
	comp=Z,1µm,20.0s						
SDV	Santo Domingo	134.09	84	eP	PKPdf	17 35 10.8	+0.5
SDV	Santo Domingo	134.09	84	eP	PKPdf	17 35 09.5	-0.8
CCA1	Carnmenellis	134.10	343	eP	PKPdf	17 35 09.7	+0.6
CCA1				IAMs_20	IAMs_20	18 37 50.6	
	comp=Z,2µm,19.4s						
SDD	Santo Domingo	134.19	71	PFAKE		17 35 20.0	+8.5
SDD				LR	LR		
	comp=Z,3µm,20.0s						
WDD	Wied Dalam	134.35	315	PFAKE		17 35 20.0	+8.7
WDD				LR	LR		
	comp=Z,800nm,22.0s						
CLTB	Caltabellotta	134.36	317	PFAKE		17 35 20.0	+8.5
CLTB				LR	LR		
	comp=Z,1µm,21.0s						
SSB	Saint Sauveur	134.41	332	ePKPdf	PKPdf	17 35 06.1	-3.8
SSB				LR	LR		
	comp=Z,2µm,20.0s						
SSB	Saint Sauveur	134.41	332	ePKIKP	PKPdf	17 35 06.1	-3.8
SSB				MLR	MLR		
	comp=Z,2µm,20.0s						
BBSR	BB Station	134.76	51	PFAKE		17 35 20.0	+7.7
BBSR				LR	LR		
	comp=Z,3µm,18.0s						
CNLB	Canela	135.76	146	eP	PKPdf	17 35 11.9	-1.1
SIV	San Ignacio	137.01	122	PKhKP	PKPpre	17 35 04.9	
	comp=Z,3.0nm,0.7s,baz=242,slow=4.0,SNR=14						
SIV				PP	PP	17 37 57.7	-1.6
	comp=Z,3.2nm,1.0s,baz=237,slow=9.1,SNR=7.2						
SJG	San Juan	137.78	71	PFAKE		17 35 30.0	+11
SJG				LR	LR		
	comp=Z,2µm,21.0s						
KEST	Kesra	137.97	318	PKhKP	PKPpre	17 35 06.9	
	comp=Z,5.4nm,0.7s,baz=61,slow=6.4,SNR=6.2						
KEST				PKP	PKPdf	17 35 17.4	+0.6
	comp=Z,19nm,1.1s,baz=70,slow=3.0,SNR=6.8						
KEST	Kesra	137.97	318	ePKPpre	PKPpre	17 35 06.9	
KEST				LR	LR		
	comp=Z,2µm,22.0s						
PTGB	Pitanga	138.45	140	eP	PKPdf	17 35 18.1	0.0
CMAH	Djebel Manchou	138.70	320	P	PKPdf	17 35 10.1	-8.0
AQDB	Aquidauana	138.78	132	eP	PKPdf	17 35 18.6	0.0
ABSA	Djebel Ababsia	138.88	320	P	PKPdf	17 35 12.0	-6.5
CKFL	Kef-Lekhel	139.28	320	P	PKPdf	17 35 13.4	-5.9
TRCB	Terra Rica	139.42	138	eP	PKPdf	17 35 19.8	0.0
DFRA	Djebel Bou Aff	139.72	321	P	PKPdf	17 35 15.2	-4.9
SABA	Saba	140.59	71	PFAKE		17 35 30.0	+5.4
SABA				LR	LR		
	comp=Z,2µm,20.0s						
SMRT	St. Maarten	140.67	70	PFAKE		17 35 30.0	+5.3
SMRT				LR	LR		
	comp=Z,2µm,22.0s						
SEUS	St. Eustatius	140.86	71	PFAKE		17 35 30.0	+4.9
SEUS				LR	LR		
	comp=Z,2µm,20.0s						
SKI	Saint Kitts	141.11	71	PFAKE		17 35 30.0	+4.3
SKI				LR	LR		
	comp=Z,2µm,22.0s						
UCM	Universidad Co	141.86	334	PKP	PKPdf	17 35 20.5	-3.2
ANWB	Willy Bob	141.94	70	PFAKE		17 35 40.0	+13
ANWB				LR	LR		
	comp=Z,2µm,20.0s						
PBRG	Braganca	142.00	339	ePKP	PKPdf	17 35 19.9	-4.0
SPB	Sao Paulo	142.11	144	PFAKE		17 35 40.0	+12
SPB				LR	LR		
	comp=Z,2µm,19.0s						
SPB	Sao Paulo	142.11	144	eP	PKPdf	17 35 23.6	-0.9
PGAV	Gavieira, Arco	142.40	340	ePKP	PKPdf	17 35 22.4	-2.3
PCAB	Cabril	142.54	340	ePKP	PKPdf	17 35 21.9	-3.0
MVO	Moncorvo	142.67	338	ePKP	PKPdf	17 35 22.7	-2.5
ESDC	Sonseca Array	142.70	334	PKhKP	PKPdf	17 35 22.0	-3.2
	comp=Z,3.7nm,0.6s,baz=26,slow=2.8,SNR=35						
ESLA	Sonseca Array	142.70	334	ePKPdf	PKPdf	17 35 23.1	-2.2
ESLA				LR	LR		
	comp=Z,1µm,22.0s						
POLO	Lamas de Olo	142.76	339	ePKP	PKPdf	17 35 22.8	-2.6
PVRL	Vila Real	142.82	339	ePKP	PKPdf	17 35 22.8	-2.6
GRGR	Grenville	142.83	79	PFAKE		17 35 40.0	+11
GRGR				LR	LR		
	comp=Z,2µm,21.0s						
PAB	San Pablo	142.97	334	ePKPdf	PKPdf	17 35 24.2	-1.6
PAB				LR	LR		
	comp=Z,1µm,20.0s						
PAB	San Pablo	142.97	334	ePKIKP	PKPdf	17 35 24.2	-1.6
PAB				MLR	MLR		
	comp=Z,1µm,20.0s						
FDF	Fort de France	143.04	75	PFAKE		17 35 40.0	+10
FDF				LR	LR		
	comp=Z,2µm,20.0s						
PARB	Paraibuna	143.34	146	eP	PKPdf	17 35 27.5	+0.6
PVIS	Viseu	143.38	339	ePKP	PKPbc	17 35 24.8	+1.2
MTE	Manteigas	143.53	338	ePKP	PKPbc	17 35 25.2	+1.1
MTE	Manteigas	143.53	338	ePP	PP	17 38 39.1	+1.3
MTE	Manteigas	143.53	338	ePKPdf	PKPbc	17 35 25.6	+1.5
MTE				LR	LR		
	comp=Z,2µm,22.0s						
PTGA	Pitinga	143.59	101	PKP	PKPdf	17 35 26.5	-1.0
	comp=Z,9.3nm,0.6s,baz=235,slow=4.4,SNR=18						
PTGA	Pitinga	143.59	101	ePKPdf	PKPbc	17 35 24.9	-0.1
PTGA	Pitinga	143.59	101	eP	PKPdf	17 35 27.5	0.0
CLDB	Colider	143.96	119	eP	PKPdf	17 35 28.1	0.0
PCBR	Castelo Branco	143.99	338	ePKP	PKPdf	17 35 27.0	-0.4
PCAS	Casmilo, Conde	144.18	339	ePKP	PKPbc	17 35 27.0	+1.1
ESAR	Angra dos Reis	144.24	147	eP	PKPdf	17 35 28.6	+0.3
PMRV	Marv??o	144.31	337	ePKP	PKPdf	17 35 28.1	+0.1
PTOM	Tomar	144.53	339	ePKP	PKPdf	17 35 28.5	+0.1
BBGH	Gun Hill	144.77	77	PFAKE		17 35 40.0	+6.8
BBGH				LR	LR		
	comp=Z,3µm,21.0s						
PMTG	Montargil	144.94	338	ePKP	PKPdf	17 35 29.7	+0.6
ALMR	Almeirim	145.00	338	ePKPdf	PKPdf	17 35 29.4	+0.2
ALMR				AMS	AMS	18 39 54.6	
	comp=Z,2µm,20.0s						
ALMR	Almeirim	145.00	338	ePKP	PKPdf	17 35 30.3	+1.1
ALMR	Almeirim	145.00	338	ePKIKP	PKPdf	17 35 29.4	+0.2
EMAL	Malaga-Limoner	145.28	331	PKP	PKPbc	17 35 29.8	+0.2
PMAFR	Mafra	145.43	339	ePKP	PKPab	17 35 31.6	+1.4
LIS	Lisbon	145.59	339	ePKPdf	PKPdf	17 35 30.6	+0.3
LIS				AMS	AMS	18 37 42.8	
	comp=E,2µm,26.3s						
LIS	Lisbon	145.59	339	ePKIKP	PKPdf	17 35 30.5	+0.3

LIJA	Lijar	145.61	333	PKP	PKPab	17 35 31.5	+0.5
BSCB	Bom Sucesso	145.66	145	eP	PKPdf	17 35 30.1	-0.9
MELI	Melilla	145.68	328	PKP	PKPab	17 35 31.7	+0.5
PBEJ	Beja	145.72	337	ePKP	PKiKP	17 35 34.0	-0.6
REAL	Reales	145.87	332	PKP	PKPdf	17 35 31.2	+0.2
PNCL	Nicolau / Gran	145.90	338	ePKP	PKPab	17 35 33.3	+1.4
GIBL	Gibalbin	145.93	333	PKP	PKPab	17 35 32.9	+0.8
MESJ	Messejana	146.01	337	ePKPdf	PKPdf	17 35 31.1	+0.1
MESJ				AMS	AMS	18 39 13.1	
	comp=Z,2µm,23.1s						
MESJ	Messejana	146.01	337	ePKP	PKPab	17 35 33.7	+1.3
MESJ	Messejana	146.01	337	ePKIKP	PKPdf	17 35 31.0	+0.1
ALJ	Aljibe	146.03	333	PKP	PKPab	17 35 33.2	+0.6
PCVE	Castro Verde	146.12	337	ePKP	PKPab	17 35 33.8	+1.0
MOMI	Momias	146.23	332	PKP	PKPab	17 35 34.3	+1.0
SFS	San Fernando	146.34	333	PKP	PKiKP	17 35 35.1	-0.7
CNIL	Conil	146.35	333	PKP	PKPab	17 35 34.4	+0.7
PBDV	Barranco-do-Ve	146.42	336	ePKP	PKiKP	17 35 35.3	-0.8
CEU	Ceuta	146.42	332	PKP	PKPbc	17 35 33.7	+0.7
PTEO	Sao Teotonio	146.47	337	ePKP	PKPab	17 35 35.3	+1.2
PVLZ	Peæn de	146.48	330	PKP	PKPdf	17 35 32.3	+0.5
SMIR	Smir Dam	146.60	331	P	PKiKP	17 35 36.0	-0.5
MORF	Marmelete	146.65	337	ePKPdf	PKPdf	17 35 32.5	+0.3
MORF				AMS	AMS	18 41 24.9	
	comp=Z,2µm,22.1s						
MORF	Marmelete	146.65	337	ePKP	PKPab	17 35 35.6	+0.7
MORF	Marmelete	146.65	337	ePP	PP	17 38 56.8	+0.4
MORF	Marmelete	146.65	337	ePKIKP	PKPdf	17 35 32.4	+0.3
CAM01	Campos-RJ	146.67	150	eP	PKPdf	17 35 32.8	+0.2
AKLM	AKL	146.77	328	P	PKPab	17 35 36.0	+0.5
TDRA	Tendrara	146.86	324	P	PKiKP	17 35 37.0	-0.4
PFVI	Vila Bisbo	146.87	337	ePKP	PKPab	17 35 36.1	+0.4
PFVI	Vila Bisbo	146.87	337	PFAKE		17 35 40.0	+3.1
PFVI				LR	LR		
	comp=Z,4µm,22.0s						
PFVI	Vila Bisbo	146.87	337	P	PKPab	17 35 36.5	+0.8
H07N1	FLORES T-PHASE	146.88	10	ePKP	PKPbc	17 35 34.3	0.0
CHEFC	Chefchaouen	147.04	331	P	PKPab	17 35 37.0	+0.4
FIGM	Figuig	147.05	322	P	PKPab	17 35 37.1	+0.3
H07S1	FLORES T-PHASE	147.17	10	ePKP	PKPbc	17 35 36.0	+0.8
TAM	Tamanrasset	147.30	302	ePKPbc	PKPdf	17 35 34.9	+1.1
TAM				LR	LR		
	comp=Z,2µm,20.0s						
TAM	Tamanrasset	147.30	302	ePKIKP	PKPdf	17 35 34.9	+1.1
TAM				MLR	MLR		
	comp=Z,2µm,20.0s						
RSA	Sarsar	147.46	331	P	PKiKP	17 35 39.0	+0.7
BDFB	Brasilia	147.47	134	PKPbc	PKPbc	17 35 35.8	-1.0
	comp=Z,118nm,1.0s,baz=278,slow=0.8,SNR=30						
BDFB	Brasilia	147.47	134	ePKPbc	PKPbc	17 35 35.7	-1.0
BDFB				ePKPbc	PKPbc	17 35 35.8	-1.0
BDFB				LR	LR		
	comp=Z,3µm,19.0s						
SICH	Sidi Chahed	147.84	330	P	PKPab	17 35 40.0	+0.4
LCRM	LCR	147.93	329	P	PKiKP	17 35 40.0	+0.5
PGRA	Graciosa	147.94	5	ePKP	PKiKP	17 35 39.6	+0.5
ALF01	Guarapari-ES	148.15	150	eP	PKPdf	17 35 35.4	+0.4
ROSA	Rosais	148.22	6	ePKP	PKiKP	17 35 39.6	-0.1
ROSA	Rosais	148.22	6	ePKPbc	PKPbc	17 35 36.9	-1.1
PCED	Cedros	148.26	7	ePKP	PKPbc	17 35 38.0	-0.1
PMAN	Manadas	148.33	6	ePKP	PKiKP	17 35 39.8	-0.1
ADH	Angra Heroismo	148.38	4	ePKP	PKiKP	17 35 40.9	+0.9
PICO	Pico	148.42	6	ePKP	PKiKP	17 35 39.9	-0.3
PCAN	Candelaria	148.45	6	ePKP	PKPbc	17 35 38.0	-0.6
PPNO	Prainha do Nor	148.47	6	ePKP	PKPdf	17 35 37.1	+2.0
MDT	Midelt	148.47	327	P	PKiKP	17 35 41.2	+0.7
CZD	Col de Zad	148.53	328	P	PKPab	17 35 42.4	-0.4
RTC	Rabat Centre	148.68	331	PFAKE		17 35 50.0	+7.0
RTC				LR	LR		
	comp=Z,4µm,21.0s						
RTC	Rabat Centre	148.68	331	P	PKiKP	17 35 42.0	+1.2
PSET	Sete Cidades	149.29	2	ePKP	PKPbc	17 35 40.8	0.0
ARF	Arif	149.30	325	P	PKiKP	17 35 43.2	+0.9
PCALD	Caldeiras da R	149.33	2	ePKP	PKiKP	17 35 43.4	+1.4
BART	Pico Bartolome	149.36	1	ePKP	PKiKP	17 35 42.7	+0.5
CMLA	Cha da Macela	149.36	2	ePKP	PKiKP	17 35 42.8	+0.7
CMLA	Cha da Macela	149.36	2	PFAKE		17 35 50.0	+4.4
CMLA				LR	LR		
	comp=Z,2µm,21.0s						
CMLA	Cha da Macela	149.36	2	i PKP2	PKiKP	17 35 43.3	+1.2
PDA	Ponta Delgada	149.37	2	ePKP	PKPbc	17 35 41.4	+0.5
RIB01	Linhares ES	149.41	149	eP	PKPdf	17 35 37.2	+0.1
PEXB	Peixe	149.50	128	eP	PKPdf	17 35 37.5	+0.1
SJMB	Sao Joao De Ma	149.50	147	eP	PKPdf	17 35 37.8	+0.5
GOLM	Goulmima	149.51	326	P	PKiKP	17 35 44.0	+1.2
BSFB	Barra de Sao F	149.58	148	eP	PKPdf	17 35 37.5	+0.1
PSMN	Pico do Norte,	150.13	1	ePKP	PKiKP	17 35 43.9	+0.2
PSMA	Santa Maria	150.14	1	ePKP	PKiKP	17 35 44.1	+0.4
SRHM	Skhour des Reh	150.42	331	P	PKiKP	17 35 45.0	+0.5
SHEL	Horse Pasture	150.71	219	PFAKE		17 35 50.0	-1.8
SHEL				LR	LR		
	comp=Z,3µm,21.0s						
OUK	Oukaimeden	151.44	330	P	PKPbc	17 35 47.0	+0.4
MDP	Montagnes des	151.75	92	PKP	PKPdf	17 35 40.9	0.0
	comp=Z,11nm,1.1s,baz=270,slow=2.0,SNR=4.8						
MDP				PKPbc	PKiKP	17 35 47.7	0.0
	comp=Z,13nm,0.6s,baz=252,slow=3.4,SNR=14						
TTIG	Tnine Tigouga,	152.26	330	P	PKiKP	17 35 49.0	+0.5
PMPST	Porto Santo, M	153.02	345	ePKP	PKPab	17 36 01.2	+0.3
PMPS	Porto Santo	153.04	345	ePKP	PKiKP	17 35 51.6	+1.8
PMOZ	Porto Moniz, M	153.48	347	ePKP	PKiKP	17 35 52.1	+1.2
PMOZ	Porto Moniz, M	153.48	347	ePKPbc	PKPbc	17 35 50.6	-0.2
PMAR	Madeira	153.50	346	ePKP	PKiKP	17 35 52.7	+1.7
TOC2	Torodi Ar. Sit	153.69	285	PFAKE		17 36 00.0	-4.4
TOC2				LR	LR		
	comp=Z,2µm,21.0s						
TOC3	Torodi Ar. Sit	153.69	285	PFAKE		17 36 00.0	-4.4
TOC3				LR	LR		
	comp=Z,2µm,19.0s						
TOC1	Torodi Ar. Sit	153.70	286	PFAKE		17 36 00.0	-4.5
TOC1				LR	LR		
	comp=Z,3µm,21.0s						
TOB3	Torodi Ar. Sit	153.71	285	PFAKE		17 36 00.0	-4.5
TOB3				LR	LR		
	comp=Z,2µm,21.0s						
TOA2	Torodi Ar. Sit	153.71	285	PFAKE		17 36 00.0	-4.5
TOA2				LR	LR		
	comp=Z,3µm,19.0s						
TOA0	Torodi Ar. Sit	153.71	285	ePKPdf	PKPdf	17 35 43.2	-0.5
TOA0				LR	LR		
	comp=Z,2µm,21.0s						
TOC4	Torodi Ar. Sit	153.71	285	PFAKE		17 36 00.0	-4.5
TOC4				LR	LR		
	comp=Z,2µm,19.0s						
TORD	Torodi Ar. Bea	153.71	285	PKP	PKPdf	17 35 43.8	0.0
	comp=Z,7.8nm,0.3s,baz=106,slow=1.1,SNR=24						
TORD				PKPbc	PKiKP	17 35 52.5	+0.8
	comp=Z,19nm,0.6s,baz=82,slow=2.3,SNR=54						
TOA1	Torodi Ar. Sit	153.71	286	ePKPdf	PKPdf	17 35 43.8	+0.1
TOA1				ePKPbc	PKiKP	17 35 52.5	+0.8
TOA1				LR	LR		
	comp=Z,2µm,21.0s						
TOB4	Torodi Ar. Sit	153.72	285	PFAKE		17 36 00.0	-4.6
TOB4				LR	LR		
	comp=Z,2µm,21.0s						
TOB5	Torodi Ar. Sit	153.72	286	PFAKE		17 36 00.0	-4.6
TOB5				LR	LR		
	comp=Z,2µm,21.0s						
TOC7	Torodi Ar. Sit	153.72	286	PFAKE		17 36 00.0	-4.6
TOC7				LR	LR		
	comp=Z,2µm,21.0s						
TOC5	Torodi Ar. Sit	153.74	285	PFAKE		17 36 00.0	-4.6
TOC5				LR	LR		
	comp=Z,2µm,20.0s						
KIC	Kosan Boka	160.57	269	ePKIKP	PKPdf	17 35 52.9	+0.4
	comp=Z,152nm,1.4s						
KIC	Kosan Boka	160.57	269	eP	PKPab	17 36 35.0	+0.8
	comp=Z,164nm,0.8s						
DBIC	Dimbokro	160.70	270	PKP	PKPdf	17 35 53.4	+0.8
	comp=Z,16nm,0.9s,baz=111,slow=2.2,SNR=5.1						
DBIC				PKPab	PKPab	17 36 36.2	+1.5
	comp=Z,36nm,0.7s,baz=74,slow=4.9,SNR=18						
LIC	Lamto	160.85	269	ePKIKP	PKPdf	17 35 53.1	+0.3
	comp=Z,89nm,1.1s						
LIC	Lamto	160.85	269	eP	PKPab	17 36 36.4	+1.0
	comp=Z,227nm,1.3s						
TIC	Toumodi	160.86	270	ePKIKP	PKPdf	17 35 52.6	-0.2
TIC	Toumodi	160.86	270	eP	PKPab	17 36 36.4	+0.9
RCBR	Riachuelo	162.77	137	eP	PKPdf	17 35 56.0	+1.2

ISK ***04*** *17:33:30.7, 38.°76N×43.°47E, h8^{km}, ML2.6/8*

ISCJB ***04*** *17:33:31.8±0.5, 38.°79N±0.°03×43.°48E±0.°05, h13^{km}±4^{km}, Error ellipse: s-maj=7.1km s-min=3.9km az=23.4*

DDA ***04*** *17:33:31.3, 38.°79N×43.°46E, h7^{km}±3^{km}, ML2.6*

ISC 04 17:33:31.2±1.1**, 38.°79N**±0.°03×**43.°47E**±0.°04**, h16**^{km}±10^{km}**, n18, σ0^{s}.56**/25**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.20	198	PG	Pb	17 33 36.5	0.0
VANB				SG	Sb	17 33 40.5	+0.4
VMUR	Van-Muradiye	0.22	21	i P	Pg	17 33 36.7	+0.3
VMUR				i S	Sb	17 33 41.3	+0.5
ERCV	ERCIS-VAN	0.26	336	PG	Pg	17 33 36.5	-0.5
ERCV				SG	Sb	17 33 41.8	0.0
TVAN	Van	0.26	191	i P	Pg	17 33 37.1	0.0
TVAN				i S	Sb	17 33 42.6	+0.6
CLDR	Caldiran	0.50	44	PG	Pg	17 33 40.7	-0.6
CLDR				SG	Sb	17 33 49.2	+0.3
CLDR	Caldiran	0.50	44	i P	Pg	17 33 41.3	0.0
CLDR				i S	Sb	17 33 49.3	+0.5
CLDR				IAML_P			
	comp=Z,8µm,0.1s						
AKDM	Akdamar-Van	0.60	220	PG	Pg	17 33 42.5	-0.5
TUTA	Tutak	0.80	321	i P	Pb	17 33 47.3	+0.4
MLAZ	Malazgirt-MUS	0.80	297	PG	Pb	17 33 46.6	-0.2
AGRB	Hanur-Agry	0.87	335	PG	Pb	17 33 47.8	-0.3
BLIS	Bitlis-Merkez	1.12	251	i P	Pg	17 33 52.8	-0.2
BLIS				i S	Sb	17 34 07.2	+0.4
BLIS				IAML_P			
	comp=Z,984nm,0.3s						
HAKT	HAKKARI	1.24	171	i P	Pn	17 33 53.0	-1.0
HAKT				IAML_P			
	comp=Z,412nm,0.1s						
EATA	Eleskirt	1.32	325	i P	Pg	17 33 56.6	0.0
EATA				IAML_P			
	comp=Z,408nm,0.2s						
TASB	TASBURUN-IGDIR	1.34	26	PN	Pg	17 33 57.0	0.0
SRTM	Siirt_Merkez	1.45	237	i P	Pg	17 33 59.7	+0.6
SRTM				IAML_P			
	comp=Z,556nm,0.3s						
MUSM	Mu-Merkez	1.53	268	i P	Pg	17 34 00.8	+0.1
MUSM				IAML_P			
	comp=Z,129nm,0.1s						
GNI	Garni	1.68	35	PN	Pn	17 34 00.9	+0.8
AKH	Akhalkalaki	2.62	0	⇑iP	Pg	17 34 20.1	-1.4

SJA ***04*** *17:38:00.9±1.0, 22.°47S×66.°16W, h256^{km}±10^{km}, ML3.1, MW4.0*

ISCJB ***04*** *17:38:01.8±0.5, 22.°53S±0.°04×66.°29W±0.°05, h251^{km}, Error ellipse: s-maj=7.1km s-min=4.5km az=43.4*

GUC ***04*** *17:38:02.2±0.6, 22.°37S×66.°70W, h281^{km}±10^{km}, ML4.5*

NEIC ***04*** *17:38:02.0±0.0, 22.°37S×66.°70W, h281^{km}, ML4.5(GUC), After GUC.*

ISC 04 17:38:01.2±1.3**, 22.°53S**±0.°06×**66.°27W**±0.°05**, h251**^{km}**, n43, σ1^{s}.32**/60**, 13C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.78	63	eP	Pn	17 38 36.7	+0.9
YJA				IAML		17 38 37.0	
	comp=Z,84nm,0.6s						
YJA				eS	S	17 39 02.2	-0.7
HJA	Humahuaca	1.04	131	eP	Pn	17 38 38.7	+1.7
AZAP	Zapla	2.02	147	eP	Pn	17 38 45.1	+1.0
AZAP				IAML		17 38 45.4	
	comp=Z,60nm,0.3s						
AZAP				eS	S	17 39 17.1	-1.0
SLA	San Lorenzo	2.29	162	eP	Pn	17 38 47.2	+0.5
LVC	Limon Verde	2.45	268	ePn	Pn	17 38 49.8	+1.5
LVC	Limon Verde	2.45	268	eP	Pn	17 38 50.0	+1.6
LVC				IAML		17 38 50.6	
	comp=Z,37nm,0.6s						
LVC	Limon Verde	2.45	268	⇓iP	Pn	17 38 50.0	+1.6
LVC				i S	S	17 39 26.6	+1.0
PB09	IPOC Station P	2.85	284	eP	Pn	17 38 54.0	+1.7
PB09	IPOC Station P	2.85	284	⇑iP	Pn	17 38 54.1	+1.7
PB09				i S	S	17 39 33.3	+0.5
PB15	IPOC Station P	3.03	256	eP	Pn	17 38 56.5	+2.1
PB15	IPOC Station P	3.03	256	⇑iP	Pn	17 38 56.2	+1.9
PB15				eS	S	17 39 37.3	+1.0
PB06	IPOC Station P	3.06	266	eP	Pn	17 38 56.5	+2.0
PB06	IPOC Station P	3.06	266	⇑iP	Pn	17 38 56.2	+1.7
PB06				i S	S	17 39 37.3	+0.5
PB06				IAML		17 39 41.0	
	comp=E,327nm,0.3s						
PB03	IPOC Station P	3.27	278	eP	Pn	17 38 58.1	+1.3
PB03	IPOC Station P	3.27	278	⇑iP	Pn	17 38 57.8	+1.0
PB03				i S	S	17 39 40.0	-0.9
PB03				IAML		17 39 41.8	
	comp=E,421nm,0.1s						
PB01	IPOC Station P	3.34	296	ePn	Pn	17 38 58.3	+0.7
PB01	IPOC Station P	3.34	296	⇑iP	Pn	17 38 58.4	+0.7
PB01				i S	S	17 39 41.2	-1.0
PB01				IAML		17 39 42.8	
	comp=N,278nm,0.4s						
PB07	IPOC Station P	3.45	283	eP	Pn	17 39 00.1	+1.2
PB07	IPOC Station P	3.45	283	⇑iP	Pn	17 38 60.0	+1.1
PB07				i S	S	17 39 43.5	-1.1
PB07				IAML		17 39 44.1	
	comp=N,490nm,0.2s						
PB02	IPOC Station P	3.58	289	eP	Pn	17 39 01.3	+1.0
PB02	IPOC Station P	3.58	289	⇑iP	Pn	17 39 01.0	+0.7
PB02				i S	S	17 39 45.8	-1.4
PB08	IPOC Station P	3.59	311	eP	Pn	17 39 02.2	+1.4
PB08	IPOC Station P	3.59	311	⇑iP	Pn	17 39 02.1	+1.4
PB08				eS	S	17 39 47.3	-0.6
PB04	IPOC Station P	3.60	272	ePn	Pn	17 39 01.5	+0.9
PB04				eS	S	17 39 46.2	-1.4
PB04	IPOC Station P	3.60	272	eP	Pn	17 39 01.8	+1.2
PB04	IPOC Station P	3.60	272	⇑iP	Pn	17 39 01.7	+1.1
PB04				i S	S	17 39 46.7	-1.0
PB04				IAML		17 39 49.3	
	comp=N,472nm,0.2s						
PB05	IPOC Station P	3.65	264	eP	Pn	17 39 02.3	+1.2
PB05	IPOC Station P	3.65	264	⇑iP	Pn	17 39 02.4	+1.2
GO01	Chusmiza	3.95	316	ePn	Pn	17 39 05.0	+0.1
GO01	Chusmiza	3.95	316	⇑iP	Pn	17 39 05.8	+0.8
GO01				eS	S	17 39 55.1	-0.4
GO02	Mina Guanaco	4.02	229	ePn	Pn	17 39 07.3	+1.8
PB10	IPOC Station P	4.07	255	ePn	Pn	17 39 04.3	-1.6
PB10	IPOC Station P	4.07	255	eP	Pn	17 39 07.5	+1.7
PB11	IPOC Station P	4.20	310	ePn	Pn	17 39 07.0	-0.6
PB11	IPOC Station P	4.20	310	eP	Pn	17 39 07.5	0.0
PB11	IPOC Station P	4.20	310	⇑iP	Pn	17 39 07.5	0.0
PB11				i S	S	17 39 57.3	-2.9
MNMC	Minye Minye	4.60	317	ePn	Pn	17 39 12.5	+0.1
MNMC	Minye Minye	4.60	317	⇑iP	Pn	17 39 13.0	+0.6
MNMC				i S	S	17 40 06.8	-2.3
PB16	IPOC Station P	5.16	323	eP	Pn	17 39 20.4	+0.7
GO03	Copiap	6.20	215	ePn	Pn	17 39 32.0	+0.2
GO03				eS	S	17 40 41.1	-3.3
GO03	Copiap	6.20	215	eP	Pn	17 39 32.2	+0.4
GO04	Tololo Observa	8.63	207	ePn	Pn	17 40 02.4	-0.2
CFA	Coronel Fontan	9.21	191	eP	Pn	17 40 09.9	+0.1

IDC ***04*** *17:40:42.8±2.0, 2.°46N×96.°01E, h0^{km}, mb3.9/3, mb1 4.0/5, mb1mx3.6/46, mbtmp3.9/5, ML3.8/2, Error ellipse: s-maj=47.9km s-min=23.4km az=43.0*

DJA ***04*** *17:40:43.9±0.8, 2°N±3°×9°6E±°, h18^{km}±3^{km}, M4.1/12, mB6.8/1, MLv4.1/12, Mw(mB)6.7/1*

ISCJB ***04*** *17:40:44.7±1.1, 2.°39N±0.°05×95.°99E±0.°05, h30^{km}±6^{km}, mb4.5/7, Error ellipse: s-maj=9.7km s-min=7.4km az=137.1*

NEIC ***04*** *17:40:46.7±0.8, 2.°48N×96.°07E, h25^{km}±10^{km}, mb4.6/3, Error ellipse: s-maj=24.1km s-min=10.1km az=72.0*

ISC 04 17:40:44.8±3.5**, 2.°38N**±0.°05×**95.°97E**±0.°07**, h17**^{km}±22^{km}**, n27, σ1^{s}.12**/34**, mb4.4**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.36	86	P	Pb	17 40 53.7	+1.1
SNSI				S	Sb	17 40 58.1	+0.2
TPTI		1.49	54	P	Pn	17 41 09.0	-1.7
TPTI				S	Sn	17 41 26.5	-3.2
MLSI	Meulaboh, Aceh	1.92	13	P	Pn	17 41 15.1	-1.5
MLSI				S	Sn	17 41 40.7	+0.3
GSI	Gunungsitoli	1.93	124	ePn	Pb	17 41 18.1	-1.3
GSI	Gunungsitoli	1.93	124	Pg	Pn	17 41 17.5	+0.7
GSI				S	Sn	17 41 40.3	-0.3
KCSI	Kotacane, Aceh	2.12	58	P	Pn	17 41 18.9	-0.6
KCSI				S	Sn	17 41 44.9	-0.5
TSI	Tuntungan	2.82	67	P	Pn	17 41 29.1	+0.1
TSI				S	Sb	17 42 10.7	+1.9
PSI	Prapat	2.98	82	Pn	Pn	17 41 30.7	-0.6
	6.9nm,0.3s,baz=322,slow=14,SNR=14						
PSI				Sn	Sn	17 42 06.4	-0.3
	4.8nm,0.3s,baz=274,slow=12,SNR=4.7						
PSI	Prapat	2.98	82	ePn	Pn	17 41 29.5	-1.8
LHMI	Lhok Sumawe	2.99	19	ePn	Pn	17 41 31.1	-0.3
LHMI	Lhok Sumawe	2.99	19	P	Pn	17 41 30.2	-1.2
LHMI				S	Sb	17 42 13.8	0.0
MNSI	Mandailing Nat	3.94	114	P	Pn	17 41 42.7	-1.7
IPM	Ipoh	5.46	67	ePn	Pn	17 42 05.2	-0.1
KULM	Kulim	5.49	58	ePn	Pn	17 42 05.1	-0.6
RGRI	Rengat	6.92	113	P	Pn	17 42 23.8	-1.6
KRJI	Kerinci	7.06	129	P	Pn	17 42 17.0	-10
CMAR	Chiang Mai Arr	16.24	10	Pn	Pn	17 44 33.4	+1.2
	0.2nm,0.3s,baz=199,slow=11,SNR=11						
ASAR	Alice Springs	45.08	127	P	P	17 49 01.4	+1.1
	0.3nm,0.6s,baz=292,slow=7.8,SNR=5.3						
MK31	Makanchi Array	45.81	347	eP	P	17 49 05.9	+0.2
	1.6nm,0.6s						
MK32	Makanchi Array	45.81	347	eP	P	17 49 06.1	+0.4
MKAR	Makanchi Array	45.81	347	P	P	17 49 06.1	+0.4
	18nm,0.3s,baz=156,slow=8.6,SNR=1.9						
SONA0	Songino Array	46.16	10	eP	P	17 49 08.1	-0.5
SONM	Songino Array	46.16	10	P	P	17 49 08.1	-0.5
	1.4nm,0.6s,baz=190,slow=7.3,SNR=6.0						
ZAA0	Zalesovo Array	52.21	352	eP	P	17 49 54.6	+0.1
	2.3nm,0.5s						
ZALV	Zalesovo Beam	52.21	352	P	P	17 49 54.5	-0.1
	2.6nm,0.4s,baz=173,slow=6.7,SNR=12						
ZAA1	Zalesovo Array	52.21	352	eP	P	17 49 54.5	-0.1
RABL	Rabaul	56.53	97	eP	P	17 50 27.2	+0.5
	68nm,0.5s						

ISCJB ***04*** *17:44:46.7±0.3, 24.°67N±0.°02×122.°72E±0.°01, h94^{km}±3^{km}, Error ellipse: s-maj=3.6km s-min=1.9km az=172.8*

JMA ***04*** *17:44:46.5±0.1, 24.°63N×122.°71E, h99^{km}±1^{km}, M3.1*

TAP ***04*** *17:44:46.7, 24.°68N×122.°71E, h95^{km}, ML4.0, B*

ISC 04 17:44:47.1±1.3**, 24.°66N**±0.°04×**122.°71E**±0.°02**, h94**^{km}±7^{km}**, n111, σ0^{s}.73**/211**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.30	135	P	Pn	17 45 00.9	-0.1
JYNG				S	Sn	17 45 11.8	+0.5
YOJ	Yonaguni jima	0.34	126	i P	Pn	17 45 01.2	-0.1
	baz=127						
YOJ				S	Sn	17 45 11.8	+0.1
	baz=127						
YOJ	Yonaguni jima	0.34	126	P	Pn	17 45 01.1	-0.1
YOJ				eS	Sn	17 45 12.2	+0.5
EOS1	EOS1	0.54	258	P	Pn	17 45 02.7	+0.2
	baz=256						
EOS1				S	Sn	17 45 14.7	+0.6
	baz=256						
EGS		0.73	285	eP	Pn	17 45 05.0	+0.7
	baz=283						
TWB1	Santiao Chiao	0.74	298	eP	Pn	17 45 04.1	-0.2
	baz=296						
TWB1				eS	Sn	17 45 17.1	-0.2
	baz=296						
TWC	Suao	0.79	266	i P	Pn	17 45 04.5	-0.3
	baz=264						
TWC				S	Sn	17 45 17.3	-0.8
	baz=264						
NTC	Toucheng	0.83	284	eP	Pn	17 45 04.7	-0.5
	baz=282						
NTC				eS	Sn	17 45 18.8	0.0
	baz=282						
TIPB	Shuangxi	0.86	291	⇓iP	Pn	17 45 05.7	0.0
	baz=289						
TIPB				i S	Sn	17 45 19.1	-0.4
	baz=289						
ILA	Ilan	0.88	277	eS	Sn	17 45 20.1	+0.3
	baz=275						
NANB	Nanao	0.91	255	P	Pn	17 45 06.2	+0.1
	baz=253						
NANB				eS	Sn	17 45 20.7	+0.3
	baz=253						
ENA	Nanau	0.92	255	P	Pn	17 45 06.3	+0.1
	baz=253						
ENA				eS	Sn	17 45 20.9	+0.5
	baz=253						
NWF	Wu-fen Shan	0.94	296	eP	Pn	17 45 06.5	0.0
	baz=294						
NWF				eS	Sn	17 45 21.2	+0.1
	baz=294						
WFSB	Wu-fen Shan	0.94	296	eP	Pn	17 45 06.6	+0.2
	baz=294						
WFSB				eS	Sn	17 45 21.1	+0.1
	baz=294						
TWE	Neicheng	0.95	274	P	Pn	17 45 06.6	0.0
	baz=272						
TWE				S	Sn	17 45 20.9	-0.3
	baz=272						
IRIF	Iriomote-Funau	0.98	109	P	Pn	17 45 06.6	-0.3
IRIF				eS	Sn	17 45 22.2	+0.5
ENTT	Nioudou	1.04	269	eP	Pn	17 45 08.3	+0.7
	baz=267						
ENTT				eS	Sn	17 45 23.6	+0.6
	baz=267						
TWA	Mucha	1.07	287	i P	Pn	17 45 08.0	0.0
	baz=286						
TWA				S	Sn	17 45 23.2	-0.4
	baz=286						
NDT	Datong Townshi	1.09	267	eP	Pn	17 45 08.8	+0.6
	baz=265						
NDT				eS	Sn	17 45 24.4	+0.4
	baz=265						
NWLT	Wulai	1.11	276	eP	Pn	17 45 08.3	-0.1
	baz=275						
NWLT				eS	Sn	17 45 23.8	-0.5
	baz=275						
PCYT	Pengchaiyu	1.13	329	eP	Pn	17 45 08.6	0.0
	baz=328						
NACB	Ninganchiao	1.13	245	eP	Pn	17 45 07.5	-1.1
	baz=243						
NACB				eS	Sn	17 45 24.0	-0.8
	baz=243						
YM01	YM01	1.15	295	eP	Pn	17 45 08.8	0.0
	baz=294						
YM01				eS	Sn	17 45 24.8	-0.3
	baz=294						
YM08	YM08	1.15	297	eP	Pn	17 45 08.6	-0.2
	baz=296						
YM05	YM05	1.16	296	eP	Pn	17 45 08.6	-0.3
	baz=294						
YM05				eS	Sn	17 45 25.2	-0.3
	baz=294						
TATO	Taipei	1.16	286	eP	Pn	17 45 08.7	-0.1
	baz=284						
TATO				eS	Sn	17 45 24.8	-0.5
	baz=284						
YM10	YM10	1.16	295	eP	Pn	17 45 08.9	-0.1
	baz=294						
YM10				eS	Sn	17 45 25.2	-0.2
	baz=294						
TAP	Taipei	1.16	289	eP	Pn	17 45 09.0	+0.1
	baz=288						
TAP				eS	Sn	17 45 25.4	0.0
	baz=288						
HATJ	Hateruma jima	1.16	121	P	Pn	17 45 09.2	+0.2
HATJ				eS	Sn	17 45 26.1	+0.7
TWD	Chiawan	1.17	241	eP	Pn	17 45 08.6	-0.4
	baz=239						
TWD				eS	Sn	17 45 24.7	-0.9
	baz=239						
YM04	YM04	1.18	295	i P	Pn	17 45 09.0	-0.2
	baz=293						
YM04				eS	Sn	17 45 25.4	-0.4
	baz=293						
TWY	Chenhua	1.18	301	eP	Pn	17 45 09.2	0.0
	baz=300						
TWY				eS	Sn	17 45 26.1	+0.3
	baz=300						
YM03	YM03	1.18	296	eP	Pn	17 45 08.9	-0.3
	baz=295						
YM03				eS	Sn	17 45 25.0	-1.0
	baz=295						
ANP	Anpu	1.20	296	eP	Pn	17 45 09.5	0.0

	baz=295						
ANP				eS	Sn	17 45 26.7	+0.3
	baz=295						
ETLH	**Xiulin Townshi**	**1.21**	**248**	eP	**Pn**	**17 45 09.3**	**-0.4**
	baz=247						
ETLH				eS	**Sn**	**17 45 26.2**	**-0.4**
	baz=247						
YHNB	**Yeheng**	**1.22**	**271**	iP	**Pn**	**17 45 10.0**	**+0.3**
	baz=269						
YHNB				eS	**Sn**	**17 45 26.6**	**-0.1**
	baz=269						
HWA	**Hwalien**	**1.22**	**236**	eP	**Pn**	**17 45 09.6**	**-0.1**
	baz=234						
HWA				eS	**Sn**	**17 45 26.9**	**+0.3**
	baz=234						
NNSB	**Datong**	**1.23**	**259**	eP	**Pn**	**17 45 10.0**	**0.0**
	baz=258						
NNSB				eS	**Sn**	**17 45 26.9**	**-0.3**
	baz=258						
NSK	**Sanguang**	**1.23**	**271**	eP	**Pn**	**17 45 10.2**	**+0.3**
	baz=269						
NSK				eS	**Sn**	**17 45 26.9**	**-0.1**
	baz=269						
NNS	**Nan Shan**	**1.24**	**260**	eP	**Pn**	**17 45 10.0**	**0.0**
	baz=258						
NNS				eS	**Sn**	**17 45 26.8**	**-0.5**
	baz=258						
NTST	**Danshui**	**1.25**	**294**	eP	**Pn**	**17 45 10.1**	**+0.1**
	baz=292						
NTST				eS	**Sn**	**17 45 27.7**	**+0.4**
	baz=292						
JKRS	**Kuro-shima**	**1.25**	**109**	P	**Pn**	**17 45 10.1**	**+0.1**
JKRS				S	**Sn**	**17 45 27.7**	**+0.4**
TWS1	**Kuangyinshan**	**1.26**	**291**	eP	**Pn**	**17 45 10.3**	**+0.2**
	baz=289						
TWS1				eS	**Sn**	**17 45 28.0**	**+0.6**
	baz=289						
JIJ	**Ishigaki jima**	**1.33**	**103**	P	**Pn**	**17 45 10.5**	**-0.5**
JIJ				S	**Sn**	**17 45 28.6**	**-0.5**
WLTB	**Daxi**	**1.34**	**278**	eP	**Pn**	**17 45 11.7**	**+0.6**
	baz=277						
WLTB				eS	**Sn**	**17 45 28.9**	**-0.3**
	baz=277						
WHF	**Hehuan Shan**	**1.42**	**249**	eP	**Pn**	**17 45 11.8**	**-0.7**
	baz=247						
WHF				eS	**Sn**	**17 45 30.6**	**-1.0**
	baz=247						
NCU	**National Centr**	**1.42**	**283**	eP	**Pn**	**17 45 12.7**	**+0.6**
	baz=281						
NCU				eS	**Sn**	**17 45 30.9**	**-0.1**
	baz=281						
ESL	**Shilin**	**1.44**	**234**	P	**Pn**	**17 45 11.7**	**-0.7**
	baz=233						
JISG	**Ishigakijimahi**	**1.46**	**93**	P	**Pn**	**17 45 12.1**	**-0.4**
JISG				eS	**Sn**	**17 45 31.5**	**-0.2**
TWT	**Tachien**	**1.46**	**254**	eP	**Pn**	**17 45 13.3**	**+0.6**
	baz=253						
TWT				eS	**Sn**	**17 45 32.1**	**0.0**
	baz=253						
TDCB	**Techi**	**1.48**	**254**	eP	**Pn**	**17 45 13.2**	**+0.3**
	baz=253						
TDCB				eS	**Sn**	**17 45 31.6**	**-0.9**
	baz=253						
CHGB	**Renai**	**1.53**	**247**	P	**Pn**	**17 45 13.4**	**-0.2**
	baz=246						
CHGB				S	**Sn**	**17 45 32.8**	**-0.9**
	baz=246						
EGFH	**Guangfu**	**1.54**	**230**	eP	**Pn**	**17 45 13.2**	**-0.3**
	baz=229						
EGFH				eS	**Sn**	**17 45 32.8**	**-0.7**
	baz=229						
LIOB	**Emei**	**1.54**	**270**	eP	**Pn**	**17 45 13.9**	**+0.3**
	baz=268						
LIOB				eS	**Sn**	**17 45 33.8**	**0.0**
	baz=268						
NSTT	**Nanjuang**	**1.56**	**269**	eP	**Pn**	**17 45 13.8**	**+0.1**
	baz=268						
NSTT				eS	**Sn**	**17 45 33.4**	**-0.6**
	baz=268						
SBCB	**Hsinchu**	**1.58**	**275**	eP	**Pn**	**17 45 13.7**	**-0.3**
	baz=274						
SBCB				eS	**Sn**	**17 45 34.9**	**+0.4**
	baz=274						
HSN	**Hsinchu**	**1.59**	**275**	eS	**Sn**	**17 45 34.1**	**-0.7**
	baz=275						
WHP	**Taichung City**	**1.66**	**257**	eP	**Pn**	**17 45 15.8**	**+0.7**
	baz=255						
WHP				eS	**Sn**	**17 45 36.9**	**+0.6**
	baz=255						
HGSD	**Ruisui**	**1.66**	**226**	P	**Pn**	**17 45 14.7**	**-0.4**
	baz=224						
HGSD				eS	**Sn**	**17 45 36.4**	**+0.2**
	baz=224						
VWDT	**VWDT**	**1.70**	**238**	iP	**Pn**	**17 45 15.8**	**+0.3**
	baz=237						
VWDT				eS	**Sn**	**17 45 36.7**	**-0.4**
	baz=237						
EHY	**Hungye**	**1.71**	**228**	eP	**Pn**	**17 45 15.0**	**-0.8**
	baz=227						
DPDB	**Guoxing**	**1.75**	**249**	eP	**Pn**	**17 45 16.9**	**+0.6**
	baz=248						
DPDB				eS	**Sn**	**17 45 39.4**	**+1.0**
	baz=248						
NMLH	**Miaoli**	**1.75**	**266**	eP	**Pn**	**17 45 16.6**	**+0.3**
	baz=265						
NMLH				eS	**Sn**	**17 45 38.3**	**-0.2**
	baz=265						
NSY	**Sanyi**	**1.79**	**263**	eP	**Pn**	**17 45 17.5**	**+0.7**
	baz=261						
NSY				eS	**Sn**	**17 45 39.9**	**+0.4**
	baz=261						
TWQ1	**Liyutan**	**1.79**	**260**	eP	**Pn**	**17 45 17.1**	**+0.2**
	baz=259						
TWQ1				eS	**Sn**	**17 45 38.9**	**-0.5**
	baz=259						
JTJ	**Tarama**	**1.81**	**90**	P	**Pn**	**17 45 17.0**	**0.0**
JTJ				eS	**Sn**	**17 45 39.7**	**0.0**
YULB	**Yu-li**	**1.81**	**226**	eP	**Pn**	**17 45 16.4**	**-0.7**
	baz=225						
SSLB	**Suanglung**	**1.83**	**242**	eP	**Pn**	**17 45 17.4**	**+0.1**
	baz=240						
SSLB				eS	**Sn**	**17 45 39.9**	**-0.3**
	baz=240						
SMLT	**Sun Moon Lake**	**1.83**	**245**	eP	**Pn**	**17 45 18.2**	**+0.9**
	baz=244						
SMLT				eS	**Sn**	**17 45 41.9**	**+1.5**
	baz=244						
TWF1	**Yuli**	**1.84**	**225**	eP	**Pn**	**17 45 16.7**	**-0.7**
	baz=224						
PTSB	**Yuanli**	**1.84**	**264**	eP	**Pn**	**17 45 17.4**	**-0.1**
	baz=262						
PTSB				eS	**Sn**	**17 45 40.3**	**-0.2**
	baz=262						
TYC	**Yuchr**	**1.85**	**246**	eP	**Pn**	**17 45 18.5**	**+0.9**
	baz=245						
TYC				eS	**Sn**	**17 45 42.2**	**+1.4**
	baz=245						
WDJ	**Dajia District**	**1.92**	**261**	eP	**Pn**	**17 45 18.6**	**+0.3**
	baz=260						
WDJ				eS	**Sn**	**17 45 41.4**	**-0.8**
	baz=260						
TCU	**Taichung**	**1.93**	**255**	eP	**Pn**	**17 45 19.1**	**+0.6**
	baz=253						
TCU				eS	**Sn**	**17 45 42.6**	**+0.2**
	baz=253						
WHYT	**Xinyi Township**	**1.95**	**241**	eP	**Pn**	**17 45 20.0**	**+1.1**
	baz=239						
WHYT				eS	**Sn**	**17 45 44.1**	**+1.0**
	baz=239						
CHKT	**Chengkung**	**1.99**	**219**	eP	**Pn**	**17 45 18.2**	**-1.1**
	baz=217						
YUS	**Yu-Shan**	**1.99**	**234**	eP	**Pn**	**17 45 20.1**	**+0.3**
	baz=233						
YUS				eS	**Sn**	**17 45 44.5**	**-0.1**
	baz=233						
WJS	**Zhushan**	**2.00**	**246**	P	**Pn**	**17 45 20.4**	**+1.0**
	baz=244						
WJS				eS	**Sn**	**17 45 45.7**	**+1.6**
	baz=244						
WNT	**Mingjian**	**2.01**	**248**	eP	**Pn**	**17 45 20.7**	**+1.1**
	baz=246						
WNT				eS	**Sn**	**17 45 46.0**	**+1.6**
	baz=246						
WCHH	**Zhanghua**	**2.05**	**254**	eP	**Pn**	**17 45 20.2**	**+0.2**
	baz=253						
WCHH				eS	**Sn**	**17 45 45.0**	**-0.3**
	baz=253						
ELDTW	**Lidau**	**2.13**	**227**	eP	**Pn**	**17 45 20.8**	**-0.6**
	baz=226						
ELDTW				eS	**Sn**	**17 45 46.2**	**-1.3**
	baz=226						
CHN5	**Tsauling**	**2.14**	**241**	eP	**Pn**	**17 45 22.3**	**+0.9**
	baz=239						
CHN5				eS	**Sn**	**17 45 49.1**	**+1.6**
	baz=239						
WGK	**Gukeng**	**2.19**	**244**	eP	**Pn**	**17 45 22.8**	**+0.8**
	baz=243						
WGK				eS	**Sn**	**17 45 50.4**	**+1.7**
	baz=243						
WDLH	**Douliu**	**2.21**	**244**	eP	**Pn**	**17 45 23.0**	**+0.8**
	baz=243						
WDLH				eS	**Sn**	**17 45 49.6**	**+0.5**
	baz=243						
JIRB	**Irabujima**	**2.24**	**85**	P	**Pn**	**17 45 23.1**	**+0.5**
JIRB				S	**Sn**	**17 45 48.8**	**-1.0**
RLNB	**Erlin**	**2.28**	**251**	eP	**Pn**	**17 45 23.5**	**+0.4**
	baz=249						
RLNB				eS	**Sn**	**17 45 50.6**	**-0.1**
	baz=249						
JIKM	**Ikemajima**	**2.32**	**83**	P	**Pn**	**17 45 24.0**	**+0.4**
JIKM				eS	**Sn**	**17 45 51.6**	**0.0**
STYT	**Tauyuan**	**2.33**	**231**	eP	**Pn**	**17 45 24.6**	**+0.7**
	baz=229						
STYT				eS	**Sn**	**17 45 52.7**	**+0.7**
	baz=229						
TPUB	**Ta-pu**	**2.34**	**235**	P	**Pn**	**17 45 25.1**	**+1.1**
	baz=234						
TPUB				S	**Sn**	**17 45 53.2**	**+1.1**
	baz=234						
JMJ	**Miyako jima 2**	**2.35**	**86**	eP	**Pn**	**17 45 24.8**	**+0.8**
	baz=86						
JMJ				eS	**Sn**	**17 45 51.9**	**-0.5**
	baz=86						
WTCT	**Ta-ch'eng**	**2.36**	**251**	eP	**Pn**	**17 45 22.6**	**-1.5**
	baz=249						
WTCT				eS	**Sn**	**17 45 52.5**	**-0.1**
	baz=249						
TWGBT	**Beinan**	**2.37**	**220**	eP	**Pn**	**17 45 23.6**	**-0.7**
	baz=218						
TWGBT				eS	**Sn**	**17 45 51.9**	**-1.0**
	baz=218						
TWG	**Pinlang**	**2.37**	**220**	eP	**Pn**	**17 45 23.7**	**-0.7**
	baz=218						
TWG				eS	**Sn**	**17 45 51.1**	**-1.8**
	baz=218						
JMJ2	**Miyako jima3**	**2.38**	**88**	P	**Pn**	**17 45 24.9**	**+0.5**
JMJ2				S	**Sn**	**17 45 52.6**	**-0.4**
WTP	**Ta-pu**	**2.38**	**234**	eP	**Pn**	**17 45 25.0**	**+0.4**
	baz=233						
CHY	**Chiayi**	**2.39**	**241**	eP	**Pn**	**17 45 25.8**	**+1.2**
	baz=240						
CHY				eS	**Sn**	**17 45 54.0**	**+0.7**
	baz=240						
JOGS	**Gusukube**	**2.45**	**87**	P	**Pn**	**17 45 25.8**	**+0.4**
JOGS				eS	**Sn**	**17 45 55.3**	**+0.6**
TWK	**Hsinying**	**2.46**	**236**	eP	**Pn**	**17 45 26.7**	**+1.1**
	baz=235						
TWK				eS	**Sn**	**17 45 56.4**	**+1.2**
	baz=235						
CHN1	**Nanshi**	**2.48**	**234**	eP	**Pn**	**17 45 26.8**	**+1.0**
	baz=233						
CHN1				eS	**Sn**	**17 45 56.6**	**+1.1**
	baz=233						
SNST	**Tainan City**	**2.48**	**235**	eP	**Pn**	**17 45 26.7**	**+0.9**
	baz=234						
SNST				eS	**Sn**	**17 45 56.6**	**+1.0**
	baz=234						
WSF	**Szhu**	**2.49**	**246**	eP	**Pn**	**17 45 26.1**	**+0.2**
	baz=245						
WSF				eS	**Sn**	**17 45 56.0**	**+0.2**
	baz=245						
WLGB	**Puzi**	**2.50**	**242**	eP	**Pn**	**17 45 26.8**	**+0.7**
	baz=241						
WLGB				eS	**Sn**	**17 45 56.1**	**+0.2**
	baz=241						
SGST	**Jiashian**	**2.50**	**232**	eP	**Pn**	**17 45 27.3**	**+1.1**
	baz=230						
SGST				eS	**Sn**	**17 45 57.8**	**+1.7**
	baz=230						
SLGT	**Liugui**	**2.52**	**229**	eP	**Pn**	**17 45 27.7**	**+1.4**
	baz=228						
SLGT				eS	**Sn**	**17 45 55.6**	**-0.8**
	baz=228						
ECL	**Taimali**	**2.61**	**218**	eP	**Pn**	**17 45 26.4**	**-1.1**
	baz=217						
ECL				eS	**Sn**	**17 45 56.9**	**-1.7**
	baz=217						
CHN8	**Yiju**	**2.64**	**241**	eP	**Pn**	**17 45 28.5**	**+0.7**
	baz=239						
CHN8				eS	**Sn**	**17 46 00.4**	**+1.2**
	baz=239						
SSD	**Sandimen**	**2.70**	**225**	eP	**Pn**	**17 45 29.8**	**+1.1**
	baz=224						
SSD				eS	**Sn**	**17 46 02.2**	**+1.6**
	baz=224						
SCLT	**Jiali**	**2.74**	**238**	eP	**Pn**	**17 45 30.2**	**+1.0**
	baz=236						
SCLT				eS	**Sn**	**17 46 03.0**	**+1.3**
	baz=236						
TWM1	**Shoushan**	**2.79**	**229**	eP	**Pn**	**17 45 29.8**	**-0.1**
	baz=228						
TWM1				eS	**Sn**	**17 46 01.5**	**-1.3**
	baz=228						
PTTC	**Pingtan**	**2.80**	**288**	eP	**Pn**	**17 45 29.1**	**-0.9**
	baz=287						
PTTC				eS	**Sn**	**17 46 00.4**	**-2.6**
	baz=287						
EAST	**Anshuo**	**2.84**	**217**	eP	**Pn**	**17 45 29.8**	**-0.9**
	baz=216						
EAST				eS	**Sn**	**17 46 02.1**	**-2.0**
	baz=216						

DJA 04 17:58:48.1±0.2, 3°N±3°×9°9E±°, h10^{km}, M3.6/13, MLv3.6/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**0.88**	**348**	P	Pb	17 59 05.9	+0.5
KCSI	**Kotacane, Aceh**	**1.31**	**312**	P	Pn	17 59 11.5	-1.0
TPTI		**1.69**	**291**	P	Pn	17 59 17.1	-0.5
TPTI				S	Sn	17 59 39.7	+0.4
GSI	**Gunungsitoli**	**1.77**	**222**	P	Pn	17 59 17.9	-0.9
MNSI	**Mandailing Nat**	**2.01**	**156**	P	Pn	17 59 23.3	+1.2
SNSI	**Sinabang, Aceh**	**2.43**	**265**	P	Pn	17 59 27.7	-0.2
MLSI	**Meulaboh, Aceh**	**2.84**	**305**	P	Pn	17 59 32.5	-1.1
PDSI	**Padang**	**3.92**	**154**	P	Pn	17 59 48.9	+0.4
SISI	**Saibi**	**3.96**	**175**	P	Pn	17 59 48.9	0.0

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*DDA **04** 18:00:38.0, 38°.70N×43°.53E, h7^{km}±3^{km}, ML2.6*
*ISK **04** 18:00:38.3, 38°.75N×43°.50E, h11^{km}, ML2.3/7*
*ISCJB **04** 18:00:39.2±0.5, 38°.76N±0°.03×43°.49E±0°.05, h14^{km}±4^{km}, Error ellipse: s-maj=7.1km s-min=3.5km az=30.1*

ISC 04 18:00:39.0±1.1, 38°.74N±0°.03×43°.52E±0°.05, h18^{km}±3^{km}, n15, σ0^{s}.75/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**215**	PG	**Pb**	**18 00 43.7**	**+0.3**
VANB				SG	**Sg**	**18 00 48.1**	**+1.0**
TVAN	**Van**	**0.23**	**203**	iP	**Pb**	**18 00 44.4**	**-0.2**
TVAN				iS	**Sb**	**18 00 48.0**	**-0.3**
VMUR	**Van-Muradiye**	**0.25**	**9**	iP	**Pb**	**18 00 44.1**	**-0.9**
VMUR				iS	**Sg**	**18 00 49.8**	**+0.8**
CLDR	**Caldiran**	**0.51**	**38**	PG	**Pg**	**18 00 48.6**	**-0.7**
CLDR				SG	**Sb**	**18 00 56.8**	**+0.2**
CLDR	**Caldiran**	**0.51**	**38**	iP	**Pg**	**18 00 48.4**	**-0.9**
CLDR				iS	**Sb**	**18 00 57.7**	**+1.0**
CLDR				IAML_P			
	comp=Z,5μm,0.1s						
GEVA	**Gevas**	**0.56**	**220**	iP	**Pb**	**18 00 49.8**	**-0.6**
GEVA				IAML_P			
	comp=Z,2μm,0.2s						
AKDM	**Akdamar-Van**	**0.59**	**226**	PG	**Pb**	**18 00 49.9**	**-1.0**
AKDM				SG	**Sb**	**18 00 59.0**	**0.0**
MLAZ	**Malazgirt-MUS**	**0.86**	**298**	PG	**Pb**	**18 00 55.8**	**+0.3**
AGRB	**Hanur-Agry**	**0.93**	**334**	PG	**Pb**	**18 00 55.5**	**-1.2**
AGRB				SG	**Sb**	**18 01 09.4**	**+0.6**
BLIS	**Bitlis-Merkez**	**1.15**	**254**	iP	**Pn**	**18 01 00.0**	**-0.4**
BLIS				iS	**Sb**	**18 01 14.4**	**-0.7**
BLIS				IAML_P			
	comp=Z,812nm,0.2s						
HAKT	**HAKKARI**	**1.19**	**173**	iP	**Pn**	**18 01 00.9**	**-0.1**
HAKT				IAML_P			
	comp=Z,286nm,0.1s						
EATA	**Eleskirt**	**1.37**	**325**	iP	**Pb**	**18 01 04.9**	**+0.5**
EATA				IAML_P			
	comp=Z,232nm,0.1s						
SRTM	**Siirt_Merkez**	**1.46**	**240**	iP	**Pb**	**18 01 06.2**	**+0.4**
SRTM				iS	**Sb**	**18 01 24.3**	**+0.2**
SRTM				IAML_P			
	comp=Z,296nm,0.3s						
CUKT	**Cukurca**	**1.49**	**177**	PN	**Pn**	**18 01 05.6**	**+0.5**
GNI	**Garni**	**1.69**	**34**	PN	**Pn**	**18 01 08.9**	**+1.0**

MEX 04 18:06:32.6±0.3, 14°.94N×93°.20W, h71^{km}±8^{km}, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.76**	**359**	eP	Pn	18 06 46.8	-1.5
PCIG				eS	Sn	18 06 58.0	-1.8
CCIG	**Comitan**	**1.68**	**37**	iP	Pn	18 06 58.5	-1.7
CCIG				iS	Sn	18 07 19.2	-1.8
TGIG		**1.83**	**2**	iP	Pn	18 06 60.0	-2.0
TGIG				eS	Sn	18 07 22.9	-1.4

TAP 04 18:38:24.5, 23°.82N×121°.41E, h17^{km}±1^{km}, ML1.4, 1C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.02**	**105**	⇑iP	Pg	18 38 28.1	+0.6
	baz=104						
ESL				iS	Sg	18 38 30.1	+0.5
	baz=104						
EGFH	**Guangfu**	**0.15**	**175**	iP	Pb	18 38 29.3	+0.4
	baz=174						
EGFH				iS	Sb	18 38 32.5	+0.8
	baz=174						
VWDT	**VWDT**	**0.26**	**255**	P	Pb	18 38 31.6	+1.0
	baz=255						
VWDT				S	Sb	18 38 36.1	+1.3
	baz=255						
VWDT	**VWDT**	**0.26**	**255**	P	Pb	18 38 31.6	+1.0
	baz=97						
TWD	**Chiawan**	**0.31**	**33**	eP	Pg	18 38 30.9	-0.2
	baz=34						
EHY	**Hungye**	**0.32**	**195**	eP	Pb	18 38 32.0	+0.2
	baz=193						
EHY				eS	Sb	18 38 37.4	+0.7
	baz=193						
CHGB	**Renai**	**0.32**	**318**	P	Pb	18 38 32.3	+0.3
	baz=317						
CHGB				S	Sb	18 38 37.1	+0.1
	baz=317						
HGSD	**Ruisui**	**0.33**	**178**	eP	Pb	18 38 32.3	+0.5
	baz=178						
ETLH	**Xiulin Townshi**	**0.39**	**9**	eP	Pb	18 38 33.1	+0.1
	baz=9.0						
NACB	**Ninganchiao**	**0.39**	**25**	eP	Pb	18 38 32.9	-0.1
	baz=25						
SSLB	**Suanglung**	**0.42**	**266**	eP	Pb	18 38 33.6	+0.2
	baz=265						
SSLB				eS	Sb	18 38 39.8	+0.3
	baz=265						
YULB	**Yu-li**	**0.44**	**194**	eP	Pb	18 38 33.8	+0.1
	baz=193						
YULB				eS	Sb	18 38 40.2	+0.2
	baz=193						
SMLT	**Sun Moon Lake**	**0.47**	**278**	eP	Pg	18 38 34.2	+0.2
	baz=277						
SMLT	**Sun Moon Lake**	**0.47**	**278**	eS	Pg	18 38 34.4	+0.3
	baz=326						
TWF1	**Yuli**	**0.48**	**193**	eP	Pb	18 38 34.7	+0.2
	baz=191						
TWF1				eS	Sb	18 38 41.9	+0.7
	baz=191						
TDCB	**Techi**	**0.49**	**332**	eP	Pb	18 38 35.0	+0.3
	baz=331						
DPDB	**Guoxing**	**0.49**	**296**	eS	Sb	18 38 42.2	+0.5
	baz=295						

TAP 04 18:38:27.1, 23°.77N×120°.99E, h13^{km}±1^{km}, ML0.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSLB	**Suanglung**	**0.04**	**298**	iP	Pg	18 38 30.1	+0.4
	baz=297						
SSLB				S	Sg	18 38 32.0	+0.6
	baz=297						
SMLT	**Sun Moon Lake**	**0.14**	**324**	P	Pg	18 38 30.9	+0.1
	baz=326						
VWDT	**VWDT**	**0.14**	**97**	eS	Sb	18 38 34.0	-0.7
	baz=97						
WHYT	**Xinyi Township**	**0.14**	**239**	P	Pb	18 38 31.4	-0.4
	baz=238						
WHYT				eS	Sb	18 38 34.5	-0.2
	baz=238						

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*ISCJB **04** 18:52:25.8±0.5, 35°.34N±0°.08×135°.45E±0°.08, h377^{km}±4^{km}, mb3.6/7, Error ellipse: s-maj=12.7km s-min=10.1km az=153.1*
*IDC **04** 18:52:26.4±1.1, 35°.32N×135°.56E, h373^{km}±11^{km}, mb3.2/6, mb1 3.4/12, mb1mx3.1/35, mbtmp4.1/12, Error ellipse: s-maj=21.4km s-min=14.4km az=77.0*
*JMA **04** 18:52:27.1±0.1, 35°.36N×135°.38E, h367^{km}±1^{km}, M3.9*

ISC 04 18:52:26.5±0.8, 35°.31N±0°.08×135°.38E±0°.07, h370^{km}±7^{km}, n31, σ1^{s}.10/37, mb3.6/7, 1C-7D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.03**	**150**	⇓P	**Pn**	**18 53 13.0**	**+0.4**
JWT				S	**S**	**18 53 48.6**	**-0.9**
JKY	**Yasaka**	**0.39**	**324**	⇓P	**Pn**	**18 53 13.3**	**+0.6**
JWY	**Kouya**	**1.10**	**171**	P	**Pn**	**18 53 15.5**	**+0.5**
JWY				S	**S**	**18 53 53.4**	**-0.5**
JYTA	**Yamagatataniai**	**1.14**	**75**	⇓P	**Pn**	**18 53 15.4**	**+0.5**
JYTA				S	**S**	**18 53 53.7**	**-0.1**
JKG	**Kaga**	**1.23**	**38**	⇓P	**Pn**	**18 53 15.5**	**+0.3**
JIE	**Ise**	**1.43**	**130**	P	**Pn**	**18 53 17.0**	**+0.7**
JIE				S	**S**	**18 53 56.0**	**-0.3**
JTNC	**Tanabenakahech**	**1.50**	**173**	⇑P	**Pn**	**18 53 17.1**	**+0.3**
JTNC				S	**S**	**18 53 56.4**	**-0.8**
JAI	**Aioi**	**1.70**	**207**	eS	**S**	**18 53 59.1**	**0.0**
JHS	**Saijyo**	**1.88**	**261**	⇓P	**Pn**	**18 53 19.4**	**+0.5**
JOI	**OKI**	**1.99**	**300**	P	**Pn**	**18 53 20.0**	**+0.5**
JMN	**Monobe**	**2.01**	**219**	P	**Pn**	**18 53 20.6**	**+0.8**
TTO1	**TONANKAI O.B.S**	**2.05**	**145**	P	**Pn**	**18 53 20.9**	**+1.2**
JGT2	**ShimaneMisato**	**2.37**	**265**	⇓P	**Pn**	**18 53 22.4**	**+0.2**
TK02	**Tokai 2**	**2.39**	**124**	P	**Pn**	**18 53 23.1**	**+0.9**
JHT	**Toyohira**	**2.52**	**256**	⇓P	**Pn**	**18 53 24.0**	**+0.6**
JYN	**Shimob**	**2.59**	**85**	P	**Pn**	**18 53 24.3**	**+0.3**
MJAR	**Matsushiro Arr**	**2.60**	**61**	P	**Pn**	**18 53 23.7**	**-0.3**
	0.2nm,0.3s,baz=247,slow=8.4,SNR=11						
MJAR				S	**S**	**18 54 14.9**	**+4.5**
	0.0nm,0.3s,baz=90,slow=23,SNR=3.2						
JRY	**Ryogami san**	**2.95**	**75**	P	**Pn**	**18 53 27.5**	**+0.6**
JNA	**Nagahama**	**2.97**	**235**	P	**Pn**	**18 53 28.5**	**+1.3**
JNU	**Nakatsue**	**4.32**	**241**	P	**Pn**	**18 53 41.1**	**+1.1**
	3.6nm,0.3s,baz=46,slow=0.8,SNR=16						
KSRS	**Korea Array**	**6.38**	**292**	P	**Pn**	**18 54 03.6**	**+1.4**
	1.7nm,0.3s,baz=105,slow=13,SNR=47						
USRK	**Ussuriysk Ar.**	**9.25**	**345**	P	**P**	**18 54 36.5**	**-0.1**
	6.5nm,0.3s,baz=154,slow=11,SNR=132						
ASAJ	**Asahikawa**	**10.40**	**30**	P	**Pn**	**18 54 46.9**	**-2.0**
	5.7nm,0.3s,baz=226,slow=10.0,SNR=61						
KLR	**Kul'dur**	**14.16**	**350**	P	**P**	**18 55 29.4**	**-1.4**
	1.1nm,0.3s,baz=170,slow=13,SNR=17						
SONM	**Songino Array**	**24.88**	**309**	P	**P**	**18 57 17.7**	**+0.5**
	0.8nm,0.5s,baz=123,slow=7.9,SNR=5.1						
ZALV	**Zalesovo Beam**	**39.53**	**314**	P	**P**	**18 59 23.3**	**+0.5**
	0.7nm,0.4s,baz=92,slow=8.8,SNR=3.5						
MKAR	**Makanchi Array**	**40.92**	**303**	P	**P**	**18 59 34.7**	**+0.5**
	11nm,0.3s,baz=91,slow=9.8,SNR=1.2						
ASAR	**Alice Springs**	**58.67**	**182**	P	**P**	**19 01 46.1**	**-0.4**
	0.8nm,0.3s,baz=2.3,slow=5.5,SNR=40						
ARCES	**ARCESS Array B**	**63.84**	**338**	P	**P**	**19 02 20.4**	**+0.3**
	0.9nm,0.6s,baz=67,slow=9.3,SNR=8.0						
FINES	**FINESS Array B**	**67.99**	**331**	P	**P**	**19 02 46.0**	**-0.4**
	0.8nm,0.4s,baz=61,slow=5.1,SNR=17						
NOA	**NORSAR Array B**	**73.79**	**335**	P	**P**	**19 03 20.6**	**-0.4**
	0.4nm,0.5s,baz=44,slow=5.6,SNR=3.1						

*GUC **04** 18:59:32.9±0.7, 20°.02S×69°.64W, h73^{km}±4^{km}, ML3.2*
*SJA **04** 18:59:33.5±0.9, 20°.05S×69°.70W, h67^{km}±6^{km}, ML2.5, MW2.6*
*ISCJB **04** 18:59:34.3±0.8, 20°.03S±0°.03×69°.70W±0°.07, h68^{km}±9^{km}, Error ellipse: s-maj=10.5km s-min=5.7km az=174.6*
ISC 04 18:59:35.1±1.5, **20°.04S**±0°.04×**69°.69W**±0°.06, **h61**^{km}±12^{km}, **n19, σ0^{s}76**/29, **2C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.28	6	eP	Pn	18 59 45.2	-0.1
PB11				eS	Sn	18 59 54.2	+1.4
PB11	IPOC Station P	0.28	6	⇓iP	Pn	18 59 45.1	-0.3
PB11				i S	Sn	18 59 53.7	+1.0
PB11				IAML		18 59 54.4	
	comp=E,2µm,0.1s						
PB08	IPOC Station P	0.51	102	eP	Pn	18 59 47.4	-0.2
PB08				eS	Sn	18 59 57.6	+0.8
PB08	IPOC Station P	0.51	102	⇓eP	Pn	18 59 46.9	-0.7
PB08				i S	Sn	18 59 57.0	+0.3
PB08				IAML		18 59 57.9	
	comp=N,4µm,0.1s						
GO01	Chusmiza	0.59	52	eP	Pn	18 59 47.5	-1.1
GO01				i S	Sn	18 59 58.2	-0.2
GO01				IAML		18 59 59.5	
	comp=E,4µm,0.1s						
PSGC	Pisagua	0.60	317	⇓eP	Pn	18 59 47.5	-0.8
PSGC				i S	Sn	18 59 58.3	+0.3
PSGCX	Pisagua	0.60	317	eP	Pn	18 59 47.8	-0.6
MNMC	Minye Minye	0.91	5	eP	Pn	18 59 51.2	-1.1
MNMC				i S	Sn	19 00 04.4	-0.4
MNMC				IAML		19 00 09.9	
	comp=E,765nm,0.3s						
MNMCX	Minye Minye	0.91	5	eP	Pn	18 59 51.6	-0.7
PB01	IPOC Station P	1.02	170	eP	Pn	18 59 52.3	-1.2
PB01				i S	Sn	19 00 06.8	-0.3
PB02	IPOC Station P	1.29	189	eP	Pn	18 59 56.2	-0.9
PB02	IPOC Station P	1.29	189	⇑eP	Pn	18 59 55.9	-1.3
PB02				i S	Sn	19 00 13.7	+0.1
PB02				IAML		19 00 17.9	
	comp=E,613nm,0.1s						
PB07	IPOC Station P	1.69	186	eP	Pn	19 00 02.6	+0.1
PB07	IPOC Station P	1.69	186	⇑iP	Pn	19 00 02.0	-0.6
PB07				eS	Sn	19 00 24.0	+0.7
PB07				IAML		19 00 28.0	
	comp=E,316nm,0.6s						
PB16	IPOC Station P	1.70	6	eP	Pn	19 00 04.0	+0.9
PB09	IPOC Station P	1.80	167	eP	Pn	19 00 04.2	+0.1
PB03	IPOC Station P	2.00	182	eP	Pn	19 00 06.9	+0.1
PB04	IPOC Station P	2.33	191	eP	Pn	19 00 11.4	+0.2
LVC	Limon Verde	2.66	164	eP	Pn	19 00 16.2	+0.3
LVC				IAML		19 00 56.8	
	comp=Z,16nm,0.2s						

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*ISCJB **04** 19:01:43.0±0.5, 39°.40N±0°.02×32°.16E±0°.02, h1^{km}±4^{km}, Error ellipse: s-maj=3.0km s-min=2.5km az=3.1*
*ISK **04** 19:01:42.6, 39°.39N×32°.21E, h6^{km}, ML3.5/41*
*DDA **04** 19:01:42.8, 39°.38N×32°.21E, h15^{km}±1^{km}, ML3.3*
ISC 04 19:01:43.1±1.1, **39°.38N**±0°.02×**32°.19E**±0°.02, **h8**^{km}±10^{km}, **n86, σ0^{s}83**/101, **6C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUSIV	SIVRIHISAR	0.51	277	PG	Pg	19 01 52.9	0.0
AUSIV				SG	Sb	19 02 01.4	-0.6
AUSIV	SIVRIHISAR	0.51	277	i P	Pb	19 01 53.8	-0.6
AUSIV				i S	Sg	19 01 59.3	-0.3
SVRH	Sivrihisar-ESK	0.52	278	PG	Pg	19 01 53.1	-0.1
KIZT	Kizilcal	0.55	206	PG	Pg	19 01 53.9	+0.1
KIZT				SG	Sb	19 02 02.8	-0.5
KKUL	Konya-Kulu	0.60	110	i P	Pb	19 01 55.9	0.0
KKUL				i S	Sn	19 02 07.1	-0.9
LOD	Lodumlu	0.68	41	PG	Pg	19 01 55.8	-0.3
ANTO	Ankara	0.68	43	PG	Pg	19 01 55.9	-0.2
ANTO	Ankara	0.68	43	⇓iP	Pn	19 02 04.5	+5.4
KULU	Kulu	0.71	118	PG	Pg	19 01 56.9	+0.1
AUMIH	MIHALICIK	0.73	312	PG	Pg	19 01 56.9	-0.3
AUMIH	MIHALICIK	0.73	312	i P	Pb	19 01 57.8	-0.4
BBAL	Bala	0.74	77	i P	Pb	19 01 57.7	-0.6
BBAL				i S	Sn	19 02 09.7	-1.8
KDHN	Kadinhani	0.86	184	i P	Pg	19 01 59.7	+0.1
KDHN				IAML_P			
	comp=Z,4µm,0.3s						
CIFT	Cifteler, Eski	0.88	269	PG	Pg	19 01 59.9	0.0
CIFT	Cifteler, Eski	0.88	269	i P	Pb	19 02 00.8	+0.2
CIFT				i S	Sg	19 02 09.4	-1.9
CIFT				IAML_P			
	comp=Z,10µm,0.2s						
CHBY	Cihanbeyli	0.96	145	PG	Pg	19 02 01.3	-0.3
ESKT	Eskisehir	1.05	278	PG	Pb	19 02 03.4	-0.2
KIBS	BOLU	1.07	346	i P	Pb	19 02 03.9	-0.1
CMDR	Camlidere-ANKA	1.14	11	i P	Pg	19 02 04.4	-0.5
CMDR				i S	Sn	19 02 21.5	+0.2
SERE	Sereflikochisa	1.15	112	PN	Pg	19 02 04.7	-0.5
BOLV	Bolvadin	1.17	236	i P	Pg	19 02 05.2	-0.3
BOLV				i S	Sg	19 02 19.2	-1.5
LADK	Ladik-KONYA	1.18	173	PN	Pb	19 02 05.4	-0.5
AUKIR	Kırka- Seyitga	1.29	266	i P	Pg	19 02 08.3	+0.4
MDUB	Mudurnu	1.33	325	PN	Pg	19 02 08.6	-0.1
YAYX	Yaylak	1.33	109	PN	Pb	19 02 08.2	-0.2
DOGA	KONYA_Doganhis	1.33	198	i P	Pn	19 02 08.2	0.0
DOGA				i S	Sg	19 02 26.1	+0.1
DOGA				IAML_P			
	comp=Z,3µm,0.2s						
KIRS	Kırehir-Merke	1.36	100	i P	Pn	19 02 08.4	-0.1
KIRS				i S	Sg	19 02 28.1	+1.3
SRCK	Saricakaya, Es	1.38	299	PN	Pb	19 02 08.9	-0.2
SRCK	Saricakaya, Es	1.38	299	i P	Pg	19 02 09.5	0.0
SRCK				IAML_P			
	comp=Z,12µm,0.5s						
AKSY	AKSARAY - Alti	1.42	120	i P	Pg	19 02 10.9	+0.5
AKSY				i S	Sg	19 02 29.5	+0.7
BORA	Eskisehir	1.43	291	PN	Pb	19 02 09.7	-0.4
BORA	Eskisehir	1.43	291	i P	Pg	19 02 10.7	+0.1
BORA				IAML_P			
	comp=Z,9µm,0.1s						
KONT	Konya--Tatoy	1.44	175	PN	Pb	19 02 10.0	-0.1
KONT	Konya--Tatoy	1.44	175	i P	Pg	19 02 10.9	+0.3
KONT				i S	Sg	19 02 30.1	+0.9
KONT				IAML_P			
	comp=Z,4µm,0.3s						
BCAM	Yenicaga	1.44	356	i P	Pg	19 02 10.6	-0.1
ELDT	Eldivan	1.46	40	i P	Pg	19 02 10.7	-0.4
DELI	KIRIKKALE	1.47	65	i P	Pb	19 02 10.5	-0.2
DELI				i S	Sn	19 02 29.1	-0.5
BTAS	Taskesti	1.50	323	i P	Pg	19 02 13.2	+1.3
SHUT	Suhut-Afyon	1.52	238	PN	Pb	19 02 11.5	-0.1
SULT	Sultanhani-AKS	1.57	138	PN	Pb	19 02 12.2	-0.2
AFYO	Afyonkarahisar	1.59	249	i P	Pg	19 02 13.3	-0.2
AFYO				i S	Sb	19 02 33.3	+0.3
KMER	Konya-Meram	1.61	175	i P	Pg	19 02 14.1	+0.1
KMER				i S	Sg	19 02 36.5	+1.6
KMER				IAML_P			
	comp=Z,712nm,0.2s						
CANT	Cankiri	1.65	41	PN	Pn	19 02 12.6	+0.2
GULT	Gulveren	1.67	310	PN	Pb	19 02 13.3	-0.8
YIGI	Dzce	1.68	340	i P	Pb	19 02 14.4	+0.1
CDAG	Cicekdag	1.70	81	i P	Pb	19 02 14.1	-0.7
CDAG				i S	Sg	19 02 37.6	-0.3
BAGO	Egridir - ISPA	1.77	219	i P	Pb	19 02 15.6	-0.2
BAGO				IAML_P			
	comp=Z,823nm,0.4s						
SAHE	Sakarya_HENDEK	1.79	326	i P	Pg	19 02 18.0	+0.5
SPNC	Sapanca-Adapaz	1.95	313	PN	Pn	19 02 16.8	+0.3
SAUV	Serdivan-Sakar	1.98	314	PN	Pn	19 02 17.2	+0.3
ISP	Isparta	2.03	221	PN	Pn	19 02 18.4	+0.7
ISP	Isparta	2.03	221	⇓iP	Pn	19 02 18.9	+1.2
ILGA	Ilgaz	2.04	34	i P	Pg	19 02 21.3	-0.9
CORM	Corum	2.04	66	PN	Pn	19 02 18.8	+0.9
TVSB	Tavsanli	2.12	273	PN	Pn	19 02 20.0	+1.1
GDZ	Gediz	2.12	263	i P	Pg	19 02 23.7	-0.1
GDZ				IAML_P			
	comp=Z,3µm,0.4s						
ADVT	Abdulvahap	2.16	300	PN	Pn	19 02 20.2	+0.8
GEDZ	Gediz	2.19	262	PN	Pn	19 02 20.7	+0.9
SIRC	Yozgat	2.29	90	i P	Pb	19 02 23.7	-1.1
COAL	Corum-Alaca	2.32	67	i P	Pb	19 02 23.8	-1.5
KHAL	Karahalli	2.33	245	i P	Pb	19 02 24.1	-1.4
HRT	Hereke	2.41	307	PN	Pn	19 02 23.6	+0.7
YLV	Yalova	2.47	300	PN	Pn	19 02 24.8	+1.1
YLV	Yalova	2.47	300	⇑iP	Pn	19 02 24.9	+1.2
ULDT	Uludag	2.48	289	i P	Pn	19 02 25.3	+1.4
KURC	Kurucasile-Bar	2.50	9	PN	Pn	19 02 24.7	+0.6
GEMT	Gemlik	2.54	296	PN	Pn	19 02 25.1	+0.5
USAK	Uak-Merkez	2.56	256	i P	Pg	19 02 31.6	-0.5
USAK				IAML_P			
	comp=Z,509nm,0.3s						
SILT	Sile	2.64	313	PN	Pn	19 02 26.6	+0.7
BUY	Buyukada	2.78	303	PN	Pn	19 02 28.3	+0.4
KORT	Korkueli	2.78	212	PN	Pn	19 02 29.1	+1.0
ARMT	Armutlu	2.82	296	PN	Pn	19 02 29.1	+0.6
KULA	Kula-Manisa	2.88	254	PN	Pn	19 02 30.6	+1.1
BZK	Bozkurt	2.92	28	⇑iP	Pb	19 02 35.5	0.0
KAVV	Kandilli-Istan	2.93	306	PN	Pn	19 02 30.9	+0.9
ISK	Istanbul-Kandi	2.93	306	PN	Pn	19 02 30.9	+0.9
KLYT	Kilyos	3.05	309	PN	Pn	19 02 32.8	+1.2
KLYT	Kilyos	3.05	309	⇓iP	Pn	19 02 32.8	+1.2
KCTX	Karacabey (Bur	3.08	288	PN	Pn	19 02 33.7	+1.6
BGKT	Bogazkoy	3.17	306	PN	Pn	19 02 34.3	+1.0
DIKM	Dikmen	3.26	45	⇑iP	Pb	19 02 42.7	+1.5
EZN	Ezine	4.55	277	⇑iP	Pn	19 02 51.9	-0.4
TIRR	Tirgusor	5.81	332	⇑iP	Pn	19 03 12.3	+2.8
TLB	Topalu	6.05	331	⇓iP	Pn	19 03 13.5	+0.6
CFR	Carcaliu	6.53	334	⇓iP	Pn	19 03 20.8	+1.4
VTS	Vitosha	7.51	298	⇑iP	Pn	19 03 34.4	+1.4

JMA 04 19:03:43.0, 29°.74N×130°.11E, h63^{km}±1^{km}, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.23	296	P	Pn	19 03 52.8	-0.2
JNN				eS	Sn	19 04 00.5	+0.3
JYAK	Yakushimahirau	0.60	35	P	Pn	19 03 56.3	0.0
JYAK				eS	Sn	19 04 05.9	-0.2
JKC	Kuchinoerabu	0.72	6	P	Pn	19 03 57.9	+0.2
JKC				eS	Sn	19 04 08.7	+0.2
JMTN	Minamitane	0.95	46	P	Pn	19 04 00.9	+0.4
JTAJ	Takarajima	0.98	234	P	Pn	19 04 01.3	+0.4
JTN	Tanegashima 3	1.18	39	P	Pn	19 04 03.9	+0.3
JTN				eS	Sn	19 04 18.8	-0.1
JAM	Amami Oshima	1.40	199	P	Pn	19 04 06.2	-0.2
JAM				eS	Sn	19 04 24.6	+0.7
JZK	Kikaishima	1.43	185	P	Pn	19 04 07.9	+1.1
JZK				eS	Sn	19 04 27.1	+2.5
JTSR	Tashiro 2	1.58	26	P	Pn	19 04 09.4	+0.5
JTSR				eS	Sn	19 04 28.6	+0.1
JAMN	Amaminishikomi	1.70	209	P	Pn	19 04 10.3	-0.2
JAMN				eS	Sn	19 04 31.2	0.0
JSU	Suzuyama	1.79	10	P	Pn	19 04 12.2	+0.6
JTK	Tokunoshima	2.20	208	P	Pn	19 04 17.6	+0.4
JTK				eS	Sn	19 04 44.7	+1.4
JOKE	Okinoerabujima	2.73	210	P	Pn	19 04 25.0	+0.5
JYRO	Yoronjima	3.08	209	P	Pn	19 04 29.9	+0.7
JYRO				eS	Sn	19 05 05.1	+0.4
JIH	Iheya	3.29	216	P	Pn	19 04 32.7	+0.6
JIH				eS	Sn	19 05 10.8	+0.8
JNTH	Nagotoyohara	3.70	210	P	Pn	19 04 38.2	+0.5
JMZ	Minamidaito 2	4.03	166	P	Pn	19 04 41.0	-1.2
JMZ				eS	Sn	19 05 23.0	-5.1

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*NDI **04** 19:47:54.4±2.5, 23°.10N×94°.32E, h15^{km}, ML3.6*
ISC 04 19:47:57.8±3.4, **23°.2N**±0°.2×**94°.2E**±0°.1, **h35**^{km}, **n17, σ1^{s}70**/25, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	2.50	358	eP	Pn	19 48 37.5	+1.3
KOHI				eS	Sn	19 49 07.3	+1.8
BELO	BELONIA	2.53	271	eP	Pn	19 48 38.4	+2.0
BELO				eS	Sn	19 49 08.7	+2.7
MOKO	MOKOCHONG	3.11	5	eP	Pn	19 48 44.5	-0.1
MOKO				eS	Sn	19 49 22.0	+1.4
SHL	Shillong	3.15	318	eP	Pn	19 48 45.7	+0.5
SHL				eS	Sn	19 49 24.0	+2.2
SHL				i SN		19 49 25.0	
SHL				IAML		19 49 27.0	
	comp=N,115nm,0.1s						
SHL				IAML		19 49 27.9	
	comp=E,121nm,0.1s						
TEZP	TEZPUR	3.62	340	eP	Pn	19 48 50.4	-1.1
TEZP				eS	Sn	19 49 32.8	-0.2
TEZP				IAML		19 49 37.3	
	comp=N,229nm,0.1s						
TEZP				IAML		19 49 37.5	
	comp=E,168nm,0.1s						
TURI	Tura	4.22	304	eP	Pn	19 48 59.5	-0.2
TURI				eS	Sn	19 49 48.2	+0.4
TURI				IAML		19 49 53.1	
	comp=N,144nm,0.1s						
TURI				IAML		19 49 53.1	
	comp=E,154nm,0.1s						
ZIRO	ZIRO	4.31	356	eP	Pn	19 49 00.4	-0.7
ZIRO				eS	Sn	19 49 50.4	+0.2
ZIRO				IAML		19 49 53.8	
	comp=N,95nm,0.2s						
ZIRO				IAML		19 49 54.0	
	comp=E,123nm,0.3s						
TAWA	Tawang	4.85	335	eP	Pn	19 49 08.8	+0.1
TAWA				eS	Sn	19 50 04.5	+0.8
TAWA				IAML		19 50 08.5	
	comp=E,301nm,0.1s						
TAWA				IAML		19 50 09.1	
	comp=N,271nm,0.2s						
JIRN	Jiri	8.48	303	eP	Pn	19 49 57.0	-1.6
	comp=N,40nm,0.2s						
GUN	Gumba	8.85	304	eP	Pn	19 50 02.1	-1.5
	comp=N,19nm,0.2s						
PKI	Pulchoki	9.05	300	eP	Pn	19 50 04.5	-1.9
	comp=N,19nm,0.5s						
PKIN	Phulchoki	9.07	300	eP	Pn	19 50 04.6	-1.9
	comp=N,24nm,0.3s						
KKN	Kakani	9.26	301	eP	Pn	19 50 07.6	-1.5
	comp=N,5.9nm,0.2s						
DMN	Daman	9.31	300	eP	Pn	19 50 08.3	-1.6
	comp=N,8.1nm,0.3s						
GKN	Gorkha	9.86	301	eP	Pn	19 50 15.0	-2.3
	comp=N,31nm,0.2s						
KOLN	Koldanda	10.59	298	eP	Pn	19 50 24.5	-2.9
PYUN	Piuthan	11.22	298	eP	Pn	19 50 33.2	-2.7
	comp=N,10nm,0.4s						

IDC 04 20:01:15.3±2.0, **5°.33S**×**152°.80E, h0**^{km}, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.5**/23, **mbtmp3.5**/4, **Error ellipse: s-maj=67.6km s-min=35.8km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.90	234	Sn	Sn	20 04 15.2	-1.9
	3.1nm,0.3s,baz=229,slow=20,SNR=10						
ASAR	Alice Springs	25.76	223	P	P	20 06 47.1	-0.8
	0.8nm,0.9s,baz=54,slow=9.0,SNR=4.6						
CMAR	Chiang Mai Arr	58.10	295	P	P	20 11 10.6	-0.5
	0.5nm,0.7s,baz=130,slow=8.4,SNR=5.2						
MKAR	Makanchi Array	80.72	319	P	P	20 13 30.9	+0.4
	0.2nm,0.6s,baz=100,slow=6.4,SNR=3.3						
ILAR	Eielson Array	82.65	22	P	P	20 13 39.3	-1.0
	0.5nm,0.9s,baz=250,slow=3.9,SNR=5.4						
TORD	Torodi Ar. Bea	150.46	287	PKPbc	PKiKP	20 21 11.7	+0.9
	0.5nm,0.7s,baz=51,slow=2.4,SNR=4.6						

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*ISCJB **04** 20:09:06.0±0.4, 24°.05N±0°.02×121°.88E±0°.02, h50^{km}±5^{km}, Error ellipse: s-maj=4.2km s-min=3.0km az=150.3*
*JMA **04** 20:09:05.5±0.1, 23°.99N×121°.85E, h49^{km}±1^{km}*
*TAP **04** 20:09:06.2, 24°.05N×121°.84E, h50^{km}, ML2.7, D*
ISC 04 20:09:06.5±1.2, **24°.05N**±0°.03×**121°.86E**±0°.03, **h46**^{km}±8^{km}, **n41, σ0^{s}71**/73, **2C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.24	277	⇑iP	Pn	20 09 14.5	-0.3
	baz=278						
TWD				S	Sn	20 09 20.7	+0.2
	baz=278						
HWA	Hwalien	0.24	253	S	Sn	20 09 22.1	+1.5
	baz=250						
NACB	Ninganchiao	0.27	297	⇑iP	Pn	20 09 14.5	-0.5
	baz=299						
NACB				i S	Sn	20 09 21.1	+0.1
	baz=299						
ETLH	Xiulin Townshi	0.38	294	P	Pn	20 09 15.7	-0.5
	baz=295						
ETLH				S	Sn	20 09 22.9	-0.2
	baz=295						
NANB	Nanao	0.39	345	P	Pn	20 09 15.8	-0.4
	baz=348						
NANB				S	Sn	20 09 23.4	+0.4
	baz=348						
ENA	Nanau	0.39	344	P	Pn	20 09 15.8	-0.4
	baz=347						
ENA				S	Sn	20 09 23.6	+0.5
	baz=347						
ESL	Shilin	0.46	239	P	Pn	20 09 16.4	-0.6
	baz=237						
ESL				S	Sn	20 09 24.0	-0.4
	baz=237						
EGFH	Guangfu	0.55	226	P	Pn	20 09 17.4	-0.7
	baz=224						
EOS1	EOS1	0.55	26	P	Pn	20 09 18.6	+0.5
	baz=27						
EOS1				S	Sn	20 09 28.5	+2.0
	baz=27						
TWC	Suao	0.56	359	P	Pn	20 09 18.1	-0.1
	baz=2.0						
TWC				S	Sn	20 09 27.1	+0.5
	baz=2.0						
NNSB	Datong	0.58	311	P	Pn	20 09 18.1	-0.5
	baz=312						
NNSB				S	Sn	20 09 26.9	-0.3
	baz=312						
NNS	Nan Shan	0.59	311	P	Pn	20 09 18.1	-0.7
	baz=312						
NNS				S	Sn	20 09 27.2	-0.3
	baz=312						
CHGB	Renai	0.63	271	P	Pn	20 09 18.9	-0.4
	baz=271						
CHGB				S	Sn	20 09 28.2	-0.4
	baz=271						
NDT	Datong Townshi	0.63	330	P	Pn	20 09 19.0	-0.3
	baz=331						
NDT				S	Sn	20 09 28.3	-0.1
	baz=331						
ENTT	Nioudou	0.65	335	eS	Sn	20 09 28.5	-0.1
	baz=337						
TWT	Tachien	0.66	288	P	Pn	20 09 19.7	0.0
	baz=288						
TWT				S	Sn	20 09 29.3	+0.1
	baz=288						
TDCB	Techi	0.67	288	P	Pn	20 09 19.5	-0.3
	baz=288						
TDCB				S	Sn	20 09 29.0	-0.5
	baz=288						
HGSD	Ruisui	0.69	216	eP	Pn	20 09 20.5	+0.6
	baz=214						
HGSD				S	Sn	20 09 30.2	+0.7
	baz=214						
TWE	Neicheng	0.69	345	P	Pn	20 09 19.4	-0.5
	baz=348						
TWE				S	Sn	20 09 29.9	+0.3
	baz=348						
VWDT	VWDT	0.72	246	P	Pn	20 09 20.2	-0.2
	baz=245						
VWDT				S	Sn	20 09 30.3	-0.1
	baz=245						
EHY	Hungye	0.73	222	eS	Sn	20 09 29.2	-1.5
	baz=220						
YHNB	Yeheng	0.76	324	eP	Pn	20 09 20.6	-0.4
	baz=325						
YHNB				eS	Sn	20 09 30.3	-1.1
	baz=325						
NSK	Sanguang	0.77	324	eP	Pn	20 09 21.0	-0.2
	baz=325						
NSK				eS	Sn	20 09 30.8	-1.0
	baz=325						
NWLT	Wulai	0.79	336	eP	Pn	20 09 20.9	-0.5
	baz=337						
NWLT				eS	Sn	20 09 31.6	-0.6
	baz=337						
NTC	Toucheng	0.80	358	eP	Pn	20 09 21.4	-0.1
	baz=359						
NTC				eS	Sn	20 09 32.8	+0.5
	baz=359						
DPDB	Guoxing	0.85	269	P	Pn	20 09 22.0	-0.2
	baz=269						
DPDB				eS	Sn	20 09 36.0	+2.3
	baz=269						
SSLB	Suanglung	0.87	253	eP	Pn	20 09 21.9	-0.5
	baz=252						
SMLT	Sun Moon Lake	0.90	259	eP	Pn	20 09 22.8	0.0
	baz=258						
TIPB	Shuangxi	0.92	358	eP	Pn	20 09 23.2	+0.2
	baz=359						
TIPB				eS	Sn	20 09 35.9	+0.8
	baz=359						
TYC	Yuchr	0.93	261	eP	Pn	20 09 23.1	0.0
	baz=260						
LIOB	Emei	0.97	308	P	Pn	20 09 24.3	+0.5
	baz=308						
LIOB				S	Sn	20 09 37.2	+0.8
	baz=308						
NSTT	Nanjuang	0.97	307	P	Pn	20 09 24.2	+0.4
	baz=307						
NSTT				S	Sn	20 09 36.8	+0.3
	baz=307						
WHYT	Xinyi Township	0.99	249	eP	Pn	20 09 24.4	+0.4
	baz=248						
WHYT				eS	Sn	20 09 38.6	+1.8
	baz=248						
YUS	Yu-Shan	1.00	236	eP	Pn	20 09 24.2	-0.4
	baz=235						
YUS				eS	Sn	20 09 38.4	+0.6
	baz=235						
JYNG	Yonagunijimaku	1.07	68	S	Sn	20 09 39.3	+0.6
YOJ	Yonaguni jima	1.13	68	P	Pn	20 09 26.0	+0.2
YOJ				S	Sn	20 09 40.1	-0.1
IRIF	Iriomote-Funau	1.73	80	P	Pn	20 09 33.8	-0.3
IRIF				S	Sn	20 09 55.2	+0.2
JKRS	Kuro-shima	1.97	84	P	Pn	20 09 37.9	+0.5
JKRS				eS	Sn	20 10 01.9	+1.0
JIJ	Ishigaki jima	2.11	81	P	Pn	20 09 38.9	-0.3
JIJ				S	Sn	20 10 02.9	-1.3
JISG	Ishigakijimahi	2.30	76	P	Pn	20 09 41.4	-0.5
JISG				eS	Sn	20 10 07.7	-1.2
JTJ	Tarama	2.66	77	eS	Sn	20 10 16.8	-1.0

MEX 04 20:48:07.7±0.4, **15°.69N**×**94°.91W, h17**^{km}±19^{km}, **MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.16	274	eP	Pn	20 48 25.7	-3.5
HUIG				i S	Sb	20 48 39.1	-4.9
CMIG	Matias Romero	1.39	1	eP	Pn	20 48 29.2	-3.1
CMIG				i S	Sn	20 48 45.0	-5.4
PCIG		1.63	89	eP	Pn	20 48 32.1	-3.4
PCIG				eS	Sn	20 48 51.5	-4.7
VHO	Vista Hermosa	2.23	308	i P	Pn	20 48 40.7	-3.3
VHO				eS	Sn	20 49 07.0	-4.3

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*NIED **04** 21:01:00, 34°.50N×140°.00E, h32^{km}, Mw3.7 Best double couple: M$_0$4.29000×10^{14} NP1:φ$_s$353.00000°, δ68.00000°, λ-14.00000°. NP2:φ$_s$88.00000°, δ77.00000°, λ-158.00000°.*
*IDC **04** 21:01:04.0±1.2, 34°.39N×140°.00E, h0^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.6/7, ML3.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/25, Error ellipse: s-maj=42.4km s-min=22.7km az=73.0*
*JMA **04** 21:01:08.4±0.1, 34°.49N×139°.96E, h17^{km}±2^{km}, M3.9*
JMA Felt II J1.
ISC 04 21:01:05.7±1.7, **34°.42N**±0°.05×**139°.99E**±0°.05, **h8**^{km}±10^{km}, **n25, σ0^{s}86**/26, **mb3.7**/6, **4C-4D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIM2	Oshima 3	0.55	303	⇓P	Pb	21 01 18.1	+0.5
JIM2				S	Sb	21 01 25.6	-0.1
BSO3	Boso 3	0.57	48	⇑P	Pb	21 01 19.0	+1.2
JTHY	Toshimahigashi	0.59	280	P	Pb	21 01 19.6	+1.3
TATJ	Tateyama 2	0.61	352	⇑P	Pb	21 01 19.6	+0.9
JMKN	Mikurajimanish	0.62	212	⇑P	Pn	21 01 21.0	+0.1

JMKN				S	Sn	21 01 30.9	-0.1
BSO4	Boso 4	0.63	27	⇑P	Pb	21 01 20.0	+1.0
JKO	Kozu shima	0.75	252	P	Pn	21 01 22.3	-0.2
JKO				*e*S	Sb	21 01 32.9	+1.6
KTJ3	Kamata3	0.92	304	⇓P	Pg	21 01 23.3	0.0
KTJ3				S	Sg	21 01 34.5	-0.7
JIZS	Izushimoda	0.97	288	⇓P	Pg	21 01 24.6	+0.3
JIZS				S	Sg	21 01 37.1	+0.3
JOD2	Odawara 2	1.12	319	⇓P	Pg	21 01 26.4	-0.9
JOD2				S	Sg	21 01 40.1	-1.7
MJAR	Matsushiro Arr	2.57	326	Pn	Pn	21 01 48.5	+0.9
	3.3nm,0.3s,baz=165,slow=14,SNR=205						
MJAR				Sn	Sn	21 02 19.7	+0.7
	3.0nm,0.3s,baz=108,slow=26,SNR=8.2						
MAT	Matsushiro	2.57	326	P	Pn	21 01 48.7	+1.0
MAT				S	Sn	21 02 19.4	+0.3
PETK	Petropavlovsk-	22.52	29	LR	LR	21 16 18.9	
	comp=Z,42nm,18.9s,baz=117,slow=41						
H11N2	WAKE ISLAND Hy	27.96	115	T	T	21 36 36.1	
	baz=308,slow=75,SNR=250						
H11N1	WAKE ISLAND Hy	27.97	115	T	T	21 36 36.6	
	baz=308,slow=75,SNR=203						
H11N3	WAKE ISLAND Hy	27.98	115	T	T	21 36 37.4	
	baz=308,slow=75,SNR=205						
H11S3	WAKE ISLAND Hy	28.56	117	T	T	21 37 24.3	
	baz=310,slow=76,SNR=76						
H11S1	WAKE ISLAND Hy	28.56	117	T	T	21 37 24.4	
	baz=310,slow=76,SNR=145						
H11S2	WAKE ISLAND Hy	28.58	117	T	T	21 37 25.9	
	baz=310,slow=76,SNR=91						
MKAR	Makanchi Array	44.58	304	P	P	21 09 17.9	-0.2
	0.2nm,0.5s,baz=93,slow=9.7,SNR=3.8						
ILAR	Eielson Array	52.32	31	P	P	21 10 17.5	0.0
	0.3nm,0.7s,baz=282,slow=5.2,SNR=4.2						
ASAR	Alice Springs	58.06	187	P	P	21 10 59.0	-0.4
	0.4nm,0.6s,baz=23,slow=11,SNR=9.1						
ARCES	ARCESS Array B	66.03	339	P	P	21 11 52.3	-0.1
	0.7nm,0.8s,baz=56,slow=6.4,SNR=3.0						
FINES	FINESS Array B	70.58	332	P	P	21 12 20.6	-0.5
	0.4nm,0.4s,baz=64,slow=6.3,SNR=7.1						
AKASG	Malin Array Be	75.65	322	P	P	21 12 50.2	-1.0
	0.4nm,0.4s,baz=46,slow=6.7,SNR=4.5						

NNC ***04*** *21:18:28.1±3.8, 37.°61N×70.°99E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=30.4km s-min=20.3km az=169.0*

ISC 04 21:18:29.6±3.4**, 37.°4N**±0.°2×**71.°0E**±0.°1**, h68**^{km}**, n10, σ1^{s}.23**/14**, 3C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.19	23	P	Pn	21 19 45.4	+0.4
	SNR=20						
UCH	Uchtor	5.56	28	P	Pn	21 19 50.0	-0.1
	SNR=8.1						
EKS2	Erkin-Say	5.70	21	P	Pn	21 19 52.6	+0.8
	SNR=6.0						
KK31	Karatay Array	5.75	356	⇓P	Pn	21 19 52.8	+0.6
	1.3nm,0.2s,baz=180,slow=13,SNR=46						
KK31				⇓S	Sn	21 20 56.9	+0.1
	0.9nm,0.3s,baz=176,slow=24						
AAK	Ala-Archa	5.91	26	⇑P	Pn	21 19 53.8	-0.8
	3.1nm,0.6s						
AAK				⇑S	Sn	21 20 59.8	-1.2
	4.1nm,0.9s						
CHMS	Chumysh	6.32	26	P	Pn	21 20 00.0	-0.1
	SNR=5.8						
TKM2	Tokmak 2	6.57	31	⇓P	Pn	21 20 02.4	-1.3
	3.0nm,0.6s						
TKM2				⇓S	Sn	21 21 19.5	+2.2
	1.5nm,0.6s						
TKM2	Tokmak 2	6.57	31	P	Pn	21 20 03.1	-0.6
	SNR=5.9						
AB31	Akbulak array	14.34	329	P	Pn	21 21 48.1	-0.8
	0.2nm,0.3s,baz=139,slow=14,SNR=14						
AB31				⇑S	Sn	21 24 25.3	-1.1
	0.6nm,0.6s,baz=160,slow=22,SNR=4.0						
AKTO	Aktyubinsk	16.04	329	⇓P	Pn	21 22 12.9	+2.2
	1.9nm,0.5s						

IDC ***04*** *22:01:18.9±1.3, 25.°87S×70.°94W, h0^{km}, mb3.2/1, mb1 4.1/5, mb1mx3.7/32, mbtmp3.9/5, ML3.8/4, Error ellipse: s-maj=36.7km s-min=23.2km az=87.0*

ISCJB ***04*** *22:01:23.6±0.6, 25.°78S±0.°03×70.°72W±0.°08, h33^{km}±8^{km}, mb4.1/6, Error ellipse: s-maj=12.4km s-min=4.4km az=2.4*

SJA ***04*** *22:01:23.5±0.8, 25.°58S×71.°14W, h80^{km}±6^{km}, ML4.0, MW4.1*

GUC ***04*** *22:01:24.8±0.6, 25.°88S×70.°40W, h46^{km}±1^{km}, ML3.8*

NEIC ***04*** *22:01:24.0±0.0, 25.°87S×70.°43W, h47^{km}, mb4.2/5, ML3.8(GUC), After GUC.*

ISC 04 22:01:26.0±0.8**, 25.°83S**±0.°03×**70.°66W**±0.°09**, h39**^{km}±5^{km}**, n47, σ2^{s}.31**/54**, mb4.3**/6**, 2C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRCH	Chaqaral	0.51	177	*e*P	Pn	22 01 36.0	-0.9
CRCH				*i* S	Sn	22 01 44.0	-0.5
CRCH				IAML		22 01 44.9	
	comp=N,9µm,0.1s						
GO02	Mina Guanaco	1.17	55	*e*Pn	Pn	22 01 44.0	-2.2
GO02	Mina Guanaco	1.17	55	⇑*i*P	Pn	22 01 44.1	-2.1
GO02				*i* S	Sn	22 01 58.6	-2.5
GO02				IAML		22 02 02.4	
	comp=E,5µm,0.6s						
PB14	IPOC Station P	1.22	11	*e*P	Pn	22 01 46.0	-0.9
PB14				*e*S	Sn	22 02 02.7	+0.3
GO03	Copiap	1.79	168	*e*Pn	Pn	22 01 53.8	-0.8
GO03	Copiap	1.79	168	⇓*i*P	Pn	22 01 53.7	-0.8
GO03				*i* S	Sn	22 02 14.8	-1.3
GO03				IAML		22 02 20.4	
	comp=E,2µm,0.3s						
PB10	IPOC Station P	2.31	2	*e*Pn	Pn	22 01 59.9	-1.8
PB10	IPOC Station P	2.31	2	*e*P	Pn	22 01 58.3	-3.3
PB10				*e*S	Sn	22 02 24.2	-4.6
PB10	IPOC Station P	2.31	2	⇑*i*P	Pn	22 01 59.4	-2.3
PB10				*e*S	Sn	22 02 30.9	+2.1
PB10				IAML		22 02 40.5	
	comp=E,554nm,0.7s						
PB15	IPOC Station P	2.83	23	*e*P	Pn	22 02 08.4	-0.5
PB15	IPOC Station P	2.83	23	*e*P	Pn	22 02 08.2	-0.7
PB15				*i* S	Sn	22 02 43.4	+1.6
PB05	IPOC Station P	3.00	8	*e*P	Pn	22 02 08.9	-2.3
PB05	IPOC Station P	3.00	8	*i* P	Pn	22 02 08.9	-2.3
PB05				*i* S	Sn	22 02 53.1	+7.2
LCO	Las Campanas	3.17	181	*e*Pn	Pn	22 02 14.7	+1.1
LCO	Las Campanas	3.17	181	*e*P	Pn	22 02 16.6	+3.0
PB06	IPOC Station P	3.27	18	*e*P	Pn	22 02 13.0	-1.9
PB06	IPOC Station P	3.27	18	*i* P	Pn	22 02 13.0	-1.9
PB04	IPOC Station P	3.52	8	*e*Pn	Pn	22 02 15.7	-2.7
PB04	IPOC Station P	3.52	8	*e*P	Pn	22 02 15.6	-2.7
LVC	Limon Verde	3.58	27	Pn	Pn	22 02 18.7	-0.8
	comp=E,5.8nm,0.3s,baz=201,slow=9.0,SNR=84						
LVC				Sn	Sn	22 03 05.8	+5.1
	comp=E,53nm,0.3s,baz=316,slow=18,SNR=8.9						
LVC	Limon Verde	3.58	27	*e*Pn	Pn	22 02 18.6	-0.8
LVC	Limon Verde	3.58	27	*e*P	Pn	22 02 18.6	-0.8
LVC				IAML		22 03 19.2	
	comp=Z,280nm,0.3s						
PB03	IPOC Station P	3.86	13	*e*P	Pn	22 02 20.4	-2.7
PB07	IPOC Station P	4.15	10	*e*P	Pn	22 02 24.6	-2.5
PB09	IPOC Station P	4.22	18	*e*P	Pn	22 02 26.8	-1.3
GO04	Tololo Observa	4.33	182	*e*Pn	Pn	22 02 29.9	+0.3
PB01	IPOC Station P	4.89	13	*e*Pn	Pn	22 02 34.4	-2.7
AZAP	Zapla	5.32	74	*e*P	Pn	22 02 46.2	+3.0
HJA	Humahuaca	5.45	62	*e*P	Pn	22 02 48.5	+3.4
YJA	Yavi	5.95	53	*e*P	Pn	22 02 54.9	+3.0
CFA	Coronel Fontan	6.13	160	Pn	Pn	22 02 53.4	-0.7
	comp=Z,0.9nm,0.3s,baz=350,slow=14,SNR=8.0						
CFA				Sn	Sn	22 04 04.5	+1.5
	comp=Z,2.8nm,0.3s,baz=210,slow=20,SNR=4.3						
GO01	Chusmiza	6.28	13	*e*Pn	Pn	22 02 53.7	-3.0
MNMC	Minye Minye	6.74	9	*e*Pn	Pn	22 02 58.9	-3.9
LPAZ	La Paz	9.79	14	Pn	Pn	22 03 43.1	-1.8
	comp=Z,0.4nm,0.3s,baz=192,slow=4.7,SNR=10						
LPAZ	La Paz	9.79	14	*e*Pn	Pn	22 03 42.8	-2.0
SIV	San Ignacio	13.26	44	Pn	Pn	22 04 31.9	0.0
	comp=Z,1.3nm,0.3s,baz=250,slow=11,SNR=18						
TXAR	Lajitas Array	63.34	328	P	P	22 11 50.1	-1.3
	comp=Z,0.2nm,0.6s,baz=140,slow=7.0,SNR=2.9						
TX31	Lajitas Ar. Si	63.34	328	*e*P	P	22 11 52.3	+0.9
	comp=Z,2.2nm,1.0s						
PV03	Paradox Valley	73.12	329	*e*P	P	22 12 53.4	+0.8
	comp=Z,14nm,1.5s						
MTPU	Mount Pierson	74.53	327	*e*P	P	22 13 01.9	+0.9
	comp=Z,7.4nm,1.5s						
TOA1	Torodi Ar. Sit	80.31	70	*e*P	P	22 13 33.5	+0.1
TORD	Torodi Ar. Bea	80.31	70	P	P	22 13 33.6	+0.1
	comp=Z,0.7nm,1.0s,baz=228,slow=6.5,SNR=3.3						
EGMT	Eagleton	81.47	335	*e*P	P	22 13 40.0	+1.0
	comp=Z,6.1nm,0.9s						
ZAA1	Zalesovo Array	146.53	26	*e*PKPbc	PKPbc	22 21 01.0	-1.8
ZALV	Zalesovo Beam	146.53	26	PKPbc	PKPbc	22 21 01.0	-1.8
	comp=Z,1.4nm,0.6s,baz=309,slow=4.5,SNR=6.1						
MK32	Makanchi Array	150.03	39	*e*PKPbc	PKPbc	22 21 10.3	-1.9
MKAR	Makanchi Array	150.03	39	PKPbc	PKPbc	22 21 10.3	-1.9
	comp=Z,1.1nm,0.8s,baz=331,slow=2.5,SNR=8.1						

IDC ***04*** *22:16:46.2±1.0, 17.°47S×173.°66W, h0^{km}, mb3.9/6, mb1 4.2/6, mb1mx4.0/28, mbtmp4.0/6, MS3.1/3, Ms1 3.1/3, ms1mx2.9/19, Error ellipse: s-maj=44.9km s-min=24.0km az=128.0*

ISCJB ***04*** *22:16:50.0±0.6, 17.°6S±0.°1×173.°6W±0.°1, h39^{km}, mb4.3/10, MS3.1/3, Error ellipse: s-maj=17.3km s-min=14.5km az=19.0*

NEIC ***04*** *22:16:51.6±0.5, 17.°74S×173.°56W, h40^{km}±14^{km}, mb4.5/6, Error ellipse: s-maj=30.4km s-min=13.7km az=153.0*

ISC 04 22:16:51.7±0.7**, 17.°6S**±0.°2×**173.°5W**±0.°1**, h39**^{km}**, n21, σ0^{s}.57**/18**, mb4.3**/10**, MS3.2**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.73	113	*e*Pn	Pn	22 17 46.2	-0.5
URZ	Urewera	22.13	200	P	P	22 21 44.1	+0.3
	5.4nm,0.6s,baz=91,slow=18,SNR=2.7						
PPT	Papeete	22.84	94	LR	LR	22 28 18.4	
	comp=Z,29nm,20.9s,baz=143,slow=30						
STKA	Stephens Creek	42.84	242	LR	LR	22 41 24.8	
	comp=Z,43nm,18.0s,baz=25,slow=34						
AS31	Alice Springs	49.32	254	*e*P	P	22 25 37.1	-0.3
	3.3nm,0.8s						
ASAR	Alice Springs	49.33	254	P	P	22 25 37.2	-0.1
	11nm,0.7s,baz=89,slow=8.5,SNR=118						
MAJO	Matsushiro	70.55	320	*e*P	P	22 28 03.2	+0.4
	13nm,0.6s						
MJB9	Matsu-Tunnel	70.55	320	*e*P	P	22 28 03.2	+0.4
	13nm,0.6s						
PETK	Petropavlovsk-	74.69	342	P	P	22 28 26.8	-0.2
	1.2nm,0.7s,baz=152,slow=9.5,SNR=2.9						
PEA1	Petropavlovsk-	74.70	343	*e*P	P	22 28 26.8	-0.2
KSRS	Korea Array	77.64	316	LR	LR	23 02 20.9	
	comp=Z,10nm,18.7s,baz=242,slow=35						
KS15	Wonju Array Si	77.66	316	*e*P	P	22 28 44.2	0.0
	51nm,1.7s						
TXAR	Lajitas Array	81.96	56	P	P	22 29 09.1	+1.3
	0.3nm,0.8s,baz=223,slow=8.7,SNR=2.7						
PD31	Pinedale Array	84.00	42	*e*P	P	22 29 18.6	+0.3
PDAR	Pinedale Array	84.00	42	P	P	22 29 18.6	+0.3
	0.3nm,0.5s,baz=224,slow=3.8,SNR=4.8						
ILAR	Eielson Array	84.64	11	P	P	22 29 19.5	-1.3
	0.3nm,0.7s,baz=213,slow=6.5,SNR=4.0						
KMBO	Kilima Mbogo	144.41	242	PKP	PKPdf	22 36 25.6	+0.6
	2.6nm,0.8s,baz=51,slow=2.9,SNR=7.5						
CLL	Collm	145.99	353	*e*PKPbc	PKPab	22 36 28.0	+0.4
BR101	Keskin Array S	147.76	319	*e*PKPbc	PKPbc	22 36 32.4	-0.3
BRTR	Keskin Array B	147.76	319	PKPbc	PKPbc	22 36 32.4	-0.3
	1.0nm,0.8s,baz=114,slow=3.1,SNR=5.4						
GERES	GERESS Array B	148.30	351	PKPbc	PKPbc	22 36 33.5	-0.3
	0.5nm,0.7s,baz=25,slow=4.4,SNR=5.6						

ISCJB ***04*** *23:10:35.5±0.5, 10.°68S±0.°07×164.°72E±0.°07, h24^{km}, mb4.5/19, MS3.5/6, Error ellipse: s-maj=10.5km s-min=9.6km az=38.4*

NEIC ***04*** *23:10:39.2±1.0, 10.°64S×164.°77E, h38^{km}±7^{km}, mb4.4/9, Error ellipse: s-maj=21.6km s-min=14.5km az=71.0*

IDC ***04*** *23:10:44.2±5.1, 10.°67S×164.°50E, h78^{km}±42^{km}, mb3.9/13, mb1 4.0/15, mb1mx3.8/37, mbtmp4.2/15, ML4.5/2, MS3.5/8, Ms1 3.5/8, ms1mx3.2/24, Error ellipse: s-maj=33.4km s-min=16.9km az=94.0*

ISC 04 23:10:37.4±0.6**, 10.°65S**±0.°09×**164.°74E**±0.°09**, h24**^{km}**, n44, σ1^{s}.08**/37**, mb4.4**/19**, MS3.5**/6**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.87	284	P	Pn	23 11 51.7	+2.4
	75nm,0.3s,baz=137,slow=6.7,SNR=8.8						
HNR				S	Sn	23 12 46.4	+1.4
	35nm,0.3s,baz=210,slow=20,SNR=3.2						
HNR				LR	LR	23 13 48.0	
	comp=Z,528nm,19.2s,baz=172,slow=40						
HNR	Honiara	4.87	284	*e*Pn	Pn	23 11 50.7	+1.4
HNR	Honiara	4.87	284	P	Pn	23 11 47.0	-2.3
HNR				S	Sn	23 12 46.0	+1.0
DZM	Mont Dzumac	11.48	172	LR	LR	23 17 11.9	
	comp=Z,324nm,18.8s,baz=38,slow=34						
DZM	Mont Dzumac	11.48	172	*e*Pn	Pn	23 13 20.4	+0.4
CTA	Charters Tower	20.13	240	P	P	23 15 09.8	-0.2
	0.4nm,0.3s,baz=8.1,slow=7.1,SNR=3.7						
H11S2	WAKE ISLAND Hy	29.02	4	T	T	23 46 56.8	
	baz=184,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.02	4	T	T	23 46 58.6	
	baz=184,slow=76,SNR=20						
H11S1	WAKE ISLAND Hy	29.03	4	T	T	23 46 59.2	
	baz=184,slow=76,SNR=15						
URZ	Urewera	29.65	160	LR	LR	23 27 30.1	
	comp=Z,141nm,18.4s,baz=31,slow=34						
STKA	Stephens Creek	30.07	222	P	P	23 16 44.5	-0.5
	3.5nm,0.8s,baz=47,slow=13,SNR=3.9						
STKA				LR	LR	23 27 45.7	
	comp=Z,77nm,18.5s,baz=25,slow=34						
STKA	Stephens Creek	30.07	222	*e*P	P	23 16 45.2	+0.2
	15nm,2.0s						
H11N1	WAKE ISLAND Hy	30.24	4	T	T	23 48 19.3	
	baz=184,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.25	4	T	T	23 48 24.3	
	baz=184,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.26	4	T	T	23 48 29.0	
	baz=184,slow=76,SNR=10						
ASAR	Alice Springs	32.10	242	P	P	23 17 00.4	-2.6
	0.6nm,0.5s,baz=62,slow=10,SNR=13						
RPZ	Rata Peaks	33.40	172	LR	LR	23 30 02.5	
	comp=Z,224nm,21.3s,baz=276,slow=35						
MJAR	Matsushiro Arr	53.17	333	P	P	23 19 51.4	-2.2
	2.7nm,1.0s,baz=170,slow=10,SNR=5.6						
MAJO	Matsushiro	53.17	333	*e*P	P	23 19 51.4	-2.2
JNU	Nakatsue	54.19	325	P	P	23 20 01.1	0.0
	13nm,0.9s,baz=0.0,slow=20,SNR=3.5						
JNU	Nakatsue	54.19	325	*e*P	P	23 20 01.1	0.0
	56nm,1.3s						
ASAJ	Asahikawa	58.10	341	P	P	23 20 28.8	-0.1
	9.3nm,0.7s,baz=215,slow=14,SNR=5.2						
KSRS	Korea Array	59.00	326	P	P	23 20 35.6	+0.4
	1.6nm,0.8s,baz=124,slow=6.7,SNR=6.8						
KS15	Wonju Array Si	59.01	326	*e*P	P	23 20 35.6	+0.3
	66nm,1.8s						
PETK	Petropavlovsk-	63.79	355	P	P	23 21 07.3	0.0
	2.2nm,0.8s,baz=157,slow=8.2,SNR=5.1						
PETK				LR	LR	23 45 32.7	
	comp=Z,8.9nm,18.1s,baz=154,slow=33						
PEA1	Petropavlovsk-	63.79	355	*e*P	P	23 21 07.3	-0.1
CASY	Casey	66.39	201	*e*P	P	23 21 24.8	+0.7
	22nm,0.5s						
VNDA	Vanda	66.88	181	P	P	23 21 28.4	+1.2
	1.2nm,0.9s,baz=343,slow=6.9,SNR=6.1						
VNDA				LR	LR	23 47 39.0	
	comp=Z,48nm,18.4s,baz=65,slow=33						
VNDA	Vanda	66.88	181	*e*P	P	23 21 27.0	-0.1
SONA0	Songino Array	77.77	324	*e*P	P	23 22 33.1	+0.4
SONM	Songino Array	77.77	324	P	P	23 22 33.1	+0.4
	0.4nm,0.3s,baz=134,slow=7.8,SNR=5.3						
CAST	Castle Rocks	80.88	18	*e*P	P	23 22 49.3	+0.1
	5.4nm,1.4s						
BWN	Browne	82.23	18	*e*P	P	23 22 56.0	-0.3
	151nm,1.0s						
ILAR	Eielson Array	83.45	19	P	P	23 23 03.2	+0.5
	1.8nm,0.8s,baz=228,slow=5.9,SNR=20						
ILB	Eielson Array	83.45	19	*e*P	P	23 23 02.9	+0.3
	2.1nm,0.8s						
MK31	Makanchi Array	92.56	317	*e*P	P	23 23 46.5	-0.5
	2.2nm,0.9s						
MK32	Makanchi Array	92.56	317	*e*P	P	23 23 46.8	-0.2
MKAR	Makanchi Array	92.56	317	P	P	23 23 46.8	-0.2
	2.6nm,0.7s,baz=102,slow=6.1,SNR=22						
ZALV	Zalesovo Beam	92.66	324	P	P	23 23 47.2	0.0
	1.0nm,0.5s,baz=108,slow=3.3,SNR=3.9						
ZALV				LR	LR	00 06 32.4	
	comp=Z,12nm,18.4s,baz=64,slow=36						
ZAA1	Zalesovo Array	92.66	324	*e*P	P	23 23 47.2	0.0
MAKZ	Makanchi	92.77	317	*e*P	P	23 23 47.8	-0.2
	2.2nm,0.8s						
PD31	Pinedale Array	94.01	47	*e*P	P	23 23 55.2	+1.2
PDAR	Pinedale Array	94.01	47	P	P	23 23 55.2	+1.2
	0.1nm,0.5s,baz=272,slow=2.6,SNR=2.5						
ESDC	Sonseca Array	149.40	343	PKPbc	PKPbc	23 30 24.1	-0.8
	0.1nm,0.4s,baz=15,slow=3.7,SNR=3.4						

IDC 04 23:16:54.4±2.7**, 23.°01S**×**178.°17W, h0**^{km}**, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.6**/31**, mbtmp3.5**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/20**, Error ellipse: s-maj=160.1km s-min=35.3km az=155.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.85	259	P	P	23 25 02.6	-0.1
	0.9nm,0.6s,baz=103,slow=7.3,SNR=12						
ASAR				LR	LR	23 42 04.2	
	comp=Z,36nm,20.4s,baz=98,slow=34						
TXAR	Lajitas Array	88.53	57	P	P	23 29 49.8	+0.3
	0.2nm,0.8s,baz=222,slow=4.9,SNR=3.7						
ILAR	Eielson Array	90.78	13	P	P	23 29 58.3	-0.7
	0.1nm,0.5s,baz=209,slow=5.2,SNR=2.9						
FINES	FINESS Array B	138.12	343	PKP	PKPdf	23 36 21.6	+0.8
	1.9nm,1.0s,baz=41,slow=1.8,SNR=6.7						

GUC ***04*** *23:20:44.0±0.7, 29.°77S×71.°61W, h40^{km}±3^{km}, ML3.7*

SJA ***04*** *23:20:44.9±0.4, 29.°87S×71.°63W, h3^{km}±8^{km}, ML3.7, MW3.9*

ISC 04 23:20:43.4±2.2**, 29.°75S**±0.°04×**71.°75W**±0.°09**, h8**^{km}±12^{km}**, n29, σ2^{s}.16**/38**, 12C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.46	110	*e*P	Pg	23 20 53.2	+0.8
LSCH				*i* S	Sb	23 20 59.6	-1.2
LSCH				IAML		23 20 59.9	
	comp=E,7µm,0.2s						
GO04	Tololo Observa	0.92	117	⇓*e*P	Pg	23 21 01.1	-0.1
GO04				*e*S	Sg	23 21 13.2	0.0
GO04	Tololo Observa	0.92	117	⇓*e*P	Pg	23 21 00.9	-0.3
GO04				*i* S	Sg	23 21 13.3	+0.1
LCO	Las Campanas	1.17	51	⇓*e*P	Pb	23 21 05.4	-0.7
LCO	Las Campanas	1.17	51	⇑*e*P	Pb	23 21 05.2	-0.8
LCO				*i* S	Sb	23 21 21.0	-0.4
LCO				IAML		23 21 23.4	
	comp=N,3µm,0.3s						
CO02	Combarbal	1.58	156	⇑*e*P	Pn	23 21 11.3	-0.5
CO02				*i* S	Sn	23 21 31.6	-1.0
GO03	Copiap	2.53	32	⇑*e*P	Pn	23 21 26.1	+1.3
GO03	Copiap	2.53	32	*e*P	Pn	23 21 25.3	+0.6
GO03				*i* S	Sn	23 21 55.2	-0.5
GO03				IAML		23 22 08.7	
	comp=N,662nm,0.4s						
AGUA	GUANDACOL	2.85	86	⇓*e*P	Pb	23 21 34.1	-0.4
AGUA				*i* S	Sg	23 22 13.0	-1.8
RTLS	Leoncito	2.93	135	*e*P	Pn	23 21 34.0	+3.5
RTLS				*e*S	Sb	23 22 11.0	-1.2
RTLS				IAML		23 22 17.5	
	comp=Z,411nm,0.5s						
AMOG	MOGNA	3.05	114	⇑*e*P	Pn	23 21 35.2	+3.3
AUSP	Uspallata	3.19	141	⇑*i*P	Pn	23 21 37.4	+3.3
AUSP				*i* S	Sb	23 22 17.2	-2.4
ZON	Zonda	3.19	125	⇑*e*P	Pn	23 21 38.0	+4.1
ZON				*e*S	Sb	23 22 16.5	-2.9
ZON				IAML		23 22 31.5	
	comp=Z,131nm,0.4s						
RTLL	Cerro Villicun	3.23	120	⇓*e*P	Pn	23 21 38.7	+4.2
RTLL				*e*S	Sb	23 22 18.2	-2.3
RTLL				IAML		23 22 30.2	
	comp=Z,228nm,0.4s						
VCA	Vinchina	3.25	73	⇑*e*P	Pb	23 21 40.5	-1.0
VCA				*e*S	Sb	23 22 21.7	+0.3
VCA				IAML		23 22 30.9	
	comp=E,602nm,0.4s						
RTCV	Cerro Valdivia	3.47	128	⇑*e*P	Pn	23 21 40.7	+3.0
RTCV				*i* S	Sb	23 22 25.7	-1.7
PEL	Peldehue	3.50	165	⇑*e*P	Pn	23 21 39.5	+1.4
PEL				*i* S	Sb	23 22 30.5	+2.2
CFA	Coronel Fontan	3.54	122	*e*P	Pn	23 21 41.9	+3.2
ACAN	Cantantal	4.65	124	⇓*e*P	Pn	23 21 56.0	+2.1
GO02	Mina Guanaco	4.96	23	*e*P	Pn	23 21 59.0	+0.7
GO05	Huala	5.25	182	*e*P	Pn	23 22 00.9	-1.2
CYA	Choya	5.36	77	*e*P	Pn	23 22 06.3	+2.6
COIS	El Sosneado	5.64	162	⇑*e*P	Pn	23 22 12.7	+5.2
FSA	Cafayete	6.26	56	⇑*e*P	Pn	23 22 21.7	+5.5
FSA				IAML		23 24 06.1	
	comp=Z,8.0nm,0.5s						
TCA	Tanti	6.37	106	*e*P	Pn	23 22 18.5	+0.9
PB05	IPOC Station P	7.01	12	*e*P	Pn	23 22 24.0	-2.4
SLA	San Lorenzo	7.48	49	*e*P	Pn	23 22 36.9	+3.9
AZAP	Zapla	8.11	49	⇑*i*P	Pn	23 22 48.6	+7.0
HJA	Humahuaca	8.64	43	*i* P	Pn	23 22 57.0	+7.9

NDI 04 23:42:04.2±2.0**, 25.°05N**×**93.°95E, h10**^{km}**, ML3.9, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	0.68	12	*e*P	Pn	23 42 19.9	-0.2
KOHI				*e*S	Sn	23 42 32.4	+1.5
MOKO	MOKOCHONG	1.36	22	*e*P	Pn	23 42 29.6	+0.1
MOKO				*e*S	Sg	23 42 49.5	+1.3
MOKO				IAML		23 42 50.7	
	comp=E,937nm,0.2s						
MOKO				IAML		23 42 50.9	
	comp=N,652nm,0.2s						
JORH	JORHAT	1.71	9	*e*P	Pb	23 42 35.1	-0.6
JORH				*e*S	Sb	23 42 57.9	+0.7
JORH				IAML		23 43 01.9	
	comp=N,2µm,0.2s						
JORH				IAML		23 43 02.1	
	comp=E,2µm,0.3s						
TEZP	TEZPUR	1.87	327	*e*P	Pn	23 42 36.4	+0.1
TEZP				*e*S	Sn	23 42 59.2	-0.7
TEZP				IAML		23 42 59.6	
	comp=N,810nm,0.2s						
TEZP				IAML		23 42 59.8	
	comp=E,1µm,0.2s						
SHL	Shillong	1.94	286	*e*P	Pb	23 42 38.6	-1.1
SHL				*e*S	Sn	23 43 02.1	+0.3
ZIRO	ZIRO	2.47	358	*e*P	Pn	23 42 44.1	-0.6
ZIRO				*e*S	Sn	23 43 13.1	-1.8
TAWA	Tawang	3.15	324	*e*P	Pn	23 42 54.9	+0.8
TAWA				*e*S	Sn	23 43 31.6	-0.4
TAWA				IAML		23 43 33.6	
	comp=E,2µm,0.3s						
TAWA				IAML		23 43 33.7	
	comp=N,1µm,0.2s						
TURI	Tura	3.31	279	*e*P	Pn	23 42 57.5	+1.4
TURI				*e*S	Sn	23 43 36.9	+1.4
TURI				IAML		23 43 39.3	
	comp=E,712nm,0.2s						
TURI				IAML		23 43 39.7	
	comp=N,527nm,0.3s						

HEL 04 23:52:17.2±0.2**, 67.°84N**×**20.°24E, h0**^{km}**, ML1.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.19	10	PG	Pg	23 52 39.6	-0.4
KIF				MSG		23 52 54.5	
	comp=Z,7.7nm,0.2s						
KIF				SG	Sg	23 52 54.7	-0.8
KIF	Kilpisjarvi	1.19	10	*e*P	Pg	23 52 39.6	-0.5
HEF	Hetta	1.41	64	PG	Pn	23 52 42.2	-1.9
	baz=233						
HEF				MSG		23 52 59.5	
	comp=Z,7.0nm,0.2s						
HEF				SB	Sg	23 53 00.8	-1.5
HEF	Hetta	1.41	64	*e*P	Pn	23 52 42.3	-1.7
ERTU	Ertsjaerv	1.50	149	PG	Pn	23 52 43.8	-1.4
	baz=321						
ERTU				SG	Sg	23 53 05.0	-0.1
TOF	Tornio	2.39	136	PB	Pn	23 52 58.3	+0.8
	baz=321						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOF				MSG		23 53 27.7	
	comp=Z,2.3nm,0.2s						
TOF				SG	Sb	23 53 30.6	-0.3
SGF	Sodankyl	2.44	96	PB	Pn	23 52 59.5	+1.3
SGF				SG	Sb	23 53 32.7	+0.3
ARE0	ARCESS Array S	2.57	46	PB	Pn	23 53 00.5	+0.4
	baz=230						
MSF	Maaselka	3.97	115	PG	Pb	23 53 28.9	+0.9

UPP 04 23:53:11.3±0.1, 67°.82N×20°.20E, h0^{km}, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.23	271	P	Pg	23 53 15.8	+0.1
RATU				S	Sg	23 53 19.0	+0.4
NIKU	Nikkaluokta	0.44	277	P	Pg	23 53 19.8	+0.1
NIKU				S	Sg	23 53 26.1	+0.6
DUNU	Dundret	0.71	168	P	Pg	23 53 24.6	-0.3
DUNU				S	Sg	23 53 34.7	+0.5
MASU	Masugnsbyn	0.78	117	P	Pg	23 53 26.0	-0.2
MASU				S	Sg	23 53 36.4	+0.2
SALU	Saltoluokta	0.78	237	P	Pg	23 53 26.1	-0.2
SALU				S	Sg	23 53 37.3	+0.9
PAJU	Pajala	1.38	124	P	Pg	23 53 36.6	-1.1
ERTU	Ertsjaerv	1.49	148	P	Pn	23 53 38.7	-0.5
HARU	Harads	1.69	169	P	Pn	23 53 42.0	0.0

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*ISCJB **05** 00:07:29.6±0.3, 32°.87S±0°.03×67°.60W±0°.04, h8^{km}, mb4.0/9, MS3.4/1, Error ellipse: s-maj=5.0km s-min=4.4km az=145.4*

*IDC **05** 00:07:29.4±0.7, 32°.81S×67°.63W, h0^{km}, mb4.0/8, mb1 4.1/13, mb1mx4.0/23, mbtmp3.9/13, ML3.5/5, MS3.3/3, Ms1 3.2/3, ms1mx3.0/18, Error ellipse: s-maj=20.9km s-min=11.3km az=76.0*

*SJA **05** 00:07:32.9±0.8, 32°.75S×67°.86W, h15^{km}±4^{km}, ML4.0, MW4.2, Fault plane solution: NP1:ϕ_s189.20000°, δ56.30000°, λ138.10000°.*

*NEIC **05** 00:07:36.1±1.4, 32°.79S×67°.64W, h47^{km}±8^{km}, MD4.1(SJA), Error ellipse: s-maj=13.1km s-min=7.2km az=70.0*

NEIC Felt [IV] in the epicentral area and [III] at Mendoza.

ISC 05 00:07:31.2±0.5, 32°.76S±0°.04×67°.81W±0°.04, h8^{km}, n67, σ1^{s}72/72, mb3.9/9, 3C-7D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACAN	Cantantal	0.71	47	⇓iP	Pb	00 07 48.1	+2.2
ASAL	Salagasta	0.88	281	⇓iP	Pb	00 07 49.7	+0.9
AAGR	Agrelo	0.92	249	⇓iP	Pb	00 07 50.2	+0.7
ARCO	CERRO ARCO	0.95	265	⇓eP	Pb	00 07 50.9	+0.9
ARCO				IAML		00 07 51.8	
	comp=Z,7μm,0.3s						
ARCO				eS	Sn	00 08 04.2	-0.7
RTCV	Cerro Valdivia	1.09	325	eP	Pn	00 07 53.4	+0.6
CFA	Coronel Fontan	1.21	342	Pg	Pn	00 07 55.7	+1.3
	comp=Z,37nm,0.3s,baz=169,slow=9.9,SNR=421						
CFA				Lg	Lg	00 08 10.6	
	comp=Z,132nm,0.3s,baz=199,slow=11,SNR=30						
CFA	Coronel Fontan	1.21	342	⇓iP	Pn	00 07 55.7	+1.3
CFA				eS	Sn	00 08 13.4	+2.3
SJA	San Juan	1.39	332	eP	Pg	00 07 58.6	+0.8
SJA				IAML		00 08 21.7	
	comp=Z,1μm,0.5s						
ZON	Zonda	1.42	328	eP	Pg	00 07 59.3	+0.8
ZON				IAML		00 08 22.9	
	comp=Z,938nm,0.5s						
AUSP	Uspallata	1.44	291	⇓eP	Pg	00 07 58.9	+0.1
AUSP				eS	Sg	00 08 19.2	+1.7
RTLL	Cerro Villicun	1.54	338	⇑eP	Pg	00 08 01.7	+1.1
RTLL				IAML		00 08 25.4	
	comp=Z,1μm,0.6s						
RTLS	Leoncito	1.59	307	eP	Pg	00 08 02.0	+0.4
RTLS				IAML		00 08 26.4	
	comp=Z,3μm,0.4s						
AMOG	MOGNA	1.91	342	⇑eP	Pb	00 08 07.6	+1.3
AMOG				ePg	Pg	00 08 09.2	+1.5
AMOG				eS	Sb	00 08 29.9	-0.4
AMOG				i Sg	Sg	00 08 32.3	-0.2
PEL	Peldehue	2.45	260	ePn	Pb	00 08 16.4	+0.9
TCA	Tanti	3.07	63	eP	Pn	00 08 22.3	+2.2
TCA				IAML		00 09 22.6	
	comp=Z,809nm,0.5s						
EDS3	Malargue	3.28	203	eP	Pn	00 08 26.8	+3.8
AGUA	GUANDACOL	3.32	350	⇓iP	Pb	00 08 28.0	-2.3
GO04	Tololo Observa	3.63	314	ePn	Pb	00 08 32.4	-3.4
GO04	Tololo Observa	3.63	314	eP	Pn	00 08 31.3	+3.3
VCA	Vinchina	4.03	355	eP	Pn	00 08 37.3	+4.0
VCA				IAML		00 09 42.7	
	comp=Z,326nm,0.6s						
GO05	Huala	4.10	236	ePn	Pn	00 08 35.6	+1.4
GO05	Huala	4.10	236	eP	Pn	00 08 35.4	+1.2
LCO	Las Campanas	4.49	326	ePn	Pn	00 08 43.0	+3.2
LCO	Las Campanas	4.49	326	eP	Pn	00 08 43.8	+4.0
CYA	Choya	4.64	22	eP	Pn	00 08 43.5	+1.9
CYA				IAML		00 10 11.4	
	comp=Z,168nm,0.6s						
GO03	Copiap	5.56	337	ePn	Pn	00 08 57.5	+3.2
GO03	Copiap	5.56	337	eP	Pn	00 08 57.4	+3.1
AHML	Horco Molle	6.33	20	⇑eP	Pn	00 09 06.4	+1.5
FSA	Cafayete	6.81	14	eP	Pn	00 09 14.8	+3.2
TRQA	Tornquist	7.11	140	ePn	Pn	00 09 16.0	+0.5
GO02	Mina Guanaco	7.73	348	ePn	Pn	00 09 27.2	+2.8
PLCA	Paso Flores	8.26	195	Pn	Pn	00 09 32.3	+1.1
	comp=Z,0.0nm,0.3s,baz=30,slow=17,SNR=2.3						
PLCA				Lg	Lg	00 11 50.2	
	comp=Z,0.5nm,0.3s,baz=77,slow=11,SNR=3.4						
PLCA				LR	LR	00 12 38.5	
	comp=Z,118nm,18.4s,baz=8.5,slow=38						
PLCA	Paso Flores	8.26	195	ePn	Pn	00 09 34.0	+2.7
PLCA				e		00 11 54.7	
LVC	Limon Verde	10.16	354	Pn	Pn	00 09 58.7	+1.0
	comp=Z,0.5nm,0.3s,baz=208,slow=9.4,SNR=4.8						
LVC				Lg	Lg	00 12 48.8	
	comp=Z,0.6nm,0.3s,baz=355,slow=11,SNR=3.0						
CPUP	Villa Florida	11.14	58	Pn	Pn	00 10 09.7	-1.1
	comp=Z,0.1nm,0.3s,baz=232,slow=14,SNR=1.6						
CPUP				Sn	Sn	00 12 08.4	-7.3
	comp=Z,0.1nm,0.3s,baz=222,slow=15,SNR=1.6						
CPUP				Lg	Lg	00 13 20.2	
	comp=Z,0.7nm,0.3s,baz=302,slow=18,SNR=3.0						
CPUP				LR	LR	00 15 03.1	
	comp=Z,124nm,20.9s,baz=230,slow=41						
LPAZ	La Paz	16.40	359	Pn	Pn	00 11 23.5	+1.1
	comp=Z,0.7nm,0.3s,baz=161,slow=9.6,SNR=20						
LPAZ	La Paz	16.40	359	ePn	Pn	00 11 24.0	+1.5
SIV	San Ignacio	17.78	22	P	Pn	00 11 39.6	+0.5
	comp=Z,0.3nm,0.3s,baz=219,slow=12,SNR=19						
USHA	Ushuaia	22.07	181	P	P	00 12 26.0	-0.3
	comp=Z,2.7nm,0.5s,baz=354,slow=9.2,SNR=4.4						
BDFB	Brasilia	24.75	51	P	P	00 12 52.6	-0.8
	comp=Z,4.7nm,0.7s,baz=219,slow=6.4,SNR=7.2						
BDFB				LR	LR	00 23 36.4	
	comp=Z,114nm,20.2s,baz=197,slow=39						
ORTC	Ortega, Tolima	37.15	348	eP	P	00 14 43.4	+0.8
CHIC	Chingaza	37.61	350	eP	P	00 14 46.8	-0.2
RREF	El Recreo	38.13	348	eP	P	00 14 52.1	+0.4
GUY2C	Guyana, Caldas	38.45	348	eP	P	00 14 54.8	+0.7
RUSC	La Rusia	38.77	352	eP	P	00 14 56.0	-0.8
HELC	Santa Helena	39.43	348	eP	P	00 15 01.7	-0.5
PTBC	PUERTO BERRIO,	39.59	350	eP	P	00 15 01.1	-2.0
VNA3	Neumayer Olymp	49.19	159	P	P	00 16 19.0	-0.4
VNA1	Neumayer--Stat	49.45	158	P	P	00 16 17.4	-3.9
SNAA	Sanae	51.41	158	P	P	00 16 35.9	-0.3
VNDA	Vanda	65.98	190	P	P	00 18 17.3	-0.2
	comp=Z,0.4nm,0.7s,baz=154,slow=5.0,SNR=3.9						
VNDA	Vanda	65.98	190	eP	P	00 18 17.1	-0.4
LTX	Lajitas	70.50	327	eP	P	00 18 46.7	+0.2
TXAR	Lajitas Array	70.50	327	P	P	00 18 46.7	+0.2
	comp=Z,0.5nm,0.6s,baz=145,slow=8.1,SNR=8.1						
DBIC	Dimbokro	71.43	69	P	P	00 18 50.9	-1.5
	comp=Z,5.6nm,1.1s,baz=184,slow=5.9,SNR=3.7						
BOSA	Boshof	77.47	116	P	P	00 19 25.9	-1.7
	comp=Z,2.9nm,0.9s,baz=220,slow=7.9,SNR=3.7						
TORD	Torodi Ar. Bea	80.46	68	P	P	00 19 42.1	-1.8
	comp=Z,6.1nm,0.3s,baz=256,slow=5.3,SNR=7.0						
TOA1	Torodi Ar. Sit	80.46	68	eP	P	00 19 42.1	-1.8
PD31	Pinedale Array	84.35	330	eP	P	00 20 03.4	-0.5
PDAR	Pinedale Array	84.35	330	P	P	00 20 03.4	-0.5
	comp=Z,0.3nm,0.7s,baz=147,slow=3.5,SNR=3.9						
NV01	Mina Array Sit	84.97	323	eP	P	00 20 07.8	+0.6
NVAR	Mina Array Bea	84.97	323	P	P	00 20 07.8	+0.6
	comp=Z,0.5nm,0.8s,baz=178,slow=3.7,SNR=3.5						
ASAR	Alice Springs	120.18	203	PKP	PKPdf	00 26 21.4	-1.9
	comp=Z,0.3nm,0.7s,baz=114,slow=1.1,SNR=3.1						
ZAA1	Zalesovo Array	151.24	34	ePKPbc	PKPbc	00 27 24.6	-0.1
ZALV	Zalesovo Beam	151.25	34	PKPbc	PKPbc	00 27 24.6	-0.1
	comp=Z,7.1nm,0.5s,baz=300,slow=3.4,SNR=32						
MK32	Makanchi Array	153.27	50	ePKPbc	PKPbc	00 27 29.1	-0.4
MKAR	Makanchi Array	153.27	50	PKPbc	PKPbc	00 27 29.1	-0.4
	comp=Z,1.1nm,0.7s,baz=305,slow=1.3,SNR=10.0						

ISC 05 00:09:50.4±0.9, 44°.11N±0°.04×16°.10E±0°.03, h16^{km}±7^{km}, n11, σ1^{s}55/22, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIJV	Kijevo	0.24	116	ePg	Pg	00 09 55.2	-0.6
KIJV				Sg	Sg	00 09 59.8	+0.3
MORI	Morici	0.38	229	i Pg	Pg	00 09 58.3	+0.2
MORI				Sg	Sg	00 10 05.7	+2.4
UDBI	Udbina	0.48	330	ePg	Pg	00 09 59.1	-0.9
UDBI				Sg	Sg	00 10 05.8	-0.8
ZIRJ	Zirje	0.56	216	i Pg	Pn	00 10 01.6	-2.0
ZIRJ				Sg	Sb	00 10 12.3	+2.7
DUGI	Dugi Otok	0.76	261	ePg	Pn	00 10 04.8	-1.6
DUGI				Sg	Sn	00 10 17.6	0.0
NVLJ	Novalja	0.99	297	ePg	Pg	00 10 07.4	-2.2
NVLJ				Sg	Sn	00 10 22.5	-0.7
MAKA	Makarska	1.06	141	i Pg	Pg	00 10 08.5	-2.3
MAKA				Sg	Sb	00 10 25.9	+2.1
BOJS	Bojanci	1.52	337	i Pn	Pn	00 10 17.6	+0.8
BOJS				eSn	Sn	00 10 36.6	+0.4
OZLJ	Ozalj	1.57	343	ePn	Pn	00 10 18.5	+1.0
OZLJ				Sn	Sn	00 10 38.4	+0.9
STON	Ston	1.70	136	ePn	Pb	00 10 21.3	+0.1
STON				Sn	Sb	00 10 43.8	+1.6
DBRK	Dubrovnik	2.07	133	ePn	Pb	00 10 27.0	-0.5
DBRK				Sn	Sb	00 10 54.2	+1.2

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*VAO **05** 00:41:18.8±0.3, 21°.99S×68°.36W, h10^{km}, mb5.3*

*SJA **05** 00:41:27.9±0.8, 22°.57S×68°.55W, h111^{km}±9^{km}, ML3.8, MW5.0*

*ISCJB **05** 00:41:27.1±0.2, 22°.50S±0°.02×68°.50W±0°.03, h123^{km}±2^{km}, mb4.8/77, Error ellipse: s-maj=4.9km s-min=3.3km az=143.7*

*IDC **05** 00:41:27.2±0.5, 22°.39S×68°.24W, h99^{km}±4^{km}, mb4.6/11, mb1 4.6/14, mb1mx4.4/22, mbtmp4.9/14, MS3.6/9, Ms1 3.5/9, ms1mx3.3/25, Error ellipse: s-maj=16.1km s-min=12.8km az=71.0*

*GUC **05** 00:41:28.4±0.6, 22°.48S×68°.64W, h122^{km}±4^{km}, ML4.6*

*NEIC **05** 00:41:28.0±0.0, 22°.48S×68°.64W, h122^{km}, mb4.9/77, ML4.6(GUC), After GUC.*

*BJI **05** 00:41:28.0±0.0, 22°.50S×68°.40W, h100^{km}, mB5.2/8*

ISC 05 00:41:27.3±0.4, 22°.49S±0°.03×68°.40W±0°.04, h106^{km}±3^{km}, h105^{km}:pP-P, n469, σ1^{s}47/505, mb4.9/77, 11C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.49	255	P	Pn	00 41 45.4	+1.4
	6μm,0.3s,baz=67,slow=6.1						
LVC				S	Sn	00 41 56.4	-0.2
	4μm,0.3s,baz=230,slow=15,SNR=33						
LVC	Limon Verde	0.49	255	ePn	Pn	00 41 45.5	+1.4
LVC				eSn	Sn	00 41 58.0	+1.4
LVC	Limon Verde	0.49	255	i P	Pn	00 41 44.7	+0.6
LVC	Limon Verde	0.49	255	eP	Pn	00 41 45.5	+1.5
LVC				eS	Sn	00 41 53.0	-3.5
PB09	IPOC Station P	1.04	311	⇑iP	Pn	00 41 50.4	+1.7
PB09				i S	Sn	00 42 06.6	+1.7
PB09				IAML		00 42 09.1	
	comp=N,9μm,0.6s						
PB06	IPOC Station P	1.10	258	i P	Pn	00 41 49.8	+0.3
PB06	IPOC Station P	1.10	258	⇑iP	Pn	00 41 50.2	+0.8
PB06				i S	Sn	00 42 06.9	+0.8
PB06				IAML		00 42 11.2	
	comp=N,13μm,0.1s						
PB15	IPOC Station P	1.22	234	i P	Pn	00 41 51.5	+0.6
PB15	IPOC Station P	1.22	234	⇑iP	Pn	00 41 52.1	+1.2
PB15				i S	Sn	00 42 10.0	+1.4
PB03	IPOC Station P	1.33	289	i P	Pn	00 41 52.7	+0.8
PB03				i S	Sn	00 42 10.8	+0.2
PB03	IPOC Station P	1.33	289	⇑iP	Pn	00 41 52.7	+0.8
PB03				i S	Sn	00 42 10.8	+0.2
PB03				IAML		00 42 13.8	
	comp=E,18μm,0.7s						
PB07	IPOC Station P	1.57	298	i P	Pn	00 41 55.9	+0.9
PB07	IPOC Station P	1.57	298	⇑iP	Pn	00 41 55.8	+0.9
PB07				i S	Sn	00 42 15.9	+0.1
PB07				IAML		00 42 17.1	
	comp=N,20μm,0.2s						
PB04	IPOC Station P	1.62	275	ePn	Pn	00 41 55.9	+0.3
PB04				eSn	Sn	00 42 17.4	+0.3
PB04	IPOC Station P	1.62	275	⇑iP	Pn	00 41 55.9	+0.3
PB04				i S	Sn	00 42 17.0	-0.1
PB04				IAML		00 42 23.2	
	comp=N,15μm,0.6s						
PB05	IPOC Station P	1.70	257	⇑iP	Pn	00 41 56.7	+0.2
PB05				i S	Sn	00 42 18.2	-0.5
PB01	IPOC Station P	1.75	325	ePn	Pn	00 41 58.7	+1.5
PB01				eSn	Sn	00 42 21.9	+2.1
PB01	IPOC Station P	1.75	325	⇑iP	Pn	00 41 58.2	+1.1
PB01				i S	Sn	00 42 20.9	+1.1
PB01				IAML		00 42 23.6	
	comp=N,6μm,0.2s						
PB02	IPOC Station P	1.81	310	i P	Pn	00 41 58.7	+0.9
PB02				i S	Sn	00 42 22.4	+1.4
PB02	IPOC Station P	1.81	310	⇑iP	Pn	00 41 58.7	+0.9
PB02				i S	Sn	00 42 21.0	0.0
PB02				IAML		00 42 27.2	
	comp=E,9μm,0.3s						
PB10	IPOC Station P	2.23	242	ePn	Pn	00 42 02.9	-0.2
PB10				eSn	Sn	00 42 27.6	-2.9
PB10	IPOC Station P	2.23	242	⇑eP	Pn	00 42 02.6	-0.5
PB10				i S	Sn	00 42 28.1	-2.4
PB10				IAML		00 42 30.2	
	comp=N,3μm,0.5s						
PB08	IPOC Station P	2.44	343	eP	Pn	00 42 08.6	+2.4
PB08				i S	Sn	00 42 37.2	+1.3
PB08				IAML		00 42 41.2	
	comp=E,1μm,0.4s						
YJA	Yavi	2.69	84	i P	Pn	00 42 14.0	+4.5
YJA				IAML		00 42 15.4	
	comp=Z,163nm,0.6s						
YJA				i S	Sn	00 42 48.6	+6.7
PB14	IPOC Station P	2.81	220	eP	Pn	00 42 12.2	+1.2
PB14				i S	Sn	00 42 42.8	-1.8
PB14				IAML		00 42 53.7	
	comp=E,4μm,0.6s						
HJA	Humahuaca	2.85	105	i P	Pn	00 42 15.9	+4.3
HJA				IAML		00 42 17.6	
	comp=Z,353nm,0.5s						
GO02	Mina Guanaco	2.88	202	ePn	Pn	00 42 12.4	+0.6
GO01	Chusmiza	2.90	345	ePn	Pn	00 42 14.1	+1.7
PB11	IPOC Station P	2.95	336	ePn	Pn	00 42 13.0	+0.3
PB11	IPOC Station P	2.95	336	⇓eP	Pn	00 42 13.1	+0.3
PB11				eS	Sn	00 42 47.9	+0.2
PB11				IAML		00 43 16.4	
	comp=N,2μm,0.7s						
AZAP	Zapla	3.52	120	i P	Pn	00 42 23.4	+3.1
AZAP				IAML		00 42 24.0	
	comp=Z,198nm,0.4s						
MNMC	Minye Minye	3.52	341	ePn	Pn	00 42 20.9	+0.5
AHML	Horco Molle	5.11	148	i P	Pn	00 42 43.5	+1.9
GO03	Copiap	5.35	198	ePn	Pn	00 42 42.9	-2.0
LPAZ	La Paz	6.17	2	P	Pn	00 42 58.7	+2.2
	comp=Z,4.5nm,0.3s,baz=193,slow=2.5,SNR=176						
LPAZ				S	Sn	00 43 58.9	-7.2
	comp=Z,1.1nm,0.3s,baz=179,slow=9.4,SNR=6.9						
LPAZ	La Paz	6.17	2	ePn	Pn	00 42 58.4	+1.9
LPAZ				e		00 42 59.1	
LPAZ	La Paz	6.17	2	eP	Pn	00 42 56.7	+0.2
LPAZ				eS	Sn	00 43 35.2	-31
LCO	Las Campanas	6.82	197	ePn	Pn	00 43 02.1	-3.0
LCO	Las Campanas	6.82	197	eP	Pn	00 42 59.1	-5.9
LCO				eS	Sn	00 44 16.7	-4.6
GO04	Tololo Observa	7.95	195	ePn	Pn	00 43 16.4	-4.0
CFA	Coronel Fontan	9.09	179	P	Pn	00 43 33.1	-2.4
	comp=Z,12nm,0.3s,baz=356,slow=13,SNR=124						
CFA				S	Sn	00 45 07.3	-8.7
	comp=Z,4.2nm,0.3s,baz=146,slow=12,SNR=3.0						
SIV	San Ignacio	9.46	48	P	Pn	00 43 39.1	-1.6
	comp=Z,9.8nm,0.3s,baz=253,slow=11,SNR=154						
SIV				S	Sn	00 45 19.1	-6.4
	comp=Z,4.3nm,0.3s,baz=320,slow=23,SNR=8.3						
CPUP	Villa Florida	10.79	113	P	Pn	00 43 58.2	-0.4
	comp=Z,0.7nm,0.3s,baz=294,slow=12,SNR=24						
CPUP				LR	LR	00 49 09.1	
	comp=Z,129nm,18.9s,baz=284,slow=43						
CPUP	Villa Florida	10.79	113	eP	Pn	00 43 57.1	-1.6
CPUP				eS	Sn	00 46 06.8	+9.4
AQDB	Aquidauana	11.99	83	eP	Pn	00 44 11.5	-3.3
AQDB				eS	Sn	00 46 00.8	-26
TRCB	Terra Rica	14.56	94	eP	Pn	00 44 48.7	+0.4
PTGB	Pitanga	15.14	102	eP	Pn	00 44 55.4	-0.2
CPSB	Cacapava Do Su	15.54	124	eP	Pn	00 44 58.8	-1.8
CPSB				eS	Sn	00 47 54.4	+1.9
PLTB	Pedras Altas	16.08	128	eP	Pn	00 45 05.2	-2.1
PLTB				eS	Sn	00 48 04.5	-0.9
TRQA	Tornquist	16.47	162	ePn	P	00 45 12.7	-0.2
	comp=Z,29nm,0.8s						
ITRB	Iturama	17.06	84	eP	Pn	00 45 18.2	-1.2
ITRB				eS	S	00 48 36.1	+4.0
CNLB	Canela	17.18	117	eP	Pn	00 45 19.1	-1.8
CNLB				eS	S	00 48 39.1	+4.7
FRTB	Fartura	17.38	96	eP	Pn	00 45 23.8	+0.5
FRTB				eS	S	00 48 50.0	+12
PLCA	Paso Flores	18.28	185	P	P	00 45 32.6	-0.3
	comp=Z,0.8nm,0.3s,baz=15,slow=9.9,SNR=33						
PLCA				LR	LR	00 52 46.4	
	comp=Z,140nm,20.9s,baz=20,slow=37						
PLCA	Paso Flores	18.28	185	eP	P	00 45 33.2	+0.4
	comp=Z,25nm,0.9s						
PLCA	Paso Flores	18.28	185	eP	P	00 45 33.1	+0.2
PLCA				eS	Sn	00 49 08.1	+10
BB19B	Bebedouro	18.51	89	eP	P	00 45 35.1	-0.5
BB19B				eS	Sn	00 49 05.4	+1.2
RCLB	Rio Claro- Sao	19.29	94	eP	P	00 45 43.8	-0.3
RCLB				eS	S	00 49 12.6	-4.3
SPB	Sao Paulo	19.33	97	eP	P	00 45 43.8	-0.6
	comp=Z,103nm,0.8s						
SPB	Sao Paulo	19.33	97	eP	P	00 45 44.3	-0.1
SPB				eS	Sn	00 49 23.9	+0.2
BDFB	Brasilia	20.42	74	LR	LR	00 55 26.6	
	comp=Z,236nm,19.9s,baz=161,slow=41						
PMNB	Patos De Minas	20.94	83	eP	P	00 46 00.8	-1.0
PMNB				eS	Sn	00 50 03.2	+0.9
PEXB	Peixe	21.76	65	eP	P	00 46 08.5	-2.1
PEXB				eS	S	00 49 58.9	-6.4
PTGA	Pitinga	23.13	22	P	P	00 46 22.3	-2.1
	comp=Z,36nm,0.6s,baz=204,slow=11,SNR=58						
PTGA				S	S	00 50 22.1	-5.6
	comp=Z,1.5nm,0.4s,baz=130,slow=18,SNR=4.5						
PTGA	Pitinga	23.13	22	eP	P	00 46 22.7	-1.8
	comp=Z,35nm,0.8s						
SOTA	Rioblanco	25.75	341	eP	P	00 46 53.6	+4.9
BBAC	Balboa, Cauca	25.84	339	eP	P	00 46 53.6	+4.3
POPC	Popayan, Colom	26.15	341	eP	P	00 46 57.0	+4.9
ORTC	Ortega, Tolima	27.07	345	eP	P	00 47 01.3	+1.1
YOTC	Yotoco, Valle	27.43	343	eP	P	00 47 05.5	+2.1
CHIC	Chingaza	27.45	348	eP	P	00 47 04.7	+0.8
RREF	El Recreo	28.05	345	eP	P	00 47 12.3	+2.7
RUSC	La Rusia	28.57	350	eP	P	00 47 13.2	-0.8
ELOV	Elorza	29.32	358	eP	P	00 47 17.4	-2.7
PTBC	PUERTO BERRIO,	29.45	348	eP	P	00 47 18.3	-3.0
PAMC	Pamplona, Colo	29.94	351	eP	P	00 47 24.8	-1.3
SDV	Santo Domingo	31.25	356	P	P	00 47 36.2	-1.2
	comp=Z,5.2nm,0.5s,baz=141,slow=13						
MDP	Montagnes des	31.45	31	LR	LR	01 01 44.9	
	comp=Z,104nm,21.9s,baz=234,slow=39						
RCBR	Riachuelo	35.47	67	eP	P	00 48 13.6	-0.3
	comp=Z,47nm,0.9s						
RCBR	Riachuelo	35.47	67	eP	P	00 48 13.8	-0.1
RCBR				eS	S	00 53 55.4	+14
APG	El Apazote	43.07	328	LR	LR	01 08 00.7	
	comp=Z,96nm,18.9s,baz=233,slow=37						
059A	Moore Haven	50.68	345	P	P	00 50 16.3	+0.2
	baz=165						
758A	Lake Helen	52.62	346	P	P	00 50 30.8	+0.4
	baz=165						
658A	Bunnell	53.07	346	P	P	00 50 34.3	+0.6
	baz=165						
656A	Willston	53.32	345	P	P	00 50 36.2	+0.6
	baz=164						
555A	McAlpin	54.15	344	P	P	00 50 42.3	+0.7
	baz=164						
LNIG	Linares	55.93	326	eP	P	00 50 53.8	-0.8
	comp=Z,7.8nm,1.1s						
157A	Early Branch	56.16	347	P	P	00 50 56.8	+0.8
	baz=166						
349A	Repton	56.48	341	P	P	00 50 58.1	-0.2
	baz=159						
Z58A	St. Stephen	56.57	349	P	P	00 50 59.3	+0.5
	baz=168						
251A	Midway	56.66	343	P	P	00 50 59.3	-0.2
	baz=161						
Z57A	Bowman	56.70	348	P	P	00 51 00.2	+0.4
	baz=167						
Y58A	Scranton	57.09	349	P	P	00 51 02.9	+0.4
	baz=168						
Z54A	Sparta	57.10	346	P	P	00 51 02.6	0.0
	baz=164						
150A	Eclectic	57.31	342	P	P	00 51 03.5	-0.6
	baz=161						
Y55A	Saluda	57.55	347	P	P	00 51 06.0	+0.2
	baz=166						
X59A	McDuffie Farm,	57.56	350	P	P	00 51 06.2	+0.3
	baz=169						
Y54A	Tignall	57.66	346	P	P	00 51 06.9	+0.3
	baz=165						
X58A	Rowland	57.67	349	eP	P	00 51 06.6	0.0
	comp=Z,31nm,0.6s						
X58A	Rowland	57.67	349	P	P	00 51 07.0	+0.4
	baz=168						
Y53A	Monroe	57.86	345	P	P	00 51 08.3	+0.3
	baz=164						
Z50A	Ashland	57.89	343	eP	P	00 51 07.5	-0.8
	comp=Z,6.3nm,0.8s						
Z50A	Ashland	57.89	343	P	P	00 51 08.0	-0.2
	baz=161						
W60A	Pink Hill	57.90	351	P	P	00 51 08.4	+0.2
	baz=170						
X56A	White Oak	57.92	348	P	P	00 51 08.5	+0.1
	baz=166						
BIRD	Birdtown, Kers	57.96	348	eP	P	00 51 09.1	+0.5
	comp=Z,15nm,0.8s						
Y52A	Lilburn	57.99	345	P	P	00 51 08.7	-0.2
	baz=163						
LRAL	Lakeview Retre	57.99	342	P	P	00 51 08.9	0.0
	baz=160						
Z49A	Columbiana	58.01	342	P	P	00 51 09.1	+0.1
	baz=160						
X55A	Gracelyn & Ava	58.02	347	P	P	00 51 09.4	+0.3
	baz=166						
W58A	Raeford	58.11	350	P	P	00 51 10.5	+0.8
	baz=168,SNR=11						
X54A	Belton	58.25	346	P	P	00 51 11.1	+0.4
	baz=165						
Y51A	Rockmart	58.27	344	P	P	00 51 10.8	-0.1
	baz=162						
W57A	Gilead	58.37	349	eP	P	00 51 11.7	+0.2
	comp=Z,12nm,0.8s						
W57A	Gilead	58.37	349	P	P	00 51 12.0	+0.5
	baz=168						
W56A	Indian Trail	58.46	348	P	P	00 51 12.5	+0.3
	baz=167						
KMSC	Kings Mountain	58.61	348	P	P	00 51 13.8	+0.6
	baz=166						
V59A	Middlesex	58.68	351	P	P	00 51 14.0	+0.3
	baz=170,SNR=6.3						
W54A	Cherokee Point	58.73	347	P	P	00 51 14.2	+0.2
	baz=165						
V58A	Windy Hill, Pi	58.84	350	P	P	00 51 15.2	+0.4
	baz=169,SNR=5.4						
X51A	Calhoun	58.85	344	P	P	00 51 15.1	+0.2
	baz=162						
VNA3	Neumayer Olymp	58.99	161	P	P	00 51 16.4	+0.9
W53A	Cullowhee	59.02	346	P	P	00 51 16.4	+0.2
	baz=164						
V57A	Coltrane Farms	59.05	349	P	P	00 51 16.5	+0.3
	baz=168,SNR=5.2						
V56A	Mocksville	59.10	349	P	P	00 51 17.1	+0.6
	baz=167,SNR=10						
W52A	Murphy	59.13	345	P	P	00 51 16.7	-0.1

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      baz=164
U59A  Littleton        59.19 351  P     P     00 51 17.5 +0.3
      baz=170
VNA1  Neumayer--Stat   59.20 160  P     P     00 51 19.2 +2.4
U60A  Pendleton        59.22 352  P     P     00 51 17.7 +0.3
      baz=171
V55A  Taylorsville     59.27 348  P     P     00 51 18.1 +0.3
      baz=166
X48A  Hartselle        59.33 342  P     P     00 51 18.1  -0.1
      baz=160
U58A  Oxford           59.34 350  P     P     00 51 18.7 +0.5
      baz=169
V54A  Nebo             59.35 347  P     P     00 51 19.1 +0.8
      baz=166
V53A  Saluda           59.43 346  P     P     00 51 19.3 +0.4
      baz=165
U57A  Blanch           59.50 350  P     P     00 51 19.8 +0.5
      baz=169,SNR=7.4
NATX  Nacogdoches      59.51 334  P     P     00 51 20.6 +1.1
      baz=152
W50A  Signal Mountai   59.57 344  P     P     00 51 20.0 +0.1
      baz=162
U56A  King             59.60 349  P     P     00 51 20.7 +0.7
      baz=167
X47A  Russelville      59.63 341  P     P     00 51 19.5  -0.8
      baz=159
W49A  Belvidere        59.74 343  P     P     00 51 20.6  -0.4
      baz=161
T59A  Double "B" Far   59.76 352  eP    P     00 51 20.9  -0.2
      comp=Z,18nm,0.8s
T59A  Double "B" Far   59.76 352  P     P     00 51 21.6 +0.5
      baz=170,SNR=9.1
V52A  Sevierville      59.77 346  eP    P     00 51 20.7  -0.4
      comp=Z,13nm,1.0s
V52A  Sevierville      59.77 346  P     P     00 51 21.1   0.0
      baz=164
U55A  TA2, Sparta      59.87 348  P     P     00 51 22.3 +0.4
      baz=167
T58A  Grand View Acr   59.88 351  P     P     00 51 22.0 +0.1
      baz=169,SNR=6.9
X46A  Booneville       59.88 341  P     P     00 51 21.1  -0.9
      baz=159
V51A  Loudon           59.91 345  P     P     00 51 21.7  -0.4
      baz=163
W48A  Pulaski          59.95 342  P     P     00 51 22.2  -0.2
      baz=160
V50A  Pikevile         59.96 344  P     P     00 51 22.4  -0.1
      baz=162
U54A  Nelsons Funny    60.04 348  eP    P     00 51 23.1  -0.1
      comp=Z,20nm,1.0s
U54A  Nelsons Funny    60.04 348  P     P     00 51 23.3 +0.1
      baz=166
T57A  Hurt             60.04 350  P     P     00 51 23.7 +0.6
      baz=169,SNR=6.1
U53A  Fall Branch      60.05 347  P     P     00 51 23.2 +0.1
      baz=165
T56A  Rocky Mt         60.20 349  P     P     00 51 25.0 +0.9
      baz=168,SNR=6.1
S61A  Accomac          60.23 353  P     P     00 51 23.9  -0.3
      baz=172
W47A  Westpoint        60.24 342  P     P     00 51 23.8  -0.6
      baz=160
U52A  Thorn Hill       60.24 346  P     P     00 51 24.0  -0.4
      baz=164
T55A  Pulaski          60.42 349  P     P     00 51 26.6 +0.9
      baz=167,SNR=6.7
BLA   Blacksburg       60.45 349  eP    P     00 51 26.0 +0.1
      comp=Z,14nm,0.8s
BLA   Blacksburg       60.45 349  P     P     00 51 26.7 +0.9
      baz=168
S58A  Poland Farm, P   60.46 351  P     P     00 51 26.1 +0.2
      baz=170
V48A  Smith Brothers   60.48 343  eP    P     00 51 25.4  -0.6
      comp=Z,26nm,1.5s
V48A                              epP   pP    00 51 54.7 +1.7
V48A  Smith Brothers   60.48 343  P     P     00 51 25.6  -0.4
      baz=161
T54A  Tazewell         60.52 348  P     P     00 51 26.4 +0.1
      baz=166
X43A  Marvell          60.58 339  P     P     00 51 27.0 +0.2
      baz=156
U50A  Jamestown        60.61 345  P     P     00 51 26.2  -0.7
      baz=163
WLAR  White Oak Lake   60.62 336  eP    P     00 51 27.9 +0.9
      comp=Z,27nm,0.8s
T53A  Wise             60.63 347  P     P     00 51 26.9  -0.2
      baz=165
CLTN  Cedars of Leba   60.68 343  eP    P     00 51 27.2  -0.2
      comp=Z,4.6nm,0.9s
V47A  Nunnelly         60.76 342  P     P     00 51 27.3  -0.6
      baz=160
S56A  Natural Bridge   60.76 350  P     P     00 51 28.3 +0.4
      baz=168
R58B  Mineral          60.78 351  eP    P     00 51 28.4 +0.4
      comp=Z,14nm,0.8s
R58B  Mineral          60.78 351  P     P     00 51 28.4 +0.4
      baz=170,SNR=7.1
R59A  King George, V   60.92 352  P     P     00 51 28.9   0.0
      baz=171
T51A  Gray             60.92 346  P     P     00 51 28.6  -0.4
      baz=164
U49A  Red Boiling Sp   60.93 344  P     P     00 51 28.7  -0.4
      baz=162
CBN   Corbin Frederi   60.95 352  P     P     00 51 29.4 +0.2
      baz=171
S55A  Lewisburg        61.01 349  P     P     00 51 30.6 +1.0
      baz=168,SNR=7.0
WVT   Waverly          61.13 342  eP    P     00 51 29.5  -0.9
      comp=Z,6.8nm,0.8s
WVT   Waverly          61.13 342  P     P     00 51 29.7  -0.6
      baz=160
U48A  Cassie Pea, Po   61.13 343  P     P     00 51 30.0  -0.4
      baz=161
R58A  Rapidan          61.13 351  P     P     00 51 30.6 +0.2
      baz=170,SNR=5.3
S54A  Dingess, Beckl   61.18 348  P     P     00 51 30.6  -0.2
      baz=167
T50A  Nancy            61.18 345  P     P     00 51 30.0  -0.8
      baz=163
SNAA  Sanae            61.20 161  P     P     00 51 31.6 +1.0
SNAA  Sanae            61.20 161  eP    P     00 51 30.4  -0.2
      comp=Z,6.0nm,1.0s
R57A  Stanardsville    61.20 351  P     P     00 51 31.8 +0.9
      baz=170,SNR=6.8
X40A  Basin Creek Fa   61.23 337  P     P     00 51 31.1  -0.1
      baz=154
U47A  Clarksville      61.27 343  P     P     00 51 30.8  -0.6
      baz=160,SNR=5.1
S52A  Salyersville     61.42 347  P     P     00 51 32.1  -0.2
      baz=165
T49A  Edmonton         61.43 344  P     P     00 51 32.0  -0.5
      baz=162,SNR=6.0
R55A  Marlinton        61.44 350  P     P     00 51 32.6 +0.1
      baz=168
R56A  Bull Pasture M   61.44 350  P     P     00 51 33.5 +0.9
      baz=169
R54A  Victor           61.49 349  P     P     00 51 33.2 +0.3
      baz=167
MIAR  Mount Ida        61.56 336  eP    P     00 51 33.0  -0.3
      comp=Z,11nm,1.3s
MIAR  Mount Ida        61.56 336  P     P     00 51 33.5 +0.1
      baz=154
Q60A  Greensboro       61.56 353  P     P     00 51 34.0 +0.8
      baz=172
W41B  Gary Mavity, V   61.65 338  P     P     00 51 34.1 +0.2
      baz=155
T48A  Bowling Green    61.66 344  P     P     00 51 33.4  -0.5
      baz=161
TXAR  Lajitas Array    61.70 325  P     P     00 51 35.7 +1.2
      comp=Z,0.2nm,0.7s,baz=139,slow=8.4,SNR=3.3
TXAR                              pP    pP    00 51 59.0  -2.7
      comp=Z,0.3nm,0.8s,baz=150,slow=14,SNR=2.0
S50A  Richmond         61.71 346  P     P     00 51 34.2  -0.1
      baz=164
Q58A  Fox Den Farm,    61.72 352  P     P     00 51 34.8 +0.4
      baz=170
T47A  Sharon Grove     61.73 343  eP    P     00 51 33.6  -0.8
      comp=Z,11nm,0.9s
T47A  Sharon Grove     61.73 343  P     P     00 51 34.0  -0.4
      baz=161
Q57A  Strasburg        61.91 351  P     P     00 51 36.8 +1.2
      baz=170,SNR=7.2
T46A  Princeton        62.00 342  P     P     00 51 35.8  -0.4
      baz=160
Q56A  Snyder Ridge,    62.03 351  P     P     00 51 37.4 +1.0
      baz=169,SNR=6.4
S48A  Wiedeman Farm,   62.09 344  P     P     00 51 35.8  -1.0
      baz=162
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Q55A  Buckhannon       62.13 350  P     P     00 51 38.2 +1.0
      baz=168
P58A  Pank, Wackersv   62.21 352  P     P     00 51 38.3 +0.7
      baz=171
W39A  Magazine         62.21 337  eP    P     00 51 38.4 +0.7
W39A                              epP   pP    00 52 07.1 +2.3
W39A  Magazine         62.21 337  P     P     00 51 38.2 +0.5
      baz=154
P59A  Jarrettsville    62.23 353  P     P     00 51 38.2 +0.5
      baz=172
S47A  Hartford         62.24 343  P     P     00 51 36.9  -1.0
      baz=161
Q54A  Coxs Mills       62.24 349  P     P     00 51 38.1 +0.3
      baz=167
Q53A  Leroy            62.25 348  P     P     00 51 38.1 +0.3
      baz=167
P57A  Homestead Farm   62.30 352  P     P     00 51 39.3 +1.1
      baz=170
P60A  Greenville       62.34 354  P     P     00 51 38.8 +0.4
      baz=173
ABTX  Abilene, Hawle   62.40 330  P     P     00 51 39.7 +0.7
      baz=148
P56A  Dayton Farm, R   62.43 351  P     P     00 51 40.1 +1.0
      baz=169
Q52A  Bidwell          62.49 348  P     P     00 51 39.5   0.0
      baz=166
O61A  Allentown        62.52 355  P     P     00 51 40.2 +0.6
      baz=174
P55A  Reedsville       62.59 350  P     P     00 51 40.7 +0.5
      baz=168
MVL   Millersville     62.60 353  eP    P     00 51 40.6 +0.4
      comp=Z,11nm,0.7s
WCI   Wyandotte Cave   62.69 344  P     P     00 51 40.1  -0.7
      baz=162
MCWV  Mont Chateau     62.74 350  P     P     00 51 41.9 +0.8
      baz=168
P54A  Burton           62.79 350  P     P     00 51 42.0 +0.6
      baz=168
O58A  Lewisberry       62.79 353  P     P     00 51 42.3 +0.9
      baz=171
O60A  Telford          62.82 354  P     P     00 51 42.4 +0.8
      baz=173
P53A  Whipple          62.83 349  P     P     00 51 42.1 +0.4
      baz=167
O59A  Robesonia        62.89 353  P     P     00 51 42.7 +0.5
      baz=172
O57A  Amberson         62.96 352  P     P     00 51 43.4 +0.8
      baz=171
S44A  Carbondale       62.99 342  P     P     00 51 42.3  -0.5
      baz=159
Q49A  Aurora           63.09 346  P     P     00 51 42.9  -0.6
      baz=163
P52A  Corning          63.11 348  P     P     00 51 43.4  -0.2
      baz=166
O56A  Blue Knob Stat   63.14 351  eP    P     00 51 44.2 +0.3
      comp=Z,12nm,1.0s
O56A  Blue Knob Stat   63.14 351  P     P     00 51 44.7 +0.8
      baz=170
O55A  Ligonier         63.19 351  P     P     00 51 45.0 +0.8
      baz=169,SNR=5.2
Q48A  North Vernon     63.21 345  P     P     00 51 44.4 +0.1
      baz=162
R45A  Skylar, Fairfi   63.27 343  P     P     00 51 43.9  -0.7
      baz=160
O54A  Avella           63.34 350  P     P     00 51 45.1   0.0
      baz=168
N60A  Cedar Hill Far   63.34 354  P     P     00 51 45.6 +0.6
      baz=173
PAL   Palisades        63.37 355  P     P     00 51 45.6 +0.3
      baz=175
Q47A  Bedord North L   63.39 344  P     P     00 51 44.8  -0.6
      baz=162
SSPA  Standing Stone   63.41 352  eP    P     00 51 46.6 +1.1
      comp=Z,11nm,1.0s
SSPA  Standing Stone   63.41 352  P     P     00 51 46.0 +0.4
      baz=170
P50A  Jamestown        63.42 347  P     P     00 51 45.4  -0.2
      baz=164
N59A  State Game Lan   63.45 354  P     P     00 51 46.5 +0.7
      baz=173
N57A  Milroy           63.49 352  P     P     00 51 46.8 +0.7
      baz=171,SNR=5.2
O52A  Adamsville       63.52 349  P     P     00 51 46.2  -0.1
      baz=166
O53A  New Philadelph   63.54 349  P     P     00 51 46.5   0.0
      baz=167
P49A  Miami Univ. Ec   63.55 346  P     P     00 51 45.7  -0.8
      baz=163
M61A  Granite Spring   63.66 355  P     P     00 51 47.2   0.0
      baz=175
O51A  Pataskala        63.70 348  P     P     00 51 47.2  -0.3
      baz=166
N55A  Marion Center    63.71 351  eP    P     00 51 47.3  -0.2
      comp=Z,18nm,0.8s
N55A                              epP   pP    00 52 17.9 +3.1
N55A  Marion Center    63.71 351  P     P     00 51 48.0 +0.4
      baz=169,SNR=6.7
N56A  West Decatur     63.74 352  P     P     00 51 47.2  -0.5
      baz=170
ACSO  Alum Creek Sta   63.86 348  P     P     00 51 48.3  -0.2
      baz=165
P47A  Martinsville     63.87 345  P     P     00 51 47.8  -0.8
      baz=162
O50A  Cable            63.90 347  P     P     00 51 48.2  -0.6
      baz=165
CCM   Cathedral Cave   63.93 340  eP    P     00 51 48.3  -0.7
CCM                               epP   pP    00 52 17.6 +1.3
CCM   Cathedral Cave   63.93 340  P     P     00 51 48.7  -0.3
      baz=157
N53A  Lisbon           64.02 350  P     P     00 51 49.7 +0.2
      baz=168
M59A  Waymart          64.03 354  P     P     00 51 50.4 +0.8
      baz=173,SNR=5.1
N54A  Moraine State    64.03 350  eP    P     00 51 49.6  -0.1
      comp=Z,15nm,1.1s
N54A  Moraine State    64.03 350  P     P     00 51 49.8 +0.2
      baz=168
KSPA  Keystone Colle   64.08 354  eP    P     00 51 50.6 +0.7
      comp=Z,12nm,0.7s
O49A  Covington        64.09 346  P     P     00 51 49.5  -0.6
      baz=164
BRYW  Bryant College   64.14 357  eP    P     00 51 50.4 +0.1
      comp=Z,26nm,0.8s
P45A  Graceland, Par   64.28 343  P     P     00 51 50.9  -0.4
      baz=160
M56A  Emporium         64.29 352  P     P     00 51 51.8 +0.5
      baz=170
O48A  Farmland         64.34 346  P     P     00 51 51.2  -0.4
      baz=163
M55A  Ridgway          64.35 351  P     P     00 51 52.0 +0.3
      baz=170
MNTX  Cornudas Mount   64.47 325  P     P     00 51 52.0  -0.7
      baz=142
M54A  Oil Creek Stat   64.52 351  P     P     00 51 53.2 +0.4
      baz=169,SNR=5.2
O47A  Sheridan         64.56 345  P     P     00 51 52.3  -0.8
      baz=162
M53A  WI Miller and    64.61 350  P     P     00 51 53.5 +0.1
      baz=168
HRV   Adam Dziewonsk   64.73 357  P     P     00 51 54.7 +0.6
      baz=177
ALLY  Alegheny Colle   64.73 350  eP    P     00 51 54.3 +0.1
      comp=Z,17nm,0.8s
BINY  Binghamton       64.74 354  eP    P     00 51 54.2  -0.1
      comp=Z,12nm,0.9s
BINY  Binghamton       64.74 354  P     P     00 51 55.1 +0.9
      baz=172,SNR=6.9
N49A  Columbus Grove   64.77 347  eP    P     00 51 53.9  -0.5
      comp=Z,19nm,1.0s
N49A  Columbus Grove   64.77 347  P     P     00 51 54.0  -0.5
      baz=164
P43A  Skaggs, Pawnee   64.88 342  P     P     00 51 54.6  -0.5
      baz=159
N48A  Decatur          64.89 346  P     P     00 51 54.5  -0.7
      baz=163
M50A  Fremont          65.00 348  P     P     00 51 56.2 +0.3
      baz=165
L55A  Hinsdale         65.01 352  P     P     00 51 56.5 +0.5
      baz=170
L53A  Girard           65.05 350  P     P     00 51 56.5 +0.3
      baz=168
L54A  Sinclairville    65.18 351  P     P     00 51 57.5 +0.4
      baz=169
N46A  Monticello       65.32 345  P     P     00 51 57.4  -0.6
      baz=162
K54A  Basiliko Farm,   65.46 352  P     P     00 51 59.5 +0.7
      baz=170
K55A  Perry            65.50 352  P     P     00 51 59.5 +0.4
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      baz=170
HDIL  Hopedale         65.67 343  P     P     00 51 59.3  -0.9
      baz=159
L48A  N Adams          65.80 347  P     P     00 51 60.0  -1.1
      baz=164
L49A  Milan            65.82 348  P     P     00 52 00.7  -0.5
      baz=165
L47A  Sherwood         65.99 346  P     P     00 52 01.8  -0.5
      baz=163
M44A  Midewin, Midew   66.11 344  P     P     00 52 04.9 +1.8
      baz=160
K50A  Casco            66.25 349  P     P     00 52 03.3  -0.6
      baz=166
J52A  Paris            66.34 350  P     P     00 52 04.5 +0.1
      baz=168,SNR=5.3
NCB   Newcomb          66.34 355  eP    P     00 52 05.0 +0.4
      comp=Z,21nm,1.5s
LBNH  Lisbon           66.48 357  eP    P     00 52 06.4 +1.0
      comp=Z,12nm,0.8s
LBNH  Lisbon           66.48 357  P     P     00 52 06.6 +1.3
      baz=177
K48A  Perry            66.56 347  P     P     00 52 05.3  -0.6
      baz=164
PECO  Prince Edward    66.56 353  eP    P     00 52 05.9   0.0
      comp=Z,13nm,1.0s
PECO  Prince Edward    66.56 353  P     P     00 52 06.0 +0.2
      baz=172
DRWO  Darlington Wes   66.71 352  P     P     00 52 07.3 +0.5
      baz=170
WLVO  Wesleyville      66.72 352  P     P     00 52 06.8   0.0
      baz=170
PKRO  Pickering        66.84 352  P     P     00 52 07.9 +0.2
      baz=170
EMMW  East Machias     66.87   1  eP    P     00 52 08.1 +0.3
      comp=Z,18nm,0.8s
I55A  Frankford        66.92 353  P     P     00 52 08.3 +0.2
      baz=171
HAL   Halifax          66.94   4  eP    P     00 52 09.0 +0.8
      comp=Z,28nm,0.9s
J48A  Bridge Port      66.97 348  P     P     00 52 07.9  -0.5
      baz=165
I51A  Listowel         66.97 350  P     P     00 52 08.4  -0.1
      baz=168
LONY  Lake Ozonia      67.02 355  eP    P     00 52 09.2 +0.4
      comp=Z,11nm,0.8s
LONY  Lake Ozonia      67.02 355  P     P     00 52 09.6 +0.8
      baz=174,SNR=7.4
I52A  Shelburne        67.10 351  P     P     00 52 09.6 +0.3
      baz=168
J47A  Sunmer           67.12 347  P     P     00 52 08.8  -0.6
      baz=164
H56A  Elgin            67.14 354  P     P     00 52 10.1 +0.6
      baz=172
FRNY  Flat Rock        67.16 356  eP    P     00 52 10.2 +0.6
      comp=Z,18nm,1.0s
H55A  Tweed            67.19 353  P     P     00 52 10.2 +0.4
      baz=171
DELO  Deloro Mine      67.21 353  P     P     00 52 10.3 +0.3
      baz=171
BASO  Ashfield         67.28 350  P     P     00 52 10.3  -0.2
      baz=167
GGN   Saint George     67.29   1  eP    P     00 52 11.5 +1.1
      comp=Z,22nm,0.7s
BWLO  Walkerton        67.30 350  P     P     00 52 10.5   0.0
      baz=168
K43A  Burlington       67.42 344  P     P     00 52 11.4   0.0
      baz=160
PKME  Peaks-Kenny Pk   67.43 359  eP    P     00 52 12.2 +0.9
      comp=Z,34nm,0.7s
PKME  Peaks-Kenny Pk   67.43 359  P     P     00 52 12.4 +1.1
      baz=179,SNR=8.4
ANMO  Albuquerque      67.58 327  P     P     00 52 14.1 +1.4
      baz=142
TASM  ASL Pad, Albuq   67.58 327  P     P     00 52 13.8 +1.0
      baz=142
TASM  ASL Pad, Albuq   67.58 327  P     P     00 52 13.6 +0.8
      baz=142
H52A  Wyevale          67.62 351  P     P     00 52 12.8 +0.2
      baz=169
PLVO  Plevna           67.66 353  P     P     00 52 13.2 +0.4
      baz=172
QSPA  South Pole Qui   67.71 180  eP    P     00 52 13.4 +0.2
QSPA                              ePcP  pP    00 52 42.9 +2.5
BANO  Bancroft         67.74 353  P     P     00 52 13.8 +0.5
      baz=171
BMRO  Meriville Lake   67.78 350  P     P     00 52 13.5   0.0
      baz=168,SNR=6.1
I47A  Gladwin          67.81 348  P     P     00 52 13.1  -0.7
      baz=164
I48A  Sherman Twp      67.81 348  P     P     00 52 13.5  -0.3
      baz=165
G55A  Calabogie        67.84 354  P     P     00 52 14.4 +0.5
      baz=172
G53A  Haliburton       67.92 352  P     P     00 52 14.9 +0.4
      baz=170,SNR=5.2
I46A  Reed City        67.92 347  P     P     00 52 13.5  -1.0
      baz=163
LMN   Caledonia Moun   68.09   3  eP    P     00 52 15.4  -0.1
      comp=Z,22nm,0.8s
JFWS  Jewell Farm      68.12 343  eP    P     00 52 15.4  -0.4
      comp=Z,6.0nm,0.6s
JFWS  Jewell Farm      68.12 343  P     P     00 52 15.7   0.0
      baz=158
LIC   Lamto            68.21  73  eP    P     00 52 16.8  -0.2
      comp=Z,51nm,0.7s
PEMO  Pembroke         68.31 353  P     P     00 52 16.9   0.0
      baz=172
BUKO  Buck Lake        68.34 352  P     P     00 52 17.4 +0.3
      baz=169,SNR=6.8
KLBO  Killbear Provi   68.37 351  P     P     00 52 17.4 +0.2
      baz=168,SNR=6.7
TIC   Toumodi          68.41  73  eP    P     00 52 18.3 +0.1
TOBO  Tobermory, Bru   68.44 350  P     P     00 52 17.3  -0.4
      baz=167
H46A  Fife Lake        68.45 347  P     P     00 52 16.8  -0.9
      baz=164
KIC   Kosan Boka       68.53  73  eP    P     00 52 18.9  -0.1
      comp=Z,72nm,0.7s
DBIC  Dimbokro         68.57  73  P     P     00 52 19.0  -0.1
      comp=Z,36nm,0.7s,baz=222,slow=6.1,SNR=49
DBIC                              LR    LR    01 20 30.8
      comp=Z,40nm,20.9s,baz=228,slow=34
DBIC  Dimbokro         68.57  73  eP    P     00 52 18.8  -0.4
      comp=Z,44nm,0.8s
ALGO  Algonquin Park   68.67 353  P     P     00 52 19.4 +0.3
      baz=171,SNR=9.2
I42A  Draeger Farm,    68.68 344  P     P     00 52 19.1  -0.1
      baz=160
PQI   Presque Isle     68.83   0  eP    P     00 52 20.4 +0.4
      comp=Z,18nm,0.9s
F51A  Arnstein         68.89 351  P     P     00 52 20.5   0.0
      baz=169,SNR=5.5
F49A  Sandfield        69.05 350  P     P     00 52 20.9  -0.5
      baz=167
E53A  Dumoine, Ponti   69.05 353  P     P     00 52 21.8 +0.4
      baz=171
E54A  Lac Daplat, Po   69.05 354  P     P     00 52 21.8 +0.3
      baz=172,SNR=11
E52A  Mattawa          69.07 352  P     P     00 52 21.6   0.0
      baz=170
I41A  Arkdale          69.08 344  P     P     00 52 21.6  -0.1
      baz=159
F48A  Evansville       69.20 349  P     P     00 52 22.3  -0.1
      baz=166
SDCO  Great Sand Dun   69.33 329  eP    P     00 52 23.4  -0.4
      comp=Z,5.0nm,1.0s
E51A  G1948 Merrick    69.42 352  P     P     00 52 24.1 +0.3
      baz=169
BATG  Bathurst New B   69.47   2  eP    P     00 52 24.8 +0.8
      comp=Z,20nm,0.9s
E50A  Wahnapitae       69.49 351  P     P     00 52 24.1   0.0
      baz=168
LATQ  La Tuque         69.65 357  P     P     00 52 25.8 +0.7
      baz=176
D54A  Lac Fusel, La    69.71 354  P     P     00 52 25.5   0.0
      baz=172,SNR=5.8
D52A  ZEK Kipawa Sen   69.72 353  P     P     00 52 26.2 +0.6
      baz=170,SNR=7.8
D53A  Lac Vacive, Po   69.75 353  P     P     00 52 26.3 +0.5
      baz=171
E48A  Lockeyer         69.76 350  P     P     00 52 25.9 +0.1
      baz=167,SNR=5.8
E47A  Iron Bridge      69.92 349  P     P     00 52 26.9 +0.1
      baz=166
E46A  Sault Ste Mari   70.03 348  P     P     00 52 27.1  -0.3
      baz=165
D48A  Paudash Townsh   70.38 350  P     P     00 52 29.7   0.0
      baz=167
```

D49A	Beulah Townshi	70.41	351	P	P	00 52 29.9	+0.1
	baz=168,SNR=8.4						
D47A	Chapleau	70.48	349	P	P	00 52 29.9	-0.3
	baz=166						
E43A	Lone Tree Farm	70.58	346	P	P	00 52 30.5	-0.3
	baz=162						
F40A	Park Falls	70.88	344	P	P	00 52 32.6	-0.1
	baz=159,SNR=8.0						
SPMN	Marine on St.	70.96	342	P	P	00 52 33.1	-0.1
	baz=156						
F38A	Pierce - Schro	71.38	343	P	P	00 52 35.5	-0.1
	baz=157						
D41A	Chassel	71.58	346	P	P	00 52 37.2	+0.4
	baz=161						
CHGQ	Chibougamau	72.27	356	P	P	00 52 41.0	+0.1
	baz=174						
MATQ	Matagami	72.39	354	P	P	00 52 41.3	-0.3
	baz=171						
Q16A	Castle Valley	73.04	326	*e*P	P	00 52 48.2	+2.2
	comp=Z,3.9nm,0.9s						
EYMN	Ely	73.11	344	*e*P	P	00 52 45.7	-0.3
	comp=Z,3.7nm,0.8s						
EYMN	Ely	73.11	344	P	P	00 52 45.6	-0.4
	baz=158						
MSU	Marysvale	73.26	325	*e*P	P	00 52 50.1	+2.8
PD31	Pinedale Array	75.19	330	*e*pP	pP	00 53 24.3	-2.0
PDAR	Pinedale Array	75.19	330	P	P	00 52 59.1	+0.6
	comp=Z,0.3nm,0.6s,baz=134,slow=6.4,SNR=2.7						
PDAR				pP	pP	00 53 24.3	-2.0
	comp=Z,0.5nm,0.6s,baz=142,slow=18,SNR=3.6						
VES	Vestal, Richgr	75.26	319	P	P	00 53 00.2	+1.5
	baz=133						
MDND	Maddock	75.42	339	*e*P	P	00 52 58.9	-0.4
	comp=Z,17nm,0.8s						
SYO	Syowa Base	75.42	159	⇓*e*P	P	00 52 59.0	-0.1
SYO	Syowa Base	75.42	159	⇑*e*PcP	PcP	00 53 09.6	-2.2
VNDA	Vanda	75.97	190	P	P	00 53 03.7	+1.5
	comp=Z,0.8nm,0.9s,baz=16,slow=1.6,SNR=5.2						
VNDA				pP	pP	00 53 29.2	-0.9
	comp=Z,1.9nm,0.9s,baz=173,slow=8.1,SNR=5.7						
VNDA	Vanda	75.97	190	*e*P	P	00 53 03.3	+1.1
ULM	Lac du Bonnet	76.39	342	P	P	00 53 04.6	-0.2
	comp=Z,3.4nm,0.5s,baz=168,slow=4.0,SNR=3.5						
NV01	Mina Array Sit	76.56	322	*e*pP	pP	00 53 32.3	-1.9
NVAR	Mina Array Bea	76.56	322	P	P	00 53 07.3	+1.0
	comp=Z,0.5nm,0.7s,baz=155,slow=6.6,SNR=2.4						
NVAR				pP	pP	00 53 32.3	-1.9
	comp=Z,0.1nm,0.3s,baz=120,slow=5.3,SNR=1.9						
SCHQ	Schefferville	77.01	1	P	P	00 53 08.6	+0.3
	comp=Z,8.5nm,0.6s,baz=210,slow=5.1,SNR=4.9						
SCHQ	Schefferville	77.01	1	*e*P	P	00 53 08.2	0.0
	comp=Z,9.3nm,0.8s						
TOA0	Torodi Ar. Sit	77.24	70	*e*P	P	00 53 10.0	-0.4
	comp=Z,73nm,1.1s						
TORD	Torodi Ar. Bea	77.24	70	P	P	00 53 08.7	-1.7
	comp=Z,28nm,0.7s,baz=268,slow=4.4,SNR=170						
YHH	Holmes Hill	77.35	330	*e*P	P	00 53 11.3	+0.6
	comp=Z,6.3nm,1.2s						
WIN	Windhoek	77.75	109	*e*P	P	00 53 13.4	0.0
	comp=Z,14nm,0.8s						
HLID	Hailey	78.12	328	P	P	00 53 16.4	+1.6
	baz=137						
MCMT	McKenzie Canyo	78.31	329	*e*P	P	00 53 17.0	+1.1
TSUM	Tsumeb	79.31	106	LR	LR	01 24 26.3	
	comp=Z,25nm,18.3s,baz=258,slow=33						
TSUM	Tsumeb	79.31	106	*e*P	P	00 53 22.6	+0.6
	comp=Z,35nm,0.8s						
PFVI	Vila Bisbo	81.62	44	*e*P	P	00 53 35.4	+1.8
MORF	Marmelete	81.83	44	*e*P	P	00 53 36.8	+2.0
PTEO	Sao Teotonio	81.93	44	*e*P	P	00 53 38.1	+2.9
PBDV	Barranco-do-Ve	82.26	44	*e*P	P	00 53 38.9	+1.8
PNCL	Nicolau / Gran	82.39	43	*e*P	P	00 53 38.9	+1.3
	comp=Z,28nm,1.3s						
PCVE	Castro Verde	82.42	44	*e*P	P	00 53 39.4	+1.6
	comp=Z,32nm,1.7s						
MESJ	Messejana	82.42	44	*e*P	P	00 53 38.5	+0.7
MESJ				AMb	AMB	00 53 40.4	
	comp=Z,25nm,1.2s						
MESJ	Messejana	82.42	44	*e*P	P	00 53 39.4	+1.6
	comp=Z,35nm,1.7s						
BOSA	Boshof	82.57	118	P	P	00 53 39.6	+0.4
	comp=Z,13nm,0.8s,baz=253,slow=4.6,SNR=15						
BOSA	Boshof	82.57	118	*e*P	P	00 53 39.6	+0.4
	comp=Z,25nm,1.0s						
PBEJ	Beja	82.76	44	*e*P	P	00 53 42.0	+2.4
	comp=Z,31nm,1.8s						
ALMR	Almeirim	82.97	43	*e*P	P	00 53 41.2	+0.6
ALMR				AMb	AMB	00 53 43.5	
	comp=Z,48nm,0.8s						
ALMR	Almeirim	82.97	43	*e*P	P	00 53 42.8	+2.2
	comp=Z,49nm,1.0s						
PMTG	Montargil	83.14	43	*e*P	P	00 53 42.8	+1.3
MAW	Mawson	83.25	163	P	P	00 53 42.1	+0.4
	comp=Z,2.4nm,0.6s,baz=218,slow=5.2,SNR=4.9						
MAW				pP	pP	00 54 08.4	-1.7
	comp=Z,7.1nm,0.9s,baz=253,slow=14,SNR=4.1						
MAW	Mawson	83.25	163	*e*P	P	00 53 42.1	+0.4
	comp=Z,1.2nm,0.8s						
PTOM	Tomar	83.35	42	*e*P	P	00 53 43.7	+1.1
	comp=Z,33nm,0.9s						
PCBR	Castelo Branco	84.06	43	*e*P	P	00 53 47.2	+1.0
	comp=Z,23nm,1.6s						
LBTB	Lobatse	84.18	115	*e*P	P	00 53 46.4	-1.1
	comp=Z,23nm,0.8s						
MTE	Manteigas	84.35	42	*e*P	P	00 53 48.6	+0.9
	comp=Z,28nm,1.5s						
MVO	Moncorvo	85.11	42	*e*P	P	00 53 52.5	+0.9
	comp=Z,31nm,1.6s						
PAB	San Pablo	85.88	44	*e*P	P	00 53 55.8	+0.3
	comp=Z,28nm,1.1s						
ESDC	Sonseca Array	86.20	44	P	P	00 53 57.5	+0.5
	comp=Z,6.5nm,1.1s,baz=237,slow=4.6,SNR=21						
MATP	Matopo	88.41	111	LR	LR	01 30 25.0	
	comp=Z,31nm,19.0s,baz=253,slow=33						
LSZ	Lusaka	90.16	107	LR	LR	01 29 01.5	
	comp=Z,27nm,20.4s,baz=160,slow=32						
LSZ	Lusaka	90.16	107	*e*P	P	00 54 17.6	+1.1
LSZ				*e*PcP	PcP	00 54 18.2	+0.6
YKA	Yellowknife Ar	92.27	340	P	P	00 54 25.5	+0.6
	comp=Z,2.2nm,0.7s,baz=135,slow=4.5,SNR=13						
KEST	Kesra	93.52	53	P	P	00 54 32.7	+1.3
	comp=Z,5.8nm,0.9s,baz=240,slow=4.5,SNR=4.2						
KEST	Kesra	93.52	53	*e*P	P	00 54 31.6	+0.2
	comp=Z,12nm,1.1s						
VYHS	Vyhne	104.73	43	*e*PDIF	Pdif	00 55 23.4	+2.0
AKASG	Malin Array Be	111.81	43	PP	PP	01 00 29.8	-4.2
	comp=Z,0.9nm,0.5s,baz=263,slow=6.3,SNR=4.9						
BRTR	Keskin Array B	113.01	55	PKiKP	PKiKP	00 59 52.9	+0.5
	comp=Z,0.9nm,0.8s,baz=211,slow=2.0,SNR=6.4						
BRTR				PP	PP	01 00 40.6	-2.5
	comp=Z,0.8nm,1.0s,baz=248,slow=7.6,SNR=3.7						
KBZ	Khabaz	120.36	52	PKP	PKPdf	01 00 06.2	0.0
	comp=Z,4.6nm,0.9s,baz=260,slow=0.9,SNR=7.6						
H11S2	WAKE ISLAND Hy	128.46	276	T	T	03 20 43.3	
	baz=104,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	128.47	276	T	T	03 20 48.6	
	baz=104,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	128.48	276	T	T	03 20 45.7	
	baz=104,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	128.57	278	T	T	03 20 55.2	
	baz=104,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	128.58	278	T	T	03 20 55.2	
	baz=104,slow=75,SNR=6.4						
H11N1	WAKE ISLAND Hy	128.58	278	T	T	03 20 59.0	
	baz=104,slow=75,SNR=3.8						
ASAR	Alice Springs	129.26	207	PKP	PKiKP	01 00 24.6	-0.1
	comp=Z,1.0nm,1.0s,baz=142,slow=1.8,SNR=5.3						
ASAR				pPKP	pPKPdf	01 00 50.0	-4.0
	comp=Z,0.9nm,0.9s,baz=164,slow=3.8,SNR=3.9						
ABKAR	Akbulak array	131.54	43	*e*PKPdf	PKiKP	01 00 29.0	+0.6
GEYT	Alibeck	131.91	59	PKP	PKiKP	01 00 29.4	-0.1
	comp=Z,2.0nm,0.7s,baz=252,slow=1.4,SNR=5.0						
ZAA0	Zalesovo Array	142.63	26	*e*PKPdf	PKPdf	01 00 44.8	-2.9
ZALV	Zalesovo Beam	142.63	26	PKP	PKPdf	01 00 45.2	-2.5
	comp=Z,3.0nm,0.6s,baz=320,slow=4.4,SNR=14						
AAK	Ala-Archa	143.22	48	*e*PKPdf	PKPdf	01 00 48.4	-1.0
NIL	Nilore	144.56	63	*e*PKPbc	PKPbc	01 00 51.0	+0.2
KDJ	Kajisay	145.25	48	*e*PKPdf	PKPab	01 00 53.8	+0.8
KSH	Kashi	145.34	52	*e*PKPbc	PKPab	01 00 53.7	+0.3
KSH				pPKP	pPKPab	01 01 20.7	-2.0
KSH				sPKP		01 01 30.9	
KSH				PP	PP	01 04 18.4	+4.6
KSH				PKS	PKSdf	01 04 28.4	-0.2
KSH				AMB	AMB		
	comp=Z,100nm,4.2s						
MAKZ	Makanchi	145.96	37	*e*PKPdf	PKPbc	01 00 54.8	+0.2
MK31	Makanchi Array	146.14	37	*e*PKPdf	PKPbc	01 00 55.5	+0.2
MK32	Makanchi Array	146.14	37	*e*pPKPdf	pPKPdf	01 01 22.7	-1.5
MKAR	Makanchi Array	146.14	37	PKPbc	PKPbc	01 00 55.1	-0.1
	comp=Z,23nm,0.8s,baz=279,slow=3.9,SNR=98						
MKAR				pPKPbc	pPKPdf	01 01 22.7	-1.5
	comp=Z,1.4nm,0.8s,baz=316,slow=27,SNR=1.5						
WMQ	Urumqi	150.97	37	*e*PKPbc	PKPdf	01 01 01.5	-0.6
WMQ				LR	LR		
	comp=Z,190nm,29.2s						
WMQ				LR	LR		
	comp=Z,210nm,29.0s						
WMQ				LR	LR		
	comp=Z,68nm,18.9s						
SONM	Songino Array	154.36	8	PKP	PKPdf	01 01 08.5	+1.6
	comp=Z,1.2nm,0.7s,baz=356,slow=1.9,SNR=5.8						
SONM				PKPbc	PKiKP	01 01 15.9	+0.5
	comp=Z,1.8nm,0.6s,baz=232,slow=1.1,SNR=8.5						
SONM				PKPab	PKPab	01 01 30.9	+1.1
	comp=Z,2.0nm,0.8s,baz=334,slow=4.8,SNR=6.6						
LZH	Lanzhou	164.86	25	*e*PKP	PKPdf	01 01 30.7	+11
LZH				pPKP	sPKPdf	01 01 59.6	-1.2
LZH				sPKP		01 02 10.5	
LZH				LR	LR		
	comp=N,200nm,15.7s						
LZH				LR	LR		
	comp=E,200nm,17.9s						
LZH				LR	LR		
	comp=Z,230nm,18.9s						
CMAR	Chiang Mai Arr	167.48	106	PKPab	PKPab	01 02 28.3	+0.5
	comp=Z,1.8nm,0.4s,baz=255,slow=5.6,SNR=6.9						
CMAR				PP	PP	01 06 19.4	+2.8
	comp=Z,1.3nm,0.4s,baz=243,slow=4.0,SNR=4.2						
NJ2	Nanjing	168.50	327	*e*PKP	PKPdf	01 01 20.5	-1.5
CD2	Chengdu	169.07	38	PKP	PKPdf	01 01 21.2	-1.3
WHN	Wuhan	171.60	344	PKP	PKPdf	01 01 24.4	+0.6

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*ISCJB **05** 00:41:50.7±0.2, 46°.46N±0°.01×9°.80E±0°.02, h7^{km}±2^{km}, Error ellipse: s-maj=2.5km s-min=1.7km az=6.4*

*VIE **05** 00:41:51.6±0.3, 46°.48N×9°.86E, h9^{km}±3^{km}, mb1.5/4, ml2.2/8, Error ellipse: s-maj=1.7km s-min=1.1km az=2.0*

*ROM **05** 00:41:51.5±0.1, 46°.494N±0°.004×9°.857E±0°.004, h10^{km}, ML1.9/16, Error ellipse: s-maj=0.4km s-min=0.2km az=8.0*

*ZUR **05** 00:41:51.9, 46°.47N×9°.86E, h7^{km}±1^{km}, MLh2.0/20, Error ellipse: s-maj=3.4km s-min=0.8km az=330.0*

*LDG **05** 00:41:52.0±0.1, 46°.46N×9°.88E, h10^{km}, Md2.1/2, Ml2.1/13, Error ellipse: s-maj=1.5km s-min=1.3km az=156.0*

*STR **05** 00:41:52.2±1.1, 46°N±3°×1°0E±1°1, h2^{km}±11^{km}, MLv2.0/7*

ISC 05 00:41:51.7±0.8**, 46°.47N**±0°.02×**9°.83E**±0°.01**, h10**^{km}±5^{km}**, n110,** σ1§**14**/158**, 7C-3D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCEL	Celerina	0.04	28	⇓Pg	Pg	00 41 53.6	-0.3
SCEL				Sg	Sg	00 41 54.4	-1.1
BERNI	Berninapass	0.15	113	⇓Pg	Pg	00 41 55.2	0.0
BERNI				Sg	Sg	00 41 57.2	-0.5
BERNI	Berninapass	0.15	113	P	Pg	00 41 55.1	0.0
BERNI				S	Sg	00 41 57.4	-0.3
BERNI				AML	AML		
	comp=E,854µm,0.5s						
BERNI				AML	AML		
	comp=N,1020µm,0.2s						
BERNI				AML	AML		
	comp=E,854µm,0.5s						
BERNI				AML	AML		
	comp=N,1020µm,0.3s						
BERNI				AML	AML		
	comp=N,1020µm,0.3s						
BERNI				AML	AML		
	comp=E,854µm,0.5s						
BERNI				AML	AML		
	comp=N,1020µm,0.3s						
BERNI				AML	AML		
	comp=E,854µm,0.5s						
BERNI	Berninapass	0.15	113	P	Pg	00 41 55.1	-0.1
BERNI				AML	AML		
	comp=E,854µm,0.5s						
BERNI				AML	AML		
	comp=N,1020µm,0.2s						
BERNI				AML	AML		
	comp=E,854µm,0.5s						
BERNI				AML	AML		
	comp=N,1020µm,0.3s						
VDL	Val di Lei	0.26	273	⇑Pg	Pg	00 41 57.5	+0.4
SZER	Zernez	0.29	39	Sg	Sg	00 42 01.5	-0.1
SVAM	Vaz, Muldain	0.30	317	Pg	Pg	00 41 58.2	+0.3
DAVOX	Davos/Dischmat	0.31	7	Pg	Pg	00 41 58.2	+0.2
DAVOX				Sg	Sg	00 42 02.2	0.0
DAVOX	Davos/Dischmat	0.31	7	P	Pg	00 41 58.2	+0.2
DAVOX				S	Sg	00 42 02.4	+0.2
DAVOX				AML	AML		
	comp=E,299µm,0.4s						
DAVOX				AML	AML		
	comp=N,302µm,0.5s						
DAVOX				AML	AML		
	comp=E,299µm,0.3s						
DAVOX				AML	AML		
	comp=N,302µm,0.5s						
DAVOX				AML	AML		
	comp=E,299µm,0.3s						
DAVOX				AML	AML		
	comp=N,302µm,0.5s						
DAVOX				AML	AML		
	comp=E,299µm,0.3s						
DAVOX				AML	AML		
	comp=N,302µm,0.5s						
DAVOX	Davos/Dischmat	0.31	7	AML	AML		
	comp=E,299µm,0.3s						
DAVOX				AML	AML		
	comp=E,299µm,0.4s						
DAVOX				AML	AML		
	comp=N,302µm,0.5s						
DAVOX				AML	AML		
	comp=N,302µm,0.5s						
TUE	Stuetta	0.33	270	⇑Pg	Pg	00 41 58.8	+0.4
TUE	Stuetta	0.33	270	P	Pg	00 41 58.8	+0.4
TUE				S	Sg	00 42 04.4	+1.5
TUE				AML	AML		
	comp=E,241µm,0.3s						
TUE				AML	AML		
	comp=N,309µm,0.4s						
TUE				AML	AML		
	comp=E,326µm,0.3s						
TUE				AML	AML		
	comp=N,390µm,0.4s						
TUE				AML	AML		
	comp=E,241µm,0.3s						
TUE				AML	AML		
	comp=N,309µm,0.4s						
TUE				AML	AML		
	comp=E,326µm,0.3s						
TUE				AML	AML		
	comp=N,390µm,0.4s						
TUE				AML	AML		
	comp=N,390µm,0.4s						
TUE				AML	AML		
	comp=N,309µm,0.4s						
TUE				AML	AML		
	comp=E,326µm,0.3s						
TUE				AML	AML		
	comp=E,241µm,0.3s						
TUE				AML	AML		
	comp=N,390µm,0.4s						
TUE				AML	AML		
	comp=N,309µm,0.4s						
TUE				AML	AML		
	comp=E,241µm,0.3s						
TUE				AML	AML		
	comp=E,326µm,0.3s						
TUE	Stuetta	0.33	270	AML	AML		
	comp=E,241µm,0.3s						
TUE				AML	AML		
	comp=N,309µm,0.4s						
TUE				AML	AML		
	comp=E,326µm,0.3s						
TUE				AML	AML		
	comp=N,390µm,0.4s						
TUE				AML	AML		
	comp=E,241µm,0.3s						
TUE				AML	AML		
	comp=N,309µm,0.4s						
TUE				AML	AML		
	comp=E,326µm,0.3s						
TUE				AML	AML		
	comp=N,390µm,0.4s						
FUORN	Ofenpass-Fuorn	0.34	64	⇑Pg	Pg	00 41 58.4	-0.1
FUORN	Ofenpass-Fuorn	0.34	64	P	Pg	00 41 58.4	-0.1
FUORN				S	Sg	00 42 03.0	0.0
FUORN				AML	AML		
	comp=E,180µm,0.7s						
FUORN				AML	AML		
	comp=N,176µm,1.0s						
FUORN				AML	AML		
	comp=E,180µm,0.7s						
FUORN				AML	AML		
	comp=N,176µm,1.0s						
FUORN				AML	AML		
	comp=E,180µm,0.7s						
FUORN				AML	AML		
	comp=N,176µm,1.0s						
FUORN				AML	AML		
	comp=E,180µm,0.7s						
FUORN				AML	AML		
	comp=N,176µm,1.0s						
FUORN	Ofenpass-Fuorn	0.34	64	AML	AML		
	comp=E,180µm,0.7s						
FUORN				AML	AML		
	comp=N,176µm,1.0s						
FUORN				AML	AML		
	comp=E,180µm,0.7s						
FUORN				AML	AML		
	comp=N,176µm,1.0s						
BRMO	Bormio	0.38	89	⇑Pg	Pg	00 41 59.1	-0.1
BRMO				Sg	Sg	00 42 03.6	-0.6
BRMO	Bormio	0.38	89	P	Pg	00 41 59.1	-0.1
BRMO				AML	AML		
	comp=E,366µm,0.3s						
BRMO				AML	AML		
	comp=N,178µm,0.2s						
BRMO				AML	AML		
	comp=E,366µm,0.3s						
BRMO				AML	AML		
	comp=N,178µm,0.2s						
BRMO				AML	AML		
	comp=E,366µm,0.3s						
BRMO				AML	AML		
	comp=N,178µm,0.2s						
BRMO				AML	AML		
	comp=E,366µm,0.3s						
BRMO				AML	AML		
	comp=N,178µm,0.2s						
BRMO	Bormio	0.38	89	AML	AML		
	comp=N,178µm,0.2s						
BRMO				AML	AML		
	comp=E,366µm,0.3s						
BRMO				AML	AML		
	comp=E,366µm,0.3s						
BRMO				AML	AML		
	comp=N,178µm,0.2s						
SCUG	Chur Gewerbesc	0.44	332	Pg	Pg	00 42 00.7	+0.4
MOSI	Grossmontoni	0.52	74	Pg	Pg	00 42 01.6	-0.2
MOSI	Grossmontoni	0.52	74	P	Pg	00 42 01.5	-0.3
MOSI				S	Sg	00 42 08.8	+0.1
MOSI				AML	AML		
	comp=E,192µm,0.7s						
MOSI				AML	AML		
	comp=N,262µm,0.2s						
MOSI				AML	AML		
	comp=E,192µm,0.7s						
MOSI				AML	AML		
	comp=N,262µm,0.2s						
MOSI				AML	AML		
	comp=E,192µm,0.7s						
MOSI				AML	AML		
	comp=N,262µm,0.2s						
MOSI				AML	AML		
	comp=E,192µm,0.7s						
MOSI				AML	AML		
	comp=N,262µm,0.2s						
MOSI	Grossmontoni	0.52	74	P	Pg	00 42 01.6	-0.2
MOSI				AML	AML		
	comp=E,192µm,0.7s						
MOSI				AML	AML		
	comp=N,262µm,0.2s						
MOSI				AML	AML		
	comp=E,192µm,0.7s						
MOSI				AML	AML		
	comp=N,262µm,0.2s						
CARE	Lago del Cares	0.60	94	⇑*e*Pg	Pg	00 42 03.1	-0.3
CARE				*e*Sg	Sg	00 42 10.5	-0.9
PANIX	Pigniu (Panix)	0.61	306	Pn	Pg	00 42 03.9	+0.4
MABI	Malga Bissina	0.63	131	Pn	Pg	00 42 04.0	0.0
MABI	Malga Bissina	0.63	131	P	Pg	00 42 04.0	0.0
MABI				S	Sg	00 42 12.8	+0.5
MABI				AML	AML		
	comp=E,55µm,0.1s						
MABI				AML	AML		
	comp=N,48µm,1.4s						
MABI				AML	AML		
	comp=N,48µm,1.4s						
MABI				AML	AML		
	comp=E,55µm,0.1s						
MABI				AML	AML		
	comp=N,48µm,1.4s						
MABI				AML	AML		
	comp=E,55µm,0.1s						
MABI	Malga Bissina	0.63	131	P	Pg	00 42 03.9	-0.1
MABI				AML	AML		
	comp=E,55µm,0.1s						
MABI				AML	AML		
	comp=N,48µm,1.4s						
PLONS	Plons/SG	0.66	332	⇓Pn	Pg	00 42 04.6	+0.2
PLONS	Plons/SG	0.66	332	P	Pg	00 42 04.5	+0.1
PLONS				S	Sg	00 42 13.4	+0.4
PLONS	Plons/SG	0.66	332	P	Pg	00 42 04.6	+0.2
LLS	Linth-Limmern	0.68	304	Pn	Pg	00 42 05.1	+0.3
MDI	Monti di Nese	0.70	187	P	Pg	00 42 06.0	+0.8
MDI				AML	AML		
	comp=E,134µm,0.3s						
MDI				AML	AML		
	comp=N,86µm,1.0s						
MDI				AML	AML		
	comp=N,86µm,1.0s						
MDI				AML	AML		
	comp=E,134µm,0.3s						
MDI				AML	AML		
	comp=N,86µm,1.0s						
MDI				AML	AML		
	comp=E,134µm,0.3s						
MDI	Monti di Nese	0.70	187	P	Pb	00 42 06.6	+0.6
MDI				AML	AML		
	comp=E,134µm,0.3s						
MDI				AML	AML		
	comp=N,86µm,1.0s						
RNI	Roncone	0.74	131	⇑*e*Pg	Pg	00 42 06.0	0.0
RNI				*e*Sg	Sb	00 42 16.8	-0.1
MUGIO	Muggio	0.78	225	Pn	Pg	00 42 07.0	+0.3
MUGIO	Muggio	0.78	225	P	Pg	00 42 06.9	+0.3
MUGIO				S	Sg	00 42 17.9	+1.2
MUGIO				AML	AML		
	comp=E,44µm,0.3s						
MUGIO				AML	AML		
	comp=N,52µm,1.4s						
MUGIO				AML	AML		
	comp=E,44µm,0.3s						
MUGIO				AML	AML		
	comp=N,52µm,1.4s						
MUGIO				AML	AML		
	comp=E,44µm,0.3s						
MUGIO				AML	AML		
	comp=N,52µm,1.4s						
MUGIO				AML	AML		
	comp=E,44µm,0.3s						
MUGIO				AML	AML		
	comp=N,52µm,1.4s						
MUGIO	Muggio	0.78	225	P	Pg	00 42 07.0	+0.3
MUGIO				AML	AML		
	comp=E,44µm,0.3s						
MUGIO				AML	AML		
	comp=N,52µm,1.4s						
MUGIO				AML	AML		
	comp=E,44µm,0.3s						
MUGIO				AML	AML		
	comp=N,52µm,1.4s						
FUSIO	Fusio	0.81	269	Pn	Pg	00 42 07.1	-0.1
FUSIO	Fusio	0.81	269	P	Pg	00 42 07.1	-0.1
FUSIO				AML	AML		
	comp=E,75µm,0.6s						
FUSIO				AML	AML		
	comp=N,150µm,0.4s						
FUSIO				AML	AML		

	comp=N,150µm,0.4s						
FUSIO				AML	AML		
	comp=E,75µm,0.6s						
FUSIO				AML	AML		
	comp=N,150µm,0.4s						
FUSIO				AML	AML		
	comp=E,75µm,0.6s						
FUSIO	**Fusio**	**0.81**	**269**	P	**Pg**	**00 42 07.1**	**-0.1**
FUSIO				AML	AML		
	comp=E,75µm,0.6s						
FUSIO				AML	AML		
	comp=N,150µm,0.4s						
DAVA	**Damuels**	**0.82**	**3**	Pg	**Pg**	**00 42 07.3**	**-0.2**
	comp=N,0.3nm,0.1s						
DAVA				Sg	**Sg**	**00 42 17.6**	**-0.5**
	comp=N,2.2nm,0.2s,SNR=7.6						
DAVA	**Damuels**	**0.82**	**3**	Pn	**Pg**	**00 42 07.9**	**+0.4**
FETA	**Feichten**	**0.83**	**48**	*e*Pg	**Pg**	**00 42 07.2**	**-0.5**
	comp=N,0.9nm,0.1s,SNR=14						
FETA				*e*Sg	**Sg**	**00 42 18.0**	**-0.5**
	comp=N,0.7nm,0.1s						
OZOL	**Ozolo**	**0.85**	**94**	*e*Pg	**Pg**	**00 42 07.7**	**-0.3**
OZOL				*e*Sg	**Sg**	**00 42 18.9**	**-0.3**
LIENZ	**Kamor/St.Gall**	**0.85**	**345**	Pn	**Pb**	**00 42 09.0**	**+0.3**
GAGG	**Gaggia**	**0.88**	**116**⇑	*e*Pg	**Pg**	**00 42 08.3**	**-0.3**
MAGA	**Magasa**	**0.89**	**141**	P	**Pg**	**00 42 08.7**	**-0.2**
MAGA				S	**Sg**	**00 42 20.8**	**+0.3**
MAGA				AML	AML		
	comp=E,118µm,0.7s						
MAGA				AML	AML		
	comp=N,81µm,0.4s						
MAGA				AML	AML		
	comp=N,81µm,0.4s						
MAGA				AML	AML		
	comp=E,118µm,0.7s						
MAGA				AML	AML		
	comp=N,81µm,0.4s						
MAGA				AML	AML		
	comp=E,118µm,0.7s						
MAGA	**Magasa**	**0.89**	**141**	P	**Pg**	**00 42 09.1**	**+0.2**
MAGA				AML	AML		
	comp=E,118µm,0.7s						
MAGA				AML	AML		
	comp=N,81µm,0.4s						
SGT04	**Schlatt-Haslen**	**0.94**	**340**	Pn	**Pb**	**00 42 10.9**	**+0.8**
VARE	**Varese**	**0.95**	**231**	P	**Pg**	**00 42 10.0**	**0.0**
VARE				AML	AML		
	comp=E,37µm,0.7s						
VARE				AML	AML		
	comp=N,57µm,0.2s						
VARE				AML	AML		
	comp=E,37µm,0.7s						
VARE				AML	AML		
	comp=N,57µm,0.2s						
VARE				AML	AML		
	comp=E,37µm,0.7s						
VARE				AML	AML		
	comp=N,57µm,0.2s						
VARE	**Varese**	**0.95**	**231**	P	**Pb**	**00 42 10.9**	**+0.6**
VARE				AML	AML		
	comp=E,37µm,0.7s						
VARE				AML	AML		
	comp=N,57µm,0.2s						
MUO	**Muotathal**	**0.96**	**302**	Pn	**Pg**	**00 42 10.6**	**+0.5**
MUO				Sg	**Sg**	**00 42 23.5**	**+0.9**
APPI	**Appiano**	**0.97**	**89**	P	**Pg**	**00 42 09.8**	**-0.5**
APPI				S	**Sg**	**00 42 22.0**	**-0.9**
APPI				AML	AML		
	comp=E,94µm,0.4s						
APPI				AML	AML		
	comp=N,90µm,0.2s						
APPI				AML	AML		
	comp=E,94µm,0.4s						
APPI				AML	AML		
	comp=N,90µm,0.2s						
APPI				AML	AML		
	comp=E,94µm,0.4s						
APPI				AML	AML		
	comp=N,90µm,0.2s						
APPI	**Appiano**	**0.97**	**89**	P	**Pg**	**00 42 09.8**	**-0.5**
APPI				AML	AML		
	comp=E,94µm,0.4s						
APPI				AML	AML		
	comp=N,90µm,0.2s						
ABSI	**Aberstueckl**	**1.06**	**75**	Pn	**Pg**	**00 42 11.3**	**-0.8**
ABSI	**Aberstueckl**	**1.06**	**75**	P	**Pg**	**00 42 11.2**	**-0.8**
ABSI				S	**Sg**	**00 42 25.2**	**-0.7**
ABSI				AML	AML		
	comp=E,56µm,0.5s						
ABSI				AML	AML		
	comp=N,44µm,0.6s						
ABSI				AML	AML		
	comp=N,44µm,0.6s						
ABSI				AML	AML		
	comp=E,56µm,0.5s						
ABSI				AML	AML		
	comp=N,44µm,0.6s						
ABSI				AML	AML		
	comp=E,56µm,0.5s						
ABSI	**Aberstueckl**	**1.06**	**75**	P	**Pg**	**00 42 11.4**	**-0.7**
ABSI				AML	AML		
	comp=E,56µm,0.5s						
ABSI				AML	AML		
	comp=N,44µm,0.6s						
KOSI	**Kohlern**	**1.07**	**90**	P	**Pg**	**00 42 11.8**	**-0.5**
KOSI				S	**Sg**	**00 42 25.4**	**-0.8**
KOSI	**Kohlern**	**1.07**	**90**	P	**Pg**	**00 42 11.8**	**-0.4**
SGT02	**Zihlschlacht**	**1.11**	**339**	Pn	**Pn**	**00 42 14.0**	**+0.6**
WILA	**Wila**	**1.14**	**327**	Pn	**Pn**	**00 42 14.4**	**+0.7**
HASLI	**Hasliberg/Brie**	**1.19**	**284**	Pn	**Pb**	**00 42 14.7**	**+0.4**
RETA	**Reutte**	**1.20**	**32**	*e*Pg	**Pg**	**00 42 14.6**	**-0.1**
	comp=N,0.7nm,0.1s						
RETA				Sg	**Sn**	**00 42 31.9**	**+1.0**
	comp=N,1.4nm,0.1s						
WEIN	**Weingarten**	**1.21**	**332**	Pn	**Pg**	**00 42 15.7**	**+0.9**
SQTA	**Sankt Quirin**	**1.21**	**51**	Pg	**Pb**	**00 42 14.2**	**-0.5**
	comp=N,1.9nm,0.2s						
MOTA	**Moosalm**	**1.24**	**45**	Pg	**Pb**	**00 42 14.5**	**-0.6**
	comp=N,1.1nm,0.2s						
SIMPL	**Simplonpass**	**1.27**	**260**	Pn	**Pn**	**00 42 16.2**	**+0.5**
MMK	**Mattmark**	**1.36**	**253**	P	**Pn**	**00 42 17.0**	**+0.2**
MMK				S	**Sb**	**00 42 35.4**	**+0.5**
MMK	**Mattmark**	**1.36**	**253**	P	**Pn**	**00 42 17.1**	**+0.3**
WTTA	**Wattenberg**	**1.47**	**57**	Pg	**Pg**	**00 42 19.5**	**-0.4**
	comp=N,1.2nm,0.2s						
WTTA				Sg	**Sg**	**00 42 38.9**	**-0.1**
	comp=N,2.0nm,0.3s						
WTTA	**Wattenberg**	**1.47**	**57**	P	**Pg**	**00 42 22.0**	**+2.1**
CGRP	**Cima Grappa**	**1.49**	**113**	P	**Pn**	**00 42 18.7**	**+0.1**
CGRP				S	**Sn**	**00 42 38.2**	**-0.1**
CGRP				AML	AML		
	comp=E,39µm,0.6s						
CGRP				AML	AML		
	comp=N,19µm,1.0s						
CGRP				AML	AML		
	comp=E,39µm,0.6s						
CGRP				AML	AML		
	comp=N,19µm,1.0s						
CGRP				AML	AML		
	comp=E,39µm,0.6s						
CGRP				AML	AML		
	comp=N,19µm,1.0s						
CGRP	**Cima Grappa**	**1.49**	**113**	P	**Pg**	**00 42 21.1**	**+0.8**
CGRP				AML	AML		
	comp=E,39µm,0.6s						
CGRP				AML	AML		
	comp=N,19µm,1.0s						
ABTA	**Abfaltersbach**	**1.87**	**81**	Pg	**Pb**	**00 42 26.4**	**+0.4**
	comp=N,0.2nm,0.2s						
ABTA				Sg	**Sg**	**00 42 50.4**	**-1.4**
	comp=N,1.3nm,0.2s						
KIZ	**Kirchzarten**	**1.98**	**319**	Pn	**Pb**	**00 42 27.2**	**-0.5**
KIZ				Pg	**Pg**	**00 42 30.1**	**+0.5**
KIZ				Sg	**Sg**	**00 42 56.3**	**+1.2**
OPP	**Oppenau**	**2.31**	**332**	Pn	**Pn**	**00 42 31.7**	**+2.0**
CHMF	**Charmoille**	**2.31**	**291**	Pn	**Pb**	**00 42 32.6**	**-0.9**
CHMF				Sn	**Sb**	**00 43 01.5**	**-0.7**
VLC	**Villacollemand**	**2.34**	**170**	S	**Sb**	**00 43 05.0**	**+2.0**
LPG	**La Plagne**	**2.36**	**247**	*e*Pn	**Pn**	**00 42 30.1**	**-0.5**
LPG	**La Plagne**	**2.36**	**247**	*e*Pg	**Pb**	**00 42 35.9**	**+1.6**
LPG				*e*Sn	**Sn**	**00 42 57.7**	**-2.0**
LPG				*e*Sg	**Sg**	**00 43 07.0**	**-0.3**
	comp=N,2.6nm,0.5s						
LPL	**La Plagne**	**2.36**	**247**	*e*Pn	**Pn**	**00 42 28.9**	**-1.7**
LPL				*e*Sn	**Sn**	**00 42 57.7**	**-2.0**
LPL				*e*Sg	**Sg**	**00 43 07.4**	**-0.1**
	comp=N,2.4nm,0.5s						
HINF	**Hinteralfeld**	**2.44**	**305**	*e*P	**Pn**	**00 42 33.7**	**+2.2**
HINF	**Hinteralfeld**	**2.44**	**305**	*e*Pg	**Pg**	**00 42 38.3**	**0.0**
HINF				*e*Sn	**Sn**	**00 42 59.7**	**-1.6**
HINF				*e*Sg	**Sg**	**00 43 10.0**	**+0.1**
	comp=N,2.1nm,0.2s						
BDI	**Bagni Di Lucca**	**2.47**	**167**	S	**Sb**	**00 43 08.0**	**+1.4**
CARD	**Cardoso**	**2.49**	**169**	S	**Sb**	**00 43 07.0**	**-0.1**
POPM	**Popiglio**	**2.51**	**165**	S	**Sb**	**00 43 10.0**	**+2.2**
ECH	**Echery**	**2.52**	**315**	Pn	**Pn**	**00 42 34.8**	**+2.2**
ECH				Sn	**Sn**	**00 43 05.3**	**+1.9**
WLS	**Welschbruch**	**2.57**	**320**	Pn	**Pn**	**00 42 35.1**	**+1.8**
CABF	**La Chapelle**	**2.58**	**274**	*e*Pn	**Pn**	**00 42 33.6**	**0.0**
CABF	**La Chapelle**	**2.58**	**274**	*e*Pg	**Pg**	**00 42 41.5**	**+0.3**
CABF				*e*Sn	**Sn**	**00 43 04.1**	**-1.0**
CABF				*e*Sg	**Sg**	**00 43 15.3**	**+0.6**
	comp=N,4.1nm,0.4s						
MAIM	**Mastiano**	**2.60**	**169**	S	**Sb**	**00 43 09.0**	**-1.3**
CDF	**Champ du Feu**	**2.60**	**319**	*e*P	**Pn**	**00 42 35.8**	**+2.0**
CDF	**Champ du Feu**	**2.60**	**319**	*e*Pg	**Pg**	**00 42 41.2**	**-0.3**
CDF				*e*Sn	**Sn**	**00 43 03.6**	**-1.9**
CDF				*e*Sg	**Sg**	**00 43 15.2**	**0.0**
	comp=N,3.2nm,0.3s						
MBDF	**Montbardon**	**2.77**	**232**	*e*Pn	**Pn**	**00 42 35.5**	**-0.6**
MBDF	**Montbardon**	**2.77**	**232**	*e*Pg	**Pg**	**00 42 43.8**	**-0.8**
MBDF				*e*Sn	**Sn**	**00 43 07.1**	**-2.5**
MBDF				*e*Sg	**Sg**	**00 43 19.4**	**-1.1**
	comp=N,1.2nm,0.3s						
CRMI	**Carmignano**	**2.80**	**163**	S	**Sb**	**00 43 17.0**	**+0.9**
HAU	**Haudompre**	**2.82**	**304**	*e*P	**Pn**	**00 42 38.6**	**+1.8**
HAU	**Haudompre**	**2.82**	**304**	*e*Pg	**Pg**	**00 42 45.1**	**-0.7**
HAU				*e*Sn	**Sn**	**00 43 09.2**	**-1.7**
HAU				*e*Sg	**Sg**	**00 43 21.9**	**-0.4**
	comp=N,1.5nm,0.2s						
CALF	**Calern**	**3.41**	**218**	Pn	**Pn**	**00 42 48.3**	**+3.3**
PAGF	**Fort de Pagny**	**3.48**	**308**	*e*Pg	**Pg**	**00 42 57.1**	**-1.1**
ATFO	**Monte Foce - G**	**3.67**	**147**	P	**Pb**	**00 42 57.5**	**+1.0**
FRF	**La Foret Royal**	**3.68**	**219**	*e*P	**Pn**	**00 42 50.7**	**+2.1**
SMF	**Signal de Mont**	**4.13**	**275**	*e*Pg	**Pg**	**00 43 08.9**	**-1.9**
SMF				*e*Sg	**Sg**	**00 44 02.7**	**-1.6**
	comp=N,0.5nm,0.2s						
LOR	**Lormes**	**4.17**	**283**	*e*P	**Pn**	**00 42 58.1**	**+2.8**
	baz=103						
LOR	**Lormes**	**4.17**	**283**	*e*Pg	**Pg**	**00 43 09.8**	**-1.7**
	baz=103						
LOR				*e*Sn	**Sn**	**00 43 41.2**	**-2.9**
	comp=N,0.4nm,0.2s						
LOR				*e*Sg	**Sg**	**00 44 04.3**	**-1.2**
SSF	**Saint Saulge**	**4.38**	**280**	*e*P	**Pn**	**00 43 01.3**	**+3.1**
SSF	**Saint Saulge**	**4.38**	**280**	*e*Pg	**Pg**	**00 43 13.8**	**-1.8**
SSF				*e*Sn	**Sn**	**00 43 46.1**	**-3.2**
	comp=N,0.3nm,0.2s						
SSF				*e*Sg	**Sg**	**00 44 10.8**	**-1.6**
	comp=N,0.5nm,0.2s						
BGF	**Bois d'Agland**	**4.82**	**274**	*e*P	**Pn**	**00 43 06.8**	**+2.6**
BGF	**Bois d'Agland**	**4.82**	**274**	*e*Pg	**Pg**	**00 43 22.0**	**-1.9**
BGF				*e*Sn	**Sn**	**00 43 57.1**	**-3.0**
BGF				*e*Sg	**Sg**	**00 44 24.3**	**-2.1**
	comp=N,0.8nm,0.2s						

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*GEN **05** 00:43:00.8, 44.°19N×10.°21E, h4^{km}±3^{km}, Ml1.5*

ROM 05 00:43:00.7±0.1**, 44.°150N**±0.°006×**10.°208E**±0.°004**,**
h7^{km}**, Md1.9**/5**, Error ellipse: s-maj=0.7km s-min=0.2km**
az=357.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T0912	**Minucciano (LU**	**0.02**	**3**	P	Pg	00 43 02.2	0.0
T0912				S	Sg	00 43 03.1	-0.1
T0912				END			
EQUI	**Equi**	**0.04**	**292**	P	Pg	00 43 02.3	0.0
EQUI				S	Sg	00 43 03.3	-0.1
T0911	**Castelpoggio (**	**0.10**	**248**	P	Pg	00 43 03.7	+0.6
T0911				S	Sg	00 43 05.7	+1.0
T0911				END			
VLC	**Villacollemand**	**0.13**	**86**	P	Pg	00 43 04.1	+0.6
VLC				S	Sg	00 43 06.5	+1.1
VLC				END			
CARD	**Cardoso**	**0.23**	**122**	P	Pg	00 43 06.2	+0.9
CARD				S	Sg	00 43 09.8	+1.3
CARD	**Cardoso**	**0.23**	**122**	P	Pg	00 43 06.2	+0.9
CARD				S	Sg	00 43 10.3	+1.8
CARD				END			
PLMA	**Palmaria, Port**	**0.28**	**249**	P	Pg	00 43 06.8	+0.7
PLMA				S	Sb	00 43 11.3	-1.5
PLMA				END			
BDI	**Bagni Di Lucca**	**0.29**	**107**	P	Pg	00 43 07.1	+0.6
BDI				S	Sg	00 43 11.9	+1.5
MAIM	**Mastiano**	**0.31**	**139**	P	Pb	00 43 07.7	-0.9
MAIM				S	Sb	00 43 12.7	-1.2
MAIM	**Mastiano**	**0.31**	**139**	P	Pb	00 43 08.0	-0.6
MAIM				S	Sb	00 43 12.8	-1.1
GRAM	**Graiana**	**0.36**	**343**	P	Pg	00 43 07.4	-0.3
GRAM				S	Sg	00 43 11.8	-0.7
POPM	**Popiglio**	**0.41**	**105**	P	Pg	00 43 09.3	+0.6
POPM				S	Sb	00 43 15.4	-1.3
POPM	**Popiglio**	**0.41**	**105**	P	Pg	00 43 09.3	+0.7
POPM				S	Sb	00 43 15.9	-0.7
MTCR	**Monte La Croce**	**0.58**	**102**	P	Pb	00 43 12.7	-0.6
MTCR				S	Sb	00 43 21.5	-0.2

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*IDC **05** 00:53:12.8±0.4, 8.°87N×70.°89W, h0^{km}, mb4.1/19,*
mb1 4.3/25, mb1mx4.3/33, mbtmp4.2/25, ML3.9/6, MS3.6/15,
Ms1 3.6/15, ms1mx3.3/37, Error ellipse: s-maj=12.3km
s-min=4.9km az=1.0
*ISCJB **05** 00:53:13.3±0.1, 8.°81N±0.°02×70.°88W±0.°02, h8^{km},*
mb4.5/94, MS3.6/12, Error ellipse: s-maj=3.1km
s-min=2.3km az=22.2
*NEIC **05** 00:53:14.5±1.0, 8.°82N×70.°85W, h5^{km}±1^{km}, mb4.6/92,*
MD4.6, Error ellipse: s-maj=9.9km s-min=7.8km az=148.0
NEIC Felt at Maracaibo.

ISC 05 00:53:14.3±0.3**, 8.°79N**±0.°03×**70.°84W**±0.°04**, h8**^{km}**, n385,**
σ**1§17**/394**, mb4.6**/100**, MS3.6**/12**, 1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo**	**0.23**	**64**	Pg	**Pg**	**00 53 17.4**	**-1.4**
	78nm,0.3s,baz=257,slow=14,SNR=136						
SDV				Lg	Lg	00 53 21.8	
	521nm,0.3s,baz=252,slow=15,SNR=237						
SDV	**Santo Domingo**	**0.23**	**64**	*e*Pg	**Pg**	**00 53 17.5**	**-1.4**
SDV				*e*Sg	**Sg**	**00 53 21.4**	**-0.6**
SDV	**Santo Domingo**	**0.23**	**64**	*e*P	**Pg**	**00 53 17.4**	**-1.4**
SOCV	**Socops**	**0.50**	**182**	*e*P	**Pg**	**00 53 20.9**	**-3.1**
CAPV	**Capacho**	**1.72**	**238**	*e*P	**Pn**	**00 53 41.5**	**-3.3**
CAPV				*e*S	**Sn**	**00 54 06.1**	**-1.0**
DABV	**Dabajuro**	**2.13**	**5**	*e*P	**Pn**	**00 53 50.8**	**+0.6**
GRMC	**Gramalote, San**	**2.22**	**242**	*e*P	**Pn**	**00 53 47.4**	**-4.2**
ELOV	**Elorza**	**2.23**	**143**	*e*P	**Pb**	**00 53 54.2**	**-0.5**
ELOV				*e*S	**Sn**	**00 54 20.7**	**+1.5**
VIRV	**Villa del Rosa**	**2.30**	**318**	*e*P	**Pn**	**00 53 49.6**	**-2.9**
PAMC	**Pamplona, Colo**	**2.34**	**232**	*e*P	**Pn**	**00 53 50.9**	**-2.6**
OCAC	**Ocana**	**2.51**	**258**	*e*P	**Pn**	**00 53 55.8**	**+0.2**
TAMC	**Tame, Arauca**	**2.52**	**202**	*e*P	**Pn**	**00 53 55.5**	**-0.1**
CODC	**Agustn Codazz**	**2.81**	**294**	*e*P	**Pn**	**00 53 56.0**	**-3.5**
GIRC	**Giron, Santand**	**2.88**	**234**	*e*P	**Pn**	**00 54 02.1**	**+1.4**
CVALL	**Valledupar, Ce**	**2.94**	**306**	*e*P	**Pn**	**00 54 00.7**	**-0.6**
URIC	**Uribia, Colomb**	**3.11**	**339**	*e*P	**Pn**	**00 54 02.3**	**-1.4**
BARC	**Barichara**	**3.19**	**227**	*e*P	**Pn**	**00 54 06.8**	**+1.8**
BRRC	**Barranca, Sant**	**3.30**	**240**	*e*P	**Pn**	**00 54 07.9**	**+1.6**
ARGC	**Ariguani, Magd**	**3.53**	**288**	*e*P	**Pn**	**00 54 09.6**	**+0.1**
RUSC	**La Rusia**	**3.64**	**218**	*e*P	**Pn**	**00 54 09.9**	**-1.5**
YOPC	**Yopal, Colombi**	**3.75**	**205**	*e*P	**Pn**	**00 54 16.0**	**+3.3**
AGZ	**La Independenc**	**4.16**	**203**	*e*P	**Pn**	**00 54 20.4**	**+2.3**
ZARC	**Zaragoza, Cauc**	**4.18**	**252**	*e*P	**Pn**	**00 54 15.2**	**-3.3**
PTBC	**PUERTO BERRIO,**	**4.22**	**238**	*e*P	**Pn**	**00 54 16.5**	**-2.5**
CTAU	**Tausa, Cundina**	**4.78**	**222**	*e*P	**Pn**	**00 54 30.0**	**+3.0**
CTAB	**Cerro Tablazo,**	**5.02**	**222**	*e*P	**Pn**	**00 54 33.6**	**+3.2**
CHIC	**Chingaza**	**5.03**	**215**	*e*P	**Pn**	**00 54 32.4**	**+1.9**
NORC	**Norcasia**	**5.12**	**232**	*e*P	**Pn**	**00 54 29.2**	**-2.2**
ROSC	**El Rosal**	**5.23**	**222**	Pn	**Pn**	**00 54 33.3**	**+0.2**
	21nm,0.3s,baz=117,slow=6.5,SNR=40						
ROSC				Sn	**Sn**	**00 55 34.2**	**+0.3**
	9.5nm,0.3s,baz=180,slow=20,SNR=2.2						
ROSC				LR	LR	00 57 05.6	
	comp=Z,547nm,20.2s,baz=32,slow=44						
ROSC	**El Rosal**	**5.23**	**222**	*e*Pn	**Pn**	**00 54 34.0**	**+0.8**
ROSC	**El Rosal**	**5.23**	**222**	*e*P	**Pn**	**00 54 34.9**	**+1.7**
HELC	**Santa Helena**	**5.32**	**241**	*e*P	**Pn**	**00 54 35.4**	**+1.1**
VILC	**Villavicencio,**	**5.44**	**212**	*e*P	**Pn**	**00 54 37.6**	**+1.8**
DBBC	**Dabeiba**	**5.60**	**252**	*e*P	**Pn**	**00 54 39.0**	**+1.0**
RREF	**El Recreo**	**5.91**	**230**	*e*P	**Pn**	**00 54 41.0**	**-1.7**
PCRV	**Puerto La Cruz**	**6.27**	**77**	Pn	**Pn**	**00 54 47.8**	**+0.6**
	6.0nm,0.3s,baz=262,slow=6.6,SNR=20						
PCRV				Sn	**Sn**	**00 55 59.8**	**+0.7**
	3.4nm,0.3s,baz=96,slow=19,SNR=2.4						
PRAC	**Prado**	**6.45**	**219**	*e*P	**Pn**	**00 54 50.9**	**+1.3**
GUVC	**San Jose del G**	**6.45**	**196**	*e*P	**Pn**	**00 54 50.8**	**+1.1**
ORTC	**Ortega, Tolima**	**6.53**	**222**	*e*P	**Pn**	**00 54 51.6**	**+0.8**
PLMC	**San Jos del P**	**6.64**	**235**	*e*P	**Pn**	**00 54 54.6**	**+2.3**
UPD2	**Meteti**	**7.10**	**269**	*e*P	**Pn**	**00 54 57.1**	**-1.4**
MACC	**Macarena, Meta**	**7.25**	**205**	*e*P	**Pn**	**00 55 00.9**	**+0.4**
YOTC	**Yotoco, Valle**	**7.26**	**229**	*e*P	**Pn**	**00 55 02.1**	**+1.2**
BETC	**Betania**	**7.60**	**217**	*e*P	**Pn**	**00 55 06.0**	**+0.5**
MARP	**Paez Belalcaza**	**7.79**	**221**	*e*P	**Pn**	**00 55 07.7**	**-0.7**
PCON	**Cinco Dias**	**8.47**	**221**	*e*P	**Pn**	**00 55 19.2**	**+1.3**
POPC	**Popayan, Colom**	**8.50**	**223**	*e*P	**Pn**	**00 55 19.4**	**+1.5**
FLOC	**Florencia**	**8.61**	**214**	*e*P	**Pn**	**00 55 19.7**	**+0.3**
SOTA	**Rioblanco**	**8.75**	**221**	*e*P	**Pn**	**00 55 21.9**	**+0.2**
BCIP	**Isla Barro Col**	**8.90**	**273**	*e*Pn	**Pn**	**00 55 21.9**	**-1.3**
PTLC	**Puerto Leguiza**	**9.42**	**205**	*e*P	**Pn**	**00 55 34.4**	**+3.9**
SDDR	**Presa de Saban**	**10.14**	**358**	*e*Pn	**Pn**	**00 55 40.8**	**+0.4**
SJG	**San Juan**	**10.33**	**26**	Pn	**Pn**	**00 55 42.3**	**-0.5**
	6.7nm,0.3s,baz=203,slow=16,SNR=12						
SJG				Sn	Sn	00 57 26.4	-13
	0.6nm,0.3s,baz=177,slow=12,SNR=2.1						
SJG				LR	LR	00 59 51.5	
	comp=Z,214nm,21.8s,baz=218,slow=39						
SJG	**San Juan**	**10.33**	**26**	*e*Pn	**Pn**	**00 55 42.0**	**-0.9**
PTGA	**Pitinga**	**14.38**	**131**	Pn	**Pn**	**00 56 38.2**	**-0.1**
	0.5nm,0.3s,baz=300,slow=16,SNR=7.5						
PTGA				Sn	**Sn**	**00 59 12.0**	**-6.1**
	0.3nm,0.3s,baz=319,slow=19,SNR=2.1						
PTGA				Lg	Lg	01 00 43.7	
	1.1nm,0.3s,baz=46,slow=20,SNR=4.7						
PTGA	**Pitinga**	**14.38**	**131**	*e*Pn	**Pn**	**00 56 39.4**	**+1.1**
ATAH	**Atahualpa**	**17.52**	**206**	P	**Pn**	**00 57 19.8**	**+0.3**
	0.8nm,0.3s,baz=28,slow=5.6,SNR=16						
ATAH				LR	LR	01 05 21.5	
	comp=Z,361nm,18.7s,baz=349,slow=42						
MDP	**Montagnes des**	**18.43**	**100**	P	**Pn**	**00 57 30.4**	**0.0**
	0.1nm,0.3s,baz=263,slow=16,SNR=2.7						
MDP				S	**Sn**	**01 00 48.7**	**-7.9**
	0.1nm,0.3s,baz=18,slow=19,SNR=2.4						
MDP				Lg	Lg	01 02 47.3	
	0.1nm,0.3s,baz=12,slow=19,SNR=2.0						
APG	**El Apazote**	**20.17**	**290**	P	**P**	**00 57 49.4**	**-0.2**
	23nm,0.8s,baz=134,slow=6.4,SNR=11						
CCIG	**Comitan**	**22.07**	**292**	*e*P	**P**	**00 58 10.8**	**+0.7**
	32nm,1.0s						
656A	**Willston**	**23.23**	**333**	P	**P**	**00 58 23.6**	**+1.5**
	baz=150						
655A	**Horseshoe Beac**	**23.68**	**332**	P	**P**	**00 58 27.9**	**+1.4**
	baz=148						
556A	**Lake Butler**	**23.72**	**334**	P	**P**	**00 58 28.2**	**+1.3**
	baz=151						
LPAZ	**La Paz**	**25.06**	**174**	P	**P**	**00 58 40.3**	**+0.3**
	5.9nm,0.7s,baz=2.8,slow=9.4,SNR=20						
LPAZ				Lg	Lg	01 06 23.0	
	2.6nm,0.9s,baz=3.6,slow=16,SNR=2.2						
LPAZ				LR	LR	01 09 34.7	
	comp=Z,169nm,18.6s,baz=340,slow=39						
LPAZ	**La Paz**	**25.06**	**174**	*e*P	**P**	**00 58 40.1**	**+0.1**
LPAZ				*e*pP	**P**	**00 58 40.8**	**+0.8**
SIV	**San Ignacio**	**26.45**	**159**	P	**P**	**00 58 53.3**	**+1.4**
	8.8nm,1.1s,baz=0.9,slow=8.8,SNR=20						
SIV				Lg	Lg	01 07 06.6	
	8.9nm,1.0s,baz=301,slow=19,SNR=3.0						
SIV				LR	LR	01 09 57.1	
	comp=Z,158nm,20.6s,baz=336,slow=38						
152A	**Waverly Hall**	**27.02**	**334**	P	**P**	**00 58 58.2**	**+1.3**
	baz=149						
Y54A	**Tignall**	**27.24**	**338**	P	**P**	**00 59 00.2**	**+1.3**
	baz=154						
X55A	**Gracelyn & Ava**	**27.42**	**340**	P	**P**	**00 59 02.0**	**+1.5**
	baz=156						
V58A	**Windy Hill, Pi**	**27.93**	**346**	P	**P**	**00 59 06.4**	**+1.4**
	baz=162						
GO01	**Chusmiza**	**28.32**	**177**	*e*P	**P**	**00 59 10.4**	**+1.1**
	10nm,1.1s						
T60A	**Surry**	**28.73**	**350**	P	**P**	**00 59 13.8**	**+1.6**
	baz=168						
T58A	**Grand View Acr**	**28.89**	**347**	P	**P**	**00 59 14.2**	**+0.6**
	baz=164						
V53A	**Saluda**	**28.91**	**340**	P	**P**	**00 59 14.6**	**+0.7**
	baz=155						
Y48A	**Jasper**	**29.18**	**331**	P	**P**	**00 59 16.9**	**+0.7**
	baz=145						
X49A	**Woodville**	**29.29**	**333**	P	**P**	**00 59 18.5**	**+1.3**
	baz=148						
W50A	**Signal Mountai**	**29.44**	**335**	P	**P**	**00 59 19.8**	**+1.2**
	baz=150						
X48A	**Hartselle**	**29.57**	**332**	P	**P**	**00 59 20.6**	**+1.0**
	baz=146						
S56A	**Natural Bridge**	**29.83**	**346**	P	**P**	**00 59 23.2**	**+1.3**
	baz=162						
U51A	**La Follette**	**29.97**	**338**	P	**P**	**00 59 24.4**	**+1.1**
	baz=153						
X47A	**Russelville**	**30.00**	**331**	P	**P**	**00 59 24.3**	**+0.8**
	baz=145						
R58A	**Rapidan**	**30.09**	**349**	P	**P**	**00 59 25.4**	**+1.2**
	baz=166						
S55A	**Lewisburg**	**30.15**	**345**	P	**P**	**00 59 26.0**	**+1.1**
	baz=161						
V49A	**McMinnville**	**30.17**	**335**	P	**P**	**00 59 25.9**	**+0.9**
	baz=149						
R57A	**Stanardsville**	**30.19**	**348**	P	**P**	**00 59 26.4**	**+1.3**
	baz=165						
T51A	**Gray**	**30.47**	**339**	P	**P**	**00 59 28.7**	**+1.1**
	baz=154						
W47A	**Westpoint**	**30.48**	**332**	P	**P**	**00 59 28.6**	**+0.9**
	baz=146						
R55A	**Marlinton**	**30.54**	**346**	P	**P**	**00 59 29.5**	**+1.2**
	baz=162						
V48A	**Smith Brothers**	**30.54**	**334**	*e*P	**P**	**00 59 29.7**	**+1.4**
	4.7nm,0.7s						
V48A	**Smith Brothers**	**30.54**	**334**	P	**P**	**00 59 29.3**	**+1.0**
	baz=148						
Q58A	**Fox Den Farm,**	**30.65**	**349**	P	**P**	**00 59 30.2**	**+1.0**
	baz=167						
OXF	**Oxford**	**30.76**	**329**	P	**P**	**00 59 30.8**	**+0.5**
	baz=142						
U49A	**Red Boiling Sp**	**30.76**	**336**	P	**P**	**00 59 31.0**	**+0.8**
	baz=150						
T50A	**Nancy**	**30.84**	**338**	P	**P**	**00 59 32.1**	**+1.2**
	baz=152						
Q57A	**Strasburg**	**30.88**	**348**	P	**P**	**00 59 32.3**	**+1.0**
	baz=165						
V47A	**Nunnelly**	**30.92**	**333**	P	**P**	**00 59 32.5**	**+0.8**
	baz=147						
V46A	**Holladay**	**31.17**	**332**	P	**P**	**00 59 34.1**	**+0.3**
	baz=146						
WVT	**Waverly**	**31.31**	**333**	*e*P	**P**	**00 59 35.3**	**+0.2**
	5.4nm,0.9s						
WVT	**Waverly**	**31.31**	**333**	P	**P**	**00 59 35.8**	**+0.7**
	baz=146						
U47A	**Clarksville**	**31.33**	**334**	P	**P**	**00 59 35.7**	**+0.4**
	baz=148						
Q54A	**Coxs Mills**	**31.38**	**345**	P	**P**	**00 59 36.6**	**+1.0**
	baz=161						
T48A	**Bowling Green**	**31.53**	**336**	P	**P**	**00 59 37.8**	**+0.8**
	baz=150						
LNIG	**Linares**	**31.63**	**304**	*e*P	**P**	**00 59 37.1**	**-1.0**
	3.8nm,0.9s						
O58A	**Lewisberry**	**31.67**	**351**	P	**P**	**00 59 39.6**	**+1.4**
	baz=169						
S49A	**Springfield**	**31.68**	**338**	P	**P**	**00 59 39.4**	**+1.0**
	baz=152						
T47A	**Sharon Grove**	**31.72**	**335**	*e*P	**P**	**00 59 38.6**	**-0.1**
	6.0nm,0.8s						
T47A	**Sharon Grove**	**31.72**	**335**	P	**P**	**00 59 39.3**	**+0.7**
	baz=148						
S48A	**Wiedeman Farm,**	**31.87**	**337**	P	**P**	**00 59 40.6**	**+0.7**
	baz=151						
O56A	**Blue Knob Stat**	**32.10**	**349**	P	**P**	**00 59 43.2**	**+1.2**
	baz=166						
T46A	**Princeton**	**32.10**	**334**	P	**P**	**00 59 42.7**	**+0.7**
	baz=147						
S47A	**Hartford**	**32.14**	**336**	P	**P**	**00 59 43.0**	**+0.7**
	baz=149						
SSPA	**Standing Stone**	**32.33**	**350**	P	**P**	**00 59 45.3**	**+1.3**
	baz=167						
WCI	**Wyandotte Cave**	**32.46**	**337**	P	**P**	**00 59 46.5**	**+1.4**
	baz=151						
P51A	**Williamsport**	**32.47**	**342**	P	**P**	**00 59 46.6**	**+1.5**
	baz=157						

M61A	Granite Spring	32.49	356	P	P	00 59 46.9	+1.5
	baz=175						
R47A	Wooly Knot Far	32.60	337	P	P	00 59 47.6	+1.1
	baz=150						
N55A	Marion Center	32.67	348	P	P	00 59 48.2	+1.2
	baz=165						
W41B	Gary Mavity, V	32.77	326	eP	P	00 59 47.8	-0.1
	7.9nm,1.1s						
W41B	Gary Mavity, V	32.77	326	P	P	00 59 48.3	+0.5
	baz=138						
Q48A	North Vernon	32.86	338	P	P	00 59 49.3	+0.7
	baz=152						
WHAR	Wooly Hollow	32.88	327	eP	P	00 59 48.6	-0.2
	9.6nm,0.9s						
O51A	Pataskala	32.95	343	P	P	00 59 50.2	+0.8
	baz=158						
MIAR	Mount Ida	33.06	324	eP	P	00 59 50.6	+0.2
	6.0nm,0.9s						
MIAR	Mount Ida	33.06	324	P	P	00 59 50.6	+0.2
	baz=136						
N54A	Moraine State	33.06	347	P	P	00 59 50.7	+0.4
	baz=163						
Q47A	Bedord North L	33.12	337	P	P	00 59 51.5	+0.5
	baz=151						
BDFB	Brasilia	33.17	137	LR	LR	01 14 17.6	
	comp=Z,109nm,18.1s,baz=183,slow=38						
435B	Jarrell	33.18	315	eP	P	00 59 51.8	+0.1
	16nm,0.9s						
435B	Jarrell	33.18	315	P	P	00 59 51.7	+0.1
	baz=126						
M56A	Emporium	33.21	350	P	P	00 59 52.7	+1.0
	baz=167						
P48A	Milroy	33.22	339	P	P	00 59 52.6	+0.8
	baz=153						
S44A	Carbondale	33.25	333	P	P	00 59 52.7	+0.6
	baz=145						
M55A	Ridgway	33.30	349	P	P	00 59 53.6	+1.2
	baz=166						
R45A	Skylar, Fairfi	33.32	335	P	P	00 59 53.4	+0.7
	baz=148						
N52A	McGinn's Farm,	33.32	345	P	P	00 59 53.7	+1.0
	baz=160						
O49A	Covington	33.51	341	eP	P	00 59 55.2	+0.9
	21nm,1.4s						
M54A	Oil Creek Stat	33.51	348	eP	P	00 59 55.2	+0.8
	26nm,1.6s						
M54A	Oil Creek Stat	33.51	348	P	P	00 59 55.3	+0.9
	baz=164						
P47A	Martinsville	33.55	338	P	P	00 59 55.3	+0.6
	baz=152						
W39A	Magazine	33.64	325	eP	P	00 59 55.9	+0.4
	10.0nm,0.9s						
W39A	Magazine	33.64	325	P	P	00 59 55.9	+0.4
	baz=136						
N50A	Nevada	33.68	343	P	P	00 59 56.6	+0.9
	baz=158						
Q45A	Warren Harvey,	33.77	335	P	P	00 59 57.4	+0.8
	baz=148						
WHTX	Lake Whitney,	33.81	317	P	P	00 59 57.3	+0.2
	baz=127						
O48A	Farmland	33.84	340	P	P	00 59 58.0	+0.8
	baz=154						
M52A	Chesterland	33.92	346	P	P	00 59 58.5	+0.5
	baz=161						
M51A	Elyria	33.94	345	P	P	00 59 58.6	+0.6
	baz=160						
U40A	Yellville	33.98	327	P	P	00 59 58.7	+0.3
	baz=139,SNR=5.7						
P46A	Rosedale	34.01	337	P	P	00 59 59.5	+0.9
	baz=150						
N49A	Columbus Grove	34.13	342	P	P	01 00 00.4	+0.7
	baz=156						
P45A	Graceland, Par	34.15	336	P	P	01 00 00.4	+0.6
	baz=149						
O47A	Sheridan	34.17	339	P	P	01 00 00.5	+0.4
	baz=152						
N48A	Decatur	34.34	341	P	P	01 00 02.0	+0.5
	baz=155						
K54A	Basiliko Farm,	34.39	350	P	P	01 00 02.4	+0.4
	baz=166						
CCM	Cathedral Cave	34.47	331	P	P	01 00 03.1	+0.5
	baz=143						
M49A	Liberty Center	34.57	342	P	P	01 00 04.3	+0.8
	baz=157						
MEDO	Medina	34.89	350	P	P	01 00 07.1	+0.9
	baz=167						
L48A	N Adams	35.14	342	P	P	01 00 09.3	+0.9
	baz=156						
TUL1	Leonard	35.30	324	eP	P	01 00 10.0	0.0
	6.8nm,0.8s						
TUL1	Leonard	35.30	324	P	P	01 00 10.2	+0.2
	baz=134						
LBNH	Lisbon	35.33	359	P	P	01 00 11.0	+0.9
	baz=178						
WLVO	Wesleyville	35.62	351	P	P	01 00 13.7	+1.2
	baz=167						
K49A	Clarkson	35.63	344	P	P	01 00 13.6	+1.0
	baz=158						
ABTX	Abilene, Hawle	35.68	316	eP	P	01 00 13.6	+0.4
	13nm,1.0s						
ABTX	Abilene, Hawle	35.68	316	P	P	01 00 13.4	+0.1
	baz=125						
I55A	Frankford	35.79	352	P	P	01 00 14.9	+0.9
	baz=168						
K48A	Perry	35.83	343	P	P	01 00 14.9	+0.6
	baz=157						
LONY	Lake Ozonia	35.85	355	P	P	01 00 15.1	+0.6
	baz=174						
M44A	Midewin, Midew	35.86	338	P	P	01 00 14.9	+0.2
	baz=150						
N43A	Stutzman Famil	35.92	336	P	P	01 00 15.7	+0.5
	baz=148						
K47A	Vermontville	35.97	342	P	P	01 00 16.6	+1.1
	baz=156						
H56A	Elgin	35.98	353	P	P	01 00 16.6	+1.0
	baz=171						
I51A	Listowel	36.00	347	P	P	01 00 16.7	+0.9
	baz=163						
DELO	Deloro Mine	36.08	352	P	P	01 00 17.0	+0.5
	baz=169						
J49A	Marlette	36.08	345	P	P	01 00 16.8	+0.3
	baz=159						
J48A	Bridge Port	36.20	344	P	P	01 00 16.3	-1.2
	baz=158						
BWLO	Walkerton	36.32	347	P	P	01 00 19.1	+0.6
	baz=163						
WMOK	Wichita Mounta	36.37	319	eP	P	01 00 18.7	-0.5
	3.7nm,0.8s						
WMOK	Wichita Mounta	36.37	319	P	P	01 00 19.2	+0.1
	baz=129						
G55A	Calabogie	36.69	353	P	P	01 00 22.4	+0.8
	baz=170						
G53A	Haliburton	36.82	351	P	P	01 00 23.3	+0.5
	baz=167						
M41A	Milan	36.85	335	P	P	01 00 23.2	+0.1
	baz=146						
N40A	Mertquake, Sal	36.89	333	P	P	01 00 23.4	0.0
	baz=144						
LTX	Lajitas	36.95	308	ePcP	PcP	01 02 46.9	+1.2
TXAR	Lajitas Array	36.95	308	P	P	01 00 24.2	0.0
	0.6nm,0.6s,baz=132,slow=9.4,SNR=11						
TXAR				PcP	PcP	01 02 46.9	+1.2
	0.9nm,0.8s,baz=134,slow=6.4,SNR=5.7						
TXAR				LR	LR	01 17 38.7	
	comp=Z,30nm,19.9s,baz=0.0,slow=40						
TX31	Lajitas Ar. Si	36.95	308	eP	P	01 00 24.2	0.0
	6.9nm,1.7s						
I48A	Sherman Twp	37.00	345	P	P	01 00 24.5	+0.2
	baz=159						
L42A	Oliver, Polo	37.02	336	P	P	01 00 24.6	0.0
	baz=148						
K43A	Burlington	37.11	338	P	P	01 00 25.2	-0.1
	baz=151						
PEMO	Pembroke	37.17	353	P	P	01 00 26.0	+0.3
	baz=170						
CPUP	Villa Florida	37.29	160	P	P	01 00 27.8	+0.8
	3.9nm,1.0s,baz=345,slow=6.8,SNR=3.2						
CPUP				PcP	PcP	01 02 48.0	+1.5
	1.7nm,0.7s,baz=42,slow=3.8,SNR=2.9						
CPUP				LR	LR	01 14 56.0	
	comp=Z,141nm,20.9s,baz=357,slow=35						
ALGO	Algonquin Park	37.55	352	P	P	01 00 29.7	+0.7
	baz=168						
F52A	Sundridge	37.59	350	P	P	01 00 30.0	+0.7
	baz=166						
F51A	Arnstein	37.82	350	P	P	01 00 31.8	+0.5
	baz=165						
E53A	Dumoine, Ponti	37.91	352	P	P	01 00 32.7	+0.6
	baz=169						
G47A	Hillman	37.96	345	P	P	01 00 33.2	+0.8
	baz=159						
E52A	Mattawa	37.96	351	P	P	01 00 33.4	+1.0
	baz=167						
KSU1	Kansas State U	38.01	327	P	P	01 00 33.1	+0.2
	baz=136						
H45A	Beulah	38.06	342	P	P	01 00 33.7	+0.4
	baz=155						
F49A	Sandfield	38.08	347	P	P	01 00 33.7	+0.2
	baz=162						
F48A	Evansville	38.27	347	P	P	01 00 35.5	+0.5
	baz=161						
G45A	Suttons Bay	38.33	343	P	P	01 00 36.0	+0.5
	baz=156						
E51A	G1948 Merrick	38.34	350	P	P	01 00 36.1	+0.5
	baz=166						
I42A	Draeger Farm,	38.35	339	P	P	01 00 36.0	+0.2
	baz=150						
E50A	Wahnapitae	38.45	349	P	P	01 00 37.0	+0.4
	baz=164						
D54A	Lac Fusel, La	38.55	354	P	P	01 00 37.9	+0.5
	baz=171						
MSTX	Muleshoe	38.60	315	P	P	01 00 37.9	-0.2
	baz=123						
D52A	ZEK Kipawa Sen	38.60	352	P	P	01 00 38.4	+0.6
	baz=168						
D53A	Lac Vacive, Po	38.60	352	P	P	01 00 38.3	+0.4
	baz=169						
E48A	Lockeyer	38.79	347	P	P	01 00 39.6	+0.1
	baz=162						
I41A	Arkdale	38.85	338	P	P	01 00 40.1	+0.2
	baz=149						
E47A	Iron Bridge	39.02	346	P	P	01 00 41.9	+0.5
	baz=160						
E46A	Sault Ste Mari	39.19	345	P	P	01 00 43.5	+0.8
	baz=159						
MNTX	Cornudas Mount	39.35	310	P	P	01 00 44.1	-0.3
	baz=118,SNR=8.8						
D48A	Paudash Townsh	39.38	348	P	P	01 00 44.8	+0.4
	baz=163						
D47A	Chapleau	39.54	347	P	P	01 00 46.2	+0.4
	baz=161						
E43A	Lone Tree Farm	39.93	343	P	P	01 00 49.1	+0.2
	baz=155						
G40A	Rib Lake	40.01	339	P	P	01 00 49.7	+0.1
	baz=149						
G39A	Holcombe	40.38	338	P	P	01 00 52.9	+0.2
	baz=148,SNR=8.3						
F39A	Loretta	40.82	338	P	P	01 00 57.2	+0.8
	baz=149						
F38A	Pierce - Schro	41.21	338	P	P	01 01 00.3	+0.7
	baz=148						
T25A	Trinidad	41.47	318	P	P	01 01 02.6	+0.5
	baz=124,SNR=6.4						
121A	Cookes Peak, D	41.54	310	P	P	01 01 03.1	+0.4
	baz=116						
ANMO	Albuquerque	41.70	314	P	P	01 01 03.9	-0.1
	1.0nm,0.6s,baz=195,slow=6.0,SNR=2.7						
ANMO	Albuquerque	41.70	314	eP	P	01 01 04.4	+0.3
	2.4nm,0.9s						
ANMO	Albuquerque	41.70	314	P	P	01 01 04.1	+0.1
	baz=120						
TASM	ASL Pad, Albuq	41.70	314	P	P	01 01 04.4	+0.3
	baz=120						
TASM	ASL Pad, Albuq	41.70	314	P	P	01 01 04.2	+0.2
	baz=120						
LAZ	Ladron	41.93	313	eP	P	01 01 05.0	-0.9
C40A	Isle Royale Na	41.97	342	P	P	01 01 06.2	+0.4
	baz=152						
OGNE	Ogallala	42.31	324	P	P	01 01 08.9	+0.1
	baz=131						
SDCO	Great Sand Dun	42.53	318	eP	P	01 01 11.8	+1.0
	7.4nm,0.8s						
SDCO	Great Sand Dun	42.53	318	P	P	01 01 11.8	+1.0
	baz=124,SNR=7.7						
EYMN	Ely	42.77	340	P	P	01 01 12.6	+0.4
	baz=149						
S22A	4UR Ranch, Cre	43.41	317	P	P	01 01 18.6	+0.6
	baz=122,SNR=9.8						
TUC	Tucson	43.75	308	P	P	01 01 20.8	+0.3
	baz=114						
ISCO	Idaho Springs	43.76	321	P	P	01 01 21.5	+0.7
	baz=126						
X18A	Snowflake	44.04	311	eP	P	01 01 24.1	+1.1
	7.4nm,1.1s						
MVCO	Mesa Verde	44.27	316	eP	P	01 01 25.6	+0.7
	23nm,1.8s						
MVCO	Mesa Verde	44.27	316	P	P	01 01 25.4	+0.5
	baz=120						
SMCO	Snowmass	44.28	319	eP	P	01 01 25.2	+0.1
	7.0nm,0.8s						
N23A	Red Feather La	44.60	322	P	P	01 01 28.0	+0.5
	baz=126						
AGMN	Agassiz Nation	44.68	336	eP	P	01 01 28.1	+0.5
	7.2nm,0.9s						
AGMN	Agassiz Nation	44.68	336	P	P	01 01 28.5	+0.9
	baz=144						
PV01	Paradox Valley	44.78	317	eP	P	01 01 29.4	+0.5
	8.4nm,1.0s						
PV02	Paradox Valley	44.94	317	eP	P	01 01 31.5	+1.3
	12nm,1.0s						
PV13	Radium Mtn., P	44.97	317	eP	P	01 01 30.7	+0.3
	8.1nm,0.8s						
PV07	Paradox Valley	44.99	317	eP	P	01 01 31.2	+0.7
	6.3nm,0.9s						
PV03	Paradox Valley	45.03	317	eP	P	01 01 31.4	+0.5
	21nm,1.7s						
PV12	Saucer Basin,	45.03	317	eP	P	01 01 31.9	+0.9
	11nm,0.9s						
PV18	Skein Mesa, Pa	45.07	317	eP	P	01 01 31.7	+0.5
	4.1nm,0.7s						
PV11	David Mesa, Pa	45.07	317	eP	P	01 01 31.7	+0.5
	24nm,1.6s						
PV16	Nyswonger Mesa	45.11	317	eP	P	01 01 31.1	-0.4
	4.9nm,0.8s						
PV05	Paradox Valley	45.12	316	eP	P	01 01 31.9	+0.3
	6.0nm,0.8s						
PV22	Blue Mesa, Par	45.14	317	eP	P	01 01 32.4	+0.7
	6.5nm,1.0s						
PV04	Paradox Valley	45.14	317	eP	P	01 01 32.7	+1.0
	12nm,1.4s						
PV21	Cone Mtn., Par	45.28	317	eP	P	01 01 33.6	+0.8
	19nm,1.8s						
RSSD	Black Hills	45.50	326	P	P	01 01 35.5	+1.0
	baz=131						
WUAZ	Wupatki	45.53	312	P	P	01 01 35.7	+0.9
	baz=116						
O20A	White River Ci	45.62	319	eP	P	01 01 36.8	+1.2
	4.9nm,0.8s						
O20A	White River Ci	45.62	319	P	P	01 01 36.7	+1.2
	baz=123						
MDND	Maddock	45.91	333	P	P	01 01 38.3	+0.8
	baz=139						
SCHQ	Schefferville	46.03	3	LR	LR	01 18 40.4	
	comp=Z,52nm,21.5s,baz=228,slow=33						
SCHQ	Schefferville	46.03	3	eP	P	01 01 39.0	+0.7
	4.7nm,0.6s						
ULM	Lac du Bonnet	46.27	338	P	P	01 01 39.0	-1.1
	2.9nm,0.6s,baz=140,slow=8.8,SNR=2.8						
ULM				LR	LR	01 22 50.7	
	comp=Z,44nm,18.7s,baz=118,slow=38						
P17A	Butcher Ranch,	46.92	317	eP	P	01 01 46.3	+0.6
	10.0nm,1.0s						
Y12C	Blythe	47.20	308	P	P	01 01 48.0	+0.2
	baz=112						
W13A	Hualapai Mount	47.22	310	eP	P	01 01 48.8	+0.6
	2.4nm,0.9s						
KNB	Kanab	47.23	313	eP	P	01 01 48.9	+0.7
	7.0nm,0.9s						
MTPU	Mount Pierson	47.23	315	eP	P	01 01 49.3	+0.9
	2.6nm,0.8s						
LCMT	Little Creek M	47.53	313	eP	P	01 01 51.2	+0.7
	3.6nm,0.9s						
IRM	Iron Mountain	47.83	309	P	P	01 01 52.9	+0.2
	baz=111						
BW06	Boulder Array	47.89	322	P	P	01 01 53.7	+0.4
	baz=124,SNR=8.7						
PD31	Pinedale Array	47.89	322	ePcP	PcP	01 03 21.3	-0.5
PDAR	Pinedale Array	47.89	322	P	P	01 01 52.6	-0.7
	2.0nm,0.5s,baz=126,slow=10,SNR=26						
PDAR				PcP	PcP	01 03 21.3	-0.5
	0.9nm,0.8s,baz=134,slow=5.2,SNR=3.7						
JLU	Jordanelle	47.96	318	eP	P	01 01 54.5	+0.6
	4.6nm,0.9s						
TCUT	Toone Canyon	48.19	319	eP	P	01 01 56.7	+1.0
	21nm,1.1s						
DGMT	Dagmar	48.49	331	P	P	01 01 58.2	+0.6
	baz=134						
PSUT	Pine Spring	48.63	315	eP	P	01 01 60.0	+0.9
DUG	Dugway, Tooele	48.67	317	eP	P	01 01 59.7	+0.5
	4.8nm,0.9s						
DUG	Dugway, Tooele	48.67	317	P	P	01 01 60.0	+0.7
	baz=118,SNR=7.0						
AHID	Auburn Hatcher	48.84	321	eP	P	01 02 00.8	+0.1
	5.2nm,1.0s						
SPUT	South Promonto	48.96	318	eP	P	01 02 01.8	+0.3
	17nm,1.9s						
LOHW	Long Hollow	48.99	322	eP	P	01 02 02.3	+0.6
	6.0nm,0.9s						
RLMT	Red Lodge	49.05	324	P	P	01 02 02.6	+0.4
	baz=126						
TPAW	Teton Pass	49.14	322	eP	P	01 02 03.3	+0.3
	4.9nm,0.8s						
BGU	Big Grassy Mou	49.16	318	eP	P	01 02 03.9	+0.8
	5.3nm,0.7s						
FXWY	Fox Creek	49.27	322	eP	P	01 02 04.1	+0.2
	4.1nm,0.9s						
PLCA	Paso Flores	49.27	180	P	P	01 02 03.9	+0.2
	2.2nm,0.7s,baz=18,slow=8.8,SNR=7.2						
PLCA	Paso Flores	49.27	180	eP	P	01 02 03.9	+0.2
	35nm,1.9s						
SHOC	Shoshone, Teco	49.33	310	P	P	01 02 04.8	+0.6
	baz=112						
GSC	Goldstone, Bar	49.52	309	P	P	01 02 06.2	+0.5
	baz=111						
GCMT	Greycliff	49.67	325	eP	P	01 02 07.2	+0.4
R11A	Troy Canyon, C	49.78	314	P	P	01 02 08.6	+0.8
	baz=114						
QLMT	Earthquake Lak	50.16	323	eP	P	01 02 12.2	+1.5
BOZ	Bozeman (W)	50.69	324	P	P	01 02 15.3	+0.7
	baz=124,SNR=5.5						
CWC	Cottonwood Cre	50.89	310	P	P	01 02 16.6	+0.4
	baz=111						
MCMT	McKenzie Canyo	51.01	322	eP	P	01 02 18.0	+0.9
EGMT	Eagleton	51.04	327	P	P	01 02 17.8	+0.7
	baz=127						
DLMT	Dillon	51.14	323	eP	P	01 02 18.8	+0.8
	6.6nm,1.1s						
HLID	Hailey	51.34	320	P	P	01 02 20.1	+0.6
	baz=119						
HRY	Holter Researc	51.43	325	eP	P	01 02 20.7	+0.7
VES	Vestal, Richgr	51.45	309	P	P	01 02 21.0	+0.8
	baz=110						
PKM	Mcpherson Peak	51.70	308	P	P	01 02 22.5	+0.1
	baz=108						
NVAR	Mina Array Bea	51.78	313	P	P	01 02 23.3	+0.4
	0.8nm,0.6s,baz=118,slow=6.0,SNR=5.7						
MSO	Missoula	52.71	324	P	P	01 02 29.9	+0.3
	baz=122						
WVOR	Wild Horse Val	53.59	317	eP	P	01 02 36.7	+0.5
	27nm,1.9s						
G08A	Pilot Rock	55.02	320	eP	P	01 02 47.0	+0.4
	5.2nm,0.9s						
NEW	Newport	55.30	324	P	P	01 02 48.9	+0.5
	baz=120						
M04C	Macdoel	55.53	315	P	P	01 02 50.5	+0.2
	baz=111						
J05D	Fort Rock, OR	55.68	317	P	P	01 02 51.9	+0.5
	baz=113						
PINE	Pine Mountain	55.68	318	eP	P	01 02 52.1	+0.7
	9.8nm,0.9s						
L04D	Klamath Falls	56.01	316	P	P	01 02 53.8	0.0
	baz=111						
K02D	Willamette Mer	57.12	316	P	P	01 03 01.5	-0.1
	baz=110						
I02D	Swisshome	57.74	317	P	P	01 03 05.5	-0.3
	baz=111						
G03D	McMinnville, O	57.77	319	P	P	01 03 05.8	-0.1
	baz=112						
B05A	Bryant	58.25	322	P	P	01 03 09.8	+0.5
	baz=115						
D03D	Eldon	58.56	321	P	P	01 03 11.5	0.0
	baz=114						
YKA	Yellowknife Ar	62.24	339	P	P	01 03 36.0	-0.3
	1.1nm,0.7s,baz=120,slow=6.9,SNR=7.0						
SUMG	Summit	66.66	10	eP	P	01 04 06.3	+0.6
	13nm,1.3s						
ESDC	Sonseca Array	66.67	51	P	P	01 04 04.6	-1.2
	0.6nm,0.8s,baz=284,slow=5.2,SNR=4.6						
TORD	Torodi Ar. Bea	71.14	79	P	P	01 04 32.9	-1.2
	8.3nm,0.4s,baz=290,slow=6.6,SNR=16						
EPYK	Eagle Plains	72.44	337	P	P	01 04 41.1	+0.1
	baz=109						
TAM	Tamanrasset	74.12	69	eP	P	01 04 53.3	+1.4
	5.6nm,1.0s						
BNI	Bardonecchia	75.02	46	eP	P	01 04 58.5	+1.8
	17nm,1.6s						
SENIN	Lac Senin/Sane	75.51	44	eP	P	01 05 00.9	+1.2
	7.8nm,0.8s						
PRP	Porcupine Dome	75.72	335	eP	P	01 04 59.9	-0.5
	3.7nm,0.8s						
ILAR	Eielson Array	76.16	335	P	P	01 05 00.1	-2.5
	0.8nm,0.8s,baz=111,slow=4.3,SNR=7.2						
ILAR				LR	LR	01 39 53.2	
	comp=Z,47nm,20.0s,baz=108,slow=37						
POKR	Poker Plat Res	76.44	335	P	P	01 05 04.3	0.0
	baz=98						
TUE	Stuetta	76.93	44	eP	P	01 05 08.8	+1.1
	5.8nm,0.8s						
KEST	Kesra	76.98	55	P	P	01 05 09.3	+1.3
	7.0nm,0.9s,baz=221,slow=6.9,SNR=5.3						
KEST	Kesra	76.98	55	eP	P	01 05 09.1	+1.1
	9.0nm,0.9s						
DAVA	Damuels	77.31	44	eP	P	01 05 11.4	+1.7
	6.6nm,1.1s						
FUORN	Ofenpass-Fuorn	77.56	44	eP	P	01 05 12.2	+0.9
	6.5nm,0.9s						
TOLK	Toolik Lake Re	77.76	338	P	P	01 05 11.8	+0.1
	baz=97						
KTH	Kantishna Hill	77.77	333	eP	P	01 05 12.5	+0.6
	6.3nm,1.1s						
BPAW	Bear Paw Mtn.	77.84	334	eP	P	01 05 12.9	+0.7
	6.6nm,0.9s						
FETA	Feichten	77.89	44	eP	P	01 05 14.8	+1.8
	6.0nm,0.8s						
RETA	Reutte	77.91	43	epP	P	01 05 14.6	+1.6
	3.0nm,1.0s						
MOTA	Moosalm	78.14	43	epP	P	01 05 15.7	+1.3
	2.2nm,0.7s						
SQTA	Sankt Quirin	78.21	44	eP	P	01 05 16.3	+1.6
	3.9nm,0.8s						
CAST	Castle Rocks	78.28	333	eP	P	01 05 14.3	-0.3
	5.2nm,1.0s						
PPLA	Purkeypile	78.29	332	eP	P	01 05 14.9	+0.1
	6.4nm,0.9s						
WTTA	Wattenberg	78.50	44	epP	P	01 05 17.6	+1.2
	3.9nm,0.9s						
NOA	NORSAR Array B	78.52	29	P	P	01 05 15.4	-0.6
	1.3nm,0.9s,baz=270,slow=5.4,SNR=3.8						
NOA				LR	LR	01 38 40.8	
	comp=Z,10nm,19.5s,baz=255,slow=35						
ABTA	Abfaltersbach	79.11	44	epP	P	01 05 21.0	+1.4
	3.4nm,0.7s						
CLL	Collm	79.36	39	eP	P	01 05 21.0	+0.3
KBA	Koelnbreinsper	79.67	44	epP	P	01 05 24.1	+1.2
	5.6nm,1.1s						
HFS	Hagfors	79.72	30	LR	LR	01 34 13.3	
	comp=Z,27nm,20.6s,baz=266,slow=31						
KHC	Kasperske Hory	79.77	42	eP	P	01 05 24.5	+1.4
GERES	GERESS Array B	79.86	42	P	P	01 05 21.6	-2.1
	1.5nm,0.9s,baz=258,slow=4.0,SNR=11						
BRG	Berggiesshubel	79.96	40	eP	P	01 05 25.0	+0.9
	8.8nm,1.6s						
MOA	Molln	80.27	43	epP	P	01 05 26.8	+1.0
	4.2nm,1.1s						
GOPC	GO Pecny, Ondr	80.53	41	eP	P	01 05 28.9	+1.7
ARSA	Arzberg	81.15	43	eP	P	01 05 30.2	-0.4
	3.1nm,1.0s						
UPC	Upice	81.29	40	eP	P	01 05 32.3	+1.1
CHVC	Chvalec	81.31	40	eP	P	01 05 31.2	-0.1
CONA	Conrad Observa	81.34	43	eP	P	01 05 33.2	+1.6
	4.7nm,1.2s						
OSTC	Ostas	81.41	40	eP	P	01 05 32.5	+0.6
DPC	Dobruska-Polom	81.49	40	eP	P	01 05 33.6	+1.2
MODS	Modra-Piesok	82.25	42	eP	P	01 05 36.8	+0.4
VYHS	Vyhne	83.28	42	eP	P	01 05 43.1	+1.4
ARA0	ARCESS Array S	84.05	21	eP	P	01 05 45.7	+0.5
ARCES	ARCESS Array B	84.05	21	P	P	01 05 45.7	+0.5
	0.2nm,0.5s,baz=274,slow=4.4,SNR=3.4						
FIA0	FINESS Array S	85.65	29	eP	P	01 05 52.9	-0.5
FINES	FINESS Array B	85.65	29	P	P	01 05 52.9	-0.5
	1.4nm,0.8s,baz=308,slow=9.4,SNR=4.2						
FINES				LR	LR	01 37 14.5	
	comp=Z,32nm,20.8s,baz=285,slow=31						
MDVR	Moldovita	85.69	46	⇑iP	P	01 05 55.3	+1.3

AGG	**Agios Georgios**	**86.98**	**51**	*e*P	**P**	**01 06 01.4**	**+0.9**
	31nm,1.8s						
MLR	**Muntele Rosu**	**88.52**	**44**	*e*P	**P**	**01 06 08.6**	**+0.7**
	24nm,1.9s						
MLR	**Muntele Rosu**	**88.52**	**44**	⇓*i*P	**P**	**01 06 08.1**	**+0.2**
VNA3	**Neumayer Olymp**	**89.39**	**164**	P	**P**	**01 06 12.7**	**+1.6**
VNA1	**Neumayer--Stat**	**89.50**	**163**	P	**P**	**01 06 13.5**	**+1.9**
AKASG	**Malin Array Be**	**89.58**	**39**	P	**P**	**01 06 11.6**	**-1.0**
	0.7nm,0.5s,baz=268,slow=3.4,SNR=3.7						
SNAA	**Sanae**	**91.54**	**163**	P	**P**	**01 06 22.2**	**+1.0**
SNAA	**Sanae**	**91.54**	**163**	*e*P	**P**	**01 06 22.5**	**+1.3**
	4.8nm,1.0s						
RAR	**Rarotonga**	**92.15**	**249**	LR	LR	01 40 24.1	
	comp=Z,225nm,18.7s,baz=294,slow=31						
ZALV	**Zalesovo Beam**	**114.20**	**15**	PKP	**PKiKP**	**01 11 53.4**	**-1.0**
	0.6nm,0.4s,baz=323,slow=3.8,SNR=3.3						
MK32	**Makanchi Array**	**119.70**	**21**	*e*PKPdf	**PKPdf**	**01 12 03.7**	**-1.6**
MKAR	**Makanchi Array**	**119.70**	**21**	PKP	**PKPdf**	**01 12 03.7**	**-1.6**
	0.4nm,0.6s,baz=27,slow=1.8,SNR=3.6						
SONA0	**Songino Array**	**123.57**	**2**	*e*PKPdf	**PKPdf**	**01 12 11.4**	**-1.5**
SONM	**Songino Array**	**123.57**	**2**	PKP	**PKPdf**	**01 12 11.4**	**-1.5**
	0.2nm,0.3s,baz=336,slow=3.2,SNR=2.9						
CD2	**Chengdu**	**140.19**	**7**	PKP	**PKPdf**	**01 12 43.4**	**-1.1**
WHN	**Wuhan**	**140.58**	**353**	PKP	**PKPdf**	**01 12 46.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**151.11**	**20**	PKP	**PKPdf**	**01 13 01.8**	**-1.5**
	1.0nm,0.3s,baz=330,slow=5.2,SNR=4.3						
CMAR				PKPbc	**PKPbc**	**01 13 09.2**	**+0.1**
	5.6nm,0.8s,baz=316,slow=3.2,SNR=19						
ASAR	**Alice Springs**	**152.09**	**235**	PKP	**PKPdf**	**01 13 03.9**	**-0.8**
	1.1nm,0.7s,baz=107,slow=1.8,SNR=8.3						
ASAR				PKPbc	**PKPbc**	**01 13 10.6**	**-0.7**
	8.6nm,0.7s,baz=117,slow=2.6,SNR=56						

MEX 05 00:56:14.3±0.5**, 15°.11N×92°.32W, h13**^{km}±3^{km}**, MD3.6,**
Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.21**	**166**	*i* P	Pg	00 56 18.8	-0.1
THIG				*i* S	Sg	00 56 21.6	-0.4
PCIG		**1.05**	**304**	*i* P	Pb	00 56 30.7	-3.6
PCIG				*i* S	Sb	00 56 43.2	-4.8
CCIG	**Comitan**	**1.18**	**8**	*e*P	Pb	00 56 33.0	-3.7
CCIG				*e*S	Sb	00 56 47.7	-4.2
TGIG		**1.83**	**335**	*e*P	Pn	00 56 42.4	-3.1
TGIG				*i* S	Sn	00 57 04.2	-4.4

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*IDC **05** 01:21:13.9±1.8, 2°.49N×126°.34E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.5/44, mbtmp3.7/5, MS2.8/2, Ms1 2.9/2, ms1mx2.3/37, Error ellipse: s-maj=210.2km s-min=25.2km az=69.0*

*ISCJB **05** 01:21:19.5±0.7, 2°.6N±0°.1×126°.5E±0°.2, h55^{km}, mb3.8/5, MS2.7/2, Error ellipse: s-maj=25.4km s-min=7.7km az=147.0*

*DJA **05** 01:21:19.4±1.6, 3°N±4°×12°7E±°, h15^{km}±15^{km}, M4.2/6, mb4.9/1, MLv3.9/6*

ISC 05 01:21:21.3±1.0**, 2°.57N**±0°.10×**126°.5E**±0°.1**, h55**^{km}**, n11,**
σ**0^{s}.51**/10**, mb4.0**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.45**	**320**	P	**Pn**	**01 21 45.0**	**-0.3**
SGSI				S	**Sn**	**01 22 04.0**	**+0.7**
TNTI	**Ternate**	**2.00**	**153**	P	**Pn**	**01 21 53.2**	**+0.5**
SANI	**Sanana**	**4.61**	**186**	P	**Pn**	**01 22 28.5**	**0.0**
SWI	**Sorong**	**5.88**	**125**	P	**Pn**	**01 22 45.8**	**-0.2**
ASAR	**Alice Springs**	**27.06**	**165**	P	**P**	**01 26 58.0**	**-0.9**
	0.4nm,0.5s,baz=347,slow=7.1,SNR=6.7						
PSI	**Prapat**	**27.51**	**271**	LR	LR	01 39 25.5	
	comp=Z,35nm,18.0s,baz=49,slow=40						
CMAR	**Chiang Mai Arr**	**31.25**	**302**	LR	LR	01 40 40.3	
	comp=Z,7.3nm,19.3s,baz=90,slow=37						
SONM	**Songino Array**	**48.31**	**342**	P	**P**	**01 29 57.6**	**+0.2**
	0.4nm,0.5s,baz=167,slow=7.1,SNR=3.6						
MKAR	**Makanchi Array**	**58.36**	**326**	P	**P**	**01 31 11.0**	**0.0**
	0.7nm,0.6s,baz=140,slow=7.8,SNR=8.6						
ZALV	**Zalesovo Beam**	**61.50**	**333**	P	**P**	**01 31 32.7**	**+0.3**
	0.7nm,0.5s,baz=124,slow=7.2,SNR=2.6						
KURBB	**Kurchatov Arra**	**62.57**	**328**	P	**P**	**01 31 39.3**	**-0.3**
	0.6nm,0.4s,baz=125,slow=6.3,SNR=13						

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*ISCJB **05** 01:29:13.0±0.5, 23°.08S±0°.04×69°.00W±0°.06, h111^{km}±5^{km}, mb4.1/3, Error ellipse: s-maj=8.5km s-min=6.9km az=3.0*

*SJA **05** 01:29:13.2±0.5, 23°.16S×69°.00W, h95^{km}±5^{km}, ML3.0, MW4.2*

*IDC **05** 01:29:13.1±1.0, 23°.04S×68°.63W, h86^{km}±16^{km}, mb3.5/2, mb1 3.5/6, mb1mx3.3/29, mbtmp3.8/6, Error ellipse: s-maj=44.4km s-min=20.2km az=99.0*

*GUC **05** 01:29:14.6±0.7, 23°.03S×69°.01W, h95^{km}±3^{km}, ML3.9*

ISC 05 01:29:13.0±0.8**, 23°.09S**±0°.05×**68°.96W**±0°.05**, h101**^{km}±8^{km}**,**
n26, σ**1^{s}.56**/42**, mb3.7**/3**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.48**	**5**	P	**Pn**	**01 29 29.8**	**+0.5**
	427nm,0.3s,baz=140,slow=7.9,SNR=9082						
LVC				S	**Sn**	**01 29 40.3**	**-1.1**
	341nm,0.3s,baz=73,slow=19,SNR=50						
LVC	**Limon Verde**	**0.48**	**5**	*i* P	**Pn**	**01 29 29.9**	**+0.7**
LVC	**Limon Verde**	**0.48**	**5**	*i* P	**Pn**	**01 29 30.0**	**+0.7**
LVC				*e*S	**Sn**	**01 29 41.4**	**0.0**
PB15	**IPOC Station P**	**0.49**	**256**	*e*P	**Pn**	**01 29 30.2**	**+1.1**
PB15				*i* S	**Sn**	**01 29 42.0**	**+0.9**
PB06	**IPOC Station P**	**0.68**	**304**	*i* P	**Pn**	**01 29 31.3**	**+0.7**
PB06				*i* S	**Sn**	**01 29 44.2**	**+0.4**
PB06	**IPOC Station P**	**0.68**	**304**	*e*P	**Pn**	**01 29 31.2**	**+0.7**
PB06				*i* S	**Sn**	**01 29 44.1**	**+0.4**
PB06				IAML		01 29 44.9	
	comp=E,12µm,0.3s						
PB05	**IPOC Station P**	**1.17**	**281**	*i* P	**Pn**	**01 29 36.1**	**+0.5**
PB05				*i* S	**Sn**	**01 29 52.9**	**+0.3**
PB05	**IPOC Station P**	**1.17**	**281**	*e*P	**Pn**	**01 29 36.4**	**+0.9**
PB05				*i* S	**Sn**	**01 29 53.0**	**+0.4**
PB05				IAML		01 29 53.5	
	comp=E,2µm,0.2s						
PB03	**IPOC Station P**	**1.27**	**325**	*i* P	**Pn**	**01 29 37.7**	**+0.9**
PB03				*i* S	**Sn**	**01 29 56.3**	**+1.6**
PB03	**IPOC Station P**	**1.27**	**325**	*e*P	**Pn**	**01 29 37.7**	**+0.9**
PB03				*i* S	**Sn**	**01 29 55.2**	**+0.5**
PB03				IAML		01 29 56.5	
	comp=N,4µm,0.6s						
PB09	**IPOC Station P**	**1.32**	**348**	*e*P	**Pn**	**01 29 38.9**	**+1.6**
PB09				*e*S	**Sn**	**01 29 56.1**	**+0.4**
PB09				IAML		01 29 58.8	
	comp=N,2µm,0.7s						
PB04	**IPOC Station P**	**1.33**	**304**	*e*P	**Pn**	**01 29 38.3**	**+0.8**
PB04				*i* S	**Sn**	**01 29 56.7**	**+0.7**
PB04				IAML		01 30 02.1	
	comp=N,3µm,0.4s						
PB10	**IPOC Station P**	**1.53**	**254**	⇑*i*P	**Pn**	**01 29 41.3**	**+1.6**
PB10				*e*S	**Sn**	**01 30 00.8**	**+1.0**
PB07	**IPOC Station P**	**1.61**	**328**	*e*P	**Pn**	**01 29 41.8**	**+1.0**
PB07				*i* S	**Sn**	**01 30 02.2**	**+0.3**
PB02	**IPOC Station P**	**1.97**	**334**	*e*P	**Pn**	**01 29 46.1**	**+0.8**
PB02				*i* S	**Sn**	**01 30 10.5**	**+0.6**
PB01	**IPOC Station P**	**2.10**	**346**	*e*P	**Pn**	**01 29 47.9**	**+0.9**
PB01				*i* S	**Sn**	**01 30 13.8**	**+0.8**
HJA	**Humahuaca**	**3.27**	**93**	*i* P	**Pn**	**01 30 05.4**	**+2.7**
HJA				IAML		01 30 07.7	
	comp=Z,77nm,0.7s						
YJA	**Yavi**	**3.31**	**75**	*i* P	**Pn**	**01 30 06.5**	**+3.2**
YJA				IAML		01 30 08.4	
	comp=Z,12nm,0.8s						
AZAP	**Zapla**	**3.74**	**108**	*i* P	**Pn**	**01 30 10.9**	**+2.0**
LPAZ	**La Paz**	**6.81**	**7**	P	**Pn**	**01 30 51.9**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=195,slow=4.0,SNR=20						
CFA	**Coronel Fontan**	**8.50**	**176**	P	**Pn**	**01 31 12.8**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=346,slow=15,SNR=48						
CFA				S	**Sn**	**01 32 42.0**	**-5.6**
	comp=Z,0.6nm,0.3s,baz=257,slow=18,SNR=3.5						
SIV	**San Ignacio**	**10.25**	**48**	P	**Pn**	**01 31 34.2**	**-3.0**
	comp=Z,0.6nm,0.3s,baz=238,slow=11,SNR=14						
SIV				S	Sn	01 33 20.3	-10
	comp=Z,0.3nm,0.3s,baz=135,slow=19,SNR=5.2						
PLCA	**Paso Flores**	**17.64**	**184**	P	**Pn**	**01 33 13.8**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=5.2,slow=11,SNR=3.5						
BDFB	**Brasilia**	**21.09**	**73**	P	**P**	**01 33 47.5**	**-2.0**
	comp=Z,2.1nm,0.5s,baz=249,slow=8.6,SNR=4.2						
PTGA	**Pitinga**	**23.88**	**23**	P	**P**	**01 34 16.4**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=197,slow=19,SNR=2.5						
TORD	**Torodi Ar. Bea**	**77.94**	**70**	P	**P**	**01 41 00.5**	**+0.2**
	comp=Z,7.0nm,0.3s,baz=240,slow=6.2,SNR=8.8						

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*ROM **05** 01:33:38.8±0.1, 44°.184N±0°.004×10°.179E±0°.004, h6^{km}, ML2.4/24, Error ellipse: s-maj=0.4km s-min=0.2km az=198.0*

*ISCJB **05** 01:33:39.2±0.2, 44°.14N±0°.02×10°.14E±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=1.8km az=11.5*

*GEN **05** 01:33:39.2, 44°.19N×10°.19E, h4^{km}±1^{km}, Ml2.4*

*LDG **05** 01:33:39.7±0.1, 44°.19N×10°.19E, h3^{km}, Md2.7/2, Ml2.6/22, Error ellipse: s-maj=2.1km s-min=1.5km az=36.0*

ISC 05 01:33:38.8±0.8**, 44°.17N**±0°.02×**10°.15E**±0°.01**, h7**^{km}±4^{km}**,**
n82, σ**1^{s}.95**/142**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	**Equi**	**0.00**	**58**	P	**Pg**	**01 33 40.4**	**+0.4**
EQUI				S	**Sg**	**01 33 41.2**	**+0.3**
EQUI	**Equi**	**0.00**	**58**	P	**Pg**	**01 33 40.5**	**+0.4**
EQUI				S	**Sg**	**01 33 41.2**	**+0.3**
EQUI				AML	AML		
	comp=E,13550µm,0.4s						
EQUI				AML	AML		
	comp=N,12300µm,0.9s						
T0912	**Minucciano (LU**	**0.04**	**85**	P	**Pg**	**01 33 40.5**	**+0.2**
T0912				S	**Sg**	**01 33 41.3**	**-0.2**
FIVI	**Fivizzano**	**0.08**	**348**	P	**Pg**	**01 33 40.9**	**+0.2**
FIVI				S	**Sg**	**01 33 42.2**	**+0.1**
T0911	**Castelpoggio (**	**0.08**	**226**	P	**Pg**	**01 33 41.9**	**+1.2**
T0911				S	**Sg**	**01 33 43.4**	**+1.3**
T0911				AML	AML		
	comp=E,3920µm,1.3s						
T0911				AML	AML		
	comp=N,7280µm,0.5s						
T0911				AML	AML		
	comp=E,3800µm,1.4s						
T0911				AML	AML		
	comp=N,7225µm,0.5s						
T0911				AML	AML		
	comp=E,3925µm,1.3s						
T0911				AML	AML		
	comp=N,7280µm,0.5s						
T0911				AML	AML		
	comp=E,3805µm,1.4s						
T0911				AML	AML		
	comp=N,7225µm,0.5s						
T0911				AML	AML		
	comp=E,3920µm,1.3s						
T0911				AML	AML		
	comp=N,7280µm,0.5s						
T0911				AML	AML		
	comp=E,3790µm,1.4s						
T0911				AML	AML		
	comp=N,7230µm,0.5s						
T0911				AML	AML		
	comp=N,7280µm,0.5s						
T0911				AML	AML		
	comp=N,7230µm,0.5s						
T0911				AML	AML		
	comp=E,3920µm,1.3s						
T0911				AML	AML		
	comp=E,3790µm,1.4s						
T0911				AML	AML		
	comp=N,7230µm,0.5s						
T0911				AML	AML		
	comp=N,7280µm,0.5s						
T0911				AML	AML		
	comp=E,3790µm,1.4s						
T0911				AML	AML		
	comp=E,3920µm,1.3s						
FOSD	**Fosdinovo**	**0.12**	**243**	P	**Pg**	**01 33 42.8**	**+1.3**
FOSD				S	**Sg**	**01 33 45.4**	**+2.2**
VLC	**Villacollemand**	**0.17**	**92**	P	**Pg**	**01 33 42.6**	**+0.3**
VLC				S	**Sg**	**01 33 45.2**	**+0.5**
VLC				AML	AML		
	comp=E,3130µm,0.7s						
VLC				AML	AML		
	comp=N,4385µm,0.1s						
VLC				AML	AML		
	comp=E,3345µm,0.8s						
VLC				AML	AML		
	comp=N,4625µm,0.1s						
VLC				AML	AML		
	comp=E,3130µm,0.7s						
VLC				AML	AML		
	comp=N,4380µm,0.1s						
VLC				AML	AML		
	comp=E,3345µm,0.8s						
VLC				AML	AML		
	comp=N,4625µm,0.1s						
VLC				AML	AML		
	comp=E,3135µm,0.7s						
VLC				AML	AML		
	comp=N,4380µm,0.1s						
VLC				AML	AML		
	comp=E,3345µm,0.8s						
VLC				AML	AML		
	comp=N,4625µm,0.1s						
VLC				AML	AML		
	comp=E,3345µm,0.8s						
VLC				AML	AML		
	comp=E,3135µm,0.7s						
VLC				AML	AML		
	comp=N,4380µm,0.1s						
VLC				AML	AML		
	comp=N,4625µm,0.1s						
VLC				AML	AML		
	comp=E,3345µm,0.8s						
VLC				AML	AML		
	comp=E,3135µm,0.7s						
VLC				AML	AML		
	comp=N,4380µm,0.1s						
VLC				AML	AML		
	comp=N,4625µm,0.1s						
PLMA	**Palmaria, Port**	**0.24**	**242**	P	**Pg**	**01 33 45.0**	**+1.3**
PLMA				S	**Sg**	**01 33 49.0**	**+2.1**
PLMA				AML	AML		
	comp=E,1305µm,0.3s						
PLMA				AML	AML		
	comp=N,1685µm,0.6s						
PLMA				AML	AML		
	comp=E,1305µm,0.3s						
PLMA				AML	AML		
	comp=N,1685µm,0.6s						
PLMA				AML	AML		
	comp=E,1305µm,0.3s						
PLMA				AML	AML		
	comp=N,1685µm,0.6s						
PLMA				AML	AML		
	comp=N,1685µm,0.6s						
PLMA				AML	AML		
	comp=E,1305µm,0.3s						
PLMA				AML	AML		
	comp=N,1685µm,0.6s						
PLMA				AML	AML		
	comp=E,1305µm,0.3s						
CARD	**Cardoso**	**0.28**	**120**	P	**Pg**	**01 33 44.5**	**+0.3**
CARD				S	**Sg**	**01 33 48.5**	**+0.6**
CARD	**Cardoso**	**0.28**	**120**	P	**Pg**	**01 33 44.6**	**+0.3**
CARD				S	**Sg**	**01 33 49.0**	**+1.1**
CARD				AML	AML		
	comp=E,1455µm,0.4s						
CARD				AML	AML		
	comp=N,1410µm,0.5s						
CARD				AML	AML		
	comp=E,1455µm,0.4s						
CARD				AML	AML		
	comp=N,1410µm,0.5s						
CARD				AML	AML		
	comp=E,1455µm,0.4s						
CARD				AML	AML		
	comp=N,1410µm,0.5s						
CARD				AML	AML		
	comp=N,1410µm,0.5s						
CARD				AML	AML		
	comp=E,1455µm,0.4s						
CARD				AML	AML		
	comp=N,1410µm,0.5s						
CARD				AML	AML		
	comp=E,1455µm,0.4s						
CODM	**Codolo**	**0.31**	**316**	P	**Pg**	**01 33 45.2**	**+0.3**
CODM				S	**Sg**	**01 33 50.1**	**+1.0**
GRAM	**Graiana**	**0.33**	**350**	P	**Pg**	**01 33 45.8**	**+0.5**
GRAM				S	**Sg**	**01 33 50.7**	**+0.9**
GRAM	**Graiana**	**0.33**	**350**	P	**Pg**	**01 33 45.9**	**+0.5**
GRAM				S	**Sg**	**01 33 50.9**	**+1.1**
GRAM				AML	AML		
	comp=E,4320µm,0.3s						
GRAM				AML	AML		
	comp=N,4330µm,0.3s						
GRAM				AML	AML		
	comp=E,4320µm,0.3s						
GRAM				AML	AML		
	comp=N,4330µm,0.3s						
GRAM				AML	AML		
	comp=E,4320µm,0.3s						
GRAM				AML	AML		
	comp=N,4330µm,0.3s						
GRAM				AML	AML		
	comp=E,4320µm,0.3s						
GRAM				AML	AML		
	comp=N,4330µm,0.3s						
GRAM				AML	AML		
	comp=E,4320µm,0.3s						
GRAM				AML	AML		
	comp=N,4330µm,0.3s						
BDI	**Bagni Di Lucca**	**0.34**	**107**	P	**Pg**	**01 33 45.5**	**+0.1**
BDI				S	**Sg**	**01 33 51.0**	**+1.1**
BDI				AML	AML		
	comp=E,722µm,0.6s						
BDI				AML	AML		
	comp=N,632µm,0.3s						
BDI				AML	AML		
	comp=E,656µm,0.6s						
BDI				AML	AML		
	comp=N,661µm,1.4s						
BDI				AML	AML		
	comp=E,722µm,0.6s						
BDI				AML	AML		
	comp=N,632µm,0.3s						
BDI				AML	AML		
	comp=E,656µm,0.6s						
BDI				AML	AML		
	comp=N,661µm,1.4s						
BDI				AML	AML		
	comp=E,722µm,0.6s						
BDI				AML	AML		
	comp=E,656µm,0.6s						
BDI				AML	AML		
	comp=N,661µm,1.4s						
BDI				AML	AML		
	comp=N,632µm,0.3s						
BDI				AML	AML		
	comp=E,722µm,0.6s						
BDI				AML	AML		
	comp=E,656µm,0.6s						
BDI				AML	AML		
	comp=N,661µm,1.4s						
BDI				AML	AML		
	comp=N,632µm,0.3s						
MAIM	**Mastiano**	**0.35**	**135**	P	**Pg**	**01 33 46.1**	**+0.5**
MAIM				S	**Sg**	**01 33 51.2**	**+0.9**
MAIM	**Mastiano**	**0.35**	**135**	P	**Pg**	**01 33 46.4**	**+0.7**
MAIM				S	**Sb**	**01 33 52.3**	**-0.9**
MAIM				AML	AML		
	comp=E,1650µm,0.3s						
MAIM				AML	AML		
	comp=N,1068µm,0.4s						
MAIM				AML	AML		
	comp=E,1650µm,0.3s						
MAIM				AML	AML		
	comp=N,1068µm,0.4s						
MAIM				AML	AML		
	comp=E,1650µm,0.3s						
MAIM				AML	AML		
	comp=N,1068µm,0.4s						
MAIM				AML	AML		
	comp=E,1650µm,0.3s						
MAIM				AML	AML		
	comp=N,1068µm,0.4s						
MAIM				AML	AML		
	comp=E,1650µm,0.3s						
MAIM				AML	AML		
	comp=N,1068µm,0.4s						
POPM	**Popiglio**	**0.45**	**105**	P	**Pg**	**01 33 47.6**	**0.0**
POPM				S	**Sg**	**01 33 54.4**	**+0.9**
POPM	**Popiglio**	**0.45**	**105**	P	**Pg**	**01 33 47.8**	**+0.2**
POPM				S	**Sb**	**01 33 55.4**	**-0.7**
POPM				AML	AML		
	comp=E,925µm,0.3s						
POPM				AML	AML		
	comp=N,1155µm,0.2s						
POPM				AML	AML		
	comp=E,925µm,0.3s						
POPM				AML	AML		
	comp=N,1155µm,0.2s						
POPM				AML	AML		
	comp=N,1155µm,0.2s						
POPM				AML	AML		
	comp=E,925µm,0.3s						
POPM				AML	AML		
	comp=N,1155µm,0.2s						
POPM				AML	AML		
	comp=E,925µm,0.3s						
MSSA	**Maissana**	**0.48**	**289**	P	**Pg**	**01 33 49.0**	**+0.9**
MSSA				S	**Sg**	**01 33 56.7**	**+2.3**
MSSA				AML	AML		
	comp=E,458µm,0.9s						
MSSA				AML	AML		
	comp=N,470µm,0.7s						
MSSA				AML	AML		
	comp=E,459µm,0.9s						
MSSA				AML	AML		
	comp=N,470µm,0.7s						
MSSA				AML	AML		
	comp=E,459µm,0.9s						
MSSA				AML	AML		
	comp=N,470µm,0.7s						
MSSA				AML	AML		
	comp=E,459µm,0.9s						
MSSA				AML	AML		
	comp=N,470µm,0.7s						
ZCCA	**Zocca**	**0.62**	**72**	AML	AML		
	comp=E,594µm,0.4s						
ZCCA				AML	AML		
	comp=E,783µm,0.5s						
ZCCA				AML	AML		
	comp=N,652µm,1.1s						
ZCCA				AML	AML		
	comp=N,580µm,1.1s						
ZCCA				AML	AML		
	comp=E,783µm,0.5s						
ZCCA				AML	AML		
	comp=N,652µm,1.1s						
ZCCA				AML	AML		
	comp=E,594µm,0.4s						
ZCCA				AML	AML		
	comp=N,580µm,1.1s						
ZCCA				AML	AML		
	comp=E,594µm,0.4s						
ZCCA				AML	AML		
	comp=E,783µm,0.5s						
ZCCA				AML	AML		
	comp=N,652µm,1.1s						
ZCCA				AML	AML		
	comp=N,580µm,1.1s						
ZCCA				AML	AML		
	comp=E,594µm,0.4s						
ZCCA				AML	AML		
	comp=E,783µm,0.5s						
ZCCA				AML	AML		
	comp=N,652µm,1.1s						
ZCCA				AML	AML		
	comp=N,580µm,1.1s						
CRMI	**Carmignano**	**0.70**	**122**	P	**Pg**	**01 33 52.6**	**+0.3**
CRMI				S	**Sb**	**01 34 03.0**	**-0.2**
CRMI				AML	AML		
	comp=E,79µm,1.5s						
CRMI				AML	AML		
	comp=N,99µm,0.6s						
CRMI				AML	AML		
	comp=E,79µm,1.5s						
CRMI				AML	AML		
	comp=N,100µm,0.6s						
CRMI				AML	AML		
	comp=E,79µm,1.5s						
CRMI				AML	AML		
	comp=N,100µm,0.6s						
CRMI				AML	AML		
	comp=E,79µm,1.5s						
CRMI				AML	AML		
	comp=N,100µm,0.6s						
FNVD	**Fontana Vidola**	**0.70**	**89**	P	**Pg**	**01 33 52.6**	**+0.3**

FNVD				S	Sb	01 34 02.6	-0.7
FNVD				AML	AML		
	comp=E,477µm,1.3s						
FNVD				AML	AML		
	comp=N,428µm,0.7s						
FNVD				AML	AML		
	comp=E,477µm,1.3s						
FNVD				AML	AML		
	comp=N,427µm,0.7s						
FNVD				AML	AML		
	comp=E,477µm,1.3s						
FNVD				AML	AML		
	comp=N,427µm,0.7s						
FNVD				AML	AML		
	comp=E,477µm,1.3s						
FNVD				AML	AML		
	comp=N,427µm,0.7s						
GORR	**Gorreto**	0.76	306	P	Pg	01 33 53.9	+0.5
GORR				S	Sg	01 34 04.0	+0.8
GORR	**Gorreto**	0.76	306	P	Pg	01 33 53.9	+0.5
GORR				AML	AML		
	comp=E,213µm,1.1s						
GORR				AML	AML		
	comp=N,234µm,1.1s						
GORR				AML	AML		
	comp=E,213µm,1.1s						
GORR				AML	AML		
	comp=N,234µm,1.1s						
GORR				AML	AML		
	comp=N,234µm,1.1s						
GORR				AML	AML		
	comp=E,213µm,1.1s						
GORR				AML	AML		
	comp=N,234µm,1.1s						
GORR				AML	AML		
	comp=E,213µm,1.1s						
GROG	**Isola di Gorgo**	0.76	194	P	Pg	01 33 54.4	+1.0
GROG				S	Sg	01 34 05.4	+2.1
GROG				AML	AML		
	comp=E,445µm,0.6s						
GROG				AML	AML		
	comp=N,456µm,0.3s						
GROG				AML	AML		
	comp=E,445µm,0.6s						
GROG				AML	AML		
	comp=N,456µm,0.3s						
GROG				AML	AML		
	comp=E,445µm,0.6s						
GROG				AML	AML		
	comp=N,456µm,0.3s						
GROG				AML	AML		
	comp=E,445µm,0.6s						
GROG				AML	AML		
	comp=N,456µm,0.3s						
SEI	**Scarperia**	0.88	97	P	Pg	01 33 55.6	-0.1
SEI				S	Sb	01 34 08.1	-0.2
SEI				AML	AML		
	comp=E,392µm,0.3s						
SEI				AML	AML		
	comp=N,468µm,0.3s						
SEI				AML	AML		
	comp=E,392µm,0.3s						
SEI				AML	AML		
	comp=N,468µm,0.3s						
SEI				AML	AML		
	comp=E,392µm,0.3s						
SEI				AML	AML		
	comp=N,468µm,0.3s						
SEI				AML	AML		
	comp=E,392µm,0.3s						
SEI				AML	AML		
	comp=N,468µm,0.3s						
BRIS	**BRISIGHELLA**	0.98	90	P	Pn	01 34 04.0	+5.0
OSSC	**Osservatorio P**	1.02	129	P	Pg	01 33 58.6	+0.2
OSSC				S	Sb	01 34 12.7	+0.3
OSSC				AML	AML		
	comp=E,254µm,1.6s						
OSSC				AML	AML		
	comp=N,298µm,0.8s						
OSSC				AML	AML		
	comp=E,238µm,0.4s						
OSSC				AML	AML		
	comp=N,266µm,0.8s						
OSSC				AML	AML		
	comp=E,238µm,0.4s						
OSSC				AML	AML		
	comp=N,266µm,0.8s						
OSSC				AML	AML		
	comp=E,238µm,0.4s						
OSSC				AML	AML		
	comp=N,266µm,0.8s						
OSSC				AML	AML		
	comp=E,238µm,0.4s						
OSSC				AML	AML		
	comp=N,266µm,0.8s						
RUFI	**Rufina**	1.03	108	P	Pg	01 33 58.4	-0.3
RUFI				S	Sb	01 34 12.8	0.0
CSNT	**Castellina Chi**	1.08	130	P	Pg	01 33 59.2	-0.3
CSNT				S	Sb	01 34 14.3	+0.2
CSNT				AML	AML		
	comp=E,119µm,1.6s						
CSNT				AML	AML		
	comp=N,144µm,0.5s						
CSNT				AML	AML		
	comp=E,119µm,1.6s						
CSNT				AML	AML		
	comp=N,144µm,0.5s						
CSNT				AML	AML		
	comp=N,144µm,0.5s						
CSNT				AML	AML		
	comp=E,119µm,1.6s						
CSNT				AML	AML		
	comp=N,144µm,0.5s						
CSNT				AML	AML		
	comp=E,119µm,1.6s						
PCP	**Piancastagn**	1.21	289	P	Pg	01 34 02.7	+0.7
PCP				AML	AML		
	comp=E,72µm,0.8s						
PCP				AML	AML		
	comp=N,66µm,0.4s						
PCP				AML	AML		
	comp=E,72µm,0.8s						
PCP				AML	AML		
	comp=N,66µm,0.4s						
PCP				AML	AML		
	comp=N,66µm,0.4s						
PCP				AML	AML		
	comp=E,72µm,0.8s						
PCP				AML	AML		
	comp=N,66µm,0.4s						
PCP				AML	AML		
	comp=E,72µm,0.8s						
FINB	**Finale Ligure**	1.31	271	P	Pn	01 34 03.5	-0.1
FINB				AML	AML		
	comp=E,76µm,0.5s						
FINB				AML	AML		
	comp=N,70µm,0.5s						
FINB				AML	AML		
	comp=E,76µm,0.5s						
FINB				AML	AML		
	comp=N,70µm,0.5s						
FINB				AML	AML		
	comp=E,76µm,0.5s						
FINB				AML	AML		
	comp=N,70µm,0.5s						
FINB				AML	AML		
	comp=E,76µm,0.5s						
FINB				AML	AML		
	comp=N,70µm,0.5s						
ROTM	**Rocchetta Tana**	1.46	299	P	Pg	01 34 08.6	+1.8
CASP	**Castiglione de**	1.47	159	P	Pn	01 34 05.5	-0.2
CASP				AML	AML		
	comp=E,64µm,0.5s						
CASP				AML	AML		
	comp=N,56µm,1.4s						
CASP				AML	AML		
	comp=E,64µm,0.5s						
CASP				AML	AML		
	comp=N,56µm,1.4s						
CASP				AML	AML		
	comp=N,56µm,1.4s						
CASP				AML	AML		
	comp=E,64µm,0.5s						
CASP				AML	AML		
	comp=N,56µm,1.4s						
CASP				AML	AML		
	comp=E,64µm,0.5s						
CAFI	**Castiglion Fio**	1.56	122	P	Pn	01 34 07.3	+0.3
CAFI				AML	AML		
	comp=E,23µm,0.8s						
CAFI				AML	AML		
	comp=N,27µm,0.7s						
CAFI				AML	AML		
	comp=E,23µm,0.8s						
CAFI				AML	AML		
	comp=N,27µm,0.7s						
CAFI				AML	AML		
	comp=E,23µm,0.8s						
CAFI				AML	AML		
	comp=N,27µm,0.7s						
CAFI				AML	AML		
	comp=E,23µm,0.8s						
CAFI				AML	AML		
	comp=N,27µm,0.7s						
IMI	**Imperia**	1.65	262	P	Pn	01 34 07.9	-0.3
IMI				AML	AML		
	comp=E,44µm,0.6s						
IMI				AML	AML		
	comp=N,72µm,1.4s						
IMI				AML	AML		
	comp=E,44µm,0.6s						
IMI				AML	AML		
	comp=N,72µm,1.4s						
IMI				AML	AML		
	comp=E,44µm,0.6s						
IMI				AML	AML		
	comp=N,72µm,1.4s						
IMI				AML	AML		
	comp=E,44µm,0.6s						
IMI				AML	AML		
	comp=N,72µm,1.4s						
CDCA	**Citt‘ di Caste**	1.67	114	S	Sg	01 34 33.0	+0.7
NEGI	**Seborga**	1.79	261	P	Pn	01 34 10.6	+0.3
PGF	**Pioggiola**	1.82	208	*e*Pn	Pn	01 34 10.7	0.0
PGF				*e*Sn	Sn	01 34 32.9	-1.1
	comp=N,16nm,0.3s						
SAOF	**Saorge**	1.88	265	P	Pn	01 34 11.9	+0.5
SAOF				AML	AML		
	comp=E,78µm,0.9s						
SAOF				AML	AML		
	comp=N,65µm,0.5s						
SAOF				AML	AML		
	comp=E,78µm,0.9s						
SAOF				AML	AML		
	comp=N,65µm,0.5s						
SAOF				AML	AML		
	comp=E,78µm,0.9s						
SAOF				AML	AML		
	comp=N,65µm,0.5s						
SBF	**Sospel**	1.98	262	*e*Pn	Pn	01 34 12.8	-0.1
SBF				*e*Sn	Sn	01 34 37.1	-0.9
	comp=N,17nm,0.3s						
MBDF	**Montbardon**	2.48	284	*e*Pn	Pn	01 34 19.6	-0.2
MBDF	**Montbardon**	2.48	284	*e*Pg	Pb	01 34 25.8	+1.9
MBDF				*e*Sn	Sn	01 34 48.8	-1.7
MBDF				*e*Sg	Sg	01 34 58.5	-0.1
	comp=N,22nm,1.0s						
FRF	**La Foret Royal**	2.60	258	*e*Pn	Pn	01 34 21.2	-0.2
FRF				*e*Sn	Sn	01 34 51.9	-1.3
	comp=N,4.5nm,0.3s						
LPG	**La Plagne**	2.76	300	*e*P	Pn	01 34 26.4	+2.6
LPG				*e*Sn	Sn	01 34 55.7	-1.8
	comp=N,6.6nm,0.5s						
LMR	**La Mourre**	2.77	254	*e*Pn	Pn	01 34 23.3	-0.3
LMR				*e*Sn	Sn	01 34 55.7	-1.5
	comp=N,2.7nm,0.2s						
LPL	**La Plagne**	2.78	300	*e*P	Pn	01 34 26.4	+2.4
LPL				*e*Sn	Sn	01 34 56.0	-1.9
	comp=N,6.6nm,0.4s						
FETA	**Feichten**	2.89	8	Pg	Pb	01 34 32.2	+1.5
	comp=N,1.2nm,0.5s						
TRI	**Trieste**	3.00	58	P	Pn	01 34 28.5	+1.8
TRI				AML	AML		
	comp=E,17µm,1.0s						
TRI				AML	AML		
	comp=N,17µm,1.5s						
TRI				AML	AML		
	comp=E,17µm,1.0s						
TRI				AML	AML		
	comp=N,17µm,1.5s						
TRI				AML	AML		
	comp=E,17µm,1.0s						
TRI				AML	AML		
	comp=N,17µm,1.5s						
ABTA	**Abfaltersbach**	3.07	32	*e*Pn	Pb	01 34 31.8	-2.0
	comp=N,0.5nm,0.2s						
ABTA				*e*Sn	Sb	01 35 08.8	-2.8
	comp=N,5.7nm,0.5s						
SKDS	**Skadanscina**	3.08	62	*i* Pn	Pn	01 34 28.4	+0.5
SKDS				*i* Sn	Sn	01 35 05.1	+0.2
	comp=Z,2.0nm,0.1s						
DAVA	**Damuels**	3.13	357	*e*Pn	Pb	01 34 32.7	-2.2
	comp=Z,3.5nm,0.4s						
DAVA				Sn	Sb	01 35 10.5	-2.8
	comp=Z,4.4nm,0.4s						
ORIF	**Oris-en-Rattie**	3.15	285	*e*P	Pn	01 34 31.4	+2.5
ORIF				*e*Sn	Sn	01 35 04.6	-2.1
	comp=Z,5.5nm,0.5s						
SQTA	**Sankt Quirin**	3.15	13	*e*Pn	Pb	01 34 32.4	-2.8
	comp=Z,1.6nm,0.2s						
SQTA				Sn	Sb	01 35 14.6	+0.9
	comp=Z,5.5nm,0.4s						
MOTA	**Moosalm**	3.25	12	*e*Pn	Pn	01 34 33.6	+3.2
	comp=Z,1.1nm,0.2s						
WTTA	**Wattenberg**	3.27	18	*e*Pn	Pb	01 34 34.3	-3.0
	comp=Z,0.7nm,0.3s						
WTTA				Sn	Sb	01 35 17.9	+0.6
	comp=Z,9.1nm,0.5s						
SMRF	**Simiane la Rot**	3.30	268	*e*Pn	Pn	01 34 30.7	-0.3
SMRF				*e*Sn	Sn	01 35 08.6	-1.9
	comp=Z,2.8nm,0.4s						
RETA	**Reutte**	3.35	7	*e*Pn	Pb	01 34 36.0	-2.6
	comp=Z,1.1nm,0.5s						
RETA				*e*Sn	Sb	01 35 17.5	-2.1
	comp=Z,2.7nm,0.6s						
NVLJ	**Novalja**	3.41	82	*e*Pn	Pn	01 34 33.9	+1.6
NVLJ				Sn	Sn	01 35 12.4	-0.7
MYKA	**Terra Mystica**	3.48	44	*e*Pn	Pb	01 34 37.5	-3.3
	comp=Z,0.8nm,0.3s						
DUGI	**Dugi Otok**	3.54	91	*i* Pn	Pn	01 34 35.0	+0.8
DUGI				Sn	Sn	01 35 16.8	+0.5
KBA	**Koelnbreinsper**	3.68	36	*e*Pn	Pb	01 34 41.2	-3.0
	comp=Z,0.4nm,0.1s						
CABF	**La Chapelle**	3.77	312	*e*P	Pn	01 34 40.1	+2.7
CABF				*e*Sn	Sn	01 35 19.2	-2.8
	comp=Z,2.0nm,0.4s						
OBKA	**Obir**	3.89	51	*e*Pn	Pn	01 34 43.5	+4.4
	comp=Z,2.0nm,0.4s						
OBKA				Sg	Sg	01 35 49.0	+5.3
	comp=Z,13nm,0.7s						
ZIRJ	**Zirje**	4.00	95	*i* Pn	Pn	01 34 41.4	+0.8
ZIRJ				Sn	Sn	01 35 28.6	+0.9
MORI	**Morici**	4.02	92	*e*Pn	Pn	01 34 41.9	+1.1
MORI				Sn	Sn	01 35 28.1	0.0
UDBI	**Udbina**	4.04	83	*e*Pn	Pn	01 34 42.1	+0.9
SOKA	**Soboth**	4.26	52	*e*Pn	Pn	01 34 46.3	+2.2
	comp=Z,0.9nm,0.3s						
SOKA				Sn	Sn	01 35 35.8	+1.7
	comp=Z,1.7nm,0.6s						
HINF	**Hinteralfeld**	4.32	329	*e*P	Pn	01 34 48.0	+3.1
HINF				*e*Sn	Sn	01 35 32.2	-3.3
	comp=Z,4.1nm,0.4s						
LASF	**Ste Croix**	4.53	271	*e*Pn	Pn	01 34 47.5	-0.4
HAU	**Haudompre**	4.66	327	*e*P	Pn	01 34 51.8	+2.1
HAU				*e*Sn	Sn	01 35 40.5	-3.6
	comp=Z,5.7nm,0.4s						
MOA	**Molln**	4.67	36	*e*Pn	Pn	01 34 51.8	+2.1
	comp=Z,1.5nm,0.4s						
MOA				*e*Sn	Sn	01 35 46.8	+2.6
	comp=Z,1.3nm,0.4s						
CDF	**Champ du Feu**	4.69	336	*e*P	Pn	01 34 52.9	+2.8
CDF				*e*Sn	Sn	01 35 41.2	-3.6
	comp=Z,2.3nm,0.5s						
ARSA	**Arzberg**	4.87	49	*e*Pn	Pn	01 34 55.1	+2.7
	comp=Z,2.8nm,0.4s						
MAKA	**Makarska**	5.05	98	*e*Pn	Pn	01 34 56.5	+1.5
MAKA				Sn	Sn	01 35 54.4	+0.8
SMF	**Signal de Mont**	5.09	301	*e*P	Pn	01 34 59.1	+3.6
SMF				*e*Sn	Sn	01 35 51.0	-3.5
	comp=Z,3.6nm,0.4s						
PAGF	**Fort de Pagny**	5.35	327	*e*P	Pn	01 35 02.9	+3.8
PAGF				*e*Sn	Sn	01 35 57.0	-4.0
	comp=Z,2.0nm,0.4s						
LOR	**Lormes**	5.39	307	*e*P	Pn	01 35 02.9	+3.3
LOR				*e*Sn	Sn	01 35 57.9	-4.0
	comp=Z,1.8nm,0.3s,baz=125						
AVF	**Avril sur Loir**	5.45	301	*e*P	Pn	01 35 04.3	+3.8
AVF				*e*Sn	Sn	01 35 59.6	-3.9
	comp=Z,0.3nm,0.2s						
SSF	**Saint Saulge**	5.49	304	*e*P	Pn	01 35 04.4	+3.4
SSF				*e*Sn	Sn	01 36 00.6	-3.7
	comp=Z,1.8nm,0.5s						
MEZF	**Maizieres J'vi**	5.59	323	*e*P	Pn	01 35 05.9	+3.5
	baz=142						
MEZF				*e*Sn	Sn	01 36 02.5	-4.4
	comp=Z,2.6nm,0.4s						
BGF	**Bois d'Agland**	5.67	297	*e*P	Pn	01 35 05.2	+1.7
BGF				*e*Sn	Sn	01 36 05.1	-3.8
	comp=Z,3.0nm,0.5s						

ROM 05 01:34:39.6±0.1**,44°.187N**±0°.005×**10°.186E**±0°.005**,**
h8^{km},Md1.2/4**,Error ellipse: s-maj=0.5km s-min=0.3km**
az=197.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	0.03	137	P	Pg	01 34 41.5	+0.2
T0912				S	Sg	01 34 42.5	+0.1
T0912				END			
EQUI	**Equi**	0.03	229	P	Pg	01 34 41.5	+0.2
EQUI				S	Sg	01 34 42.6	+0.1
EQUI				END			
FIVI	**Fivizzano**	0.07	321	P	Pg	01 34 42.0	+0.3
FIVI				S	Sg	01 34 43.2	+0.1
T0911	**Castelpoggio (**	0.11	227	P	Pg	01 34 43.0	+0.7
T0911				S	Sg	01 34 44.9	+0.8
T0911				END			
VLC	**Villacollemand**	0.15	101	P	Pg	01 34 43.7	+0.8
VLC				S	Sg	01 34 46.2	+1.2
VLC				END			
FOSD	**Fosdinovo**	0.16	240	P	Pg	01 34 44.0	+1.0
FOSD				S	Sg	01 34 46.6	+1.3
CARD	**Cardoso**	0.27	127	P	Pb	01 34 46.2	-0.5
CARD				S	Sg	01 34 49.9	+1.3
PLMA	**Palmaria, Port**	0.28	241	P	Pg	01 34 46.0	+0.8
PLMA				S	Sg	01 34 50.2	+1.3
GRAM	**Graiana**	0.32	344	P	Pb	01 34 47.0	-0.6
GRAM				S	Sb	01 34 52.0	-0.9
BDI	**Bagni Di Lucca**	0.32	113	P	Pg	01 34 46.8	+0.7
BDI				S	Sb	01 34 51.8	-1.2
POPM	**Popiglio**	0.43	109	P	Pb	01 34 48.9	-0.7
POPM				S	Sb	01 34 55.5	-0.7
NOVE	**Novellara**	0.72	32	AML	AML		
NOVE				AML	AML		

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*ISCJB **05** 01:35:17.9±1.3, 37°.51N±0°.09×71°.80E±0°.10, h130^{km},*
mb3.2/2, Error ellipse: s-maj=13.4km s-min=10.6km
az=158.1

*IDC **05** 01:35:17.3±5.4, 37°.21N×72°.51E, h157^{km}±48^{km}, mb3.1/1,*
mb1 3.1/6, mb1mx2.8/57, mbtmp3.6/6, Error ellipse:
s-maj=66.9km s-min=39.7km az=134.0

*NNC **05** 01:35:20.3±11.0, 37°.63N×71°.54E, h72^{km}±338^{km}, mb3.7,*
mpv3.9, Error ellipse: s-maj=86.1km s-min=70.5km
az=169.0

ISC 05 01:35:18.0±1.6**,37°.5N**±0°.1×**71°.9E**±0°.1**,h130^{km},n19,**
σ1^s.85/24**,2C-4D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	4.82	16	P	Pn	01 36 30.6	+1.6
	SNR=70						
UCH	**Uchtor**	5.13	23	P	Pn	01 36 33.9	+0.7
	SNR=51						
KZA	**Kyzart**	5.25	29	P	Pn	01 36 34.6	-0.2
	SNR=11						
EKS2	**Erkin-Say**	5.34	15	P	Pn	01 36 38.2	+2.4
	SNR=22						
AAK	**Ala-Archa**	5.50	21	P	Pn	01 36 39.3	+1.4
	6.4nm,0.3s,baz=178,slow=8.4,SNR=50						
AAK				S	Sn	01 37 38.2	-1.9
	1.8nm,0.3s,baz=288,slow=23,SNR=6.7						
AAK	**Ala-Archa**	5.50	21	P	Pn	01 36 38.8	+1.0
	22nm,0.5s						
AAK				S	Sn	01 37 40.4	+0.3
	9.6nm,0.7s						
AAK	**Ala-Archa**	5.50	21	P	Pn	01 36 39.1	+1.3
	SNR=21						
KBK	**Karagaybulak**	5.65	24	P	Pn	01 36 40.8	+0.8
	SNR=5.9						
KK31	**Karatay Array**	5.68	350	⇑P	Pn	01 36 43.2	+3.0
	2.9nm,0.3s,baz=192,slow=15,SNR=140						
KK31				⇑S	Sn	01 37 43.6	-0.6
	18nm,0.3s,baz=184,slow=26,SNR=36						
CHMS	**Chumysh**	5.90	21	P	Pn	01 36 44.2	+1.0
	SNR=11						
TKM2	**Tokmak 2**	6.11	27	⇓P	Pn	01 36 46.4	+0.3
	4.2nm,0.7s						
TKM2				⇓S	Sn	01 37 58.2	+3.4
	2.9nm,0.8s						
TKM2	**Tokmak 2**	6.11	27	P	Pn	01 36 46.4	+0.3
	SNR=8.5						
MKAR	**Makanchi Array**	12.06	36	P	Pn	01 38 02.9	-2.6
	0.1nm,0.3s,baz=213,slow=10,SNR=4.0						
KURBB	**Kurchatov Arra**	13.94	18	P	Pn	01 38 31.3	+1.6
	0.1nm,0.3s,baz=207,slow=10,SNR=4.1						
AB31	**Akbulak array**	14.57	327	⇓P	P	01 38 40.8	+0.2
	0.9nm,0.7s,baz=136,slow=11,SNR=8.8						
AB31				⇓S	Sn	01 41 15.4	-3.4
	0.5nm,0.5s,baz=136,slow=24,SNR=4.7						
AKTO	**Aktyubinsk**	16.28	327	P	P	01 39 02.1	+2.5
	0.1nm,0.3s,baz=117,slow=12,SNR=5.4						
ZALV	**Zalesovo Beam**	18.70	24	P	P	01 39 24.2	-1.9
	0.3nm,0.3s,baz=224,slow=12,SNR=3.8						
ARCES	**ARCESS Array B**	40.48	337	P	P	01 42 44.0	+0.5
	0.5nm,0.6s,baz=103,slow=8.8,SNR=7.5						
TORD	**Torodi Ar. Bea**	66.44	269	P	P	01 45 53.2	-0.4
	0.2nm,0.6s,baz=56,slow=4.8,SNR=3.9						

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*IDC **05** 01:42:26.4±1.9, 24°.66S×179°.98E, h508^{km}±18^{km},*
mb3.5/10, mb1 3.7/12, mb1mx3.5/38, mbtmp4.4/12, Error
ellipse: s-maj=19.2km s-min=17.1km az=168.0

*ISCJB **05** 01:42:29.3±0.6, 24°.67S±0°.06×179°.8E±0°.1, h550^{km},*
mb3.9/10, Error ellipse: s-maj=13.7km s-min=7.7km
az=0.6

ISC 05 01:42:29.1±0.6**,24°.78S**±0°.07×**180°.0W**±0°.1**,h550^{km},n53,**
σ1^s.88/59**,mb3.8**/10**,1C,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	4.81	158	P	P	01 43 56.0	-1.2
GLKZ	**Green Lake**	4.83	158	P	P	01 43 55.2	-2.1
GLKZ				S	S	01 45 04.8	-4.8
OUZ	**Omahuta**	11.80	207	P	P	01 45 06.6	+1.2
WCZ	**Waipu Caves**	12.15	202	P	P	01 45 10.7	+1.7
KUZ	**Kuaotunu**	12.49	196	P	P	01 45 13.2	+0.7
WIAZ	**Waiheke Island**	12.69	198	P	P	01 45 15.4	+0.8
DZM	**Mont Dzumac**	12.75	279	P	P	01 45 14.3	-1.2
	0.9nm,0.3s,baz=82,slow=15,SNR=14						
MKAZ	**Moumakai**	12.97	198	P	P	01 45 17.7	+0.2
WMGZ	**Waiomatatini S**	13.07	186	P	P	01 45 21.5	+3.0
HAZ	**Te Kaha**	13.08	188	P	P	01 45 19.1	+0.6
HAZ				S	S	01 47 39.2	+1.1
RUGZ	**Raukumara Rang**	13.30	188	P	P	01 45 22.5	+1.5
RUGZ				S	S	01 47 44.6	+2.1
PUZ	**Puketiti**	13.34	186	P	P	01 45 22.6	+1.3
TWGZ	**Tauwhareparae**	13.47	187	P	P	01 45 22.2	-0.5
TOZ	**Tahuroa Road**	13.48	196	P	P	01 45 26.6	+3.9
URZ	**Urewera**	13.67	190	P	P	01 45 24.3	-0.4
	2.6nm,0.3s,baz=186,slow=5.1,SNR=8.0						
URZ				S	S	01 47 45.6	-3.6
	1.1nm,0.3s,baz=54,slow=12,SNR=3.3						
URZ	**Urewera**	13.67	190	P	P	01 45 23.7	-0.9
MWZ	**Matawai**	13.68	188	P	P	01 45 27.4	+2.5
HIZ	**Hauiti**	14.38	197	P	P	01 45 35.2	+3.3
ARHZ	**Aropaoanui**	14.67	189	P	P	01 45 36.2	+1.2
TWVZ	**Taurewa**	14.77	194	P	P	01 45 37.0	+0.9
NGZ	**Ngauruhoe**	14.83	194	P	P	01 45 39.2	+2.3
KWHZ	**Kaweka Forest**	14.92	191	P	P	01 45 36.7	-0.9
BHHZ	**Black Hill Sta**	15.04	192	P	P	01 45 36.9	-2.0
KAHZ	**Kahuranaki**	15.21	189	P	P	01 45 40.5	0.0
CTA	**Charters Tower**	31.50	272	P	P	01 48 06.6	0.0
	9.6nm,0.4s,baz=96,slow=11,SNR=26						
STKA	**Stephens Creek**	34.42	249	P	P	01 48 31.4	+0.3

	2.6nm,0.6s,baz=99,slow=13,SNR=4.3						
ASAR	**Alice Springs**	41.91	262	P	P	01 49 32.3	+0.2
	2.7nm,0.8s,baz=97,slow=8.3,SNR=18						
SIJI	**Sorong**	52.73	289	P	P	01 50 52.2	-1.1
	11nm,0.6s,baz=100,slow=5.0,SNR=6.5						
VNDA	**Vanda**	53.51	185	P	P	01 50 57.6	-0.2
	0.5nm,0.6s,baz=84,slow=23,SNR=5.1						
MAW	**Mawson**	76.94	200	P	P	01 53 27.2	+2.5
	1.9nm,0.6s,baz=84,slow=15,SNR=4.1						
SNAA	**Sanae**	83.79	179	P	P	01 54 02.2	+1.8
VNA3	**Neumayer Olymp**	84.00	177	P	P	01 54 03.3	+1.9
NVAR	**Mina Array Bea**	85.37	44	P	P	01 54 10.5	+1.7
	1.7nm,0.8s,baz=224,slow=8.5,SNR=9.8						
TXAR	**Lajitas Array**	90.88	58	P	P	01 54 36.6	+2.0
	2.5nm,0.8s,baz=213,slow=6.6,SNR=32						
ILAR	**Eielson Array**	92.88	14	P	P	01 54 42.6	-0.2
	0.3nm,0.5s,baz=228,slow=4.7,SNR=5.1						
PDAR	**Pinedale Array**	93.31	44	P	P	01 54 46.6	+1.0
	0.6nm,0.7s,baz=226,slow=3.9,SNR=6.3						
ARCES	**ARCESS Array B**	132.74	348	PKP	PKiKP	02 00 40.5	-1.6
	0.6nm,0.4s,baz=67,slow=3.2,SNR=7.2						
ARCES				SKPbc	SKiKP	02 03 21.4	-4.8
	1.5nm,0.9s,baz=35,slow=3.3,SNR=4.4						
FINES	**FINESS Array B**	139.28	341	PKhKP	PKPpre	02 00 45.1	
	0.5nm,0.7s,baz=16,slow=9.9,SNR=4.2						
FINES				PKP	PKiKP	02 00 54.6	-1.0
	1.0nm,0.8s,baz=90,slow=3.8,SNR=4.6						
FINES				SKPbc	SKiKP	02 03 41.4	+1.7
	2.8nm,0.8s,baz=51,slow=4.4,SNR=9.7						
NB2	**NORSAR Subarra**	142.94	351	PKP	PKPdf	02 00 57.6	-2.3
	comp=Z,0.1nm,0.3s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	142.94	351	PKhKP	PKPdf	02 00 57.5	-2.3
	comp=Z,0.2nm,0.5s,baz=32,slow=2.7,SNR=4.2						
HFS	**Hagfors**	143.40	349	PKP	PKPdf	02 00 59.1	-1.5
	comp=Z,6.0nm,0.3s,baz=64,slow=3.4,SNR=83						
AKASG	**Malin Array Be**	145.71	327	PKPbc	PKPab	02 01 06.2	-1.9
	comp=Z,0.7nm,0.3s,baz=42,slow=4.0,SNR=7.5						
BRTR	**Keskin Array B**	148.11	306	PKPbc	PKiKP	02 01 13.7	-1.0
	comp=Z,1.0nm,0.7s,baz=122,slow=3.9,SNR=6.2						
OSTC	**Ostas**	151.37	338	*e*PKP	PKiKP	02 01 22.4	+1.4
CHVC	**Chvalec**	151.40	338	*e*PKP	PKiKP	02 01 21.9	+0.9
UPC	**Upice**	151.49	338	*e*PKP	PKiKP	02 01 22.5	+1.3
DPC	**Dobruska-Polom**	151.51	338	*e*PKP	PKiKP	02 01 22.7	+1.4
CLL	**Collm**	151.69	343	⇑*i*PKPbc	PKiKP	02 01 22.4	+0.9
	comp=Z,6.0nm,0.8s						
BRG	**Berggiesshubel**	151.82	341	*e*PKP	PKiKP	02 01 22.8	+0.9
	comp=Z,4.2nm,0.6s						
PVCC	**Panska Ves**	151.93	340	*e*PKP	PKiKP	02 01 23.7	+1.6
GOPC	**GO Pecny, Ondr**	152.40	339	*e*PKP	PKiKP	02 01 24.0	+0.9
KHC	**Kasperske Hory**	153.47	340	*e*PKP	PKiKP	02 01 26.6	+1.3
KHC				*e*x	x	02 01 33.3	
TORD	**Torodi Ar. Bea**	168.32	188	PKPab	PKPab	02 02 47.3	+1.2
	comp=Z,1.0nm,0.9s,baz=189,slow=3.3,SNR=7.1						

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*IDC **05** 01:47:30.9±1.1,6°.63S×148°.22E,h0^{km},mb4.0/6,mb1 4.2/7,mb1mx3.8/32,mbtmp4.0/7,ML2.1/1,MS2.8/2,Ms1 2.8/2,ms1mx2.5/23,Error ellipse: s-maj=52.0km s-min=20.2km az=96.0*

*ISCJB **05** 01:47:38.0±0.6,6°.73S±0°.07×147°.7E±0°.1,h54^{km},mb4.0/8,MS2.7/2,Error ellipse: s-maj=19.5km s-min=8.2km az=14.3*

*NEIC **05** 01:47:41.1±1.5,6°.81S×147°.82E,h70^{km}±6^{km},mb4.0/4,Error ellipse: s-maj=28.4km s-min=10.5km az=120.0*

ISC 05 01:47:39.3±0.8,6°.73S±0°.10×147°.7E±0°.2,h54^{km},n19,σ1^{s}.24/19,mb4.0/8,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	2.72	191	Pn	Pn	01 48 20.4	-0.2
	20nm,0.3s,baz=33,slow=8.1,SNR=41						
PMG				Sn	Sn	01 48 52.3	+0.1
	52nm,0.3s,baz=2.2,slow=14,SNR=12						
PMG	**Port Moresby**	2.72	191	*e*Pn	Pn	01 48 21.1	+0.6
PMG				*e*Sn	Sn	01 48 52.3	+0.1
RABL	**Rabaul**	5.10	61	*e*Pn	Pn	01 48 54.4	+1.1
GUMO	**Guam**	20.38	352	LR	LR	01 59 18.9	
	comp=Z,14nm,18.8s,baz=170,slow=35						
AS31	**Alice Springs**	21.44	217	*e*P	P	01 52 24.2	+1.0
	2.8nm,0.4s						
ASAR	**Alice Springs**	21.44	217	P	P	01 52 24.1	+0.9
	4.9nm,0.6s,baz=51,slow=9.1,SNR=41						
STKA	**Stephens Creek**	25.67	192	P	P	01 53 03.4	-0.8
	3.6nm,0.8s,baz=357,slow=10.0,SNR=4.5						
STKA	**Stephens Creek**	25.67	192	*e*P	P	01 53 03.4	-0.8
	12nm,1.8s						
MJAR	**Matsushiro Arr**	43.95	349	LR	LR	02 13 18.2	
	comp=Z,22nm,19.3s,baz=160,slow=35						
VNDA	**Vanda**	71.15	177	P	P	01 58 52.1	+0.2
	0.4nm,0.5s,baz=322,slow=6.3,SNR=6.3						
MK31	**Makanchi Array**	78.50	320	*e*P	P	01 59 35.6	+0.7
	1.2nm,0.8s						
MK32	**Makanchi Array**	78.50	320	*e*P	P	01 59 35.9	+1.0
MKAR	**Makanchi Array**	78.50	320	P	P	01 59 35.9	+1.0
	1.5nm,0.8s,baz=98,slow=7.5,SNR=10						
ZALV	**Zalesovo Beam**	80.00	328	P	P	01 59 42.9	+0.1
	0.9nm,0.4s,baz=108,slow=7.3,SNR=3.4						
ZAA1	**Zalesovo Array**	80.00	328	*e*P	P	01 59 42.9	+0.1
ILAR	**Eielson Array**	85.87	23	P	P	02 00 10.3	-2.7
	0.5nm,0.8s,baz=238,slow=5.2,SNR=4.3						
ILB	**Eielson Array**	85.87	23	*e*P	P	02 00 10.3	-2.7
	7.2nm,1.8s						
TORD	**Torodi Ar. Bea**	145.95	283	PKPbc	PKPdf	02 07 14.5	+1.2
	0.7nm,0.4s,baz=82,slow=3.4,SNR=22						
TOA1	**Torodi Ar. Sit**	145.95	283	*e*PKPbc	PKPdf	02 07 14.5	+1.2

SNET 05 01:54:05.2±2.8,15°.32N×87°.08W,h0^{km}±78^{km},ML3.5,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VICT	**Victoria**	2.03	228	*e*P	Pn	01 54 39.6	-1.2
LCND	**La Caada**	2.15	202	*e*P	Pn	01 54 41.9	-0.4
LCND				*e*S	Sb	01 55 12.2	-0.1
LCND				IAML		01 55 15.1	
	comp=Z,427nm,0.2s						
CNCH	**Conchagua**	2.16	200	*e*P	Pn	01 54 43.0	+0.3
CNCH				*e*S	Sb	01 55 13.4	+0.7
PAVA	**Las Pavas**	2.41	229	*e*P	Pn	01 54 45.7	-0.3
PAVA				*e*S	Sn	01 55 16.9	+0.6
PAVA				IAML		01 55 19.0	
	comp=Z,222nm,0.3s						
LFU	**La Fuente**	2.52	232	*e*P	Pn	01 54 48.1	+0.6
LFU				*e*S	Sn	01 55 20.6	+1.7
RTR	**El Retiro**	2.86	241	*e*P	Pn	01 54 53.2	+0.9
SBLS	**San Blas**	2.87	239	*e*P	Pn	01 54 52.6	+0.1
CEVE	**Cerro Verde**	2.88	239	*e*P	Pn	01 54 53.0	+0.4
CEVE				*e*S	Sb	01 55 32.8	-0.8

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*ISK **05** 01:55:41.5,38°.19N×26°.00E,h5^{km},ML2.5/12*

*ISCJB **05** 01:55:42.3±0.6,38°.21N±0°.03×26°.01E±0°.04,h9^{km}±4^{km},Error ellipse: s-maj=5.4km s-min=4.2km az=38.7*

*ATH **05** 01:55:42.2,38°.22N×26°.01E,h13^{km}±3^{km},ML2.0/2,Error ellipse: s-maj=4.1km s-min=1.2km az=53.0*

*DDA **05** 01:55:48.6,38°.25N×26°.70E,h30^{km}±1^{km},ML2.1*

ISC 05 01:55:41.9±1.0,38°.21N±0°.03×25°.99E±0°.03,h13^{km}±7^{km},n26,σ0^{s}.36/36,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	**Chios island**	0.18	17	PG	Pg	01 55 46.1	-0.1
CHOS				SG	Sg	01 55 49.3	+0.2
CHOS	**Chios island**	0.18	17	P	Pg	01 55 46.1	-0.1
CHOS				S	Sg	01 55 49.3	+0.2
CHOS				AML	AML	01 55 51.1	
	comp=N,626µm,0.2s						
CHOS				AML	AML	01 55 51.5	
	comp=E,1089µm,0.3s						
CESE	**eme**	0.27	64	PG	Pg	01 55 47.6	0.0
CESE				SG	Sg	01 55 51.7	+0.2
PSRA	**Psara**	0.47	315	P	Pb	01 55 52.2	+0.2
PSRA				S	Sb	01 55 58.8	-0.1
PSRA				AML	AML	01 55 59.2	
	comp=N,724µm,0.3s						
PSRA				AML	AML	01 55 59.3	
	comp=E,880µm,0.1s						
URLA	**Izmir**	0.50	72	PG	Pg	01 55 51.9	+0.1
URLA				SG	Sb	01 55 59.2	-0.7
URLA	**Izmir**	0.50	72	*i* P	Pb	01 55 53.0	+0.3
URLA				*i* S	Sb	01 55 59.5	-0.4
URLA				IAML_P			
	comp=Z,2µm,0.2s						
KRBN	**Karaburun**	0.59	49	PG	Pg	01 55 53.3	-0.1
DGB	**zmir**	0.72	102	*i* P	Pb	01 55 56.2	-0.2
DGB				*i* S	Sb	01 56 06.7	+0.5
DGB				IAML_P			
	comp=Z,1µm,0.2s						
FOCM	**Foa**	0.77	49	PG	Pb	01 55 57.0	-0.2
SMG	**Samos**	0.84	126	P	Pg	01 55 57.7	-0.4
SMG				S	Sb	01 56 10.0	+0.5
BLCB	**Balcova**	0.85	78	PG	Pg	01 55 58.3	0.0
TNSA	**Tinos**	0.93	225	P	Pn	01 56 01.1	+0.4
SIGR	**SIGRI**	1.01	354	PG	Pg	01 56 01.5	+0.2
SIGR	**SIGRI**	1.01	354	P	Pb	01 56 00.8	-0.4
SIGR				S	Sb	01 56 14.5	+0.2
PRK	**Paraskevi**	1.06	12	P	Pn	01 56 02.7	+0.2
PRK				S	Sb	01 56 16.0	+0.1
GCAM	**G?zelcaml?**	1.11	117	PN	Pb	01 56 02.7	-0.2
DKL	**Dikili**	1.12	40	PN	Pb	01 56 02.9	-0.3
ZEDA	**zmir-Bergama**	1.14	48	*i* P	Pg	01 56 04.9	+1.0
ZEDA				IAML_P			
	comp=Z,317nm,0.1s						
APE	**Apeiranthos**	1.20	198	PN	Pn	01 56 04.3	-0.1
APE	**Apeiranthos**	1.20	198	P	Pn	01 56 04.0	-0.4
AYVA	**Ayvalik**	1.23	26	*i* P	Pb	01 56 05.2	+0.2
AYDB	**Zeytinkoy-Aydi**	1.52	99	PN	Pb	01 56 10.3	+0.2
BAYC	**CANAKKALE_Bayr**	1.59	16	*e*P	Pn	01 56 09.0	-0.8
EZN	**Ezine**	1.64	9	PN	Pb	01 56 11.9	0.0
VLY	**Voula,Athens**	1.77	259	P	Pg	01 56 15.9	0.0
LIA	**Limnos Island**	1.80	340	P	Pb	01 56 14.4	-0.3

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*SOME **05** 02:12:27.8,41°.22N×73°.73E,h0^{km}*

*KRNET **05** 02:12:27.4±0.1,41°.08N×73°.73E,h13^{km},mb2.6*

*KNET **05** 02:12:28.7±0.6,41°.18N×73°.82E,h1^{km}±3^{km},ml1.8,Error ellipse: s-maj=4.3km s-min=2.2km az=43.0*

*NNC **05** 02:12:29.1±1.3,41°.15N×73°.68E,h0^{km},mb3.2,mpv3.0,Error ellipse: s-maj=9.2km s-min=6.5km az=171.0*

ISC 05 02:12:25.2±2.2,41°.01N±0°.09×73°.82E±0°.04,h7^{km}±11^{km},n42,σ0^{s}.83/70,33C-10D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	**Aral**	0.93	24	⇓*i*P	Pn	02 12 44.2	-0.7
	baz=30						
ARLS				⇓*i*S	Sb	02 12 56.5	0.0
	baz=30						
AML	**Almayashu**	1.13	355	⇑*i*P	Pb	02 12 47.1	-0.2
	baz=58						
AML				⇑*i*S	Sb	02 13 01.8	-0.5
	baz=58						
AML	**Almayashu**	1.13	355	⇑P	Pb	02 12 47.0	-0.2
	7.4nm,0.2s,SNR=17						
AML				⇓S	Sb	02 13 01.8	-0.5
	26nm,0.4s						
UCH	**Uchtor**	1.33	23	⇑*i*P	Pg	02 12 51.7	+1.0
	baz=27						
UCH				⇑*i*S	Sn	02 13 09.4	+0.7
	baz=27						
UCH	**Uchtor**	1.33	23	⇑P	Pg	02 12 51.5	+0.8
	3.3nm,0.1s,SNR=8.6						
UCH				⇑S	Sn	02 13 09.4	+0.7
	16nm,0.2s						
KZA	**Kyzart**	1.52	45	⇓*i*P	Pg	02 12 55.7	+1.3
	baz=48						
KZA				⇓*i*S	Sg	02 13 16.4	+2.4
	baz=48						
KZA	**Kyzart**	1.52	45	⇑P	Pg	02 12 55.6	+1.3
	3.7nm,0.2s,SNR=9.2						
EKS2	**Erkin-Say**	1.65	359	⇑*i*P	Pg	02 12 56.8	-0.1
	baz=1.0						
EKS2				⇑*i*S	Sg	02 13 17.9	-0.4
	baz=1.0						
EKS2	**Erkin-Say**	1.65	359	⇑P	Pg	02 12 56.9	0.0
	5.4nm,0.2s,SNR=15						
AAK	**Ala-Archa**	1.71	17	⇓P	Pg	02 12 58.3	+0.4
	1.8nm,0.3s						
AAK				⇑S	Sg	02 13 20.3	+0.3
	0.5nm,0.1s						
AAK	**Ala-Archa**	1.71	17	⇑*i*P	Pg	02 12 58.1	+0.2
	baz=20						
AAK				⇑*i*S	Sg	02 13 20.7	+0.7
	baz=20						
AAK	**Ala-Archa**	1.71	17	⇑P	Pg	02 12 59.1	+1.1
	3.9nm,0.2s						
AAK				⇑S	Sg	02 13 20.8	+0.8
	5.3nm,0.2s						
MRKS	**Merke**	1.79	346	P	Pg	02 12 59.3	-0.3
	22nm,0.2s						
MRKS				S	Sb	02 13 21.7	+0.5
	17nm,0.3s						
MRKS	**Merke**	1.79	346	*e*P	Pg	02 12 59.3	-0.3
	22nm,0.2s						
MRKS				*e*S	Sb	02 13 21.7	+0.5
	17nm,0.3s						
KBK	**Karagaybulak**	1.85	27	⇑*i*P	Pg	02 13 00.8	+0.1
	baz=30						
KBK				⇑*i*S	Sg	02 13 25.6	+0.9
	baz=30						
KBK	**Karagaybulak**	1.85	27	⇓P	Pg	02 13 01.5	+0.8
	4.0nm,0.1s,SNR=9.5						
CHMS	**Chumysh**	2.11	19	⇑*i*P	Pb	02 13 04.5	+0.7
	baz=21						
CHMS				⇑*e*S	Sg	02 13 31.7	-1.2
	baz=21						
BOOM	**Boomskoye usch**	2.17	46	⇑*i*P	Pg	02 13 06.4	-0.4
	baz=49						
BOOM				⇑*i*S	Sg	02 13 34.4	-0.6
	baz=49						
ULHL	**Ulahol**	2.20	55	⇑*i*P	Pg	02 13 07.0	-0.3
	baz=57						
ULHL				⇑*i*S	Sg	02 13 35.5	-0.4
	baz=57						
USP	**Ospenovka**	2.31	12	⇑*i*P	Pb	02 13 07.4	+0.1
	baz=14						
USP				⇑*i*S	Sb	02 13 36.5	+0.4
	baz=14						
TKM2	**Tokmak 2**	2.33	34	⇓Pn	Pg	02 13 09.2	-0.6
	2.2nm,0.3s						
TKM2				⇓Sn	Sg	02 13 39.6	-0.4
	11nm,0.7s						
TKM2	**Tokmak 2**	2.33	34	⇑*i*P	Pb	02 13 08.2	+0.6
	baz=37						
TKM2				⇑*i*S	Sb	02 13 37.8	+1.1
	baz=37						
TKM2	**Tokmak 2**	2.33	34	P	Pg	02 13 09.3	-0.5
	SNR=7.4						
SGDS	**Sogindy**	2.52	14	Pg	Pg	02 13 12.4	-1.1
	2.8nm,0.3s						
SGDS				Lg	Lg	02 13 44.1	
	2.5nm,0.3s						
KST	**Kastek**	2.59	37	Pg	Pg	02 13 14.7	-0.1
	3.0nm,0.3s						
KST				Lg	Lg	02 13 48.6	
	8.2nm,0.5s						
KST	**Kastek**	2.59	37	*e*P	Pg	02 13 14.7	-0.1
	3.0nm,0.3s						
KST				*e*S	Sg	02 13 48.6	+0.3
	8.2nm,0.5s						
DGS	**Degeres**	2.67	32	Pg	Pg	02 13 16.1	-0.2
	6.1nm,0.4s						
DGS				Lg	Lg	02 13 50.7	
	11nm,0.4s						
DGS	**Degeres**	2.67	32	*e*P	Pg	02 13 16.1	-0.2
	6.1nm,0.4s						
DGS				*e*S	Sg	02 13 50.7	-0.1
	11nm,0.4s						
KDJ	**Kajisay**	2.76	65	⇑*i*P	Pb	02 13 14.8	-0.2
	baz=67						
KDJ				⇑*i*S	Sb	02 13 49.4	+0.3
	baz=67						
MTBS	**Maitube**	2.88	42	Pg	Pg	02 13 20.6	+0.2
	3.4nm,0.2s						
MTBS				Lg	Lg	02 13 58.3	
	8.2nm,0.3s						
MTBS	**Maitube**	2.88	42	*e*P	Pg	02 13 20.6	+0.2
	3.4nm,0.2s						
MTBS				*e*S	Sg	02 13 58.4	+0.7
	8.2nm,0.3s						
KK31	**Karatay Array**	3.23	311	⇑Pg	Pb	02 13 23.9	+1.0
	0.7nm,0.5s,baz=121,slow=16,SNR=2.9						
KK31				⇑Lg	Lg	02 14 04.5	
	2.1nm,0.3s,baz=130,slow=27,SNR=10						
KOTS	**Kotyrbulak**	3.31	47	Pg	Pg	02 13 28.5	-0.1
	1.6nm,0.3s						
KOTS				Lg	Lg	02 14 11.8	
	37nm,0.6s						
KOTS	**Kotyrbulak**	3.31	47	*e*P	Pg	02 13 28.5	-0.1
	1.6nm,0.3s						
KOTS				*e*S	Sg	02 14 11.8	+0.3
	37nm,0.6s						
KUU	**Kurty**	3.44	32	Pg	Pg	02 13 29.6	-1.4
	1.9nm,0.2s						
KUU				Lg	Lg	02 14 15.0	
	8.9nm,0.3s						
KUU	**Kurty**	3.44	32	⇓*i*P	Pg	02 13 29.6	-1.4
	1.6nm,0.3s						
KUU				⇑*i*S	Sg	02 14 15.0	-0.5
	11nm,0.7s						
KTBS	**Karatobe**	3.44	37	Pg	Pg	02 13 29.9	-1.1
	1.6nm,0.4s						
KTBS				Lg	Lg	02 14 15.0	
	16nm,0.5s						
KTBS	**Karatobe**	3.44	37	*e*P	Pg	02 13 29.9	-1.1
	1.6nm,0.4s						
KTBS				*e*S	Sg	02 14 15.0	-0.6
	16nm,0.5s						
CHKK	**Chushkaly**	3.69	38	Pg	Pg	02 13 34.9	-1.0
	0.7nm,0.2s						
CHKK				Lg	Lg	02 14 22.8	
	6.6nm,0.3s						
CHKK	**Chushkaly**	3.69	38	*e*P	Pg	02 13 34.9	-1.0
	0.7nm,0.2s						
CHKK				*e*S	Sg	02 14 22.8	-0.8
	6.6nm,0.3s						
ARXS	**Arharly**	4.36	41	Pg	Pg	02 13 46.9	-1.8
	1.4nm,0.5s						
ARXS				Lg	Lg	02 14 43.6	
	5.9nm,0.4s						
ARXS	**Arharly**	4.36	41	*e*P	Pg	02 13 46.9	-1.8
	1.4nm,0.5s						
ARXS				*e*S	Sg	02 14 43.6	-1.6
	5.9nm,0.4s						

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*NIED **05** 02:19:00,38°.40N×142°.10E,h35^{km},Mw3.5 Best double couple: $M_0$1.86000×10^{14} NP1:ϕ_s131.00000°,δ14.00000°,λ-33.00000°. NP2:ϕ_s253.00000°,δ82.00000°,λ-102.00000°.*

JMA 05 02:19:31.8±0.1,38°.41N×142°.07E,h31^{km}±1^{km},M3.6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.48	258	P	Pb	02 19 41.6	-0.4
JIKH				S	Sb	02 19 48.1	-0.9
JIO	**Ouri**	0.57	275	P	Pb	02 19 43.2	-0.2
JIO				S	Sb	02 19 50.8	-0.5
JKMT	**Kesennumamotoy**	0.61	311	P	Pb	02 19 44.2	+0.1
JKMT				*i* S	Sb	02 19 52.6	0.0
OFUJ	**Ofunato**	0.74	335	P	Pn	02 19 45.7	-0.4
OFUJ				S	Sb	02 19 55.5	-0.5
JMK	**Ichinoseki**	0.86	309	P	Pn	02 19 47.7	0.0
JMK				S	Sn	02 19 58.9	-0.3
JOU	**Okura**	1.11	268	P	Pn	02 19 51.5	+0.3
JOU				S	Sn	02 20 05.9	+0.5
JOM	**Ohasama**	1.22	331	P	Pn	02 19 53.3	+0.5
JOM				S	Sn	02 20 08.9	+0.7
JFK	**Kawauchi**	1.41	223	P	Pn	02 19 54.5	-0.8
JFK				S	Sn	02 20 10.4	-2.4
JYK	**Kaneyama**	1.43	291	P	Pn	02 19 56.2	+0.6
JYK				*e*S	Sn	02 20 14.5	+1.1
JRG	**Rokugo**	1.49	312	P	Pn	02 19 57.4	+0.9
JRG				*e*S	Sb	02 20 18.1	+0.7

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*BJI **05** 02:19:57.2±0.0,52°.99N×172°.08E,h27^{km},mb4.7/27,mB4.9/19,Ms4.6/7,Ms7 4.3/2*

*IDC **05** 02:19:57.9±0.8,52°.74N×171°.56E,h0^{km},mb4.4/24,mb1 4.6/25,mb1mx4.5/34,mbtmp4.4/25,ML3.1/1,MS3.1/11,Ms1 3.1/11,ms1mx2.9/35,Error ellipse: s-maj=23.2km s-min=12.1km az=175.0*

*ISCJB **05** 02:20:00.0±0.2,52°.57N±0°.04×171°.56E±0°.02,h33^{km},mb4.5/121,MS3.3/12,Error ellipse: s-maj=5.9km s-min=2.0km az=6.7*

*MOS **05** 02:20:00.9±1.1,52°.50N×171°.37E,h39^{km},mb4.9/50,Error ellipse: s-maj=7.4km s-min=4.3km az=115.5*

*KRSC **05** 02:20:00.1±2.0,52°.42N×171°.18E,h100^{km}±57^{km},ML4.6*

*AEIC **05** 02:20:01.3±0.0,53°.33N×171°.72E,h25^{km}*

*NEIC **05** 02:20:02.6±1.2,52°.67N×171°.54E,h34^{km}±5^{km},mb4.7/162,Error ellipse: s-maj=18.9km s-min=7.8km az=180.0*

ISC 05 02:20:02.3±0.4,52°.55N±0°.06×171°.41E±0°.04,h35^{km},n672,σ1^{s}.56/704,mb4.6/122,MS3.1/13,15C-14D,Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	1.65	83	*e*Pn	Pn	02 20 26.7	-2.0
SMY				*e*Sn	Sn	02 20 46.6	-2.1
SMY	**Shemya**	1.65	83	*e*P	Pn	02 20 26.7	-2.0
SMY				*e*		02 20 46.6	
BKI	**Bering**	4.17	312	*e*P	Pn	02 21 04.4	+1.0
BKI				*e*S	Sn	02 21 47.3	-3.6
BKI	**Bering**	4.17	312	P	Pn	02 21 04.4	+1.0
BKI				S	Sn	02 21 47.3	-3.6
MKZ	**Mys Kozlova**	6.11	293	*e*S	Sn	02 22 34.6	-3.9
KBTR	**Krutoberegovo**	6.21	310	*e*P	Pn	02 21 31.5	+0.1
KBTR				*e*S	Sn	02 22 37.9	-3.2
KBTR	**Krutoberegovo**	6.21	310	P	Pn	02 21 31.5	+0.1
KBTR				S	Sn	02 22 37.9	-3.2
TASE	**Tanaga Southea**	6.53	92	*e*Pn	Pn	02 21 35.5	-0.4
TAPA	**Tanaga Point A**	6.67	92	*e*Pn	Pn	02 21 38.1	+0.4
SPN	**Mys Shipunski**	6.92	279	*e*P	Pn	02 21 40.0	-1.1
SPN				*e*S	Sn	02 22 51.9	-6.6
SPN	**Mys Shipunski**	6.92	279	P	Pn	02 21 40.0	-1.1
SPN				S	Sn	02 22 51.9	-6.6
TUMD	**Tumrok D**	7.03	297	*e*S	Sn	02 22 58.8	-2.4
KIMD	**Kanaga Island**	7.04	92	*e*Pn	Pn	02 21 43.1	+0.4
SMKR	**Semkarok**	7.05	309	P	Pn	02 21 44.8	+1.9
SMKR	**Semkarok**	7.05	309	P	Pn	02 21 44.8	+1.9
KIKV	**Kanaga Island**	7.05	91	*e*Pn	Pn	02 21 43.2	+0.2
KZV	**Kizimen**	7.06	296	*e*P	Pn	02 21 43.4	+0.2
KZV				*e*S	Sn	02 22 59.2	-3.0
KZV	**Kizimen**	7.06	296	P	Pn	02 21 43.4	+0.2
KZV				S	Sn	02 22 59.2	-3.0
KINC	**Kanaga Island**	7.07	90	*e*Pn	Pn	02 21 43.3	+0.1
BDR	**Baidarnaya**	7.17	308	*e*P	Pn	02 21 45.9	+1.4
BDR	**Baidarnaya**	7.17	308	P	Pn	02 21 45.9	+1.4
TUMR	**Tumrok**	7.19	297	*e*P	Pn	02 21 45.4	+0.5
TUMR	**Tumrok**	7.19	297	P	Pn	02 21 45.4	+0.5
SRKR	**Sorokina**	7.23	309	*e*P	Pn	02 21 46.2	+0.8
SRKR	**Sorokina**	7.23	309	P	Pn	02 21 46.2	+0.8
KLY	**Klyuchi**	7.32	305	*e*P	Pn	02 21 46.7	+0.2
KLY				S	Sn	02 23 04.5	-3.7
KLY	**Klyuchi**	7.32	305	P	Pn	02 21 46.7	+0.2
KLY				S	Sn	02 23 04.5	-3.7
KRSR	**Krestovskiy**	7.32	304	*e*P	Pn	02 21 45.2	-1.4
KRSR	**Krestovskiy**	7.32	304	P	Pn	02 21 45.2	-1.4
NLC	**Nalytchevo**	7.33	280	*e*S	Sn	02 23 04.7	-3.9
ADK	**Adak**	7.35	90	*e*Pn	Pn	02 21 46.1	-0.9
ADK	**Adak**	7.35	90	*e*P	Pn	02 21 46.1	-0.9
ADAG	**Mount Adagdak**	7.38	90	*e*Pn	Pn	02 21 46.6	-0.9
SDLR	**Sedlovina**	7.61	280	*e*P	Pn	02 21 50.1	-0.5
SDLR				*e*S	Sn	02 23 11.0	-4.6
SDLR	**Sedlovina**	7.61	280	P	Pn	02 21 50.1	-0.5
SDLR				S	Sn	02 23 11.0	-4.6
UGLR	**Uglovaya**	7.64	280	*e*P	Pn	02 21 51.1	0.0
UGLR				*e*S	Sn	02 23 11.4	-5.1
UGLR	**Uglovaya**	7.64	280	P	Pn	02 21 51.1	0.0
UGLR				S	Sn	02 23 11.4	-5.1
GSTD	**Great Sitkin T**	7.65	89	*e*Pn	Pn	02 21 50.9	-0.3
GSTD				*e*Sn	Sn	02 23 15.1	-1.5
SMAR	**Somma**	7.66	280	*e*P	Pn	02 21 51.3	-0.1
SMAR				*e*S	Sn	02 23 11.0	-6.0
SMAR	**Somma**	7.66	280	P	Pn	02 21 51.3	-0.1
SMAR				S	Sn	02 23 11.0	-6.0
KRER	**Koryakskii**	7.69	281	*e*P	Pn	02 21 52.0	+0.2
KRER				*e*S	Sn	02 23 11.7	-6.0
KRER	**Koryakskii**	7.69	281	P	Pn	02 21 52.0	+0.2
KRER				S	Sn	02 23 11.7	-6.0
AVH	**Avacha**	7.70	280	*e*P	Pn	02 21 51.6	-0.2
AVH				*e*S	Sn	02 23 10.5	-7.2
AVH	**Avacha**	7.70	280	P	Pn	02 21 51.6	-0.2
AVH				S	Sn	02 23 10.5	-7.2
GSTR	**Great Sitkin T**	7.70	88	*e*Pn	Pn	02 21 50.4	-1.4
KRX	**Arik**	7.75	281	*e*P	Pn	02 21 52.0	-0.6
KRX				*e*S	Sn	02 23 12.8	-6.3
KRX	**Arik**	7.75	281	P	Pn	02 21 52.0	-0.6
KRX				S	Sn	02 23 12.8	-6.3

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SRDR  Sredinnyy          7.79 304  eP     Pn    02 21 54.4 +1.3
SRDR  Sredinnyy          7.79 304   P     Pn    02 21 54.4 +1.3
RUS   Russkaya           7.87 274  eP     Pn    02 21 54.7 +0.6
RUS                                eS     Sn    02 23 15.3 -6.6
RUS   Russkaya           7.87 274   P     Pn    02 21 54.7 +0.6
RUS                                 S     Sn    02 23 15.3 -6.6
MTVR  Mutnovka           8.07 275  eS     Sn    02 23 21.0 -6.0
KRMR  Karymshinskiy      8.07 277  eS     Sn    02 23 22.0 -4.9
GNL   Ganaly             8.18 283  eP     Pn    02 21 59.5 +1.0
GNL   Ganaly             8.18 283   P     Pn    02 21 59.5 +1.0
OSSR  Ossora             8.19 328  eP     Pn    02 22 01.1 +2.7
OSSR  Ossora             8.19 328   P     Pn    02 22 01.1 +2.7
KDTR  Khodutka, Kamc     8.23 270  eP     Pn    02 21 59.0  0.0
KDTR                               eS     Sn    02 23 22.7 -7.9
KDTR  Khodutka, Kamc     8.23 270   P     Pn    02 21 59.0  0.0
KDTR                                S     Sn    02 23 22.7 -7.9
PEA0B Petropavlovsk-     8.32 279  ePn    Pn    02 22 02.1 +1.7
PEA1  Petropavlovsk-     8.32 279  ePn    Pn    02 22 00.9 +0.5
PETK  Petropavlovsk-     8.32 279   Pn    Pn    02 22 00.9 +0.5
      1.1nm,0.3s,baz=93,slow=18,SNR=12
PETK                                LR    LR    02 25 14.2
      comp=Z,52nm,22.0s,baz=107,slow=38
TILK  Tilichiki          8.44 342  eP     Pn    02 22 04.5 +2.7
TILK  Tilichiki          8.44 342   P     Pn    02 22 04.5 +2.7
KOKL  Mount Kliuchef     8.80  86  ePn    Pn    02 22 06.2 -0.8
ATKA  Atka Island        8.82  87  ePn    Pn    02 22 06.1 -1.0
KOFP  Korovin Flat P     8.87  86  ePn    Pn    02 22 07.3 -0.5
ALID  Alaid              9.99 267   P     Pn    02 22 23.0 -0.2
ALID                               eS     Sn    02 24 08.7 -5.3
ALID  Alaid              9.99 267   P     Pn    02 22 23.0 -0.2
ALID                                S     Sn    02 24 08.7 -5.3
SPIA  Saint Paul Isl    11.53  59  ePn    Pn    02 22 45.2 +1.1
NIKH  Nikolski High     11.97  80  ePn    Pn    02 22 50.0 -0.2
OKTU  Okmok Mt. Tuli    12.42  78  ePn    Pn    02 22 55.7 -0.6
MSW   Makushin Switc    13.13  75  ePn    Pn    02 23 04.6 -1.5
UNV   Unalaska Valle    13.30  76  ePn    Pn    02 23 08.1 -0.2
MA2   Magadan           13.47 310   LR    LR    02 28 19.2
      comp=Z,93nm,18.7s,baz=130,slow=37
GAMB  Gambell           14.29  32  ePn    Pn    02 23 22.0 +0.1
SEY   Seymchan          14.47 323⇓eP      Pn    02 23 26.6 +2.3
BILL  Bilibino          15.74 353  eP     Pn    02 23 42.4 +1.4
      13nm,1.0s
BILL  Bilibino          15.74 353⇓eP      P     02 23 43.1 -1.5
BILL                               eS     Sn    02 26 32.5 -1.5
BILL                                pmax  pmax
      comp=Z,13nm,1.0s
BILL                                MLR   MLR
      comp=Z,107nm,20.0s
YSS   Yuzh-Sakhalins    19.26 265  eP     P     02 24 23.5  0.0
SVW2  Sparrevohn        19.79  51  eP     P     02 24 28.4 -0.8
      comp=Z,8.1nm,0.6s
TTA   Tatalina          20.02  46  eP     P     02 24 29.9 -1.9
      comp=Z,8.4nm,0.8s
TTA   Tatalina          20.02  46  eP     P     02 24 29.9 -1.9
TTA                                 pmax  pmax
      comp=Z,8.0nm,0.8s
OHAK  Old Harbor        20.68  63  eP     P     02 24 37.0 -1.9
      comp=Z,60nm,0.7s
KDAK  Kodiak Island     21.05  61   P     P     02 24 40.7 -2.1
      comp=Z,16nm,0.4s,baz=237,slow=0.6,SNR=101
KDAK                                LR    LR    02 33 51.2
      comp=Z,68nm,18.6s,baz=256,slow=40
KDAK  Kodiak Island     21.05  61  eP     P     02 24 41.2 -1.6
      comp=Z,28nm,0.6s
KDAK  Kodiak Island     21.05  61  i P    P     02 24 40.3 -2.5
SPU   Mount Spurr       21.50  52  eP     P     02 24 46.0 -1.7
PPLA  Purkeypile        21.71  47  eP     P     02 24 49.3 -0.8
      comp=Z,9.5nm,1.0s
CNPM  China Poot        21.77  57  eP     P     02 24 49.8 -0.8
      comp=Z,16nm,0.6s
CAST  Castle Rocks      21.87  46  eP     P     02 24 50.8 -0.9
      comp=Z,7.2nm,0.7s
KTH   Kantishna Hill    22.41  46  eP     P     02 24 56.0 -1.5
      comp=Z,14nm,0.8s
BPAW  Bear Paw Mtn.     22.50  44  eP     P     02 24 57.5 -0.9
      comp=Z,7.0nm,1.1s
PMR   Palmer            22.94  51  eP     P     02 25 02.7 -0.3
      comp=Z,4.9nm,0.7s
PMR   Palmer            22.94  51  eP     P     02 25 02.7 -0.3
PMR                                 pmax  pmax
      comp=Z,5.0nm,0.7s
COLD  Coldfoot          23.69  37  eP     P     02 25 09.2 -1.2
      comp=Z,1.4nm,0.6s
TCOL  CIGO, UAF Yank    23.99  43   P     P     02 25 10.9 -2.3
      baz=259
COLA  College           23.99  43  eP     P     02 25 11.2 -1.9
      comp=Z,30nm,0.8s
COLA  College           23.99  43deP      P     02 25 11.9 -1.2
COLA                                pmax  pmax
      comp=Z,8.0nm,0.8s
YAK   Yakutsk           24.05 310⇓eP      P     02 25 13.4 -0.3
POKR  Poker Plat Res    24.21  43   P     P     02 25 13.5 -1.8
      baz=259
ILAR  Eielson Array     24.38  44   P     P     02 25 14.2 -2.5
      comp=Z,5.2nm,0.6s,baz=249,slow=7.6,SNR=46
ILAR                                LR    LR    02 35 16.3
      comp=Z,65nm,18.3s,baz=272,slow=38
TOLK  Toolik Lake Re    24.41  34  eP     P     02 25 15.5 -1.6
      comp=Z,9.8nm,0.8s
KLR   Kul'dur           25.01 278   P     P     02 25 24.7 +2.0
      comp=Z,1.4nm,0.5s,baz=65,slow=6.0,SNR=7.5
KLR                                 LR    LR    02 37 03.8
      comp=Z,39nm,18.0s,baz=58,slow=41
KLR   Kul'dur           25.01 278⇓eP      P     02 25 24.8 +2.2
KLR                                 pmax  pmax
      comp=Z,4.0nm,1.4s
FYU   Fort Yukon        25.40  40  eP     P     02 25 25.4 -0.5
      comp=Z,12nm,0.7s
TIXI  Tiksi             26.67 332   P     P     02 25 37.7 +0.4
      comp=Z,2.2nm,0.4s,baz=116,slow=11,SNR=4.2
TIXI  Tiksi             26.67 332⇓eP      P     02 25 37.2 -0.2
TIXI                                pmax  pmax
      comp=Z,5.0nm,0.8s
MJAR  Matsushiro Arr    28.24 249   LR    LR    02 36 22.4
      comp=Z,24nm,21.8s,baz=85,slow=35
EPYK  Eagle Plains      28.76  41  eP     P     02 25 55.5 -0.7
      comp=Z,5.0nm,0.6s
EPYK                               ePcP   PcP   02 29 06.3 +1.0
EPYK  Eagle Plains      28.76  41   P     P     02 25 55.4 -0.7
      baz=267
INK   Inuvik            30.11  37   P     P     02 26 07.6 -0.4
      comp=Z,3.5nm,0.6s,baz=281,slow=10,SNR=19
INK                                 PcP   PcP   02 29 09.2 +0.7
      comp=Z,1.2nm,0.5s,baz=289,slow=2.0,SNR=8.0
INK                                 LR    LR    02 39 23.5
      comp=Z,21nm,19.2s,baz=274,slow=39
INK   Inuvik            30.11  37  eP     P     02 26 07.2 -0.8
      comp=Z,3.4nm,0.6s
INK                                ePcP   PcP   02 29 09.2 +0.7
H11N2 WAKE ISLAND Hy    32.94 188   T     T     03 02 10.0
      baz=5.2,slow=76,SNR=62
H11N3 WAKE ISLAND Hy    32.95 188   T     T     03 02 08.2
      baz=5.2,slow=76,SNR=83
H11N1 WAKE ISLAND Hy    32.96 188   T     T     03 02 08.6
      baz=5.2,slow=76,SNR=85
KSRS  Korea Array       33.68 261   LR    LR    02 39 06.4
      comp=Z,21nm,20.2s,baz=63,slow=34
H11S1 WAKE ISLAND Hy    34.17 188   T     T     03 03 32.8
      baz=5.3,slow=76,SNR=481
H11S3 WAKE ISLAND Hy    34.18 188   T     T     03 03 50.7
      baz=5.3,slow=76,SNR=299
H11S2 WAKE ISLAND Hy    34.18 188   T     T     03 03 34.1
      baz=5.3,slow=76,SNR=344
YKW3  Yellowknife Ar    38.75  45  eP     P     02 27 23.6 +0.9
      comp=Z,5.2nm,0.6s
YKA   Yellowknife Ar    38.78  45   P     P     02 27 22.1 -0.8
      comp=Z,3.9nm,0.6s,baz=292,slow=7.9,SNR=20
YKA                                 PcP   PcP   02 29 33.7  0.0
      comp=Z,0.9nm,0.6s,baz=281,slow=3.2,SNR=4.8
YKB5  Yellowknife Ar    38.78  45  eP     P     02 27 22.1 -0.8
YKB5                               ePcP   PcP   02 29 33.7  0.0
ULN   Ulaanbaatar       40.23 290⇑eP      P     02 27 37.4 +2.0
ULN                                 pmax  pmax
      comp=Z,2.0nm,0.6s
SONA0 Songino Array     40.63 290  eP     P     02 27 40.0 +1.3
SONM  Songino Array     40.63 290   P     P     02 27 40.0 +1.3
      comp=Z,1.5nm,0.6s,baz=58,slow=9.7,SNR=7.4
SONM  Songino Array     40.63 290   P     P     02 27 40.0 +1.3
D03D  Eldon             41.07  70   P     P     02 27 42.2 +0.1
      baz=302
B05A  Bryant            41.25  68   P     P     02 27 43.3 -0.3
      baz=302
HHC   Hu-ho-hao-te      41.52 278  eP     P     02 27 49.1 +3.0
HHC                                 pmax  pmax
      comp=Z,8.0nm,0.8s
HHC                                 pmax  pmax
      comp=Z,16nm,4.4s
HHC                                 LR    LR
      comp=Z,96nm,11.9s
HHC                                 LR    LR
      comp=Z,73nm,11.9s
E04D  Cinebar           41.90  71   P     P     02 27 49.0 +0.1
      baz=304
NJ2   Nanjing           42.82 263  eP     P     02 27 57.6 +1.1
NJ2                                 pmax  pmax
      comp=Z,10.0nm,0.5s
I05D  Terrebonne, OR    43.87  73   P     P     02 28 04.2 -0.8
      baz=306
NEW   Newport           44.04  66   P     P     02 28 05.6 -0.7
      baz=304
J05D  Fort Rock, OR     44.55  74   P     P     02 28 10.3 -0.3
      baz=307
L04D  Klamath Falls     44.56  76   P     P     02 28 10.3 -0.4
      baz=307
M02C  Callahan          44.73  77   P     P     02 28 11.4 -0.6
      baz=308
M04C  Macdoel           45.10  76   P     P     02 28 14.3 -0.6
      baz=308
MOD   Modoc Plateau     45.93  75  eP     P     02 28 20.8 -0.7
      comp=Z,6.7nm,1.0s
O03E  Paynes Creek      46.04  78   P     P     02 28 21.8 -0.5
      baz=309
WHN   Wuhan             46.61 265   P     P     02 28 29.5 +2.7
MSO   Missoula          46.63  66   P     P     02 28 26.0 -1.0
      baz=306
EGMT  Eagleton          48.22  62   P     P     02 28 38.3 -1.0
      baz=307,SNR=7.6
FFC   Flin Flon         48.25  51  eP     P     02 28 38.4 -0.8
      comp=Z,20nm,0.6s
FFC   Flin Flon         48.25  51  eP     P     02 28 38.4 -0.8
FFC                                 pmax  pmax
      comp=Z,20nm,0.6s
HLID  Hailey            48.33  69   P     P     02 28 39.4 -0.9
      baz=308,SNR=5.1
BOZ   Bozeman (W)       48.66  66   P     P     02 28 41.9 -0.8
      baz=308,SNR=10
NV01  Mina Array Sit    49.31  77  eP     P     02 28 47.9  0.0
NV01                               ePcP   PcP   02 30 11.2 +1.0
NVAR  Mina Array Bea    49.31  77   P     P     02 28 47.9  0.0
      comp=Z,1.7nm,0.7s,baz=288,slow=7.7,SNR=12
NVAR                                PcP   PcP   02 30 11.2 +1.0
      comp=Z,0.8nm,0.7s,baz=310,slow=4.3,SNR=3.7
GTA   Gaotai            49.45 285  eP     P     02 28 50.4 +1.6
GTA                                 pP    pP    02 28 54.9 -2.9
GTA                                 sP    sP    02 28 57.8 -3.5
GTA                                 pmax  pmax
      comp=Z,6.0nm,0.9s
DGZ   Jazzator, Alta    49.92 302⇓eP      P     02 28 51.9 -0.4
DGZ                                 pmax  pmax
      comp=Z,5.0nm,0.7s
VOG   Valley Oaks Go    50.06  80   P     P     02 28 52.4 -0.9
      baz=312
RLMT  Red Lodge         50.26  65   P     P     02 28 53.9 -1.1
      baz=309
VES   Vestal, Richgr    50.56  80   P     P     02 28 56.7 -0.3
      baz=312
PKM   Mcpherson Peak    50.76  82   P     P     02 28 59.1 +0.2
      baz=313
CWC   Cottonwood Cre    50.76  79   P     P     02 28 58.2 -0.6
      baz=312
DAG   Danmarks Havn     50.80   3  i P    P     02 28 57.3 -1.0
DAG                                 pmax  pmax
      comp=Z,4.0nm,1.0s
DAG   Danmarks Havn     50.80   3  i P    P     02 28 57.3 -1.0
      comp=Z,4.1nm,1.0s
LAO   LASA Array        50.94  61   P     P     02 28 59.8 -0.1
      baz=309
R11A  Troy Canyon, C    50.98  75  eP     P     02 28 59.9 -0.6
      comp=Z,2.6nm,0.8s
R11A  Troy Canyon, C    50.98  75   P     P     02 29 00.3 -0.2
      baz=312,SNR=8.6
MPMC  Manual Prospec    51.37  79   P     P     02 29 03.3 -0.2
      baz=313
DUG   Dugway, Tooele    51.39  72   P     P     02 29 04.3 +0.8
DUG                                 pmax  pmax
      comp=Z,6.0nm,0.9s
DUG   Dugway, Tooele    51.39  72   P     P     02 29 03.4 -0.2
      baz=311,SNR=5.7
FURC  Furnace Creek,    51.47  78   P     P     02 29 04.2 +0.3
      baz=312
TPNV  Topopah Spring    51.51  77   P     P     02 29 04.4 -0.1
      baz=312
BW06  Boulder Array     51.59  67   P     P     02 29 04.4 -0.7
      baz=310,SNR=6.5
PDAR  Pinedale Array    51.59  67   P     P     02 29 04.5 -0.6
      comp=Z,2.1nm,0.5s,baz=304,slow=3.1,SNR=30
LRMC  Laurel Mtn Rad    51.64  80   P     P     02 29 05.1 -0.3
      baz=313
EDW2  Edwards Air Fo    51.86  80   P     P     02 29 06.6 -0.4
      baz=313
GSC   Goldstone, Bar    52.29  79   P     P     02 29 09.8 -0.4
      baz=313
BFSC  Mount Baldy Ra    52.50  81   P     P     02 29 11.0 -0.8
      baz=314
CD2   Chengdu           52.82 274   P     P     02 29 14.1  0.0
CD2                                 pmax  pmax
      comp=Z,20nm,0.5s
GMRC  Granite Mounta    53.33  79   P     P     02 29 17.4 -0.5
      baz=314
K22A  Casper            53.37  66   P     P     02 29 17.3 -0.9
      baz=311
SUMG  Summit            53.45  11  eP     P     02 29 17.9 -0.6
      comp=Z,8.5nm,1.0s
SUMG  Summit            53.45  11  i P    P     02 29 18.0 -0.6
SUMG                                pmax  pmax
      comp=Z,28nm,1.1s
SUMG  Summit            53.45  11  i P    P     02 29 18.0 -0.6
      comp=Z,28nm,1.1s
WMQ   Urumqi            53.50 296  eP     P     02 29 20.8 +1.8
WMQ                                 pP    sP    02 29 31.9 -0.1
WMQ                                 pmax  pmax
      comp=Z,12nm,0.7s
WMQ                                 pmax  pmax
      comp=Z,12nm,3.7s
WMQ                                 LR    LR
      comp=Z,270nm,28.9s
WMQ                                 LR    LR
      comp=Z,440nm,29.2s
BELC  Belle Mtn. Jos    53.66  80   P     P     02 29 20.0 -0.4
      baz=314
MDND  Maddock           53.66  57   P     P     02 29 19.7 -0.3
      baz=311
KURK  Kurchatov         53.67 308  eP     P     02 29 20.6 +0.6
      comp=Z,7.2nm,1.1s
KURK  Kurchatov         53.67 308⇓eP      P     02 29 20.0  0.0
KURK                                pmax  pmax
      comp=Z,12nm,1.7s
RSSD  Black Hills       53.77  63  eP     P     02 29 20.6 -0.5
      comp=Z,6.2nm,0.6s
RSSD  Black Hills       53.77  63  eP     P     02 29 20.6 -0.5
RSSD                                pmax  pmax
      comp=Z,6.0nm,0.6s
RSSD  Black Hills       53.77  63   P     P     02 29 20.5 -0.6
      baz=311
ULM   Lac du Bonnet     53.95  52   P     P     02 29 21.5 -0.6
      comp=Z,6.8nm,0.7s,baz=296,slow=7.3,SNR=6.8
ULM                                 LR    LR    02 53 51.0
      comp=Z,41nm,18.3s,baz=274,slow=38
O20A  White River Ci    54.06  69   P     P     02 29 22.9 -0.4
      baz=312
IRM   Iron Mountain     54.07  79   P     P     02 29 23.0 -0.3
      baz=314
MK32  Makanchi Array    54.42 302  eP     P     02 29 24.6 -1.0
MKAR  Makanchi Array    54.42 302   P     P     02 29 24.6 -1.0
      comp=Z,0.9nm,0.6s,baz=53,slow=7.5,SNR=7.7
MKAR  Makanchi Array    54.42 302ceP      P     02 29 29.7 +4.1
MKAR                                pmax  pmax
      comp=Z,1.0nm,0.6s
IKP   In-Ko-Pah, Jac    54.53  81   P     P     02 29 25.7 -0.9
      baz=315
N23A  Red Feather La    54.86  67   P     P     02 29 29.0 -0.2
      baz=312
PV11  David Mesa, Pa    54.94  71  eP     P     02 29 29.4 -0.2
      comp=Z,5.2nm,0.6s
AGMN  Agassiz Nation    55.25  54   P     P     02 29 30.8 -0.8
      baz=312
LVZ   Lovozero          55.62 342  eP     P     02 29 33.0 -1.0
      comp=Z,12nm,0.7s
LVZ   Lovozero          55.62 342⇑eP      P     02 29 33.2 -0.8
LVZ                                 pmax  pmax
      comp=Z,9.0nm,1.3s
ARCES ARCESS Array B    55.71 346   P     P     02 29 33.9 -0.6
      comp=Z,5.5nm,0.6s,baz=41,slow=8.6,SNR=36
ARE0  ARCESS Array S    55.71 346  eP     P     02 29 33.1 -1.5
      comp=Z,0.4nm,0.8s
ISCO  Idaho Springs     55.78  68   P     P     02 29 36.9 +1.0
ISCO                                pmax  pmax
      comp=Z,5.0nm,2.0s
ISCO  Idaho Springs     55.78  68   P     P     02 29 35.9  0.0
      baz=313
MVCO  Mesa Verde        55.90  72   P     P     02 29 36.9 +0.2
      baz=314
BRVK  Borovoye          55.93 314⇓eP      P     02 29 36.5 +0.2
BRVK                                pmax  pmax
      comp=Z,4.0nm,0.8s
TRO   Tromso            56.49 349  eP     P     02 29 38.2 -1.8
S22A  4UR Ranch, Cre    56.49  70   P     P     02 29 41.5 +0.5
      baz=314,SNR=6.7
OGNE  Ogallala          57.00  64   P     P     02 29 44.6 +0.4
      baz=314
214A  Organ Pipe Nat    57.00  79   P     P     02 29 44.5 +0.2
      baz=315
SDCO  Great Sand Dun    57.25  69   P     P     02 29 46.5 +0.2
      baz=314,SNR=6.1
SGF   Sodankyl          57.46 345   P     P     02 29 47.0  0.0
SGF                                 pmax  pmax
      comp=Z,14nm,1.0s
EYMN  Ely               57.63  52   P     P     02 29 48.1 -0.4
      baz=314,SNR=16
TUC   Tucson            57.97  78  eP     P     02 29 51.5 +0.3
      comp=Z,2.4nm,0.8s
TUC   Tucson            57.97  78  eP     P     02 29 51.5 +0.3
TUC                                 pmax  pmax
      comp=Z,2.0nm,0.8s
TUC   Tucson            57.97  78   P     P     02 29 50.7 -0.5
      baz=316
ECSD  EROS Data Cent    57.98  59   P     P     02 29 50.0 -1.1
      baz=314
ARU   Arti              58.22 323  eP     P     02 29 52.8 +0.3
      comp=Z,12nm,0.6s
ARU   Arti              58.22 323⇓iP      P     02 29 52.5 +0.1
ARU                                 pmax  pmax
      comp=Z,12nm,1.0s
T25A  Trinidad          58.30  69   P     P     02 29 53.4 -0.2
      baz=315
PRGR  Permogore         58.32 333  eP     P     02 29 51.4 -1.6
PRGR                                pmax  pmax
      comp=Z,23nm,0.8s
OTUK  Ortayu            58.36 309   P     P     02 29 54.8 +1.2
OTUK                                pmax  pmax
      comp=Z,3.0nm,0.7s
MSF   Maaselka          58.43 343   P     P     02 29 53.8  0.0
MSF                                 pmax  pmax
      comp=Z,23nm,0.8s
STEI  Steigen           58.53 350  eP     P     02 29 55.3 +0.9
E38A  The Farm, Brul    58.54  53   P     P     02 29 54.3 -0.6
      baz=315,SNR=8.7
F37A  Hinrichs Farm,    58.63  55   P     P     02 29 55.1 -0.3
      baz=315
TASM  ASL Pad, Albuq    58.66  72   P     P     02 29 56.5 +0.4
      baz=315
TASM  ASL Pad, Albuq    58.66  72   P     P     02 29 56.1  0.0
      baz=315
ANMO  Albuquerque       58.66  72  eP     P     02 29 56.3 +0.2
      comp=Z,1.7nm,0.9s
ANMO  Albuquerque       58.66  72⇑eP      P     02 29 55.5 -0.6
ANMO                                pmax  pmax
      comp=Z,2.0nm,0.9s
ANMO  Albuquerque       58.66  72   P     P     02 29 56.0 -0.1
      baz=315
C40A  Isle Royale Na    58.77  51   P     P     02 29 55.4 -1.0
      baz=315
F38A  Pierce - Schro    58.83  54   P     P     02 29 57.0 +0.1
      baz=315,SNR=30
SPMN  Marine on St.     58.89  55   P     P     02 29 57.1 -0.3
      baz=315
F39A  Loretta           59.34  54   P     P     02 30 00.2 -0.2
      baz=315,SNR=16
D41A  Chassel           59.66  51   P     P     02 30 02.5 -0.1
      baz=316
G39A  Holcombe          59.66  54   P     P     02 30 02.0 -0.6
      baz=316,SNR=6.2
F40A  Park Falls        59.72  53   P     P     02 30 02.5 -0.6
      baz=316,SNR=8.1
G40A  Rib Lake          60.15  54  eP     P     02 30 05.4 -0.6
      comp=Z,3.9nm,0.7s
MOR8  Moi Rana          60.31 349  eP     P     02 30 05.3 -1.6
F42A  Maple Grove Fa    60.80  52   P     P     02 30 09.9 -0.5
      baz=317
E43A  Lone Tree Farm    60.90  51   P     P     02 30 10.8 -0.3
      baz=317,SNR=7.1
I41A  Arkdale           61.19  54   P     P     02 30 12.6 -0.5
      baz=317
E44A  Grand Marais A    61.23  50   P     P     02 30 12.4 -0.9
      baz=317
AAK   Ala-Archa         61.30 303⇓eP      P     02 30 13.7 -0.4
AAK                                 pmax  pmax
      comp=Z,3.0nm,1.7s
AMTX  Amarillo          61.45  69   P     P     02 30 15.0 -0.2
      baz=316
MSTX  Muleshoe          61.48  71   P     P     02 30 15.0 -0.4
      baz=316
MNTX  Cornudas Mount    61.60  74   P     P     02 30 16.7 +0.6
      baz=317,SNR=13
I42A  Draeger Farm,     61.78  54   P     P     02 30 16.5 -0.6
      baz=317
JFWS  Jewell Farm       61.83  56   P     P     02 30 16.3 -1.1
      baz=317
SUF   Sumiainen         61.87 343   P     P     02 30 17.5 +0.2
SUF                                 pmax  pmax
      comp=Z,35nm,0.8s
D46A  Sault St. Mari    61.90  49   P     P     02 30 16.7 -1.2
      baz=318
H43A  Windswept, Lux    61.92  53   P     P     02 30 16.8 -1.2
      baz=317
L40A  Anamosa           61.95  57   P     P     02 30 17.4 -0.9
      baz=317
F45A  CMU Biological    62.11  51   P     P     02 30 18.1 -1.1
      baz=318
E46A  Sault Ste Mari    62.17  49   P     P     02 30 18.7 -1.0
      baz=318
D47A  Chapleau          62.20  48   P     P     02 30 18.5 -1.5
      baz=318
G45A  Suttons Bay       62.52  51   P     P     02 30 21.3 -0.7
      baz=318
MATQ  Matagami          62.54  43   P     P     02 30 20.3 -1.8
      baz=320
E47A  Iron Bridge       62.57  49   P     P     02 30 21.3 -1.0
      baz=319,SNR=6.7
SCHQ  Schefferville     62.62  34   P     P     02 30 22.0 -0.6
      comp=Z,11nm,0.7s,baz=331,slow=7.1,SNR=7.0
SCHQ                                LR    LR    02 59 54.8
      comp=Z,33nm,18.0s,baz=186,slow=38
SCHQ  Schefferville     62.62  34  eP     P     02 30 21.8 -0.7
      comp=Z,13nm,0.8s
G46A  Petoskey          62.69  50   P     P     02 30 22.8 -0.3
      baz=318,SNR=12
D48A  Paudash Townsh    62.70  47   P     P     02 30 21.5 -1.7
      baz=319
L42A  Oliver, Polo      62.79  56   P     P     02 30 22.5 -1.3
      baz=317
KSH   Kashi             62.80 300   P     P     02 30 28.3 +4.2
KSH                                 sP    pwP   02 30 42.6 +4.1
KSH                                 PP    PP    02 32 47.8 +5.7
KSH                                 pmax  pmax
      comp=Z,5.0nm,0.8s
KSH                                 pmax  pmax
      comp=Z,58nm,4.3s
KSH                                 LR    LR
      comp=Z,180nm,11.2s
KSH                                 LR    LR
      comp=Z,93nm,8.4s
D49A  Beulah Townshi    62.83  47   P     P     02 30 22.5 -1.5
      baz=319
K43A  Burlington        62.94  55   P     P     02 30 23.8 -1.1
      baz=318
KK31  Karatay Array     62.96 306  eP     P     02 30 25.2 +0.2
      comp=Z,2.2nm,0.8s
KK31  Karatay Array     62.96 306  eP     P     02 30 25.2 +0.2
KK31                                pmax  pmax
      comp=Z,2.0nm,0.8s
KKAR  Karatay Array     62.96 306  eP     P     02 30 25.2 +0.2
      comp=Z,2.2nm,0.8s
KKAR  Karatay Array     62.96 306  eP     P     02 30 25.2 +0.2
KKAR                                pmax  pmax
      comp=Z,2.0nm,0.8s
I45A  Fountain          62.98  52   P     P     02 30 23.7 -1.5
      baz=318
FINES FINESS Array B    63.06 342   P     P     02 30 25.1 -0.2
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	comp=Z,9.6nm,0.7s,baz=28,slow=8.6,SNR=46						
E48A	**Lockeyer**	**63.06**	**48**	P	**P**	**02 30 24.2**	**-1.4**
	baz=319						
H46A	**Fife Lake**	**63.10**	**51**	P	**P**	**02 30 25.1**	**-0.8**
	baz=318,SNR=5.7						
N41A	**Harden Midland**	**63.13**	**58**	P	**P**	**02 30 25.2**	**-1.0**
	baz=318						
ABKAR	**Akbulak array**	**63.14**	**317**	*e*P	**P**	**02 30 26.3**	**+0.2**
	comp=Z,3.1nm,0.8s						
GLMI	**Grayling**	**63.17**	**51**	P	**P**	**02 30 25.7**	**-0.7**
	baz=318						
WMOK	**Wichita Mounta**	**63.20**	**67**	P	**P**	**02 30 26.3**	**-0.5**
	baz=317						
G47A	**Hillman**	**63.27**	**50**	P	**P**	**02 30 26.1**	**-0.9**
	baz=319						
F48A	**Evansville**	**63.35**	**49**	P	**P**	**02 30 26.5**	**-1.0**
	baz=319						
J45A	**Montague**	**63.36**	**53**	P	**P**	**02 30 27.3**	**-0.3**
	baz=318						
LSQQ	**Lebel-sur-Quev**	**63.36**	**43**	P	**P**	**02 30 26.1**	**-1.4**
	baz=321						
I46A	**Reed City**	**63.43**	**52**	P	**P**	**02 30 27.6**	**-0.5**
	baz=318						
H47A	**Mio**	**63.53**	**51**	P	**P**	**02 30 28.4**	**-0.4**
	baz=319						
M43A	**Waltham Townsh**	**63.56**	**56**	P	**P**	**02 30 27.9**	**-1.1**
	baz=318						
F49A	**Sandfield**	**63.66**	**48**	P	**P**	**02 30 28.5**	**-1.1**
	baz=319,SNR=5.4						
E50A	**Wahnapitae**	**63.75**	**47**	P	**P**	**02 30 28.6**	**-1.6**
	baz=320						
CHGQ	**Chibougamau**	**63.76**	**41**	P	**P**	**02 30 28.5**	**-1.6**
	baz=322,SNR=8.8						
H48A	**Harrisville**	**63.87**	**50**	P	**P**	**02 30 30.4**	**-0.6**
	baz=319						
HDIL	**Hopedale**	**64.05**	**57**	P	**P**	**02 30 31.3**	**-0.9**
	baz=318,SNR=5.2						
M44A	**Midewin, Midew**	**64.06**	**55**	P	**P**	**02 30 31.3**	**-1.0**
	baz=318						
I48A	**Sherman Twp**	**64.08**	**51**	P	**P**	**02 30 31.9**	**-0.4**
	baz=319						
K46A	**Dorr**	**64.21**	**53**	P	**P**	**02 30 32.3**	**-1.0**
	baz=319						
E51A	**G1948 Merrick**	**64.22**	**46**	P	**P**	**02 30 31.5**	**-1.8**
	baz=320						
ABTX	**Abilene, Hawle**	**64.26**	**70**	P	**P**	**02 30 32.8**	**-1.0**
	baz=318						
J47A	**Sunmer**	**64.26**	**52**	P	**P**	**02 30 33.2**	**-0.4**
	baz=319						
TOBO	**Tobermory, Bru**	**64.31**	**49**	P	**P**	**02 30 32.8**	**-1.0**
	baz=320						
TXAR	**Lajitas Array**	**64.34**	**75**	P	**P**	**02 30 34.7**	**+0.3**
	comp=Z,7.1nm,0.5s,baz=305,slow=5.2,SNR=178						
D52A	**ZEK Kipawa Sen**	**64.35**	**45**	P	**P**	**02 30 32.2**	**-1.9**
	baz=321						
N44A	**Piper City**	**64.46**	**56**	P	**P**	**02 30 33.9**	**-1.0**
	baz=318						
F51A	**Arnstein**	**64.50**	**47**	P	**P**	**02 30 33.3**	**-1.7**
	baz=320						
MOL	**Molde**	**64.52**	**352**	*e*P	**P**	**02 30 34.1**	**-0.8**
D53A	**Lac Vacive, Po**	**64.58**	**45**	P	**P**	**02 30 34.0**	**-1.6**
	baz=321						
K47A	**Vermontville**	**64.60**	**53**	P	**P**	**02 30 34.9**	**-0.9**
	baz=319						
I49A	**Point Hope**	**64.68**	**50**	P	**P**	**02 30 35.5**	**-0.8**
	baz=320						
N45A	**Kentland**	**64.73**	**55**	P	**P**	**02 30 35.8**	**-0.8**
	baz=319						
E52A	**Mattawa**	**64.78**	**46**	P	**P**	**02 30 35.5**	**-1.4**
	baz=321,SNR=5.1						
KLBO	**Killbear Provi**	**64.80**	**48**	P	**P**	**02 30 35.8**	**-1.2**
	baz=320,SNR=6.4						
F52A	**Sundridge**	**64.86**	**47**	P	**P**	**02 30 35.8**	**-1.6**
	baz=321						
DOMB	**Dombas**	**64.90**	**351**	*e*P	**P**	**02 30 37.5**	**0.0**
CM31	**Chiang Mai Arr**	**64.92**	**268**	*e*P	**P**	**02 30 39.7**	**+1.5**
	comp=Z,6.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**64.92**	**268**	P	**P**	**02 30 39.7**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=25,slow=6.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**64.92**	**268**	*ce*P	**P**	**02 30 40.4**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BMRO	**Meriville Lake**	**64.93**	**49**	P	**P**	**02 30 37.1**	**-0.7**
	baz=320,SNR=7.0						
K48A	**Perry**	**64.93**	**52**	P	**P**	**02 30 36.9**	**-1.0**
	baz=319,SNR=5.9						
AKN	**Aaknes**	**64.96**	**352**	*e*P	**P**	**02 30 37.1**	**-0.7**
J49A	**Marlette**	**64.97**	**51**	P	**P**	**02 30 37.7**	**-0.5**
	baz=320						
D54A	**Lac Fusel, La**	**64.97**	**44**	P	**P**	**02 30 36.3**	**-1.9**
	baz=321						
L47A	**Sherwood**	**65.03**	**53**	P	**P**	**02 30 37.5**	**-1.1**
	baz=319						
O45A	**Potomac**	**65.07**	**56**	P	**P**	**02 30 38.4**	**-0.5**
	baz=319,SNR=9.0						
BUKO	**Buck Lake**	**65.10**	**47**	P	**P**	**02 30 37.6**	**-1.4**
	baz=321						
E53A	**Dumoine, Ponti**	**65.14**	**45**	P	**P**	**02 30 37.5**	**-1.8**
	baz=321						
BASO	**Ashfield**	**65.17**	**50**	P	**P**	**02 30 39.1**	**-0.3**
	baz=320,SNR=5.6						
M47A	**Cromwell**	**65.29**	**54**	P	**P**	**02 30 39.2**	**-1.1**
	baz=319						
U40A	**Yellville**	**65.29**	**62**	P	**P**	**02 30 39.2**	**-1.2**
	baz=318						
SFIN	**Lafayette**	**65.29**	**55**	P	**P**	**02 30 39.5**	**-0.9**
	baz=319						
ALGO	**Algonquin Park**	**65.30**	**46**	P	**P**	**02 30 38.5**	**-1.8**
	baz=321						
E54A	**Lac Daplat, Po**	**65.31**	**45**	P	**P**	**02 30 38.5**	**-1.9**
	baz=321,SNR=5.8						
BWLO	**Walkerton**	**65.33**	**49**	P	**P**	**02 30 39.6**	**-0.9**
	baz=320						
L48A	**N Adams**	**65.43**	**53**	P	**P**	**02 30 40.3**	**-0.9**
	baz=320						
NC204	**NORSAR Array S**	**65.48**	**350**	*e*P	**P**	**02 30 40.7**	**-0.6**
	comp=Z,30nm,0.7s						
H52A	**Wyevale**	**65.50**	**48**	P	**P**	**02 30 40.1**	**-1.5**
	baz=321						
P45A	**Graceland, Par**	**65.60**	**57**	P	**P**	**02 30 41.8**	**-0.6**
	baz=319						
N47A	**Urbana**	**65.61**	**54**	P	**P**	**02 30 41.2**	**-1.2**
	baz=319						
L49A	**Milan**	**65.62**	**52**	P	**P**	**02 30 41.3**	**-1.2**
	baz=320						
I51A	**Listowel**	**65.62**	**49**	P	**P**	**02 30 42.0**	**-0.5**
	baz=320						
W39A	**Magazine**	**65.64**	**64**	P	**P**	**02 30 41.7**	**-0.9**
	baz=318						
NB201	**NORSAR Array S**	**65.64**	**350**	*e*P	**P**	**02 30 42.1**	**-0.2**
NB2	**NORSAR Subarra**	**65.66**	**350**	P	**P**	**02 30 42.2**	**-0.3**
	comp=Z,9.0nm,0.6s,baz=13,slow=6.5						
NB2	**NORSAR Subarra**	**65.66**	**350**	P	**P**	**02 30 42.2**	**-0.3**
	baz=13,slow=6.5						
NOA	**NORSAR Array B**	**65.66**	**350**	P	**P**	**02 30 42.1**	**-0.3**
	comp=Z,8.5nm,0.6s,baz=14,slow=6.5,SNR=68						
NOA				LR	LR	03 00 38.9	
	comp=Z,6.1nm,18.5s,baz=330,slow=37						
VSU	**Vasula**	**65.68**	**341**	*c i*P	**P**	**02 30 42.5**	**0.0**
VSU				pmax	pmax		
	comp=Z,18nm,1.0s						
G53A	**Haliburton**	**65.70**	**47**	P	**P**	**02 30 41.3**	**-1.5**
	baz=321,SNR=8.6						
GUN	**Gumba**	**65.74**	**285**	*e*P	**P**	**02 30 45.1**	**+1.3**
	comp=Z,30nm,0.5s						
JIRN	**Jiri**	**65.74**	**284**	*e*P	**P**	**02 30 45.2**	**+1.3**
	comp=Z,32nm,0.6s						
JCT	**Junction City**	**65.75**	**71**	P	**P**	**02 30 42.9**	**-0.5**
	baz=318						
P46A	**Rosedale**	**65.81**	**56**	P	**P**	**02 30 42.6**	**-1.0**
	baz=319						
O47A	**Sheridan**	**65.86**	**55**	P	**P**	**02 30 42.3**	**-1.7**
	baz=319						
Q45A	**Warren Harvey,**	**65.87**	**57**	P	**P**	**02 30 43.2**	**-0.9**
	baz=319						
PEMO	**Pembroke**	**65.87**	**46**	P	**P**	**02 30 41.8**	**-2.2**
	baz=322						
NORES	**NORESS Array B**	**65.92**	**349**	P	**P**	**02 30 43.3**	**-0.8**
NORES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
N48A	**Decatur**	**65.96**	**54**	P	**P**	**02 30 43.3**	**-1.3**
	baz=320						
HYA	**Hoyanger**	**66.02**	**352**	*e*P	**P**	**02 30 44.7**	**0.0**
BANO	**Bancroft**	**66.08**	**47**	P	**P**	**02 30 43.9**	**-1.5**
	baz=321						
L50A	**Kingsville**	**66.14**	**52**	P	**P**	**02 30 45.0**	**-0.7**
	baz=320						
F55A	**Otter Lake**	**66.14**	**45**	P	**P**	**02 30 43.7**	**-1.9**
	baz=322						
ACTO	**Acton**	**66.22**	**49**	P	**P**	**02 30 45.6**	**-0.7**
	baz=321						
K51A	**Iona Station**	**66.23**	**50**	P	**P**	**02 30 45.9**	**-0.5**
	baz=320						
MIAR	**Mount Ida**	**66.24**	**64**	P	**P**	**02 30 45.9**	**-0.6**
	baz=319						
R45A	**Skylar, Fairfi**	**66.26**	**58**	P	**P**	**02 30 45.7**	**-0.9**
	baz=319						
PKI	**Pulchoki**	**66.27**	**285**	*e*P	**P**	**02 30 48.2**	**+1.0**
	comp=Z,19nm,0.5s						
PKIN	**Phulchoki**	**66.27**	**285**	*e*P	**P**	**02 30 48.1**	**+0.9**
	comp=Z,14nm,0.5s						
J52A	**Paris**	**66.31**	**49**	P	**P**	**02 30 45.8**	**-1.0**
	baz=321						
SKAR	**Skarslia**	**66.31**	**351**	*e*P	**P**	**02 30 46.8**	**+0.1**
N49A	**Columbus Grove**	**66.33**	**53**	P	**P**	**02 30 45.9**	**-1.1**
	baz=320						
O48A	**Farmland**	**66.35**	**54**	P	**P**	**02 30 45.7**	**-1.5**
	baz=320						
OBN	**Obninsk**	**66.38**	**334⇓**	*e*P	**P**	**02 30 46.2**	**-0.8**
OBN				*e*		02 31 16.5	
OBN				*e*		02 33 11.5	
OBN				*e*S	**S**	**02 39 30.1**	**-3.9**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,29nm,16.0s						
P47A	**Martinsville**	**66.38**	**56**	P	**P**	**02 30 46.4**	**-0.9**
	baz=320,SNR=15						
PKRO	**Pickering**	**66.39**	**48**	P	**P**	**02 30 46.0**	**-1.3**
	baz=321						
LATQ	**La Tuque**	**66.41**	**42**	P	**P**	**02 30 46.3**	**-1.0**
	baz=323						
G55A	**Calabogie**	**66.44**	**46**	P	**P**	**02 30 45.7**	**-1.9**
	baz=322						
PLIO	**Pelee Island,**	**66.45**	**52**	P	**P**	**02 30 46.4**	**-1.3**
	baz=320						
PLVO	**Plevna**	**66.45**	**46**	P	**P**	**02 30 46.0**	**-1.7**
	baz=322						
DELO	**Deloro Mine**	**66.61**	**47**	P	**P**	**02 30 47.1**	**-1.6**
	baz=322						
X40A	**Basin Creek Fa**	**66.69**	**63**	P	**P**	**02 30 47.3**	**-2.1**
	baz=319						
TYNO	**Tyneside**	**66.70**	**49**	P	**P**	**02 30 48.3**	**-1.0**
	baz=321						
Q47A	**Bedord North L**	**66.72**	**56**	P	**P**	**02 30 48.8**	**-0.7**
	baz=320,SNR=6.9						
WLVO	**Wesleyville**	**66.73**	**48**	P	**P**	**02 30 48.4**	**-1.1**
	baz=322						
H55A	**Tweed**	**66.78**	**46**	P	**P**	**02 30 48.3**	**-1.5**
	baz=322						
O49A	**Covington**	**66.81**	**54**	P	**P**	**02 30 48.8**	**-1.3**
	baz=320						
P48A	**Milroy**	**66.83**	**55**	P	**P**	**02 30 49.0**	**-1.2**
	baz=320,SNR=6.6						
N50A	**Nevada**	**66.95**	**53**	P	**P**	**02 30 49.8**	**-1.1**
	baz=320						
M51A	**Elyria**	**66.98**	**52**	P	**P**	**02 30 49.9**	**-1.3**
	baz=321						
S46A	**Don Dixon Farm**	**67.01**	**58**	P	**P**	**02 30 50.3**	**-1.1**
	baz=320						
Q48A	**North Vernon**	**67.08**	**56**	P	**P**	**02 30 50.7**	**-1.1**
	baz=320						
P49A	**Miami Univ. Ec**	**67.12**	**55**	P	**P**	**02 30 50.6**	**-1.5**
	baz=320						
J54A	**Appleton**	**67.13**	**48**	P	**P**	**02 30 50.4**	**-1.6**
	baz=322						
R47A	**Wooly Knot Far**	**67.16**	**57**	P	**P**	**02 30 51.2**	**-1.1**
	baz=320						
H56A	**Elgin**	**67.16**	**46**	P	**P**	**02 30 50.5**	**-1.7**
	baz=322						
KOLN	**Koldanda**	**67.19**	**286**	*e*P	**P**	**02 30 53.8**	**+0.9**
	comp=Z,12nm,0.7s						
O50A	**Cable**	**67.20**	**53**	P	**P**	**02 30 51.5**	**-1.1**
	baz=320						
KONO	**Kongsberg**	**67.20**	**350**	*e*P	**P**	**02 30 51.9**	**-0.3**
N51A	**Ashland**	**67.21**	**52**	P	**P**	**02 30 51.4**	**-1.2**
	baz=321						
M52A	**Chesterland**	**67.21**	**51**	P	**P**	**02 30 51.9**	**-0.7**
	baz=321						
ODD1	**Odda**	**67.23**	**352**	*e*P	**P**	**02 30 52.9**	**+0.4**
PYUN	**Piuthan**	**67.30**	**287**	*e*P	**P**	**02 30 54.2**	**+0.6**
	comp=Z,16nm,0.8s						
MEDO	**Medina**	**67.30**	**48**	P	**P**	**02 30 51.9**	**-1.2**
	baz=322						
WCI	**Wyandotte Cave**	**67.33**	**57**	*e*P	**P**	**02 30 52.9**	**-0.5**
	comp=Z,7.7nm,0.8s						
WCI	**Wyandotte Cave**	**67.33**	**57**	*e*P	**P**	**02 30 52.9**	**-0.5**
WCI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WCI	**Wyandotte Cave**	**67.33**	**57**	P	**P**	**02 30 52.7**	**-0.6**
	baz=320						
PECO	**Prince Edward**	**67.35**	**47**	P	**P**	**02 30 52.0**	**-1.5**
	baz=322						
T46A	**Princeton**	**67.40**	**58**	P	**P**	**02 30 53.6**	**-0.3**
	baz=320						
R48A	**Northridge Ran**	**67.41**	**56**	P	**P**	**02 30 53.0**	**-0.9**
	baz=320						
L53A	**Girard**	**67.41**	**50**	P	**P**	**02 30 53.2**	**-0.6**
	baz=321,SNR=8.8						
Q49A	**Aurora**	**67.44**	**55**	P	**P**	**02 30 53.0**	**-1.0**
	baz=320						
ACSO	**Alum Creek Sta**	**67.44**	**53**	P	**P**	**02 30 53.2**	**-0.9**
	baz=321						
J55A	**Hilton**	**67.51**	**48**	P	**P**	**02 30 53.4**	**-1.1**
	baz=322						
S47A	**Hartford**	**67.51**	**57**	P	**P**	**02 30 53.8**	**-0.7**
	baz=320						
P50A	**Jamestown**	**67.52**	**54**	P	**P**	**02 30 53.8**	**-0.8**
	baz=320						
M53A	**WI Miller and**	**67.62**	**51**	P	**P**	**02 30 54.8**	**-0.4**
	baz=321,SNR=21						
N52A	**McGinn’s Farm,**	**67.62**	**52**	P	**P**	**02 30 54.1**	**-1.1**
	baz=321						
K54A	**Basiliko Farm,**	**67.63**	**49**	P	**P**	**02 30 54.2**	**-1.0**
	baz=322						
L54A	**Sinclairville**	**67.63**	**49**	P	**P**	**02 30 54.3**	**-1.0**
	baz=322						
O51A	**Pataskala**	**67.69**	**53**	P	**P**	**02 30 54.6**	**-1.0**
	baz=321						
BLS5	**Blasjo**	**67.72**	**352**	*e*P	**P**	**02 30 54.1**	**-1.5**
K55A	**Perry**	**67.82**	**48**	P	**P**	**02 30 55.3**	**-1.1**
	baz=322,SNR=5.7						
R49A	**Shelbyville**	**67.85**	**56**	P	**P**	**02 30 55.6**	**-1.0**
	baz=320						
T47A	**Sharon Grove**	**67.85**	**58**	P	**P**	**02 30 56.4**	**-0.4**
	baz=320						
LONY	**Lake Ozonia**	**67.86**	**45**	P	**P**	**02 30 54.6**	**-2.1**
	baz=323						
S48A	**Wiedeman Farm,**	**67.88**	**57**	P	**P**	**02 30 56.3**	**-0.6**
	baz=320						
LPSR	**Galich'ya Gora**	**67.92**	**331**	*e*P	**P**	**02 30 56.4**	**-0.4**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
Q50A	**Georgetown**	**68.02**	**55**	P	**P**	**02 30 56.9**	**-0.9**
	baz=321						
N53A	**Lisbon**	**68.03**	**51**	P	**P**	**02 30 57.0**	**-0.8**
	baz=321						
M54A	**Oil Creek Stat**	**68.04**	**50**	P	**P**	**02 30 57.1**	**-0.8**
	baz=322,SNR=8.7						
L55A	**Hinsdale**	**68.08**	**49**	P	**P**	**02 30 57.3**	**-0.8**
	baz=322						
O52A	**Adamsville**	**68.09**	**52**	P	**P**	**02 30 57.2**	**-0.9**
	baz=321,SNR=7.5						
WVT	**Waverly**	**68.13**	**59**	*e*P	**P**	**02 30 57.9**	**-0.6**
	comp=Z,6.0nm,0.8s						
WVT	**Waverly**	**68.13**	**59**	*e*P	**P**	**02 30 57.9**	**-0.6**
WVT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WVT	**Waverly**	**68.13**	**59**	P	**P**	**02 30 57.7**	**-0.8**
	baz=320						
S49A	**Springfield**	**68.17**	**56**	P	**P**	**02 30 57.8**	**-1.0**
	baz=320						
U47A	**Clarksville**	**68.17**	**58**	P	**P**	**02 30 58.2**	**-0.6**
	baz=320						
Q51A	**Peebles**	**68.19**	**54**	P	**P**	**02 30 57.8**	**-1.1**
	baz=321						
V46A	**Holladay**	**68.23**	**59**	P	**P**	**02 30 57.9**	**-1.2**
	baz=320						
R50A	**Paris**	**68.28**	**55**	P	**P**	**02 30 58.7**	**-0.6**
	baz=321						
O53A	**New Philadelph**	**68.28**	**52**	P	**P**	**02 30 58.3**	**-1.1**
	baz=321						
N54A	**Moraine State**	**68.31**	**51**	P	**P**	**02 30 59.0**	**-0.5**
	baz=322,SNR=9.6						
P52A	**Corning**	**68.32**	**53**	P	**P**	**02 30 58.4**	**-1.3**
	baz=321						
M55A	**Ridgway**	**68.49**	**49**	P	**P**	**02 31 00.1**	**-0.6**
	baz=322,SNR=9.4						
U48A	**Cassie Pea, Po**	**68.51**	**58**	P	**P**	**02 31 00.4**	**-0.5**
	baz=320,SNR=5.0						
V47A	**Nunnelly**	**68.52**	**59**	P	**P**	**02 31 00.1**	**-0.8**
	baz=320						
OXF	**Oxford**	**68.53**	**61**	P	**P**	**02 31 00.3**	**-0.6**
	baz=320						
T49A	**Edmonton**	**68.57**	**57**	P	**P**	**02 31 00.7**	**-0.6**
	baz=320,SNR=5.0						
R51A	**Hillsboro**	**68.64**	**55**	P	**P**	**02 31 01.2**	**-0.4**
	baz=321						
S50A	**Richmond**	**68.71**	**56**	P	**P**	**02 31 01.5**	**-0.5**
	baz=321						
O54A	**Avella**	**68.74**	**51**	P	**P**	**02 31 01.4**	**-0.8**
	baz=322						
M56A	**Emporium**	**68.75**	**49**	P	**P**	**02 31 01.3**	**-1.0**
	baz=322						
Q52A	**Bidwell**	**68.77**	**53**	P	**P**	**02 31 01.3**	**-1.2**
	baz=321						
P53A	**Whipple**	**68.79**	**52**	P	**P**	**02 31 01.5**	**-1.1**
	baz=321						
U49A	**Red Boiling Sp**	**68.90**	**57**	P	**P**	**02 31 02.6**	**-0.7**
	baz=320						
W47A	**Westpoint**	**68.92**	**59**	P	**P**	**02 31 02.6**	**-0.8**
	baz=320						
N55A	**Marion Center**	**68.92**	**50**	P	**P**	**02 31 02.6**	**-0.8**
	baz=322,SNR=11						
X46A	**Booneville**	**68.93**	**61**	P	**P**	**02 31 02.5**	**-1.0**
	baz=320						
V48A	**Smith Brothers**	**68.95**	**59**	P	**P**	**02 31 02.9**	**-0.7**
	baz=320						
T50A	**Nancy**	**68.99**	**56**	P	**P**	**02 31 03.2**	**-0.6**
	baz=321,SNR=5.0						
VSR	**Storozhevoye**	**69.06**	**330**	*e*P	**P**	**02 31 03.7**	**-0.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
N56A	**West Decatur**	**69.14**	**50**	P	**P**	**02 31 04.1**	**-0.7**
	baz=322,SNR=7.1						
P54A	**Burton**	**69.14**	**52**	P	**P**	**02 31 04.0**	**-0.7**
	baz=322						
S51A	**Beattyville**	**69.14**	**55**	P	**P**	**02 31 03.8**	**-1.0**
	baz=321						
BINY	**Binghamton**	**69.18**	**47**	P	**P**	**02 31 03.7**	**-1.2**
	baz=323						
Q53A	**Leroy**	**69.22**	**53**	P	**P**	**02 31 04.5**	**-0.7**
	baz=322,SNR=6.5						
O55A	**Ligonier**	**69.23**	**51**	P	**P**	**02 31 04.3**	**-1.0**
	baz=322						
VORD	**Divnogorie**	**69.24**	**330**	*e*P	**P**	**02 31 03.1**	**-2.0**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LBNH	**Lisbon**	**69.30**	**43**	P	**P**	**02 31 04.3**	**-1.4**
	baz=324						
S52A	**Salyersville**	**69.37**	**55**	P	**P**	**02 31 05.8**	**-0.4**
	baz=321						
MCWV	**Mont Chateau**	**69.40**	**51**	P	**P**	**02 31 05.2**	**-1.1**
	baz=322						
V49A	**McMinnville**	**69.41**	**58**	P	**P**	**02 31 05.7**	**-0.8**
	baz=321						
R53A	**Hurricane**	**69.42**	**54**	P	**P**	**02 31 05.8**	**-0.7**
	baz=322						
Q54A	**Coxs Mills**	**69.45**	**52**	P	**P**	**02 31 05.9**	**-0.8**
	baz=322						
O56A	**Blue Knob Stat**	**69.53**	**50**	P	**P**	**02 31 06.3**	**-0.9**
	baz=322						
P55A	**Reedsville**	**69.53**	**51**	P	**P**	**02 31 06.6**	**-0.6**
	baz=322,SNR=5.2						
SSPA	**Standing Stone**	**69.55**	**49**	*e*P	**P**	**02 31 06.4**	**-0.8**
	comp=Z,11nm,0.8s						
SSPA	**Standing Stone**	**69.55**	**49**	P	**P**	**02 31 06.8**	**-0.5**
	baz=323						
N57A	**Milroy**	**69.61**	**49**	P	**P**	**02 31 06.9**	**-0.7**
	baz=323						
W49A	**Belvidere**	**69.72**	**59**	P	**P**	**02 31 07.5**	**-0.9**
	baz=321						
Q55A	**Buckhannon**	**69.81**	**52**	P	**P**	**02 31 08.4**	**-0.5**
	baz=322,SNR=6.2						
X48A	**Hartselle**	**69.83**	**60**	P	**P**	**02 31 07.7**	**-1.3**
	baz=321						
T52A	**Hallie**	**69.86**	**55**	P	**P**	**02 31 08.9**	**-0.3**
	baz=321						
V50A	**Pikevile**	**69.90**	**57**	P	**P**	**02 31 08.8**	**-0.7**
	baz=321						
U51A	**La Follette**	**69.91**	**56**	P	**P**	**02 31 08.7**	**-0.9**
	baz=321						
M59A	**Waymart**	**69.95**	**47**	P	**P**	**02 31 08.6**	**-1.1**
	baz=323						
P56A	**Dayton Farm, R**	**70.00**	**51**	P	**P**	**02 31 09.6**	**-0.4**
	baz=322						
O57A	**Amberson**	**70.01**	**50**	P	**P**	**02 31 09.5**	**-0.6**
	baz=323,SNR=10						
R54A	**Victor**	**70.01**	**53**	P	**P**	**02 31 09.2**	**-0.9**
	baz=322						
TZTN	**Tazewell**	**70.01**	**56**	P	**P**	**02 31 09.8**	**-0.4**
	baz=321						
S54A	**Dingess, Beckl**	**70.15**	**54**	P	**P**	**02 31 10.5**	**-0.6**
	baz=322						
W50A	**Signal Mountai**	**70.15**	**58**	P	**P**	**02 31 10.4**	**-0.7**
	baz=321						
X49A	**Woodville**	**70.16**	**59**	P	**P**	**02 31 10.1**	**-0.9**
	baz=321,SNR=5.3						
Y48A	**Jasper**	**70.17**	**60**	P	**P**	**02 31 09.7**	**-1.4**
	baz=321						
V51A	**Loudon**	**70.18**	**57**	P	**P**	**02 31 10.3**	**-0.9**
	baz=321						
T53A	**Wise**	**70.18**	**55**	P	**P**	**02 31 10.7**	**-0.6**
	baz=322						
U52A	**Thorn Hill**	**70.22**	**56**	P	**P**	**02 31 11.0**	**-0.5**
	baz=321						
N59A	**State Game Lan**	**70.30**	**48**	P	**P**	**02 31 11.0**	**-0.9**
	baz=323						
R55A	**Marlinton**	**70.35**	**52**	P	**P**	**02 31 11.3**	**-1.0**
	baz=322						
O58A	**Lewisberry**	**70.41**	**49**	P	**P**	**02 31 11.7**	**-0.9**
	baz=323						
P57A	**Homestead Farm**	**70.41**	**50**	P	**P**	**02 31 11.5**	**-1.0**
	baz=323						
W51A	**Cleveland**	**70.47**	**58**	P	**P**	**02 31 12.0**	**-1.0**
	baz=321						
V52A	**Sevierville**	**70.54**	**56**	P	**P**	**02 31 12.6**	**-0.8**
	baz=321						
X50B	**Fort Payne**	**70.55**	**59**	P	**P**	**02 31 12.4**	**-1.1**
	baz=321						
S55A	**Lewisburg**	**70.57**	**53**	P	**P**	**02 31 12.1**	**-1.5**
	baz=322						
Q57A	**Strasburg**	**70.57**	**51**	P	**P**	**02 31 12.6**	**-0.9**
	baz=323						
O59A	**Robesonia**	**70.59**	**49**	P	**P**	**02 31 12.7**	**-0.9**
	baz=323						
T54A	**Tazewell**	**70.60**	**54**	P	**P**	**02 31 13.2**	**-0.6**
	baz=322						
R56A	**Bull Pasture M**	**70.60**	**52**	P	**P**	**02 31 13.1**	**-0.8**
	baz=322						
Y49A	**Blount Mountai**	**70.62**	**60**	P	**P**	**02 31 12.7**	**-1.2**
	baz=321						
N60A	**Cedar Hill Far**	**70.64**	**47**	P	**P**	**02 31 12.9**	**-1.0**
	baz=324						
U53A	**Fall Branch**	**70.64**	**55**	P	**P**	**02 31 13.5**	**-0.5**
	baz=322						
P58A	**Pank, Wackersv**	**70.73**	**50**	P	**P**	**02 31 13.5**	**-1.0**
	baz=323						
U54A	**Nelsons Funny**	**70.90**	**55**	P	**P**	**02 31 14.9**	**-0.8**
	baz=322						
LRAL	**Lakeview Retre**	**70.94**	**61**	P	**P**	**02 31 14.6**	**-1.3**
	baz=321						
T55A	**Pulaski**	**70.94**	**54**	P	**P**	**02 31 15.0**	**-0.9**
	baz=322						
Y50A	**Piedmont**	**70.95**	**59**	P	**P**	**02 31 14.7**	**-1.2**
	baz=321						
W52A	**Murphy**	**70.95**	**57**	P	**P**	**02 31 14.9**	**-1.1**
	baz=322						
Q58A	**Fox Den Farm,**	**70.99**	**50**	P	**P**	**02 31 15.3**	**-0.8**
	baz=323						
P59A	**Jarrettsville**	**71.04**	**49**	P	**P**	**02 31 15.6**	**-0.8**
	baz=323						
BLA	**Blacksburg**	**71.05**	**53**	P	**P**	**02 31 16.0**	**-0.6**
	baz=322						
Z49A	**Columbiana**	**71.07**	**60**	P	**P**	**02 31 15.4**	**-1.2**
	baz=321						
V53A	**Saluda**	**71.07**	**56**	P	**P**	**02 31 16.1**	**-0.5**
	baz=322						
S56A	**Natural Bridge**	**71.10**	**52**	P	**P**	**02 31 16.0**	**-0.8**
	baz=323						
R57A	**Stanardsville**	**71.11**	**51**	P	**P**	**02 31 15.9**	**-0.9**
	baz=323						
W53A	**Cullowhee**	**71.28**	**56**	P	**P**	**02 31 17.0**	**-1.0**
	baz=322						

Y51A	Rockmart	71.29	59	P	P	02 31 16.8	-1.2
	baz=321						
U55A	TA2, Sparta	71.30	54	P	P	02 31 17.3	-0.8
	baz=322						
Z50A	Ashland	71.34	60	P	P	02 31 17.2	-1.1
	baz=321						
X52A	Dahlonega	71.35	57	P	P	02 31 17.4	-0.9
	baz=322						
R58A	Rapidan	71.35	51	P	P	02 31 17.6	-0.6
	baz=323						
T56A	Rocky Mt	71.38	53	P	P	02 31 17.5	-1.0
	baz=322						
149A	Jones	71.39	61	P	P	02 31 17.6	-1.0
	baz=321						
V54A	Nebo	71.42	55	P	P	02 31 18.2	-0.6
	baz=322						
R58B	Mineral	71.68	51	P	P	02 31 19.6	-0.6
	baz=323						
CBN	Corbin Frederi	71.73	51	P	P	02 31 19.7	-0.8
	baz=323						
X53A	Estanollee	71.73	57	P	P	02 31 20.0	-0.6
	baz=322						
T57A	Hurt	71.79	53	P	P	02 31 19.9	-1.0
	baz=323						
150A	Eclectic	71.79	60	P	P	02 31 20.3	-0.7
	baz=321						
Y52A	Lilburn	71.84	58	P	P	02 31 20.7	-0.6
	baz=322						
W54A	Cherokee Point	71.84	56	P	P	02 31 20.6	-0.7
	baz=322						
S58A	Poland Farm, P	71.88	51	P	P	02 31 20.5	-0.9
	baz=323						
Y53A	Monroe	72.09	58	P	P	02 31 21.9	-0.9
	baz=322						
349A	Repton	72.14	62	P	P	02 31 22.7	-0.4
	baz=321						
X54A	Belton	72.17	56	P	P	02 31 22.9	-0.3
	baz=322						
T58A	Grand View Acr	72.18	52	P	P	02 31 22.4	-0.9
	baz=323						
Z52A	Williamson	72.18	59	P	P	02 31 22.3	-1.1
	baz=322						
U57A	Blanch	72.19	53	P	P	02 31 22.5	-0.8
	baz=323						
KMSC	Kings Mountain	72.23	55	P	P	02 31 22.9	-0.7
	baz=322						
AKASG	Malin Array Be	72.28	336	P	P	02 31 23.6	-0.1
	comp=Z,3.5nm,0.6s,baz=26,slow=6.3,SNR=8.0						
EKA	Eskdalemuir Ar	72.39	357	P	P	02 31 24.1	-0.1
EKA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
V57A	Coltrane Farms	72.41	54	P	P	02 31 24.1	-0.6
	baz=323						
152A	Waverly Hall	72.43	59	P	P	02 31 23.3	-1.5
	baz=322						
GOGA	Godfrey	72.50	58	P	P	02 31 24.1	-1.1
	baz=322						
Y54A	Tignall	72.55	57	P	P	02 31 25.0	-0.5
	baz=322						
Z53A	Monticello	72.55	58	P	P	02 31 24.5	-1.0
	baz=322						
X55A	Gracelyn & Ava	72.61	56	P	P	02 31 25.3	-0.6
	baz=322						
U58A	Oxford	72.61	53	P	P	02 31 25.1	-0.7
	baz=323						
V58A	Windy Hill, Pi	72.81	53	P	P	02 31 26.5	-0.6
	baz=323						
W57A	Gilead	72.89	54	P	P	02 31 26.7	-0.8
	baz=323						
X56A	White Oak	72.89	55	P	P	02 31 27.0	-0.5
	baz=323						
Y55A	Saluda	72.91	56	P	P	02 31 27.0	-0.7
	baz=322						
GEYT	Alibeck	72.92	311	P	P	02 31 28.7	+1.0
	comp=Z,2.2nm,0.7s,baz=332,slow=5.0,SNR=4.9						
Z54A	Sparta	72.96	58	P	P	02 31 27.2	-0.8
	baz=322						
U59A	Littleton	73.01	52	P	P	02 31 27.5	-0.7
	baz=324						
U60A	Pendleton	73.22	52	P	P	02 31 28.8	-0.6
	baz=324						
V59A	Middlesex	73.26	53	P	P	02 31 29.1	-0.5
	baz=323						
154A	Montrose	73.31	58	P	P	02 31 29.5	-0.6
	baz=322						
Z55A	Blythe	73.34	57	P	P	02 31 29.7	-0.5
	baz=322						
W58A	Raeford	73.37	54	P	P	02 31 29.7	-0.7
	baz=323						
155A	Kite	73.64	58	P	P	02 31 31.5	-0.5
	baz=322						
V60A	Jim Taylor Roa	73.73	52	P	P	02 31 31.9	-0.6
	baz=324						
TIGA	Tifton	73.99	59	P	P	02 31 33.7	-0.3
	baz=322						
W60A	Pink Hill	74.09	53	P	P	02 31 33.8	-0.7
	baz=324						
255A	Hazlehurst	74.18	58	P	P	02 31 34.7	-0.4
	baz=323						
NCK	Nalchik	74.30	323	⇓eP	P	02 31 36.4	+0.7
NCK				pmax	pmax		
	comp=Z,12nm,0.6s						
X60A	Albert Glenn T	74.34	53	P	P	02 31 35.3	-0.8
	baz=324						
KBZ	Khabaz	74.35	324	P	P	02 31 37.0	+1.1
	comp=Z,3.8nm,0.9s,baz=95,slow=1.5,SNR=5.1						
KBZ	Khabaz	74.35	324	P	P	02 31 37.0	+1.1
256A	Glennville	74.44	58	P	P	02 31 35.9	-0.8
	baz=323						
355A	Pearson	74.45	59	P	P	02 31 36.3	-0.4
	baz=323						
553A	Crawfordville	74.53	61	P	P	02 31 37.3	+0.1
	baz=322						
ZEI	Tsey	74.80	323	eP	P	02 31 38.4	-0.4
OJC	Ojcow	74.83	342	eP	P	02 31 39.9	+1.3
OJC	Ojcow	74.83	342	eP	P	02 31 39.9	+1.3
KSP	Ksiaz	74.86	344	eP	P	02 31 39.4	+0.6
KSP	Ksiaz	74.86	344	eP	P	02 31 39.4	+0.6
CLL	Collm	74.93	346	eP	P	02 31 39.0	-0.2
CLL	Collm	74.93	346	eP	P	02 31 39.0	-0.2
CLL				ePP	PP	02 34 26.0	-0.2
CHVC	Chvalec	75.15	344	eP	P	02 31 40.8	+0.3
OSTC	Ostas	75.15	344	eP	P	02 31 41.0	+0.5
BRG	Berggiesshubel	75.21	345	ePKP	P	02 31 41.0	+0.2
	comp=Z,3.2nm,0.6s						
BRG	Berggiesshubel	75.21	345	eP	P	02 31 41.0	+0.2
BRG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
UPC	Upice	75.23	344	eP	P	02 31 41.5	+0.5
UPC	Upice	75.23	344	eP	P	02 31 41.5	+0.5
DPC	Dobruska-Polom	75.33	344	eP	P	02 31 42.3	+0.7
DPC	Dobruska-Polom	75.33	344	eP	P	02 31 42.3	+0.7
KOLS	Kolonicke sedl	75.55	340	eP	P	02 31 43.8	+1.0
KOLS	Kolonicke sedl	75.55	340	eP	P	02 31 43.8	+1.0
MORC	Moravsky Berou	75.67	343	eP	P	02 31 43.1	-0.4
	comp=Z,2.6nm,0.7s						
MORC	Moravsky Berou	75.67	343	⇑iP	P	02 31 44.6	+1.1
MORC	Moravsky Berou	75.67	343	eP	P	02 31 43.1	-0.4
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MORC	Moravsky Berou	75.67	343	eP	P	02 31 44.2	+0.7
LANS	Liptovska Anna	75.91	341	eP	P	02 31 47.0	+2.1
LANS	Liptovska Anna	75.91	341	eP	P	02 31 47.0	+2.1
GOPC	GO Pecny, Ondr	76.01	345	eP	P	02 31 45.9	+0.5
GOPC	GO Pecny, Ondr	76.01	345	eP	P	02 31 45.9	+0.5
NKC	Novy Kostel	76.06	346	eP	P	02 31 46.3	+0.6
NKC	Novy Kostel	76.06	346	eP	P	02 31 46.3	+0.6
BURAR	Bucovina Array	76.13	337	⇑iP	P	02 31 46.7	+0.5
BURAR	Bucovina Array	76.13	337	P	P	02 31 46.7	+0.5
TRPA	Tarpa	76.25	339	⇑iP	P	02 31 48.2	+1.4
VRAC	Vranov	76.29	343	⇑iP	P	02 31 48.3	+1.3
VRAC	Vranov	76.29	343	P	P	02 31 48.3	+1.3
VRAC	Vranov	76.29	343	eP	P	02 31 48.0	+1.0
TREC	Trest	76.49	344	eP	P	02 31 48.7	+0.5
TREC	Trest	76.49	344	eP	P	02 31 48.7	+0.5
JAVC	Velka Javorina	76.53	343	eP	P	02 31 50.3	+1.8
BIZ	Bicaz	76.54	336	⇑iP	P	02 31 49.4	+0.9
KRUC	Moravsky	76.56	343	eP	P	02 31 49.2	+0.6
VYHS	Vyhne	76.66	342	eP	P	02 31 50.5	+1.4
VYHS	Vyhne	76.66	342	eP	P	02 31 50.5	+1.4
TESR	Tescani	76.81	336	⇑iP	P	02 31 50.7	+0.7
KHC	Kasperske Hory	76.96	345	eP	P	02 31 51.4	+0.5
KHC	Kasperske Hory	76.96	345	eP	P	02 31 51.4	+0.5
GIVF	Givet	77.10	351	eP	P	02 31 52.0	+0.5
GIVF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BAIF	Baives	77.20	352	eP	P	02 31 52.8	+0.7
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GERES	GERESS Array B	77.22	345	P	P	02 31 52.7	+0.3
	comp=Z,3.1nm,0.5s,baz=26,slow=6.2,SNR=43						
DRGR		77.48	339	⇑iP	P	02 31 54.5	+0.6
DRGR		77.48	339	P	P	02 31 54.4	+0.6
CONA	Conrad Observa	77.75	343	eP	P	02 31 56.8	+1.5
	comp=Z,2.4nm,0.5s,SNR=4.8						
MLR	Muntele Rosu	77.94	336	eP	P	02 31 57.5	+1.0
	comp=Z,1.6nm,0.8s						
MLR	Muntele Rosu	77.94	336	⇓iP	P	02 31 58.0	+1.5
MLR	Muntele Rosu	77.94	336	eP	P	02 31 57.5	+1.0
MLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VOIR		78.21	337	⇑iP	P	02 31 58.2	+0.3
VOIR		78.21	337	P	P	02 31 58.1	+0.2
ARSA	Arzberg	78.47	343	eP	P	02 32 00.8	+1.5
	comp=Z,2.1nm,0.7s						
BZS	Buzias	78.83	339	⇑iP	P	02 32 01.9	+0.6
BZS	Buzias	78.83	339	P	P	02 32 01.8	+0.5
LDF	La Druitiere	78.98	354	eP	P	02 32 02.0	0.0
LDF				pmax	pmax		
	comp=Z,20nm,1.5s						
KBA	Koelnbreinsper	79.00	345	i P	P	02 32 04.0	+1.6
	comp=Z,5.9nm,0.6s						
HAU	Haudompre	79.02	350	eP	P	02 32 02.0	-0.3
HAU				pmax	pmax		
	comp=Z,15nm,1.4s						
MOTA	Moosalm	79.07	346	eP	P	02 32 03.5	+0.8
	comp=Z,2.1nm,0.6s						
WTTA	Wattenberg	79.08	346	eP	P	02 32 03.9	+1.1
	comp=Z,4.5nm,0.6s,SNR=5.1						
SOKA	Soboth	79.10	344	eP	P	02 32 04.0	+1.2
	comp=Z,3.6nm,0.5s,SNR=10.0						
SQTA	Sankt Quirin	79.18	346	eP	P	02 32 04.3	+1.0
	comp=Z,11nm,1.2s,SNR=4.3						
GRR	Gorron	79.23	355	eP	P	02 32 03.0	-0.4
GRR				pmax	pmax		
	comp=Z,11nm,0.9s						
OBKA	Obir	79.35	344	eP	P	02 32 05.7	+1.5
	comp=Z,6.5nm,0.6s,SNR=4.4						
ROSF	Rostrenen	79.39	356	eP	P	02 32 04.6	+0.3
ROSF				pmax	pmax		
	comp=Z,63nm,1.8s						
FETA	Feichten	79.44	347	eP	P	02 32 05.8	+1.0
	comp=Z,3.4nm,0.6s,SNR=4.4						
ABTA	Abfaltersbach	79.45	345	eP	P	02 32 05.6	+0.9
	comp=Z,7.6nm,1.4s,SNR=4.5						
FUORN	Ofenpass-Fuorn	79.90	347	eP	P	02 32 08.1	+0.7
	comp=Z,5.4nm,0.6s						
LOR	Lormes	80.00	351	eP	P	02 32 07.3	-0.3
LOR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SSF	Saint Saulge	80.23	352	eP	P	02 32 08.7	-0.1
SSF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CABF	La Chapelle	80.42	350	eP	P	02 32 10.3	+0.3
CABF				pmax	pmax		
	comp=Z,18nm,1.4s						
AVF	Avril sur Loir	80.51	352	eP	P	02 32 10.2	-0.1
AVF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SMF	Signal de Mont	80.61	351	eP	P	02 32 10.7	-0.2
SMF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MFF	Saint Martin d	80.97	354	eP	P	02 32 12.7	-0.1
MFF				pmax	pmax		
	comp=Z,13nm,1.4s						
BRTR	Keskin Array B	81.06	328	P	P	02 32 14.2	+0.5
	comp=Z,0.8nm,0.7s,baz=40,slow=2.9,SNR=6.4						
BRTR	Keskin Array B	81.06	328	i P	P	02 32 15.6	+2.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TCF	Toulx Ste Croi	81.11	352	eP	P	02 32 13.4	-0.2
TCF				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LPL	La Plagne	81.43	349	eP	P	02 32 16.4	+0.8
LPL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LPG	La Plagne	81.45	349	eP	P	02 32 17.9	+2.2
LPG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BNI	Bardonecchia	81.90	349	eP	P	02 32 18.4	+0.5
	comp=Z,6.6nm,1.0s						
BNI	Bardonecchia	81.90	349	eP	P	02 32 18.4	+0.5
BNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ORIF	Oris-en-Rattie	82.12	350	eP	P	02 32 19.8	+0.8
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RJF	Les Rejaudoux	82.14	353	eP	P	02 32 22.5	+3.5
RJF				pmax	pmax		
	comp=Z,26nm,2.0s						
MBDF	Montbardon	82.21	349	eP	P	02 32 20.2	+0.6
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CAF	Calviac	82.47	352	eP	P	02 32 21.2	+0.4
CAF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AS31	Alice Springs	82.64	214	eP	P	02 32 23.5	+1.8
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	82.64	214	P	P	02 32 23.5	+1.8
	comp=Z,0.6nm,0.7s,baz=15,slow=4.9,SNR=9.5						
SBF	Sospel	82.98	348	eP	P	02 32 23.4	-0.1
SBF				pmax	pmax		
	comp=Z,20nm,1.3s						
MTLF	Montolieu	84.04	352	eP	P	02 32 29.5	+0.6
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PGF	Pioggiola	84.07	347	eP	P	02 32 29.9	+0.7
PGF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
EPF	Esparros	84.49	353	eP	P	02 32 31.7	+0.5
EPF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ETSF	Etsaut	84.68	354	eP	P	02 32 32.8	+0.6
ETSF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ESDC	Sonseca Array	88.07	356	P	P	02 32 48.8	0.0
	comp=Z,0.8nm,0.5s,baz=356,slow=5.0,SNR=7.6						
BOSA	Boshof	145.41	300	PKPbc	PKPab	02 39 36.8	+0.3
	comp=Z,2.8nm,0.7s,baz=357,slow=5.0,SNR=6.8						

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*DDA **05** 02:20:14.5, 38°.65N×43°.03E, h7^{km}±1^{km}, ML2.7*
*ISK **05** 02:20:14.6, 38°.63N×43°.03E, h7^{km}, ML2.0/5*
*ISCJB **05** 02:20:15.1±0.6, 38°.65N±0°.03×43°.02E±0°.06, h10^{km}±8^{km},*
Error ellipse: s-maj=7.7km s-min=5.3km az=23.4
ISC 05 02:20:15.0±1.0**, 38°.63N**±0°.03×**43°.05E**±0°.04**, h13**^{km}±10^{km}**,**
n11, σ0^{s}.69/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.27	98	PG	Pb	02 20 21.3	-0.6
VANB				SG	Sb	02 20 26.5	+0.1
TVAN	Van	0.30	110	i P	Pg	02 20 21.5	+0.1
TVAN				i S	Sg	02 20 26.3	+0.7
TVAN				IAML_P			
	comp=Z,5µm,0.2s						
AKDM	Akdamar-Van	0.31	190	PG	Pg	02 20 21.0	-0.5
AKDM				SG	Sg	02 20 25.9	+0.1
GEVA	Gevas	0.32	178	i P	Pg	02 20 21.4	-0.3
GEVA				i S	Sb	02 20 27.4	-0.4
GEVA				IAML_P			
	comp=Z,2µm,0.1s						
VMUR	Van-Muradiye	0.54	49	i P	Pb	02 20 26.0	-0.6
VMUR				i S	Sb	02 20 34.1	-0.3
VMUR				IAML_P			
	comp=Z,449nm,0.1s						
MLAZ	Malazgirt-MUS	0.64	323	PG	Pb	02 20 27.4	-0.8
TUTA	Tutak	0.79	347	i P	Pg	02 20 30.1	-0.3
CLDR	Caldiran	0.85	53	PG	Pg	02 20 31.2	-0.4
HAKT	HAKKARI	1.19	154	i P	Pg	02 20 36.8	-1.3
MUSM	Mu-Merkez	1.20	275	i P	Pn	02 20 39.0	+1.3
CUKT	Cukurca	1.45	162	PN	Pb	02 20 42.1	+0.1

ROM 05 02:29:50.8±0.1**, 44°.201N**±0°.004×**10°.161E**±0°.004**,**
h10^{km}**, ML0.8**/2**, Error ellipse: s-maj=0.4km**
s-min=0.3km az=192.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	Equi	0.04	189	P	Pg	02 29 53.1	+0.4
EQUI				S	Sg	02 29 54.2	+0.1
EQUI				AML	AML		
	comp=E,90µm,0.6s						
EQUI				AML	AML		
	comp=N,95µm,0.8s						
EQUI				AML	AML		
	comp=N,95µm,0.8s						
EQUI				AML	AML		
	comp=E,90µm,0.6s						
FIVI	Fivizzano	0.04	328	P	Pg	02 29 53.0	+0.1
FIVI				S	Sg	02 29 54.5	+0.2
T0912	Minucciano (LU	0.05	133	P	Pg	02 29 53.4	+0.5
T0912				S	Sg	02 29 54.8	+0.4
T0911	Castelpoggio (	0.11	215	P	Pg	02 29 54.3	+0.7
T0911				S	Sg	02 29 56.3	+0.7
FOSD	Fosdinovo	0.15	232	P	Pb	02 29 55.0	-0.7
FOSD				S	Sg	02 29 57.7	+1.2
VLC	Villacollemand	0.17	104	P	Pg	02 29 55.2	+0.7
VLC				S	Sg	02 29 58.1	+1.1
PLMA	Palmaria, Port	0.27	236	P	Pg	02 29 57.0	+0.7
PLMA				S	Sg	02 30 01.0	+1.1
GRAM	Graiana	0.30	347	P	Pb	02 29 57.7	-0.7
GRAM				S	Sb	02 30 02.2	-1.1
GRAM				AML	AML		
	comp=E,27µm,0.2s						
GRAM				AML	AML		
	comp=N,46µm,0.1s						
GRAM				AML	AML		
	comp=E,27µm,0.2s						
GRAM				AML	AML		
	comp=N,46µm,0.1s						
BDI	Bagni Di Lucca	0.34	114	P	Pg	02 29 58.0	+0.3
BDI				S	Sb	02 30 03.8	-0.8
MAIM	Mastiano	0.37	140	P	Pg	02 29 58.8	+0.6
MAIM				S	Sb	02 30 04.3	-1.1
MSSA	Maissana	0.48	284	P	Pg	02 30 00.7	+0.6
MSSA				S	Sb	02 30 07.5	-0.9

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*NORS **05** 02:41:40.9±0.0, 44°.34N×43°.07E, h14^{km}, MPVA4.3*
*MOS **05** 02:41:41.0±0.0, 44°.32N×43°.08E, h19^{km}, MPVA4.2*
ISC 05 02:41:41.0±1.1**, 44°.32N**±0°.02×**43°.06E**±0°.02**, h6**^{km}±9^{km}**,**
n55, σ1^{s}.02/95**, 9C-5D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIV0	Kislovodsk Arr	0.45	215	i Pg	Pb	02 41 50.7	-0.7
KIV0				i Sg	Sb	02 41 57.7	-0.7
ALER	Alexandrovskoy	0.45	347	i Pg	Pg	02 41 50.2	+0.4
ALER				eSg	Sb	02 41 57.1	-1.2
KIV	Kislovodsk	0.45	216	⇓iPG	Pb	02 41 50.7	-0.8
KIV				eS	Sb	02 41 57.7	-0.8
KBTC	Kuba-Taba	0.57	153	ePG	Pg	02 41 52.0	+0.1
KBTC				eS	Sg	02 42 00.5	+1.1
KBTC	Kuba-Taba	0.57	153	i Pg	Pg	02 41 52.0	+0.1
	137nm,0.3s						
KBTC				eSg	Sg	02 42 00.4	+1.1
	2µm,0.3s						
SHA1	Shidzhatmaz	0.65	206	⇓iPG	Pg	02 41 54.2	+0.6
SHA1				eS	Sb	02 42 03.6	-0.7
SHA1	Shidzhatmaz	0.65	206	i Pg	Pg	02 41 54.1	+0.5
SHA1				i Sg	Sb	02 42 03.6	-0.7
GOF	Gofitskoye	0.73	359	⇑ePG	Pg	02 41 54.7	-0.4
GOF				eS	Sg	02 42 05.1	+0.4
GOF				pmax	pmax		
	comp=Z,36nm,0.4s						
GOF				smax	smax		
	comp=N,234nm,0.4s						
GOF				smax	smax		
	comp=E,435nm,0.4s						
GOF	Gofitskoye	0.73	359	ePg	Pg	02 41 54.8	-0.4
	comp=E,167nm,0.2s						
GOF				eSg	Sg	02 42 05.4	+0.7
	comp=E,1µm,0.2s						
NVNR	Nevinnomyssk	0.83	291	ePg	Pb	02 41 57.5	-0.4
	comp=E,130nm,0.1s						
NVNR				eSg	Sb	02 42 09.7	+0.4
	comp=E,801nm,0.2s						
NCK	Nalchik	0.92	155	ePG	Pg	02 41 58.8	+0.3
NCK				pmax	pmax		
	comp=Z,127nm,0.2s						
NCK	Nalchik	0.92	155	ePg	Pg	02 41 58.9	+0.3
	comp=Z,127nm,0.2s						
NCK				i Sg	Sg	02 42 10.8	+0.3
	comp=Z,582nm,0.3s						
PRTR	Priterechnaya	1.05	122	⇓iPG	Pg	02 42 00.9	-0.3
PRTR				eS	Sb	02 42 15.9	+0.3
PRTR	Priterechnaya	1.05	122	i Pg	Pg	02 42 00.8	-0.4
	comp=Z,252nm,0.2s						
PRTR				eSg	Sb	02 42 15.7	+0.1
	comp=Z,554nm,0.2s						
NEY	Neytrino	1.10	193	⇑iPG	Pg	02 42 02.0	-0.1
NEY				eS	Sg	02 42 16.5	0.0
NEY	Neytrino	1.10	193	ePg	Pg	02 42 01.8	-0.3
NEY				eSg	Sg	02 42 16.4	0.0
LSNR	Lesken	1.19	152	cePG	Pb	02 42 02.9	-0.9
LSNR	Lesken	1.19	152	ePg	Pb	02 42 03.0	-0.9
LSNR				eSg	Sg	02 42 18.6	-0.5
STDR	Stavd-Durt	1.20	142	ePG	Pb	02 42 03.6	-0.6
STDR				eS	Sn	02 42 21.5	+0.6
STDR	Stavd-Durt	1.20	142	ePg	Pb	02 42 03.6	-0.6
	comp=Z,56nm,0.5s						
STDR				eSg	Sn	02 42 21.1	+0.2
	comp=Z,140nm,0.4s						
TRKR	Terskaya	1.35	116	ePG	Pn	02 42 05.1	-1.2
TRKR				eS	Sg	02 42 24.8	+0.4
TRKR	Terskaya	1.35	116	ePg	Pn	02 42 05.1	-1.2
	comp=Z,84nm,0.3s						
TRKR				eSg	Sg	02 42 24.6	+0.2
	comp=Z,524nm,0.3s						
ARNR	Ardon	1.45	142	cePG	Pn	02 42 07.8	+0.1
ARNR	Ardon	1.45	142	ePg	Pn	02 42 07.0	-0.7
	comp=Z,66nm,0.5s						
ARNR				eSg	Sg	02 42 27.5	-0.1
DOMR	Dombai	1.46	226	⇑ePG	Pn	02 42 07.6	-0.5
DOMR				pmax	pmax		
	comp=Z,265nm,0.3s						
DOMR	Dombai	1.46	226	ePg	Pn	02 42 07.1	-1.0
DOMR				eSg	Sn	02 42 26.9	-0.7
	comp=Z,237nm,0.3s						
DIGR	Digorskoe uzhe	1.47	165	ePG	Pn	02 42 08.3	0.0
DIGR				pmax	pmax		
	comp=Z,110nm,0.1s						
DIGR	Digorskoe uzhe	1.47	165	ePg	Pn	02 42 07.7	-0.5
	comp=Z,110nm,0.1s						
DIGR				eSg	Sn	02 42 26.5	-1.5
	comp=Z,497nm,0.1s						
ARXR	Arkhyz	1.49	240	ePg	Pn	02 42 08.1	-0.4
	comp=Z,88nm,0.3s						
ARXR				eSg	Sn	02 42 28.0	-0.4
ZEI	Tsey	1.65	158	ePG	Pb	02 42 11.6	-0.4
ZEI				pmax	pmax		
	comp=Z,97nm,0.1s						
ZEI	Tsey	1.65	158	ePg	Pb	02 42 11.6	-0.4
	comp=Z,96nm,0.1s						
ZEI				eSg	Sn	02 42 32.4	+0.1
	comp=Z,807nm,0.1s						
LABN	Labinsk	1.70	282	ePN	Pb	02 42 12.1	-0.6
LABN				eS	Sg	02 42 34.9	-0.7
LABN	Labinsk	1.70	282	ePg	Pb	02 42 12.1	-0.6
LABN				eSg	Sg	02 42 35.7	+0.1
LACR	Lac	1.75	148	ePN	Pn	02 42 11.7	-0.2
LACR				eS	Sg	02 42 36.4	-0.8
LACR	Lac	1.75	148	ePg	Pn	02 42 10.4	-1.5
	comp=Z,42nm,0.2s						
LACR				eSg	Sn	02 42 33.9	-0.6
ONI	Oni	1.76	170	P	Pb	02 42 13.0	-0.6
ONI				S	Sg	02 42 37.5	0.0
ONI	Oni	1.76	170	ePN	Pb	02 42 13.0	-0.6
ONI				eS	Sg	02 42 37.4	0.0
KMGR	Komgaron	1.82	133	ePg	Pn	02 42 12.2	-0.7
	comp=Z,54nm,0.3s						
KMGR				eSg	Sb	02 42 37.4	-0.5
TKB	Tkibuli	1.97	181	P	Pg	02 42 19.1	+0.3
TKB				S	Sg	02 42 43.9	-0.4
RPOR	Krasnaya Polya	2.11	254	ePN	Pb	02 42 18.0	-1.6
RPOR				eS	Sb	02 42 45.6	-0.4
RPOR	Krasnaya Polya	2.11	254	ePg	Pb	02 42 18.0	-1.6
RPOR				eSg	Sb	02 42 45.6	-0.4
GUDG	Gudauri	2.13	150	P	Pn	02 42 15.9	-1.3
GUDG				S	Sn	02 42 42.8	-1.3
GROC	Groznyy	2.28	118	ePN	Pn	02 42 18.4	-0.7
GROC				e		02 42 52.2	
GROC				pmax	pmax		

	comp=Z,17nm,0.4s						
GROC	Groznyy	2.28	118	ePn	Pn	02 42 18.4	-0.7
	comp=Z,19nm,0.4s						
GROC				eSn	Sn	02 42 46.9	-0.6
ERBR	Yeremizino-Bor	2.29	308	⇑ePN	Pg	02 42 23.9	-1.1
LZRR	Lazarevskoye	2.67	263	ePn	Pn	02 42 24.6	+0.1
	comp=Z,11nm,0.6s						
LZRR				ePn	Sn	02 42 56.9	-0.3
BTLR	Botlikh	2.84	125	⇑ePN	Pn	02 42 24.9	-2.0
BTLR	Botlikh	2.84	125	ePn	Pn	02 42 25.0	-1.9
BTLR				ePn	Sn	02 42 58.6	-2.8
DBC	Dubki	3.03	114	ePn	Pn	02 42 27.9	-1.7
DBC				eSn	Sn	02 43 03.3	-2.9
LGD	Lagodekhi	3.41	136	P	Pn	02 42 33.5	-1.3
LGD	Lagodekhi	3.41	136	ePN	Pn	02 42 33.4	-1.3
GNI	Garni	4.35	163	⇑ePN	Pn	02 42 47.7	-0.1
GNI				pmax	pmax		
	comp=Z,17nm,0.8s						
BRVK	Borovoye	19.89	54	⇓eP	Pn	02 46 16.4	+2.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	Ala-Archa	22.81	83	⇑eP	P	02 46 47.7	+3.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	24.68	62	⇓eP	P	02 47 05.9	+3.5
KURK				pmax	pmax		
	comp=Z,3.0nm,1.7s						

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*NEIC **05** 02:49:56.8±0.0, 15°.44N×95°.75W, h15^{km}, MD4.0(MEX), After MEX.*

MEX 05 02:49:55.5±1.0, 15°.42N×95°.84W, h12^{km}±12^{km}, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.43	323	ePg	Pg	02 50 02.8	-1.3
HUIG				eSg	Sg	02 50 09.0	-0.9
HUIG	Huatulco	0.43	323	i P	Pg	02 50 02.8	-1.3
HUIG				eS	Sg	02 50 08.8	-1.1
VHO	Vista Hermosa	1.85	333	ePn	Pn	02 50 26.3	-1.1
VHO				eSn	Sn	02 50 47.6	-3.3
VHO	Vista Hermosa	1.85	333	eP	Pn	02 50 24.9	-2.5
VHO				eS	Sn	02 50 47.0	-3.9
CMIG	Matias Romero	1.90	29	ePn	Pn	02 50 24.0	-3.8
CMIG				eSn	Sn	02 50 46.9	-4.8
CMIG	Matias Romero	1.90	29	eP	Pn	02 50 24.0	-3.8
CMIG				eS	Sn	02 50 46.9	-4.8
PCIG		2.54	83	ePn	Pn	02 50 33.5	-3.1
PCIG		2.54	83	eP	Pn	02 50 33.5	-3.1
PCIG				i S	Sn	02 51 03.8	-3.8
TLIG	Tlapa	3.38	310	ePg	Pb	02 50 57.0	+1.5
CCIG	Comitan	3.67	76	ePn	Pn	02 50 51.1	-1.2

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*MEX **05** 02:57:32.6±4.4, 23°.52N×108°.82W, h10^{km}, MD4.0*
*IDC **05** 02:57:39.0±1.4, 24°.13N×109°.11W, h0^{km}, mb4.0/5, mb1 4.3/8, mb1mx4.0/37, mbtmp3.9/8, ML4.0/3, MS3.2/9, Ms1 3.2/9, ms1mx3.0/36, Error ellipse: s-maj=30.3km s-min=11.7km az=165.0*
*ISCJB **05** 02:57:40.2±0.7, 24°.11N±0°.07×109°.31W±0°.04, h10^{km}, mb4.2/18, MS3.1/6, Error ellipse: s-maj=10.0km s-min=5.2km az=179.9*
*NEIC **05** 02:57:42.0±1.8, 24°.09N×109°.32W, h10^{km}±3^{km}, mb4.2/84, Error ellipse: s-maj=16.9km s-min=6.0km az=182.0*

ISC 05 02:57:42.0±1.0, 24°.1N±0°.1×109°.35W±0°.06, h10^{km}, n72, σ1^{s}.10/65, mb4.2/18, MS3.1/6, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	0.87	269	Pg	Pg	02 57 59.3	+0.5
	239nm,0.3s,baz=20,slow=2.3,SNR=50						
LPIG				Lg	Lg	02 58 15.3	
	790nm,0.3s,baz=29,slow=20,SNR=26						
LPIG	La Paz	0.87	269	ePg	Pg	02 57 59.3	+0.5
LPIG				eSg	Sb	02 58 10.8	-0.1
LPIG	La Paz	0.87	269	eP	Pg	02 57 59.3	+0.5
	baz=133,slow=3.5						
LPIG				eS	Sb	02 58 10.8	-0.1
HPIG		4.36	49	ePn	Pn	02 58 46.8	-1.6
ZAIG	Zacatecas	6.38	101	ePn	Pn	02 59 13.1	-3.2
TX31	Lajitas Ar. Si	7.27	43	ePn	Pn	02 59 23.4	-5.0
TXAR	Lajitas Array	7.27	43	Pn	Pn	02 59 23.4	-4.9
	0.2nm,0.3s,baz=214,slow=14,SNR=7.4						
TUC	Tucson	8.26	352	ePn	Pn	02 59 41.6	-0.3
LNIG	Linares	9.04	83	ePn	Pn	02 59 55.6	+3.0
833A	Chaparral WMA,	9.87	63	ePn	Pn	03 00 03.2	-0.8
BNM	Barren Site	10.28	13	ePn	Pn	03 00 07.6	-2.1
X18A	Snowflake	10.39	357	ePn	Pn	03 00 10.7	-0.5
LAZ	Ladron	10.43	10	ePn	Pn	03 00 09.4	-2.4
Y12C	Blythe	10.61	336	ePn	Pn	03 00 14.5	+0.5
ANMO	Albuquerque	11.08	12	Pn	Pn	03 00 21.0	+0.4
	0.1nm,0.3s,baz=158,slow=11,SNR=3.5						
ANMO	Albuquerque	11.08	12	ePn	Pn	03 00 20.1	-0.5
KNB	Kanab	13.20	348	ePn	Pn	03 00 50.5	+0.8
SHPR	Sheep Range	13.32	339	ePn	Pn	03 00 53.0	+1.7
S22A	4UR Ranch, Cre	13.75	8	ePn	Pn	03 00 58.1	+0.8
CCUT	Cedar City	13.82	347	ePn	Pn	03 00 59.0	+0.8
WMOK	Wichita Mounta	14.02	39	ePn	Pn	03 01 01.5	+0.8
TPNV	Topopah Spring	14.09	337	ePn	Pn	03 01 03.1	+1.3
MSU	Marysvale	14.55	351	ePn	Pn	03 01 08.9	+0.7
Q16A	Castle Valley	14.83	354	ePn	Pn	03 01 12.4	+0.4
SRU	San Rafael Swe	14.98	356	ePn	Pn	03 01 14.1	+0.1
	6.3nm,1.1s						
R11A	Troy Canyon, C	15.15	341	ePn	Pn	03 01 15.6	-0.5
	7.9nm,1.1s						
TMUT	Trail Mountain	15.21	355	ePn	Pn	03 01 17.2	+0.1
	8.7nm,1.1s						
P17A	Butcher Ranch,	15.35	356	ePn	Pn	03 01 19.9	+1.0
	7.1nm,1.1s						
ISCO	Idaho Springs	15.95	11	ePn	Pn	03 01 27.2	+0.5
	4.6nm,0.9s						
MPU	Maple Canyon	15.97	354	ePn	Pn	03 01 26.7	-0.2
	7.0nm,1.2s						
NVAR	Mina Array Bea	16.17	334	Pn	Pn	03 01 32.5	+2.9
	0.2nm,0.3s,baz=161,slow=12,SNR=33						
NVAR				LR	LR	03 06 45.3	
	comp=Z,45nm,18.8s,baz=178,slow=34						
DUG	Dugway, Tooele	16.29	351	ePn	Pn	03 01 31.0	0.0
	22nm,1.1s						
TCUT	Toone Canyon	17.04	355	ePn	Pn	03 01 41.2	+0.7
	12nm,1.0s						
MIAR	Mount Ida	17.22	49	ePn	Pn	03 01 42.7	+0.1
	15nm,1.0s						
ELK	Elko	17.30	345	P	Pn	03 01 45.3	+1.5
	0.1nm,0.3s,baz=176,slow=8.6,SNR=9.4						
ELK				LR	LR	03 08 20.4	
	comp=Z,56nm,19.9s,baz=196,slow=37						
SPUT	South Promonto	17.34	352	ePn	Pn	03 01 43.9	-0.3
	6.9nm,1.1s						
HWUT	Hardware Ranch	17.54	354	ePn	Pn	03 01 46.5	-0.2
	8.9nm,1.1s						
HVU	Hansel Valley	17.84	352	eP	Pn	03 01 50.8	+0.3
	6.6nm,0.9s						
PDAR	Pinedale Array	18.60	360	P	P	03 01 58.7	-0.9
	0.2nm,0.3s,baz=163,slow=11,SNR=27						
FXWY	Fox Creek	19.52	356	eP	P	03 02 10.2	+0.6
	3.3nm,0.9s						
WVOR	Wild Horse Val	19.82	339	eP	P	03 02 14.8	+1.9
	8.3nm,1.1s						
APG	El Apazote	19.96	114	LR	LR	03 09 52.6	
	comp=Z,181nm,21.8s,baz=256,slow=37						
YHB	Horse Butte	20.64	356	eP	P	03 02 20.9	-0.9
	5.1nm,1.0s						
CCM	Cathedral Cave	20.77	44	eP	P	03 02 24.5	+1.4
	8.6nm,1.0s						
YBH	Yreka Blue Hor	20.79	331	LR	LR	03 09 40.9	
	comp=Z,60nm,20.1s,baz=146,slow=34						
MCMT	McKenzie Canyo	20.86	353	eP	P	03 02 24.9	+0.7
DLMT	Dillon	21.36	354	eP	P	03 02 30.2	+0.7
	8.8nm,1.1s						
BMO	Blue Mountains	21.68	345	eP	P	03 02 33.4	+0.5
	4.1nm,1.0s						
WVT	Waverly	22.08	52	eP	P	03 02 37.6	+0.4
	7.1nm,0.8s						
ECSD	EROS Data Cent	22.19	25	eP	P	03 02 40.1	+1.8
	17nm,1.1s						
CLTN	Cedars of Leba	23.16	54	eP	P	03 02 48.4	-0.2
	8.1nm,1.0s						
L42A	Oliver, Polo	24.20	38	eP	P	03 02 57.5	-1.1
	9.6nm,0.9s						
SFIN	Lafayette	24.74	44	eP	P	03 03 04.3	+0.7
	13nm,0.8s						
NEW	Newport	24.87	348	P	P	03 03 04.5	-0.3
	1.9nm,0.6s,baz=160,slow=12,SNR=3.7						
NEW				LR	LR	03 13 19.1	
	comp=Z,44nm,18.4s,baz=170,slow=38						
WALA	Waterton Lakes	25.15	353	eP	P	03 03 07.7	+0.3
	4.6nm,0.8s						
SSPA	Standing Stone	31.05	50	eP	P	03 04 01.9	+1.8
	13nm,1.0s						
BBB	Bella Bella	31.47	338	LR	LR	03 17 46.1	
	comp=Z,23nm,19.0s,baz=40,slow=38						
VLDQ	Val d'Or	34.77	38	eP	P	03 04 32.9	+0.5
	8.1nm,1.1s						
DLBC	Dease Lake	37.32	342	LR	LR	03 21 53.0	
	comp=Z,59nm,18.0s,baz=224,slow=39						
YKA	Yellowknife Ar	38.52	356	P	P	03 05 02.2	-2.1
	2.2nm,0.8s,baz=174,slow=7.8,SNR=14						
INK	Inuvik	46.59	348	eP	P	03 06 08.9	-0.8
	3.8nm,0.9s						
ILAR	Eielson Array	47.34	339	P	P	03 06 15.3	-0.3
	2.3nm,0.9s,baz=149,slow=6.5,SNR=24						
ILAR				LR	LR	03 29 14.6	
	comp=Z,21nm,18.6s,baz=91,slow=40						
PPLA	Purkeypile	48.08	335	eP	P	03 06 21.6	0.0
	4.9nm,0.6s						
MLY	Manley	48.78	338	eP	P	03 06 27.2	+0.3
	2.2nm,0.8s						
PETK	Petropavlovsk-	72.79	321	LR	LR	03 36 54.4	
	comp=Z,19nm,19.5s,baz=111,slow=32						
ARA0	ARCESS Array S	81.16	15	eP	P	03 09 55.7	-1.7
ARCES	ARCESS Array B	81.16	15	P	P	03 09 55.7	-1.7
	1.1nm,0.6s,baz=336,slow=2.7,SNR=11						
ESDC	Sonseca Array	85.92	48	P	P	03 10 20.3	-2.2
	0.6nm,0.7s,baz=282,slow=4.8,SNR=3.3						
WR1	Warramunga Arr	121.25	261	ePKPdf	PKPdf	03 16 35.4	-0.6
WRA	Warramunga Arr	121.25	261	PKP	PKPdf	03 16 35.4	-0.6
	1.1nm,0.7s,baz=125,slow=2.6,SNR=5.1						
AS31	Alice Springs	122.63	256	ePKPdf	PKPdf	03 16 38.0	-0.6
ASAR	Alice Springs	122.63	256	PKP	PKPdf	03 16 38.0	-0.6
	0.5nm,0.8s,baz=91,slow=2.4,SNR=5.0						

MEX 05 03:01:03.7±0.4, 15°.10N×92°.39W, h6^{km}±8^{km}, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.23	147	i P	Pg	03 01 08.5	+0.4
THIG				i S	Sg	03 01 10.7	-0.5
PCIG		1.00	307	eP	Pg	03 01 20.0	-2.9
PCIG				eS	Sg	03 01 33.6	-2.3
CCIG	Comitan	1.20	12	eP	Pg	03 01 23.9	-2.9
CCIG				eS	Sg	03 01 38.5	-4.0
TGIG		1.81	337	eP	Pn	03 01 32.0	-3.5
TGIG				eS	Sn	03 01 54.4	-4.5
CMIG	Matias Romero	3.11	310	i P	Pn	03 01 50.2	-3.1
CMIG				i S	Sn	03 02 26.9	-3.9

JMA 05 03:01:59.3±0.1, 27°.87N×141°.06E, h288^{km}, M4.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.26	127	P	Pn	03 02 40.0	+0.2
CBIJ				S	S	03 03 11.4	-0.6
JHH2	Haha-jima-NKT2	1.58	141	P	Pn	03 02 41.9	0.0
JHH2				S	S	03 03 15.3	-0.4
BSO1	Boso 1	6.76	359	eS	S	03 04 55.9	+0.1
BSO3	Boso 3	6.93	356	P	Pn	03 03 40.3	+1.1
BSO3				eS	S	03 04 59.3	-0.6
JAG	Ashikaga	8.64	351	P	Pn	03 04 00.8	+0.2
JHO	Hitachi	8.72	357	eS	S	03 05 36.9	-4.1
JHK	Hiroka	9.51	350	P	Pn	03 04 11.4	+0.1

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*CNRM **05** 03:15:43.9, 31°.35N×10°.72W, h30^{km}, ml4.0*
*IGIL **05** 03:15:50.9, 31°.31N×9°.85W, h18^{km}, ML2.9*
*INMG **05** 03:15:51.7±2.7, 31°.33N×9°.84W, h27^{km}±12^{km}, ML2.9, Error ellipse: s-maj=15.1km s-min=6.7km az=132.0*

ISC 05 03:15:47.8±1.5, 31°.40N±0°.06×9°.97W±0°.06, h10^{km}, n42, σ3^{s}.12/73, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EAH	EAH	0.41	53	P	Pn	03 16 00.2	+0.4
EAH				S	Sb	03 16 12.3	+8.9
TTIG	Tnine Tigouga,	1.56	123	P	Pn	03 16 13.3	-2.5
SRHM	Skhour des Reh	2.06	58	P	Pn	03 16 22.8	+0.2
SRHM				S	Sb	03 16 50.1	-0.8
SFNM	Sidi Ifni	2.07	185	P	Pn	03 16 18.1	-4.5
SFNM				S	Sn	03 16 41.4	-7.0
OUZM	OUZ	2.79	99	P	Pn	03 16 33.0	+0.3
OUZM				S	Sb	03 17 11.9	-0.3
ZHG	ZHG	3.47	53	P	Pn	03 16 42.6	+0.6
ZHG				S	Sn	03 17 27.3	+4.0
GOLM	Goulmima	4.29	85	P	Pn	03 16 56.2	+2.9
GOLM				S	Sb	03 17 53.0	-2.3
CZD	Col de Zad	4.48	67	P	Pn	03 16 57.4	+1.3
CZD				S	Sb	03 17 56.0	-4.9
MD31	MD31	4.65	70	P	Pn	03 16 59.2	+0.9
MD31				S	Sb	03 18 01.3	-4.4
SICH	Sidi Chahed	4.75	54	P	Pn	03 17 00.7	+1.1
SICH				S	Sb	03 18 02.2	-6.4
MDT	Midelt	4.76	71	P	Pn	03 17 00.7	+1.0
MDT				S	Sb	03 18 04.2	-4.6
LCRM	LCR	4.88	61	P	Pn	03 17 02.5	+1.1
LCRM				S	Sn	03 18 04.1	+6.0
ARF	Arif	4.91	88	P	Pn	03 17 03.7	+1.9
ARF				S	Sb	03 18 07.6	-5.7
RSA	Sarsar	4.92	44	P	Pn	03 17 02.5	+0.7
RSA				S	Sn	03 18 05.3	+6.5
PMPS	Porto Santo	5.64	289	ePn	Pn	03 17 14.5	+2.7
PMPST	Porto Santo, M	5.65	289	ePn	Pn	03 17 15.4	+3.5
PFVI	Vila Bisbo	5.80	9	ePn	Pn	03 17 16.4	+2.5
PFVI				eSn	Sn	03 18 19.5	-0.9
PFVI				A	A	03 18 23.4	
	11nm,0.5s						
MORF	Marmelete	5.99	10	eP	Pn	03 17 17.6	+1.0
MORF				eS	Sn	03 18 20.8	-4.5
MORF				AML	AML	03 18 27.7	
	comp=N,23nm,0.2s						
MORF	Marmelete	5.99	10	ePn	Pn	03 17 18.9	+2.3
MORF				eSn	Sn	03 18 26.2	+0.9
MORF				A	A	03 18 29.7	
	comp=N,12nm,0.2s						
AKLM	AKL	5.99	57	P	Pn	03 17 17.9	+1.3
AKLM				S	Sn	03 18 30.1	+4.7
PMAR	Madeira	6.04	284	ePn	Pn	03 17 20.8	+3.3
PBDV	Barranco-do-Ve	6.07	16	ePn	Pn	03 17 20.2	+2.6
PBDV				eSn	Sn	03 18 27.3	+0.2
PBDV				A	A	03 18 32.1	
	comp=N,6.7nm,0.7s						
PTEO	Sao Teotonio	6.22	9	ePn	Pn	03 17 22.0	+2.4
PTEO				eSn	Sn	03 18 30.0	-0.7
PTEO				A	A	03 18 32.6	
	comp=N,9.5nm,0.7s						
PMOZ	Porto Moniz, M	6.30	285	ePn	Pn	03 17 24.9	+4.0
PCVE	Castro Verde	6.42	14	ePn	Pn	03 17 24.4	+2.0
PCVE				eSn	Sn	03 18 34.8	-0.9
PCVE				A	A	03 18 44.8	
	comp=N,3.7nm,0.3s						
MESJ	Messejana	6.58	12	eP	Pn	03 17 25.2	+0.6
MESJ				eS	Sn	03 18 34.3	-5.5
MESJ				AML	AML	03 18 42.3	
	comp=N,5.8nm,0.1s						
MESJ	Messejana	6.58	12	ePn	Pn	03 17 27.5	+2.8
MESJ				eSn	Sn	03 18 39.1	-0.7
MESJ				A	A	03 18 43.5	
	comp=N,3.1nm,0.1s						
PNCL	Nicolau / Gran	6.80	10	ePn	Pn	03 17 29.7	+2.1
PNCL				eSn	Sn	03 18 43.5	-1.6
PNCL				A	A	03 18 51.2	
	comp=N,4.4nm,0.2s						
PBEJ	Beja	6.83	14	ePn	Pn	03 17 31.6	+3.5
PBEJ				eSn	Sn	03 18 45.3	-0.7
PBEJ				A	A	03 19 02.5	
	comp=N,3.3nm,0.4s						
JBK	JBK	6.88	63	P	Pn	03 17 29.4	+0.5
JBK				S	Sn	03 18 48.5	+1.1
TDRA	Tendrara	6.92	74	P	Pn	03 17 30.9	+1.4
TDRA				S	Sn	03 18 58.3	+10
HORN	Hornachuelos	7.51	30	P	Pn	03 17 36.7	-0.7
HORN				S	Sn	03 19 04.8	+2.2
PMAFR	Mafra	7.56	4	ePn	Pn	03 17 40.3	+2.2
PMAFR				eSn	Sn	03 19 01.6	-2.2
PMAFR				A	A	03 19 06.5	
	comp=N,11nm,0.2s						
PMTG	Montargil	7.78	10	ePn	Pn	03 17 42.9	+1.8
PMTG				eSn	Sn	03 19 06.0	-3.3
PMTG				A	A	03 19 11.6	
	comp=N,3.2nm,0.2s						
ALMR	Almeirim	7.82	8	eSn	Sn	03 19 07.7	-2.6
PMRV	Marv??o	8.28	14	ePn	Pn	03 17 49.6	+1.6
PMRV				eSn	Sn	03 19 19.4	-2.2
PMRV				A	A	03 19 25.3	
	comp=N,2.8nm,0.5s						
PTOM	Tomar	8.30	8	ePn	Pn	03 17 51.4	+3.2
PTOM				eSn	Sn	03 19 19.8	-2.2
PTOM				A	A	03 19 22.4	
	comp=N,5.0nm,0.7s						
PCBR	Castelo Branco	8.66	13	ePn	Pn	03 17 55.5	+2.3
PCBR				eSn	Sn	03 19 27.6	-3.3
PCBR				A	A	03 19 32.9	
	comp=N,2.9nm,0.6s						
PCAS	Casmilo, Conde	8.72	7	eSn	Sn	03 19 30.8	-1.5
MTE	Manteigas	9.19	12	ePn	Pn	03 18 02.7	+2.2
MTE				eSn	Sn	03 19 40.7	-3.4
POLO	Lamas de Olo	10.11	9	ePn	Pn	03 18 15.8	+2.7
PGAV	Gavieira, Arco	10.63	7	eSn	Sn	03 20 16.9	-2.6

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*IDC **05** 03:36:08.9±0.9, 56°.17N×111°.86E, h0^{km}, mb3.7/11, mb1 3.9/14, mb1mx3.7/48, mbtmp3.7/14, ML3.4/3, MS3.3/21, Ms1 3.3/21, ms1mx3.2/42, Error ellipse: s-maj=19.8km s-min=16.7km az=154.0*
*MOS **05** 03:36:09.6±0.9, 56°.18N×111°.90E, h13^{km}, mb4.0/5, Error ellipse: s-maj=11.4km s-min=6.9km az=66.0*
*BYKL **05** 03:36:11.9±0.2, 56°.15N×111°.91E, h23^{km}±2^{km}, FELT I=III-IV MSK at Uoyan, Novyy Uoyan, II at Mamakan.*

ISC 05 03:36:12.5±0.7, 56°.19N±0°.03×111°.84E±0°.02, h23^{km}±5^{km}, n96, σ2^{s}.73/132, mb3.9/12, MS3.4/17, 12C-12D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOA	Uoyan	0.09	229	⇓iPg	Pb	03 36 16.2	-0.5
YOA				e		03 36 18.4	
YOA				eSg	Sb	03 36 20.1	+0.5
YOA	Uoyan	0.09	229	⇓iPG	Pb	03 36 16.1	-0.6
YOA				i S	Sb	03 36 20.1	+0.5
KMO	Kumora	0.47	230	⇑iPg	Pb	03 36 21.3	-0.8
KMO				Pmax		03 36 25.5	
	955nm,0.3s						
KMO				eSg	Sb	03 36 28.4	-0.2
KMO				Smax		03 36 29.7	
	12μm,0.7s						
KMO	Kumora	0.47	230	ePG	Pb	03 36 21.4	-0.7
KMO				e		03 36 28.4	
KMO				pmax	pmax		
	comp=Z,622nm,0.2s						
KMO				smax	smax		
	comp=N,2μm,0.7s						
SVKR	Severomuysk	0.97	94	⇓iPg	Pb	03 36 29.3	-1.2
SVKR				Pmax		03 36 37.4	
	comp=N,2μm,0.3s						
SVKR				eSg	Sn	03 36 42.0	-1.7
SVKR				Smax		03 36 43.3	
	comp=N,26μm,0.4s						
SVKR	Severomuysk	0.97	94	ePG	Pn	03 36 29.6	-1.1
SVKR				e		03 36 40.3	
SVKR				pmax	pmax		
	comp=Z,2μm,0.6s						
SVKR				smax	smax		
	comp=N,20μm,0.7s						
NIZ	Nizh Angarsk	1.36	253	⇓iPg	Pb	03 36 37.3	+0.1
NIZ				Pmax		03 36 38.6	
	comp=N,325nm,0.3s						
NIZ				eSg	Sb	03 36 56.1	+2.0
NIZ				Smax		03 36 57.4	
	comp=N,3μm,0.3s						
NIZ	Nizh Angarsk	1.36	253	ePG	Pb	03 36 37.3	+0.1
NIZ				e		03 36 56.3	
NIZ				pmax	pmax		
	comp=Z,347nm,0.5s						
NIZ				smax	smax		
	comp=N,5μm,0.9s						
YLYR	Ulyunkhan	1.37	197	⇑iPg	Pb	03 36 36.6	-0.8
YLYR				Pmax		03 36 37.1	
	comp=N,2μm,0.6s						
YLYR				ePb	Pn	03 36 37.4	+1.2
YLYR				eSg	Sb	03 36 55.0	+0.5
YLYR				Smax		03 36 55.4	
	comp=N,9μm,0.8s						
BOD	Bodaibo	2.02	35	⇑iPn	Pn	03 36 45.6	+0.5
	comp=N,235nm,0.9s						
BOD				⇑iPn	Pn	03 36 45.6	+0.5
	comp=N,146nm,0.9s						
BOD				⇑iPn	Pn	03 36 45.6	+0.5
	comp=N,296nm,0.9s						
BOD				e		03 36 47.7	
BOD				max		03 36 51.0	
	comp=N,435nm,0.3s						
BOD				eSn	Sn	03 37 11.0	+1.4
BOD				eSg	Sb	03 37 13.9	+0.8
BOD				Smax		03 37 15.4	
	comp=N,7μm,0.4s						
BOD	Bodaibo	2.02	35	ePN	Pn	03 36 45.4	+0.3
BOD				eS	Sn	03 37 10.3	+0.7
BOD				eS	Sb	03 37 13.3	+0.2
BOD				smax	smax		
	comp=E,7μm,0.5s						
NLYR	Nelyaty	2.17	80	⇓iPn	Pn	03 36 47.4	+0.1
NLYR				ePg	Pb	03 36 50.0	-1.1
NLYR				Pmax		03 36 57.6	
	comp=E,592nm,0.7s						
NLYR				eSg	Sb	03 37 18.6	+1.0
NLYR				Smax		03 37 27.6	
	comp=E,3μm,1.1s						
NLYR	Nelyaty	2.17	80	ePN	Pn	03 36 47.3	+0.1
NLYR				e		03 36 50.1	
NLYR				e		03 37 17.7	
NLYR				pmax	pmax		
	comp=Z,585nm,0.6s						
NLYR				smax	smax		
	comp=E,3μm,1.1s						
SYVR	Suvo	2.75	203	⇓iPn	Pn	03 36 55.4	+0.2
SYVR				e		03 36 59.6	
SYVR				ePg	Pb	03 36 59.7	-1.2
SYVR				Pmax		03 37 03.2	
	comp=E,530nm,0.7s						
SYVR				eSg	Sb	03 37 36.3	+2.2
SYVR				Smax		03 37 40.5	
	comp=E,2μm,0.6s						
SYVR	Suvo	2.75	203	ePN	Pn	03 36 55.4	+0.2
SYVR				e		03 36 59.5	
SYVR				e		03 37 36.0	
SYVR				pmax	pmax		
	comp=Z,534nm,0.7s						
SYVR				smax	smax		
	comp=E,2μm,0.7s						
VTMR	Vitim	3.28	6	ePn	Pn	03 37 01.9	-0.5
VTMR				e		03 37 15.1	
VTMR				e		03 37 41.3	
VTMR				eSg	Sb	03 37 55.2	+5.8
VTMR				e		03 38 01.3	
MXMB	Maximikha	3.44	213	ePn	Pn	03 37 05.1	+0.5
MXMB				e		03 37 07.0	
MXMB				ePg	Pb	03 37 13.4	+0.8
MXMB				eSn	Sn	03 37 41.1	-3.5
MXMB				eSg	Sb	03 37 58.5	+4.6
OGRR	Ongureny	3.54	226	⇓iPn	Pn	03 37 07.8	+1.8
OGRR				ePg	Pb	03 37 15.1	+0.8
OGRR				e		03 37 17.6	
OGRR				max		03 37 18.4	
	comp=E,177nm,0.9s						
OGRR				e		03 37 50.3	
OGRR				eSg	Sb	03 38 02.5	+5.8
OGRR				Smax		03 38 06.5	
	comp=E,843nm,0.7s						
OGRR	Ongureny	3.54	226	ePN	Pn	03 37 07.9	+1.9
OGRR				e		03 37 16.2	
OGRR				e		03 38 02.4	
OGRR				pmax	pmax		
	comp=Z,177nm,1.0s						
OGRR				smax	smax		
	comp=E,859nm,0.8s						
CRS	Chara	3.63	76	⇓iPn	Pn	03 37 07.5	+0.2

CRS				*e*Pg	**Pb**	**03 37 16.3**	**+0.4**
CRS				Pmax		03 37 37.8	
	comp=E,439nm,0.8s						
CRS				*e*Sg	**Sb**	**03 38 03.3**	**+3.8**
CRS				*e*		03 38 09.2	
CRS				max		03 38 09.4	
	comp=E,2µm,1.6s						
CRS	**Chara**	**3.63**	**76**	*e*PN	**Pb**	**03 37 16.8**	**+0.9**
CRS				*e*		03 38 03.4	
CRS				pmax	pmax		
	comp=Z,440nm,0.9s						
CRS				smax	smax		
	comp=E,2µm,0.9s						
KELR	**Kotokel**	**4.08**	**214**	*e*	**Pb**	**03 37 25.8**	**+2.3**
KELR				*e*Sg	**Sb**	**03 38 18.0**	**+5.8**
CIT	**Chita**	**4.30**	**166**	*e*	**Pb**	**03 37 28.4**	**+1.1**
CIT				max		03 37 38.1	
	comp=E,110nm,0.1s						
CIT				*e*Sg	**Sb**	**03 38 22.6**	**+4.0**
CIT				*e*		03 38 25.6	
CIT				max			
	comp=E,3µm,0.7s						
CIT	**Chita**	**4.30**	**166**	*e*PN	**Pn**	**03 37 15.5**	**-0.9**
CIT				*e*		03 37 27.3	
CIT				*e*		03 38 25.4	
CIT				pmax	pmax		
	comp=Z,329nm,0.7s						
CIT				smax	smax		
	comp=E,3µm,0.7s						
ZRHB	**Zarechye**	**4.56**	**219**	*e*Pn	**Pn**	**03 37 20.9**	**+0.9**
ZRHB				*e*		03 37 37.2	
ZRHB				max		03 38 02.2	
	comp=E,225nm,0.6s						
ZRHB				*e*Sg	**Sb**	**03 38 32.4**	**+6.3**
ZRHB				Smax		03 38 50.1	
	comp=E,3µm,1.1s						
KHNR	**Khani**	**4.56**	**77**	*e*Pn	**Pn**	**03 37 20.4**	**+0.3**
KHNR				Pg	**Pb**	**03 37 32.9**	**+1.1**
KHNR				*e*Sn	**Sn**	**03 38 10.4**	**-2.0**
KHNR				*e*		03 38 21.8	
KHNR				*e*Sg	**Sb**	**03 38 32.7**	**+6.4**
KHNR				*e*		03 38 37.4	
TRTB	**Turuntaevo**	**4.67**	**214**	⇓*i*Pn	**Pn**	**03 37 22.4**	**+0.8**
TRTB				*e*		03 37 36.0	
TRTB				*e*Sg	**Sb**	**03 38 35.6**	**+6.2**
TRG	**Tyrgan**	**4.70**	**225**	⇓*i*Pn	**Pn**	**03 37 22.4**	**+0.5**
TRG				max		03 37 23.1	
	comp=E,92nm,0.6s						
TRG				*e*Pg	**Pb**	**03 37 36.6**	**+2.5**
TRG				*e*Sg	**Sb**	**03 38 36.6**	**+6.5**
TRG				Smax		03 38 48.0	
	comp=E,608nm,0.9s						
TRG	**Tyrgan**	**4.70**	**225**	*e*PN	**Pn**	**03 37 22.4**	**+0.5**
TRG				*e*		03 37 35.6	
TRG				*e*S	**Sn**	**03 38 17.0**	**+1.4**
TRG				*e*		03 38 37.4	
TRG				pmax	pmax		
	comp=Z,56nm,0.6s						
TRG				smax	smax		
	comp=E,612nm,0.9s						
TUP	**Tupik**	**4.96**	**107**	⇑*i*Pn	**Pn**	**03 37 24.9**	**-0.7**
TUP				*e*		03 37 38.5	
TUP				max		03 37 44.4	
	comp=E,103nm,1.0s						
TUP				*e*Sg	**Sb**	**03 38 44.5**	**+6.7**
TUP				*e*		03 38 51.1	
TUP				max		03 38 55.6	
	comp=E,2µm,1.0s						
TUP	**Tupik**	**4.96**	**107**	*e*PN	**Pn**	**03 37 24.6**	**-1.0**
TUP				*e*		03 37 39.2	
TUP				*e*		03 38 44.2	
TUP				pmax	pmax		
	comp=Z,98nm,0.7s						
TUP				smax	smax		
	comp=N,2µm,1.2s						
UUDB	**Ulan-Yde**	**4.98**	**211**	*e*Pn	**Pn**	**03 37 25.4**	**-0.4**
UUDB				*e*		03 37 33.4	
UUDB				*e*Pg	**Pb**	**03 37 41.3**	**+2.4**
UUDB				Pmax		03 37 50.9	
	comp=N,117nm,0.7s						
UUDB				*e*Sg	**Sb**	**03 38 45.7**	**+7.4**
UUDB				Smax		03 38 55.6	
	comp=N,1µm,1.2s						
KAB	**Kabansk**	**5.15**	**218**	*e*	Pb	03 37 56.7	+15
KAB				Sg	**Sb**	**03 38 51.2**	**+8.2**
KAB				Smax		03 38 55.6	
	comp=N,2µm,1.4s						
STDB	**Stepnoy Dvoret**	**5.15**	**221**	*e*	Sn	03 38 15.6	-11
STDB				*e*Sg	Sb	03 38 52.2	+9.0
YKLR	**Yuktali**	**5.47**	**82**	*e*Pn	**Pn**	**03 37 32.7**	**+0.2**
YKLR				*e*Pg	**Pb**	**03 37 48.4**	**+1.2**
YKLR				*e*Sg	**Sb**	**03 38 59.0**	**+6.7**
YKLR				*e*		03 39 04.8	
BGT	**Bolshoye Golou**	**5.61**	**225**	*e*Pn	**Pn**	**03 37 34.3**	**-0.2**
BGT				*e*		03 37 43.9	
BGT				*e*Pg	**Pb**	**03 37 52.1**	**+2.4**
BGT				Pmax		03 38 05.7	
	comp=N,32nm,0.6s						
BGT				*e*Sn	**Sb**	**03 38 47.7**	**-8.8**
BGT				*e*Sg	Sn	03 39 05.1	+27
BGT				Smax		03 39 16.9	
	comp=N,240nm,1.0s						
IRK	**Irkutsk**	**5.94**	**231**	*e*Sn	**Sn**	**03 38 45.1**	**-1.2**
IRK				*e*		03 39 13.6	
IRK				*e*Sg	Sb	03 39 16.5	+11
IRK				Smax		03 39 37.8	
	comp=N,829nm,0.8s						
LSTR	**Listvyanka**	**5.98**	**227**	*e*	**Pn**	**03 37 39.3**	**-0.2**
LSTR				*e*		03 37 48.2	
LSTR				max		03 38 10.1	
	comp=N,18nm,0.6s						
LSTR				*e*		03 39 00.7	
LSTR				*e*		03 39 02.1	
LSTR				*e*Sg	Sb	03 39 17.3	+10
LSTR				Smax		03 39 25.0	
	comp=N,482nm,1.3s						
IVK	**Ivanovka**	**6.20**	**228**	*e*Pn	**Pn**	**03 37 41.9**	**-0.7**
IVK				*e*		03 37 49.2	
IVK				*e*		03 38 01.4	
IVK				max		03 38 14.9	
	comp=N,27nm,0.8s						
IVK				*e*		03 39 03.0	
IVK				*e*Sg	Sb	03 39 24.4	+11
IVK				Smax		03 39 33.8	
	comp=N,488nm,1.4s						
KPC	**Khapcheranga**	**6.50**	**177**	*e*Pn	**Pn**	**03 37 46.3**	**-0.5**
KPC				*e*		03 37 54.6	
KPC				*e*		03 38 08.9	
KPC				max		03 38 39.8	
	comp=N,35nm,0.7s						
KPC				*e*Sg	Sb	03 39 32.4	+10
KPC				*e*		03 39 38.2	
KPC				max		03 39 39.1	
	comp=N,1µm,1.1s						
KPC	**Khapcheranga**	**6.50**	**177**	*e*PN	**Pn**	**03 37 45.6**	**-1.2**
KPC				*e*		03 38 05.6	
KPC				*e*		03 39 29.2	
KPC				pmax	pmax		
	comp=Z,33nm,1.0s						
KPC				smax	smax		
	comp=N,1µm,1.4s						
TLY	**Talaya**	**6.62**	**230**	*e*	**Pn**	**03 37 47.2**	**-1.1**
TLY				Pg	**Pb**	**03 38 11.0**	**+4.3**
TLY				Pmax		03 38 19.5	
	comp=N,44nm,0.7s						
TLY				*e*Sn	**Sn**	**03 38 58.9**	**-4.0**
TLY				*e*Sg	Sb	03 39 36.5	+11
TLY				Smax		03 39 47.6	
	comp=N,275nm,1.1s						
TLY	**Talaya**	**6.62**	**230**	*e*PN	**Pn**	**03 37 47.8**	**-0.5**
TLY				*e*		03 38 11.2	
TLY				*e*		03 39 36.0	
TLY				pmax	pmax		
	comp=Z,79nm,0.6s						
ARS	**Arshan**	**7.00**	**236**	*e*Pn	**Pn**	**03 37 54.6**	**+1.1**
ARS				*e*Sn	**Sn**	**03 39 09.2**	**-3.2**
ARS				*e*Sg	Sb	03 39 48.4	+12
ARS				Smax		03 39 55.7	
	comp=Z,1µm,1.0s						
ARS				*e*		03 40 07.1	
IENR	**Iengra**	**7.26**	**84**	*e*Pn	**Pn**	**03 37 56.9**	**-0.3**
IENR				*e*		03 38 02.5	
IENR				*e*		03 38 21.3	
IENR				*e*Sg	Sb	03 39 56.9	+13
TNDR	**Tynda**	**7.36**	**93**	*e*	Sn	03 39 08.1	-13
TNDR				*e*		03 39 18.2	
TNDR				*e*Sg	Sb	03 39 58.9	+12
TNDR				*e*		03 40 00.4	
ZAK	**Zakamensk**	**7.75**	**225**	*e*Pn	**Pn**	**03 38 04.4**	**+0.5**
ZAK				*e*		03 38 30.2	
ZAK				max		03 38 37.6	
	comp=Z,17nm,0.7s						
ZAK				*e*Sg	Sb	03 40 12.1	+14
ZAK				Smax		03 40 22.0	
	comp=Z,179nm,1.4s						
ZAK	**Zakamensk**	**7.75**	**225**	*e*PN	**Pn**	**03 38 04.3**	**+0.4**
MOY	**Mondy**	**7.84**	**239**	⇑*i*Pn	**Pn**	**03 38 06.3**	**+1.1**
MOY				*e*		03 38 12.8	
MOY				*e*		03 38 41.4	
MOY				max		03 38 43.4	
	comp=Z,54nm,0.9s						
MOY				*e*Sn	**Sn**	**03 39 28.9**	**-4.2**
MOY				*e*Sg	Sb	03 40 15.6	+15
MOY				*e*		03 40 19.6	
MOY				max		03 40 32.0	
	comp=Z,462nm,1.4s						
MOY	**Mondy**	**7.84**	**239**	*e*PN	**Pn**	**03 38 06.2**	**+1.1**
MOY				*e*		03 38 32.7	
MOY				*e*S	**Sn**	**03 39 31.8**	**-1.3**
MOY				pmax	pmax		
	comp=Z,54nm,1.0s						
MOY				smax	smax		
	comp=E,463nm,1.3s						
ORL	**Orlik**	**7.92**	**248**	⇑*i*Pn	**Pn**	**03 38 07.2**	**+1.0**
ORL				*e*		03 38 16.8	
ORL				*e*		03 38 30.6	
ORL				max		03 38 36.1	
	comp=E,26nm,0.7s						
ORL				*e*Sn	**Sn**	**03 39 33.3**	**-1.7**
ORL				Sg	Sb	03 40 18.3	+16
ORL				Smax		03 40 38.5	
	comp=E,403nm,1.6s						
ORL	**Orlik**	**7.92**	**248**	*e*PN	**Pn**	**03 38 07.1**	**+0.9**
ORL				*e*		03 38 34.1	
ORL				*e*S	**Sn**	**03 39 32.4**	**-2.6**
ORL				pmax	pmax		
	comp=Z,26nm,0.6s						
ORL				smax	smax		
	comp=N,404nm,1.6s						
SONM	**Songino Array**	**9.01**	**204**	Pn	**Pn**	**03 38 22.0**	**+0.8**
	comp=N,0.7nm,0.3s,baz=7.7,slow=12,SNR=11						
SONM				Lg	Lg	03 40 53.4	
	comp=N,6.8nm,0.3s,baz=15,slow=30,SNR=10						
SONM				LR	LR	03 42 09.7	
	comp=N,316nm,18.5s,baz=44,slow=40						
YAK	**Yakutsk**	**10.86**	**50**	*e*P	Pn	03 38 37.5	-8.8
YAK				*e*SS	**Sn**	**03 40 52.9**	**+6.0**
KLR	**Kul'dur**	**13.90**	**112**	Pn	**Pn**	**03 39 27.6**	**-0.3**
	comp=N,0.2nm,0.3s,baz=304,slow=16,SNR=3.4						
KLR				Lg	Lg	03 43 25.2	
	comp=N,0.6nm,0.3s,baz=223,slow=22,SNR=8.9						
KLR				LR	LR	03 45 16.7	
	comp=N,142nm,18.5s,baz=344,slow=40						
KLR	**Kul'dur**	**13.90**	**112**	⇑*e*P	**Pn**	**03 39 28.0**	**+0.1**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**15.35**	**181**	P	**P**	**03 39 50.6**	**-1.6**
HHC				S	**S**	**03 42 43.9**	**-9.0**
HHC				SS	SnSn	03 43 09.5	+20
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,19nm,6.4s						
HHC				LR	LR		
	comp=N,370nm,8.8s						
HHC				LR	LR		
	comp=E,320nm,9.2s						
ZALV	**Zalesovo Beam**	**15.60**	**273**	Pn	**Pn**	**03 39 50.2**	**-0.5**
	comp=E,0.5nm,0.3s,baz=73,slow=17,SNR=3.7						
ZALV				Lg	Lg	03 44 24.1	
	comp=E,0.3nm,0.3s,baz=82,slow=31,SNR=4.1						
ZALV				LR	LR	03 46 30.4	
	comp=E,31nm,20.3s,baz=252,slow=40						
TIXI	**Tiksi**	**17.11**	**18**	Pn	**Pn**	**03 40 04.4**	**-5.3**
	comp=E,1.9nm,0.3s,baz=214,slow=7.7,SNR=14						
TIXI				Sn	Sn	03 43 04.1	-15
	comp=E,2.0nm,0.3s,baz=146,slow=23,SNR=7.7						
TIXI				Lg	Lg	03 45 05.3	
	comp=E,0.6nm,0.3s,baz=324,slow=22,SNR=5.3						
TIXI				LR	LR	03 47 05.1	
	comp=E,155nm,20.1s,baz=197,slow=38						
TIXI	**Tiksi**	**17.11**	**18**	*c* *i*P	**Pn**	**03 40 05.0**	**-4.7**
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s						
USRK	**Ussuriysk Ar.**	**17.54**	**125**	Lg	Lg	03 45 22.4	
	comp=Z,0.2nm,0.3s,baz=329,slow=25,SNR=8.6						
USRK				LR	LR	03 47 47.2	
	comp=Z,67nm,18.3s,baz=7.9,slow=40						
KURK	**Kurchatov**	**20.39**	**268**	*d* *i*P	**P**	**03 40 47.4**	**0.0**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURBB	**Kurchatov Arra**	**20.48**	**268**	P	**P**	**03 40 48.5**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=67,slow=12,SNR=16						
MKAR	**Makanchi Array**	**20.51**	**255**	P	**P**	**03 40 48.6**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=58,slow=8.9,SNR=12						
MKAR	**Makanchi Array**	**20.51**	**255**	*ce*P	**P**	**03 40 48.4**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SEY	**Seymchan**	**21.31**	**55**	⇑*e*P	**P**	**03 40 58.1**	**+0.9**
BVAR	**Borovoye Array**	**23.95**	**280**	P	**P**	**03 41 25.0**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=62,slow=10,SNR=11						
BVAR				LR	LR	03 52 36.0	
	comp=Z,159nm,18.2s,baz=182,slow=41						
BVAR	**Borovoye Array**	**23.95**	**280**	P	**P**	**03 41 25.0**	**+0.3**
BRVK	**Borovoye**	**24.00**	**280**	*d* *i*P	**P**	**03 41 25.6**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WHN	**Wuhan**	**25.70**	**175**	P	**P**	**03 41 42.5**	**+1.8**
PETK	**Petropavlovsk-**	**26.33**	**77**	LR	LR	03 51 17.3	
	comp=Z,28nm,20.6s,baz=157,slow=34						
MJAR	**Matsushiro Arr**	**26.50**	**127**	LR	LR	03 52 22.5	
	comp=Z,44nm,19.4s,baz=35,slow=37						
JNU	**Nakatsue**	**26.57**	**142**	LR	LR	03 53 41.1	
	comp=Z,72nm,18.8s,baz=354,slow=40						
AAK	**Ala-Archa**	**27.43**	**256**	LR	LR	03 53 42.0	
	comp=Z,24nm,21.7s,baz=242,slow=38						
ARU	**Arti**	**28.94**	**293**	LR	LR	03 55 28.8	
	comp=Z,96nm,21.8s,baz=66,slow=40						
ARCES	**ARCESS Array B**	**37.93**	**325**	P	**P**	**03 43 27.1**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=72,slow=10,SNR=14						
ARCES				LR	LR	04 03 38.5	
	comp=Z,59nm,18.4s,baz=342,slow=44						
CMAR	**Chiang Mai Arr**	**38.91**	**200**	LR	LR	03 59 18.6	
	comp=Z,13nm,18.8s,baz=210,slow=36						
FINES	**FINESS Array B**	**41.67**	**314**	P	**P**	**03 43 58.9**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=58,slow=8.3,SNR=14						
FINES				LR	LR	04 02 31.6	
	comp=Z,43nm,19.3s,baz=18,slow=38						
FINES	**FINESS Array B**	**41.67**	**314**	*i* P	**P**	**03 43 59.2**	**+0.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KIV	**Kislovodsk**	**44.18**	**284**	*e*P	**P**	**03 44 19.4**	**+0.1**
KIV				pmax	pmax		
	comp=Z,11nm,0.9s						
KIV				MLR	MLR		
	comp=Z,77nm,16.0s						
ILAR	**Eielson Array**	**45.39**	**36**	P	**P**	**03 44 28.4**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=284,slow=6.5,SNR=6.6						
ILAR				LR	LR	04 07 19.7	
	comp=Z,35nm,18.5s,baz=166,slow=41						
INK	**Inuvik**	**46.92**	**28**	P	**P**	**03 44 40.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=328,slow=12,SNR=4.5						
NB2	**NORSAR Subarra**	**47.61**	**320**	P	**P**	**03 44 45.3**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=46,slow=7.9						
NB2	**NORSAR Subarra**	**47.61**	**320**	P	**P**	**03 44 45.3**	**-0.8**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**47.61**	**320**	P	**P**	**03 44 45.7**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=52,slow=7.3,SNR=10						
NOA				LR	LR	04 06 45.6	
	comp=Z,46nm,18.2s,baz=35,slow=39						
BRTR	**Keskin Array B**	**51.98**	**287**	LR	LR	04 11 15.9	
	comp=Z,22nm,19.4s,baz=83,slow=40						
VYHS	**Vyhne**	**53.16**	**304**	*e*P	**P**	**03 45 28.9**	**+0.7**
VYHS	**Vyhne**	**53.16**	**304**	*e*P	**P**	**03 45 28.9**	**+0.7**
GERES	**GERESS Array B**	**55.24**	**307**	LR	LR	04 11 01.5	
	comp=Z,43nm,20.7s,baz=58,slow=38						
ESDC	**Sonseca Array**	**70.16**	**312**	P	**P**	**03 47 23.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=23,slow=6.6,SNR=5.1						
ULM	**Lac du Bonnet**	**71.46**	**18**	LR	LR	04 20 32.3	
	comp=Z,31nm,19.8s,baz=328,slow=37						
NVAR	**Mina Array Bea**	**76.59**	**38**	P	**P**	**03 48 01.9**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=332,slow=3.9,SNR=4.0						
ASAR	**Alice Springs**	**81.72**	**160**	P	**P**	**03 48 28.1**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=354,slow=5.0,SNR=4.1						
TXAR	**Lajitas Array**	**89.61**	**30**	LR	LR	04 34 08.6	
	comp=Z,24nm,18.6s,baz=0.0,slow=39						
TORD	**Torodi Ar. Bea**	**90.01**	**294**	P	**P**	**03 49 10.1**	**-0.1**
	comp=Z,7.4nm,0.3s,baz=81,slow=2.6,SNR=3.0						
DZM	**Mont Dzumac**	**90.54**	**131**	LR	LR	04 29 42.7	
	comp=Z,57nm,18.0s,baz=314,slow=36						

SJA 05 03:40:15.6±0.7,28°.02S×66°.72W,h179^{km}±5^{km},ML2.7,
MW3.7,Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	**Choya**	**0.92**	**118**	*i* P	Pn	03 40 43.1	+0.5
CYA				IAML		03 40 44.1	
	comp=Z,33nm,0.6s						
CYA				*i* S	Sn	03 41 03.4	-0.1
VCA	**Vinchina**	**1.49**	**241**	*i* P	Pn	03 40 48.3	+0.7
VCA				IAML		03 40 50.1	
	comp=Z,106nm,0.2s						
AHML	**Horco Molle**	**1.74**	**45**	*i* P	Pn	03 40 50.1	+0.2
AHML				IAML		03 41 15.9	
	comp=Z,39nm,0.4s						
AHML				*i* S	Sn	03 41 16.0	-0.4
FSA	**Cafayete**	**2.01**	**19**	*i* P	Pn	03 40 54.3	+1.4
AGUA	**GUANDACOL**	**2.14**	**226**	*i* P	Pn	03 40 54.6	+0.4
TCA	**Tanti**	**3.79**	**151**	*i* P	Pn	03 41 15.1	+1.0
AZAP	**Zapla**	**4.06**	**22**	*i* P	Pn	03 41 18.7	+1.0
ACAN	**Cantantal**	**4.26**	**185**	*i* P	Pn	03 41 20.8	+0.8

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*JMA **05** 04:07:53.5±0.4,46°.77N×141°.60E,h0^{km},M3.1*
*ISCJB **05** 04:07:54.3±0.9,46°.78N±0°.04×141°.73E±0°.10,h11^{km},*
Error ellipse: s-maj=10.1km s-min=5.0km az=23.2
*SKHL **05** 04:07:54.5±0.6,46°.76N×141°.74E,h10^{km},mb3.7/2*
SKHL Felt (II) at Nevel'sk.
ISC 05 04:07:55.0±1.3**,46°.72N**±0°.06×**141°.76E**±0°.09**,h11**^{km}**,n4,**
σ**0^{s}.54**/7**,Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.72**	**71**	*e*Pg	**Pg**	**04 08 08.9**	**-0.1**
YSS				AMB	AMB	04 08 09.8	
	30nm,0.5s						
YSS				*e*Sg	**Sg**	**04 08 18.3**	**-0.2**
YSS				A	A	04 08 19.3	
	240nm,0.4s						
YSS				A	A	04 08 19.3	
	180nm,0.4s						
YSS				AMS	AMS	04 08 36.0	
	200nm,5.0s						
JRBN	**Rebuntou**	**1.38**	**201**	P	**Pn**	**04 08 19.7**	**-0.5**
JRBN				*e*S	**Sn**	**04 08 38.1**	**-0.3**
JWK2	**Keihoku**	**1.41**	**176**	P	**Pn**	**04 08 21.0**	**+0.5**
JWK2				*e*S	**Sg**	**04 08 40.7**	**+0.5**
UGL	**Uglegorsk**	**2.37**	**5**	*e*Sg	**Sg**	**04 09 11.7**	**+0.5**
UGL				A	A	04 09 13.8	
	110nm,0.4s						
UGL				A	A	04 09 13.8	
	120nm,0.4s						

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*ISCJB **05** 04:16:42.6±1.2,10°.5S±0°.1×160°.7E±0°.2,h42^{km},mb3.8/5,*
MS3.0/1,Error ellipse: s-maj=31.4km s-min=10.0km
az=154.4
*IDC **05** 04:16:44.3±2.9,10°.46S×160°.73E,h42^{km}±22^{km},mb3.7/5,*
mb1 3.9/6,mb1mx3.6/37,mbtmp3.9/6,ML3.6/1,MS3.2/1,
Ms1 3.1/1,ms1mx2.5/25,Error ellipse: s-maj=39.9km
s-min=16.9km az=69.0
ISC 05 04:16:44.2±1.3**,10°.4S**±0°.2×**160°.7E**±0°.3**,h42**^{km}**,n9,**
σ**0^{s}.78**/10**,mb3.8**/5**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.25**	**322**	P	**Pn**	**04 17 04.9**	**-0.4**
	276nm,0.3s,baz=162,slow=6.0,SNR=62						
HNR				S	**Sn**	**04 17 21.8**	**+0.9**
	443nm,0.3s,baz=105,slow=22,SNR=10						
HNR	**Honiara**	**1.25**	**322**	*i* P	**Pn**	**04 17 04.5**	**-0.7**
HNR				*i* S	**Sn**	**04 17 21.0**	**+0.1**
DZM	**Mont Dzumac**	**12.81**	**155**	P	**Pn**	**04 19 44.2**	**+0.3**
	0.4nm,0.3s,baz=330,slow=20,SNR=5.7						
WRA	**Warramunga Arr**	**27.13**	**246**	P	**P**	**04 22 23.6**	**0.0**
	2.8nm,1.1s,baz=74,slow=10,SNR=5.1						
STKA	**Stephens Creek**	**27.73**	**217**	LR	LR	04 32 37.3	
	comp=Z,40nm,18.2s,baz=27,slow=34						
ASAR	**Alice Springs**	**28.76**	**239**	P	**P**	**04 22 37.7**	**-0.5**
	0.5nm,0.7s,baz=64,slow=9.6,SNR=3.0						
CMAR	**Chiang Mai Arr**	**67.36**	**295**	P	**P**	**04 27 36.7**	**+1.1**
	0.8nm,0.3s,baz=124,slow=4.8,SNR=4.6						
SONM	**Songino Array**	**75.31**	**326**	P	**P**	**04 28 23.6**	**+0.4**
	0.6nm,0.5s,baz=133,slow=4.4,SNR=4.6						
MKAR	**Makanchi Array**	**89.72**	**318**	P	**P**	**04 29 37.0**	**-1.1**
	0.4nm,0.7s,baz=90,slow=7.4,SNR=4.2						

IDC 05 04:31:36.6±13.0**,17°.71S×178°.30W,h510**^{km}±135^{km}**,**
mb3.1/4**,mb1 3.4**/4**,mb1mx2.9**/37**,mbtmp4.0**/4**,Error**
ellipse: s-maj=93.6km s-min=45.0km az=133.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.77**	**259**	P	P	04 39 04.1	-0.5
	0.9nm,0.5s,baz=88,slow=8.0,SNR=14						
ASAR	**Alice Springs**	**44.95**	**254**	P	P	04 39 06.1	+0.1
	3.4nm,0.5s,baz=88,slow=8.4,SNR=48						
PETK	**Petropavlovsk-**	**73.52**	**345**	P	P	04 42 17.0	+0.2
	1.3nm,0.6s,baz=117,slow=5.8,SNR=3.7						
PDAR	**Pinedale Array**	**87.14**	**43**	P	P	04 43 28.2	-0.1
	0.2nm,0.5s,baz=201,slow=1.3,SNR=3.5						
BRTR	**Keskin Array B**	**144.72**	**315**	PKP	PKPdf	04 50 15.4	0.0
	0.3nm,0.6s,baz=106,slow=3.9,SNR=4.0						
GERES	**GERESS Array B**	**147.45**	**345**	PKPbc	PKPbc	04 50 22.0	-1.0
	0.3nm,0.5s,baz=41,slow=4.3,SNR=5.5						

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*ISCJB **05** 04:32:33.1±0.3,39°.43N±0°.05×95°.06E±0°.04,h10^{km},*
mb4.3/32,MS3.1/7,Error ellipse: s-maj=7.1km
s-min=3.6km az=20.3
*IDC **05** 04:32:33.3±0.7,39°.36N×95°.19E,h0^{km},mb3.9/14,*
mb1 4.1/18,mb1mx3.9/47,mbtmp4.0/18,ML3.6/4,MS3.1/10,
Ms1 3.2/10,ms1mx2.9/33,Error ellipse: s-maj=22.0km
s-min=14.2km az=40.0
*MOS **05** 04:32:34.2±1.2,39°.45N×95°.08E,h17^{km},mb4.5/13,Error*
ellipse: s-maj=11.0km s-min=6.3km az=124.2
*NNC **05** 04:32:35.4±3.7,39°.73N×95°.03E,h6^{km}±76^{km},mb4.2,*
Error ellipse: s-maj=75.0km s-min=29.7km az=126.0
*BJI **05** 04:32:35.3±0.0,39°.39N×95°.17E,h8^{km},mb4.3/4,mB4.2/3,*
ML4.0/7,Ms3.7/10,Ms7 3.4/4
*NEIC **05** 04:32:35.0±1.1,39°.40N×95°.12E,h10^{km}±2^{km},mb4.3/11,*
Error ellipse: s-maj=14.4km s-min=5.3km az=144.0
ISC 05 04:32:35.3±0.5**,39°.47N**±0°.07×**95°.08E**±0°.05**,h10**^{km}**,n93,**
σ**1^{s}.71**/108**,mb4.2**/32**,MS3.0**/7**,10C-12D,Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**7.72**	**113**	*e*Pn	**Pn**	**04 34 26.2**	**-1.6**
LZH				Sn	**Sn**	**04 35 55.4**	**0.0**
LZH				LR	LR		
	comp=N,380nm,10.8s						
LZH				LR	LR		
	comp=E,390nm,11.9s						
LZH				LR	LR		
	comp=Z,420nm,13.0s						
DGZ	**Jazzator, Alta**	**11.59**	**335**	⇑*e*P	**Pn**	**04 35 23.5**	**+2.7**
SONA0	**Songino Array**	**11.70**	**41**	*e*Pn	**Pn**	**04 35 22.3**	**0.0**
SONM	**Songino Array**	**11.70**	**41**	Pn	**Pn**	**04 35 22.3**	**0.0**
	0.5nm,0.3s,baz=226,slow=14,SNR=13						
SONM				Lg	Lg	04 38 35.4	
	0.4nm,0.3s,baz=227,slow=25,SNR=3.9						
SONM				LR	LR	04 40 01.1	
	comp=Z,184nm,18.4s,baz=196,slow=38						
MK31	**Makanchi Array**	**11.86**	**312**	*e*Pn	**Pn**	**04 35 23.4**	**-1.0**
MK31	**Makanchi Array**	**11.86**	**312**	⇑P	**Pn**	**04 35 23.7**	**-0.7**
	1.5nm,0.3s,baz=119,slow=14,SNR=71						
MK31				⇓S	**Sn**	**04 37 33.9**	**-2.9**

	13nm,0.8s,baz=122,slow=25,SNR=3.7						
MK31	Makanchi Array	11.86	312	eP	Pn	04 35 23.4	-1.0
MK32	Makanchi Array	11.86	312	ePn	Pn	04 35 23.4	-1.1
MK32				eSn	Sn	04 37 34.3	-2.5
MKAR	Makanchi Array	11.86	312	Pn	Pn	04 35 23.3	-1.1
	2.1nm,0.3s,baz=121,slow=14,SNR=51						
MKAR				Sn	Sn	04 37 34.3	-2.5
	0.6nm,0.3s,baz=124,slow=22,SNR=10						
MKAR				LR	LR	04 40 54.6	
	comp=Z,24nm,19.3s,baz=107,slow=42						
MKAR	Makanchi Array	11.86	312	eP	Pn	04 35 23.5	-0.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAKZ	Makanchi	12.05	312	ePn	Pn	04 35 26.1	-0.9
MAKZ				eSn	Sn	04 37 41.5	+0.1
MAKZ	Makanchi	12.05	312	⇓P	Pn	04 35 25.8	-1.1
	comp=Z,2.7nm,0.4s						
MAKZ				⇓S	Sn	04 37 37.1	-4.3
	comp=Z,11nm,0.8s						
MAKZ	Makanchi	12.05	312	eP	Pn	04 35 26.1	-0.9
MAKZ				e		04 37 41.5	
ULN	Ulaanbaatar	12.06	42	⇑eP	Pn	04 35 28.2	+1.0
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PDGK	Podgornoye	12.32	293	⇑P	Pn	04 35 27.7	-3.1
	comp=Z,4.7nm,0.6s						
PDGK				⇓S	Sn	04 37 47.8	-0.6
	comp=Z,12nm,0.7s						
PDGK	Podgornoye	12.32	293	P	Pn	04 35 27.7	-3.1
PDGK				S	Sn	04 37 47.7	-0.6
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PDGK				smax	smax		
	comp=N,12nm,0.7s						
HHC	Hu-ho-hao-te	12.69	78	P	Pn	04 35 37.3	+1.4
HHC				S	Sn	04 38 00.1	+2.8
HHC				sS		04 38 08.8	
HHC				pmax	pmax		
	comp=N,25nm,4.8s						
HHC				LR	LR		
	comp=N,260nm,9.3s						
HHC				LR	LR		
	comp=N,190nm,8.0s						
KSH	Kashi	14.76	276	P	Pn	04 36 07.5	+3.4
KSH				pP	P	04 36 11.9	+1.7
KSH				PP	PnPn	04 36 20.5	+8.6
KSH				pmax	pmax		
	comp=N,14nm,1.2s						
KSH				pmax	pmax		
	comp=N,40nm,4.4s						
KSH				LR	LR		
	comp=N,130nm,5.7s						
KSH				LR	LR		
	comp=N,93nm,5.9s						
TKM2	Tokmak 2	15.06	290	⇓P	Pn	04 36 06.6	-1.7
	comp=N,4.0nm,0.6s						
TKM2				⇑S	Sn	04 38 54.5	-0.8
	comp=N,2.1nm,0.8s						
TKM2	Tokmak 2	15.06	290	P	Pn	04 36 06.6	-1.7
TKM2				S	Sn	04 38 54.5	-0.8
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TKM2				smax	smax		
	comp=N,2.0nm,0.7s						
AAK	Ala-Archa	15.84	288	⇓eP	Pn	04 36 18.8	+0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZALV	Zalesovo Beam	16.08	338	Pn	Pn	04 36 22.1	+0.9
	comp=Z,0.2nm,0.3s,baz=161,slow=12,SNR=6.9						
ZALV				LR	LR	04 42 42.6	
	comp=Z,61nm,18.1s,baz=250,slow=38						
ZAA1	Zalesovo Array	16.08	338	ePn	Pn	04 36 22.1	+0.8
KURBB	Kurchatov Arra	16.12	319	Pn	Pn	04 36 19.4	-2.3
	comp=Z,0.2nm,0.3s,baz=123,slow=13,SNR=23						
KURBB	Kurchatov Arra	16.12	319	⇓P	Pn	04 36 19.1	-2.7
	comp=Z,3.7nm,0.7s						
KURBB				⇓S	Sn	04 39 16.3	-4.2
	comp=Z,3.2nm,0.6s						
KURK	Kurchatov	16.13	320	⇓P	Pn	04 36 19.2	-2.7
	comp=Z,5.6nm,0.8s						
KURK				⇑S	Sn	04 39 16.4	-4.3
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	16.13	320	ceP	Pn	04 36 19.9	-2.0
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WHN	Wuhan	18.10	114	P	P	04 36 47.1	0.0
NIL	Nilore	18.45	258	eP	P	04 36 51.1	+0.1
	comp=Z,9.8nm,0.6s						
NIL	Nilore	18.45	258	eP	P	04 36 51.1	+0.1
NIL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OTUK	Ortayu	18.55	306	⇓P	P	04 36 51.0	-1.0
	comp=Z,2.7nm,0.6s						
OTUK				⇑S	Sn	04 40 17.4	-2.0
	comp=Z,1.8nm,0.7s						
OTUK	Ortayu	18.55	306	P	P	04 36 51.0	-1.0
OTUK				S	Sn	04 40 17.4	-2.0
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OTUK				smax	smax		
	comp=N,2.0nm,0.7s						
HIA	Hailar	20.09	53	⇓eP	Pn	04 37 10.2	-0.5
HIA				pmax	pmax		
	comp=Z,23nm,0.5s						
CHTO	Chiang Mai	20.85	170	P	P	04 37 16.7	-0.6
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CM31	Chiang Mai Arr	21.20	170	eP	P	04 37 20.4	-0.6
CMAR	Chiang Mai Arr	21.20	170	P	P	04 37 20.4	-0.7
	comp=Z,2.4nm,0.6s,baz=344,slow=9.4,SNR=12						
CMAR				LR	LR	04 46 02.1	
	comp=Z,58nm,19.1s,baz=323,slow=38						
CMAR	Chiang Mai Arr	21.20	170	eP	P	04 37 20.7	-0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	Borovoye Array	21.66	317	P	P	04 37 25.9	+0.1
	comp=Z,1.5nm,0.5s,baz=118,slow=12,SNR=8.6						
BRVK	Borovoye	21.73	317	⇑eP	P	04 37 26.4	-0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KS15	Wonju Array Si	25.70	84	eP	P	04 38 04.6	-0.8
	comp=Z,55nm,1.8s						
KSRS	Korea Array	25.72	84	P	P	04 38 04.6	-1.1
	comp=Z,1.7nm,0.7s,baz=281,slow=10.0,SNR=6.6						
KSRS				LR	LR	04 49 08.8	
	comp=Z,57nm,18.9s,baz=315,slow=39						
KSRS	Korea Array	25.72	84	eP	P	04 38 06.4	+0.7
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KLR	Kul'dur	27.74	57	P	P	04 38 23.6	-0.2
	comp=Z,0.8nm,0.7s,baz=275,slow=6.5,SNR=4.3						
KLR				LR	LR	04 50 29.3	
	comp=Z,84nm,19.0s,baz=248,slow=39						
KLR	Kul'dur	27.74	57	⇑eP	P	04 38 23.4	-0.4
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	Arti	29.31	318	LR	LR	04 51 13.6	
	comp=Z,30nm,18.0s,baz=86,slow=38						
ARU	Arti	29.31	318	d iP	P	04 38 38.1	+0.5
ARU						04 39 27.8	
ARU				S	S	04 43 33.6	+3.0
ARU				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MJAR	Matsushiro Arr	33.88	81	LR	LR	04 51 57.8	
	comp=Z,20nm,20.1s,baz=70,slow=34						
VSR	Storozhevoye	40.09	306	eP	P	04 40 08.6	-2.1
VSR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LPSR	Galich'ya Gora	40.12	308	eP	P	04 40 10.2	-0.7
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PETK	Petropavlovsk-	43.97	50	LR	LR	05 00 20.3	
	comp=Z,42nm,18.1s,baz=252,slow=38						
AKASG	Malin Array Be	46.37	307	P	P	04 41 01.6	+0.2
	comp=Z,0.7nm,0.4s,baz=65,slow=8.0,SNR=5.1						
AKBB	Malin Array Si	46.37	307	eP	P	04 41 01.6	+0.2
AKBB	Malin Array Si	46.37	307	eP	P	04 41 01.7	+0.2
FIA0	FINESS Array S	46.49	322	eP	P	04 41 02.7	+0.5
FIA0	FINESS Array S	46.49	322	eP	P	04 41 02.7	+0.5
FINES	FINESS Array B	46.49	322	P	P	04 41 02.7	+0.5
	comp=Z,1.4nm,0.7s,baz=80,slow=9.7,SNR=6.1						
FINES	FINESS Array B	46.49	322	eP	P	04 41 02.9	+0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BR101	Keskin Array S	46.49	291	eP	P	04 41 03.9	+1.1
BRTR	Keskin Array B	46.49	291	P	P	04 41 03.9	+1.1
	comp=Z,0.7nm,0.7s,baz=96,slow=8.8,SNR=4.9						
BRTR	Keskin Array B	46.49	291	eP	P	04 41 04.2	+1.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARA0	ARCESS Array S	46.55	333	eP	P	04 41 03.3	+0.6
ARA0				ePcP	PcP	04 42 36.6	0.0
ARCES	ARCESS Array B	46.55	333	P	P	04 41 03.3	+0.6
	comp=Z,0.5nm,0.5s,baz=82,slow=7.9,SNR=9.2						
ARCES				PcP	PcP	04 42 36.6	0.0
	comp=Z,0.9nm,0.8s,baz=90,slow=3.8,SNR=4.6						
ARCES	ARCESS Array B	46.55	333	eP	P	04 41 03.6	+0.9
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CFR	Carcaliu	48.55	300	P	P	04 41 19.4	+0.9
CFR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VOIR		50.53	301	P	P	04 41 34.3	+0.6
VOIR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KWP	Kalwaria Pacla	50.70	307	P	P	04 41 36.2	+1.4
KWP				pmax	pmax		
	comp=Z,22nm,0.8s						
DRGR		51.60	303	P	P	04 41 42.7	+1.0
DRGR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NIE	Niedzica	52.25	307	P	P	04 41 48.1	+1.6
NIE				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OJC	Ojcow	52.30	308	P	P	04 41 47.6	+0.8
OJC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VYHS	Vyhne	53.48	306	eP	P	04 41 57.7	+2.2
VYHS	Vyhne	53.48	306	eP	P	04 41 57.6	+2.1
NB2	NORSAR Subarra	53.61	323	P	P	04 41 56.4	+0.1
	comp=Z,0.7nm,0.5s,baz=71,slow=7.4						
NB200	NORSAR Array S	53.61	323	eP	P	04 41 56.4	+0.1
NOA	NORSAR Array B	53.61	323	P	P	04 41 56.4	+0.1
	comp=Z,0.8nm,0.5s,baz=75,slow=6.9,SNR=5.3						
NOA				LR	LR	05 04 36.6	
	comp=Z,12nm,19.4s,baz=345,slow=36						
MORC	Moravsky Berou	53.82	308	P	P	04 41 58.7	+0.6
MORC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
DPC	Dobruska-Polom	54.35	309	P	P	04 42 02.8	+0.9
TOLK	Toolik Lake Re	62.12	22	eP	P	04 42 56.4	+0.4
	comp=Z,4.6nm,0.8s						
COLD	Coldfoot	62.80	23	eP	P	04 43 01.2	+0.8
	comp=Z,3.2nm,0.9s						
KTH	Kantishna Hill	64.84	27	eP	P	04 43 14.5	+0.4
	comp=Z,25nm,0.3s						
ILAR	Eielson Array	65.41	25	P	P	04 43 17.6	-0.1
	comp=Z,0.8nm,0.8s,baz=296,slow=5.7,SNR=10.0						
ILAR	Eielson Array	65.41	25	eP	P	04 43 17.8	+0.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILB	Eielson Array	65.41	25	eP	P	04 43 17.6	-0.1
	comp=Z,1.5nm,0.9s						
DOT	Dot Lake	67.09	25	eP	P	04 43 27.9	-0.5
	comp=Z,20nm,1.3s						
EGAK	Eagle	67.19	23	eP	P	04 43 29.3	+0.3
	comp=Z,7.0nm,1.3s						
KDAK	Kodiak Island	67.85	32	P	P	04 43 33.6	+0.3
	comp=Z,9.3nm,1.0s,baz=336,slow=4.8,SNR=5.6						
KDAK	Kodiak Island	67.85	32	eP	P	04 43 33.6	+0.3
	comp=Z,25nm,1.4s						
KDAK	Kodiak Island	67.85	32	i P	P	04 43 33.5	+0.2
ESDC	Sonseca Array	72.02	307	P	P	04 44 00.3	+0.9
	comp=Z,0.7nm,0.6s,baz=45,slow=6.2,SNR=6.5						
AS31	Alice Springs	72.53	143	eP	P	04 44 00.9	-1.5
	comp=Z,4.6nm,1.7s						
ASAR	Alice Springs	72.53	143	P	P	04 44 00.9	-1.5
	comp=Z,1.1nm,0.6s,baz=331,slow=6.1,SNR=19						
STKA	Stephens Creek	83.08	142	P	P	04 44 59.7	-1.3
	comp=Z,1.5nm,0.6s,baz=330,slow=6.6,SNR=3.9						
STKA	Stephens Creek	83.08	142	eP	P	04 44 59.7	-1.3
	comp=Z,10.0nm,1.9s						
LPAZ	La Paz	152.64	323	PKPbc	PKPbc	04 52 32.7	-0.6
	comp=Z,0.6nm,0.6s,baz=46,slow=1.7,SNR=3.5						

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*ISCJB **05** 05:00:42.5±0.3, 46°.17N±0°.01×16°.52E±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=2.5km s-min=2.0km az=30.9*

*SAR **05** 05:00:44.4±0.3, 46°.04N×16°.53E, h4^{km}±1^{km}, ML2.5/9*

*VIE **05** 05:00:44.9±0.5, 46°.16N×16°.38E, h8^{km}±3^{km}, mb2.0/6, ml2.5/7, Error ellipse: s-maj=4.3km s-min=2.5km az=104.0*

*LJU **05** 05:00:44.5, 46°.11N×16°.44E, h3^{km}, ML2.1*

*BEO **05** 05:00:45.8±1.7, 46°.18N×16°.80E, h5^{km}±6^{km}, ML2.7/2*

*PRU **05** 05:00:46.2±0.0, 46°.15N×16°.39E, h25^{km}*

ISC 05 05:00:43.9±0.8**, 46°.15N**±0°.02×**16°.48E**±0°.02**, h6**^{km}±5^{km}**, n65, σ1^{s}08**/112**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KALN	Kalnik	0.02	228	i Pg	Pg	05 00 44.9	-0.2
KALN				Sg	Sg	05 00 45.5	-0.4
KOGS	Kog	0.34	332	ePg	Pg	05 00 51.4	+0.8
KOGS				i Sg	Sb	05 00 56.9	-1.2
	comp=Z,263nm,0.1s						
BEHE	Becsehely	0.38	32	ePg	Pg	05 00 53.0	+1.6
BEHE				eSg	Sb	05 00 59.8	+0.4
BEHE	Becsehely	0.38	32	ePg	Pg	05 00 52.1	+0.7
BEHE				eSg	Sb	05 00 59.1	-0.3
PTJ	Puntijarka	0.43	236	iPg		05 00 52.1	
PTJ				Sg	Sg	05 00 57.7	-0.1
GOLS	Golise	0.61	257	i Pg	Pg	05 00 56.1	+0.4
GCIS	Gornji Cirnik	0.66	245	i Pg	Pg	05 00 56.6	+0.1
	comp=Z,41nm,0.1s						
DOBS	Dobrina	0.70	271	i Pg	Pg	05 00 57.4	-0.1
CESS	Cesta pri Krsk	0.73	257	i Pg	Pg	05 00 58.2	+0.3
CESS				eSg	Sb	05 01 09.0	-0.3
	comp=Z,124nm,0.3s						
GROS	Grobnik	0.75	295	i Pg	Pg	05 00 58.2	-0.1
CRES	Cresnjev	0.78	246	i Pg	Pg	05 00 58.8	-0.1
CRES				i Sg	Sb	05 01 10.6	-0.2
	comp=Z,35nm,0.1s						
CRES	Cresnjev	0.78	246	ePg	Pg	05 00 58.8	-0.1
CRES				eSg	Sg	05 01 09.6	+0.5
LEGS	Legarje	0.83	257	i Pg	Pg	05 00 59.6	-0.3
LEGS				eSg	Sb	05 01 12.4	+0.1
OZLJ	Ozalj	0.89	233	ePg	Pg	05 01 01.2	+0.3
OZLJ				Sg	Sg	05 01 12.8	+0.5
PDKS	Podkum	1.03	266	i Pg	Pg	05 01 03.4	-0.3
PDKS				eSg	Sn	05 01 18.7	-1.1
	comp=Z,26nm,0.2s						
BISS	Bistriski jare	1.06	299	i Pg	Pg	05 01 03.7	-0.6
BOJS	Bojanci	1.07	234	ePg	Pb	05 01 04.3	-0.5
BOJS				eSg	Sb	05 01 19.4	+0.3
	comp=Z,29nm,0.3s						
SOKA	Soboth	1.13	298	Pg	Pb	05 01 05.3	-0.7
	comp=Z,2.1nm,0.1s						
SOKA				Sg	Sb	05 01 20.7	-0.3
	comp=Z,9.3nm,0.1s						
VISS	Visnje	1.19	254	i Pg	Pb	05 01 06.2	-0.8
VISS				eSg	Sg	05 01 22.6	+0.3
	comp=Z,28nm,0.3s						
TIH	Tihany	1.23	52	ePg	Pn	05 01 06.1	-1.6
TIH				eSg	Sb	05 01 23.0	-0.8
VNDS	Vrh nad Dolski	1.24	269	i Pg	Pn	05 01 06.9	-0.9
VNDS				eSg	Sb	05 01 23.3	-0.6
	comp=Z,17nm,0.2s						
ARSA	Arzberg	1.29	330	Pg	Pn	05 01 08.0	-0.5
	comp=Z,2.1nm,0.1s						
ARSA				Sg	Sn	05 01 25.5	-0.5
	comp=Z,18nm,0.2s						
LJU	Ljubljana	1.36	266	ePg	Pn	05 01 09.4	-0.1
LJU				eSg	Sg	05 01 28.8	+1.1
OBKA	Obir	1.39	286	Pg	Pn	05 01 10.0	+0.1
	comp=Z,0.4nm,0.1s						
OBKA				Sg	Sg	05 01 29.4	+1.0
	comp=Z,4.3nm,0.2s						
MOZS	Mozjanca	1.42	277	i Pg	Pb	05 01 10.9	+0.1
BLY	Banja Luka	1.48	160	ePg	Pn	05 01 12.0	+0.9
BLY				eSg	Sn	05 01 30.5	-0.3
BLY	Banja Luka	1.48	160	ePn	Pn	05 01 09.9	-1.2
BLY				eSn	Sn	05 01 29.4	-1.4
CEY	Cerknica	1.49	255	ePg	Pn	05 01 10.7	-0.6
CEY				eSg	Sg	05 01 32.2	+0.4
MORH	Mrgy, Hungar	1.50	87	ePg	Pn	05 01 11.1	-0.4
MORH				eSg	Sn	05 01 31.1	-0.3
SOP	Sopron	1.54	2	ePg	Pb	05 01 13.1	+0.2
SOP				eSg	Sn	05 01 30.0	-2.2
RIY	Rijeka	1.62	240	eSn	Sb	05 01 34.8	-0.2
UDBI	Udbina	1.69	198	i Pn	Pn	05 01 14.0	-0.2
UDBI				Sn	Sn	05 01 36.6	+0.4
CSKK	Cskako	1.73	45	ePn	Pn	05 01 13.1	-1.4
CSKK				ePg	Pb	05 01 15.0	-1.0
CSKK				Sn	Sn	05 01 36.1	-0.8
CSKK				eSg	Sb	05 01 39.1	+1.1
MGRS	Mrkonjic Grad	1.78	166	ePn	Pn	05 01 14.7	-0.6
MGRS				eSn	Sn	05 01 36.3	-1.9
CONA	Conrad Observa	1.83	347	Pn	Pn	05 01 16.2	+0.2
	comp=Z,0.4nm,0.1s						
CONA				Pg	Pg	05 01 20.3	+1.3
	comp=Z,2.0nm,0.2s						
CONA				Sg	Sg	05 01 46.1	+3.3
	comp=Z,8.2nm,0.5s						
NVLJ	Novalja	1.95	216	ePn	Pn	05 01 18.3	+0.8
NVLJ				Sn	Sn	05 01 42.6	+0.4
ZST	Bratislava	2.09	11	ePN	Pn	05 01 17.7	-1.9
KIJV	Kijevo	2.14	181	ePn	Pn	05 01 20.3	+0.1
MOA	Molln	2.28	319	Pn	Pn	05 01 22.9	+0.8
	comp=Z,0.7nm,0.1s						
MOA				Sn	Sn	05 01 51.2	+0.7
	comp=Z,5.3nm,0.2s						
MODS	Modra-Piesok	2.29	13	ePN	Pn	05 01 20.7	-1.6
MODS				eSN	Sn	05 01 47.6	-3.3
MORI	Morici	2.34	194	ePn	Pn	05 01 23.6	+0.6
MORI				Sn	Sn	05 01 52.2	+0.2
KBA	Koelnbreinsper	2.35	294	Pg	Pg	05 01 28.4	-0.6
	comp=Z,2.7nm,0.3s						
KBA				Sg	Sg	05 02 00.8	+1.3
	comp=Z,1.8nm,0.3s						
DUGI	Dugi Otok	2.38	206	ePn	Pn	05 01 24.0	+0.6
DUGI				Sn	Sn	05 01 53.1	+0.1
FRGS	Fruska Gora	2.54	112	ePn	Pn	05 01 25.4	-0.3
FRGS	Fruska Gora	2.54	112	eSn	Sn	05 01 56.2	-0.7
ZIRJ	Zirje	2.56	194	ePn	Pn	05 01 26.5	+0.5
ZIRJ				Sn	Sn	05 01 58.5	+1.1
TEKS	Tekeris	2.68	126	ePn	Pn	05 01 28.2	+0.6
JAVC	Velka Javorina	2.83	16	ePN	Pn	05 01 30.1	+0.3
JAVC				eSN	Sn	05 02 04.4	+0.2
VYHS	Vyhne	2.84	33	ePN	Pn	05 01 29.5	-0.4
VYHS				eSN	Sn	05 02 02.4	-2.0
MAKA	Makarska	2.88	172	ePn	Pn	05 01 31.4	+1.0
MAKA				Sn	Sn	05 02 07.0	+1.7
KRUC	Moravsky	2.92	359	ePN	Pn	05 01 30.8	-0.1
KRUC				ePG	Pb	05 01 38.6	+2.3
KRUC				eSN	Sn	05 02 04.8	-1.5
VRAC	Vranov	3.17	1	ePN	Pn	05 01 34.1	-0.2
VRAC				eSN	Sn	05 02 09.6	-2.8
DIVS	Divibare	3.22	128	ePn	Pn	05 01 34.1	-1.0
DIVS	Divibare	3.22	128	eSn	Sn	05 02 11.2	-2.6
STON	Ston	3.39	165	ePn	Pn	05 01 38.2	+0.9
STON				eSn	Sn	05 02 19.4	+1.6
STON	Ston	3.39	165	ePn	Pn	05 01 38.3	+1.0
STON	Ston	3.39	165	ePn	Pn	05 01 36.3	-1.0
STON				eSn	Sn	05 02 14.8	-3.0
KHC	Kasperske Hory	3.57	328	ePN	Pn	05 01 40.7	+0.8
KHC				eSN	Sn	05 02 20.8	-1.7
IVAS	Ivanjica	3.66	133	ePn	Pn	05 01 41.2	0.0
DBRK	Dubrovnik	3.68	160	ePn	Pn	05 01 42.0	+0.7
TREB	Trebinje	3.68	158	ePn	Pn	05 01 42.8	+1.4
MORC	Moravsky Berou	3.70	11	ePN	Pn	05 01 42.1	+0.4
MORC				eSN	Sn	05 02 25.5	-0.2
GRUS	Gruza	3.76	125	ePn	Pn	05 01 41.9	-0.5
SJES	Sjenica	3.81	138	ePn	Pn	05 01 43.6	+0.3
SELS	Selova	4.42	130	ePn	Pn	05 01 51.2	-0.3

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*NEIC **05** 05:03:18.8±0.0, 16°.54N×94°.46W, h106^{km}, MD4.0(MEX), After MEX.*

MEX 05 05:03:17.8±0.8**, 16°.48N×94°.43W, h109**^{km}±10^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.75	325	ePn	Pn	05 03 35.1	-1.4
CMIG				eSn	Sn	05 03 48.5	-2.0
CMIG	Matias Romero	0.75	325	eP	Pn	05 03 35.1	-1.4
CMIG				eS	Sn	05 03 48.5	-2.0
HUIG	Huatulco	1.76	247	ePn	Pn	05 03 45.5	-2.2
HUIG				eSn	Sn	05 04 09.5	-1.0
HUIG	Huatulco	1.76	247	eP	Pn	05 03 46.0	-1.8
HUIG				eS	Sn	05 04 09.3	-1.2
CCIG	Comitan	2.21	95	ePn	Pn	05 03 53.8	+0.2
CCIG				eSn	Sn	05 04 18.5	-2.5
VHO	Vista Hermosa	2.28	285	ePn	Pn	05 03 54.2	-0.3
VHO				eSn	Sn	05 04 20.6	-2.1
VHO	Vista Hermosa	2.28	285	eP	Pn	05 03 54.2	-0.3
VHO				eS	Sn	05 04 20.6	-2.1
TLIG	Tlapa	4.10	286	ePn	Pn	05 04 17.6	-0.9
TLIG				eSn	Sn	05 05 02.7	-3.0
TEIG	Tepich	6.93	57	ePn	Pn	05 04 53.1	-3.7

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*ISCJB **05** 05:14:29.9±0.5, 17°.50S±0°.04×167°.14E±0°.10, h12^{km}, mb4.2/11, MS3.5/3, Error ellipse: s-maj=13.1km s-min=6.3km az=179.4*

*IDC **05** 05:14:29.1±1.3, 17°.44S×167°.23E, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.9/38, mbtmp4.0/7, ML4.2/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/28, Error ellipse: s-maj=43.1km s-min=26.2km az=140.0*

*NEIC **05** 05:14:31.7±1.6, 17°.46S×167°.19E, h14^{km}±4^{km}, mb4.4/6, Error ellipse: s-maj=26.6km s-min=5.4km az=88.0*

ISC 05 05:14:31.0±0.6**, 17°.49S**±0°.07×**167°.3E**±0°.1**, h12**^{km}**, n34, σ0^{s}92**/34**, mb4.0**/11**, MS3.4**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.03	170	ePn	Pn	05 15 34.0	+1.4
MARNC				eSn	Sn	05 16 17.6	-2.2
DZM	Mont Dzumac	4.63	190	Pn	Pn	05 15 41.2	+0.4
	11nm,0.3s,baz=88,slow=16,SNR=155						
DZM				Sn	Sn	05 16 33.5	-1.1
	8.3nm,0.3s,baz=88,slow=23,SNR=7.2						
DZM				LR	LR	05 17 14.1	
	comp=Z,168nm,20.9s,baz=25,slow=35						
DZM	Mont Dzumac	4.63	190	ePn	Pn	05 15 41.1	+0.2
DZM				eSn	Sn	05 16 35.2	+0.7
ONTNC	Ouen Toro	4.86	189	ePn	Pn	05 15 44.9	+0.9
ONTNC				eSn	Sn	05 16 40.2	+0.1
PINNC	Pines Island,	5.10	178	ePn	Pn	05 15 47.9	+0.7
HNR	Honiara	10.72	317	LR	LR	05 20 06.3	
	comp=Z,110nm,20.6s,baz=151,slow=32						
CTA	Charters Tower	20.07	259	P	Pn	05 19 06.5	+0.3
	3.0nm,0.6s,baz=87,slow=13,SNR=4.8						
CTAO	Charters Tower	20.07	259	eP	Pn	05 19 06.6	+0.4
	13nm,1.3s						
URZ	Urewera	22.41	159	LR	LR	05 27 27.5	
	comp=Z,144nm,18.1s,baz=4.0,slow=35						
WB2	Warramunga Arr	31.26	260	eP	P	05 20 50.7	-0.2
	6.8nm,1.3s						
WR1	Warramunga Arr	31.27	260	eP	P	05 20 50.4	-0.6
WRA	Warramunga Arr	31.27	260	P	P	05 20 50.4	-0.7
	0.2nm,0.3s,baz=83,slow=7.0,SNR=5.4						
AS31	Alice Springs	31.79	253	eP	P	05 20 54.6	-1.1
	1.5nm,1.0s						
ASAR	Alice Springs	31.80	253	P	P	05 20 54.8	-0.9
	0.9nm,0.6s,baz=77,slow=8.7,SNR=14						
WAKE	Wake Island	36.55	359	eP	P	05 21 36.2	-0.5
	200nm,1.3s						
SIJI	Sorong	39.07	291	LR	LR	05 37 45.0	
	comp=Z,46nm,20.6s,baz=156,slow=36						
PPT	Papeete	41.07	97	LR	LR	05 36 24.5	
	comp=Z,100nm,18.2s,baz=306,slow=32						
QSPA	South Pole Qui	72.55	180	eP	P	05 25 58.9	+1.0
	5.2nm,1.1s						
CMAR	Chiang Mai Arr	76.09	295	P	P	05 26 20.2	+1.1
	1.9nm,0.3s,baz=112,slow=4.4,SNR=5.4						
SONA0	Songino Array	84.71	324	eP	P	05 27 04.8	-0.2
SONM	Songino Array	84.71	324	P	P	05 27 04.8	-0.2
	0.8nm,0.9s,baz=128,slow=6.1,SNR=3.8						
NV01	Mina Array Sit	89.06	49	eP	P	05 27 27.5	+1.0
NVAR	Mina Array Bea	89.06	49	P	P	05 27 27.5	+1.0
	0.5nm,0.8s,baz=232,slow=7.3,SNR=4.5						
ILAR	Eielson Array	89.13	18	P	P	05 27 24.5	-1.5
	0.5nm,0.9s,baz=239,slow=6.0,SNR=5.3						
J08A	Circle Bar Ran	90.88	45	eP	P	05 27 35.8	+1.0
	2.3nm,0.9s						
ARA0	ARCESS Array S	122.91	345	ePKPdf	PKPdf	05 33 26.1	-0.5
ARCES	ARCESS Array B	122.91	345	PKP	PKPdf	05 33 26.1	-0.5
	0.7nm,0.8s,baz=322,slow=3.7,SNR=3.9						
BFO	Black Forest	144.77	335	ePKPdf	PKPab	05 34 07.2	+0.5
FUORN	Ofenpass-Fuorn	145.28	332	ePKPbc	PKPab	05 34 09.5	+0.5
ECH	Echery	145.32	336	ePKPbc	PKPbc	05 34 08.8	+0.2
TUE	Stuetta	145.81	332	ePKPdf	PKPab	05 34 11.3	+0.5

CEL	**Celeste**	147.54	315	*e*PKPdf	PKPdf	05 34 12.1	-0.9
BNI	**Bardonecchia**	148.08	334	*e*PKPbc	PKPbc	05 34 17.6	+0.8
ASCN	**Ascension**	154.69	176	*e*PKPab	PKPab	05 34 46.0	-1.6

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*IDC **05** 05:42:00.6±3.1, 10°.27S×120°.61E, h0^{km}, mb3.7/2, mb1 4.0/4, mb1mx3.7/31, mbtmp3.8/4, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/23, Error ellipse: s-maj=201.6km s-min=28.6km az=53.0*

*DJA **05** 05:42:02.5±1.9, 11°S±17°×12°1E±°, h10^{km}, M4.0/7, mb4.8/1, MLv3.7/7*

*ISCJB **05** 05:42:03.7±1.0, 10°.5S±0°.1×120°.49E±0°.09, h40^{km}±13^{km}, mb3.7/2, Error ellipse: s-maj=22.6km s-min=12.7km az=26.3*

ISC 05 05:42:04.6±1.3, 10°.3S±0°.1×120°.6E±0°.1, h30^{km}±9^{km}, n10, σ0^{s}.95/9, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	0.13	345	P	Pb	05 42 10.2	+0.1
WSI	**Waingapu**	0.74	335	P	Pb	05 42 10.6	-8.3
WBSI	**Waikabubak, Su**	1.39	300	P	Pn	05 42 27.7	-0.3
EDFI	**Ende, Flores**	1.91	34	P	Pb	05 42 38.5	-0.3
PLAI	**Plampang**	3.17	298	P	Pn	05 42 53.3	+0.8
JAGI	**Jajag, Banyuwa**	6.64	286	P	Pn	05 43 39.0	-1.2
WRA	**Warramunga Arr**	16.32	127	Pn	Pn	05 45 50.7	-1.0
	0.3nm,0.3s,baz=293,slow=14,SNR=20						
ASAR	**Alice Springs**	18.34	138	P	P	05 46 17.9	+1.1
	0.6nm,0.3s,baz=313,slow=12,SNR=51						
ASAR				LR	LR	05 54 30.9	
	comp=Z,70nm,20.2s,baz=62,slow=41						
SONM	**Songino Array**	59.28	349	P	P	05 52 03.9	+0.4
	0.6nm,0.5s,baz=169,slow=9.8,SNR=3.7						
MKAR	**Makanchi Array**	66.37	332	P	P	05 52 50.6	0.0
	0.4nm,0.6s,baz=128,slow=7.1,SNR=3.6						

TRN 05 05:48:09.2, 10°.45N×61°.94W, h7^{km}, MD3.7, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALNG	**Atlantic LNG**	0.37	137	*e*P	Pg	05 48 16.9	+0.5
BUAY	**Buenos Aires**	0.43	144	*e*P	Pg	05 48 17.3	-0.2
BUAY				*e*S	Sg	05 48 23.9	+0.8
TPP	**Pointe-a-Pierr**	0.50	106	*e*P	Pg	05 48 19.0	0.0
TRN	**Trinidad (W)**	0.56	70	*e*P	Pg	05 48 19.5	-0.6
TRN				*e*S	Sb	05 48 28.9	-0.8
TOSP	**Speyside**	1.62	59	*e*P	Pn	05 48 38.5	+0.4
TOSP				*e*S	Sn	05 48 59.6	+0.3
SVB	**Belmont**	2.88	14	*e*P	Pn	05 48 56.2	+0.6
SVB				*e*S	Sn	05 49 30.4	-0.2
SVCV	**St. Vincent, C**	2.91	16	*e*P	Pn	05 48 56.7	+0.7
SVCV				*e*S	Sn	05 49 31.2	0.0
SVV	**Soufriere Volc**	2.93	14	*e*P	Pn	05 48 56.8	+0.5
SVV				*e*S	Sn	05 49 32.0	+0.2
SSV	**Crater Summit**	2.95	14	*e*P	Pn	05 48 56.9	+0.3
MCLT	**Moule a Chique**	3.38	17	*e*P	Pn	05 49 02.8	+0.4
MCLT				*e*S	Sn	05 49 42.8	-0.1
SLB	**Belfond**	3.47	15	*e*P	Pn	05 49 04.7	+1.0
SLB				*e*S	Sn	05 49 44.5	-0.6
SLBI	**Saint Lucia, B**	3.67	15	*e*P	Pn	05 49 07.1	+0.7
SLBI				*e*S	Sn	05 49 50.0	-0.1

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*BJI **05** 05:52:14.6±0.0, 9°.29S×66°.74E, h5^{km}, mb4.8/38, mB4.8/26, Ms4.5/12, Ms7 4.3/6*

*ISCJB **05** 05:52:19.6±0.3, 8°.98S±0°.06×67°.26E±0°.05, h13^{km}, mb4.5/54, MS3.9/28, Error ellipse: s-maj=9.4km s-min=6.8km az=154.4*

*IDC **05** 05:52:19.3±0.6, 8°.99S×67°.27E, h0^{km}, mb4.4/17, mb1 4.5/17, mb1mx4.2/42, mbtmp4.4/17, MS3.7/23, Ms1 3.7/23, ms1mx3.6/29, Error ellipse: s-maj=20.7km s-min=13.3km az=153.0*

*NEIC **05** 05:52:21.3±2.3, 8°.98S×67°.24E, h10^{km}, mb4.7/31, Error ellipse: s-maj=22.3km s-min=11.3km az=161.0*

*GCMT **05** 05:52:22.3±0.3, 9°.09S±0°.02×67°.31E±0°.02, h20^{km}±2^{km}, MW4.9/80, Moment Tensor Solution. s9,c10; s80,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.23±.16; M$_{\theta\theta}$-2.30±.13; M$_{\phi\phi}$2.07±.11; M$_{r\theta}$-0.95±.26; M$_{\theta\phi}$0.26±.10; M$_{\phi r}$1.10±.28; Best double couple: M$_0$2.64200×10^{16} NP1:φ$_s$317.00000°, δ87.00000°, λ146.00000°. NP2: φ$_s$49.00000°, δ56.00000°, λ4.00000°. Principal axes: T 2.5900, Plg26.0000°, Azm268.0000°; N 0.1050, Plg56.0000°, Azm132.0000°; P -2.6930, Plg20.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 05:52:21.4±0.5, 8°.99S±0°.10×67°.34E±0°.07, h13^{km}, n120, σ1^{s}.63/103, mb4.6/54, MS3.8/29, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	4.47	54	Pn	Pn	05 53 22.4	-6.3
	baz=233,slow=16,SNR=917						
H08N3				T	T	05 58 02.3	
	baz=232,slow=75,SNR=237						
H08N2	**Diego Garcia H**	4.49	54	Pn	Pn	05 53 22.5	-6.4
	baz=233,slow=16,SNR=935						
H08N2				T	T	05 58 04.0	
	baz=232,slow=75,SNR=216						
H08N1	**Diego Carcia H**	4.50	54	Pn	Pn	05 53 22.6	-6.3
	baz=233,slow=16,SNR=826						
H08N1				T	T	05 57 59.7	
	baz=232,slow=75,SNR=271						
H08S1	**Diego Carcia H**	5.25	76	Pn	Pn	05 53 37.1	-2.4
	baz=275,slow=15,SNR=851						
H08S1				T	T	05 59 03.4	
	baz=317,slow=73						
H08S3	**Diego Garcia H**	5.27	75	Pn	Pn	05 53 37.3	-2.4
	baz=275,slow=15,SNR=492						
H08S3				T	T	05 59 06.4	
	baz=317,slow=73						
H08S2	**Diego Garcia H**	5.27	76	Pn	Pn	05 53 37.3	-2.4
	baz=275,slow=15,SNR=805						
H08S2				T	T	05 59 07.2	
	baz=317,slow=73						
DGAR	**Diego Garcia**	5.30	73	*e*Pn	Pn	05 53 38.2	-2.1
MSEY	**Mahe Island**	12.53	289	*e*Pn	Pn	05 55 20.5	+0.9
PALK	**Pallekele**	20.94	40	P	P	05 57 06.0	+1.8
	23nm,0.9s,baz=104,slow=0.4,SNR=4.6						
PALK				LR	LR	06 03 07.7	
	comp=Z,411nm,21.8s,baz=286,slow=31						
PALK	**Pallekele**	20.94	40	*e*P	P	05 57 05.5	+1.3
	40nm,1.1s						
OPO	**Ambohidratompo**	21.74	242	LR	LR	06 03 16.7	
	comp=Z,222nm,20.5s,baz=112,slow=30						
ABPO	**Ambohimpanom**	21.89	241	*e*P	P	05 57 14.3	-0.2
	50nm,1.2s						
KMBO	**Kilima Mbogo**	30.95	283	P	P	05 58 39.3	+0.5
	2.8nm,0.8s,baz=94,slow=6.9,SNR=6.1						
KMBO				LR	LR	06 09 08.2	
	comp=Z,129nm,18.6s,baz=98,slow=33						
KMBO	**Kilima Mbogo**	30.95	283	*e*P	P	05 58 39.3	+0.5
	14nm,1.4s						
LSZ	**Lusaka**	38.74	257	P	P	05 59 45.2	-0.7
	27nm,0.8s,baz=86,slow=6.9,SNR=47						
LSZ	**Lusaka**	38.74	257	*e*P	P	05 59 45.4	-0.5
	36nm,0.9s						
MATP	**Matopo**	39.15	249	P	P	05 59 48.4	-0.8
	5.5nm,0.9s,baz=92,slow=7.9,SNR=7.0						
KOLN	**Koldanda**	39.79	23	*e*P	P	05 59 55.6	+1.0
	42nm,1.0s						
PYUN	**Piuthan**	39.86	22	*e*P	P	05 59 56.2	+1.1
	63nm,1.0s						
DMN	**Daman**	40.25	25	*e*P	P	05 59 59.4	+1.0
	46nm,0.9s						
PKI	**Pulchoki**	40.34	25	*e*P	P	06 00 00.1	+0.8
	21nm,0.9s						
PKIN	**Phulchoki**	40.34	25	*e*P	P	06 00 00.1	+0.9
	8.5nm,0.6s						
KKN	**Kakani**	40.48	25	*e*P	P	06 00 01.4	+1.1
CM31	**Chiang Mai Arr**	41.43	49	*e*P	P	06 00 09.6	+1.6
	9.2nm,0.9s						
CMAR	**Chiang Mai Arr**	41.43	49	P	P	06 00 09.4	+1.4
	4.3nm,0.7s,baz=243,slow=9.2,SNR=25						
CMAR				LR	LR	06 15 16.0	
	comp=Z,78nm,19.1s,baz=232,slow=33						
CHTO	**Chiang Mai**	41.65	48	*e*P	P	06 00 10.8	+1.0
	9.9nm,0.9s						
CMMT	**Chiang Mai**	41.66	48	P	P	06 00 11.5	+1.6
	5.1nm,0.9s						
SHL	**Shillong**	41.84	34	*e*P	P	06 00 12.8	+1.2
	23nm,0.8s						
SHL	**Shillong**	41.84	34	*e*P	P	06 00 12.5	+1.0
PBKT	**Sadao Pong**	41.86	53	P	P	06 00 17.3	+5.8
	5.7nm,1.0s,317nm						
UTTA	**Uttaradit**	42.22	51	P	P	06 00 17.0	+2.6
	16µm,0.9s						
LBTB	**Lobatse**	42.77	243	P	P	06 00 18.4	-0.7
	13nm,0.9s,baz=86,slow=7.3,SNR=12						
LBTB	**Lobatse**	42.77	243	*e*P	P	06 00 18.6	-0.4
	29nm,1.1s						
NIL	**Nilore**	42.78	7	*e*P	P	06 00 19.6	+0.7
	10nm,0.8s						
KBL	**Kabul**	43.33	2	*e*P	P	06 00 24.9	+1.5
	9.4nm,0.9s						
BOSA	**Boshof**	44.06	238	P	P	06 00 28.6	-0.9
	6.1nm,1.0s,baz=86,slow=4.9,SNR=4.9						
BOSA				LR	LR	06 17 06.1	
	comp=Z,125nm,19.4s,baz=47,slow=34						
BOSA	**Boshof**	44.06	238	*e*P	P	06 00 28.5	-0.9
	33nm,1.5s						
NONG	**Nongkai**	44.41	53	P	P	06 00 37.5	+5.3
	0.2nm,0.9s						
LSA	**Lhasa**	44.78	30	*e*P	P	06 00 36.6	+1.0
	13nm,0.9s						
PANO	**Nakornpanom**	45.08	55	P	P	06 00 43.4	+5.8
	0.3nm,1.1s						
SLVN	**Son La**	46.88	50	*e*P	P	06 00 53.2	+1.5
	7.1nm,1.0s						
GEYT	**Alibeck**	47.47	350	LR	LR	06 19 22.8	
	comp=Z,52nm,20.6s,baz=245,slow=34						
GAR	**Garm**	47.83	3	*e*P	P	06 00 59.0	+0.1
	33nm,1.1s						
BTK	**Batken**	48.91	4	*e*P	P	06 01 07.3	+0.1
	8.4nm,0.8s						
KSH	**Kashi**	48.92	9	P	P	06 01 04.5	-2.9
KSH				sP	sP	06 01 11.1	+0.3
KSH				PcP	PcP	06 02 30.2	-1.4
KSH				S	S	06 08 04.0	-7.1
KSH				ScS	ScS	06 10 52.2	-7.6
KSH				SS	SS	06 11 31.4	-11
KSH				pmax	pmax		
	comp=Z,23nm,0.8s						
KSH				pmax	pmax		
	comp=Z,78nm,4.4s						
KSH				LR	LR		
	comp=N,420nm,17.0s						
KSH				LR	LR		
	comp=E,200nm,12.4s						
KSH				LR	LR		
	comp=Z,210nm,21.9s						
H01W3	**Cape Leeuwin H**	49.88	128	T	T	06 54 48.2	
	baz=290,slow=75,SNR=114						
H01W2	**Cape Leeuwin H**	49.88	128	T	T	06 54 45.8	
	baz=290,slow=75,SNR=104						
H01W1	**Cape Leeuwin H**	49.90	128	T	T	06 54 49.4	
	baz=290,slow=75,SNR=98						
QIZ	**Qiongzhong**	50.31	56	P	P	06 01 19.4	+1.2
QIZ				S	S	06 08 33.1	+2.2
QIZ				LR	LR		
	comp=N,150nm,15.3s						
QIZ				LR	LR		
	comp=E,130nm,15.2s						
AAK	**Ala-Archa**	51.80	7	*e*P	P	06 01 29.4	+0.3
	6.0nm,0.8s						
KK31	**Karatay Array**	51.93	3	*e*P	P	06 01 30.1	+0.2
	1.9nm,1.0s						
KKAR	**Karatay Array**	51.93	3	*e*P	P	06 01 30.2	+0.3
	1.9nm,1.0s						
CD2	**Chengdu**	52.85	40	P	P	06 01 37.2	+0.1
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
LZH	**Lanzhou**	56.49	35	*e*P	P	06 02 07.8	+4.3
LZH				pP	pwP	06 02 13.1	+0.3
LZH				sP	sP	06 02 15.6	+8.6
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=N,120nm,10.8s						
LZH				LR	LR		
	comp=E,110nm,11.7s						
LZH				LR	LR		
	comp=Z,280nm,12.4s						
GTA	**Gaotai**	56.81	30	*e*P	P	06 02 05.3	-0.4
GTA				pP	sP	06 02 12.0	+2.8
GTA				sP	pwP	06 02 15.4	+0.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,54nm,6.2s						
GTA				LR	LR		
	comp=N,85nm,18.6s						
GTA				LR	LR		
	comp=E,69nm,19.2s						
KBZ	**Khabaz**	56.98	339	LR	LR	06 25 46.7	
	comp=Z,44nm,19.6s,baz=169,slow=35						
MAKZ	**Makanchi**	57.07	12	*e*P	P	06 02 06.7	-0.6
	5.8nm,1.0s						
MK31	**Makanchi Array**	57.12	12	*e*P	P	06 02 06.5	-1.0
	2.9nm,0.8s						
MK32	**Makanchi Array**	57.12	12	*e*P	P	06 02 06.5	-1.1
MKAR	**Makanchi Array**	57.12	12	P	P	06 02 06.5	-1.1
	2.8nm,0.8s,baz=198,slow=7.9,SNR=16						
MKAR				LR	LR	06 26 08.9	
	comp=Z,71nm,18.4s,baz=199,slow=36						
BR101	**Keskin Array S**	57.66	330	*e*P	P	06 02 11.5	-0.2
BRTR	**Keskin Array B**	57.66	330	P	P	06 02 11.5	-0.2
	1.5nm,0.9s,baz=152,slow=8.4,SNR=6.6						
BRTR				LR	LR	06 26 25.9	
	comp=Z,46nm,18.2s,baz=112,slow=36						
XAN	**Xi'an**	58.19	40	*e*P	P	06 02 14.9	-0.5
	13nm,1.1s						
XAN	**Xi'an**	58.19	40	P	P	06 02 14.7	-0.7
XAN				pP	pwP	06 02 26.2	+1.5
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				LR	LR		
	comp=N,110nm,20.6s						
ABKAR	**Akbulak array**	58.36	354	*e*P	P	06 02 15.6	-0.6
	7.3nm,0.9s						
MAW	**Mawson**	58.61	182	LR	LR	06 21 07.5	
	comp=Z,134nm,21.6s,baz=15,slow=30						
WHN	**Wuhan**	59.83	47	P	P	06 02 32.2	+5.4
KURK	**Kurchatov**	60.26	8	*e*P	P	06 02 28.6	-0.7
	6.9nm,0.9s						
BRVK	**Borovoye**	61.86	2	*e*P	P	06 02 39.7	-0.4
	6.3nm,1.1s						
NJ2	**Nanjing**	63.90	48	*e*P	P	06 02 56.0	+1.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC	**Hu-ho-hao-te**	64.16	36	*e*P	P	06 02 57.2	+1.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,13nm,3.8s						
HHC				LR	LR		
	comp=N,120nm,11.9s						
HHC				LR	LR		
	comp=E,110nm,14.5s						
ZAA0	**Zalesovo Array**	64.42	11	*e*P	P	06 02 56.3	-0.9
	3.3nm,0.7s						
ZALV	**Zalesovo Beam**	64.42	11	P	P	06 02 55.9	-1.2
	2.8nm,0.7s,baz=202,slow=7.4,SNR=10						
ZALV				LR	LR	06 29 29.6	
	comp=Z,57nm,19.9s,baz=250,slow=35						
ZAA1	**Zalesovo Array**	64.43	11	*e*P	P	06 02 55.9	-1.3
ASAR	**Alice Springs**	65.03	112	P	P	06 03 01.8	-0.1
	2.0nm,0.7s,baz=273,slow=6.4,SNR=14						
ASAR				LR	LR	06 30 45.7	
	comp=Z,79nm,18.0s,baz=274,slow=35						
AS31	**Alice Springs**	65.03	112	*e*P	P	06 03 01.8	-0.1
	1.1nm,1.0s						
WRA	**Warramunga Arr**	65.43	108	P	P	06 03 04.8	+0.3
	3.1nm,0.8s,baz=277,slow=6.6,SNR=6.6						
WR1	**Warramunga Arr**	65.43	108	*e*P	P	06 03 04.8	+0.3
WRAB	**Tennant Creek**	65.44	108	*e*P	P	06 03 06.5	+1.9
	7.7nm,1.1s						
WB2	**Warramunga Arr**	65.44	108	*e*P	P	06 03 06.0	+1.4
	14nm,1.3s						
ARU	**Arti**	65.59	355	*e*P	P	06 03 04.2	-0.5
	5.5nm,0.7s						
SONA0	**Songino Array**	66.29	28	*e*P	P	06 03 10.1	+0.5
SONM	**Songino Array**	66.29	28	P	P	06 03 10.1	+0.5
	6.3nm,0.9s,baz=220,slow=6.2,SNR=26						
SONM				LR	LR	06 31 20.1	
	comp=Z,137nm,21.8s,baz=232,slow=35						
BJI	**Beijing**	66.44	39	*e*P	P	06 03 11.2	+0.7
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ULN	**Ulaanbaatar**	66.62	28	*e*P	P	06 03 11.5	-0.2
	4.4nm,1.1s						
AKASG	**Malin Array Be**	68.01	335	P	P	06 03 19.0	-1.3
	1.7nm,0.7s,baz=140,slow=5.6,SNR=3.7						
AKASG				LR	LR	06 35 55.5	
	comp=Z,20nm,18.4s,baz=290,slow=38						
AKBB	**Malin Array Si**	68.01	335	*e*P	P	06 03 19.5	-0.7
	4.4nm,0.9s						
TORD	**Torodi Ar. Bea**	68.79	288	LR	LR	06 30 51.9	
	comp=Z,69nm,21.5s,baz=5.0,slow=34						
KEST	**Kesra**	70.38	313	LR	LR	06 33 10.4	
	comp=Z,46nm,19.3s,baz=259,slow=35						
VYHS	**Vyhne**	71.37	328	*e*P	P	06 03 44.1	+3.0
STKA	**Stephens Creek**	71.96	121	LR	LR	06 30 44.6	
	comp=Z,67nm,21.7s,baz=219,slow=32						
KSRS	**Korea Array**	73.02	46	P	P	06 03 51.1	-0.1
	1.1nm,0.7s,baz=232,slow=6.0,SNR=3.6						
KSRS				LR	LR	06 37 06.2	
	comp=Z,38nm,18.3s,baz=238,slow=37						
DBIC	**Dimbokro**	73.61	280	LR	LR	06 34 39.2	
	comp=Z,57nm,20.4s,baz=100,slow=34						
SNAA	**Sanae**	75.33	198	P	P	06 04 04.7	+0.5
FINES	**FINESS Array B**	77.25	341	LR	LR	06 38 54.3	
	comp=Z,31nm,18.6s,baz=108,slow=36						
VNA3	**Neumayer Olymp**	77.36	199	P	P	06 04 12.0	-3.6
MAJO	**Matsushiro**	80.29	51	*e*P	P	06 04 33.1	+0.8
MJAR	**Matsushiro Arr**	80.29	51	P	P	06 04 33.2	+0.8
	1.1nm,0.3s,baz=246,slow=7.3,SNR=4.2						
MJAR				LR	LR	06 38 31.1	
	comp=Z,33nm,21.7s,baz=130,slow=34						
ARA0	**ARCESS Array S**	83.48	346	*e*P	P	06 04 48.7	+0.2
ARCES	**ARCESS Array B**	83.48	346	P	P	06 04 48.7	+0.2
	3.1nm,0.8s,baz=157,slow=4.9,SNR=12						
TIXI	**Tiksi**	89.89	16	LR	LR	06 46 21.5	
	comp=Z,84nm,21.6s,baz=220,slow=36						
PETK	**Petropavlovsk-**	97.33	37	LR	LR	06 52 06.6	
	comp=Z,30nm,20.6s,baz=245,slow=37						
LPAZ	**La Paz**	129.28	240	PKP	PKPdf	06 11 31.1	-0.3
	0.7nm,0.7s,baz=135,slow=4.3,SNR=3.2						
LPAZ	**La Paz**	129.28	240	*e*PKPdf	PKPdf	06 11 31.2	-0.1
RSSD	**Black Hills**	144.21	349	*e*PKPdf	PKPdf	06 11 59.1	+1.4
HLID	**Hailey**	145.53	2	*e*PKPdf	PKPab	06 12 01.2	+1.0
PD31	**Pinedale Array**	146.25	356	*e*PKPdf	PKPdf	06 12 01.2	-0.1
PDAR	**Pinedale Array**	146.25	356	PKPbc	PKPdf	06 12 01.2	-0.1
	0.5nm,0.7s,baz=170,slow=2.1,SNR=6.3						
LRAL	**Lakeview Retre**	146.33	319	*e*PKPdf	PKPbc	06 12 02.1	-0.3
PHWY	**Pilot Hill**	147.20	350	*e*PKPbc	PKPab	06 12 06.7	0.0
N23A	**Red Feather La**	147.67	350	*e*PKPbc	PKPbc	06 12 06.9	+0.5
BMN	**Battle Mountai**	148.43	7	*e*PKPbc	PKiKP	06 12 10.8	+0.9
BEKR	**Beckworth**	148.50	11	*e*PKPbc	PKiKP	06 12 10.4	+0.3
TUL1	**Leonard**	149.11	333	*e*PKPbc	PKPab	06 12 13.8	-0.3
SMCO	**Snowmass**	149.51	351	*e*PKPbc	PKiKP	06 12 12.3	-0.2
NV01	**Mina Array Sit**	150.25	9	*e*PKPbc	PKiKP	06 12 13.9	+0.1
NVAR	**Mina Array Bea**	150.25	9	PKPbc	PKiKP	06 12 13.9	+0.1
	1.9nm,0.7s,baz=272,slow=1.8,SNR=16						
PV01	**Paradox Valley**	150.75	353	*e*PKPbc	PKiKP	06 12 16.1	+1.2
WMOK	**Wichita Mounta**	151.39	336	*e*PKPab	PKPab	06 12 26.1	+2.5
TXAR	**Lajitas Array**	158.07	339	PKPab	PKPab	06 12 53.1	+0.8
	0.5nm,0.8s,baz=72,slow=2.9,SNR=6.2						

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*ISCJB **05** 05:54:02.5±0.4, 43°.35N±0°.05×138°.66E±0°.05, h236^{km}, mb3.6/12, Error ellipse: s-maj=6.9km s-min=5.2km az=16.4*

*IDC **05** 05:54:03.9±1.0, 43°.44N×138°.55E, h231^{km}±9^{km}, mb3.4/12, mb1 3.5/15, mb1mx3.4/39, mbtmp3.9/15, Error ellipse: s-maj=14.6km s-min=10.3km az=2.0*

*JMA **05** 05:54:03.4±0.2, 43°.38N×138°.73E, h236^{km}±2^{km}, M3.3*

ISC 05 05:54:03.6±0.7, 43°.33N±0°.06×138°.74E±0°.06, h236^{km}, n35, σ1^{s}.20/43, mb3.7/12, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK	**Shakotan**	1.26	88	P	Pn	05 54 38.6	-0.2
JSK				*e*S	S	05 55 06.1	-0.2
JOSM	**Okushiri--Mats**	1.36	156	P	Pn	05 54 39.9	+0.3
JOMM	**Oshimamatsumae**	2.03	152	P	Pn	05 54 45.7	+0.4
JEW	**Eniwo**	2.04	103	P	Pn	05 54 45.5	+0.2
JHR	**Hokuryu**	2.21	78	P	Pn	05 54 47.2	+0.3
JKB	**Kayabe**	2.22	130	P	Pn	05 54 47.1	0.0
JYG	**Yagishiri**	2.23	60	P	Pn	05 54 46.7	-0.4
JOT	**Ohata**	2.59	138	P	Pn	05 54 50.6	-0.2
JRBN	**Rebuntou**	2.67	38	P	Pn	05 54 50.9	-0.7
JFR	**Furan**	2.82	92	P	Pn	05 54 53.4	+0.1
JFR				*e*S	S	05 55 32.7	+0.5
ASAJ	**Asahikawa**	2.90	73	P	Pn	05 54 54.3	+0.2
	3.9nm,0.3s,baz=265,slow=11,SNR=13						
ASAJ				S	S	05 55 36.2	+2.3
	0.6nm,0.3s,baz=115,slow=28,SNR=4.1						
JKK2	**Kamakawa 2**	2.96	78	P	Pn	05 54 55.1	+0.3
JWK2	**Keihoku**	3.01	48	P	Pn	05 54 56.0	+0.7
JNBK	**Urakawa-nobuka**	3.13	108	P	Pn	05 54 56.3	-0.4
JSE	**Soyaes**	3.21	58	P	Pn	05 54 57.4	-0.1
JCH	**Churui**	3.46	100	P	Pn	05 54 59.1	-1.4
JCH				*e*S	S	05 55 42.3	-3.0
JAR	**Ashorobuto**	3.67	89	P	Pn	05 55 02.5	-0.3
JAR				*e*S	S	05 55 48.5	-1.1
JTKR	**Abashiri--Toko**	3.80	79	P	Pn	05 55 04.6	+0.2
JTKR				*e*S	S	05 55 52.2	-0.2
JOM	**Ohasama**	4.30	153	P	Pn	05 55 10.9	+0.4
JAK	**Akkeshi**	4.37	92	P	Pn	05 55 10.0	-1.2
JAK				*e*S	S	05 56 00.7	-3.9
JMK	**Ichinoseki**	4.76	156	P	Pn	05 55 16.5	+0.5
JMK				*e*S	S	05 56 11.7	-1.7
USRK	**Ussuriysk Ar.**	4.97	282	P	Pn	05 55 17.0	-1.5
	0.4nm,0.3s,baz=86,slow=15,SNR=6.6						
KLR	**Kul'dur**	7.63	323	P	Pn	05 55 50.7	-1.3
	0.3nm,0.3s,baz=129,slow=13,SNR=7.7						
SONM	**Songino Array**	22.98	293	P	P	05 58 46.4	-1.3
	0.6nm,0.3s,baz=92,slow=9.3,SNR=6.6						
ZALV	**Zalesovo Beam**	36.34	306	P	P	06 00 43.7	-1.1
	8.2nm,0.5s,baz=89,slow=8.5,SNR=32						
MKAR	**Makanchi Array**	39.30	295	P	P	06 01 08.9	-0.8
	2.3nm,0.5s,baz=70,slow=10,SNR=16						
ILAR	**Eielson Array**	45.41	35	P	P	06 01 58.8	+0.3
	0.7nm,0.7s,baz=274,slow=6.3,SNR=7.6						
INK	**Inuvik**	49.80	29	P	P	06 02 32.8	+0.8
	0.9nm,0.3s,baz=301,slow=11,SNR=10						
ARCES	**ARCESS Array B**	57.40	337	P	P	06 03 26.8	-0.2
	0.6nm,0.6s,baz=64,slow=11,SNR=5.7						
FINES	**FINESS Array B**	62.32	330	P	P	06 03 59.8	-0.8
	0.8nm,0.4s,baz=44,slow=8.5,SNR=11						
WRA	**Warramunga Arr**	63.09	185	P	P	06 04 06.4	+0.4
	0.6nm,0.5s,baz=8.0,slow=7.0,SNR=3.8						
ASAR	**Alice Springs**	66.81	185	P	P	06 04 32.4	+2.5
	0.4nm,0.7s,baz=5.4,slow=5.7,SNR=3.3						
NVAR	**Mina Array Bea**	72.86	53	P	P	06 05 08.2	+1.2
	1.3nm,0.6s,baz=299,slow=5.7,SNR=15						
PDAR	**Pinedale Array**	74.70	45	P	P	06 05 18.1	+0.5
	1.5nm,0.6s,baz=324,slow=1.4,SNR=24						
TXAR	**Lajitas Array**	87.81	51	P	P	06 06 27.3	+0.9
	0.2nm,0.5s,baz=299,slow=4.3,SNR=5.3						

MEX 05 05:59:18.9±0.4, 14°.92N×93°.09W, h68^{km}±7^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.79	351	*i* P	Pn	05 59 33.5	-1.2
PCIG				*e*S	Sn	05 59 44.3	-2.1
THIG		0.80	91	*e*P	Pn	05 59 33.3	-1.5
THIG				*e*S	Sn	05 59 44.9	-1.7
CCIG	**Comitan**	1.64	34	*e*P	Pn	05 59 43.9	-1.9
CCIG				*i* S	Sn	06 00 04.4	-1.7
TGIG		1.85	359	*e*P	Pn	05 59 47.0	-1.5
TGIG				*i* S	Sn	06 00 09.4	-1.6
CMIG	**Matias Romero**	2.76	322	*e*P	Pn	05 59 59.6	-1.3
CMIG				*i* S	Sn	06 00 31.2	-1.9

MEX 05 06:15:31.0±0.3, 15°.61N×95°.42W, h12^{km}±10^{km}, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.68	283	*e*P	Pg	06 15 42.6	-1.6
HUIG				*e*S	Sg	06 15 51.6	-1.6
CMIG	**Matias Romero**	1.56	19	*e*P	Pn	06 15 55.2	-3.5
CMIG				*e*S	Sn	06 16 13.7	-5.1
VHO	**Vista Hermosa**	1.92	319	*i* P	Pn	06 16 00.3	-3.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO				*i* S	Sn	06 16 23.9	-4.2

IDC 05 06:29:09.1±6.2, 20°.69S×12°.23W, h0^{km}, mb4.0/3, mb1 4.0/3, mb1mx3.6/26, mbtmp4.0/3, MS3.3/7, Ms1 3.3/7, ms1mx3.0/22, Error ellipse: s-maj=247.9km s-min=134.4km az=106.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**11.89**	**348**	T	T	06 44 32.1	
	baz=166,slow=74,SNR=3.1						
H10S3	**ASCENSION HYDR**	**11.90**	**348**	T	T	06 44 32.5	
	baz=166,slow=74,SNR=2.9						
H10S1	**ASCENSION HYDR**	**11.91**	**348**	T	T	06 44 45.7	
	baz=166,slow=74,SNR=3.1						
DBIC	**Dimbokro**	**28.14**	**16**	LR	LR	06 43 15.9	
	comp=Z,42nm,21.6s,baz=140,slow=30						
BOSA	**Boshof**	**34.86**	**111**	LR	LR	06 48 11.9	
	comp=Z,21nm,19.9s,baz=208,slow=33						
TORD	**Torodi Ar. Bea**	**36.30**	**23**	P	P	06 36 14.4	-0.2
	3.4nm,0.3s,baz=196,slow=9.5,SNR=1.4						
TORD				LR	LR	06 50 03.4	
	comp=Z,20nm,18.6s,baz=75,slow=35						
CPUP	**Villa Florida**	**41.58**	**253**	LR	LR	06 54 37.9	
	comp=Z,64nm,18.2s,baz=134,slow=37						
PLCA	**Paso Flores**	**52.99**	**234**	LR	LR	06 57 59.9	
	comp=Z,30nm,20.8s,baz=226,slow=33						
ROSC	**El Rosal**	**65.97**	**285**	LR	LR	07 07 27.0	
	comp=Z,85nm,18.9s,baz=110,slow=35						
GERES	**GERESS Array B**	**72.99**	**18**	P	P	06 40 40.8	+0.4
	8.8nm,0.2s,baz=206,slow=6.5,SNR=3.7						
BRTR	**Keskin Array B**	**73.78**	**35**	P	P	06 40 45.9	+0.4
	0.5nm,0.4s,baz=229,slow=5.7,SNR=4.4						
AKASG	**Malin Array Be**	**79.91**	**25**	P	P	06 41 18.9	-0.7
	0.1nm,0.3s,baz=219,slow=5.7,SNR=4.4						
AKASG				LR	LR	07 17 08.6	
	comp=Z,16nm,19.5s,baz=305,slow=36						

UCR 05 06:29:55.3±2.4, 8°.29N×82°.81W, h24^{km}±6^{km}, MW3.7, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.51**	**14**	*e*P	Pb	06 30 05.3	-0.5
BRU2				*e*S	Sb	06 30 13.8	+0.8
PTJ1	**Puerto Jimnez**	**0.54**	**297**	*e*P	Pb	06 30 05.9	-0.3
EDSV	**San Vito**	**0.55**	**343**	⇑*i*P	Pb	06 30 05.9	-0.5
EDSV				*e*S	Sn	06 30 15.5	-0.7
EDPN	**Palmar Norte**	**0.92**	**316**	*e*P	Pb	06 30 11.5	-1.1
EDPN				*e*S	Sb	06 30 23.7	-0.8
EDBA	**Buenos Aires**	**0.98**	**332**	*e*P	Pn	06 30 12.8	-0.9
EDBA				*e*S	Sn	06 30 27.6	+0.8
DRK0	**Durika**	**1.06**	**336**	⇑*e*P	Pn	06 30 13.5	-1.3
DRK0				*e*S	Sb	06 30 26.9	-1.7
EDLM	**Las Mercedes**	**1.25**	**322**	*e*P	Pn	06 30 15.7	-1.6
EDLM				*e*S	Sn	06 30 33.6	+0.2
LCR2	**La Lucha 2**	**1.86**	**321**	*e*P	Pn	06 30 24.9	-1.0
CVTR	**Volcan Turrial**	**1.96**	**332**	*e*P	Pn	06 30 27.3	-0.1
HDC	**Heredia**	**2.13**	**323**	*e*P	Pn	06 30 29.2	-0.3
HDC				*e*S	Sb	06 30 57.7	-1.7
ARE1	**Arenal 1**	**2.86**	**319**	*e*P	Pn	06 30 41.0	+1.5
JTS	**Las Juntas de**	**2.90**	**313**	*e*P	Pn	06 30 40.6	+0.6
CUI	**Cuipilapa**	**3.30**	**316**	*e*P	Pn	06 30 46.6	+1.0

*IDC **05** 06:56:05.0±1.5, 10°.78S×120°.02E, h0^{km}, mb4.0/3, mb1 4.1/7, mb1mx3.8/40, mbtmp4.0/7, ML3.9/4, MS3.0/6, Ms1 3.0/6, ms1mx2.7/31, Error ellipse: s-maj=54.1km s-min=12.6km az=51.0*

*ISCJB **05** 06:56:09.3±1.4, 10°.53S±0°.08×120°.50E±0°.08, h28^{km}±9^{km}, mb4.0/3, MS3.0/6, Error ellipse: s-maj=16.7km s-min=8.5km az=39.4*

*DJA **05** 06:56:10.5±0.6, 10°S±4°×12°0E±°, h10^{km}, M4.2/9, mb4.5/1, mB4.6/1, MLv4.1/9, Mw(mB)3.8/1*

ISC 05 06:56:11.1±1.3, 10°.41S±0°.08×120°.48E±0°.06, h29^{km}±9^{km}, n25, σ1^{s}.71/19, mb4.1/3, MS3.0/6, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.21**	**26**	P	**Pb**	**06 56 16.5**	**-0.9**
WSI	**Waingapu**	**0.76**	**346**	P	**Pb**	**06 56 25.8**	**-0.1**
WSI				S	**Sn**	**06 56 36.3**	**-0.2**
WBSI	**Waikabubak, Su**	**1.32**	**305**	P	**Pn**	**06 56 34.3**	**+0.6**
WBSI				S	**Sb**	**06 56 53.3**	**+1.4**
EDFI	**Ende, Flores**	**2.04**	**36**	P	**Pb**	**06 56 45.2**	**-2.4**
MMRI	**Maumere**	**2.47**	**45**	P	**Pn**	**06 56 50.7**	**+1.2**
PLAI	**Plampang**	**3.10**	**300**	P	**Pn**	**06 56 59.2**	**+1.1**
BATI	**Baumata**	**3.14**	**87**	Pn	**Pn**	**06 57 02.3**	**+3.6**
	11nm,0.3s,baz=279,slow=19,SNR=3.7						
BATI	**Baumata**	**3.14**	**87**	P	**Pn**	**06 57 00.2**	**+1.5**
BSSI	**Bau Bau, Buton**	**4.24**	**0**	P	**Pn**	**06 57 15.6**	**+1.7**
BKSI	**Bulukumba**	**5.07**	**356**	P	**Pn**	**06 57 27.3**	**+2.1**
KAPI	**Kappang**	**5.41**	**352**	Pn	**Pn**	**06 57 31.8**	**+1.9**
	1.0nm,0.3s,baz=175,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**16.38**	**127**	Pn	**Pn**	**06 59 57.1**	**-2.0**
	0.5nm,0.3s,baz=298,slow=13,SNR=25						
ASAR	**Alice Springs**	**18.37**	**138**	P	**P**	**07 00 23.7**	**-0.1**
	0.8nm,0.3s,baz=312,slow=12,SNR=73						
ASAR				S	**Sn**	**07 03 49.7**	**+1.2**
	0.1nm,0.3s,baz=302,slow=21,SNR=4.7						
PMG	**Port Moresby**	**26.30**	**90**	LR	LR	07 14 27.2	
	comp=Z,70nm,19.6s,baz=290,slow=41						
STKA	**Stephens Creek**	**28.94**	**141**	LR	LR	07 15 00.7	
	comp=Z,36nm,21.9s,baz=206,slow=39						
GUMO	**Guam**	**33.97**	**46**	LR	LR	07 17 47.3	
	comp=Z,12nm,20.0s,baz=128,slow=38						
CMAR	**Chiang Mai Arr**	**35.70**	**323**	LR	LR	07 19 24.9	
	comp=Z,41nm,19.6s,baz=174,slow=39						
H08S2	**Diego Garcia H**	**47.44**	**269**	T	T	07 55 13.1	
	baz=96,slow=75,SNR=6.6						
H08S3	**Diego Garcia H**	**47.45**	**269**	T	T	07 55 13.3	
	baz=96,slow=75,SNR=5.9						
H08S1	**Diego Carcia H**	**47.46**	**269**	T	T	07 55 25.7	
	baz=96,slow=75,SNR=7.8						
KSRS	**Korea Array**	**48.12**	**8**	LR	LR	07 26 53.5	
	comp=Z,6.8nm,19.9s,baz=175,slow=38						
SONM	**Songino Array**	**59.33**	**349**	P	**P**	**07 06 10.3**	**-0.2**
	0.9nm,0.5s,baz=170,slow=9.3,SNR=4.7						
MKAR	**Makanchi Array**	**66.38**	**332**	P	**P**	**07 06 57.0**	**-0.3**
	0.5nm,0.5s,baz=140,slow=8.2,SNR=6.2						
ZALV	**Zalesovo Beam**	**70.88**	**339**	P	**P**	**07 07 24.2**	**-1.0**
	1.3nm,0.5s,baz=133,slow=4.1,SNR=3.5						
KBZ	**Khabaz**	**88.30**	**315**	LR	LR	07 56 10.0	
	comp=Z,7.9nm,19.0s,baz=144,slow=41						

BUC 05 06:57:10.5±0.5, 45°.70N×26°.54E, h157^{km}±4^{km}, MD3.5/4, 34C-14D, Error ellipse: s-maj=4.5km s-min=3.3km az=12.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.17**	**29**	⇑*i*P	Pn	06 57 31.2	-0.4
PLOR				*i* S	Sn	06 57 45.6	-2.2
PLOR	**Plostina**	**0.17**	**29**	⇑*i*P	Pn	06 57 31.2	-0.4
VRI	**Vrincioaia**	**0.21**	**40**	⇓*i*P	Pn	06 57 31.4	-0.2
VRI				*i* S	Sn	06 57 45.4	-2.4
VRI	**Vrincioaia**	**0.21**	**40**	⇓*i*P	Pn	06 57 31.4	-0.2
ODBI	**Odobesti**	**0.37**	**81**	⇓*i*P	Pn	06 57 32.7	+0.7
ODBI				*i* S	Sn	06 57 48.0	-0.5
ODBI	**Odobesti**	**0.37**	**81**	⇓*i*P	Pn	06 57 32.7	+0.7
GRER		**0.45**	**136**	*i* S	Sn	06 57 46.5	-2.5
GRER		**0.45**	**136**	S	Sn	06 57 46.5	-2.5
MLR	**Muntele Rosu**	**0.47**	**243**	⇑*i*P	Pn	06 57 32.2	-0.4
MLR				*i* S	Sn	06 57 47.6	-1.9
MLR	**Muntele Rosu**	**0.47**	**243**	⇑*i*P	Pn	06 57 32.2	-0.4
PETR	**Petresti**	**0.49**	**88**	⇑*i*P	Pn	06 57 32.8	+0.3
PETR				*i* S	Sn	06 57 48.3	-1.0
PETR	**Petresti**	**0.49**	**88**	⇑*i*P	Pn	06 57 32.8	+0.3
ISR	**Istrita**	**0.58**	**179**	⇑*i*P	Pn	06 57 32.5	-0.6
ISR				*i* S	Sn	06 57 49.6	-0.8
ISR	**Istrita**	**0.58**	**179**	⇑*i*P	Pn	06 57 32.5	-0.6
OZUR		**0.65**	**307**	⇑*i*P	Pn	06 57 33.0	-0.5
OZUR				*i* S	Sn	06 57 49.0	-2.1
OZUR		**0.65**	**307**	⇑*i*P	Pn	06 57 33.0	-0.5
OZUR				S	Sn	06 57 49.0	-2.1
SECR		**0.74**	**206**	⇑*i*P	Pn	06 57 34.0	0.0
SECR				*i* S	Sn	06 57 50.9	-1.1
SECR		**0.74**	**206**	⇑*i*P	Pn	06 57 34.0	0.0
TUDR		**0.80**	**97**	⇓*i*P	Pn	06 57 33.9	-0.4
TUDR				*i* S	Sn	06 57 50.9	-1.7
TUDR		**0.80**	**97**	⇓*i*P	Pn	06 57 33.9	-0.4
TESR	**Tescani**	**0.81**	**6**	⇑*i*P	Pn	06 57 34.2	-0.2
TESR				*i* S	Sn	06 57 51.2	-1.7
TESR	**Tescani**	**0.81**	**6**	⇑*i*P	Pn	06 57 34.2	-0.2
PGOR	**Pogoanele**	**0.86**	**158**	*i* S	Sn	06 57 52.3	-1.0
PGOR	**Pogoanele**	**0.86**	**158**	S	Sn	06 57 52.3	-1.0
PLAR	**PLOIESTI**	**0.87**	**205**	*i* S	Sn	06 57 52.2	-1.2
PLAR	**PLOIESTI**	**0.87**	**205**	S	Sn	06 57 52.2	-1.2
SULR		**1.04**	**191**	⇑*i*P	Pn	06 57 36.2	-0.1
SULR				*i* S	Sn	06 57 54.8	-1.1
SULR		**1.04**	**191**	⇑*i*P	Pn	06 57 36.2	-0.1
VOIR		**1.08**	**256**	⇑*i*P	Pn	06 57 36.1	-0.5
VOIR				*i* S	Sn	06 57 55.8	-0.8
VOIR		**1.08**	**256**	⇑*i*P	Pn	06 57 36.1	-0.5
MTUR	**Matau**	**1.14**	**246**	⇑*i*P	Pn	06 57 36.0	-1.2
MTUR	**Matau**	**1.14**	**246**	⇑*i*P	Pn	06 57 36.0	-1.2
AMRR	**Amara**	**1.23**	**152**	*i* S	Sn	06 57 57.3	-1.6
AMRR	**Amara**	**1.23**	**152**	S	Sn	06 57 57.3	-1.6
CFR	**Carcaliu**	**1.24**	**114**	⇑*i*P	Pn	06 57 37.8	-0.2
CFR				*i* S	Sn	06 57 57.0	-2.1
CFR	**Carcaliu**	**1.24**	**114**	⇑*i*P	Pn	06 57 37.8	-0.2
LEHL	**Lehliu**	**1.25**	**171**	*i* S	Sn	06 57 57.6	-1.6
LEHL	**Lehliu**	**1.25**	**171**	S	Sn	06 57 57.6	-1.6
ARR	**Arges**	**1.38**	**257**	⇓*i*P	Pn	06 57 39.9	+0.5
ARR				*i* S	Sn	06 58 00.3	-1.2
ARR	**Arges**	**1.38**	**257**	⇓*i*P	Pn	06 57 39.9	+0.5
HARR	**Harsova**	**1.42**	**135**	⇓*i*P	Pn	06 57 39.5	-0.2
HARR	**Harsova**	**1.42**	**135**	⇓*i*P	Pn	06 57 39.5	-0.2
SGRR	**Singureni**	**1.53**	**195**	⇑*i*P	Pn	06 57 40.5	-0.4
SGRR				*i* S	Sn	06 58 01.7	-2.5
SGRR	**Singureni**	**1.53**	**195**	⇑*i*P	Pn	06 57 40.5	-0.4
TLB	**Topalu**	**1.54**	**136**	⇓*i*P	Pn	06 57 40.9	-0.1
TLB				*i* S	Sn	06 58 02.3	-2.1
TLB	**Topalu**	**1.54**	**136**	⇓*i*P	Pn	06 57 40.9	-0.1
TLCR		**1.69**	**107**	⇑*i*P	Pn	06 57 42.5	0.0
TLCR				*i* S	Sn	06 58 06.2	-0.8
TLCR		**1.69**	**107**	⇑*i*P	Pn	06 57 42.5	0.0
TIRR	**Tirgusor**	**1.82**	**132**	⇓*i*P	Pn	06 57 43.9	-0.1
TIRR				*i* S	Sn	06 58 07.6	-2.1
TIRR	**Tirgusor**	**1.82**	**132**	⇓*i*P	Pn	06 57 43.9	-0.1
LOT	**Lotru**	**1.96**	**263**	⇑*i*P	Pn	06 57 46.9	+1.2
LOT				*i* S	Sn	06 58 12.4	-0.3
LOT	**Lotru**	**1.96**	**263**	⇑*i*P	Pn	06 57 46.9	+1.2
MILM	**Milestii Mici**	**1.99**	**52**	*i* S	Sn	06 58 11.5	-1.7
MILM	**Milestii Mici**	**1.99**	**52**	S	Sn	06 58 11.5	-1.7
SRE	**Strehaia**	**2.58**	**247**	⇑*i*P	Pn	06 57 52.7	-0.1
SRE	**Strehaia**	**2.58**	**247**	⇑*i*P	Pn	06 57 52.7	-0.1
GZR	**Gura Zlata**	**2.66**	**265**	⇑*i*P	Pn	06 57 54.4	+0.5
GZR	**Gura Zlata**	**2.66**	**265**	⇑*i*P	Pn	06 57 54.4	+0.5
MDVR	**Moldovita**	**3.53**	**257**	⇑*i*P	Pn	06 58 05.1	+0.2
MDVR	**Moldovita**	**3.53**	**257**	⇑*i*P	Pn	06 58 05.1	+0.2

KRNET 05 06:59:25.0±0.1, 42°.25N×75°.74E, h19^{km}, mb2.3, 8C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOOM	**Boomskoye usch**	**0.28**	**31**	⇓*i*P	Pg	06 59 31.4	-0.1
	baz=32						
BOOM				⇓*i*S	Sb	06 59 35.3	-0.5
	baz=32						
BOOM	**Boomskoye usch**	**0.28**	**31**	⇑*i*P	Pb	06 59 32.7	+1.2
	baz=62						
BOOM				⇑*i*S	Sb	06 59 35.7	-0.1
	baz=62						
ULHL	**Ulahol**	**0.37**	**91**	⇑*i*P	Pg	06 59 32.9	-0.1
	baz=91						
ULHL				⇑*i*S	Sg	06 59 37.4	-0.9
	baz=91						
ULHL	**Ulahol**	**0.37**	**91**	⇓*i*P	Pb	06 59 33.8	+0.6
	baz=81						
ULHL				⇓*i*S	Sg	06 59 37.2	-1.1
	baz=81						
KZA	**Kyzart**	**0.40**	**245**	⇑*i*P	Pn	06 59 44.4	+8.2
	baz=39						
KZA				⇑*i*S	Sn	06 59 57.2	+14
	baz=39						
TKM2	**Tokmak 2**	**0.68**	**351**	⇑*i*P	Pb	06 59 38.2	-0.1
	baz=51						
TKM2				⇑*i*S	Sb	06 59 47.3	-0.1
	baz=51						
TKM2	**Tokmak 2**	**0.68**	**351**	⇓*i*P	Pn	06 59 40.2	+0.4
	baz=10.0						
TKM2				⇓*i*S	Sn	06 59 48.9	-1.1
	baz=10.0						
KBK	**Karagaybulak**	**0.71**	**305**	⇓*i*P	Pb	06 59 38.6	-0.3
	baz=5.0						
KBK				⇓*i*S	Sb	06 59 48.1	-0.3
	baz=5.0						

*IDC **05** 07:01:00.3±2.4, 15°.97N×147°.70E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.7/48, mbtmp4.0/8, ML4.0/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/33, Error ellipse: s-maj=61.4km s-min=29.5km az=136.0*

*ISCJB **05** 07:01:03.2±0.7, 15°.77N±0°.08×147°.69E±0°.08, h38^{km}, mb4.1/12, MS3.1/1, Error ellipse: s-maj=12.2km s-min=9.5km az=139.9*

*NEIC **05** 07:01:04.4±1.2, 15°.90N×147°.55E, h24^{km}±6^{km}, mb4.5/5, Error ellipse: s-maj=19.1km s-min=10.0km az=121.0*

ISC 05 07:01:05.3±0.7, 15°.85N±0°.08×147°.65E±0°.09, h38^{km}, n26, σ1^{s}.07/27, mb4.1/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	**Anatahan**	**1.93**	**285**	*e*Pn	**Pn**	**07 01 34.2**	**-1.4**
SARN	**Sarigan**	**1.98**	**296**	*e*Pn	**Pn**	**07 01 35.2**	**-1.1**
GUMO	**Guam**	**3.50**	**230**	Pn	**Pn**	**07 01 58.3**	**+1.0**
	14nm,0.3s,baz=86,slow=4.9,SNR=11						
GUMO				Sn	**Sn**	**07 02 34.6**	**-2.9**
	50nm,0.3s,baz=339,slow=22,SNR=13						
GUMO				LR	LR	07 03 43.1	
	comp=Z,72nm,18.7s,baz=170,slow=45						
GUMO	**Guam**	**3.50**	**230**	*e*Pn	**Pn**	**07 01 58.1**	**+0.9**
GUMO				*e*Sn	**Sn**	**07 02 36.9**	**-0.6**
PATS	**Pohnpei**	**13.76**	**129**	*e*Pn	**Pn**	**07 04 16.1**	**-1.8**
DAV	**Davao City (W)**	**23.30**	**251**	LR	LR	07 14 10.1	
	comp=Z,67nm,20.1s,baz=37,slow=34						
NACB	**Ninganchiao**	**25.81**	**293**	*e*P	**P**	**07 06 33.6**	**+0.6**
	28nm,1.1s						
KLR	**Kul'dur**	**35.73**	**342**	P	**P**	**07 08 00.5**	**+0.2**
	1.2nm,0.6s,baz=180,slow=8.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**46.50**	**281**	P	**P**	**07 09 29.6**	**+0.3**
	1.1nm,0.3s,baz=76,slow=6.9,SNR=6.1						
SONA0	**Songino Array**	**46.52**	**322**	*e*P	**P**	**07 09 29.1**	**0.0**
SONM	**Songino Array**	**46.52**	**322**	P	**P**	**07 09 29.1**	**0.0**
	0.8nm,0.7s,baz=131,slow=9.4,SNR=4.0						
PSI	**Prapat**	**49.66**	**260**	*e*P	**P**	**07 09 54.5**	**+0.6**
	4.3nm,0.9s						
MK31	**Makanchi Array**	**61.78**	**315**	*e*P	**P**	**07 11 20.7**	**+0.5**
	1.0nm,0.8s						
MK32	**Makanchi Array**	**61.78**	**315**	*e*P	**P**	**07 11 20.4**	**+0.1**
MKAR	**Makanchi Array**	**61.78**	**315**	P	**P**	**07 11 20.4**	**+0.1**
	1.2nm,0.6s,baz=90,slow=9.8,SNR=7.8						
KURK	**Kurchatov**	**64.63**	**319**	*e*P	**P**	**07 11 39.0**	**0.0**
	6.2nm,1.1s						
ILAR	**Eielson Array**	**65.39**	**25**	P	**P**	**07 11 43.6**	**-0.1**
	0.5nm,0.8s,baz=240,slow=4.7,SNR=4.7						
KK31	**Karatay Array**	**70.02**	**311**	*e*P	**P**	**07 12 14.9**	**+1.6**
	3.8nm,1.5s						
ARA0	**ARCESS Array S**	**85.76**	**343**	*e*P	**P**	**07 13 41.4**	**+1.2**
ARCES	**ARCESS Array B**	**85.76**	**343**	P	**P**	**07 13 41.4**	**+1.2**
	0.8nm,0.6s,baz=66,slow=9.4,SNR=4.5						
FIA0	**FINESS Array S**	**90.24**	**336**	*e*P	**P**	**07 14 01.2**	**-0.6**
FINES	**FINESS Array B**	**90.24**	**336**	P	**P**	**07 14 01.2**	**-0.6**
	0.3nm,0.5s,baz=67,slow=6.4,SNR=5.8						
DBIC	**Dimbokro**	**144.76**	**307**	*e*PKPdf	**PKPdf**	**07 20 39.3**	**+0.2**
LPAZ	**La Paz**	**145.64**	**96**	*e*PKPdf	**PKiKP**	**07 20 44.4**	**-1.0**
TRQA	**Tornquist**	**145.80**	**136**	*e*PKPdf	**PKPab**	**07 20 42.4**	**+1.3**
SACV	**Santiago Islan**	**148.18**	**344**	*e*PKPdf	**PKPbc**	**07 20 47.1**	**-1.0**

DJA 05 07:09:15.9±0.7, 10°S±5°×12°0E±°, h10^{km}, M3.6/6, MLv3.6/6, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.26**	**27**	P	Pg	07 09 21.9	+0.8
WSI	**Waingapu**	**0.79**	**348**	P	Pg	07 09 31.0	-0.2
WSI				S	Sb	07 09 42.4	-0.2
WBSI	**Waikabubak, Su**	**1.32**	**307**	P	Pn	07 09 39.4	-1.1
WBSI				S	Sn	07 09 58.2	-0.1
EDFI	**Ende, Flores**	**2.08**	**36**	P	Pn	07 09 49.9	-1.1
PLAI	**Plampang**	**3.10**	**301**	P	Pn	07 10 04.3	-0.6
PLAI				S	Sn	07 10 40.3	-1.7
BATI	**Baumata**	**3.16**	**86**	P	Pn	07 10 06.6	+0.8
BSSI	**Bau Bau, Buton**	**4.28**	**0**	P	Pn	07 10 21.4	+0.2

NNC 05 07:16:22.7±10.0, 36°.93N×70°.45E, h0^{km}, mb4.2, mpv3.8, 4C-2D, Error ellipse: s-maj=78.1km s-min=67.6km az=167.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.77**	**25**	P	Pn	07 17 50.7	+0.8
	SNR=5.8						
UCH	**Uchtor**	**6.15**	**29**	P	Pn	07 17 55.0	-0.3
	SNR=22						
KK31	**Karatay Array**	**6.17**	**0**	⇑Pn	Pn	07 17 56.8	+1.7
	2.2nm,0.4s,baz=178,slow=13,SNR=65						
KK31				⇑Sn	Sn	07 19 08.4	+2.1
	4.0nm,0.4s,baz=187,slow=23,SNR=8.2						
EKS2	**Erkin-Say**	**6.27**	**23**	P	Pn	07 17 57.8	+1.2
	SNR=10						
AAK	**Ala-Archa**	**6.50**	**27**	⇓Pn	Pn	07 17 59.7	0.0
	3.4nm,0.5s						
AAK				⇓Sn	Sn	07 19 15.3	+0.7
	6.3nm,0.5s						
KBK	**Karagaybulak**	**6.69**	**30**	P	Pn	07 18 02.5	+0.2
	SNR=5.0						
TKM2	**Tokmak 2**	**7.17**	**32**	⇑Pn	Pn	07 18 07.9	-1.1
	5.1nm,0.5s						
TKM2				⇑Sn	Sn	07 19 31.1	-0.3
	3.0nm,0.9s						
TKM2	**Tokmak 2**	**7.17**	**32**	P	Pn	07 18 08.1	-0.9
	SNR=16						

IDC 05 07:17:42.7±1.5, 14°.64S×177°.16W, h0^{km}, mb4.0/4, mb1 4.3/4, mb1mx3.8/28, mbtmp4.0/4, Error ellipse: s-maj=45.9km s-min=34.2km az=127.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.48**	**256**	P	P	07 26 12.1	0.0
	0.5nm,0.5s,baz=79,slow=9.1,SNR=6.2						
ASAR	**Alice Springs**	**46.90**	**251**	P	P	07 26 15.5	+0.1
	4.0nm,0.4s,baz=84,slow=8.4,SNR=98						
VNDA	**Vanda**	**63.78**	**185**	P	P	07 28 15.5	-0.7
	1.1nm,0.9s,baz=22,slow=4.4,SNR=7.3						
ILAR	**Eielson Array**	**82.45**	**13**	P	P	07 30 07.0	+0.4
	0.7nm,0.9s,baz=226,slow=6.2,SNR=6.6						

*NEIC **05** 07:28:33.4±0.0, 44°.65S×168°.01E, h5^{km}, ML4.0(WEL), After WEL.*

WEL 05 07:28:33.1, 45°S±2°×16°8E±°, h5^{km}±1^{km}, M4.0/23, ML4.1/18, MLv4.0/23, Error ellipse: s-maj=0.0km s-min=0.0km az=101.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.09**	**229**	P	Pg	07 28 36.4	+1.4
MSZ				S	Sg	07 28 39.0	+2.8
WKZ	**Wanaka**	**0.74**	**107**	*e*Pg	Pb	07 28 48.8	+0.3
WKZ				*e*Sg	Sn	07 29 01.3	-0.7
WKZ	**Wanaka**	**0.74**	**107**	P	Pb	07 28 49.0	+0.5
WKZ				S	Sb	07 29 00.5	+1.5
MLZ	**Mavora Lakes**	**0.75**	**175**	*e*Pg	Pb	07 28 48.8	+0.1
MLZ	**Mavora Lakes**	**0.75**	**175**	P	Pb	07 28 48.9	+0.2
MLZ				S	Sn	07 29 01.7	-0.5
JCZ	**Jackson Bay**	**0.78**	**46**	P	Pg	07 28 47.3	-0.6
EAZ	**Earnscleugh**	**1.10**	**124**	P	Pn	07 28 55.4	+0.2
EAZ				S	Sn	07 29 10.8	0.0
WHZ	**Wether Hill Ro**	**1.28**	**182**	*e*Pg	Pg	07 28 57.0	-0.6
WHZ	**Wether Hill Ro**	**1.28**	**182**	P	Pg	07 28 57.1	-0.5
LBZ	**Lake Benmore**	**1.57**	**82**	*e*Pn	Pb	07 29 02.5	-0.1
LBZ				*e*Sn	Sg	07 29 24.0	+0.5
LBZ	**Lake Benmore**	**1.57**	**82**	P	Pb	07 29 02.7	+0.1
LBZ				S	Sg	07 29 23.9	+0.5
FOZ	**Fox Glacier**	**1.69**	**51**	*e*Pn	Pb	07 29 04.5	-0.1
FOZ				*e*Sn	Sb	07 29 26.7	+0.5
FOZ	**Fox Glacier**	**1.69**	**51**	P	Pb	07 29 04.2	-0.4
TUZ	**Tuapeka**	**1.76**	**140**	P	Pg	07 29 06.3	-0.5
PYZ	**Puysegur Point**	**1.81**	**211**	*e*Pn	Pn	07 29 04.3	-0.6
PYZ	**Puysegur Point**	**1.81**	**211**	P	Pn	07 29 04.5	-0.5
ODZ	**Otahua Downs**	**1.92**	**104**	*e*Pn	Pn	07 29 06.9	+0.5
ODZ	**Otahua Downs**	**1.92**	**104**	P	Pn	07 29 07.3	+0.9
SYZ	**Scrubby Hill**	**2.08**	**158**	P	Pb	07 29 10.1	-1.1
APZ	**The Paps**	**2.21**	**180**	P	Pn	07 29 12.0	+1.5
HHSZ	**Highcliff Hill**	**2.22**	**126**	P	Pb	07 29 12.7	-1.0
RPZ	**Rata Peaks**	**2.37**	**69**	*e*Pn	Pn	07 29 12.7	+0.1
RPZ	**Rata Peaks**	**2.37**	**69**	P	Pn	07 29 12.4	-0.1
WVZ	**Waitaha Valley**	**2.50**	**53**	P	Pn	07 29 14.7	+0.4
INZ	**Inchbonnie**	**3.12**	**54**	P	Pn	07 29 21.6	-1.3
OXZ	**Oxford**	**3.18**	**67**	*e*Pn	Pn	07 29 22.9	-0.8
OXZ	**Oxford**	**3.18**	**67**	P	Pn	07 29 23.2	-0.5
MQZ	**McQueen’s Vall**	**3.46**	**76**	*e*Pn	Pn	07 29 26.9	-0.6
MQZ	**McQueen’s Vall**	**3.46**	**76**	P	Pn	07 29 26.5	-1.0
CRLZ	**Canterbury Las**	**3.48**	**74**	*e*Pn	Pn	07 29 27.6	-0.1
LTZ	**Lake Taylor**	**3.59**	**61**	*e*Pn	Pn	07 29 29.2	-0.2
LTZ	**Lake Taylor**	**3.59**	**61**	P	Pn	07 29 29.2	-0.2
AKCZ	**Akaroa Harbour**	**3.59**	**80**	P	Pn	07 29 28.9	-0.6
AMCZ	**Amberley**	**3.65**	**68**	P	Pn	07 29 29.7	-0.4
OKCZ	**Okains Bay**	**3.74**	**78**	P	Pn	07 29 31.5	+0.1
DSZ	**Denniston Nort**	**3.99**	**45**	P	Pn	07 29 32.5	-2.4
GVZ	**Greta Valley S**	**3.99**	**67**	P	Pn	07 29 33.6	-1.2
THZ	**Tophouse**	**4.57**	**53**	*e*Pn	Pn	07 29 42.7	-0.2
THZ	**Tophouse**	**4.57**	**53**	P	Pn	07 29 42.8	-0.2
KHZ	**Kahutara**	**4.58**	**63**	*e*Pn	Pn	07 29 42.7	-0.2
QRZ	**Quartz Range**	**5.04**	**43**	P	Pn	07 29 47.1	-2.1
NNZ	**Nelson**	**5.20**	**51**	P	Pn	07 29 51.4	-0.1
TUWZ	**Tuamarina**	**5.39**	**56**	P	Pn	07 29 54.6	+0.6
DUWZ	**D’Urville Isla**	**5.78**	**51**	P	Pn	07 30 00.5	+0.9
KHEZ	**Kahui Hut**	**6.95**	**42**	P	Pn	07 30 14.7	-0.9
PKE	**Pukeiti**	**7.01**	**41**	P	Pn	07 30 15.3	-1.1
WAZ	**Wanganui**	**7.10**	**49**	P	Pn	07 30 20.1	+2.6
VRZ	**Vera Road**	**7.44**	**45**	P	Pn	07 30 22.4	+0.1
FWVZ	**Far West T-bar**	**7.76**	**49**	P	Pn	07 30 28.2	+1.4
NGZ	**Ngauruhoe**	**7.84**	**49**	P	Pn	07 30 30.1	+2.1
HIZ	**Hauiti**	**7.96**	**42**	*e*Pn	Pn	07 30 30.4	+1.0
HIZ	**Hauiti**	**7.96**	**42**	P	Pn	07 30 29.1	-0.4
RATZ	**Rangitukua**	**8.16**	**48**	P	Pn	07 30 34.0	+1.9
WCZ	**Waipu Caves**	**9.92**	**31**	P	Pn	07 30 54.4	-1.9
OUZ	**Omahuta**	**10.31**	**26**	*e*Pn	Pn	07 30 59.5	-2.1
OUZ	**Omahuta**	**10.31**	**26**	P	Pn	07 30 59.0	-2.6

NNC 05 07:33:35.4±1.4, 54°.14N×86°.42E, h0^{km}, mb3.8, mpv3.0, 7C-7D, Error ellipse: s-maj=12.3km s-min=6.0km az=11.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.96**	**259**	⇑P	Pg	07 33 53.5	-0.4
	0.3nm,0.4s						
ZAA0				⇓S	Sb	07 34 07.4	-0.8
	3.0nm,0.9s						
KURK	**Kurchatov**	**5.88**	**237**	⇑Pn	Pn	07 35 05.2	+1.6
	2.1nm,0.7s						
KURK				⇑Sn	Sn	07 36 12.9	+1.3
	2.3nm,0.8s						
KURK				⇓Lg	Lg	07 36 40.1	
	5.7nm,0.8s						
KURBB	**Kurchatov Arra**	**5.98**	**237**	⇑Pn	Pn	07 35 06.5	+1.5
	7.7nm,1.1s						
KURBB				⇓Sn	Sn	07 36 15.1	+0.9
	3.8nm,0.6s						
KURBB				⇑Lg	Lg	07 36 45.4	
	10nm,0.8s						
MK31	**Makanchi Array**	**7.81**	**201**	⇑Pn	Pn	07 35 31.0	+0.8
	1.5nm,0.7s,baz=30,slow=12,SNR=9.9						
MK31				⇓Sn	Sn	07 36 59.6	+0.3
	1.2nm,0.8s,baz=31,slow=29,SNR=4.2						
MK31				⇑Lg	Lg	07 37 40.0	
	7.1nm,1.3s,baz=24,slow=29,SNR=5.4						
MAKZ	**Makanchi**	**7.87**	**203**	⇓Pn	Pn	07 35 32.8	+1.8
	1.6nm,1.0s						
MAKZ				⇓Sn	Sn	07 37 01.1	+0.5
	3.3nm,1.2s						
MAKZ				⇓Lg	Lg	07 37 43.5	
	5.5nm,1.1s						

*GCG **05** 07:35:26.2±0.4, 14°.96N×92°.88W, h9^{km}, MD4.2*
*ISCJB **05** 07:35:27.5±0.7, 14°.90N±0°.06×92°.87W±0°.06, h58^{km}±10^{km}, mb4.4/1, Error ellipse: s-maj=13.3km s-min=5.0km az=39.7*
*NEIC **05** 07:35:27.6±0.0, 14°.77N×92°.91W, h56^{km}, mb4.1/2, MD3.9(MEX), After MEX.*
*MEX **05** 07:35:27.7±0.6, 14°.79N×92°.90W, h58^{km}±12^{km}, MD4.0*
*SNET **05** 07:35:30.0±1.0, 14°.93N×92°.70W, h35^{km}±999^{km}, ML3.7*
ISC 05 07:35:27.5±1.2, 14°.92N±0°.07×92°.89W±0°.06, h56^{km}±11^{km}, n27, σ1^{s}76/38, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.61	91	*e*Pn	Pn	07 35 39.9	-0.5
THIG				*e*Sn	Sn	07 35 48.7	-1.1
THIG		0.61	91	*e*P	Pn	07 35 39.9	-0.5
THIG				*e*S	Sn	07 35 48.6	-1.1
PCIG		0.84	338	*e*Pn	Pn	07 35 43.9	+0.5
PCIG				*e*Sn	Sn	07 35 55.9	+0.9
PCIG		0.84	338	*i* P	Pn	07 35 43.9	+0.5
PCIG				*e*S	Sn	07 35 55.9	+0.9
STG3	Santiaguito 3,	1.29	99	*e*P	Pn	07 35 49.8	+0.2
CCIG	Comitan	1.54	28	*e*Pn	Pn	07 35 54.5	+1.7
CCIG				*e*Pn	Pn	07 35 55.2	+2.3
CCIG				*e*Sn	Sn	07 36 11.8	-0.1
CCIG	Comitan	1.54	28	*e*P	Pn	07 35 53.4	+0.6
CCIG				*i* S	Sn	07 36 12.5	+0.6
TGIG		1.86	353	*e*Pn	Pn	07 35 57.7	+0.5
TGIG				*e*Sn	Sn	07 36 21.2	+1.6
TGIG		1.86	353	*e*P	Pn	07 35 57.9	+0.7
TGIG				*e*S	Sn	07 36 21.2	+1.6
FUG	Fuego 3	2.04	103	*e*P	Pn	07 36 00.6	+1.0
PCG	Pacaya	2.27	103	*e*P	Pn	07 36 04.6	+1.6
PCG				*e*S	Sn	07 36 33.0	+3.1
CMIG	Matias Romero	2.89	319	*e*Pn	Pn	07 36 11.6	+0.5
CMIG	Matias Romero	2.89	319	*e*P	Pn	07 36 11.6	+0.5
MRL	Marmol	3.10	87	*e*P	Pn	07 36 14.7	+0.4
HUIG	Huatulco	3.22	286	*e*Pn	Pn	07 36 14.5	-1.1
HUIG	Huatulco	3.22	286	*e*P	Pn	07 36 14.5	-1.1
RTR	El Retiro	3.31	107	*e*P	Pn	07 36 17.4	+0.4
SBLS	San Blas	3.34	108	*e*P	Pn	07 36 18.4	+0.8
CEVE	Cerro Verde	3.35	108	*e*P	Pn	07 36 19.1	+1.4
CEVE				*e*S	Sn	07 36 56.0	-0.3
CEVE				IAML		07 37 08.3	
	comp=Z,237nm,0.4s						
CSGN	Cosiguina Volc	5.53	110	*e*Pn	Pn	07 36 49.4	+2.0
CSGN				*e*Sn	Sn	07 37 48.9	-0.8
LVIG	Laguna Verde	5.84	325	*e*Pn	Pn	07 36 56.1	+4.4
TLIG	Tlapa	6.05	297	*e*Pn	Pn	07 36 59.0	+4.4
COPN	Copaltepe	6.70	113	*e*P	Pn	07 37 04.0	+0.6
TEIG	Tepich	6.87	39	*e*Pn	Pn	07 37 04.3	-1.4
JTS	Las Juntas de	9.01	120	*e*Pn	Pn	07 37 39.0	+3.9
Z41A	Richland Creek	18.26	0	*e*P	P	07 39 33.3	-3.2
	comp=Z,17nm,1.2s						
P17A	Butcher Ranch,	29.05	331	*e*P	P	07 41 21.9	-0.8
	comp=Z,9.7nm,1.2s						

GUC 05 07:53:57.9±0.6, 37°.32S×74°.75W, h27^{km}±4^{km}, ML4.1, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	San Pedro de C	1.40	71	*e*P	Pn	07 54 21.4	-0.2
CCSP				*e*S	Sn	07 54 39.2	+0.1
CCSP				IAML		07 54 49.9	
	comp=E,4μm,0.3s						
CCHI	Chillan	2.26	72	*e*P	Pn	07 54 34.2	+0.8
CCHI				*e*S	Sn	07 55 01.6	+1.2
CCHI				IAML		07 55 17.4	
	comp=E,1μm,0.5s						

*IDC **05** 07:58:18.9±6.8, 37°.98S×73°.71W, h33^{km}±48^{km}, mb3.3/3, mb1 3.8/5, mb1mx3.5/20, mbtmp3.6/5, ML3.6/2, MS3.4/1, Ms1 3.3/1, ms1mx2.8/19, Error ellipse: s-maj=58.4km s-min=24.0km az=78.0*
*GUC **05** 07:58:36.7±0.5, 37°.61S×72°.70W, h49^{km}±418^{km}, ML3.6*
ISC 05 07:58:17.6±1.5, 37°.9S±0°.1×73°.7W±0°.2, h22^{km}, n13, σ1^{s}46/7, mb3.5/4, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	San Pedro de C	1.15	22	*e*P	Pb	07 58 57.5	+19
CCSP				*e*S	Sn	07 59 05.6	+12
GO05	Huala	3.21	26	IAML		08 00 15.7	
	comp=E,252nm,0.3s						
PLCA	Paso Flores	3.70	141	Pn	Pn	07 59 14.1	+0.5
	comp=E,0.7nm,0.3s,baz=332,slow=9.5,SNR=5.1						
PLCA				Lg	Lg	08 00 16.5	
	comp=E,7.5nm,0.3s,baz=64,slow=20,SNR=7.8						
CFA	Coronel Fontan	7.71	37	Pn	Pn	08 00 07.9	-0.7
	comp=E,2.7nm,0.3s,baz=223,slow=12,SNR=21						
LPAZ	La Paz	22.09	14	P	P	08 03 14.6	+2.6
	comp=E,1.9nm,0.7s,baz=194,slow=5.5,SNR=7.2						
SIV	San Ignacio	24.50	30	P	P	08 03 35.6	+0.2
	comp=E,0.6nm,0.6s,baz=199,slow=14,SNR=3.5						
BDFB	Brasilia	31.68	53	LR	LR	08 19 52.9	
	comp=E,60nm,18.6s,baz=141,slow=41						
TXAR	Lajitas Array	72.56	333	P	P	08 09 42.5	-0.5
	comp=E,0.3nm,0.7s,baz=156,slow=8.9,SNR=4.4						
TORD	Torodi Ar. Bea	86.75	71	P	P	08 10 59.7	-0.5
	comp=E,9.7nm,0.5s,baz=220,slow=5.3,SNR=4.0						
H11S2	WAKE ISLAND Hy	124.35	267	T	T	10 33 29.7	
	baz=126,slow=75,SNR=6.4						
H11S1	WAKE ISLAND Hy	124.36	267	T	T	10 33 26.2	
	baz=126,slow=75,SNR=4.7						
H11S3	WAKE ISLAND Hy	124.36	267	T	T	10 33 30.7	
	baz=126,slow=75,SNR=5.2						
BVAR	Borovoye Array	150.97	47	PKPbc	PKPbc	08 18 07.5	-0.5
	comp=E,0.6nm,0.7s,baz=270,slow=1.5,SNR=3.8						

*IDC **05** 08:00:10.4±4.0, 52°.32N×35°.29E, h0^{km}, mb1 3.3/3, mb1mx3.0/35, mbtmp3.2/3, ML2.9/3, Error ellipse: s-maj=51.3km s-min=16.7km az=126.0*
VLA 05 08:00:08.0, 52°.30N×35°.43E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBN	Obninsk	2.90	13	Lg	Lg	08 01 35.0	
	baz=18,slow=3.2,SNR=3.5						
AKASG	Malin Array Be	4.20	250	Pn	Pn	08 01 13.4	+0.3
	1.0nm,0.3s,baz=64,slow=15,SNR=5.6						
AKASG				Sn	Sn	08 02 02.2	-0.6
	1.1nm,0.3s,baz=61,slow=19,SNR=2.5						
AKASG				Lg	Lg	08 02 18.8	
	2.4nm,0.3s,baz=66,slow=30,SNR=4.5						
FINES	FINESS Array B	10.48	335	Pn	Pn	08 02 36.7	-2.7
	0.1nm,0.3s,baz=148,slow=16,SNR=3.3						
I26DE	FREYUNG INFRAS	14.21	265	*i*		09 20 00.0	
	baz=69,slow=316,SNR=3.4						
ARCES	ARCESS Array B	17.91	349	P	Pn	08 04 18.3	+0.2
	0.1nm,0.3s,baz=158,slow=9.7,SNR=6.8						

*KRAR **05** 08:13:43.6±0.2, 53°.97N×91°.05E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
IDC 05 08:13:50.3±3.6, 53°.67N×87°.97E, h0^{km}, mb1 3.4/2, mb1mx3.1/35, mbtmp3.4/2, ML2.7/2, Error ellipse: s-maj=36.6km s-min=18.5km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.89	280	*i*		08 25 36.6	
	baz=95,slow=315,SNR=3.6						
ZALV	Zalesovo Beam	1.89	280	Pn	Pn	08 14 24.1	+0.3
	2.0nm,0.3s,baz=101,slow=14,SNR=17						
ZALV				Lg	Lg	08 14 49.8	
	3.5nm,0.3s,baz=99,slow=24,SNR=10						
KURBB	Kurchatov Arra	6.56	246	Pn	Pn	08 15 28.8	+0.9
	0.1nm,0.3s,baz=61,slow=14,SNR=3.7						
MKAR	Makanchi Array	7.78	210	Pn	Pn	08 15 45.6	+0.9
	0.2nm,0.3s,baz=27,slow=13,SNR=8.2						

WEL 05 08:21:35.9, 41°S±9°×17°3E±°, h5^{km}, M3.5/30, ML3.7/24, MLv3.5/30, Error ellipse: s-maj=0.0km s-min=0.0km az=179.3, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	Quartz Range	0.32	180	P	Pg	08 21 42.9	+0.9
QRZ				S	Sg	08 21 46.6	+0.4
NNZ	Nelson	0.96	138	P	Pg	08 21 53.8	-0.4
NNZ				S	Sg	08 22 06.2	-0.5
DUWZ	D'Urville Isla	1.10	106	P	Pg	08 21 56.4	-0.6
DUWZ				S	Sg	08 22 11.4	+0.1
THZ	Tophouse	1.28	167	P	Pg	08 21 59.6	-1.0
THZ				S	Sg	08 22 17.2	+0.1
DSZ	Denniston Nort	1.35	204	P	Pn	08 22 01.2	-0.3
DSZ				S	Sb	08 22 19.3	0.0
TUWZ	Tuamarina	1.41	131	P	Pn	08 22 01.8	-0.4
TCW	Tory Channel	1.50	118	P	Pn	08 22 03.0	-0.5
TCW				S	Sn	08 22 23.1	-0.2
NMEZ	Namu Road	1.51	44	P	Pn	08 22 03.6	+0.1
BSWZ	Blackbirch Sta	1.58	140	P	Pb	08 22 05.3	-0.2
NBEZ	Newall Road No	1.61	40	P	Pn	08 22 05.1	+0.1
KHEZ	Kahui Hut	1.67	44	P	Pn	08 22 06.0	+0.2
PREZ	Palmer Road	1.71	48	P	Pn	08 22 06.8	+0.4
PKE	Pukeiti	1.73	41	P	Pn	08 22 06.9	+0.2
CMWZ	Cape Campbell	1.78	135	P	Pb	08 22 08.8	-0.2
LREZ	Lake Rotokare	1.78	55	P	Pb	08 22 08.7	-0.3
DREZ	Durham Road	1.84	45	P	Pn	08 22 08.4	+0.3
BHW	Baring Head	1.99	118	P	Pb	08 22 11.4	-1.2
CAW	Cannon Point	2.02	108	P	Pb	08 22 12.0	-1.0
WAZ	Wanganui	2.03	69	P	Pn	08 22 11.3	+0.6
OGWZ	Otaki Gorge	2.03	100	P	Pn	08 22 12.0	+1.2
KHZ	Kahutara	2.05	159	P	Pb	08 22 12.9	-0.7
OHWZ	Ohakea	2.15	83	P	Pn	08 22 13.4	+1.0
VRZ	Vera Road	2.21	52	P	Pn	08 22 13.6	+0.4
MSWZ	Moikau Station	2.25	115	P	Pb	08 22 16.1	-1.0
LTZ	Lake Taylor	2.28	185	P	Pn	08 22 14.5	+0.3
PLWZ	Palliser	2.32	118	P	Pn	08 22 16.2	+1.5
MRZ	Mangatainoka R	2.33	95	P	Pn	08 22 16.2	+1.3
MTW	Mount Morrison	2.35	107	P	Pn	08 22 16.4	+1.3
INZ	Inchbonnie	2.36	200	P	Pn	08 22 15.9	+0.6
POWZ	Post Office Ro	2.47	88	P	Pn	08 22 18.2	+1.3
GVZ	Greta Valley S	2.48	171	P	Pn	08 22 18.3	+1.3
MTVZ	Mangateitei	2.52	65	P	Pn	08 22 17.9	+0.3
FWVZ	Far West T-bar	2.64	63	P	Pn	08 22 20.2	+0.9
WHVZ	Whangaehu Hut	2.65	63	P	Pn	08 22 20.1	+0.5
TWVZ	Taurewa	2.66	58	P	Pn	08 22 19.6	+0.1
HIZ	Hauiti	2.69	43	P	Pn	08 22 19.6	-0.2
MOVZ	Moawhango	2.71	67	P	Pn	08 22 20.8	+0.6
NGZ	Ngauruhoe	2.71	62	P	Pn	08 22 20.8	+0.5
WTVZ	West Tongariro	2.74	60	P	Pn	08 22 21.1	+0.5
DVHZ	Dannevirke	2.79	87	P	Pb	08 22 24.0	-2.2
PNHZ	Pukenui	2.87	79	P	Pn	08 22 22.8	+0.4
KATZ	Kakaramea	2.88	59	P	Pn	08 22 22.6	+0.1
BHHZ	Black Hill Sta	2.90	71	P	Pn	08 22 24.3	+1.5
RATZ	Rangitukua	2.99	58	P	Pn	08 22 24.8	+0.8
TLZ	Tolley Road	3.19	48	P	Pn	08 22 26.6	-0.2
BKZ	Black Stump Fm	3.33	68	P	Pn	08 22 29.6	+0.9
TOZ	Tahuroa Road	3.61	41	P	Pn	08 22 32.5	0.0
AWAZ	Awhitu Peninsu	3.82	26	P	Pn	08 22 35.9	+0.6
KBAZ	Karaka Road Bo	3.88	29	P	Pn	08 22 36.5	+0.4
WTAZ	Waiatarua	3.91	25	P	Pn	08 22 37.1	+0.4
MKAZ	Moumakai	3.97	32	P	Pn	08 22 37.9	+0.5
ETAZ	East Tamaki Re	4.02	29	P	Pn	08 22 38.3	+0.3
MBAZ	Motutapu North	4.17	27	P	Pn	08 22 40.5	+0.3
WIAZ	Waiheke Island	4.23	30	P	Pn	08 22 41.8	+0.7
ABAZ	Army Bay	4.30	26	P	Pn	08 22 42.2	+0.3
KUZ	Kuaotunu	4.51	35	P	Pn	08 22 44.5	-0.4
ODZ	Otahua Downs	4.74	196	P	Pn	08 22 47.0	-1.0
OUZ	Omahuta	5.35	9	P	Pn	08 22 57.0	+0.6

*IDC **05** 08:51:05.8±2.8, 8°.02S×74°.10W, h124^{km}±30^{km}, mb3.4/5, mb1 3.8/10, mb1mx3.6/35, mbtmp4.0/10, Error ellipse: s-maj=39.5km s-min=12.8km az=43.0*
*ISCJB **05** 08:51:07.2±0.5, 8°.21S±0°.05×74°.26W±0°.06, h147^{km}, mb3.7/6, Error ellipse: s-maj=8.8km s-min=6.5km az=153.3*
ISC 05 08:51:07.5±0.6, 8°.27S±0°.06×74°.26W±0°.08, h147^{km}, n24, σ1^{s}21/25, mb3.6/6, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	4.25	285	P	Pn	08 52 12.2	+0.9
	44nm,0.3s,baz=62,slow=4.2,SNR=319						
ATAH				S	Sn	08 53 00.1	-0.8
	31nm,0.3s,baz=338,slow=19,SNR=15						
NNA	Nana	4.49	214	P	Pn	08 52 15.4	+1.3
	24nm,0.3s,baz=113,slow=7.8,SNR=49						
NNA				S	Sn	08 53 02.8	-3.2
	114nm,0.3s,baz=196,slow=13,SNR=12						
PTLC	Puerto Leguiza	8.40	356	*e*P	Pn	08 53 00.8	-5.5
FLOC	Florencia	9.88	352	*e*P	Pn	08 53 25.8	-0.3
LPAZ	La Paz	9.97	144	P	Pn	08 53 27.6	-0.1
	0.5nm,0.3s,baz=340,slow=11,SNR=20						
CRUC	La Cruz	10.13	345	*e*P	Pn	08 53 29.8	+0.1
MACC	Macarena, Meta	10.35	2	*e*P	Pn	08 53 31.5	-0.8
BBAC	Balboa, Cauca	10.64	344	*e*P	Pn	08 53 37.3	+1.0
PCON	Cinco Dias	10.74	348	*e*P	Pn	08 53 38.1	+0.2
PRAC	Prado	11.92	357	*e*P	Pn	08 53 54.7	+1.8
ORTC	Ortega, Tolima	12.13	355	*e*P	Pn	08 53 55.6	-0.1
CHIC	Chingaza	12.82	2	*e*P	Pn	08 54 03.9	-1.0
GUY2C	Guyana, Caldas	13.45	355	*e*P	P	08 54 16.4	-0.8
SIV	San Ignacio	15.00	122	P	P	08 54 33.4	-0.6
	1.0nm,0.3s,baz=310,slow=11,SNR=37						
LVC	Limon Verde	15.16	161	P	P	08 54 38.0	+1.9
	1.3nm,0.3s,baz=358,slow=8.2,SNR=8.7						
PTGA	Pitinga	16.09	63	P	P	08 54 46.9	+0.8
	1.7nm,0.3s,baz=309,slow=22,SNR=12						
ARGC	Ariguani, Magd	18.00	0	*e*P	Pn	08 55 08.3	-0.3
CFA	Coronel Fontan	23.89	167	P	P	08 56 09.7	+2.0
	1.7nm,0.5s,baz=346,slow=12,SNR=5.4						
TXAR	Lajitas Array	46.90	324	P	P	08 59 24.2	+0.8
	0.7nm,0.5s,baz=149,slow=7.9,SNR=14						
PDAR	Pinedale Array	60.12	331	P	P	09 00 59.6	-0.1
	0.6nm,0.6s,baz=132,slow=6.2,SNR=6.0						
YKA	Yellowknife Ar	77.07	342	P	P	09 02 43.2	-0.9
	0.5nm,0.4s,baz=142,slow=5.9,SNR=4.2						
TORD	Torodi Ar. Bea	78.36	75	P	P	09 02 51.2	-1.1
	10nm,0.6s,baz=252,slow=4.6,SNR=4.2						
ILAR	Eielson Array	90.14	336	P	P	09 03 51.2	+0.6
	0.3nm,0.8s,baz=69,slow=4.9,SNR=3.5						
WRA	Warramunga Arr	140.27	225	PKP	PKiKP	09 10 21.8	-0.6
	0.6nm,0.6s,baz=130,slow=1.3,SNR=3.5						

*NNC **05** 08:53:29.0±3.1, 54°.24N×87°.51E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=25.4km s-min=14.2km az=22.0, Suspected Mining explosion.*
*IDC **05** 08:53:32.4±2.9, 54°.15N×87°.31E, h0^{km}, mb1 3.3/3, mb1mx3.1/42, mbtmp3.3/3, ML2.8/3, Error ellipse: s-maj=28.0km s-min=17.4km az=60.0*
ISC 05 08:53:28.6±4.2, 54°.3N±0°.2×87°.6E±0°.2, h0^{km}, n10, σ1^{s}43/14, 12C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.67	258	*i*		09 02 40.0	
	baz=78,slow=300,SNR=3.4						
ZAA0	Zalesovo Array	1.67	258	⇑P	Pn	08 53 57.9	-1.2
	1.0nm,0.3s						
ZAA0				⇑S	Sn	08 54 20.0	-1.1
	3.4nm,0.8s						
ZALV	Zalesovo Beam	1.67	258	Pg	Pn	08 53 57.8	-1.3
	7.5nm,0.3s,baz=84,slow=17,SNR=38						
ZALV				Lg	Lg	08 54 19.5	
	6.8nm,0.3s,baz=79,slow=27,SNR=12						
KURK	Kurchatov	6.55	240	⇓Pn	Pn	08 55 06.7	+0.5
	2.7nm,0.8s						
KURK				⇑Sn	Sn	08 56 23.9	+2.4
	2.4nm,1.0s						
KURK				⇑Lg	Lg	08 56 52.3	
	6.6nm,0.8s						
KURBB	Kurchatov Arra	6.66	240	Pn	Pn	08 55 08.6	+1.0
	0.1nm,0.3s,baz=56,slow=14,SNR=15						
KURBB	Kurchatov Arra	6.66	240	⇓Pn	Pn	08 55 07.8	+0.3
	3.2nm,0.6s						
KURBB				⇑Sn	Sn	08 56 23.0	-1.1
	3.9nm,0.7s						
KURBB				⇑Lg	Lg	08 56 54.8	
	17nm,0.9s						
MK31	Makanchi Array	8.26	206	⇑Pn	Pn	08 55 30.6	+1.0
	2.2nm,1.1s,baz=25,slow=14,SNR=5.4						
MK31				⇑Sn	Sn	08 57 02.5	-1.0
	2.6nm,1.1s,baz=25,slow=26						
MK31				⇑Lg	Lg	08 57 45.8	
	6.6nm,1.1s,baz=28,slow=28,SNR=4.6						
MKAR	Makanchi Array	8.26	206	Pn	Pn	08 55 31.3	+1.7
	0.1nm,0.3s,baz=28,slow=15,SNR=4.3						
MKAR				Lg	Lg	08 57 47.4	
	0.1nm,0.3s,baz=19,slow=18,SNR=3.9						
MAKZ	Makanchi	8.33	208	⇑Pn	Pn	08 55 29.7	-0.9
	2.7nm,0.6s						
MAKZ				⇑Sn	Sn	08 57 04.3	-0.9
	0.8nm,0.5s						
MAKZ				⇑Lg	Lg	08 57 52.3	
	1.7nm,0.7s						
BVAR	Borovoye Array	10.28	270	Pn	Pn	08 55 59.2	+1.9
	0.2nm,0.3s,baz=72,slow=16,SNR=4.0						

*DDA **05** 09:02:25.5, 38°.85N×26°.22E, h5^{km}±2^{km}, ML2.9*
*ISK **05** 09:02:26.4, 38°.89N×26°.32E, h8^{km}, ML2.8/10*
*ISCJB **05** 09:02:27.4±0.4, 38°.88N±0°.02×26°.34E±0°.04, h6^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=3.3km az=167.9*
*ATH **05** 09:02:27.3, 38°.85N×26°.29E, h23^{km}±5^{km}, ML2.1/4, Error ellipse: s-maj=5.8km s-min=0.6km az=314.0*
ISC 05 09:02:26.9±1.1, 38°.86N±0°.02×26°.29E±0°.04, h13^{km}±10^{km}, n24, σ0^{s}55/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBN	Karaburun	0.34	143	PG	Pg	09 02 33.9	+0.1
KRBN				SG	Sg	09 02 39.1	+0.8
FOCM	Foa	0.38	114	PG	Pg	09 02 34.2	-0.2
FOCM				SG	Sg	09 02 39.2	-0.2
PRK	Paraskevi	0.38	358	P	Pb	09 02 36.1	+0.6
PRK				S	Sb	09 02 41.9	+0.5
PRK				AML	AML	09 02 42.7	
	comp=N,1111μm,0.4s						
PRK				AML	AML	09 02 43.5	
	comp=E,617μm,0.3s						
CAND	Candarli	0.41	77	PG	Pg	09 02 34.5	-0.5
SIGR	SIGRI	0.49	316	P	Pb	09 02 37.4	+0.1
SIGR				S	Sb	09 02 44.3	-0.1
SIGR				AML	AML	09 02 44.6	
	comp=E,420μm,0.5s						
SIGR				AML	AML	09 02 49.8	
	comp=N,387μm,0.2s						
CHOS	Chios island	0.51	201	P	Pb	09 02 37.7	-0.1
CHOS				S	Sb	09 02 46.0	+0.8
CHOS				AML	AML	09 02 48.2	
	comp=N,617μm,0.5s						
CHOS				AML	AML	09 02 48.7	
	comp=E,1039μm,0.2s						
DKL	Dikili	0.52	66	PG	Pg	09 02 36.7	-0.4
AYVA	Ayvalik	0.54	35	*i* P	Pb	09 02 38.2	-0.1
AYVA				*i* S	Sg	09 02 44.7	0.0
URLA	Izmir	0.56	155	PG	Pg	09 02 37.7	-0.1
URLA	Izmir	0.56	155	*i* P	Pg	09 02 37.2	-0.6
URLA				IAML_P			
	comp=Z,5μm,0.2s						
ZEDA	zmir-Bergama	0.62	80	*i* P	Pg	09 02 39.2	+0.2
ZEDA				IAML_P			
	comp=Z,1μm,0.1s						
BLCB	Balcova	0.76	129	PG	Pg	09 02 41.6	0.0
BLCB				SG	Sb	09 02 52.5	+0.3
BAYC	CANAKKALE_Bayr	0.90	13	*i* P	Pb	09 02 44.0	-0.4
EZN	Ezine	0.96	2	PG	Pb	09 02 44.8	-0.6
EZN				SG	Sg	09 02 58.1	+0.1
STEP	BALIKESIR_Sava	1.22	65	*i* P	Pg	09 02 50.6	+0.2
STEP				*i* S	Sb	09 03 05.3	-0.3
STEP				IAML_P			
	comp=Z,1μm,0.1s						
SMG	Samos	1.23	159	P	Pg	09 02 50.7	+0.1
SMG				S	Sg	09 03 07.8	+1.2
SMG				AML	AML	09 03 09.8	
	comp=E,577μm,0.3s						
SMG				AML	AML	09 03 11.1	
	comp=N,534μm,0.3s						
GCAM	G?zelcaml?	1.38	147	PN	Pb	09 02 52.4	-0.1
GCAM	G?zelcaml?	1.38	147	*i* P	Pg	09 02 53.2	-0.2
GCAM				IAML_P			
	comp=Z,685nm,0.3s						
BALB	Balikesir	1.46	57	PN	Pn	09 02 53.1	+0.2
MANT	Manisa	1.81	101	*i* P	Pg	09 03 02.6	+0.9
DURS	Dursunbey	1.85	66	*i* P	Pg	09 03 03.4	+1.0
APE	Apeiranthos	1.89	199	PN	Pb	09 03 00.5	-0.8
USAK	Uak-Merkez	2.14	93	*i* P	Pg	09 03 08.0	+0.2
USAK				IAML_P			
	comp=Z,268nm,0.1s						
GDZ	Gediz	2.50	84	*i* S	Pn	09 03 06.2	-1.1

*DJA **05** 09:40:16.5±0.3, 8°S±2°×10°8E±°, h38^{km}±4^{km}, M5.1/26, mb5.1/26, mB5.5/12, MLv5.1/18, Mw(mB)5.0/12*
*BJI **05** 09:40:16.3±0.0, 8°.00S×107°.90E, h65^{km}, mb4.8/25, mB4.9/21, Ms4.4/10, Ms7 4.3/3*
*ISCJB **05** 09:40:17.4±0.4, 7°.72S±0°.04×108°.03E±0°.03, h83^{km}±3^{km}, mb4.7/102, Error ellipse: s-maj=7.0km s-min=3.3km az=26.1*
*NEIC **05** 09:40:18.2±1.6, 7°.68S×108°.04E, h73^{km}±3^{km}, mb4.8/59, Error ellipse: s-maj=10.1km s-min=7.1km az=206.0*
*MOS **05** 09:40:19.5±1.3, 7°.55S×107°.92E, h94^{km}, mb4.9/49, Error ellipse: s-maj=13.9km s-min=6.1km az=126.9*
*KLM **05** 09:40:19.0, 7°.99S×108°.12E, h31^{km}, mb4.8*
*IDC **05** 09:40:19.8±1.3, 7°.69S×108°.10E, h90^{km}±11^{km}, mb4.2/18, mb1 4.4/19, mb1mx4.2/27, mbtmp4.6/19, MS3.4/14, Ms1 3.4/14, ms1mx3.2/28, Error ellipse: s-maj=18.4km s-min=10.8km az=55.0*
ISC 05 09:40:17.7±0.7, 7°.85S±0°.05×107°.98E±0°.03, h70^{km}±5^{km}, n610, σ1^{s}19/619, mb4.8/102, 29C-6D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.34	331	*e*Pn	Pn	09 40 28.5	-0.7
CISI				*e*Sn	Sn	09 40 37.4	-0.3
CISI	Cisompet, Garu	0.34	331	P	Pn	09 40 28.3	-0.9
CISI				S	Sn	09 40 36.8	-0.8
LEM	Lembang	1.08	341	P	Pn	09 40 39.6	+2.2
	2μm,0.3s,baz=55,slow=23,SNR=175						
LEM				LR	LR	09 40 41.1	
	comp=Z,141nm,19.8s,baz=172,slow=22						
LEM	Lembang	1.08	341	P	Pn	09 40 39.7	+2.3
LEM	Lembang	1.08	341	P	Pn	09 40 39.4	+2.0
LEM				S	Sn	09 40 59.4	+7.4
TNG	Tangerang	2.13	322	P	Pn	09 40 53.0	+1.9
TNG				S	Sn	09 41 21.5	+4.9
YOGI	Yogyakarta	2.30	89	P	Pn	09 40 52.8	-0.6
YOGI				S	Sn	09 41 23.2	+2.5
SBJI	Serang	2.52	313	P	Pn	09 40 58.2	+1.9
UGM	Wanagama	2.52	92	*e*Pn	Pn	09 40 56.1	-0.4
UGM				*e*Sn	Sn	09 41 24.1	-2.1
UGM	Wanagama	2.52	92	P	Pn	09 40 56.1	-0.4
UGM				S	Sn	09 41 26.0	-0.2
CGJI	Cibinong	2.58	298	P	Pn	09 40 57.0	-0.2
CGJI				S	Sn	09 41 24.5	-3.0
WOJI	Wonogiri, Jawa	2.92	90	P	Pn	09 41 01.3	-0.5
WOJI				S	Sn	09 41 35.2	-0.6
NGJI	Ngawi	3.49	82	P	Pn	09 41 13.8	+4.2
BLSI	Bandar Lampung	3.67	312	P	Pn	09 41 16.1	+4.0
KASI	Kota Agung	4.16	304	P	Pn	09 41 20.2	+1.4
KASI				S	Sn	09 42 06.0	-0.2
KLI	Kotabumi	4.29	314	P	Pn	09 41 23.7	+3.1
LWLI	Liwa	4.80	306	P	Pn	09 41 35.6	+7.9
MDSI	Maura Dua	5.04	311	P	Pn	09 41 33.0	+2.1
	124nm,0.9s,1μm0.4nm						
TPI	Tanjungpandan	5.07	356	P	Pn	09 41 33.6	+2.3
	79nm,0.5s,0.5nm						
PPBI	Pangkal Pinang	5.94	342	P	Pn	09 41 46.2	+3.0
	101nm,0.8s,10μm0.9nm						
LHSI	Lahat	5.97	312	P	Pn	09 41 50.6	+7.1
KMMI	Kalianget	5.99	83	P	Pn	09 41 43.9	+0.1
	41nm,0.5s,1μm0.3nm						
MNAI	Manna	6.08	305	*e*Pn	Pn	09 41 46.6	+1.6
MNAI				*e*Sn	Sn	09 42 51.2	-2.1
MNAI	Manna	6.08	305	P	Pn	09 41 46.4	+1.4
	245nm,0.6s,1.8nm						
JAGI	Jajag, Banyuwa	6.14	96	*e*Pn	Pn	09 41 47.0	+1.1
JAGI				*e*Sn	Sn	09 42 54.1	-0.7
JAGI	Jajag, Banyuwa	6.14	96	P	Pn	09 41 46.9	+1.0
	174nm,0.7s,4μm1.4nm						
PBKI	Pangkalan Bun	6.30	36	P	Pn	09 41 51.5	+3.5
	413nm,0.8s,5μm1.6nm						

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SRBI  Singaraja         7.17  92  P      Pn     09 42 03.0 +3.1
      104nm,0.6s,1µm0.4nm
DSRI  Dabo              8.07 335  P      Pn     09 42 15.7 +3.4
      250nm,1.2s,6µm
PPSI  Pulau Pagai       9.41 302  P      Pn     09 42 28.9 -1.6
      260nm,0.9s
KSM   Kuching           9.55  14  ePn    Pn     09 42 31.6 -0.9
KSM                               eSn    Sn     09 44 13.3 -5.0
PLAI  Plampang          9.74  96  P      Pn     09 42 38.1 +2.9
      97nm,0.8s
PDSI  Padang           10.18 312  P      Pn     09 42 44.7 +3.6
      26nm,0.4s,3µm
MYKOM Kota Tinggi      10.43 337  ePn    Pn     09 42 43.8 -0.6
MYKOM Kota Tinggi      10.43 337  P      Pn     09 42 49.0 +4.6
SBUM  Sibu             11.07  23  ePn    Pn     09 42 50.2 -3.1
MNSI  Mandailing Nat   12.00 315  P      Pn     09 43 11.6 +5.7
      21nm,0.4s,9µm
KAPI  Kappang          12.04  77  ePn    Pn     09 43 05.6 -0.8
KAPI  Kappang          12.04  77  eP     Pn     09 43 05.6 -0.8
BKSI  Bulukumba        12.32  79  P      P      09 43 22.6 +2.7
TTSI  Tana Toraja      12.72  69  P      P      09 43 28.2 +3.9
EDFI  Ende, Flores     13.60  95  P      Pn     09 43 26.0 -1.7
      37nm,0.7s
GSI   Gunungsitoli     13.80 311  ePn    Pn     09 43 28.3 -1.9
GSI   Gunungsitoli     13.80 311  P      P      09 43 42.5 +6.2
BATI  Baumata          15.67 100  P      Pn     09 43 54.4  0.0
      6.0nm,0.3s,baz=54,slow=0.9,SNR=4.3
BATI  Baumata          15.67 100  P      P      09 44 01.4 +4.2
GIRL  Giralia          15.89 158  ePn    Pn     09 43 52.4 -4.7
      316nm,1.6s
GIRL  Giralia          15.89 158  P      Pn     09 43 52.4 -4.7
      baz=16,SNR=14
KKM   Kota Kinabalu    16.07  31  ePn    Pn     09 43 58.4 -1.1
      50nm,1.3s
KKM   Kota Kinabalu    16.07  31  P      P      09 44 05.0 +3.4
SOEI  Soe              16.21  98  ePn    Pn     09 44 01.3  0.0
      92nm,0.8s
SOEI  Soe              16.21  98  P      P      09 44 05.2 +1.9
      127nm,0.9s,1µm
LUWI  Luwuk            16.22  66  ePn    Pn     09 43 59.8 -1.5
      73nm,1.2s
PSA00 Pilbara Seismi   17.81 141  eP     P      09 44 19.9 -0.9
      26nm,1.3s
SANI  Sanana           18.84  73  P      Pn     09 44 33.4  0.0
      61nm,0.8s
NLAI  Namlea           19.57  78  P      Pn     09 44 43.3 +1.2
      93nm,0.7s,4µm
DLV   T  Lat           19.67   1  eP     P      09 44 41.0 -0.5
      27nm,0.9s
AAI   Ambon            20.53  80  P      Pn     09 44 52.0 -1.4
AAI                               pmax   pmax
      comp=Z,98nm,0.8s
AAI   Ambon            20.53  80  P      Pn     09 44 54.9 +1.5
      comp=Z,98nm,0.8s
LBMI  Labuha           20.73  71  P      P      09 44 54.0 +1.2
      comp=Z,140nm,0.9s,comp=Z,2µm
TNTI  Ternate          21.15  67  eP     P      09 44 56.9 -0.3
      comp=Z,40nm,0.6s
TNTI  Ternate          21.15  67  P      P      09 45 00.3 +3.1
      comp=Z,60nm,0.7s
MEEK  Meekatharra      21.24 153  P      P      09 44 57.7 -0.4
      baz=21,SNR=10
KNRA  Kununurra        21.77 113  P      P      09 45 04.9 +1.1
      baz=22,SNR=12
MORW  Morawa           22.43 161  P      P      09 45 11.0 +0.2
      baz=22,SNR=3.2
MTN   Manton Dam       23.30 104  eP     P      09 45 19.8 -0.1
      comp=Z,25nm,0.8s
MTN   Manton Dam       23.30 104  P      P      09 45 19.6 -0.3
      baz=23,SNR=4.8
SIJI  Sorong           24.22  74  P      P      09 45 27.2 -1.0
      comp=Z,21nm,0.7s,baz=317,slow=3.5,SNR=7.0
CHAI  Chaiyaphum       24.34 346  P      P      09 45 31.6 +2.5
      comp=Z,19µm,0.6s
KDU   Kakadu           24.57 103  P      P      09 45 30.6 -0.7
      baz=24,SNR=9.5
FAKI  Fak Fak          24.65  80  eP     P      09 45 31.3 -0.8
      comp=Z,74nm,1.6s
WRKA  Warakurna        25.85 134  P      P      09 45 41.8 -1.1
      baz=26,SNR=5.4
H01W3 Cape Leeuwin H   27.49 169  T      T      10 15 48.6
      baz=347,slow=76,SNR=27
H01W1 Cape Leeuwin H   27.50 169  T      T      10 15 49.6
      baz=347,slow=76,SNR=11
H01W2 Cape Leeuwin H   27.51 169  T      T      10 15 50.2
      baz=347,slow=76,SNR=13
CM31  Chiang Mai Arr   27.62 341  eP     P      09 45 58.3 -0.4
      comp=Z,10nm,1.1s
CMAR  Chiang Mai Arr   27.62 341  P      P      09 45 59.1 +0.4
      comp=Z,1.0nm,0.4s,baz=181,slow=8.9,SNR=4.8
CMAR                              LR     LR     09 57 33.9
      comp=Z,60nm,18.4s,baz=196,slow=38
WRA   Warramunga Arr   28.22 118  P      P      09 46 03.6 -0.6
      comp=Z,2.5nm,0.5s,baz=292,slow=12,SNR=26
WR1   Warramunga Arr   28.22 118  eP     P      09 46 03.6 -0.6
WRAB  Tennant Creek    28.23 118  eP     P      09 46 05.5 +1.3
      comp=Z,6.9nm,0.8s
WRAB  Tennant Creek    28.23 118  i P    P      09 46 02.2 -2.0
WB2   Warramunga Arr   28.23 118  eP     P      09 46 04.5 +0.2
      comp=Z,27nm,1.5s
WC3   Warramunga Arr   28.25 118  eP     P      09 46 08.7 +4.2
      comp=Z,8.8nm,0.8s
AS31  Alice Springs    29.41 125  eP     P      09 46 15.0 +0.3
      comp=Z,1.2nm,0.6s
ASAR  Alice Springs    29.41 125  P      P      09 46 14.4 -0.3
      comp=Z,3.7nm,1.0s,baz=300,slow=8.2,SNR=18
ASAR                              PcP    PcP    09 49 19.6 +0.2
      comp=Z,1.0nm,0.5s,baz=299,slow=1.9,SNR=6.3
ASAR                              LR     LR     09 58 04.6
      comp=Z,54nm,21.2s,baz=283,slow=36
PALK  Pallekele        31.07 298  eP     P      09 46 26.9 -2.6
      comp=Z,30nm,1.2s
PALK  Pallekele        31.07 298  eP     P      09 46 26.9 -2.6
PALK                              pmax   pmax
      comp=Z,30nm,1.2s
QIS   Mount Isa        33.08 116  P      P      09 46 47.7 +0.6
      baz=33,SNR=3.4
KMI   Kunming          33.17 351  P      P      09 46 50.9 +2.9
KMI                               pmax   pmax
      comp=Z,20nm,0.5s
KMI                               pmax   pmax
      comp=Z,59nm,4.5s
SSLB  Suanglung        33.91  22  eP     P      09 46 52.7 -1.4
      comp=Z,28nm,1.5s
COEN  Coen             35.06 103  eP     P      09 47 03.9 -0.4
      comp=Z,14nm,0.8s
COEN  Coen             35.06 103  P      P      09 47 04.2 -0.1
      baz=35,SNR=6.5
H08S2 Diego Garcia H   35.15 268  T      T      10 24 17.9
      baz=92,slow=75,SNR=217
H08S3 Diego Garcia H   35.16 268  T      T      10 24 17.6
      baz=92,slow=75,SNR=168
H08S1 Diego Carcia H   35.17 268  T      T      10 24 20.0
      baz=92,slow=75,SNR=170
WHN   Wuhan            38.66   9  P      P      09 47 41.3 +6.7
PMG   Port Moresby     38.76  95  eP     P      09 47 36.0 +0.3
      comp=Z,53nm,1.6s
PMG   Port Moresby     38.76  95  eP     P      09 47 36.0 +0.3
PMG                               pmax   pmax
      comp=Z,53nm,1.6s
CTA   Charters Tower   38.98 112  P      P      09 47 38.5 +1.0
CTA                               pmax   pmax
      comp=Z,12nm,1.5s
CTAO  Charters Tower   38.98 112  P      P      09 47 38.5 +1.0
CTAO                              pmax   pmax
      comp=Z,11nm,1.5s
STKA  Stephens Creek   39.35 132  P      P      09 47 40.7 +0.2
      comp=Z,13nm,0.6s,baz=314,slow=7.3,SNR=41
STKA                              PcP    PcP    09 49 47.9 +0.1
      comp=Z,2.5nm,0.6s,baz=225,slow=1.4,SNR=4.0
STKA                              LR     LR     10 06 42.0
      comp=Z,36nm,18.3s,baz=359,slow=40
STKA  Stephens Creek   39.35 132  eP     P      09 47 41.2 +0.8
      comp=Z,4.3nm,1.0s
STKA  Stephens Creek   39.35 132  P      P      09 47 41.0 +0.5
      baz=39,SNR=36
STKA  Stephens Creek   39.35 132  eP     P      09 47 41.2 +0.8
STKA                              pmax   pmax
      comp=Z,4.0nm,1.0s
NJ2   Nanjing          41.02  14  eP     P      09 47 56.4 +2.3
NJ2                               pmax   pmax
      comp=Z,9.0nm,0.5s
XAN   Xi'an            41.67   1  P      P      09 47 58.6 -0.9
XAN                               pmax   pmax
      comp=Z,6.0nm,0.8s
XAN                               pmax   pmax
      comp=Z,77nm,4.5s
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LZH   Lanzhou          43.88 355  eP     P      09 48 19.6 +2.1
LZH                               pP     pP     09 48 36.4 +1.3
LZH                               sP     sP     09 48 45.1 +1.8
LZH                               pmax   pmax
      comp=Z,16nm,1.1s
GTA   Gaotai           47.63 351  eP     P      09 48 53.5 +6.6
GTA                               pmax   pmax
      comp=Z,4.0nm,0.6s
HHC   Hu-ho-hao-te     48.57   4  eP     P      09 48 55.5 +1.3
HHC                               pmax   pmax
      comp=Z,11nm,0.9s
HHC                               pmax   pmax
      comp=Z,15nm,4.3s
HHC                               LR     LR
      comp=Z,83nm,14.5s
HHC                               LR     LR
      comp=Z,77nm,12.8s
KSRS  Korea Array      48.78  21  PcP    PcP    09 50 20.2 +0.6
      comp=Z,1.0nm,0.8s,baz=188,slow=3.8,SNR=4.4
KSRS                              LR     LR     10 11 32.9
      comp=Z,19nm,18.1s,baz=207,slow=39
MJAR  Matsushiro Arr   52.49  31  LR     LR     10 14 06.0
      comp=Z,12nm,19.3s,baz=100,slow=39
NIL   Nilore           52.82 323  eP     P      09 49 25.3 -0.9
      comp=Z,12nm,1.0s
NIL   Nilore           52.82 323  eP     P      09 49 25.3 -0.9
NIL                               pmax   pmax
      comp=Z,12nm,1.0s
WMQ   Urumqi           54.62 342  eP     P      09 49 39.3 +0.1
WMQ                               pmax   pmax
      comp=Z,10.0nm,0.7s
WMQ                               pmax   pmax
      comp=Z,61nm,3.7s
WMQ                               LR     LR
      comp=Z,120nm,29.0s
WMQ                               LR     LR
      comp=Z,170nm,28.9s
SONA0 Songino Array    55.46 359  eP     P      09 49 44.5 -0.8
SONA0                             ePcP   PcP    09 50 44.1 -0.5
SONM  Songino Array    55.46 359  P      P      09 49 44.5 -0.8
      comp=Z,3.2nm,0.5s,baz=175,slow=8.2,SNR=16
SONM                              PcP    PcP    09 50 44.1 -0.5
      comp=Z,5.2nm,0.5s,baz=177,slow=3.9,SNR=13
SONM                              LR     LR     10 14 53.8
      comp=Z,95nm,21.3s,baz=94,slow=38
ULN   Ulaanbaatar      55.48 359  eP     P      09 49 43.9 -1.5
      comp=Z,5.1nm,0.6s
ULN   Ulaanbaatar      55.48 359⇑iP     P      09 49 44.7 -0.7
ULN                               pmax   pmax
      comp=Z,3.0nm,0.5s
KSH   Kashi            55.68 330  P      P      09 49 45.3 -1.7
KSH                               pP     pP     09 50 04.6 -0.6
KSH                               pmax   pmax
      comp=Z,13nm,1.3s
KSH                               pmax   pmax
      comp=Z,36nm,4.0s
KSH                               LR     LR
      comp=Z,66nm,7.0s
KSH                               LR     LR
      comp=Z,67nm,8.3s
KBL   Kabul            55.97 321  eP     P      09 49 47.2 -2.1
      comp=Z,4.4nm,0.6s
KBL   Kabul            55.97 321  eP     P      09 49 47.2 -2.1
KBL                               pmax   pmax
      comp=Z,4.0nm,0.6s
PDGK  Podgornoye       57.14 336  P      P      09 49 55.2 -2.1
PDGK                              pmax   pmax
      comp=Z,6.0nm,0.8s
KDJ   Kajisay          57.16 333  eP     P      09 49 55.4 -2.1
      comp=Z,12nm,0.6s
KDJ   Kajisay          57.16 333  eP     P      09 49 55.4 -2.1
KDJ                               pmax   pmax
      comp=Z,12nm,0.6s
GAR   Garm             58.26 326  eP     P      09 50 03.3 -1.9
      comp=Z,12nm,0.5s
GAR   Garm             58.26 326  eP     P      09 50 03.3 -1.9
GAR                               pmax   pmax
      comp=Z,12nm,0.5s
CASY  Casey            58.36 179  eP     P      09 50 06.3 +1.0
      comp=Z,3.7nm,0.9s
TKM2  Tokmak 2         58.50 333  i P    P      09 50 05.3 -1.6
TKM2                              pmax   pmax
      comp=Z,9.0nm,0.4s
ARSB  Arslanbob        58.53 330  eP     P      09 50 06.2 -0.9
      comp=Z,4.7nm,0.5s
CHGR  Chuyangaron      58.67 325  eP     P      09 50 07.3 -0.8
      comp=Z,20nm,0.4s
BTK   Batken           58.73 327  eP     P      09 50 06.7 -1.8
      comp=Z,9.1nm,0.6s
BTK   Batken           58.73 327  eP     P      09 50 06.7 -1.8
BTK                               pmax   pmax
      comp=Z,9.0nm,0.6s
AAK   Ala-Archa        58.79 332  eP     P      09 50 07.8 -1.2
      comp=Z,2.7nm,0.9s
AAK   Ala-Archa        58.79 332⇑iP     P      09 50 07.2 -1.7
AAK                               pmax   pmax
      comp=Z,2.0nm,1.4s
MK31  Makanchi Array   59.01 340  eP     P      09 50 08.4 -1.8
      comp=Z,5.3nm,0.7s
MK31  Makanchi Array   59.01 340  eP     P      09 50 08.4 -1.8
MK31                              pmax   pmax
      comp=Z,5.0nm,0.7s
MK32  Makanchi Array   59.01 340  eP     P      09 50 08.4 -1.8
MK32                              ePcP   PcP    09 50 58.4 -0.1
MKAR  Makanchi Array   59.01 340  P      P      09 50 08.4 -1.8
      comp=Z,9.1nm,0.5s,baz=152,slow=6.9,SNR=57
MKAR                              PcP    PcP    09 50 58.4 -0.1
      comp=Z,3.0nm,0.6s,baz=130,slow=6.5,SNR=4.4
MKAR  Makanchi Array   59.01 340ceP     P      09 50 08.3 -1.9
MKAR                              pmax   pmax
      comp=Z,9.0nm,0.5s
TLY   Talaya           59.41 357  eP     P      09 50 11.8 -1.0
      comp=Z,3.4nm,0.6s
TLY   Talaya           59.41 357  eP     P      09 50 11.8 -1.0
TLY                               pmax   pmax
      comp=Z,3.0nm,0.6s
UOSS  Minazif          60.03 305  eP     P      09 50 17.9 +0.3
      comp=Z,15nm,0.8s
DGZ   Jazzator, Alta   60.06 345⇑iP     P      09 50 16.9 -0.6
DGZ                               pmax   pmax
      comp=Z,6.0nm,0.8s
KLR   Kul'dur          60.54  18⇑iP     P      09 50 21.0 +0.4
KLR                               pmax   pmax
      comp=Z,3.0nm,1.0s
KK31  Karatay Array    61.08 329  P      P      09 50 22.5 -2.0
KK31                              pmax   pmax
      comp=Z,1.0nm,0.4s
KURK  Kurchatov        63.63 340  eP     P      09 50 40.4 -0.8
      comp=Z,5.8nm,0.8s
KURK  Kurchatov        63.63 340  i P    P      09 50 39.9 -1.3
KURK                              pmax   pmax
      comp=Z,6.0nm,0.8s
OTUK  Ortayu           64.07 334  P      P      09 50 43.5 -0.8
OTUK                              pmax   pmax
      comp=Z,5.0nm,0.7s
ZALV  Zalesovo Beam    64.60 345  P      P      09 50 45.8 -1.7
      comp=Z,2.0nm,0.5s,baz=98,slow=3.0,SNR=6.5
ZALV                              PcP    PcP    09 51 19.8 -1.1
      comp=Z,1.8nm,0.5s,baz=193,slow=2.6,SNR=3.7
ZALV                              LR     LR     10 20 59.9
      comp=Z,38nm,18.3s,baz=72,slow=38
ZALV  Zalesovo Beam    64.60 345  i P    P      09 50 46.5 -1.0
ZALV                              pmax   pmax
      comp=Z,2.0nm,0.5s
ZAA1  Zalesovo Array   64.60 345  eP     P      09 50 45.8 -1.7
ZAA1                              ePcP   PcP    09 51 19.8 -1.1
GEYT  Alibeck          65.04 318  P      P      09 50 50.4 -0.4
      comp=Z,7.5nm,0.6s,baz=153,slow=4.8,SNR=9.4
GEYT                              LR     LR     10 23 17.6
      comp=Z,14nm,18.9s,baz=340,slow=40
GYA0B ALIBECK ARRAY    65.04 318  eP     P      09 50 50.3 -0.5
      comp=Z,9.0nm,0.6s
MAW   Mawson           66.84 197  P      P      09 51 02.7 +1.0
      comp=Z,4.3nm,0.7s,baz=52,slow=7.6,SNR=9.4
MAW                               LR     LR     10 13 12.2
      comp=Z,52nm,21.9s,baz=201,slow=29
MAW   Mawson           66.84 197  eP     P      09 51 03.0 +1.3
      comp=Z,1.6nm,1.0s
MAW   Mawson           66.84 197  P      P      09 51 02.7 +1.0
      baz=67,SNR=5.1
MAW   Mawson           66.84 197  eP     P      09 51 03.0 +1.3
MAW                               pmax   pmax
      comp=Z,2.0nm,1.0s
RAYN  Ar Rayn          68.51 299  eP     P      09 51 12.6 -0.6
      comp=Z,13nm,1.4s
RAYN  Ar Rayn          68.51 299  eP     P      09 51 12.6 -0.6
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RAYN                              pmax   pmax
      comp=Z,13nm,1.4s
BRVK  Borovoye         68.59 337  eP     P      09 51 11.5 -1.6
      comp=Z,7.5nm,0.4s
BRVK  Borovoye         68.59 337⇑iP     P      09 51 12.1 -0.9
BRVK                              pmax   pmax
      comp=Z,3.0nm,0.8s
AB31  Akbulak array    70.64 329  i P    P      09 51 24.5 -1.2
AB31                              pmax   pmax
      comp=Z,11nm,0.5s
ABKAR Akbulak array    70.64 329  eP     P      09 51 24.6 -1.1
      comp=Z,24nm,0.5s
KMBO  Kilima Mbogo     70.75 272  LR     LR     10 18 22.2
      comp=Z,18nm,18.3s,baz=92,slow=32
PETK  Petropavlovsk-   73.87  29  P      P      09 51 43.1 -1.8
      comp=Z,1.6nm,0.7s,baz=263,slow=1.2,SNR=4.4
PEA1  Petropavlovsk-   73.87  29  eP     P      09 51 43.1 -1.8
VNDA  Vanda            74.96 170  P      P      09 51 51.5 +0.7
      comp=Z,1.9nm,0.5s,baz=317,slow=5.9,SNR=29
VNDA  Vanda            74.96 170  eP     P      09 51 52.1 +1.2
      comp=Z,3.4nm,0.8s
VNDA  Vanda            74.96 170  eP     P      09 51 52.1 +1.2
VNDA                              pmax   pmax
      comp=Z,3.0nm,0.8s
SYO   Syowa Base       75.04 200⇑eP     P      09 51 50.7 -0.7
SYO   Syowa Base       75.04 200⇓ePcP   PcP    09 52 04.3 -0.5
ARU   Arti             75.81 334  eP     P      09 51 54.3 -1.7
      comp=Z,5.2nm,0.5s
ARU   Arti             75.81 334⇑iP     P      09 51 55.5 -0.5
ARU                               pmax   pmax
      comp=Z,3.0nm,0.8s
TBLG  Delisi           75.88 316  eP     P      09 51 54.4 -2.4
      comp=Z,12nm,0.9s
TBLG  Delisi           75.88 316  eP     P      09 51 54.4 -2.4
TBLG                              pmax   pmax
      comp=Z,12nm,0.9s
SBA   Scott Base       76.03 169  eP     P      09 51 58.2 +1.2
      comp=Z,4.5nm,1.0s
SBA   Scott Base       76.03 169  eP     P      09 51 58.2 +1.2
SBA                               pmax   pmax
      comp=Z,5.0nm,1.0s
AKH   Akhalkalaki      76.61 316  eP     P      09 52 01.6 +0.5
      comp=Z,10nm,1.2s
AKH   Akhalkalaki      76.61 316  eP     P      09 52 01.6 +0.5
AKH                               pmax   pmax
      comp=Z,10.0nm,1.2s
ZEI   Tsey             76.88 317  eP     P      09 52 01.1 -1.6
ZEI                               pmax   pmax
      comp=Z,6.0nm,0.6s
MBAR  Mbarara          77.28 271  eP     P      09 52 06.7 +1.3
      comp=Z,7.4nm,0.8s
MBAR  Mbarara          77.28 271  eP     P      09 52 06.7 +1.3
MBAR                              pmax   pmax
      comp=Z,7.0nm,0.8s
NEY   Neytrino         77.86 317⇑iP     P      09 52 05.5 -2.6
NEY                               pmax   pmax
      comp=Z,1.0nm,1.0s
KBZ   Khabaz           77.93 318  P      P      09 52 08.2  0.0
      comp=Z,2.8nm,0.6s,baz=148,slow=5.5,SNR=6.6
SHA1  Shidzhatmaz      78.09 318⇑iP     P      09 52 07.3 -2.1
KIV   Kislovodsk       78.16 318  eP     P      09 52 10.1 +0.5
      comp=Z,9.0nm,0.6s
KIV   Kislovodsk       78.16 318  eP     P      09 52 07.4 -2.2
KIV                               pmax   pmax
      comp=Z,31nm,0.9s
KIV                               MLR    MLR
      comp=Z,37nm,18.0s
LSZ   Lusaka           78.17 256  eP     P      09 52 11.7 +1.4
      comp=Z,9.9nm,0.6s
LSZ   Lusaka           78.17 256  eP     P      09 52 11.7 +1.4
LSZ                               pmax   pmax
      comp=Z,10.0nm,0.6s
LBTB  Lobatse          79.85 246  eP     P      09 52 20.4 +1.1
      comp=Z,10nm,0.8s
LBTB  Lobatse          79.85 246  eP     P      09 52 20.5 +1.1
LBTB                              pmax   pmax
      comp=Z,10.0nm,0.8s
BOSA  Boshof           79.92 242  P      P      09 52 20.8 +1.1
      comp=Z,3.5nm,0.4s,baz=102,slow=4.6,SNR=19
BOSA                              LR     LR     10 23 11.2
      comp=Z,28nm,21.1s,baz=61,slow=32
BOSA  Boshof           79.92 242  P      P      09 52 20.6 +0.9
TIXI  Tiksi            80.53   7  eP     P      09 52 21.0 -0.8
      comp=Z,4.7nm,0.8s
TIXI  Tiksi            80.53   7⇑iP     P      09 52 23.7 +1.9
TIXI                              pmax   pmax
      comp=Z,3.0nm,1.0s
QSPA  South Pole Qui   82.14 180  eP     P      09 52 31.6 +0.8
      comp=Z,11nm,1.3s
VORD  Divnogorie       82.96 324  eP     P      09 52 33.3 -1.7
VORD                              pmax   pmax
      comp=Z,10.0nm,0.5s
BR101 Keskin Array S   83.11 312  eP     P      09 52 35.6 -0.7
BR131 Keskin Array S   83.11 312  eP     P      09 52 34.7 -1.6
      comp=Z,4.4nm,0.8s
BR131 Keskin Array S   83.11 312  eP     P      09 52 34.7 -1.6
BR131                             pmax   pmax
      comp=Z,4.0nm,0.8s
BRTR  Keskin Array B   83.11 312  P      P      09 52 35.6 -0.7
      comp=Z,3.7nm,0.7s,baz=138,slow=6.7,SNR=23
BRTR                              LR     LR     10 30 31.8
      comp=Z,13nm,21.6s,baz=90,slow=36
BRTR  Keskin Array B   83.11 312  i P    P      09 52 36.0 -0.3
BRTR                              pmax   pmax
      comp=Z,4.0nm,0.7s
VSR   Storozhevoye     83.12 324  eP     P      09 52 34.9 -1.0
VSR                               pmax   pmax
      comp=Z,30nm,0.6s
LPSR  Galich'ya Gora   83.77 325  eP     P      09 52 38.4 -0.7
LPSR                              pmax   pmax
      comp=Z,10.0nm,0.6s
PRGR  Permogore        84.24 335  eP     P      09 52 39.3 -2.0
PRGR                              pmax   pmax
      comp=Z,13nm,0.8s
OBN   Obninsk          85.96 327⇓iP     P      09 52 49.9 -0.2
OBN                               e             09 56 08.4
OBN                               ePPP   PPP    09 58 04.5
OBN                               eS     SKSac  10 02 58.7  -11
OBN                               pmax   pmax
      comp=Z,15nm,0.8s
BILL  Bilibino         85.98  19⇑eP     P      09 52 52.1 +2.2
BILL                              e             09 56 12.5
BILL                              eS     SKSac  10 03 04.6 -4.7
BILL                              pmax   pmax
      comp=Z,4.0nm,0.3s
YLV   Yalova           86.49 312⇑iP     P      09 52 52.3 -0.8
YLV   Yalova           86.49 312 ⇑P     P      09 52 52.4 -0.7
ADK   Adak             87.20  37  P      P      09 52 56.5 +0.3
ADK                               pmax   pmax
      comp=Z,24nm,1.2s
TSUM  Tsumeb           87.83 251  eP     P      09 53 01.8 +1.7
      comp=Z,8.8nm,0.7s
TLCR                   87.95 316⇑iP     P      09 53 00.5 +0.6
TLCR                   87.95 316 ⇑P     P      09 53 00.5 +0.6
TIRR  Tirgusor         88.06 315  eP     P      09 53 00.5  0.0
      comp=Z,28nm,0.8s
TIRR  Tirgusor         88.06 315⇑iP     P      09 53 00.7 +0.2
TIRR  Tirgusor         88.06 315  eP     P      09 53 00.5  0.0
TIRR                              pmax   pmax
      comp=Z,28nm,0.8s
TLB   Topalu           88.35 315⇑iP     P      09 53 02.0 +0.2
TLB   Topalu           88.35 315 ⇑P     P      09 53 02.1 +0.2
CFR   Carcaliu         88.42 316⇑iP     P      09 53 02.2 +0.1
CFR   Carcaliu         88.42 316  P      P      09 53 01.8 -0.3
CFR                               pmax   pmax
      comp=Z,11nm,0.9s
AKASG Malin Array Be   88.96 321  P      P      09 53 03.6 -1.0
      comp=Z,1.7nm,0.5s,baz=86,slow=4.7,SNR=7.9
AKASG Malin Array Be   88.96 321  i P    P      09 53 04.5 -0.1
AKASG                             pmax   pmax
      comp=Z,2.0nm,0.4s
AKBB  Malin Array Si   88.96 321  eP     P      09 53 01.9 -2.7
      comp=Z,4.3nm,0.6s
AKBB  Malin Array Si   88.96 321  eP     P      09 53 01.9 -2.7
AKBB                              pmax   pmax
      comp=Z,4.0nm,0.6s
SNAA  Sanae            89.00 197  P      P      09 53 05.8 +1.2
SNAA  Sanae            89.00 197  eP     P      09 53 05.8 +1.2
      comp=Z,4.9nm,0.7s
SNAA  Sanae            89.00 197  eP     P      09 53 05.9 +1.3
SNAA                              pmax   pmax
      comp=Z,5.0nm,0.7s
ALN   Alexandroupoli   89.03 311  P      P      09 53 05.0 -0.2
ALN                               pmax   pmax
      comp=Z,5.0nm,0.8s
VRI   Vrincioaia       89.53 316⇑iP     P      09 53 07.6 +0.2
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VRI   Vrincioaia         89.53 316 ⇑P       P       09 53 07.6 +0.2
PLOR  Plostina           89.58 316⇑iP       P       09 53 08.2 +0.5
PLOR  Plostina           89.58 316 ⇑P       P       09 53 08.2 +0.5
MLR   Muntele Rosu       89.99 316  eP      P       09 53 09.3 -0.4
      comp=Z,4.4nm,0.8s
MLR   Muntele Rosu       89.99 316⇑iP       P       09 53 09.4 -0.4
MLR   Muntele Rosu       89.99 316  eP      P       09 53 09.4 -0.4
MLR                                pmax     pmax
      comp=Z,4.0nm,0.8s
VOIR                     90.60 316  P       P       09 53 13.5 +1.0
VOIR                                pmax    pmax
      comp=Z,2.0nm,1.2s
BURAR Bucovina Array     90.89 318⇓iP       P       09 53 14.3 +0.5
BURAR Bucovina Array     90.89 318 ⇓P       P       09 53 14.3 +0.5
BUR08 Bucovina Ar. S     90.90 318  eP      P       09 53 13.8 -0.1
      comp=Z,2.2nm,0.8s
LVZ   Lovozero           91.03 339⇑iP       P       09 53 12.0 -2.0
LVZ                                 pmax    pmax
      comp=Z,5.0nm,0.9s
VNA1  Neumayer--Stat     91.03 197  P       P       09 53 15.0 +1.1
VNA3  Neumayer Olymp     91.16 197  P       P       09 53 15.5 +0.9
VTS   Vitosha            91.41 313⇓iP       P       09 53 16.7 +0.3
VTS   Vitosha            91.41 313 ⇓P       P       09 53 16.7 +0.3
LIT   Litokhoron         91.56 310  eP      P       09 53 16.3 -0.7
      comp=Z,5.5nm,0.6s
LIT   Litokhoron         91.56 310  eP      P       09 53 16.3 -0.7
LIT                                 pmax    pmax
      comp=Z,6.0nm,0.6s
VSU   Vasula             92.07 329⇑iP       P       09 53 18.3 -0.6
VSU                                 pmax    pmax
      comp=Z,17nm,0.7s
MSF   Maaselka           92.62 336  P       P       09 53 20.3 -1.0
MSF                                 pmax    pmax
      comp=Z,5.0nm,1.3s
MDVR  Moldovita          92.83 315⇑iP       P       09 53 23.3 +0.5
FIA1  FINESS Array S     92.98 332  eP      P       09 53 22.4 -0.6
      comp=Z,6.3nm,0.8s
FIA0  FINESS Array S     92.98 332  eP      P       09 53 22.4 -0.6
FIA0  FINESS Array S     92.98 332  eP      P       09 53 22.4 -0.6
FINES FINESS Array B     92.98 332  P       P       09 53 22.4 -0.6
      comp=Z,4.5nm,0.7s,baz=106,slow=6.2,SNR=16
FINES                               LR      LR      10 40 03.5
      comp=Z,38nm,18.5s,baz=62,slow=39
FINES FINESS Array B     92.98 332 i P      P       09 53 20.8 -2.2
FINES                               pmax    pmax
      comp=Z,5.0nm,0.7s
BZS   Buzias             93.01 315  P       P       09 53 23.3 -0.3
BZS                                 pmax    pmax
      comp=Z,2.0nm,0.9s
KOLS  Kolonicke sedl     93.04 319  eP      P       09 53 26.9 +3.2
KOLS  Kolonicke sedl     93.04 319  eP      P       09 53 26.9 +3.2
SUF   Sumiainen          93.19 333  P       P       09 53 22.9 -1.0
SUF                                 pmax    pmax
      comp=Z,8.0nm,0.8s
OUL   Oulu               93.73 335  P       P       09 53 25.8 -0.6
OUL                                 pmax    pmax
      comp=Z,13nm,1.3s
SGF   Sodankyl           93.92 338  P       P       09 53 26.0 -1.2
SGF                                 pmax    pmax
      comp=Z,4.0nm,0.8s
ARA0  ARCESS Array S     94.67 340  eP      P       09 53 29.5 -1.2
ARCES ARCESS Array B     94.67 340  P       P       09 53 29.5 -1.2
      comp=Z,0.8nm,0.5s,baz=103,slow=5.5,SNR=8.8
ARCES                               LR      LR      10 41 43.4
      comp=Z,20nm,19.3s,baz=88,slow=39
BNI   Bardonecchia      103.49 314  ePdif   Pdif    09 54 08.0 -3.0
BNI   Bardonecchia      103.49 314  eP      Pdif    09 54 08.0 -3.0
DAG   Danmarks Havn     105.56 349  P       Pdif    09 54 19.8 +0.5
TORD  Torodi Ar. Bea    107.53 281  PKiKP   PKiKP   09 58 37.0 -0.6
      comp=Z,0.5nm,0.5s,baz=69,slow=1.5,SNR=8.1
TOA1  Torodi Ar. Sit    107.54 281  ePKiKP  PKiKP   09 58 37.0 -0.6
YKA   Yellowknife Ar    117.32  21  PKP     PKPdf   09 58 54.2 -0.6
      comp=Z,1.0nm,0.6s,baz=344,slow=1.5,SNR=5.5
YKB5  Yellowknife Ar    117.32  21  ePKPdf  PKPdf   09 58 54.2 -0.6
J08A  Circle Bar Ran    126.21  41  ePKPdf  PKiKP   09 59 13.6 +0.5
NV01  Mina Array Sit    128.45  46  ePKPdf  PKPdf   09 59 15.8 -1.4
NVAR  Mina Array Bea    128.45  46  PKP     PKPdf   09 59 15.9 -1.4
      comp=Z,0.6nm,0.6s,baz=269,slow=2.5,SNR=5.6
EGMT  Eagleton          128.80  32  ePKPdf  PKPdf   09 59 17.4  0.0
DLMT  Dillon            128.81  36  ePKPdf  PKiKP   09 59 18.9 +0.6
BOZ   Bozeman (W)       129.24  35  ePKPdf  PKiKP   09 59 19.1 -0.1
BOZ   Bozeman (W)       129.24  35  ePKIKP  PKiKP   09 59 19.1 -0.1
ELK   Elko              129.56  42  ePKPdf  PKiKP   09 59 20.4 +0.4
ELK   Elko              129.56  42  ePKIKP  PKiKP   09 59 20.4 +0.4
PD31  Pinedale Array    132.10  37  ePKPdf  PKPdf   09 59 23.2 -0.8
PDAR  Pinedale Array    132.10  37  PKP     PKPdf   09 59 23.2 -0.8
      comp=Z,0.6nm,0.6s,baz=182,slow=1.5,SNR=7.1
TCRU  Three Creeks R    132.47  44  ePKPdf  PKPdf   09 59 23.5 -1.4
RSSD  Black Hills       134.36  32  ePKPdf  PKiKP   09 59 29.3 -0.3
RSSD  Black Hills       134.36  32  ePKIKP  PKiKP   09 59 29.3 -0.3
O20A  White River Ci    134.42  39  ePKPdf  PKPdf   09 59 28.3 -0.1
PV14  Lion Creek, Pa    134.90  42  ePKPdf  PKPdf   09 59 30.2 +0.7
ECSD  EROS Data Cent    138.29  27  ePKPdf  PKPdf   09 59 35.1 -0.2
ANMO  Albuquerque       138.47  44⇑iPKIKP   PKiKP   09 59 39.3 +1.1
LONY  Lake Ozonia       143.31   3  P       PKPbc   09 59 41.2 -0.3
      baz=356
M43A  Waltham Townsh    143.33  22  P       PKPbc   09 59 41.8 +0.2
      baz=331
TXAR  Lajitas Array     143.38  50  PKP     PKPbc   09 59 42.5 +0.2
      comp=Z,1.3nm,0.6s,baz=262,slow=0.3,SNR=24
K47A  Vermontville      143.49  16  P       PKPbc   09 59 42.2 +0.2
      baz=338
K48A  Perry             143.60  15  P       PKPbc   09 59 42.3  0.0
      baz=340
WMOK  Wichita Mounta    143.66  39  P       PKPbc   09 59 42.8  0.0
      baz=311,SNR=8.5
PECO  Prince Edward     143.80   6  P       PKPbc   09 59 42.8  0.0
      baz=352
HDIL  Hopedale          143.97  23  P       PKPab   09 59 43.1 +0.2
      baz=330
L47A  Sherwood          144.07  17  P       PKPab   09 59 43.0 -0.2
      baz=337,SNR=5.1
M46A  Old House Fiel    144.24  19  P       PKPab   09 59 43.9  0.0
      baz=335
L48A  N Adams           144.31  16  P       PKPab   09 59 44.0 -0.1
      baz=339,SNR=6.9
L49A  Milan             144.34  15  P       PKPab   09 59 44.3 +0.1
      baz=340
N45A  Kentland          144.36  20  P       PKPab   09 59 44.5 +0.1
      baz=333,SNR=7.1
K52A  Tillsonburg       144.38  11  P       PKPbc   09 59 44.7  0.0
      baz=345
ABTX  Abilene, Hawle    144.45  42  ePKPdf  PKPbc   09 59 45.9 +0.7
ACCN  Adirondack Com    144.58   2  ePKPdf  PKPab   09 59 44.7 -0.4
TUL1  Leonard           144.62  34  ePKPdf  PKPab   09 59 45.5  0.0
TUL1  Leonard           144.62  34  P       PKPab   09 59 45.3 -0.2
      baz=317,SNR=7.1
L50A  Kingsville        144.64  14  P       PKPab   09 59 44.7 -0.6
      baz=341
P43A  Skaggs, Pawnee    144.67  24  P       PKPab   09 59 45.1 -0.4
      baz=329,SNR=5.7
O45A  Potomac           144.82  21  P       PKPab   09 59 45.8 -0.2
      baz=332,SNR=12
K55A  Perry             144.86   8  P       PKPab   09 59 45.5 -0.7
      baz=350,SNR=9.3
M49A  Liberty Center    144.88  16  P       PKPab   09 59 45.8 -0.5
      baz=339
MMNY  Mt. Morris Dam    144.88   8  ePKPdf  PKPab   09 59 46.0 -0.2
K54A  Basiliko Farm,    144.89   9  P       PKPab   09 59 45.6 -0.7
      baz=348,SNR=7.7
SFIN  Lafayette         144.92  20  ePKPdf  PKPab   09 59 46.5  0.0
SFIN  Lafayette         144.92  20  P       PKPab   09 59 46.4  0.0
      baz=334,SNR=9.6
N47A  Urbana            144.93  18  P       PKPab   09 59 45.9 -0.6
      baz=336,SNR=7.8
PLIO  Pelee Island,     144.96  14  P       PKPab   09 59 45.7 -0.8
      baz=342
N48A  Decatur           145.15  17  P       PKPbc   09 59 46.8 -0.4
      baz=337,SNR=12
L54A  Sinclairville     145.16   9  P       PKPbc   09 59 46.7 -0.5
      baz=347,SNR=13
M50A  Fremont           145.18  15  ePKPbc  PKPbc   09 59 46.9 -0.4
M50A  Fremont           145.18  15  P       PKPbc   09 59 46.7 -0.5
      baz=341,SNR=5.5
TRY   Troy              145.23   2  ePKPbc  PKPab   09 59 47.6 +0.1
L53A  Girard            145.26  11  P       PKPbc   09 59 47.1 -0.5
      baz=346
CCM   Cathedral Cave    145.27  27  ePKPbc  PKPbc   09 59 47.5 -0.2
CCM   Cathedral Cave    145.27  27  ePKIKP  PKPbc   09 59 47.5 -0.2
CCM   Cathedral Cave    145.27  27  P       PKPbc   09 59 47.4 -0.2
      baz=325
N49A  Columbus Grove    145.33  16  ePKPbc  PKPbc   09 59 47.5 -0.3
N49A  Columbus Grove    145.33  16  P       PKPbc   09 59 47.5 -0.3
      baz=338,SNR=11
L55A  Hinsdale          145.34   8  P       PKPbc   09 59 47.3 -0.6
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      baz=349,SNR=9.1
HHAR  Hobbs             145.35  32  ePKPbc  PKPbc   09 59 47.4 -0.6
O47A  Sheridan          145.36  19  P       PKPbc   09 59 47.4 -0.5
      baz=335,SNR=11
M52A  Chesterland       145.44  12  ePKPbc  PKPdf   09 59 48.1 +0.1
M52A  Chesterland       145.44  12  P       PKPdf   09 59 47.8 -0.3
      baz=344,SNR=6.8
P45A  Graceland, Par    145.45  22  ePKPbc  PKPdf   09 59 48.2 +0.1
P45A  Graceland, Par    145.45  22  P       PKPdf   09 59 48.1  0.0
      baz=332,SNR=15
M51A  Elyria            145.46  14  P       PKPdf   09 59 47.7 -0.4
      baz=342
HRV   Adam Dziewonsk    145.48 359  ePKPbc  PKPdf   09 59 47.6 -0.5
HRV   Adam Dziewonsk    145.48 359  ePKIKP  PKPdf   09 59 47.6 -0.5
HRV   Adam Dziewonsk    145.48 359  P       PKPdf   09 59 48.0 -0.1
      baz=0.7
P46A  Rosedale          145.56  21  P       PKPdf   09 59 48.4 +0.1
      baz=333,SNR=9.3
ALLY  Alegheny Colle    145.58  11  ePKPdf  PKPdf   09 59 47.8 -0.5
WES   Weston            145.60 359  ePKPdf  PKPdf   09 59 48.4 +0.1
WES   Weston            145.60 359  ePKIKP  PKPdf   09 59 48.4 +0.1
JCT   Junction City     145.61  45  ePKPdf  PKPab   09 59 50.0 +0.6
JCT   Junction City     145.61  45  ePKP2   PKPab   09 59 50.0 +0.6
JCT   Junction City     145.61  45  P       PKPab   09 59 49.9 +0.5
      baz=305,SNR=65
BINY  Binghamton        145.61   5  ePKPdf  PKPdf   09 59 48.1 -0.3
BINY  Binghamton        145.61   5  P       PKPdf   09 59 48.3 -0.1
      baz=353,SNR=11
O48A  Farmland          145.66  18  P       PKPdf   09 59 48.4 -0.1
      baz=337,SNR=12
M53A  WI Miller and     145.68  12  P       PKPdf   09 59 48.5  0.0
      baz=345
QUA2  Belchertown       145.71   0  ePKPdf  PKPdf   09 59 48.6 +0.1
N50A  Nevada            145.75  15  P       PKPdf   09 59 48.8 +0.2
      baz=340,SNR=16
M54A  Oil Creek Stat    145.80  10  ePKPdf  PKPdf   09 59 49.0 +0.3
M54A  Oil Creek Stat    145.80  10  P       PKPdf   09 59 48.8 +0.1
      baz=346,SNR=15
N51A  Ashland           145.81  14  ePKPdf  PKPbc   09 59 49.1 -0.1
N51A  Ashland           145.81  14  P       PKPdf   09 59 48.7  0.0
      baz=342,SNR=7.7
Q45A  Warren Harvey,    145.85  23  P       PKPbc   09 59 49.4  0.0
      baz=331,SNR=12
U40A  Yellville         145.85  31  P       PKPbc   09 59 49.3 -0.3
      baz=321,SNR=23
O49A  Covington         145.97  17  ePKPdf  PKPbc   09 59 49.5 -0.3
O49A  Covington         145.97  17  P       PKPdf   09 59 49.4 +0.4
      baz=338,SNR=6.3
M55A  Ridgway           145.99   9  P       PKPdf   09 59 49.4 +0.4
      baz=348,SNR=9.2
P47A  Martinsville      146.00  20  P       PKPdf   09 59 49.5 +0.5
      baz=334,SNR=6.8
OLIL  Olney             146.01  23  ePKPbc  PKPbc   09 59 50.1 +0.2
Q46A  CEJHS Indians,    146.03  22  P       PKPdf   09 59 49.6 +0.4
      baz=332
M56A  Emporium          146.06   8  P       PKPdf   09 59 49.5 +0.4
      baz=349,SNR=12
N52A  McGinn’s Farm,    146.07  13  P       PKPdf   09 59 49.6 +0.5
      baz=343
O50A  Cable             146.21  16  P       PKPbc   09 59 50.1 -0.4
      baz=339
W39A  Magazine          146.25  33  ePKPbc  PKPbc   09 59 50.6 -0.2
W39A  Magazine          146.25  33  P       PKPbc   09 59 50.5 -0.2
      baz=319,SNR=5.7
N53A  Lisbon            146.26  12  ePKPbc  PKPbc   09 59 50.9 +0.2
N53A  Lisbon            146.26  12  P       PKPbc   09 59 50.3 -0.4
      baz=344,SNR=9.3
KSPA  Keystone Colle    146.27   5  ePKPbc  PKPbc   09 59 50.3 -0.3
N54A  Moraine State     146.28  11  ePKPbc  PKPbc   09 59 51.0 +0.3
N54A  Moraine State     146.28  11  P       PKPbc   09 59 50.2 -0.5
      baz=346,SNR=6.0
WHTX  Lake Whitney,     146.29  41  P       PKPab   09 59 51.7 -0.2
      baz=310
ACSO  Alum Creek Sta    146.30  15  ePKPbc  PKPbc   09 59 50.4 -0.4
ACSO  Alum Creek Sta    146.30  15  P       PKPbc   09 59 50.5 -0.4
      baz=340,SNR=6.8
P48A  Milroy            146.31  19  ePKPbc  PKPdf   09 59 50.2 +0.7
P48A  Milroy            146.31  19  P       PKPdf   09 59 50.3 +0.7
      baz=336,SNR=5.5
M59A  Waymart           146.31   5  P       PKPbc   09 59 50.6 -0.2
      baz=354,SNR=10
R45A  Skylar, Fairfi    146.32  23  P       PKPbc   09 59 50.9  0.0
      baz=330,SNR=12
S44A  Carbondale        146.44  25  P       PKPbc   09 59 51.2 -0.1
      baz=328
P49A  Miami Univ. Ec    146.46  18  P       PKPbc   09 59 50.8 -0.5
      baz=337,SNR=5.5
O51A  Pataskala         146.48  15  P       PKPbc   09 59 50.9 -0.4
      baz=341,SNR=11
FCAR  Ozark Folk Cen    146.59  30  ePKPbc  PKPbc   09 59 51.5 -0.2
N56A  West Decatur      146.60   9  P       PKPbc   09 59 51.4 -0.3
      baz=349
N55A  Marion Center     146.63  10  ePKPbc  PKPbc   09 59 51.6 -0.1
N55A  Marion Center     146.63  10  P       PKPbc   09 59 51.3 -0.5
      baz=347,SNR=8.5
M61A  Granite Spring    146.65   2  P       PKPbc   09 59 51.1 -0.6
      baz=357
P50A  Jamestown         146.66  17  P       PKPbc   09 59 51.4 -0.5
      baz=338,SNR=13
BDFB  Brasilia          146.68 226  PKPbc   PKPdf   09 59 51.9 +1.0
      comp=Z,11nm,0.6s,baz=160,slow=1.1,SNR=13
BDFB  Brasilia          146.68 226  ePKPdf  PKPdf   09 59 52.0 +1.0
BDFB                                ePKPbc  PKPab   09 59 53.9  0.0
BDFB  Brasilia          146.68 226  ePKP2   PKPdf   09 59 52.0 +1.0
PBMO  Poplar Bluff      146.69  27  ePKPbc  PKPbc   09 59 51.7 -0.3
Q48A  North Vernon      146.69  20  P       PKPbc   09 59 51.7 -0.2
      baz=335,SNR=6.5
R46A  Gibon Southern    146.69  23  P       PKPbc   09 59 51.9 -0.1
      baz=331,SNR=6.5
O52A  Adamsville        146.70  14  ePKPbc  PKPbc   09 59 52.1 +0.2
O52A  Adamsville        146.70  14  P       PKPbc   09 59 51.5 -0.4
      baz=342,SNR=8.6
O53A  New Philadelph    146.71  13  P       PKPbc   09 59 51.6 -0.4
      baz=343,SNR=6.7
ODNJ  Ogdensburg        146.83   4  ePKPbc  PKPbc   09 59 51.8 -0.4
MIAR  Mount Ida         146.85  34  ePKPbc  PKPbc   09 59 52.5  0.0
MIAR  Mount Ida         146.85  34  P       PKPbc   09 59 52.9 +0.3
      baz=318,SNR=32
N57A  Milroy            146.87   8  P       PKPbc   09 59 52.1 -0.3
      baz=350,SNR=9.0
Q49A  Aurora            146.89  19  P       PKPbc   09 59 52.0 -0.5
      baz=336
N59A  State Game Lan    146.91   5  ePKPbc  PKPbc   09 59 52.6  0.0
N59A  State Game Lan    146.91   5  P       PKPbc   09 59 52.5 -0.1
      baz=353,SNR=11
SSPA  Standing Stone    146.94   8  P       PKPbc   09 59 52.4 -0.2
      baz=349
PAL   Palisades         146.94   3  P       PKPbc   09 59 52.2 -0.3
      baz=356
O54A  Avella            146.95  12  P       PKPbc   09 59 52.5 -0.2
      baz=345,SNR=11
R47A  Wooly Knot Far    146.98  21  P       PKPbc   09 59 52.5 -0.3
      baz=333,SNR=8.4
P51A  Williamsport      146.99  16  P       PKPbc   09 59 52.0 -0.7
      baz=340
N60A  Cedar Hill Far    147.01   4  P       PKPbc   09 59 52.3 -0.4
      baz=354
S46A  Don Dixon Farm    147.07  23  P       PKPbc   09 59 52.6 -0.5
      baz=331
W41B  Gary Mavity, V    147.08  31  P       PKPbc   09 59 52.7 -0.4
      baz=321
P52A  Corning           147.08  14  P       PKPbc   09 59 52.5 -0.6
      baz=341,SNR=11
833A  Chaparral WMA,    147.11  48  P       PKPbc   09 59 54.2 +0.8
      baz=303
R48A  Northridge Ran    147.12  20  P       PKPbc   09 59 53.0 -0.2
      baz=334
WCI   Wyandotte Cave    147.12  21  ePKPbc  PKPbc   09 59 53.0 -0.2
WCI   Wyandotte Cave    147.12  21  ePKP2   PKPbc   09 59 53.0 -0.2
WCI   Wyandotte Cave    147.12  21  P       PKPbc   09 59 52.8 -0.4
      baz=333
O55A  Ligonier          147.13  10  P       PKPbc   09 59 52.6 -0.6
      baz=347
O56A  Blue Knob Stat    147.20   9  P       PKPbc   09 59 53.2 -0.2
      baz=348,SNR=15
T45A  Paducah           147.27  25  P       PKPbc   09 59 53.3 -0.3
      baz=328
X40A  Basin Creek Fa    147.30  33  P       PKPbc   09 59 53.6 -0.2
      baz=320
Q50A  Georgetown        147.32  17  P       PKPbc   09 59 53.0 -0.7
      baz=338
Q51A  Peebles           147.33  16  ePKPbc  PKPbc   09 59 53.5 -0.3
Q51A  Peebles           147.33  16  P       PKPbc   09 59 53.3 -0.4
      baz=339,SNR=6.0
UALR  University of     147.34  32  ePKPbc  PKPbc   09 59 54.4 +0.5
O57A  Amberson          147.39   8  P       PKPbc   09 59 53.5 -0.4
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      baz=350
P53A  Whipple           147.40  14  P       PKPbc   09 59 53.9 -0.1
      baz=343,SNR=6.1
R49A  Shelbyville       147.45  19  P       PKPbc   09 59 53.8 -0.3
      baz=335
O59A  Robesonia         147.47   6  P       PKPbc   09 59 53.9 -0.2
      baz=352
S47A  Hartford          147.47  22  P       PKPbc   09 59 53.7 -0.5
      baz=332
P54A  Burton            147.49  12  P       PKPbc   09 59 54.2  0.0
      baz=344,SNR=9.8
O60A  Telford           147.53   5  P       PKPbc   09 59 53.8 -0.4
      baz=354
GNAR  Gosnell           147.54  28  ePKPbc  PKPbc   09 59 54.9 +0.5
T46A  Princeton         147.56  24  P       PKPbc   09 59 54.6 +0.2
      baz=330,SNR=8.5
MCWV  Mont Chateau      147.56  11  P       PKPbc   09 59 54.2 -0.1
      baz=345,SNR=8.3
O58A  Lewisberry        147.57   7  P       PKPbc   09 59 54.1 -0.3
      baz=351
Q52A  Bidwell           147.68  15  P       PKPbc   09 59 54.2 -0.5
      baz=341
P55A  Reedsville        147.71  11  P       PKPbc   09 59 54.4 -0.4
      baz=345,SNR=5.7
S48A  Wiedeman Farm,    147.72  21  P       PKPbc   09 59 54.7 -0.2
      baz=333,SNR=8.8
R50A  Paris             147.73  18  P       PKPbc   09 59 54.4 -0.5
      baz=337
MVL   Millersville      147.76   6  ePKPbc  PKPbc   09 59 55.2 +0.3
O61A  Allentown         147.82   4  P       PKPbc   09 59 54.6 -0.4
      baz=355
S49A  Springfield       147.87  20  P       PKPbc   09 59 54.7 -0.6
      baz=335
P56A  Dayton Farm, R    147.90  10  P       PKPbc   09 59 55.1 -0.1
      baz=347,SNR=6.9
T47A  Sharon Grove      147.92  23  ePKPbc  PKPbc   09 59 55.4  0.0
T47A  Sharon Grove      147.92  23  P       PKPbc   09 59 55.3  0.0
      baz=331,SNR=7.1
R51A  Hillsboro         147.94  17  P       PKPbc   09 59 55.3 -0.1
      baz=338
Q53A  Leroy             147.97  14  P       PKPbc   09 59 55.4 -0.1
      baz=342,SNR=8.5
Q54A  Coxs Mills        148.01  13  P       PKPbc   09 59 55.3 -0.3
      baz=343,SNR=10
P60A  Greenville        148.01   5  P       PKPbc   09 59 55.2 -0.3
      baz=353
U46A  Springville       148.03  25  P       PKPbc   09 59 55.6 -0.1
      baz=329
P57A  Homestead Farm    148.05   9  P       PKPbc   09 59 55.5 -0.2
      baz=349,SNR=6.4
T48A  Bowling Green     148.08  22  P       PKPbc   09 59 55.7 -0.1
      baz=332,SNR=5.9
P59A  Jarrettsville     148.13   6  P       PKPbc   09 59 55.6 -0.3
      baz=352
P58A  Pank, Wackersv    148.15   8  P       PKPbc   09 59 55.6 -0.3
      baz=350
Q55A  Buckhannon        148.16  12  P       PKPbc   09 59 55.8 -0.2
      baz=345,SNR=7.8
R52A  Catlettsburg      148.17  16  P       PKPbc   09 59 55.4 -0.6
      baz=340
NATX  Nacogdoches       148.22  38  P       PKPbc   09 59 56.8 +0.5
      baz=314
P61A  Hammonton         148.22   4  P       PKPbc   09 59 55.4 -0.7
      baz=355
Z41A  Richland Creek    148.24  34  P       PKPbc   09 59 56.1 -0.2
      baz=318
S50A  Richmond          148.26  19  P       PKPbc   09 59 55.6 -0.7
      baz=336,SNR=5.5
Q56A  Snyder Ridge,     148.28  11  P       PKPbc   09 59 56.1 -0.2
      baz=346,SNR=6.1
X43A  Marvell           148.29  31  ePKPbc  PKPbc   09 59 56.3 -0.2
X43A                                ePKPab  PKPab   09 59 59.1 -0.5
X43A  Marvell           148.29  31  P       PKPbc   09 59 56.3 -0.2
      baz=323
U47A  Clarksville       148.32  24  P       PKPbc   09 59 56.6 +0.1
      baz=330,SNR=8.8
R53A  Hurricane         148.36  15  ePKPbc  PKPbc   09 59 56.5  0.0
R53A                                ePKPab  PKPab   09 59 60.0 +0.2
R53A  Hurricane         148.36  15  P       PKPbc   09 59 56.6  0.0
      baz=341,SNR=8.8
WVT   Waverly           148.37  25  P       PKPbc   09 59 56.8 +0.2
      baz=329
T49A  Edmonton          148.40  21  P       PKPbc   09 59 56.4 -0.2
      baz=334
Q57A  Strasburg         148.43  10  P       PKPbc   09 59 56.5 -0.2
      baz=348,SNR=6.3
V46A  Holladay          148.53  26  P       PKPbc   09 59 56.7 -0.3
      baz=328,SNR=5.9
S51A  Beattyville       148.55  18  P       PKPbc   09 59 56.7 -0.3
      baz=338,SNR=6.7
U48A  Cassie Pea, Po    148.55  23  P       PKPbc   09 59 57.0 -0.1
      baz=332,SNR=12
Q58A  Fox Den Farm,     148.63   8  P       PKPbc   09 59 56.9 -0.3
      baz=349
S52A  Salyersville      148.66  17  P       PKPbc   09 59 56.9 -0.4
      baz=339
T50A  Nancy             148.71  20  P       PKPbc   09 59 56.9 -0.6
      baz=335,SNR=6.6
R54A  Victor            148.74  14  P       PKPbc   09 59 57.3 -0.3
      baz=343
V47A  Nunnelly          148.75  25  P       PKPbc   09 59 57.4 -0.2
      baz=330,SNR=5.4
LNIG  Linares           148.79  54  ePKPbc  PKPbc   09 59 58.2 +0.2
LNIG                                ePKPab  PKPab   10 00 02.7 +0.7
U49A  Red Boiling Sp    148.84  22  P       PKPbc   09 59 57.6 -0.2
      baz=333
R56A  Bull Pasture M    148.86  11  P       PKPbc   09 59 57.9  0.0
      baz=346,SNR=5.1
S53A  Williamson        148.92  16  P       PKPbc   09 59 57.8 -0.3
      baz=340
Q61A  Milford           148.97   5  P       PKPbc   09 59 57.5 -0.6
      baz=354
W46A  Michie            148.97  27  P       PKPbc   09 59 57.6 -0.6
      baz=327
OXF   Oxford            149.02  29  P       PKPbc   09 59 58.2 -0.1
      baz=325
S54A  Dingess, Beckl    149.02  14  P       PKPbc   09 59 57.9 -0.4
      baz=342
T51A  Gray              149.06  19  P       PKPbc   09 59 58.1 -0.3
      baz=337,SNR=7.4
V48A  Smith Brothers    149.11  24  ePKPbc  PKPbc   09 59 58.3 -0.3
V48A                                ePKPab  PKPab   10 00 04.5 +1.5
V48A  Smith Brothers    149.11  24  P       PKPbc   09 59 58.2 -0.4
      baz=331
R57A  Stanardsville     149.13  10  P       PKPbc   09 59 58.5  0.0
      baz=347
R58A  Rapidan           149.21   9  P       PKPbc   09 59 58.7  0.0
      baz=348,SNR=6.4
W47A  Westpoint         149.22  25  P       PKPbc   09 59 58.5 -0.3
      baz=329,SNR=15
T52A  Hallie            149.22  17  P       PKPbc   09 59 58.7 -0.1
      baz=338
S55A  Lewisburg         149.24  13  P       PKPbc   09 59 58.4 -0.5
      baz=343
U50A  Jamestown         149.26  20  P       PKPbc   09 59 58.9  0.0
      baz=335,SNR=26
X46A  Booneville        149.36  27  P       PKPbc   09 59 58.8 -0.4
      baz=326,SNR=5.1
R60A  Leonardtown, M    149.44   7  P       PKPbc   09 59 59.0 -0.2
      baz=351
V49A  McMinnville       149.45  23  P       PKPbc   09 59 59.0 -0.4
      baz=332,SNR=5.8
T53A  Wise              149.47  17  P       PKPbc   09 59 59.4 -0.1
      baz=339
R61A  Willards          149.51   5  P       PKPbc   09 59 59.5  0.0
      baz=354
S56A  Natural Bridge    149.53  12  P       PKPbc   09 59 59.3 -0.3
      baz=345
R58B  Mineral           149.56   9  P       PKPbc   09 59 59.2 -0.3
      baz=348
TZTN  Tazewell          149.57  19  P       PKPbc   09 59 59.6  0.0
      baz=337
U51A  La Follette       149.57  19  P       PKPbc   09 59 59.7  0.0
      baz=336
S57A  Dark Hollow, R    149.57  11  ePKPbc  PKPbc   09 59 59.9 +0.3
S57A                                ePKPab  PKPab   10 00 05.7 +1.1
S57A  Dark Hollow, R    149.57  11  P       PKPbc   09 59 59.4 -0.3
      baz=346
W48A  Pulaski           149.59  25  P       PKPbc   09 59 59.5 -0.3
      baz=330
T54A  Tazewell          149.65  15  P       PKPbc   09 59 59.7 -0.2
      baz=341,SNR=7.4
X47A  Russelville       149.72  27  P       PKPbc   09 59 59.3 -0.7
      baz=328,SNR=8.9
U52A  Thorn Hill        149.76  18  P       PKPbc   09 59 60.0 -0.2
      baz=337
BLA   Blacksburg        149.79  13  P       PKPbc   09 59 59.9 -0.4
      baz=343
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T55A	Pulaski	149.80	14	P	PKPbc	10 00 00.1	-0.2
	baz=343,SNR=5.5						
V50A	Pikevile	149.83	22	P	PKPbc	10 00 00.0	-0.3
	baz=334,SNR=6.0						
S59A	Mechanicsville	149.84	8	P	PKPbc	10 00 00.5	+0.3
	baz=350						
S58A	Poland Farm, P	149.87	10	P	PKPbc	10 00 00.2	-0.1
	baz=348,SNR=7.8						
W49A	Belvidere	149.88	24	P	PKPbc	10 00 00.1	-0.3
	baz=331,SNR=9.6						
SWET	Sewanee	149.92	23	*e*PKPbc	PKPbc	10 00 00.1	-0.5
SWET				*e*PKPab	PKPab	10 00 06.2	-0.1
V51A	Loudon	149.98	20	P	PKPbc	10 00 00.7	0.0
	baz=335,SNR=5.6						
U53A	Fall Branch	150.03	17	P	PKPbc	10 00 00.5	-0.4
	baz=339						
T56A	Rocky Mt	150.06	13	P	PKPbc	10 00 00.6	-0.2
	baz=344,SNR=8.7						
U54A	Nelsons Funny	150.10	16	P	PKPbc	10 00 00.7	-0.4
	baz=340						
S61A	Accomac	150.12	6	P	PKPbc	10 00 01.0	0.0
	baz=353						
X48A	Hartselle	150.13	25	P	PKPbc	10 00 00.5	-0.6
	baz=329						
W50A	Signal Mountai	150.17	22	*e*PKPbc	PKPbc	10 00 01.4	+0.1
W50A				*e*PKPab	PKPab	10 00 06.7	-0.6
W50A	Signal Mountai	150.17	22	P	PKPbc	10 00 01.0	-0.2
	baz=333						
V52A	Sevierville	150.20	19	P	PKPbc	10 00 01.4	+0.2
	baz=336,SNR=22						
T57A	Hurt	150.25	12	P	PKPbc	10 00 01.0	-0.3
	baz=346						
U55A	TA2, Sparta	150.32	15	P	PKPbc	10 00 01.4	-0.1
	baz=342,SNR=9.5						
X49A	Woodville	150.38	24	P	PKPbc	10 00 01.4	-0.3
	baz=330						
W51A	Cleveland	150.41	21	P	PKPbc	10 00 01.7	0.0
	baz=334						
T58A	Grand View Acr	150.44	11	P	PKPbc	10 00 02.0	+0.3
	baz=347,SNR=5.8						
T60A	Surry	150.53	8	P	PKPbc	10 00 02.0	+0.1
	baz=350						
Y48A	Jasper	150.54	26	P	PKPbc	10 00 01.4	-0.7
	baz=328						
T59A	Double "B" Far	150.58	9	P	PKPbc	10 00 02.4	+0.4
	baz=349,SNR=10						
V53A	Saluda	150.60	18	*e*PKPbc	PKPbc	10 00 02.4	+0.2
V53A	Saluda	150.60	18	P	PKPbc	10 00 02.4	+0.2
	baz=338,SNR=12						
U56A	King	150.63	14	P	PKPbc	10 00 01.9	-0.3
	baz=343						
X50B	Fort Payne	150.70	23	P	PKPbc	10 00 01.9	-0.6
	baz=332						
V54A	Nebo	150.76	17	P	PKPbc	10 00 02.5	-0.1
	baz=340,SNR=6.3						
W52A	Murphy	150.77	20	*e*PKPbc	PKPbc	10 00 03.0	+0.4
W52A				*e*PKPab	PKPab	10 00 07.9	-1.8
W52A	Murphy	150.77	20	P	PKPbc	10 00 02.8	+0.1
	baz=335,SNR=7.7						
U57A	Blanch	150.78	12	P	PKPbc	10 00 02.5	0.0
	baz=345,SNR=5.8						
V55A	Taylorsville	150.89	15	P	PKPbc	10 00 02.5	-0.3
	baz=341						
X51A	Calhoun	150.91	22	P	PKPbc	10 00 02.6	-0.3
	baz=333						
Y49A	Blount Mountai	150.91	25	P	PKPbc	10 00 02.8	-0.2
	baz=330,SNR=9.7						
W53A	Cullowhee	150.95	19	P	PKPbc	10 00 03.4	+0.2
	baz=337,SNR=8.7						
U58A	Oxford	150.97	11	P	PKPbc	10 00 03.1	+0.1
	baz=347,SNR=5.1						
147A	Livingston	151.06	29	P	PKPbc	10 00 03.5	+0.2
	baz=325						
V56A	Mocksville	151.11	14	*e*PKPbc	PKPbc	10 00 03.5	+0.1
V56A				*e*PKPab	PKPab	10 00 12.0	+0.9
V56A	Mocksville	151.11	14	P	PKPbc	10 00 03.4	+0.1
	baz=342,SNR=5.4						
U60A	Pendleton	151.13	9	P	PKPbc	10 00 03.6	+0.2
	baz=349						
U59A	Littleton	151.15	10	P	PKPbc	10 00 03.3	-0.1
	baz=348						
Y50A	Piedmont	151.16	24	P	PKPbc	10 00 03.3	-0.3
	baz=331						
V57A	Coltrane Farms	151.21	13	P	PKPbc	10 00 03.4	-0.2
	baz=344,SNR=5.2						
X52A	Dahlonega	151.22	21	P	PKPbc	10 00 03.9	+0.2
	baz=335,SNR=5.1						
W54A	Cherokee Point	151.33	18	P	PKPbc	10 00 03.8	-0.1
	baz=339						
LRAL	Lakeview Retre	151.36	27	P	PKPbc	10 00 03.9	-0.1
	baz=328,SNR=7.3						
U61A	Possum Corner	151.37	7	P	PKPbc	10 00 04.2	+0.3
	baz=351						
148A	Greensboro	151.42	28	P	PKPbc	10 00 04.3	+0.1
	baz=326						
Y51A	Rockmart	151.42	23	P	PKPbc	10 00 03.8	-0.4
	baz=332						
Z49A	Columbiana	151.43	26	P	PKPbc	10 00 04.1	-0.1
	baz=329,SNR=6.8						
V58A	Windy Hill, Pi	151.44	12	P	PKPbc	10 00 03.9	-0.2
	baz=345						
X53A	Estanollee	151.52	20	P	PKPbc	10 00 04.6	+0.3
	baz=336						
KMSC	Kings Mountain	151.53	16	P	PKPbc	10 00 04.3	-0.1
	baz=340						
Z50A	Ashland	151.64	25	P	PKPbc	10 00 04.5	-0.2
	baz=330						
V59A	Middlesex	151.64	11	P	PKPbc	10 00 04.6	+0.1
	baz=347						
PAULI	Pauline	151.69	17	*e*PKPbc	PKPbc	10 00 04.7	0.0
PAULI				*e*PKPab	PKPab	10 00 10.5	-3.0
W56A	Indian Trail	151.73	15	P	PKPbc	10 00 04.6	-0.2
	baz=342						
X54A	Belton	151.78	18	P	PKPbc	10 00 05.2	+0.2
	baz=338,SNR=9.6						
V60A	Jim Taylor Roa	151.81	9	*e*PKPbc	PKiKP	10 00 05.5	+0.2
V60A				*e*PKPab	PKPab	10 00 11.7	-2.3
V60A	Jim Taylor Roa	151.81	9	P	PKPbc	10 00 05.0	+0.1
	baz=349						
149A	Jones	151.82	27	P	PKPbc	10 00 05.2	+0.2
	baz=328,SNR=9.5						
Y52A	Lilburn	151.83	22	*e*PKPbc	PKiKP	10 00 05.8	+0.4
Y52A				*e*PKPab	PKPab	10 00 11.8	-2.3
Y52A	Lilburn	151.83	22	P	PKiKP	10 00 05.6	+0.1
	baz=334,SNR=8.1						
W57A	Gilead	151.86	14	P	PKPbc	10 00 05.1	0.0
	baz=343						
V61A	Roper	151.88	8	P	PKPbc	10 00 05.0	0.0
	baz=350						
Y53A	Monroe	152.01	21	P	PKPbc	10 00 05.7	+0.2
	baz=335						
X55A	Gracelyn & Ava	152.07	17	P	PKPbc	10 00 05.7	+0.1
	baz=339,SNR=8.4						
150A	Eclectic	152.15	26	P	PKPbc	10 00 05.9	+0.1
	baz=329						
W58A	Raeford	152.16	13	P	PKPbc	10 00 05.9	+0.1
	baz=345						
249A	Camden	152.19	28	P	PKiKP	10 00 06.3	+0.1
	baz=327,SNR=5.2						
X56A	White Oak	152.22	16	P	PKPbc	10 00 05.9	0.0
	baz=341						
Z52A	Williamson	152.30	23	P	PKiKP	10 00 06.5	0.0
	baz=333						
Y54A	Tignall	152.31	19	P	PKiKP	10 00 06.4	-0.1
	baz=337,SNR=5.2						
JSC	Jenkinsville	152.35	17	*e*PKPbc	PKiKP	10 00 06.6	+0.1
JSC				*e*PKPab	PKPab	10 00 13.3	-3.0
JSC	Jenkinsville	152.35	17	*e*PKIKP	PKiKP	10 00 06.6	+0.1
JSC				*e*		10 00 13.3	
W60A	Pink Hill	152.43	10	P	PKPbc	10 00 06.2	-0.1
	baz=348						
GOGA	Godfrey	152.45	21	P	PKPbc	10 00 06.2	-0.3
	baz=335						
X57A	Johnson Farm,	152.49	15	P	PKPbc	10 00 06.5	-0.1
	baz=342						
Y55A	Saluda	152.50	18	P	PKPbc	10 00 06.7	+0.1
	baz=339						
151A	Opelika	152.51	25	P	PKPbc	10 00 06.7	0.0
	baz=331,SNR=5.6						
Z53A	Monticello	152.53	21	P	PKiKP	10 00 07.2	+0.3
	baz=335,SNR=6.1						
250A	Grady	152.58	27	P	PKiKP	10 00 07.0	0.0
	baz=328						
152A	Waverly Hall	152.64	24	P	PKiKP	10 00 07.1	0.0
	baz=332,SNR=5.3						
X59A	McDuffie Farm,	152.73	12	P	PKPbc	10 00 06.9	-0.1
	baz=346						
Y56A	Pelion	152.80	17	P	PKPbc	10 00 06.8	-0.5
	baz=340						
Z54A	Sparta	152.83	20	P	PKPbc	10 00 07.5	+0.1
	baz=336						
Y57A	Sumter	152.84	15	P	PKPbc	10 00 07.5	+0.2
	baz=342						
X60A	Albert Glenn T	152.84	11	P	PKiKP	10 00 07.5	0.0
	baz=347						
251A	Midway	152.85	26	P	PKiKP	10 00 07.9	+0.3
	baz=330,SNR=8.8						
BRAL	Brewton	152.89	29	P	PKiKP	10 00 08.2	+0.5
	baz=326						
350A	Dozier	153.01	28	P	PKiKP	10 00 08.3	+0.4
	baz=328						
Z55A	Blythe	153.07	19	P	PKiKP	10 00 08.2	+0.2
	baz=338						
Z56A	Williston	153.22	18	P	PKiKP	10 00 08.5	+0.2
	baz=339						
Y59A	Loris	153.23	13	P	PKiKP	10 00 08.7	+0.4
	baz=345						
253A	Americus	153.41	23	P	PKPbc	10 00 08.7	+0.1
	baz=332						
Z57A	Bowman	153.44	16	P	PKiKP	10 00 08.8	0.0
	baz=340						
352A	Blakely	153.59	25	P	PKPbc	10 00 08.2	-0.8
	baz=330						

ISK 05 09:40:41.9, 37°.24N×28°.18E, h4^{km}, ML1.9/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.13	142	PG	Pg	09 40 45.2	+0.6
YER				SG	Sg	09 40 47.8	+1.5
TURN	Turunc	0.50	137	PG	Pg	09 40 51.7	+0.2
TURN				SG	Sg	09 40 58.8	+0.9
DALY	Dalyan (Mula)	0.57	138	PG	Pb	09 40 53.6	-0.8
DAT	Datca	0.70	224	PG	Pg	09 40 56.0	+0.6
BODT	Bodrum	0.72	256	PG	Pb	09 40 56.4	-0.6

DDA 05 09:41:11.9, 38°.75N×27°.06E, h7^{km}±2^{km}, ML2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEDA	zmir-Bergama	0.22	3	*i* P	Pg	09 41 17.0	+0.7
ZEDA				*i* S	Sg	09 41 20.4	+1.1
URLA	Izmir	0.53	224	*i* P	Pb	09 41 23.1	-0.5
URLA				*i* S	Sb	09 41 30.4	-1.0
AKHS	Akhisar	0.60	77	*i* P	Pg	09 41 24.0	+0.5
AKHS				IAML_P			
	comp=Z,1μm,0.1s						
DGB	zmir	0.71	191	*i* P	Pb	09 41 26.3	-0.2
DGB				IAML_P			
	comp=Z,457nm,0.1s						
STEP	BALIKESIR_Sava	0.81	39	*i* P	Pb	09 41 28.1	-0.2
STEP				IAML_P			
	comp=Z,538nm,0.1s						
BAYC	CANAKKALE_Bayr	1.07	338	*i* P	Pn	09 41 33.2	-0.2
BAYC				IAML_P			
	comp=Z,270nm,0.2s						

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*ISCJB **05** 09:51:44.9±0.2, 62°.24N±0°.01×145°.72W±0°.04, h10^{km}, mb3.3/2, Error ellipse: s-maj=2.4km s-min=1.9km az=178.3*

*AEIC **05** 09:51:47.3, 62°.24N×145°.77W, h12^{km}, ML3.4, MW3.6(NEIC)*

*NEIC **05** 09:51:47.3±0.0, 62°.24N×145°.77W, h12^{km}, MW3.6, ML3.4(AEIC), Moment Tensor Solution. s39 Moment tensor: Scale 10^{14}Nm; M_{rr}0.53; $M_{\theta\theta}$-1.44; $M_{\phi\phi}$0.90; $M_{r\theta}$-0.23; $M_{\theta\phi}$2.27; $M_{\phi r}$2.49; Best double couple: $M_0$3.60000×10^{14} NP1:ϕ_s344.00000°, δ83.00000°, λ136.00000°. NP2:ϕ_s80.00000°, δ46.00000°, λ9.00000°. Principal axes: T 3.7100, Plg35.0000°, Azm292.0000°; N -0.2200, Plg45.0000°, Azm157.0000°; P -3.4900, Plg24.0000°, Azm40.0000°; After AEIC.*

NEIC Felt at Glennallen.

*ANF **05** 09:51:47.4±3.2, 62°.30N×145°.73W, h20^{km}, ML3.9/3 Error ellipse: s-maj=38.5km s-min=21.9km az=54.0*

*IDC **05** 09:51:49.2±3.5, 62°.39N×145°.88W, h12^{km}±23^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.4/29, mbtmp3.3/3, ML2.5/1, Error ellipse: s-maj=30.0km s-min=18.6km az=52.0*

ISC 05 09:51:46.1±0.6, 62°.24N±0°.02×145°.83W±0°.02, h10^{km}, n77, $\sigma 1^{s}56$/111, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAX	Paxson	0.75	13	*e*Pg	Pg	09 51 59.4	-1.1
PAX				*e*Sg	Sg	09 52 09.1	-1.3
PS12	TAPS Pump St12	0.84	157	*e*Pg	Pg	09 52 01.0	-1.2
PS12				*e*Sg	Sg	09 52 12.1	-1.0
DHY	Denali Highway	1.10	320	*e*Pn	Pg	09 52 06.0	-1.2
DHY				*e*Sg	Sg	09 52 20.6	-0.8
PS10	TAPS Pump St10	1.18	1	*e*Pn	Pb	09 52 07.3	-1.3
PS10				*e*Sn	Sb	09 52 22.6	-1.5
VMT	TAPS TI Valdez	1.19	193	*e*Pn	Pb	09 52 06.3	-2.4
MENT	Mentasta	1.20	54	*e*Pn	Pb	09 52 06.3	-2.6
MENT				*e*Sg	Sb	09 52 21.7	-2.8
JPK	Jack Peak	1.25	197	*e*Pn	Pn	09 52 07.0	-2.6
SML	Sawmill	1.26	251	*e*Pn	Pn	09 52 08.3	-1.4
SML				*e*Sn	Sb	09 52 25.8	-0.3
GLI	Glacier Island	1.50	204	*e*Pn	Pn	09 52 11.3	-1.7
GLI				*e*Sg	Sg	09 52 35.5	+1.4
KNK	Knik Glacier	1.50	237	*e*Pn	Pn	09 52 12.5	-0.6
KNK				*e*Sn	Sn	09 52 31.6	-1.0
RIDG	Independent Ri	1.57	16	*e*Pn	Pb	09 52 13.7	-1.5
DOT	Dot Lake	1.63	29	*e*Pn	Pn	09 52 14.1	-0.8
DOT				*e*Sn	Sb	09 52 35.9	-0.9
PMR	Palmer	1.69	249	*e*Pn	Pn	09 52 14.6	-1.1
PMR				*e*Sg	Sg	09 52 41.5	+1.0
EYAK	Cordova Ski Ar	1.70	179	*e*Pn	Pn	09 52 14.7	-1.1
EYAK				*e*Sn	Sb	09 52 37.9	-0.9
SGAM	Sherman Glacie	1.77	170	*e*Pn	Pn	09 52 15.5	-1.3
RND	Reindeer	1.81	311	*e*Pn	Pb	09 52 18.0	-1.4
RND				*e*Sn	Sb	09 52 42.0	-0.1
HUR	Hurricane	1.91	294	*e*Pn	Pn	09 52 18.7	+0.1
SCRK	Sand Creek	1.93	25	*e*Pn	Pn	09 52 18.1	-1.0
SCRK				*e*Sn	Sb	09 52 44.5	-1.1
BCA3	Beaver Creek A	2.04	64	*e*Pn	Pn	09 52 18.5	-2.1
BALM	Baldy	2.06	125	*e*Pn	Pn	09 52 19.5	-1.3
BALM				*e*Sn	Sn	09 52 45.6	-1.0
HMT	Hamilton	2.06	158	*e*Pn	Pb	09 52 21.5	-2.0
MCK	McKinley	2.06	318	*e*Pn	Pb	09 52 21.9	-1.7
MCK				*e*Sg	Sg	09 52 52.3	+0.1
RC01	Rabbit Creek A	2.19	240	*e*Pn	Pb	09 52 24.1	-1.7
RC01				*e*Sn	Sb	09 52 51.6	-1.4
HDA	Harding Lake	2.23	347	*e*Pn	Pb	09 52 24.2	-2.3
HDA				*e*Sn	Sn	09 52 50.4	-0.3
HDA	Harding Lake	2.23	347	P	Pn	09 52 23.2	+0.1
	baz=166						
HDA				Sb	Sb	09 52 53.9	-0.2
	baz=166						
PS08	TAPS Pump Stn8	2.35	350	*e*Pn	Pn	09 52 24.4	-0.3
WRH	Wood River Hil	2.46	337	*e*Pn	Pn	09 52 26.7	+0.6
SNH	Sunshine Point	2.53	144	*e*Pn	Pn	09 52 27.5	+0.3
BWN	Browne	2.54	321	*e*Pn	Pn	09 52 27.8	+0.5
BWN				*e*Pn	Pb	09 52 28.6	-3.2
BWN				*e*Sn	Sn	09 52 57.1	-1.2
CCB	Clear Creek Bu	2.57	341	*e*Pn	Pn	09 52 27.2	-0.5
CCB				*e*Sn	Sn	09 52 59.6	+0.6
ILAR	Eielson Array	2.58	350	Pn	Pn	09 52 27.1	-0.9
	1.1nm,0.3s,baz=174,slow=13,SNR=31						
ILAR				Pg	Pb	09 52 32.9	+0.4
	7.3nm,0.3s,baz=168,slow=17,SNR=89						
ILAR				Lg	Lg	09 53 05.9	
	38nm,0.3s,baz=168,slow=28,SNR=36						
ILB	Eielson Array	2.58	350	*e*Pn	Pn	09 52 27.2	-0.7
ILB				*e*Sn	Sn	09 52 59.4	+0.1
KTH	Kantishna Hill	2.67	302	*e*Pn	Pb	09 52 31.3	-2.8
KTH				*e*Sn	Sn	09 53 02.6	+0.9
SKT	Skwentna	2.69	267	*e*Pn	Pb	09 52 31.9	-2.4
SKT				*e*Sn	Sb	09 53 05.4	-2.0
SEW	Seward	2.77	221	*e*Pn	Pn	09 52 31.8	+1.4
SEW				*e*Sn	Sn	09 53 05.7	+1.8
COLA	College	2.79	342	*e*Pn	Pn	09 52 31.4	+0.7
TCOL	CIGO, UAF Yank	2.79	342	P	Pn	09 52 29.5	-1.3
	baz=160						
TCOL				Sb	Sb	09 53 11.8	+1.6
	baz=160						
MDM	Murphy Dome	2.93	340	*e*Sn	Sn	09 53 09.4	+1.5
POKR	Poker Plat Res	2.97	347	P	Pn	09 52 32.3	-1.0
	baz=165						
POKR				Sb	Sb	09 53 16.8	+1.4
	baz=165						
BPAW	Bear Paw Mtn.	2.99	311	*e*Pn	Pn	09 52 34.7	+1.1
PPLA	Purkeypile	3.02	285	*e*Pn	Pn	09 52 35.6	+1.6
CAST	Castle Rocks	3.10	295	*e*Pn	Pn	09 52 37.0	+1.9
CAST				*e*Sn	Sb	09 53 16.4	-2.8
SPU	Mount Spurr	3.15	253	*e*Pn	Pn	09 52 37.4	+1.7
CHX	Chaix Hills	3.16	132	*e*Pn	Pn	09 52 35.8	-0.2
EGAK	Eagle	3.29	37	*e*Pn	Pn	09 52 36.8	-0.9
DAWY	Dawson	3.45	55	*e*Pn	Pn	09 52 38.1	-1.7
MLY	Manley	3.55	324	*e*Pn	Pn	09 52 42.5	+1.2
MLY				*e*Sn	Sn	09 53 25.1	+1.8
RSO	Redoubt South	3.78	245	*e*Pn	Pn	09 52 46.1	+1.5
BCPM	Bancas Point	3.79	125	*e*Pn	Pn	09 52 42.9	-1.6
BCPM				*e*Sn	Sn	09 53 29.2	+0.3
CNPM	China Poot	3.80	226	*e*Pn	Pn	09 52 45.8	+1.2
CNPM				*e*Sn	Sn	09 53 29.4	+0.1
HOM	Homer	3.84	230	*e*Pn	Pn	09 52 46.6	+1.5
HYT	Haines Junctio	4.23	106	*e*Pn	Pn	09 52 50.9	+0.2
FYU	Fort Yukon	4.35	3	*e*Pn	Pn	09 52 52.3	+0.1
TTA	Tatalina	4.76	283	*e*Pn	Pn	09 52 59.2	+1.4
TT01	Tatalina	4.76	283	*e*Pn	Pn	09 52 59.0	+1.2
SVW2	Sparrevohn	4.79	260	*e*Pn	Pn	09 52 59.0	+0.8
IM3	Indian Mountai	5.11	321	*e*Pn	Pn	09 53 03.8	+1.2
BM3	Burnt Mountain	5.22	5	*e*Pn	Pn	09 53 03.9	-0.3
COLD	Coldfoot	5.34	341	*e*Pn	Pn	09 53 06.2	+0.4
WHY	Whitehorse	5.49	102	*e*Pn	Pn	09 53 07.5	-0.4
KDAK	Kodiak Island	5.61	220	*e*Pn	Pn	09 53 09.7	+0.2
KDAK				*e*Sn	Sn	09 54 11.5	-2.3
EPYK	Eagle Plains	5.73	40	*e*Pn	Pn	09 53 10.2	-1.0
EPYK	Eagle Plains	5.73	40	P	Pn	09 53 09.4	-1.8
	baz=228						
EPYK				Sb	Sb	09 54 38.7	+4.0
	baz=228						
OHAK	Old Harbor	6.29	220	*e*Pn	Pn	09 53 18.9	+0.2
TOLK	Toolik Lake Re	6.61	348	*e*Pn	Pn	09 53 24.4	+1.1
TOLK	Toolik Lake Re	6.61	348	P	Pn	09 53 22.8	-0.4
	baz=164						
SIT	Sitka	7.44	130	*e*Pn	Pn	09 53 34.8	+0.3
INK	Inuvik	7.96	35	*e*Pn	Pn	09 53 40.2	-1.5
INK				*e*Sn	Sn	09 55 09.0	-2.6
DLBC	Dease Lake	8.71	109	*e*Lg	Lg	09 56 25.8	
WRAK	Wrangell Islan	9.02	124	*e*Pn	Pn	09 53 58.2	+2.0
ANM	Nome	9.06	293	*e*Pn	Pn	09 53 57.0	+0.3
GAMB	Gambell	11.82	289	*e*Pn	Pn	09 54 35.0	+0.6
ATKA	Atka Island	18.19	249	*e*P	P	09 55 59.2	+0.5
PD31	Pinedale Array	28.86	116	*e*P	P	09 57 48.0	+3.3
PDAR	Pinedale Array	28.86	116	P	P	09 57 48.0	+3.3
	0.4nm,0.7s,baz=330,slow=6.3,SNR=4.4						
NV01	Mina Array Sit	29.19	132	*e*P	P	09 57 51.4	+3.7
NVAR	Mina Array Bea	29.19	132	P	P	09 57 51.4	+3.7
	0.7nm,0.9s,baz=318,slow=6.4,SNR=3.3						

IDC 05 10:13:56.8±8.2, 21°.57S×175°.92W, h500^{km}±203^{km}, mb3.0/3, mb1 3.2/4, mb1mx2.8/30, mbtmp4.1/4, Error ellipse: s-maj=346.5km s-min=28.3km az=74.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	17.68	198	P	P	10 17 34.0	-0.1
	1.5nm,0.3s,baz=333,slow=5.2,SNR=12						
URZ				S	S	10 20 32.3	+0.8
	0.6nm,0.3s,baz=258,slow=23,SNR=7.0						
STKA	Stephens Creek	39.09	246	P	P	10 20 40.5	+0.1
	1.4nm,0.5s,baz=91,slow=11,SNR=3.6						
ASAR	Alice Springs	46.17	257	P	P	10 21 36.3	+0.1
	1.6nm,0.8s,baz=96,slow=7.9,SNR=16						
WRA	Warramunga Arr	46.38	263	P	P	10 21 37.3	-0.5
	0.3nm,0.3s,baz=101,slow=7.6,SNR=9.1						

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*ISCJB **05** 10:37:49.1±0.2, 6°.79N±0°.01×73°.04W±0°.02, h158^{km}±1^{km}, mb4.5/267, Error ellipse: s-maj=3.3km s-min=2.4km az=13.1*

*IDC **05** 10:37:49.9±0.5, 6°.81N×72°.96W, h155^{km}±5^{km}, mb4.2/14, mb1 4.3/19, mb1mx4.1/31, mbtmp4.7/19, Error ellipse: s-maj=9.5km s-min=7.0km az=119.0*

*NEIC **05** 10:37:49.8±1.5, 6°.78N×72°.96W, h155^{km}±5^{km}, mb4.5/280, Error ellipse: s-maj=9.4km s-min=8.1km az=120.0*

*RSNC **05** 10:37:51.0±1.0, 6°.84N×73°.15W, h149^{km}±3^{km}, ML4.6, Mw4.7*

ISC 05 10:37:49.9±0.3, 6°.83N±0°.03×73°.07W±0°.03, h154^{km}±2^{km}, h155^{km}:pP-P, n735, $\sigma 1^{s}19$/802, mb4.5/267, 6C-8D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	205⇑	*i*P	Pn	10 38 11.2	-0.1
BARC				*e*S	Sn	10 38 26.6	-0.8
BARC				*i*		10 38 27.1	
	comp=Z,8μm,0.3s						
GIRC	Giron, Santand	0.28	334	*e*P	Pn	10 38 11.1	0.0
GIRC				*e*S	Sn	10 38 26.5	-0.8
PAMC	Pamplona, Colo	0.63	36⇑	*e*P	Pn	10 38 13.8	+0.8
PAMC				*e*S	Sn	10 38 30.7	0.0
PAMC				*i*		10 38 33.7	
	comp=Z,13μm,0.5s						
BRRC	Barranca, Sant	0.69	294⇑	*i*P	Pn	10 38 12.9	0.0
BRRC				*e*S	Sn	10 38 29.5	-0.8
BRRC				*i*		10 38 33.6	
	comp=Z,9μm,0.2s						
RUSC	La Rusia	0.93	181⇓	*i*P	Pn	10 38 15.1	0.0
RUSC				*e*S	Sn	10 38 33.5	-0.8
RUSC				*i*		10 38 35.7	
	comp=Z,2μm,0.3s						
TAMC	Tame, Arauca	1.33	107⇓	*i*P	Pn	10 38 19.6	+1.4
TAMC				*e*S	Sn	10 38 41.1	+1.3
TAMC				*i*		10 38 42.9	
	comp=Z,1μm,0.5s						
PTBC	PUERTO BERRIO,	1.41	258	*e*P	Pn	10 38 17.7	-1.2
PTBC				*e*S	Sn	10 38 38.5	-2.5
PTBC				*i*		10 38 44.0	
	comp=Z,5μm,0.2s						
OCAC	Ocana	1.42	350⇑	*i*P	Pn	10 38 19.0	-0.2
OCAC				*e*S	Sn	10 38 40.3	-1.4
OCAC				*i*		10 38 46.1	
	comp=Z,7μm,0.4s						
YOPC	Yopal, Colombi	1.60	156⇓	*i*P	Pn	10 38 22.1	+1.0
YOPC				*e*S	Sn	10 38 46.5	+1.6
YOPC				*i*		10 38 47.5	
	comp=Z,2μm,0.3s						
CTAU	Tausa, Cundina	1.88	211	*e*P	Pn	10 38 29.1	+4.5
CTAU				*e*S	Sn	10 38 53.9	+2.8
CTAU				*i*		10 39 02.1	
	comp=Z,3μm,0.5s						
ZARC	Zaragoza, Cauc	1.89	291	*e*P	Pn	10 38 23.6	-0.5
ZARC				*e*S	Sn	10 38 49.5	-0.9
ZARC				*i*		10 38 55.6	
	comp=Z,9μm,0.5s						
AGZ	La Independenc	1.97	162	*e*P	Pn	10 38 25.6	+0.5
AGZ				*e*S	Sn	10 38 50.7	-1.4
NORC	Norcasia	2.19	235	*e*P	Pn	10 38 27.2	-0.3
NORC				*e*S	Sn	10 38 55.1	-1.4
NORC				*i*		10 39 02.4	
	comp=Z,2μm,0.2s						
SMLC	San Martn de	2.20	333	*e*P	Pn	10 38 26.8	-0.9
SMLC				*e*S	Sn	10 38 55.8	-1.0
CHIC	Chingaza	2.28	197	*e*P	Pn	10 38 29.3	+0.2
CHIC				*e*S	Sn	10 38 58.9	-0.3
CHIC				*i*		10 39 07.1	
	comp=Z,2μm,0.4s						
ROSC	El Rosal	2.33	212	P	Pn	10 38 31.1	+1.4
	comp=Z,258nm,0.3s,baz=326,slow=4.5,SNR=306						
ROSC				S	Sn	10 39 02.2	+1.9
	comp=Z,659nm,0.3s,baz=297,slow=22,SNR=16						
ROSC	El Rosal	2.33	212	*e*P	Pn	10 38 31.0	+1.3
ROSC				*e*S	Sn	10 38 59.9	-0.3
CVER	Cruz Verde, Cu	2.50	204	*e*P	Pn	10 38 32.7	+1.0
HELC	Santa Helena	2.52	256	*e*P	Pn	10 38 31.2	-0.7
HELC				*e*S	Sn	10 39 03.6	-0.6
HELC				*i*		10 39 09.5	
	comp=Z,3μm,0.3s						
VILC	Villavicencio,	2.77	193	*e*P	Pn	10 38 34.7	-0.1
VILC				*e*S	Sn	10 39 09.3	-0.1
VILC				*i*		10 39 17.4	
	comp=Z,3μm,0.5s						
GUY2C	Guyana, Caldas	2.78	235	*e*P	Pn	10 38 36.2	+0.9
GUY2C				*e*S	Sn	10 39 09.2	-1.0

GUY2C				*i*		10 39 19.7	
	comp=Z,3µm,0.8s						
RREF	El Recreo	2.96	230	*e*P	Pn	10 38 37.6	0.0
RREF				*e*S	Sn	10 39 14.1	-0.4
RREF				*i*		10 39 24.6	
	comp=Z,2µm,0.3s						
CODC	Agustn Codazz	3.11	353⇑	*e*P	Pn	10 38 38.2	-0.6
CODC				*e*S	Sn	10 39 16.3	-0.5
CODC				*i*		10 39 23.1	
	comp=Z,830nm,0.6s						
SDV	Santo Domingo	3.16	50	P	Pn	10 38 40.6	+0.8
	comp=Z,247nm,0.3s,baz=212,slow=4.8,SNR=384						
SDV				S	Sn	10 39 17.1	-1.2
	comp=Z,182nm,0.3s,baz=230,slow=18,SNR=21						
SDV	Santo Domingo	3.16	50	*e*Pn	Pn	10 38 40.5	+0.7
SDV				*e*Sn	Sn	10 39 17.3	-1.1
SDV	Santo Domingo	3.16	50⇓	*e*P	Pn	10 38 40.6	+0.8
ARGC	Ariguani, Magd	3.23	339	*e*P	Pn	10 38 41.2	+0.8
ARGC				*e*S	Sn	10 39 18.7	-0.8
ARGC				*i*		10 39 21.5	
	comp=Z,1µm,0.4s						
PRAC	Prado	3.58	210	*e*P	Pn	10 38 44.6	-0.4
PRAC				*e*S	Sn	10 39 27.1	-0.7
PRAC				*i*		10 39 32.1	
	comp=Z,3µm,0.4s						
ORTC	Ortega, Tolima	3.62	217	*e*P	Pn	10 38 45.4	-0.1
ORTC				*e*S	Sn	10 39 28.3	-0.2
ORTC				*i*		10 39 35.7	
	comp=Z,2µm,0.5s						
CVALL	Valledupar, Ce	3.66	357	*e*P	Pn	10 38 45.0	-1.0
CVALL				*e*S	Sn	10 39 30.7	+1.2
PLMC	San Jos del P	3.72	239	*e*P	Pn	10 38 47.0	+0.2
GUVC	San Jose del G	4.28	174	*e*P	Pn	10 38 53.5	-0.5
GUVC				*e*S	Sn	10 39 43.4	-0.5
GUVC				*i*		10 39 47.9	
	comp=Z,1µm,0.3s						
YOTC	Yotoco, Valle	4.31	229⇓	*e*P	Pn	10 38 53.7	-0.9
SMRC	Santa Marta, M	4.46	345	*e*P	Pn	10 38 55.5	-0.8
MACC	Macarena, Meta	4.71	189	*e*P	Pn	10 38 58.4	-1.3
MACC				*e*S	Sn	10 39 49.2	-5.0
MACC				*i*		10 39 57.6	
	comp=Z,685nm,0.6s						
BETC	Betania	4.75	210	*e*P	Pn	10 38 59.6	-0.6
MARP	Paez Belalcaza	4.89	216	*e*P	Pn	10 39 02.0	-0.3
MARP				*i*		10 40 03.5	
	comp=Z,397nm,0.5s						
URIC	Uribia, Colomb	4.96	12⇑	*e*P	Pn	10 39 01.3	-1.6
MALC	Bahia Malaga	5.08	237	*e*P	Pn	10 39 05.5	+1.0
PCON	Cinco Dias	5.56	217	*e*P	Pn	10 39 12.4	+0.9
POPC	Popayan, Colom	5.57	220	*e*P	Pn	10 39 10.9	-0.3
SOTA	Rioblanco	5.84	217	*e*P	Pn	10 39 16.4	+1.3
BCIP	Isla Barro Col	7.09	290	*e*Pn	Pn	10 39 29.0	-2.2
BCIP				*e*Sn	Sn	10 40 53.6	+2.7
PCRV	Puerto La Cruz	8.98	68	P	Pn	10 39 55.2	-1.3
	comp=Z,5.1nm,0.3s,baz=254,slow=1.9,SNR=28						
PCJ	Portland Cotta	11.56	340	*i* P	Pn	10 40 32.5	+2.1
LGNH	Logne	11.62	2	*e*Pn	Pn	10 40 31.7	+0.5
LGNH				*e*Sn	Sn	10 42 37.9	-2.0
HOJ	Hope	11.67	342	*i* P	Pn	10 40 34.6	+2.7
HOJ				*i* S	Sn	10 42 00.0	-41
MCJ	Malvern	11.91	338⇓	*i*P	Pn	10 40 37.6	+2.4
MTDJ	Mount Denham	12.14	339	*e*Pn	Pn	10 40 39.2	+1.2
MTDJ				*e*Sn	Sn	10 42 50.4	-2.0
MTDJ	Mount Denham	12.14	339⇓	*i*P	Pn	10 40 40.4	+2.4
BBJ	Bamboo Saint A	12.19	341	*i* P	P	10 40 41.8	-3.0
SDDR	Presa de Saban	12.21	8	*e*Pn	Pn	10 40 38.2	-0.7
SDDR				*e*Sn	Sn	10 42 54.3	+0.3
JTS	Las Juntas de	12.24	287	*e*Sn	Sn	10 42 55.4	+0.5
ESPN	Las Esperanzas	12.29	297	*e*Pn	Pn	10 40 41.6	+1.7
ESPN				*e*Sn	Sn	10 42 55.6	-0.4
GRGR	Grenville	12.43	64	*e*Pn	Pn	10 40 40.5	-1.3
MPR	Mayaguez	12.71	27	*e*Pn	Pn	10 40 44.0	-1.3
ACON	Acoyapa	12.98	294	*e*Pn	Pn	10 40 50.7	+1.8
AOPR	Arecibo Observ	13.00	28	*e*Pn	Pn	10 40 47.9	-1.2
GTBY	Guantanamo Bay	13.17	352	*e*Pn	Pn	10 40 52.8	+1.6
GTBY				*e*Sn	Sn	10 43 14.0	-3.1
GTBY	Guantanamo Bay	13.17	352	*i* P	P	10 40 54.7	-0.9
HUMP	Col San Antoni	13.27	31	*e*Pn	Pn	10 40 49.3	-3.2
SVB	Belmont	13.28	60	*e*Pn	Pn	10 40 50.9	-1.8
CBYP	Canovanas	13.37	31	*e*Pn	Pn	10 40 53.1	-0.8
MTP	Monte Pirata	13.39	33	*e*Pn	Pn	10 40 54.5	+0.5
CUPR	Culebra, Puert	13.70	33	*e*Pn	Pn	10 40 56.8	-1.2
STVI	Saint Thomas	13.92	34	*e*Pn	Pn	10 41 00.8	+0.1
FDF	Fort de France	14.10	55	*e*Pn	Pn	10 41 01.8	-1.2
CBCY	The Bluff, Cay	14.38	334	*e*P	P	10 41 09.0	-0.1
FSCY	Frank Sound, G	14.71	328	*e*Pn	P	10 41 12.0	-0.6
PTGA	Pitinga	15.08	119	P	Pn	10 41 14.6	-0.7
	comp=Z,0.4nm,0.3s,baz=290,slow=16,SNR=7.6						
PTGA	Pitinga	15.08	119	*e*Pn	Pn	10 41 13.5	-1.8
TGUH	Tegucigalpa,Un	15.70	298	*e*P	P	10 41 24.4	+0.5
	comp=Z,27nm,0.9s						
PAYG	Puerto Ayora	18.73	247	*e*P	P	10 41 57.6	+0.6
	comp=Z,40nm,0.9s						
APG	El Apazote	18.90	297	P	P	10 41 58.8	-0.3
	comp=Z,0.8nm,0.3s,baz=146,slow=2.6,SNR=7.4						
TEIG	Tepich	19.87	314	*e*P	Pn	10 42 11.2	-1.3
	comp=Z,28nm,0.8s						
061Z	Ochoppi	20.36	339	*e*P	P	10 42 14.8	+0.3
	comp=Z,187nm,1.2s						
MDP	Montagnes des	20.39	94	P	P	10 42 16.6	+1.6
	comp=Z,20nm,1.0s,baz=265,slow=10,SNR=6.2						
CCIG	Comitan	20.89	298	*e*P	P	10 42 20.5	0.0
	comp=Z,14nm,0.7s						
LPAZ	La Paz	23.48	168	P	P	10 42 45.5	-1.1
	comp=Z,7.8nm,0.6s,baz=348,slow=10,SNR=34						
LPAZ	La Paz	23.48	168	*e*P	P	10 42 45.3	-1.2
	comp=Z,11nm,0.8s						
658A	Bunnell	23.76	342	*e*P	P	10 42 50.3	+2.0
	comp=Z,97nm,1.4s						
656A	Willston	24.13	339	*e*P	P	10 42 54.1	+2.4
	comp=Z,87nm,1.3s						
SIV	San Ignacio	25.60	152	P	P	10 43 03.2	-1.9
	comp=Z,7.7nm,0.8s,baz=338,slow=9.5,SNR=38						
MNMC	Minye Minye	26.02	172	*e*P	P	10 43 07.1	-2.0
	comp=Z,14nm,1.4s						
GO01	Chusmiza	26.60	172	*e*P	P	10 43 12.3	-2.3
	comp=Z,8.8nm,0.7s						
PB11	IPOC Station P	26.63	173	*e*P	P	10 43 12.9	-1.6
	comp=Z,18nm,1.1s						
TLIG	Tlapa	27.07	296	*e*P	P	10 43 16.1	-2.4
	comp=Z,45nm,1.6s						
Z57A	Bowman	27.27	346	P	P	10 43 21.4	+1.4
	baz=163						
251A	Midway	27.65	337	P	P	10 43 24.8	+1.6
	baz=153						
Z54A	Sparta	27.80	342	P	P	10 43 26.1	+1.5
	baz=159						
250A	Grady	27.89	335	*e*P	P	10 43 27.4	+1.9
	comp=Z,49nm,1.5s						
250A	Grady	27.89	335	P	P	10 43 27.3	+1.9
	baz=151						
152A	Waverly Hall	27.90	339	*e*P	P	10 43 27.3	+1.7
	comp=Z,9.3nm,0.8s						
152A	Waverly Hall	27.90	339	P	P	10 43 27.0	+1.5
	baz=155						
PB01	IPOC Station P	27.92	173	*e*P	P	10 43 23.6	-2.3
	comp=Z,8.9nm,0.6s						
151A	Opelika	28.00	338	P	P	10 43 28.1	+1.7
	baz=153						
Z53A	Monticello	28.07	341	P	P	10 43 28.8	+1.8
	baz=157						
GOGA	Godfrey	28.16	341	*e*P	P	10 43 28.8	+1.0
	comp=Z,14nm,1.6s						
GOGA	Godfrey	28.16	341	P	P	10 43 29.5	+1.8
	baz=158						
Y55A	Saluda	28.18	344	P	P	10 43 29.8	+1.8
	baz=161						
X58A	Rowland	28.19	349	P	P	10 43 29.6	+1.5
	baz=167						
Z52A	Williamson	28.27	340	P	P	10 43 30.8	+2.0
	baz=156						
JSC	Jenkinsville	28.35	346	*e*P	P	10 43 31.1	+1.6
	comp=Z,15nm,1.3s						
X56A	White Oak	28.50	346	P	P	10 43 32.0	+1.3
	baz=163						
BIRD	Birdtown, Kers	28.51	347	*e*P	P	10 43 31.9	+1.0
	comp=Z,13nm,1.3s						
X55A	Gracelyn & Ava	28.62	345	P	P	10 43 33.4	+1.5
	baz=162						
149A	Jones	28.65	335	P	P	10 43 33.7	+1.6
	baz=150						
V62A	Hyde County Ai	28.72	355	P	P	10 43 34.6	+1.9
	baz=174						
Y52A	Lilburn	28.76	341	*e*P	P	10 43 34.9	+1.7
	comp=Z,6.6nm,0.4s						
Y52A	Lilburn	28.76	341	P	P	10 43 35.0	+1.8
	baz=157						
Z50A	Ashland	28.88	337	*e*P	P	10 43 34.7	+0.5
	comp=Z,12nm,0.5s						
Z50A	Ashland	28.88	337	P	P	10 43 36.0	+1.8
	baz=153,SNR=7.5						
X54A	Belton	28.89	344	P	P	10 43 36.0	+1.7
	baz=160						
PAULI	Pauline	29.00	345	*e*P	P	10 43 37.2	+2.0
	comp=Z,4.8nm,0.7s						
V61A	Roper	29.01	354	*e*P	P	10 43 35.7	+0.5
	comp=Z,35nm,1.0s						
Z49A	Columbiana	29.06	336	P	P	10 43 37.7	+1.9
	baz=152,SNR=6.2						
LRAL	Lakeview Retre	29.11	335	*e*P	P	10 43 37.1	+0.9
	comp=Z,6.4nm,0.9s						
LRAL	Lakeview Retre	29.11	335	P	P	10 43 38.0	+1.8
	baz=150						
X53A	Estanollee	29.12	342	P	P	10 43 38.1	+1.8
	baz=159						
Y51A	Rockmart	29.14	339	P	P	10 43 38.1	+1.6
	baz=155						
V59A	Middlesex	29.19	351	P	P	10 43 38.5	+1.6
	baz=169						
W54A	Cherokee Point	29.35	345	P	P	10 43 40.0	+1.7
	baz=161						
147A	Livingston	29.35	333	*e*P	P	10 43 39.6	+1.3
	comp=Z,21nm,1.2s						
147A	Livingston	29.35	333	P	P	10 43 39.8	+1.4
	baz=148						
Y50A	Piedmont	29.37	338	P	P	10 43 40.3	+1.7
	baz=154						
X52A	Dahlonega	29.39	342	P	P	10 43 40.5	+1.7
	baz=158						
LVC	Limon Verde	29.54	172	*e*P	P	10 43 38.7	-1.9
	comp=Z,4.6nm,0.9s						
Y49A	Blount Mountai	29.60	337	*e*P	P	10 43 42.3	+1.8
	comp=Z,9.8nm,0.6s						
Y49A	Blount Mountai	29.60	337	P	P	10 43 42.0	+1.4
	baz=152						
V56A	Mocksville	29.64	348	P	P	10 43 43.0	+2.1
	baz=165						
X51A	Calhoun	29.67	340	P	P	10 43 42.7	+1.5
	baz=156						
U58A	Oxford	29.85	351	P	P	10 43 44.4	+1.7
	baz=169						
W52A	Murphy	29.85	342	*e*P	P	10 43 44.4	+1.6
	comp=Z,9.0nm,0.8s						
W52A	Murphy	29.85	342	P	P	10 43 44.7	+1.8
	baz=158						
V54A	Nebo	29.94	345	P	P	10 43 45.4	+1.8
	baz=162						
Y48A	Jasper	29.95	336	P	P	10 43 45.0	+1.4
	baz=151,SNR=5.0						
U57A	Blanch	30.02	350	P	P	10 43 45.6	+1.4
	baz=167						
VBMS	Vicksburg	30.05	329	*e*P	P	10 43 46.2	+1.7
	comp=Z,33nm,0.9s						
VBMS	Vicksburg	30.05	329	P	P	10 43 46.2	+1.7
	baz=144						
V53A	Saluda	30.07	344	*e*P	P	10 43 46.6	+1.9
	comp=Z,3.5nm,0.8s						
V53A	Saluda	30.07	344	P	P	10 43 46.2	+1.5
	baz=160						
X49A	Woodville	30.14	338	P	P	10 43 46.9	+1.5
	baz=153						
W51A	Cleveland	30.18	341	P	P	10 43 47.4	+1.8
	baz=156						
T59A	Double "B" Far	30.28	353	*e*P	P	10 43 47.6	+1.1
	comp=Z,4.9nm,0.6s						
T59A	Double "B" Far	30.28	353	P	P	10 43 47.9	+1.3
	baz=171						
X48A	Hartselle	30.37	337	*e*P	P	10 43 48.7	+1.4
	comp=Z,11nm,0.8s						
X48A	Hartselle	30.37	337	P	P	10 43 48.8	+1.5
	baz=152,SNR=7.0						
T58A	Grand View Acr	30.39	351	P	P	10 43 48.7	+1.2
	baz=169						
W50A	Signal Mountai	30.40	340	*e*P	P	10 43 49.0	+1.3
	comp=Z,8.7nm,0.8s						
W50A	Signal Mountai	30.40	340	P	P	10 43 49.5	+1.8
	baz=155						
V52A	Sevierville	30.45	343	P	P	10 43 50.0	+2.0
	baz=159						
T57A	Hurt	30.56	350	*e*P	P	10 43 50.3	+1.4
	comp=Z,6.1nm,0.8s						
T57A	Hurt	30.56	350	P	P	10 43 50.7	+1.7
	baz=168						
U54A	Nelsons Funny	30.62	346	*e*P	P	10 43 51.3	+1.8
	comp=Z,16nm,0.8s						
U54A	Nelsons Funny	30.62	346	P	P	10 43 51.4	+1.8
	baz=163,SNR=5.2						
V51A	Loudon	30.64	342	*e*P	P	10 43 50.6	+0.9
	comp=Z,11nm,0.9s						
V51A	Loudon	30.64	342	P	P	10 43 51.7	+2.0
	baz=158						
U53A	Fall Branch	30.66	345	P	P	10 43 51.6	+1.6
	baz=161						
W49A	Belvidere	30.66	338	P	P	10 43 51.7	+1.7
	baz=154						
T56A	Rocky Mt	30.73	349	P	P	10 43 52.1	+1.6
	baz=166						
X47A	Russelville	30.75	336	P	P	10 43 52.0	+1.3
	baz=150,SNR=5.8						
V50A	Pikevile	30.76	341	P	P	10 43 52.5	+1.8
	baz=156						
S61A	Accomac	30.80	356	P	P	10 43 52.8	+1.7
	baz=175						
U52A	Thorn Hill	30.90	344	P	P	10 43 53.7	+1.7
	baz=160						
W48A	Pulaski	30.93	338	P	P	10 43 53.9	+1.6
	baz=152,SNR=5.3						
T55A	Pulaski	30.96	348	P	P	10 43 54.5	+1.9
	baz=165						
BLA	Blacksburg	30.98	349	P	P	10 43 54.4	+1.7
	baz=166						
S58A	Poland Farm, P	30.98	352	P	P	10 43 54.1	+1.5
	baz=170						
LNIG	Linares	31.00	308	*e*P	P	10 43 52.7	-0.3
	comp=Z,5.8nm,0.9s						
U51A	La Follette	31.07	343	P	P	10 43 55.0	+1.5
	baz=158						
T54A	Tazewell	31.08	347	P	P	10 43 55.3	+1.7
	baz=163						
X46A	Booneville	31.09	335	P	P	10 43 54.9	+1.3
	baz=149						
TZTN	Tazewell	31.09	344	P	P	10 43 55.3	+1.7
	baz=159						
V49A	McMinnville	31.12	340	P	P	10 43 55.5	+1.6
	baz=155						
T53A	Wise	31.23	345	P	P	10 43 56.6	+1.6
	baz=162						
PLAL	Pickwick Lake	31.24	336	*e*P	P	10 43 55.6	+0.6
	comp=Z,10nm,0.9s						
S57A	Dark Hollow, R	31.25	351	*e*P	P	10 43 55.9	+0.8
	comp=Z,8.2nm,0.8s						
S57A	Dark Hollow, R	31.25	351	P	P	10 43 56.8	+1.7
	baz=168						
S56A	Natural Bridge	31.27	350	P	P	10 43 57.0	+1.7
	baz=167						
W47A	Westpoint	31.28	337	P	P	10 43 56.8	+1.4
	baz=151,SNR=8.8						
U50A	Jamestown	31.36	342	P	P	10 43 57.9	+1.9
	baz=157						
V48A	Smith Brothers	31.42	338	*e*P	P	10 43 57.3	+0.7
	comp=Z,19nm,0.8s						
V48A	Smith Brothers	31.42	338	P	P	10 43 58.3	+1.8
	baz=153,SNR=15						
T52A	Hallie	31.47	345	*e*P	P	10 43 58.7	+1.6
	comp=Z,9.3nm,0.6s						
T52A	Hallie	31.47	345	P	P	10 43 58.6	+1.6
	baz=161						
S55A	Lewisburg	31.54	349	P	P	10 43 59.3	+1.7
	baz=166						
CLTN	Cedars of Leba	31.56	339	*e*P	P	10 43 59.3	+1.5
	comp=Z,8.0nm,1.2s						
T51A	Gray	31.60	343	P	P	10 43 59.8	+1.7
	baz=159,SNR=7.3						
S54A	Dingess, Beckl	31.73	348	P	P	10 44 00.9	+1.6
	baz=164						
V47A	Nunnelly	31.76	337	P	P	10 44 00.9	+1.4
	baz=152,SNR=21						
S53A	Williamson	31.80	346	P	P	10 44 01.4	+1.5
	baz=163						
T50A	Nancy	31.91	342	P	P	10 44 02.5	+1.6
	baz=157						
ETX03	FM Road 95, Ga	31.92	324	*e*P	P	10 44 01.8	+0.8
R56A	Bull Pasture M	31.96	351	P	P	10 44 03.1	+1.8
	baz=168						
R55A	Marlinton	31.96	349	P	P	10 44 03.2	+1.9
	baz=167						
NATX	Nacogdoches	31.96	324	*e*P	P	10 44 02.0	+0.6
	comp=Z,34nm,1.3s						
NATX	Nacogdoches	31.96	324	P	P	10 44 02.5	+1.1
	baz=136						
V46A	Holladay	31.97	337	P	P	10 44 03.0	+1.6
	baz=151						
U48A	Cassie Pea, Po	32.01	339	P	P	10 44 03.3	+1.6
	baz=154,SNR=6.6						
R54A	Victor	32.03	348	P	P	10 44 03.7	+1.8
	baz=165						
S52A	Salyersville	32.03	345	P	P	10 44 03.6	+1.7
	baz=161						
CCAR	Cane Creek	32.03	330	*e*P	P	10 44 00.1	-1.8
	comp=Z,14nm,0.7s						
S51A	Beattyville	32.13	344	*e*P	P	10 44 04.7	+2.0
	comp=Z,4.9nm,1.0s						
S51A	Beattyville	32.13	344	P	P	10 44 04.4	+1.7
	baz=160						
WVT	Waverly	32.15	337	*e*P	P	10 44 03.8	+0.8
	comp=Z,13nm,0.9s						
WVT	Waverly	32.15	337	P	P	10 44 03.9	+1.0
	baz=152						
T49A	Edmonton	32.21	341	*e*P	P	10 44 05.1	+1.6
	comp=Z,5.7nm,0.6s						
T49A	Edmonton	32.21	341	P	P	10 44 04.9	+1.5
	baz=156						
U47A	Clarksville	32.22	338	P	P	10 44 04.8	+1.3
	baz=153						
Q58A	Fox Den Farm,	32.24	353	P	P	10 44 05.2	+1.5
	baz=171						
R53A	Hurricane	32.38	347	P	P	10 44 06.5	+1.6
	baz=163						
S50A	Richmond	32.39	343	P	P	10 44 06.6	+1.6
	baz=159						
Q57A	Strasburg	32.42	352	P	P	10 44 06.8	+1.5
	baz=170						
T48A	Bowling Green	32.50	340	P	P	10 44 07.4	+1.4
	baz=155						
ZAIG	Zacatecas	32.52	302	*e*P	P	10 44 08.9	+2.2
	comp=Z,4.1nm,0.9s						
WLAR	White Oak Lake	32.54	328	*e*P	P	10 44 07.3	+0.9
	comp=Z,24nm,1.6s						
Q56A	Snyder Ridge,	32.54	351	P	P	10 44 08.1	+1.7
	baz=168						
T47A	Sharon Grove	32.64	339	*e*P	P	10 44 07.2	0.0
	comp=Z,13nm,0.7s						
T47A	Sharon Grove	32.64	339	P	P	10 44 08.5	+1.3
	baz=153,SNR=7.5						
Q55A	Buckhannon	32.65	350	P	P	10 44 08.7	+1.5
	baz=167						
S49A	Springfield	32.76	342	P	P	10 44 09.6	+1.4
	baz=157,SNR=6.0						
Q54A	Coxs Mills	32.77	349	*e*P	P	10 44 08.3	0.0
	comp=Z,7.1nm,1.1s						
Q54A	Coxs Mills	32.77	349	P	P	10 44 09.9	+1.6
	baz=166						
Q53A	Leroy	32.79	348	P	P	10 44 10.1	+1.6
	baz=164						
833A	Chaparral WMA,	32.82	314	*e*P	P	10 44 08.4	-0.5
	comp=Z,7.8nm,0.6s						
HBAR	Harrisburg	32.84	333	*e*P	P	10 44 10.3	+1.3
	comp=Z,31nm,0.5s						
S48A	Wiedeman Farm,	32.88	341	P	P	10 44 10.3	+1.0
	baz=156,SNR=5.6						
GNAR	Gosnell	32.90	334	*e*P	P	10 44 08.0	-1.5
	comp=Z,26nm,0.5s						
R50A	Paris	32.93	344	*e*P	P	10 44 10.5	+0.8
	comp=Z,8.8nm,0.6s						
R50A	Paris	32.93	344	P	P	10 44 11.6	+1.8
	baz=159						
P56A	Dayton Farm, R	32.95	352	P	P	10 44 11.9	+2.1
	baz=169						
T46A	Princeton	32.97	338	P	P	10 44 11.2	+1.1
	baz=152,SNR=7.5						
X40A	Basin Creek Fa	33.02	329	*e*P	P	10 44 10.6	+0.1
	comp=Z,6.0nm,0.6s						
X40A	Basin Creek Fa	33.02	329	P	P	10 44 11.1	+0.5
	baz=142,SNR=6.1						
Q52A	Bidwell	33.05	347	P	P	10 44 12.2	+1.4
	baz=163						
S47A	Hartford	33.10	340	P	P	10 44 12.3	+1.1
	baz=154,SNR=8.3						
435B	Jarrell	33.10	319	*e*P	P	10 44 11.7	+0.3
	comp=Z,10nm,0.6s						
435B	Jarrell	33.10	319	P	P	10 44 11.9	+0.6
	baz=131						
R49A	Shelbyville	33.19	342	*e*P	P	10 44 12.0	+0.1
	comp=Z,17nm,1.5s						
R49A	Shelbyville	33.19	342	P	P	10 44 13.7	+1.7
	baz=158						
T45A	Paducah	33.24	337	P	P	10 44 13.3	+0.9
	baz=151						
W41B	Gary Mavity, V	33.27	331	*e*P	P	10 44 13.1	+0.4
	comp=Z,3.4nm,0.8s						
W41B	Gary Mavity, V	33.27	331	P	P	10 44 13.4	+0.7
	baz=144						
P54A	Burton	33.30	350	P	P	10 44 15.0	+2.0
	baz=166						
O58A	Lewisberry	33.33	355	P	P	10 44 15.1	+1.9
	baz=173						
Q50A	Georgetown	33.36	344	P	P	10 44 15.2	+1.8
	baz=160						
P53A	Whipple	33.37	348	*e*P	P	10 44 14.4	+0.9
	comp=Z,4.9nm,0.9s						
Q51A	Peebles	33.37	345	*e*P	P	10 44 12.7	-0.9
	comp=Z,8.5nm,0.7s						
Q51A	Peebles	33.37	345	P	P	10 44 15.3	+1.8
	baz=161						
PARMO	Parma	33.38	335	*e*P	P	10 44 12.3	-1.3
	comp=Z,12nm,0.7s						
BDFB	Brasilia	33.38	132	P	P	10 44 14.3	+0.3
	comp=Z,9.3nm,0.6s,baz=295,slow=12,SNR=10						
BDFB	Brasilia	33.38	132	*e*P	P	10 44 13.9	-0.2
	comp=Z,10nm,0.6s						
BDFB				*e*P	P	10 44 14.3	+0.3
WHAR	Wooly Hollow	33.38	331	*e*P	P	10 44 14.4	+0.6
	comp=Z,8.3nm,0.6s						
O60A	Telford	33.41	357	P	P	10 44 15.2	+1.4
	baz=176						
MIAR	Mount Ida	33.45	328	*e*P	P	10 44 14.5	+0.2
	comp=Z,3.4nm,0.7s						
MIAR	Mount Ida	33.45	328	P	P	10 44 14.9	+0.7
	baz=141						
S46A	Don Dixon Farm	33.48	339	P	P	10 44 15.4	+1.0
	baz=153						
WCI	Wyandotte Cave	33.48	341	*e*P	P	10 44 15.2	+0.7
	comp=Z,11nm,0.8s						
WCI	Wyandotte Cave	33.48	341	P	P	10 44 15.8	+1.3
	baz=156						
O57A	Amberson	33.49	354	P	P	10 44 16.4	+1.8
	baz=172						
R48A	Northridge Ran	33.50	342	P	P	10 44 16.2	+1.5
	baz=156						
R47A	Wooly Knot Far	33.62	341	P	P	10 44 16.6	+0.9
	baz=155,SNR=5.5						
O56A	Blue Knob Stat	33.66	352	P	P	10 44 17.4	+1.3
	baz=170						
P52A	Corning	33.66	347	P	P	10 44 17.5	+1.4
	baz=164						
LUPA	Lehigh Univers	33.69	357	*e*P	P	10 44 15.8	-0.5
	comp=Z,2.0nm,1.4s						
O55A	Ligonier	33.70	351	P	P	10 44 18.3	+1.8
	baz=169						
USIN	University of	33.71	339	*e*P	P	10 44 15.4	-1.1
	comp=Z,27nm,1.0s						
P51A	Williamsport	33.73	346	*e*P	P	10 44 18.1	+1.4
	comp=Z,10.0nm,0.6s						
P51A	Williamsport	33.73	346	P	P	10 44 18.2	+1.6
	baz=162						
PBMO	Poplar Bluff	33.76	334	*e*P	P	10 44 17.6	+0.6
	comp=Z,16nm,0.6s						
Q49A	Aurora	33.77	343	P	P	10 44 18.8	+1.8
	baz=158						
FCAR	Ozark Folk Cen	33.79	332	*e*P	P	10 44 17.6	+0.4
	comp=Z,13nm,1.0s						
CPNY	Central Park	33.83	359	*e*P	P	10 44 17.5	0.0
	comp=Z,14nm,0.8s						
R46A	Gibon Southern	33.88	339	P	P	10 44 18.9	+1.0
	baz=154						
SSPA	Standing Stone	33.94	353	P	P	10 44 19.9	+1.5
	baz=171						
Q48A	North Vernon	33.94	342	P	P	10 44 19.5	+1.0
	baz=157						
N60A	Cedar Hill Far	33.95	357	P	P	10 44 20.0	+1.5
	baz=176						

N57A	Milroy baz=172	34.02	354	P	P	10 44 20.5	+1.4
N59A	State Game Lan comp=Z,5.3nm,0.8s	34.03	356	*e*P	P	10 44 21.1	+1.9
N59A	State Game Lan baz=175	34.03	356	P	P	10 44 21.1	+1.9
P50A	Jamestown baz=161,SNR=5.9	34.03	345	P	P	10 44 20.7	+1.4
PAL	Palisades comp=Z,11nm,0.6s	34.04	359	*e*P	P	10 44 21.2	+1.9
PAL	Palisades baz=178	34.04	359	P	P	10 44 20.4	+1.1
W39A	Magazine comp=Z,11nm,0.8s	34.06	329	*e*P	P	10 44 20.2	+0.6
W39A	Magazine baz=141,SNR=7.6	34.06	329	P	P	10 44 20.3	+0.8
S44A	Carbondale baz=150	34.06	337	P	P	10 44 20.6	+1.0
O52A	Adamsville comp=Z,8.5nm,0.7s	34.06	348	*e*P	P	10 44 20.9	+1.4
O52A	Adamsville baz=164	34.06	348	P	P	10 44 21.0	+1.4
O53A	New Philadelph baz=165	34.07	349	P	P	10 44 21.0	+1.5
Q47A	Bedord North L baz=156,SNR=8.6	34.17	341	P	P	10 44 21.7	+1.3
N55A	Marion Center baz=169	34.22	352	P	P	10 44 22.5	+1.6
R45A	Skylar, Fairfi baz=152,SNR=12	34.22	338	P	P	10 44 21.9	+1.0
O51A	Pataskala baz=163	34.26	347	P	P	10 44 23.1	+1.9
N56A	West Decatur baz=171	34.26	353	P	P	10 44 23.1	+1.8
P48A	Milroy baz=158	34.34	343	P	P	10 44 22.8	+0.9
BLO	Bloomington comp=Z,19nm,0.6s	34.41	341	*e*P	P	10 44 24.1	+1.6
ACSO	Alum Creek Sta comp=Z,5.7nm,0.7s	34.43	347	*e*P	P	10 44 23.2	+0.6
ACSO	Alum Creek Sta baz=162	34.43	347	P	P	10 44 23.7	+1.0
O50A	Cable baz=161,SNR=5.7	34.50	346	P	P	10 44 24.5	+1.2
U40A	Yellville baz=144,SNR=28	34.51	331	P	P	10 44 24.2	+0.7
N53A	Lisbon baz=166	34.54	350	P	P	10 44 25.0	+1.3
N54A	Moraine State comp=Z,5.8nm,0.9s	34.55	351	*e*P	P	10 44 24.9	+1.2
N54A	Moraine State baz=168	34.55	351	P	P	10 44 25.0	+1.3
OLIL	Olney comp=Z,21nm,0.4s	34.55	339	*e*P	P	10 44 24.9	+1.2
Q46A	CEJHS Indians, baz=154	34.55	340	P	P	10 44 24.9	+1.2
P47A	Martinsville baz=156,SNR=7.3	34.62	342	P	P	10 44 25.5	+1.2
M59A	Waymart baz=176	34.63	357	P	P	10 44 26.0	+1.6
KSPA	Keystone Colle comp=Z,6.9nm,0.6s	34.67	356	*e*P	P	10 44 25.4	+0.8
N52A	McGinn’s Farm, baz=165	34.71	348	P	P	10 44 26.7	+1.7
Q45A	Warren Harvey, baz=153,SNR=5.9	34.71	339	P	P	10 44 25.8	+0.7
M56A	Emporium baz=171	34.81	353	P	P	10 44 27.7	+1.8
M55A	Ridgway baz=170	34.87	353	P	P	10 44 27.8	+1.4
N50A	Nevada baz=162	34.98	347	P	P	10 44 28.8	+1.5
HHAR	Hobbs comp=Z,6.0nm,0.5s	34.99	330	*e*P	P	10 44 27.1	-0.5
O48A	Farmland baz=159	35.00	344	P	P	10 44 28.5	+0.9
M54A	Oil Creek Stat comp=Z,12nm,1.1s	35.03	351	*e*P	P	10 44 27.9	+0.1
M54A	Oil Creek Stat baz=168	35.03	351	P	P	10 44 29.3	+1.4
P46A	Rosedale baz=155	35.04	341	P	P	10 44 29.0	+1.2
M53A	WI Miller and baz=167	35.13	350	P	P	10 44 29.8	+1.2
P45A	Graceland, Par comp=Z,21nm,1.0s	35.13	340	*e*P	P	10 44 28.3	-0.4
P45A	Graceland, Par baz=154,SNR=12	35.13	340	P	P	10 44 29.4	+0.7
CCM	Cathedral Cave comp=Z,25nm,0.6s	35.19	335	*e*P	P	10 44 29.8	+0.6
CCM	Cathedral Cave baz=148	35.19	335	P	P	10 44 29.9	+0.6
O47A	Sheridan baz=157	35.28	343	P	P	10 44 31.0	+1.0
M51A	Elyria baz=164	35.31	348	P	P	10 44 31.9	+1.7
BINY	Binghamton baz=175	35.32	356	P	P	10 44 31.9	+1.6
M52A	Chesterland baz=166	35.35	349	P	P	10 44 31.4	+0.9
N49A	Columbus Grove comp=Z,9.2nm,1.1s	35.37	345	*e*P	P	10 44 31.9	+1.1
N49A	Columbus Grove baz=161	35.37	345	P	P	10 44 31.8	+1.1
L55A	Hinsdale baz=171	35.53	353	P	P	10 44 33.6	+1.5
N48A	Decatur baz=159	35.53	344	P	P	10 44 33.0	+0.9
HRV	Adam Dziewonsk baz=182	35.56	2	P	P	10 44 33.6	+1.3
L53A	Girard baz=168	35.56	351	P	P	10 44 33.7	+1.3
M50A	Fremont baz=163	35.56	347	P	P	10 44 33.7	+1.4
ABTX	Abilene, Hawle comp=Z,8.2nm,0.8s	35.63	320	*e*P	P	10 44 33.9	+0.8
ABTX	Abilene, Hawle baz=130	35.63	320	P	P	10 44 33.5	+0.4
TUL1	Leonard comp=Z,7.7nm,0.8s	35.66	327	*e*P	P	10 44 33.1	-0.2
TUL1	Leonard baz=139	35.66	327	P	P	10 44 33.2	0.0
SFIN	Lafayette comp=Z,33nm,0.5s	35.69	341	*e*P	P	10 44 34.4	+1.0
SFIN	Lafayette baz=156,SNR=16	35.69	341	P	P	10 44 34.4	+1.0
L54A	Sinclairville baz=169	35.69	352	P	P	10 44 35.8	+2.3
N47A	Urbana baz=158	35.73	344	P	P	10 44 34.7	+0.8
TRY	Troy comp=Z,30nm,1.6s	35.76	359	*e*P	P	10 44 33.6	-0.4
TRY				*e*pP	pP	10 45 08.8	+1.0
TRY				*e*sP	sP	10 45 23.8	-2.0
O45A	Potomac baz=154	35.78	341	P	P	10 44 34.7	+0.6
P43A	Skaggs, Pawnee baz=151,SNR=5.1	35.86	338	P	P	10 44 35.4	+0.4
O44A	Mansfield baz=153	35.94	340	P	P	10 44 35.8	+0.2
K55A	Perry baz=171	36.03	354	P	P	10 44 37.0	+0.7
M48A	Edgerton comp=Z,9.4nm,0.5s	36.04	345	*e*P	P	10 44 37.1	+0.8
M48A	Edgerton baz=160	36.04	345	P	P	10 44 37.6	+1.2
N46A	Monticello baz=156	36.05	342	P	P	10 44 37.4	+0.8
L50A	Kingsville baz=163	36.12	348	P	P	10 44 38.4	+1.3
M47A	Cromwell baz=158	36.16	344	P	P	10 44 38.3	+0.8
N45A	Kentland baz=155	36.25	341	P	P	10 44 38.9	+0.7
L49A	Milan baz=162	36.39	347	P	P	10 44 40.5	+1.1
L48A	N Adams baz=161	36.40	346	P	P	10 44 40.2	+0.7
N44A	Piper City baz=154	36.40	341	P	P	10 44 39.7	+0.2
TXAR	Lajitas Array comp=Z,4.0nm,0.6s,baz=128,slow=9.1,SNR=61	36.49	312	P	P	10 44 41.0	+0.4
TXAR	comp=Z,0.9nm,0.6s,baz=120,slow=8.6,SNR=2.8			pP	pP	10 45 14.6	+0.7
TXAR	comp=Z,0.8nm,0.6s,baz=133,slow=5.1,SNR=4.9			PcP	PcP	10 47 02.6	+1.5
TX31	Lajitas Ar. Si comp=Z,4.4nm,0.8s	36.50	312	*e*P	P	10 44 41.1	+0.5
TX31				*e*pP	pP	10 45 14.6	+0.7
MEDO	Medina comp=Z,7.9nm,0.8s	36.50	353	*e*P	P	10 44 39.9	-0.4
MEDO				*e*pP	pP	10 45 13.8	-0.4
MEDO				*e*sP	sP	10 45 28.3	-3.9
MEDO	Medina baz=171	36.50	353	P	P	10 44 41.8	+1.5
WMOK	Wichita Mounta comp=Z,5.3nm,0.6s	36.50	323	*e*P	P	10 44 40.0	-0.5
WMOK				*e*pP	pP	10 45 13.1	-0.7
WMOK				*e*sP	sP	10 45 30.7	-0.8
WMOK	Wichita Mounta baz=134,SNR=6.5	36.50	323	P	P	10 44 40.0	-0.5
J55A	Hilton comp=Z,5.7nm,0.6s	36.53	354	*e*P	P	10 44 40.9	+0.4
J55A				*e*pP	pP	10 45 13.5	-1.0
J55A	Hilton baz=172	36.53	354	P	P	10 44 41.7	+1.1
AAM	Ann Arbor comp=Z,21nm,0.4s	36.55	347	*e*P	P	10 44 43.3	+2.5
HDIL	Hopedale comp=Z,18nm,0.6s	36.59	339	*e*P	P	10 44 41.2	+0.1
HDIL	Hopedale baz=152,SNR=5.9	36.59	339	P	P	10 44 40.9	-0.2
L47A	Sherwood baz=159,SNR=5.4	36.62	345	P	P	10 44 42.0	+0.6
K50A	Casco comp=Z,22nm,0.9s	36.78	348	*e*P	P	10 44 44.1	+1.4
K50A	Casco baz=164	36.78	348	P	P	10 44 43.6	+0.9
J52A	Paris baz=168	36.85	351	P	P	10 44 44.3	+1.0
HPIG	comp=Z,5.6nm,0.5s	36.86	307	*e*P	P	10 44 44.2	+0.3
N43A	Stutzman Famil baz=153	36.88	340	P	P	10 44 44.2	+0.7
L46A	Eue Claire comp=Z,28nm,0.4s	36.95	344	*e*P	P	10 44 45.1	+0.9
L46A	Eue Claire baz=158	36.95	344	P	P	10 44 45.0	+0.9
NCB	Newcomb comp=Z,5.5nm,1.3s	37.01	359	*e*P	P	10 44 47.2	+2.6
PECO	Prince Edward comp=Z,3.3nm,0.8s	37.12	355	*e*P	P	10 44 46.0	+0.5
PECO	Prince Edward baz=173	37.12	355	P	P	10 44 46.9	+1.4
ACTO	Acton baz=168	37.15	352	P	P	10 44 47.3	+1.5
K47A	Vermontville baz=160	37.22	345	P	P	10 44 47.1	+0.7
DRWO	Darlington Wes baz=170	37.23	353	P	P	10 44 47.7	+1.2
WLVO	Wesleyville baz=171,SNR=5.4	37.24	354	P	P	10 44 47.8	+1.2
M43A	Waltham Townsh baz=153	37.25	340	P	P	10 44 47.2	+0.5
N41A	Harden Midland comp=Z,15nm,0.8s	37.29	337	*e*P	P	10 44 47.1	0.0
N41A	Harden Midland baz=150,SNR=5.6	37.29	337	P	P	10 44 46.8	-0.3
K46A	Dorr baz=159	37.44	345	P	P	10 44 48.8	+0.6
J49A	Marlette baz=163	37.45	348	P	P	10 44 49.1	+0.8
I55A	Frankford baz=172	37.46	355	P	P	10 44 49.3	+1.0
I51A	Listowel baz=167	37.48	351	P	P	10 44 49.8	+1.2
J48A	Bridge Port comp=Z,9.4nm,0.6s	37.53	347	*e*P	P	10 44 49.0	0.0
I52A	Shelburne baz=168	37.61	352	P	P	10 44 50.9	+1.1
J47A	Sunmer comp=Z,15nm,0.4s	37.71	346	*e*P	P	10 44 51.5	+1.0
J47A	Sunmer baz=161	37.71	346	P	P	10 44 51.5	+1.0
H56A	Elgin baz=175	37.72	356	P	P	10 44 51.8	+1.3
N40A	Mertquake, Sal baz=149	37.73	337	P	P	10 44 51.7	+1.0
H55A	Tweed baz=173,SNR=8.2	37.75	355	P	P	10 44 52.0	+1.2
DELO	Deloro Mine comp=Z,3.5nm,0.5s	37.75	355	*e*P	P	10 44 51.1	+0.2
DELO	Deloro Mine baz=172	37.75	355	P	P	10 44 52.0	+1.2
M41A	Milan baz=151	37.76	338	P	P	10 44 50.5	-0.4
U32A	Winter Ranch, comp=Z,19nm,0.5s	37.77	325	*e*P	P	10 44 50.8	-0.4
BASO	Ashfield baz=166	37.80	350	P	P	10 44 52.3	+1.1
BWLO	Walkerton baz=167	37.81	351	P	P	10 44 52.6	+1.2
FRNY	Flat Rock comp=Z,4.4nm,0.8s	37.86	359	*e*P	P	10 44 53.3	+1.5
I49A	Point Hope comp=Z,14nm,0.8s	37.94	349	*e*P	P	10 44 53.3	+0.9
I49A	Point Hope baz=164	37.94	349	P	P	10 44 53.5	+1.1
L42A	Oliver, Polo comp=Z,17nm,1.1s	38.00	340	*e*P	P	10 44 52.7	-0.3
L42A	Oliver, Polo baz=152	38.00	340	P	P	10 44 52.7	-0.3
J46A	Howard City baz=159	38.02	345	P	P	10 44 53.9	+0.7
SADO	Sadowa comp=Z,6.1nm,0.9s	38.16	353	*e*P	P	10 44 55.0	+0.7
K43A	Burlington comp=Z,18nm,1.1s	38.19	342	*e*P	P	10 44 54.5	0.0
K43A	Burlington baz=155	38.19	342	P	P	10 44 54.5	0.0
PLVO	Plevna comp=Z,5.2nm,0.7s	38.22	355	*e*P	P	10 44 55.4	+0.6
PLVO	Plevna baz=173	38.22	355	P	P	10 44 55.9	+1.1
BANO	Bancroft baz=172	38.28	354	P	P	10 44 56.2	+0.9
BMRO	Meriville Lake baz=167	38.29	351	P	P	10 44 56.4	+1.1
J45A	Montague comp=Z,42nm,0.5s	38.30	344	*e*P	P	10 44 55.8	+0.3
J45A	Montague baz=158	38.30	344	P	P	10 44 56.0	+0.6
I48A	Sherman Twp baz=163	38.36	348	P	P	10 44 57.0	+1.1
AMTX	Amarillo comp=Z,12nm,0.6s	38.38	321	*e*P	P	10 44 56.8	+0.4
AMTX	Amarillo baz=130	38.38	321	P	P	10 44 57.0	+0.6
G55A	Calabogie baz=174	38.41	356	P	P	10 44 57.5	+1.2
PKME	Peaks-Kenny Pk baz=186	38.43	4	P	P	10 44 57.7	+1.2
G53A	Haliburton baz=171	38.45	354	P	P	10 44 57.8	+1.1
KSU1	Kansas State U baz=140	38.51	330	P	P	10 44 56.7	-0.6
MSTX	Muleshoe comp=Z,16nm,1.3s	38.51	319	*e*P	P	10 44 57.6	+0.1
MSTX	Muleshoe baz=128	38.51	319	P	P	10 44 57.7	+0.2
L40A	Anamosa comp=Z,9.1nm,0.4s	38.60	338	*e*P	P	10 44 57.8	-0.3
L40A	Anamosa baz=150	38.60	338	P	P	10 44 57.7	-0.3
H48A	Harrisville comp=Z,8.4nm,0.6s	38.77	348	*e*P	P	10 45 00.2	+0.9
H48A	Harrisville baz=164	38.77	348	P	P	10 45 00.3	+0.9
BUKO	Buck Lake baz=170	38.86	353	P	P	10 45 01.1	+1.0
H47A	Mio baz=162	38.86	347	P	P	10 45 01.7	+1.5
PEMO	Pembroke baz=173	38.87	355	P	P	10 45 01.2	+1.0
KLBO	Killbear Provi baz=168	38.88	352	P	P	10 45 01.1	+0.9
MNTX	Cornudas Mount comp=Z,9.5nm,0.8s	39.00	314	*e*P	P	10 45 02.0	+0.5
MNTX	Cornudas Mount baz=123,SNR=17	39.00	314	P	P	10 45 02.1	+0.5
JFWS	Jewell Farm comp=Z,26nm,0.6s	39.01	340	*e*P	P	10 45 01.1	-0.3
JFWS	Jewell Farm baz=152,SNR=13	39.01	340	P	P	10 45 01.4	+0.1
F52A	Sundridge baz=170	39.20	353	P	P	10 45 03.9	+1.0
ALGO	Algonquin Park baz=172,SNR=6.3	39.22	355	P	P	10 45 04.0	+0.9
SCIA	State Center comp=Z,22nm,0.6s	39.24	336	*e*P	P	10 45 02.3	-1.1
SCIA	State Center baz=147	39.24	336	P	P	10 45 03.6	+0.3
H45A	Beulah baz=159	39.31	345	P	P	10 45 04.9	+1.0
G47A	Hillman baz=163	39.33	348	P	P	10 45 05.0	+0.9
F51A	Arnstein baz=169	39.40	352	P	P	10 45 05.4	+0.8
I42A	Draeger Farm, comp=Z,13nm,0.5s	39.44	342	*e*P	P	10 45 05.2	+0.3
I42A	Draeger Farm, baz=155,SNR=7.9	39.44	342	P	P	10 45 05.3	+0.3
LMN	Caledonia Moun comp=Z,14nm,0.8s	39.53	9	*e*P	P	10 45 06.3	+0.6
F49A	Sandfield baz=166,SNR=6.3	39.56	350	P	P	10 45 06.6	+0.7
E53A	Dumoine, Ponti baz=173	39.60	355	P	P	10 45 07.2	+0.9
E52A	Mattawa baz=171	39.61	354	P	P	10 45 07.1	+0.8
G45A	Suttons Bay baz=160	39.61	346	P	P	10 45 07.1	+0.8
E54A	Lac Daplat, Po baz=173	39.62	356	P	P	10 45 07.1	+0.8
H43A	Windswept, Lux comp=Z,11nm,0.7s	39.63	343	*e*P	P	10 45 07.3	+0.8
H43A				*e*pP	pP	10 45 42.2	+2.0
H43A				*e*sP	sP	10 45 60.0	+2.2
H43A	Windswept, Lux baz=157	39.63	343	P	P	10 45 06.9	+0.4
G46A	Petoskey baz=161	39.69	347	P	P	10 45 07.6	+0.7
F48A	Evansville baz=165	39.72	350	P	P	10 45 08.0	+0.7
I41A	Arkdale comp=Z,15nm,0.6s	39.90	341	*e*P	P	10 45 08.7	0.0
I41A	Arkdale baz=153	39.90	341	P	P	10 45 09.4	+0.7
CBKS	Cedar Bluff baz=136	39.92	327	P	P	10 45 08.8	-0.2
E51A	G1948 Merrick baz=170	39.94	353	P	P	10 45 10.5	+1.4
E50A	Wahnapitae baz=168	40.00	352	P	P	10 45 10.4	+0.9
F45A	CMU Biological baz=160	40.18	346	P	P	10 45 11.9	+0.9
D52A	ZEK Kipawa Sen baz=172	40.27	354	P	P	10 45 12.9	+1.2
E48A	Lockeyer baz=166,SNR=8.4	40.28	350	P	P	10 45 13.0	+1.2
D54A	Lac Fusel, La baz=174,SNR=6.1	40.30	356	P	P	10 45 12.9	+1.0
D53A	Lac Vacive, Po comp=Z,5.1nm,0.8s	40.30	355	*e*P	P	10 45 12.9	+0.9
LATQ	La Tuque baz=180	40.41	0	P	P	10 45 14.2	+1.4
E47A	Iron Bridge baz=164	40.45	349	P	P	10 45 14.3	+1.1
E46A	Sault Ste Mari comp=Z,12nm,0.5s	40.57	348	*e*P	P	10 45 14.1	-0.1
E46A	Sault Ste Mari baz=163	40.57	348	P	P	10 45 15.1	+0.9
BATG	Bathurst New B comp=Z,11nm,0.6s	40.75	7	*e*P	P	10 45 15.7	0.0
D48A	Paudash Townsh baz=167,SNR=8.1	40.89	351	P	P	10 45 17.9	+1.1
D49A	Beulah Townshi baz=167	40.92	351	P	P	10 45 18.0	+0.9
F42A	Maple Grove Fa baz=157	40.92	344	P	P	10 45 17.6	+0.5
D47A	Chapleau baz=165	41.00	350	P	P	10 45 18.3	+0.6
D46A	Sault St. Mari baz=163	41.01	349	P	P	10 45 18.3	+0.5
BGNE	Belgrade baz=140	41.03	331	P	P	10 45 18.3	+0.2
G40A	Rib Lake comp=Z,9.3nm,1.1s	41.09	342	*e*P	P	10 45 18.5	0.0
G40A	Rib Lake baz=154,SNR=5.4	41.09	342	P	P	10 45 18.8	+0.3
E44A	Grand Marais A baz=160	41.16	347	P	P	10 45 19.7	+0.7
E43A	Lone Tree Farm comp=Z,4.6nm,0.6s	41.19	345	*e*P	P	10 45 19.2	-0.1
E43A	Lone Tree Farm baz=159	41.19	345	P	P	10 45 19.7	+0.4
LPM	Los Pinos Moun	41.31	316	*e*P	P	10 45 22.5	+1.8
VLDQ	Val d'Or comp=Z,4.1nm,0.8s	41.31	356	*e*P	P	10 45 21.6	+1.4
G39A	Holcombe baz=152,SNR=11	41.41	341	P	P	10 45 21.4	+0.3
LENM	Lemitar	41.46	316	*e*P	P	10 45 21.7	-0.2
COWI	Conover comp=Z,10nm,1.0s	41.52	343	*e*P	P	10 45 22.0	0.0
T25A	Trinidad comp=Z,3.8nm,0.6s	41.52	321	*e*P	P	10 45 23.5	+1.1
T25A	Trinidad baz=129	41.52	321	P	P	10 45 23.7	+1.3
ANMO	Albuquerque comp=Z,2.1nm,0.6s	41.54	317	*e*P	P	10 45 24.8	+2.2
ANMO	Albuquerque baz=125	41.54	317	P	P	10 45 23.5	+0.9
TASM	ASL Pad, Albuq baz=125	41.54	317	P	P	10 45 23.7	+1.0
TASM	ASL Pad, Albuq baz=125	41.54	317	P	P	10 45 23.6	+0.9
F40A	Park Falls baz=154	41.64	342	P	P	10 45 23.2	+0.2
LAZ	Ladron	41.71	316	*e*P	P	10 45 25.1	+1.2
F39A	Loretta baz=153,SNR=5.2	41.89	341	P	P	10 45 25.2	+0.2
SPMN	Marine on St. comp=Z,4.1nm,0.6s	41.92	339	*e*P	P	10 45 24.8	-0.5
SPMN	Marine on St. baz=150	41.92	339	P	P	10 45 25.9	+0.7
ECSD	EROS Data Cent comp=Z,4.9nm,0.5s	42.16	334	*e*P	P	10 45 26.7	-0.6
ECSD	EROS Data Cent baz=144,SNR=8.7	42.16	334	P	P	10 45 26.6	-0.7
LSQQ	Lebel-sur-Quev baz=174	42.22	356	P	P	10 45 28.1	+0.5
D41A	Chassel baz=157	42.23	344	P	P	10 45 28.1	+0.4
F38A	Pierce - Schro baz=152,SNR=6.2	42.24	340	P	P	10 45 27.9	+0.1
F37A	Hinrichs Farm, baz=150	42.29	340	P	P	10 45 28.6	+0.4
SDCO	Great Sand Dun comp=Z,4.6nm,0.8s	42.58	321	*e*P	P	10 45 32.4	+1.4
SDCO				*e*pP	pP	10 46 05.9	+0.8
SDCO	Great Sand Dun baz=128,SNR=13	42.58	321	P	P	10 45 32.3	+1.2
E38A	The Farm, Brul baz=152	42.71	341	P	P	10 45 32.5	+1.0
MATQ	Matagami baz=173	42.96	356	P	P	10 45 34.5	+1.0
C40A	Isle Royale Na baz=156	43.18	344	P	P	10 45 35.8	+0.4
TUC	Tucson comp=Z,4.7nm,0.8s	43.28	311	*e*P	P	10 45 37.2	+0.7
TUC	Tucson baz=118	43.28	311	P	P	10 45 37.4	+0.8
S22A	4UR Ranch, Cre comp=Z,7.7nm,1.3s	43.41	320	*e*P	P	10 45 38.9	+1.1
S22A	4UR Ranch, Cre baz=127,SNR=9.8	43.41	320	P	P	10 45 39.1	+1.3
X18A	Snowflake comp=Z,4.4nm,0.8s	43.75	314	*e*P	P	10 45 41.2	+0.8
SUSD	Miller baz=141,SNR=7.9	43.75	333	P	P	10 45 39.8	-0.3
EYMN	Ely comp=Z,19nm,0.6s	43.88	342	*e*P	P	10 45 41.1	+0.1
EYMN	Ely baz=153,SNR=18	43.88	342	P	P	10 45 41.0	+0.1
W18A	Petrified Fore comp=Z,11nm,0.9s	43.90	315	*e*P	P	10 45 43.2	+1.7
W18A	Petrified Fore baz=121	43.90	315	P	P	10 45 42.8	+1.2
ISCO	Idaho Springs comp=Z,5.7nm,0.9s	43.93	323	*e*P	P	10 45 43.1	+1.2
ISCO	Idaho Springs baz=130,SNR=9.3	43.93	323	P	P	10 45 43.0	+1.1
MVCO	Mesa Verde comp=Z,15nm,1.4s	44.18	318	*e*P	P	10 45 45.0	+1.1

MVCO	Mesa Verde baz=124,SNR=6.1	44.18	318	P	P	10 45 44.7	+0.8
SMCO	Snowmass comp=Z,5.0nm,1.2s	44.37	322	eP	P	10 45 46.6	+1.1
214A	Organ Pipe Nat baz=116	44.66	309	P	P	10 45 48.5	+1.0
PV01	Paradox Valley comp=Z,6.1nm,0.8s	44.76	319	eP	P	10 45 50.2	+1.7
PHWY	Pilot Hill comp=Z,2.5nm,0.7s	44.81	325	eP	P	10 45 49.6	+0.7
N23A	Red Feather La comp=Z,7.5nm,1.1s	44.83	324	eP	P	10 45 50.3	+1.3
N23A	Red Feather La baz=130	44.83	324	P	P	10 45 50.1	+1.1
PV02	Paradox Valley comp=Z,8.1nm,0.7s	44.91	319	eP	P	10 45 51.0	+1.5
PV12	Saucer Basin, comp=Z,7.1nm,0.7s	45.01	319	eP	P	10 45 51.7	+1.3
PV18	Skein Mesa, Pa comp=Z,7.7nm,0.8s	45.04	319	eP	P	10 45 51.6	+0.9
PV11	David Mesa, Pa comp=Z,4.6nm,0.7s	45.05	319	eP	P	10 45 51.5	+0.8
WUAZ	Wupatki comp=Z,14nm,0.8s	45.25	315	eP	P	10 45 53.5	+1.3
WUAZ	Wupatki baz=120,SNR=15	45.25	315	P	P	10 45 53.4	+1.1
PV21	Cone Mtn., Par comp=Z,3.8nm,0.6s	45.26	320	eP	P	10 45 53.3	+0.9
PV09	Paradox Valley	45.33	319	eP	P	10 45 53.7	+0.7
AGMN	Agassiz Nation comp=Z,9.0nm,0.6s	45.64	339	eP	P	10 45 54.8	-0.1
AGMN	Agassiz Nation baz=147,SNR=5.6	45.64	339	P	P	10 45 54.9	+0.1
Y14A	Wickenburg comp=Z,9.2nm,0.8s	45.68	312	eP	P	10 45 56.3	+0.7
O20A	White River Ci comp=Z,6.6nm,1.0s	45.72	322	eP	P	10 45 56.9	+1.0
O20A	White River Ci baz=127	45.72	322	P	P	10 45 57.2	+1.2
113A	Mohawk Valley, comp=Z,5.2nm,0.9s	45.74	310	eP	P	10 45 57.1	+1.2
RSSD	Black Hills comp=Z,5.5nm,1.2s	45.96	329	eP	P	10 45 59.0	+1.2
RSSD	Black Hills baz=135	45.96	329	P	P	10 45 58.7	+1.0
K22A	Casper baz=131	46.29	326	P	P	10 46 01.2	+0.8
U15A	North Rim comp=Z,10nm,1.0s	46.35	315	eP	P	10 46 02.5	+1.5
SRU	San Rafael Swe comp=Z,7.0nm,0.8s	46.57	319	eP	P	10 46 03.8	+1.2
SRU				epP	pP	10 46 37.4	+0.2
GLA	Glamis	46.67	310	eP	P	10 46 04.2	+1.0
GLA				epP	pP	10 46 37.5	-0.4
GLA				esP	sP	10 46 57.0	+1.9
GLA	Glamis baz=115	46.67	310	P	P	10 46 04.4	+1.1
PDMCI	Parker Dam,Lak baz=116	46.69	312	P	P	10 46 04.0	+0.7
MDND	Maddock comp=Z,26nm,0.8s	46.71	336	eP	P	10 46 03.6	+0.3
MDND	Maddock baz=142	46.71	336	P	P	10 46 03.7	+0.4
Y12C	Blythe baz=116	46.73	311	P	P	10 46 04.8	+1.1
W13A	Hualapai Mount comp=Z,2.5nm,1.1s	46.86	313	eP	P	10 46 06.0	+1.0
Q16A	Castle Valley comp=Z,1.9nm,0.7s	46.88	319	eP	P	10 46 05.7	+0.7
P17A	Butcher Ranch, comp=Z,7.4nm,0.9s	46.91	320	eP	P	10 46 06.0	+0.8
P17A				epP	pP	10 46 39.9	0.0
KNB	Kanab comp=Z,10nm,0.9s	47.01	316	eP	P	10 46 07.1	+1.1
MTPU	Mount Pierson comp=Z,5.0nm,1.1s	47.09	317	eP	P	10 46 07.6	+0.7
TMUT	Trail Mountain comp=Z,4.7nm,1.2s	47.11	319	eP	P	10 46 06.5	-0.4
ULM	Lac du Bonnet comp=Z,14nm,0.5s,baz=149,slow=8.4,SNR=13	47.30	340	P	P	10 46 07.3	-0.4
ULM	Lac du Bonnet comp=Z,12nm,0.7s	47.30	340	eP	P	10 46 07.5	-0.3
LCMT	Little Creek M comp=Z,8.9nm,0.9s	47.30	315	eP	P	10 46 09.4	+1.1
MSU	Marysvale	47.33	318	eP	P	10 46 09.8	+1.2
SWSC	Sam W. Stewart baz=114	47.37	309	P	P	10 46 09.5	+0.9
IRM	Iron Mountain baz=115	47.37	311	P	P	10 46 09.6	+0.9
PLCA	Paso Flores comp=Z,2.0nm,0.6s,baz=19,slow=9.6,SNR=6.8	47.38	177	P	P	10 46 06.6	-2.0
PLCA	Paso Flores comp=Z,4.5nm,0.9s	47.38	177	eP	P	10 46 07.4	-1.2
BC3	Big Chuckawall baz=115	47.40	310	P	P	10 46 09.7	+0.7
SZCU	Shurtz Canyon comp=Z,5.8nm,1.0s	47.48	316	eP	P	10 46 10.5	+0.8
TCRU	Three Creeks R comp=Z,13nm,0.9s	47.56	318	eP	P	10 46 11.9	+1.6
CCUT	Cedar City comp=Z,1.8nm,0.7s	47.65	316	eP	P	10 46 12.2	+1.2
LDFC	Landfair comp=Z,11nm,1.2s	47.74	312	eP	P	10 46 13.3	+1.6
MPU	Maple Canyon comp=Z,5.9nm,0.9s	47.78	320	eP	P	10 46 13.0	+1.0
MONP2	Monument Peak baz=113	47.83	309	P	P	10 46 13.2	+0.8
BELC	Belle Mtn. Jos baz=114	47.95	310	P	P	10 46 13.9	+0.7
JLU	Jordanelle comp=Z,3.0nm,0.7s	47.99	320	eP	P	10 46 13.8	+0.2
GMRC	Granite Mounta baz=115	48.02	311	P	P	10 46 14.3	+0.5
BW06	Boulder Array comp=Z,7.3nm,1.3s	48.10	324	eP	P	10 46 14.3	-0.1
BW06	Boulder Array baz=128,SNR=8.6	48.10	324	P	P	10 46 14.7	+0.3
PD31	Pinedale Array	48.10	324	eP	P	10 46 14.6	+0.2
PDAR	Pinedale Array comp=Z,2.7nm,0.6s,baz=128,slow=8.8,SNR=28	48.10	324	P	P	10 46 14.6	+0.2
SCHQ	Schefferville comp=Z,16nm,0.8s,baz=196,slow=7.3,SNR=17	48.13	5	P	P	10 46 15.2	+1.1
SCHQ	Schefferville comp=Z,16nm,0.7s	48.13	5	eP	P	10 46 14.8	+0.6
SHPR	Sheep Range comp=Z,5.7nm,1.2s	48.42	314	eP	P	10 46 18.0	+1.2
PSUT	Pine Spring comp=Z,4.1nm,0.7s	48.48	317	eP	P	10 46 18.3	+1.0
TUQ	Turquoise Moun baz=116	48.50	312	P	P	10 46 18.2	+0.7
HEC	Hector,Ludlow baz=115	48.55	311	P	P	10 46 18.5	+0.7
DUG	Dugway, Tooele comp=Z,4.4nm,0.8s	48.64	319	eP	P	10 46 19.4	+1.0
DUG	Dugway, Tooele baz=122	48.64	319	P	P	10 46 19.4	+1.0
MURC	Murrieta baz=113	48.70	309	P	P	10 46 19.9	+1.0
BBRC	Big Bear Solar baz=114	48.76	310	P	P	10 46 20.8	+1.2
LAO	LASA Array comp=Z,4.6nm,0.6s	48.85	330	eP	P	10 46 20.1	+0.2
LAO	LASA Array baz=134	48.85	330	P	P	10 46 20.1	+0.2
SHOC	Shoshone, Teco baz=116	48.96	313	P	P	10 46 21.8	+1.0
AHID	Auburn Hatcher comp=Z,6.6nm,0.9s	49.01	323	eP	P	10 46 21.9	+0.5
GSC	Goldstone, Bar comp=Z,5.9nm,0.8s	49.09	312	eP	P	10 46 23.2	+1.3
GSC	Goldstone, Bar baz=115,SNR=8.3	49.09	312	P	P	10 46 23.1	+1.1
DGMT	Dagmar comp=Z,36nm,0.6s	49.17	333	eP	P	10 46 22.4	+0.2
DGMT	Dagmar baz=137,SNR=10	49.17	333	P	P	10 46 23.2	+1.0
BGU	Big Grassy Mou comp=Z,11nm,0.7s	49.17	320	eP	P	10 46 22.2	-0.3
SNOW	Snow King Moun comp=Z,6.4nm,0.6s	49.22	324	eP	P	10 46 23.0	+0.1
LOHW	Long Hollow comp=Z,5.1nm,0.6s	49.22	324	eP	P	10 46 23.8	+0.8
TPAW	Teton Pass comp=Z,5.2nm,0.6s	49.35	324	eP	P	10 46 24.3	+0.3
MOOW	Moose Ponds comp=Z,4.2nm,0.8s	49.39	324	eP	P	10 46 24.4	+0.3
TPNV	Topopah Spring comp=Z,4.4nm,0.9s	49.40	314	eP	P	10 46 25.2	+0.9
TPNV	Topopah Spring baz=116,SNR=7.4	49.40	314	P	P	10 46 25.3	+0.9
RLMT	Red Lodge comp=Z,2.1nm,0.6s	49.40	327	eP	P	10 46 24.6	+0.3
RLMT	Red Lodge baz=129	49.40	327	P	P	10 46 24.7	+0.5
FXWY	Fox Creek comp=Z,2.5nm,0.6s	49.48	324	eP	P	10 46 25.3	+0.4
R11A	Troy Canyon, C comp=Z,3.3nm,0.9s	49.57	316	eP	P	10 46 26.6	+0.9
R11A	Troy Canyon, C baz=118,SNR=9.3	49.57	316	P	P	10 46 26.6	+0.9
IMW	Indian Meadow comp=Z,5.2nm,0.6s	49.59	324	eP	P	10 46 26.2	+0.4
FURC	Furnace Creek, baz=116	49.63	313	P	P	10 46 26.9	+1.0
EDW2	Edwards Air Fo baz=113	49.81	311	P	P	10 46 28.1	+0.7
LRMC	Laurel Mtn Rad baz=114	49.82	311	P	P	10 46 28.0	+0.4
MPMC	Manual Prospec baz=115	49.92	312	P	P	10 46 28.4	0.0
GCMT	Greycliff	50.05	327	eP	P	10 46 30.1	+1.1
YHH	Holmes Hill comp=Z,3.3nm,0.7s	50.08	325	eP	P	10 46 29.2	-0.3
YHB	Horse Butte comp=Z,4.1nm,0.7s	50.25	325	eP	P	10 46 31.2	+0.6
QLMT	Earthquake Lak	50.43	325	eP	P	10 46 33.3	+1.3
ELK	Elko comp=Z,1.6nm,0.8s	50.51	319	eP	P	10 46 33.4	+0.7
CWC	Cottonwood Cre baz=114	50.51	312	P	P	10 46 33.1	+0.4
ARVC	Arvin baz=113	50.54	310	P	P	10 46 33.6	+0.8
SCZ2	Santa Cruz Isl baz=111	50.73	309	P	P	10 46 35.0	+0.7
BOZ	Bozeman (W) comp=Z,4.1nm,0.7s	51.00	326	eP	P	10 46 36.8	+0.5
BOZ	Bozeman (W) baz=127,SNR=12	51.00	326	P	P	10 46 37.0	+0.7
PKM	Mcpherson Peak baz=112	51.20	310	P	P	10 46 38.0	+0.1
MCMT	McKenzie Canyo	51.24	324	eP	P	10 46 39.2	+1.1
DLMT	Dillon comp=Z,3.7nm,1.1s	51.41	325	eP	P	10 46 39.8	+0.5
HLID	Hailey comp=Z,3.2nm,0.8s	51.46	322	eP	P	10 46 40.5	+0.8
HLID	Hailey baz=123,SNR=8.5	51.46	322	P	P	10 46 40.3	+0.6
SMMC	Simmler baz=112	51.49	310	P	P	10 46 40.1	+0.1
NV01	Mina Array Sit	51.51	315	eP	P	10 46 41.0	+0.7
NV01				ePcP	PcP	10 47 53.1	+0.8
NVAR	Mina Array Bea comp=Z,2.1nm,0.7s,baz=123,slow=7.4,SNR=26	51.51	315	P	P	10 46 41.0	+0.7
NVAR	comp=Z,0.2nm,0.4s,baz=134,slow=4.7,SNR=4.0			PcP	PcP	10 47 53.1	+0.8
EGMT	Eagleton comp=Z,3.0nm,0.6s	51.53	329	eP	P	10 46 40.9	+0.9
EGMT	Eagleton baz=131	51.53	329	P	P	10 46 40.6	+0.6
LRM	Limekiln Ridge	51.60	326	eP	P	10 46 41.7	+0.9
KVN	Kaiserville comp=Z,3.9nm,1.0s	51.64	315	eP	P	10 46 41.8	+0.7
BMN	Battle Mountai comp=Z,4.8nm,1.1s	51.67	317	eP	P	10 46 41.7	+0.3
RYN	Ryan comp=Z,2.0nm,0.8s	51.76	315	eP	P	10 46 42.0	0.0
HRY	Holter Researc	51.79	327	eP	P	10 46 42.8	+0.7
PAGB	Antelope Grade comp=Z,6.8nm,0.8s	51.84	311	eP	P	10 46 43.4	+0.9
WAKR	Walker comp=Z,4.1nm,1.1s	52.35	314	eP	P	10 46 46.7	+0.2
YERR	Yerington comp=Z,5.7nm,0.8s	52.41	315	eP	P	10 46 47.4	+0.5
PNTR	Pine Nut comp=Z,5.2nm,0.8s	52.71	315	eP	P	10 46 48.9	-0.2
PAHR	Pah Rah Range comp=Z,3.4nm,0.8s	52.83	316	eP	P	10 46 50.5	+0.6
VCNR	Virginia City comp=Z,4.7nm,0.9s	52.84	315	eP	P	10 46 50.2	+0.2
MSO	Missoula baz=126	53.03	326	P	P	10 46 51.5	+0.4
FFC	Flin Flon comp=Z,4.5nm,0.4s	53.10	339	eP	P	10 46 51.3	-0.1
WVOR	Wild Horse Val comp=Z,7.0nm,0.9s	53.56	319	eP	P	10 46 55.3	+0.2
BEKR	Beckworth comp=Z,3.0nm,0.9s	53.57	315	eP	P	10 46 56.0	+0.7
J08A	Circle Bar Ran comp=Z,3.9nm,1.1s	53.89	320	eP	P	10 46 56.7	-0.8
BMO	Blue Mountains comp=Z,1.3nm,0.6s	53.91	322	eP	P	10 46 57.4	-0.2
FCC	Fort Churchill comp=Z,11nm,0.9s	54.28	347	eP	P	10 46 59.5	-0.3
MOD	Modoc Plateau comp=Z,10nm,1.6s	54.41	318	eP	P	10 47 01.5	+0.2
F10A	Beach Ranch, E comp=Z,5.8nm,0.5s	54.45	323	eP	P	10 47 01.4	0.0
O03E	Paynes Creek baz=114	54.76	315	P	P	10 47 03.7	-0.1
I07A	Izee comp=Z,5.8nm,0.9s	54.90	320	eP	P	10 47 05.4	+0.6
G08A	Pilot Rock comp=Z,8.8nm,0.7s	55.14	322	eP	P	10 47 07.2	+0.7
K05A	Summer Lake comp=Z,6.7nm,1.1s	55.17	318	eP	P	10 47 05.6	-1.2
M04C	Macdoel baz=115	55.40	317	P	P	10 47 08.4	0.0
NEW	Newport comp=Z,3.7nm,1.1s	55.62	326	eP	P	10 47 09.9	+0.1
NEW	Newport baz=123	55.62	326	P	P	10 47 10.1	+0.4
J05D	Fort Rock, OR baz=116,SNR=5.5	55.64	319	P	P	10 47 10.6	+0.5
PINE	Pine Mountain comp=Z,14nm,0.8s	55.68	319	eP	P	10 47 12.1	+1.6
L04D	Klamath Falls baz=115	55.90	317	P	P	10 47 12.1	+0.1
YBH	Yreka Blue Hor comp=Z,6.5nm,1.2s	55.97	317	eP	P	10 47 11.5	-1.0
C09A	Chrisman Ranch comp=Z,8.6nm,0.7s	56.02	325	eP	P	10 47 13.7	+1.1
KMRM	Mail Ridge comp=Z,35nm,1.3s	56.07	314	eP	P	10 47 13.2	0.0
G06A	Carlson Farm, comp=Z,7.3nm,1.0s	56.15	321	eP	P	10 47 15.4	+1.8
J04D	Umpqua Nationa baz=116	56.20	318	P	P	10 47 14.7	+0.5
HUMO	Hull Mountain comp=Z,14nm,1.6s	56.49	317	eP	P	10 47 15.3	-0.8
I04A	Tendick Farm, baz=116	56.63	319	P	P	10 47 17.2	+0.1
KRMB	Red Mountain comp=Z,56nm,1.6s	56.71	316	eP	P	10 47 18.4	+0.7
H04A	Detroit Lake	56.88	320	eP	P	10 47 19.5	+0.8
K02D	Willamette Mer baz=114	57.01	317	P	P	10 47 20.0	+0.3
LTY	Liberty comp=Z,5.8nm,0.7s	57.14	323	eP	P	10 47 21.3	+0.7
KEBM	Edson Butte comp=Z,76nm,1.4s	57.53	317	eP	P	10 47 25.4	+2.0
COR	Corvallis comp=Z,42nm,1.4s	57.55	319	eP	P	10 47 24.1	+0.7
GO09	Cerro Castillo comp=Z,8.1nm,0.8s	57.87	179	eP	P	10 47 23.7	-1.7
E04D	Cinebar baz=117	57.96	322	P	P	10 47 27.1	+0.9
NLWA	Neilton Lookou comp=Z,11nm,1.0s	59.13	322	eP	P	10 47 35.2	+0.9
PGC	Sidney comp=Z,34nm,1.4s	59.45	324	eP	P	10 47 37.4	+1.0
LLLB	Lillooet comp=Z,6.8nm,0.9s	59.49	326	eP	P	10 47 37.1	+0.4
YKA	Yellowknife Ar comp=Z,8.1nm,0.6s,baz=133,slow=6.6,SNR=44	63.27	340	P	P	10 48 01.8	0.0
YKA	comp=Z,1.8nm,0.7s,baz=130,slow=7.2,SNR=2.8			pP	PcP	10 48 37.9	+0.2
YKB5	Yellowknife Ar	63.27	340	eP	P	10 48 01.9	0.0
YKB5				ePcP	PcP	10 48 37.9	+0.2
YKW3	Yellowknife Ar comp=Z,8.6nm,0.7s	63.32	340	eP	P	10 48 02.2	0.0
DLBC	Dease Lake comp=Z,3.7nm,0.6s	67.34	331	eP	P	10 48 28.6	+0.3
DBIC	Dimbokro comp=Z,10nm,1.1s,baz=253,slow=6.2,SNR=3.5	67.69	86	P	P	10 48 30.6	-0.6
SUMG	Summit comp=Z,16nm,0.7s	68.97	11	eP	P	10 48 37.9	-0.7
SUMG	Summit comp=Z,41nm,0.7s	68.97	11	⇓iP	P	10 48 38.9	+0.3
JIS	Juneau Island comp=Z,2.9nm,0.7s	69.38	330	eP	P	10 48 41.3	+0.5
INK	Inuvik comp=Z,3.8nm,0.6s	73.04	340	eP	P	10 49 03.2	+0.6
EPYK	Eagle Plains comp=Z,4.7nm,0.4s	73.40	338	eP	P	10 49 05.5	+0.7
DAWY	Dawson comp=Z,2.4nm,0.9s	73.65	335	eP	P	10 49 07.4	+1.0
TOA1	Torodi Ar. Sit	73.69	78	eP	P	10 49 05.9	-1.5
TORD	Torodi Ar. Bea comp=Z,23nm,0.4s,baz=279,slow=6.4,SNR=6.0	73.69	78	P	P	10 49 05.9	-1.5
EGAK	Eagle	74.60	336	eP	P	10 49 12.5	+0.7
HMT	Hamilton comp=Z,42nm,0.6s	74.83	331	eP	P	10 49 14.7	+1.5
DOT	Dot Lake comp=Z,6.3nm,0.6s	75.52	334	eP	P	10 49 18.4	+1.3
DAG	Danmarks Havn comp=Z,3.3nm,0.6s	75.64	11	i P	P	10 49 17.1	-0.4
HDA	Harding Lake comp=Z,3.8nm,0.7s	76.93	335	eP	P	10 49 25.5	+0.5
ILAR	Eielson Array comp=Z,1.4nm,0.8s,baz=110,slow=4.4,SNR=13	76.98	335	P	P	10 49 25.2	-0.1
ILAR	comp=Z,0.8nm,0.6s,baz=102,slow=5.2,SNR=4.2			pP	pP	10 50 03.1	-0.4
ILB	Eielson Array comp=Z,1.3nm,0.7s	76.98	335	eP	P	10 49 25.4	+0.1
KNK	Knik Glacier comp=Z,8.3nm,1.0s	77.05	331	eP	P	10 49 27.3	+1.5
SML	Sawmill comp=Z,14nm,1.6s	77.06	332	eP	P	10 49 26.2	+0.3
CCB	Clear Creek Bu comp=Z,3.1nm,1.4s	77.34	335	eP	P	10 49 27.1	-0.2
PMR	Palmer comp=Z,4.4nm,1.1s	77.40	332	eP	P	10 49 28.5	+0.9
WRH	Wood River Hil comp=Z,2.5nm,1.1s	77.43	335	eP	P	10 49 29.2	+1.4
RND	Reindeer comp=Z,8.4nm,0.7s	77.57	333	eP	P	10 49 30.0	+1.2
RC01	Rabbit Creek A comp=Z,8.9nm,1.0s	77.61	331	eP	P	10 49 29.4	+0.5
HOM	Homer comp=Z,42nm,0.9s	78.37	329	eP	P	10 49 33.4	+0.3
KTH	Kantishna Hill comp=Z,2.4nm,0.6s	78.51	333	eP	P	10 49 34.5	+0.5
BPAW	Bear Paw Mtn. comp=Z,3.0nm,0.7s	78.62	334	eP	P	10 49 34.8	+0.3
BPAW				epP	pP	10 50 14.4	+1.7
KDAK	Kodiak Island comp=Z,22nm,1.6s	78.67	328	eP	P	10 49 34.8	+0.1
COLD	Coldfoot comp=Z,1.6nm,0.9s	78.76	337	eP	P	10 49 36.2	+1.1
COLD				epP	pP	10 50 13.2	-0.1
PPLA	Purkeypile comp=Z,6.0nm,0.6s	79.00	333	eP	P	10 49 36.9	+0.3
SVW2	Sparrevohn comp=Z,4.7nm,1.0s	80.44	331	eP	P	10 49 44.0	-0.4
SVW2				epP	pP	10 50 22.2	-0.5
TTA	Tatalina comp=Z,3.9nm,1.3s	80.74	333	eP	P	10 49 45.9	-0.1
TTA				epP	pP	10 50 25.0	+0.7
ARA0	ARCESS Array S	86.65	20	eP	P	10 50 16.0	+0.2
ARCES	ARCESS Array B comp=Z,1.3nm,0.7s,baz=289,slow=4.8,SNR=5.5	86.65	20	P	P	10 50 16.0	+0.2
VNA3	Neumayer Olymp	88.16	163	P	P	10 50 21.5	-1.5
VNA1	Neumayer--Stat	88.31	162	P	P	10 50 22.2	-1.4
SNAA	Sanae	90.33	163	P	P	10 50 31.7	-1.5
MK32	Makanchi Array	122.30	20	ePKPdf	PKPdf	10 56 26.1	-0.8
MKAR	Makanchi Array comp=Z,0.3nm,0.3s,baz=326,slow=3.2,SNR=5.3	122.30	20	PKP	PKPdf	10 56 26.1	-0.8
KSH	Kashi	125.72	29	ePKP	PKPdf	10 56 31.7	-2.1
KSH				PKS	sPKPdf	10 57 31.0	-0.3
HHC	Hu-ho-hao-te	132.37	355	eP	PKiKP	10 56 52.7	+5.2
HHC	comp=Z,7.0nm,0.7s			pmax	pmax		
WHN	Wuhan	142.17	350	PKP	PKPdf	10 57 03.0	-1.6
AS31	Alice Springs	149.15	234	ePKPbc	PKPbc	10 57 20.4	-0.6
ASAR	Alice Springs comp=Z,1.6nm,0.5s,baz=118,slow=2.6,SNR=34	149.16	234	PKP	PKPdf	10 57 16.6	-0.2
ASAR	comp=Z,1.7nm,0.5s,baz=120,slow=3.2,SNR=35			PKPbc	PKPbc	10 57 20.6	-0.5
WR1	Warramunga Arr	150.38	241	ePKPdf	PKPdf	10 57 18.9	+0.2
WR1				ePKPbc	PKPbc	10 57 23.9	-0.2
WRA	Warramunga Arr comp=Z,1.8nm,0.3s,baz=104,slow=2.8,SNR=4.1	150.38	241	PKP	PKPdf	10 57 18.9	+0.2
WRA	comp=Z,3.3nm,0.5s,baz=114,slow=2.2,SNR=49			PKPbc	PKPbc	10 57 23.9	-0.2

UCR 05 10:39:32.1±1.7, 10°.26N×84°.23W, h114^{km}±7^{km}, MW3.5, 3C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.30	235	eP	Pn	10 39 50.1	+1.5
SRA1				eS	Sn	10 40 01.1	+0.3
CVTR	Volcan Turrial	0.52	117	eP	Pn	10 39 47.4	-2.6
CEDE	Laguna Cedeo	0.52	296	⇓iP	Pn	10 39 49.7	+0.1
ARE1	Arenal 1	0.52	292	⇓iP	Pn	10 39 49.6	0.0
ARE1				eS	Sn	10 40 04.3	+1.6
LCR2	La Lucha 2	0.56	157	⇑eP	Pn	10 39 50.0	0.0
LCR2				eS	Sn	10 40 04.0	+0.4
JTS	Las Juntas de	0.71	272	⇑eP	Pn	10 39 50.9	-0.1
JTS				eS	Sn	10 40 04.8	-0.4
CUI	Cuipilapa	1.00	293	⇓iP	Pn	10 39 53.8	+0.1
CUI				eS	Sn	10 40 10.4	+0.3
MESS	Mesas	1.06	297	eP	Pn	10 40 01.4	+7.0
EDLM	Las Mercedes	1.16	147	eP	Pn	10 39 55.7	+0.3
BUEV	Buena Vista	1.28	295	eP	Pn	10 39 53.7	-3.0
DRK0	Durika	1.39	136	⇑eP	Pn	10 39 57.9	-0.1
DRK0				eS	Sn	10 40 18.1	+0.5

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*ISCJB **05** 10:40:47.7±1.4, 19°.5N±0°.2×94°.2E±0°.2, h33^{km}, mb3.5/4, Error ellipse: s-maj=35.7km s-min=14.4km az=40.8*

*IDC **05** 10:40:50.9±6.9, 19°.47N×94°.30E, h45^{km}±55^{km}, mb3.2/4, mb1 3.6/5, mb1mx3.3/32, mbtmp3.5/5, ML4.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/15, Error ellipse: s-maj=93.0km s-min=23.4km az=63.0*

ISC 05 10:40:50.6±1.5, 19°.7N±0°.2×94°.4E±0°.2, h35^{km}, n9, σ1^{s}.19/8, mb3.5/4, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMMT	Chiang Mai 6.5nm,0.7s,369nm	4.39	100	P	Pn	10 41 55.8	+0.9
CMAR	Chiang Mai Arr 2.3nm,0.3s,baz=279,slow=14,SNR=42	4.47	105	P	Pn	10 41 56.2	+0.2
UMPA	Umpang Tak 108µm,0.6s	5.47	128	P	Pn	10 42 11.1	+1.4
PBKT	Sadao Pong 6.2nm,0.5s,274nm	6.97	115	P	Pn	10 42 30.8	+0.5
PALK	Pallekele comp=Z,22nm,18.4s,baz=114,slow=37	18.10	229	LR	LR	10 51 50.8	
MKAR	Makanchi Array 0.4nm,0.6s,baz=152,slow=6.5,SNR=3.4	28.83	343	P	P	10 46 46.7	+1.1
WRA	Warramunga Arr 0.5nm,0.7s,baz=316,slow=9.3,SNR=2.8	55.51	133	P	P	10 50 21.2	-1.3
ASAR	Alice Springs 0.3nm,0.9s,baz=308,slow=6.7,SNR=4.1	57.78	136	P	P	10 50 38.1	-0.6
ILAR	Eielson Array 0.4nm,0.8s,baz=306,slow=5.2,SNR=4.9	83.81	22	P	P	10 53 15.2	-1.0

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*SAR **05** 10:48:21.5±0.4, 42°.37N×19°.33E, h13^{km}±2^{km}, ML1.9/7*

*TIR **05** 10:48:21.4, 42°.43N×19°.30E, h7^{km}, Md3.2/3*

*PDG **05** 10:48:21.2±0.1, 42°.39N×19°.27E, h22^{km}, MD2.5/3, ML2.5/12, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

*ISCJB **05** 10:48:22.1±0.3, 42°.37N±0°.02×19°.30E±0°.03, h16^{km}±4^{km}, Error ellipse: s-maj=3.5km s-min=3.1km az=16.6*

ISC 05 10:48:22.2±0.9, 42°.40N±0°.02×19°.29E±0°.02, h18^{km}±3^{km}, n34, σ1^{s}.04/65, 7C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDG	Podgorica	0.04	322	ePg	Pg	10 48 24.8	-0.7
PDG				eSg	Sg	10 48 27.8	+0.2
TTG	Podgorica	0.04	322	⇓iPg	Pg	10 48 24.9	-0.6
TTG				i Sg	Sg	10 48 28.1	+0.5
DRME	Dracevica, Mon	0.23	199	⇑iPg	Pg	10 48 26.5	-1.2
DRME				i Sg	Sb	10 48 31.1	-0.1
DRME	Dracevica, Mon	0.23	199	ePg	Pg	10 48 26.4	-1.2
DRME				eSg	Sb	10 48 30.8	-0.4

BUM	Brajici-Budva	0.31	251	⇓iPg	Pg	10 48 27.9	-1.1
BUM				i Sg	Sb	10 48 33.2	-0.7
CEME	Cevo	0.31	298	⇑iPg	Pg	10 48 28.1	-0.9
CEME				i Sg	Sb	10 48 33.6	-0.3
ULC	Ulcinj	0.44	184	⇑iPg	Pg	10 48 30.1	-1.1
ULC				i Sg	Sb	10 48 36.8	-1.0
NKME	Niksic	0.44	326	⇓iPg	Pg	10 48 30.3	-1.0
NKME				i Sg	Sb	10 48 37.6	-0.2
NKY	Niksic	0.46	332	⇓iPg	Pg	10 48 30.8	-0.9
NKY				i Sg	Sb	10 48 38.5	-0.1
KOME	Kolasin	0.48	21	⇓iPg	Pg	10 48 31.1	-0.9
KOME				i Sg	Sb	10 48 39.9	+0.9
PVY	Plav	0.53	69	⇑iPg	Pg	10 48 31.7	-1.3
PVY				i Sg	Sb	10 48 40.9	+0.4
PUK	Puka	0.58	128	i PG	Pg	10 48 31.3	-2.4
PUK				i SG	Sb	10 48 42.0	+0.4
BCI	Bajram Curri	0.58	93	i PG	Pg	10 48 32.5	-1.3
BCI				i SG	Sb	10 48 42.6	+0.9
HCY	Herceg Novi	0.59	275	⇑iPg	Pg	10 48 32.4	-1.5
HCY				i Sg	Sb	10 48 41.9	0.0
HCY	Herceg Novi	0.59	275	ePg	Pg	10 48 32.9	-1.0
HCY				eSg	Sb	10 48 42.3	+0.4
IVA	Berane	0.65	43	⇓iPg	Pg	10 48 34.0	-1.1
BRY	Bratogost	0.74	312	⇑iPg	Pg	10 48 35.4	-1.5
BRY				i Sg	Sb	10 48 47.4	+0.8
BRY	Bratogost	0.74	312	ePg	Pg	10 48 35.7	-1.2
BRY				eSg	Sb	10 48 47.3	+0.7
TREB	Trebinje	0.76	295	ePg	Pg	10 48 36.0	-1.1
TREB				eSg	Sb	10 48 47.9	+1.0
UPM	Unac-Piva	0.85	341	ePg	Pg	10 48 37.7	-1.1
UPM				eSg	Sb	10 48 49.9	+0.2
DBRK	Dubrovnik	0.88	288	ePg	Pg	10 48 37.9	-1.6
DBRK				Sg	Sn	10 48 52.3	+0.2
PLE	Pljevlja	0.93	5	⇑iPg	Pg	10 48 38.7	-1.7
PLE				i Sg	Sn	10 48 53.9	+0.4
PHP	Peshkopia	1.12	129	i PG	Pg	10 48 43.8	-0.1
PHP				i SG	Sn	10 49 00.2	+2.2
RUDO	Rudo	1.22	3	ePg	Pn	10 48 43.4	-1.0
RUDO				eSg	Sg	10 49 01.0	-0.7
STON	Ston	1.26	292	ePn	Pn	10 48 44.3	-0.6
STON				Sn	Sg	10 49 03.9	+0.9
STON	Ston	1.26	292	ePg	Pn	10 48 44.6	-0.3
STON				eSg	Sg	10 49 03.0	-0.1
BBLS	Lazići	1.47	3	ePg	Pb	10 48 48.8	-0.2
BBLS				eSg	Sg	10 49 09.0	-0.6
HAPS	Han Pijesak,Bl	1.70	352	ePn	Pn	10 48 51.6	+0.5
HAPS				eSn	Sb	10 49 13.9	-0.2
DIVS	Divibare	1.77	17	ePn	Pn	10 48 52.0	-0.1
DIVS				eSn	Sn	10 49 15.0	+0.8
MAKA	Makarska	1.89	299	ePn	Pn	10 48 54.7	+1.2
MAKA				Sn	Sb	10 49 18.8	-0.6
KIJV	Kijevo	2.65	308	ePn	Pn	10 49 05.7	+1.7
KIJV				Sn	Sb	10 49 39.5	-1.8
ZIRJ	Zirje	2.95	296	ePn	Pn	10 49 08.8	+0.6
ZIRJ				Sn	Sn	10 49 45.4	+2.4
MORI	Morici	3.00	300	ePn	Pn	10 49 10.4	+1.5
DUGI	Dugi Otok	3.48	299	ePn	Pn	10 49 16.1	+0.7

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*KRNET **05** 10:49:46.8±0.1, 42°.33N×70°.25E, mb2.7*

*NNC **05** 10:49:51.0±3.8, 41°.35N×71°.37E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=31.5km s-min=13.9km az=13.0*

ISC 05 10:49:47.6±3.6**, 42°.31N**±0°.10×**70°.3E**±0°.1**, h15**^{km}±16^{km}**, n10, σ0^{s}.82**/18**, 13C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	1.32	112	⇑iP	Pb	10 50 11.9	-0.2
	baz=13						
ARK				⇑iS	Sg	10 50 30.3	+0.1
	baz=13						
ARSB	Arslanbob	2.21	115	⇓iP	Pn	10 50 24.5	+0.6
	baz=15						
ARSB				⇓iS	Sn	10 50 51.4	+0.4
	baz=15						
BTK	Batken	2.28	170	⇑iP	Pn	10 50 24.6	0.0
	baz=69						
BTK				⇑iS	Sn	10 50 52.6	+0.2
	baz=69						
AML	Almayashu	2.51	93	⇑iP	Pn	10 50 28.4	+0.3
	baz=93						
AML				⇑iS	Sn	10 50 58.8	+0.2
	baz=93						
EKS2	Erkin-Say	2.58	81	⇓eP	Pn	10 50 29.1	+0.3
	baz=82						
EKS2				⇓iS	Sn	10 50 59.8	-0.1
	baz=82						
AAK	Ala-Archa	3.10	82	⇑Pg	Pn	10 50 38.3	+2.3
	1.0nm,0.4s						
AAK				⇑Lg	Lg	10 51 18.4	
	5.6nm,1.1s						
UCH	Uchtor	3.11	90	⇑iP	Pn	10 50 37.0	+0.6
	baz=90						
UCH				⇑iS	Sn	10 51 13.3	-0.2
	baz=90						
KBK	Karagaybulak	3.44	83	⇑iP	Pn	10 50 41.0	+0.3
	baz=83						
KBK				⇑iS	Sn	10 51 20.3	-0.9
	baz=83						
KZA	Kyzart	3.67	92	⇓iP	Pn	10 50 44.6	+0.6
	baz=92						
KZA				⇓iS	Sn	10 51 26.0	-1.2
	baz=92						
TKM2	Tokmak 2	3.94	79	⇑Pg	Pb	10 50 56.0	-0.7
	1.1nm,0.6s						
TKM2				⇓Lg	Lg	10 51 44.4	
	3.8nm,0.9s						

SJA 05 10:57:23.0±0.4**, 21°.87S×68°.67W, h131**^{km}±3^{km}**, ML2.2, MW3.7, 1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.54	278	i P	Pn	10 57 43.4	+0.7
PB09				i S	Sn	10 57 58.0	+0.5
LVC	Limon Verde	0.77	197	i P	Pn	10 57 45.2	+0.7
LVC				i S	Sn	10 58 01.4	+0.6
PB03	IPOC Station P	1.02	260	i P	Pn	10 57 47.0	+0.6
PB03				i S	Sn	10 58 05.1	+0.9
PB07	IPOC Station P	1.14	277	i P	Pn	10 57 48.4	+0.8
PB06	IPOC Station P	1.18	225	i P	Pn	10 57 48.8	+0.8
PB06				i S	Sn	10 58 07.6	+0.7
PB02	IPOC Station P	1.27	295	i P	Pn	10 57 49.4	+0.6
PB04	IPOC Station P	1.45	251	⇓iP	Pn	10 57 51.3	+0.5
PB11	IPOC Station P	2.30	336	i P	Pn	10 58 01.8	+0.9
SLA	San Lorenzo	4.06	135	i P	Pn	10 58 25.0	+1.2
SLA				IAML		10 59 54.1	
	comp=Z,2.8nm,0.3s						

NNC 05 11:18:14.9±8.1**, 36°.90N×71°.20E, h0**^{km}**, mb3.5, mpv3.2, 4C-2D, Error ellipse: s-maj=65.1km s-min=60.2km az=140.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.22	355	⇑Pn	Pn	11 19 48.0	-0.1
	0.5nm,0.3s,baz=170,slow=12,SNR=12						
KK31				⇑Sn	Sn	11 21 00.9	+1.0
	0.7nm,0.3s,baz=193,slow=25						
AAK	Ala-Archa	6.27	23	⇑Pn	Pn	11 19 46.4	-2.5
	1.2nm,0.4s						
AAK				⇓Sn	Sn	11 21 02.7	+1.4
	1.7nm,0.7s						
TKM2	Tokmak 2	6.90	28	⇑Pn	Pn	11 20 00.1	+2.5
	0.9nm,0.7s						
TKM2				⇓Sn	Sn	11 21 18.3	+1.4
	0.9nm,0.6s						

NNC 05 11:20:50.4±5.5**, 37°.85N×72°.10E, h0**^{km}**, mb3.6, mpv3.2, 6D, Error ellipse: s-maj=42.6km s-min=32.6km az=169.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.12	20	⇓Pn	Pn	11 22 08.9	+0.5
	2.6nm,0.4s						
AAK				⇓Sn	Sn	11 23 09.4	+1.1
	1.7nm,0.6s						
KK31	Karatay Array	5.38	347	⇓Pn	Pn	11 22 12.8	+0.9
	0.4nm,0.3s,baz=163,slow=11,SNR=8.3						
KK31				⇓Sn	Sn	11 23 14.8	+0.2
	2.3nm,0.5s,baz=164,slow=22,SNR=12						
TKM2	Tokmak 2	5.72	27	⇓Pn	Pn	11 22 14.6	-2.1
	3.4nm,0.8s						
TKM2				⇓Sn	Sn	11 23 25.8	+2.6
	0.8nm,0.5s						

MEX 05 11:22:07.1±0.7**, 16°.56N×98°.18W, h12**^{km}±7^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.06	340	eP	Pb	11 22 23.7	-3.8
TLIG				eS	Sb	11 22 36.9	-4.5
VHO	Vista Hermosa	1.48	70	eP	Pn	11 22 30.6	-3.2
VHO				eS	Sn	11 22 47.8	-5.3
CAIG	El Cayaco	2.05	284	eP	Pn	11 22 36.4	-5.1
CAIG				eS	Sn	11 23 02.8	-4.3
HUIG	Huatulco	2.14	111	i P	Pn	11 22 39.1	-3.6
HUIG				i S	Sn	11 23 04.9	-4.4
CMIG	Matias Romero	3.20	80	eP	Pn	11 22 53.9	-3.4
CMIG				i S	Sn	11 23 32.5	-2.9

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*IDC **05** 11:25:38.0±1.7, 6°.63S×130°.02E, h0^{km}, mb4.1/2, mb1 4.3/5, mb1mx3.8/28, mbtmp4.1/5, ML4.1/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/29, Error ellipse: s-maj=55.7km s-min=27.2km az=75.0*

*ISCJB **05** 11:25:46.1±0.7, 6°.36S±0°.04×131°.03E±0°.09, h100^{km}, mb4.0/2, Error ellipse: s-maj=13.4km s-min=6.2km az=172.2*

*DJA **05** 11:25:47.0±0.3, 6°S±2°×13°1E±°, h106^{km}±8^{km}, M4.6/7, mb4.5/7, mB5.5/2, MLv4.7/6, Mw(mB)4.9/2*

ISC 05 11:25:46.1±0.9**, 6°.33S**±0°.04×**131°.08E**±0°.10**, h100**^{km}**, n13, σ2^{s}.26**/15**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.66	172	P	Pn	11 26 16.8	+2.5
SAUI				S	Sn	11 26 36.1	+0.4
BNDI	Bandanaira	2.14	327	P	Pn	11 26 22.5	+2.0
BNDI				S	Sn	11 26 47.6	+0.8
FAKI	Fak Fak	3.58	19	P	Pn	11 26 42.7	+3.0
FAKI				S	Sn	11 27 23.0	+1.8
NLAI	Namlea	5.01	308	P	Pn	11 27 04.9	+5.9
SIJI	Sorong	5.43	2	Pn	Pn	11 27 05.8	+1.1
	18nm,0.3s,baz=191,slow=16,SNR=47						
SIJI				Sn	Sn	11 28 02.9	-3.0
	20nm,0.3s,baz=241,slow=23,SNR=21						
SWI	Sorong	5.43	2	P	Pn	11 27 05.3	+0.6
	61nm,0.6s,5µm1.3nm						
SWI				S	Sn	11 28 02.6	-3.4
	61nm,0.6s,5µm1.3nm						
SANI	Sanana	6.62	310	P	Pn	11 27 21.9	+1.1
	23nm,0.8s,0.1nm						
BAKI	Biak	7.16	45	P	Pn	11 27 34.2	+6.0
	30nm,0.8s						
WRA	Warramunga Arr	13.90	167	Pn	Pn	11 28 55.2	-3.5
	0.9nm,0.3s,baz=339,slow=13,SNR=46						
DAV	Davao City (W)	14.40	338	LR	LR	11 33 57.8	
	comp=Z,41nm,20.9s,baz=150,slow=35						
ASAR	Alice Springs	17.45	171	P	P	11 29 42.5	-0.5
	0.3nm,0.3s,baz=352,slow=9.2,SNR=22						
ASAR				S	Sn	11 32 44.7	-13
	0.6nm,0.3s,baz=353,slow=25,SNR=8.6						
CMAR	Chiang Mai Arr	40.14	308	P	P	11 33 12.7	+0.1
	0.5nm,0.3s,baz=128,slow=7.3,SNR=4.5						
MKAR	Makanchi Array	68.26	326	P	P	11 36 37.7	+1.5
	2.0nm,0.5s,baz=128,slow=7.8,SNR=15						

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*IDC **05** 11:34:40.9±6.0, 8°.34S×107°.33E, h64^{km}±48^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.3/34, mbtmp3.9/4, MS2.5/2, Ms1 2.6/2, ms1mx2.3/28, Error ellipse: s-maj=71.9km s-min=20.5km az=59.0*

*DJA **05** 11:34:40.8±0.7, 8°S±4°×10°8E±°, h22^{km}±5^{km}, M4.2/9, mb3.9/1, MLv4.3/9*

ISC 05 11:34:40.8±1.8**, 8°.3S**±0°.1×**107°.84E**±0°.06**, h41**^{km}±22^{km}**, n21, σ1^{s}.82**/19**, mb3.9**/4**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.71	358	P	Pn	11 34 54.4	0.0
CISI				S	Sn	11 35 02.4	-1.8
LEM	Lembang	1.45	351	P	Pn	11 35 05.3	+0.6
	205nm,0.3s,baz=125,slow=7.5,SNR=90						
LEM				S	Sn	11 35 25.5	+3.0
	203nm,0.3s,baz=82,slow=22,SNR=7.9						
LEM				LR	LR	11 35 49.5	
	comp=Z,126nm,21.6s,baz=188,slow=45						
LEM	Lembang	1.45	351	P	Pn	11 35 06.0	+1.4
LEM				S	Sn	11 35 23.0	+0.5
UGM	Wanagama	2.68	83	P	Pn	11 35 21.0	-0.5
UGM				S	Sn	11 35 50.6	-2.2
CGJI	Cibinong	2.69	308	P	Pn	11 35 23.0	+1.5
CGJI				S	Sn	11 35 50.9	-1.9
WOJI	Wonogiri, Jawa	3.09	82	P	Pn	11 35 27.2	+0.2
WOJI				S	Sn	11 36 03.2	+0.5
KASI	Kota Agung	4.29	309	P	Pn	11 35 43.2	-0.4
KASI				S	Sn	11 36 30.0	-2.5
MDSI	Maura Dua	5.23	316	P	Pn	11 35 58.2	+1.7
	13nm,1.0s,0.1nm						
KAPI	Kappang	12.27	75	LR	LR	11 42 36.6	
	comp=Z,32nm,18.9s,baz=114,slow=37						
CMAR	Chiang Mai Arr	27.97	342	LR	LR	11 52 33.2	
	comp=Z,6.3nm,18.0s,baz=15,slow=38						
WRA	Warramunga Arr	28.15	117	P	P	11 40 30.3	+0.9
	1.4nm,0.9s,baz=297,slow=12,SNR=10						
ASAR	Alice Springs	29.29	125	P	P	11 40 40.6	+1.1
	0.3nm,0.6s,baz=302,slow=7.9,SNR=3.8						
H08S2	Diego Garcia H	35.00	268	T	T	12 18 44.4	
	baz=93,slow=76,SNR=192						
H08S3	Diego Garcia H	35.01	268	T	T	12 18 43.5	
	baz=93,slow=76,SNR=88						
H08S1	Diego Carcia H	35.02	268	T	T	12 19 03.7	
	baz=93,slow=76,SNR=84						
H08N1	Diego Carcia H	36.56	270	T	T	12 21 00.8	
	baz=147,slow=75,SNR=6.9						
H08N2	Diego Garcia H	36.58	271	T	T	12 21 08.1	
	baz=147,slow=75,SNR=5.1						
H08N3	Diego Garcia H	36.59	270	T	T	12 21 03.2	
	baz=147,slow=75,SNR=7.3						
STKA	Stephens Creek	39.18	132	P	P	11 42 06.8	+1.8
	2.3nm,0.7s,baz=316,slow=8.8,SNR=5.0						
MKAR	Makanchi Array	59.35	340	P	P	11 44 35.6	-3.1
	1.0nm,0.5s,baz=159,slow=8.4,SNR=5.9						
TXAR	Lajitas Array	143.75	51	PKP	PKPab	11 54 09.2	+0.1
	0.1nm,0.5s,baz=264,slow=1.5,SNR=4.6						

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*IDC **05** 12:01:21.6±5.0, 15°.38S×167°.67E, h114^{km}±43^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.6/32, mbtmp4.2/6, MS2.8/1, Ms1 2.8/1, ms1mx2.4/26, Error ellipse: s-maj=32.9km s-min=26.7km az=16.0*

*NEIC **05** 12:01:26.3±1.4, 15°.60S×167°.63E, h146^{km}±14^{km}, mb4.5/16, Error ellipse: s-maj=39.2km s-min=12.2km az=74.0*

NEIC Felt at Luganville.

ISC 05 12:01:23.1±0.7**, 15°.54S**±0°.07×**167°.8E**±0°.1**, h124**^{km}**, n37, σ1^{s}.52**/40**, mb4.5**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	5.92	178	ePn	Pn	12 02 48.1	-0.4
MARNC				eSn	Sn	12 03 51.9	-3.1
DZM	Mont Dzumac	6.63	191	P	Pn	12 02 59.6	+1.4
	22nm,0.3s,baz=343,slow=13,SNR=222						
DZM				S	Sn	12 04 13.2	+0.6
	9.1nm,0.3s,baz=320,slow=24,SNR=7.7						
DZM	Mont Dzumac	6.63	191	ePn	Pn	12 02 59.9	+1.6
DZM				eSn	Sn	12 04 13.6	+1.1
ONTNC	Ouen Toro	6.86	191	ePn	Pn	12 03 03.8	+2.6
ONTNC				eSn	Sn	12 04 19.6	+1.7
PINNC	Pines Island,	7.05	183	ePn	Pn	12 03 05.6	+1.9
PINNC				eSn	Sn	12 04 22.9	+0.5
HNR	Honiara	9.81	307	LR	LR	12 06 26.1	
	comp=Z,53nm,20.0s,baz=69,slow=32						
HNR	Honiara	9.81	307	ePn	Pn	12 03 42.3	+1.2
EIDS	Eidsvold	18.49	235	eP	Pn	12 05 29.8	-1.5
	12nm,0.7s						
OUZ	Omahuta	20.27	166	eP	Pn	12 05 51.9	-0.1
	35nm,1.5s						
ARMA	Armidale	20.99	222	eP	P	12 05 56.4	-0.4
	21nm,1.4s						
CTA	Charters Tower	21.04	254	P	P	12 05 56.8	-0.6
	4.0nm,0.7s,baz=78,slow=12,SNR=6.9						
CTAO	Charters Tower	21.04	254	eP	P	12 05 56.6	-0.8
	7.7nm,1.1s						
HIZ	Hauiti	23.71	166	eP	P	12 06 25.7	+2.0
	47nm,1.4s						
URZ	Urewera	24.07	162	eP	P	12 06 28.2	+1.3
	16nm,1.0s						
BKZ	Black Stump Fm	24.73	164	eP	P	12 06 34.3	+1.2
	33nm,1.5s						
LTZ	Lake Taylor	27.42	173	eP	P	12 06 57.6	+0.5
	21nm,0.9s						
WB2	Warramunga Arr	32.17	257	eP	P	12 07 36.9	-2.5
	6.9nm,1.3s						
WRA	Warramunga Arr	32.18	257	P	P	12 07 36.8	-2.7
	1.2nm,0.4s,baz=83,slow=8.6,SNR=25						
AS31	Alice Springs	32.91	250	eP	P	12 07 44.0	-1.9
	1.9nm,0.8s						
ASAR	Alice Springs	32.92	250	P	P	12 07 43.9	-2.1
	3.6nm,0.6s,baz=81,slow=8.6,SNR=73						
BBOO	Buckleboo	33.54	233	eP	P	12 07 50.6	-0.6
	40nm,1.5s						
VNDA	Vanda	62.07	181	P	P	12 11 30.7	+0.6
	0.7nm,0.5s,baz=11,slow=5.8,SNR=7.7						
VNDA	Vanda	62.07	181	eP	P	12 11 30.6	+0.4
	1.9nm,1.0s						
SBA	Scott Base	62.34	180	eP	P	12 11 32.3	+0.4
	11nm,1.2s						
QSPA	South Pole Qui	74.50	180	eP	P	12 12 47.8	-0.1
	10nm,0.9s						
HHC	Hu-ho-hao-te	76.56	320	P	P	12 13 03.1	+3.1
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,20nm,7.4s						
ILAR	Eielson Array	87.12	18	P	P	12 13 52.5	-2.2
	comp=Z,0.3nm,0.5s,baz=241,slow=4.8,SNR=8.5						
SNAA	Sanae	92.78	183	P	P	12 14 20.3	-0.9
SNAA	Sanae	92.78	183	eP	P	12 14 20.3	-0.9
	comp=Z,2.5nm,0.7s						
VNA3	Neumayer Olymp	93.42	181	P	P	12 14 23.1	-1.1
WMQ	Urumqi	93.69	314	eP	P	12 14 27.7	+1.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,65nm,5.3s						
WMQ				LR	LR		
	comp=N,570nm,28.9s						
WMQ				LR	LR		
	comp=E,620nm,29.0s						
WMQ				LR	LR		
	comp=Z,52nm,28.9s						
VNA1	Neumayer--Stat	93.99	181	P	P	12 14 25.7	-1.0
ARCES	ARCESS Array B	121.17	345	PKP	PKPdf	12 19 59.8	-0.9
	comp=Z,2.0nm,0.5s,baz=64,slow=1.5,SNR=28						
FINES	FINESS Array B	126.67	338	PKP	PKPdf	12 20 11.1	-0.4
	comp=Z,0.6nm,0.4s,baz=338,slow=2.1,SNR=6.0						
NOA	NORSAR Array B	131.54	345	PKP	PKPdf	12 20 21.1	+0.3
	comp=Z,0.5nm,0.6s,baz=343,slow=1.9,SNR=2.4						
VYHS	Vyhne	138.45	329	ePKP	PKiKP	12 20 36.0	-0.2
KEST	Kesra	152.18	320	PKPbc	PKPbc	12 21 04.5	-0.1
	comp=Z,5.8nm,0.8s,baz=37,slow=2.0,SNR=6.8						

MEX 05 12:01:23.2±0.6**, 14°.99N×92°.59W, h100**^{km}±6^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.33	105	eP	Pn	12 01 35.9	-2.0
THIG				eS	Sn	12 01 47.2	-1.6
PCIG		0.93	320	eP	Pn	12 01 41.8	-1.1
PCIG				eS	Sn	12 01 55.8	-1.8
CCIG	Comitan	1.36	19	eP	Pn	12 01 47.2	-0.7
CCIG				eS	Sn	12 02 04.7	-1.8
TGIG		1.85	344	eP	Pn	12 01 52.4	-1.5
TGIG				eS	Sn	12 02 15.7	-1.6
CMIG	Matias Romero	3.03	314	eP	Pn	12 02 09.0	-0.5
CMIG				i S	Sn	12 02 43.9	-1.2

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*IDC **05** 12:22:59.5±1.8, 4°.39S×101°.79E, h0^{km}, mb4.0/7, mb1 4.0/7, mb1mx3.7/40, mbtmp4.0/7, MS3.0/3, Ms1 3.1/3, ms1mx2.6/34, Error ellipse: s-maj=80.5km s-min=19.0km az=53.0*

*ISCJB **05** 12:23:02.6±0.6, 4°.53S±0°.07×101°.73E±0°.07, h37^{km}, mb4.1/15, MS2.8/1, Error ellipse: s-maj=13.2km s-min=4.9km az=44.2*

*DJA **05** 12:23:03.3±0.8, 4°S±4°×10°2E±°, h12^{km}±7^{km}, M4.3/12, mb4.6/1, MLv4.2/12*

*NEIC **05** 12:23:04.8±1.8, 4°.46S×101°.83E, h35^{km}, mb4.2/7, Error ellipse: s-maj=33.9km s-min=14.8km az=220.0*

ISC 05 12:23:05.3±0.8**, 4°.5S**±0°.1×**101°.82E**±0°.09**, h37**^{km}**, n48, σ1^{s}.02**/41**, mb4.3**/15**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.14	82	ePn	Pn	12 23 24.7	-0.1
MNAI	Manna	1.14	82	P	Pn	12 23 23.6	-1.2
LHSI	Lahat	1.83	68	P	Pn	12 23 33.9	-0.3
LWLI	Liwa	2.29	103	P	Pn	12 23 40.9	+0.3
MDSI	Maura Dua	2.35	89	P	Pn	12 23 40.6	-0.8
KRJI	Kerinci	2.43	352	P	Pn	12 23 42.3	-0.4
PPSI	Pulau Pagai	2.51	314	P	Pn	12 23 43.6	0.0
KASI	Kota Agung	2.85	111	P	Pn	12 23 49.4	+1.1
SDSI	Sungai Dareh	3.58	354	P	Pn	12 23 59.1	+0.8
PDSI	Padang	3.83	339	P	Pn	12 24 01.5	-0.3
SISI	Saibi	4.18	319	P	Pn	12 24 06.0	-0.6
BKNI	Bangkinang	4.87	351	ePn	Pn	12 24 15.5	-0.6
PBSI	Pulau Batu	5.67	321	P	Pn	12 24 26.8	-0.3
LEM	Lembang	6.21	112	LR	LR	12 27 17.5	
	comp=Z,85nm,19.5s,baz=26,slow=41						
MYKOM	Kota Tinggi	6.58	18	ePn	Pn	12 24 38.6	-1.0
CISI	Cisompet, Garu	6.68	117	ePn	Pn	12 24 40.9	-0.2
CISI				eSn	Sn	12 25 54.4	-1.6
GSI	Gunungsitoli	7.17	324	ePn	Pn	12 24 46.6	-1.1
PSI	Prapat	7.82	338	LR	LR	12 28 16.7	
	comp=Z,174nm,20.1s,baz=101,slow=42						
IPM	Ipoh	8.97	355	ePn	Pn	12 25 11.9	-0.5
UGM	Wanagama	9.29	112	ePn	Pn	12 25 17.5	+0.7
KULM	Kulim	9.81	353	ePn	Pn	12 25 23.7	-0.2
CMAR	Chiang Mai Arr	23.00	353	LR	LR	12 37 19.1	
	comp=Z,29nm,18.4s,baz=174,slow=38						
H08S2	Diego Garcia H	29.32	262	T	T	12 59 18.5	
	baz=86,slow=75,SNR=21						
H08S3	Diego Garcia H	29.33	263	T	T	12 59 21.5	
	baz=86,slow=75,SNR=36						
H08S1	Diego Carcia H	29.34	262	T	T	12 59 25.4	
	baz=86,slow=75,SNR=35						
H01W3	Cape Leeuwin H	32.30	161	T	T	13 03 40.7	
	baz=338,slow=76,SNR=3.1						
H01W2	Cape Leeuwin H	32.31	161	T	T	13 03 48.1	
	baz=338,slow=76,SNR=6.6						
H01W1	Cape Leeuwin H	32.32	161	T	T	13 03 40.8	
	baz=338,slow=76,SNR=3.7						
WR1	Warramunga Arr	35.18	119	eP	P	12 29 55.9	-0.2
WRA	Warramunga Arr	35.18	119	P	P	12 29 55.9	-0.2
	0.4nm,0.4s,baz=296,slow=10,SNR=20						
WRAB	Tennant Creek	35.19	119	eP	P	12 29 56.0	-0.2
	8.8nm,1.4s						
WB2	Warramunga Arr	35.19	119	eP	P	12 29 56.2	0.0
	5.4nm,1.3s						
ASAR	Alice Springs	36.32	125	P	P	12 30 05.9	0.0
	0.5nm,0.5s,baz=296,slow=7.6,SNR=12						
ASAR				PcP	PcP	12 32 30.8	+0.5
	0.4nm,0.4s,baz=306,slow=2.7,SNR=4.3						
AS31	Alice Springs	36.32	125	eP	P	12 30 06.5	+0.6
	1.4nm,1.0s						
WHN	Wuhan	36.86	18	P	P	12 30 12.8	+2.5
HHC	Hu-ho-hao-te	46.02	10	P	P	12 31 27.5	+2.1
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,23nm,7.0s						
STKA	Stephens Creek	46.13	131	eP	P	12 31 26.9	+0.5
	comp=Z,3.6nm,1.5s						
MK32	Makanchi Array	53.93	343	eP	P	12 32 24.3	-1.0
MKAR	Makanchi Array	53.93	343	P	P	12 32 24.3	-1.0
	comp=Z,1.5nm,0.5s,baz=145,slow=9.3,SNR=10						
USRK	Ussuriysk Ar.	55.55	26	P	P	12 32 36.0	-1.0
	comp=Z,2.9nm,0.8s,baz=256,slow=7.7,SNR=6.1						
KURBB	Kurchatov Arra	58.47	343	P	P	12 32 56.3	-1.2
	comp=Z,0.6nm,0.6s,baz=161,slow=6.4,SNR=5.1						
KURK	Kurchatov	58.52	343	eP	P	12 32 56.9	-1.0

	comp=Z,2.1nm,0.8s						
ZAA0	Zalesovo Array	59.97	348	eP	P	12 33 06.5	-1.3
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	59.97	348	P	P	12 33 06.1	-1.7
	comp=Z,2.2nm,0.5s,baz=174,slow=5.1,SNR=8.5						
ZAA1	Zalesovo Array	59.97	348	eP	P	12 33 06.1	-1.7
BVAR	Borovoye Array	63.16	339	P	P	12 33 27.8	-1.6
	comp=Z,0.9nm,0.5s,baz=149,slow=12,SNR=5.9						
ABKAR	Akbulak array	64.70	331	eP	P	12 33 38.4	-1.2
	comp=Z,1.9nm,0.9s						
TXAR	Lajitas Array	145.48	42	PKPbc	PKPab	12 42 40.2	-0.5
	comp=Z,2.2nm,0.4s,baz=310,slow=0.9,SNR=52						

RSNC 05 12:43:48.8±0.9, 11°.23N×72°.36W, h72km±10km, ML3.2, Mw3.5, 1C, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URIC	Uribia, Colomb	0.59	38	eP	Pn	12 44 02.0	-0.7
URIC				eS	Sn	12 44 12.5	-0.4
URIC				i		12 44 13.3	
	comp=Z,548nm,0.2s						
CVALL	Valledupar, Ce	1.14	231	eP	Pn	12 44 09.1	-0.1
CVALL				eS	Sn	12 44 24.3	0.0
CVALL				i		12 44 24.7	
	comp=Z,614nm,0.1s						
CODC	Agustn Codazz	1.67	220	⇑iP	Pn	12 44 15.9	-0.2
CODC				eS	Sn	12 44 36.5	-0.3
CODC				i		12 44 39.5	
	comp=Z,110nm,0.1s						
SMRC	Santa Marta, M	1.83	268	eP	Pn	12 44 17.8	-0.4
SMRC				eS	Sn	12 44 39.3	-1.2
ARGC	Ariguani, Magd	2.30	234	eP	Pn	12 44 24.2	-0.4
ARGC				eS	Sn	12 44 52.4	+0.5
ARGC				i		12 45 02.3	
	comp=Z,74nm,0.2s						
SMLC	San Martn de	2.94	215	eP	Pn	12 44 32.2	-1.1
SMLC				eS	Sn	12 45 06.2	-1.3
OCAC	Ocana	3.12	198	eP	Pn	12 44 35.6	-0.2
OCAC				eS	Sn	12 45 10.8	-1.2
OCAC				i		12 45 14.0	
	comp=Z,174nm,0.3s						
PAMC	Pamplona, Colo	3.88	185	eP	Pn	12 44 46.3	-0.2
PAMC				eS	Sn	12 45 30.3	-0.8
PAMC				i		12 45 34.5	
	comp=Z,46nm,0.2s						
GIRC	Giron, Santand	4.21	191	eP	Pn	12 44 51.2	+0.6
BRRC	Barranca, Sant	4.31	198	eP	Pn	12 44 52.2	+0.3
BRRC				eS	Sn	12 45 41.4	+0.4
BRRC				i		12 45 47.9	
	comp=Z,22nm,0.2s						
ZARC	Zaragoza, Cauc	4.46	214	eS	Sn	12 45 42.8	-1.7
TAMC	Tame, Arauca	4.80	173	eP	Pn	12 44 58.9	+0.2
TAMC				eS	Sn	12 45 51.8	-1.1
PTBC	PUERTO BERRIO,	5.10	204	eP	Pn	12 45 02.3	-0.4
PTBC				eS	Sn	12 45 58.8	-1.6
PTBC				i		12 46 04.1	
	comp=Z,16nm,0.4s						
NORC	Norcasia	6.15	204	eP	Pn	12 45 17.8	+0.6
NORC				eS	Sn	12 46 25.6	-0.6
NORC				i		12 46 35.5	
	comp=Z,9.1nm,0.4s						
GUY2C	Guyana, Caldas	6.67	207	eP	Pn	12 45 25.7	+1.1
RREF	El Recreo	6.95	205	eP	Pn	12 45 29.8	+1.2

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*ISCJB **05** 12:50:02.7±1.4, 5°.45S±0°.08×147°.6E±0°.3, h170km, mb3.7/6, Error ellipse: s-maj=44.0km s-min=10.5km az=177.0*

*IDC **05** 12:50:05.1±3.4, 5°.46S×147°.60E, h180km±29km, mb3.5/6, mb1 3.7/8, mb1mx3.4/33, mbtmp4.0/8, MS2.4/1, Ms1 2.4/1, ms1mx2.1/20, Error ellipse: s-maj=45.2km s-min=21.0km az=81.0*

ISC 05 12:50:04.3±1.5, 5°.48S±0°.10×147°.6E±0°.4, h170km, n9, σ1ˢ.04/10, mb3.8/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.93	186	P	Pn	12 51 05.5	+1.4
	3.3nm,0.3s,baz=343,slow=5.4,SNR=9.8						
PMG				S	Sn	12 51 49.2	-1.8
	6.9nm,0.3s,baz=318,slow=4.9,SNR=4.0						
PMG				LR	LR	12 53 07.8	
	comp=Z,50nm,18.4s,baz=98,slow=46						
WRA	Warramunga Arr	19.31	221	P	P	12 54 16.7	+0.2
	1.2nm,0.3s,baz=49,slow=9.9,SNR=44						
ASAR	Alice Springs	22.38	215	P	P	12 54 49.0	+0.3
	3.1nm,0.5s,baz=51,slow=8.6,SNR=34						
CMAR	Chiang Mai Arr	53.52	298	P	P	12 59 07.9	+0.1
	0.9nm,0.7s,baz=116,slow=5.8,SNR=5.4						
SONM	Songino Array	64.24	330	P	P	13 00 21.9	+0.6
	0.6nm,0.4s,baz=145,slow=7.9,SNR=4.5						
VNDA	Vanda	72.40	177	P	P	13 01 11.4	+0.1
	0.6nm,0.6s,baz=345,slow=7.6,SNR=6.7						
MKAR	Makanchi Array	77.47	320	P	P	13 01 40.6	-0.3
	0.7nm,0.5s,baz=106,slow=5.9,SNR=7.7						
ZALV	Zalesovo Beam	78.89	328	P	P	13 01 47.4	-1.1
	0.9nm,0.3s,baz=106,slow=5.1,SNR=4.4						
TORD	Torodi Ar. Bea	145.53	285	PKPbc	PKPdf	13 09 22.4	-0.8
	0.8nm,0.3s,baz=58,slow=3.4,SNR=14						

IDC 05 12:55:26.7±2.3, 6°.53N×124°.32E, h0km, mb4.2/3, mb1 4.5/3, mb1mx3.6/38, mbtmp4.2/3, Error ellipse: s-maj=237.3km s-min=24.7km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.09	160	P	P	13 01 20.3	-0.1
	1.8nm,0.3s,baz=342,slow=12,SNR=46						
ASAR	Alice Springs	31.44	163	P	P	13 01 50.1	0.0
	1.7nm,0.5s,baz=343,slow=7.0,SNR=34						
MKAR	Makanchi Array	53.90	325	P	P	13 04 51.9	-0.1
	1.1nm,0.5s,baz=122,slow=8.0,SNR=10						

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*ISCJB **05** 13:00:17.9±0.3, 41°.96N±0°.01×23°.12E±0°.03, h3km±3km, Error ellipse: s-maj=4.1km s-min=2.2km az=160.5*

*SOF **05** 13:00:18.6, 41°.97N×23°.25E, h2km*

*THE **05** 13:00:18.7, 41°.93N×23°.18E, h2km±1km, ML2.4/6, Error ellipse: s-maj=1.4km s-min=0.6km az=281.0*

*BEO **05** 13:00:18.9±1.1, 41°.92N×23°.20E, h5km±6km, ML2.5/7*

*SKO **05** 13:00:18.0, 41°.93N×23°.15E, h22km, M2.1, ML2.5*

*ATH **05** 13:00:19.5, 41°.89N×23°.20E, h9km±4km, ML2.3/4, Error ellipse: s-maj=4.7km s-min=1.3km az=184.0*

ISC 05 13:00:18.9±0.8, 41°.94N±0°.01×23°.14E±0°.02, h14km±5km, n59, σ1ˢ.16/86, 5C-4D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.08	212	⇑iPg	Pg	13 00 21.9	0.0
KKB				i Sg	Sg	13 00 24.1	+0.3
KKB	Krupnik	0.08	212	i P	Pg	13 00 21.9	0.0
MMB	Musomiste	0.56	128	⇑iPg	Pg	13 00 30.0	+0.1
MMB				i Sg	Sb	13 00 38.0	-0.3
MMB	Musomiste	0.56	128	i P	Pg	13 00 29.8	-0.1
VTS	Vitosha	0.69	6	ePg	Pg	13 00 31.5	-0.9
VTS				eSg	Sg	13 00 40.2	-1.2
VTS	Vitosha	0.69	6	P	Pg	13 00 31.3	-1.0
VTS				S	Sg	13 00 40.2	-1.2
VTS	Vitosha	0.69	6	⇓iP	Pg	13 00 31.5	-0.9
VTS				S	Sg	13 00 40.2	-1.2
VTS	Vitosha	0.69	6	⇑iPg	Pg	13 00 31.5	-0.9
VTS				i Sg	Sg	13 00 40.2	-1.2
VTS	Vitosha	0.69	6	i P	Pg	13 00 31.4	-0.9
VAY	Valandovo	0.75	215	i Pg	Pg	13 00 33.5	+0.1
VAY				i Sg	Sg	13 00 43.8	+0.5
VAY				eLg	Lg	13 00 44.2	
	comp=N,199nm,0.9s						
VAY				eLg	Lg	13 00 44.4	
	comp=E,153nm,0.5s						
STIP	Stip	0.75	252	i Pg	Pg	13 00 29.4	-4.1
STIP				i Sg	Sg	13 00 37.5	-6.0
STIP				eLg	Lg	13 00 37.5	
	comp=N,285nm,0.2s						
STIP				eLg	Lg	13 00 37.6	
	comp=E,134nm,0.2s						
KNT	Kendrikon	0.79	193	P	Pg	13 00 34.2	-0.1
KNT				S	Sg	13 00 44.7	0.0
	comp=E,448nm,0.2s						
KNT	Kendrikon	0.79	193	i Pg	Pg	13 00 34.0	-0.3
KNT	Kendrikon	0.79	193	P	Pg	13 00 34.1	-0.3
KNT				S	Sg	13 00 44.3	-0.4
KNT				AML	AML	13 00 44.8	
	comp=E,827µm,0.2s						
KNT				AML	AML	13 00 45.4	
	comp=N,914µm,0.2s						
NVR	Nevrokopi	0.80	137	P	Pg	13 00 33.5	-0.8
NVR				S	Sg	13 00 44.1	-0.7
	comp=N,252nm,0.2s						
NVR	Nevrokopi	0.80	137	P	Pg	13 00 33.3	-1.1
NVR				S	Sg	13 00 43.8	-1.0
NVR				AML	AML	13 00 44.4	
	comp=N,403µm,0.2s						
NVR				AML	AML	13 00 44.9	
	comp=E,612µm,0.2s						
SRS	Serrai	0.88	157	P	Pg	13 00 35.4	-0.6
SRS				S	Sb	13 00 47.9	+0.3
	comp=E,162nm,0.3s						
SRS	Serrai	0.88	157	i Pg	Pg	13 00 35.5	-0.6
SRS	Serrai	0.88	157	P	Pg	13 00 35.4	-0.6
SRS				S	Sg	13 00 46.7	-0.9
SRS				AML	AML	13 00 50.8	
	comp=E,301µm,0.2s						
SRS				AML	AML	13 00 51.8	
	comp=N,354µm,0.3s						
PGB	Panagyurishte	0.98	51	i P	Pg	13 00 36.2	-1.6
GRG	Griva	1.12	210	P	Pb	13 00 40.2	+0.1
GRG				S	Sn	13 00 55.9	+0.5
	comp=N,125nm,0.5s						
GRG	Griva	1.12	210	i Pg	Pb	13 00 40.1	+0.1
GRG				i Sg	Sg	13 00 55.4	+0.2
GRG	Griva	1.12	210	P	Pb	13 00 40.0	0.0
GRG				S	Sg	13 00 55.5	+0.2
GRG				AML	AML	13 00 56.1	
	comp=E,248µm,0.2s						
GRG				AML	AML	13 00 58.2	
	comp=N,223µm,0.4s						
SOH	Sokhos	1.12	172	P	Pb	13 00 39.8	-0.3
SOH				S	Sb	13 00 54.9	+0.4
SOH	Sokhos	1.12	172	i Pg	Pb	13 00 40.0	-0.1
SOH	Sokhos	1.12	172	P	Pb	13 00 39.7	-0.4
RZN	Rozhen	1.20	101	i P	Pb	13 00 41.0	-0.5
THE	Thessaloniki	1.31	186	P	Pb	13 00 43.3	+0.1
THE				S	Sg	13 01 02.2	+1.1
	comp=N,182nm,0.4s						
THE	Thessaloniki	1.31	186	P	Pg	13 00 43.8	-0.3
BARS	Barje	1.32	312	ePg	Pb	13 00 43.8	+0.4
BARS	Barje	1.32	312	ePn	Sb	13 00 58.6	-1.6
BARS				eSg	Sg	13 01 01.8	+0.3
ZAPS	Zavoj	1.39	345	ePg	Pn	13 00 44.1	+0.3
KAVA	Kavala	1.39	132	P	Pn	13 00 44.2	+0.4
KAVA				S	Sg	13 01 03.2	-0.6
	comp=N,148nm,0.3s						
KAVA	Kavala	1.39	132	P	Pb	13 00 44.4	-0.2
MPEP	Malo Peshtene	1.49	17	P	Pb	13 00 47.0	+0.7
PLG	Polygyros	1.58	171	P	Pn	13 00 46.8	+0.4
OUR	Ouranopolis	1.72	158	P	Pn	13 00 48.5	+0.2
OUR	Ouranopolis	1.72	158	P	Pb	13 00 50.7	+0.5
KDZ	Kurdzhali	1.73	99	i P	Pn	13 00 49.3	+0.9
THAS	Thassos island	1.78	138	P	Pn	13 00 49.1	-0.1
THAS	Thassos island	1.78	138	P	Pb	13 00 51.3	0.0
PLVB	Pleven	1.82	36	⇓iP	Pb	13 00 52.1	+0.2
PLVB	Pleven	1.82	36	S	Sg	13 01 17.3	0.0
RDO	Rodhopi	1.96	113	P	Pb	13 00 54.6	+0.3
SELS	Selova	1.97	311	ePg	Pg	13 00 56.0	-0.7
SELS				eSg	Sg	13 01 22.3	+0.1
ZAGS	Zajecar	1.99	341	ePg	Pb	13 00 55.1	+0.3
ZAGS				eSg	Sg	13 01 24.1	+1.2
BOVS	Bovan	2.00	329	ePg	Pb	13 00 54.7	-0.3
BOVS				eSg	Sg	13 01 24.0	+0.8
ELND	Elena	2.25	63	⇑iP	Pb	13 00 59.7	+0.4
ELND	Elena	2.25	63	S	Sg	13 01 30.2	-1.2
ALN	Alexandroupoli	2.42	114	P	Pb	13 01 00.6	-1.5
GRUS	Gruza	2.64	318	ePn	Pn	13 01 02.2	+1.2
GRUS				eSg	Sg	13 01 43.7	-0.1
KUBS	Kucevo	2.70	337	ePn	Pn	13 01 03.2	+1.4
IVAS	Ivanjica	2.75	308	ePn	Pn	13 01 04.8	+2.3
IVAS				eSg	Sg	13 01 47.9	+0.8
MDVR	Moldovita	3.03	340	⇓iP	Pn	13 01 06.5	+0.1
MDVR	Moldovita	3.03	340	S	Sn	13 01 43.0	+0.5
DIVS	Divibare	3.16	314	ePn	Pn	13 01 09.3	+1.0
DIVS				eSg	Sg	13 02 01.2	+0.7
GZR	Gura Zlata	3.47	356	⇑iP	Pn	13 01 16.1	+3.7
GZR	Gura Zlata	3.47	356	S	Sn	13 01 53.9	+0.6
BZS	Buzias	3.84	344	⇓iP	Pn	13 01 17.8	+0.3

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*ISCJB **05** 13:03:08.7±0.6, 14°.53N±0°.04×89°.13W±0°.04, h6km, Error ellipse: s-maj=6.6km s-min=4.7km az=30.5*

*SNET **05** 13:03:08.8±1.2, 14°.53N×89°.20W, h6km±8km, ML3.1*

*GCG **05** 13:03:10.6±0.4, 15°.41N×89°.51W, h78km, MD3.4*

ISC 05 13:03:08.2±1.0, 14°.55N±0°.04×89°.11W±0°.04, h6km, n17, σ0ˢ.44/21, 3C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO3	Montecristo	0.28	238	⇑eP	Pg	13 03 13.9	0.0
MTO3				eS	Sg	13 03 17.7	+0.1
VICT	Victoria	0.74	142	⇑eP	Pb	13 03 23.8	+0.2
MRL	Marmol	0.77	314	⇓eP	Pg	13 03 22.9	-0.1
MRL				eS	Sg	13 03 33.1	+0.1
MRL	Marmol	0.77	314	eP	Pb	13 03 23.9	-0.2
MRL				eS	Sb	13 03 34.2	-0.7
LFU	La Fuente	0.80	180	eP	Pg	13 03 23.4	-0.1
RTR	El Retiro	0.83	219	eP	Pg	13 03 23.9	-0.3
SNJE	San Jose	0.83	215	eP	Pg	13 03 24.0	-0.1
PAVA	Las Pavas	0.85	168	i P	Pg	13 03 24.5	0.0
PAVA				IAML		13 03 40.9	
	comp=Z,427nm,0.4s						
SBLS	San Blas	0.86	215	eP	Pg	13 03 24.7	-0.1
SBLS				eS	Sb	13 03 36.9	-0.7
CEVE	Cerro Verde	0.87	215	eP	Pg	13 03 25.2	+0.2
CEVE				IAML		13 03 39.2	
	comp=Z,986nm,0.5s						
NBG	Las Nubes	1.20	272	eP	Pn	13 03 32.1	+0.3
TECA	Tecapa	1.20	150	eP	Pg	13 03 30.8	-0.6
PACA	Pacayal	1.32	144	eP	Pn	13 03 33.3	0.0
PCG	Pacaya	1.46	264	eP	Pg	13 03 36.6	+0.3
LCND	La Caada	1.71	136	eP	Pn	13 03 39.5	+0.9
CNCH	Conchagua	1.77	135	eP	Pn	13 03 40.4	+0.9
TGUH	Tegucigalpa,Un	1.85	105	⇑eP	Pb	13 03 42.2	-0.2

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*ISCJB **05** 13:10:33.1±0.7, 16°.4N±0°.1×47°.0W±0°.1, h10km, mb4.0/7, MS3.4/6, Error ellipse: s-maj=19.6km s-min=14.8km az=168.6*

*IDC **05** 13:10:33.4±1.1, 16°.50N×46°.93W, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.7/50, mbtmp4.0/5, MS3.4/7, Ms1 3.4/7, ms1mx3.0/44, Error ellipse: s-maj=33.8km s-min=26.3km az=92.0*

*NEIC **05** 13:10:35.5±0.7, 16°.62N×46°.87W, h10km, mb4.1/4, Error ellipse: s-maj=26.7km s-min=22.4km az=111.0*

ISC 05 13:10:35.1±0.9, 16°.5N±0°.2×47°.0W±0°.1, h10km, n25, σ1ˢ.04/13, mb4.0/7, MS3.4/6, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBGH	Gun Hill	12.63	256	ePn	Pn	13 13 33.8	-1.1
SJG	San Juan	18.39	278	LR	LR	13 20 40.5	
	comp=Z,110nm,22.0s,baz=78,slow=33						
PTGA	Pitinga	21.41	218	P	P	13 15 23.1	-0.1
	1.3nm,0.3s,baz=38,slow=15,SNR=3.6						
PTGA				LR	LR	13 23 01.8	
	comp=Z,96nm,21.8s,baz=71,slow=35						
PTGA	Pitinga	21.41	218	eP	P	13 15 25.9	+2.7
	5.4nm,0.9s						
H10N3	ASCENSION HYDR	40.21	125	T	T	14 00 16.2	
	baz=307,slow=75,SNR=152						
H10N2	ASCENSION HYDR	40.22	125	T	T	14 00 16.4	
	baz=307,slow=75,SNR=186						
H10N1	ASCENSION HYDR	40.23	125	T	T	14 00 17.6	
	baz=307,slow=75,SNR=205						
H10S3	ASCENSION HYDR	40.76	126	T	T	14 00 58.8	
	baz=309,slow=75,SNR=77						
H10S1	ASCENSION HYDR	40.77	126	T	T	14 00 59.1	
	baz=309,slow=75,SNR=88						
H10S2	ASCENSION HYDR	40.78	126	T	T	14 01 00.1	
	baz=309,slow=75,SNR=85						
CPUP	Villa Florida	43.76	194	P	P	13 18 40.5	-0.4
	4.5nm,0.9s,baz=1.7,slow=9.2,SNR=3.8						
ESDC	Sonseca Array	43.86	49	LR	LR	13 33 44.9	
	comp=Z,42nm,20.2s,baz=340,slow=32						
TOA1	Torodi Ar. Sit	47.07	87	eP	P	13 19 07.1	-0.4
TORD	Torodi Ar. Bea	47.07	87	P	P	13 19 07.1	-0.4
	2.4nm,1.1s,baz=276,slow=7.1,SNR=3.8						
TXAR	Lajitas Array	53.31	294	LR	LR	13 41 14.6	
	comp=Z,30nm,21.9s,baz=0.0,slow=34						
BW06	Boulder Array	58.92	310	eP	P	13 20 36.2	+1.3
	1.6nm,1.1s						
PD31	Pinedale Array	58.92	310	eP	P	13 20 35.2	+0.4
PDAR	Pinedale Array	58.92	310	P	P	13 20 35.2	+0.4
	1.3nm,1.0s,baz=96,slow=7.4,SNR=7.6						
NOA	NORSAR Array B	60.47	28	LR	LR	13 42 46.3	
	comp=Z,38nm,20.5s,baz=280,slow=32						
INK	Inuvik	73.52	337	P	P	13 22 07.8	0.0
	1.6nm,0.8s,baz=55,slow=5.4,SNR=3.6						
INK	Inuvik	73.52	337	eP	P	13 22 07.8	0.0
	3.2nm,1.0s						
EIL	Elat	75.14	63	LR	LR	13 57 23.4	
	comp=Z,28nm,18.8s,baz=253,slow=37						
ILAR	Eielson Array	79.38	335	P	P	13 22 40.9	-0.2
	1.1nm,0.9s,baz=73,slow=4.5,SNR=9.9						
ILB	Eielson Array	79.38	335	eP	P	13 22 40.9	-0.2
	2.6nm,1.0s						
AKTO	Aktyubinsk	86.64	38	LR	LR	13 59 59.0	
	comp=Z,21nm,18.4s,baz=280,slow=34						

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*NIED **05** 13:16:00, 38°.50N×142°.00E, h50km, Mw3.9 Best double couple: M₀7.82000×10¹⁴ NP1:φₛ53.00000°, δ49.00000°, λ143.00000°. NP2:φₛ169.00000°, δ62.00000°, λ47.00000°.*

*ISCJB **05** 13:16:05.8±0.8, 38°.50N±0°.04×142°.04E±0°.09, h49km±7km, mb3.8/8, Error ellipse: s-maj=11.8km s-min=5.6km az=15.5*

*JMA **05** 13:16:06.7, 38°.51N×141°.98E, h49km±1km, M3.9*

JMA Felt II J1.

*IDC **05** 13:16:07.4±2.1, 38°.53N×142°.04E, h49km±22km, mb3.6/8, mb1 3.9/12, mb1mx3.6/55, mbtmp3.9/12, ML3.7/3, MS2.7/5, Ms1 2.7/5, ms1mx2.6/41, Error ellipse: s-maj=25.3km s-min=22.5km az=148.0*

ISC 05 13:16:05.6±2.0, 38°.50N±0°.04×142°.14E±0°.08, h32km±13km, n35, σ1ˢ.54/38, mb3.9/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.56	251	P	Pn	13 16 17.3	0.0
JIKH				S	Sb	13 16 24.8	-0.2
JKMT	Kesennumamotoy	0.61	301	P	Pn	13 16 17.9	-0.1
JKMT				S	Sb	13 16 25.8	-0.5
JIO	Ouri	0.62	266	P	Pn	13 16 17.9	-0.3
JIO				S	Sb	13 16 25.6	-1.0
OFUJ	Ofunato	0.69	328	P	Pn	13 16 19.3	+0.2
OFUJ				S	Sn	13 16 28.4	-0.3
JMK	Ichinoseki	0.85	303	P	Pn	13 16 21.1	-0.2
JMK				S	Sn	13 16 30.8	-1.9
JOU	Okura	1.17	264	P	Pn	13 16 25.2	-0.5
JOU				S	Sn	13 16 38.7	-1.8
JOM	Ohasama	1.18	326	P	Pn	13 16 26.1	+0.3
JOM				S	Sn	13 16 40.5	-0.3
JMM	Marumori	1.23	240	P	Pn	13 16 25.9	-0.7
JMM				S	Sn	13 16 40.0	-2.1
JYK	Kaneyama	1.46	287	P	Pn	13 16 29.4	-0.2
JRG	Rokugo	1.48	308	P	Pn	13 16 29.8	-0.2
JFK	Kawauchi	1.51	222	P	Pn	13 16 30.1	-0.3
JFK				S	Sn	13 16 47.4	-1.6
JYS	Shirataka	1.66	261	P	Pn	13 16 32.2	-0.2
JYS				eS	Sn	13 16 51.7	-0.8
MAT	Matsushiro	3.69	239	P	Pn	13 17 02.0	+1.7
MAT				S	Sn	13 17 48.2	+5.5
MJAR	Matsushiro Arr	3.69	239	P	Pn	13 17 01.9	+1.6
	1.1nm,0.3s,baz=40,slow=12,SNR=55						
MJAR				LR	LR	13 18 40.6	
	comp=Z,118nm,19.5s,baz=55,slow=42						
ASAJ	Asahikawa	5.63	3	P	Pn	13 17 27.5	+0.6
	3.0nm,0.3s,baz=216,slow=9.3,SNR=32						
JHJ	Hachijo jima 2	5.70	200	P	Pn	13 17 28.5	+0.6
	18nm,0.3s,baz=312,slow=22,SNR=6.0						
JHJ				S	Sn	13 18 29.6	-2.6
	30nm,0.3s,baz=238,slow=22,SNR=4.6						
USRK	Ussuriysk Ar.	9.52	310	P	Pn	13 18 21.0	+0.6
	0.2nm,0.3s,baz=116,slow=13,SNR=6.2						
JNU	Nakatsue	10.60	243	LR	LR	13 22 51.7	
	comp=Z,80nm,20.5s,baz=355,slow=38						
KSRS	Korea Array	11.27	269	P	Pn	13 18 48.2	+3.9
	0.2nm,0.3s,baz=90,slow=15,SNR=3.6						
KSRS				LR	LR	13 22 43.8	
	comp=Z,21nm,18.1s,baz=85,slow=35						
KLR	Kul'dur	13.07	328	LR	LR	13 23 16.4	
	comp=Z,20nm,21.6s,baz=146,slow=33						
PETK	Petropavlovsk-	18.14	31	LR	LR	13 27 21.2	
	comp=Z,28nm,18.9s,baz=258,slow=37						
SEY	Seymchan	25.25	11	P	P	13 21 29.5	+1.1
	2.4nm,0.7s,baz=244,slow=4.0,SNR=4.2						
H11N2	WAKE ISLAND Hy	28.44	124	T	T	13 52 21.7	
	baz=316,slow=75,SNR=179						
H11N1	WAKE ISLAND Hy	28.45	124	T	T	13 52 22.5	
	baz=316,slow=75,SNR=238						
H11N3	WAKE ISLAND Hy	28.46	124	T	T	13 52 23.1	
	baz=316,slow=75,SNR=170						
H11S1	WAKE ISLAND Hy	29.21	126	T	T	13 53 13.4	
	baz=318,slow=76,SNR=99						
H11S3	WAKE ISLAND Hy	29.21	126	T	T	13 53 13.5	
	baz=318,slow=76,SNR=104						
H11S2	WAKE ISLAND Hy	29.23	126	T	T	13 53 14.7	
	baz=318,slow=76,SNR=62						
ZALV	Zalesovo Beam	41.37	311	P	P	13 23 47.4	-1.0
	2.0nm,0.8s,baz=64,slow=6.6,SNR=2.9						
MKAR	Makanchi Array	43.85	301	P	P	13 24 08.2	-0.4
	0.9nm,0.7s,baz=83,slow=9.9,SNR=5.2						
ILAR	Eielson Array	47.95	33	P	P	13 24 40.2	-0.6
	0.7nm,0.6s,baz=265,slow=6.3,SNR=9.8						
FINES	FINESS Array B	67.79	332	P	P	13 26 58.7	-1.1
	1.2nm,0.7s,baz=72,slow=9.2,SNR=3.8						
NVAR	Mina Array Bea	73.66	54	P	P	13 27 37.1	+0.8
	0.6nm,0.8s,baz=268,slow=7.4,SNR=4.4						
PDAR	Pinedale Array	76.23	46	P	P	13 27 51.2	+0.1
	0.7nm,0.5s,baz=247,slow=1.3,SNR=9.8						
TXAR	Lajitas Array	88.78	53	P	P	13 28 56.5	+0.1
	0.3nm,0.6s,baz=288,slow=3.0,SNR=5.5						

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*ISCJB **05** 13:20:24.6±0.4, 14°.73N±0°.06×52°.28E±0°.03, h10km, mb4.6/114, MS3.8/28, Error ellipse: s-maj=8.2km s-min=4.6km az=11.1*

*MOS **05** 13:20:24.5±1.0, 14°.71N×52°.34E, h10km, mb4.9/55, Error ellipse: s-maj=8.6km s-min=4.2km az=104.7*

*IDC **05** 13:20:24.1±0.7, 14°.67N×52°.31E, h0km, mb4.5/27, mb1 4.5/27, mb1mx4.3/52, mbtmp4.5/27, MS3.7/23, Ms1 3.7/23, ms1mx3.6/39, Error ellipse: s-maj=16.2km s-min=15.6km az=155.0*

*NEIC **05** 13:20:26.0±1.7, 14°.72N×52°.27E, h10km, mb4.8/31, Error ellipse: s-maj=19.1km s-min=7.7km az=198.0*

*BJI **05** 13:20:25.0±0.0, 14°.90N×52°.30E, h5km, mb4.7/31, mB4.9/26, Ms4.6/12, Ms7 4.3/7*

ISC 05 13:20:26.3±0.5, 14°.85N±0°.08×52°.28E±0°.07, h10km, n246, σ1ˢ.56/240, mb4.6/119, MS3.8/28, 22C-14D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MZR	Muzera	8.19	8	i Pn	Pn	13 22 23.0	-2.3
	SNR=12						
ATD	Arta Tunnel	9.76	251	LR	LR	13 25 48.2	
	comp=Z,726nm,19.6s,baz=60,slow=33						
AJN	Ajban	9.99	14	Pn	Pn	13 22 48.6	-1.4
ASUD	Al Ashush, Dub	10.14	16	i Pn	Pn	13 22 50.8	-1.3
	SNR=11						
WSAR	Wadi Sarin	10.28	35	Pn	Pn	13 22 51.1	-2.9
	3.5nm,0.3s,baz=235,slow=14,SNR=44						
FAQ	Al Faqa, Dubai	10.32	17	Pn	Pn	13 22 52.6	-1.9
ASHO	Ashiyiah	10.41	19	Pn	Pn	13 22 54.0	-1.8
HATD	Hatta, Dubai	10.56	19	Pn	Pn	13 22 55.8	-2.1
NAZ	Nazwa, Dubai	10.57	17	Pn	Pn	13 22 56.1	-1.9
MSFE	Esma-Masafi	11.07	19	Pn	Pn	13 23 02.5	-2.3
BANOM	Banah	11.64	18	i Pn	Pn	13 23 09.6	-3.1
	SNR=6.2						
SHME	Shamm	11.71	17	Pn	Pn	13 23 09.9	-3.8
EIL	Elat	21.74	316	P	P	13 25 17.3	-0.7
	9.1nm,1.1s,baz=143,slow=3.6,SNR=3.7						
KMBO	Kilima Mbogo	21.75	224	LR	LR	13 33 12.3	
	comp=Z,491nm,18.6s,baz=89,slow=36						
GEYT	Alibeck	23.56	12	P	P	13 25 36.8	-0.2
	9.0nm,0.9s,baz=198,slow=7.3,SNR=14						
GEYT				LR	LR	13 36 43.3	

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       comp=Z,596nm,18.4s,baz=190,slow=41
GYA0B  ALIBECK ARRAY     23.56  12 eP      P       13 25 36.6 -0.5
       33nm,1.1s
MMAI   Mount Meron Ar    23.70 323  LR     LR      13 36 25.8
       comp=Z,94nm,20.9s,baz=135,slow=40
KBL    Kabul             24.76  35 eP      P       13 25 51.0 +2.5
       72nm,0.9s
KBL    Kabul             24.76  35 eP      P       13 25 51.0 +2.5
KBL                                 pmax   pmax
       comp=Z,72nm,0.9s
GNI    Garni             26.05 347  P      P       13 26 02.0 +2.0
       comp=Z,20nm,0.8s,baz=60,slow=23,SNR=10
GNI                                 LR     LR      13 37 07.3
       comp=Z,151nm,20.0s,baz=154,slow=38
GNI    Garni             26.05 347 eP      P       13 26 02.3 +2.2
       comp=Z,45nm,1.1s
GNI    Garni             26.05 347  P      P       13 26 00.0  0.0
GNI    Garni             26.05 347⇑iP      P       13 26 03.3 +3.2
GNI                                 pmax   pmax
       comp=Z,135nm,1.2s
MBAR   Mbarara           26.26 236 eP      P       13 26 01.6 -0.6
       comp=Z,13nm,0.3s
MBAR   Mbarara           26.26 236 eP      P       13 26 01.6 -0.6
MBAR                                pmax   pmax
       comp=Z,13nm,0.3s
NIL    Nilore            26.66  42 eP      P       13 26 05.8 +0.3
       comp=Z,30nm,0.8s
NIL    Nilore            26.66  42 eP      P       13 26 05.8 +0.3
NIL                                 pmax   pmax
       comp=Z,30nm,0.8s
AKT    Akhty             26.82 352⇑iP      P       13 26 09.3 +2.3
AKT                                 pmax   pmax
       comp=Z,23nm,1.0s
CHGR   Chuyangaron       28.00  29 eP      P       13 26 17.9 +0.4
       comp=Z,118nm,0.9s
BTLR   Botlikh           28.20 351⇑iP      P       13 26 22.0 +2.7
BTLR                                pmax   pmax
       comp=Z,14nm,1.0s
MAK    Makhachkala       28.31 353 eP      P       13 26 16.8 -3.3
MAK                                eS      S       13 31 02.2 -4.3
MAK                                 pmax   pmax
       comp=Z,28nm,0.4s
MAK                                 MLR    MLR
       comp=Z,117nm,13.0s
DBC    Dubki             28.46 352⇑iP      P       13 26 23.7 +2.1
DBC                                 pmax   pmax
       comp=Z,5.0nm,1.0s
ZEI    Tsey              28.76 347 eP      P       13 26 26.1 +1.7
ZEI                                 pmax   pmax
       comp=Z,26nm,1.2s
GROC   Groznyy           28.80 350⇑iP      P       13 26 27.1 +2.6
GROC                                pmax   pmax
       comp=Z,34nm,1.2s
GAR    Garm              28.82  30 eP      P       13 26 25.7 +0.8
       comp=Z,29nm,1.2s
GAR    Garm              28.82  30 eP      P       13 26 25.7 +0.8
GAR                                 pmax   pmax
       comp=Z,29nm,1.2s
PALK   Pallekele         28.87 102  LR     LR      13 35 39.0
       comp=Z,83nm,19.4s,baz=296,slow=32
NEY    Neytrino          29.46 346⇑iP      P       13 26 31.5 +0.9
NEY                                 pmax   pmax
       comp=Z,2.0nm,0.8s
NCK    Nalchik           29.50 347⇑iP      P       13 26 33.6 +2.9
NCK                                 pmax   pmax
       comp=Z,13nm,1.1s
BR101  Keskin Array S    29.68 330 eP      P       13 26 33.4 +0.9
BR131  Keskin Array S    29.68 330 eP      P       13 26 34.0 +1.5
       comp=Z,7.9nm,1.1s
BR131  Keskin Array S    29.68 330 eP      P       13 26 34.0 +1.5
BR131                               pmax   pmax
       comp=Z,8.0nm,1.1s
BRTR   Keskin Array B    29.68 330  P      P       13 26 33.4 +0.9
       comp=Z,6.1nm,1.1s,baz=140,slow=9.7,SNR=17
BRTR                                LR     LR      13 39 45.4
       comp=Z,55nm,18.2s,baz=100,slow=39
BRTR   Keskin Array B    29.68 330 i P     P       13 26 35.2 +2.7
BRTR                                pmax   pmax
       comp=Z,6.0nm,1.1s
KBZ    Khabaz            29.88 346  P      P       13 26 36.2 +2.2
       comp=Z,15nm,1.1s,baz=165,slow=4.8,SNR=16
KBZ                                 LR     LR      13 41 37.6
       comp=Z,181nm,18.7s,baz=168,slow=42
SHA1   Shidzhatmaz       29.94 346⇓iP      P       13 26 37.5 +2.6
KIV    Kislovodsk        30.14 346 eP      P       13 26 38.1 +1.6
       comp=Z,29nm,1.0s
KIV    Kislovodsk        30.14 346 i P     P       13 26 37.7 +1.2
       SNR=7.2
KIV    Kislovodsk        30.14 346 eP      P       13 26 38.4 +1.9
KIV                                 pmax   pmax
       comp=Z,101nm,1.1s
KIV                                 MLR    MLR
       comp=Z,274nm,15.0s
ANTO   Ankara            30.20 329 eP      P       13 26 37.2 +0.1
       comp=Z,31nm,1.1s
ANTO   Ankara            30.20 329 eP      P       13 26 37.2 +0.1
ANTO                                pmax   pmax
       comp=Z,31nm,1.1s
ILGA   Ilgaz             30.69 332 eP      P       13 26 43.1 +1.5
       comp=Z,20nm,1.1s
PYUN   Piuthan           31.37  60 eP      P       13 26 48.9 +1.2
       comp=Z,70nm,1.0s
KOLN   Koldanda          31.78  61 eP      P       13 26 52.3 +0.9
       comp=Z,61nm,1.0s
DANN   Dangsing          32.09  60 eP      P       13 26 55.4 +1.2
       comp=Z,85nm,0.9s
KSH    Kashi             32.18  36 eP      P       13 26 54.1 -0.5
KSH                                 pmax   pmax
       comp=Z,11nm,1.2s
KK31   Karatay Array     32.21  25 eP      P       13 26 56.1 +1.4
       comp=Z,10nm,0.9s
KK31   Karatay Array     32.21  25 eP      P       13 26 56.1 +1.4
KK31                                pmax   pmax
       comp=Z,10.0nm,0.9s
KKAR   Karatay Array     32.21  25 eP      P       13 26 56.3 +1.6
       comp=Z,10nm,0.9s
KKAR   Karatay Array     32.21  25 eP      P       13 26 56.3 +1.6
KKAR                                pmax   pmax
       comp=Z,10.0nm,0.9s
GKN    Gorkha            32.73  61 eP      P       13 27 00.1 +0.5
DMN    Daman             33.02  62 eP      P       13 27 03.0 +0.7
KKN    Kakani            33.22  62 eP      P       13 27 04.8 +0.9
       comp=Z,77nm,0.9s
PKIN   Phulchoki         33.26  62 eP      P       13 27 04.7 +0.3
       comp=Z,36nm,1.3s
PKI    Pulchoki          33.27  62 eP      P       13 27 04.8 +0.3
       comp=Z,57nm,1.3s
AAK    Ala-Archa         33.64  30 eP      P       13 27 07.7 +0.3
       comp=Z,14nm,1.1s
AAK    Ala-Archa         33.64  30⇑iP      P       13 27 09.6 +2.2
AAK                                 pmax   pmax
       comp=Z,10.0nm,1.2s
GUN    Gumba             33.76  62 eP      P       13 27 09.5 +0.7
       comp=Z,98nm,1.1s
JIRN   Jiri              33.96  62 eP      P       13 27 10.7 +0.1
       comp=Z,75nm,1.1s
ABKAR  Akbulak array     34.88   9 eP      P       13 27 18.4 +0.6
       comp=Z,9.9nm,0.9s
AKTO   Aktyubinsk        35.79   6  P      P       13 27 26.6 +0.9
       comp=Z,8.5nm,1.0s,baz=191,slow=7.6,SNR=17
TIRR   Tirgusor          35.80 330 eP      P       13 27 26.1 +0.3
       comp=Z,27nm,0.9s
TIRR   Tirgusor          35.80 330⇑iP      P       13 27 26.6 +0.8
TIRR   Tirgusor          35.80 330 eP      P       13 27 26.1 +0.3
TIRR                                pmax   pmax
       comp=Z,27nm,0.9s
TLB    Topalu            36.07 330⇓iP      P       13 27 29.2 +1.1
TLB    Topalu            36.07 330  P      P       13 27 29.1 +1.0
SOH    Sokhos            36.08 321  P      P       13 27 29.0 +0.7
SOH                                 pmax   pmax
       comp=Z,4.0nm,1.6s
SRS    Serrai            36.12 322  P      P       13 27 30.5 +1.9
SRS                                 pmax   pmax
       comp=Z,14nm,1.7s
CFR    Carcaliu          36.47 331  P      P       13 27 31.9 +0.4
CFR                                 pmax   pmax
       comp=Z,7.0nm,1.2s
KNT    Kendrikon         36.56 322  P      P       13 27 32.4  0.0
KNT                                 pmax   pmax
       comp=Z,7.0nm,1.2s
PDGK   Podgornoye        36.71  34  P      P       13 27 35.2 +1.4
PDGK                                pmax   pmax
       comp=Z,7.0nm,0.9s
ISR    Istrita           37.19 329  P      P       13 27 40.1 +2.4
ISR                                 pmax   pmax
       comp=Z,29nm,1.1s
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OTUK   Ortayu            37.19  22  P      P       13 27 38.8 +1.1
OTUK                                pmax   pmax
       comp=Z,24nm,1.2s
VTS    Vitosha           37.26 324 eP      P       13 27 39.3 +0.8
       comp=Z,6.6nm,1.0s
VTS    Vitosha           37.26 324⇓iP      P       13 27 40.1 +1.6
VTS    Vitosha           37.26 324 eP      P       13 27 39.3 +0.8
VTS                                 pmax   pmax
       comp=Z,7.0nm,1.0s
VORD   Divnogorie        37.52 347 eP      P       13 27 40.1 -0.2
VORD                                pmax   pmax
       comp=Z,20nm,0.9s
KIS    Kishinev          37.54 333 eP      P       13 27 48.0 +7.4
KIS                                 LRM    MLR     13 49 16.0
       comp=Z,300nm,16.0s
KIS    Kishinev          37.54 333 eP      P       13 27 48.0 +7.4
VRI    Vrincioaia        37.64 330⇓iP      P       13 27 43.7 +2.2
VRI    Vrincioaia        37.64 330  P      P       13 27 42.8 +1.3
VRI                                 pmax   pmax
       comp=Z,20nm,1.2s
PLOR   Plostina          37.67 330⇓iP      P       13 27 43.3 +1.5
PLOR   Plostina          37.67 330  P      P       13 27 43.2 +1.5
MLR    Muntele Rosu      37.75 329⇓iP      P       13 27 44.0 +1.4
VSR    Storozhevoye      37.78 347 eP      P       13 27 42.4 -0.2
VSR                                 pmax   pmax
       comp=Z,20nm,0.7s
TESR   Tescani           38.15 331⇑iP      P       13 27 47.0 +1.2
VOIR                     38.16 329⇑iP      P       13 27 48.1 +2.1
VOIR                     38.16 329  P      P       13 27 47.9 +1.9
VOIR                                pmax   pmax
       comp=Z,8.0nm,1.2s
ARR    Arges             38.32 328⇑iP      P       13 27 48.6 +1.3
LOT    Lotru             38.82 328⇑iP      P       13 27 52.3 +0.7
LPSR   Galich'ya Gora    39.13 347 eP      P       13 27 54.0 +0.1
LPSR                                pmax   pmax
       comp=Z,30nm,1.0s
GZR    Gura Zlata        39.30 327⇑iP      P       13 27 57.5 +1.9
MDVR   Moldovita         39.48 325⇑iP      P       13 27 58.4 +1.3
BURAR  Bucovina Array    39.63 331⇓iP      P       13 28 00.0 +1.7
BURAR  Bucovina Array    39.63 331  P      P       13 27 59.9 +1.7
BUR08  Bucovina Ar. S    39.66 331 eP      P       13 27 58.0 -0.5
       comp=Z,6.3nm,1.1s
BZS    Buzias            40.07 326⇑iP      P       13 28 02.5 +0.7
BZS    Buzias            40.07 326  P      P       13 28 04.0 +2.2
BZS                                 pmax   pmax
       comp=Z,7.0nm,1.4s
DRGR                     40.27 328⇓iP      P       13 28 03.8 +0.2
DRGR                     40.27 328  P      P       13 28 06.9 +3.3
DRGR                                pmax   pmax
       comp=Z,24nm,0.8s
AKASG  Malin Array Be    40.32 337  P      P       13 28 04.3 +0.5
       comp=Z,5.4nm,0.8s,baz=142,slow=7.8,SNR=24
AKBB   Malin Array Si    40.32 337 eP      P       13 28 04.5 +0.6
AKBB   Malin Array Si    40.32 337 eP      P       13 28 04.5 +0.6
MAKZ   Makanchi          40.35  32 eP      P       13 28 04.9 +0.7
       comp=Z,4.1nm,0.7s
MAKZ   Makanchi          40.35  32 eP      P       13 28 04.9 +0.7
MAKZ                                pmax   pmax
       comp=Z,4.0nm,0.7s
MKAR   Makanchi Array    40.50  32  P      P       13 28 06.1 +0.6
       comp=Z,5.5nm,0.6s,baz=221,slow=7.4,SNR=39
MKAR                                LR     LR      13 47 28.7
       comp=Z,67nm,20.2s,baz=234,slow=40
BRVK   Borovoye          40.70  17 eP      P       13 28 07.6 +0.7
       comp=Z,9.1nm,0.7s
BRVK   Borovoye          40.70  17 eP      P       13 28 07.6 +0.7
BRVK                                pmax   pmax
       comp=Z,9.0nm,0.7s
BVAR   Borovoye Array    40.70  17  P      P       13 28 07.6 +0.6
       comp=Z,7.6nm,0.7s,baz=208,slow=6.9,SNR=40
KURBB  Kurchatov Arra    41.52  25  P      P       13 28 14.4 +0.7
       comp=Z,4.4nm,0.8s,baz=226,slow=8.0,SNR=33
KURK   Kurchatov         41.62  25 eP      P       13 28 15.2 +0.7
       comp=Z,11nm,1.1s
KURK   Kurchatov         41.62  25⇑iP      P       13 28 15.3 +0.7
KURK                                pmax   pmax
       comp=Z,12nm,1.2s
WMQ    Urumqi            41.74  39 eP      P       13 28 19.7 +3.9
WMQ                                 sP     pwP     13 28 23.9 +2.2
WMQ                                 pmax   pmax
       comp=Z,10.0nm,1.3s
WMQ                                 pmax   pmax
       comp=Z,33nm,3.7s
WMQ                                 LR     LR
       comp=Z,620nm,29.2s
WMQ                                 LR     LR
       comp=Z,760nm,29.0s
ARU    Arti              41.77   5  P      P       13 28 16.4 +0.6
       comp=Z,2.6nm,0.8s,baz=187,slow=12,SNR=11
ARU    Arti              41.77   5 eP      P       13 28 16.3 +0.6
       comp=Z,13nm,1.0s
ARU    Arti              41.77   5⇓iP      P       13 28 16.7 +1.0
ARU                                 pmax   pmax
       comp=Z,11nm,1.0s
KOLS   Kolonicke sedl    41.95 330 eP      P       13 28 19.4 +2.1
KOLS                                pmax   pmax
       comp=Z,5.0nm,0.8s
KOLS   Kolonicke sedl    41.95 330 eP      P       13 28 19.3 +2.0
OBN    Obninsk           41.98 347  P      P       13 28 18.9 +1.4
       comp=Z,9.6nm,0.3s,baz=101,slow=22,SNR=4.0
OBN    Obninsk           41.98 347⇓eP      P       13 28 18.8 +1.4
OBN                                e               13 29 58.7
OBN                                 pmax   pmax
       comp=Z,21nm,1.1s
OBN                                 MLR    MLR
       comp=Z,90nm,17.0s
MATP   Matopo            42.13 214  P      P       13 28 18.2 -1.0
       comp=Z,8.6nm,0.9s,baz=28,slow=8.5,SNR=12
MATP                                LR     LR      13 45 18.8
       comp=Z,114nm,19.3s,baz=30,slow=36
MOS    Moscow            42.34 348 eP      P       13 28 20.1 -0.2
MOS                                 pmax   pmax
       comp=Z,40nm,1.2s
NIE    Niedzica          43.23 330 eP      P       13 28 29.3 +1.5
NIE    Niedzica          43.23 330 eP      P       13 28 29.3 +1.5
VYHS   Vyhne             43.37 328 eP      P       13 28 29.4 +0.5
VYHS                                pmax   pmax
       comp=Z,3.0nm,1.1s
VYHS   Vyhne             43.37 328 eP      P       13 28 29.4 +0.5
KIRV   Kirov             43.71 358  P      P       13 28 32.3 +1.0
       comp=Z,11nm,0.7s,baz=164,slow=18,SNR=6.1
OJC    Ojcow             44.01 330  P      P       13 28 36.3 +2.3
OJC                                 pmax   pmax
       comp=Z,9.0nm,1.3s
MODS   Modra-Piesok      44.11 327 eP      P       13 28 34.6 -0.2
MODS                                pmax   pmax
       comp=Z,13nm,1.4s
MODS   Modra-Piesok      44.11 327 eP      P       13 28 34.6 -0.2
JAVC   Velka Javorina    44.20 327 eP      P       13 28 36.5 +0.9
SOKA   Soboth            44.38 323 i P     P       13 28 35.6 -1.4
       comp=Z,3.5nm,1.3s
ARSA   Arzberg           44.41 324 i pP    P       13 28 39.1 +1.8
       comp=Z,8.9nm,1.2s
OBKA   Obir              44.56 323 i pP    P       13 28 39.7 +1.1
       comp=Z,4.8nm,0.8s
CONA   Conrad Observa    44.61 325 i P     P       13 28 40.0 +1.0
       comp=Z,11nm,1.2s
CHTO   Chiang Mai        44.75  78  P      P       13 28 41.7 +1.3
CHTO                                pmax   pmax
       comp=Z,5.0nm,0.9s
CMMT   Chiang Mai        44.75  78  P      P       13 28 41.6 +1.2
       comp=Z,2.5nm,0.9s
CM31   Chiang Mai Arr    44.76  79 eP      P       13 28 40.1 -0.4
       comp=Z,11nm,1.0s
CMAR   Chiang Mai Arr    44.76  79  P      P       13 28 40.1 -0.3
       comp=Z,6.6nm,0.8s,baz=276,slow=8.8,SNR=44
CMAR                                LR     LR      13 45 27.9
       comp=Z,55nm,21.8s,baz=268,slow=34
TAM    Tamanrasset       44.80 287  P      P       13 28 42.5 +1.6
TAM                                 pmax   pmax
       comp=Z,4.0nm,0.9s
MORC   Moravsky Berou    44.84 328 eP      P       13 28 41.2 +0.6
       comp=Z,8.4nm,1.0s
MORC   Moravsky Berou    44.84 328⇑iP      P       13 28 41.3 +0.6
MORC   Moravsky Berou    44.84 328 eP      P       13 28 41.2 +0.6
MORC                                pmax   pmax
       comp=Z,8.0nm,1.0s
MORC   Moravsky Berou    44.84 328 eP      P       13 28 41.0 +0.4
KRUC   Moravsky          44.99 327  P      P       13 28 43.0 +1.2
KRUC                                pmax   pmax
       comp=Z,7.0nm,1.1s
KRUC   Moravsky          44.99 327 eP      P       13 28 42.1 +0.3
DGZ    Jazzator, Alta    45.00  32⇑iP      P       13 28 41.2 -0.9
DGZ                                 pmax   pmax
       comp=Z,1.0nm,0.8s
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VRAC   Vranov            45.03 327  P      P       13 28 43.7 +1.5
       comp=Z,2.3nm,0.7s,baz=112,slow=6.0,SNR=5.0
VRAC   Vranov            45.03 327 eP      P       13 28 42.6 +0.4
MYKA   Terra Mystica     45.16 323 i P     P       13 28 43.3  0.0
       comp=Z,7.5nm,1.0s
LAMP   Lampang           45.41  79  P      P       13 28 46.2 +0.6
       comp=Z,19µm,0.9s
MOA    Molln             45.45 324 i pP    P       13 28 46.9 +1.3
       comp=Z,10nm,1.4s
KBA    Koelnbreinsper    45.57 323 i P     P       13 28 46.9 +0.2
       comp=Z,8.0nm,1.2s
KBA    Koelnbreinsper    45.57 323  P      P       13 28 49.8 +3.1
KBA                                 pmax   pmax
       comp=Z,6.0nm,1.5s
DPC    Dobruska-Polom    45.81 328 eP      P       13 28 49.1 +0.7
DPC                                e               13 28 55.5
DPC    Dobruska-Polom    45.81 328 eP      P       13 28 49.1 +0.7
DPC                                epP     pwP     13 28 55.5 +1.3
ABTA   Abfaltersbach     45.88 322 i P     P       13 28 52.5 +3.4
       comp=Z,5.5nm,0.9s
OSTC   Ostas             45.99 329 eP      P       13 28 50.4 +0.6
OSTC                               ex      x       13 28 55.6
UPC    Upice             46.06 328 eP      P       13 28 50.4 +0.1
UPC                                e               13 28 55.8
UPC    Upice             46.06 328 eP      P       13 28 50.4 +0.1
UPC                                epP     pwP     13 28 55.8 -0.4
CHVC   Chvalec           46.09 328 eP      P       13 28 51.1 +0.5
CHVC                               ex      x       13 28 56.3
KSP    Ksiaz             46.12 329 eP      P       13 28 52.3 +1.5
KSP    Ksiaz             46.12 329 eP      P       13 28 52.3 +1.5
GERES  GERESS Array B    46.32 325  P      P       13 28 53.1 +0.6
       comp=Z,1.8nm,0.2s,baz=126,slow=5.0,SNR=9.6
GOPC   GO Pecny, Ondr    46.34 327 eP      P       13 28 52.9 +0.4
GOPC                               e               13 28 57.9
GOPC   GO Pecny, Ondr    46.34 327 eP      P       13 28 52.9 +0.4
GOPC                               epP     pwP     13 28 57.9 -0.5
PRU    Pruhonice         46.51 327  P      P       13 28 55.6 +1.7
PRU                                 pmax   pmax
       comp=Z,2.0nm,1.4s
KHC    Kasperske Hory    46.54 326⇓iP      P       13 28 54.3 +0.1
KHC    Kasperske Hory    46.54 326 eP      P       13 28 54.2 +0.1
KHC                                epP     pwP     13 29 00.4 +0.3
ZALV   Zalesovo Beam     46.58  26  P      P       13 28 53.8 -0.6
       comp=Z,6.9nm,0.6s,baz=234,slow=8.6,SNR=21
ZALV                                LR     LR      13 51 15.1
       comp=Z,107nm,18.4s,baz=250,slow=40
WTTA   Wattenberg        46.66 322 i P     P       13 28 55.8 +0.5
       comp=Z,13nm,1.3s
PVCC   Panska Ves        46.81 328 eP      P       13 28 57.0 +0.8
PVCC   Panska Ves        46.81 328 eP      P       13 28 57.0 +0.8
PBKT   Sadao Pong        46.82  81  P      P       13 28 58.2 +1.5
       comp=Z,2.2nm,1.7s
SQTA   Sankt Quirin      46.90 322 i P     P       13 28 56.8 -0.2
       comp=Z,6.2nm,0.9s
PRGR   Permogore         46.96 356 eP      P       13 28 55.6 -1.5
PRGR                                pmax   pmax
       comp=Z,29nm,0.5s
MOTA   Moosalm           47.02 322 i P     P       13 28 58.6 +0.6
       comp=Z,10nm,1.0s
FETA   Feichten          47.08 322 i pP    P       13 28 59.8 +1.2
       comp=Z,9.0nm,1.4s
RETA   Reutte            47.29 322 i P     P       13 29 00.3 +0.2
       comp=Z,5.0nm,0.9s
BRG    Berggiesshubel    47.34 328 eP      P       13 29 00.8 +0.5
       comp=Z,6.1nm,1.2s
BRG    Berggiesshubel    47.34 328 eP      P       13 29 00.8 +0.5
BRG                                 pmax   pmax
       comp=Z,6.0nm,1.2s
LBTB   Lobatse           47.40 214  LR     LR      13 48 36.4
       comp=Z,99nm,19.3s,baz=24,slow=36
LBTB   Lobatse           47.40 214 eP      P       13 29 00.8 -0.4
       comp=Z,19nm,0.8s
LBTB   Lobatse           47.40 214 eP      P       13 29 00.8 -0.4
LBTB                                pmax   pmax
       comp=Z,19nm,0.8s
DAVA   Damuels           47.72 322 i pP    P       13 29 04.4 +0.8
       comp=Z,7.6nm,0.9s
NKC    Novy Kostel       47.77 326  P      P       13 29 04.1 +0.4
NKC                                 pmax   pmax
       comp=Z,2.0nm,0.9s
CLL    Collm             48.07 328 eP      P       13 29 07.0 +1.0
CLL                                e               13 29 14.0
CLL    Collm             48.07 328 eP      P       13 29 07.0 +1.0
CLL                                e               13 29 14.0
KMI    Kunming           48.28  70  P      P       13 29 10.2 +1.9
KMI                                 pmax   pmax
       comp=Z,17nm,0.5s
KMI                                 pmax   pmax
       comp=Z,57nm,4.1s
MOX    Moxa              48.44 326  P      P       13 29 11.8 +3.0
MOX                                 pmax   pmax
       comp=Z,6.0nm,1.5s
TORD   Torodi Ar. Bea    49.02 275  P      P       13 29 12.8 -1.1
       comp=Z,20nm,0.3s,baz=54,slow=7.7,SNR=5.1
TORD                                PcP    PcP     13 30 36.4 -1.5
       comp=Z,2.2nm,0.8s,baz=60,slow=3.5,SNR=5.6
TORD                                LR     LR      13 50 13.0
       comp=Z,161nm,18.1s,baz=355,slow=36
TOA1   Torodi Ar. Sit    49.03 275 eP      P       13 29 12.8 -1.1
TOA1                               ePcP    PcP     13 30 36.4 -1.5
BFO    Black Forest      49.13 322 i P     P       13 29 15.8 +1.6
FINES  FINESS Array B    50.19 344  P      P       13 29 22.6 +0.6
       comp=Z,4.6nm,0.7s,baz=140,slow=10.0,SNR=19
FINES  FINESS Array B    50.19 344 i P     P       13 29 23.1 +1.1
FINES                               pmax   pmax
       comp=Z,5.0nm,0.6s
FIA1   FINESS Array S    50.19 344 eP      P       13 29 22.1 +0.1
       comp=Z,12nm,0.8s
PANO   Nakornpanom       50.24  80  P      P       13 29 23.8 +0.7
BOSA   Boshof            50.50 211  LR     LR      13 50 59.5
       comp=Z,85nm,19.2s,baz=26,slow=36
SUF    Sumiainen         51.23 345  P      P       13 29 32.4 +2.5
SUF                                 pmax   pmax
       comp=Z,14nm,2.1s
LOR    Lormes            51.42 319  P      P       13 29 35.1 +3.5
LOR                                 pmax   pmax
       comp=Z,11nm,1.2s
DOU    Dourbes           52.11 323  P      P       13 29 39.9 +3.3
DOU                                 pmax   pmax
       comp=Z,7.0nm,0.9s
HFS    Hagfors           53.21 337  P      P       13 29 43.8 -0.8
       comp=Z,3.8nm,0.8s,baz=152,slow=6.5,SNR=4.4
APA    Apatity           54.10 351⇓iP      P       13 29 49.6 -1.4
APA                                 pmax   pmax
       comp=Z,2.0nm,1.0s
APA                                 MLR    MLR
       comp=Z,100nm,12.0s
LVZ    Lovozero          54.23 352⇓iP      P       13 29 52.2 +0.2
LVZ                                 pmax   pmax
       comp=Z,7.0nm,1.2s
XAN    Xi'an             54.31  59  P      P       13 29 49.0 -4.2
XAN                                 sP     pwP     13 30 03.4 +4.2
XAN                                 pmax   pmax
       comp=Z,4.0nm,0.8s
XAN    Xi'an             54.31  59  P      P       13 29 57.6 +4.4
XAN                                 pmax   pmax
       comp=Z,3.0nm,1.2s
MDT    Midelt            54.39 300  LR     LR      13 54 31.9
       comp=Z,147nm,18.1s,baz=101,slow=38
NB2    NORSAR Subarra    54.73 337  P      P       13 29 56.6 +0.8
       comp=Z,13nm,1.7s,baz=133,slow=7.4
NOA    NORSAR Array B    54.73 337  LR     LR      13 56 40.6
       comp=Z,31nm,18.4s,baz=115,slow=40
ESDC   Sonseca Array     54.78 308  P      P       13 29 57.1 +0.6
       comp=Z,2.2nm,0.8s,baz=92,slow=6.7,SNR=9.8
SONA0  Songino Array     55.24  42 eP      P       13 30 00.8 +1.0
SONM   Songino Array     55.24  42  P      P       13 30 00.8 +1.0
       comp=Z,3.0nm,0.8s,baz=246,slow=7.7,SNR=13
SONM                                LR     LR      13 56 34.2
       comp=Z,85nm,20.6s,baz=254,slow=39
ULN    Ulaanbaatar       55.68  42⇓iP      P       13 30 04.0 +1.0
ULN                                 pmax   pmax
       comp=Z,3.0nm,1.0s
DBIC   Dimbokro          56.59 268  LR     LR      13 54 08.3
       comp=Z,71nm,19.5s,baz=55,slow=36
ARCES  ARCESS Array B    57.17 349  P      P       13 30 13.4 +0.3
       comp=Z,2.0nm,0.7s,baz=133,slow=8.5,SNR=9.3
ARCES                               LR     LR      14 00 50.9
       comp=Z,55nm,18.2s,baz=96,slow=42
HHC    Hu-ho-hao-te      57.27  51 eP      P       13 30 17.2 +2.7
HHC                                 pmax   pmax
       comp=Z,11nm,0.6s
HHC                                 pmax   pmax
       comp=Z,18nm,4.2s
HHC                                 LR     LR
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	comp=Z,93nm,14.5s						
HHC				LR	LR		
	comp=Z,99nm,14.5s						
WHN	Wuhan	58.70	63	P	P	13 30 28.5	+4.0
NJ2	Nanjing	62.55	61	*e*P	P	13 30 51.3	+0.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KS15	Wonju Array Si	69.79	55	*e*P	P	13 31 36.2	-0.9
KSRS	Korea Array	69.82	55	P	P	13 31 36.2	-1.1
	comp=Z,0.8nm,0.6s,baz=255,slow=7.2,SNR=4.5						
KSRS				LR	LR	14 03 20.9	
	comp=Z,45nm,19.4s,baz=248,slow=37						
YAK	Yakutsk	71.09	29	*e*P	P	13 31 41.5	-3.1
TIXI	Tiksi	71.78	19	P	P	13 31 48.9	+0.3
	comp=Z,4.0nm,0.9s,baz=285,slow=1.0,SNR=5.0						
TIXI	Tiksi	71.78	19	*e*P	P	13 31 48.2	-0.4
	comp=Z,6.2nm,1.1s						
TIXI	Tiksi	71.78	19	⇑*i*P	P	13 31 49.1	+0.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLR	Kul'dur	72.05	43	⇑*i*P	P	13 31 50.3	-0.4
KLR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAW	Mawson	82.59	176	LR	LR	14 06 42.9	
	comp=Z,22nm,18.4s,baz=30,slow=34						
BILL	Bilibino	84.95	20	⇑*e*P	P	13 33 01.4	0.0
BILL				*e*		13 36 23.7	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PETK	Petropavlovsk-	87.24	36	LR	LR	14 15 05.7	
	comp=Z,30nm,20.2s,baz=290,slow=38						
ASAR	Alice Springs	88.43	115	P	P	13 33 17.5	-1.8
	comp=Z,2.7nm,1.0s,baz=288,slow=4.6,SNR=24						
AS31	Alice Springs	88.43	115	*e*P	P	13 33 17.5	-1.9
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	99.28	8	PP	PP	13 38 04.8	-5.6
	comp=Z,0.1nm,0.6s,baz=314,slow=7.1,SNR=4.4						
PD31	Pinedale Array	120.28	345	*e*PKPdf	PKPdf	13 39 17.4	-1.0
PDAR	Pinedale Array	120.28	345	PKP	PKPdf	13 39 17.4	-1.0
	comp=Z,0.5nm,0.6s,baz=81,slow=2.9,SNR=6.5						
NV01	Mina Array Sit	126.27	351	*e*PKPdf	PKiKP	13 39 30.6	+0.1
NVAR	Mina Array Bea	126.27	351	PKP	PKiKP	13 39 30.6	+0.1
	comp=Z,1.4nm,0.7s,baz=49,slow=0.2,SNR=13						
TXAR	Lajitas Array	130.31	332	PKP	PKPdf	13 39 37.6	-0.3
	comp=Z,0.8nm,0.9s,baz=122,slow=1.6,SNR=4.9						

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*ISN **05** 13:21:06.9±29.0, 35°.52N×45°.97E, h0km±274km, ML3.0*
*ISCJB **05** 13:21:16.4±0.6, 35°.32N±0°.05×45°.39E±0°.06, h10km, Error ellipse: s-maj=7.7km s-min=5.5km az=137.4*
*TEH **05** 13:21:19.5, 35°.46N×45°.79E, h10km, ML3.0*
ISC 05 13:21:17.2±1.1**, 35°.47N**±0°.05×**45°.59E**±0°.07**, h10km, n16, σ1s.91**/15**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	1.01	139	*e*Pg	Pb	13 21 37.1	+0.2
ILIN	Lien	1.25	116	*e*Pg	Pg	13 21 39.2	-2.1
MAHB	Mahabad	1.30	4	*e*Pg	Pn	13 21 43.7	+2.1
IGHG	Ghaleghazi	1.39	144	*e*Pg	Pg	13 21 46.2	+2.2
IGHG				IAMB	IAmb	13 22 12.8	
	comp=Z,2μm,0.6s						
IVIS	Veis	1.40	132	*e*Pg	Pg	13 21 44.1	+0.1
IVIS				*e*Sg	Sn	13 22 01.6	+0.2
IVIS				IAMB	IAmb	13 22 09.9	
	comp=Z,2μm,0.4s						
KCHF	Cheshme Sefid,	1.68	134	*e*Pg	Pg	13 21 51.1	+1.5
IKOM	Komasi	2.04	129	*e*Pn	Pg	13 21 55.8	-0.5
IBZA	Bozab	2.11	117	*e*Pn	Pg	13 21 56.4	-1.4
MSL	Mosul	2.22	296	*e*Pn	Pn	13 21 50.0	-4.1
	baz=110						
MSL				*e*Sn	Sn	13 22 20.0	-1.5
IAZR	Azarshahr	2.23	8	*e*Pn	Pb	13 21 58.5	+0.7
IAZR				IAMB	IAmb	13 22 33.6	
	comp=Z,2μm,0.5s						
BHD	Baghdad	2.41	205	*e*Pn	Pn	13 21 51.0	-5.7
	baz=30						
BHD				*e*Sn	Sn	13 22 22.0	-4.2
HSAM	Samen	2.78	116	*e*Pn	Pb	13 22 06.8	-0.3
ISHB	Shabestar	2.81	0	IAMB	IAmb	13 22 56.6	
	comp=Z,441nm,0.4s						
ISRB	Sarab	2.89	35	IAMB	IAmb	13 22 08.6	
	comp=Z,419nm,0.4s						
ISRB				*e*Pn	Pb	13 22 07.5	-1.4
IMRD	Marand	3.24	2	IAMB	IAmb	13 23 12.9	
	comp=Z,337nm,0.5s						
QABG	Abgarm-Qazvin	3.26	85	*e*Pn	Pn	13 22 10.2	+1.5

DJA 05 13:25:31.3±0.3**, 9°S**±3°×**11°8E**±°**, h10km, M3.9**/8**, MLv3.9**/8**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.58	268	P	Pg	13 25 41.7	-0.8
WBSI	Waikabubak, Su	1.31	129	P	Pn	13 25 54.3	-1.4
WBSI				S	Sb	13 26 11.1	-1.9
WSI	Waingapu	2.10	114	P	Pg	13 26 16.2	+4.7
EDFI	Ende, Flores	3.29	89	P	Pn	13 26 25.5	+2.4
BSSI	Bau Bau, Buton	3.39	39	P	Pn	13 26 24.9	+0.6
MMRI	Maumere	3.84	88	P	Pb	13 26 35.6	-3.6
BKSI	Bulukumba	3.88	27	P	Pn	13 26 31.4	+0.3
JAGI	Jajag, Banyuwa	4.17	274	P	Pn	13 26 36.3	+1.2

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*NEIC **05** 13:42:21.2±1.1, 0°.19S×29°.81E, h10km, mb4.6/7, Error ellipse: s-maj=12.8km s-min=6.9km az=249.0*
*IDC **05** 13:42:23.3±5.2, 0°.19S×29°.87E, h20km±38km, mb3.7/4, mb1 3.9/5, mb1mx3.6/32, mbtmp3.9/5, ML3.8/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/40, Error ellipse: s-maj=30.4km s-min=20.7km az=21.0*
ISC 05 13:42:20.6±0.7**, 0°.40S**±0°.09×**29°.87E**±0°.08**, h10km, n28, σ2s.10**/27**, mb4.2**/13**, 2C, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	0.89	103	Pg	Pn	13 42 41.3	+2.0
	18μm,0.3s,baz=300,slow=14						
MBAR				Lg	Lg	13 42 54.1	
	6μm,0.3s,baz=13,slow=23,SNR=31						
MBAR	Mbarara	0.89	103	*e*Pg	Pn	13 42 41.1	+1.7
MBAR	Mbarara	0.89	103	⇑*e*P	Pn	13 42 41.5	+2.1
MBAR				⇑*e*S	Sn	13 42 54.3	+1.8
KMBO	Kilima Mbogo	7.42	96	Pn	Pn	13 44 11.3	+2.1
	1.6nm,0.3s,baz=260,slow=18,SNR=11						
KMBO				Lg	Lg	13 46 11.3	
	6.9nm,0.3s,baz=202,slow=20,SNR=7.7						
KMBO	Kilima Mbogo	7.42	96	*e*Pn	Pn	13 44 11.0	+1.8
KMBO				*e*		13 44 11.2	
KOND	Kondoa	7.42	127	*i* P	Pn	13 44 10.4	+1.2
KOND				*i* S	Sn	13 45 29.0	-4.6
KIBA	Kibaya	8.28	126	*i* P	Pn	13 44 22.7	+1.6
LSZ	Lusaka	14.88	186	LR	LR	13 52 17.0	
	comp=Z,54nm,18.5s,baz=3.5,slow=39						
LSZ	Lusaka	14.88	186	*e*P	P	13 45 56.9	-0.2
	2.9nm,0.9s						
MATP	Matopo	19.95	184	P	Pn	13 46 57.3	+2.5
	2.8nm,0.8s,baz=14,slow=14,SNR=4.8						
MATP				LR	LR	13 54 13.5	
	comp=Z,53nm,20.1s,baz=359,slow=35						
TORD	Torodi Ar. Bea	31.00	297	P	P	13 48 38.4	-0.2
	0.7nm,0.5s,baz=111,slow=6.4,SNR=6.0						
TORD				LR	LR	14 00 35.9	
	comp=Z,66nm,19.2s,baz=325,slow=35						
TOA1	Torodi Ar. Sit	31.01	297	*e*P	P	13 48 38.4	-0.3
SUR	Sutherland	32.94	194	*e*P	P	13 48 56.6	+0.9
	8.4nm,1.0s						
DBIC	Dimbokro	35.35	282	*e*P	P	13 49 16.4	-0.2
	11nm,1.0s						
UOSS	Minazif	35.84	43	*e*P	P	13 49 16.1	-4.6
	6.6nm,1.0s						
WDD	Wied Dalam	38.78	340	*e*P	P	13 49 44.1	-1.4
	58nm,0.9s						
AGG	Agios Georgios	39.83	351	*e*P	P	13 49 52.7	-1.5
	6.3nm,1.0s						
BR101	Keskin Array S	40.08	5	*e*P	P	13 49 56.8	+0.3
BRTR	Keskin Array B	40.08	5	P	P	13 49 56.8	+0.4
	1.2nm,0.7s,baz=179,slow=7.4,SNR=5.9						
MDUB	Mudurnu	40.69	2	*e*P	P	13 50 00.3	-1.2
	24nm,0.8s						
ESDC	Sonseca Array	50.45	326	pP	pP	13 51 26.8	+4.6
	0.3nm,0.4s,baz=134,slow=6.4,SNR=3.1						
ESDC				LR	LR	14 12 53.8	
	comp=Z,29nm,18.5s,baz=155,slow=36						
FINES	FINESS Array B	61.74	358	pP	pP	13 52 46.0	+3.5
	1.3nm,0.7s,baz=242,slow=4.1,SNR=2.9						
NB2	NORSAR Subarra	62.93	350	P	P	13 52 53.1	+6.1
	comp=Z,2.9nm,1.0s,baz=160,slow=6.5						
NOA	NORSAR Array B	62.93	350	pP	pP	13 52 53.6	+3.0
	comp=Z,0.9nm,0.7s,baz=158,slow=6.8,SNR=3.3						
MK32	Makanchi Array	65.54	37	*e*P	P	13 53 04.3	-0.2
MKAR	Makanchi Array	65.54	37	P	P	13 53 04.3	-0.2
	comp=Z,0.8nm,0.5s,baz=234,slow=7.4,SNR=8.2						
MKAR				pP	sP	13 53 12.0	+2.6
	comp=Z,0.6nm,0.8s,baz=234,slow=5.8,SNR=3.4						
ARA0	ARCESS Array S	69.86	358	*e*P	P	13 53 30.6	-0.7
ARCES	ARCESS Array B	69.86	358	P	P	13 53 30.6	-0.7
	comp=Z,1.6nm,1.0s,baz=180,slow=6.0,SNR=2.6						
ARCES				pP	sP	13 53 37.0	+0.9
	comp=Z,1.1nm,0.6s,baz=176,slow=6.8,SNR=3.5						

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*ISCJB **05** 13:51:55.4±0.4, 14°.81N±0°.06×52°.41E±0°.05, h10km, mb4.4/66, MS3.5/20, Error ellipse: s-maj=8.1km s-min=6.9km az=163.2*
*IDC **05** 13:51:55.0±0.8, 14°.71N×52°.31E, h0km, mb4.3/20, mb1 4.3/20, mb1mx4.1/53, mbtmp4.3/20, MS3.5/17, Ms1 3.5/17, ms1mx3.3/38, Error ellipse: s-maj=18.7km s-min=17.0km az=132.0*
*MOS **05** 13:51:55.5±1.1, 14°.75N×52°.38E, h10km, mb4.7/33, Error ellipse: s-maj=12.4km s-min=5.0km az=103.7*
*NEIC **05** 13:51:56.2±1.5, 14°.74N×52°.20E, h10km, mb4.5/16, Error ellipse: s-maj=20.0km s-min=17.8km az=176.0*
ISC 05 13:51:57.4±0.6**, 14°.88N**±0°.08×**52°.23E**±0°.08**, h10km, n163, σ1s.65**/155**, mb4.4**/66**, MS3.5**/20**, 20C-7D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MZR	Muzera	8.16	8	*i* Pn	Pn	13 53 53.0	-3.0
	SNR=19						
ALNE	Al Ain	9.71	19	Pn	Pn	13 54 14.5	-2.7
ATD	Arta Tunnel	9.72	251	LR	LR	13 57 18.7	
	comp=Z,383nm,20.0s,baz=153,slow=33						
ASUD	Al Ashush, Dub	10.12	16	*i* Pn	Pn	13 54 21.6	-1.2
	SNR=7.1						
WSAR	Wadi Sarin	10.28	35	Pn	Pn	13 54 22.1	-2.9
	3.1nm,0.3s,baz=248,slow=12,SNR=36						
FAQ	Al Faqa, Dubai	10.31	17	Pn	Pn	13 54 23.9	-1.5
ASHO	Ashiyiah	10.39	20	Pn	Pn	13 54 24.6	-2.0
HATD	Hatta, Dubai	10.55	20	Pn	Pn	13 54 26.8	-2.0
NAZ	Nazwa, Dubai	10.56	17	Pn	Pn	13 54 27.1	-1.7
UOSS	Minazif	10.68	20	*e*Pn	Pn	13 54 28.5	-2.0
UOSS	Minazif	10.68	20	Pn	Pn	13 54 28.3	-2.3
RAYN	Ar Rayn	10.68	325	*e*Pn	Pn	13 54 27.9	-2.7
RAYN	Ar Rayn	10.68	325	*e*P	Pn	13 54 27.9	-2.7
MDH	Madha	11.04	20	Pn	Pn	13 54 33.3	-2.2
MSFE	Esma-Masafi	11.05	19	Pn	Pn	13 54 33.1	-2.6
BANOM	Banah	11.63	18	*i* Pn	Pn	13 54 40.0	-3.5
	SNR=5.0						
BANOM				Sn	Sn	13 56 40.7	-13
KMBO	Kilima Mbogo	21.74	224	LR	LR	14 04 42.7	
	comp=Z,252nm,18.6s,baz=86,slow=35						
KMBO	Kilima Mbogo	21.74	224	*i* P	P	13 56 49.7	+0.3
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GEYT	Alibeck	23.54	12	P	P	13 57 08.2	+0.3
	comp=Z,5.5nm,0.8s,baz=204,slow=6.5,SNR=8.1						
GEYT				LR	LR	14 08 13.7	
	comp=Z,359nm,18.7s,baz=175,slow=41						
MMAI	Mount Meron Ar	23.65	323	LR	LR	14 06 43.2	
	comp=Z,51nm,19.4s,baz=215,slow=37						
LKRN	Lenkeran, Azer	23.93	353	P	P	13 57 13.7	+2.1
KBL	Kabul	24.76	35	*e*P	P	13 57 20.9	+1.4
	comp=Z,43nm,1.0s						
KBL	Kabul	24.76	35	*e*P	P	13 57 20.9	+1.4
KBL				pmax	pmax		
	comp=Z,43nm,1.0s						
NAX	Nakhchivan	24.91	348	P	P	13 57 22.9	+2.2
GNI	Garni	26.01	347	P	P	13 57 33.5	+2.8
	comp=Z,7.9nm,0.5s,baz=150,slow=6.6,SNR=5.5						
GNI				LR	LR	14 08 37.7	
	comp=Z,118nm,19.7s,baz=157,slow=38						
GNI	Garni	26.01	347	⇑*i*P	P	13 57 33.9	+3.2
GNI				pmax	pmax		
	comp=Z,76nm,1.2s						
GANJ	Ganja	26.18	350	P	P	13 57 34.3	+2.2
MNGR	Mingechevir, A	26.18	351	P	P	13 57 34.3	+2.2
SEKA	Sheki	26.59	351	P	P	13 57 37.8	+1.9
NIL	Nilore	26.67	42	*e*P	P	13 57 40.1	+3.5
	comp=Z,43nm,0.5s						
NIL	Nilore	26.67	42	*e*P	P	13 57 40.1	+3.5
NIL				pmax	pmax		
	comp=Z,43nm,0.5s						
AKT	Akhty	26.79	352	⇑*i*P	P	13 57 39.6	+1.9
AKT				pmax	pmax		
	comp=Z,12nm,1.0s						
ZKTA	Zakatala	27.10	351	P	P	13 57 42.5	+2.1
CHGR	Chuyangaron	27.99	29	*e*P	P	13 57 48.0	-0.5
	comp=Z,68nm,0.9s						
ZEI	Tsey	28.72	347	*e*P	P	13 57 56.3	+1.2
ZEI				pmax	pmax		
	comp=Z,16nm,1.3s						
GROC	Groznyy	28.76	350	*e*P	P	13 57 55.4	+0.3
GROC				*e*		13 58 47.1	
GROC				*e*		14 01 03.4	
GROC				pmax	pmax		
	comp=Z,20nm,0.4s						
GAR	Garm	28.82	30	*e*P	P	13 57 55.4	-0.5
	comp=Z,14nm,1.1s						
GAR	Garm	28.82	30	*e*P	P	13 57 55.4	-0.5
GAR				pmax	pmax		
	comp=Z,14nm,1.1s						
PALK	Pallekele	28.92	102	LR	LR	14 06 48.0	
	comp=Z,69nm,19.3s,baz=296,slow=31						
NEY	Neytrino	29.42	346	⇑*i*P	P	13 58 03.3	+2.0
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BR101	Keskin Array S	29.63	330	*e*P	P	13 58 04.6	+1.4
BRTR	Keskin Array B	29.63	330	P	P	13 58 04.6	+1.4
	comp=Z,2.7nm,1.0s,baz=140,slow=9.7,SNR=12						
BRTR				LR	LR	14 11 17.3	
	comp=Z,30nm,19.4s,baz=100,slow=39						
BRTR	Keskin Array B	29.63	330	*i* P	P	13 58 04.8	+1.7
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	29.83	346	P	P	13 58 06.5	+1.9
	comp=Z,6.1nm,0.8s,baz=164,slow=6.9,SNR=8.4						
KBZ				LR	LR	14 11 35.4	
	comp=Z,117nm,19.4s,baz=168,slow=39						
SHA1	Shidzhatmaz	29.90	346	⇓*i*P	P	13 58 07.7	+2.1
KIV	Kislovodsk	30.10	346	*e*P	P	13 58 07.0	-0.2
	comp=Z,12nm,0.7s						
KIV	Kislovodsk	30.10	346	*e*P	P	13 58 09.3	+2.1
KIV				pmax	pmax		
	comp=Z,61nm,1.1s						
KIV				MLR	MLR		
	comp=Z,155nm,15.0s						
KSH	Kashi	32.18	36	P	P	13 58 23.1	-2.5
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,79nm,4.3s						
KK31	Karatay Array	32.20	26	*e*P	P	13 58 25.5	-0.1
	comp=Z,7.8nm,0.9s						
KK31	Karatay Array	32.20	26	*e*P	P	13 58 25.5	-0.1
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK	Ala-Archa	33.64	30	P	P	13 58 40.3	+1.9
	comp=Z,1.5nm,0.4s,baz=216,slow=6.9,SNR=7.0						
AAK	Ala-Archa	33.64	30	⇓*i*P	P	13 58 40.4	+2.0
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ABKAR	Akbulak array	34.86	9	*e*P	P	13 58 48.3	-0.3
	comp=Z,13nm,1.1s						
TIRR	Tirgusor	35.75	330	⇑*i*P	P	13 58 57.2	+0.8
TIRR	Tirgusor	35.75	330	P	P	13 58 59.0	+2.6
TIRR				pmax	pmax		
	comp=Z,24nm,1.7s						
AKTO	Aktyubinsk	35.77	6	P	P	13 58 57.0	+0.5
	comp=Z,6.6nm,1.1s,baz=200,slow=9.5,SNR=10						
TLB	Topalu	36.02	330	⇓*i*P	P	13 58 59.6	+0.8
TLB	Topalu	36.02	330	P	P	13 58 59.5	+0.8
CFR	Carcaliu	36.42	331	P	P	13 59 04.9	+2.8
CFR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
OTUK	Ortayu	37.18	22	P	P	13 59 09.3	+0.7
OTUK				pmax	pmax		
	comp=Z,13nm,1.0s						
VTS	Vitosha	37.21	324	⇑*i*P	P	13 59 10.9	+1.8
VTS	Vitosha	37.21	324	P	P	13 59 12.0	+2.9
VTS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VORD	Divnogorie	37.48	347	*e*P	P	13 59 10.7	-0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VRI	Vrincioaia	37.59	330	⇓*i*P	P	13 59 13.6	+1.5
VRI	Vrincioaia	37.59	330	P	P	13 59 15.4	+3.3
VRI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PLOR	Plostina	37.62	330	⇑*i*P	P	13 59 13.9	+1.5
PLOR	Plostina	37.62	330	P	P	13 59 13.8	+1.4
MLR	Muntele Rosu	37.70	329	⇑*i*P	P	13 59 14.4	+1.2
VSR	Storozhevoye	37.74	347	*e*P	P	13 59 12.2	-1.0
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
TESR	Tescani	38.10	331	⇑*i*P	P	13 59 17.5	+1.1
VOIR		38.11	329	⇑*i*P	P	13 59 15.9	-0.7
VOIR		38.11	329	P	P	13 59 18.1	+1.5
VOIR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARR	Arges	38.27	328	⇑*i*P	P	13 59 13.4	-4.5
LOT	Lotru	38.77	328	⇑*i*P	P	13 59 22.6	+0.4
LPSR	Galich'ya Gora	39.09	347	*e*P	P	13 59 23.7	-0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GZR	Gura Zlata	39.25	327	⇑*i*P	P	13 59 28.2	+2.0
BURAR	Bucovina Array	39.58	331	⇑*i*P	P	13 59 30.5	+1.6
BURAR	Bucovina Array	39.58	331	P	P	13 59 30.5	+1.6
BUR08	Bucovina Ar. S	39.61	331	*e*P	P	13 59 29.1	0.0
	comp=Z,3.0nm,0.8s						
BZS	Buzias	40.02	326	⇓*i*P	P	13 59 33.2	+0.7
BZS	Buzias	40.02	326	P	P	13 59 33.1	+0.6
DRGR		40.22	328	P	P	13 59 38.0	+3.8
DRGR				pmax	pmax		
	comp=Z,19nm,1.1s						
AKASG	Malin Array Be	40.28	337	P	P	13 59 34.9	+0.3
	comp=Z,3.0nm,0.7s,baz=141,slow=7.7,SNR=13						
AKBB	Malin Array Si	40.28	337	*e*P	P	13 59 34.3	-0.2
	comp=Z,6.4nm,0.8s						
AKBB	Malin Array Si	40.28	337	*e*P	P	13 59 34.3	-0.2
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SIRR	Siria	40.42	327	⇓*i*P	P	13 59 37.0	+1.2
MK31	Makanchi Array	40.50	32	*e*P	P	13 59 36.8	+0.3
	comp=Z,2.6nm,0.6s						
MK31	Makanchi Array	40.50	32	*e*P	P	13 59 36.8	+0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	Makanchi Array	40.50	32	*e*P	P	13 59 36.5	0.0
MKAR	Makanchi Array	40.50	32	P	P	13 59 36.5	0.0
	comp=Z,3.0nm,0.6s,baz=220,slow=6.9,SNR=25						
MKAR				LR	LR	14 19 10.1	
	comp=Z,35nm,20.4s,baz=218,slow=40						
BRVK	Borovoye	40.68	17	*e*P	P	13 59 38.3	+0.5
	comp=Z,5.6nm,0.8s						
BRVK	Borovoye	40.68	17	⇓*i*P	P	13 59 39.7	+1.9
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	Borovoye Array	40.68	17	P	P	13 59 38.0	+0.1
	comp=Z,4.2nm,0.6s,baz=205,slow=6.6,SNR=23						
KURBB	Kurchatov Arra	41.51	25	P	P	13 59 44.8	+0.2
	comp=Z,4.1nm,1.0s,baz=226,slow=7.9,SNR=19						
KURK	Kurchatov	41.61	25	*e*P	P	13 59 44.9	-0.6
	comp=Z,3.6nm,0.8s						
KURK	Kurchatov	41.61	25	⇑*i*P	P	13 59 45.8	+0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WMQ	Urumqi	41.74	39	*e*P	P	13 59 50.6	+3.8
WMQ				LR	LR		
	comp=N,540nm,28.8s						
WMQ				LR	LR		
	comp=E,390nm,29.0s						
WMQ				LR	LR		
	comp=Z,100nm,28.9s						
ARU	Arti	41.75	5	P	P	13 59 46.9	+0.4
	comp=Z,0.9nm,0.3s,baz=189,slow=13,SNR=7.8						
ARU	Arti	41.75	5	*c i*P	P	13 59 46.7	+0.2
ARU				S	S	14 06 04.9	+1.3
ARU				SS	SS	14 09 04.6	-4.7
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KOLS	Kolonicke sedl	41.90	330	*e*P	P	13 59 49.4	+1.4
KOLS				pmax	pmax		
	comp=Z,16nm,1.9s						
KOLS	Kolonicke sedl	41.90	330	*e*P	P	13 59 49.4	+1.4
OBN	Obninsk	41.94	347	⇑*e*P	P	13 59 49.4	+1.3
OBN				*e*		14 01 26.8	
OBN				*e*S	S	14 06 06.7	+0.2
OBN				pmax	pmax		
	comp=Z,13nm,1.1s						
OBN				MLR	MLR		
	comp=Z,51nm,18.0s						
MOS	Moscow	42.30	348	*e*P	P	13 59 51.0	0.0
MOS				*e*		13 59 59.7	
VYHS	Vyhne	43.32	328	*e*P	P	14 00 00.4	+0.9
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VYHS	Vyhne	43.32	328	*e*P	P	14 00 00.4	+0.9
MODS	Modra-Piesok	44.06	327	*e*P	P	14 00 06.3	+0.8
MODS				pmax	pmax		
	comp=Z,15nm,1.7s						
MODS	Modra-Piesok	44.06	327	*e*P	P	14 00 06.3	+0.8
TAM	Tamanrasset	44.75	287	P	P	14 00 13.6	+2.1
TAM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MORC	Moravsky Berou	44.78	328	*e*P	P	14 00 11.5	+0.3
	comp=Z,6.1nm,1.0s						
MORC	Moravsky Berou	44.78	328	⇑*i*P	P	14 00 11.6	+0.3
MORC	Moravsky Berou	44.78	328	*e*P	P	14 00 11.5	+0.3
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MORC	Moravsky Berou	44.78	328	*e*P	P	14 00 11.8	+0.5
CM31	Chiang Mai Arr	44.80	79	*e*P	P	14 00 10.8	-1.1
	comp=Z,6.4nm,1.1s						
CMAR	Chiang Mai Arr	44.80	79	P	P	14 00 10.8	-1.1
	comp=Z,3.1nm,0.9s,baz=275,slow=8.6,SNR=18						
CMAR				LR	LR	14 17 56.3	
	comp=Z,26nm,21.2s,baz=280,slow=35						
KRUC	Moravsky	44.94	327	*e*P	P	14 00 12.8	+0.3
VRAC	Vranov	44.98	327	*e*P	P	14 00 13.4	+0.6
DPC	Dobruska-Polom	45.76	328	*e*P	P	14 00 19.4	+0.4
DPC	Dobruska-Polom	45.76	328	*e*P	P	14 00 19.4	+0.4
OSTC	Ostas	45.94	329	*e*P	P	14 00 20.7	+0.3
OSTC				*e*x	x	14 00 26.5	
UPC	Upice	46.01	328	*e*P	P	14 00 21.6	+0.7
UPC	Upice	46.01	328	*e*P	P	14 00 21.6	+0.7
CHVC	Chvalec	46.04	328	*e*P	P	14 00 21.3	+0.1
KSP	Ksiaz	46.08	329	P	P	14 00 23.3	+1.9
KSP				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GOPC	GO Pecny, Ondr	46.29	327	*e*P	P	14 00 23.8	+0.6
GOPC				*e*		14 00 29.9	
GOPC	GO Pecny, Ondr	46.29	327	*e*P	P	14 00 23.8	+0.6
GOPC				*e*x	x	14 00 29.9	
PRU	Pruhonice	46.46	327	P	P	14 00 26.6	+2.1
PRU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KHC	Kasperske Hory	46.49	326	*e*P	P	14 00 25.6	+0.8
KHC	Kasperske Hory	46.49	326	*e*P	P	14 00 25.6	+0.8
ZALV	Zalesovo Beam	46.57	26	P	P	14 00 24.1	-1.1
	comp=Z,2.8nm,0.6s,baz=228,slow=8.9,SNR=12						
ZALV				LR	LR	14 22 25.9	
	comp=Z,50nm,18.1s,baz=250,slow=39						
ZALV	Zalesovo Beam	46.57	26	*i* P	P	14 00 24.3	-1.0
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PVCC	Panska Ves	46.76	328	P	P	14 00 29.0	+2.2
PVCC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PRGR	Permogore	46.93	356	*e*P	P	14 00 25.3	-2.6
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BRG	Berggiesshubel	47.29	328	*e*P	P	14 00 32.4	+1.4
	comp=Z,7.5nm,1.3s						
BRG	Berggiesshubel	47.29	328	*e*P	P	14 00 32.3	+1.4
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LBTB	Lobatse	47.41	214	P	P	14 00 31.7	-0.6
	comp=Z,10nm,0.7s,baz=27,slow=8.4,SNR=10						
TORD	Torodi Ar. Bea	48.98	275	P	P	14 00 43.7	-0.9
	comp=Z,14nm,0.3s,baz=75,slow=6.4,SNR=3.5						
TOA1	Torodi Ar. Sit	48.98	275	*e*P	P	14 00 43.7	-0.9

BFO	**Black Forest**	**49.08**	**322**	*i* P	**P**	**14 00 46.5**	**+1.6**
FIA0	**FINESS Array S**	**50.14**	**344**	*e*P	**P**	**14 00 53.0**	**+0.3**
FIA0	**FINESS Array S**	**50.14**	**344**	*e*P	**P**	**14 00 53.0**	**+0.3**
FINES	**FINESS Array B**	**50.14**	**344**	P	**P**	**14 00 53.0**	**+0.3**
	comp=Z,3.7nm,0.7s,baz=126,slow=9.7,SNR=15						
FINES				LR	LR	14 23 59.7	
	comp=Z,47nm,18.4s,baz=38,slow=38						
BOSA	**Boshof**	**50.51**	**211**	LR	LR	14 22 30.9	
	comp=Z,48nm,18.2s,baz=30,slow=36						
LZH	**Lanzhou**	**50.51**	**55**	*e*P	**P**	**14 00 59.7**	**+3.6**
LZH				pP	pwP	14 01 04.4	+2.3
LZH				sP	sP	14 01 07.2	+7.9
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
HFS	**Hagfors**	**53.16**	**337**	P	**P**	**14 01 14.7**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=122,slow=7.2,SNR=4.4						
XAN	**Xi'an**	**54.33**	**59**	P	P	14 01 36.2	+12
XAN				pP	pwP	14 01 48.9	+19
NOA	**NORSAR Array B**	**54.69**	**337**	LR	LR	14 27 15.1	
	comp=Z,22nm,18.0s,baz=120,slow=39						
ESDC	**Sonseca Array**	**54.72**	**308**	P	**P**	**14 01 27.3**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=91,slow=6.9,SNR=6.4						
SONA0	**Songino Array**	**55.25**	**42**	*e*P	**P**	**14 01 31.1**	**+0.2**
SONM	**Songino Array**	**55.25**	**42**	P	**P**	**14 01 31.1**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=233,slow=7.2,SNR=5.6						
SONM				LR	LR	14 28 05.3	
	comp=Z,40nm,21.1s,baz=272,slow=39						
ULN	**Ulaanbaatar**	**55.68**	**42**	⇑*i*P	**P**	**14 01 34.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARA0	**ARCESS Array S**	**57.13**	**349**	*e*P	**P**	**14 01 43.5**	**-0.4**
ARCES	**ARCESS Array B**	**57.13**	**349**	P	**P**	**14 01 43.4**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=140,slow=6.4,SNR=8.2						
HHC	**Hu-ho-hao-te**	**57.29**	**51**	*e*P	**P**	**14 01 46.6**	**+1.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,14nm,3.5s						
HHC				LR	LR		
	comp=N,65nm,12.8s						
HHC				LR	LR		
	comp=E,100nm,13.6s						
HHC				LR	LR		
	comp=Z,23nm,17.0s						
WHN	**Wuhan**	**58.73**	**63**	P	P	14 02 00.6	+4.9
NJ2	**Nanjing**	**62.58**	**61**	*e*P	**P**	**14 02 24.1**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**69.84**	**55**	LR	LR	14 35 11.1	
	comp=Z,22nm,19.0s,baz=305,slow=37						
TIXI	**Tiksi**	**71.77**	**19**	⇑*i*P	**P**	**14 03 19.2**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAW	**Mawson**	**82.62**	**176**	LR	LR	14 32 01.5	
	comp=Z,26nm,20.1s,baz=218,slow=29						
SYO	**Syowa Base**	**84.16**	**185**	⇑*e*X	**P**	**14 04 26.0**	**-2.2**
ASAR	**Alice Springs**	**88.48**	**115**	P	**P**	**14 04 48.1**	**-2.5**
	comp=Z,0.8nm,0.7s,baz=291,slow=4.7,SNR=16						
AS31	**Alice Springs**	**88.48**	**115**	*e*P	**P**	**14 04 48.1**	**-2.5**
	comp=Z,0.9nm,0.8s						
NV01	**Mina Array Sit**	**126.23**	**351**	*e*PKPdf	**PKPdf**	**14 11 01.1**	**+0.1**
NVAR	**Mina Array Bea**	**126.23**	**351**	PKP	**PKPdf**	**14 11 01.1**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=2.8,slow=1.2,SNR=7.6						

DDA ***05*** *14:09:17.8, 39°.37N×35°.29E, h19^{km}±2^{km}, ML2.7*
ISCJB ***05*** *14:09:19.9±0.5, 39°.42N±0°.03×35°.27E±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=4.4km az=31.7*
ISK ***05*** *14:09:20.1, 39°.44N×35°.21E, h13^{km}, ML2.3/6*
ISC 05 14:09:18.8±1.1, **39°.41N**±0°.03×**35°.28E**±0°.03, **h16**^{km}±10^{km}, **n14, σ0^{s}65**/25, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRC	**Yozgat**	**0.13**	**236**	*i* P	**Pb**	**14 09 23.2**	**+0.3**
SIRC				*i* S	**Sb**	**14 09 25.2**	**-0.5**
YOZ	**Yozgat**	**0.23**	**7**	PG	**Pb**	**14 09 25.1**	**+0.3**
YOZ				SG	**Sb**	**14 09 28.9**	**+0.1**
AVNS	**Nevsehir-Avano**	**0.69**	**210**	*i* P	**Pn**	**14 09 34.4**	**+0.4**
AVNS				*i* S	**Sn**	**14 09 43.4**	**-1.1**
AVNS				IAML_P			
	comp=Z,3µm,0.2s						
BNN	**Bunyan**	**0.71**	**142**	PG	**Pn**	**14 09 35.6**	**+1.4**
CDAG	**Cicekdag**	**0.74**	**287**	*i* P	**Pb**	**14 09 33.5**	**+0.2**
CDAG				*i* S	**Sb**	**14 09 43.2**	**0.0**
CDAG				IAML_P			
	comp=Z,1µm,0.1s						
CUSAR	**Sarkisla-SIVAS**	**0.74**	**89**	*i* P	**Pg**	**14 09 31.6**	**-1.8**
CUSAR				*i* S	**Sg**	**14 09 43.7**	**+0.5**
COAL	**Corum-Alaca**	**0.88**	**345**	*i* P	**Pb**	**14 09 35.7**	**0.0**
COAL				*i* S	**Sn**	**14 09 49.6**	**+0.5**
COAL				IAML_P			
	comp=Z,250nm,0.1s						
CORM	**Corum**	**0.92**	**327**	PG	**Pn**	**14 09 36.9**	**-0.3**
CORM				SG	**Sn**	**14 09 49.5**	**-0.7**
KIRS	**Kırehir-Merke**	**1.10**	**256**	*i* P	**Pn**	**14 09 39.4**	**-0.1**
KIRS				*i* S	**Sn**	**14 09 54.2**	**-0.2**
KIRS				IAML_P			
	comp=Z,297nm,0.1s						
DELI	**KIRIKKALE**	**1.21**	**300**	*i* P	**Pg**	**14 09 42.2**	**+0.2**
DELI				*i* S	**Sg**	**14 09 57.5**	**-0.3**
DELI				IAML_P			
	comp=Z,393nm,0.1s						
YAYX	**Yaylak**	**1.24**	**248**	PN	**Pg**	**14 09 43.2**	**+0.6**
YAYX				SN	**Sg**	**14 09 59.2**	**+0.4**
AKSY	**AKSARAY - Alti**	**1.41**	**238**	*i* P	**Pb**	**14 09 44.4**	**-0.4**
AKSY				*i* S	**Sg**	**14 10 04.4**	**+0.2**
AKSY				IAML_P			
	comp=Z,115nm,0.3s						
SERE	**Sereflikochisa**	**1.41**	**252**	PN	**Pg**	**14 09 45.7**	**-0.3**
SVSK	**Karacayir**	**1.42**	**68**	PN	**Pg**	**14 09 46.5**	**+0.5**

NIED ***05*** *14:11:00, 43°.30N×146°.90E, h44^{km}, Mw3.8 Best double couple: M$_0$5.86000×10^{14} NP1:φ$_s$176.00000°, δ53.00000°, λ10.00000°. NP2:φ$_s$80.00000°, δ82.00000°, λ142.00000°.*
JMA ***05*** *14:11:56.9±0.2, 43°.31N×146°.87E, h42^{km}±3^{km}, M4.1*
JMA Felt I J1.
MOS ***05*** *14:11:56.4±1.9, 44°.69N×144°.92E, h72^{km}, mb3.9/2, Error ellipse: s-maj=16.3km s-min=8.9km az=83.2*
SKHL ***05*** *14:11:57.4±0.1, 44°.80N×145°.04E, h74^{km}±3^{km}, mb3.7/5*
ISCJB ***05*** *14:11:57.1±0.8, 43°.38N±0°.05×146°.87E±0°.07, h54^{km}±7^{km}, mb3.7/14, MS3.4/1, Error ellipse: s-maj=10.9km s-min=5.6km az=45.0*
IDC ***05*** *14:11:58.3±2.4, 43°.42N×146°.88E, h46^{km}±23^{km}, mb3.6/12, mb1 3.8/16, mb1mx3.6/35, mbtmp3.8/16, ML3.3/4, MS2.4/1, Ms1 2.4/1, ms1mx2.1/28, Error ellipse: s-maj=22.9km s-min=16.5km az=144.0*
ISC 05 14:11:57.5±1.2, **43°.37N**±0°.06×**146°.91E**±0°.06, **h40**^{km}±11^{km}, **n59, σ1^{s}15**/54, **mb3.6**/14, **1C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.85**	**270**	P	**Pn**	**14 12 12.3**	**-0.6**
NEM2				*e*S	**Sn**	**14 12 23.5**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**1.01**	**312**	*d* *i*PN	**Pn**	**14 12 15.7**	**+0.5**
YUK				*i* S	**Sn**	**14 12 29.3**	**+1.1**
YUK				pmax	pmax		
	comp=Z,5µm,0.2s						
YUK				pmax	pmax		
	comp=N,293nm,0.1s						
YUK				pmax	pmax		
	comp=E,533nm,0.3s						
YUK				smax	smax		
	comp=N,5µm,0.4s						
YUK				smax	smax		
	comp=E,4µm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.01**	**312**	*i* P	**Pn**	**14 12 15.1**	**-0.1**
YUK				AMB	AMB	14 12 16.0	
	comp=E,30nm,0.2s						
YUK				AMB	AMB	14 12 16.0	
	comp=E,50nm,0.2s						
YUK				*i* S	**Sn**	**14 12 28.3**	**+0.1**
YUK				A	A	14 12 30.7	
	comp=E,540nm,0.3s						
YUK				A	A	14 12 30.7	
	comp=E,420nm,0.3s						
GRPR	**Tuman**	**1.03**	**308**	⇓*i*PN	**Pn**	**14 12 15.1**	**-0.4**
GRPR				*i* S	**Sn**	**14 12 28.5**	**-0.3**
GRPR				pmax	pmax		
	comp=N,1µm,0.2s						
GRPR				pmax	pmax		
	comp=E,712nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,3µm,0.2s						
GRPR				smax	smax		
	comp=N,4µm,0.2s						
GRPR				smax	smax		
	comp=E,91nm,0.1s						
GRPR	**Tuman**	**1.03**	**308**	*i* P	**Pn**	**14 12 15.1**	**-0.4**
GRPR				AMB	AMB	14 12 15.5	
	comp=E,10.0nm,0.2s						
GRPR				AMB	AMB	14 12 15.5	
	comp=E,70nm,0.2s						
GRPR				AMB	AMB	14 12 15.5	
	comp=E,30nm,0.2s						
GRPR				*i* S	**Sn**	**14 12 28.5**	**-0.3**
GRPR				A	A	14 12 31.0	
	comp=E,400nm,0.2s						
GRPR				A	A	14 12 31.0	
	comp=E,90nm,0.2s						
JKHN	**Kushirohamanak**	**1.31**	**258**	P	**Pn**	**14 12 19.0**	**-0.2**
JKHN				*e*S	**Sn**	**14 12 35.3**	**-0.2**
JRA	**Rausu**	**1.42**	**294**	P	**Pn**	**14 12 20.7**	**0.0**
JRA				*e*S	**Sn**	**14 12 38.7**	**+0.6**
JNSB	**Nemuroshibetsu**	**1.44**	**287**	P	**Pn**	**14 12 21.1**	**0.0**
JNSB				*e*S	**Sn**	**14 12 39.1**	**+0.3**
JNK	**Nakash**	**1.61**	**279**	P	**Pn**	**14 12 22.9**	**-0.5**
JNK				*e*S	**Sn**	**14 12 42.4**	**-0.5**
JAK	**Akkeshi**	**1.66**	**258**	P	**Pn**	**14 12 23.6**	**-0.4**
JAK				*e*S	**Sn**	**14 12 43.2**	**-0.9**
KUR	**Kuril'sk**	**1.99**	**20**	*d* *i*PN	**Pn**	**14 12 29.2**	**+0.6**
KUR				*i* S	**Sn**	**14 12 52.3**	**0.0**
KUR				pmax	pmax		
	comp=N,38nm,0.2s						
KUR				pmax	pmax		
	comp=Z,215nm,0.2s						
KUR				pmax	pmax		
	comp=E,37nm,0.1s						
KUR				smax	smax		
	comp=N,583nm,0.3s						
KUR				smax	smax		
	comp=E,291nm,0.3s						
KUR	**Kuril'sk**	**1.99**	**20**	*i* P	**Pn**	**14 12 29.2**	**+0.6**
KUR				AMB	AMB	14 12 30.3	
	comp=E,40nm,0.4s						
KUR				AMB	AMB	14 12 30.3	
	comp=E,20nm,0.4s						
KUR				*i* S	**Sn**	**14 12 53.0**	**+0.7**
KUR				A	A	14 12 55.0	
	comp=E,60nm,0.3s						
KUR				A	A	14 12 55.0	
	comp=E,290nm,0.3s						
JTKR	**Abashiri--Toko**	**2.26**	**287**	P	**Pn**	**14 12 33.4**	**+1.1**
JAR	**Ashorobuto**	**2.29**	**269**	P	**Pn**	**14 12 33.0**	**+0.2**
JAR				*e*S	**Sn**	**14 13 00.2**	**+0.5**
JOB	**Onbets**	**2.30**	**259**	P	**Pn**	**14 12 33.1**	**+0.3**
JOB				*e*S	**Sn**	**14 13 00.1**	**+0.3**
JMP	**Maruseppu**	**2.65**	**285**	P	**Pn**	**14 12 38.9**	**+1.2**
JCH	**Churui**	**2.71**	**255**	P	**Pn**	**14 12 38.8**	**+0.3**
JCH				*e*S	**Sn**	**14 13 10.1**	**+0.1**
JEM	**Erimo**	**3.08**	**245**	P	**Pn**	**14 12 45.3**	**+1.8**
ERM	**Erimo**	**3.08**	**245**	*d* *i*PN	**Pn**	**14 12 45.3**	**+1.8**
ASAJ	**Asahikawa**	**3.21**	**285**	P	**Pn**	**14 12 47.5**	**+2.0**
	comp=E,5.3nm,0.3s,baz=114,slow=6.6,SNR=40						
ASAJ				S	**Sn**	**14 13 27.6**	**+5.1**
	comp=E,8.5nm,0.3s,baz=52,slow=18,SNR=3.4						
YSS	**Yuzh-Sakhalins**	**4.64**	**322**	*e*PN	Pn	14 12 41.3	-24
YSS				MLR	MLR		
	comp=Z,100nm,12.0s						
YSS	**Yuzh-Sakhalins**	**4.64**	**322**	*e*P	Pn	14 12 37.9	-27
YSS				AMB	AMB	14 12 38.9	
	comp=Z,10.0nm,0.4s						
YSS				*e*S	Sn	14 13 09.0	-48
YSS				A	A	14 13 12.9	
	comp=Z,10.0nm,0.5s						
YSS				A	A	14 13 12.9	
	comp=Z,20nm,0.5s						
TYV	**Tymovskoe**	**8.04**	**340**	*e*PN	Pn	14 13 27.5	-24
TYV				*e*S	Sn	14 14 39.3	-42
TYV				pmax	pmax		
	comp=Z,7.0nm,1.6s						
TYV				pmax	pmax		
	comp=Z,200nm,3.7s						
TYV				smax	smax		
	comp=E,13nm,2.4s						
TYV	**Tymovskoe**	**8.04**	**340**	*e*P	Pn	14 13 27.9	-24
TYV				AMB	AMB	14 13 29.7	
	comp=E,4.0nm,0.8s						
MAJO	**Matsushiro**	**9.54**	**227**	*i* PN	**Pn**	**14 14 14.8**	**+2.6**
MJAR	**Matsushiro Arr**	**9.54**	**227**	P	**Pn**	**14 14 11.3**	**-0.9**
	comp=E,0.1nm,0.3s,baz=32,slow=13,SNR=5.7						
KLR	**Kul'dur**	**12.01**	**305**	*i* PN	Pn	14 14 19.7	-26
KLR	**Kul'dur**	**12.01**	**305**	*e*P	Pn	14 14 19.7	-26
PETK	**Petropavlovsk-**	**12.10**	**33**	P	**Pn**	**14 14 46.3**	**-0.9**
	comp=E,0.2nm,0.3s,baz=197,slow=9.8,SNR=6.1						
KSRS	**Korea Array**	**15.61**	**254**	LR	LR	14 21 32.6	
	comp=E,14nm,18.4s,baz=335,slow=37						
MA2	**Magadan**	**16.41**	**7**	*i* P	Pn	14 15 27.1	-17
MA2	**Magadan**	**16.41**	**7**	*e*P	Pn	14 15 27.1	-17
SEY	**Seymchan**	**19.86**	**7**	P	**P**	**14 16 23.1**	**-1.8**
	comp=E,0.1nm,0.3s,baz=197,slow=13,SNR=3.3						
BILL	**Bilibino**	**26.78**	**16**	⇑*e*P	P	14 17 23.6	-10
BILL				*e*		14 18 04.6	
BILL				*e*S	S	14 21 47.9	-18
BILL				pmax	pmax		
	comp=Z,9.0nm,2.7s						
BILL				MLR	MLR		
	comp=Z,109nm,22.0s						
BILL	**Bilibino**	**26.78**	**16**	*e*P	P	14 17 23.6	-10
ULN	**Ulaanbaatar**	**28.02**	**293**	*i* P	P	14 17 27.1	-18
ULN	**Ulaanbaatar**	**28.02**	**293**	*e*P	P	14 17 27.1	-18
SONM	**Songino Array**	**28.46**	**293**	P	**P**	**14 17 49.9**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=79,slow=7.6,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**28.93**	**138**	T	T	14 48 41.1	
	baz=329,slow=75,SNR=314						
H11N1	**WAKE ISLAND Hy**	**28.94**	**138**	T	T	14 48 44.6	
	baz=329,slow=75,SNR=284						
H11N3	**WAKE ISLAND Hy**	**28.95**	**138**	T	T	14 48 45.0	
	baz=329,slow=75,SNR=247						
TIXI	**Tiksi**	**29.70**	**349**	*i* P	P	14 17 42.9	-16
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	**Tiksi**	**29.70**	**349**	*e*P	P	14 17 42.9	-16
H11S1	**WAKE ISLAND Hy**	**29.88**	**140**	T	T	14 49 51.6	
	baz=330,slow=76,SNR=483						
H11S3	**WAKE ISLAND Hy**	**29.89**	**140**	T	T	14 49 44.7	
	baz=330,slow=76,SNR=388						
H11S2	**WAKE ISLAND Hy**	**29.90**	**140**	T	T	14 49 58.9	
	baz=330,slow=76,SNR=337						
KDAK	**Kodiak Island**	**39.64**	**47**	*i* P	**P**	**14 19 26.4**	**+1.4**
ILAR	**Eielson Array**	**41.90**	**36**	P	**P**	**14 19 43.5**	**0.0**
	comp=Z,0.9nm,0.6s,baz=272,slow=7.8,SNR=15						
MKAR	**Makanchi Array**	**44.61**	**298**	P	**P**	**14 20 04.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=80,slow=10,SNR=4.1						
INK	**Inuvik**	**46.82**	**30**	P	**P**	**14 20 23.2**	**+0.5**
	comp=Z,2.0nm,0.3s,baz=286,slow=5.0,SNR=14						
YKA	**Yellowknife Ar**	**56.22**	**34**	P	**P**	**14 21 33.1**	**0.0**
	comp=Z,0.7nm,0.6s,baz=300,slow=6.6,SNR=3.3						
ARCES	**ARCESS Array B**	**59.55**	**340**	P	**P**	**14 21 55.5**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=61,slow=7.3,SNR=5.2						
FINES	**FINESS Array B**	**65.14**	**333**	P	**P**	**14 22 33.1**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=52,slow=7.5,SNR=9.3						
ASAR	**Alice Springs**	**67.76**	**193**	P	**P**	**14 22 51.3**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=8.6,slow=6.8,SNR=3.7						
NVAR	**Mina Array Bea**	**67.93**	**58**	P	**P**	**14 22 52.9**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=299,slow=7.9,SNR=3.8						
NB2	**NORSAR Subarra**	**69.90**	**339**	P	**P**	**14 23 02.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**69.90**	**339**	P	**P**	**14 23 02.9**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=44,slow=6.8,SNR=5.6						
AKASG	**Malin Array Be**	**71.78**	**324**	P	**P**	**14 23 15.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=37,slow=6.4,SNR=3.2						
TXAR	**Lajitas Array**	**83.01**	**56**	P	**P**	**14 24 18.9**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=299,slow=4.0,SNR=4.7						

ISCJB ***05*** *14:17:46.5±0.4, 40°.03N±0°.02×28°.12E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.7km az=41.2*
ISK ***05*** *14:17:46.1, 40°.02N×28°.09E, h13^{km}, ML2.1/18*
DDA ***05*** *14:17:47.0, 39°.98N×28°.05E, h8^{km}±6^{km}, ML2.7*
ISC 05 14:17:46.8±1.0, **40°.02N**±0°.02×**28°.09E**±0°.02, **h11**^{km}±9^{km}, **n26, σ0^{s}88**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.31**	**275**	PG	**Pg**	**14 17 52.9**	**-0.2**
GONE				SG	**Sb**	**14 17 57.9**	**-1.6**
KCTX	**Karacabey (Bur**	**0.32**	**40**	PG	**Pg**	**14 17 52.9**	**-0.3**
KCTX				SG	**Sg**	**14 17 57.6**	**+0.1**
EDC	**Edincik**	**0.37**	**332**	PG	**Pg**	**14 17 54.0**	**-0.1**
EDC				SG	**Sg**	**14 17 59.6**	**+0.6**
BALB	**Balikesir**	**0.41**	**203**	PG	**Pg**	**14 17 54.7**	**-0.2**
DURS	**Dursunbey**	**0.51**	**145**	*i* P	**Pg**	**14 17 56.1**	**-0.7**
DURS				*i* S	**Sg**	**14 18 04.1**	**+0.5**
DURS				IAML_P			
	comp=Z,1µm,0.2s						
MRMT	**Marmara Adasi**	**0.69**	**327**	PG	**Pg**	**14 18 00.2**	**0.0**
STEP	**BALIKESIR_Sava**	**0.71**	**204**	*i* P	**Pb**	**14 18 00.8**	**-0.3**
STEP				*i* S	**Sb**	**14 18 11.2**	**+0.4**
STEP				IAML_P			
	comp=Z,763nm,0.2s						
ARMT	**Armutlu**	**0.80**	**47**	PG	**Pg**	**14 18 02.6**	**+0.3**
ULDT	**Uludag**	**0.81**	**81**	*i* P	**Pn**	**14 18 03.9**	**-0.4**
ULDT				*i* S	**Sn**	**14 18 17.1**	**+0.7**
ULDT				IAML_P			
	comp=Z,965nm,0.2s						
GEMT	**Gemlik**	**0.94**	**63**	PG	**Pg**	**14 18 04.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.96**	**314**	PG	**Pg**	**14 18 05.2**	**-0.2**
SART	**Tekirdag**	**0.96**	**314**	*i* P	**Pb**	**14 18 05.4**	**-0.1**
SART				*i* S	**Sn**	**14 18 20.5**	**+0.4**
SART				IAML_P			
	comp=Z,2µm,0.2s						
LPK	**Lapseki**	**1.08**	**289**	PG	**Pb**	**14 18 07.0**	**-0.5**
YLV	**Yalova**	**1.12**	**61**	PN	**Pb**	**14 18 07.8**	**-0.4**
TVSB	**Tavsanli**	**1.20**	**118**	PN	**Pb**	**14 18 08.9**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**1.22**	**257**	*i* P	**Pb**	**14 18 09.4**	**-0.5**
BAYC				*i* S	**Sn**	**14 18 27.8**	**+1.5**
BAYC				IAML_P			
	comp=Z,468nm,0.2s						
KAVV	**Kandilli-Istan**	**1.28**	**35**	PN	**Pn**	**14 18 09.9**	**-0.7**
ISK	**Istanbul-Kandi**	**1.28**	**35**	PN	**Pn**	**14 18 09.9**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.29**	**287**	PN	**Pn**	**14 18 10.1**	**-0.7**
DKL	**Dikili**	**1.32**	**224**	PN	**Pb**	**14 18 10.8**	**-0.7**
KESN	**Edirne-Kesan**	**1.34**	**307**	*i* P	**Pg**	**14 18 13.9**	**+1.3**
KESN				*i* S	**Sg**	**14 18 31.1**	**+1.0**
KESN				IAML_P			
	comp=Z,368nm,0.2s						
EZN	**Ezine**	**1.37**	**262**	PN	**Pn**	**14 18 11.3**	**-0.6**
GDZ	**Gediz**	**1.42**	**130**	*i* P	**Pb**	**14 18 13.0**	**-0.4**
GDZ				*i* S	**Sg**	**14 18 35.8**	**+3.3**
GDZ				IAML_P			
	comp=Z,2µm,0.2s						
HRT	**Hereke**	**1.45**	**56**	PN	**Pn**	**14 18 12.3**	**-0.6**
MANT	**Manisa**	**1.57**	**167**	*i* P	**Pb**	**14 18 15.4**	**-0.5**
MANT				*i* S	**Sg**	**14 18 38.0**	**+0.7**
MANT				IAML_P			
	comp=Z,806nm,0.3s						
ENEZ	**Enez**	**1.64**	**296**	PN	**Pn**	**14 18 15.1**	**-0.5**

ISCJB ***05*** *14:25:20.5±0.4, 14°.71N±0°.06×52°.43E±0°.05, h10^{km}, mb4.3/66, MS3.4/14, Error ellipse: s-maj=8.0km s-min=7.3km az=4.8*
IDC ***05*** *14:25:20.5±0.6, 14°.74N×52°.47E, h0^{km}, mb4.1/22, mb1 4.3/23, mb1mx4.1/52, mbtmp4.2/23, ML4.4/1, MS3.4/13, Ms1 3.4/13, ms1mx3.2/34, Error ellipse: s-maj=16.4km s-min=13.2km az=107.0*
BJI ***05*** *14:25:20.0±0.0, 14°.70N×52°.30E, h10^{km}, mb4.5/10, mB4.8/8, Ms4.1/1*
NEIC ***05*** *14:25:22.0±2.1, 14°.80N×52°.45E, h10^{km}, mb4.5/12, Error ellipse: s-maj=20.5km s-min=18.3km az=106.0*
MOS ***05*** *14:25:24.3±1.3, 15°.15N×52°.28E, h10^{km}, mb4.6/37, Error ellipse: s-maj=12.0km s-min=4.9km az=105.8*
ISC 05 14:25:22.4±0.6, **14°.78N**±0°.08×**52°.46E**±0°.10, **h10**^{km}, **n130, σ1^{s}35**/126, **mb4.3**/66, **MS3.4**/14, **15C-8D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**9.90**	**252**	LR	LR	14 30 44.1	
	comp=Z,329nm,19.9s,baz=346,slow=33						
WSAR	**Wadi Sarin**	**10.24**	**34**	Pn	**Pn**	**14 27 47.1**	**-2.5**
	2.8nm,0.3s,baz=234,slow=7.3,SNR=32						
WSAR				Sn	Sn	14 29 34.0	-11
	0.5nm,0.3s,baz=315,slow=19,SNR=2.1						
RAYN	**Ar Rayn**	**10.90**	**324**	*e*Pn	Pn	14 27 53.5	-5.1
RAYN	**Ar Rayn**	**10.90**	**324**	*e*P	Pn	14 27 53.5	-5.1
KMBO	**Kilima Mbogo**	**21.82**	**225**	P	**P**	**14 30 14.3**	**-1.0**
	1.9nm,0.7s,baz=36,slow=14,SNR=4.7						
KMBO				LR	LR	14 38 08.4	
	comp=Z,228nm,18.5s,baz=72,slow=35						
EIL	**Elat**	**21.91**	**315**	P	**P**	**14 30 16.4**	**+0.4**
	4.3nm,0.9s,baz=106,slow=7.4,SNR=4.0						
ASF	**Jabal al Asfar**	**22.39**	**323**	P	**P**	**14 30 21.1**	**-0.1**
	1.0nm,0.4s,baz=103,slow=6.7,SNR=2.1						
GEYT	**Alibeck**	**23.60**	**11**	P	**P**	**14 30 33.6**	**+0.1**
	4.4nm,0.8s,baz=168,slow=7.6,SNR=7.3						
GEYT				LR	LR	14 42 05.6	
	comp=Z,131nm,19.0s,baz=190,slow=42						
MMAI	**Mount Meron Ar**	**23.87**	**322**	LR	LR	14 41 20.9	
	comp=Z,44nm,19.9s,baz=165,slow=40						
LKRN	**Lenkeran, Azer**	**24.06**	**353**	P	**P**	**14 30 39.4**	**+1.5**
KBL	**Kabul**	**24.72**	**34**	*e*P	**P**	**14 30 42.2**	**-2.0**
	25nm,1.0s						
KBL	**Kabul**	**24.72**	**34**	*e*P	**P**	**14 30 45.6**	**+1.3**
KBL				pmax	pmax		
	comp=Z,25nm,1.0s						
NAX	**Nakhchivan**	**25.06**	**347**	P	**P**	**14 30 48.2**	**+1.1**
GNI	**Garni**	**26.16**	**347**	P	**P**	**14 30 58.6**	**+1.4**
	comp=Z,4.6nm,0.4s,baz=176,slow=8.8,SNR=5.1						
GNI				LR	LR	14 42 11.9	
	comp=Z,117nm,18.1s,baz=155,slow=39						
GNI	**Garni**	**26.16**	**347**	*e*P	**P**	**14 30 55.3**	**-1.9**
	comp=Z,17nm,1.0s						
GNI	**Garni**	**26.16**	**347**	⇑*i*P	**P**	**14 30 59.4**	**+2.2**
MNGR	**Mingechevir, A**	**26.32**	**351**	P	**P**	**14 31 00.2**	**+1.8**
GANJ	**Ganja**	**26.32**	**349**	P	**P**	**14 31 00.1**	**+1.6**
NIL	**Nilore**	**26.60**	**41**	*e*P	**P**	**14 31 00.1**	**-1.0**
	comp=Z,8.9nm,0.8s						
NIL	**Nilore**	**26.60**	**41**	*e*P	**P**	**14 31 04.7**	**+3.6**
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SEKA	**Sheki**	**26.73**	**351**	P	**P**	**14 31 03.3**	**+1.1**
ZKTA	**Zakatala**	**27.24**	**350**	P	**P**	**14 31 08.2**	**+1.5**
ZEI	**Tsey**	**28.87**	**347**	*e*P	**P**	**14 31 19.7**	**-1.8**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GROC	**Groznyy**	**28.90**	**350**	*e*P	**P**	**14 31 21.1**	**-0.4**
GROC				pmax	pmax		
	comp=Z,25nm,0.4s						
BRTR	**Keskin Array B**	**29.83**	**330**	P	**P**	**14 31 30.1**	**+0.1**
	comp=Z,2.9nm,1.1s,baz=134,slow=7.1,SNR=5.6						
BRTR				LR	LR	14 44 40.3	
	comp=Z,30nm,18.6s,baz=106,slow=39						
BRTR	**Keskin Array B**	**29.83**	**330**	*c* *e*P	**P**	**14 31 31.1**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BR101	**Keskin Array S**	**29.83**	**330**	*e*P	**P**	**14 31 30.1**	**+0.1**
KBZ	**Khabaz**	**29.99**	**346**	P	**P**	**14 31 30.9**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=196,slow=4.8,SNR=6.0						
KBZ				LR	LR	14 45 00.7	
	comp=Z,95nm,19.8s,baz=170,slow=39						
SHA1	**Shidzhatmaz**	**30.06**	**346**	⇑*i*P	**P**	**14 31 32.0**	**0.0**
ISP	**Isparta**	**30.07**	**324**	*e*P	**P**	**14 31 35.5**	**+3.4**
ISP				pmax	pmax		
	comp=Z,11nm,0.7s						
KIV	**Kislovodsk**	**30.25**	**346**	*e*P	**P**	**14 31 31.0**	**-2.6**
	comp=Z,18nm,1.1s						
KIV	**Kislovodsk**	**30.25**	**346**	*e*P	**P**	**14 31 32.7**	**-0.9**
KIV				pmax	pmax		
	comp=Z,45nm,1.0s						
KIV				MLR	MLR		
	comp=Z,111nm,15.0s						
ANTO	**Ankara**	**30.35**	**329**	P	**P**	**14 31 36.4**	**+1.9**
ANTO				pmax	pmax		
	comp=Z,18nm,1.2s						
KARP	**Karpathos**	**30.69**	**317**	*e*P	**P**	**14 31 38.0**	**+0.5**
	comp=Z,41nm,1.1s						
ARSB	**Arslanbob**	**31.89**	**30**	*e*P	**P**	**14 31 46.8**	**-1.4**
	comp=Z,7.7nm,1.1s						
KSH	**Kashi**	**32.14**	**35**	*e*P	**P**	**14 31 47.3**	**-3.1**
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AAK	**Ala-Archa**	**33.62**	**30**	⇑*i*P	**P**	**14 32 06.6**	**+3.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BOOM	**Boomskoye usch**	**34.23**	**32**	*e*P	**P**	**14 32 06.6**	**-2.0**
	comp=Z,4.5nm,0.9s						
BOOM	**Boomskoye usch**	**34.23**	**32**	*e*P	**P**	**14 32 06.6**	**-2.0**
BOOM				pmax	pmax		

	comp=Z,5.0nm,0.9s						
ABKAR	**Akbulak array**	**34.93**	**9**	*e*P	**P**	**14 32 15.0**	**+0.7**
	comp=Z,5.4nm,1.0s						
TIRR	**Tirgusor**	**35.95**	**330**	*e*P	**P**	**14 32 22.6**	**-0.6**
	comp=Z,25nm,1.0s						
TIRR	**Tirgusor**	**35.95**	**330**	*e*P	**P**	**14 32 22.6**	**-0.6**
TIRR				pmax	pmax		
	comp=Z,25nm,1.0s						
TLB	**Topalu**	**36.22**	**330**	⇓*i*P	**P**	**14 32 25.0**	**-0.5**
TLB	**Topalu**	**36.22**	**330**	P	**P**	**14 32 25.0**	**-0.5**
SOH	**Sokhos**	**36.24**	**321**	P	**P**	**14 32 25.5**	**-0.3**
SOH				pmax	pmax		
	comp=Z,3.0nm,1.6s						
SRS	**Serrai**	**36.28**	**322**	P	**P**	**14 32 26.3**	**+0.2**
SRS				pmax	pmax		
	comp=Z,8.0nm,1.6s						
CFR	**Carcaliu**	**36.62**	**331**	P	**P**	**14 32 30.8**	**+1.9**
CFR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PDGK	**Podgornoye**	**36.67**	**34**	P	**P**	**14 32 30.5**	**+0.9**
PDGK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OTUK	**Ortayu**	**37.20**	**22**	P	**P**	**14 32 34.9**	**+1.1**
OTUK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VTS	**Vitosha**	**37.42**	**324**	P	**P**	**14 32 35.1**	**-0.9**
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VORD	**Divnogorie**	**37.63**	**346**	*e*P	**P**	**14 32 36.8**	**-0.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRI	**Vrincioaia**	**37.79**	**330**	⇑*i*P	**P**	**14 32 39.6**	**+0.7**
VRI	**Vrincioaia**	**37.79**	**330**	P	**P**	**14 32 41.4**	**+2.5**
VRI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PLOR	**Plostina**	**37.82**	**330**	⇓*i*P	**P**	**14 32 39.2**	**0.0**
PLOR	**Plostina**	**37.82**	**330**	P	**P**	**14 32 39.1**	**-0.1**
VSR	**Storozhevoye**	**37.89**	**346**	*e*P	**P**	**14 32 37.8**	**-1.8**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TESR	**Tescani**	**38.30**	**331**	⇑*i*P	**P**	**14 32 43.7**	**+0.5**
LSZ	**Lusaka**	**38.30**	**220**	P	**P**	**14 32 43.7**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=56,slow=7.3,SNR=3.4						
VOIR		**38.31**	**328**	⇓*i*P	**P**	**14 32 44.4**	**+1.0**
VOIR		**38.31**	**328**	P	**P**	**14 32 43.3**	**-0.1**
VOIR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARR	**Arges**	**38.48**	**328**	⇓*i*P	**P**	**14 32 44.7**	**0.0**
LPSR	**Galich'ya Gora**	**39.24**	**347**	*e*P	**P**	**14 32 49.8**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GZR	**Gura Zlata**	**39.46**	**327**	⇓*i*P	**P**	**14 32 54.1**	**+1.1**
GZR	**Gura Zlata**	**39.46**	**327**	P	**P**	**14 32 54.1**	**+1.1**
BURAR	**Bucovina Array**	**39.78**	**331**	⇓*i*P	**P**	**14 32 55.5**	**-0.1**
BZS	**Buzias**	**40.23**	**326**	P	**P**	**14 32 58.2**	**-1.1**
BZS				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MAKZ	**Makanchi**	**40.33**	**32**	*e*P	**P**	**14 33 01.5**	**+1.4**
	comp=Z,2.7nm,1.0s						
MAKZ	**Makanchi**	**40.33**	**32**	*e*P	**P**	**14 33 01.5**	**+1.4**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DRGR		**40.43**	**328**	P	**P**	**14 33 01.1**	**+0.1**
DRGR				pmax	pmax		
	comp=Z,17nm,0.6s						
AKASG	**Malin Array Be**	**40.46**	**337**	P	**P**	**14 33 00.1**	**-1.0**
	comp=Z,5.0nm,0.9s,baz=141,slow=7.7,SNR=13						
AKASG	**Malin Array Be**	**40.46**	**337**	*ce*P	**P**	**14 33 00.5**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	**Makanchi Array**	**40.47**	**32**	*e*P	**P**	**14 33 02.1**	**+0.7**
	comp=Z,2.3nm,0.6s						
MK31	**Makanchi Array**	**40.47**	**32**	*e*P	**P**	**14 33 02.1**	**+0.7**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK32	**Makanchi Array**	**40.47**	**32**	*e*P	**P**	**14 33 01.9**	**+0.6**
MKAR	**Makanchi Array**	**40.47**	**32**	P	**P**	**14 33 01.9**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=222,slow=7.4,SNR=22						
MKAR				LR	LR	14 52 24.4	
	comp=Z,40nm,19.1s,baz=226,slow=40						
MKAR	**Makanchi Array**	**40.47**	**32**	*ce*P	**P**	**14 33 02.4**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BMR	**Baia Mare**	**40.64**	**330**	P	**P**	**14 33 03.5**	**+0.8**
BMR				pmax	pmax		
	comp=Z,54nm,0.8s						
BRVK	**Borovoye**	**40.72**	**16**	*e*P	**P**	**14 33 03.2**	**0.0**
	comp=Z,3.7nm,0.8s						
BRVK	**Borovoye**	**40.72**	**16**	*ce*P	**P**	**14 33 04.2**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURK	**Kurchatov**	**41.62**	**25**	⇓*i*P	**P**	**14 33 11.6**	**+1.0**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARU	**Arti**	**41.83**	**5**	*c i*P	**P**	**14 33 12.2**	**-0.1**
ARU				S	**S**	**14 39 30.7**	**+0.8**
ARU				SS	**SS**	**14 42 32.1**	**-4.0**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	**Obninsk**	**42.10**	**346**	⇑*i*P	**P**	**14 33 16.3**	**+1.8**
OBN				*e*		14 34 54.9	
OBN				*e*SS	SS	14 43 20.7	+39
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,33nm,17.0s						
KOLS	**Kolonicke sedl**	**42.10**	**330**	*e*P	**P**	**14 33 15.8**	**+1.1**
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KOLS	**Kolonicke sedl**	**42.10**	**330**	*e*P	**P**	**14 33 15.8**	**+1.1**
MATP	**Matopo**	**42.17**	**215**	P	**P**	**14 33 14.2**	**-1.4**
	comp=Z,3.3nm,0.8s,baz=31,slow=10,SNR=4.3						
VYHS	**Vyhne**	**43.52**	**328**	*e*P	**P**	**14 33 27.3**	**+1.1**
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VYHS	**Vyhne**	**43.52**	**328**	*e*P	**P**	**14 33 27.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**44.61**	**79**	P	**P**	**14 33 35.0**	**-0.4**
	comp=Z,3.4nm,1.1s,baz=276,slow=8.9,SNR=13						
CMAR				LR	LR	14 50 34.4	
	comp=Z,17nm,21.9s,baz=308,slow=34						
MORC	**Moravsky Berou**	**44.99**	**328**	⇑*i*P	**P**	**14 33 37.8**	**-0.2**
MORC	**Moravsky Berou**	**44.99**	**328**	*e*P	**P**	**14 33 37.1**	**-0.9**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KRUC	**Moravsky**	**45.15**	**327**	P	**P**	**14 33 40.5**	**+1.3**
KRUC				pmax	pmax		
	comp=Z,4.0nm,0.4s						
DPC	**Dobruska-Polom**	**45.96**	**328**	*e*P	**P**	**14 33 45.4**	**-0.3**
DPC	**Dobruska-Polom**	**45.96**	**328**	*e*P	**P**	**14 33 45.4**	**-0.3**
OSTC	**Ostas**	**46.14**	**328**	*e*P	**P**	**14 33 46.9**	**-0.2**
OSTC				*e*x	x	14 33 52.8	
UPC	**Upice**	**46.22**	**328**	*e*P	**P**	**14 33 47.2**	**-0.4**
UPC	**Upice**	**46.22**	**328**	*e*P	**P**	**14 33 47.2**	**-0.4**
CHVC	**Chvalec**	**46.24**	**328**	*e*P	**P**	**14 33 46.9**	**-1.0**
KSP	**Ksiaz**	**46.28**	**329**	P	**P**	**14 33 49.3**	**+1.2**
KSP				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GEC2	**GERESS Array S**	**46.48**	**325**	*e*P	**P**	**14 33 49.8**	**-0.1**
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**46.48**	**325**	P	**P**	**14 33 49.8**	**-0.1**
	comp=Z,2.0nm,0.3s,baz=123,slow=7.2,SNR=3.8						
GOPC	**GO Pecny, Ondr**	**46.50**	**327**	*e*P	**P**	**14 33 49.2**	**-0.7**
GOPC	**GO Pecny, Ondr**	**46.50**	**327**	*e*P	**P**	**14 33 49.2**	**-0.7**
ZALV	**Zalesovo Beam**	**46.57**	**26**	P	**P**	**14 33 49.9**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=233,slow=10,SNR=7.3						
ZALV				LR	LR	14 56 10.9	
	comp=Z,44nm,18.4s,baz=255,slow=40						
ZAA1	**Zalesovo Array**	**46.58**	**26**	*e*P	**P**	**14 33 49.9**	**-0.5**
PRU	**Pruhonice**	**46.67**	**327**	P	**P**	**14 33 53.3**	**+2.1**
PRU				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KHC	**Kasperske Hory**	**46.70**	**325**	*e*P	**P**	**14 33 50.5**	**-1.0**
KHC	**Kasperske Hory**	**46.70**	**325**	*e*P	**P**	**14 33 50.5**	**-1.0**
PRGR	**Permogore**	**47.05**	**356**	*e*P	**P**	**14 33 50.5**	**-3.4**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LBTB	**Lobatse**	**47.44**	**214**	P	**P**	**14 33 56.9**	**-0.7**
	comp=Z,7.3nm,0.8s,baz=33,slow=10,SNR=7.8						
TORD	**Torodi Ar. Bea**	**49.20**	**275**	LR	LR	14 53 36.0	
	comp=Z,70nm,18.1s,baz=0.0,slow=34						
BFO	**Black Forest**	**49.30**	**322**	*ce*P	**P**	**14 34 12.7**	**+1.1**
FIA0	**FINESS Array S**	**50.31**	**344**	*e*P	**P**	**14 34 17.7**	**-1.3**
FIA0	**FINESS Array S**	**50.31**	**344**	*e*P	**P**	**14 34 17.7**	**-1.3**
FINES	**FINESS Array B**	**50.31**	**344**	P	**P**	**14 34 17.7**	**-1.3**
	comp=Z,4.1nm,0.8s,baz=134,slow=11,SNR=11						
FINES	**FINESS Array B**	**50.31**	**344**	*ce*P	**P**	**14 34 18.8**	**-0.2**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOSA	**Boshof**	**50.53**	**211**	LR	LR	14 57 51.4	
	comp=Z,30nm,18.5s,baz=29,slow=39						
ESDC	**Sonseca Array**	**54.96**	**308**	P	**P**	**14 34 53.9**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=93,slow=6.9,SNR=4.1						
SONA0	**Songino Array**	**55.19**	**42**	*e*P	**P**	**14 34 55.5**	**0.0**
SONM	**Songino Array**	**55.19**	**42**	P	**P**	**14 34 55.5**	**0.0**
	comp=Z,1.0nm,0.8s,baz=242,slow=7.9,SNR=5.2						
SONM				LR	LR	15 01 29.9	
	comp=Z,42nm,21.8s,baz=244,slow=39						
ULN	**Ulaanbaatar**	**55.62**	**42**	⇓*i*P	**P**	**14 35 01.9**	**+3.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**57.19**	**51**	P	**P**	**14 35 12.6**	**+2.6**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,19nm,5.0s						
ARA0	**ARCESS Array S**	**57.28**	**349**	*e*P	**P**	**14 35 10.1**	**+0.1**
ARCES	**ARCESS Array B**	**57.28**	**349**	P	**P**	**14 35 10.1**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=148,slow=7.1,SNR=6.3						
WHN	**Wuhan**	**58.58**	**63**	P	**P**	**14 35 20.5**	**+0.8**
TIXI	**Tiksi**	**71.80**	**19**	⇑*i*P	**P**	**14 36 46.4**	**+1.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KLR	**Kul'dur**	**71.99**	**43**	P	**P**	**14 36 46.4**	**0.0**
	comp=Z,1.5nm,0.8s,baz=284,slow=8.3,SNR=3.5						
WR1	**Warramunga Arr**	**87.56**	**111**	*e*P	**P**	**14 38 10.7**	**-0.7**
WRA	**Warramunga Arr**	**87.56**	**111**	P	**P**	**14 38 10.7**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=293,slow=4.3,SNR=5.6						
ASAR	**Alice Springs**	**88.24**	**115**	P	**P**	**14 38 13.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=290,slow=4.8,SNR=14						
NVAR	**Mina Array Bea**	**126.37**	**351**	PKP	**PKPdf**	**14 44 26.4**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=119,slow=1.9,SNR=5.5						

*ISCJB **05** 14:27:44.6±0.7, 1°.7S±0°.1×12°.9W±0°.1, h14^{km}, mb4.1/1, Error ellipse: s-maj=20.1km s-min=10.5km az=35.4*

*IDC **05** 14:27:46.0±2.3, 1°.48S×13°.07W, h0^{km}, mb4.4/3, mb1 4.4/4, mb1mx3.7/43, mbtmp4.4/4, ML3.6/1, MS3.3/6, Ms1 3.3/6, ms1mx3.1/24, Error ellipse: s-maj=120.6km s-min=27.4km az=141.0*

*NEIC **05** 14:27:46.2±1.5, 1°.71S×12°.98W, h10^{km}, mb4.2/7, Error ellipse: s-maj=24.4km s-min=14.1km az=313.0*

ISC 05 14:27:46.6±0.7**, 1°.7S**±0°.1×**12°.8W**±0°.1**, h14**^{km}**, n29,** σ**1**^{s}.**61**/19**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**6.30**	**195**	T	T	14 36 19.7	
	baz=7.5,slow=74,SNR=114						
H10N1	**ASCENSION HYDR**	**6.32**	**195**	T	T	14 36 21.1	
	baz=7.5,slow=74,SNR=183						
H10N3	**ASCENSION HYDR**	**6.32**	**195**	T	T	14 36 22.1	
	baz=7.5,slow=74,SNR=136						
ASCN	**Ascension**	**6.37**	**194**	*e*Pn	**Pn**	**14 29 19.7**	**-0.4**
H10S1	**ASCENSION HYDR**	**7.41**	**194**	T	T	14 37 43.9	
	baz=7.8,slow=75,SNR=18						
H10S3	**ASCENSION HYDR**	**7.42**	**194**	T	T	14 37 47.6	
	baz=7.8,slow=75,SNR=21						
H10S2	**ASCENSION HYDR**	**7.43**	**194**	T	T	14 37 46.4	
	baz=7.8,slow=75,SNR=11						
DBIC	**Dimbokro**	**11.50**	**44**	Pn	**Pn**	**14 30 31.3**	**+0.7**
	0.4nm,0.3s,baz=229,slow=14,SNR=6.4						
DBIC				Sn	**Sn**	**14 32 34.9**	**-4.1**
	0.3nm,0.3s,baz=234,slow=19,SNR=2.2						
DBIC				LR	LR	14 34 15.3	
	comp=Z,141nm,19.8s,baz=211,slow=34						
SACV	**Santiago Islan**	**19.73**	**328**	*e*P	**P**	**14 32 15.2**	**-0.9**
	17nm,1.0s						
TOA0	**Torodi Ar. Sit**	**20.61**	**44**	*e*P	Pn	14 32 28.8	+0.8
	7.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**20.61**	**44**	P	**P**	**14 32 26.9**	**+1.2**
	5.0nm,0.9s,baz=230,slow=11,SNR=17						
TORD				LR	LR	14 39 40.2	
	comp=Z,143nm,19.9s,baz=295,slow=35						
TOA1	**Torodi Ar. Sit**	**20.62**	**44**	*e*P	**P**	**14 32 26.9**	**+1.1**
SFS	**San Fernando**	**38.48**	**9**	*e*P	**P**	**14 35 08.2**	**-0.1**
	130nm,0.9s						
CPUP	**Villa Florida**	**49.26**	**236**	LR	LR	14 54 31.9	
	comp=Z,33nm,19.9s,baz=36,slow=33						
GEC2	**GERESS Array S**	**55.35**	**21**	*e*P	**P**	**14 37 21.2**	**+1.1**
	2.4nm,1.1s						
GERES	**GERESS Array B**	**55.35**	**21**	P	**P**	**14 37 21.2**	**+1.1**
	1.4nm,0.2s,baz=208,slow=5.5,SNR=2.3						
LPAZ	**La Paz**	**56.33**	**252**	P	**P**	**14 37 28.4**	**-0.1**
	0.8nm,0.7s,baz=68,slow=5.4,SNR=3.7						
ANTO	**Ankara**	**58.72**	**40**	*e*PcP	**PcP**	**14 38 34.2**	**+0.2**
GO05	**Huala**	**64.02**	**232**	*e*P	**P**	**14 38 17.4**	**-2.8**
	99nm,0.4s						
NOA	**NORSAR Array B**	**65.27**	**13**	LR	LR	15 11 00.5	
	comp=Z,7.1nm,18.5s,baz=235,slow=40						
KBZ	**Khabaz**	**67.18**	**41**	LR	LR	15 09 29.4	
	comp=Z,21nm,19.4s,baz=76,slow=37						
FINES	**FINESS Array B**	**69.64**	**19**	LR	LR	15 08 34.8	
	comp=Z,36nm,21.0s,baz=254,slow=35						
I41A	**Arkdale**	**81.91**	**315**	*e*P	**P**	**14 40 05.5**	**-0.5**
	63nm,0.2s						
YFT	**Old Faithful**	**96.94**	**314**	*e*P	**P**	**14 41 20.6**	**+2.3**
	32nm,0.3s						
ASAR	**Alice Springs**	**138.96**	**130**	PKP	**PKiKP**	**14 47 15.4**	**-0.6**
	0.4nm,0.9s,baz=236,slow=1.7,SNR=4.3						
AS31	**Alice Springs**	**138.96**	**130**	*e*PKPdf	**PKiKP**	**14 47 15.4**	**-0.6**
WR1	**Warramunga Arr**	**141.25**	**125**	*e*PKPdf	**PKiKP**	**14 47 21.7**	**+1.0**
WRA	**Warramunga Arr**	**141.25**	**125**	PKP	**PKiKP**	**14 47 21.7**	**+1.0**
	0.4nm,0.7s,baz=228,slow=3.2,SNR=2.6						
RABL	**Rabaul**	**163.87**	**111**	*e*PKPab	**PKPab**	**14 48 44.7**	**+1.5**

*NIED **05** 14:28:00, 36°.70N×141°.10E, h50^{km}, Mw3.8 Best double couple: $M_0$5.63000×10^{14} NP1:ϕ_s120.00000°, δ56.00000°, λ-33.00000°. NP2:ϕ_s230.00000°, δ63.00000°, λ-141.00000°.*

*ISCJB **05** 14:28:40.4±0.7, 36°.64N±0°.03×141°.19E±0°.07, h48^{km}±7^{km}, mb3.4/5, Error ellipse: s-maj=9.6km s-min=5.2km az=15.1*

*IDC **05** 14:28:40.8±2.1, 36°.63N×141°.18E, h40^{km}±23^{km}, mb3.2/5, mb1 3.6/8, mb1mx3.4/42, mbtmp3.6/8, ML3.5/3, Error ellipse: s-maj=15.3km s-min=11.5km az=94.0*

*JMA **05** 14:28:41.8, 36°.67N×141°.07E, h51^{km}±1^{km}, M3.8*

JMA Felt II J1.

ISC 05 14:28:40.0±1.5**, 36°.65N**±0°.04×**141°.24E**±0°.07**, h32**^{km}±10^{km}**, n27,** σ**1**^{s}.**11**/35**, mb3.3**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.54**	**266**	P	**Pn**	**14 28 52.0**	**+0.4**
JHO				S	**Sb**	**14 28 59.2**	**+0.3**
ONAJ	**Iwakimizuishiy**	**0.57**	**322**	P	**Pn**	**14 28 52.6**	**+0.5**
ONAJ				S	**Sn**	**14 29 00.5**	**0.0**
JHYU	**Hitachinakayam**	**0.61**	**240**	P	**Pn**	**14 28 53.3**	**+0.8**
JHYU				S	**Sb**	**14 29 01.6**	**+0.8**
JFFD	**Fukushimafurud**	**0.70**	**309**	P	**Pn**	**14 28 54.1**	**+0.3**
JFFD				S	**Sn**	**14 29 02.9**	**-0.6**
JFK	**Kawauchi**	**0.77**	**338**	P	**Pn**	**14 28 55.5**	**+0.7**
JFK				S	**Sn**	**14 29 05.2**	**-0.1**
JYT	**Yasato**	**0.94**	**244**	P	**Pn**	**14 28 57.2**	**+0.1**
JYT				S	**Sb**	**14 29 08.8**	**-1.3**
JFT	**Otama**	**1.13**	**320**	P	**Pb**	**14 29 00.7**	**-0.3**
JFT				S	**Sb**	**14 29 14.3**	**-1.1**
JMM	**Marumori**	**1.27**	**344**	P	**Pb**	**14 29 02.4**	**-0.9**
JMM				S	**Sn**	**14 29 17.6**	**+0.2**
JFY	**Yanaizu**	**1.44**	**302**	P	**Pn**	**14 29 04.3**	**+0.3**
JFY				S	**Sn**	**14 29 21.7**	**-0.2**
JAG	**Ashikaga**	**1.46**	**262**	P	**Pn**	**14 29 04.2**	**0.0**
JKT	**Katashina**	**1.61**	**275**	P	**Pn**	**14 29 06.7**	**+0.4**
JKT				S	**Sn**	**14 29 25.2**	**-0.8**
MJAR	**Matsushiro Arr**	**2.44**	**268**	P	**Pn**	**14 29 18.5**	**+0.8**
	5.7nm,0.3s,baz=90,slow=15,SNR=228						
MJAR				S	**Sn**	**14 29 45.3**	**-1.2**
	3.2nm,0.3s,baz=60,slow=25,SNR=10						
MAT	**Matsushiro**	**2.44**	**268**	P	**Pn**	**14 29 18.9**	**+1.2**
MAT				S	**Sn**	**14 29 47.4**	**+0.8**
JHJ	**Hachijo jima 2**	**3.72**	**199**	P	**Pn**	**14 29 36.4**	**+1.1**
	29nm,0.3s,baz=320,slow=18,SNR=16						
JHJ				S	**Sn**	**14 30 17.7**	**-0.3**
	33nm,0.3s,baz=53,slow=20,SNR=6.2						
ASAJ	**Asahikawa**	**7.53**	**7**	P	**Pn**	**14 30 27.2**	**-0.3**
	0.8nm,0.3s,baz=202,slow=11,SNR=11						
ASAJ				S	**Sn**	**14 31 51.0**	**-0.7**
	0.3nm,0.3s,baz=221,slow=19,SNR=4.0						
USRK	**Ussuriysk Ar.**	**10.32**	**320**	P	**Pn**	**14 31 10.1**	**+4.3**
	0.2nm,0.3s,baz=150,slow=15,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**28.07**	**120**	T	T	15 04 32.1	
	baz=313,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	**28.08**	**120**	T	T	15 04 32.7	
	baz=313,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	**28.09**	**120**	T	T	15 04 33.4	
	baz=313,slow=75,SNR=41						
H11S1	**WAKE ISLAND Hy**	**28.77**	**122**	T	T	15 05 20.2	
	baz=314,slow=76,SNR=72						
H11S3	**WAKE ISLAND Hy**	**28.77**	**122**	T	T	15 05 21.8	
	baz=314,slow=76,SNR=46						
H11S2	**WAKE ISLAND Hy**	**28.79**	**122**	T	T	15 05 22.1	
	baz=314,slow=76,SNR=34						
MKAR	**Makanchi Array**	**44.21**	**302**	P	**P**	**14 36 45.6**	**-0.5**
	0.2nm,0.6s,baz=81,slow=9.3,SNR=2.6						
ILAR	**Eielson Array**	**49.89**	**32**	P	**P**	**14 37 30.3**	**+0.3**
	0.2nm,0.6s,baz=260,slow=5.4,SNR=3.5						
WRA	**Warramunga Arr**	**56.66**	**188**	P	**P**	**14 38 18.1**	**-2.2**
	0.6nm,0.5s,baz=5.7,slow=6.6,SNR=5.3						
NVAR	**Mina Array Bea**	**75.33**	**53**	P	**P**	**14 40 21.5**	**+1.0**
	0.2nm,0.6s,baz=282,slow=5.4,SNR=3.0						
PDAR	**Pinedale Array**	**78.03**	**45**	P	**P**	**14 40 36.0**	**+0.3**
	0.2nm,0.5s,baz=328,slow=3.2,SNR=2.0						

UCR 05 14:42:19.5±1.6**, 8°.96N**×**84°.28W, h57**^{km}±125^{km}**, MW3.9, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.82**	**19**	*e*S	Sn	14 42 47.1	+0.1
JTS	**Las Juntas de**	**1.48**	**333**	*e*P	Pn	14 42 43.6	-0.4
JTS				*e*S	Sn	14 42 58.6	-3.7

*IDC **05** 14:48:12.8±0.6, 26°.91S×176°.49W, h0^{km}, mb4.3/15, mb1 4.5/15, mb1mx4.5/21, mbtmp4.3/15, MS4.3/17, Ms1 4.3/17, ms1mx4.1/31, Error ellipse: s-maj=22.9km s-min=18.5km az=134.0*

*ISCJB **05** 14:48:16.6±0.5, 27°.34S±0°.05×176°.64W±0°.10, h34^{km}, mb4.5/30, MS4.4/19, Error ellipse: s-maj=13.1km s-min=6.8km az=17.0*

*NEIC **05** 14:48:33.0±1.8, 27°.98S×177°.50W, h114^{km}±7^{km}, mb4.6/26, Error ellipse: s-maj=21.3km s-min=12.9km az=93.0*

ISC 05 14:48:18.0±0.5**, 27°.36S**±0°.06×**176°.5W**±0°.1**, h34**^{km}**, n75,** σ**2**^{s}.**12**/60**, mb4.5**/30**, MS4.3**/19**, 1C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.28**	**214**	*e*Pn	**Pb**	**14 48 58.2**	**-0.3**
RAO				*e*		14 49 15.7	
RAO				*e*Sn	**Sn**	**14 49 15.8**	**-4.3**
URZ	**Urewera**	**12.13**	**205**	Pn	**Pn**	**14 51 05.5**	**-2.9**
	0.4nm,0.3s,baz=37,slow=10,SNR=4.8						
URZ				Sn	**Sn**	**14 53 23.8**	**+1.4**
	3.2nm,0.3s,baz=230,slow=22,SNR=12						
BKZ	**Black Stump Fm**	**13.16**	**205**	*e*Pn	**Pn**	**14 51 18.7**	**-3.7**
BFZ	**Birch Farm**	**14.59**	**203**	*e*Pn	**Pn**	**14 51 39.1**	**-2.8**
DZM	**Mont Dzumac**	**16.39**	**285**	*e*P	**P**	**14 52 12.2**	**+4.0**
	61nm,1.1s						
DZM				*e*LR	LR	14 56 04.2	
	comp=Z,4µm,23.9s						
DZM	**Mont Dzumac**	**16.39**	**285**	Pn	**P**	**14 52 11.4**	**+3.2**
	1.0nm,0.3s,baz=77,slow=12,SNR=12						
DZM				LR	LR	14 57 19.5	
	comp=Z,2µm,19.3s,baz=144,slow=34						
DZM	**Mont Dzumac**	**16.39**	**285**	*e*P	**P**	**14 52 12.0**	**+3.9**
	17nm,0.7s						
RAR	**Rarotonga**	**16.39**	**72**	Pn	Pn	14 51 54.4	-11
	2.2nm,0.3s,baz=276,slow=7.5,SNR=3.4						
RAR				LR	LR	14 57 26.9	
	comp=Z,438nm,18.6s,baz=263,slow=34						
THZ	**Tophouse**	**16.80**	**209**	*e*P	**P**	**14 52 13.1**	**+0.6**
	16nm,0.8s						
KHZ	**Kahutara**	**17.09**	**206**	*e*P	**Pn**	**14 52 13.9**	**-0.3**
	57nm,1.1s						
CRLZ	**Canterbury Las**	**18.43**	**206**	*e*P	P	14 52 21.1	-9.2
	184nm,0.8s						
OXZ	**Oxford**	**18.45**	**207**	*e*P	**P**	**14 52 30.2**	**-0.5**
	20nm,0.6s						
MQZ	**McQueen's Vall**	**18.53**	**206**	*e*P	P	14 52 21.6	-10
	42nm,0.6s						
TBI	**Tubuai**	**24.71**	**87**	*e*LQ	LQ	14 58 10.2	
	1µm,28.2s						
TBI				*e*LR	LR	14 59 24.7	
	comp=Z,2µm,29.8s,baz=253						
TBI	**Tubuai**	**24.71**	**87**	*e*T	T	15 18 27.3	
	8.2nm,0.3s						
PAE	**Paea**	**26.59**	**74**	*e*T	T	15 20 45.7	
	3.4nm,0.2s						
PPT2	**Papeete2**	**26.63**	**74**	*e*LQ	LQ	14 58 53.3	
	2µm,25.5s						
PPT2				*e*LR	LR	15 00 15.3	
	comp=Z,2µm,27.5s,baz=246						
PPT2	**Papeete2**	**26.63**	**74**	*e*T	T	15 20 49.0	
	2.6nm,0.3s						
PPT	**Papeete**	**26.64**	**74**	LR	LR	15 01 33.0	
	comp=Z,460nm,21.4s,baz=244,slow=30						
TVO	**Taravao**	**26.82**	**75**	*e*T	T	15 21 02.4	
	1.0nm,0.3s						
EIDS	**Eidsvold**	**29.11**	**266**	*e*P	**P**	**14 54 15.0**	**-0.6**
	4.1nm,0.8s						
MCQ	**Macquarie Isla**	**32.53**	**207**	*e*P	**P**	**14 54 44.6**	**-0.9**
	92nm,1.0s						
CTA	**Charters Tower**	**34.79**	**274**	P	**P**	**14 55 06.0**	**+0.3**
	8.7nm,0.5s,baz=99,slow=10,SNR=31						
CTAO	**Charters Tower**	**34.79**	**274**	*e*P	**P**	**14 55 06.4**	**+0.8**
	11nm,0.5s						
STKA	**Stephens Creek**	**36.58**	**253**	P	**P**	**14 55 21.7**	**+0.9**
	1.9nm,0.5s,baz=76,slow=5.7,SNR=4.7						
STKA				LR	LR	15 09 29.3	
	comp=Z,1µm,18.2s,baz=78,slow=35						
STKA	**Stephens Creek**	**36.58**	**253**	*e*P	**P**	**14 55 19.7**	**-1.1**
RKT	**Rikitea**	**37.64**	**93**	*e*LR	LR	15 05 21.2	
	comp=Z,2µm,26.8s						
TAOE	**Nuku Hiva Isla**	**38.91**	**69**	*e*LR	LR	15 05 51.6	
	comp=Z,660nm,27.3s						
COEN	**Coen**	**39.87**	**281**	*e*P	**P**	**14 55 49.7**	**+1.0**
	11nm,1.0s						
AS31	**Alice Springs**	**44.71**	**263**	*e*P	**P**	**14 56 26.0**	**-2.1**
	1.9nm,1.1s						
ASAR	**Alice Springs**	**44.71**	**263**	P	**P**	**14 56 27.2**	**-0.9**
	1.9nm,0.6s,baz=95,slow=6.7,SNR=44						
ASAR				PcP	**PcP**	**14 58 10.4**	**+0.2**
	0.6nm,0.6s,baz=108,slow=4.1,SNR=3.1						
WB2	**Warramunga Arr**	**45.42**	**268**	*e*P	**P**	**14 56 33.0**	**-0.8**
	9.4nm,0.8s						
WRAB	**Tennant Creek**	**45.43**	**268**	*e*P	**P**	**14 56 33.0**	**-0.8**
	9.3nm,0.8s						
WR1	**Warramunga Arr**	**45.43**	**268**	*e*P	**P**	**14 56 32.8**	**-1.1**
WRA	**Warramunga Arr**	**45.43**	**268**	P	**P**	**14 56 32.8**	**-1.1**
	5.8nm,0.7s,baz=102,slow=8.8,SNR=36						
FORT	**Forrest**	**48.20**	**252**	*e*P	**P**	**14 56 53.9**	**-1.4**
	11nm,0.6s						
MTN	**Manton Dam**	**50.94**	**276**	*e*P	**P**	**14 57 16.0**	**-0.4**
	9.3nm,1.0s						
SBA	**Scott Base**	**51.16**	**185**	*e*P	**P**	**14 57 19.9**	**+2.8**
	5.5nm,0.9s						
VNDA	**Vanda**	**51.24**	**186**	P	**P**	**14 57 22.3**	**+4.4**
	0.9nm,0.6s,baz=1.7,slow=7.5,SNR=6.8						
VNDA				LR	LR	15 15 25.5	
	comp=Z,236nm,20.8s,baz=25,slow=32						
VNDA	**Vanda**	**51.24**	**186**	*e*P	**P**	**14 57 22.5**	**+4.6**
	2.2nm,0.8s						
CASY	**Casey**	**58.45**	**207**	*e*P	**P**	**14 58 11.6**	**+1.5**
	9.3nm,0.9s						
MORW	**Morawa**	**58.74**	**251**	*e*P	**P**	**14 58 11.6**	**-1.2**
	1.6nm,0.8s						
QSPA	**South Pole Qui**	**62.74**	**180**	*e*P	**P**	**14 58 42.5**	**+3.0**
	10nm,0.8s						
LEM	**Lembang**	**74.40**	**270**	LR	LR	15 32 43.6	
	comp=Z,567nm,19.9s,baz=114,slow=36						
MAW	**Mawson**	**75.61**	**200**	P	**P**	**15 00 01.8**	**+2.8**
	3.3nm,0.6s,baz=128,slow=9.5,SNR=14						
MAW				LR	LR	15 33 42.6	
	comp=Z,340nm,18.7s,baz=112,slow=36						
MAW	**Mawson**	**75.61**	**200**	*e*P	**P**	**15 00 01.9**	**+2.8**
	1.0nm,0.8s						
MJAR	**Matsushiro Arr**	**76.55**	**324**	P	**P**	**15 00 02.6**	**-2.1**
	5.2nm,0.9s,baz=162,slow=5.7,SNR=8.8						
MJAR				LR	LR	15 28 02.7	
	comp=Z,106nm,21.8s,baz=135,slow=31						
MAT	**Matsushiro**	**76.56**	**324**	P	**P**	**15 00 03.4**	**-1.4**

MAT				S	**S**	**15 09 53.8**	**+5.3**
JNU	**Nakatsue**	**78.22**	**317**	LR	LR	15 30 52.4	
	comp=Z,87nm,18.8s,baz=168,slow=33						
SYO	**Syowa Base**	**80.36**	**192**	⇓*e*P	**P**	**15 00 25.9**	**+0.5**
SYO	**Syowa Base**	**80.36**	**192**	⇑*e*P	P	15 00 40.6	+15
SNAA	**Sanae**	**81.14**	**178**	*e*P	**P**	**15 00 31.0**	**+1.4**
	4.9nm,0.8s						
KSRS	**Korea Array**	**82.94**	**319**	P	**P**	**15 00 38.6**	**-0.7**
	2.6nm,0.5s,baz=128,slow=5.5,SNR=17						
KSRS				LR	LR	15 31 49.0	
	comp=Z,107nm,21.5s,baz=128,slow=32						
PETK	**Petropavlovsk-**	**83.23**	**345**	P	**P**	**15 00 39.0**	**-1.4**
	1.3nm,0.6s,baz=116,slow=6.7,SNR=2.9						
PETK				LR	LR	15 34 14.3	
	comp=Z,119nm,19.8s,baz=149,slow=33						
PLCA	**Paso Flores**	**83.58**	**133**	LR	LR	15 31 49.2	
	comp=Z,150nm,18.6s,baz=287,slow=31						
NVAR	**Mina Array Bea**	**85.09**	**42**	P	**P**	**15 00 49.4**	**-1.3**
	1.1nm,0.8s,baz=219,slow=8.6,SNR=7.5						
NVAR				LR	LR	15 32 17.6	
	comp=Z,223nm,18.5s,baz=228,slow=31						
USRK	**Ussuriysk Ar.**	**85.40**	**326**	P	**P**	**15 00 51.8**	**+0.1**
	1.8nm,0.7s,baz=98,slow=2.9,SNR=4.8						
USRK				LR	LR	15 32 28.7	
	comp=Z,141nm,21.6s,baz=128,slow=31						
PSI	**Prapat**	**86.49**	**275**	LR	LR	15 41 05.5	
	comp=Z,294nm,19.4s,baz=124,slow=37						
GSI	**Gunungsitoli**	**87.00**	**273**	*e*P	**P**	**15 01 01.1**	**+0.7**
	12nm,0.7s						
TXAR	**Lajitas Array**	**89.61**	**57**	P	**P**	**15 01 12.2**	**-0.3**
	0.5nm,0.9s,baz=214,slow=6.0,SNR=4.8						
TXAR				LR	LR	15 33 24.7	
	comp=Z,116nm,21.0s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**93.00**	**43**	P	**P**	**15 01 27.5**	**-0.6**
	0.2nm,0.3s,baz=250,slow=2.7,SNR=4.3						
BOZ	**Bozeman (W)**	**93.44**	**40**	*e*P	P	15 01 40.5	+11
CM31	**Chiang Mai Arr**	**93.69**	**289**	*e*P	**P**	**15 01 32.0**	**+0.5**
	2.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**93.69**	**289**	P	**P**	**15 01 32.0**	**+0.5**
	1.0nm,0.6s,baz=137,slow=3.7,SNR=10						
ILAR	**Eielson Array**	**94.68**	**12**	P	**P**	**15 01 31.9**	**-3.1**
	0.7nm,0.8s,baz=210,slow=5.7,SNR=9.6						
LPAZ	**La Paz**	**98.12**	**113**	LR	LR	15 37 23.6	
	comp=Z,45nm,21.0s,baz=238,slow=30						
ZALV	**Zalesovo Beam**	**116.64**	**319**	PKP	**PKPdf**	**15 06 56.1**	**-1.9**
	0.7nm,0.6s,baz=149,slow=3.4,SNR=3.5						
MKAR	**Makanchi Array**	**116.83**	**311**	PKP	**PKPdf**	**15 06 57.0**	**-1.7**
	1.1nm,0.7s,baz=90,slow=1.4,SNR=5.6						
ARCES	**ARCESS Array B**	**135.89**	**349**	PKP	**PKPdf**	**15 07 34.4**	**0.0**
	1.1nm,0.6s,baz=101,slow=0.9,SNR=6.0						
FINES	**FINESS Array B**	**142.72**	**342**	PKhKP	PKPpre	15 07 41.0	
	1.4nm,0.9s,baz=46,slow=6.0,SNR=4.9						
NB2	**NORSAR Subarra**	**145.93**	**353**	PKP	**PKPdf**	**15 07 51.2**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=13,slow=3.3						
NOA	**NORSAR Array B**	**145.93**	**353**	PKPbc	**PKPdf**	**15 07 51.4**	**-1.3**
	comp=Z,3.0nm,0.8s,baz=7.8,slow=2.5,SNR=8.8						
AKASG	**Malin Array Be**	**149.60**	**327**	PKPbc	**PKPbc**	**15 08 01.5**	**-2.1**
	comp=Z,6.3nm,0.9s,baz=39,slow=3.6,SNR=12						
BRTR	**Keskin Array B**	**152.18**	**304**	PKPbc	**PKPbc**	**15 08 09.0**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=99,slow=2.7,SNR=4.9						
BRTR				PKPab	**sPKPdf**	**15 08 17.8**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=124,slow=3.9,SNR=4.9						
TORD	**Torodi Ar. Bea**	**165.75**	**173**	PKPab	**PKPab**	**15 09 20.0**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=184,slow=4.6,SNR=6.4						

DDA ***05*** *14:56:14.3, 39°.90N×35°.20E, h7^{km}±2^{km}, ML2.6*
ISK ***05*** *14:56:14.7, 39°.93N×35°.25E, h6^{km}, ML2.0/5*
ISCJB ***05*** *14:56:15.4±0.7, 39°.90N±0°.03×35°.19E±0°.06, h8^{km}±8^{km}, Error ellipse: s-maj=8.5km s-min=4.8km az=153.4*

ISC 05 14:56:14.8±1.2, 39°.91N±0°.04×35°.22E±0°.04, h16^{km}±12^{km}, n9, σ0^{s}.42/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOZ	**Yozgat**	**0.28**	**164**	PG	**Pg**	**14 56 20.8**	**-0.1**
YOZ				SG	**Sb**	**14 56 25.8**	**-0.2**
COAL	**Corum-Alaca**	**0.39**	**332**	*i* P	**Pg**	**14 56 22.9**	**+0.1**
COAL				*i* S	**Sb**	**14 56 29.4**	**+0.2**
COAL				IAML_P			
	comp=Z,514nm,0.2s						
CORM	**Corum**	**0.53**	**301**	PG	**Pb**	**14 56 25.6**	**-0.1**
CORM				SG	**Sb**	**14 56 33.5**	**+0.3**
SIRC	**Yozgat**	**0.58**	**186**	*i* P	**Pg**	**14 56 26.2**	**0.0**
SIRC				*i* S	**Sg**	**14 56 34.3**	**+0.3**
SIRC				IAML_P			
	comp=Z,1μm,0.1s						
CDAG	**Cicekdag**	**0.71**	**247**	*i* P	**Pg**	**14 56 28.1**	**-0.7**
CDAG				*i* S	**Sg**	**14 56 38.1**	**-0.2**
CDAG				IAML_P			
	comp=Z,1μm,0.1s						
DELI	**KIRIKKALE**	**1.00**	**275**	*i* P	**Pg**	**14 56 33.9**	**-0.4**
DELI				IAML_P			
	comp=Z,457nm,0.1s						
SVSK	**Karacayir**	**1.37**	**89**	PN	**Pg**	**14 56 40.6**	**-0.5**
YAYX	**Yaylak**	**1.46**	**229**	PN	**Pg**	**14 56 42.6**	**-0.3**
SERE	**Sereflikochisa**	**1.60**	**234**	PN	**Pb**	**14 56 44.7**	**+0.6**

SNET 05 14:57:03.6±0.9, 12°.95N×88°.61W, h58^{km}±8^{km}, ML3.7, 3D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECA	**Tecapa**	**0.55**	**11**	*e*P	Pn	14 57 16.4	+0.2
LCY	**Lacayo**	**0.56**	**33**	*e*P	Pn	14 57 16.5	+0.2
PACA	**Pacayal**	**0.59**	**29**	⇓*i*P	Pn	14 57 16.8	+0.2
SNVI	**San Vicente**	**0.70**	**342**	*e*P	Pn	14 57 18.3	+0.4
LCND	**La Caada**	**0.79**	**63**	⇓*e*P	Pn	14 57 18.8	-0.1
LCND				IAML		14 57 34.1	
	comp=Z,2μm,0.4s						
PAVA	**Las Pavas**	**0.82**	**337**	*e*P	Pn	14 57 19.7	+0.3
PAVA				IAML		14 57 34.5	
	comp=Z,2μm,0.3s						
CNCH	**Conchagua**	**0.82**	**67**	*e*P	Pn	14 57 19.2	-0.3
CNCH				IAML		14 57 36.6	
	comp=Z,2μm,0.5s						
LFU	**La Fuente**	**0.93**	**328**	*e*P	Pn	14 57 21.0	+0.2
VICT	**Victoria**	**1.00**	**359**	*e*P	Pn	14 57 22.1	+0.3
CSGN	**Cosiguina Volc**	**1.03**	**88**	*e*P	Pn	14 57 22.8	+0.8
SBLS	**San Blas**	**1.32**	**312**	*e*P	Pn	14 57 26.5	+0.3
RTR	**El Retiro**	**1.38**	**313**	*e*P	Pn	14 57 27.4	+0.5
MTO3	**Montecristo**	**1.61**	**333**	⇓*i*P	Pn	14 57 30.5	+0.5

NNC ***05*** *15:04:05.3±0.3, 43°.28N×74°.98E, h0^{km}, mb3.8, mpv3.7, Error ellipse: s-maj=2.1km s-min=1.4km az=162.0*
KRNET ***05*** *15:04:05.5±0.1, 43°.30N×74°.97E, h14^{km}, mb3.4*
SOME ***05*** *15:04:06.1, 43°.28N×75°.00E, h10^{km}*
KNET ***05*** *15:04:06.1±0.5, 43°.25N×74°.93E, h14^{km}±3^{km}, ml2.4, Error ellipse: s-maj=3.4km s-min=2.4km az=24.0*

ISC 05 15:04:05.8±0.9, 43°.29N±0°.02×74°.96E±0°.01, h14^{km}±7^{km}, n88, σ1^{s}.02/158, 62C-29D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGDS	**Sogindy**	**0.29**	**304**	P	**Pg**	**15 04 11.4**	**-0.5**
	345nm,0.1s						
SGDS				S	**Sg**	**15 04 15.1**	**-0.9**
	745nm,0.1s						
CHMS	**Chumysh**	**0.33**	**208**	⇑*i*P	**Pg**	**15 04 12.4**	**-0.1**
	baz=8.0						
CHMS				⇑*i*S	**Sg**	**15 04 17.1**	**0.0**
	baz=8.0						
CHMS	**Chumysh**	**0.33**	**208**	⇓P	**Pg**	**15 04 12.5**	**-0.1**
	33nm,0.1s,SNR=136						
CHMS				⇑S	**Sg**	**15 04 17.1**	**0.0**
	551nm,0.2s						
USP	**Ospenovka**	**0.34**	**266**	⇑*i*P	**Pg**	**15 04 12.4**	**-0.3**
	baz=65						
USP				⇑*i*S	**Sg**	**15 04 17.1**	**-0.3**
	baz=65						
USP	**Ospenovka**	**0.34**	**266**	⇑P	**Pg**	**15 04 12.5**	**-0.3**
	446nm,0.1s,SNR=139						
USP				⇑S	**Sg**	**15 04 17.2**	**-0.2**
	365nm,0.2s						
FRU1	**Bishkek**	**0.54**	**207**	⇓*e*P	**Pg**	**15 04 15.8**	**-0.6**
	baz=7.0						
FRU1				⇓*i*S	**Sg**	**15 04 23.6**	**+0.1**
	baz=7.0						
DGS	**Degeres**	**0.59**	**94**	P	**Pg**	**15 04 17.0**	**-0.4**
	89nm,0.4s						
DGS				S	**Sg**	**15 04 25.0**	**-0.3**
	272nm,0.3s						
DGS	**Degeres**	**0.59**	**94**	*e*P	**Pg**	**15 04 17.0**	**-0.4**
	baz=95						
DGS				*e*S	**Sg**	**15 04 25.0**	**-0.3**
	baz=95						
DGS	**Degeres**	**0.59**	**94**	*e*P	**Pg**	**15 04 17.0**	**-0.4**
	72nm,0.1s						
DGS				*e*S	**Sg**	**15 04 25.0**	**-0.3**
	239nm,0.3s						
TKM2	**Tokmak 2**	**0.59**	**128**	⇑P	**Pg**	**15 04 16.7**	**-0.7**
	18nm,0.5s						
TKM2				⇑S	**Sg**	**15 04 24.7**	**-0.7**
	102nm,0.2s						
TKM2	**Tokmak 2**	**0.59**	**128**	⇑*i*P	**Pg**	**15 04 16.8**	**-0.7**
	baz=29						
TKM2				⇑*i*S	**Sg**	**15 04 24.8**	**-0.5**
	baz=29						
TKM2	**Tokmak 2**	**0.59**	**128**	⇓P	**Pg**	**15 04 16.9**	**-0.6**
	34nm,0.1s,SNR=118						
KBK	**Karagaybulak**	**0.63**	**181**	⇑*i*P	**Pg**	**15 04 18.2**	**0.0**
	baz=82						
KBK				⇑*i*S	**Sb**	**15 04 27.3**	**-0.2**
	baz=82						
KBK	**Karagaybulak**	**0.63**	**181**	P	**Pb**	**15 04 18.5**	**-0.3**
	101nm,0.1s,SNR=123						
KBK				⇑S	**Sb**	**15 04 27.6**	**+0.1**
	375nm,0.2s						
AAK	**Ala-Archa**	**0.74**	**208**	⇑P	**Pg**	**15 04 20.0**	**-0.1**
	4.8nm,0.4s						
AAK				⇑S	**Sg**	**15 04 29.9**	**0.0**
	36nm,0.5s						
AAK	**Ala-Archa**	**0.74**	**208**	⇑*i*P	**Pg**	**15 04 19.9**	**-0.2**
	baz=8.0						
AAK				⇑*i*S	**Sg**	**15 04 30.1**	**+0.3**
	baz=8.0						
AAK	**Ala-Archa**	**0.74**	**208**	⇓P	**Pg**	**15 04 20.0**	**-0.1**
	15nm,0.1s,SNR=10						
AAK				⇓S	**Sg**	**15 04 29.8**	**0.0**
	109nm,0.4s						
KST	**Kastek**	**0.77**	**108**	P	**Pg**	**15 04 20.5**	**-0.3**
	94nm,0.2s						
KST				S	**Sb**	**15 04 31.1**	**-0.4**
	415nm,0.5s						
KST	**Kastek**	**0.77**	**108**	⇑*i*P	**Pg**	**15 04 20.5**	**-0.3**
	baz=9.0						
KST				⇑*i*S	**Sb**	**15 04 31.1**	**-0.4**
	baz=9.0						
KST	**Kastek**	**0.77**	**108**	⇑*i*P	**Pg**	**15 04 20.5**	**-0.3**
	94nm,0.2s						
KST				⇑*i*S	**Sb**	**15 04 31.1**	**-0.4**
	415nm,0.5s						
EKS2	**Erkin-Say**	**1.07**	**235**	⇑*i*P	**Pb**	**15 04 26.1**	**-0.1**
	baz=34						
EKS2				⇑*i*S	**Sg**	**15 04 40.8**	**+0.3**
	baz=34						
EKS2	**Erkin-Say**	**1.07**	**235**	P	**Pn**	**15 04 26.3**	**-0.2**
	20nm,0.1s,SNR=115						
EKS2				⇑S	**Sn**	**15 04 41.1**	**-0.2**
	25nm,0.1s						
BOOM	**Boomskoye usch**	**1.07**	**138**	⇑*i*P	**Pb**	**15 04 25.8**	**-0.5**
	baz=38						
BOOM				⇑*i*S	**Sg**	**15 04 40.3**	**-0.2**
	baz=38						
MTBS	**Maitube**	**1.08**	**98**	P	**Pb**	**15 04 26.0**	**-0.4**
	30nm,0.1s						
MTBS				S	**Sg**	**15 04 40.4**	**-0.4**
	57nm,0.2s						
MTBS	**Maitube**	**1.08**	**98**	⇓*i*P	**Pb**	**15 04 26.0**	**-0.4**
	baz=98						
MTBS				⇑*i*S	**Sg**	**15 04 40.4**	**-0.4**
	baz=98						
MTBS	**Maitube**	**1.08**	**98**	⇓*i*P	**Pb**	**15 04 26.0**	**-0.4**
	30nm,0.1s						
MTBS				⇑*i*S	**Sg**	**15 04 40.4**	**-0.4**
	57nm,0.2s						
UCH	**Uchtor**	**1.11**	**197**	⇑*i*P	**Pb**	**15 04 26.8**	**-0.3**
	baz=98						
UCH				⇑*i*S	**Sb**	**15 04 41.7**	**+0.1**
	baz=98						
UCH	**Uchtor**	**1.11**	**197**	⇓P	**Pb**	**15 04 27.0**	**-0.1**
	12nm,0.1s,SNR=35						
UCH				⇓S	**Sg**	**15 04 42.2**	**+0.3**
	68nm,0.3s						
KUU	**Kurty**	**1.17**	**58**	P	**Pb**	**15 04 27.2**	**-0.5**
	26nm,0.2s						
KUU				S	**Sb**	**15 04 42.4**	**-0.4**
	107nm,0.1s						
KUU	**Kurty**	**1.17**	**58**	⇑*i*P	**Pb**	**15 04 27.2**	**-0.5**
	baz=59						
KUU				⇑*i*S	**Sb**	**15 04 42.4**	**-0.4**
	baz=59						
KUU	**Kurty**	**1.17**	**58**	⇑*i*P	**Pb**	**15 04 27.2**	**-0.5**
	26nm,0.2s						
KUU				⇑*i*S	**Sb**	**15 04 42.4**	**-0.4**
	107nm,0.1s						
KZA	**Kyzart**	**1.23**	**170**	⇑*e*P	**Pn**	**15 04 28.8**	**-0.2**
	baz=70						
KZA				⇑*i*S	**Sg**	**15 04 45.6**	**+0.1**
	baz=70						
KZA	**Kyzart**	**1.23**	**170**	⇓P	**Pg**	**15 04 29.2**	**-0.3**
	16nm,0.1s,SNR=82						
IZV	**Izvestkoviy**	**1.23**	**101**	P	**Pg**	**15 04 29.1**	**-0.4**
	31nm,0.1s						
IZV				S	**Sg**	**15 04 45.5**	**-0.1**
	83nm,0.2s						
IZV	**Izvestkoviy**	**1.23**	**101**	*e*P	**Pg**	**15 04 29.1**	**-0.4**
	baz=2.0						
IZV				*e*S	**Sg**	**15 04 45.5**	**-0.1**
	baz=2.0						
IZV	**Izvestkoviy**	**1.23**	**101**	*e*P	**Pg**	**15 04 29.1**	**-0.4**
	17nm,0.2s						
IZV				*e*S	**Sg**	**15 04 45.5**	**-0.1**
	83nm,0.2s						
KTBS	**Karatobe**	**1.32**	**71**	P	**Pb**	**15 04 30.2**	**-0.2**
	37nm,0.2s						
KTBS				S	**Sn**	**15 04 47.3**	**-0.1**
	150nm,0.3s						
KTBS	**Karatobe**	**1.32**	**71**	*e*P	**Pb**	**15 04 30.2**	**-0.2**
	37nm,0.2s						
KTBS				*e*S	**Sn**	**15 04 47.2**	**-0.1**
	150nm,0.3s						
MRKS	**Merke**	**1.39**	**247**	P	**Pb**	**15 04 31.4**	**-0.1**
	45nm,0.4s						
MRKS				S	**Sg**	**15 04 50.6**	**+0.2**
	93nm,0.2s						
MRKS	**Merke**	**1.39**	**247**	⇑*i*P	**Pb**	**15 04 31.4**	**-0.1**
	baz=47						
MRKS				⇑*e*S	**Sg**	**15 04 50.1**	**-0.3**
	baz=47						
MRKS	**Merke**	**1.39**	**247**	⇑*i*P	**Pb**	**15 04 31.4**	**-0.1**
	38nm,0.2s						
MRKS				*e*S	**Sg**	**15 04 50.1**	**-0.3**
	71nm,0.2s						
ULHL	**Ulahol**	**1.41**	**137**	⇓*e*P	**Pb**	**15 04 31.5**	**-0.4**
	baz=38						
ULHL				⇓*i*S	**Sg**	**15 04 50.3**	**-0.8**
	baz=38						
ULHL	**Ulahol**	**1.41**	**137**	⇑P	**Pb**	**15 04 31.6**	**-0.3**
	11nm,0.1s,SNR=37						
AAA	**Alma-Ata**	**1.43**	**93**	P	**Pb**	**15 04 31.8**	**-0.4**
	61nm,0.1s						
AAA				S	**Sg**	**15 04 51.7**	**-0.1**
	91nm,0.2s						
AAA	**Alma-Ata**	**1.43**	**93**	*e*P	**Pb**	**15 04 31.8**	**-0.4**
	baz=93						
AAA				*e*S	**Sg**	**15 04 50.8**	**-1.0**
	baz=93						
KNDC	**Almaty**	**1.47**	**92**	⇑P	**Pb**	**15 04 32.9**	**0.0**
	39nm,0.4s						
KNDC				⇓S	**Sg**	**15 04 52.5**	**-0.5**
	53nm,0.3s						
TNSS	**Tian-Shan**	**1.47**	**99**	P	**Pb**	**15 04 33.1**	**-0.1**
	34nm,0.2s						
TNSS				S	**Sg**	**15 04 52.9**	**-0.4**
	86nm,0.6s						
TNSS	**Tian-Shan**	**1.47**	**99**	⇓*i*P	**Pb**	**15 04 33.1**	**-0.1**
	baz=0.0						
TNSS				⇑*i*S	**Sg**	**15 04 52.9**	**-0.4**
	baz=0.0						
TNSS	**Tian-Shan**	**1.47**	**99**	⇓*i*P	**Pb**	**15 04 33.1**	**-0.1**
	34nm,0.2s						
TNSS				⇑*i*S	**Sg**	**15 04 52.9**	**-0.4**
	86nm,0.6s						
AML	**Almayashu**	**1.49**	**219**	⇓*i*P	**Pb**	**15 04 33.6**	**+0.2**
	baz=19						
AML				⇓*i*S	**Sg**	**15 04 53.3**	**-0.5**
	baz=19						
ARLS	**Aral**	**1.50**	**199**	⇑*i*P	**Pb**	**15 04 33.1**	**-0.5**
	baz=99						
ARLS				⇑*i*S	**Sg**	**15 04 53.6**	**-0.6**
	baz=99						
KOTS	**Kotyrbulak**	**1.57**	**91**	P	**Pb**	**15 04 35.0**	**+0.3**
	36nm,0.3s						
KOTS				S	**Sg**	**15 04 55.6**	**-0.8**
	158nm,0.3s						
KOTS	**Kotyrbulak**	**1.57**	**91**	*e*P	**Pb**	**15 04 35.0**	**+0.3**
	baz=92						
KOTS				*e*S	**Sg**	**15 04 55.6**	**-0.8**
	baz=92						
KOTS	**Kotyrbulak**	**1.57**	**91**	*e*P	**Pb**	**15 04 35.0**	**+0.3**
	36nm,0.3s						
KOTS				*e*S	**Sg**	**15 04 55.6**	**-0.8**
	158nm,0.3s						
CHKK	**Chushkaly**	**1.58**	**68**	P	**Pb**	**15 04 35.0**	**+0.2**
	45nm,0.3s						
CHKK				S	**Sg**	**15 04 58.0**	**+1.5**
	169nm,0.3s						
CHKK	**Chushkaly**	**1.58**	**68**	⇑*i*P	**Pb**	**15 04 35.0**	**+0.2**
	baz=69						
CHKK				⇑*e*S	**Sg**	**15 04 56.2**	**-0.4**
	baz=69						
CHKK	**Chushkaly**	**1.58**	**68**	⇑*i*P	**Pb**	**15 04 35.0**	**+0.2**
	31nm,0.3s						
CHKK				*e*S	**Sg**	**15 04 56.1**	**-0.4**
	176nm,0.2s						
KDJ	**Kajisay**	**2.00**	**125**	⇓*e*P	**Pb**	**15 04 41.3**	**-0.8**
	baz=25						
KDJ				⇓*i*S	**Sb**	**15 05 08.2**	**+1.2**
	baz=25						
ARXS	**Arharly**	**2.27**	**65**	Pg	**Pb**	**15 04 46.8**	**+0.2**
	23nm,0.3s						
ARXS				Lg	Lg	15 05 16.0	
	145nm,0.6s						
ARXS	**Arharly**	**2.27**	**65**	*e*P	**Pb**	**15 04 46.8**	**+0.2**
	23nm,0.3s						
ARXS				*e*S	**Sb**	**15 05 15.9**	**+1.3**
	145nm,0.6s						
KURS	**Kuram**	**2.35**	**84**	Pg	**Pb**	**15 04 48.9**	**+1.0**
	11nm,0.4s						
KURS				Lg	Lg	15 05 19.7	
	30nm,0.3s						
KURS	**Kuram**	**2.35**	**84**	*e*P	**Pb**	**15 04 48.9**	**+1.0**
	11nm,0.4s						
KURS				*e*S	**Sg**	**15 05 19.7**	**-1.5**
	30nm,0.3s						
ARSB	**Arslanbob**	**2.45**	**217**	⇑*e*P	**Pb**	**15 04 48.1**	**-1.6**
	baz=17						
ARSB				⇑*i*S	**Sb**	**15 05 18.9**	**-1.0**
	baz=17						
SATY	**Saty**	**2.53**	**94**	Pg	**Pb**	**15 04 50.3**	**-0.8**
	32nm,0.3s						
SATY				Lg	Lg	15 05 24.1	
	68nm,0.1s						
SATY	**Saty**	**2.53**	**94**	*e*P	**Pb**	**15 04 50.3**	**-0.8**
	24nm,0.3s						
SATY				*e*S	**Sb**	**15 05 22.1**	**+0.1**
	69nm,0.1s						
ZHN	**Zhinishke**	**2.54**	**92**	*e*P	**Pb**	**15 04 51.7**	**+0.4**
	8.0nm,0.2s						
ZHN				*e*S	**Sb**	**15 05 24.2**	**+1.8**
	57nm,0.2s						
MNBS	**Baschi**	**2.62**	**71**	Pg	**Pb**	**15 04 53.6**	**+1.1**
	8.9nm,0.2s						
MNBS				Lg	Lg	15 05 27.2	
	178nm,0.3s						
MNBS	**Baschi**	**2.62**	**71**	*e*P	**Pb**	**15 04 53.6**	**+1.1**
	8.9nm,0.2s						
MNBS				*e*S	**Sg**	**15 05 27.2**	**-2.6**
	178nm,0.3s						
PRZ	**Przheval'sk**	**2.65**	**107**	⇓*i*P	**Pb**	**15 04 50.8**	**-2.4**
	baz=7.0						
PRZ				⇓*i*S	**Sb**	**15 05 23.5**	**-2.2**
	baz=7.0						
KPKS	**Kokpek**	**2.72**	**85**	*e*P	**Pb**	**15 04 54.5**	**+0.3**
	24nm,0.3s						
KPKS				*e*S	**Sb**	**15 05 29.4**	**+1.9**
	88nm,0.2s						
UZB	**Uzynbulak**	**2.97**	**91**	Pg	**Pb**	**15 04 59.0**	**+0.4**
	8.0nm,0.3s						
UZB				Lg	Lg	15 05 36.9	
	34nm,0.4s						
UZB	**Uzynbulak**	**2.97**	**91**	*e*P	**Pb**	**15 04 59.0**	**+0.4**
	8.0nm,0.3s						
UZB				*e*S	**Sb**	**15 05 36.9**	**+2.1**
	34nm,0.4s						
TDK	**Taldyqorghan**	**3.01**	**54**	Pg	**Pb**	**15 05 00.5**	**+1.3**
	52nm,0.2s						
TDK				Lg	Lg	15 05 39.6	
	69nm,0.5s						
TDK	**Taldyqorghan**	**3.01**	**54**	*e*P	**Pb**	**15 05 00.5**	**+1.3**
	52nm,0.2s						
TDK				*e*S	**Sg**	**15 05 39.6**	**-2.9**
	69nm,0.5s						
KK31	**Karatay Array**	**3.26**	**268**	⇑Pn	**Pn**	**15 04 59.0**	**+2.5**
	0.4nm,0.3s,baz=81,slow=13,SNR=44						
KK31				⇑Pg	**Pg**	**15 05 05.8**	**-2.4**
	5.0nm,0.3s,baz=81,slow=15,SNR=28						
KK31				⇑Lg	Lg	15 05 47.1	
	7.3nm,0.3s,baz=79,slow=29						
PDGK	**Podgornoye**	**3.31**	**88**	Pg	**Pb**	**15 05 05.5**	**+1.3**
	4.7nm,0.5s						
PDGK				Lg	Lg	15 05 48.2	
	8.2nm,0.5s						
PDGK	**Podgornoye**	**3.31**	**88**	⇓Pg	**Pb**	**15 05 04.5**	**+0.3**
	3.7nm,0.4s						
PDGK				⇑Lg	Lg	15 05 46.2	
	10.0nm,0.5s						
PDGK	**Podgornoye**	**3.31**	**88**	⇑*e*P	**Pn**	**15 04 58.6**	**+1.4**
	baz=88						
PDGK				⇑*i*S	**Sn**	**15 05 38.7**	**+2.3**
	baz=88						
KAPS	**Kapalarasan**	**3.73**	**56**	Pg	**Pb**	**15 05 13.1**	**+1.5**
	6.0nm,0.5s						
KAPS				Lg	Lg	15 06 00.4	
	22nm,0.6s						
KAPS	**Kapalarasan**	**3.73**	**56**	⇓*i*P	**Pb**	**15 05 13.1**	**+1.5**
	6.0nm,0.5s						
KAPS				*e*S	**Sg**	**15 06 00.8**	**-4.8**
	19nm,0.4s						
IUG	**Iuzhnay**	**3.81**	**254**	*e*P	**Pg**	**15 05 16.6**	**-2.1**
	0.9nm,0.5s						
IUG				*e*S	**Sg**	**15 06 06.9**	**-1.1**
	22nm,0.5s						
KTMS	**Ketmen**	**3.93**	**86**	Pg	**Pg**	**15 05 18.2**	**-2.8**
	8.9nm,0.3s						
KTMS				Lg	Lg	15 06 09.2	
	15nm,0.6s						
KTMS	**Ketmen**	**3.93**	**86**	*e*P	**Pg**	**15 05 18.2**	**-2.8**
	8.9nm,0.3s						
KTMS				*e*S	**Sg**	**15 06 10.1**	**-1.9**
	15nm,0.6s						
OTUK	**Ortayu**	**5.28**	**341**	⇓Pn	**Pn**	**15 05 25.5**	**+1.2**
	2.2nm,1.0s						
OTUK				⇓Sn	**Sn**	**15 06 25.8**	**+0.8**
	1.5nm,0.4s						
OTUK				⇑Lg	Lg	15 06 53.7	
	7.4nm,0.5s						
MAKZ	**Makanchi**	**6.09**	**52**	⇑Pn	**Pn**	**15 05 37.5**	**+2.1**
	1.1nm,0.7s						
MAKZ				⇓Lg	Lg	15 07 18.4	
	5.0nm,0.8s						
MK31	**Makanchi Array**	**6.26**	**53**	⇓Pn	**Pn**	**15 05 39.8**	**+2.0**
	0.5nm,0.3s						
MK31				⇑Sn	**Sn**	**15 06 49.8**	**+0.7**
	1.6nm,0.6s						
MK31				⇑Lg	Lg	15 07 25.4	
	5.9nm,0.8s						
KURBB	**Kurchatov Arra**	**7.73**	**17**	⇑Lg	Lg	15 08 08.0	
	11nm,0.6s						
KURK	**Kurchatov**	**7.84**	**17**	⇓Lg	Lg	15 08 11.4	
	9.4nm,1.0s						

KRSC 05 15:08:40.2±1.7, 49°.38N×157°.47E, h37^{km}±36^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.57**	**327**	P	Pn	15 09 07.1	+1.7
PAU	**Pauzhetka**	**2.13**	**349**	*e*P	Pn	15 09 14.0	+0.8
PAU				*e*S	Sn	15 09 39.4	+1.1
KDTR	**Khodutka, Kamc**	**2.46**	**9**	*e*P	Pn	15 09 21.1	+3.4
KDTR				*e*S	Sn	15 09 51.3	+4.9
ASAK	**Asacha**	**3.02**	**5**	*e*P	Pn	15 09 28.8	+3.4
RUS	**Russkaya**	**3.12**	**12**	*e*P	Pn	15 09 30.2	+3.4
RUS				*e*S	Sn	15 10 07.2	+4.4
MTVR	**Mutnovka**	**3.14**	**8**	*e*P	Pn	15 09 31.0	+3.9
MTVR				*e*S	Sn	15 10 08.7	+5.3
PET	**Petropavlovsk**	**3.72**	**11**	*e*P	Pn	15 09 39.0	+4.0

PET				eS	Sn	15 10 22.9	+5.4
DALK	Dalny	3.74	12	eP	Pn	15 09 39.2	+3.9
DALK				eS	Sn	15 10 23.6	+5.6
UGLR	Uglovaya	3.92	12	eP	Pn	15 09 42.6	+4.7
AVH	Avacha	3.97	11	eP	Pn	15 09 43.5	+5.0
NLC	Nalytchevo	3.97	16	eS	Sn	15 10 28.2	+4.5
SMAR	Somma	3.97	12	eP	Pn	15 09 43.9	+5.2
SDLR	Sedlovina	4.00	12	eP	Pn	15 09 42.8	+3.8
SDLR				eS	Sn	15 10 31.4	+6.8
KRX	Arik	4.05	10	eP	Pn	15 09 44.2	+4.5
SPN	Mys Shipunski	4.05	22	eP	Pn	15 09 44.5	+5.0
SPN				eS	Sn	15 10 32.1	+6.5
GNL	Ganaly	4.33	4	eP	Pn	15 09 47.8	+4.3
MKZ	Mys Kozlova	5.81	25	eP	Pn	15 10 07.4	+3.7
MKZ				eS	Sn	15 11 13.3	+4.4

*ISCJB **05** 15:09:45.1±1.6, 43°.35N±0°.06×146°.88E±0°.09, h31^{km}±10^{km}, Error ellipse: s-maj=13.2km s-min=7.1km az=136.8*
*JMA **05** 15:09:45.2±0.2, 43°.32N×146°.87E, h40^{km}±3^{km}, M2.7*
*SKHL **05** 15:09:46.1±0.7, 43°.30N×146°.83E, h45^{km}, mb3.6/3*
ISC 05 15:09:45.4±2.3, **43°.38N**±0°.08×**146°.85E**±0°.08, **h23**^{km}±16^{km}, **n13, σ0^{s}.45**/23, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.80	270	P	Pb	15 10 00.5	-0.2
NEM2				eS	Sb	15 10 11.5	+0.4
YUK	Yuzh-Kuril'sk	0.97	313	i P	Pb	15 10 03.4	-0.1
YUK				AMB	AMB	15 10 04.5	
	10.0nm,0.3s						
YUK				AMB	AMB	15 10 04.5	
	20nm,0.3s						
YUK				AMB	AMB	15 10 04.5	
	30nm,0.3s						
YUK				i S	Sn	15 10 16.6	-0.1
YUK				A	A	15 10 17.8	
	410nm,0.4s						
YUK				A	A	15 10 17.8	
	360nm,0.4s						
GRPR	Tuman	0.99	309	i P	Pb	15 10 03.4	-0.5
GRPR				AMB	AMB	15 10 03.7	
	70nm,0.3s						
GRPR				AMB	AMB	15 10 03.7	
	20nm,0.3s						
GRPR				eS	Sb	15 10 16.7	+0.2
GRPR				A	A	15 10 17.0	
	200nm,0.3s						
GRPR				A	A	15 10 17.0	
	260nm,0.3s						
JKHN	Kushirohamanak	1.27	257	eS	Sn	15 10 23.1	-0.8
JRA	Rausu	1.37	295	P	Pn	15 10 09.1	0.0
JRA				eS	Sn	15 10 26.8	+0.3
JNSB	Nemuroshibetsu	1.40	287	P	Pn	15 10 09.3	-0.2
JNSB				eS	Sn	15 10 27.1	-0.1
JNK	Nakash	1.56	278	P	Pn	15 10 11.2	-0.6
JNK				eS	Sn	15 10 30.7	-0.6
JAK	Akkeshi	1.62	257	P	Pn	15 10 12.1	-0.4
JAK				eS	Sn	15 10 32.7	+0.1
KUR	Kuril'sk	2.00	21	AMB	AMB	15 10 18.0	
	6.0nm,0.3s						
KUR				AMB	AMB	15 10 18.0	
	5.0nm,0.3s						
KUR				i P	Pn	15 10 18.1	+0.4
KUR				i S	Sn	15 10 41.5	-0.5
KUR				A	A	15 10 46.0	
	40nm,0.2s						
KUR				A	A	15 10 46.0	
	30nm,0.2s						
JTKR	Abashiri--Toko	2.21	287	P	Pn	15 10 21.6	+0.9
JAR	Ashorobuto	2.25	269	P	Pn	15 10 21.4	+0.2
JAR				eS	Sn	15 10 48.3	+0.1
JOB	Onbets	2.25	259	eS	Sn	15 10 48.4	+0.1
JCH	Churui	2.67	255	P	Pn	15 10 27.4	+0.5
JCH				eS	Sn	15 10 58.9	+0.4

*NSSC **05** 15:10:18.0±0.6, 33°.68N×35°.90E, h8^{km}±7^{km}, MD1.2, ML2.1*
*ISCJB **05** 15:10:19.4±0.7, 33°.63N±0°.05×35°.95E±0°.05, h13^{km}±7^{km}, Error ellipse: s-maj=9.8km s-min=4.9km az=43.6*
*GRAL **05** 15:10:19.1±0.3, 33°.62N×36°.03E, h8^{km}±8^{km}, MD2.8*
ISC 05 15:10:18.7±1.1, **33°.65N**±0°.05×**35°.96E**±0°.04, **h14**^{km}±11^{km}, **n7, σ0^{s}.27**/13, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCY	Rachaya	0.18	214	eP	Pg	15 10 23.0	0.0
RCY				eS	Sg	15 10 26.0	0.0
BRBR	Barbar	0.24	182	eP	Pg	15 10 23.9	0.0
BRBR				eS	Sg	15 10 27.7	+0.2
BRBR				AML	AML	15 10 34.0	
	comp=E,246nm,0.7s						
BRBR				AML	AML	15 10 35.4	
	comp=N,252nm,0.6s						
QASN	Qassioun	0.29	114	eP	Pb	15 10 25.2	-0.5
QASN				eS	Sb	15 10 30.2	-0.2
QASN				AML	AML	15 10 33.5	
	comp=E,379nm,0.3s						
QASN				AML	AML	15 10 39.0	
	comp=N,380nm,0.4s						
DQRL	Deir Qamar	0.33	280	eP	Pb	15 10 26.4	0.0
DQRL				eS	Sb	15 10 31.6	0.0
BHL	Bhannes	0.36	315	eP	Pb	15 10 26.8	-0.2
BHL				eS	Sb	15 10 32.6	+0.1
TOTH	TOTAH	0.48	126	eP	Pb	15 10 29.3	+0.2
TOTH				eS	Sb	15 10 36.6	+0.5
TOTH				AML	AML	15 10 38.0	
	comp=N,61nm,0.2s						
TOTH				AML	AML	15 10 41.8	
	comp=E,42nm,0.4s						
HWQ	Hawqa	0.63	359	eP	Pg	15 10 31.1	+0.1

GRAL 05 15:12:22.3±0.3, **33°.45N**×**35°.65E**, **h2**^{km}±11^{km}, **MD2.5, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRWL	Qaraoun	0.10	18	eP	Pg	15 12 24.1	-0.2
SHBL	Chebaa	0.13	142	eP	Pg	15 12 24.7	-0.2
SHBL				eS	Sg	15 12 26.6	-0.1
RCY	Rachaya	0.16	75	eP	Pg	15 12 25.3	-0.2
DQRL	Deir Qamar	0.26	346	eP	Pg	15 12 26.9	-0.4
DQRL				eS	Sg	15 12 30.4	-0.3

*IDC **05** 15:24:09.2±17.0, 3°.26N×125°.02E, h266^{km}±182^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.0/48, mbtmp4.0/6, Error ellipse: s-maj=214.1km s-min=18.7km az=59.0*
ISC 05 15:24:04.6±1.4, **3°.4N**±0°.2×**125°.1E**±0°.5, **h218**^{km}, **n6, σ0^{s}.68**/6, **mb3.8**/5, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	13.57	186	P	P	15 27 10.7	+0.1
	2.5nm,0.3s,baz=45,slow=1.4,SNR=4.0						
WRA	Warramunga Arr	24.88	159	P	P	15 29 07.3	-0.3
	0.8nm,0.3s,baz=338,slow=11,SNR=30						
ASAR	Alice Springs	28.21	163	P	P	15 29 36.4	-0.9
	0.3nm,0.3s,baz=337,slow=8.4,SNR=26						
STKA	Stephens Creek	38.40	157	P	P	15 31 05.8	+0.7
	3.3nm,0.9s,baz=313,slow=11,SNR=4.5						
MKAR	Makanchi Array	56.94	326	P	P	15 33 27.3	+0.1
	0.7nm,0.3s,baz=124,slow=8.2,SNR=12						
KURBB	Kurchatov Arra	61.18	328	P	P	15 33 56.0	-0.2
	0.4nm,0.5s,baz=132,slow=6.6,SNR=9.9						

*ISCJB **05** 15:30:16.7±0.9, 36°.30N±0°.08×71°.1E±0°.1, h188^{km}, mb3.3/6, Error ellipse: s-maj=16.4km s-min=9.3km az=24.0*
*IDC **05** 15:30:22.6±3.0, 36°.48N×71°.28E, h233^{km}±28^{km}, mb3.0/5, mb1 3.1/10, mb1mx2.9/44, mbtmp3.6/10, Error ellipse: s-maj=25.5km s-min=18.7km az=18.0*
*NNC **05** 15:30:25.5±5.0, 36°.99N×71°.14E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=39.9km s-min=37.2km az=132.0*
ISC 05 15:30:18.2±1.1, **36°.33N**±0°.10×**71°.0E**±0°.1, **h188**^{km}, **n15, σ1^{s}.77**/19, **mb3.2**/6, **5C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.77	357	⇑Pn	Pn	15 31 57.7	+2.4
	6.6nm,0.6s,baz=178,slow=12,SNR=62						
KK31				⇑Sn	Sn	15 33 08.8	-3.3
	13nm,0.4s,baz=183,slow=18,SNR=33						
AAK	Ala-Archa	6.84	22	P	Pn	15 31 58.5	+2.2
	1.5nm,0.3s,baz=318,slow=7.7,SNR=6.0						
AAK				S	Sn	15 33 13.3	-0.6
	1.3nm,0.3s,baz=207,slow=5.9,SNR=6.5						
AAK	Ala-Archa	6.84	22	⇓Pn	Pn	15 31 59.6	+3.3
	1.3nm,0.3s						
AAK				⇑Sn	Sn	15 33 12.9	-1.1
	5.7nm,0.5s						
TKM2	Tokmak 2	7.46	27	⇑Pn	Pn	15 32 05.8	+1.4
	3.4nm,0.8s						
TKM2				⇑Sn	Sn	15 33 25.9	-2.8
	13nm,0.8s						
GEYT	Alibeck	10.44	283	P	P	15 32 50.7	-0.4
	0.2nm,0.3s,baz=101,slow=12,SNR=2.5						
KURBB	Kurchatov Arra	15.27	18	P	P	15 33 43.4	-1.2
	0.0nm,0.3s,baz=208,slow=12,SNR=3.1						
BVAR	Borovoye Array	16.70	359	P	Pn	15 34 02.1	+1.0
	0.7nm,0.3s,baz=168,slow=12,SNR=12						
AKTO	Aktyubinsk	16.94	330	P	Pn	15 34 04.9	+0.8
	0.9nm,0.3s,baz=131,slow=10,SNR=14						
FINES	FINESS Array B	37.64	326	P	P	15 37 14.4	-0.1
	0.4nm,0.3s,baz=128,slow=10,SNR=5.7						
ARCES	ARCESS Array B	41.31	338	P	P	15 37 44.8	0.0
	0.4nm,0.6s,baz=100,slow=10,SNR=3.8						
NB2	NORSAR Subarra	44.53	323	P	P	15 38 11.7	+0.9
	comp=Z,0.4nm,0.4s,baz=100,slow=7.9						
NOA	NORSAR Array B	44.53	323	P	P	15 38 11.3	+0.5
	comp=Z,0.2nm,0.3s,baz=100,slow=8.1,SNR=3.3						
TORD	Torodi Ar. Bea	65.74	269	P	P	15 40 42.2	-0.9
	comp=Z,0.1nm,0.3s,baz=57,slow=5.6,SNR=5.4						
WRA	Warramunga Arr	81.88	122	P	P	15 42 15.9	-0.8
	comp=Z,1.4nm,1.2s,baz=312,slow=6.2,SNR=3.1						
ASAR	Alice Springs	84.14	125	P	P	15 42 27.8	-0.5
	comp=Z,0.5nm,1.1s,baz=301,slow=4.9,SNR=4.0						

*BJI **05** 15:32:07.4±0.0, 36°.57N×71°.13E, h233^{km}, mb4.2/5, mB4.2/6*
*MOS **05** 15:32:07.3±0.9, 36°.61N×71°.13E, h240^{km}, mb4.0/13, Error ellipse: s-maj=9.8km s-min=5.5km az=90.8*
*ISCJB **05** 15:32:07.6±0.2, 36°.56N±0°.02×71°.20E±0°.03, h250^{km}, mb3.9/47, Error ellipse: s-maj=4.0km s-min=2.7km az=143.9*
*IDC **05** 15:32:08.3±1.9, 36°.56N×71°.22E, h238^{km}±19^{km}, mb3.4/17, mb1 3.6/24, mb1mx3.4/46, mbtmp4.1/24, Error ellipse: s-maj=12.1km s-min=10.8km az=4.0*
*NEIC **05** 15:32:08.3±1.0, 36°.65N×71°.14E, h231^{km}±10^{km}, mb4.1/24, Error ellipse: s-maj=11.7km s-min=5.7km az=45.0*
*NNC **05** 15:32:12.2±2.7, 37°.01N×71°.09E, h215^{km}±28^{km}, mb3.3, mpv4.2, Error ellipse: s-maj=22.9km s-min=16.5km az=23.0*
ISC 05 15:32:08.4±0.4, **36°.58N**±0°.04×**71°.19E**±0°.04, **h250**^{km}, **n154, σ1^{s}.78**/166, **mb3.9**/47, **11C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.51	344	ePn	Pn	15 32 54.2	-1.6
GAR	Garm	2.51	344	ePN	Pn	15 32 54.2	-1.6
CHGR	Chuyangaron	2.62	323	eP	Pn	15 33 09.3	+12
KBL	Kabul	2.68	221	ePn	Pn	15 32 56.5	-1.3
KBL	Kabul	2.68	221	ePN	Pn	15 32 56.5	-1.3
CEP	Cherat	2.81	168	P	Pn	15 32 58.0	-1.1
CHCP	Chirah Chowk	3.38	149	P	Pn	15 33 04.4	-0.7
NIL	Nilore	3.38	149	ePn	Pn	15 33 04.8	-0.3
NIL	Nilore	3.38	149	ePN	Pn	15 33 04.8	-0.3
THW	Thamme Wali	3.81	173	P	Pn	15 33 08.7	-1.3
KSH	Kashi	4.78	51	P	Pn	15 33 15.7	-5.8
KSH				S	S	15 34 05.9	-14
SARP	Sargodha	4.81	165	P	Pn	15 33 20.2	-1.7
ARSB	Arslanbob	4.94	16	ePn	Pn	15 33 22.0	-1.5
AML	Almayashu	5.87	19	P	Pn	15 33 34.4	-0.8
	SNR=6.4						
DHRM	DHARAMSHALA	6.04	134	eP	Pn	15 33 36.6	-0.7
DHRM				eS	S	15 34 44.3	-4.0
UCH	Uchtor	6.20	24	P	Pn	15 33 38.9	-0.4
	SNR=15						
EKS2	Erkin-Say	6.39	17	P	Pn	15 33 41.3	-0.1
	SNR=8.1						
KK31	Karatay Array	6.53	356	ePn	Pn	15 33 42.1	-1.0
KK31	Karatay Array	6.53	356	⇓P	Pn	15 33 41.7	-1.3
	31nm,0.6s,baz=170,slow=11,SNR=18						
KK31				⇓S	S	15 34 52.4	-6.6
	72nm,0.4s,baz=161,slow=33,SNR=4.5						
KK31	Karatay Array	6.53	356	ePN	Pn	15 33 42.1	-1.0
KKAR	Karatay Array	6.53	356	ePn	Pn	15 33 42.0	-1.1
KKAR	Karatay Array	6.53	356	ePN	Pn	15 33 42.0	-1.1
AAK	Ala-Archa	6.56	22	P	Pn	15 33 42.8	-0.8
	6.8nm,0.3s,baz=157,slow=5.6,SNR=14						
AAK				S	S	15 34 57.4	-2.6
	7.9nm,0.3s,baz=143,slow=20,SNR=12						
AAK	Ala-Archa	6.56	22	ePn	Pn	15 33 43.1	-0.5
AAK	Ala-Archa	6.56	22	⇓P	Pn	15 33 42.7	-0.9
	10.0nm,0.4s						
AAK				S	S	15 34 52.8	-7.1
	43nm,0.5s						
AAK	Ala-Archa	6.56	22	ePN	Pn	15 33 43.1	-0.5
AAK	Ala-Archa	6.56	22	P	Pn	15 33 43.0	-0.6
	SNR=7.0						
ULHL	Ulahol	6.88	33	P	Pn	15 33 47.2	-0.4
	SNR=7.0						
BOOM	Boomskoye usch	6.95	30	ePn	Pn	15 33 48.0	-0.4
BOOM	Boomskoye usch	6.95	30	ePN	Pn	15 33 48.0	-0.4
CHMS	Chumysh	6.97	22	P	Pn	15 33 48.6	+0.1
	SNR=6.5						
TKM2	Tokmak 2	7.18	27	⇓P	Pn	15 33 50.4	-1.1
	16nm,0.8s						
TKM2				⇓S	S	15 35 10.2	-4.0
	69nm,0.8s						
TKM2	Tokmak 2	7.18	27	i PN	Pn	15 33 50.3	-1.1
TKM2				pmax	pmax		
	comp=Z,16nm,0.8s						
TKM2	Tokmak 2	7.18	27	P	Pn	15 33 51.2	-0.2
	SNR=8.7						
KDJ	Kajisay	7.23	38	ePn	Pn	15 33 50.8	-1.2
KDJ	Kajisay	7.23	38	ePN	Pn	15 33 50.8	-1.2
SMLA	Simla	7.37	136	eP	Pn	15 33 53.3	-0.4
SMLA				eS	S	15 35 13.1	-5.3
SMLA				IAML		15 35 16.6	
	comp=E,262nm,0.4s						
SMLA				IAML		15 35 17.5	
	comp=N,215nm,0.6s						
DDI	Dehra Dun	8.48	135	eP	Pn	15 34 07.3	-0.5
DDI				eS	S	15 35 39.9	-4.3
DDI				IAML		15 35 42.3	
	comp=N,139nm,0.6s						
DDI				IAML		15 35 45.4	
	comp=E,143nm,0.3s						
JOSI	Joshimath	9.21	128	eP	Pn	15 34 16.4	-0.8
JOSI				ex	x	15 35 53.2	
JOSI				IAML		15 36 05.0	
	comp=N,1μm,1.1s						
JOSI				IAML		15 36 07.5	
	comp=E,158nm,0.7s						
PDGK	Podgornoye	9.27	41	⇑P	Pn	15 34 18.7	+0.9
	comp=E,4.5nm,1.2s						
PDGK				⇑S	S	15 36 01.9	-0.6
	comp=E,7.2nm,1.1s						
PDGK	Podgornoye	9.27	41	i P	Pn	15 34 18.7	+0.9
PDGK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONA	Sohna	9.69	147	eP	Pn	15 34 21.9	-1.1
SONA				eS	S	15 36 02.7	-9.4
SONA				IAML		15 36 10.8	
	comp=E,38nm,0.6s						
SONA				IAML		15 36 11.4	
	comp=N,20nm,0.6s						
GEYT	Alibeck	10.51	281	P	Pn	15 34 30.6	-2.7
	comp=N,0.4nm,0.3s,baz=147,slow=11,SNR=3.5						
GEYT				S	S	15 36 27.0	-4.1
	comp=N,0.1nm,0.3s,baz=106,slow=20,SNR=2.3						
OTUK	Ortayu	11.69	4	⇓P	Pn	15 34 46.6	-1.3
	comp=N,9.8nm,1.0s						
OTUK				⇑S	S	15 36 52.0	-6.2
	comp=N,10nm,0.8s						
OTUK	Ortayu	11.69	4	i P	Pn	15 34 46.6	-1.3
OTUK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAKZ	Makanchi	13.00	35	ePn	Pn	15 35 04.1	-0.1
MAKZ	Makanchi	13.00	35	eP	Pn	15 35 04.1	-0.1
PYUN	Piuthan	13.07	127	eP	Pn	15 35 04.0	-1.4
	comp=Z,67nm,0.4s						
MK31	Makanchi Array	13.14	36	eP	P	15 35 07.3	-0.2
MK31	Makanchi Array	13.14	36	eP	P	15 35 07.3	-0.2
MKAR	Makanchi Array	13.14	36	P	Pn	15 35 06.1	+0.2
	comp=Z,0.2nm,0.3s,baz=211,slow=12,SNR=6.5						
MKAR	Makanchi Array	13.14	36	i P	P	15 35 07.6	+0.2
DANN	Dangsing	13.41	124	eP	Pn	15 35 09.1	-0.5
	comp=Z,59nm,0.6s						
KOLN	Koldanda	13.69	126	eP	Pn	15 35 12.3	-0.7
	comp=Z,34nm,0.5s						
GKN	Gorkha	14.22	123	eP	Pn	15 35 19.4	0.0
	comp=Z,89nm,0.4s						
BHPL	Bhopal	14.35	156	eP	Pn	15 35 18.4	-2.4
BHPL				ex	x	15 37 10.2	
DMN	Daman	14.79	123	eP	P	15 35 26.0	-0.2
	comp=Z,43nm,0.5s						
KKN	Kakani	14.79	122	eP	P	15 35 26.0	-0.2
	comp=Z,45nm,0.5s						
KURBB	Kurchatov Arra	15.00	18	P	P	15 35 26.8	-1.1
	comp=Z,0.1nm,0.3s,baz=206,slow=11,SNR=9.1						
PKIN	Phulchoki	15.01	123	eP	P	15 35 28.5	-0.1
	comp=Z,40nm,0.4s						
PKI	Pulchoki	15.02	123	eP	P	15 35 28.6	-0.2
	comp=Z,43nm,0.3s						
AB31	Akbulak array	15.09	331	⇑P	P	15 35 27.9	-1.0
	comp=Z,1.5nm,0.3s,baz=142,slow=12,SNR=42						
AB31				⇑S	S	15 38 13.9	-1.6
	comp=Z,1.9nm,0.5s,baz=152,slow=19,SNR=6.7						
AB31	Akbulak array	15.09	331	eP	P	15 35 27.8	-1.1
AB31				S	S	15 38 13.9	-1.6
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AB31				smax	smax		
	comp=N,2.0nm,0.5s						
ABKAR	Akbulak array	15.09	331	eP	P	15 35 27.9	-1.0
	comp=N,10nm,1.0s						
KURK	Kurchatov	15.11	18	ceP	P	15 35 28.5	-0.6
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
JIRN	Jiri	15.50	121	eP	Pn	15 35 34.9	-0.1
	comp=Z,103nm,0.4s						
BVAR	Borovoye Array	16.45	358	P	Pn	15 35 45.2	-0.3
	comp=Z,2.9nm,0.3s,baz=153,slow=13,SNR=37						
BRVK	Borovoye	16.49	358	ePn	Pn	15 35 46.1	+0.2
	comp=Z,12nm,0.5s						
BRVK	Borovoye	16.49	358	i P	Pn	15 35 46.4	+0.5
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKTO	Aktyubinsk	16.79	330	P	Pn	15 35 48.8	-0.6
	comp=Z,4.6nm,0.3s,baz=134,slow=11,SNR=41						
AKTO	Aktyubinsk	16.79	330	⇓P	P	15 35 48.3	+0.7
	comp=Z,29nm,0.8s						
AKTO				⇓S	S	15 38 51.5	+1.8
	comp=Z,8.3nm,1.3s						
WSAR	Wadi Sarin	17.16	223	P	Pn	15 35 53.3	-0.8
	comp=Z,0.4nm,0.3s,baz=49,slow=11,SNR=7.5						
UOSS	Minazif	17.30	232	eP	P	15 35 53.8	+0.3
	comp=Z,10nm,1.1s						
GTK	Tadong	17.41	117	eP	Pn	15 35 56.9	-0.3
BOK	Bokaro	17.97	131	eP	Pn	15 36 02.8	-0.8
LSA	Lhasa	18.06	107	eP	Pn	15 36 04.0	-1.1
LSA				e		15 36 04.5	
LSA	Lhasa	18.06	107	eP	Pn	15 36 04.0	-1.1
TURI	Tura	19.71	119	eP	P	15 36 18.4	-1.0
ZAA0	Zalesovo Array	19.78	24	eP	P	15 36 21.5	+1.8
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	19.78	24	P	P	15 36 21.6	+1.9
	comp=Z,1.4nm,0.3s,baz=219,slow=10.0,SNR=11						
ZALV	Zalesovo Beam	19.78	24	i P	Pn	15 36 22.8	-1.7
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BTLR	Botlikh	20.13	295	eP	Pn	15 36 33.7	+4.8
BTLR				pmax	pmax		
	comp=Z,12nm,0.1s						
SHL	Shillong	20.81	116	eP	P	15 36 33.7	+2.5
TEZP	TEZPUR	20.88	112	eP	P	15 36 32.8	+1.1
ZIRO	ZIRO	21.18	109	eP	P	15 36 35.9	+0.9
ARU	Arti	21.60	341	P	P	15 36 40.2	+1.8
	comp=Z,0.7nm,0.3s,baz=125,slow=12,SNR=4.7						
ARU	Arti	21.60	341	i P	P	15 36 39.0	+0.6
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MOKO	MOKOCHONG	22.32	111	eP	P	15 36 47.9	+2.3
KOHI	KOHIMA	22.35	113	eP	P	15 36 48.4	+2.6
PYA1	Pyatigorsk	22.61	298	i P	P	15 36 48.8	+1.0
SONM	Songino Array	28.16	55	P	P	15 37 39.7	+2.0
	comp=Z,0.3nm,0.4s,baz=248,slow=6.1,SNR=2.8						
SONM				pP	pP	15 38 29.2	+1.1
	comp=Z,0.5nm,0.4s,baz=248,slow=12,SNR=2.1						
BR131	Keskin Array S	29.55	288	eP	P	15 37 52.1	+2.1
	comp=Z,2.1nm,0.6s						
BRTR	Keskin Array B	29.55	288	P	P	15 37 51.5	+1.4
	comp=Z,1.4nm,0.6s,baz=103,slow=9.4,SNR=9.4						
BRTR	Keskin Array B	29.55	288	ceP	P	15 37 52.2	+2.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
OBN	Obninsk	29.97	319	i P	P	15 37 54.5	+1.1
OBN				e*PP	pP	15 38 44.5	+1.4
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHTO	Chiang Mai	30.13	118	eP	P	15 37 57.1	+1.9
	comp=Z,1.0nm,0.8s						
CHTO	Chiang Mai	30.13	118	eP	P	15 37 57.1	+1.9
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	30.36	119	P	P	15 37 59.5	+2.2
	comp=Z,0.6nm,0.7s,baz=306,slow=7.3,SNR=4.9						
CMAR	Chiang Mai Arr	30.36	119	ceP	P	15 38 00.5	+3.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC	Hu-ho-hao-te	31.59	70	P	P	15 38 10.8	+2.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,19nm,5.0s						
AKASG	Malin Array Be	33.01	309	P	P	15 38 20.9	+0.9
	comp=Z,1.6nm,0.5s,baz=80,slow=7.1,SNR=8.8						
AKASG	Malin Array Be	33.01	309	ceP	P	15 38 21.3	+1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKBB	Malin Array Si	33.01	309	eP	P	15 38 21.1	+1.2
	comp=Z,3.4nm,0.7s						
AKBB	Malin Array Si	33.01	309	eP	P	15 38 21.1	+1.2
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WHN	Wuhan	36.24	87	P	P	15 38 58.5	+11
FIA1	FINESS Array S	37.50	326	eP	P	15 38 59.4	+1.4
	comp=Z,6.3nm,1.0s						
FINES	FINESS Array B	37.50	326	P	P	15 38 59.1	+1.1
	comp=Z,1.6nm,0.3s,baz=121,slow=9.7,SNR=25						
VYHS	Vyhne	39.63	304	eP	P	15 39 18.5	+2.6
VYHS	Vyhne	39.63	304	eP	P	15 39 18.5	+2.6
ARCES	ARCESS Array B	41.13	338	P	P	15 39 29.0	+1.3
	comp=Z,1.4nm,0.5s,baz=115,slow=8.8,SNR=19						
ARCES				sP	sP	15 40 45.4	-3.8
	comp=Z,1.4nm,0.7s,baz=98,slow=7.5,SNR=3.2						
ARE0	ARCESS Array S	41.13	338	eP	P	15 39 29.3	+1.5
	comp=Z,0.3nm,1.1s						
CONA	Conrad Observa	41.66	304	i P	P	15 39 34.3	+1.8
	comp=Z,3.7nm,0.9s						
SOKA	Soboth	42.35	302	eP	P	15 39 39.9	+1.9
	comp=Z,4.3nm,0.6s						
MOA	Molln	42.73	304	i P	P	15 39 41.5	+0.5
	comp=Z,1.9nm,0.5s						
GERES	GERESS Array B	43.01	305	P	P	15 39 44.8	+1.5
	comp=Z,0.7nm,0.2s,baz=70,slow=8.5,SNR=3.6						
KBA	Koelnbreinsper	43.45	303	eP	P	15 39 48.5	+1.5
	comp=Z,1.5nm,0.5s						
ABTA	Abfaltersbach	44.06	302	eP	P	15 39 52.9	+1.2
	comp=Z,0.9nm,0.5s						
NC405	NORSAR Array S	44.17	323	eP	P	15 39 54.0	+1.7
	comp=Z,18nm,1.1s						
NC602	NORSAR Array S	44.22	323	eP	P	15 39 53.4	+0.7
	comp=Z,7.1nm,1.0s						
NORES	NORESS Array B	44.22	323	P	P	15 39 53.7	+1.1
NC303	NORSAR Array S	44.35	323	eP	P	15 39 56.2	+2.5
	comp=Z,18nm,1.1s						
NB201	NORSAR Array S	44.37	323	eP	P	15 39 55.2	+1.4
	comp=Z,29nm,1.1s						
NB2	NORSAR Subarra	44.41	323	P	P	15 39 55.0	+0.9
	comp=Z,1.4nm,0.3s,baz=100,slow=7.9						
NB2	NORSAR Subarra	44.41	323	P	P	15 39 54.5	+0.4
NB2				pmax	pmax		

	comp=Z,3.0nm,0.4s						
NOA	NORSAR Array B	44.41	323	P	P	15 39 54.9	+0.7
	comp=Z,0.9nm,0.4s,baz=98,slow=7.2,SNR=15						
NAO01	NORSAR Array S	44.55	323	*e*P	P	15 39 56.4	+1.1
	comp=Z,27nm,1.1s						
WTTA	Wattenberg	44.58	303	*e*P	P	15 39 57.4	+1.5
	comp=Z,1.4nm,0.4s						
NBO00	NORSAR Array S	44.62	323	*e*P	P	15 39 57.2	+1.4
	comp=Z,23nm,1.1s						
NC204	NORSAR Array S	44.65	323	*e*P	P	15 39 57.9	+1.8
	comp=Z,12nm,1.1s						
SQTA	Sankt Quirin	44.87	303	*e*P	P	15 39 58.3	+0.1
	comp=Z,2.9nm,0.5s						
FETA	Feichten	45.23	303	*e*P	P	15 40 01.7	+0.7
	comp=Z,1.8nm,0.5s						
FUORN	Ofenpass-Fuorn	45.61	303	*e*P	P	15 40 04.7	+0.6
	comp=Z,3.3nm,0.7s						
TIXI	Tiksi	45.64	22	*e*P	P	15 40 04.9	+1.3
	comp=Z,1.6nm,0.8s						
TIXI	Tiksi	45.64	22	*e*P	P	15 40 04.9	+1.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DAVA	Damuels	45.75	304	*e*P	P	15 40 06.1	+1.1
	comp=Z,8.2nm,0.5s						
SENIN	Lac Senin/Sane	47.67	303	*e*P	P	15 40 19.9	0.0
	comp=Z,3.8nm,0.6s						
BNI	Bardonecchia	48.38	301	*e*P	P	15 40 25.9	+0.5
	comp=Z,2.1nm,0.8s						
BNI	Bardonecchia	48.38	301	*e*P	P	15 40 25.9	+0.5
BNI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMBO	Kilima Mbogo	49.00	228	P	P	15 40 31.4	+1.0
	comp=Z,0.7nm,0.4s,baz=42,slow=13,SNR=4.8						
KEST	Kesra	49.15	289	P	P	15 40 32.6	+1.4
	comp=Z,3.1nm,0.5s,baz=27,slow=1.5,SNR=8.9						
KEST	Kesra	49.15	289	*e*P	P	15 40 32.6	+1.4
	comp=Z,3.7nm,0.6s						
SSB	Saint Sauveur	49.80	302	*e*P	P	15 40 37.1	+1.2
	comp=Z,3.8nm,0.4s						
SSB	Saint Sauveur	49.80	302	*e*P	P	15 40 37.1	+1.2
SSB				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NKL	Nikolayevsk	49.95	47⇑	*i*P	P	15 40 42.7	+5.9
NKL				*e*		15 41 49.0	
NKL				*e*		15 42 30.3	
NKL				*e*S	S	15 47 23.5	-3.8
NKL				*e*		15 49 57.4	
NKL				pmax	pmax		
	comp=Z,25nm,1.7s						
NKL				pmax	pmax		
	comp=N,33nm,1.9s						
NKL				pmax	pmax		
	comp=E,21nm,1.8s						
NKL				pmax	pmax		
	comp=Z,103nm,1.9s						
MA2	Magadan	54.21	38	*ce*P	P	15 41 10.1	+2.1
MA2				pmax	pmax		
	comp=Z,19nm,1.3s						
ESDC	Sonseca Array	57.55	298	P	P	15 41 32.5	+0.5
	comp=Z,1.5nm,0.7s,baz=57,slow=7.4,SNR=7.9						
TORD	Torodi Ar. Bea	65.87	269	P	P	15 42 26.4	-1.3
	comp=Z,12nm,0.3s,baz=47,slow=5.7,SNR=6.8						
INK	Inuvik	73.80	9	P	P	15 43 17.0	+2.1
	comp=Z,1.7nm,0.5s,baz=304,slow=5.1,SNR=4.8						
ILAR	Eielson Array	74.66	16	P	P	15 43 20.6	+0.6
	comp=Z,0.5nm,0.8s,baz=308,slow=5.0,SNR=5.8						
YKA	Yellowknife Ar	81.16	3	P	P	15 43 56.9	+1.3
	comp=Z,0.9nm,0.4s,baz=353,slow=5.3,SNR=8.7						
WRA	Warramunga Arr	81.91	122	P	P	15 43 60.0	-0.2
	comp=Z,1.3nm,0.5s,baz=301,slow=6.3,SNR=14						
WRA	Warramunga Arr	81.91	122	P	P	15 44 00.0	-0.2
ASAR	Alice Springs	84.18	125	P	P	15 44 11.8	0.0
	comp=Z,1.1nm,0.6s,baz=311,slow=4.6,SNR=26						
PLCA	Paso Flores	150.00	250	PKPbc	PKiKP	15 51 29.8	-0.1
	comp=Z,1.4nm,0.8s,baz=39,slow=6.5,SNR=3.5						

IDC 05 15:40:38.1±9.2**, 2°.74S×138°.73E, h0^{km}, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.3**/17**, mbtmp3.4**/3**, ML3.3**/1**, Error ellipse: s-maj=389.2km s-min=29.5km az=86.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.63	194	P	Pn	15 44 44.8	-0.7
	0.1nm,0.3s,baz=14,slow=13,SNR=4.6						
ASAR	Alice Springs	21.33	192	P	P	15 45 27.3	+0.4
	0.5nm,0.6s,baz=20,slow=9.1,SNR=11						
MKAR	Makanchi Array	69.82	322	P	P	15 51 50.7	0.0
	0.3nm,0.6s,baz=127,slow=6.0,SNR=3.2						

GCG 05 15:43:50.7±0.3**, 14°.56N×91°.62W, h101^{km}**±36^{km}**, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.16	17	*e*P	Pn	15 44 05.6	+0.4
FUG	Fuego 3	0.76	98	*e*P	Pn	15 44 09.4	+0.4
PCG	Pacaya	0.99	100	*e*P	Pn	15 44 12.2	+0.7
PCG				*e*S	Sn	15 44 28.9	+1.9

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*IDC **05** 15:47:45.5±1.0, 2°.10S×139°.24E, h0^{km}, mb3.4/4, mb1 3.8/5, mb1mx3.5/20, mbtmp3.5/5, ML3.6/1, MS3.1/7, Ms1 3.1/7, ms1mx3.0/18, Error ellipse: s-maj=25.7km s-min=13.3km az=20.0*

*ISCJB **05** 15:47:48.0±0.8, 2°.25S±0°.08×139°.2E±0°.1, h29^{km}, mb3.4/4, MS3.1/4, Error ellipse: s-maj=16.8km s-min=11.1km az=14.4*

ISC 05 15:47:49.0±1.0**, 2°.3S**±0°.1×**139°.4E**±0°.1**, h29^{km}, n12,** σ**1^s.79**/7**, mb3.5**/4**, MS2.9**/4**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.37	98	Pg	Pb	15 48 13.8	-0.2
	15nm,0.3s,baz=238,slow=10,SNR=73						
JAY				Lg	Lg	15 48 34.0	
	36nm,0.3s,baz=219,slow=19,SNR=13						
DAV	Davao City (W)	16.62	304	LR	LR	15 59 18.6	
	comp=Z,67nm,18.0s,baz=144,slow=42						
GUMO	Guam	16.74	19	LR	LR	15 58 19.2	
	comp=Z,50nm,19.4s,baz=184,slow=38						
WRA	Warramunga Arr	18.17	195	P	P	15 52 01.4	+2.0
	0.2nm,0.3s,baz=15,slow=10,SNR=8.2						
WRA				S	Sn	15 55 19.1	-2.4
	0.1nm,0.3s,baz=12,slow=25,SNR=3.3						
KAPI	Kappang	19.74	262	LR	LR	16 00 55.1	
	comp=Z,38nm,19.0s,baz=299,slow=40						
ASAR	Alice Springs	21.85	194	P	P	15 52 41.1	+1.7
	1.3nm,0.8s,baz=24,slow=11,SNR=30						
TGY	Tagaytay City	24.49	312	LR	LR	16 01 06.2	
	comp=Z,47nm,21.2s,baz=198,slow=33						
STKA	Stephens Creek	29.46	176	LR	LR	16 07 06.9	
	comp=Z,184nm,18.2s,baz=13,slow=39						
KSRS	Korea Array	40.98	346	LR	LR	16 13 15.7	
	comp=Z,13nm,18.7s,baz=175,slow=38						
CMAR	Chiang Mai Arr	44.81	299	P	P	15 56 00.6	-0.2
	0.6nm,1.0s,baz=116,slow=7.1,SNR=5.4						
CMAR				LR	LR	16 13 38.4	
	comp=Z,12nm,20.3s,baz=185,slow=35						
MKAR	Makanchi Array	69.88	322	P	P	15 58 57.1	-0.2
	0.3nm,0.6s,baz=112,slow=6.0,SNR=3.1						
ILAR	Eielson Array	85.23	24	P	P	16 00 22.2	-0.3
	0.2nm,0.7s,baz=260,slow=4.4,SNR=3.0						

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*NSSC **05** 15:56:45.5±0.6, 33°.75N×35°.67E, h14^{km}±3^{km}, MD1.1, ML1.9*

*ISCJB **05** 15:56:46.0±0.9, 33°.78N±0°.04×35°.74E±0°.08, h11^{km}±9^{km}, Error ellipse: s-maj=12.7km s-min=5.8km az=156.2*

*GRAL **05** 15:56:46.6±0.3, 33°.80N×35°.81E, h2^{km}±10^{km}, MD3.0*

ISC 05 15:56:46.0±1.3**, 33°.80N**±0°.04×**35°.77E**±0°.08**, h12^{km}**±15^{km}**, n7,** σ**0^s.38**/12**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.14	318	*e*P	Pg	15 56 49.7	+0.2
BHL				*e*S	Sg	15 56 52.0	0.0
DQRL	Deir Qamar	0.19	241	*e*P	Pg	15 56 50.4	+0.2
RCY	Rachaya	0.31	169	*e*P	Pg	15 56 52.0	-0.3
RCY				*e*S	Sg	15 56 55.9	-0.6
BRBR	Barbar	0.41	158	*e*P	Pg	15 56 54.1	-0.2
BRBR				*e*S	Sg	15 56 59.9	0.0
BRBR				AML	AML	15 57 04.8	
	comp=N,109nm,0.5s						
BRBR				AML	AML	15 57 05.7	
	comp=E,52nm,0.3s						
QASN	Qassioun	0.50	122	*e*P	Pg	15 56 56.3	+0.5
QASN				*e*S	Sb	15 57 04.4	+0.4
QASN				AML	AML	15 57 06.2	
	comp=E,214nm,0.3s						
QASN				AML	AML	15 57 08.3	
	comp=N,156nm,0.3s						
HWQ	Hawqa	0.50	17	*e*P	Pg	15 56 55.4	-0.4
TOTH	TOTAH	0.70	128	*e*P	Pb	15 57 00.2	0.0
TOTH				*e*S	Sb	15 57 09.9	+0.1
TOTH				AML	AML	15 57 15.9	
	comp=N,33nm,0.4s						
TOTH				AML	AML	15 57 26.9	
	comp=E,18nm,0.6s						

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*JMA **05** 16:41:25.7±0.4, 43°.57N×147°.51E, h20^{km}, M3.0*

*SKHL **05** 16:41:26.0±0.4, 43°.72N×147°.65E, h77^{km}, mb3.5/3*

ISC 05 16:41:25.3±4.0**, 43°.7N**±0°.1×**147°.6E**±0°.1**, h24^{km}**±27^{km}**, n9,** σ**0^s.90**/16**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.31	284	*i* P	Pn	16 41 48.5	+0.4
YUK				AMB	AMB	16 41 50.0	
	40nm,0.2s						
YUK				AMB	AMB	16 41 50.0	
	70nm,0.2s						
YUK				AMB	AMB	16 41 50.0	
	20nm,0.2s						
YUK				*i* S	Sb	16 42 05.3	-0.3
YUK				A	A	16 42 06.0	
	150nm,0.3s						
YUK				A	A	16 42 06.0	
	420nm,0.3s						
GRPR	Tuman	1.36	281	*e*P	Pn	16 41 48.7	-0.1
GRPR				AMB	AMB	16 41 49.0	
	100nm,0.3s						
GRPR				AMB	AMB	16 41 49.0	
	10.0nm,0.3s						
GRPR				*e*S	Sn	16 42 05.5	-0.6
GRPR				A	A	16 42 09.0	
	260nm,0.4s						
GRPR				A	A	16 42 09.0	
	160nm,0.4s						
NEM2	Nemuro 2	1.42	255	P	Pn	16 41 49.0	-0.6
NEM2				*e*S	Sn	16 42 05.4	-2.0
KUR	Kuril'sk	1.51	7	*e*P	Pn	16 41 50.7	-0.1
KUR				AMB	AMB	16 41 53.0	
	2.0nm,0.1s						
KUR				AMB	AMB	16 41 53.0	
	3.0nm,0.1s						
KUR				AMB	AMB	16 41 53.0	
	4.0nm,0.1s						
KUR				*e*S	Sn	16 42 09.6	0.0
KUR				A	A	16 42 12.0	
	80nm,0.2s						
KUR				A	A	16 42 12.0	
	70nm,0.2s						
JRA	Rausu	1.82	277	P	Pn	16 41 55.5	+0.4
JRA				*e*S	Sn	16 42 17.4	0.0
JNSB	Nemuroshibetsu	1.90	272	P	Pn	16 41 56.7	+0.5
JAK	Akkeshi	2.26	252	P	Pn	16 42 01.1	0.0
JAK				*e*S	Sn	16 42 27.8	-0.4
JAR	Ashorobuto	2.84	262	P	Pn	16 42 10.3	+1.2
JAR				*e*S	Sn	16 42 43.9	+1.4
JNBK	Urakawa-nobuka	3.86	249	P	Pn	16 42 24.0	+0.9

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*IDC **05** 16:54:36.4±0.5, 2°.49N×98°.60E, h0^{km}, mb4.5/21, mb1 4.6/21, mb1mx4.4/38, mbtmp4.5/21, MS3.7/29, Ms1 3.7/29, ms1mx3.7/36, Error ellipse: s-maj=13.1km s-min=9.5km az=164.0*

*BJI **05** 16:54:37.3±0.0, 2°.38N×98°.83E, h10^{km}, mb4.5/33, mB4.8/21, Ms4.6/20, Ms7 4.4/17*

*ISCJB **05** 16:54:37.6±0.2, 2°.49N±0°.03×98°.73E±0°.03, h10^{km}, mb4.6/89, MS3.9/35, Error ellipse: s-maj=4.8km s-min=4.0km az=140.5*

*MOS **05** 16:54:38.5±1.5, 2°.56N×98°.84E, h18^{km}, mb5.0/45, Error ellipse: s-maj=10.1km s-min=5.6km az=118.8*

*NEIC **05** 16:54:39.8±1.7, 2°.56N×98°.74E, h17^{km}±1^{km}, mb4.6/29, Error ellipse: s-maj=8.6km s-min=7.6km az=128.0*

NEIC Felt [III] at Samosir.

*DJA **05** 16:54:39.8±0.2, 3°N±2°×9°9E±°, h10^{km}, M5.0/14, mb5.2/4, mB5.4/2, MLv4.8/14, Mw(mB)4.8/2*

*KLM **05** 16:54:46.0, 2°.71N×98°.21E, h10^{km}, mb4.8*

ISC 05 16:54:39.1±0.3**, 2°.49N**±0°.04×**98°.67E**±0°.04**, h10^{km}, n237,** σ**1^s.73**/234**, mb4.7**/104**, MS3.8**/35**, 24C-4D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	0.40	40	Pg	Pg	16 54 44.6	-2.4
	2μm,0.3s,baz=246,slow=11,SNR=7874						
PSI	Prapat	0.40	40	*e*Pg	Pg	16 54 44.9	-2.1
PSI	Prapat	0.40	40	*e*P	Pg	16 54 44.9	-2.1
TSI	Tuntungan	1.01	354	P	Pg	16 54 56.9	-1.6
KCSI	Kotacane, Aceh	1.36	319	P	Pn	16 55 02.6	-1.6
KCSI				S	Sg	16 55 24.3	+1.3
GSI	Gunungsitoli	1.61	223	*e*Pn	Pn	16 55 09.2	+1.6
GSI	Gunungsitoli	1.61	223	P	Pn	16 55 08.2	+0.6
TPTI		1.67	297	P	Pn	16 55 07.7	-0.8
MNSI	Mandailing Nat	1.92	152	P	Pn	16 55 13.6	+1.8
SNSI	Sinabang, Aceh	2.34	268	P	Pn	16 55 18.9	+1.2
MLSI	Meulaboh, Aceh	2.87	308	P	Pn	16 55 25.8	+0.9
IPM	Ipoh	3.07	50	*e*Pn	Pn	16 55 27.7	0.0
IPM	Ipoh	3.07	50	P	Pn	16 55 29.0	+1.3
BKNI	Bangkinang	3.20	132	*e*Pg	Pb	16 55 38.2	+2.1
BKNI	Bangkinang	3.20	132	P	Pb	16 55 37.6	+1.5
LHMI	Lhok Sumawe	3.22	328	*e*Pn	Pn	16 55 31.3	+1.5
LHMI	Lhok Sumawe	3.22	328	P	Pn	16 55 29.7	0.0
KULM	Kulim	3.41	35	*e*Pn	Pn	16 55 32.0	-0.4
SISI	Saibi	3.82	174	P	Pn	16 55 39.7	+1.7
PDSI	Padang	3.83	152	P	Pn	16 55 41.5	+3.4
JRMM	Jerantut	4.04	70	P	Pn	16 55 43.0	+1.9
SKLT	Songkhla	5.04	23	P	Pn	16 55 55.2	+0.4
	89nm,0.7s,828nm0.6nm						
MYKOM	Kota Tinggi	5.22	98	*e*Pn	Pn	16 55 57.0	-0.3
KRJI	Kerinci	5.34	148	P	Pn	16 56 02.4	+3.4
PKDT	Phuket	5.38	356	P	Pn	16 56 01.9	+2.5
	155nm,0.7s,2μm0.8nm						
PPSI	Pulau Pagai	5.39	166	P	Pn	16 56 04.6	+5.0
TRTT	Trang	5.41	11	P	Pn	16 56 00.3	+0.5
	197nm,0.9s,2μm0.9nm						
LHSI	Lahat	7.93	142	P	Pn	16 56 40.7	+6.1
MNAI	Manna	8.04	148	*e*Pn	Pn	16 56 39.7	+3.6
MDSI	Maura Dua	8.85	142	P	Pn	16 56 48.7	+1.5
PHET	Kaeng Krachan	10.39	5	P	Pn	16 57 10.9	+2.5
	35μm,0.7s,450μm						
CHBT	CHBT	10.82	19	P	Pn	16 57 24.7	+11
PBA	Port Blair	10.84	327	*e*P	Pn	16 57 13.4	-1.0
SRDT	SRDT	11.79	2	P	Pn	16 57 33.0	+5.5
	6.6nm,1.3s,1μm						
DGPR	DIGLIPUR	12.04	332	*e*P	Pn	16 57 29.6	-1.2
LEM	Lembang	12.86	136	LR	LR	17 02 45.0	
	comp=Z,480nm,18.4s,baz=275,slow=38						
UMPA	Umpang Tak	13.63	1	P	Pn	16 57 56.8	+4.2
	30μm,0.9s,944μm						
CHAI	Chaiyaphum	13.72	14	P	P	16 58 05.3	+2.7
PBKT	Sadao Pong	14.17	9	P	Pn	16 58 02.8	+2.8
	27nm,1.0s,324nm						
KHON	Khomkaen	14.35	16	P	P	16 58 12.5	+2.9
UTTA	Uttaradit	15.27	7	P	P	16 58 19.4	-0.4
	41μm,0.8s,405μm						
SKNT	Sakolnakorn	15.31	20	P	P	16 58 21.9	+1.6
	82nm,0.9s,1μm						
PANO	Nakornpanom	15.69	21	P	P	16 58 25.5	+1.0
	0.8nm,1.1s						
CM31	Chiang Mai Arr	15.87	1	*e*P	P	16 58 24.6	-1.9
	67nm,1.1s						
CMAR	Chiang Mai Arr	15.87	1	Pn	Pn	16 58 24.1	+1.4
	0.1nm,0.3s,baz=193,slow=12,SNR=16						
CMAR				LR	LR	17 04 19.3	
	comp=Z,315nm,18.9s,baz=182,slow=37						
LAMP	Lampang	15.96	3	P	P	16 58 32.0	+4.5
	53μm,0.9s,517μm						
NONG	Nongkai	16.09	16	P	P	16 58 31.3	+2.4
	0.8nm,1.4s						
CHTO	Chiang Mai	16.22	1	*e*P	P	16 58 29.0	-1.4
	43nm,1.1s						
CHTO	Chiang Mai	16.22	1	*e*P	P	16 58 29.0	-1.4
CHTO				pmax	pmax		
	comp=Z,43nm,1.1s						
CMMT	Chiang Mai	16.22	1	P	P	16 58 31.0	+0.6
	comp=Z,20nm,1.2s,comp=Z,187nm						
KKM	Kota Kinabalu	17.85	78	*e*P	Pn	16 58 47.9	+0.1
	comp=Z,31nm,1.1s						
PALK	Pallekele	18.52	286	P	P	16 58 57.2	+1.3
	comp=Z,0.3nm,0.3s,baz=114,slow=11,SNR=2.8						
PALK				LR	LR	17 05 19.1	
	comp=Z,242nm,20.0s,baz=116,slow=35						
PALK	Pallekele	18.52	286	*e*P	P	16 58 57.2	+1.3
	comp=Z,22nm,1.0s						
PALK	Pallekele	18.52	286	*e*P	P	16 58 57.2	+1.3
PALK				pmax	pmax		
	comp=Z,22nm,1.0s						
SLVN	Son La	19.41	15	*e*P	P	16 59 03.9	-1.7
	comp=Z,32nm,1.1s						
QIZ	Qiongzhong	19.74	33	P	P	16 59 08.6	-0.6
QIZ				S	Sn	17 02 52.9	+0.2
QIZ				sS	sS	17 02 57.8	+0.6
QIZ				pmax	pmax		
	comp=Z,15nm,1.3s						
QIZ				LR	LR		
	comp=Z,390nm,14.5s						
QIZ				LR	LR		
	comp=Z,490nm,11.2s						
QIZ				LR	LR		
	comp=Z,420nm,12.6s						
KAPI	Kappang	22.34	109	LR	LR	17 09 11.8	
	comp=Z,568nm,18.7s,baz=119,slow=39						
KMI	Kunming	22.84	10	P	P	16 59 44.8	+2.0
KMI				pP	sP	16 59 49.0	+1.5
KMI				sP	pP	16 59 51.2	+5.1
KMI				PP		17 00 16.1	
KMI				S	S	17 03 50.8	-1.8
KMI				sS	sS	17 03 59.3	+1.2
KMI				SS	SnSn	17 04 34.7	+11
KMI				pmax	pmax		
	comp=Z,18nm,1.6s						
KMI				pmax	pmax		
	comp=Z,95nm,3.1s						
KMI				LR	LR		
	comp=Z,340nm,15.2s						
KMI				LR	LR		
	comp=Z,890nm,14.9s						
KMI				LR	LR		
	comp=Z,920nm,13.4s						
KOHI	KOHIMA	23.51	350	*e*P	P	16 59 47.8	-1.8
KOHI				IAmb	IAmb	16 59 52.4	
	comp=Z,20nm,1.3s						
SHL	Shillong	23.85	345	P	P	16 59 54.3	+1.3
SHL				pmax	pmax		
	comp=Z,21nm,0.9s						
SHL	Shillong	23.85	345	*e*P	P	16 59 51.9	-1.1
SHL				IAmb	IAmb	16 59 54.5	
	comp=Z,7.7nm,0.3s						
MOKO	MOKOCHONG	24.03	351	*e*P	P	16 59 53.3	-1.2
MOKO				IAmb	IAmb	16 59 55.6	
	comp=Z,22nm,1.0s						
BOK	Bokaro	24.52	331	*e*P	P	16 59 58.3	-0.7
BOK				IAmb	IAmb	17 00 01.0	
	comp=Z,3.8nm,0.8s						
TEZP	TEZPUR	24.64	347	*e*P	P	16 59 59.4	-0.6
HYB	Hyderabad	24.70	308	*i* P	P	17 00 02.0	+1.3
TGY	Tagaytay City	24.84	61	LR	LR	17 09 26.7	
	comp=Z,158nm,20.1s,baz=298,slow=36						
GYA	Guiyang	25.04	17	P	P	17 00 05.6	+1.9
GYA				pP	sP	17 00 10.8	+2.3
GYA				PP	PnPn	17 00 43.9	+6.8
GYA				S	S	17 04 27.6	-0.5
GYA				SS		17 05 28.1	
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=Z,440nm,14.1s						
GYA				LR	LR		
	comp=Z,470nm,14.4s						
GYA				LR	LR		
	comp=Z,410nm,14.6s						
ZIRO	ZIRO	25.32	350	*e*P	P	17 00 04.7	-1.6
ZIRO				IAmb	IAmb	17 00 06.3	
	comp=Z,22nm,0.8s						
DAV	Davao City (W)	27.19	79	LR	LR	17 12 21.2	
	comp=Z,92nm,19.5s,baz=127,slow=39						
QZH	Quanzhou	29.45	39	*e*P	P	17 00 47.1	+3.9
QZH				LR	LR		
	comp=Z,760nm,14.8s						
QZH				LR	LR		
	comp=Z,560nm,12.3s						
QZH				LR	LR		
	comp=Z,1μm,13.8s						
ENH	Enshi	29.47	19	*e*P	P	17 00 42.6	-0.8
	comp=Z,14nm,0.8s						
YULB	Yu-li	30.20	45	*e*P	P	17 00 49.3	-0.7
	comp=Z,7.6nm,0.9s						
SSLB	Suanglung	30.21	44	*e*P	P	17 00 50.9	+0.8
	comp=Z,7.9nm,1.0s						
WHN	Wuhan	31.60	26	P	P	17 01 10.1	+7.9
YOJ	Yonaguni jima	32.08	45	*e*P	P	17 01 05.3	-1.2
	comp=Z,66nm,1.1s						
YOJ	Yonaguni jima	32.08	45	*e*P	P	17 01 05.3	-1.2
YOJ				pmax	pmax		
	comp=Z,66nm,1.1s						
XAN	Xi'an	32.81	16	P	P	17 01 12.7	-0.2
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
XAN				LR	LR		
	comp=Z,740nm,14.2s						
XAN				LR	LR		
	comp=Z,860nm,13.3s						
LZH	Lanzhou	33.77	8	*e*P	P	17 01 24.8	+3.5
LZH				pP	sP	17 01 29.6	+3.4
LZH				sP	pP	17 01 32.2	+7.4
LZH				PP	PP	17 02 38.0	+0.1
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=Z,320nm,13.6s						
LZH				LR	LR		
	comp=Z,360nm,14.3s						
LZH				LR	LR		
	comp=Z,450nm,15.2s						
NJ2	Nanjing	35.01	31	*e*P	P	17 01 33.5	+1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MTN	Manton Dam	35.65	116	*e*P	P	17 01 35.4	-2.3
	comp=Z,6.5nm,0.8s						
DHRM	DHARAMSHALA	36.31	327	*e*P	P	17 01 42.2	-1.2
DHRM				IAmb	IAmb	17 01 44.0	
	comp=Z,9.8nm,0.7s						
NIL	Nilore	39.06	325	P	P	17 02 07.3	+0.9
NIL				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	Hu-ho-hao-te	39.92	15	*e*P	P	17 02 13.3	-0.3
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,20nm,4.7s						
BJI	Beijing	40.61	21	P	P	17 02 21.9	+2.8
BJI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BJI				LR	LR		
	comp=Z,77nm,12.3s						
BJI				LR	LR		
	comp=Z,150nm,14.6s						
WRA	Warramunga Arr	41.50	124	P	P	17 02 25.4	-1.4
	comp=Z,11nm,0.8s,baz=295,slow=9.8,SNR=51						
WRA				PcP	PcP	17 04 23.4	-1.1
	comp=Z,0.8nm,0.5s,baz=299,slow=3.4,SNR=5.3						
WR1	Warramunga Arr	41.50	124	*e*PcP	PcP	17 04 23.4	-1.1
WRAB	Tennant Creek	41.51	124	*e*P	P	17 02 25.8	-1.1
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	41.51	124⇑	*i*P	P	17 02 28.3	+1.4
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WB2	Warramunga Arr	41.51	124	*e*P	P	17 02 25.9	-1.1
	comp=Z,13nm,0.9s						
KSH	Kashi	42.24	334	*e*P	P	17 02 31.5	-1.2
WMQ	Urumqi	42.29	348	*e*P	P	17 02 34.7	+1.7
WMQ				LR	LR		
	comp=Z,350nm,29.0s						
WMQ				LR	LR		

	comp=Z,440nm,29.1s						
AS31	Alice Springs	43.03	129	eP	P	17 02 37.6	-1.8
	comp=Z,1.4nm,0.9s						
ASAR	Alice Springs	43.03	129	P	P	17 02 37.4	-1.9
	comp=Z,3.2nm,0.9s,baz=298,slow=7.7,SNR=27						
ASAR				PcP	PcP	17 04 28.4	-1.2
	comp=Z,1.1nm,0.8s,baz=300,slow=3.1,SNR=4.8						
ASAR				LR	LR	17 20 59.1	
	comp=Z,72nm,20.4s,baz=304,slow=37						
KS15	Wonju Array Si	43.93	34	eP	P	17 02 45.4	-0.9
	comp=Z,8.7nm,0.9s						
KSRS	Korea Array	43.96	34	P	P	17 02 44.9	-1.7
	comp=Z,2.3nm,0.8s,baz=225,slow=9.0,SNR=7.9						
KSRS				LR	LR	17 22 28.2	
	comp=Z,193nm,18.3s,baz=219,slow=38						
PDGK	Podgornoye	44.10	340	P	P	17 02 50.5	+2.7
PDGK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARSB	Arslanbob	45.05	333	eP	P	17 02 55.7	+0.3
	comp=Z,8.7nm,0.8s						
SONA0	Songino Array	45.66	7	eP	P	17 02 58.9	-1.2
SONA0				ePcP	PcP	17 04 37.3	-0.9
SONM	Songino Array	45.66	7	P	P	17 02 58.9	-1.2
	comp=Z,2.9nm,0.9s,baz=196,slow=7.7,SNR=11						
SONM				PcP	PcP	17 04 37.3	-0.9
	comp=Z,3.0nm,0.8s,baz=193,slow=3.0,SNR=8.3						
SONM				LR	LR	17 24 09.1	
	comp=Z,202nm,18.0s,baz=183,slow=39						
ULN	Ulaanbaatar	45.78	8	⇑iP	P	17 03 01.1	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR	Makanchi Array	46.37	344	P	P	17 03 03.5	-2.2
	comp=Z,6.8nm,0.9s,baz=158,slow=7.7,SNR=31						
MKAR				LR	LR	17 25 25.8	
	comp=Z,62nm,18.2s,baz=150,slow=40						
MKAR	Makanchi Array	46.37	344	i P	P	17 03 03.7	-1.9
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	Makanchi	46.47	344	eP	P	17 03 05.2	-1.2
	comp=Z,4.3nm,0.8s						
MAKZ	Makanchi	46.47	344	eP	P	17 03 05.2	-1.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
COEN	Coen	47.05	112	eP	P	17 03 11.2	-0.2
	comp=Z,8.8nm,1.0s						
DGZ	Jazzator, Alta	48.00	350	⇓iP	P	17 03 18.3	-0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PMG	Port Moresby	49.73	104	eP	P	17 03 30.4	-1.7
	comp=Z,15nm,0.8s						
PMG	Port Moresby	49.73	104	eP	P	17 03 30.4	-1.7
PMG				pmax	pmax		
	comp=Z,15nm,0.8s						
MJAR	Matsushiro Arr	49.75	42	LR	LR	17 26 14.0	
	comp=Z,85nm,18.1s,baz=235,slow=38						
OTUK	Ortayu	50.90	338	P	P	17 03 40.3	-0.2
OTUK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USRK	Ussuriysk Ar.	50.91	31	P	P	17 03 38.0	-2.5
	comp=Z,2.9nm,0.9s,baz=255,slow=4.3,SNR=3.9						
USRK				LR	LR	17 26 02.3	
	comp=Z,179nm,18.4s,baz=209,slow=37						
KURK	Kurchatov	50.95	344	eP	P	17 03 38.7	-2.0
	comp=Z,6.0nm,0.9s						
KURK	Kurchatov	50.95	344	⇑iP	P	17 03 41.0	+0.3
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GEYT	Alibeck	51.19	319	P	P	17 03 41.5	-1.3
	comp=Z,10nm,0.8s,baz=163,slow=6.2,SNR=23						
GEYT				LR	LR	17 27 18.7	
	comp=Z,65nm,20.5s,baz=55,slow=38						
GYA0B	ALIBECK ARRAY	51.19	319	eP	P	17 03 41.9	-0.9
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	52.54	350	P	P	17 03 50.3	-2.2
	comp=Z,6.6nm,0.8s,baz=177,slow=7.6,SNR=17						
ZALV				LR	LR	17 29 13.9	
	comp=Z,69nm,18.5s,baz=72,slow=40						
STKA	Stephens Creek	53.15	134	P	P	17 03 56.1	-1.4
	comp=Z,3.1nm,0.9s,baz=306,slow=13,SNR=3.0						
STKA				LR	LR	17 30 13.3	
	comp=Z,73nm,18.2s,baz=2.7,slow=40						
KLR	Kul'dur	54.45	26	LR	LR	17 30 14.8	
	comp=Z,205nm,19.1s,baz=222,slow=39						
KLR	Kul'dur	54.45	26	⇑iP	P	17 04 06.2	-0.5
KLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RAYN	Ar Rayn	55.47	297	eP	P	17 04 14.4	-0.2
	comp=Z,9.2nm,1.1s						
RAYN	Ar Rayn	55.47	297	eP	P	17 04 14.4	-0.2
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BRVK	Borovoye	55.60	340	eP	P	17 04 14.8	-0.2
	comp=Z,4.9nm,0.8s						
BRVK	Borovoye	55.60	340	⇑iP	P	17 04 14.7	-0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NKL	Nikolayevsk	61.21	27	eP	P	17 04 53.0	-1.1
NKL				e		17 05 33.4	
NKL				e		17 07 05.2	
NKL				e		17 14 42.5	
NKL				pmax	pmax		
	comp=N,31nm,1.5s						
NKL				pmax	pmax		
	comp=Z,12nm,1.5s						
NKL				pmax	pmax		
	comp=E,34nm,1.4s						
NKL				pmax	pmax		
	comp=Z,109nm,1.9s						
NKL				MLR	MLR		
	comp=Z,183nm,16.0s						
NKL				MLR	MLR		
	comp=N,960nm,14.0s						
GNI	Garni	61.40	315	⇑iP	P	17 04 56.0	+0.1
GNI				pmax	pmax		
	comp=Z,31nm,1.2s						
BTLR	Botlikh	61.42	318	⇑iP	P	17 04 56.5	+0.6
BTLR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMBO	Kilima Mbogo	61.51	267	P	P	17 04 56.9	-0.2
	comp=Z,1.9nm,0.7s,baz=59,slow=12,SNR=4.3						
KMBO	Kilima Mbogo	61.51	267	ceP	P	17 04 58.0	+0.9
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SVE	Sverdlovsk	62.05	337	eP	P	17 04 57.7	-2.0
SVE				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARU	Arti	62.59	336	d iP	P	17 05 03.0	-0.3
ARU						17 07 16.8	
ARU				S	S	17 13 33.0	+1.9
ARU				SS	SS	17 17 33.7	-1.8
ARU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZEI	Tsey	63.03	318	eP	P	17 05 06.8	0.0
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KBZ	Khabaz	64.08	318	P	P	17 05 13.5	+0.1
	comp=Z,6.7nm,0.9s,baz=178,slow=5.3,SNR=9.4						
SHA1	Shidzhatmaz	64.24	318	⇑iP	P	17 05 14.6	-0.2
KIV	Kislovodsk	64.31	318	eP	P	17 05 14.8	-0.3
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
KIV				MLR	MLR		
	comp=Z,61nm,17.0s						
BR101	Keskin Array S	69.34	312	eP	P	17 05 45.9	-1.5
BR131	Keskin Array S	69.34	312	eP	P	17 05 47.4	+0.1
	comp=Z,5.1nm,0.8s						
BR131	Keskin Array S	69.34	312	eP	P	17 05 47.4	+0.1
BR131				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	Keskin Array B	69.34	312	P	P	17 05 45.9	-1.5
	comp=Z,4.4nm,0.8s,baz=130,slow=7.1,SNR=21						
BRTR				LR	LR	17 37 29.3	
	comp=Z,25nm,21.8s,baz=96,slow=37						
BRTR	Keskin Array B	69.34	312	ceP	P	17 05 47.4	+0.1
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSR	Storozhevoye	69.36	325	eP	P	17 05 44.3	-2.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MA2	Magadan	69.54	25	LR	LR	17 38 17.2	
	comp=Z,63nm,18.2s,baz=240,slow=38						
PETK	Petropavlovsk-	69.85	33	LR	LR	17 40 25.1	
	comp=Z,69nm,18.4s,baz=238,slow=39						
LPSR	Galich'ya Gora	70.05	326	eP	P	17 05 48.8	-2.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PRGR	Permogore	71.05	336	eP	P	17 05 54.5	-2.6
PRGR				pmax	pmax		
	comp=Z,19nm,0.9s						
MOS	Moscow	71.99	329	eP	P	17 06 02.6	-0.3
OBN	Obninsk	72.31	328	⇑eP	P	17 06 04.3	-0.5
OBN				e		17 06 22.0	
OBN				e		17 08 46.6	
OBN				pmax	pmax		
	comp=Z,20nm,1.2s						
OBN				MLR	MLR		
	comp=Z,42nm,17.5s						
YLV	Yalova	72.72	312	⇑iP	P	17 06 08.5	+0.8
TIRR	Tirgusor	74.23	316	⇑iP	P	17 06 16.8	+0.4
TIRR	Tirgusor	74.23	316	P	P	17 06 17.7	+1.3
TIRR				pmax	pmax		
	comp=Z,28nm,1.0s						
MAW	Mawson	74.30	193	LR	LR	17 31 09.4	
	comp=Z,52nm,21.6s,baz=50,slow=30						
AKASG	Malin Array Be	75.14	322	P	P	17 06 19.8	-1.8
	comp=Z,1.6nm,0.7s,baz=89,slow=4.7,SNR=11						
AKASG				LR	LR	17 44 49.3	
	comp=Z,34nm,18.9s,baz=235,slow=40						
AKBB	Malin Array Si	75.14	322	eP	P	17 06 21.3	-0.3
	comp=Z,3.9nm,0.8s						
AKBB	Malin Array Si	75.14	322	eP	P	17 06 21.3	-0.3
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VRI	Vrincioaia	75.68	317	⇓iP	P	17 06 25.7	+0.9
VRI	Vrincioaia	75.68	317	P	P	17 06 26.5	+1.7
VRI				pmax	pmax		
	comp=Z,15nm,1.0s						
TESR	Tescani	75.86	317	⇑iP	P	17 06 25.6	-0.3
MLR	Muntele Rosu	76.15	316	⇑iP	P	17 06 27.9	+0.2
MLR	Muntele Rosu	76.15	316	P	P	17 06 27.8	+0.1
BIZ	Bicaz	76.32	318	⇑iP	P	17 06 29.4	+1.0
BOSA	Boshof	76.69	240	P	P	17 06 31.3	+0.2
	comp=Z,1.9nm,0.5s,baz=78,slow=4.1,SNR=6.8						
BOSA				LR	LR	17 34 14.8	
	comp=Z,46nm,18.1s,baz=95,slow=31						
VOIR		76.76	316	⇑iP	P	17 06 31.0	-0.1
VOIR		76.76	316	P	P	17 06 31.0	-0.1
BURAR	Bucovina Array	77.04	318	⇑iP	P	17 06 32.9	+0.3
BURAR	Bucovina Array	77.04	318	P	P	17 06 32.9	+0.3
BUR08	Bucovina Ar. S	77.05	318	eP	P	17 06 32.7	0.0
	comp=Z,7.8nm,0.9s						
VTS	Vitosha	77.61	313	⇓iP	P	17 06 36.9	+0.9
VTS	Vitosha	77.61	313	P	P	17 06 36.8	+0.8
RPZ	Rata Peaks	79.08	135	P	P	17 06 44.0	+0.1
	comp=Z,24nm,0.9s,baz=249,slow=15,SNR=3.5						
BZS	Buzias	79.17	316	⇑iP	P	17 06 43.4	-1.0
BZS	Buzias	79.17	316	P	P	17 06 43.4	-1.0
KOLS	Kolonicke sedl	79.20	319	eP	P	17 06 46.2	+1.7
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KOLS	Kolonicke sedl	79.20	319	eP	P	17 06 46.2	+1.7
SIRR	Siria	79.23	317	⇑iP	P	17 06 44.5	-0.2
BILL	Bilibino	79.44	21	⇑iP	P	17 06 47.3	+1.9
BILL				e		17 06 55.5	
BILL				e		17 09 50.8	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MSF	Maaselka	79.51	337	P	P	17 06 46.7	+0.9
MSF				pmax	pmax		
	comp=Z,13nm,1.0s						
FIA0	FINESS Array S	79.54	332	eP	P	17 06 44.4	-1.7
FIA0	FINESS Array S	79.54	332	eP	P	17 06 44.4	-1.7
FINES	FINESS Array B	79.54	332	P	P	17 06 44.4	-1.7
	comp=Z,2.4nm,0.6s,baz=117,slow=4.3,SNR=11						
FINES				LR	LR	17 45 44.8	
	comp=Z,36nm,19.5s,baz=70,slow=39						
FINES	FINESS Array B	79.54	332	i P	P	17 06 45.2	-0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PDG	Podgorica	80.51	312	⇑iP	P	17 06 52.4	+0.7
VYHS	Vyhne	81.40	319	eP	P	17 06 57.7	+1.4
VYHS	Vyhne	81.40	319	eP	P	17 06 57.7	+1.4
ARA0	ARCESS Array S	81.83	340	eP	P	17 06 56.0	-2.2
ARCES	ARCESS Array B	81.83	340	P	P	17 06 56.0	-2.2
	comp=Z,2.8nm,0.9s,baz=96,slow=8.3,SNR=5.2						
ARCES				LR	LR	17 46 39.7	
	comp=Z,44nm,20.7s,baz=90,slow=38						
ARCES	ARCESS Array B	81.83	340	P	P	17 06 56.0	-2.2
MORC	Moravsky Berou	82.37	320	⇑iP	P	17 07 00.2	-1.3
MORC	Moravsky Berou	82.37	320	P	P	17 07 00.2	-1.3
MODS	Modra-Piesok	82.42	318	eP	P	17 07 02.1	+0.4
MODS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MODS	Modra-Piesok	82.42	318	eP	P	17 07 02.1	+0.4
KSP	Ksiaz	83.26	321	P	P	17 07 09.1	+3.1
CONA	Conrad Observa	83.33	318	eP	P	17 07 06.4	-0.1
	comp=Z,2.3nm,0.9s						
SOKA	Soboth	83.83	317	ePcP	P	17 07 10.2	+1.1
	comp=Z,6.1nm,0.8s						
OBKA	Obir	84.15	316	ePcP	P	17 07 11.9	+1.2
	comp=Z,3.6nm,0.7s						
BRG	Berggiesshubel	84.75	321	ePKP	P	17 07 15.2	+1.6
	comp=Z,6.3nm,1.3s						
BRG	Berggiesshubel	84.75	321	eP	P	17 07 15.2	+1.6
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MYKA	Terra Mystica	84.78	316	i PcP	P	17 07 14.8	+0.9
	comp=Z,3.4nm,0.9s						
GERES	GERESS Array B	84.82	319	P	P	17 07 13.2	-0.9
	comp=Z,2.2nm,0.9s,baz=86,slow=8.2,SNR=14						
CLL	Collm	85.35	321	eP	P	17 07 17.0	+0.4
CLL	Collm	85.35	321	eP	P	17 07 17.0	+0.4
WET	Wettzell	85.37	319	P	P	17 07 19.6	+2.8
WET				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ABTA	Abfaltersbach	85.56	317	i P	P	17 07 17.5	-0.4
	comp=Z,4.7nm,1.2s						
WTTA	Wattenberg	86.17	317	i PcP	P	17 07 21.4	+0.4
	comp=Z,4.6nm,0.7s						
WATA	Walderalm	86.21	317	i PcP	P	17 07 22.0	+0.9
	comp=Z,2.2nm,0.6s						
NORES	NORESS Array B	86.43	331	P	P	17 07 22.5	+0.7
NORES				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SQTA	Sankt Quirin	86.46	317	i PcP	P	17 07 22.9	+0.5
	comp=Z,3.0nm,0.6s						
MOTA	Moosalm	86.53	317	i PcP	P	17 07 23.7	+1.0
	comp=Z,5.8nm,0.9s						
NB2	NORSAR Subarra	86.60	331	P	P	17 07 21.1	-1.5
	comp=Z,3.2nm,0.8s,baz=94,slow=4.6						
NOA	NORSAR Array B	86.60	331	P	P	17 07 21.3	-1.3
	comp=Z,4.2nm,0.8s,baz=95,slow=5.0,SNR=15						
NOA				LR	LR	17 50 17.0	
	comp=Z,27nm,19.7s,baz=255,slow=39						
RETA	Reutte	86.76	317	i PcP	P	17 07 24.6	+0.8
	comp=Z,4.3nm,0.8s						
FETA	Feichten	86.79	317	i PcP	P	17 07 25.3	+1.3
	comp=Z,2.4nm,0.6s						
VNDA	Vanda	86.80	169	P	P	17 07 23.2	0.0
	comp=Z,2.4nm,1.2s,baz=301,slow=9.0,SNR=5.6						
VNDA				LR	LR	17 40 41.9	
	comp=Z,30nm,21.9s,baz=321,slow=32						
DAVA	Damuels	87.36	317	i PcP	P	17 07 27.6	+0.8
	comp=Z,4.9nm,0.7s						
KEST	Kesra	88.01	306	P	P	17 07 29.6	-0.4
	comp=Z,5.7nm,0.9s,baz=64,slow=4.2,SNR=3.1						
LPG	La Plagne	89.59	315	eP	P	17 07 39.3	+1.7
LPG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HAU	Haudompre	89.72	318	eP	P	17 07 38.4	+0.6
HAU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BAIF	Baives	90.98	320	eP	P	17 07 44.9	+1.4
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VIVF	Saint-Julien-l	91.10	315	eP	P	17 07 45.3	+1.0
VIVF				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LOR	Lormes	91.46	317	eP	P	17 07 46.8	+0.9
LOR				pmax	pmax		
	comp=Z,13nm,1.0s						
SMF	Signal de Mont	91.53	317	eP	P	17 07 47.1	+0.9
SMF				pmax	pmax		
	comp=Z,13nm,1.0s						
SSF	Saint Saulge	91.72	317	eP	P	17 07 49.2	+2.1
SSF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AVF	Avril sur Loir	91.85	317	eP	P	17 07 48.6	+0.9
AVF				pmax	pmax		
	comp=Z,11nm,1.2s						
BGF	Bois d'Agland	92.22	317	eP	P	17 07 50.8	+1.4
BGF				pmax	pmax		
	comp=Z,12nm,1.0s						
TCF	Toulx Ste Croi	92.68	316	eP	P	17 07 52.8	+1.2
TCF				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CAF	Calviac	92.94	315	eP	P	17 07 54.3	+1.5
CAF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MTLF	Montolieu	93.00	313	eP	P	17 07 54.3	+1.2
MTLF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LDF	La Druitiere	93.96	319	eP	P	17 07 58.0	+0.6
LDF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
EKA	Eskdalemuir Ar	94.68	326	P	P	17 08 01.5	+1.0
TORD	Torodi Ar. Bea	96.22	283	LR	LR	17 49 07.5	
	comp=Z,15nm,18.4s,baz=310,slow=34						
COLA	College	97.52	23	⇑iP	P	17 08 13.2	0.0
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	97.94	23	LR	LR	17 57 58.1	
	comp=Z,26nm,19.3s,baz=164,slow=39						
NV01	Mina Array Sit	126.88	36	ePKPdf	PKPdf	17 13 43.8	-0.2
NVAR	Mina Array Bea	126.88	36	PKP	PKPdf	17 13 43.8	-0.2
	comp=Z,0.9nm,0.9s,baz=256,slow=3.6,SNR=5.1						
PD31	Pinedale Array	128.24	26	ePKPdf	PKPdf	17 13 43.7	-2.8
PDAR	Pinedale Array	128.24	26	PKP	PKPdf	17 13 43.7	-2.8
	comp=Z,0.6nm,1.0s,baz=311,slow=3.5,SNR=3.2						
TXAR	Lajitas Array	141.80	32	PKP	PKPdf	17 14 08.3	-3.7
	comp=Z,0.5nm,0.8s,baz=242,slow=2.7,SNR=6.4						
BDFB	Brasilia	144.68	246	PKP	PKPab	17 14 16.1	+0.1
	comp=Z,2.6nm,0.5s,baz=72,slow=9.6,SNR=3.5						
CPUP	Villa Florida	146.94	222	PKPbc	PKPdf	17 14 19.9	-1.0
	comp=Z,1.5nm,0.6s,baz=166,slow=4.2,SNR=2.4						

ISCJB ***05*** *17:01:05.4±0.3, 67°.08N±0°.02×20°.96E±0°.06, h0^{km}, Error ellipse: s-maj=3.5km s-min=3.1km az=0.8*

IDC ***05*** *17:01:06.4±1.0, 67°.06N×21°.12E, h0^{km}, mb1 3.0/3, mb1mx2.9/37, mbtmp2.9/3, ML2.0/3, Error ellipse: s-maj=16.0km s-min=8.2km az=112.0*

HEL ***05*** *17:01:06.7±0.0, 67°.08N×20°.92E, h0^{km}, ML2.3, ML2.1(UPP), Explosion*

UPP ***05*** *17:01:06.0±0.1, 67°.07N×20°.93E, h0^{km}, ML2.1, Explosion*

ISC 05 17:01:05.8±0.8**, 67°.07N**±0°.02×**20°.91E**±0°.02**, h0^{km}, n39, σ0ˢ.88**/57**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.14	290	P	Pg	17 01 09.1	+0.7
DUNU				S	Sg	17 01 11.3	+1.1
DUNU	Dundret	0.14	290	i P	Pg	17 01 09.1	+0.7
DUNU				i S	Sg	17 01 11.3	+1.1
MASU	Masugnsbyn	0.57	47	P	Pg	17 01 16.9	+0.2
MASU				S	Sg	17 01 24.2	+0.1
MASU	Masugnsbyn	0.57	47	i P	Pg	17 01 16.9	+0.2
MASU				i S	Sg	17 01 24.2	+0.1
ERTU	Ertsjaerv	0.73	135	P	Pg	17 01 19.6	-0.1
ERTU	Ertsjaerv	0.73	135	eP	Pg	17 01 19.4	-0.3
	baz=319						
PAJU	Pajala	0.86	92	P	Pg	17 01 22.0	-0.3
PAJU				S	Sg	17 01 33.5	0.0
PAJU	Pajala	0.86	92	i P	Pg	17 01 22.0	-0.3
PAJU				i S	Sg	17 01 33.5	0.0
RATU	Laukkuluspa	0.91	327	P	Pg	17 01 22.8	-0.4
RATU	Laukkuluspa	0.91	327	eP	Pg	17 01 22.8	-0.4
HARU	Harads	0.92	178	P	Pg	17 01 23.1	-0.2
HARU				S	Sg	17 01 35.4	+0.4
HARU	Harads	0.92	178	eP	Pg	17 01 23.1	-0.2
HARU				eS	Sg	17 01 35.4	+0.4
SALU	Saltoluokta	0.98	289	P	Pg	17 01 24.5	-0.1
SALU	Saltoluokta	0.98	289	eP	Pg	17 01 24.5	-0.1
SALU	Saltoluokta	0.98	289	eP	Pg	17 01 24.4	-0.1
LANU	Lannavaara	1.06	22	P	Pg	17 01 25.4	-0.7
LANU	Lannavaara	1.06	22	eP	Pg	17 01 25.2	-0.9
	baz=204						
NIKU	Nikkaluokta	1.08	319	P	Pg	17 01 25.9	-0.5
NIKU	Nikkaluokta	1.08	319	eP	Pg	17 01 25.9	-0.5
KALU	Kalix	1.57	140	P	Pn	17 01 34.6	-0.2
KALU	Kalix	1.57	140	eP	Pn	17 01 34.6	-0.2
SJUU	Sjulsmark	1.60	170	P	Pn	17 01 35.2	+0.1
SJUU	Sjulsmark	1.60	170	eP	Pn	17 01 35.2	+0.1
TOF	Tornio	1.69	125	eP	Pn	17 01 36.8	+0.3
TOF				MSG		17 01 56.4	
	comp=Z,35nm,0.2s						
TOF				eSN	Sg	17 02 01.8	+1.8
HEF	Hetta	1.70	37	eP	Pn	17 01 36.4	-0.3
	baz=223						
HEF				MSG		17 01 56.2	
	comp=Z,27nm,0.2s						
HEF				eSN	Sb	17 02 00.1	+0.3
LILU	Lilltraesk	1.85	194	P	Pn	17 01 39.3	+0.7
LILU				S	Sb	17 02 03.7	-0.3
LILU	Lilltraesk	1.85	194	eP	Pn	17 01 39.3	+0.7
LILU				eS	Sb	17 02 03.7	-0.3
KIF	Kilpisjarvi	1.94	359	ePB	Pb	17 01 41.4	-0.5
KIF				MSG		17 02 04.7	
	comp=Z,27nm,0.2s						
KIF				eSG	Sg	17 02 08.7	+0.7
KIF	Kilpisjarvi	1.94	359	eP	Pb	17 01 41.6	-0.3
RNF	Rovaniemi	2.07	101	eP	Pn	17 01 42.7	+1.0
	baz=295						
RNF				eSG	Sb	17 02 10.9	+0.5
SGF	Sodankyl	2.21	78	eP	Pn	17 01 44.7	+1.0
	baz=265						
SGF				eSG	Sb	17 02 15.4	+0.9
BURU	Burvik	2.51	175	eP	Pn	17 01 49.1	+1.4
OUL	Oulu	2.85	132	ePB	Pn	17 01 54.7	+2.4
ARCES	ARCESS Array B	3.00	33	Pn	Pn	17 01 54.6	+0.1
	comp=Z,0.6nm,0.3s,baz=212,slow=15,SNR=63						
ARCES				Sn	Sn	17 02 31.8	+0.6
	comp=Z,0.8nm,0.3s,baz=212,slow=21,SNR=6.9						
ARE0	ARCESS Array S	3.00	33	eP	Pn	17 01 55.0	+0.4
	baz=212						
ARE0				e		17 02 26.1	
OUF	Merijarvi	3.14	148	eP	Pn	17 01 57.6	+1.2
OUF				MSG		17 02 38.6	
	comp=Z,3.5nm,0.2s						
MSF	Maaselka	3.46	106	eP	Pn	17 02 02.7	+1.9
	baz=284						
FINES	FINESS Array B	6.08	156	Pn	Pn	17 02 38.0	+1.2
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=7.5						
FINES				Sn	Sn	17 03 45.1	-1.9
	comp=Z,0.3nm,0.3s,baz=345,slow=20,SNR=5.9						
FINES				Lg	Lg	17 04 16.0	
	comp=Z,0.3nm,0.3s,baz=344,slow=25,SNR=3.4						
NOA	NORSAR Array B	7.39	220	Pn	Pn	17 02 54.9	+0.1
	comp=Z,0.0nm,0.3s,baz=18,slow=12,SNR=4.3						
NOA				Sn	Sn	17 04 16.2	-3.0
	comp=Z,0.0nm,0.3s,baz=50,slow=15,SNR=2.7						
NOA				Lg	Lg	17 04 59.5	
	comp=Z,0.0nm,0.3s,baz=42,slow=26,SNR=2.4						

IDC ***05*** *17:23:46.3±1.9, 51°.97N×175°.44W, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.5/41, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=70.4km s-min=18.9km az=168.0*

ISCJB ***05*** *17:23:49.8±0.8, 51°.50N±0°.09×175°.29W±0°.05, h52^{km}±6^{km}, mb3.8/5, Error ellipse: s-maj=15.8km s-min=4.1km az=168.8*

NEIC ***05*** *17:23:49.7±0.0, 51°.52N×175°.26W, h26^{km}, ML3.2(AEIC), After AEIC.*

ISC 05 17:23:51.4±1.7**, 51°.6N**±0°.1×**175°.31W**±0°.05**, h43^{km}**±15^{km}**, n63, σ1ˢ.37**/62**, mb3.8**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSMY	Great Sitkin M	0.67	317	ePn	Pn	17 24 04.1	-0.5
GSTR	Great Sitkin T	0.71	319	ePn	Pn	17 24 04.9	-0.3
GSTD	Great Sitkin T	0.72	314	ePn	Pn	17 24 04.8	-0.5
GSTD				eSn	Sn	17 24 15.5	+0.2
ETKA	Kagalaska Isla	0.75	295	ePn	Pn	17 24 04.3	-1.3
ADAG	Mount Adagdak	0.91	298	ePn	Pn	17 24 07.6	-0.2
ADK	Adak	0.92	291	ePn	Pn	17 24 06.0	-1.8
ADK				eSn	Sn	17 24 19.0	-0.9
ATKA	Atka Island	0.94	46	ePn	Pn	17 24 06.8	-1.4
ATKA				eSn	Sn	17 24 19.7	-0.8
KOKL	Mount Kliuchef	1.03	41	ePn	Pn	17 24 08.8	-0.7
KOFP	Korovin Flat P	1.04	46	ePn	Pn	17 24 08.9	-0.7
KOSE	Korovin Southe	1.11	44	ePn	Pn	17 24 10.2	-0.3
KIRH	Kanaga Island	1.16	288	ePn	Pn	17 24 10.3	-0.9
KIRH				eSn	Sn	17 24 25.8	-0.1
KIWB	Kanaga Island	1.19	285	ePn	Pn	17 24 10.3	-1.2

KIKV	Kanaga Island	1.20	286	*e*Pn	Pn	17 24 10.8	-1.0
KIMD	Kanaga Island	1.22	280	*e*Pn	Pn	17 24 10.6	-1.4
KICM	Kanaga Island	1.23	288	*e*Pn	Pn	17 24 11.4	-0.7
TAPA	Tanaga Point A	1.58	280	*e*Pn	Pn	17 24 16.1	-0.9
TAFP	Tanaga Falls P	1.70	283	*e*Pn	Pn	17 24 18.0	-0.6
TAFP				*e*Sn	Sn	17 24 39.0	-0.2
TASE	Tanaga Southea	1.72	280	*e*Pn	Pn	17 24 18.5	-0.4
TANO	Tanaga North	1.79	283	*e*Pn	Pn	17 24 19.7	-0.1
GAEA	Gareloi East	2.15	277	*e*Pn	Pn	17 24 24.2	-0.6
NIKH	Nikolski High	4.21	68	*e*Pn	Pn	17 24 53.7	+0.7
OKWE	Okmok W'ng Wal	4.72	63	*e*Pn	Pn	17 25 00.9	+0.8
MSW	Makushin Switc	5.69	62	*e*Pn	Pn	17 25 14.4	+1.1
UNV	Unalaska Valle	5.82	63	*e*Pn	Pn	17 25 16.1	+1.0
AKUT	Akutan	6.33	62	*e*Pn	Pn	17 25 26.7	+4.7
SPIA	Saint Paul Isl	6.36	26	*e*Pn	Pn	17 25 24.8	+2.3
SMY	Shemya	6.63	284	*e*Pn	Pn	17 25 28.5	+2.3
SDPT	Sand Point	9.62	61	*e*Pn	Pn	17 26 06.8	-0.3
CHGN	Chignik	11.03	58	*e*Pn	Pn	17 26 27.6	+1.3
GAMB	Gambell	12.40	7	*e*Pn	Pn	17 26 47.1	+2.0
CHIA	Chirikof Islan	12.44	62	*e*Pn	Pn	17 26 44.2	-1.4
SII	Sitkinak Islan	13.36	60	*e*Pn	Pn	17 26 59.1	+0.9
SVW2	Sparrevohn	14.46	41	*e*Pn	Pn	17 27 12.5	-0.7
KDAK	Kodiak Island	14.51	56	Pn	Pn	17 27 10.3	-3.4
	0.3nm,0.3s,baz=261,slow=5.5,SNR=23						
CNPM	China Poot	15.71	50	*e*Pn	Pn	17 27 29.1	-0.4
PPLA	Purkeypile	16.78	39	*e*P	P	17 27 45.8	+0.9
CAST	Castle Rocks	17.11	37	*e*P	P	17 27 49.4	+1.1
KTH	Kantishna Hill	17.62	38	*e*P	P	17 27 56.2	+2.2
BPAW	Bear Paw Mtn.	17.89	36	*e*P	P	17 27 58.6	+1.7
RND	Reindeer	18.35	40	*e*P	P	17 28 02.0	0.0
MCK	McKinley	18.47	39	*e*P	P	17 28 02.5	-0.9
BWN	Browne	18.49	37	*e*P	Pn	17 28 04.7	+0.7
MLY	Manley	18.50	34	*e*P	Pn	17 28 04.3	+0.2
DHY	Denali Highway	18.80	41	*e*P	Pn	17 28 07.5	-0.4
WRH	Wood River Hil	19.16	37	*e*P	P	17 28 10.0	-0.8
CCB	Clear Creek Bu	19.35	37	*e*P	P	17 28 12.4	-0.5
HDA	Harding Lake	19.57	38	*e*P	P	17 28 15.8	+0.5
ILAR	Eielson Array	19.76	37	P	P	17 28 15.8	-1.5
	0.3nm,0.3s,baz=229,slow=9.3,SNR=10						
ILB	Eielson Array	19.76	37	*e*P	P	17 28 17.8	+0.4
DOT	Dot Lake	20.40	42	*e*P	P	17 28 24.1	-0.3
EGAK	Eagle	22.00	40	*e*P	P	17 28 41.1	-0.3
ASAJ	Asahikawa	28.89	272	*e*P	P	17 29 49.7	+3.8
KLR	Kul'dur	33.22	287	P	P	17 30 23.6	-0.4
	1.6nm,0.5s,baz=71,slow=8.0,SNR=9.5						
H11N2	WAKE ISLAND Hy	34.70	210	T	T	18 07 31.7	
	baz=18,slow=76,SNR=37						
H11N3	WAKE ISLAND Hy	34.71	210	T	T	18 07 32.2	
	baz=18,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	34.72	210	T	T	18 07 31.1	
	baz=18,slow=76,SNR=27						
USRK	Ussuriysk Ar.	35.43	279	P	P	17 30 42.5	-0.6
	1.1nm,0.5s,baz=55,slow=9.3,SNR=4.7						
H11S1	WAKE ISLAND Hy	35.91	210	T	T	18 09 04.0	
	baz=19,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	35.93	210	T	T	18 09 05.3	
	baz=19,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	35.93	210	T	T	18 08 58.0	
	baz=19,slow=76,SNR=9.0						
PDAR	Pinedale Array	44.16	75	P	P	17 31 56.6	+0.7
	0.6nm,0.6s,baz=308,slow=5.2,SNR=6.4						
MKAR	Makanchi Array	61.61	310	P	P	17 34 02.4	-1.9
	0.2nm,0.3s,baz=50,slow=7.1,SNR=6.8						
CMAR	Chiang Mai Arr	73.16	279	P	P	17 35 17.8	+0.3
	0.2nm,0.4s,baz=17,slow=5.9,SNR=3.5						

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*DDA **05** 17:29:29.8, 39°.50N×27°.68E, h7^{km}±2^{km}, ML3.1*
*ISCJB **05** 17:29:30.3±0.5, 39°.52N±0°.03×27°.67E±0°.05, h8^{km}±5^{km}, Error ellipse: s-maj=6.7km s-min=5.0km az=20.9*
*ISK **05** 17:29:30.2, 39°.54N×27°.63E, h8^{km}, ML2.1/10*
ISC 05 17:29:30.3±0.9**, 39°.50N**±0°.03×**27°.68E**±0°.04**, h13**^{km}±7^{km}**, n14, σ0^{s}.56**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEP	BALIKESIR_Sava	0.13	165	*i* P	Pg	17 29 33.4	-0.3
STEP				*i* S	Sg	17 29 35.6	-0.5
STEP				IAML_P			
	comp=Z,55µm,0.2s						
BALB	Balikesir	0.21	49	PG	Pg	17 29 34.6	-0.3
BALB				SG	Sg	17 29 38.6	+0.6
BALY	Balya	0.24	350	*i* P	Pg	17 29 35.9	+0.4
BALY				*i* S	Sg	17 29 39.2	+0.2
BALY				IAML_P			
	comp=Z,15µm,0.1s						
DURS	Dursunbey	0.62	81	*i* P	Pg	17 29 41.5	-1.0
DURS				*i* S	Sg	17 29 51.6	+0.8
ZEDA	zmir-Bergama	0.71	221	*i* P	Pb	17 29 44.9	+0.3
ZEDA				*i* S	Sb	17 29 55.0	+0.7
DKL	Dikili	0.74	234	PG	Pb	17 29 44.9	-0.1
EDC	Edincik	0.85	10	PG	Pg	17 29 46.2	-0.7
KCTX	Karacabey (Bur	0.92	34	PG	Pg	17 29 47.8	-0.4
MRMT	Marmara Adasi	1.10	357	PG	Pb	17 29 51.1	-0.2
RKY	Sarkoy-Tekirda	1.24	342	PN	Pn	17 29 53.7	+0.2
GELI	Tayfur-Gelibol	1.28	314	PN	Pg	17 29 54.2	-0.8
BOZC	Bozcaada	1.30	286	PN	Pn	17 29 54.1	-0.1
TVSB	Tavsanli	1.38	92	PN	Pg	17 29 56.9	0.0
ARMT	Armutlu	1.40	40	PN	Pb	17 29 56.2	-0.1

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*MDD **05** 17:55:00.0±1.9, 29°.30N×16°.33W, h80^{km}±28^{km}, mb1.9/5, Error ellipse: s-maj=29.3km s-min=10.6km az=172.0, PRXIMO TT-model: canary SOLUCIN POBRE*
ISC 05 17:54:56.7±2.5**, 29°.4N**±0°.1×**16°.32W**±0°.07**, h10**^{km}**, n7, σ1^{s}.97**/13**, 1C-1D, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBAJ	Bajamar	0.84	181	⇑P	Pb	17 55 15.9	+2.5
	6.7nm,0.3s,SNR=18						
EBAJ				S	Sn	17 55 27.4	+0.3
	1.7nm,0.1s,SNR=7.9						
CRAJ	Montana Rajada	1.14	192	P	Pg	17 55 19.5	+0.7
	2.6nm,0.6s,SNR=7.9						
CRAJ				S	Sg	17 55 33.6	0.0
	14nm,2.1s,SNR=7.9						
CCAN	Las Canadas	1.19	192	P	Pg	17 55 19.8	+0.2
	6.7nm,3.2s,SNR=7.9						
CCAN				S	Sg	17 55 35.4	+0.4
	20nm,2.5s,SNR=7.9						
EGOM	La Gomera	1.45	213	P	Pn	17 55 22.6	-0.4
	1.5nm,0.1s,SNR=7.9						
EGOM				S	Sb	17 55 40.5	-1.8
	7.3nm,0.1s,SNR=5.7						
EOSO	Osorio	1.47	153	⇓P	Pn	17 55 23.6	+0.2
	3.2nm,0.1s,SNR=18						
EOSO				S	Sb	17 55 41.4	-1.7
	4.2nm,0.2s,SNR=7.9						
CFTV	Fuerteventura	2.19	116	P	Pn	17 55 34.4	+1.2
	0.2nm,0.2s,SNR=7.9						
CFTV				S	Sn	17 55 56.2	-4.2
	0.8nm,0.2s,SNR=7.9						
CTAN	El Hierro	2.23	224	S	Sn	17 55 58.7	-2.7
	5.6nm,0.7s,SNR=7.9						

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*ISCJB **05** 18:04:45.1±0.9, 1°.16S±0°.03×77°.60W±0°.04, h13^{km}±4^{km}, Error ellipse: s-maj=7.4km s-min=4.1km az=27.3*
*IGQ **05** 18:04:46.0±0.5, 1°S±2°×7°8W±°, h8^{km}, MLv3.8*
ISC 05 18:04:45.4±1.1**, 1°.15S**±0°.03×**77°.63W**±0°.04**, h14**^{km}±7^{km}**, n49, σ1^{s}.31**/66**, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATEN	Tena	0.23	309	P	Pg	18 04 50.7	+0.2
ATEN				S	Sg	18 04 55.0	+1.0
ARDO	Archidona, Ten	0.23	313	P	Pg	18 04 50.9	+0.4
ARDO				S	Sg	18 04 54.9	+0.9
APUY	Puyo	0.47	230	P	Pb	18 04 55.7	+0.1
APUY				S	Sb	18 05 03.2	+0.7
PISA	Pisayambo	0.76	277	P	Pg	18 04 59.9	-0.4
PIS1	Pisayambo	0.76	277	P	Pg	18 04 59.9	-0.3
PIS1				S	Sb	18 05 10.5	-0.5
BRUN	Tungurahua Vol	0.82	251	P	Pg	18 05 01.1	-0.4
BULB	Ulba Tungurahu	0.83	250	P	Pg	18 05 00.8	-0.7
BULB				S	Sb	18 05 12.2	-0.8
RUN5	Runtun	0.83	252	P	Pg	18 05 01.5	-0.2
ANTS	Antisana-Sarah	0.84	320	P	Pg	18 05 00.9	-1.0
ANTM	Antisana-La Mi	0.85	316	P	Pg	18 05 00.9	-1.1
COV1	Cotopaxi Volc	0.86	304	P	Pb	18 05 03.1	+0.6
POND	Pondoa	0.86	252	P	Pg	18 05 01.5	-0.7
RETU	Refugio	0.86	250	P	Pg	18 05 01.7	-0.6
BPAT	Tungurahua Vol	0.87	246	P	Pg	18 05 01.8	-0.7
ANTI	Antisana	0.88	323	P	Pg	18 05 01.3	-1.2
ANTG	Antisana-Guama	0.90	316	P	Pg	18 05 01.8	-1.1
ANTG				S	Sg	18 05 13.3	-1.4
BTAM	Cotopaxi Volca	0.90	302	P	Pg	18 05 02.3	-0.7
BBIL	Ulba Tungurahu	0.90	251	P	Pg	18 05 02.1	-0.9
BMAS	Trigal station	0.92	248	P	Pg	18 05 02.1	-1.1
BIL2	Estacion Bilba	0.92	251	P	Pg	18 05 02.8	-0.5
BVC2	Cotopaxi Volca	0.92	302	P	Pg	18 05 02.7	-0.6
VC1	Cotopaxi 1	0.92	303	P	Pg	18 05 02.7	-0.7
BMOR	Cotopaxi Volca	0.93	297	P	Pg	18 05 02.6	-0.8
BREF	Cotopaxi Volca	0.94	301	P	Pg	18 05 03.1	-0.6
BREF				S	Sb	18 05 16.6	+0.2
PITA	Cotopaxi Volc	0.99	306	P	Pg	18 05 03.7	-1.1
ILLI	Illinizas Sur	1.18	292	P	Pg	18 05 05.8	-2.5
NINA	Atacazo Ninahu	1.24	308	P	Pg	18 05 08.1	-1.3
CAYA	Cayambe	1.27	344	P	Pg	18 05 08.0	-2.0
CAYA				S	Sg	18 05 24.8	-1.7
GGPC	Guagua Pichinc	1.36	315	P	Pn	18 05 10.3	-0.2
TERV	Terraza Guagua	1.37	315	P	Pn	18 05 10.5	-0.1
YANA	Yana	1.39	318	P	Pn	18 05 10.6	-0.2
PULU	Pululahua	1.45	323	P	Pn	18 05 11.3	-0.4
AOTA	Otavalo	1.52	336	P	Pn	18 05 11.5	-0.9
IMBA	Imbabura, San	1.53	338	P	Pn	18 05 13.3	+0.6
AIB2	Ibarra (Univer	1.56	342	P	Pn	18 05 13.6	+0.7
YAHU	Yahuarcocha	1.57	344	P	Pn	18 05 13.2	-0.1
YAHU				S	Sn	18 05 33.9	+0.3
CUIC	Cuicocha-Domo	1.62	333	P	Pn	18 05 14.4	+0.5
COTA	Cotacachi	1.64	334	P	Pn	18 05 15.1	+0.9
CUSE	Cuicocha Este	1.64	332	P	Pn	18 05 14.6	+0.4
CUSE				S	Sb	18 05 36.4	0.0
URCU	Urcuqui	1.70	338	P	Pn	18 05 16.3	+1.3
ATUL	Tulcn	1.91	357	P	Pn	18 05 18.9	+1.1
LITE1	Lita	2.07	339	P	Pn	18 05 21.7	+1.8
COHC	Cochancay	2.08	231	P	Pb	18 05 22.4	-0.6
CPAS2	Pasto	2.39	9	*e*Pg	Pb	18 05 27.7	-0.7
CPAS2				*e*S	Sb	18 05 58.2	+0.3
CPAS2				*e*Sg	Sg	18 05 59.8	-2.5
CRUC	La Cruz	2.79	14	*e*P	Pn	18 05 29.8	-0.1
CRUC				*e*S	Sb	18 06 09.6	+0.3
PTLC	Puerto Leguiza	3.12	65	*e*P	Pn	18 05 31.7	-2.6
PTLC				*e*S	Sn	18 06 17.1	+5.6
PTLC				*i*		18 06 25.0	
	comp=Z,169nm,0.2s						
BBAC	Balboa, Cauca	3.18	7	*e*P	Pn	18 05 36.4	+1.3
BBAC				*e*S	Sb	18 06 22.8	+2.3
FLOC	Florencia	3.36	36	*e*P	Pn	18 05 35.6	-2.0
FLOC				*e*S	Sb	18 06 28.0	+2.4
SOTA	Rioblanco	3.42	17	*e*P	Pn	18 05 39.0	+0.2
SOTA				*e*S	Sb	18 06 26.7	-1.1

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*IDC **05** 18:41:18.4±2.6, 17°.14N×147°.35E, h0^{km}, mb3.4/5, mb1 3.8/6, mb1mx3.4/36, mbtmp3.5/6, ML4.1/1, Error ellipse: s-maj=67.0km s-min=23.1km az=88.0*
*ISCJB **05** 18:41:22.3±1.6, 17°.2N±0°.1×147°.3E±0°.3, h41^{km}, mb3.4/4, Error ellipse: s-maj=39.6km s-min=11.4km az=14.4*
ISC 05 18:41:24.0±2.1**, 17°.1N**±0°.1×**147°.3E**±0°.3**, h41**^{km}**, n6, σ0^{s}.37**/7**, mb3.5**/4**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.25	214	Pn	Pn	18 42 26.8	+0.5
	10nm,0.3s,baz=16,slow=20,SNR=6.1						
GUMO				Sn	Sn	18 43 14.2	-0.4
	2.1nm,0.3s,baz=195,slow=16,SNR=1.6						
MJAR	Matsushiro Arr	20.96	339	P	P	18 46 03.6	0.0
	1.6nm,0.7s,baz=164,slow=9.9,SNR=3.1						
WRA	Warramunga Arr	38.99	200	P	P	18 48 46.4	-0.3
	0.6nm,0.6s,baz=22,slow=9.3,SNR=2.1						
ASAR	Alice Springs	42.62	198	P	P	18 49 16.5	0.0
	0.1nm,0.3s,baz=19,slow=6.9,SNR=5.7						
CMAR	Chiang Mai Arr	45.99	279	P	P	18 49 43.8	+0.1
	0.7nm,0.9s,baz=64,slow=7.1,SNR=6.8						
MKAR	Makanchi Array	60.67	314	P	P	18 51 31.0	-0.2
	0.2nm,0.6s,baz=100,slow=7.5,SNR=3.0						

IDC 05 18:46:51.3±1.7**, 1°.65N**×**124°.21E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/28**, mbtmp3.5**/3**, Error ellipse: s-maj=176.5km s-min=25.2km az=63.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.65	156	P	P	18 52 05.3	+0.7
	0.5nm,0.3s,baz=336,slow=12,SNR=2.3						
ASAR	Alice Springs	26.88	160	P	P	18 52 33.6	-0.4
	0.4nm,0.8s,baz=344,slow=15,SNR=16						
MKAR	Makanchi Array	57.87	327	P	P	18 56 45.0	0.0
	0.3nm,0.3s,baz=126,slow=8.8,SNR=8.5						

KRSC 05 18:49:25.8±2.1**, 51°.97N**×**153°.49E, h454**^{km}±30^{km}**, ML4.0, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALID	Alaid	1.70	130	*e*P	P	18 50 26.7	+1.3
KDTR	Khodutka, Kamc	2.85	91	*e*P	P	18 50 32.9	+0.9
KDTR				*e*S	S	18 51 25.8	0.0
RUS	Russkaya	3.13	80	*e*P	P	18 50 35.8	+1.8
RUS				*e*S	S	18 51 30.9	+1.4
DALK	Dalny	3.39	70	P	P	18 50 38.3	+2.3
DALK				S	S	18 51 35.2	+2.0
SPN	Mys Shipunski	4.15	72	*e*P	P	18 50 43.1	+0.7
SPN				*e*S	S	18 51 43.1	-1.7
KZV	Kizimen	5.13	50	*e*P	P	18 50 54.2	+2.5
TUMR	Tumrok	5.17	47	*e*P	P	18 50 55.1	+3.2
TUMD	Tumrok D	5.24	49	P	P	18 50 54.9	+2.4
MKZ	Mys Kozlova	5.58	59	*e*P	P	18 50 56.4	+0.5
MKZ				*e*S	S	18 52 06.5	-3.0
KBTR	Krutoberegovo	6.94	49	*e*P	P	18 51 11.3	+1.6
KBTR				*e*S	S	18 52 32.2	-2.7
BKI	Bering	8.10	62	*e*P	P	18 51 26.3	+4.2
BKI				*e*S	S	18 52 58.4	+0.7

IDC 05 19:01:59.9±4.7**, 20°.52S**×**178°.61E, h540**^{km}±38^{km}**, mb3.3**/3**, mb1 3.7**/3**, mb1mx2.9**/23**, mbtmp4.2**/3**, Error ellipse: s-maj=249.4km s-min=28.1km az=161.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.45	260	P	P	19 04 40.8	+8.0
	1.2nm,0.3s,baz=14,slow=24,SNR=15						
ASAR	Alice Springs	41.42	257	P	P	19 08 58.5	-1.2
	1.6nm,0.5s,baz=96,slow=6.9,SNR=57						
ASAR				ScP	ScP	19 13 43.1	-0.6
	0.5nm,0.7s,baz=94,slow=5.5,SNR=6.2						
WRA	Warramunga Arr	41.45	263	P	P	19 09 01.0	+1.1
	3.9nm,0.4s,baz=92,slow=8.9,SNR=9.2						
TXAR	Lajitas Array	89.76	59	P	P	19 14 01.1	-0.1
	0.5nm,0.7s,baz=202,slow=6.8,SNR=6.2						

IDC 05 19:05:26.5±2.0**, 0°.76S**×**125°.36E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/26**, mbtmp3.4**/3**, Error ellipse: s-maj=200.0km s-min=28.3km az=64.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.99	156	P	P	19 10 10.7	-0.9
	0.5nm,0.3s,baz=334,slow=12,SNR=1.8						
ASAR	Alice Springs	24.23	161	P	P	19 10 46.0	+0.8
	0.4nm,0.5s,baz=348,slow=9.9,SNR=2.0						
MKAR	Makanchi Array	60.51	327	P	P	19 15 38.4	-0.1
	0.4nm,0.5s,baz=111,slow=6.3,SNR=4.9						

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*IDC **05** 19:10:34.2±1.4, 51°.04N×179°.66W, h0^{km}, mb3.4/6, mb1 3.8/6, mb1mx3.5/38, mbtmp3.4/6, Error ellipse: s-maj=48.7km s-min=27.4km az=161.0*
*NEIC **05** 19:10:38.0±0.0, 50°.94N×179°.45W, h26^{km}, mb3.7/11, ML3.3(AEIC), After AEIC.*
ISC 05 19:10:34.8±3.1**, 51°.0N**±0°.1×**179°.53W**±0°.09**, h5**^{km}±18^{km}**, n37, σ1^{s}.13**/44**, mb3.6**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GALAA	Gareloi Lava P	0.92	31	*e*Pn	Pn	19 10 54.8	+0.4
GALAA				*e*Sn	Sn	19 11 07.7	-0.2
GAEA	Gareloi East	0.94	31	*e*Pn	Pn	19 10 55.0	+0.3
GAEA				*e*Sn	Sn	19 11 08.4	-0.2
TASE	Tanaga Southea	1.27	47	*e*Pn	Pn	19 10 59.7	+0.4
TAFP	Tanaga Falls P	1.34	46	*e*Pn	Pb	19 11 00.5	+0.2
TAFP				*e*Sn	Sg	19 11 17.9	+0.2
KIMD	Kanaga Island	1.64	61	*e*Pn	Pn	19 11 04.4	+0.1
KIMD				*e*Sn	Sn	19 11 25.0	-0.7
KIWB	Kanaga Island	1.73	59	*e*Pn	Pn	19 11 05.8	+0.3
KIKV	Kanaga Island	1.73	58	*e*Pn	Pn	19 11 06.1	+0.5
KICM	Kanaga Island	1.74	56	*e*Pn	Pn	19 11 06.5	+0.9
ADK	Adak	2.00	62	*e*Pn	Pn	19 11 09.5	+0.3
ADK				*e*Pg	Pb	19 11 09.8	-1.9
ADK				*e*Sn	Sn	19 11 34.3	-0.3
ADAG	Mount Adagdak	2.09	60	*e*Pn	Pn	19 11 11.5	+1.1
ETKA	Kagalaska Isla	2.15	64	*e*Pn	Pn	19 11 12.0	+0.7
GSTD	Great Sitkin T	2.37	62	*e*Pn	Pn	19 11 15.9	+1.4
GSTD				*e*Sn	Sn	19 11 44.3	+0.3
GSMY	Great Sitkin M	2.42	63	*e*Pn	Pn	19 11 16.2	+1.2
GSTR	Great Sitkin T	2.44	61	*e*Pn	Pn	19 11 17.3	+1.9
ATKA	Atka Island	3.54	68	*e*Pn	Pn	19 11 31.4	+1.0
NIKH	Nikolski High	6.89	69	*e*Pn	Pn	19 12 19.1	+2.7
SPIA	Saint Paul Isl	8.26	38	*e*Pn	Pn	19 12 37.9	+2.7
MSW	Makushin Switc	8.32	64	*e*Pn	Pn	19 12 38.0	+1.9
UNV	Unalaska Valle	8.46	65	*e*Pn	Pn	19 12 40.3	+2.3
SDPT	Sand Point	12.23	62	*e*Pn	Pn	19 13 30.1	+0.6
OHAK	Old Harbor	16.54	58	*e*Pn	Pn	19 14 25.4	-1.9
	8.5nm,1.3s						
KDAK	Kodiak Island	17.03	56	*e*Pn	Pn	19 14 32.0	-1.4
	7.4nm,1.0s						
CNPM	China Poot	18.13	51	*e*P	Pn	19 14 47.0	-0.1
	5.6nm,1.0s						
PPLA	Purkeypile	18.92	40	*e*P	P	19 14 56.4	+0.2
	5.8nm,1.1s						
KTH	Kantishna Hill	19.72	39	*e*P	P	19 15 04.7	-0.3
	6.1nm,1.0s						
BPAW	Bear Paw Mtn.	19.95	38	*e*P	Pn	19 15 08.4	-0.7
	5.0nm,1.3s						
RND	Reindeer	20.51	41	*e*P	P	19 15 14.0	+0.4
	2.0nm,0.8s						
SCM	Sheep Creek Mo	20.63	46	*e*P	P	19 15 13.5	-1.4
	2.9nm,1.0s						
DHY	Denali Highway	21.01	43	*e*P	P	19 15 18.5	-0.5
	4.7nm,1.1s						
ILAR	Eielson Array	21.84	38	P	P	19 15 28.2	+0.4
	0.2nm,0.3s,baz=238,slow=8.1,SNR=4.0						
DOT	Dot Lake	22.61	42	*e*P	P	19 15 36.3	+0.2
	2.6nm,0.9s						
EGAK	Eagle	24.15	41	*e*P	P	19 15 50.7	-0.8
	2.9nm,0.9s						
YKA	Yellowknife Ar	35.84	46	P	P	19 17 34.9	0.0
	0.7nm,0.7s,baz=292,slow=8.6,SNR=2.8						
NVAR	Mina Array Bea	44.06	82	P	P	19 18 44.9	+1.1
	0.2nm,0.5s,baz=293,slow=5.8,SNR=2.1						
PDAR	Pinedale Array	46.87	71	P	P	19 19 06.2	+0.1
	1.0nm,0.7s,baz=318,slow=3.5,SNR=10						
MKAR	Makanchi Array	59.92	308	P	P	19 20 41.1	-0.5
	0.2nm,0.4s,baz=56,slow=5.4,SNR=2.8						
ASAR	Alice Springs	84.88	222	P	P	19 23 10.6	+0.1
	0.4nm,0.9s,baz=22,slow=10.0,SNR=3.1						

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*IDC **05** 19:20:45.1±8.4, 12°.48S×167°.12E, h277^{km}±96^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.1/39, mbtmp3.9/6, MS2.9/1, Ms1 2.9/1, ms1mx2.4/16, Error ellipse: s-maj=85.2km s-min=33.0km az=158.0*
ISC 05 19:20:38.3±1.2**, 12°.6S**±0°.2×**167°.3E**±0°.3**, h220**^{km}**, n8, σ0^{s}.41**/7**, mb3.4**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.49	185	P	P	19 22 58.6	0.0
	0.2nm,0.3s,baz=73,slow=19,SNR=3.3						
ASAR	Alice Springs	33.53	246	P	P	19 26 57.5	-0.1
	0.4nm,0.8s,baz=78,slow=9.6,SNR=5.4						
JNU	Nakatsue	57.21	324	LR	LR	19 50 42.9	
	comp=Z,11nm,20.8s,baz=57,slow=32						
CMAR	Chiang Mai Arr	74.12	293	P	P	19 31 51.2	+0.2
	0.7nm,0.8s,baz=121,slow=4.5,SNR=6.3						
SONM	Songino Array	80.80	323	P	P	19 32 27.8	+0.3
	0.2nm,0.4s,baz=134,slow=8.3,SNR=1.5						
ILAR	Eielson Array	84.47	18	P	P	19 32 45.8	-0.1
	2.5nm,0.6s,baz=239,slow=5.5,SNR=30						
MKAR	Makanchi Array	95.68	317	P	P	19 33 38.4	-0.6
	0.7nm,0.7s,baz=95,slow=6.5,SNR=7.5						
ARCES	ARCESS Array B	118.18	346	PKP	PKiKP	19 38 59.1	+0.5
	0.5nm,0.4s,baz=36,slow=1.7,SNR=5.7						

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*SJA **05** 19:22:27.9±1.0, 21°.38S×67°.36W, h202^{km}±9^{km}, ML3.2, MW3.4*
*ISCJB **05** 19:22:29.3±0.9, 21°.37S±0°.04×67°.48W±0°.05, h192^{km}±11^{km}, Error ellipse: s-maj=7.5km s-min=5.9km az=163.2*
*GUC **05** 19:22:29.9±0.6, 21°.31S×67°.91W, h222^{km}±6^{km}, ML4.1*
*IDC **05** 19:22:31.8±7.8, 17°.89S×72°.93W, h214^{km}±66^{km}, mb2.5/1, mb1 3.2/2, mb1mx3.0/23, mbtmp3.4/2, Error ellipse: s-maj=97.9km s-min=50.6km az=33.0*
ISC 05 19:22:28.2±1.1**, 21°.37S**±0°.04×**67°.44W**±0°.05**, h206**^{km}±9^{km}**, n32, σ0^{s}.88**/51**, 8C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.73	255	*e*P	Pn	19 23 05.8	+1.1
PB09				*e*S	S	19 23 33.1	+0.5
PB09	IPOC Station P	1.73	255	⇑*i*P	Pn	19 23 05.6	+0.9
PB09				*e*S	S	19 23 33.0	+0.3
LVC	Limon Verde	1.84	228	*e*P	Pn	19 23 06.5	+0.5
LVC				*e*S	S	19 23 34.6	-0.2
LVC				IAML		19 23 38.2	
	comp=Z,57nm,0.2s						
LVC	Limon Verde	1.84	228	*i* P	Pn	19 23 06.5	+0.5
LVC				*i* S	S	19 23 35.0	+0.1
PB01	IPOC Station P	1.94	279	⇑*i*P	Pn	19 23 06.6	+0.1
PB01				*i* S	S	19 23 35.1	-0.9
PB01				IAML		19 23 36.8	
	comp=N,559nm,0.2s						
YJA	Yavi	1.96	115	*e*P	Pn	19 23 07.5	+0.3
YJA				IAML		19 23 08.2	
	comp=Z,144nm,0.7s						
YJA				*e*S	S	19 23 35.4	-1.6
PB08	IPOC Station P	2.02	307	*e*P	Pn	19 23 08.6	+0.9
PB08	IPOC Station P	2.02	307	⇓*i*P	Pn	19 23 08.6	+0.9
PB08				*i* S	S	19 23 37.9	0.0
PB03	IPOC Station P	2.25	252	*e*P	Pn	19 23 10.4	+0.5
PB03	IPOC Station P	2.25	252	⇑*i*P	Pn	19 23 10.4	+0.5
PB03				*i* S	S	19 23 40.9	-1.1
PB03				IAML		19 23 41.5	
	comp=N,761nm,0.3s						
PB02	IPOC Station P	2.29	271	*e*P	Pn	19 23 10.7	+0.4
PB02	IPOC Station P	2.29	271	⇑*i*P	Pn	19 23 10.7	+0.4
PB02				*i* S	S	19 23 41.2	-1.3
PB07	IPOC Station P	2.31	261	*e*P	Pn	19 23 11.0	+0.5
PB07	IPOC Station P	2.31	261	⇑*i*P	Pn	19 23 11.0	+0.5
PB07				*i* S	S	19 23 41.7	-1.2
PB07				IAML		19 23 43.0	
	comp=N,924nm,0.1s						
GO01	Chusmiza	2.36	316	*e*P	Pn	19 23 12.2	+0.8
GO01				*e*S	S	19 23 44.9	+0.3
PB06	IPOC Station P	2.38	236	*e*P	Pn	19 23 12.0	+0.7
PB06	IPOC Station P	2.38	236	⇓*i*P	Pn	19 23 11.9	+0.6
PB06				*i* S	S	19 23 44.2	-0.3
PB06				IAML		19 23 45.2	
	comp=E,730nm,0.2s						
PB11	IPOC Station P	2.62	307	*e*P	Pn	19 23 14.4	+0.4
PB11	IPOC Station P	2.62	307	⇓*i*P	Pn	19 23 14.0	+0.1
PB11				*i* S	S	19 23 48.0	-1.1
PB15	IPOC Station P	2.62	225	*e*P	Pn	19 23 15.0	+1.0
PB15	IPOC Station P	2.62	225	⇑*i*P	Pn	19 23 14.7	+0.7
PB15				*i* S	S	19 23 49.4	+0.1
PB04	IPOC Station P	2.69	249	*e*P	Pn	19 23 15.2	+0.4
PB04	IPOC Station P	2.69	249	⇑*i*P	Pn	19 23 15.2	+0.4
PB04				*i* S	S	19 23 49.4	-1.2
PB04				IAML		19 23 52.5	
	comp=N,441nm,0.6s						
PB05	IPOC Station P	2.96	240	*e*P	Pn	19 23 18.0	+0.3
PB05	IPOC Station P	2.96	240	⇑*i*P	Pn	19 23 18.1	+0.3
PB05				*i* S	S	19 23 54.4	-1.6
MNMC	Minye Minye	3.01	317	⇓*i*P	Pn	19 23 19.3	+0.7
MNMC				*i* S	S	19 23 56.6	-0.7
MNMCX	Minye Minye	3.01	317	*e*P	Pn	19 23 19.6	+1.1
PSGC	Pisagua	3.07	305	*e*P	Pn	19 23 18.6	-0.4

PSGC				*i*S	S	19 23 56.2	-2.1
AZAP	**Zapla**	3.59	143	*e*P	Pn	19 23 25.7	+0.4
AZAP				IAML		19 24 09.5	
	comp=Z,32nm,0.5s						
LPAZ	**La Paz**	5.10	353	P	Pn	19 23 45.8	+1.1
	comp=Z,3.9nm,0.3s,baz=165,slow=7.6,SNR=31						
LPAZ				S	S	19 24 43.7	-0.7
	baz=22,slow=18,SNR=1.5						
ASAR	**Alice Springs**	130.65	206	PKP	PKiKP	19 41 17.9	+1.6
	comp=Z,0.4nm,0.8s,baz=132,slow=1.6,SNR=10						
MKAR	**Makanchi Array**	144.72	37	PKP	PKiKP	19 41 42.7	-1.4
	comp=Z,1.2nm,0.7s,baz=306,slow=3.2,SNR=12						

IDC 05 19:24:30.4±2.1**,20°.29N**×**120°.70E,h0^{km},mb3.4**/4**,mb1 3.7**/4**,mb1mx3.4**/44**,mbtmp3.4**/4**,MS3.0**/1**,Ms1 3.2**/1**,ms1mx2.3**/25**,Error ellipse: s-maj=72.0km s-min=26.3km az=49.0,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	20.61	269	P	P	19 29 10.8	-0.5
	0.6nm,0.8s,baz=76,slow=9.5,SNR=6.9						
CMAR				LR	LR	19 38 32.2	
	comp=Z,38nm,18.9s,baz=86,slow=41						
MKAR	**Makanchi Array**	40.90	319	P	P	19 32 14.4	+0.1
	0.3nm,0.8s,baz=113,slow=15,SNR=3.0						
WRA	**Warramunga Arr**	42.16	161	P	P	19 32 24.4	-0.4
	0.7nm,0.5s,baz=345,slow=12,SNR=1.8						
ASAR	**Alice Springs**	45.55	163	P	P	19 32 52.2	+0.1
	0.3nm,0.4s,baz=344,slow=6.7,SNR=11						

IDC ***05*** *19:41:44.3±1.0,2°.26N×98°.67E,h0^{km},mb3.8/8,mb1 3.9/8,mb1mx3.6/43,mbtmp3.8/8,MS3.1/4,Ms1 3.1/4,ms1mx2.7/29,Error ellipse: s-maj=20.2km s-min=14.9km az=105.0*

ISCJB ***05*** *19:41:48.9±0.9,2°.64N±0°.05×98°.82E±0°.05,h26^{km}±8^{km},mb3.8/8,MS3.1/3,Error ellipse: s-maj=9.2km s-min=8.1km az=158.9*

DJA ***05*** *19:41:48.9±0.3,3°N±2°×9°9E±°,h10^{km},M3.9/10,MLv3.9/10*

ISC 05 19:41:48.3±1.4**,2°.58N**±0°.04×**98°.79E**±0°.05**,h16^{km}**±9^{km}**,n24,σ1^{s}39**/26**,mb3.9**/8**,MS3.0**/3**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	0.26	32	Pg	Pb	19 41 53.8	-1.0
	444nm,0.3s,baz=237,slow=9.8,SNR=1048						
TSI	**Tuntungan**	0.94	346	P	Pn	19 42 06.6	-0.2
KCSI	**Kotacane, Aceh**	1.38	313	P	Pn	19 42 12.1	-0.8
KCSI				S	Sg	19 42 33.3	+0.4
TPTI		1.74	293	P	Pn	19 42 17.3	-0.5
TPTI				S	Sn	19 42 39.9	+0.2
GSI	**Gunungsitoli**	1.75	224	P	Pn	19 42 18.2	+0.2
GSI				S	Sb	19 42 43.1	+1.2
MNSI	**Mandailing Nat**	1.94	156	P	Pb	19 42 22.6	-0.8
MNSI				S	Sg	19 42 49.8	-1.2
SNSI	**Sinabang, Aceh**	2.46	266	P	Pn	19 42 27.9	+0.1
SNSI				S	Sn	19 42 57.6	+0.1
MLSI	**Meulaboh, Aceh**	2.91	305	P	Pb	19 42 37.9	-1.9
MLSI				S	Sg	19 43 20.9	-1.0
LHMI	**Lhok Sumawe**	3.21	325	P	Pb	19 42 46.1	+1.2
SISI	**Saibi**	3.89	176	P	Pn	19 42 49.8	+2.3
TRTT	**Trang**	5.30	10	P	Pg	19 43 30.6	+0.7
PBKT	**Sadao Pong**	14.07	9	P	P	19 45 22.4	+7.6
	4.6nm,1.2s						
CMAR	**Chiang Mai Arr**	15.78	1	Pn	P	19 45 36.0	+2.2
	0.0nm,0.3s,baz=195,slow=13,SNR=13						
CMAR				LR	LR	19 51 27.8	
	comp=Z,39nm,18.5s,baz=174,slow=36						
CMMT	**Chiang Mai**	16.13	1	P	P	19 45 44.8	+7.0
WRA	**Warramunga Arr**	41.46	124	P	P	19 49 32.4	-2.3
	0.7nm,0.4s,baz=293,slow=11,SNR=4.5						
ASAR	**Alice Springs**	43.00	129	P	P	19 49 44.7	-2.6
	0.4nm,0.6s,baz=90,slow=8.2,SNR=36						
KSRS	**Korea Array**	43.82	34	LR	LR	20 08 48.2	
	comp=Z,18nm,19.4s,baz=220,slow=37						
SONM	**Songino Array**	45.56	7	P	P	19 50 09.1	+1.6
	1.0nm,1.0s,baz=151,slow=6.3,SNR=3.3						
SONM				LR	LR	20 11 27.2	
	comp=Z,31nm,19.4s,baz=128,slow=39						
MKAR	**Makanchi Array**	46.32	344	P	P	19 50 13.2	-0.2
	1.4nm,0.9s,baz=160,slow=7.8,SNR=9.6						
MJAR	**Matsushiro Arr**	49.61	42	LR	LR	20 12 35.5	
	comp=Z,17nm,19.8s,baz=115,slow=37						
GEYT	**Alibeck**	51.20	319	P	P	19 50 51.5	+0.3
	1.8nm,0.8s,baz=70,slow=9.5,SNR=4.3						
ZALV	**Zalesovo Beam**	52.47	350	P	P	19 51 01.8	+1.5
	1.2nm,0.6s,baz=182,slow=4.5,SNR=6.6						
BRTR	**Keskin Array B**	69.37	312	P	P	19 52 53.9	-1.8
	0.8nm,0.8s,baz=101,slow=7.8,SNR=3.8						
FINES	**FINESS Array B**	79.52	332	P	P	19 53 54.4	+0.3
	1.0nm,0.8s,baz=83,slow=4.8,SNR=2.9						

ISCJB ***05*** *19:44:27.0±0.4,35°.54N±0°.03×140°.09E±0°.04,h76^{km}±3^{km},mb3.5/9,Error ellipse: s-maj=6.4km s-min=5.1km az=142.4*

IDC ***05*** *19:44:26.6±1.8,35°.55N×140°.11E,h55^{km}±15^{km},mb3.4/9,mb1 3.5/12,mb1mx3.3/39,mbtmp3.6/12,ML3.4/2,MS2.5/2,Ms1 2.5/2,ms1mx2.3/15,Error ellipse: s-maj=22.9km s-min=6.6km az=67.0*

JMA ***05*** *19:44:27.3±0.2,35°.62N×140°.10E,h70^{km}±2^{km},M3.5*

JMA Felt I J1.

ISC 05 19:44:28.0±0.8**,35°.62N**±0°.05×**140°.11E**±0°.04**,h69^{km}**±6^{km}**,n34,σ1^{s}28**/42**,mb3.6**/9**,3C-7D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	**Nagara**	0.21	159	⇑P	Pn	19 44 38.5	0.0
JCN				S	Sn	19 44 46.8	+0.7
JSMT	**Sammumatsuo**	0.28	85	⇑P	Pn	19 44 38.9	+0.1
JSMT				*e*S	Sn	19 44 48.3	+1.5
TOK	**Tokyo**	0.29	284	P	Pn	19 44 39.4	+0.5
TOK				S	Sn	19 44 48.3	+1.4
BSO3	**Boso 3**	0.88	158	⇑P	Pn	19 44 43.9	-0.7
BSO3				X		19 44 57.0	
JOD2	**Odawara 2**	0.91	247	⇓P	Pn	19 44 44.6	-0.6
JOD2				S	Sn	19 44 56.8	-1.2
JAG	**Ashikaga**	0.96	327	⇓P	Pn	19 44 45.6	-0.4
JIM2	**Oshima 3**	1.06	212	P	Pn	19 44 45.9	-1.2
JIM2				S	Sn	19 44 59.4	-2.0
JRY	**Ryogami san**	1.06	292	⇓P	Pn	19 44 47.4	+0.2
BSO1	**Boso 1**	1.20	143	P	Pn	19 44 47.3	-1.1
BSO1				S	Sn	19 45 03.3	-0.4
JFNN	**Fujinakano**	1.24	250	⇓P	Pn	19 44 49.1	-0.3
JFNN				S	Sn	19 45 05.0	-0.5
JYN	**Shimob**	1.28	265	⇓P	Pn	19 44 49.8	-0.3
JYN				S	Sn	19 45 06.4	-0.2
JKT	**Katashina**	1.34	329	⇓P	Pn	19 44 50.6	-0.3
JKT				*e*S	Sn	19 45 08.3	+0.2
JIZS	**Izushimoda**	1.35	229	⇓P	Pn	19 44 50.1	-0.8
JIZS				S	Sn	19 45 06.6	-1.5
MJAR	**Matsushiro Arr**	1.79	301	P	Pn	19 44 56.6	-0.2
	6.1nm,0.3s,baz=158,slow=13,SNR=160						
MJAR				S	Sn	19 45 17.1	-1.6
	3.1nm,0.3s,baz=278,slow=15,SNR=12						
MAT	**Matsushiro**	1.80	301	P	Pn	19 44 57.2	+0.3
MAT				S	Sn	19 45 20.2	+1.4
JHJ	**Hachijo jima 2**	2.51	186	P	Pn	19 45 05.9	-0.6
	32nm,0.3s,baz=145,slow=21,SNR=17						
JHJ				S	Sn	19 45 32.9	-3.1
	107nm,0.3s,baz=241,slow=20,SNR=12						
ASAJ	**Asahikawa**	8.70	12	P	Pn	19 46 29.1	-1.9
	0.4nm,0.3s,baz=210,slow=11,SNR=5.7						
ASAJ				S	Sn	19 48 02.8	-4.7
	0.3nm,0.3s,baz=73,slow=14,SNR=2.9						
KSRS	**Korea Array**	9.98	284	P	Pn	19 46 49.1	+0.7
	baz=91,slow=14,SNR=2.4						
KSRS				LR	LR	19 50 07.7	
	comp=Z,25nm,20.3s,baz=128,slow=34						
GUMO	**Guam**	22.35	168	LR	LR	19 55 38.6	
	comp=Z,15nm,21.9s,baz=251,slow=30						
H11N2	**WAKE ISLAND Hy**	28.39	117	T	T	20 19 48.1	
	baz=308,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	28.40	117	T	T	20 19 39.8	
	baz=308,slow=75,SNR=21						
H11N3	**WAKE ISLAND Hy**	28.41	117	T	T	20 20 05.2	
	baz=308,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	29.04	119	T	T	20 20 14.8	
	baz=311,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	29.04	119	T	T	20 20 19.5	
	baz=311,slow=75,SNR=10						
H11S2	**WAKE ISLAND Hy**	29.05	119	T	T	20 20 45.5	
	baz=311,slow=75,SNR=8.2						
ZALV	**Zalesovo Beam**	42.11	314	P	P	19 52 13.6	+0.5
	0.4nm,0.3s,baz=99,slow=8.9,SNR=2.7						
ZALV				PcP	PcP	19 54 06.6	+0.2
	0.7nm,0.3s,baz=84,slow=5.9,SNR=3.6						
MKAR	**Makanchi Array**	43.99	303	P	P	19 52 29.1	+0.6
	0.7nm,0.5s,baz=84,slow=8.9,SNR=9.7						
ILAR	**Eielson Array**	51.25	32	P	P	19 53 25.2	+0.8
	0.3nm,0.6s,baz=270,slow=6.8,SNR=3.6						
WRA	**Warramunga Arr**	55.52	187	P	P	19 53 55.1	-1.0
	0.5nm,0.5s,baz=354,slow=8.7,SNR=4.2						
ASAR	**Alice Springs**	59.25	187	P	P	19 54 23.1	+0.8
	0.2nm,0.7s,baz=5.2,slow=14,SNR=2.9						
FINES	**FINESS Array B**	69.57	332	P	P	19 55 29.5	+0.3
	0.8nm,0.5s,baz=60,slow=5.0,SNR=7.9						
AKASG	**Malin Array Be**	74.77	322	P	P	19 56 00.5	0.0
	0.6nm,0.4s,baz=53,slow=6.7,SNR=4.2						
NOA	**NORSAR Array B**	75.08	337	P	P	19 56 02.6	+0.5
	0.4nm,0.6s,baz=40,slow=5.9,SNR=2.9						
GERES	**GERESS Array B**	83.35	328	P	P	19 56 46.9	-0.6
	0.2nm,0.3s,baz=49,slow=7.9,SNR=2.4						

ISCJB ***05*** *20:53:12.5±0.8,48°.08S±0°.09×99°.2E±0°.3,h12^{km},mb4.2/9,MS3.9/13,Error ellipse: s-maj=25.5km s-min=12.3km az=15.3*

IDC ***05*** *20:53:12.7±1.1,48°.18S×99°.56E,h0^{km},mb4.1/5,mb1 4.3/5,mb1mx3.9/23,mbtmp4.1/5,MS3.9/13,Ms1 3.9/13,ms1mx3.8/18,Error ellipse: s-maj=40.1km s-min=21.5km az=108.0*

NEIC ***05*** *20:53:12.5±2.7,48°.07S×99°.01E,h5^{km}±5^{km},mb4.4/6,Error ellipse: s-maj=31.0km s-min=8.6km az=119.0*

ISC 05 20:53:14.1±0.8**,48°.1S**±0°.1×**99°.3E**±0°.2**,h12^{km},n32,σ1^{s}13**/17**,mb4.4**/9**,MS3.9**/13**,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	17.21	45	T	T	21 14 48.8	
	baz=214,slow=74,SNR=33						
H01W1	**Cape Leeuwin H**	17.23	46	T	T	21 14 49.5	
	baz=214,slow=74,SNR=36						
H01W3	**Cape Leeuwin H**	17.23	45	T	T	21 14 49.5	
	baz=214,slow=74,SNR=40						
CASY	**Casey**	19.18	166	*e*P	Pn	20 57 38.7	+0.6
	5.2nm,1.1s						
NWAO	**Narrogin (SRO)**	20.32	48	LR	LR	21 03 40.6	
	comp=Z,540nm,20.8s,baz=234,slow=31						
MAW	**Mawson**	26.86	210	LR	LR	21 07 37.1	
	comp=Z,405nm,18.6s,baz=54,slow=32						
STKA	**Stephens Creek**	35.75	79	LR	LR	21 13 49.0	
	comp=Z,45nm,18.8s,baz=210,slow=35						
ASAR	**Alice Springs**	36.69	61	P	P	21 00 19.6	-1.2
	1.7nm,1.0s,baz=219,slow=7.7,SNR=12						
ASAR				LR	LR	21 13 48.0	
	comp=Z,151nm,18.2s,baz=220,slow=34						
VNDA	**Vanda**	37.69	162	P	P	21 00 27.5	-1.2
	1.9nm,0.7s,baz=287,slow=8.4,SNR=19						
VNDA				LR	LR	21 14 45.3	
	comp=Z,270nm,18.4s,baz=287,slow=34						
VNDA	**Vanda**	37.69	162	*e*P	P	21 00 28.1	-0.7
VNDA				*e*pP	P	21 00 29.1	+0.4
SBA	**Scott Base**	38.79	162	*e*P	P	21 00 40.7	+2.7
	7.7nm,1.2s						
WR1	**Warramunga Arr**	39.85	58	*e*P	P	21 00 47.4	-0.1
WRA	**Warramunga Arr**	39.85	58	P	P	21 00 47.4	-0.1
	3.0nm,1.0s,baz=216,slow=11,SNR=5.6						
WB2	**Warramunga Arr**	39.85	58	*e*P	P	21 00 49.2	+1.7
	12nm,1.3s						
LEM	**Lembang**	41.73	13	LR	LR	21 14 37.0	
	comp=Z,294nm,20.3s,baz=165,slow=31						
QSPA	**South Pole Qui**	42.05	180	*e*P	P	21 01 03.9	-1.4
	9.7nm,1.0s						
H08S2	**Diego Garcia H**	46.26	322	T	T	21 51 11.2	
	baz=155,slow=76,SNR=5.0						
H08S1	**Diego Carcia H**	46.27	322	T	T	21 51 12.8	
	baz=155,slow=76,SNR=7.8						
H08S3	**Diego Garcia H**	46.28	322	T	T	21 51 12.5	
	baz=155,slow=76,SNR=7.3						
KAPI	**Kappang**	46.36	29	LR	LR	21 18 31.7	
	comp=Z,131nm,19.3s,baz=215,slow=33						
SNAA	**Sanae**	48.75	204	P	P	21 01 58.7	+0.5
	2.7nm,0.8s,baz=136,slow=9.5,SNR=7.7						
SNAA	**Sanae**	48.75	204	*e*P	P	21 01 58.2	+0.1
	5.3nm,1.1s						
PSI	**Prapat**	50.68	360	LR	LR	21 21 16.0	
	comp=Z,98nm,18.6s,baz=184,slow=33						
BOSA	**Boshof**	58.94	261	LR	LR	21 24 03.4	
	comp=Z,70nm,18.1s,baz=178,slow=31						
CMAR	**Chiang Mai Arr**	66.24	360	P	P	21 04 02.7	+0.9
	2.0nm,0.8s,baz=197,slow=5.7,SNR=21						
CMAR				LR	LR	21 29 48.5	
	comp=Z,131nm,19.6s,baz=186,slow=33						
NIL	**Nilore**	84.64	338	*e*P	P	21 05 46.7	-0.5
	4.3nm,0.8s						
PLCA	**Paso Flores**	91.10	188	LR	LR	21 45 49.5	
	comp=Z,128nm,20.6s,baz=197,slow=35						
GEYT	**Alibeck**	93.15	329	LR	LR	21 43 29.8	
	comp=Z,27nm,21.0s,baz=70,slow=32						
MKAR	**Makanchi Array**	95.65	348	LR	LR	21 46 32.4	
	comp=Z,32nm,21.1s,baz=166,slow=33						
DAWY	**Dawson**	145.06	41	*e*PKPbc	PKPbc	21 12 48.9	-0.6
NVAR	**Mina Array Bea**	151.24	96	PKPbc	PKiKP	21 13 07.8	+0.1
	2.4nm,0.9s,baz=227,slow=5.4,SNR=6.7						
PDAR	**Pinedale Array**	159.15	94	PKP	PKPdf	21 13 11.8	0.0
	0.1nm,0.5s,baz=213,slow=3.1,SNR=2.4						

ISCJB ***05*** *20:55:09.3±0.4,42°.87N±0°.02×77°.92E±0°.02,h2^{km}±3^{km},Error ellipse: s-maj=3.7km s-min=2.4km az=162.1*

SOME ***05*** *20:55:09.9,42°.87N×77°.92E,h20^{km}*

KRNET ***05*** *20:55:09.5±0.1,42°.88N×77°.91E,h20^{km},mb3.9*

NNC ***05*** *20:55:09.3±0.4,42°.90N×77°.94E,h1^{km}±2^{km},mb3.7,mpv3.8,Error ellipse: s-maj=4.6km s-min=1.4km az=176.0*

ISC 05 20:55:09.7±1.0**,42°.88N**±0°.02×**77°.95E**±0°.01**,h9^{km}**±8^{km}**,n84,σ1^{s}09**/152**,32C-22D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	0.38	61	P	Pg	20 55 17.7	+0.5
	642nm,0.1s						
SATY				S	Sb	20 55 23.4	-1.3
	3μm,0.2s						
SATY	**Saty**	0.38	61	*e*P	Pg	20 55 17.6	+0.5
	642nm,0.1s						
SATY				*e*S	Sb	20 55 23.4	-1.3
	4μm,0.1s						
ZHN	**Zhinishke**	0.46	51	*e*P	Pg	20 55 19.1	+0.4
	baz=53						
ZHN				*e*S	Sg	20 55 25.5	+0.8
	baz=53						
ZHN	**Zhinishke**	0.46	51	*e*P	Pg	20 55 19.1	+0.4
	120nm,0.1s						
ZHN				*e*S	Sg	20 55 25.4	+0.8
	4μm,0.2s						
PRZ	**Przheval'sk**	0.52	140	⇑*i*P	Pg	20 55 20.2	+0.5
	baz=37						
PRZ				⇑*i*S	Sb	20 55 28.0	-0.7
	baz=37						
KURS	**Kuram**	0.63	15	P	Pg	20 55 22.0	+0.1
	141nm,0.1s						
KURS				S	Sb	20 55 30.9	-1.1
	216nm,0.4s						
KURS	**Kuram**	0.63	15	*e*P	Pg	20 55 22.0	+0.1
	baz=17						
KURS				*e*S	Sb	20 55 30.9	-1.1
	baz=17						
KURS	**Kuram**	0.63	15	*e*P	Pg	20 55 22.0	+0.1
	141nm,0.1s						
KURS				*e*S	Sb	20 55 30.9	-1.1
	216nm,0.4s						
KOTS	**Kotyrbulak**	0.71	300	P	Pg	20 55 22.1	-1.3
	325nm,0.2s						
KOTS				S	Sg	20 55 30.7	-2.0
	1μm,0.4s						
KOTS	**Kotyrbulak**	0.71	300	*e*P	Pg	20 55 22.1	-1.3
	baz=1.0						
KOTS				*e*S	Sg	20 55 30.7	-2.0
	baz=1.0						
KOTS	**Kotyrbulak**	0.71	300	*e*P	Pg	20 55 22.1	-1.3
	325nm,0.2s						
KOTS				*e*S	Sg	20 55 30.7	-2.0
	1μm,0.4s						
TNSS	**Tian-Shan**	0.75	283	P	Pg	20 55 23.9	-0.4
	35nm,0.2s						
TNSS				S	Sg	20 55 34.0	0.0
	247nm,0.4s						
TNSS	**Tian-Shan**	0.75	283	*e*P	Pg	20 55 23.9	-0.4
	baz=83						
TNSS				*e*S	Sg	20 55 34.1	0.0
	baz=83						
TNSS	**Tian-Shan**	0.75	283	*e*P	Pg	20 55 23.9	-0.4
	35nm,0.2s						
TNSS				*e*S	Sg	20 55 34.0	0.0
	247nm,0.4s						
KPKS	**Kokpek**	0.80	42	*e*P	Pg	20 55 25.1	+0.1
	baz=44						
KPKS				*e*S	Sb	20 55 35.8	-0.9
	baz=44						
KPKS	**Kokpek**	0.80	42	*e*P	Pg	20 55 25.1	+0.1
	1μm,0.2s						
KPKS				*e*S	Sb	20 55 35.8	-0.9
	2μm,0.4s						
KNDC	**Almaty**	0.80	296	⇑P	Pg	20 55 24.6	-0.5
	11nm,0.2s						
KNDC				⇓S	Sg	20 55 35.5	+0.1
	508nm,0.6s						
AAA	**Alma-Ata**	0.83	294	P	Pg	20 55 25.5	-0.1
	159nm,0.1s						
AAA				S	Sg	20 55 36.8	+0.4
	1μm,0.4s						
AAA	**Alma-Ata**	0.83	294	*e*P	Pg	20 55 25.5	-0.1
	baz=95						
AAA				*e*S	Sg	20 55 36.8	+0.4
	baz=95						
AAA	**Alma-Ata**	0.83	294	*e*P	Pg	20 55 25.5	-0.1
	159nm,0.1s						
AAA				*e*S	Sg	20 55 36.8	+0.4
	1μm,0.4s						
UZB	**Uzynbulak**	0.83	71	P	Pg	20 55 25.6	-0.1
	58nm,0.2s						
UZB				S	Sg	20 55 36.6	+0.1
	521nm,0.5s						
UZB	**Uzynbulak**	0.83	71	*e*P	Pg	20 55 25.6	-0.1
	baz=71						
UZB				*e*S	Sg	20 55 36.6	+0.1
	baz=71						
UZB	**Uzynbulak**	0.83	71	*e*P	Pg	20 55 25.6	-0.1
	58nm,0.2s						
UZB				*e*S	Sg	20 55 36.6	+0.1
	521nm,0.5s						
KDJ	**Kajisay**	0.94	218	⇓*i*P	Pg	20 55 26.5	-1.2
	baz=16						
KDJ				⇓*i*S	Sg	20 55 39.3	-0.7
	baz=16						
CHKK	**Chushkaly**	1.20	325	P	Pb	20 55 32.2	-0.5
	257nm,0.2s						
CHKK				S	Sg	20 55 48.2	-0.1
	1μm,0.3s						
CHKK	**Chushkaly**	1.20	325	*e*P	Pb	20 55 32.2	-0.5
	baz=26						
CHKK				*e*S	Sg	20 55 48.2	-0.1
	baz=26						
CHKK	**Chushkaly**	1.20	325	*e*P	Pb	20 55 32.2	-0.5
	257nm,0.2s						
CHKK				*e*S	Sg	20 55 48.2	-0.1
	1μm,0.3s						
PDGK	**Podgornoye**	1.22	68	P	Pb	20 55 32.3	-0.6
	10nm,0.2s						
PDGK				S	Sb	20 55 48.2	-0.5
	100nm,0.6s						
PDGK	**Podgornoye**	1.22	68	⇓P	Pb	20 55 31.9	-1.0
	5.4nm,0.2s						
PDGK				⇓S	Sb	20 55 48.0	-0.8
	119nm,0.5s						
PDGK	**Podgornoye**	1.22	68	⇓*i*P	Pb	20 55 31.9	-1.0
	baz=68						
PDGK				⇓*i*S	Sb	20 55 48.3	-0.5
	baz=68						
KTBS	**Karatobe**	1.25	312	P	Pn	20 55 32.8	-0.6
	105nm,0.2s						
KTBS				S	Sb	20 55 49.0	-0.6
	562nm,0.4s						
KTBS	**Karatobe**	1.25	312	*e*P	Pn	20 55 32.8	-0.6
	baz=10.0						
KTBS				*e*S	Sb	20 55 49.0	-0.6
	baz=10.0						
KTBS	**Karatobe**	1.25	312	*e*P	Pn	20 55 32.8	-0.6
	105nm,0.2s						
KTBS				*e*S	Sb	20 55 49.0	-0.6
	562nm,0.4s						
ARXS	**Arharly**	1.34	356	P	Pb	20 55 34.9	-0.1
	195nm,0.3s						
ARXS				S	Sg	20 55 52.7	-0.1
	284nm,0.3s						
ARXS	**Arharly**	1.34	356	*e*P	Pb	20 55 34.9	-0.1
	195nm,0.3s						
ARXS				*e*S	Sg	20 55 52.6	-0.1
	487nm,0.3s						
ULHL	**Ulahol**	1.41	244	⇑*i*P	Pn	20 55 34.4	-1.4
	baz=43						
ULHL				⇑*i*S	Sb	20 55 53.3	-1.2
	baz=43						
ULHL	**Ulahol**	1.41	244	P	Pn	20 55 35.0	-0.8
	SNR=249						
KST	**Kastek**	1.47	277	P	Pn	20 55 36.3	-0.2
	61nm,0.3s						
KST				S	Sn	20 55 55.1	-0.8
	105nm,0.8s						
KST	**Kastek**	1.47	277	*e*P	Pn	20 55 36.3	-0.2
	baz=77						
KST				*e*S	Sn	20 55 55.2	-0.8
	baz=77						
KST	**Kastek**	1.47	277	*e*P	Pn	20 55 36.3	-0.2
	61nm,0.3s						
KST				*e*S	Sn	20 55 55.1	-0.8
	105nm,0.8s						
BOOM	**Boomskoye usch**	1.53	256	⇑*e*P	Pn	20 55 36.9	-0.5
	baz=56						
BOOM				⇑*i*S	Sn	20 55 56.5	-1.0
	baz=56						
KUU	**Kurty**	1.55	311	P	Pb	20 55 38.3	-0.3
	35nm,0.3s						
KUU				S	Sb	20 55 58.2	-0.1
	1μm,0.5s						
KUU	**Kurty**	1.55	311	*e*P	Pb	20 55 38.3	-0.3
	baz=12						
KUU				*e*S	Sb	20 55 58.3	-0.1
	baz=12						
KUU	**Kurty**	1.55	311	*e*P	Pb	20 55 38.2	-0.3
	35nm,0.3s						
KUU				*e*S	Sb	20 55 58.2	-0.1
	1μm,0.5s						
DGS	**Degeres**	1.64	284	P	Pb	20 55 40.0	-0.1
	42nm,0.4s						
DGS				S	Sb	20 56 01.5	+0.6
	176nm,0.5s						
DGS	**Degeres**	1.64	284	*e*P	Pb	20 55 40.0	-0.1
	baz=84						
DGS				*e*S	Sb	20 56 01.5	+0.6
	baz=84						
DGS	**Degeres**	1.64	284	*e*P	Pb	20 55 40.0	-0.1
	42nm,0.4s						
DGS				*e*S	Sb	20 56 01.5	+0.6
	176nm,0.5s						
TKM2	**Tokmak 2**	1.73	272	⇑P	Pn	20 55 40.7	+0.6
	16nm,0.3s						
TKM2				⇓S	Sb	20 56 03.6	0.0
	50nm,0.2s						
TKM2	**Tokmak 2**	1.73	272	⇓*e*P	Pn	20 55 40.4	+0.2
	baz=72						
TKM2				⇓*i*S	Sn	20 56 02.7	+0.2
	baz=72						
TKM2	**Tokmak 2**	1.73	272	P	Pn	20 55 40.9	+0.8
	SNR=83						
DJR	**Jarkent**	1.98	42	P	Pb	20 55 45.1	-0.7
	55nm,0.5s						
DJR				S	Sb	20 56 10.5	-0.1
	118nm,0.4s						
DJR	**Jarkent**	1.98	42	*e*P	Pb	20 55 45.1	-0.7
	55nm,0.5s						
DJR				*e*S	Sb	20 56 10.5	-0.1
	118nm,0.4s						
KZA	**Kyzart**	2.15	249	⇑*i*P	Pn	20 55 46.5	+0.4
	baz=49						
KZA				⇑*i*S	Sn	20 56 14.1	+0.9
	baz=49						
KZA	**Kyzart**	2.15	249	P	Pb	20 55 48.0	-1.0
	SNR=34						
KBK	**Karagaybulak**	2.22	265	⇓*i*P	Pn	20 55 47.6	+0.7
	baz=65						
KBK				⇓*e*S	Sn	20 56 14.7	+0.1
	baz=65						

KBK	Karagaybulak	2.22	265	P	Pb	20 55 49.6	-0.5
	SNR=153						
CHMS	Chumysh	2.35	274	⇓eP	Pn	20 55 49.4	+0.9
	baz=74						
CHMS				⇓iS	Sn	20 56 18.0	+0.4
	baz=74						
CHMS	Chumysh	2.35	274	P	Pb	20 55 51.4	-0.9
	SNR=52						
FRU1	Bishkek	2.44	270	⇑iP	Pn	20 55 50.6	+0.8
	baz=70						
FRU1				⇑iS	Sn	20 56 20.5	+0.6
	baz=70						
SGDS	Sogindy	2.50	284	Pg	Pb	20 55 54.6	-0.1
	29nm,0.4s						
SGDS				Lg	Lg	20 56 26.3	
	52nm,0.8s						
AAK	Ala-Archa	2.56	266	⇑Pn	Pb	20 55 54.2	-1.6
	15nm,0.3s						
AAK				⇑Lg	Lg	20 56 28.4	
	48nm,0.6s						
AAK	Ala-Archa	2.56	266	⇑eP	Pn	20 55 52.2	+0.7
	baz=66						
AAK				⇑iS	Sn	20 56 23.4	+0.6
	baz=66						
AAK	Ala-Archa	2.56	266	P	Pb	20 55 54.0	-1.8
	SNR=34						
USP	Ospenovka	2.56	280	⇓eP	Pn	20 55 52.3	+0.9
	baz=80						
USP				⇓iS	Sn	20 56 23.5	+0.8
	baz=80						
USP	Ospenovka	2.56	280	P	Pb	20 55 54.2	-1.6
	SNR=53						
KAPS	Kapalarasan	2.61	22	Pg	Pb	20 55 56.6	-0.1
	29nm,0.4s						
KAPS				Lg	Lg	20 56 30.0	
	216nm,0.5s						
KAPS	Kapalarasan	2.61	22	eP	Pb	20 55 56.6	-0.1
	29nm,0.4s						
KAPS				eS	Sb	20 56 30.0	+1.1
	216nm,0.5s						
UCH	Uchtor	2.62	257	⇑eP	Pn	20 55 53.7	+1.1
	baz=57						
UCH				⇑iS	Sn	20 56 25.0	+0.2
	baz=57						
UCH	Uchtor	2.62	257	P	Pb	20 55 55.5	-1.6
	SNR=56						
ARLS	Aral	2.87	251	⇑eP	Pn	20 55 56.2	+0.4
	baz=50						
ARLS				⇑iS	Sn	20 56 30.9	+0.3
	baz=50						
EKS2	Erkin-Say	3.08	267	⇑iP	Pn	20 55 59.0	+0.4
	baz=67						
EKS2				⇑iS	Sn	20 56 35.5	-0.2
	baz=67						
EKS2	Erkin-Say	3.08	267	P	Pn	20 56 01.1	+2.5
	SNR=20						
MRKS	Merke	3.48	269	Pg	Pb	20 56 12.7	+1.2
	9.6nm,0.5s						
MRKS				Lg	Lg	20 56 57.4	
	55nm,0.6s						
MRKS	Merke	3.48	269	eP	Pb	20 56 12.7	+1.2
	baz=69						
MRKS				eS	Sb	20 56 57.5	+3.6
	baz=69						
MRKS	Merke	3.48	269	eP	Pb	20 56 12.7	+1.2
	9.6nm,0.5s						
MRKS				eS	Sb	20 56 57.4	+3.6
	55nm,0.6s						
BTLS	Baital	3.55	309	eP	Pb	20 56 12.9	+0.2
	baz=9.0						
BTLS				eS	Sb	20 56 57.8	+1.9
	baz=9.0						
BTLS	Baital	3.55	309	eP	Pb	20 56 12.9	+0.2
	5.9nm,0.3s						
BTLS				eS	Sb	20 56 57.8	+1.9
	32nm,0.5s						
MAKZ	Makanchi	4.86	35	⇑Pn	Pn	20 56 26.6	+3.6
	0.5nm,0.5s						
MAKZ				⇑Pg	Pg	20 56 39.8	-2.9
	4.1nm,0.9s						
MAKZ				⇑Lg	Lg	20 57 40.1	
	5.1nm,0.6s						
MK31	Makanchi Array	4.99	37	⇑Pn	Pn	20 56 26.7	+2.0
	0.5nm,0.3s,baz=49,slow=8.2,SNR=23						
MK31				⇓Pg	Pb	20 56 39.8	+2.7
	0.3nm,0.2s,baz=218,slow=17,SNR=8.1						
MK31				⇓Lg	Lg	20 57 43.6	
	3.1nm,0.4s,baz=219,slow=26,SNR=8.1						
KK31	Karatay Array	5.46	275	⇓Pg	Pb	20 56 46.5	+1.3
	0.6nm,0.3s,baz=85,slow=16,SNR=32						
KK31				⇑Lg	Lg	20 58 02.6	
	3.9nm,0.4s,baz=85,slow=28,SNR=12						
IUG	Iuzhnay	5.90	266	Pg	Pb	20 56 56.8	+4.1
	1.1nm,1.2s						
IUG				Lg	Lg	20 58 13.1	
	14nm,1.3s						
OTUK	Ortayu	6.66	326	⇓Pn	Pn	20 56 48.9	+1.3
	1.3nm,0.5s						
OTUK				⇑Lg	Lg	20 58 37.9	
	15nm,0.6s						
KURBB	Kurchatov Arra	7.76	3	⇑Pn	Pn	20 57 02.9	+0.2
	0.8nm,0.8s						
KURBB				⇓Sn	Sn	20 58 29.0	-1.6
	3.0nm,0.7s						
KURBB				⇑Lg	Lg	20 59 16.8	
	5.0nm,0.6s						
KURK	Kurchatov	7.85	3	⇓Pn	Pn	20 57 03.5	-0.5
	0.5nm,0.6s						
KURK				⇑Sn	Sn	20 58 30.2	-2.8
	1.0nm,0.5s						
KURK				⇑Lg	Lg	20 59 18.4	
	2.5nm,0.9s						

MEX 05 20:58:48.9±0.6**, 14°.79N×93°.65W, h16**^{km}±999^{km}**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.00	25	eP	Pb	20 59 03.9	-3.9
PCIG				i S	Sb	20 59 16.9	-3.8
THIG		1.34	85	i P	Pn	20 59 09.7	-3.3
THIG				i S	Sn	20 59 25.0	-5.6
TGIG		2.04	14	eP	Pn	20 59 19.7	-2.9
TGIG				eS	Sn	20 59 43.2	-4.6
CCIG	Comitan	2.08	44	i P	Pn	20 59 20.4	-2.9
CCIG				i S	Sn	20 59 44.8	-4.2

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*ATH **05** 21:02:51.8, 40°.32N×25°.79E, h28^{km}±1^{km}, ML1.9/6, Error ellipse: s-maj=2.2km s-min=1.1km az=319.0*
*ISK **05** 21:02:51.7, 40°.30N×25°.80E, h4^{km}, ML2.2/10*
*ISCJB **05** 21:02:52.1±0.4, 40°.31N±0°.02×25°.79E±0°.03, h4^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=2.7km az=152.8*
*THE **05** 21:02:52.2, 40°.31N×25°.83E, h9^{km}±1^{km}, ML1.6/5, Error ellipse: s-maj=1.2km s-min=0.4km az=61.0*
*DDA **05** 21:02:53.0, 40°.28N×25°.91E, h6^{km}±2^{km}, ML2.7*
ISC 05 21:02:51.9±0.8**, 40°.31N**±0°.02×**25°.79E**±0°.02**, h11**^{km}±6^{km}**, n37, σ0^{s}.43**/59**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.14	143	PG	Pg	21 02 55.1	-0.2
GADA				SG	Sg	21 02 57.5	-0.1
GADA	Gvkgeada	0.14	143	P	Pg	21 02 55.2	-0.1
GADA				S	Sg	21 02 57.6	-0.1
GOKC	Gokceada-Canak	0.15	136	PG	Pg	21 02 55.2	-0.1
GOKC				SG	Sg	21 02 57.6	-0.1
SMTH	Samothraki Isl	0.26	310	P	Pg	21 02 57.8	+0.6
SMTH				S	Sb	21 03 02.3	-0.7
	175nm,0.1s						
SMTH	Samothraki Isl	0.26	310	P	Pg	21 02 57.9	+0.6
SMTH				S	Sb	21 03 02.3	-0.7
BOZC	Bozcaada	0.51	156	PG	Pg	21 03 01.8	0.0
BOZC	Bozcaada	0.51	156	i P	Pb	21 03 02.6	-0.2
BOZC				i S	Sg	21 03 09.1	+0.6
BOZC				IAML_P			
	comp=Z,2μm,0.2s						
ENEZ	Enez	0.51	33	PG	Pg	21 03 02.0	+0.1
GELI	Tayfur-Gelibol	0.53	80	PG	Pg	21 03 02.3	0.0
LIA	Limnos Island	0.62	229	P	Pb	21 03 04.7	+0.1
LIA				S	Sb	21 03 14.0	+0.7
	comp=Z,102nm,0.4s						
LIA	Limnos Island	0.62	229	P	Pb	21 03 04.8	+0.2
LIA				S	Sb	21 03 13.1	-0.2
LIA				AML	AML	21 03 17.2	
	comp=E,169μm,0.6s						
LIA				AML	AML	21 03 17.4	
	comp=N,227μm,0.3s						
ALN	Alexandroupoli	0.62	18	P	Pg	21 03 03.9	-0.1
ALN				S	Sb	21 03 13.0	-0.5
	comp=N,62nm,0.3s						
ALN	Alexandroupoli	0.62	18	P	Pg	21 03 04.0	0.0
ALN				S	Sg	21 03 12.9	+0.6
ALN				AML	AML	21 03 13.2	
	comp=E,116μm,0.3s						
ALN				AML	AML	21 03 13.5	
	comp=N,136μm,0.3s						
EZN	Ezine	0.63	139	PG	Pg	21 03 03.6	-0.6
EZN	Ezine	0.63	139	P	Pg	21 03 03.8	-0.4
EZN				S	Sg	21 03 12.5	0.0
LPK	Lapseki	0.75	85	PG	Pg	21 03 06.6	+0.2
BAYC	CANAKKALE_Bayr	0.81	134	i P	Pg	21 03 07.5	-0.1
BAYC				i S	Sb	21 03 18.7	-0.3
BAYC				IAML_P			
	comp=Z,1μm,0.1s						
KESN	Edirne-Kesan	0.86	52	i P	Pb	21 03 09.1	+0.1
KESN				i S	Sb	21 03 21.4	+0.8
KESN				IAML_P			
	comp=Z,197nm,0.1s						
RDO	Rodhopi	0.86	347	PG	Pg	21 03 08.6	+0.1
RDO	Rodhopi	0.86	347	P	Pg	21 03 08.6	+0.1
RDO				S	Sb	21 03 20.9	+0.6
	comp=Z,52nm,0.3s						
RDO	Rodhopi	0.86	347	P	Pg	21 03 08.5	0.0
RDO				S	Sb	21 03 20.9	+0.6
RDO				AML	AML	21 03 23.3	
	comp=E,139μm,0.2s						
RDO				AML	AML	21 03 24.5	
	comp=N,139μm,0.1s						
THAS	Thassos island	0.87	291	P	Pg	21 03 08.8	+0.1
THAS				S	Sn	21 03 21.9	-0.7
	comp=N,35nm,0.2s						
THAS	Thassos island	0.87	291	P	Pg	21 03 08.7	+0.1
THAS				S	Sn	21 03 21.7	-0.9
THAS				AML	AML	21 03 23.8	
	comp=N,78μm,0.2s						
THAS				AML	AML	21 03 24.6	
	comp=E,63μm,0.4s						
SIGR	SIGRI	1.09	177	P	Pb	21 03 12.8	0.0
SIGR				S	Sn	21 03 28.6	+0.4
SIGR	SIGRI	1.09	177	P	Pb	21 03 12.7	0.0
SIGR				S	Sn	21 03 28.0	-0.3
SIGR				AML	AML	21 03 29.1	
	comp=N,377μm,0.5s						
SIGR				AML	AML	21 03 29.6	
	comp=E,164μm,0.4s						
PRK	Paraskevi	1.12	160	P	Pg	21 03 14.0	+0.5
PRK	Paraskevi	1.12	160	P	Pg	21 03 14.0	+0.5
PRK				S	Sn	21 03 29.2	+0.3
PRK				AML	AML	21 03 31.4	
	comp=N,233μm,0.4s						
PRK				AML	AML	21 03 32.1	
	comp=E,166μm,0.3s						
AYVA	Ayvalik	1.22	145	i P	Pg	21 03 15.5	+0.2
AYVA				i S	Sg	21 03 31.9	+0.9
AYVA				IAML_P			
	comp=Z,460nm,0.3s						
KDZ	Kurdzhali	1.37	348	PN	Pg	21 03 18.6	+0.3
OUR	Ouranopolis	1.38	272	P	Pn	21 03 16.6	-0.5
DKL	Dikili	1.51	145	PN	Pg	21 03 20.4	-0.4
EDC	Edincik	1.59	88	PN	Pb	21 03 21.3	0.0
ZEDA	zmir-Bergama	1.67	143	i P	Pg	21 03 23.8	-0.2
ZEDA				i S	Sb	21 03 44.1	+0.5
ZEDA				IAML_P			
	comp=Z,476nm,0.3s						
EDRB	Edirne	1.70	25	PN	Pb	21 03 23.3	+0.1
NVR	Nevrokopi	1.79	306	P	Pn	21 03 23.0	+0.2
SRS	Serrai	1.85	297	P	Pn	21 03 23.6	0.0
PLD	Plovdiv	1.97	336	PN	Pb	21 03 26.9	-0.9

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*ISCJB **05** 21:09:52.4±0.3, 30°.26N±0°.04×102°.97E±0°.05, h10^{km}, mb3.9/22, MS4.0/1, Error ellipse: s-maj=6.1km s-min=5.5km az=139.8*
*IDC **05** 21:09:52.3±0.8, 30°.30N×102°.99E, h0^{km}, mb3.9/16, mb1 3.9/18, mb1mx3.8/46, mbtmp3.8/18, ML3.3/2, MS3.3/4, Ms1 3.3/4, ms1mx2.7/36, Error ellipse: s-maj=20.2km s-min=15.3km az=46.0*
*NEIC **05** 21:09:54.7±1.2, 30°.22N×102°.96E, h16^{km}±4^{km}, mb4.2/6, Error ellipse: s-maj=19.1km s-min=9.8km az=60.0*
*BJI **05** 21:09:56.4±0.0, 30°.33N×102°.94E, h19^{km}, mb3.8/5, mB4.0/3, ML3.9/18, Ms3.7/9, Ms7 3.5/8*
ISC 05 21:09:54.2±0.5**, 30°.26N**±0°.04×**102°.90E**±0°.05**, h10**^{km}**, n48, σ1^{s}.95**/52**, mb3.9**/22**, 2C-1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	0.98	48	⇑iPg	Pg	21 10 12.3	-0.9
CD2				Sg	Sg	21 10 25.0	-1.0
CD2				smax	smax		
	comp=N,14μm,0.7s						
CD2				smax	smax		
	comp=E,6μm,0.7s						
GYA	Guiyang	5.03	138	⇓iPn	Pn	21 11 10.9	+1.0
GYA				Pg	Pg	21 11 27.1	-3.5
GYA				Sn	Sn	21 12 07.1	-1.1
GYA				Sg	Sb	21 12 26.7	+3.6
GYA				smax	smax		
	comp=N,230nm,0.9s						
GYA				smax	smax		
	comp=E,170nm,0.7s						
GYA				LR	LR		
	comp=N,260nm,10.4s						
GYA				LR	LR		
	comp=E,180nm,8.8s						
GYA				LR	LR		
	comp=Z,370nm,8.5s						
KMI	Kunming	5.12	182	Pn	Pb	21 11 18.8	-5.2
KMI				Sn	Sn	21 12 15.4	+5.0
KMI				LR	LR		
	comp=N,550nm,9.4s						
KMI				LR	LR		
	comp=E,680nm,9.1s						
KMI				LR	LR		
	comp=Z,380nm,9.4s						
ENH	Enshi	5.70	88	ePn	Pn	21 11 19.5	+0.6
LZH	Lanzhou	5.87	7	ePg	Pg	21 11 44.7	-1.9
LZH				Sg	Sg	21 13 02.3	-0.3
LZH				smax	smax		
	comp=N,140nm,1.1s						
LZH				smax	smax		
	comp=E,160nm,1.1s						
LZH				LR	LR		
	comp=N,470nm,6.2s						
LZH				LR	LR		
	comp=E,350nm,6.0s						
LZH				LR	LR		
	comp=Z,400nm,7.6s						
XAN	Xi'an	6.35	52	ePn	Pn	21 11 27.1	-0.8
XAN	Xi'an	6.35	52	Pn	Pn	21 11 26.8	-1.1
XAN				Pg	Pb	21 11 48.3	+3.5
XAN				Sn	Sn	21 12 36.2	-4.2
XAN				Sg	Sb	21 13 08.8	+8.0
XAN				smax	smax		
	comp=Z,230nm,1.0s						
XAN				smax	smax		
	comp=Z,250nm,0.8s						
XAN				LR	LR		
	comp=Z,300nm,5.6s						
XAN				LR	LR		
	comp=Z,260nm,5.5s						
XAN				LR	LR		
	comp=Z,250nm,13.0s						
GTA	Gaotai	9.48	345	eP	Pn	21 12 02.7	-8.2
GTA				pP		21 12 07.0	
GTA				sP		21 12 10.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LSA	Lhasa	10.21	270	ePn	Pn	21 12 22.4	+1.1
LSA	Lhasa	10.21	270	P	Pn	21 12 26.5	+5.2
CMAR	Chiang Mai Arr	12.29	198	Pn	Pn	21 12 50.7	+1.4
	comp=Z,0.0nm,0.3s,baz=10,slow=11,SNR=3.1						
HHC	Hu-ho-hao-te	12.70	31	P	Pn	21 12 57.7	+2.8
HHC				pmax	pmax		
	comp=Z,19nm,5.4s						
SONA0	Songino Array	17.76	8	ePn	Pn	21 14 01.9	+0.3
SONM	Songino Array	17.76	8	P	Pn	21 14 01.9	+0.3
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=8.4						
SONM				LR	LR	21 21 45.3	
	comp=Z,55nm,20.6s,baz=212,slow=40						
WMQ	Urumqi	18.14	322	eP	Pn	21 14 07.0	+0.7
KS15	Wonju Array Si	21.91	64	eP	P	21 14 46.8	-0.8
	comp=Z,24nm,1.3s						
KSRS	Korea Array	21.95	64	P	P	21 14 47.5	-0.5
	comp=Z,3.1nm,0.7s,baz=241,slow=9.1,SNR=14						
MK31	Makanchi Array	22.97	322	eP	P	21 14 59.5	+0.6
	comp=Z,3.8nm,1.0s						
MK32	Makanchi Array	22.97	322	eP	P	21 14 59.6	+0.8
MKAR	Makanchi Array	22.97	322	P	P	21 14 59.6	+0.8
	comp=Z,2.2nm,0.7s,baz=123,slow=11,SNR=22						
MAKZ	Makanchi	23.15	321	eP	P	21 15 01.5	+0.8
	comp=Z,5.7nm,1.1s						
PGP	Puerto Galera	23.58	131	⇑eP	P	21 15 05.9	+0.8
USRK	Ussuriysk Ar.	26.86	51	P	P	21 15 33.7	-1.2
	comp=Z,1.6nm,0.9s,baz=252,slow=8.9,SNR=3.3						
ZALV	Zalesovo Beam	27.05	336	P	P	21 15 36.6	0.0
	comp=Z,2.3nm,0.6s,baz=140,slow=7.7,SNR=10						
ZALV				LR	LR	21 27 04.6	
	comp=Z,30nm,20.0s,baz=70,slow=38						
ZAA1	Zalesovo Array	27.06	336	eP	P	21 15 36.6	0.0
KURBB	Kurchatov Arra	27.31	325	P	P	21 15 39.0	+0.1
	comp=Z,0.5nm,0.5s,baz=130,slow=10,SNR=7.1						
ABKAR	Akbulak array	37.47	313	eP	P	21 17 08.6	+0.8
	comp=Z,1.4nm,0.6s						
GEYT	Alibeck	37.58	294	P	P	21 17 09.6	+0.6
	comp=Z,1.7nm,0.7s,baz=127,slow=3.8,SNR=2.6						
TIXI	Tiksi	43.78	12	P	P	21 17 58.7	-0.9
	comp=Z,1.2nm,0.3s,baz=227,slow=6.0,SNR=5.4						
PETK	Petropavlovsk-	45.52	44	P	P	21 18 12.9	-0.8
	comp=Z,1.0nm,0.7s,baz=255,slow=15,SNR=3.0						
PEA1	Petropavlovsk-	45.52	44	eP	P	21 18 12.9	-0.8
BRTR	Keskin Array B	56.26	300	LR	LR	21 49 10.0	
	comp=Z,22nm,19.9s,baz=96,slow=42						
AKASG	Malin Array Be	57.21	313	P	P	21 19 40.8	-0.6
	comp=Z,0.3nm,0.3s,baz=67,slow=7.3,SNR=5.5						
ARA0	ARCESS Array S	57.61	336	eP	P	21 19 43.8	-0.2
ARCES	ARCESS Array B	57.61	336	P	P	21 19 43.8	-0.2
	comp=Z,2.1nm,1.0s,baz=96,slow=7.3,SNR=2.2						
FIA0	FINESS Array S	57.69	326	eP	P	21 19 44.0	-0.7
FINES	FINESS Array B	57.69	326	P	P	21 19 44.0	-0.7
	comp=Z,1.6nm,0.9s,baz=87,slow=7.1,SNR=3.9						
WRA	Warramunga Arr	58.36	145	P	P	21 19 48.8	-1.0
	comp=Z,1.7nm,0.8s,baz=336,slow=7.6,SNR=5.6						
WR1	Warramunga Arr	58.37	145	eP	P	21 19 48.8	-1.0
ASAR	Alice Springs	61.32	147	P	P	21 20 10.4	+0.2
	comp=Z,0.7nm,0.7s,baz=336,slow=6.5,SNR=3.2						
NB200	NORSAR Array S	64.81	327	eP	P	21 20 31.4	-1.6
NOA	NORSAR Array B	64.81	327	P	P	21 20 31.4	-1.6
	comp=Z,0.2nm,0.5s,baz=86,slow=4.6,SNR=2.4						
BPAW	Bear Paw Mtn.	69.82	27	eP	P	21 21 04.7	0.0
	comp=Z,3.9nm,1.2s						
PPLA	Purkeypile	69.90	28	eP	P	21 21 04.8	-0.5
	comp=Z,17nm,1.6s						
ILAR	Eielson Array	71.04	25	P	P	21 21 10.7	-1.4
	comp=Z,0.8nm,0.9s,baz=297,slow=4.7,SNR=6.4						
YKA	Yellowknife Ar	82.80	17	P	P	21 22 17.5	-0.8
	comp=Z,1.6nm,0.7s,baz=325,slow=4.9,SNR=9.5						
YKB5	Yellowknife Ar	82.80	17	eP	P	21 22 17.5	-0.8
RPZ	Rata Peaks	96.42	137	LR	LR	22 08 56.8	
	comp=Z,45nm,18.6s,baz=267,slow=37						

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*ISK **05** 21:12:31.4, 40°.29N×25°.76E, h7^{km}, ML2.5/14*
*ATH **05** 21:12:31.6, 40°.32N×25°.78E, h28^{km}±1^{km}, ML2.2/5, Error ellipse: s-maj=1.8km s-min=1.1km az=357.0*
*DDA **05** 21:12:32.1, 40°.29N×25°.85E, h6^{km}±2^{km}, ML3.2*
*ISCJB **05** 21:12:32.0±0.3, 40°.31N±0°.02×25°.78E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=4.0km s-min=2.7km az=149.9*
*THE **05** 21:12:32.2, 40°.31N×25°.83E, h10^{km}±1^{km}, ML2.1/5, Error ellipse: s-maj=1.1km s-min=0.4km az=61.0*
*SOF **05** 21:12:33.7, 40°.40N×25°.54E, h2^{km}*
ISC 05 21:12:32.2±0.8**, 40°.30N**±0°.02×**25°.79E**±0°.02**, h11**^{km}±6^{km}**, n51, σ0^{s}.50**/72**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.14	143	PG	Pg	21 12 35.2	-0.2
GADA				SG	Sg	21 12 37.5	-0.3
GADA	Gvkgeada	0.14	143	P	Pg	21 12 35.3	-0.2
GADA				S	Sg	21 12 37.7	-0.1
GOKC	Gokceada-Canak	0.14	136	PG	Pg	21 12 35.3	-0.2
GOKC				SG	Sg	21 12 37.8	-0.1
SMTH	Samothraki Isl	0.26	310	P	Pg	21 12 37.9	+0.3
SMTH				S	Sg	21 12 42.0	+0.8
	645nm,0.1s						
SMTH	Samothraki Isl	0.26	310	P	Pg	21 12 38.0	+0.3
SMTH				S	Sg	21 12 42.1	+0.9
SMTH				AML	AML	21 12 42.5	
	comp=N,1549μm,0.1s						
SMTH				AML	AML	21 12 42.6	
	comp=E,975μm,0.1s						
BOZC	Bozcaada	0.50	156	PG	Pg	21 12 41.7	-0.3
BOZC	Bozcaada	0.50	156	i P	Pb	21 12 42.8	-0.3
BOZC				i S	Sg	21 12 49.1	+0.5
BOZC				IAML_P			
	comp=Z,5μm,0.2s						
ENEZ	Enez	0.51	32	PG	Pg	21 12 42.1	-0.2
ENEZ				SG	Sb	21 12 50.4	-0.4
GELI	Tayfur-Gelibol	0.53	79	PG	Pg	21 12 42.8	+0.2
LIA	Limnos Island	0.62	229	P	Pg	21 12 44.5	+0.3
LIA				S	Sb	21 12 54.1	+0.4
	comp=Z,338nm,0.4s						
LIA	Limnos Island	0.62	229	P	Pg	21 12 44.5	+0.3
LIA				S	Sb	21 12 54.0	+0.4
LIA				AML	AML	21 12 57.4	
	comp=E,614μm,0.3s						
LIA				AML	AML	21 12 57.5	
	comp=N,782μm,0.6s						
ALN	Alexandroupoli	0.62	18	P	Pg	21 12 44.0	-0.4
ALN				S	Sg	21 12 52.8	+0.2
	comp=N,132nm,0.3s						
ALN	Alexandroupoli	0.62	18	P	Pg	21 12 44.1	-0.4
ALN				S	Sg	21 12 52.8	+0.2
ALN				AML	AML	21 12 53.2	
	comp=E,235μm,0.3s						
ALN				AML	AML	21 12 53.5	
	comp=N,293μm,0.3s						
EZN	Ezine	0.63	139	PG	Pg	21 12 43.9	-0.5
EZN				SG	Sg	21 12 53.0	+0.3
EZN	Ezine	0.63	139	P	Pg	21 12 43.7	-0.7
EZN				S	Sg	21 12 52.5	-0.2
LPK	Lapseki	0.74	84	PG	Pg	21 12 46.2	-0.4
BAYC	CANAKKALE_Bayr	0.81	134	i P	Pg	21 12 47.1	-0.7
BAYC				i S	Sg	21 12 58.6	+0.3
BAYC				IAML_P			
	comp=Z,4μm,0.1s						
RDO	Rodhopi	0.86	347	PG	Pg	21 12 48.9	0.0
RDO	Rodhopi	0.86	347	P	Pg	21 12 48.5	-0.5
RDO				S	Sb	21 13 00.9	+0.1
	comp=Z,152nm,0.3s						
RDO	Rodhopi	0.86	347	P	Pg	21 12 48.4	-0.5
RDO				S	Sg	21 13 00.2	0.0
THAS	Thassos island	0.87	291	P	Pg	21 12 48.7	-0.4
THAS				S	Sb	21 13 02.0	+1.0
	comp=Z,72nm,0.3s						
THAS	Thassos island	0.87	291	P	Pg	21 12 48.6	-0.4
THAS				S	Sb	21 13 01.4	+0.4
THAS				AML	AML	21 13 03.9	
	comp=N,168μm,0.2s						
THAS				AML	AML	21 13 04.0	
	comp=E,162μm,0.2s						
SIGR	SIGRI	1.09	177	P	Pb	21 12 52.4	-0.7
SIGR				S	Sn	21 13 08.5	0.0
SIGR	SIGRI	1.09	177	P	Pb	21 12 52.2	-0.8
SIGR				S	Sn	21 13 08.1	-0.4
SIGR				AML	AML	21 13 09.7	
	comp=N,1035μm,0.5s						
SIGR				AML	AML	21 13 09.8	
	comp=E,438μm,0.3s						
PRK	Paraskevi	1.12	160	P	Pn	21 12 53.9	+0.1
PRK	Paraskevi	1.12	160	P	Pb	21 12 53.7	+0.1
RKY	Sarkoy-Tekirda	1.13	70	PN	Pn	21 12 54.1	+0.1
AYVA	Ayvalik	1.21	145	i P	Pg	21 12 55.8	+0.3
AYVA				IAML_P			
	comp=Z,2μm,0.3s						
KDZ	Kurdzhali	1.38	348	PN	Pn	21 12 57.1	-0.3
KDZ	Kurdzhali	1.38	348	i P	Pn	21 12 57.0	-0.3
OUR	Ouranopolis	1.38	272	P	Pn	21 12 56.5	-0.9
MRMT	Marmara Adasi	1.41	77	PN	Pn	21 12 58.3	+0.4
GONE	Gonen-Balikesi	1.48	99	PN	Pb	21 12 59.4	-0.3
TKR	Tekirdag	1.50	62	PN	Pb	21 12 59.9	-0.1
DKL	Dikili	1.50	145	PN	Pn	21 12 59.5	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALY	Balya	1.51	111	iP	Pb	21 13 00.7	+0.4
BALY				IAML_P			
	comp=Z,603nm,0.1s						
EDC	Edincik	1.59	88	PN	Pb	21 13 01.1	-0.5
RZN	Rozhen	1.60	330	P	Pn	21 13 00.7	0.0
ZEDA	zmir-Bergama	1.66	143	iP	Pn	21 13 02.1	+0.8
ZEDA				iS	Sb	21 13 24.8	+0.9
ZEDA				IAML_P			
	comp=Z,1µm,0.2s						
EDRB	Edirne	1.70	25	PN	Pn	21 13 02.1	+0.2
BALB	Balikesir	1.74	112	PN	Pn	21 13 02.9	+0.6
STEP	BALIKESIR_Sava	1.75	121	iP	Pn	21 13 03.2	+0.7
STEP				IAML_P			
	comp=Z,778nm,0.2s						
DIM	Dimitrovgrad	1.76	354	P	Pb	21 13 05.1	+0.6
PLG	Polygyros	1.79	273	P	Pn	21 13 02.4	-0.7
NVR	Nevrokopi	1.80	306	P	Pn	21 13 03.0	-0.2
SRS	Serrai	1.86	297	P	Pn	21 13 03.0	-1.0
PLD	Plovdiv	1.98	336	P	Pg	21 13 10.0	-0.2
MMB	Musomiste	2.02	310	P	Pn	21 13 05.9	-0.4
URLA	Izmir	2.04	162	PN	Pn	21 13 06.7	+0.2
KNT	Kendrikon	2.36	292	P	Pn	21 13 10.9	0.0
VTS	Vitosha	3.01	321	P	Pn	21 13 18.4	-1.5

SNET ***05*** *21:19:05.4±0.6, 13°.26N×90°.47W, h28^{km}±6^{km}, ML2.9*

GCG ***05*** *21:19:06.7±0.7, 14°.45N×90°.50W, h95^{km}±20^{km}, MD3.4*

ISC 05 21:19:05.0±2.7**, 13°.6N**±0°.2×**90°.75W**±0°.09**, h35^{km}, n7, σ0^s.39**/12**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.85	9	eP	Pn	21 19 20.5	-0.2
PCG				eS	Sn	21 19 32.4	+0.3
FUG	Fuego 3	0.90	354	eP	Pn	21 19 21.6	+0.2
FUG				eS	Sn	21 19 33.0	-0.2
RTR	El Retiro	1.13	72	eP	Pn	21 19 24.6	+0.2
CEVE	Cerro Verde	1.13	76	eP	Pn	21 19 24.4	-0.1
CEVE				eS	Sn	21 19 39.5	+0.6
CEVE				IAML		21 19 41.3	
	comp=Z,314nm,0.3s						
SBLS	San Blas	1.13	75	eP	Pn	21 19 24.4	-0.2
SBLS				eS	Sn	21 19 38.8	-0.2
SNJE	San Jose	1.16	74	eP	Pn	21 19 24.6	-0.3
STG3	Santiaguito 3,	1.40	326	eP	Pn	21 19 28.7	+0.4
STG3				eS	Sn	21 19 45.0	-0.7

ISCJB ***05*** *21:35:45.5±0.4, 8°.83N±0°.05×70°.91W±0°.04, h8^{km}, mb3.9/7, MS3.1/1, Error ellipse: s-maj=7.8km s-min=4.4km az=155.2*

IDC ***05*** *21:35:45.2±0.7, 8°.91N×71°.03W, h0^{km}, mb3.7/6, mb1 4.0/9, mb1mx3.8/29, mbtmp3.9/9, ML3.3/3, MS2.7/2, Ms1 2.7/2, ms1mx2.5/24, Error ellipse: s-maj=19.5km s-min=6.7km az=3.0*

ISC 05 21:35:46.6±0.6**, 8°.87N**±0°.05×**70°.93W**±0°.05**, h8^{km}, n41, σ1^s.38**/42**, mb3.6**/7**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	0.29	87	Pg	Pg	21 35 53.0	+0.5
	143nm,0.3s,baz=224,slow=8.5,SNR=73						
SDV				Lg	Lg	21 35 58.0	
	1µm,0.3s,baz=342,slow=20,SNR=140						
SDV	Santo Domingo	0.29	87	eP	Pg	21 35 52.8	+0.3
PAMC	Pamplona, Colo	2.32	229	eP	Pn	21 36 24.7	-0.8
OCAC	Ocana	2.44	255	eP	Pn	21 36 26.5	-0.5
TAMC	Tame, Arauca	2.57	199	eP	Pn	21 36 30.3	+1.8
CODC	Agustn Codazz	2.70	293	eP	Pn	21 36 31.4	+1.1
CVALL	Valledupar, Ce	2.81	306	eP	Pb	21 36 37.2	+0.1
GIRC	Giron, Santand	2.86	232	eP	Pn	21 36 33.0	+0.3
URIC	Uribia, Colomb	3.00	340	eP	Pb	21 36 39.7	-0.6
SMLC	San Martn de	3.10	269	eP	Pn	21 36 30.4	-5.4
BARC	Barichara	3.18	225	eP	Pn	21 36 35.7	-1.5
BRRC	Barranca, Sant	3.27	238	eP	Pn	21 36 37.7	-0.4
ARGC	Ariguani, Magd	3.42	287	eP	Pn	21 36 40.3	+0.2
RUSC	La Rusia	3.65	216	eP	Pn	21 36 41.4	-2.4
YOPC	Yopal, Colombi	3.79	203	eP	Pn	21 36 47.5	+2.0
SMRC	Santa Marta, M	3.96	305	eP	Pn	21 36 49.3	+1.6
ZARC	Zaragoza, Cauc	4.12	251	eP	Pn	21 36 50.3	+0.4
PTBC	PUERTO BERRIO,	4.19	237	eP	Pn	21 36 51.2	+0.3
CHIC	Chingaza	5.05	214	eP	Pn	21 37 00.1	-2.9
NORC	Norcasia	5.11	230	eP	Pn	21 37 04.1	+0.6
ROSC	El Rosal	5.23	220	Pn	Pn	21 37 05.7	+0.2
	4.5nm,0.3s,baz=230,slow=23,SNR=12						
ROSC				Sn	Sn	21 38 07.4	+1.2
	3.9nm,0.3s,baz=253,slow=19,SNR=2.4						
HELC	Santa Helena	5.28	240	eP	Pn	21 37 08.2	+2.0
GUY2C	Guyana, Caldas	5.70	231	eP	Pn	21 37 09.2	-2.9
RREF	El Recreo	5.90	228	eP	Pn	21 37 16.0	+1.1
PCRV	Puerto La Cruz	6.34	78	Pn	Pn	21 37 22.6	+2.1
	2.4nm,0.3s,baz=225,slow=8.0,SNR=8.9						
PCRV				Sn	Sn	21 38 33.6	+0.4
	6.7nm,0.3s,baz=134,slow=22,SNR=9.7						
PCRV				Lg	Lg	21 39 10.6	
	1.9nm,0.3s,baz=20,slow=15,SNR=2.2						
PRAC	Prado	6.46	218	eP	Pn	21 37 22.8	+0.7
ORTC	Ortega, Tolima	6.53	221	eP	Pn	21 37 23.4	+0.3
YOTC	Yotoco, Valle	7.25	228	eP	Pn	21 37 32.8	-0.2
SJG	San Juan	10.29	26	Sn	Sn	21 40 06.6	-3.7
	1.5nm,0.3s,baz=45,slow=20,SNR=3.1						
PTGA	Pitinga	14.50	131	Pn	Pn	21 39 10.8	-1.5
	0.4nm,0.3s,baz=311,slow=12,SNR=4.5						
PTGA				Lg	Lg	21 43 26.6	
	1.0nm,0.3s,baz=220,slow=20,SNR=6.2						
PTGA				LR	LR	21 46 01.6	
	comp=Z,11nm,20.5s,baz=330,slow=42						
MDP	Montagnes des	18.53	100	P	Pn	21 40 04.8	+0.9
	0.3nm,0.3s,baz=297,slow=9.0,SNR=3.2						
LPAZ	La Paz	25.15	174	P	P	21 41 14.2	+1.0
	0.7nm,0.5s,baz=12,slow=8.8,SNR=6.2						
LPAZ				Lg	Lg	21 49 03.7	
	1.0nm,0.7s,baz=221,slow=16,SNR=3.6						
SIV	San Ignacio	26.56	158	P	P	21 41 26.0	+0.8
	1.3nm,0.9s,baz=350,slow=11,SNR=4.5						
SIV				Lg	Lg	21 49 45.0	
	3.0nm,0.9s,baz=303,slow=16,SNR=4.3						
SIV				LR	LR	21 52 21.5	
	comp=Z,55nm,21.6s,baz=182,slow=37						
PDAR	Pinedale Array	47.77	322	P	P	21 44 25.6	+1.0
	0.6nm,0.4s,baz=130,slow=9.7,SNR=9.6						
TORD	Torodi Ar. Bea	71.21	79	P	P	21 47 06.4	-0.4
	13nm,0.3s,baz=291,slow=6.3,SNR=1.4						
ILAR	Eielson Array	76.04	335	P	P	21 47 34.5	+0.2
	0.4nm,0.8s,baz=109,slow=4.9,SNR=3.0						
GERES	GERESS Array B	79.86	42	P	P	21 47 55.7	-0.2
	0.6nm,0.8s,baz=289,slow=3.0,SNR=4.5						
ARCES	ARCESS Array B	84.00	21	P	P	21 48 17.6	+0.4
	0.7nm,0.8s,baz=284,slow=5.4,SNR=4.1						
CMAR	Chiang Mai Arr	151.06	20	PKPbc	PKPbc	21 55 40.0	-1.3
	1.5nm,0.7s,baz=312,slow=3.3,SNR=11						
ASAR	Alice Springs	152.06	235	PKPbc	PKPbc	21 55 42.4	-1.1
	2.8nm,0.6s,baz=116,slow=2.7,SNR=31						
WRA	Warramunga Arr	153.21	243	PKPbc	PKPbc	21 55 45.3	-0.8
	3.5nm,0.5s,baz=141,slow=1.7,SNR=28						

ISCJB ***05*** *21:48:13.3±0.6, 36°.56N±0°.04×27°.24E±0°.04, h131^{km}±5^{km}, Error ellipse: s-maj=6.5km s-min=5.3km az=147.3*

HLW ***05*** *21:48:16.0, 36°.28N×27°.46E, h33^{km}±30^{km}, Ml3.8*

ATH ***05*** *21:48:16.2, 36°.62N×27°.09E, h90^{km}±9^{km}, ML2.9/5, Error ellipse: s-maj=9.8km s-min=1.9km az=74.0*

THE ***05*** *21:48:16.1, 36°.65N×27°.18E, h141^{km}±2^{km}, ML3.0/4, Error ellipse: s-maj=2.7km s-min=0.8km az=95.0*

ISC 05 21:48:13.6±1.4**, 36°.59N**±0°.05×**27°.22E**±0°.04**, h130^{km}**±11^{km}**, n39, σ1^s.06**/55**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	Datca	0.32	65	iP	Pn	21 48 32.7	+0.8
DAT				iS	Sn	21 48 46.5	+0.7
DAT				IAML_P			
	comp=Z,1µm,0.2s						
BODT	Bodrum	0.47	9	P	Pn	21 48 32.7	+0.2
BODT				S	Sn	21 48 46.4	-0.5
BDRM	Kayabasi	0.51	21	iP	Pn	21 48 33.9	+1.2
BDRM				iS	Sn	21 48 45.9	-1.3
BDRM				IAML_P			
	comp=Z,1µm,0.1s						
ARG	Arkhangelos	0.83	117	P	Pn	21 48 36.0	+1.1
ARG				S	Sn	21 48 51.2	+0.1
	comp=Z,410nm,0.2s						
ARG	Arkhangelos	0.83	117	P	Pn	21 48 36.1	+1.1
ARG				S	Sn	21 48 49.6	-1.4
ARG				AML	AML	21 48 53.0	
	comp=N,833µm,0.2s						
ARG				AML	AML	21 48 54.6	
	comp=E,914µm,0.1s						
YER	Yerkesik	1.01	57	P	Pn	21 48 37.3	+0.7
YER				S	Sn	21 48 53.8	-0.3
KARP	Karpathos	1.05	182	P	Pn	21 48 38.0	+1.0
KARP				S	Sn	21 48 55.2	+0.5
	comp=E,575nm,0.2s						
KARP	Karpathos	1.05	182	P	Pn	21 48 37.9	+1.0
KARP				S	Sn	21 48 52.4	-2.3
KARP				AML	AML	21 48 55.9	
	comp=N,1303µm,0.2s						
KARP				AML	AML	21 48 59.1	
	comp=E,1200µm,0.2s						
AMGA	Amorgos Island	1.09	283	P	Pn	21 48 37.8	+0.5
AMGA	Amorgos Island	1.09	283	P	Pn	21 48 36.8	-0.5
GCAM	G?zelcaml?	1.10	1	iP	Pn	21 48 38.2	+0.8
GCAM				iS	Sn	21 48 55.7	+0.1
GCAM				IAML_P			
	comp=Z,4µm,0.3s						
TURN	Turunc	1.15	76	iP	Pn	21 48 35.9	-2.0
TURN				IAML_P			
	comp=Z,40µm,0.1s						
SMG	Samos	1.15	345	P	Pn	21 48 37.8	-0.2
SMG	Samos	1.15	345	P	Pn	21 48 37.4	-0.5
DALY	Dalyan (Mula)	1.18	79	iP	Pn	21 48 39.5	+1.3
DALY				IAML_P			
	comp=Z,6µm,0.2s						
ANAF	Anafi Island	1.19	259	P	Pn	21 48 38.6	+0.3
ANAF	Anafi Island	1.19	259	P	Pn	21 48 37.8	-0.5
AYDN	Tasoluk	1.19	26	iP	Pn	21 48 39.1	+0.7
AYDN				IAML_P			
	comp=Z,3µm,0.2s						
APE	Apeiranthos	1.43	290	P	Pn	21 48 41.5	+0.6
APE	Apeiranthos	1.43	290	P	Pn	21 48 41.2	+0.3
SAP2K	Karterados	1.44	263	P	Pn	21 48 41.9	+1.0
THR6	Thira Island,	1.48	261	P	Pn	21 48 42.4	+0.9
FETY	Fethiye	1.50	88	P	Pn	21 48 42.4	+0.7
FETY				S	Sn	21 49 03.5	+0.4
FETY	Fethiye	1.50	88	iP	Pn	21 48 42.3	+0.7
FETY				IAML_P			
	comp=Z,2µm,0.2s						
ZKR	Zakros	1.68	209	P	Pn	21 48 45.5	+1.7
ZKR				S	Sn	21 49 08.1	+1.3
	comp=Z,242nm,0.3s						
ZKR	Zakros	1.68	209	P	Pn	21 48 45.4	+1.6
ZKR				S	Sn	21 49 04.7	-2.1
ZKR				AML	AML	21 49 09.1	
	comp=E,519µm,0.3s						
ZKR				AML	AML	21 49 10.2	
	comp=N,450µm,0.4s						
NPS	Neapolis	1.86	225	P	Pn	21 48 46.6	+0.7
NPS	Neapolis	1.86	225	P	Pn	21 48 46.8	+0.9
NPS				S	Sn	21 49 09.9	-0.6
NPS				AML	AML	21 49 11.4	
	comp=E,936µm,0.3s						
NPS				AML	AML	21 49 14.0	
	comp=N,488µm,0.2s						
KSL	Kastellorizon	1.96	102	P	Pn	21 48 48.0	+1.0
KSL				S	Sn	21 49 12.4	-0.2
LAST	Lasithi	2.01	225	P	Pn	21 48 48.7	+1.0
LAST				S	Sn	21 49 13.6	-0.2
	comp=N,125nm,0.2s						
LAST	Lasithi	2.01	225	P	Pn	21 48 48.8	+1.0
LAST				S	Sn	21 49 13.1	-0.7
LAST				AML	AML	21 49 13.9	
	comp=N,266µm,0.2s						
LAST				AML	AML	21 49 14.4	
	comp=E,235µm,0.3s						
CHOS	Chios island	2.01	333	P	Pn	21 48 47.8	0.0
SLUM	Salum	5.35	199	P	Pn	21 49 31.3	-0.1
	baz=202						
SLUM				S	Sn	21 50 24.8	-7.3
	baz=202						
SWA2		7.48	192	P	Pn	21 49 59.5	-0.5
	baz=195						
KOT	Kottamia	7.69	149	P	Pn	21 50 01.2	-1.6
	baz=148						
KOT				S	Sn	21 51 18.2	-10
	baz=148						
SUZ	Suez	8.21	143	P	Pn	21 50 08.1	-1.9
	baz=143						
HFRF	Wahat Farafira	9.46	174	P	Pn	21 50 26.0	-0.7
	baz=175						
HKAT	Jabal Katrina	9.87	143	P	Pn	21 50 31.5	-0.9
	baz=142						
HHRG	Al Ghardaqah	10.79	148	P	Pn	21 50 46.8	+2.2
	baz=148						

ISCJB ***05*** *22:00:21.7±0.9, 20°.1S±0°.2×177°.6W±0°.2, h400^{km}, mb3.5/6, Error ellipse: s-maj=28.1km s-min=17.8km az=144.8*

IDC ***05*** *22:00:22.4±7.1, 20°.13S×177°.46W, h398^{km}±81^{km}, mb3.3/6, mb1 3.6/8, mb1mx3.2/37, mbtmp4.2/8, Error ellipse: s-maj=39.1km s-min=25.8km az=4.0*

ISC 05 22:00:22.7±1.0**, 20°.2S**±0°.2×**177°.5W**±0°.2**, h400^{km}, n8, σ1^s.09**/8**, mb3.6**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.14	260	P	P	22 03 38.1	+1.2
	0.8nm,0.3s,baz=78,slow=19,SNR=13						
URZ	Urewera	18.65	193	P	P	22 04 13.0	-1.0
	3.5nm,0.3s,baz=283,slow=3.5,SNR=24						
STKA	Stephens Creek	38.39	244	P	P	22 07 08.4	+0.7
	1.5nm,0.4s,baz=86,slow=13,SNR=4.8						
ASAR	Alice Springs	45.09	256	P	P	22 08 01.4	+0.1
	2.4nm,0.6s,baz=96,slow=8.1,SNR=64						
WRA	Warramunga Arr	45.15	262	P	P	22 08 01.0	-0.8
	0.8nm,0.5s,baz=93,slow=8.4,SNR=1.9						
MJAR	Matsushiro Arr	70.23	323	P	P	22 10 52.6	-1.2
	2.6nm,0.7s,baz=162,slow=6.1,SNR=6.5						
NVAR	Mina Array Bea	80.42	43	P	P	22 11 51.5	0.0
	0.7nm,0.6s,baz=232,slow=8.7,SNR=1.8						
TXAR	Lajitas Array	86.44	57	P	P	22 12 22.7	+0.9
	0.5nm,0.8s,baz=238,slow=5.1,SNR=4.7						

NIED ***05*** *22:00:00, 35°.80N×141°.10E, h32^{km}, Mw4.6 Best double couple: M$_0$7.89000×10^{15} NP1:φ$_s$105.00000°, δ31.00000°, λ-75.00000°. NP2:φ$_s$267.00000°, δ61.00000°, λ-99.00000°.*

JMA ***05*** *22:00:45.8±0.2, 35°.80N×140°.99E, h29^{km}±1^{km}, M4.6 Broadband fault plane solution: P waves. NP1: φ$_s$275.00000°, δ64.00000°, λ-85.00000°. NP2:φ$_s$83.00000°, δ26.00000°, λ-101.00000°. Principal axes: T Plg19.0000°, Azm1.0000°; N Plg5.0000°, Azm93.0000°; P Plg70.0000°, Azm196.0000°;*

JMA Felt III J1.

BJI ***05*** *22:00:45.5±0.0, 35°.70N×140°.97E, h38^{km}, mb4.6/45, mB4.9/27, Ms4.1/26, Ms7 3.8/22*

ISCJB ***05*** *22:00:46.3±0.5, 35°.80N±0°.02×140°.93E±0°.03, h33^{km}±3^{km}, mb4.5/124, MS3.9/25, Error ellipse: s-maj=4.0km s-min=3.4km az=16.4*

MOS ***05*** *22:00:47.9±0.8, 36°.10N×140°.90E, h36^{km}, mb4.9/48, Error ellipse: s-maj=8.4km s-min=4.9km az=102.3*

NEIC ***05*** *22:00:48.2±1.2, 35°.77N×140°.85E, h41^{km}±5^{km}, mb4.6/101, Error ellipse: s-maj=13.3km s-min=11.7km az=116.0*

NEIC Felt at Narita. Recorded [3 JMA] in Chiba and Ibaraki.

IDC ***05*** *22:00:49.1±1.3, 35°.75N×140°.84E, h46^{km}±13^{km}, mb4.2/29, mb1 4.3/33, mb1mx4.3/45, mbtmp4.4/33, ML3.3/4, MS3.8/21, Ms1 3.8/21, ms1mx3.7/32, Error ellipse: s-maj=12.0km s-min=7.9km az=74.0*

ISC 05 22:00:46.6±0.7**, 35°.82N**±0°.03×**141°.00E**±0°.04**, h27^{km}**±4^{km}**, n290, σ1^s.30**/308**, mb4.6**/132**, MS3.9**/25**, 19C-15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.16	224	⇑P	Pb	22 00 51.1	-1.0
CHOJ				S	Sb	22 00 54.7	-1.1
JIHU	Itakohorinouch	0.41	291	⇓P	Pb	22 00 55.3	-0.1
JIHU				eS	Sb	22 01 01.7	+0.3
JSMT	Sammumatsuo	0.48	248	⇑P	Pb	22 00 55.9	-0.7
JSMT				eS	Sb	22 01 02.6	-0.7
JHYU	Hitachinakayam	0.61	327	⇑P	Pb	22 00 58.2	-0.6
JHYU				eS	Sb	22 01 06.7	-0.4
JCN	Nagara	0.76	238	⇑P	Pb	22 01 00.9	-0.4
JCN				eS	Sb	22 01 11.0	-0.3
JYT	Yasato	0.77	302	⇑P	Pn	22 00 59.7	-1.9
JYT				S	Sb	22 01 09.4	-2.0
JHO	Hitachi	0.86	336	⇑P	Pn	22 01 01.5	-1.4
JHO				eS	Sb	22 01 12.6	-1.5
BSO4	Boso 4	0.99	213	P	Pn	22 01 03.7	-0.9
BSO2	Boso 2	1.09	191	eS	Sn	22 01 18.7	-1.0
BSO3	Boso 3	1.09	201	P	Pn	22 01 04.3	-1.5
BSO1	Boso 1	1.17	181	P	Pn	22 01 04.8	-1.8
MJAR	Matsushiro Arr	2.37	288	P	Pn	22 01 23.3	-0.3
	4.7nm,0.3s,baz=238,slow=24,SNR=176						
MJAR				S	Sn	22 01 51.1	-0.7
	7.5nm,0.3s,baz=92,slow=14,SNR=9.3						
MJAR				LR	LR	22 02 21.8	
	comp=Z,1µm,19.8s,baz=105,slow=41						
MAJO	Matsushiro	2.37	289	ePn	Pn	22 01 23.7	0.0
MAJO				eSn	Sn	22 01 51.1	-0.8
MAJO	Matsushiro	2.37	289	d iP	Pn	22 01 23.6	0.0
MAT	Matsushiro	2.37	289	P	Pn	22 01 23.5	-0.2
MAT				eS	Sn	22 01 50.9	-0.9
MJB9	Matsu-Tunnel	2.37	289	ePn	Pn	22 01 23.7	0.0
JHJ2	Mitsune	2.87	200	ePn	Pn	22 01 30.2	-0.3
JHJ	Hachijo jima 2	2.88	201	P	Pn	22 01 30.2	-0.4
	84nm,0.3s,baz=348,slow=23,SNR=18						
JHJ				S	Sn	22 02 03.7	-0.6
	116nm,0.3s,baz=99,slow=18,SNR=4.5						
JHJ				LR	LR	22 02 51.6	
	comp=Z,2µm,20.4s,baz=246,slow=44						
INU	Inuyama	3.28	263	ePn	Pn	22 01 36.3	+0.2
ERM	Erimo	6.41	15	ePn	Pn	22 02 18.5	-0.7
ERM				eSn	Sn	22 03 33.3	+2.0
ERM	Erimo	6.41	15	ceP	Pn	22 02 18.0	-1.1
ERM				pmax	pmax		
	comp=Z,75nm,1.0s						
ASAJ	Asahikawa	8.38	8	P	Pn	22 02 45.1	-1.0
	comp=Z,9.5nm,0.3s,baz=214,slow=11,SNR=60						
ASAJ				S	Sn	22 04 16.3	-3.4
	comp=Z,0.9nm,0.3s,baz=264,slow=26,SNR=1.3						
ASAJ				LR	LR	22 07 09.4	
	comp=Z,496nm,19.4s,baz=180,slow=45						
JNU	Nakatsue	8.78	255	P	Pn	22 02 52.1	+0.4
	comp=Z,0.2nm,0.3s,baz=164,slow=20,SNR=2.2						
JNU				LR	LR	22 06 32.1	
	comp=Z,880nm,19.5s,baz=32,slow=40						
YUK	Yuzh-Kuril'sk	9.01	23	eP	Pn	22 02 54.1	-0.7
YUK				eS	Sn	22 04 33.4	-1.9
YUK				pmax	pmax		
	comp=Z,227nm,2.4s						
YUK				pmax	pmax		
	comp=Z,204nm,0.3s						
YUK				pmax	pmax		
	comp=N,56nm,0.2s						
YUK				smax	smax		
	comp=N,677nm,2.8s						
YUK				smax	smax		
	comp=E,683nm,1.2s						
YUK				MLR	MLR		
	comp=Z,386nm,14.0s						
YUK				MLR	MLR		
	comp=N,565nm,13.0s						
TEY	Ternei	9.79	341	⇑eP	Pn	22 03 06.4	+0.9
TEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSRS	Korea Array	10.63	283	P	Pn	22 03 20.7	+3.6
	comp=Z,0.2nm,0.3s,baz=97,slow=14,SNR=12						
KSRS				LR	LR	22 07 19.0	
	comp=Z,411nm,21.6s,baz=92,slow=37						
KS15	Wonju Array Si	10.66	283	ePn	Pn	22 03 16.9	-0.6
KUR	Kuril'sk	10.75	27	eP	Pn	22 03 19.3	+0.7
KUR				eS	Sn	22 05 12.8	-5.2
KUR				pmax	pmax		
	comp=Z,47nm,0.4s						
KUR				pmax	pmax		
	comp=N,34nm,0.5s						
KUR				pmax	pmax		
	comp=E,28nm,0.4s						
KUR				smax	smax		
	comp=E,98nm,0.6s						
KUR				smax	smax		
	comp=N,45nm,0.7s						
USA0B	Ussuriysk Arra	10.84	323	ePn	Pn	22 03 19.9	0.0
USRK	Ussuriysk Ar.	10.84	323	P	Pn	22 03 21.5	+1.6
	comp=N,0.6nm,0.3s,baz=151,slow=11,SNR=11						
USRK				LR	LR	22 07 17.7	
	comp=N,592nm,19.4s,baz=125,slow=36						
YSS	Yuzh-Sakhalins	11.20	6	ePn	Pn	22 03 23.8	-1.0
YSS	Yuzh-Sakhalins	11.20	6	eP	Pn	22 03 24.0	-0.8
YSS				eS	Sn	22 05 27.1	-1.9
YSS				pmax	pmax		
	comp=Z,100nm,1.0s						
YSS				pmax	pmax		
	comp=Z,80nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS				MLR	MLR		
	comp=N,400nm,13.0s						
MDJ	Mudanjiang	12.36	319	P	Pn	22 03 45.5	+4.8
MDJ				pP	P	22 03 55.2	+2.7
MDJ				sP		22 04 01.3	
MDJ				S	Sn	22 05 59.4	+1.9
MDJ				pmax	pmax		
	comp=N,15nm,1.1s						
MDJ				LR	LR		
	comp=N,520nm,15.7s						
MDJ				LR	LR		
	comp=N,450nm,18.5s						
MDJ				LR	LR		
	comp=N,600nm,19.9s						
CN2	Changchun	14.35	308	eP	Pn	22 04 09.8	+2.0
KLR	Kul'dur	15.02	336	P	Pn	22 04 13.8	-3.1
	comp=N,0.1nm,0.3s,baz=139,slow=9.3,SNR=4.6						
KLR				LR	LR	22 10 09.1	
	comp=N,436nm,18.1s,baz=140,slow=37						
TYV	Tymovskoe	15.08	4	eP	Pn	22 04 15.2	-2.5
TYV				pmax	pmax		
	comp=Z,36nm,0.6s						
DL2	Dalian	15.71	287	P	P	22 04 28.9	-0.7
DL2				eS	Sn	22 07 22.6	+3.6
DL2				pmax	pmax		
	comp=Z,24nm,1.0s						
DL2				LR	LR		
	comp=Z,250nm,17.9s						
DL2				LR	LR		
	comp=Z,290nm,18.7s						
DL2				LR	LR		
	comp=Z,320nm,19.6s						
NKL	Nikolayevsk	17.33	359	⇓iP	Pn	22 04 42.4	-3.9
NKL				pmax	pmax		
	comp=N,24nm,1.5s						
NKL				pmax	pmax		
	comp=E,28nm,1.5s						
NKL				pmax	pmax		
	comp=Z,52nm,1.5s						
NKL				MLR	MLR		
	comp=E,396nm,22.0s						
NKL				MLR	MLR		
	comp=N,416nm,15.0s						
NKL				MLR	MLR		
	comp=Z,262nm,12.0s						
NJ2	Nanjing	18.75	265	eP	P	22 05 02.0	-1.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TIA	Tai'an	19.31	278	P	P	22 05 09.8	+0.3
TIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZEA	Zeya	20.33	336	eP	P	22 05 18.0	-2.5
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
PEA0B	Petropavlovsk-	20.91	29	eP	Pn	22 05 29.1	-0.2
	comp=Z,28nm,1.0s						
PETK	Petropavlovsk-	20.91	29	P	P	22 05 27.2	+0.5
	comp=Z,14nm,0.9s,baz=219,slow=8.6,SNR=13						
PETK				LR	LR	22 14 29.3	
	comp=Z,140nm,18.3s,baz=207,slow=39						
PET	Petropavlovsk	21.23	30	eP	P	22 05 31.9	+1.8
	comp=Z,39nm,1.2s						
PET	Petropavlovsk	21.23	30	eP	P	22 05 31.9	+1.8
PET				eS	S	22 09 23.2	-1.3
PET				pmax	pmax		
	comp=Z,32nm,1.3s						
PET				MLR	MLR		
	comp=Z,200nm,20.0s						
WHN	Wuhan	22.88	264	P	P	22 05 46.8	-1.2
HHC	Hu-ho-hao-te	23.57	291	eP	P	22 05 56.9	+1.9
HHC				pmax	pmax		

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      comp=Z,6.0nm,1.0s
HHC                              LR       LR
      comp=Z,140nm,9.9s
HHC                              LR       LR
      comp=Z,140nm,8.5s
MA2   Magadan           24.61  12  P        P        22 06 04.6 +0.3
      comp=Z,19nm,0.6s,baz=214,slow=6.4,SNR=8.0
MA2                              LR       LR       22 17 18.9
      comp=Z,145nm,18.0s,baz=210,slow=40
MA2   Magadan           24.61  12 eP        P        22 06 05.3 +1.0
      comp=Z,27nm,0.8s
MA2   Magadan           24.61  12 i P       P        22 06 05.3 +1.0
MA2                              pmax     pmax
      comp=Z,19nm,0.6s
XAN   Xi'an             26.30 276  P        P        22 06 18.3 -1.6
XAN                              pP       pP       22 06 26.3 -1.6
XAN                              sP       sP       22 06 30.4 -0.9
XAN                              pmax     pmax
      comp=Z,6.0nm,0.8s
XAN                              pmax     pmax
      comp=Z,140nm,5.3s
XAN                              LR       LR
      comp=Z,180nm,22.8s
XAN                              LR       LR
      comp=Z,170nm,22.8s
ENH   Enshi             26.92 267 eP        P        22 06 23.4 -2.1
      comp=Z,14nm,0.6s
YAK   Yakutsk           27.18 348 eP        P        22 06 26.9 -0.5
      comp=Z,99nm,1.5s
YAK   Yakutsk           27.18 348 eP        P        22 06 27.3 -0.2
YAK                             e                  22 07 15.9
YAK                             eS        S        22 10 56.3 -8.0
ULN   Ulaanbaatar       27.78 306ceP        P        22 06 34.6 +1.4
ULN                              pmax     pmax
      comp=Z,4.0nm,1.1s
H11N2 WAKE ISLAND Hy    27.84 118  T        T        22 35 36.5
      baz=311,slow=75,SNR=1030
H11N1 WAKE ISLAND Hy    27.85 118  T        T        22 35 34.3
      baz=311,slow=75,SNR=689
H11N3 WAKE ISLAND Hy    27.86 118  T        T        22 35 37.7
      baz=311,slow=75,SNR=960
SEY   Seymchan          28.04  11  P        P        22 06 36.0 +0.8
      comp=Z,6.4nm,0.8s,baz=172,slow=6.8,SNR=8.9
SEY   Seymchan          28.04  11  P        P        22 06 36.0 +0.8
SONA0 Songino Array     28.20 306 eP        P        22 06 36.3 -0.7
SONM  Songino Array     28.20 306  P        P        22 06 36.3 -0.7
      comp=Z,2.4nm,0.6s,baz=102,slow=8.9,SNR=14
SONM                             LR       LR       22 18 19.9
      comp=Z,191nm,18.2s,baz=107,slow=37
H11S1 WAKE ISLAND Hy    28.51 120  T        T        22 36 26.7
      baz=312,slow=75,SNR=1669
H11S3 WAKE ISLAND Hy    28.51 120  T        T        22 36 26.6
      baz=312,slow=75,SNR=1517
H11S2 WAKE ISLAND Hy    28.53 120  T        T        22 36 27.8
      baz=312,slow=75,SNR=1693
LZH   Lanzhou           29.96 282 eP        P        22 06 53.1 +0.3
LZH                              pP       sP       22 07 04.0 -0.2
LZH                              sP       pP       22 07 10.2 +9.4
LZH                              PP       PnPn     22 07 50.6 +1.0
LZH                              SS       SS       22 13 19.6  -37
LZH                              pmax     pmax
      comp=Z,20nm,1.0s
LZH                              pmax     pmax
      comp=Z,110nm,4.2s
LZH                              LR       LR
      comp=Z,230nm,15.7s
LZH                              LR       LR
      comp=Z,280nm,16.8s
LZH                              LR       LR
      comp=Z,360nm,16.8s
TLY   Talaya            30.89 313 eP        P        22 07 02.6 +2.0
TLY                             eSS       SS       22 14 10.4 -4.6
TLY                              pmax     pmax
      comp=Z,5.0nm,0.8s
TLY                              MLR      MLR
      comp=Z,588nm,19.0s
QIZ   Qiongzhong        32.13 247  P        P        22 07 11.3 -0.5
QIZ                              S        S        22 12 20.1 -2.7
QIZ                              LR       LR
      comp=Z,130nm,18.1s
QIZ                              LR       LR
      comp=Z,170nm,20.1s
QIZ                              LR       LR
      comp=Z,160nm,19.6s
GTA   Gaotai            32.62 289 eP        P        22 07 16.4 +0.3
GTA                              pmax     pmax
      comp=Z,3.0nm,0.5s
KMI   Kunming           34.46 263  P        P        22 07 33.9 +1.5
KMI                              pmax     pmax
      comp=Z,16nm,0.7s
KMI                              LR       LR
      comp=Z,180nm,20.2s
KMI                              LR       LR
      comp=Z,140nm,17.3s
KMI                              LR       LR
      comp=Z,170nm,22.0s
BILL  Bilibino          35.28  16 eP        P        22 07 38.6 -0.1
      comp=Z,19nm,1.1s
BILL  Bilibino          35.28  16⇓iP        P        22 07 39.8 +1.1
BILL                            e                  22 08 58.4
BILL                             pmax     pmax
      comp=Z,17nm,1.0s
BILL                             MLR      MLR
      comp=Z,181nm,19.0s
TIXI  Tiksi             36.45 354  P        P        22 07 47.1 -1.5
      comp=Z,4.2nm,0.8s,baz=129,slow=7.5,SNR=5.0
TIXI  Tiksi             36.45 354 i P       P        22 07 49.8 +1.2
TIXI                             pmax     pmax
      comp=Z,5.0nm,0.9s
DGZ   Jazzator, Alta    40.84 307d iP       P        22 08 26.5 +0.5
DGZ                              pmax     pmax
      comp=Z,6.0nm,0.7s
CM31  Chiang Mai Arr    40.87 256 ePcP      PcP      22 10 27.7 +0.8
CMAR  Chiang Mai Arr    40.87 256  P        P        22 08 23.4 -3.0
      comp=Z,0.8nm,0.3s,baz=55,slow=24,SNR=3.0
CMAR                             PcP      PcP      22 10 27.7 +0.8
      comp=Z,0.6nm,0.3s,baz=30,slow=4.2,SNR=5.6
CMAR  Chiang Mai Arr    40.87 256 i P       P        22 08 28.6 +2.2
CMAR                             pmax     pmax
      comp=Z,1.0nm,0.3s
WMQ   Urumqi            41.10 298 eP        P        22 08 29.6 +1.5
WMQ                              LR       LR
      comp=Z,170nm,29.0s
WMQ                              LR       LR
      comp=Z,250nm,29.1s
WMQ                              LR       LR
      comp=Z,95nm,25.1s
LSA   Lhasa             42.00 276 eP        P        22 08 36.3 +0.2
      comp=Z,13nm,1.4s
LSA   Lhasa             42.00 276 eP        P        22 08 36.3 +0.2
LSA                              pmax     pmax
      comp=Z,13nm,1.4s
ZAA1  Zalesovo Array    42.49 313 ePcP      PcP      22 10 31.6 +0.1
ZALV  Zalesovo Beam     42.49 313  P        P        22 08 39.2  0.0
      comp=Z,4.1nm,0.5s,baz=96,slow=6.8,SNR=14
ZALV                             PcP      PcP      22 10 31.6 +0.1
      comp=Z,1.2nm,0.6s,baz=96,slow=2.9,SNR=3.2
ZALV                             LR       LR       22 27 03.3
      comp=Z,70nm,20.3s,baz=70,slow=37
MKAR  Makanchi Array    44.49 303  P        P        22 08 55.3 -0.2
      comp=Z,8.7nm,0.7s,baz=90,slow=9.9,SNR=92
MKAR                             LR       LR       22 28 06.4
      comp=Z,110nm,20.3s,baz=76,slow=37
MAKZ  Makanchi          44.70 303 eP        P        22 08 57.1  0.0
      comp=Z,10.0nm,0.8s
MAKZ  Makanchi          44.70 303 eP        P        22 08 57.1  0.0
MAKZ                             pmax     pmax
      comp=Z,10.0nm,0.8s
KURK  Kurchatov         46.42 309 eP        P        22 09 09.5 -1.1
      comp=Z,16nm,0.7s
KURK  Kurchatov         46.42 309ceP        P        22 09 10.3 -0.4
KURK                             pmax     pmax
      comp=Z,17nm,0.8s
SVW2  Sparrevohn        46.69  37 eP        P        22 09 14.8 +2.2
      comp=Z,11nm,1.4s
PDGK  Podgornoye        47.05 299  P        P        22 09 15.5 -0.4
PDGK                             pmax     pmax
      comp=Z,15nm,0.9s
RSO   Redoubt South     48.06  38 eP        P        22 09 23.9 +0.3
KDAK  Kodiak Island     48.23  41  P        P        22 09 25.6 +1.0
      comp=Z,8.3nm,0.7s,baz=271,slow=5.6,SNR=11
KDAK  Kodiak Island     48.23  41 eP        P        22 09 24.7 +0.1
      comp=Z,10nm,0.8s
PPLA  Purkeypile        48.35  34 eP        P        22 09 26.4 +0.7
      comp=Z,14nm,1.3s
KTH   Kantishna Hill    48.94  33 eP        P        22 09 31.6 +1.5
      comp=Z,8.8nm,1.1s
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MLY   Manley            49.05  31 eP        P        22 09 33.3 +2.4
      comp=Z,7.1nm,1.0s
RND   Reindeer          49.87  34 eP        P        22 09 37.6 +0.4
      comp=Z,3.8nm,0.8s
RND   Reindeer          49.87  34 eP        P        22 09 37.6 +0.4
RND                              pmax     pmax
      comp=Z,4.0nm,0.8s
SML   Sawmill           50.17  36 eP        P        22 09 40.2 +0.7
      comp=Z,6.8nm,0.8s
SML   Sawmill           50.17  36 eP        P        22 09 40.2 +0.7
SML                              pmax     pmax
      comp=Z,7.0nm,0.8s
WRH   Wood River Hil    50.19  32 eP        P        22 09 40.0 +0.5
      comp=Z,3.4nm,0.8s
KSH   Kashi             50.60 295  P        P        22 09 47.4 +4.2
KSH                              sP       sP       22 10 04.2 +9.4
KSH                              pmax     pmax
      comp=Z,9.0nm,0.7s
ILAR  Eielson Array     50.70  32  P        P        22 09 44.1 +0.8
      comp=Z,3.3nm,0.7s,baz=267,slow=6.2,SNR=34
ILAR                             PcP      PcP      22 11 00.6 +0.3
      comp=Z,0.4nm,0.6s,baz=252,slow=2.7,SNR=2.1
ILB   Eielson Array     50.70  32 eP        P        22 09 43.5 +0.1
      comp=Z,4.8nm,0.8s
OTUK  Ortayu            50.87 307  P        P        22 09 44.9 -0.1
OTUK                             pmax     pmax
      comp=Z,11nm,1.1s
BRVK  Borovoye          51.20 313 eP        P        22 09 47.0 -0.3
      comp=Z,6.9nm,1.0s
BRVK  Borovoye          51.20 313ceP        P        22 09 47.5 +0.2
BRVK                             pmax     pmax
      comp=Z,6.0nm,0.8s
PRP   Porcupine Dome    51.25  31 eP        P        22 09 48.5 +0.8
      comp=Z,2.9nm,0.8s
PAX   Paxson            51.42  34 eP        P        22 09 50.0 +1.0
      comp=Z,3.4nm,1.0s
PAX   Paxson            51.42  34 eP        P        22 09 50.0 +1.0
PAX                              pmax     pmax
      comp=Z,3.0nm,1.0s
DOT   Dot Lake          52.00  33 eP        P        22 09 53.6 +0.5
      comp=Z,3.8nm,0.8s
GSI   Gunungsitoli      52.89 240 eP        P        22 09 57.2 -3.2
      comp=Z,14nm,0.5s
HYT   Haines Junctio    55.47  36 eP        P        22 10 21.0 +2.2
      comp=Z,7.7nm,0.9s
INK   Inuvik            55.62  27  P        P        22 10 20.8 +1.3
      comp=Z,4.0nm,0.6s,baz=307,slow=7.8,SNR=13
INK   Inuvik            55.62  27 eP        P        22 10 20.0 +0.6
      comp=Z,4.5nm,0.7s
WRAB  Tennant Creek     55.81 188 eP        P        22 10 19.7 -1.7
      comp=Z,19nm,1.0s
WRAB  Tennant Creek     55.81 188ceP        P        22 10 20.6 -0.8
WRAB                             pmax     pmax
      comp=Z,25nm,1.3s
WB2   Warramunga Arr    55.81 188 eP        P        22 10 20.1 -1.4
      comp=Z,18nm,0.9s
WR1   Warramunga Arr    55.82 188 eP        P        22 10 20.4 -1.1
WRA   Warramunga Arr    55.82 188  P        P        22 10 20.4 -1.1
      comp=Z,16nm,0.9s,baz=359,slow=7.8,SNR=37
SVE   Sverdlovsk        55.84 319⇓eP        P        22 10 21.9 +0.7
SVE                              pmax     pmax
      comp=Z,15nm,0.9s
WHY   Whitehorse        56.76  36 eP        P        22 10 29.0 +1.0
      comp=Z,4.6nm,0.8s
ARU   Arti              57.05 319 eP        P        22 10 29.2 -0.6
      comp=Z,14nm,0.9s
ARU   Arti              57.05 319d iP       P        22 10 29.6 -0.3
ARU                                                22 12 31.7
ARU                              S        S        22 18 23.5 +0.9
ARU                              SS       SS       22 22 08.3 -2.6
ARU                              pmax     pmax
      comp=Z,16nm,1.0s
ASAR  Alice Springs     59.54 188  P        P        22 10 46.6 -1.0
      comp=Z,3.7nm,0.8s,baz=11,slow=7.9,SNR=37
ASAR                             LR       LR       22 35 44.0
      comp=Z,88nm,19.0s,baz=20,slow=35
DLBC  Dease Lake        59.79  37  P        P        22 10 51.6 +2.5
      comp=Z,1.0nm,0.4s,baz=332,slow=9.7,SNR=4.1
DLBC  Dease Lake        59.79  37 eP        P        22 10 50.1 +1.0
      comp=Z,8.2nm,1.4s
EIDS  Eidsvold          61.60 170 eP        P        22 11 01.2 -0.3
      comp=Z,7.7nm,0.8s
DZM   Mont Dzumac       62.42 153  P        P        22 11 08.4 +1.1
      comp=Z,4.8nm,1.0s,baz=121,slow=17,SNR=3.2
DZM   Mont Dzumac       62.42 153 eP        P        22 11 07.3 +0.1
      comp=Z,10nm,1.2s
GEYT  Alibeck           64.13 299  P        P        22 11 18.6 +0.1
      comp=Z,1.2nm,0.6s,baz=35,slow=5.3,SNR=3.9
GEYT                             LR       LR       22 41 54.5
      comp=Z,56nm,18.1s,baz=85,slow=38
ARCES ARCESS Array B    65.01 339  P        P        22 11 23.7  0.0
      comp=Z,2.9nm,0.8s,baz=49,slow=7.4,SNR=7.1
ARCES                            LR       LR       22 43 01.0
      comp=Z,99nm,19.1s,baz=62,slow=39
YKA   Yellowknife Ar    65.02  30  P        P        22 11 24.6 +0.7
      comp=Z,1.7nm,0.8s,baz=296,slow=6.5,SNR=7.3
YKB5  Yellowknife Ar    65.02  30 eP        P        22 11 24.6 +0.7
MSF   Maaselka          66.01 335  P        P        22 11 31.9 +1.7
MSF                              pmax     pmax
      comp=Z,9.0nm,0.6s
STKA  Stephens Creek    67.35 179  P        P        22 11 38.5 -0.5
      comp=Z,6.7nm,0.6s,baz=352,slow=7.1,SNR=16
STKA  Stephens Creek    67.35 179 eP        P        22 11 38.5 -0.5
      comp=Z,1.6nm,0.8s
OUL   Oulu              67.56 335  P        P        22 11 41.6 +1.6
OUL                              pmax     pmax
      comp=Z,16nm,1.4s
OBN   Obninsk           68.86 323⇑eP        P        22 11 48.4  0.0
OBN                             e                  22 12 15.0
OBN                             e                  22 14 23.6
OBN                             eS        S        22 21 08.7  +18
OBN                              pmax     pmax
      comp=Z,20nm,1.3s
OBN                              MLR      MLR
      comp=Z,70nm,16.0s
LPSR  Galich'ya Gora    69.02 320 eP        P        22 11 53.7 +4.3
LPSR                             pmax     pmax
      comp=Z,10.0nm,0.7s
AKT   Akhty             69.53 307 eP        P        22 11 52.1 -0.9
AKT                             e                  22 12 14.0
AKT                              pmax     pmax
      comp=Z,12nm,1.1s
VSR   Storozhevoye      69.62 319 eP        P        22 11 51.8 -1.4
VSR                              pmax     pmax
      comp=Z,7.0nm,0.6s
VORD  Divnogorie        69.69 319 eP        P        22 11 52.5 -1.1
VORD                             pmax     pmax
      comp=Z,5.0nm,0.6s
FINES FINESS Array B    69.73 332  P        P        22 11 53.8 +0.1
      comp=Z,3.1nm,0.7s,baz=46,slow=7.5,SNR=12
FINES                            LR       LR       22 47 24.8
      comp=Z,72nm,18.6s,baz=28,slow=40
GROC  Groznyy           69.90 309 eP        P        22 11 54.1 -1.0
GROC                            e                  22 12 16.7
GROC                            e                  22 14 28.7
GROC                             pmax     pmax
      comp=Z,4.0nm,0.5s
KBZ   Khabaz            71.44 311  P        P        22 12 04.8 +0.5
      comp=Z,4.0nm,0.9s,baz=26,slow=1.5,SNR=5.6
KIV   Kislovodsk        71.45 311 eP        P        22 12 04.7 +0.1
      comp=Z,8.0nm,0.9s
KIV   Kislovodsk        71.45 311⇑iP        P        22 12 04.2 -0.4
KIV   Kislovodsk        71.45 311 eP        P        22 12 05.1 +0.5
KIV                              pmax     pmax
      comp=Z,26nm,1.0s
KIV                              MLR      MLR
      comp=Z,135nm,18.0s
SUMG  Summit            71.89 360 eP        P        22 12 07.3 +0.2
      comp=Z,10nm,1.0s
SUMG  Summit            71.89 360 eP        P        22 12 07.4 +0.2
SUMG                             pmax     pmax
      comp=Z,10.0nm,1.0s
GNI   Garni             72.16 307 eP        P        22 12 08.7 -0.4
      comp=Z,8.9nm,0.9s
GNI   Garni             72.16 307 eP        P        22 12 08.7 -0.4
GNI                              pmax     pmax
      comp=Z,9.0nm,0.9s
AKH   Akhalkalaki       72.30 308 eP        P        22 12 10.2 +0.3
      comp=Z,3.8nm,0.8s
AKH   Akhalkalaki       72.30 308 eP        P        22 12 10.2 +0.3
AKH                              pmax     pmax
      comp=Z,4.0nm,0.8s
PAHR  Pah Rah Range     74.57  52 eP        P        22 12 23.6 +0.3
      comp=Z,3.5nm,1.0s
FFC   Flin Flon         74.91  32 eP        P        22 12 25.1 +0.4
      comp=Z,74nm,1.0s
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FFC   Flin Flon         74.91  32 i P       P        22 12 26.2 +1.5
NC405 NORSAR Array S    74.96 337 eP        P        22 12 23.8 -1.1
      comp=Z,16nm,0.8s
AKASG Malin Array Be    75.05 322  P        P        22 12 25.3 -0.3
      comp=Z,3.5nm,0.6s,baz=47,slow=6.2,SNR=21
AKASG                            LR       LR       22 48 26.0
      comp=Z,141nm,18.2s,baz=90,slow=38
AKBB  Malin Array Si    75.05 322 eP        P        22 12 25.0 -0.6
      comp=Z,4.6nm,1.4s
AKBB  Malin Array Si    75.05 322 eP        P        22 12 25.0 -0.6
AKBB                             pmax     pmax
      comp=Z,5.0nm,1.4s
HRY   Holter Researc    75.07  43 eP        P        22 12 27.0 +1.1
NC204 NORSAR Array S    75.13 338 eP        P        22 12 25.6 -0.4
      comp=Z,18nm,0.9s
NB201 NORSAR Array S    75.14 337 eP        P        22 12 26.0 +0.1
      comp=Z,98nm,1.5s
NB2   NORSAR Subarra    75.17 337  P        P        22 12 25.8 -0.4
      comp=Z,1.8nm,0.6s,baz=41,slow=5.9
NOA   NORSAR Array B    75.17 337  P        P        22 12 26.4 +0.2
      comp=Z,2.2nm,0.6s,baz=39,slow=5.7,SNR=12
NOA                              LR       LR       22 48 33.1
      comp=Z,131nm,19.6s,baz=15,slow=38
NORES NORESS Array B    75.30 337  P        P        22 12 28.3 +1.4
NORES                            pmax     pmax
      comp=Z,1.0nm,0.4s
KVN   Kaiserville       75.77  52 eP        P        22 12 30.4 +0.3
      comp=Z,5.0nm,0.9s
KVN   Kaiserville       75.77  52 eP        P        22 12 30.5 +0.3
KVN                              pmax     pmax
      comp=Z,5.0nm,0.9s
BOZ   Bozeman (W)       75.85  44 eP        P        22 12 31.0 +0.5
      comp=Z,3.7nm,0.8s
BOZ   Bozeman (W)       75.85  44 eP        P        22 12 31.0 +0.5
BOZ                              pmax     pmax
      comp=Z,4.0nm,0.8s
NVAR  Mina Array Bea    75.99  53  P        P        22 12 33.1 +1.6
      comp=Z,2.7nm,0.7s,baz=285,slow=5.4,SNR=10
ELK   Elko              76.59  49 eP        P        22 12 35.6 +0.7
      comp=Z,2.5nm,0.9s
ELK   Elko              76.59  49 eP        P        22 12 35.6 +0.7
ELK                              pmax     pmax
      comp=Z,3.0nm,0.9s
YHH   Holmes Hill       76.77  44 eP        P        22 12 36.1 +0.2
      comp=Z,4.1nm,1.2s
IMW   Indian Meadow     77.27  45 eP        P        22 12 41.5 +2.8
      comp=Z,3.8nm,0.9s
FXWY  Fox Creek         77.37  45 eP        P        22 12 40.2 +1.0
      comp=Z,4.7nm,1.4s
MOOW  Moose Ponds       77.47  45 eP        P        22 12 40.3 +0.6
      comp=Z,2.3nm,0.8s
R11A  Troy Canyon, C    77.78  51 eP        P        22 12 42.1 +0.5
      comp=Z,2.0nm,0.9s
BGU   Big Grassy Mou    77.83  48 eP        P        22 12 42.7 +0.9
      comp=Z,2.2nm,0.8s
DUG   Dugway, Tooele    78.40  49 eP        P        22 12 44.9  0.0
      comp=Z,3.7nm,0.8s
DUG   Dugway, Tooele    78.40  49 eP        P        22 12 44.9  0.0
DUG                              pmax     pmax
      comp=Z,4.0nm,0.8s
BW06  Boulder Array     78.76  45 eP        P        22 12 47.2 +0.3
      comp=Z,2.1nm,0.8s
PDAR  Pinedale Array    78.76  45  P        P        22 12 47.6 +0.7
      comp=Z,2.3nm,0.8s,baz=271,slow=0.8,SNR=15
KWP   Kalwaria Pacla    78.92 324 eP        P        22 12 48.5 +1.1
KWP   Kalwaria Pacla    78.92 324 eP        P        22 12 48.5 +1.1
BUR08 Bucovina Ar. S    79.04 322 eP        P        22 12 47.3 -1.0
      comp=Z,3.0nm,0.8s
BIZ   Bicaz             79.05 321⇓iP        P        22 12 48.7 +0.5
TESR  Tescani           79.05 320⇓iP        P        22 12 48.1 -0.1
BURAR Bucovina Array    79.05 322⇓iP        P        22 12 48.4 +0.1
BURAR Bucovina Array    79.05 322  P        P        22 12 48.4 +0.1
SHPR  Sheep Range       79.14  53 eP        P        22 12 49.8 +0.7
      comp=Z,2.5nm,0.8s
BR131 Keskin Array S    79.40 312 eP        P        22 12 50.5 +0.1
      comp=Z,2.5nm,0.9s
BRTR  Keskin Array B    79.40 312  P        P        22 12 50.0 -0.4
      comp=Z,1.9nm,0.9s,baz=101,slow=5.2,SNR=10
BRTR                             LR       LR       22 52 24.0
      comp=Z,32nm,18.8s,baz=75,slow=39
BRTR  Keskin Array B    79.40 312  P        P        22 12 50.0 -0.4
VRI   Vrincioaia        79.43 320⇑iP        P        22 12 49.1 -1.2
VRI   Vrincioaia        79.43 320  P        P        22 12 49.1 -1.2
KOLS  Kolonicke sedl    79.60 324 eP        P        22 12 51.6 +0.4
KOLS  Kolonicke sedl    79.60 324 eP        P        22 12 51.6 +0.4
PFO   Pinyon Flats O    79.99  56 eP        P        22 12 54.5 +0.8
      comp=Z,4.3nm,1.0s
PFO   Pinyon Flats O    79.99  56 eP        P        22 12 54.5 +0.8
PFO                              pmax     pmax
      comp=Z,4.0nm,1.0s
TRPA  Tarpa             80.03 323⇓iP        P        22 12 54.0 +0.6
MTPU  Mount Pierson     80.10  50 eP        P        22 12 54.6  0.0
      comp=Z,3.3nm,1.1s
P17A  Butcher Ranch,    80.11  48 eP        P        22 12 54.6 +0.3
      comp=Z,5.2nm,0.9s
NIE   Niedzica          80.19 325 eP        P        22 12 55.5 +1.1
NIE   Niedzica          80.19 325 eP        P        22 12 55.5 +1.1
SRU   San Rafael Swe    80.46  48 eP        P        22 12 56.5 +0.3
      comp=Z,6.9nm,0.8s
SRU   San Rafael Swe    80.46  48 eP        P        22 12 56.5 +0.3
SRU                              pmax     pmax
      comp=Z,7.0nm,0.8s
ULM   Lac du Bonnet     80.70  33  P        P        22 12 58.2 +1.2
      comp=Z,3.5nm,0.7s,baz=336,slow=3.9,SNR=3.4
LANS  Liptovska Anna    80.77 325 eP        P        22 12 58.4 +0.9
LANS  Liptovska Anna    80.77 325 eP        P        22 12 58.4 +0.9
RAYN  Ar Rayn           80.80 292 eP        P        22 12 57.8 -0.3
      comp=Z,12nm,1.5s
RAYN  Ar Rayn           80.80 292 eP        P        22 12 57.8 -0.3
RAYN                             pmax     pmax
      comp=Z,12nm,1.5s
ARR   Arges             80.86 320⇑iP        P        22 12 57.2 -0.9
KSP   Ksiaz             80.95 328 eP        P        22 12 59.1 +0.8
KSP   Ksiaz             80.95 328 eP        P        22 12 59.2 +0.8
U15A  North Rim         81.02  51 eP        P        22 13 00.4 +1.0
      comp=Z,3.3nm,0.8s
O20A  White River Ci    81.19  47 eP        P        22 13 01.2 +1.1
      comp=Z,4.2nm,0.9s
MORC  Moravsky Berou    81.19 327⇑iP        P        22 12 59.3 -0.4
CHVC  Chvalec           81.24 328 eP        P        22 13 00.3 +0.3
DPC   Dobruska-Polom    81.30 328 eP        P        22 13 01.0 +0.7
DPC   Dobruska-Polom    81.30 328 eP        P        22 13 01.0 +0.7
UPC   Upice             81.32 328 eP        P        22 13 00.7 +0.3
UPC   Upice             81.32 328 eP        P        22 13 00.7 +0.3
VYHS  Vyhne             81.53 325 eP        P        22 13 01.8 +0.3
VYHS  Vyhne             81.53 325 eP        P        22 13 01.8 +0.3
PV09  Paradox Valley    81.69  48 eP        P        22 13 05.1 +2.1
PV14  Lion Creek, Pa    81.84  48 eP        P        22 13 05.0 +1.3
      comp=Z,7.4nm,0.8s
PVCC  Panska Ves        81.92 329 eP        P        22 13 03.9 +0.4
PVCC                            e                  22 13 12.3
PVCC  Panska Ves        81.92 329 eP        P        22 13 03.9 +0.4
PVCC                            epP       pP       22 13 12.3  0.0
BRG   Berggiesshubel    81.92 329 eP        P        22 13 03.4 -0.1
      comp=Z,3.3nm,0.9s
BRG   Berggiesshubel    81.92 329 eP        P        22 13 03.4 -0.1
BRG                              pmax     pmax
      comp=Z,3.0nm,0.9s
PV16  Nyswonger Mesa    81.94  48 eP        P        22 13 05.4 +1.2
      comp=Z,4.3nm,0.8s
VRAC  Vranov            81.95 327⇓iP        P        22 13 04.1 +0.3
VRAC  Vranov            81.95 327  P        P        22 13 04.0 +0.3
CLL   Collm             81.98 330⇓iP        P        22 13 03.4 -0.4
CLL                              pmax     pmax
      comp=Z,6.0nm,0.8s
CLL   Collm             81.98 330⇓iP        P        22 13 03.4 -0.4
      comp=Z,6.0nm,0.8s
PV05  Paradox Valley    81.98  49 eP        P        22 13 05.9 +1.5
      comp=Z,6.8nm,0.7s
PV12  Saucer Basin,     82.01  48 eP        P        22 13 05.1 +0.6
      comp=Z,4.6nm,0.9s
PV03  Paradox Valley    82.02  48 eP        P        22 13 06.2 +1.6
      comp=Z,4.4nm,1.0s
PV13  Radium Mtn., P    82.10  48 eP        P        22 13 05.6 +0.6
      comp=Z,4.9nm,0.7s
PV01  Paradox Valley    82.27  48 eP        P        22 13 06.2 +0.3
      comp=Z,3.1nm,0.8s
GOPC  GO Pecny, Ondr    82.29 328 eP        P        22 13 05.7 +0.2
GOPC  GO Pecny, Ondr    82.29 328 eP        P        22 13 05.7 +0.2
PRU   Pruhonice         82.34 328 eP        P        22 13 08.2 +2.5
PRU   Pruhonice         82.34 328 eP        P        22 13 08.2 +2.5
TREC  Trest             82.45 327 eP        P        22 13 06.7 +0.4
TREC  Trest             82.45 327 eP        P        22 13 06.7 +0.4
MDVR  Moldovita         82.77 321⇓iP        P        22 13 07.9 -0.2
CONA  Conrad Observa    83.30 326 i PcP     P        22 13 11.2 +0.3
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	comp=Z,5.5nm,1.2s						
KHC	Kasperske Hory	83.40	328	eP	P	22 13 10.7	-0.6
	comp=Z,1.4nm,0.9s						
KHC	Kasperske Hory	83.40	328	eP	P	22 13 11.3	0.0
KHC	Kasperske Hory	83.40	328	eP	P	22 13 11.3	0.0
VTS	Vitosha	83.47	319	eP	P	22 13 12.1	+0.2
	comp=Z,3.9nm,1.1s						
VTS	Vitosha	83.47	319	⇑iP	P	22 13 12.2	+0.2
VTS	Vitosha	83.47	319	eP	P	22 13 12.1	+0.2
VTS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GERES	GERESS Array B	83.56	328	P	P	22 13 11.9	-0.3
	comp=Z,1.1nm,0.5s,baz=32,slow=6.1,SNR=13						
GERES				LR	LR	22 54 08.0	
	comp=Z,58nm,18.8s,baz=56,slow=38						
GRA1	Grafenberg Arr	83.95	330	eP	P	22 13 13.8	-0.3
	comp=Z,7.1nm,0.9s						
GRF	Grafenberg Arr	83.95	330	eP	P	22 13 13.8	-0.3
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARSA	Arzberg	83.96	326	i PcP	P	22 13 15.2	+1.0
	comp=Z,5.5nm,1.2s						
MOA	Molln	84.07	327	i PcP	P	22 13 15.8	+1.0
	comp=Z,4.2nm,1.2s						
SDCO	Great Sand Dun	84.36	47	eP	P	22 13 16.9	+0.2
	comp=Z,4.3nm,1.4s						
SOKA	Soboth	84.61	326	i PcP	P	22 13 17.5	0.0
	comp=Z,3.5nm,0.6s						
KBA	Koelnbreinsper	85.06	327	i PcP	P	22 13 19.9	-0.1
	comp=Z,1.6nm,0.5s						
ECSD	EROS Data Cent	85.08	38	eP	P	22 13 19.1	-0.8
	comp=Z,3.3nm,0.8s						
MYKA	Terra Mystica	85.27	327	i P	P	22 13 20.0	-0.9
	comp=Z,3.6nm,0.5s						
LIT	Litokhoron	85.62	317	eP	P	22 13 21.7	-1.0
	comp=Z,5.6nm,0.8s						
LIT	Litokhoron	85.62	317	eP	P	22 13 21.7	-1.0
LIT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANMO	Albuquerque	85.63	50	ceP	P	22 13 23.8	+0.8
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WTTA	Wattenberg	85.66	328	i PcP	P	22 13 22.3	-0.7
	comp=Z,2.2nm,0.7s						
RETA	Reutte	85.86	329	i PcP	P	22 13 24.0	+0.2
	comp=Z,1.8nm,0.5s						
BFO	Black Forest	86.19	331	eP	P	22 13 24.8	-0.6
	comp=Z,4.6nm,0.8s						
BFO	Black Forest	86.19	331	eP	P	22 13 24.8	-0.6
BFO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DAVA	Damuels	86.39	329	i PcP	P	22 13 26.3	-0.2
	comp=Z,5.0nm,1.0s						
SCHQ	Schefferville	86.59	16	P	P	22 13 27.8	+0.7
	comp=Z,2.4nm,0.6s,baz=31,slow=8.5,SNR=3.4						
SCHQ	Schefferville	86.59	16	eP	P	22 13 27.7	+0.5
	comp=Z,3.8nm,0.8s						
FUORN	Ofenpass-Fuorn	86.75	328	eP	P	22 13 27.9	-0.5
	comp=Z,4.3nm,0.8s						
WMOK	Wichita Mounta	90.37	45	eP	P	22 13 46.1	+0.7
	comp=Z,4.0nm,0.9s						
WMOK	Wichita Mounta	90.37	45	eP	P	22 13 46.2	+0.7
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TXAR	Lajitas Array	91.13	52	P	P	22 13 50.0	+0.8
	comp=Z,1.5nm,0.7s,baz=295,slow=2.6,SNR=18						
TXAR	Lajitas Array	91.13	52	P	P	22 13 50.0	+0.8
H06N1	SOCORRO T-PHAS	92.91	64	T	T	23 57 31.9	
	SNR=23						
H06E1	SOCORRO T-PHAS	93.01	64	T	T	23 57 28.6	
	SNR=10.0						
KEST	Kesra	95.78	322	LR	LR	23 02 32.5	
	comp=Z,57nm,18.4s,baz=239,slow=39						
TOA1	Torodi Ar. Sit	117.94	314	ePKPdf	PKPdf	22 19 30.0	-1.2
TORD	Torodi Ar. Bea	117.94	314	PKP	PKPdf	22 19 30.0	-1.2
	comp=Z,4.5nm,0.3s,baz=35,slow=2.8,SNR=4.1						
LPAZ	La Paz	147.59	61	PKPbc	PKPbc	22 20 29.7	+0.1
	comp=Z,2.8nm,0.5s,baz=341,slow=3.3,SNR=18						
LPAZ	La Paz	147.59	61	ePKPbc	PKPbc	22 20 30.1	+0.5
LPAZ	La Paz	147.59	61	ePKP2	PKPbc	22 20 30.1	+0.5

GUC ***05*** *22:27:53.1±0.5, 29°.75S×71°.04W, h58km±3km, ML3.6*
SJA ***05*** *22:27:53.2±0.8, 29°.65S×71°.23W, h66km±6km, ML3.9, MW4.0*
ISCJB ***05*** *22:27:54.0±1.2, 29°.70S±0°.04×71°.3W±0°.1, h60km±7km, Error ellipse: s-maj=17.4km s-min=5.8km az=7.0*
ISC 05 22:27:54.6±1.7**, 29°.69S**±0°.04×**71°.3W**±0°.1**, h50**km±12km**, n24, σ1s.03**/30**, 4C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.23	166	⇑eP	Pn	22 28 03.2	+0.1
LSCH				i S	Sn	22 28 10.2	+1.0
LSCH				IAML		22 28 10.6	
	comp=E,4μm,0.3s						
GO04	Tololo Observa	0.65	138	⇑eP	Pn	22 28 06.9	-1.1
GO04				i S	Sn	22 28 16.7	-1.0
LCO	Las Campanas	0.86	38	eP	Pn	22 28 10.4	-0.3
LCO				eS	Sn	22 28 22.2	-0.2
LCO	Las Campanas	0.86	38	⇑eP	Pn	22 28 10.4	-0.3
LCO				eS	Sn	22 28 22.8	+0.4
LCO				IAML		22 28 24.8	
	comp=E,3μm,0.3s						
CO02	Combarbal	1.53	170	⇑eP	Pn	22 28 18.8	-0.9
CO02				eS	Sn	22 28 38.0	-0.5
GO03	Copiap	2.29	25	eP	Pn	22 28 29.9	-0.1
GO03	Copiap	2.29	25	eP	Pn	22 28 29.9	-0.1
GO03				eS	Sn	22 28 57.8	+0.8
GO03				IAML		22 29 08.7	
	comp=E,660nm,0.5s						
RTLS	Leoncito	2.72	141	eP	Pn	22 28 37.7	+1.6
RTLS				IAML		22 29 19.4	
	comp=Z,253nm,0.3s						
AMOG	MOGNA	2.73	118	eP	Pn	22 28 37.4	+1.4
VCA	Vinchina	2.87	71	eP	Pn	22 28 40.9	+2.9
VCA				IAML		22 29 24.4	
	comp=Z,823nm,0.3s						
ZON	Zonda	2.93	130	eP	Pn	22 28 39.5	+0.8
RTLL	Cerro Villicun	2.94	125	eP	Pn	22 28 39.1	+0.2
AUSP	Uspallata	3.02	147	eP	Pn	22 28 41.5	+1.3
RTCV	Cerro Valdivia	3.22	133	eP	Pn	22 28 43.6	+1.0
CFA	Coronel Fontan	3.26	127	eP	Pn	22 28 43.8	+0.5
PEL	Peldehue	3.49	171	eP	Pn	22 28 47.2	+0.8
ACLC	CERRO LA CRUZ	3.80	87	eP	Pn	22 28 51.1	+0.3
APLL	PUNTA DE LOS L	4.20	101	eP	Pn	22 28 56.1	-0.1
APLL				IAML		22 29 52.6	
	comp=Z,71nm,0.3s						
ACAN	Cantantal	4.38	127	eP	Pn	22 28 58.6	+0.1
CYA	Choya	4.97	77	eP	Pn	22 29 06.5	-0.3
MRA	San Martin	5.51	121	eP	Pn	22 29 13.2	-1.1
MRA				IAML		22 30 23.2	
	comp=Z,59nm,0.5s						
FSA	Cafayete	5.91	54	eP	Pn	22 29 18.7	-1.1
AHML	Horco Molle	6.01	63	eP	Pn	22 29 20.4	-0.6
TCA	Tanti	6.02	108	eP	Pn	22 29 19.5	-1.7

ISCJB ***05*** *22:47:54.6±0.4, 14°.79S±0°.05×71°.86W±0°.07, h10km, MS3.8/10, Error ellipse: s-maj=10.9km s-min=5.3km az=146.7*
IDC ***05*** *22:47:55.2±1.0, 14°.79S×71°.86W, h0km, mb3.9/4, mb1 4.1/11, mb1mx3.9/29, mbtmp4.0/11, ML3.1/6, MS3.6/17, Ms1 3.6/17, ms1mx3.5/32, Error ellipse: s-maj=26.6km s-min=15.7km az=50.0*
NEIC ***05*** *22:47:59.6±2.9, 14°.94S×72°.10W, h35km±2km, mb4.6/4, Error ellipse: s-maj=14.9km s-min=5.8km az=57.0*
ISC 05 22:47:56.4±0.6**, 14°.76S**±0°.07×**71°.87W**±0°.07**, h10**km**, n41, σ1s.85**/33**, MS3.7**/10**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.91	113	Pn	Pn	22 48 57.9	+0.9
	0.1nm,0.3s,baz=294,slow=9.0,SNR=2.4						
LPAZ				Pg	Pb	22 49 06.9	+1.1
	1.6nm,0.3s,baz=296,slow=16,SNR=47						
LPAZ				LR	LR	22 50 10.8	
	comp=Z,97nm,21.4s,baz=327,slow=35						
LPAZ	La Paz	3.91	113	ePn	Pn	22 48 59.9	+2.8
LPAZ				ePg	Pb	22 49 01.9	-4.0
MNMC	Minye Minye	4.86	154	ePn	Pn	22 49 11.1	+1.2
PB11	IPOC Station P	5.41	157	ePn	Pn	22 49 17.9	+0.6
GO01	Chusmiza	5.51	153	ePn	Pn	22 49 19.6	+0.6
NNA	Nana	5.57	299	Pn	Pn	22 49 21.3	+1.9
	3.6nm,0.3s,baz=127,slow=14,SNR=5.7						
NNA				Sn	Sn	22 50 25.8	+2.3
	1.9nm,0.3s,baz=233,slow=8.4,SNR=4.0						
NNA	Nana	5.57	299	ePn	Pn	22 49 18.1	-1.2
PB01	IPOC Station P	6.65	160	ePn	Pn	22 49 33.7	-0.6
PB04	IPOC Station P	7.71	168	ePn	Pn	22 49 46.9	-2.0
LVC	Limon Verde	8.30	161	Pn	Pn	22 49 56.5	-0.7
	0.8nm,0.3s,baz=335,slow=9.3,SNR=5.4						
LVC				Sn	Sn	22 51 36.9	+5.7
	0.4nm,0.3s,baz=259,slow=22,SNR=3.1						
LVC				LR	LR	22 53 25.2	
	comp=Z,566nm,18.8s,baz=336,slow=40						
LVC	Limon Verde	8.30	161	ePn	Pn	22 49 56.2	-0.9
ATAH	Atahualpa	9.92	319	Pn	Pn	22 50 21.2	+1.8
	0.2nm,0.3s,baz=136,slow=9.7,SNR=2.5						
SIV	San Ignacio	10.48	98	Pn	Pn	22 50 27.8	+0.9
	0.7nm,0.3s,baz=276,slow=13,SNR=29						
SIV				Sn	Sn	22 52 32.5	+8.0
	0.1nm,0.3s,baz=235,slow=20,SNR=2.5						
SIV				LR	LR	22 55 11.9	
	comp=Z,671nm,19.3s,baz=294,slow=42						
GO02	Mina Guanaco	10.57	169	ePn	Pn	22 50 27.1	-1.2
CFA	Coronel Fontan	17.10	169	P	P	22 51 55.4	-2.0
	0.0nm,0.3s,baz=334,slow=12,SNR=6.4						
CFA				LR	LR	22 57 32.8	
	comp=Z,89nm,21.9s,baz=268,slow=34						
CPUP	Villa Florida	17.81	133	LR	LR	23 00 06.9	
	comp=Z,254nm,19.8s,baz=317,slow=41						
PTGA	Pitinga	18.24	41	P	P	22 52 09.2	-0.8
	1.3nm,0.3s,baz=223,slow=14,SNR=4.7						
ROSC	El Rosal	19.62	353	LR	LR	23 00 25.7	
	comp=Z,409nm,18.6s,baz=198,slow=38						
SDV	Santo Domingo	23.52	3	P	P	22 53 06.8	-0.2
	12nm,0.9s,baz=194,slow=12,SNR=10						
SDV	Santo Domingo	23.52	3	eP	P	22 53 06.6	-0.4
	14nm,0.9s						
PLCA	Paso Flores	25.91	178	P	P	22 53 27.8	-0.9
	1.3nm,0.9s,baz=352,slow=15,SNR=2.6						
PLCA				LR	LR	23 03 27.4	
	comp=Z,68nm,18.3s,baz=25,slow=36						
MDP	Montagnes des	27.43	45	LR	LR	23 05 11.7	
	comp=Z,196nm,18.5s,baz=223,slow=38						
JTS	Las Juntas de	28.06	332	LR	LR	23 04 17.7	
	comp=Z,258nm,18.8s,baz=225,slow=35						
JTS	Las Juntas de	28.06	332	eP	P	22 53 46.7	-1.5
	16nm,1.3s						
BANI	BANI	32.97	3	eP	P	22 54 31.2	-0.5
SJG	San Juan	33.14	10	LR	LR	23 08 20.8	
	comp=Z,97nm,20.8s,baz=231,slow=37						
APG	El Apazote	34.82	327	LR	LR	23 07 36.5	
	comp=Z,196nm,21.5s,baz=214,slow=34						
TXAR	Lajitas Array	53.52	325	P	P	22 57 17.3	-0.2
	0.8nm,0.8s,baz=146,slow=8.3,SNR=9.8						
LTX	Lajitas	53.52	325	eP	P	22 57 17.2	-0.2
ULM	Lac du Bonnet	68.08	344	LR	LR	23 33 00.5	
	comp=Z,32nm,18.2s,baz=184,slow=40						
SCHQ	Schefferville	69.44	3	LR	LR	23 32 19.1	
	comp=Z,41nm,18.9s,baz=268,slow=38						
DBIC	Dimbokro	69.75	77	LR	LR	23 28 45.9	
	comp=Z,75nm,18.1s,baz=272,slow=35						
TORD	Torodi Ar. Bea	77.91	73	LR	LR	23 32 48.1	
	comp=Z,66nm,19.9s,baz=295,slow=35						
YKA	Yellowknife Ar	83.93	342	P	P	23 00 28.3	+2.0
	0.8nm,0.8s,baz=134,slow=5.2,SNR=4.4						
YKB5	Yellowknife Ar	83.93	342	eP	P	23 00 28.3	+2.0
BOSA	Boshof	89.14	119	LR	LR	23 39 32.7	
	comp=Z,31nm,18.1s,baz=224,slow=35						
NOA	NORSAR Array B	99.46	29	LR	LR	23 43 22.7	
	comp=Z,21nm,18.8s,baz=270,slow=33						
KSH	Kashi	142.56	43	ePKP	PKPdf	23 07 30.1	-0.1
SONA0	Songino Array	146.99	2	ePKPbc	PKPab	23 07 39.5	-1.5
SONM	Songino Array	146.99	2	PKPbc	PKPab	23 07 39.5	-1.5
	0.4nm,0.5s,baz=335,slow=2.4,SNR=3.3						
WHN	Wuhan	163.28	341	PKP	PKPdf	23 07 59.0	-0.9

ATH 05 22:51:31.5, 38°.22N×21°.72E, h20km±3km**, ML1.4**/5**, Error ellipse: s-maj=3.1km s-min=1.1km az=332.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPR	University Cam	0.09	40	P	Pg	22 51 35.4	0.0
UPR				S	Sg	22 51 38.1	+0.1
LAKA	Lakka	0.21	83	P	Pb	22 51 36.6	-0.1
LAKA				S	Sg	22 51 40.4	-0.1
LAKA				AML	AML	22 51 41.0	
	comp=E,130μm,0.1s						
LAKA				AML	AML	22 51 41.1	
	comp=N,189μm,0.1s						
RLS	Riolos of Patr	0.25	231	P	Pb	22 51 37.2	-0.2
RLS				S	Sg	22 51 41.9	+0.5
RLS				AML	AML	22 51 42.4	
	comp=E,198μm,0.1s						
RLS				AML	AML	22 51 42.5	
	comp=N,144μm,0.2s						
EFP	Efpalio	0.26	35	P	Pb	22 51 37.4	-0.1
EFP				S	Sg	22 51 41.9	+0.2
AIG2	Aigio	0.28	85	P	Pg	22 51 38.5	+0.6
TRIZ	Trizonia	0.32	62	P	Pb	22 51 38.6	+0.1
KALE	Kalithea	0.38	62	P	Pg	22 51 39.4	-0.1
KLV	Kalavryta, Ach	0.38	117	P	Pg	22 51 39.3	-0.4
KLV				S	Sb	22 51 45.7	+0.5
KLV				AML	AML	22 51 46.6	
	comp=E,59μm,0.3s						
KLV				AML	AML	22 51 47.1	
	comp=N,38μm,0.2s						
TRAZ	Trapeza	0.39	97	P	Pb	22 51 39.8	0.0
TRAZ				S	Sg	22 51 45.0	-0.5
ANX	Ano Chora	0.41	23	P	Pg	22 51 39.8	-0.3
ANX				S	Sb	22 51 46.6	+0.6
GUR	Goura	0.57	119	P	Pb	22 51 42.5	-0.4
GUR				S	Sg	22 51 51.4	+0.7
GUR				AML	AML	22 51 53.6	
	comp=N,193μm,0.3s						
GUR				AML	AML	22 51 54.5	
	comp=E,175μm,0.3s						
AMT	Artemida-Makis	0.68	180	P	Pg	22 51 45.1	+0.1

NSSC ***05*** *22:59:02.5±0.3, 33°.61N×35°.69E, h31km±4km, MD0.8, ML1.6*
GRAL ***05*** *22:59:02.5±0.3, 33°.79N×35°.80E, h3km±7km, MD2.9*
ISC 05 22:59:01.0±1.1**, 33°.78N**±0°.06×**35°.71E**±0°.07**, h20**km±5km**, n7, σ0s.65**/12**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.13	340	eP	Pg	22 59 05.5	+0.1
BHL				eS	Sg	22 59 07.9	-0.5
DQRL	Deir Qamar	0.14	237	eP	Pg	22 59 06.2	+0.8
RCY	Rachaya	0.30	160	eP	Pg	22 59 07.8	-0.1
RCY				eS	Sg	22 59 11.7	-0.8
BRBR	Barbar	0.42	151	eP	Pg	22 59 09.9	+0.1
BRBR				eS	Sg	22 59 15.4	-0.4
BRBR				AML	AML	22 59 18.4	
	comp=N,46nm,0.4s						
BRBR				AML	AML	22 59 20.3	
	comp=E,27nm,0.4s						
SHBL	Chebaa	0.43	176	eP	Pb	22 59 10.4	+0.3
QASN	Qassioun	0.53	117	eP	Pn	22 59 13.1	-0.5
QASN				eS	Sg	22 59 20.2	+1.0
QASN				AML	AML	22 59 23.6	
	comp=E,106nm,0.3s						
QASN				AML	AML	22 59 23.7	
	comp=N,98nm,0.4s						
TOTH	TOTAH	0.73	125	eP	Pg	22 59 15.9	+0.5
TOTH				eS	Sb	22 59 24.6	-0.1
TOTH				AML	AML	22 59 36.5	
	comp=N,17nm,0.6s						
TOTH				AML	AML	22 59 38.2	
	comp=E,11nm,0.6s						

ISCJB ***05*** *23:00:56.4±1.0, 12°.45S±0°.08×77°.9W±0°.1, h33km, mb3.9/6, Error ellipse: s-maj=18.1km s-min=8.6km az=151.6*
IDC ***05*** *23:00:56.4±4.8, 12°.41S×77°.86W, h18km±31km, mb3.8/6, mb1 3.9/9, mb1mx3.7/30, mbtmp3.8/9, ML3.5/3, MS3.1/2, Ms1 3.1/2, ms1mx2.8/27, Error ellipse: s-maj=21.8km s-min=16.6km az=167.0*
ISC 05 23:00:58.5±1.0**, 12°.4S**±0°.1×**77°.8W**±0°.1**, h35**km**, n16, σ1s.07**/13**, mb3.9**/6**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	1.04	65	Pg	Pn	23 01 15.7	-1.0
	433nm,0.3s,baz=240,slow=16,SNR=434						
NNA				Lg	Lg	23 01 31.1	
	793nm,0.3s,baz=228,slow=18,SNR=16						
ATAH	Atahualpa	5.29	354	Pn	Pn	23 02 16.6	+1.0
	5.4nm,0.3s,baz=159,slow=16,SNR=28						
ATAH				Sn	Sn	23 03 15.4	-0.1
	6.8nm,0.3s,baz=351,slow=9.3,SNR=7.7						
LPAZ	La Paz	10.13	113	Pn	Pn	23 03 23.9	+1.8
	0.1nm,0.3s,baz=306,slow=14,SNR=3.4						
LVC	Limon Verde	13.20	141	LR	LR	23 08 20.3	
	comp=Z,47nm,18.6s,baz=314,slow=34						
SIV	San Ignacio	16.61	104	Pn	P	23 04 50.9	-0.1
	0.1nm,0.3s,baz=289,slow=16,SNR=2.9						
SIV				LR	LR	23 11 56.0	
	comp=Z,99nm,19.2s,baz=295,slow=40						
CFA	Coronel Fontan	21.02	157	P	P	23 05 39.7	+0.4
	2.3nm,0.7s,baz=328,slow=19,SNR=3.3						
PTGA	Pitinga	21.17	58	P	P	23 05 40.9	-0.1
	1.9nm,0.3s,baz=254,slow=18,SNR=2.9						
SDV	Santo Domingo	22.35	19	P	P	23 05 55.1	+1.4
	1.9nm,0.4s,baz=189,slow=13,SNR=3.9						
TXAR	Lajitas Array	48.45	329	P	P	23 09 38.0	+0.2
	0.5nm,0.8s,baz=157,slow=9.1,SNR=5.2						
ULM	Lac du Bonnet	64.39	347	P	P	23 11 30.0	-0.9
	2.2nm,0.5s,baz=191,slow=9.0,SNR=3.2						
YKA	Yellowknife Ar	80.00	344	P	P	23 13 03.2	-0.7
	0.7nm,0.7s,baz=141,slow=6.2,SNR=4.4						
H11S2	WAKE ISLAND Hy	117.80	284	T	T	01 28 23.7	
	baz=94,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	117.80	284	T	T	01 28 23.9	
	baz=94,slow=74,SNR=12						
H11S3	WAKE ISLAND Hy	117.81	284	T	T	01 28 23.4	
	baz=94,slow=74,SNR=13						
ZALV	Zalesovo Beam	136.35	15	PKP	PKiKP	23 20 16.9	-1.2
	0.4nm,0.3s,baz=355,slow=1.7,SNR=3.9						
SONM	Songino Array	144.53	355	PKP	PKPdf	23 20 30.4	-1.1
	1.1nm,0.8s,baz=11,slow=2.9,SNR=8.0						

SJA ***05*** *23:13:52.2±0.7, 24°.41S×67°.21W, h182km±8km, ML2.7, MW3.1*
ISCJB ***05*** *23:13:53.4±1.0, 24°.36S±0°.06×67°.26W±0°.04, h169km±13km, Error ellipse: s-maj=9.9km s-min=5.0km az=27.6*
GUC ***05*** *23:13:55.2±0.6, 24°.21S×67°.71W, h212km±7km, ML3.8*
ISC 05 23:13:51.7±2.4**, 24°.40S**±0°.06×**67°.23W**±0°.05**, h189**km±23km**, n21, σ1s.29**/33**, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.60	102	eP	Pn	23 14 26.2	+0.6
SLA				IAML		23 14 26.7	
	comp=Z,100nm,0.6s						
SLA				eS	Sn	23 14 51.0	-0.9
AZAP	Zapla	1.98	85	eP	Pn	23 14 29.7	+0.2
AZAP				IAML		23 14 30.3	
	comp=Z,71nm,0.3s						
AZAP				eS	Sn	23 14 58.4	-0.4
FSA	Cafayete	2.04	147	eP	Pn	23 14 30.6	+0.5
HJA	Humahuaca	2.05	55	eP	Pn	23 14 31.6	+1.2
HJA				IAML		23 14 31.8	
	comp=Z,21nm,0.6s						
GO02	Mina Guanaco	2.28	250	⇑iP	Pn	23 14 33.7	+0.9
GO02				i S	Sn	23 15 04.4	-0.3
LVC	Limon Verde	2.36	319	eP	Pn	23 14 35.0	+1.2
LVC				IAML		23 15 11.6	
	comp=Z,39nm,0.5s						
LVC	Limon Verde	2.36	319	eP	Pn	23 14 35.4	+1.7
LVC				eS	Sn	23 15 06.3	-0.1
PB15	IPOC Station P	2.37	300	⇑iP	Pn	23 14 35.1	+1.3
PB15				i S	Sn	23 15 06.0	-0.4
PB06	IPOC Station P	2.73	308	eP	Pn	23 14 39.0	+1.1
PB06				eS	Sn	23 15 12.9	-0.9
PB06	IPOC Station P	2.73	308	eP	Pn	23 14 39.3	+1.4
PB06				i S	Sn	23 15 12.6	-1.1
PB06				IAML		23 15 14.4	
	comp=N,262nm,0.1s						
PB14	IPOC Station P	2.90	265	eP	Pn	23 14 41.0	+1.0
AHML	Horco Molle	2.92	145	eP	Pn	23 14 40.6	+0.6
AHML				IAML		23 14 41.0	
	comp=Z,5.0nm,0.3s						
PB05	IPOC Station P	3.13	299	eP	Pn	23 14 43.6	+1.0
PB05	IPOC Station P	3.13	299	⇑iP	Pn	23 14 43.4	+0.8
PB05				i S	Sn	23 15 20.0	-2.2
PB05				IAML		23 15 23.3	
	comp=N,132nm,0.3s						
PB10	IPOC Station P	3.17	286	eP	Pn	23 14 44.0	+1.2
PB09	IPOC Station P	3.19	324	i P	Pn	23 14 45.1	+1.8
PB09				i S	Sn	23 15 22.9	-0.6
PB09				IAML		23 15 28.1	
	comp=E,80nm,0.4s						
PB03	IPOC Station P	3.30	315	eP	Pn	23 14 45.7	+1.0
PB03	IPOC Station P	3.30	315	⇑iP	Pn	23 14 45.5	+0.9
PB03				i S	Sn	23 15 24.1	-1.8
PB03				IAML		23 15 26.0	
	comp=E,128nm,0.2s						
PB04	IPOC Station P	3.38	307	⇑iP	Pn	23 14 46.6	+0.9
PB04				i S	Sn	23 15 25.2	-2.5
PB04				IAML		23 15 29.6	
	comp=E,192nm,0.1s						
PB07	IPOC Station P	3.62	317	⇓iP	Pn	23 14 49.3	+0.8
PB07				i S	Sn	23 15 30.6	-2.4
PB07				IAML		23 15 33.9	
	comp=N,127nm,0.3s						
PB08	IPOC Station P	4.60	337	eP	Pn	23 15 02.0	+0.9

ISCJB ***05*** *23:18:27.4±0.8, 3°.16S±0°.06×147°.5E±0°.1, h32km, mb4.2/19, MS3.4/11, Error ellipse: s-maj=17.1km s-min=8.8km az=177.0*
NEIC ***05*** *23:18:27.5±3.0, 3°.10S×147°.65E, h35km±3km, mb4.5/6, Error ellipse: s-maj=16.7km s-min=7.7km az=85.0*
IDC ***05*** *23:18:36.6±4.1, 3°.35S×147°.19E, h63km±40km, mb3.7/11, mb1 4.0/13, mb1mx3.8/28, mbtmp4.1/13, ML1.7/1, MS3.4/13, Ms1 3.4/13, ms1mx3.3/33, Error ellipse: s-maj=27.4km s-min=17.0km az=76.0*
ISC 05 23:18:30.8±0.7**, 3°.18S**±0°.08×**147°.3E**±0°.1**, h32**km**, n41, σ3s.16**/27**, mb3.9**/16**, MS3.3**/11**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.13	2	ePn	Pn	23 18 46.6	-3.9
RABL	Rabaul	4.93	102	ePn	Pn	23 19 35.3	-7.5
PMG	Port Moresby	6.19	182	P	Pn	23 20 01.9	+1.8
	1.2nm,0.3s,baz=333,slow=16,SNR=2.6						
PMG				LR	LR	23 22 33.2	
	comp=Z,517nm,18.7s,baz=346,slow=39						
PMG	Port Moresby	6.19	182	ePn	Pn	23 19 57.5	-2.5
JAY	Jayapura	6.65	276	P	Pn	23 20 06.8	+0.3
	1.0nm,0.3s,baz=108,slow=4.8,SNR=6.0						
JAY				LR	LR	23 22 15.7	
	comp=Z,739nm,20.8s,baz=54,slow=34						
COEN	Coen	11.47	201	ePn	Pn	23 21 12.4	-0.1
HNR	Honiara	13.99	117	LR	LR	23 27 10.6	
	comp=Z,128nm,18.1s,baz=60,slow=37						
SIJI	Sorong	16.21	278	P	P	23 22 20.0	+0.7
	0.6nm,0.3s,baz=94,slow=11,SNR=4.6						
GUMO	Guam	16.84	352	LR	LR	23 28 51.9	
	comp=Z,130nm,18.0s,baz=160,slow=36						
WRAB	Tennant Creek	20.92	216	eP	P	23 23 11.0	0.0
	35nm,0.9s						
WB2	Warramunga Arr	20.93	216	eP	P	23 23 10.6	-0.4
	37nm,1.0s						
WRA	Warramunga Arr	20.93	216	P	P	23 23 11.8	+0.7
	28nm,0.9s,baz=41,slow=10,SNR=45						
DAV	Davao City (W)	23.98	295	LR	LR	23 32 13.5	
	comp=Z,89nm,18.8s,baz=251,slow=34						
ASAR	Alice Springs	24.15	211	P	P	23 23 45.6	+1.4
	9.7nm,0.9s,baz=39,slow=8.1,SNR=55						
ASAR				LR	LR	23 34 00.3	
	comp=Z,80nm,19.1s,baz=48,slow=39						
LUWI	Luwuk	24.63	274	eP	P	23 23 46.8	-1.9
	27nm,0.9s						
DZM	Mont Dzumac	26.40	137	P	P	23 24 09.0	+4.2
	1.9nm,0.6s,baz=144,slow=14,SNR=3.1						
DZM				LR	LR	23 32 08.9	
	comp=Z,142nm,19.9s,baz=8.0,slow=31						
ONTNC	Ouen Toro	26.57	137	eP	P	23 24 01.5	-4.7
	16nm,0.9s						
KAPI	Kappang	27.56	265	LR	LR	23 35 54.8	
	comp=Z,52nm,19.5s,baz=109,slow=38						
H11S3	WAKE ISLAND Hy	28.77	41	T	T	23 54 42.2	
	baz=223,slow=75,SNR=10						

H11S2	**WAKE ISLAND Hy**	**28.77**	**41**	T	T	23 54 40.8	
	baz=223,slow=75,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	**28.79**	**41**	T	T	23 54 44.9	
	baz=223,slow=75,SNR=7.7						
STKA	**Stephens Creek**	**29.05**	**190**	P	**P**	**23 24 28.2**	**-0.1**
	2.1nm,0.8s,baz=324,slow=19,SNR=2.2						
STKA				LR	LR	23 36 33.3	
	comp=Z,133nm,18.7s,baz=22,slow=37						
H11N1	**WAKE ISLAND Hy**	**29.79**	**39**	T	T	23 56 01.8	
	baz=221						
H11N3	**WAKE ISLAND Hy**	**29.80**	**39**	T	T	23 55 55.9	
	baz=221,slow=74						
H11N2	**WAKE ISLAND Hy**	**29.80**	**39**	T	T	23 55 59.2	
	baz=221,slow=74						
MJAR	**Matsushiro Arr**	**40.42**	**349**	P	**P**	**23 26 09.8**	**+3.6**
	1.9nm,0.8s,baz=151,slow=8.7,SNR=3.6						
MJAR				LR	LR	23 41 38.8	
	comp=Z,43nm,18.0s,baz=215,slow=34						
NJ2	**Nanjing**	**44.26**	**325**	*e*P	**P**	**23 26 34.1**	**-3.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
KSRS	**Korea Array**	**44.27**	**338**	P	**P**	**23 26 41.8**	**+4.3**
	comp=Z,1.1nm,0.6s,baz=153,slow=7.0,SNR=5.6						
USRK	**Ussuriysk Ar.**	**49.13**	**345**	P	**P**	**23 27 19.8**	**+4.3**
	comp=Z,2.2nm,0.7s,baz=188,slow=8.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**52.26**	**296**	P	**P**	**23 27 42.8**	**+3.3**
	comp=Z,0.5nm,0.5s,baz=126,slow=4.6,SNR=3.3						
CMAR				LR	LR	23 49 56.6	
	comp=Z,11nm,20.1s,baz=126,slow=36						
CHTO	**Chiang Mai**	**52.38**	**297**	*e*P	**P**	**23 27 36.1**	**-4.4**
	comp=Z,1.1nm,0.8s						
HHC	**Hu-ho-hao-te**	**54.64**	**327**	*e*P	**P**	**23 27 55.1**	**-1.7**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,18nm,4.5s						
HHC				LR	LR		
	comp=N,95nm,11.9s						
HHC				LR	LR		
	comp=E,83nm,13.6s						
HHC				LR	LR		
	comp=Z,16nm,14.5s						
SONM	**Songino Array**	**62.13**	**330**	LR	LR	23 55 14.7	
	comp=Z,22nm,21.1s,baz=210,slow=35						
WMQ	**Urumqi**	**70.89**	**319**	*e*P	**P**	**23 29 43.1**	**-1.9**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,44nm,5.7s						
WMQ				LR	LR		
	comp=N,130nm,29.1s						
WMQ				LR	LR		
	comp=E,310nm,29.2s						
WMQ				LR	LR		
	comp=Z,65nm,28.8s						
MKAR	**Makanchi Array**	**75.55**	**320**	P	**P**	**23 30 13.7**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=114,slow=3.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**76.82**	**327**	P	**P**	**23 30 20.7**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=115,slow=6.5,SNR=2.4						
ILAR	**Eielson Array**	**82.78**	**23**	P	**P**	**23 30 53.4**	**+1.9**
	comp=Z,0.7nm,0.8s,baz=251,slow=5.9,SNR=5.2						
BVAR	**Borovoye Array**	**84.70**	**324**	LR	LR	00 08 35.8	
	comp=Z,44nm,19.6s,baz=182,slow=35						
HRY	**Holter Researc**	**99.74**	**43**	*e*P	**Pdif**	**23 32 04.2**	**-7.9**
SRU	**San Rafael Swe**	**101.43**	**51**	*e*Sdif	Sdif	23 43 49.1	-9.2
TORD	**Torodi Ar. Bea**	**144.62**	**288**	PKP	**PKiKP**	**23 38 07.9**	**-1.1**
	comp=Z,8.1nm,0.6s,baz=55,slow=3.0,SNR=4.3						

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*IDC **05** 23:31:26.1±0.8, 26°.75N×144°.11E, h0^{km}, mb3.9/16, mb1 4.1/18, mb1mx3.9/56, mbtmp3.9/18, ML3.5/2, MS2.7/4, Ms1 2.8/4, ms1mx2.6/38, Error ellipse: s-maj=22.8km s-min=18.0km az=66.0*

*JMA **05** 23:31:28.0±0.2, 27°.06N×144°.00E, h9^{km}, M4.2*

ISC 05 23:31:32.0±0.8**, 27°.01N**±0°.08×**144°.02E**±0°.08**, h35**^{km}**, n28, σ1^{s}66**/27**, mb4.0**/17**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.64**	**273**	P	**Pn**	**23 31 57.1**	**-1.2**
CBIJ				*e*S	**Sn**	**23 32 18.2**	**0.0**
JHH2	**Haha-jima-NKT2**	**1.69**	**257**	P	**Pn**	**23 31 57.9**	**-1.1**
JHH2				*e*S	**Sn**	**23 32 20.0**	**+0.5**
BSO1	**Boso 1**	**8.05**	**342**	*e*S	**Sn**	**23 34 51.6**	**-3.8**
JRY	**Ryogami san**	**9.98**	**335**	P	**Pn**	**23 33 53.1**	**+0.2**
MJAR	**Matsushiro Arr**	**10.71**	**334**	Pn	**Pn**	**23 34 02.6**	**-0.2**
	0.2nm,0.3s,baz=162,slow=12,SNR=7.6						
MJAR				Sn	**Sn**	**23 35 59.6**	**-1.8**
	0.1nm,0.3s,baz=170,slow=29,SNR=3.1						
JNU	**Nakatsue**	**12.90**	**301**	LR	LR	23 39 19.0	
	comp=Z,19nm,19.8s,baz=171,slow=36						
GUMO	**Guam**	**13.38**	**176**	LR	LR	23 39 01.0	
	comp=Z,33nm,19.7s,baz=136,slow=35						
KSRS	**Korea Array**	**17.12**	**311**	P	**P**	**23 35 30.1**	**+0.3**
	0.3nm,0.3s,baz=116,slow=11,SNR=5.3						
USRK	**Ussuriysk Ar.**	**19.70**	**334**	P	**P**	**23 35 57.1**	**-1.2**
	0.2nm,0.3s,baz=149,slow=12,SNR=3.2						
KLR	**Kul'dur**	**24.13**	**340**	P	**P**	**23 36 46.1**	**+1.7**
	0.8nm,0.5s,baz=151,slow=16,SNR=2.7						
SONM	**Songino Array**	**35.91**	**315**	P	**P**	**23 38 31.1**	**+2.1**
	1.1nm,0.6s,baz=111,slow=7.4,SNR=6.8						
WRA	**Warramunga Arr**	**47.61**	**192**	P	**P**	**23 40 02.0**	**-2.6**
	1.6nm,0.7s,baz=14,slow=11,SNR=7.9						
ZALV	**Zalesovo Beam**	**50.62**	**319**	P	**P**	**23 40 28.1**	**+0.8**
	0.6nm,0.5s,baz=114,slow=9.6,SNR=3.2						
ASAR	**Alice Springs**	**51.32**	**192**	P	**P**	**23 40 29.5**	**-3.4**
	0.2nm,0.6s,baz=200,slow=32,SNR=3.2						
MKAR	**Makanchi Array**	**51.79**	**310**	P	**P**	**23 40 37.5**	**+1.2**
	1.0nm,0.5s,baz=91,slow=8.5,SNR=9.1						
KURBB	**Kurchatov Arra**	**54.27**	**314**	P	**P**	**23 40 55.0**	**+0.6**
	1.2nm,0.4s,baz=90,slow=7.9,SNR=7.8						
ILAR	**Eielson Array**	**57.00**	**29**	P	**P**	**23 41 12.7**	**-1.2**
	0.4nm,0.8s,baz=263,slow=7.2,SNR=3.4						
BVAR	**Borovoye Array**	**59.21**	**318**	P	**P**	**23 41 30.7**	**+1.2**
	1.4nm,0.5s,baz=90,slow=6.7,SNR=12						
ARU	**Arti**	**65.49**	**323**	P	**P**	**23 42 09.7**	**-1.7**
	0.5nm,0.3s,baz=63,slow=6.8,SNR=3.7						
ARCES	**ARCESS Array B**	**74.15**	**341**	P	**P**	**23 43 05.6**	**+1.1**
	1.6nm,0.8s,baz=47,slow=6.6,SNR=3.4						
YBH	**Yreka Blue Hor**	**74.84**	**51**	P	**P**	**23 43 10.2**	**+1.1**
	1.2nm,0.7s,baz=198,slow=6.4,SNR=3.2						
OBN	**Obninsk**	**77.52**	**326**	LR	LR	00 19 53.1	
	comp=Z,7.4nm,21.9s,baz=304,slow=37						
FINES	**FINESS Array B**	**78.74**	**334**	P	**P**	**23 43 31.9**	**+1.3**
	0.7nm,0.7s,baz=64,slow=4.4,SNR=4.7						
KBZ	**Khabaz**	**79.26**	**314**	P	**P**	**23 43 35.6**	**+1.9**
	3.0nm,0.8s,baz=120,slow=4.8,SNR=5.1						
NVAR	**Mina Array Bea**	**79.28**	**52**	P	**P**	**23 43 34.8**	**+0.6**
	0.8nm,0.6s,baz=291,slow=6.5,SNR=5.8						
NOA	**NORSAR Array B**	**84.28**	**339**	LR	LR	00 27 57.1	
	comp=Z,6.3nm,20.1s,baz=315,slow=40						
BRTR	**Keskin Array B**	**87.25**	**314**	P	**P**	**23 44 16.1**	**+0.9**
	0.2nm,0.4s,baz=38,slow=7.3,SNR=2.7						
TXAR	**Lajitas Array**	**94.33**	**54**	P	**P**	**23 44 49.1**	**+0.7**
	0.1nm,0.4s,baz=316,slow=3.5,SNR=3.7						

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*IDC **05** 23:36:24.8±5.7, 36°.57N×70°.72E, h130^{km}±45^{km}, mb1 3.4/7, mb1mx3.0/57, mbtmp3.9/7, Error ellipse: s-maj=67.3km s-min=19.2km az=155.0*

*ISCJB **05** 23:36:25.2±0.5, 36°.57N±0°.04×70°.78E±0°.05, h188^{km}, Error ellipse: s-maj=6.0km s-min=5.0km az=30.8*

*NNC **05** 23:36:26.6±2.6, 36°.72N×70°.66E, h158^{km}±40^{km}, mb3.2, mpv4.2, Error ellipse: s-maj=24.4km s-min=13.8km az=152.0*

ISC 05 23:36:25.2±0.9**, 36°.59N**±0°.07×**70°.77E**±0°.06**, h188**^{km}**, n26, σ1^{s}57**/34**, 7C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.98**	**21**	P	**Pn**	**23 37 52.5**	**+0.1**
	SNR=20						
UCH	**Uchtor**	**6.33**	**26**	P	**Pn**	**23 37 57.2**	**+0.2**
	SNR=12						
EKS2	**Erkin-Say**	**6.50**	**20**	P	**Pn**	**23 37 59.7**	**+0.8**
	SNR=12						
KK31	**Karatay Array**	**6.51**	**358**	⇓P	**Pn**	**23 37 59.7**	**+0.7**
	13nm,0.4s,baz=185,slow=14,SNR=123						
KK31				⇑S	**Sn**	**23 39 11.9**	**-1.2**
	4.2nm,0.5s,baz=191,slow=22,SNR=6.2						
AAK	**Ala-Archa**	**6.69**	**24**	P	**Pn**	**23 38 01.6**	**+0.2**
	2.3nm,0.3s,baz=224,slow=12,SNR=16						
AAK				S	**Sn**	**23 39 15.6**	**-1.9**
	1.8nm,0.3s,baz=330,slow=21,SNR=14						
AAK	**Ala-Archa**	**6.69**	**24**	⇑P	**Pn**	**23 38 01.7**	**+0.3**
	7.1nm,0.6s						
AAK				⇑S	**Sn**	**23 39 15.9**	**-1.6**
	14nm,0.7s						
AAK	**Ala-Archa**	**6.69**	**24**	P	**Pn**	**23 38 02.0**	**+0.6**
	SNR=7.8						
CHMS	**Chumysh**	**7.10**	**24**	P	**Pn**	**23 38 07.2**	**+0.6**
	SNR=7.0						
USP	**Ospenovka**	**7.26**	**22**	P	**Pn**	**23 38 09.3**	**+0.6**
	SNR=6.1						
TKM2	**Tokmak 2**	**7.34**	**29**	⇑P	**Pn**	**23 38 09.6**	**-0.3**
	7.6nm,0.7s						
TKM2				⇓S	**Sn**	**23 39 31.5**	**-1.3**
	4.2nm,0.7s						
TKM2	**Tokmak 2**	**7.34**	**29**	P	**Pn**	**23 38 10.2**	**+0.3**
	SNR=11						
GEYT	**Alibeck**	**10.18**	**281**	P	**Pn**	**23 38 47.3**	**+0.3**
	0.7nm,0.3s,baz=104,slow=12,SNR=9.2						
GEYT				S	**Sn**	**23 40 37.7**	**-2.6**
	0.8nm,0.3s,baz=115,slow=13,SNR=4.5						
GYA0B	**ALIBECK ARRAY**	**10.18**	**281**	⇑P	**Pn**	**23 38 46.2**	**-0.7**
GYA0B				⇓S	**Sn**	**23 40 38.9**	**-1.4**
MKAR	**Makanchi Array**	**13.33**	**37**	P	**P**	**23 39 29.7**	**-0.5**
	0.1nm,0.3s,baz=223,slow=14,SNR=7.6						
PYUN	**Piuthan**	**13.34**	**126**	*e*P	**Pn**	**23 39 26.1**	**-1.6**
	11nm,0.4s						
AB31	**Akbulak array**	**14.92**	**331**	⇑P	**P**	**23 39 49.3**	**+1.5**
	0.5nm,0.5s,baz=149,slow=13,SNR=17						
AB31				⇓S	**Sn**	**23 42 31.0**	**-2.4**
	1.2nm,0.6s,baz=154,slow=24,SNR=3.3						
DMN	**Daman**	**15.08**	**122**	*e*P	**P**	**23 39 49.8**	**-0.2**
	4.6nm,0.3s						
KKN	**Kakani**	**15.08**	**121**	*e*P	**P**	**23 39 50.0**	**0.0**
	12nm,0.6s						
KURBB	**Kurchatov Arra**	**15.10**	**19**	P	**P**	**23 39 51.1**	**+1.3**
	0.1nm,0.3s,baz=211,slow=10,SNR=4.2						
PKIN	**Phulchoki**	**15.29**	**122**	*e*P	**P**	**23 39 52.7**	**+0.3**
	12nm,0.6s						
PKI	**Pulchoki**	**15.31**	**122**	*e*P	**P**	**23 39 52.5**	**-0.1**
	13nm,0.6s						
JIRN	**Jiri**	**15.79**	**120**	*e*P	**P**	**23 39 59.8**	**+1.8**
	21nm,0.4s						
BVAR	**Borovoye Array**	**16.44**	**359**	P	**Pn**	**23 40 08.1**	**+2.9**
	0.3nm,0.3s,baz=179,slow=11,SNR=8.8						
AKTO	**Aktyubinsk**	**16.61**	**330**	P	**Pn**	**23 40 11.6**	**+4.3**
	0.3nm,0.3s,baz=136,slow=11,SNR=4.3						
AKTO	**Aktyubinsk**	**16.61**	**330**	⇓P	**Pn**	**23 40 10.6**	**+3.3**
	2.0nm,0.9s						
AKTO				⇑S	**S**	**23 43 09.0**	**-1.1**
	3.3nm,1.1s						
ZALV	**Zalesovo Beam**	**19.91**	**25**	P	**Pn**	**23 40 46.3**	**+0.1**
	1.6nm,0.3s,baz=222,slow=12,SNR=22						

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*ISCJB **05** 23:53:17.6±1.6, 5°.8S±0°.1×150°.6E±0°.2, h48^{km}, mb3.9/4, MS3.4/2, Error ellipse: s-maj=36.7km s-min=14.2km az=24.9*

*IDC **05** 23:53:25.9±7.0, 5°.99S×150°.34E, h102^{km}±51^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.5/36, mbtmp4.1/6, MS3.4/2, Ms1 3.5/2, ms1mx3.0/27, Error ellipse: s-maj=62.7km s-min=36.2km az=90.0*

ISC 05 23:53:18.8±1.8**, 5°.8S**±0°.1×**150°.7E**±0°.3**, h48**^{km}**, n8, σ1^{s}82**/8**, mb4.0**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.00**	**224**	P	**Pn**	**23 54 32.7**	**+1.4**
	2.6nm,0.3s,baz=8.3,slow=15,SNR=3.6						
PMG				S	**Sn**	**23 55 28.0**	**+0.2**
	7.5nm,0.3s,baz=8.2,slow=20,SNR=12						
CTA	**Charters Tower**	**14.82**	**197**	P	**Pn**	**23 56 45.6**	**0.0**
	0.5nm,0.3s,baz=346,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**21.21**	**227**	P	**P**	**23 57 58.2**	**-2.4**
	6.1nm,0.6s,baz=52,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.00**	**221**	P	**P**	**23 58 28.7**	**-0.5**
	3.0nm,0.6s,baz=53,slow=8.9,SNR=27						
KSRS	**Korea Array**	**48.01**	**336**	LR	LR	00 21 42.0	
	comp=Z,37nm,18.8s,baz=145,slow=35						
CMAR	**Chiang Mai Arr**	**56.43**	**297**	P	**P**	**00 02 54.8**	**-1.2**
	0.4nm,0.3s,baz=132,slow=7.4,SNR=5.5						
CMAR				LR	LR	00 25 15.8	
	comp=Z,37nm,21.4s,baz=138,slow=34						
MKAR	**Makanchi Array**	**79.72**	**320**	P	**P**	**00 05 23.9**	**+2.2**
	0.6nm,0.8s,baz=104,slow=7.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**148.60**	**286**	PKPbc	**PKPbc**	**00 13 00.1**	**-1.5**
	6.5nm,0.6s,baz=58,slow=4.5,SNR=3.9						

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*ISCJB **05** 23:55:33.8±0.8, 5°.49S±0°.09×149°.8E±0°.1, h68^{km}, mb3.8/6, Error ellipse: s-maj=22.0km s-min=9.9km az=27.0*

*IDC **05** 23:55:35.0±0.8, 5°.55S×149°.91E, h68^{km}±5^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/33, mbtmp3.9/7, MS3.7/4, Ms1 3.7/4, ms1mx3.3/24, Error ellipse: s-maj=26.7km s-min=12.5km az=116.0*

ISC 05 23:55:35.2±0.8**, 5°.5S**±0°.1×**149°.9E**±0°.2**, h68**^{km}**, n12, σ1^{s}40**/16**, mb4.0**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.71**	**215**	P	**Pn**	**23 56 44.8**	**+1.1**
	3.2nm,0.3s,baz=38,slow=17,SNR=2.4						
PMG				S	**Sn**	**23 57 37.3**	**+0.2**
	4.9nm,0.3s,baz=330,slow=20,SNR=5.5						
HNR	**Honiara**	**10.69**	**112**	LR	LR	00 02 12.2	
	comp=Z,331nm,20.8s,baz=262,slow=37						
WRA	**Warramunga Arr**	**20.84**	**225**	P	**P**	**00 00 08.3**	**-3.1**
	7.7nm,0.6s,baz=54,slow=10,SNR=10						
WRA				pP	**pP**	**00 00 26.4**	**+0.5**
	16nm,0.6s,baz=52,slow=10,SNR=12						
DZM	**Mont Dzumac**	**22.95**	**137**	P	**P**	**00 00 33.8**	**-0.2**
	4.2nm,1.0s,baz=345,slow=10,SNR=1.9						
ASAR	**Alice Springs**	**23.71**	**219**	P	**P**	**00 00 39.8**	**-1.3**
	2.2nm,0.6s,baz=52,slow=8.8,SNR=10						
ASAR				pP	**pP**	**00 00 57.5**	**+0.6**
	5.5nm,0.6s,baz=50,slow=9.3,SNR=8.0						
ASAR				LR	LR	00 11 26.9	
	comp=Z,209nm,18.2s,baz=66,slow=40						
BATI	**Baumata**	**26.39**	**258**	LR	LR	00 13 03.0	
	comp=Z,184nm,22.0s,baz=116,slow=40						
STKA	**Stephens Creek**	**27.34**	**196**	sP	sP	00 01 37.0	-1.5
	4.5nm,0.9s,baz=360,slow=6.3,SNR=2.7						
CMAR	**Chiang Mai Arr**	**55.59**	**297**	P	**P**	**00 05 03.8**	**-0.5**
	0.7nm,0.3s,baz=120,slow=5.3,SNR=6.6						
CMAR				pP	**pP**	**00 05 21.9**	**-0.1**
	0.6nm,0.3s,baz=127,slow=6.6,SNR=1.4						
PETK	**Petropavlovsk-**	**58.79**	**5**	P	**P**	**00 05 25.7**	**-0.4**
	2.8nm,1.0s,baz=139,slow=11,SNR=3.6						
PETK				pP	**pP**	**00 05 42.1**	**-1.9**
	1.2nm,0.6s,baz=131,slow=4.1,SNR=3.0						
MKAR	**Makanchi Array**	**78.99**	**320**	P	**P**	**00 07 33.2**	**+1.4**
	0.3nm,0.5s,baz=97,slow=5.8,SNR=5.6						
MKAR				sP	**sP**	**00 07 58.7**	**+0.8**
	1.1nm,0.8s,baz=121,slow=4.5,SNR=3.9						
MAW	**Mawson**	**83.79**	**203**	LR	LR	00 45 00.6	
	comp=Z,56nm,18.2s,baz=64,slow=35						
ILAR	**Eielson Array**	**83.93**	**23**	P	**P**	**00 07 58.1**	**+0.6**
	0.3nm,0.5s,baz=242,slow=5.4,SNR=2.8						
ILAR				pP	**pP**	**00 08 15.0**	**-1.2**
	0.7nm,0.7s,baz=234,slow=4.5,SNR=3.9						
ILAR				sP	**sP**	**00 08 25.5**	**+1.8**
	0.4nm,0.6s,baz=249,slow=5.6,SNR=1.9						

MEX 05 23:55:44.2±0.5**, 15°.09N**×**96°.05W, h22**^{km}±21^{km}**, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.68**	**355**	*e*P	Pb	23 55 55.1	-2.3
HUIG				*e*S	Sb	23 56 03.5	-3.0
PANG	**Puerto Angel**	**0.71**	**325**	*i* P	Pb	23 55 55.5	-2.4
PANG				*i* S	Sb	23 56 04.8	-2.4
VHO	**Vista Hermosa**	**2.08**	**342**	*i* P	Pn	23 56 16.2	-1.8
VHO				*e*S	Sn	23 56 40.2	-3.1
CMIG	**Matias Romero**	**2.29**	**29**	*e*P	Pn	23 56 18.5	-2.1
CMIG				*e*S	Sn	23 56 45.1	-3.0
TGIG		**3.28**	**59**	*e*P	Pn	23 56 32.3	-2.0
TGIG				*e*S	Sn	23 57 09.1	-3.6

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*ISCJB **06** 00:02:16.8±0.4, 17°.7S±0°.1×178°.75W±0°.08, h579^{km}, mb4.2/34, Error ellipse: s-maj=18.5km s-min=6.9km az=157.3*

*IDC **06** 00:02:17.5±2.9, 17°.75S×178°.68W, h573^{km}±36^{km}, mb3.8/15, mb1 3.9/17, mb1mx3.6/40, mbtmp4.7/17, Error ellipse: s-maj=23.9km s-min=14.2km az=167.0*

*NEIC **06** 00:02:18.4±1.4, 17°.77S×178°.71W, h589^{km}±9^{km}, mb4.2/27, Error ellipse: s-maj=26.5km s-min=17.4km az=162.0*

ISC 06 00:02:17.6±0.6**, 17°.8S**±0°.1×**178°.70W**±0°.09**, h579**^{km}**, n55, σ0^{s}92**/56**, mb4.2**/34**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.62**	**250**	P	**P**	**00 05 23.6**	**+0.8**
	0.9nm,0.3s,baz=89,slow=18,SNR=14						
DZM	**Mont Dzumac**	**14.62**	**250**	*e*P	**P**	**00 05 23.5**	**+0.6**
RAR	**Rarotonga**	**18.17**	**104**	P	**P**	**00 05 56.3**	**+0.6**
	1.4nm,0.3s,baz=330,slow=16,SNR=3.3						
RAR	**Rarotonga**	**18.17**	**104**	*e*P	**P**	**00 05 56.3**	**+0.6**
	374nm,1.6s						
EIDS	**Eidsvold**	**29.06**	**250**	*e*P	**P**	**00 07 32.0**	**-0.4**
	8.1nm,0.8s						
CTA	**Charters Tower**	**33.20**	**260**	P	**P**	**00 08 06.9**	**-0.9**
	5.8nm,0.6s,baz=91,slow=11,SNR=9.1						
PMG	**Port Moresby**	**34.16**	**280**	P	**P**	**00 08 14.9**	**-1.0**
	30nm,0.8s,baz=84,slow=6.1,SNR=7.2						
PMG	**Port Moresby**	**34.16**	**280**	*e*P	**P**	**00 08 17.5**	**+1.6**
	95nm,0.8s						
COEN	**Coen**	**36.83**	**270**	*e*P	**P**	**00 08 37.9**	**-0.1**
	22nm,0.9s						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**00 08 51.6**	**+0.5**
	11nm,0.5s,baz=91,slow=11,SNR=32						
STKA	**Stephens Creek**	**38.46**	**241**	*e*P	**P**	**00 08 51.1**	**0.0**
	3.9nm,1.0s						
JAY	**Jayapura**	**42.60**	**286**	P	**P**	**00 09 25.6**	**+1.5**
	9.8nm,0.4s,baz=181,slow=23,SNR=12						
WB2	**Warramunga Arr**	**44.38**	**259**	*e*P	**P**	**00 09 37.6**	**-0.2**
	13nm,0.6s						
WR1	**Warramunga Arr**	**44.39**	**259**	*e*P	**P**	**00 09 37.7**	**-0.2**
WRA	**Warramunga Arr**	**44.39**	**259**	P	**P**	**00 09 37.7**	**-0.2**
	9.2nm,0.4s,baz=87,slow=8.7,SNR=59						
AS31	**Alice Springs**	**44.56**	**254**	*e*P	**P**	**00 09 39.9**	**+0.7**
	18nm,0.8s						
ASAR	**Alice Springs**	**44.57**	**254**	P	**P**	**00 09 40.0**	**+0.7**
	51nm,0.5s,baz=88,slow=8.5,SNR=795						
ASAR				PcP	**PcP**	**00 11 09.8**	**+0.2**
	1.3nm,0.4s,baz=102,slow=3.8,SNR=4.3						
SIJI	**Sorong**	**51.93**	**283**	P	**P**	**00 10 35.1**	**+1.1**
	31nm,0.7s,baz=122,slow=13,SNR=12						
PSA00	**Pilbara Seismi**	**57.68**	**255**	*e*P	**P**	**00 11 13.4**	**-0.6**
	13nm,0.7s						
MJAR	**Matsushiro Arr**	**67.62**	**323**	P	**P**	**00 12 17.8**	**+0.2**
	1.8nm,0.5s,baz=137,slow=4.4,SNR=4.9						
MAJO	**Matsushiro**	**67.62**	**323**	*e*P	**P**	**00 12 17.8**	**+0.2**
MNAI	**Manna**	**77.59**	**269**	*e*P	**P**	**00 13 10.9**	**-4.5**
	449nm,1.4s						
NV01	**Mina Array Sit**	**79.51**	**44**	*e*P	**P**	**00 13 25.4**	**+0.2**
NVAR	**Mina Array Bea**	**79.51**	**44**	P	**P**	**00 13 25.4**	**+0.2**
	2.3nm,0.7s,baz=222,slow=8.6,SNR=13						
KVN	**Kaiserville**	**79.97**	**44**	*e*P	**P**	**00 13 27.5**	**-0.2**
	3.1nm,0.7s						
K05A	**Summer Lake**	**80.26**	**39**	*e*P	**P**	**00 13 28.4**	**-0.7**
	12nm,1.1s						
PINE	**Pine Mountain**	**80.84**	**38**	*e*P	**P**	**00 13 30.4**	**-1.7**
	5.3nm,0.8s						
WVOR	**Wild Horse Val**	**81.47**	**40**	*e*P	**P**	**00 13 34.9**	**-0.3**
	4.1nm,0.8s						
TUC	**Tucson**	**81.83**	**52**	*e*P	**P**	**00 13 38.1**	**+0.9**
	6.0nm,1.3s						
J08A	**Circle Bar Ran**	**82.08**	**40**	*e*P	**P**	**00 13 38.6**	**+0.3**
	8.8nm,1.1s						
U15A	**North Rim**	**82.62**	**48**	*e*P	**P**	**00 13 41.0**	**-0.4**
	5.5nm,0.8s						
ELK	**Elko**	**82.73**	**43**	*e*P	**P**	**00 13 41.7**	**-0.1**
	2.5nm,0.9s						
G08A	**Pilot Rock**	**82.86**	**38**	*e*P	**P**	**00 13 42.2**	**0.0**
	2.9nm,0.8s						
SCM	**Sheep Creek Mo**	**83.15**	**14**	*e*P	**P**	**00 13 42.7**	**-0.5**
SCM				*e*pP	**pP**	**00 15 46.4**	**+0.2**
MAW	**Mawson**	**83.91**	**200**	P	**P**	**00 13 46.9**	**+0.1**
	0.8nm,0.5s,baz=153,slow=6.8,SNR=5.6						
MAW	**Mawson**	**83.91**	**200**	*e*P	**P**	**00 13 46.8**	**-0.1**
	2.5nm,1.5s						
F10A	**Beach Ranch, E**	**84.25**	**38**	*e*P	**P**	**00 13 49.1**	**+0.1**
	8.4nm,1.1s						
PAX	**Paxson**	**84.57**	**15**	*e*P	**P**	**00 13 49.7**	**-0.5**
PAX				*e*pP	**pwP**	**00 15 56.2**	**-0.1**
HLID	**Hailey**	**84.70**	**41**	*e*P	**P**	**00 13 52.0**	**+0.6**
	1.9nm,0.8s						
CCB	**Clear Creek Bu**	**85.50**	**13**	*e*P	**P**	**00 13 53.6**	**-0.9**
	1.9nm,0.6s						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**00 13 55.2**	**-0.7**
	0.7nm,0.4s,baz=233,slow=5.6,SNR=7.8						
PV17	**East Wray Mesa**	**85.83**	**48**	*e*pP	pP	00 16 03.1	+2.1
TX31	**Lajitas Ar. Si**	**86.15**	**58**	*e*P	**P**	**00 13 59.1**	**+0.6**
	4.9nm,1.0s						
TXAR	**Lajitas Array**	**86.15**	**58**	P	**P**	**00 13 59.7**	**+1.2**
	2.4nm,0.7s,baz=218,slow=6.0,SNR=34						
MCMT	**McKenzie Canyo**	**86.30**	**41**	*e*P	**P**	**00 13 59.7**	**+0.6**
PDAR	**Pinedale Array**	**87.43**	**44**	P	**P**	**00 14 04.7**	**+0.2**
	1.5nm,0.5s,baz=220,slow=3.6,SNR=20						
CMAR	**Chiang Mai Arr**	**88.57**	**290**	P	**P**	**00 14 11.8**	**+1.8**
	0.9nm,0.3s,baz=119,slow=3.6,SNR=6.4						
YKA	**Yellowknife Ar**	**94.31**	**25**	P	**P**	**00 14 34.8**	**-0.6**
	0.2nm,0.5s,baz=221,slow=3.7,SNR=3.2						
YKB5	**Yellowknife Ar**	**94.31**	**25**	*e*P	**P**	**00 14 34.8**	**-0.6**
MK32	**Makanchi Array**	**108.83**	**314**	*e*PKiKP	**PKiKP**	**00 19 41.0**	**-0.7**
MKAR	**Makanchi Array**	**108.83**	**314**	PKiKP	**PKiKP**	**00 19 41.0**	**-0.7**
	0.2nm,0.5s,baz=161,slow=1.6,SNR=1.8						
BR101	**Keskin Array S**	**144.48**	**315**	*e*PKPdf	**PKPdf**	**00 20 48.9**	**-0.2**
BR131	**Keskin Array S**	**144.48**	**315**	*e*PKPdf	PKPbc	00 20 49.6	+0.4
BRTR	**Keskin Array B**	**144.48**	**315**	PKP	**PKPdf**	**00 20 48.9**	**-0.2**
	0.9nm,0.4s,baz=101,slow=3.0,SNR=13						
CLL	**Collm**	**145.25**	**347**	*e*PKPbc	**PKPdf**	**00 20 50.0**	**+0.2**

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*ISCJB **06** 00:07:58.6±0.8, 4°.80S±0°.08×148°.8E±0°.2, h33^{km}, mb3.8/6, MS3.5/9, Error ellipse: s-maj=22.2km s-min=10.0km az=12.0*

*IDC **06** 00:08:01.7±5.6, 4°.88S×148°.89E, h50^{km}±57^{km}, mb3.7/7, mb1 4.0/8, mb1mx3.7/31, mbtmp4.0/8, ML1.6/1, MS3.5/11, Ms1 3.5/11, ms1mx3.3/33, Error ellipse: s-maj=37.3km s-min=27.3km az=26.0*

ISC 06 00:08:00.3±1.1**, 4°.8S**±0°.1×**148°.9E**±0°.2**, h35**^{km}**, n17, σ1^{s}08**/9**, mb3.9**/6**, MS3.5**/9**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.91**	**201**	P	**Pn**	**00 09 12.8**	**+1.2**
	1.6nm,0.3s,baz=21,slow=13,SNR=4.0						
PMG				S	**Sn**	**00 10 06.6**	**-0.6**
	4.1nm,0.3s,baz=8.5,slow=19,SNR=11						
HNR	**Honiara**	**11.87**	**113**	LR	LR	00 14 34.5	
	comp=Z,313nm,21.1s,baz=274,slow=33						
GUMO	**Guam**	**18.70**	**348**	LR	LR	00 18 36.0	
	comp=Z,73nm,18.8s,baz=154,slow=34						
WRA	**Warramunga Arr**	**20.70**	**222**	P	**P**	**00 12 36.6**	**-1.1**
	16nm,0.8s,baz=52,slow=10,SNR=15						
ASAR	**Alice Springs**	**23.70**	**216**	P	**P**	**00 13 08.7**	**-0.5**
	5.0nm,0.6s,baz=53,slow=8.7,SNR=20						
ASAR				LR	LR	00 23 49.1	
	comp=Z,141nm,18.3s,baz=62,slow=40						
DZM	**Mont Dzumac**	**24.15**	**137**	P	**P**	**00 13 13.1**	**-0.2**
	7.8nm,0.8s,baz=322,slow=19,SNR=2.6						
DZM				LR	LR	00 20 53.0	
	comp=Z,277nm,21.1s,baz=228,slow=32						
BATI	**Baumata**	**25.60**	**256**	LR	LR	00 24 23.1	
	comp=Z,248nm,20.6s,baz=106,slow=38						
STKA	**Stephens Creek**	**27.81**	**193**	LR	LR	00 23 50.1	
	comp=Z,137nm,19.5s,baz=26,slow=34						
MJAR	**Matsushiro Arr**	**42.32**	**347**	LR	LR	00 31 44.9	
	comp=Z,30nm,18.3s,baz=185,slow=34						
KSRS	**Korea Array**	**46.36**	**337**	LR	LR	00 33 26.3	
	comp=Z,40nm,21.1s,baz=140,slow=33						
USRK	**Ussuriysk Ar.**	**51.09**	**344**	LR	LR	00 38 08.9	
	comp=Z,33nm,18.3s,baz=170,slow=35						
CMAR	**Chiang Mai Arr**	**54.39**	**297**	P	**P**	**00 17 24.5**	**+0.2**
	0.8nm,0.3s,baz=111,slow=4.9,SNR=2.3						
MA2	**Magadan**	**64.18**	**1**	LR	LR	00 42 21.1	
	comp=Z,17nm,21.5s,baz=182,slow=32						
VNDA	**Vanda**	**73.01**	**177**	LR	LR	00 47 18.0	
	comp=Z,52nm,20.0s,baz=346,slow=32						
MKAR	**Makanchi Array**	**77.80**	**320**	P	**P**	**00 19 55.3**	**+1.2**
	0.3nm,0.7s,baz=101,slow=7.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**79.03**	**327**	P	**P**	**00 19 59.1**	**-1.5**
	0.3nm,0.4s,baz=116,slow=6.6,SNR=2.3						
ILAR	**Eielson Array**	**83.63**	**23**	P	**P**	**00 20 25.0**	**+0.2**
	0.2nm,0.4s,baz=260,slow=5.2,SNR=3.7						

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*ISCJB **06** 00:13:54.6±2.3, 46°.8N±0°.1×141°.7E±0°.2, h10^{km}, Error ellipse: s-maj=22.6km s-min=6.4km az=44.9*

JMA 06 00:13:55.3±0.6, 46.73N×141.62E, h0km, M2.7
SKHL 06 00:13:55.4±0.3, 46.74N×141.73E, h10km, mb3.9/2
ISC 06 00:13:54.8±2.7, 46.8N±0.1×141.7E±0.2, h10km, n3, σ0.24/6, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.76	75	⇓ePg	Pb	00 14 10.1	0.0
YSS				AMB	AMB	00 14 12.0	
	50nm,0.4s						
YSS				eSg	Sb	00 14 20.5	0.0
YSS				A	A	00 14 21.0	
	370nm,0.2s						
YSS				AMS	AMS	00 14 33.0	
	300nm,10.0s						
JRBN	Rebuntou	1.41	198	P	Pn	00 14 20.6	+0.2
JRBN				eS	Sn	00 14 38.7	-0.3
JWK2	Keihoku	1.46	174	P	Pb	00 14 21.9	-0.1
JWK2				eS	Sb	00 14 40.7	+0.2

ISCJB 06 00:30:54.9±1.9, 13.2S±0.1×167.1E±0.2, h250km, mb3.8/5, Error ellipse: s-maj=33.0km s-min=15.5km az=157.1
IDC 06 00:30:57.0±6.0, 13.32S×166.97E, h237km±49km, mb3.5/5, mb1 3.6/6, mb1mx3.3/37, mbtmp4.1/6, Error ellipse: s-maj=45.0km s-min=21.8km az=26.0
ISC 06 00:30:58.3±1.5, 13.4S±0.1×167.0E±0.2, h250km, n8, σ0.52/10, mb3.9/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.68	183	P	Pn	00 33 00.3	+0.1
	0.8nm,0.3s,baz=62,slow=7.1,SNR=15						
DZM				S	S	00 34 38.5	-0.3
	0.1nm,0.3s,baz=3.4,slow=19,SNR=2.1						
URZ	Urewera	26.39	162	P	P	00 36 11.2	-0.6
	1.9nm,0.3s,baz=270,slow=4.0,SNR=4.4						
STKA	Stephens Creek	29.68	227	P	P	00 36 41.6	+0.5
	3.4nm,0.4s,baz=49,slow=8.4,SNR=5.7						
WRA	Warramunga Arr	31.90	254	P	P	00 37 00.2	-0.5
	1.1nm,0.7s,baz=96,slow=8.6,SNR=3.9						
ASAR	Alice Springs	32.91	247	P	P	00 37 09.2	-0.3
	1.4nm,0.4s,baz=76,slow=9.1,SNR=30						
ASAR				PcP	PcP	00 39 48.1	+0.3
	0.2nm,0.5s,baz=63,slow=2.5,SNR=3.8						
VNDA	Vanda	64.22	181	P	P	00 41 06.8	+0.7
	0.3nm,0.5s,baz=349,slow=8.3,SNR=4.8						
ARCES	ARCESS Array B	118.86	346	PKP	PKiKP	00 49 15.9	-0.4
	1.4nm,0.9s,baz=86,slow=1.6,SNR=5.8						
FINES	FINESS Array B	124.35	338	PKP	PKiKP	00 49 27.2	-0.1
	0.7nm,0.7s,baz=101,slow=2.1,SNR=4.8						

ISK 06 00:47:55.3, 38.75N×43.45E, h21km, ML2.0/6
DDA 06 00:47:56.5, 38.74N×43.49E, h7km±6km, ML2.6
ISC 06 00:47:56.2±1.1, 38.75N±0.03×43.46E±0.04, h16km±9km, n12, σ0.77/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.17	199	PG	Pb	00 48 01.5	+0.5
VANB				SG	Sb	00 48 06.1	+1.9
TVAN	Van	0.23	191	i P	Pb	00 48 01.8	-0.3
TVAN				i S	Sb	00 48 06.2	+0.1
TVAN				IAML_P			
	comp=Z,7μm,0.1s						
VMUR	Van-Muradiye	0.25	20	i P	Pg	00 48 01.8	-0.1
VMUR				i S	Sb	00 48 07.7	+0.9
VMUR				IAML_P			
	comp=Z,1μm,0.2s						
ERCV	ERCIS-VAN	0.28	340	PG	Pg	00 48 02.0	-0.5
ERCV				SG	Sg	00 48 07.1	+0.4
CLDR	Caldiran	0.53	42	PG	Pg	00 48 06.3	-0.5
CLDR				SG	Sb	00 48 14.8	0.0
CLDR	Caldiran	0.53	42	i P	Pg	00 48 06.1	-0.7
CLDR				i S	Sb	00 48 15.6	+0.8
CLDR				IAML_P			
	comp=Z,4μm,0.2s						
GEVA	Gevas	0.54	216	i P	Pg	00 48 06.7	-0.4
AKDM	Akdamar-Van	0.57	222	PG	Pg	00 48 07.1	-0.4
ADCV	BITLIS_Adilcev	0.58	276	i P	Pb	00 48 08.0	-0.1
ADCV				i S	Sn	00 48 18.1	-1.1
ADCV				IAML_P			
	comp=Z,316nm,0.2s						
MLAZ	Malazgirt-MUS	0.81	299	PG	Pg	00 48 11.5	-0.5
TUTA	Tutak	0.82	322	i P	Pb	00 48 12.7	+0.4
TUTA				IAML_P			
	comp=Z,937nm,0.1s						
AGRB	Hanur-Agry	0.90	336	PG	Pg	00 48 13.2	-0.5
AGRB				SG	Sb	00 48 26.2	+0.8

ISCJB 06 00:51:55.9±0.6, 20.9S±0.1×178.7W±0.1, h600km, mb3.6/11, Error ellipse: s-maj=19.9km s-min=15.5km az=38.1
IDC 06 00:52:00.4±3.2, 20.80S×178.78W, h635km±38km, mb3.2/11, mb1 3.4/11, mb1mx3.2/34, mbtmp4.1/11, Error ellipse: s-maj=23.9km s-min=16.0km az=155.0
ISC 06 00:51:57.2±0.7, 20.9S±0.1×178.7W±0.1, h600km, n16, σ1.28/18, mb3.7/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	17.69	191	P	P	00 55 28.2	-1.6
	1.8nm,0.3s,baz=311,slow=2.8,SNR=14						
JAY	Jayapura	43.55	289	P	P	00 59 10.8	+1.0
	4.3nm,0.4s,baz=93,slow=13,SNR=3.8						
ASAR	Alice Springs	43.79	257	P	P	00 59 12.4	+0.8
	2.4nm,0.5s,baz=96,slow=7.5,SNR=42						
ASAR				PcP	PcP	01 00 45.5	+0.9
	0.6nm,0.7s,baz=113,slow=4.3,SNR=5.1						
ASAR				S	S	01 04 57.2	-2.8
	0.5nm,0.8s,baz=92,slow=16,SNR=3.4						
WRA	Warramunga Arr	43.90	263	P	P	00 59 12.2	-0.2
	1.8nm,0.3s,baz=88,slow=7.7,SNR=17						
VNDA	Vanda	57.48	185	P	P	01 00 51.1	+1.5
	0.5nm,0.6s,baz=1.4,slow=7.3,SNR=6.4						
PETK	Petropavlovsk-	76.47	346	P	P	01 02 46.0	-0.2
	2.3nm,0.7s,baz=96,slow=12,SNR=2.6						
USRK	Ussuriysk Ar.	78.91	326	P	P	01 02 59.6	+0.1
	1.8nm,0.7s,baz=94,slow=8.3,SNR=3.5						
NVAR	Mina Array Bea	81.75	44	P	P	01 03 13.4	-1.2
	0.4nm,0.5s,baz=224,slow=5.0,SNR=3.6						
TXAR	Lajitas Array	87.81	58	P	P	01 03 44.5	+0.5
	0.4nm,0.9s,baz=211,slow=5.1,SNR=3.5						
ILAR	Eielson Array	88.83	13	P	P	01 03 46.8	-1.0
	0.5nm,0.5s,baz=226,slow=5.9,SNR=5.4						
CMAR	Chiang Mai Arr	89.62	290	P	P	01 03 54.4	+1.8
	0.9nm,0.3s,baz=130,slow=4.0,SNR=4.1						
PDAR	Pinedale Array	89.69	43	P	P	01 03 52.5	-0.1
	0.6nm,0.7s,baz=228,slow=3.5,SNR=5.6						
ARCES	ARCESS Array B	129.17	349	PKP	PKPdf	01 09 57.0	-0.4
	0.9nm,0.6s,baz=28,slow=3.1,SNR=4.8						
AKASG	Malin Array Be	143.02	330	PKP	PKPab	01 10 20.9	-0.4
	2.2nm,0.4s,baz=42,slow=4.4,SNR=19						
BRTR	Keskin Array B	146.60	311	PKP	PKPdf	01 10 28.4	-1.8
	0.2nm,0.4s,baz=143,slow=27,SNR=2.4						
BRTR				PKPbc	PKPbc	01 10 33.2	+0.4
	0.9nm,0.6s,baz=138,slow=4.3,SNR=7.0						
GERES	GERESS Array B	150.38	343	PKPbc	PKPbc	01 10 41.9	+0.1
	0.2nm,0.5s,baz=25,slow=4.4,SNR=6.1						

KRSC 06 00:52:41.2±1.2, 52.32N×159.24E, h31km±13km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.46	285	i P	Pn	00 52 51.3	-0.3
RUS				eS	Sb	00 52 57.2	-0.5
GRL	Gorelyy	0.75	289	eP	Pb	00 52 56.6	+0.8
ASAK	Asacha	0.82	275	eP	Pb	00 52 57.3	+0.3
ASAK				eS	Sb	00 53 07.8	0.0
KRMR	Karymshinskiy	0.85	308	eP	Pn	00 52 57.1	+0.1
KRMR				eS	Sn	00 53 07.6	-0.7
NLC	Nalytchevo	0.86	4	eP	Pb	00 52 57.4	-0.1
NLC				eS	Sn	00 53 08.4	-0.1
KDTR	Khodutka, Kamc	0.88	235	eP	Pb	00 52 58.3	+0.4
KDTR				eS	Sb	00 53 09.6	+0.3
SPN	Mys Shipunski	0.92	31	eP	Pb	00 53 00.0	+1.5
SPN				eS	Sb	00 53 12.8	+2.4
UGLR	Uglovaya	0.93	344	eP	Pb	00 52 59.1	+0.3
UGLR				eS	Sb	00 53 11.2	+0.4
SDLR	Sedlovina	0.98	348	eP	Pb	00 52 59.7	-0.1
SDLR				eS	Sn	00 53 11.8	-0.1
AVH	Avacha	1.00	342	eP	Pb	00 53 00.5	+0.6
AVH				eS	Sb	00 53 14.7	+2.0
KRER	Koryakskii	1.03	343	eP	Pb	00 53 00.8	+0.2
KRER				eS	Sb	00 53 14.6	+0.8
KOK	Koryaka	1.04	340	eP	Pb	00 53 01.0	+0.3
KOK				eS	Sb	00 53 14.7	+0.7
KRX	Arik	1.10	341	eP	Pb	00 53 01.6	-0.1
APC	Apacha	1.41	296	eP	Pb	00 53 06.6	-0.1
APC				eS	Sb	00 53 24.7	+0.4
GNL	Ganaly	1.59	331	eP	Pb	00 53 09.3	-0.6
GNL				eS	Sb	00 53 28.4	-1.2
PAU	Pauzhetka	1.73	241	eP	Pb	00 53 11.6	-0.6
PAU				eS	Sb	00 53 34.0	+0.5
MKZ	Mys Kozlova	2.69	33	eS	Sn	00 53 56.2	+2.4
ALID	Alaid	2.72	239	eP	Pn	00 53 23.8	+1.0
TUMD	Tumrok D	2.97	13	eP	Pb	00 53 31.0	-2.4
TUMD				eS	Sb	00 54 05.5	-3.7
KBTR	Krutoberegovo	4.43	27	eP	Pn	00 53 50.8	+4.7
BKI	Bering	4.93	51	eP	Pn	00 53 56.3	+3.3
BKI				eS	Sn	00 54 50.0	+1.1

ISCJB 06 01:07:37.6±0.4, 27.45S±0.03×68.70W±0.04, h126km±6km, Error ellipse: s-maj=6.2km s-min=4.9km az=164.6
GUC 06 01:07:37.8±0.7, 27.44S×68.78W, h129km±6km, ML3.8
IDC 06 01:07:37.0±1.3, 27.40S×68.31W, h93km±13km, mb3.3/2, mb1 3.7/6, mb1mx3.4/36, mbtmp3.9/6, Error ellipse: s-maj=37.1km s-min=9.7km az=86.0
SJA 06 01:07:39.0±0.6, 27.51S×68.52W, h143km±7km, ML3.5, MW4.7
ISC 06 01:07:38.5±0.8, 27.43S±0.04×68.70W±0.04, h124km±8km, n23, σ1.51/35, 5C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	1.37	263	⇑iP	Pn	01 08 04.7	-0.1
GO03				eS	Sn	01 08 24.4	-0.5
GO03				IAML		01 08 25.2	
	comp=E,3μm,0.2s						
VCA	Vinchina	1.38	162	i P	Pn	01 08 06.2	+1.2
VCA				i S	Sn	01 08 26.7	+1.6
VCA	Vinchina	1.38	162	⇓iP	Pn	01 08 05.8	+0.9
VCA				eS	Sn	01 08 26.6	+1.4
VCA				IAML		01 08 27.9	
	comp=E,2μm,0.4s						
CRCH	Chaqaral	2.02	302	eP	Pn	01 08 12.8	+0.4
CRCH				eS	Sn	01 08 37.8	-0.6
CRCH				IAML		01 08 39.8	
	comp=E,541nm,0.4s						
AGUA	GUANDACOL	2.06	175	i P	Pn	01 08 14.2	+1.2
LCO	Las Campanas	2.37	228	⇑iP	Pn	01 08 17.0	0.0
LCO				eS	Sn	01 08 46.5	-0.1
LCO				IAML		01 08 50.4	
	comp=N,409nm,0.4s						
GO02	Mina Guanaco	2.39	340	⇑iP	Pn	01 08 18.1	+0.7
GO02				eS	Sn	01 08 48.2	+1.0
GO02				IAML		01 08 53.5	
	comp=N,778nm,0.1s						
ACLC	CERRO LA CRUZ	2.52	143	i P	Pn	01 08 19.4	+0.5
CYA	Choya	2.76	112	i P	Pn	01 08 21.8	0.0
CYA				IAML		01 08 22.2	
	comp=Z,114nm,0.4s						
CYA				i S	Sn	01 08 53.0	-2.1
FSA	Cafayete	2.76	62	i P	Pn	01 08 22.8	+0.8
AHML	Horco Molle	3.07	79	i P	Pn	01 08 26.6	+0.8
AHML				IAML		01 08 26.9	
	comp=Z,159nm,0.2s						
GO04	Tololo Observa	3.30	213	⇑iP	Pn	01 08 28.6	-0.4
GO04				eS	Sn	01 09 07.6	-0.5
LSCH	La Serena	3.33	222	⇑iP	Pn	01 08 28.1	-1.1
LSCH				eS	Sn	01 09 06.8	-1.7
LSCH				IAML		01 09 07.8	
	comp=N,67nm,0.3s						
APLL	PUNTA DE LOS L	3.52	148	IAML		01 08 31.6	
	comp=Z,123nm,0.2s						
APLL				i P	Pn	01 08 31.7	-0.1
APLL				i S	Sn	01 09 10.9	-2.1
CFA	Coronel Fontan	4.18	175	P	Pn	01 08 40.0	-0.6
	comp=Z,18nm,0.3s,baz=350,slow=12,SNR=137						
CFA				S	Sn	01 09 26.3	-2.5
	comp=Z,13nm,0.3s,baz=322,slow=10,SNR=10						
LVC	Limon Verde	4.80	358	P	Pn	01 08 49.0	-0.1
	comp=Z,7.8nm,0.3s,baz=173,slow=8.3,SNR=59						
LVC				S	Sn	01 09 42.0	-2.1
	comp=Z,7.7nm,0.3s,baz=170,slow=16,SNR=9.0						
LPAZ	La Paz	11.10	3	P	Pn	01 10 11.4	-2.9
	comp=Z,0.5nm,0.3s,baz=194,slow=12,SNR=12						
SIV	San Ignacio	13.40	33	P	Pn	01 10 40.8	-3.0
	comp=Z,0.6nm,0.3s,baz=238,slow=7.1,SNR=13						
TXAR	Lajitas Array	65.62	327	P	P	01 18 12.3	+3.0
	comp=Z,0.1nm,0.5s,baz=155,slow=8.8,SNR=3.0						
MAW	Mawson	78.63	163	P	P	01 19 28.1	+1.9
	comp=Z,1.8nm,0.9s,baz=277,slow=8.1,SNR=3.6						
TORD	Torodi Ar. Bea	79.22	69	P	P	01 19 30.5	+0.2
	comp=Z,18nm,0.3s,baz=258,slow=5.1,SNR=21						
ZALV	Zalesovo Beam	147.12	29	PKPbc	PKiKP	01 27 07.0	-1.8
	comp=Z,1.2nm,0.5s,baz=297,slow=4.5,SNR=4.7						
MKAR	Makanchi Array	150.11	42	PKPbc	PKiKP	01 27 16.3	+1.1
	comp=Z,0.9nm,0.6s,baz=340,slow=0.9,SNR=6.7						

IDC 06 01:19:13.6±4.2, 6.94S×149.14E, h0km, mb3.3/1, mb1 3.6/2, mb1mx3.3/28, mbtmp3.4/2, ML3.3/1, Error ellipse: s-maj=162.2km s-min=48.6km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.32	227	P	P	01 23 39.0	-1.6
	0.1nm,0.3s,baz=53,slow=11,SNR=2.7						
ASAR	Alice Springs	22.16	220	P	P	01 24 12.6	+1.2
	0.7nm,0.5s,baz=56,slow=9.0,SNR=14						
TORD	Torodi Ar. Bea	147.38	284	PKPbc	PKPbc	01 38 59.6	-0.9
	0.3nm,0.5s,baz=60,slow=4.0,SNR=5.7						

IDC 06 01:31:40.8±0.9, 37.81N×69.07E, h0km, mb3.8/12, mb1 4.0/20, mb1mx3.8/47, mbtmp3.9/20, ML3.5/8, MS3.1/11, Ms1 3.1/11, ms1mx2.8/45, Error ellipse: s-maj=19.1km s-min=11.1km az=146.0
NNC 06 01:31:43.9±3.4, 38.17N×68.74E, h0km, mb4.3, mpv4.1, Error ellipse: s-maj=32.7km s-min=23.8km az=0.0
ISCJB 06 01:31:46.0±0.3, 38.08N±0.03×69.03E±0.03, h33km, mb4.1/26, MS3.3/9, Error ellipse: s-maj=4.6km s-min=3.5km az=7.3
BJI 06 01:31:48.8±0.0, 38.11N×69.14E, h40km, mb4.4/14, mB4.5/6, ML4.1/2, Ms3.8/4, Ms7 3.7/2
NEIC 06 01:31:49.6±2.0, 38.10N×69.04E, h55km±9km, mb4.3/12, Error ellipse: s-maj=10.4km s-min=7.3km az=100.0
MOS 06 01:31:49.0±1.0, 38.13N×69.23E, h70km, mb4.5/14, Error ellipse: s-maj=6.1km s-min=4.9km az=97.9
ISC 06 01:31:46.9±0.4, 38.04N±0.05×69.06E±0.04, h35km, n160, σ2.37/163, mb4.2/26, MS3.3/9, 14C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	1.38	45	ePn	Pn	01 32 11.6	+1.8
GAR				eSn	Sn	01 32 32.6	+5.8
GAR	Garm	1.38	45	eP	Pn	01 32 11.6	+1.8
GAR				e		01 32 32.6	
BTK	Batken	2.44	34	ePn	Pn	01 32 27.8	+3.5
BTK	Batken	2.44	34	ePN	Pn	01 32 27.8	+3.5
KBL	Kabul	3.49	180	ePn	Pn	01 32 43.4	+4.5
KBL	Kabul	3.49	180	ePN	Pn	01 32 43.4	+4.5
ARSB	Arslanbob	4.46	41	ePn	Pn	01 32 54.1	+1.9
CEP	Cherat	4.80	150	P	Pn	01 32 59.1	+2.3
KK31	Karatay Array	5.18	12	ePn	Pn	01 33 03.5	+1.6
KK31	Karatay Array	5.18	12	⇑Pn	Pn	01 33 03.6	+1.6
	3.2nm,0.4s,baz=200,slow=14,SNR=90						
KK31				⇓Pg		01 33 19.8	
	6.7nm,0.3s,baz=183,slow=12,SNR=18						
KK31				⇑Lg	Lg	01 34 28.7	
	149nm,0.7s,baz=209,slow=31,SNR=12						
KK31	Karatay Array	5.18	12	ePN	Pn	01 33 03.6	+1.6
KK31				pmax	pmax		
	comp=Z,21nm,0.7s						
KKAR	Karatay Array	5.18	12	ePn	Pn	01 33 03.5	+1.5
KKAR	Karatay Array	5.18	12	ePN	Pn	01 33 03.5	+1.5
NIL	Nilore	5.54	141	ePn	Pn	01 33 10.5	+3.5
NIL	Nilore	5.54	141	ePN	Pn	01 33 10.5	+3.5
EKS2	Erkin-Say	5.86	36	P	Pn	01 33 14.4	+3.1
	SNR=5.4						
UCH	Uchtor	5.91	43	P	Pn	01 33 14.6	+2.2
	SNR=38						
AAK	Ala-Archa	6.19	40	Pn	Pn	01 33 17.8	+1.8
	comp=Z,3.9nm,0.3s,baz=209,slow=5.0,SNR=14						
AAK				Lg	Lg	01 34 56.0	
	comp=Z,1.0nm,0.3s,baz=246,slow=18,SNR=2.9						
AAK	Ala-Archa	6.19	40	ePn	Pn	01 33 18.1	+2.2
AAK	Ala-Archa	6.19	40	⇓Pn	Pn	01 33 19.1	+3.1
	comp=Z,7.1nm,0.5s						
AAK				⇑Lg	Lg	01 34 59.4	
	comp=Z,41nm,0.7s						
AAK	Ala-Archa	6.19	40	cePN	Pn	01 33 18.9	+2.9
AAK				pmax	pmax		
	comp=Z,17nm,0.6s						
AAK	Ala-Archa	6.19	40	P	Pn	01 33 20.3	+4.3
	SNR=10						
KZA	Kyzart	6.23	48	P	Pn	01 33 19.5	+2.8
	SNR=13						
FRU1	Bishkek	6.38	40	ePn	Pn	01 33 20.8	+2.2
FRU1	Bishkek	6.38	40	ePN	Pn	01 33 20.8	+2.2
KBK	Karagaybulak	6.44	42	P	Pn	01 33 22.4	+3.0
	SNR=26						
USP	Ospenovka	6.66	37	P	Pn	01 33 25.6	+3.3
	SNR=7.5						
BOOM	Boomskoye usch	6.89	48	ePn	Pn	01 33 27.0	+1.5
BOOM	Boomskoye usch	6.89	48	ePN	Pn	01 33 27.0	+1.5
TKM2	Tokmak 2	6.97	44	⇑Pn	Pn	01 33 28.6	+1.8
	comp=Z,6.3nm,0.5s						
TKM2				⇑Lg	Lg	01 35 30.2	
	comp=Z,33nm,0.7s						
TKM2	Tokmak 2	6.97	44	i PN	Pn	01 33 28.5	+1.8
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.4s						
TKM2	Tokmak 2	6.97	44	P	Pn	01 33 28.8	+2.1
	SNR=15						
KNDC	Almaty	7.93	47	⇓Pn	Pn	01 33 41.0	+1.3
	comp=Z,20nm,0.5s						
KNDC				⇑Lg	Lg	01 35 57.3	
	comp=Z,85nm,0.9s						
DHRM	DHARAMSHALA	8.27	132	eP	Pn	01 33 45.6	+1.0
DHRM				eS	Sn	01 35 14.7	-2.3
DHRM				IAML		01 35 21.6	
	comp=N,66nm,0.6s						
DHRM				IAML		01 35 23.6	
	comp=E,102nm,1.0s						
GEYT	Alibeck	8.64	273	Pn	Pn	01 33 46.3	-3.3
	comp=E,0.5nm,0.3s,baz=98,slow=11,SNR=5.7						
GEYT				Sn	Sn	01 35 21.1	-4.6
	comp=E,1.0nm,0.3s,baz=84,slow=13,SNR=2.8						
GEYT				LR	LR	01 38 26.2	
	comp=E,204nm,18.5s,baz=105,slow=47						
GYA0B	ALIBECK ARRAY	8.64	273	ePn	Pn	01 33 50.6	+1.1
PDGK	Podgornoye	9.52	53	⇑Pn	Pn	01 34 02.5	+0.9
	comp=E,7.4nm,0.9s						
PDGK				⇓Sn	Sn	01 35 57.9	+10
	comp=E,12nm,1.0s						
PDGK	Podgornoye	9.52	53	P	Pn	01 34 02.5	+0.9
PDGK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SMLA	Simla	9.60	133	eP	Pn	01 34 02.7	+0.2
SMLA				eS	Sn	01 35 44.3	-4.8
OTUK	Ortayu	10.48	12	⇓Pn	Pn	01 34 14.8	+0.1
	comp=Z,1.4nm,0.5s						
OTUK				⇓Sn	Sn	01 36 07.7	-3.0
	comp=Z,7.0nm,0.5s						
OTUK	Ortayu	10.48	12	P	Pn	01 34 14.7	+0.1
OTUK				S	Sn	01 36 07.3	-3.4
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OTUK				smax	smax		
	comp=N,11nm,0.8s						
DDI	Dehra Dun	10.70	133	eS	Sn	01 36 11.3	-5.1
DDI				IAML		01 36 17.6	
	comp=N,202nm,0.3s						
DDI				IAML		01 36 17.8	
	comp=E,246nm,0.2s						
JOSI	Joshimath	11.44	128	eS	Sn	01 36 29.3	-5.4
JOSI				IAML		01 36 40.9	
	comp=N,98nm,0.5s						
JOSI				IAML		01 36 43.2	
	comp=E,93nm,1.0s						
MAKZ	Makanchi	12.94	43	ePn	Pn	01 34 47.2	-1.1
MAKZ	Makanchi	12.94	43	⇑P	Pn	01 34 46.7	-1.6
	comp=E,6.3nm,1.2s						
MAKZ	Makanchi	12.94	43	eP	Pn	01 34 47.2	-1.1
AB31	Akbulak array	13.00	333	⇑P	Pn	01 34 46.7	-2.3
	comp=E,2.1nm,0.5s,baz=144,slow=12,SNR=77						
AB31	Akbulak array	13.00	333	eP	Pn	01 34 46.7	-2.3
AB31				S	Sn	01 37 08.3	-4.0
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AB31				smax	smax		
	comp=N,2.0nm,0.6s						
ABKAR	Akbulak array	13.00	333	ePn	Pn	01 34 46.8	-2.2
MK31	Makanchi Array	13.10	44	ePn	Pn	01 34 51.2	+0.7
MK31	Makanchi Array	13.10	44	⇑P	Pn	01 34 50.7	+0.2
	comp=N,5.1nm,0.8s,baz=231,slow=12,SNR=23						
MK31	Makanchi Array	13.10	44	eP	Pn	01 34 50.4	-0.1
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK32	Makanchi Array	13.10	44	ePn	Pn	01 34 49.6	-0.9
MKAR	Makanchi Array	13.10	44	Pn	Pn	01 34 49.6	-0.9
	comp=Z,0.2nm,0.3s,baz=229,slow=13,SNR=16						
MKAR				Lg	Lg	01 38 39.5	
	comp=Z,0.1nm,0.3s,baz=220,slow=31,SNR=2.7						
MKAR				LR	LR	01 40 22.2	
	comp=Z,71nm,18.3s,baz=236,slow=39						
MKAR	Makanchi Array	13.10	44	i P	Pn	01 34 52.5	+2.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURBB	Kurchatov Arra	14.28	25	Pn	Pn	01 35 02.1	-4.3
	comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=14						
KURBB				Lg	Lg	01 39 17.6	
	comp=Z,0.1nm,0.3s,baz=214,slow=32,SNR=7.4						
KURK	Kurchatov	14.38	25	ePn	Pn	01 35 09.5	+1.6
KURK	Kurchatov	14.38	25	eP	Pn	01 35 09.5	+1.6
AKTO	Aktyubinsk	14.69	331	Pn	Pn	01 35 08.9	-3.0
	comp=Z,0.7nm,0.3s,baz=147,slow=14,SNR=27						
AKTO				Sn	Sn	01 37 53.3	-0.1
	comp=Z,0.2nm,0.3s,baz=223,slow=19,SNR=3.8						
AKTO				Lg	Lg	01 39 39.6	
	comp=Z,0.1nm,0.3s,baz=221,slow=20,SNR=2.1						
AKTO	Aktyubinsk	14.69	331	⇑P	Pn	01 35 10.1	-1.9
	comp=Z,5.3nm,0.7s						
AKTO	Aktyubinsk	14.69	331	P	Pn	01 35 09.0	-3.0
BVAR	Borovoye Array	15.02	3	Pn	Pn	01 35 13.6	-2.8
	comp=Z,0.2nm,0.3s,baz=174,slow=15,SNR=8.4						
BVA3	Borovoye Array	15.02	3	⇓P	Pn	01 35 12.8	-3.6
	comp=Z,1.4nm,0.6s						
BVA3	Borovoye Array	15.02	3	P	Pn	01 35 12.8	-3.6
BVA3				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	Borovoye	15.05	3	ePn	Pn	01 35 17.3	+0.6
BRVK	Borovoye	15.05	3	i P	Pn	01 35 17.0	+0.2
WMQ	Urumqi	15.21	62	eP	P	01 35 21.8	-1.9
WMQ				LR	LR		
	comp=Z,460nm,28.9s						
WMQ				LR	LR		
	comp=Z,530nm,29.3s						
PYUN	Piuthan	15.30	126	eP	Pn	01 35 19.0	-1.4
	comp=Z,55nm,0.8s						
KOLN	Koldanda	15.91	126	eP	Pn	01 35 26.6	-1.8
	comp=Z,18nm,0.5s						
LKRN	Lenkeran, Azer	15.92	279	P	P	01 35 33.1	+1.6
BHPL	Bhopal	16.40	152	eP	P	01 35 37.9	+1.0
BHPL				ex	x	01 38 14.3	
AKT	Akhty	16.75	289	i P	P	01 35 41.4	+0.5
KKN	Kakani	17.00	122	eP	P	01 35 44.1	+0.3
	comp=Z,29nm,0.6s						
DMN	Daman	17.00	123	eP	P	01 35 43.4	-0.5
	comp=Z,23nm,0.7s						
SEKA	Sheki	17.13	287	P	P	01 35 46.6	+1.6
MNGR	Mingechevir, A	17.20	286	P	P	01 35 48.3	+2.7
PKIN	Phulchoki	17.22	123	eP	P	01 35 46.4	+0.1
	comp=Z,33nm,0.5s						
PKI	Pulchoki	17.23	122	eP	P	01 35 46.6	+0.1
	comp=Z,46nm,0.7s						
WSAR	Wadi Sarin	17.25	214	LR	LR	01 44 19.6	
	comp=Z,55nm,18.1s,baz=70,slow=44						
DGZ	Jazzator, Alta	17.59	43	i P	P	01 35 50.0	-0.1
ZKTA	Zakatala	17.59	289	P	P	01 35 53.0	+2.9
GANJ	Ganja	17.77	286	P	P	01 35 55.5	+3.4
NAX	Nakhchivan	18.45	281	P	Pn	01 36 03.3	+3.5
GNI	Garni	18.98	284	LR	LR	01 45 53.7	
	comp=Z,31nm,19.4s,baz=94,slow=45						

GNI	**Garni**	**18.98**	**284**	*e*P	**Pn**	**01 36 06.9**	**+0.5**
	comp=Z,8.4nm,0.8s						
GNI	**Garni**	**18.98**	**284**	*i* P	**Pn**	**01 36 08.0**	**+1.6**
GNI				pmax	pmax		
	comp=Z,21nm,1.1s						
TBLG	**Delisi**	**19.01**	**289**	*e*P	**Pn**	**01 36 08.1**	**+1.6**
	comp=Z,12nm,1.1s						
TBLG	**Delisi**	**19.01**	**289**	*e*P	**Pn**	**01 36 08.1**	**+1.6**
TBLG				pmax	pmax		
	comp=Z,12nm,1.1s						
ZAA0	**Zalesovo Array**	**19.24**	**29**	*e*P	**P**	**01 36 07.8**	**-0.2**
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**19.24**	**29**	P	**P**	**01 36 07.5**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=221,slow=12,SNR=21						
ZALV				LR	LR	01 44 12.3	
	comp=Z,31nm,21.6s,baz=195,slow=39						
ZALV	**Zalesovo Beam**	**19.24**	**29**	*i* P	**Pn**	**01 36 08.8**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZAA1	**Zalesovo Array**	**19.25**	**29**	*e*P	**P**	**01 36 07.5**	**-0.6**
SVE	**Sverdlovsk**	**19.62**	**346**	*e*P	**P**	**01 36 12.2**	**+0.1**
SVE				*e*S	**S**	**01 39 42.9**	**-8.5**
ARU	**Arti**	**19.69**	**343**	P	**P**	**01 36 13.3**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=160,slow=7.9,SNR=21						
ARU				Sn	**S**	**01 39 47.6**	**-5.3**
	comp=Z,0.0nm,0.3s,baz=150,slow=20,SNR=3.3						
ARU				Lg	Lg	01 42 16.6	
	comp=Z,0.0nm,0.3s,baz=143,slow=20,SNR=1.6						
ARU	**Arti**	**19.69**	**343**	*e*P	**P**	**01 36 13.6**	**+0.7**
	comp=Z,12nm,0.7s						
ARU	**Arti**	**19.69**	**343**	*d i*P	**Pn**	**01 36 14.0**	**-0.5**
ARU				S	**Sn**	**01 39 55.4**	**+0.9**
ARU				pmax	pmax		
	comp=Z,13nm,0.7s						
ZEI	**Tsey**	**19.71**	**292**	*e*P	**Pn**	**01 36 16.5**	**+1.4**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.3s						
AKH	**Akhalkalaki**	**19.93**	**288**	*e*P	**Pn**	**01 36 17.7**	**0.0**
	comp=Z,8.9nm,0.9s						
AKH	**Akhalkalaki**	**19.93**	**288**	*e*P	**Pn**	**01 36 17.7**	**0.0**
AKH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NCK	**Nalchik**	**20.01**	**294**	*i* P	**Pn**	**01 36 18.2**	**-0.2**
NCK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	**20.54**	**294**	LR	LR	01 45 47.2	
	comp=Z,23nm,18.1s,baz=78,slow=41						
NEY	**Neytrino**	**20.61**	**293**	*i* P	Pn	01 36 25.4	-0.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GOF	**Gofitskoye**	**20.64**	**298**	⇑*e*P	Pn	01 36 24.9	-0.9
GOF				pmax	pmax		
	comp=Z,35nm,0.8s						
SHA1	**Shidzhatmaz**	**20.71**	**294**	*i* P	Pn	01 36 26.4	-0.5
KIV	**Kislovodsk**	**20.72**	**295**	*e*P	Pn	01 36 26.5	-0.3
KIV				*e*S	**S**	**01 40 16.0**	**+2.2**
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
KIV				MLR	MLR		
	comp=Z,67nm,14.0s						
DOMR	**Dombai**	**21.42**	**293**	*i* P	**P**	**01 36 34.0**	**+2.1**
GTA	**Gaotai**	**23.98**	**77**	*e*P	**P**	**01 36 52.0**	**-6.2**
GTA				pP	pP	01 36 56.8	-12
GTA				sP	sP	01 37 00.0	-13
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VORD	**Divnogorie**	**24.66**	**311**	*e*P	**P**	**01 37 03.8**	**-0.4**
VORD				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VSR	**Storozhevoye**	**24.83**	**312**	*e*P	**P**	**01 37 06.1**	**+0.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LPSR	**Galich'ya Gora**	**25.47**	**315**	*e*P	**P**	**01 37 11.8**	**+0.3**
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BR101	**Keskin Array S**	**27.52**	**285**	*e*P	**P**	**01 37 30.1**	**-0.2**
BRTR	**Keskin Array B**	**27.52**	**285**	P	**P**	**01 37 30.1**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=92,slow=5.0,SNR=4.7						
BRTR	**Keskin Array B**	**27.52**	**285**	*i* P	**P**	**01 37 32.0**	**+1.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LZH	**Lanzhou**	**27.73**	**83**	*e*P	**P**	**01 37 34.5**	**+2.2**
LZH				pP	sP	01 37 47.6	+0.8
LZH				sP	pP	01 37 52.6	+10
LZH				PP	**PnPn**	**01 38 24.8**	**+6.0**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
PRGR	**Permogore**	**27.74**	**336**	*e*P	**P**	**01 37 32.2**	**+0.4**
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MMAI	**Mount Meron Ar**	**27.75**	**270**	LR	LR	01 51 25.5	
	comp=Z,28nm,19.0s,baz=110,slow=43						
OBN	**Obninsk**	**27.77**	**319**	*c e*P	**P**	**01 37 32.9**	**+0.8**
OBN				*SP	**sP**	**01 37 51.0**	**+4.2**
OBN				*e*		01 38 20.1	
OBN				S	**S**	**01 42 07.0**	**-5.2**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,36nm,16.0s						
SONA0	**Songino Array**	**28.79**	**58**	*e*P	**P**	**01 37 40.5**	**-1.1**
SONM	**Songino Array**	**28.79**	**58**	P	**P**	**01 37 40.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=222,slow=1.9,SNR=3.3						
SONM				LR	LR	01 50 09.4	
	comp=Z,84nm,18.0s,baz=142,slow=38						
AKASG	**Malin Array Be**	**30.78**	**307**	P	**P**	**01 37 58.1**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=81,slow=7.7,SNR=3.0						
AKBB	**Malin Array Si**	**30.78**	**307**	*e*P	**P**	**01 37 58.1**	**-0.9**
	comp=Z,15nm,1.9s						
AKBB	**Malin Array Si**	**30.78**	**307**	*e*P	**P**	**01 37 58.1**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,15nm,1.9s						
XAN	**Xi'an**	**32.31**	**85**	P	P	01 38 26.7	+14
XAN				pP	sP	01 38 32.8	+5.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,82nm,5.2s						
HHC	**Hu-ho-hao-te**	**32.71**	**72**	*e*P	**P**	**01 38 18.4**	**+2.2**
FIA0	**FINESS Array S**	**35.35**	**326**	*e*P	**P**	**01 38 39.2**	**+0.7**
FIA0	**FINESS Array S**	**35.35**	**326**	*e*P	**P**	**01 38 39.3**	**+0.7**
FINES	**FINESS Array B**	**35.35**	**326**	P	**P**	**01 38 39.2**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=118,slow=7.3,SNR=8.0						
FINES	**FINESS Array B**	**35.35**	**326**	*i* P	**P**	**01 38 39.5**	**+0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WHN	**Wuhan**	**37.86**	**87**	*e*P	P	01 39 07.8	+7.4
ARA0	**ARCESS Array S**	**39.14**	**337**	*e*P	**P**	**01 39 11.7**	**+1.0**
ARCES	**ARCESS Array B**	**39.14**	**337**	P	**P**	**01 39 11.7**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=114,slow=8.1,SNR=9.0						
GEC2	**GERESS Array S**	**40.79**	**304**	*e*P	**P**	**01 39 24.8**	**0.0**
	comp=Z,11nm,1.9s						
GEC2	**GERESS Array S**	**40.79**	**304**	*e*P	**P**	**01 39 24.8**	**0.0**
GEC2				pmax	pmax		
	comp=Z,11nm,1.9s						
GERES	**GERESS Array B**	**40.79**	**304**	P	**P**	**01 39 24.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=98,slow=8.2,SNR=3.6						
CLL	**Collm**	**41.03**	**308**	*e*P	**P**	**01 39 28.0**	**+1.4**
CLL	**Collm**	**41.03**	**308**	*e*P	**P**	**01 39 28.0**	**+1.4**
NORES	**NORESS Array B**	**42.03**	**322**	P	**P**	**01 39 35.1**	**+0.4**
AQU	**L'Aquila**	**42.09**	**294**	*e*P	**P**	**01 39 37.4**	**+1.9**
	comp=Z,16nm,1.2s						
AQU	**L'Aquila**	**42.09**	**294**	*e*P	**P**	**01 39 37.4**	**+1.9**
AQU				pmax	pmax		
	comp=Z,16nm,1.2s						
NC303	**NORSAR Array S**	**42.17**	**322**	*e*P	**P**	**01 39 35.9**	**+0.1**
	comp=Z,171nm,2.0s						
NB2	**NORSAR Subarra**	**42.22**	**322**	P	**P**	**01 39 36.3**	**0.0**
	comp=Z,1.4nm,0.7s,baz=96,slow=8.6						
NB200	**NORSAR Array S**	**42.22**	**322**	*e*P	**P**	**01 39 36.5**	**+0.3**
NOA	**NORSAR Array B**	**42.22**	**322**	P	**P**	**01 39 36.5**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=97,slow=8.2,SNR=8.8						
KSRS	**Korea Array**	**45.85**	**72**	LR	LR	02 01 27.4	
	comp=Z,53nm,18.4s,baz=307,slow=39						
KBS	**Kingsbay**	**46.77**	**347**	*e*P	**P**	**01 40 13.0**	**+0.7**
	comp=Z,57nm,1.8s						
KBS	**Kingsbay**	**46.77**	**347**	*e*P	**P**	**01 40 13.0**	**+0.7**
KBS				pmax	pmax		
	comp=Z,57nm,1.8s						
JNU	**Nakatsue**	**49.71**	**76**	LR	LR	02 03 15.5	
	comp=Z,29nm,20.1s,baz=358,slow=38						
EKA	**Eskdalemuir Ar**	**50.11**	**315**	P	**P**	**01 40 38.7**	**+0.4**
ASAJ	**Asahikawa**	**54.07**	**59**	LR	LR	02 04 55.6	
	comp=Z,31nm,19.3s,baz=338,slow=37						
ESDC	**Sonseca Array**	**55.38**	**296**	P	**P**	**01 41 18.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=58,slow=7.7,SNR=4.9						
BILL	**Bilibino**	**57.91**	**26**	⇓*e*P	**P**	**01 41 35.4**	**+0.4**
BILL				*SP	**sP**	**01 41 56.0**	**+5.8**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,234nm,19.0s						
TOA1	**Torodi Ar. Sit**	**64.23**	**267**	*e*P	**P**	**01 42 17.5**	**-1.2**
TORD	**Torodi Ar. Bea**	**64.23**	**267**	P	**P**	**01 42 17.5**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=39,slow=6.7,SNR=9.8						
INK	**Inuvik**	**72.63**	**9**	P	**P**	**01 43 10.5**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=336,slow=9.7,SNR=4.1						
INK	**Inuvik**	**72.63**	**9**	*e*P	**P**	**01 43 10.5**	**+0.2**
	comp=Z,10nm,1.9s						
ILAR	**Eielson Array**	**73.72**	**15**	P	**P**	**01 43 17.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=311,slow=3.8,SNR=4.9						
ILB	**Eielson Array**	**73.72**	**15**	*e*P	**P**	**01 43 17.0**	**+0.2**
	comp=Z,10nm,1.8s						
BOSA	**Boshof**	**77.95**	**218**	P	**P**	**01 43 40.5**	**-1.0**
	comp=Z,3.3nm,1.0s,baz=50,slow=16,SNR=1.7						
YKA	**Yellowknife Ar**	**79.77**	**2**	P	**P**	**01 43 52.2**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=353,slow=5.7,SNR=11						
YKB5	**Yellowknife Ar**	**79.77**	**2**	*e*P	**P**	**01 43 52.2**	**+1.2**

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*ISCJB **06** 02:02:49.6±0.5, 34°.7N±0°.1×136°.9E±0°.1, h350^{km}, mb3.2/2, Error ellipse: s-maj=16.4km s-min=13.7km az=29.0*

*IDC **06** 02:02:50.8±0.9, 34°.75N×136°.87E, h340^{km}±33^{km}, mb3.1/2, mb1 3.1/5, mb1mx2.8/49, mbtmp3.6/5, Error ellipse: s-maj=61.8km s-min=26.0km az=33.0*

*JMA **06** 02:02:51.1±0.3, 34°.66N×136°.75E, h336^{km}±3^{km}, M3.1*

ISC 06 02:02:50.3±1.1**, 34°.7N**±0°.1×**136°.9E**±0°.1**, h350**^{km}**, n13, σ1^s.28**/15**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.24**	**110**	P	**Pn**	**02 03 33.6**	**-0.5**
JIE	**Ise**	**0.35**	**203**	P	**Pn**	**02 03 33.6**	**-0.8**
JEG	**Eigenji**	**0.58**	**317**	P	**Pn**	**02 03 34.2**	**-0.5**
JAO	**Obara**	**0.64**	**30**	P	**Pn**	**02 03 34.5**	**-0.4**
JAO				*e*S	**S**	**02 04 08.7**	**-1.9**
JKN2	**Miekihoku**	**0.68**	**226**	P	**Pn**	**02 03 34.0**	**-1.0**
JWY	**Kouya**	**1.16**	**245**	P	**Pn**	**02 03 35.9**	**-1.0**
JWT	**Wachi**	**1.33**	**296**	P	**Pn**	**02 03 36.8**	**-0.7**
JTNC	**Tanabenakahech**	**1.37**	**230**	P	**Pn**	**02 03 36.7**	**-1.1**
MJAR	**Matsushiro Arr**	**2.13**	**30**	P	**Pn**	**02 03 42.9**	**+0.5**
	0.3nm,0.3s,baz=201,slow=8.0,SNR=8.1						
MJAR				S	**S**	**02 04 22.6**	**-1.8**
	0.1nm,0.3s,baz=220,slow=21,SNR=4.7						
JHJ	**Hachijo jima 2**	**2.90**	**122**	P	**Pn**	**02 03 49.2**	**+0.5**
	9.7nm,0.3s,baz=74,slow=20,SNR=1.6						
KSRS	**Korea Array**	**7.74**	**293**	P	**Pn**	**02 04 42.8**	**+1.5**
	0.2nm,0.3s,baz=122,slow=14,SNR=5.4						
WRA	**Warramunga Arr**	**54.41**	**183**	P	**P**	**02 11 43.7**	**+1.3**
	0.7nm,0.4s,baz=1.1,slow=8.7,SNR=7.4						
ASAR	**Alice Springs**	**58.13**	**183**	P	**P**	**02 12 10.1**	**+1.8**
	0.3nm,0.3s,baz=1.6,slow=6.6,SNR=8.6						

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*ISCJB **06** 02:02:53.0±0.3, 14°.77S±0°.04×71°.80W±0°.05, h10^{km}, mb4.5/24, MS3.9/16, Error ellipse: s-maj=8.5km s-min=4.1km az=149.1*

*IDC **06** 02:02:52.5±0.8, 14°.76S×71°.69W, h0^{km}, mb4.1/7, mb1 4.2/12, mb1mx4.0/36, mbtmp4.1/12, ML3.4/6, MS4.0/22, Ms1 4.0/22, ms1mx3.9/28, Error ellipse: s-maj=21.1km s-min=12.9km az=46.0*

*NEIC **06** 02:02:57.4±2.2, 14°.80S×71°.73W, h27^{km}±5^{km}, mb4.5/23, Error ellipse: s-maj=13.0km s-min=10.0km az=222.0*

ISC 06 02:02:54.1±0.5**, 14°.72S**±0°.05×**71°.60W**±0°.06**, h10**^{km}**, n69, σ1^s.48**/61**, mb4.6**/24**, MS4.0**/16**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I08BO	**LAS PENAS INFR**	**3.38**	**117**	*i*		02 25 50.0	
	baz=291,slow=327,SNR=1.3						
LPAZ	**La Paz**	**3.69**	**115**	Pn	**Pn**	**02 03 50.4**	**-1.4**
	0.3nm,0.3s,baz=294,slow=14,SNR=15						
LPAZ				Pg	**Pg**	**02 04 02.7**	**-2.2**
	1.6nm,0.3s,baz=308,slow=12,SNR=13						
LPAZ				LR	LR	02 05 33.3	
	comp=Z,514nm,20.4s,baz=302,slow=43						
LPAZ	**La Paz**	**3.69**	**115**	*e*Pn	**Pn**	**02 03 52.5**	**+0.7**
LPAZ				*e*Pg	**Pg**	**02 04 02.7**	**-2.2**
MNMC	**Minye Minye**	**4.79**	**157**	*e*Pn	**Pn**	**02 04 06.1**	**-0.5**
PB11	**IPOC Station P**	**5.34**	**160**	*e*Pn	**Pn**	**02 04 14.4**	**+0.3**
GO01	**Chusmiza**	**5.43**	**155**	*e*Pn	**Pn**	**02 04 16.9**	**+1.2**
NNA	**Nana**	**5.78**	**297**	Pn	**Pn**	**02 04 19.2**	**-0.9**
	6.9nm,0.3s,baz=147,slow=8.4,SNR=13						
NNA				Sn	**Sn**	**02 05 23.9**	**-2.7**
	1.5nm,0.3s,baz=204,slow=6.3,SNR=2.0						
NNA				Lg	Lg	02 05 52.6	
	4.2nm,0.3s,baz=70,slow=15,SNR=2.7						
NNA	**Nana**	**5.78**	**297**	*e*Pn	**Pn**	**02 04 19.5**	**-0.7**
PB01	**IPOC Station P**	**6.60**	**163**	*e*Pn	**Pn**	**02 04 33.4**	**+2.0**
PB04	**IPOC Station P**	**7.70**	**170**	*e*Pn	**Pn**	**02 04 48.5**	**+2.0**
LVC	**Limon Verde**	**8.25**	**162**	Pn	**Pn**	**02 04 52.4**	**-1.9**
	0.2nm,0.3s,baz=9.5,slow=17,SNR=2.4						
LVC				Sn	**Sn**	**02 06 30.8**	**+3.0**
	0.3nm,0.3s,baz=157,slow=18,SNR=1.9						
LVC				LR	LR	02 08 14.0	
	comp=Z,1µm,19.5s,baz=316,slow=39						
LVC	**Limon Verde**	**8.25**	**162**	*e*Pn	**Pn**	**02 04 55.3**	**+1.0**
ATAH	**Atahualpa**	**10.07**	**318**	Pn	**Pn**	**02 05 20.4**	**+1.1**
	0.3nm,0.3s,baz=160,slow=19,SNR=2.0						
ATAH				Sn	**Sn**	**02 07 11.3**	**-1.2**
	baz=109,slow=11,SNR=1.3						
ATAH				Lg	Lg	02 08 07.1	
	0.2nm,0.3s,baz=133,slow=19,SNR=2.7						
ATAH				LR	LR	02 09 58.1	
	comp=Z,2µm,18.7s,baz=168,slow=42						
SIV	**San Ignacio**	**10.23**	**98**	Pn	Pn	02 05 26.9	+5.7
	1.7nm,0.3s,baz=287,slow=9.7,SNR=18						
SIV				Lg	Lg	02 08 21.0	
	0.3nm,0.3s,baz=237,slow=20,SNR=1.4						
SIV				LR	LR	02 09 50.2	
	comp=Z,1µm,18.8s,baz=292,slow=40						
CFA	**Coronel Fontan**	**17.09**	**170**	P	**P**	**02 06 54.3**	**-0.7**
	0.4nm,0.3s,baz=335,slow=11,SNR=3.8						
CFA				LR	LR	02 13 24.9	
	comp=Z,225nm,19.8s,baz=288,slow=37						
CPUP	**Villa Florida**	**17.64**	**133**	LR	LR	02 15 06.3	
	comp=Z,555nm,18.7s,baz=318,slow=42						
PTGA	**Pitinga**	**18.04**	**41**	P	**P**	**02 07 05.4**	**-0.1**
	0.2nm,0.3s,baz=228,slow=15,SNR=2.5						
PTGA				Sn	**Sn**	**02 10 29.7**	**+3.1**
	0.1nm,0.3s,baz=304,slow=13,SNR=4.6						
PTGA				Lg	Lg	02 12 30.9	
	0.1nm,0.3s,baz=256,slow=4.2,SNR=4.5						
PTGA	**Pitinga**	**18.04**	**41**	*e*P	**P**	**02 07 07.3**	**+1.7**
	50nm,1.6s						
PTGA				*e*Sn	**S**	**02 10 30.8**	**-1.8**
ROSC	**El Rosal**	**19.62**	**352**	Lg	Lg	02 13 11.8	
	0.5nm,0.3s,baz=245,slow=22,SNR=3.7						
ROSC				LR	LR	02 15 26.4	
	comp=Z,544nm,20.1s,baz=215,slow=38						
BDFB	**Brasilia**	**22.78**	**95**	LR	LR	02 17 52.1	
	comp=Z,481nm,19.3s,baz=278,slow=39						
SDV	**Santo Domingo**	**23.47**	**2**	P	**P**	**02 08 04.8**	**+0.5**
	3.3nm,0.3s,baz=256,slow=1.5,SNR=8.3						
SDV				LR	LR	02 18 19.7	
	comp=Z,393nm,19.9s,baz=224,slow=39						
SDV	**Santo Domingo**	**23.47**	**2**	*e*P	**P**	**02 08 06.4**	**+2.1**
	13nm,1.0s						
PCRV	**Puerto La Cruz**	**25.68**	**16**	LR	LR	02 19 32.1	
	comp=Z,672nm,19.2s,slow=39						
PLCA	**Paso Flores**	**25.93**	**178**	P	**P**	**02 08 26.1**	**-0.6**
	2.1nm,1.0s,baz=15,slow=11,SNR=4.1						
PLCA	**Paso Flores**	**25.93**	**178**	*e*P	**P**	**02 08 26.1**	**-0.6**
	32nm,2.0s						
MDP	**Montagnes des**	**27.22**	**45**	LR	LR	02 20 01.7	
	comp=Z,417nm,18.1s,baz=222,slow=38						
JTS	**Las Juntas de**	**28.16**	**331**	LR	LR	02 18 56.5	
	comp=Z,278nm,20.6s,baz=234,slow=34						
CMIG	**Matias Romero**	**39.08**	**323**	P	**P**	**02 10 20.1**	**-1.6**
	2.3nm,0.6s,baz=88,slow=7.6,SNR=3.9						
LNIG	**Linares**	**47.85**	**325**	*e*P	**P**	**02 11 33.2**	**+0.8**
	5.5nm,0.9s						
BIRD	**Birdtown, Kers**	**49.81**	**350**	*e*P	**P**	**02 11 49.2**	**+2.0**
	11nm,0.9s						
T49A	**Edmonton**	**53.19**	**346**	*e*P	**P**	**02 12 13.8**	**+1.2**
	33nm,1.8s						
TXAR	**Lajitas Array**	**53.64**	**325**	P	**P**	**02 12 15.9**	**-0.3**
	1.2nm,0.9s,baz=150,slow=9.2,SNR=9.3						
FCAR	**Ozark Folk Cen**	**53.95**	**339**	*e*P	**P**	**02 12 18.2**	**0.0**
	3.0nm,0.8s						
PBMO	**Poplar Bluff**	**54.22**	**341**	*e*P	**P**	**02 12 20.1**	**0.0**
	3.9nm,0.6s						
N55A	**Marion Center**	**55.64**	**353**	*e*P	**P**	**02 12 32.2**	**+1.8**
	17nm,1.2s						
SADO	**Sadowa**	**59.60**	**354**	*e*P	**P**	**02 12 58.8**	**+0.7**
	6.8nm,0.9s						
KSCO	**Kaye Shedlock'**	**60.81**	**333**	*e*P	**P**	**02 13 09.2**	**+2.4**
	23nm,0.4s						
SDCO	**Great Sand Dun**	**61.14**	**330**	*e*P	**P**	**02 13 10.1**	**+0.9**
	3.8nm,0.7s						
SMCO	**Snowmass**	**62.98**	**330**	*e*P	**P**	**02 13 22.8**	**+1.1**
	2.1nm,0.8s						
PV01	**Paradox Valley**	**62.98**	**328**	*e*P	**P**	**02 13 22.8**	**+1.3**
	4.5nm,1.2s						
AGMN	**Agassiz Nation**	**66.36**	**343**	*e*P	**P**	**02 13 43.5**	**+0.5**
	5.3nm,0.7s						
R11A	**Troy Canyon, C**	**66.96**	**324**	*e*P	**P**	**02 13 48.7**	**+1.3**
	8.4nm,1.8s						
PD31	**Pinedale Array**	**66.99**	**331**	*e*P	**P**	**02 13 48.0**	**+0.5**
	0.8nm,0.8s						
PDAR	**Pinedale Array**	**66.99**	**331**	P	**P**	**02 13 48.0**	**+0.5**
	0.6nm,0.6s,baz=104,slow=6.3,SNR=5.6						
ULM	**Lac du Bonnet**	**68.12**	**343**	P	**P**	**02 13 54.0**	**-0.1**
	2.8nm,0.5s,baz=152,slow=4.3,SNR=4.5						
ULM				LR	LR	02 48 30.9	
	comp=Z,71nm,18.0s,baz=160,slow=40						
ULM	**Lac du Bonnet**	**68.12**	**343**	*e*P	**P**	**02 13 54.2**	**+0.1**
	3.4nm,0.6s						
LOHW	**Long Hollow**	**68.13**	**330**	*e*P	**P**	**02 13 55.8**	**+1.1**
	2.2nm,0.7s						
NVAR	**Mina Array Bea**	**68.60**	**322**	LR	LR	02 42 53.3	
	comp=Z,30nm,19.4s,baz=123,slow=35						
GCMT	**Greycliff**	**69.36**	**333**	*e*P	**P**	**02 14 03.1**	**+1.0**
SCHQ	**Schefferville**	**69.39**	**3**	LR	LR	02 47 19.6	
	comp=Z,45nm,19.7s,baz=200,slow=38						
SNAA	**Sanae**	**69.48**	**162**	*e*P	**P**	**02 14 03.7**	**+1.2**
	14nm,1.7s						
DBIC	**Dimbokro**	**69.49**	**77**	LR	LR	02 43 45.6	
	comp=Z,172nm,18.4s,baz=224,slow=35						
BOZ	**Bozeman (W)**	**70.10**	**331**	*e*P	**P**	**02 14 07.6**	**+0.8**
	3.2nm,1.3s						
PPT	**Papeete**	**74.46**	**256**	LR	LR	02 38 26.6	
	comp=Z,64nm,18.6s,baz=120,slow=29						
TOA1	**Torodi Ar. Sit**	**77.65**	**73**	*e*P	**P**	**02 14 51.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**77.65**	**73**	P	**P**	**02 14 51.1**	**-0.4**
	13nm,0.3s,baz=277,slow=7.2,SNR=9.8						
TORD				LR	LR	02 47 37.2	
	comp=Z,144nm,20.0s,baz=310,slow=34						
ESDC	**Sonseca Array**	**82.90**	**46**	LR	LR	02 48 40.8	
	comp=Z,44nm,20.9s,baz=330,slow=33						
YKA	**Yellowknife Ar**	**83.98**	**341**	P	**P**	**02 15 24.8**	**+0.5**
	0.9nm,0.6s,baz=136,slow=5.6,SNR=5.6						
YKA				LR	LR	02 57 52.3	
	comp=Z,5.4nm,18.3s,baz=139,slow=39						
YKB5	**Yellowknife Ar**	**83.98**	**341**	*e*P	**P**	**02 15 24.8**	**+0.5**
BOSA	**Boshof**	**88.92**	**119**	LR	LR	02 51 52.8	
	comp=Z,135nm,21.2s,baz=262,slow=33						
KEST	**Kesra**	**91.31**	**53**	LR	LR	02 57 07.5	
	comp=Z,64nm,20.0s,baz=266,slow=36						
ILAR	**Eielson Array**	**97.06**	**335**	LR	LR	03 04 29.6	
	comp=Z,48nm,18.5s,baz=128,slow=38						
ZAA1	**Zalesovo Array**	**136.70**	**20**	*e*PKPdf	**PKiKP**	**02 22 18.2**	**-0.2**
ZALV	**Zalesovo Beam**	**136.71**	**20**	PKP	**PKiKP**	**02 22 18.2**	**-0.2**
	1.7nm,0.6s,baz=27,slow=0.6,SNR=7.4						
KSH	**Kashi**	**142.35**	**43**	*e*PKP	**PKiKP**	**02 22 29.9**	**-0.7**
KSH				PKS	**PKSdf**	**02 26 04.4**	**+0.9**
SONA0	**Songino Array**	**146.94**	**2**	*e*PKPbc	**PKiKP**	**02 22 37.7**	**-2.1**
SONM	**Songino Array**	**146.94**	**2**	PKPbc	**PKiKP**	**02 22 37.7**	**-2.1**
	1.5nm,0.8s,baz=336,slow=3.2,SNR=6.9						
LZH	**Lanzhou**	**158.33**	**10**	*e*PKP	**PKPdf**	**02 22 48.1**	**-4.3**
LZH				pPKP	sPKPdf	02 22 59.8	+0.9
LZH				sPKP		02 23 03.0	
CD2	**Chengdu**	**163.33**	**14**	PKP	**PKPdf**	**02 22 57.2**	**-0.6**

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*IDC **06** 02:10:41.2±3.0, 35°.85N×141°.21E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.4/46, mbtmp3.5/4, ML2.6/1, MS2.6/3, Ms1 2.7/3, ms1mx2.5/23, Error ellipse: s-maj=81.7km s-min=24.2km az=48.0*

*ISCJB **06** 02:10:47.7±0.8, 35°.74N±0°.06×140°.84E±0°.09, h55^{km}±4^{km}, mb3.6/3, MS2.7/1, Error ellipse: s-maj=12.4km s-min=8.2km az=152.8*

*JMA **06** 02:10:48.2±0.2, 35°.73N×140°.72E, h51^{km}±2^{km}, M3.0*

ISC 06 02:10:49.1±1.1**, 35°.74N**±0°.05×**140°.81E**±0°.07**, h46**^{km}±7^{km}**, n17, σ1^s.19**/21**, mb3.6**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.05**	**132**	P	**Pn**	**02 10 56.1**	**-0.2**
CHOJ				*e*S	**Sn**	**02 11 02.3**	**+0.9**
JSMT	**Sammumatsuo**	**0.31**	**252**	P	**Pn**	**02 10 57.3**	**-0.7**
JSMT				S	**Sn**	**02 11 04.5**	**+0.2**
JIHU	**Itakohorinouch**	**0.32**	**315**	P	**Pn**	**02 10 57.9**	**-0.2**
JIHU				*e*S	**Sn**	**02 11 05.0**	**+0.5**
JCN	**Nagara**	**0.59**	**237**	P	**Pn**	**02 11 00.6**	**-0.7**
JCN				S	**Sn**	**02 11 10.0**	**0.0**
JYT	**Yasato**	**0.70**	**315**	P	**Pn**	**02 11 01.4**	**-1.3**
BSO4	**Boso 4**	**0.84**	**207**	P	**Pn**	**02 11 03.9**	**-0.6**
JHO	**Hitachi**	**0.89**	**347**	P	**Pn**	**02 11 05.0**	**-0.3**
BSO3	**Boso 3**	**0.97**	**195**	P	**Pn**	**02 11 06.0**	**0.0**
BSO1	**Boso 1**	**1.09**	**173**	P	**Pn**	**02 11 07.5**	**0.0**
JAG	**Ashikaga**	**1.29**	**302**	P	**Pn**	**02 11 09.4**	**-1.4**
MJAR	**Matsushiro Arr**	**2.25**	**292**	Pn	**Pn**	**02 11 23.2**	**-0.6**
	1.2nm,0.3s,baz=97,slow=14,SNR=20						
MJAR				Sn	**Sn**	**02 11 54.5**	**+4.0**
	1.0nm,0.3s,baz=124,slow=18,SNR=10						
MJAR				LR	LR	02 12 22.1	
	comp=Z,91nm,19.1s,baz=110,slow=41						
MAT	**Matsushiro**	**2.25**	**292**	P	**Pn**	**02 11 23.8**	**-0.1**
MAT				*e*S	**Sn**	**02 11 51.6**	**+1.1**
KSRS	**Korea Array**	**10.50**	**283**	LR	LR	02 16 58.7	
	comp=Z,38nm,20.4s,baz=90,slow=35						
CMAR	**Chiang Mai Arr**	**40.71**	**256**	LR	LR	02 36 34.4	
	comp=Z,10.0nm,19.3s,baz=160,slow=38						
MKAR	**Makanchi Array**	**44.41**	**303**	P	**P**	**02 18 55.0**	**-0.1**
	0.3nm,0.4s,baz=90,slow=9.1,SNR=2.5						
WRA	**Warramunga Arr**	**55.71**	**187**	P	**P**	**02 20 20.1**	**-0.9**
	0.5nm,0.3s,baz=2.6,slow=6.9,SNR=5.8						
ASAR	**Alice Springs**	**59.44**	**187**	P	**P**	**02 20 47.2**	**0.0**
	0.3nm,0.5s,baz=25,slow=11,SNR=4.4						

IDC 06 02:39:21.7±3.7**, 5°.89S**×**149°.59E, h0**^{km}**, mb3.9**/2**, mb1 4.3**/2**, mb1mx3.6**/18**, mbtmp4.0**/2**, MS3.2**/3**, Ms1 3.2**/3**, ms1mx3.0**/17**, Error ellipse: s-maj=125.9km s-min=48.1km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.37**	**225**	P	P	02 43 59.9	-0.2
	7.3nm,0.7s,baz=52,slow=11,SNR=16						
ASAR	**Alice Springs**	**23.25**	**219**	P	P	02 44 31.1	+0.2
	1.8nm,0.6s,baz=51,slow=9.2,SNR=23						
ASAR				LR	LR	02 52 32.2	
	comp=Z,116nm,20.0s,baz=97,slow=34						
KSRS	**Korea Array**	**47.62**	**337**	LR	LR	03 06 45.6	
	comp=Z,10nm,19.1s,baz=145,slow=34						
ZALV	**Zalesovo Beam**	**80.30**	**327**	LR	LR	03 26 38.4	
	comp=Z,21nm,19.6s,baz=70,slow=35						
TORD	**Torodi Ar. Bea**	**147.55**	**285**	PKPbc	PKPbc	02 59 08.2	-0.8
	0.8nm,0.9s,baz=58,slow=4.3,SNR=5.4						

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*NEIC **06** 02:53:50.0±0.0, 17°.25N×95°.31W, h120^{km}, mb4.2/4, MD4.0(MEX), After MEX.*

MEX 06 02:53:49.7±0.8**, 17°.25N**×**95°.32W, h124**^{km}±7^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.44**	**110**	*e*Pn	Pn	02 54 06.8	-0.9
CMIG				*e*Sn	Sn	02 54 19.0	-2.3
CMIG	**Matias Romero**	**0.44**	**110**	*i* P	Pn	02 54 06.8	-0.9
CMIG				*e*S	Sn	02 54 19.0	-2.3
OXBJ	**Oaxaca**	**1.36**	**263**	*i* P	Pn	02 54 14.3	-1.7
OXBJ				*e*S	Sn	02 54 33.9	-2.0
VHO	**Vista Hermosa**	**1.37**	**263**	*e*Pn	Pn	02 54 15.6	-0.5
VHO				*e*Sn	Sn	02 54 34.9	-1.2
VHO	**Vista Hermosa**	**1.37**	**263**	*e*P	Pn	02 54 15.3	-0.8
VHO				*e*S	Sn	02 54 34.9	-1.2
HUIG	**Huatulco**	**1.65**	**207**	*e*Pn	Pn	02 54 17.3	-1.9
HUIG				*e*Sn	Sn	02 54 38.3	-3.4
HUIG	**Huatulco**	**1.65**	**207**	*e*P	Pn	02 54 17.3	-1.9

HUIG				*e*S	Sn	02 54 39.9	-1.8
PANG	**Puerto Angel**	**1.92**	**215**	*i* P	Pn	02 54 21.3	-1.1
PANG				*i* S	Sn	02 54 45.0	-2.3
TGIG		**2.15**	**102**	*e*Pn	Pn	02 54 24.8	-0.5
TGIG				*e*Sn	Sn	02 54 50.9	-1.7
TGIG		**2.15**	**102**	*e*P	Pn	02 54 24.8	-0.5
TGIG				*i* S	Sn	02 54 50.9	-1.7
PCIG		**2.53**	**127**	*e*Pn	Pn	02 54 30.1	+0.1
PCIG				*e*Sn	Sn	02 54 58.4	-2.6
PCIG		**2.53**	**127**	*e*P	Pn	02 54 29.3	-0.7
PCIG				*e*S	Sn	02 54 58.4	-2.6
LVIG	**Laguna Verde**	**2.68**	**337**	*e*Pn	Pn	02 54 28.3	-3.6
TLIG	**Tlapa**	**3.12**	**276**	*e*Pn	Pn	02 54 37.4	-0.4
CCIG	**Comitan**	**3.19**	**107**	*e*Pn	Pn	02 54 39.0	+0.2
TEIG	**Tepich**	**7.30**	**65**	*e*Pn	Pn	02 55 31.1	-2.6
PBMO	**Poplar Bluff**	**19.93**	**12**	*e*P	P	02 58 11.2	-0.6
	5.0nm,0.8s						
PV14	**Lion Creek, Pa**	**24.23**	**333**	*e*P	P	02 58 53.9	-1.4
	20nm,0.9s						
O49A	**Covington**	**24.76**	**20**	*e*P	P	02 58 59.0	-0.8
	10nm,0.6s						

MEX 06 03:06:33.5±0.7**, 15°.29N**×**93°.07W, h84**$^{km}\pm7^{km}$**, MD3.7,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.44**	**341**	*i* P	Pn	03 06 45.7	-1.4
PCIG				*e*S	Sn	03 06 55.5	-1.6
THIG		**0.86**	**116**	*e*P	Pn	03 06 49.7	-1.5
THIG				*e*S	Sn	03 07 02.8	-1.6
CCIG	**Comitan**	**1.34**	**42**	*e*P	Pn	03 06 55.9	-1.1
CCIG				*i* S	Sn	03 07 13.2	-1.6
TGIG		**1.48**	**358**	*e*P	Pn	03 06 58.1	-0.7
TGIG				*e*S	Sn	03 07 15.6	-2.4

WEL 06 04:04:06.4, 36°S±16°×**17°9E**±°**, h162**$^{km}\pm21^{km}$**, M3.5**/21**,**
ML3.6/6**, MLv3.5**/21**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=5.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.45**	**211**	P	Pn	04 04 34.5	-1.8
WMGZ	**Waiomatatini S**	**1.64**	**204**	P	Pn	04 04 39.0	+0.8
HAZ	**Te Kaha**	**1.85**	**219**	P	Pn	04 04 41.2	+0.7
PUZ	**Puketiti**	**1.92**	**204**	P	Pn	04 04 42.3	+1.0
PUZ				S	Sn	04 05 07.9	-0.4
RUGZ	**Raukumara Rang**	**2.06**	**217**	P	Pn	04 04 44.1	+1.0
TWGZ	**Tauwhareparae**	**2.11**	**208**	P	Pn	04 04 44.8	+1.3
TWGZ				S	Sn	04 05 14.3	+2.1
CNGZ	**Carnagh Statio**	**2.31**	**201**	P	Pn	04 04 47.4	+1.6
TKGZ	**Te Karaka**	**2.39**	**208**	P	Pn	04 04 47.7	+0.9
MWZ	**Matawai**	**2.43**	**214**	P	Pn	04 04 48.6	+1.3
MWZ				S	Sn	04 05 20.0	+1.0
URZ	**Urewera**	**2.58**	**221**	P	Pn	04 04 50.3	+1.3
RAGZ	**Rawiri**	**2.61**	**213**	P	Pn	04 04 50.7	+1.2
OPRZ	**Ohinepanea**	**2.64**	**234**	P	Pn	04 04 51.2	+1.5
RIGZ	**Rimuhau**	**2.66**	**206**	P	Pn	04 04 51.1	+1.1
TGRZ	**Tauranga**	**2.77**	**239**	P	Pn	04 04 52.1	+0.7
PRGZ	**Paritu Road**	**2.81**	**202**	P	Pn	04 04 53.1	+1.2
KUZ	**Kuaotunu**	**2.88**	**261**	P	Pn	04 04 52.4	-0.3
KUZ				S	Sn	04 05 26.2	-2.3
SNGZ	**Shannon Statio**	**2.88**	**211**	P	Pn	04 04 54.2	+1.4
OMRZ	**Omania**	**2.91**	**231**	P	Pn	04 04 55.4	+2.3
RTZ	**Ruatahuna**	**2.92**	**218**	P	Pn	04 04 54.3	+1.1
KARZ	**Kaharoa**	**2.94**	**234**	P	Pn	04 04 55.5	+2.0
KNZ	**Kokohu**	**2.97**	**204**	P	Pn	04 04 54.2	+0.4
MHGZ	**Mahia Peninsul**	**3.02**	**200**	P	Pn	04 04 55.6	+1.2
RAHZ	**Arahi**	**3.11**	**213**	P	Pn	04 04 57.1	+1.5
TOZ	**Tahuroa Road**	**3.31**	**244**	P	Pn	04 04 59.8	+1.6
MKAZ	**Moumakai**	**3.38**	**255**	P	Pn	04 05 00.2	+1.3
ARHZ	**Aropaoanui**	**3.44**	**211**	P	Pn	04 05 01.0	+1.3
ETAZ	**East Tamaki Re**	**3.54**	**259**	P	Pn	04 05 02.2	+1.2
WCZ	**Waipu Caves**	**3.99**	**274**	P	Pn	04 05 07.6	+0.7

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*NIED **06** 04:07:00, 41°.80N×142°.30E, h65^{km}, Mw3.5   Best double couple: $M_0$2.22000×10^{14} NP1:ϕ_s293.00000°, δ24.00000°, λ-86.00000°.   NP2:ϕ_s109.00000°, δ66.00000°, λ-92.00000°.*

JMA 06 04:07:18.8±0.2**, 41°.82N**×**142°.27E, h57**$^{km}\pm4^{km}$**, M3.5,**
2C-8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.58**	**38**	⇑P	Pn	04 07 30.7	-0.8
JNBK				*e*S	Sn	04 07 39.4	-1.3
JSHD	**Hidakashinhida**	**0.61**	**14**	⇓P	Pn	04 07 32.0	+0.3
JSHD				*e*S	Sn	04 07 41.9	+0.7
JEM	**Erimo**	**0.69**	**73**	P	Pn	04 07 32.9	+0.2
JEM				*e*S	Sn	04 07 42.9	0.0
JAHD	**Aomorihigashid**	**0.89**	**232**	⇓P	Pn	04 07 35.9	+0.6
JKB	**Kayabe**	**0.93**	**275**	⇓P	Pn	04 07 35.5	-0.2
JKB				*e*S	Sn	04 07 47.8	-0.4
JBT2	**Biratori 2**	**0.96**	**4**	⇓P	Pn	04 07 36.0	-0.2
JBT2				*e*S	Sn	04 07 48.7	-0.3
JOT	**Ohata**	**1.01**	**245**	⇓P	Pn	04 07 37.1	+0.2
JOT				*e*S	Sn	04 07 50.3	0.0
JNB	**Noboribetsu**	**1.12**	**306**	P	Pn	04 07 37.8	-0.5
JNB				*e*S	Sn	04 07 52.1	-0.7
JCH	**Churui**	**1.14**	**45**	P	Pn	04 07 39.2	+0.7
JEW	**Eniwo**	**1.19**	**329**	⇑P	Pn	04 07 39.6	+0.4
JEW				*e*S	Sn	04 07 54.7	+0.3
JFR	**Furan**	**1.36**	**10**	P	Pn	04 07 41.5	-0.1
JTM	**Tenmabayashi**	**1.37**	**222**	⇓P	Pn	04 07 42.4	+0.7
JTM				*e*S	Sn	04 07 59.8	+1.0
JSR	**Shiriuchi**	**1.42**	**259**	P	Pn	04 07 42.4	+0.1
JYM2	**Yakumo 2**	**1.45**	**282**	P	Pn	04 07 43.1	+0.4
JYM2				*e*S	Sn	04 08 01.2	+0.6
JANG	**Nango**	**1.55**	**202**	⇓P	Pn	04 07 44.6	+0.5
JISS	**Ishikarishitsu**	**1.58**	**337**	P	Pn	04 07 45.3	+0.8
JISS				*e*S	Sn	04 08 04.3	+0.3
JOB	**Onbets**	**1.59**	**46**	P	Pn	04 07 45.9	+1.3
JAR	**Ashorobuto**	**1.84**	**36**	⇓P	Pn	04 07 48.7	+0.6
JAR				*e*S	Sn	04 08 10.5	+0.2

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*SNET **06** 04:11:06.1±1.3, 13°.42N×90°.74W, h22$^{km}\pm5^{km}$, ML3.1*
*GCG **06** 04:11:07.8±0.7, 13°.55N×90°.98W, h13$^{km}\pm999^{km}$, MD3.6*
ISC 06 04:11:05.6±3.2**, 13°.4N**±0°.1×**90°.84W**±0°.08**, h30**$^{km}\pm17^{km}$**,**
n14, σ**0^{s}.55**/22**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.04**	**13**	*e*P	**Pb**	**04 11 24.8**	**-0.5**
PCG				*e*S	**Sb**	**04 11 38.4**	**-0.3**
FUG	**Fuego 3**	**1.07**	**0**	*e*P	**Pn**	**04 11 25.0**	**+0.2**
CEVE	**Cerro Verde**	**1.27**	**69**	*e*P	**Pn**	**04 11 27.1**	**-0.4**
CEVE				*e*S	**Sn**	**04 11 43.4**	**-0.3**
CEVE				IAML		04 11 44.6	
	comp=Z,2µm,0.3s						
SBLS	**San Blas**	**1.28**	**68**	*e*P	**Pn**	**04 11 27.0**	**-0.5**
RTR	**El Retiro**	**1.28**	**66**	*e*P	**Pn**	**04 11 27.3**	**-0.2**
SNJE	**San Jose**	**1.30**	**67**	*e*P	**Pn**	**04 11 27.5**	**-0.4**
NBG	**Las Nubes**	**1.30**	**22**	*e*P	**Pb**	**04 11 29.6**	**-0.1**
NBG				*e*S	**Sb**	**04 11 47.4**	**+1.2**
STG3	**Santiaguito 3,**	**1.51**	**332**	*e*P	**Pn**	**04 11 31.2**	**+0.4**
STG3				*e*S	**Sn**	**04 11 48.9**	**-0.6**
UEES	**Universidad Ev**	**1.60**	**77**	*e*P	**Pn**	**04 11 31.8**	**-0.1**
UEES				*e*S	**Sn**	**04 11 51.4**	**-0.1**
UEES				IAML		04 11 55.3	
	comp=Z,480nm,0.2s						
SNET	**Serv Nac Est T**	**1.60**	**78**	*e*P	**Pn**	**04 11 31.8**	**-0.1**
SNET				*e*S	**Sn**	**04 11 51.4**	**-0.2**
SNET				IAML		04 11 53.3	
	comp=Z,454nm,0.2s						
LFU	**La Fuente**	**1.72**	**77**	*e*P	**Pn**	**04 11 33.9**	**+0.3**
MTO3	**Montecristo**	**1.77**	**54**	*e*P	**Pn**	**04 11 33.8**	**-0.5**
MTO3				*e*S	**Sn**	**04 11 56.0**	**0.0**
MTO3				IAML		04 11 59.6	
	comp=Z,27nm,0.4s						
PAVA	**Las Pavas**	**1.89**	**79**	*e*P	**Pn**	**04 11 36.1**	**+0.3**
PAVA				*e*S	**Sn**	**04 12 00.0**	**+1.3**
PAVA				IAML		04 12 01.9	
	comp=Z,102nm,0.4s						
MRL	**Marmol**	**2.04**	**33**	*e*P	**Pn**	**04 11 38.2**	**+0.1**

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*ROM **06** 04:16:07.1±0.9, 38°.69N±0°.06×11°.77E±0°.06, h35^{km}, ML3.8/28, Error ellipse: s-maj=7.1km s-min=4.3km az=331.0*
*ISCJB **06** 04:16:09.7±0.2, 38°.54N±0°.03×12°.07E±0°.03, h12^{km}, mb3.8/9, MS2.4/1, Error ellipse: s-maj=4.5km s-min=2.3km az=36.8*
*IDC **06** 04:16:09.8±0.9, 38°.47N×12°.03E, h0^{km}, mb3.6/8, mb1 3.6/14, mb1mx3.5/41, mbtmp3.5/14, ML3.6/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/36, Error ellipse: s-maj=19.0km s-min=15.5km az=107.0*
*LDG **06** 04:16:14.3±0.1, 38°.48N×12°.24E, h30^{km}, Ml3.4/16, Error ellipse: s-maj=9.5km s-min=2.1km az=44.0*
ISC 06 04:16:10.9±0.6**, 38°.51N**±0°.03×**12°.16E**±0°.03**, h12**^{km}**, n117,**
σ**2^{s}.21**/131**, mb3.7**/9**, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USI	**Ustica**	**0.83**	**76**	P	**Pg**	**04 16 26.8**	**-0.1**
USI				S	**Sn**	**04 16 41.7**	**+1.1**
USI				AML	AML		
	comp=E,24650µm,0.4s						
USI				AML	AML		
	comp=N,31850µm,0.5s						
USI				AML	AML		
	comp=E,24650µm,0.4s						
USI				AML	AML		
	comp=N,31800µm,0.5s						
USI				AML	AML		
	comp=E,24650µm,0.4s						
USI				AML	AML		
	comp=N,31850µm,0.5s						
USI				AML	AML		
	comp=E,24650µm,0.4s						
USI				AML	AML		
	comp=N,31850µm,0.5s						
USI	**Ustica**	**0.83**	**76**	P	**Pg**	**04 16 26.6**	**-0.3**
USI				S	**Sg**	**04 16 38.0**	**+0.3**
USI				AML	AML		
	comp=E,24650µm,0.4s						
USI				AML	AML		
	comp=N,31850µm,0.5s						
MFNL	**Monte Finestre**	**0.94**	**140**	P	**Pn**	**04 16 30.2**	**+0.3**
MFNL	**Monte Finestre**	**0.94**	**140**	P	**Pn**	**04 16 30.0**	**+0.1**
CAVT	**Castelvetrano**	**0.95**	**150**	P	**Pb**	**04 16 29.9**	**+0.6**
CRJA	**Costa Raja**	**0.97**	**136**	P	**Pg**	**04 16 29.3**	**-0.4**
CRJA	**Costa Raja**	**0.97**	**136**	P	**Pg**	**04 16 29.3**	**-0.4**
MPG	**Monte Pellegri**	**1.01**	**110**	P	**Pb**	**04 16 29.4**	**-0.9**
MPG				AML	AML		
	comp=E,2660µm,0.6s						
MPG				AML	AML		
	comp=N,2945µm,0.6s						
MPG				AML	AML		
	comp=E,2660µm,0.6s						
MPG				AML	AML		
	comp=N,2950µm,0.6s						
MPG				AML	AML		
	comp=E,2660µm,0.6s						
MPG				AML	AML		
	comp=N,2945µm,0.6s						
MPG				AML	AML		
	comp=N,2945µm,0.6s						
MPG				AML	AML		
	comp=E,2660µm,0.6s						
MPG	**Monte Pellegri**	**1.01**	**110**	P	**Pb**	**04 16 29.1**	**-1.3**
MPG				S	**Sg**	**04 16 43.2**	**-0.3**
MPG				AML	AML		
	comp=E,2660µm,0.6s						
MPG				AML	AML		
	comp=N,2945µm,0.6s						
MPG				AML	AML		
	comp=N,2945µm,0.6s						
MMGO	**Monte Magaggia**	**1.06**	**142**	P	**Pb**	**04 16 31.2**	**0.0**
CORL	**Corleone**	**1.09**	**124**	P	**Pb**	**04 16 31.3**	**-0.5**
CORL				AML	AML		
	comp=E,7185µm,0.5s						
CORL				AML	AML		
	comp=N,7175µm,0.7s						
CORL				AML	AML		
	comp=E,7190µm,0.5s						
CORL				AML	AML		
	comp=N,7175µm,0.7s						
CORL				AML	AML		
	comp=E,7185µm,0.5s						
CORL				AML	AML		
	comp=N,7175µm,0.7s						
CORL				AML	AML		
	comp=E,7185µm,0.5s						
CORL				AML	AML		
	comp=N,7175µm,0.7s						
CORL	**Corleone**	**1.09**	**124**	P	**Pb**	**04 16 31.2**	**-0.5**
CORL				AML	AML		
	comp=E,7185µm,0.5s						
CORL				AML	AML		
	comp=N,7175µm,0.7s						
CORL				AML	AML		
	comp=E,7185µm,0.5s						
SOLUN	**Solunto**	**1.16**	**110**	P	**Pb**	**04 16 31.9**	**-1.1**
SOLUN				S	**Sn**	**04 16 50.5**	**+1.8**
SOLUN				AML	AML		
	comp=E,1740µm,0.6s						
SOLUN				AML	AML		
	comp=N,1520µm,0.4s						
SOLUN				AML	AML		
	comp=E,1740µm,0.6s						
SOLUN				AML	AML		
	comp=N,1520µm,0.4s						
SOLUN				AML	AML		
	comp=E,1740µm,0.6s						
SOLUN				AML	AML		
	comp=N,1520µm,0.4s						
SOLUN				AML	AML		
	comp=N,1520µm,0.4s						
SOLUN				AML	AML		
	comp=E,1740µm,0.6s						
SOLUN	**Solunto**	**1.16**	**110**	P	**Pb**	**04 16 31.8**	**-1.1**
SOLUN				S	**Sb**	**04 16 46.3**	**-1.6**
SOLUN				AML	AML		
	comp=E,1740µm,0.6s						
SOLUN				AML	AML		
	comp=N,1520µm,0.4s						
SOLUN				AML	AML		
	comp=N,1520µm,0.4s						
SOLUN				AML	AML		
	comp=E,1740µm,0.6s						
CLTB	**Caltabellotta**	**1.25**	**138**	P	**Pn**	**04 16 34.5**	**+0.2**
CLTB				AML	AML		
	comp=E,11100µm,0.5s						
CLTB				AML	AML		
	comp=N,25400µm,0.6s						
CLTB				AML	AML		
	comp=E,11100µm,0.5s						
CLTB				AML	AML		
	comp=N,25400µm,0.6s						
CLTB				AML	AML		
	comp=E,11100µm,0.5s						
CLTB				AML	AML		
	comp=N,25400µm,0.6s						
CLTB	**Caltabellotta**	**1.25**	**138**	P	**Pn**	**04 16 34.1**	**-0.2**
CLTB				AML	AML		
	comp=E,11100µm,0.5s						
CLTB				AML	AML		
	comp=N,25400µm,0.6s						
CLTB				AML	AML		
	comp=E,11100µm,0.5s						
CLTB				AML	AML		
	comp=N,25400µm,0.6s						
MCT	**Mte Cammarata**	**1.46**	**126**	P	**Pg**	**04 16 38.9**	**0.0**
ALJA	**Alia**	**1.47**	**120**	P	**Pn**	**04 16 37.8**	**+0.5**
ALJA				AML	AML		
	comp=E,2310µm,0.7s						
ALJA				AML	AML		
	comp=N,2300µm,0.6s						
ALJA				AML	AML		
	comp=E,2325µm,0.4s						
ALJA				AML	AML		
	comp=N,2605µm,1.3s						
ALJA				AML	AML		
	comp=E,2325µm,0.4s						
ALJA				AML	AML		
	comp=N,2605µm,1.3s						
ALJA	**Alia**	**1.47**	**120**	P	**Pn**	**04 16 37.4**	**+0.1**
ALJA				AML	AML		
	comp=E,2325µm,0.4s						
ALJA				AML	AML		
	comp=N,2605µm,1.3s						
ALJA				AML	AML		
	comp=E,2325µm,0.4s						
ALJA				AML	AML		
	comp=N,2605µm,1.3s						
GIB	**Gibilmanna**	**1.56**	**109**	P	**Pn**	**04 16 37.4**	**-1.1**
GIB				AML	AML		
	comp=E,1935µm,0.7s						
GIB				AML	AML		
	comp=N,1740µm,1.1s						
GIB				AML	AML		
	comp=E,2210µm,0.7s						
GIB				AML	AML		
	comp=N,1910µm,0.6s						
GIB				AML	AML		
	comp=E,2210µm,0.7s						
GIB				AML	AML		
	comp=N,1910µm,0.6s						
GIB	**Gibilmanna**	**1.56**	**109**	P	**Pn**	**04 16 37.3**	**-1.3**
PETRA	**Petralia Sopra**	**1.68**	**113**	P	**Pn**	**04 16 40.1**	**-0.3**
PETRA				AML	AML		
	comp=E,1385µm,0.6s						
PETRA				AML	AML		
	comp=N,1330µm,0.6s						
PETRA				AML	AML		
	comp=E,1515µm,0.6s						
PETRA				AML	AML		
	comp=N,1620µm,0.8s						
PETRA				AML	AML		
	comp=E,1515µm,0.6s						
PETRA				AML	AML		
	comp=N,1620µm,0.8s						
PETRA	**Petralia Sopra**	**1.68**	**113**	P	**Pn**	**04 16 39.8**	**-0.5**
PETRA				AML	AML		
	comp=E,1515µm,0.6s						
PETRA				AML	AML		
	comp=N,1620µm,0.8s						
PETRA				AML	AML		
	comp=E,1515µm,0.6s						
PETRA				AML	AML		
	comp=N,1620µm,0.8s						
FAVR	**Favara**	**1.72**	**136**	P	**Pb**	**04 16 42.9**	**+0.4**
FAVR				AML	AML		
	comp=E,958µm,0.8s						
FAVR				AML	AML		
	comp=N,672µm,1.1s						
FAVR				AML	AML		
	comp=E,1390µm,1.1s						
FAVR				AML	AML		
	comp=N,1300µm,1.6s						
FAVR				AML	AML		
	comp=N,1300µm,1.6s						
FAVR				AML	AML		
	comp=E,1390µm,1.1s						
FAVR	**Favara**	**1.72**	**136**	P	**Pb**	**04 16 42.6**	**+0.1**
FAVR				AML	AML		
	comp=E,1390µm,1.1s						
FAVR				AML	AML		
	comp=N,1300µm,1.6s						
FAVR				AML	AML		
	comp=N,1300µm,1.6s						
FAVR				AML	AML		
	comp=E,1390µm,1.1s						
PTMD	**Pantelleria Cu**	**1.72**	**184**	P	**Pg**	**04 16 47.4**	**+3.5**
PTMD				AML	AML		
	comp=E,1006µm,0.6s						
PTMD				AML	AML		
	comp=N,2000µm,0.5s						
PTMD				AML	AML		
	comp=E,1060µm,0.5s						
PTMD				AML	AML		
	comp=N,2000µm,0.5s						
PTMD				AML	AML		
	comp=N,2000µm,0.5s						
PTMD				AML	AML		
	comp=E,1060µm,0.5s						
IACL	**Alicudi**	**1.73**	**88**	P	**Pn**	**04 16 39.5**	**-1.2**
IACL				AML	AML		
	comp=E,1011µm,1.1s						
IACL				AML	AML		
	comp=N,590µm,1.0s						
IACL				AML	AML		
	comp=E,1022µm,0.5s						
IACL				AML	AML		
	comp=N,738µm,0.7s						
IACL				AML	AML		
	comp=N,738µm,0.7s						
IACL				AML	AML		
	comp=E,1022µm,0.5s						
IACL	**Alicudi**	**1.73**	**88**	P	**Pn**	**04 16 38.8**	**-2.0**
IACL				AML	AML		
	comp=E,1022µm,0.5s						
IACL				AML	AML		
	comp=N,738µm,0.7s						
IACL				AML	AML		
	comp=E,1022µm,0.5s						
IACL				AML	AML		
	comp=N,738µm,0.7s						
CLTA	**Licata**	**1.96**	**133**	P	**Pn**	**04 16 41.6**	**-2.5**
CLTA	**Licata**	**1.96**	**133**	P	**Pn**	**04 16 44.9**	**+0.8**
CLTA				AML	AML		
	comp=E,676µm,0.6s						
CLTA				AML	AML		
	comp=N,883µm,1.5s						
CLTA				AML	AML		
	comp=N,883µm,1.5s						
CLTA				AML	AML		
	comp=E,676µm,0.6s						
MSFR	**San Fratello**	**1.97**	**103**	P	**Pn**	**04 16 43.0**	**-1.2**
MSFR				AML	AML		
	comp=E,186µm,0.8s						
MSFR				AML	AML		
	comp=N,197µm,0.7s						
MSFR				AML	AML		
	comp=E,233µm,0.9s						
MSFR				AML	AML		
	comp=N,210µm,1.3s						
MSFR				AML	AML		
	comp=E,233µm,0.9s						
MSFR				AML	AML		
	comp=N,210µm,1.3s						
MSFR	**San Fratello**	**1.97**	**103**	P	**Pn**	**04 16 42.9**	**-1.4**
MSFR				AML	AML		
	comp=E,233µm,0.9s						
MSFR				AML	AML		
	comp=N,210µm,1.3s						
MSFR				AML	AML		
	comp=N,210µm,1.3s						
MSFR				AML	AML		
	comp=E,233µm,0.9s						
VAE	**Valguarnera**	**2.06**	**119**	Pn	**Pb**	**04 16 47.5**	**-0.7**
	comp=E,4.6nm,0.3s,baz=89,slow=1.8,SNR=9.2						
VAE				Sn	**Sb**	**04 17 13.9**	**+0.2**
	comp=E,16nm,0.3s,baz=330,slow=8.1,SNR=11						
GALF	**Gagliano Caste**	**2.06**	**112**	P	**Pn**	**04 16 46.3**	**+0.9**
GALF				AML	AML		
	comp=E,872µm,0.6s						
GALF				AML	AML		
	comp=N,934µm,0.5s						
GALF				AML	AML		
	comp=E,872µm,0.6s						
GALF				AML	AML		
	comp=N,934µm,0.5s						
GALF				AML	AML		
	comp=E,872µm,0.6s						
GALF				AML	AML		
	comp=N,934µm,0.5s						
GALF	**Gagliano Caste**	**2.06**	**112**	AML	AML		
	comp=N,934µm,0.5s						
GALF				AML	AML		
	comp=E,872µm,0.6s						
GALF				AML	AML		
	comp=E,872µm,0.6s						
GALF				AML	AML		
	comp=N,934µm,0.5s						
MCPD	**Capo d'Orlando**	**2.06**	**100**	P	**Pn**	**04 16 44.2**	**-1.2**
MCPD				AML	AML		
	comp=E,774µm,0.5s						
MCPD				AML	AML		
	comp=N,753µm,0.5s						
MCPD				AML	AML		
	comp=E,774µm,0.5s						
MCPD				AML	AML		
	comp=N,753µm,0.5s						
MCPD				AML	AML		
	comp=E,774µm,0.5s						
MCPD				AML	AML		
	comp=N,753µm,0.5s						
MCPD	**Capo d'Orlando**	**2.06**	**100**	P	**Pn**	**04 16 44.2**	**-1.2**
MCPD				S	**Sn**	**04 17 08.0**	**-3.0**

MCPD				AML	AML		
	comp=E,774µm,0.5s						
MCPD				AML	AML		
	comp=N,753µm,0.5s						
MCPD				AML	AML		
	comp=N,753µm,0.5s						
RAFF	**Raffo Rosso**	2.17	126	P	Pn	04 16 47.5	+0.7
RAFF				AML	AML		
	comp=E,754µm,1.0s						
RAFF				AML	AML		
	comp=N,779µm,1.1s						
RAFF				AML	AML		
	comp=E,754µm,1.0s						
RAFF				AML	AML		
	comp=N,779µm,1.1s						
RAFF				AML	AML		
	comp=E,754µm,1.0s						
RAFF				AML	AML		
	comp=N,779µm,1.1s						
RAFF	**Raffo Rosso**	2.17	126	P	Pn	04 16 47.4	+0.6
RAFF				AML	AML		
	comp=E,754µm,1.0s						
RAFF				AML	AML		
	comp=N,779µm,1.1s						
RAFF				AML	AML		
	comp=E,754µm,1.0s						
MUCR	**Ucria**	2.19	101	P	Pn	04 16 46.2	-1.0
MUCR				AML	AML		
	comp=E,465µm,0.5s						
MUCR				AML	AML		
	comp=N,416µm,0.8s						
MUCR				AML	AML		
	comp=E,465µm,0.5s						
MUCR				AML	AML		
	comp=N,445µm,0.8s						
MUCR				AML	AML		
	comp=E,465µm,0.5s						
MUCR				AML	AML		
	comp=N,445µm,0.8s						
MUCR	**Ucria**	2.19	101	P	Pn	04 16 46.0	-1.2
MUCR				AML	AML		
	comp=E,465µm,0.5s						
MUCR				AML	AML		
	comp=N,445µm,0.8s						
MUCR				AML	AML		
	comp=E,465µm,0.5s						
MUCR				AML	AML		
	comp=N,445µm,0.8s						
HBSP	**Bosco Santo Pi**	2.31	126	P	Pn	04 16 49.5	+0.7
HBSP				AML	AML		
	comp=E,1330µm,1.3s						
HBSP				AML	AML		
	comp=N,1170µm,1.1s						
HBSP				AML	AML		
	comp=E,1330µm,1.3s						
HBSP				AML	AML		
	comp=N,1170µm,1.1s						
HBSP	**Bosco Santo Pi**	2.31	126	P	Pn	04 16 48.8	+0.1
HBSP				AML	AML		
	comp=E,1330µm,1.3s						
HBSP				AML	AML		
	comp=N,1170µm,1.1s						
ESML	**S. M. di Licod**	2.32	112	P	Pn	04 16 49.0	0.0
ESML				AML	AML		
	comp=E,616µm,1.2s						
ESML				AML	AML		
	comp=N,632µm,0.6s						
ESML				AML	AML		
	comp=E,616µm,1.2s						
ESML				AML	AML		
	comp=N,632µm,0.6s						
ESML	**S. M. di Licod**	2.32	112	AML	AML		
	comp=E,616µm,1.2s						
ESML				AML	AML		
	comp=E,616µm,1.2s						
ESML				AML	AML		
	comp=N,632µm,0.6s						
ESML				AML	AML		
	comp=N,632µm,0.6s						
VSL	**Villasalto**	2.38	295	P	Pn	04 16 49.7	-0.1
VSL				S	Sn	04 17 16.5	-2.4
HVZN	**Vizzini**	2.42	122	P	Pn	04 16 51.5	+1.1
HVZN				AML	AML		
	comp=E,4695µm,0.5s						
HVZN				AML	AML		
	comp=N,3990µm,0.7s						
HVZN				AML	AML		
	comp=N,3990µm,0.7s						
HVZN				AML	AML		
	comp=E,4695µm,0.5s						
AIO	**Antillo**	2.48	101	P	Pn	04 16 51.5	+0.3
AIO				AML	AML		
	comp=E,242µm,0.5s						
AIO				AML	AML		
	comp=N,272µm,0.6s						
AIO				AML	AML		
	comp=E,242µm,0.5s						
AIO				AML	AML		
	comp=N,272µm,0.6s						
AIO	**Antillo**	2.48	101	P	Pn	04 16 50.5	-0.7
AIO				AML	AML		
	comp=E,242µm,0.5s						
AIO				AML	AML		
	comp=N,272µm,0.6s						
AIO				AML	AML		
	comp=E,242µm,0.5s						
AIO				AML	AML		
	comp=N,272µm,0.6s						
MPNC	**Port Mandanici**	2.54	97	P	Pn	04 16 54.0	+2.1
MPNC	**Port Mandanici**	2.54	97	AML	AML		
	comp=E,702µm,0.5s						
MPNC				AML	AML		
	comp=E,702µm,0.5s						
MPNC				AML	AML		
	comp=N,802µm,0.5s						
MPNC				AML	AML		
	comp=N,802µm,0.5s						
HCRL	**Carlentini**	2.58	117	P	Pn	04 16 53.2	+0.7
HCRL				AML	AML		
	comp=E,512µm,0.4s						
HCRL				AML	AML		
	comp=N,664µm,0.7s						
HCRL				AML	AML		
	comp=E,512µm,0.4s						
HCRL				AML	AML		
	comp=N,664µm,0.7s						
HCRL	**Carlentini**	2.58	117	P	Pn	04 16 52.9	+0.4
HCRL				AML	AML		
	comp=E,512µm,0.4s						
HCRL				AML	AML		
	comp=N,664µm,0.7s						
HCRL				AML	AML		
	comp=E,512µm,0.4s						
HMDC	**Modica**	2.59	126	P	Pn	04 16 53.2	+0.5
HMDC				AML	AML		
	comp=E,628µm,1.0s						
HMDC				AML	AML		
	comp=N,569µm,0.5s						
HMDC				AML	AML		
	comp=E,628µm,1.0s						
HMDC				AML	AML		
	comp=N,569µm,0.5s						
HMDC	**Modica**	2.59	126	P	Pn	04 16 52.9	+0.2
HMDC				AML	AML		
	comp=E,628µm,1.0s						
HMDC				AML	AML		
	comp=N,569µm,0.5s						
HMDC				AML	AML		
	comp=N,569µm,0.5s						
MEU	**Monte Lauro**	2.61	122	P	Pn	04 16 52.7	-0.3
MEU				AML	AML		
	comp=E,857µm,1.0s						
MEU				AML	AML		
	comp=N,1220µm,1.4s						
MEU				AML	AML		
	comp=E,857µm,1.0s						
MEU				AML	AML		
	comp=N,1220µm,1.4s						
MEU	**Monte Lauro**	2.61	122	P	Pn	04 16 52.5	-0.4
MEU				AML	AML		
	comp=E,856µm,1.0s						
MEU				AML	AML		
	comp=N,1220µm,1.4s						
MEU				AML	AML		
	comp=E,856µm,1.0s						
HAGA	**Augusta**	2.67	116	P	Pn	04 16 54.1	+0.4
HAGA				AML	AML		
	comp=E,620µm,0.5s						
HAGA				AML	AML		
	comp=N,469µm,1.5s						
HAGA				AML	AML		
	comp=N,469µm,1.5s						
HAGA				AML	AML		
	comp=E,620µm,0.5s						
HAGA	**Augusta**	2.67	116	AML	AML		
	comp=N,469µm,1.5s						
HAGA				AML	AML		
	comp=E,620µm,0.5s						
HAGA				AML	AML		
	comp=N,469µm,1.5s						
SSY	**Sortino**	2.67	119	P	Pn	04 16 54.5	+0.7
SSY				AML	AML		
	comp=E,770µm,0.5s						
SSY				AML	AML		
	comp=N,1370µm,0.4s						
SSY				AML	AML		
	comp=E,770µm,0.5s						
SSY				AML	AML		
	comp=N,1370µm,0.4s						
SSY	**Sortino**	2.67	119	P	Pn	04 16 54.1	+0.2
SSY				AML	AML		
	comp=E,770µm,0.5s						
SSY				AML	AML		
	comp=N,1370µm,0.4s						
SSY				AML	AML		
	comp=N,1370µm,0.4s						
DGI	**Dorgali Grotta**	2.68	313	P	Pn	04 16 54.2	+0.3
HAVL	**Avola**	2.81	122	P	Pn	04 16 55.9	+0.1
HAVL				AML	AML		
	comp=E,503µm,0.3s						
HAVL				AML	AML		
	comp=N,802µm,0.3s						
HAVL				AML	AML		
	comp=E,503µm,0.3s						
HAVL				AML	AML		
	comp=N,802µm,0.3s						
HAVL	**Avola**	2.81	122	P	Pn	04 16 55.9	+0.1
HAVL				AML	AML		
	comp=E,503µm,0.3s						
HAVL				AML	AML		
	comp=N,802µm,0.3s						
HAVL				AML	AML		
	comp=E,503µm,0.3s						
TAMR	**Tamra**	2.82	240	P	Pn	04 16 54.3	-1.5
MSCL	**Scilla**	2.87	94	P	Pn	04 16 55.6	-1.0
HPAC	**Pachino**	2.96	127	P	Pn	04 16 57.6	-0.2
CAR1	**CAROLEI**	3.25	75	P	Pn	04 17 01.2	-0.6
CAR1				AML	AML		
	comp=E,118µm,0.4s						
CAR1				AML	AML		
	comp=N,119µm,0.6s						
CAR1				AML	AML		
	comp=N,119µm,0.6s						
CAR1				AML	AML		
	comp=E,118µm,0.4s						
CAR1	**CAROLEI**	3.25	75	AML	AML		
	comp=E,118µm,0.4s						
CAR1				AML	AML		
	comp=N,119µm,0.6s						
CAR1				AML	AML		
	comp=N,119µm,0.6s						
CAR1				AML	AML		
	comp=E,118µm,0.4s						
MCRV	**Calabrutti - M**	3.25	45	P	Pn	04 17 02.0	+0.1
MCRV				AML	AML		
	comp=E,23µm,1.4s						
MCRV				AML	AML		
	comp=N,25µm,0.6s						
MCRV				AML	AML		
	comp=N,25µm,0.6s						
MCRV				AML	AML		
	comp=E,23µm,1.4s						
SLCN	**Sala Consilina**	3.28	54	P	Pn	04 17 03.4	+1.1
T0721	**Laino Castello**	3.29	63	S	Sn	04 17 45.0	+3.5
CELI	**Celico**	3.51	74	P	Pn	04 17 08.3	+2.9
SALB	**San Lorenzo Be**	3.53	66	S	Sn	04 17 44.0	-3.5
KEST	**Kesra**	3.57	220	Pn	Pn	04 17 06.2	0.0
	comp=E,2.1nm,0.3s,baz=122,slow=12,SNR=26						
KEST				Sn	Sn	04 17 46.5	-1.7
	comp=E,6.6nm,0.3s,baz=43,slow=15,SNR=8.2						
MAON	**Monte Argentar**	4.00	349	P	Pn	04 17 14.9	+2.9
MAON	**Monte Argentar**	4.00	349	P	Pn	04 17 14.6	+2.6
SMPL	**Sampolo**	4.20	329	P	Pn	04 17 17.1	+2.3
SMPL	**Sampolo**	4.20	329	P	Pn	04 17 14.1	-0.7
SMPL				AML	AML		
	comp=E,1740µm,0.5s						
SMPL				AML	AML		
	comp=N,1515µm,1.5s						
SMPL				AML	AML		
	comp=E,1740µm,0.5s						
SMPL				AML	AML		
	comp=N,1515µm,1.5s						
CASP	**Castiglione de**	4.39	347	P	Pn	04 17 20.5	+3.1
CASP	**Castiglione de**	4.39	347	P	Pn	04 17 20.1	+2.7
PGF	**Pioggiola**	4.70	330	*e*Pn	Pn	04 17 22.8	+1.1
PGF				*e*Sn	Sn	04 18 14.1	-2.1
	comp=N,18nm,0.4s						
NOVE	**Novellara**	6.38	351	P	Pb	04 17 54.6	-7.2
NOVE				P	Pb	04 18 05.9	+4.1
SBF	**Sospel**	6.43	328	*e*Pn	Pn	04 17 46.4	+1.0
SBF				*e*Sn	Sn	04 18 54.2	-4.5
	comp=N,68nm,0.7s						
LMR	**La Mourre**	6.44	320	*e*Pn	Pn	04 17 45.6	0.0
LMR				*e*Sn	Sn	04 18 53.7	-5.3
	comp=N,9.0nm,0.4s						
FRF	**La Foret Royal**	6.54	322	*e*Pn	Pn	04 17 47.0	0.0
FRF				*e*Sn	Sn	04 18 56.8	-4.7
	comp=N,2.4nm,0.2s						
PUK	**Puka**	6.89	57	P	Pn	04 17 52.2	+0.5
SMRF	**Simiane la Rot**	7.38	320	*e*Pn	Pn	04 17 59.2	+0.8
SMRF				*e*Sn	Sn	04 19 17.7	-4.4
	comp=N,6.2nm,0.5s						
MBDF	**Montbardon**	7.41	329	*e*P	Pn	04 18 03.2	+4.2
MBDF				*e*Sn	Sn	04 19 19.2	-3.8
	comp=N,14nm,0.6s						
ORIF	**Oris-en-Rattie**	7.94	326	*e*Pn	Pn	04 18 07.1	+0.9
ORIF				*e*Sn	Sn	04 19 30.7	-5.3
	comp=N,2.3nm,0.4s						
LPG	**La Plagne**	8.06	332	*e*Pn	Pn	04 18 08.6	+0.6
LPG				*e*Sn	Sn	04 19 34.3	-4.9
	comp=N,1.7nm,0.4s						
LASF	**Ste Croix**	8.36	314	*e*Pn	Pn	04 18 12.6	+0.6
LASF				*e*Sn	Sn	04 19 41.2	-5.1
	comp=N,4.0nm,0.4s						
VIVF	**Saint-Julien-l**	8.46	321	*e*P	Pn	04 18 18.7	+5.4
MTLF	**Montolieu**	8.94	306	*e*Pn	Pn	04 18 20.3	+0.5
MTLF				*e*Sn	Sn	04 19 55.3	-5.1
	comp=N,3.1nm,0.5s						
CABF	**La Chapelle**	9.25	333	*e*Pn	Pn	04 18 24.7	+0.5
CABF				*e*Sn	Sn	04 20 01.0	-7.2
	comp=N,0.2nm,0.3s						
CAF	**Calviac**	9.90	314	*e*Pn	Pn	04 18 32.3	-0.7
CAF				*e*Sn	Sn	04 20 16.9	-7.1
	comp=N,2.9nm,0.5s						
SMF	**Signal de Mont**	10.18	326	*e*Pn	Pn	04 18 36.9	+0.1
GERES	**GERESS Array B**	10.39	6	Pn	Pn	04 18 41.7	+1.8
	baz=194,slow=16,SNR=2.2						
RJF	**Les Rejaudoux**	10.44	314	*e*Pn	Pn	04 18 39.9	-0.4
RJF				*e*Sn	Sn	04 20 30.0	-7.1
	comp=N,0.8nm,0.2s						
AVF	**Avril sur Loir**	10.51	325	*e*Pn	Pn	04 18 41.7	+0.4
SSF	**Saint Saulge**	10.65	326	*e*Pn	Pn	04 18 43.7	+0.5
LFF	**La Frestale**	10.68	311	*e*Pn	Pn	04 18 44.3	+0.7
LFF				*e*Sn	Sn	04 20 36.0	-7.0
	comp=N,2.3nm,0.4s						
PAGF	**Fort de Pagny**	11.07	337	*e*P	Pn	04 18 54.4	+5.4
MEZF	**Maizieres J'vi**	11.24	335	*e*P	Pn	04 18 56.1	+4.8
VRAC	**Vranov**	11.26	15	LR	LR	04 23 39.2	
	comp=N,45nm,19.7s,baz=181,slow=40						
ESDC	**Sonseca Array**	12.58	280	Pn	Pn	04 19 08.0	-1.8
	comp=N,0.2nm,0.3s,baz=108,slow=17,SNR=2.8						
BRTR	**Keskin Array B**	16.72	79	Pn	P	04 20 07.4	0.0
	comp=N,0.1nm,0.3s,baz=268,slow=6.2,SNR=5.0						
AKASG	**Malin Array Be**	17.16	39	Pn	Pn	04 20 11.0	+0.5
	comp=N,0.3nm,0.3s,baz=231,slow=10.0,SNR=3.1						
HFS	**Hagfors**	21.67	2	P	P	04 21 03.0	+1.8
	comp=N,3.3nm,1.0s,baz=179,slow=15,SNR=7.4						
NOA	**NORSAR Array B**	22.57	359	P	P	04 21 12.2	+1.4
	comp=N,0.7nm,0.8s,baz=165,slow=9.5,SNR=2.8						
NOA				LR	LR	04 31 03.1	
	comp=N,14nm,19.9s,baz=330,slow=40						
FINES	**FINESS Array B**	24.54	16	P	P	04 21 30.7	+0.6
	comp=N,1.1nm,0.5s,baz=187,slow=9.6,SNR=12						
TORD	**Torodi Ar. Bea**	26.91	203	P	P	04 21 52.4	+0.4
	comp=N,14nm,0.4s,baz=9.7,slow=12,SNR=3.5						
ZALV	**Zalesovo Beam**	50.33	47	P	P	04 25 08.1	+0.8
	comp=N,0.8nm,0.4s,baz=280,slow=8.6,SNR=2.9						
MKAR	**Makanchi Array**	50.68	57	P	P	04 25 10.8	+0.7
	comp=N,0.5nm,0.7s,baz=289,slow=7.6,SNR=3.7						
SONM	**Songino Array**	65.22	48	P	P	04 26 53.7	+1.4
	comp=N,0.8nm,0.4s,baz=326,slow=7.2,SNR=4.2						
YKA	**Yellowknife Ar**	70.66	337	P	P	04 27 26.6	+0.6
	comp=N,0.2nm,0.6s,baz=42,slow=6.0,SNR=3.1						
ILAR	**Eielson Array**	75.75	351	P	P	04 27 56.7	+0.7
	comp=N,0.4nm,0.7s,baz=3.9,slow=6.0,SNR=5.3						

IDC ***06*** *04:17:07.0±1.6, 22°.69N×121°.89E, h0*^{km}*, mb3.6/3, mb1 3.6/4, mb1mx3.3/39, mbtmp3.5/4, MS2.8/4, Ms1 2.8/4, ms1mx2.6/30, Error ellipse: s-maj=79.1km s-min=26.6km az=68.0*

BJI ***06*** *04:17:10.1±0.0, 22°.81N×121°.43E, h21*^{km}*, ML3.6/2, Ms7 3.6/2*

ISCJB ***06*** *04:17:10.6±0.3, 22°.78N±0°.02×121°.45E±0°.02, h18*^{km}*±3*^{km}*, mb3.5/3, MS2.7/2, Error ellipse: s-maj=2.9km s-min=2.6km az=135.2*

JMA ***06*** *04:17:10.0±0.1, 22°.79N×121°.44E, h22*^{km}*, M4.1*

ASIES ***06*** *04:17:11.1, 22°.85N×121°.32E, h24*^{km}*, MW3.5*

TAP ***06*** *04:17:11.8, 22°.84N×121°.33E, h21*^{km}*, ML4.1, B*

ISC 06 04:17:10.3±1.0, **22°.82N**±0°.02×**121°.42E**±0°.02, **h14**^{km}±7^{km}, **n146, σ1**^{s}**13**/194, **mb3.6**/3, **7C-31D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTN	**Taitung**	0.26	255	⇑*i*P	Pg	04 17 17.6	+1.7
	baz=242						
TTN				*i* S	Sg	04 17 21.8	+2.2
	baz=242						
CHKT	**Chengkung**	0.28	349	⇑*i*P	Pb	04 17 18.4	+1.3
	baz=21						
CHKT				S	Sb	04 17 22.9	+1.2
	baz=21						
TWGBT	**Beinan**	0.32	269	⇑P	Pb	04 17 17.7	-0.1
	baz=267						
TWGBT				S	Sb	04 17 22.0	-0.8
	baz=267						
TWG	**Pinlang**	0.32	270	⇑*i*P	Pb	04 17 17.7	-0.2
	baz=267						
TWG				S	Sb	04 17 22.2	-0.7
	baz=267						
ECL	**Taimali**	0.49	243	⇓*i*P	Pb	04 17 20.2	-0.4
	baz=237						
ECL				S	Sb	04 17 26.1	-1.6
	baz=237						
ELDTW	**Lidau**	0.52	314	⇑*i*P	Pb	04 17 20.9	-0.4
	baz=322						
ELDTW				*i* S	Sg	04 17 27.1	-0.6
	baz=322						
TWF1	**Yuli**	0.54	348	⇓*i*P	Pb	04 17 22.0	+0.4
	baz=345						
TWF1				*e*S	Sb	04 17 28.9	-0.3
	baz=345						
YULB	**Yu-li**	0.58	349	⇓P	Pb	04 17 22.4	+0.2
	baz=350						
HGSD	**Ruisui**	0.67	0	*e*P	Pb	04 17 24.6	+0.9
	baz=17						
HGSD				*e*S	Sb	04 17 33.7	+0.8
	baz=17						
TAW	**Tawu**	0.67	227	*e*P	Pb	04 17 23.3	-0.5
	baz=218						
EHY	**Hungye**	0.69	352	⇓P	Pb	04 17 24.1	0.0
	baz=1.0						
EAST	**Anshuo**	0.69	231	⇓*i*P	Pb	04 17 23.4	-0.7
	baz=233						
STYT	**Tauyuan**	0.70	299	P	Pb	04 17 23.9	-0.5
	baz=303						
STYT				S	Sg	04 17 32.4	-0.8
	baz=303						
SSD	**Sandimen**	0.73	264	⇓*i*P	Pb	04 17 24.1	-0.8
	baz=266						
SSD				*e*S	Sg	04 17 31.3	-2.9
	baz=266						
SLGT	**Liugui**	0.74	284	P	Pb	04 17 24.3	-0.6
	baz=285						
SLGT				S	Sg	04 17 33.3	-1.0
	baz=285						
MASBT	**Mashibuluo**	0.76	254	⇓P	Pb	04 17 24.7	-0.6
	baz=245						
MASBT				*e*S	Sg	04 17 32.7	-2.3
	baz=245						
LAY	**Lan-yu**	0.79	171	*e*P	Pb	04 17 25.9	+0.1
	baz=155						
LAY				S	Sb	04 17 37.4	+1.1
	baz=155						
YUS	**Yu-Shan**	0.79	327	⇓*i*P	Pb	04 17 26.1	-0.1
	baz=333						
YUS				S	Sg	04 17 35.2	-1.1
	baz=333						
SGST	**Jiashian**	0.82	289	⇓*i*P	Pb	04 17 26.5	+0.2
	baz=291						
SGST				S	Sb	04 17 37.2	+0.1
	baz=291						
EGFH	**Guangfu**	0.84	0	*e*P	Pg	04 17 26.1	-0.6
	baz=354						
WTP	**Ta-pu**	0.86	300	⇓*i*P	Pb	04 17 27.1	+0.1
	baz=303						
WTP				S	Sb	04 17 38.6	+0.2
	baz=303						
SSPT	**Xinbi**	0.86	247	P	Pb	04 17 26.8	-0.1
	baz=240						
SSPT				*e*S	Sb	04 17 37.4	-0.9
	baz=240						
SGLT	**Jiouru**	0.86	264	*e*P	Pb	04 17 27.1	0.0
	baz=264						
SCZT	**Fangliau**	0.87	239	⇓P	Pb	04 17 26.5	-0.6
	baz=229						
TPUB	**Ta-pu**	0.87	303	⇓P	Pb	04 17 27.5	+0.3
	baz=306						
TPUB				S	Sb	04 17 38.2	-0.6
	baz=306						
ALS	**Alishan**	0.89	320	⇓*i*P	Pb	04 17 28.0	+0.3
	baz=329						
ALS				S	Sb	04 17 39.2	-0.4
	baz=329						
CHN1	**Nanshi**	0.90	294	⇓*i*P	Pn	04 17 28.2	-0.3
	baz=302						
CHN1				S	Sb	04 17 40.6	+1.0
	baz=302						
TWM1	**Shoushan**	0.92	270	P	Pn	04 17 28.9	+0.1
	baz=271						
SNST	**Tainan City**	0.94	295	P	Pn	04 17 29.0	-0.1
	baz=298						
VWDT	**VWDT**	0.96	344	⇓P	Pb	04 17 29.0	+0.2
	baz=358						
TWK	**Hsinying**	0.97	297	⇓*i*P	Pn	04 17 29.1	-0.4
	baz=300						
TWK				S	Sb	04 17 42.5	+0.9
	baz=300						
ESL	**Shilin**	0.99	1	⇓P	Pg	04 17 28.3	-1.1
	baz=356						
SNJT	**Kaohsiung City**	1.01	266	⇓P	Pn	04 17 31.2	+1.3
	baz=267						
SNJT				*e*S	Sn	04 17 45.9	+2.0
	baz=267						
CHN3	**Shinhua**	1.01	285	P	Pn	04 17 30.9	+0.9
	baz=286						
CHN3				*e*S	Sn	04 17 46.4	+2.5
	baz=286						
WHYT	**Xinyi Township**	1.02	329	*e*P	Pb	04 17 30.1	+0.4
	baz=326						
HEN	**Hengchun**	1.03	218	*e*P	Pn	04 17 31.0	+0.7
	baz=199						
CHN5	**Tsauling**	1.03	319	⇓*i*P	Pn	04 17 30.6	+0.2
	baz=322						
TSEB	**Hengchuen, Pin**	1.04	208	*e*P	Pb	04 17 29.6	-0.4
	baz=192						
TWKBT	**Hengchun**	1.04	213	*e*P	Pg	04 17 28.9	-1.5
	baz=195						
TWK1	**Hengchun**	1.04	213	*e*P	Pb	04 17 29.6	-0.6
	baz=195						
SSLB	**Suanglung**	1.05	336	⇓P	Pb	04 17 30.4	+0.1
	baz=347						
SSLB				S	Sg	04 17 43.8	-0.6
	baz=347						
KAU	**Kaohsiung**	1.06	256	*e*P	Pn	04 17 32.0	+1.3
	baz=256						
KAU				*e*S	Sn	04 17 47.6	+2.4
	baz=256						
WLCH	**Liuqiu**	1.07	244	*e*P	Pn	04 17 33.6	+2.7
	baz=237						

WSSB	**Gushan**	**1.09**	**261**	⇓P	**Pn**	**04 17 32.8**	**+1.7**
	baz=261						
WSSB				S	**Sn**	**04 17 48.4**	**+2.4**
	baz=261						
TWP	**Hsiaoliuchiu**	**1.09**	**244**	*e*P	**Pn**	**04 17 33.4**	**+2.3**
	baz=237						
TWP				*e*S	**Sn**	**04 17 47.6**	**+1.6**
	baz=237						
CHN2	**Minshiung**	**1.12**	**309**	P	**Pn**	**04 17 32.7**	**+1.1**
	baz=311						
CHN2				S	**Sn**	**04 17 47.4**	**+0.6**
	baz=311						
TAI1	**Yung-k'ang**	**1.12**	**281**	*e*P	**Pn**	**04 17 33.6**	**+2.1**
	baz=283						
CHY	**Chiayi**	**1.14**	**306**	⇓P	**Pn**	**04 17 32.6**	**+0.8**
	baz=309						
CHY				*e*S	**Sn**	**04 17 48.6**	**+1.3**
	baz=309						
SMLT	**Sun Moon Lake**	**1.16**	**336**	⇑P	**Pn**	**04 17 32.9**	**+0.6**
	baz=339						
SMLT				S	**Sb**	**04 17 48.2**	**+1.1**
	baz=339						
HWA	**Hwalien**	**1.16**	**8**	*e*P	**Pg**	**04 17 31.8**	**-0.9**
	baz=1.0						
WGK	**Gukeng**	**1.17**	**318**	*e*P	**Pn**	**04 17 32.7**	**+0.5**
	baz=320						
WJS	**Zhushan**	**1.18**	**327**	P	**Pn**	**04 17 34.0**	**+1.6**
	baz=330						
WJS				S	**Sn**	**04 17 50.2**	**+1.9**
	baz=330						
SCLT	**Jiali**	**1.19**	**287**	*e*P	**Pn**	**04 17 33.1**	**+0.6**
	baz=289						
WDLH	**Douliu**	**1.19**	**317**	⇓P	**Pn**	**04 17 34.1**	**+1.7**
	baz=318						
WDLH				S	**Sn**	**04 17 49.1**	**+0.7**
	baz=318						
TYC	**Yuchr**	**1.20**	**334**	P	**Pn**	**04 17 33.7**	**+1.1**
	baz=338						
TYC				S	**Sn**	**04 17 50.2**	**+1.6**
	baz=338						
WLGB	**Puzi**	**1.22**	**302**	P	**Pn**	**04 17 33.6**	**+0.6**
	baz=305						
WLGB				S	**Sn**	**04 17 50.6**	**+1.3**
	baz=305						
CHN8	**Yiju**	**1.23**	**295**	⇓P	**Pn**	**04 17 33.8**	**+0.7**
	baz=297						
CHN8				S	**Sn**	**04 17 50.9**	**+1.4**
	baz=297						
WNT	**Mingjian**	**1.25**	**327**	⇓P	**Pn**	**04 17 34.8**	**+1.4**
	baz=330						
WNT				S	**Sn**	**04 17 52.0**	**+2.0**
	baz=330						
CHGB	**Renai**	**1.25**	**350**	⇓P	**Pg**	**04 17 33.5**	**-1.0**
	baz=3.0						
TWD	**Chiawan**	**1.26**	**7**	*e*P	**Pg**	**04 17 32.7**	**-1.9**
DPDB	**Guoxing**	**1.29**	**339**	⇓P	**Pb**	**04 17 35.1**	**+0.7**
	baz=350						
DPDB				*e*S	**Sg**	**04 17 51.1**	**-0.9**
	baz=350						
WHF	**Hehuan Shan**	**1.32**	**354**	*e*P	**Pg**	**04 17 34.4**	**-1.5**
	baz=9.0						
NACB	**Ninganchiao**	**1.35**	**7**	*e*P	**Pn**	**04 17 33.6**	**-1.2**
	baz=11						
WSF	**Szhu**	**1.37**	**307**	P	**Pn**	**04 17 35.0**	**0.0**
	baz=307						
WSF				S	**Sn**	**04 17 53.8**	**+0.8**
	baz=307						
ETLH	**Xiulin Townshi**	**1.38**	**2**	*e*P	**Pn**	**04 17 34.3**	**-0.9**
	baz=6.0						
TWT	**Tachien**	**1.44**	**351**	*e*P	**Pn**	**04 17 35.9**	**-0.3**
	baz=352						
RLNB	**Erlin**	**1.45**	**318**	*e*P	**Pg**	**04 17 37.2**	**-0.8**
	baz=320						
TDCB	**Techi**	**1.45**	**350**	⇓P	**Pn**	**04 17 36.5**	**+0.3**
	baz=352						
WTCT	**Ta-ch'eng**	**1.48**	**315**	*e*P	**Pn**	**04 17 36.6**	**+0.2**
	baz=317						
WCHH	**Zhanghua**	**1.48**	**328**	*e*P	**Pg**	**04 17 38.2**	**-0.5**
	baz=315						
TCU	**Taichung**	**1.49**	**333**	*e*P	**Pg**	**04 17 38.3**	**-0.5**
	baz=333						
TCU				*e*S	**Sg**	**04 17 58.1**	**-0.1**
	baz=333						
WHP	**Taichung City**	**1.51**	**343**	*e*P	**Pg**	**04 17 39.1**	**-0.3**
	baz=355						
WHP				*e*S	**Sg**	**04 17 59.9**	**+0.8**
	baz=355						
NNSB	**Datong**	**1.60**	**359**	*e*P	**Pn**	**04 17 38.5**	**+0.2**
	baz=16						
NNS	**Nan Shan**	**1.61**	**358**	*e*P	**Pn**	**04 17 38.8**	**+0.4**
	baz=16						
NANB	**Nanao**	**1.63**	**11**	*e*P	**Pn**	**04 17 38.0**	**-0.5**
	baz=359						
TWQ1	**Liyutan**	**1.63**	**339**	P	**Pg**	**04 17 40.8**	**-0.9**
	baz=337						
TWQ1				S	**Sg**	**04 18 02.0**	**-0.9**
	baz=337						
WDJ	**Dajia District**	**1.68**	**335**	*e*P	**Pb**	**04 17 41.0**	**0.0**
	baz=335						
WDGT	**Dungji**	**1.68**	**285**	⇓P	**Pn**	**04 17 38.7**	**-0.6**
	baz=286						
NSY	**Sanyi**	**1.70**	**339**	*e*P	**Pg**	**04 17 41.9**	**-1.0**
	baz=338						
NSY				S	**Sg**	**04 18 04.1**	**-0.9**
	baz=338						
PTSB	**Yuanli**	**1.75**	**338**	*e*P	**Pb**	**04 17 42.0**	**-0.2**
	baz=336						
PTSB				S	**Sg**	**04 18 05.5**	**-1.0**
	baz=336						
NDT	**Datong Townshi**	**1.77**	**3**	*e*P	**Pn**	**04 17 41.9**	**+1.3**
	baz=19						
NMLH	**Miaoli**	**1.80**	**341**	*e*P	**Pn**	**04 17 41.8**	**+0.9**
	baz=340						
TWC	**Suao**	**1.82**	**12**	*e*P	**Pn**	**04 17 42.5**	**+1.3**
	baz=1.0						
EOS1	**EOS1**	**1.84**	**20**	*e*P	**Pn**	**04 17 42.8**	**+1.4**
	baz=37						
PHUB	**P'eng-hu**	**1.84**	**292**	P	**Pn**	**04 17 41.1**	**-0.3**
	baz=293						
YHNB	**Yeheng**	**1.84**	**359**	*e*P	**Pn**	**04 17 42.2**	**+0.7**
	baz=14						
NSTT	**Nanjuang**	**1.84**	**348**	P	**Pn**	**04 17 42.6**	**+1.1**
	baz=346						
NSK	**Sanguang**	**1.85**	**358**	*e*P	**Pn**	**04 17 42.8**	**+1.2**
	baz=14						
LIOB	**Emei**	**1.85**	**348**	*e*P	**Pb**	**04 17 43.3**	**-0.6**
	baz=346						
PNG	**Penghu**	**1.87**	**294**	P	**Pn**	**04 17 41.6**	**-0.3**
	baz=295						
VCHM	**Qimei**	**1.88**	**282**	*e*P	**Pn**	**04 17 41.7**	**-0.3**
	baz=283						
TWE	**Neicheng**	**1.90**	**7**	*e*P	**Pb**	**04 17 44.3**	**-0.5**
	baz=9.0						
WLTB	**Daxi**	**2.03**	**356**	*e*P	**Pn**	**04 17 45.5**	**+1.4**
	baz=9.0						
NTC	**Toucheng**	**2.06**	**10**	*e*P	**Pn**	**04 17 46.1**	**+1.7**
	baz=10.0						
EGS		**2.07**	**13**	*e*P	**Pb**	**04 17 46.9**	**-0.7**
JYNG	**Yonagunijimaku**	**2.14**	**40**	P	**Pn**	**04 17 46.8**	**+1.2**
JYNG				S	**Sn**	**04 18 12.4**	**+0.5**
TATO	**Taipei**	**2.15**	**2**	*e*P	**Pn**	**04 17 46.8**	**+1.1**
	baz=22						
TWA	**Mucha**	**2.15**	**4**	*e*P	**Pb**	**04 17 48.7**	**-0.4**
	baz=20						
TIPB	**Shuangxi**	**2.17**	**10**	*e*P	**Pn**	**04 17 47.5**	**+1.4**
	baz=9.0						
YOJ	**Yonaguni jima**	**2.19**	**41**	*e*P	**Pn**	**04 17 47.0**	**+0.8**
	baz=57						
YOJ				*e*S	**Sn**	**04 18 14.9**	**+1.8**
	baz=57						
YOJ	**Yonaguni jima**	**2.19**	**41**	P	**Pn**	**04 17 47.4**	**+1.2**
YOJ				*e*S	**Sn**	**04 18 13.8**	**+0.7**
TWB1	**Santiao Chiao**	**2.24**	**13**	*e*P	**Pn**	**04 17 49.2**	**+2.3**
	baz=2.0						
NWF	**Wu-fen Shan**	**2.26**	**8**	*e*P	**Pn**	**04 17 48.6**	**+1.2**
	baz=5.0						
WFSB	**Wu-fen Shan**	**2.26**	**8**	*e*P	**Pn**	**04 17 48.7**	**+1.4**
	baz=7.0						
YM01	**YM01**	**2.32**	**3**	*e*P	**Pn**	**04 17 50.2**	**+2.1**
	baz=359						
YM04	**YM04**	**2.32**	**3**	*e*P	**Pn**	**04 17 49.2**	**+1.1**
	baz=24						
YM05	**YM05**	**2.33**	**3**	*e*P	**Pn**	**04 17 48.8**	**+0.4**
	baz=359						
YM03	**YM03**	**2.35**	**3**	*e*P	**Pb**	**04 17 51.5**	**-1.0**
	baz=24						
YM08	**YM08**	**2.36**	**4**	*e*P	**Pn**	**04 17 48.9**	**+0.2**
	baz=359						
TWY	**Chenhua**	**2.45**	**4**	*e*P	**Pb**	**04 17 52.5**	**-1.6**
	baz=359						
HATJ	**Hateruma jima**	**2.51**	**60**	P	**Pn**	**04 17 51.8**	**+1.1**
HATJ				S	**Sn**	**04 18 21.4**	**+0.3**
IRIF	**Iriomote-Funau**	**2.60**	**54**	P	**Pn**	**04 17 53.4**	**+1.5**
IRIF				S	**Sn**	**04 18 23.9**	**+0.7**
JKRS	**Kuro-shima**	**2.76**	**59**	P	**Pn**	**04 17 55.6**	**+1.5**
JKRS				*e*S	**Sn**	**04 18 28.4**	**+1.1**
PCYT	**Pengchaiyu**	**2.86**	**12**	*e*P	**Pn**	**04 17 55.8**	**+0.4**
	baz=6.0						
JIJ	**Ishigaki jima**	**2.93**	**58**	P	**Pn**	**04 17 57.8**	**+1.4**
JIJ				*e*S	**Sn**	**04 18 31.7**	**+0.3**
PTMZ	**Houxiangcun**	**3.05**	**317**	⇓*e*P	**Pn**	**04 17 58.0**	**-0.1**
	baz=316						
PTTC	**Pingtan**	**3.06**	**331**	*e*P	**Pn**	**04 17 58.3**	**0.0**
	baz=329						
JISG	**Ishigakijimahi**	**3.18**	**56**	P	**Pn**	**04 18 00.7**	**+0.9**
JISG				*e*S	**Sn**	**04 18 36.6**	**-0.9**
KNMB	**Chin-men Tao**	**3.23**	**301**	*e*P	**Pn**	**04 17 59.9**	**-0.7**
	baz=301						
QZH	**Quanzhou**	**3.34**	**310**	⇑*i*Pn	**Pn**	**04 18 02.0**	**-0.1**
QZH				Sn	**Sn**	**04 18 39.9**	**-1.7**
QZH				smax	smax		
	comp=N,86nm,0.5s						
QZH				smax	smax		
	comp=E,95nm,0.6s						
JTJ	**Tarama**	**3.51**	**58**	P	**Pn**	**04 18 05.5**	**+1.1**
JTJ				*e*S	**Sn**	**04 18 46.9**	**+1.2**
ZPLA	**Ao Xicun**	**3.55**	**289**	*e*P	**Pn**	**04 18 05.2**	**+0.2**
	baz=289						
MATB	**Ma-tsu**	**3.58**	**338**	*e*P	**Pn**	**04 18 05.7**	**+0.3**
	baz=335						
AXDP	**Jialang**	**3.78**	**304**	⇓*e*P	**Pn**	**04 18 08.1**	**0.0**
	baz=304						
ZZJH	**Jiuhuzhen**	**3.84**	**296**	*e*P	**Pn**	**04 18 08.9**	**-0.1**
	baz=296						
MHZQ	**Yeshan**	**3.92**	**327**	*e*P	**Pn**	**04 18 10.3**	**+0.2**
	baz=326						
JIRB	**Irabujima**	**3.97**	**59**	P	**Pn**	**04 18 11.8**	**+1.0**
JIRB				*e*S	**Sn**	**04 18 58.1**	**+0.9**
LYJJ	**Jianjiangzhen**	**4.01**	**338**	*e*P	**Pn**	**04 18 11.4**	**+0.2**
	baz=335						
JMJ2	**Miyako jima3**	**4.05**	**61**	P	**Pn**	**04 18 13.5**	**+1.6**
JMJ2				S	**Sn**	**04 19 00.2**	**+1.0**
JMJ	**Miyako jima 2**	**4.06**	**60**	*e*P	**Pn**	**04 18 12.7**	**+0.7**
	baz=60						
JIKM	**Ikemajima**	**4.08**	**58**	P	**Pn**	**04 18 13.4**	**+1.2**
JIKM				S	**Sn**	**04 18 59.5**	**-0.3**
KSRS	**Korea Array**	**15.62**	**20**	Pn	**Pn**	**04 20 47.3**	**-2.7**
	baz=198,slow=11,SNR=2.4						
KSRS				LR	LR	04 27 04.6	
	comp=Z,12nm,19.0s,baz=190,slow=38						
DAV	**Davao City (W)**	**16.16**	**165**	LR	LR	04 26 11.2	
	comp=Z,56nm,19.7s,baz=264,slow=34						
HHC	**Hu-ho-hao-te**	**19.80**	**337**	P	**Pn**	**04 21 43.0**	**+1.0**
HHC				S	**S**	**04 25 21.7**	**-1.6**
HHC				sS	sS	04 25 27.5	-1.9
HHC				LR	LR		
	comp=Z,150nm,11.1s						
CMAR	**Chiang Mai Arr**	**21.47**	**262**	LR	LR	04 31 50.5	
	comp=Z,36nm,18.0s,baz=172,slow=40						
GUMO	**Guam**	**24.06**	**108**	LR	LR	04 32 41.5	
	comp=Z,17nm,18.5s,baz=349,slow=40						
WMQ	**Urumqi**	**34.76**	**315**	*e*P	**P**	**04 24 02.4**	**+2.1**
MKAR	**Makanchi Array**	**39.47**	**317**	P	**P**	**04 24 41.4**	**+1.1**
	0.5nm,0.7s,baz=107,slow=8.1,SNR=3.7						
ZALV	**Zalesovo Beam**	**41.51**	**328**	P	**P**	**04 24 59.4**	**+2.5**
	1.2nm,0.5s,baz=121,slow=7.9,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**42.36**	**85**	T	T	05 10 17.3	
	baz=282,slow=75,SNR=78						
H11N2	**WAKE ISLAND Hy**	**42.36**	**85**	T	T	05 10 17.4	
	baz=282,slow=75,SNR=92						
H11N3	**WAKE ISLAND Hy**	**42.38**	**85**	T	T	05 10 18.6	
	baz=282,slow=75,SNR=118						
H11S3	**WAKE ISLAND Hy**	**42.45**	**87**	T	T	05 10 23.5	
	baz=284,slow=75,SNR=96						
H11S1	**WAKE ISLAND Hy**	**42.46**	**87**	T	T	05 10 23.7	
	baz=284,slow=75,SNR=54						
H11S2	**WAKE ISLAND Hy**	**42.47**	**87**	T	T	05 10 24.0	
	baz=284,slow=75,SNR=56						
ASAR	**Alice Springs**	**47.78**	**164**	P	**P**	**04 25 44.2**	**-3.1**
	0.2nm,0.4s,baz=344,slow=6.5,SNR=3.4						

IDC 06 04:21:27.3±3.5**, 6°.53S**×**149°.02E, h0**km**, mb3.5**/1**, mb1 3.7**/3**, mb1mx3.4**/28**, mbtmp3.5**/3**, ML3.4**/1**, Error ellipse: s-maj=126.9km s-min=35.9km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.40**	**213**	Pn	Pn	04 22 23.1	+1.5
	1.8nm,0.3s,baz=114,slow=17,SNR=2.9						
PMG				Sn	Sn	04 23 03.2	+0.5
	3.2nm,0.3s,baz=32,slow=14,SNR=3.1						
WRA	**Warramunga Arr**	**19.52**	**226**	P	P	04 25 54.6	-1.8
	0.1nm,0.3s,baz=49,slow=9.1,SNR=3.2						
ASAR	**Alice Springs**	**22.40**	**219**	P	P	04 26 27.6	0.0
	1.2nm,0.5s,baz=54,slow=9.0,SNR=21						
TORD	**Torodi Ar. Bea**	**147.17**	**284**	PKPbc	PKPbc	04 41 13.2	-0.3
	0.6nm,0.9s,baz=59,slow=4.1,SNR=6.8						

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*GCG **06** 04:23:47.3±0.3, 13°.34N×91°.02W, h14km±4km, MD3.9*
*SNET **06** 04:23:52.1±1.1, 13°.71N×90°.86W, h17km±4km, ML3.6*
*MEX **06** 04:23:53.3±0.8, 14°.07N×90°.71W, h85km±54km, MD3.8*
ISC 06 04:23:46.6±3.3**, 13°.38N**±0°.10×**91°.09W**±0°.05**, h17**km±9km**, n21, σ1s81**/33**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.09**	**13**	*e*P	**Pb**	**04 24 07.7**	**+0.6**
PCG	**Pacaya**	**1.11**	**25**	*e*P	**Pb**	**04 24 07.9**	**+0.4**
ERG	**Entre ros, C**	**1.15**	**336**	*e*P	**Pb**	**04 24 10.2**	**+2.1**
ERG				*e*S	**Sb**	**04 24 25.6**	**+2.9**
NBG	**Las Nubes**	**1.41**	**31**	*e*P	**Pn**	**04 24 12.8**	**+1.2**
CEVE	**Cerro Verde**	**1.50**	**72**	*e*P	**Pb**	**04 24 14.0**	**0.0**
CEVE				*e*S	**Sn**	**04 24 31.8**	**-0.3**
CEVE				IAML		04 24 38.4	
	comp=Z,3µm,0.4s						
RTR	**El Retiro**	**1.50**	**70**	*e*P	**Pb**	**04 24 14.1**	**0.0**
SBLS	**San Blas**	**1.50**	**72**	*e*P	**Pb**	**04 24 13.9**	**-0.2**
SNJE	**San Jose**	**1.53**	**71**	*e*P	**Pb**	**04 24 14.3**	**-0.2**
UEES	**Universidad Ev**	**1.83**	**79**	*e*P	**Pb**	**04 24 18.8**	**-0.9**
UEES				*e*S	**Sn**	**04 24 40.1**	**-0.1**
UEES				IAML		04 24 43.9	
	comp=Z,1µm,0.2s						
SNET	**Serv Nac Est T**	**1.84**	**80**	*e*P	**Pb**	**04 24 19.5**	**-0.3**
SNET				*e*S	**Sn**	**04 24 40.2**	**-0.1**
SNET				IAML		04 24 43.4	
	comp=Z,1µm,0.2s						
THIG		**1.90**	**323**	*e*P	**Pn**	**04 24 20.2**	**+2.1**
THIG				*i* S	**Sn**	**04 24 42.1**	**+0.4**
LFU	**La Fuente**	**1.96**	**79**	*e*P	**Pb**	**04 24 21.2**	**-0.7**
MTO3	**Montecristo**	**1.97**	**59**	*e*P	**Pn**	**04 24 19.7**	**+0.4**
MTO3				*e*S	**Sn**	**04 24 42.0**	**-1.7**
MTO3				IAML		04 24 44.7	
	comp=Z,179nm,0.4s						
PAVA	**Las Pavas**	**2.12**	**81**	*e*P	**Pb**	**04 24 23.4**	**-1.3**
PAVA				*e*S	**Sn**	**04 24 48.1**	**+0.6**
PAVA				IAML		04 24 55.0	
	comp=Z,295nm,0.4s						
MRL	**Marmol**	**2.18**	**39**	*e*P	**Pn**	**04 24 22.5**	**+0.3**
MRL	**Marmol**	**2.18**	**39**	*e*P	**Pn**	**04 24 23.3**	**+1.1**
MRL				*e*S	**Sn**	**04 24 51.5**	**+2.5**
PACA	**Pacayal**	**2.70**	**88**	*e*P	**Pb**	**04 24 32.1**	**-2.3**
PACA				*e*S	**Sn**	**04 25 03.6**	**+2.0**
CCIG	**Comitan**	**3.06**	**341**	*i* P	**Pn**	**04 24 33.1**	**-1.2**
CCIG				*i* S	Sn	04 25 03.0	-7.7
PCIG		**3.10**	**319**	*e*P	**Pn**	**04 24 36.9**	**+2.3**
PCIG				*i* S	**Sn**	**04 25 09.9**	**-1.5**
LCND	**La Caada**	**3.12**	**91**	*e*P	**Pn**	**04 24 37.5**	**+2.5**
LCND				*e*S	**Sn**	**04 25 14.3**	**+2.4**
LCND				IAML		04 25 22.3	
	comp=Z,200nm,0.6s						
TGIG		**3.91**	**330**	*e*P	**Pn**	**04 24 44.9**	**-1.1**
TGIG				*i* S	**Sn**	**04 25 25.9**	**-5.5**

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*IDC **06** 04:42:38.4±0.6, 5°.46S×152°.11E, h0km, mb4.2/15, mb1 4.4/16, mb1mx4.2/30, mbtmp4.2/16, ML3.5/1, MS3.4/3, Ms1 3.4/3, ms1mx3.3/28, Error ellipse: s-maj=24.4km s-min=15.0km az=95.0*
*ISCJB **06** 04:42:44.2±0.3, 5°.45S±0°.06×151°.98E±0°.08, h45km, mb4.6/47, Error ellipse: s-maj=12.8km s-min=6.3km az=31.6*
*NEIC **06** 04:42:47.1±1.7, 5°.43S×151°.99E, h58km±5km, mb4.5/32, Error ellipse: s-maj=12.5km s-min=7.3km az=154.0*
ISC 06 04:42:45.0±0.5**, 5°.57S**±0°.06×**152°.20E**±0°.09**, h45**km**, n71, σ1s33**/77**, mb4.5**/47**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.37**	**359**	*e*Pn	**Pn**	**04 43 06.9**	**-0.8**
MANU	**Manus Island**	**5.96**	**306**	*e*Pn	**Pn**	**04 44 13.9**	**+3.2**
PMG	**Port Moresby**	**6.28**	**232**	Pn	**Pn**	**04 44 16.4**	**+1.3**
	12nm,0.3s,baz=38,slow=8.8,SNR=18						
PMG				Sn	**Sn**	**04 45 21.9**	**-3.7**
	11nm,0.3s,baz=98,slow=20,SNR=3.2						
PMG	**Port Moresby**	**6.28**	**232**	*e*Pn	**Pn**	**04 44 16.8**	**+1.7**
PMG				*e*Sn	**Sn**	**04 45 21.9**	**-3.7**
HNR	**Honiara**	**8.59**	**117**	LR	LR	04 47 45.5	
	comp=Z,128nm,20.9s,baz=268,slow=35						
CTA	**Charters Tower**	**15.54**	**201**	Pn	**Pn**	**04 46 22.0**	**+0.8**
	0.1nm,0.3s,baz=20,slow=9.4,SNR=1.7						
GUMO	**Guam**	**20.38**	**339**	P	**P**	**04 47 15.1**	**-3.0**
	19nm,0.3s,baz=218,slow=18,SNR=4.0						
DZM	**Mont Dzumac**	**21.42**	**141**	P	**P**	**04 47 27.9**	**-1.6**
	1.9nm,0.7s,baz=323,slow=20,SNR=1.9						
DZM	**Mont Dzumac**	**21.42**	**141**	*e*P	**P**	**04 47 27.9**	**-1.6**
	29nm,1.7s						
MTN	**Manton Dam**	**22.00**	**249**	*e*P	**P**	**04 47 36.9**	**+1.4**
	55nm,1.4s						
WB2	**Warramunga Arr**	**22.48**	**229**	*e*P	**P**	**04 47 42.1**	**+1.4**
	13nm,0.6s						
WR1	**Warramunga Arr**	**22.48**	**229**	*e*P	**P**	**04 47 40.4**	**-0.4**
WR1				*e*PcP	**PcP**	**04 51 35.0**	**+1.0**
WRA	**Warramunga Arr**	**22.48**	**229**	P	**P**	**04 47 40.4**	**-0.4**
	3.8nm,0.4s,baz=52,slow=9.6,SNR=23						
WRA				PcP	**PcP**	**04 51 35.0**	**+1.0**
	1.1nm,0.5s,baz=28,slow=3.8,SNR=2.6						
AS31	**Alice Springs**	**25.17**	**223**	*e*P	**P**	**04 48 06.7**	**+0.2**
	4.9nm,0.8s						
AS31				*e*PcP	**PcP**	**04 51 39.5**	**-0.2**
ASAR	**Alice Springs**	**25.18**	**223**	P	**P**	**04 48 06.2**	**-0.2**
	12nm,0.8s,baz=54,slow=9.4,SNR=89						
ASAR				PcP	**PcP**	**04 51 39.5**	**-0.2**
	0.2nm,0.6s,baz=29,slow=3.4,SNR=2.6						
ASAR				LR	LR	04 59 06.7	
	comp=Z,101nm,18.3s,baz=146,slow=39						
STKA	**Stephens Creek**	**27.99**	**199**	P	**P**	**04 48 32.4**	**+0.8**
	1.1nm,0.4s,baz=14,slow=18,SNR=4.0						
STKA				LR	LR	04 59 38.8	
	comp=Z,125nm,18.5s,baz=207,slow=36						
STKA	**Stephens Creek**	**27.99**	**199**	*e*P	**P**	**04 48 32.4**	**+0.8**
	9.3nm,1.9s						
NJ2	**Nanjing**	**49.07**	**322**	*e*P	**P**	**04 51 27.7**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI	**Kunming**	**56.92**	**305**	P	**P**	**04 52 25.7**	**-0.5**
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
CM31	**Chiang Mai Arr**	**57.66**	**296**	*e*P	**P**	**04 52 29.9**	**-1.4**
	comp=Z,6.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**57.66**	**296**	P	**P**	**04 52 29.9**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=130,slow=5.4,SNR=9.2						
PETK	**Petropavlovsk-**	**58.65**	**4**	P	**P**	**04 52 37.2**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=154,slow=6.6,SNR=5.0						
PEA1	**Petropavlovsk-**	**58.65**	**4**	*e*P	**P**	**04 52 37.2**	**-0.3**
HHC	**Hu-ho-hao-te**	**59.32**	**325**	P	**P**	**04 52 43.4**	**+0.8**
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.8s						
LZH	**Lanzhou**	**61.37**	**316**	*e*P	**P**	**04 52 56.8**	**+0.1**
LZH				pP	sP	04 53 13.8	-0.8
LZH				sP	pP	04 53 19.4	+10
LZH				PP	**PP**	**04 55 16.0**	**+3.6**
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LZH				pmax	pmax		
	comp=Z,79nm,5.0s						
LZH				LR	LR		
	comp=N,370nm,17.0s						
LZH				LR	LR		
	comp=E,290nm,17.1s						
LZH				LR	LR		
	comp=Z,440nm,18.1s						
SONA0	**Songino Array**	**66.66**	**328**	*e*P	**P**	**04 53 31.1**	**-0.1**
SONM	**Songino Array**	**66.66**	**328**	P	**P**	**04 53 31.1**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=143,slow=4.5,SNR=9.8						
VNDA	**Vanda**	**72.08**	**178**	P	**P**	**04 54 05.3**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=334,slow=6.2,SNR=5.6						
WMQ	**Urumqi**	**75.90**	**318**	*e*P	**P**	**04 54 27.5**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,52nm,3.9s						
WMQ				LR	LR		
	comp=N,2µm,12.5s						
WMQ				LR	LR		
	comp=E,2µm,20.3s						
WMQ				LR	LR		
	comp=Z,2µm,29.2s						
OHAK	**Old Harbor**	**76.51**	**27**	*e*P	**P**	**04 54 30.9**	**+0.8**
	comp=Z,9.7nm,0.6s						
SVW2	**Sparrevohn**	**77.77**	**23**	*e*P	**P**	**04 54 38.6**	**+1.4**
	comp=Z,6.0nm,0.8s						
HOM	**Homer**	**78.56**	**25**	*e*P	**P**	**04 54 42.8**	**+1.2**
	comp=Z,89nm,1.0s						
CNPM	**China Poot**	**78.67**	**26**	*e*P	**P**	**04 54 43.2**	**+1.0**
	comp=Z,39nm,0.6s						
TTA	**Tatalina**	**78.70**	**22**	*e*P	**P**	**04 54 43.5**	**+1.1**
	comp=Z,3.7nm,0.7s						
CAST	**Castle Rocks**	**80.44**	**22**	*e*P	**P**	**04 54 51.8**	**+0.1**
	comp=Z,4.5nm,0.7s						
MK31	**Makanchi Array**	**80.51**	**319**	*e*P	**P**	**04 54 52.2**	**-0.3**
	comp=Z,2.7nm,1.2s						
MK32	**Makanchi Array**	**80.51**	**319**	*e*P	**P**	**04 54 51.5**	**-1.0**
MKAR	**Makanchi Array**	**80.51**	**319**	P	**P**	**04 54 51.5**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=106,slow=6.2,SNR=10						
SML	**Sawmill**	**81.07**	**24**	*e*P	**P**	**04 54 56.4**	**+1.2**
	comp=Z,14nm,0.6s						
GLI	**Glacier Island**	**81.14**	**26**	*e*P	**P**	**04 54 56.2**	**+0.7**
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**81.46**	**327**	P	**P**	**04 54 55.6**	**-1.7**
	comp=Z,1.5nm,0.4s,baz=114,slow=7.2,SNR=5.6						
ZAA1	**Zalesovo Array**	**81.46**	**327**	*e*P	**P**	**04 54 55.6**	**-1.7**
RND	**Reindeer**	**81.67**	**23**	*e*P	**P**	**04 54 58.7**	**+0.3**
	comp=Z,4.8nm,0.7s						
MCK	**McKinley**	**81.80**	**23**	*e*P	**P**	**04 54 58.9**	**-0.1**
	comp=Z,8.6nm,0.7s						
MLY	**Manley**	**81.82**	**21**	*e*P	**P**	**04 54 59.2**	**+0.1**
	comp=Z,8.0nm,0.6s						
DHY	**Denali Highway**	**82.08**	**24**	*e*P	**P**	**04 55 00.5**	**-0.1**
	comp=Z,4.1nm,0.8s						
CCB	**Clear Creek Bu**	**82.69**	**22**	*e*P	**P**	**04 55 02.7**	**-0.9**
	comp=Z,3.0nm,0.8s						
KSH	**Kashi**	**82.98**	**311**	P	**P**	**04 55 06.3**	**+0.5**
KSH				pP	sP	04 55 24.7	+1.2
KSH				pmax	pmax		
	comp=Z,25nm,1.8s						
KSH				pmax	pmax		
	comp=Z,64nm,4.1s						
ILAR	**Eielson Array**	**83.10**	**22**	P	**P**	**04 55 05.2**	**-0.5**
	comp=Z,3.5nm,0.6s,baz=248,slow=5.4,SNR=40						
ILB	**Eielson Array**	**83.10**	**22**	*e*P	**P**	**04 55 05.2**	**-0.5**
	comp=Z,4.1nm,0.6s						
BALM	**Baldy**	**83.28**	**26**	*e*P	**P**	**04 55 07.8**	**+0.9**
	comp=Z,6.0nm,0.6s						
DOT	**Dot Lake**	**83.67**	**24**	*e*P	**P**	**04 55 09.1**	**+0.4**
	comp=Z,3.6nm,0.8s						
KURK	**Kurchatov**	**84.00**	**322**	*e*P	**P**	**04 55 09.8**	**-0.8**
	comp=Z,2.6nm,0.9s						
MAW	**Mawson**	**84.63**	**203**	P	**P**	**04 55 13.1**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=68,slow=17,SNR=3.1						
EGAK	**Eagle**	**85.30**	**23**	*e*P	**P**	**04 55 18.3**	**+1.4**
	comp=Z,3.0nm,0.8s						
HYT	**Haines Junctio**	**85.39**	**28**	*e*P	**P**	**04 55 18.9**	**+1.4**
	comp=Z,5.4nm,0.7s						
DAWY	**Dawson**	**85.73**	**24**	*e*P	**P**	**04 55 20.1**	**+0.9**
	comp=Z,8.0nm,1.4s						
KK31	**Karatay Array**	**87.72**	**314**	*e*P	**P**	**04 55 29.2**	**0.0**
	comp=Z,2.4nm,1.0s						
KKAR	**Karatay Array**	**87.72**	**314**	*e*P	**P**	**04 55 28.9**	**-0.3**
	comp=Z,2.4nm,1.0s						
DLBC	**Dease Lake**	**88.35**	**31**	*e*P	**P**	**04 55 33.1**	**+1.2**
	comp=Z,23nm,1.8s						
NV01	**Mina Array Sit**	**93.03**	**52**	*e*P	**P**	**04 55 55.8**	**+1.4**
NVAR	**Mina Array Bea**	**93.03**	**52**	P	**P**	**04 55 55.8**	**+1.4**

	comp=Z,0.7nm,0.8s,baz=249,slow=7.5,SNR=4.9						
YKA	Yellowknife Ar	96.39	28	P	P	04 56 09.3	+0.4
	comp=Z,0.5nm,0.4s,baz=270,slow=4.3,SNR=10						
YKB5	Yellowknife Ar	96.39	28	*e*P	P	04 56 09.3	+0.4
CLL	Collm	123.23	331	*e*PKPdf	PKiKP	05 01 39.0	+1.8
GEC2	GERESS Array S	124.39	328	*e*PKPdf	PKPdf	05 01 39.5	+0.1
GERES	GERESS Array B	124.39	328	PKP	PKPdf	05 01 39.5	+0.1
	comp=Z,0.7nm,0.6s,baz=82,slow=1.9,SNR=7.2						
TOA0	Torodi Ar. Sit	149.96	287	*e*PKPbc	PKPbc	05 02 31.0	-0.6
TORD	Torodi Ar. Bea	149.96	287	PKPbc	PKPbc	05 02 29.3	-2.3
	comp=Z,3.3nm,0.8s,baz=72,slow=2.2,SNR=31						
TOA1	Torodi Ar. Sit	149.96	287	*e*PKPbc	PKPbc	05 02 29.3	-2.3
DBIC	Dimbokro	157.16	274	PKPab	PKPab	05 03 06.9	-0.9
	comp=Z,10.0nm,1.2s,baz=73,slow=0.6,SNR=5.5						

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*DDA **06** 05:04:48.4, 39°.13N×29°.10E, h7^{km}±2^{km}, ML2.9*

*ISK **06** 05:04:50.1, 39°.27N×29°.15E, h1^{km}, ML2.1/7*

ISC 06 05:04:48.7±1.2**, 39°.16N**±0°.03×**29°.07E**±0°.03**, h4**^{km}±12^{km}**, n19, σ0^{s}.45**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEDZ	Gediz	0.29	113	PG	Pb	05 04 57.3	+0.8
GDZ	Gediz	0.33	102	*i* P	Pg	05 04 55.6	+0.5
GDZ				*i* S	Sg	05 04 59.2	-0.2
TVSB	Tavsanli	0.42	46	PG	Pg	05 04 57.0	+0.1
TVSB				SG	Sg	05 05 02.5	+0.1
USAK	Uak-Merkez	0.45	185	*i* P	Pg	05 04 57.8	+0.5
USAK				IAML_P			
	comp=Z,7μm,0.1s						
DURS	Dursunbey	0.64	314	*i* P	Pb	05 05 02.5	+0.1
DURS				IAML_P			
	comp=Z,760nm,0.1s						
MANT	Manisa	0.78	211	*i* P	Pg	05 05 04.0	+0.4
MANT				*i* S	Sg	05 05 12.8	-0.8
MANT				IAML_P			
	comp=Z,2μm,0.1s						
KHAL	Karahalli	0.85	157	*i* P	Pg	05 05 04.7	-0.4
KHAL				*i* S	Sg	05 05 15.2	-0.9
KHAL				IAML_P			
	comp=Z,456nm,0.1s						
ORLT	Orhaneli	0.90	352	PG	Pb	05 05 06.5	-0.4
ULDT	Uludag	0.98	3	*i* P	Pb	05 05 08.2	-0.2
ULDT				IAML_P			
	comp=Z,2μm,0.1s						
MDNY	Mudanya-Bursa	1.22	353	PN	Pn	05 05 12.5	0.0
KCTX	Karacabey (Bur	1.23	334	PN	Pn	05 05 13.5	+0.7
BORA	Eskisehir	1.29	56	PN	Pn	05 05 13.7	+0.1
BORA	Eskisehir	1.29	56	*i* P	Pn	05 05 13.9	+0.2
BORA				*i* S	Sn	05 05 31.6	+0.1
BORA				IAML_P			
	comp=Z,827nm,0.1s						
BORA	Eskisehir	1.29	56	*i* P	Pn	05 05 13.6	-0.1
BORA				*i* S	Sn	05 05 31.0	-0.5
BORA				IAML_P			
	comp=Z,827nm,0.1s						
ARMT	Armutlu	1.41	354	PN	Pg	05 05 16.4	+0.6
YLV	Yalova	1.43	9	PN	Pg	05 05 16.1	0.0
SRCK	Saricakaya, Es	1.49	53	PN	Pg	05 05 17.2	-0.1
SRCK	Saricakaya, Es	1.49	53	*i* P	Pg	05 05 17.4	0.0
SRCK				IAML_P			
	comp=Z,582nm,0.1s						
SRCK	Saricakaya, Es	1.49	53	*i* P	Pg	05 05 17.3	0.0
SRCK				IAML_P			
	comp=Z,582nm,0.1s						

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*IDC **06** 05:05:03.1±0.3, 3°.32S×100°.53E, h0^{km}, mb5.6/50, mb1 5.6/53, mb1mx5.5/54, mbtmp5.5/53, ML4.7/3, MS6.0/22, Ms1 6.0/22, ms1mx5.8/36, Error ellipse: s-maj=11.3km s-min=8.9km az=37.0*

*ISCJB **06** 05:05:04.9±0.5, 3°.27S±0°.02×100°.54E±0°.02, h21^{km}±3^{km}, mb5.7/282, MS6.2/750, Error ellipse: s-maj=3.5km s-min=2.3km az=37.2*

*MOS **06** 05:05:05.2±0.9, 3°.22S×100°.59E, h23^{km}, mb6.0/122, MS6.0/60, Error ellipse: s-maj=6.0km s-min=3.3km az=121.2*

*BJI **06** 05:05:05.2±0.0, 3°.20S×100°.55E, h30^{km}, mb6.0/89, mB6.4/84, Ms6.5/99, Ms7 6.5/91*

*NEIC **06** 05:05:06.7±2.4, 3°.27S×100°.56E, h21^{km}, mb5.9/173, ME6.0, MS6.3/714, MW6.0, MW6.0, Error ellipse: s-maj=14.1km s-min=11.0km az=225.0 Best double couple: NP1:ϕ_s126.00000°, δ71.00000°, λ90.00000°. NP2:ϕ_s306.00000°, δ19.00000°, λ90.00000°. Principal axes: T 1.3700, Plg64.0000°, Azm36.0000°; N 0.1300, Plg0.0000°, Azm126.0000°; P -1.4900, Plg26.0000°, Azm216.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s305.00000°, δ10.00000°, λ90.00000°. NP2: ϕ_s125.00000°, δ80.00000°, λ90.00000°. Principal axes: T Plg55.0000°, Azm35.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm215.0000°; Apparent Stress 0.38 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Mukomuko; [III] at Bengkulu, Padang and Painan; [II] at Kepahiang, Sumatra.

*DJA **06** 05:05:07.2±0.4, 3°S±2°×10°0E±°, h31^{km}±3^{km}, M6.1/80, mb5.8/80, mB6.3/70, MLv6.4/26, Mw(mB)6.0/70, Mwp6.1/31*

*GCMT **06** 05:05:09.7±0.1, 3°.58S±0°.01×100°.22E±0°.01, h21^{km}, MW6.1/122, Moment Tensor Solution. s122, c241; s120, c339; Duration: 2^{s}.6 Moment tensor: Scale 10^{18} Nm; M_{rr}0.87±.01; $M_{\theta\theta}$-0.38±.01; $M_{\phi\phi}$-0.49±.01; $M_{r\theta}$1.10±.03; $M_{\theta\phi}$0.46±.01; $M_{\phi r}$-0.71±.02; Best double couple: $M_0$1.58400×10^{18} NP1:ϕ_s126.00000°, δ73.00000°, λ82.00000°. NP2:ϕ_s331.00000°, δ18.00000°, λ114.00000°. Principal axes: T 1.5930, Plg61.0000°, Azm25.0000°; N -0.0180, Plg7.0000°, Azm128.0000°; P -1.5750, Plg28.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 05:05:11.0±0.0, 3°.78S×100°.08E, h19^{km}, Moment Tensor Solution. s31 Moment tensor: Scale 10^{18}Nm; M_{rr}1.00; $M_{\theta\theta}$-0.54; $M_{\phi\phi}$-0.46; $M_{r\theta}$0.93; $M_{\theta\phi}$0.48; $M_{\phi r}$-0.35; Best double couple: $M_0$1.40000×10^{18} NP1:ϕ_s118.00000°, δ68.00000°, λ79.00000°. NP2:ϕ_s325.00000°, δ25.00000°, λ115.00000°. Principal axes: T 1.4400, Plg65.0000°, Azm8.0000°; N -0.0800, Plg10.0000°, Azm121.0000°; P -1.3600, Plg22.0000°, Azm216.0000°;*

ISC 06 05:05:07.0±0.3**, 3°.29S**±0°.03×**100°.53E**±0°.03**, h26**^{km}±2^{km}**, h26**^{km}**:pP-P, n2224, σ1^{s}.49**/1813**, mb5.8**/301**, MS6.3**/761**, 135C-22D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.74	315	P	Pb	05 05 20.9	-0.4
KRJI	Kerinci	1.51	38	P	Pb	05 05 34.9	+0.4
PDSI	Padang	2.37	358	P	Pn	05 05 45.0	+0.8
SISI	Saibi	2.43	324	P	Pn	05 05 44.5	-0.5
SDSI	Sungai Dareh	2.51	21	P	Pn	05 05 48.1	+2.0
MNAI	Manna	2.64	114	*e*Pn	Pn	05 05 48.5	+0.6
MNAI				*e*Sn	Sn	05 06 16.8	-2.4
MNAI	Manna	2.64	114	P	Pn	05 05 49.8	+1.9
PPI	Padang Panjang	2.82	357	P	Pn	05 05 50.4	0.0
LHSI	Lahat	3.03	100	P	Pn	05 05 56.1	+2.8
RGRI	Rengat	3.44	32	P	Pn	05 06 01.8	+3.0
BKNI	Bangkinang	3.63	8	*e*Pn	Pn	05 06 02.8	+1.3
BKNI	Bangkinang	3.63	8	P	Pn	05 06 03.0	+1.5
MDSI	Maura Dua	3.83	108	P	Pn	05 06 06.4	+2.2
LWLI	Liwa	3.91	116	P	Pn	05 06 08.1	+2.6
MNSI	Mandailing Nat	4.17	347	P	Pn	05 06 09.1	+0.1
PMBI	Palembang	4.25	85	P	Pn	05 06 11.6	+1.6
KLI	Kotabumi	4.59	110	P	Pn	05 06 17.0	+2.4
KLI	Kotabumi	4.59	110	P	Pn	05 06 17.1	+2.4
DSRI	Dabo	4.92	55	P	Pn	05 06 21.8	+2.6
GSI	Gunungsitoli	5.44	327	*e*Pn	Pn	05 06 25.3	-1.2
GSI	Gunungsitoli	5.44	327	P	Pn	05 06 24.8	-1.6
	2μm,1.0s,33μm116μm16nm						
PPBI	Pangkal Pinang	5.71	79	P	Pn	05 06 33.1	+3.0
	451nm,1.1s,19μm135μm11nm						
TPRI	Tanjung Pinang	5.78	44	P	Pn	05 06 34.2	+3.0
	3μm,0.6s,24nm						
MYKOM	Kota Tinggi	6.04	33	*e*Pn	Pn	05 06 37.3	+2.6
CGJI	Cibinong	6.11	123	P	Pn	05 06 35.0	-0.6
	2μm,0.7s,30μm74μm20nm						
SBJI	Serang	6.25	117	P	Pn	05 06 40.3	+2.8
	4μm,1.3s,52μm40nm						
PSI	Prapat	6.26	345	Pn	Pn	05 06 35.8	-2.1
	6.7nm,0.3s,baz=162,slow=13,SNR=24						
PSI	Prapat	6.26	345	*e*Pn	Pn	05 06 36.2	-1.7
PSI	Prapat	6.26	345	*e*P	Pn	05 06 36.2	-1.7
TNG	Tangerang	6.73	115	P	Pn	05 06 46.0	+1.8
	11μm,1.5s,160μm60nm						
TSI	Tuntungan	7.03	344	P	Pn	05 06 49.4	+1.1
	2μm,0.9s,28μm98μm17nm						
SNSI	Sinabang, Aceh	7.05	323	P	Pn	05 06 47.5	-1.1
	995nm,0.7s,16μm6.9nm						
TPI	Tanjungpandan	7.13	86	P	Pn	05 06 51.1	+1.4
	232nm,0.9s,10μm108μm11nm						
KCSI	Kotacane, Aceh	7.31	338	P	Pn	05 06 51.1	-1.1
	488nm,1.0s,8μm65μm7.7nm						
IPM	Ipoh	7.74	4	*e*Pn	Pn	05 06 59.6	+1.5
LEM	Lembang	7.88	117	Pn	Pn	05 06 58.7	-1.4
	7.7nm,0.3s,baz=282,slow=20,SNR=3.0						
LEM				LR	LR	05 10 40.5	
	comp=Z,112μm,18.3s,baz=266,slow=43						
LEM	Lembang	7.88	117	P	Pn	05 07 01.8	+1.7
	20μm,1.1s,440μm826μm						
CISI	Cisompet, Garu	8.40	121	*e*Pn	Pn	05 07 06.3	-0.8
CISI	Cisompet, Garu	8.40	121	P	Pn	05 07 05.9	-1.2
	2μm,0.6s,27μm						
KULM	Kulim	8.53	1	*e*Pn	Pn	05 07 09.5	+0.6
MLSI	Meulaboh, Aceh	8.57	331	P	Pn	05 07 08.8	-0.6
	1μm,1.0s,10μm						
XMIS	Christmas Isla	8.76	145	*e*Pn	Pn	05 07 15.5	+3.4
XMIS				*e*Sn	Sn	05 08 40.0	-10
LHMI	Lhok Sumawe	9.19	337	*e*Pn	Pn	05 07 19.3	+1.4
LHMI	Lhok Sumawe	9.19	337	P	Pn	05 07 19.5	+1.5
	656nm,0.9s,10μm						
SKLT	Songkhla	10.39	0	P	Pn	05 07 34.1	-0.4
	205nm,1.5s,5μm						
YOGI	Yogyakarta	10.70	115	P	Pn	05 07 39.4	+0.7
KSM	Kuching	10.86	64	*e*Pn	Pn	05 07 45.5	+4.7
UGM	Wanagama	10.95	115	*e*Pn	Pn	05 07 46.1	+4.0
UGM	Wanagama	10.95	115	P	Pn	05 07 42.3	+0.2
	828nm,1.1s,13μm						
TRTT	Trang	11.09	356	P	Pn	05 07 42.1	-1.9
	276nm,1.1s,7μm						
WOJI	Wonogiri, Jawa	11.28	114	P	Pn	05 07 46.1	-0.5
	298nm,0.8s,7μm						
PKDT	Phuket	11.33	349	P	Pn	05 07 50.1	+2.9
	171nm,1.1s,9μm						
NGJI	Ngawi	11.61	111	P	Pn	05 07 53.7	+2.6
SBUM	Sibu	13.00	64	*e*Pn	Pn	05 08 15.0	+4.8
JAGI	Jajag, Banyuwa	14.49	111	*e*Pn	Pn	05 08 26.8	-3.7
JAGI	Jajag, Banyuwa	14.49	111	P	Pn	05 08 29.4	-1.1
	705nm,0.9s,10μm						
MTKI	Muara Teweh, K	14.54	81	P	Pn	05 08 34.2	+3.0
	989nm,1.1s,25μm						
SRBI	Singaraja	15.36	109	P	Pn	05 08 41.7	-0.4
	287nm,0.9s,7μm18μm						
DNP	Denpasar	15.54	111	P	P	05 08 56.9	+8.3
CHBT	CHBT	16.04	6	P	P	05 08 53.9	-0.2
	475nm,0.5s,5μm						
PHET	Kaeng Krachan	16.12	357	P	Pn	05 08 52.3	+0.3
	224μm,0.8s						
BKB	Balikpapan	16.48	83	P	P	05 08 59.9	+0.9
	1μm,1.2s,37μm86μm						
PBA	Port Blair	16.75	333	*e*Pn	P	05 09 01.2	-0.8
	612nm,0.9s						
PBA	Port Blair	16.75	333	*e*P	P	05 09 01.3	-0.7
PBA				IAmb	IAmb	05 09 03.7	
	comp=Z,258nm,0.9s						
DLV	T Lat	17.08	27	*e*Pn	Pn	05 09 04.7	+0.4
	comp=Z,325nm,1.1s						
SRAK	Srakaew	17.26	5	P	P	05 09 07.0	-0.6
SGKI	Sangatta, Kali	17.28	81	P	P	05 09 11.8	+3.9
	comp=Z,488nm,0.9s,comp=Z,13μmcomp=Z,61μm						
SRDT	SRDT	17.59	355	P	Pn	05 09 09.5	-0.9
	comp=Z,46nm,0.9s,comp=Z,3μm						
PLAI	Plampang	18.00	109	P	Pn	05 09 11.8	-3.8
	comp=Z,514nm,0.7s,comp=Z,15μmcomp=Z,27μm						
DGPR	DIGLIPUR	18.02	335	*e*P	Pn	05 09 15.0	-0.7
DGPR				IAmb	IAmb	05 09 20.5	
	comp=Z,138nm,0.6s						
KKM	Kota Kinabalu	18.20	59	*e*Pn	P	05 09 19.2	+1.0
	comp=Z,1μm,1.4s						
CHAI	Chaiyaphum	19.13	4	P	P	05 09 28.2	0.0
	comp=Z,332μm,0.8s						
SPSI	Sidrap Palu	19.21	93	P	Pn	05 09 29.8	-0.4
	comp=Z,350nm,0.9s,comp=Z,9μmcomp=Z,35μm						
KAPI	Kappang	19.25	96	P	P	05 09 29.4	-0.1
	comp=Z,8.5nm,0.3s,baz=251,slow=6.1,SNR=71						
KAPI	Kappang	19.25	96	*e*P	P	05 09 30.1	+0.5
	comp=Z,1μm,1.3s						
KAPI	Kappang	19.25	96	*e*P	P	05 09 30.1	+0.5
KAPI				pmax	pmax		
	comp=Z,1μm,1.3s						
TTSI	Tana Toraja	19.26	90	P	Pn	05 09 32.0	+1.2
	comp=Z,698nm,1.2s,comp=Z,12μmcomp=Z,54μm						
UMPA	Umpang Tak	19.45	355	P	P	05 09 30.4	-1.3
	comp=Z,410μm,0.8s						
KHON	Khomkaen	19.64	7	P	P	05 09 33.6	-0.2
	comp=Z,501μm,0.8s						
BKSI	Bulukumba	19.64	97	P	Pn	05 09 34.9	-0.5
	comp=Z,1μm,1.4s,comp=Z,15μmcomp=Z,23μm						
PBKT	Sadao Pong	19.74	1	P	P	05 09 33.9	-1.0
	comp=Z,65nm,0.8s,comp=Z,3μm						
WBSI	Waikabubak, Su	19.76	109	P	P	05 09 32.4	-2.9
	comp=Z,970nm,0.8s,comp=Z,15μm						
BSSI	Bau Bau, Buton	20.09	99	P	P	05 09 38.9	+0.1
	comp=Z,402nm,1.6s,comp=Z,11μm						
SKNT	Sakolnakorn	20.43	9	P	P	05 09 41.1	-1.3
	comp=Z,399nm,1.0s,comp=Z,10μmcomp=Z,49μm						
PANO	Nakornpanom	20.71	11	P	P	05 09 44.1	-1.3
	comp=Z,16nm,0.8s,comp=Z,149nm						
UTTA	Uttaradit	20.91	0	P	P	05 09 46.8	-0.7
	comp=Z,196μm,0.9s						
BATP	Bataraza	20.99	55	*e*P	Pn	05 09 50.2	-1.1
APSI	Ampana	21.23	84	P	P	05 09 52.5	+1.3
	comp=Z,1μm,1.0s,comp=Z,19μm						
NONG	Nongkai	21.38	7	P	P	05 09 50.9	-1.8
	comp=Z,8.7nm,0.8s,comp=Z,110nm						
CM31	Chiang Mai Arr	21.67	356	*e*P	P	05 09 54.5	-1.3
	comp=Z,243nm,0.9s						
CMAR	Chiang Mai Arr	21.67	356	P	P	05 09 54.7	-1.1
	comp=Z,93nm,0.7s,baz=185,slow=9.2,SNR=163						
CMAR				PcP	PcP	05 13 58.4	+1.5
	comp=Z,20nm,0.8s,baz=214,slow=2.7,SNR=7.3						
CMAR				ScP	ScP	05 17 34.5	+2.0
	comp=Z,2.4nm,0.6s,baz=204,slow=2.5,SNR=4.4						
CMAR				LR	LR	05 19 30.1	
	comp=Z,47μm,18.6s,baz=186,slow=40						
LAMP	Lampang	21.70	358	P	P	05 09 56.9	+0.8
	comp=Z,814μm,0.9s						
EDFI	Ende, Flores	21.72	105	P	P	05 09 56.1	-0.4
	comp=Z,92nm,0.8s,comp=Z,6μm						
CMMT	Chiang Mai	22.02	356	P	P	05 09 58.4	-1.2
	comp=Z,92nm,1.1s,comp=Z,4μmcomp=Z,26μm						
CHTO	Chiang Mai	22.02	356	*e*P	P	05 09 58.3	-1.3
	comp=Z,174nm,1.0s						
CHTO				LR	LR		
	comp=Z,63μm,19.0s						
CHTO	Chiang Mai	22.02	356	*e*P	P	05 09 58.3	-1.3
CHTO				pmax	pmax		
	comp=Z,174nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,63μm,19.0s						
BBSI	Bau Bau	22.08	96	P	P	05 10 04.4	+4.1
	comp=Z,100nm,1.1s,comp=Z,2μm						
MMRI	Maumere	22.22	105	*e*P	P	05 09 58.6	-3.3
	comp=Z,259nm,1.0s						
MMRI				LR	LR		
	comp=Z,41μm,22.0s						
MMRI	Maumere	22.22	105	P	P	05 10 01.2	-0.6
	comp=Z,288nm,1.2s,comp=Z,7μm						
LUWI	Luwuk	22.34	85	*e*P	P	05 10 04.1	+1.0
	comp=Z,2μm,1.2s						
LUWI				LR	LR		
	comp=Z,38μm,20.0s						
LUWI	Luwuk	22.34	85	P	P	05 10 03.5	+0.5
	comp=Z,2μm,1.1s,comp=Z,25μmcomp=Z,45μm						
PALK	Pallekele	22.40	298	P	P	05 10 03.4	-0.4
	comp=Z,22nm,1.0s,baz=116,slow=16,SNR=2.5						
PALK				LR	LR	05 17 52.9	
	comp=Z,50μm,20.5s,baz=120,slow=34						
PALK	Pallekele	22.40	298	*e*P	P	05 10 06.9	+3.2
	comp=Z,218nm,1.3s						
PALK				LR	LR		
	comp=Z,50μm,20.0s						
PALK	Pallekele	22.40	298	c*e*P	P	05 10 07.7	+3.9
GIRL	Giralia	23.38	147	*e*P	P	05 10 15.1	+1.4
	comp=Z,1μm,1.5s						
GIRL				LR	LR		
	comp=Z,39μm,22.0s						
GIRL	Giralia	23.38	147	P	P	05 10 15.4	+1.7
	baz=24,SNR=4.2						
ENPP	El Nido	23.68	52	*e*P	P	05 10 18.3	+1.5
ENPP				*e*S	Sn	05 14 44.6	-7.7
BATI	Baumata	23.96	108	P	P	05 10 17.7	-1.8
	comp=Z,176nm,0.7s,baz=6.7,slow=12,SNR=12						
BATI				S	S	05 14 30.3	-4.6
	comp=Z,161nm,0.9s,baz=349,slow=16,SNR=5.5						
BATI	Baumata	23.96	108	P	P	05 10 18.0	-1.5
	comp=Z,125nm,1.1s,comp=Z,3μm						
QIZ	Qiongzhong	24.00	22	P	P	05 10 20.2	+0.5
QIZ				sP	sP	05 10 30.7	+0.1
QIZ				S	S	05 14 37.0	+1.7
QIZ				pmax	pmax		
	comp=Z,200nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,7μm,6.8s						
QIZ				LR	LR		
	comp=Z,65μm,14.3s						
QIZ				LR	LR		
	comp=Z,36μm,14.3s						
QIZ				LR	LR		
	comp=Z,62μm,14.2s						
SOEI	Soe	24.43	106	PFAKE		05 10 40.0	+16
SOEI				LR	LR		
	comp=Z,78μm,22.0s						
SOEI	Soe	24.43	106	P	P	05 10 20.9	-3.0
	comp=Z,336nm,1.4s,comp=Z,9μmcomp=Z,19μm						
SIMRM	Sittwe	24.46	342	*e*P	P	05 10 27.0	+3.1
	comp=Z,262nm,0.8s						
SIMRM				LR	LR		
	comp=Z,4μm,20.0s						
SLVN	Son La	24.70	8	*e*P	P	05 10 26.6	+0.4
	comp=Z,167nm,0.8s						
SLVN				LR	LR		
	comp=Z,66μm,19.0s						
MNI	Manado	24.75	79	P	P	05 10 26.6	-0.1
MNI				pmax	pmax		
	comp=Z,871nm,0.8s						
PAGZ	Pagadian	25.34	64	*e*P	P	05 10 31.5	-0.5
PAGZ				*e*S	S	05 14 55.9	-1.2
SANI	Sanana	25.46	88	P	P	05 10 32.9	-0.2
	comp=Z,244nm,1.2s,comp=Z,8μm						
DCPH	Dipolog City	25.63	62	⇑*e*P	P	05 10 40.8	+6.2
MBWA	Marble Bar	25.77	135	PFAKE		05 10 50.0	+14
MBWA				LR	LR		
	comp=Z,53μm,20.0s						
LUBP	Lubang	25.86	49	*e*P	P	05 10 31.5	-5.2
CTBH	Cotabato--PC H	25.87	66	⇑*e*P	P	05 10 37.5	+0.6
SNPH	Sibulan	25.88	61	*e*P	P	05 10 41.6	+4.7
SKMP	Bagumbayan, Su	25.88	68	*e*P	P	05 10 35.7	-1.2
MDRS	Chennai	25.88	309	*e*P	P	05 10 38.1	+1.2
MDRS				IAmb	IAmb	05 10 42.5	
	comp=Z,114nm,1.2s						
SGSI	Sangihe	25.93	75	P	P	05 10 38.5	+1.1
	comp=Z,407nm,0.8s						
GUIM	Jordan	25.95	58	*e*P	P	05 10 38.1	+0.6
GUIM				*e*S	S	05 15 09.5	+2.9
PSAD1	Pilbara Seismi	26.04	135	PFAKE		05 10 50.0	+12
PSAD1				LR	LR		
	comp=Z,70μm,21.0s						
PSAC1	Pilbara Seismi	26.07	136	PFAKE		05 10 50.0	+11
PSAC1				LR	LR		
	comp=Z,71μm,21.0s						
PSAB1	Pilbara Seismi	26.11	136	PFAKE		05 10 50.0	+11
PSAB1				LR	LR		
	comp=Z,70μm,21.0s						
PSAA2	Pilbara Seismi	26.12	136	PFAKE		05 10 50.0	+11
PSAA2				LR	LR		
	comp=Z,72μm,22.0s						
PSAA1	Pilbara Seismi	26.12	136	PFAKE		05 10 50.0	+11
PSAA1				LR	LR		
	comp=Z,71μm,21.0s						
PSAB2	Pilbara Seismi	26.12	136	PFAKE		05 10 50.0	+11
PSAB2				LR	LR		
	comp=Z,71μm,21.0s						
PSA00	Pilbara Seismi	26.12	136	*e*P	P	05 10 38.7	-0.4
	comp=Z,295nm,1.1s						
PSA00				LR	LR		
	comp=Z,70μm,21.0s						
PSAD3	Pilbara Seismi	26.13	136	PFAKE		05 10 50.0	+11
PSAD3				LR	LR		
	comp=Z,74μm,21.0s						
PSAA3	Pilbara Seismi	26.14	136	PFAKE		05 10 50.0	+11
PSAA3				LR	LR		
	comp=Z,72μm,21.0s						
PSAB3	Pilbara Seismi	26.14	136	PFAKE		05 10 50.0	+11
PSAB3				LR	LR		
	comp=Z,71μm,21.0s						
PSAC3	Pilbara Seismi	26.14	136	PFAKE		05 10 50.0	+11
PSAC3				LR	LR		
	comp=Z,70μm,21.0s						
PSAC2	Pilbara Seismi	26.16	136	PFAKE		05 10 50.0	+11
PSAC2				LR	LR		
	comp=Z,71μm,21.0s						
PSAD2	Pilbara Seismi	26.24	136	PFAKE		05 10 50.0	+10
PSAD2				LR	LR		
	comp=Z,72μm,21.0s						
NLAI	Namlea	26.52	91	P	P	05 10 48.7	+5.9
KCP	Kidapawan	26.56	67	⇑*i*P	P	05 10 43.8	+0.6
TGY	Tagaytay City	26.61	49	P	P	05 10 44.3	+0.7
	comp=Z,929nm,0.9s,baz=299,slow=2.5,SNR=25						
SAIH	SAIHA	26.66	344	*e*P	P	05 10 44.6	+0.6
SAIH				IAmb	IAmb	05 10 51.0	
CGP	Cagayan de Oro	26.77	64	*e*P	P	05 10 48.1	+3.1
DDMP	Don Marcelino,	26.82	70	*e*P	P	05 10 41.5	-3.9
BUKP	Musuan	26.87	66	*e*P	P	05 10 47.3	+1.4
VIS	Vishakhapatnam	26.91	321	*i* P	P	05 10 47.4	+1.2
VIS				*i* x	x	05 15 42.8	
LLP	Lapu-Lapu	26.97	60	*e*P	P	05 10 46.0	-0.8
DAV	Davao City (W)	27.04	68	P	P	05 10 48.7	+1.3
	comp=Z,203nm,0.5s,baz=26,slow=1.4,SNR=7.2						
DAV	Davao City (W)	27.04	68	*e*P	P	05 10 48.1	+0.7
	comp=Z,748nm,1.3s						
DAV	Davao City (W)	27.04	68	P	P	05 10 47.4	0.0
LBMI	Labuha	27.08	85	P	P	05 10 47.6	-0.2
	comp=Z,616nm,1.0s,comp=Z,10μm						
TNTI	Ternate	27.13	82	*e*P	P	05 10 46.4	-1.9
	comp=Z,440nm,1.6s						
TNTI	Ternate	27.13	82	P	P	05 10 45.6	-2.6
	comp=Z,139nm,0.7s,comp=Z,3μmcomp=Z,11μm						
BRDH	Bariadhala	27.23	342	P	P	05 10 49.3	+0.3
	comp=Z,657nm,0.8s,baz=128,slow=5.3,SNR=16						
BRDH				LR	LR	05 25 34.9	
	comp=Z,53μm,18.1s,baz=160,slow=45						
BOLP	Bolinao	27.37	44	*e*P	P	05 10 49.3	-1.0
BWNR	Bhubaneshwar	27.54	329	*e*P	P	05 10 52.3	+0.5
BWNR				IAmb	IAmb	05 10 58.4	
	comp=Z,426nm,1.2s						
GQP	Guinayangan	27.65	51	⇑*e*P	P	05 10 51.7	-1.1
SMPP	San Manuel, Pa	27.75	45	*e*P	P	05 10 52.1	-1.6
SMPP				*e*S	S	05 15 45.6	+11
KAAM	Kaadhehdhoo	27.78	277	PFAKE		05 11 10.0	+16
KAAM				LR	LR		
	comp=Z,40μm,18.0s						
BELO	BELONIA	27.83	342	*e*P	P	05 10 55.8	+1.4
BELO				IAMs_20	IAMs_20	05 22 19.0	
H08S2	Diego Garcia H	28.23	260	T	T	05 40 12.9	
	baz=82,slow=74,SNR=1954						
H08S3	Diego Garcia H	28.24	260	T	T	05 40 13.6	
	baz=82,slow=74						
DGAR	Diego Garcia	28.25	261	PFAKE		05 11 10.0	+12
DGAR				LR	LR		
	comp=Z,29μm,20.0s						
H08S1	Diego Carcia H	28.25	260	T	T	05 40 14.3	
	baz=82,slow=74,SNR=6680						
KMI	Kunming	28.33	4	⇑P	P	05 11 00.4	+1.3
KMI				pP	sP	05 11 10.1	+0.1
KMI				sP	pP	05 11 15.1	+8.4
KMI				S	S	05 15 48.3	+3.9
KMI				pmax	pmax		
	comp=Z,130nm,1.2s						
KMI				LR	LR		
	comp=Z,68μm,13.8s						
KMI				LR	LR		
	comp=Z,30μm,18.5s						
KMI				LR	LR		
	comp=Z,64μm,13.6s						
AGT	Agartala	28.48	342	*e*P	P	05 11 02.2	+2.0
AGT				IAmb	IAmb	05 11 05.0	
	comp=Z,392nm,0.8s						
IMP	Imphal	28.68	347	*e*P	P	05 11 01.4	-0.6
IMP				IAmb	IAmb	05 11 05.7	
	comp=Z,191nm,0.9s						

HKPS	**Hong Kong Po S**	**28.69**	**27**	PFAKE		05 11 10.0	+8.0
HKPS				LR	LR		
	comp=Z,83µm,18.0s						
PVCP	**Virac**	**28.83**	**54**	*e*P	**P**	**05 11 02.5**	**-0.8**
SILR	**SILCHAR**	**28.90**	**345**	*e*P	**P**	**05 11 04.9**	**+1.1**
SILR				IAmb	IAmb	05 11 07.7	
	comp=Z,654nm,1.4s						
MEEK	**Meekatharra**	**28.96**	**145**	P	**P**	**05 11 05.4**	**+0.9**
	baz=29,SNR=8.2						
GZH	**Guangzhou**	**29.05**	**25**	P	P	05 11 11.8	+6.6
GZH				S	S	05 16 08.8	+14
GZH				LR	LR		
	comp=N,40µm,14.9s						
GZH				LR	LR		
	comp=E,52µm,14.9s						
APYP	**Conner**	**29.31**	**43**	*e*P	**P**	**05 11 09.6**	**+2.0**
KOHI	**KOHIMA**	**29.51**	**348**	*e*P	**P**	**05 11 09.3**	**-0.1**
KOHI				IAmb	IAmb	05 11 13.5	
	comp=Z,472nm,1.0s						
H08N1	**Diego Carcia H**	**29.56**	**263**	T	T	05 42 21.9	
	baz=315,slow=75,SNR=2477						
MORW	**Morawa**	**29.57**	**152**	PFAKE		05 11 20.0	+10
MORW				LR	LR		
	comp=Z,33µm,20.0s						
MORW	**Morawa**	**29.57**	**152**	P	**P**	**05 11 11.1**	**+1.3**
	baz=30,SNR=4.0						
H08N2	**Diego Garcia H**	**29.58**	**263**	T	T	05 42 24.2	
	baz=315,slow=75,SNR=850						
H08N3	**Diego Garcia H**	**29.59**	**263**	T	T	05 42 25.3	
	baz=315,slow=75,SNR=2214						
MNCI	**Minicoy**	**29.71**	**293**	PFAKE		05 11 20.0	+8.7
MNCI				LR	LR		
	comp=Z,29µm,20.0s						
SHL	**Shillong**	**29.89**	**344**	*e*P	**P**	**05 11 13.0**	**+0.1**
	comp=Z,285nm,0.6s						
SHL				LR	LR		
	comp=Z,13µm,18.0s						
SHL	**Shillong**	**29.89**	**344**	*e*P	**P**	**05 11 13.0**	**+0.1**
SHL				pmax	pmax		
	comp=Z,285nm,0.6s						
SHL				MLR	MLR		
	comp=Z,13µm,18.0s						
SHL	**Shillong**	**29.89**	**344**	*e*P	**P**	**05 11 12.2**	**-0.6**
SHL				*i* PCN		05 11 14.5	
	comp=Z,68nm,0.8s						
SHL				IAmb	IAmb	05 11 17.5	
	comp=Z,325nm,1.0s						
SHL				*e*x	x	05 16 07.5	
HYB	**Hyderabad**	**29.90**	**314**	*i* P	**P**	**05 11 13.5**	**+0.6**
	comp=Z,120nm,1.0s						
HYB				*e*S	**S**	**05 16 10.0**	**+1.1**
HYB				LR	LR		
	comp=Z,17nm,18.0s						
HYB	**Hyderabad**	**29.90**	**314**	*e*P	**P**	**05 11 12.6**	**-0.3**
HYB				IAmb	IAmb	05 11 15.1	
	comp=Z,526nm,2.5s						
HYB				IAMs_20	IAMs_20	05 24 25.2	
	comp=Z,31µm,14.9s						
MOKO	**MOKOCHONG**	**30.01**	**349**	*e*P	**P**	**05 11 14.8**	**+0.9**
GYA	**Guiyang**	**30.17**	**11**⇑	*i*P	**P**	**05 11 15.6**	**+0.4**
GYA				pP	pP	05 11 20.8	-2.2
GYA				PcP	**PcP**	**05 14 14.3**	**-2.0**
GYA				S	**S**	**05 16 15.1**	**+2.1**
GYA				sS	pS	05 16 20.9	-0.9
GYA				SS	**SnSn**	**05 17 50.6**	**+3.1**
GYA				ScS	**ScS**	**05 21 52.9**	**0.0**
GYA				pmax	pmax		
	comp=Z,100nm,1.1s						
GYA				pmax	pmax		
	comp=Z,4µm,13.9s						
GYA				LR	LR		
	comp=Z,48µm,15.5s						
GYA				LR	LR		
	comp=Z,42µm,14.6s						
GYA				LR	LR		
	comp=Z,69µm,15.2s						
TURI	**Tura**	**30.33**	**342**	*e*P	**P**	**05 11 16.4**	**-0.2**
TURI				IAmb	IAmb	05 11 20.7	
	comp=Z,191nm,0.9s						
KNRA	**Kununurra**	**30.39**	**116**	P	**P**	**05 11 16.4**	**-0.8**
	baz=30,SNR=24						
BOK	**Bokaro**	**30.47**	**333**	*e*P	**P**	**05 11 19.7**	**+1.8**
BOK				IAMs_20	IAMs_20	05 25 35.9	
	comp=Z,21µm,15.5s						
JORH	**JORHAT**	**30.47**	**349**	*e*P	**P**	**05 11 16.7**	**-1.0**
GUWA	**GUWAHATI**	**30.54**	**344**	*e*P	**P**	**05 11 17.7**	**-0.7**
GUWA				IAmb	IAmb	05 11 21.4	
	comp=Z,681nm,1.7s						
TEZP	**TEZPUR**	**30.66**	**346**	*e*P	**P**	**05 11 19.6**	**+0.2**
TEZP				IAmb	IAmb	05 11 20.8	
	comp=Z,122nm,0.7s						
LKP	**Lekhapani**	**30.78**	**352**	*e*P	**P**	**05 11 20.8**	**+0.3**
SWI	**Sorong**	**30.80**	**86**	P	**P**	**05 11 19.7**	**-1.2**
SWI				pmax	pmax		
	comp=Z,195nm,1.0s						
SWI	**Sorong**	**30.80**	**86**	P	**P**	**05 11 20.4**	**-0.5**
DHUB	**DHUBRI**	**30.88**	**341**	*e*P	**P**	**05 11 22.7**	**+1.4**
DHUB				IAmb	IAmb	05 11 26.4	
SAUI	**Saumlaki**	**30.96**	**100**	PFAKE		05 11 30.0	+7.7
SAUI				LR	LR		
	comp=Z,34µm,22.0s						
ZIRO	**ZIRO**	**31.31**	**349**	*e*P	**P**	**05 11 25.2**	**-0.2**
BBP	**Basco**	**31.60**	**41**	*e*P	**P**	**05 11 24.6**	**-3.2**
FAKI	**Fak Fak**	**31.67**	**90**	*e*P	**P**	**05 11 27.0**	**-1.6**
	comp=Z,140nm,0.8s						
FAKI				LR	LR		
	comp=Z,22µm,20.0s						
FAKI	**Fak Fak**	**31.67**	**90**	P	**P**	**05 11 29.4**	**+0.8**
MTN	**Manton Dam**	**31.71**	**109**	PFAKE		05 11 40.0	+11
MTN				LR	LR		
	comp=Z,4µm,18.0s						
MTN	**Manton Dam**	**31.71**	**109**	P	**P**	**05 11 27.7**	**-1.2**
	baz=32,SNR=3.5						
TAWA	**Tawang**	**31.82**	**345**	*e*P	**P**	**05 11 30.9**	**+0.7**
MUN	**Mundaring**	**32.12**	**154**	P	**P**	**05 11 34.4**	**+2.1**
	baz=32,SNR=3.5						
NGP	**Nagpur**	**32.14**	**320**	*e*P	**P**	**05 11 33.5**	**+0.9**
NGP				IAmb	IAmb	05 11 37.0	
	comp=Z,237nm,1.7s						
NGP				*e*S	**S**	**05 16 45.4**	**+1.4**
GTK	**Tadong**	**32.54**	**340**	*e*P	**P**	**05 11 37.6**	**+1.4**
GTK				IAmb	IAmb	05 11 41.7	
	comp=Z,471nm,0.4s						
KNMB	**Chin-men Tao**	**32.60**	**31**	PFAKE		05 11 50.0	+13
KNMB				LR	LR		
	comp=Z,47µm,19.0s						
TWG	**Pinlang**	**32.80**	**37**	PFAKE		05 11 50.0	+12
TWG				LR	LR		
	comp=Z,79µm,21.0s						
TPUB	**Ta-pu**	**32.91**	**36**	*e*P	**P**	**05 11 39.9**	**+0.6**
	comp=Z,148nm,0.9s						
TPUB				LR	LR		
	comp=Z,18µm,18.0s						
KDU	**Kakadu**	**32.94**	**108**	P	**P**	**05 11 38.2**	**-1.5**
	baz=33,SNR=8.6						
JBP	**Jabalpur**	**33.07**	**324**	*e*P	**P**	**05 11 42.3**	**+1.7**
JBP				*e*x	x	05 16 57.6	
QZH	**Quanzhou**	**33.10**	**31**⇑	*i*P	**P**	**05 11 41.5**	**+0.6**
QZH				S	**S**	**05 17 02.6**	**+4.0**
QZH				pmax	pmax		
	comp=Z,90nm,1.5s						
QZH				pmax	pmax		
	comp=Z,3µm,5.7s						
QZH				LR	LR		
	comp=Z,23µm,13.6s						
QZH				LR	LR		
	comp=Z,46µm,14.7s						
QZH				LR	LR		
	comp=Z,47µm,18.4s						
YULB	**Yu-li**	**33.37**	**36**	*e*P	**P**	**05 11 44.4**	**+1.1**
	comp=Z,67nm,0.9s						
YULB				LR	LR		
	comp=Z,12µm,20.0s						
NWAO	**Narrogin (SRO)**	**33.37**	**154**	P	**P**	**05 11 43.6**	**+0.3**
	comp=Z,30nm,0.9s,baz=328,slow=11,SNR=4.7						
NWAO	**Narrogin (SRO)**	**33.37**	**154**	*e*P	**P**	**05 11 45.1**	**+1.9**
	comp=Z,170nm,1.3s						
NWAO				LR	LR		
	comp=Z,56µm,20.0s						
SSLB	**Suanglung**	**33.47**	**35**	PFAKE		05 12 00.0	+16
SSLB				LR	LR		
	comp=Z,21µm,22.0s						
JIRN	**Jiri**	**33.74**	**337**	*e*P	**P**	**05 11 48.5**	**+1.6**
	comp=Z,976nm,0.8s						
H01W3	**Cape Leeuwin H**	**33.88**	**160**	T	T	05 47 21.9	
	baz=336,slow=76,SNR=1053						
H01W2	**Cape Leeuwin H**	**33.89**	**160**	T	T	05 47 24.1	
	baz=336,slow=76,SNR=1264						
H01W1	**Cape Leeuwin H**	**33.89**	**160**	T	T	05 47 22.8	
	baz=336,slow=76,SNR=1195						
PKI	**Pulchoki**	**33.97**	**336**	*e*P	**P**	**05 11 49.9**	**+1.0**
	comp=Z,211nm,0.6s						
PKIN	**Phulchoki**	**33.98**	**336**	*e*P	**P**	**05 11 49.9**	**+1.0**
	comp=Z,123nm,0.6s						
LSA	**Lhasa**	**34.02**	**345**	PFAKE		05 12 00.0	+11
LSA				LR	LR		
	comp=Z,15µm,22.0s						
LSA	**Lhasa**	**34.02**	**345**	P	**P**	**05 11 50.9**	**+1.5**
LSA				S	**S**	**05 17 14.6**	**+0.9**
LSA				pmax	pmax		
	comp=Z,590nm,1.0s						
LSA				LR	LR		
	comp=Z,67µm,24.2s						
LSA				LR	LR		
	comp=Z,66µm,28.5s						
LSA				LR	LR		
	comp=Z,91µm,23.5s						
LSA	**Lhasa**	**34.02**	**345**	*i* P	**P**	**05 11 50.3**	**+0.9**
	SNR=34						
POO	**Poona**	**34.07**	**310**	*e*P	**P**	**05 11 47.0**	**-2.6**
POO				IAmb	IAmb	05 12 04.4	
	comp=Z,58nm,0.7s						
POO				*i* S	**S**	**05 17 15.0**	**+1.0**
GUN	**Gumba**	**34.08**	**336**	*e*P	**P**	**05 11 51.5**	**+1.6**
	comp=Z,641nm,0.6s						
DMN	**Daman**	**34.13**	**335**	*e*P	**P**	**05 11 51.4**	**+1.2**
	comp=Z,584nm,1.0s						
NACB	**Ninganchiao**	**34.14**	**36**	PFAKE		05 12 00.0	+10
NACB				LR	LR		
	comp=Z,17µm,22.0s						
CD2	**Chengdu**	**34.15**	**5**⇑	*i*P	**P**	**05 11 49.7**	**-0.4**
CD2				pP	pP	05 11 56.6	-1.3
CD2				PP	**PP**	**05 13 04.4**	**-3.4**
CD2				S	**S**	**05 17 14.2**	**-0.7**
CD2				sS	sS	05 17 27.4	-0.2
CD2				pmax	pmax		
	comp=Z,200nm,0.9s						
CD2				pmax	pmax		
	comp=Z,5µm,6.5s						
CD2				LR	LR		
	comp=Z,61µm,17.6s						
CD2				LR	LR		
	comp=Z,95µm,14.7s						
CD2				LR	LR		
	comp=Z,78µm,18.6s						
KKN	**Kakani**	**34.22**	**336**	*e*P	**P**	**05 11 52.1**	**+1.2**
	comp=Z,394nm,0.7s						
WRKA	**Warakurna**	**34.37**	**132**	P	**P**	**05 11 52.9**	**+0.8**
	baz=34,SNR=28						
YHNB	**Yeheng**	**34.40**	**35**	PFAKE		05 12 00.0	+7.7
YHNB				LR	LR		
	comp=Z,22µm,18.0s						
KMBL	**Kambalda**	**34.42**	**147**	P	**P**	**05 11 53.1**	**+0.7**
	baz=34,SNR=17						
GKN	**Gorkha**	**34.68**	**335**	*e*P	**P**	**05 11 56.1**	**+1.3**
BHPL	**Bhopal**	**34.69**	**321**	*e*P	**P**	**05 11 55.3**	**+0.4**
TATO	**Taipei**	**34.70**	**35**	PFAKE		05 12 10.0	+15
TATO				LR	LR		
	comp=Z,22µm,20.0s						
KOLN	**Koldanda**	**34.93**	**333**	*e*P	**P**	**05 11 58.4**	**+1.4**
	comp=Z,786nm,0.7s						
BOM	**Bombay**	**35.08**	**310**	*i* P	P	05 11 52.9	-5.2
BOM				*e*S	**S**	**05 17 25.4**	**-3.9**
YOJ	**Yonaguni jima**	**35.20**	**37**	PFAKE		05 12 10.0	+11
YOJ				LR	LR		
	comp=Z,23µm,19.0s						
YOJ	**Yonaguni jima**	**35.20**	**37**	P	**P**	**05 11 59.8**	**+0.7**
DANN	**Dangsing**	**35.36**	**334**	*e*P	**P**	**05 12 01.9**	**+1.1**
	comp=Z,945nm,0.7s						
PALU	**Palau**	**35.48**	**73**	P	**P**	**05 12 00.0**	**-1.8**
	baz=36,SNR=9.1						
PYUN	**Piuthan**	**35.49**	**333**	*e*P	**P**	**05 12 03.1**	**+1.2**
	comp=Z,1µm,0.9s						
BAKI	**Biak**	**35.61**	**87**	P	**P**	**05 12 05.3**	**+2.4**
	comp=Z,170nm,1.0s,comp=Z,3µm						
WHN	**Wuhan**	**36.14**	**20**⇑	*i*P	**P**	**05 12 08.2**	**+1.0**
WHN				pmax	pmax		
	comp=Z,210nm,0.8s						
WHN				pmax	pmax		
	comp=Z,6µm,6.6s						
WHN				LR	LR		
	comp=Z,207µm,14.3s						
WHN				LR	LR		
	comp=Z,76µm,12.8s						
WHN				LR	LR		
	comp=Z,273µm,14.4s						
WC1	**Warramunga Arr**	**36.88**	**119**	PFAKE		05 12 30.0	+16
WC1				LR	LR		
	comp=Z,31µm,21.0s						
WRA	**Warramunga Arr**	**36.89**	**119**	P	**P**	**05 12 13.9**	**+0.1**
	comp=Z,47nm,0.5s,baz=296,slow=9.6,SNR=127						
WRA				S	**S**	**05 17 54.8**	**-2.5**
	comp=Z,63nm,1.0s,baz=288,slow=19,SNR=6.2						
WRAB	**Tennant Creek**	**36.90**	**119**	*e*P	**P**	**05 12 13.2**	**-0.6**
	comp=Z,262nm,1.0s						
WRAB				*e*S	**S**	**05 17 56.8**	**-0.6**
WRAB				LR	LR		
	comp=Z,44µm,21.0s						
WRAB	**Tennant Creek**	**36.90**	**119**⇑	*i*P	**P**	**05 12 13.8**	**0.0**
WRAB				pmax	pmax		
	comp=Z,51nm,0.8s						
WRAB				MLR	MLR		
	comp=Z,40µm,20.0s						
WB2	**Warramunga Arr**	**36.90**	**119**	PFAKE		05 12 30.0	+16
WB2				LR	LR		
	comp=Z,45µm,21.0s						
WC3	**Warramunga Arr**	**36.93**	**119**	PFAKE		05 12 30.0	+16
WC3				LR	LR		
	comp=Z,40µm,21.0s						
FORT	**Forrest**	**37.72**	**139**	PFAKE		05 12 30.0	+9.4
FORT				LR	LR		
	comp=Z,48µm,21.0s						
FORT	**Forrest**	**37.72**	**139**	P	**P**	**05 12 22.0**	**+1.4**
	baz=38,SNR=6.3						
XAN	**Xi'an**	**37.97**	**11**	P	**P**	**05 12 22.5**	**-0.2**
XAN				PP	**PP**	**05 13 52.6**	**+2.8**
XAN				S	**S**	**05 18 08.8**	**-4.5**
XAN				SS	**SS**	**05 20 46.5**	**-14**
XAN				pmax	pmax		
	comp=Z,510nm,0.8s						
XAN				pmax	pmax		
	comp=Z,4µm,7.3s						
XAN				LR	LR		
	comp=Z,60µm,12.8s						
XAN				LR	LR		
	comp=Z,24µm,12.4s						
XAN				LR	LR		
	comp=Z,78µm,13.3s						
ASAR	**Alice Springs**	**38.07**	**125**	P	**P**	**05 12 24.0**	**+0.2**
	comp=Z,66nm,0.8s,baz=300,slow=8.0,SNR=180						
ASAR				S	**S**	**05 18 13.9**	**-1.3**
	comp=Z,5.5nm,1.0s,baz=304,slow=13,SNR=3.5						
ASAR				LR	LR	05 29 49.9	
	comp=Z,39µm,21.2s,baz=299,slow=39						
AS31	**Alice Springs**	**38.07**	**125**	PFAKE		05 12 40.0	+16
AS31				LR	LR		
	comp=Z,600nm,21.0s						
NDI	**New Delhi**	**38.89**	**326**	*e*P	**P**	**05 12 30.0**	**-0.5**
NJ2	**Nanjing**	**39.23**	**25**⇑	*i*P	**P**	**05 12 34.0**	**+0.8**
NJ2				pP	**pP**	**05 12 40.0**	**-1.1**
NJ2				sP	**sP**	**05 12 43.2**	**-1.1**
NJ2				PP	**PnPn**	**05 14 09.6**	**+3.3**
NJ2				S	**S**	**05 18 36.3**	**+4.1**
NJ2				sS	**sS**	**05 18 45.2**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,78nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,4µm,3.8s						
NJ2				LR	LR		
	comp=Z,67µm,17.0s						
NJ2				LR	LR		
	comp=Z,47µm,15.2s						
NJ2				LR	LR		
	comp=Z,78µm,17.1s						
LZH	**Lanzhou**	**39.30**	**4**	⇑P	**P**	**05 12 34.8**	**+0.8**
LZH				pP	pP	05 12 42.8	+1.0
LZH				sP	sP	05 12 46.5	+1.5
LZH				S	**S**	**05 18 35.8**	**+2.3**
LZH				sS	sS	05 18 48.3	+2.0
LZH				pmax	pmax		
	comp=Z,220nm,1.5s						
LZH				pmax	pmax		
	comp=Z,4µm,4.9s						
LZH				LR	LR		
	comp=Z,42µm,18.4s						
LZH				LR	LR		
	comp=Z,74µm,17.7s						
LZH				LR	LR		
	comp=Z,76µm,19.5s						
SSE	**Sheshan**	**39.46**	**28**	*e*P	**P**	**05 12 36.3**	**+1.1**
	comp=Z,146nm,0.9s						
SSE				LR	LR		
	comp=Z,40µm,19.0s						
SSE	**Sheshan**	**39.46**	**28**	P	**P**	**05 12 37.2**	**+2.0**
SSE				S	**S**	**05 18 40.6**	**+4.8**
SSE				pmax	pmax		
	comp=Z,58nm,0.9s						
SSE				pmax	pmax		
	comp=Z,2µm,6.7s						
SSE				LR	LR		
	comp=Z,2µm,15.0s						
SSE				LR	LR		
	comp=Z,9µm,17.7s						
GENI	**Genyem**	**39.59**	**90**	P	**P**	**05 12 36.5**	**-0.1**
	comp=Z,184nm,1.1s,comp=Z,4µm						
DDI	**Dehra Dun**	**39.73**	**329**	*e*P	**P**	**05 12 38.3**	**+0.7**
DDI				IAmb	IAmb	05 12 42.0	
	comp=Z,290nm,0.8s						
BHJ	**Bhuj**	**40.03**	**313**	*e*P	**P**	**05 12 39.1**	**-1.0**
BHJ				IAmb	IAmb	05 12 41.2	
	comp=Z,15µm,6.2s						
BHJ				IAMs_20	IAMs_20	05 33 38.0	
	comp=Z,17µm,25.7s						
JAY	**Jayapura**	**40.13**	**90**	P	**P**	**05 12 38.4**	**-2.7**
JAY				pmax	pmax		
	comp=Z,57nm,1.0s						
JAY	**Jayapura**	**40.13**	**90**	P	**P**	**05 12 39.1**	**-2.0**
JOW	**Kunigami**	**40.19**	**40**	PFAKE		05 12 50.0	+8.6
JOW				LR	LR		
	comp=Z,9µm,19.0s						
SMLA	**Simla**	**40.84**	**329**	*e*P	**P**	**05 12 46.2**	**-0.4**
QIS	**Mount Isa**	**41.73**	**117**	P	**P**	**05 12 54.3**	**+0.1**
	baz=42,SNR=32						
DHRM	**DHARAMSHALA**	**42.17**	**329**	*e*P	**P**	**05 12 57.9**	**0.0**
DHRM				IAmb	IAmb	05 13 01.6	
	comp=Z,299nm,0.3s						
TIA	**Tai'an**	**42.25**	**20**	P	**P**	**05 12 58.2**	**0.0**
TIA				sP	**sP**	**05 13 09.6**	**+0.4**
TIA				pmax	pmax		
	comp=Z,4µm,5.3s						
TIA				LR	LR		
	comp=Z,52µm,13.5s						
TIA				LR	LR		
	comp=Z,25µm,13.5s						
TIA				LR	LR		
	comp=Z,81µm,14.2s						
TIY	**Taiyuan**	**42.27**	**14**	*e*P	**P**	**05 12 59.4**	**+1.0**
TIY				PP	**PP**	**05 14 37.7**	**+1.1**
TIY				S	**S**	**05 19 18.7**	**+1.1**
TIY				pmax	pmax		
	comp=Z,220nm,0.9s						
TIY				pmax	pmax		
	comp=Z,4µm,6.9s						
TIY				LR	LR		
	comp=Z,50µm,14.0s						
TIY				LR	LR		
	comp=Z,20µm,10.4s						
TIY				LR	LR		
	comp=Z,49µm,14.5s						
GTA	**Gaotai**	**42.50**	**359**	P	**P**	**05 13 00.8**	**+0.5**
GTA				pP	pP	05 13 06.1	-2.1
GTA				sP	sP	05 13 09.2	-2.1
GTA				PP	**PP**	**05 14 45.3**	**+6.1**
GTA				S	**S**	**05 19 19.2**	**-1.8**
GTA				SS	**SS**	**05 22 22.1**	**-9.1**
GTA				pmax	pmax		
	comp=Z,120nm,1.2s						
GTA				pmax	pmax		
	comp=Z,4µm,7.9s						
GTA				LR	LR		
	comp=Z,24µm,16.1s						
GTA				LR	LR		
	comp=Z,44µm,16.5s						
GTA				LR	LR		
	comp=Z,29µm,17.2s						
COEN	**Coen**	**43.39**	**107**	*e*P	**P**	**05 13 06.3**	**-1.5**
	comp=Z,69nm,1.1s						
COEN				LR	LR		
	comp=Z,33µm,22.0s						
COEN	**Coen**	**43.39**	**107**	P	**P**	**05 13 06.6**	**-1.2**
	baz=43,SNR=3.8						
BBOO	**Buckleboo**	**44.36**	**136**	*e*P	**P**	**05 13 16.6**	**+1.4**
	comp=Z,110nm,0.8s						
BBOO				LR	LR		
	comp=Z,63µm,21.0s						
BBOO	**Buckleboo**	**44.36**	**136**	P	**P**	**05 13 16.5**	**+1.2**
	baz=44,SNR=5.2						
BTO	**Baotou**	**44.54**	**10**	*e*P	**P**	**05 13 18.2**	**+1.5**
BTO				S	**S**	**05 19 48.3**	**-2.6**
NIL	**Nilore**	**44.87**	**327**	*e*P	**P**	**05 13 19.2**	**-0.2**
	comp=Z,387nm,0.9s						
NIL				LR	LR		
	comp=Z,10µm,22.0s						
NIL	**Nilore**	**44.87**	**327**	*e*P	**P**	**05 13 19.2**	**-0.2**
NIL				pmax	pmax		
	comp=Z,387nm,0.9s						
NIL				MLR	MLR		
	comp=Z,10µm,22.0s						
MSEY	**Mahe Island**	**44.96**	**267**	PFAKE		05 13 30.0	+10
MSEY				LR	LR		
	comp=Z,17µm,19.0s						
HHC	**Hu-ho-hao-te**	**45.08**	**12**	P	**P**	**05 13 22.4**	**+1.4**
HHC				sP	sP	05 13 31.8	-0.3
HHC				S	**S**	**05 20 02.7**	**+4.1**
HHC				sS	sS	05 20 16.7	+5.1
HHC				pmax	pmax		
	comp=Z,350nm,1.1s						
HHC				pmax	pmax		
	comp=Z,6µm,6.0s						
HHC				LR	LR		
	comp=Z,42µm,12.7s						
HHC				LR	LR		
	comp=Z,40µm,13.4s						
HHC				LR	LR		
	comp=Z,53µm,13.3s						
MRIV	**Mauritius Mete**	**45.20**	**245**	PFAKE		05 13 30.0	+7.8
MRIV				LR	LR		
	comp=Z,5µm,18.0s						
BJT	**Baijiatuau**	**45.43**	**17**	PFAKE		05 13 40.0	+16
BJT				LR	LR		
	comp=Z,79µm,18.0s						
BJI	**Beijing**	**45.45**	**17**⇑	*i*P	**P**	**05 13 24.8**	**+1.0**
BJI				PP	**PP**	**05 15 12.2**	**+1.7**
BJI				S	**S**	**05 20 03.9**	**+0.1**
BJI				SS	**ScS**	**05 23 18.7**	**0.0**
BJI				pmax	pmax		
	comp=Z,72nm,1.2s						
BJI				pmax	pmax		
	comp=Z,2µm,7.2s						
BJI				LR	LR		
	comp=Z,960nm,15.5s						
BJI				LR	LR		
	comp=Z,7µm,15.3s						
BJI				LR	LR		
	comp=Z,4µm,16.2s						
JNU	**Nakatsue**	**46.21**	**36**	LR	LR	05 33 00.0	
	comp=Z,17µm,21.4s,baz=236,slow=36						
JNU	**Nakatsue**	**46.21**	**36**	*e*P	**P**	**05 13 30.2**	**+0.1**
	comp=Z,439nm,1.0s						
JNU				LR	LR		
	comp=Z,17µm,20.0s						
DL2	**Dalian**	**46.29**	**23**⇑	*i*P	**P**	**05 13 31.2**	**+0.8**
DL2				pP	**sP**	**05 13 41.1**	**-0.4**
DL2				PP	**PP**	**05 15 16.3**	**-3.2**
DL2				PcS	**PcS**	**05 18 59.3**	**-0.8**
DL2				S	**S**	**05 20 16.6**	**+0.8**
DL2				pmax	pmax		
	comp=Z,120nm,1.1s						
DL2				pmax	pmax		
	comp=Z,4µm,6.7s						
DL2				LR	LR		
	comp=Z,17µm,19.0s						
DL2				LR	LR		
	comp=Z,39µm,18.4s						
DL2				LR	LR		
	comp=Z,67µm,15.7s						
PMG	**Port Moresby**	**46.70**	**100**	*e*P	**P**	**05 13 33.5**	**-0.7**
	comp=Z,151nm,1.2s						

PMG				LR	LR		
	comp=Z,5µm,19.0s						
PMG	Port Moresby	46.70	100⇑	iP	P	05 13 33.4	-0.7
PMG				pmax	pmax		
	comp=Z,307nm,1.0s						
PMG				MLR	MLR		
	comp=Z,64µm,25.0s						
HTT	Hallett	46.71	134	P	P	05 13 35.2	+1.3
	baz=47,SNR=5.3						
TJN	Taejon	46.74	30⇑	iP	P	05 13 34.6	+0.5
GUMO	Guam	47.08	68	eP	P	05 13 34.1	-2.9
	comp=Z,187nm,1.2s						
GUMO	Guam	47.08	68	eP	P	05 13 34.1	-2.9
GUMO				pmax	pmax		
	comp=Z,187nm,1.2s						
CTA	Charters Tower	47.58	114	P	P	05 13 39.7	-1.2
CTAO	Charters Tower	47.58	114	eP	P	05 13 41.1	+0.2
	comp=Z,257nm,1.1s						
CTAO				LR	LR		
	comp=Z,17µm,20.0s						
CTAO	Charters Tower	47.58	114	eP	P	05 13 41.1	+0.2
CTAO				pmax	pmax		
	comp=Z,257nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,17µm,20.0s						
KS15	Wonju Array Si	47.84	30	eP	P	05 13 43.2	+0.6
	comp=Z,240nm,1.2s						
KSRS	Korea Array	47.87	30	P	P	05 13 43.2	+0.5
	comp=Z,116nm,1.0s,baz=221,slow=8.2,SNR=308						
KBL	Kabul	47.89	324	eP	P	05 13 42.4	-0.9
	comp=Z,69nm,0.8s						
KBL				LR	LR		
	comp=Z,10µm,20.0s						
KBL	Kabul	47.89	324	eP	P	05 13 42.4	-0.9
KBL				pmax	pmax		
	comp=Z,69nm,0.8s						
KBL				MLR	MLR		
	comp=Z,10µm,20.0s						
STKA	Stephens Creek	47.90	131	P	P	05 13 42.5	-0.7
	comp=Z,38nm,0.8s,baz=303,slow=7.7,SNR=39						
STKA				S	S	05 20 34.6	-4.6
	comp=Z,3.9nm,0.8s,baz=354,slow=18,SNR=1.9						
STKA				LR	LR	05 35 28.5	
	comp=Z,30µm,21.4s,baz=298,slow=38						
STKA				PKP2bc		05 45 11.8	
	comp=Z,6.4nm,1.2s,baz=288,slow=2.0,SNR=3.2						
STKA	Stephens Creek	47.90	131	eP	P	05 13 44.1	+1.0
	comp=Z,24nm,0.8s						
STKA				LR	LR		
	comp=Z,7µm,21.0s						
STKA	Stephens Creek	47.90	131	P	P	05 13 44.3	+1.1
	baz=48,SNR=36						
STKA	Stephens Creek	47.90	131	eP	P	05 13 44.2	+1.0
STKA				pmax	pmax		
	comp=Z,24nm,0.8s						
STKA				MLR	MLR		
	comp=Z,7µm,21.0s						
KSH	Kashi	48.22	334	P	P	05 13 44.9	-0.8
KSH				pP	pP	05 13 51.3	-2.4
KSH				sP	sP	05 13 54.2	-2.7
KSH				PcP	PcP	05 15 12.4	-0.3
KSH				PP	PP	05 15 37.4	-0.9
KSH				S	S	05 20 40.5	-3.2
KSH				ScS	ScS	05 23 32.6	-4.7
KSH				SS	SS	05 24 05.9	-7.6
KSH				pmax	pmax		
	comp=Z,130nm,1.0s						
KSH				pmax	pmax		
	comp=Z,3µm,9.7s						
KSH				LR	LR		
	comp=Z,9µm,18.4s						
KSH				LR	LR		
	comp=Z,29µm,20.9s						
KSH				LR	LR		
	comp=Z,10µm,24.2s						
WMQ	Urumqi	48.30	348	PFAKE		05 14 00.0	+14
WMQ				LR	LR		
	comp=Z,14µm,19.0s						
WMQ	Urumqi	48.30	348	P	P	05 13 50.6	+4.5
WMQ				pP	pP	05 13 53.4	-0.7
WMQ				S	S	05 20 48.3	+3.7
WMQ				sS	sS	05 21 02.2	+4.4
WMQ				pmax	pmax		
	comp=Z,210nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,4µm,6.1s						
WMQ				LR	LR		
	comp=Z,9µm,22.7s						
WMQ				LR	LR		
	comp=Z,13µm,27.5s						
WMQ				LR	LR		
	comp=Z,21µm,27.5s						
WSAR	Wadi Sarin	48.62	305	P	P	05 13 49.6	+0.8
	comp=Z,22nm,1.0s,baz=152,slow=7.2,SNR=5.5						
ANA2	Anatahan	48.72	65	eP	P	05 13 49.2	-0.6
	comp=Z,855nm,1.9s						
SARN	Sarigan	48.91	65	PFAKE		05 14 00.0	+8.8
SARN				LR	LR		
	comp=Z,5µm,21.0s						
SNY	Shenyang	49.56	23 ⇑	P	P	05 13 55.4	-0.3
SNY				pmax	pmax		
	comp=Z,95nm,1.1s						
SNY				pmax	pmax		
	comp=Z,4µm,5.5s						
SNY				LR	LR		
	comp=Z,24µm,13.5s						
SNY				LR	LR		
	comp=Z,41µm,14.9s						
SNY				LR	LR		
	comp=Z,61µm,13.7s						
PRZ	Przheval'sk	49.78	339	PFAKE		05 14 10.0	+12
PRZ				LR	LR		
	comp=Z,18µm,21.0s						
KDJ	Kajisay	49.93	337	PFAKE		05 14 10.0	+11
KDJ				LR	LR		
	comp=Z,14µm,20.0s						
PDGK	Podgornoye	50.14	340	P	P	05 14 01.9	+1.6
PDGK				pmax	pmax		
	comp=Z,593nm,0.8s						
UZB	Uzynbulak	50.14	340c	iP	P	05 14 01.1	+0.8
UZB				e		05 15 55.6	
UZB				i S	S	05 21 12.1	+1.5
UZB				pmax	pmax		
	comp=Z,118nm,0.7s						
UZB				smax	smax		
	comp=E,1µm,7.1s						
UZB	Uzynbulak	50.14	340⇑	iP	P	05 14 01.2	+0.8
	comp=E,118nm,0.7s						
UZB				ePP	PP	05 15 55.7	-0.1
UZB				i S	S	05 21 12.2	+1.5
	comp=E,1µm,7.1s						
UZB				eLR	LR	05 40 05.7	
	comp=E,3µm,14.5s						
SATY	Saty	50.28	339c	iP	P	05 14 02.4	+1.0
SATY				e		05 15 58.0	
SATY				i S	S	05 21 14.0	+1.5
SATY				pmax	pmax		
	comp=Z,303nm,1.0s						
SATY				smax	smax		
	comp=E,852nm,5.1s						
SATY				MLR	MLR		
	comp=Z,4µm,18.0s						
SATY	Saty	50.28	339⇑	iP	P	05 14 02.4	+1.0
	comp=Z,303nm,1.0s						
SATY				ePP	PP	05 15 58.0	+1.0
SATY				i S	S	05 21 14.1	+1.5
	comp=Z,852nm,5.1s						
SATY				eLR	LR	05 37 40.7	
	comp=Z,4µm,17.5s						
ZHN	Zhinishke	50.37	339c	iP	P	05 14 02.7	+0.7
ZHN				e		05 15 59.5	
ZHN				eS	S	05 21 14.9	+1.3
ZHN				pmax	pmax		
	comp=Z,89nm,1.2s						
ZHN				smax	smax		
	comp=N,155nm,4.9s						
ZHN	Zhinishke	50.37	339⇑	iP	P	05 14 02.8	+0.7
	comp=N,89nm,1.2s						
ZHN				ePP	PP	05 15 59.6	+1.8
ZHN				eS	S	05 21 15.0	+1.3
	comp=N,155nm,4.9s						
GAR	Garm	50.47	329	PFAKE		05 14 20.0	+17
GAR				LR	LR		
	comp=Z,28µm,22.0s						
KPKS	Kokpek	50.54	339c	iP	P	05 14 04.3	+1.0
KPKS				e		05 15 59.1	
KPKS				eS	S	05 21 15.5	-0.5
KPKS				pmax	pmax		
	comp=Z,275nm,1.0s						
KPKS				smax	smax		
	comp=E,1µm,7.2s						
KPKS	Kokpek	50.54	339⇑	iP	P	05 14 04.3	+1.0
	comp=E,275nm,1.0s						
KPKS				ePP	PP	05 15 59.2	-0.1
KPKS				eS	S	05 21 15.6	-0.5
	comp=E,1µm,7.2s						
KPKS				eLR	LR	05 40 21.8	
	comp=E,4µm,15.9s						
BOOM	Boomskoye usch	50.72	337	PFAKE		05 14 20.0	+15
BOOM				LR	LR		
	comp=Z,22µm,20.0s						
TNSS	Tian-Shan	50.80	338	eP	P	05 14 06.3	+0.7
TNSS	Tian-Shan	50.80	338	eP	P	05 14 06.4	+0.7
CHGR	Chuyangaron	50.81	328	PFAKE		05 14 20.0	+15
CHGR				LR	LR		
	comp=Z,23µm,21.0s						
MDOK	Medeo	50.87	338	i P	P	05 14 06.8	+1.0
MDOK				e		05 16 04.6	
MDOK				i S	S	05 21 22.3	+1.6
MDOK				pmax	pmax		
	comp=Z,4µm,1.7s						
MDOK				smax	smax		
	comp=E,7µm,8.3s						
MDOK				MLR	MLR		
	comp=Z,6µm,21.0s						
MDOK	Medeo	50.87	338	i P	P	05 14 06.8	+1.0
	comp=Z,4µm,1.7s						
MDOK				ePP	PP	05 16 04.7	+2.3
MDOK				i S	S	05 21 22.3	+1.6
	comp=Z,7µm,8.3s						
MDOK				eLR	LR	05 38 33.1	
	comp=Z,6µm,20.8s						
CMSA	Cobar Meteorol	50.89	129	P	P	05 14 07.3	+1.2
	baz=51,SNR=59						
AAA	Alma-Ata	50.96	338	eP	P	05 14 06.3	-0.1
AAA				e		05 16 03.7	
AAA				eS	S	05 21 21.7	-0.1
AAA				smax	smax		
	comp=E,6µm,7.5s						
AAA				MLR	MLR		
	comp=Z,6µm,21.0s						
AAA	Alma-Ata	50.96	338	eP	P	05 14 06.3	-0.1
AAA				ePP	PP	05 16 03.8	+0.7
AAA				eS	S	05 21 21.7	-0.1
	comp=Z,6µm,7.5s						
AAA				eLR	LR	05 38 49.2	
	comp=Z,6µm,20.9s						
BTK	Batken	51.03	331	PFAKE		05 14 20.0	+13
BTK				LR	LR		
	comp=Z,20µm,22.0s						
MTBS	Maitube	51.08	337⇑	iP	P	05 14 08.2	+0.9
MTBS	Maitube	51.08	337⇑	iP	P	05 14 08.2	+0.9
SONM	Songino Array	51.17	5	P	P	05 14 09.5	+1.5
	comp=Z,623nm,0.9s,baz=188,slow=8.2,SNR=852						
SONM				PcP	PcP	05 15 24.1	+0.9
	comp=Z,43nm,0.8s,baz=188,slow=3.4,SNR=2.4						
SONM				PKP2bc		05 45 05.2	
	comp=Z,1.8nm,0.8s,baz=18,slow=16,SNR=3.8						
TKM2	Tokmak 2	51.22	337	i P	P	05 14 09.6	+1.0
TKM2				pmax	pmax		
	comp=Z,328nm,1.0s						
ULN	Ulaanbaatar	51.27	6	eP	P	05 14 09.9	+1.2
	comp=Z,491nm,0.9s						
ULN				LR	LR		
	comp=Z,46µm,18.0s						
ULN	Ulaanbaatar	51.27	6c	iP	P	05 14 10.4	+1.7
ULN				pmax	pmax		
	comp=Z,428nm,0.9s						
ULN				MLR	MLR		
	comp=Z,36µm,16.0s						
ALNE	Al Ain	51.34	304	i P	P	05 14 11.9	+2.4
	SNR=10						
UOSS	Minazif	51.36	306	eP	P	05 14 10.2	+0.5
	comp=Z,46nm,1.1s						
UOSS				LR	LR		
	comp=Z,9µm,22.0s						
UOSS	Minazif	51.36	306	i P	P	05 14 10.8	+1.2
	SNR=5.8						
ASHO	Ashiyiah	51.36	305	i P	P	05 14 11.7	+1.9
	SNR=13						
HATD	Hatta, Dubai	51.37	306	i P	P	05 14 10.7	+1.0
	SNR=5.5						
AAK	Ala-Archa	51.43	336	P	P	05 14 11.1	+1.0
	comp=Z,83nm,1.1s,baz=135,slow=5.8,SNR=52						
AAK	Ala-Archa	51.43	336	eP	P	05 14 11.2	+1.0
	comp=Z,144nm,1.1s						
AAK				LR	LR		
	comp=Z,21µm,21.0s						
AAK	Ala-Archa	51.43	336	i P	P	05 14 11.4	+1.3
	SNR=40						
AAK	Ala-Archa	51.43	336c	iP	P	05 14 11.4	+1.3
AAK				pmax	pmax		
	comp=Z,72nm,1.1s						
AAK				MLR	MLR		
	comp=Z,21µm,20.0s						
INU	Inuyama	51.44	38	PFAKE		05 14 20.0	+10
INU				LR	LR		
	comp=Z,13µm,18.0s						
FRU1	Bishkek	51.52	336	PFAKE		05 14 20.0	+9.4
FRU1				LR	LR		
	comp=Z,24µm,21.0s						
RMQ	Roma	51.58	121	P	P	05 14 11.5	+0.1
	baz=52,SNR=17						
KUU	Kurty	51.76	338c	iP	P	05 14 12.6	+0.3
KUU				e		05 16 13.2	
KUU				i S	S	05 21 32.7	0.0
KUU				pmax	pmax		
	comp=Z,359nm,1.1s						
KUU				smax	smax		
	comp=E,3µm,7.1s						
KUU	Kurty	51.76	338⇑	iP	P	05 14 12.7	+0.3
	comp=E,359nm,1.1s						
KUU				ePP	PP	05 16 13.2	+2.9
KUU				i S	S	05 21 32.8	0.0
	comp=E,3µm,7.1s						
KUU				eLR	LR	05 41 52.9	
	comp=E,4µm,14.9s						
FAQ	Al Faqa, Dubai	51.77	305	i P	P	05 14 15.0	+2.2
	SNR=16						
ASUD	Al Ashush, Dub	51.93	305	i P	P	05 14 16.0	+2.0
	SNR=13						
CN2	Changchun	51.96	23	eP	P	05 14 13.3	-0.5
CN2				epP	pP	05 14 20.8	-1.0
CN2				PcP	PcP	05 15 25.6	-0.5
CN2				ePP	PP	05 16 12.2	+0.1
CN2				eS	S	05 21 33.7	-1.7
CN2				eSS	SS	05 25 08.8	-4.0
CN2				pmax	pmax		
	comp=E,500nm,1.0s						
CN2				pmax	pmax		
	comp=E,3µm,5.0s						
CN2				LR	LR		
	comp=E,52µm,15.0s						
CN2				LR	LR		
	comp=E,20µm,15.0s						
CN2				LR	LR		
	comp=E,46µm,15.0s						
TDK	Taldyqorghan	51.98	340	i P	P	05 14 13.7	-0.3
TDK				e		05 16 12.5	
TDK				i S	S	05 21 35.4	-0.3
TDK				pmax	pmax		
	comp=Z,327nm,1.1s						
TDK				smax	smax		
	comp=E,2µm,8.4s						
TDK				MLR	MLR		
	comp=Z,16µm,26.0s						
TDK	Taldyqorghan	51.98	340	i P	P	05 14 13.8	-0.3
	comp=Z,327nm,1.1s						
TDK				ePP	PP	05 16 12.5	+0.2
TDK				i S	S	05 21 35.5	-0.3
	comp=Z,2µm,8.4s						
TDK				eLR	LR	05 36 42.3	
	comp=Z,16µm,26.1s						
SGDS	Sogindy	52.05	336⇑	iP	P	05 14 15.0	+0.4
	comp=Z,818nm,5.2s						
SGDS				ePP	PP	05 16 15.6	+2.5
SGDS				i S	S	05 21 37.0	+0.1
	comp=Z,799nm,6.3s						
SGDS				eLR	LR	05 38 06.9	
	comp=Z,9µm,20.9s						
ZSN	Zaisan	52.37	347c	iP	P	05 14 18.2	+1.4
ZSN				i S	S	05 21 42.9	+1.9
ZSN				pmax	pmax		
	comp=Z,553nm,4.1s						
ZSN				smax	smax		
	comp=E,282nm,6.4s						
ZSN				MLR	MLR		
	comp=Z,1µm,18.0s						
ZSN	Zaisan	52.37	347⇑	iP	P	05 14 18.3	+1.4
	comp=Z,553nm,4.1s						
ZSN				i S	S	05 21 42.9	+1.9
	comp=Z,282nm,6.4s						
ZSN				eLR	LR	05 38 57.2	
	comp=Z,1µm,17.5s						
MK31	Makanchi Array	52.41	344	eP	P	05 14 18.1	+1.0
	comp=Z,278nm,0.9s						
MK31	Makanchi Array	52.41	344	eP	P	05 14 18.1	+1.0
MK31				pmax	pmax		
	comp=Z,278nm,0.9s						
MKAR	Makanchi Array	52.41	344	P	P	05 14 17.8	+0.6
	comp=Z,341nm,0.9s,baz=150,slow=8.1,SNR=902						
MKAR				S	S	05 21 43.5	+1.9
	comp=Z,2.9nm,0.9s,baz=152,slow=12,SNR=4.0						
MKAR				LR	LR	05 41 49.7	
	comp=Z,8µm,18.0s,baz=159,slow=42						
MKAR	Makanchi Array	52.41	344	i P	P	05 14 17.7	+0.6
MKAR				pmax	pmax		
	comp=Z,342nm,0.9s						
MAKZ	Makanchi	52.51	344	eP	P	05 14 18.5	+0.6
	comp=Z,282nm,1.0s						
MAKZ				LR	LR		
	comp=Z,11µm,18.0s						
MAKZ	Makanchi	52.51	344	eP	P	05 14 18.5	+0.6
MAKZ				pmax	pmax		
	comp=Z,282nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,11µm,18.0s						
TAS	Tashkent	52.75	331	P	P	05 14 20.2	+0.4
TAS				pmax	pmax		
	comp=Z,251nm,1.0s						
MZR	Muzera	52.80	302	i P	P	05 14 21.7	+1.3
	SNR=8.5						
MAJO	Matsushiro	52.95	38	eP	P	05 14 20.6	-0.7
	comp=Z,141nm,1.3s						
MAJO				LR	LR		
	comp=Z,13µm,20.0s						
MAJO	Matsushiro	52.95	38⇓	iP	P	05 14 21.3	0.0
MAJO				pmax	pmax		
	comp=Z,75nm,1.1s						
MAT	Matsushiro	52.95	38	P	P	05 14 20.5	-0.8
MAT				S	S	05 22 00.2	+11
MJB9	Matsu-Tunnel	52.95	38	PFAKE		05 14 30.0	+8.7
MJB9				LR	LR		
	comp=Z,14µm,20.0s						
MJAR	Matsushiro Arr	52.95	38	P	P	05 14 20.6	-0.7
	comp=Z,59nm,0.9s,baz=220,slow=7.9,SNR=92						
JBG	Jabagly	52.99	332c	iP	P	05 14 22.2	+0.5
JBG				i S	S	05 21 50.8	+0.9
JBG				pmax	pmax		
	comp=Z,124nm,1.1s						
JBG				smax	smax		
	comp=N,826nm,7.0s						
JBG				MLR	MLR		
	comp=Z,6µm,22.0s						
IUG	Iuzhnay	53.02	332c	iP	P	05 14 21.9	+0.1
IUG				eS	S	05 21 48.7	-1.5
IUG	Iuzhnay	53.02	332⇑	iP	P	05 14 21.9	+0.1
IUG				eS	S	05 21 48.7	-1.5
IUG				eLR	LR	05 37 06.5	
	comp=Z,609nm,21.9s						
EIDS	Eidsvold	53.26	119	PFAKE		05 14 40.0	+16
EIDS				LR	LR		
	comp=Z,20µm,22.0s						
EIDS	Eidsvold	53.26	119	P	P	05 14 24.5	+0.7
	baz=53,SNR=18						
MSHR	Mys Shultsa	53.41	28⇓	iP	P	05 14 25.8	+1.3
TOO	Toolangi	53.42	136	eP	P	05 14 25.6	+0.8
	comp=Z,75nm,1.0s						
TOO				LR	LR		
	comp=Z,41µm,22.0s						
TOO	Toolangi	53.42	136	eP	P	05 14 25.6	+0.8
TOO				pmax	pmax		
	comp=Z,75nm,1.0s						
TOO				MLR	MLR		
	comp=Z,41µm,22.0s						
ZAK	Zakamensk	53.52	2	eP	P	05 14 25.8	+0.5
ZAK				pmax	pmax		
	comp=Z,64nm,1.1s						
KK31	Karatay Array	53.54	333	i P	P	05 14 25.6	+0.1
KK31				pmax	pmax		
	comp=Z,20nm,0.6s						
BTLS	Baital	53.61	337c	iP	P	05 14 25.5	-0.4
BTLS				e		05 16 29.0	
BTLS				i S	S	05 21 54.9	-3.0
BTLS				pmax	pmax		
	comp=Z,50nm,1.1s						
BTLS				smax	smax		
	comp=E,287nm,6.9s						
BTLS				MLR	MLR		
	comp=Z,5µm,20.0s						
BTLS	Baital	53.61	337⇑	iP	P	05 14 25.6	-0.4
	comp=Z,50nm,1.1s						
BTLS				ePP	PP	05 16 29.1	+2.1
BTLS				i S	S	05 21 55.0	-3.0
	comp=Z,287nm,6.9s						
BTLS				eLR	LR	05 38 59.2	
	comp=Z,5µm,20.1s						
BRLS	Borolday	53.79	332	i S	S	05 21 57.3	-3.2
	comp=Z,547nm,6.0s						
DGZ	Jazzator, Alta	53.99	350c	iP	P	05 14 30.2	+1.4
DGZ				pmax	pmax		
	comp=Z,193nm,0.9s						
YNG	Young	54.09	131	P	P	05 14 30.8	+1.0
	baz=54,SNR=10						
VLA	Vladivostok	54.17	28c	iP	P	05 14 30.9	+0.8
VLA				pmax	pmax		
	comp=Z,238nm,1.0s						
MDJ	Mudanjiang	54.32	25	P	P	05 14 31.9	+0.8
MDJ				pP	pP	05 14 37.6	-1.6
MDJ				sP	sP	05 14 42.6	+0.2
MDJ				pmax	pmax		
	comp=Z,5µm,8.6s						
MDJ				LR	LR		
	comp=Z,30µm,15.5s						
MDJ				LR	LR		
	comp=Z,19µm,14.1s						
MDJ				LR	LR		
	comp=Z,43µm,13.0s						
ABPO	Ambohimpanom	54.34	249	eP	P	05 14 32.4	+0.3
	comp=Z,52nm,1.3s						
ABPO				LR	LR		
	comp=Z,17µm,19.0s						
ABPO	Ambohimpanom	54.34	249	eP	P	05 14 32.4	+0.3
ABPO				pmax	pmax		
	comp=Z,51nm,1.3s						
ABPO				MLR	MLR		
	comp=Z,17µm,19.0s						
MOY	Mondy	54.75	0	eP	P	05 14 35.8	+1.5
MOY				pmax	pmax		
	comp=Z,250nm,2.6s						
TLY	Talaya	54.83	2	eP	P	05 14 36.2	+1.4
	comp=Z,136nm,0.9s						
TLY				LR	LR		
	comp=Z,13µm,18.0s						
TLY	Talaya	54.83	2c	iP	P	05 14 36.3	+1.5
TLY				eS	S	05 22 17.2	+3.0
TLY				e		05 24 24.7	
TLY				pmax	pmax		
	comp=Z,440nm,1.1s						
TLY				MLR	MLR		
	comp=Z,70µm,14.0s						
HIA	Hailar	54.94	15	PFAKE		05 14 50.0	+14
HIA				LR	LR		
	comp=Z,38µm,18.0s						
CAN	Canberra	54.96	132	eP	P	05 14 37.5	+1.4
	comp=Z,223nm,1.2s						
CAN				LR	LR		
	comp=Z,40µm,21.0s						
CAN	Canberra	54.96	132	eP	P	05 14 37.5	+1.4
CAN				pmax	pmax		
	comp=Z,223nm,1.2s						
CAN				MLR	MLR		
	comp=Z,40µm,21.0s						
USRK	Ussuriysk Ar.	55.05	27	P	P	05 14 37.2	+0.7
	comp=Z,450nm,0.9s,baz=222,slow=5.9,SNR=460						
USRK				LR	LR	05 40 30.0	
	comp=Z,26µm,18.3s,baz=218,slow=39						
ARMA	Armidale	55.23	125	eP	P	05 14 39.8	+1.6

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             comp=Z,246nm,1.3s
ARMA                                  LR       LR
             comp=Z,16µm,20.0s
ARMA  Armidale          55.23 125     P        P          05 14 38.6 +0.4
             baz=55,SNR=15
IRK   Irkutsk           55.42   3   eP         P          05 14 40.0 +1.0
IRK                                 e                     05 22 25.4
IRK                                   pmax     pmax
             comp=Z,361nm,2.9s
MGCD  Mangrove Creek    55.76 128     P        P          05 14 42.7 +0.8
             baz=56,SNR=6.1
CIT   Chita             56.21  10   eP         P          05 14 46.4 +1.7
CIT                                 e                     05 15 39.0
CIT                                   pmax     pmax
             comp=Z,237nm,1.5s
GEYT  Alibeck           56.77 320     P        P          05 14 49.0  -0.1
             comp=Z,112nm,1.0s,baz=141,slow=7.3,SNR=68
GEYT                                  LR       LR         05 41 31.1
             comp=Z,12µm,21.1s,baz=90,slow=38
GYA0B ALIBECK ARRAY     56.77 320     PFAKE               05 15 00.0  +11
GYA0B                                 LR       LR
             comp=Z,14µm,21.0s
OTUK  Ortayu            56.93 338     P        P          05 14 49.8  -0.1
OTUK                                  pmax     pmax
             comp=Z,227nm,0.9s
KURBB Kurchatov Arra    56.93 343     P        P          05 14 50.6 +0.7
             comp=Z,224nm,0.9s,baz=162,slow=7.1,SNR=27
KURBB                                 S        S          05 22 41.9  -0.2
             comp=Z,0.5nm,0.2s,baz=155,slow=18,SNR=2.6
KURK  Kurchatov         56.99 344   eP         P          05 14 50.7 +0.5
             comp=Z,414nm,0.9s
KURK                                  LR       LR
             comp=Z,24µm,20.0s
KURK  Kurchatov         56.99 344c iP          P          05 14 50.8 +0.5
KURK                                  pmax     pmax
             comp=Z,370nm,0.9s
TAU   Tasmania Unive    57.25 140     PFAKE               05 15 10.0  +18
TAU                                   LR       LR
             comp=Z,22µm,19.0s
TEY   Ternei            57.87  30⇑iP           P          05 14 56.6 +0.1
TEY                                 eS         S          05 22 55.1 +0.5
TEY                                   pmax     pmax
             comp=E,20nm,1.0s
TEY                                   pmax     pmax
             comp=N,30nm,1.1s
TEY                                   pmax     pmax
             comp=Z,70nm,1.1s
TEY                                   MLR      MLR
             comp=N,15µm,14.0s
TEY                                   MLR      MLR
             comp=E,16µm,14.0s
TEY                                   MLR      MLR
             comp=Z,21µm,14.0s
BRZS  Berezniki         58.25 339c iP          P          05 14 58.4  -0.7
BRZS                                e                     05 17 07.2
BRZS                                i S        S          05 22 58.0  -1.5
BRZS                                  pmax     pmax
             comp=Z,217nm,2.1s
BRZS                                  smax     smax
             comp=N,311nm,5.6s
BRZS                                  MLR      MLR
             comp=Z,2µm,17.0s
BRZS  Berezniki         58.25 339⇑iP           P          05 14 58.5  -0.7
             comp=Z,217nm,2.1s
BRZS                                ePP        PP         05 17 07.2  -1.1
BRZS                                i S        S          05 22 58.1  -1.5
             comp=Z,311nm,5.6s
BRZS                                eLR        LR         05 42 12.1
             comp=Z,3µm,17.3s
DAMY  Dhamar            58.38 289   eP         P          05 15 02.5 +1.5
             comp=Z,88nm,1.0s
DAMY                                  LR       LR
             comp=Z,15µm,20.0s
ZAA0  Zalesovo Array    58.53 349     PFAKE               05 15 10.0 +9.0
ZAA0                                  LR       LR
             comp=Z,8µm,22.0s
ZALV  Zalesovo Beam     58.53 349     P        P          05 15 01.5 +0.5
             comp=Z,678nm,0.9s,baz=173,slow=5.0,SNR=589
ZALV                                  LR       LR         05 43 12.6
             comp=Z,10µm,20.9s,baz=165,slow=39
ZALV                                  PKP2bc              05 44 52.3
             comp=Z,1.1nm,0.8s,baz=322,slow=4.5,SNR=3.7
ZALV  Zalesovo Beam     58.53 349   i P        P          05 15 01.2 +0.2
ZALV                                  pmax     pmax
             comp=Z,676nm,0.9s
PATS  Pohnpei           58.55  80     PFAKE               05 15 10.0 +8.1
PATS                                  LR       LR
             comp=Z,6µm,19.0s
KLR   Kul'dur           58.90  23     P        P          05 15 04.1 +0.5
             comp=Z,193nm,0.9s,baz=234,slow=6.2,SNR=202
KLR                                   S        S          05 23 09.9 +2.0
             comp=Z,1.7nm,0.9s,baz=261,slow=19,SNR=4.4
KLR   Kul'dur           58.90  23c iP          P          05 15 04.3 +0.7
KLR                                   pmax     pmax
             comp=Z,213nm,0.9s
HNR   Honiara           59.30  99   eP         P          05 15 06.3  -0.8
             comp=Z,668nm,0.9s
HNR                                   LR       LR
             comp=Z,6µm,20.0s
HNR   Honiara           59.30  99   eP         P          05 15 06.3  -0.8
HNR                                   pmax     pmax
             comp=Z,668nm,0.9s
HNR                                   MLR      MLR
             comp=Z,6µm,20.0s
ERM   Erimo             59.38  36   eP         P          05 15 07.7 +0.6
             comp=Z,116nm,1.3s
ERM                                   LR       LR
             comp=Z,9µm,18.0s
ERM   Erimo             59.38  36⇑iP           P          05 15 07.3 +0.2
ERM                                   pmax     pmax
             comp=Z,40nm,1.0s
RAYN  Ar Rayn           59.83 300   eP         P          05 15 10.2  -0.5
             comp=Z,47nm,1.0s
RAYN                                  LR       LR
             comp=Z,16µm,18.0s
RAYN  Ar Rayn           59.83 300   i P        P          05 15 10.7   0.0
             SNR=22
RAYN  Ar Rayn           59.83 300   eP         P          05 15 10.2  -0.5
RAYN                                  pmax     pmax
             comp=Z,47nm,1.0s
RAYN                                  MLR      MLR
             comp=Z,16µm,18.0s
CRZF  Crozet Islands    60.18 217     PFAKE               05 15 30.0  +17
CRZF                                  LR       LR
             comp=Z,16µm,19.0s
ASAJ  Asahikawa         60.38  34     P        P          05 15 14.6 +0.6
             comp=Z,24nm,0.4s,baz=241,slow=8.8,SNR=19
ZEA   Zeya              61.06  18ceP           P          05 15 19.6 +1.2
ZEA                                 e                     05 15 31.5
ZEA                                 e                     05 17 31.0
ZEA                                 eS         S          05 23 40.0 +4.4
ZEA                                   pmax     pmax
             comp=N,150nm,1.0s
ZEA                                   pmax     pmax
             comp=E,120nm,1.0s
ZEA                                   pmax     pmax
             comp=Z,290nm,1.0s
ZEA                                   pmax     pmax
             comp=E,800nm,7.0s
ZEA                                   pmax     pmax
             comp=Z,4µm,7.0s
ZEA                                   pmax     pmax
             comp=N,2µm,6.0s
ZEA                                   pmax     pmax
             comp=Z,1µm,7.0s
ZEA                                   pmax     pmax
             comp=E,300nm,5.0s
ZEA                                   pmax     pmax
             comp=N,600nm,6.0s
ZEA                                   smax     smax
             comp=E,2µm,13.0s
ZEA                                   smax     smax
             comp=N,4µm,12.0s
ZEA                                   MLR      MLR
             comp=E,22µm,15.0s
BVAR  Borovoye Array    61.57 340     P        P          05 15 21.7  -0.2
             comp=E,101nm,0.9s,baz=145,slow=9.6,SNR=4.8
BRVK  Borovoye          61.64 340   eP         P          05 15 21.7  -0.6
             comp=E,105nm,0.8s
BRVK                                  LR       LR
             comp=Z,13µm,22.0s
BRVK  Borovoye          61.64 340⇑iP           P          05 15 22.1  -0.2
BRVK                                  pmax     pmax
             comp=Z,112nm,1.0s
LHI   Lord Howe Isla    61.66 124     PFAKE               05 15 40.0  +17
LHI                                   LR       LR
             comp=Z,13µm,21.0s
BOD   Bodaibo           61.88   8   eP         P          05 15 24.2 +0.4
BOD                                   pmax     pmax
             comp=Z,169nm,1.1s
ANKE  Ethiopia-Afar     61.91 283   eP         P          05 15 30.5 +5.1
ANKE  Ethiopia-Afar     61.91 283   eP         P          05 15 30.5 +5.1
ANKE  Ethiopia-Afar     61.91 283   eP         P          05 15 30.5 +5.1
GRNR  Gornyy            62.00  25   eP         P          05 15 25.2 +0.4
GRNR                                  pmax     pmax
             comp=Z,84nm,1.0s
YUK   Yuzh-Kuril'sk     62.18  35   eP         P          05 15 15.1  -11
YUK                                 e                     05 15 21.1
YUK                                 eS         S          05 23 48.8  -1.3
YUK                                   pmax     pmax
             comp=Z,576nm,1.4s
YUK                                   pmax     pmax
             comp=Z,435nm,1.2s
YUK                                   pmax     pmax
             comp=E,132nm,0.2s
YUK                                   pmax     pmax
             comp=N,158nm,0.7s
DESE  Dese              62.25 284   i P        P          05 15 35.7 +8.1
DESE                                eS         S          05 23 50.7  -1.9
DESE  Dese              62.25 284   i P        P          05 15 35.7 +8.1
DESE                                eS         S          05 23 50.7  -1.9
DESE  Dese              62.25 284   i P        P          05 15 35.7 +8.1
DESE                                eS         S          05 23 50.7  -1.9
YSS   Yuzh-Sakhalins    62.30  31   eP         P          05 15 27.3 +0.4
             comp=N,347nm,1.1s
YSS                                   LR       LR
             comp=Z,9µm,19.0s
YSS   Yuzh-Sakhalins    62.30  31αiP           P          05 15 27.5 +0.6
YSS                                 e*SP       pP         05 15 35.8 +0.7
YSS                                 e                     05 17 45.9
YSS                                 eS         S          05 23 49.7  -1.8
YSS                                 ePPS       PPS        05 24 08.7
YSS                                   pmax     pmax
             comp=Z,3µm,6.5s
YSS                                   pmax     pmax
             comp=E,1µm,6.1s
YSS                                   pmax     pmax
             comp=Z,240nm,1.1s
AAE   Adis Abeba        62.77 282   i P        P          05 15 39.3 +8.2
AAE                                 i S        S          05 24 06.6 +7.4
AAE   Adis Abeba        62.77 282   i P        P          05 15 39.3 +8.2
AAE                                 i S        S          05 24 06.6 +7.4
AAE   Adis Abeba        62.77 282   i P        P          05 15 39.3 +8.2
AAE                                 i S        S          05 24 06.6 +7.4
FURI  Furi              62.83 282     PFAKE               05 15 40.0 +8.5
FURI                                  LR       LR
             comp=Z,14µm,20.0s
AB31  Akbulak array     63.02 331   i P        P          05 15 31.3  -0.4
AB31                                  pmax     pmax
             comp=Z,355nm,1.0s
ABKAR Akbulak array     63.02 331   eP         P          05 15 31.4  -0.2
             comp=Z,286nm,0.8s
CASY  Casey             63.26 175   eP         P          05 15 33.4 +0.5
             comp=Z,88nm,1.1s
CASY                                  LR       LR
             comp=Z,27µm,20.0s
KMBO  Kilima Mbogo      63.26 270     P        P          05 15 35.0 +0.7
             comp=Z,11nm,1.1s,baz=50,slow=9.3,SNR=11
KMBO                                  LR       LR         05 37 35.0
             comp=Z,8µm,21.8s,baz=80,slow=31
KMBO  Kilima Mbogo      63.26 270   eP         P          05 15 35.2 +0.9
             comp=Z,127nm,1.8s
KMBO                                  LR       LR
             comp=Z,8µm,18.0s
KMBO  Kilima Mbogo      63.26 270   i P        P          05 15 35.4 +1.2
             SNR=10
KMBO  Kilima Mbogo      63.26 270   eP         P          05 15 35.2 +0.9
KMBO                                  pmax     pmax
             comp=Z,127nm,1.8s
KMBO                                  MLR      MLR
             comp=Z,8µm,18.0s
LKRN  Lenkeran, Azer    63.38 317     P        P          05 15 34.5 +0.2
KUR   Kuril'sk          64.04  35c iP          P          05 15 39.2 +0.7
KUR                                 e                     05 16 11.3
KUR                                 e                     05 18 05.3
KUR                                 eS         S          05 24 18.6 +5.2
KUR                                 e                     05 25 28.5
KUR                                   pmax     pmax
             comp=Z,3µm,5.8s
KUR                                   pmax     pmax
             comp=Z,410nm,1.1s
AKTO  Aktyubinsk        64.74 331     P        P          05 15 42.4  -0.6
             comp=Z,88nm,1.1s,baz=129,slow=7.1,SNR=95
TYV   Tymovskoe         64.84  28   eP         P          05 15 44.9 +1.3
TYV                                 eS         S          05 24 27.3 +4.2
TYV                                   pmax     pmax
             comp=Z,57nm,1.5s
TYV                                   pmax     pmax
             comp=Z,4µm,6.7s
TYV                                   smax     smax
             comp=E,2µm,7.3s
AKT   Akhty             65.43 319   eP         P          05 15 48.1 +0.3
AKT                                 e                     05 16 19.9
AKT                                   pmax     pmax
             comp=Z,153nm,1.2s
MNGR  Mingechevir, A    65.52 318     P        P          05 15 48.6 +0.4
NKL   Nikolayevsk       65.54  25⇓iP           P          05 15 48.2 +0.2
NKL                                 e                     05 16 17.9
NKL                                 e                     05 18 11.4
NKL                                 eS         S          05 24 27.2  -4.3
NKL                                 e                     05 25 40.9
NKL                                   pmax     pmax
             comp=N,40nm,0.9s
NKL                                   pmax     pmax
             comp=Z,111nm,0.9s
NKL                                   pmax     pmax
             comp=E,30nm,1.0s
NKL                                   pmax     pmax
             comp=Z,301nm,4.7s
NKL                                   MLR      MLR
             comp=E,15µm,15.0s
NKL                                   MLR      MLR
             comp=N,14µm,17.0s
NKL                                   MLR      MLR
             comp=Z,27µm,16.0s
SEKA  Sheki             65.65 318     P        P          05 15 49.1   0.0
NAX   Nakhchivan        65.87 316     P        P          05 15 50.6   0.0
GANJ  Ganja             65.97 317     P        P          05 15 51.4 +0.2
ZKTA  Zakatala          66.23 319     P        P          05 15 53.3 +0.5
MAK   Makhachkala       66.29 320   eP         P          05 15 50.8  -2.3
MAK                                 e                     05 18 15.9
MAK                                 ePPP       PPP        05 19 52.4
MAK                                 eS         S          05 24 37.6  -3.5
MAK                                 eSS        SS         05 28 57.4  -0.4
MAK                                   pmax     pmax
             comp=Z,131nm,1.1s
CUKT  Cukurca           66.40 313     P        P          05 15 55.0 +0.9
HAKT  HAKKARI           66.45 313   i P        P          05 15 55.7 +1.1
HAKT                                  IAML_P
             comp=Z,57nm,0.4s
DZM   Mont Dzumac       66.47 113   eP         P          05 15 55.2 +0.4
             comp=Z,109nm,1.4s
DZM                                 eS         S          05 24 39.9  -4.3
             comp=Z,12µm,26.6s
DZM   Mont Dzumac       66.47 113   eLR        LR         05 35 51.5
             comp=Z,23µm,24.1s
DZM   Mont Dzumac       66.47 113   eP         P          05 15 55.1 +0.2
             comp=Z,391nm,1.9s
DZM                                   LR       LR
             comp=Z,15µm,19.0s
GNI   Garni             66.82 316     P        P          05 15 57.4 +0.5
             comp=Z,34nm,1.1s,baz=139,slow=1.7,SNR=19
GNI   Garni             66.82 316   eP         P          05 15 57.1 +0.3
             comp=Z,177nm,1.1s
GNI                                   LR       LR
             comp=Z,4µm,22.0s
GNI   Garni             66.82 316   i P        P          05 15 57.6 +0.8
             SNR=8.6
GNI   Garni             66.82 316c iP          P          05 15 57.3 +0.5
GNI                                   pmax     pmax
             comp=Z,96nm,1.1s
GNI                                   MLR      MLR
             comp=Z,20µm,24.0s
CLDR  Caldiran          66.96 315   i P        P          05 15 58.5 +0.7
CLDR  Caldiran          66.96 315   i P        P          05 15 59.6 +1.8
CLDR                                  IAML_P
             comp=Z,204nm,0.4s
VANB  Van               67.11 314   i P        P          05 15 58.8 +0.2
VMUR  Van-Muradiye      67.14 315   i P        P          05 16 00.9 +2.0
VMUR                                  IAML_P
             comp=Z,136nm,0.3s
DVE   Vedeno            67.18 320c iP          P          05 15 59.1 +0.2
DVE                                   pmax     pmax
             comp=Z,238nm,1.0s
AKDM  Akdamar-Van       67.29 314   i P        P          05 16 01.1 +1.2
DYDN  Diyadin           67.29 315   i P        P          05 16 01.8 +1.9
DYDN                                  IAML_P
             comp=Z,262nm,0.1s
PINNC Pines Island,     67.45 113     PFAKE               05 16 10.0 +9.1
PINNC                                 LR       LR
             comp=Z,12µm,20.0s
BTNK  Botanikuri        67.46 318     P        P          05 16 02.0 +1.3
BTNK  Botanikuri        67.46 318   i P        P          05 16 02.1 +1.4
BTNK                                  IAML_P
             comp=Z,122nm,0.1s
GROC  Groznyy           67.51 320   eP         P          05 15 57.5  -3.4
GROC                                e                     05 18 25.9
GROC                                eS         S          05 24 52.0  -3.8
GROC                                  pmax     pmax
             comp=Z,232nm,0.9s
TBLG  Delisi            67.53 318   eP         P          05 16 01.9 +0.8
             comp=Z,203nm,1.0s
TBLG  Delisi            67.53 318   eP         P          05 16 01.9 +0.8
TBLG                                  pmax     pmax
             comp=Z,203nm,1.0s
TBLG  Delisi            67.53 318   i P        P          05 16 02.7 +1.6
TBLG                                  IAML_P
             comp=Z,260nm,0.3s
ADCV  BITLIS_Adilcev    67.67 314   i P        P          05 16 04.1 +1.9
ADCV                                  IAML_P
             comp=Z,32nm,0.1s
AGRB  Hanur-Agry        67.80 315   i P        P          05 16 03.8 +0.8
EAK   Akyaka            67.83 317   i P        P          05 16 05.4 +2.2
EAK                                   IAML_P
             comp=Z,2µm,1.0s
TUTA  Tutak             67.85 315   i P        P          05 16 04.7 +1.3
TUTA                                  IAML_P
             comp=Z,761nm,0.6s
MARNC Mare, Loyalty     67.88 112   eP         P          05 16 04.1 +0.4
             comp=Z,805nm,1.9s
MARNC                                 LR       LR
             comp=Z,11µm,20.0s
SRTM  Siirt_Merkez      67.92 313   i P        P          05 16 04.5 +0.7
SRTM                                  IAML_P
             comp=Z,377nm,0.5s
MLAZ  Malazgirt-MUS     67.93 315   i P        P          05 16 04.5 +0.6
SVE   Sverdlovsk        68.07 338d iP          P          05 16 04.6 +0.4
SVE                                 ePPP       PPP        05 20 16.0
SVE                                 eS         S          05 25 01.0  -1.1
SVE                                 e                     05 25 58.0
SVE                                   pmax     pmax
             comp=Z,344nm,1.1s
SVE                                   MLR      MLR
             comp=Z,14µm,21.0s
KARS  Kars              68.17 316   i P        P          05 16 06.6 +1.2
KARS  Kars              68.17 316     P        P          05 16 06.6 +1.2
AKH   Akhalkalaki       68.22 317   eP         P          05 16 06.2 +0.5
             comp=Z,71nm,1.1s
AKH   Akhalkalaki       68.22 317⇓iP           P          05 16 06.6 +0.9
AKH   Akhalkalaki       68.22 317   eP         P          05 16 06.2 +0.5
AKH                                   pmax     pmax
             comp=Z,71nm,1.1s
MARD  Mardin            68.50 312   i P        P          05 16 08.4 +1.0
MARD                                  IAML_P
             comp=Z,2µm,0.6s
MUSM  Mu-Merkez         68.50 314   i P        P          05 16 08.3 +0.8
MUSM                                  IAML_P
             comp=Z,332nm,0.7s
SVAN  Silvan-Diyarba    68.51 313   i P        P          05 16 08.6 +1.2
ZEI   Tsey              68.55 319   eP         P          05 16 07.0  -0.8
ZEI                                 eS         S          05 25 08.7  -0.1
ZEI                                   pmax     pmax
             comp=Z,568nm,6.9s
ZEI                                   pmax     pmax
             comp=Z,114nm,0.9s
ZEI                                   pmax     pmax
             comp=E,130nm,1.0s
ZEI                                   pmax     pmax
             comp=N,85nm,0.8s
ARU   Arti              68.60 336     P        P          05 16 07.3  -0.1
             comp=N,46nm,0.9s,baz=141,slow=4.3,SNR=89
ARU   Arti              68.60 336   eP         P          05 16 06.7  -0.7
             comp=N,179nm,1.0s
ARU                                   LR       LR
             comp=Z,14µm,20.0s
ARU   Arti              68.60 336c iP          P          05 16 07.2  -0.3
ARU                                                       05 16 33.1
ARU                                   PPP      PPP        05 20 13.1
ARU                                   S        S          05 25 10.3 +2.0
ARU                                                       05 26 07.2
ARU                                   SS       SS         05 29 32.5  -0.5
ARU                                   pmax     pmax
             comp=Z,213nm,1.1s
ARU                                   MLR      MLR
             comp=Z,14µm,20.0s
SENK  Senkaya-Erzuru    68.65 316   i P        P          05 16 09.6 +1.2
VRTB  Varto-Mus         68.72 314   i P        P          05 16 11.1 +2.3
WAKE  Wake Island       68.72  68     PFAKE               05 16 20.0  +11
WAKE                                  LR       LR
             comp=Z,4µm,19.0s
KOPR  Koprukoy-ERZUR    68.77 315   i P        P          05 16 09.9 +0.8
MAZI  Mazidag           68.80 312   i P        P          05 16 09.7 +0.4
BNGL  BINGOL            68.85 314   i P        P          05 16 12.9 +3.1
YAK   Yakutsk           68.86  14   eP         P          05 16 08.3  -0.6
             comp=Z,458nm,0.9s
YAK                                   LR       LR
             comp=Z,31µm,18.0s
YAK   Yakutsk           68.86  14c iP          P          05 16 08.7  -0.2
YAK                                 e*PP       pP         05 16 18.1 +0.9
YAK                                 e                     05 16 32.6
YAK                                 e                     05 18 40.6
YAK                                 eS         S          05 25 10.1  -1.0
YAK                                 e*SS       sS         05 25 35.4  +11
NCK   Nalchik           69.07 319⇓iP           P          05 16 11.6 +0.9
NCK                                   pmax     pmax
             comp=Z,102nm,0.9s
DAGI  Agillar           69.16 316   i P        P          05 16 12.5 +1.0
DAGI                                  IAML_P
             comp=Z,459nm,0.8s
MAW   Mawson            69.17 195     P        P          05 16 11.6 +0.7
             comp=Z,8.9nm,1.0s,baz=33,slow=6.7,SNR=11
MAW                                   LR       LR         05 40 06.2
             comp=Z,19µm,21.9s,baz=33,slow=30
MAW   Mawson            69.17 195     PFAKE               05 16 20.0 +9.2
MAW                                   LR       LR
             comp=Z,4µm,22.0s
MAW   Mawson            69.17 195     P        P          05 16 11.7 +0.9
             baz=69,SNR=7.7
HANI  Diyarbakir_Han    69.19 313   i P        P          05 16 12.9 +1.2
HANI                                  IAML_P
             comp=Z,573nm,0.3s
BNGB  Bingl             69.21 314   i P        P          05 16 12.5 +0.7
DYBB  Diyarbakir        69.21 313   i P        P          05 16 12.8 +1.0
DBAD  Bademkaya         69.29 316   i P        P          05 16 13.3 +1.0
DBAD                                  IAML_P
             comp=Z,1µm,1.0s
BINT  Bingol            69.30 314     P        P          05 16 12.5 +0.1
DBOC  Borcka            69.44 317   i P        P          05 16 14.2 +1.1
DBOC                                  IAML_P
             comp=Z,62nm,0.1s
YEDI  Yedisu-Bingol     69.47 314   i P        P          05 16 14.2 +0.7
BCA   Borcka            69.52 317   i P        P          05 16 13.1  -0.4
BCA   Borcka            69.52 317⇑iP           P          05 16 13.7 +0.2
BATM  Batumi            69.53 317⇑iP           P          05 16 13.7 +0.1
BATM  Batumi            69.53 317     P        P          05 16 14.3 +0.7
BATM  Batumi            69.53 317   i P        P          05 16 14.6 +1.0
NEY   Neytrino          69.53 319⇑iP           P          05 16 14.9 +1.1
NEY                                   pmax     pmax
             comp=Z,12nm,1.0s
KBZ   Khabaz            69.63 319     P        P          05 16 14.4 +0.4
             comp=Z,76nm,0.9s,baz=97,slow=5.6,SNR=59
KBZ                                   PKP2bc              05 44 23.0
             comp=Z,0.6nm,0.5s,baz=249,slow=18,SNR=1.7
PYA1  Pyatigorsk        69.64 320⇑iP           P          05 16 14.2  -0.1
PYA1                                  pmax     pmax
             comp=Z,3.0nm,1.0s
KOPT  Kop Dagi          69.73 315   i P        P          05 16 17.0 +1.7
KOPT                                  IAML_P
             comp=Z,2µm,0.1s
ASF   Jabal al Asfar    69.77 306     P        P          05 16 16.6 +1.2
             comp=Z,37nm,1.1s,baz=1.8,slow=0.4,SNR=16
SHA1  Shidzhatmaz       69.79 319   i P        P          05 16 15.8 +0.4
MBAR  Mbarara           69.79 271   eP         P          05 16 16.5 +0.5
             comp=Z,90nm,1.6s
MBAR                                  LR       LR
             comp=Z,6µm,18.0s
MBAR  Mbarara           69.79 271⇑iP           P          05 16 17.2 +1.2
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MBAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KVAR	Kislovodsk Arr	69.86	319	P	P	05 16 17.4	+1.7
	comp=Z,28nm,1.1s,baz=107,slow=19,SNR=22						
KVAR				S	S	05 25 23.0	-0.9
	comp=Z,1.8nm,0.4s,baz=167,slow=18,SNR=6.8						
KIV	Kislovodsk	69.86	319	eP	P	05 16 15.7	+0.1
	comp=Z,134nm,1.2s						
KIV				LR	LR		
	comp=Z,4µm,20.0s						
KIV	Kislovodsk	69.86	319	⇑iP	P	05 16 15.8	+0.1
KIV	Kislovodsk	69.86	319	i P	P	05 16 16.1	+0.4
	SNR=23						
KIV	Kislovodsk	69.86	319	eP	P	05 16 16.1	+0.4
KIV				e		05 18 50.6	
KIV				ePPP	PPP	05 20 32.0	
KIV				eS	S	05 25 24.9	+0.9
KIV				eSS	SS	05 29 55.4	+2.1
KIV				pmax	pmax		
	comp=Z,255nm,1.0s						
KIV				pmax	pmax		
	comp=Z,1µm,4.7s						
KIV				MLR	MLR		
	comp=Z,9µm,17.0s						
SVRC	Sivrice-ELAZID	69.97	313	i P	P	05 16 16.1	-0.5
TNCL	Tunceli-Merkez	70.07	314	i P	P	05 16 18.6	+1.4
TNCL				IAML_P			
	comp=Z,278nm,0.4s						
ERZN	Erzincan	70.12	314	P	P	05 16 18.6	+1.2
GOF	Gofitskoye	70.12	321	⇑iP	P	05 16 17.2	+0.1
GOF				eS	S	05 25 25.8	-0.9
GOF				pmax	pmax		
	comp=Z,170nm,1.0s						
GOF				smax	smax		
	comp=N,119nm,1.6s						
DOMR	Dombai	70.28	318	⇑iP	P	05 16 19.2	+0.8
DOMR				pmax	pmax		
	comp=Z,20nm,1.1s						
EZC	Erzincan	70.45	314	P	P	05 16 18.6	-0.9
KTUT	Trabzon	70.62	316	i P	P	05 16 21.2	+0.9
KELT	Kelkit	70.66	315	i P	P	05 16 21.8	+0.9
KELT				IAML_P			
	comp=Z,328nm,0.6s						
EIL	Elat	70.66	303	P	P	05 16 21.5	+0.7
	comp=Z,80nm,0.9s,baz=87,slow=4.0,SNR=18						
GAZ	Gaziantep	71.11	311	i P	P	05 16 24.5	+1.0
MMAI	Mount Meron Ar	71.22	306	P	P	05 16 25.2	+1.0
	comp=Z,46nm,0.9s,baz=99,slow=8.5,SNR=28						
DCZ	Deep Cove	71.38	137	PFAKE		05 16 40.0	+15
DCZ				LR	LR		
	comp=Z,8µm,20.0s						
DARE	Darende-Malaty	71.38	312	i P	P	05 16 25.8	+0.7
SKR	Severo-Kuril's	71.64	34	eP	P	05 16 26.9	+0.7
SKR				e		05 19 09.5	
SKR				eS	S	05 25 46.7	+2.5
SKR				pmax	pmax		
	comp=Z,327nm,0.9s						
SKR				pmax	pmax		
	comp=Z,4µm,18.6s						
SOC	Sochi	71.67	318	c iP	P	05 16 25.7	-0.8
SOC				e		05 19 02.8	
SOC				ePPP	PPP	05 20 49.6	
SOC				i S	S	05 25 41.7	-3.0
SOC				eSS	SS	05 30 24.5	+3.7
SOC				pmax	pmax		
	comp=Z,88nm,0.9s						
SOC				MLR	MLR		
	comp=Z,4µm,20.0s						
MLZ	Mavora Lakes	72.01	137	PFAKE		05 16 40.0	+11
MLZ				LR	LR		
	comp=Z,9µm,21.0s						
WHZ	Wether Hill Ro	72.02	137	PFAKE		05 16 40.0	+11
WHZ				LR	LR		
	comp=Z,12µm,20.0s						
LSZ	Lusaka	72.11	255	P	P	05 16 30.0	+0.1
	baz=92,slow=5.2						
LSZ	Lusaka	72.11	255	eP	P	05 16 29.4	-0.5
	comp=Z,102nm,1.5s						
LSZ				LR	LR		
	comp=Z,14µm,19.0s						
CEYT	Ceyhan	72.17	310	i P	P	05 16 30.6	+0.9
SVSK	Karacayir	72.20	314	i P	P	05 16 30.6	+0.8
KOZT	Kozan	72.25	311	i P	P	05 16 30.6	+0.3
WKZ	Wanaka	72.50	136	PFAKE		05 16 40.0	+8.4
WKZ				LR	LR		
	comp=Z,21µm,20.0s						
TARA	Tarawa	72.51	88	PFAKE		05 16 40.0	+7.8
TARA				LR	LR		
	comp=Z,4µm,21.0s						
TOKT	Tokat	72.66	314	i P	P	05 16 33.2	+0.5
BNN	Bunyan	72.68	312	i P	P	05 16 33.1	+0.2
KARA	Karaisali	72.77	311	i P	P	05 16 33.9	+0.6
FOZ	Fox Glacier	72.78	135	PFAKE		05 16 50.0	+17
FOZ				LR	LR		
	comp=Z,31µm,22.0s						
EREN	Erenkoy	72.93	309	i P	P	05 16 37.0	+2.7
MERS	Mersin	73.06	310	i P	P	05 16 35.3	+0.2
LBZ	Lake Benmore	73.22	135	PFAKE		05 16 50.0	+14
LBZ				LR	LR		
	comp=Z,17µm,20.0s						
KVT	Kavak	73.28	315	i P	P	05 16 36.7	+0.4
KVT	Kavak	73.28	315	P	P	05 16 36.6	+0.3
YOZ	Yozgat	73.32	313	i P	P	05 16 39.9	+3.2
CSS	Mathiatis	73.43	308	PFAKE		05 16 50.0	+13
CSS				LR	LR		
	comp=Z,11µm,20.0s						
CSS	Mathiatis	73.43	308	P	P	05 16 37.7	+0.4
	comp=Z,28nm,1.5s						
IKL	Isikli	73.51	309	i P	P	05 16 37.7	0.0
KEBE	Keben-Mersin	73.55	309	i P	P	05 16 38.5	+0.5
ANN	Anapa	73.65	319	eP	P	05 16 36.7	-1.6
ANN				e*PP	pP	05 16 42.8	-3.9
ANN				e		05 19 21.0	
ANN				eS	SKiKP	05 26 03.9	-2.9
ANN				eSS	SS	05 30 53.6	+2.6
ANN				pmax	pmax		
	comp=E,30nm,1.3s						
ANN				pmax	pmax		
	comp=Z,61nm,1.2s						
ANN				pmax	pmax		
	comp=N,28nm,1.3s						
ANN				pmax	pmax		
	comp=N,228nm,6.8s						
ANN				pmax	pmax		
	comp=Z,949nm,6.8s						
ANN				pmax	pmax		
	comp=E,188nm,6.8s						
ODZ	Otahua Downs	73.68	136	PFAKE		05 16 50.0	+11
ODZ				LR	LR		
	comp=Z,15µm,20.0s						
PEA0B	Petropavlovsk-	73.69	32	PFAKE		05 16 50.0	+12
PEA0B				LR	LR		
	comp=Z,6µm,20.0s						
PETK	Petropavlovsk-	73.69	32	P	P	05 16 38.4	0.0
	comp=Z,56nm,0.8s,baz=213,slow=3.2,SNR=38						
PETK				LR	LR	05 50 30.6	
	comp=Z,4µm,20.5s,baz=250,slow=37						
RPZ	Rata Peaks	73.70	135	PFAKE		05 16 50.0	+11
RPZ				LR	LR		
	comp=Z,32µm,22.0s						
KIRV	Kirov	73.76	335	P	P	05 16 39.0	+0.3
	comp=Z,232nm,1.0s,baz=130,slow=3.7,SNR=55						
KIRV	Kirov	73.76	335	P	P	05 16 39.0	+0.3
LEF	Lefka	73.82	308	i P	P	05 16 40.0	+0.5
LEF	Lefka	73.82	308	⇓iP	P	05 16 39.8	+0.3
BERE	Bereket-Mersin	73.90	309	i P	P	05 16 40.6	+0.4
TEKE	Tekeli-Mersin	73.93	309	i P	P	05 16 40.3	+0.1
MA2	Magadan	73.99	24	P	P	05 16 40.4	+0.4
	comp=Z,99nm,0.9s,baz=215,slow=5.7,SNR=25						
MA2	Magadan	73.99	24	eP	P	05 16 39.9	-0.1
	comp=Z,155nm,1.0s						
MA2				LR	LR		
	comp=Z,13µm,20.0s						
MA2	Magadan	73.99	24	c iP	P	05 16 40.7	+0.7
MA2				pmax	pmax		
	comp=Z,103nm,0.9s						
CORM	Corum	74.00	313	i P	P	05 16 40.9	+0.2
DIKM	Dikmen	74.03	315	i P	P	05 16 40.7	+0.1
DIKM	Dikmen	74.03	315	⇑iP	P	05 16 40.4	-0.2
PET	Petropavlovsk	74.16	32	eP	P	05 16 41.1	+0.1
	comp=Z,154nm,0.8s						
PET				LR	LR		
	comp=Z,11µm,21.0s						
PET	Petropavlovsk	74.16	32	ceP	P	05 16 41.3	+0.2
PET				i		05 19 29.4	
PET				eS	S	05 26 10.7	-2.0
PET				eSS	SS	05 31 03.9	+5.5
PET				pmax	pmax		
	comp=Z,228nm,0.9s						
PET				pmax	pmax		
	comp=Z,3µm,17.4s						
PET				pmax	pmax		
	comp=Z,3µm,17.8s						
PET				MLR	MLR		
	comp=Z,12µm,21.0s						
OUZ	Omahuta	74.28	126	PFAKE		05 16 50.0	+7.7
OUZ				LR	LR		
	comp=Z,30µm,20.0s						
OUZ	Omahuta	74.28	126	P	P	05 16 48.0	+5.7
OXZ	Oxford	74.33	134	PFAKE		05 16 50.0	+7.6
OXZ				LR	LR		
	comp=Z,27µm,22.0s						
LTZ	Lake Taylor	74.40	133	PFAKE		05 17 00.0	+17
LTZ				LR	LR		
	comp=Z,36µm,22.0s						
BRTR	Keskin Array B	74.58	313	P	P	05 16 43.2	-0.8
	comp=Z,25nm,0.8s,baz=126,slow=6.3,SNR=71						
BRTR				LR	LR	05 51 59.9	
	comp=Z,6µm,20.9s,baz=117,slow=38						
THZ	Tophouse	74.69	132	eP	P	05 16 46.5	+1.9
	comp=Z,116nm,1.1s						
THZ				LR	LR		
	comp=Z,23µm,22.0s						
CRLZ	Canterbury Las	74.79	134	PFAKE		05 17 00.0	+15
CRLZ				LR	LR		
	comp=Z,23µm,22.0s						
MQZ	McQueen's Vall	74.84	134	PFAKE		05 17 00.0	+15
MQZ				LR	LR		
	comp=Z,20µm,21.0s						
CANT	Cankiri	74.87	313	i P	P	05 16 45.9	+0.3
ILGA	Ilgaz	74.93	314	PFAKE		05 17 00.0	+14
ILGA				LR	LR		
	comp=Z,7µm,20.0s						
VORD	Divnogorie	74.96	325	eP	P	05 16 44.9	-0.9
VORD				eS	SKiKP	05 26 14.7	+6.1
VORD				pmax	pmax		
	comp=Z,130nm,0.9s						
VORD				smax	smax		
	comp=N,260nm,5.5s						
WCZ	Waipu Caves	74.98	126	P	P	05 16 50.5	+4.2
BZK	Bozkurt	75.02	315	i P	P	05 16 46.7	+0.4
BZK	Bozkurt	75.02	315	⇑iP	P	05 16 46.5	+0.2
KONT	Konya--Tatoy	75.02	311	i P	P	05 16 46.8	+0.3
LADK	Ladik-KONYA	75.08	311	i P	P	05 16 46.8	-0.2
VSR	Storozhevoye	75.14	325	eP	P	05 16 45.9	-0.9
VSR				eS	S	05 26 17.1	-6.6
VSR				pmax	pmax		
	comp=Z,220nm,0.9s						
VSR				smax	smax		
	comp=E,270nm,7.0s						
VSR				MLR	MLR		
	comp=Z,7µm,21.0s						
ANTO	Ankara	75.25	313	eP	P	05 16 47.0	-0.8
	comp=Z,98nm,1.1s						
ANTO	Ankara	75.25	313	⇓iP	P	05 16 47.1	-0.8
ANTO	Ankara	75.25	313	eP	P	05 16 47.1	-0.8
ANTO				pmax	pmax		
	comp=Z,97nm,1.1s						
KHZ	Kahutara	75.26	133	PFAKE		05 17 00.0	+12
KHZ				LR	LR		
	comp=Z,26µm,22.0s						
LOD	Lodumlu	75.28	313	i P	P	05 16 47.9	-0.1
VORR	Voronezh	75.30	326	eP	P	05 16 47.0	-0.8
VORR				pmax	pmax		
	comp=Z,300nm,1.2s						
BOSA	Boshof	75.50	241	P	P	05 16 49.3	-0.3
	comp=Z,14nm,1.0s,baz=84,slow=7.7,SNR=9.3						
BOSA				LR	LR	05 46 16.1	
	comp=Z,8µm,18.1s,baz=88,slow=33						
KIZT	Kizilcal	75.64	311	i P	P	05 16 49.5	-0.7
HIZ	Hauiti	75.70	129	PFAKE		05 17 00.0	+10
HIZ				LR	LR		
	comp=Z,15µm,20.0s						
LPSR	Galich'ya Gora	75.86	326	eP	P	05 16 50.5	-0.4
LPSR				eS	S	05 26 26.6	-5.0
LPSR				pmax	pmax		
	comp=Z,180nm,1.0s						
LPSR				smax	smax		
	comp=N,3µm,7.2s						
KURC	Kurucasile-Bar	75.87	314	P	P	05 16 51.0	-0.3
SIM	Simferopol'	75.91	318	ceP	P	05 16 51.3	-0.1
SIM				eS	S	05 26 29.0	-3.6
SIM				pmax	pmax		
	comp=Z,59nm,0.9s						
SIM				pmax	pmax		
	comp=Z,500nm,9.1s						
SNZO	South Karori	75.96	132	PFAKE		05 17 00.0	+8.2
SNZO				LR	LR		
	comp=Z,29µm,22.0s						
SEVA	Sevastopol	76.06	317	⇑iP	P	05 16 51.5	-0.8
SVRH	Sivrihisar-ESK	76.07	312	i P	P	05 16 52.4	-0.2
KORT	Korkueli	76.30	309	i P	P	05 16 53.8	-0.2
WTVZ	West Tongariro	76.34	129	P	P	05 16 55.6	+1.4
WHVZ	Whangaehu Hut	76.36	130	P	P	05 16 56.5	+2.0
ISP	Isparta	76.38	310	PFAKE		05 17 10.0	+16
ISP				LR	LR		
	comp=Z,8µm,20.0s						
CIFT	Cifteler, Eski	76.39	312	i P	P	05 16 53.4	-1.0
MOVZ	Moawhango	76.50	130	P	P	05 17 03.9	+8.9
SHUT	Suhut-Afyon	76.55	311	i P	P	05 16 55.2	-0.2
MDUB	Mudurnu	76.59	313	i P	P	05 16 55.5	0.0
MDUB	Mudurnu	76.59	313	PFAKE		05 17 10.0	+14
MDUB				LR	LR		
	comp=Z,31µm,21.0s						
SEY	Seymchan	76.62	22	P	P	05 16 55.8	+0.7
	comp=Z,36nm,0.8s,baz=238,slow=5.5,SNR=39						
SEY	Seymchan	76.62	22	⇑iP	P	05 16 56.0	+0.9
AKAS	Kas	76.69	308	i P	P	05 16 54.1	-2.1
BHHZ	Black Hill Sta	76.75	130	P	P	05 16 56.9	+0.4
SYO	Syowa Base	76.82	199	⇑eP	P	05 16 55.0	-1.1
SYO	Syowa Base	76.82	199	⇓epP	pP	05 17 04.2	-0.3
SYO	Syowa Base	76.82	199	⇑esP	sP	05 17 07.8	+0.3
SRCK	Saricakaya, Es	76.89	312	i P	P	05 16 56.9	-0.2
BFZ	Birch Farm	77.03	131	PFAKE		05 17 10.0	+12
BFZ				LR	LR		
	comp=Z,30µm,22.0s						
TIXI	Tiksi	77.04	9	P	P	05 16 57.0	-0.3
	comp=Z,110nm,0.9s,baz=151,slow=2.5,SNR=51						
TIXI				PP	PP	05 19 50.4	-0.5
	comp=Z,36nm,1.0s,baz=177,slow=3.7,SNR=4.0						
TIXI	Tiksi	77.04	9	eP	P	05 16 56.0	-1.2
	comp=Z,195nm,1.1s						
TIXI				LR	LR		
	comp=Z,50µm,19.0s						
TIXI	Tiksi	77.04	9	c iP	P	05 16 56.7	-0.6
TIXI				pmax	pmax		
	comp=Z,140nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,42µm,18.0s						
BKZ	Black Stump Fm	77.05	129	eP	P	05 16 59.3	+1.2
	comp=Z,114nm,0.8s						
BKZ				LR	LR		
	comp=Z,24µm,20.0s						
BKZ	Black Stump Fm	77.05	129	P	P	05 16 59.6	+1.5
PRGR	Permogore	77.06	336	⇑iP	P	05 16 57.7	+0.2
PRGR				eS	S	05 26 42.6	-1.8
PRGR				pmax	pmax		
	comp=Z,217nm,0.9s						
FETY	Fethiye	77.20	309	i P	P	05 16 58.4	-0.5
URZ	Urewera	77.43	128	eP	P	05 17 01.1	+0.9
	comp=Z,66nm,1.0s						
URZ				LR	LR		
	comp=Z,14µm,21.0s						
TVSB	Tavsanli	77.61	311	i P	P	05 17 01.2	-0.1
TURN	Turunc	77.63	309	i P	P	05 17 02.9	+1.6
ADVT	Abdulvahap	77.65	312	i P	P	05 17 01.2	-0.2
MWZ	Matawai	77.77	128	P	P	05 17 03.9	+1.8
HRT	Hereke	77.81	313	i P	P	05 17 02.1	-0.2
RUGZ	Raukumara Rang	77.85	128	P	P	05 17 03.7	+1.0
ARG	Arkhangelos	77.85	308	P	P	05 17 02.7	+0.1
ARG				pmax	pmax		
	comp=Z,93nm,1.1s						
MOS	Moscow	77.87	329	eP	P	05 17 01.0	-1.2
MOS				e		05 17 11.2	
MOS				e		05 19 55.8	
MOS				eS	S	05 26 47.5	-6.0
MOS				e		05 27 15.4	
MOS				e		05 27 27.4	
MOS				e		05 27 37.0	
MOS				pmax	pmax		
	comp=Z,500nm,1.6s						
MOS				pmax	pmax		
	comp=Z,248nm,1.2s						
MOS				smax	smax		
	comp=E,2µm,6.4s						
MOS				smax	smax		
	comp=N,3µm,6.4s						
HAZ	Te Kaha	77.91	128	P	P	05 17 05.2	+2.3
SILT	Sile	77.91	313	i P	P	05 17 00.7	-2.1
YER	Yerkesik	77.94	309	i P	P	05 17 02.1	-1.0
YLV	Yalova	77.96	313	i P	P	05 17 03.0	-0.2
YLV	Yalova	77.96	313	⇑iP	P	05 17 03.0	-0.2
KULA	Kula-Manisa	77.98	310	P	P	05 17 03.1	-0.2
GEMT	Gemlik	78.06	312	i P	P	05 17 06.6	+3.0
TWGZ	Tauwhareparae	78.11	128	P	P	05 17 05.3	+1.3
OBN	Obninsk	78.17	328	P	P	05 17 04.2	+0.4
	comp=N,22nm,0.3s,baz=105,slow=1.0,SNR=29						
OBN	Obninsk	78.17	328	eP	P	05 17 03.8	-0.1
	comp=N,246nm,1.1s						
OBN				LR	LR		
	comp=Z,6µm,20.0s						
OBN	Obninsk	78.17	328	c iP	P	05 17 04.1	+0.3
OBN				e*PP	pP	05 17 11.7	-0.5
OBN				e		05 17 14.2	
OBN				e		05 20 07.0	
OBN				PPP	PPP	05 21 53.0	
OBN				i S	S	05 26 53.8	-2.9
OBN				i PS	PnS	05 27 44.1	+4.2
OBN				i SS	SS	05 31 58.1	-0.9
OBN				pmax	pmax		
	comp=Z,179nm,1.0s						
BUY	Buyukada	78.22	313	i P	P	05 17 03.9	-0.6
MDNY	Mudanya-Bursa	78.27	312	i P	P	05 17 02.8	-2.0
MXZ	Matakaoa Point	78.31	128	PFAKE		05 17 20.0	+15
MXZ				LR	LR		
	comp=Z,19µm,21.0s						
CNGZ	Carnagh Statio	78.31	128	P	P	05 17 15.0	+10
KAVV	Kandilli-Istan	78.31	313	i P	P	05 17 04.3	-0.7
ISK	Istanbul-Kandi	78.31	313	i P	P	05 17 04.9	-0.1
ISK	Istanbul-Kandi	78.31	313	P	P	05 17 04.9	-0.1
ARMT	Armutlu	78.33	312	i P	P	05 17 08.0	+2.8
KLYT	Kilyos	78.38	313	i P	P	05 17 04.6	-0.7
WMGZ	Waiomatatini S	78.42	128	P	P	05 17 12.4	+6.7
AYDB	Zeytinkoy-Aydi	78.43	310	i P	P	05 17 06.3	+0.4
KARP	Karpathos	78.47	307	PFAKE		05 17 20.0	+14
KARP				LR	LR		
	comp=Z,7µm,20.0s						
BGKT	Bogazkoy	78.55	313	i P	P	05 17 05.0	-1.3
KCTX	Karacabey (Bur	78.63	312	i P	P	05 17 07.5	+0.7
BODT	Bodrum	78.68	309	i P	P	05 17 06.9	-0.3
CTKS	Kestanelik-??a	78.76	313	i P	P	05 17 05.9	-1.6
BALB	Balikesir	78.84	311	i P	P	05 17 08.2	+0.3
BALB	Balikesir	78.84	311	PFAKE		05 17 20.0	+12
BALB				LR	LR		
	comp=Z,25µm,21.0s						
GCAM	G?zelcaml?	78.88	309	i P	P	05 17 07.3	-0.9
CTYL	Yalikoy Yolu	78.98	313	i P	P	05 17 08.9	+0.2
EDC	Edincik	79.02	312	i P	P	05 17 10.9	+2.0
MRMT	Marmara Adasi	79.28	312	i P	P	05 17 12.4	+2.0
DKL	Dikili	79.44	311	i P	P	05 17 11.7	+0.5
SUR	Sutherland	79.56	238	eP	P	05 17 13.5	+1.1
	comp=Z,182nm,1.5s						
SUR				LR	LR		
	comp=Z,14µm,19.0s						
TLCR		79.56	317	⇑iP	P	05 17 12.0	+0.2
TLCR		79.56	317	P	P	05 17 12.0	+0.2
PHSR	Pinarhisar	79.58	313	i P	P	05 17 14.9	+3.0
PHSR	Pinarhisar	79.58	313	⇑iP	P	05 17 12.6	+0.7
RKY	Sarkoy-Tekirda	79.61	312	i P	P	05 17 13.9	+1.7
PSN	Preselentsi	79.61	315	i P	P	05 17 12.6	+0.5
TIRR	Tirgusor	79.65	316	PFAKE		05 17 20.0	+7.8
TIRR				LR	LR		
	comp=Z,10µm,22.0s						
TIRR	Tirgusor	79.65	316	⇑iP	P	05 17 12.3	+0.1
LPK	Lapseki	79.84	312	i P	P	05 17 14.6	+1.2
TLB	Topalu	79.94	316	⇑iP	P	05 17 14.1	+0.2
TLB	Topalu	79.94	316	P	P	05 17 14.0	+0.2
ICOR	Ion Corvin	79.99	316	⇑iP	P	05 17 15.1	+1.0
CFR	Carcaliu	80.03	317	⇓iP	P	05 17 14.2	-0.1
CFR	Carcaliu	80.03	317	P	P	05 17 13.8	-0.5
CFR				pmax	pmax		
	comp=Z,30nm,1.1s						
MILM	Milestii Mici	80.03	319	⇑iP	P	05 17 13.3	-1.0
HARR	Harsova	80.04	316	⇓iP	P	05 17 15.1	+0.7
HARR	Harsova	80.04	316	P	P	05 17 15.0	+0.7
PRD	Provadia	80.04	315	i P	P	05 17 15.2	+0.8
EZN	Ezine	80.05	311	i P	P	05 17 17.9	+3.4
EZN	Ezine	80.05	311	P	P	05 17 17.8	+3.3
KIS	Kishinev	80.05	319	⇑iP	P	05 17 13.0	-1.4
	comp=Z,190nm,1.0s						
KIS	Kishinev	80.05	319	ePcP	PcP	05 17 19.0	-2.7
KIS	Kishinev	80.05	319	ePP	PP	05 20 32.0	+15
KIS	Kishinev	80.05	319	⇑iP	P	05 17 13.0	-1.4
KIS				e		05 17 19.0	
KIS				i S	S	05 27 13.0	-4.1
KIS				i		05 27 25.0	
KIS				i PS		05 27 54.0	
KIS				pmax	pmax		
	comp=Z,190nm,1.0s						
KIS				pmax	pmax		
	comp=Z,2µm,14.0s						
KIS				smax	smax		
	comp=N,2µm,8.0s						
EDRB	Edirne	80.19	313	i P	P	05 17 15.5	+0.2
EDRB	Edirne	80.19	313	P	P	05 17 14.9	-0.4
IDI	Anoyia	80.23	306	P	P	05 17 16.5	+0.8
	comp=N,24nm,0.9s,baz=58,slow=10,SNR=8.8						
BOZC	Bozcaada	80.25	311	i P	P	05 17 15.7	+0.1
ENEZ	Enez	80.38	312	i P	P	05 17 17.1	+0.8
JMB	Yambol	80.45	314	i P	P	05 17 16.8	+0.1
ALN	Alexandroupoli	80.49	312	PFAKE		05 17 30.0	+13
ALN				LR	LR		
	comp=Z,4µm,20.0s						
ALN	Alexandroupoli	80.49	312	P	P	05 17 15.9	-1.0
ALN	Alexandroupoli	80.49	312	P	P	05 17 16.8	-0.1
ALN				pmax	pmax		
	comp=Z,26nm,1.4s						
RAZG	Razgrad	80.76	315	⇑iP	P	05 17 18.6	+0.3
VNDA	Vanda	80.80	169	P	P	05 17 17.4	-0.4
	comp=Z,5.2nm,0.9s,baz=303,slow=6.2,SNR=22						
VNDA				PKKPbc	PKKPbc	05 35 57.2	-2.8
	comp=Z,1.6nm,0.9s,baz=257,slow=2.5,SNR=7.4						
VNDA				LR	LR	05 48 34.0	
	comp=Z,7µm,21.5s,baz=310,slow=32						
VAM	Vamos	80.81	306	P	P	05 17 19.6	+0.9
AKASG	Malin Array Be	80.83	322	P	P	05 17 18.1	-0.3
	comp=Z,19nm,0.9s,baz=86,slow=4.7,SNR=48						
AKASG				PP	PP	05 20 17.9	-5.0
	comp=Z,8.3nm,1.0s,baz=90,slow=6.5,SNR=3.8						
AKASG	Malin Array Be	80.83	322	i P	P	05 17 17.7	-0.8
AKASG				pmax	pmax		
	comp=Z,31nm,0.9s						
RDO	Rodhopi	80.92	312	P	P	05 17 18.7	-0.5
IMMV	Iera Moni Meta	80.99	306	P	P	05 17 20.0	+0.3
RAO	Raoul Island	81.03	119	PFAKE		05 17 30.0	+10
RAO				LR	LR		
	comp=Z,10µm,20.0s						
ELND	Elena	81.07	314	⇓iP	P	05 17 20.1	+0.2
KDZ	Kurdzhali	81.12	313	i P	P	05 17 19.5	-0.8
VRI	Vrincioaia	81.16	317	⇑iP	P	05 17 21.3	+0.9
VRI	Vrincioaia	81.16	317	P	P	05 17 21.1	+0.7
VRI				pmax	pmax		
	comp=Z,92nm,1.0s						
SULR		81.20	316	⇑iP	P	05 17 21.7	+1.1
PLOR	Plostina	81.20	317	⇓iP	P	05 17 21.7	+1.0
PLOR	Plostina	81.20	317	P	P	05 17 21.7	+1.0
TESR	Tescani	81.36	318	⇑iP	P	05 17 22.1	+0.6
SECR		81.41	316	⇑iP	P	05 17 22.9	+1.2
ZIMR		81.59	315	⇑iP	P	05 17 22.7	0.0
MLR	Muntele Rosu	81.60	317	P	P	05 17 23.4	+0.5
	comp=Z,42nm,1.0s,baz=67,slow=2.1,SNR=42						
MLR	Muntele Rosu	81.60	317	PFAKE		05 17 30.0	+7.1
MLR				LR	LR		
	comp=Z,7µm,19.0s						
MLR	Muntele Rosu	81.60	317	⇓iP	P	05 17 23.5	+0.6
ANKY	Antikythira Is	81.61	307	P	P	05 17 23.4	+0.4
PLD	Plovdiv	81.73	313	P	P	05 17 22.8	-0.7
PLD				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PLD	Plovdiv	81.73	313	i P	P	05 17 23.3	-0.2
BIZ	Bicaz	81.83	318	⇑iP	P	05 17 23.8	-0.1
OZUR		81.85	317	⇑iP	P	05 17 25.0	+0.9

PRAR	RASCA	81.85	319	⇑*i*P	P	05 17 25.0	+1.0
KTHA	Kythira Island	81.87	307	P	P	05 17 24.1	-0.3
SBA	Scott Base	81.89	169	*e*P	P	05 17 24.0	+0.3
	comp=Z,116nm,1.3s						
SBA				LR	LR		
	comp=Z,8µm,22.0s						
SBA	Scott Base	81.89	169	*e*P	P	05 17 24.0	+0.3
SBA				pmax	pmax		
	comp=Z,116nm,1.3s						
SBA				MLR	MLR		
	comp=Z,8µm,22.0s						
OUR	Ouranopolis	81.91	311	P	P	05 17 24.2	-0.2
DID	Didima	81.95	308	P	P	05 17 23.4	-1.4
VLI	Veliai	82.05	308	P	P	05 17 24.1	-1.2
PLVB	Pleven	82.06	314	⇑*i*P	P	05 17 25.7	+0.5
NVR	Nevrokopi	82.20	312	P	P	05 17 25.5	-0.5
VOIR		82.20	317	⇑*i*P	P	05 17 25.1	-0.9
VOIR		82.20	317	P	P	05 17 25.3	-0.7
VOIR				pmax	pmax		
	comp=Z,33nm,1.4s						
PGB	Panagyurishte	82.22	314	*i* P	P	05 17 26.0	-0.1
TSUM	Tsumeb	82.27	251	*e*P	P	05 17 27.5	+0.5
	comp=Z,30nm,1.2s						
TSUM				LR	LR		
	comp=Z,12µm,21.0s						
PLG	Polygyros	82.32	311	P	P	05 17 25.8	-0.9
LKR	Lokris	82.34	310	P	P	05 17 25.4	-1.4
VLAD	Vladila	82.34	315	⇑*i*P	P	05 17 26.1	-0.5
SRS	Serrai	82.35	312	P	P	05 17 25.5	-1.3
SRS				pmax	pmax		
	comp=Z,44nm,1.1s						
ARR	Arges	82.47	316	⇓*i*P	P	05 17 27.2	-0.2
SOH	Sokhos	82.47	312	P	P	05 17 27.1	-0.4
SOH	Sokhos	82.47	312	P	P	05 17 26.6	-0.9
BURAR	Bucovina Array	82.58	319	⇓*i*P	P	05 17 29.0	+1.1
VLX	Vlachokerasia	82.60	308	P	P	05 17 27.8	-0.5
DSF	Desfina	82.66	309	P	P	05 17 26.8	-1.7
MPEP	Malo Peshtene	82.68	314	P	P	05 17 28.8	+0.3
WIN	Windhoek	82.68	248	PFAKE		05 17 40.0	+11
WIN				LR	LR		
	comp=Z,17µm,18.0s						
WIN	Windhoek	82.68	248	P	P	05 17 30.2	+1.0
WIN				pmax	pmax		
	comp=Z,24nm,1.2s						
MICGM	Minsk	82.69	326	⇑*i*P	P	05 17 28.0	-0.2
MICGM				⇑*i*P	P	05 17 28.0	-0.2
MICGM				PM		05 17 29.0	
	comp=Z,0.3nm,1.0s						
MICGM				PM		05 17 29.0	
	comp=Z,2.6nm,12.0s						
MICGM				*e*PcP	pP	05 17 35.0	-1.6
MICGM				*e*PP	PP	05 20 24.0	-14
MICGM				*e*PPP	PPP	05 22 30.0	
MICGM				*e*S	S	05 27 40.0	-4.1
MICGM				*e*PS	PnS	05 28 20.0	-16
MICGM				*e*SS	SS	05 32 26.0	-41
MICGM				*e*SSS	SSS	05 35 40.0	
MICGM				*e*LQ	LQ	05 45 22.0	
MICGM				LQM		05 55 34.0	
	comp=N,11nm,22.0s						
MICGM				LQM		05 55 40.0	
	comp=N,17nm,22.0s						
MICGM				*e*LR	LR	05 56 22.0	
MICGM				LRM	MLR	06 00 44.0	
	comp=Z,11nm,19.0s						
MICGM				LRM	MLR	06 00 44.0	
	comp=E,4.9nm,19.0s						
MICGM				LRM	MLR	06 00 46.0	
	comp=Z,16nm,20.0s						
MNK	Minsk	82.69	326	⇑*i*P	P	05 17 28.0	-0.2
MNK				*e*		05 17 35.0	
MNK				*e*PPP	PPP	05 22 30.0	
MNK				*e*S	S	05 27 40.0	-4.1
MNK				pmax	pmax		
	comp=Z,290nm,1.0s						
MNK				pmax	pmax		
	comp=Z,3µm,12.0s						
TRIP	Tripoli	82.71	308	P	P	05 17 28.6	-0.2
GUR	Goura	82.72	309	P	P	05 17 28.0	-0.9
THE	Thessaloniki	82.73	311	P	P	05 17 28.2	-0.5
THE				pmax	pmax		
	comp=Z,39nm,1.3s						
KSV	Kosov	82.83	319	P	P	05 17 28.3	-0.8
TRAZ	Trapeza	82.87	309	P	P	05 17 29.1	-0.5
KNT	Kendrikon	82.88	312	P	P	05 17 28.9	-0.6
KNT	Kendrikon	82.88	312	P	P	05 17 28.8	-0.7
KNT				pmax	pmax		
	comp=Z,36nm,2.5s						
KLV	Kalavryta, Ach	82.89	309	P	P	05 17 29.1	-0.6
VTS	Vitosha	82.90	313	P	P	05 17 29.6	-0.2
VTS	Vitosha	82.90	313	⇑*i*P	P	05 17 29.8	0.0
VTS	Vitosha	82.90	313	*i* P	P	05 17 29.8	0.0
AGG	Agios Georgios	82.92	310	PFAKE		05 17 40.0	+10
AGG				LR	LR		
	comp=Z,6µm,20.0s						
AGG	Agios Georgios	82.92	310	P	P	05 17 28.8	-1.0
ITM	Ithomi	82.92	308	P	P	05 17 29.5	-0.4
KALE	Kalithea	82.96	309	P	P	05 17 29.0	-1.1
LIT	Litokhoron	82.99	311	PFAKE		05 17 40.0	+10
LIT				LR	LR		
	comp=Z,5µm,20.0s						
LIT	Litokhoron	82.99	311	P	P	05 17 29.2	-0.9
LIT	Litokhoron	82.99	311	P	P	05 17 29.8	-0.3
PUL	Pulkovo	83.00	331	*e*P	P	05 17 30.4	+0.7
PUL	Pulkovo	83.00	331	⇓*i*P	P	05 17 31.1	+1.4
PUL				pmax	pmax		
	comp=Z,218nm,0.9s						
TRIZ	Trizonia	83.01	309	P	P	05 17 29.7	-0.5
PYL	PYLOS	83.02	308	P	P	05 17 29.0	-1.3
SERG	Sergoula	83.03	309	P	P	05 17 29.2	-1.2
ARCR	ARCALIA	83.03	318	⇑*i*P	P	05 17 30.8	+0.6
LAKA	Lakka	83.06	309	P	P	05 17 29.9	-0.7
EFP	Efpalio	83.15	309	P	P	05 17 30.1	-0.8
VAY	Valandovo	83.15	312	*i* P	P	05 17 30.3	-0.6
AMT	Artemida-Makis	83.15	308	P	P	05 17 30.2	-0.8
ANX	Ano Chora	83.16	309	P	P	05 17 30.3	-0.9
GRG	Griva	83.21	312	P	P	05 17 30.5	-0.7
GRG	Griva	83.21	312	P	P	05 17 30.6	-0.7
GRG				pmax	pmax		
	comp=Z,51nm,1.4s						
EVR	Evrytania	83.30	310	P	P	05 17 31.4	-0.5
SRE	Strehaia	83.32	315	⇑*i*P	P	05 17 32.6	+0.9
SRE	Strehaia	83.32	315	P	P	05 17 32.6	+0.9
NACGM	Naroch	83.41	326	*e*P	P	05 17 32.0	+0.1
NACGM				*e*PP	PP	05 20 23.0	-21
NACGM				*e*PPP	PPP	05 22 44.0	
NACGM				*e*S	S	05 27 48.0	-3.5
NACGM				*e*PS		05 28 46.0	
NACGM				*e*SS	SS	05 33 12.0	-5.3
NACGM				*e*LQ	LQ	05 46 42.0	
NACGM				*e*LR	LR	05 52 20.0	
NACGM				LRM	MLR	06 02 13.0	
	comp=Z,11nm,18.0s						
RLS	Riolos of Patr	83.43	309	P	P	05 17 32.0	-0.4
CJR	Cluj-Napoca	83.46	318	⇑*i*P	P	05 17 34.5	+2.0
PVO	Paravola	83.47	309	P	P	05 17 33.0	+0.4
STIP	Stip	83.50	312	*i* P	P	05 17 30.7	-2.0
BMR	Baia Mare	83.72	319	⇓*i*P	P	05 17 34.7	+1.0
BMR	Baia Mare	83.72	319	P	P	05 17 34.4	+0.7
BMR				pmax	pmax		
	comp=Z,213nm,1.0s						
GZR	Gura Zlata	83.76	316	⇑*i*P	P	05 17 34.4	+0.4
LVV	L'vov	83.83	321	*e*P	P	05 17 34.0	-0.2
LVV				*e*S	S	05 27 49.0	-7.0
IIGN	Ignalina	83.84	326	*e*P	P	05 17 34.7	+0.6
IIGN				IAmb	IAmb	05 17 45.5	
	comp=Z,123nm,1.2s						
IZAR	Zarasai	83.93	327	*e*P	P	05 17 34.9	+0.4
IZAR				IAmb	IAmb	05 17 45.8	
	comp=Z,58nm,1.2s						
ISAL	Salakas	83.95	327	*e*P	P	05 17 35.1	+0.5
ISAL				IAmb	IAmb	05 17 46.1	
	comp=Z,48nm,1.1s						
DRGR		84.07	318	⇑*i*P	P	05 17 36.3	+0.6
DRGR		84.07	318	P	P	05 17 36.2	+0.6
DRGR				pmax	pmax		
	comp=Z,73nm,2.3s						
SKO	Skopje	84.10	313	*i* P	P	05 17 34.6	-1.1
JAN	Janina	84.16	310	P	P	05 17 35.8	-0.4
LKD2	Lefkada island	84.17	309	P	P	05 17 35.4	-0.8
LVZ	Lovozero	84.17	340	*e*P	P	05 17 35.4	-0.2
	comp=Z,96nm,0.9s						
LVZ				LR	LR		
	comp=Z,14µm,21.0s						
LVZ	Lovozero	84.17	340	⇑*i*P	P	05 17 36.0	+0.4
LVZ				pmax	pmax		
	comp=Z,80nm,1.0s						
BILL	Bilibino	84.18	20	*e*P	P	05 17 35.6	0.0
	comp=Z,234nm,1.9s						
BILL				LR	LR		
	comp=Z,17µm,19.0s						
BILL	Bilibino	84.18	20c	*i*P	P	05 17 35.2	-0.4
BILL				*e**PP	pP	05 17 42.8	-1.2
BILL				*e**SP	sP	05 17 45.3	-1.8
BILL				*e*		05 20 54.7	
BILL				*i* S	S	05 27 55.6	-3.2
BILL				pmax	pmax		
	comp=Z,41nm,1.1s						
VSU	Vasula	84.38	330	*e*P	P	05 17 37.0	+0.3
VSU				IAmb	IAmb	05 17 40.0	
	comp=Z,254nm,1.1s						
VSU	Vasula	84.38	330c	*i*P	P	05 17 37.2	+0.4
VSU				pmax	pmax		
	comp=Z,202nm,0.9s						
MDVR	Moldovita	84.39	315	⇓*i*P	P	05 17 37.7	+0.5
OHR	Ohrid	84.43	312	*i* P	P	05 17 34.7	-2.8
TRPA	Tarpa	84.45	319	⇑*i*P	P	05 17 38.3	+0.9
TRPA	Tarpa	84.45	319	*e*P	P	05 17 38.0	+0.7
TRPA				*i* S	S	05 28 03.1	+0.9
APA	Apatity	84.48	339	⇑*i*P	P	05 17 36.7	-0.4
APA				*i*		05 20 48.6	
APA				*i* PPP	PPP	05 22 48.3	
APA				*i* S	S	05 27 58.0	-3.7
APA				*i* PS		05 28 50.0	
APA				*i* SS	SS	05 33 39.0	+6.5
APA				*i* SSS	SSS	05 37 01.0	
APA				pmax	pmax		
	comp=Z,30nm,1.0s						
APA				MLR	MLR		
	comp=Z,100nm,12.0s						
IGT	Igoumenitsa	84.53	310	P	P	05 17 37.9	-0.1
IGT	Igoumenitsa	84.53	310	P	P	05 17 38.0	-0.1
MIDW	Midway	84.59	61	*e*P	P	05 17 39.0	+0.5
	comp=Z,52nm,0.9s						
BZS	Buzias	84.60	316	⇑*i*P	P	05 17 38.4	+0.2
BZS	Buzias	84.60	316	P	P	05 17 38.5	+0.2
BZS				pmax	pmax		
	comp=Z,37nm,1.1s						
KWP	Kalwaria Pacla	84.63	320	*e*P	P	05 17 38.0	-0.3
KWP				*e*S	S	05 28 03.2	-0.8
KWP				LMZ	LR	05 58 51.0	
	comp=Z,5µm,23.1s						
KWP	Kalwaria Pacla	84.63	320	PFAKE		05 17 50.0	+12
KWP				LR	LR		
	comp=Z,28µm,21.0s						
KWP	Kalwaria Pacla	84.63	320	*e*P	P	05 17 38.0	-0.3
KWP				*e*S	S	05 28 03.2	-0.8
KWP				MLR	MLR		
	comp=Z,5µm,23.1s						
SIRR	Siria	84.69	317	⇑*i*P	P	05 17 39.3	+0.6
UZH	Uzhgorod	84.70	319	*e*P	P	05 17 39.0	+0.3
UZH				*e*		05 17 41.4	
UZH				*e*		05 20 54.6	
UZH				*e*PPP	PPP	05 22 50.4	
UZH				*i* S	S	05 28 03.2	-1.5
KOLS	Kolonicke sedl	84.78	320	*e*P	P	05 17 40.3	+1.2
KOLS				pmax	pmax		
	comp=Z,116nm,1.1s						
KOLS	Kolonicke sedl	84.78	320	*e*P	P	05 17 40.3	+1.2
KOLS	Kolonicke sedl	84.78	320	*e*S	S	05 28 06.0	+0.5
KEK	Kerkira	84.97	310	P	P	05 17 40.3	+0.1
TIR	Tirane	85.16	312	⇑*i*P	P	05 17 42.3	+1.1
TIR	Tirane	85.16	312	P	P	05 17 42.2	+1.1
SUW	Suwalki	85.24	325	*e*P	P	05 17 41.6	+0.4
SUW				*e*S	S	05 28 06.1	-3.7
SUW				LMZ	LR	06 01 51.6	
	comp=Z,6µm,22.4s						
SUW	Suwalki	85.24	325	PFAKE		05 17 50.0	+8.8
SUW				LR	LR		
	comp=Z,7µm,20.0s						
SUW	Suwalki	85.24	325	*e*P	P	05 17 41.6	+0.4
SUW				*e*S	S	05 28 06.1	-3.7
AMBH	Ambrzfalva	85.34	317	⇑*e*P	P	05 17 43.1	+1.2
DIVS	Divibare	85.49	315	*e*P	P	05 17 42.8	0.0
FINES	FINESS Array B	85.50	332	P	P	05 17 42.7	+0.3
	comp=Z,25nm,0.8s,baz=115,slow=5.5,SNR=64						
FINES				PKKPbc	PKKPbc	05 36 04.4	+16
	comp=Z,1.7nm,0.9s,baz=253,slow=5.8,SNR=3.4						
FINES				LR	LR	06 00 10.0	
	comp=Z,8µm,20.7s,baz=108,slow=39						
MSF	Maaselka	85.52	337	P	P	05 17 43.0	+0.6
MSF				pmax	pmax		
	comp=Z,150nm,1.0s						
PDG	Podgorica	85.77	313	⇑*i*P	P	05 17 43.7	-0.4
PDG	Podgorica	85.77	313	*e*P	P	05 17 43.9	-0.2
DRME	Dracevica, Mon	85.79	313	*e*P	P	05 17 43.5	-0.8
SUF	Sumiainen	85.80	334	P	P	05 17 44.2	+0.4
SUF				pmax	pmax		
	comp=Z,58nm,0.9s						
BBLS	Lazići	85.87	314	*e*P	P	05 17 45.2	+0.5
NIE	Niedzica	86.14	320	*e*P	P	05 17 43.5	-2.4
NIE				*e*PP	PP	05 21 09.9	+3.4
NIE				*e*S	S	05 28 17.8	-1.2
NIE				LMZ	LR	06 00 08.4	
	comp=Z,4µm,21.3s						
NIE	Niedzica	86.14	320	*e*P	P	05 17 43.5	-2.4
NIE				*e*		05 21 09.9	
NIE				*e*S	S	05 28 17.8	-1.2
NIE				MLR	MLR		
	comp=Z,4µm,21.3s						
PSZ	Piszkesteto	86.16	318	⇑*i*P	P	05 17 46.5	+0.5
PSZ	Piszkesteto	86.16	318	*e*P	P	05 17 44.1	-2.0
PSZ				*i* S	S	05 28 18.1	-1.2
HAPS	Han Pijesak,Bl	86.23	314	*e*P	P	05 17 46.0	-0.5
BEL	Belsk	86.24	322	*e*P	P	05 17 46.4	+0.1
BEL				*e*S	S	05 28 13.7	-6.0
BEL				LMZ	LR	06 00 32.7	
	comp=Z,10µm,23.3s						
BEL	Belsk	86.24	322	*e*P	P	05 17 46.4	+0.1
BEL				*e*S	S	05 28 13.7	-6.0
BEL				MLR	MLR		
	comp=Z,10µm,23.3s						
TREB	Trebinje	86.47	313	*e*P	P	05 17 47.2	-0.4
SLIT	Slitere, Latvi	86.48	328	*e*P	P	05 17 46.5	-0.8
SLIT				IAmb	IAmb	05 17 50.8	
	comp=Z,247nm,0.9s						
OUL	Oulu	86.54	336	P	P	05 17 48.3	+0.9
OUL				pmax	pmax		
	comp=Z,129nm,1.0s						
LANS	Liptovska Anna	86.63	319	*e*P	P	05 17 49.4	+1.1
LANS	Liptovska Anna	86.63	319	*e*P	P	05 17 49.4	+1.1
BUD	Budapest	86.67	318	⇑*e*P	P	05 17 48.1	-0.4
QSPA	South Pole Qui	86.68	180	*e*P	P	05 17 48.9	+0.5
	comp=Z,99nm,1.5s						
QSPA				LR	LR		
	comp=Z,16µm,20.0s						
MORH	Mrgy, Hungar	86.75	316	⇑*e*P	P	05 17 48.0	-0.8
MORH				*i* S	S	05 28 27.0	+2.1
SGF	Sodankyl	86.93	338	P	P	05 17 50.1	+0.8
SGF				pmax	pmax		
	comp=Z,114nm,1.1s						
VYHS	Vyhne	86.94	319	*e*P	P	05 17 49.9	+0.1
VYHS				*e*		05 21 13.6	
VYHS				*e*S	S	05 28 26.0	-0.8
VYHS	Vyhne	86.94	319	*e*P	P	05 17 49.9	+0.1
VYHS				*e*PP	PP	05 21 13.6	+0.6
VYHS				*e*S	S	05 28 26.0	-0.8
STON	Ston	86.97	313	*e*P	P	05 17 50.3	+0.3
CSKK	Cskako	87.17	318	*e*P	P	05 17 50.1	-0.8
CSKK				*i* S	S	05 28 28.0	-0.9
SRO	Srobarova	87.19	318	P	P	05 17 52.5	+1.5
SRO				pmax	pmax		
	comp=Z,1.0nm,1.2s						
TIP	Timpagrande	87.23	309	PFAKE		05 18 00.0	+8.5
TIP				LR	LR		
	comp=Z,4µm,21.0s						
TIP	Timpagrande	87.23	309	⇓*i*P	P	05 17 52.6	+1.1
TIH	Tihany	87.35	317	*e*P	P	05 17 51.1	-0.7
TIH				*i* S	S	05 28 29.0	-1.7
MATE	Matera	87.44	311	⇑*i*P	P	05 17 52.1	-0.2
BLY	Banja Luka	87.57	315	PFAKE		05 18 00.0	+7.1
BLY				LR	LR		
	comp=Z,4µm,21.0s						
BLY	Banja Luka	87.57	315	⇑*i*P	P	05 17 53.2	+0.3
BLY	Banja Luka	87.57	315	*e*P	P	05 17 53.6	+0.7
JAVC	Velka Javorina	87.76	319	⇑*i*P	P	05 17 55.2	+1.4
JAVC				*e*PP	PP	05 21 22.8	+3.1
JAVC				*e*S	S	05 28 36.5	+1.8
ARCES	ARCESS Array B	87.86	340	P	P	05 17 54.6	+0.8
	comp=Z,84nm,0.9s,baz=102,slow=4.0,SNR=66						
ARCES				PP	PP	05 21 15.7	-4.2
	comp=Z,12nm,0.9s,baz=108,slow=8.6,SNR=3.8						
ARCES				LR	LR	06 01 40.5	
	comp=Z,13µm,20.4s,baz=102,slow=39						
ARE0	ARCESS Array S	87.86	340	PFAKE		05 18 10.0	+16
ARE0				LR	LR		
	comp=Z,700nm,20.0s						
ARE0	ARCESS Array S	87.86	340	*e*P	P	05 17 54.6	+0.8
MODS	Modra-Piesok	87.96	319	*e*P	P	05 17 54.4	-0.3
MODS				pmax	pmax		
	comp=Z,350nm,2.5s						
MODS	Modra-Piesok	87.96	319	*e*P	P	05 17 54.4	-0.3
MODS				*e*PP	PP	05 21 21.7	+0.5
MODS				*e*S	S	05 28 35.2	-1.3
MORC	Moravsky Berou	87.96	320	PFAKE		05 18 10.0	+15
MORC				LR	LR		
	comp=Z,4µm,20.0s						
MORC	Moravsky Berou	87.96	320	⇓*i*P	P	05 17 55.2	+0.5
MORC	Moravsky Berou	87.96	320	P	P	05 17 55.5	+0.8
MORC				pmax	pmax		
	comp=Z,39nm,1.2s						
MORC	Moravsky Berou	87.96	320	⇑*i*P	P	05 17 55.5	+0.8
MORC				*e*PP	PP	05 21 22.6	+1.4
MORC				*e*S	S	05 28 36.8	+0.2
ZST	Bratislava	88.05	318	*e*P	P	05 17 54.3	-0.8
ZST				*e*		05 21 23.2	
ZST				*e*S	S	05 28 36.9	-0.5
ZST	Bratislava	88.05	318	*e*P	P	05 17 54.3	-0.8
ZST				*e*PP	PP	05 21 23.2	+1.3
ZST				*e*S	S	05 28 36.9	-0.5
BEHE	Becsehely	88.06	317	*e*P	P	05 17 57.8	+2.6
BEHE	Becsehely	88.06	317	*e*P	P	05 17 53.0	-2.2
BEHE				*i* S	S	05 28 40.1	+2.5
ADK	Adak	88.11	38	*e*P	P	05 17 55.0	-0.3
	comp=Z,169nm,1.1s						
ADK				LR	LR		
	comp=Z,5µm,21.0s						
ADK	Adak	88.11	38	*e*P	P	05 17 55.0	-0.3
ADK				pmax	pmax		
	comp=Z,169nm,1.1s						
ADK				MLR	MLR		
	comp=Z,5µm,21.0s						
SOP	Sopron	88.35	318	P	P	05 17 56.6	0.0
SOP				pmax	pmax		
	comp=Z,21nm,1.8s						
SOP	Sopron	88.35	318	*e*P	P	05 17 55.1	-1.5
SOP				*i* S	S	05 28 41.1	+0.8
KOGS	Kog	88.42	317	⇑*i*P	P	05 17 57.6	+0.7
KTK1	Kautokeino	88.52	339	*e*P	P	05 17 57.4	+0.5
VRAC	Vranov	88.52	319	P	P	05 17 57.4	+0.1
	comp=Z,6.3nm,0.9s,baz=122,slow=4.3,SNR=9.6						
VRAC	Vranov	88.52	319	⇑*i*P	P	05 17 58.8	+1.5
VRAC	Vranov	88.52	319	⇑*i*P	P	05 17 57.8	+0.5
VRAC				*e*PP	PP	05 21 27.7	+2.0
VRAC				*e*S	S	05 28 41.6	-0.2
VRAC				*e*		05 41 16.7	
GKP	Gorka Klasztor	88.60	323	*e*P	P	05 17 57.6	0.0
GKP				*e*S	S	05 28 41.7	-0.6
GKP				LMZ	LR	06 04 16.3	
	comp=Z,6µm,21.9s						
GKP	Gorka Klasztor	88.60	323	*e*P	P	05 17 57.6	0.0
GKP				*e*S	S	05 28 41.7	-0.6
KRUC	Moravsky	88.62	319	P	P	05 17 58.4	+0.6
KRUC				pmax	pmax		
	comp=Z,18nm,2.0s						
KRUC	Moravsky	88.62	319	⇑*i*P	P	05 17 58.3	+0.5
KRUC				*e*PP	PP	05 21 28.6	+2.1
KRUC				*e*S	S	05 28 42.7	0.0
KRUC				*e*		05 41 20.4	
WDD	Wied Dalam	88.67	306	PFAKE		05 18 10.0	+12
WDD				LR	LR		
	comp=Z,4µm,18.0s						
HAMF	Hammerfest	88.74	341	*e*P	P	05 17 57.7	-0.2
DPC	Dobruska-Polom	88.81	320	*e*P	P	05 18 00.0	+1.3
DPC				*e*		05 18 09.0	
DPC				*e*S	S	05 28 45.2	+0.6
DPC				MLR	MLR		
	comp=Z,6µm,18.5s						
DPC	Dobruska-Polom	88.81	320	*e*P	P	05 18 00.0	+1.3
DPC				*e*x	x	05 18 09.0	
DPC				*e*S	S	05 28 45.2	+0.6
DPC				AMS	AMS	06 05 30.0	
	comp=Z,6µm,18.5s						
CONA	Conrad Observa	88.85	318	*i* P	P	05 17 58.9	-0.1
	comp=Z,15nm,1.1s						
KSP	Ksiaz	88.89	321	*e*P	P	05 17 60.0	+1.0
KSP				*e*S	S	05 28 45.2	+0.1
KSP				LMZ	LR	06 01 11.6	
	comp=Z,6µm,24.7s						
KSP	Ksiaz	88.89	321	*e*P	P	05 18 00.0	+1.0
KSP				*e*S	S	05 28 45.3	+0.1
KSP				MLR	MLR		
	comp=Z,6µm,24.7s						
VAE	Valguarnera	88.90	307	P	P	05 18 00.4	+0.9
	comp=Z,26nm,1.0s,baz=31,slow=10,SNR=6.5						
CRES	Cresnjev	88.90	316	*e*P	P	05 17 59.5	+0.3
OSTC	Ostas	88.90	321	*e*P	P	05 18 00.5	+1.4
OSTC				*e*S	S	05 28 45.2	-0.2
OSTC				AMS	AMS	06 05 40.0	
	comp=Z,6µm,19.7s						
ARSA	Arzberg	89.00	317	*i* P	P	05 18 00.5	+0.8
	comp=Z,28nm,1.3s,SNR=13						
CHVC	Chvalec	89.01	321	*e*P	P	05 18 00.9	+1.3
CHVC				*e*x	x	05 18 09.6	
CHVC				*e*S	S	05 28 45.8	-0.6
CHVC				AMS	AMS	06 05 40.0	
	comp=Z,6µm,20.2s						
BOJS	Bojanci	89.01	315	⇑*i*P	P	05 18 00.3	+0.6
BOJS				*i* S	S	05 28 45.0	-1.6
UPC	Upice	89.03	321	*e*P	P	05 18 01.2	+1.5
UPC				*e*S	S	05 28 47.8	+1.2
UPC				MLR	MLR		
	comp=Z,6µm,19.5s						
UPC	Upice	89.03	321	*e*P	P	05 18 01.2	+1.5
UPC				*e*S	S	05 28 47.8	+1.2
UPC				AMS	AMS	06 05 40.0	
	comp=Z,6µm,19.5s						
PERS	Pernice	89.22	317	⇑*i*P	P	05 18 01.4	+0.7
PERS				*i* S	S	05 28 48.8	+0.1
TREC	Trest	89.24	319	*e*P	P	05 18 01.8	+1.1
TREC				MLR	MLR		
	comp=Z,5µm,20.7s						
TREC	Trest	89.24	319	*e*P	P	05 18 01.8	+1.1
TREC				AMS	AMS	06 04 30.0	
	comp=Z,5µm,20.7s						
SOKA	Soboth	89.28	317	*i* PcP	PcP	05 18 01.9	-0.6
	comp=Z,59nm,1.0s,SNR=31						
LJU	Ljubljana	89.57	316	⇑*i*P	P	05 18 03.2	+0.8
LJU				*i* S	S	05 28 51.2	-0.6
LJU	Ljubljana	89.57	316	*e*P	P	05 18 02.8	+0.5
OBKA	Obir	89.60	316	*i* P	P	05 18 02.3	-0.3
	comp=Z,27nm,1.4s,SNR=8.4						
CEY	Cerknica	89.61	316	*e*P	P	05 18 03.1	+0.5
ATKA	Atka Island	89.68	38	PFAKE		05 18 10.0	+7.4
ATKA				LR	LR		
	comp=Z,4µm,21.0s						
GOPC	GO Pecny, Ondr	89.75	320	*e*P	P	05 18 03.9	+0.8
GOPC				*e*S	S	05 28 49.9	-3.5
GOPC				MLR	MLR		
	comp=Z,6µm,19.5s						
GOPC	GO Pecny, Ondr	89.75	320	*e*P	P	05 18 03.9	+0.8
GOPC				*e*S	S	05 28 49.9	-3.5
GOPC				AMS	AMS	06 06 10.0	
	comp=Z,6µm,19.5s						
MOA	Molln	89.91	318	*i* P	P	05 18 04.0	+0.1
	comp=Z,8.5nm,1.0s,SNR=6.5						
PRU	Pruhonice	89.92	320	*e*P	P	05 18 04.9	+1.1
PRU				*e*		05 18 13.3	
PRU				*e*S	S	05 28 55.9	+1.1
PRU				MLR	MLR		
	comp=Z,6µm,20.7s						
PRU	Pruhonice	89.92	320	*e*P	P	05 18 04.9	+1.1
PRU				*e*pP	pP	05 18 13.3	+0.9
PRU				*e*S	S	05 28 55.9	+1.1
PRU				AMS	AMS	06 06 10.0	
	comp=Z,6µm,20.7s						
PVCC	Panska Ves	89.95	320	*e*P	P	05 18 05.4	+1.4
PVCC				*e*		05 18 12.7	
PVCC				*e*S	S	05 28 56.8	+1.7

PVCC				MLR	MLR		
	comp=Z,5µm,17.1s						
PVCC	**Panska Ves**	**89.95**	**320**	*e*P	**P**	**05 18 05.4**	**+1.4**
PVCC				*e*pP	**pP**	**05 18 12.7**	**+0.2**
PVCC				*e*S	**S**	**05 28 56.8**	**+1.7**
PVCC				AMS	AMS	06 09 00.0	
	comp=Z,5µm,17.1s						
AQU	**L'Aquila**	**90.07**	**312**	PFAKE		05 18 20.0	+15
AQU				LR	LR		
	comp=Z,3µm,21.0s						
AQU	**L'Aquila**	**90.07**	**312**	P	**P**	**05 18 06.4**	**+1.6**
AQU				pmax	pmax		
	comp=Z,89nm,1.1s						
AQU	**L'Aquila**	**90.07**	**312**	*e*P	**P**	**05 18 05.4**	**+0.6**
TRI	**Trieste**	**90.07**	**316**	PFAKE		05 18 20.0	+15
TRI				LR	LR		
	comp=Z,4µm,20.0s						
TRI	**Trieste**	**90.07**	**316**	P	**P**	**05 18 05.3**	**+0.6**
TRI				pmax	pmax		
	comp=Z,36nm,1.1s						
CADS	**Cadrg**	**90.13**	**316**	⇑*i*P	**P**	**05 18 05.0**	**0.0**
CADS				*i*S	**S**	**05 28 56.3**	**-0.8**
CADS				*i*		05 35 52.7	
TRO	**Tromso**	**90.14**	**340**	*e*P	**P**	**05 18 03.1**	**-1.3**
MYKA	**Terra Mystica**	**90.23**	**317**	*i*P	**P**	**05 18 06.0**	**+0.5**
	comp=Z,23nm,1.5s,SNR=6.3						
GEC2	**GERESS Array S**	**90.36**	**319**	PFAKE		05 18 20.0	+14
GEC2				LR	LR		
	comp=Z,7µm,22.0s						
GERES	**GERESS Array B**	**90.36**	**319**	P	**P**	**05 18 06.8**	**+0.7**
	comp=Z,19nm,0.9s,baz=96,slow=4.0,SNR=70						
GERES				LR	LR	06 04 21.4	
	comp=Z,3µm,19.0s,baz=92,slow=39						
BRG	**Berggiesshubel**	**90.37**	**321**	*i*P	**P**	**05 18 06.8**	**+0.8**
	comp=Z,41nm,1.1s						
BRG				*i*		05 18 29.5	
	comp=Z,45nm,1.2s						
BRG	**Berggiesshubel**	**90.37**	**321**	S	**S**	**05 29 02.0**	**+3.0**
BRG				SS	**SS**	**05 35 01.0**	**+1.6**
	comp=N,4µm,21.6s						
	comp=E,5µm,19.3s						
	comp=Z,7µm,19.1s						
BRG	**Berggiesshubel**	**90.37**	**321**	*i*P	**P**	**05 18 06.8**	**+0.8**
BRG				S	**S**	**05 29 02.0**	**+3.0**
BRG				SS	**SS**	**05 35 01.0**	**+1.6**
BRG				pmax	pmax		
	comp=Z,41nm,1.1s						
BRG				MLR	MLR		
	comp=N,4µm,21.6s						
BRG				MLR	MLR		
	comp=E,5µm,19.3s						
BRG				MLR	MLR		
	comp=Z,7µm,19.1s						
KBA	**Koelnbreinsper**	**90.47**	**317**	*i*P	**P**	**05 18 07.0**	**+0.3**
	comp=Z,26nm,1.1s,SNR=15						
KBA	**Koelnbreinsper**	**90.47**	**317**	P	**P**	**05 18 07.2**	**+0.5**
KBA				pmax	pmax		
	comp=Z,29nm,1.3s						
KHC	**Kasperske Hory**	**90.47**	**319**	PFAKE		05 18 20.0	+13
KHC				LR	LR		
	comp=Z,2µm,21.0s						
KHC	**Kasperske Hory**	**90.47**	**319**	*e*P	**P**	**05 18 07.1**	**+0.6**
KHC				*e*		05 18 16.0	
KHC				*e*		05 21 48.0	
KHC				*e*S	**S**	**05 29 00.3**	**+0.2**
KHC				MLR	MLR		
	comp=Z,6µm,20.3s						
KHC	**Kasperske Hory**	**90.47**	**319**	*e*P	**P**	**05 18 07.1**	**+0.6**
KHC				*e*pP	**pP**	**05 18 16.0**	**+1.0**
KHC				*e*PP	**PP**	**05 21 48.0**	**+6.8**
KHC				*e*S	**S**	**05 29 00.3**	**+0.2**
KHC				AMS	AMS	06 05 40.0	
	comp=Z,6µm,20.3s						
JOHN	**Johnston Islan**	**90.88**	**73**	PFAKE		05 18 20.0	+11
JOHN				LR	LR		
	comp=Z,5µm,22.0s						
WET	**Wettzell**	**90.93**	**319**	P	**P**	**05 18 09.3**	**+0.7**
WET				pmax	pmax		
	comp=Z,45nm,1.1s						
CLL	**Collm**	**91.00**	**321**	PFAKE		05 18 20.0	+11
CLL				LR	LR		
	comp=Z,5µm,20.0s						
CLL	**Collm**	**91.00**	**321**	*i*P	**P**	**05 18 09.1**	**+0.3**
CLL				*e*		05 28 39.0	
CLL				*e*S	**S**	**05 29 05.0**	**+0.3**
CLL				pmax	pmax		
	comp=Z,32nm,1.2s						
CLL				MLR	MLR		
	comp=Z,6µm,20.0s						
CLL	**Collm**	**91.00**	**321**	*i*P	**P**	**05 18 09.1**	**+0.3**
	comp=Z,32nm,1.2s						
CLL				*i*		05 18 32.4	
	comp=Z,38nm,1.1s						
CLL				*e*PP	**PP**	**05 21 47.0**	**+1.7**
CLL				*e*(sPP)		05 21 58.0	
CLL				*e*PPP	PPP	05 23 48.0	
CLL				*e*PPPP		05 25 18.0	
CLL				*e*SKSac	**SKSac**	**05 28 39.0**	**-0.2**
CLL				*e*S	**S**	**05 29 05.0**	**+0.3**
CLL				*e*PS	PS	05 30 19.0	+3.1
CLL				*e*		05 31 07.0	
CLL				*e*SS	SS	05 34 54.0	-14
CLL				*e*SSS	SSS	05 38 48.0	
CLL				*e*SSSS		05 41 59.0	
CLL				LmV		06 09 00.0	
	comp=Z,6µm,20.0s						
CLL				Lmax		06 15 00.0	
ABTA	**Abfaltersbach**	**91.02**	**317**	*i*P	**P**	**05 18 09.6**	**+0.4**
	comp=Z,22nm,1.1s						
RGN	**Rugen**	**91.04**	**324**	PFAKE		05 18 20.0	+11
RGN				LR	LR		
	comp=Z,8µm,19.0s						
SNAA	**Sanae**	**91.08**	**198**	P	**P**	**05 18 10.3**	**+1.4**
SNAA	**Sanae**	**91.08**	**198**	PFAKE		05 18 20.0	+11
SNAA				LR	LR		
	comp=Z,8µm,21.0s						
SNAA	**Sanae**	**91.08**	**198**	⇑*i*P	**P**	**05 18 10.6**	**+1.6**
SNAA				pmax	pmax		
	comp=Z,414nm,1.1s						
STEI	**Steigen**	**91.25**	**338**	*e*P	**P**	**05 18 10.2**	**+0.6**
NKC	**Novy Kostel**	**91.28**	**320**	*e*P	**P**	**05 18 11.4**	**+1.2**
NKC				*e*S	**S**	**05 29 08.6**	**+1.2**
NKC				MLR	MLR		
	comp=Z,5µm,17.9s						
NKC	**Novy Kostel**	**91.28**	**320**	*e*P	**P**	**05 18 11.4**	**+1.2**
NKC				*e*S	**S**	**05 29 08.6**	**+1.2**
NKC				AMS	AMS	06 06 50.0	
	comp=Z,5µm,17.9s						
MOR8	**Moi Rana**	**91.40**	**336**	*e*P	**P**	**05 18 10.2**	**-0.3**
COP	**Copenhagen**	**91.62**	**326**	*i*P	**P**	**05 18 13.9**	**+2.3**
COP				MLR	MLR		
	comp=Z,5µm,19.0s						
COP	**Copenhagen**	**91.62**	**326**	*i*P	**P**	**05 18 13.9**	**+2.3**
	comp=Z,5µm,19.0s						
WTTA	**Wattenberg**	**91.64**	**317**	*i*P	**P**	**05 18 12.2**	**0.0**
	comp=Z,29nm,0.9s,SNR=15						
WATA	**Walderalm**	**91.69**	**317**	*i*P	**P**	**05 18 12.2**	**-0.2**
	comp=Z,28nm,1.3s						
MOX	**Moxa**	**91.83**	**320**	P	**P**	**05 18 13.0**	**+0.2**
MOX				pmax	pmax		
	comp=Z,26nm,1.1s						
FUR	**Furstenfeldbru**	**91.93**	**318**	P	**P**	**05 18 13.6**	**+0.3**
FUR				pmax	pmax		
	comp=Z,21nm,1.0s						
SQTA	**Sankt Quirin**	**91.93**	**317**	*i*P	**P**	**05 18 13.6**	**+0.1**
	comp=Z,12nm,0.7s,SNR=8.7						
SPA0	**Spitsbergen Ar**	**92.00**	**348**	*e*P	**P**	**05 18 12.8**	**-0.1**
SPITS	**Spitsbergen Ar**	**92.00**	**348**	P	**P**	**05 18 12.9**	**-0.1**
SPITS				pmax	pmax		
	comp=Z,62nm,1.1s						
MOTA	**Moosalm**	**92.01**	**317**	*i*P	**P**	**05 18 13.7**	**-0.1**
	comp=Z,18nm,1.0s,SNR=18						
GRA1	**Grafenberg Arr**	**92.04**	**319**	PFAKE		05 18 30.0	+16
GRA1				LR	LR		
	comp=Z,6µm,20.0s						
GRF	**Grafenberg Arr**	**92.04**	**319**	P	**P**	**05 18 14.5**	**+0.7**
GRF				pmax	pmax		
	comp=Z,39nm,1.1s						
GRFO	**Grafenberg**	**92.04**	**319**	*e*P	**P**	**05 18 15.1**	**+1.3**
	comp=Z,86nm,1.3s						
GRFO				LR	LR		
	comp=Z,6µm,20.0s						
GRFO	**Grafenberg**	**92.04**	**319**	*e*P	**P**	**05 18 15.1**	**+1.3**
GRFO				pmax	pmax		
	comp=Z,86nm,1.3s						
GRFO				MLR	MLR		
	comp=Z,6µm,20.0s						
RETA	**Reutte**	**92.25**	**317**	*i*P	**P**	**05 18 15.1**	**+0.2**
	comp=Z,24nm,1.4s,SNR=14						
FETA	**Feichten**	**92.25**	**317**	*i*PcP	**P**	**05 18 15.4**	**+0.4**
	comp=Z,16nm,1.2s,SNR=10						
SPIA	**Saint Paul Isl**	**92.32**	**33**	PFAKE		05 18 30.0	+15
SPIA				LR	LR		
	comp=Z,7µm,19.0s						
NSS	**Namsos**	**92.33**	**334**	*e*P	**P**	**05 18 15.7**	**+1.0**
NC602	**NORSAR Array S**	**92.35**	**331**	*e*P	**P**	**05 18 13.3**	**-1.6**
NORES	**NORESS Array B**	**92.35**	**331**	P	**P**	**05 18 15.3**	**+0.4**
NORES				pmax	pmax		
	comp=Z,19nm,1.0s						
VLC	**Villacollemand**	**92.38**	**314**	PFAKE		05 18 30.0	+15
VLC				LR	LR		
	comp=Z,4µm,20.0s						
NB2	**NORSAR Subarra**	**92.53**	**331**	P	**P**	**05 18 15.4**	**-0.4**
	comp=Z,61nm,1.4s,baz=93,slow=5.3						
NB2	**NORSAR Subarra**	**92.53**	**331**	P	**P**	**05 18 15.7**	**-0.1**
NB2				pmax	pmax		
	comp=Z,118nm,1.3s						
NB2	**NORSAR Subarra**	**92.53**	**331**	P	**P**	**05 18 15.4**	**-0.4**
	baz=93,slow=5.3						
NOA	**NORSAR Array B**	**92.53**	**331**	P	**P**	**05 18 15.4**	**-0.4**
	comp=Z,16nm,0.9s,baz=93,slow=4.7,SNR=21						
NOA				PP	**PP**	**05 21 55.1**	**-2.0**
	comp=Z,5.6nm,1.0s,baz=93,slow=7.3,SNR=4.5						
NOA				LR	LR	06 03 51.8	
	comp=Z,2µm,18.8s,baz=105,slow=38						
FUORN	**Ofenpass-Fuorn**	**92.55**	**316**	PFAKE		05 18 30.0	+13
FUORN				LR	LR		
	comp=Z,5µm,20.0s						
DAVOX	**Davos/Dischmat**	**92.82**	**317**	P	**P**	**05 18 18.2**	**+0.5**
	comp=Z,9.4nm,0.6s,baz=139,slow=11,SNR=12						
DAVA	**Damuels**	**92.84**	**317**	*i*PcP	**P**	**05 18 18.3**	**+0.6**
	comp=Z,28nm,1.2s,SNR=11						
KEST	**Kesra**	**92.86**	**305**	P	**P**	**05 18 19.2**	**+1.3**
	comp=Z,41nm,1.1s,baz=69,slow=0.7,SNR=11						
KEST	**Kesra**	**92.86**	**305**	PFAKE		05 18 30.0	+12
KEST				LR	LR		
	comp=Z,9µm,19.0s						
KBS	**Kingsbay**	**92.94**	**349**	*e*P	**P**	**05 18 16.7**	**-0.6**
	comp=Z,29nm,1.0s						
KBS				LR	LR		
	comp=Z,12µm,21.0s						
KBS	**Kingsbay**	**92.94**	**349**	⇓*i*P	**P**	**05 18 17.3**	**0.0**
KBS				pmax	pmax		
	comp=Z,101nm,1.0s						
NIKH	**Nikolski High**	**92.98**	**37**	PFAKE		05 18 30.0	+12
NIKH				LR	LR		
	comp=Z,3µm,21.0s						
VNA1	**Neumayer--Stat**	**93.06**	**198**	P	**P**	**05 18 19.8**	**+1.8**
TUE	**Stuetta**	**93.18**	**316**	PFAKE		05 18 30.0	+11
TUE				LR	LR		
	comp=Z,3µm,22.0s						
KONO	**Kongsberg**	**93.29**	**329**	*e*P	**P**	**05 18 19.4**	**+0.1**
	comp=Z,30nm,0.9s						
KONO				LR	LR		
	comp=Z,4µm,20.0s						
KONO	**Kongsberg**	**93.29**	**329**	*e*P	**P**	**05 18 19.4**	**+0.1**
KONO				pmax	pmax		
	comp=Z,30nm,0.9s						
KONO				MLR	MLR		
	comp=Z,4µm,20.0s						
KONO	**Kongsberg**	**93.29**	**329**	*e*P	**P**	**05 18 19.4**	**+0.1**
VNA3	**Neumayer Olymp**	**93.30**	**198**	P	**P**	**05 18 20.1**	**+1.0**
STU	**Stuttgart**	**93.34**	**319**	PFAKE		05 18 30.0	+10
STU				LR	LR		
	comp=Z,5µm,20.0s						
MUD	**Monsted U'grnd**	**93.47**	**326**	*i*P	**P**	**05 18 23.0**	**+2.9**
MUD				MLR	MLR		
	comp=Z,8µm,22.0s						
MUD	**Monsted U'grnd**	**93.47**	**326**	*i*P	**P**	**05 18 23.0**	**+2.9**
	comp=Z,8µm,22.0s						
DOMB	**Dombas**	**93.58**	**332**	*e*P	**P**	**05 18 19.7**	**-0.9**
TNS	**Taunus Mts**	**93.84**	**320**	P	**P**	**05 18 23.2**	**+1.1**
TNS				pmax	pmax		
	comp=Z,37nm,1.0s						
BFO	**Black Forest**	**93.91**	**318**	*e*P	**P**	**05 18 23.1**	**+0.8**
	comp=Z,62nm,2.0s						
BFO	**Black Forest**	**93.91**	**318**	*e*P	**P**	**05 18 23.2**	**+0.8**
BFO				pmax	pmax		
	comp=Z,62nm,2.0s						
SBF	**Sospel**	**94.50**	**314**	*e*P	**P**	**05 18 24.8**	**-0.5**
SBF				pmax	pmax		
	comp=Z,12nm,1.0s						
SENIN	**Lac Senin/Sane**	**94.60**	**316**	PFAKE		05 18 40.0	+14
SENIN				LR	LR		
	comp=Z,6µm,21.0s						
CDF	**Champ du Feu**	**94.61**	**318**	*e*P	**P**	**05 18 25.1**	**-0.6**
CDF				pmax	pmax		
	comp=Z,11nm,1.2s						
ECH	**Echery**	**94.69**	**318**	P	**P**	**05 18 26.0**	**0.0**
ECH				pmax	pmax		
	comp=Z,11nm,1.0s						
ANM	**Nome**	**94.72**	**26**	PFAKE		05 18 40.0	+14
ANM				LR	LR		
	comp=Z,10µm,18.0s						
ISO	**Isola**	**94.78**	**314**	P	**P**	**05 18 26.8**	**+0.2**
ISO				pmax	pmax		
	comp=Z,11nm,1.3s						
AKUT	**Akutan**	**94.82**	**36**	PFAKE		05 18 40.0	+14
AKUT				LR	LR		
	comp=Z,5µm,22.0s						
BLS5	**Blasjo**	**94.89**	**329**	*e*P	**P**	**05 18 28.0**	**+1.3**
LPG	**La Plagne**	**94.98**	**315**	*e*P	**P**	**05 18 28.3**	**+0.5**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPL	**La Plagne**	**95.00**	**315**	*e*P	**P**	**05 18 27.3**	**-0.4**
LPL				pmax	pmax		
	comp=Z,15nm,1.0s						
BNI	**Bardonecchia**	**95.04**	**315**	PFAKE		05 18 40.0	+12
BNI				LR	LR		
	comp=Z,5µm,22.0s						
BNI	**Bardonecchia**	**95.04**	**315**	P	**P**	**05 18 30.6**	**+2.8**
BNI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FRF	**La Foret Royal**	**95.07**	**313**	*e*P	**P**	**05 18 27.5**	**-0.3**
FRF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HAU	**Haudompre**	**95.23**	**318**	*e*P	**P**	**05 18 27.9**	**-0.6**
HAU				pmax	pmax		
	comp=Z,23nm,1.3s						
WLF	**Walferdange**	**95.33**	**319**	PFAKE		05 18 40.0	+11
WLF				LR	LR		
	comp=Z,22µm,19.0s						
MEM	**Membach**	**95.40**	**320**	P	**P**	**05 18 29.2**	**0.0**
MEM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CABF	**La Chapelle**	**95.43**	**316**	*e*P	**P**	**05 18 31.5**	**+2.0**
CABF				pmax	pmax		
	comp=Z,18nm,1.2s						
RDOG	**Red Dog Mine**	**95.50**	**22**	PFAKE		05 18 40.0	+11
RDOG				LR	LR		
	comp=Z,12µm,19.0s						
ORIF	**Oris-en-Rattie**	**95.61**	**315**	*e*P	**P**	**05 18 30.0**	**-0.4**
ORIF				pmax	pmax		
	comp=Z,11nm,1.4s						
TAM	**Tamanrasset**	**95.88**	**292**	PFAKE		05 18 40.0	+7.8
TAM				LR	LR		
	comp=Z,5µm,20.0s						
TAM	**Tamanrasset**	**95.88**	**292**	P	**P**	**05 18 33.6**	**+1.4**
TAM				pmax	pmax		
	comp=Z,33nm,1.4s						
FALS	**False Pass**	**96.17**	**35**	PFAKE		05 18 40.0	+7.5
FALS				LR	LR		
	comp=Z,4µm,20.0s						
GIVF	**Givet**	**96.18**	**320**	*e*P	**P**	**05 18 34.5**	**+1.8**
GIVF				pmax	pmax		
	comp=Z,24nm,1.5s						
DOU	**Dourbes**	**96.33**	**320**	P	**P**	**05 18 33.6**	**+0.2**
DOU				pmax	pmax		
	comp=Z,14nm,1.2s						
UCC	**Uccle**	**96.44**	**321**	PFAKE		05 18 50.0	+16
UCC				LR	LR		
	comp=Z,6µm,22.0s						
SSB	**Saint Sauveur**	**96.54**	**315**	PFAKE		05 18 50.0	+15
SSB				LR	LR		
	comp=Z,3µm,20.0s						
SMF	**Signal de Mont**	**96.98**	**316**	*e*P	**P**	**05 18 35.8**	**-0.7**
SMF				pmax	pmax		
	comp=Z,14nm,1.2s						
SSF	**Saint Saulge**	**97.19**	**317**	*e*P	Pdif	05 18 38.3	+0.8
SSF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AVF	**Avril sur Loir**	**97.31**	**317**	*e*P	Pdif	05 18 38.5	+0.5
AVF				pmax	pmax		
	comp=Z,12nm,1.5s						
BGF	**Bois d'Agland**	**97.67**	**316**	*e*P	Pdif	05 18 41.7	+2.1
BGF				pmax	pmax		
	comp=Z,20nm,1.4s						
SDPT	**Sand Point**	**97.81**	**35**	PFAKE		05 18 50.0	+10
SDPT				LR	LR		
	comp=Z,6µm,18.0s						
CLF	**Chambon-Foret**	**97.97**	**318**	PFAKE		05 18 50.0	+9.1
CLF				LR	LR		
	comp=Z,5µm,20.0s						
MTLF	**Montolieu**	**98.30**	**313**	*e*P	Pdif	05 18 43.4	+0.9
MTLF				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CHGN	**Chignik**	**98.86**	**34**	PFAKE		05 19 00.0	+15
CHGN				LR	LR		
	comp=Z,5µm,20.0s						
TOC2	**Torodi Ar. Sit**	**99.31**	**283**	PFAKE		05 19 00.0	+12
TOC2				LR	LR		
	comp=Z,6µm,21.0s						
TOC3	**Torodi Ar. Sit**	**99.31**	**283**	PFAKE		05 19 00.0	+12
TOC3				LR	LR		
	comp=Z,6µm,22.0s						
TOB2	**Torodi Ar. Sit**	**99.33**	**283**	PFAKE		05 19 00.0	+12
TOB2				LR	LR		
	comp=Z,2µm,22.0s						
TOB3	**Torodi Ar. Sit**	**99.33**	**283**	PFAKE		05 19 00.0	+12
TOB3				LR	LR		
	comp=Z,6µm,22.0s						
TOC1	**Torodi Ar. Sit**	**99.33**	**283**	PFAKE		05 19 00.0	+12
TOC1				LR	LR		
	comp=Z,6µm,21.0s						
TOA2	**Torodi Ar. Sit**	**99.33**	**283**	PFAKE		05 19 00.0	+12
TOA2				LR	LR		
	comp=Z,6µm,22.0s						
TOC4	**Torodi Ar. Sit**	**99.33**	**283**	PFAKE		05 19 00.0	+12
TOC4				LR	LR		
	comp=Z,6µm,22.0s						
TOA0	**Torodi Ar. Sit**	**99.34**	**283**	PFAKE		05 19 00.0	+12
TOA0				LR	LR		
	comp=Z,6µm,22.0s						
TORD	**Torodi Ar. Bea**	**99.34**	**283**	P	**Pdif**	**05 18 47.8**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=144,slow=3.2,SNR=3.5						
TORD				PP	**PP**	**05 22 50.7**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=131,slow=6.5,SNR=2.9						
TORD				PKKPab	PKKPdf	05 35 26.4	+11
	comp=Z,0.7nm,0.8s,baz=305,slow=3.2,SNR=4.8						
TORD				LR	LR	05 59 31.7	
	comp=Z,5µm,21.9s,baz=20,slow=33						
TOA1	**Torodi Ar. Sit**	**99.34**	**283**	PFAKE		05 19 00.0	+12
TOA1				LR	LR		
	comp=Z,6µm,22.0s						
TOB4	**Torodi Ar. Sit**	**99.35**	**283**	PFAKE		05 19 00.0	+12
TOB4				LR	LR		
	comp=Z,6µm,22.0s						
TOB5	**Torodi Ar. Sit**	**99.35**	**283**	PFAKE		05 19 00.0	+12
TOB5				LR	LR		
	comp=Z,6µm,22.0s						
TOC7	**Torodi Ar. Sit**	**99.36**	**283**	PFAKE		05 19 00.0	+12
TOC7				LR	LR		
	comp=Z,5µm,21.0s						
TOC5	**Torodi Ar. Sit**	**99.36**	**283**	PFAKE		05 19 00.0	+12
TOC5				LR	LR		
	comp=Z,7µm,22.0s						
SVW2	**Sparrevohn**	**99.57**	**29**	PFAKE		05 19 00.0	+12
SVW2				LR	LR		
	comp=Z,8µm,20.0s						
DAG	**Danmarks Havn**	**99.65**	**348**	*i*P	**Pdif**	**05 18 46.9**	**-0.9**
DAG				*i*		05 22 56.5	
DAG				MLR	MLR		
	comp=Z,11µm,20.0s						
DAG	**Danmarks Havn**	**99.65**	**348**	*i*P	**Pdif**	**05 18 46.9**	**-0.9**
DAG				*i*		05 22 56.5	
DAG				*i*		05 22 57.3	
	comp=Z,10µm,20.0s						
FLN	**La Foliniere**	**99.73**	**319**	*e*P	**Pdif**	**05 18 50.3**	**+1.6**
FLN				pmax	pmax		
	comp=Z,16nm,1.3s						
TOLK	**Toolik Lake Re**	**100.23**	**20**	PFAKE		05 19 00.0	+9.4
TOLK				LR	LR		
	comp=Z,14µm,20.0s						
TOLK	**Toolik Lake Re**	**100.23**	**20**	P	**Pdif**	**05 18 50.8**	**+0.2**
	baz=287						
KEKH	**Kekaha**	**100.27**	**68**	PFAKE		05 19 00.0	+8.3
KEKH				LR	LR		
	comp=Z,3µm,21.0s						
COLD	**Coldfoot**	**100.42**	**22**	PFAKE		05 19 00.0	+8.6
COLD				LR	LR		
	comp=Z,10µm,22.0s						
CHIA	**Chirikof Islan**	**100.50**	**34**	PFAKE		05 19 00.0	+8.0
CHIA				LR	LR		
	comp=Z,8µm,20.0s						
ESK	**Eskdalemuir**	**100.51**	**326**	PFAKE		05 19 00.0	+8.0
ESK				LR	LR		
	comp=Z,5µm,20.0s						
CAST	**Castle Rocks**	**100.67**	**26**	PFAKE		05 19 00.0	+7.4
CAST				LR	LR		
	comp=Z,8µm,22.0s						
PPLA	**Purkeypile**	**100.75**	**26**	PFAKE		05 19 00.0	+6.8
PPLA				LR	LR		
	comp=Z,6µm,19.0s						
MLY	**Manley**	**100.82**	**24**	*e*Pdif	**Pdif**	**05 18 53.4**	**+0.1**
MLY				LR	LR		
	comp=Z,5µm,20.0s						
BPAW	**Bear Paw Mtn.**	**100.97**	**25**	PFAKE		05 19 10.0	+16
BPAW				LR	LR		
	comp=Z,10µm,20.0s						
KTH	**Kantishna Hill**	**101.14**	**26**	PFAKE		05 19 10.0	+15
KTH				LR	LR		
	comp=Z,8µm,19.0s						
SII	**Sitkinak Islan**	**101.14**	**33**	PFAKE		05 19 10.0	+15
SII				LR	LR		
	comp=Z,9µm,19.0s						
SKT	**Skwentna**	**101.28**	**27**	PFAKE		05 19 10.0	+15
SKT				LR	LR		
	comp=Z,5µm,19.0s						
OHAK	**Old Harbor**	**101.49**	**32**	PFAKE		05 19 10.0	+14
OHAK				LR	LR		
	comp=Z,10µm,19.0s						
BWN	**Browne**	**101.59**	**25**	PFAKE		05 19 10.0	+13
BWN				LR	LR		
	comp=Z,6µm,19.0s						
KDAK	**Kodiak Island**	**101.74**	**32**	P	**Pdif**	**05 18 57.5**	**0.0**
	comp=Z,8.0nm,1.1s,baz=307,slow=5.2,SNR=3.0						
KDAK	**Kodiak Island**	**101.74**	**32**	*e*Pdif	**Pdif**	**05 18 57.9**	**+0.4**
KDAK				LR	LR		
	comp=Z,10µm,20.0s						
KDAK	**Kodiak Island**	**101.74**	**32**	*e*P	**Pdif**	**05 18 57.9**	**+0.4**
KDAK				MLR	MLR		
	comp=Z,10µm,20.0s						
HOM	**Homer**	**101.79**	**30**	PFAKE		05 19 10.0	+12
HOM				LR	LR		
	comp=Z,8µm,19.0s						
KIP	**Kipapa**	**101.86**	**69**	PFAKE		05 19 10.0	+11
KIP				LR	LR		
	comp=Z,4µm,22.0s						
MDM	**Murphy Dome**	**101.86**	**24**	PFAKE		05 19 10.0	+12
MDM				LR	LR		
	comp=Z,4µm,19.0s						
HON	**Honolulu**	**101.87**	**69**	PFAKE		05 19 10.0	+11
HON				LR	LR		
	comp=Z,4µm,21.0s						
MCK	**McKinley**	**101.94**	**25**	PFAKE		05 19 10.0	+12
MCK				LR	LR		
	comp=Z,8µm,20.0s						
CNPM	**China Poot**	**102.02**	**30**	PFAKE		05 19 10.0	+11
CNPM				LR	LR		
	comp=Z,6µm,20.0s						
TCOL	**CIGO, UAF Yank**	**102.04**	**24**	P	**Pdif**	**05 18 59.2**	**+0.6**
	baz=288						
COLA	**College**	**102.04**	**24**	PFAKE		05 19 10.0	+11
COLA				LR	LR		
	comp=Z,6µm,20.0s						
WRH	**Wood River Hil**	**102.07**	**24**	PFAKE		05 19 10.0	+11
WRH				LR	LR		
	comp=Z,8µm,20.0s						
RND	**Reindeer**	**102.07**	**26**	PFAKE		05 19 10.0	+11
RND				LR	LR		
	comp=Z,8µm,20.0s						
CCB	**Clear Creek Bu**	**102.13**	**24**	PFAKE		05 19 10.0	+11
CCB				LR	LR		
	comp=Z,5µm,20.0s						
BRLK	**Bradley Lake**	**102.14**	**29**	PFAKE		05 19 10.0	+11
BRLK				LR	LR		

	comp=Z,10µm,19.0s						
RC01	**Rabbit Creek A**	**102.34**	**28**	PFAKE		05 19 10.0	+10
RC01				LR	LR		
	comp=Z,6µm,19.0s						
ILAR	**Eielson Array**	**102.47**	**24**	P	**Pdif**	**05 18 59.3**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=289,slow=5.0,SNR=10						
ILAR				PP	PP	05 23 00.3	-13
	comp=Z,4.8nm,1.0s,baz=294,slow=7.5,SNR=6.8						
ILAR				PKKPbc	**PKKPbc**	**05 35 01.8**	**-2.3**
	comp=Z,0.9nm,0.8s,baz=117,slow=2.3,SNR=5.8						
ILAR				PKKPab	PKKPdf	05 35 23.8	+13
	comp=Z,1.0nm,0.8s,baz=132,slow=1.6,SNR=4.7						
PMR	**Palmer**	**102.48**	**27**	PFAKE		05 19 10.0	+9.4
PMR				LR	LR		
	comp=Z,8µm,19.0s						
HDA	**Harding Lake**	**102.56**	**24**	PFAKE		05 19 10.0	+9.0
HDA				LR	LR		
	comp=Z,5µm,20.0s						
DSB	**Dublin**	**102.72**	**324**	PFAKE		05 19 10.0	+8.1
DSB				LR	LR		
	comp=Z,5µm,20.0s						
SEW	**Seward**	**102.74**	**29**	PFAKE		05 19 10.0	+8.2
SEW				LR	LR		
	comp=Z,8µm,20.0s						
DHY	**Denali Highway**	**102.81**	**26**	PFAKE		05 19 10.0	+7.7
DHY				LR	LR		
	comp=Z,6µm,20.0s						
KNK	**Knik Glacier**	**102.84**	**27**	PFAKE		05 19 10.0	+7.7
KNK				LR	LR		
	comp=Z,8µm,18.0s						
ESDC	**Sonseca Array**	**103.25**	**310**	PP	PP	05 23 11.0	-9.0
	comp=Z,2.1nm,1.0s,baz=64,slow=7.0,SNR=4.4						
ESLA	**Sonseca Array**	**103.25**	**310**	PFAKE		05 19 20.0	+15
ESLA				LR	LR		
	comp=Z,3µm,20.0s						
KHLH	**Kahului Airpor**	**103.35**	**69**	PFAKE		05 19 20.0	+15
KHLH				LR	LR		
	comp=Z,4µm,22.0s						
HLK	**Haleakala**	**103.52**	**70**	PFAKE		05 19 20.0	+13
HLK				LR	LR		
	comp=Z,5µm,22.0s						
SCO	**Scoresbysund**	**103.53**	**343**	PFAKE		05 19 20.0	+15
SCO				LR	LR		
	comp=Z,5µm,22.0s						
PAB	**San Pablo**	**103.56**	**310**	PFAKE		05 19 20.0	+14
PAB				LR	LR		
	comp=Z,2µm,20.0s						
GLI	**Glacier Island**	**103.63**	**28**	PFAKE		05 19 20.0	+14
GLI				LR	LR		
	comp=Z,8µm,18.0s						
PAX	**Paxson**	**103.67**	**25**	PFAKE		05 19 20.0	+14
PAX				LR	LR		
	comp=Z,8µm,20.0s						
KHLU	**Kahalu`u**	**103.89**	**71**	PFAKE		05 19 20.0	+12
KHLU				LR	LR		
	comp=Z,4µm,22.0s						
DOT	**Dot Lake**	**104.02**	**25**	PFAKE		05 19 20.0	+12
DOT				LR	LR		
	comp=Z,6µm,18.0s						
HPAH	**Hawaii Prepara**	**104.06**	**70**	PFAKE		05 19 20.0	+11
HPAH				LR	LR		
	comp=Z,4µm,21.0s						
MLOA	**Mauna Loa Obse**	**104.19**	**71**	PFAKE		05 19 20.0	+10
MLOA				LR	LR		
	comp=Z,4µm,21.0s						
POHA	**Pohakuloa**	**104.22**	**71**	PFAKE		05 19 20.0	+10
POHA				LR	LR		
	comp=Z,4µm,22.0s						
EYAK	**Cordova Ski Ar**	**104.36**	**28**	PFAKE		05 19 20.0	+11
EYAK				LR	LR		
	comp=Z,10µm,19.0s						
MENT	**Mentasta**	**104.43**	**25**	PFAKE		05 19 20.0	+11
MENT				LR	LR		
	comp=Z,8µm,21.0s						
MDT	**Midelt**	**104.50**	**303**	PP	**PP**	**05 23 26.0**	**-3.6**
	comp=Z,1.7nm,0.9s,baz=76,slow=15,SNR=3.3						
EGAK	**Eagle**	**104.74**	**23**	PFAKE		05 19 20.0	+9.3
EGAK				LR	LR		
	comp=Z,8µm,18.0s						
HMT	**Hamilton**	**105.13**	**28**	PFAKE		05 23 40.0	+13
HMT				LR	LR		
	comp=Z,11µm,20.0s						
SFS	**San Fernando**	**105.40**	**307**	PFAKE		05 23 40.0	+12
SFS				LR	LR		
	comp=Z,3µm,20.0s						
EPYK	**Eagle Plains**	**105.66**	**21**	PFAKE		05 23 40.0	+12
EPYK				LR	LR		
	comp=Z,14µm,19.0s						
EPYK	**Eagle Plains**	**105.66**	**21**	P	**PKiKP**	**05 23 28.6**	**+0.9**
	baz=299						
INK	**Inuvik**	**105.72**	**18**	Pdiff	**Pdif**	**05 19 15.8**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=299,slow=6.7,SNR=4.2						
INK				PP	**PKiKP**	**05 23 23.6**	**-4.0**
	comp=Z,4.6nm,0.9s,baz=334,slow=9.5,SNR=3.5						
INK				PKKPbc	**PKKPbc**	**05 34 52.2**	**-2.0**
	comp=Z,0.9nm,0.8s,baz=116,slow=8.7,SNR=2.9						
INK	**Inuvik**	**105.72**	**18**	PFAKE		05 23 40.0	+12
INK				LR	LR		
	comp=Z,13µm,19.0s						
DAWY	**Dawson**	**105.74**	**23**	PFAKE		05 23 40.0	+12
DAWY				LR	LR		
	comp=Z,9µm,22.0s						
BALM	**Baldy**	**105.75**	**27**	PFAKE		05 23 40.0	+12
BALM				LR	LR		
	comp=Z,8µm,20.0s						
MTE	**Manteigas**	**105.87**	**311**	PFAKE		05 23 40.0	+11
MTE				LR	LR		
	comp=Z,3µm,20.0s						
RTC	**Rabat Centre**	**106.24**	**304**	PFAKE		05 23 40.0	+10
RTC				LR	LR		
	comp=Z,16µm,18.0s						
SUMG	**Summit**	**106.34**	**348**	*e*Pdif	**Pdif**	**05 19 17.6**	**-0.6**
SUMG				LR	LR		
	comp=Z,7µm,20.0s						
SUMG	**Summit**	**106.34**	**348**	*i* P	**Pdif**	**05 19 18.8**	**+0.7**
SUMG				MLR	MLR		
	comp=Z,17µm,19.0s						
SUMG	**Summit**	**106.34**	**348**	*i* P	**Pdif**	**05 19 18.8**	**+0.7**
	comp=Z,17µm,19.0s						
COI	**Coimbra**	**106.55**	**311**	PFAKE		05 23 40.0	+10
COI				LR	LR		
	comp=Z,2µm,20.0s						
TULEG	**Thule**	**106.58**	**357**	PFAKE		05 23 40.0	+11
TULEG				LR	LR		
	comp=Z,7µm,20.0s						
MESJ	**Messejana**	**106.80**	**308**	*e*P	**Pdif**	**05 19 20.7**	**+0.3**
MESJ				*e*PP	**PP**	**05 23 46.0**	**-0.3**
MESJ				*e*SS	SS	05 38 52.1	+1.7
MESJ				AMS	AMS	06 18 05.3	
	comp=E,3µm,27.3s						
ALMR	**Almeirim**	**106.86**	**310**	*e*PP	**PP**	**05 23 46.4**	**-0.3**
ALMR				*e*SS	SS	05 38 52.7	+1.5
ALMR				AMS	AMS	06 15 53.9	
	comp=E,3µm,14.8s						
TBI	**Tubuai**	**106.94**	**115**	*e*PP	**PP**	**05 23 42.9**	**-4.8**
	comp=E,379nm,25.0s						
TBI				*e*Sdif	Sdif	05 31 16.7	-5.3
	comp=E,4µm,28.5s						
TBI	**Tubuai**	**106.94**	**115**	*e*PS	PS	05 33 06.0	-2.6
	comp=E,1µm,28.0s						
TBI				*e*SS	SS	05 38 48.0	-5.1
	comp=E,5µm,26.2s						
TBI	**Tubuai**	**106.94**	**115**	*e*LR	LR	05 54 26.8	
	comp=E,15µm,22.8s						
PCA	**Pinnacle**	**107.07**	**27**	PFAKE		05 23 40.0	+9.5
PCA				LR	LR		
	comp=Z,8µm,20.0s						
MORF	**Marmelete**	**107.22**	**308**	*e*PP	**PP**	**05 23 49.0**	**-0.5**
MORF				AMS	AMS	06 10 04.9	
	comp=E,3µm,23.4s						
LIS	**Lisbon**	**107.37**	**309**	*e*PP	**PP**	**05 23 50.2**	**-0.3**
LIS				AMS	AMS	06 30 16.7	
	comp=N,3µm,19.6s						
PFVI	**Vila Bisbo**	**107.38**	**308**	PFAKE		05 23 40.0	+8.3
PFVI				LR	LR		
	comp=Z,4µm,21.0s						
BCPM	**Bancas Point**	**107.41**	**27**	PFAKE		05 23 40.0	+8.9
BCPM				LR	LR		
	comp=Z,6µm,21.0s						
YKU2	**Yakutat**	**107.58**	**28**	PFAKE		05 23 40.0	+8.7
YKU2				LR	LR		
	comp=Z,6µm,19.0s						
KULLO	**Kullorsuaq**	**107.59**	**354**	*i* P	**Pdif**	**05 19 23.6**	**+0.5**
KULLO				MLR	MLR		
	comp=Z,12µm,20.0s						
KULLO	**Kullorsuaq**	**107.59**	**354**	*i* P	**Pdif**	**05 19 23.6**	**+0.5**
	comp=Z,12µm,20.0s						
PPT2	**Papeete2**	**107.87**	**110**	*e*Pdif	**Pdif**	**05 19 27.4**	**+1.7**
	comp=Z,309nm,27.2s						
PPT2	**Papeete2**	**107.87**	**110**	*e*PP	PP	05 23 45.6	-9.2
	comp=Z,695nm,26.2s						
PPT2				*e*Sdif	Sdif	05 31 24.5	-5.6
	comp=Z,5µm,25.8s						
PPT2	**Papeete2**	**107.87**	**110**	*e*PS	PS	05 33 14.8	-3.7
	comp=Z,1µm,29.0s						
PPT2				*e*SS	SS	05 39 01.4	-4.7
	comp=Z,2µm,23.8s						
PPT2	**Papeete2**	**107.87**	**110**	*e*LR	LR	05 54 43.4	
	comp=Z,9µm,24.5s						
HYT	**Haines Junctio**	**107.98**	**26**	PFAKE		05 23 40.0	+7.7
HYT				LR	LR		
	comp=Z,6µm,20.0s						
RES	**Resolute Bay**	**108.11**	**4**	PFAKE		05 23 40.0	+8.0
RES				LR	LR		
	comp=Z,8µm,19.0s						
WHY	**Whitehorse**	**109.20**	**25**	PFAKE		05 23 50.0	+15
WHY				LR	LR		
	comp=Z,7µm,22.0s						
SKAG	**Skagway**	**109.58**	**27**	PFAKE		05 23 50.0	+15
SKAG				LR	LR		
	comp=Z,10µm,20.0s						
BESE	**Bessie Mountai**	**110.22**	**27**	PFAKE		05 23 50.0	+14
BESE				LR	LR		
	comp=Z,8µm,21.0s						
JIS	**Juneau Island**	**110.59**	**28**	PFAKE		05 23 50.0	+13
JIS				LR	LR		
	comp=Z,9µm,19.0s						
ANGG	**Ammassalik, Gr**	**111.15**	**343**	PFAKE		05 23 50.0	+12
ANGG				LR	LR		
	comp=Z,6µm,21.0s						
PMSA	**Palmer Station**	**111.15**	**187**	PFAKE		05 23 50.0	+12
PMSA				LR	LR		
	comp=Z,9µm,22.0s						
ILULI	**Ilulissat**	**111.53**	**349**	PFAKE		05 23 50.0	+11
ILULI				LR	LR		
	comp=Z,12µm,21.0s						
HOPE	**Hope Point**	**112.46**	**206**	PFAKE		05 23 50.0	+9.3
HOPE				LR	LR		
	comp=Z,5µm,19.0s						
DLBC	**Dease Lake**	**112.47**	**26**	PFAKE		05 23 50.0	+9.3
DLBC				LR	LR		
	comp=Z,7µm,20.0s						
WRAK	**Wrangell Islan**	**112.47**	**29**	PFAKE		05 23 50.0	+9.3
WRAK				LR	LR		
	comp=Z,7µm,20.0s						
SFJD	**Kangerlussuaq**	**113.34**	**348**	PFAKE		05 23 50.0	+8.0
SFJD				LR	LR		
	comp=Z,7µm,21.0s						
DIB	**Dawson Inlet,**	**114.02**	**32**	PFAKE		05 24 00.0	+16
DIB				LR	LR		
	comp=Z,4µm,22.0s						
ASCN	**Ascension**	**114.11**	**260**	PFAKE		05 24 00.0	+15
ASCN				LR	LR		
	comp=Z,7µm,20.0s						
YKW3	**Yellowknife Ar**	**115.39**	**17**	*e*PKPdf	**PKiKP**	**05 23 45.3**	**-0.7**
YKW3				LR	LR		
	comp=Z,8µm,20.0s						
YKA	**Yellowknife Ar**	**115.44**	**17**	PKP	**PKiKP**	**05 23 45.8**	**-0.4**
	comp=Z,6.8nm,0.9s,baz=317,slow=2.2,SNR=20						
YKA				PP	PP	05 24 39.3	-7.9
	comp=Z,4.4nm,0.9s,baz=326,slow=7.5,SNR=6.1						
YKA				PKKPbc	**PKKPbc**	**05 34 20.4**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=142,slow=3.4,SNR=2.5						
YKA				PKKPab	**PKKPab**	**05 34 27.0**	**+1.2**
	comp=Z,0.9nm,0.9s,baz=145,slow=2.9,SNR=5.4						
NRS	**Narsarsuaq**	**116.81**	**342**	PFAKE		05 24 00.0	+11
NRS				LR	LR		
	comp=Z,6µm,18.0s						
BBB	**Bella Bella**	**116.81**	**31**	PFAKE		05 24 00.0	+11
BBB				LR	LR		
	comp=Z,5µm,21.0s						
IVI	**Ivigtut**	**117.58**	**344**	PFAKE		05 24 00.0	+10
IVI				LR	LR		
	comp=Z,8µm,18.0s						
TAOE	**Nuku Hiva Isla**	**118.32**	**102**	*e*PP	PP	05 24 57.0	-12
	comp=Z,906nm,26.6s						
TAOE	**Nuku Hiva Isla**	**118.32**	**102**	*e*SS	SS	05 41 18.3	-6.7
	comp=Z,5µm,27.3s						
TAOE	**Nuku Hiva Isla**	**118.32**	**102**	*e*LR	LR	05 59 44.0	
	comp=Z,4µm,22.0s						
RKT	**Rikitea**	**119.89**	**119**	*e*Sdif	Sdif	05 33 10.5	+0.5
	comp=Z,2µm,25.8s						
RKT	**Rikitea**	**119.89**	**119**	*e*PS	PS	05 35 08.9	-1.0
	comp=Z,2µm,25.8s						
RKT				*e*SS	SS	05 41 39.8	-4.3
	comp=Z,5µm,28.2s						
RKT	**Rikitea**	**119.89**	**119**	*e*LR	LR	06 00 27.2	
	comp=Z,12µm,26.2s						
CMLA	**Cha da Macela**	**120.03**	**312**	PFAKE		05 24 10.0	+14
CMLA				LR	LR		
	comp=Z,3µm,19.0s						
LLLB	**Lillooet**	**120.91**	**30**	PFAKE		05 24 10.0	+13
LLLB				LR	LR		
	comp=Z,7µm,18.0s						
ROSA	**Rosais**	**121.64**	**314**	PFAKE		05 24 10.0	+11
ROSA				LR	LR		
	comp=Z,4µm,20.0s						
NLWA	**Neilton Lookou**	**121.77**	**34**	PFAKE		05 24 10.0	+11
NLWA				LR	LR		
	comp=Z,4µm,19.0s						
D03D	**Eldon**	**122.12**	**34**	P	**PKiKP**	**05 23 59.8**	**+0.1**
	baz=306						
B05A	**Bryant**	**122.23**	**32**	P	**PKiKP**	**05 23 59.8**	**-0.1**
	baz=307						
EFI	**East Falkland**	**122.28**	**196**	PFAKE		05 24 10.0	+10
EFI				LR	LR		
	comp=Z,4µm,20.0s						
E03A	**Lebam**	**122.42**	**35**	PFAKE		05 24 10.0	+10
E03A				LR	LR		
	comp=Z,4µm,21.0s						
D04E	**Lakebay**	**122.50**	**34**	P	**PKiKP**	**05 24 00.9**	**+0.5**
	baz=306						
D05A	**Enumclaw**	**122.93**	**33**	PFAKE		05 24 10.0	+8.7
D05A				LR	LR		
	comp=Z,5µm,20.0s						
E04D	**Cinebar**	**122.98**	**34**	P	**PKiKP**	**05 24 01.4**	**0.0**
	baz=306						
F04D	**Rainier, OR**	**123.00**	**35**	P	**PKiKP**	**05 24 01.6**	**+0.1**
	baz=305						
LON	**Longmire**	**123.29**	**34**	PFAKE		05 24 10.0	+7.9
LON				LR	LR		
	comp=Z,3µm,20.0s						
G03D	**McMinnville, O**	**123.35**	**36**	P	**PKiKP**	**05 24 02.5**	**+0.3**
	baz=304						
FCC	**Fort Churchill**	**123.52**	**9**	PFAKE		05 24 10.0	+8.0
FCC				LR	LR		
	comp=Z,9µm,18.0s						
LTY	**Liberty**	**123.60**	**33**	PFAKE		05 24 10.0	+7.3
LTY				LR	LR		
	comp=Z,6µm,21.0s						
I02D	**Swisshome**	**123.62**	**37**	P	**PKiKP**	**05 24 03.4**	**+0.7**
	baz=303						
COR	**Corvallis**	**123.68**	**36**	PFAKE		05 24 10.0	+7.2
COR				LR	LR		
	comp=Z,5µm,21.0s						
SACV	**Santiago Islan**	**123.79**	**286**	PFAKE		05 24 20.0	+16
SACV				LR	LR		
	comp=Z,5µm,19.0s						
KEBM	**Edson Butte**	**123.98**	**39**	PFAKE		05 24 20.0	+16
KEBM				LR	LR		
	comp=Z,4µm,19.0s						
F05D	**White Salmon**	**124.00**	**34**	P	**PKiKP**	**05 24 03.7**	**+0.2**
	baz=306						
H04D	**Lebanon**	**124.05**	**36**	P	**PKiKP**	**05 24 03.9**	**+0.4**
	baz=304,SNR=11						
J01E	**Myrtle Point**	**124.08**	**38**	P	**PKiKP**	**05 24 04.3**	**+0.7**
	baz=302						
I03D	**Drain, OR**	**124.14**	**37**	P	**PKiKP**	**05 24 04.8**	**+1.0**
	baz=303,SNR=8.3						
H04A	**Detroit Lake**	**124.28**	**36**	PFAKE		05 24 20.0	+16
H04A				LR	LR		
	comp=Z,4µm,22.0s						
G05D	**Wamic, OR**	**124.46**	**35**	P	**PKiKP**	**05 24 04.6**	**+0.2**
	baz=306						
K02D	**Willamette Mer**	**124.49**	**39**	P	**PKiKP**	**05 24 04.7**	**0.0**
	baz=302						
C09A	**Chrisman Ranch**	**124.52**	**31**	PFAKE		05 24 20.0	+16
C09A				LR	LR		
	comp=Z,4µm,19.0s						
I04A	**Tendick Farm,**	**124.65**	**37**	P	**PKiKP**	**05 24 05.1**	**+0.2**
	baz=304						
D08A	**Wollman Farm,**	**124.66**	**32**	PFAKE		05 24 20.0	+15
D08A				LR	LR		
	comp=Z,3µm,20.0s						
HAWA	**Hanford**	**124.75**	**33**	PFAKE		05 24 20.0	+15
HAWA				LR	LR		
	comp=Z,4µm,19.0s						
NEW	**Newport**	**124.79**	**30**	PFAKE		05 24 20.0	+15
NEW				LR	LR		
	comp=Z,6µm,18.0s						
NEW	**Newport**	**124.79**	**30**	P	**PKPdf**	**05 24 04.9**	**+0.2**
	baz=312						
L02E	**Cave Junction**	**124.82**	**39**	P	**PKiKP**	**05 24 05.2**	**0.0**
	baz=302						
F07A	**Phinny Hill Vi**	**124.84**	**34**	PFAKE		05 24 20.0	+15
F07A				LR	LR		
	comp=Z,6µm,21.0s						
G06A	**Carlson Farm,**	**124.85**	**35**	PFAKE		05 24 20.0	+15
G06A				LR	LR		
	comp=Z,5µm,20.0s						
E08A	**Dider Farm, El**	**124.95**	**32**	PFAKE		05 24 20.0	+15
E08A				LR	LR		
	comp=Z,4µm,22.0s						
I05D	**Terrebonne, OR**	**124.97**	**36**	P	**PKiKP**	**05 24 05.9**	**+0.4**
	baz=306,SNR=8.5						
HUMO	**Hull Mountain**	**124.98**	**38**	PFAKE		05 24 20.0	+14
HUMO				LR	LR		
	comp=Z,4µm,19.0s						
J04D	**Umpqua Nationa**	**125.15**	**37**	P	**PKiKP**	**05 24 06.5**	**+0.4**
	baz=304,SNR=19						
JCC	**Jacoby Creek,**	**125.24**	**41**	PFAKE		05 24 20.0	+14
JCC				LR	LR		
	comp=Z,4µm,20.0s						
GO09	**Cerro Castillo**	**125.30**	**185**	PFAKE		05 24 20.0	+14
GO09				LR	LR		
	comp=Z,7µm,19.0s						
KHMM	**Horse Mountain**	**125.41**	**40**	PFAKE		05 24 20.0	+13
KHMM				LR	LR		
	comp=Z,6µm,19.0s						
E09A	**Wood Farm, Sta**	**125.42**	**32**	PFAKE		05 24 20.0	+14
E09A				LR	LR		
	comp=Z,4µm,21.0s						
PINE	**Pine Mountain**	**125.53**	**36**	PFAKE		05 24 20.0	+13
PINE				LR	LR		
	comp=Z,5µm,21.0s						
FFC	**Flin Flon**	**125.56**	**16**	*e*PKPdf	**PKPdf**	**05 24 05.8**	**-0.1**
FFC	**Flin Flon**	**125.56**	**16**	*i* PKIKP	**PKiKP**	**05 24 06.1**	**-0.2**
L04D	**Klamath Falls**	**125.59**	**38**	P	**PKiKP**	**05 24 07.0**	**+0.1**
	baz=304,SNR=8.0						
YBH	**Yreka Blue Hor**	**125.61**	**39**	PFAKE		05 24 20.0	+13
YBH				LR	LR		
	comp=Z,5µm,20.0s						
J05D	**Fort Rock, OR**	**125.65**	**37**	P	**PKiKP**	**05 24 07.3**	**+0.3**
	baz=305,SNR=15						
M02C	**Callahan**	**125.70**	**40**	P	**PKiKP**	**05 24 07.2**	**+0.1**
	baz=302,SNR=8.2						
K04D	**Chiloquin, OR**	**125.71**	**38**	P	**PKPdf**	**05 24 06.5**	**-0.2**
	baz=304						
G08A	**Pilot Rock**	**125.75**	**34**	PFAKE		05 24 20.0	+13
G08A				LR	LR		
	comp=Z,3µm,18.0s						
KMRM	**Mail Ridge**	**125.76**	**41**	PFAKE		05 24 20.0	+13
KMRM				LR	LR		
	comp=Z,6µm,20.0s						
WALA	**Waterton Lakes**	**125.77**	**27**	PFAKE		05 24 20.0	+13
WALA				LR	LR		
	comp=Z,8µm,18.0s						
N02D	**Trinity Center**	**126.02**	**40**	P	**PKiKP**	**05 24 07.9**	**+0.2**
	baz=302						
KCPM	**Cahto Peak**	**126.12**	**42**	PFAKE		05 24 20.0	+12
KCPM				LR	LR		
	comp=Z,3µm,20.0s						
M04C	**Macdoel**	**126.12**	**39**	P	**PKiKP**	**05 24 08.1**	**+0.1**
	baz=304,SNR=9.9						
K05A	**Summer Lake**	**126.17**	**37**	PFAKE		05 24 20.0	+12
K05A				LR	LR		
	comp=Z,5µm,21.0s						
F10A	**Beach Ranch, E**	**126.25**	**32**	PFAKE		05 24 20.0	+12
F10A				LR	LR		
	comp=Z,4µm,20.0s						
WDC	**Whiskeytown Da**	**126.33**	**40**	*e*PKPdf	**PKPdf**	**05 24 08.0**	**+0.2**
WDC				LR	LR		
	comp=Z,4µm,21.0s						
WDC	**Whiskeytown Da**	**126.33**	**40**	*e*PKIKP	**PKPdf**	**05 24 08.0**	**+0.2**
WDC				MLR	MLR		
	comp=Z,4µm,21.0s						
HOPS	**Hopland Field**	**126.81**	**42**	PFAKE		05 24 20.0	+11
HOPS				LR	LR		
	comp=Z,4µm,22.0s						
BMO	**Blue Mountains**	**126.94**	**33**	PFAKE		05 24 20.0	+11
BMO				LR	LR		
	comp=Z,4µm,20.0s						
O03E	**Paynes Creek**	**126.96**	**40**	P	**PKPdf**	**05 24 09.3**	**+0.1**
	baz=303,SNR=18						
MOD	**Modoc Plateau**	**127.00**	**38**	PFAKE		05 24 20.0	+10
MOD				LR	LR		
	comp=Z,4µm,20.0s						
GDXM	**Geysers**	**127.09**	**42**	PFAKE		05 24 20.0	+10
GDXM				LR	LR		
	comp=Z,4µm,20.0s						
J08A	**Circle Bar Ran**	**127.22**	**35**	PFAKE		05 24 20.0	+10
J08A				LR	LR		
	comp=Z,3µm,21.0s						
MSO	**Missoula**	**127.35**	**29**	PFAKE		05 24 20.0	+10
MSO				LR	LR		
	comp=Z,8µm,18.0s						
MSO	**Missoula**	**127.35**	**29**	P	**PKPdf**	**05 24 09.6**	**-0.1**
	baz=315						
MCCM	**Marconi Confer**	**127.37**	**43**	PFAKE		05 24 20.0	+10
MCCM				LR	LR		
	comp=Z,3µm,22.0s						
ORV	**Oroville**	**127.55**	**41**	PFAKE		05 24 20.0	+9.3
ORV				LR	LR		
	comp=Z,5µm,21.0s						
SCHQ	**Schefferville**	**127.60**	**351**	PKP	**PKiKP**	**05 24 10.2**	**-0.1**
	comp=Z,21nm,0.8s,baz=41,slow=3.2,SNR=9.5						
SCHQ				PP	**PP**	**05 26 09.6**	**-0.3**
	comp=Z,16nm,1.0s,baz=38,slow=11,SNR=4.3						
SCHQ	**Schefferville**	**127.60**	**351**	PFAKE		05 24 20.0	+10
SCHQ				LR	LR		
	comp=Z,7µm,22.0s						
WVOR	**Wild Horse Val**	**127.69**	**36**	PFAKE		05 24 20.0	+8.9
WVOR				LR	LR		
	comp=Z,5µm,20.0s						
BEKR	**Beckworth**	**128.12**	**40**	PFAKE		05 24 20.0	+7.9
BEKR				LR	LR		
	comp=Z,5µm,20.0s						
AFDM	**Forest Hills D**	**128.23**	**41**	PFAKE		05 24 20.0	+7.9
AFDM				LR	LR		
	comp=Z,3µm,20.0s						
EGMT	**Eagleton**	**128.39**	**26**	PFAKE		05 24 20.0	+7.7
EGMT				LR	LR		
	comp=Z,6µm,20.0s						
EGMT	**Eagleton**	**128.39**	**26**	P	**PKiKP**	**05 24 12.1**	**-0.2**
	baz=320						
RUBR	**Rubicon Trail**	**128.70**	**41**	PFAKE		05 24 20.0	+6.7
RUBR				LR	LR		
	comp=Z,4µm,22.0s						
PAHR	**Pah Rah Range**	**128.83**	**39**	PFAKE		05 24 20.0	+6.5
PAHR				LR	LR		
	comp=Z,4µm,19.0s						
VCNR	**Virginia City**	**128.89**	**40**	PFAKE		05 24 30.0	+16
VCNR				LR	LR		
	comp=Z,4µm,20.0s						
PNTR	**Pine Nut**	**129.04**	**40**	PFAKE		05 24 30.0	+16
PNTR				LR	LR		
	comp=Z,5µm,20.0s						
DLMT	**Dillon**	**129.04**	**30**	PFAKE		05 24 30.0	+16
DLMT				LR	LR		
	comp=Z,6µm,20.0s						
SAO	**San Andreas Ge**	**129.05**	**44**	PFAKE		05 24 30.0	+16
SAO				LR	LR		
	comp=Z,4µm,21.0s						
CMB	**Columbia Colle**	**129.10**	**42**	PFAKE		05 24 30.0	+16
CMB				LR	LR		
	comp=Z,4µm,20.0s						
YERR	**Yerington**	**129.33**	**40**	PFAKE		05 24 30.0	+15
YERR				LR	LR		
	comp=Z,5µm,20.0s						
BOZ	**Bozeman (W)**	**129.35**	**29**	PFAKE		05 24 30.0	+16
BOZ				LR	LR		
	comp=Z,6µm,18.0s						
BOZ	**Bozeman (W)**	**129.35**	**29**	P	**PKiKP**	**05 24 14.1**	**-0.3**
	baz=317						
HLID	**Hailey**	**129.35**	**33**	PFAKE		05 24 30.0	+16
HLID				LR	LR		
	comp=Z,6µm,19.0s						
HLID	**Hailey**	**129.35**	**33**	P	**PKiKP**	**05 24 14.7**	**+0.3**

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        baz=312
WAKR  Walker           129.47  41  PFAKE              05 24 30.0 +15
WAKR                               LR      LR
        comp=Z,4µm,20.0s
BMN   Battle Mountai   129.75  37  PFAKE              05 24 30.0 +15
BMN                                LR      LR
        comp=Z,3µm,20.0s
RYN   Ryan             130.00  40  PFAKE              05 24 30.0 +14
RYN                                LR      LR
        comp=Z,5µm,20.0s
KVN   Kaiserville      130.02  39  PFAKE              05 24 30.0 +14
KVN                                LR      LR
        comp=Z,4µm,20.0s
MDPB  Devils Postpil   130.19  42  PFAKE              05 24 30.0 +14
MDPB                               LR      LR
        comp=Z,3µm,21.0s
DGMT  Dagmar           130.25  21  PFAKE              05 24 30.0 +14
DGMT                               LR      LR
        comp=Z,7µm,22.0s
DGMT  Dagmar           130.25  21  P       PKPdf      05 24 15.4 +0.3
        baz=327
NVAR  Mina Array Bea   130.25  40  PKhKP   PKPpre     05 24 09.8
        comp=Z,4.9nm,0.8s,baz=326,slow=1.0,SNR=5.4
NVAR                               PKP     PKiKP      05 24 17.0 +0.5
        comp=Z,9.6nm,0.8s,baz=242,slow=1.9,SNR=27
OMMB  Old Mammoth Mi   130.25  41  PFAKE              05 24 30.0 +13
OMMB                               LR      LR
        comp=Z,4µm,21.0s
NV11  Mina Array Sit   130.34  40  PFAKE              05 24 30.0 +13
NV11                               LR      LR
        comp=Z,400nm,20.0s
MLAC  Mammoth, Mammo130.35     41  P       PKiKP      05 24 16.3 -0.4
        baz=304
PAGB  Antelope Grade   130.41  44  PFAKE              05 24 30.0 +13
PAGB                               LR      LR
        comp=Z,3µm,19.0s
DRLN  Deer Lake        130.52 341  PFAKE              05 24 30.0 +14
DRLN                               LR      LR
        comp=Z,6µm,21.0s
LKWY  Lake             130.70  29  PFAKE              05 24 30.0 +13
LKWY                               LR      LR
        comp=Z,13µm,20.0s
VOG   Valley Oaks Go   130.70  43  P       PKiKP      05 24 17.0 -0.1
        baz=302
ELK   Elko             130.74  36  PFAKE              05 24 30.0 +13
ELK                                LR      LR
        comp=Z,5µm,19.0s
H17A  Grant Village    130.74  29  PFAKE              05 24 30.0 +13
H17A                               LR      LR
        comp=Z,8µm,20.0s
H17A  Grant Village    130.74  29  P       PKiKP      05 24 18.0 +0.7
        baz=317
SMMC  Simmler          130.80  45  P       PKPdf      05 24 16.1 -0.5
        baz=301
RLMT  Red Lodge        130.82  28  PFAKE              05 24 30.0 +13
RLMT                               LR      LR
        comp=Z,10µm,19.0s
RLMT  Red Lodge        130.82  28  P       PKPdf      05 24 16.8 +0.3
        baz=319
FLWY  Flagg Ranch      130.90  30  PFAKE              05 24 30.0 +12
FLWY                               LR      LR
        comp=Z,4µm,20.0s
IMW   Indian Meadow    130.92  30  PFAKE              05 24 30.0 +12
IMW                                LR      LR
        comp=Z,6µm,21.0s
LAO   LASA Array       130.93  24  PFAKE              05 24 30.0 +13
LAO                                LR      LR
        comp=Z,9µm,20.0s
LAO   LASA Array       130.93  24  P       PKiKP      05 24 17.3 -0.1
        baz=324
TIN   Tinemaha, Big    131.07  42  P       PKPdf      05 24 17.5 +0.3
        baz=304
MOOW  Moose Ponds      131.12  30  PFAKE              05 24 30.0 +12
MOOW                               LR      LR
        comp=Z,6µm,21.0s
PKM   Mcpherson Peak   131.15  45  P       PKiKP      05 24 18.0 -0.4
        baz=301
ULM   Lac du Bonnet    131.19  14  PKP     PKPdf      05 24 16.3 -0.5
        comp=Z,30nm,1.0s,baz=332,slow=3.3,SNR=15
ULM                                PP      PP         05 26 27.1 -6.3
        comp=Z,5.5nm,0.8s,baz=327,slow=12,SNR=2.3
ULM   Lac du Bonnet    131.19  14  PFAKE              05 24 30.0 +12
ULM                                LR      LR
        comp=Z,9µm,20.0s
TPAW  Teton Pass       131.21  30  PFAKE              05 24 30.0 +12
TPAW                               LR      LR
        comp=Z,6µm,21.0s
SNOW  Snow King Moun   131.33  30  PFAKE              05 24 30.0 +11
SNOW                               LR      LR
        comp=Z,7µm,20.0s
CWC   Cottonwood Cre   131.52  42  P       PKiKP      05 24 19.0  0.0
        baz=304
AHID  Auburn Hatcher   131.65  31  PFAKE              05 24 30.0 +11
AHID                               LR      LR
        comp=Z,5µm,19.0s
ISA   Isabella, Lake   131.67  43  PFAKE              05 24 30.0 +11
ISA                                LR      LR
        comp=Z,4µm,20.0s
ISA   Isabella, Lake   131.67  43  P       PKiKP      05 24 18.9 -0.3
        baz=303
GRAC  Grapevine Rang   131.68  41  P       PKiKP      05 24 18.9 -0.2
        baz=305
ARVC  Arvin            131.71  44  P       PKiKP      05 24 19.4 +0.1
        baz=302
R11A  Troy Canyon, C   132.02  39  PFAKE              05 24 30.0 +10
R11A                               LR      LR
        comp=Z,4µm,21.0s
R11A  Troy Canyon, C   132.02  39  P       PKiKP      05 24 20.0  0.0
        baz=308,SNR=38
OSI   Osito Audit: C   132.06  45  PFAKE              05 24 30.0 +10
OSI                                LR      LR
        comp=Z,3µm,22.0s
OSI   Osito Audit: C   132.06  45  P       PKiKP      05 24 20.3 +0.3
        baz=302
BLG   Laguna Peak, P   132.08  45  P       PKiKP      05 24 19.7 -0.3
        baz=301
MPMC  Manual Prospec   132.12  42  P       PKiKP      05 24 20.2  0.0
        baz=304,SNR=11
HWUT  Hardware Ranch   132.22  33  PFAKE              05 24 30.0 +10
HWUT                               LR      LR
        comp=Z,4µm,20.0s
FURC  Furnace Creek,   132.31  41  P       PKiKP      05 24 19.9 -0.4
        baz=305
LRMC  Laurel Mtn Rad   132.31  43  P       PKiKP      05 24 20.2 -0.4
        baz=304
MDND  Maddock          132.34  18  PFAKE              05 24 30.0 +10
MDND                               LR      LR
        comp=Z,12µm,21.0s
MDND  Maddock          132.34  18  P       PKPdf      05 24 18.8 -0.2
        baz=332
EDW2  Edwards Air Fo   132.43  44  P       PKiKP      05 24 20.9 +0.2
        baz=303,SNR=5.9
BW06  Boulder Array    132.43  30  PFAKE              05 24 30.0 +9.2
BW06                               LR      LR
        comp=Z,5µm,20.0s
BW06  Boulder Array    132.43  30  P       PKPdf      05 24 19.2 -0.5
        baz=317
PDAR  Pinedale Array   132.43  30  PKhKP   PKPpre     05 24 12.9
        comp=Z,1.7nm,0.9s,baz=56,slow=2.7,SNR=8.9
PDAR                               PKP     PKiKP      05 24 21.1 +0.3
        comp=Z,4.3nm,0.8s,baz=198,slow=0.9,SNR=15
PDAR                               SKPbc   SKiKP      05 27 53.1 -2.3
        comp=Z,2.6nm,0.9s,baz=35,slow=5.4,SNR=4.0
TPNV  Topopah Spring   132.44  41  PFAKE              05 24 30.0 +9.2
TPNV                               LR      LR
        comp=Z,4µm,21.0s
TPNV  Topopah Spring   132.44  41  P       PKiKP      05 24 20.7 -0.1
        baz=306,SNR=7.5
DUG   Dugway, Tooele   132.50  35  PFAKE              05 24 30.0 +9.2
DUG                                LR      LR
        comp=Z,6µm,18.0s
DUG   Dugway, Tooele   132.50  35  P       PKPdf      05 24 20.2 +0.4
        baz=312
DECC  Green Verdugo    132.52  45  P       PKiKP      05 24 20.8 -0.2
        baz=302
PASC  Pasadena Art C   132.67  45  PFAKE              05 24 30.0 +8.8
PASC                               LR      LR
        comp=Z,4µm,21.0s
MWC   Mount Wilson     132.73  45  PFAKE              05 24 30.0 +8.4
MWC                                LR      LR
        comp=Z,4µm,19.0s
FMP   Fort Macarthur   132.83  45  P       PKiKP      05 24 21.0 -0.5
        baz=302
CIS   Catalina Islan   132.91  46  P       PKiKP      05 24 21.4 -0.4
        baz=301
BFSC  Mount Baldy Ra   133.00  44  P       PKPdf      05 24 18.4 -2.5
        baz=302,SNR=5.5
AGMN  Agassiz Nation   133.00  15  PFAKE              05 24 30.0 +8.6
AGMN                               LR      LR
        comp=Z,8µm,20.0s
AGMN  Agassiz Nation   133.00  15  P       PKPdf      05 24 19.9 -0.3
        baz=337
GSC   Goldstone, Bar   133.01  43  PFAKE              05 24 30.0 +8.0
GSC                                LR      LR
        comp=Z,4µm,20.0s
GSC   Goldstone, Bar   133.01  43  P       PKiKP      05 24 21.9 -0.1
        baz=304,SNR=13
SHOC  Shoshone, Teco   133.03  42  P       PKPdf      05 24 20.2 -0.5
        baz=305
RRX   Edison Barstow   133.12  43  P       PKPdf      05 24 20.5 -0.4
        baz=304
CHGQ  Chibougamau      133.35 355  P       PKPdf      05 24 20.6 -0.3
        baz=6.9
SHPR  Sheep Range      133.40  40  PFAKE              05 24 30.0 +7.2
SHPR                               LR      LR
        comp=Z,4µm,20.0s
BBRC  Big Bear Solar   133.50  44  P       PKiKP      05 24 22.6 -0.6
        baz=303
TUQ   Turquoise Moun   133.53  42  P       PKPdf      05 24 21.8  0.0
        baz=305
HEC   Hector,Ludlow    133.59  43  P       PKiKP      05 24 23.4 +0.3
        baz=304
MURC  Murrieta         133.67  45  P       PKiKP      05 24 23.0 -0.2
        baz=302,SNR=7.3
MATQ  Matagami         133.68 358  P       PKPdf      05 24 21.3 -0.2
        baz=2.5
RSSD  Black Hills      133.91  25  ePKPpre PKPpre     05 24 13.7
RSSD                               LR      LR
        comp=Z,5µm,19.0s
RSSD  Black Hills      133.91  25  P       PKPdf      05 24 21.8 -0.6
        baz=325
K22A  Casper           133.99  28  PFAKE              05 24 30.0 +6.2
K22A                               LR      LR
        comp=Z,5µm,20.0s
K22A  Casper           133.99  28  P       PKPdf      05 24 22.0 -0.5
        baz=321
GMRC  Granite Mounta   134.08  43  P       PKiKP      05 24 24.5 +0.3
        baz=305,SNR=26
109C  Camp Elliot, M   134.11  46  P       PKiKP      05 24 23.7 -0.4
        baz=302
CPE   Camp Elliot      134.11  46  PFAKE              05 24 30.0 +5.9
CPE                                LR      LR
        comp=Z,3µm,22.0s
PFO   Pinyon Flats O   134.18  44  ePKPdf  PKPdf      05 24 22.0 -1.1
PFO                                LR      LR
        comp=Z,3µm,19.0s
PFO   Pinyon Flats O   134.18  44  ePKIKP  PKPdf      05 24 22.0 -1.1
PFO                                MLR     MLR
        comp=Z,3µm,19.0s
PFO   Pinyon Flats O   134.18  44  P       PKiKP      05 24 24.2 -0.2
        baz=303,SNR=13
LDFC  Landfair         134.28  42  PFAKE              05 24 40.0 +15
LDFC                               LR      LR
        comp=Z,5µm,20.0s
BELC  Belle Mtn. Jos   134.29  44  P       PKiKP      05 24 24.6  0.0
        baz=304,SNR=8.6
EYMN  Ely              134.32  11  PFAKE              05 24 30.0 +5.9
EYMN                               LR      LR
        comp=Z,10µm,21.0s
EYMN  Ely              134.32  11  P       PKPdf      05 24 22.8 +0.1
        baz=343
LSQQ  Lebel-sur-Quev   134.35 358  P       PKPdf      05 24 23.4 +0.6
        baz=3.4
RWWY  Rawlins          134.40  29  PFAKE              05 24 40.0 +15
RWWY                               LR      LR
        comp=Z,8µm,19.0s
BAR   Barrett          134.53  46  PFAKE              05 24 40.0 +15
BAR                                LR      LR
        comp=Z,3µm,22.0s
MONP2 Monument Peak    134.60  45  P       PKiKP      05 24 25.1 -0.3
        baz=303,SNR=15
BATG  Bathurst New B   134.67 347  PFAKE              05 24 40.0 +15
BATG                               LR      LR
        comp=Z,10µm,20.0s
C40A  Isle Royale Na   134.77   9  PFAKE              05 24 40.0 +15
C40A                               LR      LR
        comp=Z,7µm,18.0s
C40A  Isle Royale Na   134.77   9  P       PKPdf      05 24 23.4 -0.1
        baz=346
IRM   Iron Mountain    134.78  43  P       PKiKP      05 24 25.5  0.0
        baz=305,SNR=9.1
NEE2  Needles Airpor   134.78  42  P       PKPdf      05 24 24.2 +0.1
        baz=306
BC3   Big Chuckawall   134.85  44  P       PKiKP      05 24 25.2 -0.5
        baz=304,SNR=7.9
IKP   In-Ko-Pah, Jac   134.95  45  P       PKiKP      05 24 25.8 -0.2
        baz=303,SNR=9.5
SWSC  Sam W. Stewart   135.01  45  P       PKiKP      05 24 26.0  0.0
        baz=303,SNR=8.2
O20A  White River Ci   135.04  31  PFAKE              05 24 40.0 +14
O20A                               LR      LR
        comp=Z,6µm,19.0s
O20A  White River Ci   135.04  31  P       PKPdf      05 24 24.9 +0.3
        baz=317
W13A  Hualapai Mount   135.07  41  PFAKE              05 24 40.0 +14
W13A                               LR      LR
        comp=Z,4µm,21.0s
GBN   Guysborough      135.20 342  PFAKE              05 24 40.0 +14
GBN                                LR      LR
        comp=Z,6µm,20.0s
U15A  North Rim        135.27  38  PFAKE              05 24 40.0 +13
U15A                               LR      LR
        comp=Z,3µm,20.0s
VLDQ  Val d'Or         135.32 358  PFAKE              05 24 40.0 +14
VLDQ                               LR      LR
        comp=Z,8µm,19.0s
PDMCI Parker Dam,Lak   135.38  42  P       PKiKP      05 24 26.0 -0.6
        baz=306
PLCA  Paso Flores      135.43 190  PKhKP   PKPpre     05 24 20.9
        comp=Z,0.6nm,0.7s,baz=225,slow=7.1,SNR=2.7
PLCA                               PKP     PKiKP      05 24 26.8  0.0
        comp=Z,2.8nm,1.0s,baz=225,slow=4.6,SNR=4.5
PLCA  Paso Flores      135.43 190  ePKPdf  PKiKP      05 24 26.3 -0.5
Y12C  Blythe           135.44  43  PFAKE              05 24 40.0 +13
Y12C                               LR      LR
        comp=Z,4µm,20.0s
Y12C  Blythe           135.44  43  P       PKPdf      05 24 25.8 +0.6
        baz=305
PHWY  Pilot Hill       135.53  28  ePKPdf  PKPdf      05 24 25.1 -0.6
PHWY                               LR      LR
        comp=Z,5µm,20.0s
RCBR  Riachuelo        135.56 258  PFAKE              05 24 40.0 +12
RCBR                               LR      LR
        comp=Z,6µm,18.0s
SUSD  Miller           135.56  20  P       PKPdf      05 24 24.7 -0.5
        baz=332
E38A  The Farm, Brul   135.59  12  PFAKE              05 24 40.0 +13
E38A                               LR      LR
        comp=Z,8µm,18.0s
E38A  The Farm, Brul   135.59  12  P       PKPdf      05 24 24.4 -0.8
        baz=343
N23A  Red Feather La   135.62  29  PFAKE              05 24 40.0 +13
N23A                               LR      LR
        comp=Z,4µm,19.0s
GLA   Glamis           135.63  44  PFAKE              05 24 40.0 +13
GLA                                LR      LR
        comp=Z,4µm,21.0s
GLA   Glamis           135.63  44  P       PKiKP      05 24 26.9 -0.4
        baz=304,SNR=6.4
PQI   Presque Isle     135.66 349  PFAKE              05 24 40.0 +13
PQI                                LR      LR
        comp=Z,6µm,21.0s
D41A  Chassel          135.69   9  PFAKE              05 24 40.0 +13
D41A                               LR      LR
        comp=Z,7µm,18.0s
LATQ  La Tuque         135.70 353  P       PKPdf      05 24 25.1 -0.2
        baz=9.5,SNR=18
LMN   Caledonia Moun   135.72 345  PFAKE              05 24 40.0 +13
LMN                                LR      LR
        comp=Z,6µm,21.0s
PV21  Cone Mtn., Par   135.78  34  PFAKE              05 24 40.0 +12
PV21                               LR      LR
        comp=Z,7µm,19.0s
TRQA  Tornquist        135.78 200  PFAKE              05 24 40.0 +13
TRQA                               LR      LR
        comp=Z,7µm,19.0s
PV10  Paradox Valley   135.87  34  PFAKE              05 24 40.0 +12
PV10                               LR      LR
        comp=Z,8µm,19.0s
PV14  Lion Creek, Pa   135.88  34  PFAKE              05 24 40.0 +12
PV14                               LR      LR
        comp=Z,8µm,19.0s
PV22  Blue Mesa, Par   135.90  33  PFAKE              05 24 40.0 +12
PV22                               LR      LR
        comp=Z,6µm,19.0s
PV04  Paradox Valley   135.93  34  PFAKE              05 24 40.0 +12
PV04                               LR      LR
        comp=Z,7µm,20.0s
PV19  Morning Glory    135.95  34  PFAKE              05 24 40.0 +12
PV19                               LR      LR
        comp=Z,6µm,20.0s
PV16  Nyswonger Mesa   135.99  34  PFAKE              05 24 40.0 +12
PV16                               LR      LR
        comp=Z,6µm,19.0s
PV11  David Mesa, Pa   136.02  34  PFAKE              05 24 40.0 +12
PV11                               LR      LR
        comp=Z,8µm,20.0s
PV18  Skein Mesa, Pa   136.03  34  PFAKE              05 24 40.0 +12
PV18                               LR      LR
        comp=Z,7µm,20.0s
PV07  Paradox Valley   136.04  33  PFAKE              05 24 40.0 +12
PV07                               LR      LR
        comp=Z,5µm,18.0s
PV03  Paradox Valley   136.06  34  PFAKE              05 24 40.0 +12
PV03                               LR      LR
        comp=Z,7µm,20.0s
F38A  Pierce - Schro   136.14  12  P       PKPdf      05 24 26.1 -0.1
        baz=342
PV13  Radium Mtn., P   136.15  34  PFAKE              05 24 40.0 +12
PV13                               LR      LR
        comp=Z,6µm,20.0s
D49A  Beulah Townshi   136.16   2  P       PKPdf      05 24 25.3 -0.9
        baz=357
F37A  Hinrichs Farm,   136.20  13  P       PKPdf      05 24 26.4 +0.1
        baz=341
D48A  Paudash Townsh136.24      2  P       PKPdf      05 24 26.0 -0.3
        baz=357
D54A  Lac Fusel, La    136.24 357  P       PKPdf      05 24 26.5 +0.1
        baz=4.0
D47A  Chapleau         136.29   4  P       PKPdf      05 24 26.4 -0.1
        baz=355
D50A  G1974 Best Tow   136.30   0  P       PKPdf      05 24 25.9 -0.5
        baz=359
PV01  Paradox Valley   136.30  34  PFAKE              05 24 40.0 +11
PV01                               LR      LR
        comp=Z,6µm,20.0s
Y14A  Wickenburg       136.35  42  PFAKE              05 24 40.0 +11
Y14A                               LR      LR
        comp=Z,3µm,22.0s
D53A  Lac Vacive, Po   136.36 358  PFAKE              05 24 40.0 +12
D53A                               LR      LR
        comp=Z,8µm,19.0s
D53A  Lac Vacive, Po   136.36 358  P       PKPdf      05 24 26.0 -0.5
        baz=2.5
F39A  Loretta          136.38  12  P       PKPdf      05 24 26.3 -0.4
        baz=343
D46A  Sault St. Mari   136.39   5  P       PKPdf      05 24 26.7  0.0
        baz=353
SMCO  Snowmass         136.40  31  PFAKE              05 24 40.0 +11
SMCO                               LR      LR
        comp=Z,8µm,18.0s
WUAZ  Wupatki          136.42  39  PFAKE              05 24 40.0 +11
WUAZ                               LR      LR
        comp=Z,3µm,18.0s
WUAZ  Wupatki          136.42  39  P       PKiKP      05 24 28.5 -0.5
        baz=310
D52A  ZEK Kipawa Sen   136.48 359  P       PKPdf      05 24 26.4 -0.4
        baz=1.5
E44A  Grand Marais A   136.48   6  PFAKE              05 24 40.0 +11
E44A                               LR      LR
        comp=Z,9µm,20.0s
E44A  Grand Marais A   136.48   6  P       PKPdf      05 24 26.6 -0.2
        baz=351
HAL   Halifax          136.51 344  PFAKE              05 24 40.0 +11
HAL                                LR      LR
        comp=Z,6µm,20.0s
113A  Mohawk Valley,   136.52  44  PFAKE              05 24 40.0 +11
113A                               LR      LR
        comp=Z,4µm,20.0s
F40A  Park Falls       136.53  11  P       PKPdf      05 24 27.0 +0.1
        baz=344
COWI  Conover          136.54  10  PFAKE              05 24 40.0 +11
COWI                               LR      LR
        comp=Z,9µm,21.0s
E43A  Lone Tree Farm   136.59   8  PFAKE              05 24 40.0 +11
E43A                               LR      LR
        comp=Z,8µm,20.0s
E43A  Lone Tree Farm   136.59   8  P       PKPdf      05 24 27.0  0.0
        baz=349
ISCO  Idaho Springs    136.62  30  PFAKE              05 24 40.0 +11
ISCO                               LR      LR
        comp=Z,6µm,20.0s
ISCO  Idaho Springs    136.62  30  P       PKPdf      05 24 27.5 -0.2
        baz=320
SPMN  Marine on St.    136.63  14  PFAKE              05 24 40.0 +11
SPMN                               LR      LR
        comp=Z,7µm,20.0s
SPMN  Marine on St.    136.63  14  P       PKPdf      05 24 27.1  0.0
        baz=340
E47A  Iron Bridge      136.88   4  P       PKPdf      05 24 27.4 -0.1
        baz=354
E46A  Sault Ste Mari   136.89   5  PFAKE              05 24 40.0 +11
E46A                               LR      LR
        comp=Z,7µm,22.0s
E46A  Sault Ste Mari   136.89   5  P       PKPdf      05 24 27.4 -0.2
        baz=353
GGN   Saint George     136.89 347  PFAKE              05 24 40.0 +11
GGN                                LR      LR
        comp=Z,7µm,18.0s
E48A  Lockeyer         136.92   3  P       PKPdf      05 24 26.4 -1.2
        baz=356
E51A  G1948 Merrick    136.93   0  P       PKPdf      05 24 27.2 -0.5
        baz=360
G39A  Holcombe         136.93  12  P       PKPdf      05 24 27.4 -0.3
        baz=343
ECSD  EROS Data Cent   136.96  18  PFAKE              05 24 40.0 +10
ECSD                               LR      LR
        comp=Z,12µm,20.0s
ECSD  EROS Data Cent   136.96  18  P       PKPdf      05 24 27.4 -0.4
        baz=334
E54A  Lac Daplat, Po   136.98 358  P       PKPdf      05 24 26.4 -1.3
        baz=3.3
MVCO  Mesa Verde       137.00  35  PFAKE              05 24 40.0 +10
MVCO                               LR      LR
        comp=Z,5µm,19.0s
MVCO  Mesa Verde       137.00  35  P       PKPdf      05 24 28.7 +0.3
        baz=315,SNR=6.7
E50A  Wahnapitae       137.03   1  P       PKPdf      05 24 27.7 -0.1
        baz=358
F42A  Maple Grove Fa   137.03   9  P       PKPdf      05 24 27.5 -0.4
        baz=347
E53A  Dumoine, Ponti   137.06 358  P       PKPdf      05 24 27.5 -0.3
        baz=2.6
G40A  Rib Lake         137.15  11  PFAKE              05 24 40.0 +10
G40A                               LR      LR
        comp=Z,10µm,22.0s
G40A  Rib Lake         137.15  11  P       PKPdf      05 24 27.6 -0.5
        baz=344
E52A  Mattawa          137.17 359  P       PKPdf      05 24 27.5 -0.6
        baz=1.1
PKME  Peaks-Kenny Pk   137.25 349  PFAKE              05 24 40.0 +10
PKME                               LR      LR
        comp=Z,5µm,19.0s
PKME  Peaks-Kenny Pk   137.25 349  P       PKPdf      05 24 28.0 -0.2
        baz=15
OGNE  Ogallala         137.36  25  PFAKE              05 24 40.0 +9.4
OGNE                               LR      LR
        comp=Z,6µm,20.0s
OGNE  Ogallala         137.36  25  P       PKPdf      05 24 28.4 -0.4
        baz=326
EMMW  East Machias     137.42 347  PFAKE              05 24 40.0 +10
EMMW                               LR      LR
        comp=Z,7µm,22.0s
F45A  CMU Biological   137.45   6  P       PKPdf      05 24 28.8 +0.2
        baz=351
Q24A  Divide           137.49  30  PFAKE              05 24 40.0 +8.7
Q24A                               LR      LR
        comp=Z,6µm,21.0s
Q24A  Divide           137.49  30  P       PKPdf      05 24 28.3 -1.1
        baz=320
F51A  Arnstein         137.53   0  P       PKPdf      05 24 28.6 -0.1
        baz=359
S22A  4UR Ranch, Cre   137.53  33  PFAKE              05 24 40.0 +8.6
S22A                               LR      LR
        comp=Z,6µm,19.0s
S22A  4UR Ranch, Cre   137.53  33  P       PKPdf      05 24 30.0 +0.5
        baz=317
F55A  Otter Lake       137.54 357  P       PKPdf      05 24 28.1 -0.7
        baz=4.5
F48A  Evansville       137.55   3  P       PKPdf      05 24 28.2 -0.6
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	baz=355						
F49A	Sandfield	137.64	3	P	PKPdf	05 24 28.3	-0.7
	baz=356						
214A	Organ Pipe Nat	137.65	44	P	PKPdf	05 24 30.0	+0.5
	baz=306						
F52A	Sundridge	137.67	360	P	PKPdf	05 24 28.4	-0.6
	baz=0.2						
W18A	Petrified Fore	137.69	38	PFAKE		05 24 40.0	+8.4
W18A				LR	LR		
	comp=Z,4µm,20.0s						
W18A	Petrified Fore	137.69	38	P	PKPdf	05 24 30.2	+0.5
	baz=312						
PEMO	Pembroke	137.74	358	P	PKPdf	05 24 28.5	-0.7
	baz=3.2						
G46A	Petoskey	137.88	6	P	PKPdf	05 24 29.4	0.0
	baz=352						
X18A	Snowflake	137.95	39	PFAKE		05 24 40.0	+7.8
X18A				LR	LR		
	comp=Z,4µm,18.0s						
WVL	Waterville	138.00	350	PFAKE		05 24 40.0	+8.3
WVL				LR	LR		
	comp=Z,6µm,21.0s						
BUKO	Buck Lake	138.02	360	P	PKPdf	05 24 29.2	-0.5
	baz=0.1						
G45A	Suttons Bay	138.07	7	PFAKE		05 24 40.0	+8.2
G45A				LR	LR		
	comp=Z,10µm,22.0s						
G45A	Suttons Bay	138.07	7	P	PKPdf	05 24 30.2	+0.4
	baz=351						
KLBO	Killbear Provi	138.10	1	P	PKPdf	05 24 29.6	-0.3
	baz=359						
G47A	Hillman	138.11	5	P	PKPdf	05 24 29.1	-0.7
	baz=353						
G55A	Calabogie	138.14	357	P	PKPdf	05 24 29.5	-0.4
	baz=4.0						
TOBO	Tobermory, Bru	138.20	2	P	PKPdf	05 24 29.3	-0.7
	baz=357						
SDCO	Great Sand Dun	138.24	31	PFAKE		05 24 40.0	+7.2
SDCO				LR	LR		
	comp=Z,5µm,19.0s						
SDCO	Great Sand Dun	138.24	31	P	PKPdf	05 24 31.7	+1.0
	baz=319						
FRNY	Flat Rock	138.31	354	PFAKE		05 24 40.0	+7.7
FRNY				LR	LR		
	comp=Z,6µm,18.0s						
G53A	Haliburton	138.34	359	P	PKPdf	05 24 30.1	-0.2
	baz=1.2						
H43A	Windswept, Lux	138.34	9	PFAKE		05 24 40.0	+7.6
H43A				LR	LR		
	comp=Z,10µm,21.0s						
H43A	Windswept, Lux	138.34	9	P	PKPdf	05 24 29.4	-0.9
	baz=348						
PLVO	Plevna	138.37	357	PFAKE		05 24 40.0	+7.6
PLVO				LR	LR		
	comp=Z,6µm,22.0s						
PLVO	Plevna	138.37	357	P	PKPdf	05 24 29.7	-0.6
	baz=3.5						
I41A	Arkdale	138.37	11	PFAKE		05 24 40.0	+7.5
I41A				LR	LR		
	comp=Z,8µm,22.0s						
I41A	Arkdale	138.37	11	P	PKPdf	05 24 30.0	-0.4
	baz=344						
GLMI	Grayling	138.39	6	PFAKE		05 24 40.0	+7.5
GLMI				LR	LR		
	comp=Z,9µm,21.0s						
GLMI	Grayling	138.39	6	P	PKPdf	05 24 30.0	-0.4
	baz=352						
BANO	Bancroft	138.42	358	P	PKPdf	05 24 30.4	-0.1
	baz=2.3						
H45A	Beulah	138.44	7	P	PKPdf	05 24 30.2	-0.3
	baz=350						
BGNE	Belgrade	138.51	21	PFAKE		05 24 40.0	+7.1
BGNE				LR	LR		
	comp=Z,11µm,20.0s						
BGNE	Belgrade	138.51	21	P	PKPdf	05 24 29.7	-1.1
	baz=331						
H46A	Fife Lake	138.61	6	P	PKPdf	05 24 30.2	-0.7
	baz=351						
LONY	Lake Ozonia	138.62	355	PFAKE		05 24 40.0	+7.0
LONY				LR	LR		
	comp=Z,6µm,20.0s						
LONY	Lake Ozonia	138.62	355	P	PKPdf	05 24 31.0	+0.1
	baz=7.3						
H48A	Harrisville	138.62	4	PFAKE		05 24 40.0	+7.0
H48A				LR	LR		
	comp=Z,9µm,18.0s						
H48A	Harrisville	138.62	4	P	PKPdf	05 24 30.1	-0.8
	baz=354						
H47A	Mio	138.65	5	P	PKPdf	05 24 30.7	-0.2
	baz=353						
KSCO	Kaye Shedlock’	138.67	28	PFAKE		05 24 40.0	+6.6
KSCO				LR	LR		
	comp=Z,11µm,19.0s						
KSCO	Kaye Shedlock’	138.67	28	P	PKPdf	05 24 31.2	-0.1
	baz=324						
LBNH	Lisbon	138.68	352	PFAKE		05 24 40.0	+6.9
LBNH				LR	LR		
	comp=Z,8µm,19.0s						
LBNH	Lisbon	138.68	352	P	PKPdf	05 24 31.3	+0.4
	baz=11,SNR=5.8						
SADO	Sadowa	138.69	360	PFAKE		05 24 40.0	+6.9
SADO				LR	LR		
	comp=Z,8µm,21.0s						
VT1	Waterbury	138.70	353	PFAKE		05 24 40.0	+6.8
VT1				LR	LR		
	comp=Z,8µm,19.0s						
I42A	Draeger Farm,	138.72	10	PFAKE		05 24 40.0	+6.8
I42A				LR	LR		
	comp=Z,8µm,19.0s						
I42A	Draeger Farm,	138.72	10	P	PKPdf	05 24 30.9	-0.1
	baz=346						
H56A	Elgin	138.77	357	P	PKPdf	05 24 30.8	-0.3
	baz=4.8						
TUC	Tucson	138.82	42	PFAKE		05 24 40.0	+6.2
TUC				LR	LR		
	comp=Z,4µm,21.0s						
TUC	Tucson	138.82	42	P	PKPdf	05 24 31.4	-0.2
	baz=308						
H52A	Wyevale	138.82	0	P	PKPdf	05 24 30.9	-0.3
	baz=359						
BMRO	Meriville Lake	138.84	2	P	PKPdf	05 24 30.8	-0.4
	baz=357						
H55A	Tweed	138.86	358	P	PKPdf	05 24 31.1	-0.2
	baz=3.4						
SPB	Sao Paulo	138.91	228	PFAKE		05 24 40.0	+5.9
SPB				LR	LR		
	comp=Z,4µm,22.0s						
DELO	Deloro Mine	138.91	358	PFAKE		05 24 40.0	+6.5
DELO				LR	LR		
	comp=Z,9µm,21.0s						
DELO	Deloro Mine	138.91	358	P	PKPdf	05 24 30.9	-0.4
	baz=2.8						
I45A	Fountain	138.99	7	PFAKE		05 24 40.0	+6.3
I45A				LR	LR		
	comp=Z,11µm,21.0s						
I45A	Fountain	138.99	7	P	PKPdf	05 24 30.7	-0.8
	baz=350						
I48A	Sherman Twp	139.10	5	P	PKPdf	05 24 31.4	-0.3
	baz=354						
I46A	Reed City	139.18	7	P	PKPdf	05 24 31.5	-0.4
	baz=351						
BRCO	Bruce Peninsul	139.18	2	P	PKPdf	05 24 31.4	-0.4
	baz=357						
I47A	Gladwin	139.20	6	PFAKE		05 24 40.0	+5.8
I47A				LR	LR		
	comp=Z,10µm,19.0s						
I47A	Gladwin	139.20	6	P	PKPdf	05 24 31.2	-0.7
	baz=352						
I55A	Frankford	139.22	358	P	PKPdf	05 24 31.0	-0.9
	baz=2.7						
NCB	Newcomb	139.23	354	PFAKE		05 24 40.0	+5.7
NCB				LR	LR		
	comp=Z,6µm,20.0s						
HNH	Hanover	139.26	352	PFAKE		05 24 40.0	+5.7
HNH				LR	LR		
	comp=Z,9µm,19.0s						
T25A	Trinidad	139.26	31	PFAKE		05 24 40.0	+5.2
T25A				LR	LR		
	comp=Z,5µm,19.0s						
T25A	Trinidad	139.26	31	P	PKPdf	05 24 31.6	-0.9
	baz=320						
BWLO	Walkerton	139.32	2	P	PKPdf	05 24 31.6	-0.6
	baz=357						
I52A	Shelburne	139.39	1	P	PKPdf	05 24 32.2	0.0
	baz=359						
FFD	Franklin Falls	139.40	351	PFAKE		05 24 40.0	+5.5
FFD				LR	LR		
	comp=Z,10µm,18.0s						
JFWS	Jewell Farm	139.40	12	PFAKE		05 24 40.0	+5.4
JFWS				LR	LR		
	comp=Z,6µm,21.0s						
JFWS	Jewell Farm	139.40	12	P	PKPdf	05 24 31.4	-0.9
	baz=343						
BASO	Ashfield	139.40	2	P	PKPdf	05 24 31.9	-0.3
	baz=357						
I49A	Point Hope	139.41	4	PFAKE		05 24 40.0	+5.4
I49A				LR	LR		
	comp=Z,10µm,19.0s						
I49A	Point Hope	139.41	4	P	PKPdf	05 24 32.2	-0.1
	baz=355						
PECO	Prince Edward	139.47	357	PFAKE		05 24 40.0	+5.3
PECO				LR	LR		
	comp=Z,5µm,18.0s						
PECO	Prince Edward	139.47	357	P	PKPdf	05 24 32.5	+0.1
	baz=3.7						
PKRO	Pickering	139.50	360	P	PKPdf	05 24 32.1	-0.3
	baz=0.6						
WLVO	Wesleyville	139.53	359	P	PKPdf	05 24 32.3	-0.2
	baz=1.6						
J45A	Montague	139.56	8	PFAKE		05 24 40.0	+5.1
J45A				LR	LR		
	comp=Z,9µm,21.0s						
J45A	Montague	139.56	8	P	PKPdf	05 24 32.1	-0.5
	baz=349						
DRWO	Darlington Wes	139.59	359	P	PKPdf	05 24 32.0	-0.5
	baz=1.1						
SCIA	State Center	139.63	16	PFAKE		05 24 40.0	+4.9
SCIA				LR	LR		
	comp=Z,7µm,19.0s						
SCIA	State Center	139.63	16	P	PKPdf	05 24 32.3	-0.4
	baz=339						
I51A	Listowel	139.64	2	P	PKPdf	05 24 32.0	-0.7
	baz=358						
I53A	Kortright Cn E	139.64	0	P	PKPdf	05 24 32.2	-0.4
	baz=360						
J46A	Howard City	139.74	7	P	PKPdf	05 24 32.5	-0.4
	baz=350						
ACCN	Adirondack Com	139.75	353	PFAKE		05 24 50.0	+15
ACCN				LR	LR		
	comp=Z,6µm,18.0s						
TASM	ASL Pad, Albuq	139.76	35	P	PKPdf	05 24 34.3	+0.8
	baz=316,SNR=9.2						
TASM	ASL Pad, Albuq	139.76	35	P	PKPdf	05 24 34.2	+0.7
	baz=316,SNR=9.8						
ANMO	Albuquerque	139.76	35	*e*PKPpre	PKPpre	05 24 25.6	
ANMO				LR	LR		
	comp=Z,7µm,20.0s						
ANMO	Albuquerque	139.76	35	*i* PKHKP	PKPpre	05 24 25.9	
ANMO	Albuquerque	139.76	35	P	PKPdf	05 24 33.7	+0.2
	baz=316						
TORO	Toronto--Lesli	139.85	360	P	PKPdf	05 24 32.8	-0.2
	baz=0.1						
ACTO	Acton	139.85	1	P	PKPdf	05 24 32.5	-0.6
	baz=359						
J47A	Sunmer	139.94	6	PFAKE		05 24 50.0	+14
J47A				LR	LR		
	comp=Z,9µm,19.0s						
J47A	Sunmer	139.94	6	P	PKPdf	05 24 33.0	-0.3
	baz=352						
K43A	Burlington	139.97	10	PFAKE		05 24 50.0	+14
K43A				LR	LR		
	comp=Z,8µm,20.0s						
K43A	Burlington	139.97	10	P	PKPdf	05 24 33.1	-0.3
	baz=346						
J49A	Marlette	139.97	4	P	PKPdf	05 24 32.7	-0.6
	baz=354						
J48A	Bridge Port	139.98	5	PFAKE		05 24 50.0	+14
J48A				LR	LR		
	comp=Z,8µm,22.0s						
J48A	Bridge Port	139.98	5	P	PKPdf	05 24 33.1	-0.2
	baz=353						
L40A	Anamosa	139.99	14	PFAKE		05 24 50.0	+14
L40A				LR	LR		
	comp=Z,9µm,19.0s						
L40A	Anamosa	139.99	14	P	PKPdf	05 24 32.7	-0.7
	baz=342						
Y22D	IRIS PASSCAL I	140.10	37	PFAKE		05 24 50.0	+13
Y22D				LR	LR		
	comp=Z,4µm,20.0s						
Y22D	IRIS PASSCAL I	140.10	37	P	PKPdf	05 24 34.3	+0.2
	baz=314						
CBKS	Cedar Bluff	140.11	25	PFAKE		05 24 50.0	+14
CBKS				LR	LR		
	comp=Z,8µm,20.0s						
CBKS	Cedar Bluff	140.11	25	P	PKPdf	05 24 33.0	-0.8
	baz=327						
J55A	Hilton	140.17	358	PFAKE		05 24 50.0	+14
J55A				LR	LR		
	comp=Z,11µm,21.0s						
J55A	Hilton	140.17	358	P	PKPdf	05 24 33.5	-0.1
	baz=2.5						
J54A	Appleton	140.18	359	PFAKE		05 24 50.0	+14
J54A				LR	LR		
	comp=Z,6µm,18.0s						
J54A	Appleton	140.18	359	P	PKPdf	05 24 33.6	-0.1
	baz=1.2						
J52A	Paris	140.21	1	P	PKPdf	05 24 33.0	-0.7
	baz=358						
STCO	Saint Catharin	140.25	360	P	PKPdf	05 24 33.0	-0.8
	baz=0.4						
MEDO	Medina	140.29	359	PFAKE		05 24 50.0	+14
MEDO				LR	LR		
	comp=Z,6µm,21.0s						
MEDO	Medina	140.29	359	P	PKPdf	05 24 33.0	-0.9
	baz=1.5						
HRV	Adam Dziewonsk	140.32	351	*e*PKPdf	PKiKP	05 24 36.0	-0.5
HRV				LR	LR		
	comp=Z,8µm,19.0s						
HRV	Adam Dziewonsk	140.32	351	*e*PKIKP	PKiKP	05 24 36.0	-0.5
HRV				MLR	MLR		
	comp=Z,8µm,19.0s						
HRV	Adam Dziewonsk	140.32	351	P	PKPdf	05 24 33.5	-0.5
	baz=12						
TYNO	Tyneside	140.37	0	P	PKPdf	05 24 33.4	-0.6
	baz=359						
K46A	Dorr	140.37	7	P	PKPdf	05 24 33.3	-0.7
	baz=350						
L42A	Oliver, Polo	140.39	12	PFAKE		05 24 50.0	+13
L42A				LR	LR		
	comp=Z,7µm,21.0s						
L42A	Oliver, Polo	140.39	12	P	PKPdf	05 24 33.6	-0.5
	baz=344						
TRY	Troy	140.39	353	PFAKE		05 24 50.0	+13
TRY				LR	LR		
	comp=Z,8µm,19.0s						
WES	Weston	140.40	351	PFAKE		05 24 50.0	+13
WES				LR	LR		
	comp=Z,7µm,20.0s						
BCX	Boston College	140.43	350	PFAKE		05 24 50.0	+13
BCX				LR	LR		
	comp=Z,6µm,18.0s						
K48A	Perry	140.44	5	P	PKPdf	05 24 33.6	-0.6
	baz=353						
K47A	Vermontville	140.48	6	P	PKPdf	05 24 33.8	-0.5
	baz=351						
K49A	Clarkson	140.52	5	P	PKPdf	05 24 33.7	-0.6
	baz=354						
L44A	Lake County Fo	140.55	10	P	PKPdf	05 24 34.0	-0.4
	baz=347						
K50A	Casco	140.59	4	PFAKE		05 24 50.0	+13
K50A				LR	LR		
	comp=Z,10µm,19.0s						
K50A	Casco	140.59	4	P	PKPdf	05 24 34.2	-0.3
	baz=355						
SRIG	Santa Rosalia	140.62	49	PFAKE		05 24 50.0	+12
SRIG				LR	LR		
	comp=Z,3µm,22.0s						
121A	Cookes Peak, D	140.62	39	P	PKPdf	05 24 34.3	-0.7
	baz=312						
HSIG		140.65	46	PFAKE		05 24 50.0	+12
HSIG				LR	LR		
	comp=Z,4µm,18.0s						
QUA2	Belchertown	140.67	352	PFAKE		05 24 50.0	+13
QUA2				LR	LR		
	comp=Z,6µm,20.0s						
K52A	Tillsonburg	140.67	1	P	PKPdf	05 24 33.8	-0.8
	baz=358						
K51A	Iona Station	140.70	2	P	PKPdf	05 24 34.4	-0.3
	baz=357						
MMNY	Mt. Morris Dam	140.71	358	PFAKE		05 24 50.0	+13
MMNY				LR	LR		
	comp=Z,11µm,21.0s						
K55A	Perry	140.72	358	P	PKPdf	05 24 34.3	-0.4
	baz=2.1						
M41A	Milan	140.80	13	P	PKPdf	05 24 33.8	-1.1
	baz=342						
K54A	Basiliko Farm,	140.85	359	P	PKPdf	05 24 34.9	-0.1
	baz=1.2,SNR=5.8						
BRYW	Bryant College	140.89	351	PFAKE		05 24 50.0	+12
BRYW				LR	LR		
	comp=Z,7µm,18.0s						
L46A	Eue Claire	140.97	8	PFAKE		05 24 50.0	+12
L46A				LR	LR		
	comp=Z,8µm,22.0s						
L46A	Eue Claire	140.97	8	P	PKPdf	05 24 34.5	-0.7
	baz=349						
AAM	Ann Arbor	140.98	5	PFAKE		05 24 50.0	+12
AAM				LR	LR		
	comp=Z,8µm,19.0s						
AAM	Ann Arbor	140.98	5	P	PKPdf	05 24 34.8	-0.4
	baz=353						
N40A	Mertquake, Sal	141.02	15	P	PKPdf	05 24 33.9	-1.4
	baz=341						
M43A	Waltham Townsh	141.08	11	P	PKPdf	05 24 34.8	-0.5
	baz=345						
M65A	Busby, Falmout	141.09	349	P	PKPdf	05 24 35.0	-0.4
	baz=14						
KSU1	Kansas State U	141.09	21	PFAKE		05 24 50.0	+12
KSU1				LR	LR		
	comp=Z,10µm,21.0s						
KSU1	Kansas State U	141.09	21	P	PKPdf	05 24 34.9	-0.6
	baz=332						
BINY	Binghamton	141.14	356	PFAKE		05 24 50.0	+12
BINY				LR	LR		
	comp=Z,7µm,20.0s						
BINY	Binghamton	141.14	356	P	PKPdf	05 24 35.9	+0.4
	baz=5.5,SNR=14						
L47A	Sherwood	141.15	7	P	PKPdf	05 24 35.2	-0.3
	baz=351						
L49A	Milan	141.16	5	P	PKPdf	05 24 35.2	-0.3
	baz=353						
L54A	Sinclairville	141.23	360	P	PKPdf	05 24 35.1	-0.6
	baz=0.2						
GO05	Huala	141.25	190	PFAKE		05 24 50.0	+11
GO05				LR	LR		
	comp=Z,8µm,22.0s						
L48A	N Adams	141.26	6	P	PKPdf	05 24 35.5	-0.2
	baz=352						
L55A	Hinsdale	141.27	359	P	PKPdf	05 24 35.6	-0.1
	baz=1.6,SNR=8.5						
M44A	Midewin, Midew	141.30	10	PFAKE		05 24 50.0	+11
M44A				LR	LR		
	comp=Z,7µm,19.0s						
M44A	Midewin, Midew	141.30	10	P	PKPdf	05 24 35.3	-0.4
	baz=346						
L50A	Kingsville	141.30	4	P	PKPdf	05 24 35.4	-0.3
	baz=355						
KSCT	Kent School, K	141.36	353	PFAKE		05 24 50.0	+11
KSCT				LR	LR		
	comp=Z,8µm,20.0s						
N41A	Harden Midland	141.36	14	PFAKE		05 24 50.0	+11
N41A				LR	LR		
	comp=Z,10µm,21.0s						
N41A	Harden Midland	141.36	14	P	PKPdf	05 24 35.1	-0.8
	baz=342						
M45A	Boilermakers S	141.43	9	P	PKPdf	05 24 35.7	-0.3
	baz=348						
L53A	Girard	141.50	1	P	PKPdf	05 24 35.5	-0.7
	baz=359						
N43A	Stutzman Famil	141.51	12	P	PKPdf	05 24 35.6	-0.6
	baz=344						
M46A	Old House Fiel	141.55	8	PFAKE		05 24 50.0	+11
M46A				LR	LR		
	comp=Z,11µm,22.0s						
M46A	Old House Fiel	141.55	8	P	PKPdf	05 24 35.7	-0.6
	baz=349						
PLIO	Pelee Island,	141.61	4	P	PKPdf	05 24 35.9	-0.4
	baz=355						
M48A	Edgerton	141.69	6	PFAKE		05 24 50.0	+11
M48A				LR	LR		
	comp=Z,7µm,19.0s						
M48A	Edgerton	141.69	6	P	PKPdf	05 24 36.0	-0.5
	baz=352						
YLE	Yale	141.69	352	PFAKE		05 24 50.0	+11
YLE				LR	LR		
	comp=Z,8µm,19.0s						
M47A	Cromwell	141.70	7	P	PKPdf	05 24 35.9	-0.6
	baz=350						
M59A	Waymart	141.75	355	P	PKPdf	05 24 36.4	-0.3
	baz=6.4						
KSPA	Keystone Colle	141.76	356	PFAKE		05 24 50.0	+11
KSPA				LR	LR		
	comp=Z,6µm,21.0s						
M49A	Liberty Center	141.77	5	P	PKPdf	05 24 36.4	-0.2
	baz=353						
M61A	Granite Spring	141.81	353	P	PKPdf	05 24 36.7	0.0
	baz=9.1						
N44A	Piper City	141.86	11	P	PKPdf	05 24 36.7	-0.1
	baz=346						
HDIL	Hopedale	141.86	12	PFAKE		05 24 50.0	+10
HDIL				LR	LR		
	comp=Z,8µm,22.0s						
HDIL	Hopedale	141.86	12	P	PKPdf	05 24 36.8	0.0
	baz=344						
M52A	Chesterland	141.88	2	PFAKE		05 24 50.0	+10
M52A				LR	LR		
	comp=Z,8µm,20.0s						
M52A	Chesterland	141.88	2	P	PKPdf	05 24 36.8	0.0
	baz=357						
N45A	Kentland	141.92	10	P	PKPdf	05 24 37.1	+0.2
	baz=347						
M50A	Fremont	141.92	4	PFAKE		05 24 50.0	+10
M50A				LR	LR		
	comp=Z,8µm,18.0s						
M50A	Fremont	141.92	4	P	PKPdf	05 24 36.9	0.0
	baz=354						
EPT	El Paso	141.94	39	PFAKE		05 24 50.0	+10
EPT				LR	LR		
	comp=Z,4µm,21.0s						
M54A	Oil Creek Stat	141.96	0	PFAKE		05 24 50.0	+10
M54A				LR	LR		
	comp=Z,6µm,20.0s						
M54A	Oil Creek Stat	141.96	0	P	PKPdf	05 24 37.1	+0.1
	baz=360						
M56A	Emporium	141.96	358	P	PKPdf	05 24 37.1	+0.1
	baz=2.0						
M55A	Ridgway	141.99	359	P	PKPdf	05 24 37.2	+0.2
	baz=1.1						
N46A	Monticello	142.00	9	P	PKPdf	05 24 37.1	+0.1
	baz=348						
M53A	WI Miller and	142.01	1	P	PKPdf	05 24 37.2	+0.1
	baz=358						
M51A	Elyria	142.05	3	P	PKPdf	05 24 37.3	+0.2
	baz=356						
PAL	Palisades	142.12	353	PFAKE		05 24 50.0	+10
PAL				LR	LR		
	comp=Z,8µm,21.0s						
PAL	Palisades	142.12	353	P	PKPdf	05 24 37.5	+0.2
	baz=9.0						
ODNJ	Ogdensburg	142.12	354	PFAKE		05 24 50.0	+10
ODNJ				LR	LR		
	comp=Z,8µm,22.0s						
N47A	Urbana	142.16	8	P	PKPdf	05 24 37.1	-0.3
	baz=350						
N48A	Decatur	142.27	7	P	PKPdf	05 24 37.4	-0.1
	baz=351						
N49A	Columbus Grove	142.30	6	PFAKE		05 24 50.0	+9.4
N49A				LR	LR		
	comp=Z,8µm,19.0s						
N49A	Columbus Grove	142.30	6	P	PKPdf	05 24 37.1	-0.5
	baz=352,SNR=16						
N60A	Cedar Hill Far	142.38	355	P	PKPdf	05 24 37.7	0.0
	baz=7.1						
N59A	State Game Lan	142.40	355	PFAKE		05 24 50.0	+9.2
N59A				LR	LR		
	comp=Z,6µm,19.0s						
N59A	State Game Lan	142.40	355	P	PKPdf	05 24 37.8	-0.1
	baz=6.0,SNR=7.3						
AMTX	Amarillo	142.41	31	PFAKE		05 24 50.0	+8.9
AMTX				LR	LR		
	comp=Z,7µm,20.0s						
AMTX	Amarillo	142.41	31	P	PKPdf	05 24 38.0	-0.1
	baz=322						
O44A	Mansfield	142.41	11	P	PKPdf	05 24 37.8	-0.1
	baz=345						
SFIN	Lafayette	142.44	10	PFAKE		05 24 50.0	+9.1
SFIN				LR	LR		
	comp=Z,8µm,22.0s						
SFIN	Lafayette	142.44	10	P	PKPdf	05 24 38.0	+0.2
	baz=347						
N51A	Ashland	142.45	4	PFAKE		05 24 50.0	+9.1

N51A				LR	LR		
	comp=Z,7µm,19.0s						
N51A	Ashland	142.45	4	P	PKPdf	05 24 38.0	+0.2
	baz=355						
O45A	Potomac	142.46	10	P	PKPdf	05 24 38.2	+0.3
	baz=346						
U32A	Winter Ranch,	142.47	26	PFAKE		05 24 50.0	+8.9
U32A				LR	LR		
	comp=Z,10µm,21.0s						
N54A	Moraine State	142.50	1	PFAKE		05 24 50.0	+9.0
N54A				LR	LR		
	comp=Z,7µm,20.0s						
N54A	Moraine State	142.50	1	P	PKPdf	05 24 38.0	+0.1
	baz=359						
BRNJ	Basking Ridge	142.52	354	PFAKE		05 24 50.0	+9.0
BRNJ				LR	LR		
	comp=Z,7µm,20.0s						
N56A	West Decatur	142.53	359	P	PKPdf	05 24 38.4	+0.4
	baz=1.9						
MSTX	Muleshoe	142.54	33	PFAKE		05 24 50.0	+8.5
MSTX				LR	LR		
	comp=Z,6µm,19.0s						
MSTX	Muleshoe	142.54	33	P	PKPdf	05 24 38.2	-0.2
	baz=320,SNR=23						
N50A	Nevada	142.54	5	P	PKPdf	05 24 38.1	+0.1
	baz=354,SNR=9.3						
N52A	McGinn’s Farm,	142.60	3	P	PKPdf	05 24 38.4	+0.3
	baz=356						
N53A	Lisbon	142.63	2	PFAKE		05 24 50.0	+8.7
N53A				LR	LR		
	comp=Z,6µm,20.0s						
N53A	Lisbon	142.63	2	P	PKPdf	05 24 38.7	+0.5
	baz=358						
N57A	Milroy	142.67	358	P	PKPdf	05 24 38.7	+0.4
	baz=3.1						
LUPA	Lehigh Univers	142.68	355	PFAKE		05 24 50.0	+8.6
LUPA				LR	LR		
	comp=Z,500nm,20.0s						
N55A	Marion Center	142.68	359	PFAKE		05 24 50.0	+8.6
N55A				LR	LR		
	comp=Z,7µm,19.0s						
N55A	Marion Center	142.68	359	P	PKPdf	05 24 38.5	+0.1
	baz=0.7,SNR=11						
MNTX	Cornudas Mount	142.68	38	PFAKE		05 24 50.0	+8.3
MNTX				LR	LR		
	comp=Z,7µm,19.0s						
MNTX	Cornudas Mount	142.68	38	P	PKPdf	05 24 39.0	+0.4
	baz=314,SNR=47						
P43A	Skaggs, Pawnee	142.69	13	P	PKPdf	05 24 38.6	+0.3
	baz=343						
O47A	Sheridan	142.73	8	P	PKPdf	05 24 38.3	-0.1
	baz=349						
TCA	Tanti	142.76	201	*e*P	PKPdf	05 24 40.2	+1.4
SSPA	Standing Stone	142.80	358	PFAKE		05 24 50.0	+8.4
SSPA				LR	LR		
	comp=Z,6µm,19.0s						
SSPA	Standing Stone	142.80	358	P	PKPdf	05 24 39.3	+0.9
	baz=2.5						
PEL	Peldehue	142.82	192	PFAKE		05 24 50.0	+8.0
PEL				LR	LR		
	comp=Z,10µm,22.0s						
O48A	Farmland	142.85	7	P	PKPdf	05 24 38.6	0.0
	baz=351						
O60A	Telford	142.96	355	P	PKPdf	05 24 38.9	+0.1
	baz=6.7,SNR=11						
O49A	Covington	143.01	6	PFAKE		05 24 50.0	+7.9
O49A				LR	LR		
	comp=Z,8µm,20.0s						
O49A	Covington	143.01	6	P	PKPdf	05 24 39.3	+0.4
	baz=352						
O59A	Robesonia	143.03	356	P	PKPdf	05 24 39.4	+0.5
	baz=5.4						
ACSO	Alum Creek Sta	143.09	4	PFAKE		05 24 50.0	+7.7
ACSO				LR	LR		
	comp=Z,8µm,19.0s						
ACSO	Alum Creek Sta	143.09	4	P	PKPdf	05 24 39.1	+0.1
	baz=354,SNR=16						
O61A	Allentown	143.10	354	P	PKPdf	05 24 39.5	+0.5
	baz=8.1						
O50A	Cable	143.12	5	P	PKPdf	05 24 39.0	-0.1
	baz=353,SNR=25						
PAGS	Pennsylvania G	143.15	356	PFAKE		05 24 50.0	+7.7
PAGS				LR	LR		
	comp=Z,8µm,20.0s						
P45A	Graceland, Par	143.16	11	PFAKE		05 24 50.0	+7.6
P45A				LR	LR		
	comp=Z,10µm,18.0s						
P45A	Graceland, Par	143.16	11	P	PKPdf	05 24 39.6	+0.5
	baz=346						
P46A	Rosedale	143.17	10	P	PKPdf	05 24 39.8	+0.6
	baz=347						
O53A	New Philadelph	143.18	2	P	PKPdf	05 24 39.3	+0.1
	baz=357,SNR=14						
O56A	Blue Knob Stat	143.18	359	PFAKE		05 24 50.0	+7.5
O56A				LR	LR		
	comp=Z,10µm,21.0s						
O56A	Blue Knob Stat	143.18	359	P	PKPdf	05 24 39.6	+0.3
	baz=1.4,SNR=7.0						
O51A	Pataskala	143.21	4	P	PKPdf	05 24 39.4	+0.1
	baz=355,SNR=23						
O57A	Amberson	143.21	358	P	PKPdf	05 24 40.0	+0.7
	baz=3.0,SNR=8.3						
O55A	Ligonier	143.25	360	P	PKPdf	05 24 40.0	+0.7
	baz=0.2						
O58A	Lewisberry	143.27	357	P	PKPdf	05 24 39.6	+0.3
	baz=4.2,SNR=8.3						
O54A	Avella	143.27	1	P	PKPdf	05 24 39.8	+0.5
	baz=358,SNR=6.7						
O52A	Adamsville	143.28	3	PFAKE		05 24 50.0	+7.3
O52A				LR	LR		
	comp=Z,6µm,20.0s						
O52A	Adamsville	143.28	3	P	PKPdf	05 24 39.6	+0.2
	baz=356,SNR=9.7						
PSUB	Penn St. - Bra	143.35	355	PFAKE		05 24 50.0	+7.2
PSUB				LR	LR		
	comp=Z,9µm,22.0s						
P47A	Martinsville	143.45	9	P	PKPdf	05 24 40.5	+0.8
	baz=349,SNR=18						
SLM	Saint Louis	143.48	14	PFAKE		05 24 50.0	+6.9
SLM				LR	LR		
	comp=Z,9µm,22.0s						
P60A	Greenville	143.48	355	P	PKPdf	05 24 40.2	+0.5
	baz=6.4						
P61A	Hammonton	143.54	354	P	PKPdf	05 24 40.5	+0.7
	baz=7.8						
CPUP	Villa Florida	143.58	215	PKhKP	PKPpre	05 24 37.6	
	comp=Z,12nm,0.8s,baz=140,slow=1.7,SNR=13						
P48A	Milroy	143.59	8	PFAKE		05 24 50.0	+6.7
P48A				LR	LR		
	comp=Z,9µm,21.0s						
P48A	Milroy	143.59	8	P	PKPdf	05 24 40.3	+0.4
	baz=350,SNR=30						
P49A	Miami Univ. Ec	143.61	7	P	PKPdf	05 24 40.2	+0.3
	baz=351,SNR=17						
BDFB	Brasilia	143.63	238	PKP	PKPdf	05 24 41.9	+1.1
	comp=Z,6.1nm,0.8s,baz=126,slow=2.9,SNR=9.3						
BDFB	Brasilia	143.63	238	PFAKE		05 24 50.0	+5.8
BDFB				LR	LR		
	comp=Z,6µm,18.0s						
P50A	Jamestown	143.64	6	P	PKPdf	05 24 40.5	+0.5
	baz=353,SNR=24						
Q45A	Warren Harvey,	143.69	11	P	PKPdf	05 24 40.8	+0.7
	baz=345,SNR=16						
BLO	Bloomington	143.72	9	PFAKE		05 24 50.0	+6.4
BLO				LR	LR		
	comp=Z,11µm,22.0s						
Q46A	CEJHS Indians,	143.72	10	P	PKPdf	05 24 41.3	+1.1
	baz=347						
P52A	Corning	143.75	3	P	PKPdf	05 24 41.1	+0.9
	baz=356,SNR=19						
P59A	Jarrettsville	143.75	356	P	PKPdf	05 24 41.4	+1.2
	baz=5.0,SNR=6.8						
CCM	Cathedral Cave	143.76	16	PFAKE		05 24 50.0	+6.3
CCM				LR	LR		
	comp=Z,6µm,21.0s						
CCM	Cathedral Cave	143.76	16	P	PKPdf	05 24 41.7	+1.4
	baz=340						
MCWV	Mont Chateau	143.80	0	PFAKE		05 24 50.0	+6.3
MCWV				LR	LR		
	comp=Z,4µm,19.0s						
MCWV	Mont Chateau	143.80	0	P	PKPdf	05 24 41.6	+1.3
	baz=359,SNR=16						
P51A	Williamsport	143.83	5	PFAKE		05 24 50.0	+6.2
P51A				LR	LR		
	comp=Z,8µm,21.0s						
P51A	Williamsport	143.83	5	P	PKPdf	05 24 41.2	+0.8
	baz=354,SNR=18						
P54A	Burton	143.85	1	P	PKPdf	05 24 41.6	+1.2
	baz=358						
OLIL	Olney	143.86	11	PFAKE		05 24 50.0	+6.2
OLIL				LR	LR		
	comp=Z,6µm,21.0s						
P58A	Pank, Wackersv	143.92	357	P	PKPdf	05 24 41.5	+1.1
	baz=3.6,SNR=12						
P53A	Whipple	143.93	3	PFAKE		05 24 50.0	+6.0
P53A				LR	LR		
	comp=Z,7µm,20.0s						
P53A	Whipple	143.93	3	P	PKPdf	05 24 41.7	+1.2
	baz=357,SNR=39						
WMOK	Wichita Mounta	143.93	28	PFAKE		05 24 50.0	+5.8
WMOK				LR	LR		
	comp=Z,10µm,21.0s						
WMOK	Wichita Mounta	143.93	28	P	PKPab	05 24 38.1	+0.2
	baz=326,SNR=183						
P55A	Reedsville	143.95	0	P	PKPdf	05 24 42.1	+1.5
	baz=359,SNR=33						
P56A	Dayton Farm, R	143.95	359	P	PKPdf	05 24 41.9	+1.4
	baz=1.0,SNR=24						
P57A	Homestead Farm	143.95	358	P	PKPdf	05 24 41.8	+1.3
	baz=2.4,SNR=18						
Q47A	Bedord North L	143.96	9	P	PKPab	05 24 38.0	+0.2
	baz=348,SNR=33						
SDMD	Soldier’s Deli	143.97	357	PFAKE		05 24 50.0	+5.9
SDMD				LR	LR		
	comp=Z,4µm,21.0s						
Q48A	North Vernon	144.07	8	P	PKPab	05 24 38.4	+0.2
	baz=349,SNR=50						
Q49A	Aurora	144.11	7	P	PKPab	05 24 38.2	-0.1
	baz=351,SNR=36						
TUL1	Leonard	144.21	23	PFAKE		05 24 50.0	+5.3
TUL1				LR	LR		
	comp=Z,8µm,22.0s						
TUL1	Leonard	144.21	23	P	PKPab	05 24 38.9	+0.1
	baz=331,SNR=98						
R45A	Skylar, Fairfi	144.25	12	P	PKPab	05 24 38.7	-0.2
	baz=345,SNR=32						
Q51A	Peebles	144.26	5	PFAKE		05 24 50.0	+5.3
Q51A				LR	LR		
	comp=Z,10µm,20.0s						
Q51A	Peebles	144.26	5	P	PKPab	05 24 38.6	-0.3
	baz=353,SNR=94						
Q60A	Greensboro	144.31	355	P	PKPab	05 24 39.0	0.0
	baz=6.1						
Q50A	Georgetown	144.38	6	P	PKPab	05 24 39.0	-0.3
	baz=352,SNR=44						
Q61A	Milford	144.38	354	P	PKPab	05 24 39.3	0.0
	baz=7.0						
Q52A	Bidwell	144.41	4	P	PKPab	05 24 39.2	-0.3
	baz=355,SNR=74						
Q57A	Strasburg	144.41	359	P	PKPab	05 24 39.4	0.0
	baz=1.8,SNR=110						
Q56A	Snyder Ridge,	144.42	360	P	PKPab	05 24 39.4	-0.1
	baz=0.4,SNR=25						
Q54A	Coxs Mills	144.46	2	PFAKE		05 24 50.0	+4.9
Q54A				LR	LR		
	comp=Z,8µm,21.0s						
Q54A	Coxs Mills	144.46	2	P	PKPab	05 24 39.4	-0.2
	baz=358,SNR=76						
Q55A	Buckhannon	144.46	1	P	PKPab	05 24 39.6	-0.1
	baz=359,SNR=121						
R46A	Gibon Southern	144.48	11	P	PKPab	05 24 39.7	-0.1
	baz=346,SNR=22						
Q58A	Fox Den Farm,	144.48	358	P	PKPab	05 24 39.6	-0.2
	baz=3.0,SNR=25						
Q59A	Harwood	144.50	356	P	PKPab	05 24 39.6	-0.2
	baz=4.8,SNR=6.9						
Q53A	Leroy	144.55	3	P	PKPab	05 24 39.9	-0.1
	baz=356,SNR=98						
HHAR	Hobbs	144.56	20	PFAKE		05 24 50.0	+4.6
HHAR				LR	LR		
	comp=Z,8µm,20.0s						
R47A	Wooly Knot Far	144.57	10	P	PKPab	05 24 39.8	-0.2
	baz=348,SNR=57						
R48A	Northridge Ran	144.57	9	P	PKPab	05 24 40.2	+0.1
	baz=349,SNR=34						
S44A	Carbondale	144.61	13	P	PKPab	05 24 40.1	-0.1
	baz=343,SNR=47						
WCI	Wyandotte Cave	144.67	9	*e*PKPdf	PKPab	05 24 40.3	-0.2
WCI				LR	LR		
	comp=Z,12µm,22.0s						
WCI	Wyandotte Cave	144.67	9	*e*PKIKP	PKPab	05 24 40.3	-0.2
WCI				MLR	MLR		
	comp=Z,12µm,22.0s						
WCI	Wyandotte Cave	144.67	9	P	PKPbc	05 24 40.6	0.0
	baz=348						
USIN	University of	144.69	11	PFAKE		05 24 50.0	+4.4
USIN				LR	LR		
	comp=Z,7µm,21.0s						
R49A	Shelbyville	144.78	8	PFAKE		05 24 50.0	+4.2
R49A				LR	LR		
	comp=Z,8µm,18.0s						
R49A	Shelbyville	144.78	8	P	PKPab	05 24 40.6	-0.2
	baz=350,SNR=180						
U40A	Yellville	144.86	19	P	PKPab	05 24 40.9	-0.3
	baz=336,SNR=180						
R50A	Paris	144.90	7	PFAKE		05 24 50.0	+4.0
R50A				LR	LR		
	comp=Z,10µm,19.0s						
R50A	Paris	144.90	7	P	PKPab	05 24 40.7	-0.6
	baz=352,SNR=156						
R61A	Willards	144.93	354	P	PKPab	05 24 41.1	-0.2
	baz=7.1						
S46A	Don Dixon Farm	144.95	11	P	PKPab	05 24 41.0	-0.5
	baz=346,SNR=44						
R51A	Hillsboro	144.96	6	P	PKPab	05 24 40.9	-0.6
	baz=353,SNR=100						
R52A	Catlettsburg	145.00	4	P	PKPab	05 24 41.4	-0.3
	baz=354,SNR=74						
R56A	Bull Pasture M	145.05	360	P	PKPbc	05 24 41.9	-0.1
	baz=0.1,SNR=102						
R53A	Hurricane	145.06	3	PFAKE		05 24 50.0	+3.7
R53A				LR	LR		
	comp=Z,7µm,22.0s						
R53A	Hurricane	145.06	3	P	PKPbc	05 24 41.8	-0.1
	baz=356,SNR=192						
R60A	Leonardtown, M	145.09	356	P	PKPbc	05 24 41.9	0.0
	baz=5.0,SNR=7.2						
R58A	Rapidan	145.13	358	P	PKPbc	05 24 42.0	0.0
	baz=2.5,SNR=103						
R57A	Stanardsville	145.15	359	P	PKPdf	05 24 42.4	-0.2
	baz=1.6,SNR=184						
R55A	Marlinton	145.17	1	PFAKE		05 24 50.0	+3.3
R55A				LR	LR		
	comp=Z,7µm,18.0s						
R55A	Marlinton	145.17	1	P	PKPbc	05 24 42.0	-0.3
	baz=359,SNR=126						
PBMO	Poplar Bluff	145.18	16	PFAKE		05 24 50.0	+3.4
PBMO				LR	LR		
	comp=Z,7µm,20.0s						
R59A	King George, V	145.19	357	P	PKPab	05 24 42.3	0.0
	baz=4.0,SNR=71						
S47A	Hartford	145.19	10	P	PKPbc	05 24 41.8	-0.5
	baz=347,SNR=44						
CBN	Corbin Frederi	145.20	357	PFAKE		05 24 50.0	+3.4
CBN				LR	LR		
	comp=Z,7µm,20.0s						
CBN	Corbin Frederi	145.20	357	P	PKPbc	05 24 42.1	-0.1
	baz=3.6,SNR=17						
ABTX	Abilene, Hawle	145.23	31	PFAKE		05 25 00.0	+13
ABTX				LR	LR		
	comp=Z,6µm,20.0s						
ABTX	Abilene, Hawle	145.23	31	P	PKPdf	05 24 42.9	-0.1
	baz=323,SNR=51						
R54A	Victor	145.25	2	P	PKPbc	05 24 41.8	-0.7
	baz=357,SNR=94						
S49A	Springfield	145.26	8	P	PKPbc	05 24 41.7	-0.9
	baz=350,SNR=95						
S48A	Wiedeman Farm,	145.27	9	P	PKPbc	05 24 42.5	-0.1
	baz=348,SNR=278						
ACLC	CERRO LA CRUZ	145.32	199	*i* P	PKPdf	05 24 44.5	+1.0
TXAR	Lajitas Array	145.38	39	PKPbc	PKPab	05 24 44.5	+1.0
	comp=Z,265nm,0.9s,baz=278,slow=1.4,SNR=861						
T45A	Paducah	145.39	13	PFAKE		05 25 00.0	+13
T45A				LR	LR		
	comp=Z,12µm,20.0s						
T45A	Paducah	145.39	13	P	PKPbc	05 24 43.0	0.0
	baz=344,SNR=32						
R58B	Mineral	145.46	358	PFAKE		05 25 00.0	+13
R58B				LR	LR		
	comp=Z,8µm,19.0s						
R58B	Mineral	145.46	358	P	PKPbc	05 24 43.0	-0.1
	baz=2.7,SNR=142						
PARMO	Parma	145.47	15	PFAKE		05 25 00.0	+13
PARMO				LR	LR		
	comp=Z,6µm,19.0s						
FCAR	Ozark Folk Cen	145.52	18	PFAKE		05 25 00.0	+13
FCAR				LR	LR		
	comp=Z,7µm,22.0s						
T46A	Princeton	145.53	12	P	PKPdf	05 24 43.3	0.0
	baz=345,SNR=88						
W39A	Magazine	145.59	21	PFAKE		05 25 00.0	+12
W39A				LR	LR		
	comp=Z,10µm,19.0s						
W39A	Magazine	145.59	21	P	PKPdf	05 24 43.4	-0.1
	baz=334,SNR=58						
S61A	Accomac	145.60	355	PFAKE		05 25 00.0	+13
S61A				LR	LR		
	comp=Z,9µm,21.0s						
S61A	Accomac	145.60	355	P	PKPab	05 24 43.9	+0.1
	baz=6.6,SNR=14						
S51A	Beattyville	145.61	6	PFAKE		05 25 00.0	+12
S51A				LR	LR		
	comp=Z,8µm,21.0s						
S51A	Beattyville	145.61	6	P	PKPdf	05 24 43.2	-0.3
	baz=353,SNR=302						
S54A	Dingess, Beckl	145.62	3	P	PKPdf	05 24 43.4	-0.2
	baz=357,SNR=82						
S52A	Salyersville	145.62	5	P	PKPdf	05 24 43.5	0.0
	baz=354,SNR=327						
HPIG		145.63	44	PFAKE		05 25 00.0	+12
HPIG				LR	LR		
	comp=Z,4µm,20.0s						
S59A	Mechanicsville	145.64	357	P	PKPab	05 24 43.9	-0.1
	baz=3.8,SNR=76						
S60A	Water View	145.66	356	P	PKPab	05 24 44.1	0.0
	baz=4.9,SNR=44						
S55A	Lewisburg	145.67	1	P	PKPdf	05 24 43.5	-0.1
	baz=358,SNR=59						
S53A	Williamson	145.69	4	P	PKPbc	05 24 43.8	-0.1
	baz=355,SNR=42						
S57A	Dark Hollow, R	145.69	359	PFAKE		05 25 00.0	+12
S57A				LR	LR		
	comp=Z,9µm,21.0s						
S57A	Dark Hollow, R	145.69	359	P	PKPbc	05 24 44.0	+0.1
	baz=0.8,SNR=68						
PVMO	Portageville	145.72	15	PFAKE		05 25 00.0	+12
PVMO				LR	LR		
	comp=Z,8µm,22.0s						
T47A	Sharon Grove	145.74	11	PFAKE		05 25 00.0	+12
T47A				LR	LR		
	comp=Z,8µm,22.0s						
T47A	Sharon Grove	145.74	11	P	PKPdf	05 24 43.6	-0.1
	baz=346,SNR=91						
AGUA	GUANDACOL	145.75	197	*i* P	PKPab	05 24 44.7	-0.1
T48A	Bowling Green	145.75	10	P	PKPdf	05 24 43.8	+0.1
	baz=348,SNR=325						
S56A	Natural Bridge	145.78	0	P	PKPdf	05 24 43.9	+0.1
	baz=360,SNR=99						
CYA	Choya	145.82	202	*e*P	PKPab	05 24 44.9	-0.2
S58A	Poland Farm, P	145.82	358	PFAKE		05 25 00.0	+12
S58A				LR	LR		
	comp=Z,7µm,19.0s						
S58A	Poland Farm, P	145.82	358	P	PKPbc	05 24 44.1	-0.2
	baz=2.5,SNR=74						
T49A	Edmonton	145.89	9	PFAKE		05 25 00.0	+12
T49A				LR	LR		
	comp=Z,7µm,21.0s						
T49A	Edmonton	145.89	9	P	PKPdf	05 24 43.9	-0.1
	baz=349,SNR=68						
GLAT	Glass	145.96	14	PFAKE		05 25 00.0	+12
GLAT				LR	LR		
	comp=Z,9µm,19.0s						
WHAR	Wooly Hollow	146.02	19	PFAKE		05 25 00.0	+12
WHAR				LR	LR		
	comp=Z,7µm,20.0s						
GNAR	Gosnell	146.06	15	PFAKE		05 25 00.0	+12
GNAR				LR	LR		
	comp=Z,7µm,19.0s						
T50A	Nancy	146.07	8	P	PKPdf	05 24 44.3	0.0
	baz=350,SNR=40						
U46A	Springville	146.13	13	P	PKPbc	05 24 44.9	-0.4
	baz=344,SNR=26						
W41B	Gary Mavity, V	146.14	19	PFAKE		05 25 00.0	+11
W41B				LR	LR		
	comp=Z,7µm,20.0s						
W41B	Gary Mavity, V	146.14	19	P	PKPbc	05 24 44.9	-0.4
	baz=337,SNR=57						
T52A	Hallie	146.19	5	PFAKE		05 25 00.0	+11
T52A				LR	LR		
	comp=Z,10µm,20.0s						
T52A	Hallie	146.19	5	P	PKPbc	05 24 45.2	-0.3
	baz=354,SNR=40						
T60A	Surry	146.22	356	PFAKE		05 25 00.0	+11
T60A				LR	LR		
	comp=Z,7µm,20.0s						
T60A	Surry	146.22	356	P	PKPbc	05 24 45.2	-0.3
	baz=4.8						
BLA	Blacksburg	146.24	1	PFAKE		05 25 00.0	+11
BLA				LR	LR		
	comp=Z,6µm,21.0s						
BLA	Blacksburg	146.24	1	P	PKPdf	05 24 44.9	+0.3
	baz=358,SNR=32						
U47A	Clarksville	146.24	11	P	PKPbc	05 24 45.5	-0.1
	baz=346,SNR=185						
T51A	Gray	146.24	6	P	PKPdf	05 24 45.0	+0.5
	baz=352,SNR=66						
MIAR	Mount Ida	146.25	21	PFAKE		05 25 00.0	+11
MIAR				LR	LR		
	comp=Z,7µm,19.0s						
MIAR	Mount Ida	146.25	21	P	PKPbc	05 24 46.0	+0.3
	baz=334,SNR=249						
HBAR	Harrisburg	146.27	17	PFAKE		05 25 00.0	+11
HBAR				LR	LR		
	comp=Z,7µm,21.0s						
HALT	Halls	146.28	15	PFAKE		05 25 00.0	+11
HALT				LR	LR		
	comp=Z,5µm,18.0s						
U48A	Cassie Pea, Po	146.31	10	P	PKPbc	05 24 45.5	-0.3
	baz=347,SNR=72						
T55A	Pulaski	146.32	2	P	PKPbc	05 24 45.6	-0.3
	baz=358,SNR=37						
T54A	Tazewell	146.34	3	P	PKPbc	05 24 45.7	-0.3
	baz=356,SNR=111						
T53A	Wise	146.36	4	P	PKPbc	05 24 45.9	-0.1
	baz=354,SNR=65						
VCA	Vinchina	146.37	198	*i* P	PKPbc	05 24 46.0	-0.4
T56A	Rocky Mt	146.42	1	P	PKPbc	05 24 45.9	-0.2
	baz=359,SNR=84						
WVT	Waverly	146.43	12	*e*PKPdf	PKPdf	05 24 45.2	+0.3
WVT				LR	LR		
	comp=Z,7µm,20.0s						
WVT	Waverly	146.43	12	*e*PKP2	PKPdf	05 24 45.2	+0.3
WVT				MLR	MLR		
	comp=Z,7µm,20.0s						
WVT	Waverly	146.43	12	P	PKPbc	05 24 46.1	0.0
	baz=345						
U49A	Red Boiling Sp	146.43	9	P	PKPbc	05 24 45.6	-0.6
	baz=349,SNR=59						
T59A	Double "B" Far	146.44	357	PFAKE		05 25 00.0	+11
T59A				LR	LR		
	comp=Z,6µm,19.0s						
T59A	Double "B" Far	146.44	357	P	PKPbc	05 24 46.3	+0.1
	baz=3.4,SNR=61						
T57A	Hurt	146.46	360	PFAKE		05 25 00.0	+11
T57A				LR	LR		
	comp=Z,10µm,21.0s						
T57A	Hurt	146.46	360	P	PKPbc	05 24 46.1	-0.1
	baz=0.3,SNR=77						
UALR	University of	146.47	19	PFAKE		05 25 00.0	+11
UALR				LR	LR		
	comp=Z,6µm,18.0s						
T58A	Grand View Acr	146.50	359	P	PKPbc	05 24 46.6	+0.3
	baz=1.6,SNR=135						
X40A	Basin Creek Fa	146.56	20	PFAKE		05 25 00.0	+10
X40A				LR	LR		
	comp=Z,7µm,20.0s						
X40A	Basin Creek Fa	146.56	20	P	PKPbc	05 24 46.3	-0.3
	baz=335,SNR=149						
U50A	Jamestown	146.67	8	P	PKPbc	05 24 46.5	-0.5
	baz=350,SNR=196						
V46A	Holladay	146.68	13	P	PKPbc	05 24 46.8	-0.1
	baz=344,SNR=102						
TZTN	Tazewell	146.70	6	PFAKE		05 25 00.0	+10
TZTN				LR	LR		
	comp=Z,11µm,22.0s						
TZTN	Tazewell	146.70	6	P	PKPbc	05 24 46.7	-0.3
	baz=352,SNR=78						
CLTN	Cedars of Leba	146.75	10	PFAKE		05 25 00.0	+10
CLTN				LR	LR		
	comp=Z,5µm,20.0s						
V47A	Nunnelly	146.78	12	P	PKPbc	05 24 47.0	-0.2

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      baz=345,SNR=113
U51A  La Follette      146.81   7  P       PKPbc   05 24 46.8 -0.5
      baz=352,SNR=44
WHTX  Lake Whitney,    146.82  29  PFAKE           05 25 00.0 +10
WHTX                               LR      LR
      comp=Z,7µm,21.0s
WHTX  Lake Whitney,    146.82  29  P       PKPbc   05 24 47.7 +0.2
      baz=326,SNR=27
JCT   Junction City    146.82  33  PFAKE           05 25 00.0 +10
JCT                                LR      LR
      comp=Z,6µm,22.0s
JCT   Junction City    146.82  33  P       PKPbc   05 24 48.1 +0.6
      baz=321,SNR=822
U54A  Nelsons Funny    146.86   3  PFAKE           05 25 00.0 +10
U54A                               LR      LR
      comp=Z,8µm,22.0s
U54A  Nelsons Funny    146.86   3  P       PKPbc   05 24 47.2 -0.3
      baz=356,SNR=35
U52A  Thorn Hill       146.87   6  P       PKPbc   05 24 47.0 -0.5
      baz=353,SNR=62
MET   Memphis--Engin   146.88  16  PFAKE           05 25 00.0 +10
MET                                LR      LR
      comp=Z,7µm,22.0s
U60A  Pendleton        146.91 357  P       PKPbc   05 24 47.8 +0.2
      baz=4.2,SNR=45
U55A  TA2, Sparta      146.92   2  P       PKPbc   05 24 47.6 -0.2
      baz=357,SNR=80
U53A  Fall Branch      146.97   5  P       PKPbc   05 24 47.3 -0.5
      baz=354,SNR=45
U61A  Possum Corner    147.00 356  PFAKE           05 25 00.0 +10
U61A                               LR      LR
      comp=Z,6µm,21.0s
U61A  Possum Corner    147.00 356  P       PKPbc   05 24 47.9 +0.1
      baz=5.5
V48A  Smith Brothers   147.00  11  PFAKE           05 25 00.0 +10
V48A                               LR      LR
      comp=Z,7µm,21.0s
V48A  Smith Brothers   147.00  11  P       PKPbc   05 24 47.5 -0.4
      baz=346,SNR=84
U57A  Blanch           147.02 360  P       PKPbc   05 24 48.1 +0.2
      baz=0.2,SNR=60
U58A  Oxford           147.05 359  P       PKPbc   05 24 48.0  0.0
      baz=1.6,SNR=100
U59A  Littleton        147.07 358  PFAKE           05 25 00.0 +9.5
U59A                               LR      LR
      comp=Z,7µm,18.0s
U59A  Littleton        147.07 358  P       PKPbc   05 24 48.1 +0.1
      baz=3.0,SNR=28
U56A  King             147.10   1  P       PKPbc   05 24 48.1 -0.1
      baz=358,SNR=37
AHML  Horco Molle      147.12 204 i P      PKPdf   05 24 46.9 +0.4
V49A  McMinnville      147.14  10  P       PKPbc   05 24 47.7 -0.6
      baz=348,SNR=62
X43A  Marvell          147.17  18  PFAKE           05 25 00.0 +9.2
X43A                               LR      LR
      comp=Z,6µm,22.0s
X43A  Marvell          147.17  18  P       PKPbc   05 24 48.6 +0.2
      baz=339,SNR=14
WLAR  White Oak Lake   147.19  21  PFAKE           05 25 00.0 +9.2
WLAR                               LR      LR
      comp=Z,8µm,19.0s
W46A  Michie           147.26  14  P       PKPbc   05 24 48.1 -0.5
      baz=343,SNR=34
W47A  Westpoint        147.32  12  P       PKPbc   05 24 48.6 -0.2
      baz=345,SNR=138
V51A  Loudon           147.34   7  PFAKE           05 25 00.0 +8.9
V51A                               LR      LR
      comp=Z,7µm,18.0s
V51A  Loudon           147.34   7  P       PKPbc   05 24 48.6 -0.2
      baz=351,SNR=16
V50A  Pikevile         147.36   9  P       PKPbc   05 24 48.4 -0.5
      baz=350,SNR=40
V52A  Sevierville      147.39   6  PFAKE           05 25 00.0 +8.8
V52A                               LR      LR
      comp=Z,8µm,21.0s
V52A  Sevierville      147.39   6  P       PKPbc   05 24 48.9 -0.1
      baz=352,SNR=40
CCAR  Cane Creek       147.44  19  PFAKE           05 25 00.0 +8.6
CCAR                               LR      LR
      comp=Z,7µm,20.0s
PLAL  Pickwick Lake    147.47  13  PFAKE           05 25 00.0 +8.6
PLAL                               LR      LR
      comp=Z,8µm,21.0s
V61A  Roper            147.55 356  PFAKE           05 25 00.0 +8.5
V61A                               LR      LR
      comp=Z,7µm,20.0s
V61A  Roper            147.55 356  P       PKPbc   05 24 49.8 +0.5
      baz=5.3
V55A  Taylorsville     147.56   3  P       PKPbc   05 24 49.2 -0.2
      baz=357,SNR=15
V57A  Coltrane Farms   147.57   0  P       PKPbc   05 24 49.3 -0.1
      baz=359,SNR=63
W48A  Pulaski          147.57  11  P       PKPbc   05 24 49.0 -0.5
      baz=346,SNR=92
OXF   Oxford           147.59  15  PFAKE           05 25 00.0 +8.3
OXF                                LR      LR
      comp=Z,7µm,22.0s
OXF   Oxford           147.59  15  P       PKPbc   05 24 49.0 -0.5
      baz=341
V54A  Nebo             147.60   4  P       PKPbc   05 24 49.2 -0.3
      baz=355,SNR=78
V60A  Jim Taylor Roa   147.62 357  PFAKE           05 25 00.0 +8.3
V60A                               LR      LR
      comp=Z,9µm,20.0s
V60A  Jim Taylor Roa   147.62 357  P       PKPbc   05 24 49.7 +0.2
      baz=4.0
V56A  Mocksville       147.63   2  PFAKE           05 25 00.0 +8.3
V56A                               LR      LR
      comp=Z,8µm,20.0s
V56A  Mocksville       147.63   2  P       PKPbc   05 24 49.4 -0.2
      baz=358,SNR=38
V53A  Saluda           147.64   5  PFAKE           05 25 00.0 +8.2
V53A                               LR      LR
      comp=Z,12µm,20.0s
V53A  Saluda           147.64   5  P       PKPbc   05 24 49.4 -0.3
      baz=354,SNR=156
V58A  Windy Hill, Pi   147.66 359  P       PKPbc   05 24 49.9 +0.3
      baz=0.6,SNR=55
CPCT  Cooper Cave      147.66   8  PFAKE           05 25 00.0 +8.1
CPCT                               LR      LR
      comp=Z,8µm,22.0s
V59A  Middlesex        147.67 358  P       PKPbc   05 24 49.9 +0.3
      baz=2.2,SNR=68
SWET  Sewanee          147.68  10  PFAKE           05 25 00.0 +8.0
SWET                               LR      LR
      comp=Z,11µm,21.0s
Z41A  Richland Creek   147.69  21  PFAKE           05 25 00.0 +8.0
Z41A                               LR      LR
      comp=Z,6µm,18.0s
Z41A  Richland Creek   147.69  21  P       PKPbc   05 24 50.4 +0.6
      baz=335,SNR=19
W49A  Belvidere        147.71  10  P       PKPbc   05 24 49.8 -0.1
      baz=347,SNR=124
V62A  Hyde County Ai   147.73 355  PFAKE           05 25 00.0 +7.9
V62A                               LR      LR
      comp=Z,10µm,21.0s
V62A  Hyde County Ai   147.73 355  P       PKPbc   05 24 50.3 +0.5
      baz=6.5
435B  Jarrell          147.75  30  PFAKE           05 25 00.0 +7.6
435B                               LR      LR
      comp=Z,8µm,20.0s
435B  Jarrell          147.75  30  P       PKPbc   05 24 50.7 +0.6
      baz=324,SNR=22
X46A  Booneville       147.76  14  P       PKPbc   05 24 49.6 -0.4
      baz=343,SNR=79
W50A  Signal Mountai   147.79   9  PFAKE           05 25 00.0 +7.5
W50A                               LR      LR
      comp=Z,8µm,21.0s
W50A  Signal Mountai   147.79   9  P       PKPbc   05 24 49.7 -0.4
      baz=349,SNR=23
W51A  Cleveland        147.91   8  P       PKPbc   05 24 50.5  0.0
      baz=350,SNR=47
BBSR  BB Station       147.92 336 ePKPbc   PKPbc   05 24 50.4 -0.1
BBSR                               LR      LR
      comp=Z,5µm,21.0s
X47A  Russelville      147.97  13  P       PKPbc   05 24 50.0 -0.6
      baz=344,SNR=69
FSA   Cafayete         147.98 203 i P      PKPdf   05 24 48.6 +0.6
W52A  Murphy           148.09   7  PFAKE           05 25 00.0 +6.4
W52A                               LR      LR
      comp=Z,6µm,20.0s
W52A  Murphy           148.09   7  P       PKPbc   05 24 51.0  0.0
      baz=352,SNR=42
W53A  Cullowhee        148.10   6  P       PKPbc   05 24 51.3 +0.3
      baz=353,SNR=81
CNNC  Cliffs of the    148.18 358  PFAKE           05 25 00.0 +6.1
CNNC                               LR      LR
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      comp=Z,6µm,20.0s
CNNC  Cliffs of the    148.18 358  P       PKPbc   05 24 51.6 +0.6
      baz=2.9
W61A  Ground Anchor    148.19 356  P       PKPbc   05 24 51.7 +0.6
      baz=4.6
X48A  Hartselle        148.21  12  PFAKE           05 25 00.0 +5.9
X48A                               LR      LR
      comp=Z,6µm,21.0s
X48A  Hartselle        148.21  12  P       PKPbc   05 24 50.7 -0.5
      baz=346,SNR=73
KMSC  Kings Mountain   148.26   3  PFAKE           05 25 00.0 +5.7
KMSC                               LR      LR
      comp=Z,8µm,20.0s
KMSC  Kings Mountain   148.26   3  P       PKPbc   05 24 51.1 -0.2
      baz=356,SNR=32
W54A  Cherokee Point   148.27   4  P       PKPbc   05 24 51.3 -0.1
      baz=355,SNR=34
W59A  Clinton          148.27 358  P       PKPbc   05 24 51.8 +0.5
      baz=1.9,SNR=18
NATX  Nacogdoches      148.28  25  PFAKE           05 25 00.0 +5.5
NATX                               LR      LR
      comp=Z,10µm,22.0s
NATX  Nacogdoches      148.28  25  P       PKPbc   05 24 51.9 +0.4
      baz=330,SNR=10
X49A  Woodville        148.29  11  P       PKPbc   05 24 51.3 -0.1
      baz=347,SNR=43
BG3   Lake Jocassee    148.30   5  PFAKE           05 25 00.0 +5.6
BG3                                LR      LR
      comp=Z,7µm,20.0s
W57A  Gilead           148.30   1  PFAKE           05 25 00.0 +5.6
W57A                               LR      LR
      comp=Z,9µm,20.0s
W57A  Gilead           148.30   1  P       PKPbc   05 24 51.3 -0.1
      baz=359,SNR=36
W56A  Indian Trail     148.30   2  P       PKPbc   05 24 51.3 -0.1
      baz=358,SNR=29
W60A  Pink Hill        148.36 357  P       PKPbc   05 24 51.9 +0.4
      baz=3.3
W58A  Raeford          148.43 360  P       PKPbc   05 24 51.9 +0.1
      baz=0.4,SNR=37
X50B  Fort Payne       148.46  10  P       PKPbc   05 24 51.5 -0.5
      baz=348,SNR=40
X51A  Calhoun          148.48   9  PFAKE           05 25 00.0 +4.8
X51A                               LR      LR
      comp=Z,9µm,19.0s
X51A  Calhoun          148.48   9  P       PKPbc   05 24 52.2 +0.3
      baz=350,SNR=20
PAULI Pauline          148.56   4  PFAKE           05 25 00.0 +4.6
PAULI                              LR      LR
      comp=Z,7µm,20.0s
X52A  Dahlonega        148.58   7  P       PKPbc   05 24 52.6 +0.3
      baz=352,SNR=34
833A  Chaparral WMA,   148.70  35  PFAKE           05 25 00.0 +3.8
833A                               LR      LR
      comp=Z,6µm,20.0s
833A  Chaparral WMA,   148.70  35  P       PKPbc   05 24 53.3 +0.7
      baz=319
Y48A  Jasper           148.70  12  P       PKPbc   05 24 51.8 -0.6
      baz=345,SNR=24
X53A  Estanollee       148.74   6  P       PKPbc   05 24 52.8 +0.2
      baz=353,SNR=38
X54A  Belton           148.79   5  P       PKPbc   05 24 52.7  0.0
      baz=354,SNR=67
BIRD  Birdtown, Kers   148.79   2  PFAKE           05 25 00.0 +3.6
BIRD                               LR      LR
      comp=Z,7µm,20.0s
X60A  Albert Glenn T   148.84 358  P       PKPbc   05 24 53.0 +0.2
      baz=2.8
X59A  McDuffie Farm,   148.87 359  P       PKPbc   05 24 53.1 +0.2
      baz=1.6
X58A  Rowland          148.90 360  PFAKE           05 25 00.0 +3.2
X58A                               LR      LR
      comp=Z,8µm,19.0s
X58A  Rowland          148.90 360  P       PKPbc   05 24 53.2 +0.2
      baz=0.2,SNR=14
Y49A  Blount Mountai   148.91  11  PFAKE           05 25 00.0 +3.1
Y49A                               LR      LR
      comp=Z,9µm,20.0s
Y49A  Blount Mountai   148.91  11  P       PKPbc   05 24 52.9 -0.2
      baz=346,SNR=48
X55A  Gracelyn & Ava   148.92   3  P       PKPbc   05 24 53.1 +0.1
      baz=356,SNR=24
X56A  White Oak        148.93   3  P       PKPbc   05 24 53.1 +0.1
      baz=357,SNR=24
X57A  Johnson Farm,    148.98   1  P       PKPbc   05 24 53.3 +0.1
      baz=359,SNR=24
Y50A  Piedmont         149.00  10  P       PKPbc   05 24 53.1 -0.1
      baz=348,SNR=24
Y51A  Rockmart         149.11   9  P       PKPbc   05 24 53.5  0.0
      baz=349,SNR=13
HODGE Hodges           149.11   5  PFAKE           05 25 00.0 +2.3
HODGE                              LR      LR
      comp=Z,9µm,19.0s
JSC   Jenkinsville     149.12   3  PFAKE           05 25 00.0 +2.3
JSC                                LR      LR
      comp=Z,9µm,20.0s
Y52A  Lilburn          149.28   7  PFAKE           05 25 00.0 +1.6
Y52A                               LR      LR
      comp=Z,7µm,19.0s
Y52A  Lilburn          149.28   7  P       PKPbc   05 24 54.5 +0.5
      baz=351,SNR=25
HKT   Hockley          149.29  29 ePKPdf   PKPdf   05 24 50.8 +1.1
HKT                               ePKPbc   PKiKP   05 24 55.5 +0.3
HKT                               epPKPab  pPKPab  05 25 06.9 -0.1
HKT                                LR      LR
      comp=Z,7µm,21.0s
HKT   Hockley          149.29  29 ePKIKP   PKPdf   05 24 50.8 +1.1
HKT                               e                05 24 55.5
HKT                                MLR     MLR
      comp=Z,7µm,21.0s
Y53A  Monroe           149.35   7  P       PKPbc   05 24 54.3 +0.1
      baz=352,SNR=24
VBMS  Vicksburg        149.41  19  PFAKE           05 25 00.0 +1.0
VBMS                               LR      LR
      comp=Z,7µm,22.0s
VBMS  Vicksburg        149.41  19  P       PKPbc   05 24 54.7 +0.4
      baz=338,SNR=11
Y57A  Sumter           149.42   2  PFAKE           05 25 00.0 +1.1
Y57A                               LR      LR
      comp=Z,10µm,21.0s
Y57A  Sumter           149.42   2  P       PKPbc   05 24 54.3  0.0
      baz=358,SNR=32
Y60A  Bolivia          149.42 358  PFAKE           05 25 00.0 +1.1
Y60A                               LR      LR
      comp=Z,10µm,18.0s
Y60A  Bolivia          149.42 358  P       PKPbc   05 24 54.3  0.0
      baz=2.4
Y55A  Saluda           149.43   4  P       PKPbc   05 24 54.3 -0.1
      baz=355,SNR=12
Y54A  Tignall          149.44   5  P       PKPbc   05 24 54.5 +0.1
      baz=354,SNR=28
Y59A  Loris            149.46 359  P       PKPbc   05 24 54.3 -0.1
      baz=1.1
Z49A  Columbiana       149.53  12  P       PKPbc   05 24 54.4 -0.2
      baz=346,SNR=32
Y58A  Scranton         149.54   0  PFAKE           05 25 00.0 +0.6
Y58A                               LR      LR
      comp=Z,6µm,20.0s
Y58A  Scranton         149.54   0  P       PKPbc   05 24 54.5 -0.1
      baz=360
LRAL  Lakeview Retre   149.58  13  PFAKE           05 25 00.0 +0.4
LRAL                               LR      LR
      comp=Z,7µm,22.0s
LRAL  Lakeview Retre   149.58  13  P       PKPbc   05 24 54.6 -0.1
      baz=345,SNR=32
Z50A  Ashland          149.59  11  PFAKE           05 25 00.0 +0.3
Z50A                               LR      LR
      comp=Z,10µm,21.0s
Z50A  Ashland          149.59  11  P       PKPbc   05 24 54.5 -0.3
      baz=347,SNR=34
Y56A  Pelion           149.61   3  P       PKPbc   05 24 54.5 -0.2
      baz=356,SNR=8.0
147A  Livingston       149.63  15  PFAKE           05 25 00.0 +0.2
147A                               LR      LR
      comp=Z,8µm,22.0s
147A  Livingston       149.63  15  P       PKPbc   05 24 54.8  0.0
      baz=342,SNR=17
Z51A  Franklin         149.66   9  P       PKPbc   05 24 54.7 -0.2
      baz=349,SNR=6.3
GOGA  Godfrey          149.81   7  PFAKE           05 25 00.0 -0.5
GOGA                               LR      LR
      comp=Z,6µm,20.0s
GOGA  Godfrey          149.81   7  P       PKPbc   05 24 55.4 +0.2
      baz=352,SNR=18
148A  Greensboro       149.83  14  P       PKPbc   05 24 55.4 +0.1
      baz=344
Z52A  Williamson       149.90   8  P       PKiKP   05 24 56.0 -0.4
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      baz=350,SNR=54
Z53A  Monticello       149.92   7  P       PKPbc   05 24 55.5 -0.1
      baz=352,SNR=17
Z54A  Sparta           150.04   6  P       PKPbc   05 24 56.1 +0.3
      baz=353,SNR=21
149A  Jones            150.05  12  P       PKPbc   05 24 56.0 +0.2
      baz=345,SNR=16
Z56A  Williston        150.07   3  PFAKE           05 25 00.0 -1.6
Z56A                               LR      LR
      comp=Z,8µm,20.0s
Z56A  Williston        150.07   3  P       PKPbc   05 24 56.2 +0.3
      baz=356,SNR=6.9
Z58A  St. Stephen      150.11   1  P       PKPbc   05 24 56.2 +0.2
      baz=359
Z55A  Blythe           150.12   4  P       PKPbc   05 24 56.3 +0.2
      baz=355,SNR=12
Z57A  Bowman           150.13   2  P       PKPbc   05 24 56.2 +0.2
      baz=358
GO02  Mina Guanaco     150.13 198 ePKPbc   PKiKP   05 24 57.3 -0.3
GO02                               LR      LR
      comp=Z,8µm,19.0s
KVTX  Kingsville       150.14  34  PFAKE           05 25 00.0 -2.1
KVTX                               LR      LR
      comp=Z,7µm,21.0s
150A  Eclectic         150.20  11  P       PKPbc   05 24 56.4 +0.1
      baz=347,SNR=38
Z59A  Georgetown, SC   150.21 360  P       PKPbc   05 24 56.6 +0.3
      baz=0.3
HJA   Humahuaca        150.30 207 i P      PKPdf   05 24 53.4 +1.3
152A  Waverly Hall     150.37   9  PFAKE           05 25 00.0 +2.6
152A                               LR      LR
      comp=Z,15µm,22.0s
152A  Waverly Hall     150.37   9  P       PKPbc   05 24 56.8 +0.1
      baz=349,SNR=62
151A  Opelika          150.40  10  P       PKPbc   05 24 56.8 +0.1
      baz=348,SNR=18
ZAIG  Zacatecas        150.41  47  PFAKE           05 25 00.0 +1.8
ZAIG                               LR      LR
      comp=Z,7µm,20.0s
153A  Fort Valley      150.51   7  P       PKPbc   05 24 57.2 +0.2
      baz=351,SNR=12
249A  Camden           150.57  13  P       PKiKP   05 24 57.6 -0.3
      baz=344,SNR=52
154A  Montrose         150.63   6  PFAKE           05 25 00.0 +2.0
154A                               LR      LR
      comp=Z,9µm,18.0s
154A  Montrose         150.63   6  P       PKiKP   05 24 57.6 -0.3
      baz=353,SNR=16
158A  Hollywood        150.70   1  P       PKPbc   05 24 57.6 +0.1
      baz=358
156A  Sylvania         150.73   3  P       PKiKP   05 24 58.2 +0.1
      baz=356,SNR=16
157A  Early Branch     150.73   3  P       PKiKP   05 24 58.0 -0.2
      baz=357
250A  Grady            150.76  12  PFAKE           05 25 00.0 +1.7
250A                               LR      LR
      comp=Z,9µm,21.0s
250A  Grady            150.76  12  P       PKiKP   05 24 58.1 -0.2
      baz=346,SNR=12
251A  Midway           150.81  10  P       PKiKP   05 24 58.3 -0.1
      baz=348,SNR=150
252A  Lumpkin          151.02   9  P       PKiKP   05 24 58.7 -0.1
      baz=349,SNR=15
253A  Americus         151.05   8  PFAKE           05 25 00.0 +1.1
253A                               LR      LR
      comp=Z,6µm,20.0s
253A  Americus         151.05   8  P       PKPbc   05 24 58.5 +0.2
      baz=350,SNR=14
LNIG  Linares          151.15  40 ePKPdf   PKPdf   05 24 52.2 -0.7
LNIG                              ePKPbc   PKPbc   05 24 59.0 +0.2
LNIG                               LR      LR
      comp=Z,3µm,21.0s
349A  Repton           151.16  14  P       PKiKP   05 24 59.2 +0.1
      baz=344
YJA   Yavi             151.24 208 i P      PKPdf   05 24 55.5 +1.8
254A  Abbeville        151.27   7  P       PKiKP   05 24 59.2 -0.1
      baz=352,SNR=7.6
350A  Dozier           151.28  12  P       PKiKP   05 24 59.3  0.0
      baz=346,SNR=12
BRAL  Brewton          151.37  14  PFAKE           05 25 00.0 +0.5
BRAL                               LR      LR
      comp=Z,6µm,20.0s
BRAL  Brewton          151.37  14  P       PKiKP   05 24 59.7 +0.2
      baz=344,SNR=6.9
256A  Glennville       151.37   4  P       PKiKP   05 24 59.7 +0.2
      baz=355
255A  Hazlehurst       151.38   5  PFAKE           05 25 00.0 +0.5
255A                               LR      LR
      comp=Z,5µm,21.0s
255A  Hazlehurst       151.38   5  P       PKiKP   05 24 59.5  0.0
      baz=354
257A  Skidaway Islan   151.43   3  PFAKE           05 25 00.0 +0.4
257A                               LR      LR
      comp=Z,8µm,20.0s
257A  Skidaway Islan   151.43   3  P       PKPbc   05 24 59.4 +0.2
      baz=357
352A  Blakely          151.50  10  PFAKE           05 25 00.0 +0.2
352A                               LR      LR
      comp=Z,9µm,22.0s
352A  Blakely          151.50  10  P       PKiKP   05 24 59.9 +0.1
      baz=348,SNR=16
449A  Pace             151.72  14  P       PKPbc   05 24 59.8  0.0
      baz=344
TIGA  Tifton           151.74   7  PFAKE           05 25 10.0 +1.4
TIGA                               LR      LR
      comp=Z,10µm,21.0s
TIGA  Tifton           151.74   7  P       PKiKP   05 25 00.4 +0.1
      baz=351,SNR=15
353A  Camilla          151.74   9  P       PKiKP   05 25 00.6 +0.3
      baz=350,SNR=13
450A  Crestview        151.82  13  P       PKiKP   05 25 01.2 +0.7
      baz=345
355A  Pearson          151.92   6  P       PKiKP   05 25 00.8 +0.1
      baz=353
357A  Townsend         151.96   4  P       PKiKP   05 25 00.9 +0.1
      baz=356
356A  Blackshear       152.00   5  P       PKiKP   05 25 00.8  0.0
      baz=354
452A  Marianna         152.07  11  P       PKiKP   05 25 01.1 +0.1
      baz=348
451A  Vernon           152.18  12  PFAKE           05 25 10.0 -0.4
451A                               LR      LR
      comp=Z,9µm,20.0s
451A  Vernon           152.18  12  P       PKiKP   05 25 01.6 +0.4
      baz=346
453A  Whigham          152.21   9  PFAKE           05 25 10.0 -0.5
453A                               LR      LR
      comp=Z,6µm,20.0s
453A  Whigham          152.21   9  P       PKiKP   05 25 01.7 +0.5
      baz=350,SNR=10
LVC   Limon Verde      152.26 201 ePKPbc   PKPbc   05 25 02.7 +0.9
LVC                               ePKPab   PKPab   05 25 12.4 +0.9
LVC   Limon Verde      152.26 201 ePKIKP   PKPbc   05 25 02.7 +0.9
LVC                               e                05 25 12.4
454A  Quitman          152.44   8  P       PKiKP   05 25 02.1 +0.3
      baz=351
455A  Stateville       152.49   7  P       PKiKP   05 25 02.3 +0.4
      baz=352
456A  Hilliard         152.61   5  PFAKE           05 25 10.0 -2.2
456A                               LR      LR
      comp=Z,8µm,20.0s
456A  Hilliard         152.61   5  P       PKiKP   05 25 02.6 +0.5
      baz=354
552A  Lynn Haven       152.74  11  P       PKiKP   05 25 02.8 +0.4
      baz=347
457A  Yulee            152.75   4  P       PKiKP   05 25 03.0 +0.7
      baz=355
553A  Crawfordville    152.84   9  P       PKiKP   05 25 03.1 +0.5
      baz=349
554A  Perry            153.06   8  P       PKiKP   05 25 03.6 +0.6
      baz=351
555A  McAlpin          153.11   7  PFAKE           05 25 10.0 -4.3
555A                               LR      LR
      comp=Z,8µm,20.0s
555A  McAlpin          153.11   7  P       PKiKP   05 25 03.3 +0.1
      baz=352
556A  Lake Butler      153.29   6  P       PKiKP   05 25 03.8 +0.3
      baz=353
557A  Orange Park      153.34   4  P       PKiKP   05 25 04.0 +0.4
      baz=355
655A  Horseshoe Beac   153.68   7  P       PKiKP   05 25 05.7 +1.4
      baz=351
657A  Interlachen      153.75   5  P       PKiKP   05 25 06.3 +1.8
      baz=354
656A  Willston         153.90   6  PFAKE           05 25 10.0 +5.2
656A                               LR      LR
      comp=Z,10µm,19.0s
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656A	Willston	153.90	6	P	PKiKP	05 25 06.2	+1.4
	baz=353						
658A	Bunnell	153.96	4	P	PKiKP	05 25 05.1	+0.2
	baz=356						
757A	Oxford	154.37	5	P	PKiKP	05 25 06.5	+0.7
	baz=354						
758A	Lake Helen	154.42	4	P	PKiKP	05 25 06.7	+0.8
	baz=356						
857A	Zephyrhills	155.03	6	P	PKPdf	05 25 08.2	+10
	baz=353						
GO01	Chusmiza	155.05	203	PFAKE		05 25 10.0	+11
GO01				LR	LR		
	comp=Z,6µm,20.0s						
858A	St. Cloud	155.15	4	P	PKPdf	05 25 08.4	+10
	baz=355						
DWPF	Disney Wildern	155.25	4	PFAKE		05 25 10.0	+11
DWPF				LR	LR		
	comp=Z,6µm,19.0s						
DWPF	Disney Wildern	155.25	4	P	PKPdf	05 25 08.9	+10
	baz=355						
859A	Kempfer Cattle	155.33	3	P	PKPdf	05 25 09.1	+10
	baz=356						
957A	Wimauma	155.62	6	PFAKE		05 25 10.0	+11
957A				LR	LR		
	comp=Z,8µm,22.0s						
958A	Wauchula	155.75	5	P	PKPab	05 25 24.8	-0.8
	baz=354						
959A	Okeechobee	155.87	3	P	PKPab	05 25 26.3	+0.2
	baz=356						
058A	Arcadia	156.26	5	P	PKPab	05 25 27.1	-0.8
	baz=354						
060A	Indiantown	156.38	2	PFAKE		05 25 10.0	+10
060A				LR	LR		
	comp=Z,10µm,20.0s						
060A	Indiantown	156.38	2	P	PKPab	05 25 27.8	-0.5
	baz=358						
059A	Moore Haven	156.41	4	PFAKE		05 25 10.0	+10
059A				LR	LR		
	comp=Z,6µm,18.0s						
059A	Moore Haven	156.41	4	P	PKPab	05 25 27.5	-0.9
	baz=356						
TLIG	Tlapa	156.51	52	PFAKE		05 25 10.0	+9.2
TLIG				LR	LR		
	comp=Z,4µm,20.0s						
LVIG	Laguna Verde	156.75	44	PFAKE		05 25 10.0	+9.1
LVIG				LR	LR		
	comp=Z,2µm,22.0s						
060Z	West Palm Beac	157.00	2	P	PKPab	05 25 31.1	+0.1
	baz=357						
059Z	Ave Maria	157.01	5	P	PKPab	05 25 31.0	0.0
	baz=355						
061Z	Ochoppi	157.51	3	PFAKE		05 25 10.0	+8.3
061Z				LR	LR		
	comp=Z,6µm,20.0s						
061Z	Ochoppi	157.51	3	P	PKPab	05 25 32.3	-0.9
	baz=356						
ANWB	Willy Bob	157.53	311	PFAKE		05 25 10.0	+8.1
ANWB				LR	LR		
	comp=Z,3µm,22.0s						
LPAZ	La Paz	157.54	210	PKP	PKPdf	05 25 02.2	-0.6
	comp=Z,4.6nm,1.0s,baz=158,slow=5.4,SNR=2.5						
BBGH	Gun Hill	158.02	298	PFAKE		05 25 10.0	+7.4
BBGH				LR	LR		
	comp=Z,6µm,21.0s						
SMRT	St. Maarten	158.25	314	PFAKE		05 25 10.0	+7.2
SMRT				LR	LR		
	comp=Z,4µm,21.0s						
SKI	Saint Kitts	158.46	312	PFAKE		05 25 10.0	+6.9
SKI				LR	LR		
	comp=Z,5µm,22.0s						
SEUS	St. Eustatius	158.54	312	PFAKE		05 25 10.0	+6.9
SEUS				LR	LR		
	comp=Z,4µm,21.0s						
SABA	Saba	158.65	313	PFAKE		05 25 10.0	+6.7
SABA				LR	LR		
	comp=Z,4µm,20.0s						
FDF	Fort de France	158.66	303	PFAKE		05 25 10.0	+6.6
FDF				LR	LR		
	comp=Z,4µm,19.0s						
MTP	Monte Pirata	159.94	318	PFAKE		05 25 20.0	+15
MTP				LR	LR		
	comp=Z,4µm,20.0s						
PTGA	Pitinga	160.10	259	ePKPdf	PKPdf	05 25 05.1	-0.1
SJG	San Juan	160.32	319	eP	PKPdf	05 24 58.6	-6.6
SDDR	Presa de Saban	162.47	333	ePKPab	PKPab	05 25 55.8	+0.7
MTDJ	Mount Denham	165.04	353	ePKPab	PKPab	05 26 07.2	+0.9
TGUH	Tegucigalpa,Un	166.82	35	ePKPdf	PKPdf	05 25 13.4	+1.9
URIC	Uribia, Colomb	168.84	319	eP	PKPdf	05 25 10.6	-2.2
SDV	Santo Domingo	169.61	303	ePKPdf	PKPdf	05 25 12.1	-1.5
SDV				ePKPab	PKPab	05 26 26.1	-1.0
SDV	Santo Domingo	169.61	303	eP	PKPdf	05 25 11.1	-2.4
SMRC	Santa Marta, M	170.61	327	eP	PKPdf	05 25 05.1	-8.7
CODC	Agustn Codazz	171.09	318	eP	PKPdf	05 25 13.1	-1.0
TAMC	Tame, Arauca	171.74	292	eP	PKPdf	05 25 13.6	-0.9
PAMC	Pamplona, Colo	172.15	301	eP	PKPdf	05 25 16.7	+1.4
OCAC	Ocana	172.16	309	eP	PKPdf	05 25 14.6	-0.2
SMLC	San Martn de	172.34	316	eP	PKPdf	05 25 13.2	-1.6
BARC	Barichara	172.93	298	eP	PKPdf	05 25 16.4	+1.1
BRRC	Barranca, Sant	173.13	304	eP	PKPdf	05 25 13.5	-1.5
RUSC	La Rusia	173.13	292	eP	PKPdf	05 25 13.2	-2.5
ZARC	Zaragoza, Cauc	173.80	312	eP	PKPdf	05 25 07.2	-8.1
PTBC	PUERTO BERRIO,	174.06	303	eP	PKPdf	05 25 14.4	-1.1
CHIC	Chingaza	174.12	283	eP	PKPdf	05 25 11.8	-4.1
BCIP	Isla Barro Col	174.15	4	eP	PKPdf	05 25 22.6	+7.2
MACC	Macarena, Meta	174.27	259	eP	PKPdf	05 25 14.2	-1.3
PTLC	Puerto Leguiza	174.39	236	eP	PKPdf	05 25 10.1	-5.4
ROSC	El Rosal	174.64	287	PKP	PKPdf	05 25 15.7	-0.4
	comp=Z,3.0nm,0.6s,baz=7.6,slow=9.1,SNR=5.9						
ROSC	El Rosal	174.64	287	ePKPdf	PKPdf	05 25 15.6	-0.5
ROSC	El Rosal	174.64	287	eP	PKPdf	05 25 16.1	0.0
NORC	Norcasia	174.89	296	eP	PKPdf	05 25 14.9	-0.8
DBBC	Dabeiba	175.08	319	eP	PKPdf	05 25 15.8	-0.1
HELC	Santa Helena	175.13	306	eP	PKPdf	05 25 15.6	-0.6
PRAC	Prado	175.41	275	eP	PKPdf	05 25 14.3	-1.6
GUY2C	Guyana, Caldas	175.48	295	eP	PKPdf	05 25 20.6	+4.2
RREF	El Recreo	175.59	291	eP	PKPdf	05 25 14.2	-2.5
ORTC	Ortega, Tolima	175.74	278	eP	PKPdf	05 25 14.8	-1.2
FLOC	Florencia	175.83	246	eP	PKPdf	05 25 12.6	-3.4
PLMC	San Jos del P	176.44	297	eP	PKPdf	05 25 16.0	-0.2
YOTC	Yotoco, Valle	176.81	282	eP	PKPdf	05 25 12.7	-3.6
SOTA	Rioblanco	176.92	248	eP	PKPdf	05 25 17.6	+0.8
POPC	Popayan, Colom	177.11	255	eP	PKPdf	05 25 13.4	-3.1
BBAC	Balboa, Cauca	177.45	240	eP	PKPdf	05 25 15.3	-1.2

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*ISCJB **06** 05:29:56.3±0.4, 47°.88N±0°.07×153°.29E±0°.10, h150^{km}, mb3.6/12, Error ellipse: s-maj=12.8km s-min=2.8km az=136.7*

*MOS **06** 05:29:58.1±1.3, 48°.13N×153°.03E, h154^{km}, mb4.1/1, Error ellipse: s-maj=18.4km s-min=5.0km az=64.2*

*SKHL **06** 05:29:58.4±0.1, 47°.92N×153°.33E, h148^{km}±5^{km}, mb4.3/5, msh5.3/3*

*JMA **06** 05:30:00.4±0.5, 46°.60N×153°.72E, h172^{km}, M3.9*

*IDC **06** 05:30:01.3±1.8, 48°.19N×152°.82E, h165^{km}±17^{km}, mb3.4/12, mb1 3.6/17, mb1mx3.4/36, mbtmp4.0/17, Error ellipse: s-maj=19.8km s-min=9.7km az=142.0*

ISC 06 05:29:57.6±0.7**, 47°.87N**±0°.09×**153°.25E**±0°.09**, h150**^{km}**, n77, σ2^{s}.54**/85**, mb3.7**/12**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.38	33	ePN	Pn	05 30 49.7	-0.1
SKR				eS	Sn	05 31 28.3	-2.0
SKR				pmax	pmax		
	comp=Z,188nm,0.6s						
SKR				smax	smax		
	comp=E,220nm,0.6s						
SKR				smax	smax		
	comp=N,212nm,0.4s						
SKR	Severo-Kuril's	3.38	33	eP	Pn	05 30 49.7	-0.1
SKR				AMB	AMB	05 30 52.2	
	comp=N,20nm,0.5s						
SKR				eS	Sn	05 31 28.3	-2.0
SKR				A	A	05 31 34.3	
	comp=N,210nm,0.6s						
SKR				A	A	05 31 34.3	
	comp=N,180nm,0.6s						
PAU	Pauzhetka	4.28	31	PN	Pn	05 31 01.1	-0.3
PAU				S	Sn	05 31 48.4	-2.7
PAU	Pauzhetka	4.28	31	eP	Pn	05 31 01.4	0.0
PAU				AMB	AMB	05 31 02.7	
	comp=N,20nm,0.4s						
PAU				eS	Sn	05 31 48.6	-2.5
PAU				A	A	05 31 50.5	
	comp=N,30nm,0.3s						
PAU				A	A	05 31 50.5	
	comp=N,50nm,0.3s						
KDTR	Khodutka, Kamc	5.03	37	PN	Pn	05 31 09.3	-2.0
KDTR				S	Sn	05 32 01.8	-7.0
ASAK	Asacha	5.42	32	PN	Pn	05 31 16.5	0.0
MTVR	Mutnovka	5.60	33	PN	Pn	05 31 18.5	-0.5
MTVR				S	Sn	05 32 18.5	-4.1
APC	Apacha	5.64	25	PN	Pn	05 31 19.1	-0.3
RUS	Russkaya	5.68	35	PN	Pn	05 31 18.6	-1.4
RUS				S	Sn	05 32 18.2	-6.1
RUS	Russkaya	5.68	35	eP	Pn	05 31 18.6	-1.4
KRMR	Karymshinskiy	5.87	30	PN	Pn	05 31 21.8	-0.6
KRMR				S	Sn	05 32 25.9	-2.8
PETK	Petropavlovsk-	5.96	27	P	Pn	05 31 24.1	+0.4
	comp=N,1.4nm,0.3s,baz=196,slow=12,SNR=20						
PETK				S	Sn	05 32 34.3	+3.2
	comp=N,0.7nm,0.3s,baz=170,slow=18,SNR=2.3						
PET	Petropavlovsk	6.21	32	PN	Pn	05 31 26.4	-0.5
PET				S	Sn	05 32 30.8	-6.0
PET	Petropavlovsk	6.21	32	eP	Pn	05 31 26.7	-0.2
PET				AMB	AMB	05 31 27.7	
	comp=N,10.0nm,0.4s						
PET				eS	Sn	05 32 32.8	-4.0
PET				A	A	05 32 36.0	
	comp=N,40nm,0.5s						
PET				A	A	05 32 36.0	
	comp=N,30nm,0.5s						
DALK	Dalny	6.25	32	PN	Pn	05 31 26.9	-0.6
DALK				S	Sn	05 32 32.1	-5.7
UGLR	Uglovaya	6.42	32	PN	Pn	05 31 29.8	0.0
KOK	Koryaka	6.42	30	PN	Pn	05 31 30.1	+0.2
KOK	Koryaka	6.42	30	eP	Pn	05 31 30.1	+0.2
AVH	Avacha	6.43	31	PN	Pn	05 31 30.0	0.0
AVH				S	Sn	05 32 37.1	-5.3
SMAR	Somma	6.45	31	PN	Pn	05 31 30.2	-0.2
KRER	Koryakskii	6.47	31	PN	Pn	05 31 30.7	+0.1
KRX	Arik	6.48	30	PN	Pn	05 31 30.2	-0.5
SDLR	Sedlovina	6.50	31	PN	Pn	05 31 30.2	-0.7
GNL	Ganaly	6.55	25	PN	Pn	05 31 32.0	+0.4
SPN	Mys Shipunski	6.79	37	PN	Pn	05 31 33.5	-1.1
SPN	Mys Shipunski	6.79	37	eP	Pn	05 31 32.0	-2.6
NEM2	Nemuro 2	6.92	232	P	Pn	05 31 34.7	-1.9
NEM2				eS	Sn	05 32 48.1	-6.0
YSS	Yuzh-Sakhalins	7.18	267	eP	Pn	05 31 41.3	+1.4
YSS				AMB	AMB	05 31 42.6	
	comp=N,10.0nm,0.6s						
JNK	Nakash	7.34	237	P	Pn	05 31 42.3	+0.1
TYV	Tymovskoe	7.53	297	eP	Pn	05 31 45.9	+1.3
TYV				AMB	AMB	05 31 46.9	
	comp=N,10.0nm,0.9s						
JTKR	Abashiri--Toko	7.59	243	P	Pn	05 31 46.6	+1.2
JAK	Akkeshi	7.74	234	P	Pn	05 31 45.8	-1.6
JAK				eS	Sn	05 33 07.9	-5.8
JMP	Maruseppu	7.90	244	P	Pn	05 31 51.4	+1.8
JAR	Ashorobuto	8.07	239	P	Pn	05 31 52.3	+0.5
JOB	Onbets	8.28	237	P	Pn	05 31 53.6	-1.0
JKA	Kamikawa-asahi	8.31	247	eP	Pn	05 31 56.6	+1.6
ASAJ	Asahikawa	8.31	247	P	Pn	05 31 56.6	+1.5
	comp=N,4.0nm,0.3s,baz=72,slow=13,SNR=84						
ASAJ	Asahikawa	8.31	247	P	Pn	05 31 56.9	+1.8
JKK2	Kamakawa 2	8.34	245	P	Pn	05 31 57.0	+1.5
MKZ	Mys Kozlova	8.55	35	PN	Pn	05 31 55.3	-2.8
MKZ	Mys Kozlova	8.55	35	eP	Pn	05 31 55.3	-2.8
TUMR	Tumrok	8.57	27	PN	Pn	05 31 59.4	+0.8
JSS	Shosan	8.64	251	P	Pn	05 32 02.7	+3.3
JCH	Churui	8.73	237	P	Pn	05 31 59.5	-1.1
JCH				eS	Sn	05 33 31.7	-5.8
JFR	Furan	8.83	242	P	Pn	05 32 03.0	+0.9
JBT2	Biratori 2	9.20	240	P	Pn	05 32 06.1	-0.8
JNBK	Urakawa-nobuka	9.29	237	P	Pn	05 32 05.5	-2.6
JNBK				eS	Sn	05 33 43.5	-7.5
JNB	Noboribetsu	10.17	242	P	Pn	05 32 18.5	-1.2
JNB				eS	Sn	05 34 05.3	-6.9
JKB	Kayabe	10.53	240	P	Pn	05 32 22.1	-2.3
JKB				eS	Sn	05 34 11.2	-10
JSH	Shimam	10.67	246	P	Pn	05 32 26.6	+0.3
JYM2	Yakumo 2	10.78	242	P	Pn	05 32 26.2	-1.5
BKI	Bering	10.79	42	PN	Pn	05 32 25.2	-2.6
JSR	Shiriuchi	11.11	240	P	Pn	05 32 29.8	-2.3
JTM	Tenmabayashi	11.23	235	P	Pn	05 32 30.0	-3.7
JTM				eS	Sn	05 34 25.2	-13
JANG	Nango	11.27	233	P	Pn	05 32 29.7	-4.6
JANG				eS	Sn	05 34 26.7	-12
EKMR	Ekimchan	13.91	300	eP	Pn	05 33 08.9	+0.7
EKMR				AMB	AMB	05 33 14.2	
	comp=N,8.0nm,0.8s						
KLR	Kul'dur	14.30	283	P	Pn	05 33 13.3	+0.3
	comp=N,0.3nm,0.3s,baz=89,slow=12,SNR=8.7						
USRK	Ussuriysk Ar.	15.20	264	P	Pn	05 33 24.5	+0.1
	comp=N,1.1nm,0.3s,baz=68,slow=13,SNR=23						
MJAR	Matsushiro Arr	15.85	230	P	Pn	05 33 33.4	+1.0
	comp=N,0.2nm,0.3s,baz=41,slow=17,SNR=3.5						
KSRS	Korea Array	21.24	250	P	P	05 34 33.5	+1.8
	comp=N,5.3nm,0.8s,baz=48,slow=10,SNR=22						
JNU	Nakatsue	22.39	237	P	P	05 34 45.5	+1.9
	comp=N,5.9nm,0.7s,baz=17,slow=20,SNR=2.4						
H11N2	WAKE ISLAND Hy	30.18	154	T	T	06 08 08.9	
	baz=342,slow=76,SNR=7.8						
H11N1	WAKE ISLAND Hy	30.20	154	T	T	06 08 10.2	
	baz=342,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	30.20	154	T	T	06 08 08.9	
	baz=342,slow=76,SNR=5.4						
H11S1	WAKE ISLAND Hy	31.28	155	T	T	06 09 38.0	
	baz=344,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	31.29	155	T	T	06 09 39.7	
	baz=344,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	31.30	155	T	T	06 09 37.9	
	baz=344,slow=76,SNR=19						
ZALV	Zalesovo Beam	42.04	305	P	P	05 37 32.5	-1.4
	comp=N,0.9nm,0.5s,baz=57,slow=5.5,SNR=3.5						
MKAR	Makanchi Array	46.51	296	P	P	05 38 08.8	-0.9
	comp=N,0.6nm,0.4s,baz=66,slow=7.8,SNR=9.8						
YKA	Yellowknife Ar	49.97	37	P	P	05 38 38.5	+2.7
	comp=N,0.3nm,0.5s,baz=301,slow=7.0,SNR=4.2						
CMAR	Chiang Mai Arr	52.73	256	P	P	05 38 56.7	-0.2
	comp=N,0.9nm,0.7s,baz=36,slow=7.0,SNR=6.0						
NVAR	Mina Array Bea	61.84	63	P	P	05 40 02.3	+1.5
	comp=N,0.1nm,0.4s,baz=335,slow=8.3,SNR=2.5						
FINES	FINESS Array B	63.06	335	P	P	05 40 07.6	-0.8
	comp=N,0.7nm,0.5s,baz=46,slow=5.5,SNR=6.2						
PDAR	Pinedale Array	64.02	54	P	P	05 40 17.3	+2.1
	comp=N,0.2nm,0.5s,baz=272,slow=3.4,SNR=2.3						
WRA	Warramunga Arr	69.60	199	P	P	05 40 53.4	+3.0
	comp=N,2.9nm,1.1s,baz=16,slow=5.5,SNR=9.4						
ASAR	Alice Springs	73.30	198	P	P	05 41 17.2	+4.8
	comp=N,1.6nm,0.7s,baz=11,slow=5.6,SNR=26						
TXAR	Lajitas Array	76.86	61	P	P	05 41 36.3	+3.1
	comp=N,0.4nm,0.6s,baz=287,slow=4.7,SNR=6.4						

JMA 06 05:39:22.8, 36°.64N×139°.51E, h7^{km}±1^{km}, M3.7, 4C-2D Broadband fault plane solution: P waves. NP1: φs331.00000°, δ79.00000°, λ-11.00000°. **NP2:** φs63.00000°, δ79.00000°, λ-169.00000°. **Principal axes:** T Plg0.0000°, Azm17.0000°; N Plg75.0000°, Azm107.0000°; P Plg15.0000°, Azm287.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.22	192	⇑P	Pg	05 39 27.3	+0.1
JKT	Katashina	0.24	301	⇓P	Pg	05 39 28.0	+0.3
JKT				S	Sg	05 39 31.6	+0.6
JSB	Shiboa	0.46	45	⇑P	Pg	05 39 32.4	+0.6
JSB				S	Sg	05 39 38.9	+1.0
JHK	Hiroka	0.72	327	⇓P	Pg	05 39 36.9	+0.2
JHK				S	Sg	05 39 46.4	+0.2
JFY	Yanaizu	0.78	11	⇑P	Pg	05 39 37.8	0.0
JRY	Ryogami san	0.79	218	⇑P	Pg	05 39 37.8	-0.2
JRY				S	Sg	05 39 48.6	+0.3
MAT	Matsushiro	1.05	265	P	Pg	05 39 42.6	-0.4
MAT				S	Sg	05 39 56.1	-0.6

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*ISK **06** 05:50:53.8, 37°.87N×37°.60E, h15^{km}, ML2.1/6*

*ISCJB **06** 05:50:54.2±0.6, 37°.88N±0°.03×37°.63E±0°.04, h0^{km}±8^{km}, Error ellipse: s-maj=5.8km s-min=4.6km az=22.4*

*DDA **06** 05:50:55.0, 37°.82N×37°.60E, h7^{km}±2^{km}, ML2.5*

ISC 06 05:50:54.2±1.3**, 37°.85N**±0°.04×**37°.64E**±0°.04**, h8**^{km}±12^{km}**, n14, σ0^{s}.64**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZT	Gaziantep	0.50	187	iP	Pb	05 51 04.9	-0.4
GZT				iS	Sb	05 51 12.1	-0.8
GZT				IAML_P			
	comp=Z,980nm,0.1s						
ATAB	Bozova	0.65	126	iP	Pg	05 51 06.1	-0.6
ATAB				IAML_P			
	comp=Z,2µm,0.2s						
KMRS	Kahramanmaras	0.68	239	PG	Pg	05 51 07.6	+0.3
KMRS				SG	Sb	05 51 16.8	-1.1
DARE	Darende-Malaty	0.73	350	PG	Pg	05 51 07.9	-0.3
DARE				SG	Sg	05 51 18.2	+0.5
GAZ	Gaziantep	0.76	207	PG	Pg	05 51 08.9	+0.1
GAZ				SG	Sb	05 51 20.3	+0.1
HCB	Kahramanmara	0.77	229	iP	Pb	05 51 09.9	0.0
HCB				IAML_P			
	comp=Z,365nm,0.1s						
KAMA	Osmaniye	1.02	229	iP	Pb	05 51 14.1	0.0
URFA	Urfa	1.03	113	PG	Pb	05 51 14.9	+0.7
URFA				SG	Sn	05 51 29.7	+0.1
HEKM	Malatya_Hekimh	1.05	14	iP	Pn	05 51 16.1	+0.6
HEKM				IAML_P			
	comp=Z,366nm,0.1s						
ANDN	Andirin	1.06	255	iP	Pn	05 51 15.1	-0.3
KUZU	Kuzuini	1.17	203	iP	Pn	05 51 18.1	+1.2
KUZU				iS	Sn	05 51 33.6	+0.6
SAIM	ADANA	1.24	276	iP	Pn	05 51 18.1	+0.3
SAIM				IAML_P			
	comp=Z,367nm,0.1s						
SVRC	Sivrice-ELAZID	1.42	68	PN	Pn	05 51 19.9	-0.5
KOZT	Kozan	1.48	256	PN	Pn	05 51 20.5	-0.7

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*ISCJB **06** 06:06:49.7±0.5, 6°.84N±0°.03×73°.14W±0°.03, h153^{km}±4^{km}, mb3.1/2, Error ellipse: s-maj=5.7km s-min=4.2km az=16.1*

*IDC **06** 06:06:49.6±0.8, 6°.91N×73°.19W, h143^{km}±12^{km}, mb2.9/2, mb1 3.4/5, mb1mx3.0/34, mbtmp3.7/5, Error ellipse: s-maj=32.1km s-min=7.6km az=132.0*

*RSNC **06** 06:06:51.8±1.1, 6°.83N×73°.16W, h142^{km}±5^{km}, ML3.0, Mw3.5*

ISC 06 06:06:50.1±0.9**, 6°.83N**±0°.03×**73°.13W**±0°.04**, h153**^{km}±6^{km}**, n28, σ0^{s}.83**/48**, 3C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	193	⇓iP	Pn	06 07 11.2	0.0
BARC				eS	Sn	06 07 26.0	-1.2
BARC				i		06 07 27.4	
	comp=Z,217nm,0.2s						
GIRC	Giron, Santand	0.25	345	eP	Pn	06 07 11.3	+0.2
BRRC	Barranca, Sant	0.64	295	⇑iP	Pn	06 07 13.0	+0.5
BRRC				eS	Sn	06 07 29.8	+0.2
BRRC				i		06 07 33.1	
	comp=Z,171nm,0.2s						
PAMC	Pamplona, Colo	0.66	40	⇓eP	Pn	06 07 14.1	+0.9
PAMC				eS	Sn	06 07 30.7	-0.1
PAMC				i		06 07 33.0	
	comp=Z,246nm,0.4s						
RUSC	La Rusia	0.94	177	eP	Pn	06 07 15.2	0.0
RUSC				eS	Sn	06 07 33.2	-1.2
RUSC				i		06 07 35.5	
	comp=Z,136nm,0.4s						
PTBC	PUERTO BERRIO,	1.35	258	eP	Pn	06 07 17.6	-0.8
PTBC				eS	Sn	06 07 38.5	-1.6
PTBC				i		06 07 41.6	
	comp=Z,161nm,0.2s						
TAMC	Tame, Arauca	1.38	107	⇑iP	Pn	06 07 19.6	+0.8
TAMC				eS	Sn	06 07 40.7	+0.1
OCAC	Ocana	1.41	352	eP	Pn	06 07 19.5	+0.3
OCAC				eS	Sn	06 07 40.6	-0.8
OCAC				i		06 07 44.6	
	comp=Z,135nm,0.3s						
YOPC	Yopal, Colombi	1.63	154	⇑eP	Pn	06 07 22.1	+0.7
YOPC				eS	Sn	06 07 45.9	+0.5
YOPC				i		06 07 47.3	
	comp=Z,108nm,0.4s						
ZARC	Zaragoza, Cauc	1.84	291	eP	Pn	06 07 24.3	+0.7
ZARC				eS	Sn	06 07 49.8	+0.5
ZARC				i		06 07 55.8	
	comp=Z,157nm,0.3s						
NORC	Norcasia	2.14	234	eP	Pn	06 07 27.5	+0.3
NORC				eS	Sn	06 07 55.0	-0.6
NORC				i		06 07 59.3	
	comp=Z,95nm,0.5s						
SMLC	San Martn de	2.17	334	eP	Pn	06 07 27.4	0.0
SMLC				eS	Sn	06 07 55.2	-0.9
CHIC	Chingaza	2.27	195	eP	Pn	06 07 29.7	+0.6
CHIC				eS	Sn	06 07 58.7	-0.3
CHIC				i		06 08 02.3	
	comp=Z,39nm,0.2s						
ROSC	El Rosal	2.31	211	P	Pn	06 07 30.6	+1.1
	comp=Z,11nm,0.3s,baz=224,slow=23,SNR=53						
ROSC				S	Sn	06 07 59.0	-0.7
	comp=Z,19nm,0.3s,baz=336,slow=20,SNR=14						
ROSC	El Rosal	2.31	211	eP	Pn	06 07 31.1	+1.6
ROSC				eS	Sn	06 08 00.3	+0.6
HELC	Santa Helena	2.47	255	eP	Pn	06 07 31.7	+0.3
HELC				eS	Sn	06 08 01.8	-1.4
HELC				i		06 08 09.6	
	comp=Z,62nm,0.4s						
GUY2C	Guyana, Caldas	2.74	234	eP	Pn	06 07 35.9	+1.0
GUY2C				i		06 08 18.5	
	comp=Z,44nm,0.5s						
VILC	Villavicencio,	2.76	192	eP	Pn	06 07 34.8	0.0
VILC				eS	Sn	06 08 08.6	-0.7
VILC				i		06 08 18.7	
	comp=Z,64nm,0.4s						
RREF	El Recreo	2.93	229	eP	Pn	06 07 37.9	+0.6
RREF				i		06 08 21.7	
	comp=Z,54nm,0.4s						
CODC	Agustn Codazz	3.10	354	eP	Pn	06 07 39.0	+0.1
CODC				eS	Sn	06 08 16.1	-0.5
CODC				i		06 08 23.5	
	comp=Z,12nm,0.6s						
SDV	Santo Domingo	3.20	50	P	Pn	06 07 41.0	+0.6
	comp=Z,13nm,0.3s,baz=236,slow=7.3,SNR=53						
SDV				S	Sn	06 08 18.0	-1.2
	comp=Z,5.6nm,0.3s,baz=250,slow=23,SNR=13						
PRAC	Prado	3.56	210	eP	Pn	06 07 44.9	0.0
PRAC				eS	Sn	06 08 27.2	-0.1
PRAC				i		06 08 32.7	
	comp=Z,40nm,0.5s						
GUVC	San Jose del G	4.29	173	eP	Pn	06 07 53.9	-0.4
GUVC				eS	Sn	06 08 41.9	-2.4
GUVC				i		06 08 47.6	
	comp=Z,39nm,0.2s						
PCRV	Puerto La Cruz	9.03	68	P	Pn	06 08 57.8	+0.4
	comp=Z,0.3nm,0.3s,baz=194,slow=8.3,SNR=2.6						
TXAR	Lajitas Array	36.45	312	P	P	06 13 41.6	+1.0
	comp=Z,0.1nm,0.5s,baz=141,slow=9.3,SNR=2.6						
YKA	Yellowknife Ar	63.25	340	P	P	06 17 01.9	-0.2
	comp=Z,0.5nm,0.7s,baz=133,slow=6.3,SNR=7.2						
ASAR	Alice Springs	149.11	234	PKPbc	PKPbc	06 26 20.6	-0.7
	comp=Z,0.2nm,0.5s,baz=103,slow=3.5,SNR=4.5						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	06 26 23.7	-0.7
	comp=Z,1.0nm,0.9s,baz=96,slow=4.3,SNR=4.6						

NNC 06 06:16:22.5±9.2**, 36°.94N×70°.83E, h0**^{km}**, mb4.0, mpv3.8, 3C, Error ellipse: s-maj=91.0km s-min=52.4km az=150.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.16	358	P	Pn	06 17 55.1	+0.4
	6.8nm,0.4s,baz=178,slow=12,SNR=107						
KK31				S	Sn	06 19 09.8	+4.0
	2.4nm,0.4s,baz=176,slow=22,SNR=7.5						
AAK	Ala-Archa	6.35	25	⇑P	Pn	06 17 59.9	+2.4
	2.1nm,0.5s						
AAK				⇑S	Sn	06 19 09.9	-0.8
	3.4nm,0.8s						
AB31	Akbulak array	14.63	331	P	Pn	06 19 47.1	-3.5
	0.4nm,0.3s,baz=140,slow=13,SNR=37						
AKTO	Aktyubinsk	16.33	330	⇑P	Pn	06 20 10.8	-2.2
	1.9nm,0.7s						

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*ISCJB **06** 06:53:11.8±0.4, 45°.81N±0°.03×150°.68E±0°.02, h111^{km}±3^{km}, mb4.8/205, Error ellipse: s-maj=4.7km s-min=2.7km az=169.8*

*MOS **06** 06:53:12.9±0.9, 45°.87N×150°.68E, h121^{km}, mb4.9/84,*

Error ellipse: s-maj=6.4km s-min=4.2km az=103.5
MOS Felt (II-III) at Kuril'sk.
*SKHL **06** 06:53:13.1±0.7, 45.°67N×150.°84E, h118km±8km, mb5.3/12, msh6.1/4*
SKHL Felt (II) at Gornyi (268 km). Felt (II-III) at Kuril'sk (237 km), Goryachie Kluchi (252 km), Reidovo (225 km).
*IDC **06** 06:53:13.7±1.8, 45.°98N×150.°55E, h112km±16km, mb4.3/28, mb1 4.5/35, mb1mx4.4/43, mbtmp4.7/35, Error ellipse: s-maj=13.9km s-min=8.4km az=154.0*
*JMA **06** 06:53:16.8±0.6, 45.°13N×150.°55E, h130km, M4.8*
JMA Felt I J1.
*BJI **06** 06:53:17.2±0.0, 46.°27N×150.°34E, h140km, mb4.8/42, mB5.0/28*
*NEIC **06** 06:53:19.4±1.7, 46.°05N×150.°52E, h161km±5km, mb4.8/339, Error ellipse: s-maj=17.2km s-min=12.3km az=146.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
ISC 06 06:53:13.1±0.6**, 45.°81N**±0.°05×**150.°70E**±0.°04**, h112**km±5km**, n1015, σ1.°18**/1056**, mb4.9**/208**, 65C-22D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.08	255	d iPN	Pn	06 53 48.6	+1.6
KUR				iS	Sn	06 54 15.2	+2.2
KUR				pmax	pmax		
	comp=Z,5µm,0.3s						
KUR				pmax	pmax		
	comp=N,2µm,0.2s						
KUR				pmax	pmax		
	comp=E,746nm,0.2s						
KUR				smax	smax		
	comp=N,38µm,0.4s						
KUR				smax	smax		
	comp=E,42µm,0.5s						
KUR	Kuril'sk	2.08	255	iP	Pn	06 53 48.7	+1.7
KUR				AMB	AMB	06 53 49.2	
	comp=E,240nm,0.3s						
KUR				AMB	AMB	06 53 49.2	
	comp=E,600nm,0.3s						
KUR				AMB	AMB	06 53 49.2	
	comp=E,640nm,0.3s						
KUR				iS	Sn	06 54 15.4	+2.4
KUR				A	A	06 54 16.2	
	comp=E,500nm,0.5s						
KUR				A	A	06 54 16.2	
	comp=E,2µm,0.5s						
YUK	Yuzh-Kuril'sk	3.87	244	iPN	Pn	06 54 12.9	+2.3
YUK				iS	Sn	06 54 56.3	+1.1
YUK				pmax	pmax		
	comp=E,522nm,0.2s						
YUK				pmax	pmax		
	comp=Z,3µm,0.2s						
YUK				pmax	pmax		
	comp=N,472nm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.2s						
YUK				smax	smax		
	comp=E,5µm,0.3s						
YUK	Yuzh-Kuril'sk	3.87	244	iP	Pn	06 54 12.4	+1.8
YUK				AMB	AMB	06 54 13.0	
	comp=E,470nm,0.2s						
YUK				AMB	AMB	06 54 13.0	
	comp=E,520nm,0.2s						
YUK				AMB	AMB	06 54 13.0	
	comp=E,270nm,0.2s						
YUK				iS	Sn	06 54 56.3	+1.1
YUK				A	A	06 55 04.2	
	comp=E,180nm,0.2s						
YUK				A	A	06 55 04.2	
	comp=E,550nm,0.2s						
GRPR	Tuman	3.95	244	d iPN	Pn	06 54 12.6	+1.0
GRPR				iS	Sn	06 54 56.9	-0.1
GRPR				pmax	pmax		
	comp=Z,1µm,0.4s						
GRPR				pmax	pmax		
	comp=N,716nm,0.2s						
GRPR				pmax	pmax		
	comp=E,864nm,0.5s						
GRPR				smax	smax		
	comp=N,6µm,0.4s						
GRPR				smax	smax		
	comp=E,5µm,0.4s						
GRPR	Tuman	3.95	244	iP	Pn	06 54 12.6	+1.0
GRPR				AMB	AMB	06 54 15.0	
	comp=E,720nm,0.5s						
GRPR				AMB	AMB	06 54 15.0	
	comp=E,860nm,0.5s						
GRPR				AMB	AMB	06 54 15.0	
	comp=E,1µm,0.5s						
GRPR				iS	Sn	06 54 56.0	-1.0
GRPR				A	A	06 55 04.0	
	comp=E,590nm,0.3s						
GRPR				A	A	06 55 04.0	
	comp=E,450nm,0.3s						
NEM2	Nemuro 2	4.30	237	P	Pn	06 54 15.3	-1.1
NEM2				eS	Sn	06 55 00.8	-4.8
JRA	Rausu	4.39	247	P	Pn	06 54 18.6	+1.1
JNK	Nakash	4.81	245	P	Pn	06 54 23.8	+0.5
JTKR	Abashiri--Toko	5.17	252	P	Pn	06 54 29.2	+1.2
JMP	Maruseppu	5.52	254	P	Pn	06 54 34.0	+1.1
JAR	Ashorobuto	5.55	246	P	Pn	06 54 33.8	+0.5
YSS	Yuzh-Sakhalins	5.62	285	ePn	Pn	06 54 36.4	+2.3
YSS	Yuzh-Sakhalins	5.62	285	κ ePN	Pn	06 54 36.7	+2.6
YSS				eS	Sn	06 55 41.5	+4.2
YSS				pmax	pmax		
	comp=Z,420nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
YSS	Yuzh-Sakhalins	5.62	285	eP	Pn	06 54 37.0	+2.9
YSS				AMB	AMB	06 54 37.9	
	comp=Z,230nm,0.6s						
YSS				eS	Sn	06 55 39.5	+2.2
JOB	Onbets	5.72	242	P	Pn	06 54 35.0	-0.5
JOB				eS	Sn	06 55 35.8	-4.0
JSE	Soyaes	5.78	264	P	Pn	06 54 38.7	+2.3
JKK2	Kamakawa 2	5.98	254	P	Pn	06 54 40.6	+1.5
JKA	Kamikawa-asahi	5.99	256	eP	Pn	06 54 41.1	+1.9
ASAJ	Asahikawa	6.00	256	P	Pn	06 54 41.1	+1.8
	comp=Z,23nm,0.3s,baz=90,slow=15,SNR=123						
ASAJ				S	Sn	06 55 45.6	-1.0
	baz=270,slow=14,SNR=1.5						
ASAJ	Asahikawa	6.00	256	P	Pn	06 54 41.2	+1.9
SKR	Severo-Kuril's	6.07	35	ePN	Pn	06 54 40.0	-0.2
SKR				eS	Sn	06 55 45.3	-2.9
SKR				pmax	pmax		
	comp=Z,332nm,0.4s						
SKR				smax	smax		
	comp=E,265nm,0.4s						
SKR				smax	smax		
	comp=N,310nm,0.5s						
SKR	Severo-Kuril's	6.07	35	eP	Pn	06 54 40.0	-0.2
SKR				AMB	AMB	06 54 40.8	
	comp=N,110nm,0.4s						
SKR				AMB	AMB	06 54 40.8	
	comp=N,80nm,0.4s						
SKR				AMB	AMB	06 54 40.8	
	comp=N,240nm,0.4s						
SKR				eS	Sn	06 55 45.8	-2.4
SKR				A	A	06 55 47.4	
	comp=N,180nm,0.4s						
SKR				A	A	06 55 47.4	
	comp=N,270nm,0.4s						
JCH	Churui	6.17	241	P	Pn	06 54 40.6	-1.0
JCH				eS	Sn	06 55 45.5	-5.2
JWK2	Keihoku	6.20	269	P	Pn	06 54 45.7	+3.7
JAB	Ashibetsu	6.47	252	P	Pn	06 54 47.7	+2.0
JEM	Erimo	6.64	238	eS	Sn	06 55 55.8	-6.3
ERM	Erimo	6.64	238	ePn	Pn	06 54 48.1	+0.2
ERM	Erimo	6.64	238	c iPN	Pn	06 54 47.9	-0.1
JBT2	Biratori 2	6.71	246	P	Pn	06 54 48.9	0.0
JBT2				eS	Sn	06 55 59.3	-4.5
UGL	Uglegorsk	6.71	302	ePN	Pn	06 54 45.6	-3.3
UGL				pmax	pmax		
	comp=Z,154nm,1.2s						
UGL	Uglegorsk	6.71	302	eP	Pn	06 54 51.3	+2.4
UGL				AMB	AMB	06 54 52.4	
	comp=Z,140nm,0.8s						
UGL				eS	Sn	06 56 04.2	+0.5
UGL				A	A	06 56 09.9	
	comp=Z,80nm,0.7s						
UGL				A	A	06 56 09.9	
	comp=Z,110nm,0.7s						
JNBK	Urakawa-nobuka	6.73	241	P	Pn	06 54 47.7	-1.5
JNBK				eS	Sn	06 55 58.2	-6.1
JEW	Eniwo	7.27	249	eS	Sn	06 56 14.0	-3.4
TYV	Tymovskoe	7.37	316	ePN	Pn	06 55 00.7	+2.9
TYV				pmax	pmax		
	comp=Z,24nm,0.7s						
TYV	Tymovskoe	7.37	316	eP	Pn	06 55 00.7	+2.9
TYV				AMB	AMB	06 55 01.7	
	comp=Z,20nm,0.7s						
TYV				eS	Sn	06 56 23.3	+3.5
TYV				A	A	06 56 29.4	
	comp=Z,30nm,0.8s						
JNB	Noboribetsu	7.71	248	P	Pn	06 55 01.5	-1.0
JNB				eS	Sn	06 56 24.7	-3.5
JKB	Kayabe	8.01	244	P	Pn	06 55 04.6	-2.0
JKB				eS	Sn	06 56 28.2	-7.3
JSH	Shimam	8.28	251	P	Pn	06 55 10.3	+0.1
JYM2	Yakumo 2	8.31	247	P	Pn	06 55 09.4	-1.3
JYM2				eS	Sn	06 56 38.6	-4.3
JSR	Shiriuchi	8.59	244	P	Pn	06 55 12.5	-2.0
JSR				eS	Sn	06 56 40.9	-8.7
PEA0B	Petropavlovsk-	8.61	29	ePn	Pn	06 55 13.4	-1.2
PETK	Petropavlovsk-	8.61	29	P	Pn	06 55 14.0	-0.6
	comp=Z,6.5nm,0.3s,baz=210,slow=11,SNR=55						
PEA1	Petropavlovsk-	8.61	29	ePn	Pn	06 55 14.0	-0.6
JTM	Tenmabayashi	8.63	238	P	Pn	06 55 12.1	-2.9
JTM				eS	Sn	06 56 41.0	-10
JANG	Nango	8.64	234	P	Pn	06 55 11.6	-3.5
JANG				eS	Sn	06 56 40.3	-10
JTH	Tanohata	8.74	231	P	Pn	06 55 12.9	-3.7
JTH				eS	Sn	06 56 42.5	-11
PET	Petropavlovsk	8.88	33	ePn	Pn	06 55 15.8	-2.5
PET	Petropavlovsk	8.88	33	ePN	Pn	06 55 15.8	-2.5
PET	Petropavlovsk	8.88	33	eP	Pn	06 55 16.9	-1.4
PET				AMB	AMB	06 55 18.4	
	comp=Z,10.0nm,0.4s						
PET				AMB	AMB	06 55 18.4	
	comp=Z,20nm,0.4s						
PET				eS	Sn	06 56 52.0	-4.5
PET				A	A	06 56 55.4	
	comp=Z,40nm,0.4s						
JOSM	Okushiri--Mats	8.91	249	P	Pn	06 55 17.5	-1.3
OKH	Okha	9.24	330	eP	Pn	06 55 26.2	+3.1
OKH				eS	Sn	06 57 07.6	+2.6
OFUJ	Ofunato	9.47	228	P	Pn	06 55 23.1	-3.3
OFUJ				eS	Sn	06 57 01.5	-9.5
JRG	Rokugo	9.80	233	P	Pn	06 55 28.2	-2.7
JRG				eS	Sn	06 57 11.1	-7.9
NKL	Nikolayevsk	9.82	322	eP	Pn	06 55 34.0	+3.1
TEY	Ternei	9.95	271	⇑ ePN	Pn	06 55 34.2	+1.4
TEY				pmax	pmax		
	comp=E,50nm,0.8s						
TEY				pmax	pmax		
	comp=Z,50nm,0.7s						
TEY				pmax	pmax		
	comp=Z,70nm,0.7s						
TEY	Ternei	9.95	271	eP	Pn	06 55 34.5	+1.7
TEY				AMB	AMB	06 55 35.3	
	comp=Z,40nm,0.9s						
JIO	Ouri	10.11	227	P	Pn	06 55 31.0	-4.0
JIO				eS	Sn	06 57 16.4	-10
GRNR	Gornyy	10.73	303	ePN	Pn	06 55 38.0	-5.3
MJAR	Matsushiro Arr	13.19	230	P	Pn	06 56 14.0	-2.0
	comp=Z,0.2nm,0.3s,baz=25,slow=13,SNR=36						
MJAR				S	Sn	06 58 31.5	-10
	comp=Z,0.2nm,0.3s,baz=52,slow=34,SNR=3.7						
MJB9	Matsu-Tunnel	13.19	230	ePn	Pn	06 56 13.5	-2.4
MAJO	Matsushiro	13.19	230	ePn	Pn	06 56 14.4	-1.6
MAJO				eSn	Sn	06 58 31.5	-10
MAJO	Matsushiro	13.19	230	iPN	Pn	06 56 13.9	-2.0
MAT	Matsushiro	13.19	230	P	Pn	06 56 13.8	-2.1
MAT				eS	Sn	06 58 31.2	-10
KLR	Kul'dur	13.26	292	P	Pn	06 56 14.7	-2.0
	comp=Z,0.3nm,0.3s,baz=100,slow=14,SNR=17						
KLR	Kul'dur	13.26	292	d iPN	Pn	06 56 17.5	+0.8
KLR	Kul'dur	13.26	292	eP	Pn	06 56 17.5	+0.8
USRK	Ussuriysk Ar.	13.34	270	P	Pn	06 56 17.5	-0.4
	comp=Z,2.0nm,0.3s,baz=87,slow=11,SNR=32						
EKMR	Ekimchan	13.62	309	eP	Pn	06 56 22.5	+1.0
EKMR				AMB	AMB	06 56 28.2	
	comp=Z,9.0nm,0.8s						
VLA	Vladivostok	13.71	265	c eP	Pn	06 56 21.9	-0.7
VLA	Vladivostok	13.71	265	eP	Pn	06 56 21.9	-0.7
MA2	Magadan	13.79	0	P	Pn	06 56 21.1	-2.5
	comp=Z,0.7nm,0.3s,baz=170,slow=12,SNR=3.1						
MA2	Magadan	13.79	0	ePn	Pn	06 56 23.9	+0.3
MA2	Magadan	13.79	0	eP	Pn	06 56 23.9	+0.3
MA2	Magadan	13.79	0	eP	Pn	06 56 23.9	+0.3
MDJ	Mudanjiang	14.93	273	ePn	Pn	06 56 38.5	+0.3
MDJ	Mudanjiang	14.93	273	P	Pn	06 56 38.7	+0.6
MDJ				pmax	pmax		
	comp=Z,23nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,390nm,11.8s						
BMKR	Bomnak	16.52	311	eP	P	06 56 58.0	-0.5
BMKR				AMB	AMB	06 57 01.7	
	comp=Z,10.0nm,0.8s						
SMY	Shemya	16.72	57	eP	P	06 57 03.6	+2.9
	comp=Z,69nm,1.5s						
SMY	Shemya	16.72	57	eP	P	06 57 03.6	+2.9
SMY				pmax	pmax		
	comp=Z,69nm,1.5s						
ZEA	Zeya	17.04	306	eP	P	06 57 04.4	+0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	Zeya	17.04	306	eP	P	06 57 04.2	-0.1
ZEA				AMB	AMB	06 57 05.4	
	comp=Z,100nm,0.8s						
SEY	Seymchan	17.19	3	P	P	06 57 04.2	-1.5
	comp=Z,1.3nm,0.3s,baz=174,slow=8.8,SNR=20						
KROS	Kirovskiy	17.43	308	eP	Pn	06 57 08.0	-0.9
KROS				AMB	AMB	06 57 11.5	
	comp=Z,20nm,0.9s						
CN2	Changchun	18.01	273	eP	P	06 57 14.6	-0.4
CN2				esP	sP	06 57 54.6	+6.0
CN2				eS	S	07 00 25.6	-10
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
CN2				LR	LR		
	comp=Z,500nm,14.0s						
CN2				LR	LR		
	comp=Z,320nm,14.0s						
CN2				LR	LR		
	comp=Z,480nm,15.0s						
KSRS	Korea Array	18.92	252	P	P	06 57 25.6	+0.7
	comp=Z,1.7nm,0.3s,baz=59,slow=10.0,SNR=35						
KS15	Wonju Array Si	18.95	252	eP	Pn	06 57 27.5	+0.3
	comp=Z,11nm,0.8s						
JNU	Nakatsue	19.80	237	P	Pn	06 57 39.4	+2.2
	comp=Z,0.8nm,0.3s,baz=195,slow=8.1,SNR=4.1						
JNU	Nakatsue	19.80	237	eP	Pn	06 57 40.4	+3.2
	comp=Z,42nm,1.5s						
TJN	Taejon	19.89	250	⇑ eP	P	06 57 36.2	+0.6
YAK	Yakutsk	20.27	331	eP	P	06 57 39.5	+0.1
	comp=Z,111nm,0.8s						
YAK	Yakutsk	20.27	331	eP	P	06 57 36.7	-2.6
YAK				eS	S	07 01 17.0	-3.2
YAK				e*SS	sS	07 01 51.4	-2.8
YAK	Yakutsk	20.27	331	eP	P	06 57 39.4	+0.1
ADK	Adak	22.18	62	eP	P	06 58 03.0	+3.2
	comp=Z,36nm,1.0s						
ADK	Adak	22.18	62	eP	P	06 58 03.0	+3.2
ADK				pmax	pmax		
	comp=Z,36nm,1.0s						
BILL	Bilibino	23.70	15	eP	P	06 58 13.1	-1.2
	comp=Z,20nm,1.1s						
BILL	Bilibino	23.70	15	⇓ eP	P	06 58 13.2	-1.1
BILL				e		06 58 45.3	
BILL				e		07 01 56.1	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,394nm,18.0s						
BILL	Bilibino	23.70	15	eP	P	06 58 14.6	+0.3
BJI	Beijing	25.80	269	eP	P	06 58 35.2	+1.7
BJI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BJT	Baijiatuau	25.81	269	eP	P	06 58 35.5	+1.9
	comp=Z,15nm,0.8s						
BJT	Baijiatuau	25.81	269	eP	P	06 58 35.5	+1.9
BJT				pmax	pmax		
	comp=Z,15nm,0.8s						
GAMB	Gambell	27.56	36	eP	P	06 58 50.0	+0.9
	comp=Z,23nm,1.4s						
TIXI	Tiksi	27.93	345	P	P	06 58 49.8	-2.5
	comp=Z,13nm,0.4s,baz=139,slow=7.6,SNR=43						
TIXI				PcP	PcP	07 02 04.5	-0.1
	comp=Z,6.2nm,1.1s,baz=104,slow=3.1,SNR=3.8						
TIXI	Tiksi	27.93	345	eP	P	06 58 49.9	-2.3
	comp=Z,15nm,0.5s						
TIXI				ePcP	PcP	07 02 05.2	+0.7
TIXI	Tiksi	27.93	345	iP	P	06 58 50.0	-2.3
NJ2	Nanjing	28.12	252	eP	P	06 58 56.6	+2.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	28.69	274	P	P	06 59 02.3	+2.8
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,5.4s						
H11N2	WAKE ISLAND Hy	29.24	147	T	T	07 30 17.3	
	baz=335,slow=74						
H11N1	WAKE ISLAND Hy	29.25	147	T	T	07 30 17.3	
	baz=335						
H11N3	WAKE ISLAND Hy	29.25	147	T	T	07 30 16.2	
	baz=335,slow=74						
ULN	Ulaanbaatar	29.64	290	⇓ eP	P	06 59 09.1	+1.2
ULN				pmax	pmax		
	comp=Z,21nm,5.4s						
ULN	Ulaanbaatar	29.64	290	eP	P	06 59 09.1	+1.2
ANA2	Anatahan	29.68	190	eP	P	06 59 17.6	+9.3
	comp=Z,89nm,0.4s						
SONM	Songino Array	30.08	290	P	P	06 59 11.0	-0.7
	comp=Z,1.7nm,0.5s,baz=69,slow=7.9,SNR=7.0						
H11S1	WAKE ISLAND Hy	30.29	149	T	T	07 31 29.0	
	baz=337,slow=76,SNR=177						
H11S3	WAKE ISLAND Hy	30.29	149	T	T	07 31 29.6	
	baz=337,slow=76,SNR=134						
H11S2	WAKE ISLAND Hy	30.30	149	T	T	07 31 29.0	
	baz=337,slow=76,SNR=192						
TLY	Talaya	31.14	298	eP	P	06 59 20.2	-0.6
	comp=Z,1.8nm,0.6s						
TLY	Talaya	31.14	298	d eP	P	06 59 19.8	-1.1
WHN	Wuhan	32.07	254	eP	P	06 59 33.4	+4.2
RDOG	Red Dog Mine	32.48	30	eP	P	06 59 32.8	+0.4
	comp=Z,23nm,0.7s						
TTA	Tatalina	34.23	41	eP	P	06 59 48.7	+1.0
	comp=Z,12nm,0.8s						
TTA				ePcP	PcP	07 02 22.8	+1.2
TTA	Tatalina	34.23	41	eP	P	06 59 48.7	+1.0
TTA				e		07 02 22.8	
TTA				pmax	pmax		
	comp=Z,12nm,0.8s						
SVW2	Sparrevohn	34.33	44	eP	P	06 59 50.0	+1.4
	comp=Z,8.1nm,1.0s						
SVW2				ePcP	PcP	07 02 23.4	+1.5
OHAK	Old Harbor	35.67	51	eP	P	07 00 00.1	0.0
	comp=Z,15nm,0.9s						
KDAK	Kodiak Island	35.99	50	P	P	07 00 02.6	-0.2
	comp=Z,16nm,0.8s,baz=304,slow=2.9,SNR=21						
KDAK	Kodiak Island	35.99	50	eP	P	07 00 02.9	+0.1
	comp=Z,22nm,0.9s						
KDAK				ePcP	PcP	07 02 27.5	+0.7
KDAK	Kodiak Island	35.99	50	iP	P	07 00 02.3	-0.5
LZH	Lanzhou	36.24	271	eP	P	07 00 06.6	+1.2
LZH				pP	sP	07 00 40.3	-3.0
LZH				sP	pP	07 00 53.8	+23
LZH				PP	PnPn	07 01 34.8	+4.1
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,240nm,4.8s						
CNPM	China Poot	36.54	47	eP	P	07 00 07.8	+0.3
MLY	Manley	36.68	37	eP	P	07 00 10.2	+1.6
	comp=Z,9.9nm,0.8s						
MLY				ePcP	PcP	07 02 29.5	+0.7
SEW	Seward	37.39	46	eP	P	07 00 14.5	-0.1
	comp=Z,20nm,1.1s						
TOLK	Toolik Lake Re	37.42	31	P	P	07 00 15.9	+1.0
	baz=264						
GTA	Gaotai	37.46	279	eP	P	07 00 17.1	+1.4
GTA				pmax	pmax		
	comp=Z,24nm,0.8s						
TCOL	CIGO, UAF Yank	37.90	38	P	P	07 00 19.7	+0.8
	baz=271						
COLA	College	37.91	38	eP	P	07 00 20.6	+1.7
	comp=Z,26nm,0.8s						
COLA	College	37.91	38	c iP	P	07 00 19.7	+0.8
COLA				i *PP	pwP	07 00 45.7	-0.9
COLA				pmax	pmax		
	comp=Z,20nm,1.0s						
POKR	Poker Plat Res	38.08	37	P	P	07 00 21.5	+1.1
	baz=271						
HDA	Harding Lake	38.30	38	P	P	07 00 22.5	+0.2
	baz=272						
ILAR	Eielson Array	38.32	38	P	P	07 00 22.5	+0.1
	comp=Z,6.0nm,0.7s,baz=268,slow=7.4,SNR=54						
GLI	Glacier Island	38.47	44	eP	P	07 00 24.5	+0.8
	comp=Z,19nm,0.8s						
CD2	Chengdu	39.13	264	P	P	07 00 30.1	+0.5
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
BALM	Baldy	40.75	43	eP	P	07 00 43.8	+1.1
	comp=Z,18nm,0.9s						
BALM	Baldy	40.75	43	eP	P	07 00 43.8	+1.1
BALM				pmax	pmax		
	comp=Z,18nm,0.9s						
EGAK	Eagle	40.77	38	eP	P	07 00 43.1	+0.4
	comp=Z,35nm,1.4s						
DGZ	Jazzator, Alta	41.60	299	⇓ eP	P	07 00 49.2	-0.7
DAWY	Dawson	41.62	38	eP	P	07 00 50.5	+0.7
	comp=Z,4.4nm,0.6s						
ZAA1	Zalesovo Array	41.81	306	eP	P	07 00 49.4	-1.9
ZAA1				ePcP	PcP	07 02 45.5	+0.3
ZALV	Zalesovo Beam	41.81	306	P	P	07 00 49.4	-1.9
	comp=Z,2.2nm,0.6s,baz=46,slow=6.4,SNR=3.4						
ZALV				PcP	PcP	07 02 45.5	+0.3
	comp=Z,6.7nm,0.7s,baz=67,slow=3.1,SNR=17						
PCA	Pinnacle	41.94	44	eP	P	07 00 53.6	+1.2
	comp=Z,34nm,1.2s						
EPYK	Eagle Plains	42.40	35	eP	P	07 00 57.5	+1.5
	comp=Z,39nm,1.0s						
EPYK	Eagle Plains	42.40	35	P	P	07 00 57.1	+1.1
	baz=279						
HYT	Haines Junctio	43.11	43	eP	P	07 01 03.8	+1.8
	comp=Z,36nm,1.0s						
INK	Inuvik	43.34	32	P	P	07 01 04.1	+0.6
	comp=Z,12nm,0.5s,baz=277,slow=6.1,SNR=88						
INK	Inuvik	43.34	32	eP	P	07 01 04.8	+1.4
	comp=Z,31nm,1.1s						
INK				ePP	PcP	07 02 50.0	0.0
INK	Inuvik	43.34	32	eP	P	07 01 04.8	+1.4
INK				e		07 02 50.0	
INK				pmax	pmax		
	comp=Z,31nm,1.1s						
KMI	Kunming	43.42	258	P	P	07 01 08.9	+3.9
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ	Urumqi	43.70	291	eP	P	07 01 08.7	+1.8
WMQ				sP	sP	07 01 50.6	+5.9
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,6.1s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,2µm,29.7s						
WMQ				LR	LR		
	comp=Z,240nm,19.9s						
MK31	Makanchi Array	45.89	297	eP	P	07 01 23.5	-0.5
	comp=Z,4.3nm,0.9s						
MK31				ePcP	PcP	07 03 00.0	+0.7
MK31	Makanchi Array	45.89	297	eP	P	07 01 23.5	-0.5
MK31				e		07 03 00.0	
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK32	Makanchi Array	45.89	297	eP	P	07 01 23.1	-1.0
MK32				ePcP	PcP	07 02 59.5	+0.3
MKAR	Makanchi Array	45.89	297	P	P	07 01 23.1	-1.0
	comp=Z,3.5nm,0.6s,baz=71,slow=7.4,SNR=24						
MKAR				PcP	PcP	07 02 59.5	+0.3
	comp=Z,3.6nm,0.6s,baz=198,slow=0.8,SNR=8.1						
MAKZ	Makanchi	46.07	297	eP	P	07 01 24.8	-0.7
	comp=Z,9.6nm,1.4s						
MAKZ	Makanchi	46.07	297	eP	P	07 01 24.8	-0.7
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KURK	Kurchatov	46.49	303	eP	P	07 01 26.9	-1.8
	comp=Z,11nm,0.8s						
KURK	Kurchatov	46.49	303	c iP	P	07 01 26.9	-1.8

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KURK                                pmax     pmax
      comp=Z,11nm,0.8s
KURK  Kurchatov          46.49 303  eP       P        07 01 26.9 -1.8
DLBC  Dease Lake         47.44  45   P       P        07 01 38.2 +2.1
      comp=Z,3.5nm,0.6s,baz=243,slow=3.5,SNR=7.2
DLBC  Dease Lake         47.44  45  eP       P        07 01 38.4 +2.3
      comp=Z,4.8nm,0.8s
DIB   Dawson Inlet,      48.18  52  eP       P        07 01 43.3 +1.6
      comp=Z,18nm,1.1s
CMAR  Chiang Mai Arr     50.52 255   P       P        07 02 01.1 +1.1
      comp=Z,1.3nm,0.3s,baz=49,slow=9.7,SNR=4.1
SHL   Shillong           50.67 267  eP       P        07 02 00.8 -0.4
      comp=Z,9.8nm,0.8s
SHL   Shillong           50.67 267  eP       P        07 02 00.8 -0.4
SHL                                  pmax     pmax
      comp=Z,10.0nm,0.8s
OTUK  Ortayu             51.26 303   P       P        07 02 04.8 -0.3
OTUK                                 pmax     pmax
      comp=Z,5.0nm,1.0s
KDJ   Kajisay            51.30 294  eP       P        07 02 06.1 +0.3
      comp=Z,12nm,0.6s
KDJ   Kajisay            51.30 294  eP       P        07 02 06.1 +0.3
KDJ                                  pmax     pmax
      comp=Z,12nm,0.6s
RES   Resolute Bay       52.25  18   P       P        07 02 12.2 +0.1
      comp=Z,32nm,0.9s,baz=297,slow=4.3,SNR=36
RES   Resolute Bay       52.25  18  eP       P        07 02 12.3 +0.3
      comp=Z,27nm,0.8s
RES   Resolute Bay       52.25  18  eP       P        07 02 12.4 +0.3
RES                                  pmax     pmax
      comp=Z,27nm,0.8s
YKA   Yellowknife Ar     52.67  36   P       P        07 02 15.9 +0.6
      comp=Z,6.0nm,0.6s,baz=298,slow=6.8,SNR=36
YKA                                  PcP      PcP     07 03 23.8 +0.2
      comp=Z,1.5nm,0.7s,baz=295,slow=3.8,SNR=6.0
YKB5  Yellowknife Ar     52.67  36  eP       P        07 02 15.9 +0.6
YKB5                                ePcP     PcP      07 03 23.8 +0.2
AAK   Ala-Archa          52.74 296  eP       P        07 02 16.9 +0.5
      comp=Z,8.1nm,0.9s
AAK   Ala-Archa          52.74 296d iP       P        07 02 17.1 +0.7
AAK                                  pmax     pmax
      comp=Z,9.0nm,0.9s
AAK   Ala-Archa          52.74 296  eP       P        07 02 17.1 +0.7
KBS   Kingsbay           53.17 351  eP       P        07 02 17.7 -1.1
      comp=Z,22nm,1.5s
KBS   Kingsbay           53.17 351  eP       P        07 02 17.7 -1.1
KBS                                  pmax     pmax
      comp=Z,22nm,1.5s
JIRN  Jiri               53.34 274  eP       P        07 02 22.3 +1.0
      comp=Z,48nm,0.2s
SVE   Sverdlovsk         53.38 317⇑iP       P        07 02 19.8 -0.8
SVE                                  pmax     pmax
      comp=Z,28nm,0.9s
GUN   Gumba              53.41 274  eP       P        07 02 23.1 +1.4
      comp=Z,29nm,0.3s
KSH   Kashi              53.46 292   P       P        07 02 26.1 +4.5
KSH                                  pP       pP      07 02 58.7  +10
KSH                                  sP       sP      07 03 15.7  +15
KSH                                  PcP      PcP     07 03 30.0 +2.7
KSH                                  S        S       07 09 45.3 -0.3
KSH                                  ScS      ScS     07 11 57.0 -3.1
KSH                                  pmax     pmax
      comp=Z,16nm,1.1s
KSH                                  pmax     pmax
      comp=Z,170nm,6.3s
KSH                                  LR       LR
      comp=Z,330nm,15.2s
KSH                                  LR       LR
      comp=Z,280nm,14.9s
KKN   Kakani             53.90 274  eP       P        07 02 26.2 +1.1
      comp=Z,21nm,0.5s
PKI   Pulchoki           53.95 274  eP       P        07 02 26.1 +0.5
      comp=Z,14nm,0.4s
PKIN  Phulchoki          53.95 274  eP       P        07 02 26.1 +0.5
      comp=Z,14nm,0.4s
DMN   Daman              54.13 274  eP       P        07 02 27.7 +0.8
      comp=Z,19nm,0.5s
GKN   Gorkha             54.22 275  eP       P        07 02 28.4 +1.0
      comp=Z,34nm,0.3s
ARU   Arti               54.57 317  eP       P        07 02 28.0 -1.3
      comp=Z,23nm,0.9s
ARU   Arti               54.57 317c iP       P        07 02 27.6 -1.7
ARU                                  pmax     pmax
      comp=Z,32nm,1.1s
DANN  Dangsing           54.62 276  eP       P        07 02 31.6 +1.2
      comp=Z,42nm,0.5s
KKAR  Karatay Array      54.98 298  eP       P        07 02 32.8 +0.3
      comp=Z,6.4nm,0.7s
KKAR  Karatay Array      54.98 298  eP       P        07 02 32.8 +0.3
KKAR                                 pmax     pmax
      comp=Z,6.0nm,0.7s
KOLN  Koldanda           55.08 275  eP       P        07 02 34.5 +0.8
      comp=Z,14nm,0.5s
PYUN  Piuthan            55.30 276  eP       P        07 02 36.4 +1.1
      comp=Z,8.3nm,0.3s
PGC   Sidney             55.35  54  eP       P        07 02 35.8 +0.8
      comp=Z,36nm,1.5s
D03D  Eldon              56.16  54   P       P        07 02 41.9 +1.1
      baz=303,SNR=7.4
B05A  Bryant             56.32  53   P       P        07 02 42.9 +0.9
      baz=303
E03A  Lebam              56.42  56  eP       P        07 02 44.1 +1.5
      comp=Z,44nm,1.4s
D04E  Lakebay            56.53  55   P       P        07 02 44.8 +1.4
      baz=304
E04D  Cinebar            56.99  55   P       P        07 02 48.1 +1.4
      baz=304
PRGR  Permogore          57.24 327  eP       P        07 02 45.3 -2.9
PRGR                                 pmax     pmax
      comp=Z,20nm,0.6s
G03D  McMinnville, O     57.34  57   P       P        07 02 50.7 +1.6
      baz=304
DAG   Danmarks Havn      57.51 357⇑iP       P        07 02 49.2 -0.7
DAG                                  pmax     pmax
      comp=Z,6.0nm,0.7s
DAG   Danmarks Havn      57.51 357⇑iP       P        07 02 49.2 -0.7
      comp=Z,8.4nm,0.7s
I02D  Swisshome          57.61  58   P       P        07 02 52.9 +1.8
      baz=305
COR   Corvallis          57.66  58  eP       P        07 02 53.5 +2.0
      comp=Z,121nm,1.5s
COR   Corvallis          57.66  58  eP       P        07 02 53.5 +2.0
COR                                  pmax     pmax
      comp=Z,121nm,1.5s
ABKAR Akbulak array      57.73 309  eP       P        07 02 51.3 -0.6
      comp=Z,8.4nm,1.0s
H04D  Lebanon            58.03  57   P       P        07 02 55.8 +1.7
      baz=305
I03D  Drain, OR          58.14  58   P       P        07 02 56.8 +2.0
      baz=305
ARA0  ARCESS Array S     58.18 340  eP       P        07 02 52.9 -1.9
ARA0                                ePcP     PcP      07 03 44.9  0.0
ARCES ARCESS Array B     58.18 340   P       P        07 02 52.9 -1.9
      comp=Z,2.0nm,0.6s,baz=24,slow=6.9,SNR=9.9
ARCES                                PcP      PcP     07 03 44.9  0.0
      comp=Z,4.3nm,0.7s,baz=37,slow=6.2,SNR=7.7
KULLO Kullorsuaq         58.45   8  i P      P        07 02 55.4 -1.1
KULLO                                pmax     pmax
      comp=Z,28nm,0.7s
KULLO Kullorsuaq         58.45   8  i P      P        07 02 55.4 -1.1
      comp=Z,28nm,0.7s
G05D  Wamic, OR          58.45  56   P       P        07 02 58.6 +1.6
      baz=305
K02D  Willamette Mer     58.52  60   P       P        07 02 59.2 +1.6
      baz=306
NIL   Nilore             58.60 287  eP       P        07 02 59.1 +0.8
      comp=Z,32nm,0.9s
NIL   Nilore             58.60 287  eP       P        07 02 59.1 +0.8
NIL                                  pmax     pmax
      comp=Z,31nm,0.9s
I04A  Tendick Farm,      58.64  58   P       P        07 02 59.6 +1.2
      baz=306
HAWA  Hanford            58.81  54  eP       P        07 03 00.9 +1.5
      comp=Z,14nm,1.3s
G06A  Carlson Farm,      58.85  56  eP       P        07 03 01.1 +1.3
      comp=Z,17nm,1.4s
I05D  Terrebonne, OR     58.96  57   P       P        07 03 01.9 +1.3
      baz=306
HUMO  Hull Mountain      59.00  59  eP       P        07 03 02.5 +1.6
      comp=Z,4.4nm,0.9s
NEW   Newport            59.07  51   P       P        07 03 01.6 +0.3
      comp=Z,7.2nm,0.8s,baz=305,slow=6.7,SNR=14
NEW   Newport            59.07  51   P       P        07 03 01.8 +0.5
      baz=306,SNR=10
KTK1  Kautokeino         59.11 341  eP       P        07 02 59.9 -1.3
J04D  Umpqua Nationa     59.14  58   P       P        07 03 03.5 +1.4
      baz=306
PINE  Pine Mountain      59.51  57  eP       P        07 03 06.5 +2.0
      comp=Z,17nm,0.8s
L04D  Klamath Falls      59.62  59   P       P        07 03 06.7 +1.4
      baz=306
J05D  Fort Rock, OR      59.63  58   P       P        07 03 06.8 +1.4
      baz=306,SNR=9.1
K04D  Chiloquin, OR      59.71  59   P       P        07 03 07.2 +1.3
      baz=306
G08A  Pilot Rock         59.78  55  eP       P        07 03 07.6 +1.3
      comp=Z,6.9nm,0.9s
N02D  Trinity Center     60.11  61   P       P        07 03 10.1 +1.6
      baz=307
M04C  Macdoel            60.16  59   P       P        07 03 10.5 +1.5
      baz=307
K05A  Summer Lake        60.17  58  eP       P        07 03 10.9 +1.8
      comp=Z,18nm,0.8s
I07A  Izee               60.18  56  eP       P        07 03 10.5 +1.4
      comp=Z,6.3nm,1.0s
O02D  Mt. Diablo Mer     60.53  61   P       P        07 03 13.2 +1.7
      baz=307
KBL   Kabul              60.85 291  eP       P        07 03 13.2 -0.6
      comp=Z,14nm,0.7s
KBL   Kabul              60.85 291  eP       P        07 03 13.2 -0.6
KBL                                  pmax     pmax
      comp=Z,14nm,0.7s
J08A  Circle Bar Ran     61.21  56  eP       P        07 03 16.9 +0.8
      comp=Z,24nm,1.3s
MSO   Missoula           61.66  51  eP       P        07 03 19.4 +0.5
      comp=Z,15nm,0.8s
MSO   Missoula           61.66  51   P       P        07 03 19.6 +0.7
      baz=308,SNR=19
SUMG  Summit             61.74   3  eP       P        07 03 19.6 +0.1
      comp=Z,81nm,0.8s
SUMG  Summit             61.74   3⇑iP       P        07 03 19.8 +0.3
SUMG  Summit             61.74   3⇑iP       P        07 03 19.8 +0.3
      comp=Z,194nm,0.8s
FFC   Flin Flon          62.53  39  eP       P        07 03 25.1 +0.6
      comp=Z,12nm,0.6s
FFC                                 epP      PcP      07 04 03.0 +0.4
FFC   Flin Flon          62.53  39  i P      P        07 03 25.3 +0.8
VCNR  Virginia City      62.99  61  eP       P        07 03 29.1 +1.0
      comp=Z,9.8nm,0.8s
PNTR  Pine Nut           63.15  61  eP       P        07 03 29.9 +0.7
      comp=Z,14nm,0.8s
CMB   Columbia Colle     63.32  62  eP       P        07 03 30.6 +0.5
      comp=Z,6.6nm,0.9s
CMB   Columbia Colle     63.32  62  eP       P        07 03 30.6 +0.5
CMB                                  pmax     pmax
      comp=Z,7.0nm,0.9s
KONS  Konsvik            63.41 342  eP       P        07 03 29.1 -0.9
HLID  Hailey             63.42  54   P       P        07 03 31.6 +0.7
      baz=309,SNR=12
YERR  Yerington          63.43  61  eP       P        07 03 31.9 +0.9
      comp=Z,14nm,0.9s
MCMT  McKenzie Canyo     63.50  52  eP       P        07 03 31.9 +0.5
BOZ   Bozeman (W)        63.68  51   P       P        07 03 33.4 +0.9
      baz=310,SNR=29
SCO   Scoresbysund       63.90 357  eP       P        07 03 33.2  0.0
      comp=Z,23nm,0.8s
SCO   Scoresbysund       63.90 357⇑iP       P        07 03 33.4 +0.1
SCO                                  pmax     pmax
      comp=Z,23nm,0.8s
SCO   Scoresbysund       63.90 357⇑iP       P        07 03 33.4 +0.1
      comp=Z,23nm,0.8s
FIA1  FINESS Array S     64.16 334  eP       P        07 03 33.3 -1.9
      comp=Z,9.3nm,0.8s
FINES FINESS Array B     64.16 334   P       P        07 03 33.5 -1.6
      comp=Z,8.3nm,0.5s,baz=33,slow=6.7,SNR=68
ILULI Ilulissat          64.17   8  eP       P        07 03 34.6 -0.4
      comp=Z,38nm,0.7s
ILULI Ilulissat          64.17   8  i P      P        07 03 34.7 -0.3
ILULI                                pmax     pmax
      comp=Z,38nm,0.7s
ILULI Ilulissat          64.17   8  i P      P        07 03 34.7 -0.3
      comp=Z,38nm,0.7s
QLMT  Earthquake Lak     64.28  51  eP       P        07 03 36.8 +0.3
NVAR  Mina Array Bea     64.35  61   P       P        07 03 38.2 +1.1
      comp=Z,9.0nm,0.7s,baz=293,slow=7.0,SNR=71
MDPB  Devils Postpil     64.38  62  eP       P        07 03 38.3 +1.0
      comp=Z,7.2nm,0.9s
YMR   Madison River      64.64  51  eP       P        07 03 39.9 +1.0
      comp=Z,9.8nm,0.8s
ELK   Elko               64.72  57  eP       P        07 03 40.4 +0.9
      comp=Z,3.6nm,0.8s
ELK   Elko               64.72  57  eP       P        07 03 40.4 +0.9
ELK                                  pmax     pmax
      comp=Z,4.0nm,0.8s
YFT   Old Faithful       64.85  52  eP       P        07 03 42.3 +2.1
      comp=Z,8.6nm,0.7s
H17A  Grant Village      65.02  51  eP       P        07 03 43.7 +2.3
      comp=Z,12nm,0.8s
H17A  Grant Village      65.02  51   P       P        07 03 43.7 +2.3
      baz=311,SNR=10
OBN   Obninsk            65.12 325⇑eP       P        07 03 39.7 -1.8
OBN                                  *PP      pP      07 04 09.0  0.0
OBN                                  pmax     pmax
      comp=Z,12nm,0.6s
OBN                                  MLR      MLR
      comp=Z,532nm,20.0s
OBN   Obninsk            65.12 325  eP       P        07 03 39.7 -1.8
RLMT  Red Lodge          65.26  50   P       P        07 03 44.0 +1.1
      baz=311,SNR=10
FXWY  Fox Creek          65.27  52  eP       P        07 03 44.0 +1.0
      comp=Z,6.1nm,0.6s
TIN   Tinemaha, Big      65.27  62   P       P        07 03 44.7 +1.8
      baz=310
SMMC  Simmler            65.28  64   P       P        07 03 44.8 +1.9
      baz=310
NSS   Namsos             65.35 342  eP       P        07 03 42.8 +0.1
VES   Vestal, Richgr     65.51  63   P       P        07 03 44.6 +0.3
      baz=310
SNOW  Snow King Moun     65.53  52  eP       P        07 03 46.1 +1.5
      comp=Z,11nm,0.8s
GEYT  Alibeck            65.64 300   P       P        07 03 45.7 +0.6
      comp=Z,13nm,0.6s,baz=15,slow=2.3,SNR=27
GYA0B ALIBECK ARRAY      65.64 300  eP       P        07 03 45.4 +0.2
      comp=Z,20nm,0.8s
DGMT  Dagmar             65.66  45   P       P        07 03 45.6 +0.5
      baz=312,SNR=6.1
PKM   Mcpherson Peak     65.66  64   P       P        07 03 46.5 +1.0
      baz=310
CWC   Cottonwood Cre     65.75  62   P       P        07 03 46.8 +0.7
      baz=310
AHID  Auburn Hatcher     65.79  53  eP       P        07 03 46.6 +0.4
      comp=Z,9.9nm,0.8s
LAO   LASA Array         65.83  47   P       P        07 03 47.2 +0.9
      baz=312,SNR=8.8
GRAC  Grapevine Rang     65.84  61   P       P        07 03 47.7 +1.3
      baz=310
ISA   Isabella, Lake     66.01  63   P       P        07 03 47.9 +0.3
      baz=310
R11A  Troy Canyon, C     66.05  59   P       P        07 03 48.7 +0.7
      baz=311,SNR=18
SFJD  Kangerlussuaq      66.35   9  eP       P        07 03 48.3 -0.9
      comp=Z,19nm,0.8s
SFJD  Kangerlussuaq      66.35   9  i P      P        07 03 48.6 -0.6
SFJD  Kangerlussuaq      66.35   9  i P      P        07 03 48.6 -0.6
MPMC  Manual Prospec     66.36  62   P       P        07 03 50.8 +0.8
      baz=311,SNR=11
FRB   Frobisher Bay      66.47  18   P       P        07 03 50.6 +0.7
FRB                                  pmax     pmax
      comp=Z,44nm,0.9s
FURC  Furnace Creek,     66.49  61   P       P        07 03 51.1 +0.6
      baz=311,SNR=16
DUG   Dugway, Tooele     66.49  56   P       P        07 03 51.9 +1.2
DUG                                  pmax     pmax
      comp=Z,20nm,0.9s
DUG   Dugway, Tooele     66.49  56   P       P        07 03 51.6 +0.9
      baz=311,SNR=10
OSI   Osito Audit: C     66.53  64  eP       P        07 03 52.0 +1.1
      comp=Z,10nm,0.8s
OSI   Osito Audit: C     66.53  64   P       P        07 03 51.8 +0.9
      baz=311
TPNV  Topopah Spring     66.55  61   P       P        07 03 52.1 +0.9
      baz=311,SNR=15
BW06  Boulder Array      66.65  52   P       P        07 03 52.2 +0.4
      baz=312,SNR=22
PDAR  Pinedale Array     66.65  52   P       P        07 03 52.3 +0.5
      comp=Z,8.4nm,0.6s,baz=266,slow=1.7,SNR=122
TCUT  Toone Canyon       66.69  55  eP       P        07 03 52.8 +0.7
      comp=Z,14nm,0.9s
EDW2  Edwards Air Fo     66.81  63   P       P        07 03 53.5 +0.8
      baz=311,SNR=9.3
TBLU  Trondheim          66.84 342  eP       P        07 03 50.9 -1.5
DECC  Green Verdugo      67.00  64   P       P        07 03 54.3 +0.3
      baz=311
WRA   Warramunga Arr     67.10 197   P       P        07 03 54.6 +0.1
      comp=Z,0.7nm,0.5s,baz=9.9,slow=7.3,SNR=6.6
GSC   Goldstone, Bar     67.28  62   P       P        07 03 56.1 +0.4
      baz=311,SNR=5.3
MPU   Maple Canyon       67.29  56  eP       P        07 03 56.1 +0.3
      comp=Z,8.2nm,0.7s
BFSC  Mount Baldy Ra     67.44  64   P       P        07 03 57.2 +0.4
      baz=311,SNR=5.2
TUQ   Turquoise Moun     67.73  62   P       P        07 03 59.4 +0.8
      baz=311,SNR=6.3
TCRU  Three Creeks R     67.74  57  eP       P        07 03 59.7 +0.9
      comp=Z,5.8nm,0.9s
HEC   Hector,Ludlow      67.88  62   P       P        07 03 60.0 +0.5
      baz=312,SNR=8.9
MOL   Molde              68.03 343  eP       P        07 03 59.5 -0.2
MURC  Murrieta           68.15  64   P       P        07 04 01.3 +0.2
      baz=312
DOMB  Dombas             68.17 342  eP       P        07 04 00.1 -0.6
MDND  Maddock            68.32  43   P       P        07 04 02.4 +0.5
      baz=315,SNR=5.4
ULM   Lac du Bonnet      68.32  39   P       P        07 04 00.7 -1.2
      comp=Z,4.0nm,0.6s,baz=314,slow=6.5,SNR=6.2
GMRC  Granite Mounta     68.33  62   P       P        07 04 02.9 +0.6
      baz=312,SNR=10
K22A  Casper             68.39  51   P       P        07 04 02.7  0.0
      baz=313,SNR=9.0
AKN   Aaknes             68.49 343  eP       P        07 04 03.0 +0.2
NB2   NORSAR Subarra     68.56 340   P       P        07 04 02.1 -1.1
      comp=Z,14nm,0.6s,baz=28,slow=6.5
NB2   NORSAR Subarra     68.56 340   P       P        07 04 02.1 -1.1
      baz=28,slow=6.5
NOA   NORSAR Array B     68.56 340   P       P        07 04 02.2 -1.0
      comp=Z,17nm,0.6s,baz=28,slow=6.4,SNR=77
PFO   Pinyon Flats O     68.60  64   P       P        07 04 04.7 +0.6
      baz=312
BELC  Belle Mtn. Jos     68.63  63   P       P        07 04 04.8 +0.5
      baz=312
RSSD  Black Hills        68.70  48  eP       P        07 04 04.8 +0.2
      comp=Z,23nm,1.3s
RSSD  Black Hills        68.70  48  eP       P        07 04 04.8 +0.2
RSSD                                 pmax     pmax
      comp=Z,23nm,1.3s
RSSD  Black Hills        68.70  48   P       P        07 04 04.9 +0.2
      baz=314
NORES NORESS Array B     68.75 340   P       P        07 04 02.9 -1.4
NORES                                pmax     pmax
      comp=Z,3.0nm,0.3s
NC602 NORSAR Array S     68.75 340  eP       P        07 04 02.9 -1.4
IRM   Iron Mountain      69.06  62   P       P        07 04 07.4 +0.7
      baz=312,SNR=6.8
MONP2 Monument Peak      69.10  64   P       P        07 04 07.6 +0.4
      baz=312
O20A  White River Ci     69.14  54   P       P        07 04 07.6 +0.2
      baz=313,SNR=7.0
BC3   Big Chuckawall     69.20  63   P       P        07 04 08.1 +0.4
      baz=312,SNR=5.3
AKT   Akhty              69.29 308  eP       P        07 04 08.9 +0.7
AKT                                 e                 07 04 31.3
AKT                                 e*PP     pP       07 04 38.1 +2.0
AKT                                  pmax     pmax
      comp=Z,46nm,0.6s
SWSC  Sam W. Stewart     69.45  64   P       P        07 04 10.0 +0.8
      baz=312
IKP   In-Ko-Pah, Jac     69.46  64   P       P        07 04 10.1 +0.7
      baz=312
HYA   Hoyanger           69.57 343  eP       P        07 04 09.2 -0.1
PDMCI Parker Dam,Lak     69.58  62   P       P        07 04 10.6 +0.7
      baz=312,SNR=6.0
Y12C  Blythe             69.71  62   P       P        07 04 11.5 +0.8
      baz=312,SNR=5.1
AGMN  Agassiz Nation     69.74  41   P       P        07 04 10.3 -0.4
      baz=317,SNR=6.4
N23A  Red Feather La     69.90  52   P       P        07 04 12.9 +0.8
      baz=314,SNR=8.0
PV04  Paradox Valley     69.95  55  eP       P        07 04 12.8 +0.5
      comp=Z,13nm,0.7s
SUE   Sulen              69.97 343  eP       P        07 04 11.4 -0.3
GLA   Glamis             69.99  63   P       P        07 04 13.4 +0.8
      baz=312
NCK   Nalchik            70.10 312⇑eP       P        07 04 13.7 +0.7
NCK                                  pmax     pmax
      comp=Z,33nm,0.9s
KONO  Kongsberg          70.17 340⇓eP       P        07 04 12.7 -0.4
KONO                                 pmax     pmax
      comp=Z,18nm,1.0s
KONO  Kongsberg          70.17 340  eP       P        07 04 12.6 -0.5
KIV   Kislovodsk         70.24 313  eP       P        07 04 14.1 +0.2
      comp=Z,43nm,0.7s
KIV   Kislovodsk         70.24 313⇑iP       P        07 04 15.3 +1.4
KIV   Kislovodsk         70.24 313  eP       P        07 04 14.5 +0.6
KIV                                  pmax     pmax
      comp=Z,161nm,0.9s
KIV   Kislovodsk         70.24 313  eP       P        07 04 14.5 +0.6
KBZ   Khabaz             70.29 313   P       P        07 04 15.2 +1.1
      comp=Z,40nm,0.8s,baz=56,slow=4.7,SNR=66
PV01  Paradox Valley     70.32  55  eP       P        07 04 14.9 +0.2
      comp=Z,8.3nm,0.8s
ASK   Askoy              70.40 343  eP       P        07 04 14.7 +0.2
ZEI   Tsey               70.44 312  eP       P        07 04 14.6 -0.7
ZEI                                  pmax     pmax
      comp=Z,18nm,0.6s
WUAZ  Wupatki            70.45  59   P       P        07 04 16.5 +1.1
      baz=313,SNR=6.2
BER   Bergen             70.46 343   P       P        07 04 14.9 +0.1
BER   Bergen             70.46 343  eP       P        07 04 14.6 -0.2
ODD1  Odda               70.61 342  eP       P        07 04 15.4 -0.5
NEY   Neytrino           70.72 313⇑eP       P        07 04 17.5 +0.5
NEY                                  pmax     pmax
      comp=Z,5.0nm,0.6s
AS31  Alice Springs      70.81 196  eP       P        07 04 18.6 +1.3
      comp=Z,0.6nm,0.7s
ASAR  Alice Springs      70.81 196   P       P        07 04 18.6 +1.3
      comp=Z,1.2nm,0.7s,baz=12,slow=6.1,SNR=15
ISCO  Idaho Springs      70.84  52  eP       P        07 04 18.7 +0.8
      comp=Z,7.2nm,0.8s
ISCO  Idaho Springs      70.84  52  eP       P        07 04 18.7 +0.8
ISCO                                 pmax     pmax
      comp=Z,7.0nm,0.8s
ISCO  Idaho Springs      70.84  52   P       P        07 04 18.8 +0.9
      baz=314,SNR=15
MVCO  Mesa Verde         70.99  56   P       P        07 04 19.4 +0.6
      baz=314,SNR=14
SUSD  Miller             71.06  45   P       P        07 04 18.8  0.0
      baz=316
BLS5  Blasjo             71.09 342  eP       P        07 04 18.6 -0.1
AKASG Malin Array Be     71.38 325   P       P        07 04 19.4 -1.2
      comp=Z,10nm,0.5s,baz=35,slow=6.3,SNR=45
AKBB  Malin Array Si     71.38 325  eP       P        07 04 18.8 -1.8
      comp=Z,21nm,1.0s
AKBB  Malin Array Si     71.38 325  eP       P        07 04 18.8 -1.8
AKBB                                 pmax     pmax
      comp=Z,21nm,1.0s
S22A  4UR Ranch, Cre     71.58  55   P       P        07 04 23.5 +1.1
      baz=314,SNR=20
AKH   Akhalkalaki        71.62 311⇑iP       P        07 04 23.8 +1.3
AKH   Akhalkalaki        71.62 311   P       P        07 04 23.7 +1.3
HOMB  Homborsund         71.66 340  eP       P        07 04 21.9 -0.2
Q24A  Divide             71.68  53   P       P        07 04 23.3 +0.3
      baz=315
W18A  Petrified Fore     71.70  58   P       P        07 04 24.0 +1.0
      baz=314
GNI   Garni              71.85 309  eP       P        07 04 25.3 +1.6
      comp=Z,21nm,0.8s
GNI   Garni              71.85 309c iP       P        07 04 25.1 +1.3
GNI                                  pmax     pmax
      comp=Z,93nm,1.0s
EYMN  Ely                71.96  39   P       P        07 04 23.7 -0.4
      baz=320,SNR=6.8
OGNE  Ogallala           71.98  50   P       P        07 04 24.9 +0.4
      baz=316,SNR=6.2
214A  Organ Pipe Nat     71.98  63   P       P        07 04 25.4 +0.8
      baz=314
SOC   Sochi              72.00 314  eP       P        07 04 23.3 -1.1
SOC                                  pmax     pmax
      comp=Z,32nm,0.9s
ANN   Anapa              72.23 317  eP       P        07 04 25.7 -0.1
ANN                                  pmax     pmax
      comp=Z,47nm,0.8s
SDCO  Great Sand Dun     72.34  54   P       P        07 04 27.5 +0.6
      baz=315,SNR=10.0
BATM  Batumi             72.43 312⇑iP       P        07 04 27.8 +0.8
BATM  Batumi             72.43 312   P       P        07 04 27.8 +0.8
BCA   Borcka             72.58 312⇑iP       P        07 04 28.2 +0.2
DBOC  Borcka             72.63 312  i P      P        07 04 29.8 +1.5
DBOC                                 IAML_P
      comp=Z,2μm,0.5s
DAGI  Agillar            72.69 311  i P      P        07 04 29.8 +1.1
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DAGI                                    IAML_P
       comp=Z,224nm,0.6s
ECSD   EROS Data Cent    72.73  44  eP          P         07 04 28.2  -0.6
       comp=Z,20nm,1.0s
ECSD   EROS Data Cent    72.73  44   P          P         07 04 28.6  -0.3
       baz=318,SNR=24
DBAD   Bademkaya         72.85 312  i P         P         07 04 31.9  +2.3
DBAD                                    IAML_P
       comp=Z,723nm,0.6s
E38A   The Farm, Brul    72.95  40   P          P         07 04 29.6  -0.5
       baz=320,SNR=7.2
TUC    Tucson            72.99  61   P          P         07 04 31.4  +0.8
       baz=314
KSCO   Kaye Shedlock'    73.04  51   P          P         07 04 31.0  +0.1
       baz=316
F37A   Hinrichs Farm,    73.14  41   P          P         07 04 30.7  -0.4
       baz=320
F38A   Pierce - Schro    73.30  40   P          P         07 04 32.0  -0.1
       baz=320,SNR=12
T25A   Trinidad          73.38  54   P          P         07 04 33.5  +0.5
       baz=316,SNR=9.9
SPMN   Marine on St.     73.43  41   P          P         07 04 32.6  -0.3
       baz=320
GKP    Gorka Klasztor    73.60 333  eP          P         07 04 33.1  -0.5
GKP    Gorka Klasztor    73.60 333  eP          P         07 04 33.1  -0.5
SIM    Simferopol'       73.69 319ceP           P         07 04 34.4   0.0
SIM                                     pmax    pmax
       comp=Z,24nm,1.0s
TASM   ASL Pad, Albuq    73.75  57   P          P         07 04 36.0  +0.8
       baz=315,SNR=12
TASM   ASL Pad, Albuq    73.75  57   P          P         07 04 36.0  +0.8
       baz=315,SNR=12
ANMO   Albuquerque       73.75  57  eP          P         07 04 35.9  +0.8
       comp=Z,5.4nm,0.8s
ANMO   Albuquerque       73.75  57c iP          P         07 04 35.9  +0.8
ANMO                                    pmax    pmax
       comp=Z,5.0nm,0.7s
ANMO   Albuquerque       73.75  57   P          P         07 04 36.0  +0.8
       baz=315
F39A   Loretta           73.76  40   P          P         07 04 34.5  -0.3
       baz=320,SNR=8.2
D41A   Chassel           73.91  38   P          P         07 04 35.4  -0.2
       baz=322
F40A   Park Falls        74.12  39   P          P         07 04 36.4  -0.5
       baz=321
G39A   Holcombe          74.13  40   P          P         07 04 36.4  -0.6
       baz=320
HAKT   HAKKARI           74.26 308  i P         P         07 04 39.5  +1.4
HAKT                                    IAML_P
       comp=Z,591nm,0.7s
MILM   Milestii Mici     74.51 323⇑iP           P         07 04 38.8  -0.3
G40A   Rib Lake          74.58  40   P          P         07 04 39.2  -0.4
       baz=321,SNR=6.4
121A   Cookes Peak, D    74.66  59   P          P         07 04 41.5  +1.0
       baz=315,SNR=7.4
MORS   Morshin           74.71 327   P          P         07 04 40.7  +0.5
KWP    Kalwaria Pacla    74.75 328  eP          P         07 04 41.0  +0.6
KWP    Kalwaria Pacla    74.75 328  eP          P         07 04 41.1  +0.6
KELT   Kelkit            74.75 312  i P         P         07 04 42.7  +1.8
KELT                                    IAML_P
       comp=Z,290nm,0.6s
SCHQ   Schefferville     74.81  21   P          P         07 04 40.8  +0.1
       comp=Z,11nm,0.6s,baz=351,slow=5.2,SNR=14
KSV    Kosov             74.92 326   P          P         07 04 41.0  -0.5
E43A   Lone Tree Farm    75.11  37   P          P         07 04 42.2  -0.4
       baz=323
BURAR  Bucovina Array    75.43 325⇑iP           P         07 04 44.4  -0.1
BURAR  Bucovina Array    75.43 325   P          P         07 04 44.4  -0.1
KOLS   Kolonicke sedl    75.49 328  eP          P         07 04 45.2  +0.5
KOLS                                    pmax    pmax
       comp=Z,22nm,1.2s
KOLS   Kolonicke sedl    75.49 328  eP          P         07 04 45.2  +0.5
BIZ    Bicaz             75.62 324⇑iP           P         07 04 45.7  +0.2
DIKM   Dikmen            75.64 316⇓iP           P         07 04 47.0  +1.3
I41A   Arkdale           75.67  40   P          P         07 04 45.4  -0.4
       baz=321
UZH    Uzhgorod          75.73 328  eP          P         07 04 45.3  -0.8
UZH                                 e                     07 04 58.7
TESR   Tescani           75.74 324⇑iP           P         07 04 46.0  -0.2
SCIA   State Center      75.76  44   P          P         07 04 46.4  +0.1
       baz=320
NIE    Niedzica          75.81 329  eP          P         07 04 47.4  +0.8
NIE    Niedzica          75.81 329  eP          P         07 04 47.4  +0.8
TLCR                     75.88 322⇑iP           P         07 04 46.8  -0.2
TLCR                     75.88 322   P          P         07 04 46.7  -0.2
TRSU   Trosnyk           75.92 327   P          P         07 04 47.1   0.0
D46A   Sault St. Mari    75.93  35   P          P         07 04 46.3  -0.9
       baz=324
MATQ   Matagami          75.97  30   P          P         07 04 46.7  -0.7
       baz=328,SNR=5.9
KSP    Ksiaz             75.97 332  eP          P         07 04 47.3  -0.1
KSP    Ksiaz             75.97 332  eP          P         07 04 47.3  -0.1
BZK    Bozkurt           76.02 317⇑iP           P         07 04 48.4  +0.6
TRPA   Tarpa             76.05 327⇑iP           P         07 04 48.3  +0.4
TRPA   Tarpa             76.05 327⇑eP           P         07 04 48.0  +0.1
D47A   Chapleau          76.17  35   P          P         07 04 47.6  -1.0
       baz=325
ODBI   Odobesti          76.17 323⇓iP           P         07 04 49.9  +1.3
KSU1   Kansas State U    76.17  48   P          P         07 04 47.9  -0.9
       baz=319
CFR    Carcaliu          76.18 322⇓iP           P         07 04 48.9  +0.3
CFR    Carcaliu          76.18 322   P          P         07 04 48.8  +0.2
ARCR   ARCALIA           76.20 325⇑iP           P         07 04 49.9  +1.1
VRI    Vrincioaia        76.22 323⇓iP           P         07 04 49.4  +0.4
VRI    Vrincioaia        76.22 323   P          P         07 04 49.4  +0.4
I42A   Draeger Farm,     76.23  40   P          P         07 04 48.6  -0.4
       baz=322,SNR=7.2
E46A   Sault Ste Mari    76.24  36   P          P         07 04 48.4  -0.7
       baz=324
OSTC   Ostas             76.25 332  eP          P         07 04 49.5  +0.5
PLOR   Plostina          76.27 323⇑iP           P         07 04 50.1  +0.9
PLOR   Plostina          76.27 323   P          P         07 04 50.1  +0.9
CHVC   Chvalec           76.27 332  eP          P         07 04 49.4  +0.2
H43A   Windswept, Lux    76.29  39   P          P         07 04 49.0  -0.3
       baz=322
F45A   CMU Biological    76.29  37   P          P         07 04 48.9  -0.4
       baz=324
LANS   Liptovska Anna    76.33 329  eP          P         07 04 51.0  +1.5
LANS   Liptovska Anna    76.33 329  eP          P         07 04 51.0  +1.5
UPC    Upice             76.35 332  eP          P         07 04 49.8  +0.2
UPC    Upice             76.35 332  eP          P         07 04 49.8  +0.2
DPC    Dobruska-Polom    76.39 332  eP          P         07 04 50.5  +0.7
DPC    Dobruska-Polom    76.39 332  eP          P         07 04 50.5  +0.7
OZUR                     76.43 324⇑iP           P         07 04 50.9  +0.8
MORC   Moravsky Berou    76.47 331  eP          P         07 04 50.1  -0.2
       comp=Z,31nm,0.9s
MORC   Moravsky Berou    76.47 331⇑iP           P         07 04 50.5  +0.2
MORC   Moravsky Berou    76.47 331  eP          P         07 04 50.1  -0.2
MORC                                    pmax    pmax
       comp=Z,31nm,0.9s
MORC   Moravsky Berou    76.47 331⇑iP           P         07 04 50.5  +0.2
KECS   Kecovo            76.52 329  eP          P         07 04 50.9  +0.3
KECS                                    pmax    pmax
       comp=Z,44nm,0.9s
KECS   Kecovo            76.52 329  eP          P         07 04 50.9  +0.3
AMTX   Amarillo          76.53  54   P          P         07 04 51.5  +0.5
       baz=317
MSTX   Muleshoe          76.58  55   P          P         07 04 51.4  +0.1
       baz=317,SNR=6.3
D48A   Paudash Townsh    76.58  34   P          P         07 04 49.9  -1.1
       baz=326
E47A   Iron Bridge       76.59  35   P          P         07 04 49.8  -1.1
       baz=325,SNR=6.3
L40A   Anamosa           76.59  42   P          P         07 04 50.2  -0.8
       baz=321,SNR=5.8
CLL    Collm             76.61 334  i P         P         07 04 50.8  -0.2
CLL                                     pmax    pmax
       comp=Z,42nm,0.9s
CLL    Collm             76.61 334  i P         P         07 04 50.8  -0.2
       comp=Z,42nm,0.9s
D49A   Beulah Townshi    76.67  33   P          P         07 04 50.5  -0.9
       baz=326
MNTX   Cornudas Mount    76.68  58   P          P         07 04 52.2  +0.4
       baz=316,SNR=7.4
TLB    Topalu            76.69 322⇑iP           P         07 04 52.0  +0.4
TLB    Topalu            76.69 322   P          P         07 04 51.9  +0.4
DOPR   Dopca             76.69 324⇓iP           P         07 04 52.7  +1.1
BRG    Berggiesshubel    76.70 334  i P         P         07 04 51.3  -0.2
       comp=Z,13nm,0.9s
       comp=N,477nm,17.5s
       comp=E,402nm,19.7s
       comp=Z,889nm,20.6s
BRG    Berggiesshubel    76.70 334  i P         P         07 04 51.3  -0.2
BRG                                     pmax    pmax
       comp=Z,13nm,0.9s
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BRG                                     MLR     MLR
       comp=N,477nm,17.5s
BRG                                     MLR     MLR
       comp=E,402nm,19.7s
BRG                                     MLR     MLR
       comp=Z,889nm,20.6s
G45A   Suttons Bay       76.75  37   P          P         07 04 51.5  -0.4
       baz=324
LSQQ   Lebel-sur-Quev    76.79  30   P          P         07 04 51.7  -0.4
       baz=328
PVCC   Panska Ves        76.80 333  eP          P         07 04 52.6  +0.5
PVCC   Panska Ves        76.80 333  eP          P         07 04 52.6  +0.5
CJR    Cluj-Napoca       76.81 326⇑iP           P         07 04 53.2  +0.9
CJR    Cluj-Napoca       76.81 326   P          P         07 04 53.2  +0.9
EKA    Eskdalemuir Ar    76.84 345   P          P         07 04 51.6  -0.6
ILGA   Ilgaz             76.85 316  i P         P         07 04 54.9  +2.0
ILGA                                    IAML_P
       comp=Z,120nm,0.1s
MLR    Muntele Rosu      76.85 324⇑iP           P         07 04 53.0  +0.4
MLR    Muntele Rosu      76.85 324   P          P         07 04 53.0  +0.4
G46A   Petoskey          76.86  37   P          P         07 04 52.1  -0.4
       baz=324,SNR=5.6
ESK    Eskdalemuir       76.86 345  eP          P         07 04 52.1  -0.2
       comp=Z,15nm,0.8s
ESK    Eskdalemuir       76.86 345  i P         P         07 04 53.4  +1.1
H45A   Beulah            76.91  38   P          P         07 04 52.6  -0.2
       baz=323
CHGQ   Chibougamau       76.94  28   P          P         07 04 52.2  -0.7
       baz=330,SNR=13
E48A   Lockeyer          77.01  34   P          P         07 04 52.4  -0.9
       baz=325
DRGR                     77.09 326⇓iP           P         07 04 54.2  +0.3
DRGR                     77.09 326   P          P         07 04 54.2  +0.3
VYHS   Vyhne             77.11 329  eP          P         07 04 54.2  +0.3
VYHS                                    pmax    pmax
       comp=Z,14nm,1.2s
VYHS   Vyhne             77.11 329  eP          P         07 04 54.2  +0.3
ICOR   Ion Corvin        77.17 322⇓iP           P         07 04 55.3  +1.1
VRAC   Vranov            77.19 331⇑iP           P         07 04 54.9  +0.6
VRAC   Vranov            77.19 331   P          P         07 04 54.9  +0.6
VRAC   Vranov            77.19 331⇑iP           P         07 04 54.7  +0.4
JAVC   Velka Javorina    77.21 330⇑iP           P         07 04 55.7  +1.2
PSZ    Piszkesteto       77.21 329⇑iP           P         07 04 55.2  +0.6
PSZ    Piszkesteto       77.21 329   P          P         07 04 55.1  +0.5
PSZ    Piszkesteto       77.21 329⇑eP           P         07 04 54.1  -0.5
VOIR                     77.26 324⇑iP           P         07 04 55.4  +0.5
VOIR                     77.26 324   P          P         07 04 55.4  +0.5
GOPC   GO Pecny, Ondr    77.27 333  eP          P         07 04 55.0  +0.3
GOPC   GO Pecny, Ondr    77.27 333  eP          P         07 04 55.0  +0.3
PRU    Pruhonice         77.28 333  eP          P         07 04 54.8   0.0
PRU    Pruhonice         77.28 333  eP          P         07 04 54.8   0.0
I45A   Fountain          77.30  38   P          P         07 04 54.7  -0.3
       baz=323
N40A   Mertquake, Sal    77.33  43   P          P         07 04 55.1  -0.1
       baz=321,SNR=12
D50A   G1974 Best Tow    77.34  33   P          P         07 04 53.9  -1.3
       baz=327
H46A   Fife Lake         77.34  37   P          P         07 04 54.9  -0.3
       baz=324,SNR=11
GLMI   Grayling          77.36  37   P          P         07 04 55.1  -0.3
       baz=324
F48A   Evansville        77.36  35   P          P         07 04 54.8  -0.5
       baz=325
G47A   Hillman           77.39  36   P          P         07 04 55.0  -0.5
       baz=325
ELDT   Eldivan           77.42 316  i P         P         07 04 57.4  +1.5
ELDT                                    IAML_P
       comp=Z,39nm,0.1s
K43A   Burlington        77.43  40   P          P         07 04 55.0  -0.8
       baz=322
M41A   Milan             77.45  43   P          P         07 04 55.2  -0.7
       baz=321,SNR=5.8
KRUC   Moravsky          77.47 331⇑iP           P         07 04 56.1  +0.2
ARR    Arges             77.49 324⇑iP           P         07 04 57.4  +1.3
DELI   KIRIKKALE         77.56 315  i P         P         07 04 57.7  +1.0
DELI                                    IAML_P
       comp=Z,348nm,0.4s
TREC   Trest             77.57 332  eP          P         07 04 56.9  +0.4
TREC   Trest             77.57 332  eP          P         07 04 56.9  +0.4
E50A   Wahnapitae        77.61  34   P          P         07 04 55.8  -0.9
       baz=326
F49A   Sandfield         77.65  35   P          P         07 04 56.0  -0.9
       baz=326
H47A   Mio               77.71  37   P          P         07 04 57.0  -0.3
       baz=324
J45A   Montague          77.71  39   P          P         07 04 56.9  -0.4
       baz=323
I46A   Reed City         77.72  38   P          P         07 04 57.1  -0.2
       baz=324
NKC    Novy Kostel       77.72 334  eP          P         07 04 57.4  +0.1
NKC    Novy Kostel       77.72 334  eP          P         07 04 57.4  +0.1
MODS   Modra-Piesok      77.76 330  eP          P         07 04 57.3  -0.2
MODS                                    pmax    pmax
       comp=Z,37nm,1.0s
MODS   Modra-Piesok      77.76 330  eP          P         07 04 57.3  -0.2
DEV    Deva              77.76 326⇓iP           P         07 04 58.3  +0.8
DEV    Deva              77.76 326   P          P         07 04 58.3  +0.8
WTSB   Winterswijk       77.77 338  eP          P         07 04 56.6  -0.8
       comp=Z,50nm,0.7s
N41A   Harden Midland    77.82  43   P          P         07 04 57.7  -0.2
       baz=321,SNR=6.8
BCAM   Yenicaga          77.83 317  i P         P         07 04 59.7  +1.6
BCAM                                    IAML_P
       comp=Z,82nm,0.2s
BUD    Budapest          77.90 329   P          P         07 05 00.2  +2.0
BUD                                     pmax    pmax
       comp=Z,36nm,1.0s
BUD    Budapest          77.90 329⇑eP           P         07 04 58.1  -0.2
BRTR   Keskin Array B    77.91 315   P          P         07 04 59.1  +0.4
       comp=Z,8.2nm,0.8s,baz=71,slow=4.5,SNR=40
SIRR   Siria             77.93 327⇓iP           P         07 04 58.9  +0.4
ZST    Bratislava        77.97 330  eP          P         07 04 58.7  +0.1
ZST    Bratislava        77.97 330  eP          P         07 04 58.7  +0.1
H48A   Harrisville       78.00  36   P          P         07 04 58.5  -0.3
       baz=325
E51A   G1948 Merrick     78.00  33   P          P         07 04 57.8  -1.1
       baz=327
D52A   ZEK Kipawa Sen    78.03  32   P          P         07 04 58.2  -0.8
       baz=328
J46A   Howard City       78.11  38   P          P         07 04 59.4  -0.1
       baz=324
M43A   Waltham Townsh    78.14  42   P          P         07 04 59.2  -0.5
       baz=322
D53A   Lac Vacive, Po    78.21  31   P          P         07 04 59.2  -0.8
       baz=328
ANTO   Ankara            78.21 316  eP          P         07 05 00.2   0.0
       comp=Z,32nm,0.9s
ANTO   Ankara            78.21 316⇑iP           P         07 05 01.2  +1.0
ANTO   Ankara            78.21 316  eP          P         07 05 00.3   0.0
ANTO                                    pmax    pmax
       comp=Z,32nm,0.9s
AMBH   Ambrzfalva        78.22 327⇓eP           P         07 05 01.0  +1.0
GZR    Gura Zlata        78.22 325⇑iP           P         07 05 00.0  -0.2
GZR    Gura Zlata        78.22 325   P          P         07 04 59.9  -0.2
KIRS   Kırehir-Merke     78.22 315  i P         P         07 05 01.8  +1.5
KIRS                                    IAML_P
       comp=Z,441nm,0.8s
KIBS   BOLU              78.23 317  i P         P         07 05 02.0  +1.6
KIBS                                    IAML_P
       comp=Z,1µm,0.2s
COPA   Copaceanca        78.25 323⇑iP           P         07 05 00.0  -0.3
WMOK   Wichita Mounta    78.26  52  eP          P         07 05 00.4  -0.1
       comp=Z,8.7nm,0.9s
WMOK   Wichita Mounta    78.26  52  eP          P         07 05 00.4  -0.1
WMOK                                    pmax    pmax
       comp=Z,9.0nm,0.9s
WMOK   Wichita Mounta    78.26  52   P          P         07 05 00.5   0.0
       baz=318,SNR=9.5
CSKK   Cskako            78.27 329  eP          P         07 04 58.1  -2.3
TOBO   Tobermory, Bru    78.30  35   P          P         07 04 59.9  -0.6
       baz=326
KHC    Kasperske Hory    78.33 333  eP          P         07 05 00.9  +0.2
KHC    Kasperske Hory    78.33 333  eP          P         07 05 00.9  +0.2
F51A   Arnstein          78.34  33   P          P         07 04 59.9  -0.9
       baz=327
N43A   Stutzman Famil    78.43  42   P          P         07 05 01.0  -0.3
       baz=322,SNR=5.8
BZS    Buzias            78.49 326⇑iP           P         07 05 01.5  -0.1
BZS    Buzias            78.49 326   P          P         07 05 01.5  -0.1
E52A   Mattawa           78.52  32   P          P         07 05 00.6  -1.2
       baz=328
D54A   Lac Fusel, La     78.52  31   P          P         07 05 00.9  -0.8
       baz=329
GERES  GERESS Array B    78.55 333   P          P         07 05 01.8  -0.1
       comp=Z,9.9nm,0.7s,baz=32,slow=5.2,SNR=54
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J47A   Sunmer            78.55  38  eP          P         07 05 01.4  -0.5
       comp=Z,29nm,0.9s
J47A   Sunmer            78.55  38   P          P         07 05 02.0   0.0
       baz=324,SNR=8.4
GRFO   Grafenberg        78.57 335  eP          P         07 05 01.8  -0.2
       comp=Z,50nm,0.8s
GRFO   Grafenberg        78.57 335  eP          P         07 05 01.8  -0.2
GRFO                                    pmax    pmax
       comp=Z,50nm,0.8s
K46A   Dorr              78.58  39   P          P         07 05 01.7  -0.4
       baz=324
SOP    Sopron            78.60 330⇑eP           P         07 05 02.1   0.0
M44A   Midewin, Midew    78.60  41  eP          P         07 05 02.1  -0.2
       comp=Z,20nm,1.0s
M44A   Midewin, Midew    78.60  41   P          P         07 05 01.9  -0.4
       baz=323
CONA   Conrad Observa    78.63 331  i P         P         07 05 03.1  +0.7
       comp=Z,25nm,0.8s,SNR=20
HDIL   Hopedale          78.67  42   P          P         07 05 02.4  -0.2
       baz=322,SNR=12
F52A   Sundridge         78.68  33   P          P         07 05 01.9  -0.7
       baz=327
KLBO   Killbear Provi    78.70  34   P          P         07 05 02.1  -0.6
       baz=327
TIH    Tihany            78.80 329  eP          P         07 05 04.1  +0.8
E53A   Dumoine, Ponti    78.81  32   P          P         07 05 02.5  -0.8
       baz=328
I49A   Point Hope        78.82  36   P          P         07 05 03.2  -0.2
       baz=325
L46A   Eue Claire        78.89  40   P          P         07 05 03.3  -0.5
       baz=324
K47A   Vermontville      78.93  38   P          P         07 05 03.7  -0.3
       baz=324
BMRO   Meriville Lake    78.94  35   P          P         07 05 03.6  -0.4
       baz=326
E54A   Lac Daplat, Po    78.94  32   P          P         07 05 03.0  -1.0
       baz=328
J48A   Bridge Port       78.94  37   P          P         07 05 04.8  +0.7
       baz=325
BUKO   Buck Lake         78.95  33   P          P         07 05 03.2  -0.9
       baz=327
TUL1   Leonard           79.00  49   P          P         07 05 04.5   0.0
       baz=320
N44A   Piper City        79.03  41   P          P         07 05 04.3  -0.3
       baz=323,SNR=7.5
ALGO   Algonquin Park    79.03  32   P          P         07 05 03.1  -1.4
       baz=328
HGN    Heimansgroeve     79.09 338  eP          P         07 05 04.6  -0.1
       comp=Z,33nm,0.7s
MORH   Mrgy, Hungar      79.11 328⇑eP           P         07 05 04.0  -0.9
PLVB   Pleven            79.11 323⇑iP           P         07 05 05.2  +0.2
BEBN   Eben Emael        79.13 338 ⇓P           P         07 05 05.3  +0.4
MDVR   Moldovita         79.15 326⇑iP           P         07 05 04.9  -0.3
J49A   Marlette          79.17  37   P          P         07 05 05.0  -0.3
       baz=325
K48A   Perry             79.21  38   P          P         07 05 05.5   0.0
       baz=325,SNR=7.1
MEM    Membach           79.22 338 ⇑P           P         07 05 05.2  -0.2
       comp=Z,33nm,1.0s
MOA    Molln             79.23 332  i P         P         07 05 05.9  +0.3
       comp=Z,13nm,0.8s,SNR=8.3
BASO   Ashfield          79.24  36   P          P         07 05 05.1  -0.6
       baz=326
N45A   Kentland          79.27  41   P          P         07 05 05.7  -0.2
       baz=323,SNR=5.0
PHSR   Pinarhisar        79.28 320⇑iP           P         07 05 06.3  +0.4
P43A   Skaggs, Pawnee    79.29  43   P          P         07 05 05.5  -0.5
       baz=322,SNR=5.8
ARSA   Arzberg           79.33 331  i P         P         07 05 06.6  +0.5
       comp=Z,11nm,1.0s
ABTX   Abilene, Hawle    79.34  54   P          P         07 05 06.6  +0.1
       baz=318
BWLO   Walkerton         79.37  35   P          P         07 05 06.1  -0.3
       baz=326
O44A   Mansfield         79.38  42   P          P         07 05 06.1  -0.5
       baz=323
L47A   Sherwood          79.41  39   P          P         07 05 06.2  -0.5
       baz=324,SNR=11
TX31   Lajitas Ar. Si    79.41  59  eP          P         07 05 07.4  +0.4
       comp=Z,12nm,1.2s
TXAR   Lajitas Array     79.41  59   P          P         07 05 07.5  +0.5
       comp=Z,6.2nm,0.7s,baz=296,slow=4.0,SNR=45
H52A   Wyevale           79.43  34   P          P         07 05 06.0  -0.7
       baz=327
K49A   Clarkson          79.50  37   P          P         07 05 07.3  +0.1
       baz=325,SNR=5.4
G53A   Haliburton        79.52  33   P          P         07 05 06.3  -0.8
       baz=328
PEMO   Pembroke          79.56  32   P          P         07 05 06.3  -1.1
       baz=328
BCLA   Clavier           79.57 338 ⇑P           P         07 05 06.9  -0.5
       comp=Z,20nm,0.9s
N46A   Monticello        79.59  41   P          P         07 05 07.2  -0.4
       baz=324
O45A   Potomac           79.65  42   P          P         07 05 08.0   0.0
       baz=323,SNR=23
I51A   Listowel          79.67  35   P          P         07 05 07.9  -0.1
       baz=326
CCM    Cathedral Cave    79.69  45  eP          P         07 05 07.4  -0.8
       comp=Z,17nm,0.8s
CCM    Cathedral Cave    79.69  45  eP          P         07 05 07.4  -0.8
CCM                                     pmax    pmax
       comp=Z,17nm,0.8s
CCM    Cathedral Cave    79.69  45   P          P         07 05 07.9  -0.3
       baz=322
M47A   Cromwell          79.72  40   P          P         07 05 07.9  -0.5
       baz=324
SNF    Seneffe           79.75 339 ⇑P           P         07 05 08.2  -0.1
       comp=Z,16nm,0.9s
F55A   Otter Lake        79.76  31   P          P         07 05 07.1  -1.3
       baz=329
L48A   N Adams           79.77  38   P          P         07 05 08.4  -0.2
       baz=325,SNR=7.8
AAM    Ann Arbor         79.81  38   P          P         07 05 08.6  -0.2
       baz=325
SFIN   Lafayette         79.84  41   P          P         07 05 08.5  -0.5
       baz=323,SNR=6.6
K50A   Casco             79.86  37   P          P         07 05 08.8  -0.3
       baz=326
BANO   Bancroft          79.86  33   P          P         07 05 08.3  -0.7
       baz=328,SNR=5.9
L49A   Milan             79.92  38   P          P         07 05 09.5   0.0
       baz=325
GIVF   Givet             79.99 338  eP          P         07 05 09.0  -0.6
GIVF                                    pmax    pmax
       comp=Z,13nm,0.9s
SOKA   Soboth            79.99 331  i P         P         07 05 09.9   0.0
       comp=Z,30nm,1.2s,SNR=9.5
M48A   Edgerton          80.02  39   P          P         07 05 09.7  -0.3
       baz=325
GROS   Grobnik           80.02 330  i P         P         07 05 09.6  -0.4
DOU    Dourbes           80.05 339 ⇑P           P         07 05 09.2  -0.7
       comp=Z,7.0nm,0.9s
N47A   Urbana            80.07  40   P          P         07 05 09.6  -0.7
       baz=324,SNR=9.8
G55A   Calabogie         80.12  32   P          P         07 05 09.5  -0.9
       baz=329,SNR=5.6
PLD    Plovdiv           80.13 322   P          P         07 05 11.7  +1.2
PLVO   Plevna            80.17  32   P          P         07 05 09.7  -0.9
       baz=329,SNR=6.5
BAIF   Baives            80.18 339  eP          P         07 05 09.2  -1.5
BAIF                                    pmax    pmax
       comp=Z,7.0nm,0.6s
U40A   Yellville         80.19  47   P          P         07 05 10.6  -0.4
       baz=321,SNR=28
KBA    Koelnbreinsper    80.21 332  i PcP       P         07 05 11.8  +0.6
       comp=Z,23nm,0.8s,SNR=20
KBA    Koelnbreinsper    80.21 332   P          P         07 05 11.7  +0.6
P45A   Graceland, Par    80.22  42   P          P         07 05 10.8  -0.2
       baz=323,SNR=5.3
ACTO   Acton             80.22  35   P          P         07 05 10.7  -0.4
       baz=327
I53A   Kortright Cn E    80.23  34   P          P         07 05 10.6  -0.4
       baz=327
OBKA   Obir              80.30 331  i P         P         07 05 11.2  -0.3
       comp=Z,10.0nm,0.8s
PKRO   Pickering         80.31  34   P          P         07 05 11.1  -0.4
       baz=328
VTS    Vitosha           80.32 324⇑iP           P         07 05 12.4  +0.6
J52A   Paris             80.36  35   P          P         07 05 11.6  -0.2
       baz=327
K51A   Iona Station      80.37  36   P          P         07 05 11.7  -0.1
       baz=326
O47A   Sheridan          80.37  41   P          P         07 05 11.1  -0.7
       baz=324
L50A   Kingsville        80.39  37   P          P         07 05 11.7  -0.2
       baz=326
N48A   Decatur           80.39  39   P          P         07 05 11.5  -0.4
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	baz=324,SNR=15						
P46A	Rosedale	80.39	42	P	P	07 05 11.9	-0.1
	baz=323,SNR=9.9						
DELO	Deloro Mine	80.41	33	P	P	07 05 11.3	-0.7
	baz=328						
GCIS	Gornji Cirnik	80.49	330	*i* P	P	07 05 12.1	-0.3
MYKA	Terra Mystica	80.50	332	*i* P	P	07 05 11.9	-0.6
	comp=Z,5.7nm,0.4s,SNR=5.2						
Q45A	Warren Harvey,	80.52	43	P	P	07 05 12.7	0.0
	baz=323,SNR=5.2						
DRWO	Darlington Wes	80.53	34	P	P	07 05 12.4	-0.2
	baz=328						
H55A	Tweed	80.54	33	P	P	07 05 11.8	-0.8
	baz=329,SNR=5.4						
WATA	Walderalm	80.55	333	*i* P	P	07 05 13.4	+0.5
	comp=Z,15nm,0.5s,SNR=14						
WTTA	Wattenberg	80.60	333	*i* PcP	P	07 05 13.7	+0.5
	comp=Z,14nm,0.4s,SNR=15						
W39A	Magazine	80.60	49	P	P	07 05 12.8	-0.3
	baz=321						
WLVO	Wesleyville	80.61	34	P	P	07 05 12.5	-0.5
	baz=328						
I55A	Frankford	80.64	33	P	P	07 05 12.4	-0.8
	baz=328						
BFO	Black Forest	80.64	336	*e*P	P	07 05 12.8	-0.4
	comp=Z,16nm,0.9s						
BFO	Black Forest	80.64	336	*i* P	P	07 05 13.2	0.0
K52A	Tillsonburg	80.65	36	P	P	07 05 13.0	-0.3
	baz=327,SNR=5.5						
RETA	Reutte	80.67	334	*i* P	P	07 05 13.7	+0.3
	comp=Z,11nm,0.8s,SNR=6.6						
MOTA	Moosalm	80.69	333	*i* P	P	07 05 13.7	+0.1
	comp=Z,26nm,0.9s,SNR=9.5						
PLIO	Pelee Island,	80.70	37	P	P	07 05 13.1	-0.5
	baz=326						
N49A	Columbus Grove	80.71	39	P	P	07 05 13.3	-0.3
	baz=325,SNR=9.7						
TYNO	Tyneside	80.73	35	P	P	07 05 13.3	-0.4
	baz=327						
SQTA	Sankt Quirin	80.77	333	*i* PcP	P	07 05 14.5	+0.5
	comp=Z,21nm,1.0s,SNR=7.7						
ABTA	Abfaltersbach	80.77	332	*i* P	P	07 05 13.4	-0.6
	comp=Z,5.1nm,1.0s						
M50A	Fremont	80.81	38	P	P	07 05 13.7	-0.5
	baz=326						
O48A	Farmland	80.82	40	P	P	07 05 13.7	-0.6
	baz=324,SNR=9.7						
JCT	Junction City	80.84	56	P	P	07 05 14.7	+0.1
	baz=318,SNR=7.6						
H56A	Elgin	80.85	32	P	P	07 05 13.6	-0.7
	baz=329						
CDF	Champ du Feu	80.87	336	*e*P	P	07 05 13.5	-1.0
CDF				pmax	pmax		
	comp=Z,25nm,1.1s						
P47A	Martinsville	80.93	41	P	P	07 05 14.4	-0.5
	baz=324,SNR=8.9						
R45A	Skylar, Fairfi	80.94	43	P	P	07 05 14.8	-0.1
	baz=323						
S44A	Carbondale	80.95	44	P	P	07 05 15.0	0.0
	baz=323,SNR=11						
WHTX	Lake Whitney,	81.04	53	P	P	07 05 15.8	+0.3
	baz=319						
J54A	Appleton	81.07	34	P	P	07 05 15.1	-0.4
	baz=328						
FETA	Feichten	81.10	334	*i* P	P	07 05 16.0	+0.2
	comp=Z,12nm,1.0s,SNR=6.8						
KEPZ	Antalya-Kepez	81.11	315	*i* P	P	07 05 15.1	-0.8
KEPZ				IAML_P			
	comp=Z,925nm,0.5s						
DAVA	Damuels	81.12	334	*i* P	P	07 05 16.0	0.0
	comp=Z,14nm,1.1s,SNR=6.3						
PECO	Prince Edward	81.14	33	P	P	07 05 15.1	-0.7
	baz=329						
MIAR	Mount Ida	81.21	49	P	P	07 05 16.6	+0.1
	baz=321,SNR=21						
MEDO	Medina	81.23	34	P	P	07 05 15.8	-0.6
	baz=328						
M51A	Elyria	81.24	37	P	P	07 05 15.9	-0.6
	baz=326						
O49A	Covington	81.24	39	P	P	07 05 16.2	-0.3
	baz=325						
N50A	Nevada	81.28	38	P	P	07 05 16.5	-0.2
	baz=326,SNR=5.4						
Q47A	Bedord North L	81.30	42	P	P	07 05 16.8	0.0
	baz=324,SNR=11						
P48A	Milroy	81.34	41	P	P	07 05 16.5	-0.5
	baz=324,SNR=6.0						
R46A	Gibon Southern	81.37	43	P	P	07 05 17.3	0.0
	baz=323						
J55A	Hilton	81.39	34	P	P	07 05 16.6	-0.6
	baz=328						
M52A	Chesterland	81.41	37	P	P	07 05 17.4	0.0
	baz=326,SNR=5.2						
W41B	Gary Mavity, V	81.42	48	P	P	07 05 17.3	-0.2
	baz=321,SNR=11						
LONY	Lake Ozonia	81.44	31	P	P	07 05 16.6	-0.9
	baz=330						
N51A	Ashland	81.50	38	P	P	07 05 17.5	-0.4
	baz=326						
HAU	Haudompre	81.50	337	*e*P	P	07 05 16.6	-1.1
HAU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
L53A	Girard	81.52	36	P	P	07 05 17.9	0.0
	baz=327,SNR=9.4						
HINF	Hinteralfeld	81.53	336	*e*P	P	07 05 17.6	-0.3
HINF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
O50A	Cable	81.59	39	P	P	07 05 18.2	-0.2
	baz=325,SNR=6.5						
P49A	Miami Univ. Ec	81.60	40	P	P	07 05 18.1	-0.3
	baz=325						
K54A	Basiliko Farm,	81.61	35	P	P	07 05 18.0	-0.4
	baz=328,SNR=6.0						
Q48A	North Vernon	81.63	41	P	P	07 05 18.4	-0.2
	baz=324,SNR=7.2						
X40A	Basin Creek Fa	81.64	48	P	P	07 05 18.7	0.0
	baz=321,SNR=5.6						
L54A	Sinclairville	81.67	35	P	P	07 05 18.6	-0.2
	baz=328						
S46A	Don Dixon Farm	81.70	43	P	P	07 05 18.9	0.0
	baz=323,SNR=5.3						
K55A	Perry	81.75	34	P	P	07 05 18.6	-0.5
	baz=328,SNR=6.0						
R47A	Wooly Knot Far	81.77	42	P	P	07 05 19.3	0.0
	baz=324,SNR=9.7						
T45A	Paducah	81.78	44	P	P	07 05 19.4	0.0
	baz=323						
M53A	WI Miller and	81.78	36	P	P	07 05 19.4	0.0
	baz=327,SNR=6.6						
ACSO	Alum Creek Sta	81.80	39	P	P	07 05 19.4	-0.1
	baz=326,SNR=6.1						
435B	Jarrell	81.88	54	P	P	07 05 20.3	+0.2
	baz=319						
WCI	Wyandotte Cave	81.93	42	*e*P	P	07 05 20.0	-0.1
	comp=Z,31nm,1.2s						
WCI	Wyandotte Cave	81.93	42	*e*P	P	07 05 20.0	-0.1
WCI				pmax	pmax		
	comp=Z,31nm,1.2s						
WCI	Wyandotte Cave	81.93	42	P	P	07 05 20.2	0.0
	baz=324						
Q49A	Aurora	81.95	40	P	P	07 05 20.2	0.0
	baz=325						
P50A	Jamestown	81.95	39	P	P	07 05 20.1	-0.1
	baz=325,SNR=9.3						
R48A	Northridge Ran	81.99	41	P	P	07 05 20.7	+0.2
	baz=324,SNR=5.9						
O51A	Pataskala	82.03	38	P	P	07 05 20.5	-0.2
	baz=326						
L55A	Hinsdale	82.07	35	P	P	07 05 20.6	-0.3
	baz=328						
PDG	Podgorica	82.09	326	⇑*i*P	P	07 05 20.5	-0.4
T46A	Princeton	82.12	44	P	P	07 05 21.6	+0.5
	baz=323,SNR=6.2						
M54A	Oil Creek Stat	82.14	36	P	P	07 05 21.0	-0.2
	baz=327,SNR=7.1						
S47A	Hartford	82.17	43	P	P	07 05 21.1	-0.3
	baz=324						
N53A	Lisbon	82.24	37	P	P	07 05 21.6	-0.2
	baz=327,SNR=6.2						
P51A	Williamsport	82.38	39	P	P	07 05 21.9	-0.5
	baz=326,SNR=5.9						
O52A	Adamsville	82.39	38	P	P	07 05 22.2	-0.3
	baz=326,SNR=5.6						
R49A	Shelbyville	82.40	41	P	P	07 05 22.6	0.0
	baz=325						
N54A	Moraine State	82.46	36	P	P	07 05 22.7	-0.2
	baz=327,SNR=6.9						
Q50A	Georgetown	82.49	40	P	P	07 05 23.0	-0.1
	baz=325						
S48A	Wiedeman Farm,	82.50	42	P	P	07 05 23.2	0.0
	baz=324,SNR=7.9						
FLN	La Foliniere	82.51	341	*e*P	P	07 05 22.0	-1.0
FLN				pmax	pmax		
	comp=Z,17nm,0.6s						
U46A	Springville	82.53	44	P	P	07 05 23.4	+0.1
	baz=323						
M55A	Ridgway	82.54	35	P	P	07 05 23.1	-0.2
	baz=328,SNR=7.1						
T47A	Sharon Grove	82.54	43	P	P	07 05 23.7	+0.3
	baz=324,SNR=7.1						
O53A	New Philadelph	82.55	37	P	P	07 05 23.1	-0.2
	baz=327,SNR=12						
LDF	La Druitiere	82.59	341	*e*P	P	07 05 22.5	-0.9
LDF				pmax	pmax		
	comp=Z,9.0nm,0.5s						
Z41A	Richland Creek	82.61	49	P	P	07 05 24.1	+0.4
	baz=321						
Q51A	Peebles	82.63	39	P	P	07 05 23.8	0.0
	baz=326,SNR=9.1						
X43A	Marvell	82.63	47	P	P	07 05 24.1	+0.3
	baz=322						
P52A	Corning	82.66	38	P	P	07 05 23.3	-0.7
	baz=326						
LBNH	Lisbon	82.70	29	P	P	07 05 24.0	-0.1
	baz=332						
S49A	Springfield	82.76	41	P	P	07 05 24.5	+0.1
	baz=325,SNR=8.3						
M56A	Emporium	82.76	35	P	P	07 05 24.0	-0.5
	baz=328						
NATX	Nacogdoches	82.76	51	P	P	07 05 25.3	+0.8
	baz=321						
T48A	Bowling Green	82.78	43	P	P	07 05 24.7	0.0
	baz=324						
R50A	Paris	82.80	41	P	P	07 05 24.7	0.0
	baz=325						
CABF	La Chapelle	82.84	336	*e*P	P	07 05 25.1	+0.2
CABF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LOR	Lormes	82.85	338	*e*P	P	07 05 23.8	-1.0
LOR				pmax	pmax		
	comp=Z,11nm,0.5s						
WVT	Waverly	82.88	44	*e*P	P	07 05 24.9	-0.2
	comp=Z,9.5nm,0.8s						
WVT	Waverly	82.88	44	*e*P	P	07 05 24.9	-0.2
WVT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WVT	Waverly	82.88	44	P	P	07 05 25.2	+0.1
	baz=323						
U47A	Clarksville	82.89	44	P	P	07 05 25.4	+0.3
	baz=324						
GRR	Gorron	82.95	341	*e*P	P	07 05 24.5	-0.7
GRR				pmax	pmax		
	comp=Z,24nm,0.5s						
O54A	Avella	82.95	37	P	P	07 05 25.5	+0.1
	baz=327						
V46A	Holladay	83.00	44	P	P	07 05 25.7	-0.1
	baz=323,SNR=7.3						
BINY	Binghamton	83.01	33	P	P	07 05 25.0	-0.7
	baz=330						
N55A	Marion Center	83.03	36	P	P	07 05 25.6	-0.3
	baz=328,SNR=5.0						
P53A	Whipple	83.10	38	P	P	07 05 26.0	-0.3
	baz=327						
R51A	Hillsboro	83.12	40	P	P	07 05 26.3	0.0
	baz=326,SNR=7.1						
SSF	Saint Saulge	83.13	338	*e*P	P	07 05 25.8	-0.4
SSF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
Q52A	Bidwell	83.16	39	P	P	07 05 26.1	-0.4
	baz=326						
N56A	West Decatur	83.19	35	P	P	07 05 26.7	-0.1
	baz=328,SNR=6.3						
T49A	Edmonton	83.19	42	P	P	07 05 26.8	0.0
	baz=324,SNR=5.5						
U48A	Cassie Pea, Po	83.20	43	P	P	07 05 26.8	0.0
	baz=324						
V47A	Nunnelly	83.27	44	P	P	07 05 27.0	-0.2
	baz=324,SNR=13						
RAYN	Ar Rayn	83.38	297	*e*P	P	07 05 26.3	-1.7
	comp=Z,4.3nm,0.8s						
RAYN	Ar Rayn	83.38	297	*e*P	P	07 05 26.3	-1.7
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
O55A	Ligonier	83.38	36	P	P	07 05 27.3	-0.3
	baz=328,SNR=5.9						
OXF	Oxford	83.38	46	P	P	07 05 27.7	0.0
	baz=323						
P54A	Burton	83.40	37	P	P	07 05 27.8	0.0
	baz=327,SNR=5.6						
W46A	Michie	83.41	45	P	P	07 05 27.7	-0.1
	baz=323						
AVF	Avril sur Loir	83.42	338	*e*P	P	07 05 27.4	-0.3
AVF				pmax	pmax		
	comp=Z,24nm,0.8s						
SMF	Signal de Mont	83.43	338	*e*P	P	07 05 27.1	-0.7
SMF				pmax	pmax		
	comp=Z,46nm,1.1s						
SGMF	Saint Gilles	83.44	342	*e*P	P	07 05 27.2	-0.6
SGMF				pmax	pmax		
	comp=Z,22nm,0.6s						
LMN	Caledonia Moun	83.50	24	*e*P	P	07 05 27.4	-0.7
	comp=Z,7.7nm,0.8s						
R52A	Catlettsburg	83.51	39	P	P	07 05 28.2	-0.1
	baz=326						
ROSF	Rostrenen	83.52	343	*e*P	P	07 05 27.6	-0.6
ROSF				pmax	pmax		
	comp=Z,27nm,0.8s						
U49A	Red Boiling Sp	83.56	43	P	P	07 05 28.7	+0.1
	baz=324,SNR=13						
Q53A	Leroy	83.57	38	P	P	07 05 28.7	+0.1
	baz=327,SNR=9.2						
T50A	Nancy	83.59	42	P	P	07 05 28.7	0.0
	baz=325,SNR=14						
SSPA	Standing Stone	83.60	35	P	P	07 05 28.5	-0.3
	baz=328						
MCWV	Mont Chateau	83.62	37	P	P	07 05 28.9	+0.1
	baz=327						
N57A	Milroy	83.63	35	P	P	07 05 28.7	-0.2
	baz=329,SNR=9.1						
O56A	Blue Knob Stat	83.63	36	P	P	07 05 28.8	-0.1
	baz=328,SNR=5.9						
S51A	Beattyville	83.65	40	P	P	07 05 28.9	-0.2
	baz=326,SNR=5.4						
LPL	La Plagne	83.66	335	*e*P	P	07 05 29.7	+0.5
LPL				pmax	pmax		
	comp=Z,15nm,0.9s						
LPG	La Plagne	83.67	335	*e*P	P	07 05 29.9	+0.5
LPG				pmax	pmax		
	comp=Z,14nm,0.9s						
V48A	Smith Brothers	83.68	44	P	P	07 05 29.2	-0.1
	baz=324,SNR=7.0						
W47A	Westpoint	83.70	44	P	P	07 05 29.2	-0.1
	baz=324,SNR=6.0						
P55A	Reedsville	83.75	37	P	P	07 05 29.7	+0.1
	baz=327,SNR=8.3						
Q54A	Coxs Mills	83.76	38	P	P	07 05 29.6	0.0
	baz=327						
X46A	Booneville	83.76	46	P	P	07 05 29.4	-0.2
	baz=323						
BGF	Bois d'Agland	83.77	338	*e*P	P	07 05 26.5	-3.0
BGF				pmax	pmax		
	comp=Z,7.0nm,0.4s						
M59A	Waymart	83.78	33	P	P	07 05 29.1	-0.6
	baz=330						
R53A	Hurricane	83.82	39	P	P	07 05 29.8	-0.1
	baz=326						
S52A	Salyersville	83.85	40	P	P	07 05 30.1	0.0
	baz=326,SNR=7.7						
QUIF	Quistinic	83.89	343	*e*P	P	07 05 26.8	-3.3
QUIF				pmax	pmax		
	comp=Z,18nm,0.9s						
T51A	Gray	84.04	41	P	P	07 05 30.9	-0.1
	baz=325						
O57A	Amberson	84.06	35	P	P	07 05 31.1	0.0
	baz=329						
Q55A	Buckhannon	84.07	37	P	P	07 05 31.2	0.0
	baz=327						
U50A	Jamestown	84.08	42	P	P	07 05 31.4	+0.1
	baz=325,SNR=11						
V49A	McMinnville	84.10	43	P	P	07 05 31.2	-0.2
	baz=324						
W48A	Pulaski	84.11	44	P	P	07 05 31.4	0.0
	baz=324,SNR=15						
X47A	Russelville	84.15	45	P	P	07 05 31.4	-0.3
	baz=324						
P56A	Dayton Farm, R	84.17	36	P	P	07 05 31.8	+0.2
	baz=328,SNR=11						
TCF	Toulx Ste Croi	84.18	339	*e*P	P	07 05 31.5	-0.1
TCF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
N59A	State Game Lan	84.19	34	P	P	07 05 31.5	-0.3
	baz=330						
S53A	Williamson	84.28	39	P	P	07 05 32.0	-0.3
	baz=326						
HRV	Adam Dziewonsk	84.36	30	P	P	07 05 32.6	+0.1
	baz=332						
R54A	Victor	84.36	38	P	P	07 05 32.6	-0.1
	baz=327						
MBDF	Montbardon	84.36	335	*e*P	P	07 05 32.2	-0.6
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.4s						
T52A	Hallie	84.36	40	P	P	07 05 32.6	-0.1
	baz=326						
Q56A	Snyder Ridge,	84.41	37	P	P	07 05 32.9	0.0
	baz=328						
O58A	Lewisberry	84.42	35	P	P	07 05 32.6	-0.3
	baz=329,SNR=5.6						
ORIF	Oris-en-Rattie	84.45	336	*e*P	P	07 05 33.2	+0.1
ORIF				pmax	pmax		
	comp=Z,13nm,0.7s						
W49A	Belvidere	84.45	44	P	P	07 05 33.0	-0.2
	baz=324,SNR=5.5						
MFF	Saint Martin d	84.47	340	*e*P	P	07 05 33.2	+0.2
MFF				pmax	pmax		
	comp=Z,18nm,0.6s						
U51A	La Follette	84.49	41	P	P	07 05 33.2	-0.1
	baz=325						
SSB	Saint Sauveur	84.50	337	P	P	07 05 33.6	+0.3
P57A	Homestead Farm	84.52	36	P	P	07 05 32.8	-0.6
	baz=328						
S54A	Dingess, Beckl	84.54	39	P	P	07 05 33.5	-0.1
	baz=327						
O59A	Robesonia	84.55	34	P	P	07 05 33.2	-0.3
	baz=330						
V50A	Pikevile	84.56	43	P	P	07 05 33.5	-0.2
	baz=325,SNR=5.2						
TZTN	Tazewell	84.57	41	P	P	07 05 33.8	+0.1
	baz=326						
X48A	Hartselle	84.61	45	P	P	07 05 33.5	-0.5
	baz=324						
M61A	Granite Spring	84.61	32	P	P	07 05 33.2	-0.6
	baz=331						
VBMS	Vicksburg	84.62	48	P	P	07 05 34.6	+0.6
	baz=322						
R55A	Marlinton	84.65	38	P	P	07 05 34.2	0.0
	baz=327,SNR=7.7						
T53A	Wise	84.67	40	P	P	07 05 34.3	0.0
	baz=326,SNR=6.0						
Q57A	Strasburg	84.74	36	P	P	07 05 34.0	-0.6
	baz=328						
U52A	Thorn Hill	84.78	41	P	P	07 05 35.0	+0.2
	baz=326,SNR=10						
V51A	Loudon	84.81	42	P	P	07 05 34.9	0.0
	baz=325						
P58A	Pank, Wackersv	84.81	35	P	P	07 05 34.7	-0.1
	baz=329,SNR=5.1						
PAL	Palisades	84.82	32	P	P	07 05 34.5	-0.4
	baz=331						
W50A	Signal Mountai	84.84	43	*e*P	P	07 05 35.0	-0.2
	comp=Z,12nm,0.8s						
W50A	Signal Mountai	84.84	43	P	P	07 05 35.0	-0.2
	baz=325,SNR=5.2						
O60A	Telford	84.85	34	P	P	07 05 34.6	-0.5
	baz=330						
VIVF	Saint-Julien-l	84.85	336	*e*P	P	07 05 34.8	-0.2
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
R56A	Bull Pasture M	84.85	37	P	P	07 05 35.2	-0.1
	baz=328						
X49A	Woodville	84.91	44	P	P	07 05 35.3	-0.1
	baz=324,SNR=6.3						
S55A	Lewisburg	84.92	38	P	P	07 05 35.2	-0.3
	baz=327						
SBF	Sospel	84.95	334	*e*P	P	07 05 34.8	-0.8
SBF				pmax	pmax		
	comp=Z,29nm,0.9s						
Y48A	Jasper	84.98	45	P	P	07 05 35.2	-0.6
	baz=324,SNR=6.1						
T54A	Tazewell	85.04	39	P	P	07 05 36.2	0.0
	baz=327,SNR=9.2						
P59A	Jarrettsville	85.05	35	P	P	07 05 35.8	-0.3
	baz=329						
Q58A	Fox Den Farm,	85.12	36	P	P	07 05 36.3	-0.1
	baz=329						
V52A	Sevierville	85.12	41	P	P	07 05 36.6	0.0
	baz=326,SNR=9.7						
W51A	Cleveland	85.14	43	P	P	07 05 36.4	-0.2
	baz=325,SNR=6.4						
U53A	Fall Branch	85.16	40	P	P	07 05 36.7	0.0
	baz=326,SNR=7.2						
P60A	Greenville	85.19	34	P	P	07 05 36.4	-0.4
	baz=330						
X50B	Fort Payne	85.28	44	P	P	07 05 37.2	-0.2
	baz=325						
T55A	Pulaski	85.34	39	P	P	07 05 37.7	+0.1
	baz=327,SNR=7.7						
U54A	Nelsons Funny	85.37	40	P	P	07 05 37.9	0.0
	baz=326						
Y49A	Blount Mountai	85.39	45	P	P	07 05 37.6	-0.3
	baz=324						
S56A	Natural Bridge	85.40	38	P	P	07 05 37.8	-0.1
	baz=328						
147A	Livingston	85.42	46	P	P	07 05 38.4	+0.4
	baz=323						
BLA	Blacksburg	85.42	39	P	P	07 05 38.0	0.0
	baz=327,SNR=6.5						
FRF	La Foret Royal	85.46	335	*e*P	P	07 05 37.8	-0.3
FRF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CAF	Calviac	85.49	338	*e*P	P	07 05 38.3	+0.1
CAF				pmax	pmax		
	comp=Z,15nm,0.6s						
R58A	Rapidan	85.53	36	P	P	07 05 38.3	-0.2
	baz=328,SNR=5.4						
X51A	Calhoun	85.57	43	P	P	07 05 38.8	0.0
	baz=325						
W52A	Murphy	85.58	42	P	P	07 05 38.9	0.0
	baz=326						
S57A	Dark Hollow, R	85.59	37	P	P	07 05 38.9	+0.1
	baz=328						
V53A	Saluda	85.63	41	P	P	07 05 39.1	0.0
	baz=326						
PGF	Pioggiola	85.65	333	*e*P	P	07 05 38.4	-0.8
PGF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
Y50A	Piedmont	85.70	44	P	P	07 05 39.2	-0.2
	baz=325,SNR=5.3						
LMR	La Mourre	85.71	335	*e*P	P	07 05 38.9	-0.4
LMR				pmax	pmax		
	comp=Z,17nm,1.0s						
U55A	TA2, Sparta	85.73	39	P	P	07 05 39.4	-0.2
	baz=327						
T56A	Rocky Mt	85.74	38	P	P	07 05 39.4	-0.2
	baz=328						
LRAL	Lakeview Retre	85.77	45	P	P	07 05 39.2	-0.5
	baz=324						
148A	Greensboro	85.79	46	P	P	07 05 40.5	+0.7
	baz=324						
Q60A	Greensboro	85.81	35	P	P	07 05 39.0	-0.8
	baz=330						
LFF	La Frestale	85.81	339	*e*P	P	07 05 39.7	0.0
LFF				pmax	pmax		
	comp=Z,20nm,0.6s						
TIP	Timpagrande	85.85	326	⇑*i*P	P	07 05 39.5	-0.7
R58B	Mineral	85.87	36	P	P	07 05 39.9	-0.3
	baz=329						
Z49A	Columbiana	85.87	45	P	P	07 05 40.0	-0.3
	baz=324						
CBN	Corbin Frederi	85.87	36	P	P	07 05 40.1	0.0
	baz=329						
W53A	Cullowhee	85.88	42	P	P	07 05 40.4	0.0
	baz=326						
V54A	Nebo	85.93	40	P	P	07 05 40.4	-0.2
	baz=326						
R59A	King George, V	85.98	36	P	P	07 05 40.5	-0.2
	baz=329						
X52A	Dahlonega	86.00	42	P	P	07 05 41.0	+0.1
	baz=326						
Y51A	Rockmart	86.02	44	P	P	07 05 40.8	-0.2
	baz=325,SNR=12						
T57A	Hurt	86.10	38	P	P	07 05 41.2	-0.2
	baz=328,SNR=5.1						
Z50A	Ashland	86.12	45	P	P	07 05 41.5	0.0
	baz=325,SNR=17						

U56A	King	86.16	39	P	P	07 05 41.7	+0.1
	baz=327						
149A	Jones	86.22	46	P	P	07 05 42.2	+0.2
	baz=324,SNR=8.7						
S59A	Mechanicsville	86.28	36	P	P	07 05 42.3	+0.1
	baz=329						
X53A	Estanollee	86.36	42	P	P	07 05 43.2	+0.6
	baz=326,SNR=8.8						
W54A	Cherokee Point	86.40	41	P	P	07 05 43.0	+0.2
	baz=326						
Z51A	Franklin	86.44	44	P	P	07 05 43.1	0.0
	baz=325						
T58A	Grand View Acr	86.45	37	P	P	07 05 43.0	0.0
	baz=328						
Y52A	Lilburn	86.53	43	P	P	07 05 43.7	+0.2
	baz=326						
U57A	Blanch	86.54	38	P	P	07 05 43.4	-0.1
	baz=328						
249A	Camden	86.56	46	P	P	07 05 44.4	+0.8
	baz=324,SNR=7.2						
V56A	Mocksville	86.56	39	P	P	07 05 43.7	+0.1
	baz=327						
150A	Eclectic	86.60	45	P	P	07 05 43.6	-0.2
	baz=324,SNR=5.7						
KMSC	Kings Mountain	86.74	40	P	P	07 05 44.3	-0.2
	baz=327,SNR=5.7						
X54A	Belton	86.76	41	P	P	07 05 45.0	+0.4
	baz=326						
Y53A	Monroe	86.76	43	P	P	07 05 44.8	+0.2
	baz=326,SNR=5.9						
V57A	Coltrane Farms	86.81	39	P	P	07 05 44.7	-0.1
	baz=328						
T59A	Double "B" Far	86.85	37	P	P	07 05 44.8	-0.2
	baz=329						
Z52A	Williamson	86.91	44	P	P	07 05 45.6	+0.2
	baz=325						
U58A	Oxford	86.92	38	P	P	07 05 45.3	-0.1
	baz=328,SNR=6.4						
MTLF	Montolieu	86.92	338	eP	P	07 05 46.0	+0.8
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
250A	Grady	86.98	46	P	P	07 05 46.1	+0.4
	baz=324,SNR=6.3						
151A	Opelika	87.00	45	P	P	07 05 45.7	-0.1
	baz=325						
349A	Repton	87.02	47	P	P	07 05 46.6	+0.7
	baz=324						
T60A	Surry	87.04	36	P	P	07 05 45.9	0.0
	baz=329						
X55A	Gracelyn & Ava	87.16	41	P	P	07 05 46.7	+0.2
	baz=327						
Y54A	Tignall	87.18	42	P	P	07 05 47.3	+0.6
	baz=326,SNR=22						
V58A	Windy Hill, Pi	87.18	38	P	P	07 05 46.6	0.0
	baz=328						
GOGA	Godfrey	87.18	43	P	P	07 05 46.9	+0.3
	baz=326						
152A	Waverly Hall	87.19	44	P	P	07 05 46.6	-0.1
	baz=325						
Z53A	Monticello	87.24	43	P	P	07 05 47.1	+0.2
	baz=326,SNR=5.6						
BRAL	Brewton	87.24	47	P	P	07 05 47.3	+0.4
	baz=324						
U59A	Littleton	87.27	37	P	P	07 05 47.2	+0.2
	baz=329						
251A	Midway	87.31	45	P	P	07 05 47.4	0.0
	baz=325						
W57A	Gilead	87.33	39	P	P	07 05 47.2	-0.2
	baz=328						
X56A	White Oak	87.42	40	P	P	07 05 47.7	-0.1
	baz=327,SNR=5.0						
U60A	Pendleton	87.44	37	P	P	07 05 47.7	-0.1
	baz=329						
449A	Pace	87.48	47	P	P	07 05 48.7	+0.6
	baz=324						
Y55A	Saluda	87.50	41	P	P	07 05 48.5	+0.4
	baz=327						
V59A	Middlesex	87.58	38	P	P	07 05 48.6	+0.1
	baz=328						
Z54A	Sparta	87.62	42	P	P	07 05 49.2	+0.4
	baz=326						
153A	Fort Valley	87.63	43	P	P	07 05 49.0	+0.2
	baz=326						
EPF	Esparros	87.70	339	eP	P	07 05 47.4	-1.6
EPF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
252A	Lumpkin	87.72	44	P	P	07 05 49.3	+0.1
	baz=325						
450A	Crestview	87.77	46	P	P	07 05 49.8	+0.3
	baz=324						
W58A	Raeford	87.78	39	P	P	07 05 49.5	0.0
	baz=328						
U61A	Possum Corner	87.85	36	P	P	07 05 49.7	-0.1
	baz=330						
X57A	Johnson Farm,	87.86	40	P	P	07 05 50.1	+0.2
	baz=328						
Y56A	Pelion	87.88	41	P	P	07 05 50.4	+0.5
	baz=327						
351A	Pinckard	87.88	45	P	P	07 05 50.6	+0.5
	baz=325						
Z55A	Blythe	87.96	42	P	P	07 05 51.0	+0.6
	baz=326						
253A	Americus	87.97	44	P	P	07 05 50.8	+0.4
	baz=326						
V60A	Jim Taylor Roa	88.00	37	P	P	07 05 50.5	+0.1
	baz=329						
W59A	Clinton	88.00	38	P	P	07 05 51.0	+0.5
	baz=328						
154A	Montrose	88.01	43	P	P	07 05 51.0	+0.4
	baz=326						
ETSF	Etsaut	88.05	339	eP	P	07 05 50.1	-0.6
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
352A	Blakely	88.05	45	P	P	07 05 51.4	+0.6
	baz=325						
Y57A	Sumter	88.10	40	P	P	07 05 51.4	+0.4
	baz=327						
X58A	Rowland	88.12	39	P	P	07 05 51.2	+0.1
	baz=328						
CNNC	Cliffs of the	88.18	38	P	P	07 05 51.6	+0.3
	baz=329						
Z56A	Williston	88.23	41	P	P	07 05 52.1	+0.5
	baz=327						
V61A	Roper	88.26	37	P	P	07 05 52.1	+0.4
	baz=329						
X59A	McDuffie Farm,	88.43	39	P	P	07 05 52.6	+0.1
	baz=328						
353A	Camilla	88.51	44	P	P	07 05 53.7	+0.8
	baz=326						
Y58A	Scranton	88.52	40	P	P	07 05 53.3	+0.3
	baz=328						
Z57A	Bowman	88.56	41	P	P	07 05 53.5	+0.3
	baz=327						
W61A	Ground Anchor	88.61	37	P	P	07 05 53.6	+0.2
	baz=329						
X60A	Albert Glenn T	88.70	38	P	P	07 05 54.0	+0.2
	baz=329						
156A	Sylvania	88.73	42	P	P	07 05 55.0	+1.0
	baz=327						
TIGA	Tifton	88.74	44	P	P	07 05 54.7	+0.6
	baz=326						
Y59A	Loris	88.81	39	P	P	07 05 54.5	+0.2
	baz=328						
255A	Hazlehurst	88.87	43	P	P	07 05 55.2	+0.5
	baz=326						
Z58A	St. Stephen	88.94	40	P	P	07 05 55.3	+0.3
	baz=328						
256A	Glennville	89.11	42	P	P	07 05 56.3	+0.5
	baz=327						
355A	Pearson	89.17	43	P	P	07 05 56.7	+0.6
	baz=326						
Z59A	Georgetown, SC	89.26	40	P	P	07 05 56.8	+0.3
	baz=328						
356A	Blackshear	89.54	43	P	P	07 05 58.4	+0.6
	baz=326						
KEST	Kesra	91.66	329	P	P	07 06 07.4	-0.3
	comp=Z,9.1nm,0.9s,baz=327,slow=8.0,SNR=7.9						
KEST	Kesra	91.66	329	eP	P	07 06 07.5	-0.3
	comp=Z,17nm,1.2s						
ESDC	Sonseca Array	91.92	341	P	P	07 06 06.5	-2.3
	comp=Z,0.2nm,0.3s,baz=20,slow=4.8,SNR=6.0						
TOA1	Torodi Ar. Sit	114.99	326	ePKiKP	PKiKP	07 11 40.4	-0.8
TORD	Torodi Ar. Bea	115.00	326	PKP	PKiKP	07 11 40.4	-0.8
	comp=Z,0.7nm,0.4s,baz=28,slow=2.1,SNR=12						
QSPA	South Pole Qui	135.54	180	ePKPdf	PKPdf	07 12 20.0	+1.2
CFA	Coronel Fontan	146.81	78	PKPbc	PKPbc	07 12 41.8	-0.2
	comp=Z,11nm,0.7s,baz=301,slow=7.0,SNR=2.7						
PLCA	Paso Flores	149.79	95	ePKPbc	PKiKP	07 12 50.4	0.0
PLCA	Paso Flores	149.79	95	ePKP2	PKiKP	07 12 50.4	0.0
SNAA	Sanae	151.17	197	PKPdf	PKPbc	07 12 51.5	-0.3
SNAA	Sanae	151.17	197	ePKPbc	PKPbc	07 12 51.8	0.0
SNAA	Sanae	151.17	197	ePKIKP	PKPbc	07 12 51.8	0.0
VNA3	Neumayer Olymp	152.79	194	PKPdf	PKPbc	07 12 54.8	-0.7
SPB	Sao Paulo	153.41	40	ePKPdf	PKPdf	07 12 50.3	-0.2

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*SJA **06** 07:05:35.2±0.8, 23°.40S×66°.42W, h290km±7km, ML5.0, MW5.4*
*MOS **06** 07:05:40.8±1.4, 23°.45S×66°.42W, h210km, mb5.2/23, Error ellipse: s-maj=12.1km s-min=7.1km az=107.2*
*ISCJB **06** 07:05:40.2±0.2, 23°.37S±0°.02×66°.49W±0°.02, h213km±2km, mb5.0/85, Error ellipse: s-maj=4.2km s-min=2.7km az=38.2*
*IDC **06** 07:05:40.3±0.7, 23°.41S×66°.38W, h198km±5km, mb4.6/19, mb1 4.7/28, mb1mx4.7/33, mbtmp5.2/28, Error ellipse: s-maj=9.1km s-min=7.5km az=78.0*
*NEIC **06** 07:05:40.2±2.0, 23°.52S×66°.43W, h199km, mb5.2/385, MD5.4(SJA), ML5.3(GUC), Error ellipse: s-maj=9.9km s-min=7.8km az=84.0*
*VAO **06** 07:05:41.1±0.3, 23°.47S×66°.50W, h212km±3km, mb5.2*
*GUC **06** 07:05:42.3±0.7, 23°.47S×67°.11W, h247km±9km, ML5.3*
*BJI **06** 07:05:42.3±0.0, 23°.50S×66°.40W, h203km, mB5.1/12*
ISC 06 07:05:41.4±0.5**, 23°.43S**±0°.03×**66°.52W**±0°.04**, h210**km±4km**,**
n962, σ1s.17/1017**, mb5.0**/85**, 17C-9D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	1.05	78	iP	Pn	07 06 14.8	+1.8
HJA				IAML		07 06 15.9	
	comp=Z,5μm,0.5s						
AZAP	Zapla	1.55	121	iP	Pn	07 06 17.7	+1.0
AZAP				IAML		07 06 18.6	
	comp=Z,6μm,0.7s						
YJA	Yavi	1.56	37	iP	Pn	07 06 18.9	+1.9
YJA				iS	S	07 06 50.4	+6.0
SLA	San Lorenzo	1.59	144	iP	Pn	07 06 18.4	+1.5
SLA				IAML		07 06 20.0	
	comp=Z,12μm,0.7s						
LVC	Limon Verde	2.35	290	P	Pn	07 06 25.2	+0.6
	comp=Z,531nm,0.3s,baz=112,slow=6.4,SNR=2884						
LVC				S	S	07 06 57.6	-0.3
	comp=Z,170nm,0.3s,baz=186,slow=23,SNR=17						
LVC	Limon Verde	2.35	290	ePn	Pn	07 06 25.4	+0.8
LVC				eSn	S	07 06 58.7	+0.8
LVC	Limon Verde	2.35	290	iP	Pn	07 06 25.5	+0.8
LVC				iS	S	07 07 02.5	+4.6
LVC	Limon Verde	2.35	290	⇓eP	Pn	07 06 25.4	+0.8
LVC				eS	S	07 06 58.2	+0.3
LVC	Limon Verde	2.35	290	eP	Pn	07 06 25.4	+0.8
LVC				eS	S	07 06 58.1	+0.2
FSA	Cafayete	2.71	170	iP	Pn	07 06 28.5	+0.1
FSA				IAML		07 06 29.4	
	comp=Z,945nm,0.5s						
PB15	IPOC Station P	2.72	274	iP	Pn	07 06 28.8	+0.2
PB15				iS	S	07 07 08.6	+3.6
PB15	IPOC Station P	2.72	274	⇑iP	Pn	07 06 28.5	-0.1
PB15				eS	S	07 07 03.6	-1.4
PB06	IPOC Station P	2.90	284	iP	Pn	07 06 30.2	-0.3
PB06				iS	S	07 07 11.9	+3.3
PB06	IPOC Station P	2.90	284	⇑iP	Pn	07 06 30.8	+0.2
PB06				eS	S	07 07 06.8	-1.8
PB06				IAML		07 07 12.5	
	comp=E,5μm,0.5s						
PB09	IPOC Station P	2.99	302	⇑iP	Pn	07 06 32.7	+1.0
PB09				eS	S	07 07 10.5	-0.1
PB09				IAML		07 07 14.1	
	comp=N,3μm,0.2s						
PB03	IPOC Station P	3.28	294	⇑iP	Pn	07 06 35.2	+0.1
PB03				⇑eS	S	07 07 15.0	-1.7
GO02	Mina Guanaco	3.29	238	ePn	Pn	07 06 34.8	-0.5
GO02				eSn	S	07 07 15.2	-1.8
GO02	Mina Guanaco	3.29	238	⇑iP	Pn	07 06 34.7	-0.5
GO02				eS	S	07 07 15.5	-1.5
GO02				IAML		07 07 17.7	
	comp=N,7μm,0.7s						
PB05	IPOC Station P	3.44	279	iP	Pn	07 06 36.1	-0.7
PB05	IPOC Station P	3.44	279	⇑iP	Pn	07 06 36.3	-0.5
PB05				eS	S	07 07 16.8	-3.0
PB05				IAML		07 07 20.4	
	comp=N,2μm,0.4s						
AHML	Horco Molle	3.51	162	iP	Pn	07 06 36.2	-1.4
PB04	IPOC Station P	3.52	287	ePn	Pn	07 06 37.6	-0.3
PB04				eSn	S	07 07 20.2	-1.5
PB04	IPOC Station P	3.52	287	iP	Pn	07 06 37.5	-0.3
PB04				iS	S	07 07 22.5	+0.8
PB04	IPOC Station P	3.52	287	⇑iP	Pn	07 06 37.6	-0.3
PB04				eS	S	07 07 19.5	-2.2
PB04				IAML		07 07 23.6	
	comp=E,5μm,0.4s						
PB07	IPOC Station P	3.54	298	⇑iP	Pn	07 06 38.2	0.0
PB07				eS	S	07 07 19.8	-2.4
PB01	IPOC Station P	3.63	310	ePn	Pn	07 06 39.4	+0.3
PB01				eSn	S	07 07 23.6	-0.4
PB01	IPOC Station P	3.63	310	⇑iP	Pn	07 06 39.3	+0.1
PB01				eS	S	07 07 23.3	-0.8
PB10	IPOC Station P	3.70	268	ePn	Pn	07 06 39.2	-0.7
PB10	IPOC Station P	3.70	268	⇑iP	Pn	07 06 39.2	-0.7
PB10				eS	S	07 07 21.4	-4.0
PB14	IPOC Station P	3.74	251	iP	Pn	07 06 39.5	-1.2
PB14	IPOC Station P	3.74	251	IAML		07 07 28.0	
	comp=E,3μm,0.5s						
PB02	IPOC Station P	3.76	303	⇑iP	Pn	07 06 40.4	-0.4
PB02				eS	S	07 07 24.1	-2.9
GO01	Chusmiza	4.49	326	ePn	Pn	07 06 51.0	+0.8
GO01				eSn	S	07 07 43.5	-0.4
PB11	IPOC Station P	4.67	321	ePn	Pn	07 06 51.7	-0.4
PB11				eSn	S	07 07 45.0	-2.5
MNMC	Minye Minye	5.15	326	ePn	Pn	07 06 58.2	0.0
MNMC				eSn	S	07 07 57.7	-1.0
GO03	Copiap	5.33	218	ePn	Pn	07 06 57.8	-2.5
GO03				eSn	S	07 07 55.6	-6.9
LPAZ	La Paz	7.26	348	P	Pn	07 07 26.6	+0.9
	comp=E,32nm,0.3s,baz=153,slow=5.5,SNR=1346						
LPAZ				S	S	07 08 46.3	-2.3
	comp=E,7.9nm,0.3s,baz=202,slow=23,SNR=4.5						
LPAZ	La Paz	7.26	348	ePn	Pn	07 07 26.3	+0.5
LPAZ				eSn	S	07 08 47.3	-1.3
LPAZ	La Paz	7.26	348	eP	Pn	07 07 26.3	+0.5
LPAZ	La Paz	7.26	348	eP	Pn	07 07 26.5	+0.8
GO04	Tololo Observa	7.73	209	ePn	Pn	07 07 27.6	-3.6
GO04				eSn	S	07 08 51.5	-7.4
CFA	Coronel Fontan	8.29	190	P	Pn	07 07 35.9	-2.4
	comp=E,9.5nm,0.3s,baz=344,slow=8.9,SNR=66						
CFA				S	S	07 09 02.3	-9.5
	comp=E,15nm,0.3s,baz=276,slow=19,SNR=15						
CPUP	Villa Florida	8.83	111	P	Pn	07 07 43.5	-1.9
	comp=E,1.2nm,0.3s,baz=297,slow=12,SNR=50						
CPUP				ScP	ScP	07 17 02.1	+0.3
	comp=E,0.1nm,0.3s,baz=50,slow=2.5,SNR=3.1						
CPUP	Villa Florida	8.83	111	eP	Pn	07 07 44.3	-1.1
CPUP				eS	S	07 09 24.0	-0.8
SIV	San Ignacio	9.00	36	P	Pn	07 07 46.8	-0.9
	comp=E,28nm,0.3s,baz=230,slow=13,SNR=780						
SIV				S	S	07 09 15.7	-13
	comp=E,0.6nm,0.3s,baz=255,slow=16,SNR=2.4						
PEL	Peldehue	10.35	200	ePn	Pn	07 08 03.5	-1.4
PEL	Peldehue	10.35	200	eP	Pn	07 08 03.5	-1.4
AQDB	Aquidauana	10.46	76	eP	Pn	07 08 05.8	-0.7
GO05	Huala	12.46	201	ePn	Pn	07 08 30.4	-1.3
TRCB	Terra Rica	12.80	90	eP	Pn	07 08 35.3	-0.8
PTGB	Pitanga	13.27	98	eP	Pn	07 08 42.7	+0.6
CPSB	Cacapava Do Su	13.58	124	eP	Pn	07 08 44.8	-0.9
PLTB	Pedras Altas	14.14	129	eP	Pn	07 08 50.8	-1.8
OGAUY	Aigu	14.99	139	eP	Pn	07 09 01.6	-1.4
NNA	Nana	15.03	317	P	P	07 09 04.9	+0.8
	comp=E,4.1nm,0.3s,baz=164,slow=9.8,SNR=32						
NNA				S	S	07 11 46.5	-3.7
	comp=E,1.3nm,0.3s,baz=222,slow=15,SNR=2.1						
NNA	Nana	15.03	317	eP	P	07 09 04.4	+0.3
	comp=E,102nm,0.8s						
NNA	Nana	15.03	317	iP	P	07 09 05.9	+1.8
TRQA	Tornquist	15.09	166	eP	Pn	07 09 01.9	-2.3
TRQA	Tornquist	15.09	166	eP	Pn	07 09 01.9	-2.3
CNLB	Canela	15.21	116	eP	Pn	07 09 04.5	-1.3
CNLB				eS	S	07 11 53.6	-0.7
ITRB	Iturama	15.48	79	eP	P	07 09 08.8	-0.3
FRTB	Fartura	15.57	93	eP	Pn	07 09 10.7	+0.5
CLDB	Colider	16.14	41	eP	P	07 09 16.3	0.0
BB19B	Bebedouro	16.82	85	eP	P	07 09 24.4	+0.6
SPB	Sao Paulo	17.51	94	ePn	P	07 09 31.6	+0.3
	comp=E,230nm,0.9s						
SPB	Sao Paulo	17.51	94	eP	P	07 09 31.4	+0.1
RCLB	Rio Claro- Sao	17.53	90	eP	P	07 09 31.0	-0.5
PLCA	Paso Flores	17.58	190	P	P	07 09 31.4	-0.5
	comp=E,0.4nm,0.3s,baz=30,slow=13,SNR=20						
PLCA				S	S	07 12 45.3	+1.7
	comp=E,0.1nm,0.3s,baz=58,slow=15,SNR=2.2						
PLCA				PcP	PcP	07 14 00.2	-0.4
	comp=E,0.3nm,0.3s,baz=337,slow=4.2,SNR=5.0						
PLCA				ScP	ScP	07 17 16.8	+1.0
	comp=E,0.1nm,0.3s,baz=357,slow=3.4,SNR=3.3						
PLCA	Paso Flores	17.58	190	eP	P	07 09 32.1	+0.1
	comp=E,19nm,0.8s						
PLCA				ePcP	PcP	07 14 00.2	-0.4
PLCA				eScP	ScP	07 17 16.8	+1.0
PLCA	Paso Flores	17.58	190	eP	P	07 09 32.1	+0.1
PLCA				pmax	pmax		
	comp=Z,19nm,0.8s						
PLCA	Paso Flores	17.58	190	eP	P	07 09 31.4	-0.5
BDFB	Brasilia	19.07	69	P	P	07 09 48.4	0.0
	comp=Z,16nm,0.3s,baz=245,slow=11,SNR=302						
BDFB				ScP	ScP	07 17 19.7	+0.3
	comp=Z,0.4nm,0.3s,baz=92,slow=4.0,SNR=4.9						
BDFB	Brasilia	19.07	69	eP	P	07 09 49.1	+0.7
	comp=Z,431nm,0.9s						
BDFB				eScP	ScP	07 17 19.7	+0.3
BDFB	Brasilia	19.07	69	eP	P	07 09 49.1	+0.7
BDFB				pmax	pmax		
	comp=Z,431nm,0.9s						
PMNB	Patos De Minas	19.37	79	eP	P	07 09 51.3	-0.2
ATAH	Atahualpa	19.82	323	P	P	07 09 57.9	+1.2
	comp=Z,1.5nm,0.3s,baz=154,slow=8.1,SNR=22						
BSCB	Bom Sucesso	20.28	87	eP	P	07 10 00.9	-0.3
ESAR	Angra dos Reis	20.30	93	eP	P	07 10 00.8	-0.5
PEXB	Peixe	20.66	60	eP	P	07 10 04.4	-0.8
VAS01	Vassouras-RJ	21.30	91	eP	P	07 10 11.4	-0.5
DUB01	Friburgo-RJ	22.31	91	eP	P	07 10 20.5	-1.3
CAM01	Campos-RJ	23.00	91	eP	P	07 10 26.6	-1.3
SMTB	Santa Maria do	23.21	54	eP	P	07 10 29.0	-0.9
PTGA	Pitinga	23.44	17	P	P	07 10 31.1	-0.9
	comp=Z,62nm,0.9s,baz=200,slow=10,SNR=96						
PTGA				S	S	07 14 25.5	-4.2
	comp=Z,2.7nm,0.3s,baz=92,slow=20,SNR=6.8						
PTGA	Pitinga	23.44	17	eP	P	07 10 31.8	-0.1
	comp=Z,87nm,1.0s						
PTGA	Pitinga	23.44	17	eP	P	07 10 31.5	-0.5
ALF01	Guarapari-ES	24.07	88	eP	P	07 10 37.1	-0.6
SJMB	Sao Joao De Ma	24.09	84	eP	P	07 10 36.7	-1.2
BSFB	Barra de Sao F	24.37	84	eP	P	07 10 39.0	-1.4
PTLC	Puerto Leguiza	24.80	340	eP	P	07 10 40.3	-4.1
FLOC	Florencia	26.40	339	eP	P	07 10 59.1	+0.4
MACC	Macarena, Meta	26.40	343	eP	P	07 10 57.0	-1.7
GUVC	San Jose del G	26.49	346	eP	P	07 10 59.3	-0.3
CRUC	La Cruz	26.84	336	eP	P	07 11 07.9	+4.9
SOTA	Rioblanco	27.24	338	eP	P	07 11 08.9	+2.2
PCON	Cinco Dias	27.35	338	eP	P	07 11 09.2	+1.4
BBAC	Balboa, Cauca	27.37	336	eP	P	07 11 09.2	+1.6
POPC	Popayan, Colom	27.64	338	eP	P	07 11 11.6	+1.6
MARP	Paez Belalcaza	27.68	339	eP	P	07 11 10.8	+0.4
PRAC	Prado	28.18	342	eP	P	07 11 14.0	-0.6
VILC	Villavicencio,	28.25	345	eP	P	07 11 15.3	0.0
ORTC	Ortega, Tolima	28.47	341	eP	P	07 11 16.9	-0.2
GRGC	Isla de Gorgon	28.62	335	eP	P	07 11 19.7	+1.3
CHIC	Chingaza	28.76	345	eP	P	07 11 19.9	-0.3
YOTC	Yotoco, Valle	28.88	339	eP	P	07 11 20.1	-0.8
EFI	East Falkland	28.94	169	eP	P	07 11 21.0	+0.1
	comp=Z,137nm,1.5s						
EFI	East Falkland	28.94	169	eP	P	07 11 21.0	+0.1
EFI				pmax	pmax		
	comp=Z,137nm,1.5s						
ROSC	El Rosal	29.11	344	P	P	07 11 23.0	-0.1
	comp=Z,12nm,0.5s,baz=162,slow=11,SNR=6.8						
YOPC	Yopal, Colombi	29.18	348	eP	P	07 11 23.3	-0.2
MALC	Bahia Malaga	29.24	337	eP	P	07 11 25.7	+1.8
RREF	El Recreo	29.45	342	eP	P	07 11 26.7	+0.3
GUY2C	Guyana, Caldas	29.76	342	eP	P	07 11 28.8	-0.2
RUSC	La Rusia	29.84	347	eP	P	07 11 29.5	-0.2
NORC	Norcasia	29.95	343	eP	P	07 11 28.7	-1.5
TAMC	Tame, Arauca	30.12	350	eP	P	07 11 37.2	+5.5
ELOV	Elorza	30.38	354	eP	P	07 11 33.3	-0.7
BARC	Barichara	30.54	347	eP	P	07 11 34.0	-1.6
HELC	Santa Helena	30.73	342	eP	P	07 11 35.9	-1.5
PTBC	PUERTO BERRIO,	30.78	344	eP	P	07 11 34.6	-2.8
BRRC	Barranca, Sant	31.15	346	eP	P	07 11 38.7	-2.0
PAMC	Pamplona, Colo	31.17	348	eP	P	07 11 40.0	-1.4
USHA	Ushuaia	31.39	182	P	P	07 11 42.3	-0.1
	comp=Z,11nm,1.0s,baz=338,slow=7.4,SNR=3.6						
MDP	Montagnes des	31.43	27	P	P	07 11 42.3	-0.8
	comp=Z,26nm,0.4s,baz=197,slow=10,SNR=56						
DBBC	Dabeiba	31.71	341	eP	P	07 11 43.7	-2.0
ZARC	Zaragoza, Cauc	31.79	344	eP	P	07 11 43.8	-2.5
OCAC	Ocana	32.17	347	eP	P	07 11 46.4	-3.3
SDV	Santo Domingo	32.37	352	P	P	07 11 50.5	-1.0
	comp=Z,19nm,0.6s,baz=178,slow=8.7,SNR=28						
SDV	Santo Domingo	32.37	352	eP	P	07 11 50.7	-0.8
	comp=Z,58nm,1.1s						
SDV	Santo Domingo	32.37	352	eP	P	07 11 50.4	-1.2
SDV	Santo Domingo	32.37	352	eP	P	07 11 50.3	-1.2
NBLI	Livramento-PB	32.57	65	eP	P	07 11 53.0	-0.2
SMLC	San Martn de	32.87	346	eP	P	07 11 52.5	-3.2
NBPA	Parau_RN	33.33	63	eP	P	07 11 58.8	-0.9
PCRV	Puerto La Cruz	33.45	3	P	P	07 12 00.6	-0.1
	comp=Z,26nm,0.8s,baz=171,slow=4.6,SNR=12						
CODC	Agustn Codazz	33.84	348	eP	P	07 11 59.1	-5.0
ARGC	Ariguani, Magd	33.94	346	eP	P	07 12 03.1	-1.8
TRN	Trinidad (W)	34.24	9	e	P	07 12 09.1	+1.6
RCBR	Riachuelo	34.28	64	eP	P	07 12 07.9	-0.1
	comp=Z,106nm,0.8s						
RCBR	Riachuelo	34.28	64	eP	P	07 12 07.9	-0.1
RCBR				pmax	pmax		
	comp=Z,106nm,0.8s						
RCBR	Riachuelo	34.28	64	eP	P	07 12 07.7	-0.2
BCIP	Isla Barro Col	34.92	337	eP	P	07 12 15.5	+2.2
	comp=Z,108nm,0.8s						
BCIP	Isla Barro Col	34.92	337	eP	P	07 12 15.5	+2.2
BCIP				pmax	pmax		
	comp=Z,107nm,0.8s						
BCIP	Isla Barro Col	34.92	337	eP	P	07 12 14.8	+1.5
TOSP	Speyside	35.01	10	e	P	07 12 15.2	+1.2
SMRC	Santa Marta, M	35.20	347	eP	P	07 12 12.8	-2.8
URIC	Uribia, Colomb	35.32	351	eP	P	07 12 13.2	-3.5
GRHS	Sauteurs	35.75	8	e	P	07 12 23.2	+2.8
GRSS	Sisters	35.83	8	e	P	07 12 24.4	+3.4
FCV	Fort Charlotte	36.73	9	e	P	07 12 29.3	+0.7
SVB	Belmont	36.84	9	eP	P	07 12 29.3	-0.2
	comp=Z,63nm,1.0s						
SVB	Belmont	36.84	9	e	P	07 12 29.4	-0.1
SVCV	St. Vincent, C	36.85	9	e	P	07 12 30.2	+0.5
SVV	Soufriere Volc	36.89	9	e	P	07 12 31.5	+1.5
SSV	Crater Summit	36.90	9	e	P	07 12 32.1	+1.9
BBSP	Saint Philip	36.96	11	e	P	07 12 17.9	-13
BBGH	Gun Hill	36.98	11	e	P	07 12 18.1	-13
MCLT	Moule a Chique	37.31	9	e	P	07 12 31.8	-1.8
SLDE	Delcer	37.39	9	e	P	07 12 36.8	+2.6
SLB	Belfond	37.41	9	e	P	07 12 35.4	+0.9
SLPA	Patience	37.46	9	e	P	07 12 37.4	+2.6
SLBI	Saint Lucia, B	37.62	9	e	P	07 12 36.0	-0.1
SLW	Petit Monier	37.62	9	e	P	07 12 40.0	+3.8
MPOM	Morne Pois Mar	38.05	9	eP	P	07 12 39.2	-0.5
JTS	Las Juntas de	38.06	330	eP	P	07 12 41.9	+2.0
	comp=Z,77nm,1.0s						
JTS	Las Juntas de	38.06	330	d iP	P	07 12 42.1	+2.2
JTS				pmax	pmax		
	comp=Z,67nm,1.1s						
BIM	Bigot	38.09	9	eP	P	07 12 39.8	-0.3
TRMF	Trois Ilets	38.11	9	eP	P	07 12 39.4	-0.8
HOPE	Hope Point	38.14	152	eP	P	07 12 39.6	-0.4
	comp=Z,76nm,1.0s						
ZAM	Aeronautique	38.15	9	eP	P	07 12 40.1	-0.4
MVM	Montagne Vaucl	38.15	9	eP	P	07 12 40.1	-0.5
LPMF	Morne Lapointe	38.16	9	eP	P	07 12 40.3	-0.3
FDF	Fort de France	38.29	8	eP	P	07 12 40.6	-1.2
	comp=Z,214nm,1.0s						
FDF	Fort de France	38.29	8	e	P	07 12 41.1	-0.7
FDF	Fort de France	38.29	8	eP	P	07 12 40.6	-1.2
FDF				pmax	pmax		
	comp=Z,214nm,1.0s						
PML	Morne Lenard	38.33	8	eP	P	07 12 41.6	-0.5
GBMF	Grand Be	38.35	8	eP	P	07 12 41.4	-0.9
PCM	Pelee Case Pet	38.36	8	eP	P	07 12 41.2	-1.1
CXM	Morne La Croix	38.37	8	eP	P	07 12 41.8	-0.7

BAMF	Morne Balai	38.37	8	*e*P	P	07 12 42.1	-0.4
DBCT	Belle View Cho	38.79	8	*e*	P	07 12 43.7	-2.2
MDN	Morne-Daniel	38.84	8	*e*	P	07 12 47.4	+1.2
DLPL	La Plaine	38.87	8	*e*	P	07 12 41.2	-5.3
MDPO	Dominica; Chan	39.08	8	*e*	P	07 12 48.1	-0.1
DWS	Wesley	39.09	8	*e*	P	07 12 45.8	-2.6
ESPN	Las Esperanzas	39.45	332	*e*P	P	07 12 52.7	+1.3
	comp=Z,116nm,1.2s						
MLYT	Lee's Yard	40.13	6	*e*	P	07 12 50.3	-6.6
SKI	Saint Kitts	40.68	6	*e*	P	07 12 57.2	-4.3
ANWB	Willy Bob	41.11	7	*e*P	P	07 13 03.2	-1.7
	comp=Z,160nm,0.6s						
ANWB	Willy Bob	41.11	7	*e*	P	07 13 03.4	-1.5
ESTN	Estel	41.17	330	*e*P	P	07 13 06.2	+0.6
	comp=Z,88nm,0.7s						
SJG	San Juan	41.29	1	*e*P	P	07 13 04.2	-2.2
	comp=Z,26nm,0.8s						
SJG	San Juan	41.29	1	*e*P	P	07 13 04.2	-2.2
SJG				pmax	pmax		
	comp=Z,26nm,0.8s						
SJG	San Juan	41.29	1	*e*P	P	07 13 04.3	-2.0
SDDR	Presa de Saban	42.41	353	*e*P	P	07 13 14.4	-1.1
	comp=Z,25nm,0.5s						
TEIG	Tepich	48.30	332	*e*P	P	07 14 01.9	+0.2
	comp=Z,128nm,0.8s						
062Z	Marathon	49.90	343	P	P	07 14 14.6	+0.9
	baz=162						
061Z	Ochoppi	50.95	343	P	P	07 14 22.3	+0.8
	baz=163						
060Z	West Palm Beac	51.37	344	P	P	07 14 25.2	+0.6
	baz=163						
TLIG	Tlapa	51.38	320	*e*P	P	07 14 27.0	+2.0
	comp=Z,31nm,0.7s						
059Z	Ave Maria	51.54	343	P	P	07 14 26.5	+0.7
	baz=162,SNR=9.8						
060A	Indiantown	51.92	344	P	P	07 14 29.3	+0.6
	baz=164						
059A	Moore Haven	52.06	343	P	P	07 14 30.3	+0.6
	baz=163,SNR=8.0						
058A	Arcadia	52.32	343	P	P	07 14 32.2	+0.6
	baz=162,SNR=11						
959A	Okeechobee	52.52	344	P	P	07 14 33.6	+0.5
	baz=163						
958A	Wauchula	52.81	343	P	P	07 14 35.6	+0.4
	baz=162						
957A	Wimauma	53.02	343	P	P	07 14 37.4	+0.7
	baz=162						
859A	Kempfer Cattle	53.03	344	P	P	07 14 37.4	+0.5
	baz=163,SNR=5.2						
DWPF	Disney Wildern	53.22	344	*e*P	P	07 14 38.6	+0.4
	comp=Z,64nm,0.8s						
DWPF	Disney Wildern	53.22	344	P	P	07 14 38.8	+0.6
	baz=163						
858A	St. Cloud	53.30	344	P	P	07 14 39.1	+0.4
	baz=163						
857A	Zephyrhills	53.58	343	P	P	07 14 40.9	+0.1
	baz=162						
758A	Lake Helen	53.97	344	P	P	07 14 44.2	+0.6
	baz=163						
757A	Oxford	54.18	343	P	P	07 14 45.5	+0.4
	baz=162						
658A	Bunnell	54.43	344	P	P	07 14 47.3	+0.4
	baz=163						
656A	Willston	54.71	343	P	P	07 14 49.2	+0.3
	baz=162						
657A	Interlachen	54.74	344	P	P	07 14 49.5	+0.4
	baz=163,SNR=5.5						
655A	Horseshoe Beac	55.04	342	P	P	07 14 51.3	0.0
	baz=161						
557A	Orange Park	55.11	344	P	P	07 14 52.2	+0.4
	baz=163						
556A	Lake Butler	55.27	343	P	P	07 14 53.2	+0.2
	baz=162						
555A	McAlpin	55.54	343	P	P	07 14 55.2	+0.3
	baz=162						
554A	Perry	55.70	342	P	P	07 14 56.2	+0.2
	baz=161						
456A	Hilliard	55.86	344	P	P	07 14 57.7	+0.6
	baz=163						
553A	Crawfordville	56.02	341	P	P	07 14 58.9	+0.6
	baz=160						
455A	Stateville	56.14	343	P	P	07 14 59.4	+0.3
	baz=162						
552A	Lynn Haven	56.23	340	P	P	07 15 00.0	+0.3
	baz=159						
454A	Quitman	56.28	342	P	P	07 15 00.3	+0.2
	baz=161						
357A	Townsend	56.39	345	P	P	07 15 01.1	+0.3
	baz=164						
356A	Blackshear	56.46	344	P	P	07 15 01.6	+0.3
	baz=163,SNR=5.3						
453A	Whigham	56.61	342	P	P	07 15 02.9	+0.5
	baz=160,SNR=8.0						
355A	Pearson	56.66	343	P	P	07 15 03.0	+0.2
	baz=162						
257A	Skidaway Islan	56.81	345	P	P	07 15 04.4	+0.6
	baz=164						
451A	Vernon	56.81	340	P	P	07 15 04.2	+0.3
	baz=159						
452A	Marianna	56.86	341	P	P	07 15 04.2	+0.1
	baz=160						
TIGA	Tifton	56.95	343	P	P	07 15 04.7	-0.1
	baz=161						
256A	Glennville	57.02	344	P	P	07 15 05.8	+0.5
	baz=163,SNR=6.2						
353A	Camilla	57.04	342	P	P	07 15 05.5	0.0
	baz=161,SNR=7.5						
255A	Hazlehurst	57.12	344	P	P	07 15 06.2	+0.2
	baz=162,SNR=6.2						
450A	Crestview	57.26	339	P	P	07 15 07.1	+0.1
	baz=158						
254A	Abbeville	57.35	343	P	P	07 15 07.6	0.0
	baz=162,SNR=5.9						
158A	Hollywood	57.36	346	P	P	07 15 08.5	+0.9
	baz=165						
352A	Blakely	57.37	341	P	P	07 15 07.8	0.0
	baz=160,SNR=9.7						
449A	Pace	57.42	339	P	P	07 15 08.0	-0.1
	baz=157						
157A	Early Branch	57.48	346	P	P	07 15 09.2	+0.8
	baz=164,SNR=6.5						
VNA3	Neumayer Olymp	57.55	161	P	P	07 15 09.2	+0.6
156A	Sylvania	57.57	345	P	P	07 15 09.9	+0.8
	baz=164,SNR=6.3						
Z59A	Georgetown, SC	57.65	347	P	P	07 15 10.1	+0.5
	baz=166						
253A	Americus	57.69	342	P	P	07 15 09.7	-0.2
	baz=161,SNR=7.9						
VNA1	Neumayer--Stat	57.74	160	P	P	07 15 10.9	+1.1
BRAL	Brewton	57.74	339	P	P	07 15 10.5	+0.2
	baz=158,SNR=8.7						
350A	Dozier	57.75	340	P	P	07 15 10.3	0.0
	baz=158,SNR=5.3						
ZAIG	Zacatecas	57.77	320	*e*P	P	07 15 12.4	+1.3
	comp=Z,74nm,1.0s						
155A	Kite	57.78	344	P	P	07 15 10.8	+0.3
	baz=163,SNR=7.7						
252A	Lumpkin	57.80	342	P	P	07 15 10.5	-0.3
	baz=160,SNR=12						
Z58A	St. Stephen	57.85	347	P	P	07 15 11.7	+0.6
	baz=166,SNR=20						
154A	Montrose	57.94	343	P	P	07 15 11.8	+0.1
	baz=162,SNR=18						
349A	Repton	57.96	339	P	P	07 15 12.0	+0.2
	baz=158,SNR=9.7						
Z57A	Bowman	58.01	346	P	P	07 15 12.8	+0.7
	baz=165,SNR=24						
251A	Midway	58.09	341	P	P	07 15 12.4	-0.3
	baz=160,SNR=24						
153A	Fort Valley	58.16	343	P	P	07 15 13.1	-0.2
	baz=161						
Z56A	Williston	58.19	345	P	P	07 15 13.9	+0.5
	baz=164,SNR=16						
Y60A	Bolivia	58.19	349	P	P	07 15 13.6	+0.3
	baz=167,SNR=7.4						
250A	Grady	58.24	340	P	P	07 15 13.5	-0.3
	baz=159,SNR=15						
Z55A	Blythe	58.27	345	P	P	07 15 14.4	+0.5
	baz=163,SNR=11						
Y59A	Loris	58.30	348	P	P	07 15 14.3	+0.2
	baz=167,SNR=9.0						
Y58A	Scranton	58.37	347	P	P	07 15 15.2	+0.6
	baz=166,SNR=28						
152A	Waverly Hall	58.43	342	P	P	07 15 14.7	-0.4
	baz=160,SNR=14						
Z54A	Sparta	58.46	344	P	P	07 15 15.3	0.0
	baz=162,SNR=14						
151A	Opelika	58.47	341	P	P	07 15 14.8	-0.6
	baz=160,SNR=13						
249A	Camden	58.51	339	P	P	07 15 15.6	0.0
	baz=158,SNR=5.7						
Y56A	Pelion	58.62	346	P	P	07 15 16.8	+0.5
	baz=164,SNR=9.0						
Y57A	Sumter	58.63	347	P	P	07 15 17.0	+0.5
	baz=165,SNR=25						
Z53A	Monticello	58.69	343	P	P	07 15 16.5	-0.4
	baz=162,SNR=14						
X60A	Albert Glenn T	58.70	349	P	P	07 15 17.1	+0.2
	baz=168,SNR=11						
150A	Eclectic	58.75	341	P	P	07 15 17.0	-0.3
	baz=159,SNR=24						
GOGA	Godfrey	58.79	343	P	P	07 15 17.3	-0.2
	baz=162,SNR=13						
X59A	McDuffie Farm,	58.81	348	P	P	07 15 17.9	+0.2
	baz=167,SNR=26						
Z52A	Williamson	58.83	342	P	P	07 15 17.6	-0.3
	baz=161,SNR=13						
Y55A	Saluda	58.89	345	P	P	07 15 18.6	+0.4
	baz=164,SNR=24						
X58A	Rowland	58.94	348	P	P	07 15 19.0	+0.5
	baz=166,SNR=22						
149A	Jones	58.98	340	P	P	07 15 18.3	-0.5
	baz=158,SNR=17						
X57A	Johnson Farm,	59.00	347	P	P	07 15 19.5	+0.5
	baz=165,SNR=16						
Y54A	Tignall	59.02	344	P	P	07 15 19.2	+0.1
	baz=163,SNR=18						
W60A	Pink Hill	59.12	349	P	P	07 15 20.1	+0.3
	baz=168,SNR=7.5						
W61A	Ground Anchor	59.12	350	P	P	07 15 20.1	+0.4
	baz=169,SNR=6.7						
Z51A	Franklin	59.16	342	P	P	07 15 19.9	-0.3
	baz=160,SNR=5.9						
X56A	White Oak	59.23	346	P	P	07 15 21.2	+0.6
	baz=164,SNR=29						
Y53A	Monroe	59.24	343	P	P	07 15 20.5	-0.1
	baz=162,SNR=15						
148A	Greensboro	59.27	339	P	P	07 15 20.4	-0.5
	baz=158,SNR=9.0						
Z50A	Ashland	59.33	341	P	P	07 15 21.0	-0.3
	baz=159,SNR=37						
CNNC	Cliffs of the	59.34	349	P	P	07 15 21.4	+0.2
	baz=168,SNR=7.2						
X55A	Gracelyn & Ava	59.34	346	P	P	07 15 21.9	+0.5
	baz=164,SNR=22						
V62A	Hyde County Ai	59.35	351	P	P	07 15 22.0	+0.7
	baz=170						
W59A	Clinton	59.36	349	P	P	07 15 21.7	+0.3
	baz=167,SNR=5.3						
W58A	Raeford	59.37	348	P	P	07 15 22.0	+0.6
	baz=166,SNR=32						
Y52A	Lilburn	59.37	343	P	P	07 15 21.3	-0.2
	baz=161,SNR=16						
LRAL	Lakeview Retre	59.45	340	*e*P	P	07 15 21.8	-0.3
	comp=Z,39nm,0.9s						
LRAL	Lakeview Retre	59.45	340	P	P	07 15 21.6	-0.5
	baz=158,SNR=23						
Z49A	Columbiana	59.45	341	P	P	07 15 21.6	-0.5
	baz=159,SNR=20						
147A	Livingston	59.53	339	P	P	07 15 22.1	-0.5
	baz=157						
X54A	Belton	59.59	345	P	P	07 15 23.5	+0.5
	baz=163,SNR=16						
W57A	Gilead	59.65	347	P	P	07 15 23.7	+0.4
	baz=166,SNR=27						
V61A	Roper	59.66	351	P	P	07 15 23.5	0.0
	baz=169						
Y51A	Rockmart	59.68	342	P	P	07 15 23.3	-0.4
	baz=160,SNR=31						
SNAA	Sanae	59.74	161	P	P	07 15 24.2	+0.5
SNAA	Sanae	59.74	161	*e*P	P	07 15 23.9	+0.2
	comp=Z,16nm,0.8s						
SNAA	Sanae	59.74	161	*ce*P	P	07 15 23.5	-0.2
V60A	Jim Taylor Roa	59.74	350	P	P	07 15 24.1	+0.1
	baz=168						
W56A	Indian Trail	59.75	347	P	P	07 15 24.4	+0.4
	baz=165,SNR=25						
X53A	Estanollee	59.78	344	P	P	07 15 24.3	0.0
	baz=162,SNR=11						
Y50A	Piedmont	59.86	342	P	P	07 15 24.5	-0.4
	baz=160,SNR=16						
VBMS	Vicksburg	59.90	337	P	P	07 15 25.1	-0.1
	baz=154						
V59A	Middlesex	59.91	349	P	P	07 15 25.4	+0.2
	baz=168,SNR=28						
KMSC	Kings Mountain	59.92	346	P	P	07 15 25.7	+0.4
	baz=164,SNR=26						
X52A	Dahlonega	60.03	343	P	P	07 15 25.8	-0.2
	baz=162,SNR=12						
Y49A	Blount Mountai	60.03	341	P	P	07 15 25.6	-0.5
	baz=159,SNR=12						
W54A	Cherokee Point	60.06	345	P	P	07 15 26.9	+0.7
	baz=163,SNR=24						
HKT	Hockley	60.08	331	*e*P	P	07 15 26.8	+0.4
	comp=Z,36nm,1.0s						
HKT	Hockley	60.08	331	*e*P	P	07 15 26.8	+0.4
HKT				pmax	pmax		
	comp=Z,36nm,1.0s						
V58A	Windy Hill, Pi	60.09	348	P	P	07 15 26.6	+0.1
	baz=167,SNR=17						
U61A	Possum Corner	60.17	351	P	P	07 15 27.0	+0.1
	baz=169,SNR=7.7						
X51A	Calhoun	60.25	343	P	P	07 15 27.5	0.0
	baz=161,SNR=18						
V57A	Coltrane Farms	60.31	348	P	P	07 15 27.9	0.0
	baz=166,SNR=18						
Y48A	Jasper	60.32	340	P	P	07 15 27.1	-0.8
	baz=158,SNR=9.2						
X50B	Fort Payne	60.37	342	P	P	07 15 27.9	-0.5
	baz=160,SNR=18						
W53A	Cullowhee	60.38	344	P	P	07 15 28.7	+0.2
	baz=162,SNR=12						
V56A	Mocksville	60.38	347	P	P	07 15 29.1	+0.8
	baz=165,SNR=49						
U59A	Littleton	60.41	350	P	P	07 15 28.6	+0.1
	baz=168,SNR=17						
U60A	Pendleton	60.42	350	P	P	07 15 28.6	+0.1
	baz=169,SNR=8.6						
833A	Chaparral WMA,	60.43	327	P	P	07 15 29.7	+0.9
	baz=145,SNR=62						
W52A	Murphy	60.50	344	P	P	07 15 29.2	0.0
	baz=162,SNR=6.8						
U58A	Oxford	60.58	349	P	P	07 15 29.9	+0.3
	baz=167,SNR=19						
V55A	Taylorsville	60.58	346	P	P	07 15 30.4	+0.7
	baz=164,SNR=7.5						
X49A	Woodville	60.62	341	P	P	07 15 29.6	-0.4
	baz=159,SNR=12						
V54A	Nebo	60.67	346	P	P	07 15 30.7	+0.3
	baz=164,SNR=23						
U57A	Blanch	60.76	348	P	P	07 15 31.1	+0.2
	baz=166,SNR=36						
V53A	Saluda	60.77	345	P	P	07 15 31.1	+0.1
	baz=163,SNR=13						
X48A	Hartselle	60.78	341	P	P	07 15 30.8	-0.2
	baz=158,SNR=41						
W51A	Cleveland	60.78	343	P	P	07 15 31.0	-0.1
	baz=161,SNR=10						
U56A	King	60.88	347	P	P	07 15 32.5	+0.8
	baz=165,SNR=13						
T59A	Double "B" Far	60.97	350	P	P	07 15 32.3	0.0
	baz=168,SNR=12						
W50A	Signal Mountai	60.97	342	P	P	07 15 32.3	-0.1
	baz=160,SNR=17						
CPCT	Cooper Cave	60.99	343	*e*P	P	07 15 32.1	-0.4
	comp=Z,30nm,1.0s						
T60A	Surry	61.01	351	P	P	07 15 32.6	0.0
	baz=169						
X47A	Russelville	61.09	340	P	P	07 15 32.5	-0.7
	baz=158,SNR=31						
T58A	Grand View Acr	61.11	349	P	P	07 15 33.4	+0.2
	baz=167,SNR=16						
V52A	Sevierville	61.12	344	P	P	07 15 33.0	-0.4
	baz=162,SNR=11						
NATX	Nacogdoches	61.13	333	P	P	07 15 34.7	+1.2
	baz=150,SNR=14						
W49A	Belvidere	61.16	342	P	P	07 15 33.3	-0.3
	baz=159,SNR=16						
U55A	TA2, Sparta	61.17	347	P	P	07 15 34.1	+0.4
	baz=165,SNR=15						
V51A	Loudon	61.28	344	P	P	07 15 33.9	-0.6
	baz=161						
T57A	Hurt	61.29	348	P	P	07 15 34.8	+0.3
	baz=167,SNR=13						
U54A	Nelsons Funny	61.35	346	P	P	07 15 35.2	+0.2
	baz=164,SNR=18						
V50A	Pikevile	61.35	343	P	P	07 15 34.7	-0.2
	baz=160,SNR=23						
X46A	Booneville	61.36	339	P	P	07 15 34.2	-0.7
	baz=157,SNR=8.8						
U53A	Fall Branch	61.38	345	P	P	07 15 34.9	-0.2
	baz=163,SNR=7.6						
W48A	Pulaski	61.38	341	P	P	07 15 34.8	-0.3
	baz=159,SNR=33						
T56A	Rocky Mt	61.47	348	P	P	07 15 36.5	+0.8
	baz=166,SNR=20						
S60A	Water View	61.55	351	P	P	07 15 35.0	-1.2
	baz=169						
435B	Jarrell	61.59	330	P	P	07 15 37.1	+0.5
	baz=148,SNR=8.0						
OXF	Oxford	61.59	339	P	P	07 15 35.4	-1.1
	baz=156						
U52A	Thorn Hill	61.59	345	P	P	07 15 35.9	-0.6
	baz=162,SNR=6.3						
V49A	McMinnville	61.67	342	P	P	07 15 36.3	-0.7
	baz=160,SNR=19						
S58A	Poland Farm, P	61.68	350	P	P	07 15 37.0	0.0
	baz=168						
W47A	Westpoint	61.69	340	P	P	07 15 36.5	-0.6
	baz=158,SNR=29						
Z41A	Richland Creek	61.69	335	P	P	07 15 37.6	+0.4
	baz=153,SNR=9.1						
S59A	Mechanicsville	61.70	350	P	P	07 15 37.3	+0.1
	baz=169,SNR=5.5						
T55A	Pulaski	61.70	347	P	P	07 15 38.1	+0.9
	baz=165,SNR=19						
BLA	Blacksburg	61.72	347	P	P	07 15 38.0	+0.6
	baz=166,SNR=9.5						
U51A	La Follette	61.74	344	P	P	07 15 37.0	-0.6
	baz=162,SNR=5.1						
TZTN	Tazewell	61.78	344	P	P	07 15 37.3	-0.4
	baz=162						
T54A	Tazewell	61.82	346	P	P	07 15 38.2	+0.1
	baz=164,SNR=10						
W46A	Michie	61.82	340	P	P	07 15 36.9	-1.1
	baz=157						
V48A	Smith Brothers	61.91	341	P	P	07 15 38.2	-0.4
	baz=159,SNR=26						
T53A	Wise	61.96	346	P	P	07 15 38.8	-0.2
	baz=163,SNR=11						
S57A	Dark Hollow, R	61.98	349	P	P	07 15 39.4	+0.4
	baz=167,SNR=10.0						
R61A	Willards	61.99	352	P	P	07 15 39.8	+0.7
	baz=171						
U50A	Jamestown	61.99	343	P	P	07 15 38.6	-0.6
	baz=161,SNR=11						
R58B	Mineral	61.99	350	P	P	07 15 39.5	+0.4
	baz=168,SNR=14						
S56A	Natural Bridge	62.01	348	P	P	07 15 39.6	+0.3
	baz=166,SNR=8.1						
R60A	Leonardtown, M	62.09	351	P	P	07 15 40.2	+0.5
	baz=170						
X43A	Marvell	62.10	337	P	P	07 15 40.1	+0.2
	baz=155,SNR=14						
R59A	King George, V	62.10	351	P	P	07 15 40.1	+0.3
	baz=169						
CBN	Corbin Frederi	62.15	350	P	P	07 15 40.3	+0.2
	baz=169						
T52A	Hallie	62.18	345	P	P	07 15 40.0	-0.5
	baz=163,SNR=5.4						
V47A	Nunnelly	62.20	341	P	P	07 15 39.7	-0.8
	baz=158,SNR=17						
T51A	Gray	62.28	344	P	P	07 15 40.6	-0.4
	baz=162,SNR=9.6						
S55A	Lewisburg	62.28	348	P	P	07 15 41.9	+0.8
	baz=166,SNR=26						
U49A	Red Boiling Sp	62.33	343	P	P	07 15 40.7	-0.7
	baz=160,SNR=10						
R58A	Rapidan	62.34	350	P	P	07 15 41.8	+0.3
	baz=168,SNR=14						
V46A	Holladay	62.35	340	P	P	07 15 40.4	-1.2
	baz=158,SNR=13						
JCT	Junction City	62.40	328	P	P	07 15 42.4	+0.4
	baz=145,SNR=68						
R57A	Stanardsville	62.42	349	P	P	07 15 42.6	+0.6
	baz=168,SNR=11						
S54A	Dingess, Beckl	62.47	347	P	P	07 15 42.6	+0.2
	baz=165,SNR=30						
Q61A	Milford	62.53	352	P	P	07 15 42.6	-0.1
	baz=171						
S53A	Williamson	62.53	346	P	P	07 15 42.6	-0.2
	baz=164,SNR=8.9						
U48A	Cassie Pea, Po	62.54	342	P	P	07 15 42.3	-0.5
	baz=159,SNR=7.2						
WHTX	Lake Whitney,	62.55	331	P	P	07 15 43.4	+0.4
	baz=148,SNR=23						
T50A	Nancy	62.56	344	P	P	07 15 42.2	-0.7
	baz=161,SNR=12						
WVT	Waverly	62.57	341	*e*P	P	07 15 42.1	-0.8
	comp=Z,76nm,0.8s						
WVT	Waverly	62.57	341	*e*P	P	07 15 42.2	-0.8
WVT				pmax	pmax		
	comp=Z,76nm,0.8s						
WVT	Waverly	62.57	341	P	P	07 15 42.3	-0.8
	baz=158						
R56A	Bull Pasture M	62.69	349	P	P	07 15 44.4	+0.6
	baz=167,SNR=5.8						
Q59A	Harwood	62.69	351	P	P	07 15 44.2	+0.5
	baz=170						
U47A	Clarksville	62.70	341	P	P	07 15 43.2	-0.6
	baz=158,SNR=34						
R55A	Marlinton	62.70	348	P	P	07 15 44.9	+1.0
	baz=166,SNR=11						
Q60A	Greensboro	62.71	352	P	P	07 15 44.4	+0.6
	baz=170						
S52A	Salyersville	62.75	345	P	P	07 15 43.8	-0.4
	baz=163,SNR=8.3						
R54A	Victor	62.77	347	P	P	07 15 44.7	+0.4
	baz=165,SNR=16						
X40A	Basin Creek Fa	62.79	336	P	P	07 15 44.1	-0.4
	baz=153,SNR=5.9						
T49A	Edmonton	62.82	343	P	P	07 15 44.0	-0.7
	baz=160,SNR=19						
S51A	Beattyville	62.83	345	P	P	07 15 44.2	-0.5
	baz=162,SNR=7.7						
U46A	Springville	62.89	340	P	P	07 15 44.4	-0.6
	baz=158,SNR=14						
Q58A	Fox Den Farm,	62.92	350	P	P	07 15 45.6	+0.4
	baz=168,SNR=10						
T48A	Bowling Green	63.06	342	P	P	07 15 45.4	-0.8
	baz=160,SNR=9.6						
R53A	Hurricane	63.12	346	P	P	07 15 46.5	0.0
	baz=164,SNR=9.7						
MIAR	Mount Ida	63.12	335	P	P	07 15 46.8	+0.1
	baz=152,SNR=33						
Q57A	Strasburg	63.13	350	P	P	07 15 47.5	+0.9
	baz=168,SNR=20						
T47A	Sharon Grove	63.15	342	P	P	07 15 46.0	-0.8
	baz=159,SNR=25						
W41B	Gary Mavity, V	63.18	337	P	P	07 15 46.8	-0.3
	baz=154,SNR=14						
P61A	Hammonton	63.25	353	P	P	07 15 47.7	+0.3
	baz=171						
SDMD	Soldier's Deli	63.25	351	*e*P	P	07 15 48.2	+0.8
	comp=Z,10nm,0.9s						
Q56A	Snyder Ridge,	63.26	349	P	P	07 15 48.5	+1.0
	baz=167,SNR=15						
R52A	Catlettsburg	63.28	346	P	P	07 15 47.2	-0.4
	baz=163						
Q55A	Buckhannon	63.38	348	P	P	07 15 49.3	+0.9
	baz=166,SNR=22						
P59A	Jarrettsville	63.39	351	P	P	07 15 49.1	+0.8
	baz=170,SNR=15						
S49A	Springfield	63.40	343	P	P	07 15 47.4	-1.0
	baz=161,SNR=8.4						
P58A	Pank, Wackersv	63.40	351	P	P	07 15 48.7	+0.4
	baz=169,SNR=6.9						
T46A	Princeton	63.43	341	P	P	07 15 47.9	-0.7
	baz=158,SNR=14						
R51A	Hillsboro	63.46	345	P	P	07 15 48.5	-0.3
	baz=162,SNR=13						
TXAR	Lajitas Array	63.47	324	P	P	07 15 49.8	+0.5
	comp=Z,10nm,0.7s,baz=151,slow=8.1,SNR=85						
S48A	Wiedeman Farm,	63.48	343	P	P	07 15 47.7	-1.3
	baz=160,SNR=14						
P60A	Greenville	63.48	352	P	P	07 15 49.0	+0.1
	baz=171						
P57A	Homestead Farm	63.50	350	P	P	07 15 50.0	+1.0
	baz=168,SNR=14						
Q54A	Coxs Mills	63.52	348	P	P	07 15 49.2	0.0
	baz=165,SNR=13						
Q53A	Leroy	63.53	347	P	P	07 15 49.3	0.0
	baz=165,SNR=29						
LPIG	La Paz	63.55	315	P	P	07 15 50.5	+0.8

comp=Z,32nm,0.5s,baz=118,slow=1.7,SNR=5.9

R50A	**Paris** baz=162,SNR=6.7	**63.62**	**344**	P	**P**	**07 15 49.3**	**-0.6**
O61A	**Allentown** baz=172,SNR=6.2	**63.64**	**353**	P	**P**	**07 15 50.5**	**+0.6**
T45A	**Paducah** baz=157,SNR=6.8	**63.64**	**340**	P	**P**	**07 15 49.4**	**-0.6**
S47A	**Hartford** baz=159,SNR=19	**63.65**	**342**	P	**P**	**07 15 48.8**	**-1.3**
P56A	**Dayton Farm, R** baz=167,SNR=10	**63.66**	**349**	P	**P**	**07 15 51.0**	**+0.9**
W39A	**Magazine** baz=152,SNR=43	**63.78**	**335**	P	**P**	**07 15 51.5**	**+0.6**
Q52A	**Bidwell** baz=164,SNR=10	**63.79**	**346**	P	**P**	**07 15 50.8**	**-0.1**
P55A	**Reedsville** baz=166,SNR=17	**63.83**	**349**	P	**P**	**07 15 52.0**	**+0.7**
R49A	**Shelbyville** baz=161,SNR=6.3	**63.84**	**344**	P	**P**	**07 15 50.5**	**-0.9**
O60A	**Telford** baz=171,SNR=6.0	**63.96**	**352**	P	**P**	**07 15 52.4**	**+0.5**
O58A	**Lewisberry** baz=169,SNR=7.8	**63.96**	**351**	P	**P**	**07 15 52.6**	**+0.5**
S46A	**Don Dixon Farm** baz=158,SNR=11	**63.98**	**341**	P	**P**	**07 15 50.9**	**-1.3**
MCWV	**Mont Chateau** baz=166,SNR=19	**63.98**	**349**	P	**P**	**07 15 52.8**	**+0.6**
P54A	**Burton** baz=166	**64.05**	**348**	P	**P**	**07 15 53.0**	**+0.3**
O59A	**Robesonia** baz=170	**64.05**	**352**	P	**P**	**07 15 53.1**	**+0.5**
Q50A	**Georgetown** baz=162,SNR=8.6	**64.07**	**345**	P	**P**	**07 15 52.1**	**-0.7**
WCI	**Wyandotte Cave** comp=Z,38nm,1.0s	**64.08**	**343**	*e*P	**P**	**07 15 52.2**	**-0.7**
WCI	**Wyandotte Cave**	**64.08**	**343**	*e*P	**P**	**07 15 52.2**	**-0.7**
WCI 	 comp=Z,38nm,1.0s			pmax	pmax		
WCI	**Wyandotte Cave** baz=160	**64.08**	**343**	P	**P**	**07 15 51.9**	**-0.9**
ABTX	**Abilene, Hawle** baz=146,SNR=17	**64.08**	**329**	P	**P**	**07 15 53.2**	**+0.1**
Q51A	**Peebles** baz=163,SNR=8.1	**64.09**	**345**	P	**P**	**07 15 52.5**	**-0.4**
P53A	**Whipple** baz=165,SNR=25	**64.11**	**347**	P	**P**	**07 15 53.3**	**+0.3**
R48A	**Northridge Ran** baz=160,SNR=5.1	**64.13**	**343**	P	**P**	**07 15 52.4**	**-0.8**
O57A	**Amberson** baz=169,SNR=8.9	**64.15**	**351**	P	**P**	**07 15 54.0**	**+0.7**
R47A	**Wooly Knot Far** baz=160,SNR=8.0	**64.21**	**343**	P	**P**	**07 15 52.5**	**-1.2**
O56A	**Blue Knob Stat** baz=168,SNR=13	**64.36**	**350**	P	**P**	**07 15 55.4**	**+0.7**
R46A	**Gibon Southern** baz=159	**64.41**	**342**	P	**P**	**07 15 53.4**	**-1.5**
P52A	**Corning** baz=164,SNR=24	**64.41**	**347**	P	**P**	**07 15 54.6**	**-0.3**
O55A	**Ligonier** baz=167,SNR=23	**64.42**	**349**	P	**P**	**07 15 55.7**	**+0.7**
Q49A	**Aurora** baz=161,SNR=10.0	**64.45**	**344**	P	**P**	**07 15 54.5**	**-0.8**
S44A	**Carbondale** baz=157,SNR=6.4	**64.45**	**340**	P	**P**	**07 15 54.5**	**-0.8**
U40A	**Yellville** baz=153,SNR=35	**64.46**	**337**	P	**P**	**07 15 55.1**	**-0.3**
N60A	**Cedar Hill Far** baz=171,SNR=9.2	**64.47**	**353**	P	**P**	**07 15 55.6**	**+0.4**
P51A	**Williamsport** baz=163,SNR=10	**64.47**	**346**	P	**P**	**07 15 54.8**	**-0.5**
PAL	**Palisades** baz=172,SNR=6.5	**64.47**	**354**	P	**P**	**07 15 55.6**	**+0.3**
O54A	**Avella** baz=166,SNR=12	**64.59**	**348**	P	**P**	**07 15 56.2**	**+0.1**
Q48A	**North Vernon** baz=160,SNR=11	**64.59**	**343**	P	**P**	**07 15 55.3**	**-0.8**
N59A	**State Game Lan** baz=171,SNR=8.0	**64.59**	**352**	P	**P**	**07 15 56.8**	**+0.7**
SSPA	**Standing Stone** comp=Z,18nm,0.6s	**64.61**	**350**	*e*P	**P**	**07 15 56.8**	**+0.6**
SSPA	**Standing Stone** baz=168	**64.61**	**350**	P	**P**	**07 15 56.7**	**+0.5**
N57A	**Milroy** baz=169,SNR=20	**64.67**	**351**	P	**P**	**07 15 57.1**	**+0.5**
R45A	**Skylar, Fairfi** baz=158,SNR=10	**64.70**	**341**	P	**P**	**07 15 55.8**	**-1.1**
P50A	**Jamestown** baz=162,SNR=18	**64.75**	**345**	P	**P**	**07 15 56.7**	**-0.5**
M61A	**Granite Spring** baz=173,SNR=7.5	**64.76**	**354**	P	**P**	**07 15 57.5**	**+0.3**
Q47A	**Bedord North L** baz=160,SNR=7.7	**64.78**	**343**	P	**P**	**07 15 56.5**	**-0.9**
O52A	**Adamsville** baz=164,SNR=12	**64.81**	**347**	P	**P**	**07 15 57.4**	**-0.1**
O53A	**New Philadelph** baz=165,SNR=15	**64.81**	**348**	P	**P**	**07 15 57.5**	**0.0**
P49A	**Miami Univ. Ec** baz=162,SNR=8.4	**64.90**	**345**	P	**P**	**07 15 57.3**	**-0.9**
N55A	**Marion Center** baz=167,SNR=30	**64.92**	**350**	P	**P**	**07 15 58.9**	**+0.6**
N56A	**West Decatur** baz=168,SNR=16	**64.95**	**350**	P	**P**	**07 15 59.0**	**+0.5**
O51A	**Pataskala** baz=164,SNR=18	**65.00**	**346**	P	**P**	**07 15 58.4**	**-0.4**
P48A	**Milroy** baz=161,SNR=7.1	**65.01**	**344**	P	**P**	**07 15 57.6**	**-1.2**
ACSO	**Alum Creek Sta** baz=163,SNR=11	**65.17**	**346**	P	**P**	**07 15 59.4**	**-0.5**
M59A	**Waymart** baz=171,SNR=35	**65.17**	**353**	P	**P**	**07 16 00.7**	**+0.8**
TUL1	**Leonard** baz=150,SNR=28	**65.19**	**334**	P	**P**	**07 16 00.2**	**+0.1**
O50A	**Cable** baz=163,SNR=10	**65.23**	**346**	P	**P**	**07 15 59.6**	**-0.7**
Q45A	**Warren Harvey,** baz=158,SNR=8.2	**65.23**	**342**	P	**P**	**07 15 59.0**	**-1.2**
P47A	**Martinsville** baz=160,SNR=9.3	**65.25**	**343**	P	**P**	**07 15 59.5**	**-1.0**
N54A	**Moraine State** baz=166,SNR=18	**65.27**	**349**	P	**P**	**07 16 01.2**	**+0.6**
N53A	**Lisbon** baz=166,SNR=11	**65.28**	**348**	P	**P**	**07 16 00.7**	**+0.1**
CCM	**Cathedral Cave** comp=Z,67nm,0.8s	**65.42**	**339**	*e*P	**P**	**07 16 01.3**	**-0.2**
CCM	**Cathedral Cave**	**65.42**	**339**	*e*P	**P**	**07 16 01.3**	**-0.2**
CCM 	 comp=Z,67nm,0.8s			pmax	pmax		
CCM	**Cathedral Cave** baz=155	**65.42**	**339**	P	**P**	**07 16 01.1**	**-0.4**
O49A	**Covington** baz=162,SNR=11	**65.43**	**345**	P	**P**	**07 16 00.7**	**-0.8**
N52A	**McGinn’s Farm,** baz=165	**65.45**	**347**	P	**P**	**07 16 01.2**	**-0.5**
WMOK	**Wichita Mounta** baz=148,SNR=8.4	**65.45**	**331**	P	**P**	**07 16 01.4**	**-0.4**
M56A	**Emporium** baz=168,SNR=22	**65.48**	**350**	P	**P**	**07 16 02.2**	**+0.4**
M55A	**Ridgway** baz=168,SNR=21	**65.56**	**350**	P	**P**	**07 16 02.8**	**+0.4**
P46A	**Rosedale** baz=159	**65.63**	**343**	P	**P**	**07 16 01.4**	**-1.4**
N51A	**Ashland** baz=164,SNR=6.7	**65.69**	**347**	P	**P**	**07 16 02.8**	**-0.4**
O48A	**Farmland** baz=161,SNR=22	**65.69**	**344**	P	**P**	**07 16 02.4**	**-0.9**
P45A	**Graceland, Par** baz=159,SNR=9.5	**65.69**	**342**	P	**P**	**07 16 01.8**	**-1.4**
N50A	**Nevada** baz=163	**65.72**	**346**	P	**P**	**07 16 02.6**	**-0.8**
M54A	**Oil Creek Stat** baz=167,SNR=21	**65.75**	**349**	P	**P**	**07 16 03.9**	**+0.3**
HRV	**Adam Dziewonsk** comp=Z,62nm,0.9s	**65.77**	**356**	*e*P	**P**	**07 16 04.5**	**+0.9**
HRV	**Adam Dziewonsk**	**65.77**	**356**	*e*P	**P**	**07 16 04.5**	**+0.9**
HRV 	 comp=Z,62nm,0.9s			pmax	pmax		
HRV	**Adam Dziewonsk** baz=175	**65.77**	**356**	P	**P**	**07 16 04.2**	**+0.6**
M53A	**WI Miller and** baz=166,SNR=13	**65.86**	**348**	P	**P**	**07 16 04.4**	**+0.1**
BINY	**Binghamton** baz=170,SNR=62	**65.88**	**352**	P	**P**	**07 16 05.3**	**+0.9**
O47A	**Sheridan** baz=160,SNR=8.9	**65.93**	**344**	P	**P**	**07 16 03.7**	**-1.1**
M51A	**Elyria** baz=164	**66.05**	**347**	P	**P**	**07 16 05.2**	**-0.3**
M52A	**Chesterland** baz=165,SNR=6.5	**66.09**	**348**	P	**P**	**07 16 05.6**	**-0.1**
N49A	**Columbus Grove** baz=162,SNR=15	**66.09**	**345**	P	**P**	**07 16 05.2**	**-0.5**
L55A	**Hinsdale** baz=168,SNR=16	**66.20**	**350**	P	**P**	**07 16 07.0**	**+0.5**
N48A	**Decatur** baz=161,SNR=11	**66.23**	**345**	P	**P**	**07 16 05.8**	**-0.9**
MNTX	**Cornudas Mount** comp=Z,45nm,0.9s	**66.24**	**324**	*e*P	**P**	**07 16 06.3**	**-0.6**
MNTX	**Cornudas Mount** baz=141,SNR=76	**66.24**	**324**	P	**P**	**07 16 06.8**	**-0.1**
L53A	**Girard** baz=166,SNR=12	**66.28**	**349**	P	**P**	**07 16 07.0**	**+0.1**
M50A	**Fremont** baz=163	**66.30**	**346**	P	**P**	**07 16 06.4**	**-0.7**
SFIN	**Lafayette** baz=159,SNR=13	**66.31**	**343**	P	**P**	**07 16 05.8**	**-1.3**
P43A	**Skaggs, Pawnee** baz=157,SNR=8.2	**66.32**	**341**	P	**P**	**07 16 06.2**	**-1.0**
O45A	**Potomac** baz=159,SNR=15	**66.36**	**342**	P	**P**	**07 16 06.0**	**-1.4**
L54A	**Sinclairville** baz=167,SNR=34	**66.40**	**350**	P	**P**	**07 16 08.3**	**+0.7**
N47A	**Urbana** baz=161,SNR=17	**66.42**	**344**	P	**P**	**07 16 06.7**	**-1.1**
O44A	**Mansfield** baz=158	**66.48**	**342**	P	**P**	**07 16 06.7**	**-1.5**
PLIO	**Pelee Island,** baz=164	**66.55**	**347**	P	**P**	**07 16 08.0**	**-0.6**
M49A	**Liberty Center** baz=162	**66.57**	**346**	P	**P**	**07 16 08.1**	**-0.6**
K54A	**Basiliko Farm,** baz=168,SNR=23	**66.66**	**350**	P	**P**	**07 16 09.9**	**+0.5**
K55A	**Perry** baz=168,SNR=23	**66.68**	**351**	P	**P**	**07 16 09.9**	**+0.4**
MSTX	**Muleshoe** baz=144	**66.69**	**328**	P	**P**	**07 16 10.2**	**+0.3**
N46A	**Monticello** baz=160,SNR=14	**66.70**	**343**	P	**P**	**07 16 08.4**	**-1.2**
M48A	**Edgerton** baz=162	**66.75**	**345**	P	**P**	**07 16 09.1**	**-0.9**
QSPA	**South Pole Qui** comp=Z,19nm,0.7s	**66.77**	**180**	*e*P	**P**	**07 16 10.8**	**+0.8**
LIC	**Lamto** comp=Z,55nm,0.8s	**66.84**	**72**	*e*P	**P**	**07 16 09.7**	**-1.4**
M47A	**Cromwell** baz=161	**66.85**	**344**	P	**P**	**07 16 09.6**	**-0.9**
N45A	**Kentland** baz=159,SNR=9.2	**66.86**	**343**	P	**P**	**07 16 09.2**	**-1.4**
L50A	**Kingsville** baz=164	**66.86**	**347**	P	**P**	**07 16 09.8**	**-0.8**
AMTX	**Amarillo** baz=145	**66.90**	**329**	P	**P**	**07 16 11.2**	**+0.1**
N44A	**Piper City** baz=158,SNR=13	**66.98**	**342**	P	**P**	**07 16 10.1**	**-1.3**
SRIG	**Santa Rosalia** comp=Z,76nm,1.3s	**67.04**	**316**	*e*P	**P**	**07 16 13.7**	**+1.7**
TIC	**Toumodi**	**67.05**	**71**	*e*P	**P**	**07 16 11.1**	**-1.4**
M46A	**Old House Fiel** baz=160,SNR=6.0	**67.08**	**344**	P	**P**	**07 16 10.9**	**-1.1**
HDIL	**Hopedale** baz=157,SNR=12	**67.09**	**341**	P	**P**	**07 16 11.1**	**-1.0**
L48A	**N Adams** baz=162,SNR=15	**67.12**	**346**	P	**P**	**07 16 11.6**	**-0.7**
L49A	**Milan** baz=163	**67.13**	**346**	P	**P**	**07 16 11.8**	**-0.5**
KIC	**Kosan Boka** comp=Z,55nm,0.7s	**67.16**	**72**	*e*P	**P**	**07 16 12.0**	**-1.1**
K52A	**Tillsonburg** baz=166,SNR=12	**67.17**	**349**	P	**P**	**07 16 12.5**	**0.0**
MEDO	**Medina** baz=168,SNR=6.4	**67.17**	**351**	P	**P**	**07 16 12.7**	**+0.2**
J55A	**Hilton** baz=169,SNR=15	**67.17**	**351**	P	**P**	**07 16 12.7**	**+0.2**
DBIC	**Dimbokro** comp=Z,30nm,0.7s,baz=219,slow=7.0,SNR=25	**67.21**	**72**	P	**P**	**07 16 12.3**	**-1.0**
DBIC	**Dimbokro** comp=Z,36nm,0.8s	**67.21**	**72**	*e*P	**P**	**07 16 12.4**	**-1.0**
K51A	**Iona Station** baz=165,SNR=7.4	**67.26**	**348**	P	**P**	**07 16 12.8**	**-0.3**
AAM	**Ann Arbor** comp=Z,13nm,0.6s	**67.29**	**346**	*e*P	**P**	**07 16 12.4**	**-0.9**
AAM	**Ann Arbor**	**67.29**	**346**	*e*P	**P**	**07 16 12.4**	**-0.9**
AAM 	 comp=Z,13nm,0.6s			pmax	pmax		
AAM	**Ann Arbor** baz=163	**67.29**	**346**	P	**P**	**07 16 12.5**	**-0.9**
M45A	**Boilermakers S** baz=159	**67.30**	**343**	P	**P**	**07 16 11.6**	**-1.7**
J54A	**Appleton** baz=168,SNR=5.7	**67.30**	**350**	P	**P**	**07 16 13.5**	**+0.2**
STCO	**Saint Catharin** baz=167,SNR=6.3	**67.32**	**350**	P	**P**	**07 16 13.8**	**+0.4**
TYNO	**Tyneside** baz=167,SNR=12	**67.33**	**349**	P	**P**	**07 16 13.7**	**+0.2**
L47A	**Sherwood** baz=161,SNR=14	**67.33**	**345**	P	**P**	**07 16 12.6**	**-0.9**
N43A	**Stutzman Famil** baz=158,SNR=29	**67.41**	**342**	P	**P**	**07 16 13.4**	**-0.7**
HSIG	 comp=Z,88nm,1.2s	**67.44**	**318**	*e*P	**P**	**07 16 15.8**	**+1.2**
M44A	**Midewin, Midew** baz=159	**67.51**	**343**	P	**P**	**07 16 13.4**	**-1.3**
LBNH	**Lisbon** baz=175,SNR=12	**67.52**	**356**	P	**P**	**07 16 15.6**	**+0.9**
K50A	**Casco** baz=164,SNR=6.3	**67.53**	**347**	P	**P**	**07 16 14.3**	**-0.5**
J52A	**Paris** baz=166,SNR=43	**67.57**	**349**	P	**P**	**07 16 15.2**	**+0.2**
L46A	**Eue Claire** baz=160,SNR=6.0	**67.64**	**344**	P	**P**	**07 16 14.3**	**-1.1**
N41A	**Harden Midland** baz=156	**67.70**	**340**	P	**P**	**07 16 15.0**	**-0.9**
K49A	**Clarkson** baz=163	**67.71**	**347**	P	**P**	**07 16 15.0**	**-0.9**
PECO	**Prince Edward** baz=170,SNR=28	**67.72**	**352**	P	**P**	**07 16 16.3**	**+0.4**
TORO	**Toronto--Lesli** baz=167	**67.74**	**350**	P	**P**	**07 16 16.1**	**+0.1**
HAL	**Halifax** comp=Z,23nm,0.9s	**67.79**	**2**	*e*P	**P**	**07 16 16.5**	**+0.2**
HAL	**Halifax**	**67.79**	**2**	*e*P	**P**	**07 16 16.5**	**+0.2**
HAL 	 comp=Z,23nm,0.9s			pmax	pmax		
M43A	**Waltham Townsh** baz=158,SNR=21	**67.81**	**342**	P	**P**	**07 16 15.7**	**-0.9**
ACTO	**Acton** baz=167,SNR=11	**67.86**	**349**	P	**P**	**07 16 16.9**	**0.0**
K48A	**Perry** baz=163,SNR=21	**67.87**	**346**	P	**P**	**07 16 16.2**	**-0.8**
DRCO	**St. Marys Ceme** baz=168,SNR=6.2	**67.90**	**351**	P	**P**	**07 16 17.3**	**+0.3**
DRWO	**Darlington Wes** baz=168	**67.90**	**350**	P	**P**	**07 16 17.4**	**+0.4**
WLVO	**Wesleyville** baz=168,SNR=13	**67.90**	**351**	P	**P**	**07 16 17.2**	**+0.2**
K47A	**Vermontville** baz=162,SNR=9.0	**67.94**	**345**	P	**P**	**07 16 16.4**	**-0.9**
I53A	**Kortright Cn E** baz=167,SNR=8.3	**67.99**	**350**	P	**P**	**07 16 17.8**	**+0.2**
PKRO	**Pickering** baz=168,SNR=17	**68.04**	**350**	P	**P**	**07 16 18.2**	**+0.3**
I55A	**Frankford** baz=169,SNR=45	**68.09**	**351**	P	**P**	**07 16 18.5**	**+0.3**
N40A	**Mertquake, Sal** baz=155,SNR=18	**68.09**	**340**	P	**P**	**07 16 17.6**	**-0.7**
LONY	**Lake Ozonia** baz=172,SNR=17	**68.12**	**354**	P	**P**	**07 16 19.0**	**+0.6**
K46A	**Dorr** baz=161,SNR=7.3	**68.14**	**345**	P	**P**	**07 16 17.4**	**-1.2**
121A	**Cookes Peak, D** baz=139,SNR=47	**68.18**	**323**	P	**P**	**07 16 21.1**	**+1.8**
J49A	**Marlette** baz=164,SNR=7.6	**68.19**	**347**	P	**P**	**07 16 18.0**	**-0.9**
L44A	**Lake County Fo** baz=159	**68.21**	**343**	P	**P**	**07 16 17.9**	**-1.1**
I51A	**Listowel** baz=166,SNR=32	**68.21**	**349**	P	**P**	**07 16 19.1**	**+0.1**
M41A	**Milan** baz=156,SNR=14	**68.22**	**341**	P	**P**	**07 16 18.1**	**-1.0**
J48A	**Bridge Port** baz=163,SNR=12	**68.27**	**347**	P	**P**	**07 16 18.8**	**-0.6**
H56A	**Elgin** baz=170,SNR=17	**68.27**	**353**	P	**P**	**07 16 19.7**	**+0.3**
KSU1	**Kansas State U** baz=150,SNR=11	**68.28**	**335**	P	**P**	**07 16 19.4**	**-0.2**
I52A	**Shelburne** baz=166,SNR=17	**68.32**	**349**	P	**P**	**07 16 20.0**	**+0.2**
H55A	**Tweed** baz=169,SNR=31	**68.35**	**352**	P	**P**	**07 16 20.1**	**+0.3**
DELO	**Deloro Mine** baz=169,SNR=16	**68.37**	**351**	P	**P**	**07 16 20.1**	**+0.2**
PKME	**Peaks-Kenny Pk** baz=177,SNR=11	**68.41**	**358**	P	**P**	**07 16 20.6**	**+0.5**
J47A	**Sunmer** baz=162,SNR=9.3	**68.44**	**346**	P	**P**	**07 16 19.7**	**-0.8**
BASO	**Ashfield** baz=165,SNR=8.4	**68.53**	**348**	P	**P**	**07 16 20.9**	**0.0**
L42A	**Oliver, Polo** baz=157	**68.54**	**342**	P	**P**	**07 16 20.1**	**-1.0**
BWLO	**Walkerton** baz=166,SNR=22	**68.54**	**349**	P	**P**	**07 16 21.0**	**0.0**
I49A	**Point Hope** baz=164,SNR=6.1	**68.69**	**347**	P	**P**	**07 16 21.4**	**-0.5**
BRCO	**Bruce Peninsul** baz=165,SNR=6.0	**68.72**	**349**	P	**P**	**07 16 22.3**	**+0.2**
J46A	**Howard City** baz=161	**68.74**	**345**	P	**P**	**07 16 21.0**	**-1.3**
K43A	**Burlington** baz=158,SNR=12	**68.81**	**343**	P	**P**	**07 16 22.2**	**-0.6**
PLVO	**Plevna** baz=170,SNR=17	**68.81**	**352**	P	**P**	**07 16 23.0**	**+0.3**
H52A	**Wyevale** baz=167,SNR=25	**68.83**	**350**	P	**P**	**07 16 22.9**	**+0.1**
SADO	**Sadowa** comp=Z,27nm,0.7s	**68.84**	**350**	*e*P	**P**	**07 16 22.6**	**-0.3**
Y22D	**IRIS PASSCAL I** baz=140	**68.89**	**325**	P	**P**	**07 16 25.5**	**+1.9**
BANO	**Bancroft** baz=169,SNR=12	**68.91**	**351**	P	**P**	**07 16 23.4**	**+0.1**
G55A	**Calabogie** baz=170,SNR=15	**68.98**	**352**	P	**P**	**07 16 23.9**	**+0.2**
J45A	**Montague** baz=160	**69.00**	**345**	P	**P**	**07 16 22.5**	**-1.3**
BMRO	**Meriville Lake** baz=166,SNR=21	**69.02**	**349**	P	**P**	**07 16 23.9**	**0.0**
L40A	**Anamosa** baz=156,SNR=20	**69.05**	**341**	P	**P**	**07 16 23.6**	**-0.7**
I48A	**Sherman Twp** baz=163,SNR=8.9	**69.10**	**347**	P	**P**	**07 16 24.1**	**-0.4**
G53A	**Haliburton** baz=168,SNR=29	**69.11**	**351**	P	**P**	**07 16 24.7**	**+0.2**
I47A	**Gladwin** baz=162,SNR=7.5	**69.12**	**346**	P	**P**	**07 16 24.0**	**-0.6**
I46A	**Reed City** baz=161,SNR=8.3	**69.25**	**345**	P	**P**	**07 16 24.4**	**-1.0**
CBKS	**Cedar Bluff** baz=148,SNR=25	**69.30**	**333**	P	**P**	**07 16 26.9**	**+1.0**
ANMO	**Albuquerque** comp=Z,66nm,1.0s	**69.32**	**326**	*e*P	**P**	**07 16 28.0**	**+1.7**
ANMO	**Albuquerque**	**69.32**	**326**	*d i*P	**P**	**07 16 27.5**	**+1.2**
ANMO				*i* *PP	**pP**	**07 17 15.8**	**-1.3**
ANMO 	 comp=Z,72nm,1.1s			pmax	pmax		
ANMO	**Albuquerque** baz=141	**69.32**	**326**	P	**P**	**07 16 27.7**	**+1.4**
TASM	**ASL Pad, Albuq** baz=141,SNR=103	**69.32**	**326**	P	**P**	**07 16 27.8**	**+1.4**
TASM	**ASL Pad, Albuq** baz=141,SNR=102	**69.32**	**326**	P	**P**	**07 16 27.8**	**+1.4**
PEMO	**Pembroke** baz=169,SNR=15	**69.46**	**352**	P	**P**	**07 16 26.7**	**0.0**
F55A	**Otter Lake** baz=170	**69.51**	**353**	P	**P**	**07 16 26.9**	**0.0**
H48A	**Harrisville** baz=164,SNR=6.9	**69.52**	**347**	P	**P**	**07 16 26.6**	**-0.5**
I45A	**Fountain** baz=161	**69.53**	**345**	P	**P**	**07 16 25.9**	**-1.1**
BUKO	**Buck Lake** baz=167,SNR=18	**69.54**	**350**	P	**P**	**07 16 27.3**	**+0.2**
JFWS	**Jewell Farm** baz=157,SNR=21	**69.54**	**342**	P	**P**	**07 16 26.9**	**-0.3**
SCIA	**State Center** baz=154	**69.55**	**339**	P	**P**	**07 16 26.8**	**-0.4**
KLBO	**Killbear Provi** baz=167,SNR=22	**69.58**	**350**	P	**P**	**07 16 27.4**	**0.0**
H47A	**Mio** baz=163	**69.60**	**347**	P	**P**	**07 16 26.8**	**-0.7**
TOBO	**Tobermory, Bru** baz=165,SNR=7.3	**69.68**	**349**	P	**P**	**07 16 27.7**	**-0.3**
TUC	**Tucson** comp=Z,46nm,1.1s	**69.71**	**321**	*e*P	**P**	**07 16 30.6**	**+2.0**
TUC	**Tucson**	**69.71**	**321**	*e*P	**P**	**07 16 30.6**	**+2.0**
TUC 	 comp=Z,46nm,1.1s			pmax	pmax		
TUC	**Tucson** baz=137	**69.71**	**321**	P	**P**	**07 16 30.1**	**+1.5**
H46A	**Fife Lake** baz=162,SNR=14	**69.77**	**346**	P	**P**	**07 16 27.8**	**-0.7**
ALGO	**Algonquin Park** baz=169,SNR=18	**69.84**	**351**	P	**P**	**07 16 28.9**	**-0.1**
F52A	**Sundridge** baz=167,SNR=16	**69.87**	**350**	P	**P**	**07 16 29.2**	**0.0**
GLMI	**Grayling** baz=162	**69.91**	**346**	P	**P**	**07 16 28.9**	**-0.5**
T25A	**Trinidad** baz=143,SNR=62	**70.03**	**329**	P	**P**	**07 16 32.0**	**+1.5**
H45A	**Beulah** baz=161	**70.04**	**345**	P	**P**	**07 16 29.0**	**-1.1**
I42A	**Draeger Farm,** baz=158,SNR=9.9	**70.07**	**343**	P	**P**	**07 16 30.1**	**-0.3**
G47A	**Hillman** baz=163	**70.08**	**347**	P	**P**	**07 16 30.0**	**-0.4**
F51A	**Arnstein** baz=167,SNR=9.3	**70.09**	**350**	P	**P**	**07 16 30.2**	**-0.3**
E54A	**Lac Daplat, Po** baz=170,SNR=15	**70.20**	**352**	P	**P**	**07 16 31.1**	**0.0**
E53A	**Dumoine, Ponti** baz=169,SNR=13	**70.21**	**352**	P	**P**	**07 16 31.3**	**+0.1**
E52A	**Mattawa** baz=168,SNR=9.7	**70.25**	**351**	P	**P**	**07 16 31.1**	**-0.3**
F49A	**Sandfield** baz=165,SNR=12	**70.29**	**349**	P	**P**	**07 16 31.4**	**-0.3**
H43A	**Windswept, Lux** baz=159	**70.31**	**344**	P	**P**	**07 16 31.1**	**-0.7**
G45A	**Suttons Bay** baz=161	**70.34**	**346**	P	**P**	**07 16 31.3**	**-0.7**
BATG	**Bathurst New B** comp=Z,31nm,0.9s	**70.38**	**0**	*e*P	**P**	**07 16 32.9**	**+0.7**
G46A	**Petoskey** baz=162,SNR=5.2	**70.43**	**346**	P	**P**	**07 16 32.2**	**-0.4**
F48A	**Evansville** baz=164,SNR=11	**70.46**	**348**	P	**P**	**07 16 32.5**	**-0.2**
I41A	**Arkdale** baz=157	**70.49**	**342**	P	**P**	**07 16 32.4**	**-0.5**
E51A	**G1948 Merrick** baz=167,SNR=10	**70.62**	**351**	P	**P**	**07 16 33.7**	**+0.1**
214A	**Organ Pipe Nat** baz=135,SNR=22	**70.65**	**319**	P	**P**	**07 16 36.0**	**+1.8**
E50A	**Wahnapitae** baz=166,SNR=7.2	**70.71**	**350**	P	**P**	**07 16 34.0**	**-0.1**
LATQ	**La Tuque** baz=174,SNR=8.5	**70.71**	**355**	P	**P**	**07 16 34.4**	**+0.3**
KSCO	**Kaye Shedlock’** baz=145,SNR=23	**70.71**	**331**	P	**P**	**07 16 35.8**	**+1.2**
D54A	**Lac Fusel, La** baz=170,SNR=10	**70.84**	**353**	P	**P**	**07 16 34.4**	**-0.6**
BGNE	**Belgrade** comp=Z,330nm,0.7s	**70.87**	**335**	*e*P	**P**	**07 16 35.4**	**+0.1**
BGNE	**Belgrade** baz=149,SNR=30	**70.87**	**335**	P	**P**	**07 16 35.8**	**+0.4**
D52A	**ZEK Kipawa Sen** baz=168,SNR=19	**70.89**	**351**	P	**P**	**07 16 35.5**	**+0.2**
D53A	**Lac Vacive, Po** baz=169,SNR=22	**70.90**	**352**	P	**P**	**07 16 35.4**	**0.0**
F45A	**CMU Biological** baz=162	**70.92**	**346**	P	**P**	**07 16 34.9**	**-0.6**
E48A	**Lockeyer** baz=165,SNR=19	**71.01**	**349**	P	**P**	**07 16 36.0**	**0.0**
SDCO	**Great Sand Dun** baz=142,SNR=115	**71.03**	**328**	P	**P**	**07 16 38.2**	**+1.5**
E47A	**Iron Bridge** baz=164,SNR=18	**71.19**	**348**	P	**P**	**07 16 37.0**	**-0.1**
W18A	**Petrified Fore** baz=138,SNR=7.7	**71.19**	**324**	P	**P**	**07 16 39.2**	**+1.6**
D50A	**G1974 Best Tow** baz=167	**71.29**	**350**	P	**P**	**07 16 37.6**	**-0.1**
E46A	**Sault Ste Mari** baz=163,SNR=13	**71.31**	**347**	P	**P**	**07 16 37.5**	**-0.3**
F42A	**Maple Grove Fa** baz=159	**71.61**	**344**	P	**P**	**07 16 39.1**	**-0.6**
D48A	**Paudash Townsh** baz=165,SNR=10	**71.61**	**349**	P	**P**	**07 16 39.3**	**-0.4**
D49A	**Beulah Townshi** baz=166,SNR=18	**71.63**	**349**	P	**P**	**07 16 39.7**	**-0.1**
S22A	**4UR Ranch, Cre** baz=141,SNR=36	**71.69**	**327**	P	**P**	**07 16 41.9**	**+1.3**

G40A	Rib Lake	71.69	343	P	P	07 16 39.8	-0.3
	baz=157,SNR=8.2						
D47A	Chapleau	71.74	348	P	P	07 16 39.9	-0.5
	baz=164,SNR=7.3						
D46A	Sault St. Mari	71.76	347	P	P	07 16 40.0	-0.5
	baz=163						
Q24A	Divide	71.83	329	P	P	07 16 42.9	+1.4
	baz=143,SNR=26						
E44A	Grand Marais A	71.90	346	P	P	07 16 41.6	+0.3
	baz=161						
E43A	Lone Tree Farm	71.91	345	P	P	07 16 41.1	-0.3
	baz=160,SNR=7.9						
G39A	Holcombe	71.98	342	P	P	07 16 41.4	-0.5
	baz=156,SNR=12						
OGNE	Ogallala	72.05	332	P	P	07 16 43.6	+1.1
	baz=146,SNR=15						
MVCO	Mesa Verde	72.12	326	P	P	07 16 44.7	+1.5
	baz=140,SNR=54						
F40A	Park Falls	72.27	343	P	P	07 16 43.6	0.0
	baz=157,SNR=25						
ECSD	EROS Data Cent	72.32	338	P	P	07 16 43.8	-0.2
	baz=151,SNR=43						
WUAZ	Wupatki	72.39	323	P	P	07 16 46.7	+1.9
	baz=137,SNR=54						
SPMN	Marine on St.	72.40	341	P	P	07 16 43.8	-0.6
	baz=155,SNR=9.3						
F39A	Loretta	72.49	342	P	P	07 16 44.7	-0.2
	baz=157,SNR=8.1						
GLA	Glamis	72.63	319	P	P	07 16 47.6	+1.6
	baz=134,SNR=6.0						
ISCO	Idaho Springs	72.71	329	P	P	07 16 48.2	+1.5
	baz=143,SNR=64						
LSQQ	Lebel-sur-Quev	72.76	353	P	P	07 16 46.2	-0.2
	baz=170						
F38A	Pierce - Schro	72.80	342	P	P	07 16 46.6	-0.1
	baz=156,SNR=9.5						
F37A	Hinrichs Farm,	72.80	341	P	P	07 16 46.5	-0.2
	baz=155,SNR=9.0						
D41A	Chassel	72.93	344	P	P	07 16 47.6	+0.2
	baz=159,SNR=9.8						
Y12C	Blythe	72.94	320	P	P	07 16 49.5	+1.8
	baz=135,SNR=24						
PV03	Paradox Valley	73.09	326	*e*P	P	07 16 49.7	+0.8
	comp=Z,93nm,1.8s						
PDMCI	Parker Dam,Lak	73.10	320	P	P	07 16 50.2	+1.5
	baz=135,SNR=5.8						
IKP	In-Ko-Pah, Jac	73.14	318	P	P	07 16 50.9	+1.8
	baz=133,SNR=23						
SWSC	Sam W. Stewart	73.15	318	P	P	07 16 50.7	+1.7
	baz=134,SNR=6.7						
E38A	The Farm, Brul	73.30	342	P	P	07 16 49.2	-0.4
	baz=156						
CHGQ	Chibougamau	73.34	355	P	P	07 16 49.6	-0.2
	baz=172,SNR=12						
BC3	Big Chuckawall	73.43	319	P	P	07 16 52.3	+1.5
	baz=134,SNR=24						
MONP2	Monument Peak	73.50	318	P	P	07 16 53.0	+1.6
	baz=133,SNR=22						
BAR	Barrett	73.51	318	*e*P	P	07 16 53.0	+1.8
	comp=Z,42nm,1.1s						
MATQ	Matagami	73.53	353	P	P	07 16 50.3	-0.5
	baz=169,SNR=18						
IRM	Iron Mountain	73.59	320	P	P	07 16 53.3	+1.7
	baz=134,SNR=26						
N23A	Red Feather La	73.74	330	P	P	07 16 54.2	+1.5
	baz=143,SNR=54						
SUSD	Miller	73.78	336	P	P	07 16 52.4	0.0
	baz=149,SNR=5.6						
C40A	Isle Royale Na	73.87	344	P	P	07 16 52.7	-0.2
	baz=158						
109C	Camp Elliot, M	73.92	317	P	P	07 16 54.7	+1.2
	baz=132						
SYO	Syowa Base	73.92	159⇓	*e*P	P	07 16 52.4	-0.6
SYO	Syowa Base	73.92	159⇓	*e*PcP	PcP	07 17 04.8	-2.5
BELC	Belle Mtn. Jos	73.99	319	P	P	07 16 55.8	+1.7
	baz=134,SNR=20						
PFO	Pinyon Flats O	74.01	318	*e*P	P	07 16 56.1	+1.9
	comp=Z,32nm,1.1s						
PFO	Pinyon Flats O	74.01	318	*e*P	P	07 16 56.1	+1.9
PFO				pmax	pmax		
	comp=Z,33nm,1.1s						
PFO	Pinyon Flats O	74.01	318	P	P	07 16 55.9	+1.7
	baz=133,SNR=27						
O20A	White River Ci	74.23	328	P	P	07 16 57.0	+1.6
	baz=141,SNR=39						
GMRC	Granite Mounta	74.33	320	P	P	07 16 58.0	+1.9
	baz=134,SNR=69						
SBA	Scott Base	74.33	190	*e*P	P	07 16 57.2	+2.0
	comp=Z,17nm,1.4s						
SBA	Scott Base	74.33	190	*e*P	P	07 16 57.2	+2.0
SBA				pmax	pmax		
	comp=Z,17nm,1.4s						
MURC	Murrieta	74.45	318	P	P	07 16 58.3	+1.6
	baz=133,SNR=13						
EYMN	Ely	74.51	343	P	P	07 16 56.1	-0.5
	baz=156,SNR=8.1						
BBRC	Big Bear Solar	74.73	319	P	P	07 17 00.5	+2.0
	baz=133,SNR=6.6						
HEC	Hector,Ludlow	74.76	319	P	P	07 17 00.5	+2.0
	baz=134,SNR=7.5						
SCI2	San Clemente I	74.88	317	P	P	07 17 00.5	+1.5
	baz=132,SNR=6.6						
TUQ	Turquoise Moun	74.94	320	P	P	07 17 00.9	+1.4
	baz=134						
CIS	Catalina Islan	75.08	317	P	P	07 17 01.7	+1.5
	baz=132,SNR=7.1						
BFSC	Mount Baldy Ra	75.17	318	P	P	07 17 02.1	+1.3
	baz=132,SNR=15						
RRX	Edison Barstow	75.19	319	P	P	07 17 02.8	+1.9
	baz=133						
FMP	Fort Macarthur	75.21	317	P	P	07 17 02.4	+1.6
	baz=132						
VNDA	Vanda	75.33	190	P	P	07 17 02.2	+1.2
	comp=Z,4.9nm,0.9s,baz=132,slow=6.5,SNR=24						
VNDA	Vanda	75.33	190	*e*P	P	07 17 02.5	+1.5
	comp=Z,7.1nm,1.0s						
VNDA	Vanda	75.33	190	*e*P	P	07 17 02.5	+1.5
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GSC	Goldstone, Bar	75.37	319	P	P	07 17 03.7	+1.8
	baz=133,SNR=22						
K22A	Casper	75.39	331	P	P	07 17 03.4	+1.4
	baz=142,SNR=33						
SHOC	Shoshone, Teco	75.46	320	P	P	07 17 03.7	+1.3
	baz=134						
RSSD	Black Hills	75.50	333	*e*P	P	07 17 03.8	+1.2
	comp=Z,40nm,0.9s						
RSSD	Black Hills	75.50	333	*e*P	P	07 17 03.8	+1.2
RSSD				pmax	pmax		
	comp=Z,40nm,0.9s						
RSSD	Black Hills	75.50	333	P	P	07 17 03.5	+0.9
	baz=145						
DECC	Green Verdugo	75.59	318	P	P	07 17 04.8	+1.7
	baz=132						
EDW2	Edwards Air Fo	75.80	318	P	P	07 17 05.5	+1.2
	baz=132,SNR=15						
BLG	Laguna Peak, P	75.95	317	P	P	07 17 06.4	+1.3
	baz=131						
TORD	Torodi Ar. Bea	75.96	69	P	P	07 17 03.2	-2.4
	comp=Z,29nm,0.6s,baz=247,slow=5.3,SNR=124						
LRMC	Laurel Mtn Rad	76.01	319	P	P	07 17 07.1	+1.5
	baz=133,SNR=8.2						
OSI	Osito Audit: C	76.07	318	P	P	07 17 07.1	+1.2
	baz=132						
AGMN	Agassiz Nation	76.09	340	P	P	07 17 05.5	-0.1
	baz=152,SNR=12						
TPNV	Topopah Spring	76.17	321	P	P	07 17 08.6	+2.0
	baz=134,SNR=62						
FURC	Furnace Creek,	76.20	320	P	P	07 17 08.4	+2.0
	baz=133,SNR=27						
SCZ2	Santa Cruz Isl	76.23	317	P	P	07 17 08.0	+1.3
	baz=131						
MPMC	Manual Prospec	76.29	320	P	P	07 17 08.6	+1.3
	baz=133,SNR=30						
ARVC	Arvin	76.47	318	P	P	07 17 09.5	+1.5
	baz=132						
DUG	Dugway, Tooele	76.58	325	P	P	07 17 10.4	+1.7
	baz=137,SNR=32						
ISA	Isabella, Lake	76.61	319	*e*P	P	07 17 10.4	+1.5
	comp=Z,44nm,0.9s						
ISA	Isabella, Lake	76.61	319	*e*P	P	07 17 10.5	+1.5
ISA				pmax	pmax		
	comp=Z,44nm,0.9s						
ISA	Isabella, Lake	76.61	319	P	P	07 17 10.7	+1.8
	baz=132,SNR=20						
R11A	Troy Canyon, C	76.77	322	P	P	07 17 11.9	+2.0
	baz=135,SNR=89						
GRAC	Grapevine Rang	76.85	320	P	P	07 17 12.0	+1.8
	baz=133						
BW06	Boulder Array	76.89	329	P	P	07 17 11.4	+0.9
	baz=140,SNR=44						
PDAR	Pinedale Array	76.89	329	P	P	07 17 11.3	+0.8
	comp=Z,18nm,0.7s,baz=129,slow=7.7,SNR=178						
CWC	Cottonwood Cre	76.90	320	P	P	07 17 12.1	+1.5
	baz=132						
PKM	Mcpherson Peak	76.92	317	P	P	07 17 12.6	+1.8
	baz=131,SNR=20						
MDND	Maddock	76.93	338	P	P	07 17 11.2	+0.9
	baz=149,SNR=7.5						
VES	Vestal, Richgr	77.10	319	P	P	07 17 13.0	+1.5
	baz=132,SNR=18						
SMMC	Simmler	77.32	318	P	P	07 17 14.7	+1.9
	baz=131,SNR=7.7						
TTIG	Tnine Tigouga,	77.35	49	P	P	07 17 15.0	+1.8
TSUM	Tsumeb	77.39	106	*e*P	P	07 17 13.5	-0.3
	comp=Z,28nm,0.8s						
TIN	Tinemaha, Big	77.40	320	P	P	07 17 15.1	+1.8
	baz=132,SNR=8.2						
VOG	Valley Oaks Go	77.60	319	P	P	07 17 14.7	+0.4
	baz=132						
ULM	Lac du Bonnet	77.83	341	P	P	07 17 15.1	-0.1
	comp=Z,18nm,0.5s,baz=153,slow=6.2,SNR=29						
SCHQ	Schefferville	77.94	360	P	P	07 17 16.0	+0.3
	comp=Z,34nm,0.6s,baz=182,slow=3.8,SNR=36						
MLAC	Mammoth, Mammo	78.14	320	P	P	07 17 19.2	+1.6
	baz=132,SNR=7.5						
NVAR	Mina Array Bea	78.37	321	P	P	07 17 20.1	+1.4
	comp=Z,13nm,0.8s,baz=150,slow=6.1,SNR=79						
NVAR				PP	PP	07 20 19.6	+0.3
	comp=Z,0.9nm,0.8s,baz=130,slow=11,SNR=3.9						
LAO	LASA Array	78.48	333	P	P	07 17 20.0	+1.0
	baz=143,SNR=17						
RLMT	Red Lodge	78.56	331	P	P	07 17 21.0	+1.3
	baz=141,SNR=65						
H17A	Grant Village	78.61	329	P	P	07 17 21.8	+1.8
	baz=139,SNR=22						
OUZM	OUZ	78.73	49	P	P	07 17 22.0	+1.3
DGMT	Dagmar	79.12	336	P	P	07 17 23.7	+1.3
	baz=145,SNR=29						
HLID	Hailey	79.85	327	P	P	07 17 28.6	+2.0
	baz=136,SNR=212						
BOZ	Bozeman (W)	80.00	330	P	P	07 17 28.3	+1.0
	baz=139,SNR=34						
GOLM	Goulmima	80.45	49	P	P	07 17 32.0	+2.0
BOSA	Boshof	80.60	117	P	P	07 17 30.2	-0.8
	comp=Z,11nm,0.6s,baz=266,slow=4.2,SNR=25						
BOSA				PKKP	PKKPdf	07 35 56.9	-1.3
	comp=Z,1.9nm,0.8s,baz=16,slow=1.0,SNR=4.0						
BOSA	Boshof	80.60	117	*e*P	P	07 17 30.3	-0.8
	comp=Z,16nm,0.8s						
BOSA	Boshof	80.60	117	*e*P	P	07 17 30.3	-0.8
BOSA				pmax	pmax		
	comp=Z,16nm,0.8s						
ARF	Arif	80.81	50	P	P	07 17 33.1	+1.2
EGMT	Eagleton	81.01	332	P	P	07 17 33.0	+0.4
	baz=140						
PFVI	Vila Bisbo	81.10	43	*e*P	P	07 17 34.3	+1.1
	comp=Z,251nm,1.6s						
CZD	Col de Zad	81.15	48	P	P	07 17 36.0	+2.1
O03E	Paynes Creek	81.64	321	P	P	07 17 36.2	+0.1
	baz=130,SNR=12						
LCRM	LCR	81.65	48	P	P	07 17 38.0	+1.6
PBDV	Barranco-do-Ve	81.74	43	*e*P	P	07 17 37.7	+1.1
MAW	Mawson	81.85	163	P	P	07 17 37.4	+0.7
	comp=Z,8.6nm,0.7s,baz=244,slow=6.4,SNR=14						
PNCL	Nicolau / Gran	81.89	43	*e*P	P	07 17 38.1	+0.8
	comp=Z,55nm,1.9s						
PCVE	Castro Verde	81.91	43	*e*P	P	07 17 38.6	+1.2
	comp=Z,52nm,1.8s						
MESJ	Messejana	81.92	43	*e*P	P	07 17 38.1	+0.6
MESJ				AMb	AMB	07 17 43.2	
	comp=Z,55nm,1.7s						
MESJ	Messejana	81.92	43	*e*P	P	07 17 38.6	+1.2
	comp=Z,58nm,1.8s						
MSO	Missoula	81.99	329	P	P	07 17 39.0	+1.2
	baz=137,SNR=20						
O02D	Mt. Diablo Mer	82.14	320	P	P	07 17 39.2	+0.5
	baz=130						
LBTB	Lobatse	82.22	114	*e*P	P	07 17 39.4	-0.2
	comp=Z,15nm,0.8s						
LBTB	Lobatse	82.22	114	*e*P	P	07 17 39.4	-0.2
LBTB				pmax	pmax		
	comp=Z,15nm,0.8s						
PBEJ	Beja	82.25	43	*e*P	P	07 17 41.4	+2.2
	comp=Z,28nm,1.7s						
ALMR	Almeirim	82.51	42	*e*P	P	07 17 41.0	+0.5
ALMR				AMb	AMB	07 17 44.1	
	comp=Z,38nm,1.1s						
N02D	Trinity Center	82.60	321	P	P	07 17 41.1	+0.1
	baz=130						
M04C	Macdoel	82.62	322	P	P	07 17 42.1	+0.9
	baz=130,SNR=18						
PMTG	Montargil	82.67	42	*e*P	P	07 17 41.9	+0.6
	comp=Z,22nm,1.7s						
PTOM	Tomar	82.89	41	*e*P	P	07 17 43.8	+1.3
M02C	Callahan	82.95	321	P	P	07 17 43.0	+0.2
	baz=130						
PCAS	Casmilo, Conde	83.11	41	*e*P	P	07 17 45.0	+1.4
	comp=Z,36nm,2.1s						
K04D	Chiloquin, OR	83.12	322	P	P	07 17 44.7	+1.0
	baz=131,SNR=6.3						
L04D	Klamath Falls	83.17	322	P	P	07 17 44.4	+0.4
	baz=130,SNR=7.7						
J05D	Fort Rock, OR	83.26	323	P	P	07 17 45.7	+1.2
	baz=131,SNR=17						
FIGM	Figuig	83.29	51	P	P	07 17 46.0	+1.1
FFC	Flin Flon	83.57	340	*i* P	P	07 17 46.3	+0.8
PCBR	Castelo Branco	83.60	42	*e*P	P	07 17 47.0	+1.0
	comp=Z,21nm,2.0s						
J04D	Umpqua Nationa	83.72	323	P	P	07 17 47.7	+0.9
	baz=130,SNR=15						
TAM	Tamanrasset	83.74	62	*e*P	P	07 17 47.8	+0.4
	comp=Z,17nm,1.0s						
TAM	Tamanrasset	83.74	62	*e*P	P	07 17 47.8	+0.4
TAM				pmax	pmax		
	comp=Z,17nm,1.0s						
L02E	Cave Junction	83.87	321	P	P	07 17 48.7	+1.3
	baz=129						
PVIS	Viseu	83.88	41	*e*P	P	07 17 48.7	+1.2
MTE	Manteigas	83.90	41	*e*P	P	07 17 49.3	+1.6
	comp=Z,24nm,1.4s						
I05D	Terrebonne, OR	84.01	324	P	P	07 17 49.5	+1.4
	baz=131,SNR=15						
I04A	Tendick Farm,	84.24	323	P	P	07 17 49.6	+0.3
	baz=130,SNR=6.8						
K02D	Willamette Mer	84.25	322	P	P	07 17 50.7	+1.4
	baz=129,SNR=7.5						
PVRL	Vila Real	84.33	40	*e*P	P	07 17 53.0	+3.2
POLO	Lamas de Olo	84.35	40	*e*P	P	07 17 53.9	+4.0
	comp=Z,12nm,1.5s						
PGAV	Gavieira, Arco	84.43	40	*e*P	P	07 17 52.3	+2.0
	comp=Z,40nm,1.8s						
NEW	Newport	84.53	329	P	P	07 17 50.4	-0.1
	baz=135,SNR=18						
G05D	Wamic, OR	84.59	325	P	P	07 17 52.4	+1.4
	baz=131						
MVO	Moncorvo	84.68	41	*e*P	P	07 17 53.0	+1.5
	comp=Z,23nm,1.3s						
J01E	Myrtle Point	84.69	322	P	P	07 17 52.4	+1.0
	baz=129						
I03D	Drain, OR	84.70	322	P	P	07 17 52.5	+1.1
	baz=130,SNR=6.4						
H04D	Lebanon	84.89	323	P	P	07 17 53.5	+1.1
	baz=130						
F05D	White Salmon	85.09	325	P	P	07 17 54.4	+1.0
	baz=131						
PBRG	Braganca	85.23	40	*e*P	P	07 17 54.9	+0.6
	comp=Z,28nm,1.5s						
I02D	Swisshome	85.24	323	P	P	07 17 55.5	+1.3
	baz=129						
COR	Corvallis	85.24	323	*e*P	P	07 17 55.5	+1.4
	comp=Z,63nm,0.9s						
COR	Corvallis	85.24	323	*e*P	P	07 17 55.5	+1.4
COR				pmax	pmax		
	comp=Z,63nm,0.9s						
PAB	San Pablo	85.37	43	*e*P	P	07 17 55.6	+0.6
	comp=Z,9.2nm,0.8s						
PAB	San Pablo	85.37	43	*e*P	P	07 17 55.6	+0.6
PAB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
G03D	McMinnville, O	85.62	324	P	P	07 17 57.3	+1.3
	baz=130						
ESDC	Sonseca Array	85.68	43	P	P	07 17 57.3	+0.7
	comp=Z,5.4nm,0.9s,baz=243,slow=4.5,SNR=17						
F04D	Rainier, OR	86.04	324	P	P	07 17 59.1	+1.0
	baz=130						
E04D	Cinebar	86.11	325	P	P	07 17 58.8	+0.4
	baz=130						
D04E	Lakebay	86.62	325	P	P	07 18 02.0	+1.2
	baz=130						
B05A	Bryant	86.97	327	P	P	07 18 02.7	+0.2
	baz=131						
D03D	Eldon	87.01	326	P	P	07 18 03.7	+1.0
	baz=130,SNR=8.9						
A04D	Lummi Island	87.58	327	P	P	07 18 05.9	+0.6
	baz=130						
LSZ	Lusaka	88.24	106	*e*P	P	07 18 10.7	+1.1
	comp=Z,42nm,1.4s						
LSZ	Lusaka	88.24	106	*e*P	P	07 18 10.7	+1.1
LSZ				pmax	pmax		
	comp=Z,42nm,1.4s						
CASY	Casey	90.55	179	*e*P	P	07 18 20.4	+1.2
	comp=Z,16nm,0.9s						
YKA	Yellowknife Ar	93.74	340	P	P	07 18 33.9	+0.2
	comp=Z,6.7nm,0.6s,baz=131,slow=4.5,SNR=92						
YKA				PP	PP	07 22 22.4	+0.1
	comp=Z,0.8nm,0.9s,baz=134,slow=7.4,SNR=4.4						
ILAR	Eielson Array	106.94	334	Pdiff	Pdif	07 19 32.6	-0.2
	comp=Z,0.5nm,1.0s,baz=156,slow=2.3,SNR=5.1						
ILAR				PP	PP	07 24 00.9	-0.9
	comp=Z,1.0nm,0.8s,baz=120,slow=5.5,SNR=4.8						
AKASG	Malin Array Be	111.32	43	PKiKP	PKiKP	07 23 48.9	-1.0
	comp=Z,0.1nm,0.3s,baz=276,slow=2.2,SNR=4.7						
AKBB	Malin Array Si	111.32	43	*e*PKiKP	PKiKP	07 23 48.9	-1.0
AKBB	Malin Array Si	111.32	43	*e*PKIKP	PKiKP	07 23 48.9	-1.0
FIA0	FINESS Array S	111.52	31	*e*PKKPbc	PKKPbc	07 34 46.1	-0.9
FINES	FINESS Array B	111.52	31	PKKPbc	PKKPbc	07 34 46.1	-0.9
	comp=Z,1.9nm,1.0s,baz=64,slow=6.3,SNR=5.8						
BR101	Keskin Array S	112.13	55	*e*PKKPab	PKKPab	07 34 53.2	+1.3
BRTR	Keskin Array B	112.13	55	PKKPab	PKKPab	07 34 53.2	+1.3
	comp=Z,1.0nm,0.7s,baz=100,slow=5.3,SNR=5.7						
ARA0	ARCESS Array S	112.43	22	*e*PKKPbc	PKKPbc	07 34 42.1	-2.1
ARCES	ARCESS Array B	112.43	22	PKKPbc	PKKPbc	07 34 42.1	-2.1
	comp=Z,1.1nm,0.6s,baz=95,slow=5.1,SNR=4.7						
KBZ	Khabaz	119.59	52	PKP	PKiKP	07 24 06.5	+0.4
	comp=Z,2.7nm,0.8s,baz=286,slow=4.2,SNR=4.7						
PRGR	Permogore	120.85	31	*e*PKIKP	PKPdf	07 24 07.1	-0.8
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BILL	Bilibino	125.12	339⇓	*i*PKIKP	PKiKP	07 24 16.4	+0.1
BILL				*e*		07 37 27.2	
BILL				SS	SS	07 42 52.0	+4.6
BILL				pmax	pmax		
	comp=Z,12nm,1.2s						
ARU	Arti	128.47	35	*e*PKPdf	PKiKP	07 24 23.3	0.0
ARU	Arti	128.47	35	*i* PKIKP	PKiKP	07 24 23.8	+0.5
ARU						07 26 30.2	
ARU						07 31 15.2	
ARU				SS	SS	07 43 25.1	-4.5
ASAR	Alice Springs	129.15	204	PKP	PKPdf	07 24 24.8	-0.3
	comp=Z,8.0nm,0.8s,baz=135,slow=2.0,SNR=46						
AS31	Alice Springs	129.16	204	*e*PKPdf	PKPdf	07 24 24.9	-0.2
ABKAR	Akbulak array	131.02	44	*e*PKPdf	PKiKP	07 24 28.4	-0.2
WB2	Warramunga Arr	132.33	207	*e*PKPdf	PKiKP	07 24 31.8	-0.5
WRA	Warramunga Arr	132.33	207	PKP	PKPdf	07 24 31.1	-0.2
	comp=Z,4.4nm,0.6s,baz=188,slow=1.6,SNR=21						
WRA				SKPbc	SKPbc	07 27 37.8	-0.3
	comp=Z,8.5nm,0.9s,baz=175,slow=4.2,SNR=24						
WRAB	Tennant Creek	132.34	207⇑	*i*PKIKP	PKPdf	07 24 31.6	+0.4
WRAB				pmax	pmax		
	comp=Z,20nm,2.5s						
PEA1	Petropavlovsk-	135.42	323	*e*PKPpre	PKPpre	07 24 28.4	
PEA1				*e*PKPdf	PKiKP	07 24 36.8	-0.7
PEA1				*e*SKPbc	SKPbc	07 27 46.3	-0.8
PETK	Petropavlovsk-	135.42	323	PKhKP	PKPpre	07 24 28.4	
	comp=Z,2.0nm,0.6s,baz=60,slow=2.6,SNR=5.5						
PETK				PKP	PKiKP	07 24 36.8	-0.7
	comp=Z,4.6nm,0.7s,baz=73,slow=3.5,SNR=7.1						
PETK				SKPbc	SKPbc	07 27 46.3	-0.8
	comp=Z,5.3nm,0.8s,baz=92,slow=4.8,SNR=7.2						
BRVK	Borovoye	136.01	36	*e*PKPdf	PKiKP	07 24 38.1	-0.5
BRVK	Borovoye	136.01	36*d*	*i*PKIKP	PKiKP	07 24 38.0	-0.7
CHGR	Chuyangaron	139.51	57	*e*PKPdf	PKPdf	07 24 42.4	-1.6
YAK	Yakutsk	139.86	348⇑	*e*PKIKP	PKPdf	07 24 44.1	+0.3
KURBB	Kurchatov Arra	141.66	36	SKP		07 28 02.6	
	comp=Z,3.5nm,1.1s,baz=296,slow=3.6,SNR=6.4						
KURK	Kurchatov	141.66	36	*e*PKPdf	PKPdf	07 24 44.3	-3.1
KURK	Kurchatov	141.66	36*c*	*i*PKIKP	PKPdf	07 24 48.5	+1.1
AAK	Ala-Archa	142.53	50	SKPbc	SKiKP	07 28 09.1	+0.4
	comp=Z,6.5nm,0.7s,baz=211,slow=2.6,SNR=12						
AAK	Ala-Archa	142.53	50	*e*PKPdf	PKPdf	07 24 50.2	+0.8
AAK	Ala-Archa	142.53	50	*e*PKIKP	PKPdf	07 24 50.3	+0.8
ZAA1	Zalesovo Array	142.68	28	*e*PKPdf	PKPdf	07 24 46.6	-2.5
ZALV	Zalesovo Beam	142.69	28	PKP	PKPdf	07 24 46.6	-2.5
	comp=Z,7.2nm,0.5s,baz=299,slow=4.6,SNR=22						
ZALV				SKP		07 28 04.8	
	comp=Z,2.7nm,0.6s,baz=281,slow=3.0,SNR=4.2						
KSH	Kashi	144.51	54	PKP	PKPdf	07 24 52.3	-0.7
KSH				pPKP	pPKPdf	07 25 46.5	-2.1
KSH				PP	PP	07 28 13.1	+1.6
KSH				PKS	PKSdf	07 28 25.4	-3.2
KSH				SS	SS	07 46 39.0	-2.5
KSH				AMB	AMB		
	comp=Z,96nm,6.4s						
KSH				LR	LR		
	comp=Z,220nm,12.8s						
KSH				LR	LR		
	comp=Z,140nm,10.7s						
KSH				LR	LR		
	comp=Z,120nm,14.6s						
KDJ	Kajisay	144.58	49	*e*PKPbc	PKPbc	07 24 52.0	-0.3
KDJ	Kajisay	144.58	49	*e*PKIKP	PKPbc	07 24 52.0	-0.3
PALK	Pallekele	144.68	112	PKP	PKPdf	07 24 53.5	-0.3
	comp=Z,13nm,1.0s,baz=118,slow=1.8,SNR=3.5						
PRZ	Przheval'sk	145.29	48	*e*PKPdf	PKPab	07 24 55.8	+0.9
MAKZ	Makanchi	145.62	39	*e*PKPdf	PKPbc	07 24 54.8	-0.4
MAKZ	Makanchi	145.62	39	*e*PKP2	PKPbc	07 24 54.8	-0.4
BOD	Bodaibo	145.64	360	*e*PKIKP	PKPbc	07 24 54.4	-0.4
BOD				pmax	pmax		
	comp=Z,71nm,1.1s						
MKAR	Makanchi Array	145.81	39	PKPbc	PKPbc	07 24 55.5	-0.2
	comp=Z,33nm,0.9s,baz=304,slow=3.1,SNR=117						
MKAR				SKPbc	SKiKP	07 28 15.5	+0.4
	comp=Z,2.3nm,0.8s,baz=311,slow=2.4,SNR=4.4						
DGZ	Jazzator, Alta	146.78	31*d*	*e*PKIKP	PKPbc	07 24 57.5	-1.1
HYB	Hyderabad	146.78	94	*i* PKP	PKPab	07 25 01.0	-0.2
YSS	Yuzh-Sakhalins	146.81	322	*e*PKPbc	PKPbc	07 24 58.9	+0.3
YSS	Yuzh-Sakhalins	146.81	322⇑	*i*PKP2	PKPab	07 24 59.2	-1.1
GRNR	Gornyy	147.41	333	*e*PKP2	PKiKP	07 25 01.0	-1.1
GRNR				pmax	pmax		
	comp=Z,38nm,1.0s						
ZEA	Zeya	148.00	345	*e*PKIKP	PKPbc	07 25 00.5	-1.1
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ASAJ	Asahikawa	148.46	318	PKPbc	PKPbc	07 25 03.5	+0.4
	baz=90,slow=1.0						
CISI	Cisompet, Garu	148.71	169	*e*PKPbc	PKPbc	07 25 04.6	-0.1
GUMO	Guam	148.73	257	*e*PKPbc	PKPbc	07 25 04.1	-0.5
ERM	Erimo	149.13	314	*e*PKPbc	PKiKP	07 25 06.4	+0.5
LEM	Lembang	149.39	169	PKPbc	PKiKP	07 25 07.5	0.0
	comp=Z,73nm,0.7s,baz=14,slow=22,SNR=4.3						
MOY	Mondy	150.21	16	*e*PKIKP	PKiKP	07 25 08.8	+0.8
MOY				pmax	pmax		
	comp=Z,56nm,1.3s						
SIJI	Sorong	150.29	218	PKPbc	PKiKP	07 25 08.9	-0.3
	comp=Z,47nm,0.8s,baz=14,slow=5.0,SNR=21						
KLR	Kul'dur	150.50	335	PKPbc	PKPbc	07 25 07.8	0.0
WMQ	Urumqi	150.63	40	*e*PKPbc	PKPdf	07 25 02.0	-0.8
WMQ				LR	LR		
	comp=Z,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,1μm,28.9s						
WMQ				LR	LR		
	comp=Z,270nm,28.8s						
TLY	Talaya	150.79	13	*e*PKPdf	PKPdf	07 25 02.7	-0.1
TLY				*e*PKPbc	PKiKP	07 25 09.3	+0.2
TLY				*e*PKPab	PKPab	07 25 17.9	+1.5
TLY	Talaya	150.79	13	*e*PKIKP	PKPdf	07 25 04.5	+1.7
TLY				*e*		07 25 17.6	
TLY				pmax	pmax		
	comp=Z,19nm,1.5s						
KAPI	Kappang	151.07	193	PKPbc	PKiKP	07 25 11.0	+0.2
	comp=Z,26nm,0.7s,baz=143,slow=3.8,SNR=8.4						
KAPI	Kappang	151.07	193	*e*PKPbc	PKiKP	07 25 11.0	+0.2
KAPI				*e*PKPab	PKPab	07 25 19.3	+0.8
TEY	Ternei	151.37	324⇓	*i*PKIKP	PKiKP	07 25 10.2	-0.2
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,50nm,0.7s						

ZAK	Zakamensk	151.94	14	*e*PKIKP	PKPdf	07 25 05.2	+0.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SPSI	Sidrap Palu	152.09	194	PKP	PKPdf	07 25 07.9	+2.1
SPSI				PKP	PKiKP	07 25 14.1	+1.2
PYUN	Piuthan	152.19	74	*e*P	PKPbc	07 25 12.6	-0.1
	comp=Z,48nm,0.8s						
DANN	Dangsing	152.86	73	*e*P	PKiKP	07 25 14.6	+0.1
	comp=Z,111nm,0.7s						
DMN	Daman	154.09	75	*e*P	PKiKP	07 25 22.4	+5.4
	comp=Z,40nm,0.7s						
USRK	Ussuriysk Ar.	154.31	328	PKP	PKPdf	07 25 07.5	-0.6
	comp=Z,2.4nm,0.8s,baz=66,slow=6.7,SNR=6.3						
USRK				PKPbc	PKiKP	07 25 16.9	+0.4
	comp=Z,4.1nm,0.6s,baz=311,slow=0.7,SNR=10						
PKIN	Phulchoki	154.35	75	*e*P	PKiKP	07 25 23.4	+5.9
	comp=Z,20nm,0.8s						
PKI	Pulchoki	154.36	75	*e*P	PKiKP	07 25 23.4	+5.8
	comp=Z,26nm,0.8s						
GUN	Gumba	154.75	74	*e*P	PKiKP	07 25 23.4	+4.9
	comp=Z,33nm,0.6s						
MJAR	Matsushiro Arr	154.99	307	PKP	PKPdf	07 25 09.3	0.0
	comp=Z,1.7nm,0.7s,baz=22,slow=1.6,SNR=4.6						
MJAR				PKPbc	PKPbc	07 25 18.1	-0.2
	comp=Z,6.8nm,0.8s,baz=143,slow=1.4,SNR=8.1						
MJAR				PKPab	PKPab	07 25 34.0	-0.7
	comp=Z,9.1nm,0.9s,baz=74,slow=1.2,SNR=9.1						
MAJO	Matsushiro	154.99	307	*e*PKPdf	PKPdf	07 25 09.3	0.0
MAJO				*e*PKPbc	PKiKP	07 25 18.2	-0.1
MAJO				*e*PKPab	PKPab	07 25 35.1	+0.4
MAJO	Matsushiro	154.99	307	*e*PKIKP	PKPdf	07 25 09.3	0.0
MAJO				*e*		07 25 18.2	
MAJO				*e*		07 25 35.1	
MAT	Matsushiro	154.99	307	PKP	PKiKP	07 25 18.1	-0.2
MJB9	Matsu-Tunnel	155.00	307	*e*PKPdf	PKPdf	07 25 11.4	+2.1
MJB9				*e*PKPbc	PKiKP	07 25 18.2	-0.1
MJB9				*e*PKPab	PKPab	07 25 35.8	+1.1
SONA0	Songino Array	155.00	11	*e*PKPdf	PKPdf	07 25 09.9	+0.7
SONA0				*e*PKPbc	PKiKP	07 25 18.6	+0.6
SONA0				*e*PKPab	PKPab	07 25 35.2	+0.8
SONM	Songino Array	155.00	11	PKP	PKPdf	07 25 09.9	+0.7
	comp=Z,4.1nm,0.8s,baz=281,slow=0.6,SNR=16						
SONM				PKPbc	PKiKP	07 25 18.6	+0.6
	comp=Z,4.3nm,0.9s,baz=335,slow=2.4,SNR=9.8						
SONM				PKPab	PKPab	07 25 35.2	+0.8
	comp=Z,4.6nm,0.7s,baz=319,slow=4.4,SNR=11						
ULN	Ulaanbaatar	155.08	10	*e*PKPdf	PKPdf	07 25 09.9	+0.6
ULN				*e*PKPab	PKPab	07 25 36.0	+1.2
ULN	Ulaanbaatar	155.08	10	*e*PKIKP	PKPdf	07 25 09.9	+0.6
ULN				*e*		07 25 36.0	
LSA	Lhasa	159.09	68	*e*PKPab	PKPab	07 25 53.9	+0.7
KRAB	Krabi	159.60	136	P	PKPab	07 26 07.5	+12
SHL	Shillong	160.23	79	*e*PKPdf	PKPdf	07 25 16.0	-0.4
SHL				*e*PKPab	PKPab	07 25 57.6	-0.4
SHL	Shillong	160.23	79	*e*PKIKP	PKPdf	07 25 16.0	-0.4
SHL				*e*		07 25 57.6	
GTA	Gaotai	160.30	33	*e*PKP	PKPdf	07 25 16.6	+0.7
KSRS	Korea Array	161.31	322	PKP	PKPdf	07 25 17.4	+0.6
	comp=Z,2.7nm,0.8s,baz=63,slow=1.4,SNR=18						
KSRS				PKPab	PKPab	07 26 03.1	+1.2
	comp=Z,4.7nm,0.9s,baz=41,slow=4.1,SNR=16						
KSRS				PP	PP	07 29 49.0	+3.6
	comp=Z,0.3nm,0.3s,baz=33,slow=4.2,SNR=4.5						
KS15	Wonju Array Si	161.34	322	*e*PKPdf	PKPdf	07 25 17.4	+0.5
KS15				*e*PKPab	PKPab	07 26 03.1	+1.0
HHC	Hu-ho-hao-te	162.56	5	PKP	PKPdf	07 25 14.5	-3.7
LZH	Lanzhou	164.88	31	*e*PKP	PKPdf	07 25 16.2	-4.4
LZH				pPKP	PKPab	07 26 15.6	-2.2
CM31	Chiang Mai Arr	165.55	107	*e*PKPdf	PKPdf	07 25 21.6	+0.2
CM31				*e*PKPab	PKPab	07 26 20.6	-0.6
CMAR	Chiang Mai Arr	165.55	107	PKP	PKPdf	07 25 21.6	+0.2
	comp=Z,2.5nm,1.0s,baz=246,slow=2.5,SNR=9.0						
CMAR				PKPab	PKPab	07 26 20.6	-0.6
	comp=Z,9.4nm,0.7s,baz=252,slow=5.2,SNR=15						
CMMT	Chiang Mai	165.69	106	P	PKPab	07 26 21.9	0.0
	comp=Z,7.5nm,1.2s						
LAMP	Lampang	166.18	108	P	PKPdf	07 25 17.5	-4.4
	comp=Z,106µm,0.8s						
PBKT	Sadao Pong	166.41	118	P	PKPab	07 26 26.1	+1.1
CD2	Chengdu	168.59	47	PKP	PKPdf	07 25 22.0	-1.4
XAN	Xi'an	168.70	20	PKP	PKPdf	07 25 23.8	+0.4
XAN				PP	PP	07 30 25.0	+1.7
KMI	Kunming	170.06	78	PKP	PKPdf	07 25 24.2	-0.5
NJ2	Nanjing	170.18	332	*e*PKP	PKPdf	07 25 23.9	-0.3
WHN	Wuhan	172.87	354	*e*PKP	PKPdf	07 25 27.1	+1.5
GYA	Guiyang	173.12	63	*i* PKPbc	PKPdf	07 25 36.4	+10
GYA				pPKP	pPKPdf	07 26 34.3	+12
GYA				PKPab	PKPab	07 27 07.8	+13
GYA				PP	PP	07 31 00.8	+14
GYA				AMB	AMB		
	comp=Z,130nm,8.0s						

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*ISCJB **06** 07:18:03.7±0.9, 35°.30N±0°.04×27°.76E±0°.03, h3^{km}±5^{km}, Error ellipse: s-maj=7.4km s-min=3.2km az=150.5*

*ISK **06** 07:18:03.6, 35°.30N×27°.76E, h9^{km}, ML3.4/19*

*ATH **06** 07:18:04.4, 35°.33N×27°.76E, h25^{km}±2^{km}, ML3.1/5, Error ellipse: s-maj=4.6km s-min=1.6km az=334.0*

*THE **06** 07:18:05.4, 35°.42N×27°.72E, h0^{km}±1^{km}, ML3.1/6, Error ellipse: s-maj=2.8km s-min=0.9km az=148.0*

ISC 06 07:18:04.1±1.4, **35°.31N**±0°.05×**27°.78E**±0°.03, **h10**^{km}±10^{km}, **n66,** σ**0^s.88**/85, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.56	296	PG	Pg	07 18 14.8	-0.3
KARP				SG	Sb	07 18 22.9	-1.2
KARP	Karpathos	0.56	296	P	Pg	07 18 14.5	-0.5
KARP				S	Sb	07 18 23.6	-0.6
KARP	Karpathos	0.56	296	P	Pg	07 18 14.7	-0.3
KARP				S	Sb	07 18 23.5	-0.6
KARP				AML	AML	07 18 26.0	
	comp=N,5244µm,0.3s						
KARP				AML	AML	07 18 26.3	
	comp=E,5138µm,0.3s						
ARG	Arkhangelos	0.95	17	PG	Pg	07 18 22.4	0.0
ARG				SG	Sn	07 18 36.3	-0.8
ARG	Arkhangelos	0.95	17	P	Pg	07 18 22.1	-0.3
ARG				S	Sb	07 18 35.6	+0.3
ARG	Arkhangelos	0.95	17	P	Pb	07 18 22.8	+0.1
ARG				S	Sb	07 18 35.7	+0.3
ARG				AML	AML	07 18 42.0	
	comp=N,1645µm,0.7s						
ARG				AML	AML	07 18 44.5	
	comp=E,2151µm,0.7s						
ZKR	Zakros	1.29	262	PN	Pn	07 18 28.1	-0.1
ZKR				SN	Sn	07 18 46.4	+0.8
ZKR	Zakros	1.29	262	P	Pn	07 18 27.7	-0.5
ZKR				S	Sn	07 18 47.5	+1.9
ZKR	Zakros	1.29	262	P	Pn	07 18 27.8	-0.4
ZKR				AML	AML	07 18 53.6	
	comp=N,759µm,0.6s						
ZKR				AML	AML	07 18 59.8	
	comp=E,1352µm,0.4s						
BBRN	Bozburun-Marma	1.39	9	PN	Pb	07 18 30.4	+0.2
BBRN				SN	Sg	07 18 48.9	+0.1
DAT	Datca	1.43	353	PN	Pn	07 18 30.5	+0.3
DAT	Datca	1.43	353	*i* P	Pb	07 18 31.0	+0.1
DAT				*i* S	Sg	07 18 51.1	+1.0
DAT				IAML_P			
	comp=Z,2µm,0.3s						
MRSB	Marmaris-Mugla	1.45	13	PN	Pn	07 18 30.6	+0.2
DATC	Datca-Mugla	1.45	356	PN	Pn	07 18 30.4	0.0
DALY	Dalyan (Mula)	1.67	25	PN	Pn	07 18 33.9	+0.6
DALY	Dalyan (Mula)	1.67	25	*i* P	Pg	07 18 35.8	-0.2
DALY				*i* S	Sg	07 18 59.0	+1.3
DALY				IAML_P			
	comp=Z,2µm,0.3s						
KSL	Kastellorizon	1.69	60	P	Pn	07 18 34.1	+0.5
FETY	Fethiye	1.70	38	PN	Pn	07 18 34.4	+0.6
FETY	Fethiye	1.70	38	P	Pn	07 18 34.6	+0.8
FETY				S	Sb	07 18 56.8	0.0
FETY	Fethiye	1.70	38	*i* P	Pn	07 18 34.7	+0.9
FETY				IAML_P			
	comp=Z,2µm,0.1s						
AKAS	Kas	1.75	58	PN	Pn	07 18 35.0	+0.4
AKAS	Kas	1.75	58	*i* P	Pn	07 18 35.3	+0.7
AKAS				*i* S	Sg	07 19 00.6	+0.2
AKAS				IAML_P			
	comp=Z,1µm,0.2s						
NPS	Neapolis	1.77	269	P	Pn	07 18 35.7	+0.8
NPS				S	Sb	07 18 58.4	-0.6
NPS	Neapolis	1.77	269	P	Pb	07 18 36.3	-0.4
NPS				AML	AML	07 19 09.6	
	comp=N,994µm,0.5s						
NPS				AML	AML	07 19 13.2	
	comp=E,1454µm,0.5s						
BDRM	Kayabasi	1.78	351	*i* P	Pn	07 18 35.4	+0.5
BDRM				*i* S	Sn	07 18 56.3	-1.3
BDRM				IAML_P			
	comp=Z,2µm,0.3s						
BODT	Bodrum	1.79	348	PN	Pn	07 18 35.4	+0.3
BODT	Bodrum	1.79	348	P	Pn	07 18 35.1	0.0
YER	Yerkesik	1.87	12	PN	Pn	07 18 36.9	+0.7
YER	Yerkesik	1.87	12	P	Pn	07 18 36.8	+0.6
LAST	Lasithi	1.89	266	P	Pn	07 18 37.4	+0.9
LAST				S	Sb	07 19 02.1	-0.3
LAST	Lasithi	1.89	266	P	Pb	07 18 38.1	-0.6
LAST				AML	AML	07 19 16.8	
	comp=N,775µm,0.8s						
LAST				AML	AML	07 19 17.1	
	comp=E,526µm,0.8s						
ANAF	Anafi Island	1.94	303	P	Pn	07 18 36.2	-0.9
ANAF				S	Sn	07 19 01.4	-0.1
ANAF	Anafi Island	1.94	303	P	Pn	07 18 36.6	-0.5
AMGA	Amorgos Island	2.16	315	P	Pn	07 18 40.0	-0.1
AMGA	Amorgos Island	2.16	315	P	Pn	07 18 40.2	+0.1
THR8	Santorini-Mono	2.17	301	P	Pn	07 18 41.7	+1.5
SNT2	Vlychada, Sant	2.17	299	P	Pn	07 18 41.3	+1.0
THR6	Thira Island,	2.20	299	P	Pn	07 18 41.6	+0.9
THR3	Thira Island,	2.22	300	P	Pn	07 18 41.7	+0.7
THR5	Thira Island,	2.27	300	P	Pn	07 18 42.9	+1.3
AYDN	Tasoluk	2.35	2	*i* P	Pn	07 18 44.6	+1.8
AYDN				*i* S	Sb	07 19 15.2	-0.5
AYDN				IAML_P			
	comp=Z,1µm,0.3s						
GCAM	G?zelcaml?	2.43	350	PN	Pn	07 18 44.7	+0.9
GCAM	G?zelcaml?	2.43	350	*i* P	Pn	07 18 44.1	+0.3
GCAM				IAML_P			
	comp=Z,700nm,0.2s						
SMG	Samos	2.52	343	P	Pn	07 18 45.2	+0.1
APE	Apeiranthos	2.53	315	PN	Pn	07 18 45.7	+0.4
APE	Apeiranthos	2.53	315	P	Pn	07 18 45.5	+0.2
AYDB	Zeytinkoy-Aydi	2.64	2	PN	Pn	07 18 47.5	+0.7
KORT	Korkueli	2.68	50	PN	Pn	07 18 48.3	+0.9
KORT	Korkueli	2.68	50	*i* P	Pb	07 18 50.9	-1.3
KORT				IAML_P			
	comp=Z,511nm,0.2s						
VAM	Vamos	2.93	273	P	Pn	07 18 52.1	+1.4
VAM	Vamos	2.93	273	P	Pn	07 18 52.2	+1.4
BRDR	BURDUR-Merkez	3.01	37	*i* P	Pb	07 18 55.5	-2.3
BRDR				IAML_P			
	comp=Z,306nm,0.2s						
GVD	Gavdhos	3.06	262	P	Pn	07 18 53.0	+0.4
GVD	Gavdhos	3.06	262	P	Pn	07 18 52.9	+0.3
IMMV	Iera Moni Meta	3.11	274	P	Pn	07 18 54.9	+1.7
BLCB	Balcova	3.13	349	PN	Pn	07 18 54.4	+0.9
URLA	Izmir	3.19	343	PN	Pn	07 18 55.3	+0.9
URLA	Izmir	3.19	343	*i* P	Pn	07 18 55.1	+0.7
URLA				IAML_P			
	comp=Z,692nm,0.3s						
MANT	Manisa	3.24	11	*i* P	Pn	07 18 56.9	+1.7
MANT				IAML_P			
	comp=Z,170nm,0.3s						
KULA	Kula-Manisa	3.28	12	PN	Pn	07 18 56.6	+1.0
KHAL	Karahalli	3.35	24	*i* P	Pn	07 18 57.7	+1.0
KHAL				IAML_P			
	comp=Z,165nm,0.2s						
KEPZ	Antalya-Kepez	3.48	62	*i* P	Pn	07 19 00.1	+1.7
KEPZ				*i* S	Sn	07 19 38.7	-0.9
KEPZ				IAML_P			
	comp=Z,1µm,0.3s						
ANKY	Antikythira Is	3.69	280	P	Pn	07 19 02.2	+1.0
ANKY	Antikythira Is	3.69	280	P	Pn	07 19 02.8	+1.6
KTHA	Kythira Island	3.95	285	P	Pn	07 19 05.8	+1.0
VLI	Veliai	4.17	291	P	Pn	07 19 08.3	+0.5

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*ATH **06** 07:21:05.2, 35°.25N×27°.82E, h10^{km}±31^{km}, ML2.7/3, Error ellipse: s-maj=31.6km s-min=1.9km az=0.0*

*ISCJB **06** 07:21:06.3±1.0, 35°.27N±0°.04×27°.80E±0°.04, h4^{km}±6^{km}, Error ellipse: s-maj=7.6km s-min=5.2km az=149.3*

*ISK **06** 07:21:06.7, 35°.29N×27°.76E, h9^{km}, ML3.1/16*

*DDA **06** 07:21:23.4, 34°.00N×26°.87E, h35^{km}±30^{km}, ML3.6*

ISC 06 07:21:07.4±1.4, **35°.29N**±0°.06×**27°.74E**±0°.04, **h9**^{km}±10^{km}, **n36,** σ**1^s.32**/48, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.54	299	PG	Pg	07 21 17.9	0.0
KARP				SG	Sg	07 21 26.0	+1.0
KARP	Karpathos	0.54	299	P	Pg	07 21 16.6	-1.2
KARP				S	Sg	07 21 25.9	+1.0
KARP				AML	AML	07 21 28.3	
	comp=E,2175µm,0.3s						
KARP				AML	AML	07 21 28.3	
	comp=N,3008µm,0.5s						
ARG	Arkhangelos	0.98	19	PG	Pg	07 21 25.7	-0.5
ARG				SG	Sb	07 21 39.5	-0.1
ARG	Arkhangelos	0.98	19	P	Pg	07 21 25.4	-0.8
ARG				S	Sg	07 21 38.6	-0.4
ARG	Arkhangelos	0.98	19	P	Pg	07 21 23.7	-2.6
ARG				S	Sg	07 21 38.5	-0.4
ARG				AML	AML	07 21 44.0	
	comp=N,721µm,0.6s						
ARG				AML	AML	07 21 44.3	
	comp=E,1028µm,0.5s						
ZKR	Zakros	1.26	263	PN	Pg	07 21 31.3	-0.3
ZKR	Zakros	1.26	263	P	Pn	07 21 29.4	-1.8
BBRN	Bozburun-Marma	1.42	10	PN	Pn	07 21 33.1	-0.2
DAT	Datca	1.45	355	PN	Pn	07 21 33.5	-0.4
DAT	Datca	1.45	355	*i* P	Pn	07 21 33.4	-0.5
DAT				*i* S	Sg	07 21 54.1	+0.2
DAT				IAML_P			
	comp=Z,690nm,0.3s						
DATC	Datca-Mugla	1.47	358	PN	Pn	07 21 34.0	-0.1
MRSB	Marmaris-Mugla	1.48	14	PN	Pn	07 21 33.9	-0.3
DALY	Dalyan (Mula)	1.70	26	PN	Pn	07 21 37.1	-0.1
DALY	Dalyan (Mula)	1.70	26	*i* P	Pb	07 21 38.3	-0.5
DALY				*i* S	Sg	07 22 05.5	+3.5
KSL	Kastellorizon	1.73	60	P	Pn	07 21 37.0	-0.7
TURN	Turunc	1.73	24	PN	Pn	07 21 34.9	-2.8
FETY	Fethiye	1.73	39	PN	Pn	07 21 37.6	-0.1
FETY	Fethiye	1.73	39	P	Pn	07 21 35.6	-2.1
FETY	Fethiye	1.73	39	*i* P	Pb	07 21 38.9	-0.5
FETY				*i* S	Sg	07 22 08.7	+5.6
FETY				IAML_P			
	comp=Z,2µm,0.3s						
NPS	Neapolis	1.74	270	P	Pb	07 21 38.8	-0.8
AKAS	Kas	1.79	58	PN	Pn	07 21 38.3	-0.3
AKAS	Kas	1.79	58	*i* P	Pn	07 21 38.0	-0.6
AKAS				IAML_P			
	comp=Z,780nm,0.2s						
BDRM	Kayabasi	1.79	352	*i* P	Pn	07 21 38.4	-0.1
BDRM				*i* S	Sn	07 22 01.4	0.0
BDRM				IAML_P			
	comp=Z,1µm,0.3s						
BODT	Bodrum	1.81	349	PN	Pn	07 21 38.8	+0.1
BODT	Bodrum	1.81	349	P	Pn	07 21 38.8	+0.1
LAST	Lasithi	1.86	267	P	Pb	07 21 41.8	+0.3
LAST	Lasithi	1.86	267	P	Pb	07 21 40.7	-0.8
LAST				AML	AML	07 22 18.2	
	comp=E,232µm,0.9s						
LAST				AML	AML	07 22 25.0	
	comp=N,270µm,0.9s						
YER	Yerkesik	1.90	13	PN	Pn	07 21 39.9	-0.1
YER	Yerkesik	1.90	13	P	Pn	07 21 40.8	+0.8
YER				S	Sn	07 22 04.0	-0.1
ELL	Elmali	2.29	50	PN	Pn	07 21 45.4	0.0
AYDN	Tasoluk	2.37	3	*i* P	Pn	07 21 46.7	+0.2
AYDN				*i* S	Sn	07 22 16.8	+0.9
AYDN				IAML_P			
	comp=Z,506nm,0.3s						
SIVA	Sivas	2.42	264	P	Pn	07 21 48.4	+1.3
APE	Apeiranthos	2.52	316	PN	Pn	07 21 49.1	+0.5
AYDB	Zeytinkoy-Aydi	2.66	3	PN	Pn	07 21 50.9	+0.3
KORT	Korkueli	2.72	50	PN	Pn	07 21 51.5	+0.1
KEPZ	Antalya-Kepez	3.52	62	*i* P	Pn	07 22 02.1	-0.2
KEPZ				*i* S	Sn	07 22 44.5	+0.4
KEPZ				IAML_P			
	comp=Z,694nm,0.3s						

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*NEIC **06** 07:55:41.1±2.9, 7°.98N×83°.27W, h10^{km}±5^{km}, mb4.6/3, MW4.1(UCR), Error ellipse: s-maj=21.0km s-min=10.8km az=200.0*

NEIC Felt at Golfito.

*ISCJB **06** 07:55:44.5±0.6, 8°.45N±0°.07×83°.10W±0°.05, h13^{km}, mb3.9/7, MS3.8/1, Error ellipse: s-maj=11.1km s-min=5.0km az=34.0*

*UCR **06** 07:55:44.4±1.4, 8°.48N×83°.11W, h2^{km}±8^{km}, MW4.1*

*IDC **06** 07:55:45.8±1.3, 9°.08N×82°.84W, h0^{km}, mb3.7/5, mb1 4.0/8, mb1mx3.8/32, mbtmp3.8/8, ML3.6/3, MS3.8/1, Ms1 3.8/1, ms1mx2.8/37, Error ellipse: s-maj=42.7km s-min=22.3km az=38.0*

ISC 06 07:55:45.1±0.7, **8°.50N**±0°.07×**83°.12W**±0°.04, **h13**^{km}, **n45,** σ**1^s.56**/46, **mb3.9**/7, **1C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTJ1	Puerto Jimnez	0.19	281	⇑*e*P	Pg	07 55 49.7	+0.4
EDSV	San Vito	0.35	24	⇓*e*P	Pg	07 55 53.0	+0.8
BRU2	Volcan	0.51	55	⇓*e*P	Pg	07 55 55.2	0.0
EDPN	Palmar Norte	0.57	324	*e*P	Pg	07 55 56.5	+0.3
EDBA	Buenos Aires	0.68	347	*e*P	Pg	07 55 58.5	+0.3
DRK0	Durika	0.77	351	*e*P	Pg	07 55 59.6	-0.4
EDLM	Las Mercedes	0.90	329	*e*P	Pg	07 56 02.2	-0.4
EDDO	Dominical	1.05	315	*e*P	Pb	07 56 05.0	-0.2
LCR2	La Lucha 2	1.51	325	*e*P	Pn	07 56 11.6	-0.5
CVTR	Volcan Turrial	1.64	337	*e*P	Pn	07 56 14.4	+0.5
SJS	Escuela Geolog	1.70	327	*e*P	Pb	07 56 17.6	+1.2
HDC	Heredia	1.79	327	*e*Pn	Pn	07 56 17.1	+1.3
HDC	Heredia	1.79	327	*e*P	Pn	07 56 16.7	+1.0
SRA1	San Ramn	2.07	320	*e*P	Pn	07 56 21.3	+1.6
ARE1	Arenal 1	2.51	321	*e*P	Pn	07 56 27.9	+2.3
CEDE	Laguna Cedeo	2.52	322	*e*P	Pb	07 56 29.2	-1.0
JTS	Las Juntas de	2.54	315	Pn	Pn	07 56 26.2	+0.1
	18nm,0.3s,baz=86,slow=15,SNR=70						
JTS				Sn	Sn	07 56 56.6	-0.2
	37nm,0.3s,baz=24,slow=21,SNR=13						
JTS	Las Juntas de	2.54	315	*e*P	Pn	07 56 26.1	+0.1
MESS	Mesas	3.02	318	*e*P	Pn	07 56 35.9	+3.2
BCIP	Isla Barro Col	3.31	78	*e*Pn	Pn	07 56 37.5	+0.9
BCIP	Isla Barro Col	3.31	78	*e*P	Pn	07 56 37.0	+0.4
BCIP	Isla Barro Col	3.31	78	*e*P	Pn	07 56 37.4	+0.9
ESPN	Las Esperanzas	3.85	343	*e*Pn	Pn	07 56 44.6	+0.5
ACON	Acoyapa	4.00	330	*e*Pn	Pn	07 56 48.0	+2.0
ACON	Acoyapa	4.00	330	*e*P	Pn	07 56 47.5	+1.5
ESTN	Estel	5.58	325	*e*Pn	Pn	07 57 10.0	+2.1
TGUH	Tegucigalpa,Un	6.86	324	*e*Pn	Pn	07 57 27.8	+2.4
RREF	El Recreo	8.51	114	*e*P	Pn	07 57 48.9	+0.3
POPC	Popayan, Colom	8.73	132	*e*P	Pn	07 57 53.6	+2.3
ORTC	Ortega, Tolima	9.06	120	*e*P	Pn	07 57 57.4	+1.8
APG	El Apazote	9.67	313	Pn	Pn	07 58 03.8	-0.4
	0.6nm,0.3s,baz=55,slow=13,SNR=5.0						
CMIG	Matias Romero	14.29	308	Pn	Pn	07 59 09.1	+1.8
	0.2nm,0.3s,baz=125,slow=11,SNR=3.0						
253A	Americus	23.46	358	*e*P	P	08 00 55.9	+1.6
	25nm,1.4s						
KVTX	Kingsville	23.54	325	*e*P	P	08 00 54.0	-1.2
	23nm,0.8s						
TXAR	Lajitas Array	28.32	320	ScP	ScP	08 08 32.4	-0.4
	0.2nm,0.6s,baz=119,slow=3.2,SNR=3.0						
PDAR	Pinedale Array	41.27	330	PcP	PcP	08 05 29.1	0.0
	0.8nm,1.0s,baz=133,slow=3.8,SNR=5.0						
PDAR				ScP	ScP	08 09 14.4	-4.6
	0.1nm,0.3s,baz=134,slow=6.4,SNR=3.5						
NV01	Mina Array Sit	43.46	319	*e*P	P	08 03 50.1	+1.8
NVAR	Mina Array Bea	43.46	319	P	P	08 03 50.1	+1.8
	0.8nm,0.9s,baz=126,slow=6.8,SNR=3.9						
PLCA	Paso Flores	50.34	168	P	P	08 04 48.0	+6.2
	1.6nm,1.1s,baz=342,slow=20,SNR=2.9						
PLCA				LR	LR	08 22 27.7	
	comp=Z,108nm,21.7s,baz=184,slow=32						
YKA	Yellowknife Ar	58.55	343	P	P	08 05 39.5	-1.6
	0.6nm,0.9s,baz=128,slow=7.9,SNR=5.4						
YKB5	Yellowknife Ar	58.55	343	*e*P	P	08 05 39.5	-1.6
ILAR	Eielson Array	71.33	336	P	P	08 07 04.7	+0.3
	1.0nm,0.9s,baz=114,slow=4.5,SNR=8.8						
ESDC	Sonseca Array	76.29	51	P	P	08 07 34.1	+0.2
	0.2nm,0.4s,baz=277,slow=4.8,SNR=4.1						
CLL	Collm	87.24	39	*e*P	P	08 08 31.0	-0.4
RAYN	Ar Rayn	120.56	56	*e*PKPdf	PKPdf	08 14 33.9	-3.6

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*SOME **06** 08:02:28.3, 41°.28N×71°.90E, h5^{km}*

*KRNET **06** 08:02:30.7±0.1, 41°.36N×72°.01E, h12^{km}, mb2.5*

*NNC **06** 08:02:33.2±2.6, 41°.56N×71°.84E, h0^{km}, mb3.0, mpv2.9, Error ellipse: s-maj=25.3km s-min=8.0km az=178.0*

ISC 06 08:02:29.6±2.0, **41°.32N**±0°.07×**71°.97E**±0°.05, **h5**^{km}±12^{km}, **n27,** σ**1^s.51**/48, **14C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.48	360	⇓*i*P	Pg	08 02 38.9	+0.1
	baz=57						
ARK				⇓*i*S	Sg	08 02 45.1	0.0
	baz=57						
ARSB	Arslanbob	0.77	89	⇓*i*P	Pg	08 02 44.8	+0.6
	baz=92						
ARSB				⇓*i*S	Sb	08 02 55.4	-0.8
	baz=92						
AML	Almayashu	1.53	57	⇑*i*P	Pg	08 02 59.1	+0.3
	baz=58						
AML				⇑*i*S	Sg	08 03 19.2	+0.6
	baz=58						
IUG	Iuzhnay	1.67	300	P	Pn	08 02 59.1	-0.5
	2.7nm,0.1s						
IUG				S	Sn	08 03 20.3	-1.1
	153nm,0.2s						
IUG	Iuzhnay	1.67	300	*e*P	Pn	08 02 59.1	-0.5
	2.7nm,0.2s						
IUG				*e*S	Sn	08 03 20.4	-1.1
	174nm,0.2s						
MRKS	Merke	1.71	33	P	Pb	08 03 01.8	+0.3
	9.0nm,0.2s						
MRKS				S	Sg	08 03 24.6	+0.3
	37nm,0.3s						
MRKS	Merke	1.71	33	*e*P	Pb	08 03 01.8	+0.3
	9.0nm,0.2s						
MRKS				*e*S	Sg	08 03 24.6	+0.3
	37nm,0.3s						
ARLS	Aral	1.85	72	⇑*i*P	Pg	08 03 04.8	-0.2
	baz=73						
ARLS				⇑*i*S	Sg	08 03 29.4	+0.5
	baz=73						
EKS2	Erkin-Say	1.90	45	⇓*i*P	Pb	08 03 04.9	+0.1
	baz=45						
EKS2				⇓*i*S	Sg	08 03 30.4	-0.3
	baz=45						
KK31	Karatay Array	2.08	329	P	Pn	08 03 05.2	0.0
	0.6nm,0.2s,baz=140,slow=16,SNR=17						
KK31				S	Sn	08 03 32.1	+0.5
	6.6nm,0.3s,baz=135,slow=26,SNR=22						
UCH	Uchtor	2.11	64	⇑*e*P	Pb	08 03 09.0	+0.4
	baz=64						
UCH				⇑*i*S	Sg	08 03 37.1	-0.3
	baz=64						
AAK	Ala-Archa	2.30	54	⇑P	Pb	08 03 12.4	+0.8
	1.8nm,0.3s						
AAK				S	Sg	08 03 42.8	-0.6
	9.4nm,0.6s						
AAK	Ala-Archa	2.30	54	⇑*e*P	Pb	08 03 11.6	0.0
	baz=55						
AAK				⇑*i*S	Sb	08 03 40.8	+0.4
	baz=55						
BRLS	Boroldav	2.33	318	Pg	Pn	08 03 09.4	+0.8
	0.9nm,0.2s						
BRLS				Lg	Lg	08 03 37.3	
	24nm,0.2s						
BRLS	Boroldav	2.33	318	*e*P	Pn	08 03 09.5	+1.0
	0.9nm,0.2s						
BRLS				*e*S	Sn	08 03 37.5	-0.2
	24nm,0.2s						
KZA	Kyzart	2.57	72	⇑*i*P	Pb	08 03 15.7	-0.7
	baz=72						
KZA				⇑*i*S	Sb	08 03 48.1	-0.4
	baz=72						
CHMS	Chumysh	2.67	50	⇓*i*P	Pb	08 03 16.5	-1.3
	baz=50						
CHMS				⇓*i*S	Sb	08 03 49.3	-1.5
	baz=50						
USP	Ospenovka	2.71	43	⇑*e*P	Pb	08 03 16.9	-1.6
	baz=43						
USP				⇑*i*S	Sb	08 03 50.3	-1.7
	baz=43						
SGDS	Sogindy	2.90	42	Pg	Pb	08 03 22.2	+0.3
	2.1nm,0.3s						
SGDS				Lg	Lg	08 03 59.7	

	9.3nm,0.4s						
TKM2	**Tokmak 2**	**3.14**	**58**	Pn	**Pg**	**08 03 29.5**	**-0.2**
	0.5nm,0.3s						
TKM2				⇑Lg	Lg	08 04 08.9	
	5.2nm,0.6s						
DGS	**Degeres**	**3.42**	**55**	Pg	**Pb**	**08 03 32.1**	**+1.5**
	1.6nm,0.4s						
DGS				Lg	Lg	08 04 16.4	
	4.9nm,0.6s						
DGS	**Degeres**	**3.42**	**55**	*e*P	**Pb**	**08 03 32.1**	**+1.5**
	1.6nm,0.4s						
DGS				*e*S	**Sg**	**08 04 16.4**	**-2.9**
	4.9nm,0.6s						
KUU	**Kurty**	**4.13**	**50**	Pg	**Pb**	**08 03 44.9**	**+2.3**
	1.7nm,0.1s						
KUU				Lg	Lg	08 04 38.5	
	3.9nm,0.1s						
KUU	**Kurty**	**4.13**	**50**	*e*P	**Pb**	**08 03 44.9**	**+2.3**
	1.7nm,0.1s						
KUU				*e*S	**Sg**	**08 04 38.5**	**-3.6**
	3.9nm,0.1s						
KTBS	**Karatobe**	**4.23**	**54**	Pg	**Pb**	**08 03 47.0**	**+2.6**
	1.5nm,0.6s						
KTBS				Lg	Lg	08 04 41.8	
	5.0nm,0.7s						
KTBS	**Karatobe**	**4.23**	**54**	*e*P	**Pb**	**08 03 47.0**	**+2.6**
	1.5nm,0.6s						
KTBS				*e*S	**Sg**	**08 04 41.8**	**-3.4**
	5.0nm,0.7s						
CHKK	**Chushkaly**	**4.49**	**54**	*e*P	**Pb**	**08 03 50.8**	**+1.9**
	1.0nm,0.4s						
CHKK				*e*S	**Sb**	**08 04 47.5**	**+4.3**
	3.0nm,0.3s						

JMA 06 08:09:53.6±0.1, 29°.82N×139°.88E, h398^{km}, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.39**	**143**	P	Pn	08 10 59.9	-0.1
CBIJ				*e*S	S	08 11 52.0	-1.8
JHH2	**Haha-jima-NKT2**	**3.77**	**147**	P	Pn	08 11 04.0	+0.6
JHH2				*e*S	S	08 11 59.0	-1.0
BSO1	**Boso 1**	**4.91**	**11**	P	Pn	08 11 15.7	+1.9
BSO1				*e*S	S	08 12 19.9	+0.7
BSO3	**Boso 3**	**5.00**	**6**	S	S	08 12 19.9	-1.5
BSO4	**Boso 4**	**5.17**	**4**	P	Pn	08 11 18.5	+1.5
JIE	**Ise**	**5.29**	**330**	P	Pn	08 11 19.2	+0.7
JNY	**Yasuok**	**5.78**	**343**	P	Pn	08 11 24.9	+1.2
JHU	**Hanno**	**6.04**	**355**	P	Pn	08 11 26.5	+0.1
JRY	**Ryogami san**	**6.23**	**353**	P	Pn	08 11 29.3	+0.7
JYT	**Yasato**	**6.40**	**2**	P	Pn	08 11 31.0	+0.7
JAG	**Ashikaga**	**6.60**	**357**	P	Pn	08 11 32.1	-0.5
JHO	**Hitachi**	**6.80**	**5**	P	P	08 11 35.6	+0.2
JFK	**Kawauchi**	**7.57**	**6**	P	P	08 11 45.1	+1.0

SVSA 06 08:11:20.2±0.8, 39°.53N×30°.00W, h10^{km}, MD3.6, ML2.7, Error ellipse: s-maj=23.6km s-min=7.6km az=46.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.35**	**131**	*e*P	Pn	08 11 40.6	-4.5
PCED				*e*S	Sb	08 11 55.7	-7.3
PCED				A	A	08 11 58.2	
	36nm,0.4s						
CALA	**Caldeira**	**1.38**	**133**	*e*S	Sb	08 11 56.8	-7.2
PCAN	**Candelaria**	**1.59**	**131**	*e*P	Pn	08 11 43.5	-4.9
PCAN				*e*S	Sn	08 12 01.2	-7.8
PCAN				A	A	08 12 03.8	
	30nm,0.3s						
ROSA	**Rosais**	**1.59**	**120**	*e*S	Sn	08 12 01.3	-7.7
ROSA				A	A	08 12 04.1	
	21nm,0.5s						
PICO	**Pico**	**1.60**	**129**	*e*P	Pn	08 11 44.2	-4.4
PICO				*e*S	Sn	08 12 02.2	-7.1
PICO				A	A	08 12 03.9	
	80nm,0.5s						

*SOME **06** 08:18:40.5, 44°.60N×82°.13E, h10^{km}*

*NNC **06** 08:18:41.9±1.1, 44°.72N×81°.99E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=11.4km s-min=4.2km az=123.0*

ISC 06 08:18:36.7±1.3, 44°.65N±0°.05×82°.45E±0°.06, h10^{km}, n34, σ1^{s}.08/55, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.93**	**262**	P	**Pg**	**08 19 12.4**	**-1.2**
	13nm,0.2s						
DJR				S	**Sb**	**08 19 35.3**	**-0.8**
	13nm,0.3s						
DJR	**Jarkent**	**1.93**	**262**	*e*P	**Pg**	**08 19 12.7**	**-1.0**
	13nm,0.2s						
DJR				*e*S	**Sb**	**08 19 36.5**	**+0.4**
	15nm,0.4s						
KTMS	**Ketmen**	**1.93**	**232**	P	**Pg**	**08 19 13.4**	**-0.2**
	11nm,0.2s						
KTMS				S	**Sg**	**08 19 37.3**	**-1.4**
	73nm,0.4s						
KTMS	**Ketmen**	**1.93**	**232**	*e*P	**Pg**	**08 19 13.4**	**-0.2**
	11nm,0.2s						
KTMS				*e*S	**Sg**	**08 19 37.3**	**-1.4**
	73nm,0.4s						
MK31	**Makanchi Array**	**2.15**	**357**	⇓Pn	**Pg**	**08 19 18.1**	**+0.1**
	6.6nm,0.2s,baz=182,slow=14,SNR=287						
MK31				⇑Sn	**Sg**	**08 19 45.9**	**+0.1**
	3.2nm,0.2s,baz=186,slow=28,SNR=19						
MAKZ	**Makanchi**	**2.19**	**352**	⇑Pn	**Pg**	**08 19 17.8**	**-0.8**
	2.0nm,0.2s						
MAKZ				⇓Sn	**Sg**	**08 19 46.0**	**-0.9**
	18nm,0.5s						
KAPS	**Kapalarasan**	**2.28**	**287**	Pg	**Pb**	**08 19 18.2**	**+0.1**
	11nm,0.1s						
KAPS				Lg	Lg	08 19 45.2	
	19nm,0.2s						
KAPS	**Kapalarasan**	**2.28**	**287**	*e*P	**Pb**	**08 19 18.6**	**+0.5**
	11nm,0.1s						
KAPS				*e*S	**Sb**	**08 19 46.1**	**-0.3**
	19nm,0.2s						
PDGK	**Podgornoye**	**2.51**	**239**	Pg	**Pb**	**08 19 22.8**	**+0.9**
	3.4nm,0.2s						
PDGK				Lg	Lg	08 19 53.2	
	19nm,0.5s						
PDGK	**Podgornoye**	**2.51**	**239**	⇑Pn	**Pb**	**08 19 21.4**	**-0.5**
	1.6nm,0.2s						
PDGK				⇑Sn	**Sb**	**08 19 53.7**	**+0.9**
	26nm,0.5s						
UZB	**Uzynbulak**	**2.89**	**240**	Pg	**Pb**	**08 19 28.7**	**+0.2**
	5.3nm,0.2s						
UZB				Lg	Lg	08 20 03.4	
	13nm,0.5s						
UZB	**Uzynbulak**	**2.89**	**240**	*e*P	**Pb**	**08 19 28.7**	**+0.2**
	5.3nm,0.2s						
UZB				*e*S	**Sb**	**08 20 03.4**	**-0.6**
	13nm,0.5s						
MNBS	**Baschi**	**2.96**	**260**	Pg	**Pb**	**08 19 29.7**	**+0.1**
	9.5nm,0.1s						
MNBS				Lg	Lg	08 20 05.4	
	19nm,0.2s						
MNBS	**Baschi**	**2.96**	**260**	*e*P	**Pb**	**08 19 29.7**	**+0.1**
	9.5nm,0.1s						
MNBS				*e*S	**Sb**	**08 20 05.4**	**-0.4**
	19nm,0.2s						
KPKS	**Kokpek**	**2.96**	**248**	*e*P	**Pb**	**08 19 30.0**	**+0.4**
	21nm,0.1s						
KPKS				*e*S	**Sb**	**08 20 05.8**	**+0.1**
	73nm,0.3s						
ZHN	**Zhinishke**	**3.25**	**244**	Pg	**Pb**	**08 19 35.6**	**+1.0**
	3.9nm,0.2s						
ZHN				Lg	Lg	08 20 15.2	
	12nm,0.2s						
ZHN	**Zhinishke**	**3.25**	**244**	*e*P	**Pb**	**08 19 35.6**	**+1.0**
	3.9nm,0.2s						
ZHN				*e*S	**Sb**	**08 20 15.2**	**+0.9**
	12nm,0.2s						
ZSN	**Zaisan**	**3.27**	**30**	*e*P	**Pg**	**08 19 38.6**	**-0.7**
	1.5nm,0.2s						
ZSN				*e*S	**Sg**	**08 20 20.6**	**-1.2**
	1.7nm,0.3s						
KURS	**Kuram**	**3.29**	**251**	Pg	**Pb**	**08 19 36.2**	**+0.9**
	2.4nm,0.3s						
KURS				Lg	Lg	08 20 16.0	
	4.4nm,0.3s						
KURS	**Kuram**	**3.29**	**251**	*e*P	**Pb**	**08 19 36.2**	**+0.9**
	2.4nm,0.3s						
KURS				*e*S	**Sb**	**08 20 16.0**	**+0.6**
	4.4nm,0.3s						
SATY	**Saty**	**3.33**	**243**	Pg	**Pb**	**08 19 36.8**	**+1.0**
	5.6nm,0.1s						
SATY				Lg	Lg	08 20 17.1	
	42nm,0.2s						
SATY	**Saty**	**3.33**	**243**	*e*P	**Pb**	**08 19 36.8**	**+1.0**
	5.6nm,0.1s						
SATY				*e*S	**Sb**	**08 20 17.1**	**+0.7**
	42nm,0.2s						
ARXS	**Arharly**	**3.34**	**264**	Pg	**Pb**	**08 19 37.1**	**+1.1**
	5.5nm,0.3s						
ARXS				Lg	Lg	08 20 17.7	
	15nm,0.3s						
ARXS	**Arharly**	**3.34**	**264**	*e*P	**Pb**	**08 19 37.1**	**+1.1**
	5.5nm,0.3s						
ARXS				*e*S	**Sb**	**08 20 17.7**	**+1.0**
	15nm,0.3s						
CHKK	**Chushkaly**	**4.00**	**260**	Pg	**Pb**	**08 19 48.2**	**+0.9**
	1.7nm,0.2s						
CHKK				Lg	Lg	08 20 36.7	
	11nm,0.3s						
CHKK	**Chushkaly**	**4.00**	**260**	*e*P	**Pb**	**08 19 48.2**	**+0.9**
	1.7nm,0.2s						
CHKK				*e*S	**Sb**	**08 20 36.7**	**+0.9**
	11nm,0.3s						
KOTS	**Kotyrbulak**	**4.10**	**252**	Pg	**Pb**	**08 19 50.1**	**+1.0**
	5.7nm,0.3s						
KOTS				Lg	Lg	08 20 40.0	
	26nm,0.3s						
KOTS	**Kotyrbulak**	**4.10**	**252**	*e*P	**Pb**	**08 19 50.1**	**+1.0**
	5.7nm,0.3s						
KOTS				*e*S	**Sb**	**08 20 40.0**	**+1.2**
	26nm,0.3s						
KTBS	**Karatobe**	**4.25**	**259**	Pg	**Pb**	**08 19 52.5**	**+1.0**
	2.2nm,0.3s						
KTBS				Lg	Lg	08 20 44.1	
	8.3nm,0.5s						
KTBS	**Karatobe**	**4.25**	**259**	*e*P	**Pb**	**08 19 52.5**	**+1.0**
	2.2nm,0.3s						
KTBS				*e*S	**Sb**	**08 20 44.1**	**+1.2**
	8.3nm,0.5s						
TNSS	**Tian-Shan**	**4.29**	**250**	Pg	**Pg**	**08 19 57.3**	**-1.6**
	2.3nm,0.3s						
TNSS				Lg	Lg	08 20 52.3	
	5.6nm,0.4s						
TNSS	**Tian-Shan**	**4.29**	**250**	*e*P	**Pb**	**08 19 54.8**	**+2.3**
	2.3nm,0.3s						
TNSS				*e*S	**Sb**	**08 20 48.0**	**+3.5**
	5.6nm,0.4s						
KUU	**Kurty**	**4.45**	**262**	Pg	**Pb**	**08 19 56.2**	**+1.3**
	0.9nm,0.2s						
KUU				Lg	Lg	08 20 50.4	
	6.1nm,0.4s						
KUU	**Kurty**	**4.45**	**262**	*e*P	**Pb**	**08 19 56.2**	**+1.3**
	0.9nm,0.2s						
KUU				*e*S	**Sb**	**08 20 50.4**	**+1.8**
	6.1nm,0.4s						

*ATH **06** 08:41:38.0, 36°.38N×28°.90E, h53^{km}±7^{km}, ML3.0/3, Error ellipse: s-maj=8.0km s-min=1.5km az=132.0*

*ISCJB **06** 08:41:37.2±0.3, 36°.28N±0°.02×28°.92E±0°.03, h76^{km}±4^{km}, Error ellipse: s-maj=4.4km s-min=3.4km az=31.7*

*DDA **06** 08:41:38.4, 36°.43N×28°.95E, h59^{km}, ML3.2*

*HLW **06** 08:41:38.8, 36°.18N×29°.03E, h33^{km}±21^{km}, Ml3.4*

*ISK **06** 08:41:39.2, 36°.30N×28°.89E, h28^{km}, ML3.2/10*

*THE **06** 08:41:40.5, 36°.32N×28°.84E, h41^{km}±5^{km}, ML2.9/2, Error ellipse: s-maj=6.7km s-min=1.5km az=138.0*

*NSSC **06** 08:41:51.4±0.3, 35°.90N×30°.37E, h5^{km}, ML2.7*

ISC 06 08:41:38.0±1.1, 36°.26N±0°.03×28°.93E±0°.03, h64^{km}±7^{km}, n51, σ1^{s}.53/81, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.39**	**19**	P	**Pn**	**08 41 48.9**	**-0.4**
FETY				S	**Sn**	**08 41 56.4**	**-1.1**
FETY	**Fethiye**	**0.39**	**19**	*i* P	**Pn**	**08 41 49.8**	**+0.5**
FETY				*i* S	**Sn**	**08 41 56.5**	**-1.1**
FETY				IAML_P			
	comp=Z,6µm,0.2s						
KSL	**Kastellorizon**	**0.54**	**102**	P	**Pn**	**08 41 51.4**	**+0.7**
KSL				S	**Sn**	**08 42 00.6**	**+0.7**
KSL				AML	AML	08 42 01.5	
	comp=N,1812µm,0.3s						
KSL				AML	AML	08 42 01.9	
	comp=E,4321µm,0.4s						
AKAS	**Kas**	**0.55**	**93**	PG	**Pn**	**08 41 51.7**	**+0.8**
AKAS				SG	**Sn**	**08 42 00.8**	**+0.4**
AKAS	**Kas**	**0.55**	**93**	*i* P	**Pn**	**08 41 51.9**	**+0.9**
AKAS				*i* S	**Sn**	**08 42 01.8**	**+1.5**
AKAS				IAML_P			
	comp=Z,16µm,0.1s						
DALY	**Dalyan (Mula)**	**0.60**	**338**	PG	**Pn**	**08 41 51.2**	**-0.1**
DALY				SG	**Sn**	**08 41 59.8**	**-1.2**
DALY	**Dalyan (Mula)**	**0.60**	**338**	*i* P	**Pn**	**08 41 51.4**	**+0.1**
DALY				*i* S	**Sn**	**08 41 59.0**	**-2.0**
ARG	**Arkhangelos**	**0.65**	**266**	PG	**Pn**	**08 41 52.2**	**+0.3**
ARG				SG	**Sn**	**08 42 02.0**	**0.0**
ARG	**Arkhangelos**	**0.65**	**266**	P	**Pn**	**08 41 52.2**	**+0.3**
ARG				S	**Sn**	**08 42 00.8**	**-1.2**
	comp=Z,515nm,0.3s						
ARG	**Arkhangelos**	**0.65**	**266**	P	**Pn**	**08 41 52.2**	**+0.3**
ARG				S	**Sn**	**08 42 02.2**	**+0.1**
ARG				AML	AML	08 42 02.4	
	comp=N,868µm,0.2s						
ARG				AML	AML	08 42 03.4	
	comp=E,1188µm,0.3s						
TURN	**Turunc**	**0.66**	**337**	PG	**Pn**	**08 41 53.4**	**+1.4**
TURN				SG	**Sn**	**08 42 03.9**	**+1.6**
TURN	**Turunc**	**0.66**	**337**	*i* P	**Pn**	**08 41 54.0**	**+1.9**
TURN				*i* S	**Sn**	**08 42 04.8**	**+2.5**
MRSB	**Marmaris-Mugla**	**0.74**	**308**	PG	**Pn**	**08 41 53.3**	**+0.3**
MRSB				SG	**Sn**	**08 42 03.6**	**-0.4**
BBRN	**Bozburun-Marma**	**0.81**	**301**	PG	**Pn**	**08 41 54.3**	**+0.5**
BBRN				SG	**Sn**	**08 42 05.4**	**-0.1**
ELL	**Elmali**	**0.93**	**58**	PG	**Pn**	**08 41 56.9**	**+1.5**
YER	**Yerkesik**	**1.01**	**330**	PG	**Pn**	**08 41 57.5**	**+1.1**
YER	**Yerkesik**	**1.01**	**330**	P	**Pn**	**08 41 57.5**	**+1.1**
DATC	**Datca-Mugla**	**1.14**	**296**	PN	**Pn**	**08 41 58.5**	**+0.6**
AKUM	**Antalya-Kumluc**	**1.15**	**87**	*i* P	**Pn**	**08 41 59.6**	**+1.6**
AKUM				*i* S	**Sn**	**08 42 15.8**	**+2.7**
AKUM				IAML_P			
	comp=Z,3µm,0.2s						
DAT	**Datca**	**1.18**	**294**	PN	**Pn**	**08 41 59.3**	**+0.6**
DAT	**Datca**	**1.18**	**294**	*i* P	**Pn**	**08 41 59.3**	**+0.6**
DAT				*i* S	**Sn**	**08 42 13.6**	**-0.4**
DAT				IAML_P			
	comp=Z,1µm,0.1s						
KORT	**Korkueli**	**1.36**	**57**	PN	**Pn**	**08 42 03.1**	**+2.1**
BDRM	**Kayabasi**	**1.44**	**304**	*i* P	**Pn**	**08 42 02.9**	**+1.0**
BDRM				IAML_P			
	comp=Z,648nm,0.1s						
BODT	**Bodrum**	**1.53**	**302**	P	**Pn**	**08 42 03.6**	**+0.5**
KARP	**Karpathos**	**1.60**	**244**	P	**Pn**	**08 42 05.4**	**+1.3**
KARP				S	**Sn**	**08 42 25.1**	**+1.3**
AYDN	**Tasoluk**	**1.63**	**329**	*i* P	**Pn**	**08 42 05.1**	**+0.5**
AYDN				IAML_P			
	comp=Z,948nm,0.2s						
GCAM	**G?zelcaml?**	**1.98**	**317**	*i* P	**Pn**	**08 42 10.6**	**+1.5**
GCAM				*i* S	**Sn**	**08 42 32.6**	**-0.2**
KHAL	**Karahalli**	**2.15**	**12**	*i* P	**Pn**	**08 42 12.7**	**+1.0**
KHAL				*i* S	**Sn**	**08 42 35.8**	**-1.6**
KHAL				IAML_P			
	comp=Z,467nm,0.2s						
SMG	**Samos**	**2.21**	**311**	P	**Pn**	**08 42 12.2**	**-0.2**
SMG				S	**Sn**	**08 42 37.1**	**-1.5**
	comp=Z,372nm,0.3s						
SMG	**Samos**	**2.21**	**311**	P	**Pn**	**08 42 13.0**	**+0.6**
SMG				S	**Sn**	**08 42 36.6**	**-2.0**
SMG				AML	AML	08 42 38.8	
	comp=N,684µm,0.4s						
SMG				AML	AML	08 42 39.5	
	comp=E,802µm,0.2s						
MANT	**Manisa**	**2.25**	**353**	*i* P	**Pn**	**08 42 13.5**	**+0.5**
MANT				*i* S	**Sn**	**08 42 37.5**	**-2.2**
KEPZ	**Antalya-Kepez**	**2.25**	**73**	*i* P	**Pn**	**08 42 15.2**	**+2.3**
KEPZ				*i* S	**Sn**	**08 42 41.6**	**+2.1**
KULA	**Kula-Manisa**	**2.26**	**355**	P	**Pn**	**08 42 13.2**	**+0.1**
USAK	**Uak-Merkez**	**2.45**	**2**	*i* P	**Pn**	**08 42 16.2**	**+0.5**
USAK				*i* S	**Sn**	**08 42 43.0**	**-1.6**
ZKR	**Zakros**	**2.48**	**243**	P	**Pn**	**08 42 18.2**	**+2.1**
ZKR				S	**Sn**	**08 42 47.8**	**+2.5**
GAZI	**Gazipasa**	**2.74**	**90**	*i* P	**Pn**	**08 42 19.3**	**-0.3**
GAZI				IAML_P			
	comp=Z,350nm,0.2s						
AKHS	**Akhisar**	**2.76**	**342**	*i* P	**Pn**	**08 42 18.5**	**-1.3**
GDZ	**Gediz**	**2.86**	**9**	*i* P	**Pn**	**08 42 21.6**	**+0.4**
GDZ				*i* S	**Sn**	**08 42 52.7**	**-1.9**
CHOS	**Chios island**	**3.12**	**314**	P	**Pn**	**08 42 25.3**	**+0.5**
CHOS				S	**Sn**	**08 42 59.5**	**-1.5**
LEF	**Lefka**	**3.42**	**108**	*i* P	**Pn**	**08 42 28.6**	**-0.3**
LEF				*i* S	**Sn**	**08 43 04.3**	**-3.9**
SLUM	**Salum**	**5.67**	**214**	P	**Pn**	**08 43 00.8**	**+1.1**
	baz=216						
BRBR	**Barbar**	**6.44**	**114**	*e*P	**Pn**	**08 43 10.9**	**+0.5**
BRBR				*e*S	Sn	08 44 08.3	-14
BRBR				AML	AML	08 44 21.6	
	comp=N,16nm,0.2s						
BRBR				AML	AML	08 44 23.8	
	comp=E,7.9nm,0.5s						
QASN	**Qassioun**	**6.62**	**112**	*e*P	**Pn**	**08 43 13.6**	**+0.8**
QASN				AML	AML	08 44 15.3	
	comp=E,49nm,0.3s						
QASN				AML	AML	08 44 21.4	
	comp=N,58nm,0.4s						
RSH		**6.63**	**142**	P	**Pn**	**08 43 13.2**	**+0.5**
	baz=141						
HNAT	**Natroun**	**6.76**	**167**	P	**Pn**	**08 43 14.9**	**+0.3**
	baz=167						
HNAT				S	**Sn**	**08 44 25.2**	**-5.0**
	baz=167						
KOT	**Kottamia**	**6.77**	**158**	P	**Pn**	**08 43 14.7**	**-0.1**
	baz=158						
KOT				S	**Sn**	**08 44 24.7**	**-5.7**
	baz=158						
TOTH	**TOTAH**	**6.81**	**113**	*e*P	**Pn**	**08 43 16.5**	**+1.1**
TOTH				*e*S	Sn	08 44 17.2	-14
TOTH				AML	AML	08 44 31.3	
	comp=E,9.9nm,0.4s						
TOTH				AML	AML	08 44 32.7	
	comp=N,19nm,0.6s						
HHAG	**Hagoal**	**6.83**	**156**	P	**Pn**	**08 43 15.8**	**+0.2**
	baz=156						
GLL	**Jalalah**	**7.06**	**160**	P	**Pn**	**08 43 19.0**	**+0.2**
	baz=160						
SUZ	**Suez**	**7.19**	**152**	P	**Pn**	**08 43 20.7**	**+0.2**
	baz=152						
HKAT	**Jabal Katrina**	**8.82**	**150**	P	**Pn**	**08 43 43.1**	**+0.1**
	baz=149						

MEX 06 08:46:42.6±0.4, 15°.55N×96°.20W, h12^{km}±1^{km}, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.23**	**23**	*e*P	Pg	08 46 47.3	-0.3
HUIG				*i* S	Sg	08 46 50.5	-0.4
PANG	**Puerto Angel**	**0.28**	**294**	*e*P	Pg	08 46 48.0	-0.5
PANG				*e*S	Sg	08 46 52.4	0.0
VHO	**Vista Hermosa**	**1.59**	**341**	*e*P	Pn	08 47 08.1	-2.7
VHO				*e*S	Sn	08 47 26.2	-5.2
CMIG	**Matias Romero**	**1.99**	**39**	*e*P	Pn	08 47 12.7	-3.3
CMIG				*i* S	Sn	08 47 35.8	-5.0

UCR 06 08:46:57.3±1.8, 8°.72N×83°.07W, h28^{km}±6^{km}, MW3.6, 1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDPN	**Palmar Norte**	**0.45**	**303**	*e*P	Pb	08 47 06.5	-0.3
EDPN				*e*S	Sb	08 47 13.8	+0.4
EDBA	**Buenos Aires**	**0.49**	**336**	*e*P	Pb	08 47 07.8	+0.3
EDBA				*e*S	Sn	08 47 15.5	-0.6
DRK0	**Durika**	**0.57**	**343**	⇑*e*P	Pb	08 47 08.3	-0.6
DRK0				*e*S	Sb	08 47 16.6	-0.3
EDLM	**Las Mercedes**	**0.76**	**318**	*e*P	Pb	08 47 11.4	-0.6
LCR2	**La Lucha 2**	**1.37**	**318**	*e*P	Pn	08 47 21.1	+0.2
LCR2				*e*S	Sn	08 47 37.4	-0.8

*IDC **06** 09:22:28.1±9.9, 35°.29N×69°.77E, h262^{km}±125^{km}, mb3.4/1, mb1 2.8/5, mb1mx2.6/60, mbtmp3.6/5, Error ellipse: s-maj=116.6km s-min=66.9km az=154.0*

*NNC **06** 09:22:37.7±17.0, 37°.21N×69°.83E, h225^{km}±326^{km}, mb2.0, mpv3.1, Error ellipse: s-maj=211.2km s-min=89.0km az=3.0*

ISC 06 09:22:35.7±2.5, 37°.0N±0°.2×69°.8E±0°.1, h250^{km}, n8, σ2^{s}.96/7, 2C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.08**	**5**	P	**Pn**	**09 24 03.7**	**-1.1**
	0.4nm,0.2s,baz=191,slow=12,SNR=30						
KK31				S	**S**	**09 25 16.5**	**+0.5**
	0.7nm,0.3s,baz=188,slow=23,SNR=6.2						
TKM2	**Tokmak 2**	**7.38**	**36**	⇑P	**Pn**	**09 24 21.7**	**+0.3**
	0.7nm,0.4s						
TKM2				⇑S	**S**	**09 25 42.0**	**-4.2**
GEYT	**Alibeck**	**9.30**	**279**	P	**Pn**	**09 24 43.6**	**-1.8**
	0.4nm,0.3s,baz=107,slow=12,SNR=3.0						
MKAR	**Makanchi Array**	**13.47**	**40**	P	P	09 25 46.1	+7.6
	0.1nm,0.3s,baz=222,slow=12,SNR=4.1						
AB31	**Akbulak array**	**14.13**	**333**	P	**P**	**09 25 47.5**	**+1.7**
	0.1nm,0.2s,baz=160,slow=11,SNR=9.7						
KURBB	**Kurchatov Arra**	**14.96**	**22**	P	Pn	09 26 03.5	+8.3
	0.1nm,0.3s,baz=213,slow=10,SNR=3.2						
BVAR	**Borovoye Array**	**15.99**	**1**	P	Pn	09 26 16.2	+8.7
	0.1nm,0.3s,baz=170,slow=8.8,SNR=1.8						
ZALV	**Zalesovo Beam**	**19.86**	**27**	P	**Pn**	**09 26 56.0**	**+3.2**
	2.6nm,0.5s,baz=222,slow=11,SNR=7.6						

*IDC **06** 09:27:42.6±0.6, 7°.08S×155°.05E, h0^{km}, mb4.1/13, mb1 4.2/17, mb1mx4.1/36, mbtmp4.1/17, ML3.0/4, MS3.5/7, Ms1 3.5/7, ms1mx3.2/27, Error ellipse: s-maj=18.4km s-min=16.4km az=100.0*

*ISCJB **06** 09:27:44.1±0.4, 7°.03S±0°.06×154°.77E±0°.06, h10^{km}, mb4.3/27, MS3.6/6, Error ellipse: s-maj=10.8km s-min=7.3km az=136.5*

*NEIC **06** 09:27:47.2±1.2, 7°.08S×154°.76E, h22^{km}±4^{km}, mb4.5/16, Error ellipse: s-maj=16.1km s-min=6.5km az=111.0*

ISC 06 09:27:44.7±0.4, 7°.08S±0°.07×154°.95E±0°.05, h10^{km}, n58, σ1^{s}.32/61, mb4.4/27, MS3.6/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.99**	**316**	*e*Pn	**Pn**	**09 28 45.8**	**-0.3**
HNR	**Honiara**	**5.47**	**116**	Pn	**Pn**	**09 29 02.7**	**-3.6**
	2.3nm,0.3s,baz=6.3,slow=18,SNR=2.4						
HNR				Sn	**Sn**	**09 30 08.7**	**-0.6**
	5.9nm,0.3s,baz=151,slow=19,SNR=1.8						
HNR	**Honiara**	**5.47**	**116**	P	**Pb**	**09 29 21.0**	**+0.6**
HNR				S	**Sg**	**09 30 43.0**	**+2.6**
PMG	**Port Moresby**	**8.05**	**253**	Pn	**Pn**	**09 29 41.5**	**-0.4**
	1.2nm,0.3s,baz=191,slow=5.2,SNR=3.2						
PMG				Sn	**Sn**	**09 31 14.6**	**+1.5**
	4.1nm,0.3s,baz=69,slow=22,SNR=8.1						
PMG				LR	LR	09 31 50.8	
	comp=Z,99nm,21.5s,baz=48,slow=30						
PMG	**Port Moresby**	**8.05**	**253**	*e*Pn	**Pn**	**09 29 41.1**	**-0.8**
PMG				*e*		09 29 41.5	
PMG				*e*Sn	**Sn**	**09 31 15.6**	**+2.5**
CTA	**Charters Tower**	**15.44**	**212**	Pn	**Pn**	**09 31 22.3**	**-0.5**
	0.0nm,0.3s,baz=63,slow=7.6,SNR=2.1						
DZM	**Mont Dzumac**	**18.58**	**145**	P	**Pn**	**09 32 00.4**	**-2.0**
	0.2nm,0.3s,baz=86,slow=19,SNR=2.6						
DZM	**Mont Dzumac**	**18.58**	**145**	*e*P	**Pn**	**09 32 04.3**	**+2.0**
	11nm,0.9s						
GUMO	**Guam**	**22.84**	**334**	LR	LR	09 41 23.3	
	comp=Z,41nm,18.6s,baz=108,slow=36						
WB2	**Warramunga Arr**	**23.73**	**235**	*e*P	**P**	**09 32 56.3**	**-0.9**
	13nm,1.1s						
WR1	**Warramunga Arr**	**23.73**	**235**	*e*P	**P**	**09 32 57.1**	**-0.2**
WRA	**Warramunga Arr**	**23.74**	**235**	P	**P**	**09 32 57.1**	**-0.2**
	4.4nm,0.7s,baz=60,slow=9.3,SNR=20						
SIJI	**Sorong**	**24.41**	**284**	P	**P**	**09 33 03.8**	**+0.1**
	12nm,0.8s,baz=121,slow=6.7,SNR=4.3						
AS31	**Alice Springs**	**26.09**	**228**	*e*P	**P**	**09 33 17.9**	**-0.9**
	2.5nm,1.4s						
ASAR	**Alice Springs**	**26.09**	**228**	P	**P**	**09 33 19.0**	**+0.1**
	1.3nm,0.8s,baz=63,slow=9.0,SNR=13						
ASAR				ScP	**ScP**	**09 40 28.2**	**+1.5**
	1.5nm,1.0s,baz=58,slow=3.5,SNR=6.4						

ASAR				LR	LR	09 43 38.9	
	comp=Z,173nm,18.2s,baz=65,slow=37						
STKA	Stephens Creek	27.64	205	P	P	09 33 33.4	+0.7
	2.6nm,0.8s,baz=25,slow=12,SNR=4.3						
STKA				LR	LR	09 45 03.6	
	comp=Z,261nm,18.6s,baz=16,slow=38						
STKA	Stephens Creek	27.64	205	*e*P	P	09 33 32.4	-0.3
	1.4nm,1.3s						
KSRS	Korea Array	50.99	332	P	P	09 36 45.5	-1.2
	1.0nm,0.7s,baz=148,slow=8.1,SNR=7.6						
KS15	Wonju Array Si	51.00	332	*e*P	P	09 36 45.5	-1.3
USRK	Ussuriysk Ar.	55.09	340	P	P	09 37 17.0	+0.1
	0.5nm,0.3s,baz=159,slow=3.6,SNR=5.9						
PETK	Petropavlovsk-	60.00	2	P	P	09 37 57.6	+6.3
	7.9nm,0.8s,baz=170,slow=7.6,SNR=7.9						
PETK				LR	LR	10 01 37.5	
	comp=Z,25nm,20.8s,baz=175,slow=34						
PEA1	Petropavlovsk-	60.00	2	*e*pP	pP	09 37 57.6	+4.5
CM31	Chiang Mai Arr	60.78	296	*e*P	P	09 37 56.5	-0.9
	8.9nm,1.0s						
CMAR	Chiang Mai Arr	60.78	296	P	P	09 37 58.3	+0.9
	2.9nm,0.7s,baz=116,slow=5.6,SNR=17						
SONA0	Songino Array	69.38	327	*e*P	P	09 38 52.8	-0.1
SONM	Songino Array	69.38	327	P	P	09 38 52.8	-0.1
	1.1nm,0.5s,baz=129,slow=6.0,SNR=9.6						
SONM				LR	LR	10 09 20.2	
	comp=Z,33nm,18.8s,baz=129,slow=36						
QSPA	South Pole Qui	82.90	180	*e*P	P	09 40 13.3	+3.7
	8.4nm,0.9s						
MK31	Makanchi Array	83.44	319	*e*P	P	09 40 13.1	+0.5
	2.3nm,0.8s						
MK32	Makanchi Array	83.44	319	*e*P	P	09 40 12.3	-0.3
MKAR	Makanchi Array	83.44	319	P	P	09 40 12.3	-0.3
	1.4nm,0.6s,baz=102,slow=5.6,SNR=15						
ILAR	Eielson Array	83.47	21	P	P	09 40 10.2	-2.0
	0.7nm,0.9s,baz=260,slow=5.3,SNR=6.7						
ILAR				LR	LR	10 15 31.3	
	comp=Z,69nm,19.5s,baz=252,slow=34						
ILB	Eielson Array	83.47	21	*e*P	P	09 40 12.8	+0.5
	3.3nm,1.4s						
ZALV	Zalesovo Beam	84.22	326	P	P	09 40 15.2	-1.1
	0.7nm,0.3s,baz=124,slow=6.7,SNR=3.5						
ZAA1	Zalesovo Array	84.23	326	*e*P	P	09 40 15.2	-1.1
MAW	Mawson	84.31	203	P	P	09 40 15.5	-1.1
	0.8nm,0.5s,baz=12,slow=2.1,SNR=2.3						
MAW	Mawson	84.31	203	*e*P	P	09 40 17.1	+0.5
	2.3nm,1.4s						
HYT	Haines Junctio	85.47	27	*e*P	P	09 40 23.6	+1.0
	3.7nm,0.8s						
EPYK	Eagle Plains	87.95	22	*e*P	P	09 40 36.8	+2.2
	9.4nm,1.4s						
DLBC	Dease Lake	88.23	31	*e*P	P	09 40 37.8	+1.7
	9.1nm,1.2s						
RYN	Ryan	91.66	51	*e*P	P	09 40 53.4	+0.6
	6.0nm,1.4s						
NV01	Mina Array Sit	91.80	52	*e*P	P	09 40 55.8	+2.3
NVAR	Mina Array Bea	91.80	52	P	P	09 40 55.8	+2.3
	2.9nm,0.9s,baz=250,slow=6.6,SNR=18						
NV11	Mina Array Sit	91.92	52	*e*P	P	09 40 55.3	+1.3
	0.3nm,0.9s						
KVN	Kaiserville	92.04	51	*e*P	P	09 40 56.4	+1.8
	4.3nm,1.0s						
R11A	Troy Canyon, C	93.92	52	*e*P	P	09 41 05.3	+2.1
	2.8nm,1.1s						
YKA	Yellowknife Ar	96.43	28	P	P	09 41 14.7	+0.9
	2.1nm,0.9s,baz=273,slow=4.4,SNR=11						
YKB5	Yellowknife Ar	96.43	28	*e*P	P	09 41 14.7	+0.8
FIA0	FINESS Array S	114.00	336	*e*PKiKP	PKiKP	09 46 24.0	+0.2
FINES	FINESS Array B	114.00	336	PKP	PKiKP	09 46 24.0	+0.2
	2.1nm,0.9s,baz=102,slow=2.7,SNR=4.5						
AKASG	Malin Array Be	117.58	324	PKP	PKiKP	09 46 30.3	-0.7
	0.7nm,0.5s,baz=68,slow=2.1,SNR=3.1						
AKBB	Malin Array Si	117.58	324	*e*PKPdf	PKiKP	09 46 31.4	+0.3
BR101	Keskin Array S	118.41	311	*e*PKPdf	PKiKP	09 46 33.6	+0.4
BRTR	Keskin Array B	118.41	311	PKP	PKiKP	09 46 33.6	+0.4
	0.3nm,0.6s,baz=354,slow=2.9,SNR=2.9						
CLL	Collm	125.86	331	*e*PKPdf	PKiKP	09 46 48.0	+0.7
GEC2	GERESS Array S	127.10	329	*e*PKPdf	PKiKP	09 46 49.6	-0.4
GERES	GERESS Array B	127.10	329	PKP	PKiKP	09 46 49.7	-0.4
	0.6nm,0.3s,baz=85,slow=1.6,SNR=5.2						
TORD	Torodi Ar. Bea	153.01	285	PKPbc	PKiKP	09 47 44.1	+0.4
	1.8nm,0.5s,baz=75,slow=2.1,SNR=18						
TORD				PKPab	pPKPab	09 47 54.4	-2.4
	3.6nm,0.9s,baz=17,slow=5.3,SNR=8.6						
TOA1	Torodi Ar. Sit	153.01	285	*e*PKPbc	PKiKP	09 47 44.1	+0.4
TOA1				*e*PKPab	pPKPab	09 47 54.4	-2.4

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*ISCJB **06** 09:29:13.0±0.3, 54°.60N±0°.02×160°.52E±0°.07, h121^{km}±3^{km}, mb3.7/12, Error ellipse: s-maj=7.1km s-min=2.8km az=26.3*

*KRSC **06** 09:29:12.2±0.7, 54°.60N×160°.54E, h119^{km}±9^{km}, ML4.1, FELT [II] at GMS Kronoki.*

*IDC **06** 09:29:14.7±1.2, 54°.81N×160°.02E, h129^{km}±12^{km}, mb3.5/12, mb1 3.7/16, mb1mx3.4/53, mbtmp3.8/16, Error ellipse: s-maj=18.5km s-min=11.7km az=142.0*

ISC 06 09:29:13.4±0.6**, 54°.61N**±0°.03×**160°.44E**±0°.04**, h120**^{km}±5^{km}**, n65, σ1.^{s}07**/83**, mb3.7**/12**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZV	Kizimen	0.51	351	*i* P	Pn	09 29 31.7	+0.1
KZV				*e*S	Sn	09 29 45.2	-0.1
TUMD	Tumrok D	0.59	358	*e*P	Pn	09 29 31.6	-0.4
TUMD				*e*S	Sn	09 29 45.2	-0.8
TUMR	Tumrok	0.69	346	*e*P	Pn	09 29 33.2	+0.4
TUMR				*e*S	Sn	09 29 47.8	+0.3
MKZ	Mys Kozlova	0.75	94	*i* P	Pn	09 29 33.0	-0.1
MKZ				*e*S	Sn	09 29 47.3	-0.7
KMNR	Kamenistaya	1.15	354	*e*P	Pn	09 29 37.4	+0.3
BZGR	Bezymyannyi-Gr	1.34	6	*e*P	Pn	09 29 39.2	+0.1
BZWR	Bezymyannyi-We	1.35	1	*e*P	Pn	09 29 39.7	+0.4
KPT	Kopyto	1.36	355	*e*P	Pn	09 29 39.2	-0.1
LGNR	Loginova	1.48	5	*e*P	Pn	09 29 42.1	+1.2
KOZ	Kozyrevsk	1.48	348	*e*P	Pn	09 29 40.9	+0.3
KOZ				*e*S	Sn	09 30 01.8	+0.5
CIRR	Tsirk	1.52	7	*e*P	Pn	09 29 41.5	+0.4
SPN	Mys Shipunski	1.54	189	*e*P	Pn	09 29 40.5	-0.8
SPN				*e*S	Sn	09 30 00.9	-1.5
NLC	Nalytchevo	1.58	205	*e*P	Pn	09 29 41.8	0.0
NLC				*e*S	Sn	09 30 03.2	-0.1
KRSR	Krestovskiy	1.61	3	*e*P	Pn	09 29 42.0	-0.2
KRSR				*e*S	Sn	09 30 03.5	-0.6
SDLR	Sedlovina	1.62	215	*i* P	Pn	09 29 43.3	+0.9
SDLR				*e*S	Sn	09 30 05.4	+1.0
KRX	Arik	1.64	221	*e*P	Pn	09 29 43.8	+1.2
KRER	Koryakskii	1.65	218	*e*P	Pn	09 29 43.4	+0.6
ESO	Esso	1.65	324	*i* P	Pn	09 29 42.6	0.0
ESO				*e*S	Sn	09 30 05.0	+0.2
SMAR	Somma	1.66	216	*e*P	Pn	09 29 43.8	+0.8
AVH	Avacha	1.68	217	*e*P	Pn	09 29 44.2	+1.1
KOK	Koryaka	1.70	220	*e*P	Pn	09 29 44.4	+1.1
UGLR	Uglovaya	1.70	215	*e*P	Pn	09 29 44.2	+0.9
UGLR				*e*S	Sn	09 30 07.4	+1.4
KLY	Klyuchi	1.71	4	*e*P	Pn	09 29 43.6	+0.4
KLY				*e*S	Sn	09 30 06.3	+0.3
GNL	Ganaly	1.73	239	*e*P	Pn	09 29 44.2	+0.5
SRDR	Sredinnyy	1.76	347	*e*P	Pn	09 29 43.7	-0.2
DALK	Dalny	1.87	213	*i* P	Pn	09 29 45.9	+0.6
DALK				*e*S	Sn	09 30 10.5	+1.0
PET	Petropavlovsk	1.91	214	*e*Pn	Pn	09 29 46.8	+1.1
PET	Petropavlovsk	1.91	214	*i* P	Pn	09 29 46.7	+1.0
BDR	Baidarnaya	2.01	12	*e*P	Pn	09 29 48.2	+1.2
BDR				*e*S	Sn	09 30 14.1	+1.4
SMKR	Semkarok	2.06	16	*e*P	Pn	09 29 48.8	+1.2
SRKR	Sorokina	2.09	11	*e*P	Pn	09 29 48.7	+0.7
KBG	Krutoberegovo	2.09	37	*e*P	Pn	09 29 48.9	+1.0
KBG				*e*S	Sn	09 30 14.8	+0.4
KBTR	Krutoberegovo	2.10	39	*e*P	Pn	09 29 48.5	+0.5
KBTR				*e*S	Sn	09 30 14.3	-0.2
PEA0B	Petropavlovsk-	2.21	228	*e*Pn	Pn	09 29 50.2	+0.7
PETK	Petropavlovsk-	2.21	228	P	Pn	09 29 50.4	+0.8
	3.8nm,0.3s,baz=71,slow=18,SNR=81						
PETK				S	Sn	09 30 19.2	+2.0
	6.3nm,0.3s,baz=85,slow=20,SNR=6.3						
KRMR	Karymshinskiy	2.25	218	*e*P	Pn	09 29 50.7	+0.7
KRMR				*e*S	Sn	09 30 18.4	+0.4
RUS	Russkaya	2.47	209	*e*P	Pn	09 29 53.0	+0.3
RUS				*e*S	Sn	09 30 22.1	-0.8
MTVR	Mutnovka	2.52	213	*e*P	Pn	09 29 54.3	+0.7
MTVR				*e*S	Sn	09 30 24.8	+0.4
APC	Apacha	2.58	230	*e*P	Pn	09 29 55.7	+1.5
ASAK	Asacha	2.70	215	*e*P	Pn	09 29 56.9	+1.1
KDTR	Khodutka, Kamc	3.15	208	*e*P	Pn	09 30 01.3	-0.3
KDTR				*e*S	Sn	09 30 36.4	-2.3
BKI	Bering	3.25	77	*i* P	Pn	09 30 02.8	-0.1
BKI				*e*S	Sn	09 30 38.4	-2.7
PALN	Palana	4.50	357	P	Pn	09 30 19.7	+0.3
OSSR	Ossora	4.87	16	*e*P	Pn	09 30 26.6	+2.2
MA2	Magadan	7.24	317	P	Pn	09 30 54.0	-2.5
	2.2nm,0.3s,baz=131,slow=10,SNR=12						
ASAJ	Asahikawa	15.62	235	P	Pn	09 32 47.0	+0.3
	0.3nm,0.3s,baz=93,slow=7.8,SNR=5.7						
KLR	Kul'dur	18.42	265	P	P	09 33 18.3	-0.9
	0.1nm,0.3s,baz=64,slow=16,SNR=3.0						
MJAR	Matsushiro Arr	23.67	229	P	P	09 34 14.8	+0.9
	1.4nm,0.5s,baz=9.2,slow=7.9,SNR=7.1						
KDAK	Kodiak Island	25.91	64	P	P	09 34 34.1	+0.2
	2.7nm,0.6s,baz=289,slow=3.2,SNR=8.6						
ILAR	Eielson Array	27.61	47	P	P	09 34 49.2	+0.1
	0.6nm,0.7s,baz=268,slow=7.6,SNR=10						
H11N2	WAKE ISLAND Hy	35.17	169	T	T	10 13 30.6	
	baz=354,slow=76,SNR=64						
H11N3	WAKE ISLAND Hy	35.18	169	T	T	10 13 36.0	
	baz=354,slow=76,SNR=82						
H11N1	WAKE ISLAND Hy	35.19	169	T	T	10 13 37.1	
	baz=354,slow=76,SNR=84						
H11S1	WAKE ISLAND Hy	36.36	170	T	T	10 14 43.9	
	baz=351						
H11S3	WAKE ISLAND Hy	36.37	170	T	T	10 14 52.6	
	baz=351						
H11S2	WAKE ISLAND Hy	36.38	170	T	T	10 14 53.6	
	baz=351						
YKA	Yellowknife Ar	41.91	44	P	P	09 36 52.4	+0.8
	0.4nm,0.5s,baz=301,slow=7.9,SNR=3.2						
MKAR	Makanchi Array	47.69	295	P	P	09 37 34.5	-3.1
	0.6nm,0.7s,baz=54,slow=7.3,SNR=4.0						
NVAR	Mina Array Bea	55.05	71	P	P	09 38 34.6	+1.9
	1.1nm,0.7s,baz=306,slow=7.1,SNR=11						
NVAR				pP	pP	09 39 01.3	+0.1
	0.9nm,0.7s,baz=297,slow=5.7,SNR=5.9						
PDAR	Pinedale Array	56.61	62	P	P	09 38 45.5	+1.7
	0.7nm,0.6s,baz=342,slow=3.2,SNR=8.0						
PDAR				pP	pP	09 39 13.3	+0.9
	0.4nm,0.8s,baz=310,slow=4.2,SNR=2.8						
FINES	FINESS Array B	58.81	336	P	P	09 38 56.0	-2.5
	1.1nm,0.8s,baz=28,slow=8.6,SNR=3.5						
TXAR	Lajitas Array	69.86	68	P	P	09 40 12.8	+1.6
	1.6nm,0.6s,baz=293,slow=5.0,SNR=29						
BRTR	Keskin Array B	75.58	320	P	P	09 40 43.7	-1.2
	0.5nm,0.6s,baz=43,slow=2.6,SNR=3.3						
WRA	Warramunga Arr	77.55	205	P	P	09 40 55.8	-0.1
	0.6nm,0.4s,baz=21,slow=6.1,SNR=8.0						
ASAR	Alice Springs	81.23	204	P	P	09 41 16.2	+0.4
	0.7nm,0.6s,baz=17,slow=4.9,SNR=9.5						

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*GUC **06** 09:46:42.9±0.7, 19°.95S×70°.26W, h46^{km}±1^{km}, ML3.5*

*SJA **06** 09:46:42.3±0.6, 19°.97S×70°.29W, h40^{km}±8^{km}, ML2.7, MW3.7*

*ISCJB **06** 09:46:43.5±0.8, 19°.98S±0°.03×70°.34W±0°.06, h31^{km}±4^{km}, Error ellipse: s-maj=9.5km s-min=4.4km az=1.0*

ISC 06 09:46:43.7±1.3**, 19°.95S**±0°.03×**70°.29W**±0°.06**, h29**^{km}±12^{km}**, n18, σ0.^{s}62**/33**, 2C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.39	24	*e*P	Pb	09 46 52.7	+0.3
PSGC				*i* S	Sn	09 46 59.5	-0.5
PSGCX	Pisagua	0.39	24	*i* P	Pb	09 46 52.5	+0.1
PSGCX				*i* S	Sn	09 47 00.8	+0.8
PB11	IPOC Station P	0.63	73	*i* P	Pb	09 46 55.9	-0.4
PB11				*i* S	Sn	09 47 06.2	+0.1
PB11	IPOC Station P	0.63	73	*e*P	Pb	09 46 56.0	-0.4
PB11				*i* S	Sn	09 47 05.4	-0.6
PB11				IAML		09 47 06.3	
	comp=N,8µm,0.3s						
MNMC	Minye Minye	1.05	39	⇑*i*P	Pn	09 47 02.5	-0.2
MNMC				*e*S	Sb	09 47 16.9	0.0
MNMC				IAML		09 47 20.5	
	comp=E,4µm,0.1s						
MNMCX	Minye Minye	1.05	39	*i* P	Pn	09 47 02.3	-0.5
MNMCX				*i* S	Sb	09 47 17.2	+0.3
GO01	Chusmiza	1.07	75	*e*P	Pn	09 47 02.8	-0.4
GO01				*i* S	Sb	09 47 17.9	+0.1
PB08	IPOC Station P	1.09	100	*i* P	Pn	09 47 02.6	-0.8
PB08	IPOC Station P	1.09	100	*e*P	Pn	09 47 03.0	-0.4
PB08				*i* S	Sn	09 47 17.8	+0.1
PB01	IPOC Station P	1.32	145	*e*P	Pn	09 47 05.4	-1.0
PB01				*i* S	Sn	09 47 22.6	-0.5
PB01				IAML		09 47 23.5	
	comp=E,1µm,0.3s						
PB12	IPOC Station P	1.33	359	*i* P	Pn	09 47 05.9	-0.6
PB12				*i* S	Sb	09 47 24.1	-0.7
PB12	IPOC Station P	1.33	359	*e*P	Pn	09 47 06.2	-0.3
PB12				*i* S	Sn	09 47 23.6	+0.2
PB12				IAML		09 47 26.5	
	comp=E,1µm,0.3s						
PB02	IPOC Station P	1.41	165	*i* P	Pn	09 47 07.0	-0.6
PB02	IPOC Station P	1.41	165	*e*P	Pn	09 47 06.9	-0.6
PB02				*i* S	Sn	09 47 25.4	+0.1
PB02				IAML		09 47 29.3	
	comp=E,1µm,0.1s						
PB16	IPOC Station P	1.77	25	*e*P	Pn	09 47 13.0	0.0
PB16				*i* S	Sn	09 47 35.9	+1.1
PB07	IPOC Station P	1.81	168	*e*P	Pn	09 47 13.0	-0.1
PB07				*i* S	Sn	09 47 35.7	+0.5
PB07				IAML		09 47 45.2	
	comp=E,460nm,0.5s						
PB09	IPOC Station P	2.08	152	⇑*i*P	Pn	09 47 17.2	+0.3
PB09				*e*S	Sn	09 47 42.4	+0.5
HJA	Humahuaca	5.58	126	*i* P	Pn	09 48 07.0	+1.8
HJA				IAML		09 48 12.7	
	comp=Z,3.4nm,0.6s						

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*IDC **06** 10:06:49.1±1.7, 2°.49N×95°.81E, h0^{km}, mb3.8/8, mb1 3.8/10, mb1mx3.6/49, mbtmp3.7/10, ML3.6/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/51, Error ellipse: s-maj=48.5km s-min=19.0km az=52.0*

*ISCJB **06** 10:06:50.5±0.7, 2°.42N±0°.05×95°.72E±0°.05, h25^{km}, mb3.8/8, MS3.2/1, Error ellipse: s-maj=8.7km s-min=6.0km az=141.9*

*DJA **06** 10:06:54.1±0.9, 2°N±3°×9°6E±°, h25^{km}±4^{km}, M3.8/9, MLv3.8/9*

ISC 06 10:06:52.9±1.0**, 2°.49N**±0°.05×**95°.87E**±0°.09**, h25**^{km}**, n26, σ0.^{s}65**/23**, mb3.9**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	0.46	100	P	Pn	10 07 03.6	-0.4
SNSI				S	Sn	10 07 11.5	+0.1
TPTI		1.52	60	P	Pn	10 07 17.5	-1.0
TPTI				S	Sn	10 07 37.8	+0.4
MLSI	Meulaboh, Aceh	1.84	17	P	Pn	10 07 23.9	+0.9
MLSI				S	Sb	10 07 48.7	0.0
GSI	Gunungsitoli	2.07	125	P	Pn	10 07 27.0	+0.8
GSI				S	Sn	10 07 51.3	+0.1
KCSI	Kotacane, Aceh	2.16	62	P	Pn	10 07 27.9	+0.5
TSI	Tuntungan	2.87	69	P	Pn	10 07 37.7	+0.5
PSI	Prapat	3.07	84	Pn	Pn	10 07 41.1	+1.2
	3.2nm,0.3s,baz=313,slow=7.2,SNR=9.6						
PBSI	Pulau Batu	3.49	136	P	Pn	10 07 46.0	+0.3
MNSI	Mandailing Nat	4.07	114	P	Pn	10 07 54.1	+0.4
SISI	Saibi	4.97	140	P	Pn	10 08 06.3	+0.2
LEM	Lembang	14.94	128	LR	LR	10 16 02.6	
	comp=Z,68nm,19.6s,baz=262,slow=37						
CMAR	Chiang Mai Arr	16.15	11	Pn	Pn	10 10 39.3	+0.8
	0.1nm,0.3s,baz=192,slow=13,SNR=3.5						
H08S2	Diego Garcia H	25.40	246	T	T	10 38 38.3	
	baz=66,slow=75,SNR=11						
H08S3	Diego Garcia H	25.41	247	T	T	10 38 34.8	
	baz=66,slow=75,SNR=105						
H08S1	Diego Carcia H	25.42	246	T	T	10 38 37.8	
	baz=66,slow=75,SNR=24						
H01W3	Cape Leeuwin H	40.94	157	T	T	10 57 59.2	
	baz=333,slow=76,SNR=90						
H01W2	Cape Leeuwin H	40.95	157	T	T	10 58 00.2	
	baz=333,slow=76,SNR=117						
H01W1	Cape Leeuwin H	40.95	157	T	T	10 58 02.5	
	baz=333,slow=76,SNR=101						
WRA	Warramunga Arr	43.84	122	P	P	10 14 57.7	+0.3
	1.5nm,1.1s,baz=295,slow=10,SNR=3.7						
ASAR	Alice Springs	45.23	127	P	P	10 15 08.7	+0.2
	0.3nm,0.7s,baz=304,slow=8.1,SNR=4.5						
KSRS	Korea Array	45.57	36	P	P	10 15 10.2	-0.8
	0.9nm,0.8s,baz=237,slow=7.6,SNR=4.8						
MKAR	Makanchi Array	45.69	347	P	P	10 15 11.7	-0.1
	1.2nm,0.6s,baz=164,slow=8.4,SNR=10						
SONM	Songino Array	46.08	10	P	P	10 15 14.0	-1.0
	0.7nm,0.5s,baz=184,slow=7.7,SNR=3.9						
SONM				LR	LR	10 34 28.4	
	comp=Z,25nm,19.2s,baz=106,slow=36						
KURBB	Kurchatov Arra	50.16	346	P	P	10 15 47.1	+0.9
	1.0nm,0.7s,baz=167,slow=7.2,SNR=5.1						
ZALV	Zalesovo Beam	52.09	352	P	P	10 16 00.1	-0.7
	1.1nm,0.4s,baz=176,slow=7.1,SNR=6.0						
BVAR	Borovoye Array	54.61	341	P	P	10 16 19.2	-0.1
	0.7nm,0.6s,baz=120,slow=8.5,SNR=3.8						

IDC 06 10:23:33.5±3.4**, 25°.04S**×**179°.34W, h0**^{km}**, mb4.0**/4**, mb1 4.3**/4**, mb1mx3.8**/30**, mbtmp4.0**/4**, Error ellipse: s-maj=284.3km s-min=34.1km az=167.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	32.10	272	P	P	10 30 03.9	+1.3
	6.8nm,0.3s,baz=98,slow=11,SNR=17						
ASAR	Alice Springs	42.46	262	P	P	10 31 30.6	0.0
	1.0nm,0.8s,baz=88,slow=8.5,SNR=7.7						
WRA	Warramunga Arr	42.94	267	P	P	10 31 32.6	-1.9
	0.5nm,0.4s,baz=91,slow=8.8,SNR=4.2						
TXAR	Lajitas Array	90.52	58	P	P	10 36 37.8	0.0
	0.4nm,0.8s,baz=216,slow=6.2,SNR=3.9						

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*IDC **06** 10:24:33.5±2.2, 36°.40N×71°.13E, h76^{km}±19^{km}, mb3.7/15, mb1 3.9/21, mb1mx3.7/50, mbtmp4.1/21, Error ellipse: s-maj=14.8km s-min=12.8km az=34.0*

*BJI **06** 10:24:34.1±0.0, 36°.31N×71°.31E, h107^{km}, mb4.7/10, mB4.6/7*

*ISCJB **06** 10:24:35.7±0.2, 36°.49N±0°.02×71°.47E±0°.04, h114^{km}, mb4.1/37, Error ellipse: s-maj=4.2km s-min=2.9km az=161.0*

*MOS **06** 10:24:35.7±1.4, 36°.57N×71°.37E, h101^{km}, mb4.4/19, Error ellipse: s-maj=8.2km s-min=4.3km az=93.5*

*NEIC **06** 10:24:36.3±1.9, 36°.58N×71°.24E, h110^{km}±17^{km}, mb4.2/6, Error ellipse: s-maj=12.5km s-min=4.0km az=79.0*

*NNC **06** 10:24:41.1±4.5, 36°.93N×70°.93E, h152^{km}±57^{km}, mb3.3, mpv4.0, Error ellipse: s-maj=36.7km s-min=25.2km az=17.0*

ISC 06 10:24:36.8±0.4**, 36°.45N**±0°.04×**71°.44E**±0°.05**, h114**^{km}**, n150, σ2.^{s}24**/167**, mb4.2**/37**, 6C-11D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.65	171	P	Pn	10 25 18.8	+0.4
GAR	Garm	2.70	341	*e*Pn	Pn	10 25 17.0	-2.0
GAR				*e*Sn	Sn	10 25 44.6	-6.9
GAR	Garm	2.70	341	*e*PN	Pn	10 25 17.0	-2.0
KBL	Kabul	2.73	226	*e*Pn	Pn	10 25 18.6	-0.9
KBL	Kabul	2.73	226	*e*PN	Pn	10 25 18.6	-0.9
CHGR	Chuyangaron	2.85	321	*e*P	Pn	10 25 34.5	+13
CHCP	Chirah Chowk	3.16	151	P	Pn	10 25 26.6	+1.5
NIL	Nilore	3.16	151	*e*Pn	Pn	10 25 27.2	+2.1
NIL				*e*Sn	Sn	10 26 04.8	+2.4
NIL	Nilore	3.16	151	*e*PN	Pn	10 25 27.2	+2.1
NIL				*e*		10 26 04.8	
BTK	Batken	3.64	352	*e*Pn	Pn	10 25 31.4	0.0
BTK	Batken	3.64	352	*e*PN	Pn	10 25 31.4	0.0
THW	Thamme Wali	3.65	176	P	Pn	10 25 31.2	-0.4
SARP	Sargodha	4.63	167	P	Pn	10 25 43.8	-0.9
KSH	Kashi	4.71	48	P	Pn	10 25 42.8	-3.1
KSH				S	Sn	10 26 31.3	-8.3
KSH				smax	smax		
	comp=N,440nm,0.5s						
KSH				smax	smax		
	comp=E,460nm,0.5s						
TAS	Tashkent	5.16	342	PN	Pn	10 25 46.1	-5.6
DHRM	DHARAMSHALA	5.80	135	*e*P	Pn	10 26 01.0	+0.3
DHRM				*e*S	Sn	10 27 05.2	-1.0
DHRM				IAML		10 27 08.3	
	comp=N,439nm,0.4s						
DHRM				IAML		10 27 08.8	
	comp=E,620nm,0.5s						
AML	Almayashu	5.94	16	P	Pn	10 26 02.4	-0.3
	SNR=22						
UCH	Uchtor	6.24	21	P	Pn	10 26 06.7	-0.1
	SNR=52						
KZA	Kyzart	6.35	27	P	Pn	10 26 08.5	+0.2
	SNR=13						
EKS2	Erkin-Say	6.46	16	P	Pn	10 26 09.4	-0.1
	SNR=37						
AAK	Ala-Archa	6.62	20	P	Pn	10 26 11.9	+0.3
	comp=E,22nm,0.3s,baz=160,slow=6.3,SNR=70						
AAK				S	Sn	10 27 24.5	-1.2
	comp=E,2.0nm,0.3s,baz=322,slow=21,SNR=10						
AAK	Ala-Archa	6.62	20	*e*Pn	Pn	10 26 11.6	0.0
AAK				*e*Sn	Sn	10 27 23.2	-2.4
AAK	Ala-Archa	6.62	20	⇑P	Pn	10 26 11.6	0.0
	comp=E,14nm,0.3s						
AAK				⇓S	Sn	10 27 25.0	-0.6
	comp=E,31nm,0.6s						
AAK	Ala-Archa	6.62	20	*d i*PN	Pn	10 26 11.6	0.0
AAK	Ala-Archa	6.62	20	P	Pn	10 26 11.9	+0.3
	SNR=34						
KK31	Karatay Array	6.69	354	*e*Pn	Pn	10 26 10.8	-1.6
KK31				*e*Sn	Sn	10 27 20.8	-6.3
KK31	Karatay Array	6.69	354	P	Pn	10 26 10.6	-1.8
	comp=E,5.6nm,0.3s,baz=176,slow=12,SNR=239						
KK31				⇑S	Sn	10 27 20.6	-6.5
	comp=E,35nm,0.5s,baz=183,slow=23,SNR=12						
KK31	Karatay Array	6.69	354	*e*PN	Pn	10 26 10.8	-1.6
KKAR	Karatay Array	6.69	354	*e*Pn	Pn	10 26 10.6	-1.8
KKAR				*e*Sn	Sn	10 27 20.9	-6.2
KKAR	Karatay Array	6.69	354	*e*PN	Pn	10 26 10.6	-1.8
KBK	Karagaybulak	6.77	23	P	Pn	10 26 15.2	+1.5
	SNR=14						
FRU1	Bishkek	6.81	20	*e*Pn	Pn	10 26 14.8	+0.6
FRU1	Bishkek	6.81	20	*e*PN	Pn	10 26 14.8	+0.6
ULHL	Ulahol	6.88	31	P	Pn	10 26 15.9	+0.7
	SNR=6.9						
BOOM	Boomskoye usch	6.96	29	*e*Pn	Pn	10 26 16.6	+0.3
BOOM				*e*Sn	Sn	10 27 31.6	-2.6
BOOM	Boomskoye usch	6.96	29	*e*PN	Pn	10 26 16.6	+0.3
CHMS	Chumysh	7.02	20	P	Pn	10 26 17.0	0.0
	SNR=28						
SMLA	Simla	7.13	136	*e*P	Pn	10 26 18.9	+0.4
SMLA				*e*S	Sn	10 27 33.9	-4.1
SMLA				IAML		10 27 39.6	
	comp=E,199nm,0.2s						
SMLA				IAML		10 27 40.2	
	comp=N,174nm,0.1s						
USP	Ospenovka	7.21	18	P	Pn	10 26 19.6	+0.1
	SNR=14						
KDJ	Kajisay	7.21	36	*e*Pn	Pn	10 26 17.7	-2.0
KDJ	Kajisay	7.21	36	*e*PN	Pn	10 26 17.7	-2.0
TKM2	Tokmak 2	7.21	25	⇓P	Pn	10 26 19.9	+0.1
	comp=N,0.8nm,0.2s						
TKM2				⇑S	Sn	10 27 39.7	-0.5
	comp=N,16nm,1.0s						
TKM2	Tokmak 2	7.21	25	PN	Pn	10 26 19.8	+0.1
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.2s						
TKM2	Tokmak 2	7.21	25	P	Pn	10 26 20.0	+0.3
	SNR=26						
PRZ	Przheval'sk	8.08	40	*e*Pn	Pn	10 26 32.7	+1.3
PRZ	Przheval'sk	8.08	40	*e*PN	Pn	10 26 32.7	+1.3
DDI	Dehra Dun	8.24	136	*e*S	Sn	10 27 59.2	-5.8
JOSI	Joshimath	8.97	129	*e*S	Sn	10 28 17.7	-5.3
JOSI				IAML		10 28 27.5	
	comp=N,291nm,0.8s						
JOSI				IAML		10 28 27.8	
	comp=E,180nm,0.4s						
KHET	Khetri	9.13	155	*e*P	Pn	10 26 43.9	-1.7
KHET				*e*x	x	10 28 17.2	
NDI	New Delhi	9.15	146	*e*S	Sn	10 28 22.0	-5.0
PDGK	Podgornoye	9.24	40	P	Pn	10 26 47.3	+0.2
PDGK				pmax	pmax		
	comp=Z,13nm,1.0s						
SONA	Sohna	9.46	148	*e*P	Pn	10 26 51.0	+0.9
SONA				*e*S	Sn	10 28 29.6	-5.0
GEYT	Alibeck	10.73	282	P	Pn	10 27 00.6	-6.6
	comp=Z,0.9nm,0.3s,baz=113,slow=11,SNR=5.6						
GEYT				S	Sn	10 28 52.8	-13

	comp=Z,4.3nm,0.3s,baz=134,slow=18,SNR=8.6						
GYA0B	ALIBECK ARRAY	10.73	282	ePn	Pn	10 27 05.2	-2.1
PYUN	Piuthan	12.83	127	eP	Pn	10 27 33.7	-1.5
	comp=Z,15nm,0.3s						
MAKZ	Makanchi	13.00	34	ePn	Pn	10 27 34.5	-2.5
MAKZ	Makanchi	13.00	34	eP	Pn	10 27 34.6	-2.5
MK31	Makanchi Array	13.13	35	ePn	Pn	10 27 37.4	-1.4
MK31	Makanchi Array	13.13	35	⇑P	Pn	10 27 38.6	-0.2
	comp=Z,0.6nm,0.3s,baz=219,slow=13,SNR=7.2						
MK31	Makanchi Array	13.13	35	eP	Pn	10 27 37.4	-1.4
MKAR	Makanchi Array	13.13	35	P	Pn	10 27 38.0	-0.8
	comp=Z,0.2nm,0.3s,baz=224,slow=15,SNR=7.7						
DANN	Dangsing	13.17	124	eP	Pn	10 27 38.4	-1.3
	comp=Z,14nm,0.2s						
KOLN	Koldanda	13.45	127	eP	Pn	10 27 42.5	-0.8
	comp=Z,9.7nm,0.4s						
WMQ	Urumqi	14.44	54	eP	Pn	10 27 55.7	0.0
WMQ				LR	LR		
	comp=Z,470nm,28.9s						
WMQ				LR	LR		
	comp=Z,550nm,29.2s						
WMQ				LR	LR		
	comp=Z,85nm,25.9s						
DMN	Daman	14.55	123	eP	Pn	10 27 56.4	-1.0
	comp=Z,6.9nm,0.2s						
KKN	Kakani	14.55	122	eP	Pn	10 27 55.9	-1.5
	comp=Z,7.1nm,0.2s						
PKIN	Phulchoki	14.77	123	eP	Pn	10 27 59.6	-0.6
PKI	Pulchoki	14.78	123	eP	Pn	10 27 59.6	-0.8
	comp=Z,12nm,0.5s						
KURBB	Kurchatov Arra	15.06	18	P	Pn	10 28 00.6	-2.8
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=5.8						
KURBB	Kurchatov Arra	15.06	18	⇓P	Pn	10 28 00.3	-3.1
	comp=Z,2.5nm,0.6s						
KURK	Kurchatov	15.17	18	⇑eP	Pn	10 28 03.5	-1.3
JIRN	Jiri	15.26	121	eP	Pn	10 28 06.0	-0.5
	comp=Z,24nm,0.4s						
AB31	Akbulak array	15.30	330	P	Pn	10 28 02.8	-3.7
	comp=Z,2.1nm,0.5s,baz=138,slow=13,SNR=93						
AB31				S	Sn	10 30 38.5	-17
	comp=Z,6.3nm,0.6s,baz=144,slow=24,SNR=11						
AB31	Akbulak array	15.30	330	P	Pn	10 28 02.8	-3.7
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ABKAR	Akbulak array	15.30	330	ePn	Pn	10 28 03.7	-2.8
	comp=Z,3.7nm,0.5s						
BVA2	Borovoye Array	16.59	358	⇓P	Pn	10 28 19.1	-3.2
	comp=Z,0.8nm,0.3s						
BVA2	Borovoye Array	16.59	358	P	Pn	10 28 19.1	-3.2
BVA2				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	Borovoye Array	16.59	358	P	Pn	10 28 20.8	-1.7
	comp=Z,0.4nm,0.3s,baz=162,slow=13,SNR=10						
BVAR				S	Sn	10 31 26.0	-0.6
	comp=Z,0.2nm,0.3s,baz=122,slow=36,SNR=2.2						
BRVK	Borovoye	16.63	358	eP	Pn	10 28 21.3	-1.6
	comp=Z,2.6nm,0.7s						
BRVK	Borovoye	16.63	358	⇓eP	P	10 28 23.4	+0.1
AKTO	Aktyubinsk	17.00	329	P	Pn	10 28 25.5	-2.0
	comp=Z,1.8nm,0.3s,baz=133,slow=13,SNR=16						
AKTO				S	Sn	10 31 20.1	-16
	comp=Z,0.3nm,0.3s,baz=49,slow=19,SNR=4.8						
AKTO	Aktyubinsk	17.00	329	⇓P	Pn	10 28 25.5	-2.0
	comp=Z,10nm,0.8s						
DGZ	Jazzator, Alta	17.61	36	deP	Pn	10 28 34.9	-0.1
ZAA0	Zalesovo Array	19.82	24	eP	P	10 28 57.6	-0.6
	comp=Z,7.1nm,0.5s						
ZALV	Zalesovo Beam	19.82	24	P	P	10 28 58.8	+0.6
	comp=Z,2.4nm,0.3s,baz=238,slow=11,SNR=12						
GNI	Garni	21.25	288	P	P	10 29 14.5	+0.7
	comp=Z,5.9nm,0.5s,baz=142,slow=11,SNR=5.8						
GNI	Garni	21.25	288	eP	P	10 29 11.8	-2.0
	comp=Z,30nm,1.2s						
GNI	Garni	21.25	288	deP	P	10 29 15.6	+1.7
GNI				pmax	pmax		
	comp=Z,75nm,1.1s						
SVE	Sverdlovsk	21.64	344	eP	P	10 29 20.8	+3.1
ARU	Arti	21.80	341	P	P	10 29 19.2	-0.1
	comp=Z,2.3nm,0.5s,baz=78,slow=14,SNR=7.6						
ARU				S	S	10 33 12.4	-0.8
	comp=Z,0.9nm,0.3s,baz=180,slow=20,SNR=2.4						
ARU	Arti	21.80	341	eP	P	10 29 17.6	-1.7
	comp=Z,14nm,1.2s						
ARU	Arti	21.80	341	d iP	P	10 29 22.0	+2.6
ARU						10 29 46.0	
ARU				S	S	10 33 18.7	+5.5
ARU				SS	SnSn	10 33 54.9	+5.4
ARU				pmax	pmax		
	comp=Z,14nm,1.2s						
ZEI	Tsey	22.08	295	eP	P	10 29 26.2	+3.5
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KBZ	Khabaz	22.94	297	P	P	10 29 28.5	-2.5
	comp=Z,2.3nm,0.8s,baz=119,slow=10,SNR=2.3						
NEY	Neytrino	23.00	296	⇓eP	P	10 29 33.6	+1.7
NEY				i *PP	pP	10 29 56.4	+2.0
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	Kislovodsk	23.12	298	eP	P	10 29 33.3	+0.4
KIV				eS	S	10 33 38.1	+2.7
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,36nm,14.0s						
LZH	Lanzhou	26.07	81	eP	P	10 29 58.4	-1.4
LZH				pP	pP	10 30 24.0	-1.5
LZH				sP	sP	10 30 37.2	-2.0
LZH				PP	PnPn	10 30 49.1	+4.0
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
BRTR	Keskin Array B	29.79	288	P	P	10 30 32.1	-0.7
	comp=Z,0.4nm,0.4s,baz=98,slow=5.0,SNR=2.8						
CMAR	Chiang Mai Arr	30.12	119	P	P	10 30 36.6	+0.8
	comp=Z,0.5nm,0.4s,baz=54,slow=30,SNR=2.6						
HHC	Hu-ho-hao-te	31.45	70	P	P	10 30 48.5	+1.0
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
AKASG	Malin Array Be	33.25	309	P	P	10 31 03.1	+0.2
	comp=Z,6.9nm,0.6s,baz=81,slow=7.0,SNR=19						
AKASG	Malin Array Be	33.25	309	ceP	P	10 31 04.1	+1.2
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKBB	Malin Array Si	33.25	309	eP	P	10 31 01.0	-1.9
	comp=Z,6.3nm,0.6s						
AKBB	Malin Array Si	33.25	309	eP	P	10 31 01.0	-1.9
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJI	Beijing	35.04	70	eP	P	10 31 19.1	+0.6
BJI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MLR	Muntele Rosu	35.11	299	P	P	10 31 20.8	+1.6
MLR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
WHN	Wuhan	36.04	87	P	P	10 31 33.1	+5.9
KOLS	Kolonicke sedl	37.59	305	eP	P	10 31 42.0	+1.9
KOLS	Kolonicke sedl	37.59	305	eP	P	10 31 42.0	+1.9
LVZ	Lovozero	37.64	338	P	P	10 31 40.7	+0.4
LVZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FINES	FINESS Array B	37.72	326	P	P	10 31 41.7	+0.7
	comp=Z,2.1nm,0.4s,baz=120,slow=8.5,SNR=27						
SUF	Sumiainen	38.15	328	P	P	10 31 45.3	+0.7
SUF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MSF	Maaselka	38.39	334	P	P	10 31 47.3	+0.7
MSF				pmax	pmax		
	comp=Z,7.0nm,1.9s						
NIE	Niedzica	38.89	306	P	P	10 31 53.5	+2.5
NIE				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OUL	Oulu	39.19	331	P	P	10 31 54.8	+1.6
OUL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
VYHS	Vyhne	39.88	304	eP	P	10 32 01.8	+2.6
VYHS	Vyhne	39.88	304	eP	P	10 32 01.8	+2.6
MORC	Moravsky Berou	40.68	307	P	P	10 32 06.9	+1.1
MORC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ARCES	ARCESS Array B	41.33	338	P	P	10 32 12.0	+1.2
	comp=Z,3.4nm,0.5s,baz=116,slow=8.9,SNR=27						
ARE0	ARCESS Array S	41.33	338	eP	P	10 32 11.7	+0.9
DPC	Dobruska-Polom	41.44	307	P	P	10 32 13.1	+1.0
DPC				pmax	pmax		
	comp=Z,28nm,0.8s						
KTK1	Kautokeino	41.81	336	eP	P	10 32 14.5	-0.2
HAMF	Hammerfest	42.40	339	eP	P	10 32 19.6	+0.1
BRG	Berggiesshubel	42.93	308	eP	P	10 32 25.1	+1.0
	comp=Z,3.6nm,0.8s						
BRG	Berggiesshubel	42.93	308	eP	P	10 32 25.1	+1.0
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	43.50	309	i P	P	10 32 30.2	+1.6
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	Collm	43.50	309	i P	P	10 32 30.2	+1.6
	comp=Z,3.0nm,0.8s						
MOR8	Moi Rana	44.03	331	eP	P	10 32 33.1	+0.4
NORES	NORESS Array B	44.45	323	P	P	10 32 35.2	-0.9
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NB2	NORSAR Subarra	44.63	323	P	P	10 32 37.6	0.0
	comp=Z,3.0nm,0.4s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.63	323	P	P	10 32 37.6	0.0
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.63	323	P	P	10 32 37.9	+0.3
	comp=Z,3.3nm,0.5s,baz=96,slow=7.7,SNR=23						
NSS	Namsos	44.73	328	eP	P	10 32 36.8	-1.4
NAO01	NORSAR Array S	44.78	323	eP	P	10 32 39.0	+0.3
KONO	Kongsberg	45.35	321	P	P	10 32 44.5	+1.3
KONO				pmax	pmax		
	comp=Z,7.0nm,2.0s						
KONO	Kongsberg	45.35	321	eP	P	10 32 44.1	+1.0
TIXI	Tiksi	45.69	22	P	P	10 32 47.3	+1.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HOMB	Homborsund	45.89	319	eP	P	10 32 45.8	-1.6
BFO	Black Forest	46.85	305	P	P	10 32 56.9	+1.7
BFO				pmax	pmax		
	comp=Z,4.0nm,2.7s						
BLS5	Blasjo	46.95	321	eP	P	10 32 54.1	-1.7
BER	Bergen	47.50	322	eP	P	10 32 58.3	-1.7
TORD	Torodi Ar. Bea	66.07	269	P	P	10 35 09.7	-2.1
	comp=Z,14nm,0.3s,baz=44,slow=6.5,SNR=30						
INK	Inuvik	73.90	9	P	P	10 36 01.0	+2.2
	comp=Z,1.0nm,0.4s,baz=5.3,slow=4.8,SNR=5.6						
INK	Inuvik	73.90	9	P	P	10 36 01.0	+2.2
ILAR	Eielson Array	74.73	16	P	P	10 36 05.2	+1.5
	comp=Z,0.1nm,0.3s,baz=305,slow=5.0,SNR=2.4						
KDAK	Kodiak Island	79.11	22	P	P	10 36 30.2	+1.8
	comp=Z,2.7nm,0.9s,baz=315,slow=7.1,SNR=3.4						
YKA	Yellowknife Ar	81.28	3	P	P	10 36 41.8	+2.0
	comp=Z,1.1nm,0.5s,baz=351,slow=5.3,SNR=11						
WRA	Warramunga Arr	81.66	122	P	P	10 36 43.9	+1.3
	comp=Z,0.7nm,0.6s,baz=306,slow=5.7,SNR=4.7						
ASAR	Alice Springs	83.94	125	P	P	10 36 56.3	+2.0
	comp=Z,0.2nm,0.6s,baz=310,slow=5.0,SNR=7.5						
CTA	Charters Tower	90.20	115	P	P	10 37 26.5	+1.9
	comp=Z,1.0nm,0.4s,baz=354,slow=9.2,SNR=2.9						

MEX 06 10:36:17.1±0.5, 15°.92N×98°.47W, h9^{km}±8^{km}, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.64	357	eP	Pn	10 36 42.4	-3.8
TLIG				eS	Sn	10 37 02.9	-4.5
VHO	Vista Hermosa	2.02	55	eP	Pn	10 36 49.1	-2.5
VHO				eS	Sn	10 37 12.4	-4.7
CAIG	El Cayaco	2.05	303	eP	Pn	10 36 48.5	-3.3
CAIG				i S	Sn	10 37 13.2	-4.4
HUIG	Huatulco	2.28	93	eP	Pn	10 36 51.4	-3.5
HUIG				i S	Sn	10 37 18.2	-5.0

NEIC ***06*** *10:41:19.5±0.0, 17°.05N×94°.11W, h174^{km}, MD4.1(MEX), After MEX.*

MEX 06 10:41:19.4±0.8, 17°.06N×94°.11W, h175^{km}±8^{km}, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.74	273	ePn	Pn	10 41 44.2	-0.7
CMIG				eSn	Sn	10 42 02.2	-2.3
CMIG	Matias Romero	0.74	273	i P	Pn	10 41 44.2	-0.7
CMIG				eS	Sn	10 42 02.2	-2.3
TGIG		0.98	106	ePn	Pn	10 41 45.4	-1.2
TGIG				eSn	Sn	10 42 04.5	-3.0
TGIG		0.98	106	i P	Pn	10 41 45.4	-1.2
TGIG				i S	Sn	10 42 04.5	-3.0
CCIG	Comitan	2.04	112	ePn	Pn	10 41 56.4	-0.4
CCIG				eSn	Sn	10 42 24.6	-1.1
HUIG	Huatulco	2.31	237	ePn	Pn	10 41 57.8	-1.9
HUIG				eSn	Sn	10 42 28.8	-2.0
HUIG	Huatulco	2.31	237	eP	Pn	10 41 57.8	-1.9
HUIG				eS	Sn	10 42 28.8	-2.0
VHO	Vista Hermosa	2.51	271	ePn	Pn	10 42 02.2	0.0
VHO				eSn	Sn	10 42 33.7	-1.7
VHO	Vista Hermosa	2.51	271	eP	Pn	10 42 01.6	-0.6
VHO				i S	Sn	10 42 34.0	-1.4
LVIG	Laguna Verde	3.44	321	ePn	Pn	10 42 12.3	-0.9
TLIG	Tlapa	4.29	277	ePn	Pn	10 42 23.9	-0.3
TLIG				eSn	Sn	10 43 11.6	-3.2
TEIG	Tepich	6.36	59	ePn	Pn	10 42 48.5	-2.7
TGUH	Tegucigalpa,Un	7.23	113	ePn	Pn	10 43 01.3	-1.4
CSGN	Cosiguina Volc	7.52	122	ePn	Pn	10 43 05.2	-1.2
LNIG	Linares	9.27	328	ePn	Pn	10 43 30.2	+0.8

IDC ***06*** *10:43:24.6±1.7, 52°.23N×170°.52W, h0^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.5/60, mbtmp3.6/9, ML3.4/2, Error ellipse: s-maj=45.8km s-min=19.4km az=5.0*

ISCJB ***06*** *10:43:26.3±0.8, 51°.9N±0°.1×170°.42W±0°.07, h31^{km}, mb3.5/7, Error ellipse: s-maj=15.8km s-min=3.5km az=159.8*

NEIC ***06*** *10:43:26.1±0.0, 51°.75N×170°.35W, h29^{km}, ML3.0(AEIC), After AEIC.*

ISC 06 10:43:27.9±1.0, 52°.0N±0°.1×170°.45W±0°.06, h31^{km}, n35, σ1^{s}20/36, mb3.3/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.39	44	ePn	Pn	10 43 51.1	-0.1
NIKH				eSn	Sb	10 44 10.1	-0.6
OKWE	Okmok W'ng Wal	2.01	41	ePn	Pb	10 44 01.0	-2.8
OKTU	Okmok Mt. Tuli	2.03	45	ePn	Pn	10 44 01.0	+0.9
OKAK	Okmok	2.04	38	ePn	Pn	10 43 59.5	-0.7
KOSE	Korovin Southe	2.25	281	ePn	Pn	10 44 03.9	+0.9
KOFP	Korovin Flat P	2.27	279	ePn	Pn	10 44 03.9	+0.6
ATKA	Atka Island	2.32	277	ePn	Pn	10 44 03.8	-0.1
ATKA				eSn	Sn	10 44 31.8	+0.4
KOKL	Mount Kliuchef	2.34	280	ePn	Pn	10 44 05.4	+1.2
KOWE	Korovin West	2.37	281	ePn	Pn	10 44 05.6	+0.9
MSW	Makushin Switc	2.94	47	ePn	Pn	10 44 13.5	+0.9
MSW				eSn	Sn	10 44 49.3	+2.5
UNV	Unalaska Valle	3.03	50	ePn	Pn	10 44 14.5	+0.8
UNV				eSn	Sn	10 44 50.6	+1.6
GSMY	Great Sitkin M	3.46	273	ePn	Pn	10 44 20.1	+0.4
GSTR	Great Sitkin T	3.47	274	ePn	Pn	10 44 20.6	+0.9
GSTD	Great Sitkin T	3.52	273	ePn	Pn	10 44 20.9	+0.4
GSTD				eSn	Sn	10 45 02.2	+1.1
AKUT	Akutan	3.55	51	ePn	Pb	10 44 24.7	-5.3
ETKA	Kagalaska Isla	3.69	271	ePn	Pn	10 44 22.8	0.0
ADAG	Mount Adagdak	3.80	272	ePn	Pn	10 44 24.9	+0.6
ADK	Adak	3.86	271	ePn	Pn	10 44 25.3	+0.3
KIWB	Kanaga Island	4.15	271	ePn	Pn	10 44 29.6	+0.5
KIMD	Kanaga Island	4.21	270	ePn	Pn	10 44 30.1	+0.2
TAFP	Tanaga Falls P	4.66	272	ePn	Pn	10 44 36.8	+0.7
SPIA	Saint Paul Isl	5.21	1	ePn	Pn	10 44 45.9	+2.4
KDAK	Kodiak Island	11.80	53	Pn	Pn	10 46 11.9	-2.0
	0.2nm,0.3s,baz=178,slow=3.2,SNR=8.9						
ILAR	Eielson Array	17.65	34	P	Pn	10 47 30.1	-1.0
	0.1nm,0.3s,baz=226,slow=10,SNR=2.8						
PETK	Petropavlovsk-	19.33	286	P	Pn	10 47 50.9	-0.7
	1.7nm,0.3s,baz=84,slow=14,SNR=30						
INK	Inuvik	24.04	33	P	P	10 48 38.1	-1.6
	0.5nm,0.5s,baz=225,slow=9.9,SNR=3.2						
YKA	Yellowknife Ar	31.00	48	P	P	10 49 42.9	+0.8
	0.2nm,0.5s,baz=269,slow=7.6,SNR=4.2						
H11S1	WAKE ISLAND Hy	37.93	217	T	T	11 31 36.3	
	baz=23,slow=76,SNR=7.2						
H11S2	WAKE ISLAND Hy	37.94	217	T	T	11 31 22.5	
	baz=23,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	37.95	217	T	T	11 31 41.7	
	baz=23,slow=76,SNR=4.1						
PDAR	Pinedale Array	41.13	78	P	P	10 51 11.7	+2.5
	0.1nm,0.4s,baz=303,slow=8.5,SNR=3.0						
SONM	Songino Array	50.93	300	P	P	10 52 26.3	+0.2
	0.5nm,0.4s,baz=52,slow=7.4,SNR=2.4						
TXAR	Lajitas Array	53.42	88	P	P	10 52 45.1	+0.2
	0.1nm,0.5s,baz=298,slow=3.8,SNR=2.6						
ARCES	ARCESS Array B	58.24	353	P	P	10 53 18.4	-0.2
	1.6nm,0.8s,baz=7.8,slow=7.3,SNR=3.0						
BVAR	Borovoye Array	63.63	324	P	P	10 53 55.0	-0.5
	1.7nm,0.4s,baz=53,slow=6.1,SNR=15						

NDI ***06*** *10:45:00.6±2.1, 33°.97N×77°.40E, h10^{km}, ML3.7*

IDC ***06*** *10:45:10.4±0.9, 33°.04N×75°.55E, h0^{km}, mb3.7/8, mb1 3.9/11, mb1mx3.6/56, mbtmp3.8/11, ML3.5/3, MS3.2/4, Ms1 3.2/4, ms1mx2.6/38, Error ellipse: s-maj=26.0km s-min=17.0km az=59.0*

ISCJB ***06*** *10:45:12.2±0.5, 33°.07N±0°.03×75°.66E±0°.07, h24^{km}±2^{km}, mb3.8/8, MS3.6/1, Error ellipse: s-maj=10.5km s-min=5.2km az=166.5*

HYB ***06*** *10:45:13.9±0.3, 33°.13N×75°.69E, h15^{km}±2^{km}, ML3.8, Fault plane solution: NP1:ϕ_s148.08000°, δ60.00000°, λ90.00000°.*

ISC 06 10:45:12.5±1.4, 33°.03N±0°.04×75°.57E±0°.08, h13^{km}±8^{km}, n27, σ1^{s}45/30, mb3.7/8, 2C-3D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DODA	Doda	0.12	355	⇑eP	Pb	10 45 17.1	+0.3
DODA				eS	Sb	10 45 19.7	+0.1
DODA				IAML		10 45 20.4	
	comp=Z,20μm,0.2s						
BDRWA	Bhadarwah	0.14	116	⇑eP	Pb	10 45 18.1	+0.8
BDRWA				eS	Sb	10 45 20.9	+0.6
BDRWA				IAML		10 45 22.3	
	comp=Z,33μm,0.2s						
THTRI	Thathri	0.22	57	⇓eP	Pg	10 45 16.8	-0.7
THTRI				eS	Sg	10 45 19.0	-1.8
THTRI				IAML		10 45 19.5	
	comp=Z,15μm,0.1s						
GANDO	Gandoh	0.29	88	⇓eP	Pg	10 45 18.7	0.0
GANDO				eS	Sg	10 45 21.9	-0.9
GANDO				IAML		10 45 22.5	
	comp=Z,20μm,0.1s						
KSHWR	Kishtwar	0.34	31	⇓eP	Pg	10 45 18.3	-1.2
KSHWR				IAML		10 45 23.4	
	comp=Z,10μm,0.2s						
BHK	Bhakra	1.76	156	eP	Pb	10 45 44.2	-0.4
BHK				ex	Sb	10 46 07.6	+1.0
JOSI	Joshimath	4.20	125	eP	Pn	10 46 01.9	-14
JOSI				eS	Sn	10 46 44.1	-21
JOSI				IAML		10 47 35.1	
	comp=E,315nm,0.6s						
KALG	Kalgarh	4.44	141	eP	Pn	10 46 09.2	-10
KALG				eS	Sn	10 47 00.4	-11
KALG				IAML		10 47 19.5	
	comp=E,152nm,0.3s						
NDI	New Delhi	4.55	161	eP	Pn	10 46 19.5	-1.6
NDI				ex	x	10 47 20.5	
KUDL	Kundal	4.93	170	eP	Pn	10 46 18.4	-7.9
KUDL				eS	Sn	10 47 22.6	-0.6
KUDL				IAML		10 47 40.0	
	comp=E,105nm,0.5s						
KUDL				IAML		10 47 40.2	
	comp=N,104nm,0.4s						
SONA	Sohna	4.94	164	eP	Pn	10 46 24.9	-1.4
SONA				eS	Sn	10 47 25.2	+1.9
SONA				IAML		10 47 54.4	
	comp=N,85nm,0.1s						
SONA				IAML		10 47 55.2	
	comp=E,147nm,0.3s						
KHET	Khetri	4.94	178	eP	Pn	10 46 29.5	+3.0
KHET				eS	Sb	10 47 36.0	-2.2
KHET				IAML		10 47 50.5	
	comp=E,147nm,0.7s						
KHET				IAML		10 47 52.0	
	comp=N,98nm,0.3s						
AAK	Ala-Archa	9.63	355	Pn	Pn	10 47 31.9	+0.9
	comp=N,0.6nm,0.3s,baz=160,slow=15,SNR=3.3						
AAK				Sn	Sn	10 49 22.1	+2.9
	comp=N,0.3nm,0.3s,baz=300,slow=16,SNR=2.6						
AAK				LR	LR	10 51 32.0	
	comp=N,86nm,19.9s,baz=196,slow=40						
MKAR	Makanchi Array	14.68	19	Pn	Pn	10 48 38.6	-1.2
	comp=N,0.4nm,0.3s,baz=185,slow=11,SNR=4.6						
KURBB	Kurchatov Arra	17.72	6	P	Pn	10 49 16.6	-2.3
	comp=N,0.1nm,0.3s,baz=192,slow=11,SNR=8.8						
BVAR	Borovoye Array	20.34	351	P	Pn	10 49 49.6	-0.8
	comp=N,3.4nm,0.5s,baz=160,slow=10,SNR=30						
AKTO	Aktyubinsk	21.68	329	P	P	10 50 03.4	+0.5
	comp=N,3.2nm,0.6s,baz=123,slow=10,SNR=11						
ZALV	Zalesovo Beam	21.93	15	P	P	10 50 04.3	-1.1
	comp=N,1.0nm,0.5s,baz=216,slow=9.0,SNR=5.1						
ZALV				LR	LR	10 59 25.7	
	comp=N,40nm,21.3s,baz=68,slow=39						
CMAR	Chiang Mai Arr	25.49	119	P	P	10 50 42.0	+1.5
	comp=N,1.2nm,0.6s,baz=306,slow=11,SNR=4.5						
PALK	Pallekele	26.06	168	LR	LR	11 01 46.6	
	comp=N,67nm,18.3s,baz=122,slow=38						
SONM	Songino Array	27.52	48	P	P	10 50 57.7	-1.2
	comp=N,0.8nm,0.6s,baz=262,slow=10.0,SNR=3.2						
NB2	NORSAR Subarra	49.40	325	P	P	10 54 02.2	+0.5
	comp=Z,0.1nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	49.40	325	P	P	10 54 02.5	+0.8
	comp=Z,0.4nm,0.5s,baz=103,slow=7.0,SNR=3.0						
TORD	Torodi Ar. Bea	69.52	273	P	P	10 56 20.0	-1.3
	comp=Z,15nm,0.3s,baz=50,slow=6.0,SNR=3.6						
WRA	Warramunga Arr	76.95	124	P	P	10 57 05.1	+0.1
	comp=Z,1.1nm,0.9s,baz=323,slow=5.4,SNR=3.3						
ASAR	Alice Springs	79.17	127	P	P	10 57 17.6	+0.3
	comp=Z,0.1nm,0.4s,baz=324,slow=4.9,SNR=2.8						
SCHQ	Schefferville	86.71	339	LR	LR	11 39 42.3	
	comp=Z,23nm,18.5s,baz=24,slow=38						

SJA 06 10:54:32.8±0.5, 27°.44S×65°.10W, h55^{km}±9^{km}, ML2.0, MW3.5, Tucuman Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHML	Horco Molle	0.68	342	i P	Pn	10 54 47.5	+0.9
AHML				i S	Sn	10 54 58.4	+1.8
AHML				IAML		10 54 58.5	
	comp=Z,16nm,0.1s						
CYA	Choya	1.18	212	i P	Pn	10 54 54.4	+1.3
CYA				i S	Sn	10 55 10.0	+1.8
CYA				IAML		10 55 10.3	
	comp=Z,36nm,0.1s						
FSA	Cafayete	1.54	329	i P	Pn	10 54 59.5	+1.4
FSA				IAML		10 55 22.7	
	comp=Z,15nm,0.3s						
VCA	Vinchina	3.03	244	i P	Pn	10 55 21.0	+2.5
VCA				IAML		10 56 01.5	
	comp=Z,12nm,0.7s						

ISCJB ***06*** *11:30:43.2±0.4, 17°.78S±0°.07×175°.17W±0°.05, h200^{km}, mb4.1/18, Error ellipse: s-maj=10.0km s-min=7.2km az=9.4*

NEIC ***06*** *11:30:44.5±1.0, 17°.75S×175°.19W, h200^{km}±13^{km}, mb4.2/15, Error ellipse: s-maj=20.8km s-min=16.5km az=185.0*

IDC ***06*** *11:30:44.1±10.0, 17°.75S×175°.13W, h197^{km}±95^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.5/35, mbtmp4.4/7, Error ellipse: s-maj=39.9km s-min=29.9km az=40.0*

ISC 06 11:30:44.4±0.6, 17°.74S±0°.09×175°.13W±0°.07, h200^{km}, n29, σ0^{s}49/30, mb4.2/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.11	106	ePn	Pn	11 32 00.9	+0.7
NIUE				eSn	Sn	11 32 59.3	-0.8
FUNA	Funafuti	10.70	328	ePn	Pn	11 33 12.7	0.0
RAR	Rarotonga	14.88	106	ePn	Pn	11 34 04.9	-0.4
KNTN	Kanton	15.24	13	ePn	P	11 34 10.3	+0.2
	246nm,1.4s						
URZ	Urewera	21.54	197	P	P	11 35 18.0	0.0
	5.2nm,0.4s,baz=280,slow=2.6,SNR=18						
URZ	Urewera	21.54	197	eP	P	11 35 17.9	0.0
	38nm,1.4s						
TARA	Tarawa	22.33	327	eP	P	11 35 26.2	+0.4
	31nm,0.6s						
THZ	Tophouse	26.04	201	eP	P	11 35 59.5	+0.3
	55nm,1.4s						
KHZ	Kahutara	26.43	199	eP	P	11 36 02.7	+0.1
	25nm,1.3s						
ARMA	Armidale	32.74	241	eP	P	11 36 59.1	+0.5
	11nm,1.4s						

CTA	**Charters Tower**	**36.55**	**260**	P	**P**	**11 37 31.6**	**+0.3**
	2.4nm,0.5s,baz=88,slow=12,SNR=4.5						
CTAO	**Charters Tower**	**36.55**	**260**	*e*P	**P**	**11 37 31.6**	**+0.3**
	14nm,1.4s						
TOO	**Toolangi**	**39.72**	**232**	*e*P	**P**	**11 37 57.1**	**-0.5**
	5.1nm,0.8s						
STKA	**Stephens Creek**	**41.45**	**242**	P	**P**	**11 38 11.9**	**+0.1**
	2.8nm,0.5s,baz=84,slow=12,SNR=10						
STKA	**Stephens Creek**	**41.45**	**242**	*e*P	**P**	**11 38 11.8**	**0.0**
	2.1nm,1.3s						
BBOO	**Buckleboo**	**46.23**	**241**	*e*P	**P**	**11 38 49.0**	**-0.7**
	29nm,1.3s						
WB2	**Warramunga Arr**	**47.72**	**259**	*e*P	**P**	**11 39 00.8**	**-0.7**
	14nm,1.4s						
WR1	**Warramunga Arr**	**47.73**	**259**	*e*P	**P**	**11 39 01.0**	**-0.6**
WRA	**Warramunga Arr**	**47.73**	**259**	P	**P**	**11 39 01.0**	**-0.6**
	2.6nm,0.4s,baz=89,slow=8.1,SNR=52						
AS31	**Alice Springs**	**47.84**	**254**	*e*P	**P**	**11 39 02.1**	**-0.3**
	3.3nm,0.6s						
ASAR	**Alice Springs**	**47.84**	**254**	P	**P**	**11 39 02.1**	**-0.3**
	15nm,0.7s,baz=91,slow=7.8,SNR=228						
SBA	**Scott Base**	**60.80**	**184**	*e*P	**P**	**11 40 36.0**	**+1.2**
	3.2nm,1.3s						
PSA00	**Pilbara Seismi**	**60.97**	**255**	*e*P	**P**	**11 40 36.1**	**-0.9**
	7.4nm,1.0s						
QSPA	**South Pole Qui**	**72.31**	**180**	*e*P	**P**	**11 41 48.2**	**+0.1**
	0.7nm,1.0s						
ILAR	**Eielson Array**	**85.06**	**12**	P	**P**	**11 42 57.0**	**-0.1**
	0.2nm,0.4s,baz=231,slow=5.7,SNR=4.2						
MAW	**Mawson**	**85.06**	**199**	P	**P**	**11 42 57.0**	**-0.2**
	1.2nm,0.6s,baz=109,slow=7.2,SNR=4.1						
CLL	**Collm**	**145.89**	**351**	*e*PKPbc	**PKPab**	**11 50 01.0**	**+0.1**
BR101	**Keskin Array S**	**146.83**	**317**	*e*PKPbc	**PKPbc**	**11 50 03.7**	**+0.2**
BRTR	**Keskin Array B**	**146.83**	**317**	PKPbc	**PKPbc**	**11 50 03.7**	**+0.2**
	0.5nm,0.5s,baz=56,slow=0.5,SNR=3.9						

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*ISCJB **06** 11:36:26.4±0.2, 7°.06S±0°.03×125°.23E±0°.04, h500^{km}, mb4.1/21, Error ellipse: s-maj=4.7km s-min=4.5km az=172.3*

*DJA **06** 11:36:26.9±0.4, 7°S±3°×12°5E±°, h508^{km}±5^{km}, M4.1/17, mB4.7/11, mb4.2/17, MLv4.3/17, Mw(mB)3.9/11*

*NEIC **06** 11:36:26.5±1.7, 7°.02S×125°.24E, h497^{km}±13^{km}, mb4.5/17, Error ellipse: s-maj=13.6km s-min=6.8km az=141.0*

*IDC **06** 11:36:27.2±0.7, 7°.04S×125°.23E, h506^{km}±10^{km}, mb3.3/10, mb1 3.5/15, mb1mx3.4/34, mbtmp4.3/15, Error ellipse: s-maj=16.8km s-min=9.0km az=68.0*

ISC 06 11:36:26.6±0.5**, 7°.06S**±0°.05×**125°.24E**±0°.06**, h500**^{km}**, n66, σ1^{s}33**/76**, mb4.1**/21**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.85**	**200**	*e*P	**P**	**11 37 37.2**	**+0.4**
SOEI				*e*S	**S**	**11 38 32.2**	**-1.6**
SOEI	**Soe**	**2.85**	**200**	P	**P**	**11 37 38.3**	**+1.5**
SOEI				S	**S**	**11 38 33.7**	**-0.1**
BBSI	**Bau Bau**	**3.08**	**300**	P	**P**	**11 37 40.4**	**+2.2**
BBSI				S	**S**	**11 38 39.6**	**+3.3**
MMRI	**Maumere**	**3.36**	**242**	*e*P	**P**	**11 37 40.9**	**+0.7**
MMRI				*e*S	**S**	**11 38 40.1**	**+0.1**
MMRI	**Maumere**	**3.36**	**242**	P	**P**	**11 37 40.5**	**+0.3**
BATI	**Baumata**	**3.50**	**206**	P	**P**	**11 37 43.0**	**+1.8**
	128nm,0.3s,baz=45,slow=0.8,SNR=54						
BATI				S	**S**	**11 38 42.1**	**+0.3**
	23nm,0.3s,baz=108,slow=20,SNR=3.0						
BATI	**Baumata**	**3.50**	**206**	P	**P**	**11 37 42.0**	**+0.8**
EDFI	**Ende, Flores**	**3.90**	**244**	P	**P**	**11 37 44.2**	**-0.2**
NLAI	**Namlea**	**4.22**	**26**	P	**P**	**11 37 49.1**	**+2.2**
AAI	**Ambon**	**4.46**	**41**	P	**P**	**11 37 51.1**	**+2.2**
BSSI	**Bau Bau, Buton**	**4.80**	**281**	P	**P**	**11 37 53.0**	**+1.1**
SANI	**Sanana**	**5.03**	**9**	P	**P**	**11 37 55.7**	**+1.7**
BKSI	**Bulukumba**	**5.37**	**288**	P	**P**	**11 37 58.3**	**+1.2**
	29nm,0.7s						
KAPI	**Kappang**	**5.82**	**290**	P	**P**	**11 38 04.0**	**+2.7**
	2.0nm,0.3s,baz=93,slow=7.7,SNR=14						
KAPI	**Kappang**	**5.82**	**290**	*e*P	**P**	**11 38 02.7**	**+1.4**
SAUI	**Saumlaki**	**6.08**	**99**	*e*P	**P**	**11 38 05.2**	**+1.4**
SAUI				*e*S	**S**	**11 39 21.3**	**-1.9**
SPSI	**Sidrap Palu**	**6.25**	**299**	P	**P**	**11 38 06.8**	**+1.3**
	22nm,0.8s						
WBSI	**Waikabubak, Su**	**6.33**	**246**	P	**P**	**11 38 05.1**	**-1.2**
	293nm,0.9s,5µm						
LUWI	**Luwuk**	**6.46**	**338**	*e*P	**P**	**11 38 07.8**	**+0.3**
LUWI	**Luwuk**	**6.46**	**338**	P	**P**	**11 38 09.7**	**+2.2**
	151nm,0.9s,7µm						
TTSI	**Tana Toraja**	**6.71**	**306**	P	**P**	**11 38 11.4**	**+1.4**
	69nm,1.2s,688nm						
LBMI	**Labuha**	**6.76**	**20**	P	**P**	**11 38 11.9**	**+1.4**
	33nm,1.7s,761nm						
APSI	**Ampana**	**7.08**	**329**	P	**P**	**11 38 15.5**	**+1.8**
	90nm,0.9s,904nm						
PLAI	**Plampang**	**7.60**	**256**	P	**P**	**11 38 17.1**	**-1.9**
	59nm,0.8s						
TNTI	**Ternate**	**8.06**	**15**	*e*P	**P**	**11 38 23.9**	**+0.1**
TNTI				*e*S	**S**	**11 39 58.2**	**-1.6**
TNTI	**Ternate**	**8.06**	**15**	P	**P**	**11 38 24.2**	**+0.4**
	12nm,0.6s						
FAKI	**Fak Fak**	**8.10**	**60**	*e*P	**P**	**11 38 24.4**	**+0.3**
FAKI				*e*S	**S**	**11 40 00.1**	**-0.5**
FAKI	**Fak Fak**	**8.10**	**60**	P	**P**	**11 38 24.5**	**+0.3**
MTN	**Manton Dam**	**8.17**	**135**	*e*P	**P**	**11 38 25.6**	**+0.8**
SIJI	**Sorong**	**8.60**	**45**	P	**P**	**11 38 30.9**	**+1.6**
	9.5nm,0.3s,baz=220,slow=7.9,SNR=35						
SIJI				S	**S**	**11 40 10.9**	**+0.9**
	1.0nm,0.3s,baz=75,slow=20,SNR=3.7						
SWI	**Sorong**	**8.60**	**45**	P	**P**	**11 38 31.1**	**+1.8**
WRAB	**Tennant Creek**	**15.56**	**146**	*e*P	**P**	**11 39 42.4**	**-0.3**
	8.9nm,0.4s						
WRA	**Warramunga Arr**	**15.56**	**146**	P	**P**	**11 39 42.5**	**-0.2**
	3.6nm,0.3s,baz=328,slow=12,SNR=38						
WB2	**Warramunga Arr**	**15.57**	**146**	*e*P	**P**	**11 39 42.5**	**-0.3**
	9.4nm,0.6s						
JAY	**Jayapura**	**16.05**	**74**	P	**P**	**11 39 47.6**	**-0.4**
	0.7nm,0.3s,baz=287,slow=11,SNR=3.1						
SBUM	**Sibu**	**16.06**	**306**	*e*P	**P**	**11 39 47.3**	**-0.7**
	3.9nm,0.6s						
KSM	**Kuching**	**17.14**	**299**	*e*P	**P**	**11 39 58.2**	**-1.0**
	16nm,0.8s						
AS31	**Alice Springs**	**18.50**	**154**	*e*P	**P**	**11 40 12.0**	**+0.4**
	3.2nm,0.4s						
ASAR	**Alice Springs**	**18.50**	**154**	P	**P**	**11 40 12.2**	**+0.5**
	1.9nm,0.3s,baz=330,slow=8.0,SNR=74						
ASAR				S	**S**	**11 43 15.9**	**+0.9**
	baz=344,slow=22,SNR=8.2						
COEN	**Coen**	**18.91**	**113**	*e*P	**P**	**11 40 15.6**	**+0.1**
	10nm,0.6s						
FORT	**Forrest**	**23.75**	**174**	*e*P	**P**	**11 40 59.0**	**0.0**
	34nm,1.3s						
CTA	**Charters Tower**	**24.15**	**125**	P	**P**	**11 41 03.5**	**+0.8**
	3.7nm,0.8s,baz=316,slow=10,SNR=3.8						
CTAO	**Charters Tower**	**24.15**	**125**	*e*P	**P**	**11 41 02.9**	**+0.2**
	21nm,1.5s						
KULM	**Kulim**	**27.43**	**296**	*e*P	**P**	**11 41 31.2**	**-0.6**
	19nm,1.3s						
BBOO	**Buckleboo**	**27.53**	**160**	*e*P	**P**	**11 41 32.4**	**-0.1**
	13nm,0.8s						
GUMO	**Guam**	**28.29**	**44**	*e*P	**P**	**11 41 38.2**	**-1.1**
	35nm,0.9s						
STKA	**Stephens Creek**	**29.03**	**150**	P	**P**	**11 41 46.4**	**+0.8**
	4.9nm,0.5s,baz=326,slow=8.8,SNR=14						
STKA	**Stephens Creek**	**29.03**	**150**	*e*P	**P**	**11 41 46.4**	**+0.8**
	1.6nm,1.0s						
ARMA	**Armidale**	**33.95**	**137**	*e*P	**P**	**11 42 29.2**	**+1.2**
	14nm,1.3s						
CAN	**Canberra**	**35.60**	**146**	*e*P	**P**	**11 42 43.2**	**+1.6**
	21nm,1.2s						
CMAR	**Chiang Mai Arr**	**36.27**	**315**	P	**P**	**11 42 48.0**	**+0.6**
	1.0nm,0.3s,baz=144,slow=7.0,SNR=9.1						
WHN	**Wuhan**	**38.81**	**345**	*e*P	P	11 43 13.2	+5.2
KSRS	**Korea Array**	**44.35**	**3**	P	**P**	**11 43 52.1**	**+0.4**
	1.4nm,0.7s,baz=178,slow=9.2,SNR=9.0						
MJAR	**Matsushiro Arr**	**45.04**	**15**	P	**P**	**11 43 55.7**	**-1.5**
	3.1nm,0.8s,baz=204,slow=8.6,SNR=7.5						
LZH	**Lanzhou**	**47.39**	**336**	*e*P	**P**	**11 44 12.8**	**-2.5**
LZH				pP	PcP	11 45 11.5	-25
LZH				PP	**PP**	**11 46 13.3**	**+0.4**
LZH				sP	sP	11 46 49.6	+6.4
LZH				pmax	pmax		
	comp=Z,11nm,1.2s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
HHC	**Hu-ho-hao-te**	**49.30**	**346**	P	**P**	**11 44 31.1**	**+1.7**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.9s						
USRK	**Ussuriysk Ar.**	**51.38**	**6**	P	**P**	**11 44 44.4**	**0.0**
	comp=Z,2.3nm,0.6s,baz=195,slow=5.4,SNR=6.9						
BKZ	**Black Stump Fm**	**55.97**	**133**	*e*P	**P**	**11 45 17.0**	**-0.2**
	comp=Z,4.9nm,0.9s						
SONM	**Songino Array**	**57.13**	**345**	P	**P**	**11 45 25.0**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=162,slow=6.0,SNR=5.1						
WMQ	**Urumqi**	**60.96**	**330**	*e*P	**P**	**11 45 52.8**	**+2.0**
WMQ				LR	LR		
	comp=N,320nm,29.2s						
WMQ				LR	LR		
	comp=E,390nm,29.2s						
WMQ				LR	LR		
	comp=Z,35nm,29.9s						
MK31	**Makanchi Array**	**65.76**	**329**	*e*P	**P**	**11 46 21.0**	**-0.6**
	comp=Z,4.4nm,1.4s						
MKAR	**Makanchi Array**	**65.76**	**329**	P	**P**	**11 46 21.4**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=126,slow=6.4,SNR=19						
PEA0B	**Petropavlovsk-**	**65.95**	**21**	*e*P	**P**	**11 46 22.9**	**+0.4**
	comp=Z,32nm,1.4s						
PETK	**Petropavlovsk-**	**65.95**	**21**	P	**P**	**11 46 23.2**	**+0.6**
	comp=Z,3.7nm,0.7s,baz=202,slow=2.5,SNR=10						
ZALV	**Zalesovo Beam**	**69.62**	**336**	P	**P**	**11 46 43.4**	**-1.6**
	comp=Z,1.4nm,0.4s,baz=138,slow=3.5,SNR=4.7						
VYHS	**Vyhne**	**106.11**	**318**	*e*PDIF	**Pdif**	**11 49 48.8**	**+3.9**

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*GRAL **06** 11:40:58.3±0.3, 33°.83N×36°.74E, h13^{km}±80^{km}, MD3.3*

*NSSC **06** 11:40:59.7±0.4, 33°.69N×36°.63E, h17^{km}±2^{km}, MD0.8, ML2.7*

ISC 06 11:40:58.7±1.4**, 33°.76N**±0°.05×**36°.66E**±0°.05**, h11**^{km}±13^{km}**, n21, σ0^{s}83**/30**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	**Qassioun**	**0.39**	**235**	*e*P	**Pg**	**11 41 07.0**	**+0.5**
QASN				*e*S	**Sg**	**11 41 12.2**	**+0.5**
QASN				AML	AML	11 41 14.3	
	comp=N,2µm,0.3s						
QASN				AML	AML	11 41 15.7	
	comp=E,2µm,0.3s						
TOTH	**TOTAH**	**0.44**	**206**	*e*P	**Pg**	**11 41 07.9**	**+0.6**
TOTH				*e*S	**Sg**	**11 41 12.9**	**-0.2**
TOTH				AML	AML	11 41 15.5	
	comp=E,262nm,0.3s						
TOTH				AML	AML	11 41 15.6	
	comp=N,445nm,0.3s						
BRBR	**Barbar**	**0.68**	**240**	*e*P	**Pg**	**11 41 11.9**	**-0.1**
BRBR				*e*S	**Sg**	**11 41 20.7**	**-0.3**
BRBR				AML	AML	11 41 28.5	
	comp=N,298nm,0.4s						
BRBR				AML	AML	11 41 29.5	
	comp=E,176nm,0.5s						
RCY	**Rachaya**	**0.73**	**250**	*e*P	**Pg**	**11 41 12.8**	**-0.1**
RCY				*e*S	**Sg**	**11 41 23.6**	**+1.0**
BHL	**Bhannes**	**0.85**	**280**	*e*P	**Pb**	**11 41 14.2**	**-1.4**
SHBL	**Chebaa**	**0.87**	**242**	*e*P	**Pb**	**11 41 15.1**	**-0.8**
SHBL				*e*S	**Sb**	**11 41 27.5**	**-0.1**
DQRL	**Deir Qamar**	**0.91**	**267**	*e*P	**Pb**	**11 41 15.5**	**-1.1**
DQRL				*e*S	**Sb**	**11 41 28.1**	**-0.7**
KSDI	**Kefar Szold**	**1.01**	**236**	P	**Pb**	**11 41 17.7**	**-0.5**
	comp=E,111nm,0.5s,comp=E,0.8nm						
SHMJ	**Saham**	**1.27**	**216**	P	**Pb**	**11 41 22.7**	**0.0**
	comp=E,331nm,0.5s,comp=E,1.7nm						
ASF	**Jabal al Asfar**	**1.59**	**173**	P	**Pb**	**11 41 27.9**	**-0.3**
	comp=E,75nm,0.6s,comp=E,0.4nm						
MMLI	**Mount Malkishu**	**1.68**	**219**	P	**Pb**	**11 41 29.3**	**-0.3**
	comp=E,94nm,0.5s,comp=E,0.5nm						
WALJ	**Wala**	**2.30**	**198**	P	**Pb**	**11 41 39.4**	**-0.9**
	comp=E,72nm,0.6s,comp=E,1.1nm						
YAYL	**Yayladag**	**2.32**	**349**	*i* P	**Pn**	**11 41 37.4**	**+0.5**
YAYL				IAML_P			
	comp=Z,13nm,0.1s						
LISJ	**El Lisan**	**2.70**	**202**	P	**Pb**	**11 41 45.3**	**-1.7**
KUZU	**Kuzuini**	**3.03**	**6**	*i* P	**Pn**	**11 41 46.2**	**-0.5**
KUZU				*i* S	**Sb**	**11 42 28.9**	**-0.8**
KUZU				IAML_P			
	comp=Z,2µm,0.1s						
YURE	**YUREGIR**	**3.18**	**345**	*i* P	**Pn**	**11 41 50.4**	**+1.7**
KAMA	**Osmaniye**	**3.42**	**0**	*i* P	**Pn**	**11 41 52.0**	**-0.1**
KAMA				IAML_P			
	comp=Z,712nm,0.1s						
HCB	**Kahramanmara**	**3.59**	**3**	*i* P	**Pn**	**11 41 54.3**	**0.0**
HCB				IAML_P			
	comp=Z,506nm,0.1s						
GZT	**Gaziantep**	**3.67**	**11**	*i* P	**Pn**	**11 41 54.7**	**-0.8**
GZT				*i* S	**Sb**	**11 42 48.9**	**+0.7**
GZT				IAML_P			
	comp=Z,1µm,0.1s						
ANDN	**Andirin**	**3.82**	**356**	*i* P	**Pn**	**11 41 58.0**	**+0.3**
ANDN				IAML_P			
	comp=Z,694nm,0.2s						
KERG	**Konya-Eregli**	**4.19**	**331**	*i* P	**Pn**	**11 42 03.1**	**+0.3**
KERG				*i* S	**Sn**	**11 42 53.3**	**+1.4**
KERG				IAML_P			
	comp=Z,225nm,0.3s						

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*MEX **06** 11:45:48.8±1.0, 13°.92N×91°.75W, h73^{km}±32^{km}, MD3.7*

*GCG **06** 11:45:51.3±0.4, 14°.26N×91°.67W, h73^{km}±4^{km}, MD3.6*

ISC 06 11:45:49.6±2.9**, 14°.0N**±0°.2×**91°.85W**±0°.10**, h67**^{km}±17^{km}**, n8, σ1^{s}00**/13**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.50**	**32**	*e*P	**Pn**	**11 46 02.5**	**+0.3**
ERG				*e*S	**Sn**	**11 46 10.7**	**-0.6**
STG3	**Santiaguito 3,**	**0.74**	**21**	*e*P	**Pn**	**11 46 04.7**	**-0.3**
THIG		**0.97**	**335**	*e*P	**Pn**	**11 46 06.8**	**-0.8**
THIG				*e*S	**Sn**	**11 46 22.5**	**+1.5**
FUG	**Fuego 3**	**1.06**	**66**	*e*P	**Pn**	**11 46 08.3**	**-0.6**
PCG	**Pacaya**	**1.26**	**73**	*e*P	**Pn**	**11 46 11.2**	**-0.3**
PCG				*e*S	**Sn**	**11 46 27.2**	**-0.7**
NBG	**Las Nubes**	**1.56**	**69**	*e*P	**Pn**	**11 46 16.7**	**+1.2**
PCIG		**2.14**	**322**	*e*P	**Pn**	**11 46 22.6**	**-0.4**
PCIG				*e*S	**Sn**	**11 46 49.5**	**+0.9**
CCIG	**Comitan**	**2.27**	**353**	*i* P	**Pn**	**11 46 23.8**	**-1.2**
CCIG				*i* S	**Sn**	**11 46 52.9**	**+0.8**

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*GRAL **06** 11:47:13.9±0.3, 33°.77N×36°.77E, h55^{km}±20^{km}, MD3.1*

*NSSC **06** 11:47:16.0±1.0, 33°.73N×36°.64E, h21^{km}±27^{km}, MD1.4, ML2.1*

ISC 06 11:47:14.1±3.5**, 33°.8N**±0°.1×**36°.7E**±0°.2**, h27**^{km}±15^{km}**, n6, σ0^{s}32**/12**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	**Qassioun**	**0.42**	**233**	*e*P	**Pn**	**11 47 24.2**	**-0.4**
QASN				*e*S	**Sb**	**11 47 29.3**	**-0.2**
QASN				AML	AML	11 47 30.7	
	comp=N,698nm,0.4s						
QASN				AML	AML	11 47 32.2	
	comp=E,596nm,0.2s						
TOTH	**TOTAH**	**0.48**	**206**	*e*P	**Pb**	**11 47 24.3**	**+0.2**
TOTH				*e*S	**Sb**	**11 47 30.8**	**0.0**
TOTH				AML	AML	11 47 31.9	
	comp=E,97nm,0.2s						
TOTH				AML	AML	11 47 33.3	
	comp=N,68nm,0.6s						
BRBR	**Barbar**	**0.72**	**238**	*e*P	**Pn**	**11 47 29.0**	**+0.3**
BRBR				*e*S	**Sb**	**11 47 37.4**	**-0.4**
BRBR				AML	AML	11 47 44.7	
	comp=N,62nm,0.5s						
BRBR				AML	AML	11 47 46.1	
	comp=E,38nm,0.5s						
RCY	**Rachaya**	**0.76**	**248**	*e*P	**Pb**	**11 47 29.0**	**0.0**
RCY				*e*S	**Sn**	**11 47 40.1**	**+0.1**
BHL	**Bhannes**	**0.86**	**278**	*e*P	**Pn**	**11 47 30.4**	**-0.2**
BHL				*e*S	**Sn**	**11 47 42.6**	**+0.2**
DQRL	**Deir Qamar**	**0.93**	**265**	*e*P	**Pn**	**11 47 31.2**	**-0.3**
DQRL				*e*S	**Sb**	**11 47 44.0**	**+0.4**

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*ISCJB **06** 11:56:01.6±0.2, 44°.15N±0°.02×10°.12E±0°.02, h13^{km}±1^{km}, Error ellipse: s-maj=2.6km s-min=1.9km az=176.8*

*ROM **06** 11:56:01.2±0.1, 44°.175N±0°.004×10°.144E±0°.005, h8^{km}, ML2.7/23, Error ellipse: s-maj=0.6km s-min=0.2km az=199.0*

*GEN **06** 11:56:01.8, 44°.18N×10°.15E, h4^{km}, Ml2.6*

*STR **06** 11:56:02.7±2.1, 44°N±3°×1°0E±°, h6^{km}±15^{km}, mb3.7/1, MLv3.0/7*

*LDG **06** 11:56:02.0±0.1, 44°.17N×10°.14E, h2^{km}, Ml2.8/24, Error ellipse: s-maj=1.5km s-min=1.1km az=25.0*

*PRU **06** 11:56:03.5±0.0, 44°.18N×10°.14E, h0^{km}*

ISC 06 11:56:01.4±0.8**, 44°.16N**±0°.02×**10°.10E**±0°.02**, h7**^{km}±4^{km}**, n95, σ1^{s}83**/150**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.04**	**72**	P	**Pg**	**11 56 02.6**	**-0.2**
EQUI				S	**Sg**	**11 56 03.2**	**-0.6**
EQUI	**Equi**	**0.04**	**72**	P	**Pg**	**11 56 02.7**	**-0.2**
EQUI				S	**Sg**	**11 56 03.3**	**-0.6**
T0911	**Castelpoggio (**	**0.05**	**207**	P	**Pg**	**11 56 03.8**	**+0.9**
T0911				S	**Sg**	**11 56 05.4**	**+1.3**
T0911				AML	AML		
	comp=E,33850µm,0.2s						
T0911				AML	AML		
	comp=N,21700µm,0.3s						
T0911				AML	AML		
	comp=E,33150µm,0.2s						
T0911				AML	AML		
	comp=N,21550µm,0.3s						
T0912	**Minucciano (LU**	**0.08**	**80**	P	**Pg**	**11 56 03.3**	**-0.1**
T0912				S	**Sg**	**11 56 04.4**	**-0.4**
FIVI	**Fivizzano**	**0.09**	**11**	P	**Pg**	**11 56 03.3**	**-0.2**
FIVI				S	**Sg**	**11 56 04.6**	**-0.3**
FIVI				AML	AML		
	comp=E,59250µm,0.8s						
FIVI				AML	AML		
	comp=N,46550µm,0.5s						
FIVI				AML	AML		
	comp=E,59250µm,0.8s						
FIVI				AML	AML		
	comp=N,46550µm,0.5s						
FIVI				AML	AML		
	comp=E,59250µm,0.8s						
FIVI				AML	AML		
	comp=N,46500µm,0.5s						
FIVI				AML	AML		
	comp=N,46500µm,0.5s						
FIVI				AML	AML		
	comp=E,59250µm,0.8s						
FIVI				AML	AML		
	comp=N,46500µm,0.5s						
FIVI				AML	AML		
	comp=E,59250µm,0.8s						
FOSD	**Fosdinovo**	**0.09**	**239**	P	**Pg**	**11 56 04.7**	**+1.2**
FOSD				S	**Sg**	**11 56 06.9**	**+2.0**
VLC	**Villacollemand**	**0.20**	**89**	P	**Pg**	**11 56 05.6**	**+0.1**
VLC				S	**Sg**	**11 56 08.4**	**+0.2**
VLC				AML	AML		
	comp=E,1865µm,1.1s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=E,1915µm,1.1s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=E,1865µm,1.1s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=E,1915µm,1.1s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=E,1865µm,1.1s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=E,1915µm,1.1s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=E,1915µm,1.1s						
VLC				AML	AML		
	comp=E,1865µm,1.1s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=N,2120µm,1.3s						
VLC				AML	AML		
	comp=E,1915µm,1.1s						
VLC				AML	AML		
	comp=E,1865µm,1.1s						
PLMA	**Palmaria, Port**	**0.21**	**240**	P	**Pg**	**11 56 06.8**	**+1.3**
PLMA				S	**Sg**	**11 56 10.3**	**+1.9**
PLMA				AML	AML		
	comp=E,4180µm,0.4s						
PLMA				AML	AML		
	comp=N,5550µm,0.4s						
PLMA				AML	AML		
	comp=E,4180µm,0.4s						
PLMA				AML	AML		
	comp=N,5550µm,0.4s						
PLMA				AML	AML		
	comp=E,4180µm,0.4s						
PLMA				AML	AML		
	comp=N,5550µm,0.4s						
PLMA				AML	AML		
	comp=N,5550µm,0.4s						
PLMA				AML	AML		
	comp=E,4180µm,0.4s						
PLMA				AML	AML		
	comp=N,5550µm,0.4s						
PLMA				AML	AML		
	comp=E,4180µm,0.4s						
CARD	**Cardoso**	**0.30**	**115**	P	**Pg**	**11 56 07.6**	**+0.3**
CARD				S	**Sg**	**11 56 11.8**	**+0.5**
CARD	**Cardoso**	**0.30**	**115**	P	**Pg**	**11 56 07.6**	**+0.3**
CARD				S	**Sg**	**11 56 12.0**	**+0.7**
CARD				AML	AML		
	comp=E,4240µm,0.8s						
CARD				AML	AML		
	comp=N,3825µm,0.8s						
CARD				AML	AML		
	comp=E,4240µm,0.8s						
CARD				AML	AML		
	comp=N,3825µm,0.8s						
CARD				AML	AML		
	comp=E,4235µm,0.8s						
CARD				AML	AML		
	comp=N,3825µm,0.8s						
CARD				AML	AML		
	comp=N,3825µm,0.8s						
CARD				AML	AML		
	comp=E,4235µm,0.8s						
CARD				AML	AML		
	comp=N,3825µm,0.8s						
CARD				AML	AML		
	comp=E,4235µm,0.8s						
GRAM	**Graiana**	**0.34**	**355**	P	**Pg**	**11 56 08.3**	**+0.3**
GRAM				S	**Sg**	**11 56 13.4**	**+1.0**
GRAM	**Graiana**	**0.34**	**355**	P	**Pg**	**11 56 08.3**	**+0.3**
GRAM				S	**Sg**	**11 56 13.5**	**+1.0**
GRAM				AML	AML		
	comp=E,4675µm,0.7s						
GRAM				AML	AML		
	comp=N,4680µm,0.4s						
GRAM				AML	AML		
	comp=E,4675µm,0.7s						
GRAM				AML	AML		
	comp=N,4680µm,0.4s						
GRAM				AML	AML		
	comp=E,4675µm,0.7s						
GRAM				AML	AML		
	comp=N,4680µm,0.4s						
GRAM				AML	AML		
	comp=E,4675µm,0.7s						
GRAM				AML	AML		
	comp=N,4680µm,0.4s						
GRAM				AML	AML		
	comp=E,4675µm,0.7s						
GRAM				AML	AML		
	comp=N,4680µm,0.4s						
BDI	**Bagni Di Lucca**	**0.37**	**104**	P	**Pg**	**11 56 08.7**	**+0.2**
BDI				S	**Sg**	**11 56 14.0**	**+0.6**
BDI				AML	AML		
	comp=E,1135µm,1.1s						
BDI				AML	AML		
	comp=N,907µm,0.4s						
BDI				AML	AML		
	comp=E,1230µm,1.3s						

BDI				AML	AML		
	comp=N,1235µm,0.4s						
BDI				AML	AML		
	comp=E,1135µm,1.1s						
BDI				AML	AML		
	comp=N,912µm,0.4s						
BDI				AML	AML		
	comp=E,1230µm,1.3s						
BDI				AML	AML		
	comp=N,1235µm,0.4s						
BDI				AML	AML		
	comp=N,912µm,0.4s						
BDI				AML	AML		
	comp=N,1235µm,0.4s						
BDI				AML	AML		
	comp=E,1230µm,1.3s						
BDI				AML	AML		
	comp=E,1135µm,1.1s						
BDI				AML	AML		
	comp=N,912µm,0.4s						
BDI				AML	AML		
	comp=N,1235µm,0.4s						
BDI				AML	AML		
	comp=E,1230µm,1.3s						
BDI				AML	AML		
	comp=E,1135µm,1.1s						
MAIM	**Mastiano**	**0.37**	**131**	P	**Pg**	**11 56 09.0**	**+0.5**
MAIM				S	**Sg**	**11 56 14.1**	**+0.7**
MAIM	**Mastiano**	**0.37**	**131**	P	**Pg**	**11 56 09.0**	**+0.5**
MAIM				S	**Sg**	**11 56 14.3**	**+0.9**
MAIM				AML	AML		
	comp=E,1965µm,1.4s						
MAIM				AML	AML		
	comp=N,2245µm,0.4s						
MAIM				AML	AML		
	comp=E,1965µm,1.4s						
MAIM				AML	AML		
	comp=N,2245µm,0.4s						
MAIM				AML	AML		
	comp=E,1970µm,1.4s						
MAIM				AML	AML		
	comp=N,2245µm,0.4s						
MAIM				AML	AML		
	comp=E,1970µm,1.4s						
MAIM				AML	AML		
	comp=N,2245µm,0.4s						
MAIM				AML	AML		
	comp=E,1970µm,1.4s						
MAIM				AML	AML		
	comp=N,2245µm,0.4s						
MSSA	**Maissana**	**0.45**	**291**	P	**Pg**	**11 56 11.0**	**+0.8**
MSSA				S	**Sg**	**11 56 18.0**	**+1.9**
MSSA				AML	AML		
	comp=E,665µm,1.6s						
MSSA				AML	AML		
	comp=N,622µm,0.9s						
MSSA				AML	AML		
	comp=E,666µm,1.6s						
MSSA				AML	AML		
	comp=N,623µm,0.9s						
MSSA				AML	AML		
	comp=N,623µm,0.9s						
MSSA				AML	AML		
	comp=E,666µm,1.6s						
MSSA				AML	AML		
	comp=N,623µm,0.9s						
MSSA				AML	AML		
	comp=E,666µm,1.6s						
NEVI	**Neviano degli**	**0.45**	**19**	P	**Pb**	**11 56 11.3**	**-0.4**
POPM	**Popiglio**	**0.48**	**103**	P	**Pg**	**11 56 10.9**	**+0.2**
POPM				S	**Sg**	**11 56 17.5**	**+0.5**
MTCR	**Monte La Croce**	**0.66**	**101**	P	**Pg**	**11 56 14.2**	**+0.2**
MTCR				S	**Sg**	**11 56 22.8**	**+0.2**
MTCR				AML	AML		
	comp=E,700µm,0.3s						
MTCR				AML	AML		
	comp=N,1395µm,0.5s						
ZCCA	**Zocca**	**0.66**	**72**	AML	AML		
	comp=N,894µm,0.8s						
ZCCA				AML	AML		
	comp=E,657µm,0.4s						
ZCCA				AML	AML		
	comp=E,657µm,0.4s						
ZCCA				AML	AML		
	comp=N,894µm,0.8s						
ZCCA				AML	AML		
	comp=N,894µm,0.8s						
ZCCA				AML	AML		
	comp=E,657µm,0.4s						
ZCCA				AML	AML		
	comp=N,894µm,0.8s						
ZCCA				AML	AML		
	comp=E,657µm,0.4s						
CRMI	**Carmignano**	**0.72**	**120**	AML	AML		
	comp=E,278µm,0.9s						
CRMI				AML	AML		
	comp=E,278µm,0.9s						
CRMI				AML	AML		
	comp=N,352µm,1.3s						
CRMI				AML	AML		
	comp=E,278µm,0.9s						
CRMI				AML	AML		
	comp=N,352µm,1.3s						
CRMI				AML	AML		
	comp=N,352µm,1.3s						
CRMI				AML	AML		
	comp=E,278µm,0.9s						
CRMI				AML	AML		
	comp=N,352µm,1.3s						
GORR	**Gorreto**	**0.74**	**308**	P	**Pg**	**11 56 16.0**	**+0.5**
GORR				S	**Sg**	**11 56 26.0**	**+0.9**
GORR				AML	AML		
	comp=E,495µm,0.7s						
GORR				AML	AML		
	comp=N,478µm,0.9s						
GORR				AML	AML		
	comp=E,496µm,0.7s						
GORR				AML	AML		
	comp=N,477µm,0.9s						
GORR				AML	AML		
	comp=E,496µm,0.7s						
GORR				AML	AML		
	comp=N,477µm,0.9s						
GORR				AML	AML		
	comp=E,496µm,0.7s						
GORR				AML	AML		
	comp=N,477µm,0.9s						
GROG	**Isola di Gorgo**	**0.74**	**192**	P	**Pg**	**11 56 16.8**	**+1.1**
GROG				S	**Sg**	**11 56 26.6**	**+1.3**
GROG				AML	AML		
	comp=E,1026µm,0.4s						
GROG				AML	AML		
	comp=N,860µm,1.4s						
GROG				AML	AML		
	comp=E,1027µm,0.4s						
GROG				AML	AML		
	comp=N,860µm,1.4s						
GROG				AML	AML		
	comp=E,1027µm,0.4s						
GROG				AML	AML		
	comp=N,860µm,1.4s						
GROG				AML	AML		
	comp=E,1027µm,0.4s						
GROG				AML	AML		
	comp=N,860µm,1.4s						
BOB	**Bobbio (Coli)**	**0.77**	**323**	P	**Pg**	**11 56 16.5**	**+0.3**
BOB				AML	AML		
	comp=E,426µm,0.8s						
BOB				AML	AML		
	comp=N,462µm,0.6s						
BOB				AML	AML		
	comp=E,430µm,0.9s						
BOB				AML	AML		
	comp=N,526µm,0.9s						
BOB				AML	AML		
	comp=E,430µm,0.9s						
BOB				AML	AML		
	comp=N,526µm,0.9s						
BOB				AML	AML		
	comp=N,526µm,0.9s						
BOB				AML	AML		
	comp=E,430µm,0.9s						
BOB				AML	AML		
	comp=N,526µm,0.9s						
BOB				AML	AML		
	comp=E,430µm,0.9s						
SEI	**Scarperia**	**0.91**	**96**	AML	AML		
	comp=N,1795µm,0.6s						
SEI				AML	AML		
	comp=E,766µm,0.5s						
SEI				AML	AML		
	comp=N,1795µm,0.6s						
SEI				AML	AML		
	comp=E,766µm,0.5s						
SEI				AML	AML		
	comp=N,1795µm,0.6s						
SEI				AML	AML		
	comp=E,766µm,0.5s						
SEI				AML	AML		
	comp=N,1795µm,0.6s						
SEI				AML	AML		
	comp=E,766µm,0.5s						
RUFI	**Rufina**	**1.06**	**107**	AML	AML		
	comp=E,366µm,0.4s						
RUFI				AML	AML		
	comp=N,286µm,0.6s						
CSNT	**Castellina Chi**	**1.10**	**128**	P	**Pg**	**11 56 22.8**	**+0.4**
CSNT				AML	AML		
	comp=E,338µm,0.7s						
CSNT				AML	AML		
	comp=N,462µm,0.4s						
CSNT				AML	AML		
	comp=E,338µm,0.7s						
CSNT				AML	AML		
	comp=N,462µm,0.4s						
CSNT				AML	AML		
	comp=E,338µm,0.7s						
CSNT				AML	AML		
	comp=N,462µm,0.4s						
CSNT				AML	AML		
	comp=E,338µm,0.7s						
CSNT				AML	AML		
	comp=N,462µm,0.4s						
PCP	**Piancastagn**	**1.18**	**290**	P	**Pg**	**11 56 23.9**	**-0.2**
PCP				AML	AML		
	comp=E,129µm,0.7s						
PCP				AML	AML		
	comp=N,192µm,0.5s						
PCP				AML	AML		
	comp=E,129µm,0.7s						
PCP				AML	AML		
	comp=N,192µm,0.5s						
PCP				AML	AML		
	comp=E,129µm,0.7s						
PCP				AML	AML		
	comp=N,192µm,0.5s						
PCP				AML	AML		
	comp=E,129µm,0.7s						
PCP				AML	AML		
	comp=N,192µm,0.5s						
TRIF	**Trifonti**	**1.19**	**151**	P	**Pg**	**11 56 24.4**	**+0.2**
TRIF				AML	AML		
	comp=E,179µm,1.1s						
TRIF				AML	AML		
	comp=N,228µm,0.5s						
TRIF				AML	AML		
	comp=E,179µm,1.1s						
TRIF				AML	AML		
	comp=N,228µm,0.6s						
TRIF				AML	AML		
	comp=N,228µm,0.6s						
TRIF				AML	AML		
	comp=E,179µm,1.1s						
TRIF				AML	AML		
	comp=N,228µm,0.6s						
TRIF				AML	AML		
	comp=E,179µm,1.1s						
FROS	**Frosini**	**1.22**	**141**	P	**Pg**	**11 56 24.8**	**+0.1**
FROS				AML	AML		
	comp=E,639µm,0.5s						
FROS				AML	AML		
	comp=N,394µm,1.3s						
FROS				AML	AML		
	comp=E,639µm,0.5s						
FROS				AML	AML		
	comp=N,394µm,1.3s						
FROS				AML	AML		
	comp=N,394µm,1.3s						
FROS				AML	AML		
	comp=E,639µm,0.5s						
FROS				AML	AML		
	comp=N,394µm,1.3s						
FROS				AML	AML		
	comp=E,639µm,0.5s						
CASP	**Castiglione de**	**1.47**	**158**	P	**Pn**	**11 56 27.9**	**-0.4**
CASP				AML	AML		
	comp=E,139µm,1.4s						
CASP				AML	AML		
	comp=N,160µm,0.5s						
CASP				AML	AML		
	comp=E,138µm,1.4s						
CASP				AML	AML		
	comp=N,160µm,0.5s						
CASP				AML	AML		
	comp=N,160µm,0.5s						
CASP				AML	AML		
	comp=E,138µm,1.4s						
CASP				AML	AML		
	comp=N,160µm,0.5s						
CASP				AML	AML		
	comp=E,138µm,1.4s						
PARC	**Parchiule**	**1.62**	**107**	P	**Pn**	**11 56 30.6**	**+0.1**
PARC				AML	AML		
	comp=E,95µm,0.7s						
PARC				AML	AML		
	comp=N,89µm,1.6s						
PARC				AML	AML		
	comp=E,95µm,0.7s						
PARC				AML	AML		
	comp=N,89µm,1.6s						
PARC				AML	AML		
	comp=N,89µm,1.6s						
PARC				AML	AML		
	comp=E,95µm,0.7s						
PARC				AML	AML		
	comp=N,89µm,1.6s						
PARC				AML	AML		
	comp=E,95µm,0.7s						
MAGA	**Magasa**	**1.66**	**13**	P	**Pb**	**11 56 32.6**	**+0.2**
MAGA				AML	AML		
	comp=E,748µm,0.6s						
MAGA				AML	AML		
	comp=N,348µm,0.5s						
MAGA				AML	AML		
	comp=E,749µm,0.6s						
MAGA				AML	AML		
	comp=N,347µm,0.5s						
MAGA				AML	AML		
	comp=E,749µm,0.6s						
MAGA				AML	AML		
	comp=N,347µm,0.5s						
MAGA				AML	AML		
	comp=E,749µm,0.6s						
MAGA				AML	AML		
	comp=N,347µm,0.5s						
PGF	**Pioggiola**	**1.80**	**207**	*e*Pn	**Pn**	**11 56 32.3**	**-0.6**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**11 56 54.4**	**-1.6**
	comp=N,42nm,0.6s,SNR=1.0						
PGF	**Pioggiola**	**1.80**	**207**	Pn	**Pn**	**11 56 32.5**	**-0.3**
SBF	**Sospel**	**1.95**	**262**	*e*Pn	**Pn**	**11 56 34.5**	**-0.4**
	SNR=1.0						
SBF	**Sospel**	**1.95**	**262**	*e*Pg	**Pb**	**11 56 39.0**	**+1.8**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**11 56 58.5**	**-1.2**
	comp=N,67nm,0.5s,SNR=1.0						
ESCA	**l'Escarene**	**2.00**	**262**	Pn	**Pn**	**11 56 35.4**	**-0.1**
SMPL	**Sampolo**	**2.15**	**197**	Pn	**Pn**	**11 56 38.6**	**+1.1**
ISO	**Isola**	**2.20**	**272**	Pn	**Pn**	**11 56 39.9**	**+1.5**
CALF	**Calern**	**2.33**	**261**	Pn	**Pn**	**11 56 40.5**	**+0.3**
SURF	**Saint Ours**	**2.38**	**279**	Pn	**Pn**	**11 56 41.6**	**+0.5**
MBDF	**Montbardon**	**2.46**	**285**	*e*Pn	**Pn**	**11 56 41.3**	**-0.7**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**11 57 10.9**	**-1.4**
	comp=N,22nm,0.6s						
FRF	**La Foret Royal**	**2.57**	**258**	*e*Pn	**Pn**	**11 56 42.9**	**-0.5**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**11 57 13.5**	**-1.4**
	comp=N,7.8nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**2.73**	**254**	*e*Pn	**Pn**	**11 56 45.1**	**-0.5**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**11 57 16.0**	**-2.9**
	comp=N,9.5nm,0.4s,SNR=1.0						
LMR				*e*Sg	**Sg**	**11 57 28.9**	**-0.2**
	comp=N,6.2nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**2.74**	**301**	*e*Pn	**Pn**	**11 56 45.3**	**-0.7**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**11 57 16.8**	**-2.7**
	comp=N,9.4nm,0.5s						
LPL	**La Plagne**	**2.76**	**301**	*e*Pn	**Pn**	**11 56 46.2**	**0.0**
LPL				*e*Sn	**Sn**	**11 57 18.5**	**-1.4**
	comp=N,9.4nm,0.5s						
FETA	**Feichten**	**2.90**	**8**	Pn	**Pn**	**11 56 51.3**	**+3.2**
	comp=N,2.5nm,0.4s						
FETA				Sn	**Sn**	**11 57 20.7**	**-2.6**
	comp=N,6.5nm,0.8s						
TRI	**Trieste**	**3.03**	**58**	AML	AML		
	comp=E,48µm,1.5s						
TRI				AML	AML		
	comp=N,31µm,0.6s						
TRI				AML	AML		
	comp=E,48µm,1.5s						
TRI				AML	AML		
	comp=N,31µm,0.6s						
TRI				AML	AML		
	comp=E,48µm,1.5s						
TRI				AML	AML		
	comp=N,31µm,0.6s						
ABTA	**Abfaltersbach**	**3.10**	**32**	*e*Pn	**Pn**	**11 56 52.6**	**+1.9**
	comp=N,1.8nm,0.3s						
ABTA				Sn	**Sn**	**11 57 28.6**	**+0.6**
	comp=N,10nm,0.6s						
ORIF	**Oris-en-Rattie**	**3.12**	**286**	*e*P	**Pn**	**11 56 53.6**	**+2.6**
ORIF				*e*Sn	**Sn**	**11 57 26.4**	**-2.1**
	comp=N,12nm,0.6s,SNR=1.0						
DAVA	**Damuels**	**3.14**	**357**	*i* Pn	**Pb**	**11 56 55.4**	**-2.1**
	comp=N,8.0nm,0.3s,SNR=12						
DAVA				*e*Sn	**Sn**	**11 57 30.5**	**+1.4**
	comp=N,70nm,0.7s						
SQTA	**Sankt Quirin**	**3.16**	**14**	*e*Pn	**Pb**	**11 56 55.4**	**-2.5**
	comp=N,4.0nm,0.2s,SNR=9.8						
SQTA				*e*Sn	**Sn**	**11 57 31.1**	**+1.4**
	comp=N,12nm,0.4s						
ASEAF	**Site Antares,**	**3.17**	**246**	Pn	**Pn**	**11 56 52.9**	**+1.5**
MOTA	**Moosalm**	**3.27**	**12**	*e*Pn	**Pn**	**11 56 56.2**	**+3.0**
	comp=N,4.5nm,0.4s						
MOTA				Sg	**Sb**	**11 57 40.6**	**+0.9**
	comp=N,5.3nm,0.4s						
SMRF	**Simiane la Rot**	**3.27**	**268**	*e*Pn	**Pn**	**11 56 52.6**	**-0.5**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**11 57 30.0**	**-2.2**
	comp=N,7.2nm,0.5s						
WTTA	**Wattenberg**	**3.29**	**19**	*e*Pn	**Pn**	**11 56 56.4**	**+2.9**
	comp=N,6.6nm,0.3s,SNR=8.4						
WTTA				Sg	**Sb**	**11 57 39.0**	**-1.4**
	comp=N,32nm,0.6s						
WATA	**Walderalm**	**3.34**	**17**	*e*Pn	**Pn**	**11 56 55.0**	**+0.8**
	comp=N,1.1nm,0.1s						
RETA	**Reutte**	**3.36**	**8**	*e*Pn	**Pn**	**11 56 57.2**	**+2.8**
	comp=N,0.6nm,0.1s						
RETA				*e*Sn	**Sn**	**11 57 34.7**	**+0.1**
	comp=N,8µm,0.0s						
NVLJ	**Novalja**	**3.44**	**82**	*e*Pn	**Pn**	**11 56 57.1**	**+1.7**
NVLJ				Sn	**Sn**	**11 57 36.1**	**-0.3**
MYKA	**Terra Mystica**	**3.51**	**44**	*i* Pn	**Pn**	**11 56 57.3**	**+0.9**
	comp=N,0.5nm,0.1s						
MYKA				*i* Sn	**Sn**	**11 57 40.1**	**+1.8**
	comp=N,0.4nm,0.1s						
DUGI	**Dugi Otok**	**3.57**	**91**	*i* Pn	**Pn**	**11 56 58.7**	**+1.5**
DUGI				Sn	**Sn**	**11 57 38.4**	**-1.3**
KBA	**Koelnbreinsper**	**3.70**	**37**	*i* Pn	**Pn**	**11 57 01.7**	**+2.5**
	comp=N,0.3nm,0.1s						
KBA				*e*Sn	**Sn**	**11 57 41.6**	**-1.5**
	comp=N,1.5nm,0.2s						
CABF	**La Chapelle**	**3.75**	**312**	*e*P	**Pn**	**11 57 02.4**	**+2.7**
OBKA	**Obir**	**3.92**	**52**	*e*Pn	**Pn**	**11 57 03.8**	**+1.7**
	comp=N,0.4nm,0.1s						
OBKA				Sn	**Sn**	**11 57 47.5**	**-0.8**
	comp=N,15nm,0.5s						
CHMF	**Charmoille**	**3.93**	**323**	Pn	**Pn**	**11 57 05.2**	**+3.1**
VIVF	**Saint-Julien-l**	**3.95**	**282**	*e*Pn	**Pn**	**11 57 01.6**	**-0.8**
VIVF				*e*Sn	**Sn**	**11 57 46.3**	**-2.7**
	comp=N,1.3nm,0.3s						
ZIRJ	**Zirje**	**4.03**	**95**	*e*Pn	**Pn**	**11 57 03.7**	**+0.2**
ZIRJ				Sn	**Sn**	**11 57 52.1**	**+1.1**
MORI	**Morici**	**4.05**	**92**	*i* Pn	**Pn**	**11 57 06.3**	**+2.6**
MORI				Sn	**Sn**	**11 57 52.6**	**+1.1**
KIZ	**Kirchzarten**	**4.09**	**339**	Pn	**Pn**	**11 57 06.9**	**+2.5**
MOF	**Molkenrain**	**4.24**	**332**	Pn	**Pn**	**11 57 09.1**	**+2.7**
SOKA	**Soboth**	**4.29**	**52**	*e*Pn	**Pn**	**11 57 06.0**	**-1.1**
	comp=N,2.2nm,0.5s						
SOKA				Sn	**Sn**	**11 57 57.8**	**+0.3**
	comp=N,2.7nm,0.6s						
HINF	**Hinteralfeld**	**4.31**	**329**	*e*P	**Pn**	**11 57 10.2**	**+2.9**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**11 57 54.7**	**-3.1**
	comp=N,12nm,0.6s,SNR=1.0						
LASF	**Ste Croix**	**4.50**	**271**	*e*Pn	**Pn**	**11 57 09.7**	**-0.2**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**11 57 59.3**	**-3.2**
	comp=N,0.3nm,0.2s						
OPP	**Oppenau**	**4.54**	**344**	Pn	**Pn**	**11 57 12.4**	**+1.9**
ECH	**Echery**	**4.55**	**334**	Pn	**Pn**	**11 57 12.5**	**+1.9**
HAU	**Haudompre**	**4.65**	**327**	*e*P	**Pn**	**11 57 14.7**	**+2.6**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**11 58 03.1**	**-3.2**
	comp=N,14nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**4.69**	**336**	*e*P	**Pn**	**11 57 15.3**	**+2.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**11 58 03.5**	**-3.7**
	comp=N,10nm,0.5s						
MOA	**Molln**	**4.70**	**37**	*i* Pn	**Pn**	**11 57 14.9**	**+2.3**
	comp=N,1.1nm,0.2s						
MOA				*e*Sn	**Sn**	**11 58 06.2**	**-1.2**
	comp=N,0.6nm,0.3s						
HVAR	**Hvar**	**4.71**	**100**	*e*Pn	**Pn**	**11 57 14.4**	**+1.7**
HVAR				Sn	**Sn**	**11 58 07.9**	**+0.3**
ARSA	**Arzberg**	**4.90**	**49**	*e*Pn	**Pn**	**11 57 17.5**	**+2.1**
	comp=N,3.2nm,0.4s						
ARSA				*e*Sn	**Sn**	**11 58 11.6**	**-0.8**
	comp=N,2.4nm,0.6s						
SMF	**Signal de Mont**	**5.07**	**302**	*e*P	**Pn**	**11 57 21.3**	**+3.6**
SMF				*e*Sn	**Sn**	**11 58 12.3**	**-4.1**
	comp=N,7.6nm,0.6s						
PAGF	**Fort de Pagny**	**5.34**	**327**	*e*P	**Pn**	**11 57 25.5**	**+4.0**
SFTF	**Sexfontaines**	**5.36**	**321**	*e*P	**Pn**	**11 57 24.8**	**+3.0**
	baz=138						
SFTF				*e*Sn	**Sn**	**11 58 19.7**	**-4.1**
	comp=N,3.7nm,0.4s						
LOR	**Lormes**	**5.37**	**308**	*e*P	**Pn**	**11 57 25.1**	**+3.2**
	baz=128,SNR=1.0						
LOR				*e*Sn	**Sn**	**11 58 19.9**	**-4.0**
	comp=N,7.0nm,0.5s						
SSF	**Saint Saulge**	**5.47**	**304**	*e*Sn	**Sn**	**11 58 22.2**	**-4.1**
	comp=N,1.2nm,0.3s						
CONA	**Conrad Observa**	**5.50**	**45**	*e*Pn	**Pn**	**11 57 26.1**	**+2.3**
	comp=N,0.3nm,0.1s						
CONA				*e*Sn	**Sn**	**11 58 28.5**	**+1.1**
	comp=N,2.2nm,0.5s						
KHC	**Kasperske Hory**	**5.52**	**24**	*e*PN	**Pn**	**11 57 24.7**	**+0.7**
KHC				*e*x	x	11 57 58.0	
KHC				*e*SN	**Sn**	**11 58 27.0**	**-0.7**
KHC				*e*x	x	11 59 12.0	
MEZF	**Maizieres J'vi**	**5.58**	**323**	*e*P	**Pn**	**11 57 29.0**	**+4.3**
	baz=142						
BGF	**Bois d'Agland**	**5.65**	**298**	*e*P	**Pn**	**11 57 28.9**	**+3.2**
BGF				*e*Sn	**Sn**	**11 58 26.9**	**-4.0**
	comp=N,4.7nm,0.4s						
MTLF	**Montolieu**	**5.77**	**265**	*e*Pn	**Pn**	**11 57 26.9**	**-0.5**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**11 58 30.6**	**-3.2**
	comp=N,0.7nm,0.4s						
MTLF	**Montolieu**	**5.77**	**265**	Pn	**Pn**	**11 57 28.2**	**+0.9**
FNEB	**Nbias**	**5.95**	**261**	Pn	**Pn**	**11 57 30.9**	**+1.1**
HYF	**Humbligny**	**6.08**	**303**	*e*P	**Pn**	**11 57 33.4**	**+1.7**
VYHS	**Vyhne**	**7.44**	**51**	*e*PN	**Pn**	**11 57 49.2**	**-1.1**

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*GEN **06** 12:26:37.0, 44°.17N×10°.15E, h4^{km}, Ml1.3*

ROM 06 12:26:36.3±0.1, **44°.170N**±0°.006×**10°.141E**±0°.006, **h9^{km}, ML1.5**/8, **Error ellipse: s-maj=0.7km s-min=0.4km az=184.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.01**	**113**	P	Pg	12 26 37.9	0.0
EQUI				S	Sg	12 26 38.5	-0.6
EQUI	**Equi**	**0.01**	**113**	P	Pg	12 26 37.9	0.0
EQUI				S	Sg	12 26 38.4	-0.6
T0912	**Minucciano (LU**	**0.05**	**91**	P	Pg	12 26 38.5	+0.2
T0912				S	Sg	12 26 39.7	0.0
T0912				AML	AML		

	comp=E,2020µm,0.8s						
T0912				AML	AML		
	comp=N,4070µm,0.8s						
T0912				AML	AML		
	comp=E,1965µm,0.8s						
T0912				AML	AML		
	comp=N,4050µm,0.8s						
T0912				AML	AML		
	comp=E,2025µm,0.8s						
T0912				AML	AML		
	comp=N,4070µm,0.8s						
T0912				AML	AML		
	comp=E,1955µm,0.8s						
T0912				AML	AML		
	comp=N,4045µm,0.8s						
T0912				AML	AML		
	comp=N,4070µm,0.8s						
T0912				AML	AML		
	comp=N,4045µm,0.8s						
T0912				AML	AML		
	comp=E,2025µm,0.8s						
T0912				AML	AML		
	comp=E,1955µm,0.8s						
T0911	**Castelpoggio (**	**0.08**	**220**	P	Pg	12 26 39.1	+0.6
T0911				S	Sg	12 26 40.7	+0.6
VLC	**Villacollemand**	**0.18**	**93**	P	Pg	12 26 40.8	+0.7
VLC				S	Sg	12 26 43.7	+1.1
VLC				AML	AML		
	comp=E,107µm,0.8s						
VLC				AML	AML		
	comp=N,94µm,1.1s						
VLC				AML	AML		
	comp=E,79µm,1.4s						
VLC				AML	AML		
	comp=N,74µm,0.9s						
VLC				AML	AML		
	comp=E,107µm,0.8s						
VLC				AML	AML		
	comp=N,94µm,1.1s						
VLC				AML	AML		
	comp=E,79µm,1.4s						
VLC				AML	AML		
	comp=N,75µm,0.1s						
VLC				AML	AML		
	comp=N,94µm,1.1s						
VLC				AML	AML		
	comp=E,107µm,0.8s						
VLC				AML	AML		
	comp=E,79µm,1.4s						
VLC				AML	AML		
	comp=N,75µm,0.1s						
PLMA	**Palmaria, Port**	**0.24**	**240**	P	Pg	12 26 42.2	+1.0
PLMA				S	Sg	12 26 45.6	+1.1
PLMA				AML	AML		
	comp=E,341µm,1.3s						
PLMA				AML	AML		
	comp=N,620µm,0.3s						
PLMA				AML	AML		
	comp=E,341µm,1.3s						
PLMA				AML	AML		
	comp=N,620µm,0.3s						
PLMA				AML	AML		
	comp=E,341µm,1.3s						
PLMA				AML	AML		
	comp=N,620µm,0.3s						
CARD	**Cardoso**	**0.28**	**120**	P	Pg	12 26 42.6	+0.6
CARD				S	Sg	12 26 46.7	+0.9
CARD	**Cardoso**	**0.28**	**120**	P	Pg	12 26 42.7	+0.6
CARD				S	Sg	12 26 46.8	+0.9
CARD	**Cardoso**	**0.28**	**120**	P	Pb	12 26 42.8	-0.8
CARD				S	Sb	12 26 47.3	-1.2
CARD				AML	AML		
	comp=E,114µm,0.1s						
CARD				AML	AML		
	comp=N,130µm,1.3s						
CARD				AML	AML		
	comp=E,114µm,0.1s						
CARD				AML	AML		
	comp=N,130µm,1.3s						
CARD				AML	AML		
	comp=N,130µm,1.3s						
CARD				AML	AML		
	comp=E,114µm,0.1s						
GRAM	**Graiana**	**0.33**	**350**	P	Pb	12 26 43.7	-0.7
GRAM				S	Sg	12 26 48.4	+1.1
GRAM	**Graiana**	**0.33**	**350**	P	Pb	12 26 43.7	-0.7
GRAM				S	Sg	12 26 48.5	+1.3
GRAM	**Graiana**	**0.33**	**350**	P	Pb	12 26 43.7	-0.7
GRAM				S	Sb	12 26 48.6	-1.2
GRAM				AML	AML		
	comp=E,838µm,0.2s						
GRAM				AML	AML		
	comp=N,811µm,0.9s						
GRAM				AML	AML		
	comp=E,838µm,0.2s						
GRAM				AML	AML		
	comp=N,811µm,0.9s						
GRAM				AML	AML		
	comp=N,811µm,0.9s						
GRAM				AML	AML		
	comp=E,838µm,0.2s						
BDI	**Bagni Di Lucca**	**0.34**	**108**	P	Pb	12 26 44.2	-0.5
BDI				S	Sb	12 26 49.1	-1.2
BDI				AML	AML		
	comp=E,54µm,1.1s						
BDI				AML	AML		
	comp=N,52µm,0.6s						
BDI				AML	AML		
	comp=E,54µm,1.1s						
BDI				AML	AML		
	comp=N,52µm,0.6s						
BDI				AML	AML		
	comp=N,52µm,0.6s						
BDI				AML	AML		
	comp=E,54µm,1.1s						
MAIM	**Mastiano**	**0.36**	**135**	P	Pb	12 26 44.5	-0.4
MAIM				S	Sg	12 26 48.9	+0.7
MAIM	**Mastiano**	**0.36**	**135**	P	Pb	12 26 44.5	-0.4
MAIM				S	Sg	12 26 49.1	+1.0
MAIM	**Mastiano**	**0.36**	**135**	P	Pb	12 26 44.5	-0.4
MAIM				S	Sg	12 26 49.3	+1.2
MAIM				AML	AML		
	comp=E,67µm,0.6s						
MAIM				AML	AML		
	comp=N,79µm,0.6s						
MAIM				AML	AML		
	comp=E,67µm,0.6s						
MAIM				AML	AML		
	comp=N,79µm,0.6s						
MAIM				AML	AML		
	comp=N,79µm,0.6s						
MAIM				AML	AML		
	comp=E,67µm,0.6s						
POPM	**Popiglio**	**0.46**	**105**	P	Pb	12 26 46.0	-0.6
POPM				S	Sb	12 26 52.7	-0.9
POPM	**Popiglio**	**0.46**	**105**	P	Pb	12 26 46.2	-0.5
POPM				S	Sb	12 26 53.2	-0.3
POPM				AML	AML		
	comp=E,70µm,0.2s						
POPM				AML	AML		
	comp=N,69µm,1.4s						
POPM				AML	AML		
	comp=E,70µm,0.2s						
POPM				AML	AML		
	comp=N,69µm,1.4s						
POPM				AML	AML		
	comp=N,69µm,1.4s						
POPM				AML	AML		
	comp=E,70µm,0.2s						

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*ISK **06** 12:37:30.5, 38°.57N×28°.64E, h7^{km}±1^{km}, ML2.1/4, Suspected Mining explosion.*
*ISCJB **06** 12:37:31.5±0.4, 38°.56N±0°.03×28°.66E±0°.03, h0^{km}, Error ellipse: s-maj=4.6km s-min=2.9km az=41.5*
*DDA **06** 12:37:31.5, 38°.57N×28°.70E, h7^{km}±3^{km}, ML2.5*
ISC 06 12:37:31.6±0.9**, 38°.57N**±0°.03×**28°.63E**±0°.03**, h0**^{km}**, n13, σ0^{s}.58**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**0.06**	**157**	PG	**Pg**	**12 37 32.4**	**-0.4**
KULA				SG	**Sg**	**12 37 33.9**	**+0.3**
MANT	**Manisa**	**0.10**	**215**	*i* P	**Pg**	**12 37 33.8**	**+0.3**
MANT				*i* S	**Sg**	**12 37 36.0**	**+1.2**
USAK	**Uak-Merkez**	**0.34**	**65**	*i* P	**Pg**	**12 37 38.2**	**+0.1**
USAK				*i* S	**Sg**	**12 37 42.2**	**-0.2**
USAK				IAML_P			
	comp=Z,2µm,0.2s						
KHAL	**Karahalli**	**0.71**	**106**	*i* P	**Pg**	**12 37 45.1**	**-0.1**
KHAL				*i* S	**Sg**	**12 37 54.7**	**+0.3**
KHAL				IAML_P			
	comp=Z,1µm,0.1s						
GDZ	**Gediz**	**0.84**	**52**	*i* P	**Pg**	**12 37 47.4**	**-0.4**
GDZ				*i* S	**Sg**	**12 37 58.9**	**+0.2**
GDZ				IAML_P			
	comp=Z,457nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**0.85**	**223**	PG	**Pg**	**12 37 47.5**	**-0.5**
AYDB				SG	**Sg**	**12 37 59.5**	**+0.5**
DURS	**Dursunbey**	**1.03**	**353**	*i* P	**Pb**	**12 37 52.9**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.07**	**319**	*i* P	**Pb**	**12 37 53.4**	**+0.3**
STEP				*i* S	**Sn**	**12 38 09.0**	**-0.6**
AYDN	**Tasoluk**	**1.08**	**213**	*i* P	**Pb**	**12 37 53.2**	**-0.1**
AYDN				*i* S	**Sb**	**12 38 07.9**	**-0.2**
AYDN				IAML_P			
	comp=Z,487nm,0.1s						
TVSB	**Tavsanli**	**1.09**	**36**	PN	**Pg**	**12 37 51.8**	**-0.8**
TVSB				SN	**Sg**	**12 38 07.2**	**+0.5**
BALB	**Balikesir**	**1.22**	**332**	PN	**Pg**	**12 37 54.7**	**-0.2**
BLCB	**Balcova**	**1.26**	**262**	PN	**Pg**	**12 37 55.2**	**-0.6**
ULDT	**Uludag**	**1.62**	**14**	*i* P	**Pb**	**12 38 02.5**	**0.0**
ULDT				*i* S	**Sg**	**12 38 25.1**	**+1.5**

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*DDA **06** 13:08:35.1, 38°.68N×43°.66E, h7^{km}±5^{km}, ML2.7*
*ISK **06** 13:08:35.7, 38°.69N×43°.50E, h3^{km}, ML2.5/5*
ISC 06 13:08:35.8±1.3**, 38°.72N**±0°.03×**43°.62E**±0°.05**, h9**^{km}±10^{km}**, n14, σ0^{s}.93**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.22**	**237**	PG	**Pg**	**13 08 40.5**	**+0.2**
VANB				SG	**Sg**	**13 08 44.0**	**+0.6**
TVAN	**Van**	**0.25**	**222**	*i* P	**Pg**	**13 08 40.8**	**-0.2**
TVAN				*i* S	**Sg**	**13 08 45.4**	**+0.9**
VMUR	**Van-Muradiye**	**0.28**	**352**	*i* P	**Pg**	**13 08 41.6**	**+0.1**
VMUR				*i* S	**Sb**	**13 08 47.9**	**-0.1**
GEVA	**Gevas**	**0.60**	**228**	*i* P	**Pg**	**13 08 46.3**	**-1.1**
GEVA				IAML_P			
	comp=Z,1µm,0.2s						
AKDM	**Akdamar-Van**	**0.63**	**233**	PG	**Pg**	**13 08 47.0**	**-1.1**
ADCV	**BITLIS_Adilcev**	**0.71**	**278**	*i* P	**Pb**	**13 08 49.5**	**-0.9**
BASK	**Baskale_VAN**	**0.73**	**155**	*i* P	**Pg**	**13 08 49.2**	**-0.7**
TUTA	**Tutak**	**0.93**	**318**	*i* P	**Pg**	**13 08 53.7**	**-0.1**
TUTA				*i* S	**Sb**	**13 09 06.7**	**-0.1**
MLAZ	**Malazgirt-MUS**	**0.94**	**297**	PG	**Pg**	**13 08 53.2**	**-0.7**
MLAZ				SG	**Sg**	**13 09 05.8**	**-0.3**
AGRB	**Hanur-Agry**	**0.99**	**331**	PG	**Pg**	**13 08 54.9**	**0.0**
AGRB				SG	**Sb**	**13 09 09.2**	**+0.7**
HAKT	**HAKKARI**	**1.16**	**177**	*i* P	**Pg**	**13 08 56.4**	**-1.7**
HAKT				*i* S	**Sn**	**13 09 15.7**	**+1.3**
HAKT				IAML_P			
	comp=Z,951nm,0.3s						
CUKT	**Cukurca**	**1.47**	**180**	PN	**Pg**	**13 09 03.6**	**-0.3**
CUKT	**Cukurca**	**1.47**	**180**	*i* P	**Pg**	**13 09 05.8**	**+1.8**
CUKT				IAML_P			
	comp=Z,893nm,0.2s						
SRTM	**Siirt_Merkez**	**1.52**	**242**	*i* P	**Pg**	**13 09 05.8**	**+0.8**
SRTM				IAML_P			
	comp=Z,605nm,0.3s						

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*JMA **06** 13:51:19.8±0.3, 44°.04N×147°.86E, h0^{km}, M3.8*
*SKHL **06** 13:51:21.0±0.2, 44°.38N×148°.10E, h38^{km}±3^{km}, mb4.1/3*
ISC 06 13:51:17.3±3.3**, 44°.4N**±0°.1×**148°.4E**±0°.2**, h65**^{km}**, n10, σ1^{s}.68**/18**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.95**	**339**	AMB	AMB	13 51 35.0	
	40nm,0.5s						
KUR				AMB	AMB	13 51 35.0	
	60nm,0.5s						
KUR				AMB	AMB	13 51 35.0	
	170nm,0.5s						
KUR				*i* P	**Pn**	**13 51 35.5**	**+0.6**
KUR				*e*S	**Sn**	**13 51 46.2**	**-1.7**
KUR				A	A	13 51 48.0	
	330nm,0.3s						
KUR				A	A	13 51 48.0	
	860nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.82**	**261**	*i* P	**Pn**	**13 51 47.5**	**+1.1**
YUK				AMB	AMB	13 51 50.1	
	70nm,0.4s						
YUK				*i* S	**Sn**	**13 52 07.5**	**-1.0**
YUK				A	A	13 52 12.0	
	140nm,0.4s						
YUK				A	A	13 52 12.0	
	490nm,0.4s						
GRPR	**Tuman**	**1.89**	**260**	*e*P	**Pn**	**13 51 49.0**	**+1.6**
GRPR				AMB	AMB	13 51 49.0	
	80nm,0.4s						
GRPR				*e*S	**Sn**	**13 52 09.0**	**-1.2**
GRPR				A	A	13 52 13.0	
	400nm,0.3s						
GRPR				A	A	13 52 13.0	
	70nm,0.3s						
NEM2	**Nemuro 2**	**2.13**	**243**	P	**Pn**	**13 51 50.6**	**0.0**
NEM2				*e*S	**Sn**	**13 52 12.6**	**-3.4**
JRA	**Rausu**	**2.36**	**261**	P	**Pn**	**13 51 55.2**	**+1.5**
JRA				*e*S	**Sn**	**13 52 21.8**	**+0.2**
JKHN	**Kushirohamanak**	**2.64**	**242**	P	**Pn**	**13 51 58.1**	**+0.6**
JNK	**Nakash**	**2.73**	**255**	P	**Pn**	**13 52 00.1**	**+1.3**
JNK				*e*S	**Sn**	**13 52 28.8**	**-1.9**
JAR	**Ashorobuto**	**3.48**	**254**	P	**Pn**	**13 52 10.9**	**+1.9**
JAR				*e*S	**Sn**	**13 52 48.7**	**-0.3**
JCH	**Churui**	**4.03**	**246**	P	**Pn**	**13 52 17.7**	**+1.3**
JCH				*e*S	**Sn**	**13 53 00.2**	**-2.1**
JNBK	**Urakawa-nobuka**	**4.58**	**245**	P	**Pn**	**13 52 26.0**	**+2.0**

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*SOME **06** 13:56:01.8, 40°.42N×73°.25E, h15^{km}*
*KRNET **06** 13:56:02.5±0.1, 40°.52N×73°.24E, h13^{km}, mb2.6*
*NNC **06** 13:56:12.7±7.1, 41°.06N×73°.06E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=73.6km s-min=34.1km az=159.0*
ISC 06 13:55:59.6±1.6**, 40°.41N**±0°.07×**73°.38E**±0°.04**, h3**^{km}±17^{km}**, n18, σ0^{s}.72**/33**, 17C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	**Aral**	**1.61**	**26**	⇑*i*P	**Pg**	**13 56 31.5**	**+0.9**
	baz=31						
ARLS				⇑*i*S	**Sg**	**13 56 52.6**	**+1.1**
	baz=31						
AML	**Almayashu**	**1.73**	**8**	⇑*i*P	**Pg**	**13 56 33.6**	**+0.7**
	baz=12						
AML				⇑*i*S	**Sg**	**13 56 55.7**	**+0.3**
	baz=12						
BTK	**Batken**	**1.99**	**261**	⇑*i*P	**Pg**	**13 56 37.7**	**-0.1**
	baz=57						
BTK				⇑*i*S	**Sg**	**13 57 03.2**	**-0.4**
	baz=57						
UCH	**Uchtor**	**2.01**	**25**	⇑*i*P	**Pg**	**13 56 38.9**	**+0.8**
	baz=29						
UCH				⇑*i*S	**Sg**	**13 57 05.0**	**+0.9**
	baz=29						
KZA	**Kyzart**	**2.18**	**40**	⇑*i*P	**Pg**	**13 56 41.6**	**+0.1**
	baz=43						
KZA				⇑*i*S	**Sg**	**13 57 10.0**	**+0.2**
	baz=43						
EKS2	**Erkin-Say**	**2.27**	**7**	⇑*i*P	**Pb**	**13 56 41.6**	**+0.3**
	baz=10.0						
EKS2				⇑*i*S	**Sb**	**13 57 10.0**	**+0.2**
	baz=10.0						
MRKS	**Merke**	**2.33**	**357**	*e*P	**Pg**	**13 56 43.9**	**-0.5**
	5.5nm,0.3s						
MRKS				*e*S	**Sg**	**13 57 12.6**	**-2.1**
	9.3nm,0.2s						
AAK	**Ala-Archa**	**2.38**	**20**	⇑Pn	**Pg**	**13 56 44.8**	**-0.4**
	3.5nm,0.4s						
AAK				⇓Sn	**Sg**	**13 57 14.8**	**-1.2**
	6.5nm,0.3s						
AAK	**Ala-Archa**	**2.38**	**20**	⇓*i*P	**Pb**	**13 56 43.6**	**+0.4**
	baz=23						
AAK				⇓*i*S	**Sb**	**13 57 13.3**	**+0.3**
	baz=23						
ULHL	**Ulahol**	**2.83**	**49**	⇑*i*P	**Pb**	**13 56 50.8**	**-0.1**
	baz=52						
ULHL				⇑*i*S	**Sb**	**13 57 26.0**	**-0.1**
	baz=52						
BOOM	**Boomskoye usch**	**2.83**	**42**	⇓*i*P	**Pb**	**13 56 50.6**	**-0.3**
	baz=45						
BOOM				⇓*i*S	**Sb**	**13 57 25.4**	**-0.7**
	baz=45						
TKM2	**Tokmak 2**	**3.01**	**33**	⇓Pn	**Pg**	**13 56 57.3**	**0.0**
	0.6nm,0.3s						
TKM2				⇑Lg	Lg	13 57 33.4	
	2.3nm,0.5s						
IUG	**Iuzhnay**	**3.06**	**306**	*e*P	**Pb**	**13 56 55.8**	**+1.0**
	1.2nm,0.2s						
IUG				*e*S	**Sb**	**13 57 33.1**	**+0.5**
	24nm,0.3s						
KST	**Kastek**	**3.27**	**35**	*e*P	**Pg**	**13 57 02.1**	**-0.1**
	2.4nm,0.3s						
KST				*e*S	**Sg**	**13 57 44.7**	**+0.2**
	3.3nm,0.2s						
DGS	**Degeres**	**3.35**	**32**	*e*P	**Pg**	**13 57 03.3**	**-0.5**
	3.7nm,0.5s						
DGS				*e*S	**Sg**	**13 57 46.1**	**-1.1**
	4.2nm,0.5s						
CHM	**Chimkent**	**3.42**	**305**	*e*P	**Pb**	**13 57 01.5**	**+0.6**
	136nm,0.2s						
KK31	**Karatay Array**	**3.44**	**322**	⇑Pg	**Pb**	**13 57 01.5**	**+0.3**
	0.8nm,0.5s,baz=135,slow=16						
KK31				Lg	Lg	13 57 44.2	
	0.7nm,0.3s,baz=132,slow=29,SNR=3.1						
BRLS	**Borolday**	**3.73**	**316**	*e*P	**Pb**	**13 57 05.7**	**-0.3**
	1.6nm,0.2s						
BRLS				*e*S	**Sb**	**13 57 50.9**	**-0.7**
	2.1nm,0.3s						

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*ISCJB **06** 14:03:11.6±0.4, 48°.66N±0°.02×2°.71W±0°.03, h10^{km}, Error ellipse: s-maj=3.4km s-min=2.7km az=23.7*
*STR **06** 14:03:11.1±0.7, 49°N±2°×°±°, h3^{km}±6^{km}, MLv2.9/6*
*LDG **06** 14:03:12.4±0.1, 48°.78N×2°.93W, h4^{km}, Md3.2/4, Ml3.1/31, Error ellipse: s-maj=1.8km s-min=1.5km az=120.0*
*BGS **06** 14:03:12.7±0.8, 48°.84N×2°.98W, h8^{km}, ML2.2*
ISC 06 14:03:11.9±0.8**, 48°.81N**±0°.02×**2°.95W**±0°.03**, h10**^{km}**, n68, σ2^{s}.83**/105**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSF	**Rostrenen**	**0.52**	**204**	*e*Pg	**Pg**	**14 03 21.9**	**-0.1**
	SNR=1.0						
ROSF	**Rostrenen**	**0.52**	**204**	*e*Pn	**Pg**	**14 03 23.8**	**+1.8**
ROSF				*e*Sg	**Sg**	**14 03 28.8**	**-0.1**
	193nm,0.2s						
SGMF	**Saint Gilles**	**0.62**	**155**	*e*Pg	**Pg**	**14 03 24.5**	**+0.7**
	SNR=1.0						
SGMF	**Saint Gilles**	**0.62**	**155**	*e*P	**Pg**	**14 03 25.1**	**+1.3**
SGMF				*e*Sg	**Sg**	**14 03 31.4**	**-0.5**
SGMF				*e*Sn	**Sb**	**14 03 35.1**	**+1.7**
	78nm,0.3s,SNR=1.0						
JVM	**Valle D.L. Mar**	**0.64**	**50**	*e*P	**Pg**	**14 03 24.1**	**-0.1**
JVM	**Valle D.L. Mar**	**0.64**	**50**	*e*P	**Pg**	**14 03 24.1**	**-0.1**
JSA	**Saint Aubin**	**0.64**	**54**	*e*P	**Pg**	**14 03 24.1**	**-0.1**
JSA				*e*S	**Sg**	**14 03 33.2**	**+0.7**
JSA				IAML		14 03 36.8	
	comp=N,131nm,0.3s						
JSA				IAML		14 03 37.0	
	comp=E,192nm,0.2s						
JSA	**Saint Aubin**	**0.64**	**54**	*e*P	**Pg**	**14 03 24.1**	**-0.1**
JSA				*e*S	**Sg**	**14 03 33.2**	**+0.7**
JSA				IAML		14 03 36.8	
	comp=N,131nm,0.3s						
JSA				IAML		14 03 37.0	
	comp=E,192nm,0.2s						
JSA	**Saint Aubin**	**0.64**	**54**	Pg	**Pg**	**14 03 24.2**	**+0.1**
JSA				Sg	**Sg**	**14 03 33.3**	**+0.7**
JRS	**Jersey**	**0.68**	**56**	*e*P	**Pg**	**14 03 25.1**	**0.0**
JRS				*e*S	**Sg**	**14 03 34.9**	**+0.9**
JRS				IAML		14 03 37.9	
	comp=N,102nm,0.3s						
JRS				IAML		14 03 38.3	
	comp=E,131nm,0.1s						
JRS	**Jersey**	**0.68**	**56**	*e*P	**Pg**	**14 03 25.1**	**0.0**
JRS				*e*S	**Sg**	**14 03 34.9**	**+0.9**
JRS				IAML		14 03 37.9	
	comp=N,102nm,0.3s						
JRS				IAML		14 03 38.3	
	comp=E,131nm,0.1s						
JDC	**Jersey Dam (Cr**	**0.70**	**58**	*e*P	**Pg**	**14 03 25.6**	**+0.1**
JDC				*e*S	**Sg**	**14 03 35.9**	**+1.3**
JDC	**Jersey Dam (Cr**	**0.70**	**58**	*e*P	**Pg**	**14 03 25.6**	**+0.1**
JDC				*e*S	**Sg**	**14 03 35.9**	**+1.3**
JLP	**Les Platons**	**0.70**	**52**	*e*P	**Pg**	**14 03 25.4**	**-0.1**
JLP	**Les Platons**	**0.70**	**52**	*e*P	**Pg**	**14 03 25.4**	**-0.1**
JDG	**Jersey Dam (Ga**	**0.71**	**57**	*e*P	**Pg**	**14 03 25.5**	**0.0**
JDG	**Jersey Dam (Ga**	**0.71**	**57**	*e*P	**Pg**	**14 03 25.5**	**0.0**
JQE	**Queens East**	**0.71**	**57**	*e*P	**Pg**	**14 03 25.7**	**0.0**
JQE	**Queens East**	**0.71**	**57**	*e*P	**Pg**	**14 03 25.7**	**0.0**
QUIF	**Quistinic**	**0.91**	**189**	*e*Pg	**Pg**	**14 03 29.3**	**0.0**
	SNR=1.0						
QUIF	**Quistinic**	**0.91**	**189**	*e*Pn	**Pg**	**14 03 29.7**	**+0.4**
QUIF				*e*Sg	**Sg**	**14 03 40.3**	**-0.8**
	comp=E,286nm,0.2s,SNR=1.0						
RENF	**Rennes**	**1.12**	**128**	*e*P	**Pb**	**14 03 34.6**	**+1.4**
RENF	**Rennes**	**1.12**	**128**	*e*P	**Pb**	**14 03 34.6**	**+1.4**
RENF	**Rennes**	**1.12**	**128**	Pg	**Pb**	**14 03 34.8**	**+1.6**
RENF				Sg	**Sn**	**14 03 51.0**	**+2.1**
GRR	**Gorron**	**1.45**	**106**	*e*Pn	**Pn**	**14 03 38.3**	**+0.1**
GRR	**Gorron**	**1.45**	**106**	*e*Pg	**Pb**	**14 03 40.3**	**+1.3**
	SNR=1.0						
GRR				*e*Sg	**Sn**	**14 03 57.9**	**+0.7**
	comp=E,212nm,0.3s,SNR=1.0						
FLN	**La Foliniere**	**1.63**	**91**	*e*Pn	**Pn**	**14 03 40.3**	**-0.4**
	baz=272,SNR=1.0						
FLN	**La Foliniere**	**1.63**	**91**	*e*Pg	**Pb**	**14 03 43.1**	**+1.0**
	baz=274						
FLN				*e*Sg	**Sb**	**14 04 04.2**	**+1.5**
	comp=E,63nm,0.4s,baz=281						
DYA	**Yadsworthy**	**1.75**	**339**	*e*P	**Pn**	**14 03 41.7**	**-0.5**
DYA				IAML		14 04 05.4	
	comp=N,27nm,0.3s						
DYA				IAML		14 04 07.1	
	comp=E,24nm,0.2s						
DYA	**Yadsworthy**	**1.75**	**339**	*e*P	**Pn**	**14 03 41.7**	**-0.5**
DYA				IAML		14 04 05.4	
	comp=N,27nm,0.3s						
DYA				IAML		14 04 07.1	
	comp=E,24nm,0.2s						
DYA	**Yadsworthy**	**1.75**	**339**	Pn	**Pn**	**14 03 39.0**	**-3.2**
DYA				Pg	**Pn**	**14 03 41.7**	**-0.5**
DYA				Sn	**Sn**	**14 04 02.9**	**-1.6**
LDF	**La Druitiere**	**1.89**	**96**	*e*Pn	**Pn**	**14 03 43.8**	**-0.3**
	SNR=1.0						
LDF	**La Druitiere**	**1.89**	**96**	*e*Pg	**Pb**	**14 03 47.5**	**+1.1**
	SNR=1.0						
LDF				*e*Sg	**Sn**	**14 04 10.1**	**+2.1**
	comp=E,52nm,0.2s,SNR=1.0						
CCA1	**Carnmenellis**	**2.02**	**314**	*e*P	**Pn**	**14 03 45.7**	**-0.3**
CCA1				IAML		14 04 12.0	
	comp=E,20nm,0.3s						
CCA1				IAML		14 04 12.4	
	comp=N,18nm,0.2s						
CCA1	**Carnmenellis**	**2.02**	**314**	*e*P	**Pn**	**14 03 45.7**	**-0.3**
CCA1				IAML		14 04 12.0	
	comp=E,20nm,0.3s						
CCA1				IAML		14 04 12.4	
	comp=N,18nm,0.2s						
CCA1	**Carnmenellis**	**2.02**	**314**	Pn	**Pn**	**14 03 42.4**	**-3.6**
SBD	**Saint Breward**	**2.08**	**328**	*e*P	**Pn**	**14 03 47.3**	**+0.4**
SBD	**Saint Breward**	**2.08**	**328**	*e*P	**Pn**	**14 03 47.3**	**+0.4**
HTL	**Hartland**	**2.40**	**336**	Pn	**Pn**	**14 03 48.9**	**-2.3**
MFF	**Saint Martin d**	**2.91**	**138**	*e*Pn	**Pn**	**14 03 58.5**	**+0.3**
	SNR=1.0						
MFF	**Saint Martin d**	**2.91**	**138**	*e*Pg	**Pb**	**14 04 05.4**	**+1.6**
MFF				*e*Sn	**Sn**	**14 04 29.2**	**-4.1**
	comp=N,9.2nm,0.2s,SNR=1.0						
MFF				*e*Sg	**Sb**	**14 04 42.6**	**+3.1**
	comp=N,9.6nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	**2.91**	**138**	Pn	**Pn**	**14 03 58.9**	**+0.6**
CHIF	**Chize**	**3.19**	**146**	Pn	**Pn**	**14 04 02.2**	**+0.2**
ELSH	**Elham, Standar**	**3.52**	**47**	Pn	**Pn**	**14 04 05.3**	**-1.3**
HYF	**Humbligny**	**4.06**	**110**	*e*Pn	**Pn**	**14 04 12.8**	**-1.2**
HYF				*e*Sn	**Sn**	**14 04 58.0**	**-3.5**
HYF				*e*Sg	**Sg**	**14 05 19.5**	**-2.5**
TCF	**Toulx Ste Croi**	**4.31**	**124**	*e*Pn	**Pn**	**14 04 17.0**	**-0.5**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**4.31**	**124**	*e*Pg	**Pb**	**14 04 31.6**	**+3.9**
TCF				*e*Sn	**Sn**	**14 05 03.6**	**-4.2**
	comp=N,4.2nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**4.52**	**118**	*e*Pn	**Pn**	**14 04 19.2**	**-1.1**
	SNR=1.0						

BGF				eSn	Sn	14 05 08.6	-4.3
	comp=N,28nm,0.5s,SNR=1.0						
LFF	La Frestale	4.63	145	ePn	Pn	14 04 20.9	-0.9
LFF				eSn	Sn	14 05 10.6	-4.9
	comp=N,2.2nm,0.2s						
LFF				eSg	Sb	14 05 35.6	+6.8
	comp=N,9.4nm,0.3s						
RJF	Les Rejaudoux	4.65	137	ePn	Pn	14 04 21.0	-1.1
	SNR=1.0						
RJF				eSn	Sn	14 05 11.7	-4.5
	comp=N,1.2nm,0.2s,SNR=1.0						
RJF				eSg	Sb	14 05 36.3	+6.8
	comp=N,7.4nm,0.3s,SNR=1.0						
SSF	Saint Saulge	4.68	110	ePn	Pn	14 04 21.1	-1.4
	SNR=1.0						
SSF				eSn	Sn	14 05 12.3	-4.6
	comp=N,14nm,0.5s						
AVF	Avril sur Loir	4.71	113	ePn	Pn	14 04 21.8	-1.1
AVF				eSn	Sn	14 05 13.0	-4.5
	comp=N,2.6nm,0.3s,SNR=1.0						
AVF				eSg	Sg	14 05 39.2	-3.6
	comp=N,5.0nm,0.3s						
LOR	Lormes	4.82	106	ePn	Pn	14 04 23.2	-1.3
	SNR=1.0						
LOR				eSn	Sn	14 05 16.5	-3.9
	comp=N,7.0nm,0.3s,SNR=1.0						
LOR				eSg	Sb	14 05 41.1	+6.6
	comp=N,7.1nm,0.4s,baz=306,SNR=1.0						
BAIF	Baives	4.83	72	ePn	Pn	14 04 23.5	-1.1
CAF	Calviac	5.19	137	ePn	Pn	14 04 28.2	-1.4
	SNR=1.0						
CAF				eSn	Sn	14 05 24.6	-4.9
	comp=N,0.8nm,0.2s						
CAF				eSg	Sb	14 05 53.1	+8.0
	comp=N,5.7nm,0.3s						
GIVF	Givet	5.23	73	ePn	Pn	14 04 29.6	-0.5
GIVF				eSn	Sn	14 05 24.5	-5.9
	comp=N,4.0nm,0.3s,SNR=1.0						
MEZF	Maizieres J'vi	5.31	90	ePn	Pn	14 04 30.8	-0.4
	baz=270						
MEZF				eSn	Sn	14 05 27.7	-4.7
	comp=N,13nm,0.6s,baz=262,SNR=1.0						
SFTF	Sexfontaines	5.34	94	ePn	Pn	14 04 27.1	-4.6
	baz=279						
SFTF				eSn	Sn	14 05 28.4	-4.9
	comp=N,6.1nm,0.3s						
SJPF	Ste Jean	5.83	167	ePn	Pn	14 04 36.9	-1.4
	SNR=1.0						
SJPF				eSn	Sn	14 05 39.1	-6.0
	comp=N,1.4nm,0.2s,SNR=1.0						
ETSF	Etsaut	6.15	163	ePn	Pn	14 04 40.7	-2.0
	SNR=1.0						
EPF	Esparros	6.22	157	ePn	Pn	14 04 42.3	-1.4
	SNR=1.0						
HAU	Haudompre	6.24	94	eSn	Sn	14 05 49.3	-6.1
	comp=N,2.9nm,0.3s						
CABF	La Chapelle	6.48	106	ePn	Pn	14 04 46.7	-0.7
	SNR=1.0						
MTLF	Montolieu	6.55	145	ePn	Pn	14 04 46.8	-1.4
	SNR=1.0						
MTLF	Montolieu	6.55	145	ePg	Pb	14 05 12.2	+6.4
HINF	Hinteralfeld	6.62	95	eSn	Sn	14 05 58.6	-6.0
	comp=N,3.4nm,0.4s						
LASF	Ste Croix	6.67	133	ePn	Pn	14 04 48.7	-1.2
	SNR=1.0						
LASF				eSg	Sg	14 06 39.2	-6.8
	comp=N,6.7nm,0.7s						
CDF	Champ du Feu	6.79	90	eSn	Sn	14 06 02.4	-6.6
	comp=N,0.9nm,0.2s,SNR=1.0						

WEL 06 14:19:34.1,43°.6S±0°.5×172°.7E±0°.4,h6^{km},M3.5/13, ML3.7/9,MLv3.5/13,Error ellipse: s-maj=0.0km s-min=0.0km az=172.7,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRLZ	Canterbury Las	0.04	325	P	Pg	14 19 36.1	+0.8
MQZ	McQueen's Vall	0.10	180	P	Pg	14 19 37.8	+1.5
MQZ				S	Sg	14 19 39.7	+2.0
EYCZ	Eyrewell	0.29	310	P	Pb	14 19 41.1	-0.5
OKCZ	Okains Bay	0.32	112	P	Pb	14 19 42.0	-0.1
AKCZ	Akaroa Harbour	0.32	145	P	Pb	14 19 42.1	-0.1
AMCZ	Amberley	0.43	360	P	Pb	14 19 44.2	+0.2
OXZ	Oxford	0.53	302	P	Pb	14 19 45.5	-0.2
GVZ	Greta Valley S	0.70	24	P	Pb	14 19 49.2	+0.6
LTZ	Lake Taylor	0.87	341	P	Pb	14 19 52.2	+0.6
RPZ	Rata Peaks	1.17	264	P	Pn	14 19 56.9	-0.1
INZ	Inchbonnie	1.25	314	P	Pn	14 19 59.0	+1.0
KHZ	Kahutara	1.36	29	P	Pn	14 19 59.0	-0.5
WVZ	Waitaha Valley	1.50	290	P	Pn	14 20 01.8	+0.3
THZ	Tophouse	1.85	6	P	Pn	14 20 06.3	-0.1
LBZ	Lake Benmore	1.94	246	P	Pn	14 20 08.6	+1.0
DSZ	Denniston Nort	1.96	341	P	Pn	14 20 08.0	+0.2
ODZ	Otahua Downs	2.04	224	P	Pn	14 20 09.0	+0.2
FOZ	Fox Glacier	2.06	271	P	Pb	14 20 10.9	-1.0
BSWZ	Blackbirch Sta	2.09	26	P	Pn	14 20 09.3	-0.4
NNZ	Nelson	2.45	13	P	Pn	14 20 15.0	+0.5
TCW	Tory Channel	2.68	27	P	Pn	14 20 17.0	-0.7
QRZ	Quartz Range	2.78	358	P	Pn	14 20 19.2	+0.1
EAZ	Earnscleugh	2.90	235	P	Pn	14 20 21.3	+0.6
CAW	Cannon Point	3.07	36	P	Pn	14 20 22.1	-0.9
TUZ	Tuapeka	3.19	221	P	Pn	14 20 25.7	+1.0
SYZ	Scrubby Hill	3.84	219	P	Pn	14 20 34.7	+1.0
VRZ	Vera Road	4.75	20	P	Pn	14 20 47.3	+1.1

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*ISCJB **06** 14:26:34.7±0.8,27°.84S±0°.03×71°.73W±0°.08,h28^{km},Error ellipse: s-maj=10.2km s-min=4.5km az=173.4*
*GUC **06** 14:26:36.6±1.1,27°.90S×71°.32W,h62^{km}±22^{km},ML3.8*
*SJA **06** 14:26:36.4±1.5,27°.77S×71°.60W,h60^{km},ML3.7,MW3.8*
ISC 06 14:26:35.9±1.6,27°.83S±0°.05×71°.73W±0°.09,h28^{km},n18, σ1^{s}82/24,2C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	1.35	80	⇑eP	Pn	14 26 56.3	-2.6
GO03				i S	Sn	14 27 10.5	-5.5
GO03				IAML		14 27 15.7	
	comp=N,1μm,0.5s						
CRCH	Chaqaral	1.78	34	eP	Pn	14 27 04.8	-0.1
CRCH				i S	Sn	14 27 26.3	-0.2
LSCH	La Serena	2.11	168	eP	Pn	14 27 08.5	-0.9
LSCH				eS	Sn	14 27 34.4	-0.4
GO04	Tololo Observa	2.47	161	⇑iP	Pn	14 27 14.0	-0.6
GO04				eS	Sn	14 27 43.6	-0.4
GO04				IAML		14 27 55.4	
	comp=N,2μm,0.3s						
VCA	Vinchina	3.24	107	eP	Pn	14 27 27.9	+2.9
VCA				eS	Sn	14 28 03.2	+0.4
VCA				IAML		14 28 17.2	
	comp=Z,200nm,0.5s						
ACLC	CERRO LA CRUZ	4.49	112	eP	Pn	14 27 42.6	+0.3
ACLC				eS	Sn	14 28 34.1	+0.3
CFA	Coronel Fontan	4.83	142	eP	Pn	14 27 48.7	+1.8
PB15	IPOC Station P	5.04	24	eP	Pn	14 27 51.6	+1.8
PB05	IPOC Station P	5.15	16	eP	Pn	14 27 51.6	+0.3
APLL	PUNTA DE LOS L	5.22	121	eP	Pn	14 27 52.6	+0.4
APLL				IAML		14 28 57.9	
	comp=Z,40nm,0.8s						
CYA	Choya	5.27	98	eP	Pn	14 27 53.3	+0.4
PB06	IPOC Station P	5.47	21	eP	Pn	14 27 56.1	+0.4
PB04	IPOC Station P	5.66	15	eP	Pn	14 27 59.0	+0.6
AHML	Horco Molle	5.79	81	eP	Pn	14 28 03.4	+3.4
LVC	Limon Verde	5.79	27	eP	Pn	14 28 01.4	+1.0
LVC				IAML		14 29 42.2	
	comp=Z,39nm,0.8s						
PB03	IPOC Station P	6.03	18	eP	Pn	14 28 04.4	+0.9
PB07	IPOC Station P	6.31	16	eP	Pn	14 28 08.2	+0.9
TCA	Tanti	7.13	121	eP	Pn	14 28 19.3	+0.8

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*IDC **06** 14:30:18.1±1.2,0°.77N×124°.59E,h0^{km},mb3.9/6, mb1 4.0/6,mb1mx3.6/48,mbtmp3.9/6,Error ellipse: s-maj=111.4km s-min=17.2km az=61.0*
*NEIC **06** 14:30:22.6±2.6,0°.75N×124°.42E,h36^{km}±13^{km},mb4.0/11, Error ellipse: s-maj=22.5km s-min=11.1km az=62.0*
*ISCJB **06** 14:30:29.1±0.5,0°.22N±0°.05×123°.69E±0°.04,h100^{km}, mb3.8/14,Error ellipse: s-maj=7.1km s-min=4.9km az=14.0*
*DJA **06** 14:30:32.7±0.5,0°S±3°×12°4E±°,h118^{km}±9^{km},M4.1/6, MLv4.1/6*
ISC 06 14:30:30.9±0.8,0°.09N±0°.08×123°.68E±0°.04,h100^{km},n29, σ1^{s}80/34,mb3.9/14,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.44	219	ePn	Pn	14 30 59.5	+3.0
LUWI	Luwuk	1.44	219	P	Pn	14 30 58.7	+2.2
LUWI				S	Sn	14 31 17.7	+1.9
APSI	Ampana	2.26	244	P	Pn	14 31 08.9	+2.1
APSI				S	Sn	14 31 36.3	+1.9
SANI	Sanana	3.13	133	P	Pn	14 31 19.8	+1.3
SANI				S	Sn	14 31 54.0	-1.2
TNTI	Ternate	3.75	80	S	Sn	14 32 12.6	+2.6
LBMI	Labuha	3.89	101	P	Pn	14 31 31.0	+2.4
LBMI				S	Sn	14 32 15.4	+2.1
NLAI	Namlea	4.75	134	P	Pn	14 31 40.9	+0.6
NLAI				S	Sn	14 32 35.4	+1.1
TTSI	Tana Toraja	4.96	231	P	Pn	14 31 43.7	+0.7
TTSI				S	Sn	14 32 39.4	+0.2
SPSI	Sidrap Palu	5.61	224	P	Pn	14 31 52.0	+0.1
MTN	Manton Dam	14.82	150	eP	P	14 33 58.5	-0.2
	6.4nm,0.8s						
WRAB	Tennant Creek	22.48	153	eP	P	14 35 18.6	-3.5
	19nm,1.0s						
WR1	Warramunga Arr	22.48	153	eP	P	14 35 21.8	-0.4
WRA	Warramunga Arr	22.48	153	P	P	14 35 21.8	-0.4
	1.4nm,0.4s,baz=339,slow=12,SNR=17						
WB2	Warramunga Arr	22.48	153	eP	P	14 35 22.2	0.0
	2.0nm,0.6s						
TPUB	Ta-pu	23.26	353	eP	P	14 35 20.1	-10
	8.2nm,0.9s						
KULM	Kulim	23.57	283	eP	P	14 35 32.9	+0.1
	6.7nm,1.1s						
AS31	Alice Springs	25.61	158	eP	P	14 35 52.0	+0.8
	0.5nm,0.8s						
ASAR	Alice Springs	25.61	158	P	P	14 35 52.0	+0.8
	0.4nm,0.4s,baz=347,slow=13,SNR=8.7						
CM31	Chiang Mai Arr	30.39	308	eP	P	14 36 35.2	+1.4
	2.9nm,0.4s						
CMAR	Chiang Mai Arr	30.39	308	P	P	14 36 35.2	+1.4
	0.6nm,0.7s,baz=128,slow=7.7,SNR=6.3						
CHTO	Chiang Mai	30.59	309	eP	P	14 36 33.5	-2.1
	1.9nm,1.1s						
STKA	Stephens Creek	36.03	154	P	P	14 37 23.0	+0.3
	2.2nm,0.5s,baz=329,slow=10,SNR=8.7						
STKA	Stephens Creek	36.03	154	eP	P	14 37 23.0	+0.3
	0.8nm,0.8s						
ARMA	Armidale	40.33	141	eP	P	14 37 54.9	-4.0
CAN	Canberra	42.41	149	eP	P	14 38 13.7	-2.0
	8.7nm,1.0s						
MK32	Makanchi Array	58.90	328	eP	P	14 40 17.9	-1.6
MKAR	Makanchi Array	58.90	328	P	P	14 40 17.9	-1.6
	0.6nm,0.4s,baz=121,slow=8.0,SNR=3.2						
ZALV	Zalesovo Beam	62.52	335	P	P	14 40 42.2	-1.6
	0.6nm,0.5s,baz=116,slow=5.9,SNR=3.2						
ZAA1	Zalesovo Array	62.52	335	eP	P	14 40 42.2	-1.6

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*SOME **06** 14:34:27.9,41°.50N×71°.37E,h5^{km}*
*KRNET **06** 14:34:28.2±0.1,41°.55N×71°.36E,h13^{km},mb3.8*
*NNC **06** 14:34:28.3±2.4,41°.38N×71°.32E,h0^{km},mb4.1,mpv3.9, Error ellipse: s-maj=22.0km s-min=6.6km az=11.0*
*IDC **06** 14:34:28.6±1.9,41°.54N×71°.37E,h0^{km},mb1 3.5/7, mb1mx3.3/60,mbtmp3.5/7,ML3.2/7,Error ellipse: s-maj=20.5km s-min=13.0km az=3.0*
ISC 06 14:34:27.3±1.1,41°.53N±0°.03×71°.45E±0°.02,h7^{km}±9^{km}, n79,σ1^{s}65/124,20C-23D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.47	55	⇓iP	Pb	14 34 38.3	+0.4
	baz=64						
ARK				⇓iS	Sb	14 34 45.5	+0.4
	baz=64						
ARSB	Arslanbob	1.17	100	⇑iP	Pn	14 34 51.4	+1.2
	baz=0.0						
ARSB				⇑iS	Sn	14 35 08.4	+1.9
	baz=0.0						
IUG	Iuzhnay	1.23	300	P	Pb	14 34 50.6	-0.3
	31nm,0.3s						
IUG				S	Sg	14 35 05.7	-1.0
	682nm,0.2s						
IUG	Iuzhnay	1.23	300	eP	Pb	14 34 50.5	-0.3
	31nm,0.3s						
IUG				eS	Sg	14 35 05.7	-1.0
	682nm,0.2s						
DZA	Taraz	1.36	356	P	Pg	14 34 54.0	+0.6
	215nm,0.2s						
DZA				S	Sn	14 35 11.3	+0.2
	852nm,0.2s						
DZA	Taraz	1.36	356	eP	Pg	14 34 54.0	+0.6
	215nm,0.1s						
DZA				eS	Sn	14 35 11.3	+0.2
	859nm,0.3s						
BTK	Batken	1.55	198	⇑iP	Pg	14 34 56.7	-0.3
	baz=96						
BTK				⇑iS	Sg	14 35 17.9	+0.8
	baz=96						
CHM	Chimkent	1.59	300	eP	Pn	14 34 55.8	-0.1
	644nm,0.2s						
CHM				eS	Sn	14 35 15.7	-0.9
	5μm,0.4s						
TAS	Tashkent	1.64	264	⇑iP	Pn	14 34 56.9	+0.3
	baz=63						
TAS				⇑iS	Sb	14 35 18.4	-0.4
	baz=63						
KK31	Karatay Array	1.72	336	P	Pb	14 34 59.4	+0.2
	45nm,0.2s,baz=168,slow=14,SNR=615						
KK31				⇑S	Sg	14 35 23.3	+0.8
	94nm,0.2s,baz=170,slow=27,SNR=13						
AML	Almayashu	1.78	70	⇓iP	Pg	14 35 02.1	+0.7
	baz=71						
AML				⇓iS	Sg	14 35 27.0	+2.5
	baz=71						
AML	Almayashu	1.78	70	P	Pg	14 35 02.1	+0.8
	SNR=72						
MRKS	Merke	1.79	47	P	Pg	14 35 03.1	+1.5
	35nm,0.2s						
MRKS				S	Sg	14 35 27.6	+2.7
	308nm,0.4s						
MRKS	Merke	1.79	47	eP	Pg	14 35 03.1	+1.5
	38nm,0.2s						
MRKS				eS	Sg	14 35 27.6	+2.7
	308nm,0.3s						
BRLS	Borolday	1.92	322	P	Pb	14 35 01.7	-0.9
	32nm,0.2s						
BRLS				S	Sn	14 35 25.4	+0.6
	212nm,0.3s						
BRLS	Borolday	1.92	322	eP	Pb	14 35 01.6	-1.0
	32nm,0.2s						
BRLS				eS	Sn	14 35 25.4	+0.6
	212nm,0.3s						
EKS2	Erkin-Say	2.07	56	⇓iP	Pg	14 35 06.4	-0.5
	baz=57						
EKS2				⇓iS	Sg	14 35 34.6	+1.0
	baz=57						
EKS2	Erkin-Say	2.07	56	P	Pg	14 35 08.1	+1.3
	SNR=26						
DRK	Karamyk	2.07	172	⇓iP	Pg	14 35 06.5	-0.4
	baz=70						
DRK				⇓iS	Sg	14 35 33.8	+0.1
	baz=70						
ARLS	Aral	2.17	80	⇑iP	Pg	14 35 08.0	-1.0
	baz=81						
ARLS				⇑iS	Sg	14 35 37.2	0.0
	baz=81						
UCH	Uchtor	2.39	72	⇑iP	Pb	14 35 11.3	+0.4
	baz=73						
UCH				⇑iS	Sg	14 35 43.0	-1.1
	baz=73						
UCH	Uchtor	2.39	72	P	Pb	14 35 11.5	+0.6
	SNR=51						
AAK	Ala-Archa	2.52	63	Pn	Pg	14 35 14.2	-1.3
	14nm,0.3s,baz=242,slow=5.1,SNR=21						
AAK				Sn	Sg	14 35 50.0	+1.8
	18nm,0.3s,baz=118,slow=18,SNR=12						
AAK	Ala-Archa	2.52	63	Pn	Pg	14 35 15.5	-0.1
	20nm,0.5s						
AAK				⇑Sn	Sg	14 35 49.7	+1.5
	73nm,0.5s						
AAK	Ala-Archa	2.52	63	⇓iP	Pb	14 35 12.9	0.0
	baz=64						
AAK				⇓iS	Sb	14 35 45.6	+1.4
	baz=64						
AAK	Ala-Archa	2.52	63	P	Pb	14 35 13.7	+0.8
	SNR=24						
FRU1	Bishkek	2.69	61	⇓iP	Pb	14 35 14.8	-0.9
	baz=61						
FRU1				⇓iS	Sb	14 35 49.3	+0.4
	baz=61						
KBK	Karagaybulak	2.83	66	⇓iP	Pb	14 35 17.2	-1.1
	baz=66						
KBK				⇓iS	Sb	14 35 53.3	0.0
	baz=66						
KBK	Karagaybulak	2.83	66	P	Pb	14 35 18.6	+0.3
	SNR=11						
USP	Ospenovka	2.85	51	⇓iP	Pb	14 35 16.9	-1.5
	baz=53						
USP				⇓iS	Sb	14 35 52.8	-0.7
	baz=53						
USP	Ospenovka	2.85	51	P	Pg	14 35 20.3	-1.4
	SNR=15						
CHMS	Chumysh	2.85	58	⇑iP	Pb	14 35 17.1	-1.5
	baz=59						
CHMS				⇑iS	Sb	14 35 53.2	-0.5
	baz=59						
CHMS	Chumysh	2.85	58	P	Pb	14 35 17.8	-0.8
	SNR=6.1						
KZA	Kyzart	2.89	78	⇑iP	Pb	14 35 18.3	-1.1
	baz=78						
KZA				⇑iS	Sb	14 35 55.2	0.0
	baz=78						
KZA	Kyzart	2.89	78	P	Pb	14 35 19.1	-0.4
	SNR=16						
TKM2	Tokmak 2	3.38	64	⇓Pg	Pg	14 35 32.2	+0.3
	7.7nm,0.3s						
TKM2				⇓Sn	Sg	14 36 14.3	-1.4
	84nm,0.6s						
TKM2	Tokmak 2	3.38	64	⇓iP	Pb	14 35 24.7	-2.9
	baz=65						
TKM2				⇓iS	Sb	14 36 06.5	-2.4
	baz=65						
TKM2	Tokmak 2	3.38	64	P	Pg	14 35 32.4	+0.5
	SNR=12						
BOOM	Boomskoye usch	3.48	73	⇑iP	Pb	14 35 26.0	-3.3
	baz=73						
DGS	Degeres	3.63	60	Pg	Pg	14 35 35.4	-1.4
	20nm,0.4s						
DGS				Lg	Lg	14 36 22.0	
	82nm,0.6s						
DGS	Degeres	3.63	60	eP	Pg	14 35 35.4	-1.4
	20nm,0.4s						
DGS				eS	Sg	14 36 22.0	-1.8
	82nm,0.6s						
ULHL	Ulahol	3.65	77	⇓iP	Pb	14 35 28.9	-3.3
	baz=78						
ULHL				⇓iS	Sb	14 36 13.2	-3.5
	baz=78						
KST	Kastek	3.67	64	Pg	Pg	14 35 37.5	0.0
	14nm,0.6s						
KST				Lg	Lg	14 36 25.6	
	91nm,0.5s						
KST	Kastek	3.67	64	eP	Pg	14 35 37.5	0.0
	14nm,0.6s						
KST				eS	Sg	14 36 25.6	+0.4
	91nm,0.5s						
BTLS	Baital	3.98	28	Pg	Pg	14 35 43.7	+0.1
	32nm,0.8s						
BTLS				Lg	Lg	14 36 36.5	
	93nm,0.4s						
BTLS	Baital	3.98	28	eP	Pg	14 35 42.5	-1.1
	36nm,0.5s						
BTLS				eS	Sg	14 36 34.7	-0.5
	93nm,0.4s						
IZV	Izvestkoviy	4.11	67	Pg	Pg	14 35 45.9	-0.2
IZV				Lg	Lg	14 36 39.9	
IZV	Izvestkoviy	4.11	67	eP	Pg	14 35 45.9	-0.2
	27nm,0.5s						
IZV				eS	Sg	14 36 39.5	+0.1
	51nm,0.5s						
KUU	Kurty	4.30	55	Pg	Pg	14 35 49.4	-0.3
	9.0nm,0.6s						
KUU				Lg	Lg	14 36 46.0	
	48nm,0.4s						
KUU	Kurty	4.30	55	eP	Pg	14 35 48.6	-1.1
	9.0nm,0.6s						
KUU				eS	Sg	14 36 43.9	-1.6
	48nm,0.4s						
KDJ	Kajisay	4.32	80	⇑iP	Pn	14 35 37.8	+4.2
	baz=81						
KDJ				⇑iS	Sn	14 36 29.0	+4.7
	baz=81						
TNSS	Tian-Shan	4.34	68	Pg	Pg	14 35 51.6	+1.1
	15nm,0.4s						
TNSS				Lg	Lg	14 36 50.2	
	23nm,0.7s						
TNSS	Tian-Shan	4.34	68	eP	Pg	14 35 49.0	-1.5
	15nm,0.4s						
TNSS				eS	Sg	14 36 47.2	+0.4
	23nm,0.7s						
KTBS	Karatobe	4.43	59	Pg	Pg	14 35 51.2	-0.9
	9.2nm,0.7s						
KTBS				Lg	Lg	14 36 49.3	
	78nm,0.5s						
KTBS	Karatobe	4.43	59	eP	Pg	14 35 52.5	+0.4
	12nm,0.3s						
KTBS				eS	Sg	14 36 50.3	+0.8
	78nm,0.5s						
CHKK	Chushkaly	4.69	59	Pg	Pg	14 35 55.5	-1.7
	3.4nm,0.6s						
CHKK				Lg	Lg	14 36 58.6	
	36nm,0.4s						
CHKK	Chushkaly	4.69	59	eP	Pg	14 35 55.5	-1.7
	4.2nm,0.4s						
CHKK				eS	Sg	14 36 56.8	-1.2
	36nm,0.3s						
KURS	Kuram	5.34	66	Pg	Pg	14 36 08.6	-0.8
	3.7nm,0.7s						
KURS				Lg	Lg	14 37 18.8	
	10nm,0.9s						
KURS	Kuram	5.34	66	eP	Pg	14 36 08.6	-0.8
	3.7nm,0.7s						
KURS				eS	Sg	14 37 18.8	+0.3
	10nm,0.9s						
SATY	Saty	5.38	71	Pg	Pg	14 36 07.7	-2.6
	14nm,0.8s						
SATY				Lg	Lg	14 37 17.9	
	30nm,0.4s						
SATY	Saty	5.38	71	eP	Pg	14 36 07.7	-2.6
	14nm,0.8s						
SATY				eS	Sg	14 37 17.9	-2.1
	30nm,0.4s						
ARXS	Arharly	5.40	58	Pg	Pg	14 36 07.9	-2.7
	5.6nm,0.5s						
ARXS				Lg	Lg	14 37 17.7	
	32nm,0.7s						
ARXS	Arharly	5.40	58	eP	Pg	14 36 07.8	-2.7
	5.6nm,0.5s						
ARXS				eS	Sg	14 37 17.7	-2.8
	32nm,0.7s						
KPKS	Kokpek	5.69	68	eP	Pg	14 36 13.8	-2.3
	11nm,0.4s						
KPKS				eS	Sg	14 37 27.6	-2.1
	32nm,0.4s						
UZB	Uzynbulak	5.84	71	Pg	Pg	14 36 17.3	-1.7
	3.2nm,0.3s						
UZB				Lg	Lg	14 37 32.6	
	16nm,0.6s						
UZB	Uzynbulak	5.84	71	eP	Pg	14 36 17.3	-1.7
	3.2nm,0.3s						
UZB				eS	Sg	14 37 32.6	-2.0
	16nm,0.6s						
PDGK	Podgornoye	6.21	71	Pg	Pg	14 36 23.5	-2.7
	1.3nm,0.5s						
PDGK				Lg	Lg	14 37 43.8	
	6.1nm,0.7s						
DJR	Jarkent	6.73	63	Pg	Pg	14 36 33.4	-2.7
	2.5nm,0.5s						
DJR				Lg	Lg	14 38 01.5	
	8.9nm,0.7s						
DJR	Jarkent	6.73	63	eP	Pg	14 36 33.4	-2.7
	2.5nm,0.5s						
DJR				eS	Sg	14 38 01.5	-1.7
	8.9nm,0.7s						
OTUK	Ortayu	6.74	5	⇓Lg	Lg	14 38 01.3	
	11nm,0.6s						
MK31	Makanchi Array	9.39	52	Pn	Pn	14 36 53.5	+10
	0.4nm,0.5s,baz=233,slow=13,SNR=11						
MKAR	Makanchi Array	9.39	52	Pn	Pn	14 36 47.2	+4.2
	0.1nm,0.3s,baz=242,slow=14,SNR=4.6						
MKAR				Lg	Lg	14 39 29.2	
	0.3nm,0.3s,baz=244,slow=32,SNR=3.7						
KURBB	Kurchatov Arra	10.33	26	Pn	Pn	14 36 58.6	+2.8
	0.0nm,0.3s,baz=221,slow=13,SNR=3.0						
KURBB				Sn	Sn	14 38 50.7	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.1nm,0.3s,baz=221,slow=18,SNR=4.9						
KURBB				Lg	Lg	14 39 54.4	
	0.1nm,0.3s,baz=216,slow=29,SNR=4.4						
GEYT	**Alibeck**	**10.88**	**255**	Pn	**Pn**	**14 37 03.3**	**-0.2**
	0.3nm,0.3s,baz=97,slow=12,SNR=4.0						
AB31	**Akbulak array**	**11.18**	**318**	P	**Pn**	**14 37 07.1**	**-0.2**
	0.6nm,0.3s,baz=128,slow=14,SNR=32						
BVAR	**Borovoye Array**	**11.52**	**357**	Pn	**Pn**	**14 37 12.1**	**0.0**
	0.4nm,0.3s,baz=161,slow=14,SNR=7.9						
BVAR				Sn	**Sn**	**14 39 17.8**	**-3.2**
	1.2nm,0.3s,baz=162,slow=20,SNR=9.2						
AKTO	**Aktyubinsk**	**12.89**	**318**	Pn	**Pn**	**14 37 32.4**	**+1.6**
	0.2nm,0.3s,baz=119,slow=13,SNR=5.7						
AKTO	**Aktyubinsk**	**12.89**	**318**	⇑P	**Pn**	**14 37 35.0**	**+4.2**
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**15.30**	**31**	Pn	**P**	**14 38 06.6**	**-1.8**
	0.2nm,0.3s,baz=216,slow=15,SNR=3.6						

KRNET 06 14:35:12.3±0.1, 41°.55N×71°.42E, h8^{km}, mb4.0, 27C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.19**	**100**	⇑*i*P	Pg	14 35 34.9	-0.4
	baz=0.0						
ARSB				⇑*i*S	Sg	14 35 50.5	-0.3
	baz=0.0						
BTK	**Batken**	**1.56**	**197**	⇑*i*P	Pb	14 35 41.3	-0.1
	baz=97						
BTK				⇑*i*S	Sg	14 36 02.6	+0.2
	baz=97						
TAS	**Tashkent**	**1.62**	**263**	⇓*e*P	Pb	14 35 42.2	-0.3
	baz=63						
TAS				⇓*e*S	Sg	14 36 03.8	-0.6
	baz=63						
AML	**Almayashu**	**1.80**	**70**	⇑*i*P	Pb	14 35 45.5	-0.2
	baz=70						
AML				⇑*i*S	Sg	14 36 10.1	0.0
	baz=70						
EKS2	**Erkin-Say**	**2.08**	**57**	⇑*i*P	Pb	14 35 50.0	-0.4
	baz=57						
EKS2				⇑*i*S	Sb	14 36 17.2	+0.8
	baz=57						
ARLS	**Aral**	**2.19**	**81**	⇑*i*P	Pb	14 35 52.0	-0.4
	baz=81						
ARLS				⇑*i*S	Sb	14 36 20.0	+0.2
	baz=81						
UCH	**Uchtor**	**2.41**	**73**	⇑*i*P	Pb	14 35 54.6	-1.6
	baz=73						
UCH				⇑*i*S	Sb	14 36 25.7	-0.5
	baz=73						
AAK	**Ala-Archa**	**2.53**	**63**	⇑*i*P	Pb	14 35 56.4	-1.8
	baz=64						
AAK				⇑*i*S	Sb	14 36 28.2	-1.3
	baz=64						
FRU1	**Bishkek**	**2.70**	**61**	⇑*i*P	Pn	14 35 58.4	+2.3
	baz=61						
FRU1				⇑*i*S	Sb	14 36 32.1	-2.1
	baz=61						
KBK	**Karagaybulak**	**2.85**	**66**	⇑*i*P	Pn	14 36 00.5	+2.2
	baz=66						
KBK				⇑*i*S	Sb	14 36 35.8	-2.8
	baz=66						
USP	**Ospenovka**	**2.85**	**52**	⇑*i*P	Pn	14 36 00.6	+2.4
	baz=52						
USP				⇑*i*S	Sb	14 36 36.0	-2.7
	baz=52						
CHMS	**Chumysh**	**2.87**	**58**	⇑*i*P	Pn	14 36 00.9	+2.5
	baz=58						
CHMS				⇑*i*S	Sb	14 36 36.3	-2.7
	baz=58						
KZA	**Kyzart**	**2.91**	**78**	⇓*i*P	Pn	14 36 01.9	+2.6
	baz=78						
KZA				⇓*i*S	Sb	14 36 38.1	-2.5
	baz=78						
BOOM	**Boomskoye usch**	**3.50**	**73**	⇑*i*P	Pn	14 36 09.3	+2.1
	baz=73						
BOOM				⇑*i*S	Sn	14 36 51.1	+2.3
	baz=73						
BOOM	**Boomskoye usch**	**3.50**	**73**	⇑*i*S	Pn	14 36 08.9	+1.7
	baz=73						
KDJ	**Kajisay**	**4.34**	**80**	⇑*e*P	Pn	14 36 21.7	+2.9
	baz=80						
KDJ				⇑*i*S	Sn	14 37 12.0	+2.3
	baz=80						

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*PRE **06** 14:43:56.0±1.1, 27°.00S×26°.78E, h2^{km}, ML2.9*
*EAF **06** 14:43:58.3±1.1, 27°.07S×26°.99E, h10^{km}±12^{km}, MD3.9*

ISC 06 14:43:57.2±1.3, 26°.97S±0°.04×26°.78E±0°.04, h16^{km}±10^{km}, n29, σ1^s.76/55, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.52**	**86**	*e*P	**Pg**	**14 44 06.9**	**-0.7**
PRYS				*e*S	**Sg**	**14 44 13.1**	**-1.5**
PRYS				AML	AML	14 44 19.7	
	comp=Z,840nm,0.6s						
WDLM	**Western Deep L**	**0.79**	**47**	*e*P	**Pb**	**14 44 12.3**	**-0.4**
WDLM				*e*S	**Sb**	**14 44 23.6**	**+0.3**
WDLM				AML	AML	14 44 29.8	
	comp=Z,716nm,0.2s						
KLOF	**Kloof**	**0.96**	**51**	*e*P	**Pb**	**14 44 15.3**	**-0.4**
KLOF				*e*S	**Sb**	**14 44 27.7**	**-0.6**
KLOF				AML	AML	14 44 33.1	
	comp=Z,1μm,0.1s						
KSR	**Koster**	**1.12**	**5**	*e*P	**Pb**	**14 44 18.2**	**-0.1**
KSR				*e*S	**Sn**	**14 44 33.5**	**-0.1**
KSR				AML	AML	14 44 37.0	
	comp=Z,227nm,0.3s						
SWZ	**Schweizer**	**1.31**	**260**	*e*P	**Pn**	**14 44 20.9**	**-0.1**
SWZ				*e*S	**Sn**	**14 44 38.8**	**+0.5**
SWZ				AML	AML	14 44 43.1	
	comp=Z,469nm,0.4s						
ERPM	**east rand prop**	**1.45**	**65**	*e*P	**Pb**	**14 44 24.5**	**+0.6**
ERPM				*e*S	**Sg**	**14 44 45.3**	**+1.3**
ERPM				AML	AML	14 45 00.8	
	comp=Z,51nm,0.2s						
BOSA	**Boshof**	**2.12**	**219**	*i* P	**Pb**	**14 44 34.7**	**-0.8**
BOSA				*i* S	**Sn**	**14 45 00.1**	**+1.7**
BOSA	**Boshof**	**2.12**	**219**	*e*P	**Pn**	**14 44 33.3**	**+1.0**
BOSA				*e*S	**Sn**	**14 44 59.7**	**+1.3**
BOSA				AML	AML	14 45 14.1	
	comp=Z,55nm,0.4s						
BOSA	**Boshof**	**2.12**	**219**	*i* P	**Pb**	**14 44 34.7**	**-0.8**
BOSA				*i* S	**Sn**	**14 45 00.1**	**+1.7**
BOSA	**Boshof**	**2.12**	**219**	*i* P	**Pb**	**14 44 34.7**	**-0.8**
BOSA				*i* S	**Sn**	**14 45 00.1**	**+1.7**
LBTB	**Lobatse**	**2.22**	**331**	*e*P	**Pn**	**14 44 34.8**	**+1.3**
LBTB				*e*S	**Sb**	**14 45 03.4**	**-0.9**
LBTB				AML	AML	14 45 06.4	
	comp=Z,281nm,0.5s						
UPI	**Upington**	**5.09**	**253**	*e*P	**Pn**	**14 45 14.9**	**+1.8**
UPI				*e*S	**Sn**	**14 46 10.5**	**-1.1**
UPI				AML	AML	14 46 39.8	
	comp=Z,29nm,0.5s						
KEIM	**Keimoes**	**5.43**	**250**	*e*P	**Pn**	**14 45 18.5**	**+0.9**
KEIM				*e*S	**Sn**	**14 46 19.1**	**-0.8**
KEIM				AML	AML	14 46 49.1	
	comp=Z,26nm,0.4s						
MSNA	**Messina**	**5.47**	**33**	*i* P	**Pn**	**14 45 19.1**	**+1.0**
MSNA				*i* S	**Sn**	**14 46 18.8**	**-1.9**
MSNA	**Messina**	**5.47**	**33**	*i* P	**Pn**	**14 45 19.1**	**+1.0**
MSNA				*i* S	**Sn**	**14 46 18.8**	**-1.9**
MSNA	**Messina**	**5.47**	**33**	*i* P	**Pn**	**14 45 19.1**	**+1.0**
MSNA				*i* S	**Sn**	**14 46 18.8**	**-1.9**
SOE	**Somerset East**	**5.82**	**190**	*e*P	**Pn**	**14 45 23.9**	**+0.9**
SOE				*e*S	**Sn**	**14 46 27.7**	**-1.8**
SOE				AML	AML	14 46 56.9	
	comp=Z,10nm,0.4s						
MATP	**Matopo**	**6.70**	**14**	*i* P	**Pn**	**14 45 35.8**	**+0.7**
MATP				*i* S	**Sn**	**14 46 48.5**	**-2.8**
MATP	**Matopo**	**6.70**	**14**	*i* P	**Pn**	**14 45 35.8**	**+0.7**
MATP				*i* S	**Sn**	**14 46 48.5**	**-2.8**
MATP	**Matopo**	**6.70**	**14**	*i* P	**Pn**	**14 45 35.8**	**+0.7**
MATP				*i* S	**Sn**	**14 46 48.5**	**-2.8**
BLWY	**Bulawayo**	**7.00**	**14**	*i* P	**Pn**	**14 45 40.4**	**+1.1**
BLWY				*i* S	**Sn**	**14 46 54.9**	**-3.8**
BLWY	**Bulawayo**	**7.00**	**14**	*i* P	**Pn**	**14 45 40.4**	**+1.1**
BLWY				*i* S	**Sn**	**14 46 54.9**	**-3.8**
BLWY	**Bulawayo**	**7.00**	**14**	*i* P	**Pn**	**14 45 40.4**	**+1.1**
BLWY				*i* S	**Sn**	**14 46 54.9**	**-3.8**
BUFB	**Buffelsbos**	**7.37**	**193**	*e*P	**Pn**	**14 45 44.5**	**+0.3**
BUFB				*e*S	**Sn**	**14 47 04.5**	**-3.1**
BUFB				AML	AML	14 47 08.6	
	comp=Z,5.1nm,0.4s						
CVNA	**Calvinia**	**7.61**	**232**	*e*P	**Pn**	**14 45 48.7**	**+1.1**
CVNA				*e*S	**Sn**	**14 47 10.3**	**-3.1**
CVNA				AML	AML	14 47 58.2	
	comp=Z,24nm,0.5s						
KOMG	**Komaggas**	**8.66**	**249**	*e*P	**Pn**	**14 46 02.5**	**+0.5**
KOMG				*e*S	**Sn**	**14 47 36.2**	**-3.1**
KOMG				AML	AML	14 48 07.3	
	comp=Z,3.7nm,0.4s						
TSUM	**Tsumeb**	**11.46**	**311**	*i* P	**Pn**	**14 46 42.3**	**+1.9**
TSUM				*i* S	Sn	14 48 41.3	-6.9
TSUM	**Tsumeb**	**11.46**	**311**	*i* P	**Pn**	**14 46 42.3**	**+1.9**
TSUM				*i* S	Sn	14 48 41.3	-6.9
TSUM	**Tsumeb**	**11.46**	**311**	*i* P	**Pn**	**14 46 42.3**	**+1.9**
TSUM				*i* S	Sn	14 48 41.3	-6.9

MEX 06 14:47:01.7±0.5, 15°.44N×95°.22W, h16^{km}±8^{km}, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.91**	**291**	*e*P	Pb	14 47 16.2	-3.0
HUIG				*e*S	Sb	14 47 26.9	-4.2
CMIG	**Matias Romero**	**1.67**	**11**	*e*P	Pn	14 47 26.6	-3.8
CMIG				*e*S	Sn	14 47 46.5	-5.0
PCIG		**1.95**	**82**	*e*P	Pn	14 47 30.6	-3.5
PCIG				*i* S	Sn	14 47 52.8	-5.5
VHO	**Vista Hermosa**	**2.17**	**318**	*i* P	Pn	14 47 33.5	-3.9
VHO				*i* S	Sn	14 48 00.1	-4.1
TGIG		**2.42**	**56**	*e*P	Pn	14 47 38.1	-2.5
TGIG				*e*S	Sn	14 48 05.9	-4.1

IDC 06 14:50:02.4±66.0, 27°.99N×140°.11E, h480^{km}±350^{km}, mb3.0/4, mb1 3.0/5, mb1mx2.6/35, mbtmp3.8/5, Error ellipse: s-maj=881.5km s-min=77.7km az=166.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**8.68**	**350**	P	P	14 52 05.3	-0.1
	0.0nm,0.3s,baz=172,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**48.48**	**309**	P	P	14 58 00.4	0.0
	0.3nm,0.4s,baz=93,slow=8.5,SNR=4.9						
KURBB	**Kurchatov Arra**	**51.10**	**314**	P	P	14 58 19.4	-0.2
	1.0nm,0.5s,baz=91,slow=8.1,SNR=16						
BVAR	**Borovoye Array**	**56.14**	**317**	P	P	14 58 55.3	0.0
	0.6nm,0.4s,baz=96,slow=7.2,SNR=5.0						
FINES	**FINESS Array B**	**76.33**	**333**	P	P	15 01 01.0	0.0
	2.2nm,0.9s,baz=58,slow=4.1,SNR=7.3						

SJA 06 14:54:34.4±0.8, 31°.49S×68°.76W, h20^{km}±19^{km}, ML3.3, MW3.8, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLL	**PUNTA DE LOS L**	**2.20**	**61**	*i* P	Pb	14 55 12.8	-0.8
APLL				IAML		14 55 13.0	
	comp=Z,186nm,0.1s						
APLL				*i* S	Sb	14 55 40.4	-0.1
ACLC	**CERRO LA CRUZ**	**2.58**	**38**	*i* P	Pn	14 55 17.3	+2.1
MRA	**San Martin**	**2.74**	**111**	*i* P	Pb	14 55 20.1	-2.7
VCA	**Vinchina**	**2.78**	**10**	*i* P	Pb	14 55 20.9	-2.7
VCA				IAML		14 55 54.7	
	comp=Z,97nm,0.2s						
VCA				*i* S	Sb	14 55 55.0	-2.3
TCA	**Tanti**	**3.56**	**89**	*i* P	Pn	14 55 31.4	+2.8

MEX 06 15:44:48.7±0.6, 15°.89N×98°.51W, h12^{km}±11^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.66**	**358**	*e*P	Pn	15 45 14.2	-3.6
TLIG				*i* S	Sn	15 45 34.2	-4.9
CAIG	**El Cayaco**	**2.04**	**305**	*e*P	Pn	15 45 19.2	-3.7
CAIG				*i* S	Sn	15 45 44.4	-3.9
VHO	**Vista Hermosa**	**2.07**	**55**	*e*P	Pn	15 45 20.5	-2.9
VHO				*e*S	Sn	15 45 44.8	-4.4

SVSA 06 16:08:09.8±0.9, 37°.32N×24°.74W, h5^{km}, MD3.9, ML2.7, 1C, Error ellipse: s-maj=8.6km s-min=2.1km az=87.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.41**	**220**	⇑*e*P	Pg	16 08 17.2	-0.5
PSMN				*e*S	Sg	16 08 22.7	-0.4
PSMN				A	A	16 08 28.8	
	128nm,0.3s						
PSMA	**Santa Maria**	**0.45**	**224**	*e*P	Pg	16 08 17.6	-0.8
PSMA				*e*S	Sg	16 08 23.5	-0.8
PSMA				A	A	16 08 36.2	
	117nm,0.4s						
BART	**Pico Bartolome**	**0.57**	**323**	*e*P	Pg	16 08 18.6	-2.2
BART				*e*S	Sg	16 08 25.9	-2.3
BART				A	A	16 08 37.8	
	178nm,0.6s						
PCALD	**Caldeiras da R**	**0.76**	**309**	*e*P	Pg	16 08 22.4	-2.0
PCALD				*e*S	Sg	16 08 31.6	-2.7
PCALD				A	A	16 08 33.2	
	94nm,0.3s						
PDA	**Ponta Delgada**	**0.85**	**300**	*e*P	Pg	16 08 23.2	-2.9
PDA				*e*S	Sg	16 08 33.3	-3.8
PDA				A	A	16 08 34.8	
	79nm,0.1s						
PSET	**Sete Cidades**	**0.93**	**303**	*e*P	Pg	16 08 24.6	-3.0
PSET				*e*S	Sg	16 08 36.1	-3.5
PSET				A	A	16 08 41.8	
	110nm,0.4s						
PSCM	**Serra do Cume**	**2.33**	**307**	*e*P	Pn	16 08 44.2	-4.6
PSCM				*e*S	Sn	16 09 10.0	-7.8
PSCM				A	A	16 09 14.3	
	34nm,0.2s						

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*ISCJB **06** 16:34:04.2±0.4, 9°.75S±0°.05×124°.23E±0°.04, h85^{km}±3^{km}, mb4.4/23, Error ellipse: s-maj=9.1km s-min=4.1km az=37.5*
*NEIC **06** 16:34:05.1±2.7, 9°.71S×124°.23E, h79^{km}±7^{km}, mb4.2/18, Error ellipse: s-maj=14.0km s-min=1.9km az=204.0*
*IDC **06** 16:34:05.6±2.1, 9°.86S×124°.28E, h84^{km}±27^{km}, mb3.9/4, mb1 4.3/8, mb1mx3.8/35, mbtmp4.5/8, MS2.6/2, Ms1 2.8/2, ms1mx2.4/31, Error ellipse: s-maj=61.0km s-min=23.2km az=43.0*
*DJA **06** 16:34:06.1±0.4, 10°S±3°×12°4E±°, h70^{km}±5^{km}, M4.9/13, mb5.1/6, mB5.7/5, MLv4.7/13, Mw(mB)5.2/5*

ISC 06 16:34:05.3±0.7, 9°.72S±0°.06×124°.23E±0°.05, h80^{km}±6^{km}, n66, σ1^s.42/73, mb4.4/23, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.05**	**131**	*e*Pn	**Pn**	**16 34 16.0**	**-0.9**
SOEI	**Soe**	**0.05**	**131**	P	**Pn**	**16 34 16.4**	**-0.5**
SOEI				S	**Sn**	**16 34 24.6**	**-0.9**
BATI	**Baumata**	**0.74**	**229**	P	**Pn**	**16 34 22.8**	**+1.3**
	150nm,0.3s,baz=62,slow=1.8,SNR=192						
BATI				LR	LR	16 34 27.4	
	comp=Z,82nm,20.2s,baz=334,slow=31						
BATI				S	**Sn**	**16 34 34.8**	**+1.4**
	436nm,0.3s,baz=221,slow=20,SNR=95						
BATI	**Baumata**	**0.74**	**229**	P	**Pn**	**16 34 22.6**	**+1.2**
BATI				S	**Sn**	**16 34 35.5**	**+2.1**
MMRI	**Maumere**	**2.24**	**299**	*e*Pn	**Pn**	**16 34 41.1**	**+0.6**
MMRI				*e*Sn	**Sn**	**16 35 07.8**	**+0.5**
MMRI	**Maumere**	**2.24**	**299**	P	**Pn**	**16 34 41.1**	**+0.6**
MMRI				S	**Sn**	**16 35 06.1**	**-1.2**
EDFI	**Ende, Flores**	**2.68**	**291**	P	**Pn**	**16 34 46.7**	**+0.2**
EDFI				S	**Sn**	**16 35 16.2**	**-2.0**
WSI	**Waingapu**	**3.88**	**270**	P	**Pn**	**16 35 02.9**	**+0.3**
WSI				S	**Sn**	**16 35 46.6**	**-0.3**
WBSI	**Waikabubak, Su**	**4.77**	**271**	P	**Pn**	**16 35 14.7**	**-0.1**
WBSI				S	**Sn**	**16 36 04.2**	**-4.7**
BSSI	**Bau Bau, Buton**	**5.13**	**314**	P	**Pn**	**16 35 21.1**	**+1.4**
BKSI	**Bulukumba**	**5.97**	**317**	P	**Pn**	**16 35 32.6**	**+1.4**
	22nm,0.6s,0.1nm						
PLAI	**Plampang**	**6.43**	**277**	P	**Pn**	**16 35 37.8**	**+0.4**
	240nm,0.5s,4μm1.1nm						
KAPI	**Kappang**	**6.45**	**316**	P	**Pn**	**16 35 40.3**	**+2.6**
	2.0nm,0.3s,baz=137,slow=11,SNR=6.3						
KAPI				LR	LR	16 38 42.2	
	comp=Z,51nm,19.4s,baz=288,slow=42						
KAPI	**Kappang**	**6.45**	**316**	*e*Pn	**Pn**	**16 35 36.2**	**-1.5**
MTN	**Manton Dam**	**7.45**	**115**	*e*Pn	**Pn**	**16 35 52.7**	**+1.4**
MTN				*e*Sn	**Sn**	**16 37 14.3**	**0.0**
JAGI	**Jajag, Banyuwa**	**10.03**	**276**	*e*Pn	**Pn**	**16 36 23.1**	**-3.5**
PSA00	**Pilbara Seismi**	**12.51**	**199**	*e*Pn	**Pn**	**16 37 00.9**	**+0.6**
UGM	**Wanagama**	**13.66**	**276**	*e*Pn	**Pn**	**16 37 13.7**	**-2.0**
WRA	**Warramunga Arr**	**14.09**	**137**	P	**Pn**	**16 37 19.0**	**-2.2**
	5.4nm,0.3s,baz=318,slow=13,SNR=80						
WRA				S	Sn	16 39 45.9	-10
	10.0nm,0.3s,baz=307,slow=24,SNR=16						
WR1	**Warramunga Arr**	**14.09**	**137**	*e*Pn	**Pn**	**16 37 19.0**	**-2.2**
WRAB	**Tennant Creek**	**14.09**	**137**	*e*Pn	**Pn**	**16 37 19.4**	**-1.9**
WB2	**Warramunga Arr**	**14.10**	**137**	*e*Pn	**Pn**	**16 37 19.4**	**-2.0**
CISI	**Cisompet, Garu**	**16.37**	**276**	*e*Pn	**Pn**	**16 37 47.7**	**-2.7**
	58nm,0.9s						
AS31	**Alice Springs**	**16.67**	**147**	*e*Pn	**Pn**	**16 37 53.8**	**-0.2**
	8.4nm,0.4s						
AS31				*e*Sn	**Sn**	**16 40 56.2**	**-2.5**
ASAR	**Alice Springs**	**16.67**	**147**	P	**Pn**	**16 37 53.5**	**-0.4**
	3.6nm,0.3s,baz=320,slow=11,SNR=279						
ASAR				S	Sn	16 40 47.8	-11
	1.7nm,0.3s,baz=326,slow=24,SNR=16						
LEM	**Lembang**	**16.69**	**279**	P	**P**	**16 37 56.5**	**+1.1**
	4.0nm,0.3s,baz=338,slow=21,SNR=6.7						
COEN	**Coen**	**19.01**	**105**	*e*Pn	**Pn**	**16 38 22.6**	**+0.1**
	7.7nm,0.9s						
MORW	**Morawa**	**20.72**	**201**	*e*P	**P**	**16 38 38.3**	**-1.0**
	8.4nm,1.0s						
FORT	**Forrest**	**21.25**	**171**	*e*P	**P**	**16 38 44.9**	**-0.1**
	33nm,1.0s						
CTAO	**Charters Tower**	**23.62**	**118**	*e*P	**P**	**16 39 10.7**	**+1.3**
	14nm,0.9s						
BBOO	**Buckleboo**	**25.44**	**156**	*e*P	**P**	**16 39 26.5**	**+0.7**
	6.3nm,1.0s						
DLV	**T Lat**	**26.61**	**324**	*e*P	**P**	**16 39 38.7**	**+2.1**
	5.7nm,0.8s						
STKA	**Stephens Creek**	**27.30**	**146**	*e*P	**P**	**16 39 43.1**	**+0.7**
	1.1nm,0.8s						
GSI	**Gunungsitoli**	**28.71**	**291**	*e*P	**P**	**16 39 53.5**	**-1.7**
	6.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**37.51**	**318**	P	**P**	**16 41 12.9**	**+1.3**
	3.8nm,0.7s,baz=144,slow=6.8,SNR=38						
CMAR				LR	LR	17 00 18.9	
	comp=Z,9.2nm,18.3s,baz=145,slow=42						
PAYA	**Payao**	**37.57**	**320**	P	**P**	**16 41 13.7**	**+1.5**
	23μm,0.6s						
CMMT	**Chiang Mai**	**37.76**	**319**	P	**P**	**16 41 15.2**	**+1.4**
	4.4nm,0.7s						
CHTO	**Chiang Mai**	**37.76**	**319**	*e*P	**P**	**16 41 14.0**	**+0.2**
WHN	**Wuhan**	**41.14**	**347**	P	P	16 41 48.3	+6.6
HHC	**Hu-ho-hao-te**	**51.66**	**348**	P	P	16 43 09.2	+5.1
HHC				PP	sP	16 43 34.6	+1.6
HHC				S	S	16 50 31.8	+12
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=N,370nm,15.5s						
HHC				LR	LR		
	comp=E,140nm,14.9s						
HHC				LR	LR		
	comp=Z,420nm,14.3s						
JIRN	**Jiri**	**52.32**	**316**	*e*P	**P**	**16 43 10.8**	**+1.2**
	comp=Z,43nm,0.6s						
GUN	**Gumba**	**52.69**	**316**	*e*P	**P**	**16 43 13.8**	**+1.5**
	comp=Z,56nm,0.7s						
PKI	**Pulchoki**	**52.80**	**316**	*e*P	**P**	**16 43 13.4**	**+0.3**
	comp=Z,21nm,0.4s						
PKIN	**Phulchoki**	**52.81**	**316**	*e*P	**P**	**16 43 13.9**	**+0.8**
	comp=Z,19nm,0.4s						
KKN	**Kakani**	**53.03**	**316**	*e*P	**P**	**16 43 15.4**	**+0.8**
	comp=Z,12nm,0.5s						
DMN	**Daman**	**53.03**	**316**	*e*P	**P**	**16 43 15.5**	**+0.8**
GKN	**Gorkha**	**53.60**	**316**	*e*P	**P**	**16 43 19.8**	**+1.1**
	comp=Z,32nm,0.3s						
GTA	**Gaotai**	**53.89**	**337**	*e*P	**P**	**16 43 22.1**	**+1.5**
GTA				pP	pP	16 43 26.3	-14
GTA				sP	sP	16 43 29.5	-20
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KOLN	**Koldanda**	**54.18**	**315**	*e*P	**P**	**16 43 23.2**	**+0.2**
DANN	**Dangsing**	**54.42**	**315**	*e*P	**P**	**16 43 26.2**	**+1.3**
	comp=Z,49nm,0.5s						
PYUN	**Piuthan**	**54.81**	**315**	*e*P	**P**	**16 43 28.1**	**+0.5**
	comp=Z,15nm,0.4s						
SONA0	**Songino Array**	**59.45**	**346**	*e*P	**P**	**16 44 00.7**	**+0.9**
SONM	**Songino Array**	**59.45**	**346**	P	**P**	**16 44 00.7**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=164,slow=8.1,SNR=6.1						
NIL	**Nilore**	**64.83**	**314**	*e*P	**P**	**16 44 36.1**	**0.0**
	comp=Z,4.1nm,0.6s						
KSH	**Kashi**	**66.33**	**321**	*e*P	P	16 44 51.3	+5.6
KSH				pmax	pmax		
	comp=Z,37nm,2.2s						
MK31	**Makanchi Array**	**67.55**	**330**	*e*P	**P**	**16 44 53.0**	**-0.1**
	comp=Z,1.2nm,0.6s						
MK32	**Makanchi Array**	**67.55**	**330**	*e*P	**P**	**16 44 54.0**	**+0.9**
MKAR	**Makanchi Array**	**67.55**	**330**	P	**P**	**16 44 54.0**	**+0.9**
	comp=Z,2.2nm,0.5s,baz=132,slow=7.3,SNR=42						
MAKZ	**Makanchi**	**67.71**	**330**	*e*P	**P**	**16 44 54.0**	**-0.1**
	comp=Z,1.6nm,0.9s						
VNDA	**Vanda**	**70.51**	**172**	*e*P	**P**	**16 45 11.3**	**+0.3**
	comp=Z,0.5nm,1.0s						
ZAA0	**Zalesovo Array**	**71.64**	**337**	*e*P	**P**	**16 45 16.6**	**-1.5**
	comp=Z,1.8nm,1.0s						
ZALV	**Zalesovo Beam**	**71.64**	**337**	P	**P**	**16 45 18.1**	**0.0**
	comp=Z,1.5nm,0.4s,baz=138,slow=5.1,SNR=6.5						
ZAA1	**Zalesovo Array**	**71.65**	**337**	*e*P	**P**	**16 45 18.1**	**0.0**
YAK	**Yakutsk**	**71.66**	**3**	*e*P	**P**	**16 45 17.5**	**-0.5**
	comp=Z,50nm,0.6s						
KURK	**Kurchatov**	**72.00**	**331**	*e*P	**P**	**16 45 19.9**	**-0.5**
	comp=Z,2.2nm,0.6s						
MA2	**Magadan**	**72.28**	**14**	*e*P	**P**	**16 45 20.8**	**-1.0**
	comp=Z,12nm,1.1s						

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*ISCJB **06** 16:38:41.9±0.7, 42°.44N±0°.03×41°.05E±0°.04, h2^{km}±8^{km}, Error ellipse: s-maj=5.6km s-min=4.5km az=135.1*
*TIF **06** 16:38:43.1, 42°.37N×40°.94E, h43^{km}±2^{km}*
*DDA **06** 16:38:45.9, 42°.25N×41°.23E, h7^{km}±6^{km}, ML2.7*

ISC 06 16:38:44.8±1.6, 42°.36N±0°.03×41°.12E±0°.04, h14^{km}±11^{km}, n18, σ1^s.73/34, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.86**	**150**	P	**Pb**	**16 39 01.6**	**+0.1**
BATM				S	**Sn**	**16 39 15.2**	**+0.3**
BATM	**Batumi**	**0.86**	**150**	*i* P	**Pn**	**16 39 02.3**	**-0.2**
BATM				*i* S	**Sn**	**16 39 15.2**	**+0.3**
BATM	**Batumi**	**0.86**	**150**	*e*Pg	**Pb**	**16 39 01.6**	**+0.1**
BATM				*e*Sg	**Sn**	**16 39 15.2**	**+0.3**
DBOC	**Borcka**	**1.09**	**158**	*i* P	**Pn**	**16 39 05.4**	**-0.2**
DBOC				*i* S	**Sn**	**16 39 20.2**	**-0.3**
DBOC				IAML_P			
	comp=Z,1μm,0.1s						
ARXR	**Arkhyz**	**1.21**	**5**	*e*Pg	**Pn**	**16 39 06.7**	**-0.7**
ARXR				*e*Sg	**Sb**	**16 39 20.8**	**-2.3**
TKB	**Tkibuli**	**1.39**	**90**	P	**Pn**	**16 39 10.1**	**+0.4**
TKB				S	**Sn**	**16 39 28.8**	**+0.9**
DBAD	**Bademkaya**	**1.40**	**162**	*i* P	**Pn**	**16 39 10.0**	**0.0**
DBAD				*i* S	**Sn**	**16 39 28.3**	**-0.1**
DBAD				IAML_P			
	comp=Z,574nm,0.1s						
DAGI	**Agillar**	**1.41**	**155**	*i* P	**Pb**	**16 39 10.4**	**-0.5**
DAGI				*i* S	**Sn**	**16 39 28.5**	**0.0**
DAGI				IAML_P			
	comp=Z,165nm,0.1s						
EPOS	**Posof**	**1.47**	**125**	*i* P	**Pn**	**16 39 11.3**	**+0.3**
EPOS				*i* S	**Sn**	**16 39 31.1**	**+1.1**
NEY	**Neytrino**	**1.48**	**52**	*e*Pg	**Pn**	**16 39 10.8**	**-0.3**
NEY				*e*Sg	**Sn**	**16 39 29.7**	**-0.6**
SOC	**Sochi**	**1.60**	**320**	*e*Pg	Pn	16 39 11.2	-1.4
SOC				*e*Sg	**Sn**	**16 39 31.3**	**-1.8**
ONI	**Oni**	**1.74**	**81**	P	**Pg**	**16 39 17.9**	**-0.3**
ONI				S	**Sg**	**16 39 40.9**	**+0.1**
ONI	**Oni**	**1.74**	**81**	*e*Pg	**Pg**	**16 39 17.9**	**-0.3**
ONI				*e*Sg	**Sg**	**16 39 40.9**	**+0.1**
SHA1	**Shidzhatmaz**	**1.78**	**39**	*i* Pg	**Pn**	**16 39 17.4**	**+2.1**
SHA1				*e*Sg	**Sn**	**16 39 39.0**	**+1.2**
LZRR	**Lazarevskoye**	**2.03**	**322**	*e*Pg	**Pn**	**16 39 20.4**	**+1.9**
LZRR				*e*Sg	**Sn**	**16 39 45.5**	**+1.9**
ZEI	**Tsey**	**2.10**	**77**	*e*Pg	**Pn**	**16 39 21.5**	**+1.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZEI				eSg	Sn	16 39 48.1	+2.4
LACR	Lac	2.39	78	ePn	Pb	16 39 28.3	+0.7
LACR				i Sn	Sb	16 39 57.7	+0.7
ARNR	Ardon	2.47	69	ePn	Pn	16 39 15.8	-8.8
ARNR				i Sn	Sn	16 39 47.2	-7.3

ISCJB ***06*** *16:43:08.5±0.2, 67°.61N±0°.02×142°.21E±0°.06, h10^{km}, mb4.5/90, MS3.5/17, Error ellipse: s-maj=3.2km s-min=2.7km az=160.7*

IDC ***06*** *16:43:08.3±0.4, 67°.59N×142°.37E, h0^{km}, mb4.2/24, mb1 4.4/28, mb1mx4.3/47, mbtmp4.2/28, ML4.1/3, MS3.2/15, Ms1 3.2/15, ms1mx3.1/42, Error ellipse: s-maj=11.4km s-min=10.6km az=56.0*

MOS ***06*** *16:43:08.1±0.9, 67°.65N×142°.30E, h9^{km}, mb4.7/29, MS3.5/5, Error ellipse: s-maj=13.4km s-min=5.8km az=90.7*

YARS ***06*** *16:43:09.5, 67°.61N×142°.44E, h8^{km}*

NEIC ***06*** *16:43:10.1±1.4, 67°.59N×142°.18E, h10^{km}, mb4.4/33, Error ellipse: s-maj=14.4km s-min=11.7km az=123.0*

ISC 06 16:43:10.5±0.3, **67°.58N**±0°.02×**142°.17E**±0°.03, **h10^{km}, n179, σ1^{s}83**/216, **mb4.4**/94, **MS3.4**/17, **12C-6D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.19	159	i Pg	Pb	16 43 31.2	-1.9
	751nm,0.3s						
MOMR				eSg	Sb	16 43 46.7	-1.9
	19µm,0.7s						
MOMR				eSg	Sb	16 43 46.7	-1.9
	6µm,0.3s						
YBGR	Belaya Gora	1.79	56	i Pg	Pn	16 43 39.7	-1.6
	9µm,0.2s						
YBGR				eSg	Sn	16 44 02.2	-1.8
	8µm,0.2s						
DEPR	Deputatskiy	2.00	336	i Pn	Pn	16 43 44.3	0.0
DEPR				i Pg	Pb	16 43 46.0	-0.9
	231nm,0.2s						
DEPR				eSn	Sn	16 44 10.2	+0.8
DEPR				eSg	Sb	16 44 12.9	+1.1
	37µm,0.8s						
BTGS	Batagay	2.88	275	i Pn	Pn	16 43 57.4	+1.0
BTGS				i Pg	Pb	16 44 03.3	+1.3
	251nm,0.2s						
BTGS				i Sn	Sn	16 44 34.4	+3.4
BTGS				eSg	Sg	16 44 42.8	-0.2
	5µm,0.8s						
BTGS				eSg	Sg	16 44 42.8	-0.2
	8µm,1.3s						
UNR	Ust'-Nera	3.06	171	ePg	Pb	16 44 05.3	+0.4
	452nm,1.0s						
UNR				eSn	Sn	16 44 35.9	+0.5
UNR				eSg	Sg	16 44 45.5	-3.0
	528nm,0.4s						
UNR				eSg	Sg	16 44 45.5	-3.0
	1µm,0.4s						
ATKR	Artyk	3.63	159	ePn	Pn	16 44 06.5	-0.1
ATKR				ePg	Pb	16 44 14.7	0.0
	452nm,0.6s						
ATKR				eSn	Sn	16 44 49.7	+0.2
ATKR				eSg	Sb	16 45 02.3	+3.7
	7µm,0.7s						
ATKR				eSg	Sb	16 45 02.3	+3.7
	4µm,0.8s						
TIXI	Tiksi	6.18	317	Pn	Pn	16 44 42.5	+0.9
	31nm,0.3s,baz=127,slow=17,SNR=400						
TIXI				Sn	Sn	16 45 47.9	-4.2
	23nm,0.3s,baz=140,slow=16,SNR=4.0						
TIXI				Lg	Lg	16 46 19.2	
	48nm,0.3s,baz=64,slow=16,SNR=6.6						
TIXI	Tiksi	6.18	317	ePn	Pn	16 44 42.0	+0.4
TIXI				eSn	Sn	16 45 49.3	-2.8
TIXI	Tiksi	6.18	317	deP	Pn	16 44 42.0	+0.4
TIXI				pmax	pmax		
	comp=Z,17nm,0.5s						
TIXI	Tiksi	6.18	317	ePn	Pn	16 44 42.4	+0.8
TIXI				ePg	Pb	16 45 01.6	+3.6
	comp=Z,26nm,0.2s						
TIXI				eSn	Sn	16 45 53.2	+1.1
TIXI				eSg	Sg	16 46 23.7	-4.7
	comp=Z,276nm,0.4s						
TIXI				eSg	Sg	16 46 23.7	-4.7
	comp=Z,295nm,0.5s						
SEY	Seymchan	6.33	133	Pn	Pn	16 44 43.1	-0.6
	comp=Z,1.3nm,0.3s,baz=318,slow=17,SNR=25						
SEY				Lg	Lg	16 46 25.5	
	comp=Z,6.2nm,0.3s,baz=191,slow=19,SNR=8.0						
YAK	Yakutsk	7.70	230	ePn	Pn	16 45 02.7	+0.3
YAK	Yakutsk	7.70	230	eP	Pn	16 45 02.3	-0.1
YAK				e		16 46 24.7	
YAK	Yakutsk	7.70	230	i Pn	Pn	16 45 03.4	+1.0
YAK				ePg	Pb	16 45 29.7	+5.9
YAK				eSn	Sn	16 46 31.0	+1.5
YAK				eSg	Sg	16 47 13.0	-4.1
TBGR	Tabaga	7.88	229	i Pn	Pn	16 45 07.0	+2.1
TBGR				ePg	Pb	16 45 33.9	+7.1
	comp=Z,206nm,0.5s						
TBGR				eSn	Sn	16 46 36.2	+2.3
TBGR				eSg	Sg	16 47 18.2	-4.7
	comp=Z,910nm,0.9s						
TBGR				eSg	Sg	16 47 18.2	-4.7
	comp=Z,1µm,0.6s						
MA2	Magadan	8.89	151	Pn	Pn	16 45 18.6	-0.3
	comp=Z,0.2nm,0.3s,baz=162,slow=20,SNR=2.2						
MA2				Lg	Lg	16 47 49.7	
	comp=Z,3.2nm,0.3s,baz=294,slow=18,SNR=7.1						
MA2				LR	LR	16 49 14.9	
	comp=Z,69nm,18.0s,baz=336,slow=41						
MA2	Magadan	8.89	151	⇑eP	Pn	16 45 21.8	+2.9
BILL	Bilibino	9.11	76	ceP	Pn	16 45 22.3	+0.5
BILL				S	Sn	16 47 12.0	+7.8
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,491nm,17.0s						
NKL	Nikolayevsk	14.50	184	eP	Pn	16 46 35.5	+0.1
NKL				eS	Sn	16 49 17.4	+1.4
NKL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,7.0nm,1.4s						
NKL				pmax	pmax		
	comp=E,4.0nm,1.3s						
NKL				MLR	MLR		
	comp=N,119nm,10.0s						
NKL				MLR	MLR		
	comp=Z,158nm,10.0s						
ZEA	Zeya	15.62	215	eP	Pn	16 46 52.6	+2.2
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
ZEA				MLR	MLR		
	comp=N,900nm,9.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,9.0s						
BOD	Bodaibo	16.03	246	eP	Pn	16 46 56.9	+1.2
BOD				pmax	pmax		
	comp=Z,21nm,1.6s						
PEA1	Petropavlovsk-	16.34	145	eP	Pn	16 47 00.9	+1.3
PEA0B	Petropavlovsk-	16.34	145	eP	P	16 47 01.9	-0.8
	comp=Z,25nm,1.1s						
PETK	Petropavlovsk-	16.34	145	Pn	Pn	16 47 00.9	+1.2
	comp=Z,0.1nm,0.3s,baz=308,slow=10,SNR=2.8						
PETK				LR	LR	16 53 18.9	
	comp=Z,51nm,19.1s,baz=335,slow=38						
PET	Petropavlovsk	16.63	143	eP	P	16 47 05.7	-0.2
	comp=Z,29nm,0.7s						
PET	Petropavlovsk	16.63	143	⇑eP	P	16 47 07.3	+1.5
GRNR	Gornyy	17.11	192	eP	Pn	16 47 10.0	+0.6
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
GAMB	Gambell	19.01	80	eP	Pn	16 47 32.1	-0.5
	comp=Z,17nm,1.1s						
KLR	Kul'dur	19.14	201	P	Pn	16 47 34.3	-0.1
	comp=Z,0.8nm,0.3s,baz=10,slow=8.5,SNR=6.9						
KLR				LR	LR	16 55 17.8	
	comp=Z,86nm,20.4s,baz=18,slow=38						
KLR	Kul'dur	19.14	201	d iP	Pn	16 47 34.4	0.0
RDOG	Red Dog Mine	20.17	63	eP	P	16 47 44.3	-0.3
	comp=Z,35nm,1.1s						
YSS	Yuzh-Sakhalins	20.69	179	eP	P	16 47 48.5	-1.8
YSS				e		16 48 07.6	
YSS				eS	S	16 51 33.9	-7.2
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
YSS				MLR	MLR		
	comp=N,100nm,15.0s						
HIA	Hailar	21.56	223	eP	P	16 47 59.8	0.0
	comp=N,31nm,1.0s						
HIA	Hailar	21.56	223	eP	P	16 47 59.8	0.0
HIA				pmax	pmax		
	comp=Z,31nm,1.0s						
TEY	Ternei	22.79	190	⇑eP	P	16 48 12.0	-0.9
TEY				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASAJ	Asahikawa	23.52	179	P	P	16 48 18.8	-1.5
	comp=Z,2.9nm,0.5s,baz=78,slow=19,SNR=10						
ASAJ				LR	LR	16 57 44.3	
	comp=Z,83nm,21.3s,baz=343,slow=37						
MDJ	Mudanjiang	23.97	203	eP	P	16 48 24.7	0.0
	comp=Z,23nm,0.8s						
USA0B	Ussuriysk Arra	24.06	198	eP	P	16 48 24.4	-1.0
	comp=Z,9.1nm,0.9s						
USRK	Ussuriysk Ar.	24.06	198	P	P	16 48 24.3	-1.2
	comp=Z,6.6nm,0.8s,baz=15,slow=10,SNR=18						
USRK				LR	LR	16 58 23.7	
	comp=Z,134nm,19.2s,baz=336,slow=38						
TLY	Talaya	24.56	249	eP	P	16 48 32.0	+1.9
TLY				eS	S	16 52 55.5	+4.9
TLY				pmax	pmax		
	comp=Z,12nm,0.9s						
TLY				MLR	MLR		
	comp=Z,694nm,11.0s						
COLD	Coldfoot	24.84	59	eP	P	16 48 32.5	+0.1
	comp=Z,16nm,1.0s						
VLA	Vladivostok	25.13	198	deP	P	16 48 35.8	+0.5
VLA				pmax	pmax		
	comp=Z,13nm,0.9s						
TTA	Tatalina	25.30	71	eP	P	16 48 35.9	-0.9
	comp=Z,4.4nm,0.6s						
TTA	Tatalina	25.30	71	eP	P	16 48 35.9	-0.9
TTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CN2	Changchun	25.45	209	eP	P	16 48 36.6	-1.6
CN2				ePP	PnPn	16 49 15.0	+1.8
CN2				eS	S	16 52 57.7	-7.1
CN2				eSS	SnSn	16 54 01.1	+4.2
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,620nm,11.0s						
CN2				LR	LR		
	comp=E,440nm,11.0s						
CN2				LR	LR		
	comp=Z,910nm,11.0s						
MOY	Mondy	25.53	252	eP	P	16 48 40.3	+1.3
MOY				pmax	pmax		
	comp=Z,40nm,1.4s						
ZAK	Zakamensk	25.77	248	eP	P	16 48 41.3	+0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MLY	Manley	25.90	64	eP	P	16 48 41.7	-0.4
	comp=Z,7.0nm,0.7s						
ATKA	Atka Island	26.01	104	eP	P	16 48 42.1	-1.0
	comp=Z,66nm,1.2s						
BPAW	Bear Paw Mtn.	26.37	65	eP	P	16 48 46.7	+0.4
	comp=Z,5.0nm,1.0s						
CAST	Castle Rocks	26.41	67	eP	P	16 48 46.1	-0.6
	comp=Z,5.7nm,0.8s						
ULN	Ulaanbaatar	26.62	240	⇓eP	P	16 48 50.4	+1.5
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
PPLA	Purkeypile	26.70	68	eP	P	16 48 49.0	-0.4
	comp=Z,4.6nm,1.0s						
SONM	Songino Array	26.86	241	P	P	16 48 52.2	+1.1
	comp=Z,2.0nm,0.7s,baz=26,slow=9.2,SNR=12						
SONM				LR	LR	17 01 26.1	
	comp=Z,74nm,19.6s,baz=38,slow=41						
COLA	College	26.98	62	⇓eP	P	16 48 51.2	-0.6
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CCB	Clear Creek Bu	27.13	63	eP	P	16 48 53.1	0.0
	comp=Z,2.1nm,0.8s						
WRH	Wood River Hil	27.14	63	eP	P	16 48 54.0	+0.7
	comp=Z,3.9nm,0.8s						
MCK	McKinley	27.31	65	eP	P	16 48 54.3	-0.6
	comp=Z,7.8nm,0.9s						
MCK	McKinley	27.31	65	eP	P	16 48 54.3	-0.6
MCK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ILAR	Eielson Array	27.37	62	P	P	16 48 54.0	-1.3
	comp=Z,4.5nm,0.8s,baz=298,slow=7.7,SNR=38						
INK	Inuvik	29.37	49	P	P	16 49 12.0	-1.0
	comp=Z,1.1nm,0.8s,baz=358,slow=4.9,SNR=2.8						
INK				LR	LR	17 02 38.7	
	comp=Z,50nm,20.2s,baz=314,slow=40						
ZAA0	Zalesovo Array	29.86	272	eP	P	16 49 15.6	-2.0
	comp=Z,3.6nm,1.0s						
ZALV	Zalesovo Beam	29.86	272	P	P	16 49 17.5	-0.1
	comp=Z,1.6nm,0.5s,baz=38,slow=7.5,SNR=7.0						
BJI	Beijing	31.08	221	eP	P	16 49 29.1	+0.7
BJI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MJAR	Matsushiro Arr	31.17	186	LR	LR	17 01 53.8	
	comp=Z,16nm,19.3s,baz=200,slow=36						
KSRS	Korea Array	31.23	202	P	P	16 49 29.1	-0.6
	comp=Z,1.4nm,0.6s,baz=359,slow=8.8,SNR=9.4						
KS15	Wonju Array Si	31.25	202	eP	P	16 49 29.1	-0.8
	comp=Z,3.3nm,0.9s						
HHC	Hu-ho-hao-te	31.55	228	P	P	16 49 35.1	+2.4
HHC				S	S	16 54 37.2	-3.8
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,97nm,7.8s						
HHC				LR	LR		
	comp=N,430nm,9.7s						
HHC				LR	LR		
	comp=E,140nm,10.8s						
HHC				LR	LR		
	comp=Z,470nm,10.0s						
DGZ	Jazzator, Alta	32.21	264	c iP	P	16 49 39.4	+0.9
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK	Kurchatov	34.77	273	eP	P	16 50 00.5	0.0
	comp=Z,10nm,1.1s						
KURK	Kurchatov	34.77	273	ceP	P	16 50 00.3	-0.2
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JNU	Nakatsue	35.13	197	LR	LR	17 04 47.6	
	comp=Z,43nm,18.4s,baz=350,slow=37						
BRVK	Borovoye	36.07	283	eP	P	16 50 11.1	-0.6
	comp=Z,5.8nm,1.0s						
BRVK	Borovoye	36.07	283	c iP	P	16 50 11.3	-0.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
APA	Apatity	36.35	322	⇑iP	P	16 50 11.2	-2.7
APA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARA0	ARCESS Array S	36.49	328	eP	P	16 50 14.2	-0.9
ARA0				ePcP	PcP	16 52 37.7	-0.8
ARCES	ARCESS Array B	36.49	328	P	P	16 50 14.2	-0.9
	comp=Z,2.6nm,0.8s,baz=44,slow=8.5,SNR=10						
ARCES				PcP	PcP	16 52 37.7	-0.8
	comp=Z,1.4nm,0.9s,baz=29,slow=2.8,SNR=5.0						
ARCES				LR	LR	17 08 44.0	
	comp=Z,15nm,18.4s,baz=126,slow=42						
GTA	Gaotai	36.53	241	eP	P	16 50 17.0	+1.0
GTA				pP	sP	16 50 21.1	+0.6
GTA				sP	pP	16 50 24.2	+5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	Makanchi Array	36.56	266	P	P	16 50 15.1	-0.9
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MKAR	Makanchi Array	36.56	266	P	P	16 50 15.4	-0.5
	comp=Z,6.7nm,0.5s,baz=26,slow=6.8,SNR=131						
SVE	Sverdlovsk	36.63	294	eP	P	16 50 17.1	+0.6
SVE				pmax	pmax		
	comp=Z,12nm,0.8s						
MAKZ	Makanchi	36.66	266	eP	P	16 50 16.3	-0.6
	comp=Z,7.2nm,0.5s						
MAKZ	Makanchi	36.66	266	eP	P	16 50 16.3	-0.6
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ARU	Arti	37.66	295	c iP	P	16 50 25.1	-0.1
ARU				S	S	16 56 15.6	+1.0
ARU				SS	SnSn	16 58 47.7	-5.5
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YKA	Yellowknife Ar	38.99	46	P	P	16 50 34.2	-2.1
	comp=Z,2.2nm,0.8s,baz=319,slow=8.2,SNR=8.4						
YKA	Yellowknife Ar	38.99	46	i P	P	16 50 35.4	-0.9
YKA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OTUK	Ortayu	39.17	277	i P	P	16 50 37.7	-0.3
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WHN	Wuhan	40.57	218	P	P	16 50 54.5	+4.8
AB31	Akbulak array	42.97	288	eP	P	16 51 09.0	-0.3
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	42.97	288	eP	P	16 51 09.0	-0.3
	comp=Z,9.8nm,1.0s						
AAK	Ala-Archa	43.05	270	eP	P	16 51 11.1	+1.0
	comp=Z,14nm,0.6s						
AAK	Ala-Archa	43.05	270	c iP	P	16 51 11.1	+1.0
AAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
FIA0	FINESS Array S	43.21	321	eP	P	16 51 10.6	-0.4
FIA0	FINESS Array S	43.21	321	eP	P	16 51 10.6	-0.4
FINES	FINESS Array B	43.21	321	P	P	16 51 10.6	-0.4
	comp=Z,2.9nm,0.5s,baz=33,slow=9.4,SNR=32						
FINES				LR	LR	17 11 02.3	
	comp=Z,25nm,18.8s,baz=30,slow=39						
KK31	Karatay Array	44.18	274	eP	P	16 51 19.2	+0.1
KK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KKAR	Karatay Array	44.18	274	eP	P	16 51 19.7	+0.6
KKAR	Karatay Array	44.18	274	eP	P	16 51 19.7	+0.6
BTK	Batken	46.67	272	eP	P	16 51 39.0	0.0
	comp=Z,17nm,1.1s						
BTK	Batken	46.67	272	eP	P	16 51 39.0	0.0
BTK				pmax	pmax		
	comp=Z,17nm,1.1s						
NB2	NORSAR Subarra	46.81	330	P	P	16 51 38.8	-0.9
	comp=Z,3.4nm,0.6s,baz=24,slow=7.9						
NB200	NORSAR Array S	46.81	330	eP	P	16 51 38.8	-0.9
NOA	NORSAR Array B	46.81	330	P	P	16 51 38.8	-0.9
	comp=Z,3.3nm,0.6s,baz=24,slow=7.8,SNR=13						
NOA				LR	LR	17 13 54.3	
	comp=Z,15nm,20.4s,baz=15,slow=39						
NORES	NORESS Array B	47.03	329	P	P	16 51 40.2	-1.1
NORES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GAR	Garm	47.78	271	eP	P	16 51 47.3	-0.4
	comp=Z,17nm,0.7s						
GAR	Garm	47.78	271	eP	P	16 51 47.3	-0.4
GAR				pmax	pmax		
	comp=Z,17nm,0.7s						
VSR	Storozhevoye	48.42	305	eP	P	16 51 51.1	-1.1
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KMI	Kunming	48.81	230	P	P	16 51 55.9	0.0
KMI				pP	pP	16 51 59.9	+0.7
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
FFC	Flin Flon	49.06	44	i P	P	16 51 59.9	+2.8
GUN	Gumba	51.80	250	eP	P	16 52 19.2	+0.6
	comp=Z,30nm,0.6s						
AKASG	Malin Array Be	51.85	312	P	P	16 52 17.4	-0.9
	comp=Z,2.1nm,0.4s,baz=28,slow=8.4,SNR=5.9						
AKBB	Malin Array Si	51.85	312	eP	P	16 52 17.4	-0.9
	comp=Z,4.6nm,0.5s						
AKBB	Malin Array Si	51.85	312	eP	P	16 52 17.4	-0.9
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.5s						
JIRN	Jiri	51.92	249	eP	P	16 52 20.3	+0.8
	comp=Z,59nm,0.7s						
KKN	Kakani	52.13	250	eP	P	16 52 21.7	+0.8
	comp=Z,51nm,0.6s						
GKN	Gorkha	52.16	251	eP	P	16 52 22.0	+0.9
	comp=Z,76nm,0.6s						
DANN	Dangsing	52.17	252	eP	P	16 52 22.5	+1.2
	comp=Z,56nm,0.6s						
PKIN	Phulchoki	52.28	250	eP	P	16 52 22.5	+0.5
	comp=Z,16nm,0.5s						
PKI	Pulchoki	52.28	250	eP	P	16 52 22.6	+0.5
	comp=Z,18nm,0.5s						
DMN	Daman	52.35	250	eP	P	16 52 23.3	+0.7
	comp=Z,35nm,0.8s						
PYUN	Piuthan	52.68	253	eP	P	16 52 25.3	+0.4
	comp=Z,51nm,0.9s						
KOLN	Koldanda	52.75	252	eP	P	16 52 26.2	+0.7
	comp=Z,84nm,1.0s						
GEYT	Alibeck	53.36	281	P	P	16 52 30.4	+0.7
	comp=Z,4.5nm,0.8s,baz=359,slow=5.9,SNR=11						
GEYT				LR	LR	17 16 36.3	
	comp=Z,97nm,18.6s,baz=210,slow=38						
KIV	Kislovodsk	53.62	298	eP	P	16 52 31.9	+0.3
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
KIV				MLR	MLR		
	comp=Z,87nm,17.0s						
KBZ	Khabaz	53.75	297	P	P	16 52 33.1	+0.7
	comp=Z,6.1nm,0.9s,baz=296,slow=6.7,SNR=8.7						
AKT	Akhty	54.05	292	eP	P	16 52 35.0	+0.2
AKT				e		16 53 39.5	
AKT				pmax	pmax		
	comp=Z,30nm,1.4s						
NEY	Neytrino	54.23	297	⇓eP	P	16 52 37.7	+1.6
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULM	Lac du Bonnet	54.71	42	LR	LR	17 19 07.0	
	comp=Z,47nm,19.2s,baz=70,slow=40						
EKA	Eskdalemuir Ar	54.71	337	P	P	16 52 38.4	-0.8
PAYA	Payao	55.10	231	P	P	16 52 43.6	+1.1
	comp=Z,28µm,0.8s,comp=Z,382µm						
KOLS	Kolonicke sedl	55.38	316	eP	P	16 52 43.0	-1.1
KOLS	Kolonicke sedl	55.38	316	eP	P	16 52 43.0	-1.1
CLL	Collm	55.47	324	⇑iP	P	16 52 43.9	-0.8
CLL				i		16 52 48.0	
CLL				i		16 52 49.6	
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CLL	Collm	55.47	324	⇑iP	P	16 52 43.9	-0.8
	comp=Z,8.0nm,0.7s						
CLL				i pP	pP	16 52 48.0	-0.1
CLL				i sP	sP	16 52 49.6	+0.2
DPC	Dobruska-Polom	55.58	321	eP	P	16 52 45.2	-0.5
DPC	Dobruska-Polom	55.58	321	ePP	P	16 52 45.2	-0.5
MORC	Moravsky Berou	55.81	320	P	P	16 52 47.7	+0.4
MORC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CHTO	Chiang Mai	55.89	232	P	P	16 52 52.2	+4.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CMMT	Chiang Mai	55.89	232	P	P	16 52 52.1	+3.9
	comp=Z,2.4nm,1.2s						
LAMP	Lampang	55.96	231	P	P	16 52 49.5	+0.9
	comp=Z,43µm,0.8s						
SCHQ	Schefferville	56.00	20	LR	LR	17 17 58.4	
	comp=Z,28nm,18.2s,baz=20,slow=37						
CM31	Chiang Mai Arr	56.23	231	eP	P	16 52 50.4	-0.2
	comp=Z,5.5nm,1.1s						
CMAR	Chiang Mai Arr	56.23	231	P	P	16 52 50.4	-0.2
	comp=Z,1.3nm,0.7s,baz=12,slow=8.7,SNR=7.5						
MOX	Moxa	56.40	324	P	P	16 52 52.4	+0.9
MOX				pmax	pmax		
	comp=Z,6.0nm,1.1s						
UTTA	Uttaradit	56.42	229	P	P	16 52 52.4	+0.5
	comp=Z,29µm,0.7s,comp=Z,247µm						
VYHS	Vyhne	56.68	318	eP	P	16 52 53.3	-0.2
VYHS	Vyhne	56.68	318	eP	P	16 52 53.2	-0.2
KHC	Kasperske Hory	57.37	322	eP	P	16 52 58.1	-0.3
KHC	Kasperske Hory	57.37	322	ePP	P	16 52 58.1	-0.3
PBKT	Sadao Pong	57.42	229	P	P	16 52 59.6	+0.6
	comp=Z,5.6nm,1.0s						
PDAR	Pinedale Array	57.57	56	P	P	16 52 59.5	-0.6
	comp=Z,2.5nm,0.7s,baz=14,slow=2.4,SNR=21						
GERES	GERESS Array B	57.61	322	P	P	16 52 59.8	-0.3
	comp=Z,1.2nm,0.6s,baz=28,slow=6.0,SNR=8.4						
CHAI	Chaiyaphum	57.76	227	P	P	16 53 06.4	+5.0
CONA	Conrad Observa	57.95	320	i P	P	16 53 01.4	-1.2
	comp=Z,4.4nm,1.5s						
MOA	Molln	58.41	321	i pP	P	16 53 05.3	-0.4
	comp=Z,2.1nm,0.7s						
NV01	Mina Array Sit	58.55	65	eP	P	16 53 06.8	-0.3
NVAR	Mina Array Bea	58.55	65	P	P	16 53 06.8	-0.3
	comp=Z,1.9nm,0.7s,baz=308,slow=6.2,SNR=10						
ARSA	Arzberg	58.66	320	i P	P	16 53 05.4	-2.1
	comp=Z,4.3nm,1.2s						
DUG	Dugway, Tooele	58.83	60	P	P	16 53 10.0	+1.1
DUG				pmax	pmax		

	comp=Z,7.0nm,1.0s						
BFO	Black Forest	59.30	326	i P	P	16 53 12.1	+0.2
KBA	Koelnbreinsper	59.35	322	i pP	P	16 53 12.3	-0.1
	comp=Z,3.4nm,0.7s						
KBA	Koelnbreinsper	59.35	322	P	P	16 53 14.2	+1.8
KBA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBKA	Obir	59.59	321	i pP	P	16 53 14.0	0.0
	comp=Z,5.3nm,0.7s						
MYKA	Terra Mystica	59.70	321	i pP	P	16 53 14.5	-0.1
	comp=Z,6.0nm,1.1s						
SQTA	Sankt Quirin	59.71	323	i pP	P	16 53 14.4	-0.4
	comp=Z,6.3nm,1.3s						
FETA	Feichten	60.01	324	i P	P	16 53 14.2	-2.8
	comp=Z,3.5nm,1.2s						
BR101	Keskin Array S	60.41	303	eP	P	16 53 19.7	0.0
BRTR	Keskin Array B	60.41	303	P	P	16 53 19.7	0.0
	comp=Z,2.0nm,0.7s,baz=21,slow=4.9,SNR=9.2						
WMOK	Wichita Mounta	68.25	51	P	P	16 54 13.3	+2.2
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WVT	Waverly	69.97	41	P	P	16 54 23.7	+2.1
WVT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ESDC	Sonseca Array	70.03	333	P	P	16 54 20.4	-1.6
	comp=Z,1.3nm,0.6s,baz=8.1,slow=6.8,SNR=11						
TXAR	Lajitas Array	71.76	57	P	P	16 54 31.2	-1.6
	comp=Z,0.3nm,0.5s,baz=336,slow=3.0,SNR=7.4						
WR1	Warramunga Arr	87.46	187	eP	P	16 55 56.0	-1.7
WRA	Warramunga Arr	87.46	187	P	P	16 55 56.0	-1.7
	comp=Z,1.1nm,0.7s,baz=8.2,slow=7.6,SNR=3.5						
ASAR	Alice Springs	91.18	188	P	P	16 56 13.6	-1.6
	comp=Z,0.4nm,0.6s,baz=7.5,slow=4.8,SNR=4.1						
TOA1	Torodi Ar. Sit	94.55	322	eP	P	16 56 30.9	-0.2
TORD	Torodi Ar. Bea	94.56	322	P	P	16 56 30.9	-0.2
	comp=Z,0.4nm,0.7s,baz=9.0,slow=3.5,SNR=2.8						
VNDA	Vanda	145.37	173	PKPbc	PKPbc	17 02 45.1	-1.2
	comp=Z,1.0nm,0.6s,baz=318,slow=5.0,SNR=16						
PLCA	Paso Flores	147.73	50	PKPbc	PKPbc	17 02 54.6	+0.2
	comp=Z,2.5nm,0.8s,baz=11,slow=3.0,SNR=7.2						

IDC 06 16:50:28.5±1.8**, 6°.26S×129°.26E, h0**^{km}**, mb3.7**/1**, mb1 3.9**/4**, mb1mx3.5**/35**, mbtmp3.8**/4**, ML3.7**/3**, Error ellipse: s-maj=66.8km s-min=28.3km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.72	21	Pn	Pn	16 51 55.3	+0.5
	3.6nm,0.3s,baz=29,slow=7.3,SNR=31						
SIJI				Sn	Sn	16 52 51.3	-10
	4.7nm,0.3s,baz=233,slow=22,SNR=13						
WRA	Warramunga Arr	14.47	161	Pn	Pn	16 53 53.4	-1.4
	0.2nm,0.3s,baz=344,slow=13,SNR=8.6						
WRA				Sn	Sn	16 56 21.2	-15
	0.4nm,0.3s,baz=345,slow=22,SNR=7.2						
ASAR	Alice Springs	17.88	166	P	P	16 54 39.6	0.0
	0.3nm,0.3s,baz=348,slow=10,SNR=34						
ASAR				S	Sn	16 57 47.9	-11
	0.2nm,0.3s,baz=349,slow=27,SNR=6.5						
MKAR	Makanchi Array	67.21	327	P	P	17 01 24.6	-0.1
	0.5nm,0.5s,baz=117,slow=6.2,SNR=5.4						

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*ATH **06** 16:51:31.1, 35°.80N×27°.28E, h27^{km}±2^{km}, ML2.6/4, Error ellipse: s-maj=4.6km s-min=0.9km az=135.0*

*DDA **06** 16:51:32.2, 35°.84N×27°.35E, h8^{km}±3^{km}, ML2.4*

ISC 06 16:51:32.3±1.4**, 35°.80N**±0°.04×**27°.30E**±0°.03**, h21**^{km}±3^{km}**, n18, σ1^{s}.94**/30**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.28	204	P	Pb	16 51 37.8	-0.9
KARP				S	Sb	16 51 43.0	-0.2
KARP				AML	AML	16 51 43.4	
	comp=E,2783μm,0.3s						
KARP				AML	AML	16 51 44.2	
	comp=N,925μm,0.1s						
ARG	Arkhangelos	0.79	58	P	Pb	16 51 46.9	-0.4
ARG				S	Sn	16 51 58.4	-0.9
ARG				AML	AML	16 52 01.8	
	comp=N,645μm,0.4s						
ARG				AML	AML	16 52 02.4	
	comp=E,676μm,0.4s						
DAT	Datca	0.95	14	i P	Pn	16 51 50.1	-0.4
DAT				i S	Sn	16 52 02.2	-1.4
DAT				IAML_P			
	comp=Z,193nm,0.2s						
ZKR	Zakros	1.12	232	P	Pn	16 51 52.7	0.0
BDRM	Kayabasi	1.27	5	i P	Pb	16 51 56.4	+1.0
BDRM				i S	Sb	16 52 10.9	-0.4
BDRM				IAML_P			
	comp=Z,272nm,0.2s						
ANAF	Anafi Island	1.35	295	P	Pn	16 51 55.8	-0.2
ANAF				S	Sb	16 52 13.8	0.0
ANAF				AML	AML	16 52 16.9	
	comp=N,1436μm,0.4s						
ANAF				AML	AML	16 52 18.1	
	comp=E,1041μm,0.4s						
NPS	Neapolis	1.48	249	P	Pn	16 51 57.6	-0.1
NPS				S	Sn	16 52 16.8	+0.4
NPS				AML	AML	16 52 17.4	
	comp=E,376μm,0.3s						
NPS				AML	AML	16 52 18.7	
	comp=N,322μm,0.5s						
DALY	Dalyan (Mula)	1.49	47	i P	Pb	16 51 58.4	-0.9
DALY				i S	Sb	16 52 20.6	+2.9
DALY				IAML_P			
	comp=Z,318nm,0.3s						
TURN	Turunc	1.50	44	i P	Pn	16 51 56.0	-2.0
TURN				i S	Sn	16 52 10.7	-6.2
TURN				IAML_P			
	comp=Z,575nm,0.2s						
AMGA	Amorgos Island	1.53	313	P	Pn	16 51 58.9	+0.5
AMGA				S	Sb	16 52 19.0	+0.1
LAST	Lasithi	1.62	247	P	Pn	16 52 00.0	+0.4
FETY	Fethiye	1.67	60	i P	Pb	16 52 02.5	+0.3
FETY				i S	Sb	16 52 26.8	+4.0
FETY				IAML_P			
	comp=Z,1μm,0.2s						
IOSP	Ios island	1.87	300	P	Pn	16 52 02.8	-0.3
APE	Apeiranthos	1.91	312	P	Pn	16 52 03.9	+0.3
AYDN	Tasoluk	1.91	14	i P	Pb	16 52 07.7	+1.2
AYDN				i S	Sb	16 52 31.7	+1.8
AYDN				IAML_P			
	comp=Z,407nm,0.3s						
AKAS	Kas	1.92	76	i P	Pb	16 52 06.6	0.0
AKAS				i S	Sb	16 52 34.5	+4.3
AKAS				IAML_P			
	comp=Z,271nm,0.3s						
IDI	Anoyia	2.03	256	P	Pn	16 52 05.8	+0.5
KTHA	Kythira Island	3.46	279	P	Pn	16 52 25.9	+0.9

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*ISK **06** 16:56:14.9, 37°.05N×35°.59E, h23^{km}, ML2.3/5*

*DDA **06** 16:56:14.9, 36°.91N×35°.61E, h7^{km}±3^{km}, ML2.6*

*ISCJB **06** 16:56:16.5±0.5, 37°.02N±0°.04×35°.57E±0°.03, h11^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=4.5km az=179.5*

ISC 06 16:56:16.1±1.0**, 37°.02N**±0°.03×**35°.58E**±0°.03**, h15**^{km}±8^{km}**, n14, σ0^{s}.48**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	Ceyhan	0.14	93	PG	Pg	16 56 19.8	0.0
CEYT				SG	Sb	16 56 23.3	0.0
YURE	YUREGIR	0.20	167	PG	Pg	16 56 20.8	+0.1
YURE	YUREGIR	0.20	167	i P	Pb	16 56 21.4	0.0
KRTD	Karatas-Adana	0.44	197	PG	Pg	16 56 25.2	+0.3
KRTD				SG	Sb	16 56 32.6	+0.6
KRTS	Karatas	0.47	200	PG	Pg	16 56 25.7	+0.2
KARA	Karaisali	0.48	300	PG	Pg	16 56 25.3	-0.4
KARA				SG	Sg	16 56 32.7	+0.5
DED	Mersin	0.62	265	i P	Pg	16 56 28.2	-0.1
DED				i S	Sb	16 56 38.0	+0.7
DED				IAML_P			
	comp=Z,996nm,0.1s						
MERS	Mersin	0.86	260	PG	Pb	16 56 32.2	-0.5
KAMA	Osmaniye	0.89	79	i P	Pb	16 56 32.7	-0.6
KAMA				i S	Sb	16 56 44.8	-0.3
SAIM	ADANA	1.04	23	i P	Pg	16 56 37.3	+1.1
SAIM				IAML_P			
	comp=Z,245nm,0.1s						
YAHY	KAYSERI_Yahyal	1.09	351	i P	Pg	16 56 37.4	+0.2
YAHY				IAML_P			
	comp=Z,176nm,0.1s						
HCB	Kahramanmara	1.11	73	i P	Pb	16 56 22.2	-15
KERG	Konya-Eregli	1.22	289	i P	Pg	16 56 39.9	+0.2
KERG				i S	Sn	16 56 55.1	-0.1
KERG				IAML_P			
	comp=Z,118nm,0.1s						
KUZU	Kuzuini	1.23	101	i P	Pn	16 56 38.6	-0.2
KUZU				IAML_P			
	comp=Z,1μm,0.3s						

MEX 06 17:01:33.8±0.4**, 13°.89N×92°.50W, h16**^{km}±109^{km}**, MD3.7, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.93	339	eP	Pn	17 02 03.0	-3.0
PCIG				eS	Sn	17 02 24.9	-5.2
CCIG	Comitan	2.40	8	eP	Pn	17 02 10.2	-2.5
CCIG				i S	Sn	17 02 37.9	-4.0
TGIG		2.93	348	i P	Pn	17 02 16.6	-3.3
TGIG				i S	Sn	17 02 51.7	-3.2

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*MOS **06** 17:07:48.5±1.4, 37°.48N×49°.03E, h15^{km}, mb4.3/18, Error ellipse: s-maj=8.0km s-min=4.9km az=120.6*

*IDC **06** 17:07:49.5±1.0, 37°.66N×48°.92E, h0^{km}, mb3.9/9, mb1 4.0/17, mb1mx3.8/40, mbtmp3.9/17, ML3.0/4, MS3.1/11, Ms1 3.1/11, ms1mx2.9/39, Error ellipse: s-maj=17.5km s-min=10.1km az=6.0*

*TEH **06** 17:07:49.3, 37°.63N×48°.97E, h11^{km}, ML4.3*

*ISCJB **06** 17:07:49.3±0.6, 37°.62N±0°.02×49°.03E±0°.02, h2^{km}±4^{km}, mb4.0/29, MS3.1/5, Error ellipse: s-maj=3.5km s-min=2.3km az=151.5*

*NEIC **06** 17:07:49.3±0.0, 37°.63N×48°.97E, h11^{km}, mb4.1/25, MN4.3(TEH), After TEH.*

*THR **06** 17:07:50.1, 37°.52N×48°.72E, h16^{km}, ML4.3*

*AZER **06** 17:07:51.4±0.7, 37°.69N×49°.19E, h10^{km}±2^{km}, ml4.2/26, Error ellipse: s-maj=5.2km s-min=4.7km az=50.0*

*NNC **06** 17:07:55.5±2.6, 38°.22N×49°.49E, h0^{km}, mb4.2, Error ellipse: s-maj=32.3km s-min=18.8km az=39.0*

ISC 06 17:07:49.6±1.2**, 37°.67N**±0°.02×**49°.17E**±0°.03**, h1**^{km}±9^{km}**, n286, σ2^{s}.16**/316**, mb4.2**/29**, MS3.2**/5**, 13C-6D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASTR	Astara	0.93	342	ePg	Pg	17 08 08.1	+0.6
ASTR	Astara	0.93	342	Pg	Pg	17 08 08.1	+0.6
	SNR=280						
ASTR				Sg	Sb	17 08 22.3	+0.8
ASTR	Astara	0.93	342	P	Pg	17 08 08.1	+0.6
	SNR=280						
ASTR				S	Sb	17 08 22.3	+0.8
ZNJK	Zanjan	1.07	201	ePg	Pg	17 08 06.4	-3.8
ZNJK	Zanjan	1.07	201	eAML	AML	17 08 18.4	
	comp=E,298nm,0.2s						
ZNJK	Zanjan	1.07	201	ePg	Pg	17 08 06.4	-3.8
ZNJK				eSg	Sg	17 08 18.0	-6.1
LKRN	Lenkeran, Azer	1.08	344	P	Pg	17 08 10.7	+0.4
LKRN	Lenkeran, Azer	1.08	344	ePg	Pg	17 08 10.7	+0.4
LKRN	Lenkeran, Azer	1.08	344	Pb	Pg	17 08 10.8	+0.4
	SNR=106						
LKRN				Sb	Sn	17 08 27.3	-0.3
LKRN	Lenkeran, Azer	1.08	344	P	Pg	17 08 10.8	+0.4
	SNR=106						
LKRN				S	Sn	17 08 27.3	-0.3
GRMI	Germi	1.51	319	ePg	Pn	17 08 16.8	-1.2
GRMI	Germi	1.51	319	eAML	AML	17 08 38.0	
	comp=E,3μm,0.4s						
GRMI	Germi	1.51	319	ePg	Pn	17 08 16.8	-1.2
GRMI				eSg	Sn	17 08 36.1	-2.3
IGZV	Ghazvin	1.54	146	ePn	Pn	17 08 17.9	-0.6
IGZV				IAMB	IAmb	17 08 46.3	
	comp=Z,63μm,0.4s						
GLBA	Clilabad	1.68	339	ePn	Pn	17 08 20.2	+0.1
GLBA	Clilabad	1.68	339	Pn	Pn	17 08 20.3	+0.1
	SNR=108						
GLBA				Sn	Sb	17 08 43.2	+0.2
GLBA	Clilabad	1.68	339	P	Pn	17 08 20.3	+0.1
	SNR=108						
GLBA				S	Sb	17 08 43.2	+0.2
QALM	Alamut, Qazvin	1.71	136	ePn	Pn	17 08 21.8	+0.9
IHRS	Heris	1.80	292	ePn	Pn	17 08 18.9	-3.1
IHRS				IAMB	IAmb	17 08 26.7	
	comp=Z,39μm,0.3s						
IBST	Bostanabad	1.80	272	ePn	Pn	17 08 16.9	-5.2
IBST				IAMB	IAmb	17 08 41.0	
	comp=Z,38μm,0.2s						
QABG	Abgarm-Qazvin	1.99	170	ePn	Pn	17 08 24.6	-0.1
ALIB	Äli-Bayra	2.28	357	ePn	Pb	17 08 30.8	-0.8
ALIB	Äli-Bayra	2.28	357	Pn	Pb	17 08 30.9	-0.8
	SNR=8.0						
ALIB				Sn	Sb	17 08 59.6	-0.8
ALIB	Äli-Bayra	2.28	357	P	Pb	17 08 30.9	-0.8
	SNR=8.0						
ALIB				S	Sb	17 08 59.6	-0.8
IMHD	Mahdasht	2.32	148	ePn	Pn	17 08 30.0	+0.8
IMHD				IAMB	IAmb	17 09 09.3	
	comp=Z,23μm,0.2s						
CHTH	Charan	2.36	138	ePn	Pb	17 08 32.4	-0.8
CHTH	Charan	2.36	138	ePn	Pb	17 08 32.4	-0.8
IAZR	Azarshahr	2.53	271	ePn	Pn	17 08 29.4	-2.7
GOBA	Gobu	2.76	9	ePn	Pn	17 08 35.9	+0.9
GOBA	Gobu	2.76	9	Pn	Pn	17 08 36.0	+0.9
GOBA				Sn	Sb	17 09 12.1	-2.0
GOBA	Gobu	2.76	9	P	Pn	17 08 36.0	+0.9
GOBA				S	Sb	17 09 12.1	-2.0
ORD	Ordubad	2.79	298	ePn	Pn	17 08 38.1	+2.5
ORD	Ordubad	2.79	298	Pn	Pn	17 08 38.1	+2.5
ORD				Sn	Sb	17 09 13.9	-1.2
ORD	Ordubad	2.79	298	P	Pn	17 08 38.1	+2.5
ORD				S	Sb	17 09 13.9	-1.2
IHSB	Hasanabad	2.81	142	ePn	Pn	17 08 38.7	+2.9
GALA	Gala	2.84	15	ePn	Pn	17 08 38.2	+2.1
GALA	Gala	2.84	15	Pn	Pn	17 08 38.2	+2.1
GALA				Sn	Sb	17 09 14.3	-2.0
GALA	Gala	2.84	15	P	Pn	17 08 38.2	+2.1
GALA				S	Sb	17 09 14.3	-2.0
ZRD	Zardab	2.84	337	ePn	Pn	17 08 38.0	+1.9
ZRD	Zardab	2.84	337	Pn	Pn	17 08 38.1	+1.9
	SNR=26						
ZRD				Sn	Sb	17 09 14.8	-1.7
ZRD	Zardab	2.84	337	P	Pn	17 08 38.1	+1.9
	SNR=26						
ZRD				S	Sb	17 09 14.8	-1.7
HAGD	Aghdareh	2.85	180	ePn	Pn	17 08 36.7	+0.2
GBS	Qobustan	2.86	357	ePn	Pn	17 08 38.8	+2.3
GBS	Qobustan	2.86	357	Pn	Pn	17 08 38.8	+2.3
GBS				Sn	Sb	17 09 15.0	-2.1
GBS	Qobustan	2.86	357	P	Pn	17 08 38.8	+2.3
GBS				S	Sb	17 09 15.0	-2.1
MAHB	Mahabad	2.91	253	ePn	Pn	17 08 35.5	-1.7
IPRN	Peran	2.92	118	ePn	Pn	17 08 39.2	+1.9
IMRD	Marand	2.92	292	ePn	Pn	17 08 36.4	-1.0
IMRD				IAMB	IAmb	17 08 47.6	
	comp=Z,26μm,0.6s						
NDR	Nardaran	2.97	12	ePn	Pn	17 08 37.7	-0.2
NDR	Nardaran	2.97	12	Pn	Pn	17 08 37.8	-0.2
NDR				Sn	Sb	17 09 17.0	-3.2
NDR	Nardaran	2.97	12	P	Pn	17 08 37.8	-0.2
NDR				S	Sb	17 09 17.0	-3.2
BRDA	Brd	3.01	330	ePn	Pn	17 08 39.6	+1.1
BRDA	Brd	3.01	330	Pn	Pn	17 08 39.7	+1.1
BRDA				Sn	Sn	17 09 17.9	+2.7
BRDA	Brd	3.01	330	P	Pn	17 08 39.7	+1.1
BRDA				S	Sn	17 09 17.9	+2.7
DAMV	Damavand	3.04	131	ePn	Pn	17 08 42.4	+3.2
DAMV	Damavand	3.04	131	ePn	Pn	17 08 42.4	+3.2
IDMV	Damavand	3.11	131	ePn	Pn	17 08 43.1	+2.9
IDMV	Damavand	3.11	131	ePn	Pn	17 08 43.2	+3.0
PQL	Pirkuli	3.14	352	ePn	Pn	17 08 41.6	+1.2
PQL	Pirkuli	3.14	352	Pn	Pn	17 08 41.7	+1.2
	SNR=14						
PQL				Sn	Sn	17 09 20.0	+1.3
PQL	Pirkuli	3.14	352	P	Pn	17 08 41.7	+1.2
	SNR=14						
PQL				S	Sn	17 09 20.0	+1.3
ASAO	Ashtian	3.20	167	ePn	Sb	17 09 28.2	+1.2
ASAO	Ashtian	3.20	167	eSg	Sb	17 09 28.2	+1.2
IML	Ismayilli	3.21	347	Pn	Pn	17 08 42.4	+1.2
IML				Sn	Sn	17 09 22.9	+2.8
IML	Ismayilli	3.21	347	P	Pn	17 08 42.4	+1.2
IML				S	Sn	17 09 22.9	+2.8
NAX	Nakhchivan	3.25	299	P	Pn	17 08 44.5	+2.7
NAX	Nakhchivan	3.25	299	ePn	Pn	17 08 44.5	+2.7
NAX	Nakhchivan	3.25	299	Pn	Pn	17 08 44.5	+2.7
NAX	Nakhchivan	3.25	299	P	Pn	17 08 44.5	+2.7
ILIN	Lien	3.27	214	ePn	Pn	17 08 41.2	-1.2
SBZ	Shahbuz	3.31	302	ePn	Pn	17 08 45.2	+2.4
SBZ	Shahbuz	3.31	302	Pn	Pn	17 08 45.2	+2.4
	SNR=68						
SBZ				Sn	Sn	17 09 26.0	+3.1
SBZ	Shahbuz	3.31	302	P	Pn	17 08 45.2	+2.4
	SNR=68						
SBZ				S	Sn	17 09 26.0	+3.1
IALA	Alasht	3.33	117	ePn	Pn	17 08 45.6	+2.5
IALA	Alasht	3.33	117	ePn	Pn	17 08 45.6	+2.5
IBZA	Bozab	3.37	199	ePn	Pn	17 08 43.1	-0.6
SIZA	Siyzn	3.40	357	ePn	Pn	17 08 45.2	+1.2
SIZA	Siyzn	3.40	357	Pn	Pn	17 08 45.2	+1.2
SIZA				Sn	Sb	17 09 29.0	-3.7
SIZA	Siyzn	3.40	357	P	Pn	17 08 45.2	+1.2
SIZA				S	Sb	17 09 29.0	-3.7
QBL	Gabala	3.43	343	ePn	Pn	17 08 46.3	+2.1
QBL	Gabala	3.43	343	Pn	Pn	17 08 46.4	+2.1
QBL				Sn	Sn	17 09 27.9	+2.3
QBL	Gabala	3.43	343	P	Pn	17 08 46.4	+2.1
QBL				S	Sn	17 09 27.9	+2.3
HSAM	Samen	3.49	188	ePn	Pn	17 08 45.9	+0.6
IFIR	Firoozkooh	3.53	124	ePn	Pb	17 08 50.6	-2.4
IFIR	Firoozkooh	3.53	124	ePn	Pb	17 08 50.7	-2.3
XNQ	Khinaliq	3.58	348	ePn	Pn	17 08 47.2	+0.7
XNQ	Khinaliq	3.58	348	Pn	Pn	17 08 47.2	+0.7
	SNR=16						
XNQ	Khinaliq	3.58	348	P	Pn	17 08 47.2	+0.7
	SNR=16						
GHVR	GHOM	3.62	151	ePn	Pn	17 08 48.3	+1.3
GHVR	GHOM	3.62	151	ePn	Pn	17 08 48.3	+1.3
GANJ	Ganja	3.70	324	P	Pn	17 08 49.0	+1.0
GANJ	Ganja	3.70	324	ePn	Pn	17 08 49.0	+1.0
GANJ	Ganja	3.70	324	Pn	Pn	17 08 49.0	+1.0
	SNR=25						
GANJ				Sn	Sn	17 09 31.7	-0.6
GANJ	Ganja	3.70	324	P	Pn	17 08 49.0	+1.0
	SNR=25						
GANJ				S	Sn	17 09 31.7	-0.6
QUBA	Quba, Azerbaij	3.71	352	Pn	Pn	17 08 48.9	+0.7
QUBA	Quba, Azerbaij	3.71	352	P	Pn	17 08 48.9	+0.7
IDHR	Dehrash	3.72	218	ePn	Pn	17 08 46.5	-2.0
IKOM	Komasi	3.74	202	ePn	Pn	17 08 48.3	-0.4
QUB	Quba	3.75	351	ePn	Pn	17 08 48.8	0.0
ILAS	Lasjerd	3.82	126	ePn	Pn	17 08 53.4	+3.6
SEKA	Sheki	3.84	337	P	Pn	17 08 50.6	+0.6
SEKA	Sheki	3.84	337	ePn	Pn	17 08 50.6	+0.6
SEKA	Sheki	3.84	337	Pn	Pn	17 08 50.7	+0.6
	SNR=21						
SEKA				Sn	Sn	17 09 36.6	+0.7
SEKA	Sheki	3.84	337	P	Pn	17 08 50.7	+0.6
	SNR=21						
SEKA				S	Sn	17 09 36.6	+0.7
MAKU	Maku	3.90	297	ePn	Pn	17 08 48.1	-2.7
MAKU	Maku	3.90	297	ePn	Pn	17 08 48.1	-2.7
QSAR	Qusar	3.90	350	ePn	Pn	17 08 51.7	+1.0
QSAR	Qusar	3.90	350	Pn	Pn	17 08 51.7	+1.0
QSAR	Qusar	3.90	350	P	Pn	17 08 51.7	+1.0
IKIA	Kiasar	3.91	111	ePn	Pn	17 08 53.4	+2.4
IGLO	Ghaloghah	3.91	106	ePn	Pn	17 08 52.7	+1.6
HYR	Heyderabad	3.94	302	ePn	Pn	17 08 54.0	+2.6
HYR	Heyderabad	3.94	302	Pn	Pn	17 08 54.0	+2.6
HYR				Sn	Sn	17 09 39.7	+1.4
HYR	Heyderabad	3.94	302	P	Pn	17 08 54.0	+2.6
HYR				S	Sn	17 09 39.7	+1.4
IGHG	Ghaleghazi	3.95	213	ePn	Pn	17 08 50.9	-0.7
AKT	Akhty	3.96	344	eP	Pn	17 08 53.9	+2.2
AKT				eS	Sn	17 09 41.0	+2.2
AKT				pmax	pmax		
	comp=Z,61nm,0.5s						
AKT				smax	smax		
	comp=E,80nm,0.4s						
AKT				smax	smax		
	comp=N,33nm,0.5s						
AKT				smax	smax		
	comp=E,81nm,0.4s						
IDOB	Doab	3.96	192	ePn	Pn	17 08 52.4	+0.6
GDB	GEDABAY	4.03	320	ePn	Pn	17 08 53.8	+1.1
GDB	GEDABAY	4.03	320	Pn	Pn	17 08 53.9	+1.1
GDB				Sn	Sn	17 09 43.0	+2.3
GDB	GEDABAY	4.03	320	P	Pn	17 08 53.9	+1.1
GDB				S	Sn	17 09 43.0	+2.3
BASK	Baskale_VAN	4.10	277	i P	Pb	17 09 01.4	-1.3
BASK				IAML_P			
	comp=Z,114nm,0.1s						
IKMR	Kamar-syah	4.20	189	ePn	Pn	17 08 56.5	+1.7
GNI	Garni	4.24	307	Pn	Pn	17 08 56.4	+0.8
	comp=Z,1.0nm,0.3s,baz=321,slow=18,SNR=3.4						
GNI				Pg	Pb	17 09 05.5	+0.3
	comp=Z,17nm,0.3s,baz=114,slow=7.0,SNR=32						
GNI				Lg	Lg	17 10 01.7	
	comp=Z,2.7nm,0.3s,baz=209,slow=19,SNR=2.3						
GNI				LR	LR	17 10 43.0	
	comp=Z,229nm,20.1s,baz=102,slow=42						
GNI	Garni	4.24	307	ePg	Pn	17 08 59.4	+3.8
GNI	Garni	4.24	307	eP	Pn	17 08 59.4	+3.8
GNI	Garni	4.24	307	ePn	Pn	17 08 59.4	+3.8
IKFM	Kafar-mosalman	4.28	195	ePn	Pn	17 08 56.5	+0.6
HAKT	HAKKARI	4.33	270	i P	Pn	17 08 57.6	+0.7
HAKT				IAML_P			
	comp=Z,415nm,0.2s						
HAKT	HAKKARI	4.33	270	ePn	Pn	17 08 56.8	-0.1
IANJ	Anjilo	4.41	119	ePn	Pn	17 09 02.2	+4.3
IANJ	Anjilo	4.41	119	ePn	Pn	17 09 02.3	+4.3
KRSH	Karshahi	4.42	146	ePn	Pn	17 08 59.7	+1.7
ZKTA	Zakatala	4.42	334	P	Pn	17 08 58.7	+0.9
ZKTA	Zakatala	4.42	334	Pn	Pn	17 08 58.8	+0.9
ZKTA				Sn	Sn	17 09 51.7	+1.7
ZKTA	Zakatala	4.42	334	P	Pn	17 08 58.8	+0.9
ZKTA				S	Sn	17 09 51.7	+1.7
QZX	Qazax, Azerbai	4.48	320	ePn	Pn	17 09 00.6	+1.9
QZX	Qazax, Azerbai	4.48	320	Pn	Pn	17 09 00.7	+1.9
QZX				Sn	Sn	17 09 55.7	+4.2
QZX	Qazax, Azerbai	4.48	320	P	Pn	17 09 00.7	+1.9
QZX				S	Sn	17 09 55.7	+4.2
VMUR	Van-Muradiye	4.59	288	i P	Pn	17 09 05.6	+5.2
VMUR				IAML_P			
	comp=Z,106nm,0.3s						
TVAN	Van	4.62	282	i P	Pb	17 09 12.3	+0.6
TVAN				IAML_P			
	comp=Z,520nm,0.4s						
IKLH	Kolahrood	4.77	155	ePn	Pn	17 09 05.0	+2.0
IKLH	Kolahrood	4.77	155	ePn	Pn	17 09 05.0	+2.0
IMND	Minoodasht	4.98	93	ePn	Pn	17 09 06.8	+1.2
IPIR	Pirpir	5.18	164	ePn	Pn	17 09 11.6	+3.0
KZRT	Kazreti	5.23	317	i P	Pb	17 09 18.3	-3.6
EAK	Akyaka	5.26	307	i P	Pb	17 09 25.8	+3.3
EAK				IAML_P			
	comp=Z,783nm,0.5s						
DIGO	Kars	5.27	303	i P	Pb	17 09 24.3	+1.5
DIGO				IAML_P			
	comp=Z,434nm,0.1s						
TBLG	Delisi	5.30	321	ePn	Pb	17 09 17.6	-5.4
TBLG	Delisi	5.30	321	eP	Pb	17 09 17.6	-5.4
SIRN	Sırnak	5.37	270	i P	Pb	17 09 21.7	-2.6
SIRN				IAML_P			
	comp=Z,555nm,0.3s						
MRVT	Maraveh tapeh	5.49	88	eAML	AML	17 10 20.4	
	comp=N,134nm,0.8s						
MRVT				eAML	AML	17 10 22.2	
	comp=E,107nm,0.4s						
JHBN	Jahan bin	5.57	167	ePn	Pn	17 09 15.5	+1.5
SRTM	Siirt_Merkez	5.74	275	i P	Pb	17 09 35.1	+4.4
SRTM				IAML_P			
	comp=Z,73nm,0.4s						
AKH	Akhalkalaki	5.76	312	ePn	Pn	17 09 20.8	+4.4
AKH	Akhalkalaki	5.76	312	eP	Pn	17 09 20.8	+4.4
IGAR	Gharneh	5.76	155	ePn	Pn	17 09 19.6	+3.0
ANAR	Anarak	5.82	139	ePn	Pn	17 09 19.9	+2.6
MUSM	Mu-Merkez	6.12	282	i P	Pb	17 09 41.6	+4.5
MUSM				IAML_P			
	comp=Z,24nm,0.1s						
HOMI	Horasan	6.14	295	i P	Pb	17 09 43.3	+5.8
HOMI				IAML_P			
	comp=Z,127nm,0.2s						

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BTMN  Batman              6.26 274  iP     Pb      17 09 40.3 +0.9
BTMN                                  IAML_P
      comp=Z,186nm,0.5s
ZEI   Tsey                6.50 323  eP     Pn      17 09 30.0 +3.3
ZEI                                   pmax   pmax
      comp=Z,12nm,0.6s
DAGI  Agillar             6.56 303  iP     Pn      17 09 31.8 +4.4
DAGI                                  IAML_P
      comp=Z,3.0nm,0.2s
MARD  Mardin              6.68 269  iP     Pb      17 09 52.3 +5.7
MARD                                  IAML_P
      comp=Z,37nm,0.3s
DBAD  Bademkaya           6.68 302  iP     Pn      17 09 33.9 +4.8
DBAD                                  IAML_P
      comp=Z,210nm,0.6s
GEYT  Alibeck             7.09  85   Pn    Pn      17 09 36.8 +2.1
      comp=Z,2.9nm,0.3s,baz=282,slow=15,SNR=26
GEYT                                  Sn     Sn      17 10 56.2 +0.3
      comp=Z,3.4nm,0.3s,baz=51,slow=27,SNR=6.1
GYA0  ALIBECK ARRAY       7.09  85   P     Pn      17 09 35.5 +0.8
GYA0B ALIBECK ARRAY       7.09  85  ePn    Pn      17 09 35.9 +1.2
GYA0B ALIBECK ARRAY       7.09  85   S     Sn      17 10 56.7 +0.7
IKRD  Kardeh              7.51  94  ePn    Pb      17 09 54.8 -6.1
KBZ   Khabaz              7.70 324   Pn    Pn      17 09 43.5 +0.7
      comp=Z,0.1nm,0.3s,baz=173,slow=8.1,SNR=1.9
KBZ                                   LR     LR      17 12 44.8
      comp=Z,96nm,19.5s,baz=172,slow=39
IAKL  Akhelmad            7.74  95  ePn    Pn      17 09 46.7 +3.0
IPAY  Payeh               7.95  96  ePn    Pn      17 09 49.3 +2.7
KIV   Kislovodsk          7.97 324  ePn    Pn      17 09 48.1 +1.4
KIV   Kislovodsk          7.97 324  eP     Pn      17 09 49.5 +2.8
KIV                                   pmax   pmax
      comp=Z,32nm,1.1s
IMYA  Miami               8.85  95  ePn    Pn      17 10 03.2 +4.3
IMYA  Miami               8.85  95  ePn    Pn      17 10 03.2 +4.3
MMAI  Mount Meron Ar     12.16 252   Pn    Pn      17 10 42.7 -1.4
      comp=Z,0.2nm,0.3s,baz=228,slow=43,SNR=2.6
BR101 Keskin Array S     12.30 284  ePn    Pn      17 10 46.2 +0.1
BR131 Keskin Array S     12.30 284  ePn    Pn      17 10 44.2 -1.9
BRTR  Keskin Array B     12.30 284   Pn    Pn      17 10 46.2 +0.1
      comp=Z,0.1nm,0.3s,baz=311,slow=7.5,SNR=2.5
AB31  Akbulak array      13.96  31 ⇓P     Pn      17 11 06.1 -2.4
      comp=Z,1.6nm,0.5s,baz=216,slow=10,SNR=38
AB31                                 ⇓S     Sn      17 13 37.4 -6.6
      comp=Z,1.8nm,0.6s,baz=213,slow=23,SNR=3.9
ABKAR Akbulak array      13.96  31  ePn    Pn      17 11 06.0 -2.4
UOSS  Minazif            14.04 153  ePn    Pn      17 11 11.6 +1.9
AKTO  Aktyubinsk         14.24  24   Pn    Pn      17 11 10.5 -1.9
      comp=Z,1.4nm,0.3s,baz=201,slow=11,SNR=24
AKTO                                  Sn     Sn      17 13 42.8 -8.2
      comp=Z,0.9nm,0.3s,baz=44,slow=20,SNR=5.6
AKTO                                  LR     LR      17 18 19.0
      comp=Z,56nm,20.9s,baz=208,slow=44
AKTO  Aktyubinsk         14.24  24 ⇑P     Pn      17 11 09.1 -3.3
      comp=Z,11nm,0.7s
AKTO                                 ⇓S     Sn      17 13 42.4 -8.6
      comp=Z,10nm,0.9s
RAYN  Ar Rayn            14.45 194  ePn    Pn      17 11 09.9 -5.5
RAYN  Ar Rayn            14.45 194  eP     Pn      17 11 09.9 -5.6
WSAR  Wadi Sarin         16.52 148   LR    LR      17 18 40.5
      comp=Z,38nm,19.0s,baz=350,slow=39
GAR   Garm               16.65  79  eP     Pn      17 11 44.8 +0.4
      comp=Z,14nm,1.0s
GAR   Garm               16.65  79  eP     Pn      17 11 44.8 +0.4
GAR                                   pmax   pmax
      comp=Z,14nm,1.0s
TIRR  Tirgusor           17.03 300  ePn    Pn      17 11 45.2 -3.8
      comp=Z,56nm,1.5s
TIRR  Tirgusor           17.03 300  eP     Pn      17 11 45.2 -3.8
TIRR                                  pmax   pmax
      comp=Z,56nm,1.5s
KK31  Karatay Array      17.13  65  ePn    Pn      17 11 50.1 -0.2
      comp=Z,5.2nm,0.8s
KK31  Karatay Array      17.13  65   P     Pn      17 11 50.5 +0.2
      comp=Z,1.7nm,0.5s,baz=271,slow=12,SNR=41
KK31  Karatay Array      17.13  65  eP     Pn      17 11 50.1 -0.2
KK31                                  pmax   pmax
      comp=Z,5.0nm,0.8s
KKAR  Karatay Array      17.13  65  ePn    Pn      17 11 50.1 -0.2
      comp=Z,5.2nm,0.8s
KKAR  Karatay Array      17.13  65  eP     Pn      17 11 50.1 -0.2
KKAR                                  pmax   pmax
      comp=Z,5.0nm,0.8s
CFR   Carcaliu           17.43 302   P     Pn      17 11 54.3 +0.3
CFR                                   pmax   pmax
      comp=Z,4.0nm,1.0s
KARP  Karpathos          17.79 270  eP     Pn      17 11 56.6 -2.0
      comp=Z,45nm,1.0s
MLR   Muntele Rosu       19.00 302   LR    LR      17 21 38.4
      comp=Z,65nm,18.6s,baz=56,slow=44
MLR   Muntele Rosu       19.00 302   P     P       17 12 13.6 +0.8
MLR                                   pmax   pmax
      comp=Z,7.0nm,1.4s
AKASG Malin Array Be     19.26 319   P     P       17 12 13.4 -2.1
      comp=Z,0.7nm,0.3s,baz=122,slow=12,SNR=32
AKBB  Malin Array Si     19.26 319  eP     P       17 12 14.3 -1.1
      comp=Z,30nm,1.3s
AKBB  Malin Array Si     19.26 319  eP     P       17 12 14.3 -1.1
AKBB                                  pmax   pmax
      comp=Z,30nm,1.3s
HUMR  Humele             19.43 298⇑iP     Pn      17 12 29.2  +11
OBN   Obninsk            19.43 338⇓eP     Pn      17 12 19.0 +0.6
OBN                                   pmax   pmax
      comp=Z,8.0nm,0.7s
OBN                                   MLR    MLR
      comp=Z,55nm,18.0s
DOPR  Dopca              19.51 303⇑iP     P       17 12 18.5 +0.2
VOIR                     19.59 301⇑iP     P       17 12 19.2 -0.1
VOIR                     19.59 301 ⇑P     P       17 12 19.2 -0.1
ARU   Arti               19.79  16   P     P       17 12 21.3 +0.1
      comp=Z,0.0nm,0.3s,baz=211,slow=4.3,SNR=10
ARU                                   LR     LR      17 21 23.7
      comp=Z,32nm,18.3s,baz=199,slow=41
ARU   Arti               19.79  16  eP     P       17 12 20.5 -0.7
      comp=Z,7.3nm,0.5s
ARU   Arti               19.79  16c iP     P       17 12 20.7 -0.5
ARU                                   S      S       17 15 52.9  -12
ARU                                   pmax   pmax
      comp=Z,13nm,1.4s
ARR   Arges              19.86 301⇑iP     Pn      17 12 27.6 +3.9
OTUK  Ortayu             19.91  51 ⇓P     P       17 12 22.7 +0.1
      comp=Z,4.8nm,0.6s
OTUK  Ortayu             19.91  51   P     P       17 12 22.7 +0.1
OTUK                                  pmax   pmax
      comp=Z,5.0nm,0.6s
AAK   Ala-Archa          19.95  68  eP     Pn      17 12 27.9 +3.0
      comp=Z,9.3nm,1.3s
NIL   Nilore             19.96  94  eP     Pn      17 12 26.7 +1.7
      comp=Z,6.9nm,0.9s
NIL   Nilore             19.96  94  eP     Pn      17 12 26.7 +1.7
NIL                                   pmax   pmax
      comp=Z,7.0nm,0.9s
BURAR Bucovina Array     20.15 307⇑iP     P       17 12 24.4 -0.9
BURAR Bucovina Array     20.15 307 ⇑P     P       17 12 24.4 -0.9
BUR08 Bucovina Ar. S     20.17 307  eP     P       17 12 24.6 -1.0
      comp=Z,6.1nm,0.9s
VTS   Vitosha            20.39 292  eP     P       17 12 29.0 +0.9
      comp=Z,5.8nm,1.3s
VTS   Vitosha            20.39 292  eP     P       17 12 29.0 +0.9
VTS                                   pmax   pmax
      comp=Z,6.0nm,1.3s
KIRV  Kirov              20.93   0   P     P       17 12 34.3 +0.8
      comp=Z,9.6nm,0.5s,baz=183,slow=2.8,SNR=6.0
KIRV                                  LR     LR      17 22 20.9
      comp=Z,30nm,18.9s,baz=178,slow=42
BOOM  Boomskoye usch     21.00  68  eP     P       17 12 39.2 +4.5
      comp=Z,17nm,1.2s
BOOM  Boomskoye usch     21.00  68  eP     P       17 12 39.2 +4.5
BOOM                                  pmax   pmax
      comp=Z,17nm,1.2s
KSH   Kashi              21.01  77  eP     P       17 12 32.5 -2.3
KSH                                   PP     PnPn    17 12 59.4 +6.2
KSH                                   pmax   pmax
      comp=Z,8.0nm,1.2s
GZR   Gura Zlata         21.14 300⇑iP     P       17 12 35.2 -0.8
BRVK  Borovoye           21.25  37  eP     P       17 12 38.0 +0.9
      comp=Z,13nm,1.0s
BRVK  Borovoye           21.25  37  eP     P       17 12 38.0 +0.9
BRVK                                  pmax   pmax
      comp=Z,13nm,1.0s
BVA2  Borovoye Array     21.28  37 ⇑P     P       17 12 38.5 +1.1
      comp=Z,21nm,0.9s
BVA2  Borovoye Array     21.28  37   P     P       17 12 38.5 +1.1
BVA2                                  pmax   pmax
      comp=Z,21nm,0.9s
BVAR  Borovoye Array     21.28  37   P     P       17 12 38.4 +1.0
      comp=Z,12nm,0.8s,baz=232,slow=9.0,SNR=63
DRGR                     21.52 303   P     P       17 12 38.8 -1.3
DRGR                                  pmax   pmax
      comp=Z,18nm,0.9s
ITM   Ithomi             21.61 277  eP     P       17 12 33.6 -7.6
      comp=Z,11nm,1.0s
MDVR  Moldovita          21.77 298⇑iP     P       17 12 42.2 -0.6
BZS   Buzias             21.98 300   P     P       17 12 43.4 -1.6
BZS                                   pmax   pmax
      comp=Z,3.0nm,0.9s
TRPA  Tarpa              22.02 307⇑iP     P       17 12 35.2  -10
KOLS  Kolonicke sedl     22.45 309   P     P       17 12 48.3 -1.8
KOLS                                  pmax   pmax
      comp=Z,6.0nm,0.9s
KOLS  Kolonicke sedl     22.45 309  eP     P       17 12 50.8 +0.7
PSZ   Piszkesteto        23.66 305  eP     P       17 12 59.0 -3.6
      comp=Z,6.1nm,0.8s
PSZ   Piszkesteto        23.66 305  eP     P       17 12 59.0 -3.6
PSZ                                   pmax   pmax
      comp=Z,6.0nm,0.8s
VYHS  Vyhne              24.49 306  eP     P       17 13 09.5 -0.9
VYHS  Vyhne              24.49 306  eP     P       17 13 09.5 -0.9
KURBB Kurchatov Arra     24.54  49   P     P       17 13 12.4 +1.7
      comp=Z,1.4nm,0.8s,baz=254,slow=9.5,SNR=9.4
KURBB Kurchatov Arra     24.54  49 ⇓P     P       17 13 10.3 -0.5
      comp=Z,2.9nm,0.9s
KURK  Kurchatov          24.63  49  eP     P       17 13 13.0 +1.5
      comp=Z,4.8nm,0.9s
KURK  Kurchatov          24.63  49  eP     P       17 13 13.0 +1.5
KURK                                  pmax   pmax
      comp=Z,5.0nm,0.9s
MORC  Moravsky Berou     25.66 308  eP     P       17 13 19.5 -1.4
MORC  Moravsky Berou     25.66 308  eP     P       17 13 19.5 -1.4
MAKZ  Makanchi           25.79  59  eP     P       17 13 23.5 +1.4
      comp=Z,3.6nm,0.8s
MAKZ  Makanchi           25.79  59  eP     P       17 13 23.5 +1.4
MAKZ                                  pmax   pmax
      comp=Z,4.0nm,0.8s
MK31  Makanchi Array     26.00  59  eP     P       17 13 25.4 +1.4
      comp=Z,3.0nm,1.0s
MK31  Makanchi Array     26.00  59   P     P       17 13 26.4 +2.4
      comp=Z,2.8nm,0.8s,baz=257,slow=8.3,SNR=18
MK31  Makanchi Array     26.00  59  eP     P       17 13 25.4 +1.4
MK31                                  pmax   pmax
      comp=Z,3.0nm,1.0s
MKAR  Makanchi Array     26.00  59   P     P       17 13 26.4 +2.3
      comp=Z,1.8nm,0.8s,baz=260,slow=8.7,SNR=12
VRAC  Vranov             26.13 307   P     P       17 13 23.2 -1.9
      comp=Z,2.0nm,0.8s,baz=51,slow=3.4,SNR=3.3
KRUC  Moravsky           26.20 306   P     P       17 13 24.0 -1.8
KRUC                                  pmax   pmax
      comp=Z,6.0nm,1.2s
DPC   Dobruska-Polom     26.57 309  eP     P       17 13 30.0 +0.8
DPC   Dobruska-Polom     26.57 309  eP     P       17 13 30.0 +0.8
OSTC  Ostas              26.69 309  eP     P       17 13 29.1 -1.1
CHVC  Chvalec            26.80 309  eP     P       17 13 32.9 +1.7
VAE   Valguarnera        27.45 280   LR    LR      17 25 06.5
      comp=Z,76nm,19.3s,baz=185,slow=38
FINES FINESS Array B     27.81 336   LR    LR      17 26 25.1
      comp=Z,59nm,18.1s,baz=146,slow=40
GEC2  GERESS Array S     27.89 305  eP     P       17 13 39.7 -1.4
      comp=Z,4.7nm,1.3s
GEC2  GERESS Array S     27.89 305  eP     P       17 13 39.7 -1.4
GEC2                                  pmax   pmax
      comp=Z,5.0nm,1.3s
GERES GERESS Array B     27.89 305   P     P       17 13 39.2 -1.9
      comp=Z,0.6nm,0.5s,baz=95,slow=8.3,SNR=11
KHC   Kasperske Hory     28.02 306  eP     P       17 13 40.4 -1.8
      comp=Z,1.2nm,1.4s
KHC   Kasperske Hory     28.02 306  eP     P       17 13 40.4 -1.8
KHC                                   pmax   pmax
      comp=Z,1.0nm,1.4s
CLL   Collm              28.85 310  eP     P       17 13 46.8 -2.7
      comp=Z,2.4nm,0.7s
CLL   Collm              28.85 310  eP     P       17 13 46.8 -2.7
CLL                                   pmax   pmax
      comp=Z,2.0nm,0.7s
ZAA0  Zalesovo Array     29.31  45  eP     P       17 13 52.2 -1.3
      comp=Z,2.1nm,1.1s
ZALV  Zalesovo Beam      29.31  45   P     P       17 13 55.3 +1.8
      comp=Z,0.3nm,0.3s,baz=215,slow=9.8,SNR=2.5
BNI   Bardonecchia       32.43 297  eP     P       17 14 19.9 -1.4
      comp=Z,3.7nm,1.2s
BNI   Bardonecchia       32.43 297  eP     P       17 14 19.9 -1.4
BNI                                   pmax   pmax
      comp=Z,4.0nm,1.2s
NC405 NORSAR Array S     33.08 327  eP     P       17 14 25.3 -1.4
      comp=Z,6.5nm,0.8s
NB201 NORSAR Array S     33.23 327  eP     P       17 14 27.4 -0.7
      comp=Z,41nm,1.4s
NB2   NORSAR Subarra     33.26 327   P     P       17 14 26.2 -2.1
      comp=Z,3.9nm,1.2s,baz=118,slow=9.3
NB200 NORSAR Array S     33.26 327  eP     P       17 14 26.9 -1.3
NOA   NORSAR Array B     33.26 327   P     P       17 14 26.9 -1.3
      comp=Z,0.8nm,0.7s,baz=118,slow=8.0,SNR=4.5
NOA                                   LR     LR      17 29 38.0
      comp=Z,24nm,19.3s,baz=295,slow=40
NOA   NORSAR Array B     33.26 327   P     P       17 14 27.0 -1.3
CMAR  Chiang Mai Arr     47.32 100   P     P       17 16 26.1 +1.0
      comp=Z,1.2nm,0.8s,baz=295,slow=6.9,SNR=4.5
HHC   Hu-ho-hao-te       47.51  66   P     P       17 16 26.7 +0.1
HHC                                   pmax   pmax
      comp=Z,18nm,1.0s
HHC                                   pmax   pmax
      comp=Z,76nm,7.1s
TOA1  Torodi Ar. Sit     48.70 253  eP     P       17 16 34.5 -1.3
TORD  Torodi Ar. Bea     48.70 253   P     P       17 16 34.5 -1.3
      comp=Z,0.7nm,1.0s,baz=22,slow=9.3,SNR=3.0
USRK  Ussuriysk Ar.      60.39  55   LR    LR      17 47 36.2
      comp=Z,34nm,19.3s,baz=288,slow=39
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IDC 06 17:13:15.6±3.2**, 31°.75S**×**177°.64W, h0^{km}, mb3.6**/2**, mb1 3.9**/3**, mb1mx3.6**/19**, mbtmp3.7**/3**, ML2.6**/1**, Error ellipse: s-maj=74.9km s-min=37.1km az=115.0, Kermadec Islands region**

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Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                      Op     ISC     h  m  s    ISC
URZ   Urewera             7.80 212   Pn    Pn      17 15 09.6 -0.6
      0.1nm,0.3s,baz=123,slow=17,SNR=2.2
URZ                                   Sn     Sn      17 16 42.0 +2.8
      0.3nm,0.3s,baz=233,slow=20,SNR=4.2
ASAR  Alice Springs      43.36 268   P     P       17 21 19.9 +0.1
      0.4nm,0.6s,baz=106,slow=7.8,SNR=9.8
WRA   Warramunga Arr     44.47 273   P     P       17 21 28.4 -0.4
      0.9nm,0.7s,baz=116,slow=7.5,SNR=12
FINES FINESS Array B    146.51 339   PKPbc PKPdf   17 32 57.3 +0.7
      1.3nm,0.8s,baz=72,slow=4.5,SNR=4.7
```

PGC 06 17:17:09.8±7.6**, 50°.50N**×**130°.66W, h10^{km}, MLSn2.9**/18**, Mw3.5**/18**, Mw3.5**/18**, 229km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

```
Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                      Op     ISC     h  m  s    ISC
HG4B  Hotspring           1.83 350   Pn    Pn      17 17 39.3 -1.9
HG4B                                  Sn     Sn      17 17 59.9 -4.5
BPBC  Brooks Peninsu      1.88  99   Pn    Pn      17 17 39.6 -2.5
PHC   Port Hardy          2.06  83   Pn    Pn      17 17 42.1 -2.4
PHC                                   Sn     Sn      17 18 03.8 -6.4
HG3B  Hotspring           2.13 347   Pn    Pn      17 17 43.2 -2.2
HG3B                                  Sn     Sn      17 18 08.5 -3.5
BNB   Barry Inlet         2.19 342   Pn    Pn      17 17 44.5 -1.7
BNB                                   Sn     Sn      17 18 09.8 -3.7
MAYB  Maynard             2.23  91   Pn    Pn      17 17 45.0 -2.0
MAYB                                  Sn     Sn      17 18 08.4 -6.2
BBB   Bella Bella         2.32  42   Pn    Pn      17 17 45.2 -2.8
BBB                                   Sn     Sn      17 18 08.2 -8.3
EDB   Eliza Dome          2.36 104   Pn    Pn      17 17 46.8 -1.8
TLCB  Telegraph Cove      2.44  87   Pn    Pn      17 17 48.4 -1.2
WOSB  Woss                2.64  96   Pn    Pn      17 17 51.2 -1.3
NTKA  Nootka              2.76 108   Pn    Pn      17 17 52.5 -1.6
MOBC  Moresby Island      2.77 343   Pn    Pn      17 17 52.4 -1.8
DIB   Dawson Inlet,       2.93 338   Pn    Pn      17 17 55.5 -0.9
NCRB  Newcastle Ridg      2.94  90   Pn    Pn      17 17 54.8 -1.9
NCRB                                  Sn     Sn      17 18 27.7 -4.4
GDR   Gold River          3.06 102   Pn    Pn      17 17 56.6 -1.6
CBB   Campbell River      3.43  96   Pn    Pn      17 18 02.2 -1.0
CBB                                   Sn     Sn      17 18 39.1 -4.8
BTB   Buttle Lake         3.47 105   Pn    Pn      17 18 02.6 -1.4
RUBB  Prince Rupert       3.84   4   Pn    Pn      17 18 07.1 -1.8
TXB   Texada              4.08  99   Pn    Pn      17 18 11.4 -0.9
MGB   Mount Grey          4.15 109   Pn    Pn      17 18 10.9 -2.4
SHB   Sechelt             4.46  99   Pn    Pn      17 18 16.6 -1.0
PFB   Port Renfrew        4.49 113   Pn    Pn      17 18 18.6 +0.8
UBRB  Upper Baezaeko      4.74  57   Pn    Pn      17 18 21.0 -0.3
UBRB                                  Sn     Sn      17 19 12.3 -4.1
FSB   Fort Saint Jam      5.55  42   Pn    Pn      17 18 30.7 -1.7
VDB   Vedder Mountai      5.74 102   Pn    Pn      17 18 36.7 +1.7
MBW   Mount Baker         5.94 103   Pn    Pn      17 18 39.1 +1.2
JCW   Jim Creek           6.15 109   Pn    Pn      17 18 41.6 +0.9
```

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*ISCJB **06** 18:14:19.2±0.6, 3°.05N±0°.04×126°.31E±0°.08, h63^{km}, mb3.6/3, Error ellipse: s-maj=12.1km s-min=4.5km az=161.5*

*DJA **06** 18:14:19.8±1.7, 3°N±5°×12°6E±°, h33^{km}±34^{km}, M4.2/6, mb4.7/1, mB4.5/1, MLv4.0/6, Mw(mB)3.7/1*

*MAN **06** 18:14:20.9, 3°.01N×125°.91E, h44^{km}, MS3.5*

*IDC **06** 18:14:29.9±16.0, 0°.99N×126°.33E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.4/36, mbtmp3.7/3, MS2.7/4, Ms1 2.8/4, ms1mx2.5/29, Error ellipse: s-maj=250.2km s-min=180.6km az=159.0*

ISC 06 18:14:20.5±1.0**, 3°.04N**±0°.06×**126°.30E**±0°.10**, h63^{km}, n18, σ0.^{s}91**/21**, mb3.8**/3**, 1D, Talaud Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                      Op     ISC     h  m  s    ISC
SGSI  Sangihe             1.01 310   P     Pn      18 14 38.9 +0.1
SGSI                                  S      Sn      18 14 53.2 +0.9
TNTI  Ternate             2.49 155   P     Pn      18 14 58.5 -0.2
DDMP  Don Marcelino,      3.10 349  eP     Pn      18 15 07.2 +0.1
DDMP                                 eS      Sn      18 15 42.5 -0.5
LBMI  Labuha              3.84 162   P     Pn      18 15 18.5 +1.3
SKMP  Bagumbayan, Su      3.88 333  eP     Pn      18 15 17.9 +0.1
SKMP                                 eS      Sn      18 16 00.5 -1.5
MATI  Mati                3.88 359  eP     Pn      18 15 18.5 +0.7
MATI                                 eS      Sn      18 16 03.0 +0.8
CTBH  Cotabato--PC H      4.63 334⇓iP     Pn      18 15 27.0 -1.0
BUKP  Musuan              4.97 346  eP     Pn      18 15 33.1 +0.5
BUKP                                 eS      Sn      18 16 29.5 +0.6
PAGZ  Pagadian            5.59 329  eP     Pn      18 15 41.5 +0.3
PAGZ                                 eS      Sn      18 16 44.6 +0.5
IPIL  Ipil                6.01 322  eP     Pn      18 15 48.1 +1.3
IPIL                                 eS      Sn      18 16 53.3 -1.0
APSI  Ampana              6.08 230   P     Pn      18 15 48.9 +1.0
KAPI  Kappang            10.33 219   LR    LR      18 20 47.2
      comp=Z,47nm,20.5s,baz=302,slow=42
JAY   Jayapura           15.42 111   LR    LR      18 23 24.9
      comp=Z,60nm,21.1s,baz=15,slow=36
GUMO  Guam               21.13  59   LR    LR      18 26 37.3
      comp=Z,18nm,21.9s,baz=138,slow=33
WRA   Warramunga Arr     24.16 161   P     P       18 19 29.9 -1.1
      1.4nm,0.4s,baz=338,slow=12,SNR=18
ASAR  Alice Springs      27.55 165   P     P       18 20 00.5 -1.2
      0.3nm,0.4s,baz=340,slow=8.8,SNR=14
CMAR  Chiang Mai Arr     30.86 302   LR    LR      18 34 37.2
      comp=Z,12nm,18.8s,baz=126,slow=38
STKA  Stephens Creek     37.64 158   P     P       18 21 30.0 +0.5
      1.2nm,0.9s,baz=319,slow=9.3,SNR=3.6
```

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*IDC **06** 18:15:44.0±1.3, 40°.89N×90°.09E, h0^{km}, mb3.4/4, mb1 3.6/9, mb1mx3.4/49, mbtmp3.5/9, ML3.4/5, MS3.0/3, Ms1 3.0/3, ms1mx2.5/31, Error ellipse: s-maj=42.9km s-min=19.7km az=58.0*

*ISCJB **06** 18:15:47.3±0.9, 41°.39N±0°.08×89°.95E±0°.08, h10^{km}, mb3.3/6, MS3.0/3, Error ellipse: s-maj=11.9km s-min=8.0km az=30.5*

*BJI **06** 18:15:50.4±0.0, 41°.03N×89°.85E, h10^{km}, mb3.8/3, ML3.8/15, Ms3.4/4, Ms7 3.3/4*

*NNC **06** 18:15:53.3±3.6, 41°.50N×89°.65E, h0^{km}, mb3.7, mpv3.9, Error ellipse: s-maj=47.1km s-min=29.8km az=4.0*

ISC 06 18:15:51.4±0.9**, 41°.41N**±0°.09×**89°.83E**±0°.07**, h10^{km}, n21, σ2.^{s}41**/24**, mb3.5**/6**, MS2.9**/3**, 4C-7D, Southern Xinjiang**

```
Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                      Op     ISC     h  m  s    ISC
WMQ   Urumqi              2.88 328  ePn    Pn      18 16 41.3 +3.9
WMQ                                   Sn     Sb      18 17 18.7 +0.5
WMQ                                   Sg     Sg      18 17 24.1 +0.3
WMQ                                   smax   smax
      comp=N,180nm,0.9s
WMQ                                   smax   smax
      comp=E,360nm,0.9s
MK31  Makanchi Array      7.64 317 ⇑Pn    Pn      18 17 44.5 +1.8
      1.2nm,0.2s,baz=135,slow=14,SNR=294
MK31                                  Sn     Sn      18 19 11.4 +2.1
      5.2nm,0.4s,baz=130,slow=26,SNR=7.0
MKAR  Makanchi Array      7.64 317   Pn    Pn      18 17 43.8 +1.1
      2.9nm,0.3s,baz=133,slow=14,SNR=156
MKAR                                  Sn     Sn      18 19 10.9 +1.6
      3.0nm,0.3s,baz=134,slow=26,SNR=8.9
MKAR                                  Lg     Lg      18 19 57.4
      0.5nm,0.3s,baz=135,slow=28,SNR=2.7
GTA   Gaotai              7.88 101  ePn    Pn      18 17 49.2 +3.1
GTA                                   smax   smax
      comp=N,45nm,1.1s
GTA                                   smax   smax
      comp=E,47nm,0.8s
PDGK  Podgornoye          7.89 287 ⇑Pn    Pn      18 17 47.0 +0.7
      3.5nm,0.4s
PDGK                                 ⇓Sn     Sn      18 19 15.3 -0.4
      13nm,0.6s
PDGK                                 ⇑Lg     Lg      18 19 58.5
      34nm,0.7s
TKM2  Tokmak 2           10.67 283 ⇓Pn    Pn      18 18 23.8 -0.7
      1.4nm,0.5s
TKM2                                 ⇓Sn     Sn      18 20 28.7 +4.6
      4.3nm,0.7s
TKM2                                 ⇓Lg     Lg      18 21 32.5
      9.4nm,0.9s
KURBB Kurchatov Arra     12.09 323   Pn    Pn      18 18 41.8 -1.8
      0.1nm,0.3s,baz=133,slow=13,SNR=8.6
KURBB Kurchatov Arra     12.09 323 ⇓Pn    Pn      18 18 42.2 -1.4
      0.8nm,0.6s
KURBB                                ⇓Lg     Lg      18 22 11.2
      16nm,0.7s
ZALV  Zalesovo Beam      12.99 347   Pn    Pn      18 18 55.1 -0.7
      0.2nm,0.3s,baz=170,slow=14,SNR=3.7
SONM  Songino Array      13.42  56   Pn    Pn      18 18 58.9 -3.1
      0.2nm,0.3s,baz=243,slow=14,SNR=3.5
BVAR  Borovoye Array     17.52 318   P     Pn      18 19 54.7 -0.9
      0.3nm,0.3s,baz=115,slow=11,SNR=6.1
AB31  Akbulak array      22.32 301 ⇓P     P       18 20 46.8 -2.2
      0.1nm,0.2s,baz=96,slow=12,SNR=6.9
WHN   Wuhan              22.54 111  eP     P       18 20 54.3 +2.8
AKTO  Aktyubinsk         23.74 303   P     P       18 21 01.9 -1.7
      0.6nm,0.7s,baz=121,slow=12,SNR=2.9
AKTO                                  LR     LR      18 30 37.8
      comp=Z,27nm,18.7s,baz=108,slow=37
AKTO  Aktyubinsk         23.74 303 ⇑P     P       18 21 06.9 +3.3
      1.0nm,0.7s
CMAR  Chiang Mai Arr     24.17 158   P     P       18 20 56.3  -12
      0.2nm,0.4s,baz=322,slow=42,SNR=2.9
JNU   Nakatsue           33.45  91   LR    LR      18 35 47.5
      comp=Z,44nm,19.0s,baz=171,slow=36
ASAJ  Asahikawa          38.29  68   LR    LR      18 39 26.2
      comp=Z,19nm,18.9s,baz=38,slow=37
FINES FINESS Array B     42.46 320   P     P       18 23 44.0 -2.1
      1.6nm,0.9s,baz=118,slow=8.0,SNR=2.7
NOA   NORSAR Array B     49.62 321   P     P       18 24 41.4 -1.2
      0.3nm,0.5s,baz=74,slow=7.5,SNR=2.7
TORD  Torodi Ar. Bea     80.05 279   P     P       18 27 57.7 -3.8
      0.4nm,0.6s,baz=63,slow=4.4,SNR=3.8
```

NEIC 06 18:29:35.6±0.0**, 52°.85N**×**165°.57W, h37^{km}, ML2.9**(AEIC)**, After AEIC., South of Aleutian Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                      Op     ISC     h  m  s    ISC
UNV   Unalaska Valle      1.15 331  ePn    Pn      18 29 55.2 +0.2
UNV                                  eSn     Sn      18 30 09.1 -0.3
MREP  Makushin Rep't      1.20 324  ePn    Pn      18 29 56.3 +0.5
MSW   Makushin Switc      1.29 326  ePn    Pn      18 29 57.6 +0.6
MSW                                  eSn     Sn      18 30 14.2 +1.1
AKSA  Akutan Strait       1.29 357  ePn    Pn      18 29 57.2 +0.2
AKSA                                 eSn     Sn      18 30 14.6 +1.5
AKUT  Akutan              1.30 355  ePn    Pn      18 29 57.8 +0.8
AKUT                                 eSn     Sn      18 30 15.4 +2.2
AKRB  Akutan Reef Bi      1.32 347  ePn    Pn      18 29 58.2 +0.8
MCIR  Makushin Cirqu      1.36 325  ePn    Pn      18 29 59.0 +0.9
OKTU  Okmok Mt. Tuli      1.58 291  ePn    Pn      18 30 02.2 +1.2
OKER  Okmok East Rim      1.61 293  ePn    Pn      18 30 02.7 +1.2
```

WESP	**Westdahl Peak**	**1.73**	**17**	ePn	Pn	18 30 04.0	+1.0
WESP				eSn	Sn	18 30 25.9	+2.1
OKAK	**Okmok**	**1.83**	**295**	ePn	Pn	18 30 04.3	0.0
NIKH	**Nikolski High**	**1.99**	**275**	ePn	Pn	18 30 04.3	-2.3
FALS	**False Pass**	**2.38**	**31**	ePn	Pn	18 30 12.8	+0.8
FALS				eSn	Sn	18 30 39.0	-0.9
SDPT	**Sand Point**	**3.91**	**48**	ePn	Pn	18 30 33.8	+0.8
SDPT				eSn	Sn	18 31 17.5	0.0
ATKA	**Atka Island**	**5.31**	**266**	ePn	Pn	18 30 52.0	-0.1
CHGN	**Chignik**	**5.41**	**47**	ePn	Pn	18 30 54.5	+1.0
CHIA	**Chirikof Islan**	**6.56**	**59**	ePn	Pn	18 31 08.9	-0.5
ADK	**Adak**	**6.88**	**266**	ePn	Pn	18 31 15.9	+2.2
ADK				eSn	Sn	18 32 30.9	+0.4
KDAK	**Kodiak Island**	**8.90**	**51**	ePn	Pn	18 31 40.4	-1.0
CNPM	**China Poot**	**10.41**	**44**	ePn	Pn	18 32 02.0	0.0
BRLK	**Bradley Lake**	**10.69**	**44**	ePn	Pn	18 32 06.8	+1.0

---

*ISCJB **06** 18:31:06.2±0.7, 3°.78S±0°.06×128°.89E±0°.07, h100^{km}, mb3.7/2, Error ellipse: s-maj=9.9km s-min=8.5km az=6.3*
*DJA **06** 18:31:09.3±0.5, 4°S±5°×12°9E±°, h102^{km}±5^{km}, M4.4/10, mb4.7/2, MLv4.2/10*
*IDC **06** 18:31:11.4±3.4, 3°.56S×129°.33E, h169^{km}±48^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.3/24, mbtmp4.1/5, Error ellipse: s-maj=59.0km s-min=17.2km az=77.0*
ISC 06 18:31:07.5±0.9**, 3°.62S**±0°.07×**128°.85E**±0°.06**, h100^{km}, n13, σ2^{s}.38**/15**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.28**	**15**	P	**Pn**	**18 31 24.9**	**+2.8**
MSAI				S	**Sn**	**18 31 36.6**	**+3.7**
AAI	**Ambon**	**0.66**	**264**	P	**Pn**	**18 31 27.6**	**+3.0**
BNDI	**Bandanaira**	**1.38**	**130**	P	**Pn**	**18 31 35.1**	**+2.8**
NLAI	**Namlea**	**1.79**	**282**	P	**Pn**	**18 31 39.0**	**+1.6**
LBMI	**Labuha**	**3.26**	**335**	P	**Pn**	**18 31 58.2**	**+1.4**
FAKI	**Fak Fak**	**3.46**	**78**	P	**Pn**	**18 32 01.3**	**+1.8**
SIJI	**Sorong**	**3.65**	**41**	P	**Pn**	**18 32 03.4**	**+1.5**
	29nm,0.3s,baz=50,slow=8.5,SNR=130						
SIJI				S	**Sn**	**18 32 44.0**	**-0.1**
	41nm,0.3s,baz=292,slow=23,SNR=29						
TNTI	**Ternate**	**4.61**	**341**	P	**Pn**	**18 32 16.4**	**+1.4**
RKPI	**Ransiki, Papua**	**5.72**	**69**	P	**Pn**	**18 32 31.5**	**+1.5**
	248nm,0.9s						
WRA	**Warramunga Arr**	**17.08**	**162**	P	**Pn**	**18 34 57.4**	**-2.9**
	1.0nm,0.3s,baz=344,slow=12,SNR=26						
WRA				S	Sn	18 37 56.8	-13
	0.3nm,0.3s,baz=339,slow=23,SNR=3.5						
ASAR	**Alice Springs**	**20.52**	**167**	P	**P**	**18 35 36.5**	**-1.3**
	6.2nm,0.5s,baz=350,slow=12,SNR=169						
ASAR				S	S	18 39 13.2	-8.9
	4.3nm,0.8s,baz=348,slow=22,SNR=17						
CMAR	**Chiang Mai Arr**	**36.74**	**308**	P	**P**	**18 38 05.5**	**0.0**
	1.0nm,0.6s,baz=129,slow=6.9,SNR=8.1						
MKAR	**Makanchi Array**	**64.79**	**327**	P	**P**	**18 41 33.5**	**-2.1**
	0.5nm,0.5s,baz=127,slow=8.3,SNR=7.6						

UCR 06 18:58:38.9±0.9**, 9°.90N×86°.51W, h0^{km}**±9^{km}**, MW3.6, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	**Buena Vista**	**1.41**	**51**	eP	Pn	18 59 04.8	-1.0
GB1A	**Borinquen Arri**	**1.43**	**50**	eP	Pn	18 59 05.0	-1.1
GB1A				eS	Sg	18 59 24.2	-0.6
CUI	**Cuipilapa**	**1.53**	**60**	eP	Pn	18 59 07.4	-0.1
CUI				eS	Sg	18 59 27.7	-0.3
MESS	**Mesas**	**1.54**	**57**	eP	Pn	18 59 07.4	-0.3
MESS				eS	Sn	18 59 28.2	-0.3

MEX 06 19:04:28.1±0.4**, 15°.19N×93°.63W, h45^{km}**±17^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.65**	**38**	eP	Pn	19 04 39.4	-1.7
PCIG				eS	Sn	19 04 48.3	-2.0
TGIG		**1.66**	**17**	i P	Pn	19 04 53.4	-1.4
TGIG				i S	Sn	19 05 12.6	-2.3
CCIG	**Comitan**	**1.81**	**53**	eP	Pn	19 04 55.6	-1.3
CCIG				eS	Sn	19 05 16.6	-2.1

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*IDC **06** 19:14:25.4±1.3, 56°.63S×25°.47W, h0^{km}, mb4.4/3, mb1 4.4/3, mb1mx3.9/16, mbtmp4.4/3, Error ellipse: s-maj=47.2km s-min=34.0km az=86.0*
*ISCJB **06** 19:14:28.5±0.7, 56°.59S±0°.09×25°.6W±0°.1, h29^{km}, mb4.3/7, Error ellipse: s-maj=15.4km s-min=7.8km az=41.2*
*NEIC **06** 19:14:30.9±0.9, 56°.61S×25°.48W, h35^{km}, mb4.6/7, Error ellipse: s-maj=23.4km s-min=14.5km az=119.0*
ISC 06 19:14:30.0±0.9**, 56°.6S**±0°.1×**25°.4W**±0°.1**, h29^{km}, n23, σ0^{s}.62**/18**, mb4.5**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.71**	**286**	ePn	**Pn**	**19 16 07.3**	**+0.9**
HOPE				eSn	**Sn**	**19 17 21.2**	**-0.7**
VNA1	**Neumayer--Stat**	**15.91**	**159**	P	**P**	**19 18 13.4**	**-1.5**
VNA3	**Neumayer Olymp**	**16.14**	**162**	P	**Pn**	**19 18 14.6**	**+0.2**
SNAA	**Sanae**	**17.83**	**157**	P	**P**	**19 18 37.1**	**+0.9**
SNAA	**Sanae**	**17.83**	**157**	ePn	**P**	**19 18 36.5**	**+0.3**
	6.3nm,1.4s						
PMSA	**Palmer Station**	**20.29**	**230**	eP	**P**	**19 19 03.3**	**+0.3**
	52nm,1.4s						
QSPA	**South Pole Qui**	**33.64**	**180**	eP	**P**	**19 21 07.7**	**-0.1**
	9.2nm,1.5s						
VNDA	**Vanda**	**46.05**	**182**	P	**P**	**19 22 49.9**	**-0.5**
	0.5nm,0.7s,baz=170,slow=6.7,SNR=4.3						
VNDA	**Vanda**	**46.05**	**182**	eP	**P**	**19 22 50.8**	**+0.4**
H10S2	**ASCENSION HYDR**	**48.28**	**14**	T	T	20 15 43.9	
	baz=188						
H10S3	**ASCENSION HYDR**	**48.28**	**14**	T	T	20 15 34.6	
	baz=188						
H10S1	**ASCENSION HYDR**	**48.30**	**14**	T	T	20 15 33.2	
	baz=188						
GO01	**Chusmiza**	**49.08**	**300**	eP	**P**	**19 23 14.6**	**-0.5**
	4.1nm,0.8s						
PB11	**IPOC Station P**	**49.22**	**300**	eP	**P**	**19 23 15.2**	**-0.6**
	13nm,1.1s						
H10N1	**ASCENSION HYDR**	**49.40**	**14**	T	T	20 17 12.1	
	baz=196						
H10N3	**ASCENSION HYDR**	**49.40**	**14**	T	T	20 17 13.3	
	baz=196						
H10N2	**ASCENSION HYDR**	**49.41**	**14**	T	T	20 17 08.2	
	baz=196						
MNMC	**Minye Minye**	**49.73**	**300**	eP	**P**	**19 23 19.7**	**-0.1**
	9.3nm,1.0s						
LPAZ	**La Paz**	**51.50**	**304**	P	**P**	**19 23 33.3**	**-0.3**
	2.3nm,0.4s,baz=163,slow=5.2,SNR=12						
LPAZ	**La Paz**	**51.50**	**304**	eP	**P**	**19 23 33.4**	**-0.3**
	4.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**73.08**	**28**	P	**P**	**19 25 57.5**	**+0.2**
	0.2nm,0.5s,baz=212,slow=7.0,SNR=3.0						
TOA1	**Torodi Ar. Sit**	**73.08**	**28**	eP	**P**	**19 25 57.5**	**+0.2**
ILAR	**Eielson Array**	**151.22**	**311**	PKPbc	**PKPbc**	**19 34 18.6**	**-0.3**
	0.6nm,0.8s,baz=129,slow=2.4,SNR=5.9						

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*ISK **06** 19:15:35.8, 38°.52N×43°.88E, h27^{km}, ML2.3/4*
*ISCJB **06** 19:15:39.7±0.8, 38°.74N±0°.03×43°.61E±0°.07, h21^{km}±7^{km}, Error ellipse: s-maj=9.3km s-min=5.7km az=4.2*
*DDA **06** 19:15:39.4, 38°.72N×43°.51E, h7^{km}±3^{km}, ML2.6*
ISC 06 19:15:40.5±1.1**, 38°.75N**±0°.03×**43°.54E**±0°.05**, h16^{km}**±7^{km}**, n11, σ1^{s}.27**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.19**	**218**	PG	**Pg**	**19 15 44.5**	**-0.6**
VANB				SG	**Sg**	**19 15 50.9**	**+2.7**
TVAN	**Van**	**0.24**	**205**	i P	**Pg**	**19 15 44.8**	**-1.1**
TVAN				IAML_P			
	comp=Z,14µm,0.2s						
VMUR	**Van-Muradiye**	**0.25**	**6**	i P	**Pg**	**19 15 45.2**	**-0.9**
VMUR				i S	**Sg**	**19 15 50.0**	**+0.1**
VMUR				IAML_P			
	comp=Z,2µm,0.1s						
GEVA	**Gevas**	**0.57**	**221**	i P	**Pg**	**19 15 50.7**	**-1.2**
GEVA				i S	**Sg**	**19 15 59.3**	**-0.2**
GEVA				IAML_P			
	comp=Z,937nm,0.2s						
AKDM	**Akdamar-Van**	**0.60**	**227**	PG	**Pg**	**19 15 50.6**	**-1.8**
AKDM				SG	**Sb**	**19 16 01.3**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.64**	**276**	i P	**Pg**	**19 15 51.9**	**-1.2**
ADCV				i S	**Sb**	**19 16 02.5**	**+0.4**
ADCV				IAML_P			
	comp=Z,305nm,0.1s						
BASK	**Baskale_VAN**	**0.78**	**152**	i P	**Pg**	**19 15 54.8**	**-1.0**
BASK				IAML_P			
	comp=Z,978nm,0.1s						
TUTA	**Tutak**	**0.86**	**320**	i P	**Pg**	**19 15 56.2**	**-1.1**
TUTA				i S	**Sb**	**19 16 08.9**	**+0.2**
MLAZ	**Malazgirt-MUS**	**0.87**	**298**	PN	**Pb**	**19 15 57.3**	**0.0**
AGRB	**Hanur-Agry**	**0.93**	**333**	PN	**Pg**	**19 15 58.1**	**-0.5**
HAKT	**HAKKARI**	**1.19**	**173**	i P	**Pb**	**19 16 02.2**	**-0.7**
HAKT				i S	**Sn**	**19 16 20.7**	**+1.9**
HAKT				IAML_P			
	comp=Z,269nm,0.2s						

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*ISCJB **06** 19:40:26.6±0.2, 18°.67S±0°.02×69°.31W±0°.03, h98^{km}±3^{km}, mb4.8/61, Error ellipse: s-maj=4.9km s-min=3.2km az=136.1*
*SJA **06** 19:40:26.9±0.6, 18°.85S×69°.55W, h117^{km}±4^{km}, ML4.6, MW5.0*
*NEIC **06** 19:40:28.7±1.7, 18°.82S×69°.30W, h99^{km}±2^{km}, mb4.9/231, ML5.1(GUC), Error ellipse: s-maj=13.0km s-min=9.3km az=92.0*
NEIC Felt [IV] at Cuya; [III] at Alcerreca, Codpa, Huara and Poconchile; [II] at Arica, Mamina, Pisagua and Putre.
*GUC **06** 19:40:28.4±0.7, 18°.85S×69°.52W, h103^{km}±3^{km}, ML5.1*
*BJI **06** 19:40:29.8±0.0, 18°.90S×69°.30W, h102^{km}, mB5.2/5*
*IDC **06** 19:40:30.0±0.4, 18°.69S×69°.21W, h109^{km}±2^{km}, mb4.4/18, mb1 4.6/21, mb1mx4.5/26, mbtmp4.9/21, MS3.5/12, Ms1 3.5/12, ms1mx3.3/27, Error ellipse: s-maj=11.5km s-min=8.3km az=90.0*
*VAO **06** 19:40:30.6±0.5, 18°.82S×69°.18W, h112^{km}±4^{km}, mb5.1*
*GCMT **06** 19:40:33.7±0.3, 18°.88S±0°.02×69°.62W±0°.03, h131^{km}±4^{km}, MW5.0/69, Moment Tensor Solution. s20,c22; s69,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.48±.20; $M_{\theta\theta}$-1.71±.26; $M_{\phi\phi}$1.23±.31; $M_{r\theta}$-0.28±.11; $M_{\theta\phi}$1.92±.16; $M_{\phi r}$-3.20±.14; Best double couple: $M_0$3.90200×10^{16} NP1:ϕ_s164.00000°, δ84.00000°, λ130.00000°. NP2: ϕ_s261.00000°, δ41.00000°, λ9.00000°. Principal axes: T 4.5120, Plg38.0000°, Azm109.0000°; N -1.2170, Plg40.0000°, Azm339.0000°; P -3.2920, Plg28.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 19:40:28.8±0.3**, 18°.80S**±0°.03×**69°.41W**±0°.04**, h104^{km}**±2^{km}**, h104^{km}:pP-P, n634, σ1^{s}.02**/693**, mb4.9**/62**, 9C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	**0.37**	**208**	ePn	**Pn**	**19 40 43.7**	**-0.9**
MNMC				eSn	**Sn**	**19 40 55.9**	**-0.5**
MNMC	**Minye Minye**	**0.37**	**208**	⇑iP	**Pn**	**19 40 44.2**	**-0.4**
MNMC				i S	**Sn**	**19 40 55.6**	**-0.8**
MNMC				IAML		19 40 56.8	
	comp=E,157µm,0.2s						
MNMCX	**Minye Minye**	**0.37**	**208**	i P	**Pn**	**19 40 43.8**	**-0.8**
MNMCX				i S	**Sn**	**19 40 57.2**	**+0.8**
PB16	**IPOC Station P**	**0.47**	**349**	i P	**Pn**	**19 40 46.2**	**+0.7**
PB16				i S	**Sn**	**19 41 00.3**	**+2.3**
PB16	**IPOC Station P**	**0.47**	**349**	⇑iP	**Pn**	**19 40 46.0**	**+0.5**
PB16				i S	**Sn**	**19 40 59.1**	**+1.1**
GO01	**Chusmiza**	**0.89**	**167**	ePn	**Pn**	**19 40 49.2**	**+0.3**
GO01				eSn	**Sn**	**19 41 04.5**	**+0.6**
GO01	**Chusmiza**	**0.89**	**167**	⇓iP	**Pn**	**19 40 49.2**	**+0.3**
GO01				i S	**Sn**	**19 41 04.6**	**+0.6**
PB12	**IPOC Station P**	**0.89**	**282**	i P	**Pn**	**19 40 47.0**	**-1.5**
PB12				i S	**Sn**	**19 41 02.6**	**-0.7**
PB12	**IPOC Station P**	**0.89**	**282**	⇑iP	**Pn**	**19 40 47.6**	**-0.9**
PB12				i S	**Sn**	**19 41 02.0**	**-1.3**
PB11	**IPOC Station P**	**0.98**	**194**	ePn	**Pn**	**19 40 48.5**	**-1.0**
PB11				eSn	**Sn**	**19 41 04.3**	**-0.8**
PB11	**IPOC Station P**	**0.98**	**194**	i P	**Pn**	**19 40 48.9**	**-0.6**
PB11				i S	**Sn**	**19 41 04.9**	**-0.2**
PB11	**IPOC Station P**	**0.98**	**194**	⇑iP	**Pn**	**19 40 49.1**	**-0.5**
PB11				i S	**Sn**	**19 41 04.4**	**-0.7**
PSGC	**Pisagua**	**1.04**	**220**	⇑iP	**Pn**	**19 40 49.0**	**-1.1**
PSGC				i S	**Sn**	**19 41 04.1**	**-2.0**
PSGCX	**Pisagua**	**1.04**	**220**	i P	**Pn**	**19 40 48.9**	**-1.2**
PSGCX				i S	**Sn**	**19 41 04.8**	**-1.2**
PB08	**IPOC Station P**	**1.35**	**170**	⇑iP	**Pn**	**19 40 54.4**	**+0.4**
PB08				i S	**Sn**	**19 41 13.3**	**+0.4**
PB08				IAML		19 41 14.5	
	comp=E,23µm,0.5s						
PB01	**IPOC Station P**	**2.23**	**182**	ePn	**Pn**	**19 41 04.4**	**-0.2**
PB01	**IPOC Station P**	**2.23**	**182**	⇑iP	**Pn**	**19 41 04.1**	**-0.6**
PB01				i S	**Sn**	**19 41 31.5**	**-0.5**
PB01				IAML		19 41 37.1	
	comp=E,9µm,0.7s						
PB02	**IPOC Station P**	**2.55**	**190**	eP	**Pn**	**19 41 08.1**	**-0.7**
LPAZ	**La Paz**	**2.78**	**26**	P	**Pn**	**19 41 15.5**	**+3.1**
	comp=E,40nm,0.3s,baz=224,slow=5.7,SNR=461						
LPAZ				S	**Sn**	**19 41 44.4**	**-1.3**
	comp=E,21nm,0.3s,baz=225,slow=13,SNR=9.4						
LPAZ				LR	LR	19 42 17.9	
	comp=E,514nm,18.6s,baz=218,slow=41						
LPAZ	**La Paz**	**2.78**	**26**	ePn	**Pn**	**19 41 15.4**	**+3.1**
LPAZ				eSn	**Sn**	**19 41 45.6**	**-0.1**
LPAZ	**La Paz**	**2.78**	**26**	eP	**Pn**	**19 41 15.5**	**+3.1**
LPAZ				eS	**Sn**	**19 41 45.9**	**+0.2**
PB07	**IPOC Station P**	**2.94**	**189**	eP	**Pn**	**19 41 14.0**	**-0.1**
PB07				IAML		19 41 59.1	
	comp=E,8µm,0.3s						
PB09	**IPOC Station P**	**2.98**	**177**	eP	**Pn**	**19 41 14.9**	**+0.3**
PB09				IAML		19 41 57.1	
	comp=E,5µm,0.5s						
PB03	**IPOC Station P**	**3.25**	**186**	⇓iP	**Pn**	**19 41 18.1**	**+0.1**
PB03				i S	**Sn**	**19 41 56.2**	**+0.1**
PB03				IAML		19 42 07.2	
	comp=E,3µm,0.6s						
PB04	**IPOC Station P**	**3.58**	**191**	ePn	**Pn**	**19 41 22.0**	**-0.6**
LVC	**Limon Verde**	**3.82**	**173**	P	**Pn**	**19 41 28.2**	**+2.3**
	comp=E,78nm,0.3s,baz=342,slow=9.5,SNR=196						
LVC				S	**Sn**	**19 42 13.6**	**+3.5**
	comp=E,114nm,0.3s,baz=144,slow=22,SNR=5.3						
LVC	**Limon Verde**	**3.82**	**173**	ePn	**Pn**	**19 41 26.4**	**+0.5**
LVC	**Limon Verde**	**3.82**	**173**	eP	**Pn**	**19 41 26.6**	**+0.6**
LVC	**Limon Verde**	**3.82**	**173**	eP	**Pn**	**19 41 26.6**	**+0.6**
PB10	**IPOC Station P**	**4.81**	**193**	ePn	**Pn**	**19 41 36.2**	**-2.8**
HJA	**Humahuaca**	**5.76**	**140**	i P	**Pn**	**19 41 53.1**	**+0.9**
HJA				IAML		19 41 58.6	
	comp=Z,235nm,0.6s						
GO02	**Mina Guanaco**	**6.33**	**181**	ePn	**Pn**	**19 41 58.4**	**-1.5**
AZAP	**Zapla**	**6.74**	**144**	i P	**Pn**	**19 42 05.3**	**-0.1**
SIV	**San Ignacio**	**8.44**	**72**	P	**Pn**	**19 42 27.2**	**-1.1**
	comp=Z,41nm,0.3s,baz=266,slow=12,SNR=472						
SIV				S	**Sn**	**19 43 58.8**	**-3.1**
	comp=Z,2.3nm,0.3s,baz=164,slow=23,SNR=5.6						
GO03	**Copiap**	**8.78**	**185**	ePn	**Pn**	**19 42 31.0**	**-2.0**
NNA	**Nana**	**9.86**	**312**	P	**Pn**	**19 42 46.1**	**-1.5**
	comp=Z,1.9nm,0.3s,baz=102,slow=7.4,SNR=4.1						
NNA				S	Sn	19 44 55.5	+19
	comp=Z,2.9nm,0.3s,baz=273,slow=22,SNR=1.6						
NNA	**Nana**	**9.86**	**312**	ePn	**Pn**	**19 42 46.0**	**-1.7**
GO04	**Tololo Observa**	**11.39**	**186**	ePn	Pn	19 43 03.1	-5.3
CFA	**Coronel Fontan**	**12.79**	**175**	P	**Pn**	**19 43 22.4**	**-4.5**
	comp=Z,1.2nm,0.3s,baz=16,slow=15,SNR=6.6						
CFA				S	**S**	**19 46 04.3**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=72,slow=20,SNR=1.8						
CFA				LR	LR	19 48 43.0	
	comp=Z,175nm,18.2s,baz=106,slow=38						
AQDB	**Aquidauana**	**13.03**	**100**	eP	**Pn**	**19 43 27.1**	**-2.8**
CPUP	**Villa Florida**	**13.44**	**126**	P	**Pn**	**19 43 33.2**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=304,slow=12,SNR=34						
CPUP				LR	LR	19 49 47.3	
	comp=Z,219nm,18.3s,baz=312,slow=42						
CPUP	**Villa Florida**	**13.44**	**126**	ePn	**Pn**	**19 43 32.8**	**-2.5**
CPUP	**Villa Florida**	**13.44**	**126**	eP	**Pn**	**19 43 32.6**	**-2.7**
ATAH	**Atahualpa**	**14.52**	**322**	P	**Pn**	**19 43 48.6**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=69,slow=6.7,SNR=5.3						
ATAH				LR	LR	19 48 59.1	
	comp=Z,225nm,20.8s,baz=153,slow=35						
CLDB	**Colider**	**15.33**	**61**	eP	**Pn**	**19 43 56.9**	**-2.7**
TRCB	**Terra Rica**	**16.18**	**107**	eP	**Pn**	**19 44 09.5**	**-0.7**
GO05	**Huala**	**16.30**	**187**	ePn	**Pn**	**19 44 11.7**	**+0.1**
	comp=Z,29nm,1.1s						
PTGB	**Pitanga**	**17.15**	**113**	eP	**Pn**	**19 44 21.9**	**-0.2**
ITRB	**Iturama**	**18.01**	**96**	eP	**P**	**19 44 31.0**	**-0.6**
CPSB	**Cacapava Do Su**	**18.53**	**132**	eP	**P**	**19 44 36.2**	**-1.0**
FRTB	**Fartura**	**19.06**	**107**	eP	**P**	**19 44 42.5**	**-0.6**
PLTB	**Pedras Altas**	**19.23**	**135**	eP	**P**	**19 44 43.7**	**-1.1**
BB19B	**Bebedouro**	**19.76**	**100**	eP	**P**	**19 44 49.5**	**-1.3**
CNLB	**Canela**	**19.89**	**125**	eP	**P**	**19 44 52.1**	**0.0**
PTGA	**Pitinga**	**20.21**	**28**	P	**P**	**19 44 54.1**	**-1.4**
	comp=Z,21nm,0.4s,baz=218,slow=14,SNR=39						
PTGA				S	**S**	**19 48 33.7**	**-3.0**
	comp=Z,2.0nm,0.3s,baz=311,slow=22,SNR=2.1						
PTGA				LR	LR	19 52 21.5	
	comp=Z,85nm,21.0s,baz=214,slow=36						
PTGA	**Pitinga**	**20.21**	**28**	eP	**P**	**19 44 54.1**	**-1.4**
	comp=Z,48nm,1.1s						
PTGA	**Pitinga**	**20.21**	**28**	eP	**P**	**19 44 54.0**	**-1.5**
TRQA	**Tornquist**	**20.25**	**163**	eP	**P**	**19 44 55.6**	**-0.3**
	comp=Z,91nm,0.8s						
OGAUY	**Aigu**	**20.26**	**143**	eP	**P**	**19 44 55.4**	**-0.6**
BDFB	**Brasilia**	**20.68**	**85**	P	**P**	**19 44 59.8**	**-0.9**
	comp=Z,59nm,0.4s,baz=251,slow=9.2,SNR=39						
BDFB	**Brasilia**	**20.68**	**85**	eP	**P**	**19 44 59.6**	**-1.1**
	comp=Z,72nm,0.5s						
RCLB	**Rio Claro- Sao**	**20.79**	**104**	eP	**P**	**19 45 00.7**	**-1.1**
SPB	**Sao Paulo**	**21.03**	**107**	eP	**P**	**19 45 02.3**	**-2.0**
	comp=Z,31nm,0.6s						
SPB	**Sao Paulo**	**21.03**	**107**	eP	**P**	**19 45 02.8**	**-1.6**
FLOC	**Florencia**	**21.17**	**342**	eP	**P**	**19 45 05.4**	**-0.5**
FLOC				eP	**P**	**19 45 05.7**	**-0.1**
PEXB	**Peixe**	**21.40**	**75**	eP	**P**	**19 45 07.3**	**-1.0**
PMNB	**Patos De Minas**	**21.77**	**93**	eP	**P**	**19 45 11.0**	**-1.3**
PLCA	**Paso Flores**	**21.88**	**182**	P	**P**	**19 45 15.1**	**+1.8**
	comp=Z,20nm,1.1s,baz=28,slow=11,SNR=20						
PLCA				LR	LR	19 54 21.2	
	comp=Z,174nm,18.1s,baz=11,slow=38						
PLCA	**Paso Flores**	**21.88**	**182**	eP	**P**	**19 45 13.7**	**+0.4**
	comp=Z,53nm,1.4s						
PLCA	**Paso Flores**	**21.88**	**182**	eP	**P**	**19 45 14.8**	**+1.6**
BBAC	**Balboa, Cauca**	**22.08**	**339**	eP	**P**	**19 45 15.8**	**+0.1**
POPC	**Popayan, Colom**	**22.38**	**341**	eP	**P**	**19 45 20.0**	**+1.1**
PARB	**Paraibuna**	**22.64**	**106**	eP	**P**	**19 45 19.3**	**-2.1**
PRAC	**Prado**	**23.01**	**346**	eP	**P**	**19 45 23.4**	**-1.6**
BSCB	**Bom Sucesso**	**23.26**	**100**	eP	**P**	**19 45 25.9**	**-1.5**
ORTC	**Ortega, Tolima**	**23.29**	**345**	eP	**P**	**19 45 25.5**	**-2.0**
SMTB	**Santa Maria do**	**23.35**	**68**	eP	**P**	**19 45 27.7**	**-0.5**
CHIC	**Chingaza**	**23.67**	**349**	eP	**P**	**19 45 29.3**	**-2.2**
ESAR	**Angra dos Reis**	**23.69**	**105**	eP	**P**	**19 45 30.6**	**-0.5**
ROSC	**El Rosal**	**23.98**	**348**	LR	LR	19 56 22.1	
	comp=Z,88nm,21.8s,baz=236,slow=40						
YOPC	**Yopal, Colombi**	**24.18**	**353**	eP	**P**	**19 45 37.7**	**+1.9**
RREF	**El Recreo**	**24.27**	**345**	eP	**P**	**19 45 36.9**	**-0.2**
VAS01	**Vassouras-RJ**	**24.55**	**103**	eP	**P**	**19 45 38.9**	**-0.1**
GUY2C	**Guyana, Caldas**	**24.58**	**346**	eP	**P**	**19 45 39.2**	**-0.6**
NORC	**Norcasia**	**24.80**	**347**	eP	**P**	**19 45 41.1**	**-0.2**
RUSC	**La Rusia**	**24.80**	**351**	eP	**P**	**19 45 41.6**	**-0.2**
TAMC	**Tame, Arauca**	**25.19**	**354**	eP	**P**	**19 45 43.7**	**-1.1**
BARC	**Barichara**	**25.51**	**351**	eP	**P**	**19 45 47.0**	**-0.9**
PTBC	**PUERTO BERRIO,**	**25.67**	**348**	eP	**P**	**19 45 46.2**	**-3.0**
DBBC	**Dabeiba**	**26.52**	**345**	eP	**P**	**19 45 55.4**	**-1.4**
CAPV	**Capacho**	**26.65**	**354**	eP	**P**	**19 45 57.8**	**-0.4**
ZARC	**Zaragoza, Cauc**	**26.67**	**348**	eP	**P**	**19 45 56.8**	**-1.4**
SJMB	**Sao Joao De Ma**	**26.72**	**94**	eP	**P**	**19 45 58.4**	**-0.2**
SOCV	**Socops**	**26.95**	**357**	eP	**P**	**19 45 59.3**	**-1.4**
BSFB	**Barra de Sao F**	**27.03**	**95**	eP	**P**	**19 46 00.9**	**-0.5**
ALF01	**Guarapari-ES**	**27.05**	**99**	eP	**P**	**19 46 01.5**	**-0.1**
SDV	**Santo Domingo**	**27.54**	**357**	P	**P**	**19 46 05.0**	**-1.1**
	comp=Z,7.0nm,0.3s,baz=277,slow=3.4,SNR=7.9						
SDV	**Santo Domingo**	**27.54**	**357**	eP	**P**	**19 46 05.3**	**-0.8**
MDP	**Montagnes des**	**28.93**	**36**	P	**P**	**19 46 17.3**	**-1.1**
	comp=Z,5.6nm,0.6s,baz=204,slow=9.0,SNR=8.1						
MDP				LR	LR	19 58 59.1	
	comp=Z,144nm,20.8s,baz=237,slow=39						
PCRV	**Puerto La Cruz**	**29.18**	**10**	P	**P**	**19 46 20.3**	**-0.2**
	comp=Z,12nm,1.0s,baz=286,slow=11,SNR=1.8						
VIRV	**Villa del Rosa**	**29.27**	**354**	eP	**P**	**19 46 18.1**	**-3.1**
JTS	**Las Juntas de**	**32.72**	**331**	eP	**P**	**19 46 53.6**	**+1.9**
	comp=Z,18nm,0.9s						
NBLI	**Livramento-PB**	**33.53**	**75**	eP	**P**	**19 46 58.6**	**-0.3**
EFI	**East Falkland**	**34.00**	**167**	eP	**P**	**19 47 03.2**	**+0.8**
	comp=Z,48nm,1.1s						
NBPA	**Parau_RN**	**34.04**	**72**	eP	**P**	**19 47 03.2**	**-0.1**
RCBR	**Riachuelo**	**35.10**	**73**	eP	**P**	**19 47 12.2**	**-0.2**
	comp=Z,27nm,0.6s						
RCBR	**Riachuelo**	**35.10**	**73**	eP	**P**	**19 47 12.6**	**+0.2**
TEIG	**Tepich**	**42.97**	**334**	eP	**P**	**19 48 18.5**	**+0.7**
	comp=Z,32nm,0.8s						
PMSA	**Palmer Station**	**46.08**	**177**	eP	**P**	**19 48 43.4**	**+1.4**
	comp=Z,22nm,1.1s						
TLIG	**Tlapa**	**46.12**	**320**	eP	**P**	**19 48 44.6**	**+1.5**
	comp=Z,18nm,0.9s						
059Z	**Ave Maria**	**46.37**	**345**	P	**P**	**19 48 44.9**	**+0.2**
	baz=164						
058A	**Arcadia**	**47.14**	**345**	P	**P**	**19 48 51.0**	**+0.3**
	baz=164						
DWPF	**Disney Wildern**	**48.06**	**346**	P	**P**	**19 48 58.1**	**+0.3**
	baz=165						
757A	**Oxford**	**49.01**	**345**	P	**P**	**19 49 05.5**	**+0.5**
	baz=164						
656A	**Willston**	**49.54**	**345**	P	**P**	**19 49 09.4**	**+0.4**
	baz=164						
657A	**Interlachen**	**49.58**	**346**	P	**P**	**19 49 10.0**	**+0.6**
	baz=164						
655A	**Horseshoe Beac**	**49.85**	**344**	P	**P**	**19 49 11.7**	**+0.3**
	baz=163						
557A	**Orange Park**	**49.97**	**346**	P	**P**	**19 49 12.6**	**+0.4**
	baz=165						
556A	**Lake Butler**	**50.11**	**345**	P	**P**	**19 49 13.9**	**+0.6**
	baz=164						
555A	**McAlpin**	**50.36**	**345**	P	**P**	**19 49 15.7**	**+0.5**
	baz=163						
554A	**Perry**	**50.51**	**344**	P	**P**	**19 49 17.0**	**+0.7**
	baz=162						
553A	**Crawfordville**	**50.81**	**343**	P	**P**	**19 49 19.6**	**+1.0**
	baz=162						
455A	**Stateville**	**50.97**	**345**	P	**P**	**19 49 20.5**	**+0.7**
	baz=163						
552A	**Lynn Haven**	**51.00**	**342**	P	**P**	**19 49 20.7**	**+0.7**
	baz=160						
454A	**Quitman**	**51.09**	**344**	P	**P**	**19 49 21.4**	**+0.6**
	baz=163						
357A	**Townsend**	**51.27**	**347**	P	**P**	**19 49 22.9**	**+0.9**
	baz=165						
356A	**Blackshear**	**51.31**	**346**	P	**P**	**19 49 22.9**	**+0.5**
	baz=164						
453A	**Whigham**	**51.41**	**344**	P	**P**	**19 49 23.9**	**+0.8**
	baz=162						
355A	**Pearson**	**51.50**	**345**	P	**P**	**19 49 24.4**	**+0.7**
	baz=164						
452A	**Marianna**	**51.64**	**343**	P	**P**	**19 49 25.2**	**+0.4**
	baz=161						
TIGA	**Tifton**	**51.77**	**345**	P	**P**	**19 49 26.1**	**+0.3**
	baz=163						
353A	**Camilla**	**51.85**	**344**	P	**P**	**19 49 26.5**	**+0.2**
	baz=162,SNR=5.1						
256A	**Glennville**	**51.89**	**347**	P	**P**	**19 49 27.2**	**+0.5**
	baz=165						
255A	**Hazlehurst**	**51.97**	**346**	P	**P**	**19 49 27.8**	**+0.5**
	baz=164						
352A	**Blakely**	**52.16**	**343**	P	**P**	**19 49 29.1**	**+0.4**
	baz=161						
254A	**Abbeville**	**52.18**	**345**	P	**P**	**19 49 29.2**	**+0.3**
	baz=163,SNR=6.3						
156A	**Sylvania**	**52.45**	**347**	P	**P**	**19 49 31.1**	**+0.3**
	baz=166						
253A	**Americus**	**52.50**	**344**	P	**P**	**19 49 31.2**	**0.0**
	baz=162						
350A	**Dozier**	**52.51**	**342**	P	**P**	**19 49 31.2**	**-0.1**
	baz=160						
Z59A	**Georgetown, SC**	**52.60**	**350**	P	**P**	**19 49 32.3**	**+0.4**
	baz=168						
155A	**Kite**	**52.64**	**346**	P	**P**	**19 49 32.6**	**+0.4**
	baz=164,SNR=7.5						
349A	**Repton**	**52.71**	**341**	P	**P**	**19 49 32.9**	**+0.2**
	baz=159						
154A	**Montrose**	**52.78**	**345**	P	**P**	**19 49 33.4**	**+0.2**
	baz=164,SNR=7.3						
251A	**Midway**	**52.88**	**343**	P	**P**	**19 49 33.8**	**-0.2**
	baz=161,SNR=9.4						
Z57A	**Bowman**	**52.92**	**348**	P	**P**	**19 49 34.3**	**+0.1**
	baz=166						
153A	**Fort Valley**	**52.99**	**345**	P	**P**	**19 49 34.9**	**+0.1**
	baz=163						
250A	**Grady**	**53.01**	**342**	P	**P**	**19 49 34.9**	**-0.1**
	baz=160						
152A	**Waverly Hall**	**53.23**	**344**	P	**P**	**19 49 36.2**	**-0.3**
	baz=162,SNR=7.5						

249A	**Camden** baz=159,SNR=5.2	**53.27**	**341**	P	**P**	**19 49 37.0**	**+0.2**
Z54A	**Sparta** baz=164,SNR=6.3	**53.31**	**346**	P	**P**	**19 49 36.9**	**-0.2**
Z53A	**Monticello** baz=163	**53.53**	**345**	P	**P**	**19 49 38.6**	**-0.1**
150A	**Eclectic** baz=160,SNR=6.3	**53.53**	**343**	P	**P**	**19 49 38.6**	**-0.2**
Y57A	**Sumter** baz=167	**53.56**	**349**	P	**P**	**19 49 38.9**	**0.0**
GOGA	**Godfrey** baz=163	**53.63**	**345**	P	**P**	**19 49 39.2**	**-0.2**
Z52A	**Williamson** baz=162	**53.65**	**344**	P	**P**	**19 49 39.5**	**-0.1**
149A	**Jones** baz=159,SNR=5.5	**53.75**	**342**	P	**P**	**19 49 39.9**	**-0.4**
Y55A	**Saluda** baz=165,SNR=9.1	**53.77**	**347**	P	**P**	**19 49 40.7**	**+0.2**
Y54A	**Tignall** baz=164,SNR=6.4	**53.88**	**346**	P	**P**	**19 49 41.0**	**-0.3**
Z51A	**Franklin** baz=161	**53.97**	**344**	P	**P**	**19 49 41.7**	**-0.2**
148A	**Greensboro** baz=159	**54.03**	**341**	P	**P**	**19 49 41.9**	**-0.4**
Z50A	**Ashland** baz=161,SNR=13	**54.11**	**343**	P	**P**	**19 49 42.8**	**-0.2**
X56A	**White Oak** baz=166,SNR=6.9	**54.14**	**348**	P	**P**	**19 49 43.2**	**+0.1**
W61A	**Ground Anchor** baz=171	**54.16**	**352**	P	**P**	**19 49 42.8**	**-0.5**
Y52A	**Lilburn** baz=163	**54.20**	**345**	P	**P**	**19 49 43.4**	**-0.3**
LRAL	**Lakeview Retre** baz=159,SNR=5.7	**54.22**	**342**	P	**P**	**19 49 43.4**	**-0.4**
Z49A	**Columbiana** baz=160,SNR=9.1	**54.23**	**342**	P	**P**	**19 49 43.4**	**-0.5**
X55A	**Gracelyn & Ava** baz=166,SNR=8.1	**54.24**	**348**	P	**P**	**19 49 44.1**	**+0.2**
W58A	**Raeford** baz=168	**54.33**	**350**	P	**P**	**19 49 44.5**	**-0.1**
W59A	**Clinton** baz=169	**54.35**	**351**	P	**P**	**19 49 44.5**	**-0.1**
X54A	**Belton** baz=165,SNR=8.5	**54.47**	**347**	P	**P**	**19 49 45.9**	**+0.4**
Y51A	**Rockmart** baz=162,SNR=12	**54.49**	**344**	P	**P**	**19 49 45.3**	**-0.5**
W57A	**Gilead** baz=168	**54.59**	**349**	P	**P**	**19 49 46.3**	**-0.1**
X53A	**Estanollee** baz=164	**54.63**	**346**	P	**P**	**19 49 46.5**	**-0.2**
Y50A	**Piedmont** baz=161,SNR=5.4	**54.66**	**343**	P	**P**	**19 49 46.3**	**-0.6**
W56A	**Indian Trail** baz=167,SNR=5.3	**54.68**	**349**	P	**P**	**19 49 47.1**	**+0.1**
HKT	**Hockley** comp=Z,15nm,1.0s	**54.75**	**332**	*e*P	**P**	**19 49 48.8**	**+1.2**
Y49A	**Blount Mountai** baz=160,SNR=5.7	**54.82**	**343**	P	**P**	**19 49 47.5**	**-0.6**
KMSC	**Kings Mountain** baz=166,SNR=8.2	**54.83**	**348**	P	**P**	**19 49 48.1**	**0.0**
X52A	**Dahlonega** baz=163	**54.87**	**345**	P	**P**	**19 49 48.2**	**-0.3**
V59A	**Middlesex** baz=170	**54.91**	**351**	P	**P**	**19 49 48.4**	**-0.2**
W54A	**Cherokee Point** baz=165,SNR=9.2	**54.95**	**347**	P	**P**	**19 49 49.4**	**+0.4**
X51A	**Calhoun** baz=162,SNR=7.0	**55.07**	**344**	P	**P**	**19 49 49.5**	**-0.4**
V58A	**Windy Hill, Pi** baz=169	**55.07**	**350**	P	**P**	**19 49 49.6**	**-0.3**
Y48A	**Jasper** baz=159	**55.09**	**342**	P	**P**	**19 49 49.1**	**-0.9**
833A	**Chaparral WMA,** baz=145,SNR=8.9	**55.10**	**328**	P	**P**	**19 49 50.8**	**+0.6**
X50B	**Fort Payne** baz=161,SNR=5.2	**55.18**	**344**	P	**P**	**19 49 50.0**	**-0.7**
W53A	**Cullowhee** baz=164,SNR=7.9	**55.24**	**346**	P	**P**	**19 49 51.4**	**+0.2**
V57A	**Coltrane Farms** baz=168	**55.27**	**350**	P	**P**	**19 49 51.0**	**-0.3**
V56A	**Mocksville** baz=167,SNR=10	**55.32**	**349**	P	**P**	**19 49 52.1**	**+0.4**
W52A	**Murphy** baz=163	**55.34**	**346**	P	**P**	**19 49 51.9**	**0.0**
X49A	**Woodville** baz=160	**55.41**	**343**	P	**P**	**19 49 51.9**	**-0.4**
U59A	**Littleton** baz=170	**55.42**	**352**	P	**P**	**19 49 52.0**	**-0.3**
V55A	**Taylorsville** baz=166,SNR=6.4	**55.49**	**348**	P	**P**	**19 49 53.4**	**+0.5**
X48A	**Hartselle** baz=160,SNR=7.9	**55.55**	**342**	P	**P**	**19 49 53.0**	**-0.3**
V54A	**Nebo** baz=166,SNR=14	**55.56**	**348**	P	**P**	**19 49 53.7**	**+0.3**
U58A	**Oxford** baz=169	**55.57**	**351**	P	**P**	**19 49 53.1**	**-0.3**
W51A	**Cleveland** baz=162,SNR=7.7	**55.61**	**345**	P	**P**	**19 49 53.5**	**-0.2**
V53A	**Saluda** baz=164,SNR=6.3	**55.64**	**347**	P	**P**	**19 49 54.1**	**0.0**
U57A	**Blanch** baz=168	**55.73**	**350**	P	**P**	**19 49 54.4**	**-0.2**
W50A	**Signal Mountai** baz=162,SNR=5.8	**55.79**	**344**	P	**P**	**19 49 54.8**	**-0.2**
X47A	**Russelville** baz=159,SNR=5.8	**55.85**	**342**	P	**P**	**19 49 54.6**	**-0.9**
W49A	**Belvidere** baz=161	**55.96**	**343**	P	**P**	**19 49 55.7**	**-0.5**
V52A	**Sevierville** baz=164,SNR=11	**55.98**	**346**	P	**P**	**19 49 56.2**	**-0.2**
T59A	**Double "B" Far** baz=171,SNR=5.4	**56.00**	**352**	P	**P**	**19 49 56.1**	**-0.3**
U55A	**TA2, Sparta** baz=167,SNR=11	**56.09**	**349**	P	**P**	**19 49 57.5**	**+0.3**
T58A	**Grand View Acr** baz=170	**56.11**	**351**	P	**P**	**19 49 57.1**	**-0.1**
X46A	**Booneville** baz=158	**56.11**	**341**	P	**P**	**19 49 56.5**	**-0.8**
V51A	**Loudon** baz=163	**56.12**	**345**	P	**P**	**19 49 57.0**	**-0.3**
W48A	**Pulaski** baz=160,SNR=9.2	**56.16**	**343**	P	**P**	**19 49 57.1**	**-0.6**
V50A	**Pikevile** baz=162	**56.18**	**345**	P	**P**	**19 49 57.6**	**-0.2**
435B	**Jarrell** baz=148	**56.25**	**331**	P	**P**	**19 49 59.0**	**+0.6**
U54A	**Nelsons Funny** baz=166,SNR=6.6	**56.26**	**348**	P	**P**	**19 49 58.7**	**+0.2**
U53A	**Fall Branch** baz=165,SNR=5.2	**56.26**	**347**	P	**P**	**19 49 58.2**	**-0.2**
T57A	**Hurt** baz=169	**56.27**	**351**	P	**P**	**19 49 58.3**	**-0.1**
Z41A	**Richland Creek** baz=153	**56.38**	**336**	P	**P**	**19 49 59.7**	**+0.4**
T56A	**Rocky Mt** baz=168,SNR=6.3	**56.43**	**350**	P	**P**	**19 50 00.2**	**+0.6**
U52A	**Thorn Hill** baz=164	**56.46**	**346**	P	**P**	**19 49 59.0**	**-0.8**
W47A	**Westpoint** baz=159,SNR=6.5	**56.46**	**342**	P	**P**	**19 49 58.9**	**-0.9**
V49A	**McMinnville** baz=161,SNR=14	**56.48**	**344**	P	**P**	**19 49 59.3**	**-0.6**
W46A	**Michie** baz=158	**56.58**	**341**	P	**P**	**19 49 59.8**	**-0.9**
U51A	**La Follette** baz=163,SNR=5.3	**56.59**	**346**	P	**P**	**19 50 00.3**	**-0.5**
T55A	**Pulaski** baz=167,SNR=14	**56.64**	**349**	P	**P**	**19 50 01.7**	**+0.6**
TZTN	**Tazewell** baz=164	**56.64**	**346**	P	**P**	**19 50 00.8**	**-0.3**
BLA	**Blacksburg** baz=167	**56.67**	**349**	P	**P**	**19 50 01.9**	**+0.5**
V48A	**Smith Brothers** baz=160,SNR=9.7	**56.70**	**343**	P	**P**	**19 50 01.0**	**-0.5**
T54A	**Tazewell** baz=166,SNR=6.5	**56.73**	**348**	P	**P**	**19 50 01.7**	**-0.1**
U50A	**Jamestown** baz=162,SNR=11	**56.82**	**345**	P	**P**	**19 50 01.9**	**-0.5**
X43A	**Marvell** baz=156	**56.82**	**339**	P	**P**	**19 50 02.3**	**-0.1**
T53A	**Wise** baz=165,SNR=7.7	**56.85**	**347**	P	**P**	**19 50 02.5**	**-0.1**
S57A	**Dark Hollow, R** baz=169	**56.97**	**351**	P	**P**	**19 50 03.4**	**0.0**
V47A	**Nunnelly** baz=159,SNR=5.9	**56.98**	**342**	P	**P**	**19 50 02.3**	**-1.1**
R58B	**Mineral** baz=170	**57.02**	**352**	P	**P**	**19 50 03.6**	**-0.1**
JCT	**Junction City** baz=145,SNR=9.8	**57.06**	**329**	P	**P**	**19 50 04.4**	**+0.2**
T52A	**Hallie** comp=Z,13nm,0.8s	**57.06**	**347**	*e*P	**P**	**19 50 03.9**	**-0.2**
T52A				*e*pP	**pP**	**19 50 30.3**	**-0.3**
T52A	**Hallie** baz=165	**57.06**	**347**	P	**P**	**19 50 03.8**	**-0.2**
V46A	**Holladay** baz=159	**57.12**	**342**	P	**P**	**19 50 03.2**	**-1.3**
T51A	**Gray** baz=164,SNR=6.0	**57.14**	**346**	P	**P**	**19 50 04.2**	**-0.4**
U49A	**Red Boiling Sp** baz=161,SNR=9.6	**57.15**	**344**	P	**P**	**19 50 04.0**	**-0.7**
WHTX	**Lake Whitney,** baz=148	**57.21**	**332**	P	**P**	**19 50 05.7**	**+0.5**
S55A	**Lewisburg** baz=167,SNR=17	**57.23**	**350**	P	**P**	**19 50 05.7**	**+0.4**
U48A	**Cassie Pea, Po** baz=161,SNR=9.1	**57.35**	**344**	P	**P**	**19 50 05.5**	**-0.5**
WVT	**Waverly** comp=Z,25nm,0.7s	**57.35**	**342**	*e*P	**P**	**19 50 05.5**	**-0.5**
WVT	**Waverly** baz=159	**57.35**	**342**	P	**P**	**19 50 05.0**	**-1.0**
R58A	**Rapidan** baz=170	**57.37**	**352**	P	**P**	**19 50 06.2**	**0.0**
T50A	**Nancy** baz=163,SNR=7.8	**57.40**	**345**	P	**P**	**19 50 05.9**	**-0.5**
S54A	**Dingess, Beckl** baz=166,SNR=11	**57.40**	**349**	P	**P**	**19 50 06.6**	**+0.2**
R57A	**Stanardsville** baz=170	**57.44**	**351**	P	**P**	**19 50 06.9**	**+0.3**
S53A	**Williamson** baz=166,SNR=6.0	**57.44**	**348**	P	**P**	**19 50 06.5**	**-0.2**
U47A	**Clarksville** baz=160,SNR=10	**57.48**	**343**	P	**P**	**19 50 06.2**	**-0.8**
S52A	**Salyersville** baz=165,SNR=5.3	**57.63**	**347**	P	**P**	**19 50 07.6**	**-0.5**
Q61A	**Milford** baz=173	**57.64**	**355**	P	**P**	**19 50 07.1**	**-0.9**
T49A	**Edmonton** baz=162,SNR=21	**57.65**	**345**	P	**P**	**19 50 07.7**	**-0.4**
U46A	**Springville** baz=159	**57.66**	**342**	P	**P**	**19 50 07.5**	**-0.7**
R55A	**Marlinton** baz=168	**57.66**	**350**	P	**P**	**19 50 07.8**	**-0.5**
R56A	**Bull Pasture M** baz=169	**57.67**	**351**	P	**P**	**19 50 07.5**	**-0.9**
S51A	**Beattyville** baz=164	**57.70**	**347**	P	**P**	**19 50 08.0**	**-0.5**
R54A	**Victor** baz=167,SNR=9.7	**57.71**	**349**	P	**P**	**19 50 08.9**	**+0.3**
Q60A	**Greensboro** baz=173	**57.81**	**354**	P	**P**	**19 50 09.3**	**+0.1**
MIAR	**Mount Ida** baz=153,SNR=6.2	**57.82**	**336**	P	**P**	**19 50 09.4**	**0.0**
T48A	**Bowling Green** baz=161,SNR=9.9	**57.87**	**344**	P	**P**	**19 50 09.2**	**-0.5**
W41B	**Gary Mavity, V** baz=154	**57.89**	**338**	P	**P**	**19 50 09.5**	**-0.4**
S50A	**Richmond** baz=163,SNR=8.0	**57.92**	**346**	P	**P**	**19 50 09.8**	**-0.2**
T47A	**Sharon Grove** comp=Z,43nm,0.8s	**57.95**	**343**	*e*P	**P**	**19 50 10.1**	**-0.1**
T47A				*e*pP	**pP**	**19 50 35.9**	**-1.1**
T47A	**Sharon Grove** baz=160	**57.95**	**343**	P	**P**	**19 50 09.9**	**-0.4**
Q58A	**Fox Den Farm,** baz=171	**57.96**	**352**	P	**P**	**19 50 10.1**	**-0.1**
R53A	**Hurricane** baz=166	**58.04**	**348**	P	**P**	**19 50 10.8**	**-0.1**
Q57A	**Strasburg** baz=170,SNR=5.8	**58.15**	**352**	P	**P**	**19 50 12.2**	**+0.7**
TXAR	**Lajitas Array** comp=Z,4.5nm,0.8s,baz=146,slow=8.2,SNR=39	**58.16**	**325**	P	**P**	**19 50 12.7**	**+0.6**
TXAR	comp=Z,1.4nm,0.8s,baz=145,slow=9.7,SNR=2.6			pP	**pP**	**19 50 39.8**	**+1.3**
R52A	**Catlettsburg** baz=165	**58.18**	**348**	P	**P**	**19 50 11.4**	**-0.5**
T46A	**Princeton** baz=159,SNR=11	**58.22**	**343**	P	**P**	**19 50 11.6**	**-0.5**
S49A	**Springfield** baz=162,SNR=7.2	**58.23**	**345**	P	**P**	**19 50 11.4**	**-0.8**
Q56A	**Snyder Ridge,** baz=169,SNR=6.9	**58.26**	**351**	P	**P**	**19 50 13.2**	**+0.8**
S48A	**Wiedeman Farm,** baz=161,SNR=14	**58.30**	**345**	P	**P**	**19 50 11.7**	**-1.0**
R51A	**Hillsboro** baz=164,SNR=7.1	**58.34**	**347**	P	**P**	**19 50 12.6**	**-0.3**
Q55A	**Buckhannon** baz=168,SNR=8.7	**58.35**	**350**	P	**P**	**19 50 14.1**	**+1.0**
T45A	**Paducah** baz=158	**58.41**	**342**	P	**P**	**19 50 13.0**	**-0.5**
P58A	**Pank, Wackersv** baz=171	**58.45**	**353**	P	**P**	**19 50 13.3**	**-0.3**
S47A	**Hartford** baz=160,SNR=14	**58.46**	**344**	P	**P**	**19 50 13.0**	**-0.8**
Q54A	**Coxs Mills** baz=167,SNR=8.3	**58.47**	**350**	P	**P**	**19 50 13.8**	**0.0**
Q53A	**Leroy** baz=166,SNR=11	**58.47**	**349**	P	**P**	**19 50 14.0**	**+0.1**
W39A	**Magazine** baz=153,SNR=7.8	**58.48**	**337**	P	**P**	**19 50 14.5**	**+0.5**
R50A	**Paris** baz=163,SNR=5.0	**58.48**	**346**	P	**P**	**19 50 13.5**	**-0.4**
P57A	**Homestead Farm** baz=170	**58.53**	**352**	P	**P**	**19 50 14.8**	**+0.6**
P60A	**Greenville** baz=173	**58.60**	**354**	P	**P**	**19 50 14.4**	**-0.3**
P56A	**Dayton Farm, R** baz=170	**58.67**	**351**	P	**P**	**19 50 15.9**	**+0.7**
R49A	**Shelbyville** baz=162	**58.69**	**346**	P	**P**	**19 50 14.9**	**-0.5**
Q52A	**Bidwell** baz=166,SNR=5.4	**58.71**	**348**	P	**P**	**19 50 15.3**	**-0.2**
ABTX	**Abilene, Hawle** baz=146,SNR=6.6	**58.75**	**330**	P	**P**	**19 50 16.3**	**+0.4**
S46A	**Don Dixon Farm** baz=160	**58.77**	**343**	P	**P**	**19 50 15.1**	**-0.8**
O61A	**Allentown** baz=174	**58.78**	**355**	P	**P**	**19 50 15.8**	**-0.2**
P55A	**Reedsville** baz=168,SNR=5.5	**58.82**	**351**	P	**P**	**19 50 16.8**	**+0.5**
WCI	**Wyandotte Cave** comp=Z,16nm,0.7s	**58.90**	**345**	*e*P	**P**	**19 50 16.1**	**-0.7**
WCI				*e*pP	**pP**	**19 50 42.8**	**-0.9**
WCI	**Wyandotte Cave** baz=161	**58.90**	**345**	P	**P**	**19 50 16.1**	**-0.7**
Q50A	**Georgetown** baz=164,SNR=7.1	**58.95**	**347**	P	**P**	**19 50 16.4**	**-0.7**
R48A	**Northridge Ran** baz=162	**58.96**	**345**	P	**P**	**19 50 16.6**	**-0.7**
MCWV	**Mont Chateau** baz=168,SNR=6.1	**58.97**	**351**	P	**P**	**19 50 17.7**	**+0.5**
Q51A	**Peebles** baz=164	**58.98**	**347**	P	**P**	**19 50 17.0**	**-0.4**
P54A	**Burton** baz=168,SNR=8.3	**59.01**	**350**	P	**P**	**19 50 18.1**	**+0.5**
R47A	**Wooly Knot Far** baz=161,SNR=5.3	**59.03**	**344**	P	**P**	**19 50 16.7**	**-1.0**
O58A	**Lewisberry** baz=172	**59.03**	**353**	P	**P**	**19 50 17.4**	**-0.3**
P53A	**Whipple** comp=Z,29nm,0.7s	**59.05**	**349**	*e*P	**P**	**19 50 18.1**	**+0.2**
P53A				*e*pP	**pP**	**19 50 44.7**	**+0.2**
P53A	**Whipple** baz=167,SNR=9.8	**59.05**	**349**	P	**P**	**19 50 18.0**	**+0.2**
U40A	**Yellville** baz=154,SNR=8.1	**59.17**	**338**	P	**P**	**19 50 18.4**	**-0.4**
S44A	**Carbondale** baz=158,SNR=12	**59.22**	**342**	P	**P**	**19 50 18.5**	**-0.5**
Q49A	**Aurora** baz=163	**59.30**	**346**	P	**P**	**19 50 18.8**	**-0.8**
P52A	**Corning** baz=166,SNR=8.5	**59.33**	**349**	P	**P**	**19 50 19.5**	**-0.3**
P51A	**Williamsport** baz=165	**59.37**	**348**	P	**P**	**19 50 19.2**	**-0.8**
O56A	**Blue Knob Stat** baz=170	**59.38**	**352**	P	**P**	**19 50 20.6**	**+0.4**
O55A	**Ligonier** baz=169,SNR=5.5	**59.42**	**351**	P	**P**	**19 50 20.9**	**+0.4**
Q48A	**North Vernon** baz=162,SNR=8.2	**59.43**	**345**	P	**P**	**19 50 19.7**	**-0.7**
R45A	**Skylar, Fairfi** baz=159,SNR=5.3	**59.49**	**343**	P	**P**	**19 50 20.1**	**-0.8**
O54A	**Avella** baz=168	**59.56**	**350**	P	**P**	**19 50 21.1**	**-0.3**
N60A	**Cedar Hill Far** baz=174	**59.60**	**355**	P	**P**	**19 50 21.2**	**-0.4**
Q47A	**Bedord North L** baz=161	**59.60**	**345**	P	**P**	**19 50 21.1**	**-0.6**
P50A	**Jamestown** baz=164,SNR=6.0	**59.64**	**347**	P	**P**	**19 50 21.1**	**-0.8**
SSPA	**Standing Stone** baz=171	**59.65**	**353**	P	**P**	**19 50 22.1**	**+0.1**
N59A	**State Game Lan** baz=173	**59.70**	**354**	P	**P**	**19 50 22.2**	**-0.1**
N57A	**Milroy** baz=171	**59.73**	**353**	P	**P**	**19 50 22.6**	**+0.1**
O52A	**Adamsville** baz=166,SNR=5.3	**59.75**	**349**	P	**P**	**19 50 22.4**	**-0.3**
O53A	**New Philadelph** baz=167,SNR=6.2	**59.77**	**350**	P	**P**	**19 50 22.7**	**-0.1**
P49A	**Miami Univ. Ec** baz=163,SNR=7.8	**59.77**	**346**	P	**P**	**19 50 21.8**	**-1.0**
P48A	**Milroy** baz=162,SNR=5.6	**59.86**	**346**	P	**P**	**19 50 22.3**	**-1.2**
TUL1	**Leonard** baz=151	**59.88**	**335**	P	**P**	**19 50 23.7**	**+0.1**
O51A	**Pataskala** baz=166,SNR=5.6	**59.92**	**348**	P	**P**	**19 50 23.4**	**-0.4**
M61A	**Granite Spring** baz=175	**59.94**	**356**	P	**P**	**19 50 24.3**	**+0.4**
N55A	**Marion Center** baz=169,SNR=10	**59.94**	**352**	P	**P**	**19 50 24.5**	**+0.5**
N56A	**West Decatur** baz=170	**59.98**	**352**	P	**P**	**19 50 24.5**	**+0.2**
Q45A	**Warren Harvey,** baz=159	**60.02**	**343**	P	**P**	**19 50 23.7**	**-0.8**
ACSO	**Alum Creek Sta** comp=Z,22nm,0.9s	**60.08**	**348**	*e*P	**P**	**19 50 24.4**	**-0.4**
ACSO				*e*pP	**pP**	**19 50 51.4**	**-0.2**
ACSO	**Alum Creek Sta** baz=165	**60.08**	**348**	P	**P**	**19 50 24.5**	**-0.4**
P47A	**Martinsville** baz=162,SNR=6.6	**60.09**	**345**	P	**P**	**19 50 24.1**	**-0.8**
O50A	**Cable** baz=164	**60.12**	**347**	P	**P**	**19 50 24.9**	**-0.3**
WMOK	**Wichita Mounta** baz=148,SNR=6.6	**60.12**	**332**	P	**P**	**19 50 24.7**	**-0.6**
CCM	**Cathedral Cave** baz=156	**60.16**	**340**	P	**P**	**19 50 25.1**	**-0.4**
N53A	**Lisbon** baz=167,SNR=5.6	**60.25**	**350**	P	**P**	**19 50 26.3**	**+0.3**
N54A	**Moraine State** baz=168,SNR=6.9	**60.26**	**351**	P	**P**	**19 50 26.6**	**+0.4**
M59A	**Waymart** baz=173	**60.29**	**355**	P	**P**	**19 50 26.5**	**+0.1**
O49A	**Covington** baz=164,SNR=7.1	**60.31**	**347**	P	**P**	**19 50 25.6**	**-0.9**
N52A	**McGinn’s Farm,** baz=166,SNR=5.8	**60.40**	**349**	P	**P**	**19 50 26.6**	**-0.5**
P46A	**Rosedale** baz=160	**60.45**	**344**	P	**P**	**19 50 26.2**	**-1.2**
P45A	**Graceland, Par** baz=160,SNR=8.5	**60.50**	**344**	P	**P**	**19 50 26.5**	**-1.3**
M56A	**Emporium** baz=170	**60.53**	**352**	P	**P**	**19 50 28.1**	**+0.2**
O48A	**Farmland** baz=163,SNR=9.6	**60.56**	**346**	P	**P**	**19 50 27.3**	**-0.9**
M55A	**Ridgway** baz=170	**60.59**	**352**	P	**P**	**19 50 28.5**	**+0.1**
N51A	**Ashland** baz=166	**60.62**	**349**	P	**P**	**19 50 28.2**	**-0.4**
N50A	**Nevada** baz=165	**60.63**	**348**	P	**P**	**19 50 28.2**	**-0.5**
M54A	**Oil Creek Stat** baz=169,SNR=7.4	**60.75**	**351**	P	**P**	**19 50 29.7**	**+0.2**
O47A	**Sheridan** baz=162,SNR=7.9	**60.77**	**345**	P	**P**	**19 50 28.4**	**-1.3**
M53A	**WI Miller and** baz=168,SNR=7.5	**60.84**	**350**	P	**P**	**19 50 30.1**	**0.0**
MNTX	**Cornudas Mount** baz=140,SNR=24	**60.92**	**325**	P	**P**	**19 50 30.5**	**-0.4**
N49A	**Columbus Grove** baz=164,SNR=20	**60.98**	**347**	P	**P**	**19 50 30.5**	**-0.5**
M51A	**Elyria** baz=166	**60.99**	**349**	P	**P**	**19 50 30.6**	**-0.4**
BINY	**Binghamton** baz=173	**61.00**	**354**	P	**P**	**19 50 31.4**	**+0.3**
HRV	**Adam Dziewonsk** baz=178	**61.03**	**358**	P	**P**	**19 50 31.5**	**+0.2**
M52A	**Chesterland** baz=167	**61.05**	**350**	P	**P**	**19 50 31.3**	**-0.2**
P43A	**Skaggs, Pawnee** baz=158,SNR=7.2	**61.10**	**342**	P	**P**	**19 50 30.9**	**-0.9**
N48A	**Decatur** baz=163,SNR=9.5	**61.10**	**347**	P	**P**	**19 50 31.1**	**-0.7**
SFIN	**Lafayette** baz=161,SNR=13	**61.14**	**345**	P	**P**	**19 50 30.8**	**-1.3**
O45A	**Potomac** baz=160,SNR=14	**61.17**	**344**	P	**P**	**19 50 31.1**	**-1.2**
M50A	**Fremont** baz=165	**61.22**	**348**	P	**P**	**19 50 32.2**	**-0.4**
L55A	**Hinsdale** baz=170	**61.25**	**352**	P	**P**	**19 50 33.0**	**+0.1**
N47A	**Urbana** baz=162,SNR=9.6	**61.27**	**346**	P	**P**	**19 50 32.0**	**-1.0**
L53A	**Girard** baz=168,SNR=7.7	**61.27**	**351**	P	**P**	**19 50 33.0**	**0.0**
O44A	**Mansfield** baz=159	**61.28**	**343**	P	**P**	**19 50 31.8**	**-1.3**
MSTX	**Muleshoe** baz=144,SNR=15	**61.36**	**329**	P	**P**	**19 50 33.5**	**-0.4**
L54A	**Sinclairville** baz=169	**61.41**	**352**	P	**P**	**19 50 34.3**	**+0.4**
M49A	**Liberty Center** baz=164,SNR=8.1	**61.47**	**348**	P	**P**	**19 50 33.6**	**-0.7**
PLIO	**Pelee Island,** baz=166	**61.48**	**349**	P	**P**	**19 50 33.9**	**-0.4**
N46A	**Monticello** baz=161,SNR=8.2	**61.53**	**345**	P	**P**	**19 50 33.6**	**-1.2**
N45A	**Kentland** baz=160,SNR=6.7	**61.68**	**344**	P	**P**	**19 50 34.2**	**-1.6**
K54A	**Basiliko Farm,** baz=170	**61.70**	**352**	P	**P**	**19 50 34.8**	**-1.0**
M47A	**Cromwell** baz=162,SNR=6.2	**61.71**	**346**	P	**P**	**19 50 35.2**	**-0.8**
K55A	**Perry** baz=171	**61.74**	**353**	P	**P**	**19 50 35.8**	**-0.4**
N44A	**Piper City** baz=160,SNR=8.6	**61.79**	**344**	P	**P**	**19 50 35.0**	**-1.4**
HDIL	**Hopedale** baz=159,SNR=5.2	**61.88**	**343**	P	**P**	**19 50 36.0**	**-1.1**
M46A	**Old House Fiel** baz=162	**61.93**	**346**	P	**P**	**19 50 36.1**	**-1.3**
L48A	**N Adams** baz=164,SNR=8.2	**62.02**	**347**	P	**P**	**19 50 37.3**	**-0.6**
N43A	**Stutzman Famil** baz=159	**62.21**	**343**	P	**P**	**19 50 38.5**	**-0.8**
L47A	**Sherwood** baz=163,SNR=11	**62.21**	**347**	P	**P**	**19 50 38.4**	**-0.8**
K51A	**Iona Station** baz=167	**62.22**	**350**	P	**P**	**19 50 38.9**	**-0.4**
M44A	**Midewin, Midew** baz=160	**62.33**	**344**	P	**P**	**19 50 38.9**	**-1.2**
K50A	**Casco** baz=166	**62.47**	**349**	P	**P**	**19 50 40.4**	**-0.6**
J52A	**Paris** baz=168,SNR=12	**62.57**	**351**	P	**P**	**19 50 41.6**	**0.0**
M43A	**Waltham Townsh** baz=159,SNR=11	**62.61**	**344**	P	**P**	**19 50 40.9**	**-1.0**
VNA3	**Neumayer Olymp**	**62.77**	**162**	P	**P**	**19 50 43.7**	**+1.0**
K48A	**Perry** baz=164,SNR=9.7	**62.78**	**348**	P	**P**	**19 50 42.5**	**-0.5**
PECO	**Prince Edward** baz=172	**62.81**	**354**	P	**P**	**19 50 42.5**	**-0.6**
K47A	**Vermontville** baz=163	**62.83**	**347**	P	**P**	**19 50 42.4**	**-0.9**
N40A	**Mertquake, Sal** baz=156,SNR=5.8	**62.85**	**341**	P	**P**	**19 50 42.6**	**-1.0**
ACTO	**Acton** baz=169	**62.87**	**351**	P	**P**	**19 50 43.4**	**-0.2**
121A	**Cookes Peak, D** baz=139,SNR=8.7	**62.88**	**324**	P	**P**	**19 50 45.5**	**+1.4**
DRWO	**Darlington Wes** baz=170	**62.95**	**352**	P	**P**	**19 50 43.9**	**-0.2**
VNA1	**Neumayer--Stat**	**62.97**	**161**	P	**P**	**19 50 45.3**	**+1.4**
KSU1	**Kansas State U** baz=151	**62.98**	**336**	P	**P**	**19 50 44.0**	**-0.4**
M41A	**Milan** baz=157	**63.00**	**342**	P	**P**	**19 50 43.6**	**-0.9**
K46A	**Dorr** baz=162	**63.02**	**347**	P	**P**	**19 50 43.6**	**-1.0**
J49A	**Marlette** baz=165,SNR=5.1	**63.13**	**349**	P	**P**	**19 50 44.4**	**-0.9**
I55A	**Frankford**	**63.16**	**353**	P	**P**	**19 50 45.5**	**0.0**

	baz=171						
J48A	Bridge Port	63.19	348	P	P	19 50 45.0	-0.7
	baz=165,SNR=7.8						
I51A	Listowel	63.20	351	P	P	19 50 45.5	-0.3
	baz=168,SNR=12						
LONY	Lake Ozonia	63.29	356	P	P	19 50 46.5	+0.1
	baz=174						
I52A	Shelburne	63.33	351	P	P	19 50 46.8	+0.1
	baz=168,SNR=6.9						
L42A	Oliver, Polo	63.33	343	P	P	19 50 45.7	-1.0
	baz=158						
J47A	Sunmer	63.34	347	P	P	19 50 46.1	-0.6
	baz=164						
H56A	Elgin	63.40	355	P	P	19 50 46.6	-0.4
	baz=173						
H55A	Tweed	63.44	354	P	P	19 50 47.4	0.0
	baz=172						
DELO	Deloro Mine	63.45	353	P	P	19 50 47.3	-0.1
	baz=171						
BASO	Ashfield	63.51	350	P	P	19 50 47.8	0.0
	baz=167,SNR=7.2						
BWLO	Walkerton	63.52	351	P	P	19 50 47.7	-0.2
	baz=168,SNR=22						
J46A	Howard City	63.62	347	P	P	19 50 48.2	-0.4
	baz=163						
I49A	Point Hope	63.63	349	P	P	19 50 48.1	-0.5
	baz=166						
K43A	Burlington	63.64	345	P	P	19 50 48.0	-0.7
	baz=160,SNR=5.3						
BRCO	Bruce Peninsul	63.70	350	P	P	19 50 48.9	-0.2
	baz=167						
PKME	Peaks-Kenny Pk	63.76	0	P	P	19 50 49.3	-0.1
	baz=180						
L40A	Anamosa	63.83	342	P	P	19 50 49.6	-0.4
	baz=157						
ANMO	Albuquerque	63.99	327	*e*P	P	19 50 52.0	+0.5
	comp=Z,5.2nm,0.9s						
ANMO	Albuquerque	63.99	327	P	P	19 50 52.3	+0.8
	baz=141						
TASM	ASL Pad, Albuq	64.00	327	P	P	19 50 52.3	+0.8
	baz=141,SNR=9.5						
TASM	ASL Pad, Albuq	64.00	327	P	P	19 50 52.1	+0.6
	baz=141,SNR=8.7						
BMRO	Meriville Lake	64.00	351	P	P	19 50 50.9	-0.1
	baz=168,SNR=8.4						
I47A	Gladwin	64.03	348	P	P	19 50 50.5	-0.7
	baz=164						
I48A	Sherman Twp	64.03	349	P	P	19 50 50.5	-0.7
	baz=165,SNR=9.2						
G55A	Calabogie	64.09	354	P	P	19 50 51.6	0.0
	baz=172						
I46A	Reed City	64.14	347	P	P	19 50 51.5	-0.4
	baz=163						
G53A	Haliburton	64.17	353	P	P	19 50 52.1	0.0
	baz=170,SNR=6.2						
SCIA	State Center	64.29	340	P	P	19 50 52.8	-0.3
	baz=155						
JFWS	Jewell Farm	64.34	343	P	P	19 50 52.9	-0.4
	baz=158,SNR=7.1						
TUC	Tucson	64.44	322	*e*P	P	19 50 55.4	+1.1
	comp=Z,4.8nm,0.8s						
H48A	Harrisville	64.46	349	P	P	19 50 53.6	-0.4
	baz=165						
H47A	Mio	64.52	348	P	P	19 50 53.9	-0.6
	baz=164						
PEMO	Pembroke	64.56	354	P	P	19 50 54.4	-0.2
	baz=172						
BUKO	Buck Lake	64.58	352	P	P	19 50 54.8	0.0
	baz=169,SNR=11						
KLBO	Killbear Provi	64.60	352	P	P	19 50 54.8	-0.2
	baz=169,SNR=7.6						
H46A	Fife Lake	64.66	348	P	P	19 50 54.7	-0.7
	baz=163,SNR=5.9						
TOBO	Tobermory, Bru	64.67	351	P	P	19 50 54.8	-0.5
	baz=167						
T25A	Trinidad	64.69	330	P	P	19 50 56.8	+0.8
	baz=143,SNR=7.9						
I42A	Draeger Farm,	64.90	345	P	P	19 50 56.8	-0.1
	baz=160						
F52A	Sundridge	64.92	352	P	P	19 50 56.8	-0.1
	baz=170						
ALGO	Algonquin Park	64.92	353	P	P	19 50 57.0	0.0
	baz=171						
SNAA	Sanae	64.97	161	P	P	19 50 57.9	+0.7
SNAA	Sanae	64.97	161	*e*P	P	19 50 57.0	-0.2
	comp=Z,10nm,0.7s						
G47A	Hillman	65.01	349	P	P	19 50 56.9	-0.7
	baz=165						
F51A	Arnstein	65.12	352	P	P	19 50 57.3	-1.0
	baz=169						
H43A	Windswept, Lux	65.16	346	P	P	19 50 58.0	-0.6
	baz=161						
G45A	Suttons Bay	65.24	347	P	P	19 50 58.2	-0.9
	baz=163						
F49A	Sandfield	65.27	350	P	P	19 50 58.7	-0.5
	baz=167,SNR=7.4						
I41A	Arkdale	65.30	344	P	P	19 50 59.1	-0.4
	baz=159						
E53A	Dumoine, Ponti	65.30	354	P	P	19 50 59.4	-0.1
	baz=171						
E54A	Lac Daplat, Po	65.31	354	P	P	19 50 59.5	0.0
	baz=172,SNR=5.6						
E52A	Mattawa	65.32	353	P	P	19 50 59.3	-0.2
	baz=170						
KSCO	Kaye Shedlock’	65.38	332	P	P	19 51 01.0	+0.7
	baz=145						
214A	Organ Pipe Nat	65.40	320	P	P	19 51 02.1	+1.6
	baz=134,SNR=12						
F48A	Evansville	65.43	350	P	P	19 50 59.9	-0.4
	baz=166						
BGNE	Belgrade	65.56	337	P	P	19 51 01.7	+0.4
	baz=150,SNR=7.4						
E51A	G1948 Merrick	65.66	352	P	P	19 51 01.9	+0.1
	baz=169						
SDCO	Great Sand Dun	65.70	329	*e*P	P	19 51 03.6	+1.0
	comp=Z,15nm,0.9s						
SDCO				*e*pP	pP	19 51 30.0	+0.4
SDCO	Great Sand Dun	65.70	329	P	P	19 51 03.6	+1.0
	baz=142,SNR=27						
E50A	Wahnapitae	65.72	351	P	P	19 51 01.5	-0.6
	baz=168						
F45A	CMU Biological	65.82	348	P	P	19 51 02.2	-0.6
	baz=163						
W18A	Petrified Fore	65.88	324	P	P	19 51 04.9	+1.2
	baz=138,SNR=6.8						
D54A	Lac Fusel, La	65.97	355	P	P	19 51 03.4	-0.4
	baz=172						
D52A	ZEK Kipawa Sen	65.97	353	P	P	19 51 04.0	+0.2
	baz=171						
E48A	Lockeyer	65.99	350	P	P	19 51 03.7	-0.2
	baz=167,SNR=7.3						
D53A	Lac Vacive, Po	66.00	354	P	P	19 51 03.9	0.0
	baz=171,SNR=6.6						
E46A	Sault Ste Mari	66.25	349	P	P	19 51 04.9	-0.6
	baz=164						
S22A	4UR Ranch, Cre	66.35	328	P	P	19 51 07.9	+1.2
	baz=141						
Q24A	Divide	66.50	330	P	P	19 51 08.8	+1.1
	baz=143						
G40A	Rib Lake	66.51	344	P	P	19 51 07.0	-0.2
	baz=158						
113A	Mohawk Valley,	66.54	320	*e*P	P	19 51 08.9	+1.2
	comp=Z,6.9nm,1.0s						
D48A	Paudash Townsh	66.61	351	P	P	19 51 07.3	-0.5
	baz=167,SNR=7.0						
D49A	Beulah Townshi	66.64	351	P	P	19 51 07.8	-0.2
	baz=168						
D47A	Chapleau	66.70	350	P	P	19 51 07.9	-0.5
	baz=166						
D46A	Sault St. Mari	66.70	349	P	P	19 51 07.8	-0.7
	baz=165						
G39A	Holcombe	66.78	343	P	P	19 51 08.7	-0.3
	baz=158,SNR=8.8						
MVCO	Mesa Verde	66.79	327	P	P	19 51 10.3	+0.7
	baz=140,SNR=5.4						
E43A	Lone Tree Farm	66.79	347	P	P	19 51 08.6	-0.4
	baz=162						
ECSD	EROS Data Cent	67.04	339	P	P	19 51 10.6	-0.1
	baz=152,SNR=7.3						
WUAZ	Wupatki	67.09	324	P	P	19 51 12.9	+1.5
	baz=137,SNR=10						
F40A	Park Falls	67.10	344	P	P	19 51 11.0	+0.1
	baz=159,SNR=16						
SPMN	Marine on St.	67.18	342	P	P	19 51 11.0	-0.5
	baz=156						
F39A	Loretta	67.30	344	P	P	19 51 12.1	-0.2
	baz=158,SNR=8.9						
ISCO	Idaho Springs	67.38	330	P	P	19 51 14.2	+0.9
	baz=143,SNR=8.8						
F38A	Pierce - Schro	67.60	343	P	P	19 51 14.0	-0.1
	baz=157,SNR=6.0						
D41A	Chassel	67.79	346	P	P	19 51 15.3	0.0
	baz=160						
LSQQ	Lebel-sur-Quev	67.89	355	P	P	19 51 15.5	-0.4
	baz=172						
IKP	In-Ko-Pah, Jac	67.91	319	P	P	19 51 18.3	+1.8
	baz=132,SNR=9.1						
SWSC	Sam W. Stewart	67.91	319	P	P	19 51 18.1	+1.7
	baz=132						
E38A	The Farm, Brul	68.11	344	P	P	19 51 17.0	-0.3
	baz=157						
LIC	Lamto	68.12	75	*e*P	P	19 51 16.7	-1.4
	comp=Z,87nm,1.3s						
BC3	Big Chuckawall	68.18	320	P	P	19 51 19.7	+1.5
	baz=133,SNR=12						
MONP2	Monument Peak	68.27	319	P	P	19 51 20.6	+1.7
	baz=132,SNR=7.5						
TIC	Toumodi	68.29	75	*e*P	P	19 51 18.0	-1.2
IRM	Iron Mountain	68.33	320	P	P	19 51 20.7	+1.7
	baz=133,SNR=19						
N23A	Red Feather La	68.40	331	P	P	19 51 20.7	+1.1
	baz=143,SNR=7.3						
KIC	Kosan Boka	68.43	75	*e*P	P	19 51 19.0	-1.1
	comp=Z,45nm,0.4s						
DBIC	Dimbokro	68.45	75	P	P	19 51 19.2	-0.9
	comp=Z,33nm,0.8s,baz=222,slow=6.4,SNR=35						
DBIC				LR	LR	20 20 54.7	
	comp=Z,37nm,18.6s,baz=212,slow=36						
CHGQ	Chibougamau	68.55	357	P	P	19 51 19.9	-0.1
	baz=175						
MATQ	Matagami	68.64	354	P	P	19 51 20.3	-0.2
	baz=172						
BELC	Belle Mtn. Jos	68.74	320	P	P	19 51 23.4	+1.7
	baz=132,SNR=6.6						
PFO	Pinyon Flats O	68.77	319	*e*P	P	19 51 23.4	+1.5
	comp=Z,10nm,0.9s						
PFO	Pinyon Flats O	68.77	319	P	P	19 51 23.7	+1.8
	baz=132,SNR=5.4						
O20A	White River Ci	68.90	329	P	P	19 51 23.8	+1.2
	baz=140,SNR=8.8						
GMRC	Granite Mounta	69.07	320	P	P	19 51 25.3	+1.6
	baz=133,SNR=13						
EYMN	Ely	69.33	344	P	P	19 51 24.3	-0.6
	baz=158,SNR=5.7						
HEC	Hector,Ludlow	69.51	320	P	P	19 51 28.2	+1.9
	baz=132,SNR=8.3						
TUQ	Turquoise Moun	69.67	321	P	P	19 51 28.8	+1.4
	baz=133						
CIS	Catalina Islan	69.86	318	P	P	19 51 29.9	+1.4
	baz=130						
BFSC	Mount Baldy Ra	69.93	319	P	P	19 51 30.6	+1.6
	baz=131						
FMP	Fort Macarthur	69.98	318	P	P	19 51 30.1	+0.9
	baz=131						
K22A	Casper	70.06	332	P	P	19 51 30.8	+1.1
	baz=143						
GSC	Goldstone, Bar	70.11	320	P	P	19 51 31.7	+1.7
	baz=132						
RSSD	Black Hills	70.17	334	*e*P	P	19 51 31.2	+0.8
	comp=Z,11nm,0.9s						
RSSD	Black Hills	70.17	334	P	P	19 51 31.4	+1.0
	baz=145						
DECC	Green Verdugo	70.36	318	P	P	19 51 33.4	+1.8
	baz=131						
EDW2	Edwards Air Fo	70.56	319	P	P	19 51 34.2	+1.4
	baz=131						
AGMN	Agassiz Nation	70.86	342	P	P	19 51 34.2	0.0
	baz=153						
TPNV	Topopah Spring	70.89	322	P	P	19 51 36.8	+1.9
	baz=133,SNR=12						
FURC	Furnace Creek,	70.93	321	P	P	19 51 36.7	+1.9
	baz=132,SNR=8.8						
MPMC	Manual Prospec	71.03	320	P	P	19 51 37.1	+1.3
	baz=132,SNR=5.7						
DUG	Dugway, Tooele	71.26	326	P	P	19 51 38.5	+1.5
	baz=137,SNR=11						
SBC	Santa Barbara	71.35	318	P	P	19 51 37.1	-0.4
	baz=130						
ISA	Isabella, Lake	71.37	320	*e*P	P	19 51 39.4	+1.7
	comp=Z,14nm,0.9s						
ISA				*e*pP	pP	19 52 06.1	+1.2
ISA	Isabella, Lake	71.37	320	P	P	19 51 39.4	+1.7
	baz=131,SNR=5.3						
QSPA	South Pole Qui	71.38	180	*e*P	P	19 51 38.4	+1.1
	comp=Z,4.1nm,0.8s						
R11A	Troy Canyon, C	71.47	323	P	P	19 51 40.2	+1.8
	baz=134,SNR=16						
BW06	Boulder Array	71.55	330	P	P	19 51 40.3	+1.5
	baz=140,SNR=7.3						
PDAR	Pinedale Array	71.55	330	P	P	19 51 39.0	+0.3
	comp=Z,2.1nm,0.8s,baz=147,slow=8.3,SNR=14						
PDAR				pP	pP	19 52 06.6	+0.4
	comp=Z,3.6nm,1.0s,baz=134,slow=6.4,SNR=5.1						
CWC	Cottonwood Cre	71.64	320	P	P	19 51 41.1	+1.7
	baz=132						
MDND	Maddock	71.66	339	P	P	19 51 39.9	+0.8
	baz=150						
PKM	Mcpherson Peak	71.70	318	P	P	19 51 41.6	+1.8
	baz=130						
VES	Vestal, Richgr	71.86	319	P	P	19 51 42.3	+1.8
	baz=131						
SMMC	Simmler	72.09	318	P	P	19 51 44.0	+2.0
	baz=130						
TIN	Tinemaha, Big	72.14	321	P	P	19 51 44.5	+2.2
	baz=132						
ULM	Lac du Bonnet	72.61	343	P	P	19 51 44.4	-0.3
	comp=Z,7.1nm,0.6s,baz=157,slow=7.0,SNR=7.0						
ULM				pP	pP	19 52 12.4	+0.1
	comp=Z,4.5nm,0.5s,baz=148,slow=4.1,SNR=2.6						
ULM				LR	LR	20 25 08.5	
	comp=Z,17nm,21.6s,baz=358,slow=37						
FXWY	Fox Creek	72.91	330	*e*P	P	19 51 47.8	+1.0
	comp=Z,7.0nm,1.0s						
FXWY				*e*pP	pP	19 52 14.7	+0.3
NVAR	Mina Array Bea	73.09	322	P	P	19 51 49.7	+1.7
	comp=Z,4.1nm,0.8s,baz=148,slow=6.7,SNR=20						
NVAR				pP	pP	19 52 16.1	+0.7
	comp=Z,4.6nm,0.9s,baz=150,slow=6.3,SNR=7.3						
LAO	LASA Array	73.16	334	P	P	19 51 48.8	+0.7
	baz=144						
RLMT	Red Lodge	73.23	332	P	P	19 51 49.7	+1.0
	baz=141,SNR=7.9						
H17A	Grant Village	73.27	330	P	P	19 51 51.2	+2.2
	baz=139						
SCHQ	Schefferville	73.37	2	P	P	19 51 48.9	-0.1
	comp=Z,5.6nm,0.6s,baz=227,slow=14,SNR=2.9						
DGMT	Dagmar	73.82	337	P	P	19 51 52.7	+0.8
	baz=146						
GCMT	Greycliff	73.92	332	*e*P	P	19 51 53.6	+1.0
GCMT				*e*pP	pP	19 52 21.0	+0.9
HLID	Hailey	74.52	328	P	P	19 51 58.0	+1.7
	baz=136,SNR=24						
BOZ	Bozeman (W)	74.67	331	*e*P	P	19 51 58.0	+1.0
	comp=Z,7.0nm,0.9s						
BOZ				*e*pP	pP	19 52 25.4	+0.8
BOZ	Bozeman (W)	74.67	331	P	P	19 51 58.0	+1.0
	baz=139,SNR=11						
MCMT	McKenzie Canyo	74.67	330	*e*P	P	19 51 58.8	+1.7
MCMT				*e*pP	pP	19 52 26.0	+1.3
EGMT	Eagleton	75.69	333	P	P	19 52 03.3	+0.6
	baz=141,SNR=5.6						
O03E	Paynes Creek	76.36	321	P	P	19 52 07.0	+0.3
	baz=130						
MOD	Modoc Plateau	76.53	323	*e*P	P	19 52 09.0	+1.2
	comp=Z,4.1nm,0.7s						
MOD				*e*pP	pP	19 52 36.1	+0.8
MSO	Missoula	76.66	330	P	P	19 52 09.6	+1.4
	baz=137						
TOA0	Torodi Ar. Sit	76.91	71	*e*P	P	19 52 09.3	-0.9
	comp=Z,19nm,0.7s						
TORD	Torodi Ar. Bea	76.91	71	P	P	19 52 09.5	-0.7
	comp=Z,13nm,0.4s,baz=254,slow=4.5,SNR=122						
TORD				pP	pP	19 52 37.4	-1.0
	comp=Z,14nm,0.9s,baz=284,slow=6.5,SNR=6.6						
TORD				LR	LR	20 25 02.5	
	comp=Z,58nm,20.6s,baz=290,slow=35						
M04C	Macdoel	77.33	323	P	P	19 52 13.6	+1.5
	baz=130						
M02C	Callahan	77.67	322	P	P	19 52 15.4	+1.4
	baz=129						
K04D	Chiloquin, OR	77.82	323	P	P	19 52 16.3	+1.4
	baz=130						
J05D	Fort Rock, OR	77.95	324	P	P	19 52 17.1	+1.5
	baz=130						
J04D	Umpqua Nationa	78.41	324	P	P	19 52 19.5	+1.3
	baz=130						
I04A	Tendick Farm,	78.94	324	P	P	19 52 21.6	+0.7
	baz=130						
K02D	Willamette Mer	78.96	322	P	P	19 52 22.6	+1.6
	baz=128						
SYO	Syowa Base	79.18	160	⇑*i*P	P	19 52 21.4	-0.4
SYO	Syowa Base	79.18	160	⇑*i*PcP	PcP	19 52 28.0	-1.8
NEW	Newport	79.19	330	P	P	19 52 22.7	+0.5
	baz=134						
VNDA	Vanda	79.41	190	P	P	19 52 24.6	+1.7
	comp=Z,1.3nm,0.8s,baz=124,slow=5.4,SNR=9.7						
VNDA				pP	pP	19 52 52.1	+1.4
	comp=Z,0.8nm,0.8s,baz=127,slow=5.1,SNR=2.9						
VNDA	Vanda	79.41	190	*e*P	P	19 52 24.9	+1.9
MORF	Marmelete	79.89	45	*e*P	P	19 52 26.6	+0.4
MORF				AMb	AMB	19 52 29.1	
	comp=Z,82nm,2.0s						
MORF	Marmelete	79.89	45	*e*P	P	19 52 28.0	+1.8
G03D	McMinnville, O	80.31	325	P	P	19 52 29.7	+1.5
	baz=129						
PBDV	Barranco-do-Ve	80.33	45	*e*P	P	19 52 30.3	+1.7
	comp=Z,89nm,1.6s						
PNCL	Nicolau / Gran	80.40	44	*e*P	P	19 52 30.6	+1.7
MESJ	Messejana	80.46	45	*e*P	P	19 52 29.8	+0.6
MESJ				AMb	AMB	19 52 32.4	
	comp=Z,25nm,2.1s						
MESJ	Messejana	80.46	45	*e*P	P	19 52 30.5	+1.3
	comp=Z,37nm,2.0s						
PCVE	Castro Verde	80.47	45	*e*P	P	19 52 31.0	+1.7
	comp=Z,43nm,1.8s						
PBEJ	Beja	80.80	45	*e*P	P	19 52 33.2	+2.2
ALMR	Almeirim	80.94	43	*e*P	P	19 52 32.2	+0.5
ALMR				AMb	AMB	19 52 34.1	
	comp=Z,44nm,0.8s						
ALMR	Almeirim	80.94	43	*e*P	P	19 52 34.0	+2.3
	comp=Z,53nm,1.7s						
PMTG	Montargil	81.12	44	*e*P	P	19 52 33.6	+0.9
	comp=Z,32nm,1.4s						
PMTG				*e*pP	pP	19 53 03.2	+2.2
TSUM	Tsumeb	81.28	107	*e*P	P	19 52 34.1	-0.1
	comp=Z,14nm,0.8s						
PTOM	Tomar	81.30	43	*e*P	P	19 52 34.6	+1.0
	comp=Z,37nm,1.6s						
PCAS	Casmilo, Conde	81.48	43	*e*P	P	19 52 35.5	+0.9
	comp=Z,35nm,2.0s						
B05A	Bryant	81.64	328	P	P	19 52 35.7	+0.5
	baz=130,SNR=5.1						
D03D	Eldon	81.69	327	P	P	19 52 37.0	+1.5
	baz=130						
PMRV	Marv??o	81.86	44	*e*P	P	19 52 37.0	+0.4
MTE	Manteigas	82.28	43	*e*P	P	19 52 39.5	+0.6
	comp=Z,19nm,1.8s						
MTE				*e*pP	pP	19 53 06.5	-0.7
PVRL	Vila Real	82.64	42	*e*P	P	19 52 41.6	+0.9
POLO	Lamas de Olo	82.65	42	*e*P	P	19 52 41.1	+0.3
	comp=Z,10nm,1.5s						
PCAB	Cabril	82.68	42	*e*P	P	19 52 41.8	+0.9
	comp=Z,33nm,1.8s						
PCAB				*e*pP	pP	19 53 10.6	+1.3
MVO	Moncorvo	83.02	42	*e*P	P	19 52 43.3	+0.6
	comp=Z,29nm,1.7s						
MVO				*e*pP	pP	19 53 12.6	+1.5
PBRG	Braganca	83.55	42	*e*P	P	19 52 46.0	+0.7
	comp=Z,30nm,1.5s						
PAB	San Pablo	83.93	45	*e*P	P	19 52 47.8	+0.4
	comp=Z,19nm,0.9s						
ESDC	Sonseca Array	84.26	45	P	P	19 52 49.4	+0.4
	comp=Z,9.8nm,1.0s,baz=249,slow=5.3,SNR=36						
ESDC				pP	pP	19 53 17.7	+0.2
	comp=Z,6.2nm,1.1s,baz=250,slow=5.5,SNR=4.4						
ESLA	Sonseca Array	84.26	45	*e*P	P	19 52 49.0	-0.1
	comp=Z,17nm,1.1s						
BOSA	Boshof	85.13	118	P	P	19 52 54.0	+0.1
	comp=Z,11nm,1.1s,baz=232,slow=4.7,SNR=6.7						
BOSA				LR	LR	20 28 45.0	
	comp=Z,66nm,18.4s,baz=235,slow=34						
MAW	Mawson	87.04	164	P	P	19 53 03.4	+1.2
	comp=Z,2.8nm,1.0s,baz=242,slow=8.3,SNR=5.1						
MAW	Mawson	87.04	164	*e*P	P	19 53 02.9	+0.7
	comp=Z,0.8nm,0.9s						
YKA	Yellowknife Ar	88.50	341	P	P	19 53 09.6	+0.6
	comp=Z,16nm,0.8s,baz=135,slow=4.8,SNR=63						
YKA				pP	pP	19 53 37.0	-0.4
	comp=Z,13nm,0.8s,baz=133,slow=4.7,SNR=8.6						
YKA				sP	sP	19 53 48.1	-0.9
	comp=Z,9.6nm,0.8s,baz=136,slow=4.8,SNR=4.4						
YKW3	Yellowknife Ar	88.55	341	*e*P	P	19 53 09.8	+0.5
	comp=Z,17nm,0.8s						
YKW3				*e*pP	pP	19 53 37.3	-0.5
ILAR	Eielson Array	101.62	335	PP	PP	19 58 12.8	-7.7
	comp=Z,0.5nm,0.5s,baz=117,slow=6.9,SNR=5.6						
STKA	Stephens Creek	121.50	211	PKP	PKiKP	19 59 11.0	+0.2
	comp=Z,1.6nm,0.7s,baz=138,slow=9.0,SNR=3.3						
H11S2	WAKE ISLAND Hy	127.03	279	T	T	22 18 43.8	
	baz=101,slow=75,SNR=114						
H11S1	WAKE ISLAND Hy	127.03	279	T	T	22 18 56.6	
	baz=101,slow=75,SNR=69						
H11N3	WAKE ISLAND Hy	127.04	281	T	T	22 18 52.1	
	baz=100,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	127.05	279	T	T	22 18 56.3	
	baz=101,slow=75,SNR=49						
H11N2	WAKE ISLAND Hy	127.05	281	T	T	22 18 56.1	
	baz=100,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	127.05	281	T	T	22 18 59.6	
	baz=100,slow=75,SNR=7.1						
ABKAR	Akbulak array	129.46	41	*e*PKPdf	PKiKP	19 59 26.3	+0.4
PEA1	Petropavlovsk-	130.11	325	*e*PKPdf	PKiKP	19 59 27.1	0.0
PETK	Petropavlovsk-	130.11	325	PKP	PKiKP	19 59 27.1	0.0
	comp=Z,3.8nm,0.8s,baz=34,slow=5.8,SNR=3.9						
ASAR	Alice Springs	132.05	209	PKP	PKPdf	19 59 31.1	+0.1
	comp=Z,1.6nm,0.6s,baz=144,slow=1.7,SNR=16						
ASAR				pPKP	pPKPdf	20 00 01.8	+1.0
	comp=Z,0.6nm,0.6s,baz=131,slow=1.3,SNR=2.4						
ASAR				SKPbc	SKPbc	20 02 47.4	-0.6
	comp=Z,2.2nm,1.0s,baz=156,slow=4.3,SNR=9.1						
AS31	Alice Springs	132.05	209	*e*PKPdf	PKPdf	19 59 31.1	+0.1
WR1	Warramunga Arr	135.00	212	*e*PKPdf	PKPdf	19 59 37.1	+0.5
WRA	Warramunga Arr	135.00	212	PKP	PKPdf	19 59 37.1	+0.5
	comp=Z,2.2nm,0.5s,baz=175,slow=1.8,SNR=15						
WRA				pPKP	pPKPdf	20 00 08.1	+1.7
	comp=Z,2.1nm,0.8s,baz=184,slow=1.6,SNR=3.3						
WRA				SKPbc	SKPbc	20 02 57.9	0.0
	comp=Z,1.7nm,1.0s,baz=144,slow=7.2,SNR=3.4						
ZAA1	Zalesovo Array	139.69	23	*e*PKPdf	PKPdf	19 59 44.2	0.0
ZALV	Zalesovo Beam	139.70	23	PKP	PKPdf	19 59 44.2	0.0
	comp=Z,1.3nm,0.5s,baz=226,slow=2.7,SNR=6.8						
ZALV				pPKP	pPKPdf	20 00 15.1	+1.0
	comp=Z,3.0nm,0.7s,baz=207,slow=1.7,SNR=4.1						
ZALV				SKPbc	SKPbc	20 03 09.9	-0.6
	comp=Z,1.7nm,0.8s,baz=309,slow=5.0,SNR=4.4						
MK31	Makanchi Array	143.69	33	*e*PKPpre	PKPpre	19 59 49.5	
MK32	Makanchi Array	143.69	33	*e*PKPdf	PKPdf	19 59 51.8	+0.2
MKAR	Makanchi Array	143.69	33	PKhKP	PKPpre	19 59 48.6	
	comp=Z,0.9nm,0.6s,baz=341,slow=2.8,SNR=12						
MKAR				PKP	PKPdf	19 59 51.8	+0.2
	comp=Z,0.9nm,0.6s,baz=291,slow=3.4,SNR=12						
MKAR				pPKP	pPKPdf	20 00 21.6	+0.1
	comp=Z,1.5nm,0.7s,baz=319,slow=2.4,SNR=3.5						
MKAR				SKPbc	SKPbc	20 03 20.0	-0.9
	comp=Z,1.5nm,0.8s,baz=337,slow=2.8,SNR=6.8						
KSH	Kashi	143.71	48	*e*PKP	PKPbc	19 59 50.5	+0.7
KSH				sPKP		20 00 28.9	
KSH				PP	PP	20 03 05.5	-0.1
KSH				PKS	PKSdf	20 03 24.4	-3.3
KSH				AMB	AMB		
	comp=Z,150nm,8.6s						
WMQ	Urumqi	148.51	33	*e*PKPbc	PKPdf	19 59 59.9	0.0
WMQ				LR	LR		
	comp=Z,400nm,28.9s						
WMQ				LR	LR		
	comp=Z,620nm,28.9s						
WMQ				LR	LR		
	comp=Z,53nm,29.3s						
USA0B	Ussuriysk Arra	148.97	329	*e*PKPbc	PKiKP	20 00 05.6	-0.4
USRK	Ussuriysk Ar.	148.97	329	PKPbc	PKPbc	20 00 04.9	+0.3
	comp=Z,19nm,0.9s,baz=17,slow=1.4,SNR=39						
USRK				pPKPbc	pPKPbc	20 00 34.9	+0.5
	comp=Z,2.7nm,0.7s,baz=33,slow=4.7,SNR=2.6						
HYB	Hyderabad	149.54	87	*i* PKP	PKPab	20 00 12.0	-0.2
MJAR	Matsushiro Arr	149.98	312	PKPbc	PKiKP	20 00 08.2	-0.1
	comp=Z,10nm,0.8s,baz=106,slow=1.5,SNR=41						
MJAR				pPKPbc	pPKPbc	20 00 37.0	+0.1
	comp=Z,3.4nm,0.7s,baz=86,slow=1.1,SNR=3.9						
MAJO	Matsushiro	149.98	312	*e*PKPbc	PKiKP	20 00 08.1	-0.2
MAJO				*e*pPKPdf	pPKPbc	20 00 37.0	+0.1
MAT	Matsushiro	149.98	312	PKP	PKiKP	20 00 08.0	-0.3
MJB9	Matsu-Tunnel	149.98	312	*e*PKPbc	PKiKP	20 00 08.2	-0.1

SONA0	**Songino Array**	**150.84**	**6**	*e*PKPbc	**PKiKP**	**20 00 10.1**	**+0.3**
SONA0				*e*pPKPdf	**pPKPbc**	**20 00 39.7**	**+0.5**
SONA0				*e*pPKPab	**sPKPbc**	**20 00 51.6**	**+1.1**
SONM	**Songino Array**	**150.84**	**6**	PKPbc	**PKiKP**	**20 00 10.1**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=331,slow=1.8,SNR=17						
SONM				pPKPbc	**pPKPbc**	**20 00 39.7**	**+0.5**
	comp=Z,8.6nm,0.8s,baz=324,slow=1.5,SNR=9.0						
SONM				sPKPbc	**sPKPbc**	**20 00 51.7**	**+1.1**
	comp=Z,3.5nm,0.6s,baz=325,slow=1.5,SNR=4.1						
KSRS	**Korea Array**	**156.01**	**324**	PKPbc	PKPdf	20 00 21.9	+11
	comp=Z,1.6nm,0.8s,baz=39,slow=0.6,SNR=4.4						
KSRS				PKPab	**PKPab**	**20 00 39.2**	**+0.5**
	comp=Z,2.9nm,1.0s,baz=56,slow=4.1,SNR=8.1						
HHC	**Hu-ho-hao-te**	**158.01**	**358**	*e*PKP	**PKPdf**	**20 00 13.0**	**-0.7**
LZH	**Lanzhou**	**161.78**	**18**	*e*PKP	**PKPdf**	**20 00 20.0**	**+1.8**
LZH				pPKP	pPKPdf	20 00 42.6	-5.7
LZH				LR	LR		
	comp=Z,120nm,18.1s						
LZH				LR	LR		
	comp=Z,130nm,18.3s						
LZH				LR	LR		
	comp=Z,150nm,20.0s						
NJ2	**Nanjing**	**164.85**	**332**	*e*PKP	**PKPdf**	**20 00 20.4**	**-0.6**
CD2	**Chengdu**	**166.45**	**26**	PKP	**PKPdf**	**20 00 20.7**	**-1.7**
CMAR	**Chiang Mai Arr**	**168.95**	**90**	PKPab	**PKPab**	**20 01 35.7**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=270,slow=5.7,SNR=11						
CMAR				PP	**PP**	**20 05 26.6**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=268,slow=5.4,SNR=4.5						
GYA	**Guiyang**	**171.56**	**25**	*e*PKP	**PKPdf**	**20 00 26.8**	**+1.0**
GYA				PKPab	**PKPab**	**20 01 51.4**	**+4.1**
GYA				AMB	AMB		
	comp=Z,120nm,8.1s						

MEX 06 20:32:17.8±0.6, 17.°09N×100.°00W, h35^{km}±9^{km}, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.24**	**152**	*e*P	Pn	20 32 23.4	-1.3
ACP2				*i* S	Sn	20 32 28.2	-0.5
CAIG	**El Cayaco**	**0.26**	**261**	*i* P	Pn	20 32 23.5	-1.4
CAIG				*i* S	Sn	20 32 28.6	-0.6
MEIG	**Mezcala**	**0.91**	**24**	*e*P	Pn	20 32 33.0	-1.3
MEIG				*i* S	Sn	20 32 43.4	-2.8
MEIG				*e*S	Sb	20 32 43.8	-3.5
ARIG	**Puente Sto Nin**	**1.23**	**345**	*e*P	Pn	20 32 36.5	-2.1
ARIG				*e*S	Sn	20 32 51.8	-2.2
TLIG	**Tlapa**	**1.45**	**71**	*i* P	Pn	20 32 39.9	-1.9
TLIG				*i* S	Sn	20 32 57.4	-2.2

IDC ***06*** *20:37:39.7±0.5, 29.°60S×112.°10W, h0^{km}, mb4.3/23, mb1 4.5/24, mb1mx4.4/38, mbtmp4.3/24, ML4.1/1, MS4.9/23, Ms1 4.9/23, ms1mx4.8/24, Error ellipse: s-maj=15.7km s-min=14.4km az=50.0*

ISCJB ***06*** *20:37:40.9±0.3, 29.°66S±0.°04×111.°78W±0.°05, h10^{km}, mb4.7/62, MS5.0/471, Error ellipse: s-maj=7.4km s-min=4.9km az=149.8*

MOS ***06*** *20:37:42.1±1.6, 29.°67S×111.°55W, h10^{km}, mb5.0/27, MS5.1/22, Error ellipse: s-maj=13.4km s-min=9.4km az=78.9*

NEIC ***06*** *20:37:43.3±1.5, 29.°73S×111.°66W, h10^{km}±2^{km}, mb4.9/238, MS5.0/471, MW5.4, Error ellipse: s-maj=18.9km s-min=14.7km az=109.0, Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.38; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$1.45; $M_{r\theta}$-0.37; $M_{\theta\phi}$-0.03; $M_{\phi r}$-0.12; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s42.00000°, δ76.00000°, λ-20.00000°. NP2:ϕ_s137.00000°, δ71.00000°, λ-165.00000°. Principal axes: T 1.4600, Plg4.0000°, Azm90.0000°; N -0.2200, Plg66.0000°, Azm188.0000°; P -1.2300, Plg24.0000°, Azm358.0000°;*

GCMT ***06*** *20:37:45.3±0.1, 29.°65S±0.°01×111.°86W±0.°01, h23^{km}, MW5.4/129, Moment Tensor Solution. s97,c150; s129,c231; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.02±.03; $M_{\theta\theta}$-1.72±.03; $M_{\phi\phi}$1.70±.03; $M_{r\theta}$-0.32±.04; $M_{\theta\phi}$0.41±.02; $M_{\phi r}$-0.04±.04; Best double couple: $M_0$1.78800×10^{17} NP1:ϕ_s51.00000°, δ85.00000°, λ-9.00000°. NP2:ϕ_s142.00000°, δ81.00000°, λ-175.00000°. Principal axes: T 1.7530, Plg2.0000°, Azm97.0000°; N 0.0690, Plg80.0000°, Azm201.0000°; P -1.8240, Plg10.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 20:37:42.9±0.3, 29.°74S±0.°06×111.°76W±0.°06, h10^{km}, n1067, σ1^{s}33/643, mb4.8/62, MS5.0/471, 31C-6D, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**3.37**	**40**	Pn	**Pn**	**20 38 34.6**	**-1.1**
	16nm,0.3s,baz=171,slow=1.8,SNR=4.6						
RPN				Sn	**Sn**	**20 39 17.4**	**+1.7**
	17nm,0.3s,baz=216,slow=7.3,SNR=1.9						
RPN				LR	LR	20 39 42.0	
	comp=Z,15µm,19.5s,baz=228,slow=35						
RPN	**Rapa Nui**	**3.37**	**40**	*e*Pn	**Pn**	**20 38 34.2**	**-1.5**
RPN	**Rapa Nui**	**3.37**	**40**	*e*P	**Pn**	**20 38 34.2**	**-1.5**
RKT	**Rikitea**	**21.79**	**282**	*e*LR	LR	20 47 33.2	
	comp=Z,9µm,27.2s						
TAOE	**Nuku Hiva Isla**	**33.73**	**302**	*e*S	**S**	**20 49 49.1**	**+0.6**
	210nm,28.9s						
TAOE				*e*LQ	LQ	20 51 55.9	
	2µm,25.7s						
TAOE				*e*LR	LR	20 53 20.7	
	comp=Z,5µm,26.4s						
GO05	**Huala**	**33.89**	**109**	*e*P	**P**	**20 44 25.9**	**-0.2**
	10.0nm,0.9s						
GO05				LR	LR		
	comp=Z,4µm,19.0s						
TBI	**Tubuai**	**34.21**	**272**	*e*S	**S**	**20 49 56.0**	**+0.4**
	comp=Z,350nm,27.1s						
TBI				*e*LQ	LQ	20 52 09.4	
	comp=Z,622nm,24.2s						
TBI				*e*LR	LR	20 53 20.0	
	comp=Z,8µm,26.5s						
PEL	**Peldehue**	**35.05**	**106**	*e*P	**P**	**20 44 34.9**	**-1.2**
	comp=Z,15nm,0.8s						
PEL				LR	LR		
	comp=Z,4µm,21.0s						
PEL	**Peldehue**	**35.05**	**106**	*e*P	**P**	**20 44 34.9**	**-1.2**
PEL				pmax	pmax		
	comp=Z,15nm,0.8s						
PEL				MLR	MLR		
	comp=Z,4µm,21.0s						
PLCA	**Paso Flores**	**35.11**	**119**	P	**P**	**20 44 37.6**	**+1.0**
	comp=Z,2.8nm,0.9s,baz=308,slow=10.0,SNR=5.4						
PLCA				LR	LR	20 55 15.4	
	comp=Z,2µm,21.4s,baz=296,slow=30						
PLCA	**Paso Flores**	**35.11**	**119**	*e*P	**P**	**20 44 37.0**	**+0.4**
	comp=Z,6.2nm,1.0s						
PLCA	**Paso Flores**	**35.11**	**119**	*e*P	**P**	**20 44 37.0**	**+0.4**
PLCA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PLCA	**Paso Flores**	**35.11**	**119**	*e*P	**P**	**20 44 37.9**	**+1.3**
GO04	**Tololo Observa**	**35.36**	**101**	*e*P	**P**	**20 44 38.7**	**-0.4**
	comp=Z,19nm,1.1s						
GO09	**Cerro Castillo**	**36.29**	**138**	*e*P	**P**	**20 44 46.1**	**-0.3**
	comp=Z,36nm,0.9s						
GO03	**Copiap**	**36.36**	**97**	*e*P	**P**	**20 44 46.1**	**-1.3**
	comp=Z,17nm,1.0s						
PPT2	**Papeete2**	**36.52**	**281**	*e*S	**S**	**20 50 34.8**	**+3.4**
	comp=Z,310nm,26.0s						
PPT2				*e*LQ	LQ	20 53 08.5	
	comp=Z,630nm,26.5s						
PPT2				*e*LR	LR	20 54 21.2	
	comp=Z,8µm,26.5s						
NNA	**Nana**	**36.91**	**69**	*e*P	**P**	**20 44 51.4**	**-0.8**
	comp=Z,19nm,1.0s						
NNA				LR	LR		
	comp=Z,4µm,22.0s						
NNA	**Nana**	**36.91**	**69**	*e*P	**P**	**20 44 51.4**	**-0.8**
NNA				pmax	pmax		
	comp=Z,19nm,1.0s						
NNA				MLR	MLR		
	comp=Z,4µm,22.0s						
PB10	**IPOC Station P**	**37.21**	**90**	PFAKE		20 45 10.0	+15
PB10				LR	LR		
	comp=Z,5µm,18.0s						
CFA	**Coronel Fontan**	**37.30**	**104**	P	**P**	**20 44 55.4**	**0.0**
	comp=Z,7.3nm,0.9s,baz=266,slow=9.1,SNR=3.5						
GO02	**Mina Guanaco**	**37.55**	**93**	*e*P	**P**	**20 44 56.5**	**-1.3**
	comp=Z,10.0nm,0.8s						
GO02				LR	LR		
	comp=Z,4µm,19.0s						
ATAH	**Atahualpa**	**38.59**	**61**	P	**P**	**20 45 07.5**	**+0.7**
	comp=Z,14nm,1.0s,baz=260,slow=3.9,SNR=4.8						
LVC	**Limon Verde**	**38.94**	**90**	P	**P**	**20 45 10.7**	**+1.1**
	comp=Z,6.1nm,0.8s,baz=294,slow=12,SNR=4.1						
LVC	**Limon Verde**	**38.94**	**90**	*e*P	**P**	**20 45 09.1**	**-0.5**
	comp=Z,9.5nm,0.9s						
LVC				LR	LR		
	comp=Z,4µm,20.0s						
LVC	**Limon Verde**	**38.94**	**90**	*e*P	**P**	**20 45 09.1**	**-0.5**
LVC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LVC				MLR	MLR		
	comp=Z,4µm,20.0s						
LVC	**Limon Verde**	**38.94**	**90**	*e*P	**P**	**20 45 11.7**	**+2.0**
PB01	**IPOC Station P**	**38.99**	**87**	*e*P	**P**	**20 45 09.6**	**-0.2**
	comp=Z,5.5nm,1.1s						
PB11	**IPOC Station P**	**39.32**	**85**	*e*P	**P**	**20 45 12.4**	**-0.3**
	comp=Z,30nm,1.1s						
PB11				LR	LR		
	comp=Z,3µm,20.0s						
MNMC	**Minye Minye**	**39.62**	**84**	*e*P	**P**	**20 45 14.2**	**-1.1**
	comp=Z,26nm,1.0s						
TRQA	**Tornquist**	**41.73**	**115**	*e*P	**P**	**20 45 31.7**	**-0.6**
	comp=Z,14nm,1.0s						
TRQA				LR	LR		
	comp=Z,4µm,18.0s						
TRQA	**Tornquist**	**41.73**	**115**	*e*P	**P**	**20 45 31.7**	**-0.6**
TRQA				pmax	pmax		
	comp=Z,15nm,1.0s						
TRQA				MLR	MLR		
	comp=Z,4µm,18.0s						
LPAZ	**La Paz**	**42.09**	**81**	P	**P**	**20 45 35.8**	**-0.3**
	comp=Z,12nm,1.2s,baz=246,slow=5.3,SNR=12						
LPAZ				PcP	**PcP**	**20 47 29.6**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=200,slow=3.0,SNR=2.5						
LPAZ				LR	LR	20 59 03.0	
	comp=Z,2µm,19.1s,baz=248,slow=30						
LPAZ	**La Paz**	**42.09**	**81**	*e*P	**P**	**20 45 35.1**	**-1.0**
LPAZ				*e*pP	**P**	**20 45 35.4**	**-0.7**
LPAZ	**La Paz**	**42.09**	**81**	*e*P	**P**	**20 45 35.1**	**-1.0**
LPAZ				*e**PP	**P**	**20 45 35.4**	**-0.7**
LPAZ	**La Paz**	**42.09**	**81**	*e*P	**P**	**20 45 36.1**	**0.0**
EFI	**East Falkland**	**45.02**	**135⇓**	*e*P	**P**	**20 45 58.1**	**-0.5**
EFI				pmax	pmax		
	comp=Z,64nm,1.4s						
JTS	**Las Juntas de**	**47.45**	**37⇑**	*e*P	**P**	**20 46 20.3**	**+2.3**
JTS				pmax	pmax		
	comp=Z,16nm,1.2s						
HDC	**Heredia**	**47.65**	**38**	PFAKE		20 46 30.0	+10
HDC				LR	LR		
	comp=Z,3µm,20.0s						
CPUP	**Villa Florida**	**47.80**	**100**	P	**P**	**20 46 22.1**	**+1.4**
	comp=Z,6.5nm,1.2s,baz=258,slow=11,SNR=3.0						
CPUP				LR	LR	21 03 05.0	
	comp=Z,2µm,19.2s,baz=278,slow=32						
CPUP	**Villa Florida**	**47.80**	**100**	*e*P	**P**	**20 46 21.1**	**+0.3**
	comp=Z,6.6nm,1.1s						
CPUP	**Villa Florida**	**47.80**	**100**	*e*P	**P**	**20 46 21.1**	**+0.3**
CPUP				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CPUP	**Villa Florida**	**47.80**	**100**	*e*P	**P**	**20 46 24.7**	**+3.9**
CSGN	**Cosiguina Volc**	**48.46**	**32**	PFAKE		20 46 40.0	+14
CSGN				LR	LR		
	comp=Z,1µm,21.0s						
TLIG	**Tlapa**	**48.72**	**17**	*e*P	**P**	**20 46 28.2**	**+0.3**
	comp=Z,42nm,1.0s						
ESPN	**Las Esperanzas**	**49.39**	**36**	PFAKE		20 46 40.0	+7.0
ESPN				LR	LR		
	comp=Z,1µm,20.0s						
CCIG	**Comitan**	**49.52**	**25**	*e*P	**P**	**20 46 35.0**	**+0.8**
	comp=Z,14nm,1.1s						
TGUH	**Tegucigalpa,Un**	**49.54**	**32**	PFAKE		20 46 50.0	+16
TGUH				LR	LR		
	comp=Z,1µm,19.0s						
ROSC	**El Rosal**	**49.71**	**53**	P	**P**	**20 46 36.0**	**0.0**
	comp=Z,4.1nm,0.3s,baz=229,slow=11,SNR=5.0						
ROSC				LR	LR	21 04 07.7	
	comp=Z,697nm,18.9s,baz=211,slow=32						
ROSC	**El Rosal**	**49.71**	**53**	*e*P	**P**	**20 46 35.9**	**0.0**
	comp=Z,25nm,1.1s						
ROSC				LR	LR		
	comp=Z,800nm,18.0s						
LVIG	**Laguna Verde**	**51.35**	**19**	*e*P	**P**	**20 46 48.7**	**+1.0**
	comp=Z,19nm,1.0s						
LVIG				LR	LR		
	comp=Z,500nm,20.0s						
ZAIG	**Zacatecas**	**52.95**	**11**	*e*P	**P**	**20 46 59.9**	**0.0**
	comp=Z,5.0nm,1.0s						
ZAIG				LR	LR		
	comp=Z,1µm,22.0s						
LPIG	**La Paz**	**53.55**	**2**	LR	LR	21 04 29.9	
	comp=Z,2µm,19.9s,baz=198,slow=30						
TEIG	**Tepich**	**54.59**	**27**	PFAKE		20 47 20.0	+8.4
TEIG				LR	LR		
	comp=Z,1µm,19.0s						
MYIG	**Mrida**	**54.69**	**25**	PFAKE		20 47 20.0	+7.7
MYIG				LR	LR		
	comp=Z,800nm,20.0s						
SDV	**Santo Domingo**	**55.14**	**52**	P	**P**	**20 47 16.3**	**+0.2**
	comp=Z,4.2nm,0.3s,baz=254,slow=5.4,SNR=7.3						
SDV	**Santo Domingo**	**55.14**	**52**	*e*P	**P**	**20 47 15.9**	**-0.2**
	comp=Z,34nm,1.1s						
SDV				LR	LR		
	comp=Z,800nm,22.0s						
SDV	**Santo Domingo**	**55.14**	**52**	*e*P	**P**	**20 47 16.6**	**+0.6**
LNIG	**Linares**	**55.60**	**14**	*e*P	**P**	**20 47 18.6**	**-0.3**
	comp=Z,4.7nm,1.0s						
ITRB	**Iturama**	**56.11**	**95**	*e*P	**P**	**20 47 24.8**	**+1.9**
HPIG		**56.66**	**7**	*e*P	**P**	**20 47 27.4**	**+0.7**
	comp=Z,13nm,1.1s						
HPIG				LR	LR		
	comp=Z,1µm,19.0s						
SRIG	**Santa Rosalia**	**56.74**	**359**	PFAKE		20 47 40.0	+13
SRIG				LR	LR		
	comp=Z,2µm,21.0s						
PTGA	**Pitinga**	**57.04**	**69**	*e*P	**P**	**20 47 29.6**	**+0.2**
	comp=Z,14nm,1.1s						
PTGA				LR	LR		
	comp=Z,1µm,18.0s						
BB19B	**Bebedouro**	**57.17**	**97**	*e*P	**P**	**20 47 31.6**	**+1.2**
SPB	**Sao Paulo**	**57.18**	**100**	PFAKE		20 47 40.0	+10
SPB				LR	LR		
	comp=Z,2µm,18.0s						
SPB	**Sao Paulo**	**57.18**	**100**	*e*P	**P**	**20 47 32.6**	**+2.3**
RCLB	**Rio Claro- Sao**	**57.52**	**99**	*e*P	**P**	**20 47 35.4**	**+2.6**
MXZ	**Matakaoa Point**	**57.53**	**242**	PFAKE		20 47 50.0	+17
MXZ				LR	LR		
	comp=Z,2µm,22.0s						
MTDJ	**Mount Denham**	**57.99**	**39**	PFAKE		20 47 50.0	+14
MTDJ				LR	LR		
	comp=Z,1µm,21.0s						
URZ	**Urewera**	**58.27**	**241**	PFAKE		20 47 50.0	+12
URZ				LR	LR		
	comp=Z,2µm,19.0s						
HSIG		**58.44**	**1**	PFAKE		20 47 50.0	+11
HSIG				LR	LR		
	comp=Z,2µm,20.0s						
833A	**Chaparral WMA,**	**58.94**	**13**	PFAKE		20 47 50.0	+7.6
833A				LR	LR		
	comp=Z,2µm,18.0s						
833A	**Chaparral WMA,**	**58.94**	**13**	P	**P**	**20 47 42.1**	**-0.3**
	baz=192						
TXAR	**Lajitas Array**	**59.25**	**8**	P	**P**	**20 47 42.7**	**-2.0**
	comp=Z,3.9nm,1.1s,baz=185,slow=7.3,SNR=16						
TXAR				LR	LR	21 08 24.4	
	comp=Z,780nm,20.1s,baz=0.0,slow=31						
SBA	**Scott Base**	**59.36**	**194**	*e*P	**P**	**20 47 45.5**	**+0.7**
	comp=Z,9.0nm,1.1s						
SBA				LR	LR		
	comp=Z,2µm,22.0s						
SBA	**Scott Base**	**59.36**	**194**	*e*P	**P**	**20 47 45.5**	**+0.7**
SBA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SBA				MLR	MLR		
	comp=Z,2µm,22.0s						
BDFB	**Brasilia**	**59.81**	**92**	P	**P**	**20 47 49.4**	**+0.4**
	comp=Z,4.8nm,1.1s,baz=259,slow=9.3,SNR=2.1						
BDFB				LR	LR	21 10 21.9	
	comp=Z,780nm,21.0s,baz=259,slow=33						
BDFB	**Brasilia**	**59.81**	**92**	*e*P	**P**	**20 47 49.8**	**+0.8**
	comp=Z,7.1nm,1.0s						
BDFB				LR	LR		
	comp=Z,800nm,19.0s						
BDFB	**Brasilia**	**59.81**	**92**	*e*P	**P**	**20 47 49.8**	**+0.8**
BDFB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BDFB				MLR	MLR		
	comp=Z,800nm,19.0s						
PMNB	**Patos De Minas**	**59.97**	**95**	*e*P	**P**	**20 47 52.6**	**+2.6**
VNDA	**Vanda**	**60.42**	**194**	P	**P**	**20 47 51.6**	**-0.5**
	comp=Z,2.8nm,1.1s,baz=96,slow=6.8,SNR=8.8						
VNDA				LR	LR	21 08 18.8	
	comp=Z,2µm,20.4s,baz=90,slow=30						
VNDA	**Vanda**	**60.42**	**194**	*e*P	**P**	**20 47 53.1**	**+1.1**
	comp=Z,5.8nm,1.0s						
VNDA	**Vanda**	**60.42**	**194**	*e*P	**P**	**20 47 53.2**	**+1.1**
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BSCB	**Bom Sucesso**	**60.43**	**99**	*e*P	**P**	**20 47 55.9**	**+2.7**
QSPA	**South Pole Qui**	**60.44**	**180**	*e*P	**P**	**20 47 53.4**	**+0.8**
	comp=Z,12nm,1.1s						
QSPA				LR	LR		
	comp=Z,1µm,18.0s						
JCT	**Junction City**	**60.96**	**12**	*e*P	**P**	**20 47 56.0**	**-0.3**
	comp=Z,29nm,1.1s						
JCT				LR	LR		
	comp=Z,2µm,20.0s						
JCT	**Junction City**	**60.96**	**12**	*e*P	**P**	**20 47 56.0**	**-0.3**
JCT				pmax	pmax		
	comp=Z,29nm,1.1s						
JCT				MLR	MLR		
	comp=Z,2µm,20.0s						
JCT	**Junction City**	**60.96**	**12**	P	**P**	**20 47 55.1**	**-1.2**
	baz=192,SNR=9.2						
HKT	**Hockley**	**61.27**	**16**	*e*P	**P**	**20 47 58.4**	**+0.1**
HKT				LR	LR		
	comp=Z,900nm,19.0s						
HKT	**Hockley**	**61.27**	**16**	*e*P	**P**	**20 47 58.4**	**+0.1**
HKT				MLR	MLR		
	comp=Z,900nm,19.0s						
214A	**Organ Pipe Nat**	**61.37**	**359**	P	**P**	**20 47 58.8**	**-0.3**
	baz=179						
EPT	**El Paso**	**61.38**	**5**	PFAKE		20 48 10.0	+11
EPT				LR	LR		
	comp=Z,1µm,21.0s						
MNTX	**Cornudas Mount**	**61.40**	**6**	P	**P**	**20 47 58.4**	**-0.9**
	baz=186,SNR=15						
435B	**Jarrell**	**61.68**	**14**	PFAKE		20 48 10.0	+8.8
435B				LR	LR		
	comp=Z,2µm,19.0s						
435B	**Jarrell**	**61.68**	**14**	P	**P**	**20 48 01.0**	**-0.1**
	baz=194						
TUC	**Tucson**	**61.72**	**1**	*e*P	**P**	**20 48 01.0**	**-0.5**
	comp=Z,6.6nm,1.0s						
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	**61.72**	**1**	*e*P	**P**	**20 48 01.0**	**-0.5**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	**61.72**	**1**	P	**P**	**20 48 01.5**	**0.0**
	baz=181						
GDL2	**Guadalupe Moun**	**62.00**	**7**	*e*P	**P**	**20 48 03.4**	**0.0**
121A	**Cookes Peak, D**	**62.05**	**4**	P	**P**	**20 48 03.9**	**+0.1**
	baz=184						
IKP	**In-Ko-Pah, Jac**	**62.19**	**356**	P	**P**	**20 48 04.9**	**+0.3**
	baz=176						
113A	**Mohawk Valley,**	**62.20**	**358**	PFAKE		20 48 20.0	+15
113A				LR	LR		
	comp=Z,2µm,21.0s						
BAR	**Barrett**	**62.26**	**355**	PFAKE		20 48 20.0	+15
BAR				LR	LR		
	comp=Z,2µm,22.0s						
MONP2	**Monument Peak**	**62.45**	**356**	P	**P**	**20 48 06.7**	**+0.2**
	baz=175						
SWSC	**Sam W. Stewart**	**62.46**	**356**	P	**P**	**20 48 06.3**	**-0.1**
	baz=176						
CPE	**Camp Elliot**	**62.49**	**355**	PFAKE		20 48 20.0	+13
CPE				LR	LR		
	comp=Z,2µm,20.0s						
GLA	**Glamis**	**62.52**	**357**	PFAKE		20 48 20.0	+13
GLA				LR	LR		
	comp=Z,2µm,22.0s						
GLA	**Glamis**	**62.52**	**357**	P	**P**	**20 48 06.6**	**-0.1**
	baz=177						
059Z	**Ave Maria**	**62.88**	**31**	P	**P**	**20 48 09.1**	**-0.1**
	baz=209						
WHTX	**Lake Whitney,**	**62.88**	**14**	P	**P**	**20 48 08.8**	**-0.3**
	baz=194						
ABTX	**Abilene, Hawle**	**63.08**	**11**	PFAKE		20 48 20.0	+9.5
ABTX				LR	LR		
	comp=Z,2µm,20.0s						
ABTX	**Abilene, Hawle**	**63.08**	**11**	P	**P**	**20 48 09.6**	**-1.0**
	baz=192,SNR=6.0						
CIS	**Catalina Islan**	**63.12**	**354**	P	**P**	**20 48 10.6**	**-0.1**
	baz=173						
BC3	**Big Chuckawall**	**63.15**	**357**	P	**P**	**20 48 10.7**	**-0.3**
	baz=176,SNR=14						
PFO	**Pinyon Flats O**	**63.17**	**356**	P	**P**	**20 48 08.7**	**-2.5**
	comp=Z,0.7nm,0.3s,baz=161,slow=8.0,SNR=2.1						
PFO				LR	LR	21 09 10.2	
	comp=Z,1µm,19.1s,baz=172,slow=30						
PFO	**Pinyon Flats O**	**63.17**	**356**	*e*P	**P**	**20 48 11.2**	**+0.1**
	comp=Z,4.4nm,1.0s						
PFO				LR	LR		
	comp=Z,2µm,20.0s						
PFO	**Pinyon Flats O**	**63.17**	**356**	*e*P	**P**	**20 48 11.3**	**+0.1**
PFO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PFO				MLR	MLR		
	comp=Z,2µm,20.0s						
PFO	**Pinyon Flats O**	**63.17**	**356**	P	**P**	**20 48 10.9**	**-0.2**
	baz=175						
Y12C	**Blythe**	**63.20**	**357**	PFAKE		20 48 20.0	+8.8
Y12C				LR	LR		
	comp=Z,2µm,20.0s						
Y12C	**Blythe**	**63.20**	**357**	P	**P**	**20 48 11.3**	**+0.1**
	baz=177						
NATX	**Nacogdoches**	**63.28**	**16**	PFAKE		20 48 20.0	+8.2
NATX				LR	LR		
	comp=Z,700nm,18.0s						
NATX	**Nacogdoches**	**63.28**	**16**	P	**P**	**20 48 11.7**	**-0.1**
	baz=196						
058A	**Arcadia**	**63.34**	**30**	P	**P**	**20 48 10.9**	**-1.4**
	baz=209						
Y14A	**Wickenburg**	**63.35**	**359**	PFAKE		20 48 20.0	+7.7
Y14A				LR	LR		
	comp=Z,700nm,18.0s						
BELC	**Belle Mtn. Jos**	**63.52**	**356**	P	**P**	**20 48 13.8**	**+0.2**
	baz=176						
IRM	**Iron Mountain**	**63.63**	**357**	P	**P**	**20 48 14.3**	**+0.1**
	baz=177						
Y22D	**IRIS PASSCAL I**	**63.64**	**4**	PFAKE		20 48 30.0	+16
Y22D				LR	LR		
	comp=Z,2µm,20.0s						
Y22D	**IRIS PASSCAL I**	**63.64**	**4**	P	**P**	**20 48 14.8**	**+0.5**
	baz=185						
PDMCI	**Parker Dam,Lak**	**63.74**	**358**	P	**P**	**20 48 15.3**	**+0.5**
	baz=178						
X16A	**Lo Mia Camp, P**	**63.81**	**0**	PFAKE		20 48 30.0	+14
X16A				LR	LR		
	comp=Z,1µm,20.0s						
958A	**Wauchula**	**63.83**	**30**	P	**P**	**20 48 15.4**	**0.0**
	baz=209						
PASC	**Pasadena Art C**	**63.86**	**354**	PFAKE		20 48 30.0	+14
PASC				LR	LR		
	comp=Z,2µm,20.0s						
BFSC	**Mount Baldy Ra**	**63.88**	**355**	P	**P**	**20 48 17.4**	**+1.5**
	baz=174						
MWC	**Mount Wilson**	**63.90**	**354**	PFAKE		20 48 30.0	+14
MWC				LR	LR		
	comp=Z,2µm,20.0s						
MSTX	**Muleshoe**	**63.94**	**8**	PFAKE		20 48 30.0	+14
MSTX				LR	LR		
	comp=Z,700nm,19.0s						
MSTX	**Muleshoe**	**63.94**	**8**	P	**P**	**20 48 15.6**	**-0.6**
	baz=189						
X18A	**Snowflake**	**63.95**	**2**	PFAKE		20 48 30.0	+14
X18A				LR	LR		
	comp=Z,2µm,20.0s						
060A	**Indiantown**	**63.96**	**31**	P	**P**	**20 48 16.0**	**-0.4**
	baz=210						
ALF01	**Guarapari-ES**	**64.06**	**100**	*e*P	**P**	**20 48 19.8**	**+2.5**
SJMB	**Sao Joao De Ma**	**64.44**	**98**	*e*P	**P**	**20 48 21.0**	**+1.1**
W13A	**Hualapai Mount**	**64.53**	**358**	PFAKE		20 48 30.0	+10
W13A				LR	LR		
	comp=Z,2µm,19.0s						
TASM	**ASL Pad, Albuq**	**64.53**	**5**	P	**P**	**20 48 20.0**	**-0.3**
	baz=185,SNR=6.5						

TASM	ASL Pad, Albuq	64.53	5	P	P	20 48 20.2	-0.1
	baz=185,SNR=6.5						
ANMO	Albuquerque	64.54	5	P	P	20 48 18.0	-2.3
	comp=Z,1.9nm,0.8s,baz=170,slow=8.5,SNR=11						
ANMO				LR	LR	21 11 23.5	
	comp=Z,1µm,18.5s,baz=185,slow=31						
ANMO	Albuquerque	64.54	5	*e*P	P	20 48 20.3	0.0
	comp=Z,3.9nm,1.1s						
ANMO				LR	LR		
	comp=Z,1µm,19.0s						
ANMO	Albuquerque	64.54	5	⇑*e*P	P	20 48 20.7	+0.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ANMO	Albuquerque	64.54	5	P	P	20 48 20.3	0.0
	baz=185						
W18A	Petrified Fore	64.54	2	PFAKE		20 48 30.0	+10
W18A				LR	LR		
	comp=Z,2µm,21.0s						
W18A	Petrified Fore	64.54	2	P	P	20 48 20.2	-0.1
	baz=182						
LDFC	Landfair	64.55	357	PFAKE		20 48 30.0	+10
LDFC				LR	LR		
	comp=Z,2µm,20.0s						
BSFB	Barra de Sao F	64.68	98	*e*P	P	20 48 23.7	+2.2
PKM	Mcpherson Peak	64.73	353	P	P	20 48 21.7	+0.1
	baz=172						
SVB	Belmont	64.79	56	PFAKE		20 48 30.0	+7.9
SVB				LR	LR		
	comp=Z,600nm,22.0s						
GSC	Goldstone, Bar	64.87	355	P	P	20 48 20.9	-1.4
	baz=175						
WUAZ	Wupatki	64.91	0	PFAKE		20 48 40.0	+17
WUAZ				LR	LR		
	comp=Z,2µm,22.0s						
WUAZ	Wupatki	64.91	0	P	P	20 48 22.9	+0.2
	baz=180						
TUQ	Turquoise Moun	64.95	356	P	P	20 48 22.9	0.0
	baz=176						
AMTX	Amarillo	64.98	9	PFAKE		20 48 40.0	+17
AMTX				LR	LR		
	comp=Z,800nm,19.0s						
AMTX	Amarillo	64.98	9	P	P	20 48 22.8	-0.2
	baz=190						
656A	Willston	65.06	28	PFAKE		20 48 40.0	+16
656A				LR	LR		
	comp=Z,800nm,19.0s						
Z41A	Richland Creek	65.18	17	P	P	20 48 23.9	-0.3
	baz=198						
554A	Perry	65.23	27	P	P	20 48 23.6	-1.0
	baz=207						
WMOK	Wichita Mounta	65.29	12	PFAKE		20 48 40.0	+15
WMOK				LR	LR		
	comp=Z,2µm,20.0s						
ISA	Isabella, Lake	65.36	354	PFAKE		20 48 40.0	+15
ISA				LR	LR		
	comp=Z,3µm,20.0s						
ISA	Isabella, Lake	65.36	354	P	P	20 48 26.1	+0.6
	baz=174						
WLAR	White Oak Lake	65.51	17	PFAKE		20 48 40.0	+14
WLAR				LR	LR		
	comp=Z,700nm,18.0s						
PAGB	Antelope Grade	65.61	352	PFAKE		20 48 40.0	+13
PAGB				LR	LR		
	comp=Z,2µm,20.0s						
658A	Bunnell	65.64	29	PFAKE		20 48 40.0	+13
658A				LR	LR		
	comp=Z,2µm,22.0s						
556A	Lake Butler	65.67	28	P	P	20 48 27.6	+0.2
	baz=208						
MPMC	Manual Prospec	65.67	355	P	P	20 48 27.7	0.0
	baz=174						
453A	Whigham	65.68	26	P	P	20 48 26.9	-0.6
	baz=206						
249A	Camden	65.69	23	P	P	20 48 27.5	0.0
	baz=203						
454A	Quitman	65.82	26	P	P	20 48 26.9	-1.5
	baz=206						
U15A	North Rim	65.82	360	PFAKE		20 48 40.0	+11
U15A				LR	LR		
	comp=Z,1µm,22.0s						
X37A	Clayton	65.83	15	PFAKE		20 48 40.0	+12
X37A				LR	LR		
	comp=Z,1µm,18.0s						
DAC	Darwin (Calif)	65.90	355	PFAKE		20 48 40.0	+11
DAC				LR	LR		
	comp=Z,1µm,19.0s						
VNA3	Neumayer Olymp	65.92	160	P	P	20 48 27.3	-1.4
SHPR	Sheep Range	65.97	357	*e*P	P	20 48 30.2	+0.6
	comp=Z,9.9nm,1.1s						
SHPR				LR	LR		
	comp=Z,2µm,21.0s						
250A	Grady	65.98	24	PFAKE		20 48 40.0	+11
250A				LR	LR		
	comp=Z,600nm,20.0s						
250A	Grady	65.98	24	P	P	20 48 29.0	-0.5
	baz=204,SNR=7.2						
352A	Blakely	66.01	25	PFAKE		20 48 40.0	+10
352A				LR	LR		
	comp=Z,1µm,22.0s						
352A	Blakely	66.01	25	P	P	20 48 29.5	-0.2
	baz=205						
CCAR	Cane Creek	66.08	18	PFAKE		20 48 40.0	+10
CCAR				LR	LR		
	comp=Z,300nm,19.0s						
CWC	Cottonwood Cre	66.10	354	P	P	20 48 30.5	+0.2
	baz=174						
148A	Greensboro	66.15	22	P	P	20 48 30.0	-0.6
	baz=203						
MIAR	Mount Ida	66.21	16	PFAKE		20 48 40.0	+9.1
MIAR				LR	LR		
	comp=Z,900nm,19.0s						
MIAR	Mount Ida	66.21	16	P	P	20 48 30.4	-0.5
MIAR				pmax	pmax		
	comp=Z,19nm,1.7s						
MIAR	Mount Ida	66.21	16	P	P	20 48 30.1	-0.8
	baz=197						
X40A	Basin Creek Fa	66.34	17	PFAKE		20 48 40.0	+8.3
X40A				LR	LR		
	comp=Z,600nm,18.0s						
X40A	Basin Creek Fa	66.34	17	P	P	20 48 30.9	-0.8
	baz=198						
149A	Jones	66.37	23	P	P	20 48 31.0	-0.9
	baz=203						
SABA	Saba	66.37	51	PFAKE		20 48 40.0	+7.7
SABA				LR	LR		
	comp=Z,500nm,22.0s						
251A	Midway	66.39	24	P	P	20 48 31.3	-0.8
	baz=205,SNR=7.9						
TPNV	Topopah Spring	66.47	356	PFAKE		20 48 50.0	+17
TPNV				LR	LR		
	comp=Z,1µm,21.0s						
TPNV	Topopah Spring	66.47	356	P	P	20 48 32.0	-0.7
	baz=176						
TIGA	Tifton	66.48	26	P	P	20 48 32.0	-0.7
	baz=206						
252A	Lumpkin	66.55	25	P	P	20 48 32.0	-1.1
	baz=205						
457A	Yulee	66.56	28	P	P	20 48 31.5	-1.6
	baz=208						
VNA1	Neumayer--Stat	66.57	159	P	P	20 48 31.9	-0.9
GRAC	Grapevine Rang	66.59	355	P	P	20 48 33.0	-0.3
	baz=175						
150A	Eclectic	66.64	24	P	P	20 48 33.3	-0.3
	baz=204,SNR=6.2						
MVCO	Mesa Verde	66.67	3	PFAKE		20 48 50.0	+16
MVCO				LR	LR		
	comp=Z,2µm,22.0s						
MVCO	Mesa Verde	66.67	3	P	P	20 48 33.5	-0.6
	baz=183,SNR=6.6						
355A	Pearson	66.68	27	P	P	20 48 33.0	-0.9
	baz=207						
LRAL	Lakeview Retre	66.70	23	PFAKE		20 48 50.0	+16
LRAL				LR	LR		
	comp=Z,500nm,18.0s						
LRAL	Lakeview Retre	66.70	23	P	P	20 48 33.6	-0.4
	baz=203,SNR=6.3						
UALR	University of	66.74	17	PFAKE		20 48 50.0	+16
UALR				LR	LR		
	comp=Z,500nm,18.0s						
SAO	San Andreas Ge	66.78	352	PFAKE		20 48 50.0	+16
SAO				LR	LR		
	comp=Z,3µm,21.0s						
W39A	Magazine	66.78	16	PFAKE		20 48 50.0	+16
W39A				LR	LR		
	comp=Z,900nm,20.0s						
W39A	Magazine	66.78	16	P	P	20 48 34.2	-0.3
	baz=197,SNR=6.6						
151A	Opelika	66.81	24	P	P	20 48 34.1	-0.7
	baz=205,SNR=6.2						
253A	Americus	66.83	25	PFAKE		20 48 50.0	+15
253A				LR	LR		
	comp=Z,800nm,21.0s						
253A	Americus	66.83	25	P	P	20 48 33.8	-1.1
	baz=206						
U32A	Winter Ranch,	66.86	11	PFAKE		20 48 50.0	+15
U32A				LR	LR		
	comp=Z,2µm,21.0s						
T25A	Trinidad	66.89	6	PFAKE		20 48 50.0	+15
T25A				LR	LR		
	comp=Z,700nm,18.0s						
T25A	Trinidad	66.89	6	P	P	20 48 34.9	-0.6
	baz=187						
X43A	Marvell	66.89	19	P	P	20 48 34.6	-0.6
	baz=200						
Z49A	Columbiana	67.00	23	P	P	20 48 35.7	-0.3
	baz=204,SNR=8.5						
TUL1	Leonard	67.01	14	PFAKE		20 48 50.0	+14
TUL1				LR	LR		
	comp=Z,700nm,18.0s						
TUL1	Leonard	67.01	14	P	P	20 48 35.2	-0.7
	baz=195,SNR=9.8						
254A	Abbeville	67.04	26	P	P	20 48 35.2	-1.0
	baz=207						
W41B	Gary Mavity, V	67.14	17	PFAKE		20 48 50.0	+13
W41B				LR	LR		
	comp=Z,600nm,19.0s						
W41B	Gary Mavity, V	67.14	17	P	P	20 48 36.8	0.0
	baz=198,SNR=11						
152A	Waverly Hall	67.16	25	PFAKE		20 48 50.0	+13
152A				LR	LR		
	comp=Z,1µm,22.0s						
WHAR	Wooly Hollow	67.24	17	PFAKE		20 48 50.0	+13
WHAR				LR	LR		
	comp=Z,600nm,18.0s						
Z50A	Ashland	67.26	23	PFAKE		20 48 50.0	+12
Z50A				LR	LR		
	comp=Z,600nm,20.0s						
Z50A	Ashland	67.26	23	P	P	20 48 36.5	-1.2
	baz=204						
S22A	4UR Ranch, Cre	67.30	4	PFAKE		20 48 50.0	+12
S22A				LR	LR		
	comp=Z,2µm,22.0s						
S22A	4UR Ranch, Cre	67.30	4	P	P	20 48 37.5	-0.6
	baz=184						
OXF	Oxford	67.30	20	PFAKE		20 48 50.0	+12
OXF				LR	LR		
	comp=Z,300nm,18.0s						
OXF	Oxford	67.30	20	P	P	20 48 37.0	-0.8
	baz=201						
OMMB	Old Mammoth Mi	67.34	354	PFAKE		20 48 50.0	+12
OMMB				LR	LR		
	comp=Z,3µm,20.0s						
MDPB	Devils Postpil	67.37	354	PFAKE		20 48 50.0	+11
MDPB				LR	LR		
	comp=Z,2µm,20.0s						
SDCO	Great Sand Dun	67.39	5	PFAKE		20 48 50.0	+11
SDCO				LR	LR		
	comp=Z,1µm,19.0s						
SDCO	Great Sand Dun	67.39	5	P	P	20 48 38.5	-0.2
	baz=186,SNR=7.9						
Y48A	Jasper	67.45	22	P	P	20 48 38.2	-0.6
	baz=203,SNR=5.2						
153A	Fort Valley	67.47	25	P	P	20 48 38.7	-0.2
	baz=206						
Z51A	Franklin	67.58	24	P	P	20 48 38.8	-0.8
	baz=205						
X46A	Booneville	67.59	21	P	P	20 48 38.8	-0.8
	baz=202						
KIP	Kipapa	67.60	313	PFAKE		20 48 50.0	+10
KIP				LR	LR		
	comp=Z,2µm,19.0s						
256A	Glennville	67.62	27	P	P	20 48 39.5	-0.3
	baz=208						
Y49A	Blount Mountai	67.65	23	PFAKE		20 48 50.0	+10
Y49A				LR	LR		
	comp=Z,400nm,20.0s						
Y49A	Blount Mountai	67.65	23	P	P	20 48 39.7	-0.4
	baz=204						
PV18	Skein Mesa, Pa	67.69	2	PFAKE		20 48 50.0	+10
PV18				LR	LR		
	comp=Z,2µm,19.0s						
PV03	Paradox Valley	67.70	2	PFAKE		20 48 50.0	+9.5
PV03				LR	LR		
	comp=Z,2µm,18.0s						
154A	Montrose	67.71	26	P	P	20 48 39.8	-0.7
	baz=207						
SNAA	Sanae	67.73	161	P	P	20 48 38.5	-1.8
SNAA	Sanae	67.73	161	*e*P	P	20 48 39.7	-0.6
	comp=Z,16nm,1.0s						
SNAA				LR	LR		
	comp=Z,600nm,18.0s						
SNAA	Sanae	67.73	161	*e*P	P	20 48 39.7	-0.6
SNAA				pmax	pmax		
	comp=Z,16nm,1.0s						
SNAA				MLR	MLR		
	comp=Z,600nm,18.0s						
Z52A	Williamson	67.74	25	P	P	20 48 40.3	-0.3
	baz=205,SNR=7.8						
PV20	West Nyswonger	67.78	2	PFAKE		20 48 50.0	+9.0
PV20				LR	LR		
	comp=Z,2µm,19.0s						
X47A	Russelville	67.78	21	P	P	20 48 40.0	-0.9
	baz=202						
R11A	Troy Canyon, C	67.83	357	PFAKE		20 48 50.0	+8.7
R11A				LR	LR		
	comp=Z,2µm,21.0s						
R11A	Troy Canyon, C	67.83	357	P	P	20 48 41.0	-0.3
	baz=176,SNR=8.9						
FCAR	Ozark Folk Cen	67.85	17	PFAKE		20 48 50.0	+8.7
FCAR				LR	LR		
	comp=Z,500nm,18.0s						
PV07	Paradox Valley	67.89	3	PFAKE		20 48 50.0	+8.3
PV07				LR	LR		
	comp=Z,1µm,20.0s						
CMB	Columbia Colle	67.91	353	PFAKE		20 48 50.0	+8.4
CMB				LR	LR		
	comp=Z,3µm,20.0s						
CMB	Columbia Colle	67.91	353	P	P	20 48 43.0	+1.4
HBAR	Harrisburg	67.92	18	PFAKE		20 48 50.0	+8.3
HBAR				LR	LR		
	comp=Z,400nm,18.0s						
155A	Kite	67.96	26	P	P	20 48 41.3	-0.7
	baz=207,SNR=5.4						
X48A	Hartselle	67.98	22	PFAKE		20 48 50.0	+7.9
X48A				LR	LR		
	comp=Z,400nm,20.0s						
X48A	Hartselle	67.98	22	P	P	20 48 41.5	-0.7
	baz=203						
PV21	Cone Mtn., Par	68.00	2	PFAKE		20 48 50.0	+7.5
PV21				LR	LR		
	comp=Z,2µm,19.0s						
NV11	Mina Array Sit	68.08	355	PFAKE		20 49 00.0	+17
NV11				LR	LR		
	comp=Z,100nm,20.0s						
NVAR	Mina Array Bea	68.09	354	P	P	20 48 40.8	-2.2
	comp=Z,5.6nm,0.9s,baz=186,slow=9.3,SNR=11						
NVAR				LR	LR	21 12 13.3	
	comp=Z,2µm,19.3s,baz=170,slow=30						
U40A	Yellville	68.11	16	P	P	20 48 42.1	-0.8
	baz=198,SNR=7.0						
Z53A	Monticello	68.13	25	P	P	20 48 42.4	-0.7
	baz=206,SNR=5.3						
Y51A	Rockmart	68.15	24	P	P	20 48 42.2	-1.0
	baz=205,SNR=6.9						
WAKR	Walker	68.27	354	PFAKE		20 49 00.0	+16
WAKR				LR	LR		
	comp=Z,3µm,20.0s						
X49A	Woodville	68.27	22	P	P	20 48 43.2	-0.8
	baz=204						
GOGA	Godfrey	68.28	25	PFAKE		20 49 00.0	+16
GOGA				LR	LR		
	comp=Z,700nm,22.0s						
GOGA	Godfrey	68.28	25	P	P	20 48 43.1	-0.9
GOGA				pmax	pmax		
	comp=Z,24nm,1.5s						
GOGA	Godfrey	68.28	25	P	P	20 48 43.5	-0.5
	baz=206						
RYN	Ryan	68.31	354	PFAKE		20 49 00.0	+16
RYN				LR	LR		
	comp=Z,2µm,20.0s						
MCCM	Marconi Confer	68.33	351	PFAKE		20 49 00.0	+16
MCCM				LR	LR		
	comp=Z,2µm,20.0s						
Z54A	Sparta	68.36	26	P	P	20 48 43.5	-1.0
	baz=207,SNR=5.7						
156A	Sylvania	68.37	27	P	P	20 48 44.1	-0.5
	baz=208						
X50B	Fort Payne	68.45	23	P	P	20 48 44.6	-0.5
	baz=204						
Y52A	Lilburn	68.47	25	PFAKE		20 49 00.0	+15
Y52A				LR	LR		
	comp=Z,900nm,21.0s						
Y52A	Lilburn	68.47	25	P	P	20 48 44.4	-0.8
	baz=206,SNR=6.6						
GNAR	Gosnell	68.49	19	PFAKE		20 49 00.0	+15
GNAR				LR	LR		
	comp=Z,300nm,20.0s						
W47A	Westpoint	68.54	21	P	P	20 48 45.1	-0.5
	baz=202						
HALT	Halls	68.63	19	PFAKE		20 49 00.0	+14
HALT				LR	LR		
	comp=Z,300nm,20.0s						
Q24A	Divide	68.63	6	PFAKE		20 49 00.0	+13
Q24A				LR	LR		
	comp=Z,1µm,20.0s						
Q24A	Divide	68.63	6	P	P	20 48 45.5	-1.0
	baz=186						
Y53A	Monroe	68.64	25	P	P	20 48 45.4	-0.8
	baz=206,SNR=7.4						
W48A	Pulaski	68.65	22	P	P	20 48 45.3	-1.1
	baz=203,SNR=8.9						
KVN	Kaiserville	68.69	355	PFAKE		20 49 00.0	+13
KVN				LR	LR		
	comp=Z,2µm,19.0s						
YERR	Yerington	68.73	354	PFAKE		20 49 00.0	+13
YERR				LR	LR		
	comp=Z,2µm,21.0s						
X51A	Calhoun	68.82	24	PFAKE		20 49 00.0	+13
X51A				LR	LR		
	comp=Z,900nm,22.0s						
X51A	Calhoun	68.82	24	P	P	20 48 46.9	-0.5
	baz=205						
W49A	Belvidere	68.85	22	P	P	20 48 47.1	-0.4
	baz=204						
PNTR	Pine Nut	68.87	353	PFAKE		20 49 00.0	+12
PNTR				LR	LR		
	comp=Z,2µm,18.0s						
AFDM	Forest Hills D	68.87	352	PFAKE		20 49 00.0	+12
AFDM				LR	LR		
	comp=Z,2µm,20.0s						
RUBR	Rubicon Trail	68.89	353	PFAKE		20 49 00.0	+12
RUBR				LR	LR		
	comp=Z,2µm,19.0s						
V46A	Holladay	68.89	20	P	P	20 48 46.5	-1.3
	baz=202						
KSCO	Kaye Shedlock’	68.93	8	PFAKE		20 49 00.0	+12
KSCO				LR	LR		
	comp=Z,600nm,19.0s						
158A	Hollywood	68.97	28	P	P	20 48 47.4	-0.9
	baz=209						
GDXM	Geysers	68.97	351	PFAKE		20 49 00.0	+12
GDXM				LR	LR		
	comp=Z,2µm,19.0s						
Y54A	Tignall	68.98	26	P	P	20 48 47.9	-0.5
	baz=207,SNR=6.9						
Z56A	Williston	69.01	27	PFAKE		20 49 00.0	+11
Z56A				LR	LR		
	comp=Z,600nm,21.0s						
SWET	Sewanee	69.05	22	PFAKE		20 49 00.0	+11
SWET				LR	LR		
	comp=Z,400nm,19.0s						
VCNR	Virginia City	69.08	353	PFAKE		20 49 00.0	+11
VCNR				LR	LR		
	comp=Z,2µm,18.0s						
V47A	Nunnelly	69.10	21	P	P	20 48 48.0	-1.1
	baz=202						
CBKS	Cedar Bluff	69.12	10	PFAKE		20 49 00.0	+11
CBKS				LR	LR		
	comp=Z,1µm,19.0s						
CBKS	Cedar Bluff	69.12	10	P	P	20 48 49.0	-0.2
	baz=191						
HOPS	Hopland Field	69.19	351	PFAKE		20 49 00.0	+10
HOPS				LR	LR		
	comp=Z,2µm,20.0s						
X52A	Dahlonega	69.20	24	P	P	20 48 49.4	-0.4
	baz=206,SNR=8.3						
V48A	Smith Brothers	69.24	22	PFAKE		20 49 00.0	+10
V48A				LR	LR		
	comp=Z,400nm,20.0s						
V48A	Smith Brothers	69.24	22	P	P	20 48 48.6	-1.3
	baz=203						
W50A	Signal Mountai	69.24	23	PFAKE		20 49 00.0	+10
W50A				LR	LR		
	comp=Z,500nm,20.0s						
W50A	Signal Mountai	69.24	23	P	P	20 48 49.6	-0.4
	baz=204						
Z57A	Bowman	69.25	28	P	P	20 48 49.0	-1.0
	baz=208						
WVT	Waverly	69.28	21	PFAKE		20 49 00.0	+10
WVT				LR	LR		
	comp=Z,500nm,18.0s						
WVT	Waverly	69.28	21	P	P	20 48 46.9	-3.3
WVT				pmax	pmax		
	comp=Z,16nm,1.5s						
WVT	Waverly	69.28	21	P	P	20 48 49.5	-0.7
	baz=202						
X53A	Estanollee	69.32	25	P	P	20 48 49.8	-0.7
	baz=206,SNR=6.4						
Y55A	Saluda	69.36	26	P	P	20 48 50.7	-0.1
	baz=207						
U46A	Springville	69.39	20	P	P	20 48 50.3	-0.6
	baz=202						
W51A	Cleveland	69.39	23	P	P	20 48 50.3	-0.6
	baz=205,SNR=6.4						
ISCO	Idaho Springs	69.42	5	PFAKE		20 49 00.0	+8.6
ISCO				LR	LR		
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	69.42	5	P	P	20 48 50.9	-0.5
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ISCO	Idaho Springs	69.42	5	P	P	20 48 51.2	-0.2
	baz=186,SNR=5.9						
PAHR	Pah Rah Range	69.46	354	PFAKE		20 49 00.0	+8.6
PAHR				LR	LR		
	comp=Z,2µm,21.0s						
HODGE	Hodges	69.47	26	PFAKE		20 49 00.0	+8.6
HODGE				LR	LR		
	comp=Z,500nm,20.0s						
ORV	Oroville	69.53	352	PFAKE		20 49 00.0	+8.3
ORV				LR	LR		
	comp=Z,2µm,22.0s						
V49A	McMinnville	69.56	22	P	P	20 48 50.7	-1.2
	baz=204						
DUG	Dugway, Tooele	69.59	359	PFAKE		20 49 00.0	+7.8
DUG				LR	LR		
	comp=Z,1µm,18.0s						
DUG	Dugway, Tooele	69.59	359	P	P	20 48 50.5	-1.7
DUG				pmax	pmax		
	comp=Z,17nm,1.5s						
DUG	Dugway, Tooele	69.59	359	P	P	20 48 52.6	+0.4
	baz=179						
O20A	White River Ci	69.60	3	PFAKE		20 49 00.0	+7.6
O20A				LR	LR		
	comp=Z,1µm,18.0s						
O20A	White River Ci	69.60	3	P	P	20 48 52.3	0.0
	baz=183						
W52A	Murphy	69.62	24	PFAKE		20 49 00.0	+7.6
W52A				LR	LR		
	comp=Z,900nm,21.0s						
W52A	Murphy	69.62	24	P	P	20 48 51.8	-0.6
	baz=206						
Z58A	St. Stephen	69.65	28	P	P	20 48 51.7	-0.8
	baz=209						
X54A	Belton	69.70	26	P	P	20 48 52.4	-0.5
	baz=207,SNR=5.8						
BEKR	Beckworth	69.71	353	PFAKE		20 49 10.0	+17
BEKR				LR	LR		
	comp=Z,2µm,20.0s						
CLTN	Cedars of Leba	69.72	22	PFAKE		20 49 00.0	+7.1
CLTN				LR	LR		
	comp=Z,300nm,20.0s						
U47A	Clarksville	69.73	21	P	P	20 48 51.6	-1.4
	baz=202						
CPCT	Cooper Cave	69.74	23	PFAKE		20 49 10.0	+17
CPCT				LR	LR		
	comp=Z,800nm,21.0s						
V50A	Pikevile	69.74	23	P	P	20 48 52.6	-0.4
	baz=204,SNR=7.2						
Z59A	Georgetown, SC	69.79	29	P	P	20 48 51.6	-1.7
	baz=210						

T45A	Paducah	69.86	20	PFAKE		20 49 10.0	+16
T45A				LR	LR		
	comp=Z,400nm,21.0s						
BG3	Lake Jocassee	69.89	25	PFAKE		20 49 10.0	+16
BG3				LR	LR		
	comp=Z,400nm,22.0s						
X55A	Gracelyn & Ava	69.92	26	P	P	20 48 53.6	-0.5
	baz=208						
KSU1	Kansas State U	69.93	13	PFAKE		20 49 10.0	+16
KSU1				LR	LR		
	comp=Z,900nm,20.0s						
KSU1	Kansas State U	69.93	13	P	P	20 48 53.6	-0.6
	baz=194						
KCPM	Cahto Peak	69.94	350	PFAKE		20 49 10.0	+16
KCPM				LR	LR		
	comp=Z,2µm,19.0s						
W53A	Cullowhee	69.97	25	P	P	20 48 53.6	-1.0
	baz=206						
BMN	Battle Mountai	70.00	356	PFAKE		20 49 10.0	+15
BMN				LR	LR		
	comp=Z,1µm,22.0s						
Y57A	Sumter	70.01	27	PFAKE		20 49 10.0	+15
Y57A				LR	LR		
	comp=Z,500nm,18.0s						
Y57A	Sumter	70.01	27	P	P	20 48 51.9	-2.8
	baz=209						
U48A	Cassie Pea, Po	70.03	21	P	P	20 48 53.4	-1.4
	baz=203						
T46A	Princeton	70.10	20	P	P	20 48 53.4	-1.8
	baz=202						
V51A	Loudon	70.12	23	PFAKE		20 49 10.0	+15
V51A				LR	LR		
	comp=Z,700nm,21.0s						
V51A	Loudon	70.12	23	P	P	20 48 53.6	-1.8
	baz=205						
CCM	Cathedral Cave	70.12	17	PFAKE		20 49 10.0	+15
CCM				LR	LR		
	comp=Z,800nm,19.0s						
CCM	Cathedral Cave	70.12	17	P	P	20 48 53.6	-1.8
	baz=199						
X56A	White Oak	70.17	27	P	P	20 48 53.6	-2.1
	baz=208						
ELK	Elko	70.20	357	P	P	20 48 54.1	-2.0
	comp=Z,1.7nm,0.7s,baz=143,slow=5.4,SNR=8.4						
ELK				LR	LR	21 13 48.5	
	comp=Z,1µm,20.4s,baz=186,slow=31						
ELK	Elko	70.20	357	PFAKE		20 49 10.0	+14
ELK				LR	LR		
	comp=Z,2µm,20.0s						
W54A	Cherokee Point	70.25	25	P	P	20 48 55.9	-0.4
	baz=207,SNR=5.6						
U49A	Red Boiling Sp	70.28	22	P	P	20 48 54.8	-1.6
	baz=204						
T47A	Sharon Grove	70.30	21	PFAKE		20 49 10.0	+14
T47A				LR	LR		
	comp=Z,600nm,19.0s						
T47A	Sharon Grove	70.30	21	P	P	20 48 55.2	-1.3
	baz=202						
O03E	Paynes Creek	70.30	352	P	P	20 48 55.7	-0.8
	baz=171						
S44A	Carbondale	70.32	19	P	P	20 48 55.1	-1.5
	baz=200						
V52A	Sevierville	70.42	24	PFAKE		20 49 10.0	+13
V52A				LR	LR		
	comp=Z,900nm,22.0s						
KMRM	Mail Ridge	70.49	350	PFAKE		20 49 10.0	+12
KMRM				LR	LR		
	comp=Z,2µm,19.0s						
N23A	Red Feather La	70.49	5	PFAKE		20 49 10.0	+12
N23A				LR	LR		
	comp=Z,2µm,20.0s						
N23A	Red Feather La	70.49	5	P	P	20 48 57.4	-0.5
	baz=185,SNR=6.2						
U50A	Jamestown	70.50	23	P	P	20 48 56.5	-1.3
	baz=204						
X57A	Johnson Farm,	70.52	27	P	P	20 48 56.1	-1.7
	baz=209						
BIRD	Birdtown, Kers	70.53	27	PFAKE		20 49 10.0	+12
BIRD				LR	LR		
	comp=Z,500nm,20.0s						
V53A	Saluda	70.54	25	PFAKE		20 49 10.0	+12
V53A				LR	LR		
	comp=Z,800nm,22.0s						
V53A	Saluda	70.54	25	P	P	20 48 57.5	-0.6
	baz=206,SNR=8.8						
Y59A	Loris	70.60	29	P	P	20 48 57.4	-0.9
	baz=210						
KMSC	Kings Mountain	70.62	26	PFAKE		20 49 10.0	+11
KMSC				LR	LR		
	comp=Z,500nm,20.0s						
KMSC	Kings Mountain	70.62	26	P	P	20 48 57.5	-1.0
	baz=208						
T48A	Bowling Green	70.63	21	P	P	20 48 57.6	-0.9
	baz=203,SNR=7.9						
WDC	Whiskeytown Da	70.68	351	PFAKE		20 49 10.0	+11
WDC				LR	LR		
	comp=Z,2µm,22.0s						
U51A	La Follette	70.75	23	P	P	20 48 58.2	-1.1
	baz=205						
S46A	Don Dixon Farm	70.75	20	P	P	20 48 58.1	-1.1
	baz=202						
Y60A	Bolivia	70.89	29	PFAKE		20 49 10.0	+10
Y60A				LR	LR		
	comp=Z,400nm,18.0s						
T49A	Edmonton	70.90	22	PFAKE		20 49 10.0	+10
T49A				LR	LR		
	comp=Z,600nm,21.0s						
T49A	Edmonton	70.90	22	P	P	20 48 59.0	-1.1
	baz=204						
OGNE	Ogallala	70.91	8	PFAKE		20 49 10.0	+10
OGNE				LR	LR		
	comp=Z,500nm,22.0s						
OGNE	Ogallala	70.91	8	P	P	20 48 59.5	-0.7
	baz=189						
W56A	Indian Trail	70.91	27	P	P	20 48 59.2	-1.0
	baz=208						
S47A	Hartford	70.92	21	P	P	20 48 59.3	-1.0
	baz=203,SNR=8.4						
PHWY	Pilot Hill	70.93	5	PFAKE		20 49 10.0	+9.4
PHWY				LR	LR		
	comp=Z,2µm,20.0s						
SLM	Saint Louis	70.93	18	PFAKE		20 49 10.0	+10
SLM				LR	LR		
	comp=Z,900nm,19.0s						
V54A	Nebo	70.95	25	P	P	20 48 59.8	-0.7
	baz=207,SNR=10						
U52A	Thorn Hill	70.99	24	P	P	20 49 00.6	-0.2
	baz=206,SNR=7.5						
USIN	University of	71.03	20	PFAKE		20 49 10.0	+9.1
USIN				LR	LR		
	comp=Z,400nm,21.0s						
T50A	Nancy	71.05	23	P	P	20 49 00.9	-0.2
	baz=204						
TZTN	Tazewell	71.06	24	PFAKE		20 49 10.0	+8.8
TZTN				LR	LR		
	comp=Z,800nm,22.0s						
TZTN	Tazewell	71.06	24	P	P	20 49 01.0	-0.2
	baz=206,SNR=7.1						
N02D	Trinity Center	71.09	351	P	P	20 49 01.2	-0.1
	baz=170						
JCC	Jacoby Creek,	71.12	350	PFAKE		20 49 10.0	+8.7
JCC				LR	LR		
	comp=Z,2µm,18.0s						
KHMM	Horse Mountain	71.13	350	PFAKE		20 49 10.0	+8.4
KHMM				LR	LR		
	comp=Z,2µm,20.0s						
R45A	Skylar, Fairfi	71.15	19	P	P	20 49 01.2	-0.4
	baz=201						
W57A	Gilead	71.16	27	PFAKE		20 49 10.0	+8.3
W57A				LR	LR		
	comp=Z,500nm,18.0s						
W57A	Gilead	71.16	27	P	P	20 49 01.2	-0.5
	baz=209						
RWWY	Rawlins	71.20	4	PFAKE		20 49 10.0	+7.8
RWWY				LR	LR		
	comp=Z,800nm,21.0s						
X59A	McDuffie Farm,	71.22	28	P	P	20 49 01.2	-0.9
	baz=210						
S48A	Wiedeman Farm,	71.24	21	P	P	20 49 01.1	-1.1
	baz=203						
U53A	Fall Branch	71.25	25	P	P	20 49 02.4	+0.1
	baz=206,SNR=7.4						
W58A	Raeford	71.35	28	P	P	20 49 01.7	-1.1
	baz=209						
X60A	Albert Glenn T	71.48	29	P	P	20 49 03.0	-0.7
	baz=210						
M02C	Callahan	71.52	351	P	P	20 49 04.0	+0.1
	baz=170						
V56A	Mocksville	71.53	26	P	P	20 49 03.8	-0.2
	baz=208,SNR=5.4						
S49A	Springfield	71.60	22	P	P	20 49 03.0	-1.3
	baz=204						
OLIL	Olney	71.61	19	PFAKE		20 49 20.0	+16
OLIL				LR	LR		
	comp=Z,300nm,19.0s						
U54A	Nelsons Funny	71.66	25	PFAKE		20 49 20.0	+15
U54A				LR	LR		
	comp=Z,500nm,20.0s						
U54A	Nelsons Funny	71.66	25	P	P	20 49 04.2	-0.7
	baz=207						
R47A	Wooly Knot Far	71.68	21	P	P	20 49 04.1	-0.7
	baz=203						
WCI	Wyandotte Cave	71.69	21	PFAKE		20 49 20.0	+15
WCI				LR	LR		
	comp=Z,500nm,19.0s						
WCI	Wyandotte Cave	71.69	21	P	P	20 49 05.0	+0.1
WCI				pmax	pmax		
	comp=Z,16nm,1.6s						
WCI	Wyandotte Cave	71.69	21	P	P	20 49 03.7	-1.2
	baz=203						
MOD	Modoc Plateau	71.72	353	PFAKE		20 49 20.0	+15
MOD				LR	LR		
	comp=Z,2µm,19.0s						
Q45A	Warren Harvey,	71.75	19	P	P	20 49 04.5	-0.7
	baz=201						
T52A	Hallie	71.77	24	PFAKE		20 49 20.0	+15
T52A				LR	LR		
	comp=Z,800nm,21.0s						
T52A	Hallie	71.77	24	P	P	20 49 04.8	-0.6
	baz=206						
M04C	Macdoel	71.77	352	P	P	20 49 05.0	-0.5
	baz=171						
S50A	Richmond	71.80	23	P	P	20 49 04.9	-0.7
	baz=205						
T53A	Wise	71.81	24	P	P	20 49 04.9	-0.9
	baz=206						
YBH	Yreka Blue Hor	71.83	351	LR	LR	21 13 30.3	
	comp=Z,2µm,20.2s,baz=172,slow=30						
YBH	Yreka Blue Hor	71.83	351	PFAKE		20 49 20.0	+14
YBH				LR	LR		
	comp=Z,2µm,21.0s						
V57A	Coltrane Farms	71.88	27	P	P	20 49 06.4	+0.3
	baz=209,SNR=5.4						
BGNE	Belgrade	71.91	11	PFAKE		20 49 20.0	+14
BGNE				LR	LR		
	comp=Z,500nm,18.0s						
BGNE	Belgrade	71.91	11	P	P	20 49 05.9	-0.2
	baz=192						
U55A	TA2, Sparta	71.93	26	P	P	20 49 05.9	-0.6
	baz=208						
R48A	Northridge Ran	71.97	21	P	P	20 49 05.8	-0.8
	baz=203						
W60A	Pink Hill	72.00	29	P	P	20 49 06.2	-0.6
	baz=211						
S51A	Beattyville	72.03	23	PFAKE		20 49 20.0	+13
S51A				LR	LR		
	comp=Z,800nm,20.0s						
S51A	Beattyville	72.03	23	P	P	20 49 06.3	-0.7
	baz=205						
U56A	King	72.05	26	P	P	20 49 06.8	-0.3
	baz=208						
P43A	Skaggs, Pawnee	72.06	18	P	P	20 49 06.1	-1.0
	baz=200						
V58A	Windy Hill, Pi	72.06	27	P	P	20 49 06.2	-1.0
	baz=209						
WVOR	Wild Horse Val	72.10	355	PFAKE		20 49 20.0	+13
WVOR				LR	LR		
	comp=Z,2µm,18.0s						
WVOR	Wild Horse Val	72.10	355	P	P	20 49 07.1	-0.3
WVOR				pmax	pmax		
	comp=Z,26nm,1.6s						
R49A	Shelbyville	72.10	22	PFAKE		20 49 20.0	+13
R49A				LR	LR		
	comp=Z,500nm,20.0s						
R49A	Shelbyville	72.10	22	P	P	20 49 05.9	-1.4
	baz=204						
AHID	Auburn Hatcher	72.15	1	PFAKE		20 49 20.0	+12
AHID				LR	LR		
	comp=Z,2µm,20.0s						
BW06	Boulder Array	72.18	2	PFAKE		20 49 20.0	+12
BW06				LR	LR		
	comp=Z,1µm,21.0s						
BW06	Boulder Array	72.18	2	P	P	20 49 08.3	+0.3
	baz=182,SNR=8.5						
PDAR	Pinedale Array	72.18	2	P	P	20 49 04.4	-3.6
	comp=Z,0.5nm,0.6s,baz=174,slow=6.5,SNR=7.9						
K22A	Casper	72.20	4	PFAKE		20 49 20.0	+12
K22A				LR	LR		
	comp=Z,600nm,20.0s						
K22A	Casper	72.20	4	P	P	20 49 07.6	-0.4
	baz=185						
T54A	Tazewell	72.23	25	P	P	20 49 08.1	-0.1
	baz=207						
S52A	Salyersville	72.25	24	P	P	20 49 07.9	-0.4
	baz=206						
L04D	Klamath Falls	72.26	352	P	P	20 49 08.2	-0.2
	baz=170						
R50A	Paris	72.36	22	PFAKE		20 49 20.0	+11
R50A				LR	LR		
	comp=Z,700nm,22.0s						
R50A	Paris	72.36	22	P	P	20 49 07.8	-1.1
	baz=205						
L02E	Cave Junction	72.37	351	P	P	20 49 09.0	+0.1
	baz=169						
V59A	Middlesex	72.39	28	P	P	20 49 08.5	-0.7
	baz=210						
P45A	Graceland, Par	72.45	19	PFAKE		20 49 20.0	+11
P45A				LR	LR		
	comp=Z,300nm,20.0s						
P45A	Graceland, Par	72.45	19	P	P	20 49 09.0	-0.4
	baz=202						
ONTNC	Ouen Toro	72.46	254	PFAKE		20 49 20.0	+10
ONTNC				LR	LR		
	comp=Z,1µm,22.0s						
BLO	Bloomington	72.48	20	PFAKE		20 49 20.0	+10
BLO				LR	LR		
	comp=Z,500nm,20.0s						
Q48A	North Vernon	72.50	21	P	P	20 49 09.1	-0.6
	baz=203						
NBMO	Morrinhos-CE	72.50	84	*e*P	P	20 49 13.4	+3.0
U57A	Blanch	72.53	27	P	P	20 49 09.6	-0.4
	baz=209,SNR=5.8						
DZM	Mont Dzumac	72.57	254	*e*S	S	20 58 36.3	+0.5
	comp=Z,330nm,24.9s						
DZM	Mont Dzumac	72.57	254	*e*LR	LR	21 11 22.5	
	comp=Z,3µm,25.2s						
DZM	Mont Dzumac	72.57	254	PFAKE		20 49 20.0	+9.2
DZM				LR	LR		
	comp=Z,1µm,21.0s						
T55A	Pulaski	72.58	26	P	P	20 49 09.1	-1.1
	baz=208						
S53A	Williamson	72.58	24	P	P	20 49 09.1	-1.2
	baz=207						
K04D	Chiloquin, OR	72.59	352	P	P	20 49 10.1	-0.3
	baz=171						
K05A	Summer Lake	72.60	353	PFAKE		20 49 20.0	+10
K05A				LR	LR		
	comp=Z,2µm,21.0s						
R51A	Hillsboro	72.63	23	P	P	20 49 09.3	-1.2
	baz=205						
P46A	Rosedale	72.69	20	P	P	20 49 09.7	-1.1
	baz=202						
N40A	Mertquake, Sal	72.72	16	P	P	20 49 10.3	-0.7
	baz=198						
N41A	Harden Midland	72.72	17	P	P	20 49 10.2	-0.8
	baz=199						
HUMO	Hull Mountain	72.73	351	PFAKE		20 49 20.0	+9.0
HUMO				LR	LR		
	comp=Z,2µm,21.0s						
T56A	Rocky Mt	72.78	26	P	P	20 49 10.1	-1.3
	baz=208						
BLA	Blacksburg	72.80	26	P	P	20 49 10.6	-1.0
	baz=208						
V60A	Jim Taylor Roa	72.80	29	PFAKE		20 49 20.0	+8.4
V60A				LR	LR		
	comp=Z,400nm,20.0s						
O44A	Mansfield	72.83	18	P	P	20 49 10.4	-1.2
	baz=201						
Q49A	Aurora	72.84	22	P	P	20 49 10.2	-1.5
	baz=204						
P47A	Martinsville	72.85	20	P	P	20 49 10.4	-1.4
	baz=203						
SNOW	Snow King Moun	72.85	1	PFAKE		20 49 20.0	+7.9
SNOW				LR	LR		
	comp=Z,2µm,22.0s						
TPAW	Teton Pass	72.88	1	PFAKE		20 49 20.0	+7.8
TPAW				LR	LR		
	comp=Z,1µm,22.0s						
K02D	Willamette Mer	72.91	351	P	P	20 49 11.3	-0.9
	baz=169						
HDIL	Hopedale	72.98	18	PFAKE		20 49 20.0	+7.5
HDIL				LR	LR		
	comp=Z,500nm,18.0s						
HDIL	Hopedale	72.98	18	P	P	20 49 11.6	-1.0
	baz=200						
R52A	Catlettsburg	72.99	24	P	P	20 49 11.3	-1.4
	baz=206						
HLID	Hailey	72.99	358	PFAKE		20 49 20.0	+7.2
HLID				LR	LR		
	comp=Z,1µm,18.0s						
HLID	Hailey	72.99	358	P	P	20 49 12.9	+0.2
	baz=178,SNR=22						
Q50A	Georgetown	72.99	22	P	P	20 49 11.3	-1.3
	baz=205						
J08A	Circle Bar Ran	73.00	355	PFAKE		20 49 20.0	+7.2
J08A				LR	LR		
	comp=Z,2µm,19.0s						
LOHW	Long Hollow	73.00	1	PFAKE		20 49 30.0	+17
LOHW				LR	LR		
	comp=Z,2µm,21.0s						
U59A	Littleton	73.08	28	PFAKE		20 49 30.0	+17
U59A				LR	LR		
	comp=Z,400nm,18.0s						
P48A	Milroy	73.08	21	PFAKE		20 49 30.0	+17
P48A				LR	LR		
	comp=Z,400nm,19.0s						
P48A	Milroy	73.08	21	P	P	20 49 11.6	-1.6
	baz=204						
O45A	Potomac	73.13	19	P	P	20 49 12.2	-1.2
	baz=202						
MOOW	Moose Ponds	73.14	1	PFAKE		20 49 30.0	+16
MOOW				LR	LR		
	comp=Z,1µm,20.0s						
J05D	Fort Rock, OR	73.19	353	P	P	20 49 13.5	-0.4
	baz=171						
R53A	Hurricane	73.22	24	PFAKE		20 49 30.0	+16
R53A				LR	LR		
	comp=Z,900nm,22.0s						
S55A	Lewisburg	73.26	25	P	P	20 49 14.3	-0.1
	baz=208,SNR=7.8						
IMW	Indian Meadow	73.28	1	PFAKE		20 49 30.0	+15
IMW				LR	LR		
	comp=Z,1µm,21.0s						
T58A	Grand View Acr	73.30	27	P	P	20 49 14.1	-0.4
	baz=210						
SCIA	State Center	73.32	14	PFAKE		20 49 30.0	+15
SCIA				LR	LR		
	comp=Z,500nm,21.0s						
Q51A	Peebles	73.36	23	PFAKE		20 49 30.0	+15
Q51A				LR	LR		
	comp=Z,700nm,22.0s						
Q51A	Peebles	73.36	23	P	P	20 49 14.0	-0.9
	baz=205						
N43A	Stutzman Famil	73.37	18	P	P	20 49 14.2	-0.6
	baz=200						
P49A	Miami Univ. Ec	73.38	22	P	P	20 49 13.6	-1.3
	baz=204						
SFIN	Lafayette	73.43	19	PFAKE		20 49 30.0	+15
SFIN				LR	LR		
	comp=Z,600nm,19.0s						
SFIN	Lafayette	73.43	19	P	P	20 49 14.6	-0.5
	baz=202						
M41A	Milan	73.43	17	P	P	20 49 14.7	-0.5
	baz=199						
R54A	Victor	73.44	25	P	P	20 49 15.2	-0.2
	baz=208						
U60A	Pendleton	73.45	29	P	P	20 49 14.9	-0.4
	baz=211						
FLWY	Flagg Ranch	73.47	1	PFAKE		20 49 30.0	+14
FLWY				LR	LR		
	comp=Z,2µm,22.0s						
N44A	Piper City	73.52	19	P	P	20 49 15.4	-0.3
	baz=201						
O47A	Sheridan	73.57	20	P	P	20 49 15.9	-0.1
	baz=203						
PINE	Pine Mountain	73.66	353	PFAKE		20 49 30.0	+13
PINE				LR	LR		
	comp=Z,1µm,20.0s						
Q52A	Bidwell	73.68	24	P	P	20 49 16.1	-0.6
	baz=206						
T59A	Double "B" Far	73.71	28	PFAKE		20 49 30.0	+13
T59A				LR	LR		
	comp=Z,500nm,18.0s						
T59A	Double "B" Far	73.71	28	P	P	20 49 16.3	-0.7
	baz=210						
P50A	Jamestown	73.74	22	P	P	20 49 16.0	-1.1
	baz=205						
N45A	Kentland	73.74	19	P	P	20 49 16.7	-0.3
	baz=202,SNR=5.5						
H17A	Grant Village	73.79	1	PFAKE		20 49 30.0	+12
H17A				LR	LR		
	comp=Z,2µm,20.0s						
I04A	Tendick Farm,	73.83	352	P	P	20 49 17.2	-0.3
	baz=170						
RSSD	Black Hills	73.84	6	*e*P	P	20 49 18.1	+0.3
	comp=Z,13nm,1.0s						
RSSD				LR	LR		
	comp=Z,1µm,21.0s						
RSSD	Black Hills	73.84	6	*e*P	P	20 49 18.1	+0.3
RSSD				pmax	pmax		
	comp=Z,13nm,1.0s						
RSSD				MLR	MLR		
	comp=Z,1µm,21.0s						
RSSD	Black Hills	73.84	6	P	P	20 49 17.2	-0.6
	baz=187						
Q53A	Leroy	73.85	24	P	P	20 49 17.0	-0.7
	baz=207						
R55A	Marlinton	73.85	25	PFAKE		20 49 30.0	+12
R55A				LR	LR		
	comp=Z,500nm,19.0s						
R55A	Marlinton	73.85	25	P	P	20 49 17.0	-0.8
	baz=208						
P51A	Williamsport	73.87	23	PFAKE		20 49 30.0	+12
P51A				LR	LR		
	comp=Z,700nm,21.0s						
M43A	Waltham Townsh	73.89	18	P	P	20 49 16.5	-1.4
	baz=200						
O48A	Farmland	73.90	21	P	P	20 49 16.4	-1.5
	baz=204						
L40A	Anamosa	73.92	16	PFAKE		20 49 30.0	+12
L40A				LR	LR		
	comp=Z,600nm,19.0s						
L40A	Anamosa	73.92	16	P	P	20 49 17.8	-0.2
	baz=198,SNR=9.0						
LKWY	Lake	73.96	1	PFAKE		20 49 30.0	+11
LKWY				LR	LR		
	comp=Z,1µm,19.0s						
N46A	Monticello	74.01	19	P	P	20 49 18.3	-0.3
	baz=202,SNR=6.6						
S58A	Poland Farm, P	74.06	27	P	P	20 49 18.3	-0.6
	baz=210						
O49A	Covington	74.09	22	PFAKE		20 49 30.0	+11
O49A				LR	LR		
	comp=Z,500nm,19.0s						
O49A	Covington	74.09	22	P	P	20 49 18.8	-0.3
	baz=204						
M44A	Midewin, Midew	74.10	18	PFAKE		20 49 30.0	+11
M44A				LR	LR		
	comp=Z,500nm,20.0s						
M44A	Midewin, Midew	74.10	18	P	P	20 49 18.6	-0.5
	baz=201						
T60A	Surry	74.19	28	PFAKE		20 49 30.0	+10
T60A				LR	LR		
	comp=Z,500nm,21.0s						
Q54A	Coxs Mills	74.20	25	PFAKE		20 49 30.0	+10
Q54A				LR	LR		
	comp=Z,800nm,22.0s						
Q54A	Coxs Mills	74.20	25	P	P	20 49 19.9	+0.1
	baz=208						
R56A	Bull Pasture M	74.23	26	P	P	20 49 20.6	+0.5
	baz=209,SNR=5.9						
L42A	Oliver, Polo	74.24	17	PFAKE		20 49 30.0	+10
L42A				LR	LR		
	comp=Z,700nm,19.0s						
L42A	Oliver, Polo	74.24	17	P	P	20 49 20.0	+0.1
	baz=200						
O50A	Cable	74.28	22	P	P	20 49 18.7	-1.6
	baz=205						
N47A	Urbana	74.30	20	P	P	20 49 19.0	-1.3
	baz=203,SNR=5.8						
M45A	Boilermakers S	74.32	19	P	P	20 49 19.0	-1.3

	baz=202						
P52A	Corning	74.32	23	P	P	20 49 19.1	-1.4
	baz=206,SNR=8.1						
BMO	Blue Mountains	74.41	356	PFAKE		20 49 30.0	+9.0
BMO				LR	LR		
	comp=Z,1µm,20.0s						
ECSD	EROS Data Cent	74.42	11	PFAKE		20 49 30.0	+9.0
ECSD				LR	LR		
	comp=Z,1µm,21.0s						
ECSD	EROS Data Cent	74.42	11	P	P	20 49 20.0	-1.0
	baz=194						
R58B	Mineral	74.44	27	P	P	20 49 19.9	-1.2
	baz=210						
P53A	Whipple	74.45	24	PFAKE		20 49 30.0	+8.8
P53A				LR	LR		
	comp=Z,700nm,21.0s						
P53A	Whipple	74.45	24	P	P	20 49 20.0	-1.2
	baz=207,SNR=7.3						
R57A	Stanardsville	74.47	27	P	P	20 49 20.6	-0.8
	baz=210						
LHI	Lord Howe Isla	74.48	242	PFAKE		20 49 30.0	+8.2
LHI				LR	LR		
	comp=Z,2µm,22.0s						
N48A	Decatur	74.49	21	P	P	20 49 20.4	-0.9
	baz=204						
S59A	Mechanicsville	74.50	28	P	P	20 49 18.7	-2.8
	baz=210						
RLMT	Red Lodge	74.54	2	PFAKE		20 49 30.0	+8.1
RLMT				LR	LR		
	comp=Z,1µm,20.0s						
RLMT	Red Lodge	74.54	2	P	P	20 49 20.9	-0.9
	baz=182						
ACSO	Alum Creek Sta	74.57	22	PFAKE		20 49 30.0	+8.1
ACSO				LR	LR		
	comp=Z,600nm,20.0s						
ACSO	Alum Creek Sta	74.57	22	P	P	20 49 21.3	-0.6
	baz=206						
M46A	Old House Fiel	74.59	20	PFAKE		20 49 30.0	+8.0
M46A				LR	LR		
	comp=Z,800nm,18.0s						
O51A	Pataskala	74.62	23	P	P	20 49 21.7	-0.6
	baz=206						
R58A	Rapidan	74.68	27	P	P	20 49 22.1	-0.4
	baz=210						
SUSD	Miller	74.75	9	P	P	20 49 22.4	-0.4
	baz=191						
DLMT	Dillon	74.75	359	PFAKE		20 49 40.0	+17
DLMT				LR	LR		
	comp=Z,1µm,20.0s						
M47A	Cromwell	74.76	20	P	P	20 49 22.4	-0.6
	baz=203						
N49A	Columbus Grove	74.81	21	PFAKE		20 49 40.0	+17
N49A				LR	LR		
	comp=Z,500nm,20.0s						
N49A	Columbus Grove	74.81	21	P	P	20 49 22.5	-0.7
	baz=204						
CBN	Corbin Frederi	74.85	27	PFAKE		20 49 40.0	+16
CBN				LR	LR		
	comp=Z,400nm,19.0s						
O52A	Adamsville	74.86	23	PFAKE		20 49 40.0	+16
O52A				LR	LR		
	comp=Z,900nm,22.0s						
O52A	Adamsville	74.86	23	P	P	20 49 23.6	0.0
	baz=206,SNR=8.0						
RCBR	Riachuelo	74.86	88	PFAKE		20 49 40.0	+16
RCBR				LR	LR		
	comp=Z,2µm,20.0s						
Q56A	Snyder Ridge,	74.86	26	P	P	20 49 22.9	-0.8
	baz=209						
L44A	Lake County Fo	74.87	18	P	P	20 49 23.4	-0.2
	baz=201						
P54A	Burton	74.88	25	P	P	20 49 24.1	+0.3
	baz=208,SNR=7.5						
JFWS	Jewell Farm	74.96	16	PFAKE		20 49 40.0	+16
JFWS				LR	LR		
	comp=Z,600nm,19.0s						
JFWS	Jewell Farm	74.96	16	P	P	20 49 23.7	-0.4
	baz=199						
G08A	Pilot Rock	74.96	355	*e*P	P	20 49 24.5	+0.3
	comp=Z,16nm,1.1s						
G08A				LR	LR		
	comp=Z,3µm,19.0s						
BOZ	Bozeman (W)	74.98	0	PFAKE		20 49 40.0	+16
BOZ				LR	LR		
	comp=Z,1µm,19.0s						
BOZ	Bozeman (W)	74.98	0	P	P	20 49 24.1	-0.2
	baz=180						
N50A	Nevada	75.00	22	P	P	20 49 23.4	-1.0
	baz=205						
P55A	Reedsville	75.03	25	P	P	20 49 24.6	0.0
	baz=208,SNR=5.6						
S61A	Accomac	75.10	29	P	P	20 49 25.2	+0.2
	baz=212						
G05D	Wamic, OR	75.13	353	P	P	20 49 25.4	+0.3
	baz=171						
M48A	Edgerton	75.15	21	PFAKE		20 49 40.0	+15
M48A				LR	LR		
	comp=Z,500nm,20.0s						
Q57A	Strasburg	75.16	26	P	P	20 49 25.5	+0.1
	baz=210						
MCWV	Mont Chateau	75.16	25	PFAKE		20 49 40.0	+15
MCWV				LR	LR		
	comp=Z,300nm,22.0s						
MCWV	Mont Chateau	75.16	25	P	P	20 49 25.4	+0.1
	baz=208						
L46A	Eue Claire	75.17	19	PFAKE		20 49 40.0	+15
L46A				LR	LR		
	comp=Z,600nm,18.0s						
L46A	Eue Claire	75.17	19	P	P	20 49 25.2	-0.1
	baz=203						
O53A	New Philadelph	75.19	24	P	P	20 49 25.9	+0.4
	baz=207,SNR=7.7						
K43A	Burlington	75.25	18	PFAKE		20 49 40.0	+14
K43A				LR	LR		
	comp=Z,700nm,19.0s						
K43A	Burlington	75.25	18	P	P	20 49 25.7	-0.1
	baz=201						
Q58A	Fox Den Farm,	75.36	27	P	P	20 49 26.3	-0.2
	baz=210						
N51A	Ashland	75.39	23	PFAKE		20 49 40.0	+13
N51A				LR	LR		
	comp=Z,700nm,20.0s						
N51A	Ashland	75.39	23	P	P	20 49 26.5	-0.1
	baz=206						
P56A	Dayton Farm, R	75.40	26	P	P	20 49 26.9	+0.2
	baz=209						
O54A	Avella	75.43	24	P	P	20 49 26.7	-0.1
	baz=208						
L47A	Sherwood	75.45	20	P	P	20 49 26.6	-0.3
	baz=204						
F10A	Beach Ranch, E	75.52	356	PFAKE		20 49 40.0	+13
F10A				LR	LR		
	comp=Z,1µm,21.0s						
N52A	McGinn’s Farm,	75.53	23	P	P	20 49 26.6	-0.8
	baz=207						
M50A	Fremont	75.61	22	PFAKE		20 49 40.0	+12
M50A				LR	LR		
	comp=Z,500nm,20.0s						
M50A	Fremont	75.61	22	P	P	20 49 27.6	-0.3
	baz=205						
F07A	Phinny Hill Vi	75.64	354	PFAKE		20 49 40.0	+12
F07A				LR	LR		
	comp=Z,1µm,21.0s						
L48A	N Adams	75.66	21	P	P	20 49 26.8	-1.3
	baz=204						
P57A	Homestead Farm	75.70	26	P	P	20 49 28.0	-0.4
	baz=210						
R61A	Willards	75.79	29	P	P	20 49 28.2	-0.7
	baz=212						
N53A	Lisbon	75.82	24	PFAKE		20 49 40.0	+11
N53A				LR	LR		
	comp=Z,700nm,21.0s						
N53A	Lisbon	75.82	24	P	P	20 49 29.1	0.0
	baz=207,SNR=6.2						
M51A	Elyria	75.83	23	P	P	20 49 29.0	-0.1
	baz=206						
P58A	Pank, Wackersv	75.98	27	P	P	20 49 29.8	-0.2
	baz=210						
L49A	Milan	76.01	21	P	P	20 49 29.9	-0.3
	baz=205						
PLIO	Pelee Island,	76.06	22	P	P	20 49 30.1	-0.3
	baz=206						
HAWA	Hanford	76.10	354	PFAKE		20 49 40.0	+9.4
HAWA				LR	LR		
	comp=Z,2µm,20.0s						
E09A	Wood Farm, Sta	76.12	355	PFAKE		20 49 40.0	+9.4
E09A				LR	LR		

	comp=Z,2µm,19.0s						
I41A	Arkdale	76.13	16	PFAKE		20 49 40.0	+9.2
I41A				LR	LR		
	comp=Z,400nm,21.0s						
K47A	Vermontville	76.15	20	P	P	20 49 30.7	-0.2
	baz=204						
F04D	Rainier, OR	76.15	352	P	P	20 49 31.2	+0.4
	baz=170						
E08A	Dider Farm, El	76.16	355	PFAKE		20 49 40.0	+9.1
E08A				LR	LR		
	comp=Z,2µm,19.0s						
O56A	Blue Knob Stat	76.17	26	PFAKE		20 49 40.0	+8.9
O56A				LR	LR		
	comp=Z,500nm,19.0s						
O56A	Blue Knob Stat	76.17	26	P	P	20 49 31.0	-0.1
	baz=209						
I42A	Draeger Farm,	76.20	17	PFAKE		20 49 40.0	+8.8
I42A				LR	LR		
	comp=Z,800nm,19.0s						
BBSR	BB Station	76.21	40	*e*P	P	20 49 32.2	+0.8
	comp=Z,33nm,1.0s						
AAM	Ann Arbor	76.22	21	PFAKE		20 49 40.0	+8.7
AAM				LR	LR		
	comp=Z,600nm,22.0s						
LAO	LASA Array	76.24	4	PFAKE		20 49 40.0	+8.6
LAO				LR	LR		
	comp=Z,1µm,19.0s						
LAO	LASA Array	76.24	4	P	P	20 49 31.0	-0.4
	baz=185						
MSO	Missoula	76.24	358	PFAKE		20 49 40.0	+8.5
MSO				LR	LR		
	comp=Z,1µm,18.0s						
MSO	Missoula	76.24	358	P	P	20 49 30.9	-0.6
	baz=178						
N54A	Moraine State	76.25	24	PFAKE		20 49 40.0	+8.4
N54A				LR	LR		
	comp=Z,700nm,22.0s						
N54A	Moraine State	76.25	24	P	P	20 49 32.2	+0.7
	baz=208,SNR=6.8						
L50A	Kingsville	76.26	22	P	P	20 49 31.6	+0.1
	baz=206						
M52A	Chesterland	76.29	23	PFAKE		20 49 40.0	+8.2
M52A				LR	LR		
	comp=Z,800nm,22.0s						
M52A	Chesterland	76.29	23	P	P	20 49 31.1	-0.7
	baz=207						
P59A	Jarrettsville	76.43	27	P	P	20 49 31.7	-0.9
	baz=211						
M53A	WI Miller and	76.44	24	P	P	20 49 32.1	-0.5
	baz=207,SNR=6.3						
J45A	Montague	76.45	19	PFAKE		20 49 40.0	+7.4
J45A				LR	LR		
	comp=Z,900nm,18.0s						
N55A	Marion Center	76.46	25	PFAKE		20 49 40.0	+7.2
N55A				LR	LR		
	comp=Z,400nm,20.0s						
N55A	Marion Center	76.46	25	P	P	20 49 33.5	+0.8
	baz=209,SNR=6.7						
O57A	Amberson	76.47	26	P	P	20 49 32.5	-0.4
	baz=210,SNR=6.3						
K48A	Perry	76.54	21	P	P	20 49 33.1	0.0
	baz=204						
SPMN	Marine on St.	76.58	14	PFAKE		20 49 50.0	+17
SPMN				LR	LR		
	comp=Z,1µm,20.0s						
O58A	Lewisberry	76.67	27	P	P	20 49 33.7	-0.2
	baz=210,SNR=7.1						
LON	Longmire	76.67	353	PFAKE		20 49 50.0	+16
LON				LR	LR		
	comp=Z,1µm,22.0s						
D08A	Wollman Farm,	76.71	355	PFAKE		20 49 50.0	+16
D08A				LR	LR		
	comp=Z,2µm,20.0s						
J47A	Sunmer	76.72	20	PFAKE		20 49 50.0	+16
J47A				LR	LR		
	comp=Z,500nm,19.0s						
J47A	Sunmer	76.72	20	P	P	20 49 34.5	+0.3
	baz=204						
SSPA	Standing Stone	76.74	26	*e*P	P	20 49 34.5	+0.2
	comp=Z,9.3nm,1.1s						
SSPA				LR	LR		
	comp=Z,400nm,19.0s						
SSPA	Standing Stone	76.74	26	P	P	20 49 34.2	-0.2
	baz=210						
N56A	West Decatur	76.83	25	P	P	20 49 34.2	-0.7
	baz=209						
PAGS	Pennsylvania G	76.84	27	PFAKE		20 49 50.0	+15
PAGS				LR	LR		
	comp=Z,400nm,20.0s						
M54A	Oil Creek Stat	76.85	24	PFAKE		20 49 50.0	+15
M54A				LR	LR		
	comp=Z,600nm,22.0s						
M54A	Oil Creek Stat	76.85	24	P	P	20 49 34.5	-0.5
	baz=208						
N57A	Milroy	76.97	26	P	P	20 49 35.1	-0.5
	baz=210,SNR=5.6						
K50A	Casco	76.98	22	PFAKE		20 49 50.0	+14
K50A				LR	LR		
	comp=Z,500nm,20.0s						
G39A	Holcombe	76.99	15	P	P	20 49 35.2	-0.4
	baz=198,SNR=5.5						
H43A	Windswept, Lux	77.04	17	PFAKE		20 49 50.0	+14
H43A				LR	LR		
	comp=Z,800nm,19.0s						
H43A	Windswept, Lux	77.04	17	P	P	20 49 34.9	-1.0
	baz=201						
LTY	Liberty	77.06	354	PFAKE		20 49 50.0	+14
LTY				LR	LR		
	comp=Z,1µm,21.0s						
J48A	Bridge Port	77.09	21	PFAKE		20 49 50.0	+14
J48A				LR	LR		
	comp=Z,500nm,20.0s						
J48A	Bridge Port	77.09	21	P	P	20 49 36.7	+0.5
	baz=205						
F37A	Hinrichs Farm,	77.09	14	P	P	20 49 35.2	-1.0
	baz=197						
O59A	Robesonia	77.12	27	P	P	20 49 36.0	-0.4
	baz=211						
D05A	Enumclaw	77.13	353	PFAKE		20 49 50.0	+14
D05A				LR	LR		
	comp=Z,1µm,22.0s						
M55A	Ridgway	77.14	25	P	P	20 49 35.5	-1.1
	baz=209						
G40A	Rib Lake	77.19	15	PFAKE		20 49 50.0	+13
G40A				LR	LR		
	comp=Z,400nm,19.0s						
G40A	Rib Lake	77.19	15	P	P	20 49 36.7	-0.1
	baz=199,SNR=10						
D04E	Lakebay	77.20	352	P	P	20 49 36.8	0.0
	baz=170						
J49A	Marlette	77.34	21	P	P	20 49 36.8	-0.8
	baz=205						
M56A	Emporium	77.37	25	P	P	20 49 38.1	+0.3
	baz=209,SNR=7.4						
EGMT	Eagleton	77.43	1	P	P	20 49 38.4	+0.3
	baz=182,SNR=8.6						
O60A	Telford	77.44	28	P	P	20 49 37.7	-0.5
	baz=212						
F38A	Pierce - Schro	77.47	14	P	P	20 49 38.3	-0.1
	baz=198,SNR=10						
I47A	Gladwin	77.53	20	PFAKE		20 49 50.0	+11
I47A				LR	LR		
	comp=Z,800nm,20.0s						
I47A	Gladwin	77.53	20	P	P	20 49 37.8	-0.8
	baz=204						
NLWA	Neilton Lookou	77.55	352	PFAKE		20 49 50.0	+11
NLWA				LR	LR		
	comp=Z,1µm,22.0s						
O61A	Allentown	77.60	28	P	P	20 49 38.5	-0.7
	baz=212						
L54A	Sinclairville	77.61	24	P	P	20 49 38.5	-0.7
	baz=208						
F39A	Loretta	77.64	15	P	P	20 49 39.0	-0.2
	baz=198,SNR=9.8						
NEW	Newport	77.80	356	P	P	20 49 38.1	-2.1
	comp=Z,8.7nm,1.0s,baz=165,slow=6.5,SNR=14						
NEW	Newport	77.80	356	PFAKE		20 49 50.0	+10
NEW				LR	LR		
	comp=Z,2µm,19.0s						
NEW	Newport	77.80	356	P	P	20 49 39.6	-0.5
NEW				pmax	pmax		
	comp=Z,20nm,1.2s						
NEW	Newport	77.80	356	P	P	20 49 40.1	0.0
	baz=175,SNR=8.0						
F40A	Park Falls	77.82	15	P	P	20 49 40.3	+0.1
	baz=199,SNR=8.4						
L55A	Hinsdale	77.88	25	P	P	20 49 40.7	0.0

	baz=209,SNR=6.0						
TARA	Tarawa	77.95	279	PFAKE		20 49 50.0	+8.3
TARA				LR	LR		
	comp=Z,1µm,19.0s						
I49A	Point Hope	77.97	21	PFAKE		20 49 50.0	+8.9
I49A				LR	LR		
	comp=Z,700nm,21.0s						
I49A	Point Hope	77.97	21	P	P	20 49 40.9	-0.1
	baz=205						
MDND	Maddock	78.00	8	PFAKE		20 49 50.0	+8.8
MDND				LR	LR		
	comp=Z,500nm,19.0s						
MDND	Maddock	78.00	8	P	P	20 49 41.3	+0.1
	baz=191						
BRNJ	Basking Ridge	78.09	28	PFAKE		20 49 50.0	+8.2
BRNJ				LR	LR		
	comp=Z,500nm,18.0s						
J52A	Paris	78.10	23	P	P	20 49 41.2	-0.7
	baz=207						
G45A	Suttons Bay	78.14	19	PFAKE		20 49 50.0	+8.0
G45A				LR	LR		
	comp=Z,800nm,19.0s						
G45A	Suttons Bay	78.14	19	P	P	20 49 42.0	0.0
	baz=203						
H47A	Mio	78.14	20	P	P	20 49 42.1	0.0
	baz=204						
DGMT	Dagmar	78.15	5	PFAKE		20 49 50.0	+7.9
DGMT				LR	LR		
	comp=Z,1µm,20.0s						
DGMT	Dagmar	78.15	5	P	P	20 49 42.2	+0.2
	baz=187						
E38A	The Farm, Brul	78.16	14	PFAKE		20 49 50.0	+7.9
E38A				LR	LR		
	comp=Z,800nm,19.0s						
E38A	The Farm, Brul	78.16	14	P	P	20 49 42.2	+0.1
	baz=198						
K54A	Basiliko Farm,	78.17	24	P	P	20 49 42.1	-0.2
	baz=209						
COWI	Conover	78.22	16	PFAKE		20 49 50.0	+7.5
COWI				LR	LR		
	comp=Z,400nm,18.0s						
GLMI	Grayling	78.23	19	PFAKE		20 49 50.0	+7.4
GLMI				LR	LR		
	comp=Z,900nm,19.0s						
BASO	Ashfield	78.40	22	P	P	20 49 43.7	+0.2
	baz=206						
ODNJ	Ogdensburg	78.41	28	PFAKE		20 50 00.0	+16
ODNJ				LR	LR		
	comp=Z,500nm,18.0s						
I51A	Listowel	78.42	22	P	P	20 49 43.2	-0.4
	baz=207,SNR=6.6						
M59A	Waymart	78.47	27	P	P	20 49 44.0	0.0
	baz=212						
K55A	Perry	78.49	25	P	P	20 49 44.1	+0.1
	baz=209						
H48A	Harrisville	78.50	20	PFAKE		20 50 00.0	+16
H48A				LR	LR		
	comp=Z,700nm,18.0s						
MMNY	Mt. Morris Dam	78.56	25	PFAKE		20 50 00.0	+16
MMNY				LR	LR		
	comp=Z,600nm,19.0s						
PAL	Palisades	78.63	28	PFAKE		20 50 00.0	+15
PAL				LR	LR		
	comp=Z,500nm,20.0s						
BWLO	Walkerton	78.66	22	P	P	20 49 45.3	+0.4
	baz=207						
A04D	Lummi Island	78.72	353	P	P	20 49 44.8	-0.3
	baz=170						
MEDO	Medina	78.73	24	PFAKE		20 50 00.0	+15
MEDO				LR	LR		
	comp=Z,600nm,20.0s						
J54A	Appleton	78.76	24	PFAKE		20 50 00.0	+15
J54A				LR	LR		
	comp=Z,700nm,22.0s						
J54A	Appleton	78.76	24	P	P	20 49 45.5	0.0
	baz=209						
F45A	CMU Biological	78.77	18	P	P	20 49 45.5	0.0
	baz=203						
G47A	Hillman	78.77	20	P	P	20 49 46.0	+0.5
	baz=204,SNR=5.9						
BINY	Binghamton	78.81	26	PFAKE		20 50 00.0	+14
BINY				LR	LR		
	comp=Z,400nm,18.0s						
BINY	Binghamton	78.81	26	P	P	20 49 45.9	0.0
	baz=211						
I52A	Shelburne	78.93	23	P	P	20 49 46.1	-0.4
	baz=208						
M61A	Granite Spring	78.95	28	P	P	20 49 45.6	-0.9
	baz=213						
CASY	Casey	78.98	196	*e*P	P	20 49 46.5	-0.1
	comp=Z,4.0nm,0.9s						
CASY				LR	LR		
	comp=Z,1µm,20.0s						
AGMN	Agassiz Nation	78.98	11	PFAKE		20 50 00.0	+13
AGMN				LR	LR		
	comp=Z,500nm,19.0s						
AGMN	Agassiz Nation	78.98	11	P	P	20 49 46.3	-0.3
	baz=194						
E43A	Lone Tree Farm	79.01	17	PFAKE		20 50 00.0	+13
E43A				LR	LR		
	comp=Z,500nm,18.0s						
E43A	Lone Tree Farm	79.01	17	P	P	20 49 46.3	-0.5
	baz=202						
J55A	Hilton	79.05	25	PFAKE		20 50 00.0	+13
J55A				LR	LR		
	comp=Z,500nm,18.0s						
J55A	Hilton	79.05	25	P	P	20 49 46.5	-0.6
	baz=210						
BMRO	Meriville Lake	79.06	22	P	P	20 49 46.8	-0.3
	baz=207						
D41A	Chassel	79.26	16	PFAKE		20 50 00.0	+12
D41A				LR	LR		
	comp=Z,500nm,18.0s						
D41A	Chassel	79.26	16	P	P	20 49 47.5	-0.6
	baz=200						
SYO	Syowa Base	79.32	170⇑	*e*P	P	20 49 45.8	-2.5
SYO	Syowa Base	79.32	170⇑	*e*sP	sP	20 49 53.0	+1.4
SYO	Syowa Base	79.32	170⇑	*e*PP	PP	20 52 44.4	-3.1
KSCT	Kent School, K	79.41	28	PFAKE		20 50 00.0	+11
KSCT				LR	LR		
	comp=Z,400nm,18.0s						
WLVO	Wesleyville	79.42	24	P	P	20 49 48.3	-0.8
	baz=209						
EYMN	Ely	79.45	14	PFAKE		20 50 00.0	+11
EYMN				LR	LR		
	comp=Z,1µm,20.0s						
EYMN	Ely	79.45	14	P	P	20 49 48.9	-0.3
	baz=198,SNR=6.5						
E44A	Grand Marais A	79.52	18	PFAKE		20 50 00.0	+10
E44A				LR	LR		
	comp=Z,700nm,18.0s						
H52A	Wyevale	79.54	23	P	P	20 49 49.2	-0.5
	baz=208						
E46A	Sault Ste Mari	79.73	19	PFAKE		20 50 00.0	+9.3
E46A				LR	LR		
	comp=Z,500nm,21.0s						
E46A	Sault Ste Mari	79.73	19	P	P	20 49 50.7	0.0
	baz=204						
F48A	Evansville	79.73	20	P	P	20 49 50.4	-0.4
	baz=205						
F49A	Sandfield	79.85	21	P	P	20 49 50.8	-0.6
	baz=206						
SADO	Sadowa	79.90	23	LR	LR	21 20 57.9	
	comp=Z,732nm,21.9s,baz=188,slow=32						
SADO	Sadowa	79.90	23	PFAKE		20 50 00.0	+8.3
SADO				LR	LR		
	comp=Z,800nm,22.0s						
I55A	Frankford	79.92	24	P	P	20 49 51.1	-0.7
	baz=210						
PECO	Prince Edward	79.93	25	P	P	20 49 51.7	-0.1
	baz=210,SNR=6.6						
C40A	Isle Royale Na	79.93	15	PFAKE		20 50 00.0	+8.2
C40A				LR	LR		
	comp=Z,1µm,20.0s						
C40A	Isle Royale Na	79.93	15	P	P	20 49 50.7	-1.1
	baz=200						
KLBO	Killbear Provi	80.06	22	P	P	20 49 52.6	+0.1
	baz=207,SNR=5.1						
E47A	Iron Bridge	80.10	20	P	P	20 49 52.6	-0.1
	baz=205						
TRY	Troy	80.18	27	PFAKE		20 50 00.0	+6.8
TRY				LR	LR		
	comp=Z,600nm,18.0s						
DELO	Deloro Mine	80.21	24	P	P	20 49 52.7	-0.6
	baz=210,SNR=6.9						
D46A	Sault St. Mari	80.28	19	P	P	20 49 53.2	-0.5
	baz=204						

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QUA2  Belchertown        80.34  29 PFAKE               20 50 10.0  +16
QUA2                               LR        LR
      comp=Z,400nm,19.0s
BRYW  Bryant College     80.38  29 PFAKE               20 50 10.0  +16
BRYW                               LR        LR
      comp=Z,400nm,19.0s
G53A  Haliburton         80.39  23 P         P         20 49 53.7 -0.6
      baz=209
H55A  Tweed              80.39  24 P         P         20 49 53.6 -0.7
      baz=210
BUKO  Buck Lake          80.41  22 P         P         20 49 53.5 -0.9
      baz=208,SNR=6.0
E48A  Lockeyer           80.46  20 P         P         20 49 54.9 +0.3
      baz=206,SNR=7.5
LLLB  Lillooet           80.50 353 PFAKE               20 50 10.0  +15
LLLB                               LR        LR
      comp=Z,900nm,20.0s
BANO  Bancroft           80.54  24 P         P         20 49 55.1  0.0
      baz=209,SNR=7.0
F51A  Arnstein           80.67  22 P         P         20 49 55.7 -0.1
      baz=208,SNR=5.9
D47A  Chapleau           80.70  19 P         P         20 49 55.7 -0.2
      baz=205,SNR=5.6
F52A  Sundridge          80.74  22 P         P         20 49 56.0 -0.2
      baz=208
H56A  Elgin              80.76  25 P         P         20 49 56.1 -0.3
      baz=211
E50A  Wahnapitae         80.84  21 P         P         20 49 56.5 -0.2
      baz=207,SNR=6.1
PLVO  Plevna             80.86  24 PFAKE               20 50 10.0  +13
PLVO                               LR        LR
      comp=Z,600nm,20.0s
WES   Weston             80.86  29 PFAKE               20 50 10.0  +13
WES                                LR        LR
      comp=Z,600nm,22.0s
HRV   Adam Dziewonsk     80.86  29 PFAKE               20 50 10.0  +13
HRV                                LR        LR
      comp=Z,400nm,22.0s
ULM   Lac du Bonnet      80.88  10 P         P         20 49 55.3 -1.5
      comp=Z,5.6nm,0.8s,baz=201,slow=5.0,SNR=4.8
ULM                                LR        LR        21 22 14.1
      comp=Z,477nm,19.4s,baz=193,slow=33
ULM   Lac du Bonnet      80.88  10 PFAKE               20 50 10.0  +13
ULM                                LR        LR
      comp=Z,500nm,20.0s
G55A  Calabogie          81.17  24 P         P         20 49 58.2 -0.3
      baz=210
D48A  Paudash Townsh     81.19  20 P         P         20 49 58.2 -0.4
      baz=206,SNR=6.4
E52A  Mattawa            81.40  23 P         P         20 49 59.7  0.0
      baz=209
LONY  Lake Ozonia        81.41  26 P         P         20 49 59.6 -0.3
      baz=212,SNR=7.5
D49A  Beulah Townshi     81.41  20 P         P         20 49 60.0 +0.2
      baz=206,SNR=6.2
HNH   Hanover            81.55  28 PFAKE               20 50 10.0 +9.5
HNH                                LR        LR
      comp=Z,300nm,20.0s
FFD   Franklin Falls     81.61  28 PFAKE               20 50 10.0 +9.1
FFD                                LR        LR
      comp=Z,700nm,21.0s
VT1   Waterbury          81.88  27 PFAKE               20 50 10.0 +7.7
VT1                                LR        LR
      comp=Z,500nm,18.0s
FRNY  Flat Rock          81.97  26 PFAKE               20 50 10.0 +7.2
FRNY                               LR        LR
      comp=Z,400nm,20.0s
E54A  Lac Daplat, Po     82.02  23 P         P         20 50 02.8 -0.2
      baz=210,SNR=5.2
D52A  ZEK Kipawa Sen     82.08  22 P         P         20 50 03.2 -0.1
      baz=209
LBNH  Lisbon             82.14  28 P         P         20 50 02.7 -1.0
      baz=214
D53A  Lac Vacive, Po     82.41  23 PFAKE               20 50 20.0  +15
D53A                               LR        LR
      comp=Z,700nm,19.0s
D53A  Lac Vacive, Po     82.41  23 P         P         20 50 04.4 -0.6
      baz=209
BBB   Bella Bella        82.83 350 LR        LR        21 19 09.6
      comp=Z,526nm,21.7s,baz=185,slow=30
D54A  Lac Fusel, La      82.83  23 P         P         20 50 06.7 -0.5
      baz=210
MAW   Mawson             82.87 178 P         P         20 50 05.9 -1.4
      comp=Z,3.6nm,0.8s,baz=184,slow=7.6,SNR=6.5
MAW                                LR        LR        21 24 25.9
      comp=Z,1µm,18.5s,baz=192,slow=34
MAW   Mawson             82.87 178 PFAKE               20 50 20.0  +13
MAW                                LR        LR
      comp=Z,300nm,20.0s
WVL   Waterville         83.34  29 PFAKE               20 50 20.0  +10
WVL                                LR        LR
      comp=Z,400nm,18.0s
VLDQ  Val d'Or           83.39  22 PFAKE               20 50 20.0  +10
VLDQ                               LR        LR
      comp=Z,600nm,21.0s
HNR   Honiara            83.92 263 PFAKE               20 50 30.0  +16
HNR                                LR        LR
      comp=Z,900nm,20.0s
PKME  Peaks-Kenny Pk     84.05  29 PFAKE               20 50 20.0 +6.5
PKME                               LR        LR
      comp=Z,300nm,19.0s
PKME  Peaks-Kenny Pk     84.05  29 P         P         20 50 13.0 -0.5
      baz=216
EMMW  East Machias       84.39  30 PFAKE               20 50 30.0  +15
EMMW                               LR        LR
      comp=Z,400nm,21.0s
FFC   Flin Flon          84.54   6 eP        P         20 50 15.0 -0.8
      comp=Z,192nm,1.1s
FFC                                LR        LR
      comp=Z,12µm,22.0s
FFC   Flin Flon          84.54   6 i P       P         20 50 19.1 +3.3
DIB   Dawson Inlet,      84.54 348 PFAKE               20 50 30.0  +14
DIB                                LR        LR
      comp=Z,900nm,21.0s
H02S1 DAWSON INLET T     84.54 348 T         T         22 24 01.7
      SNR=8.5
MATQ  Matagami           84.77  21 P         P         20 50 16.9 -0.2
      baz=209
GGN   Saint George       84.98  30 PFAKE               20 50 30.0  +12
GGN                                LR        LR
      comp=Z,500nm,21.0s
MIDW  Midway             85.13 306 PFAKE               20 50 30.0  +11
MIDW                               LR        LR
      comp=Z,900nm,19.0s
PQI   Presque Isle       85.71  29 PFAKE               20 50 30.0 +8.2
PQI                                LR        LR
      comp=Z,400nm,22.0s
HAL   Halifax            86.07  32 PFAKE               20 50 30.0 +6.3
HAL                                LR        LR
      comp=Z,200nm,22.0s
LMN   Caledonia Moun     86.45  31 PFAKE               20 50 40.0  +14
LMN                                LR        LR
      comp=Z,500nm,21.0s
STKA  Stephens Creek     87.28 235 LR        LR        21 22 39.1
      comp=Z,272nm,21.4s,baz=106,slow=31
WRAK  Wrangell Islan     87.59 349 PFAKE               20 50 40.0 +9.3
WRAK                               LR        LR
      comp=Z,1µm,21.0s
DLBC  Dease Lake         89.16 351 P         P         20 50 36.0 -2.3
      comp=Z,0.5nm,0.2s,baz=205,slow=5.3,SNR=3.0
DLBC  Dease Lake         89.16 351 eP        P         20 50 37.4 -0.9
      comp=Z,4.9nm,1.1s
DLBC                               LR        LR
      comp=Z,600nm,22.0s
FCC   Fort Churchill     89.39   9 PFAKE               20 50 50.0  +11
FCC                                LR        LR
      comp=Z,900nm,19.0s
JIS   Juneau Island      89.71 348 PFAKE               20 50 50.0 +9.3
JIS                                LR        LR
      comp=Z,400nm,19.0s
BESE  Bessie Mountai     90.08 348 PFAKE               20 50 50.0 +7.4
BESE                               LR        LR
      comp=Z,400nm,21.0s
SKAG  Skagway            90.99 348 PFAKE               20 51 00.0  +13
SKAG                               LR        LR
      comp=Z,300nm,20.0s
YKA   Yellowknife Ar     91.94 359 P         P         20 50 48.4 -2.6
      comp=Z,0.6nm,0.7s,baz=172,slow=4.5,SNR=4.1
YKA                                LR        LR        21 27 53.2
      comp=Z,175nm,18.1s,baz=182,slow=33
H11S2 WAKE ISLAND Hy     91.95 290 T         T         22 32 54.3
      baz=118
H11S1 WAKE ISLAND Hy     91.96 290 T         T         22 32 45.0
      baz=118
H11S3 WAKE ISLAND Hy     91.97 290 T         T         22 32 47.3
      baz=118
YKW3  Yellowknife Ar     92.01 359 PFAKE               20 51 00.0 +8.7
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YKW3                               LR        LR
      comp=Z,2µm,19.0s
BCPM  Bancas Point       92.27 346 PFAKE               20 51 00.0 +7.4
BCPM                               LR        LR
      comp=Z,500nm,20.0s
WAKE  Wake Island        92.39 291 PFAKE               20 51 10.0  +16
WAKE                               LR        LR
      comp=Z,500nm,21.0s
H11N3 WAKE ISLAND Hy     92.41 291 T         T         22 33 21.8
      baz=118
H11N1 WAKE ISLAND Hy     92.42 291 T         T         22 33 08.4
      baz=118
H11N2 WAKE ISLAND Hy     92.42 291 T         T         22 33 20.0
      baz=118
PCA   Pinnacle           92.53 346 PFAKE               20 51 10.0  +16
PCA                                LR        LR
      comp=Z,500nm,19.0s
SCHQ  Schefferville      92.66  24 LR        LR        21 30 48.7
      comp=Z,230nm,18.3s,baz=234,slow=34
SCHQ  Schefferville      92.66  24 PFAKE               20 51 10.0  +15
SCHQ                               LR        LR
      comp=Z,400nm,21.0s
HYT   Haines Junctio     92.66 348 PFAKE               20 51 10.0  +15
HYT                                LR        LR
      comp=Z,600nm,19.0s
CHIA  Chirikof Islan     93.07 337 PFAKE               20 51 10.0  +14
CHIA                               LR        LR
      comp=Z,600nm,21.0s
SII   Sitkinak Islan     93.19 338 PFAKE               20 51 10.0  +13
SII                                LR        LR
      comp=Z,600nm,20.0s
RABL  Rabaul             93.21 263 PFAKE               20 51 10.0  +12
RABL                               LR        LR
      comp=Z,500nm,22.0s
OHAK  Old Harbor         93.44 339 PFAKE               20 51 10.0  +12
OHAK                               LR        LR
      comp=Z,600nm,20.0s
HMT   Hamilton           93.63 344 PFAKE               20 51 10.0  +11
HMT                                LR        LR
      comp=Z,700nm,21.0s
KDAK  Kodiak Island      93.68 339 PFAKE               20 51 10.0  +11
KDAK                               LR        LR
      comp=Z,700nm,20.0s
BALM  Baldy              93.83 346 PFAKE               20 51 10.0  +10
BALM                               LR        LR
      comp=Z,700nm,22.0s
CHGN  Chignik            94.42 336 PFAKE               20 51 10.0 +7.4
CHGN                               LR        LR
      comp=Z,500nm,21.0s
SEW   Seward             94.73 342 PFAKE               20 51 20.0  +16
SEW                                LR        LR
      comp=Z,600nm,21.0s
CNPM  China Poot         94.73 341 PFAKE               20 51 20.0  +16
CNPM                               LR        LR
      comp=Z,500nm,20.0s
GLI   Glacier Island     94.79 344 PFAKE               20 51 20.0  +16
GLI                                LR        LR
      comp=Z,600nm,21.0s
BRLK  Bradley Lake       94.83 341 PFAKE               20 51 20.0  +16
BRLK                               LR        LR
      comp=Z,500nm,20.0s
PMG   Port Moresby       94.86 256 PFAKE               20 51 20.0  +14
PMG                                LR        LR
      comp=Z,900nm,21.0s
KNK   Knik Glacier       95.58 343 PFAKE               20 51 20.0  +12
KNK                                LR        LR
      comp=Z,600nm,19.0s
COEN  Coen               95.80 250 PFAKE               20 51 20.0  +10
COEN                               LR        LR
      comp=Z,900nm,18.0s
MENT  Mentasta           95.82 346 PFAKE               20 51 20.0  +11
MENT                               LR        LR
      comp=Z,600nm,21.0s
SML   Sawmill            95.89 343 PFAKE               20 51 20.0  +11
SML                                LR        LR
      comp=Z,500nm,20.0s
PMR   Palmer             95.91 343 PFAKE               20 51 20.0  +11
PMR                                LR        LR
      comp=Z,500nm,20.0s
DAWY  Dawson             96.00 348 PFAKE               20 51 20.0  +10
DAWY                               LR        LR
      comp=Z,700nm,19.0s
PAX   Paxson             96.23 345 PFAKE               20 51 20.0 +9.1
PAX                                LR        LR
      comp=Z,500nm,22.0s
DOT   Dot Lake           96.53 346 PFAKE               20 51 20.0 +7.9
DOT                                LR        LR
      comp=Z,600nm,21.0s
EGAK  Eagle              96.97 348 PFAKE               20 51 30.0  +16
EGAK                               LR        LR
      comp=Z,600nm,20.0s
SVW2  Sparrevohn         97.27 340 PFAKE               20 51 30.0  +14
SVW2                               LR        LR
      comp=Z,400nm,22.0s
RND   Reindeer           97.38 344 PFAKE               20 51 30.0  +14
RND                                LR        LR
      comp=Z,600nm,21.0s
ASAR  Alice Springs      97.56 237 P         P         20 51 16.0 -2.0
      comp=Z,0.8nm,1.1s,baz=131,slow=4.5,SNR=3.5
ASAR                               PP        PP        20 55 16.8 +1.8
      comp=Z,1.6nm,1.1s,baz=131,slow=7.4,SNR=5.6
ASAR                               LR        LR        21 29 24.1
      comp=Z,232nm,20.0s,baz=120,slow=32
MCK   McKinley           97.68 344 PFAKE               20 51 30.0  +13
MCK                                LR        LR
      comp=Z,600nm,21.0s
EPYK  Eagle Plains       97.69 350 PFAKE               20 51 30.0  +13
EPYK                               LR        LR
      comp=Z,500nm,21.0s
PPLA  Purkeypile         97.79 343 PFAKE               20 51 30.0  +12
PPLA                               LR        LR
      comp=Z,400nm,21.0s
HDA   Harding Lake       97.81 345 PFAKE               20 51 30.0  +12
HDA                                LR        LR
      comp=Z,400nm,20.0s
KTH   Kantishna Hill     98.01 343 PFAKE               20 51 30.0  +11
KTH                                LR        LR
      comp=Z,500nm,20.0s
ILAR  Eielson Array      98.11 346 P         P         20 51 15.8 -3.4
      comp=Z,0.2nm,0.4s,baz=160,slow=2.9,SNR=2.5
ILAR                               LR        LR        21 26 35.0
      comp=Z,427nm,21.0s,baz=143,slow=30
WRH   Wood River Hil     98.12 345 PFAKE               20 51 30.0  +11
WRH                                LR        LR
      comp=Z,600nm,18.0s
CAST  Castle Rocks       98.19 343 PFAKE               20 51 30.0  +10
CAST                               LR        LR
      comp=Z,500nm,20.0s
CCB   Clear Creek Bu     98.20 345 PFAKE               20 51 30.0  +10
CCB                                LR        LR
      comp=Z,600nm,22.0s
COLA  College            98.41 345 PFAKE               20 51 30.0 +9.5
COLA                               LR        LR
      comp=Z,500nm,19.0s
COLA  College            98.41 345⇑eP        Pdif      20 51 22.8 +2.3
COLA                               pmax      pmax
      comp=Z,3.0nm,1.0s
MANU  Manus Island       98.42 263 PFAKE               20 51 30.0 +8.1
MANU                               LR        LR
      comp=Z,600nm,19.0s
BPAW  Bear Paw Mtn.      98.48 344 PFAKE               20 51 30.0 +9.0
BPAW                               LR        LR
      comp=Z,400nm,21.0s
TTA   Tatalina           98.85 341 PFAKE               20 51 30.0 +7.3
TTA                                LR        LR
      comp=Z,500nm,21.0s
INK   Inuvik             99.08 352 PFAKE               20 51 30.0 +6.5
INK                                LR        LR
      comp=Z,700nm,21.0s
MLY   Manley             99.20 344 PFAKE               20 51 40.0  +16
MLY                                LR        LR
      comp=Z,500nm,20.0s
WB2   Warramunga Arr     99.44 241 PFAKE               20 51 40.0  +14
WB2                                LR        LR
      comp=Z,1µm,19.0s
COLD  Coldfoot          100.92 346 PFAKE               20 51 40.0 +8.3
COLD                               LR        LR
      comp=Z,500nm,21.0s
TOLK  Toolik Lake Re    101.98 347 PFAKE               20 51 50.0  +14
TOLK                               LR        LR
      comp=Z,600nm,21.0s
H01W1 Cape Leeuwin H    102.49 217 T         T         22 46 20.1
      baz=138,slow=76,SNR=11
H01W2 Cape Leeuwin H    102.50 217 T         T         22 46 20.7
      baz=138,slow=76,SNR=14
H01W3 Cape Leeuwin H    102.51 217 T         T         22 46 25.6
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      baz=138,slow=76,SNR=14
ANM   Nome              102.85 339 PFAKE               20 51 50.0  +10
ANM                                LR        LR
      comp=Z,500nm,22.0s
GAMB  Gambell           104.40 337 PFAKE               20 52 00.0  +13
GAMB                               LR        LR
      comp=Z,500nm,19.0s
RDOG  Red Dog Mine      104.61 342 PFAKE               20 52 00.0  +12
RDOG                               LR        LR
      comp=Z,400nm,21.0s
RES   Resolute Bay      104.75   5 PFAKE               20 52 00.0  +11
RES                                LR        LR
      comp=Z,400nm,20.0s
TULEG Thule             109.31  10 PFAKE               20 56 20.0 +7.8
TULEG                              LR        LR
      comp=Z,1µm,18.0s
FAKI  Fak Fak           110.83 254 PFAKE               20 56 30.0  +13
FAKI                               LR        LR
      comp=Z,300nm,20.0s
PET   Petropavlovsk     112.92 319 PFAKE               20 56 30.0  +10
PET                                LR        LR
      comp=Z,400nm,20.0s
SOEI  Soe               113.32 243 PFAKE               20 56 30.0 +8.1
SOEI                               LR        LR
      comp=Z,800nm,21.0s
PEA0B Petropavlovsk-    113.50 319 PFAKE               20 56 30.0 +9.2
PEA0B                              LR        LR
      comp=Z,400nm,20.0s
TOC5  Torodi Ar. Sit    116.64  90 PFAKE               20 56 40.0  +12
TOC5                               LR        LR
      comp=Z,1µm,22.0s
TOA0  Torodi Ar. Sit    116.67  90 PFAKE               20 56 40.0  +12
TOA0                               LR        LR
      comp=Z,900nm,22.0s
TOA1  Torodi Ar. Sit    116.67  90 PFAKE               20 56 40.0  +12
TOA1                               LR        LR
      comp=Z,900nm,22.0s
TORD  Torodi Ar. Bea    116.67  90 PP        PP        20 57 41.2 +5.3
      comp=Z,1.7nm,1.1s,baz=238,slow=8.3,SNR=3.8
TOB3  Torodi Ar. Sit    116.67  90 PFAKE               20 56 40.0  +12
TOB3                               LR        LR
      comp=Z,800nm,21.0s
TOB2  Torodi Ar. Sit    116.68  90 PFAKE               20 56 40.0  +12
TOB2                               LR        LR
      comp=Z,5µm,22.0s
TOC1  Torodi Ar. Sit    116.68  90 PFAKE               20 56 40.0  +12
TOC1                               LR        LR
      comp=Z,1µm,21.0s
TOC3  Torodi Ar. Sit    116.69  90 PFAKE               20 56 40.0  +12
TOC3                               LR        LR
      comp=Z,900nm,21.0s
TOC2  Torodi Ar. Sit    116.69  90 PFAKE               20 56 40.0  +12
TOC2                               LR        LR
      comp=Z,900nm,21.0s
TNTI  Ternate           116.92 254 PFAKE               20 56 40.0  +11
TNTI                               LR        LR
      comp=Z,100nm,20.0s
YSS   Yuzh-Sakhalins    121.24 309 PFAKE               20 56 50.0  +14
YSS                                LR        LR
      comp=Z,600nm,20.0s
ESDC  Sonseca Array     121.27  59 PKP       PKPdf     20 56 35.0 -1.3
      comp=Z,0.5nm,0.8s,baz=273,slow=1.8,SNR=3.5
MAJO  Matsushiro        122.17 297 PFAKE               20 56 50.0  +12
MAJO                               LR        LR
      comp=Z,300nm,20.0s
MJB9  Matsu-Tunnel      122.18 297 PFAKE               20 56 50.0  +12
MJB9                               LR        LR
      comp=Z,300nm,20.0s
INU   Inuyama           122.79 295 PFAKE               20 56 50.0  +11
INU                                LR        LR
      comp=Z,400nm,20.0s
TAM   Tamanrasset       123.92  81 PFAKE               20 56 50.0 +7.7
TAM                                LR        LR
      comp=Z,700nm,22.0s
KBS   Kingsbay          125.28  11 PFAKE               20 56 50.0 +6.8
KBS                                LR        LR
      comp=Z,800nm,20.0s
JNU   Nakatsue          127.14 291 PFAKE               20 57 00.0  +12
JNU                                LR        LR
      comp=Z,400nm,20.0s
JOW   Kunigami          127.57 282 PFAKE               20 57 00.0  +11
JOW                                LR        LR
      comp=Z,800nm,20.0s
USA0B Ussuriysk Arra    128.28 305 PFAKE               20 57 00.0  +10
USA0B                              LR        LR
      comp=Z,300nm,19.0s
USRK  Ussuriysk Ar.     128.28 305 PKP       PKPdf     20 56 47.1 -2.4
      comp=Z,0.4nm,0.6s,baz=114,slow=1.7,SNR=2.3
KLR   Kul'dur           128.83 311⇑iPKIKP    PKiKP     20 56 51.0 -0.1
YAK   Yakutsk           129.14 328⇓ePKIKP    PKiKP     20 56 53.4 +2.1
MDJ   Mudanjiang        130.03 305 PFAKE               20 57 00.0 +6.4
MDJ                                LR        LR
      comp=Z,300nm,20.0s
KSRS  Korea Array       130.41 296 PKP       PKPdf     20 56 52.4 -1.3
      comp=Z,0.2nm,0.3s,baz=73,slow=1.7,SNR=3.2
KS15  Wonju Array Si    130.44 296 ePKPdf    PKPdf     20 56 53.2 -0.6
KEST  Kesra             130.74  67 PFAKE               20 57 10.0  +15
KEST                               LR        LR
      comp=Z,700nm,21.0s
TUE   Stuetta           131.86  53 PFAKE               20 57 10.0  +12
TUE                                LR        LR
      comp=Z,400nm,20.0s
DAVA  Damuels           132.23  52 i pPKPdf  PKPdf     20 57 00.7 +3.6
      comp=Z,11nm,1.3s
NACB  Ninganchiao       132.46 277 PFAKE               20 57 10.0  +11
NACB                               LR        LR
      comp=Z,300nm,20.0s
YULB  Yu-li             132.46 276 PFAKE               20 57 10.0  +11
YULB                               LR        LR
      comp=Z,200nm,19.0s
TWG   Pinlang           132.46 275 PFAKE               20 57 10.0  +11
TWG                                LR        LR
      comp=Z,1µm,21.0s
YHNB  Yeheng            132.81 277 PFAKE               20 57 10.0  +10
YHNB                               LR        LR
      comp=Z,400nm,20.0s
FETA  Feichten          132.81  52 i pPKiKP  PKiKP     20 57 03.3 +3.9
      comp=Z,15nm,1.7s
RETA  Reutte            132.83  51 i pPKPdf  PKPdf     20 57 01.9 +3.7
      comp=Z,5.9nm,1.1s
SSLB  Suanglung         132.89 276 PFAKE               20 57 10.0  +10
SSLB                               LR        LR
      comp=Z,300nm,22.0s
MOTA  Moosalm           133.07  51 i pPKPdf  PKPdf     20 57 02.0 +3.3
      comp=Z,9.2nm,1.3s
SQTA  Sankt Quirin      133.14  52 i pPKPdf  PKPdf     20 57 02.4 +3.6
      comp=Z,11nm,1.3s
MBAR  Mbarara           133.22 123 PFAKE               20 57 10.0 +8.7
MBAR                               LR        LR
      comp=Z,500nm,18.0s
WATA  Walderalm         133.39  51 i sPKiKP  PKiKP     20 57 06.3 +5.7
      comp=Z,11nm,1.6s
WTTA  Wattenberg        133.43  52 i PKiKP   PKiKP     20 57 01.4 +0.7
      comp=Z,24nm,1.9s
ABTA  Abfaltersbach     134.04  52 i sPKiKP  PKiKP     20 57 07.3 +5.5
      comp=Z,4.0nm,1.3s
CLL   Collm             134.07  46 i PKIKP   PKPdf     20 57 00.0 -0.2
CLL                                i                   20 57 03.4
CLL                                i                   20 57 06.9
CLL                                pmax      pmax
      comp=Z,5.0nm,1.4s
CLL                                MLR       MLR
      comp=Z,300nm,18.4s
CLL   Collm             134.07  46 i PKPdf   PKPdf     20 57 00.0 -0.2
      comp=Z,5.0nm,1.4s
CLL                                i pPKPdf  sPKPdf    20 57 03.4 -0.1
CLL                                i (sPKiKP)          20 57 06.9
      comp=Z,10.0nm,1.5s
CLL                                e                   20 59 58.0
CLL                                eSS       SS        21 17 18.0 -1.9
CLL                                eSSS      SSS       21 22 18.0
CLL                                eSSSS               21 25 54.0
CLL                                LmV                 21 58 00.0
      comp=Z,300nm,18.4s
CLTB  Caltabellotta     134.09  65 PFAKE               20 57 10.0 +7.8
CLTB                               LR        LR
      comp=Z,500nm,21.0s
KBA   Koelnbreinsper    134.60  52 i pPKPdf  PKPdf     20 57 04.3 +2.6
      comp=Z,4.8nm,1.3s
AQU   L'Aquila          134.63  58 PFAKE               20 57 10.0 +6.9
AQU                                LR        LR
      comp=Z,400nm,21.0s
SSE   Sheshan           134.68 286 PFAKE               20 57 10.0 +6.6
SSE                                LR        LR
      comp=Z,500nm,22.0s
BRG   Berggiesshubel    134.71  46 eP        PKiKP     20 57 05.0 +2.1
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	comp=Z,6.8nm,1.3s						
	comp=N,134nm,20.7s						
	comp=E,128nm,14.9s						
	comp=Z,312nm,16.8s						
BRG	Berggiesshubel	134.71	46	ePKIKP	PKiKP	20 57 05.0	+2.1
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,134nm,20.7s						
BRG				MLR	MLR		
	comp=E,128nm,14.9s						
BRG				MLR	MLR		
	comp=Z,312nm,16.8s						
GEC2	GERESS Array S	134.74	49	ePKPdf	PKPdf	20 57 00.9	-0.8
GEC2	GERESS Array S	134.74	49	ePKIKP	PKPdf	20 57 00.9	-0.8
GERES	GERESS Array B	134.74	49	PKP	PKPdf	20 57 00.3	-1.4
	comp=Z,0.5nm,0.7s,baz=349,slow=2.7,SNR=4.9						
WDD	Wied Dalam	134.91	68	PFAKE		20 57 10.0	+6.3
WDD				LR	LR		
	comp=Z,400nm,18.0s						
TRI	Trieste	134.93	54	PFAKE		20 57 10.0	+6.5
TRI				LR	LR		
	comp=Z,200nm,20.0s						
MOA	Molln	135.19	51	iPKiKP	PKiKP	20 57 04.4	+0.4
	comp=Z,4.6nm,1.8s						
KNMB	Chin-men Tao	135.32	276	PFAKE		20 57 20.0	+15
KNMB				LR	LR		
	comp=Z,200nm,20.0s						
OBKA	Obir	135.45	52	iPKiKP	PKiKP	20 57 04.8	+0.1
	comp=Z,11nm,1.3s						
SOKA	Soboth	135.78	52	pPKPdf	PKPdf	20 57 07.1	+3.4
	comp=Z,4.6nm,1.3s						
ARSA	Arzberg	136.07	51	iPKiKP	PKiKP	20 57 05.8	0.0
	comp=Z,3.9nm,1.1s						
CONA	Conrad Observa	136.25	50	iPKPdf	PKPdf	20 57 04.6	0.0
	comp=Z,4.4nm,1.1s						
CEL	Celeste	136.27	64	PFAKE		20 57 20.0	+13
CEL				LR	LR		
	comp=Z,400nm,21.0s						
HIA	Hailar	136.68	312	PFAKE		20 57 20.0	+13
HIA				LR	LR		
	comp=Z,300nm,19.0s						
NJ2	Nanjing	136.82	286	ePKP	PKPdf	20 57 06.8	+0.8
TIP	Timpagrande	137.02	63	PFAKE		20 57 20.0	+12
TIP				LR	LR		
	comp=Z,500nm,21.0s						
MODS	Modra-Piesok	137.15	50	ePKIKP	PKiKP	20 57 09.3	+1.3
MODS	Modra-Piesok	137.15	50	ePKP	PKiKP	20 57 09.3	+1.3
VYHS	Vyhne	138.16	49	ePKIKP	PKiKP	20 57 12.6	+2.6
VYHS	Vyhne	138.16	49	ePKP	PKiKP	20 57 12.6	+2.6
PSZ	Piszkesteto	138.94	50	PFAKE		20 57 20.0	+8.3
PSZ				LR	LR		
	comp=Z,300nm,20.0s						
TTG	Podgorica	138.97	58	PFAKE		20 57 20.0	+8.2
TTG				LR	LR		
	comp=Z,200nm,20.0s						
TIR	Tirane	139.45	60	PFAKE		20 57 20.0	+7.2
TIR				LR	LR		
	comp=Z,300nm,20.0s						
BJT	Baijiatuau	139.79	298	PFAKE		20 57 20.0	+6.4
BJT				LR	LR		
	comp=Z,300nm,21.0s						
WHN	Wuhan	140.33	283	PKP	PKiKP	20 57 18.2	+3.2
QIZ	Qiongzhong	140.82	264	PKP	PKPdf	20 57 12.6	-1.1
QIZ				PP	PP	21 00 14.6	+0.4
QIZ				LR	LR		
	comp=Z,180nm,16.7s						
QIZ				LR	LR		
	comp=Z,190nm,15.2s						
QIZ				LR	LR		
	comp=Z,140nm,17.7s						
ITM	Ithomi	140.97	67	PFAKE		20 57 30.0	+14
ITM				LR	LR		
	comp=Z,300nm,20.0s						
LIT	Litokhoron	141.46	62	PFAKE		20 57 30.0	+13
LIT				LR	LR		
	comp=Z,300nm,20.0s						
VTS	Vitosha	141.90	58	PFAKE		20 57 30.0	+12
VTS				LR	LR		
	comp=Z,200nm,21.0s						
BURAR	Bucovina Array	142.53	49	⇑iP	PKPdf	20 57 11.7	-4.3
BURAR	Bucovina Array	142.53	49	⇑PKIKP	PKPdf	20 57 11.7	-4.3
ARR	Arges	142.56	53	⇓iP	PKPdf	20 57 10.3	-5.8
VOIR		142.84	53	⇑iP	PKPdf	20 57 09.9	-6.7
VOIR		142.84	53	⇑PKHKP	PKPdf	20 57 09.9	-6.7
DOPR	Dopca	142.98	52	⇑iP	PKPdf	20 57 10.8	-6.0
BIZ	Bicaz	143.27	50	⇑iP	PKPab	20 57 12.3	-0.7
HHC	Hu-ho-hao-te	143.28	299	ePKP	PKiKP	20 57 20.3	-0.6
HHC				PP	PP	21 00 35.5	+6.6
HHC				AMB	AMB		
	comp=Z,76nm,6.9s						
HHC				LR	LR		
	comp=Z,210nm,21.8s						
HHC				LR	LR		
	comp=Z,240nm,20.8s						
HHC				LR	LR		
	comp=Z,410nm,21.3s						
MLR	Muntele Rosu	143.45	53	PKhKP	PKPpre	20 57 12.2	
	comp=Z,7.4nm,0.8s,baz=350,slow=2.4,SNR=6.6						
MLR	Muntele Rosu	143.45	53	ePKPpre	PKPpre	20 57 11.8	
MLR	Muntele Rosu	143.45	53	⇑iP	PKPab	20 57 13.2	-0.8
MLR	Muntele Rosu	143.45	53	⇑PKHKP	PKPab	20 57 13.2	-0.8
TESR	Tescani	143.73	51	⇑iP	PKPdf	20 57 17.6	-0.4
PLOR	Plostina	143.87	52	⇑iP	PKPbc	20 57 16.8	+0.7
PLOR	Plostina	143.87	52	⇑PKIKP	PKPbc	20 57 16.8	+0.7
VRI	Vrincioaia	143.92	52	⇑iP	PKPab	20 57 15.6	0.0
VRI	Vrincioaia	143.92	52	⇑PKIKP	PKPab	20 57 15.6	0.0
ALN	Alexandroupoli	144.13	60	PFAKE		20 57 30.0	+7.6
ALN				LR	LR		
	comp=Z,200nm,21.0s						
AKASG	Malin Array Be	144.16	43	PKP	PKPbc	20 57 16.9	+0.2
	comp=Z,1.1nm,0.7s,baz=277,slow=4.1,SNR=8.7						
AKBB	Malin Array Si	144.16	43	ePKPdf	PKPdf	20 57 19.1	+0.5
AKBB	Malin Array Si	144.16	43	ePKIKP	PKPdf	20 57 19.1	+0.5
ENH	Enshi	144.41	281	ePKPdf	PKPdf	20 57 19.5	-0.3
ENH				LR	LR		
	comp=Z,400nm,22.0s						
BTO	Baotou	144.46	299	ePKP	PKPab	20 57 17.0	-1.0
PRGR	Permogore	144.79	19	ePKIKP	PKPab	20 57 16.5	-1.8
PRGR				e		21 00 34.4	
PRGR				pmax	pmax		
	comp=Z,53nm,1.3s						
CFR	Carcaliu	145.03	53	⇑iP	PKPbc	20 57 17.5	-2.2
CFR	Carcaliu	145.03	53	⇑PKIKP	PKPbc	20 57 17.5	-2.2
KIS	Kishinev	145.06	49	⇓iPKP	PKPdf	20 57 21.0	+0.7
KIS				MPKP		20 57 21.5	
	comp=Z,190nm,1.0s						
KIS	Kishinev	145.06	49	⇓iPKIKP	PKPdf	20 57 21.0	+0.7
KIS				pmax	pmax		
	comp=Z,190nm,1.0s						
KIS				MLR	MLR		
	comp=Z,400nm,20.0s						
MILM	Milestii Mici	145.07	49	⇑iP	PKPbc	20 57 16.2	-3.6
TLB	Topalu	145.08	54	⇑iP	PKPbc	20 57 18.4	-1.5
TLB	Topalu	145.08	54	⇑PKIKP	PKPbc	20 57 18.4	-1.5
ULN	Ulaanbaatar	145.21	312	PFAKE		20 57 30.0	+5.3
ULN				LR	LR		
	comp=Z,300nm,19.0s						
ULN	Ulaanbaatar	145.21	312	⇑ePKP2	PKPbc	20 57 18.4	-2.0
IRK	Irkutsk	145.25	321	ePKIKP	PKPdf	20 57 21.0	+0.5
IRK				pmax	pmax		
	comp=Z,115nm,1.8s						
XAN	Xi'an	145.35	288	ePKPbc	PKPbc	20 57 21.3	+0.1
XAN				LR	LR		
	comp=Z,300nm,20.0s						
XAN	Xi'an	145.35	288	PKPbc	PKiKP	20 57 23.5	-1.8
XAN				SS	SS	21 19 28.4	-5.4
XAN				AMB	AMB		
	comp=Z,140nm,6.9s						
XAN				LR	LR		
	comp=Z,140nm,22.7s						
XAN				LR	LR		
	comp=Z,210nm,23.5s						
XAN				LR	LR		
	comp=Z,290nm,23.5s						
XAN	Xi'an	145.35	288	ePKIKP	PKPbc	20 57 21.3	+0.1
XAN				MLR	MLR		
	comp=Z,300nm,20.0s						
TIRR	Tirgusor	145.37	54	⇑iP	PKPbc	20 57 19.8	-1.0
TIRR	Tirgusor	145.37	54	⇑PKIKP	PKPbc	20 57 19.8	-1.0
BDRM	Kayabasi	145.38	67	iP	PKPbc	20 57 20.1	-1.1
BDRM				IAML_P			
	comp=Z,384nm,0.8s						
FURI	Furi	145.42	121	PFAKE		20 57 30.0	+3.7
FURI				LR	LR		
	comp=Z,400nm,21.0s						
DAT	Datca	145.48	67	iP	PKPdf	20 57 20.9	-0.6
DAT				IAML_P			
	comp=Z,134nm,0.8s						
BALB	Balikesir	145.63	62	ePKPdf	PKPdf	20 57 21.6	0.0
BALB				LR	LR		
	comp=Z,700nm,20.0s						
SONA0	Songino Array	145.64	312	ePKPdf	PKPdf	20 57 18.7	-2.8
SONM	Songino Array	145.64	312	PKPbc	PKPdf	20 57 18.7	-2.8
	comp=Z,1.9nm,0.9s,baz=72,slow=2.3,SNR=9.4						
AYDN	Tasoluk	145.72	66	iP	PKiKP	20 57 27.7	+1.8
AYDN				IAML_P			
	comp=Z,338nm,0.8s						
TLY	Talaya	145.85	320	ePKPdf	PKPbc	20 57 22.0	-0.2
TLY				LR	LR		
	comp=Z,400nm,20.0s						
TLY	Talaya	145.85	320	ePKIKP	PKPdf	20 57 20.6	-1.0
TLY				pmax	pmax		
	comp=Z,68nm,1.3s						
OBN	Obninsk	146.02	33	PKPbc	PKPdf	20 57 20.4	-1.2
	comp=Z,1.6nm,0.4s,baz=280,slow=1.0,SNR=6.4						
OBN	Obninsk	146.02	33	ePKPdf	PKPdf	20 57 21.2	-0.5
OBN	Obninsk	146.02	33	⇓ePKP2	PKPbc	20 57 22.7	+0.2
OBN				SS	SS	21 19 33.0	-6.1
OBN				pmax	pmax		
	comp=Z,24nm,1.3s						
OBN				pmax	pmax		
	comp=Z,70nm,1.5s						
GYA	Guiyang	146.05	274	⇑iPKPbc	PKiKP	20 57 25.9	-1.1
GYA				AMB	AMB		
	comp=Z,120nm,7.1s						
MOS	Moscow	146.14	31	ePKIKP	PKPdf	20 57 21.0	-0.9
MOS				e		21 00 50.3	
MOS				pmax	pmax		
	comp=Z,87nm,1.9s						
MOS				pmax	pmax		
	comp=Z,200nm,2.4s						
MOS				MLR	MLR		
	comp=Z,600nm,22.0s						
USAK	Uak-Merkez	146.57	64	iP	PKPdf	20 57 23.5	+0.2
USAK				IAML_P			
	comp=Z,122nm,0.8s						
ZAK	Zakamensk	146.62	318	ePKIKP	PKPdf	20 57 21.8	-1.2
ZAK				pmax	pmax		
	comp=Z,17nm,1.5s						
FETY	Fethiye	146.69	68	iP	PKPbc	20 57 24.4	-0.8
FETY				IAML_P			
	comp=Z,290nm,0.6s						
KHAL	Karahalli	146.96	64	iP	PKPdf	20 57 24.1	0.0
KHAL				IAML_P			
	comp=Z,17nm,0.4s						
AKAS	Kas	147.12	68	iP	PKPdf	20 57 23.5	-0.9
AKAS				IAML_P			
	comp=Z,165nm,0.7s						
KIRV	Kirov	148.39	19	PKPbc	PKPdf	20 57 25.6	+0.1
	comp=Z,4.9nm,0.6s,baz=322,slow=4.6,SNR=2.0						
LPSR	Galich'ya Gora	148.62	35	ePKP2	PKPbc	20 57 28.7	-1.1
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
KEPZ	Antalya-Kepez	148.71	67	iP	PKPbc	20 57 28.9	-1.7
KEPZ				IAML_P			
	comp=Z,95nm,0.5s						
KMI	Kunming	149.10	270	PFAKE		20 57 40.0	+3.5
KMI				LR	LR		
	comp=Z,300nm,22.0s						
KMI	Kunming	149.10	270	PKPbc	PKPdf	20 57 29.2	+1.1
KMI				pPKP	PKPbc	20 57 32.2	0.0
KMI				sPKP		20 57 34.5	
CD2	Chengdu	149.39	281	PKPbc	PKPdf	20 57 28.2	0.0
VSR	Storozhevoye	149.52	37	ePKIKP	PKPdf	20 57 29.7	+2.1
VSR				pmax	pmax		
	comp=Z,30nm,1.2s						
LZH	Lanzhou	149.56	291	ePKPbc	PKPdf	20 57 29.7	+1.3
LZH				pPKP	sPKPbc	20 57 36.4	+0.2
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
VORD	Divnogorie	149.73	37	ePKP2	PKPbc	20 57 32.7	+0.1
VORD				pmax	pmax		
	comp=Z,40nm,1.3s						
CM31	Chiang Mai Arr	149.89	255	ePKPdf	PKPdf	20 57 29.6	+0.4
CMAR	Chiang Mai Arr	149.89	255	PKPbc	PKPbc	20 57 32.2	-1.8
	comp=Z,5.1nm,1.1s,baz=173,slow=1.5,SNR=18						
BR131	Keskin Array S	150.03	61	ePKPdf	PKPdf	20 57 30.9	+1.9
BRTR	Keskin Array B	150.03	61	PKPbc	PKPbc	20 57 31.9	-2.0
	comp=Z,2.7nm,0.9s,baz=191,slow=1.9,SNR=14						
BRTR				PKPab	sPKPbc	20 57 37.6	+0.4
	comp=Z,4.1nm,0.9s,baz=250,slow=2.7,SNR=18						
CHTO	Chiang Mai	150.06	256	ePKPdf	PKPdf	20 57 29.9	+0.4
CHTO				LR	LR		
	comp=Z,200nm,20.0s						
CHTO	Chiang Mai	150.06	256	ePKIKP	PKPdf	20 57 29.9	+0.4
CHTO				MLR	MLR		
	comp=Z,200nm,20.0s						
DIKM	Dikmen	150.87	57	⇑iP	PKiKP	20 57 38.6	+2.3
ANN	Anapa	151.45	50	ePKIKP	PKiKP	20 57 37.7	+0.3
ANN				pmax	pmax		
	comp=Z,48nm,1.1s						
ANN				MLR	MLR		
	comp=Z,295nm,22.0s						
GTA	Gaotai	152.39	299	PKPbc	PKPdf	20 57 34.7	+2.1
GTA				LR	LR		
	comp=Z,150nm,17.9s						
GTA				LR	LR		
	comp=Z,240nm,22.0s						
GTA				LR	LR		
	comp=Z,400nm,21.6s						
ARU	Arti	152.46	12	PKPbc	PKPbc	20 57 35.9	-2.9
	comp=Z,0.3nm,0.3s,baz=217,slow=0.4,SNR=5.6						
ARU	Arti	152.46	12	ePKPdf	PKPdf	20 57 33.5	+1.6
ARU				LR	LR		
	comp=Z,400nm,20.0s						
ARU	Arti	152.46	12	iPKIKP	PKPbc	20 57 35.7	-3.2
ARU				MLR	MLR		
	comp=Z,395nm,21.0s						
ZALV	Zalesovo Beam	152.98	338	PKPbc	PKPbc	20 57 35.8	-4.3
	comp=Z,1.7nm,0.8s,baz=56,slow=0.5,SNR=5.5						
ZALV				PKPab	PKPab	20 57 47.4	-3.9
	comp=Z,1.6nm,0.6s,baz=10,slow=1.6,SNR=6.3						
DAMY	Dhamar	153.33	119	PFAKE		20 57 50.0	-4.3
DAMY				LR	LR		
	comp=Z,400nm,20.0s						
KIV	Kislovodsk	155.24	48	ePKIKP	PKPdf	20 57 34.8	-1.7
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,536nm,25.0s						
DGZ	Jazzator, Alta	155.32	329	⇑ePKIKP	PKPdf	20 57 38.4	+1.9
KBZ	Khabaz	155.48	48	PKP	PKPdf	20 57 34.8	-1.8
	comp=Z,1.4nm,0.6s,baz=292,slow=1.4,SNR=3.8						
BRVK	Borovoye	156.65	357	ePKPdf	PKPdf	20 57 39.4	+1.5
BRVK				ePKPab	PKPab	20 58 08.3	+1.3
BRVK				LR	LR		
	comp=Z,601nm,20.0s						
BRVK	Borovoye	156.65	357	ePKIKP	PKPdf	20 57 39.4	+1.5
BRVK				MLR	MLR		
	comp=Z,601nm,20.0s						
AKH	Akhalkalaki	156.83	53	PFAKE		20 57 50.0	+11
AKH				LR	LR		
	comp=Z,300nm,22.0s						
GROC	Groznyy	157.59	47	ePKIKP	PKPdf	20 57 38.9	-0.5
GROC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KURK	Kurchatov	157.64	342	ePKPdf	PKPdf	20 57 39.8	+0.6
KURK				LR	LR		
	comp=Z,500nm,20.0s						
KURK	Kurchatov	157.64	342	ePKIKP	PKPdf	20 57 39.8	+0.6
KURK				MLR	MLR		
	comp=Z,500nm,20.0s						
RAYN	Ar Rayn	158.77	102	PFAKE		20 57 50.0	+8.5
RAYN				LR	LR		
	comp=Z,400nm,21.0s						
WMQ	Urumqi	159.09	318	PFAKE		20 57 50.0	+8.7
WMQ				LR	LR		
	comp=Z,400nm,20.0s						
WMQ	Urumqi	159.09	318	ePKP	PKPdf	20 57 42.2	+0.9
WMQ				LR	LR		
	comp=Z,320nm,28.9s						
WMQ				LR	LR		
	comp=Z,250nm,29.2s						
WMQ				LR	LR		
	comp=Z,250nm,23.1s						
ABKAR	Akbulak array	159.51	16	ePKPdf	PKPdf	20 57 41.6	+0.1
ABKAR				ePKPab	pPKPab	20 58 21.9	+0.1
MKAR	Makanchi Array	159.77	331	PKP	PKPdf	20 57 40.0	-2.0
	comp=Z,1.1nm,1.1s,baz=14,slow=0.6,SNR=5.0						
MKAR				PKPab	PKPab	20 58 17.9	-2.8
	comp=Z,1.3nm,0.9s,baz=37,slow=3.0,SNR=5.5						
MKAR				PP	PP	21 02 06.1	+4.0
	comp=Z,0.3nm,0.7s,baz=20,slow=4.6,SNR=3.5						
MAKZ	Makanchi	159.88	332	ePKPdf	PKPdf	20 57 41.7	-0.4
MAKZ				ePKPab	PKPab	20 58 22.1	+0.9
MAKZ				LR	LR		
	comp=Z,500nm,20.0s						
MAKZ	Makanchi	159.88	332	ePKIKP	PKPdf	20 57 41.7	-0.4
MAKZ				e		20 58 22.2	
MAKZ				MLR	MLR		
	comp=Z,500nm,20.0s						
GEYT	Alibeck	168.28	43	PKP	PKPdf	20 57 48.1	-1.9
	comp=Z,0.7nm,0.5s,baz=338,slow=1.6,SNR=2.4						
KSH	Kashi	168.36	329	ePKP	PKPdf	20 57 54.2	+4.1

IDC 06 21:32:50.6±20.0, 18°.45S×177°.34W, h494^{km}±176^{km}, mb2.7/3, mb1 3.0/3, mb1mx2.7/22, mbtmp3.6/3, Error ellipse: s-maj=262.9km s-min=51.6km az=133.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.54	260	P	P	21 40 25.1	-0.6
	0.3nm,0.4s,baz=89,slow=6.8,SNR=1.1						
ASAR	Alice Springs	45.63	255	P	P	21 40 26.4	+0.1
	0.6nm,0.5s,baz=92,slow=7.9,SNR=14						
ASAR				PcP	PcP	21 41 54.2	-0.4
	0.3nm,0.4s,baz=106,slow=3.7,SNR=5.8						
ILAR	Eielson Array	86.18	13	P	P	21 44 38.4	-0.1
	0.2nm,0.5s,baz=218,slow=5.7,SNR=3.3						
BRTR	Keskin Array B	145.88	315	PKPbc	PKPdf	21 51 33.8	+0.7
	0.6nm,0.7s,baz=81,slow=1.7,SNR=4.3						
GERES	GERESS Array B	148.38	346	PKPbc	PKPbc	21 51 40.6	-0.4
	0.4nm,0.5s,baz=2.9,slow=2.7,SNR=4.7						

*IDC **06** 21:37:27.4±50.0, 42°.92N×146°.64E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/31, mbtmp3.5/4, Error ellipse: s-maj=1122.0km s-min=77.6km az=156.0*

*JMA **06** 21:37:32.4±0.1, 42°.90N×146°.47E, h47^{km}±2^{km}, M3.1*

ISC 06 21:37:32.6±3.6, 42°.90N±0°.10×146°.5E±0°.1, h31^{km}±18^{km}, n13, σ0^{s}.46/21, mb3.5/4, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.70	312	P	Pn	21 37 46.1	-0.4
NEM2				eS	Sb	21 37 56.0	+0.2
JKHN	Kushirohamanak	0.97	281	P	Pn	21 37 50.0	-0.2
JKHN				eS	Sb	21 38 03.1	-0.4
JNSB	Nemuroshibetsu	1.38	310	P	Pn	21 37 55.6	-0.1
JNSB				eS	Sn	21 38 13.1	+0.2
JRA	Rausu	1.43	317	P	Pn	21 37 56.4	0.0
JRA				eS	Sn	21 38 14.0	-0.1
JNK	Nakash	1.45	299	P	Pn	21 37 56.4	-0.3
JNK				eS	Sn	21 38 13.8	-0.9
JOB	Onbets	1.93	271	P	Pn	21 38 03.6	+0.2
JAR	Ashorobuto	2.01	282	P	Pn	21 38 04.7	+0.2
JAR				eS	Sn	21 38 28.5	-0.1
JTKR	Abashiri--Toko	2.15	301	P	Pn	21 38 07.2	+0.9
JTKR				eS	Sn	21 38 33.0	+1.1
JCH	Churui	2.30	264	P	Pn	21 38 08.8	+0.3
JCH				eS	Sn	21 38 35.4	-0.3
SONM	Songino Array	28.35	294	P	P	21 43 24.0	+0.1
	0.4nm,0.4s,baz=106,slow=9.1,SNR=2.6						
MKAR	Makanchi Array	44.54	298	P	P	21 45 41.5	+0.1
	0.4nm,0.5s,baz=84,slow=8.9,SNR=6.5						
KURBB	Kurchatov Arra	45.68	304	P	P	21 45 50.2	0.0
	0.1nm,0.4s,baz=76,slow=7.9,SNR=1.9						
FINES	FINESS Array B	65.40	333	P	P	21 48 11.6	-0.2
	1.2nm,0.9s,baz=34,slow=10,SNR=7.7						

*ISCJB **06** 21:38:10.6±0.5, 43°.72N±0°.03×105°.22W±0°.06, h0^{km}, Error ellipse: s-maj=5.9km s-min=4.0km az=174.0*

*ANF **06** 21:38:10.2±0.5, 43°.74N×105°.28W, ML3.6/7, Error ellipse: s-maj=9.5km s-min=2.3km az=135.0*

*NEIC **06** 21:38:11.4±0.5, 43°.73N×105°.24W, h0^{km}, ML3.4, Error ellipse: s-maj=6.9km s-min=6.0km az=66.0, Suspected Mining explosion.*

NEIC 63 km [39 miles] SSE of Gillette.

ISC 06 21:38:11.1±0.9, 43°.71N±0°.04×105°.25W±0°.04, h0^{km}, n31, σ1^{s}.63/36, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	65	ePg	Pg	21 38 28.9	-0.9
RSSD	Black Hills	0.97	65	P	Pg	21 38 29.3	-0.5
	baz=246						
K22A	Casper	1.41	222	P	Pn	21 38 35.9	-2.2
	baz=40						
K22A				S	Sg	21 38 57.5	+1.1
	baz=40						
PHWY	Pilot Hill	2.41	184	ePn	Pn	21 38 51.4	-0.7
RWWY	Rawlins	2.48	216	ePn	Pn	21 38 52.5	-0.5
N23A	Red Feather La	2.86	191	ePn	Pn	21 38 57.6	-0.6
N23A	Red Feather La	2.86	191	P	Pn	21 38 57.5	-0.7
	baz=10						
N23A				Sb	Sb	21 39 39.4	+0.6
	baz=10						
LAO	LASA Array	3.06	347	ePn	Pn	21 39 01.7	+1.0
LAO	LASA Array	3.06	347	Pb	Pb	21 39 04.6	-1.8
	baz=166						
LAO				Sb	Sb	21 39 45.1	+0.8
	baz=166						
RLMT	Red Lodge	3.20	298	ePn	Pn	21 39 02.9	-0.1
RLMT	Red Lodge	3.20	298	P	Pn	21 39 01.5	-1.4
	baz=114						
RLMT				Sb	Sb	21 39 49.6	+0.9
	baz=114						
BW06	Boulder Array	3.28	255	ePn	Pn	21 39 04.5	+0.5
BW06	Boulder Array	3.28	255	P	Pn	21 39 04.5	+0.5
	baz=71						
OGNE	Ogallala	3.65	138	ePn	Pn	21 39 11.4	+2.5
GCMT	Greycliff	3.77	305	ePn	Pn	21 39 10.6	0.0
LOHW	Long Hollow	3.88	270	ePn	Pn	21 39 14.0	+1.8
H17A	Grant Village	3.90	282	ePb	Pb	21 39 20.6	-0.2
H17A	Grant Village	3.90	282	Pb	Pb	21 39 19.6	-1.3
	baz=98						
ISCO	Idaho Springs	3.92	184	ePn	Pn	21 39 14.6	+1.8
FLWY	Flagg Ranch	3.95	277	ePn	Pn	21 39 14.3	+1.1
MOOW	Moose Ponds	3.98	272	ePn	Pn	21 39 17.4	+3.9
SNOW	Snow King Moun	4.00	268	ePn	Pn	21 39 17.9	+4.0
YFT	Old Faithful	4.09	282	ePb	Pb	21 39 20.4	-3.8
YHH	Holmes Hill	4.16	287	ePn	Pn	21 39 18.2	+2.1
SMCO	Snowmass	4.71	197	ePb	Pb	21 39 34.7	-0.1
DGMT	Dagmar	4.82	8	ePb	Pb	21 39 34.8	-1.6
BOZ	Bozeman (W)	4.92	295	ePn	Pn	21 39 26.2	-0.3
BOZ				ePb	Pb	21 39 39.3	+1.1
KSCO	Kaye Shedlock'	5.09	156	ePn	Pn	21 39 30.1	+1.3
HWUT	Hardware Ranch	5.11	248	ePn	Pn	21 39 29.1	+0.1
TCUT	Toone Canyon	5.24	242	ePn	Pn	21 39 31.1	+0.2
JLU	Jordanelle	5.55	238	ePn	Pn	21 39 35.2	0.0

UCR 06 21:38:44.9±2.5, 8°.93N×84°.07W, h10^{km}, MW4.1, 2C-5D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.38	32	⇓iP	Pg	21 38 52.3	-0.2
EDDO				eS	Sg	21 38 57.5	-0.1
EDLM	Las Mercedes	0.59	53	⇓iP	Pg	21 38 55.3	-1.1
EDLM				eS	Sb	21 39 05.3	-0.5
EDPN	Palmar Norte	0.60	86	⇓iP	Pg	21 38 55.9	-0.7
EDPN				eS	Sb	21 39 06.1	-0.1
LCR2	La Lucha 2	0.81	5	⇑eP	Pg	21 38 59.6	-1.1
LCR2				eS	Sg	21 39 11.7	+0.3
EDBA	Buenos Aires	0.82	73	eP	Pg	21 38 59.6	-1.1
EDBA				eS	Sg	21 39 10.6	-0.8
PTJ1	Puerto Jimnez	0.85	117	eP	Pg	21 39 00.4	-0.9
PTJ1				eS	Sn	21 39 14.4	-1.0
DRK0	Durika	0.88	67	eP	Pg	21 39 00.2	-1.7
DRK0				eS	Sg	21 39 13.3	0.0
SJS	Escuela Geolog	1.01	1	⇓iP	Pg	21 39 04.2	-0.1
SJS				eS	Sn	21 39 19.8	+0.2
HDC	Heredia	1.07	358	⇑eP	Pg	21 39 03.7	-1.8
HDC				eS	Sg	21 39 19.2	-0.3
CVTR	Volcan Turrial	1.13	16	⇓eP	Pg	21 39 05.0	-1.7

CVTR				eS	Sg	21 39 21.2	-0.2
SRA1	San Ramn	1.22	341	eP	Pn	21 39 05.9	-2.3
SRA1				eS	Sg	21 39 24.4	0.0
BRU2	Volcan	1.37	95	eP	Pn	21 39 09.2	-1.0
BRU2				eS	Sb	21 39 27.3	-1.0
JTS	Las Juntas de	1.61	327	eP	Pn	21 39 10.9	-2.6
JTS				eS	Sn	21 39 32.0	-2.3
ARE1	Arenal 1	1.66	337	eP	Pn	21 39 13.7	-0.4
ARE1				eS	Sb	21 39 37.1	+0.6
CEDE	Laguna Cedeo	1.67	338	eP	Pn	21 39 13.8	-0.6
CUI	Cuipilapa	2.03	328	eP	Pn	21 39 18.3	-1.0
MESS	Mesas	2.12	328	eP	Pn	21 39 21.9	+1.4
GB1A	Borinquen Arri	2.29	325	eP	Pn	21 39 23.4	+0.5
GB1A				eS	Sn	21 39 51.5	+0.2
ACON	Acoyapa	3.21	340	eP	Pn	21 39 35.8	+0.3
ESPN	Las Esperanzas	3.26	356	eP	Pn	21 39 37.5	+1.4

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*ISCJB **06** 21:41:52.2±1.1, 25°.92N±0°.05×93°.47E±0°.09, h54^{km}±12^{km}, mb3.9/13, MS3.7/3, Error ellipse: s-maj=13.3km s-min=8.2km az=162.3*

*IDC **06** 21:41:53.2±0.6, 25°.95N×93°.42E, h44^{km}±6^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.4/33, mbtmp3.7/9, ML3.9/2, MS3.8/3, Ms1 3.8/3, ms1mx3.2/39, Error ellipse: s-maj=18.3km s-min=9.8km az=88.0*

*NEIC **06** 21:41:53.4±1.1, 25°.94N×93°.41E, h49^{km}±5^{km}, mb4.1/4, Error ellipse: s-maj=20.7km s-min=13.4km az=75.0*

ISC 06 21:41:53.1±0.6, **25°.96N**±0°.06×**93°.47E**±0°.08, **h44**^{km}±5^{km}, **h44**^{km}**:pP-P, n29,** σ**0^{s}.67**/39, **mb3.9**/13, **MS3.5**/3, **1D, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	1.48	255	ePn	Pn	21 42 17.3	-0.1
SHL	Shillong	1.48	255	⇓iPG	Pn	21 42 19.0	+1.6
SHL				eSG	Sn	21 42 35.0	-0.7
BRDH	Bariadhala	3.66	207	P	Pn	21 42 47.9	+0.6
	53nm,0.3s,baz=241,slow=23,SNR=6.3						
BRDH				S	Sn	21 43 29.0	-0.2
	46nm,0.3s,baz=240,slow=20,SNR=7.5						
LSA	Lhasa	4.26	332	ePn	Pn	21 42 55.9	0.0
SIMRM	Sittwe	5.82	185	ePn	Pn	21 43 17.2	+0.3
CMAR	Chiang Mai Arr	9.02	145	P	Pn	21 44 01.2	+0.3
	0.1nm,0.3s,baz=324,slow=14,SNR=7.7						
PALK	Pallekele	22.21	215	LR	LR	21 57 39.3	
	comp=Z,185nm,20.2s,baz=116,slow=43						
MK31	Makanchi Array	22.61	340	eP	P	21 46 51.0	+0.9
	2.5nm,0.8s						
MK32	Makanchi Array	22.61	340	eP	P	21 46 49.2	-0.9
MK32				epP	pP	21 47 02.4	+1.4
MKAR	Makanchi Array	22.61	340	P	P	21 46 49.2	-0.9
	1.4nm,0.5s,baz=154,slow=10,SNR=21						
MKAR				pP	pP	21 47 02.4	+1.4
	0.6nm,0.5s,baz=158,slow=12,SNR=3.6						
MAKZ	Makanchi	22.73	339	eP	P	21 46 51.7	+0.4
	3.0nm,0.6s						
GAR	Garm	23.39	309	eP	P	21 46 57.9	-0.2
	12nm,1.1s						
SONA0	Songino Array	24.10	22	eP	P	21 47 04.8	+0.1
SONM	Songino Array	24.10	22	P	P	21 47 04.8	+0.1
	0.3nm,0.4s,baz=217,slow=9.1,SNR=3.2						
KURBB	Kurchatov Arra	27.17	339	P	P	21 47 32.5	+0.2
	0.3nm,0.3s,baz=149,slow=8.9,SNR=8.8						
KURBB				pP	pP	21 47 44.2	0.0
	0.4nm,0.8s,baz=160,slow=8.5,SNR=2.4						
KURBB				sP	sP	21 47 50.1	+0.4
	0.9nm,0.8s,baz=155,slow=10.0,SNR=6.1						
TGY	Tagaytay City	28.31	109	LR	LR	21 59 34.0	
	comp=Z,93nm,18.7s,baz=212,slow=37						
ZALV	Zalesovo Beam	28.69	349	P	P	21 47 45.6	-0.2
	0.7nm,0.4s,baz=167,slow=8.7,SNR=4.2						
ZAA1	Zalesovo Array	28.70	349	eP	P	21 47 45.6	-0.2
ABKAR	Akbulak array	34.85	321	eP	P	21 48 40.0	+0.1
	2.7nm,0.7s						
FIA0	FINESS Array S	56.77	328	eP	P	21 51 32.5	+0.2
FIA0				epP	pP	21 51 44.4	-0.7
FINES	FINESS Array B	56.77	328	P	P	21 51 32.5	+0.2
	0.8nm,0.8s,baz=108,slow=7.5,SNR=4.1						
FINES				pP	pP	21 51 44.4	-0.7
	0.8nm,0.7s,baz=115,slow=6.6,SNR=1.9						
ARA0	ARCESS Array S	58.24	337	eP	P	21 51 42.3	-0.3
ARA0				epP	pP	21 51 55.1	-0.3
ARCES	ARCESS Array B	58.24	337	P	P	21 51 42.3	-0.3
	1.5nm,0.8s,baz=84,slow=9.2,SNR=2.1						
ARCES				pP	pP	21 51 55.1	-0.3
	3.3nm,1.0s,baz=78,slow=8.6,SNR=2.5						
WR1	Warramunga Arr	60.47	135	eP	P	21 51 59.0	+0.3
WR1				epP	pP	21 52 10.3	-1.2
WRA	Warramunga Arr	60.47	135	P	P	21 51 59.0	+0.3
	1.4nm,0.7s,baz=316,slow=7.0,SNR=5.2						
WRA				pP	pP	21 52 10.3	-1.2
	0.3nm,0.4s,baz=310,slow=7.5,SNR=1.3						
ASAR	Alice Springs	62.97	138	P	P	21 52 16.1	+0.6
	0.5nm,0.6s,baz=321,slow=7.2,SNR=9.6						
ASAR				pP	pP	21 52 28.4	+0.1
	0.5nm,0.7s,baz=322,slow=7.1,SNR=4.6						
VAE	Valguarnera	66.44	302	LR	LR	22 26 50.7	
	comp=Z,136nm,18.1s,baz=178,slow=41						
TOA1	Torodi Ar. Sit	85.91	283	eP	P	21 54 28.4	-0.6
TORD	Torodi Ar. Bea	85.91	283	P	P	21 54 28.4	-0.6
	6.2nm,0.3s,baz=54,slow=4.1,SNR=3.6						

IDC 06 22:07:36.5±1.4, **4°.64S**×**129°.86E, h196**^{km}±15^{km}, **mb3.5**/4, **mb1 3.7**/8, **mb1mx3.3**/44, **mbtmp4.1**/8, **Error ellipse: s-maj=26.6km s-min=9.9km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.00	21	P	Pn	22 08 39.8	+1.6
	8.8nm,0.3s,baz=85,slow=1.5,SNR=28						
SIJI				S	Sn	22 09 25.6	-1.1
	6.8nm,0.3s,baz=237,slow=9.4,SNR=5.4						
BATI	Baumata	8.27	228	P	Pn	22 09 32.9	-0.4
	3.9nm,0.3s,baz=51,slow=1.3,SNR=4.2						
WRA	Warramunga Arr	15.82	164	P	Pn	22 11 09.9	+0.9
	0.5nm,0.3s,baz=334,slow=13,SNR=15						
WRA				S	S	22 13 56.7	-7.9
	0.6nm,0.3s,baz=334,slow=22,SNR=6.7						
ASAR	Alice Springs	19.31	169	P	P	22 11 48.5	+1.6
	0.9nm,0.3s,baz=351,slow=11,SNR=68						
ASAR				S	S	22 15 14.2	-0.8
	0.2nm,0.3s,baz=348,slow=20,SNR=18						
CMAR	Chiang Mai Arr	38.15	308	P	P	22 14 36.2	-0.9
	0.8nm,0.3s,baz=140,slow=6.4,SNR=6.9						
SONM	Songino Array	56.18	341	P	P	22 16 56.4	+0.5
	0.4nm,0.6s,baz=164,slow=6.1,SNR=2.9						
MKAR	Makanchi Array	66.19	326	P	P	22 18 03.3	+0.2
	2.0nm,0.6s,baz=113,slow=8.4,SNR=22						
ZALV	Zalesovo Beam	69.42	333	P	P	22 18 22.6	-0.5
	1.3nm,0.6s,baz=122,slow=4.2,SNR=5.6						
TORD	Torodi Ar. Bea	128.18	283	PKP	PKiKP	22 26 20.8	-0.2
	7.6nm,0.3s,baz=101,slow=2.9,SNR=2.7						

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*IDC **06** 22:20:09.1±1.2, 40°.73N×47°.89E, h0^{km}, mb3.6/2, mb1 3.5/10, mb1mx3.3/38, mbtmp3.5/10, ML2.5/6, Error ellipse: s-maj=21.9km s-min=11.4km az=162.0*

*NSSP **06** 22:20:11.8, 40°.68N×47°.63E, h10^{km}, Ms3.6*

*DRS **06** 22:20:13.0±0.0, 40°.60N×47°.82E, h15^{km}*

*AZER **06** 22:20:14.6±0.0, 40°.74N×47°.77E, h46^{km}, ml3.8/30, Error ellipse: s-maj=0.6km s-min=0.5km az=26.0*

*TIF **06** 22:20:14.9, 40°.70N×47°.82E, h49^{km}*

*ISCJB **06** 22:20:16.0±0.2, 40°.70N±0°.02×47°.79E±0°.02, h57^{km}±3^{km}, mb3.5/4, Error ellipse: s-maj=2.7km s-min=2.2km az=39.6*

*DDA **06** 22:20:21.7, 40°.73N×46°.65E, h12^{km}±2^{km}, ML3.0*

ISC 06 22:20:16.6±0.3, **40°.68N**±0°.01×**47°.78E**±0°.01, **h53**^{km}±4^{km}, **n126,** σ**1^{s}.78**/174, **mb3.4**/4, **14C-9D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QBL	Gabala	0.27	10	⇑P	Pn	22 20 23.8	-2.1
	SNR=366						
QBL				⇑S	Sn	22 20 30.8	-1.7
IML	Ismayilli	0.33	70	⇑P	Pn	22 20 24.1	-2.2
	SNR=530						
IML				S	Sn	22 20 31.5	-1.8
ZRD	Zardab	0.41	190	P	Pn	22 20 26.9	-0.1
	SNR=5.6						
ZRD				S	Sn	22 20 37.2	+2.7
KDMR	Kurdemir	0.44	134	P	Pn	22 20 26.5	-0.8
	SNR=9.8						
KDMR				S	Sn	22 20 36.2	+1.2
MNGR	Mingechevir, A	0.53	280	P	Pn	22 20 27.8	-0.6
MNGR	Mingechevir, A	0.53	280	P	Pn	22 20 27.9	-0.6
	SNR=66						
MNGR				S	Sn	22 20 37.2	+0.2
XNQ	Khinaliq	0.56	29	P	Pn	22 20 26.5	-2.5
	SNR=564						
XNQ				S	Sn	22 20 35.5	-2.5
BRDA	Brd	0.62	228	P	Pn	22 20 29.5	+0.1
	SNR=27						
BRDA				S	Sn	22 20 40.8	+2.0
PQL	Pirkuli	0.63	80	P	Pn	22 20 28.1	-1.6
	SNR=182						
PQL				S	Sn	22 20 38.3	-1.0
SEKA	Sheki	0.69	320	P	Pn	22 20 28.9	-1.5
SEKA	Sheki	0.69	320	P	Pn	22 20 28.9	-1.5
	SNR=649						
SEKA				S	Sn	22 20 39.7	-0.6
AKT	Akhty	0.80	357	eP	Pn	22 20 30.3	-1.5
AKT				eS	Sn	22 20 42.7	-0.3
AKT				pmax	pmax		
	comp=Z,736nm,0.3s						
AKT	Akhty	0.80	357	ePg	Pn	22 20 30.4	-1.5
	comp=Z,736nm,0.3s						
AKT				eSg	Sn	22 20 42.5	-0.5
	comp=Z,2µm,0.5s						
QUBA	Quba, Azerbaij	0.86	39	P	Pn	22 20 31.9	-0.8
	SNR=114						
QUBA				S	Sn	22 20 44.6	+0.2
ATGJ	Altiaghaj	0.90	78	P	Pn	22 20 32.4	-0.8
	SNR=366						
ATGJ				S	Sn	22 20 46.5	+1.1
GBS	Qobustan	0.90	99	P	Pn	22 20 33.4	+0.3
	SNR=225						
GBS				S	Sn	22 20 47.2	+1.9
QSAR	Qusar	0.91	24	P	Pn	22 20 32.5	-0.8
	SNR=134						
QSAR				S	Sn	22 20 45.5	0.0
SIZA	Siyzn	0.94	65	P	Pn	22 20 32.6	-1.1
	SNR=163						
SIZA				S	Sn	22 20 47.2	+1.0
KSMR	Kasumkent	0.96	16	⇓iP	Pn	22 20 33.0	-0.9
KSMR				i S	Sn	22 20 47.0	+0.4
KSMR				pmax	pmax		
	comp=Z,1µm,0.1s						
KSMR	Kasumkent	0.96	16	i Pg	Pn	22 20 33.0	-0.9
	comp=Z,1µm,0.1s						
KSMR				i Sg	Sn	22 20 47.0	+0.4
	comp=Z,3µm,0.2s						
SAAT	Saatly	0.96	149	P	Pn	22 20 32.3	-1.5
	SNR=14						
SAAT				S	Sn	22 20 46.5	0.0
GANJ	Ganja	1.11	269	P	Pn	22 20 34.5	-1.4
GANJ	Ganja	1.11	269	P	Pn	22 20 34.5	-1.4
	SNR=62						
GANJ				S	Sn	22 20 49.4	-0.8
ALIB	Äli-Bayra	1.19	127	Pn	Pn	22 20 38.1	+1.2
	SNR=90						
ALIB				Sn	Sn	22 20 54.7	+2.7
ZKTA	Zakatala	1.29	318	P	Pn	22 20 37.9	-0.5
ZKTA	Zakatala	1.29	318	Pn	Pn	22 20 37.5	-0.8
	SNR=910						
ZKTA				Sn	Sn	22 20 55.0	+0.4
DRN	Derbent	1.41	17	eP	Pn	22 20 40.8	+0.9
DRN				eS	Sn	22 21 00.3	+3.0
DRN				pmax	pmax		
	comp=Z,170nm,0.7s						
DRN	Derbent	1.41	17	ePg	Pn	22 20 38.5	-1.4
DRN				eSg	Sn	22 20 58.4	+1.1
DDFL	Dedoflistskaro	1.47	302	P	Pn	22 20 37.6	-3.2
DDFL				S	Sn	22 20 59.9	+1.0
DDFL	Dedoflistskaro	1.47	302	i P	Pn	22 20 38.5	-2.2
URKR	Urkarakh	1.49	356	eP	Pn	22 20 40.5	-0.6
URKR	Urkarakh	1.49	356	ePg	Pn	22 20 40.5	-0.6
URKR				eSg	Sn	22 20 59.9	+0.4
GLBA	Clilabad	1.52	162	Pn	Pn	22 20 40.7	-0.6
	SNR=77						
GLBA				Sn	Sn	22 21 00.2	+0.2
GOBA	Gobu	1.52	100	Pn	Pn	22 20 41.8	+0.5
	SNR=16						
GOBA				Sn	Sn	22 21 00.8	+0.8
KMKR	Kumukh	1.53	341	eP	Pn	22 20 42.0	+0.2
KMKR				eS	Sn	22 21 03.0	+2.2
KMKR				pmax	pmax		
	comp=Z,206nm,0.2s						
GDB	GEDABAY	1.54	272	Pn	Pn	22 20 40.4	-1.5
	SNR=1405						
GDB				Sn	Sn	22 21 00.0	-0.8
GRS	Goris	1.62	224	⇓iP	Pn	22 20 38.0	-4.9
GRS				⇓iS	Sn	22 20 59.0	-3.7
LGD	Lagodekhi	1.63	315	P	Pn	22 20 42.3	-0.6
LGD				S	Sn	22 21 03.2	+0.4
LGD	Lagodekhi	1.63	315	⇓iP	Pn	22 20 42.3	-0.6
NDR	Nardaran	1.69	93	Pn	Pn	22 20 43.1	-0.5
	SNR=3.5						
NDR				Sn	Sn	22 21 04.9	+0.8
SGKR	Sergokala	1.78	357	eP	Pn	22 20 48.0	+3.0
SGKR				eS	Sn	22 21 12.5	+6.1
SGKR	Sergokala	1.78	357	ePg	Pn	22 20 48.0	+3.0
SGKR				eSg	Sn	22 21 12.5	+6.1
GNBR	Gunib	1.81	341	eP	Pn	22 20 48.8	+3.4
GNBR				eS	Sn	22 21 14.0	+6.7
GNBR				pmax	pmax		
	comp=Z,147nm,0.6s						
GNBR	Gunib	1.81	341	ePg	Pn	22 20 46.2	+0.8
	comp=Z,147nm,0.6s						
GNBR				eSg	Sn	22 21 09.9	+2.7
	comp=Z,908nm,0.7s						
GALA	Gala	1.83	98	Pn	Pn	22 20 45.5	-0.2
GALA				Sn	Sn	22 21 08.2	+0.5
QZX	Qazax, Azerbai	1.86	282	Pn	Pn	22 20 45.1	-1.0
	SNR=66						
QZX				Sn	Sn	22 21 08.5	0.0
ARKR	Arakani	2.01	343	i P	Pn	22 20 49.0	+0.9
ARKR				pmax	pmax		
	comp=Z,99nm,0.2s						
ARKR	Arakani	2.01	343	i Pg	Pn	22 20 49.0	+0.9
	comp=Z,99nm,0.2s						
ARKR				eSg	Sn	22 21 14.0	+1.9
	comp=Z,347nm,0.0s						
XNZR	Khunzakh	2.02	337	eP	Pn	22 20 52.5	+4.1
XNZR				eS	Sn	22 21 21.1	+8.4
XNZR	Khunzakh	2.02	337	ePg	Pn	22 20 49.0	+0.5
XNZR				eSg	Sn	22 21 15.8	+3.2
LRK	Lerik	2.08	168	Pn	Pn	22 20 49.0	-0.3
	SNR=45						
LRK				Sn	Sn	22 21 14.7	+0.6
LKRN	Lenkeran, Azer	2.12	158	P	Pn	22 20 48.7	-0.8
LKRN	Lenkeran, Azer	2.12	158	Pn	Pn	22 20 48.7	-0.8
	SNR=17						
LKRN				Sn	Sn	22 21 14.5	-0.2
SBZ	Shahbuz	2.14	234	Pn	Pn	22 20 50.3	+0.4
	SNR=35						
SBZ				Sn	Sn	22 21 17.7	+2.4
UNCR	Uncukul	2.16	340	⇑iP	Pn	22 20 54.5	+4.3
UNCR				eS	Sn	22 21 24.0	+8.2
UNCR				pmax	pmax		
	comp=Z,133nm,0.5s						
UNCR	Uncukul	2.16	340	i Pg	Pn	22 20 54.5	+4.3
	comp=Z,133nm,0.5s						
UNCR				eSg	Sn	22 21 24.0	+8.2
	comp=Z,628nm,0.6s						
KRNR	Karanay	2.24	343	i P	Pn	22 20 56.0	+4.7
KRNR				i S	Sn	22 21 26.0	+8.2
KRNR				pmax	pmax		
	comp=Z,52nm,0.2s						
KRNR	Karanay	2.24	343	i Pn	Pn	22 20 56.0	+4.7
	comp=Z,52nm,0.2s						
KRNR				i Sn	Sn	22 21 26.0	+8.2
	comp=Z,141nm,0.3s						
ASTR	Astara	2.26	159	Pn	Pn	22 20 50.8	-0.7
	SNR=116						
ASTR				Sn	Sn	22 21 18.5	+0.3
MAK	Makhachkala	2.29	355	⇑iP	Pn	22 20 50.3	-1.5
MAK				e		22 21 21.1	
MAK				pmax	pmax		
	comp=Z,64nm,0.5s						
MAK				smax	smax		
	comp=E,389nm,0.5s						
MAK				smax	smax		
	comp=E,466nm,0.4s						
MAK	Makhachkala	2.29	355	ePn	Pn	22 20 52.4	+0.5
MAK				eSn	Sn	22 21 18.9	+0.1
BTLR	Botlikh	2.30	330	⇓eP	Pn	22 20 51.9	-0.1
BTLR				eS	Sn	22 21 24.3	+5.1
BTLR				smax	smax		
	comp=N,285nm,0.6s						
BTLR	Botlikh	2.30	330	ePn	Pn	22 20 52.0	-0.1
BTLR				eSn	Sn	22 21 21.3	+2.1
NAX	Nakhchivan	2.31	230	P	Pn	22 20 53.1	+0.8
NAX	Nakhchivan	2.31	230	Pn	Pn	22 20 53.1	+0.8
	SNR=12						
NAX				Sn	Sn	22 21 21.0	+1.4
GNI	Garni	2.38	258	Pn	Pn	22 20 53.9	+0.7
	comp=N,10.0nm,0.3s,baz=292,slow=2.8,SNR=40						
GNI	Garni	2.38	258	d iP	Pn	22 20 53.5	+0.2
GNI	Garni	2.38	258	i P	Pn	22 20 53.7	+0.4
GNI				i S	Sn	22 21 24.1	+2.8
HYR	Heyderabad	2.44	248	Pn	Pn	22 20 54.8	+0.8
	SNR=12						
HYR				Sn	Sn	22 21 24.4	+1.7
DBC	Dubki	2.44	343	eP	Pn	22 20 54.1	+0.1
DBC				eS	Sn	22 21 23.3	+0.6
DBC				pmax	pmax		
	comp=Z,21nm,0.3s						
DBC	Dubki	2.44	343	ePn	Pn	22 20 53.8	-0.2
	comp=Z,21nm,0.3s						
DBC				eSn	Sn	22 21 23.1	+0.4
	comp=Z,258nm,0.6s						
BTNK	Botanikuri	2.46	295	i P	Pn	22 20 53.6	-0.7
BTNK				IAML_P			
	comp=Z,5µm,0.2s						
SEAG	Tbilisi Sea	2.49	297	P	Pn	22 20 55.6	+1.0
SEAG				S	Sn	22 21 25.5	+1.7
TBLG	Delisi	2.52	296	P	Pn	22 20 54.1	-1.0
TBLG				S	Sn	22 21 23.5	-1.1
TBLG	Delisi	2.52	296	eP	Pn	22 20 54.1	-1.0
TBLG	Delisi	2.52	296	i P	Pn	22 20 54.4	-0.7
TBLG				i S	Sn	22 21 25.4	+0.8
DVE	Vedeno	2.59	332	deP	Pn	22 20 56.5	+0.5
DVE	Vedeno	2.59	332	ePn	Pn	22 20 56.6	+0.6
DVE				eSn	Sn	22 21 25.6	-0.7
KZRT	Kazreti	2.65	286	P	Pn	22 20 55.6	-1.3
KZRT				S	Sn	22 21 26.6	-1.3
KZRT	Kazreti	2.65	286	P	Pn	22 20 55.3	-1.6
KZRT	Kazreti	2.65	286	i P	Pn	22 20 55.8	-1.1
GROC	Groznyy	2.92	330	eP	Pn	22 21 00.8	+0.3
GROC				e		22 21 37.3	
GROC				pmax	pmax		
	comp=Z,181nm,0.7s						
GROC				smax	smax		
	comp=N,352nm,0.9s						
GROC				smax	smax		
	comp=E,333nm,0.6s						
GROC				smax	smax		
	comp=E,557nm,0.6s						
GROC	Groznyy	2.92	330	ePn	Pn	22 21 01.0	+0.5
GROC				eSn	Sn	22 21 34.2	-0.1
GUDG	Gudauri	3.05	307	P	Pn	22 21 02.6	+0.1
GUDG				S	Sn	22 21 38.1	+0.2
EAK	Akyaka	3.17	271	i P	Pn	22 21 07.3	+3.2
EAK				IAML_P			
	comp=Z,1µm,0.4s						
BGD	Bogdanovka	3.22	282	P	Pn	22 21 05.1	+0.3
VLKR	Vladikavkaz	3.31	317	ePn	Pn	22 21 08.9	+3.0
VLKR				eSn	Sn	22 21 46.5	+2.5
AKH	Akhalkalaki	3.32	284	P	Pn	22 21 07.3	+1.1
AKH	Akhalkalaki	3.32	284	eP	Pn	22 21 07.3	+1.1
DIGO	Kars	3.37	267	i P	Pn	22 21 12.2	+5.4
DIGO				IAML_P			
	comp=Z,807nm,0.2s						
LACR	Lac	3.37	311	i Pn	Pn	22 21 07.1	+0.2
LACR				eSn	Sn	22 21 49.0	+3.3
ZEI	Tsey	3.58	307	eP	Pn	22 21 06.3	-3.5
ZEI				pmax	pmax		
	comp=Z,15nm,0.4s						
ONI	Oni	3.76	302	P	Pn	22 21 12.9	+0.8
ONI	Oni	3.76	302	eP	Pn	22 21 12.9	+0.8
DIGR	Digorskoe uzhe	3.84	307	ePn	Pn	22 21 13.6	+0.3
DIGR				eSn	Sn	22 21 58.6	+1.3
EPOS	Posof	3.90	284	i P	Pn	22 21 15.3	+1.2
TKB	Tkibuli	3.96	296	P	Pn	22 21 14.4	-0.4
TKB				S	Sn	22 21 59.5	-0.5
TUTA	Tutak	4.02	253	i P	Pn	22 21 16.9	+1.1
TUTA				IAML_P			
	comp=Z,88nm,0.2s						
NCK	Nalchik	4.19	313	⇑eP	Pn	22 21 20.8	+2.8
HAKT	HAKKARI	4.44	227	i P	Pn	22 21 24.8	+3.1
HAKT				IAML_P			
	comp=Z,149nm,0.3s						
DAGI	Agillar	4.46	277	i P	Pn	22 21 21.0	-0.8
DAGI				IAML_P			
	comp=Z,35nm,0.1s						
NEY	Neytrino	4.56	306	⇑eP	Pn	22 21 27.3	+4.2
DBAD	Bademkaya	4.62	276	i P	Pn	22 21 25.6	+1.6
DBAD				IAML_P			
	comp=Z,191nm,0.5s						
KBZ	Khabaz	4.73	312	Pn	Pn	22 21 25.5	+0.2
	comp=Z,0.2nm,0.3s,baz=124,slow=6.9,SNR=4.0						
KBZ				Sn	Sn	22 22 16.5	-2.3
	comp=Z,0.9nm,0.3s,baz=225,slow=9.0,SNR=3.6						
PYA1	Pyatigorsk	4.84	316	⇑eP	Pn	22 21 26.2	-0.7
SHA1	Shidzhatmaz	4.88	310	⇑eP	Pn	22 21 28.3	+0.8
KVAR	Kislovodsk Arr	4.99	313	Pn	Pn	22 21 28.4	-0.6
	baz=310,slow=21,SNR=7.9						
KVAR				Sn	Sn	22 22 22.5	-2.9
	baz=164,slow=12,SNR=5.3						
KIV	Kislovodsk	4.99	313	eP	Pn	22 21 28.7	-0.3
KIV				eS	Sn	22 22 29.9	+4.4
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOF	Gofitskoye	5.59	323	⇑eP	Pn	22 21 35.6	-1.5
GOF				eS	Sn	22 22 35.2	-4.7
GOF				pmax	pmax		
	comp=Z,11nm,0.6s						
GOF				smax	smax		
	comp=E,38nm,0.4s						
GOF				smax	smax		
	comp=N,51nm,0.6s						
GEYT	Alibeck	8.47	106	Pn	Pn	22 22 12.4	-4.3
	comp=N,2.1nm,0.3s,baz=278,slow=15,SNR=37						
GEYT				Sn	Sn	22 23 38.7	-12
	comp=N,1.4nm,0.3s,baz=290,slow=15,SNR=3.2						
BRTR	Keskin Array B	10.86	270	Pn	Pn	22 22 50.9	+1.5
	comp=N,0.1nm,0.3s,baz=88,slow=16,SNR=7.1						
BRTR	Keskin Array B	10.86	270	i P	Pn	22 22 52.4	+3.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKTO	Aktyubinsk	12.10	33	Pn	Pn	22 23 00.8	-5.4
	comp=Z,0.2nm,0.3s,baz=191,slow=15,SNR=4.3						
AKTO				Sn	Sn	22 25 04.1	-15
	comp=Z,0.8nm,0.3s,baz=344,slow=20,SNR=10						
AKTO	Aktyubinsk	12.10	33	⇓Pn	Pn	22 23 00.7	-5.4
	comp=Z,0.8nm,0.6s						
AKTO				⇑Sn	Sn	22 25 04.2	-15
	comp=Z,3.2nm,0.5s						
AB31	Akbulak array	12.14	41	Pn	Pn	22 23 01.7	-5.0
	comp=Z,0.5nm,0.5s,baz=233,slow=16,SNR=9.8						
AB31				⇑Sn	Sn	22 25 07.2	-13
	comp=Z,1.0nm,0.3s,baz=237,slow=24,SNR=5.2						
AB31	Akbulak array	12.14	41	P	Pn	22 23 01.7	-5.0
OBN	Obninsk	16.25	336	⇑eP	P	22 24 02.7	-0.5
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKASG	Malin Array Be	16.34	314	Pn	Pn	22 23 59.1	-3.1
	comp=Z,0.4nm,0.3s,baz=123,slow=11,SNR=2.8						
ARU	Arti	17.26	21	P	Pn	22 24 08.7	-5.0
	comp=Z,0.0nm,0.3s,baz=326,slow=18,SNR=2.3						
ARU	Arti	17.26	21	P	P	22 24 15.1	+0.6
ARU				S	S	22 27 32.8	+1.6
BVAR	Borovoye Array	19.68	44	P	P	22 24 38.4	-2.8
	comp=Z,0.2nm,0.3s,baz=253,slow=10,SNR=4.2						
AAK	Ala-Archa	20.03	76	⇓eP	P	22 24 45.5	+0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PRGR	Permogore	21.02	357	eP	P	22 24 48.9	-6.6
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KURK	Kurchatov	23.61	54	⇑eP	P	22 25 25.3	+2.8
KURK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
FINES	FINESS Array B	24.63	335	P	P	22 25 29.4	-2.3
	comp=Z,1.1nm,0.6s,baz=149,slow=8.4,SNR=6.8						
MKAR	Makanchi Array	25.53	65	P	P	22 25 38.5	-1.6
	comp=Z,0.6nm,0.6s,baz=262,slow=8.6,SNR=5.2						

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*SJA **06** 23:02:00.8±0.7, 31°.75S×69°.74W, h127^{km}±6^{km}, ML3.2, MW3.4*

*ISCJB **06** 23:02:01.2±0.9, 31°.70S±0°.04×69°.78W±0°.06, h123^{km}±11^{km}, Error ellipse: s-maj=8.9km s-min=6.2km az=11.2*
*GUC **06** 23:02:02.3±0.7, 31°.72S×69°.88W, h126^{km}±15^{km}, ML3.1*
ISC 06 23:02:02.0±1.8**, 31°.70S**±0°.04×**69°.79W**±0°.06**, h118^{km}**±18^{km}**, n12, σ0^{s}.51**/20**, 4C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	1.15	295	⇑eP	Pn	23 02 25.2	-0.3
CO02				i S	Sn	23 02 42.9	-0.4
RTLL	**Cerro Villicun**	1.18	72	eP	Pn	23 02 26.1	+0.4
RTLL				eS	Sn	23 02 44.0	+0.3
RTLL				IAML		23 02 45.9	
	comp=Z,436nm,0.3s						
PEL	**Peldehue**	1.63	208	eP	Pn	23 02 30.6	-0.2
PEL				eS	Sn	23 02 52.7	0.0
PEL	**Peldehue**	1.63	208	eP	Pn	23 02 30.4	-0.4
PEL				eS	Sn	23 02 51.8	-1.0
PEL				IAML		23 02 53.0	
	comp=N,186nm,0.2s						
FCH	**Farellones**	1.68	195	⇑eP	Pn	23 02 32.1	+0.4
FCH				i S	Sn	23 02 55.0	+0.8
FCH				IAML		23 02 58.2	
	comp=E,237nm,0.2s						
GO04	**Tololo Observa**	1.76	330	⇑eP	Pn	23 02 32.6	0.0
GO04				i S	Sn	23 02 55.9	0.0
RCDM	**Rinconada Maip**	1.98	206	⇑eP	Pn	23 02 35.2	+0.1
RCDM				i S	Sn	23 03 00.3	0.0
LMEL	**Las Melosas**	2.17	189	eP	Pn	23 02 38.0	+0.4
LMEL				eS	Sn	23 03 05.2	+0.4
LMEL				IAML		23 03 10.7	
	comp=N,149nm,0.2s						
MRA	**San Martin**	3.53	103	eP	Pn	23 02 55.0	-0.2
MRA				IAML		23 04 10.9	
	comp=Z,21nm,0.4s						
GO03	**Copiap**	4.11	354	eP	Pn	23 03 04.0	+0.9
TCA	**Tanti**	4.45	87	eP	Pn	23 03 07.0	-0.5
TCA				IAML		23 03 08.0	
	comp=Z,22nm,0.3s						
CYA	**Choya**	4.74	48	eP	Pn	23 03 10.9	-0.6

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*NNC **06** 23:27:21.1±3.6, 37°.37N×71°.79E, h188^{km}±53^{km}, mb2.6, mpv3.6, Error ellipse: s-maj=36.4km s-min=19.3km az=6.0*
ISC 06 23:27:20.9±3.2**, 37°.4N**±0°.2×**71°.9E**±0°.1**, h200^{km}, n11, σ0^{s}.73**/14**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	4.99	16	P	Pn	23 28 35.5	+0.1
	SNR=5.1						
UCH	**Uchtor**	5.29	22	P	Pn	23 28 39.1	-0.2
	SNR=18						
KZA	**Kyzart**	5.40	28	P	Pn	23 28 39.9	-0.9
	SNR=6.2						
EKS2	**Erkin-Say**	5.51	15	P	Pn	23 28 42.6	+0.8
	SNR=11						
AAK	**Ala-Archa**	5.66	20	⇑P	Pn	23 28 43.7	-0.1
	4.4nm,0.5s						
AAK				⇑S	Sn	23 29 50.7	+1.3
	12nm,0.7s						
AAK	**Ala-Archa**	5.66	20	P	Pn	23 28 44.1	+0.3
	SNR=6.7						
KK31	**Karatay Array**	5.84	350	P	Pn	23 28 46.0	+0.1
	1.3nm,0.3s,baz=162,slow=11,SNR=53						
KK31				⇓S	Sn	23 29 52.1	-1.2
	3.4nm,0.3s,baz=169,slow=23,SNR=18						
TKM2	**Tokmak 2**	6.26	26	⇑P	Pn	23 28 51.1	-0.6
	4.0nm,0.5s						
TKM2				⇓S	Sn	23 30 03.3	-0.2
	1.3nm,0.6s						
TKM2	**Tokmak 2**	6.26	26	P	Pn	23 28 51.5	-0.2
	SNR=9.4						
AB31	**Akbulak array**	14.70	328	P	P	23 30 40.9	+0.7
	0.3nm,0.5s,baz=143,slow=12,SNR=9.4						
AKTO	**Aktyubinsk**	16.41	327	⇑P	Pn	23 30 59.3	-0.6
	1.5nm,0.8s						

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*ISK **06** 23:28:14.2, 38°.71N×43°.53E, h5^{km}, ML2.6/15*
*DDA **06** 23:28:15.0, 38°.70N×43°.48E, h7^{km}±4^{km}, ML2.8*
*ISCJB **06** 23:28:16.1±0.5, 38°.73N±0°.02×43°.50E±0°.04, h8^{km}±3^{km}, Error ellipse: s-maj=5.1km s-min=3.2km az=11.4*
ISC 06 23:28:16.2±0.9**, 38°.73N**±0°.02×**43°.48E**±0°.03**, h15^{km}**±6^{km}**, n36, σ1^{s}.33**/51**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	0.15	207	PG	Pg	23 28 19.8	-0.4
VANB				SG	Sg	23 28 23.9	+1.0
TVAN	**Van**	0.21	196	i P	Pg	23 28 20.3	-0.8
TVAN				i S	Sg	23 28 25.4	+1.0
VMUR	**Van-Muradiye**	0.27	16	i P	Pg	23 28 21.3	-0.8
VMUR				i S	Sb	23 28 27.5	+0.1
VMUR				IAML_P			
	comp=Z,7μm,0.2s						
ERCV	**ERCIS-VAN**	0.31	340	PG	Pg	23 28 22.1	-0.7
ERCV				SG	Sb	23 28 27.9	-0.6
GEVA	**Gevas**	0.53	218	i P	Pg	23 28 25.4	-1.3
GEVA				i S	Sg	23 28 32.4	-1.5
GEVA				IAML_P			
	comp=Z,3μm,0.1s						
AKDM	**Akdamar-Van**	0.56	224	PG	Pb	23 28 26.1	-1.7
AKDM				SG	Sb	23 28 35.6	0.0
ADCV	**BITLIS_Adilcev**	0.59	278	i P	Pg	23 28 27.1	-0.8
ADCV				i S	Sb	23 28 37.3	+0.6
ADCV				IAML_P			
	comp=Z,1μm,0.1s						
BASK	**Baskale_VAN**	0.79	148	i P	Pb	23 28 30.6	-1.2
BASK				IAML_P			
	comp=Z,2μm,0.1s						
DYDN	**Diyadin**	0.83	11	i P	Pb	23 28 32.3	-0.1
DYDN				i S	Sb	23 28 43.1	-0.4
DYDN				IAML_P			
	comp=Z,1μm,0.2s						
MLAZ	**Malazgirt-MUS**	0.83	300	PG	Pb	23 28 31.9	-0.6
MLAZ				SG	Sn	23 28 45.2	-0.4
TUTA	**Tutak**	0.85	323	i P	Pg	23 28 31.8	-0.9
TUTA				i S	Sb	23 28 44.1	+0.1
AGRB	**Hanur-Agry**	0.93	336	PG	Pg	23 28 33.2	-1.0
BLIS	**Bitlis-Merkez**	1.11	254	i P	Pg	23 28 36.3	-1.4
BLIS				i S	Sb	23 28 51.7	+0.1
BLIS				IAML_P			
	comp=Z,2μm,0.2s						
HAKT	**HAKKARI**	1.18	171	i P	Pb	23 28 37.1	-1.4
HAKT				i S	Sn	23 28 56.4	+2.0
HAKT				IAML_P			
	comp=Z,1μm,0.3s						
SRTM	**Siirt_Merkez**	1.43	239	i P	Pg	23 28 43.1	-0.5
SRTM				i S	Sg	23 29 02.9	+0.7
SRTM				IAML_P			
	comp=Z,1μm,0.3s						
CUKT	**Cukurca**	1.48	176	PN	Pg	23 28 42.6	-2.1
CUKT	**Cukurca**	1.48	176	i P	Pg	23 28 42.8	-1.9
CUKT				i S	Sg	23 29 09.0	+5.0
CUKT				IAML_P			
	comp=Z,908nm,0.5s						
SIRN	**Sırnak**	1.49	215	i P	Pg	23 28 44.6	-0.3
SIRN				IAML_P			
	comp=Z,860nm,0.2s						
MUSM	**Mu-Merkez**	1.54	270	i P	Pg	23 28 44.7	-1.0
MUSM				i S	Sb	23 29 03.9	+0.1
MUSM				IAML_P			
	comp=Z,184nm,0.2s						
VRTB	**Varto-Mus**	1.63	286	PN	Pb	23 28 45.8	-0.3
VRTB	**Varto-Mus**	1.63	286	i P	Pg	23 28 47.9	+0.3
GNI	**Garni**	1.72	34	PN	Pb	23 28 46.6	-1.1
KOPR	**Koprukoy-ERZUR**	1.78	316	PN	Pb	23 28 47.8	-0.8
HOMI	**Horasan**	1.79	318	i P	Pg	23 28 49.3	-1.3
HOMI				i S	Sg	23 29 15.2	+1.3
HOMI				IAML_P			
	comp=Z,474nm,0.3s						
BNGL	**BINGOL**	1.83	278	i P	Pb	23 28 49.4	-0.1
SVAN	**Silvan-Diyarba**	1.88	253	PN	Pb	23 28 49.5	-0.7
KARS	**Kars**	1.92	351	PN	Pb	23 28 49.9	-1.1
BTMN	**Batman**	1.93	245	i P	Pn	23 28 47.3	-1.2
EAK	**Akyaka**	1.96	3	i P	Pg	23 28 53.7	-0.1
EAK				IAML_P			
	comp=Z,251nm,0.5s						
SENK	**Senkaya-Erzuru**	2.03	335	PN	Pb	23 28 51.5	-1.3
BNGB	**Bingl**	2.20	278	PN	Pb	23 28 54.2	-1.5
YEDI	**Yedisu-Bingol**	2.39	288	PN	Pn	23 28 56.5	+1.6
DAGI	**Agillar**	2.64	333	i P	Pg	23 29 04.9	-1.8
KOPT	**Kop Dagi**	2.64	300	i P	Pn	23 28 50.1	-8.5
MAZI	**Mazidag**	2.71	243	PN	Pn	23 29 01.2	+1.9
EPOS	**Posof**	2.83	349	i P	Pg	23 29 09.3	-1.2

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*GUC **06** 23:30:23.7±0.6, 21°.11S×69°.08W, h115^{km}±3^{km}, ML3.5*
*ISCJB **06** 23:30:25.6±0.5, 21°.12S±0°.02×69°.03W±0°.07, h100^{km}, mb4.9/1, Error ellipse: s-maj=9.1km s-min=3.3km az=4.4*
*IDC **06** 23:30:53.2±7.0, 18°.53S×67°.35W, h220^{km}±42^{km}, mb1 3.0/3, mb1mx2.8/23, mbtmp3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/20, Error ellipse: s-maj=122.2km s-min=33.9km az=22.0*
ISC 06 23:30:25.1±1.0**, 21°.11S**±0°.03×**68°.99W**±0°.07**, h100^{km}, n20, σ1^{s}.41**/34**, 11C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	0.47	278	⇑eP	Pn	23 30 41.1	+0.3
PB01				i S	Sn	23 30 53.8	+1.3
PB01				IAML		23 30 54.5	
	comp=N,7μm,0.3s						
PB09	**IPOC Station P**	0.72	199	eP	Pn	23 30 43.2	+0.3
PB09				i S	Sn	23 30 57.9	+1.6
PB09				IAML		23 31 00.6	
	comp=E,835nm,0.1s						
PB02	**IPOC Station P**	0.87	256	eP	Pn	23 30 44.4	+0.1
PB02				i S	Sn	23 30 59.6	+0.9
PB02				IAML		23 31 00.6	
	comp=N,3μm,0.4s						
PB08	**IPOC Station P**	0.98	351	⇑eP	Pn	23 30 46.1	+0.4
PB08				i S	Sn	23 31 02.9	+1.8
PB08				IAML		23 31 04.3	
	comp=E,767nm,0.2s						
PB07	**IPOC Station P**	1.03	234	⇑eP	Pn	23 30 46.0	0.0
PB07				i S	Sn	23 31 02.7	+0.8
PB07				IAML		23 31 03.4	
	comp=N,970nm,0.3s						
PB03	**IPOC Station P**	1.17	217	⇑eP	Pn	23 30 47.6	0.0
PB03				i S	Sn	23 31 05.2	+0.6
PB03				IAML		23 31 05.8	
	comp=E,1μm,0.2s						
GO01	**Chusmiza**	1.45	352	⇑iP	Pn	23 30 51.3	+0.1
GO01				eS	Sn	23 31 12.4	+1.5
GO01				IAML		23 31 14.1	
	comp=E,920nm,0.2s						
PB11	**IPOC Station P**	1.48	335	⇑eP	Pn	23 30 51.2	-0.1
PB11				i S	Sn	23 31 12.0	+0.8
PB11				IAML		23 31 13.2	
	comp=N,1μm,0.4s						
LVC	**Limon Verde**	1.49	177	⇑eP	Pn	23 30 51.8	+0.1
LVC				i S	Sn	23 31 13.1	+1.4
PB04	**IPOC Station P**	1.62	221	eP	Pn	23 30 52.5	-0.5
PB04				i S	Sn	23 31 14.3	0.0
PB04				IAML		23 31 19.6	
	comp=N,553nm,0.5s						
PB06	**IPOC Station P**	1.67	199	⇑eP	Pn	23 30 53.5	-0.2
PB06				i S	Sn	23 31 15.5	+0.1
PB06				IAML		23 31 17.7	
	comp=E,449nm,0.3s						
PSGC	**Pisagua**	1.84	325	⇑eP	Pn	23 30 54.8	-1.0
PSGC				i S	Sn	23 31 18.9	-0.3
PSGC				IAML		23 31 19.9	
	comp=N,250nm,0.3s						
MNMC	**Minye Minye**	2.05	344	⇑eP	Pn	23 30 58.5	-0.1
MNMC				i S	Sn	23 31 24.7	+0.5
MNMC				IAML		23 31 31.0	
	comp=N,469nm,0.4s						
PB05	**IPOC Station P**	2.06	213	⇑eP	Pn	23 30 57.7	-0.9
PB05				i S	Sn	23 31 21.6	-2.6
PB05				IAML		23 31 23.4	
	comp=N,268nm,0.6s						
PB15	**IPOC Station P**	2.13	192	eP	Pn	23 30 59.9	+0.3
PB15				eS	Sn	23 31 26.8	+0.9
LPAZ	**La Paz**	4.87	10	P	Pn	23 31 37.7	+1.1
	comp=N,0.6nm,0.3s,baz=177,slow=3.1,SNR=12						
LPAZ				S	Sn	23 32 12.4	-20
	comp=N,0.2nm,0.3s,baz=211,slow=8.3,SNR=4.3						
SIV	**San Ignacio**	9.07	57	P	Pn	23 32 28.6	-4.7
	baz=252,slow=13						
PLCA	**Paso Flores**	19.60	184	LR	LR	23 46 39.5	
	comp=N,66nm,19.6s,baz=198,slow=42						
BDFB	**Brasilia**	20.63	78	P	P	23 34 53.9	-2.9
	comp=N,0.3nm,0.3s,baz=265,slow=10,SNR=3.5						
TORD	**Torodi Ar. Bea**	77.30	70	P	P	23 42 11.4	+2.3
	comp=N,12nm,0.4s,baz=260,slow=5.1,SNR=3.0						

HEL 07 00:10:05.2±0.0**, 67°.84N**×**20°.21E, h0^{km}, ML1.6, ML0.9**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	0.24	266	i P	Pg	00 10 09.2	-0.5
RATU				i S	Sg	00 10 12.6	-0.2
NIKU	**Nikkaluokta**	0.45	274	i P	Pg	00 10 13.1	-0.6
NIKU				i S	Sg	00 10 19.2	-0.3
LANU	**Lannavaara**	0.70	72	eP	Pg	00 10 17.8	-0.9
LANU				eS	Sg	00 10 27.6	-0.1
DUNU	**Dundret**	0.73	169	i P	Pg	00 10 18.2	-1.0
DUNU				i S	Sg	00 10 28.1	-0.6
SALU	**Saltoluokta**	0.80	236	i P	Pg	00 10 19.6	-0.9
SALU				i S	Sg	00 10 29.9	-1.0
KIF	**Kilpisjarvi**	1.19	10	ePB	Pg	00 10 27.4	-0.6
	baz=194						
KIF				MSG		00 10 42.3	
	comp=Z,6.7nm,0.2s						
KIF				eS	Sg	00 10 43.2	-0.2
KIF	**Kilpisjarvi**	1.19	10	eP	Pg	00 10 27.6	-0.4
PAJU	**Pajala**	1.39	125	eP	Pg	00 10 29.9	-1.8
PAJU				eS	Sg	00 10 48.5	-1.2
HEF	**Hetta**	1.41	65	ePG	Pn	00 10 30.6	-1.5
	baz=252						
HEF				MSG		00 10 47.5	
	comp=Z,4.8nm,0.2s						
HEF				eSB	Sg	00 10 49.2	-1.2
HEF	**Hetta**	1.41	65	eP	Pn	00 10 30.6	-1.5
ERTU	**Ertsjaerv**	1.50	148	ePG	Pn	00 10 32.1	-1.3
ERTU				eSB	Sg	00 10 52.4	-0.9
TOF	**Tornio**	2.40	136	ePB	Pn	00 10 46.6	+1.0
	baz=317						
TOF				MSG		00 11 15.4	
	comp=Z,2.7nm,0.2s						
TOF				eSB	Sb	00 11 17.4	-1.7
SGF	**Sodankyl**	2.45	96	ePB	Pn	00 10 47.8	+1.5
	baz=278						
SGF				eSG	Sb	00 11 21.9	+1.2
RNF	**Rovaniemi**	2.57	116	ePB	Pn	00 10 49.5	+1.4
RNF				eSB	Sb	00 11 22.8	-1.4
ARE0	**ARCESS Array S**	2.58	46	eP	Pn	00 10 48.0	-0.1
ARE0				eSB	Sn	00 11 21.7	+1.6

UPP 07 00:10:47.6±0.1**, 67°.82N**×**20°.21E, h1^{km}, ML2.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	0.23	271	P	Pg	00 10 52.1	+0.1
RATU				S	Sg	00 10 55.4	+0.3
NIKU	**Nikkaluokta**	0.45	276	P	Pg	00 10 56.1	-0.1
NIKU				S	Sg	00 11 02.2	+0.3
LANU	**Lannavaara**	0.71	70	P	Pg	00 11 00.9	-0.3
DUNU	**Dundret**	0.72	169	P	Pg	00 11 00.9	-0.4
SALU	**Saltoluokta**	0.79	237	P	Pg	00 11 02.5	-0.2
SALU				S	Sg	00 11 12.8	0.0
PAJU	**Pajala**	1.38	124	P	Pg	00 11 12.8	-1.1
PAJU				S	Sg	00 11 31.1	-0.7
ERTU	**Ertsjaerv**	1.49	148	S	Sn	00 11 35.5	-0.1

UCR 07 00:25:00.0±3.8**, 7°.33N**×**82°.00W, h0^{km}**±39^{km}**, MW3.9, 1D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZU	**Azuero**	1.77	75	⇓eP	Pn	00 25 31.9	0.0
AZU				eS	Sb	00 25 56.2	+0.1
EDPN	**Palmar Norte**	2.17	318	eP	Pn	00 25 38.6	+1.2
DRK0	**Durika**	2.28	327	eP	Pn	00 25 37.5	-1.6
DRK0				eS	Sb	00 26 09.8	-1.2
LCR2	**La Lucha 2**	3.11	321	eP	Pn	00 25 48.9	-1.6
CVTR	**Volcan Turrial**	3.19	327	eP	Pn	00 25 52.1	+0.3
ARE1	**Arenal 1**	4.11	319	eP	Pn	00 26 05.8	+1.7
CEDE	**Laguna Cedeo**	4.12	320	eP	Pn	00 26 06.0	+1.8
MESS	**Mesas**	4.63	317	eP	Pn	00 26 16.3	+4.9

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*ISCJB **07** 01:08:42.3±0.5, 26°.97S±0°.04×26°.75E±0°.03, h10^{km}, Error ellipse: s-maj=6.7km s-min=3.5km az=151.0*
*PRE **07** 01:08:42.7±1.0, 26°.96S×26°.78E, h2^{km}, ML2.9*
*EAF **07** 01:08:45.1±1.0, 27°.05S×27°.06E, h16^{km}±13^{km}, MD4.1*
*BUL **07** 01:08:46.6±1.5, 27°.08S×27°.12E, h15^{km}±17^{km}, MD4.7*
ISC 07 01:08:42.4±0.6**, 26°.90S**±0°.03×**26°.75E**±0°.03**, h10^{km}, n31, σ2^{s}.25**/56**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	**Parys**	0.55	92	eP	Pg	01 08 53.3	+0.2
PRYS				eS	Sg	01 09 00.3	-0.2
PRYS				AML	AML	01 09 08.8	
	comp=Z,342nm,0.3s						
WDLM	**Western Deep L**	0.77	52	eP	Pb	01 08 58.1	+0.1
WDLM				eS	Sg	01 09 08.1	+0.7
WDLM				AML	AML	01 09 15.3	
	comp=Z,422nm,0.2s						
KLOF	**Kloof**	0.95	55	eP	Pn	01 09 01.8	-0.2
KLOF				eS	Sb	01 09 14.2	+0.3
KLOF				AML	AML	01 09 19.4	
	comp=Z,1μm,0.3s						
KSR	**Koster**	1.06	7	eP	Pn	01 09 04.1	+0.7
KSR				eS	Sn	01 09 19.2	+0.8
KSR				AML	AML	01 09 25.4	
	comp=Z,159nm,0.7s						
SWZ	**Schweizer**	1.29	257	eP	Pg	01 09 08.4	+1.1
SWZ				eS	Sn	01 09 25.9	+1.8
SWZ				AML	AML	01 09 29.3	
	comp=Z,636nm,0.4s						
ERPM	**east rand prop**	1.45	68	eP	Pg	01 09 11.7	+1.4
ERPM				eS	Sg	01 09 32.1	+2.9
ERPM				AML	AML	01 09 33.5	
	comp=Z,113nm,0.1s						
LBTB	**Lobatse**	2.15	331	eP	Pb	01 09 21.6	+0.1
LBTB				eS	Sb	01 09 49.2	+1.0
LBTB				AML	AML	01 09 52.0	
	comp=Z,273nm,0.4s						
BOSA	**Boshof**	2.16	217	i P	Pb	01 09 21.1	-0.5
BOSA				i S	Sb	01 09 48.1	-0.4
BOSA	**Boshof**	2.16	217	eP	Pn	01 09 19.2	+0.6
BOSA				eS	Sb	01 09 47.5	-1.0
BOSA				AML	AML	01 10 01.4	
	comp=Z,70nm,0.4s						
BOSA	**Boshof**	2.16	217	i P	Pb	01 09 21.1	-0.5
BOSA				i S	Sb	01 09 48.1	-0.4
BOSA	**Boshof**	2.16	217	i P	Pb	01 09 21.1	-0.5
BOSA				i S	Sb	01 09 48.1	-0.4
UPI	**Upington**	5.08	252	eP	Pn	01 10 01.0	+2.2
UPI				eS	Sn	01 10 57.7	+0.1
UPI				AML	AML	01 11 29.4	
	comp=Z,29nm,0.4s						
KEIM	**Keimoes**	5.42	249	eP	Pn	01 10 05.5	+2.0
KEIM				eS	Sn	01 11 05.6	-0.3
KEIM				AML	AML	01 11 36.9	
	comp=Z,34nm,0.4s						
MSNA	**Messina**	5.43	34	i P	Pn	01 10 03.8	+0.3
MSNA	**Messina**	5.43	34	eP	Pn	01 10 05.1	+1.5
MSNA				eS	Sn	01 11 04.2	-2.0
MSNA				AML	AML	01 11 10.2	
	comp=Z,11nm,0.1s						
MSNA	**Messina**	5.43	34	i P	Pn	01 10 03.8	+0.3
MSNA	**Messina**	5.43	34	i P	Pn	01 10 03.8	+0.3
MATP	**Matopo**	6.64	14	i P	Pn	01 10 23.0	+2.7
MATP				i S	Sn	01 11 32.7	-3.5
MATP	**Matopo**	6.64	14	i P	Pn	01 10 23.0	+2.7
MATP				i S	Sn	01 11 32.7	-3.5
MATP	**Matopo**	6.64	14	i P	Pn	01 10 23.0	+2.7
MATP				i S	Sn	01 11 32.7	-3.5
BLWY	**Bulawayo**	6.95	15	i P	Pn	01 10 26.8	+2.3
BLWY				i S	Sn	01 11 41.0	-2.7
BLWY	**Bulawayo**	6.95	15	i P	Pn	01 10 26.8	+2.3
BLWY				i S	Sn	01 11 41.0	-2.7
BLWY	**Bulawayo**	6.95	15	i P	Pn	01 10 26.8	+2.3
BLWY				i S	Sn	01 11 41.0	-2.7
BUFB	**Buffelsbos**	7.43	193	eP	Pn	01 10 32.3	+1.4
BUFB				eS	Sn	01 11 52.1	-3.2
BUFB				AML	AML	01 12 12.3	
	comp=Z,5.0nm,0.5s						
KOMG	**Komaggas**	8.65	248	eP	Pn	01 10 49.7	+1.9
KOMG				eS	Sn	01 12 23.3	-2.2
KOMG				AML	AML	01 13 17.6	
	comp=Z,10nm,0.6s						
TSUM	**Tsumeb**	11.39	310	i P	Pn	01 11 28.2	+2.7
TSUM				i S	Sn	01 13 27.4	-5.5
TSUM	**Tsumeb**	11.39	310	i P	Pn	01 11 28.2	+2.7
TSUM				i S	Sn	01 13 27.4	-5.5
TSUM	**Tsumeb**	11.39	310	i P	Pn	01 11 28.2	+2.7
TSUM				i S	Sn	01 13 27.4	-5.5
LSZ	**Lusaka**	11.65	7	i P	Pn	01 11 29.6	+0.7
LSZ				i S	Sn	01 13 28.7	-10
LSZ	**Lusaka**	11.65	7	i P	Pn	01 11 29.6	+0.7
LSZ				i S	Sn	01 13 28.7	-10
LSZ	**Lusaka**	11.65	7	i P	Pn	01 11 29.6	+0.7
LSZ				i S	Sn	01 13 28.7	-10

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*ISCJB **07** 01:31:34.0±1.1, 24°.0N±0°.2×94°.0E±0°.2, h100^{km}, mb3.6/4, Error ellipse: s-maj=29.9km s-min=10.7km az=39.1*
*IDC **07** 01:31:36.8±4.5, 24°.02N×94°.21E, h111^{km}±53^{km}, mb3.5/4, mb1 3.5/5, mb1mx3.0/43, mbtmp3.7/5, Error ellipse: s-maj=57.4km s-min=36.0km az=75.0*
ISC 07 01:31:35.5±1.2**, 24°.0N**±0°.2×**93°.9E**±0°.2**, h100^{km}, n6, σ1^{s}.24**/8**, mb3.5**/4**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	2.44	311	ePN	Pn	01 32 14.8	+0.8
SHL				eSN	Sn	01 32 41.5	-2.0
CMAR	**Chiang Mai Arr**	7.22	139	P	Pn	01 33 18.0	-0.4
	0.8nm,0.3s,baz=313,slow=15,SNR=4.2						
CMAR				S	Sn	01 34 51.2	+12
	0.6nm,0.3s,baz=209,slow=28,SNR=5.0						
MKAR	**Makanchi Array**	24.60	341	P	P	01 36 47.0	+0.7
	0.9nm,0.6s,baz=157,slow=9.1,SNR=12						
SONM	**Songino Array**	25.78	20	P	P	01 36 55.9	-1.2
	0.5nm,0.4s,baz=198,slow=8.9,SNR=3.1						
ZALV	**Zalesovo Beam**	30.69	349	P	P	01 37 41.3	+0.7
	0.5nm,0.3s,baz=168,slow=7.4,SNR=3.0						
ZALV				PcP	PcP	01 40 35.9	-0.2
	1.5nm,0.6s,baz=161,slow=4.5,SNR=4.8						
FINES	**FINESS Array B**	58.66	329	P	P	01 41 22.8	+0.7
	1.0nm,0.6s,baz=90,slow=6.9,SNR=5.5						

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*ISCJB **07** 01:40:06.4±0.9, 28°.20N±0°.04×51°.80E±0°.08, h15^{km}, Error ellipse: s-maj=11.1km s-min=5.4km az=163.2*
*TEH **07** 01:40:08.8, 28°.35N×51°.72E, h28^{km}, ML3.0*
*DSN **07** 01:40:10.0±1.2, 28°.22N×52°.09E, h10^{km}, ML3.3/4, Error ellipse: s-maj=26.8km s-min=7.5km az=17.0*
ISC 07 01:40:06.7±1.8**, 28°.24N**±0°.06×**51°.8E**±0°.1**, h15^{km}, n19, σ1^{s}.10**/21**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKAZ	**Kazeroun**	1.54	3	ePn	Pn	01 40 34.5	+0.6
IKAZ				IAMB	IAmb	01 40 59.1	
	comp=Z,5μm,0.4s						
LMD1	**Lamerd**	1.54	125	ePn	Pg	01 40 36.9	+0.6
SHI	**Shiraz**	1.55	25	ePn	Pn	01 40 34.4	+0.5
SHI				IAMB	IAmb	01 41 27.4	
	comp=Z,2μm,0.1s						
JHRM	**Jahrom**	1.63	80	ePn	Pg	01 40 37.1	-1.0
ISRV	**Sarvestan**	1.65	46	ePn	Pb	01 40 37.0	0.0
ISRV				eSg	Sg	01 41 00.6	+0.7
ISRV				IAMB	IAmb	01 41 11.4	
	comp=Z,2μm,0.4s						
IPAR	**Pars**	1.96	35	ePn	Pb	01 40 40.9	-1.4
IPAR				IAMB	IAmb	01 41 16.1	
	comp=Z,861nm,1.0s						
KLNJ	**Kolanjah**	2.76	357	ePn	Pn	01 40 51.3	+0.6
IRAM	**Ramesheh**	3.60	9	ePn	Pn	01 41 01.9	-0.2
IRAM				IAMB	IAmb	01 41 15.5	
	comp=Z,239nm,0.4s						
IMEH	**Mehriz**	4.00	38	ePn	Pn	01 41 10.0	+2.3
IMEH				IAMB	IAmb	01 41 10.8	
	comp=Z,411nm,0.4s						
ISAD	**Sadrabad**	4.03	24	IAMB	IAmb	01 41 22.7	

	comp=Z,176nm,0.5s						
ISAD				*e*Pn	**Pn**	**01 41 09.9**	**+1.8**
SHME	**Shamm**	**4.48**	**118**	P	**Pn**	**01 41 14.5**	**+0.4**
SHME				S	**Sn**	**01 42 04.6**	**-1.4**
IZEF	**Zefreh**	**4.67**	**6**	*e*Pn	**Pn**	**01 41 17.6**	**+0.7**
IZEF				IAMB	IAmb	01 41 17.8	
	comp=Z,100nm,0.4s						
IBAF	**Bafgh**	**4.70**	**44**	*e*Pn	**Pn**	**01 41 18.5**	**+1.2**
IBAF				IAMB	IAmb	01 41 19.0	
	comp=Z,100nm,0.3s						
NAZ	**Nazwa, Dubai**	**4.77**	**132**	*i* P	**Pn**	**01 41 19.5**	**+1.5**
	SNR=6.2						
ASUD	**Al Ashush, Dub**	**4.82**	**137**	*i* P	**Pn**	**01 41 19.9**	**+1.2**
	SNR=5.7						
MSFE	**Esma-Masafi**	**4.88**	**125**	P	**Pn**	**01 41 19.9**	**+0.4**
IKLH	**Kolahrood**	**5.06**	**358**	*e*Pn	**Pn**	**01 41 23.0**	**+0.7**
UOSS	**Minazif**	**5.17**	**128**	*i* P	**Pn**	**01 41 23.3**	**-0.2**
	SNR=7.1						
HATD	**Hatta, Dubai**	**5.19**	**130**	P	**Pn**	**01 41 24.6**	**+0.8**

SVSA 07 01:49:00.8±0.9**, 37°.59N×25°.14W, h0^{km}±9^{km}, MD3.5, ML1.8, Error ellipse: s-maj=10.4km s-min=2.5km az=63.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.19**	**352**	*e*P	Pg	01 49 04.4	-0.1
BART				*e*S	Sg	01 49 07.8	+0.8
BART				A	A	01 49 08.7	
	106nm,0.4s						
PCALD	**Caldeiras da R**	**0.35**	**307**	*e*S	Sg	01 49 12.5	+0.5
PCALD				A	A	01 49 20.4	
	71nm,0.4s						
PDA	**Ponta Delgada**	**0.45**	**291**	*e*P	Pg	01 49 09.1	-0.3
PSET	**Sete Cidades**	**0.52**	**297**	*e*P	Pg	01 49 10.3	-0.5
PSET				*e*S	Sg	01 49 17.1	-0.4
PSET				A	A	01 49 20.1	
	14nm,0.2s						
PSMN	**Pico do Norte,**	**0.59**	**174**	*e*P	Pg	01 49 11.0	-1.0
PSMN				*e*S	Sg	01 49 19.3	-0.3
PSMN				A	A	01 49 21.9	
	7.8nm,0.2s						
PSMA	**Santa Maria**	**0.59**	**179**	*e*P	Pg	01 49 11.3	-0.8
PSMA				*e*S	Sg	01 49 19.4	-0.4
PSMA				A	A	01 49 20.6	
	26nm,0.2s						

NIED ***07*** *01:51:00, 35°.80N×141°.10E, h35^{km}, Mw4.1 Best double couple: $M_0$1.69000×10^{15} NP1:ϕ_s229.00000°, δ18.00000°, λ36.00000°. NP2:ϕ_s104.00000°, δ79.00000°, λ105.00000°.*

IDC ***07*** *01:51:19.2±0.8, 35°.83N×141°.00E, h0^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.8/46, mbtmp3.9/16, ML4.0/2, MS3.0/8, Ms1 3.1/8, ms1mx2.8/39, Error ellipse: s-maj=24.1km s-min=15.6km az=81.0*

ISCJB ***07*** *01:51:20.5±0.9, 35°.83N±0°.03×141°.20E±0°.06, h25^{km}±5^{km}, mb4.0/18, MS3.1/4, Error ellipse: s-maj=8.6km s-min=5.2km az=5.1*

NEIC ***07*** *01:51:21.8±1.3, 35°.86N×141°.19E, h20^{km}±5^{km}, mb4.4/8, Error ellipse: s-maj=9.0km s-min=4.7km az=185.0*

NEIC Recorded [2 JMA] in Chiba and Ibaraki.

JMA ***07*** *01:51:22.7±0.2, 35°.79N×141°.00E, h29^{km}±1^{km}, M4.0*

JMA Felt II J1.

ISC 07 01:51:22.7±1.2**, 35°.84N**±0°.04×**141°.05E**±0°.06**, h23**^{km}±8^{km}**, n58,** σ1^{s}**17**/59**, mb4.1**/18**, MS3.1**/4**, 2C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.21**	**229**	⇑P	**Pb**	**01 51 28.2**	**-0.1**
CHOJ				S	**Sb**	**01 51 31.7**	**-0.3**
JIHU	**Itakohorinouch**	**0.45**	**286**	⇓P	**Pn**	**01 51 32.4**	**-1.3**
JIHU				S	**Sn**	**01 51 39.3**	**-1.8**
JSMT	**Sammumatsuo**	**0.53**	**248**	⇑P	**Pb**	**01 51 32.9**	**-0.5**
JSMT				S	**Sb**	**01 51 40.6**	**0.0**
JHYU	**Hitachinakayam**	**0.62**	**323**	⇓P	**Pn**	**01 51 35.5**	**-0.7**
JHYU				S	**Sn**	**01 51 44.3**	**-1.2**
JYT	**Yasato**	**0.80**	**299**	⇓P	**Pb**	**01 51 36.9**	**-1.0**
JYT				S	**Sb**	**01 51 46.5**	**-1.7**
JHO	**Hitachi**	**0.86**	**333**	⇓P	**Pb**	**01 51 38.7**	**-0.3**
BSO3	**Boso 3**	**1.13**	**203**	⇓P	**Pn**	**01 51 41.3**	**-1.6**
MJAR	**Matsushiro Arr**	**2.41**	**288**	Pn	**Pn**	**01 52 00.4**	**-0.3**
	1.5nm,0.3s,baz=94,slow=8.3,SNR=76						
MJAR				Sn	**Sb**	**01 52 36.8**	**+2.2**
	3.6nm,0.3s,baz=66,slow=20,SNR=7.4						
MJAR				LR	LR	01 53 02.6	
	comp=Z,101nm,18.8s,baz=105,slow=44						
MAJO	**Matsushiro**	**2.41**	**288**	*e*Pn	**Pn**	**01 52 00.9**	**+0.1**
MAJO				*e*Sg	**Sb**	**01 52 36.8**	**+2.2**
MAT	**Matsushiro**	**2.41**	**288**	P	**Pn**	**01 52 00.7**	**0.0**
MAT				*e*S	**Sb**	**01 52 31.8**	**-2.8**
MJB9	**Matsu-Tunnel**	**2.41**	**288**	*e*Pn	**Pn**	**01 52 00.8**	**0.0**
JHJ2	**Mitsune**	**2.91**	**201**	*e*Pn	**Pn**	**01 52 07.1**	**-0.5**
JHJ	**Hachijo jima 2**	**2.91**	**201**	Pn	**Pn**	**01 52 07.0**	**-0.7**
	28nm,0.3s,baz=144,slow=24,SNR=8.1						
JHJ				Sn	**Sn**	**01 52 41.5**	**-0.4**
	70nm,0.3s,baz=90,slow=20,SNR=4.6						
INU	**Inuyama**	**3.33**	**263**	*e*Pn	**Pn**	**01 52 14.8**	**+1.5**
ERM	**Erimo**	**6.38**	**14**	*e*Pn	**Pn**	**01 52 55.1**	**-0.1**
ASAJ	**Asahikawa**	**8.35**	**8**	Pn	**Pn**	**01 53 21.9**	**-0.4**
	2.5nm,0.3s,baz=212,slow=10,SNR=12						
ASAJ				Sn	**Sn**	**01 54 54.8**	**-1.1**
	0.4nm,0.3s,baz=227,slow=19,SNR=1.8						
JNU	**Nakatsue**	**8.83**	**255**	LR	LR	01 57 25.4	
	comp=Z,153nm,19.1s,baz=0.5,slow=42						
KSRS	**Korea Array**	**10.67**	**283**	Pn	**Pn**	**01 53 57.8**	**+3.6**
	baz=93,slow=15,SNR=6.2						
KSRS				LR	LR	01 58 00.4	
	comp=Z,47nm,19.1s,baz=100,slow=38						
KS15	**Wonju Array Si**	**10.70**	**282**	*e*Pn	**Pn**	**01 53 57.8**	**+3.2**
USRK	**Ussuriysk Ar.**	**10.86**	**323**	Pn	**Pn**	**01 53 59.6**	**+2.9**
	0.2nm,0.3s,baz=144,slow=14,SNR=7.2						
USRK				LR	LR	01 57 51.6	
	comp=Z,79nm,18.6s,baz=149,slow=36						
YSS	**Yuzh-Sakhalins**	**11.18**	**6**	*e*Pn	**Pn**	**01 54 00.3**	**-0.6**
PETK	**Petropavlovsk-**	**20.86**	**29**	LR	LR	02 03 57.2	
	comp=Z,38nm,20.6s,baz=223,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.81**	**118**	T	T	02 26 14.5	
	baz=311,slow=75,SNR=138						
H11N1	**WAKE ISLAND Hy**	**27.82**	**118**	T	T	02 26 13.2	
	baz=311,slow=75,SNR=118						
H11N3	**WAKE ISLAND Hy**	**27.83**	**118**	T	T	02 26 15.9	
	baz=311,slow=75,SNR=104						
SONA0	**Songino Array**	**28.23**	**306**	*e*P	**P**	**01 57 13.5**	**-0.5**
SONM	**Songino Array**	**28.23**	**306**	P	**P**	**01 57 13.5**	**-0.5**
	0.6nm,0.5s,baz=112,slow=11,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**28.48**	**121**	T	T	02 27 03.6	
	baz=312,slow=75,SNR=196						
H11S3	**WAKE ISLAND Hy**	**28.48**	**121**	T	T	02 27 03.6	
	baz=312,slow=75,SNR=158						
H11S2	**WAKE ISLAND Hy**	**28.50**	**121**	T	T	02 27 04.8	
	baz=312,slow=75,SNR=143						
CMAR	**Chiang Mai Arr**	**40.92**	**256**	LR	LR	02 17 49.8	
	comp=Z,19nm,18.4s,baz=65,slow=39						
ZAA1	**Zalesovo Array**	**42.51**	**313**	*e*P	**P**	**01 59 15.8**	**-0.3**
ZALV	**Zalesovo Beam**	**42.51**	**313**	P	**P**	**01 59 15.8**	**-0.3**
	1.1nm,0.6s,baz=97,slow=7.8,SNR=3.6						
MK31	**Makanchi Array**	**44.52**	**303**	*e*P	**P**	**01 59 32.3**	**-0.1**
	1.9nm,0.7s						
MK32	**Makanchi Array**	**44.52**	**303**	*e*P	**P**	**01 59 32.6**	**+0.2**
MKAR	**Makanchi Array**	**44.52**	**303**	P	**P**	**01 59 32.6**	**+0.2**
	2.1nm,0.6s,baz=87,slow=9.5,SNR=19						
MKAR				LR	LR	02 17 50.4	
	comp=Z,26nm,18.6s,baz=73,slow=36						
KURK	**Kurchatov**	**46.45**	**309**	*e*P	**P**	**01 59 47.1**	**-0.5**
	4.9nm,0.6s						
ILAR	**Eielson Array**	**50.66**	**32**	P	**P**	**02 00 20.4**	**+0.6**
	0.7nm,0.8s,baz=272,slow=6.7,SNR=6.7						
ILB	**Eielson Array**	**50.66**	**32**	*e*P	**P**	**02 00 20.4**	**+0.6**
	9.9nm,1.8s						
WR1	**Warramunga Arr**	**55.84**	**188**	*e*P	**P**	**02 00 57.9**	**-0.5**
WRA	**Warramunga Arr**	**55.84**	**188**	P	**P**	**02 00 57.9**	**-0.5**
	3.3nm,0.8s,baz=356,slow=7.5,SNR=6.9						
ABKAR	**Akbulak array**	**58.49**	**311**	*e*P	**P**	**02 01 16.4**	**-0.4**
	4.2nm,1.4s						
AS31	**Alice Springs**	**59.57**	**188**	*e*P	**P**	**02 01 24.9**	**+0.3**
	3.1nm,1.6s						
ASAR	**Alice Springs**	**59.57**	**188**	P	**P**	**02 01 24.9**	**+0.3**
	0.8nm,0.7s,baz=14,slow=8.8,SNR=5.7						
STKA	**Stephens Creek**	**67.37**	**180**	P	**P**	**02 02 15.5**	**-0.4**
	2.6nm,0.7s,baz=0.0,slow=9.1,SNR=4.5						
STKA	**Stephens Creek**	**67.37**	**180**	*e*P	**P**	**02 02 15.5**	**-0.4**
	9.9nm,2.0s						
FIA0	**FINESS Array S**	**69.73**	**332**	*e*P	**P**	**02 02 30.5**	**0.0**
FINES	**FINESS Array B**	**69.73**	**332**	P	**P**	**02 02 30.5**	**0.0**
	1.0nm,0.7s,baz=40,slow=6.2,SNR=7.2						
HFS	**Hagfors**	**75.05**	**336**	P	**P**	**02 03 01.9**	**-0.3**
	1.2nm,0.6s,baz=22,slow=1.6,SNR=6.7						
AKASG	**Malin Array Be**	**75.06**	**322**	P	**P**	**02 03 02.1**	**-0.3**
	0.6nm,0.4s,baz=48,slow=5.9,SNR=4.5						
AKBB	**Malin Array Si**	**75.06**	**322**	*e*P	**P**	**02 03 02.1**	**-0.3**
	3.8nm,0.8s						
NB2	**NORSAR Subarra**	**75.17**	**337**	P	**P**	**02 03 03.5**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=41,slow=5.9						
NB200	**NORSAR Array S**	**75.17**	**337**	*e*P	**P**	**02 03 02.7**	**-0.3**
NOA	**NORSAR Array B**	**75.17**	**337**	P	**P**	**02 03 02.7**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=44,slow=5.6,SNR=3.5						
NOA				LR	LR	02 38 45.7	
	comp=Z,23nm,20.9s,baz=275,slow=38						
PD31	**Pinedale Array**	**78.71**	**45**	*e*P	**P**	**02 03 24.9**	**+1.4**
	comp=Z,0.8nm,0.8s						
PDAR	**Pinedale Array**	**78.71**	**45**	P	**P**	**02 03 24.9**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=296,slow=0.3,SNR=3.9						
BR101	**Keskin Array S**	**79.42**	**312**	*e*P	**P**	**02 03 27.1**	**-0.2**
BRTR	**Keskin Array B**	**79.42**	**312**	P	**P**	**02 03 27.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=74,slow=6.0,SNR=3.0						

UCR 07 01:56:39.5±2.4**, 8°.94N×82°.87W, h6**^{km}±5^{km}**, MW3.6, 3C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDSV	**San Vito**	**0.15**	**221**	⇑*i*P	Pg	01 56 43.6	+1.0
EDSV				*e*S	Sg	01 56 48.2	+3.4
BRU2	**Volcan**	**0.23**	**129**	⇑*i*P	Pg	01 56 44.8	+0.8
BRU2				*e*S	Sg	01 56 49.0	+1.9
EDBA	**Buenos Aires**	**0.46**	**299**	*e*P	Pb	01 56 50.2	+0.1
EDBA				*e*S	Sb	01 56 56.9	-0.3
DRK0	**Durika**	**0.49**	**311**	⇓*e*P	Pg	01 56 48.5	-0.6
DRK0				*e*S	Sg	01 56 55.9	+0.4
EDPN	**Palmar Norte**	**0.58**	**272**	⇓*e*P	Pg	01 56 50.9	+0.2
EDPN				*e*S	Sg	01 56 58.9	+0.6
PTJ1	**Puerto Jimnez**	**0.58**	**227**	*e*P	Pg	01 56 50.0	-0.8
PTJ1				*e*S	Sg	01 56 59.1	+0.8
EDLM	**Las Mercedes**	**0.79**	**296**	*e*P	Pg	01 56 55.1	+0.4
EDLM				*e*S	Sg	01 57 05.4	+0.5
LCR2	**La Lucha 2**	**1.38**	**306**	*e*P	Pn	01 57 03.5	-2.0
LCR2				*e*S	Sb	01 57 22.3	-1.5
CVTR	**Volcan Turrial**	**1.39**	**321**	⇑*e*P	Pn	01 57 04.4	-1.5
CVTR				*e*S	Sg	01 57 24.2	-0.1
ARE1	**Arenal 1**	**2.37**	**310**	*e*P	Pn	01 57 19.2	+0.1
JTS	**Las Juntas de**	**2.46**	**303**	*e*P	Pn	01 57 19.7	-0.6
JTS				*e*S	Sb	01 57 52.9	-1.8
CUI	**Cuipilapa**	**2.83**	**307**	*e*P	Pb	01 57 28.1	-2.5
CUI				*e*S	Sn	01 58 02.1	+2.1

CRAAG ***07*** *02:00:11.9, 35°.95N×5°.45E, Ml3.7*

IDC ***07*** *02:00:12.7±1.3, 36°.07N×5°.33E, h0^{km}, mb3.6/4, mb1 3.5/7, mb1mx3.4/39, mbtmp3.5/7, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.0/43, Error ellipse: s-maj=30.7km s-min=20.1km az=157.0*

MDD ***07*** *02:00:13.5±0.6, 35°.98N×5°.39E, h2^{km}±5^{km}, mb4.4/25, Error ellipse: s-maj=6.8km s-min=4.0km az=174.0, PRXIMO*

LDG ***07*** *02:00:15.8±0.4, 35°.99N×5°.41E, h10^{km}, Ml3.2/13, Error ellipse: s-maj=8.3km s-min=4.0km az=138.0*

ISC 07 02:00:13.1±1.0**, 36°.06N**±0°.04×**5°.46E**±0°.03**, h10**^{km}±7^{km}**, n102,** σ2^{s}**75**/146**, mb3.6**/4**, 1D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHR	**Kef el Ahmar**	**0.06**	**131**	P	**Pg**	**02 00 14.7**	**-0.6**
CKHR	**Kef el Ahmar**	**0.06**	**131**	Pg	**Pg**	**02 00 14.7**	**-0.6**
SET	**Setif**	**0.15**	**342**	P	**Pg**	**02 00 17.0**	**+0.5**
SET	**Setif**	**0.15**	**342**	Pg	**Pg**	**02 00 17.0**	**+0.5**
DFRA	**Djebel Bou Aff**	**0.59**	**35**	P	**Pn**	**02 00 27.4**	**-0.4**
DFRA	**Djebel Bou Aff**	**0.59**	**35**	Pg	**Pn**	**02 00 27.4**	**-0.4**
CTEI	**Djebel Teioual**	**0.77**	**89**	P	**Pb**	**02 00 28.9**	**+0.2**
CTEI	**Djebel Teioual**	**0.77**	**89**	Pg	**Pb**	**02 00 28.9**	**+0.2**
CASM	**Ain Smara**	**0.86**	**76**	P	**Pn**	**02 00 31.5**	**+0.1**
CASM	**Ain Smara**	**0.86**	**76**	Pg	**Pn**	**02 00 31.5**	**+0.1**
ATAF	**Djebel Tarf**	**0.97**	**260**	P	**Pb**	**02 00 29.8**	**-2.4**
ATAF	**Djebel Tarf**	**0.97**	**260**	Pg	**Pb**	**02 00 29.8**	**-2.4**
CKFL	**Kef-Lekhel**	**1.08**	**71**	P	**Pg**	**02 00 35.6**	**+1.8**
CKFL	**Kef-Lekhel**	**1.08**	**71**	Pn	**Pg**	**02 00 35.6**	**+1.8**
CAEH	**'Ain El Ouahch**	**1.34**	**57**	P	**Pn**	**02 00 38.0**	**+0.1**
CAEH	**'Ain El Ouahch**	**1.34**	**57**	Pn	**Pn**	**02 00 38.0**	**+0.1**
ABSA	**Djebel Ababsia**	**1.65**	**82**	P	**Pb**	**02 00 43.9**	**+0.2**
CABS	**Djebel Ababsia**	**1.65**	**82**	Pn	**Pb**	**02 00 43.9**	**+0.2**
CMAH	**Djebel Manchou**	**1.68**	**70**	P	**Pn**	**02 00 43.5**	**+0.8**
CMAH	**Djebel Manchou**	**1.68**	**70**	Pn	**Pn**	**02 00 43.5**	**+0.8**
KEST	**Kesra**	**3.17**	**95**	Pn	**Pn**	**02 01 05.3**	**+2.1**
	3.7nm,0.3s,baz=55,slow=1.4,SNR=55						
KEST				Sn	**Sb**	**02 01 45.5**	**-3.0**
	3.0nm,0.3s,baz=162,slow=20,SNR=6.5						
EBNR	**Beni Rached**	**3.19**	**275**	P	**Pg**	**02 01 17.6**	**+3.5**
ECHA	**Ech Chlef**	**3.31**	**273**	P	**Pb**	**02 01 14.8**	**+2.8**
ECHF	**Ech Chlef**	**3.33**	**273**	Pg	**Pb**	**02 01 14.8**	**+2.5**
ETRT	**Tiaret**	**3.45**	**260**	P	**Pn**	**02 01 05.5**	**-1.5**
ETRT	**Tiaret**	**3.45**	**260**	Pn	**Pn**	**02 01 05.5**	**-1.5**
EANR	**'Ain N'Sour**	**3.53**	**270**	P	**Pn**	**02 01 10.0**	**+1.9**
OKGL	**Djebel Kef Gue**	**3.90**	**271**	Pn	**Pn**	**02 01 12.7**	**-0.5**
	16nm,0.1s,SNR=7.9						
OKGL				Sn	**Sn**	**02 01 56.4**	**-2.7**
	156nm,0.9s,SNR=7.9						
OJBR	**Djebel Berber**	**4.18**	**265**	P	**Pb**	**02 01 30.0**	**+3.2**
OJBR	**Djebel Berber**	**4.18**	**265**	Pg	**Pb**	**02 01 30.0**	**+3.2**
ETOS	**Mallorca**	**4.25**	**331**	⇓Pn	**Pn**	**02 01 19.4**	**+1.4**
	24nm,0.8s,SNR=18						
ETOS				Sn	**Sn**	**02 02 07.0**	**-0.7**
	6.6nm,0.9s						
EIBI	**Ibiza**	**4.41**	**313**	Pn	**Pn**	**02 01 21.3**	**+1.1**
	16nm,0.5s,SNR=19						
EIBI				Sn	**Sn**	**02 02 10.3**	**-1.3**
	7.9nm,0.9s						
EBEN2	**Beniarda presa**	**5.20**	**302**	Pn	**Pn**	**02 01 31.8**	**+0.8**
	14nm,0.7s,SNR=7.9						
EBEN2				Sn	**Sn**	**02 02 28.6**	**-2.6**
	17nm,1.0s,SNR=7.9						
ETRV	**Los Montesinos**	**5.35**	**293**	Sn	**Sn**	**02 02 31.7**	**-2.9**
	44nm,0.7s,SNR=7.9						
EMUR	**La Murta**	**5.65**	**290**	Pn	**Pn**	**02 01 36.9**	**-0.4**
	7.1nm,0.2s,SNR=44						
EMUR				Sn	**Sn**	**02 02 38.8**	**-3.5**
	11nm,1.3s						
ETOB	**Tobarra**	**6.15**	**297**	Pn	**Pn**	**02 01 44.9**	**+0.8**
	2.2nm,0.3s,SNR=20						
ETOB				Sn	**Sn**	**02 02 50.7**	**-3.8**
	0.7nm,0.9s						
CFON	**Fontmartina**	**6.17**	**338**	Pn	**Pn**	**02 01 45.2**	**+0.9**
	1.0nm,0.2s,SNR=7.5						
CFON				Sn	**Sn**	**02 02 52.5**	**-2.5**
	1.3nm,1.4s,SNR=7.9						
ECHE	**Chera**	**6.19**	**307**	Pn	**Pn**	**02 01 44.6**	**0.0**
	4.4nm,0.5s,SNR=7.9						
ECHE				Sn	**Sn**	**02 02 52.0**	**-3.5**
	2.3nm,0.9s,SNR=7.9						
ENIJ	**Nijar**	**6.24**	**281**	Pn	**Pn**	**02 01 44.0**	**-1.3**
	7.7nm,0.3s,SNR=7.9						
ENIJ				Sn	**Sn**	**02 02 52.0**	**-4.7**
	10nm,0.7s,SNR=7.9						
EPOB	**Poblet**	**6.30**	**328**	Pn	**Pn**	**02 01 47.1**	**+0.9**
	1.5nm,0.3s,SNR=7.9						
EPOB				Sn	**Sn**	**02 02 54.1**	**-4.1**
	1.4nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**6.35**	**314**	Pn	**Pn**	**02 01 47.7**	**+0.8**
	3.9nm,0.6s,SNR=7.6						
EMOS				Sn	**Sn**	**02 02 55.9**	**-3.6**
	3.0nm,0.7s						
EMIR	**Miracle**	**6.60**	**334**	Pn	**Pn**	**02 01 52.2**	**+2.0**
	7.3nm,0.3s,SNR=22						
EMIR				Sn	**Sn**	**02 03 03.4**	**-2.3**
	6.7nm,0.3s,SNR=14						
EJON	**La Jonquera**	**6.69**	**343**	Pn	**Pn**	**02 01 52.1**	**+0.7**
	0.9nm,0.2s,SNR=7.9						
EJON				Sn	**Sn**	**02 03 04.9**	**-2.8**
	1.4nm,0.8s,SNR=7.9						
SESP	**Santiago Espad**	**6.72**	**290**	Pn	**Pn**	**02 01 52.8**	**+0.8**
	9.9nm,0.3s,SNR=7.9						
SESP				Sn	**Sn**	**02 03 04.4**	**-4.3**
	5.4nm,0.8s,SNR=7.9						
SESP	**Santiago Espad**	**6.72**	**290**	P	**Pn**	**02 01 53.7**	**+1.7**
SESP				S	**Sn**	**02 03 09.6**	**+0.9**
SJAF	**Saint Jean de**	**6.72**	**344**	Pn	**Pn**	**02 01 52.6**	**+0.8**
	0.5nm,0.3s,SNR=7.9						
SJAF				Sn	**Sn**	**02 03 06.3**	**-2.3**
	1.4nm,1.0s,SNR=7.9						
EBER	**Berja**	**6.78**	**280**	Pn	**Pn**	**02 01 51.9**	**-1.0**
	7.6nm,0.3s,SNR=12						
JBK	**JBK**	**6.79**	**258**	P	**Pn**	**02 01 53.0**	**0.0**
JBK				S	**Sn**	**02 03 11.6**	**+1.1**
FIGM	**Figuig**	**6.81**	**237**	P	**Pn**	**02 01 52.4**	**-0.9**
FIGM				S	**Sn**	**02 03 07.0**	**-3.9**
CLLI	**Llivia**	**6.96**	**338**	Pn	**Pn**	**02 01 56.2**	**+0.9**
	3.2nm,0.5s,SNR=7.9						
GORA	**Gorafe**	**6.97**	**284**	Pn	**Pn**	**02 01 55.7**	**+0.3**
	5.5nm,0.2s,SNR=7.9						
PGF	**Pioggiola**	**7.04**	**22**	*e*Pn	**Pn**	**02 01 57.9**	**+1.6**
PGF				*e*Sn	**Sn**	**02 03 13.8**	**-2.7**
	1.8nm,0.3s						
PGF	**Pioggiola**	**7.04**	**22**	Pn	**Pn**	**02 01 57.9**	**+1.6**
PGF				Sn	**Sn**	**02 03 13.8**	**-2.7**
	0.9nm,0.3s						
EQES	**Quesada**	**7.05**	**287**	Pn	**Pn**	**02 01 57.0**	**+0.5**
	5.4nm,0.3s,SNR=27						
EQES				Sn	**Sn**	**02 03 12.3**	**-4.4**
	9.1nm,0.7s,SNR=7.9						
CSOR	**Sort**	**7.15**	**333**	Pn	**Pn**	**02 01 58.6**	**+0.8**
	1.9nm,0.3s,SNR=11						
CSOR				Sn	**Sn**	**02 03 15.9**	**-3.2**
	2.1nm,0.6s,SNR=7.9						
EQUE	**Quentar**	**7.25**	**282**	Pn	**Pn**	**02 01 59.0**	**-0.1**
	4.4nm,0.3s,SNR=16						
EQUE				Sn	**Sn**	**02 03 16.5**	**-5.0**
	1.0nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**7.30**	**323**	Pn	**Pn**	**02 02 00.4**	**+0.5**
	4.6nm,0.3s,SNR=4.5						
LMR	**La Mourre**	**7.31**	**6**	*e*Pn	**Pn**	**02 02 01.0**	**+1.0**
LMR				*e*Sn	**Sn**	**02 03 19.0**	**-4.0**
	8.2nm,0.6s						
LMR	**La Mourre**	**7.31**	**6**	Pn	**Pn**	**02 02 01.0**	**+1.0**
LMR				Sn	**Sn**	**02 03 19.0**	**-4.0**
	4.1nm,0.6s						
FRF	**La Foret Royal**	**7.55**	**7**	*e*Pn	**Pn**	**02 02 04.4**	**+1.2**
FRF				*e*Sn	**Sn**	**02 03 24.7**	**-4.2**
	3.1nm,0.5s						
FRF	**La Foret Royal**	**7.55**	**7**	Pn	**Pn**	**02 02 04.4**	**+1.2**
FRF				Sn	**Sn**	**02 03 24.7**	**-4.2**
	1.6nm,0.5s						
MTLF	**Montolieu**	**7.69**	**342**	*e*Pn	**Pn**	**02 02 06.1**	**+0.9**
MTLF				*e*Sn	**Sn**	**02 03 27.2**	**-5.2**
	0.8nm,0.3s						
MTLF	**Montolieu**	**7.69**	**342**	Pn	**Pn**	**02 02 06.1**	**+0.9**
MTLF				Sn	**Sn**	**02 03 27.2**	**-5.2**
	0.4nm,0.3s						
EGOR	**Sierra Gorda,**	**7.77**	**281**	Pn	**Pn**	**02 02 07.0**	**+0.6**
	3.5nm,0.3s,SNR=7.9						
EGOR				Sn	**Sn**	**02 03 27.6**	**-6.9**
	0.6nm,0.5s,SNR=7.9						
AKLM	**AKL**	**7.78**	**261**	P	**Pn**	**02 02 07.4**	**+1.0**
AKLM				S	**Sn**	**02 03 34.5**	**-0.1**
SMRF	**Simiane la Rot**	**7.91**	**1**	*e*Pn	**Pn**	**02 02 09.4**	**+1.2**
SMRF				*e*Sn	**Sn**	**02 03 33.1**	**-4.7**
	0.7nm,0.3s						
SMRF	**Simiane la Rot**	**7.91**	**1**	Pn	**Pn**	**02 02 09.4**	**+1.2**
SMRF				Sn	**Sn**	**02 03 33.1**	**-4.7**
	0.7nm,0.3s						
SBF	**Sospel**	**7.94**	**10**	*e*Pn	**Pn**	**02 02 10.3**	**+1.6**
SBF				*e*Sn	**Sn**	**02 03 34.3**	**-4.4**
	4.5nm,0.4s						
SBF	**Sospel**	**7.94**	**10**	Pn	**Pn**	**02 02 10.3**	**+1.6**
SBF				Sn	**Sn**	**02 03 34.3**	**-4.4**
	2.2nm,0.4s						
EPF	**Esparros**	**8.01**	**332**	*e*Pn	**Pn**	**02 02 09.7**	**+0.1**
EPF				*e*Sn	**Sn**	**02 03 34.4**	**-5.8**
	3.2nm,0.5s						
EPF	**Esparros**	**8.01**	**332**	Pn	**Pn**	**02 02 09.7**	**+0.1**
EPF				Sn	**Sn**	**02 03 34.4**	**-5.8**
	1.6nm,0.5s						
LASF	**Ste Croix**	**8.10**	**352**	*e*Pn	**Pn**	**02 02 11.7**	**+0.8**
LASF				*e*Sn	**Sn**	**02 03 37.3**	**-5.2**
	3.1nm,0.5s						
LASF	**Ste Croix**	**8.10**	**352**	Pn	**Pn**	**02 02 11.7**	**+0.8**
LASF				Sn	**Sn**	**02 03 37.3**	**-5.2**
	1.6nm,0.5s						
ETSF	**Etsaut**	**8.26**	**328**	*e*Pn	**Pn**	**02 02 13.8**	**+0.7**
ETSF				*e*Sn	**Sn**	**02 03 40.3**	**-6.3**
	2.4nm,0.4s						
ETSF	**Etsaut**	**8.26**	**328**	Pn	**Pn**	**02 02 13.8**	**+0.7**
ETSF				Sn	**Sn**	**02 03 40.3**	**-6.3**
	1.2nm,0.4s						
EMIJ	**Mijas**	**8.27**	**277**	Pn	**Pn**	**02 02 11.9**	**-1.3**
	0.7nm,0.8s,SNR=7.9						
ESDC	**Sonseca Array**	**8.28**	**299**	Pn	**Pn**	**02 02 12.2**	**-1.0**
	0.2nm,0.3s,baz=116,slow=13,SNR=4.2						
ESDC	**Sonseca Array**	**8.28**	**299**	Pn	**Pn**	**02 02 13.8**	**+0.5**
	0.3nm,0.3s,baz=120,slow=13,SNR=5.3						
EADA	**Adamuz**	**8.29**	**288**	Pn	**Pn**	**02 02 12.9**	**-0.5**
	1.3nm,0.5s,SNR=7.9						
PAB	**San Pablo**	**8.51**	**297**	Pn	**Pn**	**02 02 16.8**	**+0.4**
	0.5nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**8.60**	**325**	Pn	**Pn**	**02 02 19.0**	**+1.4**
	0.7nm,1.3s,SNR=7.9						
SJPF	**Ste Jean**	**8.73**	**326**	*e*Pn	**Pn**	**02 02 21.4**	**+2.0**
SJPF	**Ste Jean**	**8.73**	**326**	Pn	**Pn**	**02 02 21.4**	**+2.0**
HORN	**Hornachuelos**	**8.76**	**285**	P	**Pn**	**02 02 19.2**	**-0.7**
HORN				S	**Sn**	**02 03 52.2**	**-6.5**
GUD	**Guadarrama**	**8.83**	**304**	Pn	**Pn**	**02 02 20.6**	**-0.3**
	0.9nm,1.0s,SNR=7.9						
MDT	**Midelt**	**8.92**	**252**	Pn	**Pn**	**02 02 21.6**	**-0.5**
	0.3nm,0.3s,baz=63,slow=14,SNR=6.8						
MDT	**Midelt**	**8.92**	**252**	P	**Pn**	**02 02 22.5**	**+0.3**
MDT				S	Sn	02 03 53.5	-9.2
ECAB	**El Cabril**	**8.92**	**286**	Pn	**Pn**	**02 02 21.4**	**-0.8**
	3.2nm,0.5s,SNR=14						
EALK	**Alkurruntz**	**8.94**	**325**	Sn	**Sn**	**02 03 59.6**	**-3.6**
	44nm,1.5s,SNR=7.9						
MD31	**MD31**	**9.02**	**252**	P	**Pn**	**02 02 23.1**	**-0.3**
MD31				S	**Sn**	**02 03 56.8**	**-8.3**
CAF	**Calviac**	**9.23**	**345**	*e*Pn	**Pn**	**02 02 27.4**	**+1.1**
CAF	**Calviac**	**9.23**	**345**	Pn	**Pn**	**02 02 27.4**	**+1.1**
LFF	**La Frestale**	**9.57**	**339**	*e*Pn	**Pn**	**02 02 31.7**	**+0.8**
LFF				*e*Sn	**Sn**	**02 04 11.9**	**-6.6**
	12nm,1.0s						
LFF	**La Frestale**	**9.57**	**339**	Pn	**Pn**	**02 02 31.7**	**+0.8**
LFF				Sn	**Sn**	**02 04 11.9**	**-6.6**
	6.1nm,1.0s						
RJF	**Les Rejaudoux**	**9.71**	**343**	*e*Sn	Sn	02 04 10.9	-11
	2.9nm,0.7s						
EMIN	**Mina Concepcio**	**9.86**	**284**	Pn	**Pn**	**02 02 34.4**	**-0.6**
	2.7nm,1.2s,SNR=7.9						
ELAN	**Lanestosa**	**9.91**	**319**	Pn	**Pn**	**02 02 36.1**	**+0.5**
	3.8nm,0.8s,SNR=7.9						
BRTR	**Keskin Array B**	**22.50**	**72**	P	**P**	**02 05 14.7**	**+1.7**
	0.7nm,0.8s,baz=271,slow=9.7,SNR=4.3						
AKASG	**Malin Array Be**	**22.51**	**42**	P	**P**	**02 05 15.1**	**+2.4**
	0.9nm,0.5s,baz=239,slow=9.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**23.06**	**189**	P	**P**	**02 05 19.9**	**+1.1**
	6.0nm,0.4s,baz=3.7,slow=12,SNR=3.7						
HFS	**Hagfors**	**24.67**	**10**	LR	LR	02 14 53.9	
	comp=Z,15nm,19.6s,baz=318,slow=36						
MKAR	**Makanchi Array**	**56.45**	**53**	P	**P**	**02 09 56.4**	**+1.4**
	0.4nm,0.7s,baz=282,slow=7.2,SNR=3.1						

ISCJB ***07*** *03:11:13.0±0.5, 20°.45S±0°.03×69°.03W±0°.09, h115^{km}±6^{km}, mb4.8/1, Error ellipse: s-maj=13.6km s-min=4.5km az=5.3*

IDC ***07*** *03:11:14.8±1.8, 20°.48S×68°.80W, h115^{km}±14^{km}, mb3.4/2, mb1 3.5/5, mb1mx3.2/30, mbtmp3.9/5, Error ellipse: s-maj=40.6km s-min=14.0km az=107.0*

GUC ***07*** *03:11:14.1±0.8, 20°.46S×69°.06W, h101^{km}±4^{km}, ML3.8*

ISC 07 03:11:13.3±0.9**, 20°.44S**±0°.04×**69°.04W**±0°.08**, h109**^{km}±8^{km}**, n19,** σ1^{s}**04**/32**, 5C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.32**	**340**	⇓*i*P	**Pn**	**03 11 29.9**	**+0.3**
PB08				*e*S	**Sn**	**03 11 41.5**	**-0.2**
PB08				IAML		03 11 43.1	
	comp=E,4μm,0.3s						
PB01	**IPOC Station P**	**0.73**	**215**	⇑*i*P	**Pn**	**03 11 32.1**	**+0.1**
PB01				*e*S	**Sn**	**03 11 45.9**	**-0.1**
PB01				IAML		03 11 47.3	
	comp=N,4μm,0.2s						
GO01	**Chusmiza**	**0.78**	**349**	⇓*i*P	**Pn**	**03 11 33.4**	**+0.5**
GO01				*e*S	**Sn**	**03 11 48.2**	**+0.7**
GO01				IAML		03 11 51.0	
	comp=N,9μm,0.2s						
PB11	**IPOC Station P**	**0.89**	**319**	⇓*i*P	**Pn**	**03 11 34.2**	**+0.6**

PB11				eS	Sn	03 11 49.4	+0.6
PB02	IPOC Station P	1.19	222	⇑iP	Pn	03 11 37.1	+0.5
PB02				eS	Sn	03 11 54.6	+0.4
PB02				IAML		03 11 56.6	
	comp=E,5µm,0.5s						
PSGC	Pisagua	1.32	309	⇓iP	Pn	03 11 38.7	+0.6
PSGC				eS	Sn	03 11 57.4	+0.5
PSGC				IAML		03 12 00.2	
	comp=N,1µm,0.4s						
PB09	IPOC Station P	1.36	188	⇑iP	Pn	03 11 39.3	+0.6
PB09				eS	Sn	03 11 58.3	+0.4
MNMC	Minye Minye	1.41	338	⇓iP	Pn	03 11 40.6	+1.3
MNMC				eS	Sn	03 12 00.2	+1.3
MNMC				IAML		03 12 06.8	
	comp=N,4µm,0.2s						
PB07	IPOC Station P	1.51	212	⇑iP	Pn	03 11 40.6	+0.2
PB07				eS	Sn	03 12 00.8	0.0
PB07				IAML		03 12 05.0	
	comp=E,1µm,0.3s						
PB03	IPOC Station P	1.73	203	⇑iP	Pn	03 11 43.2	+0.1
PB03				eS	Sn	03 12 05.3	-0.5
PB03				IAML		03 12 06.0	
	comp=E,767nm,0.2s						
PB04	IPOC Station P	2.15	209	⇓iP	Pn	03 11 49.2	+0.9
PB04				eS	Sn	03 12 14.8	-0.4
PB04				IAML		03 12 21.3	
	comp=N,473nm,0.2s						
LVC	Limon Verde	2.16	177	P	Pn	03 11 49.9	+1.2
	comp=N,25nm,0.3s,baz=358,slow=12,SNR=169						
LVC				S	Sn	03 12 17.2	+1.5
	comp=N,97nm,0.3s,baz=125,slow=22,SNR=34						
LVC	Limon Verde	2.16	177	iP	Pn	03 11 50.2	+1.5
LVC				eS	Sn	03 12 17.0	+1.3
LPAZ	La Paz	4.22	12	P	Pn	03 12 18.7	+2.5
	comp=N,2.4nm,0.3s,baz=198,slow=5.4,SNR=74						
LPAZ				S	Sn	03 13 04.3	-0.5
	comp=N,0.4nm,0.3s,baz=234,slow=19,SNR=1.9						
SIV	San Ignacio	8.77	61	P	Pn	03 13 15.1	-2.2
	comp=N,2.4nm,0.3s,baz=258,slow=12,SNR=56						
PLCA	Paso Flores	20.27	183	P	Pn	03 15 41.8	-1.4
	comp=N,3.9nm,0.9s,baz=24,slow=14,SNR=5.8						
BDFB	Brasilia	20.55	80	P	P	03 15 42.2	-1.3
	comp=N,1.3nm,0.4s,baz=225,slow=8.6,SNR=3.5						
TORD	Torodi Ar. Bea	77.11	71	P	P	03 22 55.5	+0.1
	comp=N,7.5nm,0.3s,baz=245,slow=5.4,SNR=41						
WRA	Warramunga Arr	133.80	211	PKP	PKPdf	03 30 16.9	-1.3
	comp=N,1.3nm,0.9s,baz=129,slow=2.7,SNR=2.6						

ANF ***07*** *03:38:08.1±1.9, 32°.24N×115°.17W, ML2.3/9, Error ellipse: s-maj=13.8km s-min=6.3km az=171.0*
ISCJB ***07*** *03:38:12.9±0.8, 32°.42N±0°.04×115°.21W±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=6.7km s-min=5.3km az=139.5*
SCEDC ***07*** *03:38:13.7, 32°.43N×115°.23W*
ECX ***07*** *03:38:14.2±0.6, 32°.40N×115°.20W, h6^{km}, MD2.4, ML2.6*
ISC 07 03:38:12.8±1.0**, 32°.45N**±0°.05×**115°.22W**±0°.04**, h15**^{km}±6^{km}**, n16, σ0^s.82**/24**, 2C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.07	245	eP	Pg	03 38 15.8	+0.1
CPBX				eS	Sg	03 38 17.6	0.0
CPBX				IAML		03 38 19.3	
	comp=N,8µm,0.2s						
CPBX				⇓e		03 38 19.3	
CPBX				⇑e		03 38 20.5	
CPBX				IAML		03 38 20.5	
	comp=E,17µm,0.3s						
GLA	Glamis	0.69	29	P	Pb	03 38 26.8	+0.2
	baz=209,SNR=23						
GLA				S	Sb	03 38 37.1	+1.2
	baz=209						
SWSC	Sam W. Stewart	0.69	316	P	Pb	03 38 26.7	+0.1
	baz=137,SNR=22						
SWSC				S	Sb	03 38 37.7	+1.7
	baz=137						
RMX	La Rumorosa	0.74	282	eP	Pg	03 38 27.1	-0.1
RMX				eS	Sg	03 38 36.5	-0.4
IKP	In-Ko-Pah, Jac	0.77	285	P	Pb	03 38 28.2	+0.1
	baz=106,SNR=41						
IKP				S	Sb	03 38 38.9	+0.5
	baz=106						
IKP	In-Ko-Pah, Jac	0.77	285	eP	Pb	03 38 28.4	+0.3
MONP2	Monument Peak	1.10	294	P	Pb	03 38 33.2	-0.5
	baz=114,SNR=20						
MONP2				S	Sg	03 38 48.6	0.0
	baz=114						
MONP2	Monument Peak	1.10	294	eP	Pb	03 38 33.3	-0.5
BC3	Big Chuckawall	1.22	351	P	Pn	03 38 35.0	-0.5
	baz=171						
CBX	Cerro Bola	1.23	264	eP	Pn	03 38 35.7	+0.2
CBX				eS	Sn	03 38 52.5	+0.6
CBX				⇓e		03 38 56.2	
CBX				IAML		03 38 56.2	
	comp=N,122nm,0.4s						
BAR	Barrett	1.25	281	eP	Pg	03 38 36.5	-0.2
SPX	San Pedro Mart	1.41	188	eP	Pn	03 38 37.8	-0.5
SPX				eS	Sn	03 38 56.5	-0.4
SPX				⇓e		03 38 57.3	
SPX				IAML		03 38 57.3	
	comp=E,55nm,0.4s						
SPX				⇑e		03 38 59.1	
SPX				IAML		03 38 59.1	
	comp=N,48nm,0.3s						
Y12C	Blythe	1.43	24	Sb	Sg	03 38 59.3	+0.6
	baz=204						
PFO	Pinyon Flats O	1.56	319	P	Pn	03 38 38.6	-1.5
	baz=138						
109C	Camp Elliot, M	1.65	286	Sb	Sb	03 39 04.6	+1.2
	baz=106						
IRM	Iron Mountain	1.71	2	P	Pn	03 38 40.4	-1.7
	baz=182						

NIED ***07*** *03:38:00, 31°.30N×142°.00E, h5^{km}, Mw3.9 Best double couple: M$_0$9.42000×10^{14} NP1:φ$_s$42.00000°, δ24.00000°, λ146.00000°. NP2:φ$_s$164.00000°, δ77.00000°, λ70.00000°.*
IDC ***07*** *03:38:36.3±0.6, 31°.27N×141°.96E, h0^{km}, mb4.1/18, mb1 4.2/22, mb1mx4.1/41, mbtmp4.0/22, ML3.6/3, MS3.0/5, Ms1 3.0/5, ms1mx2.6/35, Error ellipse: s-maj=18.2km s-min=15.9km az=69.0*
JMA ***07*** *03:38:38.6±0.2, 31°.32N×142°.01E, h65^{km}, M4.0*
BJI ***07*** *03:38:38.9±0.0, 31°.13N×141°.94E, h35^{km}, mb4.5/27, mB4.8/18, Ms4.1/7, Ms7 3.9/2*
ISCJB ***07*** *03:38:39.8±0.3, 31°.32N±0°.03×141°.80E±0°.05, h29^{km}, mb4.5/66, Error ellipse: s-maj=6.5km s-min=3.9km az=144.1*
MOS ***07*** *03:38:40.3±1.1, 31°.31N×141°.87E, h37^{km}, mb4.6/21, Error ellipse: s-maj=14.6km s-min=6.1km az=111.8*
NEIC ***07*** *03:38:41.4±1.3, 31°.29N×141°.88E, h30^{km}±5^{km}, mb4.6/36, Error ellipse: s-maj=13.9km s-min=13.3km az=127.0*
ISC 07 03:38:41.0±0.5**, 31°.36N**±0°.05×**141°.94E**±0°.07**, h29**^{km}**, n130, σ1^s.57**/142**, mb4.6**/66**, 10C-4D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.51	315	ePn	Pn	03 39 20.0	+0.1
JHJ	Hachijo jima 2	2.54	314	Pn	Pn	03 39 19.6	-0.6
	23nm,0.3s,baz=80,slow=21,SNR=6.3						
JHJ				Sn	Sn	03 39 45.0	-5.1
	22nm,0.3s,baz=227,slow=21,SNR=3.2						
BSO1	Boso 1	3.38	346	P	Pn	03 39 30.9	-0.5
BSO3	Boso 3	3.64	341	P	Pn	03 39 35.1	0.0
CBIJ	Chichi jima	4.25	177	S	Sn	03 40 28.8	-3.8
JHU	Hanno	5.00	334	P	Pn	03 39 53.8	-0.3
JHU				S	Sn	03 40 52.4	+1.5
JRY	Ryogami san	5.29	332	S	Sn	03 40 58.3	+0.1
JAG	Ashikaga	5.46	338	P	Pn	03 40 00.0	-0.4
JAG				S	Sn	03 41 02.0	-0.3
MJAR	Matsushiro Arr	6.03	330	Pn	Pn	03 40 09.0	+0.7
	1.0nm,0.3s,baz=153,slow=11,SNR=71						
MJAR				Sn	Sn	03 41 17.1	+0.8
	0.2nm,0.3s,baz=168,slow=20,SNR=4.7						
MJAR				LR	LR	03 42 38.1	
	comp=Z,79nm,18.6s,baz=115,slow=40						
MAJO	Matsushiro	6.03	330	ePn	Pn	03 40 08.8	+0.5
MAJO				eSn	Sn	03 41 17.1	+0.8
MAJO	Matsushiro	6.03	330	deP	Pn	03 40 08.9	+0.6
MAT	Matsushiro	6.03	330	P	Pn	03 40 09.3	+1.0
MAT				S	Sn	03 41 17.1	+0.8
MJB9	Matsu-Tunnel	6.03	330	ePn	Pn	03 40 08.9	+0.5
JNU	Nakatsue	9.54	284	LR	LR	03 44 43.6	
	comp=Z,89nm,18.4s,baz=349,slow=38						
ASAJ	Asahikawa	12.75	2	Pn	Pn	03 41 36.6	-3.6
	0.7nm,0.3s,baz=210,slow=5.7,SNR=7.3						
ASAJ				Sn	Sn	03 43 55.8	-5.3
	0.3nm,0.3s,baz=198,slow=20,SNR=2.8						
YUK	Yuzh-Kuril'sk	13.03	13	P	P	03 41 54.2	+0.1
KSRS	Korea Array	13.07	302	Pn	Pn	03 41 47.2	+2.6
	0.2nm,0.3s,baz=113,slow=12,SNR=8.3						
KSRS				LR	LR	03 46 35.7	
	comp=Z,74nm,19.0s,baz=126,slow=36						
KS15	Wonju Array Si	13.09	301	ePn	Pn	03 41 47.2	+2.2
VLA	Vladivostok	14.20	329	⇑eP	Pn	03 42 01.0	+1.0
USRK	Ussuriysk Ar.	15.03	331	Pn	Pn	03 42 12.2	+1.0
	0.1nm,0.3s,baz=144,slow=12,SNR=4.1						
YSS	Yuzh-Sakhalins	15.59	2	eP	P	03 42 21.6	-0.9
CN2	Changchun	17.99	318	eP	P	03 42 50.2	+1.0
CN2				esP	pwP	03 43 02.7	-0.8
CN2				eS	Sn	03 46 07.0	-1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,150nm,11.0s						
CN2				LR	LR		
	comp=E,130nm,11.0s						
CN2				LR	LR		
	comp=Z,150nm,12.0s						
KLR	Kul'dur	19.44	340	P	P	03 43 04.7	-0.4
	0.4nm,0.3s,baz=160,slow=6.1,SNR=6.6						
KLR	Kul'dur	19.44	340	⇑eP	P	03 43 05.6	+0.6
NJ2	Nanjing	19.66	278	eP	P	03 43 07.7	+0.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GRNR	Gornyy	19.82	350	eP	P	03 43 09.0	-0.2
SSLB	Suanglung	20.06	253	eP	P	03 43 11.1	-0.9
	20nm,1.1s						
BJI	Beijing	22.59	300	P	P	03 43 38.8	-0.3
BJI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HIA	Hailar	24.48	323	⇓eP	P	03 43 57.4	-0.1
HIA				pmax	pmax		
	comp=Z,78nm,1.1s						
ZEA	Zeya	24.75	339	eP	P	03 44 00.5	+0.6
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
ULN	Ulaanbaatar	31.20	312	⇑eP	P	03 44 56.8	-1.0
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONA0	Songino Array	31.61	312	eP	P	03 45 02.2	+0.8
SONM	Songino Array	31.61	312	P	P	03 45 02.2	+0.8
	comp=Z,2.5nm,0.6s,baz=112,slow=6.6,SNR=12						
SONM				LR	LR	03 57 57.0	
	comp=Z,24nm,18.7s,baz=72,slow=37						
YAK	Yakutsk	31.70	349	⇓eP	P	03 45 02.2	+0.4
YAK				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH	Lanzhou	31.90	289	eP	P	03 45 04.2	+0.1
LZH				pP	sP	03 45 15.9	+2.3
LZH				sP	pwP	03 45 18.4	-0.3
LZH				PP	PP	03 46 09.2	-7.1
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,96nm,4.9s						
LZH				LR	LR		
	comp=Z,360nm,12.9s						
LZH				LR	LR		
	comp=Z,370nm,13.3s						
LZH				LR	LR		
	comp=Z,420nm,15.5s						
SEY	Seymchan	32.29	9	P	P	03 45 07.4	+0.4
	comp=Z,1.6nm,0.5s,baz=175,slow=7.0,SNR=7.5						
CD2	Chengdu	32.58	279	eP	P	03 45 08.5	-1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TLY	Talaya	34.59	317	eP	P	03 45 32.9	+5.7
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,86nm,8.0s						
KMI	Kunming	34.96	270	P	P	03 45 26.4	-4.5
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
BILL	Bilibino	39.37	14	⇑eP	P	03 46 08.3	+0.7
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CM31	Chiang Mai Arr	40.81	262	eP	P	03 46 19.8	-0.4
	comp=Z,3.8nm,0.8s						
CMAR	Chiang Mai Arr	40.81	262	P	P	03 46 19.8	-0.4
	comp=Z,0.6nm,0.3s,baz=60,slow=5.4,SNR=4.9						
WMQ	Urumqi	44.02	302	eP	P	03 46 47.5	+1.4
WMQ				pP	sP	03 46 55.4	-0.3
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,57nm,4.3s						
DGZ	Jazzator, Alta	44.25	311	ceP	P	03 46 49.3	+1.4
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZALV	Zalesovo Beam	46.20	317	P	P	03 47 03.3	+0.2
	comp=Z,1.0nm,0.3s,baz=105,slow=9.1,SNR=4.7						
ZALV				PcP	PcP	03 48 38.1	-0.3
	comp=Z,1.4nm,0.3s,baz=90,slow=2.7,SNR=4.5						
ZAA1	Zalesovo Array	46.20	317	eP	P	03 47 03.3	+0.2
ZAA1				ePcP	PcP	03 48 38.1	-0.3
MK31	Makanchi Array	47.68	307	eP	P	03 47 15.2	+0.3
	comp=Z,6.3nm,1.8s						
MK31	Makanchi Array	47.68	307	eP	P	03 47 15.2	+0.3
MK31				pmax	pmax		
	comp=Z,6.0nm,1.8s						
MK32	Makanchi Array	47.68	307	eP	P	03 47 15.0	+0.1
MKAR	Makanchi Array	47.68	307	P	P	03 47 15.0	+0.1
	comp=Z,1.2nm,0.5s,baz=89,slow=11,SNR=11						
MKAR	Makanchi Array	47.68	307	ceP	P	03 47 15.3	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MAKZ	Makanchi	47.90	307	eP	P	03 47 16.7	+0.2
	comp=Z,2.6nm,0.6s						
MAKZ	Makanchi	47.90	307	eP	P	03 47 16.7	+0.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	49.92	312	eP	P	03 47 31.8	-0.1
	comp=Z,5.5nm,0.9s						
KURK	Kurchatov	49.92	312	c iP	P	03 47 32.0	+0.1
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURBB	Kurchatov Arra	49.98	312	P	P	03 47 32.4	0.0
	comp=Z,2.6nm,0.5s,baz=89,slow=6.9,SNR=27						
WRAB	Tennant Creek	51.52	189	⇑eP	P	03 47 44.2	0.0
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WR1	Warramunga Arr	51.53	189	eP	P	03 47 42.9	-1.4
WRA	Warramunga Arr	51.53	189	P	P	03 47 42.9	-1.4
	comp=Z,1.5nm,0.3s,baz=0.0,slow=7.6,SNR=22						
KSH	Kashi	53.30	298	P	P	03 48 01.3	+3.8
KSH				sP	pwP	03 48 15.4	+3.1
KSH				PcP	PcP	03 49 06.5	+1.6
KSH				PP	PP	03 50 03.1	+5.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,77nm,5.3s						
KSH				LR	LR		
	comp=Z,93nm,8.1s						
KSH				LR	LR		
	comp=Z,86nm,7.0s						
AAK	Ala-Archa	53.73	302	⇑eP	P	03 48 00.1	-0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SCM	Sheep Creek Mo	53.86	34	eP	P	03 48 00.5	-0.7
	comp=Z,14nm,0.6s						
SCM	Sheep Creek Mo	53.86	34	eP	P	03 48 00.5	-0.7
SCM				pmax	pmax		
	comp=Z,14nm,0.6s						
ILAR	Eielson Array	54.11	30	P	P	03 48 02.4	-0.5
	comp=Z,1.4nm,0.9s,baz=256,slow=6.2,SNR=12						
ILB	Eielson Array	54.11	30	eP	P	03 48 02.4	-0.5
	comp=Z,8.4nm,1.8s						
AS31	Alice Springs	55.25	189	eP	P	03 48 10.8	-0.8
	comp=Z,1.4nm,0.5s						
ASAR	Alice Springs	55.25	189	P	P	03 48 10.9	-0.8
	comp=Z,1.3nm,0.5s,baz=12,slow=8.4,SNR=24						
KK31	Karatay Array	56.49	304	eP	P	03 48 20.8	+0.4
	comp=Z,5.5nm,0.8s						
KK31	Karatay Array	56.49	304	eP	P	03 48 20.8	+0.4
KK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKAR	Karatay Array	56.49	304	eP	P	03 48 20.8	+0.4
	comp=Z,5.5nm,0.8s						
KKAR	Karatay Array	56.49	304	eP	P	03 48 20.8	+0.4
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EPYK	Eagle Plains	58.27	28	eP	P	03 48 33.6	+0.9
	comp=Z,10nm,1.4s						
ARU	Arti	60.96	321	eP	P	03 48 51.2	0.0
	comp=Z,6.6nm,1.0s						
ARU	Arti	60.96	321	d iP	P	03 48 51.3	0.0
ARU						03 49 32.2	
ARU				S	S	03 57 10.0	+2.5
ARU				SS	SS	04 01 00.3	-6.3
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ABKAR	Akbulak array	62.02	313	eP	P	03 48 58.9	+0.3
	comp=Z,2.3nm,0.6s						
YKA	Yellowknife Ar	68.52	29	P	P	03 49 40.6	+0.2
	comp=Z,0.3nm,0.7s,baz=299,slow=6.3,SNR=2.9						
YKB5	Yellowknife Ar	68.52	29	eP	P	03 49 40.6	+0.2
ARA0	ARCESS Array S	69.46	340	eP	P	03 49 47.0	+0.8
ARCES	ARCESS Array B	69.46	340	P	P	03 49 47.0	+0.8
	comp=Z,1.8nm,0.8s,baz=72,slow=8.6,SNR=6.8						
YBH	Yreka Blue Hor	73.52	51	LR	LR	04 16 16.3	
	comp=Z,21nm,19.8s,baz=270,slow=31						
FIA0	FINESS Array S	74.05	333	eP	P	03 50 14.1	+0.3
FIA0	FINESS Array S	74.05	333	eP	P	03 50 14.1	+0.3
FINES	FINESS Array B	74.05	333	P	P	03 50 14.1	+0.3
	comp=Z,0.9nm,0.4s,baz=73,slow=4.8,SNR=14						
KIV	Kislovodsk	75.00	312	eP	P	03 50 19.9	+0.1
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LRM	Limekiln Ridge	77.92	44	eP	P	03 50 35.8	-0.8
NV01	Mina Array Sit	78.07	52	eP	P	03 50 38.0	+0.5
NVAR	Mina Array Bea	78.07	52	P	P	03 50 38.0	+0.5
	comp=Z,1.0nm,0.7s,baz=288,slow=5.9,SNR=9.8						
AKASG	Malin Array Be	79.07	323	P	P	03 50 43.1	+0.6
	comp=Z,0.3nm,0.3s,baz=48,slow=5.0,SNR=4.5						
AKBB	Malin Array Si	79.07	323	eP	P	03 50 43.1	+0.6
	comp=Z,18nm,1.9s						
AKBB	Malin Array Si	79.07	323	eP	P	03 50 43.1	+0.6
AKBB				pmax	pmax		
	comp=Z,18nm,1.9s						
NB2	NORSAR Subarra	79.59	338	P	P	03 50 44.9	-0.2
	comp=Z,0.3nm,0.4s,baz=40,slow=5.3						
NB200	NORSAR Array S	79.59	338	eP	P	03 50 45.0	-0.2
NOA	NORSAR Array B	79.59	338	P	P	03 50 45.0	-0.2
	comp=Z,0.9nm,0.7s,baz=42,slow=5.3,SNR=5.6						
NOA	NORSAR Array B	79.59	338	P	P	03 50 45.0	-0.2
PD31	Pinedale Array	81.34	45	eP	P	03 50 55.0	-0.2
	comp=Z,1.2nm,0.8s						
PDAR	Pinedale Array	81.34	45	P	P	03 50 55.0	-0.2
	comp=Z,0.5nm,0.7s,baz=252,slow=1.4,SNR=5.1						
SZCU	Shurtz Canyon	82.00	51	eP	P	03 50 59.8	+1.1
	comp=Z,25nm,1.2s						
LCMT	Little Creek M	82.22	51	eP	P	03 51 01.4	+1.6
	comp=Z,1.9nm,0.8s						
P17A	Butcher Ranch,	82.48	48	eP	P	03 51 01.2	+0.1
	comp=Z,3.7nm,0.8s						
KNB	Kanab	82.50	51	eP	P	03 51 02.7	+1.4
	comp=Z,4.0nm,0.9s						
KNB	Kanab	82.50	51	eP	P	03 51 02.7	+1.4
KNB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
Q16A	Castle Valley	82.52	49	eP	P	03 51 03.1	+1.7
	comp=Z,4.7nm,1.1s						
SRU	San Rafael Swe	82.83	48	eP	P	03 51 03.8	+0.8
	comp=Z,3.7nm,0.7s						
SRU	San Rafael Swe	82.83	48	eP	P	03 51 03.8	+0.8
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BR101	Keskin Array S	82.97	312	eP	P	03 51 04.0	+0.4
BRTR	Keskin Array B	82.97	312	P	P	03 51 04.0	+0.4
	comp=Z,1.7nm,1.1s,baz=100,slow=3.0,SNR=7.4						
BRTR	Keskin Array B	82.97	312	ceP	P	03 51 05.5	+1.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RAYN	Ar Rayn	83.25	293	eP	P	03 51 05.5	+0.2
	comp=Z,4.5nm,1.0s						
RAYN	Ar Rayn	83.25	293	eP	P	03 51 05.5	+0.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PV23	Carpenter Ridg	84.17	48	eP	P	03 51 11.0	+1.0
	comp=Z,8.5nm,0.9s						
PV10	Paradox Valley	84.20	48	eP	P	03 51 11.8	+1.7
	comp=Z,14nm,0.9s						
PV14	Lion Creek, Pa	84.21	48	eP	P	03 51 11.0	+0.8
	comp=Z,6.8nm,0.8s						
PV20	West Nyswonger	84.27	48	eP	P	03 51 11.1	+0.7
	comp=Z,13nm,1.3s						
PV04	Paradox Valley	84.28	48	eP	P	03 51 11.5	+1.1
	comp=Z,11nm,1.3s						
WUAZ	Wupatki	84.31	52	eP	P	03 51 12.1	+1.5
	comp=Z,4.3nm,0.9s						
PV16	Nyswonger Mesa	84.32	48	eP	P	03 51 11.6	+0.9
	comp=Z,6.3nm,1.0s						
PV11	David Mesa, Pa	84.35	48	eP	P	03 51 12.3	+1.4
	comp=Z,14nm,1.3s						
PV18	Skein Mesa, Pa	84.36	48	eP	P	03 51 11.6	+0.7
	comp=Z,13nm,1.2s						
PV12	Saucer Basin,	84.38	48	eP	P	03 51 12.5	+1.5
	comp=Z,6.3nm,0.9s						
PV03	Paradox Valley	84.39	48	eP	P	03 51 12.2	+1.2
	comp=Z,5.3nm,0.9s						
PV01	Paradox Valley	84.64	48	eP	P	03 51 13.6	+1.2
	comp=Z,7.5nm,1.3s						
VYHS	Vyhne	85.65	326	eP	P	03 51 18.9	+2.0
VYHS	Vyhne	85.65	326	eP	P	03 51 18.9	+2.0
CLL	Collm	86.24	331	iP	P	03 51 18.9	-0.8
CLL				pmax	pmax		
	comp=Z,23nm,2.3s						
CLL	Collm	86.24	331	iP	P	03 51 18.9	-0.8
	comp=Z,23nm,2.3s						
TX31	Lajitas Ar. Si	93.21	53	eP	P	03 51 54.2	+1.0
	comp=Z,5.6nm,1.1s						
TXAR	Lajitas Array	93.21	53	P	P	03 51 53.8	+0.6
	comp=Z,2.2nm,0.7s,baz=306,slow=3.1,SNR=25						
TOA1	Torodi Ar. Sit	121.58	313	ePKPdf	PKPdf	03 57 31.0	-1.5
TORD	Torodi Ar. Bea	121.58	313	PKP	PKPdf	03 57 31.0	-1.5
	comp=Z,0.4nm,1.1s,baz=63,slow=1.8,SNR=2.9						
LPAZ	La Paz	148.79	68	PKPbc	PKiKP	03 58 28.5	0.0
	comp=Z,1.3nm,0.7s,baz=323,slow=2.8,SNR=4.7						

SVSA 07 03:52:15.6±0.9**, 38°.60N**×**26°.80W, h5**^{km}±3^{km}**, MD3.5, ML2.5, 1C, Error ellipse: s-maj=7.2km s-min=1.2km az=28.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	Serra do Cume	0.27	292	eP	Pg	03 52 20.8	0.0
PSCM				eS	Sg	03 52 24.4	0.0
PSCM				A	A	03 52 32.9	
	385nm,0.5s						
ADH	Angra Heroismo	0.34	279	eP	Pg	03 52 21.6	-0.7
ADH				eS	Sg	03 52 26.3	-0.5
ADH				A	A	03 52 28.7	
	200nm,0.2s						
PMAN	Manadas	1.01	272	eP	Pg	03 52 31.8	-3.2
PMAN				eS	Sg	03 52 43.6	-4.5
PMAN				A	A	03 52 46.2	
	42nm,0.1s						
PGRA	Graciosa	1.02	295	eP	Pg	03 52 31.9	-3.2
PGRA				eS	Sg	03 52 43.6	-4.7
PGRA				A	A	03 52 49.4	
	38nm,0.4s						
ROSA	Rosais	1.14	276	eP	Pg	03 52 33.2	-4.2
ROSA				eS	Sg	03 52 46.8	-5.3
ROSA				A	A	03 52 47.5	
	51nm,0.2s						
PSET	Sete Cidades	1.15	132	eP	Pg	03 52 33.5	-4.2
PSET				eS	Sg	03 52 47.1	-5.5
PSET				A	A	03 52 48.0	
	45nm,0.3s						
PDA	Ponta Delgada	1.24	133	eP	Pg	03 52 34.7	-4.6
PDA				eS	Sg	03 52 49.3	-6.0
PDA				A	A	03 52 53.3	
	54nm,0.3s						
PICO	Pico	1.28	266	eP	Pg	03 52 35.5	-4.6
PICO				eS	Sg	03 52 50.0	-6.7
PICO				A	A	03 52 52.6	
	25nm,0.2s						
CMLA	Cha da Macela	1.31	129	eP	Pn	03 52 35.6	-5.0

CMLA				*e*S	Sg	03 52 50.7	-6.9
CMLA				A	A	03 52 54.4	
	83nm,0.1s						
PCALD	**Caldeiras da R**	**1.31**	**127**	*e*S	Sg	03 52 50.9	-6.7
PCALD				A	A	03 52 53.2	
	43nm,0.1s						
PCAN	**Candelaria**	**1.33**	**265**	*e*P	Pn	03 52 35.7	-5.2
PCAN				*e*S	Sg	03 52 51.5	-6.8
PCAN				A	A	03 52 57.6	
	18nm,0.2s						
PCED	**Cedros**	**1.49**	**272**⇑	*e*P	Pn	03 52 37.7	-5.4
PCED				*e*S	Sn	03 52 55.4	-7.5
PCED				A	A	03 53 03.0	
	26nm,0.6s						
CALA	**Caldeira**	**1.49**	**270**	*e*P	Pn	03 52 38.4	-4.8
CALA				*e*S	Sn	03 52 55.3	-7.8
BART	**Pico Bartolome**	**1.52**	**122**	*e*P	Pn	03 52 38.6	-5.0
BART				*e*S	Sn	03 52 56.2	-7.7
BART				A	A	03 53 02.8	
	19nm,0.5s						
PSMA	**Santa Maria**	**2.08**	**140**	*e*P	Pn	03 52 46.1	-5.1
PSMA				*e*S	Sn	03 53 09.6	-7.8
PSMA				A	A	03 53 11.2	
	13nm,0.2s						
PSMN	**Pico do Norte,**	**2.10**	**139**	*e*P	Pn	03 52 47.2	-4.3
PSMN				*e*S	Sn	03 53 09.8	-8.3
PSMN				A	A	03 53 12.2	
	12nm,0.3s						

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*TAP **07** 03:53:58.0, 24°.78N×122°.84E, h138^{km}±1^{km}, ML3.2, B*
*ISCJB **07** 03:53:58.3±0.5, 24°.76N±0°.04×122°.87E±0°.02, h127^{km}±4^{km}, Error ellipse: s-maj=7.3km s-min=2.6km az=176.8*
*JMA **07** 03:53:58.3±0.2, 24°.93N×122°.90E, h127^{km}±2^{km}, M3.0*
ISC 07 03:53:58.0±1.6**, 24°.78N**±0°.06×**122°.87E**±0°.03**, h134**^{km}±9^{km}**, n52, σ0^{s}.61**/93**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.33**	**168**	P	**Pn**	**03 54 17.0**	**+0.2**
JYNG				*e*S	**Sn**	**03 54 31.0**	**0.0**
YOJ	**Yonaguni jima**	**0.34**	**157**	*e*P	**Pn**	**03 54 16.9**	**+0.1**
	baz=154						
YOJ				*e*S	**Sn**	**03 54 31.7**	**+0.7**
	baz=154						
YOJ	**Yonaguni jima**	**0.34**	**157**	P	**Pn**	**03 54 17.1**	**+0.3**
YOJ				*e*S	**Sn**	**03 54 31.4**	**+0.4**
EOS1	**EOS1**	**0.71**	**251**	*e*P	**Pn**	**03 54 18.8**	**0.0**
	baz=250						
EOS1				*e*S	**Sn**	**03 54 35.0**	**+0.4**
	baz=250						
TWB1	**Santiao Chiao**	**0.83**	**286**	P	**Pn**	**03 54 20.2**	**+0.4**
	baz=286						
TWB1				*e*S	**Sn**	**03 54 36.3**	**0.0**
	baz=286						
IRIF	**Iriomote-Funau**	**0.90**	**119**	P	**Pn**	**03 54 20.6**	**+0.2**
IRIF				S	**Sn**	**03 54 37.3**	**-0.1**
TWC	**Suao**	**0.94**	**260**	P	**Pn**	**03 54 20.6**	**-0.2**
	baz=259						
TWC				S	**Sn**	**03 54 37.3**	**-0.7**
	baz=259						
TIPB	**Shuangxi**	**0.97**	**282**	*e*P	**Pn**	**03 54 21.1**	**+0.1**
	baz=281						
TIPB				*e*S	**Sn**	**03 54 37.5**	**-0.9**
	baz=281						
NWF	**Wu-fen Shan**	**1.03**	**287**	P	**Pn**	**03 54 21.8**	**+0.2**
	baz=286						
WFSB	**Wu-fen Shan**	**1.03**	**287**	*e*P	**Pn**	**03 54 21.9**	**+0.4**
	baz=286						
NANB	**Nanao**	**1.07**	**251**	*e*P	**Pn**	**03 54 22.1**	**+0.1**
	baz=250						
NANB				*e*S	**Sn**	**03 54 40.4**	**+0.2**
	baz=250						
ENA	**Nanau**	**1.08**	**251**	P	**Pn**	**03 54 22.4**	**+0.3**
	baz=250						
ENA				S	**Sn**	**03 54 40.2**	**-0.1**
	baz=250						
TWE	**Neicheng**	**1.09**	**267**	P	**Pn**	**03 54 22.4**	**+0.2**
	baz=266						
TWE				*e*S	**Sn**	**03 54 40.1**	**-0.4**
	baz=266						
PCYT	**Pengchaiyu**	**1.11**	**320**	P	**Pn**	**03 54 22.8**	**+0.4**
	baz=320						
HATJ	**Hateruma jima**	**1.12**	**130**	P	**Pn**	**03 54 23.1**	**+0.7**
HATJ				S	**Sn**	**03 54 41.8**	**+0.9**
JKRS	**Kuro-shima**	**1.17**	**117**	P	**Pn**	**03 54 23.5**	**+0.6**
JKRS				S	**Sn**	**03 54 41.9**	**+0.1**
TWA	**Mucha**	**1.18**	**280**	*e*P	**Pn**	**03 54 23.3**	**+0.2**
	baz=279						
JIJ	**Ishigaki jima**	**1.23**	**109**	P	**Pn**	**03 54 23.6**	**0.0**
JIJ				S	**Sn**	**03 54 41.8**	**-1.2**
YM01	**YM01**	**1.23**	**288**	*e*P	**Pn**	**03 54 23.8**	**+0.2**
	baz=287						
YM01				*e*S	**Sn**	**03 54 42.7**	**-0.4**
	baz=287						
YM10	**YM10**	**1.24**	**288**	*e*P	**Pn**	**03 54 24.0**	**+0.2**
	baz=287						
YM10				*e*S	**Sn**	**03 54 43.5**	**+0.2**
	baz=287						
NDT	**Datong Townshi**	**1.25**	**262**	P	**Pn**	**03 54 24.4**	**+0.7**
	baz=261						
NDT				*e*S	**Sn**	**03 54 43.4**	**+0.2**
	baz=261						
NACB	**Ninganchiao**	**1.31**	**243**	*e*P	**Pn**	**03 54 23.8**	**-0.5**
	baz=242						
NACB				*e*S	**Sn**	**03 54 43.7**	**-0.6**
	baz=242						
JISG	**Ishigakijimahi**	**1.33**	**98**	S	**Sn**	**03 54 43.6**	**-1.1**
TWD	**Chiawan**	**1.35**	**239**	*e*P	**Pn**	**03 54 24.9**	**+0.1**
	baz=238						
TWD				S	**Sn**	**03 54 44.6**	**-0.6**
	baz=238						
YHNB	**Yeheng**	**1.36**	**266**	*e*P	**Pn**	**03 54 25.1**	**+0.1**
	baz=265						
YHNB				*e*S	**Sn**	**03 54 45.2**	**-0.2**
	baz=265						
NSK	**Sanguang**	**1.38**	**266**	P	**Pn**	**03 54 25.2**	**+0.1**
	baz=265						
NSK				S	**Sn**	**03 54 45.2**	**-0.5**
	baz=265						
ETLH	**Xiulin Townshi**	**1.38**	**246**	*e*P	**Pn**	**03 54 25.1**	**-0.2**
	baz=245						
ETLH				*e*S	**Sn**	**03 54 45.7**	**-0.3**
	baz=245						
NNSB	**Datong**	**1.40**	**256**	*e*P	**Pn**	**03 54 25.1**	**-0.3**
	baz=255						
NNSB				*e*S	**Sn**	**03 54 45.5**	**-0.7**
	baz=255						
NNS	**Nan Shan**	**1.40**	**256**	*e*P	**Pn**	**03 54 25.6**	**+0.1**
	baz=255						
NNS				*e*S	**Sn**	**03 54 45.4**	**-1.0**
	baz=255						
ENLB	**Shoufeng**	**1.45**	**233**	*e*S	**Sn**	**03 54 45.0**	**-2.0**
	baz=232						
WHF	**Hehuan Shan**	**1.59**	**247**	P	**Pn**	**03 54 27.9**	**0.0**
	baz=246						
WHF				S	**Sn**	**03 54 49.9**	**-0.7**
	baz=246						
ESL	**Shilin**	**1.62**	**234**	P	**Pn**	**03 54 28.2**	**+0.4**
	baz=233						
ESL				S	**Sn**	**03 54 49.9**	**-0.7**
	baz=233						
TWT	**Tachien**	**1.63**	**252**	*e*P	**Pn**	**03 54 29.0**	**+1.0**
	baz=251						
TWT				*e*S	**Sn**	**03 54 50.8**	**-0.1**
	baz=251						
TDCB	**Techi**	**1.64**	**252**	*e*P	**Pn**	**03 54 28.2**	**0.0**
	baz=251						
TDCB				*e*S	**Sn**	**03 54 50.8**	**-0.3**
	baz=251						
JTJ	**Tarama**	**1.67**	**94**	P	**Pn**	**03 54 28.4**	**0.0**
JTJ				S	**Sn**	**03 54 51.0**	**-0.5**
LIOB	**Emei**	**1.69**	**266**	P	**Pn**	**03 54 28.7**	**+0.1**
	baz=265						
LIOB				S	**Sn**	**03 54 51.8**	**-0.1**
	baz=265						
CHGB	**Renai**	**1.70**	**246**	*e*P	**Pn**	**03 54 29.5**	**+0.6**
	baz=244						
CHGB				*e*S	**Sn**	**03 54 52.0**	**-0.5**
	baz=244						
NSTT	**Nanjuang**	**1.70**	**265**	P	**Pn**	**03 54 28.8**	**0.0**
	baz=264						
NSTT				S	**Sn**	**03 54 51.5**	**-0.7**
	baz=264						
WHP	**Taichung City**	**1.82**	**255**	P	**Pn**	**03 54 31.0**	**+0.9**
	baz=253						
WHP				S	**Sn**	**03 54 55.3**	**+0.6**
	baz=253						
HGSD	**Ruisui**	**1.84**	**226**	*e*P	**Pn**	**03 54 30.6**	**+0.3**
	baz=225						
HGSD				*e*S	**Sn**	**03 54 54.6**	**-0.4**
	baz=225						
VWDT	**VWDT**	**1.88**	**237**	*e*P	**Pn**	**03 54 31.6**	**+0.8**
	baz=236						
VWDT				*e*S	**Sn**	**03 54 55.5**	**-0.2**
	baz=236						
EHY	**Hungye**	**1.90**	**228**	*e*P	**Pn**	**03 54 30.6**	**-0.4**
	baz=227						
EHY				*e*S	**Sn**	**03 54 55.1**	**-1.1**
	baz=227						
YULB	**Yu-li**	**1.99**	**226**	*e*P	**Pn**	**03 54 31.6**	**-0.6**
	baz=225						
YULB				*e*S	**Sn**	**03 54 57.5**	**-0.8**
	baz=225						
SSLB	**Suanglung**	**2.00**	**241**	*e*P	**Pn**	**03 54 33.2**	**+0.8**
	baz=240						
SSLB				*e*S	**Sn**	**03 54 58.6**	**+0.1**
	baz=240						
TYC	**Yuchr**	**2.03**	**245**	P	**Pn**	**03 54 33.6**	**+1.0**
	baz=244						
JIRB	**Irabujima**	**2.10**	**88**	P	**Pn**	**03 54 33.6**	**+0.2**
JIRB				S	**Sn**	**03 54 59.1**	**-1.4**
JIKM	**Ikemajima**	**2.17**	**86**	*e*S	**Sn**	**03 55 01.5**	**-0.5**
WNT	**Mingjian**	**2.18**	**246**	*e*P	**Pn**	**03 54 34.1**	**-0.3**
	baz=245						
JMJ	**Miyako jima 2**	**2.21**	**89**	*e*P	**Pn**	**03 54 35.6**	**+0.9**
	baz=88						
JMJ				*e*S	**Sn**	**03 55 02.7**	**-0.1**
	baz=88						
JMJ2	**Miyako jima3**	**2.24**	**90**	P	**Pn**	**03 54 35.6**	**+0.5**
JMJ2				S	**Sn**	**03 55 02.8**	**-0.8**
JOGS	**Gusukube**	**2.31**	**90**	*e*S	**Sn**	**03 55 04.5**	**-0.6**
TPUB	**Ta-pu**	**2.52**	**235**	*e*P	**Pn**	**03 54 40.8**	**+2.1**
	baz=234						

SVSA 07 03:59:11.8±0.8**, 38°.43N×26°.91W, h0**^{km}±5^{km}**, MD3.5, ML1.5, Error ellipse: s-maj=3.7km s-min=3.3km az=33.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.32**	**328**	*e*P	Pg	03 59 17.8	-0.1
PSCM				*e*S	Sg	03 59 22.3	+0.3
PSCM				A	A	03 59 22.7	
	11nm,0.2s						
ADH	**Angra Heroismo**	**0.34**	**311**	*e*P	Pg	03 59 18.2	-0.2
ADH				*e*S	Sg	03 59 22.7	-0.1
ADH				A	A	03 59 22.7	
	7.7nm,0.1s						
ROSA	**Rosais**	**1.09**	**286**	*e*P	Pg	03 59 29.1	-3.5
ROSA				*e*S	Sg	03 59 42.5	-4.2
ROSA				A	A	03 59 45.7	
	7.4nm,0.2s						
PSET	**Sete Cidades**	**1.11**	**123**	*e*P	Pg	03 59 29.5	-3.7
PSET				*e*S	Sg	03 59 43.3	-4.3
PSET				A	A	03 59 44.4	
	13nm,0.4s						
PICO	**Pico**	**1.20**	**274**	*e*P	Pg	03 59 31.3	-3.4
PICO				*e*S	Sg	03 59 45.2	-5.0
PICO				A	A	03 59 47.8	
	7.9nm,0.5s						
CMLA	**Cha da Macela**	**1.28**	**121**	*e*S	Sg	03 59 47.2	-5.6
CMLA				A	A	03 59 49.9	
	6.9nm,0.2s						

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*IDC **07** 04:07:01.8±3.3, 15°.87N×98°.30W, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.6/33, mbtmp3.5/6, ML3.2/2, MS2.9/3, Ms1 2.9/3, ms1mx2.6/23, Error ellipse: s-maj=55.0km s-min=21.4km az=2.0*
*MEX **07** 04:07:05.7±0.5, 16°.05N×98°.40W, h12^{km}±6^{km}, MD3.9*
*NEIC **07** 04:07:05.7±0.0, 16°.05N×98°.40W, h11^{km}, mb3.8/9, MD4.0(MEX), After MEX.*
ISC 07 04:07:04.2±1.4**, 16°.0N**±0°.1×**98°.37W**±0°.05**, h17**^{km}**, n22, σ2^{s}.71**/24**, mb3.8**/9**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.56**	**353**	*e*P	**Pn**	**04 07 29.3**	**-2.0**
TLIG				*e*S	**Sn**	**04 07 47.3**	**-4.0**
VHO	**Vista Hermosa**	**1.89**	**56**	*e*Pn	**Pn**	**04 07 34.6**	**-1.3**
VHO				*e*Sn	**Sn**	**04 07 57.9**	**-1.6**
VHO	**Vista Hermosa**	**1.89**	**56**	*e*P	**Pn**	**04 07 34.6**	**-1.3**
VHO				*e*S	**Sn**	**04 07 57.9**	**-1.6**
OXBJ	**Oaxaca**	**1.90**	**56**	*e*P	**Pn**	**04 07 34.7**	**-1.3**
OXBJ				*e*S	**Sn**	**04 07 57.5**	**-2.2**
CAIG	**El Cayaco**	**2.10**	**300**	*e*Pn	**Pn**	**04 07 36.8**	**-1.8**
CAIG	**El Cayaco**	**2.10**	**300**	*e*P	**Pn**	**04 07 36.8**	**-1.8**
CAIG				*i* S	**Sn**	**04 08 00.7**	**-3.5**
CMIG	**Matias Romero**	**3.51**	**72**	Pn	**Pn**	**04 07 57.1**	**-1.0**
	3.9nm,0.3s,baz=250,slow=15,SNR=31						
CMIG				LR	LR	04 08 43.2	
	comp=Z,50nm,21.9s,baz=246,slow=29						
CMIG				Lg	Lg	04 08 53.5	
	50nm,0.3s,baz=353,slow=22,SNR=26						
LVIG	**Laguna Verde**	**4.14**	**26**	*e*Pn	**Pn**	**04 08 07.2**	**+0.5**
CCIG	**Comitan**	**6.00**	**87**	*e*Pn	**Pn**	**04 08 28.8**	**-3.5**
TXAR	**Lajitas Array**	**14.13**	**341**	Pn	**P**	**04 10 28.7**	**-2.6**
	0.0nm,0.3s,baz=161,slow=14,SNR=3.2						
TXAR				Lg	Lg	04 14 31.8	
	0.0nm,0.3s,baz=162,slow=32,SNR=2.4						
TXAR				LR	LR	04 16 16.0	
	comp=Z,68nm,20.4s,baz=0.0,slow=39						
ANMO	**Albuquerque**	**20.21**	**340**	P	Pn	04 11 40.9	+0.5
	2.7nm,0.9s,baz=154,slow=12,SNR=5.0						
ANMO	**Albuquerque**	**20.21**	**340**	*e*P	Pn	04 11 42.7	+2.3
	2.8nm,0.8s						
X16A	**Lo Mia Camp, P**	**21.78**	**330**	*e*P	**P**	**04 11 58.9**	**+3.4**
	4.2nm,0.9s						
SDCO	**Great Sand Dun**	**22.55**	**345**	*e*P	**P**	**04 12 07.8**	**+3.9**
	3.3nm,1.1s						
MVCO	**Mesa Verde**	**22.95**	**339**	*e*P	**P**	**04 12 10.6**	**+2.6**
	13nm,1.6s						
PV01	**Paradox Valley**	**23.81**	**340**	*e*P	**P**	**04 12 20.0**	**+3.5**
	2.2nm,0.8s						
PV12	**Saucer Basin,**	**24.05**	**340**	*e*P	**P**	**04 12 21.5**	**+2.7**
	5.1nm,0.9s						
MTPU	**Mount Pierson**	**25.11**	**334**	*e*P	**P**	**04 12 32.6**	**+4.1**
	3.9nm,0.9s						
PDAR	**Pinedale Array**	**28.34**	**342**	P	**P**	**04 12 59.6**	**+2.1**
	0.5nm,0.8s,baz=151,slow=11,SNR=5.1						
YKA	**Yellowknife Ar**	**47.83**	**350**	P	**P**	**04 15 40.1**	**-0.5**
	0.4nm,0.8s,baz=157,slow=7.9,SNR=3.0						
ILAR	**Eielson Array**	**58.63**	**338**	P	**P**	**04 17 02.3**	**+2.2**
	0.5nm,0.8s,baz=157,slow=5.9,SNR=4.4						
SPITS	**Spitsbergen Ar**	**79.33**	**11**	LR	LR	04 55 17.7	
	comp=Z,19nm,18.1s,baz=245,slow=36						

MEX 07 04:11:29.2±0.9**, 16°.13N×98°.42W, h10**^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.44**	**354**	*e*P	Pn	04 11 52.0	-3.5
TLIG				*e*S	Sn	04 12 09.8	-4.7

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*ISCJB **07** 04:16:46.1±0.8, 0°.61S±0°.02×77°.56W±0°.03, h2^{km}±5^{km}, Error ellipse: s-maj=5.9km s-min=3.4km az=14.4*
*IGQ **07** 04:16:46.8±0.4, 1°S±2°×7°8W±°, h10^{km}, MLv3.7*
ISC 07 04:16:46.4±1.2**, 0°.61S**±0°.02×**77°.57W**±0°.04**, h9**^{km}±10^{km}**, n52, σ0^{s}.95**/64**, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARDO	**Archidona, Ten**	**0.45**	**212**	P	**Pg**	**04 16 55.5**	**+0.4**
ARDO				S	**Sg**	**04 17 02.0**	**+0.9**
ATEN	**Tena**	**0.46**	**212**	P	**Pg**	**04 16 55.4**	**-0.1**
ATEN				S	**Sg**	**04 17 02.4**	**+0.9**
CONE	**Cono NE Rev Vo**	**0.55**	**352**	P	**Pg**	**04 16 56.6**	**-0.6**
ANTS	**Antisana-Sarah**	**0.62**	**281**	P	**Pg**	**04 16 58.5**	**0.0**
ANTI	**Antisana**	**0.62**	**285**	P	**Pg**	**04 16 58.5**	**0.0**
ANTM	**Antisana-La Mi**	**0.66**	**277**	P	**Pg**	**04 16 59.2**	**-0.1**
ANTM				S	**Sg**	**04 17 08.3**	**+0.2**
ANTG	**Antisana-Guama**	**0.70**	**279**	P	**Pg**	**04 16 59.9**	**-0.1**
ANTG				S	**Sg**	**04 17 09.4**	**+0.1**
COV1	**Cotopaxi Volc**	**0.78**	**267**	P	**Pn**	**04 17 03.9**	**-0.3**
CAYA	**Cayambe**	**0.80**	**328**	P	**Pg**	**04 16 59.8**	**-2.2**
BTAM	**Cotopaxi Volca**	**0.83**	**266**	P	**Pb**	**04 17 03.0**	**-0.4**
BTAM				S	**Sb**	**04 17 15.4**	**+0.4**
VC1	**Cotopaxi 1**	**0.84**	**268**	P	**Pg**	**04 17 03.0**	**+0.3**
BVC2	**Cotopaxi Volca**	**0.85**	**267**	P	**Pb**	**04 17 03.3**	**-0.4**
BVC2				S	**Sb**	**04 17 15.7**	**+0.3**
PITA	**Cotopaxi Volc**	**0.87**	**274**	P	**Pg**	**04 17 03.2**	**0.0**
BREF	**Cotopaxi Volca**	**0.88**	**266**	P	**Pb**	**04 17 03.8**	**-0.4**
BMOR	**Cotopaxi Volca**	**0.90**	**263**	P	**Pg**	**04 17 03.9**	**+0.1**
BMOR				S	**Sg**	**04 17 15.8**	**+0.1**
BNAS	**Cotopaxi Volca**	**0.92**	**266**	P	**Pb**	**04 17 04.6**	**-0.1**
PIS1	**Pisayambo**	**0.93**	**242**	P	**Pg**	**04 17 04.6**	**+0.1**
PIS1				S	**Sb**	**04 17 17.8**	**+0.1**
PISA	**Pisayambo**	**0.93**	**242**	P	**Pg**	**04 17 04.6**	**+0.1**
APUY	**Puyo**	**0.94**	**207**	P	**Pb**	**04 17 05.0**	**0.0**
APUY				S	**Sn**	**04 17 19.1**	**-0.5**
IMBA	**Imbabura, San**	**1.09**	**324**	P	**Pg**	**04 17 07.5**	**0.0**
AIB2	**Ibarra (Univer**	**1.09**	**330**	P	**Pg**	**04 17 06.8**	**-0.7**
YAHU	**Yahuarcocha**	**1.10**	**333**	P	**Pg**	**04 17 06.4**	**-1.2**
YAHU				S	**Sg**	**04 17 20.9**	**-1.1**
GGPC	**Guagua Pichinc**	**1.12**	**293**	P	**Pg**	**04 17 08.0**	**0.0**
YANA	**Yana**	**1.12**	**296**	P	**Pg**	**04 17 07.8**	**-0.2**
TERV	**Terraza Guagua**	**1.13**	**293**	P	**Pg**	**04 17 08.3**	**+0.1**
PULU	**Pululahua**	**1.13**	**304**	P	**Pg**	**04 17 07.7**	**-0.5**
BRUN	**Tungurahua Vol**	**1.17**	**227**	P	**Pg**	**04 17 08.8**	**-0.1**
RUN5	**Runtun**	**1.17**	**227**	P	**Pb**	**04 17 09.1**	**0.0**
BULB	**Ulba Tungurahu**	**1.18**	**226**	P	**Pg**	**04 17 08.3**	**-0.8**
CUSW	**Cuicocha Oeste**	**1.19**	**319**	P	**Pb**	**04 17 09.0**	**-0.4**
POND	**Pondoa**	**1.20**	**228**	P	**Pb**	**04 17 08.7**	**-0.7**
CUIC	**Cuicocha-Domo**	**1.21**	**319**	P	**Pb**	**04 17 09.1**	**-0.7**
RETU	**Refugio**	**1.21**	**227**	P	**Pg**	**04 17 09.0**	**-0.8**
CUSE	**Cuicocha Este**	**1.24**	**318**	P	**Pb**	**04 17 09.4**	**-0.8**
BPAT	**Tungurahua Vol**	**1.24**	**225**	P	**Pb**	**04 17 09.6**	**-0.6**
BBIL	**Ulba Tungurahu**	**1.24**	**228**	P	**Pb**	**04 17 09.6**	**-0.6**
PAT1	**Patacocha**	**1.24**	**225**	P	**Pb**	**04 17 09.6**	**-0.8**
URCU	**Urcuqui**	**1.25**	**327**	P	**Pb**	**04 17 10.1**	**-0.4**
ARRY	**Arrayan**	**1.26**	**225**	P	**Pb**	**04 17 09.5**	**-0.9**
BMAS	**Trigal station**	**1.27**	**226**	P	**Pn**	**04 17 09.8**	**-0.9**
ATUL	**Tulcn**	**1.39**	**353**	P	**Pb**	**04 17 13.0**	**+0.3**
PAC1	**Pacto, Paraso**	**1.51**	**305**	P	**Pn**	**04 17 13.3**	**-0.4**
LITE1	**Lita**	**1.61**	**330**	P	**Pn**	**04 17 15.5**	**+0.4**
CPAS1	**Pasto**	**1.81**	**8**	*e*P	**Pb**	**04 17 20.0**	**+0.1**
CPAS2	**Pasto**	**1.85**	**10**	*e*P	**Pb**	**04 17 20.5**	**-0.1**
CPAS2				*e*S	**Sb**	**04 17 44.5**	**+0.5**
CRUC	**La Cruz**	**2.25**	**16**	*e*P	**Pn**	**04 17 25.1**	**+0.9**
BBAC	**Balboa, Cauca**	**2.64**	**7**	*e*P	**Pn**	**04 17 30.4**	**+1.0**
PTLC	**Puerto Leguiza**	**2.88**	**74**	*e*P	**Pn**	**04 17 31.3**	**-1.2**
SOTA	**Rioblanco**	**2.89**	**19**	*e*P	**Pn**	**04 17 34.3**	**+1.2**
SOTA				*e*S	**Sb**	**04 18 13.5**	**-0.8**
SOTA				*i*		04 18 20.1	
	comp=Z,52nm,0.7s						
FLOC	**Florencia**	**2.90**	**41**	*e*P	**Pn**	**04 17 31.6**	**-1.3**
POPC	**Popayan, Colom**	**3.26**	**16**	*e*P	**Pn**	**04 17 40.7**	**+2.8**
YOTC	**Yotoco, Valle**	**4.73**	**15**	*e*P	**Pn**	**04 18 02.6**	**+4.6**

SVSA 07 04:18:11.0±1.0**, 38°.49N×26°.85W, h1**^{km}±4^{km}**, MD3.5, ML2.3, Error ellipse: s-maj=6.0km s-min=1.8km az=36.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.30**	**315**	*e*P	Pg	04 18 16.7	0.0
PSCM				*e*S	Sg	04 18 20.4	-0.2
PSCM				A	A	04 18 28.2	
	224nm,0.6s						
ADH	**Angra Heroismo**	**0.34**	**299**	*e*P	Pg	04 18 17.3	-0.3
ADH				*e*S	Sg	04 18 22.3	+0.2
ADH				A	A	04 18 26.1	
	86nm,0.3s						
PMAN	**Manadas**	**0.98**	**279**	*e*P	Pg	04 18 27.0	-2.8
PMAN				*e*S	Sg	04 18 39.1	-3.5
PMAN				A	A	04 18 41.8	
	16nm,0.2s						
PGRA	**Graciosa**	**1.04**	**302**	*e*P	Pg	04 18 27.9	-3.0
PGRA				*e*S	Sg	04 18 40.4	-3.9
PGRA				A	A	04 18 42.8	
	12nm,0.2s						
PSET	**Sete Cidades**	**1.11**	**126**	*e*P	Pg	04 18 29.0	-3.3
PSET				*e*S	Sg	04 18 42.3	-4.4
PSET				A	A	04 18 45.6	
	42nm,0.3s						
ROSA	**Rosais**	**1.12**	**282**	*e*P	Pg	04 18 28.8	-3.6
ROSA				*e*S	Sg	04 18 42.5	-4.3
ROSA				A	A	04 18 43.8	
	14nm,0.3s						
PDA	**Ponta Delgada**	**1.19**	**128**	*e*P	Pg	04 18 29.9	-4.0
PDA				*e*S	Sg	04 18 44.3	-5.0
PDA				A	A	04 18 46.1	
	24nm,0.2s						
PICO	**Pico**	**1.24**	**271**	*e*P	Pg	04 18 30.8	-3.9
PICO				*e*S	Sg	04 18 45.6	-5.2
PICO				A	A	04 18 56.5	
	16nm,0.7s						
CMLA	**Cha da Macela**	**1.27**	**124**	*e*P	Pg	04 18 31.2	-4.2
CMLA				*e*S	Sg	04 18 46.3	-5.5
CMLA				A	A	04 18 49.4	
	53nm,0.1s						
PCED	**Cedros**	**1.46**	**276**	*e*P	Pn	04 18 33.3	-5.2
PCED				*e*S	Sg	04 18 50.5	-7.4
PCED				A	A	04 18 58.3	
	16nm,0.6s						
PSMA	**Santa Maria**	**2.02**	**137**	*e*S	Sn	04 19 03.9	-8.2
PSMA				A	A	04 19 05.8	
	9.0nm,0.1s						
PSMN	**Pico do Norte,**	**2.05**	**136**	*e*P	Pn	04 18 42.0	-4.6
PSMN				*e*S	Sn	04 19 04.4	-8.4
PSMN				A	A	04 19 06.1	
	5.2nm,0.3s						

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*DJA **07** 04:33:27.8±0.3, 6°S±3°×10°4E±°, h10^{km}, M4.8/18, mb4.8/6, mB5.1/4, MLv4.9/18, Mw(mB)4.5/4*
*BJI **07** 04:33:27.6±0.0, 6°.10S×103°.80E, h47^{km}, mb5.0/50, mB5.0/35, Ms4.4/13, Ms7 4.1/12*
*MOS **07** 04:33:29.3±1.2, 5°.94S×103°.85E, h56^{km}, mb5.0/35, Error ellipse: s-maj=8.4km s-min=5.6km az=110.5*
*ISCJB **07** 04:33:29.8±0.5, 6°.07S±0°.04×103°.83E±0°.03, h66^{km}±4^{km}, mb4.8/89, Error ellipse: s-maj=7.6km s-min=4.1km az=37.9*
*NEIC **07** 04:33:29.1±1.2, 6°.09S×103°.79E, h47^{km}±4^{km}, mb4.9/37, Error ellipse: s-maj=19.3km s-min=7.7km az=218.0*
NEIC Felt [III] at Liwa.
*IDC **07** 04:33:30.0±0.8, 6°.01S×103°.79E, h50^{km}±6^{km}, mb4.5/29, mb1 4.5/31, mb1mx4.4/49, mbtmp4.8/31, MS3.4/13, Ms1 3.4/13, ms1mx3.2/35, Error ellipse: s-maj=20.1km s-min=10.3km az=40.0*
ISC 07 04:33:29.9±0.4**, 6°.08S**±0°.05×**103°.80E**±0°.05**, h51**^{km}±3^{km}**, h51**^{km}**:pP-P, n447, σ1^{s}.07**/471**, mb4.8**/90**, MS3.8**/17**, 23C-7D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.89**	**52**	P	**Pn**	**04 33 46.2**	**0.0**
KASI				S	**Sn**	**04 33 56.7**	**-1.4**
LWLI	**Liwa**	**1.09**	**14**	P	**Pn**	**04 33 49.7**	**+0.7**
BLSI	**Bandar Lampung**	**1.60**	**64**	P	**Pn**	**04 33 57.2**	**+1.3**
KLI	**Kotabumi**	**1.60**	**41**	P	**Pn**	**04 33 57.9**	**+2.0**
KLI	**Kotabumi**	**1.60**	**41**	P	**Pn**	**04 33 57.9**	**+2.0**
MDSI	**Maura Dua**	**1.63**	**13**	P	**Pn**	**04 33 57.5**	**+1.3**
MDSI				S	**Sn**	**04 34 18.7**	**+2.6**
MNAI	**Manna**	**1.90**	**334**	*e*Pn	**Pn**	**04 33 60.0**	**0.0**
MNAI	**Manna**	**1.90**	**334**	P	**Pn**	**04 34 00.8**	**+0.8**
CGJI	**Cibinong**	**1.96**	**106**	P	**Pn**	**04 34 00.6**	**-0.1**
CGJI				S	**Sn**	**04 34 24.7**	**+0.6**
LHSI	**Lahat**	**2.25**	**353**	P	**Pn**	**04 34 06.8**	**+2.0**
SBJI	**Serang**	**2.32**	**91**	P	**Pn**	**04 34 07.0**	**+1.3**
CBJI	**Citeko**	**3.05**	**97**	P	**Pn**	**04 34 19.2**	**+3.5**
PMBI	**Palembang**	**3.28**	**17**	P	**Pn**	**04 34 20.9**	**+2.0**
LEM	**Lembang**	**3.87**	**101**	P	**Pn**	**04 34 29.2**	**+2.2**
	22nm,0.3s,baz=269,slow=22,SNR=14						
LEM				S	**Sn**	**04 35 12.5**	**+1.1**
	20nm,0.3s,baz=299,slow=19,SNR=2.9						
LEM				LR	LR	04 36 21.3	
	comp=Z,834nm,18.8s,baz=16,slow=44						
LEM	**Lembang**	**3.87**	**101**	P	**Pn**	**04 34 29.3**	**+2.2**
CISI	**Cisompet, Garu**	**4.25**	**110**	*e*Pn	**Pn**	**04 34 31.3**	**-0.9**
CISI	**Cisompet, Garu**	**4.25**	**110**	P	**Pn**	**04 34 32.1**	**-0.1**
PPBI	**Pangkal Pinang**	**4.54**	**31**	P	**Pn**	**04 34 38.5**	**+2.4**
KRJI	**Kerinci**	**4.60**	**329**	P	**Pn**	**04 34 39.8**	**+2.8**
PPSI	**Pulau Pagai**	**5.01**	**311**	P	**Pn**	**04 34 41.5**	**-1.1**

TPI	Tanjungpandan	5.07	50	P	Pn	04 34 45.3	+1.9
PDSI	Padang	6.12	327	P	Pn	04 34 56.5	-1.4
SISI	Saibi	6.66	315	P	Pn	04 35 04.5	-0.8
UGM	Wanagama	6.92	106	ePn	Pn	04 35 07.6	-1.2
BKNI	Bangkinang	6.93	337	ePn	Pn	04 35 08.0	-1.0
COCO	West Island	9.17	228	i P	Pn	04 35 42.0	+2.4
GSI	Gunungsitoli	9.61	320	ePn	Pn	04 35 43.3	-2.4
GSI	Gunungsitoli	9.61	320	P	Pn	04 35 42.4	-3.3
PSI	Prapat	10.08	331	LR	LR	04 40 09.6	
	comp=Z,227nm,21.2s,baz=138,slow=40						
SRBI	Singaraja	11.50	101	P	Pn	04 36 12.8	+1.2
PLAI	Plampang	14.13	102	P	P	04 36 54.0	+0.4
KAPI	Kappang	15.91	87	P	Pn	04 37 09.9	-0.8
	1.6nm,0.3s,baz=252,slow=14,SNR=5.1						
KAPI				LR	LR	04 44 01.3	
	comp=Z,140nm,18.6s,baz=192,slow=40						
BKSI	Bulukumba	16.26	88	P	Pn	04 37 16.9	+1.8
MMRI	Maumere	18.46	99	eP	P	04 37 41.4	-0.3
	84nm,0.5s						
CHBT	CHBT	18.77	356	P	Pn	04 37 52.0	+6.1
SRAK	Srakaew	20.04	355	P	Pn	04 38 00.8	-0.2
	190µm,0.9s						
BATI	Baumata	20.09	103	P	P	04 37 59.9	+0.4
	108nm,0.4s,baz=270,slow=0.6,SNR=20						
BATI				S	S	04 41 39.2	-3.4
	26nm,0.5s,baz=276,slow=18,SNR=4.1						
SOEI	Soe	20.60	102	eP	P	04 38 04.2	-1.0
	107nm,0.6s						
UMPA	Umpang Tak	22.68	348	P	P	04 38 26.2	-1.1
	34µm,0.8s						
PBKT	Sadao Pong	22.68	353	P	P	04 38 27.3	+0.1
	4.6nm,0.6s						
CM31	Chiang Mai Arr	24.85	349	eP	P	04 38 46.9	-0.9
	32nm,0.6s						
CM31				ePcP	PcP	04 42 24.5	+1.4
CMAR	Chiang Mai Arr	24.85	349	P	P	04 38 46.4	-1.4
	23nm,0.7s,baz=181,slow=9.0,SNR=83						
CMAR				PcP	PcP	04 42 24.5	+1.4
	0.8nm,0.3s,baz=170,slow=2.2,SNR=4.9						
CMAR				LR	LR	04 49 52.0	
	comp=Z,107nm,18.9s,baz=172,slow=40						
KCP	Kidapawan	24.91	59	⇓iP	P	04 38 50.3	+1.8
CMMT	Chiang Mai	25.19	349	P	P	04 38 49.9	-1.1
	16nm,0.9s						
CHTO	Chiang Mai	25.20	349	eP	P	04 38 49.9	-1.0
	22nm,0.8s						
CHTO	Chiang Mai	25.20	349	eP	P	04 38 49.9	-1.0
CHTO				pmax	pmax		
	comp=Z,22nm,0.8s						
DAV	Davao City (W)	25.36	59	LR	LR	04 48 47.1	
	comp=Z,64nm,21.5s,baz=152,slow=36						
PAYA	Payao	25.57	351	P	P	04 38 57.2	+2.8
	comp=Z,18µm,0.7s,comp=Z,944µm						
SLVN	Son La	27.24	0	eP	P	04 39 09.1	-0.4
	comp=Z,12nm,1.4s						
MTN	Manton Dam	27.77	106	eP	P	04 39 13.5	-0.7
	comp=Z,16nm,0.6s						
H01W3	Cape Leeuwin H	30.21	163	T	T	05 11 35.9	
	baz=342,slow=76,SNR=8.2						
H01W2	Cape Leeuwin H	30.22	163	T	T	05 11 26.2	
	baz=342,slow=76,SNR=8.1						
H01W1	Cape Leeuwin H	30.23	163	T	T	05 11 46.1	
	baz=342,slow=76,SNR=10						
KMI	Kunming	31.03	358	P	P	04 39 46.8	+3.5
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KMI				LR	LR		
	comp=Z,210nm,15.4s						
KMI				LR	LR		
	comp=Z,110nm,17.5s						
KMI				LR	LR		
	comp=Z,240nm,21.6s						
H08S2	Diego Garcia H	31.11	265	T	T	05 13 44.9	
	baz=89,slow=75,SNR=19						
H08S3	Diego Garcia H	31.12	265	T	T	05 13 29.4	
	baz=89,slow=75,SNR=9.8						
H08S1	Diego Carcia H	31.13	265	T	T	05 13 39.3	
	baz=89,slow=75,SNR=13						
GYA	Guiyang	32.47	5	eP	P	04 39 56.1	+0.3
GYA				pP	pP	04 40 07.4	-0.8
GYA				PP	PnPn	04 41 05.6	+1.2
GYA				S	S	04 45 07.0	-0.2
GYA				sS	sS	04 45 26.8	-1.5
GYA				SS	SnSn	04 47 04.4	-0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=Z,130nm,16.1s						
GYA				LR	LR		
	comp=Z,200nm,18.0s						
GYA				LR	LR		
	comp=Z,100nm,15.5s						
WRA	Warramunga Arr	32.71	118	P	P	04 39 57.7	-0.2
	comp=Z,6.4nm,0.6s,baz=291,slow=11,SNR=38						
WR1	Warramunga Arr	32.71	118	eP	P	04 39 57.8	-0.2
WRAB	Tennant Creek	32.72	118	⇑eP	P	04 39 57.7	-0.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WB2	Warramunga Arr	32.72	118	eP	P	04 39 57.5	-0.6
	comp=Z,6.6nm,0.6s						
SHL	Shillong	33.52	340	eP	P	04 40 03.9	-1.2
	comp=Z,23nm,0.3s						
SHL	Shillong	33.52	340	eP	P	04 40 03.9	-1.2
SHL				pmax	pmax		
	comp=Z,23nm,0.3s						
ASAR	Alice Springs	33.82	124	P	P	04 40 07.8	+0.1
	comp=Z,2.4nm,0.9s,baz=299,slow=8.1,SNR=23						
ASAR				PcP	PcP	04 42 47.3	+1.4
	comp=Z,0.8nm,0.8s,baz=286,slow=3.0,SNR=2.8						
ASAR				S	S	04 45 27.9	-0.5
	comp=Z,1.0nm,1.0s,baz=297,slow=16,SNR=4.6						
AS31	Alice Springs	33.82	124	eP	P	04 40 07.1	-0.5
	comp=Z,2.4nm,0.6s						
AS31				ePcP	PcP	04 42 47.3	+1.4
ENH	Enshi	36.55	8	eP	P	04 40 30.6	-0.3
	comp=Z,9.9nm,0.8s						
CD2	Chengdu	36.78	360	eP	P	04 40 34.0	+1.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
JIRN	Jiri	37.61	334	eP	P	04 40 40.7	+0.3
	comp=Z,151nm,0.6s						
PKI	Pulchoki	37.88	333	eP	P	04 40 42.3	-0.3
	comp=Z,35nm,0.6s						
PKIN	Phulchoki	37.89	333	eP	P	04 40 42.2	-0.5
	comp=Z,26nm,0.5s						
GUN	Gumba	37.97	334	eP	P	04 40 43.7	+0.4
	comp=Z,152nm,0.5s						
DMN	Daman	38.05	333	eP	P	04 40 43.8	-0.2
	comp=Z,18nm,0.4s						
KKN	Kakani	38.13	333	eP	P	04 40 44.4	-0.2
	comp=Z,71nm,0.5s						
GKN	Gorkha	38.61	332	eP	P	04 40 48.6	+0.1
	comp=Z,77nm,0.3s						
KOLN	Koldanda	38.90	331	eP	P	04 40 51.3	+0.3
	comp=Z,126nm,0.7s						
DANN	Dangsing	39.31	332	eP	P	04 40 54.7	+0.1
	comp=Z,168nm,0.6s						
PYUN	Piuthan	39.47	330	eP	P	04 40 56.0	+0.2
	comp=Z,84nm,0.5s						
XAN	Xi'an	40.20	7	eP	P	04 41 00.1	-1.4
	comp=Z,7.2nm,0.7s						
XAN	Xi'an	40.20	7	P	P	04 41 00.4	-1.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN	Xi'an	40.20	7	eP	P	04 41 00.1	-1.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NJ2	Nanjing	40.55	20	eP	P	04 41 06.3	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	41.94	0	eP	P	04 41 19.9	+3.9
LZH				pP	pP	04 41 29.6	+0.8
LZH				sP	sP	04 41 37.3	+2.8
LZH				PP	PnPn	04 42 59.4	+0.1
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=Z,240nm,15.9s						
LZH				LR	LR		
	comp=Z,240nm,16.8s						
LZH				LR	LR		
	comp=Z,220nm,15.7s						
PMG	Port Moresby	43.07	97	P	P	04 41 25.2	-0.2
	comp=Z,8.3nm,0.6s,baz=294,slow=1.7,SNR=5.4						
STKA	Stephens Creek	43.63	131	P	P	04 41 29.9	+0.3
	comp=Z,6.6nm,0.6s,baz=302,slow=8.8,SNR=23						
STKA				LR	LR	05 00 04.8	
	comp=Z,56nm,20.6s,baz=9.7,slow=36						
STKA	Stephens Creek	43.63	131	eP	P	04 41 29.4	-0.2
	comp=Z,2.6nm,0.8s						
GTA	Gaotai	45.41	356	eP	P	04 41 44.2	+0.4
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
JNU	Nakatsue	46.70	32	eP	P	04 41 53.6	-0.4
	comp=Z,21nm,0.9s						
HHC	Hu-ho-hao-te	47.24	8	P	P	04 42 02.2	+4.1
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,7.7s						
HHC				LR	LR		
	comp=Z,140nm,15.3s						
HHC				LR	LR		
	comp=Z,140nm,15.3s						
HHC				LR	LR		
	comp=Z,170nm,14.5s						
BJT	Baijiatuau	47.27	13	eP	P	04 41 58.4	+0.2
	comp=Z,15nm,0.6s						
BJT	Baijiatuau	47.27	13	eP	P	04 41 58.4	+0.2
BJT				pmax	pmax		
	comp=Z,15nm,0.6s						
BJI	Beijing	47.29	13	P	P	04 41 58.8	+0.5
BJI				pP	pP	04 42 11.5	+0.2
BJI				sP	pwP	04 42 14.5	+0.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MSEY	Mahe Island	48.11	269	i P	P	04 42 06.9	+1.6
KS15	Wonju Array Si	48.78	26	eP	P	04 42 10.2	+0.3
KSRS	Korea Array	48.81	26	P	P	04 42 10.7	+0.6
	comp=Z,15nm,0.6s,baz=221,slow=7.6,SNR=52						
NIL	Nilore	48.98	326	eP	P	04 42 11.1	-0.5
	comp=Z,24nm,0.8s						
NIL	Nilore	48.98	326	eP	P	04 42 11.1	-0.5
NIL				pmax	pmax		
	comp=Z,25nm,0.8s						
WMQ	Urumqi	51.76	345	eP	P	04 42 34.2	+1.7
WMQ				sP	sP	04 42 52.1	+0.9
WMQ				pmax	pmax		
	comp=Z,37nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,71nm,4.7s						
WMQ				LR	LR		
	comp=Z,180nm,20.1s						
WMQ				LR	LR		
	comp=Z,160nm,20.1s						
WMQ				LR	LR		
	comp=Z,100nm,21.5s						
KSH	Kashi	52.15	333	P	P	04 42 34.3	-1.2
KSH				pP	pP	04 42 47.9	-0.7
KSH				sP	pwP	04 42 52.0	+0.4
KSH				PP	PP	04 44 34.4	0.0
KSH				S	S	04 49 50.1	-6.3
KSH				pmax	pmax		
	comp=Z,25nm,1.2s						
KSH				pmax	pmax		
	comp=Z,160nm,4.4s						
KSH				LR	LR		
	comp=Z,450nm,11.2s						
KSH				LR	LR		
	comp=Z,370nm,11.1s						
KSH				LR	LR		
	comp=Z,110nm,7.5s						
MAJO	Matsushiro	53.25	35	eP	P	04 42 43.6	0.0
	comp=Z,21nm,1.4s						
MAJO	Matsushiro	53.25	35	ceP	P	04 42 42.6	-1.0
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAT	Matsushiro	53.25	35	P	P	04 42 41.6	-2.0
MAT				S	S	04 50 08.4	-2.9
MJAR	Matsushiro Arr	53.25	35	P	P	04 42 41.8	-1.8
	comp=Z,3.1nm,0.5s,baz=199,slow=8.7,SNR=22						
MJB9	Matsu-Tunnel	53.25	35	eP	P	04 42 43.5	-0.1
	comp=Z,22nm,1.4s						
CN2	Changchun	53.37	19	eP	P	04 42 43.6	-0.7
CN2				esP	pwP	04 43 01.5	+1.1
CN2				eS	S	04 50 12.1	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,110nm,12.0s						
CN2				LR	LR		
	comp=Z,80nm,12.0s						
CN2				LR	LR		
	comp=Z,140nm,13.0s						
SONA0	Songino Array	53.73	2	eP	P	04 42 47.6	+0.6
SONA0				ePcP	PcP	04 43 52.8	+0.3
SONM	Songino Array	53.73	2	P	P	04 42 47.6	+0.6
	comp=Z,20nm,0.7s,baz=181,slow=8.5,SNR=84						
SONM				PcP	PcP	04 43 52.8	+0.3
	comp=Z,2.8nm,0.7s,baz=189,slow=4.2,SNR=5.2						
KDJ	Kajisay	53.77	336	eP	P	04 42 47.5	+0.1
	comp=Z,35nm,1.1s						
KDJ	Kajisay	53.77	336	P	P	04 42 47.6	+0.1
KDJ				pmax	pmax		
	comp=Z,35nm,1.1s						
ULN	Ulaanbaatar	53.79	3	eP	P	04 42 47.1	-0.3
	comp=Z,10nm,0.7s						
ULN	Ulaanbaatar	53.79	3	c iP	P	04 42 47.6	+0.1
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
GAR	Garm	54.52	328	eP	P	04 42 52.2	-0.8
	comp=Z,23nm,0.7s						
GAR	Garm	54.52	328	eP	P	04 42 52.2	-0.8
GAR				pmax	pmax		
	comp=Z,23nm,0.7s						
AAK	Ala-Archa	55.33	334	eP	P	04 42 58.8	+0.1
	comp=Z,4.7nm,0.6s						
AAK	Ala-Archa	55.33	334	⇓eP	P	04 42 59.2	+0.5
AAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MK31	Makanchi Array	56.00	342	i P	P	04 43 02.8	-0.5
MK31				pmax	pmax		
	comp=Z,11nm,0.7s						
MK32	Makanchi Array	56.00	342	eP	P	04 43 02.9	-0.4
MK32				epP	pP	04 43 16.6	0.0
MKAR	Makanchi Array	56.00	342	P	P	04 43 02.9	-0.4
	comp=Z,16nm,0.7s,baz=145,slow=8.4,SNR=125						
MKAR				pP	pP	04 43 16.6	0.0
	comp=Z,5.7nm,0.5s,baz=157,slow=8.0,SNR=7.8						
MKAR				LR	LR	05 10 03.6	
	comp=Z,32nm,19.4s,baz=160,slow=39						
MAKZ	Makanchi	56.11	342	eP	P	04 43 03.0	-1.1
	comp=Z,5.8nm,1.0s						
MAKZ	Makanchi	56.11	342	eP	P	04 43 03.0	-1.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
USRK	Ussuriysk Ar.	56.13	24	P	P	04 43 04.2	-0.1
	comp=Z,12nm,0.5s,baz=206,slow=5.4,SNR=42						
ZAK	Zakamensk	56.23	360	eP	P	04 43 04.7	-0.3
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DGZ	Jazzator, Alta	57.35	347	c iP	P	04 43 13.3	+0.3
DGZ				pmax	pmax		
	comp=Z,28nm,0.7s						
KK31	Karatay Array	57.51	332	eP	P	04 43 13.0	-1.1
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	57.51	332	eP	P	04 43 13.2	-0.9
	comp=Z,3.4nm,0.7s						
KKAR	Karatay Array	57.51	332	eP	P	04 43 13.2	-0.9
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TLY	Talaya	57.53	360	eP	P	04 43 14.9	+0.8
TLY				pmax	pmax		
	comp=Z,20nm,0.9s						
TLY				MLR	MLR		
	comp=Z,107nm,8.0s						
KLR	Kul'dur	60.24	21	ceP	P	04 43 32.1	-0.8
KLR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURBB	Kurchatov Arra	60.55	342	P	P	04 43 34.3	-0.7
	comp=Z,9.0nm,0.7s,baz=158,slow=6.4,SNR=14						
KURK	Kurchatov	60.60	342	eP	P	04 43 34.5	-0.8
	comp=Z,14nm,0.8s						
KURK	Kurchatov	60.60	342	c iP	P	04 43 34.7	-0.6
KURK				pmax	pmax		
	comp=Z,15nm,0.8s						
OTUK	Ortayu	60.74	336	P	P	04 43 35.2	-1.2
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GEYT	Alibeck	60.99	320	P	P	04 43 38.1	-0.2
	comp=Z,1.8nm,0.5s,baz=157,slow=8.7,SNR=4.1						
GEYT				pP	pP	04 43 52.5	+0.8
	comp=Z,4.3nm,0.6s,baz=145,slow=8.2,SNR=3.8						
GEYT				LR	LR	05 12 08.2	
	comp=Z,19nm,18.8s,baz=80,slow=38						
ZALV	Zalesovo Beam	61.90	347	P	P	04 43 43.5	-0.6
	comp=Z,24nm,0.6s,baz=156,slow=7.6,SNR=68						
ZALV				LR	LR	05 13 26.7	
	comp=Z,81nm,19.8s,baz=72,slow=39						
ZEA	Zeya	62.79	15	eP	P	04 43 50.0	0.0
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	Yuzh-Sakhalins	63.06	29	eP	P	04 43 51.5	-0.4
	comp=Z,24nm,0.8s						
YSS	Yuzh-Sakhalins	63.06	29	⇑iP	P	04 43 51.5	-0.4
YSS				e		04 44 06.5	
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
BVAR	Borovoye Array	65.32	339	P	P	04 44 05.8	-0.8
	comp=Z,7.1nm,0.5s,baz=145,slow=9.1,SNR=53						
BRVK	Borovoye	65.38	338	c iP	P	04 44 06.4	-0.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AB31	Akbulak array	67.02	330	i P	P	04 44 16.7	-0.9
AB31				pmax	pmax		
	comp=Z,16nm,0.8s						
ABKAR	Akbulak array	67.02	330	eP	P	04 44 16.8	-0.8
	comp=Z,16nm,0.8s						
MAW	Mawson	67.35	196	pP	pP	04 44 33.4	+0.2
	comp=Z,1.7nm,0.7s,baz=327,slow=6.1,SNR=3.3						
MAW				LR	LR	05 09 13.4	
	comp=Z,76nm,18.3s,baz=48,slow=32						
AKTO	Aktyubinsk	68.74	331	P	P	04 44 27.2	-1.2
	comp=Z,1.7nm,0.3s,baz=114,slow=6.3,SNR=14						
YAK	Yakutsk	70.79	13	eP	P	04 44 39.8	-0.9
YAK				e*PP	pP	04 44 50.8	-3.6
YAK				e		04 45 01.5	
YAK				eS	S	04 53 50.9	-0.6
YAK				e*SS	SKiKP	04 54 21.9	+2.8
YAK				e		04 54 45.8	
GNI	Garni	71.07	316	P	P	04 44 43.2	+0.1
	comp=Z,5.2nm,0.5s,baz=62,slow=6.0						
GNI	Garni	71.07	316	deP	P	04 44 43.8	+0.6
GNI				pmax	pmax		
	comp=Z,51nm,1.0s						
SVE	Sverdlovsk	71.89	337	⇓eP	P	04 44 47.6	+0.1
SVE				pmax	pmax		
	comp=Z,24nm,0.9s						
ARU	Arti	72.45	336	P	P	04 44 50.6	-0.3
	comp=Z,4.5nm,0.5s,baz=100,slow=3.4,SNR=19						
ARU				LR	LR	05 22 08.5	
	comp=Z,24nm,18.3s,baz=178,slow=40						
ARU	Arti	72.45	336	eP	P	04 44 50.2	-0.6
	comp=Z,16nm,0.5s						
ARU	Arti	72.45	336	d iP	P	04 44 50.5	-0.3
ARU				*PP	pP	04 45 04.5	-0.1
ARU						04 47 27.7	
ARU				S	S	04 54 12.5	+1.6
ARU				pmax	pmax		
	comp=Z,23nm,1.1s						
ZEI	Tsey	72.78	318	eP	P	04 44 51.8	-1.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s						
NEY	Neytrino	73.76	318	⇑eP	P	04 45 01.0	+1.8
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KBZ	Khabaz	73.85	319	P	P	04 44 59.9	+0.5
	comp=Z,6.0nm,0.8s,baz=172,slow=7.7,SNR=11						
KIV	Kislovodsk	74.09	319	eP	P	04 45 01.6	+0.7
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
PETK	Petropavlovsk-	74.38	30	P	P	04 45 01.3	-1.0
	comp=Z,2.8nm,0.7s,baz=189,slow=5.9,SNR=3.6						
PEA1	Petropavlovsk-	74.38	30	eP	P	04 45 01.3	-1.0
MA2	Magadan	75.24	23	⇑eP	P	04 45 05.1	-2.0
MA2				pmax	pmax		
	comp=Z,19nm,1.7s						
KIRV	Kirov	77.66	334	P	P	04 45 20.8	0.0
	comp=Z,14nm,0.5s,baz=120,slow=14,SNR=5.2						
BR101	Keskin Array S	78.85	312	eP	P	04 45 27.6	-0.5
BR101				epP	pP	04 45 42.4	+0.5
BRTR	Keskin Array B	78.85	312	P	P	04 45 27.6	-0.5
	comp=Z,5.4nm,0.8s,baz=131,slow=7.0,SNR=31						
BRTR				pP	pP	04 45 42.4	+0.5
	comp=Z,3.2nm,0.8s,baz=130,slow=6.7,SNR=6.4						
BRTR				LR	LR	05 23 34.8	
	comp=Z,11nm,18.5s,baz=91,slow=38						
BRTR	Keskin Array B	78.85	312	i P	P	04 45 28.1	0.0
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VSR	Storozhevoye	79.27	325	eP	P	04 45 28.9	-1.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR	Galich'ya Gora	79.97	326	eP	P	04 45 28.6	-5.0
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PRGR	Permogore	80.91	336	eP	P	04 45 37.8	-0.7
PRGR				e*PP	pP	04 45 49.9	-2.5
PRGR				pmax	pmax		
	comp=Z,19nm,0.6s						
MOS	Moscow	81.93	328	eP	P	04 45 42.4	-1.6
MOS				e		04 45 57.2	
MOS				e		04 48 54.7	
OBN	Obninsk	82.24	328	i P	P	04 45 45.7	+0.1
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AKASG	Malin Array Be	85.01	322	P	P	04 45 59.5	-0.4
	comp=Z,3.5nm,0.6s,baz=89,slow=4.6,SNR=14						
AKBB	Malin Array Si	85.01	322	eP	P	04 45 59.7	-0.2
	comp=Z,6.7nm,0.8s						
AKBB	Malin Array Si	85.01	322	eP	P	04 45 59.7	-0.2
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VRI	Vrincioaia	85.40	317	⇓iP	P	04 46 03.6	+1.5
VRI	Vrincioaia	85.40	317	P	P	04 46 03.5	+1.5
PLOR	Plostina	85.45	317	⇑iP	P	04 46 04.3	+2.0
PLOR	Plostina	85.45	317	P	P	04 46 04.3	+2.0
TESR	Tescani	85.60	318	⇑iP	P	04 46 04.3	+1.3
BILL	Bilibino	85.68	20	⇓eP	P	04 46 02.6	-0.3
BILL				e		04 49 20.7	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MLR	Muntele Rosu	85.85	316	P	P	04 46 04.9	+0.5
	comp=Z,8.8nm,0.9s,baz=72,slow=3.6,SNR=10						
MLR	Muntele Rosu	85.85	316	eP	P	04 46 05.3	+0.9
	comp=Z,13nm,1.0s						
MLR	Muntele Rosu	85.85	316	⇑iP	P	04 46 05.8	+1.4
MLR	Muntele Rosu	85.85	316	eP	P	04 46 05.3	+0.9
MLR				pmax	pmax		
	comp=Z,13nm,1.0s						
BIZ	Bicaz	86.07	318	⇑iP	P	04 46 06.1	+0.8
PLVB	Pleven	86.32	314	⇑iP	P	04 46 07.8	+1.1
VOIR		86.45	316	⇑iP	P	04 46 07.7	+0.3
VOIR		86.45	316	P	P	04 46 07.6	+0.2
ARR	Arges	86.72	316	⇑iP	P	04 46 09.3	+0.6
BURAR	Bucovina Array	86.81	318	⇑iP	P	04 46 10.8	+1.7
BURAR	Bucovina Array	86.81	318	P	P	04 46 10.7	+1.7
BUR08	Bucovina Ar. S	86.82	318	eP	P	04 46 09.8	+0.7
	comp=Z,8.9nm,0.7s						
ARCR	ARCALIA	87.27	318	⇑iP	P	04 46 13.0	+1.8
BMR	Baia Mare	87.96	318	⇑iP	P	04 46 15.7	+1.2
BMR	Baia Mare	87.96	318	P	P	04 46 15.7	+1.2
DEV	Deva	88.02	316	⇑iP	P	04 46 16.8	+2.0
DEV	Deva	88.02	316	P	P	04 46 16.7	+2.0
DRGR		88.31	317	⇑iP	P	04 46 17.3	+1.0
DRGR		88.31	317	P	P	04 46 17.3	+1.0
BZS	Buzias	88.85	316	⇑iP	P	04 46 19.9	+1.1
BZS	Buzias	88.85	316	P	P	04 46 19.8	+1.1
KOLS	Kolonicke sedl	88.99	319	eP	P	04 46 21.0	+1.6
KOLS				e		04 46 36.1	
KOLS	Kolonicke sedl	88.99	319	eP	P	04 46 21.0	+1.6
KOLS				epP	pwP	04 46 36.1	-0.3
FINES	FINESS Array B	89.46	332	P	P	04 46 21.4	+0.1
	comp=Z,2.4nm,0.6s,baz=110,slow=6.6,SNR=18						
FINES	FINESS Array B	89.46	332	i P	P	04 46 21.7	+0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VYHS	Vyhne	91.17	318	eP	P	04 46 31.3	+1.8
VYHS				e		04 46 45.5	
VYHS	Vyhne	91.17	318	eP	P	04 46 31.3	+1.8

VYHS				*e*pP	pwP	04 46 45.5	-1.1
ARCES	ARCESS Array B	91.58	340	P	P	04 46 30.7	-0.2
	comp=Z,1.1nm,0.6s,baz=138,slow=3.2,SNR=7.8						
GERES	GERESS Array B	94.59	318	P	P	04 46 45.9	+0.4
	comp=Z,0.4nm,0.5s,baz=81,slow=4.2,SNR=5.6						
HFS	Hagfors	95.28	330	P	P	04 46 47.8	-0.3
	comp=Z,1.5nm,0.7s,baz=151,slow=3.4,SNR=5.6						
SPITS	Spitsbergen Ar	95.38	348	P	P	04 46 47.4	-0.9
	comp=Z,7.0nm,0.9s,baz=49,slow=14,SNR=4.7						
NOA	NORSAR Array B	96.53	331	LR	LR	05 34 16.5	
	comp=Z,8.0nm,20.3s,baz=10.0,slow=38						
YKA	Yellowknife Ar	117.07	19	PKP	PKPdf	04 52 08.3	-0.7
	comp=Z,0.5nm,0.8s,baz=325,slow=2.2,SNR=4.2						
YKB5	Yellowknife Ar	117.07	19	*e*PKPdf	PKPdf	04 52 08.3	-0.7
DLMT	Dillon	129.72	33	*e*PKPdf	PKiKP	04 52 35.2	+0.5
NV01	Mina Array Sit	130.14	44	*e*PKPdf	PKiKP	04 52 36.7	+0.8
NVAR	Mina Array Bea	130.14	44	PKP	PKiKP	04 52 36.7	+0.8
	comp=Z,0.2nm,0.6s,baz=318,slow=2.6,SNR=3.3						
PDAR	Pinedale Array	133.07	34	PKP	PKPdf	04 52 41.0	+0.5
	comp=Z,0.3nm,0.7s,baz=0.0,slow=0.0,SNR=4.4						
Q24A	Divide	138.10	34	*e*PKPdf	PKPdf	04 52 49.0	-1.1
BINY	Binghamton	144.03	360	P	PKPab	04 52 58.2	+0.5
	baz=0.4						
N46A	Monticello	144.08	14	P	PKPab	04 52 58.2	+0.3
	baz=342						
L53A	Girard	144.09	5	P	PKPab	04 52 58.6	+0.7
	baz=353						
M50A	Fremont	144.30	9	P	PKPab	04 52 58.8	+0.1
	baz=348						
N47A	Urbana	144.32	12	P	PKPab	04 52 58.8	0.0
	baz=344						
O44A	Mansfield	144.33	16	P	PKPab	04 52 59.0	+0.2
	baz=339						
M52A	Chesterland	144.39	7	P	PKPab	04 52 59.0	-0.1
	baz=351						
O45A	Potomac	144.44	15	P	PKPab	04 52 59.4	+0.2
	baz=340						
SFIN	Lafayette	144.48	14	P	PKPab	04 52 59.3	-0.1
	baz=341,SNR=5.9						
N48A	Decatur	144.48	12	P	PKPab	04 52 59.0	-0.4
	baz=345						
M51A	Elyria	144.50	8	P	PKPab	04 52 59.1	-0.3
	baz=350						
P43A	Skaggs, Pawnee	144.50	18	P	PKPab	04 52 59.1	-0.3
	baz=337						
M53A	WI Miller and	144.57	6	P	PKPab	04 52 59.2	-0.5
	baz=352						
N49A	Columbus Grove	144.58	10	P	PKPab	04 52 59.3	-0.4
	baz=346						
M54A	Oil Creek Stat	144.59	4	P	PKPab	04 52 59.4	-0.4
	baz=354,SNR=6.0						
WMOK	Wichita Mounta	144.68	33	*e*PKPdf	PKPab	04 53 00.1	-0.3
WMOK	Wichita Mounta	144.68	33	*e*PKIKP	PKPab	04 53 00.1	-0.3
WMOK	Wichita Mounta	144.68	33	P	PKPab	04 52 59.9	-0.4
	baz=319						
M59A	Waymart	144.68	359	P	PKPab	04 52 59.8	-0.4
	baz=1.3						
M55A	Ridgway	144.69	3	P	PKPab	04 52 59.8	-0.4
	baz=356						
M56A	Emporium	144.70	3	P	PKPab	04 52 59.6	-0.6
	baz=357						
BDFB	Brasilia	144.71	232	PKP	PKPbc	04 53 01.9	+0.7
	comp=Z,3.5nm,0.7s,baz=169,slow=5.2,SNR=5.0						
O47A	Sheridan	144.83	13	P	PKPab	04 52 59.9	-0.8
	baz=343						
M61A	Granite Spring	144.85	357	P	PKPab	04 52 59.9	-0.9
	baz=4.2						
N51A	Ashland	144.88	8	P	PKPab	04 52 59.4	-1.5
	baz=349						
N50A	Nevada	144.90	9	P	PKPab	04 53 00.6	-0.3
	baz=348,SNR=5.3						
O48A	Farmland	145.03	12	P	PKPbc	04 53 00.8	-0.6
	baz=344,SNR=14						
N52A	McGinn's Farm,	145.07	7	P	PKPbc	04 53 01.1	-0.5
	baz=350,SNR=5.4						
N54A	Moraine State	145.10	5	*e*PKPbc	PKPbc	04 53 00.8	-0.8
N54A	Moraine State	145.10	5	P	PKPbc	04 53 01.0	-0.6
	baz=353						
P45A	Graceland, Par	145.11	16	P	PKPbc	04 53 01.5	-0.2
	baz=340,SNR=8.7						
PAL	Palisades	145.16	357	P	PKPbc	04 53 01.4	-0.3
	baz=4.0						
P46A	Rosedale	145.17	15	P	PKPbc	04 53 01.5	-0.3
	baz=341,SNR=9.0						
N53A	Lisbon	145.18	6	*e*PKPbc	PKPbc	04 53 01.7	-0.1
N53A	Lisbon	145.18	6	P	PKPbc	04 53 01.3	-0.5
	baz=352						
TX31	Lajitas Ar. Si	145.26	45	*e*PKPbc	PKPbc	04 53 03.2	+0.5
TXAR	Lajitas Array	145.26	45	PKPbc	PKPab	04 53 03.6	+0.8
	comp=Z,14nm,0.8s,baz=288,slow=1.3,SNR=126						
N56A	West Decatur	145.26	3	P	PKPbc	04 53 01.7	-0.5
	baz=356,SNR=5.5						
O49A	Covington	145.26	11	P	PKPbc	04 53 01.6	-0.6
	baz=346,SNR=5.9						
TUL1	Leonard	145.29	29	P	PKPbc	04 53 02.1	-0.3
	baz=324						
N59A	State Game Lan	145.31	359	*e*PKPbc	PKPbc	04 53 02.5	+0.2
N59A	State Game Lan	145.31	359	P	PKPbc	04 53 02.0	-0.3
	baz=0.8,SNR=5.6						
CCM	Cathedral Cave	145.36	21	*e*PKPbc	PKPbc	04 53 01.7	-0.8
CCM	Cathedral Cave	145.36	21	*e*PKIKP	PKPbc	04 53 01.7	-0.8
CCM	Cathedral Cave	145.36	21	P	PKPbc	04 53 02.0	-0.5
	baz=333						
N55A	Marion Center	145.36	4	P	PKPbc	04 53 02.0	-0.5
	baz=355,SNR=8.7						
O50A	Cable	145.43	10	P	PKPbc	04 53 02.2	-0.5
	baz=347,SNR=9.7						
N57A	Milroy	145.45	2	P	PKPdf	04 53 02.3	-0.4
	baz=358,SNR=8.0						
ACSO	Alum Creek Sta	145.46	9	P	PKPdf	04 53 02.3	-0.5
	baz=348,SNR=11						
P47A	Martinsville	145.52	14	P	PKPdf	04 53 02.6	-0.3
	baz=342,SNR=25						
SSPA	Standing Stone	145.56	2	*e*PKPdf	PKPdf	04 53 02.7	-0.2
SSPA	Standing Stone	145.56	2	P	PKPdf	04 53 02.6	-0.3
	baz=357						
Q45A	Warren Harvey,	145.59	17	P	PKPdf	04 53 03.0	0.0
	baz=339,SNR=12						
O51A	Pataskala	145.60	9	P	PKPdf	04 53 02.7	-0.3
	baz=349,SNR=17						
LUPA	Lehigh Univers	145.62	359	*e*PKPdf	PKPdf	04 53 03.2	+0.1
O53A	New Philadelph	145.68	7	P	PKPdf	04 53 03.0	-0.1
	baz=351,SNR=5.5						
O52A	Adamsville	145.74	8	P	PKPdf	04 53 03.0	-0.2
	baz=350						
P48A	Milroy	145.74	13	*e*PKPdf	PKPdf	04 53 02.8	-0.5
P48A	Milroy	145.74	13	P	PKPdf	04 53 03.0	-0.2
	baz=344,SNR=10						
P49A	Miami Univ. Ec	145.82	12	P	PKPdf	04 53 03.3	-0.1
	baz=345,SNR=17						
O54A	Avella	145.84	6	P	PKPdf	04 53 03.7	+0.3
	baz=353,SNR=5.9						
O56A	Blue Knob Stat	145.90	3	P	PKPdf	04 53 04.0	+0.4
	baz=356,SNR=10						
O55A	Ligonier	145.91	4	P	PKPdf	04 53 03.8	+0.3
	baz=354						
O59A	Robesonia	145.92	360	P	PKPdf	04 53 03.8	+0.3
	baz=0.1						
P50A	Jamestown	145.93	11	P	PKPdf	04 53 03.6	0.0
	baz=346,SNR=9.6						
O57A	Amberson	146.00	2	P	PKPdf	04 53 03.9	+0.1
	baz=358						
Q47A	Bedord North L	146.01	14	P	PKPdf	04 53 04.2	+0.5
	baz=342,SNR=9.2						
O58A	Lewisberry	146.10	1	P	PKPdf	04 53 04.3	+0.5
	baz=359						
O61A	Allentown	146.10	358	P	PKPdf	04 53 04.2	+0.4
	baz=3.0						
R45A	Skylar, Fairfi	146.11	17	P	PKPdf	04 53 04.7	+0.8
	baz=338,SNR=6.8						
P51A	Williamsport	146.18	10	P	PKPdf	04 53 04.3	+0.3
	baz=348						
Q48A	North Vernon	146.18	13	P	PKPdf	04 53 04.8	+0.8
	baz=343,SNR=23						
U40A	Yellville	146.22	25	P	PKPdf	04 53 04.8	+0.6
	baz=329						
Q49A	Aurora	146.29	12	P	PKPdf	04 53 04.8	+0.5
	baz=344						
PSUB	Penn St. - Bra	146.29	359	*e*PKPbc	PKPdf	04 53 04.6	+0.5
S44A	Carbondale	146.36	19	P	PKPdf	04 53 05.3	+1.0
	baz=336						
P54A	Burton	146.41	6	P	PKPdf	04 53 05.4	+1.0
	baz=352						
MCWV	Mont Chateau	146.41	5	P	PKPdf	04 53 05.5	+1.1
	baz=354						
P53A	Whipple	146.41	7	P	PKPdf	04 53 05.4	+1.0
	baz=351,SNR=5.6						
P60A	Greenville	146.41	359	P	PKPdf	04 53 05.2	+0.8
	baz=1.0						
P55A	Reedsville	146.56	5	P	PKPdf	04 53 05.7	+0.9
	baz=354						
Q51A	Peebles	146.57	10	P	PKPdf	04 53 05.7	+1.0
	baz=347,SNR=5.9						
R47A	Wooly Knot Far	146.59	15	P	PKPdf	04 53 05.7	+1.0
	baz=341						
P59A	Jarrettsville	146.62	0	P	PKPdf	04 53 05.9	+1.2
	baz=360						
Q50A	Georgetown	146.63	11	P	PKPdf	04 53 05.7	+0.9
	baz=346						
P56A	Dayton Farm, R	146.64	4	P	PKPdf	04 53 06.1	+1.3
	baz=355,SNR=6.1						
R48A	Northridge Ran	146.65	14	P	PKPdf	04 53 06.3	+1.4
	baz=342,SNR=7.5						
P57A	Homestead Farm	146.71	3	P	PKPdf	04 53 06.4	+1.5
	baz=357,SNR=7.6						
WCI	Wyandotte Cave	146.71	15	*e*PKPbc	PKPdf	04 53 06.1	+1.2
WCI	Wyandotte Cave	146.71	15	*e*PKP2	PKPdf	04 53 06.1	+1.2
WCI	Wyandotte Cave	146.71	15	P	PKPdf	04 53 06.3	+1.3
	baz=342						
P58A	Pank, Wackersv	146.72	2	P	PKPdf	04 53 06.3	+1.4
	baz=358						
Q52A	Bidwell	146.81	9	P	PKPdf	04 53 06.3	+1.2
	baz=349,SNR=5.9						
S46A	Don Dixon Farm	146.84	17	P	PKPbc	04 53 07.1	0.0
	baz=339						
R49A	Shelbyville	146.92	13	P	PKPdf	04 53 06.7	+1.4
	baz=344						
Q54A	Coxs Mills	146.98	7	P	PKPdf	04 53 06.9	+1.5
	baz=352						
Q53A	Leroy	147.01	8	P	PKPdf	04 53 07.2	+1.8
	baz=350						
Q55A	Buckhannon	147.04	6	P	PKPdf	04 53 07.3	+1.7
	baz=353,SNR=5.6						
Q56A	Snyder Ridge,	147.08	4	P	PKPdf	04 53 07.3	+1.7
	baz=355						
R50A	Paris	147.11	12	P	PKPdf	04 53 07.1	+1.5
	baz=345						
JCT	Junction City	147.12	40	*e*PKPbc	PKPbc	04 53 08.6	+0.5
JCT	Junction City	147.12	40	*e*PKP2	PKPbc	04 53 08.6	+0.5
Q57A	Strasburg	147.13	3	P	PKPdf	04 53 07.5	+1.8
	baz=356						
S47A	Hartford	147.16	16	P	PKPdf	04 53 07.5	+1.8
	baz=340						
Q58A	Fox Den Farm,	147.26	2	P	PKPbc	04 53 07.8	-0.3
	baz=357						
S48A	Wiedeman Farm,	147.31	15	P	PKPbc	04 53 08.0	-0.4
	baz=342						
R52A	Catlettsburg	147.36	9	P	PKPdf	04 53 07.8	+1.7
	baz=348						
T46A	Princeton	147.38	18	P	PKPbc	04 53 08.5	-0.1
	baz=338						
MIAR	Mount Ida	147.44	27	P	PKPbc	04 53 08.9	+0.1
	baz=327						
R53A	Hurricane	147.47	8	P	PKPbc	04 53 08.5	-0.3
	baz=349,SNR=8.3						
W41B	Gary Mavity, V	147.49	25	P	PKPdf	04 53 08.3	+1.9
	baz=329						
T47A	Sharon Grove	147.66	16	P	PKPbc	04 53 09.0	-0.3
	baz=340						
S50A	Richmond	147.67	12	P	PKPdf	04 53 08.7	+2.1
	baz=345						
R56A	Bull Pasture M	147.69	5	P	PKPbc	04 53 09.2	-0.3
	baz=354						
T48A	Bowling Green	147.74	15	P	PKPbc	04 53 09.2	-0.3
	baz=341						
R54A	Victor	147.75	7	P	PKPdf	04 53 08.8	+2.1
	baz=351						
R57A	Stanardsville	147.86	3	P	PKPbc	04 53 10.0	+0.1
	baz=356						
S51A	Beattyville	147.87	11	P	PKPbc	04 53 09.4	-0.5
	baz=346						
R58A	Rapidan	147.89	3	P	PKPbc	04 53 09.7	-0.2
	baz=357						
R61A	Willards	147.89	359	P	PKPbc	04 53 09.3	-0.6
	baz=1.6						
U46A	Springville	147.93	18	P	PKPbc	04 53 10.2	+0.1
	baz=337						
S52A	Salyersville	147.93	10	P	PKPbc	04 53 09.6	-0.4
	baz=347						
R59A	King George, V	148.02	1	P	PKPbc	04 53 10.0	-0.2
	baz=358						
S54A	Dingess, Beckl	148.09	8	P	PKPbc	04 53 10.1	-0.4
	baz=350						
U47A	Clarksville	148.12	17	P	PKPbc	04 53 10.5	0.0
	baz=339						
T50A	Nancy	148.21	13	P	PKPbc	04 53 10.2	-0.6
	baz=344						
S55A	Lewisburg	148.21	6	P	PKPbc	04 53 10.3	-0.6
	baz=352						
R58B	Mineral	148.23	3	P	PKPbc	04 53 10.6	-0.2
	baz=357						
WVT	Waverly	148.25	18	*e*PKPbc	PKPbc	04 53 10.5	-0.4
WVT	Waverly	148.25	18	*e*PKP2	PKPbc	04 53 10.5	-0.4
WVT	Waverly	148.25	18	P	PKPbc	04 53 10.8	-0.1
	baz=338						
U48A	Cassie Pea, Po	148.27	16	P	PKPbc	04 53 10.7	-0.3
	baz=340						
S56A	Natural Bridge	148.40	5	P	PKPbc	04 53 11.1	-0.2
	baz=354						
S59A	Mechanicsville	148.45	2	P	PKPbc	04 53 11.7	+0.3
	baz=358						
T51A	Gray	148.46	12	P	PKPbc	04 53 11.1	-0.4
	baz=345						
V46A	Holladay	148.46	19	P	PKPbc	04 53 11.1	-0.3
	baz=337						
U49A	Red Boiling Sp	148.47	15	P	PKPbc	04 53 11.0	-0.5
	baz=342						
S58A	Poland Farm, P	148.57	3	P	PKPbc	04 53 11.6	-0.1
	baz=356						
X43A	Marvell	148.62	24	P	PKPbc	04 53 12.1	+0.2
	baz=331						
V47A	Nunnelly	148.62	18	P	PKPbc	04 53 11.5	-0.4
	baz=338						
T53A	Wise	148.70	10	P	PKPbc	04 53 11.9	-0.3
	baz=348						
T54A	Tazewell	148.78	8	P	PKPbc	04 53 12.0	-0.4
	baz=350						
U50A	Jamestown	148.79	14	P	PKPbc	04 53 12.1	-0.2
	baz=343						
T55A	Pulaski	148.83	7	P	PKPbc	04 53 12.2	-0.2
	baz=351						
V48A	Smith Brothers	148.91	17	*e*PKPbc	PKPbc	04 53 11.9	-0.7
V48A	Smith Brothers	148.91	17	P	PKPbc	04 53 12.1	-0.6
	baz=339						
TZTN	Tazewell	148.94	12	P	PKPbc	04 53 12.5	-0.2
	baz=346						
T56A	Rocky Mt	149.00	6	P	PKPbc	04 53 12.4	-0.4
	baz=353						
T57A	Hurt	149.10	5	P	PKPbc	04 53 12.8	-0.3
	baz=354						
U52A	Thorn Hill	149.12	11	P	PKPbc	04 53 12.8	-0.4
	baz=346						
W47A	Westpoint	149.13	18	P	PKPbc	04 53 12.8	-0.4
	baz=338						
V49A	McMinnville	149.14	15	P	PKPbc	04 53 12.5	-0.8
	baz=341						
OXF	Oxford	149.19	22	P	PKPbc	04 53 12.9	-0.4
	baz=334						
T58A	Grand View Acr	149.21	4	P	PKPbc	04 53 13.4	0.0
	baz=356						
T59A	Double "B" Far	149.23	2	P	PKPbc	04 53 13.5	+0.1
	baz=357						
U55A	TA2, Sparta	149.40	8	P	PKPbc	04 53 13.7	-0.2
	baz=351						
V50A	Pikevile	149.44	14	P	PKPbc	04 53 13.6	-0.4
	baz=342						
W48A	Pulaski	149.44	17	P	PKPbc	04 53 13.5	-0.5
	baz=339						
X46A	Booneville	149.44	20	P	PKPbc	04 53 13.5	-0.5
	baz=335						
V51A	Loudon	149.49	13	P	PKPbc	04 53 13.9	-0.2
	baz=344						
V52A	Sevierville	149.61	12	P	PKPbc	04 53 14.4	0.0
	baz=345						
U56A	King	149.63	7	P	PKPbc	04 53 14.1	-0.4
	baz=352						
W49A	Belvidere	149.65	16	P	PKPbc	04 53 14.1	-0.4
	baz=340						
U57A	Blanch	149.66	5	P	PKPbc	04 53 14.3	-0.2
	baz=354						
X47A	Russelville	149.72	19	P	PKPbc	04 53 14.0	-0.7
	baz=337						
U60A	Pendleton	149.74	2	P	PKPbc	04 53 14.7	+0.1
	baz=358						
U58A	Oxford	149.75	4	P	PKPbc	04 53 14.7	0.0
	baz=355						
CPCT	Cooper Cave	149.78	14	*e*PKPbc	PKPbc	04 53 14.8	0.0
W50A	Signal Mountai	149.83	15	P	PKPbc	04 53 14.5	-0.5
	baz=342						
U59A	Littleton	149.84	3	P	PKPbc	04 53 14.8	-0.1
	baz=357						
V53A	Saluda	149.93	11	P	PKPbc	04 53 15.1	-0.2
	baz=347						
V54A	Nebo	149.98	9	P	PKPbc	04 53 15.0	-0.3
	baz=349						
W51A	Cleveland	150.00	14	P	PKPbc	04 53 15.1	-0.3
	baz=343						
X48A	Hartselle	150.04	18	P	PKPbc	04 53 14.7	-0.8
	baz=338						
V56A	Mocksville	150.15	7	P	PKPbc	04 53 15.5	-0.2
	baz=352						
V57A	Coltrane Farms	150.15	6	P	PKPbc	04 53 15.4	-0.4
	baz=353						
X49A	Woodville	150.20	17	P	PKPbc	04 53 15.5	-0.4
	baz=340						
W52A	Murphy	150.26	13	P	PKPbc	04 53 15.9	-0.1
	baz=344						
V58A	Windy Hill, Pi	150.31	5	P	PKPbc	04 53 15.8	-0.3
	baz=354						
W53A	Cullowhee	150.35	12	P	PKPbc	04 53 16.5	+0.1
	baz=346						
V59A	Middlesex	150.40	3	P	PKPbc	04 53 16.2	0.0
	baz=356						
V61A	Roper	150.43	1	P	PKPbc	04 53 16.5	+0.1
	baz=359						
X50B	Fort Payne	150.44	16	P	PKPbc	04 53 16.3	-0.2
	baz=341						
V60A	Jim Taylor Roa	150.44	2	P	PKPbc	04 53 16.6	+0.2
	baz=358						
Y48A	Jasper	150.50	19	P	PKPbc	04 53 16.1	-0.5
	baz=338						
KMSC	Kings Mountain	150.69	9	P	PKPbc	04 53 16.7	-0.3
	baz=350						
X52A	Dahlonega	150.74	13	P	PKPbc	04 53 16.9	-0.3
	baz=344						
VBMS	Vicksburg	150.76	25	P	PKPbc	04 53 17.1	-0.2
	baz=330						
Y49A	Blount Mountai	150.78	18	*e*PKPbc	PKPbc	04 53 16.9	-0.4
Y49A	Blount Mountai	150.78	18	P	PKPbc	04 53 17.0	-0.4
	baz=339						
Y50A	Piedmont	150.95	16	P	PKPbc	04 53 17.2	-0.5
	baz=340						
X53A	Estanollee	150.96	12	P	PKPbc	04 53 17.5	-0.2
	baz=345						
W58A	Raeford	151.06	5	P	PKPbc	04 53 17.6	-0.3
	baz=354						
X54A	Belton	151.10	11	P	PKPbc	04 53 18.0	0.0
	baz=347						
Y51A	Rockmart	151.12	15	P	PKPbc	04 53 18.0	-0.1
	baz=342						
W60A	Pink Hill	151.13	3	P	PKPbc	04 53 18.3	+0.3
	baz=357						
147A	Livingston	151.25	22	P	PKPbc	04 53 18.5	+0.2
	baz=334						
X55A	Gracelyn & Ava	151.31	9	P	PKPbc	04 53 18.3	-0.2
	baz=349						
LRAL	Lakeview Retre	151.36	19	P	PKPbc	04 53 18.4	-0.2
	baz=337						
Z49A	Columbiana	151.36	18	P	PKPbc	04 53 18.5	-0.1
	baz=338						
Y52A	Lilburn	151.41	14	*e*PKPbc	PKPbc	04 53 18.9	+0.2
Y52A				*e*PKPab	pPKPdf	04 53 26.2	-1.1
Y52A	Lilburn	151.41	14	P	PKPbc	04 53 19.0	+0.2
	baz=344						
Z50A	Ashland	151.49	17	P	PKPbc	04 53 18.6	-0.4
	baz=340						
Y53A	Monroe	151.53	13	P	PKPbc	04 53 19.2	+0.2
	baz=345						
X59A	McDuffie Farm,	151.56	4	P	PKPbc	04 53 19.3	+0.2
	baz=355						
X60A	Albert Glenn T	151.59	3	P	PKPbc	04 53 19.2	+0.1
	baz=356						
Z51A	Franklin	151.65	16	P	PKPbc	04 53 19.3	0.0
	baz=341						
Y54A	Tignall	151.71	11	P	PKPbc	04 53 19.4	-0.1
	baz=346						
Y55A	Saluda	151.79	10	P	PKPbc	04 53 19.6	0.0
	baz=348						
149A	Jones	151.83	19	P	PKPbc	04 53 19.7	0.0
	baz=337						
Y57A	Sumter	151.93	7	P	PKPbc	04 53 19.8	-0.1
	baz=351						
Z52A	Williamson	151.97	15	P	PKPbc	04 53 20.2	+0.2
	baz=342						
GOGA	Godfrey	151.98	13	P	PKPbc	04 53 20.1	+0.1
	baz=345						
Y56A	Pelion	152.02	9	P	PKPbc	04 53 20.1	0.0
	baz=349						
150A	Eclectic	152.06	18	P	PKPbc	04 53 20.2	-0.1
	baz=339						
Z53A	Monticello	152.08	13	P	PKPbc	04 53 20.2	-0.1
	baz=344						
Y58A	Scranton	152.13	6	P	PKPbc	04 53 20.0	-0.3
	baz=353						
Y60A	Bolivia	152.15	4	P	PKPbc	04 53 20.3	-0.1
	baz=356						
Z54A	Sparta	152.28	12	P	PKPbc	04 53 20.4	-0.3
	baz=346						
249A	Camden	152.29	20	P	PKPbc	04 53 21.0	+0.2
	baz=336						
151A	Opelika	152.34	17	P	PKPbc	04 53 21.2	+0.3
	baz=340						
Z56A	Williston	152.47	9	P	PKPbc	04 53 21.0	-0.1
	baz=349						
250A	Grady	152.57	19	P	PKPbc	04 53 21.6	+0.2
	baz=338						
Z57A	Bowman	152.60	8	P	PKPbc	04 53 21.6	+0.2
	baz=350						
153A	Fort Valley	152.62	14	P	PKPbc	04 53 21.6	+0.1
	baz=343						
Z58A	St. Stephen	152.68	7	P	PKPbc	04 53 21.8	+0.2
	baz=352						
251A	Midway	152.73	17	P	PKPbc	04 53 22.1	+0.3
	baz=340						
252A	Lumpkin	153.01	16	P	PKPbc	04 53 22.4	0.0
	baz=341						
253A	Americus	153.11	15	P	PKPbc	04 53 22.7	+0.1
	baz=342						
157A	Early Branch	153.16	9	P	PKPbc	04 53 22.5	-0.2
	baz=350						
158A	Hollywood	153.22	7	P	PKPbc	04 53 22.3	-0.5
	baz=351						
449A	Pace	153.36	22	P	PKPbc	04 53 22.5	-0.6
	baz=335						
LPAZ	La Paz	156.38	200	PKPab	PKPab	04 53 47.4	-1.7
	comp=Z,0.5nm,0.4s,baz=189,slow=4.3,SNR=4.8						

IDC 07 04:43:04.4±1.1**, 3°.13S×139°.95E, h110^{km}**±12^{km}**, mb3.5**/3**, mb1 3.9**/5**, mb1mx3.4**/27**, mbtmp4.1**/5**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/24**, Error ellipse: s-maj=31.2km s-min=19.2km az=113.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	0.97	51	P	Pn	04 43 24.8	-0.5
	283nm,0.3s,baz=220,slow=12,SNR=850						
JAY				S	Sn	04 43 41.6	+0.5
	136nm,0.3s,baz=292,slow=10,SNR=8.8						
JAY				LR	LR	04 43 58.8	
	comp=Z,99nm,20.4s,baz=20,slow=56						
SIJI	Sorong	8.96	284	P	Pn	04 45 10.4	-0.7
	2.2nm,0.3s,baz=196,slow=22,SNR=7.9						
SIJI				S	Sn	04 46 42.7	-7.6
	0.3nm,0.3s,baz=163,slow=19,SNR=3.0						
WRA	Warramunga Arr	17.59	198	P	P	04 47 02.0	-0.2
	1.6nm,0.3s,baz=22,slow=13,SNR=23						
WRA				S	Sn	04 50 06.8	-12
	0.3nm,0.3s,baz=10.0,slow=24,SNR=3.1						
ASAR	Alice Springs	21.24	195	P	P	04 47 42.5	+0.7
	2.4nm,0.5s,baz=23,slow=9.2,SNR=34						
ASAR				S	S	04 51 26.7	-5.1
	0.2nm,0.3s,baz=14,slow=27,SNR=3.4						
MJAR	Matsushiro Arr	39.50	358	LR	LR	05 06 17.4	
	comp=Z,17nm,18.9s,baz=200,slow=35						
KSRS	Korea Array	41.89	346	P	P	04 50 44.8	+0.8
	0.9nm,0.5s,baz=155,slow=9.1,SNR=5.6						
ILAR	Eielson Array	85.70	24	P	P	04 55 29.9	-0.8
	0.6nm,0.6s,baz=264,slow=5.4,SNR=7.1						

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*ISK **07** 04:58:49.4, 37°.22N×36°.12E, h9^{km}, ML2.3/5*

*DDA **07** 04:58:49.0, 37°.11N×36°.19E, h15^{km}±2^{km}, ML2.5*

ISC 07 04:58:49.0±1.2**, 37°.17N**±0°.05×**36°.15E**±0°.03**, h10**^{km}±11^{km}**, n16, σ0^{s}.57**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.36**	**244**	PG	**Pb**	**04 58 57.1**	**-0.4**
CEYT				SG	**Sb**	**04 59 02.6**	**-0.6**
KAMA	**Osmaniye**	**0.41**	**88**	*i* P	**Pg**	**04 58 57.2**	**0.0**
KAMA				*i* S	**Sg**	**04 59 01.6**	**-1.0**
ANDN	**Andirin**	**0.44**	**21**	*i* P	**Pb**	**04 58 58.5**	**-0.4**
ANDN				*i* S	**Sb**	**04 59 05.9**	**+0.3**
ANDN				IAML_P			
	comp=Z,853nm,0.1s						
YURE	**YUREGIR**	**0.54**	**231**	PG	**Pb**	**04 59 00.6**	**0.0**
YURE	**YUREGIR**	**0.54**	**231**	*i* P	**Pg**	**04 58 59.6**	**+0.1**
KMRS	**Kahramanmaras**	**0.69**	**60**	PG	**Pb**	**04 59 03.3**	**+0.2**
SAIM	**ADANA**	**0.81**	**356**	*i* P	**Pn**	**04 59 06.8**	**+0.2**
SAIM				IAML_P			
	comp=Z,1µm,0.1s						
KUZU	**Kuzuini**	**0.84**	**118**	*i* P	**Pg**	**04 59 05.2**	**0.0**
KUZU				*i* S	**Sg**	**04 59 16.4**	**+0.3**
GAZ	**Gaziantep**	**0.85**	**90**	PG	**Pb**	**04 59 06.4**	**+0.5**
GAZ				SG	**Sn**	**04 59 19.0**	**-0.7**
KRTS	**Karatas**	**0.86**	**226**	PG	**Pb**	**04 59 06.4**	**+0.3**
KRTS				SG	**Sn**	**04 59 19.5**	**-0.4**
GZT	**Gaziantep**	**1.14**	**80**	*i* P	**Pn**	**04 59 11.3**	**0.0**
GZT				*i* S	**Sb**	**04 59 26.2**	**+0.2**
MERS	**Mersin**	**1.34**	**257**	PN	**Pb**	**04 59 14.2**	**-0.1**
KERG	**Konya-Eregli**	**1.63**	**279**	*i* P	**Pn**	**04 59 18.6**	**+0.6**
KERG				IAML_P			
	comp=Z,46nm,0.3s						
ATAB	**Bozova**	**1.73**	**79**	*i* P	**Pg**	**04 59 23.2**	**+0.9**
ATAB				*i* S	**Sg**	**04 59 45.2**	**+0.4**
SURC	**SANLIURFA_SURC**	**1.99**	**98**	*i* P	**Pg**	**04 59 26.6**	**-0.6**
SURC				*i* S	**Sb**	**04 59 51.2**	**+0.9**
URFA	**Urfa**	**2.15**	**82**	PN	**Pb**	**04 59 27.0**	**-1.1**

IDC 07 04:58:59.6±2.9**, 10°.79S**×**112°.13E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/44**, mbtmp3.6**/4**, Error ellipse: s-maj=143.1km s-min=22.6km az=46.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.24**	**116**	P	P	05 04 09.3	+0.5
	0.6nm,0.5s,baz=289,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**24.38**	**125**	P	P	05 04 19.6	-0.3
	0.6nm,0.6s,baz=298,slow=9.3,SNR=12						
H08S2	**Diego Garcia H**	**39.23**	**271**	T	T	05 48 01.6	
	baz=100						
H08S3	**Diego Garcia H**	**39.24**	**271**	T	T	05 47 57.6	
	baz=100						
H08S1	**Diego Carcia H**	**39.25**	**271**	T	T	05 48 10.4	
	baz=100						
MKAR	**Makanchi Array**	**63.23**	**337**	P	P	05 09 29.7	-0.1
	0.6nm,0.6s,baz=149,slow=6.3,SNR=5.2						
ZALV	**Zalesovo Beam**	**68.53**	**343**	P	P	05 10 03.8	0.0
	0.8nm,0.5s,baz=161,slow=5.6,SNR=3.5						

IDC 07 05:08:07.8±11.0**, 3°.49N**×**65°.89E, h0**^{km}**, mb3.9**/2**, mb1 4.2**/2**, mb1mx3.3**/58**, mbtmp3.9**/2**, MS3.1**/7**, Ms1 3.1**/7**, ms1mx2.9**/32**, Error ellipse: s-maj=945.8km s-min=51.1km az=40.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**11.01**	**152**	T	T	05 21 43.3	
	baz=330,slow=76,SNR=39						
H08N3	**Diego Garcia H**	**11.02**	**152**	T	T	05 21 56.4	
	baz=330,slow=76,SNR=40						
H08N1	**Diego Carcia H**	**11.03**	**152**	T	T	05 22 02.1	
	baz=330,slow=76,SNR=36						
PSI	**Prapat**	**32.99**	**90**	LR	LR	05 25 34.4	
	comp=Z,37nm,19.1s,baz=84,slow=32						
GEYT	**Alibeck**	**35.01**	**349**	LR	LR	05 29 02.5	
	comp=Z,27nm,20.2s,baz=85,slow=36						
CMAR	**Chiang Mai Arr**	**35.59**	**63**	LR	LR	05 29 39.6	
	comp=Z,25nm,18.6s,baz=192,slow=36						
BRTR	**Keskin Array B**	**46.41**	**325**	LR	LR	05 35 55.7	
	comp=Z,18nm,20.0s,baz=100,slow=36						
BOSA	**Boshof**	**50.42**	**228**	LR	LR	05 35 43.3	
	comp=Z,26nm,18.7s,baz=70,slow=33						
ZALV	**Zalesovo Beam**	**52.63**	**14**	LR	LR	05 38 46.0	
	comp=Z,20nm,19.9s,baz=76,slow=35						
H01W3	**Cape Leeuwin H**	**59.20**	**134**	T	T	06 22 18.4	
	baz=299						
H01W2	**Cape Leeuwin H**	**59.21**	**134**	T	T	06 22 12.6	
	baz=299						
H01W1	**Cape Leeuwin H**	**59.22**	**134**	T	T	06 22 11.5	
	baz=299						
KSRS	**Korea Array**	**65.85**	**50**	LR	LR	05 49 07.3	
	comp=Z,9.6nm,21.7s,baz=85,slow=37						
WRA	**Warramunga Arr**	**71.07**	**112**	P	P	05 19 28.6	+0.1
	1.8nm,0.8s,baz=278,slow=6.4,SNR=3.8						
ASAR	**Alice Springs**	**71.43**	**116**	P	P	05 19 30.6	-0.1
	0.5nm,0.7s,baz=286,slow=6.7,SNR=4.5						
TXAR	**Lajitas Array**	**145.86**	**344**	PKPbc	PKPdf	05 27 49.2	-0.4
	0.3nm,0.7s,baz=23,slow=2.9,SNR=5.8						

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*KRSC **07** 05:09:18.3±1.4, 52°.24N×160°.70E, h51^{km}±21^{km}, ML3.8*

*IDC **07** 05:09:19.9±4.3, 52°.91N×160°.73E, h0^{km}, mb3.6/2, mb1 3.6/2, mb1mx3.1/57, mbtmp3.6/2, Error ellipse: s-maj=90.4km s-min=34.1km az=163.0*

ISC 07 05:09:17.9±2.3**, 52°.21N**±0°.08×**160°.67E**±0°.07**, h15**^{km}±12^{km}**, n19, σ0^{s}.80**/24**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.97**	**336**	*e*P	**Pg**	**05 09 36.7**	**0.0**
SPN				*e*S	**Sb**	**05 09 49.1**	**+0.1**
NLC	**Nalytchevo**	**1.25**	**321**	*e*P	**Pb**	**05 09 41.2**	**0.0**
NLC				*e*S	**Sb**	**05 09 57.0**	**-0.1**
RUS	**Russkaya**	**1.34**	**280**	*e*P	**Pb**	**05 09 42.4**	**-0.3**
RUS				*e*S	**Sn**	**05 09 58.7**	**-0.9**
DALK	**Dalny**	**1.43**	**306**	*e*P	**Pb**	**05 09 43.7**	**-0.4**
DALK				*e*S	**Sn**	**05 10 01.2**	**-0.5**
UGLR	**Uglovaya**	**1.50**	**312**	*e*P	**Pn**	**05 09 44.7**	**+0.3**
MTVR	**Mutnovka**	**1.55**	**281**	*e*P	**Pb**	**05 09 45.8**	**-0.5**
MTVR				*e*S	**Sn**	**05 10 04.6**	**-0.3**
AVH	**Avacha**	**1.58**	**313**	*e*P	**Pb**	**05 09 46.8**	**0.0**
KDTR	**Khodutka, Kamc**	**1.65**	**257**	*e*P	**Pn**	**05 09 46.8**	**+0.5**
KDTR				*e*S	**Sn**	**05 10 06.1**	**-1.1**
KRMR	**Karymshinskiy**	**1.67**	**293**	*i* P	**Pn**	**05 09 47.4**	**+0.9**
KRMR				*e*S	**Sn**	**05 10 07.4**	**-0.3**
ASAK	**Asacha**	**1.71**	**277**	*e*P	**Pb**	**05 09 48.6**	**-0.4**
PETK	**Petropavlovsk-**	**2.02**	**298**	Pn	**Pn**	**05 09 52.6**	**+1.2**
	8.0nm,0.3s,baz=93,slow=19,SNR=55						
PETK				Sn	**Sb**	**05 10 18.2**	**-1.0**
	9.1nm,0.3s,baz=136,slow=21,SNR=4.6						
GNL	**Ganaly**	**2.22**	**313**	*e*P	**Pb**	**05 09 56.7**	**-1.0**
APC	**Apacha**	**2.26**	**290**	*e*P	**Pb**	**05 09 57.3**	**-1.0**
BKI	**Bering**	**4.35**	**44**	*e*S	**Sn**	**05 11 11.9**	**-1.8**
H11N2	**WAKE ISLAND Hy**	**32.78**	**169**	T	T	05 53 10.5	
	baz=355,slow=76,SNR=9.0						
H11N3	**WAKE ISLAND Hy**	**32.80**	**169**	T	T	05 53 11.7	
	baz=355,slow=76,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**32.80**	**169**	T	T	05 53 11.5	
	baz=355,slow=76,SNR=9.5						
FINES	**FINESS Array B**	**61.07**	**337**	P	**P**	**05 19 31.4**	**+0.9**
	1.1nm,0.9s,baz=47,slow=6.3,SNR=4.6						
AKASG	**Malin Array Be**	**69.55**	**329**	P	**P**	**05 20 25.9**	**+0.3**
	0.2nm,0.4s,baz=28,slow=7.3,SNR=2.8						

IDC 07 05:16:07.2±1.8**, 5°.44S**×**153°.33E, h0**^{km}**, mb3.6**/5**, mb1 3.9**/5**, mb1mx3.5**/34**, mbtmp3.6**/5**, Error ellipse: s-maj=75.6km s-min=25.3km az=122.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.43**	**230**	P	P	05 21 17.8	-0.5
	0.8nm,0.4s,baz=59,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**26.05**	**224**	P	P	05 21 43.5	+1.1
	0.3nm,0.5s,baz=52,slow=8.9,SNR=3.6						
MKAR	**Makanchi Array**	**81.16**	**319**	P	P	05 28 25.3	+0.6
	0.1nm,0.4s,baz=110,slow=3.9,SNR=2.4						
ILAR	**Eielson Array**	**82.55**	**22**	P	P	05 28 32.1	+0.5
	1.4nm,0.8s,baz=253,slow=5.2,SNR=14						
KURBB	**Kurchatov Arra**	**84.63**	**322**	P	P	05 28 41.4	-1.3
	0.1nm,0.3s,baz=100,slow=4.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**151.01**	**287**	PKPbc	PKPbc	05 36 02.3	-0.9
	4.4nm,0.3s,baz=86,slow=2.6,SNR=2.7						

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*IDC **07** 05:23:47.7±1.1, 7°.14N×74°.40W, h0^{km}, mb3.6/1, mb1 3.8/4, mb1mx3.4/29, mbtmp3.7/4, ML2.4/3, MS2.9/4, Ms1 2.9/4, ms1mx2.7/28, Error ellipse: s-maj=28.9km s-min=16.2km az=96.0*

*ISCJB **07** 05:23:49.5±0.7, 7°.01N±0°.02×73°.99W±0°.02, h1^{km}±4^{km}, mb3.8/1, MS3.2/1, Error ellipse: s-maj=4.3km s-min=3.0km az=137.2*

*RSNC **07** 05:23:51.3±1.3, 6°.99N×73°.97W, h5^{km}±3^{km}, ML3.4, Mw4.2*

ISC 07 05:23:50.3±1.1**, 7°.04N**±0°.02×**73°.99W**±0°.02**, h5**^{km}±8^{km}**, n38, σ1^{s}.26**/54**, 5C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.28**	**75**	⇑*i*Pg	**Pg**	**05 23 55.6**	**-0.1**
BRRC				*e*Sg	**Sg**	**05 23 59.9**	**+0.5**
PTBC	**PUERTO BERRIO,**	**0.68**	**223**	⇑*i*P	**Pg**	**05 24 02.5**	**-0.9**
PTBC				*e*S	**Sg**	**05 24 11.9**	**-0.3**
PTBC				*i*		05 24 13.1	
	comp=N,1µm,0.2s						
PTBC				*i*		05 24 13.3	
	comp=Z,610nm,0.2s						
GIRC	**Giron, Santand**	**0.79**	**87**	*e*P	**Pg**	**05 24 05.0**	**-0.4**
BARC	**Barichara**	**0.91**	**119**	⇑*i*P	**Pg**	**05 24 06.7**	**-1.1**
BARC				*e*S	**Sg**	**05 24 18.4**	**-1.3**
ZARC	**Zaragoza, Cauc**	**0.98**	**298**	⇓*i*P	**Pg**	**05 24 08.8**	**-0.3**
ZARC				*e*S	**Sg**	**05 24 23.0**	**+1.2**
ZARC				*i*		05 24 27.4	
	comp=Z,3µm,0.5s						
PAMC	**Pamplona, Colo**	**1.31**	**77**	⇑*i*P	**Pg**	**05 24 14.4**	**-1.0**
PAMC				*e*S	**Sg**	**05 24 31.9**	**-0.6**
PAMC				*i*		05 24 40.2	
	comp=N,598nm,0.5s						
PAMC				*i*		05 24 40.9	
	comp=Z,327nm,0.4s						
GRMC	**Gramalote, San**	**1.35**	**60**	*i* P	**Pn**	**05 24 16.9**	**+1.0**
OCAC	**Ocana**	**1.36**	**29**	⇑*e*P	**Pn**	**05 24 15.4**	**-0.7**
OCAC				*e*S	**Sb**	**05 24 35.3**	**+1.1**
OCAC				*i*		05 24 43.3	
	comp=N,2µm,0.4s						
OCAC				*i*		05 24 47.2	
	comp=Z,676nm,0.5s						
RUSC	**La Rusia**	**1.45**	**142**	*e*P	**Pn**	**05 24 16.2**	**-1.3**
RUSC				*e*S	**Sg**	**05 24 35.2**	**-1.7**
RUSC				*i*		05 24 40.3	
	comp=E,947nm,0.4s						
NORC	**Norcasia**	**1.71**	**211**	*e*P	**Pn**	**05 24 20.3**	**-0.4**
NORC				*e*S	**Sn**	**05 24 42.3**	**-0.6**
NORC				*i*		05 24 45.9	
	comp=Z,256nm,0.3s						
NORC				*i*		05 24 48.9	
	comp=E,309nm,0.7s						
HELC	**Santa Helena**	**1.75**	**241**	⇓*i*P	**Pn**	**05 24 21.0**	**-0.6**
HELC				*e*S	**Sn**	**05 24 43.0**	**-1.4**
HELC				*i*		05 24 49.1	
	comp=N,399nm,0.5s						
SMLC	**San Martn de**	**1.75**	**357**	*e*P	**Pn**	**05 24 19.8**	**-1.6**
SMLC				*e*S	**Sn**	**05 24 45.1**	**+1.0**
SMLC				*i*		05 24 55.1	
	comp=E,481nm,0.5s						
CTAU	**Tausa, Cundina**	**1.82**	**182**	*e*P	**Pg**	**05 24 26.9**	**+1.6**
CTAU				*e*S	**Sg**	**05 24 50.9**	**+1.9**
CAPV	**Capacho**	**1.85**	**63**	*e*S	**Sn**	**05 24 48.0**	**+1.3**
CTAB	**Cerro Tablazo,**	**2.02**	**186**	*e*P	**Pn**	**05 24 26.8**	**+1.4**
CTAB				*e*S	**Sg**	**05 24 55.0**	**-0.4**
ROSC	**El Rosal**	**2.21**	**189**	Pn	**Pn**	**05 24 27.9**	**0.0**
	comp=E,5.3nm,0.3s,baz=342,slow=9.6,SNR=14						
ROSC				Lg	Lg	05 25 00.1	
	comp=E,24nm,0.3s,baz=231,slow=20,SNR=8.9						
ROSC				LR	LR	05 25 28.9	
	comp=E,101nm,21.7s,baz=86,slow=44						
ROSC	**El Rosal**	**2.21**	**189**	*e*P	**Pn**	**05 24 27.9**	**0.0**
ROSC				*e*S	**Sn**	**05 24 54.4**	**-1.4**
DBBC	**Dabeiba**	**2.21**	**270**	*e*S	**Sn**	**05 24 56.1**	**+0.8**
DBBC				*i*		05 25 15.9	
	comp=Z,341nm,0.6s						
TAMC	**Tame, Arauca**	**2.26**	**105**	*e*S	**Sn**	**05 24 56.9**	**+0.3**
GUY2C	**Guyana, Caldas**	**2.26**	**217**	*e*S	**Sn**	**05 24 57.3**	**0.0**
YOPC	**Yopal, Colombi**	**2.28**	**137**	*e*P	**Pb**	**05 24 31.8**	**-0.2**
YOPC				*e*S	**Sg**	**05 25 05.3**	**+1.6**
YOPC				*i*		05 25 09.6	
	comp=Z,425nm,0.4s						
CHIC	**Chingaza**	**2.40**	**174**	*e*P	**Pn**	**05 24 30.6**	**0.0**
CHIC				*e*S	**Sb**	**05 25 05.4**	**+1.0**
CHIC				*i*		05 25 22.9	
	comp=Z,115nm,0.4s						
RREF	**El Recreo**	**2.52**	**213**	*e*P	**Pn**	**05 24 31.8**	**-0.6**
RREF				*e*S	**Sn**	**05 25 03.9**	**+0.1**
RREF				*i*		05 25 12.5	
	comp=Z,282nm,0.4s						
AGZ	**La Independenc**	**2.58**	**144**	*e*P	**Pn**	**05 24 34.4**	**+1.8**
ARGC	**Ariguani, Magd**	**2.81**	**355**	*e*S	**Sb**	**05 25 17.9**	**+2.0**
ARGC				*i*		05 25 43.0	
	comp=Z,57nm,0.6s						
CODC	**Agustn Codazz**	**2.93**	**10**	*e*P	**Pn**	**05 24 36.8**	**-0.7**
CODC				*e*S	**Sn**	**05 25 14.8**	**+1.7**
SOCV	**Socops**	**3.34**	**68**	*e*P	**Pn**	**05 24 44.0**	**+0.9**
ORTC	**Ortega, Tolima**	**3.35**	**202**	*e*S	**Sn**	**05 25 23.2**	**-0.4**
SDV	**Santo Domingo**	**3.79**	**61**	Pn	**Pn**	**05 24 51.0**	**+1.4**
	comp=Z,2.2nm,0.3s,baz=262,slow=7.1,SNR=11						
SDV				Sn	**Sb**	**05 25 44.0**	**-0.3**
	comp=Z,7.7nm,0.3s,baz=321,slow=19,SNR=4.1						
ELOV	**Elorza**	**4.47**	**90**	*e*P	**Pn**	**05 24 58.4**	**-0.3**
FLOC	**Florencia**	**5.67**	**197**	*e*P	**Pn**	**05 25 14.7**	**-0.5**
PCRV	**Puerto La Cruz**	**9.76**	**71**	Pn	**Pn**	**05 26 15.1**	**+3.7**
	comp=Z,0.3nm,0.3s,baz=277,slow=8.1,SNR=2.1						
PCRV				Sn	**Sn**	**05 28 00.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=323,slow=20,SNR=2.5						
SJG	**San Juan**	**13.40**	**34**	LR	LR	05 33 00.8	
	comp=Z,29nm,21.5s,baz=172,slow=41						
PTGA	**Pitinga**	**15.97**	**118**	LR	LR	05 33 57.4	
	comp=Z,80nm,19.5s,baz=299,slow=37						
MDP	**Montagnes des**	**21.31**	**94**	LR	LR	05 37 07.4	
	comp=Z,92nm,19.2s,baz=244,slow=37						
YKA	**Yellowknife Ar**	**62.77**	**340**	P	**P**	**05 34 13.1**	**-3.2**
	comp=Z,0.4nm,0.6s,baz=132,slow=6.8,SNR=5.9						
ASAR	**Alice Springs**	**148.53**	**235**	PKPbc	**PKPdf**	**05 43 37.5**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=108,slow=3.6,SNR=3.5						
WRA	**Warramunga Arr**	**149.68**	**242**	PKPbc	**PKPdf**	**05 43 37.7**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=124,slow=2.4,SNR=3.2						

SVSA 07 05:30:08.5±0.8**, 38°.50N**×**26°.88W, h10**^{km}**, MD3.5, ML1.6, Error ellipse: s-maj=5.4km s-min=1.8km az=36.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.27**	**317**	*e*P	Pg	05 30 13.3	-0.7
PSCM				*e*S	Sg	05 30 17.1	-0.6
PSCM				A	A	05 30 21.6	
	29nm,0.3s						
ADH	**Angra Heroismo**	**0.32**	**299**	*e*P	Pg	05 30 13.9	-0.9
ADH				*e*S	Sg	05 30 18.5	-0.6
ADH				A	A	05 30 20.9	
	16nm,0.3s						
PMAN	**Manadas**	**0.95**	**278**	*e*S	Sg	05 30 34.2	-5.1
PMAN				A	A	05 30 36.0	
	8.6nm,0.2s						
ROSA	**Rosais**	**1.09**	**282**	*e*P	Pg	05 30 24.7	-4.7
ROSA				*e*S	Sg	05 30 37.6	-5.9
ROSA				A	A	05 30 39.0	
	7.5nm,0.2s						
PSET	**Sete Cidades**	**1.14**	**126**	*e*P	Pb	05 30 25.4	-4.9
PSET				*e*S	Sb	05 30 39.0	-6.2
PSET				A	A	05 30 40.5	
	14nm,0.4s						
PICO	**Pico**	**1.21**	**270**	*e*P	Pb	05 30 27.0	-4.6
PICO				*e*S	Sb	05 30 40.7	-6.6
PICO				A	A	05 30 43.6	
	7.5nm,0.4s						
CMLA	**Cha da Macela**	**1.30**	**124**	*e*S	Sb	05 30 42.9	-6.9
CMLA				A	A	05 30 45.6	
	9.1nm,0.2s						

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*IDC **07** 05:37:30.0±1.0, 12°.40N×144°.01E, h0^{km}, mb3.6/6, mb1 3.9/6, mb1mx3.6/36, mbtmp3.6/6, MS3.0/5, Ms1 3.0/5, ms1mx2.7/34, Error ellipse: s-maj=39.9km s-min=17.7km az=116.0*

*ISCJB **07** 05:37:32.4±0.8, 12°.4N±0°.1×143°.9E±0°.2, h27^{km}, mb3.6/6, MS3.2/3, Error ellipse: s-maj=31.8km s-min=9.6km az=34.1*

ISC 07 05:37:34.0±1.0**, 12°.4N**±0°.2×**144°.0E**±0°.2**, h27**^{km}**, n18, σ1^{s}.13**/8**, mb3.7**/6**, MS3.3**/3**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.45**	**35**	Pn	**Pn**	**05 37 58.3**	**-0.3**
	69nm,0.3s,baz=154,slow=1.4,SNR=69						
GUMO				Sn	**Sn**	**05 38 16.9**	**+0.2**
	156nm,0.3s,baz=162,slow=20,SNR=11						
SIJI	**Sorong**	**18.27**	**225**	LR	LR	05 49 34.2	
	comp=Z,14nm,18.3s,baz=299,slow=40						
DAV	**Davao City (W)**	**18.91**	**255**	LR	LR	05 48 23.4	
	comp=Z,11nm,20.8s,baz=2.5,slow=34						
TGY	**Tagaytay City**	**22.52**	**277**	LR	LR	05 51 08.5	
	comp=Z,98nm,18.0s,baz=2.5,slow=36						
H11S3	**WAKE ISLAND Hy**	**22.67**	**72**	T	T	06 06 10.4	
	baz=258,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**22.69**	**72**	T	T	06 06 06.1	
	baz=258,slow=75,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**22.69**	**72**	T	T	06 06 06.4	
	baz=258,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**23.15**	**69**	T	T	06 06 34.3	
	baz=255,slow=75,SNR=20						
H11N2	**WAKE ISLAND Hy**	**23.16**	**69**	T	T	06 06 37.3	
	baz=255,slow=75,SNR=21						
H11N3	**WAKE ISLAND Hy**	**23.16**	**69**	T	T	06 06 42.4	
	baz=255,slow=75,SNR=12						
MJAR	**Matsushiro Arr**	**24.60**	**349**	LR	LR	05 51 49.0	
	comp=Z,36nm,19.1s,baz=190,slow=35						
WRA	**Warramunga Arr**	**33.52**	**197**	P	**P**	**05 44 11.4**	**-0.2**
	0.6nm,0.6s,baz=5.7,slow=9.2,SNR=3.5						
ASAR	**Alice Springs**	**37.18**	**195**	P	**P**	**05 44 43.1**	**0.0**
	0.1nm,0.3s,baz=14,slow=10,SNR=4.1						
STKA	**Stephens Creek**	**44.08**	**183**	LR	LR	06 06 02.5	
	comp=Z,57nm,18.0s,baz=204,slow=39						
MKAR	**Makanchi Array**	**61.77**	**317**	P	**P**	**05 47 51.4**	**+1.1**
	0.2nm,0.5s,baz=94,slow=7.8,SNR=3.0						
YKA	**Yellowknife Ar**	**84.30**	**27**	P	**P**	**05 50 02.0**	**-1.2**
	0.3nm,0.7s,baz=299,slow=4.5,SNR=3.9						
NVAR	**Mina Array Bea**	**88.32**	**51**	P	**P**	**05 50 25.4**	**+1.5**
	0.5nm,0.6s,baz=260,slow=5.4,SNR=5.8						
FINES	**FINESS Array B**	**91.88**	**335**	P	**P**	**05 50 38.5**	**-1.1**
	0.3nm,0.3s,baz=68,slow=4.7,SNR=7.1						

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*UCR **07** 06:00:08.5±2.0, 11°.35N×86°.80W, h28^{km}±26^{km}, MW4.2*

*SNET **07** 06:00:10.8±1.2, 11°.50N×86°.80W, h25^{km}±15^{km}, ML3.6*

ISC 07 06:00:09.5±1.6**, 11°.40N**±0°.07×**86°.77W**±0°.07**, h33**^{km}±12^{km}**, n24, σ0^{s}.90**/31**, 9C-1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASN	**Masaya**	**0.84**	**46**	*e*P	**Pb**	**06 00 27.3**	**+1.5**
CNGN	**Cerro Negro**	**1.10**	**3**	⇑*e*P	**Pn**	**06 00 28.9**	**+0.1**
BUEV	**Buena Vista**	**1.46**	**114**	⇑*e*P	**Pn**	**06 00 33.7**	**0.0**
BUEV				*e*S	**Sb**	**06 00 53.0**	**-1.5**
GB1A	**Borinquen Arri**	**1.46**	**113**	*e*P	**Pn**	**06 00 33.2**	**-0.6**
ACON	**Acoyapa**	**1.66**	**70**	*e*P	**Pn**	**06 00 35.0**	**-1.4**
MESS	**Mesas**	**1.68**	**113**	⇓*i*P	**Pn**	**06 00 36.5**	**-0.1**
MESS				*e*S	**Sn**	**06 00 57.4**	**+0.3**
MATN	**Matagalpa**	**1.73**	**28**	⇑*e*P	**Pn**	**06 00 37.6**	**+0.1**
CUI	**Cuipilapa**	**1.73**	**115**	⇑*e*P	**Pn**	**06 00 37.5**	**+0.1**
ESTN	**Estel**	**1.74**	**13**	⇑*e*P	**Pn**	**06 00 37.0**	**-0.6**
ESTN	**Estel**	**1.74**	**13**	⇑*e*P	**Pn**	**06 00 37.9**	**+0.3**
CSGN	**Cosiguina Volc**	**1.75**	**334**	⇑*i*P	**Pn**	**06 00 38.4**	**+0.7**
CSGN	**Cosiguina Volc**	**1.75**	**334**	*e*P	**Pb**	**06 00 39.0**	**-2.1**
CSGN				*e*S	**Sn**	**06 00 59.7**	**+0.7**
JTS	**Las Juntas de**	**2.09**	**121**	*e*P	**Pn**	**06 00 41.8**	**-0.6**
JTS				*e*S	**Sb**	**06 01 14.4**	**+1.9**
CNCH	**Conchagua**	**2.14**	**331**	*e*P	**Pn**	**06 00 43.2**	**+0.1**
CNCH				IAML		06 01 13.6	
	comp=Z,796nm,0.4s						
RCON	**San Juan de Ri**	**2.16**	**16**	*e*P	**Pn**	**06 00 43.7**	**+0.2**
LCND	**La Caada**	**2.20**	**330**	*e*P	**Pn**	**06 00 44.1**	**+0.3**
LCND				*e*S	**Sn**	**06 01 10.1**	**+0.2**
LCND				IAML		06 01 16.2	
	comp=Z,224nm,0.3s						
ARE1	**Arenal 1**	**2.21**	**115**	⇑*i*P	**Pn**	**06 00 44.2**	**+0.2**
CEDE	**Laguna Cedeo**	**2.22**	**114**	*e*P	**Pn**	**06 00 44.0**	**-0.1**
ESPN	**Las Esperanzas**	**2.54**	**72**	*e*P	**Pn**	**06 00 47.7**	**-0.8**
PACA	**Pacayal**	**2.56**	**324**	*e*P	**Pn**	**06 00 49.7**	**+0.8**
SRA1	**San Ramn**	**2.60**	**120**	*e*P	**Pn**	**06 00 50.3**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.69**	**349**	⇑*e*P	**Pn**	**06 00 51.9**	**+1.1**
LCR2	**La Lucha 2**	**3.17**	**121**	*e*P	**Pn**	**06 00 58.2**	**+0.7**
LCR2				*e*S	**Sn**	**06 01 34.2**	**-0.1**
DRK0	**Durika**	**4.06**	**121**	*e*P	**Pn**	**06 01 09.9**	**+0.3**
DRK0				*e*S	**Sn**	**06 01 55.6**	**-0.6**

SVSA 07 06:10:36.1±0.9**, 38°.44N**×**26°.91W, h0**^{km}±4^{km}**, MD3.6, ML2.3, 1C, Error ellipse: s-maj=3.4km s-min=2.3km az=36.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.31**	**329**	*e*P	Pg	06 10 41.7	-0.4
PSCM				*e*S	Sg	06 10 46.6	+0.5
PSCM				A	A	06 10 50.3	
	165nm,0.3s						
ADH	**Angra Heroismo**	**0.34**	**311**	⇑*i*P	Pg	06 10 41.9	-0.6
ADH				*e*S	Sg	06 10 47.1	+0.2
ADH				A	A	06 10 50.2	
	170nm,0.4s						
PMAN	**Manadas**	**0.94**	**282**	*e*S	Sg	06 11 03.4	-3.0
PMAN				A	A	06 11 04.5	
	32nm,0.1s						
PGRA	**Graciosa**	**1.02**	**306**	*e*P	Pg	06 10 53.0	-2.8
PGRA				*e*S	Sg	06 11 05.7	-3.3
PGRA				A	A	06 11 09.8	
	25nm,0.2s						
PPNO	**Prainha do Nor**	**1.06**	**272**	*e*P	Pg	06 10 53.5	-2.9
PPNO				*e*S	Sg	06 11 06.4	-3.8
PPNO				A	A	06 11 08.7	
	21nm,0.1s						
ROSA	**Rosais**	**1.08**	**286**	*e*P	Pg	06 10 53.4	-3.4
ROSA				*e*S	Sg	06 11 07.1	-3.7
ROSA				A	A	06 11 07.8	
	27nm,0.1s						
PSET	**Sete Cidades**	**1.12**	**123**	*e*P	Pg	06 10 54.3	-3.3
PSET				*e*S	Sg	06 11 07.8	-4.3
PSET				A	A	06 11 09.8	
	40nm,0.3s						
PICO	**Pico**	**1.19**	**274**	*e*P	Pg	06 10 55.5	-3.4
PICO				*e*S	Sg	06 11 09.3	-5.0
PICO				A	A	06 11 10.8	
	13nm,0.2s						
PDA	**Ponta Delgada**	**1.20**	**124**	*e*P	Pg	06 10 55.2	-3.9
PDA				*e*S	Sg	06 11 09.8	-4.9
PDA				A	A	06 11 13.7	
	37nm,0.2s						
CMLA	**Cha da Macela**	**1.28**	**121**	*e*P	Pg	06 10 56.5	-4.2
CMLA				*e*S	Sg	06 11 11.6	-5.8
CMLA				A	A	06 11 14.6	
	56nm,0.2s						
CALA	**Caldeira**	**1.41**	**276**	*e*P	Pn	06 10 58.2	-4.9
CALA				*e*S	Sg	06 11 14.7	-6.7

SVSA 07 06:17:32.5±0.9**, 38°.52N**×**26°.85W, h5**^{km}**, MD3.5, ML2.3, Error ellipse: s-maj=4.9km s-min=1.4km az=33.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.27**	**311**	*e*P	Pg	06 17 37.5	-0.3
PSCM				*e*S	Sg	06 17 41.4	0.0
PSCM				A	A	06 17 47.3	
	172nm,0.3s						
ADH	**Angra Heroismo**	**0.33**	**294**	*e*P	Pg	06 17 38.1	-0.7
ADH				*e*S	Sg	06 17 43.2	+0.1
ADH				A	A	06 17 49.4	
	210nm,0.6s						
PMAN	**Manadas**	**0.97**	**277**	*e*P	Pg	06 17 47.5	-3.7
PMAN				*e*S	Sg	06 17 59.3	-4.5
PMAN				A	A	06 18 01.2	
	33nm,0.1s						
ROSA	**Rosais**	**1.10**	**281**	*e*P	Pg	06 17 49.6	-4.1
ROSA				*e*S	Sg	06 18 02.9	-5.1
ROSA				A	A	06 18 04.1	
	34nm,0.3s						
PPNO	**Prainha do Nor**	**1.11**	**268**	*e*P	Pg	06 17 49.8	-3.9
PPNO				*e*S	Sg	06 18 03.0	-5.1
PPNO				A	A	06 18 04.7	

	23nm,0.2s						
PSET	**Sete Cidades**	**1.13**	**128**	*e*S	Sg	06 18 03.4	-5.5
PSET				A	A	06 18 07.0	
	50nm,0.3s						
PDA	**Ponta Delgada**	**1.22**	**129**	*e*P	Pg	06 17 51.3	-4.5
PDA				*e*S	Sg	06 18 05.7	-5.9
PDA				A	A	06 18 07.6	
	22nm,0.3s						
PICO	**Pico**	**1.23**	**270**	*e*P	Pg	06 17 51.7	-4.4
PICO				*e*S	Sg	06 18 05.9	-6.2
PICO				A	A	06 18 10.7	
	21nm,0.3s						
CMLA	**Cha da Macela**	**1.29**	**125**	*e*P	Pn	06 17 52.4	-4.8
CMLA				*e*S	Sg	06 18 07.4	-6.7
CMLA				A	A	06 18 09.2	
	35nm,0.3s						
CALA	**Caldeira**	**1.45**	**273**	*e*S	Sb	06 18 11.4	-7.4
PCED	**Cedros**	**1.45**	**275**	*e*P	Pn	06 17 54.1	-5.3
PCED				*e*S	Sb	06 18 11.3	-7.5
PCED				A	A	06 18 14.2	
	14nm,0.8s						

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*GUC **07** 06:17:56.6±0.5, 24°.42S×67°.73W, h170^{km}±11^{km}, ML3.9*
*IDC **07** 06:18:02.8±2.4, 23°.92S×67°.45W, h217^{km}±24^{km}, mb3.8/3, mb1 3.6/6, mb1mx3.3/20, mbtmp4.2/6, Error ellipse: s-maj=28.3km s-min=21.0km az=88.0*
ISC 07 06:17:56.2±1.5**, 24°.40S**±0°.07×**67°.5W**±0°.2**, h165**^{km}±21^{km}**, n16, σ1^s.42**/22**, 8C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**2.01**	**247**	⇑*i*P	**Pn**	**06 18 32.7**	**+0.1**
GO02				*e*S	**Sn**	**06 19 00.5**	**-0.2**
GO02				IAML		06 19 02.8	
	comp=N,840nm,0.1s						
PB14	**IPOC Station P**	**2.61**	**265**	*e*P	**Pn**	**06 18 39.9**	**+0.1**
PB14				*e*S	**Sn**	**06 19 12.6**	**-0.8**
PB14				IAML		06 19 20.5	
	comp=N,240nm,0.4s						
PB05	**IPOC Station P**	**2.88**	**302**	⇑*i*P	**Pn**	**06 18 43.6**	**+0.8**
PB05				*e*S	**Sn**	**06 19 18.8**	**-0.3**
PB05				IAML		06 19 21.0	
	comp=E,297nm,0.3s						
PB10	**IPOC Station P**	**2.89**	**287**	⇑*i*P	**Pn**	**06 18 43.2**	**+0.4**
PB10				*e*S	**Sn**	**06 19 18.1**	**-0.8**
PB10				IAML		06 19 27.7	
	comp=N,282nm,0.5s						
PB09	**IPOC Station P**	**3.03**	**329**	⇑*i*P	**Pn**	**06 18 46.5**	**+1.7**
PB09				*e*S	**Sn**	**06 19 23.6**	**+1.2**
PB09				IAML		06 19 27.4	
	comp=E,324nm,0.4s						
PB03	**IPOC Station P**	**3.10**	**319**	⇑*i*P	**Pn**	**06 18 46.5**	**+0.8**
PB03				*e*S	**Sn**	**06 19 23.2**	**-0.7**
PB04	**IPOC Station P**	**3.16**	**310**	⇑*i*P	**Pn**	**06 18 46.9**	**+0.6**
PB04				*e*S	**Sn**	**06 19 23.8**	**-1.4**
PB07	**IPOC Station P**	**3.43**	**321**	⇓*i*P	**Pn**	**06 18 50.5**	**+0.7**
PB07				*e*S	**Sn**	**06 19 30.4**	**-0.9**
LPAZ	**La Paz**	**8.09**	**356**	P	**Pn**	**06 19 52.4**	**+0.9**
	comp=E,2.4nm,0.3s,baz=178,slow=6.5,SNR=80						
LPAZ				S	**Sn**	**06 21 18.6**	**-3.6**
	comp=E,0.1nm,0.3s,baz=307,slow=18,SNR=1.5						
CPUP	**Villa Florida**	**9.44**	**104**	P	Pn	06 20 15.6	+7.0
	comp=E,0.2nm,0.3s,baz=271,slow=10,SNR=6.1						
PLCA	**Paso Flores**	**16.48**	**188**	P	Pn	06 21 46.8	+8.8
	comp=E,0.2nm,0.3s,baz=7.0,slow=12,SNR=7.7						
BDFB	**Brasilia**	**20.30**	**68**	P	**P**	**06 22 19.2**	**-0.3**
	comp=E,5.1nm,0.8s,baz=259,slow=9.6,SNR=7.0						
SYO	**Syowa Base**	**73.36**	**159**	⇑*e*P	**P**	**06 29 07.4**	**-2.1**
SYO	**Syowa Base**	**73.36**	**159**	⇑*e*X	P	06 29 15.4	+5.9
TORD	**Torodi Ar. Bea**	**77.18**	**69**	P	**P**	**06 29 32.3**	**+0.1**
	comp=E,4.5nm,0.3s,baz=255,slow=4.6,SNR=13						
MAW	**Mawson**	**81.20**	**163**	P	**P**	**06 29 55.7**	**+2.5**
	comp=E,1.7nm,0.7s,baz=198,slow=13,SNR=6.7						

SVSA 07 06:21:00.7±0.8**, 38°.53N×26°.86W, h10**^{km}**, MD3.5, ML1.7, Error ellipse: s-maj=5.0km s-min=2.0km az=33.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.27**	**311**	*e*P	Pg	06 21 05.7	-0.4
PSCM				*e*S	Sg	06 21 09.2	-0.5
PSCM				A	A	06 21 12.7	
	44nm,0.2s						
ADH	**Angra Heroismo**	**0.32**	**293**	*e*P	Pg	06 21 06.1	-1.0
ADH				*e*S	Sg	06 21 10.6	-0.8
ADH				A	A	06 21 14.1	
	38nm,0.4s						
PMAN	**Manadas**	**0.97**	**277**	*e*S	Sg	06 21 26.7	-5.3
PMAN				A	A	06 21 27.7	
	14nm,0.3s						
ROSA	**Rosais**	**1.10**	**280**	*e*P	Pb	06 21 17.0	-4.8
ROSA				*e*S	Sg	06 21 30.1	-6.0
ROSA				A	A	06 21 31.4	
	13nm,0.1s						
PPNO	**Prainha do Nor**	**1.10**	**268**	*e*P	Pg	06 21 17.7	-4.2
PPNO				*e*S	Sg	06 21 30.4	-5.8
PPNO				A	A	06 21 32.0	
	7.4nm,0.1s						
PICO	**Pico**	**1.23**	**269**	*e*P	Pn	06 21 19.5	-4.5
PICO				*e*S	Sb	06 21 33.3	-6.7
PICO				A	A	06 21 34.5	
	8.8nm,0.3s						
CMLA	**Cha da Macela**	**1.30**	**126**	*e*P	Pn	06 21 20.1	-4.8
CMLA				*e*S	Sb	06 21 35.1	-6.9
CMLA				A	A	06 21 37.0	
	13nm,0.3s						

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*ISK **07** 06:37:08.2, 38°.66N×42°.97E, h4^{km}, ML2.2/4*
*ISCJB **07** 06:37:09.1±0.5, 38°.66N±0°.03×42°.98E±0°.05, h10^{km}, Error ellipse: s-maj=6.1km s-min=3.5km az=145.9*
*DDA **07** 06:37:09.3, 38°.75N×43°.06E, h7^{km}±2^{km}, ML2.5*
ISC 07 06:37:08.1±1.1**, 38°.62N**±0°.04×**42°.97E**±0°.04**, h10**^{km}**, n10, σ0^s.60**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	**BITLIS_Adilcev**	**0.27**	**315**	*i* P	**Pb**	**06 37 15.5**	**+0.4**
ADCV				*i* S	**Sb**	**06 37 20.4**	**+0.6**
AKDM	**Akdamar-Van**	**0.29**	**178**	PG	**Pb**	**06 37 15.3**	**-0.2**
AKDM				SG	**Sb**	**06 37 20.5**	**0.0**
GEVA	**Gevas**	**0.32**	**166**	*i* P	**Pb**	**06 37 16.7**	**+0.8**
VANB	**Van**	**0.33**	**94**	PG	**Pb**	**06 37 16.3**	**+0.1**
VANB				SG	**Sb**	**06 37 22.1**	**+0.4**
TVAN	**Van**	**0.36**	**105**	*i* P	**Pg**	**06 37 16.1**	**+0.8**
TVAN				*i* S	**Sb**	**06 37 22.3**	**-0.1**
TVAN				IAML_P			
	comp=Z,4µm,0.1s						
VMUR	**Van-Muradiye**	**0.60**	**52**	*i* P	**Pg**	**06 37 19.6**	**-0.3**
VMUR				IAML_P			
	comp=Z,410nm,0.1s						
MLAZ	**Malazgirt-MUS**	**0.61**	**328**	PG	**Pg**	**06 37 20.0**	**-0.1**
MLAZ				SG	**Sb**	**06 37 29.2**	**-0.6**
TUTA	**Tutak**	**0.79**	**351**	*i* P	**Pg**	**06 37 23.5**	**0.0**
AGRB	**Hanur-Agry**	**0.95**	**1**	PG	**Pg**	**06 37 26.2**	**-0.3**
AGRB				SG	**Sg**	**06 37 39.2**	**+0.2**
HAKT	**HAKKARI**	**1.21**	**151**	*i* P	**Pb**	**06 37 29.8**	**-1.5**
HAKT				IAML_P			
	comp=Z,123nm,0.2s						

UCR 07 06:57:24.1±0.9**, 8°.25N×82°.46W, h57**^{km}±6^{km}**, MW3.6, 1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.59**	**337**	*e*P	Pn	06 57 37.1	+0.1
BRU2				*e*S	Sn	06 57 46.3	-0.1
EDSV	**San Vito**	**0.76**	**318**	*e*P	Pn	06 57 38.9	-0.2
EDSV				*e*S	Sn	06 57 50.4	+0.4
EDPN	**Palmar Norte**	**1.21**	**306**	*e*P	Pn	06 57 45.4	+0.5
EDPN				*e*S	Sn	06 57 59.8	-0.6
DRK0	**Durika**	**1.27**	**323**	⇓*e*P	Pn	06 57 46.1	+0.2
DRK0				*e*S	Sn	06 58 02.6	+0.6
EDDO	**Dominical**	**1.71**	**306**	*e*P	Pn	06 57 51.2	-0.4

IDC 07 07:01:28.2±2.1**, 10°.39S×132°.82E, h0**^{km}**, mb3.4**/1**, mb1 3.4**/3**, mb1mx3.2**/18**, mbtmp3.2**/3**, ML2.8**/2**, Error ellipse: s-maj=85.5km s-min=21.8km az=77.0, Arafura Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**9.61**	**171**	Pn	Pn	07 03 49.5	+1.5
	0.1nm,0.3s,baz=357,slow=14,SNR=3.5						
WRA				Sn	Sn	07 05 29.3	-7.5
	0.7nm,0.3s,baz=359,slow=25,SNR=4.3						
WRA				Lg	Lg	07 06 32.5	
	1.1nm,0.3s,baz=349,slow=30,SNR=3.9						
ASAR	**Alice Springs**	**13.25**	**176**	Pn	Pn	07 04 37.5	-0.3
	0.1nm,0.3s,baz=357,slow=14,SNR=2.9						
ASAR				Sn	Sn	07 06 60.0	-5.9
	0.1nm,0.3s,baz=359,slow=27,SNR=2.4						
ASAR				Lg	Lg	07 08 27.2	
	baz=2.0,slow=30,SNR=3.2						
MKAR	**Makanchi Array**	**72.57**	**326**	P	P	07 12 57.2	-0.1
	0.2nm,0.5s,baz=122,slow=7.4,SNR=3.1						

SVSA 07 07:07:35.3±1.0**, 38°.61N×26°.81W, h1**^{km}±4^{km}**, MD3.9, ML3.1, Error ellipse: s-maj=7.6km s-min=1.4km az=28.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	**0.26**	**290**	*e*P	Pg	07 07 40.8	+0.5
PSCM				*e*S	Sg	07 07 43.8	+0.1
PSCM				A	A	07 07 54.3	
	2µm,0.5s						
ADH	**Angra Heroismo**	**0.34**	**277**	*e*P	Pg	07 07 41.7	-0.1
ADH				*e*S	Sg	07 07 45.7	-0.5
ADH				A	A	07 07 53.5	
	1µm,0.5s						
PMAN	**Manadas**	**1.01**	**272**	*e*P	Pg	07 07 51.2	-3.4
PMAN				*e*S	Sg	07 08 04.1	-3.5
PMAN				A	A	07 08 05.9	
	117nm,0.1s						
PGRA	**Graciosa**	**1.01**	**295**	*e*P	Pg	07 07 51.7	-2.9
PGRA				*e*S	Sg	07 08 04.0	-3.7
PGRA				A	A	07 08 08.0	
	95nm,0.3s						
ROSA	**Rosais**	**1.13**	**276**	*e*P	Pg	07 07 53.5	-3.5
ROSA				*e*S	Sg	07 08 07.0	-4.6
ROSA				A	A	07 08 08.0	
	99nm,0.2s						
PPNO	**Prainha do Nor**	**1.15**	**263**	*e*P	Pg	07 07 53.6	-3.8
PPNO				*e*S	Sg	07 08 07.2	-5.1
PPNO				A	A	07 08 16.3	
	147nm,0.5s						
PSET	**Sete Cidades**	**1.16**	**132**	*e*P	Pg	07 07 53.9	-3.7
PSET				*e*S	Sg	07 08 07.8	-4.8
PSET				A	A	07 08 10.3	
	296nm,0.5s						
PDA	**Ponta Delgada**	**1.25**	**133**	*e*P	Pg	07 07 54.7	-4.5
PDA				*e*S	Sg	07 08 09.6	-5.8
PDA				A	A	07 08 11.8	
	136nm,0.2s						
PICO	**Pico**	**1.27**	**266**	*e*P	Pg	07 07 55.3	-4.4
PICO				*e*S	Sg	07 08 10.8	-5.5
PICO				A	A	07 08 13.4	
	97nm,0.4s						
CMLA	**Cha da Macela**	**1.32**	**130**	*e*P	Pg	07 07 56.2	-4.3
CMLA				*e*S	Sg	07 08 11.5	-6.1
CMLA				A	A	07 08 13.4	
	267nm,0.1s						
PCALD	**Caldeiras da R**	**1.32**	**128**	*e*P	Pg	07 07 56.0	-4.6
PCALD				*e*S	Sg	07 08 11.5	-6.2
PCALD				A	A	07 08 18.7	
	213nm,0.4s						
PCAN	**Candelaria**	**1.33**	**264**	*e*P	Pg	07 07 56.0	-4.7
PCAN				*e*S	Sg	07 08 11.9	-6.0
PCAN				A	A	07 08 34.8	
	74nm,0.4s						
PCED	**Cedros**	**1.49**	**271**	*e*P	Pn	07 07 57.8	-5.4
PCED				*e*S	Sg	07 08 15.3	-7.7
PCED				A	A	07 08 23.4	
	77nm,0.5s						
BART	**Pico Bartolome**	**1.54**	**122**	*e*P	Pn	07 07 58.9	-5.0
BART				*e*S	Sn	07 08 16.5	-8.0
BART				A	A	07 08 18.7	
	45nm,0.4s						
PSMA	**Santa Maria**	**2.09**	**140**	*e*P	Pn	07 08 06.6	-4.8
PSMA				*e*S	Sn	07 08 30.4	-7.7
PSMA				A	A	07 08 31.9	
	31nm,0.2s						
PSMN	**Pico do Norte,**	**2.12**	**139**	*e*P	Pn	07 08 07.3	-4.5
PSMN				*e*S	Sn	07 08 30.9	-7.9
PSMN				A	A	07 08 32.6	
	36nm,0.2s						

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*IDC **07** 07:24:47.7±1.5, 52°.00N×172°.01W, h0^{km}, mb3.3/6, mb1 3.6/7, mb1mx3.4/39, mbtmp3.3/7, ML3.2/1, Error ellipse: s-maj=48.2km s-min=28.5km az=139.0*
*NEIC **07** 07:24:51.6±0.0, 51°.63N×171°.56W, h25^{km}, ML2.8(AEIC), After AEIC.*
*ISCJB **07** 07:24:53.1±0.7, 51°.8N±0°.1×171°.63W±0°.05, h44^{km}, mb3.2/6, Error ellipse: s-maj=15.5km s-min=4.2km az=172.0*
ISC 07 07:24:54.6±0.9**, 51°.9N**±0°.2×**171°.67W**±0°.05**, h44**^{km}**, n27, σ0^s.82**/26**, mb3.3**/6**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**1.54**	**288**	*e*Pn	**Pn**	**07 25 19.9**	**+0.3**
KOSE				*e*Sn	**Sn**	**07 25 39.7**	**+1.3**
KOFP	**Korovin Flat P**	**1.55**	**286**	*e*Pn	**Pn**	**07 25 19.4**	**-0.3**
ATKA	**Atka Island**	**1.59**	**283**	*e*Pn	**Pn**	**07 25 19.4**	**-0.9**
ATKA				*e*Sn	**Sn**	**07 25 39.1**	**-0.5**
KOKL	**Mount Kliuchef**	**1.62**	**287**	*e*Pn	**Pn**	**07 25 21.1**	**+0.4**
NIKH	**Nikolski High**	**2.04**	**57**	*e*Pn	**Pn**	**07 25 25.6**	**-0.8**
NIKH				*e*Sn	**Sn**	**07 25 51.2**	**+0.6**
OKWE	**Okmok W'ng Wal**	**2.62**	**51**	*e*Pn	**Pn**	**07 25 34.5**	**0.0**
GSMY	**Great Sitkin M**	**2.72**	**275**	*e*Pn	**Pn**	**07 25 35.9**	**+0.2**
GSTR	**Great Sitkin T**	**2.72**	**276**	*e*Pn	**Pn**	**07 25 35.1**	**-0.7**
GSTD	**Great Sitkin T**	**2.77**	**275**	*e*Pn	**Pn**	**07 25 36.4**	**-0.2**
GSTD				*e*Sn	**Sn**	**07 26 10.5**	**+1.6**
ETKA	**Kagalaska Isla**	**2.94**	**271**	*e*Pn	**Pn**	**07 25 38.6**	**-0.1**
ADAG	**Mount Adagdak**	**3.06**	**274**	*e*Pn	**Pn**	**07 25 40.4**	**+0.1**
ADK	**Adak**	**3.11**	**272**	*e*Pn	**Pn**	**07 25 40.6**	**-0.4**
ADK				*e*Pg	**Pn**	**07 25 40.7**	**-0.3**
KIRH	**Kanaga Island**	**3.36**	**272**	*e*Pn	**Pn**	**07 25 45.3**	**+0.7**
MSW	**Makushin Switc**	**3.59**	**54**	*e*Pn	**Pn**	**07 25 48.9**	**+1.2**
ILAR	**Eielson Array**	**18.16**	**35**	P	**P**	**07 29 01.2**	**-1.8**
	0.1nm,0.3s,baz=224,slow=9.8,SNR=5.9						
INK	**Inuvik**	**24.53**	**34**	P	**P**	**07 30 08.6**	**-0.9**
	0.7nm,0.4s,baz=254,slow=7.4,SNR=3.4						
YKA	**Yellowknife Ar**	**31.63**	**48**	P	**P**	**07 31 12.8**	**-0.1**
	0.2nm,0.5s,baz=273,slow=8.1,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**36.21**	**216**	T	T	08 10 21.5	
	baz=21,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**36.22**	**216**	T	T	08 10 22.2	
	baz=21,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**36.23**	**216**	T	T	08 10 24.3	
	baz=21,slow=75,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**37.41**	**215**	T	T	08 11 57.0	
	baz=22,slow=76,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**37.42**	**215**	T	T	08 11 55.9	
	baz=22,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**37.42**	**215**	T	T	08 11 54.8	
	baz=22,slow=76,SNR=4.8						
NVAR	**Mina Array Bea**	**39.08**	**89**	P	**P**	**07 32 18.6**	**+1.1**
	0.3nm,0.7s,baz=297,slow=10.0,SNR=3.2						
PDAR	**Pinedale Array**	**41.89**	**77**	P	**P**	**07 32 41.1**	**+0.4**
	0.1nm,0.5s,baz=295,slow=6.9,SNR=3.7						
TXAR	**Lajitas Array**	**54.18**	**87**	P	**P**	**07 34 15.8**	**+0.3**
	0.2nm,0.5s,baz=297,slow=6.4,SNR=5.3						
ASAR	**Alice Springs**	**89.00**	**228**	P	**P**	**07 37 43.9**	**-0.7**
	0.3nm,0.9s,baz=27,slow=6.3,SNR=2.9						

GUC 07 07:36:24.2±0.8**, 22°.62S×69°.20W, h109**^{km}±4^{km}**, ML3.5, 4C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.35**	**257**	⇓*i*P	Pn	07 36 40.8	+0.5
PB06				*e*S	Sn	07 36 53.1	+0.8
PB06				IAML		07 36 53.8	
	comp=N,3µm,0.1s						
PB15	**IPOC Station P**	**0.63**	**203**	⇑*i*P	Pn	07 36 42.6	+0.4
PB15				*e*S	Sn	07 36 56.2	+0.6
PB03	**IPOC Station P**	**0.77**	**318**	⇓*i*P	Pn	07 36 43.9	+0.6
PB03				*e*S	Sn	07 36 58.5	+0.9
PB03				IAML		07 36 59.6	
	comp=E,1µm,0.2s						
PB09	**IPOC Station P**	**0.82**	**357**	⇓*i*P	Pn	07 36 44.6	+0.8
PB09				*e*S	Sn	07 36 59.2	+0.8
PB04	**IPOC Station P**	**0.92**	**288**	⇑*i*P	Pn	07 36 45.6	+0.9
PB04				*e*S	Sn	07 37 01.5	+1.3
PB04				IAML		07 37 04.7	
	comp=N,872nm,0.1s						
PB05	**IPOC Station P**	**0.95**	**256**	⇑*i*P	Pn	07 36 45.6	+0.7
PB05				*e*S	Sn	07 37 01.4	+0.8
PB07	**IPOC Station P**	**1.09**	**324**	⇓*i*P	Pn	07 36 47.2	+0.7
PB07				*e*S	Sn	07 37 04.4	+1.0
PB07				IAML		07 37 05.3	
	comp=N,1µm,0.4s						
PB02	**IPOC Station P**	**1.45**	**333**	*i* P	Pn	07 36 51.0	+0.6
PB02				*e*S	Sn	07 37 11.2	+0.8
PB02				IAML		07 37 13.6	
	comp=E,959nm,0.2s						
PB10	**IPOC Station P**	**1.53**	**234**	⇑*i*P	Pn	07 36 51.5	+0.2
PB10				*e*S	Sn	07 37 12.3	+0.4
PB01	**IPOC Station P**	**1.59**	**350**	⇓*i*P	Pn	07 36 52.6	+0.4
PB01				*e*S	Sn	07 37 14.0	+0.6
PB01				IAML		07 37 14.8	
	comp=E,651nm,0.2s						

WEL 07 07:50:02.2±1.1**, 35°S**±8°×**17°9E**±1°1**, h266**^{km}±9^{km}**, M3.9**/34**, mB4.5**/2**, MLv3.9**/34**, Mw(mB)3.7**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=69.7, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.22**	**185**	P	Pn	07 50 47.6	-0.3
WMGZ	**Waiomatatini S**	**2.47**	**182**	P	Pn	07 50 50.6	+0.3
HAZ	**Te Kaha**	**2.48**	**194**	P	Pn	07 50 50.2	-0.2
PKGZ	**Pakihiroa**	**2.56**	**188**	P	Pn	07 50 51.2	0.0
GRZ	**Great Barrier**	**2.66**	**249**	P	Pn	07 50 50.8	-1.3
RUGZ	**Raukumara Rang**	**2.70**	**194**	P	Pn	07 50 52.4	-0.3
RUGZ				S	S	07 51 30.5	-2.3
PUZ	**Puketiti**	**2.73**	**185**	P	Pn	07 50 52.6	-0.2
TWGZ	**Tauwhareparae**	**2.86**	**189**	P	Pn	07 50 54.4	+0.2
MWZ	**Matawai**	**3.09**	**195**	P	Pn	07 50 56.9	+0.3
URZ	**Urewera**	**3.12**	**201**	P	Pn	07 50 56.7	-0.2
TKGZ	**Te Karaka**	**3.14**	**190**	P	Pn	07 50 57.2	+0.2
RAGZ	**Rawiri**	**3.27**	**196**	P	Pn	07 50 59.2	+0.6
ETAZ	**East Tamaki Re**	**3.33**	**240**	P	Pn	07 50 60.0	+0.9
TOZ	**Tahuroa Road**	**3.41**	**225**	P	Pn	07 51 01.4	+1.4
RIGZ	**Rimuhau**	**3.41**	**190**	P	Pn	07 50 58.4	-1.7
RTZ	**Ruatahuna**	**3.49**	**200**	P	Pn	07 51 01.4	+0.4
PRGZ	**Paritu Road**	**3.61**	**188**	P	Pn	07 51 02.1	-0.1
KNZ	**Kokohu**	**3.73**	**190**	P	Pn	07 51 03.3	-0.3
KNZ				S	S	07 51 53.1	+0.5
RAHZ	**Arahi**	**3.75**	**198**	P	Pn	07 51 03.9	+0.1
RAHZ				S	S	07 51 54.2	+1.3
MTHZ	**Maungataniwha**	**3.75**	**201**	P	Pn	07 51 05.4	+1.5
KUTZ	**Kaahu Road**	**3.81**	**214**	P	Pn	07 51 07.3	+2.7
MRHZ	**Matea Rd**	**3.87**	**205**	P	Pn	07 51 05.4	+0.2
MRHZ				S	S	07 51 55.3	-0.2
OUZ	**Omahuta**	**4.04**	**270**	P	Pn	07 51 04.9	-2.3
ARHZ	**Aropaoanui**	**4.10**	**197**	P	Pn	07 51 07.7	0.0
HIZ	**Hauiti**	**4.32**	**222**	P	Pn	07 51 14.1	+3.7
MCHZ	**McNeill Hill**	**4.34**	**199**	P	Pn	07 51 12.6	+1.9
COVZ	**Chateau Observ**	**4.53**	**211**	P	Pn	07 51 12.4	-0.4
FWVZ	**Far West T-bar**	**4.57**	**210**	P	Pn	07 51 14.9	+1.4
BHHZ	**Black Hill Sta**	**4.58**	**205**	P	Pn	07 51 13.8	+0.4
MOVZ	**Moawhango**	**4.62**	**208**	P	Pn	07 51 14.3	+0.4
KRHZ	**Kereru**	**4.62**	**201**	P	Pn	07 51 14.7	+0.8
PXZ	**Pawanui**	**4.86**	**195**	P	Pn	07 51 16.9	+0.2
PNHZ	**Pukenui**	**4.92**	**201**	P	Pn	07 51 17.7	+0.2
WAZ	**Wanganui**	**5.22**	**212**	P	Pn	07 51 22.1	+0.9
BFZ	**Birch Farm**	**5.62**	**198**	P	Pn	07 51 26.1	+0.1
MRZ	**Mangatainoka R**	**5.79**	**203**	P	Pn	07 51 27.4	-0.7
CPWZ	**Castlepoint**	**5.85**	**198**	P	Pn	07 51 29.6	+0.9
HOWZ	**Holdsworth Sta**	**6.03**	**202**	P	Pn	07 51 30.3	-0.7
OGWZ	**Otaki Gorge**	**6.07**	**205**	P	Pn	07 51 30.5	-0.9
TMWZ	**Te Maipa**	**6.12**	**199**	P	Pn	07 51 32.0	0.0
CAW	**Cannon Point**	**6.37**	**204**	P	Pn	07 51 34.0	-1.1
TRWZ	**Traveller**	**6.44**	**199**	P	Pn	07 51 35.7	-0.3
MSWZ	**Moikau Station**	**6.58**	**202**	P	Pn	07 51 36.9	-0.9
BHW	**Baring Head**	**6.70**	**204**	P	Pn	07 51 38.1	-1.0
PLWZ	**Palliser**	**6.72**	**201**	P	Pn	07 51 38.7	-0.9
TCW	**Tory Channel**	**6.74**	**208**	P	Pn	07 51 38.3	-1.5
TUWZ	**Tuamarina**	**7.06**	**209**	P	Pn	07 51 42.0	-1.7
NNZ	**Nelson**	**7.12**	**213**	P	Pn	07 51 44.8	+0.4

NEIC 07 08:38:59.7±1.3**, 36°.46N×112°.56W, h5**^{km}±2^{km}**, MW3.5, Error ellipse: s-maj=3.4km s-min=2.1km az=211.0, Moment Tensor Solution. s18 Moment tensor: Scale** 10^{14}**Nm;** M_{rr}-1.17; $M_{\theta\theta}$0.30; $M_{\phi\phi}$0.87; $M_{r\theta}$-1.14; $M_{\theta\phi}$-1.53; $M_{\phi r}$-0.37; **Best double couple:** $M_0$2.20000×10^{14} **NP1:** ϕ_s354.00000°**,** δ51.00000°**,** λ-33.00000°. **NP2:** ϕ_s106.00000°**,** δ65.00000°**,** λ-136.00000°. **Principal axes:** T 2.2100, Plg9.0000°, Azm227.0000°**;** N 0.0100, Plg41.0000°, Azm130.0000°**;** P -2.2200, Plg48.0000°, Azm327.0000°**; Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U15A	**North Rim**	**0.21**	**98**	*e*Pg	Pg	08 39 04.6	+0.6
U15A				*e*Sg	Sg	08 39 08.2	+1.3
KNB	**Kanab**	**0.60**	**339**	*e*Pg	Pg	08 39 11.6	+0.3
KNB				*e*Sg	Sg	08 39 19.3	+0.2
LCMT	**Little Creek M**	**0.78**	**315**	*e*Pg	Pg	08 39 14.9	+0.1
LCMT				*e*Sg	Sg	08 39 25.5	+0.6
PKCU	**Pink Cliffs**	**1.00**	**11**	*e*Pg	Pg	08 39 18.3	-0.7
PKCU				*e*Sg	Sg	08 39 31.8	-0.3
SZCU	**Shurtz Canyon**	**1.21**	**340**	*e*Pg	Pg	08 39 22.1	-0.9
SZCU				*e*Sg	Sg	08 39 37.6	-1.1
CCUT	**Cedar City**	**1.27**	**330**	*e*Pg	Pg	08 39 23.4	-0.7
CCUT				*e*Sg	Sg	08 39 39.3	-1.2
WUAZ	**Wupatki**	**1.34**	**134**	*e*Pn	Pn	08 39 24.4	-0.8
WUAZ				*e*Sn	Sg	08 39 41.5	-1.3
MTPU	**Mount Pierson**	**1.61**	**10**	*e*Pn	Pn	08 39 28.7	-0.4
MTPU				*e*Sn	Sn	08 39 48.6	-1.8
W13A	**Hualapai Mount**	**1.73**	**219**	*e*Pn	Pn	08 39 30.3	-0.4
W13A				*e*Sn	Sn	08 39 53.4	+0.1
MSU	**Marysvale**	**2.07**	**8**	*e*Pn	Pb	08 39 36.9	-1.1
MSU				*e*Sn	Sn	08 40 02.7	+1.0
SHPR	**Sheep Range**	**2.10**	**272**	*e*Pn	Pn	08 39 35.9	+0.2
SHPR				*e*Sn	Sn	08 40 02.3	0.0
TCRU	**Three Creeks R**	**2.15**	**2**	*e*Pn	Pn	08 39 36.7	+0.3
X16A	**Lo Mia Camp, P**	**2.23**	**156**	*e*Pn	Pn	08 39 37.1	-0.3
PSUT	**Pine Spring**	**2.32**	**334**	*e*Pn	Pn	08 39 38.7	0.0
LDFC	**Landfair**	**2.49**	**237**	*e*Pn	Pn	08 39 41.1	+0.1
Y14A	**Wickenburg**	**2.54**	**188**	*e*Pn	Pn	08 39 40.9	-0.7
W18A	**Petrified Fore**	**2.65**	**119**	*e*Pn	Pn	08 39 43.5	+0.2
X18A	**Snowflake**	**2.87**	**131**	*e*Pn	Pn	08 39 46.3	+0.1
TPNV	**Topopah Spring**	**3.01**	**280**	*e*Pn	Pn	08 39 48.6	+0.5
TMUT	**Trail Mountain**	**3.03**	**20**	*e*Pn	Pn	08 39 48.5	-0.1
R11A	**Troy Canyon, C**	**3.06**	**309**	*e*Pn	Pn	08 39 49.1	+0.2

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*IDC **07** 08:57:08.6±1.8, 5°.36S×146°.37E, h0^{km}, mb3.6/2, mb1 4.2/5, mb1mx3.7/26, mbtmp4.0/5, ML4.1/2 Error ellipse: s-maj=64.6km s-min=27.5km az=109.0*
*ISCJB **07** 08:57:18.5±0.8, 5°.97S±0°.06×146°.6E±0°.1, h100^{km}, mb3.9/4, Error ellipse: s-maj=19.4km s-min=8.9km az=6.6*
*NEIC **07** 08:57:20.1±0.9, 6°.00S×146°.57E, h108^{km}±14^{km}, mb4.1/3, Error ellipse: s-maj=29.6km s-min=7.2km az=103.0*
ISC 07 08:57:19.6±1.1**, 5°.94S**±0°.09×**146°.6E**±0°.2**, h100**^{km}**, n12, σ1^s.12**/15**, mb3.9**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.49**	**171**	Pn	**Pn**	**08 58 12.2**	**+0.3**
	21nm,0.3s,baz=10,slow=11,SNR=54						
PMG				Sn	**Sn**	**08 58 51.8**	**-0.6**
	22nm,0.3s,baz=126,slow=22,SNR=15						
PMG	**Port Moresby**	**3.49**	**171**	*e*Pn	**Pn**	**08 58 12.3**	**+0.4**
PMG				*e*		08 58 51.2	
PMG				*e*Sn	**Sn**	**08 58 51.8**	**-0.6**
COEN	**Coen**	**8.64**	**203**	*e*Pn	**Pn**	**08 59 21.3**	**-0.6**
COEN				*e*Sn	**Sn**	**09 00 56.7**	**-0.9**
CTA	**Charters Tower**	**14.06**	**181**	Pn	**P**	**09 00 38.9**	**-0.2**
	0.8nm,0.3s,baz=358,slow=14,SNR=7.1						
WR1	**Warramunga Arr**	**18.31**	**219**	*e*P	**P**	**09 01 27.8**	**+1.9**
WRA	**Warramunga Arr**	**18.31**	**219**	P	**P**	**09 01 27.8**	**+1.8**
	0.6nm,0.3s,baz=39,slow=9.8,SNR=22						

AS31	**Alice Springs**	**21.43**	**213**	*e*P	**P**	**09 01 59.4**	**-0.4**
	1.8nm,0.3s						
ASAR	**Alice Springs**	**21.43**	**213**	P	**P**	**09 02 02.1**	**+2.3**
	0.8nm,0.3s,baz=48,slow=9.2,SNR=17						
KURK	**Kurchatov**	**80.91**	**323**	*e*P	**P**	**09 09 22.1**	**-0.7**
	7.9nm,1.1s						
RSO	**Redoubt South**	**81.25**	**26**	*e*P	**P**	**09 09 24.7**	**0.0**
ILAR	**Eielson Array**	**85.59**	**23**	P	**P**	**09 09 46.5**	**0.0**
	0.4nm,0.6s,baz=245,slow=5.2,SNR=5.2						
ILB	**Eielson Array**	**85.59**	**23**	*e*P	**P**	**09 09 46.2**	**-0.3**
	3.6nm,1.3s						

NNC 07 09:08:21.3±6.7**, 49°.43N×76°.31E, h0^{km}, mb2.6, mpv2.2, 1C-3D, Error ellipse: s-maj=55.3km s-min=41.0km az=118.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.86**	**49**	⇓Pg	Pb	09 08 55.6	-0.5
	1.5nm,0.7s,baz=239,slow=13						
KURBB				⇓Lg	Lg	09 09 21.1	
	13nm,0.7s,baz=329,slow=14						
KURK	**Kurchatov**	**1.96**	**48**	⇑Pg	Pb	09 08 57.2	-0.7
	1.5nm,0.6s						
MK31	**Makanchi Array**	**4.80**	**121**	⇓Lg	Lg	09 10 47.9	
	1.2nm,0.7s,baz=302,slow=24,SNR=4.1						

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*OMAN **07** 09:15:35.1±1.7, 28°.10N×56°.80E, h41^{km}±101^{km}, Error ellipse: s-maj=53.6km s-min=36.5km az=266.0*
*IDC **07** 09:15:37.0±2.0, 27°.67N×55°.36E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.3/32, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=118.2km s-min=30.0km az=54.0*
*THR **07** 09:15:37.3, 27°.15N×55°.04E, h29^{km}, ML3.2*
*ISCJB **07** 09:15:39.2±0.4, 27°.38N±0°.03×55°.01E±0°.04, h15^{km}, mb3.5/3, Error ellipse: s-maj=5.8km s-min=3.9km az=138.3*
*TEH **07** 09:15:39.6, 27°.30N×55°.02E, h20^{km}, ML3.3*
ISC 07 09:15:39.6±0.8**, 27°.35N**±0°.04×**55°.06E**±0°.04**, h15^{km}, n36, σ1^{s}40**/38**, mb3.6**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.99**	**87**	*e*AML	AML	09 16 18.9	
	comp=N,544nm,0.5s						
BNDS	**Bandar-Abbas**	**0.99**	**87**	*e*Pg	**Pb**	**09 15 56.6**	**-1.9**
GENO	**Geno**	**0.99**	**87**	*e*Pg	**Pb**	**09 15 58.7**	**+0.2**
GENO				*e*Sg	**Sn**	**09 16 14.9**	**+2.0**
GENO				IAMB	IAmb	09 16 20.9	
	comp=Z,0.0nm,0.3s						
NIAN	**Nian**	**1.59**	**82**	IAMB	IAmb	09 16 42.2	
	comp=Z,0.0nm,0.4s						
NIAN				*e*Pn	**Pb**	**09 16 09.0**	**+0.3**
SHME	**Shamm**	**1.61**	**143**	*e*Pn	**Pn**	**09 16 06.6**	**-1.0**
LMD1	**Lamerd**	**1.69**	**270**	*e*Pn	**Pn**	**09 16 09.0**	**+0.4**
JHRM	**Jahrom**	**1.75**	**312**	*e*Pn	**Pn**	**09 16 11.3**	**+1.8**
BANOM	**Banah**	**1.80**	**142**	P	**Pn**	**09 16 09.7**	**-0.4**
	SNR=24						
BANOM				S	**Sb**	**09 16 36.0**	**+1.4**
GHIR	**Ghir-Karzin**	**2.06**	**297**	*e*AML	AML	09 16 55.4	
	comp=N,166nm,0.6s						
GHIR	**Ghir-Karzin**	**2.06**	**297**	*e*Pn	**Pn**	**09 16 13.3**	**-0.5**
GHIR				*e*Sg	**Sb**	**09 16 43.5**	**+1.2**
MSFE	**Esma-Masafi**	**2.21**	**153**	*e*Pn	**Pn**	**09 16 16.8**	**+1.0**
MDH	**Madha**	**2.32**	**151**	P	**Pn**	**09 16 18.2**	**+0.9**
MDH	**Madha**	**2.32**	**151**	*e*Pn	**Pn**	**09 16 17.8**	**+0.5**
NAZ	**Nazwa, Dubai**	**2.41**	**167**	*e*Pn	**Pn**	**09 16 20.9**	**+2.4**
KHNJ	**Kahnooj**	**2.42**	**75**	*e*Pn	**Pn**	**09 16 20.5**	**+1.8**
UOSS	**Minazif**	**2.60**	**157**	P	**Pn**	**09 16 22.6**	**+1.5**
	SNR=9.8						
UOSS	**Minazif**	**2.60**	**157**	*e*Pn	**Pn**	**09 16 21.2**	**+0.1**
FAQ	**Al Faqa, Dubai**	**2.63**	**169**	*e*Pn	**Pg**	**09 16 30.4**	**+0.3**
HATD	**Hatta, Dubai**	**2.69**	**159**	*e*Pn	**Pn**	**09 16 25.0**	**+2.7**
ASUD	**Al Ashush, Dub**	**2.72**	**175**	*e*Pn	**Pn**	**09 16 23.4**	**+0.7**
NGRK	**Negar Kerman**	**2.72**	**32**	*e*Pn	**Pn**	**09 16 24.5**	**+1.4**
NGRK				IAMB	IAmb	09 17 05.8	
	comp=Z,0.0nm,0.4s						
ASHO	**Ashiyiah**	**2.80**	**161**	*e*Pn	**Pn**	**09 16 24.0**	**+0.1**
IPAR	**Pars**	**3.05**	**325**	*e*Pn	**Pn**	**09 16 28.5**	**+0.9**
IPAR				IAMB	IAmb	09 17 30.6	
	comp=N,1μm,0.8s						
ALNE	**Al Ain**	**3.33**	**169**	*e*Pn	**Pn**	**09 16 33.5**	**+2.3**
IBAF	**Bafgh**	**4.25**	**6**	*e*Pn	**Pn**	**09 16 45.1**	**+1.1**
MZR	**Muzera**	**4.56**	**199**	P	**Pb**	**09 17 00.1**	**+0.8**
	SNR=29						
IRAM	**Ramesheh**	**5.02**	**333**	*e*Pn	**Pn**	**09 16 55.4**	**+0.8**
IRAM				IAMB	IAmb	09 16 57.6	
	comp=Z,184nm,0.1s						
YZKH	**Yazd**	**5.04**	**355**	*e*Pn	**Pn**	**09 16 55.9**	**+1.1**
WSAR	**Wadi Sarin**	**5.21**	**141**	Pn	**Pn**	**09 16 57.5**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=336,slow=10.0,SNR=9.3						
WSAR				Sn	**Sn**	**09 17 54.6**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=28,slow=17,SNR=3.2						
ZHSF	**Zahedan**	**5.51**	**65**	*e*Pn	**Pn**	**09 17 01.5**	**+0.2**
IGAR	**Gharneh**	**5.68**	**333**	IAMB	IAmb	09 17 05.2	
	comp=Z,341nm,0.1s						
IGAR				*e*Pn	**Pn**	**09 17 04.7**	**+1.0**
BSRN	**Basiran**	**5.80**	**37**	*e*Pn	**Pn**	**09 17 06.6**	**+1.4**
IZEF	**Zefreh**	**6.01**	**337**	IAMB	IAmb	09 17 10.1	
	comp=Z,144nm,0.4s						
IZEF				*e*Pn	**Pn**	**09 17 08.0**	**-0.3**
BRTR	**Keskin Array B**	**21.65**	**310**	P	**P**	**09 20 28.6**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=126,slow=9.7,SNR=6.0						
FINES	**FINESS Array B**	**39.23**	**338**	P	**P**	**09 23 03.8**	**-3.2**
	comp=Z,1.5nm,0.8s,baz=138,slow=8.6,SNR=4.8						
NOA	**NORSAR Array B**	**44.65**	**331**	P	**P**	**09 23 51.3**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=121,slow=7.5,SNR=3.6						

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*NIED **07** 09:48:00, 44°.10N×148°.00E, h53^{km}, Mw4.2 Best double couple: M$_0$2.19000×10^{15} NP1:φ$_s$241.00000°, δ14.00000°, λ111.00000°. NP2:φ$_s$40.00000°, δ77.00000°, λ85.00000°.*
*JMA **07** 09:48:40.6±0.3, 44°.05N×148°.03E, h0^{km}, M4.9*
*SKHL **07** 09:48:41.2±0.3, 44°.36N×148°.40E, h64^{km}, mb4.6/15*
*MOS **07** 09:48:41.2±1.1, 44°.37N×148°.25E, h62^{km}, mb4.5/17, Error ellipse: s-maj=8.4km s-min=7.4km az=88.1*
*ISCJB **07** 09:48:41.7±0.5, 44°.40N±0°.03×148°.16E±0°.05, h62^{km}±4^{km}, mb4.2/72, Error ellipse: s-maj=6.5km s-min=3.8km az=40.6*
*NEIC **07** 09:48:43.0±1.5, 44°.49N×148°.14E, h54^{km}±6^{km}, mb4.3/45, Error ellipse: s-maj=18.5km s-min=14.7km az=131.0*
*IDC **07** 09:48:45.5±2.3, 44°.51N×148°.09E, h84^{km}±20^{km}, mb3.6/21, mb1 3.8/25, mb1mx3.8/32, mbtmp3.9/25, MS3.2/12, Ms1 3.2/12, ms1mx3.0/31, Error ellipse: s-maj=17.2km s-min=12.5km az=151.0*
ISC 07 09:48:42.6±1.1**, 44°.40N**±0°.06×**148°.18E**±0°.06**, h56^{km}**±9^{km}**, n176, σ1^{s}43**/188**, mb4.2**/72**, MS3.4**/9**, 7C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.86**	**345**	d *i*PN	Pn	09 48 57.6	-1.0
KUR				*i* S	**Sn**	**09 49 09.5**	**-1.0**
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				pmax	pmax		
	comp=N,551nm,0.6s						
KUR				pmax	pmax		
	comp=Z,3μm,1.1s						
KUR				smax	smax		
	comp=E,7μm,0.4s						
KUR				smax	smax		
	comp=N,4μm,0.3s						
KUR	**Kuril'sk**	**0.86**	**345**	*i* P	Pn	09 48 57.6	-1.0
KUR				AMB	AMB	09 48 58.0	
	comp=N,550nm,0.4s						
KUR				AMB	AMB	09 48 58.0	
	comp=N,400nm,0.4s						
KUR				AMB	AMB	09 48 58.0	
	comp=N,2μm,0.4s						
KUR				*i* S	**Sn**	**09 49 09.7**	**-0.8**
KUR				A	A	09 49 10.0	
	comp=N,4μm,0.5s						
KUR				A	A	09 49 10.0	
	comp=N,7μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.71**	**258**	d *i*PN	**Pn**	**09 49 11.4**	**+1.5**
YUK				*e*S	**Sn**	**09 49 31.3**	**+0.7**
YUK				pmax	pmax		
	comp=N,268nm,0.4s						
YUK				pmax	pmax		
	comp=Z,1μm,0.4s						
YUK				pmax	pmax		
	comp=E,392nm,0.1s						
YUK				smax	smax		
	comp=N,4μm,0.5s						
YUK				smax	smax		
	comp=E,6μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.71**	**258**	*i* P	**Pn**	**09 49 10.8**	**+0.9**
YUK				AMB	AMB	09 49 11.5	
	comp=E,270nm,0.4s						
YUK				AMB	AMB	09 49 11.5	
	comp=E,390nm,0.4s						
YUK				AMB	AMB	09 49 11.5	
	comp=E,1μm,0.4s						
YUK				*e*S	**Sn**	**09 49 31.5**	**+0.9**
YUK				A	A	09 49 35.4	
	comp=E,2μm,0.5s						
YUK				A	A	09 49 35.4	
	comp=E,3μm,0.5s						
GRPR	**Tuman**	**1.78**	**258**	d *i*PN	**Pn**	**09 49 10.4**	**-0.5**
GRPR				*i* S	**Sn**	**09 49 31.5**	**-0.9**
GRPR				pmax	pmax		
	comp=Z,866nm,0.3s						
GRPR				pmax	pmax		
	comp=N,430nm,0.2s						
GRPR				smax	smax		
	comp=N,4μm,0.3s						
GRPR				smax	smax		
	comp=E,3μm,0.3s						
GRPR	**Tuman**	**1.78**	**258**	*i* P	**Pn**	**09 49 10.4**	**-0.5**
GRPR				AMB	AMB	09 49 13.0	
	comp=E,430nm,0.3s						
GRPR				AMB	AMB	09 49 13.0	
	comp=E,870nm,0.3s						
GRPR				*i* S	**Sn**	**09 49 31.5**	**-0.9**
NEM2	**Nemuro 2**	**2.04**	**240**	P	**Pn**	**09 49 13.1**	**-1.4**
NEM2				*e*S	**Sn**	**09 49 36.6**	**-2.2**
JRA	**Rausu**	**2.25**	**259**	P	**Pn**	**09 49 17.8**	**+0.5**
JRA				*e*S	**Sn**	**09 49 45.0**	**+1.1**
JNSB	**Nemuroshibetsu**	**2.37**	**256**	P	**Pn**	**09 49 19.3**	**+0.3**
JNSB				*e*S	**Sn**	**09 49 47.8**	**+0.9**
JKHN	**Kushirohamanak**	**2.55**	**240**	P	**Pn**	**09 49 20.6**	**-0.9**
JNK	**Nakash**	**2.63**	**253**	P	**Pn**	**09 49 22.6**	**+0.1**
JNK				*e*S	**Sn**	**09 49 53.4**	**+0.2**
JTKR	**Abashiri--Toko**	**3.10**	**264**	P	**Pn**	**09 49 29.5**	**+0.5**
JAR	**Ashorobuto**	**3.38**	**252**	P	**Pn**	**09 49 33.7**	**+0.9**
JAR				*e*S	**Sn**	**09 50 12.3**	**+0.8**
JCH	**Churui**	**3.93**	**245**	P	**Pn**	**09 49 40.1**	**-0.3**
JCH				*e*S	**Sn**	**09 50 24.5**	**-0.7**
JKK2	**Kamakawa 2**	**3.94**	**264**	P	**Pn**	**09 49 42.0**	**+1.4**
JKA	**Kamikawa-asahi**	**4.02**	**268**	*e*P	**Pn**	**09 49 43.3**	**+1.7**
ASAJ	**Asahikawa**	**4.02**	**268**	P	**Pn**	**09 49 43.3**	**+1.7**
	comp=E,2.4nm,0.3s,baz=63,slow=21,SNR=44						
ASAJ				S	Sn	09 50 39.0	+12
	comp=E,4.1nm,0.3s,baz=350,slow=28,SNR=2.8						
ASAJ				LR	LR	09 51 24.1	
	comp=E,338nm,21.0s,baz=165,slow=40						
JSE	**Soyaes**	**4.03**	**280**	P	**Pn**	**09 49 42.2**	**+0.5**
JFR	**Furan**	**4.23**	**255**	P	**Pn**	**09 49 46.4**	**+1.9**
ERM	**Erimo**	**4.38**	**239**	*e*Pn	**Pn**	**09 49 47.7**	**+1.2**
ERM				*e*Sn	**Sn**	**09 50 44.3**	**+8.2**
ERM	**Erimo**	**4.38**	**239**	c*e*PN	**Pn**	**09 49 48.4**	**+1.9**
JNBK	**Urakawa-nobuka**	**4.49**	**244**	P	**Pn**	**09 49 48.3**	**+0.3**
JNBK				*e*S	**Sn**	**09 50 36.2**	**-2.7**
YSS	**Yuzh-Sakhalins**	**4.58**	**306**	*e*Pn	**Pn**	**09 49 50.0**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.58**	**306**	⇓*e*PN	**Pn**	**09 49 50.0**	**+0.8**
YSS				*e*		09 50 47.0	
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
YSS	**Yuzh-Sakhalins**	**4.58**	**306**	*e*P	**Pn**	**09 49 50.0**	**+0.8**
YSS				AMB	AMB	09 49 50.4	
	comp=Z,60nm,0.7s						
YSS				*e*S	**Sn**	**09 50 42.8**	**+1.7**
JEW	**Eniwo**	**5.13**	**255**	P	**Pn**	**09 49 59.5**	**+2.7**
JRBN	**Rebuntou**	**5.16**	**284**	P	**Pn**	**09 49 59.1**	**+2.0**
JKB	**Kayabe**	**5.80**	**247**	P	**Pn**	**09 50 06.3**	**+0.4**
JKB				*e*S	**Sn**	**09 51 10.1**	**-1.0**
JOT	**Ohata**	**6.04**	**243**	P	**Pn**	**09 50 08.9**	**-0.4**
JOT				*e*S	**Sn**	**09 51 15.2**	**-1.9**
UGL	**Uglegorsk**	**6.29**	**320**	*e*P	**Pn**	**09 50 15.0**	**+2.4**
UGL				AMB	AMB	09 50 16.0	
	comp=Z,40nm,0.9s						
TYV	**Tymovskoe**	**7.46**	**332**	*e*PN	**Pn**	**09 50 31.2**	**+2.5**
TYV				pmax	pmax		
	comp=Z,12nm,0.7s						
TYV	**Tymovskoe**	**7.46**	**332**	*e*P	**Pn**	**09 50 31.1**	**+2.4**
TYV				AMB	AMB	09 50 32.0	
	comp=Z,10.0nm,0.5s						
TYV				*e*S	**Sn**	**09 51 52.0**	**+0.2**
TYV				A	A	09 51 53.0	
	comp=Z,9.0nm,0.2s						
SKR	**Severo-Kuril's**	**8.26**	**38**	⇓*e*PN	**Pn**	**09 50 39.6**	**0.0**
SKR	**Severo-Kuril's**	**8.26**	**38**	*e*P	**Pn**	**09 50 39.6**	**0.0**
TEY	**Ternei**	**8.27**	**278**	⇑*e*PN	**Pn**	**09 50 44.0**	**+4.2**
TEY				pmax	pmax		
	comp=E,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY	**Ternei**	**8.27**	**278**	*e*P	**Pn**	**09 50 43.0**	**+3.2**
TEY				AMB	AMB	09 50 45.0	
	comp=Z,20nm,1.0s						
OKH	**Okha**	**9.78**	**341**	*e*P	**Pn**	**09 51 01.4**	**+1.0**
OKH				*e*S	**Sn**	**09 52 48.7**	**+0.1**
NKL	**Nikolayevsk**	**10.05**	**333**	*e*P	**Pn**	**09 51 05.2**	**+1.1**
NKL				AMB	AMB	09 51 06.9	
	comp=Z,10.0nm,1.0s						
GRNR	**Gornyy**	**10.18**	**313**	*e*P	**Pn**	**09 51 08.0**	**+2.2**
GRNR				AMB	AMB	09 51 10.5	
	comp=Z,10.0nm,0.9s						
PETK	**Petropavlovsk-**	**10.73**	**32**	P	**Pn**	**09 51 14.7**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=205,slow=8.9,SNR=3.5						
PETK				LR	LR	09 55 51.9	
	comp=Z,48nm,21.1s,baz=231,slow=40						
MJAR	**Matsushiro Arr**	**10.91**	**227**	P	**Pn**	**09 51 14.8**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=9.0						
MJAR				LR	LR	09 55 41.2	
	comp=Z,60nm,21.1s,baz=50,slow=38						
MJB9	**Matsu-Tunnel**	**10.91**	**227**	*e*Pn	**Pn**	**09 51 14.8**	**-1.2**
MAJO	**Matsushiro**	**10.91**	**227**	*e*Pn	**Pn**	**09 51 14.7**	**-1.3**
MAJO	**Matsushiro**	**10.91**	**227**	*e*PN	**Pn**	**09 51 14.7**	**-1.3**
MAT	**Matsushiro**	**10.91**	**227**	P	**Pn**	**09 51 14.4**	**-1.6**
USA0B	**Ussuriysk Arra**	**11.61**	**275**	*e*Pn	**Pn**	**09 51 26.8**	**+1.4**
USRK	**Ussuriysk Ar.**	**11.61**	**275**	P	**Pn**	**09 51 27.1**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=85,slow=12,SNR=8.5						
USRK				LR	LR	09 55 57.3	
	comp=Z,80nm,19.1s,baz=81,slow=37						
KLR	**Kul'dur**	**12.24**	**299**	P	**Pn**	**09 51 36.6**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=105,slow=17,SNR=6.9						
KLR	**Kul'dur**	**12.24**	**299**	⇑*e*PN	**Pn**	**09 51 37.4**	**+3.4**
KLR	**Kul'dur**	**12.24**	**299**	*e*P	**Pn**	**09 51 37.4**	**+3.4**
EKMR	**Ekimchan**	**13.25**	**316**	*e*P	**Pn**	**09 51 48.8**	**+1.0**
EKMR				AMB	AMB	09 51 51.8	
	comp=Z,10.0nm,1.0s						
BMKR	**Bomnak**	**16.19**	**316**	*e*P	**Pn**	**09 52 24.8**	**-1.3**
BMKR				AMB	AMB	09 52 29.0	
	comp=Z,8.0nm,0.8s						
KSRS	**Korea Array**	**16.79**	**253**	P	**Pn**	**09 52 32.3**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=61,slow=12,SNR=5.5						
KSRS				LR	LR	09 58 09.3	
	comp=Z,50nm,21.8s,baz=36,slow=34						
KROS	**Kirovskiy**	**17.00**	**314**	*e*P	**Pn**	**09 52 34.8**	**-1.5**
KROS				AMB	AMB	09 52 38.0	
	comp=Z,10.0nm,1.0s						
BJI	**Beijing**	**24.01**	**271**	P	**P**	**09 53 52.8**	**+0.8**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**27.03**	**275**	P	**P**	**09 54 20.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
HHC				LR	LR		
	comp=N,120nm,13.6s						
HHC				LR	LR		
	comp=E,110nm,14.5s						
HHC				LR	LR		
	comp=Z,160nm,14.5s						
ULN	**Ulaanbaatar**	**28.47**	**292**	*i* P	**P**	**09 54 33.6**	**+1.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**28.91**	**292**	P	**P**	**09 54 35.7**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=78,slow=7.7,SNR=4.4						
SONM				LR	LR	10 07 05.5	
	comp=Z,65nm,20.8s,baz=88,slow=38						
H11N2	**WAKE ISLAND Hy**	**29.13**	**142**	T	T	10 25 31.6	
	baz=332,slow=76,SNR=218						
H11N1	**WAKE ISLAND Hy**	**29.14**	**142**	T	T	10 25 32.7	
	baz=332,slow=76,SNR=237						
H11N3	**WAKE ISLAND Hy**	**29.14**	**142**	T	T	10 25 27.5	
	baz=332,slow=76,SNR=192						
H11S1	**WAKE ISLAND Hy**	**30.12**	**143**	T	T	10 26 42.7	
	baz=333,slow=76,SNR=432						
H11S3	**WAKE ISLAND Hy**	**30.13**	**143**	T	T	10 26 41.9	
	baz=333,slow=76,SNR=269						
H11S2	**WAKE ISLAND Hy**	**30.14**	**143**	T	T	10 26 42.7	
	baz=333,slow=76,SNR=258						
LZH	**Lanzhou**	**34.49**	**272**	*e*P	**P**	**09 55 25.9**	**+0.6**
LZH				pP	pP	09 55 38.3	-1.1
LZH				sP	sP	09 55 44.4	-1.6
LZH				PP	**PnPn**	**09 56 37.2**	**-4.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
TTA	**Tatalina**	**36.46**	**40**	*e*P	**P**	**09 55 41.9**	**+0.1**
	comp=Z,1.9nm,0.9s						
TTA	**Tatalina**	**36.46**	**40**	*e*P	**P**	**09 55 41.9**	**+0.1**
TTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SVW2	**Sparrevohn**	**36.59**	**43**	*e*P	**P**	**09 55 43.7**	**+0.9**
	comp=Z,4.5nm,0.9s						
CAST	**Castle Rocks**	**38.26**	**39**	*e*P	**P**	**09 55 58.1**	**+1.2**
	comp=Z,3.0nm,1.0s						
BPAW	**Bear Paw Mtn.**	**38.75**	**38**	*e*P	**P**	**09 56 03.2**	**+2.2**
	comp=Z,2.3nm,1.2s						
KTH	**Kantishna Hill**	**38.78**	**39**	*e*P	**P**	**09 56 03.3**	**+1.9**
	comp=Z,4.7nm,1.1s						
MLY	**Manley**	**38.88**	**36**	*e*P	**P**	**09 56 02.9**	**+0.7**
	comp=Z,1.9nm,1.0s						
SML	**Sawmill**	**40.04**	**41**	*e*P	**P**	**09 56 12.8**	**+1.0**
	comp=Z,11nm,0.9s						
SML	**Sawmill**	**40.04**	**41**	*e*P	**P**	**09 56 12.9**	**+1.0**
SML				pmax	pmax		
	comp=Z,11nm,0.9s						
COLA	**College**	**40.11**	**37**	c*e*P	**P**	**09 56 12.8**	**+0.5**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ILAR	**Eielson Array**	**40.52**	**37**	P	**P**	**09 56 15.7**	**0.0**
	comp=Z,0.8nm,0.8s,baz=258,slow=7.3,SNR=14						
ZALV	**Zalesovo Beam**	**41.20**	**307**	P	**P**	**09 56 20.3**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=90,slow=4.5,SNR=2.9						
ZALV				PcP	**PcP**	**09 58 19.0**	**-0.4**
	comp=Z,2.2nm,0.4s,baz=86,slow=2.5,SNR=11						
ZALV				LR	LR	10 13 36.5	
	comp=Z,33nm,19.6s,baz=68,slow=36						
KMI	**Kunming**	**41.38**	**258**	P	**P**	**09 56 23.6**	**+0.1**
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
WMQ	**Urumqi**	**42.55**	**291**	*e*P	**P**	**09 56 34.9**	**+2.3**
EGAK	**Eagle**	**42.97**	**36**	*e*P	**P**	**09 56 35.8**	**+0.1**
	comp=Z,3.1nm,0.8s						
BALM	**Baldy**	**42.99**	**42**	*e*PcP	**PcP**	**09 58 28.3**	**+2.8**
DAWY	**Dawson**	**43.83**	**37**	*e*P	**P**	**09 56 43.4**	**+0.7**
	comp=Z,2.5nm,1.4s						
EPYK	**Eagle Plains**	**44.57**	**34**	*e*P	**P**	**09 56 49.3**	**+0.8**
	comp=Z,3.5nm,1.0s						
MK31	**Makanchi Array**	**44.94**	**297**	*e*P	**P**	**09 56 51.7**	**-0.1**
	comp=Z,2.3nm,0.8s						
MK31	**Makanchi Array**	**44.94**	**297**	*e*P	**P**	**09 56 51.7**	**-0.1**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**44.94**	**297**	P	**P**	**09 56 51.3**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=76,slow=8.4,SNR=17						
MKAR				PcP	**PcP**	**09 58 31.6**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=61,slow=3.7,SNR=7.9						
MKAR				LR	LR	10 17 08.7	
	comp=Z,63nm,18.8s,baz=41,slow=38						
HYT	**Haines Junctio**	**45.35**	**42**	*e*P	**P**	**09 56 56.8**	**+1.9**
	comp=Z,4.4nm,0.8s						
INK	**Inuvik**	**45.47**	**31**	P	**P**	**09 56 55.7**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=300,slow=9.2,SNR=6.1						
INK	**Inuvik**	**45.47**	**31**	*e*P	**P**	**09 56 56.1**	**+0.6**
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**45.47**	**31**	*e*P	**P**	**09 56 56.1**	**+0.6**
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**45.78**	**304**	*e*P	**P**	**09 56 58.5**	**+0.2**
	comp=Z,4.4nm,1.4s						
KURK	**Kurchatov**	**45.78**	**304**	⇑*e*P	**P**	**09 56 57.6**	**-0.7**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**45.78**	**304**	*e*P	**P**	**09 56 57.6**	**-0.7**
CHTO	**Chiang Mai**	**48.17**	**254**	*e*P	**P**	**09 57 18.0**	**+0.6**
	comp=Z,5.8nm,0.9s						
CHTO	**Chiang Mai**	**48.17**	**254**	*e*P	**P**	**09 57 18.0**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**48.42**	**254**	P	**P**	**09 57 19.5**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=47,slow=6.6,SNR=6.7						
CMAR				LR	LR	10 19 14.9	
	comp=Z,13nm,18.3s,baz=235,slow=38						
JIRN	**Jiri**	**51.64**	**273**	*e*P	**P**	**09 57 44.0**	**0.0**
	comp=Z,13nm,0.4s						
GUN	**Gumba**	**51.72**	**273**	*e*P	**P**	**09 57 44.8**	**+0.2**
	comp=Z,19nm,0.4s						
AAK	**Ala-Archa**	**51.74**	**296**	⇓*e*P	**P**	**09 57 44.4**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK	**Ala-Archa**	**51.74**	**296**	*e*P	**P**	**09 57 44.4**	**0.0**
KKN	**Kakani**	**52.22**	**274**	*e*P	**P**	**09 57 48.2**	**+0.1**
PKI	**Pulchoki**	**52.25**	**273**	*e*P	**P**	**09 57 48.0**	**-0.5**
	comp=Z,10nm,0.6s						
PKIN	**Phulchoki**	**52.26**	**273**	*e*P	**P**	**09 57 48.2**	**-0.3**
	comp=Z,6.9nm,0.4s						
KSH	**Kashi**	**52.31**	**291**	P	**P**	**09 57 51.3**	**+2.7**
KSH				*e*pP	pP	09 58 04.6	+1.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,170nm,5.9s						
DMN	**Daman**	**52.45**	**274**	*e*P	**P**	**09 57 49.9**	**0.0**
	comp=Z,18nm,0.7s						
GKN	**Gorkha**	**52.55**	**274**	*e*P	**P**	**09 57 50.4**	**-0.1**
	comp=Z,8.4nm,0.2s						
DANN	**Dangsing**	**52.97**	**275**	*e*P	**P**	**09 57 54.1**	**+0.3**
KOLN	**Koldanda**	**53.43**	**275**	*e*P	**P**	**09 57 57.0**	**0.0**
PYUN	**Piuthan**	**53.67**	**276**	*e*P	**P**	**09 57 58.5**	**-0.3**
	comp=Z,13nm,0.4s						
KKAR	**Karatay Array**	**54.06**	**298**	⇑*e*P	**P**	**09 58 01.9**	**+0.6**
RES	**Resolute Bay**	**54.13**	**17**	*e*P	**P**	**09 58 00.0**	**-1.2**
	comp=Z,3.6nm,1.2s						
RES	**Resolute Bay**	**54.13**	**17**	*e*P	**P**	**09 58 00.0**	**-1.2**
RES				pmax	pmax		
	comp=Z,4.0nm,1.2s						
YKW3	**Yellowknife Ar**	**54.81**	**34**	*e*P	**P**	**09 58 06.7**	**+0.3**
	comp=Z,2.6nm,0.8s						
YKA	**Yellowknife Ar**	**54.85**	**34**	P	**P**	**09 58 06.3**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=298,slow=6.8,SNR=14						
ABKAR	**Akbulak array**	**57.23**	**309**	*e*P	**P**	**09 58 23.3**	**-0.6**
	comp=Z,4.3nm,1.4s						
NIL	**Nilore**	**57.31**	**287**	*e*P	**P**	**09 58 25.0**	**+0.3**
	comp=Z,9.9nm,0.7s						
NIL	**Nilore**	**57.31**	**287**	*e*P	**P**	**09 58 25.0**	**+0.3**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.90**	**340**	P	**P**	**09 58 34.4**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=61,slow=7.3,SNR=4.2						
MTN	**Manton Dam**	**59.04**	**199**	*e*P	**P**	**09 58 37.7**	**+0.9**
	comp=Z,24nm,1.4s						
SUMG	**Summit**	**63.23**	**2**	*e*P	**P**	**09 59 04.4**	**-0.6**
	comp=Z,1.7nm,0.6s						
SUMG	**Summit**	**63.23**	**2**	*e*P	**P**	**09 59 04.4**	**-0.6**
SUMG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PLID	**Pearl Lake**	**63.85**	**52**	*e*P	**P**	**09 59 09.8**	**+0.5**
	comp=Z,1.6nm,0.8s						
FINES	**FINESS Array B**	**64.63**	**333**	P	**P**	**09 59 12.4**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=49,slow=6.4,SNR=12						
FINES	**FINESS Array B**	**64.63**	**333**	*i* P	**P**	**09 59 13.0**	**-0.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FFC	**Flin Flon**	**64.73**	**37**	*e*P	**P**	**09 59 15.0**	**+0.4**
	comp=Z,4.8nm,0.9s						
FFC	**Flin Flon**	**64.73**	**37**	c*e*P	**P**	**09 59 15.7**	**+1.1**
FFC				pmax	pmax		
	comp=Z,21nm,2.5s						
GEYT	**Alibeck**	**64.77**	**299**	P	**P**	**09 59 14.4**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=54,slow=7.3,SNR=3.3						
GEYT				LR	LR	10 27 51.7	
	comp=Z,23nm,18.2s,baz=70,slow=36						
FCC	**Fort Churchill**	**65.09**	**31**	*e*P	**P**	**09 59 16.4**	**-0.4**

	comp=Z,3.2nm,0.7s						
FCC	Fort Churchill	65.09	31	*e*P	P	09 59 16.4	-0.4
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WB2	Warramunga Arr	65.27	194	*e*P	P	09 59 18.9	+0.6
	comp=Z,8.5nm,1.4s						
WRA	Warramunga Arr	65.27	194	P	P	09 59 18.5	+0.1
	comp=Z,1.0nm,0.7s,baz=1.6,slow=5.8,SNR=5.3						
WC3	Warramunga Arr	65.28	194	*e*P	P	09 59 19.6	+1.2
	comp=Z,7.5nm,1.3s						
EGMT	Eagleton	65.41	46	*e*P	P	09 59 19.6	+0.4
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	66.61	59	P	P	09 59 27.4	+0.2
	comp=Z,0.7nm,0.7s,baz=299,slow=6.6,SNR=7.6						
PDAR	Pinedale Array	68.92	50	P	P	09 59 41.0	-0.7
	comp=Z,0.4nm,0.6s,baz=301,slow=1.8,SNR=5.6						
ASAR	Alice Springs	68.98	194	P	P	09 59 42.2	+0.3
	comp=Z,0.7nm,0.6s,baz=14,slow=6.4,SNR=19						
NB2	NORSAR Subarra	69.26	339	P	P	09 59 41.4	-1.9
	comp=Z,0.4nm,0.5s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.26	339	P	P	09 59 41.6	-1.7
	comp=Z,0.3nm,0.5s,baz=29,slow=6.5,SNR=12						
NOA				LR	LR	10 33 21.7	
	comp=Z,12nm,19.9s,baz=255,slow=39						
KIV	Kislovodsk	69.88	312	*e*P	P	09 59 49.9	+2.5
KIV				pmax	pmax		
	comp=Z,15nm,0.9s						
KIV				MLR	MLR		
	comp=Z,55nm,18.0s						
KIV	Kislovodsk	69.88	312	*e*P	P	09 59 49.9	+2.5
KBZ	Khabaz	69.92	312	P	P	09 59 46.8	-0.8
	comp=Z,1.9nm,0.6s,baz=52,slow=8.1,SNR=4.4						
KBZ				LR	LR	10 35 33.4	
	comp=Z,47nm,18.2s,baz=33,slow=40						
AKASG	Malin Array Be	71.49	324	P	P	09 59 55.5	-1.5
	comp=Z,0.5nm,0.4s,baz=37,slow=6.1,SNR=5.2						
AKASG	Malin Array Be	71.49	324	*i* P	P	09 59 57.9	+0.9
PV03	Paradox Valley	72.35	54	*e*P	P	10 00 03.3	+0.6
	comp=Z,2.3nm,1.2s						
ECSD	EROS Data Cent	74.99	43	*e*P	P	10 00 18.4	+0.7
	comp=Z,1.4nm,0.9s						
E38A	The Farm, Brul	75.17	38	*e*P	P	10 00 18.2	-0.5
	comp=Z,9.7nm,0.9s						
BUR08	Bucovina Ar. S	75.53	324	*e*P	P	10 00 20.8	-0.2
	comp=Z,1.9nm,1.0s						
KOLS	Kolonicke sedl	75.70	327	*e*P	P	10 00 23.8	+2.0
KOLS	Kolonicke sedl	75.70	327	*e*P	P	10 00 23.8	+2.0
G40A	Rib Lake	76.80	38	*e*P	P	10 00 27.8	-0.2
	comp=Z,2.5nm,0.6s						
FORT	Forrest	77.04	198	*e*P	P	10 00 30.9	+1.6
	comp=Z,55nm,1.5s						
CLL	Collm	77.08	333	*i* P	P	10 00 27.9	-1.5
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	77.08	333	*i* P	P	10 00 27.9	-1.5
	comp=Z,4.0nm,0.8s						
E43A	Lone Tree Farm	77.31	36	*e*P	P	10 00 30.0	-0.8
	comp=Z,3.8nm,0.9s						
VYHS	Vyhne	77.39	328	*e*P	P	10 00 36.1	+4.8
VYHS	Vyhne	77.39	328	*e*P	P	10 00 36.1	+4.8
HSIG		77.40	62	*e*P	P	10 00 31.5	-0.2
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	77.63	314	P	P	10 00 33.0	+0.1
	comp=Z,1.0nm,0.7s,baz=100,slow=3.8,SNR=6.3						
BBOO	Buckleboo	77.63	190	*e*P	P	10 00 34.1	+1.5
	comp=Z,20nm,1.4s						
KHC	Kasperske Hory	78.75	332	*e*P	P	10 00 38.6	-0.2
	comp=Z,0.9nm,0.6s						
KHC	Kasperske Hory	78.75	332	*e*P	P	10 00 38.6	-0.2
KHC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KHC	Kasperske Hory	78.75	332	*e*P	P	10 00 37.5	-1.3
GERES	GERESS Array B	78.95	331	P	P	10 00 38.8	-1.2
	comp=Z,0.4nm,0.5s,baz=44,slow=6.8,SNR=7.0						
TX31	Lajitas Ar. Si	81.67	57	*e*P	P	10 00 55.5	+0.5
	comp=Z,1.7nm,1.0s						
TXAR	Lajitas Array	81.67	57	P	P	10 00 55.0	0.0
	comp=Z,0.7nm,0.6s,baz=299,slow=3.7,SNR=12						
TXAR	Lajitas Array	81.67	57	P	P	10 00 55.0	0.0
PLVO	Plevna	82.30	31	*e*P	P	10 00 57.1	-0.8
	comp=Z,2.7nm,0.9s						
DELO	Deloro Mine	82.55	31	*e*P	P	10 00 58.0	-1.2
	comp=Z,5.2nm,1.3s						
M54A	Oil Creek Stat	84.32	34	*e*P	P	10 01 08.0	-0.3
	comp=Z,3.6nm,0.8s						
BNI	Bardonecchia	84.60	334	*e*P	P	10 01 10.6	+0.7
	comp=Z,5.0nm,1.3s						
BNI	Bardonecchia	84.60	334	*e*P	P	10 01 10.6	+0.7
BNI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ESDC	Sonseca Array	92.62	339	P	P	10 01 46.7	-1.4
	comp=Z,0.2nm,0.4s,baz=22,slow=4.9,SNR=3.3						
TORD	Torodi Ar. Bea	115.12	324	PKP	PKiKP	10 07 16.1	-1.7
	comp=Z,12nm,0.6s,baz=59,slow=2.3,SNR=3.6						
GO04	Tololo Observa	146.23	78	*e*PKPdf	PKPbc	10 08 16.6	-0.3
PLCA	Paso Flores	151.42	96	*e*PKPbc	PKiKP	10 08 30.0	-0.2
PLCA	Paso Flores	151.42	96	*e*PKIKP	PKiKP	10 08 30.0	-0.2

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*ISK **07** 10:05:05.7, 39°.89N×34°.22E, h5^{km}, ML2.2/9*

*ISCJB **07** 10:05:06.5±0.5, 39°.90N±0°.03×34°.22E±0°.04, h12^{km}, Error ellipse: s-maj=4.9km s-min=4.0km az=44.7*

*DDA **07** 10:05:06.0, 39°.93N×34°.28E, h7^{km}±2^{km}, ML2.6*

ISC 07 10:05:06.4±0.9**, 39°.91N**±0°.03×**34°.23E**±0°.03**, h12**^{km}**, n17, σ0^s.60**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DELI	KIRIKKALE	0.26	291	*i* P	Pb	10 05 12.8	-0.2
CDAG	Cicekdag	0.30	159	*i* P	Pb	10 05 13.8	0.0
CDAG				*i* S	Sb	10 05 18.1	-0.7
CORM	Corum	0.41	49	PG	Pg	10 05 14.8	+0.3
CORM				SG	Sb	10 05 21.2	-0.7
COAL	Corum-Alaca	0.67	59	*i* P	Pg	10 05 19.3	-0.2
COAL				IAML_P			
	comp=Z,142nm,0.1s						
KIRS	Kırehir-Merke	0.81	198	*i* P	Pg	10 05 21.8	-0.3
KIRS				IAML_P			
	comp=Z,859nm,0.1s						
ELDT	Eldivan	0.85	314	*i* P	Pg	10 05 22.8	+0.1
ELDT				IAML_P			
	comp=Z,455nm,0.2s						
YOZ	Yozgat	0.88	107	PG	Pg	10 05 22.9	-0.5
YOZ				SG	Sb	10 05 35.7	+0.2
SIRC	Yozgat	0.91	129	*i* P	Pg	10 05 23.9	0.0
SIRC				IAML_P			
	comp=Z,755nm,0.1s						
YAYX	Yaylak	1.02	199	PG	Pb	10 05 25.4	-0.7
YAYX				SG	Sg	10 05 39.6	+0.2
SERE	Sereflikochisa	1.09	208	PG	Pb	10 05 26.6	-0.7
ANTO	Ankara	1.11	268	PN	Pb	10 05 26.9	-0.6
LOD	Lodumlu	1.13	269	PN	Pb	10 05 27.1	-0.8
KKUL	Konya-Kulu	1.25	234	*i* P	Pg	10 05 31.1	+0.6
AKSY	AKSARAY - Alti	1.31	196	*i* P	Pg	10 05 31.7	+0.2
AKSY				IAML_P			
	comp=Z,127nm,0.1s						
SULT	Sultanhani-AKS	1.80	198	PN	Pn	10 05 37.6	+0.3
DIKM	Dikmen	1.91	24	PN	Pb	10 05 40.3	-0.8
SVSK	Karacayir	2.13	89	PN	Pn	10 05 43.1	+1.4

IDC 07 10:27:47.6±28.0**, 19°.45S**×**172°.91W, h0**^{km}**, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.7**/28**, mbtmp4.1**/4**, Error ellipse: s-maj=529.5km s-min=163.5km az=75.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	38.37	262	P	P	10 35 11.0	+0.2
	1.4nm,0.3s,baz=95,slow=10.0,SNR=4.3						
STKA	Stephens Creek	42.55	244	P	P	10 35 45.0	-0.2
	1.1nm,0.4s,baz=98,slow=10,SNR=7.2						
ASAR	Alice Springs	49.42	255	P	P	10 36 39.5	-0.1
	2.2nm,0.7s,baz=92,slow=7.7,SNR=47						
WRA	Warramunga Arr	49.49	260	P	P	10 36 39.9	-0.3
	0.7nm,0.3s,baz=98,slow=7.1,SNR=15						

SJA 07 10:39:38.0±0.4**, 30°.95S**×**64°.65W, h28**^{km}±20^{km}**, ML2.2, MW3.6, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APLL	PUNTA DE LOS L	1.71	288	*i* P	Pb	10 40 08.2	-0.5
APLL				*i* S	Sb	10 40 30.3	+0.4
APLL				IAML		10 40 35.8	
	comp=Z,13nm,0.3s						
MRA	San Martin	1.73	211	*i* P	Pb	10 40 08.3	-0.8
MRA				*i* S	Sb	10 40 31.0	+0.6
MRA				IAML		10 40 33.9	
	comp=Z,42nm,0.4s						
ACLC	CERRO LA CRUZ	2.50	307	*i* P	Pn	10 40 19.6	+2.5

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*ISCJB **07** 10:47:56.1±1.4, 20°.5S±0°.2×178°.0W±0°.3, h534^{km}, mb3.4/4, Error ellipse: s-maj=38.8km s-min=22.8km az=19.0*

*IDC **07** 10:47:56.5±7.2, 20°.55S×177°.88W, h534^{km}±84^{km}, mb2.9/4, mb1 3.2/5, mb1mx2.8/31, mbtmp3.9/5, Error ellipse: s-maj=39.8km s-min=35.8km az=143.0*

ISC 07 10:47:56.9±1.5**, 20°.6S**±0°.2×**178°.0W**±0°.3**, h534**^{km}**, n6, σ0^s.50**/6**, mb3.4**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.14	193	P	P	10 51 36.4	-0.3
	0.7nm,0.3s,baz=346,slow=8.3,SNR=5.9						
ASAR	Alice Springs	44.54	257	P	P	10 55 21.8	+0.3
	1.3nm,0.7s,baz=99,slow=7.5,SNR=23						
ASAR				PcP	PcP	10 56 53.8	+0.6
	0.2nm,0.6s,baz=110,slow=4.4,SNR=4.4						
WRA	Warramunga Arr	44.63	262	P	P	10 55 21.8	-0.3
	0.5nm,0.5s,baz=91,slow=6.9,SNR=2.8						
PETK	Petropavlovsk-	76.34	345	P	P	10 58 50.5	-0.3
	1.4nm,0.6s,baz=123,slow=5.3,SNR=3.2						
ILAR	Eielson Array	88.37	13	P	P	10 59 51.5	+0.2
	0.3nm,0.6s,baz=210,slow=5.5,SNR=4.2						
AKASG	Malin Array Be	143.09	331	PKP	PKPab	11 06 26.9	-0.5
	0.3nm,0.5s,baz=49,slow=3.6,SNR=6.0						

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*NNC **07** 10:48:42.3±3.0, 53°.45N×87°.99E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=23.1km s-min=19.4km az=13.0, Suspected Mining explosion.*

KRAR 07 10:48:40.7±0.2**, 53°.62N**×**87°.87E, M2.0, 4C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	Kurchatov	6.39	247	⇓Pn	Pn	10 50 16.9	+0.9
	1.0nm,0.5s						
KURK				⇓Sn	Sn	10 51 33.5	+3.9
	2.1nm,1.1s						
KURK				⇓Lg	Lg	10 52 02.7	
	2.1nm,0.6s						
KURBB	Kurchatov Arra	6.49	246	⇑Pn	Pn	10 50 18.1	+0.8
	3.3nm,0.5s						
KURBB				⇑Sn	Sn	10 51 35.0	+3.0
	3.9nm,0.7s						
KURBB				⇑Lg	Lg	10 52 05.8	
	5.3nm,0.7s						
MK31	Makanchi Array	7.71	210	⇓Pn	Pn	10 50 35.4	+1.2
	0.1nm,0.2s,baz=27,slow=12,SNR=16						
MK31				⇓Sn	Sn	10 52 01.8	-0.4
	0.6nm,0.6s						
MK31				⇑Lg	Lg	10 52 42.5	
	1.0nm,0.7s,baz=36,slow=29,SNR=3.8						

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*ISCJB **07** 11:09:58.2±0.4, 45°.18N±0°.05×141°.24E±0°.08, h285^{km}±3^{km}, mb3.2/9, Error ellipse: s-maj=9.6km s-min=8.1km az=150.2*

*JMA **07** 11:09:58.7±0.2, 45°.18N×141°.27E, h285^{km}±2^{km}, M2.8*

*IDC **07** 11:09:58.8±0.6, 45°.24N×141°.30E, h275^{km}±8^{km}, mb3.0/9, mb1 3.2/12, mb1mx3.0/44, mbtmp3.6/12, Error ellipse: s-maj=18.4km s-min=13.4km az=177.0*

ISC 07 11:09:59.0±0.7**, 45°.13N**±0°.06×**141°.25E**±0°.07**, h282**^{km}±6^{km}**, n33, σ0^s.98**/47**, mb3.1**/9**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRR	Rishiri	0.05	78	P	Pn	11 10 35.6	+0.8
JRBN	Rebuntou	0.32	337	P	Pn	11 10 35.1	0.0
JRBN				*e*S	S	11 11 03.5	-0.2
JWK2	Keihoku	0.50	68	P	Pn	11 10 35.5	0.0
JWK2				*e*S	S	11 11 03.8	-0.6
JYG	Yagishiri	0.71	169	P	Pn	11 10 36.5	+0.2
JSS	Shosan	0.85	149	P	Pn	11 10 37.3	+0.5
JSE	Soyaes	0.96	100	P	Pn	11 10 37.1	-0.1
JSE				*e*S	S	11 11 05.9	-1.6
ASAJ	Asahikawa	1.40	136	P	Pn	11 10 39.9	+0.1
	5.1nm,0.3s,baz=277,slow=7.2,SNR=108						
ASAJ				S	S	11 11 11.2	-0.9
	0.4nm,0.3s,baz=359,slow=28,SNR=6.5						
ASAJ	Asahikawa	1.40	136	P	Pn	11 10 39.7	-0.1
ASAJ				*e*S	S	11 11 11.9	-0.2
JKK2	Kamakawa 2	1.65	139	P	Pn	11 10 41.8	+0.3
JKK2				*e*S	S	11 11 16.0	+0.7
JISS	Ishikarishitsu	1.86	176	P	Pn	11 10 43.8	+0.7
JSK	Shakotan	1.86	198	P	Pn	11 10 43.5	+0.4
JMP	Maruseppu	1.88	126	P	Pn	11 10 43.4	+0.1
JMP				*e*S	S	11 11 18.8	+0.4
JFR	Furan	2.19	153	P	Pn	11 10 46.4	+0.5
JFR				*e*S	S	11 11 24.2	+1.0
JTKR	Abashiri--Toko	2.23	120	P	Pn	11 10 46.5	+0.4
JTKR				*e*S	S	11 11 23.9	+0.3
JEW	Eniwo	2.29	176	P	Pn	11 10 47.6	+0.8
JEW				*e*S	S	11 11 26.3	+1.5
JAR	Ashorobuto	2.58	134	P	Pn	11 10 49.7	+0.3
JAR				*e*S	S	11 11 30.2	+0.7
JCH	Churui	2.94	148	P	Pn	11 10 51.5	-1.5
JCH				*e*S	S	11 11 32.5	-3.5
JRA	Rausu	3.02	112	P	Pn	11 10 54.4	+0.7
JNBK	Urakawa-nobuka	3.05	158	P	Pn	11 10 54.1	0.0
JNBK				*e*S	S	11 11 37.2	-0.8
JKB	Kayabe	3.24	183	P	Pn	11 10 55.2	-0.9
JKB				*e*S	S	11 11 39.4	-2.2
JOSM	Okushiri--Mats	3.30	204	P	Pn	11 10 56.5	-0.2
USRK	Ussuriysk Ar.	6.67	265	P	Pn	11 11 35.9	0.0
	0.2nm,0.3s,baz=84,slow=15,SNR=7.7						
KLR	Kul'dur	7.66	306	P	Pn	11 11 47.9	-0.2
	0.2nm,0.3s,baz=115,slow=13,SNR=9.9						
SEY	Seymchan	18.95	16	P	P	11 13 58.9	-0.6
	0.2nm,0.3s,baz=197,slow=7.2,SNR=6.9						
SONM	Songino Array	24.03	289	P	P	11 14 48.9	+0.2
	1.0nm,0.6s,baz=67,slow=8.7,SNR=4.2						
MKAR	Makanchi Array	40.18	294	P	P	11 17 08.4	+0.4
	0.9nm,0.7s,baz=80,slow=9.2,SNR=7.7						
ILAR	Eielson Array	42.90	37	P	P	11 17 27.6	-2.1
	0.4nm,0.7s,baz=284,slow=9.8,SNR=6.3						
INK	Inuvik	47.35	30	P	P	11 18 03.3	-1.1
	0.5nm,0.5s,baz=307,slow=9.6,SNR=3.0						
YKA	Yellowknife Ar	56.96	32	P	P	11 19 15.0	+0.2
	0.4nm,0.6s,baz=306,slow=7.0,SNR=5.5						
ASAR	Alice Springs	68.79	187	P	P	11 20 33.8	+1.0
	0.2nm,0.5s,baz=6.9,slow=5.8,SNR=5.8						
NVAR	Mina Array Bea	70.35	55	P	P	11 20 43.0	+0.4
	0.7nm,0.7s,baz=291,slow=5.8,SNR=7.2						
PDAR	Pinedale Array	72.16	47	P	P	11 20 53.3	0.0
	0.6nm,0.6s,baz=271,slow=1.9,SNR=8.4						
TXAR	Lajitas Array	85.29	53	P	P	11 22 05.8	+1.3
	0.2nm,0.6s,baz=280,slow=3.9,SNR=4.3						

SVSA 07 11:19:16.7±1.1**, 38°.50N**×**26°.86W, h1**^{km}±6^{km}**, MD3.5, ML1.9, Error ellipse: s-maj=6.5km s-min=2.9km az=33.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSCM	Serra do Cume	0.29	315	*e*P	Pg	11 19 22.4	+0.2
PSCM				*e*S	Sg	11 19 26.0	+0.1
PSCM				A	A	11 19 31.1	
	70nm,0.3s						
ADH	Angra Heroismo	0.33	298	*e*P	Pg	11 19 22.5	-0.6
ADH				*e*S	Sg	11 19 27.4	-0.1
ADH				A	A	11 19 31.4	
	69nm,0.5s						
PMAN	Manadas	0.97	278	*e*S	Sg	11 19 44.5	-3.5
PMAN				A	A	11 19 45.5	
	18nm,0.2s						
PPNO	Prainha do Nor	1.10	269	*e*P	Pg	11 19 34.4	-3.4
PPNO				*e*S	Sg	11 19 47.4	-4.7
PPNO				A	A	11 19 48.0	
	28nm,0.3s						
ROSA	Rosais	1.11	282	*e*P	Pg	11 19 34.2	-3.7
ROSA				*e*S	Sg	11 19 48.0	-4.2
ROSA				A	A	11 19 48.5	
	48nm,0.2s						
PSET	Sete Cidades	1.12	127	*e*P	Pg	11 19 34.9	-3.3
PSET				*e*S	Sg	11 19 48.3	-4.4
PSET				A	A	11 19 50.6	
	15nm,0.3s						
PICO	Pico	1.23	271	*e*P	Pg	11 19 36.1	-4.2
PICO				*e*S	Sg	11 19 50.9	-5.3
PICO				A	A	11 19 54.5	
	12nm,0.3s						
CMLA	Cha da Macela	1.28	124	*e*S	Sg	11 19 51.5	-6.4
CMLA				A	A	11 19 54.5	
	28nm,0.3s						

IDC 07 11:23:38.4±61.0**, 17°.16S**×**174°.84E, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/18**, mbtmp3.9**/3**, Error ellipse: s-maj=1066.0km s-min=150.9km az=74.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	33.45	238	P	P	11 30 17.4	-1.9
	0.6nm,0.4s,baz=69,slow=8.6,SNR=3.5						
WRA	Warramunga Arr	38.43	259	P	P	11 31 02.4	+0.2
	1.2nm,0.9s,baz=84,slow=9.3,SNR=2.3						
ASAR	Alice Springs	38.80	253	P	P	11 31 06.0	+0.7
	1.7nm,0.6s,baz=88,slow=8.8,SNR=53						

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*IDC **07** 11:48:42.6±2.2, 1°.70N×93°.94E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.6/36, mbtmp3.8/6, ML3.8/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/39, Error ellipse: s-maj=59.5km s-min=25.2km az=57.0*

*ISCJB **07** 11:48:45.0±0.8, 1°.81N±0°.09×94°.22E±0°.07, h20^{km}, mb3.9/8, MS3.3/2, Error ellipse: s-maj=14.0km s-min=7.3km az=32.8*

*NEIC **07** 11:48:48.8±0.5, 1°.88N×94°.18E, h34^{km}±6^{km}, mb4.1/5, Error ellipse: s-maj=25.9km s-min=18.2km az=55.0*

ISC 07 11:48:47.2±1.2**, 1°.9N**±0°.1×**94°.3E**±0°.1**, h20**^{km}**, n26, σ0^s.97**/22**, mb4.0**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	3.37	100	*e*Pn	Pn	11 49 39.9	+1.1
GSI				*e*Sn	Sn	11 50 16.8	-1.4
PSI	Prapat	4.76	79	Pn	Pn	11 49 59.1	+1.2
	1.3nm,0.3s,baz=260,slow=6.1,SNR=4.4						
PSI				Sn	Sn	11 50 50.1	-2.5
	1.7nm,0.3s,baz=354,slow=18,SNR=4.3						
PSI				LR	LR	11 52 13.9	
	comp=Z,92nm,18.9s,baz=356,slow=42						
PSI	Prapat	4.76	79	*e*Pn	Pn	11 49 58.9	+0.9
PSI				*e*Sn	Sn	11 50 53.4	+0.8
KULM	Kulim	7.23	62	*e*Pn	Pn	11 50 32.5	+0.7
IPM	Ipoh	7.24	69	*e*Pn	Pn	11 50 33.1	+1.1
MNAI	Manna	10.68	125	*e*Pn	Pn	11 51 19.1	-0.2
PALK	Pallekele	14.53	292	Sn	Sn	11 54 35.3	-17
	0.8nm,0.3s,baz=114,slow=8.9,SNR=2.6						
PALK				LR	LR	11 56 56.2	
	comp=Z,44nm,18.9s,baz=115,slow=34						
LEM	Lembang	15.90	123	LR	LR	11 58 29.3	
	comp=Z,36nm,19.3s,baz=359,slow=36						
CM31	Chiang Mai Arr	17.11	15	*e*P	P	11 52 47.4	+0.4
	9.1nm,1.0s						
CMAR	Chiang Mai Arr	17.11	15	P	P	11 52 47.5	+0.5
	0.2nm,0.3s,baz=212,slow=12,SNR=21						
SHL	Shillong	23.66	355	*e*P	P	11 53 57.1	-0.6
	8.8nm,0.8s						
H08S2	Diego Garcia H	23.68	246	T	T	12 19 51.5	
	baz=64,slow=76,SNR=6.6						
H08S3	Diego Garcia H	23.68	246	T	T	12 19 48.6	
	baz=64,slow=76,SNR=6.8						
H08S1	Diego Carcia H	23.70	246	T	T	12 20 01.4	
	baz=64,slow=76,SNR=6.1						
WB2	Warramunga Arr	44.91	121	*e*P	P	11 57 01.8	+0.8
	4.7nm,1.3s						
MK31	Makanchi Array	45.94	349	*e*P	P	11 57 08.2	-0.5
	1.8nm,0.7s						
MK32	Makanchi Array	45.94	349	*e*P	P	11 57 08.0	-0.8
MKAR	Makanchi Array	45.94	349	P	P	11 57 08.0	-0.8
	1.1nm,0.6s,baz=160,slow=8.0,SNR=8.7						
AS31	Alice Springs	46.17	126	*e*P	P	11 57 11.1	+0.2
	0.8nm,1.1s						
ASAR	Alice Springs	46.17	126	P	P	11 57 10.8	-0.1
	0.6nm,0.5s,baz=296,slow=7.6,SNR=27						
SONA0	Songino Array	46.97	11	*e*P	P	11 57 17.1	+0.1
SONM	Songino Array	46.97	11	P	P	11 57 17.1	+0.1
	0.3nm,0.3s,baz=183,slow=7.2,SNR=2.3						
ZALV	Zalesovo Beam	52.48	353	P	P	11 57 58.0	-0.6
	0.8nm,0.5s,baz=152,slow=9.4,SNR=3.1						
ZAA1	Zalesovo Array	52.48	353	*e*P	P	11 57 58.0	-0.6
PMG	Port Moresby	53.88	103	LR	LR	12 25 22.8	
	comp=Z,48nm,18.4s,baz=186,slow=41						
ASAJ	Asahikawa	59.93	38	LR	LR	12 23 32.5	
	comp=Z,12nm,18.6s,baz=158,slow=35						

IDC 07 12:07:41.8±3.4**, 22°.83N**×**11°.60W, h0**^{km}**, mb3.7**/3**, mb1 3.8**/4**, mb1mx3.4**/34**, mbtmp3.7**/4**, ML3.4**/1**, Error ellipse: s-maj=90.5km s-min=38.2km az=71.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	Torodi Ar. Bea	15.88	125	Pn	Pn	12 11 28.0	+1.2
	0.1nm,0.3s,baz=322,slow=13,SNR=2.2						
TORD				Sn	Sn	12 14 22.2	-1.5
	0.1nm,0.3s,baz=311,slow=24,SNR=2.3						
I42PT	GRACIOSA ISLAN	21.38	323	*i*		14 14 40.0	
	baz=140,slow=316,SNR=5.2						
GERES	GERESS Array B	32.80	31	P	P	12 14 17.2	+0.4
	0.3nm,0.5s,baz=230,slow=10,SNR=4.9						
FINES	FINESS Array B	46.44	24	P	P	12 16 09.5	-0.5
	2.1nm,1.0s,baz=245,slow=8.0,SNR=4.4						
MKAR	Makanchi Array	76.28	45	P	P	12 19 32.5	0.0
	0.3nm,0.5s,baz=306,slow=4.8,SNR=3.3						
ASAR	Alice Springs	148.34	98	PKPbc	PKPbc	12 27 30.1	-0.7
	0.5nm,0.7s,baz=292,slow=1.9,SNR=7.6						

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*CNRM **07** 12:10:17.2, 29°.01N×12°.47W, h68^{km}, ml3.3*

ISC 07 12:10:15.5±4.4**, 29°.1N**±0°.2×**12°.4W**±0°.2**, h10**^{km}**, n9, σ2^s.25**/15**, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFNM	Sidi Ifni	1.98	83	P	Pn	12 10 49.2	+0.2
SFNM				S	Sn	12 11 12.4	-1.5
TTIG	Tnine Tigouga,	3.74	66	P	Pn	12 11 13.8	+0.4
TTIG				S	Sn	12 12 00.6	+3.1
OUK	Oukaimeden	4.46	61	P	Pn	12 11 26.5	+3.0
OUK				S	Sn	12 12 18.2	+2.5
SRHM	Skhour des Reh	5.13	48	P	Pn	12 11 28.6	-3.9
SRHM				S	Sn	12 12 23.8	-8.0
OUZM	OUZ	5.22	69	P	Pn	12 11 31.1	-2.7
OUZM				S	Sn	12 12 31.6	-2.6
ZHG	ZHG	6.56	47	P	Pn	12 11 50.8	-1.4
ZHG				S	Sn	12 13 06.0	-1.1
CZD	Col de Zad	7.43	56	P	Pn	12 12 05.9	+1.6
CZD				S	Sn	12 13 31.3	+2.5
MD31	MD31	7.56	58	P	Pn	12 12 04.8	-1.1
MD31				S	Sn	12 13 29.9	-1.8
MDT	Midelt	7.65	59	P	Pn	12 12 05.9	-1.3
MDT				S	Sn	12 13 31.0	-3.0

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*ISCJB **07** 12:14:02.5±0.6, 14°.79S±0°.06×167°.01E±0°.07, h67^{km}, mb4.4/19, Error ellipse: s-maj=10.8km s-min=6.7km az=136.9*

*IDC **07** 12:14:02.6±5.6, 14°.58S×167°.16E, h65^{km}±48^{km}, mb4.0/7, mb1 4.2/7, mb1mx3.7/30, mbtmp4.3/7, ML5.3/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/27, Error ellipse: s-maj=32.6km s-min=23.4km az=19.0*

*NEIC **07** 12:14:04.5±1.6, 14°.72S×167°.05E, h76^{km}±12^{km}, mb4.7/16, Error ellipse: s-maj=30.8km s-min=12.5km az=80.0*

ISC 07 12:14:03.4±0.8**, 14°.77S**±0°.07×**167°.2E**±0°.1**, h67**^{km}**, n66, σ1^s.56**/67**, mb4.6**/19**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	6.72	174	*e*Pn	Pn	12 15 39.2	-0.3
MARNC				*e*Sn	Sn	12 16 49.8	-4.9
DZM	Mont Dzumac	7.30	186	P	Pn	12 15 49.1	+1.6

	44nm,0.3s,baz=0.8,slow=12,SNR=66						
DZM				S	**Sn**	**12 17 06.9**	**-2.1**
	6.0nm,0.3s,baz=131,slow=20,SNR=2.1						
DZM	**Mont Dzumac**	**7.30**	**186**	*e*Pn	**Pn**	**12 15 49.3**	**+1.8**
DZM				*e*Sn	**Sn**	**12 17 07.5**	**-1.4**
ONTNC	**Ouen Toro**	**7.54**	**185**	*e*Pn	**Pn**	**12 15 52.6**	**+2.0**
ONTNC				*e*Sn	**Sn**	**12 17 11.4**	**-3.1**
PINNC	**Pines Island,**	**7.81**	**178**	*e*Pn	**Pn**	**12 15 56.8**	**+2.5**
PINNC				*e*Sn	**Sn**	**12 17 22.2**	**+1.0**
HNR	**Honiara**	**8.87**	**306**	LR	LR	12 18 46.0	
	comp=Z,49nm,20.4s,baz=198,slow=32						
EIDS	**Eidsvold**	**18.45**	**233**	*e*P	**Pn**	**12 18 15.8**	**+1.3**
	12nm,1.2s						
CTA	**Charters Tower**	**20.68**	**252**	P	**P**	**12 18 38.5**	**+0.4**
	7.0nm,0.6s,baz=72,slow=12,SNR=13						
CTAO	**Charters Tower**	**20.68**	**252**	*e*P	Pn	12 18 38.9	-2.1
	23nm,1.4s						
ARMA	**Armidale**	**21.17**	**220**	*e*P	**P**	**12 18 44.1**	**+0.7**
	7.1nm,0.8s						
KUZ	**Kuaotunu**	**23.17**	**162**	P	P	12 19 18.3	+14
MKAZ	**Moumakai**	**23.34**	**164**	P	**P**	**12 19 08.8**	**+3.0**
TOZ	**Tahuroa Road**	**24.02**	**164**	P	**P**	**12 19 14.8**	**+2.8**
HAZ	**Te Kaha**	**24.74**	**160**	P	**P**	**12 19 20.8**	**+2.2**
MXZ	**Matakaoa Point**	**24.75**	**159**	*e*P	**P**	**12 19 19.6**	**+0.9**
	126nm,1.3s						
RRRZ	**Republican Roa**	**24.88**	**162**	P	**P**	**12 19 22.5**	**+2.7**
RUGZ	**Raukumara Rang**	**24.90**	**160**	P	**P**	**12 19 21.6**	**+1.4**
URZ	**Urewera**	**24.98**	**161**	P	**P**	**12 19 22.3**	**+1.5**
	6.9nm,0.4s,baz=270,slow=3.1,SNR=19						
URZ	**Urewera**	**24.98**	**161**	*e*P	**P**	**12 19 22.2**	**+1.5**
	34nm,1.4s						
URZ	**Urewera**	**24.98**	**161**	P	**P**	**12 19 22.4**	**+1.6**
WMGZ	**Waiomatatini S**	**25.02**	**159**	P	**P**	**12 19 21.8**	**+0.7**
MWZ	**Matawai**	**25.18**	**161**	P	**P**	**12 19 23.6**	**+1.0**
PUZ	**Puketiti**	**25.19**	**159**	P	**P**	**12 19 23.3**	**+0.6**
TWGZ	**Tauwhareparae**	**25.19**	**160**	P	**P**	**12 19 23.9**	**+1.2**
MRHZ	**Matea Rd**	**25.31**	**163**	P	**P**	**12 19 26.6**	**+2.7**
TKGZ	**Te Karaka**	**25.38**	**160**	P	**P**	**12 19 25.0**	**+0.6**
SNGZ	**Shannon Statio**	**25.53**	**161**	P	**P**	**12 19 26.8**	**+1.0**
CNGZ	**Carnagh Statio**	**25.54**	**160**	P	**P**	**12 19 26.6**	**+0.8**
RAHZ	**Arahi**	**25.58**	**162**	P	**P**	**12 19 27.9**	**+1.7**
RIGZ	**Rimuhau**	**25.60**	**161**	P	**P**	**12 19 27.3**	**+0.9**
BKZ	**Black Stump Fm**	**25.64**	**163**	*e*P	**P**	**12 19 28.7**	**+1.9**
	61nm,1.4s						
BKZ	**Black Stump Fm**	**25.64**	**163**	P	**P**	**12 19 28.3**	**+1.5**
NMHZ	**Naumai**	**25.66**	**163**	P	**P**	**12 19 28.9**	**+1.9**
WHHZ	**Waihua**	**25.77**	**162**	P	**P**	**12 19 29.2**	**+1.3**
KNZ	**Kokohu**	**25.86**	**161**	P	**P**	**12 19 28.9**	**+0.3**
ARHZ	**Aropaoanui**	**25.87**	**162**	P	**P**	**12 19 29.7**	**+0.8**
MHGZ	**Mahia Peninsul**	**26.05**	**161**	P	**P**	**12 19 30.7**	**+0.3**
CKHZ	**Cape Kidnapper**	**26.26**	**163**	P	**P**	**12 19 33.1**	**+0.7**
KAHZ	**Kahuranaki**	**26.33**	**163**	P	**P**	**12 19 34.0**	**+0.9**
BFZ	**Birch Farm**	**26.99**	**165**	*e*P	**P**	**12 19 39.9**	**+0.9**
	66nm,1.4s						
THZ	**Tophouse**	**27.35**	**171**	*e*P	**P**	**12 19 44.4**	**+2.3**
	26nm,1.1s						
KHZ	**Kahutara**	**28.09**	**170**	*e*P	**P**	**12 19 50.5**	**+1.8**
	44nm,1.2s						
STKA	**Stephens Creek**	**28.93**	**230**	P	**P**	**12 19 56.8**	**+0.4**
	5.3nm,0.5s,baz=40,slow=8.0,SNR=11						
WB2	**Warramunga Arr**	**31.75**	**256**	*e*P	**P**	**12 20 20.0**	**-1.5**
WRAB	**Tennant Creek**	**31.76**	**256**	*e*P	**P**	**12 20 20.3**	**-1.1**
	11nm,1.1s						
WR1	**Warramunga Arr**	**31.77**	**256**	*e*P	**P**	**12 20 20.4**	**-1.2**
WRA	**Warramunga Arr**	**31.77**	**256**	P	**P**	**12 20 20.3**	**-1.2**
	2.0nm,0.5s,baz=75,slow=9.7,SNR=16						
AS31	**Alice Springs**	**32.61**	**249**	*e*P	**P**	**12 20 27.9**	**-1.1**
	1.0nm,0.8s						
ASAR	**Alice Springs**	**32.61**	**249**	P	**P**	**12 20 27.6**	**-1.3**
	2.6nm,0.8s,baz=82,slow=8.4,SNR=25						
BBOO	**Buckleboo**	**33.52**	**232**	*e*P	**P**	**12 20 36.8**	**+0.2**
	9.7nm,0.8s						
FORT	**Forrest**	**39.23**	**239**	*e*P	**P**	**12 21 25.1**	**-0.3**
DAV	**Davao City (W)**	**46.64**	**295**	LR	LR	12 39 43.7	
	comp=Z,23nm,19.0s,baz=276,slow=33						
NWAO	**Narrogin (SRO)**	**48.69**	**239**	*e*P	**P**	**12 22 40.3**	**-0.9**
	24nm,1.2s						
MORW	**Morawa**	**49.20**	**244**	*e*P	**P**	**12 22 44.6**	**-0.6**
	22nm,1.5s						
VNDA	**Vanda**	**62.82**	**181**	P	**P**	**12 24 21.4**	**-0.2**
	0.4nm,0.5s,baz=357,slow=7.2,SNR=5.7						
VNDA	**Vanda**	**62.82**	**181**	*e*P	**P**	**12 24 21.5**	**-0.1**
SBA	**Scott Base**	**63.10**	**180**	*e*P	**P**	**12 24 24.2**	**+0.8**
QSPA	**South Pole Qui**	**75.26**	**180**	*e*P	**P**	**12 25 38.5**	**-0.5**
	2.2nm,0.9s						
RND	**Reindeer**	**84.99**	**18**	*e*P	**P**	**12 26 32.1**	**+1.0**
	7.7nm,1.4s						
ILAR	**Eielson Array**	**86.58**	**18**	P	**P**	**12 26 36.9**	**-2.0**
	0.9nm,0.8s,baz=235,slow=5.2,SNR=11						
ARA0	**ARCESS Array S**	**120.28**	**345**	*e*PKPdf	**PKiKP**	**12 32 46.2**	**-0.2**
ARCES	**ARCESS Array B**	**120.28**	**345**	PKP	**PKiKP**	**12 32 46.2**	**-0.2**
	1.1nm,0.6s,baz=97,slow=2.1,SNR=9.8						
BR101	**Keskin Array S**	**132.50**	**311**	*e*PKPdf	**PKPdf**	**12 33 10.3**	**-0.4**
BRTR	**Keskin Array B**	**132.50**	**311**	PKP	**PKPdf**	**12 33 10.3**	**-0.4**
	0.3nm,0.4s,baz=12,slow=7.4,SNR=3.6						
TIP	**Timpagrande**	**144.44**	**319**	*e*PKPdf	**PKPdf**	**12 33 31.8**	**-0.7**
BNI	**Bardonecchia**	**145.61**	**335**	*e*PKPdf	**PKPab**	**12 33 35.8**	**+0.8**

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*ISCJB **07** 12:34:35.0±0.4, 9°.25S±0°.04×106°.92E±0°.05, h22^{km}, mb4.0/13, MS3.0/4, Error ellipse: s-maj=7.6km s-min=5.3km az=144.8*

*IDC **07** 12:34:34.2±0.9, 9°.18S×106°.94E, h0^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.8/30, mbtmp3.9/10, ML3.7/1, MS2.9/6, Ms1 3.0/6, ms1mx2.7/46, Error ellipse: s-maj=36.0km s-min=17.3km az=62.0*

*DJA **07** 12:34:34.0±0.3, 9°S±4°×10°7E±°, h10^{km}, M4.4/9, mb4.5/3, MLv4.3/9*

*NEIC **07** 12:34:39.1±1.6, 9°.27S×106°.90E, h39^{km}±6^{km}, mb4.2/7, Error ellipse: s-maj=16.6km s-min=10.7km az=132.0*

ISC 07 12:34:36.7±0.6, **9°.27S**±0°.05×**106°.91E**±0°.06, **h22**^{km}, **n43, σ1^{s}.15**/40, **mb4.0**/13, **MS2.9**/4, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XMIS	**Christmas Isla**	**1.73**	**226**	*e*Pn	**Pn**	**12 35 03.8**	**-1.6**
CISI	**Cisompet, Garu**	**1.92**	**28**	*e*Pn	**Pn**	**12 35 07.4**	**-0.8**
CISI	**Cisompet, Garu**	**1.92**	**28**	P	**Pn**	**12 35 07.4**	**-0.8**
CISI				S	**Sn**	**12 35 30.4**	**-1.4**
LEM	**Lembang**	**2.53**	**16**	Pn	**Pn**	**12 35 16.2**	**-0.4**
	18nm,0.3s,baz=330,slow=22,SNR=25						
LEM				Sn	**Sb**	**12 35 52.2**	**0.0**
	34nm,0.3s,baz=6.2,slow=18,SNR=10						
LEM				LR	LR	12 36 40.5	
	comp=Z,187nm,18.1s,baz=8.5,slow=52						
LEM	**Lembang**	**2.53**	**16**	P	**Pn**	**12 35 17.1**	**+0.5**
CGJI	**Cibinong**	**2.90**	**335**	P	**Pn**	**12 35 20.9**	**-0.7**
CGJI				S	**Sn**	**12 35 54.5**	**-1.3**
UGM	**Wanagama**	**3.82**	**70**	*e*Pn	**Pn**	**12 35 33.9**	**-0.4**
UGM	**Wanagama**	**3.82**	**70**	P	**Pn**	**12 35 33.9**	**-0.4**
KASI	**Kota Agung**	**4.42**	**327**	P	**Pn**	**12 35 42.2**	**-0.3**
PWJI	**Pagerwojo**	**5.00**	**76**	P	**Pn**	**12 35 49.3**	**-1.1**
LWLI	**Liwa**	**5.08**	**326**	P	**Pn**	**12 35 52.1**	**+0.4**
MDSI	**Maura Dua**	**5.47**	**330**	P	**Pn**	**12 35 55.9**	**-1.0**
	16nm,0.7s						
MNAI	**Manna**	**6.26**	**321**	*e*Pn	**Pn**	**12 36 09.2**	**+1.4**
JAGI	**Jajag, Banyuwa**	**7.20**	**84**	*e*Pn	**Pn**	**12 36 21.8**	**+1.0**
KAPI	**Kappang**	**13.43**	**73**	LR	LR	12 43 27.7	
	comp=Z,51nm,18.6s,baz=178,slow=40						
PSAA2	**Pilbara Seismi**	**17.45**	**136**	*e*Pn	**Pn**	**12 38 37.5**	**-1.3**
	18nm,1.5s						
PSAB2	**Pilbara Seismi**	**17.45**	**136**	*e*Pn	**P**	**12 38 38.5**	**-1.5**
	19nm,1.5s						
WRA	**Warramunga Arr**	**28.54**	**115**	P	**P**	**12 40 31.5**	**+0.4**
	0.4nm,0.4s,baz=284,slow=12,SNR=1.5						
WR1	**Warramunga Arr**	**28.54**	**115**	*e*P	**P**	**12 40 31.5**	**+0.4**
WB2	**Warramunga Arr**	**28.55**	**115**	*e*P	**P**	**12 40 32.1**	**+0.9**
	11nm,1.4s						
CMAR	**Chiang Mai Arr**	**28.65**	**344**	P	**P**	**12 40 31.4**	**-0.6**
	0.8nm,0.6s,baz=167,slow=8.2,SNR=4.7						
CMAR				LR	LR	12 52 21.0	
	comp=Z,19nm,18.3s,baz=162,slow=37						
ASAR	**Alice Springs**	**29.50**	**122**	P	**P**	**12 40 39.7**	**0.0**
	0.5nm,0.9s,baz=297,slow=7.5,SNR=8.0						
H08S2	**Diego Garcia H**	**34.07**	**270**	T	T	13 18 36.4	
	baz=96,slow=75						
H08S3	**Diego Garcia H**	**34.08**	**270**	T	T	13 17 17.8	
	baz=96						
H08S1	**Diego Carcia H**	**34.09**	**270**	T	T	13 18 31.2	
	baz=96,slow=75						
STKA	**Stephens Creek**	**39.23**	**130**	P	**P**	**12 42 05.2**	**+1.6**
	2.2nm,0.8s,baz=323,slow=5.8,SNR=4.9						
GUMO	**Guam**	**43.99**	**59**	LR	LR	13 00 52.7	
	comp=Z,9.6nm,20.5s,baz=187,slow=36						
SONA0	**Songino Array**	**56.85**	**360**	*e*P	**P**	**12 44 20.6**	**+0.8**
SONM	**Songino Array**	**56.85**	**360**	P	**P**	**12 44 20.6**	**+0.8**
	1.0nm,0.6s,baz=168,slow=8.9,SNR=5.3						
MK32	**Makanchi Array**	**59.98**	**341**	*e*P	**P**	**12 44 42.2**	**+0.7**
MKAR	**Makanchi Array**	**59.98**	**341**	P	**P**	**12 44 42.2**	**+0.7**
	1.4nm,0.5s,baz=155,slow=8.2,SNR=7.1						
KURK	**Kurchatov**	**64.59**	**341**	*e*P	**P**	**12 45 12.4**	**+0.2**
	3.3nm,0.7s						
MAW	**Mawson**	**65.18**	**197**	P	**P**	**12 45 18.0**	**+2.1**
	1.2nm,0.7s,baz=73,slow=8.4,SNR=3.0						
MAW	**Mawson**	**65.18**	**197**	*e*P	**P**	**12 45 18.4**	**+2.6**
	0.4nm,0.9s						
ZAA0	**Zalesovo Array**	**65.69**	**346**	*e*P	**P**	**12 45 19.7**	**+0.4**
	4.4nm,1.4s						
ZALV	**Zalesovo Beam**	**65.69**	**346**	P	**P**	**12 45 19.1**	**-0.2**
	0.5nm,0.3s,baz=153,slow=7.1,SNR=2.7						
ZAA1	**Zalesovo Array**	**65.70**	**346**	*e*P	**P**	**12 45 19.1**	**-0.3**
ABKAR	**Akbulak array**	**71.31**	**330**	*e*P	**P**	**12 45 54.8**	**+0.3**
	2.9nm,0.6s						
BR101	**Keskin Array S**	**83.26**	**312**	*e*P	**P**	**12 47 02.6**	**+0.6**
BRTR	**Keskin Array B**	**83.26**	**312**	P	**P**	**12 47 02.6**	**+0.6**
	0.3nm,0.6s,baz=98,slow=8.9,SNR=1.9						
BRTR				LR	LR	13 25 38.1	
	comp=Z,7.4nm,21.9s,baz=90,slow=37						
FINES	**FINESS Array B**	**93.71**	**332**	LR	LR	13 33 42.3	
	comp=Z,16nm,20.0s,baz=200,slow=38						
PV02	**Paradox Valley**	**136.93**	**42**	*e*PKPdf	**PKPdf**	**12 53 56.6**	**-1.9**
TXAR	**Lajitas Array**	**145.09**	**51**	PKPbc	**PKiKP**	**12 54 14.2**	**-2.9**
	0.5nm,0.9s,baz=289,slow=3.6,SNR=3.2						

PGC 07 12:36:07.3±0.8, **62°.68N**×**133°.93W**, **h15**^{km}, **ML2.7**/10, **225km Nne of Whitehorse, Yt Southern Yukon Territory, Canada, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHY	**Whitehorse**	**2.08**	**193**	Pn	Pn	12 36 41.3	-0.5
WHY				Pg	Pb	12 36 44.6	-0.2
WHY				Sg	Sb	12 37 11.0	+0.5
YUK5	**Granite Creek**	**2.43**	**232**	Pg	Pb	12 36 50.9	+0.2
YUK5				Sg	Sb	12 37 20.6	+0.1
HYT	**Haines Junctio**	**2.52**	**224**	Pn	Pn	12 36 48.0	+0.1
HYT				Pg	Pb	12 36 52.4	0.0
HYT				Sn	Sn	12 37 18.1	-0.3
HYT				Sg	Sb	12 37 24.7	+1.5
YUK4	**Talbot Arm**	**2.60**	**241**	Pn	Pn	12 36 48.5	-0.5
YUK4				Pg	Pb	12 36 52.5	-1.2
YUK4				Sg	Sb	12 37 25.1	-0.4
YUK6	**Outpost Mounta**	**2.73**	**232**	Pn	Pn	12 36 50.8	-0.1
YUK6				Pg	Pb	12 36 56.5	+0.4
YUK6				Sg	Sb	12 37 32.1	+2.7
DAWY	**Dawson**	**2.82**	**302**	Pn	Pn	12 36 50.3	-1.6
DAWY				Pg	Pb	12 36 57.8	+0.3
DAWY				Sg	Sb	12 37 32.3	+0.6
YUK3	**Moose Creek**	**3.19**	**256**	Pn	Pn	12 36 56.5	-0.6
YUK3				Pg	Pb	12 37 04.7	+0.9
YUK3				Sg	Sg	12 37 46.2	-3.5
BVCY	**Beaver Creek**	**3.22**	**268**	Pn	Pn	12 36 56.5	-0.8
BVCY				Pg	Pb	12 37 05.2	+1.0
BVCY				Sn	Sn	12 37 35.5	0.0
BVCY				Sg	Sg	12 37 47.1	-3.6
YUK2	**White River**	**3.36**	**258**	Pn	Pn	12 36 59.0	-0.3
YUK2				Pg	Pb	12 37 07.5	+0.9
YUK2				Sg	Sb	12 37 51.0	+3.8
PLBC	**Pleasant Camp**	**3.45**	**201**	Pn	Pn	12 37 00.8	+0.4
PLBC				Sg	Sb	12 37 52.0	+2.3
PNL	**Peninsula**	**4.02**	**224**	Sg	Sb	12 38 10.3	+4.1
BESE	**Bessie Mountai**	**4.14**	**187**	Sg	Sb	12 38 12.7	+2.9
BALM	**Baldy**	**4.32**	**251**	Sg	Sg	12 38 22.9	-2.9
DLBC	**Dease Lake**	**4.68**	**154**	Pn	Pn	12 37 16.8	-0.6
DLBC				Pg	Pb	12 37 31.6	+2.6
DLBC				Sg	Sb	12 38 27.9	+2.8
DOT	**Dot Lake**	**4.69**	**286**	Sg	Sb	12 38 31.1	+5.6
INK	**Inuvik**	**5.65**	**2**	Pn	Pn	12 37 30.2	-0.4
INK				Sn	Sn	12 38 30.7	-4.4
FNBB	**Fort Nelson**	**6.56**	**121**	Sg	Sb	12 39 25.3	+6.2
YKW3	**Yellowknife Ar**	**8.90**	**82**	Pn	Pn	12 38 12.0	-3.1

UCR 07 12:46:37.4±2.2, **8°.94N**×**84°.06W**, **h0**^{km}±5^{km}, **MW4.2, 1C-5D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDDO	**Dominical**	**0.37**	**32**	⇓*i*P	Pb	12 46 45.9	-0.9
EDDO				*e*S	Sb	12 46 52.8	-0.3
EDLM	**Las Mercedes**	**0.58**	**54**	⇓*i*P	Pg	12 46 48.8	+0.3
EDPN	**Palmar Norte**	**0.60**	**88**	*e*P	Pg	12 46 49.8	+0.9
EDPN				*e*S	Sb	12 46 59.1	-0.7
LCR2	**La Lucha 2**	**0.80**	**4**	⇓*i*P	Pg	12 46 52.9	+0.1
LCR2				*e*S	Sb	12 47 06.1	+0.3
EDBA	**Buenos Aires**	**0.81**	**74**	*e*P	Pg	12 46 52.4	-0.6
EDBA				*e*S	Sb	12 47 05.2	-0.7
PTJ1	**Puerto Jimnez**	**0.85**	**118**	*e*P	Pb	12 46 55.0	0.0
DRK0	**Durika**	**0.87**	**68**	*e*P	Pg	12 46 54.5	+0.4
DRK0				*e*S	Sb	12 47 07.2	-0.6
SJS	**Escuela Geolog**	**0.99**	**1**	*e*P	Pb	12 46 57.4	-0.2
HDC	**Heredia**	**1.06**	**357**	⇓*e*P	Pg	12 46 58.1	+0.5
HDC				*e*S	Sb	12 47 13.0	-0.1
EDSV	**San Vito**	**1.08**	**96**	*e*P	Pn	12 47 03.5	+3.5
EDSV				*e*S	Sn	12 47 15.8	+0.1
CVTR	**Volcan Turrial**	**1.11**	**16**	⇓*i*P	Pg	12 46 59.1	+0.3
CVTR				*e*S	Sb	12 47 14.8	-0.2
SRA1	**San Ramn**	**1.21**	**340**	⇑*e*P	Pg	12 47 00.3	-0.4
BRU2	**Volcan**	**1.36**	**96**	*e*P	Pg	12 47 02.1	-1.5
BRU2				*e*S	Sb	12 47 22.0	+0.1
JTS	**Las Juntas de**	**1.60**	**327**	*e*P	Pn	12 47 05.2	-1.9
JTS				*e*S	Sn	12 47 26.9	-1.6
ARE1	**Arenal 1**	**1.65**	**337**	*e*P	Pb	12 47 08.3	-0.3
CEDE	**Laguna Cedeo**	**1.66**	**338**	*e*P	Pn	12 47 07.6	-0.3
CUI	**Cuipilapa**	**2.02**	**328**	*e*P	Pn	12 47 13.9	+1.1
MESS	**Mesas**	**2.11**	**328**	*e*P	Pn	12 47 15.2	+1.2
BUEV	**Buena Vista**	**2.27**	**324**	*e*P	Pb	12 47 18.5	-0.9
BUEV				*e*S	Sn	12 47 44.7	-0.4
ACON	**Acoyapa**	**3.20**	**340**	*e*P	Pn	12 47 30.2	+1.2
ESPN	**Las Esperanzas**	**3.24**	**356**	*e*P	Pn	12 47 30.2	+0.6

IDC 07 12:50:19.7±12.0, **20°.51S**×**179°.95E**, **h0**^{km}, **mb4.0**/3, **mb1 4.3**/3, **mb1mx3.7**/26, **mbtmp4.0**/3, **MS3.2**/1, **Ms1 3.1**/1, **ms1mx2.5**/28, **Error ellipse: s-maj=390.2km s-min=97.0km az=136.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.06**	**244**	LR	LR	13 10 42.0	
	comp=Z,35nm,19.3s,baz=187,slow=34						
ASAR	**Alice Springs**	**42.65**	**257**	P	P	12 58 16.9	-1.4
	1.9nm,1.1s,baz=97,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**42.70**	**262**	P	P	12 58 20.6	+1.8
	0.8nm,0.7s,baz=93,slow=8.7,SNR=1.9						
CMAR	**Chiang Mai Arr**	**88.31**	**290**	P	P	13 03 13.8	0.0
	0.5nm,0.4s,baz=98,slow=2.7,SNR=1.9						

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*NIED **07** 12:57:00, 37°.90N×143°.60E, h11^{km}, Mw3.4 Best double couple: $M_0$1.44000×10^{14} NP1:ϕ_s189.00000°, δ44.00000°, λ-113.00000°. NP2:ϕ_s39.00000°, δ50.00000°, λ-70.00000°.*

JMA 07 12:57:34.9±0.1, **37°.91N**×**143°.59E**, **h50**^{km}, **M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.72**	**284**	P	Pn	12 58 03.2	+0.8
JIKH				S	Sn	12 58 23.7	+0.5
JIO	**Ouri**	**1.85**	**288**	P	Pn	12 58 05.1	+1.0
JIO				S	Sn	12 58 27.1	+0.8
JKMT	**Kesennumamotoy**	**1.89**	**299**	P	Pn	12 58 05.7	+1.0
JKMT				S	Sn	12 58 28.2	+0.8
OFUJ	**Ofunato**	**1.91**	**308**	P	Pn	12 58 05.8	+0.8
JMK	**Ichinoseki**	**2.13**	**300**	P	Pn	12 58 09.3	+1.3
JMK				S	Sn	12 58 35.0	+1.7
JOM	**Ohasama**	**2.38**	**312**	P	Pn	12 58 12.9	+1.5
JOM				S	Sn	12 58 41.3	+1.9
JFT	**Otama**	**2.61**	**262**	P	Pn	12 58 15.9	+1.3
JFT				S	Sn	12 58 46.0	+0.9
JYK	**Kaneyama**	**2.73**	**293**	P	Pn	12 58 18.0	+1.8
JYK				*e*S	Sn	12 58 49.9	+1.9
JANG	**Nango**	**2.94**	**327**	P	Pn	12 58 20.4	+1.3
JANG				*e*S	Sn	12 58 54.0	+0.8
JAG	**Ashikaga**	**3.62**	**247**	P	Pn	12 58 29.2	+0.7
JOT	**Ohata**	**3.98**	**331**	P	Pn	12 58 35.2	+1.8
JOT				S	Sn	12 59 18.6	-0.2
JRY	**Ryogami san**	**4.20**	**245**	P	Pn	12 58 37.2	+0.7
JRY				S	Sn	12 59 21.9	-2.4
JKB	**Kayabe**	**4.43**	**334**	P	Pn	12 58 41.9	+2.4
JOD2	**Odawara 2**	**4.48**	**235**	*e*S	Sn	12 59 28.7	-2.5
JCH	**Churui**	**4.70**	**358**	P	Pn	12 58 43.7	+0.4

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*MOS **07** 13:02:21.8±1.2, 27°.75N×66°.47E, h10^{km}, mb4.6/34, Error ellipse: s-maj=8.3km s-min=5.4km az=114.2*

*IDC **07** 13:02:21.9±0.7, 27°.76N×66°.52E, h0^{km}, mb3.8/22, mb1 4.0/25, mb1mx3.9/48, mbtmp3.9/25, ML3.9/3, MS3.1/11, Ms1 3.2/11, ms1mx2.9/43, Error ellipse: s-maj=17.1km s-min=13.5km az=7.0*

*ISCJB **07** 13:02:24.9±0.4, 27°.77N±0°.05×66°.51E±0°.04, h33^{km}, mb4.2/68, MS3.1/8, Error ellipse: s-maj=7.8km s-min=5.0km az=166.7*

*NEIC **07** 13:02:25.7±1.9, 27°.79N×66°.51E, h26^{km}±13^{km}, mb4.2/18, Error ellipse: s-maj=7.3km s-min=5.1km az=159.0*

ISC 07 13:02:27.2±0.6, **27°.77N**±0°.09×**66°.58E**±0°.06, **h35**^{km}, **n132, σ1^{s}.46**/128, **mb4.3**/68, **MS3.1**/8, **11C-14D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THW	**Thamme Wali**	**6.71**	**40**	P	**Pn**	**13 04 01.5**	**-1.8**
KBL	**Kabul**	**7.07**	**17**	*e*Pn	**Pn**	**13 04 06.7**	**-1.7**
KBL	**Kabul**	**7.07**	**17**	*e*P	**Pn**	**13 04 06.7**	**-1.7**
CEP	**Cherat**	**7.58**	**36**	P	**Pn**	**13 04 14.0**	**-1.3**
NIL	**Nilore**	**8.20**	**43**	*e*Pn	**Pn**	**13 04 22.1**	**-1.6**
NIL	**Nilore**	**8.20**	**43**	*e*P	**Pn**	**13 04 22.2**	**-1.6**
CHCP	**Chirah Chowk**	**8.22**	**43**	P	**Pn**	**13 04 22.5**	**-1.5**
WSAR	**Wadi Sarin**	**8.48**	**240**	Pn	**Pn**	**13 04 26.4**	**-1.2**
	3.3nm,0.3s,baz=91,slow=10,SNR=16						
WSAR				Sn	Sn	13 05 49.6	-13
	0.8nm,0.3s,baz=349,slow=16,SNR=1.8						
WSAR				LR	LR	13 08 55.2	
	comp=Z,166nm,18.3s,baz=93,slow=47						
UOSS	**Minazif**	**9.72**	**256**	*e*Pn	**Pn**	**13 04 43.0**	**-1.7**
GEYT	**Alibeck**	**12.37**	**327**	Pn	**Pn**	**13 05 21.0**	**+0.1**
	0.2nm,0.3s,baz=139,slow=14,SNR=3.0						
GEYT				LR	LR	13 11 07.1	
	comp=Z,45nm,20.6s,baz=105,slow=42						
KSH	**Kashi**	**14.08**	**31**	P	Pn	13 05 39.0	-5.2
KSH				pP	P	13 05 47.7	-3.8
KSH				PP	**PnPn**	**13 05 50.7**	**-1.5**
KSH				sP		13 05 54.2	
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,100nm,4.1s						
KSH				LR	LR		
	comp=N,220nm,9.8s						
KSH				LR	LR		
	comp=E,190nm,9.7s						
KK31	**Karatay Array**	**15.63**	**11**	*e*Pn	**Pn**	**13 06 04.8**	**0.0**
	comp=E,2.6nm,0.8s						
KK31	**Karatay Array**	**15.63**	**11**	*e*P	**Pn**	**13 06 04.8**	**0.0**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**15.63**	**11**	*e*Pn	**Pn**	**13 06 04.9**	**+0.1**
	comp=Z,2.6nm,0.8s						
KKAR	**Karatay Array**	**15.63**	**11**	*e*P	**Pn**	**13 06 04.9**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**16.17**	**21**	Pn	**Pn**	**13 06 11.7**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=218,slow=17,SNR=3.0						
AAK				LR	LR	13 13 04.9	
	comp=Z,54nm,19.6s,baz=198,slow=40						
AAK	**Ala-Archa**	**16.17**	**21**	*e*Pn	**Pn**	**13 06 12.0**	**+0.1**
	comp=Z,2.6nm,0.7s						
AAK	**Ala-Archa**	**16.17**	**21**	*e*P	**Pn**	**13 06 12.0**	**+0.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GNI	**Garni**	**21.86**	**310**	LR	LR	13 17 00.2	
	comp=Z,46nm,21.7s,baz=106,slow=40						
GNI	**Garni**	**21.86**	**310**	⇓*e*P	**P**	**13 07 21.8**	**+4.8**
GNI				pmax	pmax		
	comp=Z,77nm,1.3s						
ABKAR	**Akbulak array**	**22.06**	**348**	*e*P	**P**	**13 07 17.5**	**-1.4**
	comp=Z,6.1nm,1.3s						
MK31	**Makanchi Array**	**22.66**	**29**	*e*P	**P**	**13 07 23.8**	**-1.5**
	comp=Z,2.5nm,1.1s						
MK31	**Makanchi Array**	**22.66**	**29**	*e*P	**P**	**13 07 23.8**	**-1.5**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK32	**Makanchi Array**	**22.66**	**29**	*e*P	**P**	**13 07 23.6**	**-1.8**
MKAR	**Makanchi Array**	**22.66**	**29**	P	**P**	**13 07 23.6**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=203,slow=10,SNR=6.5						
MKAR				LR	LR	13 17 47.4	
	comp=Z,54nm,21.9s,baz=232,slow=41						
MKAR	**Makanchi Array**	**22.66**	**29**	*ce*P	**P**	**13 07 28.3**	**+3.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WMQ	**Urumqi**	**23.35**	**41**	*e*P	**P**	**13 07 32.3**	**-0.2**
WMQ				pP	pP	13 07 40.6	-1.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.5s						
AKTO	**Aktyubinsk**	**23.56**	**346**	P	**P**	**13 07 34.3**	**0.0**
	comp=Z,0.8nm,0.4s,baz=163,slow=16,SNR=3.3						
AKTO				LR	LR	13 17 34.1	
	comp=Z,66nm,18.3s,baz=162,slow=39						
ZEI	**Tsey**	**23.72**	**315**	*e*P	**P**	**13 07 36.3**	**+0.1**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
NCK	**Nalchik**	**24.28**	**316**	⇓*e*P	**P**	**13 07 46.3**	**+5.1**
PALK	**Pallekele**	**24.38**	**144**	LR	LR	13 17 56.8	
	comp=Z,51nm,20.1s,baz=296,slow=38						
KURBB	**Kurchatov Arra**	**24.57**	**18**	P	**P**	**13 07 43.9**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=210,slow=9.3,SNR=24						
KURK	**Kurchatov**	**24.68**	**19**	*e*P	**P**	**13 07 44.8**	**+0.2**
	comp=Z,4.9nm,0.9s						
KURK	**Kurchatov**	**24.68**	**19**	⇓*i*P	**P**	**13 07 45.8**	**+1.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NEY	**Neytrino**	**24.70**	**315**	⇑*e*P	**P**	**13 07 49.5**	**+4.4**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KBZ	**Khabaz**	**24.84**	**316**	P	**P**	**13 07 46.4**	**+0.2**
	comp=Z,4.5nm,0.7s,baz=114,slow=7.3,SNR=9.3						
KIV	**Kislovodsk**	**25.09**	**316**	*e*P	**P**	**13 07 51.4**	**+2.8**
KIV				pmax	pmax		
	comp=Z,26nm,1.0s						
BVAR	**Borovoye Array**	**25.39**	**5**	P	**P**	**13 07 51.3**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=185,slow=10,SNR=13						
BRVK	**Borovoye**	**25.41**	**5**	*e*P	**P**	**13 07 52.3**	**+1.0**
	comp=Z,4.4nm,0.8s						
BRVK	**Borovoye**	**25.41**	**5**	⇓*e*P	**P**	**13 07 52.4**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ASF	**Jabal al Asfar**	**26.05**	**287**	P	**P**	**13 07 56.7**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=143,slow=5.1,SNR=2.9						
DGZ	**Jazzator, Alta**	**27.11**	**30**	⇓*e*P	**P**	**13 08 09.7**	**+2.8**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARU	**Arti**	**29.21**	**351**	LR	LR	13 21 43.2	
	comp=Z,59nm,19.1s,baz=146,slow=40						
ARU	**Arti**	**29.21**	**351**	⇓*e*P	**P**	**13 08 27.8**	**+2.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ZALV	**Zalesovo Beam**	**29.39**	**22**	P	**P**	**13 08 25.1**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=246,slow=11,SNR=2.9						
ZALV				LR	LR	13 20 33.3	
	comp=Z,17nm,19.6s,baz=248,slow=37						
ZAA1	**Zalesovo Array**	**29.39**	**22**	*e*P	**P**	**13 08 25.1**	**-1.8**
CM31	**Chiang Mai Arr**	**31.09**	**100**	*e*P	**P**	**13 08 43.7**	**+1.2**
	comp=Z,6.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.09**	**100**	P	**P**	**13 08 43.7**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=288,slow=11,SNR=3.3						
LZH	**Lanzhou**	**32.54**	**66**	*e*P	**P**	**13 08 52.8**	**-2.4**
LZH				pP	pP	13 09 05.1	-0.6
LZH				sP	sP	13 09 09.3	-0.9
LZH				PP	**PP**	**13 10 09.4**	**+0.4**
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
LZH				pmax	pmax		
	comp=Z,81nm,4.9s						
OBN	**Obninsk**	**34.90**	**330**	*i* P	**P**	**13 09 16.4**	**+1.2**
OBN				*i*		13 10 37.1	
OBN				*i*		13 11 49.8	
OBN				pmax	pmax		

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       comp=Z,5.0nm,0.8s
VRI    Vrincioaia        36.21 311⇓iP    P        13 09 29.5 +2.9
VRI    Vrincioaia        36.21 311 ⇓P    P        13 09 29.5 +2.9
PLOR   Plostina          36.26 311⇓iP    P        13 09 28.8 +1.7
PLOR   Plostina          36.26 311 ⇓P    P        13 09 28.8 +1.7
AKASG  Malin Array Be    36.33 319  P    P        13 09 26.7 -0.9
       comp=Z,0.5nm,0.4s,baz=118,slow=7.6,SNR=3.6
AKBB   Malin Array Si    36.33 319 eP    P        13 09 26.8 -0.8
       comp=Z,4.1nm,1.0s
AKBB   Malin Array Si    36.33 319 eP    P        13 09 26.8 -0.8
AKBB                                pmax pmax
       comp=Z,4.0nm,1.0s
MLR    Muntele Rosu      36.64 310⇑iP    P        13 09 32.0 +1.6
MLR    Muntele Rosu      36.64 310 ⇑P    P        13 09 32.0 +1.6
SONA0  Songino Array     36.77  46 eP    P        13 09 33.2 +1.7
SONM   Songino Array     36.77  46  P    P        13 09 33.2 +1.7
       comp=Z,0.2nm,0.3s,baz=262,slow=7.1,SNR=5.3
ULN    Ulaanbaatar       37.20  46⇓eP    P        13 09 37.4 +2.2
ULN                                 pmax pmax
       comp=Z,6.0nm,2.6s
VOIR                     37.24 310⇑iP    P        13 09 35.7 +0.2
VOIR                     37.24 310 ⇑P    P        13 09 35.7 +0.2
ARR    Arges             37.50 309⇑iP    P        13 09 38.7 +1.0
BURAR  Bucovina Array    37.70 313⇓iP    P        13 09 39.4  0.0
BURAR  Bucovina Array    37.70 313 ⇓P    P        13 09 39.4  0.0
BUR08  Bucovina Ar. S    37.72 313 eP    P        13 09 39.3 -0.3
       comp=Z,4.7nm,1.4s
HHC    Hu-ho-hao-te      38.97  58  P    P        13 09 48.7 -1.5
HHC                                 pmax pmax
       comp=Z,14nm,0.8s
HHC                                 pmax pmax
       comp=Z,110nm,4.5s
DRGR                     39.14 311⇑iP    P        13 09 51.3 -0.1
DRGR                     39.14 311 ⇑P    P        13 09 51.3 -0.1
VYHS   Vyhne             42.06 313 eP    P        13 10 17.4 +1.9
VYHS   Vyhne             42.06 313 eP    P        13 10 17.4 +1.9
KLNR   Kaliningrad       42.89 322⇑eP    P        13 10 26.4 +4.3
KLNR                                pmax pmax
       comp=Z,41nm,0.6s
FIA0   FINESS Array S    43.10 333 eP    P        13 10 23.1 -0.6
FIA0   FINESS Array S    43.10 333 eP    P        13 10 23.1 -0.6
FINES  FINESS Array B    43.10 333  P    P        13 10 23.1 -0.6
       comp=Z,0.7nm,0.4s,baz=112,slow=6.4,SNR=12
GEC2   GERESS Array S    45.48 312 eP    P        13 10 42.5 -0.5
       comp=Z,3.9nm,1.3s
GEC2   GERESS Array S    45.48 312 eP    P        13 10 42.5 -0.5
GEC2                                pmax pmax
       comp=Z,4.0nm,1.3s
GERES  GERESS Array B    45.48 312  P    P        13 10 42.5 -0.5
       comp=Z,0.6nm,0.6s,baz=133,slow=5.9,SNR=4.7
DAVOX  Davos/Dischmat    47.86 309  LR   LR       13 35 15.8
       comp=Z,33nm,18.7s,baz=257,slow=41
ARA0   ARCESS Array S    48.03 342 eP    P        13 11 02.4 -0.2
ARCES  ARCESS Array B    48.03 342  P    P        13 11 02.4 -0.2
       comp=Z,0.9nm,0.5s,baz=124,slow=7.5,SNR=7.5
ARCES                               LR   LR       13 32 52.6
       comp=Z,52nm,20.2s,baz=274,slow=38
NB200  NORSAR Array S    49.46 328 eP    P        13 11 13.2 -0.5
NOA    NORSAR Array B    49.46 328  P    P        13 11 13.2 -0.5
       comp=Z,0.8nm,0.8s,baz=110,slow=7.6,SNR=2.7
SBF    Sospel            49.55 305 eP    P        13 11 13.4 -1.4
SBF                                 pmax pmax
       comp=Z,9.0nm,0.6s
CDF    Champ du Feu      49.69 311 eP    P        13 11 14.8 -0.9
CDF                                 pmax pmax
       comp=Z,2.0nm,1.0s
MBDF   Montbardon        50.01 306 eP    P        13 11 17.0 -1.3
MBDF                                pmax pmax
       comp=Z,3.0nm,0.4s
LPG    La Plagne         50.01 307 eP    P        13 11 17.7 -0.8
LPG                                 pmax pmax
       comp=Z,3.0nm,0.7s
LPL    La Plagne         50.02 307 eP    P        13 11 17.0 -1.5
LPL                                 pmax pmax
       comp=Z,3.0nm,0.6s
BNI    Bardonecchia      50.07 307 eP    P        13 11 16.9 -1.8
       comp=Z,3.6nm,0.7s
BNI    Bardonecchia      50.07 307 eP    P        13 11 16.9 -1.8
BNI                                 pmax pmax
       comp=Z,4.0nm,0.7s
GIVF   Givet             51.35 313 eP    P        13 11 28.1  0.0
GIVF                                pmax pmax
       comp=Z,1.0nm,0.3s
VIVF   Saint-Julien-l    51.50 307 eP    P        13 11 28.0 -1.4
VIVF                                pmax pmax
       comp=Z,4.0nm,1.1s
SSB    Saint Sauveur     51.57 307 eP    P        13 11 28.2 -1.7
       comp=Z,3.3nm,0.6s
SSB    Saint Sauveur     51.57 307 eP    P        13 11 28.3 -1.7
SSB                                 pmax pmax
       comp=Z,3.0nm,0.6s
KS15   Wonju Array Si    51.74  63 eP    P        13 11 31.5 +0.2
       comp=Z,63nm,1.8s
KSAR   Wonju Array Be    51.74  63  P    P        13 11 31.5 +0.2
KSAR   Wonju Array Be    51.74  63  P    P        13 11 31.5 +0.2
BAIF   Baives            51.74 313 eP    P        13 11 31.8 +0.7
BAIF                                pmax pmax
       comp=Z,2.0nm,0.6s
KSRS   Korea Array       51.77  63  P    P        13 11 31.5  0.0
       comp=Z,0.7nm,0.8s,baz=268,slow=9.6,SNR=3.5
LOR    Lormes            51.98 310 eP    P        13 11 31.4 -1.5
LOR                                 pmax pmax
       comp=Z,2.0nm,0.6s
SMF    Signal de Mont    52.01 309 eP    P        13 11 31.9 -1.2
SMF                                 pmax pmax
       comp=Z,8.0nm,0.8s
SSF    Saint Saulge      52.23 310 eP    P        13 11 33.5 -1.2
SSF                                 pmax pmax
       comp=Z,4.0nm,0.8s
TCF    Toulx Ste Croi    53.15 309 eP    P        13 11 40.6 -1.0
TCF                                 pmax pmax
       comp=Z,10.0nm,1.4s
CAF    Calviac           53.34 307 eP    P        13 11 42.1 -1.0
CAF                                 pmax pmax
       comp=Z,5.0nm,0.8s
MTLF   Montolieu         53.37 305 eP    P        13 11 42.1 -1.1
MTLF                                pmax pmax
       comp=Z,1.0nm,0.6s
KLR    Kul'dur           53.56  48⇓eP    P        13 11 46.2 +1.6
RJF    Les Rejaudoux     53.70 307 eP    P        13 11 47.1 +1.5
RJF                                 pmax pmax
       comp=Z,19nm,1.7s
LFF    La Frestale       54.28 307 eP    P        13 11 49.6 -0.2
LFF                                 pmax pmax
       comp=Z,5.0nm,0.6s
LDF    La Druitiere      54.60 312 eP    P        13 11 51.1 -1.0
LDF                                 pmax pmax
       comp=Z,9.0nm,1.2s
MFF    Saint Martin d    54.76 309 eP    P        13 11 52.7 -0.6
MFF                                 pmax pmax
       comp=Z,15nm,1.6s
ETSF   Etsaut            55.44 305 eP    P        13 11 58.1 -0.3
ETSF                                pmax pmax
       comp=Z,3.0nm,0.9s
SJPF   Ste Jean          55.89 305 eP    P        13 12 00.4 -1.2
SJPF                                pmax pmax
       comp=Z,23nm,1.6s
SGMF   Saint Gilles      56.24 311 eP    P        13 12 04.6 +0.7
SGMF                                pmax pmax
       comp=Z,13nm,1.3s
ROSF   Rostrenen         56.71 311 eP    P        13 12 06.9 -0.4
ROSF                                pmax pmax
       comp=Z,20nm,1.4s
ESDC   Sonseca Array     58.50 301  P    P        13 12 19.0 -1.1
       comp=Z,0.1nm,0.3s,baz=72,slow=7.4,SNR=4.7
TOA0   Torodi Ar. Sit    61.90 271 eP    P        13 12 41.5 -2.1
       comp=Z,27nm,1.9s
TOA1   Torodi Ar. Sit    61.90 271 eP    P        13 12 42.4 -1.2
TORD   Torodi Ar. Bea    61.90 271  P    P        13 12 42.4 -1.2
       comp=Z,2.9nm,0.7s,baz=53,slow=6.9,SNR=18
DBIC   Dimbokro          70.51 267  P    P        13 13 39.4 +0.5
       comp=Z,1.7nm,0.5s,baz=45,slow=7.8,SNR=4.7
DBIC   Dimbokro          70.51 267 eP    P        13 13 39.4 +0.5
       comp=Z,16nm,1.2s
WR1    Warramunga Arr    80.89 118 eP    P        13 14 38.0 -0.1
WRA    Warramunga Arr    80.89 118  P    P        13 14 38.0 -0.1
       comp=Z,2.8nm,1.0s,baz=274,slow=5.8,SNR=4.7
WRA    Warramunga Arr    80.89 118  P    P        13 14 38.0 -0.1
WRAB   Tennant Creek     80.89 118ceP    P        13 14 41.0 +2.9
WRAB                                pmax pmax
       comp=Z,7.0nm,1.3s
AS31   Alice Springs     82.63 121 eP    P        13 14 47.6 +0.4
       comp=Z,1.9nm,1.4s
ASAR   Alice Springs     82.63 121  P    P        13 14 47.6 +0.4
       comp=Z,0.9nm,0.6s,baz=309,slow=5.3,SNR=26
ILAR   Eielson Array     84.15  14  P    P        13 14 54.0 -0.4
       comp=Z,0.4nm,0.8s,baz=318,slow=4.2,SNR=3.0
ILB    Eielson Array     84.15  14 eP    P        13 14 54.0 -0.4
       comp=Z,13nm,1.8s
YKA    Yellowknife Ar    90.05   1  P    P        13 15 22.8 -0.2
       comp=Z,0.3nm,0.7s,baz=340,slow=5.3,SNR=4.5
YKB5   Yellowknife Ar    90.05   1 eP    P        13 15 22.8 -0.2
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*ISCJB **07** 13:15:07.8±0.6, 21°.14S±0°.10×175°.96W±0°.07, h150^{km},*
mb4.2/9, Error ellipse: s-maj=14.6km s-min=8.5km
az=158.7
*IDC **07** 13:15:07.2±11.0, 21°.03S×176°.17W, h113^{km}±98^{km},*
mb4.2/8, mb1 4.2/9, mb1mx3.7/40, mbtmp4.6/9, ML5.0/1,
MS3.0/2, Ms1 3.0/2, ms1mx2.6/25, Error ellipse:
s-maj=50.9km s-min=24.9km az=60.0
*NEIC **07** 13:15:11.6±1.3, 21°.18S×176°.15W, h156^{km}±13^{km}, mb4.4/7,*
Error ellipse: s-maj=15.0km s-min=10.3km az=136.0
ISC 07 13:15:10.6±0.6, **21°.1S**±0°.1×**176°.05W**±0°.08, **h150^{km}, n31,**
σ**1^{s}.69**/33, **mb4.2**/9, **Fiji Islands region**

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Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
NIUE   Niue               6.11  71 ePn     Pn       13 16 40.9 +2.1
NIUE                               eSn     Sn       13 17 43.8 -3.9
MARNC  Mare, Loyalty     14.84 266 eP      P        13 18 34.4 -0.6
RAR    Rarotonga         15.18  93  LR     LR       13 23 49.6
       comp=Z,43nm,18.4s,baz=258,slow=34
PINNC  Pines Island,     15.39 262 ePn     Pn       13 18 36.5 -3.3
       66nm,1.2s
DZM    Mont Dzumac       16.31 264  P      P        13 18 55.6 +4.2
       1.2nm,0.3s,baz=85,slow=17,SNR=12
DZM    Mont Dzumac       16.31 264 eP      P        13 18 55.0 +3.6
       22nm,0.8s
URZ    Urewera           18.05 198  P      P        13 19 09.2 -1.0
       5.3nm,0.3s,baz=301,slow=3.5,SNR=35
URZ                                 S      S        13 22 12.6  -17
       0.4nm,0.3s,baz=303,slow=17,SNR=4.9
URZ    Urewera           18.05 198 eP      P        13 19 09.1 -1.2
       29nm,1.1s
HIZ    Hauiti            19.00 202 eP      P        13 19 21.6 +0.9
       683nm,2.0s
BKZ    Black Stump Fm    19.07 198 eP      P        13 19 19.8 -1.6
       86nm,1.8s
RPZ    Rata Peaks        24.94 203  P      P        13 20 21.2 +1.3
       22nm,0.4s,baz=65,slow=1.8,SNR=20
CTA    Charters Tower    35.24 265  P      P        13 21 51.2 +0.3
       6.9nm,0.7s,baz=96,slow=11,SNR=7.5
STKA   Stephens Creek    39.16 245  P      P        13 22 23.8 -0.1
       2.6nm,0.4s,baz=96,slow=11,SNR=9.3
STKA   Stephens Creek    39.16 245 eP      P        13 22 23.3 -0.6
       8.9nm,2.0s
AS31   Alice Springs     46.15 257 eP      P        13 23 19.2 -1.2
       1.8nm,0.8s
AS31                               ePcP    PcP      13 24 53.4 -0.6
ASAR   Alice Springs     46.15 257  P      P        13 23 19.2 -1.1
       4.0nm,0.5s,baz=88,slow=8.4,SNR=144
ASAR                                PcP    PcP      13 24 53.4 -0.6
       0.8nm,0.6s,baz=99,slow=3.6,SNR=6.1
WR1    Warramunga Arr    46.32 262 eP      P        13 23 20.2 -1.5
WRA    Warramunga Arr    46.32 262  P      P        13 23 20.2 -1.5
       3.4nm,0.6s,baz=100,slow=7.0,SNR=13
SIJI   Sorong            55.16 284  P      P        13 24 28.2 +0.2
       5.8nm,0.4s,baz=108,slow=8.9,SNR=4.6
MJAR   Matsushiro Arr    71.82 323  P      P        13 26 16.5 -0.4
       0.4nm,0.5s,baz=160,slow=7.2,SNR=2.8
MAJO   Matsushiro        71.82 323 eP      P        13 26 16.5 -0.4
YBH    Yreka Blue Hor    79.67  38  LR     LR       13 56 49.7
       comp=Z,10nm,18.4s,baz=201,slow=31
MAW    Mawson            81.57 199  P      P        13 27 12.5 +1.3
       1.0nm,0.4s,baz=153,slow=7.1,SNR=7.6
MAW    Mawson            81.57 199 eP      P        13 27 12.1 +1.0
       1.3nm,1.2s
ARA0   ARCESS Array S   129.87 350 ePKPdf  PKPdf    13 34 01.8 +0.3
ARCES  ARCESS Array B   129.87 350  PKP    PKPdf    13 34 01.8 +0.3
       3.5nm,0.9s,baz=331,slow=4.5,SNR=3.9
FIA0   FINESS Array S   136.89 345 ePKPdf  PKPdf    13 34 16.2 +1.4
FINES  FINESS Array B   136.89 345  PKP    PKPdf    13 34 16.2 +1.4
       1.8nm,0.9s,baz=101,slow=2.8,SNR=3.5
BR101  Keskin Array S   148.62 313 ePKPbc  PKPbc    13 34 40.5 +0.2
BRTR   Keskin Array B   148.62 313  PKPbc  PKPbc    13 34 40.5 +0.2
       2.9nm,0.6s,baz=134,slow=3.0,SNR=14
CLL    Collm            149.07 349 i PKPbc PKPbc    13 34 41.4 +0.6
       comp=Z,3.0nm,0.7s
CLL                                ePKPab  PKPab    13 34 46.0 +0.5
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*ISCJB **07** 13:17:40.2±2.4, 46°.8N±0°.1×141°.6E±0°.2, h11^{km}, Error*
ellipse: s-maj=22.9km s-min=6.1km az=44.4
*JMA **07** 13:17:40.6±0.4, 46°.73N×141°.58E, h0^{km}, M3.1*
*SKHL **07** 13:17:41.6±0.4, 46°.69N×141°.77E, h10^{km}, mb3.8/4*
ISC 07 13:17:40.9±2.5, **46°.7N**±0°.1×**141°.7E**±0°.1, **h11^{km}, n5,**
σ**0^{s}.58**/7, **1D, Sakhalin Island**

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Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
YSS    Yuzh-Sakhalins     0.77  71⇓ePg     Pb       13 17 56.3 +0.1
YSS                                 AMB    AMB      13 17 56.6
       20nm,0.2s
YSS                                eSg     Sb       13 18 06.2 -0.4
YSS                                 A      A        13 18 06.4
       200nm,0.4s
JRBN   Rebuntou           1.35 199  P      Pb       13 18 05.9 -0.3
JRBN                               eS      Sn       13 18 23.9 +0.3
JWK2   Keihoku            1.40 174 eS      Sg       13 18 26.4 +0.7
JRR    Rishiri            1.59 190 eS      Sg       13 18 32.4 +0.4
JSE    Soyaes             1.85 160  P      Pb       13 18 14.1 -0.6
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*IDC **07** 13:25:36.8±1.4, 39°.25S×178°.38E, h0^{km}, mb4.2/2,*
mb1 4.4/3, mb1mx3.8/30, mbtmp4.2/3, ML3.5/1, MS2.7/1,
Ms1 2.7/1, ms1mx2.4/20, Error ellipse: s-maj=39.9km
s-min=24.6km az=50.0
*NEIC **07** 13:25:36.3±1.7, 39°.45S×178°.61E, h4^{km}±8^{km}, mb4.0/1,*
ML3.9(WEL), Error ellipse: s-maj=23.6km s-min=11.8km
az=80.0
*WEL **07** 13:25:36.7, 39°S±5°×17°9E±°, h33^{km}, M3.8/59, ML4.0/45,*
MLv3.8/59, Error ellipse: s-maj=0.0km s-min=0.0km
az=51.0
ISC 07 13:25:34.2±1.8, **39°.34S**±0°.03×**178°.73E**±0°.06, **h2^{km}**±10^{km},
n133, σ**1^{s}.44**/144, **mb4.0**/3, **Off east coast of North Island**

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Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
MHGZ   Mahia Peninsul     0.67 286  P      Pn       13 25 50.4 -0.3
MHGZ                                S      Sn       13 26 00.8 -1.0
PRGZ   Paritu Road        0.78 302  P      Pn       13 25 51.4 -0.9
KNZ    Kokohu             0.88 291  P      Pn       13 25 53.0 -0.7
KNZ                                 S      Sn       13 26 05.7 -1.4
CNGZ   Carnagh Statio     0.95 334  P      Pn       13 25 53.9 -0.7
RIGZ   Rimuhau            0.99 310  P      Pn       13 25 54.5 -0.7
RIGZ                                S      Sn       13 26 07.8 -2.0
TKGZ   Te Karaka          1.13 322  P      Pn       13 25 56.3 -0.8
WHHZ   Waihua             1.19 282  P      Pg       13 25 58.3 +1.2
SNGZ   Shannon Statio     1.22 297  P      Pg       13 25 58.2 +0.7
SNGZ                                S      Sn       13 26 14.9 -0.5
TWGZ   Tauwhareparae      1.30 333  P      Pg       13 25 59.2 +0.1
CKHZ   Cape Kidnapper     1.32 256  P      Pg       13 26 00.7 +1.2
PUZ    Puketiti           1.32 343  P      Pn       13 25 58.5 -1.2
RAGZ   Rawiri             1.33 309  P      Pb       13 25 59.4 -0.5
ARHZ   Aropaoanui         1.35 273  P      Pg       13 26 01.0 +0.9
ARHZ                                S      Sg       13 26 18.4 +0.8
RAHZ   Arahi              1.35 288  P      Pg       13 26 00.3 +0.3
MWZ    Matawai            1.38 316  P      Pn       13 25 59.7 -0.8
KAHZ   Kahuranaki         1.50 252  P      Pg       13 26 03.5 +0.4
NMHZ   Naumai             1.52 279  P      Pg       13 26 03.3  0.0
PKGZ   Pakihiroa          1.54 340  P      Pn       13 26 02.2 -0.5
PKGZ                                S      Sn       13 26 19.9 -3.5
WMGZ   Waiomatatini S     1.54 351  P      Pb       13 26 02.2 -1.2
WMGZ                                S      Sn       13 26 20.8 -2.5
RTZ    Ruatahuna          1.55 297  P      Pb       13 26 02.7 -1.0
MTHZ   Maungataniwha      1.55 288  P      Pb       13 26 03.6 -0.1
MCHZ   McNeill Hill       1.58 266  P      Pg       13 26 04.5 -0.1
PXZ    Pawanui            1.60 244  P      Pg       13 26 04.7 -0.2
RUGZ   Raukumara Rang     1.60 329  P      Pn       13 26 02.7 -1.0
URZ    Urewera            1.67 310  Pn     Pn       13 26 04.0 -0.4
       23nm,0.3s,baz=246,slow=3.3,SNR=223
URZ                                 Sn     Sn       13 26 22.8 -3.6
       42nm,0.3s,baz=27,slow=11,SNR=12
URZ                                 LR     LR       13 26 31.0
       comp=Z,81nm,19.9s,baz=136,slow=39
URZ    Urewera            1.67 310  P      Pn       13 26 04.0 -0.4
BKZ    Black Stump Fm     1.75 275 ePn     Pb       13 26 05.9 -1.2
BKZ    Black Stump Fm     1.75 275  P      Pb       13 26 05.9 -1.2
HAZ    Te Kaha            1.75 334  P      Pn       13 26 04.9 -0.7
MUGZ   Murupara           1.76 299  P      Pb       13 26 06.0 -1.2
MXZ    Matakaoa Point     1.81 349 ePn     Pn       13 26 05.9 -0.5
MXZ    Matakaoa Point     1.81 349  P      Pn       13 26 06.2 -0.2
KRHZ   Kereru             1.85 260  P      Pb       13 26 08.1 -0.8
PRHZ   Porangahau         1.86 240  P      Pb       13 26 07.8 -1.2
MRHZ   Matea Rd           1.87 285  P      Pb       13 26 07.7 -1.5
WPHZ   Waipukurau         1.91 247  P      Pb       13 26 08.7 -1.2
EDRZ   Edgecumbe          1.99 308  P      Pb       13 26 09.7 -1.4
RRRZ   Republican Roa     2.00 299  P      Pb       13 26 09.6 -1.7
PRRZ   Plateau Road       2.01 294  P      Pb       13 26 09.9 -1.6
ALRZ   Allen Road         2.02 292  P      Pb       13 26 10.0 -1.7
WHRZ   Whale Island       2.02 317  P      Pn       13 26 09.6 +0.3
TARZ   Mount Tarawera     2.06 302  P      Pn       13 26 10.3 +0.4
ANWZ   Angora Road        2.07 237  P      Pn       13 26 10.3 +0.3
BHHZ   Black Hill Sta     2.07 265  P      Pb       13 26 10.9 -1.7
HRRZ   Handcock Road      2.13 296  P      Pn       13 26 11.4 +0.4
WPRZ   Whakapapatarin     2.17 291  P      Pb       13 26 12.2 -2.0
DVHZ   Dannevirke         2.20 243  P      Pn       13 26 12.3 +0.5
HSRZ   Hossack Road       2.20 297  P      Pn       13 26 12.6 +0.8
OMRZ   Omania             2.22 303  P      Pn       13 26 12.1  0.0
RITZ   Rihia Road         2.26 278  P      Pb       13 26 14.5 -1.4
OPRZ   Ohinepanea         2.27 310  P      Pn       13 26 12.3 -0.4
MOVZ   Moawhango          2.31 267  P      Pb       13 26 14.6 -2.0
BFZ    Birch Farm         2.33 234 ePn     Pn       13 26 13.5 -0.1
BFZ    Birch Farm         2.33 234  P      Pn       13 26 13.7 +0.1
KARZ   Kaharoa            2.35 303  P      Pn       13 26 14.1 +0.1
RATZ   Rangitukua         2.35 281  P      Pb       13 26 15.4 -1.9
KUTZ   Kaahu Road         2.42 290  P      Pn       13 26 16.0 +1.1
NGZ    Ngauruhoe          2.44 273  P      Pb       13 26 17.1 -1.8
WHVZ   Whangaehu Hut      2.44 270  P      Pb       13 26 17.3 -1.7
PRWZ   Pori Road          2.45 239  P      Pn       13 26 16.2 +1.1
WTVZ   West Tongariro     2.45 274  P      Pb       13 26 17.3 -1.8
FWVZ   Far West T-bar     2.47 271  P      Pb       13 26 17.1 -2.3
POWZ   Post Office Ro     2.51 244  P      Pn       13 26 17.5 +1.4
POWZ                                S      Sn       13 26 47.3  0.0
TGRZ   Tauranga           2.52 309  P      Pn       13 26 15.5 -0.7
TIWZ   Tintock            2.61 236  P      Pn       13 26 18.6 +1.0
PKVZ   Pokaka             2.63 270  P      Pn       13 26 19.3 +1.5
MRZ    Mangatainoka R     2.76 240  P      Pn       13 26 19.8 +0.3
TMWZ   Te Maipa           2.80 230  P      Pn       13 26 19.7 -0.4
HOWZ   Holdsworth Sta     2.92 237  P      Pn       13 26 21.4 -0.3
WAZ    Wanganui           2.93 261  P      Pb       13 26 24.5 -2.6
TOZ    Tahuroa Road       3.00 301  P      Pn       13 26 22.5 -0.3
MTW    Mount Morrison     3.07 233  P      Pn       13 26 23.4 -0.3
MTW                                 S      Sn       13 26 58.8 -2.3
VRZ    Vera Road          3.10 273  P      Pb       13 26 26.6 -3.3
TRWZ   Traveller          3.10 228  P      Pn       13 26 23.2 -1.1
TRWZ                                S      Sn       13 27 01.0 -0.9
HIZ    Hauiti             3.13 284 ePn     Pn       13 26 26.2 +1.5
HIZ    Hauiti             3.13 284  P      Pn       13 26 25.9 +1.3
PAWZ   Paruwai Farm       3.25 230  P      Pn       13 26 25.3 -1.0
CAW    Cannon Point       3.32 237  P      Pn       13 26 26.8 -0.4
LREZ   Lake Rotokare      3.36 267  P      Pn       13 26 29.6 +1.9
MSWZ   Moikau Station     3.37 231  P      Pn       13 26 27.0 -0.9
PLWZ   Palliser           3.46 229  P      Pn       13 26 28.5 -0.7
KUZ    Kuaotunu           3.52 317  P      Pn       13 26 29.1 -0.8
DREZ   Durham Road        3.52 271  P      Pn       13 26 31.9 +1.9
MKAZ   Moumakai           3.59 307  P      Pn       13 26 30.7 -0.2
BHW    Baring Head        3.60 234  P      Pn       13 26 30.1 -0.9
SNZO   South Karori       3.65 236 ePn     Pn       13 26 30.3 -1.5
KHEZ   Kahui Hut          3.66 269  P      Pn       13 26 34.4 +2.4
PKE    Pukeiti            3.69 271  P      Pn       13 26 34.1 +1.8
KBAZ   Karaka Road Bo     3.77 305  P      Pn       13 26 34.0 +0.6
WIAZ   Waiheke Island     3.81 311  P      Pn       13 26 34.6 +0.6
ETAZ   East Tamaki Re     3.83 307  P      Pn       13 26 34.8 +0.6
TCW    Tory Channel       3.89 240  P      Pn       13 26 35.0  0.0
AWAZ   Awhitu Peninsu     3.94 304  P      Pn       13 26 36.4 +0.7
MBAZ   Motutapu North     3.97 309  P      Pn       13 26 36.5 +0.4
DUWZ   D'Urville Isla     3.97 247  P      Pn       13 26 36.2 +0.1
WTAZ   Waiatarua          4.07 305  P      Pn       13 26 38.6 +1.2
TUWZ   Tuamarina          4.21 239  P      Pn       13 26 39.2 -0.3
BSWZ   Blackbirch Sta     4.40 236  P      Pn       13 26 41.0 -1.0
NNZ    Nelson             4.50 244  P      Pn       13 26 42.8 -0.6
WCZ    Waipu Caves        4.86 313  P      Pn       13 26 48.2 -0.2
QRZ    Quartz Range       4.99 251  P      Pn       13 26 49.3 -0.8
KHZ    Kahutara           4.99 230 ePn     Pn       13 26 47.8 -2.4
THZ    Tophouse           5.06 240 ePn     Pn       13 26 49.8 -1.3
THZ    Tophouse           5.06 240  P      Pn       13 26 49.8 -1.3
CTZ    Chatham Island     5.61 143  P      Pn       13 27 04.3 +5.7
GVZ    Greta Valley S     5.62 228  P      Pn       13 26 59.5 +0.7
OUZ    Omahuta            5.80 314 ePn     Pn       13 26 60.0 -1.3
LTZ    Lake Taylor        5.97 233 ePn     Pn       13 27 03.3 -0.4
LTZ    Lake Taylor        5.97 233  P      Pn       13 27 03.1 -0.5
OKCZ   Okains Bay         6.11 222  P      Pn       13 27 04.5 -1.0
CRLZ   Canterbury Las     6.24 225 ePn     Pn       13 27 07.7 +0.4
MQZ    McQueen's Vall     6.31 224 ePn     Pn       13 27 07.8 -0.4
MQZ    McQueen's Vall     6.31 224  P      Pn       13 27 07.4 -0.9
OXZ    Oxford             6.42 230 ePn     Pn       13 27 09.6 -0.3
OXZ    Oxford             6.42 230  P      Pn       13 27 09.3 -0.5
INZ    Inchbonnie         6.46 236  P      Pn       13 27 08.7 -1.7
RPZ    Rata Peaks         7.23 230  Pn     Pn       13 27 20.8 -0.2
       0.9nm,0.3s,baz=90,slow=3.0,SNR=3.2
RPZ                                 Sn     Sn       13 28 36.3 -7.4
       2.1nm,0.3s,baz=294,slow=22,SNR=10
LBZ    Lake Benmore       8.13 229 ePn     Pn       13 27 32.3 -0.9
ODZ    Otahua Downs       8.28 224 ePn     Pn       13 27 35.2  0.0
ODZ    Otahua Downs       8.28 224  P      Pn       13 27 34.8 -0.4
AS31   Alice Springs     40.86 279 eP      P        13 33 18.6 +0.9
       1.8nm,0.5s
ASAR   Alice Springs     40.86 279  P      P        13 33 18.6 +0.9
       3.7nm,0.6s,baz=126,slow=8.7,SNR=68
ASAR                                PcP    PcP      13 35 19.7 +1.1
       0.4nm,0.6s,baz=117,slow=3.4,SNR=4.1
WR1    Warramunga Arr    42.66 284 eP      P        13 33 32.7 +0.3
WRA    Warramunga Arr    42.66 284  P      P        13 33 32.7 +0.3
       1.4nm,0.6s,baz=130,slow=7.8,SNR=8.0
GUMO   Guam              61.40 322  LR     LR       13 57 38.2
       comp=Z,6.1nm,20.8s,baz=180,slow=31
ARA0   ARCESS Array S   146.57 343 ePKPbc  PKiKP    13 45 17.4 -1.6
ARCES  ARCESS Array B   146.57 343  PKPbc  PKiKP    13 45 17.4 -1.6
       3.1nm,0.7s,baz=15,slow=5.0,SNR=7.2
FIA0   FINESS Array S   152.21 332 ePKPbc  PKiKP    13 45 33.1 +2.3
FINES  FINESS Array B   152.21 332  PKPbc  PKiKP    13 45 33.1 +2.3
       3.1nm,0.9s,baz=336,slow=4.2,SNR=4.5
BR101  Keskin Array S   153.17 282 ePKPbc  PKiKP    13 45 34.8 +1.1
BRTR   Keskin Array B   153.17 282  PKPbc  PKiKP    13 45 34.8 +1.1
       0.7nm,0.9s,baz=132,slow=7.2,SNR=3.6
TORD   Torodi Ar. Bea   153.78 187  PKPab  PKPab    13 45 51.6 +3.5
       0.7nm,0.7s,baz=181,slow=4.2,SNR=3.7
TOA1   Torodi Ar. Sit   153.78 187 ePKPab  PKPab    13 45 51.6 +3.5
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*ISCJB **07** 13:32:08.3±0.5, 16°.82S±0°.04×69°.74W±0°.05, h173^{km}±5^{km},*
mb3.5/4, Error ellipse: s-maj=8.2km s-min=5.6km az=41.0
*IDC **07** 13:32:10.7±1.4, 16°.84S×69°.50W, h178^{km}±11^{km}, mb3.3/4,*
mb1 3.5/7, mb1mx3.2/44, mbtmp3.9/7, Error ellipse:
s-maj=30.0km s-min=17.2km az=104.0
*SCB **07** 13:32:13.7±8.5, 17°.16S×69°.44W, h0^{km}±79^{km}, ML4.1/4,*
Error ellipse: s-maj=12.6km s-min=4.3km az=2.0
ISC 07 13:32:09.3±0.8, **16°.87S**±0°.05×**69°.69W**±0°.07, **h168^{km}**±7^{km},
n31, σ**1^{s}.37**/45, **mb3.6**/4, **5C-1D, Peru-Bolivia border**
region

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Code   Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC        h  m  s    ISC
BS09   Huarina            1.23  57  P      Pn       13 32 39.3 +0.9
BS09                                S      Sn       13 32 59.3 -1.3
BBOJ   La Paz, Jacaqu     1.43  94  P      Pn       13 32 40.2  0.0
PB16   IPOC Station P     1.46 173⇑iP      Pn       13 32 42.5 +2.0
PB16                               i S     Sn       13 33 07.6 +2.9
LPAZ   La Paz             1.60  69  P      Pn       13 32 43.0 +1.0
       9.0nm,0.3s,baz=305,slow=6.4,SNR=171
LPAZ                                S      Sn       13 33 07.0  0.0
       16nm,0.3s,baz=343,slow=22,SNR=13
LPAZ   La Paz             1.60  69 eP      Pn       13 32 42.9 +1.0
LPAZ                               i S     Sn       13 33 06.3 -0.7
LPAZ   La Paz             1.60  69  P      Pn       13 32 43.0 +1.0
LPAZ                                S      Sn       13 33 05.6 -1.4
LPAZ                                AML    AML      13 33 05.7
       1µm,0.5s
BBOE   La Paz, Chanca     1.63  88  P      Pn       13 32 42.9 +0.7
BBOE                                S      Sn       13 33 05.1 -2.4
BBOE                                AML    AML      13 33 07.6
       4µm,0.5s
BBOB   La Paz, Bander     1.66  64  P      Pn       13 32 43.0 +0.6
PB12   IPOC Station P     1.84 199⇑iP      Pn       13 32 43.8 -0.1
PB12                               i S     Sn       13 33 09.3 -1.4
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MNMC	**Minye Minye**	**2.25**	**178**	⇑*i*P	**Pn**	**13 32 49.8**	**+1.2**
MNMC				*i* S	**Sn**	**13 33 19.6**	**+0.4**
MNMC	**Minye Minye**	**2.25**	**178**	P	**Pn**	**13 32 48.5**	**-0.2**
BS05	**Cuyupaya**	**2.63**	**93**	P	**Pn**	**13 32 54.5**	**+1.2**
BS05				S	**Sn**	**13 33 27.4**	**0.0**
PSGC	**Pisagua**	**2.74**	**189**	⇑*i*P	**Pn**	**13 32 54.1**	**-0.3**
PSGC	**Pisagua**	**2.74**	**189**	P	**Pn**	**13 32 54.6**	**+0.2**
PSGC				S	**Sn**	**13 33 27.5**	**-1.9**
PB11	**IPOC Station P**	**2.87**	**179**	⇑*i*P	**Pn**	**13 32 56.5**	**+0.5**
PB11				*i* S	**Sn**	**13 33 31.9**	**-0.5**
PB11	**IPOC Station P**	**2.87**	**179**	P	**Pn**	**13 32 56.5**	**+0.5**
PB11				S	**Sn**	**13 33 31.1**	**-1.3**
PB11				AML	AML	13 33 32.0	
	1µm,0.3s						
PB08	**IPOC Station P**	**3.29**	**171**	⇓*i*P	**Pn**	**13 33 02.8**	**+1.4**
PB08	**IPOC Station P**	**3.29**	**171**	P	**Pn**	**13 33 02.6**	**+1.2**
BS10	**CO. Tuti**	**3.70**	**100**	P	**Pn**	**13 33 07.9**	**+1.1**
BS10				S	**Sn**	**13 33 51.9**	**+0.4**
PB01	**IPOC Station P**	**4.15**	**177**	P	**Pn**	**13 33 12.1**	**0.0**
BB01	**Montecillos**	**4.39**	**106**	P	**Pn**	**13 33 17.1**	**+1.8**
BB01				S	**Sn**	**13 34 05.7**	**-1.2**
BB01				AML	AML	13 34 05.9	
	252nm,0.6s						
LVC	**Limon Verde**	**5.75**	**173**	P	**Pn**	**13 33 34.2**	**+0.9**
	2.5nm,0.3s,baz=24,slow=7.0,SNR=44						
LVC				S	**Sn**	**13 34 34.7**	**-4.5**
	6.6nm,0.3s,baz=183,slow=20,SNR=18						
SIV	**San Ignacio**	**8.31**	**85**	P	**Pn**	**13 34 04.7**	**-2.2**
	3.0nm,0.3s,baz=268,slow=10,SNR=35						
NNA	**Nana**	**8.46**	**304**	S	Sn	13 35 39.5	-4.0
	1.4nm,0.3s,baz=198,slow=20,SNR=1.8						
PTGA	**Pitinga**	**18.68**	**32**	P	**P**	**13 36 13.7**	**-1.2**
	0.4nm,0.3s,baz=319,slow=20,SNR=1.6						
PLCA	**Paso Flores**	**23.79**	**182**	P	**P**	**13 37 07.7**	**+1.0**
	3.3nm,0.9s,baz=20,slow=11,SNR=6.6						
TXAR	**Lajitas Array**	**56.45**	**324**	P	**P**	**13 41 33.6**	**-0.2**
	0.2nm,0.7s,baz=149,slow=7.3,SNR=2.3						
TORD	**Torodi Ar. Bea**	**76.55**	**72**	P	**P**	**13 43 40.8**	**-0.8**
	0.9nm,0.6s,baz=252,slow=4.8,SNR=6.7						
YKA	**Yellowknife Ar**	**86.60**	**341**	P	**P**	**13 44 33.5**	**+0.3**
	0.5nm,0.6s,baz=131,slow=5.1,SNR=5.5						
ASAR	**Alice Springs**	**133.58**	**210**	PKP	**PKPdf**	**13 51 07.0**	**+0.3**
	0.3nm,0.9s,baz=104,slow=1.9,SNR=2.3						
SONM	**Songino Array**	**148.96**	**5**	PKPbc	**PKPbc**	**13 51 38.8**	**+1.3**
	0.7nm,0.5s,baz=333,slow=2.0,SNR=4.4						

MEX 07 13:47:25.0±1.0**, 17°.00N×94°.01W, h177km**±10km**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.84**	**277**	*i* P	Pn	13 47 50.0	-1.3
CMIG				*e*S	Sn	13 48 08.9	-2.7
TGIG		**0.88**	**104**	*i* P	Pn	13 47 50.3	-1.3
TGIG				*e*S	Sn	13 48 09.9	-2.1
HUIG	**Huatulco**	**2.36**	**239**	*e*P	Pn	13 48 03.7	-2.1
HUIG				*e*S	Sn	13 48 36.1	-1.5
VHO	**Vista Hermosa**	**2.61**	**272**	*e*P	Pn	13 48 08.4	-0.6
VHO				*e*S	Sn	13 48 41.4	-1.8

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*ISCJB **07** 13:50:57.4±0.3, 13°.03S±0°.04×167°.05E±0°.09, h200km, mb4.3/33, Error ellipse: s-maj=12.2km s-min=6.0km az=5.4*

*NEIC **07** 13:50:59.4±0.4, 13°.03S×167°.09E, h206km±4km, mb4.4/21, Error ellipse: s-maj=8.4km s-min=4.8km az=107.0*

*IDC **07** 13:51:02.6±3.0, 13°.12S×167°.03E, h232km±27km, mb3.9/18, mb1 4.1/19, mb1mx4.0/27, mbtmp4.5/19, Error ellipse: s-maj=17.7km s-min=11.7km az=75.0*

ISC 07 13:50:58.8±0.5**, 13°.06S**±0°.06×**167°.1E**±0°.1**, h200km, n78, σ0^{s}.92**/84**, mb4.4**/34**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**8.42**	**174**	*e*Pn	**Pn**	**13 52 58.0**	**+0.4**
DZM	**Mont Dzumac**	**8.98**	**184**	P	**Pn**	**13 53 09.1**	**+4.1**
	0.8nm,0.3s,baz=317,slow=13,SNR=17						
DZM				S	**Sn**	**13 54 44.5**	**-1.3**
	baz=127,slow=20,SNR=1.9						
DZM	**Mont Dzumac**	**8.98**	**184**	*e*Pn	**Pn**	**13 53 08.3**	**+3.4**
DZM				S	**Sn**	**13 54 44.5**	**-1.3**
EIDS	**Eidsvold**	**19.42**	**229**	*e*P	**Pn**	**13 55 11.3**	**-2.3**
	33nm,1.6s						
LHI	**Lord Howe Isla**	**19.80**	**201**	*e*P	**P**	**13 55 13.7**	**-0.4**
	124nm,1.5s						
CTA	**Charters Tower**	**21.13**	**248**	P	**P**	**13 55 29.9**	**+1.5**
	13nm,0.9s,baz=97,slow=7.5,SNR=5.2						
ARMA	**Armidale**	**22.41**	**217**	*e*P	**P**	**13 55 41.6**	**+0.5**
	23nm,1.3s						
URZ	**Urewera**	**26.64**	**162**	P	**P**	**13 56 19.1**	**+0.2**
	2.7nm,0.4s,baz=250,slow=4.0,SNR=14						
STKA	**Stephens Creek**	**29.96**	**227**	P	**P**	**13 56 49.0**	**+0.5**
	6.8nm,0.4s,baz=52,slow=9.8,SNR=30						
STKA				PcP	**PcP**	**13 59 46.0**	**-0.1**
	2.7nm,0.5s,baz=45,slow=3.4,SNR=8.1						
STKA	**Stephens Creek**	**29.96**	**227**	*e*P	**P**	**13 56 48.7**	**+0.1**
	2.5nm,0.9s						
STKA				*e*PcP	**PcP**	**13 59 46.0**	**-0.1**
RPZ	**Rata Peaks**	**30.74**	**174**	P	**P**	**13 56 55.7**	**+0.5**
	11nm,0.6s,baz=311,slow=3.7,SNR=3.5						
WR1	**Warramunga Arr**	**32.09**	**253**	*e*P	**P**	**13 57 06.6**	**-0.8**
WRA	**Warramunga Arr**	**32.09**	**253**	P	**P**	**13 57 06.6**	**-0.8**
	1.7nm,0.3s,baz=79,slow=9.7,SNR=15						
AS31	**Alice Springs**	**33.12**	**247**	*e*P	**P**	**13 57 15.2**	**-1.2**
	2.7nm,0.6s						
AS31				*e*PcP	**PcP**	**13 59 54.2**	**-0.6**
ASAR	**Alice Springs**	**33.13**	**247**	P	**P**	**13 57 15.5**	**-0.9**
	6.8nm,0.6s,baz=74,slow=9.5,SNR=166						
ASAR				PcP	**PcP**	**13 59 54.2**	**-0.6**
	1.0nm,0.5s,baz=74,slow=2.6,SNR=8.0						
FORT	**Forrest**	**40.01**	**237**	*e*P	**P**	**13 58 13.9**	**-0.6**
	45nm,0.6s						
MJAR	**Matsushiro Arr**	**56.35**	**332**	P	**P**	**14 00 18.6**	**-0.6**
	3.4nm,0.8s,baz=167,slow=8.2,SNR=12						
MAJO	**Matsushiro**	**56.35**	**332**	*e*P	**P**	**14 00 18.8**	**-0.4**
	7.4nm,1.0s						
MJB9	**Matsu-Tunnel**	**56.35**	**332**	*e*P	**P**	**14 00 18.8**	**-0.5**
	7.5nm,1.0s						
KSRS	**Korea Array**	**62.27**	**325**	P	**P**	**14 01 00.0**	**+0.4**
	1.9nm,0.8s,baz=142,slow=7.0,SNR=7.1						
KS15	**Wonju Array Si**	**62.28**	**325**	*e*P	**P**	**14 00 59.6**	**-0.1**
	63nm,1.9s						
KSAR	**Wonju Array Be**	**62.28**	**325**	P	**P**	**14 01 00.0**	**+0.3**
VNDA	**Vanda**	**64.52**	**181**	P	**P**	**14 01 13.7**	**-0.2**
	1.1nm,0.5s,baz=359,slow=8.3,SNR=9.9						
VNDA	**Vanda**	**64.52**	**181**	*e*P	**P**	**14 01 13.6**	**-0.2**
	7.4nm,1.5s						
SBA	**Scott Base**	**64.80**	**180**	*e*P	**P**	**14 01 16.6**	**+1.0**
	5.5nm,0.9s						
USRK	**Ussuriysk Ar.**	**65.32**	**333**	P	**P**	**14 01 21.3**	**+1.9**
	3.4nm,0.8s,baz=144,slow=8.0,SNR=7.3						
PETK	**Petropavlovsk-**	**66.39**	**354**	P	**P**	**14 01 27.4**	**+1.2**
	4.6nm,0.7s,baz=145,slow=8.8,SNR=13						
PEA1	**Petropavlovsk-**	**66.39**	**354**	*e*P	**P**	**14 01 27.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**74.11**	**294**	P	**P**	**14 02 14.8**	**+1.1**
	1.5nm,0.6s,baz=127,slow=5.0,SNR=9.8						
QSPA	**South Pole Qui**	**76.96**	**180**	*e*P	**P**	**14 02 29.1**	**-0.1**
	14nm,0.9s						
YAK	**Yakutsk**	**80.39**	**343**	*e*P	**P**	**14 02 47.4**	**-0.1**
	15nm,0.8s						
SONA0	**Songino Array**	**81.05**	**324**	*e*P	**P**	**14 02 52.6**	**+1.0**
SONM	**Songino Array**	**81.05**	**324**	P	**P**	**14 02 52.6**	**+1.0**
	2.1nm,0.8s,baz=140,slow=7.5,SNR=3.3						
CAST	**Castle Rocks**	**82.46**	**17**	*e*P	**P**	**14 02 58.0**	**-0.5**
	4.9nm,0.8s						
MAW	**Mawson**	**83.35**	**202**	P	**P**	**14 03 03.0**	**-0.1**
	4.6nm,0.9s,baz=90,slow=3.7,SNR=6.9						
MAW	**Mawson**	**83.35**	**202**	*e*P	**P**	**14 03 02.9**	**-0.2**
	2.1nm,1.2s						
WRH	**Wood River Hil**	**84.43**	**18**	*e*P	**P**	**14 03 08.0**	**-0.5**
	9.7nm,1.1s						
CCB	**Clear Creek Bu**	**84.64**	**18**	*e*P	**P**	**14 03 08.9**	**-0.6**
	4.1nm,0.9s						
HDA	**Harding Lake**	**84.73**	**18**	*e*P	**P**	**14 03 09.9**	**-0.1**
	18nm,1.2s						
COLA	**College**	**84.79**	**18**	*e*P	**P**	**14 03 09.6**	**-0.6**
	6.3nm,0.8s						
ILAR	**Eielson Array**	**85.00**	**18**	P	**P**	**14 03 10.8**	**-0.6**
	2.8nm,0.5s,baz=236,slow=5.1,SNR=55						
ILAR				pP	**pP**	**14 04 00.1**	**+0.2**
	1.0nm,0.7s,baz=238,slow=7.0,SNR=3.9						
ILB	**Eielson Array**	**85.00**	**18**	*e*P	**P**	**14 03 10.6**	**-0.8**
	3.9nm,0.9s						
NV01	**Mina Array Sit**	**86.33**	**49**	*e*pP	pP	14 04 08.5	+1.5
NVAR	**Mina Array Bea**	**86.33**	**49**	pP	pP	14 04 08.5	+1.5
	0.9nm,0.9s,baz=211,slow=6.9,SNR=3.9						
EGAK	**Eagle**	**86.82**	**20**	*e*P	**P**	**14 03 20.6**	**+0.3**
	10nm,1.6s						
MK32	**Makanchi Array**	**95.87**	**317**	*e*P	**P**	**14 04 01.6**	**-1.1**
MKAR	**Makanchi Array**	**95.87**	**317**	P	**P**	**14 04 01.6**	**-1.1**
	1.8nm,0.7s,baz=91,slow=7.2,SNR=6.2						
ZALV	**Zalesovo Beam**	**95.94**	**324**	P	**P**	**14 04 02.5**	**-0.3**
	1.5nm,0.7s,baz=119,slow=7.4,SNR=3.9						
ZAA1	**Zalesovo Array**	**95.94**	**324**	*e*P	**P**	**14 04 02.5**	**-0.3**
YKA	**Yellowknife Ar**	**96.16**	**27**	P	**P**	**14 04 02.5**	**-1.1**
	0.5nm,0.7s,baz=255,slow=4.4,SNR=4.4						
YKB5	**Yellowknife Ar**	**96.16**	**27**	*e*P	**P**	**14 04 02.5**	**-1.1**
ARA0	**ARCESS Array S**	**118.60**	**346**	*e*PKPdf	**PKPdf**	**14 09 21.8**	**-0.5**
ARCES	**ARCESS Array B**	**118.60**	**346**	PKP	**PKPdf**	**14 09 21.8**	**-0.5**
	4.8nm,0.3s,baz=68,slow=2.1,SNR=76						
FIA0	**FINESS Array S**	**124.11**	**339**	*e*PKPdf	**PKPdf**	**14 09 32.9**	**-0.2**
FINES	**FINESS Array B**	**124.11**	**339**	PKP	**PKPdf**	**14 09 32.9**	**-0.2**
	3.2nm,0.6s,baz=89,slow=2.4,SNR=30						
BOSA	**Boshof**	**124.51**	**221**	PKP	**PKPdf**	**14 09 34.6**	**-0.6**
	3.4nm,0.9s,baz=144,slow=0.7,SNR=3.9						
NB2	**NORSAR Subarra**	**128.97**	**345**	PKPdf	**PKPdf**	**14 09 42.0**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=31,slow=1.9						
NB200	**NORSAR Array S**	**128.97**	**345**	*e*PKPdf	**PKPdf**	**14 09 42.5**	**0.0**
NOA	**NORSAR Array B**	**128.97**	**345**	PKP	**PKPdf**	**14 09 42.5**	**0.0**
	comp=Z,1.9nm,0.6s,baz=30,slow=2.0,SNR=8.3						
AKASG	**Malin Array Be**	**129.25**	**327**	PKP	**PKPdf**	**14 09 42.8**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=46,slow=2.7,SNR=4.8						
BR101	**Keskin Array S**	**131.27**	**312**	*e*PKPdf	**PKPdf**	**14 09 47.6**	**0.0**
BRTR	**Keskin Array B**	**131.27**	**312**	PKP	**PKPdf**	**14 09 47.6**	**0.0**
	comp=Z,0.6nm,0.5s,baz=138,slow=3.1,SNR=3.6						
CONA	**Conrad Observa**	**137.78**	**331**	*e*PKiKP	**PKiKP**	**14 10 01.2**	**-0.3**
	comp=Z,1.1nm,0.4s						
GEC2	**GERESS Array S**	**138.08**	**334**	*e*PKPdf	**PKPdf**	**14 10 00.2**	**+0.2**
GERES	**GERESS Array B**	**138.08**	**334**	PKP	**PKPdf**	**14 10 00.6**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=66,slow=3.3,SNR=5.2						
WATA	**Walderalm**	**140.15**	**334**	*e*PKiKP	**PKiKP**	**14 10 05.4**	**-1.1**
	comp=Z,2.2nm,0.5s						
MOTA	**Moosalm**	**140.34**	**334**	*e*PKiKP	**PKiKP**	**14 10 06.6**	**-0.3**
	comp=Z,1.8nm,0.4s						
SQTA	**Sankt Quirin**	**140.40**	**334**	*i* PKiKP	**PKiKP**	**14 10 06.4**	**-0.5**
	comp=Z,1.7nm,0.4s						
BNI	**Bardonecchia**	**144.01**	**336**	*e*PKPdf	PKPbc	14 10 10.1	+0.9
SSB	**Saint Sauveur**	**144.62**	**339**	*e*PKPbc	**PKPab**	**14 10 11.0**	**+0.1**
KEST	**Kesra**	**149.80**	**322**	PKPbc	**PKPbc**	**14 10 26.0**	**+0.3**
	comp=Z,8.0nm,0.6s,baz=234,slow=4.3,SNR=11						
KEST	**Kesra**	**149.80**	**322**	*e*PKPbc	**PKPbc**	**14 10 25.2**	**-0.4**
ESDC	**Sonseca Array**	**152.34**	**345**	PKPbc	**PKPbc**	**14 10 31.6**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=16,slow=3.5,SNR=17						
ESLA	**Sonseca Array**	**152.34**	**345**	*e*PKPbc	**PKPbc**	**14 10 31.4**	**0.0**
MTE	**Manteigas**	**152.36**	**351**	*e*PKPbc	**PKPbc**	**14 10 31.4**	**0.0**
PAB	**San Pablo**	**152.55**	**346**	*e*PKPbc	**PKPbc**	**14 10 32.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**165.76**	**272**	PKP	**PKPdf**	**14 10 40.0**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=354,slow=3.0,SNR=6.9						
TORD				PKPab	**PKPab**	**14 11 40.8**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=82,slow=5.3,SNR=5.2						
TOA1	**Torodi Ar. Sit**	**165.76**	**272**	*e*PKPdf	**PKPdf**	**14 10 40.0**	**-0.6**
TOA1				*e*PKPab	**PKPab**	**14 11 40.8**	**-0.4**

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*IDC **07** 13:52:55.6±0.5, 43°.13N×87°.25E, h0km, mb4.1/22, mb1 4.2/27, mb1mx4.1/49, mbtmp4.1/27, ML3.8/5, MS3.1/8, Ms1 3.1/8, ms1mx2.9/33, Error ellipse: s-maj=15.3km s-min=9.6km az=30.0*

*SOME **07** 13:52:56.5, 40°.57N×84°.73E, h0km*

*ISCJB **07** 13:52:56.4±0.2, 43°.34N±0°.03×87°.22E±0°.03, h10km, mb4.3/38, MS3.1/6, Error ellipse: s-maj=4.2km s-min=2.7km az=9.1*

*BJI **07** 13:52:58.8±0.0, 43°.06N×87°.24E, h6km, mb4.4/25, mB4.4/19, ML4.3/12, Ms3.9/13, Ms7 3.7/13*

*NNC **07** 13:52:59.8±1.7, 43°.39N×87°.03E, h0km, mb4.7, mpv4.6, Error ellipse: s-maj=15.6km s-min=9.0km az=146.0*

*MOS **07** 13:52:59.5±1.1, 43°.19N×87°.22E, h37km, mb4.5/7, Error ellipse: s-maj=8.1km s-min=5.8km az=44.0*

*NEIC **07** 13:53:01.5±0.5, 43°.20N×87°.21E, h40km±4km, mb4.4/14, Error ellipse: s-maj=5.3km s-min=4.0km az=186.0*

ISC 07 13:52:58.4±0.3**, 43°.18N**±0°.03×**87°.28E**±0°.02**, h10km, n185, σ2^{s}.29**/200**, mb4.3**/38**, MS3.0**/6**, 18C-13D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**0.71**	**25**	Pg	**Pb**	**13 53 15.3**	**+2.4**
WMQ				Sg	**Sg**	**13 53 26.1**	**+4.7**
WMQ				smax	smax		
	comp=N,4µm,0.7s						
WMQ				smax	smax		
	comp=E,4µm,0.7s						
ZSN	**Zaisan**	**4.60**	**339**	Pg	**Pn**	**13 54 10.4**	**+2.4**
	16nm,0.3s						
ZSN				Lg	Lg	13 55 04.4	
	85nm,0.5s						
MK31	**Makanchi Array**	**5.06**	**317**	*e*Pn	**Pn**	**13 54 15.1**	**+0.8**
MK31	**Makanchi Array**	**5.06**	**317**	Pn	**Pn**	**13 54 14.9**	**+0.6**
	5.3nm,0.3s,baz=133,slow=15,SNR=356						
MK31				⇑Pg	Pb	13 54 30.5	+3.4
	29nm,0.6s,baz=130,slow=15,SNR=4.2						
MK31				⇑Lg	Lg	13 55 32.2	
	80nm,0.5s,baz=133,slow=30,SNR=3.9						
MK31	**Makanchi Array**	**5.06**	**317**	P	**Pn**	**13 54 14.9**	**+0.6**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MK32	**Makanchi Array**	**5.06**	**317**	*e*Pn	**Pn**	**13 54 15.2**	**+0.8**
MK32				*e*Sn	**Sn**	**13 55 14.1**	**+1.3**
MK32				*e*Lg	Lg	13 55 34.0	
MKAR	**Makanchi Array**	**5.06**	**317**	Pn	**Pn**	**13 54 15.2**	**+0.8**
	comp=Z,6.3nm,0.3s,baz=128,slow=13,SNR=106						
MKAR				Sn	**Sn**	**13 55 14.1**	**+1.3**
	comp=Z,23nm,0.3s,baz=140,slow=23,SNR=5.7						
MKAR				Lg	Lg	13 55 34.0	
	comp=Z,34nm,0.3s,baz=128,slow=27,SNR=6.8						
MKAR				LR	LR	13 56 32.6	
	comp=Z,194nm,22.0s,baz=63,slow=43						
MKAR	**Makanchi Array**	**5.06**	**317**	*i* P	**Pn**	**13 54 15.1**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
KTMS	**Ketmen**	**5.06**	**275**	Pg	**Pb**	**13 54 26.3**	**-0.8**
	comp=Z,46nm,0.3s						
KTMS				Lg	Lg	13 55 32.0	
	comp=Z,246nm,0.5s						
MAKZ	**Makanchi**	**5.23**	**316**	*e*Pn	**Pn**	**13 54 17.4**	**+0.8**
MAKZ	**Makanchi**	**5.23**	**316**	*e*P	**Pn**	**13 54 17.4**	**+0.8**
DJR	**Jarkent**	**5.55**	**285**	Pg	**Pb**	**13 54 36.2**	**+0.9**
	comp=Z,33nm,0.3s						
DJR				Lg	Lg	13 55 49.3	
	comp=Z,158nm,0.5s						
PDGK	**Podgornoye**	**5.69**	**274**	Pg	**Pb**	**13 54 39.1**	**+1.2**
	comp=Z,20nm,0.4s						
PDGK				Lg	Lg	13 55 53.7	
	comp=Z,90nm,0.4s						
PDGK	**Podgornoye**	**5.69**	**274**	⇓Pn	**Pn**	**13 54 24.3**	**+1.2**
	comp=Z,22nm,0.4s						
PDGK				⇑Sn	**Sn**	**13 55 29.9**	**+1.3**
	comp=Z,105nm,0.6s						
PDGK				⇑Lg	Lg	13 55 53.9	
	comp=Z,235nm,0.6s						
PDGK	**Podgornoye**	**5.69**	**274**	*i* P	**Pn**	**13 54 24.3**	**+1.2**
PDGK				pmax	pmax		
	comp=Z,22nm,0.3s						
UZB	**Uzynbulak**	**6.04**	**273**	Pg	**Pb**	**13 54 45.7**	**+1.9**
	comp=Z,16nm,0.3s						
UZB				Lg	Lg	13 56 05.3	
	comp=Z,130nm,0.8s						
UZB	**Uzynbulak**	**6.04**	**273**	*e*P	**Pn**	**13 54 29.6**	**+1.6**
	comp=Z,53nm,0.4s						
UZB				*e*S	**Sn**	**13 55 36.2**	**-1.0**
	comp=Z,60nm,0.3s						
KAPS	**Kapalarasan**	**6.07**	**293**	Pg	**Pb**	**13 54 44.9**	**+0.7**
	comp=Z,14nm,0.3s						
KAPS				Lg	Lg	13 56 04.0	
	comp=Z,100nm,0.4s						
KPKS	**Kokpek**	**6.28**	**276**	*e*P	**Pn**	**13 54 34.2**	**+3.1**
	comp=Z,26nm,0.1s						
KPKS				*e*S	**Sn**	**13 55 44.1**	**+1.2**
	comp=Z,119nm,0.3s						
ZHN	**Zhinishke**	**6.47**	**273**	Pg	Pb	13 54 54.7	+3.6
	comp=Z,21nm,0.2s						
ZHN				Lg	Lg	13 56 20.9	
	comp=Z,151nm,0.3s						
ZHN	**Zhinishke**	**6.47**	**273**	*e*P	**Pn**	**13 54 35.9**	**+2.1**
	comp=Z,18nm,0.1s						
ZHN				*e*S	**Sn**	**13 55 47.0**	**-0.7**
	comp=Z,64nm,0.2s						
SATY	**Saty**	**6.50**	**272**	Pg	**Pb**	**13 54 53.2**	**+1.7**
	comp=Z,40nm,0.2s						
SATY				Lg	Lg	13 56 18.6	
	comp=Z,288nm,0.8s						
SATY	**Saty**	**6.50**	**272**	*e*P	**Pn**	**13 54 35.6**	**+1.4**
	comp=Z,37nm,0.2s						
SATY				*e*S	**Sn**	**13 55 46.6**	**-1.8**
	comp=Z,108nm,0.1s						
MNBS	**Baschi**	**6.51**	**281**	Pg	**Pb**	**13 54 54.0**	**+2.2**
	comp=Z,14nm,0.2s						
MNBS				Lg	Lg	13 56 19.5	
	comp=Z,104nm,0.4s						
DGZ	**Jazzator, Alta**	**6.52**	**1**	*d* *i*P	**Pn**	**13 54 38.0**	**+3.4**
PRZ	**Przheval'sk**	**6.57**	**267**	*e*Pn	**Pn**	**13 54 37.2**	**+2.0**
PRZ	**Przheval'sk**	**6.57**	**267**	*e*P	**Pn**	**13 54 37.2**	**+2.0**
TDK	**Taldyqorghan**	**6.64**	**289**	Pg	**Pb**	**13 54 55.2**	**+1.2**
	comp=Z,97nm,0.3s						
TDK				Lg	Lg	13 56 21.7	
	comp=Z,402nm,0.7s						
KURS	**Kuram**	**6.65**	**276**	Pg	Pb	13 54 57.5	+3.3
	comp=Z,27nm,0.6s						
KURS				Lg	Lg	13 56 25.6	
	comp=Z,80nm,0.9s						
KURS	**Kuram**	**6.65**	**276**	*e*P	Pn	13 54 42.6	+6.3
	comp=Z,18nm,0.3s						
KURS				*e*S	**Sn**	**13 55 58.8**	**+6.7**
	comp=Z,40nm,0.5s						
ARXS	**Arharly**	**6.93**	**282**	Pg	**Pb**	**13 55 02.1**	**+3.1**
	comp=Z,12nm,0.3s						
ARXS				Lg	Lg	13 56 33.4	
	comp=Z,124nm,0.5s						
KOTS	**Kotyrbulak**	**7.43**	**274**	Pg	Pb	13 55 12.4	+4.9
	comp=Z,24nm,0.4s						
KOTS				Lg	Lg	13 56 51.4	
	comp=Z,314nm,0.7s						
CHKK	**Chushkaly**	**7.51**	**279**	Pg	Pb	13 55 13.6	+4.8
	comp=Z,7.2nm,0.3s						
CHKK				Lg	Lg	13 56 53.2	
	comp=Z,56nm,0.6s						
TNSS	**Tian-Shan**	**7.56**	**272**	Pg	Pb	13 55 16.2	+6.3
	comp=Z,23nm,0.5s						
TNSS				Lg	Lg	13 56 57.5	
	comp=Z,74nm,0.8s						
TNSS	**Tian-Shan**	**7.56**	**272**	*e*P	Pn	13 54 53.2	+4.1
	comp=Z,27nm,0.3s						
TNSS				*e*S	**Sn**	**13 56 17.2**	**+2.1**
	comp=Z,62nm,0.6s						
AAA	**Alma-Ata**	**7.58**	**274**	Pg	Pb	13 55 15.5	+5.6
	comp=Z,15nm,0.1s						
AAA				Lg	Lg	13 56 57.0	
	comp=Z,63nm,0.5s						
AAA	**Alma-Ata**	**7.58**	**274**	*e*P	**Pn**	**13 54 52.0**	**+3.1**
AAA				*e*S	**Sn**	**13 56 13.3**	**-1.6**
AAA				pmax	pmax		
	comp=Z,21nm,0.2s						
AAA				smax	smax		
	comp=N,32nm,0.1s						
KTBS	**Karatobe**	**7.73**	**278**	Pg	**Pb**	**13 55 14.5**	**+1.9**
	comp=N,11nm,0.5s						
KTBS				Lg	Lg	13 56 54.8	
	comp=N,140nm,0.5s						
KUU	**Kurty**	**7.98**	**279**	Pg	Pb	13 55 21.7	+4.8
	comp=N,4.4nm,0.1s						
KUU				Lg	Lg	13 57 07.2	
	comp=N,55nm,0.4s						
ULHL	**Ulahol**	**8.18**	**267**	P	**Pn**	**13 54 57.3**	**-0.1**
	SNR=14						
KST	**Kastek**	**8.28**	**273**	Pg	Pb	13 55 29.1	+7.1
	comp=N,17nm,0.5s						
KST				Lg	Lg	13 57 19.9	
	comp=N,44nm,0.7s						
BOOM	**Boomskoye usch**	**8.36**	**269**	*e*Pn	**Pn**	**13 54 59.4**	**-0.4**
BOOM	**Boomskoye usch**	**8.36**	**269**	*e*P	**Pn**	**13 54 59.4**	**-0.4**
TKM2	**Tokmak 2**	**8.56**	**272**	⇑Pn	**Pn**	**13 55 03.6**	**+0.9**
	comp=N,9.0nm,0.6s						
TKM2				⇓Sn	**Sn**	**13 56 42.0**	**+2.6**
	comp=N,28nm,0.7s						
TKM2	**Tokmak 2**	**8.56**	**272**	*i* P	**Pn**	**13 55 03.5**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TKM2	**Tokmak 2**	**8.56**	**272**	P	**Pn**	**13 55 04.1**	**+1.5**
	SNR=21						
KZA	**Kyzart**	**8.94**	**267**	P	**Pn**	**13 55 08.1**	**+0.1**
	SNR=14						
KBK	**Karagaybulak**	**9.07**	**271**	P	**Pn**	**13 55 09.9**	**+0.4**
	SNR=7.7						
KSH	**Kashi**	**9.26**	**251**	P	Pn	13 55 18.4	+6.4
KSH				pP		13 55 25.7	
KSH				sP		13 55 30.2	
KSH				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,78nm,5.0s						
KSH				smax	smax		
	comp=Z,87nm,0.7s						
KSH				smax	smax		
	comp=Z,88nm,0.9s						
KSH				LR	LR		
	comp=Z,160nm,5.3s						
KSH				LR	LR		
	comp=Z,220nm,3.2s						
AAK	**Ala-Archa**	**9.40**	**271**	Pn	**Pn**	**13 55 13.0**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=120,slow=10,SNR=6.6						
AAK				Sn	**Sn**	**13 56 58.4**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=197,slow=20,SNR=2.3						
AAK				Lg	Lg	13 57 51.8	
	comp=Z,0.8nm,0.3s,baz=311,slow=14,SNR=3.5						
AAK	**Ala-Archa**	**9.40**	**271**	*e*Pn	**Pn**	**13 55 12.7**	**-1.4**
AAK				Sn	**Sn**	**13 56 58.4**	**-1.5**
AAK				Lg	Lg	13 57 51.8	
AAK	**Ala-Archa**	**9.40**	**271**	⇑Pn	**Pn**	**13 55 12.9**	**-1.2**
	comp=Z,5.4nm,0.6s						
AAK				⇑Lg	Lg	13 57 55.9	
	comp=Z,22nm,0.7s						
AAK	**Ala-Archa**	**9.40**	**271**	⇓*e*P	**Pn**	**13 55 14.3**	**+0.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
UCH	**Uchtor**	**9.45**	**269**	P	**Pn**	**13 55 15.1**	**+0.2**
	SNR=17						
KURBB	**Kurchatov Arra**	**9.55**	**324**	Pn	**Pn**	**13 55 14.9**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=131,slow=13,SNR=80						
KURBB				Sn	**Sn**	**13 56 59.3**	**-3.9**
	comp=Z,1.0nm,0.3s,baz=142,slow=21,SNR=4.3						
KURBB				Lg	Lg	13 57 56.1	
	comp=Z,1.1nm,0.3s,baz=109,slow=12,SNR=4.5						
KURBB	**Kurchatov Arra**	**9.55**	**324**	⇑Pn	**Pn**	**13 55 14.9**	**-1.0**
	comp=Z,19nm,0.5s						
KURBB				⇓Sn	**Sn**	**13 57 02.5**	**-0.6**
	comp=Z,15nm,0.5s						
KURK	**Kurchatov**	**9.58**	**325**	*e*Pn	**Pn**	**13 55 14.5**	**-1.8**
KURK	**Kurchatov**	**9.58**	**325**	⇑Pn	**Pn**	**13 55 15.0**	**-1.3**
	comp=Z,6.5nm,0.5s						
KURK				⇓Sn	**Sn**	**13 57 00.0**	**-3.9**
	comp=Z,16nm,0.5s						
KURK	**Kurchatov**	**9.58**	**325**	*de*P	**Pn**	**13 55 15.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GTA	**Gaotai**	**10.15**	**108**	*e*P	Pn	13 55 16.7	-7.6
GTA				pP		13 55 21.0	
GTA				sP		13 55 24.4	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,65nm,6.2s						
GTA				smax	smax		
	comp=N,77nm,0.9s						
GTA				smax	smax		
	comp=E,60nm,0.9s						
GTA				LR	LR		
	comp=N,120nm,8.9s						
GTA				LR	LR		
	comp=E,160nm,10.6s						
GTA				LR	LR		
	comp=Z,200nm,11.3s						
ZAA0	**Zalesovo Array**	**10.90**	**352**	*e*Pn	**Pn**	**13 55 33.7**	**-0.7**
ZAA0	**Zalesovo Array**	**10.90**	**352**	⇑Pn	**Pn**	**13 55 32.4**	**-2.0**
	comp=Z,1.0nm,0.8s						
ZAA0				⇓Sn	**Sn**	**13 57 31.5**	**-4.7**
	comp=Z,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**10.90**	**352**	Pn	**Pn**	**13 55 34.0**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=174,slow=14,SNR=17						
ZALV				Sn	Sn	13 57 28.9	-7.3
	comp=Z,5.4nm,0.3s,baz=165,slow=27,SNR=12						
ZALV				Lg	Lg	13 58 41.0	
	baz=180,slow=25,SNR=2.0						
ZALV				LR	LR	14 00 26.4	
	comp=Z,115nm,18.7s,baz=70,slow=41						
ZALV	**Zalesovo Beam**	**10.90**	**352**	P	**Pn**	**13 55 34.0**	**-0.3**

ZAA1	Zalesovo Array	10.90	352	ePn	Pn	13 55 34.0	-0.4
ZAA1				eSn	Sn	13 57 28.9	-7.4
ZAA1				eLg	Lg	13 58 41.0	
OTUK	Ortayu	11.61	301	⇑Pn	Pn	13 55 41.2	-2.9
	comp=Z,2.9nm,0.5s						
OTUK				⇑Sn	Sn	13 57 47.7	-5.9
	comp=Z,5.4nm,0.6s						
OTUK	Ortayu	11.61	301	P	Pn	13 55 41.2	-2.9
OTUK				S	Sn	13 57 47.7	-5.9
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
OTUK				smax	smax		
	comp=N,5.0nm,0.6s						
KK31	Karatay Array	12.25	275	ePn	Pn	13 55 52.1	-0.8
KK31	Karatay Array	12.25	275	⇓Pn	Pn	13 55 48.4	-4.6
	comp=N,2.6nm,0.8s,baz=70,slow=12,SNR=16						
KK31				⇓Lg	Lg	13 59 27.2	
	comp=N,6.6nm,0.7s,baz=76,slow=28,SNR=3.5						
KK31	Karatay Array	12.25	275	eP	Pn	13 55 52.1	-0.8
KKAR	Karatay Array	12.25	275	ePn	Pn	13 55 52.1	-0.9
KKAR	Karatay Array	12.25	275	eP	Pn	13 55 52.1	-0.9
BTK	Batken	12.71	261	ePn	Pn	13 55 58.0	-1.2
BTK	Batken	12.71	261	eP	Pn	13 55 58.1	-1.2
GAR	Garm	13.46	258	ePn	Pn	13 56 10.2	+0.7
GAR	Garm	13.46	258	eP	Pn	13 56 10.2	+0.7
TLY	Talaya	13.94	47	eP	P	13 56 25.8	+1.7
TLY	Talaya	13.94	47	eP	P	13 56 26.2	+2.1
TLY				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,290nm,8.0s						
SONA0	Songino Array	14.18	64	ePn	Pn	13 56 20.1	+0.7
SONM	Songino Array	14.18	64	Pn	Pn	13 56 20.1	+0.7
	comp=Z,0.3nm,0.3s,baz=258,slow=14,SNR=12						
SONM				Lg	Lg	14 00 23.5	
	comp=Z,0.2nm,0.3s,baz=254,slow=28,SNR=3.5						
SONM				LR	LR	14 02 02.2	
	comp=Z,180nm,20.4s,baz=259,slow=38						
CHCP	Chirah Chowk	14.51	234	P	Pn	13 56 20.0	-3.8
NIL	Nilore	14.52	234	ePn	Pn	13 56 20.2	-3.8
NIL	Nilore	14.52	234	eP	Pn	13 56 20.2	-3.8
IRK	Irkutsk	14.56	46	eP	P	13 56 32.6	+1.6
LZH	Lanzhou	14.58	113	⇑P	P	13 56 31.9	+0.4
LZH				sP	Pn	13 56 40.9	+16
LZH				PP	PnPn	13 56 43.3	+11
LZH				pmax	pmax		
	comp=Z,17nm,1.5s						
LZH				pmax	pmax		
	comp=Z,92nm,4.9s						
LZH				LR	LR		
	comp=Z,360nm,12.9s						
LZH				LR	LR		
	comp=Z,370nm,13.3s						
LZH				LR	LR		
	comp=Z,420nm,15.5s						
ULN	Ulaanbaatar	14.62	64	ePn	Pn	13 56 28.7	+3.3
ULN	Ulaanbaatar	14.62	64	⇑eP	P	13 56 30.1	-1.7
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVA2	Borovoye Array	14.94	317	⇑P	P	13 56 33.9	-1.2
BVA2	Borovoye Array	14.94	317	P	P	13 56 33.9	-1.2
BVAR	Borovoye Array	14.94	317	Pn	Pn	13 56 27.8	-1.8
	comp=Z,0.6nm,0.3s,baz=117,slow=12,SNR=9.3						
BRVK	Borovoye	15.01	317	ePn	Pn	13 56 30.3	-0.2
BRVK	Borovoye	15.01	317	⇓P	P	13 56 35.6	-0.3
	comp=Z,5.6nm,0.5s						
BRVK	Borovoye	15.01	317	⇑eP	Pn	13 56 31.2	+0.7
CEP	Cherat	15.21	237	P	Pn	13 56 29.9	-3.5
CEP				S	Sn	13 59 14.0	-8.0
GUN	Gumba	15.28	185	eP	P	13 56 38.0	-1.4
	comp=Z,35nm,0.5s						
GKN	Gorkha	15.29	189	eP	P	13 56 38.5	-0.9
	comp=Z,31nm,0.4s						
KKN	Kakani	15.44	187	eP	P	13 56 39.9	-1.2
	comp=Z,59nm,0.5s						
PYUN	Piuthan	15.44	194	eP	P	13 56 40.7	-0.4
	comp=Z,21nm,0.7s						
JIRN	Jiri	15.51	184	eP	P	13 56 40.5	-1.5
	comp=Z,31nm,0.6s						
DMN	Daman	15.64	187	eP	P	13 56 41.8	-1.5
	comp=Z,14nm,0.4s						
PKIN	Phulchoki	15.64	186	eP	P	13 56 42.2	-1.2
	comp=Z,28nm,0.5s						
PKI	Pulchoki	15.65	186	eP	P	13 56 42.0	-1.5
	comp=Z,32nm,0.5s						
KOLN	Koldanda	15.66	192	eP	P	13 56 42.3	-1.2
	comp=Z,7.4nm,0.4s						
THW	Thamme Wali	16.02	235	P	Pn	13 56 40.2	-3.6
SHL	Shillong	17.97	166	ePn	Pn	13 57 07.5	-1.0
	comp=Z,24nm,1.2s						
SHL	Shillong	17.97	166	eP	Pn	13 57 07.5	-1.0
SHL				pmax	pmax		
	comp=Z,24nm,1.2s						
HHC	Hu-ho-hao-te	18.18	89	P	P	13 57 12.5	+1.3
HHC				S	Sn	14 00 33.8	-0.1
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,98nm,6.4s						
HHC				LR	LR		
	comp=Z,120nm,13.2s						
HHC				LR	LR		
	comp=Z,180nm,12.8s						
HHC				LR	LR		
	comp=Z,230nm,12.8s						
AB31	Akbulak array	19.80	297	P	P	13 57 27.6	-1.3
	comp=Z,2.4nm,0.6s,baz=97,slow=9.9,SNR=43						
AB31	Akbulak array	19.80	297	P	P	13 57 27.5	-1.3
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	19.80	297	eP	P	13 57 26.9	-1.9
	comp=Z,13nm,1.6s						
AKTO	Aktyubinsk	21.21	300	P	P	13 57 43.1	-1.0
	comp=Z,1.8nm,0.5s,baz=96,slow=15,SNR=8.9						
AKTO				LR	LR	14 07 00.2	
	comp=Z,23nm,19.3s,baz=108,slow=40						
AKTO	Aktyubinsk	21.21	300	⇓P	P	13 57 44.5	+0.5
	comp=Z,4.3nm,0.8s						
BJI	Beijing	21.78	88	P	P	13 57 54.7	+4.4
BJI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI	Kunming	22.03	140	P	P	13 57 54.2	+0.9
KMI				pP	sP	13 58 02.2	+3.4
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
BOD	Bodaibo	22.23	39	eP	P	13 57 55.7	+0.7
BOD				pmax	pmax		
	comp=Z,19nm,1.1s						
ARU	Arti	22.58	316	P	P	13 57 58.4	-0.4
	comp=Z,1.7nm,0.5s,baz=98,slow=2.4,SNR=7.7						
ARU				LR	LR	14 07 34.9	
	comp=Z,64nm,19.5s,baz=114,slow=39						
ARU	Arti	22.58	316	eP	P	13 57 56.6	-2.1
	comp=Z,17nm,1.0s						
ARU	Arti	22.58	316	⇑eP	P	13 57 58.3	-0.4
ARU				pmax	pmax		
	comp=Z,15nm,1.7s						
GEYT	Alibeck	22.71	267	P	P	13 57 58.1	-2.2
	comp=Z,4.6nm,0.8s,baz=90,slow=3.4,SNR=11						
GEYT				LR	LR	14 08 05.0	
	comp=Z,65nm,20.1s,baz=45,slow=40						
GYA	Guiyang	22.96	130	eP	P	13 58 03.8	+0.7
GYA				pP	sP	13 58 10.6	+1.9
GYA				PP	PnPn	13 58 34.7	+7.0
GYA				S	S	14 02 09.2	-4.3
GYA				SS	SnSn	14 02 55.8	+11
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,70nm,4.3s						
GYA				LR	LR		
	comp=Z,80nm,8.9s						
GYA				LR	LR		
	comp=Z,50nm,7.1s						
GYA				LR	LR		
	comp=Z,90nm,8.4s						
CHTO	Chiang Mai	26.21	154	eP	P	13 58 36.3	+2.9
	comp=Z,5.4nm,0.8s						
CHTO	Chiang Mai	26.21	154	eP	P	13 58 36.3	+2.9
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMMT	Chiang Mai	26.21	154	P	P	13 58 39.5	+6.1
	comp=Z,4.2nm,0.9s,comp=Z,0.0nm						
CM31	Chiang Mai Arr	26.55	155	eP	P	13 58 36.5	+0.1
	comp=Z,9.3nm,0.9s						
CMAR	Chiang Mai Arr	26.55	155	P	P	13 58 36.5	+0.1
	comp=Z,2.4nm,0.7s,baz=332,slow=9.1,SNR=18						
KIRV	Kirov	27.96	317	LR	LR	14 11 38.2	
	comp=Z,33nm,19.0s,baz=187,slow=40						
KLR	Kul'dur	31.01	63	⇓eP	P	13 59 16.0	+0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YAK	Yakutsk	31.13	38	⇑eP	P	13 59 16.2	-0.6
KS15	Wonju Array Si	31.26	87	eP	P	13 59 17.8	-0.5
	comp=Z,45nm,1.6s						
KSAR	Wonju Array Be	31.26	87	P	P	13 59 17.8	-0.5
KSAR	Wonju Array Be	31.26	87	P	P	13 59 17.8	-0.5
KSRS	Korea Array	31.28	87	P	P	13 59 17.8	-0.7
	comp=Z,4.7nm,0.6s,baz=289,slow=8.8,SNR=18						
KSRS				LR	LR	14 13 41.4	
	comp=Z,28nm,20.3s,baz=316,slow=40						
YSS	Yuzh-Sakhalins	38.67	65	eP	P	14 00 20.9	-1.1
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
MAJO	Matsushiro	39.15	82	eP	P	14 00 25.1	-1.1
MAJO	Matsushiro	39.15	82	eP	P	14 00 25.1	-1.1
MJAR	Matsushiro Arr	39.15	82	P	P	14 00 25.1	-1.1
	comp=Z,2.3nm,0.9s,baz=278,slow=9.7,SNR=7.0						
AKASG	Malin Array Be	39.44	302	P	P	14 00 27.1	-1.3
	comp=Z,0.4nm,0.4s,baz=71,slow=9.3,SNR=4.0						
AKBB	Malin Array Si	39.44	302	eP	P	14 00 27.1	-1.3
	comp=Z,17nm,1.9s						
AKBB	Malin Array Si	39.44	302	eP	P	14 00 27.1	-1.3
AKBB				pmax	pmax		
	comp=Z,17nm,1.9s						
BR101	Keskin Array S	39.78	284	eP	P	14 00 30.8	-0.8
BRTR	Keskin Array B	39.78	284	P	P	14 00 30.8	-0.8
	comp=Z,0.6nm,0.4s,baz=77,slow=7.0,SNR=4.9						
FIA0	FINESS Array S	39.89	319	eP	P	14 00 31.1	-0.9
FIA0				ePcP	PcP	14 02 35.5	-1.9
FIA0	FINESS Array S	39.89	319	eP	P	14 00 31.1	-0.9
FIA0				e		14 02 35.5	
FINES	FINESS Array B	39.89	319	P	P	14 00 31.1	-0.9
	comp=Z,1.7nm,0.7s,baz=57,slow=7.0,SNR=10						
FINES				PcP	PcP	14 02 35.5	-1.9
	comp=Z,0.8nm,0.4s,baz=103,slow=5.6,SNR=6.0						
FINES	FINESS Array B	39.89	319	i P	P	14 00 32.2	+0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARA0	ARCESS Array S	40.54	332	eP	P	14 00 37.1	-0.2
ARA0				ePcP	PcP	14 02 37.9	-1.5
ARCES	ARCESS Array B	40.54	332	P	P	14 00 37.1	-0.2
	comp=Z,1.2nm,0.4s,baz=90,slow=8.0,SNR=11						
ARCES				PcP	PcP	14 02 37.9	-1.5
	comp=Z,1.7nm,0.4s,baz=97,slow=3.7,SNR=12						
PEA1	Petropavlovsk-	46.23	52	eP	P	14 01 22.5	-1.0
PETK	Petropavlovsk-	46.23	52	P	P	14 01 22.5	-1.0
	comp=Z,2.3nm,0.8s,baz=304,slow=8.6,SNR=5.4						
VYHS	Vyhne	46.54	302	epP	pP	14 01 37.0	+7.0
NB2	NORSAR Subarra	47.05	320	P	P	14 01 28.1	-1.7
	comp=Z,2.7nm,0.7s,baz=76,slow=7.9						
NB200	NORSAR Array S	47.05	320	eP	P	14 01 28.7	-1.1
NOA	NORSAR Array B	47.05	320	P	P	14 01 28.7	-1.1
	comp=Z,0.7nm,0.4s,baz=77,slow=7.7,SNR=9.7						
IDI	Anoyia	47.97	283	P	P	14 01 35.6	-1.8
	comp=Z,5.4nm,0.6s,baz=56,slow=11,SNR=3.3						
CLL	Collm	49.06	307	eP	P	14 01 44.0	-1.5
CLL	Collm	49.06	307	eP	P	14 01 44.0	-1.5
GEC2	GERESS Array S	49.57	304	eP	P	14 01 49.0	-0.5
	comp=Z,5.5nm,1.5s						
GEC2	GERESS Array S	49.57	304	eP	P	14 01 49.0	-0.5
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GERES	GERESS Array B	49.57	304	P	P	14 01 49.0	-0.5
	comp=Z,0.3nm,0.5s,baz=46,slow=5.6,SNR=3.3						
KAPI	Kappang	56.25	140	eP	P	14 02 40.3	+1.3
	comp=Z,14nm,0.4s						
KAPI	Kappang	56.25	140	eP	P	14 02 40.3	+1.3
KAPI				pmax	pmax		
	comp=Z,14nm,0.4s						
TOLK	Toolik Lake Re	60.80	21	eP	P	14 03 09.4	-0.7
	comp=Z,3.4nm,0.5s						
ILAR	Eielson Array	64.37	23	P	P	14 03 32.8	-1.3
	comp=Z,1.3nm,0.8s,baz=307,slow=5.4,SNR=12						
ILB	Eielson Array	64.37	23	eP	P	14 03 32.8	-1.3
	comp=Z,7.2nm,1.4s						
ESDC	Sonseca Array	65.08	302	P	P	14 03 37.7	-1.4
	comp=Z,0.8nm,0.5s,baz=56,slow=6.8,SNR=13						
EGAK	Eagle	65.91	21	eP	P	14 03 43.0	-0.9
	comp=Z,4.4nm,1.3s						
YKA	Yellowknife Ar	73.22	10	P	P	14 04 26.9	-2.2
	comp=Z,1.9nm,0.7s,baz=339,slow=6.0,SNR=15						
YKB5	Yellowknife Ar	73.22	10	eP	P	14 04 26.9	-2.2
WR1	Warramunga Arr	76.25	135	eP	P	14 04 46.1	-1.1
WRA	Warramunga Arr	76.25	135	P	P	14 04 46.1	-1.1
	comp=Z,3.5nm,0.7s,baz=313,slow=5.5,SNR=12						
TOA1	Torodi Ar. Sit	77.94	277	eP	P	14 04 55.0	-2.0
TORD	Torodi Ar. Bea	77.94	277	P	P	14 04 55.0	-2.0
	comp=Z,1.9nm,0.5s,baz=46,slow=5.0,SNR=24						
CMLA	Cha da Macela	78.98	312	i P	P	14 05 00.7	-1.7
AS31	Alice Springs	79.14	137	eP	P	14 05 01.8	-1.5
	comp=Z,1.3nm,1.1s						
ASAR	Alice Springs	79.14	137	P	P	14 05 01.8	-1.5
	comp=Z,1.4nm,0.7s,baz=327,slow=5.3,SNR=30						
DBIC	Dimbokro	87.04	276	P	P	14 05 42.4	-2.0
	comp=Z,4.0nm,0.5s,baz=36,slow=6.2,SNR=12						
DBIC	Dimbokro	87.04	276	eP	P	14 05 42.4	-2.0
	comp=Z,80nm,1.9s						
KIC	Kosan Boka	87.17	276	eP	P	14 05 42.9	-2.2
	comp=Z,113nm,2.0s						
TIC	Toumodi	87.18	276	eP	P	14 05 45.0	-0.1
LIC	Lamto	87.47	276	eP	P	14 05 44.0	-2.5
	comp=Z,46nm,1.4s						
STKA	Stephens Creek	89.73	136	P	P	14 05 55.3	-1.4
	comp=Z,0.8nm,0.4s,baz=331,slow=3.9,SNR=5.1						
STKA	Stephens Creek	89.73	136	eP	P	14 05 55.3	-1.4
	comp=Z,7.2nm,2.0s						
LPAZ	La Paz	145.98	314	PKPbc	PKPdf	14 12 37.0	-1.6
	comp=Z,2.1nm,0.6s,baz=34,slow=0.9,SNR=9.9						
CPUP	Villa Florida	146.72	289	PKPbc	PKPdf	14 12 38.0	-0.8
	comp=Z,2.8nm,0.8s,baz=77,slow=3.2,SNR=4.8						
MNMC	Minye Minye	149.11	314	ePKPbc	PKPbc	14 12 46.2	-1.3

IDC 07 14:33:05.0±5.0**, 14°.65S**×**174°.77W, h0^{km}, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.7**/29**, mbtmp3.8**/4**, Error ellipse: s-maj=224.7km s-min=35.3km az=136.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.28	239	P	P	14 41 07.2	-1.3
	0.8nm,0.6s,baz=66,slow=12,SNR=3.0						
WRA	Warramunga Arr	48.73	256	P	P	14 41 52.6	+0.8
	0.5nm,0.3s,baz=88,slow=8.1,SNR=2.0						
ASAR	Alice Springs	49.09	251	P	P	14 41 54.6	+0.1
	3.8nm,0.7s,baz=86,slow=8.0,SNR=81						
ILAR	Eielson Array	81.97	12	P	P	14 45 26.4	0.0
	0.2nm,0.6s,baz=232,slow=5.1,SNR=4.4						

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*ISCJB **07** 14:37:40.3±0.5, 8°.03S±0°.06×74°.51W±0°.05, h151^{km}, mb3.4/8, Error ellipse: s-maj=8.2km s-min=7.7km az=179.8*

*IDC **07** 14:37:41.5±0.9, 8°.10S×74°.53W, h153^{km}±6^{km}, mb3.3/8, mb1 3.6/12, mb1mx3.5/38, mbtmp3.9/12, MS2.8/3, Ms1 2.8/3, ms1mx2.6/14, Error ellipse: s-maj=29.5km s-min=12.1km az=16.0*

ISC 07 14:37:41.7±0.5**, 8°.02S**±0°.07×**74°.51W**±0°.08**, h151^{km}, n23, σ1^s.08**/27**, mb3.6**/8**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.96	283	P	Pn	14 38 41.8	0.0
	38nm,0.3s,baz=66,slow=4.6,SNR=240						
ATAH				S	Sn	14 39 27.3	-1.1
	91nm,0.3s,baz=227,slow=23,SNR=9.4						
NNA	Nana	4.56	210	P	Pn	14 38 51.4	+1.9
	4.8nm,0.3s,baz=342,slow=1.4,SNR=10						
NNA				S	Sn	14 39 40.6	-1.6
	36nm,0.3s,baz=137,slow=18,SNR=12						
NNA				LR	LR	14 40 59.9	
	comp=Z,46nm,19.6s,baz=239,slow=44						
LPAZ	La Paz	10.31	143	P	Pn	14 40 06.1	-0.3
	0.1nm,0.3s,baz=9.8,slow=17,SNR=4.2						
SIV	San Ignacio	15.33	122	P	P	14 41 12.3	+0.6
	0.8nm,0.3s,baz=301,slow=12,SNR=21						
SIV				LR	LR	14 46 30.5	
	comp=Z,61nm,21.0s,baz=170,slow=34						
PTGA	Pitinga	16.20	64	P	Pn	14 41 20.9	-0.1
	1.7nm,0.3s,baz=244,slow=13,SNR=11						
PTGA				LR	LR	14 48 52.1	
	comp=Z,53nm,20.4s,baz=124,slow=41						
SDV	Santo Domingo	17.23	13	P	Pn	14 41 34.6	+1.0
	0.3nm,0.3s,baz=0.0,slow=19,SNR=2.5						
TXAR	Lajitas Array	46.56	324	P	P	14 45 54.5	0.0
	0.4nm,0.8s,baz=142,slow=9.2,SNR=3.7						
PDAR	Pinedale Array	59.79	331	P	P	14 47 31.1	-0.2
	0.6nm,0.9s,baz=145,slow=5.4,SNR=4.9						
NVAR	Mina Array Bea	61.60	322	P	P	14 47 44.9	+1.3
	0.4nm,0.7s,baz=111,slow=5.1,SNR=4.0						
NVAR				pP	pP	14 48 19.4	0.0
	0.2nm,0.5s,baz=134,slow=7.7,SNR=3.0						
DBIC	Dimbokro	70.97	80	P	P	14 48 41.9	-1.5
	2.6nm,0.4s,baz=241,slow=4.6,SNR=8.5						
VNA3	Neumayer Olymp	74.49	162	P	P	14 49 01.3	-1.9
VNA1	Neumayer--Stat	74.71	162	P	P	14 49 02.5	-1.9
SNAA	Sanae	76.70	162	P	P	14 49 17.0	+1.1
YKA	Yellowknife Ar	76.77	342	P	P	14 49 16.3	+0.2
	0.2nm,0.4s,baz=139,slow=5.5,SNR=6.8						
YKA				pP	pP	14 49 53.7	+0.3
	1.4nm,0.8s,baz=136,slow=6.6,SNR=4.3						
TORD	Torodi Ar. Bea	78.53	75	P	P	14 49 25.9	-1.0
	0.5nm,0.3s,baz=251,slow=5.4,SNR=7.9						
ESDC	Sonseca Array	80.42	48	P	P	14 49 37.1	+0.3
	0.2nm,0.4s,baz=248,slow=6.8,SNR=3.8						
ILAR	Eielson Array	89.81	336	P	P	14 50 22.5	-0.4
	0.2nm,0.7s,baz=121,slow=5.4,SNR=4.5						
ILAR				pP	pP	14 51 01.1	-0.1
	1.6nm,0.9s,baz=121,slow=3.3,SNR=11						
STKA	Stephens Creek	127.44	219	pPKP	pPKPdf	14 57 10.8	+1.4
	0.7nm,0.7s,baz=181,slow=9.5,SNR=1.4						
ZALV	Zalesovo Beam	131.26	16	PKP	PKiKP	14 56 37.0	+0.2
	0.5nm,0.5s,baz=338,slow=3.4,SNR=4.0						
ZALV				pPKP	pPKPdf	14 57 17.6	+1.7
	2.6nm,0.7s,baz=301,slow=2.5,SNR=6.2						
MKAR	Makanchi Array	136.56	23	pPKP	pPKPdf	14 57 27.2	+1.1
	1.0nm,0.7s,baz=336,slow=2.0,SNR=8.2						
ASAR	Alice Springs	138.02	221	PKP	PKPdf	14 56 49.8	+0.3
	0.6nm,0.7s,baz=140,slow=2.0,SNR=7.0						
ASAR				pPKP	pPKPdf	14 57 30.1	+0.6
	0.7nm,0.6s,baz=124,slow=1.9,SNR=4.2						
WRA	Warramunga Arr	140.27	225	pPKP	pPKPdf	14 57 33.8	0.0
	2.1nm,0.7s,baz=169,slow=2.2,SNR=3.4						
KSRS	Korea Array	144.34	329	PKP	PKPdf	14 57 01.5	+1.2
	0.3nm,0.5s,baz=176,slow=21,SNR=3.5						

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*SJA **07** 14:39:16.9±0.7, 27°.89S×66°.79W, h206^{km}±7^{km}, ML4.5, MW4.8*

*NEIC **07** 14:39:18.6±2.1, 27°.98S×66°.80W, h160^{km}±6^{km}, mb4.5/80, ML4.7(GUC), Error ellipse: s-maj=12.9km s-min=10.8km az=79.0*

*ISCJB **07** 14:39:18.8±0.3, 27°.78S±0°.03×66°.82W±0°.03, h173^{km}±2^{km}, mb4.3/83, Error ellipse: s-maj=5.2km s-min=4.5km az=2.7*

*IDC **07** 14:39:19.4±0.5, 27°.89S×66°.80W, h162^{km}±4^{km}, mb3.9/17, mb1 4.0/23, mb1mx3.9/40, mbtmp4.4/23, MS2.9/1, Ms1 2.9/1, ms1mx2.5/19, Error ellipse: s-maj=12.7km s-min=8.8km az=92.0*

*VAO **07** 14:39:20.9±0.4, 27°.77S×66°.95W, h187^{km}, mb4.3*

*GUC **07** 14:39:21.2±0.5, 27°.70S×66°.95W, h147^{km}±8^{km}, ML4.7*

ISC 07 14:39:19.3±0.5**, 27°.86S**±0°.04×**66°.85W**±0°.04**, h165^{km}**±4^{km}**, h165^{km}:pP-P, n459, σ0^s.87**/483**, mb4.4**/82**, 5C, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	Choya	1.09	122	i P	Pn	14 39 47.8	+1.4
CYA				IAML		14 39 48.0	
	comp=Z,6µm,0.5s						
VCA	Vinchina	1.48	234	i P	Pn	14 39 51.6	+1.5
VCA				i S	Sn	14 40 17.8	+4.0
VCA				IAML		14 40 18.7	
	comp=Z,7µm,0.6s						
VCA	Vinchina	1.48	234	⇑iP	Pn	14 39 51.5	+1.5
VCA				i S	Sn	14 40 14.5	+0.7
AHML	Horco Molle	1.72	52	i P	Pn	14 39 53.4	+0.9
AHML				i S	Sn	14 40 20.0	+2.0
AHML				IAML		14 40 20.0	
	comp=Z,659nm,0.6s						
AHML	Horco Molle	1.72	52	⇑iP	Pn	14 39 53.4	+0.9
AHML				i S	Sn	14 40 17.5	-0.4
FSA	Cafayete	1.91	24	i P	Pn	14 39 56.1	+1.5
GO03	Copiap	3.02	274	ePn	Pn	14 40 07.8	+0.3
GO03				eSn	Sn	14 40 43.6	-1.4
GO03	Copiap	3.02	274	i P	Pn	14 40 08.0	+0.3
GO03				i S	Sn	14 40 46.3	+1.2
GO03	Copiap	3.02	274	⇑iP	Pn	14 40 07.9	+0.3
GO03				i S	Sn	14 40 43.6	-1.4
GO03				IAML		14 40 45.9	
	comp=E,2µm,0.2s						
SLA	San Lorenzo	3.35	21	i P	Pn	14 40 11.7	-0.2
GO02	Mina Guanaco	3.64	317	ePn	Pn	14 40 17.2	+1.4
CFA	Coronel Fontan	3.92	198	P	Pn	14 40 18.8	-0.2
	comp=E,89nm,0.3s,baz=310,slow=8.6,SNR=1181						
CFA				S	Sn	14 41 03.7	-1.9
	comp=E,164nm,0.3s,baz=290,slow=17,SNR=32						
AZAP	Zapla	3.96	24	i P	Pn	14 40 20.1	+0.3
GO04	Tololo Observa	4.16	235	ePn	Pn	14 40 21.7	-0.6
GO04	Tololo Observa	4.16	235	⇑iP	Pn	14 40 21.8	-0.4
GO04				i S	Sn	14 41 10.2	-1.1
PB10	IPOC Station P	5.47	321	ePn	Pn	14 40 38.8	-0.5
LVC	Limon Verde	5.55	340	P	Pn	14 40 41.1	+0.4
	comp=E,9.1nm,0.3s,baz=181,slow=8.1,SNR=86						
LVC				S	Sn	14 41 42.6	-1.8
	comp=E,10nm,0.3s,baz=278,slow=21,SNR=28						
LVC	Limon Verde	5.55	340	ePn	Pn	14 40 41.0	+0.3
LVC	Limon Verde	5.55	340	eP	Pn	14 40 41.3	+0.6
LVC				eS	Sn	14 41 42.7	-1.8
PB05	IPOC Station P	5.84	328	⇑iP	Pn	14 40 44.0	-0.2
PEL	Peldehue	6.22	211	ePn	Pn	14 40 47.9	-1.2
PB04	IPOC Station P	6.27	331	ePn	Pn	14 40 49.0	-0.9
PB01	IPOC Station P	7.20	340	ePn	Pn	14 41 01.1	-1.1
GO05	Huala	8.34	210	ePn	Pn	14 41 13.2	-4.0
GO01	Chusmiza	8.44	345	ePn	Pn	14 41 17.3	-1.6
PB11	IPOC Station P	8.46	342	ePn	Pn	14 41 16.5	-2.6
CPUP	Villa Florida	8.62	82	P	Pn	14 41 19.7	-1.2
	comp=E,0.4nm,0.3s,baz=262,slow=11,SNR=11						
CPUP				LR	LR	14 45 32.1	
	comp=E,77nm,18.5s,baz=204,slow=44						
MNMC	Minye Minye	9.05	343	ePn	Pn	14 41 24.7	-2.2
TRQA	Tornquist	10.95	159	ePn	Pn	14 41 50.8	-0.7
LPAZ	La Paz	11.58	354	P	Pn	14 41 59.9	-0.6
	comp=E,2.5nm,0.3s,baz=153,slow=9.3,SNR=9.6						
LPAZ	La Paz	11.58	354	ePn	Pn	14 42 00.0	-0.4
LPAZ	La Paz	11.58	354	eP	Pn	14 41 59.8	-0.6
SIV	San Ignacio	12.97	26	P	Pn	14 42 16.6	-1.1
	comp=E,0.4nm,0.3s,baz=211,slow=14,SNR=4.8						
PLCA	Paso Flores	13.20	192	P	Pn	14 42 19.8	-0.7
	comp=E,0.2nm,0.3s,baz=24,slow=12,SNR=8.1						
PLCA	Paso Flores	13.20	192	eP	Pn	14 42 20.1	-0.3
PLCA	Paso Flores	13.20	192	eP	Pn	14 42 20.9	+0.4
TRCB	Terra Rica	13.80	72	eP	P	14 42 30.4	-1.0
CNLB	Canela	14.13	100	eP	P	14 42 35.0	+0.1
FRTB	Fartura	16.22	78	eP	P	14 42 58.2	+0.1
ITRB	Iturama	17.12	65	eP	Pn	14 43 08.7	-0.2
BB19B	Bebedouro	17.99	72	eP	P	14 43 17.4	-0.1
SPB	Sao Paulo	18.00	81	eP	P	14 43 17.9	+0.4
	comp=E,52nm,1.8s						
SPB	Sao Paulo	18.00	81	eP	P	14 43 17.8	+0.2
RCLB	Rio Claro- Sao	18.30	77	eP	P	14 43 20.9	0.0
PARB	Paraibuna	19.66	82	eP	P	14 43 35.5	-0.2
CLDB	Colider	19.83	34	eP	P	14 43 36.8	-0.7
ESAR	Angra dos Reis	20.79	82	eP	P	14 43 47.3	-0.3
BSCB	Bom Sucesso	21.21	76	eP	P	14 43 52.5	+0.2
BDFB	Brasilia	21.27	59	P	P	14 43 52.3	-0.7
	comp=E,4.9nm,0.5s,baz=224,slow=10,SNR=8.4						
BDFB	Brasilia	21.27	59	eP	P	14 43 52.2	-0.7
	comp=E,6.8nm,0.9s						
BDFB				eP	P	14 43 52.3	-0.7
PEXB	Peixe	23.39	52	eP	P	14 44 12.9	-0.5
CAM01	Campos-RJ	23.61	81	eP	P	14 44 16.6	+1.3
ALF01	Guarapari-ES	24.85	79	eP	P	14 44 25.9	-0.7
SJMB	Sao Joao De Ma	25.23	74	eP	P	14 44 29.6	-0.5
SMTB	Santa Maria do	26.22	48	eP	P	14 44 38.9	-0.1
PTGA	Pitinga	27.77	15	P	P	14 44 52.8	0.0
	comp=E,4.9nm,0.3s,baz=324,slow=22,SNR=5.2						
PTGA	Pitinga	27.77	15	eP	P	14 44 52.7	-0.1
BBAC	Balboa, Cauca	31.35	340	eP	P	14 45 25.8	+1.1
POPC	Popayan, Colom	31.67	341	eP	P	14 45 29.1	+1.6
RUSC	La Rusia	34.09	349	eP	P	14 45 48.8	0.0
NORC	Norcasia	34.12	346	eP	P	14 45 47.7	-0.8
HELC	Santa Helena	34.88	345	eP	P	14 45 54.2	-1.2
PTBC	PUERTO BERRIO,	34.98	347	eP	P	14 45 53.2	-2.7

MDP	Montagnes des comp=E,11nm,0.9s,baz=209,slow=9.9,SNR=7.7	35.52	25	P	P	14 46 00.3	-0.2
CAPV	Capacho	35.91	351	*e*P	P	14 46 03.4	-0.7
SDV	Santo Domingo comp=E,6.4nm,0.4s,baz=133,slow=5.0,SNR=10	36.72	354	P	P	14 46 09.7	-1.2
SDV	Santo Domingo comp=E,13nm,1.0s	36.72	354	*e*P	P	14 46 09.6	-1.3
SDV	Santo Domingo	36.72	354	*e*P	P	14 46 09.5	-1.3
SDV	Santo Domingo	36.72	354	*e*P	P	14 46 09.8	-1.0
SMLC	San Martn de	37.11	348	*e*P	P	14 46 10.8	-3.2
JTS	Las Juntas de comp=E,3.3nm,0.4s,baz=247,slow=7.0,SNR=4.4	41.79	333	P	P	14 46 55.2	+2.5
JTS	Las Juntas de comp=E,34nm,1.6s	41.79	333	*e*P	P	14 46 55.2	+2.5
APG	El Apazote comp=E,3.9nm,0.3s,baz=329,slow=15,SNR=7.9	48.37	329	P	P	14 47 45.8	+0.9
SNAA	Sanae comp=E,1.0nm,0.7s,baz=318,slow=9.2,SNR=6.4	55.68	160	P	P	14 48 38.9	+0.9
SNAA	comp=E,3.1nm,0.9s,baz=273,slow=6.7,SNR=5.4			pP	pP	14 49 15.4	-0.9
SNAA	Sanae comp=E,11nm,1.3s	55.68	160	*e*P	P	14 48 38.7	+0.7
859A	Kempfer Cattle baz=165	57.22	345	P	P	14 48 49.3	+0.1
453A	Whigham baz=162	60.72	343	P	P	14 49 13.3	0.0
353A	Camilla baz=162	61.17	343	P	P	14 49 16.1	-0.2
156A	Sylvania baz=165	61.77	346	P	P	14 49 20.8	+0.4
155A	Kite baz=164	61.96	345	P	P	14 49 21.5	-0.1
349A	Repton baz=160	62.00	340	P	P	14 49 21.3	-0.5
154A	Montrose baz=164	62.10	344	P	P	14 49 22.0	-0.6
251A	Midway baz=162	62.19	342	P	P	14 49 22.7	-0.4
250A	Grady baz=161	62.32	341	P	P	14 49 23.1	-0.9
152A	Waverly Hall baz=162	62.55	343	P	P	14 49 25.1	-0.4
249A	Camden baz=160	62.56	341	P	P	14 49 25.3	-0.3
151A	Opelika baz=162	62.58	342	P	P	14 49 25.0	-0.7
Z54A	Sparta baz=164	62.63	345	P	P	14 49 25.4	-0.7
150A	Eclectic baz=161	62.84	342	P	P	14 49 26.9	-0.5
Z53A	Monticello baz=163	62.85	344	P	P	14 49 27.1	-0.4
GOGA	Godfrey baz=164	62.95	344	P	P	14 49 27.7	-0.5
Z52A	Williamson baz=163	62.97	343	P	P	14 49 27.3	-1.0
149A	Jones baz=160	63.05	341	P	P	14 49 28.3	-0.5
Y55A	Saluda baz=165	63.09	346	P	P	14 49 28.9	-0.1
X58A	Rowland baz=168	63.20	348	P	P	14 49 29.7	0.0
Y54A	Tignall baz=164	63.20	345	P	P	14 49 29.4	-0.3
Y53A	Monroe baz=164	63.40	344	P	P	14 49 31.0	-0.1
Z50A	Ashland comp=E,9.9nm,0.8s	63.42	342	*e*P	P	14 49 30.9	-0.4
Z50A	Ashland baz=161	63.42	342	P	P	14 49 30.7	-0.6
X56A	White Oak baz=166	63.45	347	P	P	14 49 30.7	-0.7
LRAL	Lakeview Retre baz=160	63.52	341	P	P	14 49 32.3	+0.4
Y52A	Lilburn baz=163	63.52	344	P	P	14 49 31.8	-0.2
Z49A	Columbiana baz=161	63.53	342	P	P	14 49 31.5	-0.5
X55A	Gracelyn & Ava baz=165	63.56	346	P	P	14 49 32.3	+0.2
W58A	Raeford baz=168	63.63	349	P	P	14 49 33.1	+0.5
V62A	Hyde County Ai baz=171	63.67	352	P	P	14 49 33.4	+0.6
X54A	Belton baz=165	63.79	346	P	P	14 49 33.9	+0.2
Y51A	Rockmart baz=162	63.81	343	P	P	14 49 33.4	-0.4
VBMS	Vicksburg baz=157	63.85	338	P	P	14 49 34.5	+0.4
W57A	Gilead comp=E,9.3nm,0.8s	63.90	348	*e*P	P	14 49 34.5	+0.2
W57A	Gilead baz=167	63.90	348	P	P	14 49 34.5	+0.2
X53A	Estanollee baz=164	63.95	345	P	P	14 49 34.7	0.0
Y50A	Piedmont baz=162	63.98	343	P	P	14 49 34.3	-0.6
W56A	Indian Trail baz=166	63.99	347	P	P	14 49 34.9	0.0
833A	Chaparral WMA, comp=E,19nm,0.6s	63.99	328	*e*P	P	14 49 35.9	+0.8
833A	Chaparral WMA, baz=148	63.99	328	P	P	14 49 36.1	+1.0
Y49A	Blount Mountai baz=161	64.13	342	P	P	14 49 35.4	-0.5
X52A	Dahlonega baz=163	64.19	344	P	P	14 49 36.0	-0.3
V59A	Middlesex baz=169	64.19	350	P	P	14 49 36.8	+0.5
W54A	Cherokee Point baz=165	64.27	346	P	P	14 49 37.0	+0.2
V58A	Windy Hill, Pi baz=168	64.36	349	P	P	14 49 37.6	+0.3
X51A	Calhoun comp=E,16nm,0.9s	64.39	344	*e*P	P	14 49 37.1	-0.4
X51A	Calhoun baz=162,SNR=5.1	64.39	344	P	P	14 49 37.6	+0.1
X50B	Fort Payne baz=162	64.49	343	P	P	14 49 37.8	-0.4
W53A	Cullowhee baz=164	64.56	345	P	P	14 49 38.9	+0.1
V57A	Coltrane Farms baz=167	64.57	348	P	P	14 49 38.6	-0.1
V56A	Mocksville baz=167	64.63	348	P	P	14 49 39.1	0.0
W52A	Murphy baz=163	64.67	345	P	P	14 49 39.3	0.0
X49A	Woodville baz=161	64.72	342	P	P	14 49 39.4	-0.3
U58A	Oxford baz=169	64.86	350	P	P	14 49 40.7	+0.1
X48A	Hartselle comp=E,18nm,1.2s	64.86	342	*e*P	P	14 49 40.3	-0.3
X48A	Hartselle baz=160,SNR=5.3	64.86	342	P	P	14 49 40.5	-0.1
V54A	Nebo baz=165	64.88	346	P	P	14 49 40.9	+0.1
W51A	Cleveland baz=163	64.93	344	P	P	14 49 41.0	-0.1
NATX	Nacogdoches baz=153	64.94	334	P	P	14 49 40.7	-0.5
V53A	Saluda baz=164	64.96	346	P	P	14 49 41.1	-0.3
U57A	Blanch baz=168	65.03	349	P	P	14 49 41.7	+0.1
W50A	Signal Mountai baz=162	65.11	343	P	P	14 49 42.1	-0.2
U56A	King baz=167	65.13	348	P	P	14 49 42.6	+0.3
X47A	Russelville baz=160	65.15	341	P	P	14 49 42.1	-0.4
W49A	Belvidere baz=161	65.28	343	P	P	14 49 43.0	-0.3
SWET	Sewanee comp=E,8.3nm,0.8s	65.28	343	*e*P	P	14 49 42.8	-0.5
V52A	Sevierville baz=164	65.30	345	P	P	14 49 43.0	-0.4
T58A	Grand View Acr baz=169	65.39	350	P	P	14 49 44.4	+0.4
X46A	Booneville baz=159	65.40	340	P	P	14 49 43.5	-0.6
W48A	Pulaski baz=161	65.47	342	P	P	14 49 44.2	-0.3
V50A	Pikevile baz=162	65.50	344	P	P	14 49 44.4	-0.3
U53A	Fall Branch baz=165	65.58	346	P	P	14 49 44.9	-0.4
OXF	Oxford baz=158	65.61	340	P	P	14 49 44.9	-0.6
T56A	Rocky Mt baz=167	65.73	348	P	P	14 49 45.9	-0.3
W47A	Westpoint baz=160	65.76	341	P	P	14 49 45.9	-0.6
U52A	Thorn Hill baz=164	65.78	345	P	P	14 49 45.7	-0.8
V49A	McMinnville baz=162	65.79	343	P	P	14 49 46.0	-0.6
U51A	La Follette baz=163	65.91	345	P	P	14 49 46.8	-0.6
T55A	Pulaski baz=166	65.95	348	P	P	14 49 48.2	+0.6
JCT	Junction City comp=E,13nm,0.6s	66.00	329	*e*P	P	14 49 47.5	-0.6
JCT	Junction City baz=148	66.00	329	P	P	14 49 49.1	+1.0
V48A	Smith Brothers comp=E,8.9nm,0.8s	66.01	342	*e*P	P	14 49 47.6	-0.4
V48A	Smith Brothers baz=161,SNR=6.3	66.01	342	P	P	14 49 47.6	-0.4
T54A	Tazewell baz=166	66.05	347	P	P	14 49 48.4	+0.1
WLAR	White Oak Lake comp=E,28nm,1.0s	66.09	336	*e*P	P	14 49 49.8	+1.3
U50A	Jamestown baz=163	66.14	344	P	P	14 49 48.2	-0.6
T53A	Wise baz=165	66.17	346	P	P	14 49 48.9	-0.2
CLTN	Cedars of Leba comp=E,3.5nm,0.6s	66.21	343	*e*P	P	14 49 48.5	-0.7
S57A	Dark Hollow, R baz=168	66.26	350	P	P	14 49 50.3	+0.8
WHTX	Lake Whitney, baz=151	66.27	332	P	P	14 49 50.1	+0.4
R58B	Mineral baz=169	66.29	350	P	P	14 49 50.2	+0.5
V46A	Holladay baz=160	66.43	341	P	P	14 49 49.9	-0.8
T51A	Gray baz=164	66.46	345	P	P	14 49 50.6	-0.2
U49A	Red Boiling Sp baz=162	66.47	343	P	P	14 49 50.3	-0.6
S55A	Lewisburg baz=167	66.53	348	P	P	14 49 52.1	+0.8
R58A	Rapidan baz=169	66.64	350	P	P	14 49 52.2	+0.2
WVT	Waverly comp=E,16nm,0.8s	66.65	342	*e*P	P	14 49 51.3	-0.7
WVT	Waverly baz=160	66.65	342	P	P	14 49 51.7	-0.3
U48A	Cassie Pea, Po baz=161	66.66	343	P	P	14 49 51.7	-0.4
S54A	Dingess, Beckl baz=166	66.71	348	P	P	14 49 52.7	+0.2
R57A	Stanardsville baz=169	66.72	350	P	P	14 49 53.0	+0.6
U47A	Clarksville baz=160,SNR=5.6	66.80	342	P	P	14 49 52.5	-0.4
TXAR	Lajitas Array comp=E,1.2nm,0.6s,baz=149,slow=8.7,SNR=16	66.91	325	P	P	14 49 54.9	+1.0
TX31	Lajitas Ar. Si comp=E,9.8nm,1.8s	66.91	325	*e*P	P	14 49 54.5	+0.6
S52A	Salyersville baz=164	66.95	346	P	P	14 49 53.5	-0.4
R55A	Marlinton baz=167	66.96	349	P	P	14 49 55.5	+1.5
T49A	Edmonton comp=E,14nm,1.4s	66.97	344	*e*P	P	14 49 53.3	-0.7
T49A	Edmonton baz=162	66.97	344	P	P	14 49 53.4	-0.7
S51A	Beattyville baz=164	67.03	346	P	P	14 49 54.8	+0.4
MIAR	Mount Ida comp=E,11nm,1.3s	67.03	336	*e*P	P	14 49 54.8	+0.4
MIAR	Mount Ida baz=154,SNR=5.3	67.03	336	P	P	14 49 54.6	+0.2
W41B	Gary Mavity, V comp=E,5.2nm,0.8s	67.13	338	*e*P	P	14 49 55.4	+0.3
W41B	Gary Mavity, V baz=156,SNR=5.0	67.13	338	P	P	14 49 55.1	0.0
Q58A	Fox Den Farm, baz=170	67.22	351	P	P	14 49 55.9	+0.3
S50A	Richmond baz=163	67.25	345	P	P	14 49 55.4	-0.3
WHAR	Wooly Hollow comp=E,6.2nm,1.0s	67.25	338	*e*P	P	14 49 56.1	+0.3
T47A	Sharon Grove baz=161	67.26	343	P	P	14 49 55.4	-0.5
Q57A	Strasburg baz=169	67.42	350	P	P	14 49 58.1	+1.2
Q56A	Snyder Ridge, baz=168	67.55	350	P	P	14 49 58.6	+1.0
Q55A	Buckhannon baz=167	67.65	349	P	P	14 49 59.2	+0.9
R51A	Hillsboro baz=164	67.66	346	P	P	14 49 58.2	-0.2
W39A	Magazine comp=E,9.3nm,0.8s	67.69	336	*e*P	P	14 49 59.3	+0.7
W39A	Magazine baz=154,SNR=5.9	67.69	336	P	P	14 49 59.4	+0.9
P59A	Jarrettsville baz=171	67.72	352	P	P	14 49 59.5	+0.8
FCAR	Ozark Folk Cen comp=E,17nm,1.4s	67.74	338	*e*P	P	14 49 58.5	-0.4
ABTX	Abilene, Hawle baz=149	67.75	330	P	P	14 49 59.7	+0.6
Q54A	Coxs Mills baz=167	67.77	348	P	P	14 49 59.1	+0.1
S47A	Hartford baz=161	67.77	343	P	P	14 49 57.8	-1.3
Q53A	Leroy baz=166	67.78	348	P	P	14 49 59.0	-0.1
P57A	Homestead Farm baz=169	67.80	351	P	P	14 49 59.9	+0.7
R50A	Paris baz=163	67.81	345	P	P	14 49 58.9	-0.4
P60A	Greenville baz=172	67.82	353	P	P	14 49 58.2	-1.1
P56A	Dayton Farm, R baz=169	67.95	350	P	P	14 49 60.0	-0.1
PBMO	Poplar Bluff comp=E,18nm,0.8s	68.02	340	*e*P	P	14 50 00.6	-0.1
P55A	Reedsville baz=168	68.11	349	P	P	14 50 01.8	+0.6
WCI	Wyandotte Cave baz=162	68.22	344	P	P	14 50 01.2	-0.7
MCWV	Mont Chateau baz=168	68.26	349	P	P	14 50 02.8	+0.8
R48A	Northridge Ran baz=162	68.28	344	P	P	14 50 02.5	+0.3
O60A	Telford baz=172	68.30	353	P	P	14 50 03.0	+0.7
P54A	Burton baz=167	68.31	349	P	P	14 50 02.8	+0.4
P53A	Whipple baz=166	68.36	348	P	P	14 50 03.0	+0.2
O59A	Robesonia baz=171	68.38	352	P	P	14 50 03.7	+0.9
U40A	Yellville baz=155,SNR=8.9	68.41	338	P	P	14 50 02.9	-0.2
O57A	Amberson baz=170	68.47	351	P	P	14 50 03.9	+0.5
S44A	Carbondale baz=159	68.52	341	P	P	14 50 03.4	-0.3
P52A	Corning baz=166	68.64	347	P	P	14 50 04.4	0.0
O56A	Blue Knob Stat baz=169	68.65	350	P	P	14 50 05.4	+0.8
P51A	Williamsport baz=165	68.68	347	P	P	14 50 04.3	-0.4
O55A	Ligonier baz=168	68.71	350	P	P	14 50 05.5	+0.6
HHAR	Hobbs comp=E,6.7nm,0.7s	68.72	337	*e*P	P	14 50 04.9	-0.1
Q48A	North Vernon baz=162	68.75	344	P	P	14 50 04.6	-0.5
R45A	Skylar, Fairfi baz=160	68.80	342	P	P	14 50 04.5	-0.9
O54A	Avella baz=167	68.86	349	P	P	14 50 05.0	-0.7
SSPA	Standing Stone baz=170	68.92	351	P	P	14 50 06.7	+0.6
N59A	State Game Lan baz=172	68.93	353	P	P	14 50 06.9	+0.7
DBIC	Dimbokro comp=E,3.8nm,0.9s,baz=228,slow=4.3,SNR=3.8	68.94	70	P	P	14 50 06.1	-0.7
DBIC	Dimbokro comp=E,24nm,1.3s	68.94	70	*e*P	P	14 50 06.1	-0.7
P50A	Jamestown baz=164	68.96	346	P	P	14 50 06.3	-0.1
N57A	Milroy baz=170	68.99	351	P	P	14 50 06.3	-0.3
O52A	Adamsville baz=166	69.06	348	P	P	14 50 06.6	-0.4
TUL1	Leonard comp=E,22nm,1.4s	69.06	335	*e*P	P	14 50 06.9	-0.1
TUL1	Leonard baz=153	69.06	335	P	P	14 50 07.0	-0.1
P49A	Miami Univ. Ec baz=163	69.09	345	P	P	14 50 06.3	-0.9
P48A	Milroy baz=162	69.18	345	P	P	14 50 06.8	-1.0
WMOK	Wichita Mounta comp=E,4.2nm,1.2s	69.20	332	*e*P	P	14 50 07.9	-0.1
WMOK	Wichita Mounta baz=150,SNR=5.1	69.20	332	P	P	14 50 08.0	-0.1
N55A	Marion Center comp=E,11nm,0.8s	69.22	350	*e*P	P	14 50 08.3	+0.3
N55A	Marion Center baz=168	69.22	350	P	P	14 50 08.2	+0.3
N56A	West Decatur baz=169	69.25	351	P	P	14 50 07.8	-0.4
Q45A	Warren Harvey, baz=160	69.33	342	P	P	14 50 07.8	-0.9
ACSO	Alum Creek Sta baz=165	69.39	347	P	P	14 50 09.0	-0.1
CCM	Cathedral Cave comp=E,12nm,0.7s	69.44	340	*e*P	P	14 50 08.8	-0.6
CCM	Cathedral Cave baz=157	69.44	340	P	P	14 50 09.4	-0.1
M59A	Waymart baz=172	69.51	353	P	P	14 50 10.6	+0.9
N54A	Moraine State comp=E,13nm,0.9s	69.55	349	*e*P	P	14 50 10.2	+0.2
N54A	Moraine State baz=168	69.55	349	P	P	14 50 10.6	+0.5
MNTX	Cornudas Mount comp=E,3.8nm,1.0s	69.68	326	*e*P	P	14 50 10.8	-0.2
MNTX	Cornudas Mount baz=144,SNR=7.4	69.68	326	P	P	14 50 10.8	-0.2
M56A	Emporium baz=169	69.79	351	P	P	14 50 11.8	+0.3
P45A	Graceland, Par baz=160	69.82	343	P	P	14 50 10.7	-1.0
M55A	Ridgway baz=169	69.86	350	P	P	14 50 12.3	+0.4
O48A	Farmland baz=163	69.88	345	P	P	14 50 11.4	-0.6
M54A	Oil Creek Stat baz=168	70.03	350	P	P	14 50 13.2	+0.2
O47A	Sheridan baz=162	70.10	344	P	P	14 50 12.9	-0.5
HRV	Adam Dziewonsk baz=176	70.15	356	P	P	14 50 14.3	+0.7
BINY	Binghamton baz=171	70.22	353	P	P	14 50 15.0	+0.9
MSTX	Muleshoe comp=E,8.2nm,0.6s	70.29	329	*e*P	P	14 50 14.9	+0.1
MSTX	Muleshoe baz=147,SNR=6.8	70.29	329	P	P	14 50 15.0	+0.1
M51A	Elyria baz=166	70.30	348	P	P	14 50 14.6	0.0
N49A	Columbus Grove baz=164	70.30	346	P	P	14 50 14.2	-0.3
P43A	Skaggs, Pawnee baz=159	70.41	342	P	P	14 50 14.7	-0.5
N48A	Decatur baz=163	70.42	345	P	P	14 50 14.3	-1.0
SFIN	Lafayette baz=161	70.46	344	P	P	14 50 14.6	-1.0
O45A	Potomac baz=160	70.49	343	P	P	14 50 14.6	-1.1
L55A	Hinsdale baz=169	70.51	351	P	P	14 50 15.6	-0.3
AMTX	Amarillo comp=E,10.0nm,0.6s	70.56	330	*e*P	P	14 50 16.2	-0.3
N47A	Urbana baz=162	70.60	345	P	P	14 50 16.1	-0.3
L54A	Sinclairville baz=168	70.69	350	P	P	14 50 17.1	+0.1
M49A	Liberty Center baz=164	70.79	346	P	P	14 50 17.1	-0.4
N46A	Monticello baz=162	70.86	344	P	P	14 50 17.7	-0.2
K54A	Basiliko Farm, baz=169	70.97	351	P	P	14 50 18.5	-0.1
K55A	Perry baz=170	71.00	351	P	P	14 50 18.9	+0.1
N45A	Kentland baz=161	71.00	344	P	P	14 50 17.8	-1.1
M47A	Cromwell baz=162	71.04	345	P	P	14 50 18.4	-0.6
N44A	Piper City baz=160	71.11	343	P	P	14 50 19.6	+0.1
K52A	Tillsonburg baz=167	71.44	349	P	P	14 50 21.4	0.0
319A	Douglas comp=E,12nm,0.8s	71.46	323	*e*P	P	14 50 23.6	+1.7
N43A	Stutzman Famil baz=159	71.52	342	P	P	14 50 21.6	-0.3
L47A	Sherwood baz=163	71.53	346	P	P	14 50 21.2	-0.8
121A	Cookes Peak, D baz=142	71.57	324	P	P	14 50 24.3	+1.7
N41A	Harden Midland baz=158	71.77	341	P	P	14 50 23.2	-0.3
J52A	Paris baz=167	71.86	350	P	P	14 50 23.9	+0.1
LBNH	Lisbon baz=175	71.90	356	P	P	14 50 25.0	+0.9
M43A	Waltham Townsh baz=160	71.93	343	P	P	14 50 24.0	-0.4
PECO	Prince Edward baz=171	72.05	352	P	P	14 50 25.1	+0.1
K48A	Perry baz=164	72.09	347	P	P	14 50 24.8	-0.5
N40A	Mertquake, Sal baz=157	72.15	341	P	P	14 50 25.3	-0.4
K47A	Vermontville baz=163	72.15	346	P	P	14 50 25.1	-0.6
KSU1	Kansas State U baz=153	72.18	336	P	P	14 50 25.4	-0.6
I55A	Frankford baz=170	72.41	352	P	P	14 50 27.2	+0.1
I51A	Listowel baz=167	72.49	349	P	P	14 50 27.6	0.0
J48A	Bridge Port baz=164	72.50	347	P	P	14 50 27.4	-0.3
H56A	Elgin baz=171	72.62	353	P	P	14 50 29.1	+0.8
J47A	Sunmer baz=163	72.66	346	P	P	14 50 28.2	-0.4
H55A	Tweed baz=170	72.68	352	P	P	14 50 29.0	+0.3
PKME	Peaks-Kenny Pk baz=178	72.81	358	P	P	14 50 30.2	+0.8
BWLO	Walkerton baz=167	72.82	349	P	P	14 50 29.5	-0.1
ANMO	Albuquerque comp=E,3.2nm,0.8s	72.83	327	*e*P	P	14 50 30.6	+0.5
ANMO	Albuquerque baz=144	72.83	327	P	P	14 50 31.6	+1.5
TASM	ASL Pad, Albuq baz=144,SNR=6.9	72.83	327	P	P	14 50 31.5	+1.3
TASM	ASL Pad, Albuq baz=144,SNR=6.7	72.83	327	P	P	14 50 31.5	+1.3
K43A	Burlington baz=160	72.96	344	P	P	14 50 30.4	0.0
TUC	Tucson baz=140	72.99	322	P	P	14 50 32.2	+1.2
L40A	Anamosa comp=E,15nm,0.8s	73.13	341	*e*P	P	14 50 31.6	+0.1
L40A	Anamosa baz=158	73.13	341	P	P	14 50 31.2	-0.2
PLVO	Plevna baz=171	73.15	352	P	P	14 50 32.0	+0.5
BMRO	Meriville Lake baz=167	73.30	349	P	P	14 50 32.5	+0.2
G53A	Haliburton baz=169	73.42	351	P	P	14 50 33.6	+0.5
JFWS	Jewell Farm baz=159	73.65	342	P	P	14 50 34.5	+0.1
T25A	Trinidad comp=E,4.5nm,0.7s	73.66	329	*e*P	P	14 50 36.0	+1.0

T25A	Trinidad	73.66	329	P	P	14 50 36.4	+1.4
	baz=146,SNR=6.4						
PEMO	Pembroke	73.80	352	P	P	14 50 35.7	+0.4
	baz=170						
214A	Organ Pipe Nat	73.84	320	P	P	14 50 37.4	+1.4
	baz=139,SNR=5.5						
BUKO	Buck Lake	73.84	351	P	P	14 50 35.6	+0.1
	baz=168						
KLBO	Killbear Provi	73.88	350	P	P	14 50 34.8	-1.0
	baz=168						
TOBO	Tobermory, Bru	73.96	349	P	P	14 50 35.2	-1.0
	baz=166						
H46A	Fife Lake	73.98	346	P	P	14 50 35.6	-0.8
	baz=163						
ALGO	Algonquin Park	74.17	352	P	P	14 50 37.3	-0.1
	baz=170						
F52A	Sundridge	74.18	351	P	P	14 50 37.3	-0.2
	baz=168						
I42A	Draeger Farm,	74.22	344	P	P	14 50 37.7	-0.1
	baz=160						
F51A	Arnstein	74.39	351	P	P	14 50 38.5	-0.2
	baz=168						
E54A	Lac Daplat, Po	74.54	353	P	P	14 50 39.4	-0.1
	baz=170						
E53A	Dumoine, Ponti	74.54	352	P	P	14 50 39.3	-0.3
	baz=170						
F49A	Sandfield	74.57	349	P	P	14 50 39.3	-0.4
	baz=166						
W18A	Petrified Fore	74.60	325	P	P	14 50 39.0	-1.4
	baz=142						
SDCO	Great Sand Dun	74.65	329	eP	P	14 50 41.8	+1.0
	comp=E,3.7nm,1.3s						
SDCO	Great Sand Dun	74.65	329	P	P	14 50 42.2	+1.4
	baz=145,SNR=5.6						
G46A	Petoskey	74.66	347	P	P	14 50 40.3	0.0
	baz=164						
F48A	Evansville	74.73	349	P	P	14 50 40.5	-0.1
	baz=166						
BGNE	Belgrade	74.77	336	eP	P	14 50 41.6	+0.6
	comp=E,32nm,0.8s						
BGNE	Belgrade	74.77	336	P	P	14 50 41.3	+0.2
	baz=152						
E51A	G1948 Merrick	74.93	351	P	P	14 50 41.9	+0.1
	baz=168						
X16A	Lo Mia Camp, P	74.95	323	eP	P	14 50 44.0	+1.5
	comp=E,9.3nm,1.3s						
E50A	Wahnapitae	75.00	350	P	P	14 50 42.1	-0.1
	baz=167						
D52A	ZEK Kipawa Sen	75.22	352	P	P	14 50 43.2	-0.2
	baz=169						
D53A	Lac Vacive, Po	75.23	352	P	P	14 50 44.1	+0.6
	baz=170						
S22A	4UR Ranch, Cre	75.26	328	P	P	14 50 45.1	+0.7
	baz=144						
E48A	Lockeyer	75.28	349	P	P	14 50 43.5	-0.3
	baz=166						
Y14A	Wickenburg	75.44	322	eP	P	14 50 46.3	+1.2
	comp=E,3.0nm,0.8s						
E47A	Iron Bridge	75.45	348	P	P	14 50 44.5	-0.2
	baz=165						
Q24A	Divide	75.49	330	P	P	14 50 46.8	+1.2
	baz=146						
E46A	Sault Ste Mari	75.56	348	P	P	14 50 45.1	-0.2
	baz=164						
MVCO	Mesa Verde	75.63	327	P	P	14 50 47.6	+1.3
	baz=143						
WUAZ	Wupatki	75.76	324	eP	P	14 50 48.7	+1.7
	comp=E,7.2nm,0.9s						
WUAZ	Wupatki	75.76	324	P	P	14 50 48.2	+1.2
	baz=140						
GLA	Glamis	75.80	320	P	P	14 50 48.2	+1.0
	baz=137						
G40A	Rib Lake	75.83	343	P	P	14 50 48.1	+1.1
	baz=159						
D48A	Paudash Townsh	75.90	350	P	P	14 50 48.1	+0.8
	baz=166						
D49A	Beulah Townshi	75.92	350	P	P	14 50 47.4	-0.1
	baz=167						
D47A	Chapleau	76.00	349	P	P	14 50 47.6	-0.3
	baz=165						
G39A	Holcombe	76.10	343	P	P	14 50 48.0	-0.5
	baz=158						
E43A	Lone Tree Farm	76.11	346	P	P	14 50 49.2	+0.6
	baz=162						
IKP	In-Ko-Pah, Jac	76.24	319	P	P	14 50 51.0	+1.3
	baz=136						
ECSD	EROS Data Cent	76.30	338	eP	P	14 50 49.5	-0.2
	comp=E,8.2nm,0.9s						
ECSD	EROS Data Cent	76.30	338	P	P	14 50 49.8	+0.1
	baz=153						
ISCO	Idaho Springs	76.39	330	eP	P	14 50 51.6	+1.0
	comp=E,2.5nm,0.8s						
ISCO	Idaho Springs	76.39	330	P	P	14 50 51.5	+0.9
	baz=145						
F40A	Park Falls	76.42	344	P	P	14 50 51.1	+0.8
	baz=159						
SMCO	Snowmass	76.49	329	eP	P	14 50 52.8	+1.4
	comp=E,3.3nm,0.7s						
BC3	Big Chuckawall	76.59	320	P	P	14 50 53.0	+1.3
	baz=137						
MONP2	Monument Peak	76.60	319	P	P	14 50 53.2	+1.3
	baz=136						
F39A	Loretta	76.62	343	P	P	14 50 51.5	+0.1
	baz=158						
W13A	Hualapai Mount	76.78	322	eP	P	14 50 54.5	+1.6
	comp=E,3.1nm,0.8s						
IRM	Iron Mountain	76.79	321	P	P	14 50 54.3	+1.6
	baz=137						
F37A	Hinrichs Farm,	76.90	342	P	P	14 50 53.6	+0.6
	baz=157						
F38A	Pierce - Schro	76.91	342	P	P	14 50 53.0	0.0
	baz=157						
U15A	North Rim	76.93	324	eP	P	14 50 55.3	+1.6
	comp=E,4.2nm,0.9s						
LSQQ	Lebel-sur-Quev	77.11	353	P	P	14 50 54.1	+0.1
	baz=171						
D41A	Chassel	77.11	345	P	P	14 50 54.6	+0.5
	baz=160						
PFO	Pinyon Flats O	77.14	319	P	P	14 50 56.3	+1.5
	baz=136						
BELC	Belle Mtn. Jos	77.16	320	P	P	14 50 55.9	+1.1
	baz=137						
GMRC	Granite Mounta	77.53	321	P	P	14 50 58.6	+1.6
	baz=137						
MURC	Murrieta	77.56	319	P	P	14 50 58.5	+1.5
	baz=136						
KNB	Kanab	77.66	324	eP	P	14 50 59.4	+1.7
	comp=E,8.2nm,0.9s						
O20A	White River Ci	77.84	329	eP	P	14 51 00.2	+1.7
	comp=E,7.2nm,0.9s						
O20A	White River Ci	77.84	329	P	P	14 51 00.1	+1.5
	baz=143						
TORD	Torodi Ar. Bea	77.85	68	P	P	14 50 58.9	-0.1
	comp=E,1.2nm,0.5s,baz=284,slow=6.3,SNR=13						
TORD				pP	pP	14 51 40.8	+1.0
	comp=E,1.0nm,0.8s,baz=224,slow=5.5,SNR=2.9						
TOA1	Torodi Ar. Sit	77.85	68	eP	P	14 50 58.9	-0.1
TOA1				epP	pP	14 51 40.8	+1.0
HEC	Hector,Ludlow	77.95	320	P	P	14 51 00.6	+1.4
	baz=137						
SRU	San Rafael Swe	78.11	327	eP	P	14 51 01.1	+1.0
	comp=E,4.5nm,0.9s						
MTPU	Mount Pierson	78.11	325	eP	P	14 51 01.7	+1.4
	comp=E,3.0nm,0.8s						
TUQ	Turquoise Moun	78.16	321	P	P	14 51 01.7	+1.3
	baz=137						
BFSC	Mount Baldy Ra	78.28	319	P	P	14 51 02.6	+1.5
	baz=136						
CCUT	Cedar City	78.34	324	eP	P	14 51 03.5	+2.1
	comp=E,4.4nm,0.8s						
MSU	Marysvale	78.46	325	eP	P	14 51 03.5	+1.4
P17A	Butcher Ranch,	78.50	327	eP	P	14 51 03.5	+1.3
	comp=E,5.6nm,1.1s						
GSC	Goldstone, Bar	78.56	320	P	P	14 51 04.0	+1.4
	baz=136						
RWWY	Rawlins	78.63	330	eP	P	14 51 04.3	+1.3
	comp=E,11nm,1.0s						
BOSA	Boshof	78.88	116	P	P	14 51 05.1	+0.5
	comp=E,2.9nm,0.5s,baz=278,slow=3.9,SNR=8.6						
BOSA				pP	pP	14 51 44.8	-0.7
	comp=E,1.3nm,0.6s,baz=266,slow=4.9,SNR=1.5						
EDW2	Edwards Air Fo	78.93	319	P	P	14 51 05.6	+1.1
	baz=136						
K22A	Casper	79.11	331	P	P	14 51 06.8	+1.3
	baz=145						
LRMC	Laurel Mtn Rad	79.18	320	P	P	14 51 07.6	+1.6
	baz=136						
RSSD	Black Hills	79.31	334	P	P	14 51 07.3	+0.7
	baz=147						
PSUT	Pine Spring	79.34	324	eP	P	14 51 08.3	+1.4
	comp=E,3.3nm,0.8s						
TPNV	Topopah Spring	79.44	322	P	P	14 51 08.9	+1.5
	baz=137						
JLU	Jordanelle	79.71	327	eP	P	14 51 09.7	+0.8
	comp=E,3.0nm,0.6s						
PKM	Mcpherson Peak	80.00	318	P	P	14 51 12.0	+1.5
	baz=134						
DUG	Dugway, Tooele	80.07	326	P	P	14 51 11.7	+1.1
	baz=140						
CWC	Cottonwood Cre	80.09	320	P	P	14 51 12.2	+1.3
	baz=136						
R11A	Troy Canyon, C	80.11	323	P	P	14 51 12.3	+1.3
	baz=138						
AGMN	Agassiz Nation	80.16	341	eP	P	14 51 10.8	+0.1
	comp=E,7.1nm,0.8s						
AGMN	Agassiz Nation	80.16	341	P	P	14 51 11.1	+0.4
	baz=154						
BW06	Boulder Array	80.53	330	eP	P	14 51 12.7	-0.5
	comp=E,17nm,1.9s						
BW06	Boulder Array	80.53	330	P	P	14 51 13.9	+0.7
	baz=143						
PD31	Pinedale Array	80.53	330	eP	P	14 51 13.9	+0.7
	comp=E,1.1nm,0.8s						
PDAR	Pinedale Array	80.53	330	P	P	14 51 13.9	+0.7
	comp=E,1.6nm,0.8s,baz=119,slow=7.3,SNR=12						
LBTB	Lobatse	80.72	113	P	P	14 51 15.2	+0.6
	comp=E,3.1nm,0.5s,baz=237,slow=6.5,SNR=7.5						
LBTB	Lobatse	80.72	113	eP	P	14 51 15.2	+0.6
	comp=E,160nm,0.4s						
HVU	Hansel Valley	81.26	327	eP	P	14 51 17.6	+0.7
	comp=E,3.6nm,0.7s						
NV01	Mina Array Sit	81.63	322	eP	P	14 51 19.6	+0.4
NVAR	Mina Array Bea	81.63	322	P	P	14 51 19.6	+0.4
	comp=E,0.4nm,0.7s,baz=147,slow=8.5,SNR=3.8						
ELK	Elko	81.70	325	eP	P	14 51 20.4	+1.0
	comp=E,3.5nm,1.1s						
FXWY	Fox Creek	81.88	329	eP	P	14 51 21.2	+0.9
	comp=E,1.6nm,0.8s						
ULM	Lac du Bonnet	81.92	342	P	P	14 51 19.9	-0.2
	comp=E,2.9nm,0.6s,baz=164,slow=7.5,SNR=3.6						
IMW	Indian Meadow	82.04	329	eP	P	14 51 22.1	+0.8
	comp=E,3.3nm,0.8s						
RLMT	Red Lodge	82.28	331	eP	P	14 51 23.0	+0.7
	comp=E,3.3nm,0.7s						
RLMT	Red Lodge	82.28	331	P	P	14 51 23.4	+1.1
	baz=143						
LAO	LASA Array	82.31	334	P	P	14 51 23.6	+1.4
	baz=146						
YHH	Holmes Hill	82.70	330	eP	P	14 51 25.3	+0.7
	comp=E,5.0nm,0.9s						
DGMT	Dagmar	83.03	336	eP	P	14 51 26.8	+0.9
	comp=E,11nm,0.8s						
DGMT	Dagmar	83.03	336	P	P	14 51 27.0	+1.1
	baz=147						
PAHR	Pah Rah Range	83.13	322	eP	P	14 51 27.3	+0.6
	comp=E,6.3nm,1.2s						
HLID	Hailey	83.40	327	eP	P	14 51 29.2	+1.2
	comp=E,3.8nm,0.8s						
HLID	Hailey	83.40	327	P	P	14 51 29.5	+1.5
	baz=139						
MCMT	McKenzie Canyo	83.63	329	eP	P	14 51 30.7	+1.4
BOZ	Bozeman (W)	83.68	330	P	P	14 51 30.2	+0.8
	baz=141						
EGMT	Eagleton	84.79	333	P	P	14 51 35.2	+0.3
	baz=143						
MATP	Matopo	85.19	110	P	P	14 51 38.4	+0.7
	comp=E,1.2nm,0.8s,baz=248,slow=5.4,SNR=3.1						
J08A	Circle Bar Ran	85.25	325	eP	P	14 51 38.1	+0.8
	comp=E,8.6nm,1.1s						
F10A	Beach Ranch, E	86.53	327	eP	P	14 51 44.1	+0.6
	comp=E,2.6nm,0.8s						
PINE	Pine Mountain	86.83	324	eP	P	14 51 45.8	+0.7
	comp=E,6.1nm,0.9s						
WALA	Waterton Lakes	87.33	331	eP	P	14 51 48.1	+0.8
	comp=E,6.1nm,0.8s						
I05D	Terrebonne, OR	87.41	324	P	P	14 51 49.1	+1.4
	baz=134						
YKA	Yellowknife Ar	97.78	340	P	Pdif	14 52 35.3	+0.2
	comp=E,0.5nm,0.6s,baz=136,slow=4.0,SNR=6.7						
YKB5	Yellowknife Ar	97.78	340	eP	Pdif	14 52 35.3	+0.2
ASAR	Alice Springs	125.00	203	PKP	PKPdf	14 58 00.5	0.0
	comp=E,1.5nm,0.6s,baz=132,slow=1.7,SNR=21						
ASAR				pPKP	pPKPdf	14 58 43.5	-0.8
	comp=E,0.4nm,0.5s,baz=128,slow=1.7,SNR=3.1						
AS31	Alice Springs	125.00	203	ePKPdf	PKPdf	14 58 00.5	0.0
AS31				epPKPdf	pPKPdf	14 58 43.5	-0.8
WR1	Warramunga Arr	128.24	206	ePKPdf	PKPdf	14 58 06.6	-0.1
WR1				epPKPdf	pPKPdf	14 58 49.9	-0.6
WRA	Warramunga Arr	128.24	206	PKP	PKPdf	14 58 06.6	-0.1
	comp=E,1.4nm,0.4s,baz=190,slow=2.5,SNR=9.3						
WRA				pPKP	pPKPdf	14 58 49.9	-0.6
	comp=E,0.7nm,0.5s,baz=193,slow=2.6,SNR=1.7						
PEA1	Petropavlovsk-	138.71	320	ePKPdf	PKiKP	14 58 26.9	-0.5
PETK	Petropavlovsk-	138.71	320	PKP	PKiKP	14 58 26.9	-0.5
	comp=E,2.0nm,0.8s,baz=72,slow=5.0,SNR=3.9						
ZAA1	Zalesovo Array	146.68	31	ePKPbc	PKPbc	14 58 40.5	-0.6
ZAA1				e		14 59 23.4	
ZALV	Zalesovo Beam	146.68	31	PKPbc	PKPbc	14 58 40.5	-0.6
	comp=E,13nm,0.8s,baz=306,slow=3.6,SNR=22						
ZALV				pPKPbc	pPKPdf	14 59 23.4	+0.2
	comp=E,3.2nm,0.7s,baz=292,slow=3.4,SNR=3.0						
KSH	Kashi	147.17	60	ePKPbc	PKPdf	14 58 39.4	-1.3
KSH				pPKP	pPKPdf	14 59 20.6	-4.1
KSH				sPKP		14 59 39.2	
KSH				PP	PP	15 02 10.5	+0.4
KSH				PKS	PKSdf	15 02 13.5	-2.5
KSH				LR	LR		
	comp=N,200nm,10.3s						
KSH				LR	LR		
	comp=E,120nm,5.9s						
MK32	Makanchi Array	149.31	44	ePKPbc	PKiKP	14 58 49.1	-0.4
MK32				e		14 59 30.9	
MKAR	Makanchi Array	149.31	44	PKPbc	PKiKP	14 58 49.1	-0.4
	comp=E,4.8nm,0.7s,baz=300,slow=2.9,SNR=35						
MKAR				pPKPbc	pPKPbc	14 59 30.9	-1.0
	comp=E,2.5nm,0.7s,baz=307,slow=2.5,SNR=5.8						
MJAR	Matsushiro Arr	157.15	299	PKPab	PKPab	14 59 27.9	+0.8
	comp=E,1.6nm,0.7s,baz=82,slow=4.7,SNR=6.3						
MAJO	Matsushiro	157.15	299	ePKPab	PKPab	14 59 27.9	+0.8
SONA0	Songino Array	159.38	13	ePKPdf	PKPdf	14 58 58.5	+0.6
SONA0				ePKPab	PKPab	14 59 37.2	+0.9
SONM	Songino Array	159.38	13	PKP	PKPdf	14 58 58.5	+0.6
	comp=E,0.9nm,0.9s,baz=347,slow=1.9,SNR=4.4						
SONM				PKPab	PKPab	14 59 37.2	+0.9
	comp=E,0.7nm,0.7s,baz=348,slow=6.1,SNR=3.0						
KSRS	Korea Array	164.33	311	PKPab	PKPab	14 59 58.5	+0.3
	comp=E,1.0nm,0.8s,baz=42,slow=5.6,SNR=3.7						
KS15	Wonju Array Si	164.36	311	ePKPab	PKPab	14 59 58.5	+0.1
LZH	Lanzhou	168.62	42	ePKP	PKPdf	14 59 06.5	-0.2
LZH				pPKP	pPKPdf	14 59 48.8	-2.1
LZH				sPKP		15 00 09.3	

BJI ***07*** *14:52:11.8±0.0, 26°.37S×30°.49E, h8km, mb4.7/10, mB5.1/7*

ISCJB ***07*** *14:52:13.8±0.3, 25°.71S±0°.05×30°.47E±0°.04, h10km, mb4.4/23, Error ellipse: s-maj=7.8km s-min=3.8km az=149.0*

IDC ***07*** *14:52:14.2±0.7, 25°.61S×30°.51E, h0km, mb4.1/13, mb1 4.3/18, mb1mx4.1/34, mbtmp4.2/18, ML3.5/4, MS3.1/5, Ms1 3.0/5, ms1mx2.8/28, Error ellipse: s-maj=17.9km s-min=16.4km az=137.0*

NEIC ***07*** *14:52:14.6±2.4, 25°.64S×30°.58E, h5km±1km, mb4.6/11, Error ellipse: s-maj=13.0km s-min=11.0km az=124.0*

NEIC Felt [IV] at Nelspruit. Also felt at Ermelo, White River and Witbank. Felt at Mbabane, Swaziland.

EAF ***07*** *14:52:16.0±2.6, 25°.67S×30°.42E, h10km, MD4.0*

PRE ***07*** *14:52:16.5±1.6, 25°.98S×30°.45E, h5km, ML4.0*

BUL ***07*** *14:52:17.6±1.8, 25°.68S×30°.41E, h10km, MD4.5*

ISC 07 14:52:15.1±0.5**, 25°.70S**±0°.04×**30°.31E**±0°.05**, h10km, n114, σ2s.02**/135**, mb4.4**/23**, 9C-1D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERPM	east rand prop	1.97	251	eP	Pg	14 52 52.9	-0.1
ERPM				eS	Sb	14 53 17.2	+1.2
ERPM				AML	AML	14 53 22.6	
	comp=Z,1µm,0.5s						
KLOF	Kloof	2.52	255	eP	Pb	14 53 00.1	-0.4
KLOF				eS	Sb	14 53 31.6	0.0
KLOF				AML	AML	14 53 42.2	
	comp=Z,3µm,0.3s						
WDLM	Western Deep L	2.70	254	eP	Pb	14 53 02.6	-1.1
WDLM				eS	Sb	14 53 35.4	-1.5
WDLM				AML	AML	14 53 51.2	
	comp=Z,2µm,0.3s						
PRYS	Parys	2.92	245	eP	Pn	14 53 04.8	+3.0
PRYS				eS	Sn	14 53 38.1	+1.1
PRYS				AML	AML	14 53 56.2	
	comp=Z,1µm,0.5s						
KSR	Koster	3.08	266	eP	Pb	14 53 08.7	-1.5
KSR				eS	Sb	14 53 45.7	-2.3
KSR				AML	AML	14 54 04.3	
	comp=Z,381nm,0.7s						
MSNA	Messina	3.35	355	i P	Pn	14 53 08.2	+0.6
MSNA	Messina	3.35	355	eP	Pn	14 53 08.0	+0.4
MSNA				eS	Sb	14 53 53.4	-2.2
MSNA				AML	AML	14 54 03.5	
	comp=Z,882nm,0.5s						
MSNA	Messina	3.35	355	i P	Pn	14 53 08.2	+0.6
MSNA	Messina	3.35	355	i P	Pn	14 53 08.2	+0.6
LBTB	Lobatse	4.32	278	Pn	Pn	14 53 25.1	+4.1
	comp=Z,3.9nm,0.3s,baz=70,slow=11,SNR=42						
LBTB				Pg	Pg	14 53 36.2	-1.8
	comp=Z,18nm,0.3s,baz=98,slow=17,SNR=21						
LBTB				Sn	Sn	14 54 16.6	+5.1
	comp=Z,48nm,0.3s,baz=95,slow=15,SNR=4.5						
LBTB				Lg	Lg	14 54 32.6	
	comp=Z,47nm,0.3s,baz=180,slow=13,SNR=11						
LBTB	Lobatse	4.32	278	eP	Pn	14 53 24.6	+3.5
LBTB				eS	Sn	14 54 16.4	+4.8
LBTB				AML	AML	14 54 50.6	
	comp=Z,464nm,0.5s						
SWZ	Schweizer	4.70	251	eP	Pn	14 53 29.9	+3.6
SWZ				eS	Sn	14 54 23.3	+2.3
SWZ				AML	AML	14 54 49.0	
	comp=Z,608nm,0.5s						
BOSA	Boshof	5.36	236	i P	Pn	14 53 37.0	+1.7
BOSA				i S	Sn	14 54 36.0	-1.1
BOSA	Boshof	5.36	236	Pn	Pn	14 53 37.0	+1.7
	comp=Z,3.3nm,0.3s,baz=56,slow=12,SNR=41						
BOSA				Pg	Pg	14 53 55.8	-2.0
	comp=Z,10nm,0.3s,baz=66,slow=17,SNR=14						
BOSA				Sn	Sn	14 54 36.6	-0.5
	comp=Z,28nm,0.3s,baz=83,slow=14,SNR=5.2						
BOSA				Lg	Lg	14 55 04.8	
	comp=Z,91nm,0.3s,baz=139,slow=22,SNR=8.5						
BOSA				LR	LR	14 56 04.8	
	comp=Z,192nm,19.5s,baz=50,slow=42						
BOSA	Boshof	5.36	236	ePn	Pn	14 53 36.7	+1.4
BOSA	Boshof	5.36	236	eP	Pn	14 53 37.3	+2.0
BOSA				eS	Sn	14 54 36.2	-1.0
BOSA				AML	AML	14 55 17.6	
	comp=Z,305nm,0.5s						
BOSA	Boshof	5.36	236	i P	Pn	14 53 37.0	+1.7
BOSA				i S	Sn	14 54 36.0	-1.1
BOSA	Boshof	5.36	236	i P	Pn	14 53 37.0	+1.7
BOSA				i S	Sn	14 54 36.0	-1.1
MATP	Matopo	5.51	342	i P	Pn	14 53 38.3	+0.9
MATP	Matopo	5.51	342	Pn	Pn	14 53 37.8	+0.4
	comp=Z,4.0nm,0.3s,baz=158,slow=11,SNR=58						
MATP				Pg	Pb	14 53 54.3	+2.7
	comp=Z,6.7nm,0.3s,baz=143,slow=16,SNR=8.3						
MATP				Lg	Lg	14 55 05.5	
	comp=Z,122nm,0.3s,baz=74,slow=20,SNR=19						
MATP				LR	LR	14 55 07.2	
	comp=Z,83nm,18.4s,baz=167,slow=32						
MATP	Matopo	5.51	342	i P	Pn	14 53 38.3	+0.9
MATP	Matopo	5.51	342	i P	Pn	14 53 38.3	+0.9
BLWY	Bulawayo	5.75	344	i P	Pn	14 53 41.0	+0.3
BLWY				i S	Sn	14 54 43.2	-3.7
BLWY	Bulawayo	5.75	344	i P	Pn	14 53 41.0	+0.3
BLWY				i S	Sn	14 54 43.2	-3.7
BLWY	Bulawayo	5.75	344	i P	Pn	14 53 41.0	+0.3
BLWY				i S	Sn	14 54 43.2	-3.7
SOE	Somerset East	8.12	210	eP	Pn	14 54 14.9	+1.7
SOE				eS	Sn	14 55 39.2	-6.0
SOE				AML	AML	14 56 13.1	
	comp=Z,58nm,0.6s						
UPI	Upington	8.50	250	eP	Pn	14 54 21.6	+3.1
UPI				eS	Sn	14 55 52.6	-2.0
UPI				AML	AML	14 55 56.4	
	comp=Z,95nm,0.4s						
KEIM	Keimoes	8.84	248	eP	Pn	14 54 26.2	+3.2
KEIM				eS	Sn	14 56 00.7	-2.2
KEIM				AML	AML	14 56 05.6	
	comp=Z,115nm,0.6s						
BUFB	Buffelsbos	9.71	209	eP	Pn	14 54 35.0	+0.2
BUFB				eS	Sn	14 56 16.2	-7.8
BUFB				AML	AML	14 56 27.8	
	comp=Z,30nm,0.5s						
LSZ	Lusaka	10.56	349	i P	Pn	14 54 43.4	-3.3
LSZ				i S	Sn	14 56 32.4	-13
LSZ	Lusaka	10.56	349	Pn	Pn	14 54 45.2	-1.5
	comp=Z,4.2nm,0.3s,baz=166,slow=12,SNR=46						
LSZ				Sn	Sn	14 56 37.9	-7.3
	comp=Z,4.2nm,0.3s,baz=86,slow=2.7,SNR=6.7						
LSZ				Lg	Lg	14 57 41.9	
	comp=Z,10nm,0.3s,baz=84,slow=23,SNR=10						
LSZ				LR	LR	14 58 01.7	
	comp=Z,74nm,21.1s,baz=132,slow=33						
LSZ	Lusaka	10.56	349	i P	Pn	14 54 43.4	-3.3
LSZ				i S	Sn	14 56 32.4	-13
LSZ	Lusaka	10.56	349	i P	Pn	14 54 43.4	-3.3
LSZ				i S	Sn	14 56 32.4	-13
SUR	Sutherland	10.65	229	ePn	Pn	14 54 50.0	+2.0
KOMG	Komaggas	12.07	247	eP	Pn	14 55 09.5	+2.2
KOMG				eS	Sn	14 57 18.9	-3.1
KOMG				AML	AML	14 57 42.6	
	comp=Z,33nm,0.5s						
WIN	Windhoek	12.46	282	ePn	Pn	14 55 14.8	+2.0
TSUM	Tsumeb	13.43	296	i P	Pn	14 55 26.5	+0.5
TSUM	Tsumeb	13.43	296	Pn	Pn	14 55 25.9	0.0
	comp=Z,2.0nm,0.3s,baz=126,slow=12,SNR=29						
TSUM				Sn	Sn	14 57 53.8	-1.6
	comp=Z,0.3nm,0.3s,baz=105,slow=21,SNR=3.0						
TSUM				Lg	Lg	14 59 21.7	
	comp=Z,0.7nm,0.3s,baz=236,slow=22,SNR=4.3						
TSUM				LR	LR	15 00 53.7	
	comp=Z,140nm,19.2s,baz=146,slow=38						
TSUM	Tsumeb	13.43	296	ePn	Pn	14 55 26.3	+0.4
TSUM	Tsumeb	13.43	296	i P	Pn	14 55 26.5	+0.5
TSUM	Tsumeb	13.43	296	i P	Pn	14 55 26.5	+0.5
OPO	Ambohidratompo	17.16	69	LR	LR	15 03 21.4	
	comp=Z,54nm,18.2s,baz=41,slow=39						
DBIC	Dimbokro	46.94	308	P	P	15 00 46.9	+0.6
	comp=Z,3.8nm,0.8s,baz=150,slow=8.1,SNR=3.4						
DBIC	Dimbokro	46.94	308	eP	P	15 00 46.9	+0.6
	comp=Z,61nm,2.0s						
TOA0	Torodi Ar. Sit	47.62	321	eP	P	15 00 52.0	+0.4
	comp=Z,6.9nm,0.6s						
TORD	Torodi Ar. Bea	47.62	321	P	P	15 00 52.1	+0.5
	comp=Z,5.9nm,0.6s,baz=136,slow=6.5,SNR=36						
TOA1	Torodi Ar. Sit	47.63	321	eP	P	15 00 52.1	+0.4
SNAA	Sanae	49.60	193	P	P	15 01 10.7	+4.4
SNAA	Sanae	49.60	193	P	P	15 01 08.0	+1.8
	comp=Z,1.2nm,0.8s,baz=24,slow=10.0,SNR=4.8						
SNAA	Sanae	49.60	193	eP	P	15 01 08.0	+1.8
	comp=Z,5.5nm,1.3s						
BR101	Keskin Array S	65.16	3	eP	P	15 02 56.9	+0.5
BRTR	Keskin Array B	65.16	3	P	P	15 02 56.9	+0.5
	comp=Z,1.1nm,0.8s,baz=173,slow=7.4,SNR=6.4						
CFR	Carcaliu	70.56	358	⇑iP	P	15 03 31.4	+1.3
ARR	Arges	70.92	356	⇑iP	P	15 03 33.6	+1.2
MLR	Muntele Rosu	70.96	357	eP	P	15 03 34.0	+1.3
	comp=Z,17nm,1.6s						
MLR	Muntele Rosu	70.96	357	⇑iP	P	15 03 34.2	+1.5
LOT	Lotru	71.06	355	⇑iP	P	15 03 34.7	+1.4
BANR	Banloc	71.23	353	⇑iP	P	15 03 41.7	+7.5
PLOR	Plostina	71.29	357	⇑iP	P	15 03 35.8	+1.2
VRI	Vrincioaia	71.30	357	⇑iP	P	15 03 36.0	+1.4
BZS	Buzias	71.42	354	⇑iP	P	15 03 36.8	+1.5
BIZ	Bicaz	72.40	357	⇓iP	P	15 03 42.6	+1.4
ESDC	Sonseca Array	72.48	333	P	P	15 03 42.7	+0.8
	comp=Z,2.1nm,0.7s,baz=151,slow=5.4,SNR=13						
DRGR		72.48	355	⇑iP	P	15 03 43.5	+1.7
BDFB	Brasilia	73.06	261	P	P	15 03 47.9	+1.8
	comp=Z,3.2nm,0.8s,baz=107,slow=7.5,SNR=3.5						
BUR08	Bucovina Ar. S	73.15	356	eP	P	15 03 47.1	+1.4
	comp=Z,3.4nm,1.0s						
GEC2	GERESS Array S	75.68	349	eP	P	15 04 01.9	+1.4
	comp=Z,2.4nm,0.9s						
GERES	GERESS Array B	75.68	349	P	P	15 04 01.9	+1.4
	comp=Z,1.0nm,0.6s,baz=160,slow=5.5,SNR=10						
AKASG	Malin Array Be	76.07	359	P	P	15 04 02.5	0.0
	comp=Z,0.9nm,0.5s,baz=181,slow=5.3,SNR=4.2						

AKBB	**Malin Array Si**	**76.07**	**359**	*e*P	**P**	**15 04 02.5**	**0.0**
	comp=Z,15nm,1.8s						
KSH	**Kashi**	**77.62**	**34**	*e*P	**P**	**15 04 10.5**	**-1.2**
KSH				PcP	**PcP**	**15 04 21.4**	**-0.5**
KK31	**Karatay Array**	**77.82**	**29**	*e*P	**P**	**15 04 11.5**	**-1.1**
	comp=Z,5.1nm,0.9s						
KKAR	**Karatay Array**	**77.82**	**29**	*e*P	**P**	**15 04 12.6**	**0.0**
	comp=Z,5.1nm,0.9s						
CM31	**Chiang Mai Arr**	**79.84**	**64**	*e*P	**P**	**15 04 23.0**	**-1.3**
	comp=Z,17nm,1.9s						
CMAR	**Chiang Mai Arr**	**79.84**	**64**	P	**P**	**15 04 23.0**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=232,slow=4.4,SNR=3.3						
MK32	**Makanchi Array**	**86.08**	**33**	*e*P	**P**	**15 04 55.4**	**-0.6**
MKAR	**Makanchi Array**	**86.08**	**33**	P	**P**	**15 04 55.4**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=220,slow=4.8,SNR=7.0						
WMQ	**Urumqi**	**86.88**	**38**	*e*P	**P**	**15 05 00.6**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,87nm,5.3s						
FIA0	**FINESS Array S**	**86.90**	**358**	*e*P	**P**	**15 05 00.3**	**+0.7**
FINES	**FINESS Array B**	**86.90**	**358**	P	**P**	**15 05 00.3**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=132,slow=2.8,SNR=6.1						
LPAZ	**La Paz**	**90.40**	**252**	P	**P**	**15 05 19.3**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=104,slow=8.3,SNR=2.3						
ASAR	**Alice Springs**	**91.27**	**117**	P	**P**	**15 05 21.9**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=229,slow=3.5,SNR=7.2						
AS31	**Alice Springs**	**91.27**	**117**	*e*P	**P**	**15 05 21.9**	**+0.5**
	comp=Z,1.2nm,1.3s						
LZH	**Lanzhou**	**92.62**	**51**	*e*P	**P**	**15 05 27.1**	**-0.3**
LZH				pP	pP	15 05 31.9	+0.6
LZH				sP	sP	15 05 34.2	+1.6
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
HHC	**Hu-ho-hao-te**	**100.19**	**50**	P	**Pdif**	**15 06 03.5**	**+2.0**
NJ2	**Nanjing**	**102.02**	**60**	*e*P	**Pdif**	**15 06 10.6**	**+0.9**
YKA	**Yellowknife Ar**	**136.45**	**337**	PKP	**PKPdf**	**15 11 36.2**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=354,slow=1.2,SNR=3.7						
YKB5	**Yellowknife Ar**	**136.45**	**337**	*e*PKPdf	**PKPdf**	**15 11 36.2**	**-0.4**
TXAR	**Lajitas Array**	**139.22**	**286**	PKhKP	PKPpre	15 11 38.1	
	comp=Z,0.2nm,0.7s,baz=51,slow=5.9,SNR=2.8						
ILAR	**Eielson Array**	**140.89**	**358**	PKP	**PKiKP**	**15 11 46.9**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=313,slow=2.4,SNR=5.1						
ILB	**Eielson Array**	**140.89**	**358**	*e*PKPdf	**PKiKP**	**15 11 46.9**	**-0.5**
PD31	**Pinedale Array**	**143.11**	**308**	*e*PKPpre	PKPpre	15 11 45.8	
PDAR	**Pinedale Array**	**143.11**	**308**	PKhKP	PKPpre	15 11 45.8	
	comp=Z,0.2nm,0.4s,baz=90,slow=3.0,SNR=4.1						
PV01	**Paradox Valley**	**143.25**	**300**	*e*PKPdf	**PKPdf**	**15 11 48.7**	**-1.4**
PV12	**Saucer Basin,**	**143.41**	**300**	*e*PKPdf	**PKPdf**	**15 11 49.2**	**-1.1**
PV13	**Radium Mtn., P**	**143.44**	**300**	*e*PKPdf	**PKPdf**	**15 11 49.2**	**-1.2**
PV03	**Paradox Valley**	**143.45**	**300**	*e*PKPdf	**PKPdf**	**15 11 49.2**	**-1.2**
PV11	**David Mesa, Pa**	**143.46**	**300**	*e*PKPdf	PKPbc	15 11 49.0	+1.3
PV21	**Cone Mtn., Par**	**143.50**	**301**	*e*PKPdf	PKPbc	15 11 49.1	+1.3
PV09	**Paradox Valley**	**143.64**	**301**	*e*PKPdf	**PKPdf**	**15 11 50.0**	**-0.8**
SRU	**San Rafael Swe**	**144.61**	**302**	*e*PKPdf	**PKPdf**	**15 11 52.2**	**-0.2**
P17A	**Butcher Ranch,**	**144.71**	**303**	*e*PKPdf	**PKPdf**	**15 11 52.6**	**+0.1**
TCUT	**Toone Canyon**	**144.85**	**306**	*e*PKPbc	**PKPdf**	**15 11 53.1**	**+0.2**
TMUT	**Trail Mountain**	**145.10**	**302**	*e*PKPbc	**PKPdf**	**15 11 53.5**	**+0.1**
TUC	**Tucson**	**145.49**	**290**	*e*PKPdf	**PKPab**	**15 11 55.2**	**+1.0**
HVU	**Hansel Valley**	**145.67**	**307**	*e*PKPdf	**PKPab**	**15 11 54.8**	**0.0**
WUAZ	**Wupatki**	**145.79**	**296**	*e*PKPbc	**PKPab**	**15 11 56.8**	**+1.4**
MSU	**Marysvale**	**145.99**	**301**	*e*PKPbc	**PKPab**	**15 11 57.4**	**+1.3**
HLID	**Hailey**	**146.27**	**311**	*e*PKPbc	**PKPab**	**15 11 57.0**	**+0.1**
BMO	**Blue Mountains**	**147.69**	**315**	*e*PKPbc	**PKPbc**	**15 12 00.6**	**+0.5**
ELK	**Elko**	**147.75**	**306**	*e*PKPbc	**PKiKP**	**15 12 01.9**	**-0.6**
W13A	**Hualapai Mount**	**147.88**	**296**	*e*PKPbc	**PKiKP**	**15 12 02.7**	**-0.2**
NV01	**Mina Array Sit**	**150.68**	**303**	*e*PKPbc	**PKiKP**	**15 12 09.7**	**+1.0**
NVAR	**Mina Array Bea**	**150.68**	**303**	PKPbc	**PKiKP**	**15 12 09.7**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=84,slow=4.3,SNR=9.6						

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*NDI **07** 14:59:55.3±2.3, 24°.73N×95°.17E, h20^{km}, ML3.5*

ISC 07 14:59:55.3±2.6**, 24°.8N**±0°.1×**95°.13E**±0°.10**, h10**^{km}**, n15, σ2ˢ.10**/23**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOHI	**KOHIMA**	**1.33**	**316**	*e*P	**Pg**	**15 00 23.4**	**+2.5**
KOHI				*e*S	**Sg**	**15 00 40.7**	**+2.6**
KOHI				IAML		15 00 47.8	
	comp=N,636nm,0.2s						
KOHI				IAML		15 00 47.9	
	comp=E,381nm,0.2s						
MOKO	**MOKOCHONG**	**1.65**	**341**	*e*P	**Pb**	**15 00 26.0**	**+0.1**
MOKO				*e*S	**Sn**	**15 00 47.2**	**+1.3**
MOKO				IAML		15 00 53.3	
	comp=E,343nm,0.3s						
MOKO				IAML		15 00 54.2	
	comp=N,242nm,0.2s						
LKP	**Lekhapani**	**2.64**	**14**	*e*P	**Pn**	**15 00 37.1**	**-0.9**
LKP				*e*S	**Sn**	**15 01 07.5**	**-2.6**
LKP				IAML		15 01 12.7	
	comp=N,239nm,0.2s						
LKP				IAML		15 01 12.9	
	comp=E,145nm,0.1s						
TEZP	**TEZPUR**	**2.80**	**312**	*e*P	**Pn**	**15 00 39.7**	**-0.4**
TEZP				*e*S	**Sn**	**15 01 11.4**	**-2.6**
TEZP				IAML		15 01 12.6	
	comp=E,639nm,0.1s						
TEZP				IAML		15 01 14.3	
	comp=N,663nm,0.1s						
ZIRO	**ZIRO**	**2.98**	**338**	*e*P	**Pn**	**15 00 42.8**	**0.0**
ZIRO				*e*S	**Sn**	**15 01 16.1**	**-2.7**
ZIRO				IAML		15 01 20.0	
	comp=E,347nm,0.2s						
ZIRO				IAML		15 01 20.6	
	comp=N,396nm,0.1s						
GUWA	**GUWAHATI**	**3.42**	**295**	*e*P	**Pn**	**15 00 48.2**	**-0.5**
GUWA				*e*S	**Sn**	**15 01 26.0**	**-3.3**
GUWA				IAML		15 01 27.7	
	comp=N,208nm,0.1s						
GUWA				IAML		15 01 28.0	
	comp=E,107nm,0.1s						
TAWA	**Tawang**	**4.07**	**315**	*e*P	**Pn**	**15 00 56.8**	**-1.2**
TAWA				*e*S	**Sn**	**15 01 41.2**	**-4.6**
TURI	**Tura**	**4.42**	**281**	*e*P	**Pn**	**15 01 04.3**	**+1.8**
TURI				*e*S	**Sn**	**15 01 52.9**	**-1.0**
TURI				IAML		15 01 56.1	
	comp=E,139nm,0.1s						
TURI				IAML		15 01 56.2	
	comp=N,172nm,0.1s						
JIRN	**Jiri**	**8.53**	**292**	*e*P	**Pn**	**15 01 59.5**	**+0.2**
	comp=N,26nm,0.4s						
GUN	**Gumba**	**8.87**	**293**	*e*P	**Pn**	**15 02 04.2**	**+0.3**
	comp=N,19nm,0.4s						
PKI	**Pulchoki**	**9.17**	**290**	*e*P	**Pn**	**15 02 06.3**	**-1.7**
	comp=N,4.8nm,0.2s						
PKIN	**Phulchoki**	**9.18**	**290**	*e*P	**Pn**	**15 02 06.4**	**-1.7**
	comp=N,6.2nm,0.2s						
KKN	**Kakani**	**9.34**	**291**	*e*P	**Pn**	**15 02 08.8**	**-1.4**
	comp=N,10nm,0.2s						
DMN	**Daman**	**9.44**	**290**	*e*P	**Pn**	**15 02 09.7**	**-1.9**
	comp=N,5.1nm,0.3s						
GKN	**Gorkha**	**9.94**	**291**	*e*P	**Pn**	**15 02 16.9**	**-1.6**
	comp=N,19nm,0.3s						

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*SJA **07** 15:00:21.2±0.6, 22°.89S×66°.53W, h245^{km}±11^{km}, ML3.5, MW4.0*

*ISCJB **07** 15:00:22.5±0.6, 23°.01S±0°.04×66°.87W±0°.04, h223^{km}±8^{km}, Error ellipse: s-maj=6.6km s-min=4.9km az=136.9*

*NEIC **07** 15:00:22.7±1.9, 23°.02S×66°.94W, h236^{km}±23^{km}, mb4.6/1, ML4.0(GUC), Error ellipse: s-maj=17.7km s-min=12.7km az=97.0*

*GUC **07** 15:00:24.0±0.5, 22°.89S×67°.35W, h255^{km}±9^{km}, ML4.0*

ISC 07 15:00:21.8±1.0**, 22°.99S**±0°.05×**66°.83W**±0°.05**, h229**^{km}±9^{km}**, n31, σ1ˢ.16**/49**, 12C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	**Humahuaca**	**1.32**	**100**	*i* P	**Pn**	**15 00 57.4**	**+0.2**
HJA				IAML		15 00 57.9	
	comp=Z,444nm,0.6s						
YJA	**Yavi**	**1.46**	**56**	*i* P	**Pn**	**15 00 58.5**	**+0.1**
YJA				IAML		15 00 59.5	
	comp=Z,157nm,0.2s						
YJA				*i* S	**S**	**15 01 25.2**	**-1.5**
LVC	**Limon Verde**	**1.96**	**281**	*e*Pn	**Pn**	**15 01 03.6**	**+1.0**
LVC				*e*S	**S**	**15 01 33.3**	**-1.0**
AZAP	**Zapla**	**2.03**	**128**	*i* P	**Pn**	**15 01 03.1**	**0.0**
AZAP				IAML		15 01 03.7	
	comp=Z,191nm,0.2s						
SLA	**San Lorenzo**	**2.11**	**145**	*i* P	**Pn**	**15 01 04.5**	**+0.7**
SLA				IAML		15 01 06.5	
	comp=Z,125nm,0.6s						
PB15	**IPOC Station P**	**2.44**	**264⇑**	*e*P	**Pn**	**15 01 08.6**	**+1.3**
PB15				*e*S	**S**	**15 01 42.5**	**-0.1**
PB09	**IPOC Station P**	**2.53**	**298⇑**	*e*P	**Pn**	**15 01 09.7**	**+1.6**
PB09				*i* S	**S**	**15 01 44.3**	**0.0**
PB09				IAML		15 01 46.0	
	comp=N,154nm,0.3s						
PB06	**IPOC Station P**	**2.55**	**276⇑**	*e*P	**Pn**	**15 01 09.4**	**+1.1**
PB06				*i* S	**S**	**15 01 43.9**	**-0.6**
PB06				IAML		15 01 44.9	
	comp=N,274nm,0.4s						
PB03	**IPOC Station P**	**2.86**	**289⇑**	*i*P	**Pn**	**15 01 12.6**	**+0.9**
PB03				*i* S	**S**	**15 01 49.5**	**-1.2**
PB03				IAML		15 01 52.2	
	comp=E,332nm,0.2s						
PB07	**IPOC Station P**	**3.10**	**293⇑**	*e*P	**Pn**	**15 01 15.3**	**+0.9**
PB07				*i* S	**S**	**15 01 53.9**	**-1.6**
PB07				IAML		15 01 55.4	
	comp=N,347nm,0.2s						
PB05	**IPOC Station P**	**3.12**	**272⇑**	*e*P	**Pn**	**15 01 15.5**	**+1.0**
PB05				*i* S	**S**	**15 01 54.0**	**-1.7**
PB05				IAML		15 02 01.2	
	comp=E,101nm,0.4s						
PB04	**IPOC Station P**	**3.14**	**281**	*e*Pn	**Pn**	**15 01 15.6**	**+0.8**
PB04	**IPOC Station P**	**3.14**	**281⇑**	*e*P	**Pn**	**15 01 15.8**	**+1.0**
PB04				*i* S	**S**	**15 01 55.0**	**-1.3**
PB04				IAML		15 01 59.0	
	comp=N,308nm,0.2s						
PB01	**IPOC Station P**	**3.14**	**308**	*e*Pn	**Pn**	**15 01 15.4**	**+0.7**
PB01	**IPOC Station P**	**3.14**	**308⇑**	*e*P	**Pn**	**15 01 15.5**	**+0.7**
PB01				*i* S	**S**	**15 01 55.2**	**-1.0**
PB01				IAML		15 01 57.0	
	comp=E,301nm,0.3s						
FSA	**Cafayete**	**3.20**	**166**	*i* P	**Pn**	**15 01 16.6**	**+1.1**
FSA				*i* S	**S**	**15 01 58.4**	**+0.7**
PB02	**IPOC Station P**	**3.30**	**300⇑**	*e*P	**Pn**	**15 01 17.2**	**+0.7**
PB02				*i* S	**S**	**15 01 57.6**	**-1.8**
PB02				IAML		15 01 59.5	
	comp=E,312nm,0.3s						
GO02	**Mina Guanaco**	**3.33**	**229**	*e*Pn	**Pn**	**15 01 18.2**	**+1.1**
GO02	**Mina Guanaco**	**3.33**	**229⇑**	*e*P	**Pn**	**15 01 18.3**	**+1.3**
GO02				*e*S	**S**	**15 02 00.8**	**+0.4**
GO02				IAML		15 02 02.2	
	comp=E,427nm,0.3s						
PB10	**IPOC Station P**	**3.47**	**261**	*e*Pn	**Pn**	**15 01 19.4**	**+1.0**
PB10				*e*S	**S**	**15 02 00.9**	**-1.9**
PB08	**IPOC Station P**	**3.57**	**322⇑**	*e*P	**Pn**	**15 01 21.6**	**+1.6**
PB08				*i* S	**S**	**15 02 06.3**	**+0.6**
PB08				IAML		15 02 09.1	
	comp=E,79nm,0.2s						
GO01	**Chusmiza**	**3.98**	**326**	*e*Pn	**Pn**	**15 01 26.0**	**+1.1**
AHML	**Horco Molle**	**4.01**	**161**	*i* P	**Pn**	**15 01 25.6**	**+0.7**
PB11	**IPOC Station P**	**4.16**	**320**	*e*Pn	**Pn**	**15 01 26.6**	**-0.2**
MNMC	**Minye Minye**	**4.63**	**326**	*e*Pn	**Pn**	**15 01 33.1**	**+0.4**
MNMC	**Minye Minye**	**4.63**	**326⇑**	*e*P	**Pn**	**15 01 33.2**	**+0.4**
MNMC				*e*S	**S**	**15 02 27.1**	**-1.6**
GO03	**Copiap**	**5.53**	**213**	*e*Pn	**Pn**	**15 01 43.1**	**-0.4**
GO03				*e*S	**S**	**15 02 45.2**	**-3.3**
LPAZ	**La Paz**	**6.78**	**349**	*e*Pn	**Pn**	**15 02 01.2**	**+1.0**
GO04	**Tololo Observa**	**7.99**	**206**	*e*Pn	**Pn**	**15 02 14.6**	**-0.5**
TRQA	**Tornquist**	**15.58**	**166**	*e*P	**Pn**	**15 03 50.9**	**+1.1**
	comp=E,56nm,2.0s						
LZH	**Lanzhou**	**164.64**	**30**	*e*PKP	**PKPdf**	**15 19 58.4**	**-0.3**
LZH				pPKP	**PKPab**	**15 20 55.0**	**-0.2**
LZH				sPKP		15 21 21.5	

IDC 07 15:05:32.0±8.0**, 30°.57S**×**178°.96W, h0**^{km}**, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.5**/17**, mbtmp3.7**/2**, Error ellipse: s-maj=331.8km s-min=61.1km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.27**	**268**	P	P	15 13 26.2	-1.2
	0.5nm,0.6s,baz=110,slow=7.9,SNR=15						
WRA	**Warramunga Arr**	**43.27**	**273**	P	P	15 13 36.2	+0.5
	0.5nm,0.3s,baz=95,slow=9.3,SNR=2.6						
FINES	**FINESS Array B**	**145.01**	**339**	PKPbc	PKPab	15 25 09.9	0.0
	1.5nm,0.9s,baz=28,slow=4.5,SNR=3.7						

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*DDA **07** 15:17:24.9, 40°.32N×40°.85E, h7^{km}±1^{km}, ML2.8*

*ISCJB **07** 15:17:25.5±0.5, 40°.25N±0°.04×40°.88E±0°.04, h7^{km}, Error ellipse: s-maj=5.6km s-min=4.7km az=11.8*

*ISK **07** 15:17:25.0, 40°.24N×40°.86E, h15^{km}, ML2.5/4*

ISC 07 15:17:24.7±0.9**, 40°.28N**±0°.04×**40°.86E**±0°.03**, h7**^{km}**, n16, σ0ˢ.44**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	**0.38**	**227**	*i* P	**Pb**	**15 17 33.6**	**-0.3**
AKDA	**Akdag**	**0.42**	**114**	*i* P	**Pb**	**15 17 34.6**	**-0.1**
BAYT	**Aydıntepe-Bayb**	**0.56**	**282**	PG	**Pb**	**15 17 36.9**	**0.0**
BAYT				SG	**Sb**	**15 17 45.2**	**0.0**
CHAY	**Cayeli-Rize**	**0.81**	**353**	PG	**Pn**	**15 17 42.2**	**-0.3**
CHAY				SG	**Sn**	**15 17 54.1**	**-0.7**
KOPR	**Koprukoy-ERZUR**	**0.81**	**110**	PG	**Pb**	**15 17 41.1**	**-0.2**
HOMI	**Horasan**	**0.83**	**106**	*i* P	**Pb**	**15 17 41.8**	**+0.1**
HOMI				IAML_P			
	comp=Z,893nm,0.1s						
YEDI	**Yedisu-Bingol**	**0.88**	**196**	PG	**Pg**	**15 17 41.5**	**0.0**
DBAD	**Bademkaya**	**0.97**	**40**	*i* P	**Pn**	**15 17 44.3**	**-0.6**
MACK	**Trabzon**	**1.06**	**309**	*i* P	**Pn**	**15 17 47.0**	**+0.9**
DAGI	**Agillar**	**1.13**	**45**	*i* P	**Pn**	**15 17 46.9**	**-0.1**
DAGI				IAML_P			
	comp=Z,979nm,0.1s						
DBOC	**Borcka**	**1.23**	**30**	*i* P	**Pn**	**15 17 48.4**	**0.0**
KELT	**Kelkit**	**1.23**	**264**	*i* P	**Pn**	**15 17 48.7**	**+0.1**
KELT				IAML_P			
	comp=Z,620nm,0.1s						
BCA	**Borcka**	**1.30**	**26**	PN	**Pg**	**15 17 49.5**	**-0.1**
EATA	**Eleskirt**	**1.32**	**108**	*i* P	**Pg**	**15 17 50.7**	**+0.7**
EATA				IAML_P			
	comp=Z,206nm,0.2s						
BATM	**Batumi**	**1.47**	**25**	PN	**Pb**	**15 17 52.4**	**+0.1**
BATM	**Batumi**	**1.47**	**25**	*i* P	**Pg**	**15 17 53.4**	**+0.6**

IDC 07 15:35:29.6±0.9**, 13°.23N**×**144°.03E, h0**^{km}**, mb3.6**/6**, mb1 3.9**/6**, mb1mx3.6**/26**, mbtmp3.6**/6**, Error ellipse: s-maj=47.9km s-min=21.5km az=105.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.32**	**196**	P	P	15 42 17.3	-0.8
	1.7nm,0.7s,baz=10,slow=7.2,SNR=7.6						
ASAR	**Alice Springs**	**37.99**	**195**	P	P	15 42 49.8	+0.3
	0.4nm,0.5s,baz=18,slow=13,SNR=23						
MKAR	**Makanchi Array**	**61.18**	**316**	P	P	15 45 46.3	+0.2
	0.2nm,0.5s,baz=90,slow=8.5,SNR=2.8						
ILAR	**Eielson Array**	**69.24**	**25**	P	P	15 46 37.2	-0.9
	0.2nm,0.6s,baz=244,slow=5.7,SNR=4.5						
YKA	**Yellowknife Ar**	**83.55**	**27**	P	P	15 47 59.3	-0.1
	0.2nm,0.4s,baz=283,slow=5.1,SNR=2.5						
NVAR	**Mina Array Bea**	**87.78**	**51**	P	P	15 48 22.3	+1.1
	0.4nm,0.7s,baz=266,slow=5.4,SNR=4.0						

MEX 07 15:37:46.2±0.3**, 16°.03N**×**97°.09W, h22**^{km}±5^{km}**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**1.09**	**18**	*i* P	Pn	15 38 03.2	-3.2
VHO				*i* S	Sb	15 38 16.6	-3.8

NDI 07 15:41:29.7±2.1**, 26°.32N**×**93°.33E, h35**^{km}±7^{km}**, ML3.6, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEZP	**TEZPUR**	**0.56**	**301**	*e*P	Pb	15 41 41.6	+0.3
TEZP				*e*S	Sb	15 41 49.6	+0.2
TEZP				IAML		15 41 49.9	
	comp=E,5µm,0.3s						
TEZP				IAML		15 41 50.4	
	comp=N,4µm,0.7s						
KOHI	**KOHIMA**	**0.92**	**131**	*e*P	Pb	15 41 48.8	+1.4
KOHI				*e*x	x	15 42 01.6	
KOHI				IAML		15 42 02.2	
	comp=E,480nm,0.2s						
KOHI				IAML		15 42 03.1	
	comp=N,654nm,0.2s						
JORH	**JORHAT**	**0.92**	**63**	*e*P	Pn	15 41 46.7	+0.6
JORH				*e*S	Sn	15 41 58.7	+0.5
JORH				IAML		15 42 00.7	
	comp=E,3µm,0.2s						
JORH				IAML		15 42 01.4	
	comp=N,1µm,0.0s						
MOKO	**MOKOCHONG**	**1.06**	**90**	*e*P	Pb	15 41 49.9	+0.2
MOKO				*e*S	Sb	15 42 03.9	+0.4
MOKO				IAML		15 42 04.2	
	comp=N,776nm,1.2s						
MOKO				IAML		15 42 05.6	
	comp=E,862nm,0.1s						
ZIRO	**ZIRO**	**1.28**	**21**	*e*P	Pn	15 41 51.5	+0.2
ZIRO				*e*S	Sn	15 42 07.2	-0.2
ZIRO				IAML		15 42 08.8	
	comp=N,1µm,0.3s						
ZIRO				IAML		15 42 08.9	
	comp=E,798nm,0.2s						
GUWA	**GUWAHATI**	**1.48**	**265**	*e*P	Pn	15 41 53.7	-0.1
GUWA				*e*S	Sn	15 42 12.1	+0.2
GUWA				IAML		15 42 13.2	
	comp=N,293nm,0.1s						
GUWA				IAML		15 42 13.3	
	comp=E,276nm,0.7s						
SHL	**Shillong**	**1.51**	**240**	*e*P	Pn	15 41 55.3	+0.9
SHL				*e*S	Sn	15 42 13.7	+0.7
SHL				IAML		15 42 14.7	
	comp=N,669nm,0.2s						
SHL				IAML		15 42 15.1	
	comp=E,775nm,0.3s						
SILR	**SILCHAR**	**1.61**	**197**	*e*S	Sn	15 42 16.2	+1.0
TAWA	**Tawang**	**1.82**	**314**	*e*P	Pn	15 42 00.4	+1.5
TAWA				*e*S	Sn	15 42 20.3	-0.6
TAWA				IAML		15 42 22.7	
	comp=E,900nm,0.2s						
TAWA				IAML		15 42 23.6	
	comp=N,936nm,0.1s						
TURI	**Tura**	**2.81**	**255**	*e*P	Pn	15 42 14.1	+1.9
TURI				*e*S	Sn	15 42 45.7	+0.9
TURI				IAML		15 42 46.9	
	comp=E,495nm,0.2s						
TURI				IAML		15 42 47.8	
	comp=N,760nm,0.1s						

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*TIF **07** 16:32:20.4, 42°.38N×41°.00E, h24^{km}±2^{km}*

*ISK **07** 16:32:20.7, 42°.28N×40°.85E, h19^{km}, ML2.8/1*

*DDA **07** 16:32:36.3, 41°.58N×41°.84E, h7^{km}±3^{km}, ML2.5*

ISC 07 16:32:20.2±1.5**, 42°.38N**±0°.03×**41°.05E**±0°.04**, h7**^{km}±12^{km}**, n21, σ0ˢ.50**/37**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	**Batumi**	**0.91**	**148**	PG	**Pn**	**16 32 39.1**	**-0.4**
BATM				SG	**Sn**	**16 32 52.4**	**-0.4**
BATM	**Batumi**	**0.91**	**148**	P	**Pn**	**16 32 39.3**	**-0.2**
BATM				S	**Sn**	**16 32 52.8**	**-0.1**
BATM	**Batumi**	**0.91**	**148**	*i* P	**Pn**	**16 32 39.2**	**-0.2**
BATM				*i* S	**Sn**	**16 32 52.7**	**-0.1**
BATM	**Batumi**	**0.91**	**148**	*e*Pg	**Pn**	**16 32 39.3**	**-0.2**
BATM				*e*Sg	**Sn**	**16 32 52.8**	**-0.1**
BCA	**Borcka**	**1.02**	**155**	PG	**Pb**	**16 32 40.5**	**+0.2**
BCA				SG	**Sn**	**16 32 54.9**	**-0.8**
DBOC	**Borcka**	**1.13**	**156**	*i* P	**Pn**	**16 32 42.7**	**+0.2**
DBOC				IAML_P			
	comp=Z,4µm,0.1s						
ARXR	**Arkhyz**	**1.20**	**8**	*e*Pg	**Pb**	**16 32 43.4**	**0.0**
ARXR				*e*Sg	**Sg**	**16 32 58.3**	**-0.5**
DBAD	**Bademkaya**	**1.44**	**160**	*i* P	**Pb**	**16 32 47.4**	**-0.1**
DBAD				IAML_P			
	comp=Z,1µm,0.2s						
TKB	**Tkibuli**	**1.44**	**90**	P	**Pn**	**16 32 47.0**	**+0.1**
TKB				S	**Sn**	**16 33 06.0**	**-0.1**
DAGI	**Agillar**	**1.45**	**153**	*i* P	**Pb**	**16 32 47.7**	**0.0**
DAGI				*i* S	**Sn**	**16 33 06.1**	**-0.3**
DAGI				IAML_P			
	comp=Z,380nm,0.1s						
NEY	**Neytrino**	**1.51**	**54**	*e*Pg	**Pn**	**16 32 48.3**	**+0.4**
NEY				*e*Sg	**Sn**	**16 33 06.8**	**-1.2**
EPOS	**Posof**	**1.53**	**124**	*i* P	**Pg**	**16 32 49.7**	**+0.2**
SOC	**Sochi**	**1.55**	**322**	*e*Pg	**Pb**	**16 32 49.1**	**-0.3**
SOC				*i* Sg	**Sb**	**16 33 09.2**	**0.0**
ONI	**Oni**	**1.79**	**82**	PN	**Pb**	**16 32 53.9**	**+0.4**
ONI	**Oni**	**1.79**	**82**	P	**Pb**	**16 32 53.7**	**+0.2**
ONI				S	**Sb**	**16 33 16.9**	**+0.7**
ONI	**Oni**	**1.79**	**82**	*e*Pg	**Pb**	**16 32 53.7**	**+0.2**
ONI				*e*Sg	**Sb**	**16 33 16.9**	**+0.7**
SHA1	**Shidzhatmaz**	**1.80**	**40**	*e*Pg	**Pb**	**16 32 54.7**	**+0.9**
SHA1				*e*Sg	**Sb**	**16 33 16.5**	**-0.2**
LZRR	**Lazarevskoye**	**1.98**	**323**	*e*Pg	**Pb**	**16 32 57.4**	**+0.7**
LZRR				*i* Sg	**Sb**	**16 33 22.8**	**+1.2**
KIV	**Kislovodsk**	**1.98**	**37**	PN	**Pb**	**16 32 56.5**	**-0.3**
KIV0	**Kislovodsk Arr**	**1.99**	**37**	*e*Pg	**Pb**	**16 32 56.6**	**-0.2**
KIV0				*e*Sg	**Sb**	**16 33 21.7**	**-0.2**
LACR	**Lac**	**2.44**	**78**	*e*Pn	**Pg**	**16 33 06.7**	**-0.3**
LACR				*e*Sn	**Sb**	**16 33 35.7**	**+0.7**

IDC 07 17:26:04.6±7.4**, 13°.51S**×**168°.36E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.4**/23**, mbtmp3.5**/2**, Error ellipse: s-maj=446.8km s-min=39.4km az=141.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**34.10**	**248**	P	P	17 32 51.4	+0.1
	0.1nm,0.4s,baz=69,slow=10,SNR=5.3						
ILAR	**Eielson Array**	**85.05**	**18**	P	P	17 38 42.1	+0.3
	0.5nm,0.6s,baz=231,slow=5.7,SNR=6.4						
ARCES	**ARCESS Array B**	**119.34**	**346**	PKP	PKPdf	17 44 54.8	-0.7
	3.6nm,1.1s,baz=68,slow=1.9,SNR=6.7						

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*IDC **07** 17:57:19.9±2.1, 10°.63N×126°.55E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.5/46, mbtmp3.8/5, MS2.7/1, Ms1 2.7/1, ms1mx2.1/40, Error ellipse: s-maj=251.5km s-min=21.0km az=67.0*

*MAN **07** 17:57:19.8, 10°.61N×126°.86E, h34^{km}, MS3.8*

*ISCJB **07** 17:57:20.1±0.4, 10°.60N±0°.04×126°.75E±0°.04, h20^{km}, mb4.1/18, Error ellipse: s-maj=6.9km s-min=4.3km az=142.4*

*NEIC **07** 17:57:25.1±2.8, 10°.74N×127°.08E, h47^{km}±8^{km}, mb4.1/16, Error ellipse: s-maj=15.3km s-min=7.1km az=151.0*

ISC 07 17:57:21.7±0.6**, 10°.60N**±0°.04×**126°.83E**±0°.07**, h20**^{km}**, n35, σ1ˢ.87**/45**, mb4.2**/18**, 1C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**1.69**	**306**	*e*P	**Pn**	**17 57 48.6**	**-1.6**
BESP				*e*S	**Sn**	**17 58 08.3**	**-2.9**
PLP	**Palo**	**1.91**	**287⇑**	*i*P	**Pn**	**17 57 51.0**	**-2.2**
PLP				*i* S	**Sn**	**17 58 12.2**	**-4.4**
OCLP	**Ormoc**	**2.23**	**282**	*e*P	**Pn**	**17 57 56.4**	**-1.2**
OCLP				*e*S	**Sn**	**17 58 21.7**	**-2.9**
LLP	**Lapu-Lapu**	**2.83**	**265**	*e*P	**Pn**	**17 58 04.2**	**-1.7**
LLP				*e*S	**Sn**	**17 58 42.0**	**+2.5**
CNP	**Catarman**	**2.85**	**312**	*e*P	**Pn**	**17 58 04.7**	**-1.4**
CNP				*e*S	**Sn**	**17 58 37.9**	**-1.9**
CGP	**Cagayan de Oro**	**3.00**	**225⇓**	*e*P	**Pn**	**17 58 06.3**	**-1.8**
BUKP	**Musuan**	**3.22**	**213**	*e*P	**Pn**	**17 58 09.4**	**-1.9**
BUKP				*e*S	**Sn**	**17 58 47.8**	**-1.3**
KCP	**Kidapawan**	**3.96**	**206⇓**	*e*P	**Pn**	**17 58 18.2**	**-3.4**
KCP				*i* S	**Sb**	**17 59 18.2**	**-0.4**
PVCP	**Virac**	**3.96**	**319**	*e*P	**Pn**	**17 58 21.2**	**-0.3**
PVCP				*e*S	**Sn**	**17 59 06.9**	**-0.5**
GUIM	**Jordan**	**4.17**	**271**	*e*P	**Pn**	**17 58 23.4**	**-0.9**
GUIM				*e*S	**Sn**	**17 59 11.6**	**-0.9**
TPUB	**Ta-pu**	**13.95**	**336**	*e*Pn	**Pn**	**18 00 41.4**	**+3.0**
SBUM	**Sibu**	**16.61**	**242**	*e*P	**P**	**18 01 19.4**	**+3.3**
	1.2nm,0.5s						
GUMO	**Guam**	**17.88**	**79**	LR	LR	18 07 10.6	
	comp=Z,22nm,19.8s,baz=223,slow=32						
SARN	**Sarigan**	**19.38**	**70**	*e*P	**P**	**18 01 44.2**	**-2.3**
	45nm,1.2s						
JNU	**Nakatsue**	**22.72**	**9**	*e*P	**P**	**18 02 19.7**	**-2.8**
	4.0nm,1.1s						
MTN	**Manton Dam**	**23.68**	**170**	*e*P	**P**	**18 02 34.5**	**+2.2**
	6.8nm,0.9s						
COEN	**Coen**	**29.29**	**146**	*e*P	**P**	**18 03 21.3**	**-1.7**
	11nm,1.1s						
WRAB	**Tennant Creek**	**31.23**	**166**	*e*P	**P**	**18 03 41.0**	**+0.8**

	40nm,0.6s						
WB2	Warramunga Arr	31.24	166	*e*P	P	18 03 37.6	-2.6
	3.2nm,1.1s						
AS31	Alice Springs	34.75	169	*e*P	P	18 04 11.9	+1.0
	0.3nm,0.6s						
ASAR	Alice Springs	34.75	169	P	P	18 04 13.3	+2.4
	0.3nm,0.5s,baz=343,slow=6.7,SNR=8.3						
FORT	Forrest	41.16	178	*e*P	P	18 05 07.0	+2.1
	13nm,1.0s						
EIDS	Eidsvold	42.86	147	*e*P	P	18 05 18.9	+0.1
	5.5nm,1.1s						
BBOO	Buckleboo	44.06	169	*e*P	P	18 05 29.1	+0.7
	6.5nm,1.0s						
NWAO	Narrogin (SRO)	44.24	192	*e*P	P	18 05 30.3	+0.4
	4.4nm,0.9s						
STKA	Stephens Creek	44.54	162	P	P	18 05 33.7	+1.4
	0.9nm,0.7s,baz=339,slow=14,SNR=2.7						
MK31	Makanchi Array	52.10	322	*e*P	P	18 06 29.8	-0.7
	1.0nm,0.9s						
MK32	Makanchi Array	52.10	322	*e*P	P	18 06 30.3	-0.3
MK32				*e*PcP	PcP	18 07 43.1	+0.8
MKAR	Makanchi Array	52.10	322	P	P	18 06 30.3	-0.3
	0.5nm,0.6s,baz=115,slow=8.4,SNR=5.9						
MKAR				PcP	PcP	18 07 43.1	+0.8
	0.5nm,0.6s,baz=120,slow=5.4,SNR=3.8						
MAKZ	Makanchi	52.30	322	*e*P	P	18 06 31.4	-0.6
	1.7nm,1.1s						
ZAA0	Zalesovo Array	54.60	331	*e*P	P	18 06 48.9	+0.1
	1.2nm,0.6s						
ZALV	Zalesovo Beam	54.60	331	P	P	18 06 49.1	+0.4
	1.3nm,0.5s,baz=117,slow=6.8,SNR=5.6						
ZAA1	Zalesovo Array	54.61	331	*e*P	P	18 06 49.1	+0.4
FIA0	FINESS Array S	85.86	332	*e*P	P	18 09 60.0	+0.1
FINES	FINESS Array B	85.86	332	P	P	18 09 60.0	+0.1
	2.7nm,1.0s,baz=114,slow=4.6,SNR=3.4						

IDC ***07*** *18:16:11.1±1.8, 5.°26N×127.°04E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.6/25, mbtmp3.9/5, Error ellipse: s-maj=199.6km s-min=19.8km az=69.0*

MAN ***07*** *18:16:16.8, 4.°80N×126.°33E, h33^{km}, MS3.2*

NEIC ***07*** *18:16:16.4±1.3, 5.°26N×127.°23E, h40^{km}±8^{km}, mb4.3/11, Error ellipse: s-maj=20.3km s-min=13.1km az=83.0*

ISC 07 18:16:17.0±0.7**, 4.°87N**±0.°07×**126.°5E**±0.°1**, h35^{km}, n28, σ1.^{s}91**/34**, mb4.1**/12**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.44	329	*e*P	Pn	18 16 39.9	-0.8
DDMP				*e*S	Sn	18 16 56.6	-1.7
GSPH	General Santos	1.94	309	⇑*i*P	Pn	18 16 48.8	+1.2
MATI	Mati	2.08	354	*e*P	Pn	18 16 51.6	+2.3
MATI				*e*S	Sn	18 17 15.3	+1.3
SKMP	Bagumbayan, Su	2.52	311	*e*P	Pn	18 16 56.6	+1.1
SKMP				*e*S	Sn	18 17 24.8	-0.3
KCP	Kidapawan	2.53	327	⇓*e*P	Pn	18 16 58.4	+2.7
KCP				*i* S	Sn	18 17 31.9	+6.5
CTBH	Cotabato--PC H	3.21	317	⇑*i*P	Pn	18 17 06.0	+0.9
BUKP	Musuan	3.30	335	*e*P	Pn	18 17 07.2	+0.9
BUKP				*e*S	Sn	18 17 45.6	+1.2
PAGZ	Pagadian	4.26	314	*e*P	Pn	18 17 19.9	+0.5
PAGZ				*e*S	Sn	18 18 08.8	+0.8
LUWI	Luwuk	6.93	212	*e*Pn	Pn	18 18 05.4	+9.2
TPUB	Ta-pu	19.17	343	*e*P	P	18 20 36.0	-1.7
	9.2nm,1.1s						
YOJ	Yonaguni jima	19.76	351	*e*P	P	18 20 40.2	-3.9
	58nm,1.1s						
SARN	Sarigan	22.29	57	*e*P	P	18 21 02.0	-10
	36nm,1.2s						
WR1	Warramunga Arr	25.84	163	*e*P	P	18 21 45.8	+0.4
WRA	Warramunga Arr	25.84	163	P	P	18 21 45.8	+0.4
	1.2nm,0.8s,baz=344,slow=9.5,SNR=2.7						
AS31	Alice Springs	29.27	166	*e*P	P	18 22 18.1	+1.9
	0.4nm,0.8s						
ASAR	Alice Springs	29.27	166	P	P	18 22 18.1	+1.9
	0.4nm,0.6s,baz=343,slow=6.8,SNR=19						
FORT	Forrest	35.48	178	*e*P	P	18 23 12.2	+1.9
	14nm,1.0s						
BBOO	Buckleboo	38.56	167	*e*P	P	18 23 38.9	+2.4
CAN	Canberra	45.24	154	*e*P	P	18 24 29.6	-1.5
	6.6nm,1.1s						
TOO	Toolangi	45.79	159	*e*P	P	18 24 34.6	-0.8
	6.3nm,1.1s						
MK31	Makanchi Array	56.48	325	*e*P	P	18 25 55.2	-0.4
	0.6nm,0.7s						
MK32	Makanchi Array	56.48	325	*e*P	P	18 25 55.2	-0.4
MK32				*e*PcP	PcP	18 26 51.8	-0.3
MKAR	Makanchi Array	56.48	325	P	P	18 25 55.2	-0.4
	0.5nm,0.5s,baz=121,slow=7.9,SNR=13						
MKAR				PcP	PcP	18 26 51.8	-0.3
	0.7nm,0.6s,baz=123,slow=3.7,SNR=6.4						
ZALV	Zalesovo Beam	59.46	333	P	P	18 26 15.2	-1.1
	0.7nm,0.4s,baz=121,slow=7.1,SNR=3.2						
ZAA1	Zalesovo Array	59.46	333	*e*P	P	18 26 15.2	-1.2
KURK	Kurchatov	60.65	327	*e*P	P	18 26 24.3	-0.2
	1.9nm,1.1s						
FIA0	FINESS Array S	90.71	332	*e*P	P	18 29 14.7	-1.4
FINES	FINESS Array B	90.71	332	P	P	18 29 14.7	-1.3
	4.7nm,1.2s,baz=64,slow=6.3,SNR=5.9						

WEL 07 18:16:48.5, 39°S±1°×**17°8E**±°**, h55^{km}**±2^{km}**, M3.7**/27**, ML4.1**/21**, MLv3.7**/27**, Error ellipse: s-maj=0.0km s-min=0.0km az=93.3, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	Mahia Peninsul	0.06	353	P	Pn	18 16 57.6	+0.8
MHGZ				S	Sn	18 17 04.6	+1.8
KNZ	Kokohu	0.27	315	P	Pn	18 16 57.9	0.0
KNZ				S	Sn	18 17 04.8	+0.3
PRGZ	Paritu Road	0.29	355	P	Pn	18 16 58.3	+0.3
PRGZ				S	Sn	18 17 05.5	+0.6
RIGZ	Rimuhau	0.52	347	P	Pn	18 17 00.7	+0.3
RIGZ				S	Sn	18 17 09.7	+0.8
WHHZ	Waihua	0.55	284	P	Pn	18 17 01.0	+0.4
WHHZ				S	Sn	18 17 09.7	+0.3
SNGZ	Shannon Statio	0.62	314	P	Pn	18 17 01.7	+0.2
SNGZ				S	Sn	18 17 11.1	+0.1
RAHZ	Arahi	0.71	294	P	Pn	18 17 02.9	+0.3
RAHZ				S	Sn	18 17 13.0	+0.1
ARHZ	Aropaoanui	0.72	266	P	Pn	18 17 03.3	+0.6
ARHZ				S	Sn	18 17 14.3	+1.3
CNGZ	Carnagh Statio	0.76	17	P	Pn	18 17 04.0	+0.8
TKGZ	Te Karaka	0.77	356	P	Pn	18 17 03.6	+0.3
CKHZ	Cape Kidnapper	0.79	235	P	Pn	18 17 04.1	+0.5
CKHZ				S	Sn	18 17 15.8	+1.2
RAGZ	Rawiri	0.81	331	P	Pn	18 17 04.0	+0.1
NMHZ	Naumai	0.87	277	P	Pn	18 17 05.2	+0.5
MTHZ	Maungataniwha	0.91	293	P	Pn	18 17 05.2	0.0
MWZ	Matawai	0.93	341	P	Pn	18 17 05.4	0.0
RTZ	Ruatahuna	0.94	309	P	Pn	18 17 05.7	+0.1
MCHZ	McNeill Hill	0.97	256	P	Pn	18 17 06.7	+0.7
KAHZ	Kahuranaki	0.99	234	P	Pn	18 17 06.6	+0.4
TWGZ	Tauwhareparae	1.03	3	P	Pn	18 17 07.4	+0.6
BKZ	Black Stump Fm	1.11	272	P	Pn	18 17 08.0	+0.2
URZ	Urewera	1.14	326	P	Pn	18 17 08.1	-0.1
PXZ	Pawanui	1.15	225	P	Pn	18 17 08.3	-0.1
MUGZ	Murupara	1.16	309	P	Pn	18 17 08.6	+0.2
PUZ	Puketiti	1.17	13	P	Pn	18 17 08.5	-0.1
KWHZ	Kaweka Forest	1.18	259	P	Pn	18 17 09.3	+0.5
MRHZ	Matea Rd	1.23	287	P	Pn	18 17 09.9	+0.5
RUGZ	Raukumara Rang	1.26	351	P	Pn	18 17 09.6	-0.3
KRHZ	Kereru	1.27	250	P	Pn	18 17 10.1	+0.1
PKGZ	Pakihiroa	1.33	5	P	Pn	18 17 11.0	+0.3
PRRZ	Plateau Road	1.39	300	P	Pn	18 17 11.6	+0.1
ALRZ	Allen Road	1.39	297	P	Pn	18 17 11.8	+0.3
RRRZ	Republican Roa	1.40	308	P	Pn	18 17 11.6	-0.1
WPHZ	Waipukurau	1.42	233	P	Pn	18 17 12.0	0.0
PRHZ	Porangahau	1.44	223	P	Pn	18 17 12.0	-0.3
WMGZ	Waiomatatini S	1.44	16	P	Pn	18 17 12.4	+0.1
HATZ	Hinemaiaia	1.46	282	P	Pn	18 17 12.9	+0.5
HAZ	Te Kaha	1.46	356	P	Pn	18 17 12.8	+0.4
BHHZ	Black Hill Sta	1.46	258	P	Pn	18 17 12.8	+0.2
TARZ	Mount Tarawera	1.47	311	P	Pn	18 17 13.2	+0.4
HRRZ	Handcock Road	1.52	302	P	Pn	18 17 13.3	0.0
WPRZ	Whakapapatarin	1.53	296	P	Pn	18 17 13.5	-0.1
WHRZ	Whale Island	1.54	331	P	Pn	18 17 13.8	+0.2
HLRZ	Highlands Stat	1.55	308	P	Pn	18 17 13.9	+0.1
MARZ	Manawahe	1.56	321	P	Pn	18 17 14.0	0.0
HSRZ	Hossack Road	1.59	304	P	Pn	18 17 14.5	+0.2
RITZ	Rihia Road	1.62	278	P	Pn	18 17 15.4	+0.7
WHTZ	Whakaora	1.62	289	P	Pn	18 17 14.9	+0.2
OMRZ	Omania	1.64	312	P	Pn	18 17 14.8	-0.1
GRRZ	Galatos Road	1.65	301	P	Pn	18 17 15.6	+0.4
ANWZ	Angora Road	1.67	221	P	Pn	18 17 15.4	+0.1
MXZ	Matakaoa Point	1.67	11	P	Pn	18 17 15.5	+0.1
MOVZ	Moawhango	1.69	263	P	Pn	18 17 16.4	+0.7
UTU	Utuhina	1.70	307	P	Pn	18 17 15.9	+0.2
LIRZ	Lichensteins R	1.70	315	P	Pn	18 17 15.4	-0.4
RATZ	Rangitukua	1.71	281	P	Pn	18 17 16.3	+0.5
DVHZ	Dannevirke	1.73	231	P	Pn	18 17 15.9	-0.3
OPRZ	Ohinepanea	1.73	322	P	Pn	18 17 15.3	-0.9
KATZ	Kakaramea	1.75	277	P	Pn	18 17 16.8	+0.3
NGRZ	Ngongotaha	1.75	309	P	Pn	18 17 16.9	+0.4
TUVZ	Tukino	1.76	267	P	Pn	18 17 17.3	+0.7
KARZ	Kaharoa	1.77	312	P	Pn	18 17 16.2	-0.5
KRVZ	Karewarewa	1.77	273	P	Pn	18 17 17.4	+0.5
WATZ	Wairara	1.77	286	P	Pn	18 17 17.0	+0.2
KUTZ	Kaahu Road	1.79	293	P	Pn	18 17 16.9	0.0
NGZ	Ngauruhoe	1.80	270	P	Pn	18 17 17.8	+0.6
WHVZ	Whangaehu Hut	1.81	267	P	Pn	18 17 17.9	+0.5
WTVZ	West Tongariro	1.81	272	P	Pn	18 17 18.2	+0.8
DRZ	Dome Shelter	1.83	267	P	Pn	18 17 18.1	+0.3
FWVZ	Far West T-bar	1.84	268	P	Pn	18 17 18.2	+0.4
MTVZ	Mangateitei	1.91	264	P	Pn	18 17 19.2	+0.6
TWVZ	Taurewa	1.93	273	P	Pn	18 17 19.2	+0.2
BFZ	Birch Farm	1.95	221	P	Pn	18 17 18.4	-0.8
TGRZ	Tauranga	1.97	318	P	Pn	18 17 18.8	-0.7
PKVZ	Pokaka	2.00	267	P	Pn	18 17 20.4	+0.5
PRWZ	Pori Road	2.01	227	P	Pn	18 17 19.7	-0.3
POWZ	Post Office Ro	2.03	234	P	Pn	18 17 20.1	-0.2
TLZ	Tolley Road	2.06	295	P	Pn	18 17 20.5	-0.2
CPWZ	Castlepoint	2.15	217	P	Pn	18 17 21.0	-0.9
TIWZ	Tintock	2.21	224	P	Pn	18 17 22.2	-0.5
MRZ	Mangatainoka R	2.31	230	P	Pn	18 17 23.2	-0.8
WAZ	Wanganui	2.33	256	P	Pn	18 17 25.5	+1.1
TOZ	Tahuroa Road	2.40	307	P	Pn	18 17 25.1	-0.2
TMWZ	Te Maipa	2.45	219	P	Pn	18 17 24.5	-1.5
VRZ	Vera Road	2.46	271	P	Pn	18 17 26.7	+0.6
HIZ	Hauiti	2.49	285	P	Pn	18 17 26.9	+0.4
HOWZ	Holdsworth Sta	2.50	227	P	Pn	18 17 25.4	-1.2
OGWZ	Otaki Gorge	2.65	232	P	Pn	18 17 27.6	-1.1
MTW	Mount Morrison	2.68	223	P	Pn	18 17 27.1	-2.1
LREZ	Lake Rotokare	2.74	264	P	Pn	18 17 30.6	+0.7
TRWZ	Traveller	2.77	217	P	Pn	18 17 28.1	-2.3
MHEZ	Mangahewa	2.80	272	P	Pn	18 17 32.1	+1.4
PAWZ	Paruwai Farm	2.88	220	P	Pn	18 17 30.2	-1.7
DREZ	Durham Road	2.89	269	P	Pn	18 17 33.4	+1.4
CAW	Cannon Point	2.89	228	P	Pn	18 17 30.8	-1.3
PREZ	Palmer Road	2.92	266	P	Pn	18 17 34.0	+1.5
MSWZ	Moikau Station	3.00	222	P	Pn	18 17 31.5	-2.0
KUZ	Kuaotunu	3.01	324	P	Pn	18 17 32.9	-0.8
MKAZ	Moumakai	3.02	313	P	Pn	18 17 34.1	+0.3
KHEZ	Kahui Hut	3.03	267	P	Pn	18 17 35.7	+1.7
PKE	Pukeiti	3.05	269	P	Pn	18 17 35.9	+1.7
PLWZ	Palliser	3.11	220	P	Pn	18 17 32.4	-2.7
NMEZ	Namu Road	3.14	265	P	Pn	18 17 36.6	+1.2
NBEZ	Newall Road No	3.14	268	P	Pn	18 17 37.0	+1.5
BHW	Baring Head	3.20	226	P	Pn	18 17 34.1	-2.1
ETAZ	East Tamaki Re	3.26	313	P	Pn	18 17 38.0	+0.9
WIAZ	Waiheke Island	3.26	317	P	Pn	18 17 37.0	-0.2
AWAZ	Awhitu Peninsu	3.35	309	P	Pn	18 17 39.1	+0.8
MBAZ	Motutapu North	3.41	315	P	Pn	18 17 39.8	+0.7
TCW	Tory Channel	3.43	233	P	Pn	18 17 37.5	-1.8
DUWZ	D'Urville Isla	3.46	241	P	Pn	18 17 38.4	-1.3
WTAZ	Waiatarua	3.48	310	P	Pn	18 17 41.3	+1.1
TUWZ	Tuamarina	3.76	233	P	Pn	18 17 41.7	-2.2
BSWZ	Blackbirch Sta	3.97	230	P	Pn	18 17 44.2	-2.6
NNZ	Nelson	4.01	239	P	Pn	18 17 45.2	-2.1
WCZ	Waipu Caves	4.33	318	P	Pn	18 17 52.2	+0.5
QRZ	Quartz Range	4.44	247	P	Pn	18 17 51.0	-2.2
THZ	Tophouse	4.59	235	P	Pn	18 17 52.9	-2.4
GVZ	Greta Valley S	5.26	223	P	Pn	18 18 03.8	-0.7
OUZ	Omahuta	5.27	318	P	Pn	18 18 05.5	+0.9
DSZ	Denniston Nort	5.30	240	P	Pn	18 18 02.6	-2.5
LTZ	Lake Taylor	5.56	228	P	Pn	18 18 07.4	-1.3
OKCZ	Okains Bay	5.80	217	P	Pn	18 18 08.5	-3.4
MQZ	McQueen's Vall	5.98	220	P	Pn	18 18 11.1	-3.2
INZ	Inchbonnie	6.03	232	P	Pn	18 18 11.4	-3.6
OXZ	Oxford	6.04	225	P	Pn	18 18 11.9	-3.2
CTZ	Chatham Island	6.11	140	P	Pn	18 18 17.9	+1.8
CTZ				S	Sn	18 19 20.3	-4.2

MEX 07 18:26:18.9±0.6**, 16.°21N**×**98.°06W, h16^{km}**±8^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	Tlapa	1.43	340	*e*P	Pn	18 26 41.0	-3.4
TLIG				*e*S	Sn	18 26 57.2	-5.7
VHO	Vista Hermosa	1.53	56	*e*P	Pn	18 26 42.3	-3.5
VHO				*e*S	Sn	18 27 00.5	-5.0
HUIG	Huatulco	1.93	103	*e*P	Pn	18 26 47.6	-3.4

BJI ***07*** *18:35:28.5±0.0, 3.°92S×153.°92E, h380^{km}, mb6.9/8, mB6.8/26*

ISCJB ***07*** *18:35:29.5±0.4, 3.°94S±0.°02×153.°89E±0.°02, h384^{km}±4^{km}, mb6.2/217, Error ellipse: s-maj=3.2km s-min=2.6km az=21.1*

MOS ***07*** *18:35:29.8±0.8, 3.°91S×153.°88E, h389^{km}, mb6.6/58, Error ellipse: s-maj=6.4km s-min=4.9km az=113.2*

NEIC ***07*** *18:35:30.0±0.0, 4.°04S×153.°68E, h380^{km}, Moment Tensor Solution. s54 Moment tensor: Scale 10^{20}Nm; M_{rr}-1.07; $M_{\theta\theta}$0.19; $M_{\phi\phi}$0.88; $M_{r\theta}$0.30; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.16; Best double couple: $M_0$1.10000×10^{20} NP1:ϕ_s172.00000°, δ48.00000°, λ-68.00000°. NP2:ϕ_s322.00000°, δ46.00000°, λ-111.00000°. Principal axes: T 1.0300, Plg0.0000°, Azm247.0000°; N 0.1300, Plg15.0000°, Azm337.0000°; P -1.1600, Plg74.0000°, Azm154.0000°;*

NEIC ***07*** *18:35:30.7±1.8, 3.°92S×153.°93E, h386^{km}±4^{km}, mb6.5/314, MW7.2, MW7.3, MW7.3 Error ellipse: s-maj=12.2km s-min=11.7km az=154.0, Moment Tensor Solution. s58 Moment tensor: Scale 10^{19}Nm; M_{rr}-6.52; $M_{\theta\theta}$0.61; $M_{\phi\phi}$5.91; $M_{r\theta}$1.58; $M_{\theta\phi}$-1.97; $M_{\phi r}$-0.40; Best double couple: $M_0$6.70000×10^{19} NP1:ϕ_s173.00000°, δ42.00000°, λ-73.00000°. NP2:ϕ_s330.00000°, δ50.00000°, λ-105.00000°. Principal axes: T 6.6200, Plg4.0000°, Azm71.0000°; N 0.2300, Plg11.0000°, Azm340.0000°; P -6.8500, Plg78.0000°, Azm180.0000°;*

IDC ***07*** *18:35:31.5±0.3, 3.°99S×153.°87E, h394^{km}±2^{km}, mb5.3/49, mb1 5.3/54, mb1mx5.3/55, mbtmp6.0/54 Error ellipse: s-maj=5.7km s-min=4.5km az=85.0*

DJA ***07*** *18:35:31.6±0.3, 4°S±2°×15°4E±°, h385^{km}±3^{km}, M6.6/129, mb6.5/129, mB6.7/129, MLv7.3/2, Mw(mB)6.5/129, Mwp6.6/94*

GCMT ***07*** *18:35:41.7±0.1, 4.°10S±0.°01×153.°98E±0.°01, h383^{km}, MW7.3/145, Moment Tensor Solution. s145,c416; s142,c368; Duration: 10.^{s}9 Moment tensor: Scale 10^{20} Nm; M_{rr}-1.10±.00; $M_{\theta\theta}$0.24±.00; $M_{\phi\phi}$0.86±.00; $M_{r\theta}$0.27±.00; $M_{\theta\phi}$-0.42±.00; $M_{\phi r}$0.14±.00; Best double couple: $M_0$1.12700×10^{20} NP1:ϕ_s167.00000°, δ47.00000°, λ-70.00000°. NP2:ϕ_s319.00000°, δ47.00000°, λ-110.00000°. Principal axes: T 1.0750, Plg0.0000°, Azm243.0000°; N 0.1050, Plg14.0000°, Azm333.0000°; P -1.1780, Plg76.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=150s. Triangular moment-rate function*

NEIC ***07*** *18:35:58.2±0.0, 3.°66S×153.°88E, h398^{km}, Moment Tensor Solution. s186 Moment tensor: Scale 10^{20}Nm; M_{rr}-1.18; $M_{\theta\theta}$0.30; $M_{\phi\phi}$0.89; $M_{r\theta}$0.30; $M_{\theta\phi}$-0.40; $M_{\phi r}$0.14; Best double couple: $M_0$1.20000×10^{20} NP1:ϕ_s167.00000°, δ46.00000°, λ-71.00000°. NP2:ϕ_s320.00000°, δ47.00000°, λ-109.00000°. Principal axes: T 1.0900, Plg0.0000°, Azm63.0000°; N 0.1800, Plg14.0000°, Azm333.0000°; P -1.2700, Plg76.0000°, Azm155.0000°;*

ISC 07 18:35:31.4±0.2**, 4.°01S**±0.°03×**153.°93E**±0.°03**, h387^{km}**±1^{km}**, h388^{km}:pP-P, n2315, σ2.^{s}35**/2567**, mb6.3**/226**, 178C-126D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.77	264	*e*Pn	Pn	18 36 22.7	-2.0
MANU	Manus Island	6.84	286	*e*Pn	Pn	18 37 12.4	-0.5
HNR	Honiara	8.04	132	P	Pn	18 37 26.7	0.0
	219nm,0.3s,baz=221,slow=4.6,SNR=45						
HNR				S	S	18 38 49.1	-12
	baz=186,slow=10,SNR=1.3						
HNR	Honiara	8.04	132	*e*P	Pn	18 37 26.9	+0.2
HNR	Honiara	8.04	132	*e*P	Pn	18 37 26.9	+0.2
HNR	Honiara	8.04	132	*e*P	Pn	18 37 27.0	+0.2
HNR				*e*S	S	18 39 09.0	+7.9
PMG	Port Moresby	8.60	231	P	P	18 37 34.6	+0.9
	422nm,0.3s,baz=50,slow=4.9,SNR=253						
PMG				P3KPbc		19 14 13.7	
	0.4nm,0.3s,baz=203,slow=2.1,SNR=3.2						
PMG	Port Moresby	8.60	231	*c i*P	P	18 37 34.5	+0.7
PATS	Pohnpei	11.63	22	*e*P	P	18 38 06.6	-0.9
JAY	Jayapura	13.29	276	P	P	18 38 25.1	-0.6
	45nm,0.3s,baz=105,slow=3.7,SNR=164						
JAY				S	S	18 40 54.9	+4.7
	21nm,0.3s,baz=258,slow=17,SNR=2.0						
JAY				P3KPbc		19 14 04.5	
	0.3nm,0.3s,baz=82,slow=13,SNR=3.5						
JAY	Jayapura	13.29	276	P	P	18 38 25.2	-0.6
	43μm,0.8s						
GENI	Genyem	13.81	275	P	P	18 38 31.3	-0.2
	8μm,0.9s,277μm847μm						
MMPI	Merauke	14.17	251	P	Pn	18 38 36.8	-0.9
	37μm,0.9s,486μm882μm						
COEN	Coen	14.50	226	*e*P	Pn	18 38 41.1	-0.4
COEN	Coen	14.50	226	P	P	18 38 38.3	-0.7
	baz=15,SNR=1000						
CTA	Charters Tower	17.64	204	P	P	18 39 13.7	+1.0
	32nm,0.3s,baz=29,slow=11,SNR=236						
CTA				S	S	18 42 20.2	+4.1
	13nm,0.3s,baz=278,slow=14,SNR=2.6						
CTA				P3KPbc		19 13 55.9	
	0.2nm,0.3s,baz=310,slow=0.6,SNR=5.0						
CTAO	Charters Tower	17.64	204	*e*P	P	18 39 13.2	+0.5
	4μm,0.8s						
CTAO	Charters Tower	17.64	204	*e*P	P	18 39 13.2	+0.5
CTAO				pmax	pmax		
	comp=Z,4μm,0.8s						
SRPI	Serui, Papua	17.79	276	P	P	18 39 15.0	+0.6
	comp=Z,4μm,0.8s,comp=Z,79μmcomp=Z,339μm						
BAKI	Biak	18.02	278	P	P	18 39 16.5	-0.4
	comp=Z,6μm,1.0s,comp=Z,126μmcomp=Z,415μm						
KWAJ	Kwajalein Atol	18.66	47	*e*P	P	18 39 22.2	-1.5
	comp=Z,9μm,0.9s						
KWAJ	Kwajalein Atol	18.66	47	*e*P	P	18 39 22.2	-1.5
KWAJ				pmax	pmax		
	comp=Z,9μm,0.9s						
GUMO	Guam	19.66	333	P	P	18 39 31.6	-2.1
	comp=Z,39nm,0.3s,baz=172,slow=7.9,SNR=57						
GUMO				S	S	18 42 55.5	+3.5
	comp=Z,21nm,0.3s,baz=180,slow=20,SNR=1.7						
GUMO	Guam	19.66	333	*e*P	P	18 39 31.3	-2.4
	comp=Z,10μm,1.4s						
TARA	Tarawa	19.72	75	*e*P	P	18 39 32.6	-1.7
	comp=Z,11μm,1.5s						
EIDS	Eidsvold	21.41	187	*e*P	P	18 39 49.4	-0.2
	comp=Z,6μm,1.5s						
EIDS	Eidsvold	21.41	187	P	P	18 39 49.0	-0.6
	baz=22,SNR=551						
QIS	Mount Isa	21.56	219	P	P	18 39 51.6	+0.5
	baz=22,SNR=310						
FAKI	Fak Fak	21.67	272	*e*P	P	18 39 51.0	-1.1
	comp=Z,3μm,0.7s						
FAKI	Fak Fak	21.67	272	P	P	18 39 51.3	-0.8
	comp=Z,4μm,0.8s,comp=Z,97μmcomp=Z,228μm						
DZM	Mont Dzumac	21.67	147	*e*P	P	18 39 51.4	-0.7
	comp=Z,26μm,1.3s						
DZM	Mont Dzumac	21.67	147	P	P	18 39 51.4	-0.7
	comp=Z,633nm,0.5s,baz=269,slow=5.0,SNR=736						
DZM				S	S	18 43 30.2	+5.6
	comp=Z,220nm,1.1s,baz=202,slow=19,SNR=6.2						
DZM	Mont Dzumac	21.67	147	*e*P	P	18 39 51.8	-0.3
	comp=Z,21μm,1.4s						
ANA2	Anatahan	21.80	338	*e*P	P	18 39 51.1	-2.1
	comp=Z,3μm,0.8s						
ONTNC	Ouen Toro	21.87	147	*e*P	P	18 39 53.7	0.0
SARN	Sarigan	22.10	339	*e*P	P	18 39 53.9	-2.2
	comp=Z,906nm,0.8s						
MARNC	Mare, Loyalty	22.11	143	*e*P	P	18 39 55.8	-0.3
PALU	Palau	22.45	300	P	P	18 39 58.4	-0.9
	baz=22,SNR=87						
SAUI	Saumlaki	22.84	259	P	P	18 39 57.8	-5.0
SIJI	Sorong	22.85	277	P	P	18 40 02.1	-0.8
	comp=Z,572nm,0.9s,baz=76,slow=7.6,SNR=67						
SIJI				pP	PP	18 41 04.9	+0.1
	comp=Z,307nm,0.7s,baz=116,slow=14,SNR=0.8						
SIJI				S	S	18 43 47.4	+3.9
	comp=Z,115nm,0.8s,baz=0.3,slow=13,SNR=1.4						
SIJI				P3KPbc		19 13 32.1	
	comp=Z,24nm,1.1s,baz=302,slow=4.9,SNR=7.0						
SWI	Sorong	22.86	277	P	P	18 40 02.0	-0.9
SWI				pmax	pmax		
	comp=Z,2μm,0.8s						
SWI	Sorong	22.86	277	P	P	18 40 02.8	-0.1
	comp=Z,2μm,0.9s,comp=Z,22μm						
RMQ	Roma	22.89	192	P	P	18 40 02.8	-0.2
	baz=23,SNR=64						
KDU	Kakadu	22.89	247	P	P	18 40 01.7	-1.4
	baz=23,SNR=919						
BNDI	Bandanaira	23.96	268	P	P	18 40 12.4	-0.5
	comp=Z,2μm,1.3s,comp=Z,51μmcomp=Z,261μm						
MTN	Manton Dam	24.17	247	P	P	18 40 13.8	-1.0
	baz=24,SNR=37						
WRAB	Tennant Creek	24.79	229	*e*P	P	18 40 20.7	+0.5
	comp=Z,1μm,0.7s						
WRAB	Tennant Creek	24.79	229	*i* P	P	18 40 19.3	-0.9
WRAB				pmax	pmax		
	comp=Z,134nm,0.8s						
WRA	Warramunga Arr	24.80	229	P	P	18 40 19.0	-1.3
	comp=Z,79nm,0.2s,baz=58,slow=10,SNR=98						
WRA				S	S	18 44 15.5	+1.3
	comp=Z,336nm,0.9s,baz=62,slow=10,SNR=2.4						
WRA				P3KPbc		19 13 13.3	
	comp=Z,3.2nm,0.8s,baz=72,slow=2.7,SNR=3.6						
MSAI	Masohi	24.96	271	P	P	18 40 22.5	+0.7
	comp=Z,392nm,0.9s,comp=Z,6μm						
H11S3	WAKE ISLAND Hy	25.66	29	P	P	18 40 26.3	-1.4
	baz=230,slow=6.0,SNR=135						
H11S2	WAKE ISLAND Hy	25.66	29	P	P	18 40 27.0	-0.8
	baz=230,slow=6.0,SNR=167						
H11S1	WAKE ISLAND Hy	25.68	29	P	P	18 40 31.4	+3.5
	baz=230,slow=6.0,SNR=116						
AAI	Ambon	25.68	270	P	P	18 40 28.9	+0.7
AAI				pmax	pmax		
	comp=Z,2μm,0.6s						
AAI	Ambon	25.68	270	P	P	18 40 27.3	-0.9
	comp=Z,2μm,0.8s,comp=Z,26μmcomp=Z,179μm						
ARMA	Armidale	26.35	184	P	P	18 40 34.4	+0.3
	baz=27,SNR=165						
LBMI	Labuha	26.61	277	P	P	18 40 36.6	+0.1
	comp=Z,4μm,0.8s,comp=Z,57μmcomp=Z,125μm						
NLAI	Namlea	26.79	271	P	P	18 40 38.2	+0.2
	comp=Z,1μm,1.1s,comp=Z,22μm						
H11N1	WAKE ISLAND Hy	26.80	28	P	P	18 40 36.1	-1.7
	baz=219,slow=12,SNR=421						
H11N3	WAKE ISLAND Hy	26.82	28	P	P	18 40 36.3	-1.6
	baz=219,slow=12,SNR=289						
H11N2	WAKE ISLAND Hy	26.82	28	P	P	18 40 31.8	-6.2
	baz=219,slow=12,SNR=240						
TNTI	Ternate	26.96	280	*e*P	P	18 40 39.6	-0.1
	comp=Z,1μm,1.1s						
TNTI	Ternate	26.96	280	P	P	18 40 39.0	-0.6
	comp=Z,1μm,0.8s,comp=Z,14μmcomp=Z,88μm						
KNRA	Kununurra	27.33	243	P	P	18 40 41.6	-1.2
	baz=28,SNR=69						
ASAR	Alice Springs	27.49	223	P	P	18 40 42.8	-1.4
	comp=Z,32nm,0.3s,baz=56,slow=9.1,SNR=1950						
ASAR				pP	pP	18 41 53.5	+0.1
	comp=Z,351nm,0.8s,baz=51,slow=11,SNR=1.4						
ASAR				PcP	PcP	18 43 53.5	+2.3
	comp=Z,268nm,0.7s,baz=44,slow=3.6,SNR=4.6						
ASAR				S	S	18 44 52.1	-4.1
	comp=Z,66nm,0.8s,baz=52,slow=7.7,SNR=2.1						
ASAR				ScP	ScP	18 46 55.7	+1.3
	comp=Z,49nm,0.7s,baz=4.8,slow=2.2,SNR=3.0						
ASAR				P3KPbc		19 13 08.5	
	comp=Z,3.5nm,0.7s,baz=222,slow=4.1,SNR=12						
LHI	Lord Howe Isla	27.79	171	P	P	18 40 46.9	+0.3
	baz=28,SNR=10						
SANI	Sanana	27.97	273	P	P	18 40 47.8	-0.7
	comp=Z,1μm,0.9s,comp=Z,20μmcomp=Z,240μm						
NFK	Norfolk Island	28.22	153	P	P	18 40 50.7	+0.2
	baz=28,SNR=22						
CMSA	Cobar Meteorol	28.45	195	P	P	18 40 52.2	-0.3
	baz=29,SNR=203						
MGCD	Mangrove Creek	29.17	185	P	P	18 40 59.6	+0.8
	baz=29,SNR=38						
SGSI	Sangihe	29.39	285	P	P	18 41 01.5	+0.5

	comp=Z,6µm,1.0s,comp=Z,53µmcomp=Z,5µm					
MNI	Manado	29.57 280	P	P	18 41 02.0	-0.6
MNI			pmax	pmax		
	comp=Z,7µm,0.8s					
MATI	Mati	29.69 291	eP	P	18 41 02.6	-1.0
RIV	Riverview	29.78 185	P	P	18 41 05.0	+0.9
	baz=30,SNR=27					
RIV	Riverview	29.78 185	P	P	18 41 05.0	+0.9
RIV			pmax	pmax		
	comp=Z,5µm,1.3s					
DDMP	Don Marcelino,	29.91 289	eP	P	18 41 05.7	+0.1
SOEI	Soe	29.98 257	P	P	18 41 05.9	-0.4
	comp=Z,2µm,0.9s,comp=Z,20µmcomp=Z,246µm					
STKA	Stephens Creek	30.04 201	P	P	18 41 05.7	-0.8
	comp=Z,26nm,0.3s,baz=4.0,slow=8.5,SNR=82					
STKA			pP	pP	18 42 19.1	+2.9
	comp=Z,218nm,0.6s,baz=22,slow=13,SNR=1.7					
STKA			S	S	18 45 34.8	-1.1
	comp=Z,74nm,0.7s,baz=354,slow=19,SNR=1.5					
STKA			P3KPbc		19 12 53.7	
	comp=Z,3.8nm,0.8s,baz=276,slow=12,SNR=4.4					
STKA	Stephens Creek	30.04 201	P	P	18 41 05.7	-0.8
	baz=30,SNR=133					
DAV	Davao City (W)	30.36 291	P	P	18 41 09.3	-0.2
	comp=Z,178nm,0.4s,baz=90,slow=4.1,SNR=12					
DAV			pP	pP	18 42 23.3	+2.5
	comp=Z,760nm,0.9s,baz=77,slow=18,SNR=0.9					
DAV	Davao City (W)	30.36 291	eP	P	18 41 09.9	+0.4
	comp=Z,2µm,0.8s					
DAV			ePcP	PcP	18 43 55.6	-3.1
DAV	Davao City (W)	30.36 291	P	P	18 41 09.7	+0.2
	SNR=55					
DAV	Davao City (W)	30.36 291	P	P	18 41 07.8	-1.7
YNG	Young	30.57 189	P	P	18 41 11.8	+0.8
	baz=31,SNR=132					
GSPH	General Santos	30.63 289	⇑iP	P	18 41 12.3	+0.3
BATI	Baumata	30.64 257	P	P	18 41 11.8	-0.2
	comp=Z,281nm,0.6s,baz=98,slow=1.6,SNR=33					
BATI			pP	PP	18 42 29.9	-1.2
	comp=Z,1µm,0.9s,baz=303,slow=17,SNR=1.3					
BATI			S	S	18 45 46.2	+0.6
	comp=Z,488nm,1.0s,baz=294,slow=18,SNR=1.7					
BATI			P3KPbc		19 12 56.5	
	comp=Z,82nm,0.7s,baz=254,slow=3.1,SNR=16					
BATI	Baumata	30.64 257	P	P	18 41 12.1	+0.2
	comp=Z,944nm,0.8s,comp=Z,14µmcomp=Z,57µm					
KCP	Kidapawan	30.80 291	⇑eP	P	18 41 12.0	-1.3
BUTP	Butuan	31.03 295	eP	P	18 41 15.4	+0.1
BUKP	Musuan	31.13 292	eP	P	18 41 14.6	-1.6
SKMP	Bagumbayan, Su	31.15 290	eP	P	18 41 16.2	-0.1
LUWI	Luwuk	31.26 275	eP	P	18 41 16.4	-0.9
	comp=Z,4µm,0.9s					
LUWI			ePcP	PcP	18 43 57.4	-3.7
LUWI	Luwuk	31.26 275	P	P	18 41 16.9	-0.4
	comp=Z,4µm,0.8s,comp=Z,44µmcomp=Z,77µm					
BBSI	Bau Bau	31.28 266	P	P	18 41 18.1	+0.6
	comp=Z,277nm,1.5s,comp=Z,4µm					
CNB	Canberra Magne	31.43 187	P	P	18 41 19.6	+1.0
	baz=32,SNR=46					
CAN	Canberra	31.48 188	P	P	18 41 19.7	+0.7
CAN			pmax	pmax		
	comp=Z,2µm,1.3s					
CTBH	Cotabato--PC H	31.66 291	⇑eP	P	18 41 20.5	-0.2
CGP	Cagayan de Oro	31.68 293	⇓eP	P	18 41 21.1	+0.2
MMRI	Maumere	31.82 260	P	P	18 41 20.3	-1.9
	comp=Z,1µm,1.1s,comp=Z,16µmcomp=Z,80µm					
MSLP	Maasin	32.18 296	eP	P	18 41 25.0	-0.3
BESP	Borongan	32.31 299	eP	P	18 41 26.5	+0.2
WRKA	Warakurna	32.31 227	P	P	18 41 24.4	-1.9
	baz=32,SNR=1000					
EDFI	Ende, Flores	32.37 260	P	P	18 41 24.9	-2.1
	comp=Z,1µm,0.6s,comp=Z,16µm					
APSI	Ampana	32.39 275	P	P	18 41 26.8	-0.3
	comp=Z,3µm,1.0s,comp=Z,33µmcomp=Z,42µm					
HTT	Hallett	32.45 204	P	P	18 41 26.5	-0.9
	baz=33,SNR=1000					
PLP	Palo	32.52 298	⇓eP	P	18 41 26.8	-1.3
PAGZ	Pagadian	32.67 291	eP	P	18 41 31.2	+1.7
OCLP	Ormoc	32.79 297	eP	P	18 41 29.6	-0.9
TBP	Tagbilaran	32.91 295	eP	P	18 41 35.3	+3.8
LLP	Lapu-Lapu	33.06 296	eP	P	18 41 32.0	-0.8
LLP			eS	S	18 46 20.9	-2.0
BBOO	Buckleboo	33.17 208	ePP	PP	18 42 59.2	+0.5
BBOO	Buckleboo	33.17 208	P	P	18 41 32.6	-0.9
	baz=33,SNR=99					
MILA	Mila	33.17 187	P	P	18 41 34.5	+1.0
	baz=33,SNR=86					
SNPH	Sibulan	33.34 294	eP	P	18 41 35.3	0.0
BSSI	Bau Bau, Buton	33.37 265	P	P	18 41 35.4	-0.1
	comp=Z,1µm,1.3s,comp=Z,25µmcomp=Z,72µm					
CNP	Catarman	33.40 300	eP	P	18 41 33.5	-2.1
BKSI	Bulukumba	33.72 266	P	P	18 41 37.0	-1.4
	comp=Z,252nm,0.9s,comp=Z,5µmcomp=Z,40µm					
WSI	Waingapu	33.84 259	P	P	18 41 38.9	-0.6
	comp=Z,9µm,0.6s,comp=Z,131µm					
TTSI	Tana Toraja	34.06 270	P	P	18 41 41.8	+0.5
	comp=Z,984nm,0.8s,comp=Z,14µmcomp=Z,64µm					
SPSI	Sidrap Palu	34.07 269	P	P	18 41 40.4	-1.1
	comp=Z,493nm,0.8s,comp=Z,8µmcomp=Z,39µm					
KAPI	Kappang	34.08 267	P	P	18 41 41.1	-0.4
	comp=Z,291nm,0.7s,baz=111,slow=6.2,SNR=48					
KAPI			pP	pwP	18 42 55.1	-1.0
	comp=Z,88nm,0.5s,baz=84,slow=9.2,SNR=0.8					
KAPI			S	S	18 46 41.5	+2.9
	comp=Z,42nm,0.8s,baz=20,slow=15,SNR=1.5					
KAPI	Kappang	34.08 267	eP	P	18 41 41.1	-0.4
	comp=Z,1µm,1.1s					
KAPI	Kappang	34.08 267	P	P	18 41 41.7	+0.2
	SNR=88					
MMPH	Masbate	34.23 299	eP	P	18 41 49.7	+6.9
TOO	Toolangi	34.28 192	eP	P	18 41 43.7	+0.7
	comp=Z,2µm,1.4s					
TOO	Toolangi	34.28 192	P	P	18 41 43.3	+0.4
	baz=34,SNR=40					
TOO	Toolangi	34.28 192	eP	P	18 41 43.7	+0.7
TOO			pmax	pmax		
	comp=Z,2µm,1.4s					
KNTN	Kanton	34.31 89	eP	P	18 41 43.3	-0.2
	comp=Z,2µm,0.9s					
PVCP	Virac	34.34 301	eP	P	18 41 43.6	0.0
GUIM	Jordan	34.42 295	eP	P	18 41 43.5	-0.9
ARPS	Mount Arapiles	34.44 197	P	P	18 41 44.3	0.0
	baz=35,SNR=37					
WBSI	Waikabubak, Su	34.73 259	P	P	18 41 45.4	-1.7
	comp=Z,3µm,1.3s,comp=Z,26µm					
AUQP	San Andres	35.49 300	eP	P	18 41 54.6	+1.3
OTRP	Odiongan	35.64 298	eP	P	18 41 54.4	-0.3
CUYO	Cuyo Island	35.93 295	eP	P	18 41 57.5	+0.3
OUZ	Omahuta	36.00 152	P	P	18 41 59.4	+2.1
FORT	Forrest	36.10 220	eP	P	18 41 57.3	-1.0
	comp=Z,3µm,0.6s					
FORT			ePP	PP	18 43 30.7	0.0
FORT	Forrest	36.10 220	P	P	18 41 57.3	-1.0
	baz=36,SNR=215					
PLAI	Plampang	36.23 261	P	P	18 41 57.2	-2.4
	comp=Z,1µm,0.9s,comp=Z,15µmcomp=Z,63µm					
BOAC	Boac	36.27 299	eP	P	18 42 01.6	+1.7
SJMP	San Jose	36.48 297	eP	P	18 42 02.0	+0.3
POLP	Polilio Island	36.77 301	eP	P	18 42 03.6	-0.4
SMKI	Samarinda	36.86 275	P	P	18 42 06.6	+1.7
	comp=Z,3µm,0.9s,comp=Z,23µmcomp=Z,49µm					
WCZ	Waipu Caves	36.94 152	P	P	18 42 07.0	+1.8
PGP	Puerto Galera	37.07 299	⇑eP	P	18 42 10.1	+3.5
BKB	Balikpapan	37.09 273	P	P	18 42 08.5	+1.7
	comp=Z,2µm,1.8s,comp=Z,33µmcomp=Z,76µm					
BUSP	Coron	37.12 296	eP	P	18 42 06.5	-0.5
MBWA	Marble Bar	37.34 240	P	P	18 42 08.1	-0.7
	SNR=30					
TGY	Tagaytay City	37.34 299	P	P	18 42 08.6	-0.4
	comp=Z,603nm,0.6s,baz=216,slow=1.9,SNR=24					
TGY			S	S	18 47 29.1	+1.2
	comp=Z,233nm,0.4s,baz=112,slow=18,SNR=2.6					
TGY	Tagaytay City	37.34 299	⇓eP	P	18 42 16.4	+7.4
PALP	Palanan	37.50 305	eP	P	18 42 09.8	-0.4
ENPP	El Nido	37.51 294	eP	P	18 42 12.9	+2.6
BALP	Baler	37.55 302	eP	P	18 42 09.9	-0.7
GRZ	Great Barrier	37.72 151	P	P	18 42 12.8	+1.1
LUBP	Lubang	37.79 298	eP	P	18 42 12.1	-0.4
WTAZ	Waiatarua	37.85 153	P	P	18 42 14.7	+1.9
CAUP	Cauayan	37.94 304	eP	P	18 42 14.4	+0.7
WIAZ	Waiheke Island	38.00 152	P	P	18 42 15.4	+1.4
BATP	Bataraza	38.20 290	eP	P	18 42 17.2	+1.1
KUZ	Kuaotunu	38.24 151	P	P	18 42 17.4	+1.4
MKAZ	Moumakai	38.26 152	P	P	18 42 17.6	+1.4
CVP	Callao Caves	38.33 305	eP	P	18 42 15.9	-1.1
NIUE	Niue	38.33 116	P	P	18 42 16.3	-0.7
	baz=38,SNR=15					
SPMM	Sapulut	38.42 283	P	P	18 42 18.0	+0.1
SMPP	San Manuel, Pa	38.51 302	eP	P	18 42 19.1	+0.6
KDM	Kudat	38.59 286	P	P	18 42 24.0	+4.8
SRBI	Singaraja	38.70 262	P	P	18 42 18.6	-1.5
	comp=Z,521nm,1.1s,comp=Z,9µmcomp=Z,38µm					
MOO	Moorlands	38.73 188	P	P	18 42 21.1	+1.1
	baz=39,SNR=69					
DNP	Denpasar	38.74 261	P	P	18 42 19.8	-0.7
DNP			pmax	pmax		
	comp=Z,2µm,0.8s					
DNP	Denpasar	38.74 261	P	P	18 42 18.1	-2.4
	comp=Z,2µm,0.7s,comp=Z,29µmcomp=Z,63µm					
APYP	Conner	38.88 305	eP	P	18 42 20.2	-1.4
TOZ	Tahuroa Road	38.93 152	P	P	18 42 23.1	+1.4
KKM	Kota Kinabalu	38.96 285	eP	P	18 42 21.7	-0.8
	comp=Z,3µm,0.9s					
SCZP	Santa Cruz	38.98 301	eP	P	18 42 21.7	-0.7
MTKI	Muara Teweh, K	39.11 273	P	P	18 42 23.3	-0.2
	comp=Z,2µm,0.9s,comp=Z,28µmcomp=Z,57µm					
TAU	Tasmania Unive	39.17 188	eP	P	18 42 24.8	+1.3
	comp=Z,4µm,1.4s					
TAU	Tasmania Unive	39.17 188	eP	P	18 42 24.8	+1.3
TAU			pmax	pmax		
	comp=Z,4µm,1.4s					
ABRA	Dolores	39.21 304	eP	P	18 42 24.5	+0.3
BOLP	Bolinao	39.26 302	eP	P	18 42 26.9	+2.2
JHJ2	Mitsune	39.27 341	eP	P	18 42 23.9	-0.6
	comp=Z,573nm,0.8s					
HIZ	Hauiti	39.28 154	P	P	18 42 26.0	+1.5
TGRZ	Tauranga	39.28 152	P	P	18 42 25.4	+0.8
JHJ	Hachijo jima 2	39.29 341	P	P	18 42 22.9	-1.7
	comp=Z,155nm,0.8s,baz=240,slow=23,SNR=4.6					
JHJ			S	S	18 47 47.5	-8.6
	comp=Z,383nm,0.8s,baz=289,slow=12,SNR=3.7					
TLZ	Tolley Road	39.43 153	P	P	18 42 27.1	+1.2
JOW	Kunigami	39.44 322	P	P	18 42 25.6	-0.4
	comp=Z,13nm,0.5s,baz=152,slow=12,SNR=42					
NBEZ	Newall Road No	39.48 155	P	P	18 42 33.1	+6.9
KARZ	Kaharoa	39.51 152	P	P	18 42 27.2	+0.8
OPRZ	Ohinepanea	39.52 151	P	P	18 42 27.4	+1.0
NGRZ	Ngongotaha	39.55 152	P	P	18 42 27.7	+0.9
LIRZ	Lichensteins R	39.56 152	P	P	18 42 28.4	+1.5
KHEZ	Kahui Hut	39.57 155	P	P	18 42 29.0	+2.0
NEZ	North Egmont	39.58 155	P	P	18 42 33.3	+6.2
UTU	Utuhina	39.61 152	P	P	18 42 30.9	+3.6
OMRZ	Omania	39.64 152	P	P	18 42 28.9	+1.4
BBP	Basco	39.69 309	eP	P	18 42 30.9	+2.8
GRRZ	Galatos Road	39.71 152	P	P	18 42 28.6	+0.5
VRZ	Vera Road	39.74 154	P	P	18 42 30.4	+2.1
HSRZ	Hossack Road	39.74 152	P	P	18 42 29.8	+1.4
HLRZ	Highlands Stat	39.75 152	P	P	18 42 30.6	+2.2
JAGI	Jajag, Banyuwa	39.77 262	ePP	PP	18 44 04.6	-5.7
JAGI	Jajag, Banyuwa	39.77 262	P	P	18 42 26.4	-2.5
	comp=Z,1µm,1.0s,comp=Z,15µmcomp=Z,55µm					
KMMI	Kalianget	39.88 264	P	P	18 42 29.9	+0.1
	comp=Z,654nm,0.8s,comp=Z,5µm					
URZ	Urewera	40.11 151	P	P	18 42 31.7	+0.4
	comp=Z,91nm,0.3s,baz=240,slow=4.4,SNR=133					
URZ			PcP	sP	18 44 31.3	+1.2
	comp=Z,735nm,0.9s,baz=324,slow=5.8,SNR=3.2					
URZ			S	S	18 48 14.3	+6.1
	comp=Z,108nm,0.7s,baz=30,slow=20,SNR=6.7					
RUGZ	Raukumara Rang	40.16 150	P	P	18 42 31.8	0.0
PKGZ	Pakihiroa	40.29 150	P	P	18 42 33.4	+0.5
BNMM	Bakun	40.43 279	P	P	18 42 42.0	+7.7
GMJI	Gumukmas	40.46 262	P	P	18 42 32.4	-2.1
MEEK	Meekatharra	40.57 233	P	P	18 42 33.9	-1.4
	baz=41,SNR=261					
KMBL	Kambalda	40.60 224	P	P	18 42 34.1	-1.3
	baz=41,SNR=35					
YOJ	Yonaguni jima	41.30 315	P	P	18 42 41.3	+0.2
YOJ			pmax	pmax		
	comp=Z,3µm,0.9s					
SNZO	South Karori	41.55 156	eP	P	18 42 43.5	+0.7
	comp=Z,5µm,1.4s					
JOHN	Johnston Islan	41.58 59	eP	P	18 42 44.6	+1.2
	comp=Z,2µm,1.1s					
SBUM	Sibu	42.17 278	eP	P	18 42 48.5	+0.2
	comp=Z,695nm,1.0s					
SBUM	Sibu	42.17 278	P	P	18 42 50.0	+1.7
PBKI	Pangkalan Bun	42.20 270	P	P	18 42 48.8	+0.3
	comp=Z,9µm,1.0s,comp=Z,75µm					
MIDW	Midway	42.31 39	eP	P	18 42 47.3	-1.8
	comp=Z,3µm,1.1s					
OXZ	Oxford	42.31 160	eP	P	18 42 49.2	+0.3
	comp=Z,7µm,1.4s					
RPZ	Rata Peaks	42.34 162	P	P	18 42 48.8	-0.3
	comp=Z,196nm,0.7s,baz=346,slow=4.6,SNR=30					
RPZ			S	S	18 48 42.4	+1.8
	comp=Z,40nm,1.0s,baz=29,slow=18,SNR=2.2					
NGJI	Ngawi	42.38 264	P	P	18 42 51.8	+1.9
	comp=Z,1µm,0.8s,comp=Z,16µmcomp=Z,73µm					
SSLB	Suanglung	42.38 312	eP	P	18 42 49.1	-0.6
	comp=Z,953nm,0.6s					
STKI	Sintang	42.61 274	P	P	18 42 53.3	+1.6
	comp=Z,2µm,1.0s,comp=Z,27µm					
STKI			pP	pwP	18 44 09.6	-0.3
	comp=Z,2µm,1.0s,comp=Z,27µm					
GIRL	Giralia	42.63 241	eP	P	18 42 51.9	+0.1
	comp=Z,6µm,1.5s					
GIRL	Giralia	42.63 241	P	P	18 42 52.6	+0.9
	baz=43,SNR=48					
TATO	Taipei	42.70 314	eP	P	18 42 51.6	-0.6
	comp=Z,1µm,0.8s					
DCZ	Deep Cove	42.88 166	ePP	PP	18 44 45.7	+3.2
JNU	Nakatsue	42.90 331	P	P	18 42 52.4	-1.4
	comp=Z,354nm,1.0s,baz=115,slow=3.0,SNR=108					
JNU			pP	pP	18 44 10.7	+2.6
	comp=Z,454nm,1.1s,baz=45,slow=17,SNR=1.0					
JNU			S	S	18 48 50.8	+1.7
	comp=Z,53nm,1.0s,baz=0.0,slow=20,SNR=1.7					
WOJI	Wonogiri, Jawa	42.93 263	P	P	18 42 54.1	-0.1
	comp=Z,2µm,0.9s,comp=Z,21µmcomp=Z,40µm					
MJAR	Matsushiro Arr	42.94 341	P	P	18 42 51.4	-2.6
	comp=Z,61nm,0.8s,baz=172,slow=8.6,SNR=107					
MJAR			PcP	PcP	18 44 37.3	+0.7
	comp=Z,76nm,0.9s,baz=182,slow=4.4,SNR=2.4					
MJAR			ScP	ScP	18 47 48.5	-1.6
	comp=Z,27nm,0.9s,baz=173,slow=4.2,SNR=2.4					
MJAR			S	S	18 48 49.6	+0.2
	comp=Z,19nm,1.0s,baz=149,slow=6.9,SNR=2.1					
MJAR			PKPPKP		19 14 08.7	
	comp=Z,6.0nm,1.0s,baz=344,slow=1.0,SNR=5.6					
MAJO	Matsushiro	42.94 341	eP	P	18 42 52.0	-2.0
	comp=Z,499nm,0.8s					
MAJO			ePcP	PcP	18 44 37.3	+0.7
MAJO			ePP	PP	18 44 43.0	-0.3
MAJO	Matsushiro	42.94 341	c iP	P	18 42 51.6	-2.4
MAJO			pmax	pmax		
	comp=Z,552nm,0.7s					
MAT	Matsushiro	42.94 341	P	P	18 42 51.3	-2.7
MAT			S	S	18 48 49.0	-0.5
MJB9	Matsu-Tunnel	42.94 341	ePP	PP	18 44 43.1	-0.3
UGM	Wanagama	43.33 263	eP	P	18 42 57.1	-0.3
	comp=Z,3µm,0.9s					
UGM	Wanagama	43.33 263	P	P	18 42 57.3	-0.1
	comp=Z,3µm,0.8s,comp=Z,39µm					
ODZ	Otahua Downs	43.42 163	eP	P	18 42 57.8	+0.2
	comp=Z,5µm,1.5s					
YOGI	Yogyakarta	43.55 263	P	P	18 42 57.6	-1.6
MORW	Morawa	43.71 231	P	P	18 42 58.5	-1.7
	baz=44,SNR=594					
KSM	Kuching	43.93 276	eP	P	18 43 01.9	-0.3
	comp=Z,4µm,1.0s					
KSM	Kuching	43.93 276	P	P	18 43 03.0	+0.8
BLDU	Ballidu	43.94 229	P	P	18 43 00.4	-1.5
	baz=44,SNR=84					
KNMB	Chin-men Tao	44.68 311	ePP	PP	18 44 50.7	-8.9
NWAO	Narrogin (SRO)	44.74 226	P	P	18 43 06.6	-1.6
	comp=Z,20nm,0.4s,baz=58,slow=8.7,SNR=26					
NWAO			pP	pP	18 44 25.0	+2.6
	comp=Z,226nm,0.8s,baz=50,slow=8.4,SNR=2.4					
NWAO			PcP	PcP	18 44 40.8	-2.0
	comp=Z,251nm,0.8s,baz=50,slow=5.9,SNR=6.5					
NWAO			S	S	18 49 12.8	-2.7
	comp=Z,84nm,1.0s,baz=151,slow=19,SNR=1.7					
NWAO	Narrogin (SRO)	44.74 226	eP	P	18 43 07.0	-1.2
NWAO			ePcP	PcP	18 44 40.8	-2.0
NWAO			ePcP	pwP	18 44 41.1	+9.1
NWAO			ePP	PP	18 44 54.2	-5.8
NWAO	Narrogin (SRO)	44.74 226	P	P	18 43 07.2	-1.0
	baz=45,SNR=32					
NWAO	Narrogin (SRO)	44.74 226	eP	P	18 43 07.0	-1.2
NWAO			e		18 44 41.2	
NWAO			e		18 44 54.2	
NWAO	Narrogin (SRO)	44.74 226	P	P	18 43 08.5	+0.3
	SNR=32					
QZH	Quanzhou	44.80 312	⇓iP	P	18 43 08.3	-0.4
QZH			pP	pP	18 44 25.2	+0.6
QZH			sP	sP	18 45 06.0	-2.1
QZH			S	S	18 49 20.7	+4.3
QZH			LR	LR		
	comp=Z,20µm,17.5s					
QZH			LR	LR		
	comp=Z,21µm,18.5s					
QZH			LR	LR		
	comp=Z,40µm,17.5s					
MUN	Mundaring	44.99 227	P	P	18 43 08.8	-1.3
	baz=45,SNR=22					
CISI	Cisompet, Garu	45.99 263	P	P	18 43 16.4	-1.9
	comp=Z,8µm,0.7s,comp=Z,115µmcomp=Z,63µm					
LEM	Lembang	46.17 264	P	P	18 43 18.4	-1.4
	comp=Z,510nm,0.8s,baz=55,slow=4.7,SNR=51					
LEM			S	S	18 49 33.0	-3.6
	comp=Z,592nm,1.0s,baz=171,slow=14,SNR=4.0					
LEM			PKPPKP		19 14 11.9	
	comp=Z,31nm,0.9s,baz=142,slow=7.7,SNR=3.0					
TPI	Tanjungpandan	46.21 270	P	P	18 43 20.3	+0.4
	comp=Z,1µm,0.9s,comp=Z,17µm					
SSE	Sheshan	46.84 321	P	P	18 43 24.3	-0.1
SSE			S	S	18 49 45.7	+0.6
SSE			LR	LR		
	comp=Z,2µm,12.2s					
SSE			LR	LR		
	comp=Z,1µm,19.4s					
HKC	Hong Kong Obse	46.84 306	⇓P	P	18 43 25.0	+0.5
ERM	Erimo	46.85 349	eP	P	18 43 23.6	-0.6
	comp=Z,3µm,1.7s					
ERM	Erimo	46.85 349	⇑eP	P	18 43 23.9	-0.3
ERM			pmax	pmax		
	comp=Z,501nm,0.9s					
CBJI	Citeko	46.93 265	P	P	18 43 23.7	-1.7
	comp=Z,3µm,0.9s,comp=Z,31µmcomp=Z,55µm					
TNG	Tangerang	47.13 265	P	P	18 43 26.9	0.0
TJN	Taejon	47.23 331	d iP	P	18 43 25.9	-1.4
MCO	Taipa Grande	47.26 305	P	P	18 43 34.0	+6.3
SBJI	Serang	47.65 265	P	P	18 43 28.6	-2.2
PPBI	Pangkal Pinang	47.75 271	P	P	18 43 30.9	-0.8
KSRS	Korea Array	47.82 332	P	P	18 43 30.1	-1.7
	comp=Z,83nm,0.9s,baz=150,slow=8.2,SNR=137					
KSRS			pP	PcP	18 44 52.3	-1.3
	comp=Z,84nm,1.1s,baz=156,slow=9.8,SNR=0.8					
KSRS			S	S	18 49 59.4	+0.7
	comp=Z,8.4nm,1.1s,baz=210,slow=7.0,SNR=2.2					
KSRS			PKiKP	PKiKP	18 51 42.1	-1.7
	comp=Z,3.2nm,0.9s,baz=210,slow=2.5,SNR=2.1					
KSRS			PKPPKP		19 14 12.2	
	comp=Z,14nm,1.0s,baz=5.5,slow=2.8,SNR=8.2					
GZH	Guangzhou	47.89 306	P	P	18 43 33.3	+0.8
GZH			PcP	PcP	18 44 53.8	-0.4
GZH			sP	sP	18 45 32.0	-0.9
GZH			PcS	PcS	18 48 48.5	-2.2
GZH			S	S	18 50 03.2	+3.2
H01W1	Cape Leeuwin H	47.95 225	P	P	18 43 33.5	+1.0
	baz=91,slow=5.6,SNR=95					
H01W3	Cape Leeuwin H	47.95 225	P	P	18 43 35.1	+2.5
	baz=91,slow=5.6,SNR=77					
H01W2	Cape Leeuwin H	47.96 225	P	P	18 43 32.2	-0.4
	baz=91,slow=5.6,SNR=58					
RAR	Rarotonga	48.08 115	P	P	18 43 34.2	+0.2
	comp=Z,120nm,1.0s,baz=286,slow=3.0,SNR=4.4					
CGJI	Cibinong	48.08 265	P	P	18 43 31.8	-2.4
	comp=Z,5µm,0.8s,comp=Z,59µmcomp=Z,70µm					
YUK	Yuzh-Kuril'sk	48.38 352	d iP	P	18 43 37.1	+1.3
YUK			i		18 44 54.3	
YUK			e		18 45 30.9	
YUK			i S	S	18 50 05.5	-0.6
YUK			eSS	SS	18 53 42.1	+0.3
YUK			pmax	pmax		
	comp=Z,2µm,3.4s					
YUK			pmax	pmax		
	comp=Z,1µm,1.1s					
YUK			pmax	pmax		
	comp=N,562nm,0.9s					
YUK			pmax	pmax		
	comp=E,330nm,1.3s					
BLSI	Bandar Lampung	48.53 266	P	P	18 43 36.0	-1.6
	comp=E,968nm,1.1s,comp=E,13µmcomp=E,48µm					
KLI	Kotabumi	48.92 267	P	P	18 43 39.7	-0.8
KLI			pmax	pmax		
	comp=Z,1µm,1.1s					
KLI	Kotabumi	48.92 267	P	P	18 43 39.7	-0.8
	comp=Z,1µm,1.2s,comp=Z,14µm					
NJ2	Nanjing	48.96 320	⇓iP	P	18 43 40.0	-0.4
NJ2			pP	pP	18 44 56.3	-1.1
NJ2			S	S	18 50 19.2	+4.6
NJ2			sS	sS	18 52 32.1	-1.7
NJ2			LR	LR		
	comp=Z,25µm,14.2s					
NJ2			LR	LR		
	comp=Z,34µm,12.8s					
NJ2			LR	LR		
	comp=Z,60µm,24.6s					
XMAS	Kiritimati	48.97 84	eP	P	18 43 41.0	+0.1
	comp=Z,2µm,0.9s					
ASAJ	Asahikawa	48.98 349	P	P	18 43 40.3	-0.1
	comp=Z,266nm,0.9s,baz=212,slow=8.1,SNR=155					
ASAJ			pP	PcP	18 44 58.4	+0.7
	comp=Z,595nm,1.2s,baz=208,slow=11,SNR=1.2					
ASAJ			S	S	18 50 13.8	-0.7
	comp=Z,23nm,0.9s,baz=90,slow=10,SNR=1.4					
ASAJ			PKPPKP	P'P'df	19 14 16.6	-21
	comp=Z,17nm,1.0s,baz=143,slow=5.0,SNR=4.0					
KLSI		49.05 267	P	P	18 43 41.9	+0.4
	comp=Z,438nm,0.8s,comp=Z,7µm					
QIZ	Qiongzhong	49.05 299	P	P	18 43 41.6	+0.2
QIZ			pP	pP	18 44 59.5	+0.4
QIZ			sP	sP	18 45 43.0	+1.0
QIZ			S	S	18 50 21.6	+5.3
QIZ			sS	sS	18 52 36.5	+0.9
PMBI	Palembang	49.07 270	P	P	18 43 42.3	+0.7
	comp=Z,5µm,0.9s,comp=Z,38µmcomp=Z,73µm					
KASI	Kota Agung	49.27 266	P	P	18 43 40.4	-2.7
	comp=Z,3µm,0.9s,comp=Z,25µmcomp=Z,60µm					
KUR	Kuril'sk	49.33 354	deP	P	18 43 42.4	-0.5
KUR			i		18 44 57.9	
KUR			i *PP	pP	18 45 00.4	+0.5
KUR			e		18 45 37.5	
KUR			i S	S	18 50 20.3	+1.2
KUR			i		18 52 48.8	
KUR			eSS	SS	18 53 59.2	+2.4
KUR			pmax	pmax		
	comp=Z,2µm,1.1s					
KUR			pmax	pmax		
	comp=N,841nm,1.4s					
KUR			pmax	pmax		
	comp=E,510nm,1.6s					
KUR			pmax	pmax		
	comp=Z,11µm,5.3s					
KUR			pmax	pmax		
	comp=N,5µm,4.0s					
DSRI	Dabo	49.43 273	P	P	18 43 49.3	+5.0
MDSI	Maura Dua	49.61 268	P	P	18 43 43.5	-2.1
	comp=N,1µm,1.0s,comp=N,15µmcomp=N,53µm					
TPRI	Tanjung Pinang	49.61 275	P	P	18 43 45.0	-0.6
LWLI	Liwa	49.72 267	P	P	18 43 44.6	-2.0
	comp=N,2µm,0.8s,comp=N,12µm					
JMBI	JAMBI	50.27 271	P	P	18 43 51.6	+1.0
	comp=N,4µm,1.3s,comp=N,60µm					
LHSI	Lahat	50.28 268	P	P	18 43 49.3	-1.3
	comp=N,2µm,1.1s,comp=N,19µm					
MYKOM	Kota Tinggi	50.38 276	eP	P	18 43 50.7	-0.7
	comp=N,2µm,1.2s					
MYKOM	Kota Tinggi	50.38 276	P	P	18 43 52.0	+0.7
MCQ	Macquarie Isla	50.50 176	P	P	18 43 52.6	+1.2
	baz=51,SNR=4.3					
MSHR	Mys Shultsa	50.76 338	d iP	P	18 43 53.9	+0.3
MNAI	Manna	50.83 268	ePP	PP	18 45 53.2	-2.5
MNAI	Manna	50.83 268	P	P	18 43 53.9	-0.8
	comp=N,3µm,0.7s,comp=N,30µm					
VLA	Vladivostok	50.97 339	i P	P	18 43 54.3	-0.8
VLA			pmax	pmax		
	comp=Z,2µm,1.4s					
WHN	Wuhan	51.08 315	⇓P	P	18 43 55.3	-0.9
WHN			pP	pP	18 45 11.5	-3.0
WHN			sP	sP	18 45 54.6	-2.6
WHN			S	S	18 50 41.8	-1.9
WHN			ScS	ScS	18 53 03.9	-1.5
WHN			LR	LR		

	comp=Z,55µm,17.3s						
WHN				LR	LR		
	comp=Z,13µm,13.6s						
WHN				LR	LR		
	comp=Z,70µm,24.4s						
TEY	Ternei	51.23	344⇑	eP	P	18 43 56.1	-0.9
TEY				e		18 45 15.4	
TEY				eS	S	18 51 00.1	+15
TEY				pmax	pmax		
	comp=Z,5µm,3.8s						
RGRI	Rengat	51.67	273	P	P	18 44 05.4	+4.5
YSS	Yuzh-Sakhalins	51.70	350	eP	P	18 43 59.7	-0.7
	comp=Z,821nm,0.9s						
YSS	Yuzh-Sakhalins	51.70	350⇓	eP	P	18 43 59.7	-0.7
YSS				e		18 45 07.0	
YSS				e*PP	pwP	18 45 23.6	+0.2
YSS				e*SP	sP	18 45 59.5	-1.2
YSS				eS	S	18 50 53.0	+1.5
YSS				ePS	PKiKP	18 51 09.0	-39
YSS				eSS	SS	18 54 32.0	-2.2
YSS				pmax	pmax		
	comp=Z,8µm,5.1s						
YSS				pmax	pmax		
	comp=N,4µm,4.6s						
YSS				pmax	pmax		
	comp=E,2µm,4.3s						
USRK	Ussuriysk Ar.	51.88	340	P	P	18 44 00.8	-1.0
	comp=E,100nm,0.7s,baz=144,slow=4.7,SNR=107						
USRK				S	S	18 50 52.1	-2.0
	comp=E,3.0nm,0.8s,baz=225,slow=36,SNR=2.1						
USRK				PKPPKP	P'P'df	19 14 11.5	-22
	comp=E,4.3nm,0.8s,baz=29,slow=4.4,SNR=5.8						
JRMM	Jerantut	52.01	278	P	P	18 44 03.0	-0.3
DL2	Dalian	52.09	328⇓	iP	P	18 44 01.9	-1.5
DL2				pP	pP	18 45 19.5	-1.4
DL2				PP	PP	18 46 10.4	+3.9
DL2				S	S	18 50 55.7	-1.3
DL2				sS	sS	18 53 18.0	0.0
KRJI	Kerinci	52.42	270	P	P	18 44 05.4	-1.0
	comp=E,4µm,0.8s,comp=E,41µmcomp=E,51µm						
SDSI	Sungai Dareh	52.53	272	P	P	18 44 06.2	-0.9
	comp=E,2µm,0.9s,comp=E,35µm						
TIA	Tai'an	52.77	323	P	P	18 44 07.0	-1.4
TIA				pP	pP	18 45 25.0	-1.5
TIA				LR	LR		
	comp=E,20µm,17.2s						
TIA				LR	LR		
	comp=E,26µm,26.5s						
TIA				LR	LR		
	comp=E,47µm,35.3s						
BKNI	Bangkinang	53.02	273	eP	P	18 44 10.2	-0.5
	comp=E,2µm,0.9s						
BKNI	Bangkinang	53.02	273	P	P	18 44 10.0	-0.7
	comp=E,3µm,0.9s,comp=E,34µmcomp=E,114µm						
PANO	Nakornpanom	53.03	295	P	P	18 44 10.8	+0.2
	comp=E,29nm,1.1s,comp=E,533nm						
MDJ	Mudanjiang	53.09	338	P	P	18 44 09.6	-1.0
MDJ				PcP	PcP	18 45 11.0	-2.1
MDJ				pP	pP	18 45 28.2	-1.2
MDJ				sP	sP	18 46 10.4	-2.3
MDJ				PP	PP	18 46 15.8	+0.4
MDJ				ScP	ScP	18 48 31.4	-1.5
MDJ				PcS	PcS	18 49 10.6	-1.8
MDJ				S	S	18 51 11.0	+0.6
MDJ				ScS	ScS	18 53 19.0	0.0
SNY	Shenyang	53.33	332 ⇑	P	P	18 44 14.3	+2.0
SNY				S	S	18 51 20.3	+6.7
SNY				LR	LR		
	comp=E,15µm,19.6s						
SNY				LR	LR		
	comp=E,10µm,12.7s						
SNY				LR	LR		
	comp=E,23µm,25.0s						
KIP	Kipapa	53.42	60	eP	P	18 44 13.5	+0.1
	comp=E,3µm,1.4s						
KIP	Kipapa	53.42	60	eP	P	18 44 13.5	+0.1
KIP				pmax	pmax		
	comp=Z,3µm,1.4s						
PDSI	Padang	53.50	272	P	P	18 44 11.5	-2.6
	comp=Z,2µm,0.7s,comp=Z,23µmcomp=Z,103µm						
IPM	Ipoh	53.52	279	P	P	18 44 14.0	-0.3
SKNT	Sakolnakorn	53.55	294	P	P	18 44 14.2	-0.2
	comp=Z,2µm,1.0s,comp=Z,24µmcomp=Z,78µm						
PPSI	Pulau Pagai	53.83	270	P	P	18 44 17.7	+1.2
CHBT	CHBT	53.89	289	P	P	18 44 17.4	+0.6
	comp=Z,2µm,0.5s,comp=Z,20µm						
KULM	Kulim	54.01	279	P	P	18 44 18.0	+0.2
CN2	Changchun	54.06	335	eP	P	18 44 16.4	-1.1
CN2				epP	pP	18 45 35.7	-0.8
CN2				eS	S	18 51 24.2	+1.0
CN2				ScS	ScS	18 53 22.6	-3.3
CN2				LR	LR		
	comp=Z,9µm,22.0s						
CN2				LR	LR		
	comp=Z,10µm,22.0s						
CN2				LR	LR		
	comp=Z,10µm,22.0s						
SKLT	Songkhla	54.35	282	P	P	18 44 19.5	-0.7
	comp=Z,532nm,1.1s,comp=Z,10µm						
SKR	Severo-Kuril's	54.51	2	eP	P	18 44 20.5	-0.1
SKR				e*PP	pP	18 45 40.4	+0.8
SKR				eS	S	18 51 38.8	+10
SKR				pmax	pmax		
	comp=Z,10µm,7.5s						
SKR				pmax	pmax		
	comp=Z,8µm,10.8s						
SKR				MLR	MLR		
	comp=Z,12µm,15.0s						
MNSI	Mandailing Nat	54.52	274	P	P	18 44 19.3	-2.1
	comp=Z,2µm,0.9s,comp=Z,24µmcomp=Z,110µm						
NONG	Nongkai	54.65	295	P	P	18 44 22.0	-0.2
	comp=Z,38nm,0.8s,comp=Z,543nm						
GYA	Guiyang	54.83	306⇓	iP	P	18 44 23.3	-0.2
GYA				sP	sP	18 46 23.5	-2.7
GYA				PP	PP	18 46 32.4	+1.1
GYA				sS	sS	18 53 53.3	-3.4
GYA				SS	SS	18 55 24.6	+0.1
GYA				LR	LR		
	comp=Z,16µm,21.4s						
GYA				LR	LR		
	comp=Z,21µm,17.3s						
GYA				LR	LR		
	comp=Z,37µm,17.7s						
SISI	Saibi	54.83	271	P	P	18 44 22.2	-1.4
	comp=Z,1µm,0.9s,comp=Z,23µm						
POHA	Pohakuloa	54.99	63	eP	P	18 44 24.7	-0.2
	comp=Z,5µm,1.4s						
CHAI	Chaiyaphum	55.05	292	P	P	18 44 24.6	-0.5
TRTT	Trang	55.37	282	P	P	18 44 26.7	-0.7
	comp=Z,733nm,1.1s,comp=Z,19µmcomp=Z,59µm						
PSI	Prapat	55.38	276	P	P	18 44 25.5	-2.1
	comp=Z,78nm,1.0s,baz=158,slow=4.0,SNR=32						
PSI				S	S	18 51 41.5	-0.5
	comp=Z,6.0nm,0.5s,baz=190,slow=17,SNR=3.6						
PSI				PKPPKP		19 14 06.8	
	comp=Z,22nm,1.0s,baz=214,slow=5.6,SNR=5.9						
TYV	Tymovskoe	55.51	351	eP	P	18 44 30.5	+2.8
TYV				eS	S	18 51 49.8	+7.7
TYV				pmax	pmax		
	comp=Z,333nm,1.2s						
TYV				pmax	pmax		
	comp=Z,5µm,3.3s						
TYV				smax	smax		
	comp=E,7µm,5.0s						
TYV				smax	smax		
	comp=N,500nm,2.0s						
TMDB	BangkokBB_BH_I	55.74	289	P	P	18 44 36.8	+6.9
TSI	Tuntungan	55.82	277	P	P	18 44 29.5	-1.1
	comp=N,4µm,1.1s,comp=N,34µmcomp=N,123µm						
BJT	Baijiatuau	55.87	325	ePP	PP	18 46 38.5	-1.7
KLR	Kul'dur	56.42	343	P	P	18 44 33.3	-0.8
	comp=N,372nm,1.0s,baz=154,slow=5.4,SNR=196						
KLR				pP	pP	18 45 55.5	+0.6
	comp=N,130nm,0.8s,baz=147,slow=13,SNR=1.3						
KLR				S	S	18 51 56.5	+2.4
	comp=N,5.4nm,0.8s,baz=288,slow=20,SNR=2.2						
KLR				PKPPKP	P'P'bc	19 14 10.6	-29
	comp=N,12nm,0.9s,baz=331,slow=5.1,SNR=9.1						
KLR	Kul'dur	56.42	343d	iP	P	18 44 33.2	-0.9
KLR				pmax	pmax		
	comp=Z,2µm,1.0s						
PHET	Kaeng Krachan	56.48	288	P	P	18 44 35.9	+0.8
GSI	Gunungsitoli	56.56	274	eP	P	18 44 33.7	-2.0
	comp=Z,3µm,1.0s						
GSI				ePP	PP	18 46 45.5	-1.3
GSI	Gunungsitoli	56.56	274	P	P	18 44 33.8	-2.0
	comp=Z,3µm,1.0s,comp=Z,28µmcomp=Z,107µm						
GRNR	Gornyy	56.60	347	eP	P	18 44 34.1	-1.3
GRNR				e		18 52 01.7	
KCSI	Kotacane, Aceh	56.61	277	P	P	18 44 33.6	-2.5
	comp=Z,2µm,1.1s,comp=Z,21µmcomp=Z,93µm						
TIY	Taiyuan	56.62	321	eP	P	18 44 35.1	-0.7
TIY				pP	pwP	18 45 59.6	-0.3
TIY				S	S	18 51 59.8	+2.6
PKDT	Phuket	56.70	282	P	P	18 44 36.2	-0.5
	comp=Z,2µm,1.0s,comp=Z,20µm						
XAN	Xi'an	56.84	315	P	P	18 44 35.9	-1.5
XAN				PcP	PcP	18 45 26.6	-1.4
XAN				pP	pwP	18 46 01.2	+0.8
XAN				PP	PP	18 46 48.3	-0.7
XAN				S	S	18 51 51.9	-8.3
PPT	Papeete	56.90	108	P	P	18 44 38.9	+0.9
	comp=Z,144nm,0.7s,baz=46,slow=7.9,SNR=18						
UTTA	Uttaradit	56.90	294	P	P	18 44 38.1	+0.1
PPT2	Papeete2	56.90	108	eP	P	18 44 39.0	+0.9
	comp=Z,1µm,1.3s						
PAE	Paea	56.90	108	eP	P	18 44 38.9	+0.9
	comp=Z,151nm,1.1s						
PPTF	Pamatai, Papee	56.91	108	eP	P	18 44 39.1	+1.0
	comp=Z,2µm,1.2s						
PET	Petropavlovsk	56.97	3	eP	P	18 44 37.0	-0.8
	comp=Z,2µm,1.4s						
PET	Petropavlovsk	56.97	3⇓	iP	P	18 44 36.9	-0.8
PET				e*PP	pP	18 45 57.4	-0.2
PET				e*SP	sP	18 46 37.8	-1.8
PET				eS	S	18 52 04.0	+3.1
PET				pmax	pmax		
	comp=Z,984nm,0.6s						
PET				pmax	pmax		
	comp=Z,10µm,5.5s						
PET				pmax	pmax		
	comp=Z,12µm,10.7s						
PET				smax	smax		
	comp=N,83µm,24.5s						
PET				smax	smax		
	comp=N,36µm,14.9s						
PET				MLR	MLR		
	comp=Z,12µm,16.0s						
PEA0B	Petropavlovsk-	57.00	3	eP	P	18 44 37.8	-0.2
	comp=Z,4µm,1.3s						
PETK	Petropavlovsk-	57.00	3	P	P	18 44 37.4	-0.7
	comp=Z,394nm,1.0s,baz=152,slow=6.5,SNR=229						
PETK				pP	pP	18 46 00.3	+2.3
	comp=Z,530nm,1.2s,baz=165,slow=7.2,SNR=1.3						
PETK				S	S	18 52 08.5	+7.0
	comp=Z,18nm,0.9s,baz=145,slow=7.9,SNR=3.8						
PETK				PKPPKP	P'P'df	19 14 18.7	-7.4
	comp=Z,19nm,1.1s,baz=113,slow=3.9,SNR=6.3						
TIAR	Tiarei	57.11	108	eP	P	18 44 40.4	+0.9
	comp=Z,648nm,1.0s						
TPTI		57.17	276	P	P	18 44 38.0	-2.0
	comp=Z,2µm,1.0s,comp=Z,19µm						
TVO	Taravao	57.23	108	eP	P	18 44 41.6	+1.2
	comp=Z,468nm,0.9s						
TVO	Taravao	57.23	108	eP'P'bc	P'P'bc	19 14 34.8	-3.3
	comp=Z,60nm,1.1s						
SRDT	SRDT	57.31	290	P	P	18 44 41.5	+0.6
	comp=Z,1µm,0.9s,comp=Z,17µm						
KMI	Kunming	57.49	303	P	P	18 44 42.8	+0.5
KMI				PP	PP	18 46 58.3	+3.2
KMI				S	S	18 52 14.5	+5.2
KMI				LR	LR		
	comp=Z,10µm,20.5s						
KMI				LR	LR		
	comp=Z,20µm,18.4s						
KMI				LR	LR		
	comp=Z,27µm,19.5s						
LHMI	Lhok Sumawe	57.65	279	P	P	18 44 42.7	-0.6
	comp=Z,5µm,1.0s,comp=Z,47µmcomp=Z,95µm						
TBI	Tubuai	57.86	115	eP	P	18 44 45.2	+0.6
	comp=Z,4µm,1.1s						
SNSI	Sinabang, Aceh	57.92	275	P	P	18 44 49.0	+3.9
	comp=Z,2µm,1.0s,comp=Z,27µm						
LAMP	Lampang	57.96	295	P	P	18 44 45.9	+0.5
PAYA	Payao	58.00	296	P	P	18 44 45.6	0.0
UMPA	Umpang Tak	58.03	292	P	P	18 44 46.2	+0.4
NKL	Nikolayevsk	58.04	351	eP	P	18 44 44.9	-0.2
NKL				e		18 45 34.4	
NKL				e		18 46 51.1	
NKL				eS	S	18 52 16.8	+2.1
NKL				e		18 53 54.0	
NKL				eSS	SS	18 56 15.2	+1.5
NKL				pmax	pmax		
	comp=N,111nm,1.2s						
NKL				pmax	pmax		
	comp=E,26nm,1.2s						
NKL				pmax	pmax		
	comp=Z,359nm,1.2s						
NKL				pmax	pmax		
	comp=Z,2µm,4.0s						
NKL				MLR	MLR		
	comp=E,4µm,14.0s						
NKL				MLR	MLR		
	comp=Z,12µm,18.0s						
NKL				MLR	MLR		
	comp=N,3µm,17.0s						
MLSI	Meulaboh, Aceh	58.06	278	P	P	18 44 44.2	-1.9
	comp=N,6µm,1.0s,comp=N,53µmcomp=N,92µm						
PMOR	Pomariorio Ree	58.25	105	eP	P	18 44 48.1	+0.7
	comp=N,7µm,1.4s						
MEH	Mehetia	58.36	108	eP	P	18 44 48.9	+0.8
	comp=N,586nm,1.1s						
VAH	Vaihoa	58.53	105	eP	P	18 44 49.7	+0.5
	comp=N,3µm,1.4s						
CM31	Chiang Mai Arr	58.57	294	P	P	18 44 49.9	+0.4
	SNR=695						
CMAR	Chiang Mai Arr	58.57	294	P	P	18 44 49.0	-0.6
	comp=N,130nm,0.8s,baz=110,slow=5.0,SNR=428						
CMAR				S	S	18 52 25.5	+2.6
	comp=N,11nm,1.1s,baz=147,slow=1.8,SNR=2.6						
CMAR				PKPPKP		19 14 12.4	
	comp=N,7.9nm,0.9s,baz=256,slow=4.0,SNR=5.1						
CMAR	Chiang Mai Arr	58.57	294	iP	P	18 44 49.9	+0.4
CMAR				pmax	pmax		
	comp=Z,130nm,0.8s						
CMMT	Chiang Mai	58.67	295	P	P	18 44 50.0	-0.2
	comp=Z,626nm,1.6s,comp=Z,10µmcomp=Z,74µm						
CHTO	Chiang Mai	58.67	295	eP	P	18 44 50.1	-0.1
	comp=Z,1µm,1.0s						
CHTO	Chiang Mai	58.67	295	eP	P	18 44 50.1	-0.1
CHTO				pmax	pmax		
	comp=Z,1µm,1.0s						
CHTO	Chiang Mai	58.67	295	P	P	18 44 50.1	-0.1
	SNR=446						
HHC	Hu-ho-hao-te	59.08	323	P	P	18 44 52.1	-0.6
HHC				pP	pP	18 46 12.7	-0.4
HHC				sP	sP	18 46 54.3	-0.9
HHC				S	S	18 52 27.7	-1.1
HHC				sS	sS	18 54 53.2	-0.3
HHC				SS	SS	18 56 32.3	+1.6
CD2	Chengdu	59.09	310⇓	iP	P	18 44 52.2	-0.7
CD2				pP	pP	18 46 14.2	0.0
CD2				sP	sP	18 46 56.0	+0.1
CD2				S	S	18 52 29.0	-0.3
CD2				SS	SS	18 56 31.4	+0.2
CD2				pmax	pmax		
	comp=Z,23µm,7.1s						
CD2				LR	LR		
	comp=Z,38µm,20.1s						
CD2				LR	LR		
	comp=Z,35µm,17.2s						
CD2				LR	LR		
	comp=Z,37µm,17.2s						
BTO	Baotou	59.86	322	eP	P	18 44 58.1	+0.1
BTO				epP	pP	18 46 18.7	-0.1
BTO				S	S	18 52 34.0	-4.7
HIA	Hailar	60.79	335	ePP	PP	18 47 17.9	-5.6
ADK	Adak	61.04	20	eP	P	18 45 04.5	-1.0
	comp=Z,2µm,1.0s						
ADK	Adak	61.04	20	eP	P	18 45 04.5	-1.0
ADK				pmax	pmax		
	comp=Z,2µm,1.0s						
GSTR	Great Sitkin T	61.43	21	ePP	PP	18 47 27.9	-1.1
LZH	Lanzhou	61.46	315 ⇑	P	P	18 45 08.5	-0.3
LZH				S	S	18 53 02.1	+2.9
LZH				SS	SS	18 57 12.9	+4.6
LZH				pmax	pmax		
	comp=Z,18µm,6.5s						
ZEA	Zeya	61.73	342⇓	eP	P	18 45 09.2	-0.8
ZEA				e		18 47 27.0	
ZEA				eS	S	18 53 05.0	+3.6
ZEA				eSS	SS	18 57 16.0	+4.5
ZEA				pmax	pmax		
	comp=N,130nm,1.0s						
ZEA				pmax	pmax		
	comp=E,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,230nm,1.0s						
ZEA				pmax	pmax		
	comp=N,5µm,4.0s						
ZEA				pmax	pmax		
	comp=E,2µm,4.0s						
ZEA				pmax	pmax		
	comp=Z,9µm,4.0s						
ZEA				pmax	pmax		
	comp=Z,8µm,10.0s						
ZEA				pmax	pmax		
	comp=E,3µm,8.0s						
ZEA				pmax	pmax		
	comp=N,5µm,7.0s						
ZEA				smax	smax		
	comp=E,23µm,8.0s						
ZEA				smax	smax		
	comp=N,28µm,7.0s						
PBA	Port Blair	62.80	285	eP	P	18 45 15.9	-1.9
PBA				IAmb	IAmb	18 45 28.4	
	comp=Z,554nm,1.0s						
DGPR	DIGLIPUR	62.91	287	eP	P	18 45 17.4	-1.1
MA2	Magadan	63.44	358	P	P	18 45 20.1	-1.0
	comp=Z,246nm,0.7s,baz=166,slow=6.9,SNR=207						
MA2				pP	pP	18 46 43.2	+0.1
	comp=Z,255nm,1.0s,baz=172,slow=8.2,SNR=1.2						
MA2				S	S	18 53 24.3	+1.9
	comp=Z,34nm,1.1s,baz=285,slow=19,SNR=2.8						
MA2				PKPPKP	P'P'df	19 14 05.4	-10
	comp=Z,3.8nm,0.4s,baz=161,slow=5.2,SNR=3.9						
MA2	Magadan	63.44	358	eP	P	18 45 19.9	-1.2
	comp=Z,1µm,0.7s						
MA2	Magadan	63.44	358d	iP	P	18 45 20.0	-1.0
MA2				pmax	pmax		
	comp=Z,886nm,0.6s						
SIMRM	Sittwe	64.53	294	ePcP	PcP	18 45 59.0	-0.3
NIKH	Nikolski High	64.84	24	eP	P	18 45 28.7	-1.5
	comp=Z,3µm,1.0s						
MOKO	MOKOCHONG	64.85	301	eP	P	18 45 29.7	-1.3
KOHI	KOHIMA	65.02	301	eP	P	18 45 28.9	-3.2
JORH	JORHAT	65.21	302	eP	P	18 45 32.6	-0.5
CIT	Chita	65.48	334	eP	P	18 45 33.9	-0.5
CIT				e		18 45 55.0	
CIT				e		18 46 58.2	
CIT				e		18 47 40.2	
CIT				e		18 47 59.4	
CIT				eS	S	18 53 50.7	+3.2
CIT				pmax	pmax		
	comp=Z,2µm,2.8s						
GTA	Gaotai	65.85	317 ⇓	P	P	18 45 37.1	0.0
GTA				pP	pP	18 47 00.2	0.0
GTA				sP	sP	18 47 40.6	-1.0
GTA				S	S	18 53 55.8	+3.2
GTA				sS	sS	18 56 18.0	-3.3
GTA				SS	SS	18 58 15.8	-0.5
GTA				LR	LR		
	comp=Z,15µm,22.0s						
GTA				LR	LR		
	comp=Z,14µm,19.9s						
GTA				LR	LR		
	comp=Z,26µm,22.0s						
SILR	SILCHAR	65.86	299	eP	P	18 45 37.3	0.0
ULN	Ulaanbaatar	65.93	327	eP	P	18 45 37.1	-0.3
	comp=Z,879nm,1.0s						
ULN	Ulaanbaatar	65.93	327d	iP	P	18 45 37.1	-0.3
ULN				pmax	pmax		
	comp=Z,795nm,0.9s						
ULN	Ulaanbaatar	65.93	327	P	P	18 45 37.5	+0.1
	SNR=801						
SONM	Songino Array	66.27	327	P	P	18 45 39.1	-0.4
	comp=Z,62nm,0.6s,baz=137,slow=5.4,SNR=236						
SONM				pP	pP	18 47 02.8	-0.1
	comp=Z,35nm,0.6s,baz=145,slow=5.3,SNR=0.7						
SONM				PKPPKP	P'P'df	19 14 02.5	-8.6
	comp=Z,9.6nm,1.0s,baz=270,slow=2.6,SNR=5.2						
SONM				P4KPbc		19 22 32.2	
	comp=Z,2.1nm,1.1s,baz=106,slow=3.1,SNR=3.5						
BRDH	Bariadhala	66.31	297	P	P	18 45 41.0	+0.9
	comp=Z,200nm,0.4s,baz=75,slow=5.1,SNR=9.5						
BRDH				S	S	18 53 56.2	-2.0
	comp=Z,89nm,0.4s,baz=80,slow=19,SNR=1.8						
TEZP	TEZPUR	66.41	301	eP	P	18 45 39.5	-1.1
UNV	Unalaska Valle	66.44	24	eP	P	18 45 38.8	-1.5
	comp=Z,816nm,0.6s						
BELO	BELONIA	66.63	297	eP	P	18 45 42.4	+0.3
SEY	Seymchan	66.77	359	P	P	18 45 41.2	-1.0
	comp=Z,185nm,1.1s,baz=167,slow=5.2,SNR=137						
SEY				pP	pP	18 47 05.6	+0.3
	comp=Z,120nm,0.8s,baz=147,slow=4.1,SNR=0.9						
SEY				S	S	18 54 03.4	+1.0
	comp=Z,6.4nm,0.9s,baz=12,slow=20,SNR=1.6						
SEY				PKPPKP		19 13 57.4	
	comp=Z,10nm,0.9s,baz=51,slow=4.2,SNR=4.0						
SHL	Shillong	66.89	300	P	P	18 45 42.9	-1.0
SHL				pmax	pmax		
	comp=Z,4µm,1.2s						
SHL	Shillong	66.89	300	eP	P	18 45 43.4	-0.5
AKUT	Akutan	66.95	24	eP	P	18 45 42.4	-1.1
	comp=Z,2µm,0.8s						
TAWA	Tawang	67.49	302	eP	P	18 45 47.7	-0.1
TURI	Tura	68.23	299	eP	P	18 45 52.0	0.0
YAK	Yakutsk	68.44	348	eP	P	18 45 51.8	-0.7
	comp=Z,2µm,1.4s						
YAK	Yakutsk	68.44	348	eP	P	18 45 52.0	-0.5
YAK				eS	S	18 54 29.4	+7.4
LSA	Lhasa	68.73	304	eP	P	18 45 55.7	+0.1
LSA				ePcP	PcP	18 46 09.1	-8.3
LSA	Lhasa	68.73	304	P	P	18 45 55.6	+0.1
LSA				S	S	18 54 32.2	+4.6
LSA				LR	LR		
	comp=Z,72µm,27.1s						
LSA				LR	LR		
	comp=Z,94µm,34.9s						
LSA				LR	LR		
	comp=Z,110µm,34.2s						
LSA	Lhasa	68.73	304	P	P	18 45 55.6	+0.1
LSA	Lhasa	68.73	304	eP	P	18 45 55.7	+0.1
LSA				e		18 46 09.1	
CASY	Casey	69.09	197	eP	P	18 45 56.7	+0.2
	comp=Z,4µm,1.5s						
ZAK	Zakamensk	69.42	328	eP	P	18 45 58.2	-0.7
ZAK				e		18 54 39.8	
ZAK				pmax	pmax		
	comp=Z,1µm,1.3s						
BOD	Bodaibo	69.47	338	eP	P	18 45 57.0	-1.9
BOD				e		18 47 22.1	
BOD				e		18 54 39.2	
BOD				pmax	pmax		
	comp=Z,842nm,1.9s						
TLY	Talaya	69.97	329	eP	P	18 46 01.3	-0.8
	comp=Z,370nm,0.8s						
TLY	Talaya	69.97	329d	iP	P	18 46 01.0	-1.1
TLY				e		18 47 27.1	
TLY				eS	S	18 54 44.0	+3.7
TLY				pmax	pmax		
	comp=Z,1µm,0.9s						
TLY	Talaya	69.97	329	P	P	18 46 01.7	-0.4
	SNR=358						
IRK	Irkutsk	69.98	330	eP	P	18 46 01.4	-0.7
IRK				eS	S	18 54 47.9	+7.5
IRK				pmax	pmax		
	comp=Z,2µm,1.7s						
SDPT	Sand Point	70.03	26	ePP	PP	18 48 40.7	-2.7
GTK	Tadong	70.20	301	eP	P	18 46 03.8	-0.3
GTK				IAmb	IAmb	18 46 17.1	
	comp=Z,73µm,3.7s						
BWNR	Bhubaneshwar	71.04	293	eP	P	18 46 08.4	-0.6
RKT	Rikitea	71.06	113	eP	P	18 46 09.5	+0.4
	comp=Z,2µm,1.2s						
MOY	Mondy	71.33	328	eP	P	18 46 10.0	-0.3
MOY				pmax	pmax		
	comp=Z,2µm,3.1s						
BOK	Bokaro	71.71	297	eP	P	18 46 13.0	0.0
BOK				IAmb	IAmb	18 46 26.4	
	comp=Z,2µm,1.1s						
JIRN	Jiri	72.36	301	eP	P	18 46 16.9	-0.3
BILL	Bilibino	72.41	5	eP	P	18 46 15.1	-1.1
	comp=Z,949nm,0.9s						
BILL				ePP	PP	18 49 01.5	-2.0

BILL	**Bilibino**	**72.41**	**5**	*d* *i*P	**P**	**18 46 15.6**	**-0.6**
BILL				*i*		18 46 30.4	
BILL				*i* *PP	**pwP**	**18 47 43.4**	**-1.5**
BILL				*e*		18 49 00.0	
BILL				*i* S	**SKiKP**	**18 55 11.5**	**+1.8**
BILL				pmax	pmax		
	comp=Z,875nm,0.9s						
GUN	**Gumba**	**72.68**	**301**	*e*P	**P**	**18 46 18.7**	**-0.3**
	comp=Z,10µm,0.8s						
PKI	**Pulchoki**	**73.00**	**300**	*e*P	**P**	**18 46 20.2**	**-0.7**
	comp=Z,10µm,1.2s						
PKIN	**Phulchoki**	**73.02**	**300**	*e*P	**P**	**18 46 20.3**	**-0.6**
KKN	**Kakani**	**73.17**	**300**	*e*P	**P**	**18 46 21.3**	**-0.4**
	comp=Z,4µm,0.8s						
DMN	**Daman**	**73.28**	**300**	*e*P	**P**	**18 46 22.0**	**-0.4**
	comp=Z,11µm,1.0s						
VNDA	**Vanda**	**73.57**	**178**	P	**P**	**18 46 22.7**	**-0.1**
	comp=Z,131nm,0.8s,baz=331,slow=6.4,SNR=288						
VNDA				S	**S**	**18 55 25.5**	**+5.4**
	comp=Z,15nm,1.2s,baz=332,slow=17,SNR=1.4						
VNDA				PKPPKP	P'P'df	19 13 32.8	-27
	comp=Z,2.2nm,0.8s,baz=224,slow=4.5,SNR=3.8						
VNDA	**Vanda**	**73.57**	**178**	*e*PcP	**P**	**18 46 23.5**	**+0.7**
	comp=Z,5µm,1.5s						
VNDA	**Vanda**	**73.57**	**178**	⇑*e*P	**P**	**18 46 23.5**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,5µm,1.5s						
GKN	**Gorkha**	**73.77**	**301**	*e*P	**P**	**18 46 24.6**	**-0.5**
	comp=Z,17µm,1.3s						
PALK	**Pallekele**	**73.93**	**279**	P	**P**	**18 46 25.4**	**-0.7**
	comp=Z,169nm,0.9s,baz=116,slow=4.8,SNR=32						
PALK				S	**S**	**18 55 30.8**	**+4.5**
	comp=Z,13nm,0.9s,baz=294,slow=20,SNR=3.2						
PALK	**Pallekele**	**73.93**	**279**	*e*P	**P**	**18 46 26.6**	**+0.5**
	comp=Z,2µm,1.2s						
PALK	**Pallekele**	**73.93**	**279**	*i* P	**P**	**18 46 25.8**	**-0.3**
	SNR=23						
PALK	**Pallekele**	**73.93**	**279**	*e*P	**P**	**18 46 26.6**	**+0.5**
PALK				pmax	pmax		
	comp=Z,2µm,1.2s						
SBA	**Scott Base**	**74.10**	**177**	*e*P	**P**	**18 46 26.9**	**+1.1**
	comp=Z,7µm,1.6s						
SBA	**Scott Base**	**74.10**	**177**	*e*P	**P**	**18 46 26.9**	**+1.1**
SBA				pmax	pmax		
	comp=Z,7µm,1.6s						
DANN	**Dangsing**	**74.61**	**301**	*e*P	**P**	**18 46 29.3**	**-0.7**
KOLN	**Koldanda**	**74.61**	**300**	*e*P	**P**	**18 46 29.2**	**-0.8**
	comp=Z,13µm,1.2s						
KDAK	**Kodiak Island**	**74.97**	**26**	*e*P	**P**	**18 46 30.2**	**-0.9**
	comp=Z,2µm,0.8s						
KDAK	**Kodiak Island**	**74.97**	**26**	*e*P	**P**	**18 46 30.2**	**-0.9**
KDAK				pmax	pmax		
	comp=Z,2µm,0.8s						
MDRS	**Chennai**	**75.08**	**285**	*e*P	**P**	**18 46 31.4**	**-1.1**
MDRS				IAmb	IAmb	18 46 45.3	
	comp=Z,1µm,1.2s						
PYUN	**Piuthan**	**75.21**	**300**	*e*P	**P**	**18 46 32.3**	**-1.1**
	comp=Z,5µm,1.0s						
WMQ	**Urumqi**	**75.93**	**317**	*e*P	**P**	**18 46 37.0**	**+0.1**
	comp=Z,2µm,1.1s						
WMQ	**Urumqi**	**75.93**	**317**	P	**P**	**18 46 37.6**	**+0.7**
WMQ				PcP	**PcP**	**18 46 45.9**	**-1.5**
WMQ				pP	pP	18 48 02.3	-0.8
WMQ				S	**S**	**18 55 46.5**	**-0.8**
WMQ				sS	sS	18 58 15.9	-1.9
WMQ				SS	**SS**	**19 00 50.9**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,9µm,4.5s						
WMQ				LR	LR		
	comp=Z,11µm,21.5s						
WMQ				LR	LR		
	comp=Z,10µm,19.7s						
WMQ				LR	LR		
	comp=Z,10µm,23.5s						
WMQ	**Urumqi**	**75.93**	**317**	*e*P	**P**	**18 46 37.0**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,2µm,1.1s						
TIXI	**Tiksi**	**77.27**	**352**	P	**P**	**18 46 42.0**	**-1.5**
	comp=Z,50nm,0.9s,baz=155,slow=6.9,SNR=28						
TIXI				pP	**pwP**	**18 48 12.7**	**-1.2**
	comp=Z,70nm,0.8s,baz=180,slow=3.0,SNR=2.0						
TIXI				PKKPbc	**PKKPbc**	**19 05 51.0**	**+0.8**
	comp=Z,9.6nm,1.0s,baz=353,slow=2.5,SNR=3.0						
TIXI				PKPPKP	P'P'df	19 13 38.9	-13
	comp=Z,6.1nm,0.8s,baz=312,slow=3.8,SNR=4.1						
TIXI	**Tiksi**	**77.27**	**352**	*e*P	**P**	**18 46 42.1**	**-1.5**
	comp=Z,802nm,1.3s						
TIXI	**Tiksi**	**77.27**	**352**	*ce*P	**P**	**18 46 41.8**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,750nm,1.7s						
HYB	**Hyderabad**	**77.30**	**289**	⇓*i*P	**P**	**18 46 43.5**	**-1.5**
	comp=Z,1µm,1.0s						
HYB				*e*		18 47 11.0	
HYB				*e*pP	**pP**	**18 48 12.0**	**+0.2**
HYB				*e*sP	**sP**	**18 48 58.0**	**+5.4**
HYB				*e*S	**S**	**18 56 02.0**	**-0.8**
HYB				*e*ScS	**ScS**	**18 56 30.0**	**+3.3**
HYB				*e*		18 57 02.0	
HYB				*e*PKPPKP	**P'P'df**	**19 13 49.0**	**-2.6**
HYB				*e*		19 15 33.0	
HYB				*e*		19 16 50.0	
NGP	**Nagpur**	**77.41**	**293**	*e*P	**P**	**18 46 44.5**	**-1.0**
TRD	**Trivandrum**	**77.75**	**280**	*e*P	**P**	**18 46 46.9**	**-0.5**
PTH	**Pithoragarh**	**77.90**	**301**	*e*P	**P**	**18 46 46.1**	**-2.1**
PTH				*e*S	**S**	**18 56 09.1**	**0.0**
RC01	**Rabbit Creek A**	**78.00**	**24**	*e*PP	PP	18 49 50.6	+0.3
DGZ	**Jazzator, Alta**	**78.14**	**323**	*i* P	**P**	**18 46 48.1**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,1µm,1.0s						
JHNI	**Jhansi**	**78.59**	**297**	*e*P	**P**	**18 46 50.5**	**-1.3**
JHNI				*e*x	x	18 48 18.0	
ZSN	**Zaisan**	**79.00**	**320**	*e*P	**P**	**18 46 52.6**	**-0.9**
ZSN				*e**PP	**pwP**	**18 48 21.8**	**-0.9**
ZSN				*i* S	**S**	**18 56 25.0**	**+5.4**
ZSN				pmax	pmax		
	comp=Z,1µm,3.2s						
ZSN				smax	smax		
	comp=E,688nm,4.4s						
BHPL	**Bhopal**	**79.23**	**294**	*e*P	**P**	**18 46 54.1**	**-1.3**
BHPL				IAmb	IAmb	18 47 01.3	
	comp=Z,716nm,0.8s						
DDI	**Dehra Dun**	**79.89**	**302**	*e*P	**P**	**18 46 58.2**	**-0.5**
DDI				IAmb	IAmb	18 47 05.8	
	comp=Z,828nm,0.9s						
NDI	**New Delhi**	**80.31**	**300**	*e*P	**P**	**18 46 59.5**	**-1.4**
MK31	**Makanchi Array**	**80.48**	**319**	*i* P	**P**	**18 47 00.5**	**-0.9**
MK31				pmax	pmax		
	comp=Z,1µm,0.8s						
MKAR	**Makanchi Array**	**80.48**	**319**	P	**P**	**18 47 00.7**	**-0.8**
	comp=Z,110nm,0.8s,baz=101,slow=5.9,SNR=598						
MKAR				S	**S**	**18 56 33.3**	**-1.7**
	comp=Z,8.4nm,0.9s,baz=83,slow=3.3,SNR=2.9						
MKAR				PKKPbc	**PKKPbc**	**19 05 39.5**	**-2.3**
	comp=Z,3.2nm,0.7s,baz=287,slow=3.8,SNR=3.4						
MKAR				PKPPKP		19 13 36.4	
	comp=Z,3.1nm,0.9s,baz=289,slow=3.7,SNR=5.6						
MAKZ	**Makanchi**	**80.69**	**319**	*e*P	**P**	**18 47 01.6**	**-0.9**
	comp=Z,2µm,0.8s						
MAKZ	**Makanchi**	**80.69**	**319**	*e*P	**P**	**18 47 01.6**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,2µm,0.8s						
TCOL	**CIGO, UAF Yank**	**80.70**	**22**	P	**P**	**18 47 00.5**	**-1.7**
	baz=239						
COLA	**College**	**80.71**	**22**	*d* *i*P	**P**	**18 47 00.0**	**-2.2**
COLA				pmax	pmax		
	comp=Z,2µm,0.9s						
SMLA	**Simla**	**80.78**	**302**	*e*P	**P**	**18 47 02.2**	**-1.1**
SMLA				IAMs_20	IAMs_20	19 22 47.0	
	comp=Z,17µm,19.4s						
POKR	**Poker Plat Res**	**80.99**	**21**	P	**P**	**18 47 01.5**	**-2.1**
	baz=240						
H08S2	**Diego Garcia H**	**81.00**	**263**	P	**P**	**18 47 04.8**	**+0.3**
	baz=35,slow=6.0,SNR=138						
H08S3	**Diego Garcia H**	**81.01**	**263**	P	**P**	**18 47 04.6**	**+0.1**
	baz=35,slow=6.0,SNR=140						
ILAR	**Eielson Array**	**81.01**	**22**	P	**P**	**18 47 01.6**	**-2.2**
	comp=Z,323nm,1.0s,baz=251,slow=5.1,SNR=578						
ILAR				pP	**pP**	**18 48 32.0**	**+1.3**
	comp=Z,119nm,0.8s,baz=255,slow=5.5,SNR=2.3						
ILAR				S	**S**	**18 56 34.3**	**-5.4**
	comp=Z,12nm,1.0s,baz=238,slow=2.1,SNR=4.5						
ILAR				PKKPbc	**PKKPbc**	**19 05 39.0**	**-2.6**
	comp=Z,12nm,0.7s,baz=347,slow=1.5,SNR=7.1						
ILAR				PKPPKP	P'P'df	19 13 26.2	-19
	comp=Z,5.6nm,1.0s,baz=120,slow=2.4,SNR=7.5						
H08S1	**Diego Carcia H**	**81.02**	**263**	P	**P**	**18 47 05.1**	**+0.5**
	baz=35,slow=6.0,SNR=73						
DGAR	**Diego Garcia**	**81.05**	**263**	P	**P**	**18 47 04.7**	**-0.4**
	SNR=13						
ZALV	**Zalesovo Beam**	**81.13**	**326**	P	**P**	**18 47 02.9**	**-1.7**
	comp=Z,124nm,0.6s,baz=115,slow=5.7,SNR=171						
ZALV				pP	**pwP**	**18 48 36.6**	**+2.2**
	comp=Z,82nm,0.8s,baz=140,slow=4.7,SNR=1.0						
ZALV				S	**S**	**18 56 36.4**	**-4.9**
	comp=Z,11nm,0.9s,baz=70,slow=4.7,SNR=2.6						
ZALV				PKKPbc	**PKKPbc**	**19 05 35.9**	**-4.9**
	comp=Z,7.5nm,0.8s,baz=318,slow=1.9,SNR=3.1						
ZALV				PKPPKP	P'P'df	19 13 25.0	-20
	comp=Z,8.6nm,0.8s,baz=294,slow=3.0,SNR=9.0						
BHK	**Bhakra**	**81.47**	**302**	*e*P	**P**	**18 47 05.2**	**-1.7**
PDGK	**Podgornoye**	**81.50**	**315**	P	**P**	**18 47 05.9**	**-1.1**
PDGK				pmax	pmax		
	comp=Z,963nm,0.9s						
GOA	**Goa**	**81.56**	**286**	*e*P	**P**	**18 47 07.0**	**-0.7**
GOA				IAMs_20	IAMs_20	19 18 22.0	
	comp=Z,23µm,24.2s						
DHRM	**DHARAMSHALA**	**81.71**	**303**	*e*P	**P**	**18 47 07.0**	**-1.5**
DHRM				IAMs_20	IAMs_20	19 19 41.1	
	comp=Z,15µm,24.8s						
UZB	**Uzynbulak**	**81.79**	**314**	*de*P	**P**	**18 47 07.4**	**-1.1**
UZB				*e**PP	**pP**	**18 48 36.6**	**+0.5**
UZB				*e*S	**S**	**18 56 50.1**	**+1.3**
UZB				pmax	pmax		
	comp=Z,2µm,2.9s						
UZB				smax	smax		
	comp=N,825nm,4.9s						
POO	**Poona**	**81.89**	**289**	*e*P	**P**	**18 47 07.3**	**-2.1**
KPKS	**Kokpek**	**82.11**	**315**	*de*P	**P**	**18 47 08.9**	**-1.2**
KPKS				*e*S	**S**	**18 56 50.0**	**-1.9**
KPKS				pmax	pmax		
	comp=Z,4µm,3.0s						
KPKS				smax	smax		
	comp=E,1µm,3.9s						
TOLK	**Toolik Lake Re**	**82.12**	**18**	P	**P**	**18 47 09.3**	**-0.3**
	baz=237						
SATY	**Saty**	**82.21**	**314**	*de*P	**P**	**18 47 09.7**	**-1.0**
SATY				*e**PP	**pP**	**18 48 36.2**	**-2.1**
SATY				*e*S	**S**	**18 56 51.8**	**-1.2**
SATY				pmax	pmax		
	comp=Z,4µm,3.4s						
SATY				smax	smax		
	comp=E,2µm,3.7s						
ZHN	**Zhinishke**	**82.22**	**314**	*de*P	**P**	**18 47 09.5**	**-1.2**
ZHN				*e**PP	**pP**	**18 48 38.2**	**-0.1**
ZHN				*e*S	**S**	**18 56 56.9**	**+3.9**
ZHN				pmax	pmax		
	comp=Z,826nm,1.9s						
ZHN				smax	smax		
	comp=N,228nm,4.2s						
H08N1	**Diego Carcia H**	**82.53**	**264**	P	**P**	**18 47 10.3**	**-2.1**
	baz=144,slow=2.5,SNR=27						
H08N2	**Diego Garcia H**	**82.55**	**264**	P	**P**	**18 47 09.2**	**-3.2**
	baz=144,slow=2.5,SNR=37						
H08N3	**Diego Garcia H**	**82.56**	**264**	P	**P**	**18 47 09.5**	**-2.9**
	baz=144,slow=2.5,SNR=27						
TDK	**Taldyqorghan**	**82.65**	**316**	*e*P	**P**	**18 47 12.1**	**-0.6**
TDK				*e**PP	**pP**	**18 48 40.1**	**-0.5**
TDK				*e*S	**S**	**18 56 54.6**	**-2.5**
TNSS	**Tian-Shan**	**83.25**	**314**	*e*P	**P**	**18 47 15.9**	**-0.4**
KSH	**Kashi**	**83.28**	**310**	P	**P**	**18 47 17.6**	**+1.4**
KSH				pP	pP	18 48 45.0	+0.6
KSH				sP	sP	18 49 23.9	-1.0
KSH				PP	**PP**	**18 50 37.3**	**+3.0**
KSH				S	**SKSac**	**18 56 57.7**	**-3.2**
KSH				SS	**SS**	**19 02 47.4**	**+8.2**
KSH				pmax	pmax		
	comp=N,4µm,1.5s						
KSH				pmax	pmax		
	comp=N,21µm,5.4s						
KSH				LR	LR		
	comp=N,7µm,16.4s						
KSH				LR	LR		
	comp=N,7µm,13.9s						
KSH				LR	LR		
	comp=N,28µm,38.0s						
AAA	**Alma-Ata**	**83.31**	**314**	*d* *i*P	**P**	**18 47 15.6**	**-0.6**
AAA				*e**PP	**pP**	**18 48 45.1**	**+1.0**
AAA				*e*S	**S**	**18 57 04.2**	**+0.3**
AAA				pmax	pmax		
	comp=Z,5µm,2.5s						
CHKK	**Chushkaly**	**83.39**	**315**	⇓*i*P	**P**	**18 47 15.4**	**-1.1**
H02S1	**DAWSON INLET T**	**83.46**	**36**	P	**P**	**18 47 16.4**	**-0.1**
ULHL	**Ulahol**	**83.60**	**313**	P	**P**	**18 47 17.8**	**0.0**
	SNR=59						
MTBS	**Maitube**	**83.64**	**314**	⇓*i*P	**P**	**18 47 17.3**	**-0.6**
KURK	**Kurchatov**	**83.85**	**322**	*e*P	**P**	**18 47 17.0**	**-1.6**
	comp=Z,4µm,1.4s						
KURK	**Kurchatov**	**83.85**	**322**	*d* *i*P	**P**	**18 47 17.0**	**-1.6**
KURK				pmax	pmax		
	comp=Z,4µm,1.5s						
KURK	**Kurchatov**	**83.85**	**322**	P	**P**	**18 47 17.3**	**-1.2**
	SNR=1543						
KUU	**Kurty**	**83.86**	**315**	*d* *i*P	**P**	**18 47 18.0**	**-0.8**
KUU				*e**PP	**pP**	**18 48 45.6**	**-1.3**
KUU				*e*S	**SKSac**	**18 57 03.7**	**-0.5**
KUU				pmax	pmax		
	comp=Z,8µm,2.0s						
KUU				smax	smax		
	comp=E,5µm,4.3s						
KURBB	**Kurchatov Arra**	**83.88**	**322**	P	**P**	**18 47 17.1**	**-1.6**
	comp=E,138nm,1.0s,baz=107,slow=3.6,SNR=668						
KURBB				pP	**pP**	**18 48 47.0**	**+0.3**
	comp=E,42nm,0.8s,baz=100,slow=3.9,SNR=0.9						
KURBB				PKKPbc	**PKKPbc**	**19 05 34.1**	**-0.1**
	comp=E,25nm,0.8s,baz=295,slow=2.9,SNR=12						
KURBB				PKPPKP	P'P'df	19 13 22.6	-17
	comp=E,4.8nm,0.9s,baz=286,slow=2.2,SNR=6.8						
TKM2	**Tokmak 2**	**84.20**	**314**	P	**P**	**18 47 20.2**	**-0.6**
	SNR=361						
KZA	**Kyzart**	**84.30**	**313**	P	**P**	**18 47 21.8**	**+0.2**
	SNR=345						
NIL	**Nilore**	**84.46**	**304**	*e*P	**P**	**18 47 21.3**	**-0.8**
	comp=E,6µm,1.5s						
NIL	**Nilore**	**84.46**	**304**	*e*P	**P**	**18 47 21.3**	**-0.8**
NIL				pmax	pmax		
	comp=Z,6µm,1.5s						
KBK	**Karagaybulak**	**84.62**	**313**	P	**P**	**18 47 22.4**	**-0.5**
	SNR=138						
CHMS	**Chumysh**	**84.83**	**314**	P	**P**	**18 47 22.8**	**-0.9**
	SNR=236						
UCH	**Uchtor**	**84.86**	**313**	P	**P**	**18 47 24.3**	**-0.1**
	SNR=210						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**18 47 24.0**	**-0.4**
	comp=Z,127nm,0.7s,baz=106,slow=4.7,SNR=194						
AAK				pP	**pP**	**18 48 52.4**	**-0.5**
	comp=Z,112nm,0.8s,baz=229,slow=11,SNR=1.3						
AAK				S	**SKSac**	**18 57 13.5**	**+2.0**
	comp=Z,12nm,0.8s,baz=66,slow=20,SNR=2.3						
AAK				PKKP	**PKKPdf**	**19 05 18.5**	**-4.7**
	comp=Z,11nm,0.8s,baz=329,slow=2.0,SNR=5.8						
AAK				PKPPKP	P'P'df	19 13 28.5	-9.3
	comp=Z,9.4nm,0.8s,baz=134,slow=10.0,SNR=6.3						
AAK	**Ala-Archa**	**84.95**	**313**	*e*P	**P**	**18 47 23.9**	**-0.5**
	comp=Z,843nm,0.9s						
AAK	**Ala-Archa**	**84.95**	**313**	*i* P	**P**	**18 47 24.0**	**-0.4**
	SNR=170						
AAK	**Ala-Archa**	**84.95**	**313**	*d* *i*P	**P**	**18 47 23.8**	**-0.7**
AAK				pmax	pmax		
	comp=Z,705nm,0.9s						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**18 47 24.2**	**-0.3**
	SNR=404						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**18 47 24.0**	**-0.5**
	SNR=115						
USP	**Ospenovka**	**85.05**	**314**	P	**P**	**18 47 24.0**	**-0.8**
	SNR=263						
AML	**Almayashu**	**85.44**	**313**	P	**P**	**18 47 26.9**	**-0.3**
	SNR=187						
EKS2	**Erkin-Say**	**85.47**	**313**	P	**P**	**18 47 26.5**	**-0.5**
	SNR=188						
EPYK	**Eagle Plains**	**85.52**	**22**	P	**P**	**18 47 26.1**	**-0.5**
	baz=250						
BTLS	**Baital**	**85.69**	**316**	*de*P	**P**	**18 47 26.3**	**-1.5**
BTLS				*e**PP	**pP**	**18 48 53.9**	**-2.2**
BTLS				*e*S	**SKSac**	**18 57 14.7**	**-0.9**
BTLS				pmax	pmax		
	comp=Z,1µm,1.7s						
BTLS				smax	smax		
	comp=E,813nm,4.0s						
QSPA	**South Pole Qui**	**85.94**	**180**	*e*P	**P**	**18 47 28.0**	**-0.7**
	comp=E,11µm,1.6s						
DLBC	**Dease Lake**	**86.14**	**31**	P	**P**	**18 47 29.1**	**-0.7**
	comp=E,164nm,1.1s,baz=252,slow=4.9,SNR=104						
DLBC				pP	**pwP**	**18 49 00.8**	**-0.5**
	comp=E,172nm,1.2s,baz=266,slow=4.4,SNR=1.3						
BHJ	**Bhuj**	**86.32**	**294**	*e*P	**P**	**18 47 30.5**	**-0.8**
BHJ				IAmb	IAmb	18 47 37.8	
	comp=Z,693nm,0.8s						
BHJ				IAMs_20	IAMs_20	19 19 58.8	
	comp=Z,30µm,25.4s						
MAW	**Mawson**	**86.72**	**203**	P	**P**	**18 47 31.3**	**-1.0**
	comp=Z,86nm,0.6s,baz=88,slow=6.1,SNR=154						
MAW				S	**SKSac**	**18 57 23.6**	**+2.6**
	comp=Z,22nm,1.1s,baz=273,slow=10,SNR=2.4						
MAW				PKKPbc	**PKKPbc**	**19 05 30.9**	**+3.0**
	comp=Z,14nm,0.6s,baz=228,slow=1.6,SNR=8.5						
MAW				PKPPKP	P'P'df	19 13 24.2	-11
	comp=Z,10.0nm,1.1s,baz=264,slow=6.9,SNR=5.4						
MAW	**Mawson**	**86.72**	**203**	*e*P	**P**	**18 47 31.8**	**-0.5**
	comp=Z,624nm,1.5s						
MAW	**Mawson**	**86.72**	**203**	P	**P**	**18 47 31.8**	**-0.5**
	baz=87,SNR=372						
MAW	**Mawson**	**86.72**	**203**	*e*P	**P**	**18 47 31.8**	**-0.5**
MAW				pmax	pmax		
	comp=Z,624nm,1.5s						
J01E	**Myrtle Point**	**87.00**	**47**	P	**P**	**18 47 33.7**	**-0.4**
	baz=262						
L02E	**Cave Junction**	**87.09**	**48**	P	**P**	**18 47 34.0**	**-0.6**
	baz=262,SNR=12						
K02D	**Willamette Mer**	**87.12**	**47**	P	**P**	**18 47 33.5**	**-1.4**
	baz=262,SNR=15						
K02D				S	SKSac	18 57 35.8	+11
	baz=262						
I02D	**Swisshome**	**87.19**	**46**	P	**P**	**18 47 34.2**	**-0.8**
	baz=262,SNR=8.7						
DZA	**Taraz**	**87.29**	**313**	*e*P	**P**	**18 47 34.4**	**-1.2**
DZA				*e**PP	**pP**	**18 49 03.4**	**-0.8**
DZA				pmax	pmax		
	comp=Z,2µm,3.2s						
INK	**Inuvik**	**87.32**	**21**	P	**P**	**18 47 33.8**	**-1.3**
	comp=Z,170nm,1.0s,baz=251,slow=4.6,SNR=188						
INK				pP	**pP**	**18 49 05.4**	**+1.9**
	comp=Z,252nm,1.0s,baz=271,slow=7.2,SNR=3.6						
INK				S	**SKSac**	**18 57 29.6**	**+5.1**
	comp=Z,20nm,1.0s,baz=41,slow=19,SNR=5.1						
INK				PKKPbc	**PKKPdf**	**19 05 22.9**	**+3.4**
	comp=Z,21nm,0.6s,baz=25,slow=3.5,SNR=16						
INK				PKPPKP	P'P'df	19 13 13.7	-19
	comp=Z,6.4nm,1.1s,baz=3.8,slow=4.2,SNR=3.2						
OTUK	**Ortayu**	**87.37**	**319**	*i* P	**P**	**18 47 33.3**	**-2.5**
OTUK				pmax	pmax		
	comp=Z,798nm,1.1s						
BRZS	**Berezniki**	**87.43**	**320**	*de*P	**P**	**18 47 33.7**	**-2.3**
BRZS				*e**PP	**pP**	**18 49 03.3**	**-1.5**
BRZS				*e*S	**SKSac**	**18 57 27.2**	**+1.2**
BRZS				pmax	pmax		
	comp=Z,2µm,2.9s						
O02D	**Mt. Diablo Mer**	**87.44**	**50**	P	**P**	**18 47 36.0**	**-0.4**
	baz=263,SNR=29						
I03D	**Drain, OR**	**87.49**	**46**	P	**P**	**18 47 35.6**	**-0.8**
	baz=262,SNR=13						
M02C	**Callahan**	**87.55**	**48**	P	**P**	**18 47 36.7**	**-0.2**
	baz=263,SNR=37						
N02D	**Trinity Center**	**87.60**	**49**	P	**P**	**18 47 36.3**	**-0.9**
	baz=263,SNR=24						
COR	**Corvallis**	**87.65**	**45**	*e*P	**P**	**18 47 37.3**	**+0.2**
	comp=Z,516nm,1.0s						
COR	**Corvallis**	**87.65**	**45**	*e*P	**P**	**18 47 37.3**	**+0.2**
COR				pmax	pmax		
	comp=Z,516nm,1.0s						
G03D	**McMinnville, O**	**87.76**	**45**	P	**P**	**18 47 37.0**	**-0.6**
	baz=262,SNR=9.5						
JBG	**Jabagly**	**87.80**	**313**	*d* *i*P	**P**	**18 47 36.9**	**-1.2**
JBG				*e**PP	**pP**	**18 49 07.9**	**+1.0**
JBG				*e*S	**SKSac**	**18 57 26.2**	**-2.7**
JBG				pmax	pmax		
	comp=Z,2µm,3.0s						
JBG				smax	smax		
	comp=E,773nm,3.5s						
KK31	**Karatay Array**	**87.91**	**313**	*i* P	**P**	**18 47 36.4**	**-2.1**
KK31				pmax	pmax		
	comp=Z,288nm,0.8s						
H04D	**Lebanon**	**88.04**	**45**	P	**P**	**18 47 38.1**	**-0.9**
	baz=262,SNR=37						
KBL	**Kabul**	**88.04**	**305**	*e*P	**P**	**18 47 38.2**	**-1.3**
	comp=Z,1µm,1.6s						
KBL	**Kabul**	**88.04**	**305**	*e*P	**P**	**18 47 38.2**	**-1.3**
KBL				pmax	pmax		
	comp=Z,1µm,1.6s						
F04D	**Rainier, OR**	**88.05**	**44**	P	**P**	**18 47 38.2**	**-0.8**
	baz=262						
L04D	**Klamath Falls**	**88.06**	**48**	P	**P**	**18 47 38.4**	**-0.9**
	baz=263						
IUG	**Iuzhnay**	**88.14**	**312**	*d* *i*P	**P**	**18 47 38.3**	**-1.4**
IUG				*e**PP	**pP**	**18 49 09.9**	**+1.4**
IUG				*e*S	**SKSac**	**18 57 33.3**	**+2.4**
I04A	**Tendick Farm,**	**88.18**	**46**	P	**P**	**18 47 38.5**	**-1.2**
	baz=263,SNR=27						
D03D	**Eldon**	**88.20**	**42**	P	**P**	**18 47 38.9**	**-0.7**
	baz=262,SNR=23						
O03E	**Paynes Creek**	**88.20**	**50**	P	**P**	**18 47 39.0**	**-1.0**
	baz=263,SNR=54						
J04D	**Umpqua Nationa**	**88.33**	**47**	P	**P**	**18 47 39.8**	**-0.9**
	baz=263,SNR=79						
M04C	**Macdoel**	**88.35**	**48**	P	**P**	**18 47 39.8**	**-0.9**
	baz=263,SNR=38						
D04E	**Lakebay**	**88.36**	**43**	P	**P**	**18 47 39.9**	**-0.5**
	baz=262						
E04D	**Cinebar**	**88.42**	**43**	P	**P**	**18 47 40.1**	**-0.6**
	baz=263						
CHM	**Chimkent**	**88.48**	**312**	*e*P	**P**	**18 47 40.1**	**-1.0**
CHM				*e**PP	**pP**	**18 49 09.5**	**-0.6**
CHM				*e*S	**SKSac**	**18 57 34.4**	**+1.8**
CHM				pmax	pmax		
	comp=Z,3µm,3.8s						
K04D	**Chiloquin, OR**	**88.51**	**47**	P	**P**	**18 47 40.6**	**-0.8**
	baz=263						
TAS	**Tashkent**	**88.60**	**311**	P	**P**	**18 47 41.5**	**-0.2**
TAS				pmax	pmax		
	comp=Z,844nm,0.9s						
A04D	**Lummi Island**	**88.61**	**41**	P	**P**	**18 47 40.9**	**-0.6**
	baz=262						
B05A	**Bryant**	**88.96**	**42**	P	**P**	**18 47 42.2**	**-0.9**
	baz=263,SNR=22						
J05D	**Fort Rock, OR**	**88.97**	**47**	P	**P**	**18 47 42.5**	**-1.1**
	baz=264,SNR=75						
I05D	**Terrebonne, OR**	**89.01**	**46**	P	**P**	**18 47 42.5**	**-1.1**
	baz=264,SNR=61						
CMB	**Columbia Colle**	**89.05**	**52**	P	**P**	**18 47 43.2**	**-0.7**
SMMC	**Simmler**	**89.09**	**55**	P	**P**	**18 47 43.9**	**-0.3**
	baz=264,SNR=13						
F05D	**White Salmon**	**89.10**	**44**	P	**P**	**18 47 43.1**	**-0.8**
	baz=263						
G05D	**Wamic, OR**	**89.13**	**45**	P	**P**	**18 47 43.1**	**-1.0**
	baz=264						
PKM	**Mcpherson Peak**	**89.20**	**55**	P	**P**	**18 47 44.1**	**-0.8**
	baz=265,SNR=26						
SBC	**Santa Barbara**	**89.24**	**56**	P	**P**	**18 47 44.6**	**-0.2**
	baz=265,SNR=6.2						
SCZ2	**Santa Cruz Isl**	**89.27**	**56**	P	**P**	**18 47 43.7**	**-1.3**
	baz=265,SNR=13						
BVAR	**Borovoye Array**	**89.29**	**323**	P	**P**	**18 47 42.8**	**-1.8**
	comp=Z,102nm,0.7s,baz=107,slow=5.1,SNR=586						
BVAR				pP	**pwP**	**18 49 16.1**	**-1.3**
	comp=Z,54nm,0.8s,baz=157,slow=4.4,SNR=1.3						
BVAR				PKKPbc	**PKKPbc**	**19 05 22.1**	**+0.8**
	comp=Z,23nm,0.8s,baz=299,slow=3.1,SNR=6.6						
BVAR				PKPPKP	P'P'df	19 13 14.6	-15
	comp=Z,1.1nm,0.8s,baz=203,slow=1.1,SNR=3.8						
BRVK	**Borovoye**	**89.36**	**323**	*e*P	**P**	**18 47 42.9**	**-2.0**
	comp=Z,969nm,0.9s						
BRVK	**Borovoye**	**89.36**	**323**	*d* *i*P	**P**	**18 47 42.9**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,939nm,0.9s						
BRVK	**Borovoye**	**89.36**	**323**	P	**P**	**18 47 42.8**	**-2.1**
	SNR=666						
VOG	**Valley Oaks Go**	**89.68**	**54**	P	**P**	**18 47 45.9**	**-0.9**
	baz=265						
C06D	**Leavenworth**	**89.72**	**42**	P	**P**	**18 47 45.4**	**-1.4**
	baz=264						
BLG	**Laguna Peak, P**	**89.75**	**56**	P	**P**	**18 47 46.4**	**-0.8**
	baz=265,SNR=16						
VES	**Vestal, Richgr**	**89.88**	**54**	P	**P**	**18 47 46.5**	**-1.2**
	baz=265,SNR=25						
ARVC	**Arvin**	**90.03**	**55**	P	**P**	**18 47 48.0**	**-0.5**
	baz=265,SNR=13						
OSI	**Osito Audit: C**	**90.07**	**55**	P	**P**	**18 47 48.2**	**-0.5**
	baz=265						
SCI2	**San Clemente I**	**90.08**	**57**	P	**P**	**18 47 48.2**	**-0.6**
	baz=265,SNR=6.8						

CIS	**Catalina Islan**	**90.23**	**57**	P	**P**	**18 47 49.1**	**-0.4**
	baz=265,SNR=8.9						
MLAC	**Mammoth, Mammo**	**90.23**	**52**	P	**P**	**18 47 49.0**	**-0.7**
	baz=265						
FMP	**Fort Macarthur**	**90.35**	**56**	P	**P**	**18 47 49.6**	**-0.4**
	baz=266						
ISA	**Isabella, Lake**	**90.36**	**54**	P	**P**	**18 47 49.2**	**-0.9**
	baz=265,SNR=24						
DECC	**Green Verdugo**	**90.36**	**56**	P	**P**	**18 47 49.7**	**-0.4**
	baz=266,SNR=17						
TIN	**Tinemaha, Big**	**90.67**	**53**	P	**P**	**18 47 51.1**	**-0.5**
	baz=266,SNR=9.0						
EDW2	**Edwards Air Fo**	**90.69**	**55**	P	**P**	**18 47 51.4**	**-0.2**
	baz=266,SNR=121						
NVAR	**Mina Array Bea**	**90.72**	**52**	P	**P**	**18 47 51.3**	**-0.6**
	comp=Z,52nm,0.7s,baz=256,slow=6.4,SNR=147						
NVAR				pP	**pwP**	**18 49 25.9**	**+1.7**
	comp=Z,45nm,1.1s,baz=268,slow=4.2,SNR=1.0						
NVAR				PKKP	**PKKPdf**	**19 05 11.3**	**-1.8**
	comp=Z,6.9nm,0.9s,baz=143,slow=1.8,SNR=4.5						
NVAR				PKPPKP	P'P'df	19 13 17.2	-10
	comp=Z,1.7nm,0.7s,baz=84,slow=3.6,SNR=5.9						
NVAR				P4KP		19 24 48.8	
	comp=Z,0.9nm,0.9s,baz=264,slow=1.8,SNR=3.9						
CWC	**Cottonwood Cre**	**90.74**	**54**	P	**P**	**18 47 51.1**	**-0.9**
	baz=266						
WVOR	**Wild Horse Val**	**90.78**	**48**	P	**P**	**18 47 51.2**	**-0.8**
WVOR				pmax	pmax		
	comp=Z,494nm,2.0s						
BFSC	**Mount Baldy Ra**	**90.92**	**56**	P	**P**	**18 47 52.0**	**-0.8**
	baz=266,SNR=19						
LRMC	**Laurel Mtn Rad**	**90.99**	**55**	P	**P**	**18 47 52.5**	**-0.7**
	baz=266,SNR=32						
MPMC	**Manual Prospec**	**91.19**	**54**	P	**P**	**18 47 53.6**	**-0.5**
	baz=266,SNR=292						
MURC	**Murrieta**	**91.26**	**57**	P	**P**	**18 47 53.5**	**-0.8**
	baz=266,SNR=9.3						
109C	**Camp Elliot, M**	**91.29**	**57**	P	**P**	**18 47 54.3**	**-0.1**
	baz=266,SNR=15						
GRAC	**Grapevine Rang**	**91.35**	**53**	P	**P**	**18 47 54.1**	**-0.5**
	baz=266,SNR=11						
RRX	**Edison Barstow**	**91.51**	**55**	P	**P**	**18 47 54.8**	**-0.5**
	baz=266,SNR=12						
BBRC	**Big Bear Solar**	**91.53**	**56**	P	**P**	**18 47 54.8**	**-1.0**
	baz=266						
GSC	**Goldstone, Bar**	**91.69**	**55**	P	**P**	**18 47 55.9**	**-0.4**
	baz=266,SNR=53						
FURC	**Furnace Creek,**	**91.72**	**54**	P	**P**	**18 47 55.8**	**-0.4**
	baz=266,SNR=80						
MONP2	**Monument Peak**	**91.86**	**57**	P	**P**	**18 47 56.8**	**-0.5**
	baz=266,SNR=49						
PFO	**Pinyon Flats O**	**91.87**	**57**	*e*P	**P**	**18 47 56.0**	**-1.2**
	comp=Z,456nm,1.1s						
PFO	**Pinyon Flats O**	**91.87**	**57**	*e*P	**P**	**18 47 56.0**	**-1.2**
PFO				pmax	pmax		
	comp=Z,456nm,1.1s						
PFO	**Pinyon Flats O**	**91.87**	**57**	P	**P**	**18 47 57.1**	**-0.1**
	baz=266,SNR=33						
HEC	**Hector,Ludlow**	**92.05**	**55**	P	**P**	**18 47 57.1**	**-0.9**
	baz=267,SNR=54						
IKP	**In-Ko-Pah, Jac**	**92.11**	**58**	P	**P**	**18 47 58.2**	**-0.1**
	baz=267,SNR=26						
SHOC	**Shoshone, Teco**	**92.16**	**54**	P	**P**	**18 47 57.7**	**-0.7**
	baz=267,SNR=30						
TPNV	**Topopah Spring**	**92.24**	**53**	P	**P**	**18 47 58.2**	**-0.7**
	baz=267,SNR=117						
NEW	**Newport**	**92.26**	**42**	P	**P**	**18 47 57.2**	**-1.3**
NEW				pmax	pmax		
	comp=Z,640nm,1.1s						
NEW	**Newport**	**92.26**	**42**	P	**P**	**18 47 57.3**	**-1.3**
	baz=267						
BELC	**Belle Mtn. Jos**	**92.28**	**56**	P	**P**	**18 47 58.7**	**-0.4**
	baz=267,SNR=136						
SWSC	**Sam W. Stewart**	**92.39**	**57**	P	**P**	**18 47 59.4**	**0.0**
	baz=267,SNR=38						
TUQ	**Turquoise Moun**	**92.42**	**55**	P	**P**	**18 47 59.0**	**-0.7**
	baz=267,SNR=8.7						
GMRC	**Granite Mounta**	**92.60**	**55**	P	**P**	**18 48 00.1**	**-0.5**
	baz=267,SNR=150						
BC3	**Big Chuckawall**	**92.71**	**57**	P	**P**	**18 48 00.8**	**-0.3**
	baz=267,SNR=59						
R11A	**Troy Canyon, C**	**92.84**	**52**	P	**P**	**18 48 00.8**	**-0.8**
	baz=267,SNR=91						
IRM	**Iron Mountain**	**93.00**	**56**	P	**P**	**18 48 02.0**	**-0.3**
	baz=267,SNR=144						
GLA	**Glamis**	**93.21**	**57**	P	**P**	**18 48 03.5**	**+0.3**
	baz=267,SNR=30						
NEE2	**Needles Airpor**	**93.46**	**56**	P	**P**	**18 48 04.1**	**-0.2**
	baz=268						
Y12C	**Blythe**	**93.49**	**57**	P	**P**	**18 48 04.2**	**-0.3**
	baz=268						
PDMCI	**Parker Dam,Lak**	**93.83**	**56**	P	**P**	**18 48 05.5**	**-0.5**
	baz=268						
HLID	**Hailey**	**93.94**	**47**	P	**P**	**18 48 05.7**	**-0.9**
	baz=268,SNR=71						
YKA	**Yellowknife Ar**	**94.21**	**28**	P	**P**	**18 48 06.0**	**-1.1**
	comp=Z,61nm,0.8s,baz=270,slow=4.7,SNR=330						
YKA				pP	**pP**	**18 49 35.7**	**-0.6**
	comp=Z,26nm,0.8s,baz=268,slow=4.5,SNR=1.7						
YKA				S	**SKSac**	**18 58 10.2**	**+6.4**
	comp=Z,5.3nm,0.8s,baz=286,slow=7.1,SNR=5.6						
YKA				PKKP	**PKKPdf**	**19 05 04.7**	**-2.5**
	comp=Z,2.4nm,0.6s,baz=114,slow=3.2,SNR=4.4						
YKA				PKPPKP	P'P'df	19 13 10.5	-10
	comp=Z,3.4nm,0.9s,baz=80,slow=2.0,SNR=6.0						
YKA	**Yellowknife Ar**	**94.21**	**28**	*i* P	**P**	**18 48 06.0**	**-1.1**
YKA				pmax	pmax		
	comp=Z,61nm,0.8s						
MSO	**Missoula**	**94.36**	**43**	P	**P**	**18 48 08.2**	**-0.1**
	baz=269,SNR=7.2						
214A	**Organ Pipe Nat**	**94.87**	**58**	P	**P**	**18 48 11.2**	**+0.3**
	baz=268,SNR=20						
DUG	**Dugway, Tooele**	**95.06**	**50**	P	**P**	**18 48 11.1**	**-0.6**
DUG				pmax	pmax		
	comp=Z,98nm,1.7s						
DUG	**Dugway, Tooele**	**95.06**	**50**	P	**P**	**18 48 10.3**	**-1.3**
	baz=269						
HVU	**Hansel Valley**	**95.11**	**49**	*e*PP	**PP**	**18 52 03.9**	**-3.7**
SVE	**Sverdlovsk**	**95.14**	**327**	⇑*e*P	**P**	**18 48 09.0**	**-2.4**
SVE				*e*PPP	PPP	18 54 09.0	
SVE				*e*S	**SKSac**	**18 58 06.3**	**-2.7**
SVE				*e*		18 58 53.5	
SVE				*e*SS	SS	19 05 42.2	+14
SVE				pmax	pmax		
	comp=Z,583nm,1.8s						
AB31	**Akbulak array**	**95.62**	**319**	*i* P	**P**	**18 48 10.6**	**-3.2**
AB31				pmax	pmax		
	comp=Z,127nm,0.7s						
JLN	**Jalan Bani Buh**	**95.68**	**292**	P	**P**	**18 48 13.5**	**-1.2**
	SNR=16						
BOZ	**Bozeman (W)**	**95.96**	**45**	P	**P**	**18 48 14.1**	**-1.5**
	baz=270,SNR=146						
WBK	**Wadi Bani Khal**	**96.10**	**292**	P	**P**	**18 48 15.3**	**-1.3**
	SNR=20						
WUAZ	**Wupatki**	**96.14**	**55**	P	**P**	**18 48 16.5**	**-0.2**
	baz=270,SNR=33						
ARU	**Arti**	**96.29**	**326**	P	**P**	**18 48 13.8**	**-2.9**
	comp=Z,7.6nm,0.6s,baz=88,slow=1.8,SNR=30						
ARU				pP	**pP**	**18 49 45.2**	**-0.5**
	comp=Z,12nm,0.7s,baz=158,slow=20,SNR=1.4						
ARU				S	**SKSac**	**18 58 18.4**	**+3.4**
	comp=Z,5.9nm,0.8s,baz=247,slow=23,SNR=9.7						
ARU				PKKPbc	**PKKPdf**	**19 05 00.3**	**-3.1**
	comp=Z,2.6nm,0.4s,baz=254,slow=2.7,SNR=3.1						
ARU				PKPPKP	**P'P'df**	**19 13 14.8**	**-1.4**
	comp=Z,3.5nm,0.8s,baz=29,slow=4.5,SNR=3.5						
ARU	**Arti**	**96.29**	**326**	*e*P	**P**	**18 48 13.3**	**-3.4**
	comp=Z,198nm,0.8s						
ARU	**Arti**	**96.29**	**326**	*d i*P	**P**	**18 48 13.6**	**-3.1**
ARU				pmax	pmax		
	comp=Z,510nm,1.5s						
WSAR	**Wadi Sarin**	**96.43**	**293**	P	**P**	**18 48 16.2**	**-1.8**
	comp=Z,19nm,0.7s,baz=156,slow=6.6,SNR=16						
WSAR				pP	**pwP**	**18 49 49.6**	**-0.6**
	comp=Z,18nm,0.9s,baz=63,slow=7.6,SNR=1.0						
WSAR				S	**SKSac**	**18 58 22.4**	**+5.2**
	comp=Z,3.4nm,0.6s,baz=350,slow=18,SNR=4.0						
WSAR				PKKPbc	**PKKPbc**	**19 04 57.8**	**-3.9**
	comp=Z,5.8nm,0.5s,baz=258,slow=4.5,SNR=7.0						
WSAR	**Wadi Sarin**	**96.43**	**293**	P	**P**	**18 48 16.7**	**-1.4**
	SNR=49						
TUC	**Tucson**	**96.59**	**58**	*e*P	**P**	**18 48 19.6**	**+0.9**
	comp=Z,486nm,2.0s						
TUC	**Tucson**	**96.59**	**58**	*e*P	**P**	**18 48 19.6**	**+0.9**
TUC				pmax	pmax		
	comp=Z,486nm,2.0s						
TUC	**Tucson**	**96.59**	**58**	P	**P**	**18 48 19.2**	**+0.5**
	baz=270						
H17A	**Grant Village**	**96.72**	**46**	P	**P**	**18 48 18.9**	**-0.3**
	baz=271						
ASHT	**Ashkhabad**	**96.82**	**308**	P	**P**	**18 48 18.9**	**-0.6**
ASHT				pmax	pmax		
	comp=Z,414nm,1.0s						
AKTO	**Aktyubinsk**	**96.84**	**320**	P	**P**	**18 48 16.4**	**-2.9**
	comp=Z,20nm,0.6s,baz=95,slow=5.5,SNR=57						
AKTO				pP	**pwP**	**18 49 51.4**	**-0.4**
	comp=Z,22nm,0.7s,baz=112,slow=6.1,SNR=1.2						
AKTO				S	**SKSac**	**18 58 20.3**	**+2.1**
	comp=Z,10.0nm,0.9s,baz=98,slow=15,SNR=2.3						
AKTO				PKKPbc	**PKKPbc**	**19 05 01.8**	**+0.1**
	comp=Z,54nm,1.0s,baz=300,slow=3.3,SNR=6.7						
AKTO				PKPPKP	**P'P'df**	**19 13 16.7**	**+1.4**
	comp=Z,6.4nm,0.9s,baz=181,slow=1.5,SNR=7.7						
LPIG	**La Paz**	**96.88**	**66**	pP	pP	18 49 53.2	+3.7
	comp=Z,9.7nm,0.3s,baz=321,slow=6.5,SNR=1.0						
BIDO	**Bidbid**	**96.90**	**293**	P	**P**	**18 48 21.0**	**+0.8**
	SNR=75						
SMDO	**Samad**	**96.96**	**293**	P	**P**	**18 48 20.8**	**+0.2**
	SNR=12						
MHTO	**MHTO**	**96.98**	**291**	P	**P**	**18 48 19.0**	**-1.6**
	SNR=49						
GEYT	**Alibeck**	**97.03**	**308**	P	**P**	**18 48 19.8**	**-0.8**
	comp=Z,74nm,1.1s,baz=144,slow=1.3,SNR=104						
GEYT				pP	**pP**	**18 49 50.6**	**+0.7**
	comp=Z,27nm,0.9s,baz=88,slow=10,SNR=1.7						
GEYT				PP	**PP**	**18 52 15.8**	**-6.4**
	comp=Z,27nm,0.9s,baz=161,slow=11,SNR=3.3						
GEYT				PKKP	**PKKPdf**	**19 05 04.6**	**+2.9**
	comp=Z,16nm,0.7s,baz=284,slow=3.2,SNR=5.6						
GEYT				PKPPKP	**P'P'df**	**19 13 14.3**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=254,slow=5.4,SNR=3.6						
EGMT	**Eagleton**	**97.19**	**42**	P	**P**	**18 48 19.8**	**-1.3**
	baz=272						
W18A	**Petrified Fore**	**97.47**	**55**	P	**P**	**18 48 22.7**	**-0.1**
	baz=270,SNR=15						
BW06	**Boulder Array**	**97.49**	**48**	P	**P**	**18 48 21.0**	**-1.7**
	baz=272,SNR=43						
PDAR	**Pinedale Array**	**97.49**	**48**	P	**P**	**18 48 20.8**	**-2.0**
	comp=Z,16nm,0.9s,baz=254,slow=2.6,SNR=81						
PDAR				pP	**pwP**	**18 49 55.4**	**+0.3**
	comp=Z,5.2nm,0.8s,baz=251,slow=2.8,SNR=0.7						
PDAR				PKKPbc	**PKKPbc**	**19 04 53.1**	**-6.8**
	comp=Z,4.4nm,0.8s,baz=108,slow=4.2,SNR=5.0						
PDAR				PKPPKP	P'P'df	19 13 05.3	-9.0
	comp=Z,3.6nm,1.1s,baz=90,slow=1.5,SNR=4.8						
RLMT	**Red Lodge**	**97.63**	**45**	P	**P**	**18 48 21.9**	**-1.3**
	baz=272,SNR=63						
HOQ	**Hoqain**	**97.65**	**293**	P	Pdif	18 48 24.0	+0.5
	SNR=14						
BSY	**Bisya**	**97.74**	**292**	P	Pdif	18 48 28.4	+4.4
	SNR=16						
MSEY	**Mahe Island**	**98.07**	**265**	P	**P**	**18 48 24.7**	**-1.0**
MSEY	**Mahe Island**	**98.07**	**265**	P	Pdif	18 48 29.6	+3.9
	SNR=6.0						
ARQ	**Araqi**	**98.37**	**293**	P	P	18 48 33.0	+6.2
	SNR=17						
MVCO	**Mesa Verde**	**98.44**	**53**	P	Pdif	18 48 25.9	-1.2
	baz=272,SNR=23						
O20A	**White River Ci**	**98.56**	**50**	P	Pdif	18 48 26.0	-1.5
	baz=272						
MDH	**Madha**	**98.59**	**295**	*i* P	Pdif	18 48 25.2	-2.5
	SNR=7.4						
MDH	**Madha**	**98.59**	**295**	P	Pdif	18 48 27.5	-0.2
	SNR=9.3						
UOSS	**Minazif**	**98.68**	**294**	*i* P	Pdif	18 48 26.1	-2.1
	SNR=17						
UOSS	**Minazif**	**98.68**	**294**	P	Pdif	18 48 26.3	-1.8
	SNR=13						
MSFE	**Esma-Masafi**	**98.72**	**295**	*i* P	Pdif	18 48 26.6	-1.8
	SNR=14						
SHME	**Shamm**	**98.74**	**296**	*i* P	Pdif	18 48 26.4	-2.0
	SNR=18						
HATD	**Hatta, Dubai**	**98.74**	**294**	*i* P	Pdif	18 48 27.1	-1.3
	SNR=8.3						
HATD	**Hatta, Dubai**	**98.74**	**294**	P	Pdif	18 48 27.0	-1.4
	SNR=17						
ASHO	**Ashiyiah**	**98.81**	**294**	*i* P	Pdif	18 48 26.9	-1.8
	SNR=22						
ASHO	**Ashiyiah**	**98.81**	**294**	P	Pdif	18 48 27.8	-0.9
	SNR=27						
ALNE	**Al Ain**	**99.08**	**294**	*i* P	**Pdif**	**18 48 28.6**	**-1.3**
	SNR=9.7						
121A	**Cookes Peak, D**	**99.13**	**58**	P	**Pdif**	**18 48 28.3**	**-1.9**
	baz=271,SNR=14						
NAZ	**Nazwa, Dubai**	**99.17**	**295**	*i* P	**Pdif**	**18 48 28.4**	**-1.8**
	SNR=17						
NAZ	**Nazwa, Dubai**	**99.17**	**295**	P	**Pdif**	**18 48 29.4**	**-0.9**
	SNR=28						
UMQ	**Umm Al-Quwin**	**99.17**	**295**	P	**Pdif**	**18 48 29.2**	**-1.0**
FAQ	**Al Faqa, Dubai**	**99.23**	**294**	*i* P	**Pdif**	**18 48 28.8**	**-1.8**
	SNR=21						
FAQ	**Al Faqa, Dubai**	**99.23**	**294**	P	**Pdif**	**18 48 29.6**	**-1.0**
	SNR=28						
RES	**Resolute Bay**	**99.37**	**15**	P	**Pdif**	**18 48 28.0**	**-2.1**
	comp=Z,11nm,0.8s,baz=54,slow=2.5,SNR=24						
RES				pP	**pP**	**18 50 00.5**	**+1.0**
	comp=Z,24nm,0.9s,baz=266,slow=4.2,SNR=1.6						
RES				S	**SKSac**	**18 58 34.7**	**+4.8**
	comp=Z,9.0nm,1.0s,baz=60,slow=20,SNR=4.6						
RES				PKKPbc	**PKKPbc**	**19 04 49.7**	**-5.8**
	comp=Z,6.4nm,0.8s,baz=157,slow=8.5,SNR=3.8						
ASUD	**Al Ashush, Dub**	**99.47**	**294**	*i* P	**Pdif**	**18 48 31.0**	**-0.7**
	SNR=18						
ASUD	**Al Ashush, Dub**	**99.47**	**294**	P	**Pdif**	**18 48 30.1**	**-1.5**
	SNR=29						
LAO	**LASA Array**	**99.67**	**43**	P	**Pdif**	**18 48 31.2**	**-0.9**
	baz=274						
K22A	**Casper**	**99.73**	**48**	P	**Pdif**	**18 48 30.9**	**-1.7**
	baz=274,SNR=18						
S22A	**4UR Ranch, Cre**	**99.75**	**53**	P	**Pdif**	**18 48 32.3**	**-0.7**
	baz=273,SNR=29						
AJN	**Ajban**	**99.78**	**294**	*i* P	**Pdif**	**18 48 31.9**	**-1.1**
	SNR=23						
AJN	**Ajban**	**99.78**	**294**	P	**Pdif**	**18 48 32.0**	**-1.0**
	SNR=28						
Y22D	**IRIS PASSCAL I**	**99.81**	**56**	P	**Pdif**	**18 48 32.7**	**-0.4**
	baz=272						
TASM	**ASL Pad, Albuq**	**100.17**	**55**	P	**Pdif**	**18 48 34.4**	**-0.4**
	baz=272,SNR=10						
TASM	**ASL Pad, Albuq**	**100.17**	**55**	P	**Pdif**	**18 48 34.4**	**-0.4**
	baz=272,SNR=10						
ANMO	**Albuquerque**	**100.17**	**55**	*de*P	**Pdif**	**18 48 34.1**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,48nm,1.0s						
ANMO	**Albuquerque**	**100.17**	**55**	P	**Pdif**	**18 48 34.3**	**-0.5**
	baz=272						
N23A	**Red Feather La**	**100.27**	**49**	P	**Pdif**	**18 48 34.1**	**-1.1**
	baz=274,SNR=24						
ISCO	**Idaho Springs**	**100.59**	**50**	P	**Pdif**	**18 48 36.2**	**-0.5**
ISCO				pmax	pmax		
	comp=Z,58nm,1.2s						
ISCO	**Idaho Springs**	**100.59**	**50**	P	**Pdif**	**18 48 35.8**	**-0.9**
	baz=274,SNR=28						
SDCO	**Great Sand Dun**	**100.80**	**52**	P	**Pdif**	**18 48 37.3**	**-0.4**
	baz=273,SNR=24						
DGMT	**Dagmar**	**100.87**	**42**	P	**Pdif**	**18 48 36.1**	**-1.2**
	baz=276						
KIRV	**Kirov**	**100.96**	**329**	S	**SKSac**	**18 58 38.1**	**0.0**
	comp=Z,8.9nm,0.7s,baz=270,slow=20,SNR=4.6						
KIRV				PKKPbc	PKKPbc	19 04 46.5	-3.9
	comp=Z,19nm,0.7s,baz=220,slow=4.7,SNR=4.3						
KIRV				PKPPKP		19 13 00.5	
	comp=Z,2.4nm,0.5s,baz=200,slow=2.5,SNR=4.3						
Q24A	**Divide**	**101.01**	**51**	P	**Pdif**	**18 48 36.6**	**-1.9**
	baz=274						
MNTX	**Cornudas Mount**	**101.19**	**59**	P	**Pdif**	**18 48 38.7**	**-0.4**
	baz=272						
FFC	**Flin Flon**	**101.39**	**35**	*i* P	**Pdif**	**18 48 39.2**	**-0.3**
RSSD	**Black Hills**	**101.42**	**46**	*e*Pdif	**Pdif**	**18 48 38.9**	**-1.3**
RSSD	**Black Hills**	**101.42**	**46**	*e*P	**Pdif**	**18 48 38.9**	**-1.3**
RSSD	**Black Hills**	**101.42**	**46**	P	**Pdif**	**18 48 38.6**	**-1.6**
	baz=276						
T25A	**Trinidad**	**101.71**	**53**	P	**Pdif**	**18 48 39.9**	**-1.7**
	baz=274,SNR=15						
PRGR	**Permogore**	**102.16**	**332**	⇓*i*P	**Pdif**	**18 48 39.8**	**-2.9**
PRGR				*i* S	**SKSac**	**18 58 40.4**	**-3.3**
PRGR				pmax	pmax		
	comp=Z,196nm,0.8s						
SPITS	**Spitsbergen Ar**	**102.70**	**352**	P	**Pdif**	**18 48 46.1**	**+1.3**
	comp=Z,17nm,0.8s,baz=91,slow=6.7,SNR=7.1						
SPITS				PKKPbc	**PKKPbc**	**19 04 43.2**	**-2.8**
	comp=Z,13nm,0.7s,baz=148,slow=4.9,SNR=6.8						
TXAR	**Lajitas Array**	**102.77**	**61**	P	**Pdif**	**18 48 46.7**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=296,slow=6.8,SNR=5.9						
TXAR				PKiKP	**PP**	**18 53 07.0**	**+1.4**
	comp=Z,5.8nm,0.8s,baz=253,slow=5.4,SNR=3.3						
TXAR				PKKPbc	**PKKPbc**	**19 04 44.4**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=91,slow=2.6,SNR=5.9						
TXAR				PKKP	**PKKPdf**	**19 04 50.2**	**-0.9**
	comp=Z,14nm,0.7s,baz=110,slow=4.1,SNR=12						
TXAR				PKPPKP	**P'P'df**	**19 13 02.4**	**-1.8**
	comp=Z,2.8nm,1.0s,baz=116,slow=4.1,SNR=3.3						
SNAA	**Sanae**	**102.95**	**187**	P	**Pdif**	**18 48 45.6**	**-0.6**
SNAA	**Sanae**	**102.95**	**187**	Pdiff	**Pdif**	**18 48 45.4**	**-0.8**
	comp=Z,8.8nm,0.9s,baz=191,slow=7.7,SNR=30						
SNAA				PP	**PKiKP**	**18 53 00.6**	**-3.3**
	comp=Z,37nm,1.0s,baz=174,slow=9.7,SNR=4.5						
SNAA				PKKPbc	**PKKPbc**	**19 04 42.6**	**-2.7**
	comp=Z,9.0nm,0.9s,baz=333,slow=5.8,SNR=2.7						
SNAA				PKKP	**PKKPdf**	**19 04 51.3**	**+0.2**
	comp=Z,25nm,1.1s,baz=312,slow=4.1,SNR=4.3						
SNAA	**Sanae**	**102.95**	**187**	*c i*P	**Pdif**	**18 48 47.4**	**+1.2**
KSCO	**Kaye Shedlock'**	**102.96**	**51**	P	**Pdif**	**18 48 46.2**	**-0.8**
	baz=276						
OGNE	**Ogallala**	**103.22**	**49**	P	**Pdif**	**18 48 46.5**	**-1.6**
	baz=276						
MSTX	**Muleshoe**	**103.26**	**56**	P	**Pdif**	**18 48 47.1**	**-1.3**
	baz=274						
HSPB	**Hornsund (broa**	**103.68**	**351**	*e*P	**Pdif**	**18 48 52.2**	**+3.0**
HSPB				*e*SKS		18 58 57.4	
HSPB	**Hornsund (broa**	**103.68**	**351**	*e*P	**Pdif**	**18 48 52.2**	**+3.0**
MDND	**Maddock**	**104.00**	**42**	P	**Pdif**	**18 48 49.6**	**-1.7**
	baz=280						
AMTX	**Amarillo**	**104.09**	**55**	P	**Pdif**	**18 48 49.8**	**-2.3**
	baz=275						
VNA3	**Neumayer Olymp**	**104.11**	**185**	P	**Pdif**	**18 48 50.5**	**-0.8**
OPO	**Ambohidratompo**	**104.51**	**250**	PKiKP	**PKiKP**	**18 53 07.4**	**-0.9**
	comp=Z,18nm,0.9s,baz=90,slow=5.9,SNR=3.9						
OPO				PKKPbc	**PKKPbc**	**19 04 40.3**	**+1.4**
	comp=Z,13nm,1.0s,baz=197,slow=1.0,SNR=4.0						
VNA1	**Neumayer--Stat**	**104.54**	**186**	P	**Pdif**	**18 48 53.8**	**+0.6**
MAK	**Makhachkala**	**104.73**	**313**	*i* P	**Pdif**	**18 48 57.0**	**+2.4**
MAK				*e*		18 53 20.1	
MAK				*e*PPP	PPP	18 55 32.4	
MAK				*e*		18 58 59.7	
MAK				*e*		18 59 46.4	
MAK				*e*SS	SS	19 07 51.5	+10
MAK				pmax	pmax		
	comp=Z,100nm,1.0s						
APA	**Apatity**	**104.99**	**340**	⇓*i*P	**Pdif**	**18 49 02.5**	**+7.3**
APA				*i*		18 53 27.0	
APA				*i*		18 59 43.0	
APA				*i* SS	SS	19 07 51.0	+7.3
APA				pmax	pmax		
	comp=Z,43nm,0.7s						
SUSD	**Miller**	**105.00**	**45**	P	**Pdif**	**18 48 54.0**	**-1.8**
	baz=279						
CBKS	**Cedar Bluff**	**105.22**	**51**	P	**PKiKP**	**18 53 07.3**	**-1.7**
	baz=277						
ULM	**Lac du Bonnet**	**105.93**	**39**	Pdiff	**Pdif**	**18 48 58.8**	**-0.9**
	comp=Z,23nm,0.9s,baz=301,slow=4.2,SNR=8.3						
ULM				PKiKP	**PKiKP**	**18 53 09.9**	**+0.1**
	comp=Z,9.4nm,0.6s,baz=302,slow=4.8,SNR=3.4						
ULM				PKKPbc	**PKKPbc**	**19 04 39.0**	**+3.5**
	comp=Z,16nm,0.7s,baz=92,slow=3.8,SNR=9.6						
ULM				PKPPKP	**P'P'df**	**19 12 53.3**	**-4.5**
	comp=Z,4.5nm,0.8s,baz=127,slow=5.1,SNR=2.1						
GROC	**Groznyy**	**105.93**	**314**	*e*P	**Pdif**	**18 48 58.2**	**-1.7**
GROC				*e*		18 53 24.5	
GROC				*e*		18 58 59.9	
GROC				*e*PS	PS	19 02 51.2	-4.0
GROC				pmax	pmax		
	comp=Z,185nm,1.4s						
ABTX	**Abilene, Hawle**	**105.99**	**57**	P	**PKiKP**	**18 53 08.8**	**-1.8**
	baz=276						
JCT	**Junction City**	**106.04**	**60**	P	**PKiKP**	**18 53 09.4**	**-1.4**
	baz=275						
BGNE	**Belgrade**	**106.06**	**48**	P	**PKiKP**	**18 53 08.9**	**-1.5**
	baz=279						
HAMF	**Hammerfest**	**106.29**	**345**	*e*Pdif	**Pdif**	**18 49 00.1**	**-0.8**
HAMF				*e*PP	**PP**	**18 53 29.8**	**-0.1**
HAMF				*e*		18 54 54.9	
HAMF				*e*SKSac	**SKSac**	**18 59 04.5**	**+2.4**
HAMF				IVMs_BB	IVMs_BB	19 28 53.8	
	comp=Z,3µm,19.2s						
AGMN	**Agassiz Nation**	**106.37**	**41**	P	**PKiKP**	**18 53 09.5**	**-1.2**
	baz=283						
ARCES	**ARCESS Array B**	**106.45**	**343**	Pdiff	**Pdif**	**18 49 00.9**	**-0.7**
	comp=Z,9.1nm,0.8s,baz=56,slow=3.1,SNR=5.7						
ARCES				PKiKP	**PKiKP**	**18 53 10.1**	**-0.3**
	comp=Z,71nm,1.1s,baz=112,slow=1.1,SNR=8.0						
ARCES				PKKPbc	**PKKPbc**	**19 04 27.1**	**-7.5**
	comp=Z,11nm,0.7s,baz=220,slow=2.2,SNR=6.7						
ARCES				PKPPKP	**P'P'df**	**19 12 54.5**	**-2.2**
	comp=Z,6.0nm,0.9s,baz=305,slow=3.2,SNR=3.8						
WMOK	**Wichita Mounta**	**106.48**	**55**	P	**PKiKP**	**18 53 10.8**	**-0.6**
	baz=277						
833A	**Chaparral WMA,**	**106.57**	**62**	P	**PKiKP**	**18 53 09.6**	**-2.2**
	baz=274						
ECSD	**EROS Data Cent**	**106.78**	**46**	P	**PKiKP**	**18 53 10.7**	**-1.0**
	baz=281						
KULLO	**Kullorsuaq**	**107.18**	**8**	*i* P	**PKiKP**	**18 53 16.6**	**+5.1**
KULLO				*i*		19 04 33.1	
DAG	**Danmarks Havn**	**107.19**	**358**	*i* P	**PKiKP**	**18 53 17.2**	**+5.7**
	comp=Z,39nm,1.0s						
DAG				*i*		18 54 56.8	
DAG				*i*		19 04 31.5	
GNI	**Garni**	**107.21**	**311**	Pdiff	**Pdif**	**18 49 05.7**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=49,slow=19,SNR=1.5						
GNI				PKKPbc	**PKKPdf**	**19 04 40.1**	**-3.2**
	comp=Z,30nm,0.9s,baz=136,slow=5.9,SNR=4.9						
GNI	**Garni**	**107.21**	**311**	*d i*P	**Pdif**	**18 49 06.6**	**+0.7**
ZEI	**Tsey**	**107.37**	**314**	*e*P	**Pdif**	**18 49 03.9**	**-2.7**
ZEI				pmax	pmax		
	comp=Z,52nm,0.8s						
KTK1	**Kautokeino**	**107.41**	**343**	*e*Pdif	**Pdif**	**18 49 04.6**	**-1.3**
KTK1				*e*		18 53 09.3	
KTK1				*e*SP	SP	19 02 20.9	+0.6
NCK	**Nalchik**	**107.45**	**314**	*c i*P	**Pdif**	**18 49 05.6**	**-1.1**
GOF	**Gofitskoye**	**107.52**	**316**	*ce*P	**Pdif**	**18 49 10.8**	**+3.8**
GOF				pmax	pmax		
	comp=Z,136nm,1.4s						
KSU1	**Kansas State U**	**107.60**	**50**	P	**PKiKP**	**18 53 11.7**	**-1.7**
	baz=280						
WHTX	**Lake Whitney,**	**107.89**	**58**	P	**PKiKP**	**18 53 12.8**	**-1.3**
	baz=277						
MOS	**Moscow**	**107.90**	**328**	*i* P	**Pdif**	**18 49 05.9**	**-2.5**
MOS				*e*		18 53 39.9	
MOS				*e*		19 08 39.9	
MOS				pmax	pmax		
	comp=Z,102nm,1.0s						
MOS				pmax	pmax		
	comp=Z,700nm,2.6s						
KBZ	**Khabaz**	**107.90**	**315**	Pdiff	**Pdif**	**18 49 07.0**	**-1.6**
	comp=Z,14nm,0.8s,baz=130,slow=5.8,SNR=6.6						
KBZ				PKKPbc	**PKKPbc**	**19 04 26.1**	**-3.1**
	comp=Z,10nm,0.9s,baz=198,slow=2.2,SNR=4.0						
KBZ				PKKP	**PKKPdf**	**19 04 35.8**	**-6.0**
	comp=Z,20nm,0.9s,baz=216,slow=1.8,SNR=6.8						
KBZ				PKPPKP	P'P'df	19 12 43.2	-11
	comp=Z,4.3nm,0.9s,baz=342,slow=3.2,SNR=2.9						
435B	**Jarrell**	**107.92**	**59**	P	**PKiKP**	**18 53 12.5**	**-1.7**
	baz=276						
AKH	**Akhalkalaki**	**107.93**	**312**	⇑*i*P	**Pdif**	**18 49 08.6**	**-0.5**
AKH	**Akhalkalaki**	**107.93**	**312**	⇑*i*P	**PKiKP**	**18 53 19.8**	**+5.7**
AKH	**Akhalkalaki**	**107.93**	**312**	⇑*i*P	**PKKPdf**	**19 04 37.7**	**-4.2**
KVAR	**Kislovodsk Arr**	**108.00**	**315**	Pdiff	**Pdif**	**18 49 11.3**	**+2.0**
	comp=Z,3.4nm,0.8s,baz=73,slow=19,SNR=4.0						
KIV	**Kislovodsk**	**108.01**	**315**	⇓*i*P	**Pdif**	**18 49 13.9**	**+4.6**
KIV	**Kislovodsk**	**108.01**	**315**	⇓*i*P	PKiKP	18 53 25.9	+12
KIV	**Kislovodsk**	**108.01**	**315**	⇓*i*P	**PKKPdf**	**19 04 37.4**	**-4.3**
KIV	**Kislovodsk**	**108.01**	**315**	*e*P	**Pdif**	**18 49 07.9**	**-1.4**
KIV				*e*		18 53 42.4	
KIV				*e*PS	PS	19 03 13.5	-1.3
KIV				*e*SS	SS	19 08 25.4	-0.6
KIV				pmax	pmax		
	comp=Z,104nm,1.0s						
KIV				MLR	MLR		
	comp=Z,20µm,21.0s						
NEY	**Neytrino**	**108.13**	**314**	⇑*i*P	**Pdif**	**18 49 08.9**	**-1.0**
LPSR	**Galich'ya Gora**	**108.19**	**324**	*e*P	**Pdif**	**18 49 13.1**	**+3.4**
LPSR				*e*		18 53 40.1	
LPSR				*e*		18 59 09.3	
LPSR				*e*SP	SP	19 02 31.9	+2.8
LPSR				pmax	pmax		
	comp=Z,80nm,0.9s						
VORR	**Voronezh**	**108.31**	**323**	P	**Pdif**	**18 49 09.0**	**-1.3**
VORR				pmax	pmax		
	comp=Z,250nm,1.8s						
VORD	**Divnogorie**	**108.47**	**323**	*e*P	**Pdif**	**18 49 14.3**	**+3.3**
VORD				pmax	pmax		

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             comp=Z,30nm,1.2s
VSR    Storozhevoye       108.47 323  eP        Pdif      18 49 14.5 +3.5
VSR                                   e                   18 53 44.8
VSR                                   e                   18 59 12.1
VSR                                   eSP       SP        19 02 29.0 -2.9
VSR                                    pmax     pmax
             comp=Z,40nm,1.1s
AGRB   Hanur-Agry         108.64 310  eP        PKiKP     18 53 21.6 +6.1
OBN    Obninsk            108.68 327   PKKPbc   PKKPbc    19 04 30.2 +3.1
             comp=Z,7.6nm,0.5s,baz=6.6,slow=8.0,SNR=5.9
OBN    Obninsk            108.68 327⇑iP         Pdif      18 49 16.5 +4.7
OBN    Obninsk            108.68 327⇓iP         PKKPbc    19 04 30.4 +3.3
OBN    Obninsk            108.68 327⇓eP         Pdif      18 49 09.5 -2.3
OBN                                   i                   18 53 51.7
OBN                                    pmax     pmax
             comp=Z,267nm,2.6s
TUL1   Leonard            108.74  54   P        PKiKP     18 53 13.8 -1.7
             baz=279
F37A   Hinrichs Farm,     109.13  43   P        PKiKP     18 53 14.6 -1.4
             baz=284
SPMN   Marine on St.      109.13  43   P        PKiKP     18 53 15.8 -0.2
             baz=284
BATM   Batumi             109.21 313⇑iP         Pdif      18 49 19.3 +4.7
BATM   Batumi             109.21 313⇓iP         PKiKP     18 53 22.0 +5.7
BATM   Batumi             109.21 313⇑iP         PKKPbc    19 04 33.1 +8.1
EYMN   Ely                109.29  40   P        PKiKP     18 53 15.6 -0.6
             baz=286
BCA    Borcka             109.30 313⇓iP         Pdif      18 49 19.8 +4.8
BCA    Borcka             109.30 313⇑iP         PKiKP     18 53 22.6 +6.1
BCA    Borcka             109.30 313⇑iP         PKKPbc    19 04 32.0 +7.3
F38A   Pierce - Schro     109.57  42   P        PKiKP     18 53 15.2 -1.7
             baz=285
SCIA   State Center       109.60  47   P        PKiKP     18 53 15.4 -1.6
             baz=283
E38A   The Farm, Brul     109.62  42   P        PKiKP     18 53 15.5 -1.4
             baz=286
PUL    Pulkovo            109.84 333⇓iP         Pdif      18 49 15.2 -1.7
SOC    Sochi              110.19 315  i P       Pdif      18 49 20.1 +1.3
SOC                                   e                   18 53 58.0
SOC                                   ePPP      PPP       18 56 17.1
SOC                                   e                   18 59 17.5
SOC                                   ePS       PS        19 03 35.1 +0.5
SOC                                   eSS       SS        19 08 52.0 -2.9
SOC                                   eSSS      SSS       19 13 02.9
SOC                                    pmax     pmax
             comp=Z,36nm,0.7s
G39A   Holcombe           110.23  43   P        PKiKP     18 53 16.4 -1.7
             baz=286
F39A   Loretta            110.23  42   P        PKiKP     18 53 16.3 -1.8
             baz=286
NATX   Nacogdoches        110.28  58   P        PKiKP     18 53 17.2 -1.4
             baz=278
W39A   Magazine           110.47  54   P        PKiKP     18 53 17.4 -1.5
             baz=280
BNGB   Bingl              110.51 310  eP        PKiKP     18 53 19.2 +0.2
MIAR   Mount Ida          110.75  55   P        PKiKP     18 53 17.9 -1.5
             baz=280
F40A   Park Falls         110.76  42   P        PKiKP     18 53 18.0 -1.2
             baz=286
FINES  FINESS Array B     110.80 336   Pdiff    Pdif      18 49 18.6 -2.5
             comp=Z,2.9nm,0.5s,baz=66,slow=4.9,SNR=14
FINES                                  PKiKP    PKiKP     18 53 19.2 +0.6
             comp=Z,47nm,0.8s,baz=106,slow=3.4,SNR=5.8
FINES                                  PKKPbc   PKKPbc    19 04 19.7 -0.9
             comp=Z,50nm,0.7s,baz=217,slow=2.6,SNR=15
FINES                                  PKPPKP   P'P'df    19 12 50.4 +2.1
             comp=Z,4.6nm,0.9s,baz=67,slow=5.0,SNR=4.4
C40A   Isle Royale Na     110.81  40   P        PKiKP     18 53 17.6 -1.5
             baz=288
G40A   Rib Lake           110.89  43   P        PKiKP     18 53 17.9 -1.5
             baz=286
MAZI   Mazidag            111.00 309  eP        PKiKP     18 53 18.9 -1.1
U40A   Yellville          111.01  53   P        PKiKP     18 53 18.1 -1.8
             baz=281
L40A   Anamosa            111.01  46   P        PKiKP     18 53 18.2 -1.5
             baz=284
N40A   Mertquake, Sal     111.03  48   P        PKiKP     18 53 17.2 -2.5
             baz=284
SUMG   Summit             111.09   4  ePKIKP    PKiKP     18 53 25.4 +5.9
SUMG   Summit             111.09   4  i P       PKiKP     18 53 25.4 +5.9
SUMG                                  i                   19 04 21.4
X40A   Basin Creek Fa     111.36  55   P        PKiKP     18 53 17.6 -3.0
             baz=280
CMIG   Matias Romero      111.42  73   Pdiff    Pdif      18 49 29.3 +4.4
             comp=Z,0.6nm,0.3s,baz=149,slow=6.0,SNR=2.8
CMIG                                   PKiKP    PKiKP     18 53 22.2 +1.1
             comp=Z,9.7nm,0.7s,baz=36,slow=2.4,SNR=8.1
CMIG                                   PKKPab   PKKPab    19 04 22.7 -5.1
             comp=Z,8.1nm,0.7s,baz=100,slow=3.3,SNR=7.6
ANN    Anapa              111.45 317  i PKIKP   PKiKP     18 53 18.5 -1.9
ANN                                   e                   18 54 09.1
ANN                                   eSP       SP        19 03 03.3 +3.4
ANN                                   eSS       SS        19 09 29.8  +18
D41A   Chassel            111.45  41   P        PKiKP     18 53 18.6 -1.8
             baz=288
I41A   Arkdale            111.45  44   P        PKiKP     18 53 19.1 -1.4
             baz=286
JFWS   Jewell Farm        111.50  45   P        PKiKP     18 53 19.0 -1.6
             baz=285
Z41A   Richland Creek     111.60  56   P        PKiKP     18 53 18.8 -2.2
             baz=280
N41A   Harden Midland     111.61  48   P        PKiKP     18 53 19.0 -1.8
             baz=284
M41A   Milan              111.68  47   P        PKiKP     18 53 18.8 -2.2
             baz=284
USHA   Ushuaia            111.70 155   PKiKP    PKiKP     18 53 21.8 +1.2
             comp=Z,14nm,0.9s,baz=196,slow=2.6,SNR=3.3
USHA                                   PKKPbc   PKKPbc    19 04 19.5 +2.0
             comp=Z,40nm,0.9s,baz=284,slow=2.9,SNR=6.9
W41B   Gary Mavity, V     111.72  54   P        PKiKP     18 53 19.5 -1.7
             baz=281
CCM    Cathedral Cave     111.92  51   P        PKiKP     18 53 19.4 -2.2
             baz=283
KONS   Konsvik            111.95 344  ePdif     Pdif      18 49 25.1 -1.1
VSU    Vasula             112.09 333  eP        PKiKP     18 53 21.4 +0.2
VSU                                   eSP       SP        19 03 05.9 +1.1
VSU    Vasula             112.09 333⇑iP         Pdif      18 49 26.5 -0.4
F42A   Maple Grove Fa     112.14  42   P        PKiKP     18 53 20.5 -1.2
             baz=288
L42A   Oliver, Polo       112.15  46   P        PKiKP     18 53 19.9 -1.9
             baz=285,SNR=13
I42A   Draeger Farm,      112.16  44   P        PKiKP     18 53 19.7 -2.1
             baz=287
E43A   Lone Tree Farm     112.69  41   P        PKiKP     18 53 21.1 -1.6
             baz=289
H43A   Windswept, Lux     112.78  43   P        PKiKP     18 53 21.0 -1.9
             baz=288
N43A   Stutzman Famil     112.79  47   P        PKiKP     18 53 21.7 -1.4
             baz=285
HDIL   Hopedale           112.80  48   P        PKiKP     18 53 21.7 -1.5
             baz=285
ILULI  Ilulissat          112.81   9  i PKIKP   PKiKP     18 53 27.7 +5.4
ILULI                                 i                   18 54 25.2
ILULI                                  pmax     pmax
             comp=Z,75nm,1.0s
ILULI  Ilulissat          112.81   9  i P       PKiKP     18 53 27.7 +5.4
             comp=Z,75nm,1.0s
ILULI                                 i                   18 54 25.2
M43A   Waltham Townsh     112.81  47   P        PKiKP     18 53 21.5 -1.6
             baz=286,SNR=12
P43A   Skaggs, Pawnee     112.86  49   P        PKiKP     18 53 21.8 -1.5
             baz=285
K43A   Burlington         112.91  45   P        PKiKP     18 53 22.3 -1.0
             baz=287,SNR=5.0
FRB    Frobisher Bay      112.92  19   PKKPab   PKKPab    19 04 20.3 -0.4
             comp=Z,30nm,0.8s,baz=126,slow=4.6,SNR=8.0
X43A   Marvell            112.94  54   P        PKiKP     18 53 21.4 -2.1
             baz=282
DARE   Darende-Malaty     113.04 310  eP        PKiKP     18 53 22.9 -0.9
SVSK   Karacayir          113.07 312  eP        PKiKP     18 53 23.3 -0.3
E44A   Grand Marais A     113.31  40   P        PKiKP     18 53 22.3 -1.6
             baz=290
L44A   Lake County Fo     113.36  46   P        PKiKP     18 53 22.4 -1.7
             baz=287,SNR=11
KVT    Kavak              113.46 313  eP        PKiKP     18 53 26.6 +2.1
M44A   Midewin, Midew     113.49  46   P        PKiKP     18 53 23.2 -1.2
             baz=286
MICGM  Minsk              113.51 329  eP        Pdif      18 49 36.0 +2.7
MICGM                                 eP        Pdif      18 49 36.0 +2.7
MICGM                                 epP       pPdif     18 51 01.0 -1.5
MICGM                                 esP       sPdif     18 52 02.0  +20
MICGM                                 ePP       PP        18 54 26.0 +4.1
MICGM                                  PPM                18 54 30.0
             comp=Z,9.9nm,6.0s
MICGM                                 ePPP      PPP       18 55 48.0
MICGM                                 eSKS      SKSac     18 59 36.0 +3.5
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MICGM                                 eSKKS     SKKSac    19 00 44.0 +0.9
MICGM                                 eSS       SS        19 09 40.0 +2.3
MICGM                                 eSSS      SSS       19 14 12.0
MICGM                                 eLR       LR        19 37 20.0
MICGM                                  LRM      MLR       19 41 14.0
             comp=Z,15nm,20.0s
MICGM                                  LRM      MLR       19 41 32.0
             comp=E,12nm,20.0s
MICGM                                  LRM      MLR       19 41 40.0
             comp=Z,26nm,20.0s
MNK    Minsk              113.51 329  eP        Pdif      18 49 36.0 +2.7
MNK                                   e                   18 54 26.0
MNK                                   e                   18 59 36.0
MNK                                   eSS       SS        19 09 40.0 +2.3
MNK                                    pmax     pmax
             comp=Z,10µm,6.0s
MNK                                    MLR      MLR
             comp=E,12µm,20.0s
MNK                                    MLR      MLR
             comp=Z,26µm,20.0s
O44A   Mansfield          113.51  48   P        PKiKP     18 53 23.1 -1.4
             baz=286
S44A   Carbondale         113.54  51   P        PKiKP     18 53 23.1 -1.5
             baz=284
SCO    Scoresbysund       113.57 358  i PKIKP   PKiKP     18 53 29.3 +5.6
SCO    Scoresbysund       113.57 358  i P       PKiKP     18 53 29.3 +5.6
SCO                                   i                   19 04 11.9
GAZ    Gaziantep          113.58 309  eP        PKiKP     18 53 24.3 -0.5
N44A   Piper City         113.58  47   P        PKiKP     18 53 23.4 -1.3
             baz=286
SIM    Simferopol'        113.65 318  eP        Pdif      18 49 38.5 +4.3
SIM                                   e                   18 54 27.0
SIM                                    pmax     pmax
             comp=Z,2µm,8.7s
VBMS   Vicksburg          113.68  57   P        PKiKP     18 53 24.1 -1.0
             baz=281
IZAR   Zarasai            113.71 331  eP        PKiKP     18 53 25.2 +0.8
IZAR                                  ePS       PKKPbc    19 04 06.6 -4.2
NSS    Namsos             113.73 343  ePdif     Pdif      18 49 32.4 -1.7
NSS                                   ePKPdf    PKiKP     18 53 23.5 -0.7
NSS                                   ePP       PP        18 54 22.3 -0.8
NSS                                   eSKSac    SKSac     18 59 31.9 -1.0
NSS                                   eSP       SP        19 03 20.4 +1.1
ISAL   Salakas            113.86 331  eP        PKiKP     18 53 24.0 -0.7
ISAL                                  ePS       PKKPbc    19 04 06.6 -3.7
NACGM  Naroch             113.87 330  eP        Pdif      18 49 47.0  +12
NACGM                                 epP       pPdif     18 51 06.0 +1.9
NACGM                                 ePKP      PKiKP     18 53 30.0 +5.3
NACGM                                 ePP       PP        18 54 18.0 -6.5
NACGM                                 ePPP      PPP       18 55 45.0
NACGM                                 eSKS      SKSac     18 59 40.0 +6.1
NACGM                                 eSKKS     SKKSac    19 00 45.0 -0.5
NACGM                                 eS        Sdif      19 01 30.0 +1.2
NACGM                                 eSP       SP        19 03 37.0  +16
NACGM                                 eSS       SS        19 09 45.0 +2.6
NACGM                                 eSSS      SSS       19 13 40.0
NACGM                                 eLQ       LQ        19 27 42.0
NACGM                                 eLR       LR        19 34 04.0
NACGM                                  LRM      MLR       19 40 28.0
             comp=Z,23nm,20.0s
DIKM   Dikmen             113.87 314  eP        PKiKP     18 53 25.4 +0.2
DIKM   Dikmen             113.87 314⇑iP         PKiKP     18 53 24.6 -0.6
DIKM   Dikmen             113.87 314⇓iP         PKKPbc    19 04 13.3 +3.5
F45A   CMU Biological     113.90  41   P        PKiKP     18 53 23.4 -1.7
             baz=290
H45A   Beulah             113.90  43   P        PKiKP     18 53 23.2 -1.9
             baz=289
IIGN   Ignalina           113.92 330  eP        PKiKP     18 53 24.0 -0.8
IIGN                                  ePS       PKKPbc    19 04 07.7 -2.5
I45A   Fountain           113.96  43   P        PKiKP     18 53 24.0 -1.3
             baz=289
G45A   Suttons Bay        114.02  42   P        PKPdf     18 53 23.7 -1.6
             baz=290
N45A   Kentland           114.02  47   P        PKPdf     18 53 23.9 -1.5
             baz=287,SNR=13
O45A   Potomac            114.03  48   P        PKPdf     18 53 24.5 -1.0
             baz=286,SNR=5.5
J45A   Montague           114.05  44   P        PKPdf     18 53 24.0 -1.4
             baz=288
M45A   Boilermakers S     114.06  46   P        PKPdf     18 53 23.9 -1.6
             baz=287
Q45A   Warren Harvey,     114.08  49   P        PKPdf     18 53 24.3 -1.3
             baz=285
OXF    Oxford             114.13  54   P        PKPdf     18 53 24.9 -0.9
             baz=282
R45A   Skylar, Fairfi     114.14  50   P        PKPdf     18 53 24.3 -1.4
             baz=285
T45A   Paducah            114.17  51   P        PKPdf     18 53 24.2 -1.6
             baz=284
BNN    Bunyan             114.21 311  eP        PKPdf     18 53 24.5 -1.6
P45A   Graceland, Par     114.22  48   P        PKPdf     18 53 24.6 -1.3
             baz=286
D46A   Sault St. Mari     114.43  40   P        PKPdf     18 53 24.4 -1.7
             baz=292
E46A   Sault Ste Mari     114.45  40   P        PKPdf     18 53 24.4 -1.7
             baz=291
G46A   Petoskey           114.46  42   P        PKPdf     18 53 24.1 -2.0
             baz=290
SFIN   Lafayette          114.46  47   P        PKPdf     18 53 24.7 -1.6
             baz=287
H46A   Fife Lake          114.50  42   P        PKPdf     18 53 24.3 -1.9
             baz=290
ANKE   Ethiopia-Afar      114.50 279  i P       Pdif      18 49 46.5 +7.3
ANKE                                  eS        SP        19 03 30.5 +0.3
ANKE   Ethiopia-Afar      114.50 279  i P       Pdif      18 49 46.5 +7.3
ANKE                                  eS        PP        18 54 30.5 -0.5
AKASG  Malin Array Be     114.51 325   Pdiff    Pdif      18 49 35.7 -2.2
             comp=Z,4.7nm,0.8s,baz=52,slow=4.8,SNR=16
AKASG                                  PKP      PKPdf     18 53 24.6 -1.5
             comp=Z,16nm,0.5s,baz=46,slow=2.6,SNR=30
AKASG                                  PP       PP        18 54 32.1 +3.0
             comp=Z,57nm,1.0s,baz=61,slow=6.8,SNR=4.1
AKASG                                  PKKPbc   PKKPbc    19 04 07.6 -0.4
             comp=Z,12nm,0.4s,baz=262,slow=3.7,SNR=13
AKASG                                  PKPPKP   P'P'df    19 12 40.4 -0.8
             comp=Z,1.3nm,0.7s,baz=245,slow=1.7,SNR=3.2
SLIT   Slitere, Latvi     114.53 334  eP        PKiKP     18 53 30.8 +4.9
SLIT                                  eSP       SP        19 03 24.9 -2.1
SLIT                                  ePS       PKKPbc    19 04 10.3 +2.2
I46A   Reed City          114.53  43   P        PKPdf     18 53 25.5 -0.9
             baz=290
L46A   Eue Claire         114.56  45   P        PKPdf     18 53 25.7 -0.8
             baz=288
N46A   Monticello         114.57  47   P        PKPdf     18 53 24.6 -1.9
             baz=287,SNR=13
J46A   Howard City        114.59  44   P        PKPdf     18 53 25.2 -1.2
             baz=289
DESE   Dese               114.59 280  eS        PKPdf     18 53 28.7 +1.0
P46A   Rosedale           114.59  48   P        PKPdf     18 53 25.3 -1.3
             baz=286,SNR=12
Q46A   CEJHS Indians,     114.64  49   P        PKPdf     18 53 25.6 -1.1
             baz=286
BZK    Bozkurt            114.67 315  eP        PKPdf     18 53 25.0 -1.6
BZK    Bozkurt            114.67 315⇓iP         PKPdf     18 53 25.4 -1.2
BZK    Bozkurt            114.67 315⇓iP         PKKPbc    19 04 11.6 +4.6
U46A   Springville        114.69  52   P        PKPdf     18 53 24.6 -2.3
             baz=284
M46A   Old House Fiel     114.70  46   P        PKPdf     18 53 25.3 -1.4
             baz=288,SNR=11
K46A   Dorr               114.70  44   P        PKPdf     18 53 24.6 -2.1
             baz=289
R46A   Gibon Southern     114.74  50   P        PKPdf     18 53 25.5 -1.4
             baz=285
T46A   Princeton          114.75  51   P        PKPdf     18 53 25.4 -1.6
             baz=285
CEYT   Ceyhan             114.76 309  eP        PKPdf     18 53 24.7 -2.3
X46A   Booneville         114.79  54   P        PKPdf     18 53 25.0 -2.1
             baz=283
GLMI   Grayling           114.79  42   P        PKPdf     18 53 25.2 -1.6
             baz=290
W46A   Michie             114.82  53   P        PKPdf     18 53 24.8 -2.3
             baz=283
SFJD   Kangerlussuaq      114.87  10   PKP      PKiKP     18 53 25.9 -0.4
             comp=Z,9.4nm,0.6s,baz=157,slow=3.3
SFJD                                   PKKPbc   PKKPbc    19 04 05.5 -1.7
             comp=Z,51nm,0.9s,baz=103,slow=2.8,SNR=4.3
SFJD   Kangerlussuaq      114.87  10  i P       PKPdf     18 53 30.4 +4.1
V46A   Holladay           114.88  52   P        PKPdf     18 53 25.3 -2.0
             baz=284
YURE   YUREGIR            114.89 309  eP        PKPdf     18 53 26.2 -1.1
ASF    Jabal al Asfar     114.92 304   PKP      PKPdf     18 53 27.0 -0.6
             comp=Z,15nm,0.9s,baz=102,slow=0.7,SNR=6.9
ASF                                    PP       PP        18 54 34.4 +1.5
             comp=Z,16nm,0.9s,baz=353,slow=1.6,SNR=3.5
ASF                                    PKKPab   PKKPab    19 04 12.0 -0.3
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             comp=Z,36nm,1.0s,baz=168,slow=0.6,SNR=12
ASF    Jabal al Asfar     114.92 304   PKIKP    PKPdf     18 53 27.0 -0.6
ASF    Jabal al Asfar     114.92 304   P        PKPdf     18 53 26.1 -1.5
ASF    Jabal al Asfar     114.92 304   P        PKPdf     18 53 26.1 -1.5
D47A   Chapleau           114.95  39   P        PKiKP     18 53 25.3 -1.8
             baz=293
WVT    Waverly            115.02  52  ePKPdf    PKiKP     18 53 25.8 -1.7
WVT    Waverly            115.02  52   P        PKiKP     18 53 25.5 -2.0
             baz=284
TOTH   TOTAH              115.06 305  eP        PKPdf     18 53 27.1 -0.7
E47A   Iron Bridge        115.07  40   P        PKiKP     18 53 25.6 -1.7
             baz=292,SNR=9.4
I47A   Gladwin            115.14  43   P        PKPdf     18 53 25.5 -2.1
             baz=290
H47A   Mio                115.14  42   P        PKPdf     18 53 25.6 -2.0
             baz=291
QASN   Qassioun           115.15 305  eP        PKiKP     18 53 29.2 +1.2
G47A   Hillman            115.17  41   P        PKPdf     18 53 25.9 -1.7
             baz=291,SNR=5.9
O47A   Sheridan           115.17  47   P        PKPdf     18 53 25.5 -2.2
             baz=287,SNR=6.1
TBLU   Trondheim          115.19 343  ePP       PP        18 54 34.1 +0.8
J47A   Sunmer             115.19  44   P        PKPdf     18 53 25.9 -1.7
             baz=290
KARA   Karaisali          115.23 309  eP        PKPdf     18 53 26.6 -1.3
M47A   Cromwell           115.24  46   P        PKPdf     18 53 26.1 -1.7
             baz=288
K47A   Vermontville       115.26  44   P        PKPdf     18 53 26.2 -1.6
             baz=289
P47A   Martinsville       115.32  48   P        PKPdf     18 53 26.0 -2.0
             baz=287
N47A   Urbana             115.33  46   P        PKPdf     18 53 25.6 -2.4
             baz=288,SNR=12
V47A   Nunnelly           115.34  52   P        PKPdf     18 53 26.4 -1.8
             baz=284,SNR=5.7
L47A   Sherwood           115.34  45   P        PKPdf     18 53 26.0 -1.9
             baz=289
Q47A   Bedord North L     115.36  49   P        PKPdf     18 53 25.9 -2.2
             baz=286,SNR=5.1
CANT   Cankiri            115.36 313  eP        PKPdf     18 53 26.2 -1.9
U47A   Clarksville        115.37  51   P        PKPdf     18 53 26.0 -2.1
             baz=285
T47A   Sharon Grove       115.37  51   P        PKPdf     18 53 26.7 -1.5
             baz=285,SNR=10
X47A   Russelville        115.38  54   P        PKPdf     18 53 25.9 -2.4
             baz=284
S47A   Hartford           115.39  50   P        PKPdf     18 53 26.0 -2.2
             baz=286
W47A   Westpoint          115.42  53   P        PKPdf     18 53 26.2 -2.1
             baz=284,SNR=12
BRBR   Barbar             115.44 305  eP        PKiKP     18 53 29.3 +0.6
AAE    Adis Abeba         115.45 278  eP        Pdif      18 49 45.6 +2.3
AAE    Adis Abeba         115.45 278  eP        Pdif      18 49 45.6 +2.3
R47A   Wooly Knot Far     115.47  49   P        PKPdf     18 53 26.5 -1.8
             baz=286,SNR=7.5
RCY    Rachaya            115.51 305  eP        PKPdf     18 53 27.8 -0.9
HSUJ   Al Zarqa           115.52 304   P        PKiKP     18 53 35.2 +6.5
HSUJ   Al Zarqa           115.52 304   P        PKPdf     18 53 28.5 -0.2
HSUJ   Al Zarqa           115.52 304   P        PKPdf     18 53 28.5 -0.2
BHL    Bhannes            115.57 306  eP        PKPdf     18 53 27.0 -1.8
KURC   Kurucasile-Bar     115.60 315  eP        PKiKP     18 53 30.2 +1.7
BR131  Keskin Array S     115.61 312   P        PKPdf     18 53 28.1 -0.6
             SNR=22
BRTR   Keskin Array B     115.61 312   Pdiff    Pdif      18 49 45.2 +1.9
             comp=Z,2.3nm,0.7s,baz=270,slow=0.2,SNR=9.1
BRTR                                   PKP      PKPdf     18 53 27.3 -1.5
             comp=Z,18nm,0.8s,baz=142,slow=2.7,SNR=13
BRTR                                   PKKPbc   PKKPbc    19 04 01.5 -2.5
             comp=Z,12nm,0.9s,baz=220,slow=3.5,SNR=4.2
BRTR                                   SKKP               19 07 25.6
             comp=Z,15nm,1.0s,baz=197,slow=4.1,SNR=3.6
BRTR                                   PKPPKP             19 12 37.2
             comp=Z,1.5nm,0.9s,baz=214,slow=2.5,SNR=2.0
I48A   Sherman Twp        115.63  42   P        PKPdf     18 53 26.6 -1.8
             baz=291,SNR=5.5
QRWL   Qaraoun            115.63 305  eP        PKPdf     18 53 28.3 -0.6
WCI    Wyandotte Cave     115.66  49  ePKPdf    PKPdf     18 53 27.1 -1.6
WCI    Wyandotte Cave     115.66  49   P        PKPdf     18 53 26.6 -2.1
             baz=286
DQRL   Deir Qamar         115.68 306  eP        PKPdf     18 53 26.4 -2.6
H48A   Harrisville        115.69  42   P        PKPdf     18 53 26.2 -2.3
             baz=292
YAYX   Yaylak             115.71 312  eP        PKPdf     18 53 26.8 -2.1
D48A   Paudash Townsh     115.72  39   P        PKPdf     18 53 26.6 -1.9
             baz=294
KSDI   Kefar Szold        115.72 305   P        PKiKP     18 53 29.7 +0.7
KSDI   Kefar Szold        115.72 305   P        PKiKP     18 53 29.1 +0.1
KSDI   Kefar Szold        115.72 305   P        PKiKP     18 53 29.1 +0.1
F48A   Evansville         115.74  40   P        PKPdf     18 53 26.7 -1.9
             baz=293
SHMJ   Saham              115.74 304   P        PKiKP     18 53 30.2 +1.2
SHMJ   Saham              115.74 304   P        PKiKP     18 53 30.2 +1.2
MERS   Mersin             115.74 309  eP        PKPdf     18 53 27.1 -1.9
APG    El Apazote         115.76  75   PKP      PKPdf     18 53 28.8 -0.9
             comp=Z,10.0nm,0.9s,baz=259,slow=10,SNR=4.5
APG                                    PKKPab   PKKPab    19 04 12.4 +3.5
             comp=Z,36nm,0.8s,baz=6.1,slow=8.2,SNR=6.1
E48A   Lockeyer           115.77  40   P        PKPdf     18 53 27.1 -1.6
             baz=293
SWQJ   Swaqa              115.80 303   P        PKPdf     18 53 28.9 -0.4
SWQJ   Swaqa              115.80 303   P        PKPdf     18 53 28.9 -0.4
N48A   Decatur            115.82  46   P        PKPdf     18 53 27.4 -1.6
             baz=288,SNR=8.6
K48A   Perry              115.82  44   P        PKPdf     18 53 26.9 -2.0
             baz=290,SNR=12
M48A   Edgerton           115.84  45   P        PKPdf     18 53 27.0 -1.9
             baz=289
J48A   Bridge Port        115.88  43   P        PKPdf     18 53 28.3 -0.6
             baz=290,SNR=8.7
Q48A   North Vernon       115.89  48   P        PKPdf     18 53 27.6 -1.5
             baz=287
T48A   Bowling Green      115.89  51   P        PKPdf     18 53 27.8 -1.4
             baz=286,SNR=6.2
L48A   N Adams            115.89  45   P        PKPdf     18 53 27.6 -1.4
             baz=289,SNR=10
V48A   Smith Brothers     115.91  52   P        PKPdf     18 53 27.7 -1.5
             baz=285
O48A   Farmland           115.91  47   P        PKPdf     18 53 27.4 -1.7
             baz=288
R48A   Northridge Ran     115.93  49   P        PKPdf     18 53 27.8 -1.5
             baz=287
U48A   Cassie Pea, Po     115.93  51   P        PKPdf     18 53 27.5 -1.8
             baz=285,SNR=11
WALJ   Wala               115.95 303   P        PKiKP     18 53 36.1 +6.7
WALJ   Wala               115.95 303   P        PKiKP     18 53 29.4  0.0
WALJ   Wala               115.95 303   P        PKiKP     18 53 29.4  0.0
P48A   Milroy             115.95  48   P        PKPdf     18 53 27.4 -1.8
             baz=288,SNR=6.3
D49A   Beulah Townshi     115.96  39   P        PKPdf     18 53 27.8 -1.2
             baz=294
MMAI   Mount Meron Ar     115.97 305   PKP      PKPdf     18 53 28.5 -1.1
             comp=Z,57nm,0.8s,baz=62,slow=5.7,SNR=8.9
MMAI                                   PP       PP        18 54 37.9 -2.3
             comp=Z,15nm,0.8s,baz=48,slow=4.3,SNR=2.2
MMAI                                   PKKPab   PKKPbc    19 04 04.6 +2.2
             comp=Z,38nm,1.0s,baz=27,slow=0.2,SNR=4.3
W48A   Pulaski            115.97  53   P        PKPdf     18 53 27.0 -2.4
             baz=284
S48A   Wiedeman Farm,     116.00  50   P        PKPdf     18 53 27.8 -1.5
             baz=286,SNR=10
148A   Greensboro         116.03  56   P        PKPdf     18 53 28.0 -1.6
             baz=283
X48A   Hartselle          116.05  54   P        PKPdf     18 53 27.4 -2.2
             baz=284
Y48A   Jasper             116.08  54   P        PKPdf     18 53 27.7 -1.9
             baz=284
MMLI   Mount Malkishu     116.08 304   P        PKPdf     18 53 25.6 -4.1
MMLI   Mount Malkishu     116.08 304   P        PKiKP     18 53 30.0 +0.3
MMLI   Mount Malkishu     116.08 304   P        PKiKP     18 53 30.0 +0.3
SUW    Suwalki            116.13 330  ePdif     Pdif      18 49 52.6 +7.6
SUW    Suwalki            116.13 330  eP        Pdif      18 49 52.6 +7.6
F49A   Sandfield          116.13  40   P        PKPdf     18 53 27.5 -1.8
             baz=293
ANTO   Ankara             116.19 313  ePKPdf    PKPdf     18 53 29.1 -0.7
ANTO   Ankara             116.19 313⇓iP         PKPdf     18 53 28.7 -1.1
ANTO   Ankara             116.19 313⇑iP         PKKPbc    19 04 07.0 +5.1
ANTO   Ankara             116.19 313  ⇓PKIKP    PKPdf     18 53 28.7 -1.1
ANTO   Ankara             116.19 313   P        PKPdf     18 53 29.4 -0.4
             SNR=37
LOD    Lodumlu            116.21 313  eP        PKPdf     18 53 28.1 -1.7
JDRJ   Daraweish          116.24 302   P        PKPdf     18 53 29.5 -0.7
JDRJ   Daraweish          116.24 302   P        PKPdf     18 53 29.5 -0.7
LISJ   El Lisan           116.29 303   P        PKiKP     18 53 36.6 +6.6
LISJ   El Lisan           116.29 303   P        PKiKP     18 53 30.3 +0.3
LISJ   El Lisan           116.29 303   P        PKiKP     18 53 30.3 +0.3
K49A   Clarkson           116.29  44   P        PKPdf     18 53 27.4 -2.3
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	baz=291,SNR=5.9						
J49A	Marlette	116.30	43	P	PKPdf	18 53 27.6	-2.2
	baz=291,SNR=9.7						
L49A	Milan	116.31	45	P	PKPdf	18 53 27.9	-1.9
	baz=290,SNR=13						
I49A	Point Hope	116.31	42	P	PKPdf	18 53 28.0	-1.7
	baz=292,SNR=8.5						
AAM	Ann Arbor	116.32	44	P	PKPdf	18 53 28.2	-1.6
	baz=290						
KIS	Kishinev	116.32	321	*e*P	Pdif	18 49 46.0	0.0
KIS				*e*pP	pPdif	18 51 16.0	+0.5
KIS	Kishinev	116.32	321	*e*PKP	PKPdf	18 53 28.0	-1.7
KIS	Kishinev	116.32	321	*e*PP	PP	18 54 30.0	-12
	comp=Z,5µm,20.0s						
KIS				*i* pPKP	PP	18 54 43.0	+1.2
KIS	Kishinev	116.32	321	*i* PS	PS	19 03 57.0	-33
KIS				*i* SS	SS	19 10 23.0	+8.2
KIS				*i* SSS	SSS	19 12 40.0	
KIS				LRM	MLR	19 47 36.0	
	comp=Z,11µm,22.0s						
KIS	Kishinev	116.32	321	*e*P	Pdif	18 49 46.0	0.0
KIS				*e*		18 53 28.0	
KIS				*i*		18 54 43.0	
KIS				*i*		18 59 39.0	
KIS				*i* SS	SS	19 10 23.0	+8.2
HFS	Hagfors	116.36	339	Pdiff	Pdif	18 49 44.0	-1.9
	baz=90,slow=4.3						
HFS				PKP	PKPdf	18 53 27.5	-1.9
	comp=Z,10nm,0.7s,baz=132,slow=2.2,SNR=7.2						
HFS				PKKPbc	PKKPbc	19 04 01.4	-0.6
	comp=Z,24nm,0.8s,baz=170,slow=2.3,SNR=9.4						
MILM	Milestii Mici	116.36	321	⇓*i*P	PKPdf	18 53 28.3	-1.4
MILM	Milestii Mici	116.36	321	⇑*i*P	PKKPab	19 04 05.6	0.0
EREN	Erenkoy	116.36	308	*e*P	PKiKP	18 53 35.6	+5.5
M49A	Liberty Center	116.37	45	P	PKPdf	18 53 28.4	-1.5
	baz=290,SNR=10						
N49A	Columbus Grove	116.41	46	P	PKPdf	18 53 28.8	-1.2
	baz=289,SNR=11						
LRAL	Lakeview Retre	116.42	55	P	PKPdf	18 53 28.8	-1.5
	baz=283,SNR=9.5						
P49A	Miami Univ. Ec	116.46	48	P	PKPdf	18 53 28.7	-1.5
	baz=288,SNR=25						
DOMB	Dombas	116.47	342	*e*PKPdf	PKPdf	18 53 28.5	-1.1
DOMB				*e*PP	PP	18 54 43.8	+1.5
DOMB				*e*SP	SP	19 03 45.3	+0.9
DOMB				*e*SS	SS	19 10 22.1	+6.3
DOMB				IVMs_BB	IVMs_BB	19 29 04.4	
	comp=Z,3µm,6.2s						
KEBE	Keben-Mersin	116.48	309	*e*P	PKPdf	18 53 30.0	-0.4
Q49A	Aurora	116.48	48	P	PKPdf	18 53 28.6	-1.6
	baz=288,SNR=13						
R49A	Shelbyville	116.49	49	P	PKPdf	18 53 28.5	-1.8
	baz=287						
CHBY	Cihanbeyli	116.51	311	*e*P	PKPdf	18 53 28.3	-2.2
MOL	Molde	116.51	343	*e*PKPdf	PKPdf	18 53 28.8	-0.7
MOL				*e*PP	PP	18 54 42.4	0.0
MOL				*e*PS	PKKPdf	19 04 30.5	+4.6
W49A	Belvidere	116.51	53	P	PKPdf	18 53 28.3	-2.1
	baz=285						
KMBO	Kilima Mbogo	116.51	267	*i* P	PKiKP	18 53 34.5	+3.1
KMBO	Kilima Mbogo	116.51	267	Pdiff	Pdif	18 49 48.4	+0.5
	comp=Z,2.7nm,0.8s,baz=68,slow=7.2,SNR=4.2						
KMBO				PKP	PKPdf	18 53 30.7	-0.6
	comp=Z,17nm,1.0s,baz=43,slow=2.8,SNR=7.8						
KMBO				PP	PP	18 54 45.6	+0.8
	comp=Z,20nm,0.9s,baz=86,slow=7.3,SNR=3.5						
KMBO				PKKPab	PKKPab	19 04 07.2	+1.4
	comp=Z,31nm,1.1s,baz=291,slow=3.0,SNR=10						
KMBO	Kilima Mbogo	116.51	267	P	PKPdf	18 53 30.3	-1.0
KMBO	Kilima Mbogo	116.51	267	P	PKPdf	18 53 30.8	-0.5
	SNR=27						
KMBO	Kilima Mbogo	116.51	267	*i* P	PKiKP	18 53 34.5	+3.1
U49A	Red Boiling Sp	116.52	51	P	PKPdf	18 53 28.5	-1.9
	baz=286,SNR=6.0						
O49A	Covington	116.53	47	P	PKPdf	18 53 28.8	-1.5
	baz=289,SNR=30						
S49A	Springfield	116.55	50	P	PKPdf	18 53 28.5	-1.9
	baz=287						
249A	Camden	116.55	56	P	PKPdf	18 53 29.3	-1.3
	baz=283,SNR=8.6						
NB2	NORSAR Subarra	116.55	341	P	Pdif	18 49 48.6	+1.8
	comp=Z,3.1nm,0.7s,baz=42,slow=5.1						
NB2	NORSAR Subarra	116.55	341	PKPdf	PKPdf	18 53 28.1	-1.7
	comp=Z,5.6nm,0.6s,baz=45,slow=1.9						
NB2	NORSAR Subarra	116.55	341	*e*	PKPdf	18 53 28.1	-1.7
	baz=45,slow=1.9						
NOA	NORSAR Array B	116.55	341	Pdiff	Pdif	18 49 49.2	+2.3
	comp=Z,0.7nm,0.6s,baz=51,slow=4.2,SNR=5.4						
NOA				PKP	PKPdf	18 53 28.4	-1.4
	comp=Z,9.4nm,0.7s,baz=45,slow=2.0,SNR=20						
NOA				PP	PP	18 54 44.6	+1.7
	comp=Z,10nm,0.8s,baz=34,slow=7.8,SNR=2.2						
NOA				PKKPab	PKKPab	19 04 03.6	-1.2
	comp=Z,40nm,1.1s,baz=224,slow=3.6,SNR=17						
NOA				SKKP		19 07 15.8	
	comp=Z,14nm,1.1s,baz=249,slow=4.7,SNR=3.8						
T49A	Edmonton	116.55	50	P	PKPdf	18 53 28.8	-1.7
	baz=286,SNR=17						
IKL	Isikli	116.56	309	*e*P	PKPdf	18 53 28.5	-2.0
PHNC	Paralimni	116.61	307	P	PKiKP	18 53 31.6	+1.0
X49A	Woodville	116.61	53	P	PKPdf	18 53 28.5	-2.1
	baz=284						
V49A	McMinnville	116.63	52	P	PKPdf	18 53 28.3	-2.4
	baz=285						
349A	Repton	116.63	57	P	PKPdf	18 53 29.1	-1.6
	baz=282						
TOBO	Tobermory, Bru	116.68	41	P	PKPdf	18 53 28.9	-1.5
	baz=293						
AKKU	Akkuyu-Mersin	116.69	309	*e*P	PKPdf	18 53 29.7	-1.0
149A	Jones	116.69	55	P	PKPdf	18 53 29.2	-1.6
	baz=283,SNR=22						
TEVE	Tevekalti-Mers	116.69	309	*e*P	PKPdf	18 53 29.2	-1.6
AMAZ	Amatzia	116.70	303	P	PKiKP	18 53 31.6	+0.7
AMAZ	Amatzia	116.70	303	P	PKiKP	18 53 33.9	+3.0
AMAZ	Amatzia	116.70	303	P	PKiKP	18 53 33.9	+3.0
E50A	Wahnapitae	116.70	39	P	PKPdf	18 53 29.0	-1.4
	baz=294,SNR=14						
Y49A	Blount Mountai	116.70	54	P	PKPdf	18 53 29.1	-1.8
	baz=284						
449A	Pace	116.73	58	P	PKPdf	18 53 29.2	-1.7
	baz=282						
Z49A	Columbiana	116.76	55	P	PKPdf	18 53 29.6	-1.4
	baz=284,SNR=10						
BRAL	Brewton	116.79	57	P	PKPdf	18 53 29.3	-1.8
	baz=282						
K50A	Casco	116.87	44	P	PKPdf	18 53 29.1	-1.7
	baz=291						
BERE	Bereket-Mersin	116.89	309	*e*P	PKPdf	18 53 29.9	-1.4
HRFI	Mount Harif	116.91	302	P	PKPdf	18 53 30.8	-0.6
HRFI	Mount Harif	116.91	302	P	PKPdf	18 53 30.8	-0.6
AQBJ	Aqaba	116.96	301	P	PKPdf	18 53 31.1	-0.3
AQBJ	Aqaba	116.96	301	P	PKPdf	18 53 31.1	-0.3
L50A	Kingsville	117.00	44	P	PKPdf	18 53 29.3	-1.8
	baz=291						
LADK	Ladik-KONYA	117.01	311	*e*P	PKPdf	18 53 29.7	-1.8
IAS	Iasi	117.02	322	⇑*i*P	PKiKP	18 53 36.9	+5.9
IAS	Iasi	117.02	322	⇓*i*P	PKKPab	19 04 04.8	+2.1
IAS	Iasi	117.02	322	⇑PKIKP	PKiKP	18 53 36.9	+5.9
TEKE	Tekeli-Mersin	117.03	309	*e*P	PKPdf	18 53 29.2	-2.2
ERMK	Ermenek	117.05	309	*i* P	PKPdf	18 53 31.3	-0.4
ERMK				IAML_P			
	comp=Z,2µm,0.4s						
EIL	Elat	117.06	301	PKP	PKPdf	18 53 31.0	-0.7
	comp=Z,33nm,1.0s,baz=270,slow=0.9,SNR=8.5						
EIL				PP	PP	18 54 44.4	-3.3
	comp=Z,22nm,0.7s,baz=353,slow=7.6,SNR=1.7						
EIL				PKKPab	PKKPab	19 04 00.9	-1.8
	comp=Z,16nm,0.7s,baz=358,slow=4.6,SNR=7.4						
BASO	Ashfield	117.06	42	P	PKPdf	18 53 29.6	-1.6
	baz=293						
M50A	Fremont	117.06	45	P	PKPdf	18 53 29.7	-1.6
	baz=290						
TLCR		117.06	319	⇓*i*P	PKPdf	18 53 30.2	-0.9
TLCR		117.06	319	⇓*i*P	PKKPbc	19 03 58.5	-0.5
TLCR		117.06	319	⇓PKIKP	PKPdf	18 53 30.2	-0.9
O50A	Cable	117.06	47	P	PKPdf	18 53 29.6	-1.7
	baz=289,SNR=18						
MATQ	Matagami	117.07	35	P	PKPdf	18 53 29.6	-1.4
	baz=299						
KDHN	Kadinhani	117.10	312	*i* P	PKPdf	18 53 31.3	-0.3
KDHN				IAML_P			
	comp=Z,990nm,0.6s						
P50A	Jamestown	117.11	47	P	PKPdf	18 53 29.4	-2.0
	baz=289						
T50A	Nancy	117.11	50	P	PKPdf	18 53 29.5	-2.1
	baz=287						
BRCO	Bruce Peninsul	117.11	42	P	PKPdf	18 53 29.6	-1.7
	baz=293						
BMRO	Meriville Lake	117.13	41	P	PKPdf	18 53 29.7	-1.6
	baz=293						
R50A	Paris	117.13	49	P	PKPdf	18 53 29.7	-1.9
	baz=288						
MDUB	Mudurnu	117.16	314	*e*P	PKPdf	18 53 30.6	-1.1
X50B	Fort Payne	117.17	53	P	PKPdf	18 53 29.8	-2.0
	baz=285,SNR=13						
KIZT	Kizilcal	117.17	312	*e*P	PKPdf	18 53 28.9	-2.8
CSS	Mathiatis	117.17	307	*e*PKPdf	PKPdf	18 53 30.1	-1.6
CSS	Mathiatis	117.17	307	P	PKPdf	18 53 30.1	-1.6
CSS	Mathiatis	117.17	307	P	PKPdf	18 53 30.4	-1.3
CSS	Mathiatis	117.17	307	P	PKPdf	18 53 30.7	-1.0
CSS	Mathiatis	117.17	307	P	PKPdf	18 53 30.7	-1.0
N50A	Nevada	117.19	46	P	PKPdf	18 53 30.3	-1.2
	baz=290,SNR=20						
Q50A	Georgetown	117.21	48	P	PKPdf	18 53 29.8	-1.8
	baz=288						
PLIO	Pelee Island,	117.23	45	P	PKPdf	18 53 29.5	-2.0
	baz=291						
KLNR	Kaliningrad	117.24	332	⇑*i*PKIKP	PKPdf	18 53 30.6	-0.6
Y50A	Piedmont	117.24	54	P	PKPdf	18 53 29.5	-2.3
	baz=285						
W50A	Signal Mountai	117.24	52	P	PKPdf	18 53 30.1	-1.8
	baz=286,SNR=16						
Z50A	Ashland	117.24	55	P	PKPdf	18 53 30.1	-1.8
	baz=284,SNR=9.8						
S50A	Richmond	117.25	49	P	PKPdf	18 53 30.1	-1.7
	baz=287,SNR=14						
450A	Crestview	117.25	57	P	PKPdf	18 53 29.9	-2.1
	baz=282						
250A	Grady	117.26	56	P	PKPdf	18 53 30.8	-1.2
	baz=283,SNR=12						
KZIT	Kziot	117.27	303	P	PKPdf	18 53 31.7	-0.3
KZIT	Kziot	117.27	303	P	PKPdf	18 53 31.4	-0.6
KZIT	Kziot	117.27	303	P	PKPdf	18 53 31.4	-0.6
U50A	Jamestown	117.28	51	P	PKPdf	18 53 30.0	-1.9
	baz=286						
V50A	Pikevile	117.28	52	P	PKPdf	18 53 30.2	-1.7
	baz=286						
150A	Eclectic	117.32	55	P	PKPdf	18 53 30.4	-1.7
	baz=284						
350A	Dozier	117.33	57	P	PKPdf	18 53 30.1	-2.0
	baz=283						
GIUM	Giurgiulesti	117.33	320	⇑*i*P	PKiKP	18 53 40.2	+8.5
GIUM	Giurgiulesti	117.33	320	⇑*i*P	PKKPab	19 04 03.1	+1.7
BWLO	Walkerton	117.37	42	P	PKPdf	18 53 30.3	-1.5
	baz=293						
BIR	Birlad	117.37	321	⇑*i*P	PKiKP	18 53 34.6	+2.8
BIR	Birlad	117.37	321	⇑*i*P	PKKPab	19 04 01.9	+0.7
BIR	Birlad	117.37	321	⇑PKIKP	PKiKP	18 53 34.6	+2.8
F51A	Arnstein	117.42	39	P	PKPdf	18 53 29.8	-2.0
	baz=295,SNR=17						
E51A	G1948 Merrick	117.43	39	P	PKPdf	18 53 30.1	-1.8
	baz=296,SNR=6.5						
TEIG	Tepich	117.44	69	*e*PKPdf	PKPdf	18 53 32.1	-0.5
KLBO	Killbear Provi	117.47	40	P	PKPdf	18 53 30.3	-1.7
	baz=294						
LEF	Lefka	117.48	308	*e*P	PKPdf	18 53 30.6	-1.7
LEF	Lefka	117.48	308	⇓*i*P	PKPdf	18 53 30.8	-1.5
LEF	Lefka	117.48	308	*i* P	PKiKP	18 53 33.5	+1.2
LEF				IAML_P			
	comp=Z,3µm,1.0s						
ACSO	Alum Creek Sta	117.50	46	P	PKPdf	18 53 30.6	-1.6
	baz=290,SNR=11						
CFR	Carcaliu	117.50	320	⇑*i*P	Pdif	18 49 56.3	+5.0
CFR	Carcaliu	117.50	320	⇓*i*P	PKPdf	18 53 31.1	-0.9
CFR	Carcaliu	117.50	320	⇑*i*P	PKKPab	19 04 01.7	+1.1
CFR	Carcaliu	117.50	320	⇓PKIKP	PKPdf	18 53 31.1	-0.9
I51A	Listowel	117.56	42	P	PKPdf	18 53 30.5	-1.7
	baz=293						
SZAC	Souni	117.58	307	P	PKPdf	18 53 31.4	-1.2
TIRR	Tirgusor	117.61	319	⇑*i*P	Pdif	18 49 56.9	+5.1
TIRR	Tirgusor	117.61	319	⇑*i*P	PKPdf	18 53 31.6	-0.6
TIRR	Tirgusor	117.61	319	⇓*i*P	PKKPab	19 04 01.4	+1.3
TIRR	Tirgusor	117.61	319	⇑PKIKP	PKPdf	18 53 31.6	-0.6
CIFT	Cifteler, Eski	117.62	313	*e*P	PKPdf	18 53 30.7	-1.8
CIFT	Cifteler, Eski	117.62	313	*i* P	PKiKP	18 53 33.5	+1.0
CIFT				IAML_P			
	comp=Z,2µm,0.5s						
EFOR	EFORIE	117.62	318	⇑*i*P	PKiKP	18 53 38.6	+6.3
GAZI	Gazipasa	117.62	309	*i* P	PKPdf	18 53 30.4	-2.2
GAZI				IAML_P			
	comp=Z,214nm,0.3s						
Q51A	Peebles	117.63	48	P	PKPdf	18 53 30.5	-2.0
	baz=289,SNR=16						
TUDR		117.63	320	⇓*i*P	PKiKP	18 53 36.4	+4.1
K51A	Iona Station	117.65	43	P	PKPdf	18 53 30.6	-1.8
	baz=292						
GULT	Gulveren	117.66	314	*e*P	PKPdf	18 53 31.1	-1.5
R51A	Hillsboro	117.68	49	P	PKPdf	18 53 30.3	-2.3
	baz=288						
M51A	Elyria	117.69	45	P	PKPdf	18 53 30.6	-1.9
	baz=291,SNR=12						
P51A	Williamsport	117.69	47	P	PKPdf	18 53 30.6	-2.0
	baz=289,SNR=15						
W51A	Cleveland	117.69	52	P	PKPdf	18 53 30.7	-2.0
	baz=286,SNR=6.3						
SAUV	Serdivan-Sakar	117.69	314	*e*P	PKPdf	18 53 31.1	-1.4
N51A	Ashland	117.70	45	P	PKPdf	18 53 31.1	-1.5
	baz=290,SNR=29						
ALFC	Alefka	117.70	308	P	PKPdf	18 53 30.5	-2.3
SRCK	Saricakaya, Es	117.71	314	*e*P	PKPdf	18 53 30.7	-1.9
MFTR	Murfatlar	117.72	319	⇓*i*P	PKPdf	18 53 31.9	-0.5
MFTR	Murfatlar	117.72	319	⇑*i*P	PKKPab	19 04 01.2	+1.6
MANR	Mangalia	117.75	318	⇓*i*P	PKPdf	18 53 32.0	-0.5
MANR	Mangalia	117.75	318	⇑*i*P	PKKPab	19 03 58.8	-0.7
PRAR	RASCA	117.76	323	⇑*i*P	PKPdf	18 53 31.6	-0.9
PRAR	RASCA	117.76	323	⇑*i*P	SP	19 04 00.3	+3.3
X51A	Calhoun	117.77	53	P	PKPdf	18 53 30.8	-2.1
	baz=286,SNR=6.0						
Y51A	Rockmart	117.78	54	P	PKPdf	18 53 30.9	-2.0
	baz=285,SNR=6.1						
LSQQ	Lebel-sur-Quev	117.78	35	P	PKPdf	18 53 30.6	-1.8
	baz=299						
O51A	Pataskala	117.80	46	P	PKPdf	18 53 31.0	-1.7
	baz=290,SNR=17						
TLB	Topalu	117.81	319	⇑*i*P	Pdif	18 49 58.1	+5.4
TLB	Topalu	117.81	319	⇑*i*P	PKPdf	18 53 31.8	-0.8
TLB	Topalu	117.81	319	⇑*i*P	PKKPbc	19 03 54.4	-1.9
TLB	Topalu	117.81	319	⇑PKIKP	PKPdf	18 53 31.8	-0.8
T51A	Gray	117.81	50	P	PKPdf	18 53 31.3	-1.6
	baz=287,SNR=11						
V51A	Loudon	117.83	51	P	PKPdf	18 53 31.5	-1.5
	baz=286,SNR=5.7						
HARR	Harsova	117.84	319	⇓*i*P	Pdif	18 49 58.8	+6.0
HARR	Harsova	117.84	319	⇓*i*P	PKPdf	18 53 32.1	-0.6
HARR	Harsova	117.84	319	⇑*i*P	PKKPab	19 04 02.3	+3.2
HARR	Harsova	117.84	319	⇓PKIKP	PKPdf	18 53 32.1	-0.6
Z51A	Franklin	117.84	54	P	PKPdf	18 53 31.3	-1.7
	baz=285						
PETR	Petresti	117.85	321	⇑*i*P	PKiKP	18 53 39.5	+6.8
PETR	Petresti	117.85	321	⇑*i*P	PKKPab	19 04 00.4	+1.4
F52A	Sundridge	117.86	39	P	PKPdf	18 53 31.1	-1.6
	baz=295,SNR=24						
LVV	L'vov	117.87	326	*e*P	Pdif	18 49 58.4	+5.5
LVV				*e*		18 53 31.3	
LVV				*e*		18 54 49.7	
LVV				*e*		18 57 28.5	
LVV				MLR	MLR		
	comp=N,5µm,21.0s						
LVV				MLR	MLR		
	comp=E,5µm,21.0s						
LVV				MLR	MLR		
	comp=Z,8µm,21.0s						
S51A	Beattyville	117.87	49	P	PKPdf	18 53 31.4	-1.6
	baz=288,SNR=13						
TESR	Tescani	117.88	322	⇑*i*P	Pdif	18 49 58.0	+5.0
TESR	Tescani	117.88	322	⇑*i*P	PKiKP	18 53 34.4	+1.6
TESR	Tescani	117.88	322	⇓*i*P	PKKPab	19 03 59.2	+0.2
151A	Opelika	117.91	55	P	PKPdf	18 53 31.4	-1.8
	baz=284,SNR=15						
D52A	ZEK Kipawa Sen	117.91	38	P	PKPdf	18 53 30.9	-1.8
	baz=297,SNR=12						
CVDA	Cernavoda	117.91	319	⇓*i*P	PKiKP	18 53 39.2	+6.4
U51A	La Follette	117.93	51	P	PKPdf	18 53 31.6	-1.6
	baz=287						
251A	Midway	117.94	56	P	PKPdf	18 53 31.9	-1.3
	baz=284,SNR=12						
ODBI	Odobesti	117.95	321	⇑*i*P	PKPdf	18 53 32.8	0.0
PPCY	Paphos	117.98	308	P	PKPdf	18 53 31.5	-1.7
H52A	Wyevale	117.98	41	P	PKPdf	18 53 30.9	-2.1
	baz=294,SNR=23						
KEPZ	Antalya-Kepez	117.98	310	*i* P	PKPdf	18 53 31.0	-2.3
KEPZ				IAML_P			
	comp=Z,179nm,0.3s						
451A	Vernon	118.00	57	P	PKPdf	18 53 32.1	-1.3
	baz=283						
HYA	Hoyanger	118.02	343	*e*PKPdf	PKPdf	18 53 31.9	-0.6
HYA				*e*PP	PP	18 54 52.2	-0.6
HYA				*e*SP	SP	19 03 58.5	+0.2
I52A	Shelburne	118.02	41	P	PKPdf	18 53 31.6	-1.5
	baz=294,SNR=20						
BIZ	Bicaz	118.02	322	⇑*i*P	Pdif	18 50 02.3	+8.7
BIZ	Bicaz	118.02	322	⇑*i*P	PKiKP	18 53 33.0	0.0
SILT	Sile	118.03	315	*e*P	PKPdf	18 53 30.2	-2.9
E52A	Mattawa	118.06	39	P	PKPdf	18 53 31.4	-1.7
	baz=296,SNR=6.7						
PSN	Preselentsi	118.08	318	P	PKPdf	18 53 32.8	-0.4
VRI	Vrincioaia	118.11	321	⇓*i*P	Pdif	18 50 00.1	+6.0
VRI	Vrincioaia	118.11	321	⇑*i*P	PKiKP	18 53 35.8	+2.6
VRI	Vrincioaia	118.11	321	⇓*i*P	PKKPab	19 03 57.8	-0.2
VRI	Vrincioaia	118.11	321	⇑PKIKP	PKiKP	18 53 35.8	+2.6
HRT	Hereke	118.13	315	*e*P	PKPdf	18 53 31.6	-1.8
J52A	Paris	118.15	42	P	PKPdf	18 53 31.8	-1.5
	baz=293,SNR=6.0						
ICOR	Ion Corvin	118.15	319	⇑*i*P	PKiKP	18 53 39.7	+6.4
ICOR	Ion Corvin	118.15	319	⇑*i*P	PKKPab	19 03 59.8	+2.1
GRER		118.16	320	⇑*i*P	PKiKP	18 53 35.7	+2.4
PLOR	Plostina	118.17	321	⇑*i*P	Pdif	18 49 58.8	+4.4
PLOR	Plostina	118.17	321	⇑*i*P	PKPdf	18 53 30.4	-2.9
PLOR	Plostina	118.17	321	⇓*i*P	PKKPab	19 03 59.1	+1.3
PLOR	Plostina	118.17	321	⇑PKIKP	PKPdf	18 53 30.4	-2.9
K52A	Tillsonburg	118.17	43	P	PKPdf	18 53 31.7	-1.7
	baz=293						
M52A	Chesterland	118.19	44	P	PKPdf	18 53 32.0	-1.5
	baz=292,SNR=11						
ADVT	Abdulvahap	118.22	314	*e*P	PKPdf	18 53 31.8	-1.7
N52A	McGinn's Farm,	118.22	45	P	PKPdf	18 53 32.3	-1.3
	baz=291,SNR=9.7						
TZTN	Tazewell	118.24	50	P	PKPdf	18 53 32.7	-1.0
	baz=288,SNR=14						
BURAR	Bucovina Array	118.25	323	⇑*i*P	Pdif	18 50 00.4	+5.6
BURAR	Bucovina Array	118.25	323	⇑*i*P	PKiKP	18 53 34.0	+0.4
BURAR	Bucovina Array	118.25	323	⇓*i*P	PKKPab	19 04 01.0	+3.5
BURAR	Bucovina Array	118.25	323	⇑PKIKP	PKiKP	18 53 34.0	+0.4
S52A	Salyersville	118.25	49	P	PKPdf	18 53 32.1	-1.6
	baz=288						
AMRR	Amara	118.26	319	⇑*i*P	PKPdf	18 53 31.7	-1.8
AMRR	Amara	118.26	319	⇑PKIKP	PKPdf	18 53 31.7	-1.8
BISRR	Bisoca	118.26	321	⇑*i*P	PKiKP	18 53 40.0	+6.4
BISRR	Bisoca	118.26	321	⇑*i*P	PKKPab	19 03 57.6	+0.2
SHUT	Suhut-Afyon	118.26	312	*e*P	PKPdf	18 53 32.3	-1.6
ACTO	Acton	118.28	42	P	PKPdf	18 53 31.7	-1.9
	baz=294						
D53A	Lac Vacive, Po	118.29	37	P	PKPdf	18 53 31.7	-1.8
	baz=298,SNR=9.1						
P52A	Corning	118.31	47	P	PKPdf	18 53 31.9	-1.9
	baz=290,SNR=10						
PGOR	Pogoanele	118.36	320	⇓*i*P	PKiKP	18 53 34.2	+0.5
PGOR	Pogoanele	118.36	320	⇑*i*P	PKKPbc	19 03 54.7	+0.3
O52A	Adamsville	118.36	46	P	PKPdf	18 53 32.0	-1.9
	baz=291,SNR=6.0						
W52A	Murphy	118.36	52	P	PKPdf	18 53 32.6	-1.4
	baz=286,SNR=11						
R52A	Catlettsburg	118.37	48	P	PKPdf	18 53 32.0	-1.9
	baz=289,SNR=7.2						
152A	Waverly Hall	118.37	55	P	PKPdf	18 53 32.6	-1.4
	baz=285,SNR=12						
SADO	Sadowa	118.41	40	PKKPbc	PKKPbc	19 03 51.6	-2.6
	comp=Z,7.7nm,0.8s,baz=65,slow=11,SNR=5.1						
V52A	Sevierville	118.41	51	P	PKPdf	18 53 32.3	-1.7
	baz=287,SNR=16						
KLYT	Kilyos	118.42	315	⇑*i*P	PKiKP	18 53 37.9	+4.0
452A	Marianna	118.42	57	P	PKPdf	18 53 32.1	-2.1
	baz=283,SNR=18						
U52A	Thorn Hill	118.42	51	P	PKPdf	18 53 32.8	-1.3
	baz=288,SNR=5.4						
YLV	Yalova	118.43	314	*e*P	PKPdf	18 53 32.3	-1.8
YLV	Yalova	118.43	314	⇓*i*P	PKPdf	18 53 32.7	-1.4
YLV	Yalova	118.43	314	⇓*i*P	PKKPab	19 03 58.6	+1.9
YLV	Yalova	118.43	314	⇓PKIKP	PKPdf	18 53 32.7	-1.4
Q52A	Bidwell	118.44	47	P	PKPdf	18 53 32.3	-1.8
	baz=290,SNR=6.7						
ISK	Istanbul-Kandi	118.47	315	*e*P	PKPdf	18 53 31.9	-2.1
ISK	Istanbul-Kandi	118.47	315	P	PKPdf	18 53 32.6	-1.4
KAVV	Kandilli-Istan	118.47	315	*e*P	PKPdf	18 53 31.2	-2.8
Z52A	Williamson	118.48	54	P	PKPdf	18 53 33.2	-1.1
	baz=285,SNR=8.8						
352A	Blakely	118.49	56	P	PKPdf	18 53 32.5	-1.8
	baz=284,SNR=7.2						
552A	Lynn Haven	118.49	58	P	PKPdf	18 53 32.6	-1.7
	baz=283						
T52A	Hallie	118.50	50	P	PKPdf	18 53 32.8	-1.4
	baz=288,SNR=10.0						
I53A	Kortright Cn E	118.51	41	P	PKPdf	18 53 32.2	-1.7
	baz=294						
BUY	Buyukada	118.51	315	*e*P	PKPdf	18 53 31.6	-2.5
ISP	Isparta	118.52	311	*e*PKPdf	PKPdf	18 53 32.6	-1.8
ISP	Isparta	118.52	311	P	PKPdf	18 53 32.6	-1.8
ISP	Isparta	118.52	311	⇑*i*P	PKPdf	18 53 33.7	-0.7
ISP	Isparta	118.52	311	⇑PKIKP	PKPdf	18 53 33.7	-0.7
SUE	Sulen	118.52	344	*e*PKPdf	PKPdf	18 53 32.5	-0.9
SUE				*e*PP	PP	18 54 56.0	-0.2
SUE				*e*SKSdf	SKSdf	19 00 08.0	+0.2
SUE				*e*SP	SP	19 04 02.9	+0.3
SUE				*e*SS	SS	19 10 43.6	+1.9
252A	Lumpkin	118.52	56	P	PKPdf	18 53 33.0	-1.3
	baz=284,SNR=10.0						
X52A	Dahlonega	118.53	53	P	PKPdf	18 53 33.3	-1.1
	baz=286,SNR=42						
RASA	Rasa	118.54	319	⇓*i*P	PKiKP	18 53 40.5	+6.4
ISR	Istrita	118.55	320	⇑*i*P	PKiKP	18 53 35.9	+1.7
ISR	Istrita	118.55	320	⇑*i*P	PKKPab	19 03 57.8	+1.7
ISR	Istrita	118.55	320	⇑PKIKP	PKiKP	18 53 35.9	+1.7
ALGO	Algonquin Park	118.59	39	P	PKPdf	18 53 32.3	-1.8
	baz=297						
G53A	Haliburton	118.59	40	P	PKPdf	18 53 32.5	-1.6
	baz=296,SNR=25						
Y52A	Lilburn	118.59	53	P	PKPdf	18 53 33.4	-1.1
	baz=286,SNR=34						
OZUR		118.60	321	⇓*i*P	PKPdf	18 53 29.9	-4.3
OZUR		118.60	321	⇑*i*P	PKKPab	19 03 56.3	+0.4
TYNO	Tyneside	118.61	42	P	PKPdf	18 53 32.3	-1.9
	baz=294						
BGKT	Bogazkoy	118.63	315	*e*P	PKPdf	18 53 31.9	-2.4
E53A	Dumoine, Ponti	118.64	38	P	PKPdf	18 53 32.2	-2.0
	baz=297,SNR=13						
LEHL	Lehliu	118.65	319	⇑*i*P	PKPdf	18 53 34.0	-0.2
LEHL	Lehliu	118.65	319	⇑*i*P	PKKPab	19 03 58.5	+2.9
KWP	Kalwaria Pacla	118.70	326	*e*Pdif	Pdif	18 50 03.1	+6.5
KWP	Kalwaria Pacla	118.70	326	*e*P	Pdif	18 50 03.1	+6.5
M53A	WI Miller and	118.70	44	P	PKPdf	18 53 32.6	-1.8
	baz=292						
TVSB	Tavsanli	118.76	313	*e*P	PKPdf	18 53 33.3	-1.5
O53A	New Philadelph	118.76	46	P	PKPdf	18 53 32.8	-1.9
	baz=291						
MLR	Muntele Rosu	118.77	321	PKP	PKPdf	18 53 33.2	-1.4
	comp=Z,65nm,0.7s,baz=227,slow=2.0,SNR=12						
MLR				PP	PP	18 55 02.6	+3.8
	comp=Z,43nm,1.1s,baz=146,slow=7.3,SNR=2.1						
MLR				PKKPbc	PKKPbc	19 03 50.3	-2.8
	comp=Z,18nm,0.8s,baz=319,slow=0.8,SNR=11						
MLR	Muntele Rosu	118.77	321	⇑*i*P	Pdif	18 50 08.2	+11
MLR	Muntele Rosu	118.77	321	⇓*i*P	PKPdf	18 53 33.7	-0.9
MLR	Muntele Rosu	118.77	321	⇑*i*P	PKKPbc	19 03 52.0	-1.1
MLR	Muntele Rosu	118.77	321	⇓PKIKP	PKPdf	18 53 33.7	-0.9
PKRO	Pickering	118.79	41	P	PKPdf	18 53 32.5	-2.0
	baz=295						
CTKS	Kestanelik-??a	118.80	315	*e*P	PKPdf	18 53 32.1	-2.5
L53A	Girard	118.80	44	P	PKPdf	18 53 32.8	-1.8
	baz=293,SNR=5.8						
CHGQ	Chibougamau	118.82	33	P	PKPdf	18 53 32.3	-2.1
	baz=302						
N53A	Lisbon	118.83	45	P	PKPdf	18 53 33.3	-1.4
	baz=292						
CTYL	Yalikoy Yolu	118.86	316	⇓*i*P	PKiKP	18 53 39.0	+4.2
GDZ	Gediz	118.87	313	*i* P	PKPdf	18 53 34.2	-0.9
GDZ				IAML_P			
	comp=Z,1µm,0.9s						
T53A	Wise	118.88	50	P	PKPdf	18 53 33.7	-1.3
	baz=288,SNR=15						
ODD1	Odda	118.88	342	*e*PKPdf	PKPdf	18 53 33.3	-1.0
ODD1				*e*PP	PP	18 54 57.6	-1.2
ODD1				*e*SKPdf	SKPdf	18 56 31.2	-1.2
R53A	Hurricane	118.88	48	P	PKPdf	18 53 33.3	-1.6
	baz=290,SNR=10						
D54A	Lac Fusel, La	118.89	37	P	PKPdf	18 53 32.5	-2.2

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     baz=298
SECR                     118.89 320⇑iP      PKPdf   18 53 34.1 -0.6
SECR                     118.89 320⇑iP      PKKPab  19 03 57.8 +3.3
BER  Bergen              118.90 343 ePKPdf  PKPdf   18 53 32.9 -1.3
BER                                 ePP     PP      18 54 58.2 -0.6
BER                                 eSKPdf  SKPdf   18 56 31.4 -0.8
BER                                 eSP     SP      19 04 05.7 -0.4
BRDR BURDUR-Merkez       118.90 311 i P     PKPdf   18 53 33.3 -1.8
BRDR                                 IAML_P
     comp=Z,861nm,0.7s
P53A Whipple             118.90  47  P      PKPdf   18 53 33.5 -1.4
     baz=291,SNR=17
DOPR Dopca               118.90 321⇓iP      Pdif    18 50 03.8 +6.2
DOPR Dopca               118.90 321⇑iP      PKPdf   18 53 34.5 -0.2
DOPR Dopca               118.90 321⇓iP      PKKPbc  19 03 47.2 -5.3
E54A Lac Daplat, Po      118.90  38  P      PKPdf   18 53 32.6 -2.1
     baz=298,SNR=22
KORT Korkueli            118.91 310 eP      PKPdf   18 53 33.3 -1.9
KORT Korkueli            118.91 310 i P     PKPdf   18 53 34.4 -0.7
KORT                                 IAML_P
     comp=Z,1µm,0.7s
SULR                     118.92 320⇓iP      PKPdf   18 53 34.4 -0.3
SULR                     118.92 320⇑iP      PKKPab  19 03 57.9 +3.6
W53A Cullowhee           118.94  52  P      PKPdf   18 53 33.9 -1.3
     baz=287,SNR=11
S53A Williamson          118.97  49  P      PKPdf   18 53 33.6 -1.5
     baz=289
Y53A Monroe              118.98  53  P      PKPdf   18 53 34.1 -1.1
     baz=286,SNR=22
253A Americus            119.00  55  P      PKPdf   18 53 33.8 -1.5
     baz=285
ARCR ARCALIA             119.02 323⇓iP      PKPdf   18 53 34.2 -0.7
Q53A Leroy               119.02  47  P      PKPdf   18 53 33.7 -1.4
     baz=290,SNR=19
X53A Estanollee          119.02  53  P      PKPdf   18 53 34.0 -1.3
     baz=287,SNR=15
U53A Fall Branch         119.04  50  P      PKPdf   18 53 34.2 -1.1
     baz=288,SNR=22
V53A Saluda              119.07  51  P      PKPdf   18 53 34.4 -1.0
     baz=288,SNR=12
DRCO St. Marys Ceme      119.07  41  P      PKPdf   18 53 33.7 -1.4
     baz=295
BANO Bancroft            119.08  40  P      PKPdf   18 53 33.9 -1.2
     baz=296
153A Fort Valley         119.10  55  P      PKPdf   18 53 34.0 -1.4
     baz=285
KHAL Karahalli           119.10 312 i P     PKPdf   18 53 34.4 -1.0
KHAL                                 IAML_P
     comp=Z,40nm,0.4s
353A Camilla             119.11  56  P      PKPdf   18 53 34.5 -1.0
     baz=284
AKUM Antalya-Kumluc      119.12 310 i P     PKPdf   18 53 34.5 -0.8
AKUM                                 IAML_P
     comp=Z,79nm,0.3s
453A Whigham             119.14  57  P      PKPdf   18 53 33.6 -2.0
     baz=284,SNR=13
Z53A Monticello          119.14  54  P      PKPdf   18 53 34.1 -1.4
     baz=286,SNR=21
GOGA Godfrey             119.19  54  P      PKPdf   18 53 34.1 -1.5
     baz=286,SNR=15
553A Crawfordville       119.20  58  P      PKPdf   18 53 33.3 -2.4
     baz=284
PEMO Pembroke            119.21  39  P      PKPdf   18 53 33.7 -1.6
     baz=297
RAZG Razgrad             119.23 319⇑iP      PKPdf   18 53 34.7 -0.7
RAZG Razgrad             119.23 319⇓iP      PKKPab  19 03 56.0 +3.0
BMR  Baia Mare           119.24 324⇑iP      Pdif    18 50 06.2 +7.2
BMR  Baia Mare           119.24 324⇑iP      PKPdf   18 53 34.7 -0.6
BMR  Baia Mare           119.24 324 ⇑PKIKP  PKPdf   18 53 34.7 -0.6
WLVO Wesleyville         119.25  41  P      PKPdf   18 53 33.9 -1.5
     baz=295
KCTX Karacabey (Bur      119.26 314 eP      PKPdf   18 53 33.7 -1.9
MSNA Messina             119.27 242 i P     PKiKP   18 53 37.6 +1.4
MSNA Messina             119.27 242 i P     PKiKP   18 53 37.6 +1.4
BORG Borgarnes           119.29 358  PKP    PKPdf   18 53 34.4 -0.5
     comp=Z,22nm,1.0s,baz=270,slow=7.1,SNR=2.3
BORG                                 PKKPab PKKPab  19 03 55.0 +2.4
     comp=Z,29nm,0.9s,baz=186,slow=5.6,SNR=3.2
SGRR Singureni           119.30 319⇑iP      PKPdf   18 53 34.4 -1.1
SGRR Singureni           119.30 319⇓iP      PKKPab  19 03 53.8 +1.1
KOLS Kolonicke sedl      119.31 326 ePKIKP  PKPdf   18 53 34.9 -0.5
KOLS Kolonicke sedl      119.31 326 ePKP    PKPdf   18 53 34.9 -0.5
KOLS                                e               18 53 42.0
KOLS                                eSKPDF          18 56 31.4
KOLS                                ePKKPDF         19 04 20.6
ELL  Elmali              119.32 310 eP      PKPdf   18 53 34.2 -1.8
BLS5 Blasjo              119.32 342 ePKPdf  PKPdf   18 53 34.4 -0.8
BLS5                                eSKPdf  SKPdf   18 56 31.0 -2.2
BLS5                                eSP     SP      19 04 10.3 +0.2
BLS5                                 IVMs_BB IVMs_BB 19 37 21.5
     comp=Z,4µm,23.6s
PHSR Pinarhisar          119.33 316⇓iP      PKPdf   18 53 34.5 -1.2
PHSR Pinarhisar          119.33 316⇑iP      PKKPab  19 03 55.2 +2.6
L54A Sinclairville       119.33  43  P      PKPdf   18 53 33.9 -1.7
     baz=294,SNR=17
VOIR                     119.36 321⇑iP      Pdif    18 50 12.4  +13
VOIR                     119.36 321⇑iP      PKPdf   18 53 35.4 -0.3
VOIR                     119.36 321⇑iP      PKKPab  19 03 53.2 +0.6
VOIR                     119.36 321 ⇑PKIKP  PKPdf   18 53 35.4 -0.3
N54A Moraine State       119.36  45  P      PKPdf   18 53 34.3 -1.4
     baz=292,SNR=10
J54A Appleton            119.36  42  P      PKPdf   18 53 33.8 -1.9
     baz=295,SNR=6.5
M54A Oil Creek Stat      119.38  44  P      PKPdf   18 53 33.9 -1.9
     baz=293,SNR=26
O54A Avella              119.38  46  P      PKPdf   18 53 34.6 -1.2
     baz=292
MTUR Matau               119.44 321⇓iP      PKiKP   18 53 42.4 +6.4
MTUR Matau               119.44 321 ⇓PKIKP  PKiKP   18 53 42.4 +6.4
MDB  Medias              119.45 322⇓iP      PKiKP   18 53 42.3 +6.5
MDB  Medias              119.45 322 ⇓PKIKP  PKiKP   18 53 42.3 +6.5
UZH  Uzhgorod            119.45 325 eP      Pdif    18 49 59.1 -0.8
UZH                                 i               18 53 34.2
UZH                                 e               18 55 07.1
Q54A Coxs Mills          119.48  47  P      PKPdf   18 53 34.6 -1.4
     baz=291
DELO Deloro Mine         119.50  40  P      PKPdf   18 53 34.4 -1.5
     baz=296
P54A Burton              119.52  46  P      PKPdf   18 53 35.0 -1.2
     baz=291
MEDO Medina              119.53  42  P      PKPdf   18 53 34.5 -1.5
     baz=295
S54A Dingess, Beckl      119.54  48  P      PKPdf   18 53 34.7 -1.5
     baz=290,SNR=13
HOMB Homborsund          119.54 340 ePKPdf  PKPdf   18 53 34.4 -1.1
HOMB                                ePP     PP      18 55 02.4 -0.9
HOMB                                eSKPdf  SKPdf   18 56 32.7 -0.9
HOMB                                eSP     SP      19 04 12.3 +0.3
HOMB                                 IVMs_BB IVMs_BB 19 25 00.3
     comp=Z,5µm,36.6s
TRPA Tarpa               119.57 325⇑iP      Pdif    18 50 06.4 +6.0
TRPA Tarpa               119.57 325⇑iP      PKPdf   18 53 34.9 -1.0
TRPA Tarpa               119.57 325⇓iP      PKKPab  19 03 51.0 -0.5
TRPA Tarpa               119.57 325 eP      PKPdf   18 53 34.0 -1.9
TRPA                                ePP     pPKPdf  18 55 11.1 +1.2
U54A Nelsons Funny       119.57  50  P      PKPdf   18 53 34.8 -1.6
     baz=289
EDC  Edincik             119.58 315 eP      PKPdf   18 53 34.5 -1.7
T54A Tazewell            119.58  49  P      PKPdf   18 53 34.7 -1.7
     baz=289,SNR=9.7
I55A Frankford           119.59  40  P      PKPdf   18 53 34.3 -1.7
     baz=296
SCHQ Schefferville       119.59  26  PKP    PKPdf   18 53 35.7 -0.1
     comp=Z,13nm,0.6s,baz=15,slow=7.4,SNR=5.8
K54A Basiliko Farm,      119.61  42  P      PKPdf   18 53 34.3 -1.8
     baz=294
TIGA Tifton              119.61  56  P      PKPdf   18 53 35.3 -1.1
     baz=285,SNR=14
PLVO Plevna              119.61  39  P      PKPdf   18 53 34.6 -1.5
     baz=297
JMB  Yambol              119.64 317  P      PKPdf   18 53 35.1 -1.1
R54A Victor              119.65  48  P      PKPdf   18 53 34.8 -1.6
     baz=290
ARR  Arges               119.65 321⇓iP      Pdif    18 50 06.8 +5.8
ARR  Arges               119.65 321⇓iP      PKiKP   18 53 36.3  0.0
CJR  Cluj-Napoca         119.65 323⇑iP      PKPdf   18 53 35.7 -0.5
CJR  Cluj-Napoca         119.65 323⇑iP      PKKPbc  19 03 48.3 -1.6
CJR  Cluj-Napoca         119.65 323 ⇑PKIKP  PKPdf   18 53 35.7 -0.5
KULA Kula-Manisa         119.67 313 eP      PKPdf   18 53 35.4 -1.1
KULA Kula-Manisa         119.67 313  P      PKPdf   18 53 35.0 -1.5
MRMT Marmara Adasi       119.67 315 eP      PKPdf   18 53 33.5 -2.9
Y54A Tignall             119.69  53  P      PKPdf   18 53 35.4 -1.2
     baz=287,SNR=21
154A Montrose            119.70  55  P      PKPdf   18 53 34.9 -1.7
     baz=286,SNR=7.5
F55A Otter Lake          119.70  38  P      PKPdf   18 53 34.4 -1.8
     baz=298
V54A Nebo                119.70  51  P      PKPdf   18 53 35.4 -1.2
     baz=288,SNR=11
AKAS Kas                 119.72 310 eP      PKPdf   18 53 34.5 -2.2
AKAS Kas                 119.72 310 i P     PKPdf   18 53 35.8 -0.9
AKAS                                 IAML_P
     comp=Z,1µm,0.6s
PLCA Paso Flores         119.72 142  PKP    PKPdf   18 53 36.5 -0.1
     comp=Z,23nm,0.6s,baz=270,slow=1.8,SNR=27
PLCA                                 pPKP   pPKPdf  18 55 10.8 -0.3
     comp=Z,37nm,0.9s,baz=254,slow=5.4,SNR=2.3
PLCA                                 PKKPbc PKKPbc  19 03 48.2 -1.4
     comp=Z,4.8nm,0.7s,baz=62,slow=4.1,SNR=6.3
PLCA Paso Flores         119.72 142 ePKPdf  PKPdf   18 53 36.2 -0.4
PLCA Paso Flores         119.72 142 eP      PKiKP   18 53 38.2 +1.5
254A Abbeville           119.72  55  P      PKPdf   18 53 35.3 -1.4
     baz=285
W54A Cherokee Point      119.73  52  P      PKPdf   18 53 35.8 -0.9
     baz=288,SNR=11
G55A Calabogie           119.74  39  P      PKPdf   18 53 34.9 -1.5
     baz=298
X54A Belton              119.74  52  P      PKPdf   18 53 35.6 -1.1
     baz=287,SNR=9.5
Z54A Sparta              119.74  54  P      PKPdf   18 53 35.6 -1.1
     baz=286,SNR=6.8
454A Quitman             119.75  57  P      PKPdf   18 53 35.4 -1.4
     baz=284
MANT Manisa              119.75 313 i P     PKPdf   18 53 35.4 -1.4
MANT                                 IAML_P
     comp=Z,836nm,0.9s
KSL  Kastellorizon       119.76 310  P      PKPdf   18 53 35.7 -0.9
H55A Tweed               119.76  40  P      PKPdf   18 53 34.6 -1.8
     baz=297,SNR=12
EDRB Edirne              119.78 317 eP      PKPdf   18 53 34.3 -2.2
EDRB Edirne              119.78 317  P      PKPdf   18 53 34.7 -1.8
HUMR Humele              119.81 320⇑iP      PKPdf   18 53 35.4 -1.1
ESTN Estel               119.82  77 eP      PKPdf   18 53 35.4 -2.0
COPA Copaceanca          119.83 320⇓iP      PKPdf   18 53 35.6 -0.9
COPA Copaceanca          119.83 320⇓iP      PKKPab  19 03 52.7 +2.3
CEI  Carei               119.84 324⇑iP      PKiKP   18 53 42.6 +6.1
CEI  Carei               119.84 324 ⇑PKIKP  PKiKP   18 53 42.6 +6.1
554A Perry               119.86  58  P      PKPdf   18 53 35.8 -1.1
     baz=284,SNR=10
J55A Hilton              119.91  41  P      PKPdf   18 53 34.8 -1.9
     baz=296,SNR=11
ELND Elena               119.92 318⇑iP      PKPdf   18 53 36.2 -0.6
ELND Elena               119.92 318⇑iP      PKKPab  19 03 50.8 +0.8
ZIMR                     119.94 319⇑iP      PKPdf   18 53 36.4 -0.3
ZIMR                     119.94 319⇑iP      PKKPab  19 03 49.7 -0.2
ZIMR                     119.94 319 ⇑PKIKP  PKPdf   18 53 36.4 -0.3
L55A Hinsdale            119.95  43  P      PKPdf   18 53 35.3 -1.6
     baz=294,SNR=16
MCWV Mont Chateau        119.95  46  P      PKPdf   18 53 35.4 -1.5
     baz=292
COP  Copenhagen          119.96 336⇓iPKIKP  PKiKP   18 53 42.2 +5.7
COP                                 i               18 55 09.1
COP  Copenhagen          119.96 336⇓iP      PKiKP   18 53 42.2 +5.7
COP                                 i               18 55 09.1
COP                                 i               19 03 58.0
K55A Perry               119.97  42  P      PKPdf   18 53 34.9 -2.0
     baz=295,SNR=8.9
FETY Fethiye             119.98 310 eP      PKPdf   18 53 35.4 -1.7
FETY Fethiye             119.98 310 ePKPdf  PKPdf   18 53 35.1 -2.0
FETY Fethiye             119.98 310  P      PKPdf   18 53 35.1 -2.0
FETY Fethiye             119.98 310 i P     PKPdf   18 53 35.8 -1.3
FETY                                 IAML_P
     comp=Z,911nm,0.5s
RCON San Juan de Ri      120.01  77 eP      PKiKP   18 53 42.4 +4.5
M55A Ridgway             120.02  44  P      PKPdf   18 53 35.6 -1.4
     baz=294,SNR=8.5
P55A Reedsville          120.02  46  P      PKPdf   18 53 35.2 -1.9
     baz=292,SNR=7.8
Q55A Buckhannon          120.03  47  P      PKPdf   18 53 35.5 -1.6
     baz=291,SNR=15
O55A Ligonier            120.13  45  P      PKPdf   18 53 35.5 -1.8
     baz=293,SNR=14
N55A Marion Center       120.14  44  P      PKPdf   18 53 35.7 -1.6
     baz=293
DRGR                     120.14 323⇓iP      Pdif    18 50 06.6 +3.4
DRGR                     120.14 323⇑iP      PKPdf   18 53 36.3 -0.9
DRGR                     120.14 323⇓iP      PKKPab  19 03 49.7 +0.6
DRGR                     120.14 323 ⇑PKIKP  PKPdf   18 53 36.3 -0.9
NIE  Niedzica            120.14 327 ePdif   Pdif    18 50 08.2 +5.1
NIE                                 eSKS            19 01 42.2
NIE  Niedzica            120.14 327 eP      Pdif    18 50 08.2 +5.1
LOT  Lotru               120.15 322⇑iP      PKPdf   18 53 35.9 -1.4
S55A Lewisburg           120.15  48  P      PKPdf   18 53 35.4 -2.0
     baz=290,SNR=8.4
PVL  Pavlikeni           120.16 319  P      PKPdf   18 53 36.0 -1.2
AKHS Akhisar             120.16 313 i P     PKPdf   18 53 36.1 -1.3
AKHS                                 IAML_P
     comp=Z,183nm,0.3s
PECO Prince Edward       120.16  40  P      PKPdf   18 53 35.3 -1.9
     baz=297
T55A Pulaski             120.16  49  P      PKPdf   18 53 35.7 -1.8
     baz=290,SNR=14
U55A TA2, Sparta         120.17  50  P      PKPdf   18 53 36.3 -1.3
     baz=289,SNR=12
155A Kite                120.22  54  P      PKPdf   18 53 36.0 -1.6
     baz=286,SNR=9.0
355A Pearson             120.24  56  P      PKPdf   18 53 36.6 -1.1
     baz=285,SNR=5.9
455A Stateville          120.25  57  P      PKPdf   18 53 36.2 -1.5
     baz=285
V55A Taylorsville        120.25  51  P      PKPdf   18 53 36.1 -1.5
     baz=289,SNR=12
DALY Dalyan (Mula)       120.25 311 eP      PKPdf   18 53 36.6 -0.9
DALY Dalyan (Mula)       120.25 311 i P     PKiKP   18 53 38.9 +1.2
DALY                                 IAML_P
     comp=Z,260nm,0.3s
R55A Marlinton           120.25  48  P      PKPdf   18 53 36.0 -1.7
     baz=291,SNR=61
MATN Matagalpa           120.26  77 eP      PKPdf   18 53 34.5 -3.7
TURN Turunc              120.27 311 eP      PKPdf   18 53 36.9 -0.7
TURN Turunc              120.27 311 i P     PKPdf   18 53 37.2 -0.3
TURN                                 IAML_P
     comp=Z,1µm,0.5s
Z55A Blythe              120.31  54  P      PKPdf   18 53 36.7 -1.1
     baz=287,SNR=9.3
Y55A Saluda              120.33  53  P      PKPdf   18 53 36.5 -1.3
     baz=287,SNR=14
H56A Elgin               120.33  39  P      PKPdf   18 53 36.1 -1.4
     baz=298
X55A Gracelyn & Ava      120.35  52  P      PKPdf   18 53 36.7 -1.1
     baz=288,SNR=16
LPK  Lapseki             120.35 315 eP      PKPdf   18 53 35.9 -1.8
KMSC Kings Mountain      120.38  51  P      PKPdf   18 53 36.4 -1.4
     baz=288,SNR=10
255A Hazlehurst          120.39  55  P      PKPdf   18 53 36.8 -1.1
     baz=286,SNR=9.2
ORIO Orleans, Innes      120.40  38  P      PKPdf   18 53 35.8 -1.7
     baz=299
BLA  Blacksburg          120.40  49  P      PKPdf   18 53 36.5 -1.4
     baz=290,SNR=15
M56A Emporium            120.41  43  P      PKPdf   18 53 36.3 -1.4
     baz=294,SNR=12
VLAD Vladila             120.42 320⇑iP      PKiKP   18 53 38.0 +0.2
VLAD Vladila             120.42 320⇓iP      PKKPab  19 03 51.5 +3.7
YER  Yerkesik            120.42 311 eP      PKPdf   18 53 36.4 -1.6
YER  Yerkesik            120.42 311 ePKPdf  PKPdf   18 53 37.0 -1.0
YER  Yerkesik            120.42 311  P      PKPdf   18 53 37.0 -1.0
YER  Yerkesik            120.42 311 ePKIKP  PKPdf   18 53 37.0 -1.0
AYDB Zeytinkoy-Aydi      120.43 312 eP      PKPdf   18 53 36.6 -1.5
555A McAlpin             120.45  57  P      PKPdf   18 53 36.5 -1.6
     baz=284,SNR=11
DEV  Deva                120.47 322⇑iP      PKPdf   18 53 36.9 -0.8
DEV  Deva                120.47 322⇑iP      PKKPab  19 03 47.4 -0.2
DEV  Deva                120.47 322 ⇑PKIKP  PKPdf   18 53 36.9 -0.8
DIM  Dimitrovgrad        120.52 317  P      PKPdf   18 53 36.7 -1.2
AYDN Tasoluk             120.54 312 i P     PKiKP   18 53 38.3  0.0
AYDN                                 IAML_P
     comp=Z,2µm,0.8s
GELI Tayfur-Gelibol      120.54 315 eP      PKPdf   18 53 35.7 -2.3
KECS Kecovo              120.55 326 ePKIKP  PKPdf   18 53 37.2 -0.6
KECS Kecovo              120.55 326 ePKP    PKPdf   18 53 37.2 -0.6
KECS                                e               18 53 43.9
PLVB Pleven              120.55 319⇑iP      Pdif    18 50 10.2 +5.3
PLVB Pleven              120.55 319⇓iP      PKPdf   18 53 37.0 -0.9
PLVB Pleven              120.55 319⇑iP      PKKPab  19 03 50.4 +3.1
N56A West Decatur        120.56  44  P      PKPdf   18 53 36.5 -1.6
     baz=294,SNR=12
O56A Blue Knob Stat      120.63  45  P      PKPdf   18 53 37.1 -1.2
     baz=293,SNR=32
ALN  Alexandroupoli      120.64 316  P      PKPdf   18 53 35.9 -2.3
CRAR CRAIOVA             120.66 320⇑iP      PKPdf   18 53 37.8 -0.3
CRAR CRAIOVA             120.66 320 ⇑PKIKP  PKPdf   18 53 37.8 -0.3
Q56A Snyder Ridge,       120.66  46  P      PKPdf   18 53 36.6 -1.7
     baz=292,SNR=13
MUD  Monsted U'grnd      120.67 338 i PKIKP PKiKP   18 53 43.1 +5.2
MUD                                 i               18 55 14.1
MUD  Monsted U'grnd      120.67 338 i P     PKiKP   18 53 43.1 +5.2
MUD                                 i               18 55 14.1
MUD                                 i               19 03 53.3
U56A King                120.72  50  P      PKPdf   18 53 37.0 -1.5
     baz=290,SNR=13
P56A Dayton Farm, R      120.73  46  P      PKPdf   18 53 36.7 -1.7
     baz=293,SNR=11
R56A Bull Pasture M      120.73  47  P      PKPdf   18 53 37.1 -1.5
     baz=292,SNR=7.9
LANS Liptovska Anna      120.74 327 ePKIKP  PKiKP   18 53 38.4 +0.1
LANS Liptovska Anna      120.74 327 ePKP    PKiKP   18 53 38.4 +0.1
LANS                                e               18 53 45.1
DKL  Dikili              120.75 314 eP      PKPdf   18 53 35.2 -3.2
T56A Rocky Mt            120.76  49  P      PKPdf   18 53 37.0 -1.5
     baz=290,SNR=11
KDZ  Kurdzhali           120.77 317  P      PKPdf   18 53 36.9 -1.5
GZR  Gura Zlata          120.79 322⇑iP      PKPdf   18 53 37.5 -0.9
GZR  Gura Zlata          120.79 322⇑iP      PKKPab  19 03 45.2 -1.1
GZR  Gura Zlata          120.79 322 ⇑PKIKP  PKPdf   18 53 37.5 -0.9
V56A Mocksville          120.81  50  P      PKPdf   18 53 37.4 -1.3
     baz=289,SNR=13
Y56A Pelion              120.81  53  P      PKPdf   18 53 37.6 -1.2
     baz=288
X56A White Oak           120.82  52  P      PKPdf   18 53 37.7 -1.0
     baz=288,SNR=15
356A Blackshear          120.84  56  P      PKPdf   18 53 37.6 -1.2
     baz=286
ARG  Arkhangelos         120.85 310  P      PKPdf   18 53 37.8 -0.9
GB1A Borinquen Arri      120.86  80 eP      PKiKP   18 53 42.0 +2.5
256A Glennville          120.86  55  P      PKPdf   18 53 37.9 -1.0
     baz=286
LRW  Lerwick             120.87 346 eP      PKPdf   18 53 37.1 -0.9
EZN  Ezine               120.87 315 eP      PKPdf   18 53 36.8 -1.8
EZN  Ezine               120.87 315 ePKPdf  PKPdf   18 53 37.1 -1.6
EZN  Ezine               120.87 315  P      PKPdf   18 53 37.1 -1.6
EZN  Ezine               120.87 315⇓iP      PKPdf   18 53 37.0 -1.6
EZN  Ezine               120.87 315 ⇓PKIKP  PKPdf   18 53 37.1 -1.6
SRE  Strehaia            120.87 321⇑iP      PKPdf   18 53 38.1 -0.4
SRE  Strehaia            120.87 321⇑iP      PKKPab  19 03 49.3 +3.5
SRE  Strehaia            120.87 321 ⇑PKIKP  PKPdf   18 53 38.1 -0.4
S56A Natural Bridge      120.88  48  P      PKPdf   18 53 37.0 -1.8
     baz=291,SNR=12
RDO  Rodhopi             120.89 316 ePKPdf  PKPdf   18 53 36.8 -1.9
RDO  Rodhopi             120.89 316  P      PKPdf   18 53 36.8 -1.9
Z56A Williston           120.90  53  P      PKPdf   18 53 38.0 -0.9
     baz=287
BLCB Balcova             120.90 313 eP      PKPdf   18 53 36.8 -2.0
556A Lake Butler         120.95  57  P      PKPdf   18 53 37.7 -1.4
     baz=285,SNR=6.5
SSPA Standing Stone      120.96  44 ePKPdf  PKPdf   18 53 37.6 -1.2
W56A Indian Trail        120.97  51  P      PKPdf   18 53 37.8 -1.2
     baz=289,SNR=12
156A Sylvania            120.99  54  P      PKPdf   18 53 37.9 -1.2
     baz=287,SNR=7.7
BOSA Boshof              120.99 233 i P     PKPdf   18 53 37.5 -1.9
BOSA Boshof              120.99 233  Pdiff  Pdif    18 50 10.8 +3.3
     comp=Z,2.1nm,0.9s,baz=168,slow=9.3,SNR=1.8
BOSA                                 PKP    PKPdf   18 53 38.4 -1.1
     comp=Z,36nm,0.7s,baz=107,slow=1.4,SNR=28
BOSA                                 pPKP   PP      18 55 15.2 +0.7
     comp=Z,19nm,0.6s,baz=107,slow=11,SNR=1.2
BOSA                                 PKKPab PKKPab  19 03 46.5 +0.3
     comp=Z,41nm,0.9s,baz=293,slow=3.7,SNR=6.4
BOSA Boshof              120.99 233 ePKPdf  PKPdf   18 53 38.9 -0.5
BOSA Boshof              120.99 233 i P     PKPdf   18 53 37.5 -1.9
656A Willston            121.00  58  P      PKPdf   18 53 38.0 -1.2
     baz=284,SNR=10
GCAM G?zelcaml?          121.01 312 i P     PKPdf   18 53 38.3 -0.7
GCAM                                 IAML_P
     comp=Z,122nm,0.4s
GADA Gvkgeada            121.03 315 eP      PKPdf   18 53 36.6 -2.3
GADA Gvkgeada            121.03 315 ePKPdf  PKPdf   18 53 36.6 -2.3
GADA Gvkgeada            121.03 315  P      PKPdf   18 53 36.6 -2.3
ACON Acoyapa             121.04  79 eP      PKPdf   18 53 38.1 -1.5
LATQ La Tuque            121.05  35  P      PKPdf   18 53 37.0 -1.8
     baz=302
PLD  Plovdiv             121.06 318  P      PKPdf   18 53 37.2 -1.7
MESS Mesas               121.06  80 eP      PKPdf   18 53 38.1 -1.7
BDRM Kayabasi            121.08 311 i P     PKPdf   18 53 38.1 -1.1
BDRM                                 IAML_P
     comp=Z,878nm,1.0s
BAIL Bailesti            121.09 320⇑iP      PKiKP   18 53 44.8 +5.7
456A Hilliard            121.09  56  P      PKPdf   18 53 37.6 -1.7
     baz=285,SNR=6.3
DAT  Datca               121.09 311 eP      PKPdf   18 53 36.9 -2.4
DAT  Datca               121.09 311 i P     PKPdf   18 53 38.0 -1.4
DAT                                  IAML_P
     comp=Z,448nm,0.6s
PRK  Paraskevi           121.13 314  P      PKPdf   18 53 38.5 -0.7
MPEP Malo Peshtene       121.14 319  P      PKPdf   18 53 38.5 -0.6
DGB  zmir                121.14 313 i P     PKPdf   18 53 35.4 -3.8
DGB                                  IAML_P
     comp=Z,766nm,0.5s
N57A Milroy              121.14  44  P      PKPdf   18 53 37.6 -1.6
     baz=294,SNR=18
SMTH Samothraki Isl      121.17 316 ePKPdf  PKPdf   18 53 37.1 -2.2
SMTH Samothraki Isl      121.17 316  P      PKPdf   18 53 37.1 -2.2
BODT Bodrum              121.18 311 eP      PKPdf   18 53 37.3 -2.1
BODT Bodrum              121.18 311 ePKPdf  PKPdf   18 53 37.4 -2.0
BODT Bodrum              121.18 311  P      PKPdf   18 53 37.4 -2.0
PSZ  Piszkesteto         121.19 326⇑iP      Pdif    18 50 14.0 +6.2
PSZ  Piszkesteto         121.19 326⇑iP      PKPdf   18 53 38.6 -0.5
PSZ  Piszkesteto         121.19 326⇑iP      PKKPab  19 03 47.4 +2.9
PSZ  Piszkesteto         121.19 326 ⇑PKIKP  PKPdf   18 53 38.6 -0.5
PSZ  Piszkesteto         121.19 326 eP      PKPdf   18 53 39.1 -0.1
PSZ                                 ePP     PP      18 55 20.0 +5.0
BLWY Bulawayo            121.20 244 i P     PKiKP   18 53 41.6 +1.4
BLWY Bulawayo            121.20 244 i P     PKiKP   18 53 41.6 +1.4
MATP Matopo              121.21 243 i P     PKiKP   18 53 41.9 +1.7
MATP Matopo              121.21 243 i P     PKiKP   18 53 41.9 +1.7
Q57A Strasburg           121.22  46  P      PKPdf   18 53 38.0 -1.4
     baz=293,SNR=37
PGB  Panagyurishte       121.22 318  P      PKPdf   18 53 37.9 -1.4
RZN  Rozhen              121.23 317  P      PKPdf   18 53 37.8 -1.8
URLA Izmir               121.24 313 eP      PKPdf   18 53 37.8 -1.7
URLA Izmir               121.24 313 i P     PKiKP   18 53 39.6  0.0
URLA                                 IAML_P
     comp=Z,4µm,0.8s
HOPE Hope Point          121.26 173 ePKPdf  PKPdf   18 53 38.1 -0.9
SMG  Samos               121.30 312  P      PKPdf   18 53 37.8 -1.8
S57A Dark Hollow, R      121.30  48  P      PKPdf   18 53 37.7 -1.8
     baz=292,SNR=5.6
O57A Amberson            121.31  45  P      PKPdf   18 53 38.1 -1.5
     baz=294,SNR=14
JTS  Las Juntas de       121.31  80  PKP    PKPdf   18 53 39.5 -0.8
     comp=Z,23nm,0.6s,baz=63,slow=3.1,SNR=21
JTS                                  pPKP   PP      18 55 19.6 +2.2
     comp=Z,35nm,0.9s,baz=311,slow=10,SNR=1.5
JTS                                  PKKPab PKKPab  19 03 48.2 +3.8
     comp=Z,9.4nm,0.8s,baz=288,slow=3.2,SNR=3.2
JTS  Las Juntas de       121.31  80 eP      PKPdf   18 53 38.8 -1.4
P57A Homestead Farm      121.33  46  P      PKPdf   18 53 37.8 -1.8
     baz=293,SNR=11
V57A Coltrane Farms      121.34  50  P      PKPdf   18 53 37.8 -1.9
     baz=290,SNR=12
357A Townsend            121.34  55  P      PKPdf   18 53 38.6 -1.2
     baz=286
T57A Hurt                121.35  49  P      PKPdf   18 53 37.8 -1.9
     baz=291,SNR=13
LONY Lake Ozonia         121.37  39  P      PKPdf   18 53 38.0 -1.6
     baz=299
157A Early Branch        121.39  54  P      PKPdf   18 53 38.7 -1.1
     baz=287,SNR=7.5
BZS  Buzias              121.39 323⇑iP      PKKPab  19 03 44.7 +1.1
MORC Moravsky Berou      121.41 328⇑iP      Pdif    18 50 14.6 +5.9
MORC Moravsky Berou      121.41 328⇓iP      PKPdf   18 53 39.0 -0.5
MORC Moravsky Berou      121.41 328⇑iP      PKKPab  19 03 44.8 +1.3
MORC Moravsky Berou      121.41 328 ⇓PKIKP  PKPdf   18 53 39.0 -0.5
MORC Moravsky Berou      121.41 328 ePDIFF  Pdif    18 50 13.6 +4.9
MORC Moravsky Berou      121.41 328 ePKP    PKPdf   18 53 38.9 -0.5
MORC                                e               18 53 45.1
MORC                                e               18 56 41.5
MORC                                ePKKP   PKKPbc  19 03 46.6 +3.0
MORC                                eSS     SS      19 11 28.1 +8.5
W57A Gilead              121.42  51  P      PKPdf   18 53 38.8 -1.1
     baz=289,SNR=27
R57A Stanardsville       121.42  47  P      PKPdf   18 53 38.7 -1.0
     baz=292,SNR=28
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Z57A  Bowman             121.44  53  P         PKPdf   18 53 38.1  -1.8
      baz=288,SNR=13
SIGR  SIGRI              121.45 314  P         PKPdf   18 53 38.3  -1.5
VYHS  Vyhne              121.46 327  ePKIKP    PKPdf   18 53 38.7  -0.9
VYHS                                 e                 18 55 21.6
VYHS  Vyhne              121.46 327  ePKP      PKPdf   18 53 38.7  -0.9
VYHS                                 e                 18 53 45.6
VYHS                                 ePP       PP      18 55 21.6  +4.8
VYHS                                 eSKPDF            18 56 40.9
VYHS                                 eSP       SP      19 04 30.3  +0.6
Y57A  Sumter             121.47  52  P         PKPdf   18 53 38.6  -1.3
      baz=288,SNR=11
U57A  Blanch             121.49  49  P         PKPdf   18 53 38.3  -1.6
      baz=290,SNR=21
757A  Oxford             121.50  58  P         PKPdf   18 53 38.7  -1.4
      baz=284,SNR=6.9
457A  Yulee              121.50  56  P         PKPdf   18 53 38.3  -1.8
      baz=286
657A  Interlachen        121.51  58  P         PKPdf   18 53 38.9  -1.3
      baz=285,SNR=6.5
557A  Orange Park        121.52  57  P         PKPdf   18 53 39.0  -1.1
      baz=285
857A  Zephyrhills        121.52  59  P         PKPdf   18 53 38.3  -1.9
      baz=284,SNR=10
ARE1  Arenal 1           121.54  80  eP        PKPdf   18 53 38.6  -2.0
AMBH  Ambrzfalva         121.55 324  eP        PKPdf   18 53 39.1  -0.7
CEDE  Laguna Cedeo       121.55  80  eP        PKPdf   18 53 40.4  -0.3
X57A  Johnson Farm,      121.56  52  P         PKPdf   18 53 39.2  -1.0
      baz=289
257A  Skidaway Islan     121.57  55  P         PKPdf   18 53 39.0  -1.2
      baz=287
TIM   Timisoara          121.57 323⇑iP         PKiKP   18 53 46.3  +6.3
TIM   Timisoara          121.57 323 ⇑PKIKP     PKiKP   18 53 46.4  +6.4
BINY  Binghamton         121.59  42  P         PKPdf   18 53 38.7  -1.3
      baz=296
CHOS  Chios island       121.62 313  P         PKPdf   18 53 39.1  -1.2
OSTC  Ostas              121.62 330  ePKPDF    PKPdf   18 53 39.4  -0.4
OSTC                                 ex        x       18 53 46.3
OSTC                                 ePKKP     PKKPbc  19 03 47.2  +4.4
OSTC                                 ePKKS             19 07 45.7
LIA   Limnos Island      121.65 315  P         PKPdf   18 53 38.1  -2.0
957A  Wimauma            121.65  60  P         PKPdf   18 53 38.2  -2.3
      baz=283
CHVC  Chvalec            121.68 330  ePKPDF    PKPdf   18 53 39.6  -0.3
CHVC                                 ex        x       18 53 46.2
CHVC                                 ePKKP     PKKPbc  19 03 44.6  +2.0
CHVC                                 ePKKS             19 07 48.6
THAS  Thassos island     121.68 316  P         PKPdf   18 53 37.6  -2.6
DPC   Dobruska-Polom     121.69 329  ePKIKP    PKPdf   18 53 39.6  -0.4
DPC   Dobruska-Polom     121.69 329  ePKPDF    PKPdf   18 53 39.6  -0.4
DPC                                  ex        x       18 53 46.2
DPC                                  ePKKP     PKKPbc  19 03 46.5  +4.0
BLKB  Belogradchik       121.70 320⇑iP         PKPdf   18 53 39.6  -0.6
MDVR  Moldovita          121.75 322⇑iP         PKPdf   18 53 39.5  -0.8
UPC   Upice              121.75 330  ePKIKP    PKPdf   18 53 38.3  -1.8
UPC   Upice              121.75 330  ePKPDF    PKPdf   18 53 38.3  -1.8
UPC                                  ex        x       18 53 45.5
UPC                                  ePKKP     PKKPbc  19 03 46.3  +4.0
UPC                                  ePKKS             19 07 44.9
Q58A  Fox Den Farm,      121.78  46  P         PKPdf   18 53 38.6  -1.8
      baz=293,SNR=28
R58A  Rapidan            121.80  47  P         PKPdf   18 53 38.9  -1.6
      baz=293,SNR=21
BANR  Banloc             121.80 323⇓iP         PKiKP   18 53 40.4   0.0
VTS   Vitosha            121.80 319  ePKPdf    PKPdf   18 53 39.2  -1.4
VTS   Vitosha            121.80 319  P         PKPdf   18 53 39.2  -1.4
VTS   Vitosha            121.80 319⇑iP         Pdif    18 50 16.8  +6.0
VTS   Vitosha            121.80 319⇑iP         PKPdf   18 53 39.9  -0.7
VTS   Vitosha            121.80 319⇑iP         PKKPbc  19 03 45.1  +3.2
VTS   Vitosha            121.80 319 ⇑PKIKP     PKPdf   18 53 39.9  -0.7
VTS   Vitosha            121.80 319  P         PKPdf   18 53 39.3  -1.4
KARP  Karpathos          121.81 310  P         PKPdf   18 53 39.3  -1.4
P58A  Pank, Wackersv     121.83  45  P         PKPdf   18 53 38.9  -1.6
      baz=294,SNR=20
O58A  Lewisberry         121.84  44  P         PKPdf   18 53 38.5  -2.0
      baz=295,SNR=36
V58A  Windy Hill, Pi     121.88  50  P         PKPdf   18 53 38.8  -1.9
      baz=290,SNR=18
ESPN  Las Esperanzas     121.88  78  eP        PKiKP   18 53 42.4  +1.0
JAVC  Velka Javorina     121.88 327  ePDIFF    Pdif    18 50 17.6  +6.8
JAVC  Velka Javorina     121.88 327  ePKP      PKiKP   18 53 40.6   0.0
JAVC                                 e                 18 53 47.1
JAVC                                 e                 18 56 45.1
JAVC                                 ePKKP     PKKPbc  19 03 45.0  +3.2
JAVC                                 eSS       SS      19 11 41.4  +16
T58A  Grand View Acr     121.91  48  P         PKPdf   18 53 39.2  -1.5
      baz=291,SNR=49
BUD   Budapest           121.92 326  eP        PKPdf   18 53 40.0  -0.4
BUD                                  ePP       PP      18 55 20.0  +0.1
MMB   Musomiste          121.94 318  P         PKPdf   18 53 39.1  -1.6
NVR   Nevrokopi          121.95 317  P         PKPdf   18 53 38.4  -2.4
R58B  Mineral            122.01  47  P         PKPdf   18 53 39.1  -1.8
      baz=293,SNR=26
158A  Hollywood          122.02  54  P         PKPdf   18 53 39.9  -1.2
      baz=288
S58A  Poland Farm, P     122.02  48  P         PKPdf   18 53 39.4  -1.5
      baz=292,SNR=24
GO05  Huala              122.05 136  eP        PKiKP   18 53 46.3  +5.0
W58A  Raeford            122.05  51  P         PKPdf   18 53 39.6  -1.4
      baz=290,SNR=36
658A  Bunnell            122.06  58  P         PKPdf   18 53 39.7  -1.5
      baz=285,SNR=5.9
Y58A  Scranton           122.07  52  P         PKPdf   18 53 39.6  -1.6
      baz=289,SNR=8.3
958A  Wauchula           122.09  60  P         PKPdf   18 53 39.8  -1.6
      baz=284
U58A  Oxford             122.09  49  P         PKPdf   18 53 39.8  -1.3
      baz=291,SNR=39
SRO2  Moca               122.12 326  ePKIKP    PKPdf   18 53 39.1  -1.7
SRO2  Moca               122.12 326  ePKP      PKPdf   18 53 39.1  -1.7
SRO2                                 e                 18 53 46.3
X58A  Rowland            122.12  51  P         PKPdf   18 53 40.2  -1.0
      baz=289,SNR=11
Z58A  St. Stephen        122.14  53  P         PKPdf   18 53 40.2  -1.1
      baz=288,SNR=10
HDC   Heredia            122.15  81  eP        PKPdf   18 53 40.6  -1.4
058A  Arcadia            122.17  61  P         PKPdf   18 53 40.6  -0.9
      baz=283,SNR=6.1
VRAC  Vranov             122.19 328  PKP       PKPdf   18 53 40.5  -0.4
      comp=Z,31nm,1.0s,baz=75,slow=0.9,SNR=12
VRAC                                 pPKP      PP      18 55 20.2  -1.4
      comp=Z,48nm,1.1s,baz=321,slow=14,SNR=1.6
VRAC                                 PKKPab    PKKPbc  19 03 44.5  +3.9
      comp=Z,23nm,0.8s,baz=218,slow=5.0,SNR=7.6
VRAC  Vranov             122.19 328⇑iP         Pdif    18 50 18.0  +5.9
VRAC  Vranov             122.19 328⇑iP         PKPdf   18 53 40.7  -0.2
VRAC  Vranov             122.19 328⇓iP         PKKPbc  19 03 41.5  +0.9
VRAC  Vranov             122.19 328 ⇑PKIKP     PKPdf   18 53 40.7  -0.2
VRAC  Vranov             122.19 328  ePDIFF    Pdif    18 50 17.5  +5.4
VRAC  Vranov             122.19 328  ePKP      PKPdf   18 53 39.9  -1.0
VRAC                                 e                 18 56 47.0
VRAC                                 ePKKP     PKKPbc  19 03 44.5  +3.9
VRAC                                 eSS       SS      19 11 42.2  +13
758A  Lake Helen         122.23  58  P         PKPdf   18 53 40.0  -1.5
      baz=285,SNR=5.6
SRS   Serrai             122.23 317  P         PKPdf   18 53 38.8  -2.5
DWPF  Disney Wildern     122.24  59  ePKPdf    PKPdf   18 53 41.0  -0.6
DWPF  Disney Wildern     122.24  59  P         PKPdf   18 53 39.4  -2.2
      baz=284
KKB   Krupnik            122.25 318  P         PKPdf   18 53 39.9  -1.4
M59A  Waymart            122.25  42  P         PKPdf   18 53 40.1  -1.2
      baz=297
LCR2  La Lucha 2         122.26  81  eP        PKPdf   18 53 41.2  -1.2
O59A  Robesonia          122.28  44  P         PKPdf   18 53 40.1  -1.3
      baz=295
858A  St. Cloud          122.28  59  P         PKPdf   18 53 40.2  -1.5
      baz=284
CBN   Corbin Frederi     122.29  47  P         PKPdf   18 53 40.1  -1.3
      baz=293
N59A  State Game Lan     122.30  43  P         PKPdf   18 53 40.2  -1.2
      baz=296
OUR   Ouranopolis        122.31 316  ePKPdf    PKPdf   18 53 39.2  -2.2
OUR   Ouranopolis        122.31 316  P         PKPdf   18 53 39.2  -2.2
OUR   Ouranopolis        122.31 316  ePKIKP    PKPdf   18 53 39.2  -2.2
AMGA  Amorgos Island     122.32 312  P         PKPdf   18 53 39.6  -2.0
MODS  Modra-Piesok       122.38 327  ePKIKP    PKPdf   18 53 40.1  -1.2
MODS                                 e                 18 55 27.6
MODS  Modra-Piesok       122.38 327  ePKP      PKPdf   18 53 40.1  -1.2
MODS                                 e                 18 53 47.0
MODS                                 ePP       PP      18 55 27.6  +4.7
MODS                                 eSKPDF            18 56 47.0
MODS                                 eSP       SP      19 04 37.6  -0.2
P59A  Jarrettsville      122.40  45  P         PKPdf   18 53 40.0  -1.6
      baz=295,SNR=5.4
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CSKK  Cskako             122.42 326  eP        PKPdf   18 53 40.1  -1.4
CSKK                                 ePP       PP      18 55 26.0  +2.8
KRUC  Moravsky           122.44 328  ePDIFF    Pdif    18 50 18.5  +5.3
KRUC  Moravsky           122.44 328  ePKP      PKPdf   18 53 40.4  -1.0
KRUC                                 e                 18 53 46.9
KRUC                                 e                 18 56 45.9
KRUC                                 ePKKP     PKKPbc  19 03 43.6  +4.0
KRUC                                 eSS       SS      19 11 43.9  +11
PVCC  Panska Ves         122.46 330  ePKIKP    PKPdf   18 53 41.0  -0.4
PVCC  Panska Ves         122.46 330  ePKPDF    PKPdf   18 53 41.0  -0.4
PVCC                                 ex        x       18 53 47.8
PVCC                                 ePKKP     PKKPbc  19 03 44.1  +4.5
R59A  King George, V     122.48  47  P         PKPdf   18 53 40.1  -1.7
      baz=293,SNR=14
CVTR  Volcan Turrial     122.50  81  eP        PKPdf   18 53 40.1  -2.9
APE   Apeiranthos        122.50 312⇑iP         PKPdf   18 53 39.9  -2.1
APE   Apeiranthos        122.50 312 ⇑PKIKP     PKPdf   18 53 39.9  -2.1
S59A  Mechanicsville     122.52  47  P         PKPdf   18 53 39.9  -2.0
      baz=293,SNR=5.9
SOH   Sokhos             122.53 317  P         PKPdf   18 53 39.9  -2.0
BRG   Berggiesshubel     122.54 331  ePKP      Pdif    18 50 14.0  +0.4
      comp=Z,8.5nm,1.1s
BRG                                  e                 18 51 52.0
BRG                                  i                 18 55 31.0
BRG                                   SKS      SKiKP   18 56 53.0  +13
BRG                                   SS       SKKPbc  19 06 14.0  -36
      comp=N,6µm,19.2s
      comp=E,6µm,18.8s
      comp=Z,14µm,20.1s
BRG   Berggiesshubel     122.54 331  eP        Pdif    18 50 14.0  +0.4
BRG                                  i                 18 55 31.0
BRG                                   SS       SKKPbc  19 06 14.0  -36
BRG                                   pmax     pmax
      comp=Z,9.0nm,1.1s
BRG                                   MLR      MLR
      comp=N,6µm,19.2s
BRG                                   MLR      MLR
      comp=E,6µm,18.8s
BRG                                   MLR      MLR
      comp=Z,14µm,20.1s
Q59A  Harwood            122.55  46  P         PKPdf   18 53 40.4  -1.5
      baz=294,SNR=5.6
V59A  Middlesex          122.55  50  P         PKPdf   18 53 40.8  -1.2
      baz=291,SNR=26
ZST   Bratislava         122.58 327  ePKIKP    PKPdf   18 53 40.0  -1.7
ZST                                  e                 18 55 29.4
ZST   Bratislava         122.58 327  ePKP      PKPdf   18 53 40.0  -1.7
ZST                                  e                 18 53 47.0
ZST                                  ePP       PP      18 55 29.4  +5.2
ZST                                  eSKPDF            18 56 45.1
ANAF  Anafi Island       122.58 311  P         PKPdf   18 53 39.7  -2.4
Z59A  Georgetown, SC     122.59  53  P         PKPdf   18 53 41.0  -1.1
      baz=289
W59A  Clinton            122.61  50  P         PKPdf   18 53 40.9  -1.2
      baz=290,SNR=14
T59A  Double "B" Far     122.63  48  P         PKPdf   18 53 40.7  -1.4
      baz=292,SNR=32
059Z  Ave Maria          122.64  61  P         PKPdf   18 53 41.1  -1.4
      baz=283,SNR=6.8
PLG   Polygyros          122.66 316  P         PKPdf   18 53 39.5  -2.7
Y59A  Loris              122.67  52  P         PKPdf   18 53 40.9  -1.3
      baz=289,SNR=15
SUR   Sutherland         122.67 227  ePKPdf    PKiKP   18 53 42.9  +0.1
SUR   Sutherland         122.67 227  P         PKiKP   18 53 43.0  +0.1
      SNR=14
U59A  Littleton          122.68  49  P         PKPdf   18 53 40.8  -1.4
      baz=292,SNR=9.1
KNT   Kendrikon          122.69 317  P         PKPdf   18 53 37.2  -4.9
X59A  McDuffie Farm,     122.69  51  P         PKPdf   18 53 40.8  -1.5
      baz=290
ZKR   Zakros             122.69 310  ePKPdf    PKiKP   18 53 44.0  +1.5
ZKR   Zakros             122.69 310  P         PKiKP   18 53 44.0  +1.5
CLL   Collm              122.70 332  eP        Pdif    18 50 15.0  +0.7
CLL                                  i                 18 53 41.1
CLL                                  e                 19 00 13.0
CLL                                   pmax     pmax
      comp=Z,75nm,0.8s
CLL   Collm              122.70 332  ePdif     Pdif    18 50 15.0  +0.7
CLL                                  ePdiffmax         18 50 22.0
      comp=Z,21nm,1.2s
CLL                                  epPdiffma         18 51 48.0
CLL                                  i PKPdf   PKPdf   18 53 41.1  -0.7
      comp=Z,75nm,0.8s
CLL                                  i                 18 53 43.2
      comp=Z,99nm,0.9s
CLL                                  i PKPdfmax        18 53 47.7
      comp=Z,362nm,0.8s
CLL                                  ePP       PP      18 55 26.0  +1.1
CLL                                  e                 18 55 42.0
CLL                                  e                 18 56 12.0
CLL                                  eSKPdf    SKPdf   18 56 30.0  -10
CLL                                  epPP              18 56 48.0
CLL                                  ePPP      PPP     18 57 57.0
CLL                                  eSKSacmax         19 00 13.0
CLL                                  eSKKSacma         19 01 46.0
CLL                                  eSdif     SKKSac  19 02 36.0  +52
CLL                                  ePKKPbcma         19 03 43.0
      comp=Z,625nm,2.1s
CLL                                  epSKKSacm         19 03 55.0
CLL                                  e                 19 04 23.0
CLL                                  eSP       SP      19 04 40.0  -0.4
CLL                                  e                 19 04 55.0
CLL                                  ePS       PS      19 05 21.0  -5.3
CLL                                  eSPPmax           19 06 18.0
CLL                                  ePPS      PPS     19 06 54.0
CLL                                  e(SKKPdf)         19 07 03.0
CLL                                  ePcPPKPrm         19 07 39.0
CLL                                  esPPS             19 08 48.0
CLL                                  i PPPrmax         19 11 16.4
      comp=Z,1µm,4.3s
CLL                                  eSSmax            19 11 42.0
CLL                                  esSSmax           19 14 12.0
CLL                                  e                 19 17 30.0
CLL                                  eSSSS             19 19 48.0
CLL                                  esSSSS            19 22 18.0
CLL                                  e                 19 23 54.0
859A  Kempfer Cattle     122.71  59  P         PKPdf   18 53 40.9  -1.6
      baz=284
FRGS  Fruska Gora        122.72 323  i P       PKPdf   18 53 40.6  -1.5
GOPC  GO Pecny, Ondr     122.74 330  ePKIKP    PKPdf   18 53 41.2  -0.8
GOPC  GO Pecny, Ondr     122.74 330  ePKPDF    PKPdf   18 53 41.2  -0.8
GOPC                                 ex        x       18 53 47.9
GOPC                                 ePKKP     PKKPbc  19 03 41.6  +3.1
GOPC                                 ePKKS             19 07 36.5
059A  Moore Haven        122.76  60  P         PKPdf   18 53 41.2  -1.5
      baz=284,SNR=6.4
TREC  Trest              122.77 329  ePKIKP    PKPdf   18 53 41.4  -0.7
TREC  Trest              122.77 329  ePKPDF    PKPdf   18 53 41.4  -0.7
TREC                                 ex        x       18 53 48.3
TREC                                 ePKKP     PKKPbc  19 03 42.4  +4.0
N60A  Cedar Hill Far     122.78  43  P         PKPdf   18 53 41.0  -1.3
      baz=297
IOSP  Ios island         122.81 312  P         PKPdf   18 53 38.3  -4.2
O60A  Telford            122.81  44  P         PKPdf   18 53 41.1  -1.2
      baz=296
PRU   Pruhonice          122.81 330  ePKIKP    PKPdf   18 53 40.7  -1.4
PRU   Pruhonice          122.81 330  ePKPDF    PKPdf   18 53 40.7  -1.4
PRU                                  ex        x       18 53 48.0
PRU                                  ePKKP     PKKPbc  19 03 42.7  +4.5
PRU                                  ePKKS             19 07 37.0
CMBO  Columbo, Santo     122.82 311  P         PKiKP   18 53 52.1  +9.4
THR7  Fira-Santorini     122.82 311  P         PKPdf   18 53 41.1  -1.4
VAY   Valandovo          122.83 318  i PKP     PKPdf   18 53 40.2  -2.1
MORH  Mrgy, Hungar       122.84 324  eP        PKPdf   18 53 40.1  -2.2
MORH                                 ePP       PP      18 55 27.0  +1.0
R60A  Leonardtown, M     122.84  46  P         PKPdf   18 53 41.2  -1.3
      baz=294
THR3  Thira Island,      122.84 311  P         PKPdf   18 53 38.6  -3.9
959A  Okeechobee         122.86  60  P         PKPdf   18 53 42.1  -0.7
      baz=284,SNR=12
THR6  Thira Island,      122.87 311  ePKPdf    PKPdf   18 53 40.5  -2.1
THR6  Thira Island,      122.87 311  P         PKPdf   18 53 40.5  -2.1
P60A  Greenville         122.87  44  P         PKPdf   18 53 41.1  -1.4
      baz=296
THE   Thessaloniki       122.88 317  P         PKPdf   18 53 39.5  -3.0
THR5  Thira Island,      122.88 311  P         PKPdf   18 53 41.2  -1.4
TIH   Tihany             122.89 325  eP        PKPdf   18 53 39.1  -3.2
TIH                                  ePP       PP      18 55 32.1  +5.7
STIP  Stip               122.92 318  i PKP     PKPdf   18 53 38.1  -4.5
LSZ   Lusaka             122.97 249  ePKPdf    PKPdf   18 53 43.0  -0.5
LSZ   Lusaka             122.97 249  ePKIKP    PKPdf   18 53 43.0  -0.5
BIGH  Upper Bighouse     122.98 346  eP        PKPdf   18 53 41.2  -0.9
CNNC  Cliffs of the      123.01  50  P         PKPdf   18 53 41.6  -1.3
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      baz=291,SNR=13
S60A  Water View         123.01  47  P         PKPdf   18 53 42.0  -0.8
      baz=293
DRK0  Durika             123.02  82  eP        PKPdf   18 53 42.6  -1.1
Q60A  Greensboro         123.07  45  P         PKPdf   18 53 41.9  -1.0
      baz=295
NPS   Neapolis           123.10 310  P         PKPdf   18 53 42.3  -0.8
U60A  Pendleton          123.11  48  P         PKPdf   18 53 41.3  -1.8
      baz=292,SNR=12
GRG   Griva              123.11 317  P         PKPdf   18 53 40.7  -2.3
DIVS  Divibare           123.16 322  i P       PKPdf   18 53 41.5  -1.6
SKIA  Skiathos           123.16 315  P         PKPdf   18 53 40.1  -3.0
T60A  Surry              123.17  48  P         PKPdf   18 53 41.6  -1.5
      baz=293,SNR=15
X60A  Albert Glenn T     123.17  51  P         PKPdf   18 53 41.6  -1.6
      baz=290,SNR=25
SOP   Sopron             123.17 327  eP        PKPdf   18 53 40.1  -2.8
SOP                                  ePP       PP      18 55 26.0  -2.2
Y60A  Bolivia            123.18  52  P         PKPdf   18 53 42.2  -1.1
      baz=290
TEKS  Tekeris            123.21 322  eP        PKPdf   18 53 41.4  -1.7
W60A  Pink Hill          123.21  50  P         PKPdf   18 53 42.1  -1.2
      baz=291
LBNH  Lisbon             123.21  38  P         PKPdf   18 53 41.6  -1.4
      baz=301
061Z  Ochoppi            123.22  62  P         PKPdf   18 53 42.0  -1.5
      baz=283
LAST  Lasithi            123.24 310  P         PKPdf   18 53 42.7  -0.8
MRKA  Markates           123.27 314  P         PKPdf   18 53 42.0  -1.3
XOR   Xorichti           123.27 315  P         PKPdf   18 53 40.5  -2.8
NEO   Neokhori           123.27 315  P         PKPdf   18 53 40.9  -2.4
SKO   Skopje             123.28 319  i PKP     PKPdf   18 53 42.5  -0.8
V60A  Jim Taylor Roa     123.29  49  P         PKPdf   18 53 41.8  -1.7
      baz=292,SNR=12
062Z  Marathon           123.33  63  P         PKPdf   18 53 42.7  -1.1
      baz=282
PTL   Penteli            123.34 314  ePKPdf    PKPdf   18 53 40.8  -2.7
PTL   Penteli            123.34 314  P         PKPdf   18 53 40.8  -2.7
RSC   Scourie            123.40 347  eP        PKPdf   18 53 42.0  -0.9
060Z  West Palm Beac     123.40  61  P         PKPdf   18 53 42.4  -1.5
      baz=284
CONA  Conrad Observa     123.41 327  i Pdiff   Pdif    18 50 17.5  -0.2
      comp=Z,7.1nm,1.0s
CONA                                 i PKiKP   PKPdf   18 53 42.5  -1.0
      comp=Z,36nm,0.7s,SNR=16
CONA                                 ePKKPab   PKKPbc  19 03 40.2  +4.2
      comp=Z,201nm,1.2s,SNR=7.1
060A  Indiantown         123.42  60  P         PKPdf   18 53 42.6  -1.3
      baz=284
FYTO  Fytoko, Volos      123.43 316  ePKPdf    PKPdf   18 53 41.3  -2.3
FYTO  Fytoko, Volos      123.43 316  P         PKPdf   18 53 41.3  -2.3
ATHU  Athens Univers     123.43 314  ePKPdf    PKPdf   18 53 41.9  -1.8
ATHU  Athens Univers     123.43 314  P         PKPdf   18 53 41.9  -1.8
LIT   Litokhoron         123.44 316  P         PKPdf   18 53 34.7  -8.9
SMIA  Simia              123.46 315  P         PKPdf   18 53 41.6  -2.1
VLY   Voula,Athens       123.47 313  P         PKPdf   18 53 41.1  -2.6
M61A  Granite Spring     123.47  42  P         PKPdf   18 53 42.4  -1.3
      baz=298
MHLO  Agia Marina, M     123.48 312  P         PKPdf   18 53 41.8  -2.0
Q61A  Milford            123.48  45  P         PKPdf   18 53 42.6  -1.1
      baz=295
O61A  Allentown          123.50  44  P         PKPdf   18 53 42.1  -1.5
      baz=297
P61A  Hammonton          123.52  44  P         PKPdf   18 53 41.8  -1.9
      baz=296
PAL   Palisades          123.52  42  P         PKPdf   18 53 42.5  -1.1
      baz=298
BRU2  Volcan             123.58  82  eP        PKPdf   18 53 42.8  -2.0
BBLS  Lazi&#263;i        123.64 322  i P       PKPdf   18 53 42.9  -1.1
IDI   Anoyia             123.64 310  PKP       PKPdf   18 53 42.9  -1.3
      comp=Z,85nm,0.9s,baz=203,slow=0.8,SNR=16
IDI                                  pPKP      pPKPdf  18 55 22.9  +4.4
      comp=Z,52nm,1.0s,baz=59,slow=5.9,SNR=0.9
IDI                                  PKKPab    PKKPbc  19 03 36.1  +1.6
      comp=Z,318nm,1.0s,baz=258,slow=4.6,SNR=7.7
IDI                                  SKKPbc    SKKPbc  19 06 53.8  +7.6
      comp=Z,56nm,1.0s,baz=280,slow=5.8,SNR=4.1
ATAL  Atalanti           123.67 315  ePKPdf    PKPdf   18 53 41.8  -2.3
ATAL  Atalanti           123.67 315  P         PKPdf   18 53 41.8  -2.3
NKC   Novy Kostel        123.68 331  ePKIKP    PKPdf   18 53 43.4  -0.4
NKC   Novy Kostel        123.68 331  ePKPDF    PKPdf   18 53 43.4  -0.4
NKC                                  ex        x       18 53 50.1
NKC                                  ePKKP     PKKPbc  19 03 40.8  +5.9
NKC                                  ePKKS             19 07 39.1
VILL  Villia             123.69 314  P         PKPdf   18 53 41.7  -2.5
U61A  Possum Corner      123.69  48  P         PKPdf   18 53 42.9  -1.3
      baz=293,SNR=7.4
R61A  Willards           123.70  46  P         PKPdf   18 53 42.9  -1.2
      baz=295
LKR   Lokris             123.71 315  P         PKPdf   18 53 41.7  -2.5
W61A  Ground Anchor      123.72  50  P         PKPdf   18 53 42.8  -1.5
      baz=292,SNR=6.9
S61A  Accomac            123.73  47  P         PKPdf   18 53 42.9  -1.3
      baz=294
BEHE  Becsehely          123.76 326  eSP       PS      19 05 23.1   -13
RUDO  Rudo               123.79 321  eP        PKPdf   18 53 42.5  -1.7
SIVA  Sivas              123.80 310  P         PKPdf   18 53 44.0  -0.4
V61A  Roper              123.80  49  P         PKPdf   18 53 42.9  -1.4
      baz=292,SNR=6.9
HAPS  Han Pijesak,BI     123.80 322  eP        PKPdf   18 53 42.3  -2.0
KZN   Kozani             123.84 317  P         PKPdf   18 53 42.1  -2.4
IVA   Berane             123.84 320⇑iPKP       PKPdf   18 53 43.3  -1.1
KHC   Kasperske Hory     123.84 330  i P       Pdif    18 50 24.0  +4.5
KHC                                  e                 18 53 43.7
KHC                                  e                 18 55 53.0
KHC   Kasperske Hory     123.84 330  ePDIFF    Pdif    18 50 24.0  +4.5
KHC                                  ex        x       18 50 29.5
KHC                                  ePKPDF    PKPdf   18 53 43.7  -0.5
KHC                                  ex        x       18 53 50.6
KHC                                  ex        x       18 55 53.0
KHC                                  ePKS      PKSdf   18 57 26.5  +5.8
KHC                                  ePKKP     PKKPbc  19 03 38.2  +3.9
KHC                                  eSP       SP      19 04 58.5  +7.9
KHC                                  ePKKS             19 07 31.9
PEL   Peldehue           123.92 135  eP        PKiKP   18 53 46.5  +1.4
PLE   Pljevlja           123.92 321⇑iPKP       PKPdf   18 53 43.8  -0.8
PVY   Plav               123.94 320⇑iPKP       PKPdf   18 53 43.9  -0.8
GERES GERESS Array B     123.97 329  Pdiff     Pdif    18 50 21.1  +0.9
      comp=Z,2.9nm,0.8s,baz=54,slow=3.4,SNR=21
GERES                                PKP       PKPdf   18 53 43.8  -0.7
      comp=Z,40nm,0.7s,baz=67,slow=1.7,SNR=49
GERES                                PKKPbc    PKKPab  19 03 31.9  -0.6
      comp=Z,27nm,0.7s,baz=211,slow=3.2,SNR=7.9
DOB   Doboj              123.97 323  eP        PKiKP   18 53 46.3  +1.5
RRR   Rubha Reidh        123.99 347  eP        PKPdf   18 53 42.9  -1.1
ARSA  Arzberg            124.00 327  ePdiff    Pdif    18 50 26.3  +6.1
      comp=Z,6.8nm,1.1s
ARSA                                 i PKPdf   PKPdf   18 53 43.0  -1.5
      comp=Z,17nm,1.0s,SNR=12
THL   Klokotos Trika     124.00 316  P         PKPdf   18 53 42.2  -2.5
LOUT  Loutraki           124.00 314  P         PKPdf   18 53 42.6  -2.2
DID   Didima             124.01 313  ePKPdf    PKPdf   18 53 42.0  -2.8
DID   Didima             124.01 313  P         PKPdf   18 53 42.0  -2.8
AGG   Agios Georgios     124.02 315  ePKPdf    PKPdf   18 53 43.6  -1.2
AGG   Agios Georgios     124.02 315  P         PKPdf   18 53 36.7  -8.1
AGG   Agios Georgios     124.02 315  ePKIKP    PKPdf   18 53 43.6  -1.2
KOGS  Kog                124.07 326  i Pdiff   Pdif    18 50 25.6  +5.1
KOGS                                 i pPdiff  pPdif   18 51 56.5  +6.7
KOGS                                 i PKPdf   PKPdf   18 53 43.3  -1.3
KOGS                                 e                 19 06 29.1
KOGS                                 e                 19 06 39.2
PHP   Peshkopia          124.08 319  P         PKPdf   18 53 42.4  -2.5
KOME  Kolasin            124.09 321⇑iPKP       PKPdf   18 53 43.6  -1.3
OHR   Ohrid              124.11 318  i PKP     PKPdf   18 53 43.2  -1.7
VAM   Vamos              124.12 311  P         PKPdf   18 53 44.5  -0.6
RRH   Rhenigidale        124.12 348  eP        PKPdf   18 53 43.1  -1.2
KRND  KRANIDI            124.13 313  P         PKPdf   18 53 41.6  -3.4
KALN  Kalnik             124.14 325  i P       PKPdf   18 53 43.8  -1.0
DSF   Desfina            124.14 315  P         PKPdf   18 53 42.8  -2.3
KAC   Achnashellach      124.20 347  eP        PKPdf   18 53 43.5  -1.0
THAL  Thalero            124.21 314  P         PKPdf   18 53 42.2  -2.9
PKME  Peaks-Kenny Pk     124.24  36  P         PKPdf   18 53 43.9  -1.1
      baz=304
IMMV  Iera Moni Meta     124.27 311  P         PKPdf   18 53 40.1  -5.2
KPRO  Kipourio           124.27 317  P         PKPdf   18 53 43.5  -1.8
NEST  Nestorio           124.28 317  P         PKPdf   18 53 43.7  -1.6
UPM   Unac-Piva          124.29 321⇑iPKP       PKPdf   18 53 44.4  -1.0
UPM   Unac-Piva          124.29 321  eP        PKiKP   18 53 46.2  +0.5
MOA   Molln              124.30 328  ePdiff    Pdif    18 50 27.4  +5.9
      comp=Z,7.6nm,0.9s
MOA                                  ePKPdf    PKPdf   18 53 43.3  -1.8
      comp=Z,23nm,0.9s,SNR=12
MOA                                  ePKKPab   PKKPbc  19 03 36.4  +4.0
      comp=Z,164nm,1.4s,SNR=6.4
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HRV	Adam Dziewonsk	124.33	40	ePKPdf	PKPdf	18 53 44.6	-0.6
HRV	Adam Dziewonsk	124.33	40	ePKIKP	PKPdf	18 53 44.6	-0.6
HRV	Adam Dziewonsk	124.33	40	P	PKPdf	18 53 44.2	-1.1
	baz=301						
V62A	Hyde County Ai	124.36	49	P	PKPdf	18 53 43.8	-1.7
	baz=293,SNR=6.6						
GVDS	Gavdos	124.42	310	P	PKPdf	18 53 45.0	-0.6
GVD	Gavdhos	124.42	310	ePKPdf	PKPdf	18 53 44.5	-1.1
GVD	Gavdhos	124.42	310	P	PKPdf	18 53 44.5	-1.1
KPL	Plockton	124.43	347	eP	PKPdf	18 53 42.0	-2.9
KALE	Kalithea	124.43	315	P	PKPdf	18 53 33.6	-12
EVR	Evrytania	124.43	315	P	PKPdf	18 53 44.4	-1.3
NKY	Niksic	124.44	321	⇑iPKP	PKPdf	18 53 44.6	-1.0
PDG	Podgorica	124.47	320	⇑iP	Pdif	18 50 27.9	+5.5
PDG	Podgorica	124.47	320	⇓iP	PKPdf	18 53 44.4	-1.1
PDG	Podgorica	124.47	320	⇓iP	PKKPbc	19 03 33.6	+2.1
PDG	Podgorica	124.47	320	i P	PKPdf	18 53 43.3	-2.2
TTG	Podgorica	124.47	320	⇑iPKP	PKPdf	18 53 43.9	-1.6
TRAZ	Trapeza	124.47	314	P	PKPdf	18 53 44.5	-1.2
SERG	Sergoula	124.48	315	P	PKPdf	18 53 43.5	-2.2
GUR	Goura	124.48	314	P	PKPdf	18 53 40.5	-5.3
TRIZ	Trizonia	124.49	315	P	PKPdf	18 53 44.5	-1.1
EDU	Dundee	124.49	345	eP	PKPdf	18 53 40.8	-4.3
NKME	Niksic	124.49	321	⇑iPKP	PKPdf	18 53 44.6	-1.0
ANX	Ano Chora	124.50	315	P	PKPdf	18 53 42.2	-3.6
ALIK	Aliki, Aigiali	124.50	315	P	PKiKP	18 53 48.3	+2.3
BLY	Banja Luka	124.50	324	⇓iP	PKPdf	18 53 45.1	-0.4
BLY	Banja Luka	124.50	324	i P	PKPdf	18 53 44.1	-1.4
PTJ	Puntijarka	124.55	325	P	PKPdf	18 53 44.9	-0.8
KLV	Kalavryta, Ach	124.57	314	P	PKPdf	18 53 40.9	-5.0
EFP	Efpalio	124.58	315	P	PKPdf	18 53 45.3	-0.5
LAKA	Lakka	124.61	315	ePKPdf	PKPdf	18 53 44.5	-1.4
LAKA	Lakka	124.61	315	P	PKPdf	18 53 44.5	-1.4
SOKA	Soboth	124.61	327	ePdiff	Pdif	18 50 30.7	+7.7
	comp=Z,6.1nm,1.2s						
SOKA				i PKPdf	PKPdf	18 53 44.3	-1.5
	comp=Z,36nm,0.9s,SNR=16						
SOKA				ePKKPab	PKKPbc	19 03 37.7	+6.4
	comp=Z,144nm,1.9s,SNR=5.9						
TIR	Tirane	124.62	319	P	PKPdf	18 53 44.6	-1.2
TIR	Tirane	124.62	319	⇑iP	PKPdf	18 53 45.2	-0.6
TIR	Tirane	124.62	319	⇑PKIKP	PKPdf	18 53 45.2	-0.6
ANKY	Antikythira Is	124.62	311	ePKPdf	PKPdf	18 53 44.8	-1.2
ANKY	Antikythira Is	124.62	311	P	PKPdf	18 53 44.8	-1.2
CEME	Cevo	124.62	321	⇑iPKP	PKPdf	18 53 44.7	-1.2
DRME	Dracevica, Mon	124.64	320	⇑iPKP	PKPdf	18 53 44.5	-1.3
DRME	Dracevica, Mon	124.64	320	i P	PKPdf	18 53 44.2	-1.6
KTHA	Kythira Island	124.64	312	P	PKPdf	18 53 44.3	-1.8
PRVC	Isla de Provid	124.67	77	eP	PKiKP	18 53 49.3	+2.3
BRY	Bratogost	124.68	321	⇑iPKP	PKPdf	18 53 44.9	-1.2
KTHR	Kythira	124.69	312	P	PKPdf	18 53 45.4	-0.7
VLX	Vlachokerasia	124.69	314	P	PKPdf	18 53 40.7	-5.5
TRIP	Tripoli	124.70	314	P	PKPdf	18 53 45.0	-1.2
ULC	Ulcinj	124.71	320	⇓iPKP	PKPdf	18 53 44.8	-1.2
ELO	Logie Almond	124.74	345	eP	PKPdf	18 53 44.6	-1.0
MGRS	Mrkonjic Grad	124.75	323	eP	PKPdf	18 53 44.2	-1.8
JAN	Janina	124.76	317	P	PKPdf	18 53 45.0	-1.2
PVO	Paravola	124.76	315	P	PKPdf	18 53 44.9	-1.3
BUM	Brajici-Budva	124.77	320	⇑iPKP	PKPdf	18 53 45.0	-1.2
ITZ	Itezhi-Tezhi	124.86	248	i P	PKiKP	18 53 51.8	+4.4
ITZ				i S	SP	19 04 54.6	-7.4
INVG	Invergeldie, C	124.86	345	eP	PKPdf	18 53 44.9	-0.9
EBH	Black Hill	124.88	345	eP	PKPdf	18 53 43.5	-2.3
CRES	Cresnjev	124.88	326	i P	PKPdf	18 53 44.8	-1.4
TREB	Trebinje	124.89	321	eP	PKPdf	18 53 45.0	-1.3
ESY	Stoneypath	124.94	344	eP	PKPdf	18 53 44.9	-1.1
HCY	Herceg Novi	124.94	321	⇑iPKP	PKPdf	18 53 45.1	-1.3
HCY	Herceg Novi	124.94	321	eP	PKPdf	18 53 44.6	-1.8
WTSB	Winterswijk	124.96	336	ePKPdf	PKPdf	18 53 44.2	-1.9
	comp=Z,1µm,1.2s						
WTSB				epPKPdf	pPKPdf	18 55 21.1	+1.0
WTSB				ePP	PP	18 55 46.1	+6.4
WTSB				ePKS	PKSdf	18 57 07.8	-15
WTSB				ePKKP	PKKPbc	19 03 34.5	+4.6
	comp=Z,466nm,1.8s						
OBKA	Obir	124.98	327	i Pdiff	Pdif	18 50 30.3	+5.6
OBKA				i PKPdf	PKPdf	18 53 44.9	-1.6
	comp=Z,22nm,0.8s,SNR=9.8						
OBKA				ePKKPab	PKKPbc	19 03 35.2	+5.4
	comp=Z,138nm,1.3s,SNR=6.3						
OZLJ	Ozalj	125.00	325	i P	PKPdf	18 53 46.0	-0.4
DBRK	Dubrovnik	125.05	321	i P	PKPdf	18 53 45.1	-1.5
RLS	Riolos of Patr	125.05	315	P	PKPdf	18 53 45.1	-1.6
EDI	Edinburgh	125.08	344	eP	PKPdf	18 53 44.8	-1.4
ITM	Ithomi	125.10	313	P	PKPdf	18 53 44.9	-2.0
AMT	Artemida-Makis	125.11	314	P	PKPdf	18 53 43.1	-3.8
EAB	Aberfoyle	125.15	345	eP	PKPdf	18 53 44.5	-1.9
IGT	Igoumenitsa	125.17	317	ePKPdf	PKPdf	18 53 45.5	-1.5
IGT	Igoumenitsa	125.17	317	P	PKPdf	18 53 45.5	-1.5
IGT	Igoumenitsa	125.17	317	ePKIKP	PKPdf	18 53 45.5	-1.5
EBL	Broad Law	125.18	344	eP	PKPdf	18 53 44.8	-1.6
BOJS	Bojanci	125.19	325	i PKPdf	PKPdf	18 53 45.8	-0.9
STON	Ston	125.22	321	i P	PKPdf	18 53 45.4	-1.5
STON	Ston	125.22	321	i P	PKPdf	18 53 44.7	-2.2
SRN	Sarande	125.24	317	P	PKPdf	18 53 45.8	-1.2
LJU	Ljubljana	125.27	326	i Pdiff	Pdif	18 50 30.8	+4.9
LJU				i		18 51 53.2	
LJU				i pPdiff	pPdif	18 52 01.9	+6.7
LJU				i PKPdf	PKPdf	18 53 46.0	-0.9
LJU				e		18 53 48.6	
LJU				epPKPdf	pPKPdf	18 55 21.9	+0.9
LJU				ePP	PP	18 55 36.4	-5.8
LJU				e		18 55 52.4	
LJU				e		18 56 38.8	
LJU				epPP		18 57 04.3	
LJU				e		19 00 27.0	
LJU				e		19 02 09.6	
LJU				e		19 03 36.8	
LJU				e		19 04 11.3	
LJU				e		19 05 02.7	
LJU				e		19 05 37.7	
LJU				e		19 06 50.1	
LJU				e		19 12 20.2	
LJU	Ljubljana	125.27	326	i P	PKPdf	18 53 45.5	-1.4
KBA	Koelnbreinsper	125.27	328	ePdiff	Pdif	18 50 32.1	+6.0
	comp=Z,6.6nm,1.2s						
KBA				i PKPdf	PKPdf	18 53 45.1	-2.0
	comp=Z,61nm,1.1s,SNR=22						
KBA				PKKPab	PKKPbc	19 03 34.2	+5.5
	comp=Z,21nm,0.7s						
KBA	Koelnbreinsper	125.27	328	ePKiKP	PP	18 55 33.2	-9.2
	comp=Z,123nm,1.0s						
KBA	Koelnbreinsper	125.27	328	PKIKP	PKPdf	18 53 45.7	-1.4
LKD2	Lefkada island	125.29	316	P	PKPdf	18 53 46.2	-1.0
LAWE	Loch Awe, Argy	125.34	346	eP	PKPdf	18 53 42.8	-4.0
PYL	PYLOS	125.35	313	ePKPdf	PKPdf	18 53 45.7	-1.7
PYL	PYLOS	125.35	313	P	PKPdf	18 53 45.7	-1.7
EVGI	Lefkada island	125.37	316	P	PKPdf	18 53 46.6	-0.7
KIJV	Kijevo	125.39	323	i P	PKPdf	18 53 44.0	-3.2
MYKA	Terra Mystica	125.39	327	ePdiff	Pdif	18 50 29.4	+2.9
	comp=Z,5.6nm,1.4s						
MYKA				ePKPdf	PKPdf	18 53 45.3	-1.9
	comp=Z,24nm,0.8s,SNR=11						
MYKA				ePKKPab	PKKPbc	19 03 32.9	+4.8
	comp=Z,116nm,1.2s,SNR=5.2						
MYKA	Terra Mystica	125.39	327	ePKiKP	PP	18 55 32.3	-11
	comp=Z,84nm,1.2s						
M65A	Busby, Falmout	125.40	40	P	PKPdf	18 53 45.8	-1.5
	baz=301						
MAKA	Makarska	125.41	322	i P	PKPdf	18 53 45.5	-1.7
KEK	Kerkira	125.45	317	ePKPdf	PKPdf	18 53 46.0	-1.5
KEK	Kerkira	125.45	317	P	PKPdf	18 53 46.0	-1.5
UDBI	Udbina	125.47	324	i P	PKPdf	18 53 46.2	-1.3
FSK	Fiskardo	125.51	315	P	PKPdf	18 53 46.4	-1.2
CEY	Cerknica	125.51	326	i P	PKPdf	18 53 46.3	-1.1
PGBU	Glenifferbraes	125.52	345	eP	PKPdf	18 53 45.8	-1.3
VLS	Valsamata	125.62	315	P	PKPdf	18 53 47.0	-0.9
ESK	Eskdalemuir	125.62	344	i PKIKP	PKPdf	18 53 46.4	-0.9
EDMD	Edmundbyers	125.70	343	eP	PKPdf	18 53 46.4	-1.1
GDLE	Glaisdale, N Y	125.71	342	eP	PKPdf	18 53 46.7	-0.8
RIY	Rijeka	125.73	326	P	PKPdf	18 53 46.5	-1.3
RIY	Rijeka	125.73	326	eP	PKPdf	18 53 46.6	-1.3
HVAR	Hvar	125.82	322	i P	PKPdf	18 53 46.6	-1.4
BHH	Howats Hill	125.83	344	eP	PKPdf	18 53 41.3	-6.4
MORI	Morici	125.88	324	i P	PKPdf	18 53 46.9	-1.2
TRI	Trieste	125.90	326	ePKPdf	PKPdf	18 53 47.5	-0.6
TRI	Trieste	125.90	326	ePKIKP	PKPdf	18 53 47.5	-0.6
ABTA	Abfaltersbach	125.92	328	ePdiff	Pdif	18 50 24.4	-4.5
	comp=Z,3.7nm,0.6s						
ABTA				ePKPdf	PKPdf	18 53 46.3	-1.9
	comp=Z,72nm,0.9s,SNR=18						
ABTA				ePKKPab	PKKPbc	19 03 30.5	+4.4
	comp=Z,60nm,0.9s,SNR=12						
ABTA	Abfaltersbach	125.92	328	ePKiKP	PP	18 55 31.1	-15
	comp=Z,108nm,1.0s						
NVLJ	Novalja	125.96	325	i P	PKPdf	18 53 46.9	-1.3
WATA	Walderalm	126.03	329	Pdiff	Pdif	18 50 29.1	-0.4
	comp=Z,1.3nm,0.4s						
WATA				i PKiKP	PKPdf	18 53 47.5	-1.0
	comp=Z,85nm,1.1s,SNR=26						
WATA				ePKKPab	PKKPbc	19 03 29.7	+3.9
	comp=Z,52nm,1.4s						
WATA	Walderalm	126.03	329	ePKiKP	PP	18 55 32.7	-15
	comp=Z,96nm,1.2s						
ZIRJ	Zirje	126.04	323	i P	PKPdf	18 53 46.9	-1.5
WTTA	Wattenberg	126.05	329	ePdiff	Pdif	18 50 28.1	-1.4
	comp=Z,0.9nm,0.5s						
WTTA				ePKiKP	PKPdf	18 53 47.3	-1.3
	comp=Z,152nm,1.0s,SNR=25						
WTTA				ePKKPab	PKKPbc	19 03 28.7	+3.0
	comp=Z,41nm,1.0s						
WTTA	Wattenberg	126.05	329	ePKiKP	PP	18 55 32.1	-15
	comp=Z,280nm,1.4s						
DUGI	Dugi Otok	126.19	324	i P	PKPdf	18 53 47.4	-1.4
HGN	Heimansgroeve	126.22	335	ePKPdf	PKPdf	18 53 48.0	-0.6
	comp=Z,1µm,1.1s						
HGN				epPKPdf	pPKPdf	18 55 28.0	+5.4
HGN				ePP	PP	18 55 53.7	+5.6
HGN				ePKS	PKSdf	18 57 20.2	-4.7
HGN				ePKKP	PKKPbc	19 03 29.3	+4.4
	comp=Z,115nm,1.2s						
KESW	Keswick, Cumbr	126.24	344	eP	PKPdf	18 53 41.3	-7.2
MOTA	Moosalm	126.26	329	ePdiff	Pdif	18 50 25.0	-5.5
	comp=Z,0.9nm,0.5s						
MOTA				ePKPdf	PKPdf	18 53 44.3	-4.7
	comp=Z,67nm,0.7s,SNR=17						
MOTA				ePKKPab	PKKPbc	19 03 29.2	+4.4
	comp=Z,21nm,0.8s						
MOTA	Moosalm	126.26	329	ePKiKP	PP	18 55 33.1	-16
	comp=Z,98nm,1.2s						
SQTA	Sankt Quirin	126.29	329	ePdiff	Pdif	18 50 27.8	-2.8
	comp=Z,0.7nm,0.4s						
SQTA				ePKPdf	PKPdf	18 53 44.7	-4.3
	comp=Z,77nm,0.9s,SNR=15						
SQTA				ePKKPab	PKKPbc	19 03 29.3	+4.6
	comp=Z,141nm,1.1s,SNR=7.6						
SQTA	Sankt Quirin	126.29	329	ePKiKP	PP	18 55 32.4	-17
	comp=Z,125nm,1.3s						
BEBN	Eben Emael	126.31	336	⇓PKiKP	PKPdf	18 53 47.6	-1.1
BEBN				⇑pPKP	pPKPdf	18 55 34.6	+12
MEM	Membach	126.31	335	⇑PKiKP	PKPdf	18 53 47.8	-1.0
MEM				⇑pPKP	pPKPdf	18 55 27.0	+4.3
RETA	Reutte	126.34	330	i PKPdf	PKPdf	18 53 47.6	-1.4
	comp=Z,39nm,0.9s,SNR=11						
RETA				ePKKPab	PKKPbc	19 03 29.9	+5.5
	comp=Z,150nm,1.6s,SNR=6.1						
RETA	Reutte	126.34	330	ePKiKP	PP	18 55 33.7	-15
	comp=Z,80nm,1.1s						
HPK	Haverah Park	126.35	342	eP	PKPdf	18 53 47.7	-1.0
ZANG	Zanguenga, Cho	126.36	82	eP	PKiKP	18 53 50.5	+0.1
LMK	Market Rasen	126.38	341	eP	PKPdf	18 53 46.2	-2.6
BCIP	Isla Barro Col	126.39	82	ePKPdf	PKPdf	18 53 49.0	-0.9
BCIP	Isla Barro Col	126.39	82	ePKIKP	PKPdf	18 53 49.0	-0.9
BCIP	Isla Barro Col	126.39	82	eP	PKPdf	18 53 49.6	-0.3
BCIP	Isla Barro Col	126.39	82	eP	PKPdf	18 53 50.1	+0.2
GAL1	Galloway	126.43	345	eP	PKPdf	18 53 39.3	-10
CFA	Coronel Fontan	126.49	135	PKhKP	PKPpre	18 53 33.9	
	comp=Z,3.4nm,0.5s,baz=167,slow=2.8,SNR=4.0						
CFA				PKP	PKPdf	18 53 49.1	-0.7
	comp=Z,56nm,0.6s,baz=252,slow=3.2,SNR=30						
CFA				pPKP	pPKPdf	18 55 26.9	+2.5
	comp=Z,58nm,0.8s,baz=112,slow=5.4,SNR=1.7						
CFA				SKKP		19 07 02.8	
	comp=Z,24nm,1.1s,baz=64,slow=4.1,SNR=4.4						
FASA	Fasano	126.52	320	eP	PKPdf	18 53 48.4	-1.1
TRQA	Tornquist	126.53	145	eP	PKiKP	18 53 55.0	+4.8
TRQA	Tornquist	126.53	145	eP	PKPdf	18 53 48.0	-1.7
CGL1	Ceglie Messapi	126.53	319	eP	PKPdf	18 53 48.1	-1.4
ATAH	Atahualpa	126.62	102	PKhKP	PKPpre	18 53 45.7	
	comp=Z,16nm,0.9s,baz=68,slow=1.8,SNR=7.3						
ATAH				PKP	PKPdf	18 53 51.0	+0.1
	comp=Z,63nm,0.8s,baz=209,slow=1.5,SNR=21						
ATAH				pPKP	pPKPdf	18 55 29.4	+4.3
	comp=Z,43nm,0.9s,baz=51,slow=7.4,SNR=0.7						
FETA	Feichten	126.67	329	Pdiff	Pdif	18 50 27.8	-4.5
	comp=Z,0.9nm,0.5s						
FETA				ePKiKP	PKPdf	18 53 48.9	-0.9
	comp=Z,108nm,1.1s,SNR=13						
FETA	Feichten	126.67	329	ePKiKP	PP	18 55 33.4	-18
	comp=Z,84nm,1.2s						
WACR	West Acre	126.67	340	eP	PKPdf	18 53 40.2	-9.2
BAI	Bari	126.68	320	eP	PKPdf	18 53 48.6	-1.1
UPA	Univ. de Panam	126.69	82	eP	PKPdf	18 53 47.8	-2.7
TAR1	Taranto	126.72	319	eP	PKPdf	18 53 49.1	-0.7
BCLA	Clavier	126.75	335	⇑PKiKP	PKPdf	18 53 48.9	-0.7
BCLA				⇑pPKP	pPKPdf	18 55 25.3	+1.7
MASS	Massafra	126.75	319	eP	PKPdf	18 53 48.4	-1.5
UCC	Uccle	126.84	336	⇓PKiKP	PKPdf	18 53 48.8	-1.0
UCC				⇑pPKP	pPKPdf	18 55 22.6	-1.1
LBWR	Ladybower, Pea	126.86	342	eP	PKPdf	18 53 49.1	-0.7
DAVA	Damuels	126.92	330	ePdiff	Pdif	18 50 26.8	-6.6
	comp=Z,1.8nm,0.8s						
DAVA				ePKPdf	PKPdf	18 53 44.5	-5.8
	comp=Z,17nm,0.6s,SNR=17						
DAVA	Damuels	126.92	330	ePKiKP	PP	18 55 33.4	-20
	comp=Z,156nm,1.4s						
IOMK	Kirk Michael	126.93	344	eP	PKPdf	18 53 42.7	-7.1
SG1	Sgolgore (BA)	126.95	320	eP	PKPdf	18 53 48.8	-1.5
WLF	Walferdange	126.96	334	⇓PKiKP	PKiKP	18 53 50.3	-0.3
WLF				⇑pPKP	pPKPdf	18 55 27.2	+3.2
MATE	Matera	127.03	320	⇓iP	PKPdf	18 53 49.2	-1.2
NNA	Nana	127.08	108	PKhKP	PKPpre	18 53 42.6	
	comp=Z,4.7nm,0.5s,baz=270,slow=5.9,SNR=4.4						
NNA				PKP	PKPdf	18 53 49.8	-1.5
	comp=Z,69nm,0.9s,baz=293,slow=3.9,SNR=16						
NNA				pPKP	pPKPdf	18 55 29.3	+3.6
	comp=Z,60nm,1.0s,baz=85,slow=12,SNR=1.2						
NNA				SKKP		19 06 58.5	
	comp=Z,28nm,0.9s,baz=339,slow=2.3,SNR=6.9						
SNF	Seneffe	127.09	336	⇑PKPdf	PKPdf	18 53 44.7	-5.5
SNF				⇑PKiKP	PKiKP	18 53 49.7	-1.1
DAVOX	Davos/Dischmat	127.26	330	PKhKP	PKPpre	18 53 43.1	
	comp=Z,36nm,0.7s,baz=54,slow=3.9,SNR=20						
DAVOX				PKP	PKPdf	18 53 50.6	-0.4
	comp=Z,98nm,0.7s,baz=207,slow=2.3,SNR=22						
DAVOX				pPKP	pPKPdf	18 55 30.6	+5.6
	comp=Z,56nm,0.8s,baz=18,slow=9.6,SNR=2.2						
DAVOX				PKKPbc	PKKPdf	19 03 26.6	-39
	comp=Z,34nm,0.8s,baz=232,slow=4.4,SNR=11						
DAVOX				SKKP		19 07 02.5	
	comp=Z,30nm,0.9s,baz=265,slow=5.6,SNR=4.9						
DOU	Dourbes	127.29	336	⇑PKiKP	PKPdf	18 53 50.1	-0.6
DOU				⇓pPKP	pPKPdf	18 55 27.6	+3.0
CWF	Charnwood Fore	127.30	341	eP	PKPdf	18 53 41.7	-8.9
TUMC	Tumaco	127.38	91	eP	PKiKP	18 53 58.1	+5.7
WME	Myndd Eilian	127.62	344	eP	PKPdf	18 53 37.7	-13
WPS	Cemaes, Angles	127.67	344	eP	PKPdf	18 53 43.4	-7.8
MONG	Mongu	127.73	247	i P	PKPdf	18 53 52.0	-0.5
WLF1	Llynfaes	127.75	344	eP	PKPdf	18 53 43.0	-8.4
FOEL	Foel Wylfa	127.75	343	eP	PKPdf	18 53 42.9	-8.6
TIP	Timpagrande	127.76	318	P	PKPdf	18 53 43.2	-8.8
TIP	Timpagrande	127.76	318	⇓iP	PKPdf	18 53 52.0	0.0
YLL	Llanberis	127.81	343	eP	PKPdf	18 53 43.3	-8.3
YRC	Rhoscolyn	127.83	344	eP	PKPdf	18 53 42.7	-8.8
HLM1	Long Mynd	127.98	342	eP	PKPdf	18 53 44.2	-7.7
GRGC	Isla de Gorgon	128.00	89	eP	PKPdf	18 53 51.9	-1.2
VCA	Vinchina	128.06	132	eP	PKiKP	18 53 53.5	-0.1
AQU	L'Aquila	128.13	323	eP	PKPdf	18 53 46.4	-6.2
MCH1	Michaelchurch	128.47	342	eP	PKPdf	18 53 45.1	-7.7
MONM	Monmouth	128.54	342	eP	PKPdf	18 53 45.5	-7.4
PB10	IPOC Station P	128.74	124	eP	PKPdf	18 53 53.8	-0.4
CPAS2	Pasto	128.81	92	eP	PKiKP	18 54 02.8	+7.1
SOLC	Bahia Solano	128.84	85	eP	PKiKP	18 53 58.3	+3.0
BBAC	Balboa, Cauca	128.87	91	eP	PKPdf	18 53 53.3	-1.7
MALC	Bahia Malaga	128.87	88	eP	PKiKP	18 54 01.3	+5.9
MALC	Bahia Malaga	128.87	88	eP	PKiKP	18 54 01.9	+6.4
RSBS	Rosebush, Pemb	129.03	343	eP	PKPdf	18 53 46.0	-8.0
CRUC	La Cruz	129.13	91	eP	PKPdf	18 53 55.3	-0.4
TCA	Tanti	129.19	137	eP	PKPdf	18 53 52.6	-2.4
PB05	IPOC Station P	129.32	124	eP	PKiKP	18 54 01.5	+5.2
POPC	Popayan, Colom	129.46	90	eP	PKPdf	18 53 51.9	-4.2
SOTA	Rioblanco	129.51	91	eP	PKPdf	18 53 55.4	-1.2
GTBY	Guantanamo Bay	129.71	67	eP	PKPdf	18 53 50.2	-5.9
YOTC	Yotoco, Valle	129.86	88	eP	PKPdf	18 53 51.4	-5.4
PB06	IPOC Station P	129.91	124	eP	PKiKP	18 54 02.4	+4.9
PLMC	San Jos del P	129.94	87	eP	PKiKP	18 54 01.0	+3.3
DBBC	Dabeiba	130.02	84	eP	PKPdf	18 53 50.8	-6.2
PB03	IPOC Station P	130.04	123	eP	PKiKP	18 54 02.7	+4.9
DYA	Yadsworthy	130.12	342	eP	PKPdf	18 53 46.5	-9.5
MARP	Paez Belalcaza	130.20	90	eP	PKPdf	18 53 57.0	-0.6
VAE	Valguarnera	130.22	317	PKP	PKPdf	18 53 56.2	-0.5
	comp=Z,19nm,0.8s,baz=43,slow=12,SNR=4.6						
VAE				SKKP		19 06 56.5	
	comp=Z,50nm,1.2s,baz=255,slow=4.6,SNR=3.1						
PB02	IPOC Station P	130.24	122	eP	PKPdf	18 53 57.5	+0.2
CFLOR	Florencia	130.42	91	eP	PKiKP	18 54 02.1	+3.5
FLOC	Florencia	130.43	91	eP	PKPdf	18 53 54.1	-3.7
LVC	Limon Verde	130.50	124	PKhKP	PKPpre	18 53 45.4	
	comp=Z,7.5nm,0.5s,baz=183,slow=8.9,SNR=20						
LVC				PP	PP	18 56 21.8	+4.4
	comp=Z,49nm,0.9s,baz=213,slow=5.9,SNR=6.1						
LVC				SKP		18 56 51.4	
	comp=Z,437nm,1.1s,baz=254,slow=4.4,SNR=5.7						
LVC				SKKPbc	SKKPbc	19 06 29.5	+7.2
	comp=Z,16nm,0.8s,baz=105,slow=7.9,SNR=5.0						
PB09	IPOC Station P	130.58	123	eP	PKiKP	18 54 04.1	+5.2
PB01	IPOC Station P	130.70	122	eP	PKiKP	18 54 00.3	+1.2
BETC	Betania	130.70	90	eP	PKPdf	18 53 58.5	+0.2
HELC	Santa Helena	130.71	85	eP	PKPdf	18 53 58.3	-0.4
PSGC	Pisagua	130.75	120	eP	PKiKP	18 54 00.3	+1.1
GUY2C	Guyana, Caldas	130.86	87	eP	PKPdf	18 53 58.1	-1.0
RREF	El Recreo	130.88	87	eP	PKPdf	18 53 59.6	+0.2
ORTC	Ortega, Tolima	130.95	88	eP	PKPdf	18 53 57.8	-0.9
LPA	La Plata	131.05	145	cePKIKP	PKiKP	18 53 59.0	-0.2
LPA				ePP	PP	18 56 19.0	-0.7
LPA				eSKIKP		18 56 54.0	
LPA				eSKIKS		18 57 33.0	
LPA				epPP		18 57 44.0	
LPA				ePPP	PPP	18 59 10.0	
LPA				eSKS	SKSdf	19 00 28.0	-4.4
LPA				eSKIKS		19 00 33.0	
LPA				eSDIFF	Sdif	19 03 50.0	-3.1
LPA				ePS	PS	19 06 38.0	-1.0
LPA				ePSP	PSP	19 08 21.0	
LPA				ePPP	PPP	19 10 18.0	
LPA				eSS	SS	19 13 21.0	+2.0
LPA				eSSS	SSS	19 18 18.0	
PB11	IPOC Station P	131.09	121	eP	PKPdf	18 53 45.9	-13
PB11				i P	PKPdf	18 53 45.9	-13
PTLC	Puerto Leguiza	131.17	93	eP	PKiKP	18 54 01.5	+1.4
TSUM	Tsumeb	131.25	240	i P	PKPdf	18 53 56.9	-2.4
TSUM	Tsumeb	131.25	240	i P	PKPdf	18 53 56.9	-2.4
PRAC	Prado	131.30	89	eP	PKPdf	18 53 58.4	-1.0
ZARC	Zaragoza, Cauc	131.36	84	eP	PKPdf	18 53 50.5	-8.9
NORC	Norcasia	131.36	86	eP	PKPdf	18 53 58.0	-1.5
PB08	IPOC Station P	131.36	121	eP	PKiKP	18 54 05.5	+4.8
PTBC	PUERTO BERRIO,	131.77	85	eP	PKPdf	18 53 51.2	-9.1
SMRC	Santa Marta, M	131.80	79	eP	PKiKP	18 54 03.1	+1.9
ARGC	Ariguani, Magd	131.87	80	eP	PKPdf	18 53 58.5	-1.9
CROSA	EL ROSAL, CUND	131.90	87	eP	PKiKP	18 54 09.6	+7.5
ROSC	El Rosal	131.90	87	PKhKP	PKPpre	18 53 55.8	
	comp=Z,21nm,0.9s,baz=109,slow=13,SNR=3.6						
ROSC				PKP	PKPdf	18 53 58.8	-2.2
	comp=Z,56nm,0.8s,baz=137,slow=6.5,SNR=21						
ROSC				SKP		18 56 60.0	
	comp=Z,733nm,1.0s,baz=212,slow=7.7,SNR=13						
ROSC	El Rosal	131.90	87	eP	PKPdf	18 53 60.0	-1.0
SMLC	San Martn de	132.09	82	eP	PKiKP	18 54 13.6	+12
SMLC	San Martn de	132.09	82	eP	PKPdf	18 53 59.6	-1.2
SLA	San Lorenzo	132.21	129	eP	PKPdf	18 53 58.5	-2.5
MACC	Macarena, Meta	132.26	91	eP	PKPdf	18 54 00.6	-0.6
CHIC	Chingaza	132.48	87	eP	PKPpre	18 53 57.3	
VILC	Villavicencio,	132.50	88	eP	PKPdf	18 54 01.6	-0.2
CODC	Agustn Codazz	132.65	80	eP	PKPpre	18 53 51.7	
CODC	Agustn Codazz	132.65	80	eP	PKPdf	18 53 58.6	-3.3
CCODA	Codazzi, Cesar	132.65	80	eP	PKiKP	18 54 05.4	+2.4
CVALL	Valledupar, Ce	132.79	79	eP	PKiKP	18 54 08.7	+5.3
OCAC	Ocana	132.86	83	eP	PKPdf	18 53 59.3	-3.1
GIRC	Giron, Santand	133.02	84	eP	PKPpre	18 53 51.5	
BARC	Barichara	133.03	85	eP	PKPpre	18 53 57.6	
RUSC	La Rusia	133.14	86	eP	PKPdf	18 53 59.5	-3.9
OGAUY	Aigu	133.27	147	eP	PKPdf	18 54 01.7	-0.8
PAMC	Pamplona, Colo	133.50	84	eP	PKPdf	18 54 02.6	-1.4
GUVC	San Jose del G	133.50	90	eP	PKiKP	18 54 07.5	+2.7
AGZ	La Independenc	133.74	87	eP	PKPdf	18 53 58.7	-5.3
LPAZ	La Paz	133.78	117	PKhKP	PKPpre	18 53 53.8	
	comp=Z,22nm,1.0s,baz=20,slow=5.4,SNR=12						
LPAZ				PKP	PKPdf	18 54 02.1	-2.6
	comp=Z,68nm,0.6s,baz=255,slow=2.3,SNR=20						
LPAZ				SKP		18 57 02.6	
	comp=Z,300nm,1.0s,baz=310,slow=3.2,SNR=5.2						
LPAZ				SKKPbc	SKKPbc	19 06 21.8	+11
	comp=Z,20nm,0.9s,baz=92,slow=5.8,SNR=4.8						
YOPC	Yopal, Colombi	133.79	86	eP	PKPpre	18 53 57.9	
CAPV	Capacho	133.87	83	eP	PKPdf	18 54 02.6	-1.8
URIC	Uribia, Colomb	133.93	78	eP	PKPpre	18 53 58.8	
TAMC	Tame, Arauca	134.42	85	eP	PKPpre	18 53 59.8	
KEST	Kesra	134.58	319	PKhKP	PKPpre	18 53 55.1	
	comp=Z,30nm,0.9s,baz=356,slow=7.2,SNR=11						
KEST				SKP		18 57 02.9	
	comp=Z,133nm,1.1s,baz=347,slow=7.3,SNR=3.7						
KEST				SKKPbc	SKKPbc	19 06 23.1	+15
	comp=Z,31nm,1.0s,baz=263,slow=4.7,SNR=3.7						
CMAH	Djebel Manchou	135.28	321	P	PKPdf	18 54 04.0	-2.3
ABSA	Djebel Ababsia	135.46	320	P	PKiKP	18 54 07.7	-0.6
SDV	Santo Domingo	135.48	81	PKhKP	PKPpre	18 53 57.2	
	comp=Z,62nm,1.0s,baz=310,slow=3.1,SNR=11						
SDV				SKP		18 57 07.4	
	comp=Z,144nm,1.1s,baz=284,slow=16,SNR=1.9						
SDV	Santo Domingo	135.48	81	eP	PKPdf	18 53 57.1	-10
CAEH	'Ain El Ouahch	135.54	321	P	PKiKP	18 54 07.9	-0.4
CKFL	Kef-Lekhel	135.86	321	P	PKPdf	18 54 05.0	-2.4
CASM	Ain Smara	136.09	321	P	PKPdf	18 54 02.8	-5.0
CTEI	Djebel Teioual	136.27	321	P	PKPdf	18 54 04.2	-4.0
DFRA	Djebel Bou Aff	136.29	322	P	PKPdf	18 54 04.6	-3.6
SET	Setif	136.81	322	P	PKPdf	18 54 08.0	-1.2
CKHR	Kef el Ahmar	136.86	322	P	PKPdf	18 54 06.7	-2.6
CPUP	Villa Florida	137.28	137	PKhKP	PKPpre	18 53 57.3	
	comp=Z,10.0nm,0.8s,baz=251,slow=2.7,SNR=9.0						
CPUP				PKP	PKPdf	18 54 06.3	-3.8
	comp=Z,65nm,0.7s,baz=246,slow=4.4,SNR=32						
CPUP				SKP		18 57 08.6	
	comp=Z,130nm,1.2s,baz=219,slow=6.5,SNR=4.0						
CPUP				SKKPbc	SKKPbc	19 05 51.1	-6.0
	comp=Z,14nm,1.1s,baz=270,slow=1.0,SNR=2.3						
SJG	San Juan	138.37	67	PKhKP	PKPpre	18 54 03.2	
	comp=Z,47nm,0.8s,baz=157,slow=4.5,SNR=11						
SJG				PKP	PKPdf	18 54 12.3	-0.1
	comp=Z,535nm,0.8s,baz=30,slow=6.0,SNR=39						
SJG	San Juan	138.37	67	eP	PKPdf	18 54 07.6	-4.7
UCM	Universidad Co	138.41	333	PKP	PKPdf	18 54 08.2	-3.7
UCM	Universidad Co	138.41	333	PP	PP	18 57 24.2	+19
PBRG	Braganca	138.59	338	ePKPdf	PKPdf	18 54 08.6	-3.6
PBRG	Braganca	138.59	338	ePP	PP	18 57 16.1	+10
PGAV	Gavieira, Arco	139.00	340	ePKPdf	PKPdf	18 54 10.0	-3.0
PGAV	Gavieira, Arco	139.00	340	ePP	PP	18 57 20.4	+11
PGAV	Gavieira, Arco	139.00	340	eSS	SS	19 15 39.7	+47
EBNR	Beni Rached	139.04	325	P	PKPdf	18 54 13.0	-0.2
PCAB	Cabril	139.14	339	ePKPdf	PKPdf	18 54 09.8	-3.4
PCAB	Cabril	139.14	339	ePP	PP	18 57 19.9	+10
CNLB	Canela	139.21	146	eP	PKPdf	18 54 12.0	-1.7
ECHA	Ech Chlef	139.24	325	P	PKPdf	18 54 12.0	-1.4
ESDC	Sonseca Array	139.25	334	PKhKP	PKPpre	18 54 08.0	
	comp=Z,16nm,0.8s,baz=27,slow=3.5,SNR=14						
ESDC				SKPbc	SKiKP	18 57 13.1	-1.5
	comp=Z,40nm,1.0s,baz=27,slow=5.3,SNR=3.8						
ESDC				PKKP	PKKPdf	19 03 43.6	+1.7
	comp=Z,4.3nm,0.8s,baz=248,slow=1.6,SNR=4.4						
ESDC				SKKPbc	SKKPbc	19 05 46.9	-3.7
	comp=Z,18nm,1.1s,baz=250,slow=1.5,SNR=4.1						
MVO	Moncorvo	139.25	338	ePKPdf	PKPdf	18 54 11.9	-1.6
MVO	Moncorvo	139.25	338	ePP	PP	18 57 21.1	+10
MVO	Moncorvo	139.25	338	eSS	SS	19 15 50.6	+55
POLO	Lamas de Olo	139.35	339	ePKPdf	PKPdf	18 54 10.2	-3.5
POLO	Lamas de Olo	139.35	339	ePP	PP	18 57 17.6	+6.3
PVRL	Vila Real	139.41	339	ePKPdf	PKPdf	18 54 10.7	-3.0
PVRL	Vila Real	139.41	339	ePP	PP	18 57 17.8	+6.2
EANR	'Ain N'Sour	139.53	325	P	PKPdf	18 54 11.0	-3.1
ETRT	Tiaret	139.81	324	P	PKPdf	18 54 07.0	-7.7
SESP	Santiago Espad	139.83	331	P	PKPdf	18 54 06.6	-8.2
PTO	Porto	139.84	339	ePKPdf	PKPdf	18 54 13.3	-1.1
PVIS	Viseu	139.96	338	ePKPdf	PKPdf	18 54 12.9	-1.8
PVIS	Viseu	139.96	338	ePP	PP	18 57 19.3	+4.3
SIV	San Ignacio	140.08	121	PKhKP	PKPpre	18 54 05.6	
	comp=Z,4.8nm,0.5s,baz=261,slow=5.0,SNR=3.6						
SIV				PKP	PKPdf	18 54 14.4	-1.2
	comp=Z,121nm,0.7s,baz=250,slow=5.3,SNR=41						

SIV				PP	**PP**	**18 57 23.3**	**+6.2**
	comp=Z,202nm,0.9s,baz=231,slow=5.2,SNR=7.5						
SIV				SKKPbc	SKKPbc	19 05 47.8	+1.6
	comp=Z,24nm,1.0s,baz=102,slow=6.1,SNR=5.8						
MTE	**Manteigas**	**140.11**	**338**	*e*PKPdf	**PKPdf**	**18 54 13.1**	**-1.9**
MTE	**Manteigas**	**140.11**	**338**	*e*PP	PP	18 57 22.5	+6.6
MTE	**Manteigas**	**140.11**	**338**	*e*SS	SS	19 15 23.0	+17
PCBR	**Castelo Branco**	**140.56**	**337**	*e*PKPdf	**PKPdf**	**18 54 14.1**	**-1.7**
PCBR	**Castelo Branco**	**140.56**	**337**	*e*PP	PP	18 57 20.2	+1.6
COI	**Coimbra**	**140.60**	**339**	*e*PKPdf	**PKPdf**	**18 54 14.9**	**-0.9**
PMRV	**Marv??o**	**140.89**	**337**	*e*PKPdf	**PKPdf**	**18 54 14.2**	**-2.2**
PMRV	**Marv??o**	**140.89**	**337**	*e*PP	PP	18 57 23.9	+3.3
PTOM	**Tomar**	**141.11**	**338**	*e*PKPdf	**PKPdf**	**18 54 16.6**	**-0.2**
PTOM	**Tomar**	**141.11**	**338**	*e*PP	PP	18 57 23.6	+1.7
SABA	**Saba**	**141.17**	**67**	*e*P	**PKPdf**	**18 54 15.5**	**-2.0**
SMRT	**St. Maarten**	**141.20**	**66**	*e*P	**PKPdf**	**18 54 17.0**	**-0.5**
PCRV	**Puerto La Cruz**	**141.27**	**79**	PKhKP	PKPpre	18 54 09.4	
	comp=Z,37nm,0.6s,baz=24,slow=3.7,SNR=25						
PCRV				PKP	**PKPdf**	**18 54 16.1**	**-1.6**
	comp=Z,182nm,1.0s,baz=344,slow=7.4,SNR=22						
SEUS	**St. Eustatius**	**141.44**	**67**	*e*P	**PKPdf**	**18 54 15.8**	**-2.1**
PMTG	**Montargil**	**141.52**	**337**	*e*PKPdf	**PKPdf**	**18 54 14.9**	**-2.6**
PMTG	**Montargil**	**141.52**	**337**	*e*PP	PP	18 57 24.2	-0.2
ALMR	**Almeirim**	**141.58**	**338**	*e*PKPdf	**PKPdf**	**18 54 16.0**	**-1.6**
ALMR	**Almeirim**	**141.58**	**338**	*e*PKPdf	**PKPdf**	**18 54 16.0**	**-1.6**
ALMR	**Almeirim**	**141.58**	**338**	*e*PP	PP	18 57 24.9	+0.2
BSK	**Brimstone Hill**	**141.61**	**67**	*e*P	**PKPdf**	**18 54 19.0**	**+0.8**
SKI	**Saint Kitts**	**141.71**	**67**	*e*P	**PKPdf**	**18 54 17.1**	**-1.4**
EMAL	**Malaga-Limoner**	**141.82**	**331**	PKP	**PKPdf**	**18 54 11.5**	**-6.5**
EMAL	**Malaga-Limoner**	**141.82**	**331**	PP	PP	18 57 30.7	+4.3
NVRH	**Round Hill, Ne**	**141.88**	**67**	*e*P	PKPdf	18 54 10.0	-8.7
NVBH	**Bath Hotel, Ne**	**141.88**	**67**	*e*P	**PKPdf**	**18 54 14.0**	**-4.7**
NEV	**Hard Times**	**141.92**	**67**	*e*P	**PKPdf**	**18 54 13.5**	**-5.3**
PMAFR	**Mafra**	**142.02**	**339**	*e*PKPdf	**PKPdf**	**18 54 19.1**	**+0.7**
LIJA	**Lijar**	**142.16**	**333**	PKP	**PKPdf**	**18 54 14.1**	**-4.8**
LIS	**Lisbon**	**142.18**	**338**	*e*PKPdf	**PKPdf**	**18 54 17.0**	**-1.7**
LIS	**Lisbon**	**142.18**	**338**	*e*PKPdf	**PKPdf**	**18 54 19.0**	**+0.3**
MELI	**Melilla**	**142.22**	**328**	PKP	**PKPdf**	**18 54 13.2**	**-5.6**
MELI	**Melilla**	**142.22**	**328**	PP	PP	18 57 32.1	+3.2
PBEJ	**Beja**	**142.28**	**336**	*e*PKPdf	**PKPdf**	**18 54 19.4**	**+0.5**
PBEJ	**Beja**	**142.28**	**336**	*e*PP	PP	18 57 29.1	+0.1
MLYT	**Lee's Yard**	**142.38**	**68**	*e*P	**PKPdf**	**18 54 14.6**	**-5.1**
REAL	**Reales**	**142.41**	**332**	PKP	**PKPdf**	**18 54 15.2**	**-4.2**
PNCL	**Nicolau / Gran**	**142.47**	**337**	*e*PKPdf	**PKPdf**	**18 54 18.6**	**-0.6**
PNCL	**Nicolau / Gran**	**142.47**	**337**	*e*PP	PP	18 57 27.3	-2.8
GIBL	**Gibalbin**	**142.48**	**333**	PKP	**PKPdf**	**18 54 15.6**	**-3.7**
ANWB	**Willy Bob**	**142.49**	**66**	*e*P	**PKiKP**	**18 54 22.2**	**-0.8**
ALJ	**Aljibe**	**142.58**	**332**	PKP	**PKPdf**	**18 54 16.2**	**-3.3**
MESJ	**Messejana**	**142.58**	**336**	*e*PKPdf	**PKPdf**	**18 54 17.8**	**-1.6**
MESJ	**Messejana**	**142.58**	**336**	*e*PKPdf	**PKPdf**	**18 54 16.5**	**-2.9**
MESJ	**Messejana**	**142.58**	**336**	*e*PP	PP	18 57 28.4	-2.4
BPA	**Boggy Peak**	**142.60**	**67**	*e*P	**PKiKP**	**18 54 23.3**	**0.0**
PCVE	**Castro Verde**	**142.69**	**336**	*e*PKPdf	**PKPdf**	**18 54 19.6**	**0.0**
PCVE	**Castro Verde**	**142.69**	**336**	*e*PP	PP	18 57 32.8	+1.4
MOMI	**Momias**	**142.78**	**332**	PKP	**PKPdf**	**18 54 19.5**	**-0.3**
SFS	**San Fernando**	**142.89**	**333**	PKP	**PKPdf**	**18 54 14.8**	**-5.2**
SFS	**San Fernando**	**142.89**	**333**	PP	PP	18 57 28.2	-4.4
CNIL	**Conil**	**142.90**	**333**	PKP	**PKPdf**	**18 54 17.2**	**-2.8**
CEU	**Ceuta**	**142.96**	**332**	PKP	**PKPdf**	**18 54 14.6**	**-5.6**
CEU	**Ceuta**	**142.96**	**332**	PP	PP	18 57 33.1	-0.1
PBDV	**Barranco-do-Ve**	**142.98**	**336**	*e*PKPdf	**PKPdf**	**18 54 18.8**	**-1.4**
PVLZ	**Peæn de**	**143.02**	**330**	PKP	PKPbc	18 54 18.9	+1.1
PVLZ	**Peæn de**	**143.02**	**330**	PP	PP	18 57 36.6	+3.0
PTEO	**Sao Teotonio**	**143.04**	**337**	*e*PKPdf	PKPab	18 54 17.0	0.0
PTEO	**Sao Teotonio**	**143.04**	**337**	*e*PP	PP	18 57 31.5	-2.0
MORF	**Marmelete**	**143.22**	**337**	*e*PKPdf	PKPbc	18 54 19.1	+0.8
MORF	**Marmelete**	**143.22**	**337**	*e*PKPdf	PKPab	18 54 17.8	+0.1
MORF	**Marmelete**	**143.22**	**337**	*e*PP	PP	18 57 38.9	+4.3
MDPO	**Dominica; Chan**	**143.36**	**69**	*e*P	PKPab	18 54 17.7	-1.1
TDRA	**Tendrara**	**143.41**	**325**	P	PKPab	18 54 00.4	-18
PFVI	**Vila Bisbo**	**143.44**	**337**	*e*PKPdf	**PKPdf**	**18 54 21.8**	**+0.8**
PFVI	**Vila Bisbo**	**143.44**	**337**	*e*PP	PP	18 57 36.7	+0.8
MDN	**Morne-Daniel**	**143.48**	**70**	*e*P	PKPbc	18 54 19.6	-0.1
DWS	**Wesley**	**143.50**	**69**	*e*P	PKPab	18 54 18.3	-1.0
DPMT	**Pointe Michel**	**143.51**	**70**	*e*P	PKPab	18 54 19.5	+0.1
DBCT	**Belle View Cho**	**143.54**	**70**	*e*P	PKPbc	18 54 19.8	-0.2
DLPL	**La Plaine**	**143.61**	**70**	*e*P	PKPab	18 54 18.8	-1.0
FDF	**Fort de France**	**143.85**	**70**	*e*PKPdf	PKPab	18 54 19.5	-1.2
FDF	**Fort de France**	**143.85**	**70**	*e*P	PKPab	18 54 19.5	-1.2
FDF	**Fort de France**	**143.85**	**70**	*e*PKIKP	PKPab	18 54 19.5	-1.2
GRGR	**Grenville**	**143.90**	**75**	*e*P	PKPab	18 54 17.2	-3.7
SVB	**Belmont**	**144.07**	**73**	*e*P	**PKPab**	**18 54 19.4**	**-2.2**
FCV	**Fort Charlotte**	**144.10**	**73**	*e*P	**PKiKP**	**18 54 27.0**	**+0.6**
SSV	**Crater Summit**	**144.12**	**73**	*e*P	**PKPab**	**18 54 20.9**	**-0.8**
SLDE	**Delcer**	**144.14**	**72**	*e*P	**PKPdf**	**18 54 23.1**	**+0.3**
SLB	**Belfond**	**144.16**	**72**	*e*P	**PKPab**	**18 54 21.4**	**-0.6**
SLBI	**Saint Lucia, B**	**144.18**	**72**	*e*P	**PKPab**	**18 54 20.3**	**-1.6**
TAM	**Tamanrasset**	**144.19**	**304**	*e*PKPbc	**PKPdf**	**18 54 22.5**	**-0.4**
TAM	**Tamanrasset**	**144.19**	**304**	*e*PKIKP	**PKPdf**	**18 54 22.5**	**-0.4**
H07N1	**FLORES T-PHASE**	**144.19**	**7**	*e*PKP	PKPbc	18 54 21.4	+0.1
H07N1				*e*pPKP	pPKPdf	18 55 55.3	-1.2
SLW	**Petit Monier**	**144.21**	**72**	*e*P	**PKPdf**	**18 54 22.7**	**-0.2**
SLPA	**Patience**	**144.26**	**72**	*e*P	**PKPdf**	**18 54 23.3**	**+0.3**
MCLT	**Moule a Chique**	**144.28**	**72**	*e*P	PKPbc	18 54 20.1	-2.1
TPP	**Pointe-a-Pierr**	**144.37**	**78**	*e*P	**PKPab**	**18 54 22.7**	**0.0**
TRN	**Trinidad (W)**	**144.37**	**77**	*e*P	PKPbc	18 54 20.4	-2.2
H07S1	**FLORES T-PHASE**	**144.49**	**7**	*e*PKP	**PKPab**	**18 54 22.3**	**-0.1**
H07S1				*e*pPKP	**pPKPdf**	**18 55 56.5**	**-0.5**
TBH	**Brigand Hill**	**144.72**	**78**	*e*P	**PKPab**	**18 54 24.6**	**+0.6**
IFR	**Ifrane**	**144.74**	**329**	PKP	PKPbc	18 54 19.2	-4.3
IFR	**Ifrane**	**144.74**	**329**	PP	PP	18 57 46.8	+2.7
MDT	**Midelt**	**145.01**	**327**	PKP	**PKPdf**	**18 54 23.5**	**-0.4**
	comp=Z,248nm,1.0s,baz=58,slow=3.9,SNR=182						
MDT				pPKP	**pPKPdf**	**18 55 59.1**	**+1.0**
	comp=Z,166nm,1.1s,baz=242,slow=3.3,SNR=1.5						
MDT				SKKPbc	SKKPbc	19 05 23.7	-3.6
	comp=Z,7.8nm,1.0s,baz=280,slow=7.3,SNR=2.8						
PGRA	**Graciosa**	**145.10**	**3**	*e*PKP	**PKPdf**	**18 54 23.6**	**-0.2**
PGRA				*e*pPKP	pPKPbc	18 55 57.2	+0.7
TOSP	**Speyside**	**145.12**	**76**	*e*P	**PKPdf**	**18 54 23.6**	**-0.9**
ROSA	**Rosais**	**145.40**	**3**	*e*PKP	**PKPdf**	**18 54 24.1**	**-0.2**
ROSA				*e*pPKP	pPKPbc	18 55 57.7	+0.4
ROSA	**Rosais**	**145.40**	**3**	*e*PKPab	**PKPbc**	**18 54 25.4**	**+0.3**
PSCM	**Serra do Cume**	**145.46**	**1**	*e*PKP	**PKPbc**	**18 54 24.9**	**-0.4**
PSCM				*e*pPKP	pPKPbc	18 55 57.6	+0.1
PCED	**Cedros**	**145.46**	**4**	*e*PKP	**PKPdf**	**18 54 24.1**	**-0.3**
PCED				*e*pPKP	pPKPbc	18 55 57.6	+0.2
PMAN	**Manadas**	**145.49**	**3**	*e*PKP	**PKPbc**	**18 54 25.6**	**+0.3**
PMAN				*e*pPKP	pPKPbc	18 55 57.9	+0.4
ADH	**Angra Heroismo**	**145.50**	**2**	*e*PKP	**PKPbc**	**18 54 25.3**	**-0.1**
ADH				*e*pPKP	**pPKPdf**	**18 55 58.4**	**-0.3**
CALA	**Caldeira**	**145.51**	**4**	*e*PKP	**PKiKP**	**18 54 29.0**	**+0.2**
CALA				*e*pPKP	pPKPbc	18 55 58.1	+0.4
SPB	**Sao Paulo**	**145.55**	**144**	*e*P	**PKPbc**	**18 54 26.1**	**+0.2**
HOR	**Horta**	**145.57**	**4**	*e*PKP	**PKPbc**	**18 54 25.6**	**0.0**
HOR				*e*pPKP	pPKPbc	18 55 58.0	+0.3
PICO	**Pico**	**145.61**	**3**	*e*PKP	**PKPbc**	**18 54 25.9**	**+0.1**
PICO				*e*pPKP	pPKPab	18 55 55.5	-1.7
PCAN	**Candelaria**	**145.64**	**3**	*e*PKP	**PKPdf**	**18 54 24.6**	**-0.2**
PCAN				*e*pPKP	pPKPbc	18 55 58.0	0.0
BCHC	**Barbados, Cave**	**145.64**	**73**	*e*P	**PKiKP**	**18 54 31.5**	**+1.9**
PPNO	**Prainha do Nor**	**145.64**	**3**	*e*PKP	**PKPdf**	**18 54 24.4**	**-0.4**
PPNO				*e*pPKP	pPKPab	18 55 57.0	-0.3
BBGH	**Gun Hill**	**145.71**	**73**	*e*P	**PKPab**	**18 54 27.6**	**-0.2**
PTGA	**Pitinga**	**145.80**	**97**	PKPbc	**PKPdf**	**18 54 24.9**	**-0.8**
	comp=Z,258nm,0.7s,baz=265,slow=3.8,SNR=247						
PTGA				pPKPbc	**pPKPdf**	**18 56 01.6**	**+1.7**
	comp=Z,108nm,0.6s,baz=323,slow=20,SNR=1.0						
PTGA	**Pitinga**	**145.80**	**97**	*e*PKPdf	**PKPdf**	**18 54 26.3**	**+0.6**
PTGA	**Pitinga**	**145.80**	**97**	*e*P	**PKPdf**	**18 54 25.6**	**-0.1**
BBSP	**Saint Philip**	**145.81**	**73**	*e*P	**PKiKP**	**18 54 36.8**	**+6.9**
PSET	**Sete Cidades**	**146.35**	**359**	*e*PKP	**PKPdf**	**18 54 26.7**	**+0.7**
PSET				*e*pPKP	pPKPab	18 55 59.4	-0.6
PCALD	**Caldeiras da R**	**146.37**	**359**	*e*PKP	**PKPdf**	**18 54 25.5**	**-0.5**
PCALD				*e*pPKP	pPKPab	18 55 58.9	-1.3
RCLB	**Rio Claro- Sao**	**146.38**	**142**	*e*P	**PKPdf**	**18 54 27.2**	**+0.6**
BART	**Pico Bartolome**	**146.38**	**359**	*e*PKP	**PKPdf**	**18 54 26.8**	**+0.7**
BART				*e*pPKP	pPKPab	18 55 57.7	-2.6
CMLA	**Cha da Macela**	**146.41**	**359**	*e*PKP	**PKPdf**	**18 54 26.1**	**0.0**
CMLA				*e*pPKP	pPKPab	18 55 59.6	-0.7
CMLA	**Cha da Macela**	**146.41**	**359**	*e*PKPbc	**PKPbc**	**18 54 28.2**	**+0.2**
CMLA	**Cha da Macela**	**146.41**	**359**	*i* PKP2	**PKPbc**	**18 54 28.6**	**+0.6**
PDA	**Ponta Delgada**	**146.42**	**359**	*e*PKP	**PKPdf**	**18 54 25.3**	**-0.7**
PDA				*e*pPKP	pPKPbc	18 56 00.6	+0.3
ITRB	**Iturama**	**146.45**	**135**	*e*P	**PKPdf**	**18 54 27.0**	**+0.3**
BB19B	**Bebedouro**	**146.74**	**139**	*e*P	**PKPdf**	**18 54 27.9**	**+0.7**
PARB	**Paraibuna**	**146.79**	**146**	*e*P	**PKPdf**	**18 54 27.2**	**0.0**
CLDB	**Colider**	**146.92**	**117**	*e*P	**PKPdf**	**18 54 27.7**	**+0.1**
SRHM	**Skhour des Reh**	**146.96**	**331**	P	**PKPbc**	**18 54 29.1**	**-0.8**
PSMN	**Pico do Norte,**	**147.16**	**359**	*e*PKP	**PKPdf**	**18 54 26.8**	**-0.5**
PSMN				*e*pPKP	**pPKPdf**	**18 56 00.1**	**-1.5**
PSMA	**Santa Maria**	**147.16**	**359**	*e*PKP	**PKPdf**	**18 54 26.4**	**-0.9**
PSMA				*e*pPKP	**pPKPdf**	**18 56 00.5**	**-1.1**
ESAR	**Angra dos Reis**	**147.69**	**147**	*e*P	**PKPdf**	**18 54 29.2**	**+0.6**
EAH	**EAH**	**148.44**	**332**	P	**PKiKP**	**18 54 36.0**	**+1.1**
BSCB	**Bom Sucesso**	**149.11**	**144**	*e*P	**PKPdf**	**18 54 31.2**	**+0.1**
PMPST	**Porto Santo, M**	**149.68**	**344**	*e*PKPbc	**PKPbc**	**18 54 36.4**	**-0.2**
PMPST	**Porto Santo, M**	**149.68**	**344**	*e*PKPab	**PKPab**	**18 54 42.6**	**-0.6**
PMPST	**Porto Santo, M**	**149.68**	**344**	*e*PP	PP	18 58 15.2	+3.1
PMPS	**Porto Santo**	**149.71**	**344**	*e*PKPbc	**PKPbc**	**18 54 36.5**	**-0.1**
PMPS	**Porto Santo**	**149.71**	**344**	*e*PKPab	**PKPab**	**18 54 42.9**	**-0.3**
PMPS	**Porto Santo**	**149.71**	**344**	*e*PP	PP	18 58 14.9	+2.7
PMNB	**Patos De Minas**	**149.92**	**139**	*e*P	**PKPdf**	**18 54 31.8**	**-0.6**
CAM01	**Campos-RJ**	**150.13**	**150**	*e*P	**PKPdf**	**18 54 31.8**	**-0.7**
PMOZ	**Porto Moniz, M**	**150.16**	**345**	*e*PKPbc	**PKPbc**	**18 54 37.9**	**0.0**
PMOZ	**Porto Moniz, M**	**150.16**	**345**	*e*PKPab	**PKPab**	**18 54 43.9**	**-1.4**
PMOZ	**Porto Moniz, M**	**150.16**	**345**	*e*PP	PP	18 58 18.0	+3.0
PMOZ	**Porto Moniz, M**	**150.16**	**345**	*e*SS	SS	19 17 11.2	+12
PMAR	**Madeira**	**150.18**	**344**	*e*PKPbc	**PKPbc**	**18 54 38.1**	**+0.1**
PMAR	**Madeira**	**150.18**	**344**	*e*PKPab	**PKPab**	**18 54 43.3**	**-2.2**
PMAR	**Madeira**	**150.18**	**344**	*e*PP	PP	18 58 20.4	+5.2
FUL	**Funchal**	**150.24**	**344**	*e*PKPbc	**PKiKP**	**18 54 39.8**	**+1.2**
FUL	**Funchal**	**150.24**	**344**	*e*PKPab	**PKPab**	**18 54 44.4**	**-1.1**
FUL	**Funchal**	**150.24**	**344**	*e*PP	PP	18 58 20.6	+5.3
SFNM	**Sidi Ifni**	**150.65**	**331**	P	**PKPbc**	**18 54 39.1**	**+0.1**
BDFB	**Brasilia**	**150.79**	**132**	PKP	**PKPdf**	**18 54 33.6**	**-0.2**
	comp=Z,55nm,1.1s,baz=187,slow=1.8,SNR=38						
TOA0	**Torodi Ar. Sit**	**151.11**	**290**	*e*PKPdf	**PKPdf**	**18 54 32.7**	**-1.5**
TOA0	**Torodi Ar. Sit**	**151.11**	**290**	P	**PKPdf**	**18 54 33.2**	**-1.0**
	SNR=274						
TORD	**Torodi Ar. Bea**	**151.11**	**290**	PKP	**PKPdf**	**18 54 31.6**	**-2.6**
	comp=Z,43nm,1.1s,baz=127,slow=3.2,SNR=48						
TORD				PKPbc	**PKPbc**	**18 54 39.7**	**-0.7**
	comp=Z,327nm,1.0s,baz=110,slow=2.6,SNR=203						
TORD				PKPab	**PKPab**	**18 54 46.6**	**-3.2**
	comp=Z,1µm,0.8s,baz=84,slow=2.4,SNR=68						
TORD				pPKP	**pPKPdf**	**18 56 08.9**	**-0.2**
	comp=Z,56nm,0.7s,baz=51,slow=6.7,SNR=0.9						
ALF01	**Guarapari-ES**	**151.61**	**150**	*e*P	**PKPdf**	**18 54 34.7**	**-0.1**
RIB01	**Linhares ES**	**152.87**	**149**	*e*P	**PKPdf**	**18 54 35.8**	**-1.0**
SJMB	**Sao Joao De Ma**	**152.96**	**147**	*e*P	**PKPdf**	**18 54 36.1**	**-0.7**
BSFB	**Barra de Sao F**	**153.04**	**148**	*e*P	**PKPdf**	**18 54 36.8**	**-0.2**
MDP	**Montagnes des**	**153.49**	**87**	PKP	**PKPdf**	**18 54 36.6**	**-1.2**
	comp=Z,65nm,1.1s,baz=195,slow=1.9,SNR=8.3						
MDP				PKPbc	**PKPbc**	**18 54 44.6**	**-1.2**
	comp=Z,363nm,1.1s,baz=237,slow=3.7,SNR=26						
MDP				pPKP	**pPKPdf**	**18 56 15.5**	**+3.3**
	comp=Z,88nm,0.8s,baz=56,slow=3.6,SNR=0.9						
SMTB	**Santa Maria do**	**155.03**	**121**	*e*P	**PKPdf**	**18 54 39.7**	**-0.2**
KIC	**Kosan Boka**	**158.63**	**277**	*e*PKP2	**PKPdf**	**18 54 42.1**	**-2.4**
	comp=Z,3µm,1.4s						
DBIC	**Dimbokro**	**158.71**	**278**	PKP	**PKPdf**	**18 54 43.8**	**-0.7**
	comp=Z,67nm,1.1s,baz=32,slow=1.1,SNR=15						
DBIC				PKPab	**PKPab**	**18 55 20.7**	**-1.7**
	comp=Z,87nm,0.6s,baz=71,slow=6.8,SNR=8.7						
DBIC				pPKP	**pPKPdf**	**18 56 23.1**	**+3.1**
	comp=Z,45nm,0.7s,baz=315,slow=2.9,SNR=0.7						
DBIC				PP	**PP**	**18 59 07.9**	**+3.2**
	comp=Z,59nm,1.1s,baz=142,slow=18,SNR=2.4						
TIC	**Toumodi**	**158.88**	**278**	*e*PKP2	**PKPdf**	**18 54 43.8**	**-1.0**
LIC	**Lamto**	**158.93**	**277**	*e*PKP2	**PKPdf**	**18 54 42.8**	**-2.0**
	comp=Z,3µm,1.8s						
NBMO	**Morrinhos-CE**	**164.26**	**117**	*e*P	**PKPdf**	**18 54 50.7**	**+0.4**
NBLI	**Livramento-PB**	**164.33**	**136**	*e*P	**PKPdf**	**18 54 50.4**	**-0.1**
NBPA	**Parau_RN**	**165.32**	**131**	*e*P	**PKPdf**	**18 54 51.6**	**+0.4**
RCBR	**Riachuelo**	**166.15**	**135**	PKP	**PKPdf**	**18 54 55.1**	**+3.2**
	comp=Z,135nm,0.9s,baz=59,slow=1.1,SNR=7.3						
RCBR				PKPab	**PKPab**	**18 55 59.2**	**+4.2**
	comp=Z,57nm,0.8s,baz=148,slow=1.4,SNR=2.1						
RCBR				PP	**PP**	**18 59 46.2**	**+3.6**
	comp=Z,99nm,0.8s,baz=174,slow=4.5,SNR=4.3						
RCBR	**Riachuelo**	**166.15**	**135**	*e*PKPdf	**PKPdf**	**18 54 51.8**	**-0.1**
RCBR	**Riachuelo**	**166.15**	**135**	*e*PKIKP	**PKPdf**	**18 54 51.8**	**-0.1**
RCBR	**Riachuelo**	**166.15**	**135**	*e*P	**PKPdf**	**18 54 51.9**	**-0.1**
SACV	**Santiago Islan**	**168.84**	**348**	*e*PKPdf	**PKPdf**	**18 54 54.1**	**+0.4**

GEN 07 18:48:04.6, 44°.22N×10°.13E, h4^{km}, Ml0.5, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.05**	**162**	P	Pg	18 48 06.0	+0.3
EQUI				S	Sg	18 48 07.1	+0.4

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*ISCJB **07** 18:49:18.9±0.3, 42°.95N±0°.02×12°.57E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=3.4km s-min=2.7km az=145.0*

*ROM **07** 18:49:18.3±0.1, 42°.949N±0°.003×12°.582E±0°.004, h9^{km}, ML2.5/28, Error ellipse: s-maj=0.3km s-min=0.1km az=69.0*

ISC 07 18:49:18.8±0.9, 42°.95N±0°.02×12°.59E±0°.02, h13^{km}±7^{km}, n36, σ0^{s}.86/51, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MOMA	**Monte Martano**	**0.15**	**185**	P	**Pg**	**18 49 22.3**	**-0.2**
MOMA				S	**Sg**	**18 49 25.1**	**0.0**
MOMA				AML	AML		
	comp=E,4640µm,1.3s						
MOMA				AML	AML		
	comp=N,4290µm,0.3s						
MOMA				AML	AML		
	comp=E,5080µm,1.3s						
MOMA				AML	AML		
	comp=N,4365µm,0.3s						
MOMA				AML	AML		
	comp=E,4640µm,1.3s						
MOMA				AML	AML		
	comp=N,4290µm,0.3s						
MOMA				AML	AML		
	comp=E,5080µm,1.3s						
MOMA				AML	AML		
	comp=N,4365µm,0.3s						
MOMA				AML	AML		
	comp=E,4640µm,1.3s						
MOMA				AML	AML		
	comp=N,4285µm,0.3s						
MOMA				AML	AML		
	comp=E,5080µm,1.3s						
MOMA				AML	AML		
	comp=N,4365µm,0.3s						
MOMA				AML	AML		
	comp=N,4285µm,0.3s						
MOMA				AML	AML		
	comp=N,4365µm,0.3s						
MOMA				AML	AML		
	comp=E,4640µm,1.3s						
MOMA				AML	AML		
	comp=E,5080µm,1.3s						
MOMA				AML	AML		
	comp=N,4285µm,0.3s						
MOMA				AML	AML		
	comp=N,4365µm,0.3s						
MOMA				AML	AML		
	comp=E,5080µm,1.3s						
MOMA				AML	AML		
	comp=E,4640µm,1.3s						
CESI	**CESI - Serrava**	**0.24**	**77**	P	**Pg**	**18 49 23.9**	**-0.1**
CESI				S	**Sg**	**18 49 28.1**	**+0.6**
CESI				AML	AML		
	comp=E,432µm,0.3s						
CESI				AML	AML		
	comp=N,1160µm,0.9s						
CESI				AML	AML		
	comp=E,432µm,0.3s						
CESI				AML	AML		
	comp=N,1160µm,0.9s						
CESI				AML	AML		
	comp=E,432µm,0.3s						
CESI				AML	AML		
	comp=N,1160µm,0.9s						
CESI				AML	AML		
	comp=E,432µm,0.3s						
CESI				AML	AML		
	comp=N,1160µm,0.9s						
CESI				AML	AML		
	comp=E,432µm,0.3s						
CESI				AML	AML		
	comp=N,1160µm,0.9s						
ATTE	**AVT- Monte Tez**	**0.30**	**326**	P	**Pg**	**18 49 24.6**	**-0.4**
ATTE				S	**Sg**	**18 49 29.4**	**+0.1**
ATTE				AML	AML		
	comp=E,1205µm,0.5s						
ATTE				AML	AML		
	comp=N,1150µm,0.3s						
ATTE				AML	AML		
	comp=E,1205µm,0.5s						
ATTE				AML	AML		
	comp=N,1150µm,0.3s						
ATTE				AML	AML		
	comp=E,1205µm,0.5s						
ATTE				AML	AML		
	comp=N,1150µm,0.3s						
ATTE				AML	AML		
	comp=N,1150µm,0.3s						
ATTE				AML	AML		
	comp=E,1205µm,0.5s						
ATTE				AML	AML		
	comp=N,1150µm,0.3s						
ATTE				AML	AML		
	comp=E,1205µm,0.5s						
MURB	**Monte Urbino**	**0.32**	**352**	P	**Pg**	**18 49 25.4**	**+0.1**
MURB				S	**Sb**	**18 49 30.8**	**-0.7**
MURB				AML	AML		
	comp=E,14200µm,0.3s						
MURB				AML	AML		
	comp=N,9220µm,0.2s						
MURB				AML	AML		
	comp=E,15500µm,0.3s						
MURB				AML	AML		
	comp=N,10400µm,0.3s						
MURB				AML	AML		
	comp=E,14150µm,0.3s						
MURB				AML	AML		
	comp=N,9225µm,0.2s						
MURB				AML	AML		
	comp=E,15500µm,0.3s						
MURB				AML	AML		
	comp=N,10400µm,0.3s						
MURB				AML	AML		
	comp=E,14150µm,0.3s						
MURB				AML	AML		
	comp=N,9225µm,0.2s						
MURB				AML	AML		
	comp=E,15500µm,0.3s						
MURB				AML	AML		
	comp=N,10400µm,0.3s						
MURB				AML	AML		
	comp=N,10400µm,0.3s						
MURB				AML	AML		
	comp=N,9225µm,0.2s						
MURB				AML	AML		
	comp=E,15500µm,0.3s						
MURB				AML	AML		
	comp=E,14150µm,0.3s						
MURB				AML	AML		
	comp=N,9225µm,0.2s						
MURB				AML	AML		
	comp=N,10400µm,0.3s						
MURB				AML	AML		
	comp=E,15500µm,0.3s						
MURB				AML	AML		
	comp=E,14150µm,0.3s						
CESX	**Cesi**	**0.34**	**181**	P	**Pg**	**18 49 25.6**	**-0.1**
CESX				S	**Sb**	**18 49 31.1**	**-0.9**
CESX				AML	AML		
	comp=E,1074µm,0.4s						
CESX				AML	AML		
	comp=N,1065µm,0.5s						
CESX				AML	AML		
	comp=E,1074µm,0.4s						
CESX				AML	AML		
	comp=N,1065µm,0.5s						
CESX				AML	AML		
	comp=N,1065µm,0.5s						
CESX				AML	AML		
	comp=E,1074µm,0.4s						
CESX				AML	AML		
	comp=N,1065µm,0.5s						
CESX				AML	AML		
	comp=E,1074µm,0.4s						
MGAB	**Montegabbione**	**0.35**	**264**	P	**Pg**	**18 49 25.9**	**0.0**
MGAB				S	**Sb**	**18 49 31.7**	**-0.7**
MGAB				AML	AML		
	comp=E,1190µm,0.3s						
MGAB				AML	AML		
	comp=N,1220µm,0.3s						
MGAB				AML	AML		
	comp=E,1290µm,0.3s						
MGAB				AML	AML		
	comp=N,1280µm,0.5s						
MGAB				AML	AML		
	comp=E,1190µm,0.3s						
MGAB				AML	AML		
	comp=N,1220µm,0.3s						
MGAB				AML	AML		
	comp=E,1290µm,0.3s						
MGAB				AML	AML		
	comp=N,1280µm,0.5s						
MGAB				AML	AML		
	comp=E,1190µm,0.3s						
MGAB				AML	AML		
	comp=E,1290µm,0.3s						
MGAB				AML	AML		
	comp=N,1220µm,0.3s						
MGAB				AML	AML		
	comp=N,1280µm,0.5s						
MGAB				AML	AML		
	comp=E,1290µm,0.3s						
MGAB				AML	AML		
	comp=E,1190µm,0.3s						
MGAB				AML	AML		
	comp=N,1280µm,0.5s						
MGAB				AML	AML		
	comp=N,1220µm,0.3s						
FOSV	**Fossato di Vic**	**0.37**	**20**	P	**Pb**	**18 49 26.4**	**-0.8**
FOSV				S	**Sb**	**18 49 32.3**	**-0.7**
FOSV				AML	AML		
	comp=E,2705µm,0.5s						
FOSV				AML	AML		
	comp=N,1465µm,0.4s						
FOSV				AML	AML		
	comp=E,2705µm,0.5s						
FOSV				AML	AML		
	comp=N,1460µm,0.4s						
FOSV				AML	AML		
	comp=N,1460µm,0.4s						
FOSV				AML	AML		
	comp=E,2705µm,0.5s						
FOSV				AML	AML		
	comp=N,1460µm,0.4s						
FOSV				AML	AML		
	comp=E,2705µm,0.5s						
FDMO	**Fiordimonte**	**0.38**	**77**	P	**Pg**	**18 49 26.2**	**-0.2**
FDMO				S	**Sb**	**18 49 32.5**	**-0.7**
FDMO				AML	AML		
	comp=E,688µm,1.1s						
FDMO				AML	AML		
	comp=N,574µm,0.2s						
FDMO				AML	AML		
	comp=E,688µm,1.1s						
FDMO				AML	AML		
	comp=N,574µm,0.2s						
FDMO				AML	AML		
	comp=E,688µm,1.1s						
FDMO				AML	AML		
	comp=N,574µm,0.2s						
FDMO				AML	AML		
	comp=E,688µm,1.1s						
FDMO				AML	AML		
	comp=N,574µm,0.2s						
SNTG	**Esanatoglia**	**0.40**	**40**	P	**Pg**	**18 49 26.6**	**-0.3**
SNTG				S	**Sb**	**18 49 33.0**	**-0.8**
SNTG				AML	AML		
	comp=E,808µm,0.5s						
SNTG				AML	AML		
	comp=N,935µm,0.3s						
SNTG				AML	AML		
	comp=E,808µm,0.5s						
SNTG				AML	AML		
	comp=N,935µm,0.3s						
SNTG				AML	AML		
	comp=E,808µm,0.5s						
SNTG				AML	AML		
	comp=N,935µm,0.3s						
SNTG				AML	AML		
	comp=E,808µm,0.5s						
SNTG				AML	AML		
	comp=N,935µm,0.3s						

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SNTG                                   AML    AML
      comp=E,808µm,0.5s
SNTG                                   AML    AML
      comp=N,935µm,0.3s
NRCA  Norcia            0.41 107       P      Pg         18 49 26.7 -0.2
NRCA                                   S      Sb         18 49 33.2 -0.8
NRCA                                   AML    AML
      comp=E,688µm,0.2s
NRCA                                   AML    AML
      comp=N,894µm,0.2s
NRCA                                   AML    AML
      comp=E,688µm,0.2s
NRCA                                   AML    AML
      comp=N,894µm,0.2s
NRCA                                   AML    AML
      comp=N,894µm,0.2s
NRCA                                   AML    AML
      comp=E,688µm,0.2s
NRCA                                   AML    AML
      comp=N,894µm,0.2s
NRCA                                   AML    AML
      comp=E,688µm,0.2s
ATFO  Monte Foce - G    0.42 359       P      Pg         18 49 27.2 +0.1
ATFO                                   S      Sb         18 49 34.0 -0.4
ATMI  Monte Miggiano    0.45 329       P      Pb         18 49 27.8 -0.9
ATMI                                   S      Sb         18 49 34.5 -0.7
ATMI                                   AML    AML
      comp=E,3100µm,0.7s
ATMI                                   AML    AML
      comp=N,3260µm,0.3s
ATMI                                   AML    AML
      comp=E,3100µm,0.7s
ATMI                                   AML    AML
      comp=N,3260µm,0.3s
ATMI                                   AML    AML
      comp=E,3100µm,0.7s
ATMI                                   AML    AML
      comp=N,3260µm,0.3s
ATMI                                   AML    AML
      comp=E,3100µm,0.7s
ATMI                                   AML    AML
      comp=N,3260µm,0.3s
ATMI                                   AML    AML
      comp=E,3100µm,0.7s
ATMI                                   AML    AML
      comp=N,3260µm,0.3s
ATVO  AVT- Monte Val    0.45 343       P      Pg         18 49 27.5 -0.2
ATVO                                   S      Sb         18 49 34.5 -0.8
ATVO                                   AML    AML
      comp=E,850µm,0.7s
ATVO                                   AML    AML
      comp=N,673µm,1.3s
ATVO                                   AML    AML
      comp=E,850µm,0.7s
ATVO                                   AML    AML
      comp=N,673µm,1.3s
ATVO                                   AML    AML
      comp=E,850µm,0.7s
ATVO                                   AML    AML
      comp=N,673µm,1.3s
ATVO                                   AML    AML
      comp=E,850µm,0.7s
ATVO                                   AML    AML
      comp=N,673µm,1.3s
CSP1  Cessapalombo      0.47  72       P      Pg         18 49 28.0 -0.2
CSP1                                   S      Sb         18 49 35.7 -0.4
LNSS  Leonessa          0.48 136       P      Pg         18 49 28.2 -0.1
LNSS                                   S      Sb         18 49 35.8 -0.5
LNSS                                   AML    AML
      comp=E,566µm,0.5s
LNSS                                   AML    AML
      comp=N,535µm,1.0s
LNSS                                   AML    AML
      comp=E,566µm,0.5s
LNSS                                   AML    AML
      comp=N,535µm,1.0s
LNSS                                   AML    AML
      comp=E,566µm,0.5s
LNSS                                   AML    AML
      comp=N,535µm,1.0s
LNSS                                   AML    AML
      comp=E,566µm,0.5s
LNSS                                   AML    AML
      comp=N,535µm,1.0s
SACS  San Casciano d    0.51 259       P      Pb         18 49 28.7 -0.9
SACS                                   AML    AML
      comp=E,428µm,0.6s
SACS                                   AML    AML
      comp=N,488µm,0.7s
SACS                                   AML    AML
      comp=E,417µm,0.6s
SACS                                   AML    AML
      comp=N,493µm,0.7s
SACS                                   AML    AML
      comp=E,418µm,0.6s
SACS                                   AML    AML
      comp=N,493µm,0.7s
SACS                                   AML    AML
      comp=E,418µm,0.6s
SACS                                   AML    AML
      comp=N,493µm,0.7s
SACS                                   AML    AML
      comp=E,418µm,0.6s
SACS                                   AML    AML
      comp=N,493µm,0.7s
ATPI  Pietralunga -     0.52 345       P      Pg         18 49 28.7 -0.3
ATPI                                   S      Sb         18 49 36.9 -0.3
ATPI                                   AML    AML
      comp=E,616µm,0.3s
ATPI                                   AML    AML
      comp=N,950µm,0.4s
ATPI                                   AML    AML
      comp=E,616µm,0.3s
ATPI                                   AML    AML
      comp=N,950µm,0.4s
ATPI                                   AML    AML
      comp=N,950µm,0.4s
ATPI                                   AML    AML
      comp=E,616µm,0.3s
ATPI                                   AML    AML
      comp=N,950µm,0.4s
ATPI                                   AML    AML
      comp=E,616µm,0.3s
EL6   Elcito            0.54  45       P      Pg         18 49 29.1 -0.2
EL6                                    S      Sb         18 49 37.5 -0.2
EL6                                    AML    AML
      comp=E,1845µm,0.3s
EL6                                    AML    AML
      comp=N,830µm,0.5s
EL6                                    AML    AML
      comp=E,1850µm,0.3s
EL6                                    AML    AML
      comp=N,834µm,0.5s
EL6                                    AML    AML
      comp=E,1850µm,0.3s
EL6                                    AML    AML
      comp=N,834µm,0.5s
EL6                                    AML    AML
      comp=E,1850µm,0.3s
EL6                                    AML    AML
      comp=N,834µm,0.5s
PIEI  Pieia             0.59 356       P      Pg         18 49 30.0 -0.3
PIEI                                   AML    AML
      comp=E,582µm,0.8s
PIEI                                   AML    AML
      comp=N,433µm,0.3s
PIEI                                   AML    AML
      comp=E,582µm,0.8s
PIEI                                   AML    AML
      comp=N,432µm,0.3s
PIEI                                   AML    AML
      comp=N,432µm,0.3s
PIEI                                   AML    AML
      comp=E,582µm,0.8s
PIEI                                   AML    AML
      comp=N,432µm,0.3s
PIEI                                   AML    AML
      comp=E,582µm,0.8s
CAFI  Castiglion Fio    0.59 310       P      Pg         18 49 30.1 -0.3
CAFI                                   AML    AML
      comp=E,574µm,0.2s
CAFI                                   AML    AML
      comp=N,596µm,0.8s
CAFI                                   AML    AML
      comp=E,574µm,0.2s
CAFI                                   AML    AML
      comp=N,596µm,0.8s
CAFI                                   AML    AML
      comp=E,574µm,0.2s
CAFI                                   AML    AML
      comp=N,596µm,0.8s
CAFI                                   AML    AML
      comp=E,574µm,0.2s
CAFI                                   AML    AML
      comp=N,596µm,0.8s
ARVD  Arcevia           0.61  25       P      Pg         18 49 30.3 -0.3
ARVD                                   AML    AML
      comp=E,328µm,0.5s
ARVD                                   AML    AML
      comp=N,190µm,0.5s
ARVD                                   AML    AML
      comp=E,328µm,0.5s
ARVD                                   AML    AML
      comp=N,190µm,0.5s
ARVD                                   AML    AML
      comp=N,190µm,0.5s
ARVD                                   AML    AML
      comp=E,328µm,0.5s
ARVD                                   AML    AML
      comp=N,190µm,0.5s
ARVD                                   AML    AML
      comp=E,328µm,0.5s
BADI  Badiali           0.61 336       P      Pg         18 49 30.5 -0.3
BADI                                   AML    AML
      comp=E,505µm,1.0s
BADI                                   AML    AML
      comp=N,660µm,0.3s
BADI                                   AML    AML
      comp=E,504µm,1.0s
BADI                                   AML    AML
      comp=N,660µm,0.3s
BADI                                   AML    AML
      comp=E,504µm,1.0s
BADI                                   AML    AML
      comp=N,660µm,0.3s
BADI                                   AML    AML
      comp=E,504µm,1.0s
BADI                                   AML    AML
      comp=N,660µm,0.3s
CING  Cingoli           0.62  46       P      Pg         18 49 30.5 -0.4
CING                                   AML    AML
      comp=E,337µm,1.5s
CING                                   AML    AML
      comp=N,388µm,0.3s
CING                                   AML    AML
      comp=N,388µm,0.3s
CING                                   AML    AML
      comp=E,337µm,1.5s
CING                                   AML    AML
      comp=N,388µm,0.3s
CING                                   AML    AML
      comp=E,337µm,1.5s
MCIV  Monte Civitell    0.69 256       AML    AML
      comp=E,229µm,0.4s
MCIV                                   AML    AML
      comp=N,161µm,0.7s
MCIV                                   AML    AML
      comp=E,229µm,0.4s
MCIV                                   AML    AML
      comp=N,161µm,0.7s
MCIV                                   AML    AML
      comp=N,161µm,0.7s
MCIV                                   AML    AML
      comp=E,229µm,0.4s
MCIV                                   AML    AML
      comp=N,161µm,0.7s
MCIV                                   AML    AML
      comp=E,229µm,0.4s
SSP9  Sansepolcro       0.71 332       P      Pb         18 49 32.8 -0.2
SSP9                                   AML    AML
      comp=E,358µm,0.5s
SSP9                                   AML    AML
      comp=N,319µm,1.6s
PARC  Parchiule         0.74 340       AML    AML
      comp=E,552µm,0.4s
PARC                                   AML    AML
      comp=E,552µm,0.4s
PARC                                   AML    AML
      comp=N,482µm,0.8s
PARC                                   AML    AML
      comp=E,552µm,0.4s
PARC                                   AML    AML
      comp=N,482µm,0.8s
PARC                                   AML    AML
      comp=E,552µm,0.4s
PARC                                   AML    AML
      comp=N,482µm,0.8s
PARC                                   AML    AML
      comp=N,482µm,0.8s
PE3   Peglio            0.75 355       AML    AML
      comp=E,752µm,0.5s
PE3                                    AML    AML
      comp=N,1042µm,0.5s
PE3                                    AML    AML
      comp=E,752µm,0.5s
PE3                                    AML    AML
      comp=N,1042µm,0.5s
PE3                                    AML    AML
      comp=N,1042µm,0.5s
PE3                                    AML    AML
      comp=E,752µm,0.5s
PE3                                    AML    AML
      comp=N,1042µm,0.5s
PE3                                    AML    AML
      comp=E,752µm,0.5s
FSSB  Fossombrone       0.76  11       P      Pg         18 49 33.0 -0.5
FSSB                                   AML    AML
      comp=E,972µm,0.3s
FSSB                                   AML    AML
      comp=N,856µm,0.3s
FSSB                                   AML    AML
      comp=E,972µm,0.3s
FSSB                                   AML    AML
      comp=N,856µm,0.3s
FSSB                                   AML    AML
      comp=E,972µm,0.3s
FSSB                                   AML    AML
      comp=N,856µm,0.3s
FSSB                                   AML    AML
      comp=E,972µm,0.3s
FSSB                                   AML    AML
      comp=N,856µm,0.3s
FIAM  Fiamignano        0.79 150       AML    AML
      comp=N,197µm,0.6s
FIAM                                   AML    AML
      comp=E,217µm,1.0s
FIAM                                   AML    AML
      comp=N,196µm,0.6s
FIAM                                   AML    AML
      comp=E,218µm,1.0s
FIAM                                   AML    AML
      comp=N,197µm,0.6s
FIAM                                   AML    AML
      comp=E,218µm,1.0s
FIAM                                   AML    AML
      comp=N,197µm,0.6s
FIAM                                   AML    AML
      comp=E,218µm,1.0s
TERO  Teramo            0.82 113       P      Pg         18 49 34.0 -0.7
TERO                                   AML    AML
      comp=E,60µm,0.6s
TERO                                   AML    AML
      comp=N,78µm,0.6s
TERO                                   AML    AML
      comp=E,60µm,0.6s
TERO                                   AML    AML
      comp=N,78µm,0.6s
TERO                                   AML    AML
      comp=N,78µm,0.6s
TERO                                   AML    AML
      comp=E,60µm,0.6s
TERO                                   AML    AML
      comp=N,78µm,0.6s
TERO                                   AML    AML
      comp=E,60µm,0.6s
GUMA  Gualdo di Mace    1.00  83       P      Pg         18 49 29.9 -8.2
GUMA                                   AML    AML
      comp=E,1670µm,0.4s
GUMA                                   AML    AML
      comp=N,986µm,0.5s
GUMA                                   AML    AML
      comp=E,1505µm,0.4s
GUMA                                   AML    AML
      comp=N,1232µm,0.3s
GUMA                                   AML    AML
      comp=E,1670µm,0.4s
GUMA                                   AML    AML
      comp=E,1505µm,0.4s
GUMA                                   AML    AML
      comp=N,1232µm,0.3s
GUMA                                   AML    AML
      comp=N,986µm,0.5s
GUMA                                   AML    AML
      comp=E,1670µm,0.4s
GUMA                                   AML    AML
      comp=E,1505µm,0.4s
GUMA                                   AML    AML
      comp=N,1232µm,0.3s
GUMA                                   AML    AML
      comp=N,986µm,0.5s
DUGI  Dugi Otok         2.08  59       ePn    Pn         18 49 54.0 +0.7
ZIRJ  Zirje             2.34  71       ePn    Pn         18 49 58.0 +1.1
ZIRJ                                   Sn     Sb         18 50 28.6 -1.0
MORI  Morici            2.45  67       ePn    Pn         18 50 00.4 +1.9
MORI                                   Sn     Sb         18 50 31.4 -1.5
UDBI  Udbina            2.79  55       ePn    Pn         18 50 05.4 +2.2
KIJV  Kijevo            2.97  68       i Pn   Pn         18 50 08.2 +2.5
KIJV                                   Sn     Sb         18 50 45.7 -2.2
```

IDC ***07*** *19:17:20.4±1.2, 0°.71N×97°.32E, h0^{km}, mb4.3/13, mb1 4.4/15, mb1mx4.0/51, mbtmp4.3/15, ML3.6/2, Error ellipse: s-maj=28.9km s-min=17.0km az=65.0*

NEIC ***07*** *19:17:21.8±2.4, 0°.70N×97°.06E, h28^{km}±5^{km}, mb4.5/16, Error ellipse: s-maj=11.5km s-min=7.7km az=101.0*

NEIC Felt [III] in western Nias.

ISCJB ***07*** *19:17:22.8±1.0, 0°.71N±0°.04×97°.28E±0°.07, h38^{km}±7^{km}, mb4.4/25, Error ellipse: s-maj=12.4km s-min=6.1km az=156.7*

DJA ***07*** *19:17:24.9±0.7, 1°N±4°×9°7E±°, h31^{km}±7^{km}, M4.6/11, mb4.6/3, MLv4.6/11*

ISC 07 19:17:22.6±2.0, **0°.73N**±0°.06×**97°.20E**±0°.08, **h24**^{km}±13^{km}, **n56**, σ1^{s}.**37**/57, **mb4.5**/25, **Northern Sumatera**

```
Code  Station Name          Δ°  AZ°   Phase ID           Time      Res
                                      Op     ISC       h  m  s    ISC
GSI   Gunungsitoli        0.69  34    ePn    Pb        19 17 36.5 +0.5
GSI                                   eSn    Sn        19 17 47.7 +0.9
GSI   Gunungsitoli        0.69  34    P      Pb        19 17 36.7 +0.7
GSI                                   S      Sn        19 17 46.2 -0.5
MNSI  Mandailing Nat      2.38  88    P      Pn        19 17 59.5 -0.7
MNSI                                  S      Sn        19 18 25.8 -2.8
TPTI                      2.52 360    P      Pn        19 18 02.6 +0.6
PSI   Prapat              2.69  40    Pn     Pn        19 18 03.6 -0.8
      3.7nm,0.3s,baz=213,slow=7.0,SNR=9.6
PSI                                   Sn     Sn        19 18 37.0 +0.6
      9.1nm,0.3s,baz=224,slow=16,SNR=5.4
PSI   Prapat              2.69  40    ePn    Pn        19 18 03.3 -1.2
PSI                                   eSn    Sn        19 18 37.0 +0.6
SISI  Saibi               2.78 137    P      Pn        19 18 06.8 +1.1
KCSI  Kotacane, Aceh      2.83  12    P      Pn        19 18 06.1 -0.3
PDSI  Padang              3.65 117    P      Pn        19 18 17.0 -0.6
BKNI  Bangkinang          3.86  96    ePn    Pn        19 18 21.3 +0.7
BKNI  Bangkinang          3.86  96    P      Pn        19 18 21.0 +0.5
LHMI  Lhok Sumawe         4.48 357    ePn    Pn        19 18 30.1 +1.1
IPM   Ipoh                5.34  46    ePn    Pn        19 18 41.4 +0.5
KULM  Kulim               5.69  37    ePn    Pn        19 18 45.2 -0.6
MYKOM Kota Tinggi         6.74  81    ePn    Pn        19 18 59.0 -1.0
MNAI  Manna               7.66 131    ePn    Pn        19 19 13.2 +0.5
LHSI  Lahat               7.78 126    P      Pn        19 19 15.3 +1.0
MDSI  Maura Dua           8.69 127    P      Pn        19 19 26.6 -0.3
PALK  Pallekele          17.68 292    ePn    Pn        19 21 23.1 -4.5
      15nm,1.0s
CMAR  Chiang Mai Arr     17.70   5    P      Pn        19 21 27.5 -0.1
      0.2nm,0.3s,baz=195,slow=12,SNR=20
KKM   Kota Kinabalu      19.70  74    eP     P         19 21 50.8 +0.3
      15nm,0.9s
KAPI  Kappang            23.24 104    P      P         19 22 28.8 +0.5
      7.3nm,1.0s,baz=98,slow=9.2,SNR=2.6
H08S2 Diego Garcia H     26.00 251    T      T         19 50 27.2
      baz=72,slow=75,SNR=538
H08S3 Diego Garcia H     26.01 251    T      T         19 50 30.1
      baz=72,slow=75,SNR=693
H08S1 Diego Carcia H     26.02 251    T      T         19 50 31.2
      baz=72,slow=75,SNR=326
LSA   Lhasa              29.38 349    eP     P         19 23 22.1 -2.5
      7.9nm,1.1s
YULB  Yu-li              32.48  44    eP     P         19 23 51.8 +0.3
      14nm,1.0s
SSLB  Suanglung          32.50  43    eP     P         19 23 52.3 +0.7
      25nm,0.9s
WR1   Warramunga Arr     41.79 122    eP     P         19 25 11.2 +0.6
WRA   Warramunga Arr     41.79 122    P      P         19 25 11.2 +0.6
      8.4nm,1.1s,baz=290,slow=9.5,SNR=3.2
WB2   Warramunga Arr     41.80 122    eP     P         19 25 09.5 -1.2
      7.4nm,0.9s
ASAR  Alice Springs      43.12 127    P      P         19 25 21.8 +0.4
      1.7nm,0.8s,baz=296,slow=7.9,SNR=11
AS31  Alice Springs      43.12 127    eP     P         19 25 21.5 +0.1
      2.0nm,1.1s
JNU   Nakatsue           45.16  41    P      P         19 25 38.1 +0.5
      6.0nm,0.8s,baz=279,slow=7.8,SNR=3.3
JNU   Nakatsue           45.16  41    eP     P         19 25 36.2 -1.4
      12nm,1.1s
KS15  Wonju Array Si     46.21  34    eP     P         19 25 46.3 +0.6
      15nm,1.1s
KSRS  Korea Array        46.24  34    P      P         19 25 46.5 +0.5
      5.0nm,0.8s,baz=219,slow=9.1,SNR=19
SONA0 Songino Array      47.60   8    eP     P         19 25 58.0 +1.3
SONM  Songino Array      47.60   8    P      P         19 25 58.0 +1.3
      2.4nm,0.8s,baz=177,slow=9.2,SNR=6.8
MK31  Makanchi Array     47.70 346    eP     P         19 25 56.4 -0.9
      4.7nm,1.0s
MKAR  Makanchi Array     47.70 346    P      P         19 25 59.6 +2.3
      3.7nm,0.7s,baz=159,slow=8.9,SNR=22
MAJO  Matsushiro         52.04  42    eP     P         19 26 28.5 -2.0
      4.7nm,1.0s
MJB9  Matsu-Tunnel       52.04  42    eP     P         19 26 28.6 -1.9
      5.0nm,1.1s
MJAR  Matsushiro Arr     52.04  42    P      P         19 26 30.8 +0.3
      1.2nm,0.7s,baz=222,slow=6.3,SNR=5.9
CTAO  Charters Tower     52.30 116    eP     P         19 26 32.0 -0.7
      10nm,1.1s
STKA  Stephens Creek     53.05 132    P      P         19 26 39.1 +1.1
      2.0nm,0.7s,baz=314,slow=11,SNR=3.2
STKA  Stephens Creek     53.05 132    eP     P         19 26 36.6 -1.4
      1.3nm,0.9s
USA0B Ussuriysk Arra     53.17  31    eP     P         19 26 36.1 -2.6
      9.6nm,0.9s
USRK  Ussuriysk Ar.      53.17  31    P      P         19 26 40.1 +1.4
      9.4nm,0.9s,baz=234,slow=6.2,SNR=13
ZAA0  Zalesovo Array     54.02 351    eP     P         19 26 44.3 -0.5
      6.7nm,0.8s
ZALV  Zalesovo Beam      54.02 351    P      P         19 26 46.5 +1.8
      5.7nm,0.7s,baz=173,slow=6.6,SNR=16
ZAA1  Zalesovo Array     54.02 351    eP     P         19 26 46.5 +1.7
KLR   Kul'dur            56.67  26    P      P         19 27 05.7 +1.7
      5.1nm,0.9s,baz=246,slow=6.5,SNR=9.7
GERES GERESS Array B     85.16 319    P      P         19 29 59.7 +2.6
      0.9nm,1.0s,baz=99,slow=8.2,SNR=4.5
VNDA  Vanda              85.37 169    PP     PP        19 33 23.7 +8.3
      1.5nm,1.1s,baz=307,slow=7.9,SNR=4.4
TXAR  Lajitas Array     144.07  32    PKP    PKPdf     19 36 56.1 -1.0
      0.6nm,1.0s,baz=316,slow=2.5,SNR=3.8
```

MOS ***07*** *20:17:57.5±0.9, 51°.25N×179°.83W, h14^{km}, mb5.8/108, Error ellipse: s-maj=6.8km s-min=3.7km az=99.2*

NEIC ***07*** *20:17:59.3±0.0, 51°.03N×179°.91W, h7^{km}, mb5.6/388, ML5.5(AEIC), After AEIC.*

AEIC ***07*** *20:17:59.3, 51°.03N×179°.91W, h7^{km}, ML5.5, MB5.6(NEIC)*

BJI ***07*** *20:18:00.5±0.0, 51°.20N×179°.90W, h44^{km}, mb5.7/70, mB5.7/35, Ms5.6/25, Ms7 5.4/24*

IDC ***07*** *20:18:01.6±1.2, 51°.26N×179°.85W, h30^{km}±7^{km}, mb5.0/34, mb1 5.1/37, mb1mx5.1/42, mbtmp5.1/37, ML5.2/2, MS4.9/5, Ms1 4.9/5, ms1mx4.3/61, Error ellipse: s-maj=12.9km s-min=9.0km az=155.0*

ISCJB ***07*** *20:18:02.3±0.3, 51°.17N±0°.03×179°.82W±0°.02, h54^{km}±2^{km}, mb5.5/255, MS5.3/17, Error ellipse: s-maj=4.2km s-min=1.9km az=179.0*

ISC 07 20:18:03.0±0.5, **51°.12N**±0°.05×**179°.86W**±0°.03, **h43**^{km}±3^{km}, **h43**^{km}**:pP-P**, **n1295**, σ0^{s}.**99**/1356, **mb5.5**/258, **MS5.3**/18, **109C-37D**, **Andreanof Islands**

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Code  Station Name          Δ°  AZ°   Phase ID           Time      Res
                                      Op     ISC       h  m  s    ISC
GALAA Gareloi Lava P      0.94  46    ePg    Pn        20 18 19.0 -0.7
```

GAEA	Gareloi East	0.96	46	*e*Pg	Pn	20 18 19.1	-1.0
TASE	Tanaga Southea	1.35	57	*e*Pn	Pn	20 18 24.6	-0.7
TANO	Tanaga North	1.35	53	*e*Pn	Pn	20 18 24.8	-0.5
TAFP	Tanaga Falls P	1.41	55	*e*Pn	Pn	20 18 25.6	-0.6
KIMD	Kanaga Island	1.76	67	*e*Pn	Pn	20 18 30.5	-0.5
KIKV	Kanaga Island	1.84	64	*e*Pn	Pn	20 18 31.9	-0.2
KIWB	Kanaga Island	1.85	65	*e*Pn	Pn	20 18 31.6	-0.5
KICM	Kanaga Island	1.85	63	*e*Pn	Pn	20 18 32.5	+0.4
ADK	Adak	2.13	68	*e*Pn	Pn	20 18 35.4	-0.6
ADK				*e*Sn	Sn	20 19 03.7	+2.6
ADK	Adak	2.13	68	*e*P	Pn	20 18 35.4	-0.6
ADK				*e*		20 19 03.7	
ADAG	Mount Adagdak	2.21	66	*e*Pn	Pn	20 18 37.5	+0.4
ETKA	Kagalaska Isla	2.28	70	*e*Pn	Pn	20 18 38.1	0.0
GSTD	Great Sitkin T	2.50	66	*e*Pn	Pn	20 18 41.5	+0.4
GSMY	Great Sitkin M	2.55	67	*e*Pn	Pn	20 18 41.6	-0.1
GSTR	Great Sitkin T	2.56	66	*e*Pn	Pn	20 18 42.7	+0.7
ATKA	Atka Island	3.69	71	*e*Pn	Pn	20 18 57.5	+0.1
ATKA				*e*Sn	Sn	20 19 44.7	+5.1
KOKL	Mount Kliuchef	3.72	69	*e*Pn	Pn	20 18 58.7	+0.8
KOFP	Korovin Flat P	3.77	70	*e*Pn	Pn	20 18 59.4	+0.9
KOSE	Korovin Southe	3.81	69	*e*Pn	Pn	20 19 00.2	+1.0
SMY	Shemya	4.08	296	*e*Pn	Pn	20 19 02.6	0.0
SMY				*e*Sn	Sn	20 19 53.5	+4.4
SMY	Shemya	4.08	296	*e*P	Pn	20 19 02.7	0.0
SMY				*e*		20 19 53.5	
NIKH	Nikolski High	7.04	70	*e*Pn	Pn	20 19 44.5	+1.2
OKAK	Okmok	7.46	66	*e*Pn	Pn	20 19 50.2	+1.0
OKTU	Okmok Mt. Tuli	7.60	68	*e*Pn	Pn	20 19 52.3	+1.2
OKER	Okmok East Rim	7.61	67	*e*Pn	Pn	20 19 53.4	+2.1
SPIA	Saint Paul Isl	8.28	39	*e*Pn	Pn	20 20 02.6	+2.3
MCIR	Makushin Cirqu	8.40	65	*e*Pn	Pn	20 20 04.2	+2.2
MREP	Makushin Rep't	8.45	66	*e*Pn	Pn	20 20 04.2	+1.5
MSW	Makushin Switc	8.45	66	*e*Pn	Pn	20 20 04.5	+1.8
UNV	Unalaska Valle	8.60	66	*e*Pn	Pn	20 20 05.7	+1.1
AKRB	Akutan Reef Bi	8.91	65	*e*Pn	Pn	20 20 10.8	+1.7
AKUT	Akutan	9.09	65	*e*Pn	Pn	20 20 13.1	+1.8
AKSA	Akutan Strait	9.13	65	*e*Pn	Pn	20 20 13.5	+1.6
WESP	Westdahl Peak	9.77	64	*e*Pn	Pn	20 20 22.3	+1.5
WEBT	Westdahl Beart	9.78	63	*e*Pn	Pn	20 20 23.4	+2.6
FALS	False Pass	10.59	63	*e*Pn	Pn	20 20 32.9	+1.0
SDPT	Sand Point	12.35	62	*e*Pn	Pn	20 20 54.6	-1.4
PET	Petropavlovsk	13.35	287	*e*Pn	Pn	20 21 10.6	+1.0
PET	Petropavlovsk	13.35	287	*e*P	Pn	20 21 10.2	+0.6
PET				*e*S	Sn	20 23 37.9	+1.5
PET				pmax	pmax		
	comp=Z,1µm,4.7s						
PET				pmax	pmax		
	comp=Z,138nm,1.1s						
PET				MLR	MLR		
	comp=Z,7µm,17.0s						
GAMB	Gambell	13.41	16	*e*Pn	Pn	20 21 12.5	+2.1
CHGN	Chignik	13.70	59	*e*Pn	Pn	20 21 12.6	-1.7
PEA1	Petropavlovsk-	13.93	287	*e*Pn	Pn	20 21 18.0	+0.5
PETK	Petropavlovsk-	13.93	287	Pn	Pn	20 21 18.0	+0.5
	comp=Z,2.0nm,0.3s,baz=91,slow=16,SNR=36						
PETK				Sn	Sn	20 23 52.2	+1.6
	comp=Z,0.9nm,0.3s,baz=81,slow=19,SNR=3.6						
PETK				PcP	PcP	20 26 37.4	+0.8
	comp=Z,0.3nm,0.3s,baz=113,slow=4.7,SNR=5.6						
PETK				LR	LR	20 26 50.3	
	comp=Z,5µm,19.7s,baz=96,slow=38						
PETK				ScP	ScP	20 30 07.8	+1.4
	comp=Z,0.1nm,0.3s,baz=70,slow=6.5,SNR=4.2						
SKR	Severo-Kuril's	15.15	278	*e*P	P	20 21 38.3	0.0
SKR				*e*S	Sn	20 24 19.7	-0.6
SKR				pmax	pmax		
	comp=Z,300nm,0.7s						
SKR				pmax	pmax		
	comp=Z,2µm,8.1s						
SKR				MLR	MLR		
	comp=Z,3µm,12.0s						
KDAK	Kodiak Island	17.12	56	*e*Pn	Pn	20 21 55.9	-2.9
	comp=Z,326nm,1.4s						
KDAK	Kodiak Island	17.12	56	*e*P	Pn	20 21 55.9	-2.9
KDAK				pmax	pmax		
	comp=Z,326nm,1.4s						
CNPM	China Poot	18.21	51	*e*P	P	20 22 10.7	-1.3
	comp=Z,153nm,0.8s						
BILL	Bilibino	18.29	343	*e*P	Pn	20 22 13.9	+0.9
	comp=Z,294nm,1.2s						
BILL	Bilibino	18.29	343	*c* *i*P	Pn	20 22 13.9	+0.9
BILL				pmax	pmax		
	comp=Z,312nm,1.7s						
BILL				MLR	MLR		
	comp=Z,5µm,19.0s						
BRLK	Bradley Lake	18.44	51	*e*P	P	20 22 12.9	-1.6
	comp=Z,95nm,0.7s						
MA2	Magadan	18.59	308	P	P	20 22 15.4	-0.8
	comp=Z,1.4nm,0.3s,baz=94,slow=10,SNR=8.3						
MA2	Magadan	18.59	308	⇑*e*P	Pn	20 22 17.4	+0.6
MA2				pmax	pmax		
	comp=Z,44nm,1.3s						
RDOG	Red Dog Mine	18.91	20	*e*P	Pn	20 22 21.9	+1.3
	comp=Z,262nm,1.1s						
PPLA	Purkeypile	18.95	41	*e*P	Pn	20 22 21.8	+0.5
	comp=Z,452nm,1.3s						
SEY	Seymchan	19.00	319	P	P	20 22 19.9	-0.8
	comp=Z,1.9nm,0.3s,baz=117,slow=9.1,SNR=35						
SEY				PcP	PcP	20 26 45.3	+1.1
	comp=Z,0.4nm,0.3s,baz=180,slow=3.0,SNR=3.2						
SEY				ScP	ScP	20 30 16.8	+0.6
	comp=Z,0.5nm,0.3s,baz=130,slow=5.0,SNR=10						
KTH	Kantishna Hill	19.75	40	*e*P	P	20 22 29.4	+0.5
	comp=Z,350nm,0.9s						
PMR	Palmer	19.79	46	*e*P	P	20 22 28.0	-1.3
	comp=Z,83nm,1.1s						
PMR	Palmer	19.79	46	*e*P	P	20 22 28.0	-1.3
PMR				pmax	pmax		
	comp=Z,83nm,1.1s						
BPAW	Bear Paw Mtn.	19.97	38	*e*P	P	20 22 32.0	+0.8
	comp=Z,126nm,0.8s						
KNK	Knik Glacier	20.05	47	*e*P	P	20 22 30.4	-1.7
	comp=Z,127nm,0.8s						
MLY	Manley	20.50	36	*e*P	P	20 22 37.7	+0.7
	comp=Z,116nm,1.0s						
GLI	Glacier Island	20.55	49	*e*P	P	20 22 35.1	-2.4
	comp=Z,94nm,1.0s						
MCK	McKinley	20.63	40	*e*P	P	20 22 37.2	-1.2
	comp=Z,174nm,1.4s						
MCK	McKinley	20.63	40	*e*P	P	20 22 37.2	-1.2
MCK				pmax	pmax		
	comp=Z,174nm,1.4s						
TCOL	CIGO, UAF Yank	21.52	38	P	P	20 22 47.5	-0.4
	baz=245						
COLA	College	21.53	38	*e*P	P	20 22 48.5	+0.5
	comp=Z,132nm,0.9s						
COLA	College	21.53	38	*c* *i*P	P	20 22 49.3	+1.3
COLA				pmax	pmax		
	comp=Z,68nm,0.9s						
HDA	Harding Lake	21.70	40	P	P	20 22 48.7	-1.1
	baz=248						
POKR	Poker Plat Res	21.79	38	P	P	20 22 50.9	0.0
	baz=246,SNR=10						
ILAR	Eielson Array	21.86	39	P	P	20 22 48.9	-2.8
	comp=Z,7.9nm,0.6s,baz=241,slow=9.4,SNR=44						
ILAR				PcP	PcP	20 26 48.9	-0.6
	comp=Z,1.7nm,0.6s,baz=272,slow=2.2,SNR=3.9						
ILAR				ScP	ScP	20 30 22.8	-0.1
	comp=Z,6.9nm,0.7s,baz=281,slow=3.7,SNR=17						
ILAR				P3KPbc		20 56 40.0	
	comp=Z,1.3nm,1.0s,baz=48,slow=3.8,SNR=5.6						
KUR	Kuril'sk	22.19	267	*c* *i*P	P	20 22 55.3	0.0
TOLK	Toolik Lake Re	22.81	28	P	P	20 23 01.7	-0.1
	baz=235,SNR=13						
MIDW	Midway	22.95	174	*e*P	P	20 23 02.6	-0.7
	comp=Z,112nm,1.0s						
TYV	Tymovskoe	23.44	284	*e*P	P	20 23 09.2	+1.1
TYV				*e*S	S	20 27 23.6	+5.5
TYV				pmax	pmax		
	comp=Z,3µm,3.0s						
TYV				pmax	pmax		
	comp=Z,130nm,1.7s						
TYV				smax	smax		
	comp=E,19nm,1.8s						
TYV				smax	smax		
	comp=E,2µm,6.7s						
YUK	Yuzh-Kuril'sk	24.02	266	*e*P	P	20 23 15.7	+2.1
YUK				*e*		20 23 43.8	
YUK				*e*PPP	PPP	20 23 58.1	
YUK				*e*S	S	20 27 28.0	+0.4
YUK				*e*SSS	SSS	20 28 24.3	
YUK				pmax	pmax		
	comp=Z,495nm,1.2s						
YUK				MLR	MLR		
	comp=Z,2µm,14.0s						
NKL	Nikolayevsk	24.10	290	⇑*i*P	P	20 23 14.5	+0.3
NKL				pmax	pmax		
	comp=N,77nm,1.3s						
NKL				pmax	pmax		
	comp=E,280nm,1.3s						
NKL				pmax	pmax		
	comp=Z,607nm,1.3s						
NKL				MLR	MLR		
	comp=E,2µm,19.0s						
NKL				MLR	MLR		
	comp=Z,4µm,19.0s						
UGL	Uglegorsk	24.33	280	⇑*i*P	P	20 23 17.6	+1.2
UGL				pmax	pmax		
	comp=Z,334nm,1.0s						
YSS	Yuzh-Sakhalins	24.68	275	*e*P	P	20 23 20.5	+0.9
	comp=Z,221nm,0.9s						
YSS	Yuzh-Sakhalins	24.68	275	⇑*e*P	P	20 23 20.1	+0.5
YSS				*e*		20 23 25.6	
YSS				*e*S	S	20 27 34.1	-4.0
YSS				pmax	pmax		
	comp=Z,200nm,0.9s						
YSS				pmax	pmax		
	comp=E,150nm,0.8s						
HYT	Haines Junctio	25.18	51	*e*P	P	20 23 22.7	-1.4
	comp=E,39nm,1.0s						
ASAJ	Asahikawa	26.04	269	P	P	20 23 32.5	+0.6
	comp=E,218nm,1.0s,baz=59,slow=5.7,SNR=102						
ASAJ				PcP	PcP	20 26 59.8	+1.0
	comp=E,9.6nm,1.0s,baz=162,slow=3.2,SNR=2.6						
ASAJ				LR	LR	20 33 30.7	
	comp=E,2µm,20.0s,baz=66,slow=36						
EPYK	Eagle Plains	26.38	38	P	P	20 23 33.7	-1.2
	baz=256,SNR=14						
WHY	Whitehorse	26.46	51	*e*P	P	20 23 35.3	-0.4
	comp=E,58nm,1.5s						
ERM	Erimo	26.76	265	*e*P	P	20 23 39.2	+0.8
	comp=E,129nm,1.1s						
ERM	Erimo	26.76	265	*c* *i*P	P	20 23 38.5	+0.1
ERM				pmax	pmax		
	comp=Z,154nm,1.3s						
JIS	Juneau Island	26.79	57	*e*P	P	20 23 38.5	0.0
	comp=Z,26nm,1.0s						
GRNR	Gornyy	27.25	287	⇑*i*P	P	20 23 44.0	+1.2
GRNR				pmax	pmax		
	comp=N,42nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,180nm,1.0s						
INK	Inuvik	28.05	35	P	P	20 23 49.2	-0.5
	comp=Z,3.3nm,0.3s,baz=270,slow=5.8,SNR=23						
INK				PcP	PcP	20 27 03.6	+0.4
	comp=Z,12nm,0.9s,baz=357,slow=3.7,SNR=3.4						
INK				ScP	ScP	20 30 40.4	+0.1
	comp=Z,5.5nm,0.8s,baz=297,slow=4.5,SNR=6.3						
INK	Inuvik	28.05	35	*e*P	P	20 23 49.9	+0.2
	comp=Z,26nm,0.8s						
INK				*e*PcP	PcP	20 27 03.6	+0.4
INK				*e*ScP	ScP	20 30 40.4	+0.1
INK	Inuvik	28.05	35	*e*P	P	20 23 49.9	+0.2
INK				*e*		20 27 03.6	
INK				pmax	pmax		
	comp=Z,26nm,0.8s						
DLBC	Dease Lake	29.06	56	P	P	20 23 58.8	-0.1
	comp=Z,2.7nm,0.6s,baz=309,slow=8.5,SNR=3.9						
DLBC	Dease Lake	29.06	56	*e*P	P	20 24 00.5	+1.6
	comp=Z,13nm,1.0s						
YAK	Yakutsk	29.09	312	*e*P	P	20 23 57.0	-2.0
	comp=Z,304nm,1.7s						
YAK	Yakutsk	29.09	312	*e*P	P	20 23 56.3	-2.7
TEY	Ternei	29.38	275	⇑*i*P	P	20 24 01.4	-0.3
TEY				pmax	pmax		
	comp=E,100nm,1.0s						
TEY				pmax	pmax		
	comp=Z,160nm,1.0s						
TEY				pmax	pmax		
	comp=N,40nm,1.0s						
TIXI	Tiksi	30.54	331	LR	LR	20 37 01.4	
	comp=N,3µm,20.7s,baz=325,slow=38						
TIXI	Tiksi	30.54	331	⇑*e*P	P	20 24 11.9	+0.2
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	Kul'dur	30.61	286	ScP	ScP	20 30 50.1	+1.3
	comp=Z,2.1nm,1.0s,baz=83,slow=2.8,SNR=4.2						
KLR	Kul'dur	30.61	286	*c* *i*P	P	20 24 12.2	-0.4
ZEA	Zeya	31.74	296	*e*P	P	20 24 21.4	-1.1
ZEA				pmax	pmax		
	comp=N,52nm,0.8s						
ZEA				pmax	pmax		
	comp=E,83nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,240nm,1.0s						
USRK	Ussuriysk Ar.	32.67	277	P	P	20 24 30.4	-0.4
	comp=Z,22nm,0.6s,baz=63,slow=7.9,SNR=61						
USRK				PcP	PcP	20 27 16.3	+0.6
	comp=Z,9.7nm,0.8s,baz=60,slow=4.6,SNR=6.0						
USRK				ScP	ScP	20 30 58.4	+2.6
	comp=Z,4.8nm,1.1s,baz=0.0,slow=2.1,SNR=7.9						
USRK				LR	LR	20 40 47.7	
	comp=Z,2µm,18.0s,baz=250,slow=42						
H11N2	WAKE ISLAND Hy	33.02	203	T	T	21 00 00.8	
	baz=18,slow=76,SNR=8.6						
H11N3	WAKE ISLAND Hy	33.03	203	T	T	21 00 06.3	
	baz=18,slow=76,SNR=807						
H11N1	WAKE ISLAND Hy	33.04	203	T	T	20 59 58.6	
	baz=18,slow=76,SNR=412						
MAJO	Matsushiro	33.09	260	*e*P	P	20 24 35.1	+0.5
	comp=Z,114nm,1.1s						
MAJO				*e*PcP	PcP	20 27 17.3	+0.3
MAJO	Matsushiro	33.09	260	*c* *i*P	P	20 24 35.0	+0.5
MAJO				pmax	pmax		
	comp=Z,133nm,1.2s						
MAT	Matsushiro	33.09	260	P	P	20 24 34.9	+0.4
MJAR	Matsushiro Arr	33.09	260	P	P	20 24 34.9	+0.4
	comp=Z,25nm,0.8s,baz=52,slow=7.4,SNR=114						
MJAR				PcP	PcP	20 27 17.3	+0.3
	comp=Z,9.5nm,0.9s,baz=71,slow=0.3,SNR=9.6						
MJAR				ScP	ScP	20 30 59.8	+2.3
	comp=Z,9.9nm,1.2s,baz=332,slow=1.1,SNR=13						
VLA	Vladivostok	33.28	275	*c* *i*P	P	20 24 36.5	+0.4
VLA				pmax	pmax		
	comp=Z,172nm,1.2s						
OPA	Opana	33.97	142	*e*P	P	20 24 43.8	+1.6
	comp=Z,122nm,1.1s						
OPA	Opana	33.97	142	*e*P	P	20 24 43.8	+1.6
OPA				pmax	pmax		
	comp=Z,122nm,1.1s						
MSHR	Mys Shultsa	34.02	275	*c* *i*P	P	20 24 42.9	+0.4
KIP	Kipapa	34.20	142	*e*P	P	20 24 44.0	-0.3
	comp=Z,115nm,1.0s						
KIP	Kipapa	34.20	142	*e*P	P	20 24 44.0	-0.3
KIP				pmax	pmax		
	comp=Z,115nm,1.0s						
H11S1	WAKE ISLAND Hy	34.24	203	T	T	21 01 39.8	
	baz=15,slow=77,SNR=683						
H11S2	WAKE ISLAND Hy	34.26	203	T	T	21 01 36.7	
	baz=15,slow=77,SNR=471						
H11S3	WAKE ISLAND Hy	34.26	203	T	T	21 01 40.3	
	baz=15,slow=77,SNR=542						
HON	Honolulu	34.30	142	*e*P	P	20 24 46.6	+1.5
HON	Honolulu	34.30	142	*e*P	P	20 24 46.6	+1.5
YKW3	Yellowknife Ar	35.87	46	*e*P	P	20 24 57.3	-0.9
	comp=Z,35nm,0.9s						
YKA	Yellowknife Ar	35.89	46	P	P	20 24 57.6	-0.8
	comp=Z,10nm,0.5s,baz=283,slow=7.3,SNR=47						
YKA				PcP	PcP	20 27 25.4	+0.9
	comp=Z,5.1nm,0.7s,baz=289,slow=3.2,SNR=5.5						
YKA				ScP	ScP	20 31 07.8	+0.8
	comp=Z,4.2nm,0.7s,baz=290,slow=3.5,SNR=14						
YKB5	Yellowknife Ar	35.89	46	*e*PcP	PcP	20 27 25.4	+0.9
YKB5				*e*ScP	ScP	20 31 07.8	+0.8
A04D	Lummi Island	36.09	71	P	P	20 25 00.7	+0.5
	baz=296						
D03D	Eldon	36.39	73	P	P	20 25 04.5	+1.7
	baz=297,SNR=38						
B05A	Bryant	36.65	71	P	P	20 25 06.3	+1.2
	baz=297,SNR=24						
POHA	Pohakuloa	36.69	140	*e*P	P	20 25 06.2	+0.2
	comp=Z,58nm,0.8s						
CN2	Changchun	36.94	281	⇑P	P	20 25 06.8	-0.8
F04D	Rainier, OR	37.12	75	P	P	20 25 10.6	+1.5
	baz=299,SNR=10.0						
E04D	Cinebar	37.16	74	P	P	20 25 10.8	+1.4
	baz=299						
G03D	McMinnville, O	37.40	76	P	P	20 25 11.7	+0.3
	baz=300						
I02D	Swisshome	37.60	78	P	P	20 25 13.9	+0.8
	baz=301						
BOD	Bodaibo	37.60	307	*e*P	P	20 25 11.6	-1.4
BOD				pmax	pmax		
	comp=Z,238nm,1.3s						
J01E	Myrtle Point	38.04	80	P	P	20 25 17.2	+0.3
	baz=302						
H04D	Lebanon	38.07	77	P	P	20 25 18.4	+1.2
	baz=301,SNR=10						
I03D	Drain, OR	38.12	78	P	P	20 25 19.2	+1.6
	baz=302,SNR=7.2						
F05D	White Salmon	38.16	74	P	P	20 25 18.6	+0.7
	baz=300						
K02D	Willamette Mer	38.46	80	P	P	20 25 22.2	+1.6
	baz=303,SNR=6.1						
G05D	Wamic, OR	38.57	75	P	P	20 25 22.3	+0.9
	baz=300						
I04A	Tendick Farm,	38.65	78	P	P	20 25 23.4	+1.3
	baz=302,SNR=26						
L02E	Cave Junction	38.79	81	P	P	20 25 25.2	+2.0
	baz=303,SNR=8.6						
KSRS	Korea Array	38.98	270	P	P	20 25 25.8	+1.0
	comp=Z,49nm,0.9s,baz=60,slow=8.3,SNR=112						
KSRS				PcP	PcP	20 27 35.2	+0.8
	comp=Z,7.1nm,0.9s,baz=66,slow=3.5,SNR=6.6						
KSRS				ScP	S	20 31 22.1	+1.8
	comp=Z,0.6nm,0.5s,baz=61,slow=4.1,SNR=4.5						
KS15	Wonju Array Si	39.01	270	*e*PcP	PcP	20 27 35.2	+0.6
I05D	Terrebonne, OR	39.02	76	P	P	20 25 26.2	+1.0
	baz=301,SNR=22						
HAWA	Hanford	39.08	73	*e*P	P	20 25 26.6	+1.0
	comp=Z,198nm,1.4s						
J04D	Umpqua Nationa	39.13	78	P	P	20 25 27.6	+1.3
	baz=302,SNR=16						
SNY	Shenyang	39.16	279	⇑P	P	20 25 26.5	+0.2
SNY				S	S	20 31 24.0	+0.9
SNY				pmax	pmax		
	comp=Z,160nm,1.3s						
SNY				pmax	pmax		
	comp=Z,2µm,12.0s						
SNY				LR	LR		
	comp=Z,3µm,14.9s						
SNY				LR	LR		
	comp=Z,2µm,13.9s						
SNY				LR	LR		
	comp=Z,4µm,24.0s						
L04D	Klamath Falls	39.56	80	P	P	20 25 31.5	+1.7
	baz=303						
YBH	Yreka Blue Hor	39.58	81	*e*P	P	20 25 31.7	+1.8
	comp=Z,45nm,0.9s						
YBH	Yreka Blue Hor	39.58	81	*e*P	P	20 25 31.7	+1.8
YBH				pmax	pmax		
	comp=Z,45nm,0.9s						
NEW	Newport	39.60	69	ScP	ScP	20 31 24.5	+3.2
	comp=Z,1.1nm,0.4s,baz=298,slow=3.0,SNR=4.2						
NEW	Newport	39.60	69	P	P	20 25 30.1	+0.2
NEW				pmax	pmax		
	comp=Z,87nm,0.9s						
NEW	Newport	39.60	69	P	P	20 25 30.2	+0.2
	baz=298,SNR=58						
J05D	Fort Rock, OR	39.64	78	P	P	20 25 31.9	+1.4
	baz=302,SNR=41						
M02C	Callahan	39.68	81	P	P	20 25 32.5	+1.8
	baz=304,SNR=10						
K04D	Chiloquin, OR	39.68	79	P	P	20 25 31.6	+0.8
	baz=303						
TJN	Taejon	39.99	269	*c* *i*P	P	20 25 33.8	+0.5
N02D	Trinity Center	40.01	82	P	P	20 25 35.1	+1.6
	baz=304,SNR=10						
CIT	Chita	40.08	298	*e*P	P	20 25 33.9	0.0
CIT				pmax	pmax		
	comp=Z,405nm,1.1s						
M04C	Macdoel	40.09	80	P	P	20 25 35.7	+1.4
	baz=304,SNR=31						
RES	Resolute Bay	40.26	24	*e*P	P	20 25 34.8	-0.2
	comp=Z,62nm,1.4s						
RES	Resolute Bay	40.26	24	*e*P	P	20 25 34.8	-0.2
RES				pmax	pmax		
	comp=Z,62nm,1.4s						
O02D	Mt. Diablo Mer	40.41	83	P	P	20 25 38.8	+2.0
	baz=305,SNR=10						
O03E	Paynes Creek	40.96	82	P	P	20 25 42.3	+0.9
	baz=305,SNR=38						
WVOR	Wild Horse Val	41.71	77	P	P	20 25 48.5	+1.0
WVOR				pmax	pmax		
	comp=Z,102nm,0.9s						
DL2	Dalian	42.06	277	⇑*i*P	P	20 25 50.1	-0.1
DL2				pmax	pmax		
	comp=Z,110nm,1.1s						
MSO	Missoula	42.18	69	P	P	20 25 51.2	-0.1
	baz=301,SNR=46						
HLID	Hailey	43.65	73	P	P	20 26 03.9	+0.5
	baz=304,SNR=48						
EGMT	Eagleton	43.99	65	P	P	20 26 05.3	-0.6
	baz=301,SNR=31						
BOZ	Bozeman (W)	44.20	69	P	P	20 26 07.7	0.0
	baz=303,SNR=168						
NV01	Mina Array Sit	44.25	82	*e*ScP	ScP	20 31 42.0	+1.7
NVAR	Mina Array Bea	44.25	82	P	P	20 26 09.1	+0.8
	comp=Z,20nm,1.0s,baz=292,slow=7.9,SNR=91						
NVAR				ScP	ScP	20 31 42.0	+1.7
	comp=Z,3.7nm,1.0s,baz=281,slow=3.6,SNR=7.5						
MLAC	Mammoth, Mammo	44.40	83	P	P	20 26 10.4	+0.9
	baz=308						
ELK	Elko	44.76	77	ScP	ScP	20 31 43.8	+1.4
	comp=Z,0.6nm,0.4s,baz=345,slow=3.1,SNR=3.6						
BJI	Beijing	44.78	282	⇑*e*P	P	20 26 12.6	+0.5
BJI				pP	pP	20 26 22.4	-0.5
BJI				pmax	pmax		
	comp=Z,50nm,0.9s						
VOG	Valley Oaks Go	44.87	85	P	P	20 26 12.6	-0.3
	baz=309						
IRK	Irkutsk	45.02	303	*e*P	P	20 26 12.7	-1.3
IRK				*e*		20 27 54.5	
IRK				pmax	pmax		
	comp=Z,155nm,2.0s						
TIN	Tinemaha, Big	45.14	83	P	P	20 26 16.3	+1.1
	baz=308						
YNR	Norris Junctio	45.24	70	*e*P	P	20 26 17.2	+1.1
	comp=Z,123nm,1.0s						
VES	Vestal, Richgr	45.36	85	P	P	20 26 16.8	0.0
	baz=309,SNR=18						
H17A	Grant Village	45.48	70	P	P	20 26 19.3	+1.2
	baz=304,SNR=35						
PKM	Mcpherson Peak	45.51	87	P	P	20 26 19.2	+0.9
	baz=310,SNR=13						
CWC	Cottonwood Cre	45.61	84	P	P	20 26 19.6	+0.6
	baz=309						
TLY	Talaya	45.64	302	*e*P	P	20 26 19.3	+0.4
	comp=Z,67nm,0.7s						
TLY	Talaya	45.64	302	*c* *i*P	P	20 26 19.0	+0.1
TLY	Talaya	45.64	302	P	P	20 26 19.3	+0.4
	SNR=38						
ULN	Ulaanbaatar	45.78	296	*e*P	P	20 26 20.1	0.0
	comp=Z,235nm,1.5s						
ULN	Ulaanbaatar	45.78	296	*c* *i*P	P	20 26 20.4	+0.2
ULN				pmax	pmax		
	comp=Z,100nm,1.0s						
ULN	Ulaanbaatar	45.78	296	P	P	20 26 20.7	+0.5
	SNR=53						
ULN				P	P	20 26 20.7	+0.5
	SNR=53						
RLMT	Red Lodge	45.85	69	P	P	20 26 21.1	+0.2
	baz=304,SNR=96						
ISA	Isabella, Lake	45.86	85	P	P	20 26 21.0	+0.1
ISA				pmax	pmax		
	comp=Z,136nm,1.7s						
ISA	Isabella, Lake	45.86	85	P	P	20 26 20.8	0.0
	baz=310,SNR=15						
ARVC	Arvin	45.98	86	P	P	20 26 21.7	0.0
	baz=310,SNR=7.2						
R11A	Troy Canyon, C	45.99	80	P	P	20 26 22.3	+0.3
	baz=308,SNR=44						
SONA0	Songino Array	46.17	296	*e*PcP	PcP	20 27 58.6	+0.1
SONM	Songino Array	46.17	296	P	P	20 26 23.8	+0.6
	comp=Z,36nm,0.7s,baz=56,slow=9.5,SNR=279						
SONM				PcP	PcP	20 27 58.6	+0.1
	comp=Z,14nm,0.7s,baz=71,slow=2.7,SNR=5.7						
SONM				ScP	ScP	20 31 49.1	+1.1
	comp=Z,7.7nm,1.0s,baz=51,slow=3.3,SNR=14						
SCZ2	Santa Cruz Isl	46.20	88	P	P	20 26 23.0	-0.5
	baz=311						
MPMC	Manual Prospec	46.23	84	P	P	20 26 24.3	+0.4
	baz=309,SNR=30						
FURC	Furnace Creek,	46.36	83	P	P	20 26 25.4	+0.7
	baz=309,SNR=12						
TPNV	Topopah Spring	46.44	82	P	P	20 26 26.1	+0.6
	baz=309,SNR=60						
LRMC	Laurel Mtn Rad	46.47	85	P	P	20 26 25.7	-0.1

	baz=310						
BLG	**Laguna Peak, P**	46.48	87	P	P	20 26 25.8	+0.1
	baz=311,SNR=8.1						
ZAK	**Zakamensk**	46.52	301	eP	P	20 26 25.5	-0.4
ZAK				pmax	pmax		
	comp=Z,103nm,1.4s						
TIA	**Tai'an**	46.54	277	P	P	20 26 26.1	0.0
TIA				pmax	pmax		
	comp=Z,120nm,1.0s						
DUG	**Dugway, Tooele**	46.58	76	P	P	20 26 27.3	+0.8
DUG				pmax	pmax		
	comp=Z,148nm,1.1s						
DUG	**Dugway, Tooele**	46.58	76	P	P	20 26 27.4	+0.8
	baz=307,SNR=69						
EDW2	**Edwards Air Fo**	46.66	85	P	P	20 26 27.5	+0.3
	baz=310,SNR=21						
LAO	**LASA Array**	46.73	65	P	P	20 26 27.7	+0.1
	baz=304,SNR=13						
DECC	**Green Verdugo**	46.85	86	P	P	20 26 28.9	+0.3
	baz=311,SNR=5.1						
DGMT	**Dagmar**	46.90	62	P	P	20 26 27.3	-1.5
	baz=303						
BW06	**Boulder Array**	47.02	71	P	P	20 26 30.3	+0.1
	baz=306,SNR=126						
PDAR	**Pinedale Array**	47.02	71	P	P	20 26 30.2	+0.1
	comp=Z,49nm,0.7s,baz=310,slow=3.6,SNR=334						
PDAR				ScP	ScP	20 31 51.9	+0.2
	comp=Z,1.2nm,0.8s,baz=318,slow=1.2,SNR=3.3						
MOY	**Mondy**	47.05	303	eP	P	20 26 30.4	+0.3
MOY				pmax	pmax		
	comp=Z,167nm,1.9s						
SHOC	**Shoshone, Teco**	47.09	83	P	P	20 26 31.0	+0.6
	baz=310,SNR=17						
HHC	**Hu-ho-hao-te**	47.12	285	P	P	20 26 31.4	+0.7
HHC				pmax	pmax		
	comp=Z,110nm,1.3s						
HHC				pmax	pmax		
	comp=Z,780nm,8.4s						
GSC	**Goldstone, Bar**	47.13	84	P	P	20 26 31.3	+0.4
	baz=310,SNR=33						
BFSC	**Mount Baldy Ra**	47.28	86	P	P	20 26 32.4	+0.3
	baz=311,SNR=36						
RRX	**Edison Barstow**	47.29	85	P	P	20 26 32.5	+0.5
	baz=310						
CIS	**Catalina Islan**	47.36	87	P	P	20 26 31.5	-1.0
	baz=311						
SHPR	**Sheep Range**	47.40	82	eP	P	20 26 33.6	+0.5
	comp=Z,65nm,1.7s						
SCI2	**San Clemente I**	47.55	88	P	P	20 26 33.1	-0.9
	baz=312						
TUQ	**Turquoise Moun**	47.60	83	P	P	20 26 34.9	+0.3
	baz=310,SNR=18						
BBRC	**Big Bear Solar**	47.73	85	P	P	20 26 34.2	-1.5
	baz=311						
HEC	**Hector,Ludlow**	47.73	84	P	P	20 26 35.9	+0.4
	baz=310,SNR=13						
MURC	**Murrieta**	47.99	86	P	P	20 26 37.8	+0.3
	baz=311,SNR=9.0						
NJ2	**Nanjing**	48.15	271	⇑iP	P	20 26 38.5	-0.2
NJ2				pmax	pmax		
	comp=Z,69nm,1.0s						
GMRC	**Granite Mounta**	48.19	84	P	P	20 26 39.3	+0.2
	baz=310,SNR=20						
BTO	**Baotou**	48.20	286	eP	P	20 26 39.3	+0.2
PFO	**Pinyon Flats O**	48.45	86	ScP	ScP	20 31 59.2	+1.4
	comp=Z,7.3nm,1.0s,baz=291,slow=3.5,SNR=9.3						
PFO	**Pinyon Flats O**	48.45	86	eP	P	20 26 41.4	+0.2
	comp=Z,30nm,1.1s						
PFO				eScP	ScP	20 31 59.8	+2.0
PFO	**Pinyon Flats O**	48.45	86	eP	P	20 26 41.4	+0.2
PFO				pmax	pmax		
	comp=Z,30nm,1.1s						
PFO	**Pinyon Flats O**	48.45	86	P	P	20 26 41.3	+0.2
	baz=311,SNR=17						
BELC	**Belle Mtn. Jos**	48.48	85	P	P	20 26 41.5	+0.1
	baz=311,SNR=20						
109C	**Camp Elliot, M**	48.52	87	P	P	20 26 42.0	+0.5
	baz=312,SNR=8.0						
NEE2	**Needles Airpor**	48.85	83	P	P	20 26 43.9	-0.2
	baz=311						
K22A	**Casper**	48.89	70	P	P	20 26 44.1	-0.4
	baz=307,SNR=22						
IRM	**Iron Mountain**	48.92	84	P	P	20 26 44.7	+0.1
	baz=311,SNR=37						
KULLO	**Kullorsuaq**	48.92	17	i P	P	20 26 43.3	-0.7
KULLO	**Kullorsuaq**	48.92	17	i P	P	20 26 43.3	-0.7
MONP2	**Monument Peak**	48.95	86	P	P	20 26 45.5	+0.4
	baz=312,SNR=28						
BC3	**Big Chuckawall**	49.05	85	P	P	20 26 45.7	-0.1
	baz=311,SNR=16						
SWSC	**Sam W. Stewart**	49.30	86	P	P	20 26 47.5	0.0
	baz=312,SNR=13						
IKP	**In-Ko-Pah, Jac**	49.30	86	P	P	20 26 47.9	+0.2
	baz=312,SNR=23						
O20A	**White River Ci**	49.39	73	P	P	20 26 48.3	-0.1
	baz=308,SNR=38						
PDMCI	**Parker Dam,Lak**	49.45	83	P	P	20 26 48.8	+0.2
	baz=311,SNR=11						
RSSD	**Black Hills**	49.47	67	eP	P	20 26 48.5	-0.5
	comp=Z,35nm,1.0s						
RSSD	**Black Hills**	49.47	67	eP	P	20 26 48.5	-0.5
RSSD				pmax	pmax		
	comp=Z,35nm,1.0s						
RSSD	**Black Hills**	49.47	67	P	P	20 26 48.4	-0.6
	baz=306						
Y12C	**Blythe**	49.57	84	P	P	20 26 49.8	+0.3
	baz=311,SNR=10						
MDND	**Maddock**	49.78	60	P	P	20 26 50.1	-0.9
	baz=306						
GLA	**Glamis**	49.84	85	P	P	20 26 51.6	-0.1
	baz=312,SNR=17						
KBS	**Kingsbay**	50.03	357	eP	P	20 26 52.7	+0.3
	comp=Z,44nm,0.8s						
KBS	**Kingsbay**	50.03	357	c iP	P	20 26 52.1	-0.3
KBS				pmax	pmax		
	comp=Z,321nm,1.3s						
KBS	**Kingsbay**	50.03	357	eP	P	20 26 52.5	0.0
N23A	**Red Feather La**	50.30	71	P	P	20 26 55.4	0.0
	baz=308,SNR=27						
ULM	**Lac du Bonnet**	50.38	56	P	P	20 26 54.4	-1.1
	comp=Z,4.3nm,0.5s,baz=286,slow=9.2,SNR=3.8						
ULM				ScP	ScP	20 32 06.1	+0.5
	comp=Z,4.5nm,0.8s,baz=326,slow=3.6,SNR=2.9						
ULM	**Lac du Bonnet**	50.38	56	eP	P	20 26 54.8	-0.7
	comp=Z,86nm,1.8s						
ULM	**Lac du Bonnet**	50.38	56	eP	P	20 26 54.8	-0.7
ULM				pmax	pmax		
	comp=Z,86nm,1.8s						
WUAZ	**Wupatki**	50.39	80	eP	P	20 26 54.7	-1.3
	comp=Z,50nm,0.9s						
WUAZ	**Wupatki**	50.39	80	P	P	20 26 56.5	+0.5
	baz=310,SNR=15						
SPA0	**Spitsbergen Ar**	50.59	356	eP	P	20 26 56.0	-0.7
SPITS	**Spitsbergen Ar**	50.59	356	P	P	20 26 56.0	-0.7
SPITS				pmax	pmax		
	comp=Z,52nm,0.4s						
MVCO	**Mesa Verde**	51.07	77	P	P	20 27 01.2	0.0
	baz=310,SNR=14						
ISCO	**Idaho Springs**	51.18	72	P	P	20 27 02.8	+0.7
ISCO				pmax	pmax		
	comp=Z,58nm,1.4s						
ISCO	**Idaho Springs**	51.18	72	P	P	20 27 02.6	+0.5
	baz=309,SNR=26						
AGMN	**Agassiz Nation**	51.54	58	P	P	20 27 03.1	-1.1
	baz=307						
W18A	**Petrified Fore**	51.66	79	P	P	20 27 06.2	+0.6
	baz=311,SNR=14						
S22A	**4UR Ranch, Cre**	51.75	75	P	P	20 27 07.0	+0.7
	baz=310,SNR=24						
HSPB	**Hornsund (broa**	51.78	356	eP	P	20 27 05.5	-0.1
HSPB	**Hornsund (broa**	51.78	356	eP	P	20 27 05.5	-0.1
HSPB	**Hornsund (broa**	51.78	356	eP	P	20 27 05.4	-0.2
DAG	**Danmarks Havn**	51.83	5	⇑iP	P	20 27 04.9	-1.0
DAG	**Danmarks Havn**	51.83	5	⇑iP	P	20 27 04.9	-1.0
214A	**Organ Pipe Nat**	51.84	85	P	P	20 27 07.0	+0.3
	baz=312,SNR=18						
Q24A	**Divide**	51.99	73	P	P	20 27 07.8	-0.3
	baz=310						
SUSD	**Miller**	52.18	64	P	P	20 27 08.3	-0.8
	baz=308						
SDCO	**Great Sand Dun**	52.56	74	P	P	20 27 12.6	+0.4
	baz=310,SNR=26						
OGNE	**Ogallala**	52.59	69	P	P	20 27 13.0	+0.7
	baz=309,SNR=6.6						
SSLB	**Suanglung**	52.62	262	eP	P	20 27 12.4	-0.1
	comp=Z,91nm,0.8s						
TUC	**Tucson**	52.87	83	eP	P	20 27 14.9	+0.5
	comp=Z,31nm,0.9s						
TUC	**Tucson**	52.87	83	eP	P	20 27 14.9	+0.5
TUC				pmax	pmax		
	comp=Z,31nm,0.9s						
TUC	**Tucson**	52.87	83	P	P	20 27 14.2	-0.2
	baz=312						
XAN	**Xi'an**	53.05	280	P	P	20 27 15.1	-0.6
XAN				pP	pP	20 27 23.3	-3.4
XAN				S	S	20 34 36.6	-6.0
XAN				pmax	pmax		
	comp=Z,58nm,1.4s						
TPUB	**Ta-pu**	53.18	262	eP	P	20 27 16.3	-0.4
	comp=Z,80nm,1.1s						
QZH	**Quanzhou**	53.26	265	⇑iP	P	20 27 17.6	+0.4
QZH				pmax	pmax		
	comp=Z,110nm,1.3s						
KSCO	**Kaye Shedlock'**	53.47	71	P	P	20 27 19.5	+0.7
	baz=310,SNR=9.6						
FRB	**Frobisher Bay**	53.60	31	P	P	20 27 18.1	-1.0
T25A	**Trinidad**	53.61	74	P	P	20 27 20.5	+0.6
	baz=311,SNR=22						
SUMG	**Summit**	53.71	13	eP	P	20 27 19.2	-1.2
	comp=Z,63nm,0.9s						
SUMG	**Summit**	53.71	13	i P	P	20 27 20.1	-0.3
SUMG				MLR	MLR		
	comp=Z,24µm,24.0s						
SUMG	**Summit**	53.71	13	i P	P	20 27 20.1	-0.3
	comp=Z,24µm,24.0s						
ZAA1	**Zalesovo Array**	53.73	313	ePcP	PcP	20 28 26.7	+0.8
ZALV	**Zalesovo Beam**	53.73	313	P	P	20 27 19.4	-0.9
	comp=Z,19nm,0.5s,baz=46,slow=6.3,SNR=79						
ZALV				PcP	PcP	20 28 26.7	+0.8
	comp=Z,24nm,0.8s,baz=30,slow=5.5,SNR=6.6						
TASM	**ASL Pad, Albuq**	53.80	77	P	P	20 27 21.9	+0.6
	baz=312,SNR=26						
TASM	**ASL Pad, Albuq**	53.80	77	P	P	20 27 21.7	+0.3
	baz=312,SNR=22						
ANMO	**Albuquerque**	53.80	77	eP	P	20 27 21.9	+0.5
	comp=Z,38nm,1.4s						
ANMO	**Albuquerque**	53.80	77	d iP	P	20 27 21.6	+0.3
ANMO				pmax	pmax		
	comp=Z,13nm,1.3s						
ANMO	**Albuquerque**	53.80	77	P	P	20 27 21.0	-0.3
	baz=312						
ECSD	**EROS Data Cent**	53.95	63	P	P	20 27 21.1	-1.0
	baz=309,SNR=14						
BJO1	**Bjornoya**	54.03	354	eP	P	20 27 21.7	-0.4
EYMN	**Ely**	54.07	56	eP	P	20 27 22.1	-0.8
	comp=Z,30nm,0.8s						
EYMN	**Ely**	54.07	56	P	P	20 27 22.4	-0.5
	baz=309						
Y22D	**IRIS PASSCAL I**	54.09	78	P	P	20 27 22.8	-0.7
	baz=312						
BGNE	**Belgrade**	54.55	66	P	P	20 27 26.2	-0.3
	baz=310						
121A	**Cookes Peak, D**	54.59	80	P	P	20 27 27.4	+0.3
	baz=313,SNR=11						
LZH	**Lanzhou**	54.82	286	⇑P	P	20 27 29.1	+0.4
LZH				pP	sP	20 27 42.8	-1.4
LZH				sP	pwP	20 27 46.0	+1.3
LZH				ePP	PP	20 29 33.1	+1.6
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,15.9s						
LZH				LR	LR		
	comp=Z,1µm,16.8s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
F37A	**Hinrichs Farm,**	54.88	59	P	P	20 27 28.2	-0.6
	baz=310,SNR=6.6						
E38A	**The Farm, Brul**	54.89	57	P	P	20 27 28.6	-0.2
	baz=310						
GTA	**Gaotai**	55.05	291	P	P	20 27 30.1	-0.1
GTA				pP	pP	20 27 42.0	+0.3
GTA				sP	sP	20 27 47.7	+1.3
GTA				ScP	ScP	20 32 27.2	+1.0
GTA				ScS	ScS	20 37 16.1	+0.4
GTA				pmax	pmax		
	comp=Z,100nm,1.0s						
GTA				pmax	pmax		
	comp=Z,1µm,10.3s						
GTA				LR	LR		
	comp=Z,3µm,14.8s						
GTA				LR	LR		
	comp=Z,7µm,22.3s						
SPMN	**Marine on St.**	55.10	59	P	P	20 27 29.0	-1.3
	baz=310						
F38A	**Pierce - Schro**	55.13	58	P	P	20 27 29.9	-0.7
	baz=310,SNR=26						
DGZ	**Jazzator, Alta**	55.17	308	c iP	P	20 27 31.3	+0.2
DGZ				pmax	pmax		
	comp=Z,110nm,1.3s						
CBKS	**Cedar Bluff**	55.31	69	P	P	20 27 32.3	+0.2
	baz=311,SNR=11						
F39A	**Loretta**	55.67	58	P	P	20 27 34.1	-0.4
	baz=310,SNR=13						
G39A	**Holcombe**	55.94	58	P	P	20 27 36.2	-0.3
	baz=310,SNR=10						
F40A	**Park Falls**	56.09	57	P	P	20 27 36.4	-1.1
	baz=311,SNR=13						
D41A	**Chassel**	56.16	55	P	P	20 27 37.3	-0.7
	baz=311						
G40A	**Rib Lake**	56.47	58	P	P	20 27 40.1	-0.2
	baz=311,SNR=7.2						
MNTX	**Cornudas Mount**	56.65	79	P	P	20 27 42.2	+0.5
	baz=313,SNR=27						
MSTX	**Muleshoe**	56.71	76	P	P	20 27 41.8	-0.4
	baz=313						
AMTX	**Amarillo**	56.76	74	P	P	20 27 42.7	+0.2
	baz=312						
APYP	**Conner**	56.85	257	eP	P	20 27 41.8	-1.5
KSU1	**Kansas State U**	56.95	67	P	P	20 27 43.0	-0.8
	baz=312,SNR=16						
ABRA	**Dolores**	57.34	257	eP	P	20 27 48.4	+1.7
HAMF	**Hammerfest**	57.37	351	eP	P	20 27 44.6	-1.6
E43A	**Lone Tree Farm**	57.43	55	P	P	20 27 46.2	-0.8
	baz=312,SNR=17						
I41A	**Arkdale**	57.45	59	P	P	20 27 46.9	-0.2
	baz=312						
SCO	**Scoresbysund**	57.66	9	⇑iP	P	20 27 47.9	-0.3
SCO				MLR	MLR		
	comp=Z,7µm,29.0s						
SCO	**Scoresbysund**	57.66	9	⇑iP	P	20 27 47.9	-0.3
	comp=Z,7µm,29.0s						
E44A	**Grand Marais A**	57.82	54	P	P	20 27 49.2	-0.5
	baz=312						
HKPS	**Hong Kong Po S**	57.99	266	eP	P	20 27 52.1	+0.9
	comp=Z,80nm,1.0s						
JFWS	**Jewell Farm**	58.00	60	P	P	20 27 50.4	-0.7
	baz=312,SNR=7.2						
L40A	**Anamosa**	58.04	61	P	P	20 27 50.5	-0.8
	baz=312						
I42A	**Draeger Farm,**	58.07	58	P	P	20 27 51.2	-0.4
	baz=312,SNR=6.6						
ARCES	**ARCESS Array B**	58.24	350	P	P	20 27 51.0	-1.2
	comp=Z,34nm,0.6s,baz=30,slow=8.8,SNR=194						
ARE0	**ARCESS Array S**	58.24	350	eP	P	20 27 51.3	-1.1
	comp=Z,2.0nm,0.6s						
ARE0	**ARCESS Array S**	58.24	350	eP	P	20 27 51.2	-1.1
BALP	**Baler**	58.27	255	eP	P	20 27 52.8	-0.4
H43A	**Windswept, Lux**	58.29	57	eP	P	20 27 52.3	-0.7
	comp=Z,59nm,0.8s						
H43A	**Windswept, Lux**	58.29	57	P	P	20 27 53.1	0.0
	baz=312						
CD2	**Chengdu**	58.38	281	eP	P	20 27 52.4	-1.5
SMPP	**San Manuel, Pa**	58.51	256	eP	P	20 27 52.4	-2.5
LVZ	**Lovozero**	58.53	345	eP	P	20 27 53.0	-1.4
	comp=Z,138nm,0.7s						
LVZ	**Lovozero**	58.53	345	c iP	P	20 27 52.8	-1.6
LVZ				pmax	pmax		
	comp=Z,163nm,1.0s						
D46A	**Sault St. Mari**	58.59	53	P	P	20 27 55.0	-0.1
	baz=313						
WMOK	**Wichita Mounta**	58.61	72	P	P	20 27 55.6	+0.1
WMOK				pmax	pmax		
	comp=Z,40nm,0.8s						
WMOK	**Wichita Mounta**	58.61	72	P	P	20 27 55.5	+0.1
	baz=313,SNR=23						
N40A	**Mertquake, Sal**	58.63	63	P	P	20 27 55.1	-0.3
	baz=312						
F45A	**CMU Biological**	58.66	55	P	P	20 27 53.9	-1.6
	baz=313						
KURK	**Kurchatov**	58.72	313	eP	P	20 27 55.4	-0.6
	comp=Z,170nm,0.9s						
KURK	**Kurchatov**	58.72	313	c iP	P	20 27 55.3	-0.6
KURK				pmax	pmax		
	comp=Z,288nm,1.3s						
KURK	**Kurchatov**	58.72	313	P	P	20 27 55.7	-0.2
	SNR=83						
TRO	**Tromso**	58.78	352	eP	P	20 27 54.5	-1.5
BOLP	**Bolinao**	58.80	257	eP	P	20 27 55.9	-1.0
E46A	**Sault Ste Mari**	58.81	54	P	P	20 27 56.1	-0.5
	baz=313						
KURBB	**Kurchatov Arra**	58.83	313	PKPPKP	P'P'df	20 57 36.5	-0.3
	comp=Z,1.1nm,1.0s,baz=252,slow=3.0,SNR=4.2						
M41A	**Milan**	58.88	62	P	P	20 27 55.9	-1.3
	baz=313						
WMQ	**Urumqi**	58.92	302	P	P	20 28 00.2	+2.7
WMQ				pP	pwP	20 28 12.7	+0.4
WMQ				sP	sP	20 28 19.2	+5.4
WMQ				pmax	pmax		
	comp=Z,89nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,780nm,11.9s						
WMQ				LR	LR		
	comp=Z,3µm,21.3s						
WMQ				LR	LR		
	comp=Z,5µm,21.3s						
L42A	**Oliver, Polo**	58.93	60	P	P	20 27 56.5	-1.1
	baz=313						
D47A	**Chapleau**	58.95	52	P	P	20 27 57.1	-0.5
	baz=313,SNR=10						
KTK1	**Kautokeino**	58.98	351	eP	P	20 27 56.4	-1.0
G45A	**Suttons Bay**	59.02	56	P	P	20 27 57.6	-0.5
	baz=313						
APA	**Apatity**	59.03	346	⇑iP	P	20 27 55.6	-2.2
APA				pmax	pmax		
	comp=Z,17nm,0.7s						
APA				MLR	MLR		
	comp=Z,8µm,33.0s						
N41A	**Harden Midland**	59.16	62	P	P	20 27 58.3	-0.8
	baz=313						
K43A	**Burlington**	59.19	59	P	P	20 27 58.0	-1.3
	baz=313						
G46A	**Petoskey**	59.24	55	P	P	20 27 59.6	0.0
	baz=313						
E47A	**Iron Bridge**	59.27	53	P	P	20 27 59.7	-0.1
	baz=313,SNR=8.4						
TXAR	**Lajitas Array**	59.35	80	P	P	20 28 00.6	-0.1
	comp=Z,6.2nm,0.6s,baz=302,slow=5.2,SNR=69						
TXAR				ScP	ScP	20 32 45.1	-0.2
	comp=Z,1.1nm,0.9s,baz=298,slow=1.9,SNR=3.4						
I45A	**Fountain**	59.40	57	P	P	20 28 01.0	+0.2
	baz=313						
D48A	**Paudash Townsh**	59.51	52	P	P	20 28 00.9	-0.6
	baz=314,SNR=16						
ABTX	**Abilene, Hawle**	59.54	75	P	P	20 28 01.8	-0.2
	baz=314,SNR=9.7						
TUL1	**Leonard**	59.59	69	P	P	20 28 01.9	-0.2
	baz=313,SNR=16						
H46A	**Fife Lake**	59.60	56	P	P	20 28 00.7	-1.4
	baz=313						
D49A	**Beulah Townshi**	59.66	51	P	P	20 28 01.7	-0.8
	baz=314,SNR=5.2						
MKAR	**Makanchi Array**	59.67	308	P	P	20 28 01.9	-0.7
	comp=Z,73nm,0.7s,baz=51,slow=7.1,SNR=480						
MKAR	**Makanchi Array**	59.67	308	i P	P	20 28 01.6	-1.0
MKAR				pmax	pmax		
	comp=Z,73nm,0.7s						
GYA	**Guiyang**	59.69	275	⇑iP	P	20 28 02.3	-0.8
GYA				pP	pP	20 28 15.6	+1.2
GYA				PP	PP	20 30 18.8	+3.9
GYA				S	S	20 36 08.6	-2.1
GYA				sS	sS	20 36 29.5	-0.4
GYA				SS	SS	20 40 05.8	-0.7
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=Z,630nm,18.5s						
GYA				LR	LR		
	comp=Z,580nm,18.2s						
GLMI	**Grayling**	59.70	55	P	P	20 28 00.1	-2.8
	baz=313						
MATQ	**Matagami**	59.71	47	P	P	20 28 01.3	-1.5
	baz=314						
M43A	**Waltham Townsh**	59.71	61	P	P	20 28 02.1	-0.8
	baz=313,SNR=8.4						
L44A	**Lake County Fo**	59.77	59	P	P	20 28 02.8	-0.6
	baz=313,SNR=7.7						
E48A	**Lockeyer**	59.81	52	P	P	20 28 02.8	-0.7
	baz=314,SNR=11						
MAKZ	**Makanchi**	59.82	308	eP	P	20 28 02.6	-1.0
	comp=Z,114nm,0.8s						
MAKZ	**Makanchi**	59.82	308	eP	P	20 28 02.6	-1.0
MAKZ				pmax	pmax		
	comp=Z,114nm,0.8s						
G47A	**Hillman**	59.86	54	P	P	20 28 03.8	0.0
	baz=314						
I46A	**Reed City**	59.88	56	P	P	20 28 04.0	0.0
	baz=313						
BOAC	**Boac**	59.88	253	eP	P	20 28 03.7	-0.7
N43A	**Stutzman Famil**	59.93	61	P	P	20 28 03.6	-0.8
	baz=313						
F48A	**Evansville**	60.03	53	P	P	20 28 04.2	-0.9
	baz=314,SNR=9.3						
H47A	**Mio**	60.07	55	P	P	20 28 03.3	-2.1
	baz=314						
SGF	**Sodankyl**	60.11	349	P	P	20 28 04.3	-0.9
SGF				pmax	pmax		
	comp=Z,107nm,1.1s						
HDIL	**Hopedale**	60.13	61	P	P	20 28 04.8	-1.0
	baz=313,SNR=8.5						
J46A	**Howard City**	60.18	57	P	P	20 28 05.2	-0.9
	baz=314						
M44A	**Midewin, Midew**	60.24	60	P	P	20 28 05.7	-0.9
	baz=314,SNR=9.8						
I47A	**Gladwin**	60.31	56	P	P	20 28 06.8	-0.2
	baz=314						
F49A	**Sandfield**	60.37	53	P	P	20 28 07.0	-0.3
	baz=314,SNR=12						
H48A	**Harrisville**	60.46	55	P	P	20 28 07.7	-0.2
	baz=314						
LSQQ	**Lebel-sur-Quev**	60.51	47	P	P	20 28 07.4	-0.8
	baz=315						
E50A	**Wahnapitae**	60.56	52	P	P	20 28 08.1	-0.5
	baz=314						
K46A	**Dorr**	60.57	58	P	P	20 28 08.3	-0.4
	baz=314						
N44A	**Piper City**	60.60	61	P	P	20 28 08.8	-0.2
	baz=314,SNR=8.4						
I48A	**Sherman Twp**	60.62	55	P	P	20 28 08.2	-0.9
	baz=314						
SCHQ	**Schefferville**	60.62	38	P	P	20 28 08.4	-0.6
	comp=Z,8.7nm,0.7s,baz=330,slow=5.3,SNR=6.3						
P43A	**Skaggs, Pawnee**	60.63	62	P	P	20 28 09.0	-0.3
	baz=314,SNR=15						
BRVK	**Borovoye**	60.68	319	eP	P	20 28 08.9	-0.4
	comp=Z,219nm,1.4s						
BRVK	**Borovoye**	60.68	319	i P	P	20 28 08.8	-0.5
BRVK				pmax	pmax		
	comp=Z,149nm,1.4s						
BRVK	**Borovoye**	60.68	319	P	P	20 28 09.1	-0.2
	SNR=43						
J47A	**Sunmer**	60.69	57	P	P	20 28 09.6	0.0
	baz=314						
CCM	**Cathedral Cave**	60.75	65	eP	P	20 28 09.2	-0.9
	comp=Z,35nm,0.8s						
CCM	**Cathedral Cave**	60.75	65	eP	P	20 28 09.2	-0.9
CCM				pmax	pmax		
	comp=Z,35nm,0.8s						
CCM	**Cathedral Cave**	60.75	65	P	P	20 28 10.0	-0.1
	baz=314						
L46A	**Eue Claire**	60.76	58	P	P	20 28 09.9	-0.2
	baz=314						
O44A	**Mansfield**	60.86	61	P	P	20 28 08.8	-1.9
	baz=314						
N45A	**Kentland**	60.91	60	P	P	20 28 11.4	+0.3
	baz=314						
JCT	**Junction City**	60.94	77	P	P	20 28 11.0	-0.5
	baz=315						
K47A	**Vermontville**	60.99	57	P	P	20 28 11.4	-0.3
	baz=314,SNR=7.7						
U40A	**Yellville**	61.00	67	P	P	20 28 11.5	-0.3
	baz=314,SNR=33						
TOBO	**Tobermory, Bru**	61.01	53	P	P	20 28 11.2	-0.5
	baz=315,SNR=21						
CHGQ	**Chibougamau**	61.09	45	P	P	20 28 10.9	-1.2
	baz=316,SNR=15						
E51A	**G1948 Merrick**	61.09	51	P	P	20 28 11.1	-1.2

	baz=315						
M46A	Old House Fiel	61.15	59	P	P	20 28 12.3	-0.4
	baz=314						
J48A	Bridge Port	61.19	56	P	P	20 28 14.0	+1.0
	baz=314						
O45A	Potomac	61.20	61	P	P	20 28 13.2	+0.1
	baz=314,SNR=19						
I49A	Point Hope	61.24	55	P	P	20 28 13.1	-0.2
	baz=314						
W39A	Magazine	61.26	69	P	P	20 28 13.2	-0.3
	baz=314,SNR=15						
N46A	Monticello	61.30	60	P	P	20 28 13.3	-0.4
	baz=314,SNR=13						
D52A	ZEK Kipawa Sen	61.30	50	P	P	20 28 12.5	-1.2
	baz=315						
WHTX	Lake Whitney,	61.31	74	P	P	20 28 14.4	+0.5
	baz=315,SNR=12						
F51A	Arnstein	61.31	52	P	P	20 28 13.3	-0.5
	baz=315						
K48A	Perry	61.37	57	P	P	20 28 14.2	0.0
	baz=314						
L47A	Sherwood	61.37	58	P	P	20 28 14.0	-0.2
	baz=314,SNR=14						
SVE	Sverdlovsk	61.45	327⇓	eP	P	20 28 14.5	0.0
SVE				pmax	pmax		
	comp=Z,69nm,1.7s						
SFIN	Lafayette	61.46	60	P	P	20 28 14.5	-0.3
	baz=314,SNR=22						
J49A	Marlette	61.49	56	P	P	20 28 14.5	-0.5
	baz=315						
KLBO	Killbear Provi	61.57	52	P	P	20 28 15.0	-0.5
	baz=315,SNR=13						
D53A	Lac Vacive, Po	61.57	49	P	P	20 28 14.5	-1.0
	baz=316						
M47A	Cromwell	61.58	59	P	P	20 28 15.4	-0.2
	baz=314						
BMRO	Meriville Lake	61.60	53	P	P	20 28 16.2	+0.4
	baz=315						
E52A	Mattawa	61.68	51	P	P	20 28 15.5	-0.8
	baz=315						
P45A	Graceland, Par	61.70	61	P	P	20 28 16.1	-0.3
	baz=314						
F52A	Sundridge	61.70	51	P	P	20 28 16.0	-0.4
	baz=315,SNR=14						
K49A	Clarkson	61.73	56	P	P	20 28 16.6	0.0
	baz=315						
BRCO	Bruce Peninsul	61.74	54	P	P	20 28 16.2	-0.5
	baz=315						
BASO	Ashfield	61.79	54	P	P	20 28 16.1	-0.9
	baz=315						
L48A	N Adams	61.80	57	P	P	20 28 17.2	+0.1
	baz=315,SNR=6.8						
MIAR	Mount Ida	61.84	69	P	P	20 28 17.7	+0.2
	baz=314,SNR=25						
N47A	Urbana	61.87	59	P	P	20 28 16.8	-0.8
	baz=315,SNR=12						
PRGR	Permogore	61.90	337⇑	iP	P	20 28 16.7	-0.7
PRGR				e		20 29 01.2	
PRGR				eS	S	20 36 37.6	0.0
PRGR				pmax	pmax		
	comp=Z,41nm,0.6s						
Q45A	Warren Harvey,	61.91	62	P	P	20 28 17.6	-0.2
	baz=314,SNR=18						
BUKO	Buck Lake	61.91	52	P	P	20 28 17.4	-0.5
	baz=315,SNR=13						
P46A	Rosedale	61.93	61	P	P	20 28 17.9	-0.2
	baz=314,SNR=7.1						
AAM	Ann Arbor	61.96	57	P	P	20 28 17.3	-0.9
	baz=315						
BWLO	Walkerton	61.98	54	P	P	20 28 17.6	-0.7
	baz=315						
D54A	Lac Fusel, La	62.02	49	P	P	20 28 16.8	-1.7
	baz=316						
L49A	Milan	62.04	57	P	P	20 28 18.5	-0.2
	baz=315						
O47A	Sheridan	62.06	60	P	P	20 28 18.1	-0.8
	baz=315,SNR=25						
435B	Jarrell	62.08	75	P	P	20 28 18.7	-0.5
	baz=315						
E53A	Dumoine, Ponti	62.09	50	P	P	20 28 18.0	-1.0
	baz=316						
S44A	Carbondale	62.13	64	P	P	20 28 19.2	-0.2
	baz=315,SNR=24						
W41B	Gary Mavity, V	62.18	68	P	P	20 28 19.2	-0.6
	baz=315,SNR=36						
ALGO	Algonquin Park	62.21	51	P	P	20 28 19.3	-0.5
	baz=316						
H52A	Wyevale	62.24	53	P	P	20 28 19.3	-0.7
	baz=316						
N48A	Decatur	62.25	59	P	P	20 28 19.7	-0.4
	baz=315,SNR=11						
R45A	Skylar, Fairfi	62.26	63	P	P	20 28 20.0	-0.2
	baz=315,SNR=17						
I51A	Listowel	62.26	54	P	P	20 28 19.5	-0.7
	baz=315						
E54A	Lac Daplat, Po	62.28	50	P	P	20 28 19.0	-1.2
	baz=316						
KONS	Konsvik	62.30	354	eP	P	20 28 19.2	-0.9
X40A	Basin Creek Fa	62.31	69	P	P	20 28 20.7	+0.1
	baz=315						
M49A	Liberty Center	62.38	58	P	P	20 28 21.0	+0.1
	baz=315						
OUL	Oulu	62.43	348	P	P	20 28 19.6	-1.4
OUL				pmax	pmax		
	comp=Z,168nm,0.6s						
ARU	Arti	62.48	328	eP	P	20 28 20.5	-0.9
	comp=Z,39nm,0.5s						
ARU	Arti	62.48	328	c iP	P	20 28 20.4	-0.9
ARU				pmax	pmax		
	comp=Z,68nm,1.7s						
I52A	Shelburne	62.50	53	P	P	20 28 21.8	-0.1
	baz=316						
G53A	Haliburton	62.53	52	P	P	20 28 21.5	-0.5
	baz=316,SNR=22						
MOR8	Moi Rana	62.53	354	eP	P	20 28 19.4	-2.2
P47A	Martinsville	62.54	61	P	P	20 28 21.6	-0.5
	baz=315,SNR=21						
O48A	Farmland	62.60	59	P	P	20 28 22.0	-0.5
	baz=315,SNR=24						
N49A	Columbus Grove	62.66	58	P	P	20 28 22.4	-0.4
	baz=315,SNR=12						
833A	Chaparral WMA,	62.71	78	P	P	20 28 23.5	+0.1
	baz=316						
R46A	Gibon Southern	62.75	62	P	P	20 28 24.1	+0.6
	baz=315						
PEMO	Pembroke	62.80	50	P	P	20 28 22.5	-1.2
	baz=316						
Q47A	Bedord North L	62.84	61	P	P	20 28 23.8	-0.3
	baz=315						
ACTO	Acton	62.89	54	P	P	20 28 23.7	-0.7
	baz=316						
BANO	Bancroft	62.94	51	P	P	20 28 23.9	-0.8
	baz=316						
J52A	Paris	62.94	54	P	P	20 28 24.5	-0.2
	baz=316						
I53A	Kortright Cn E	62.98	53	P	P	20 28 24.4	-0.5
	baz=316						
S46A	Don Dixon Farm	63.01	63	P	P	20 28 25.2	-0.1
	baz=315						
P48A	Milroy	63.02	60	P	P	20 28 24.9	-0.4
	baz=315,SNR=15						
O49A	Covington	63.09	59	P	P	20 28 25.9	+0.1
	baz=315						
JAY	Jayapura	63.10	225	P	P	20 28 26.2	+0.1
	comp=Z,17nm,1.0s,baz=339,slow=8.7,SNR=4.8						
KCP	Kidapawan	63.10	246⇑	iP	P	20 28 25.4	-0.8
KMI	Kunming	63.10	277	P	P	20 28 26.1	-0.2
KMI				pP	pP	20 28 38.1	+0.5
KMI				sP	sP	20 28 43.7	+1.5
KMI				pmax	pmax		
	comp=Z,63nm,1.4s						
KMI				pmax	pmax		
	comp=Z,370nm,7.3s						
F55A	Otter Lake	63.12	50	P	P	20 28 25.5	-0.3
	baz=317						
PKRO	Pickering	63.13	53	P	P	20 28 26.2	+0.2
	baz=316						
NATX	Nacogdoches	63.15	72	P	P	20 28 26.9	+0.6
	baz=315						
Z41A	Richland Creek	63.20	70	P	P	20 28 27.1	+0.6
	baz=315						
Q48A	North Vernon	63.23	61	P	P	20 28 26.3	-0.3
	baz=315						
R47A	Wooly Knot Far	63.24	62	P	P	20 28 27.0	+0.2
	baz=315,SNR=8.3						
N50A	Nevada	63.31	58	P	P	20 28 27.1	-0.2
	baz=316						
PLVO	Plevna	63.34	51	P	P	20 28 26.8	-0.5
	baz=317						
OTUK	Ortayu	63.35	315	P	P	20 28 27.0	-0.4
OTUK				pmax	pmax		
	comp=Z,109nm,1.0s						
P49A	Miami Univ. Ec	63.35	60	P	P	20 28 26.7	-0.8
	baz=315,SNR=14						
TYNO	Tyneside	63.36	54	P	P	20 28 25.2	-2.3
	baz=316						
T46A	Princeton	63.36	63	P	P	20 28 27.4	-0.2
	baz=315,SNR=16						
G55A	Calabogie	63.36	50	P	P	20 28 26.0	-1.4
	baz=317						
DRWO	Darlington Wes	63.37	53	P	P	20 28 27.1	-0.5
	baz=316						
GENI	Genyem	63.41	226	P	P	20 28 29.0	+0.9
	comp=Z,85nm,1.2s						
WCI	Wyandotte Cave	63.41	62	eP	P	20 28 28.0	+0.1
	comp=Z,72nm,0.9s						
WCI	Wyandotte Cave	63.41	62	eP	P	20 28 28.0	+0.1
WCI				pmax	pmax		
	comp=Z,72nm,0.9s						
WCI	Wyandotte Cave	63.41	62	P	P	20 28 27.6	-0.3
	baz=315						
M51A	Elyria	63.42	57	P	P	20 28 27.8	-0.2
	baz=316						
X43A	Marvell	63.43	67	P	P	20 28 27.5	-0.6
	baz=315						
DELO	Deloro Mine	63.46	51	P	P	20 28 26.9	-1.2
	baz=316						
WLVO	Wesleyville	63.50	52	P	P	20 28 27.9	-0.5
	baz=316						
O50A	Cable	63.51	58	P	P	20 28 28.1	-0.5
	baz=316,SNR=7.1						
R48A	Northridge Ran	63.52	61	P	P	20 28 28.1	-0.6
	baz=315						
PDGK	Podgornoye	63.53	307	P	P	20 28 28.6	-0.2
PDGK				pmax	pmax		
	comp=Z,149nm,1.1s						
S47A	Hartford	63.54	62	P	P	20 28 28.6	-0.1
	baz=315,SNR=10						
N51A	Ashland	63.62	57	P	P	20 28 28.8	-0.4
	baz=316						
Q49A	Aurora	63.63	60	P	P	20 28 28.8	-0.6
	baz=316						
I55A	Frankford	63.65	52	P	P	20 28 28.6	-0.7
	baz=317						
H55A	Tweed	63.65	51	P	P	20 28 28.6	-0.7
	baz=317						
LATQ	La Tuque	63.66	46	P	P	20 28 27.9	-1.5
	baz=318						
U46A	Springville	63.68	64	P	P	20 28 30.4	+0.7
	baz=315						
M52A	Chesterland	63.71	56	P	P	20 28 29.4	-0.4
	baz=316						
HKT	Hockley	63.73	74	eP	P	20 28 31.2	+1.2
	comp=Z,93nm,1.6s						
HKT	Hockley	63.73	74	eP	P	20 28 31.2	+1.2
HKT				pmax	pmax		
	comp=Z,93nm,1.6s						
ACSO	Alum Creek Sta	63.79	58	P	P	20 28 30.0	-0.4
	baz=316						
P50A	Jamestown	63.80	59	P	P	20 28 30.3	-0.1
	baz=316,SNR=18						
ORIO	Orleans, Innes	63.80	49	P	P	20 28 29.6	-0.7
	baz=317						
T47A	Sharon Grove	63.84	63	P	P	20 28 30.9	+0.1
	baz=316,SNR=51						
J54A	Appleton	63.85	53	P	P	20 28 30.3	-0.5
	baz=316						
S48A	Wiedeman Farm,	63.95	62	P	P	20 28 31.2	-0.3
	baz=316						
L53A	Girard	63.98	55	P	P	20 28 31.6	0.0
	baz=316						
R49A	Shelbyville	63.99	61	P	P	20 28 32.1	+0.4
	baz=316						
MEDO	Medina	64.02	53	P	P	20 28 30.2	-1.6
	baz=317						
WVT	Waverly	64.04	64	eP	P	20 28 31.9	-0.2
	comp=Z,60nm,0.9s						
WVT	Waverly	64.04	64	eP	P	20 28 31.9	-0.2
WVT				pmax	pmax		
	comp=Z,60nm,0.9s						
WVT	Waverly	64.04	64	P	P	20 28 32.1	0.0
	baz=316						
O51A	Pataskala	64.05	58	P	P	20 28 31.6	-0.5
	baz=316,SNR=14						
N52A	McGinn’s Farm,	64.06	57	P	P	20 28 31.7	-0.4
	baz=316						
H56A	Elgin	64.07	51	P	P	20 28 30.9	-1.2
	baz=317						
V46A	Holladay	64.11	65	P	P	20 28 32.4	-0.2
	baz=316,SNR=24						
U47A	Clarksville	64.13	64	P	P	20 28 33.4	+0.7
	baz=316,SNR=18						
M53A	WI Miller and	64.14	56	P	P	20 28 32.2	-0.5
	baz=316,SNR=9.1						
T48A	Bowling Green	64.15	62	P	P	20 28 32.9	+0.1
	baz=316,SNR=8.5						
PECO	Prince Edward	64.19	51	P	P	20 28 32.2	-0.7
	baz=317						
Q50A	Georgetown	64.25	60	P	P	20 28 33.0	-0.4
	baz=316						
L54A	Sinclairville	64.26	54	P	P	20 28 32.5	-0.9
	baz=317						
J55A	Hilton	64.27	52	P	P	20 28 33.0	-0.5
	baz=317						
P51A	Williamsport	64.28	59	P	P	20 28 32.8	-0.8
	baz=316						
S49A	Springfield	64.29	61	P	P	20 28 33.6	0.0
	baz=316,SNR=13						
OXF	Oxford	64.29	66	P	P	20 28 33.5	-0.2
	baz=316,SNR=36						
K54A	Basiliko Farm,	64.31	53	P	P	20 28 32.6	-1.2
	baz=317						
V47A	Nunnelly	64.43	64	P	P	20 28 34.6	-0.1
	baz=316,SNR=11						
W46A	Michie	64.44	65	P	P	20 28 34.5	-0.2
	baz=316						
Q51A	Peebles	64.46	59	P	P	20 28 34.4	-0.4
	baz=316,SNR=13						
R50A	Paris	64.46	60	P	P	20 28 34.5	-0.3
	baz=316						
O52A	Adamsville	64.48	57	P	P	20 28 34.7	-0.2
	baz=316,SNR=14						
U48A	Cassie Pea, Po	64.50	63	P	P	20 28 35.0	-0.1
	baz=316,SNR=32						
N53A	Lisbon	64.51	56	P	P	20 28 34.7	-0.4
	baz=316						
K55A	Perry	64.53	53	P	P	20 28 34.7	-0.5
	baz=317						
M54A	Oil Creek Stat	64.61	55	P	P	20 28 35.7	0.0
	baz=317						
SRPI	Serui, Papua	64.61	230	P	P	20 28 35.3	-0.7
T49A	Edmonton	64.64	62	P	P	20 28 35.9	-0.1
	baz=316,SNR=14						
P52A	Corning	64.67	58	P	P	20 28 34.6	-1.5
	baz=316						
O53A	New Philadelph	64.71	57	P	P	20 28 36.1	-0.3
	baz=316,SNR=13						
X46A	Booneville	64.74	66	P	P	20 28 35.9	-0.7
	baz=316,SNR=22						
L55A	Hinsdale	64.75	54	P	P	20 28 35.9	-0.8
	baz=317						
W47A	Westpoint	64.81	65	P	P	20 28 36.8	-0.3
	baz=316,SNR=22						
R51A	Hillsboro	64.85	60	P	P	20 28 37.8	+0.4
	baz=316,SNR=18						
S50A	Richmond	64.85	61	P	P	20 28 37.6	+0.2
	baz=316,SNR=13						
LONY	Lake Ozonia	64.86	50	P	P	20 28 35.6	-1.7
	baz=318						
V48A	Smith Brothers	64.89	64	P	P	20 28 37.2	-0.4
	baz=316,SNR=18						
U49A	Red Boiling Sp	64.92	63	P	P	20 28 37.8	-0.1
	baz=316,SNR=13						
T50A	Nancy	65.08	62	P	P	20 28 39.0	+0.1
	baz=316,SNR=22						
Q52A	Bidwell	65.08	58	P	P	20 28 38.8	-0.1
	baz=316,SNR=11						
M55A	Ridgway	65.10	54	P	P	20 28 38.9	0.0
	baz=317						
LNIG	Linares	65.13	81	eP	P	20 28 38.5	-0.8
	comp=Z,55nm,1.9s						
P53A	Whipple	65.17	57	P	P	20 28 38.6	-0.8
	baz=317						
X47A	Russelville	65.18	65	P	P	20 28 39.1	-0.5
	baz=316,SNR=15						
O54A	Avella	65.20	56	P	P	20 28 39.2	-0.4
	baz=317						
W48A	Pulaski	65.26	64	P	P	20 28 40.2	+0.2
	baz=316,SNR=49						
VBMS	Vicksburg	65.29	69	P	P	20 28 40.8	+0.6
	baz=316						
S51A	Beattyville	65.32	60	P	P	20 28 40.2	-0.3
	baz=316,SNR=7.5						
R52A	Catlettsburg	65.33	59	P	P	20 28 40.4	-0.1
	baz=317						
M56A	Emporium	65.39	54	P	P	20 28 40.4	-0.4
	baz=317,SNR=9.1						
V49A	McMinnville	65.39	63	P	P	20 28 41.0	+0.1
	baz=316,SNR=25						
N55A	Marion Center	65.49	55	P	P	20 28 39.9	-1.6
	baz=317						
U50A	Jamestown	65.52	62	P	P	20 28 41.5	-0.3
	baz=316,SNR=10						
Q53A	Leroy	65.56	58	P	P	20 28 41.7	-0.2
	baz=317,SNR=30						
P54A	Burton	65.57	57	P	P	20 28 42.3	+0.2
	baz=317						
S52A	Salyersville	65.58	60	P	P	20 28 42.2	+0.2
	baz=317,SNR=14						
T51A	Gray	65.62	61	P	P	20 28 42.3	0.0
	baz=317,SNR=7.8						
W49A	Belvidere	65.66	64	P	P	20 28 42.7	0.0
	baz=316,SNR=23						
X48A	Hartselle	65.69	65	P	P	20 28 42.5	-0.4
	baz=316,SNR=15						
TBLU	Trondheim	65.70	355	eP	P	20 28 40.9	-1.6
R53A	Hurricane	65.71	59	P	P	20 28 43.3	+0.4
	baz=317,SNR=13						
O55A	Ligonier	65.75	56	P	P	20 28 43.1	0.0
	baz=317						
N56A	West Decatur	65.75	55	P	P	20 28 42.4	-0.7
	baz=317						
TKM2	Tokmak 2	65.77	309	P	P	20 28 43.7	+0.2
	SNR=151						
Q54A	Coxs Mills	65.83	58	P	P	20 28 43.8	+0.1
	baz=317						
MCWV	Mont Chateau	65.86	56	P	P	20 28 43.0	-0.9
	baz=317						
FINES	FINESS Array B	65.89	347	P	P	20 28 42.1	-1.5
	comp=Z,42nm,0.6s,baz=26,slow=8.7,SNR=228						
FINES	FINESS Array B	65.89	347	i P	P	20 28 42.0	-1.7
FINES				pmax	pmax		
	comp=Z,42nm,0.6s						
V50A	Pikevile	65.91	63	P	P	20 28 44.0	-0.2
	baz=317,SNR=12						
ULHL	Ulahol	65.95	308	P	P	20 28 45.0	+0.4
	SNR=33						
BINY	Binghamton	65.97	52	P	P	20 28 44.4	-0.1
	baz=318,SNR=10						
P55A	Reedsville	65.98	57	P	P	20 28 43.3	-1.4
	baz=317						
U51A	La Follette	66.00	61	P	P	20 28 45.3	+0.4
	baz=317,SNR=12						
Y48A	Jasper	66.01	65	P	P	20 28 44.0	-0.9
	baz=316,SNR=24						
T52A	Hallie	66.04	60	P	P	20 28 45.2	+0.1
	baz=317						
USP	Ospenovka	66.04	310	P	P	20 28 45.4	+0.4
	SNR=288						
X49A	Woodville	66.06	64	P	P	20 28 44.9	-0.3
	baz=317,SNR=14						
O56A	Blue Knob Stat	66.08	55	P	P	20 28 45.1	-0.3
	baz=318						
S53A	Williamson	66.09	59	P	P	20 28 45.7	+0.2
	baz=317,SNR=10						
CHMS	Chumysh	66.12	309	P	P	20 28 46.1	+0.6
	SNR=94						
W50A	Signal Mountai	66.13	63	P	P	20 28 45.7	0.0
	baz=317,SNR=12						
TZTN	Tazewell	66.14	61	P	P	20 28 44.0	-1.7
	baz=317						
SSPA	Standing Stone	66.16	54	eP	P	20 28 45.4	-0.3
	comp=Z,39nm,0.9s						
SSPA	Standing Stone	66.16	54	P	P	20 28 45.1	-0.7
	baz=318						
Q55A	Buckhannon	66.23	57	P	P	20 28 44.9	-1.4
	baz=317						
V51A	Loudon	66.23	62	P	P	20 28 46.0	-0.3
	baz=317						
SWI	Sorong	66.25	235	P	P	20 28 47.3	+0.7
	comp=Z,83nm,1.1s						
N57A	Milroy	66.25	54	P	P	20 28 45.9	-0.4
	baz=318						
KBK	Karagaybulak	66.28	309	P	P	20 28 47.4	+0.6
	SNR=61						
R54A	Victor	66.34	58	P	P	20 28 46.7	-0.3
	baz=317,SNR=12						
U52A	Thorn Hill	66.35	61	P	P	20 28 47.0	-0.1
	baz=317						
T53A	Wise	66.38	60	P	P	20 28 47.4	+0.1
	baz=317,SNR=11						
LBNH	Lisbon	66.40	48	P	P	20 28 46.5	-0.8
	baz=319						
S54A	Dingess, Beckl	66.44	59	P	P	20 28 47.3	-0.4
	baz=317						
W51A	Cleveland	66.47	63	P	P	20 28 48.2	+0.4
	baz=317,SNR=11						
X50B	Fort Payne	66.48	64	P	P	20 28 48.0	0.0
	baz=317,SNR=29						
Y49A	Blount Mountai	66.48	65	P	P	20 28 47.8	-0.2
	baz=317,SNR=14						
P56A	Dayton Farm, R	66.50	56	P	P	20 28 48.1	+0.1
	baz=318,SNR=6.7						
MOL	Molde	66.51	356	eP	P	20 28 47.2	-0.4
AAK	Ala-Archa	66.52	309	eP	P	20 28 48.7	+0.4
	comp=Z,362nm,1.4s						
AAK	Ala-Archa	66.52	309	i P	P	20 28 48.6	+0.4
	SNR=104						
AAK	Ala-Archa	66.52	309	c iP	P	20 28 48.6	+0.4
AAK				pmax	pmax		
	comp=Z,259nm,1.3s						
AAK	Ala-Archa	66.52	309	P	P	20 28 48.8	+0.5
	SNR=82						
AAK				P	P	20 28 48.8	+0.5
	SNR=82						
AAK	Ala-Archa	66.52	309	P	P	20 28 48.6	+0.3
	SNR=90						
KZA	Kyzart	66.56	308	P	P	20 28 49.5	+0.6
	SNR=72						
O57A	Amberson	66.61	55	P	P	20 28 48.0	-0.7
	baz=318						
V52A	Sevierville	66.63	62	P	P	20 28 48.8	0.0
	baz=317,SNR=12						
Q56A	Snyder Ridge,	66.66	56	P	P	20 28 49.3	+0.3
	baz=318						
148A	Greensboro	66.70	67	P	P	20 28 49.4	+0.1
	baz=317						
R55A	Marlinton	66.73	58	P	P	20 28 49.5	0.0
	baz=318						
M59A	Waymart	66.73	52	P	P	20 28 48.0	-1.4
	baz=318						
LRAL	Lakeview Retre	66.75	66	P	P	20 28 49.4	-0.2
	baz=317,SNR=28						
PUL	Pulkovo	66.80	344⇑	eP	P	20 28 49.1	-0.4
PUL				pmax	pmax		
	comp=Z,45nm,0.5s						
U53A	Fall Branch	66.81	61	P	P	20 28 50.4	+0.3
	baz=317						
UCH	Uchtor	66.81	309	P	P	20 28 51.0	+0.5
	SNR=82						
PKME	Peaks-Kenny Pk	66.84	46	P	P	20 28 49.5	-0.5
	baz=320						
T54A	Tazewell	66.84	59	P	P	20 28 50.6	+0.3
	baz=317,SNR=22						
Y50A	Piedmont	66.85	64	P	P	20 28 50.2	0.0
	baz=317,SNR=13						
EKS2	Erkin-Say	66.85	310	P	P	20 28 50.8	+0.5
	SNR=240						
X51A	Calhoun	66.85	63	P	P	20 28 50.4	+0.2
	baz=317,SNR=10						
Z49A	Columbiana	66.90	66	P	P	20 28 50.2	-0.3
	baz=317,SNR=31						
LSA	Lhasa	66.90	289	P	P	20 28 52.3	+1.1
LSA	Lhasa	66.90	289	P	P	20 28 52.4	+1.1
S55A	Lewisburg	66.90	58	P	P	20 28 50.0	-0.7
	baz=318						
AKN	Aaknes	66.92	357	eP	P	20 28 50.1	-0.2
TNTI	Ternate	66.94	240	P	P	20 28 51.1	+0.1
	comp=Z,43nm,1.6s						
P57A	Homestead Farm	66.95	55	P	P	20 28 50.9	+0.1
	baz=318						
DOMB	Dombas	66.97	355	eP	P	20 28 49.9	-0.7
W52A	Murphy	66.99	62	P	P	20 28 51.1	-0.1
	baz=317						

R56A	Bull Pasture M	67.02	57	P	P	20 28 50.7	-0.7
	baz=318						
N59A	State Game Lan	67.03	53	P	P	20 28 51.5	+0.1
	baz=318,SNR=15						
O58A	Lewisberry	67.04	54	P	P	20 28 50.9	-0.4
	baz=318						
Q57A	Strasburg	67.07	56	P	P	20 28 51.5	-0.2
	baz=318						
U54A	Nelsons Funny	67.11	60	P	P	20 28 52.1	+0.1
	baz=317,SNR=10						
149A	Jones	67.18	66	P	P	20 28 51.8	-0.6
	baz=317,SNR=19						
V53A	Saluda	67.19	61	P	P	20 28 52.6	+0.2
	baz=317,SNR=7.9						
Z50A	Ashland	67.20	65	P	P	20 28 52.3	-0.3
	baz=317,SNR=29						
Y51A	Rockmart	67.22	64	P	P	20 28 52.5	-0.2
	baz=317,SNR=14						
T55A	Pulaski	67.23	59	P	P	20 28 52.3	-0.4
	baz=318						
O59A	Robesonia	67.27	54	P	P	20 28 51.5	-1.4
	baz=318						
AML	Almayashu	67.29	309	P	P	20 28 54.1	+0.7
	SNR=116						
BLA	Blacksburg	67.36	59	P	P	20 28 53.8	+0.3
	baz=318						
W53A	Cullowhee	67.36	62	P	P	20 28 54.0	+0.3
	baz=317,SNR=11						
X52A	Dahlonega	67.36	63	P	P	20 28 53.2	-0.3
	baz=317,SNR=25						
N60A	Cedar Hill Far	67.40	53	P	P	20 28 52.7	-0.9
	baz=319						
249A	Camden	67.44	67	P	P	20 28 54.3	+0.3
	baz=317,SNR=12						
S56A	Natural Bridge	67.47	58	P	P	20 28 54.2	0.0
	baz=318,SNR=9.0						
FAKI	Fak Fak	67.49	233	P	P	20 28 55.3	+0.8
	comp=Z,105nm,1.5s						
Q58A	Fox Den Farm,	67.52	56	P	P	20 28 52.7	-1.8
	baz=318						
U55A	TA2, Sparta	67.54	59	P	P	20 28 54.8	+0.1
	baz=318,SNR=15						
R57A	Stanardsville	67.56	57	P	P	20 28 53.7	-1.1
	baz=318						
FOO	Floro	67.57	357	*e*P	P	20 28 49.5	-4.8
V54A	Nebo	67.58	61	P	P	20 28 55.0	+0.1
	baz=318,SNR=10						
Z51A	Franklin	67.58	65	P	P	20 28 54.7	-0.3
	baz=317,SNR=7.9						
150A	Eclectic	67.62	66	P	P	20 28 55.3	+0.1
	baz=317,SNR=7.8						
O60A	Telford	67.66	53	P	P	20 28 54.9	-0.4
	baz=319						
P59A	Jarrettsville	67.67	54	P	P	20 28 54.3	-1.1
	baz=319						
T56A	Rocky Mt	67.70	58	P	P	20 28 56.0	+0.3
	baz=318						
M61A	Granite Spring	67.73	51	P	P	20 28 55.3	-0.5
	baz=319						
S57A	Dark Hollow, R	67.73	57	P	P	20 28 55.9	+0.1
	baz=318						
X53A	Estanollee	67.77	62	P	P	20 28 55.9	-0.2
	baz=318,SNR=14						
PANO	Nakornpanom	67.79	270	P	P	20 28 56.3	-0.1
	comp=Z,2.0nm,1.2s,comp=Z,349nm						
Y52A	Lilburn	67.81	63	P	P	20 28 56.5	+0.2
	baz=317,SNR=13						
R58A	Rapidan	67.83	56	P	P	20 28 56.5	+0.1
	baz=318						
NB2	NORSAR Subarra	67.84	354	P	P	20 28 55.2	-1.0
	comp=Z,23nm,0.8s,baz=6.5,slow=6.2						
NB2	NORSAR Subarra	67.84	354	P	P	20 28 55.2	-1.0
	baz=6.5,slow=6.2						
NOA	NORSAR Array B	67.84	354	P	P	20 28 55.4	-0.8
	comp=Z,88nm,1.0s,baz=7.4,slow=6.3,SNR=99						
NOA				PKPPKP	P'P'df	20 57 10.9	-12
	comp=Z,1.5nm,0.9s,baz=207,slow=2.0,SNR=3.3						
349A	Repton	67.86	67	P	P	20 28 57.1	+0.4
	baz=317,SNR=7.6						
PAL	Palisades	67.89	52	P	P	20 28 55.8	-0.9
	baz=319						
HRV	Adam Dziewonsk	67.90	49	P	P	20 28 56.2	-0.5
	baz=320						
P60A	Greenville	67.92	54	P	P	20 28 57.9	+1.0
	baz=319						
V55A	Taylorsville	67.93	60	P	P	20 28 57.0	-0.1
	baz=318						
250A	Grady	67.94	66	P	P	20 28 56.7	-0.4
	baz=317,SNR=23						
W54A	Cherokee Point	67.96	61	P	P	20 28 57.7	+0.4
	baz=318						
HYA	Hoyanger	67.97	357	*e*P	P	20 28 56.0	-0.9
U56A	King	68.02	59	P	P	20 28 58.2	+0.6
	baz=318						
NONG	Nongkai	68.03	272	P	P	20 28 57.6	-0.3
	comp=Z,2.0nm,1.3s,comp=Z,228nm						
LBMI	Labuha	68.05	239	P	P	20 28 57.3	-0.7
151A	Opelika	68.08	65	P	P	20 28 57.6	-0.5
	baz=317,SNR=5.1						
Y53A	Monroe	68.09	63	P	P	20 28 58.4	+0.3
	baz=318,SNR=14						
Z52A	Williamson	68.11	64	P	P	20 28 58.3	+0.1
	baz=318,SNR=11						
KSH	Kashi	68.12	306	P	P	20 29 02.3	+3.9
KSH				pP	sP	20 29 15.5	+0.9
KSH				sP	PcP	20 29 20.0	-4.2
KSH				PP	PP	20 31 35.3	+6.8
KSH				S	S	20 37 58.3	+3.3
KSH				ScS	ScS	20 38 55.0	+1.0
KSH				SS	SS	20 42 23.5	+6.2
KSH				pmax	pmax		
	comp=Z,440nm,1.4s						
KSH				pmax	pmax		
	comp=Z,730nm,6.3s						
KSH				LR	LR		
	comp=Z,3µm,14.9s						
KSH				LR	LR		
	comp=Z,1µm,19.0s						
NC602	NORSAR Array S	68.13	354	*e*P	P	20 28 57.0	-0.9
NORES	NORESS Array B	68.13	354	P	P	20 28 56.8	-1.1
T57A	Hurt	68.14	58	P	P	20 28 58.3	-0.1
	baz=318,SNR=8.6						
R58B	Mineral	68.15	56	P	P	20 28 57.8	-0.6
	baz=318						
X54A	Belton	68.25	62	P	P	20 28 59.8	+0.7
	baz=318,SNR=16						
O61A	Allentown	68.26	53	P	P	20 28 58.6	-0.4
	baz=319						
449A	Pace	68.28	68	P	P	20 28 59.5	+0.1
	baz=317						
350A	Dozier	68.31	67	P	P	20 28 59.4	-0.1
	baz=317						
SKNT	Sakolnakorn	68.31	270	P	P	20 28 59.2	-0.5
	comp=Z,112nm,1.4s						
152A	Waverly Hall	68.32	65	P	P	20 28 59.4	-0.2
	baz=318						
S58A	Poland Farm, P	68.32	57	P	P	20 28 59.6	+0.1
	baz=318						
251A	Midway	68.35	66	P	P	20 28 59.4	-0.3
	baz=318,SNR=7.4						
V56A	Mocksville	68.35	60	P	P	20 28 59.4	-0.3
	baz=318						
SKAR	Skarslia	68.36	356	*e*P	P	20 28 59.1	-0.4
KMSC	Kings Mountain	68.39	61	P	P	20 28 59.9	-0.1
	baz=318,SNR=11						
GOGA	Godfrey	68.48	63	P	P	20 29 00.5	0.0
	baz=318,SNR=15						
U57A	Blanch	68.52	58	P	P	20 29 00.9	+0.1
	baz=318						
Z53A	Monticello	68.52	63	P	P	20 29 00.2	-0.6
	baz=318,SNR=18						
T58A	Grand View Acr	68.56	58	P	P	20 29 00.9	-0.1
	baz=318						
Y54A	Tignall	68.58	62	P	P	20 29 00.6	-0.6
	baz=318,SNR=22						
450A	Crestview	68.61	67	P	P	20 29 01.8	+0.4
	baz=318						
VSU	Vasula	68.64	345	*e*P	P	20 28 59.9	-1.2
VSU				IAmb	IAmb	20 29 00.6	
	comp=Z,141nm,0.8s						
VSU	Vasula	68.64	345	*c i*P	P	20 29 00.0	-1.2
VSU				pmax	pmax		
	comp=Z,206nm,1.1s						
ASK	Askoy	68.68	357	*e*P	P	20 29 00.9	-0.4
V57A	Coltrane Farms	68.69	59	P	P	20 29 01.3	-0.5
	baz=318						
X55A	Gracelyn & Ava	68.72	61	P	P	20 29 01.7	-0.3
	baz=318,SNR=11						
252A	Lumpkin	68.80	65	P	P	20 29 02.7	+0.1
	baz=318						
W56A	Indian Trail	68.81	60	P	P	20 29 02.7	+0.2
	baz=318						
153A	Fort Valley	68.84	64	P	P	20 29 02.6	-0.2
	baz=318						
Z54A	Sparta	68.96	63	P	P	20 29 03.5	0.0
	baz=318,SNR=15						
U58A	Oxford	68.97	58	P	P	20 29 03.0	-0.6
	baz=319						
OSL	Oslo	68.97	354	*e*P	P	20 29 03.1	0.0
Y55A	Saluda	68.99	62	P	P	20 29 03.2	-0.5
	baz=318,SNR=13						
X56A	White Oak	69.04	61	P	P	20 29 03.3	-0.7
	baz=318						
MOS	Moscow	69.06	338	*e*P	P	20 29 01.5	-2.3
MOS				*e*S	S	20 38 05.3	-0.1
MOS				*e*		20 38 59.0	
MOS				pmax	pmax		
	comp=Z,102nm,1.0s						
MOS				MLR	MLR		
	comp=Z,3µm,20.0s						
T59A	Double "B" Far	69.06	57	P	P	20 29 03.5	-0.6
	baz=319						
352A	Blakely	69.08	66	P	P	20 29 04.1	-0.1
	baz=318						
253A	Americus	69.10	65	P	P	20 29 04.5	+0.1
	baz=318						
V58A	Windy Hill, Pi	69.11	59	P	P	20 29 04.4	-0.1
	baz=319						
W57A	Gilead	69.11	60	P	P	20 29 04.4	0.0
	baz=318						
PAYA	Payao	69.12	275	P	P	20 29 04.9	+0.1
	comp=Z,226µm,1.0s						
ODD1	Odda	69.20	357	*e*P	P	20 29 04.4	-0.3
154A	Montrose	69.27	64	P	P	20 29 05.8	+0.3
	baz=318						
KONO	Kongsberg	69.33	355	*e*P	P	20 29 05.1	-0.3
	comp=Z,93nm,0.8s						
KONO	Kongsberg	69.33	355	*c i*P	P	20 29 04.9	-0.5
KONO				pmax	pmax		
	comp=Z,114nm,0.9s						
KONO	Kongsberg	69.33	355	*e*P	P	20 29 05.3	-0.1
353A	Camilla	69.58	65	P	P	20 29 07.7	+0.3
	baz=318						
V59A	Middlesex	69.60	58	P	P	20 29 06.9	-0.6
	baz=319,SNR=11						
W58A	Raeford	69.63	59	P	P	20 29 07.8	+0.2
	baz=319						
155A	Kite	69.63	63	P	P	20 29 07.5	-0.2
	baz=318						
254A	Abbeville	69.67	64	P	P	20 29 07.3	-0.6
	baz=318						
BLS5	Blasjo	69.70	357	*e*P	P	20 29 07.4	-0.3
Z56A	Williston	69.72	62	P	P	20 29 08.5	+0.2
	baz=318						
Y57A	Sumter	69.74	61	P	P	20 29 09.0	+0.7
	baz=319						
TIGA	Tifton	69.87	65	P	P	20 29 09.3	+0.1
	baz=318						
OBN	Obninsk	69.88	339	LR	LR	21 03 15.9	
	comp=Z,550nm,18.8s,baz=344,slow=39						
OBN	Obninsk	69.88	339	*e*P	P	20 29 07.8	-1.0
	comp=Z,81nm,1.0s						
OBN	Obninsk	69.88	339	⇑*i*P	P	20 29 08.0	-0.8
OBN	Obninsk	69.88	339	*c i*P	P	20 29 07.5	-1.3
OBN				*i*		20 29 17.0	
OBN				*i*		20 29 28.0	
OBN				pmax	pmax		
	comp=Z,119nm,1.3s						
453A	Whigham	69.89	66	P	P	20 29 09.6	+0.3
	baz=318						
LAMP	Lampang	69.89	275	P	P	20 29 09.9	+0.4
	comp=Z,58µm,1.0s,comp=Z,585µm						
UTTA	Uttaradit	69.90	273	P	P	20 29 09.1	-0.4
	comp=Z,151µm,0.9s						
SANI	Sanana	70.04	240	P	P	20 29 09.6	-0.8
	comp=Z,55nm,1.2s						
SLIT	Slitere, Latvi	70.10	348	*e*P	P	20 29 08.7	-1.4
SLIT				IAmb	IAmb	20 29 09.3	
	comp=Z,399nm,0.7s						
CMMT	Chiang Mai	70.11	275	P	P	20 29 10.3	-0.5
	comp=Z,30nm,0.9s						
CHTO	Chiang Mai	70.11	275	*e*P	P	20 29 10.2	-0.6
	comp=Z,61nm,1.0s						
CHTO	Chiang Mai	70.11	275	*e*P	P	20 29 10.2	-0.6
CHTO				pmax	pmax		
	comp=Z,61nm,1.0s						
CHTO	Chiang Mai	70.11	275	P	P	20 29 10.7	-0.1
	SNR=15						
CHTO				P	P	20 29 10.7	-0.1
	SNR=15						
Z57A	Bowman	70.11	62	P	P	20 29 10.2	-0.5
	baz=319						
V60A	Jim Taylor Roa	70.12	58	P	P	20 29 10.1	-0.5
	baz=319						
U61A	Possum Corner	70.13	57	P	P	20 29 10.6	-0.1
	baz=319						
255A	Hazlehurst	70.14	64	P	P	20 29 10.2	-0.6
	baz=318						
156A	Sylvania	70.15	63	P	P	20 29 10.9	0.0
	baz=318						
AAI	Ambon	70.24	237	P	P	20 29 12.2	+0.6
	comp=Z,131nm,1.2s						
X59A	McDuffie Farm,	70.31	59	P	P	20 29 12.0	+0.2
	baz=319						
553A	Crawfordville	70.32	66	P	P	20 29 11.4	-0.6
	baz=318						
355A	Pearson	70.36	64	P	P	20 29 12.7	+0.5
	baz=318						
CHAI	Chaiyaphum	70.38	271	P	P	20 29 12.0	-0.5
	comp=Z,63µm,1.1s,comp=Z,674µm						
CM31	Chiang Mai Arr	70.38	275	P	P	20 29 12.6	+0.2
	SNR=14						
CMAR	Chiang Mai Arr	70.38	275	P	P	20 29 12.2	-0.2
	comp=Z,31nm,0.9s,baz=26,slow=7.0,SNR=196						
454A	Quitman	70.39	65	P	P	20 29 11.8	-0.6
	baz=318						
157A	Early Branch	70.41	62	P	P	20 29 12.9	+0.5
	baz=319						
W60A	Pink Hill	70.42	58	P	P	20 29 13.1	+0.6
	baz=319						
256A	Glennville	70.43	63	P	P	20 29 13.4	+0.7
	baz=319						
Z58A	St. Stephen	70.57	61	P	P	20 29 12.8	-0.7
	baz=319						
455A	Stateville	70.71	65	P	P	20 29 15.1	+0.8
	baz=318						
HOMB	Homborsund	70.76	355	*e*P	P	20 29 14.1	-0.1
356A	Blackshear	70.79	64	P	P	20 29 15.5	+0.8
	baz=319						
LUWI	Luwuk	70.99	243	P	P	20 29 15.7	-0.4
	comp=Z,169nm,1.3s						
555A	McAlpin	71.21	65	P	P	20 29 17.7	+0.4
	baz=319						
456A	Hilliard	71.30	64	P	P	20 29 16.8	-1.0
	baz=319						
IZAR	Zarasai	71.32	345	*e*P	P	20 29 16.6	-0.9
IZAR				IAmb	IAmb	20 29 17.2	
	comp=Z,17nm,0.6s						
GUN	Gumba	71.33	291	*e*P	P	20 29 19.4	+0.8
	comp=Z,427nm,0.6s						
JIRN	Jiri	71.34	291	*e*P	P	20 29 19.5	+0.8
	comp=Z,780nm,1.0s						
ISAL	Salakas	71.51	345	*e*P	P	20 29 17.7	-1.0
ISAL				IAmb	IAmb	20 29 19.4	
	comp=Z,23nm,1.0s						
APSI	Ampana	71.51	244	P	P	20 29 20.2	+0.9
	comp=Z,54nm,1.3s						
LPSR	Galich'ya Gora	71.61	336	*e*P	P	20 29 15.8	-3.6
LPSR				pmax	pmax		
	comp=Z,50nm,1.4s						
556A	Lake Butler	71.62	65	P	P	20 29 20.2	+0.3
	baz=319						
457A	Yulee	71.64	64	P	P	20 29 20.3	+0.3
	baz=319						
KKN	Kakani	71.78	292	*e*P	P	20 29 21.5	+0.4
	comp=Z,236nm,0.8s						
PKI	Pulchoki	71.86	291	*e*P	P	20 29 21.9	+0.1
	comp=Z,420nm,1.2s						
PKIN	Phulchoki	71.87	291	*e*P	P	20 29 22.1	+0.4
	comp=Z,150nm,0.7s						
GKN	Gorkha	71.99	292	*e*P	P	20 29 22.5	+0.2
	comp=Z,368nm,1.0s						
557A	Orange Park	71.99	65	P	P	20 29 21.5	-0.6
	baz=319						
DMN	Daman	72.01	292	*e*P	P	20 29 22.8	+0.2
	comp=Z,206nm,0.9s						
656A	Willston	72.02	66	P	P	20 29 22.6	+0.4
	baz=319						
UMPA	Umpang Tak	72.11	274	P	P	20 29 24.1	+1.1
	comp=Z,141µm,1.0s						
MICGM	Minsk	72.23	343	*e*	P	20 29 22.0	-1.1
MNK	Minsk	72.23	343	*e*P	P	20 29 22.0	-1.1
DANN	Dangsing	72.24	293	*e*P	P	20 29 24.4	+0.4
	comp=Z,417nm,0.9s						
MUD	Monsted U'grnd	72.53	355	*i* P	P	20 29 25.0	+0.2
MUD				MLR	MLR		
	comp=Z,20µm,21.0s						
MUD	Monsted U'grnd	72.53	355	*i* P	P	20 29 25.0	+0.2
	comp=Z,20µm,21.0s						
757A	Oxford	72.61	66	P	P	20 29 24.3	-1.5
	baz=319						
KOLN	Koldanda	72.77	293	*e*P	P	20 29 27.1	+0.1
	comp=Z,223nm,1.0s						
VSR	Storozhevoye	72.81	336	*e*P	P	20 29 23.9	-2.7
VSR				pmax	pmax		
	comp=Z,50nm,1.3s						
PYUN	Piuthan	72.88	293	*e*P	P	20 29 27.8	+0.1
	comp=Z,449nm,1.0s						
VORD	Divnogorie	73.00	335	*e*P	P	20 29 25.5	-2.2
VORD				pmax	pmax		
	comp=Z,40nm,1.2s						
857A	Zephyrhills	73.03	66	P	P	20 29 27.3	-1.0
	baz=319						
COP	Copenhagen	73.08	353	⇑*i*P	P	20 29 27.9	-0.2
COP				MLR	MLR		
	comp=Z,9µm,21.0s						
COP	Copenhagen	73.08	353	⇑*i*P	P	20 29 27.9	-0.2
	comp=Z,9µm,21.0s						
758A	Lake Helen	73.09	65	P	P	20 29 27.4	-1.2
	baz=319						
KLNR	Kaliningrad	73.32	348	*de*P	P	20 29 29.0	-0.5
KLNR				pmax	pmax		
	comp=Z,63nm,0.7s						
SRDT	SRDT	73.35	272	P	P	20 29 30.4	+0.1
	comp=Z,29nm,1.4s						
957A	Wimauma	73.47	66	P	P	20 29 32.0	+1.1
	baz=319						
SUW	Suwalki	73.48	346	*e*P	P	20 29 29.1	-1.4
SUW	Suwalki	73.48	346	*e*P	P	20 29 29.1	-1.4
858A	St. Cloud	73.56	66	P	P	20 29 32.3	+0.8
	baz=320						
DWPF	Disney Wildern	73.60	66	P	P	20 29 31.6	-0.1
	baz=320						
DZM	Mont Dzumac	73.86	193	P	P	20 29 34.5	+1.4
	comp=Z,18nm,1.1s,baz=39,slow=11,SNR=4.7						
ESK	Eskdalemuir	73.90	2	*e*P	P	20 29 32.9	0.0
	comp=Z,44nm,0.6s						
ESK	Eskdalemuir	73.90	2	*i* P	P	20 29 33.0	0.0
859A	Kempfer Cattle	73.95	65	P	P	20 29 34.0	+0.4
	baz=320						
NIL	Nilore	74.01	304	*e*P	P	20 29 34.9	+0.9
	comp=Z,305nm,1.2s						
NIL	Nilore	74.01	304	*e*P	P	20 29 34.9	+0.9
NIL				pmax	pmax		
	comp=Z,305nm,1.2s						
PHET	Kaeng Krachan	74.12	271	P	P	20 29 35.1	+0.3
	comp=Z,113µm,0.8s,comp=Z,944µm						
058A	Arcadia	74.19	67	P	P	20 29 34.8	-0.3
	baz=320						
TTSI	Tana Toraja	74.30	244	P	P	20 29 35.5	-0.3
	comp=Z,90nm,1.2s						
SBUM	Sibu	74.36	254	P	P	20 29 37.0	+0.8
959A	Okeechobee	74.36	66	P	P	20 29 36.3	+0.2
	baz=320						
059A	Moore Haven	74.64	66	P	P	20 29 37.2	-0.5
	baz=320						
059Z	Ave Maria	74.94	67	P	P	20 29 39.2	-0.2
	baz=320						
GKP	Gorka Klasztor	75.00	349	*e*P	P	20 29 38.7	-0.6
GKP	Gorka Klasztor	75.00	349	*e*P	P	20 29 38.7	-0.6
SPSI	Sidrap Palu	75.08	244	P	P	20 29 40.0	-0.3
	comp=Z,20nm,1.1s,comp=Z,884nm						
KBL	Kabul	75.47	307	*e*P	P	20 29 42.1	-0.6
	comp=Z,238nm,0.8s						
KBL	Kabul	75.47	307	*e*P	P	20 29 42.1	-0.6
KBL				pmax	pmax		
	comp=Z,238nm,0.8s						
AKASG	Malin Array Be	75.59	341	P	P	20 29 41.5	-1.3
	comp=Z,21nm,0.5s,baz=23,slow=6.1,SNR=100						
BEL	Belsk	75.95	347	*e*P	P	20 29 44.8	0.0
BEL	Belsk	75.95	347	*e*P	P	20 29 44.8	0.0
BKSI	Bulukumba	75.99	243	P	P	20 29 45.7	+0.2
	comp=Z,53nm,1.2s						
KSM	Kuching	76.29	255	P	P	20 29 48.0	+0.7
CTA	Charters Tower	76.90	213	P	P	20 29 51.0	+0.5
	comp=Z,33nm,1.0s,baz=22,slow=7.9,SNR=12						
CTAO	Charters Tower	76.90	213	P	P	20 29 51.5	+1.0
CTAO				pmax	pmax		
	comp=Z,54nm,1.1s						
WTSB	Winterswijk	77.14	356	*e*P	P	20 29 50.4	-1.1
	comp=Z,161nm,1.4s						
WTSB				*e*pP	pwP	20 30 06.0	-0.2
GOF	Gofitskoye	77.27	330	⇑*i*P	P	20 29 52.0	-0.4
GOF				pmax	pmax		
	comp=Z,137nm,0.9s						
CLL	Collm	77.37	352	⇑*i*P	P	20 29 52.0	-0.9
CLL				*i*		20 29 58.6	
CLL				pmax	pmax		
	comp=Z,117nm,1.9s						
CLL	Collm	77.37	352	⇑*i*P	P	20 29 52.0	-0.9
	comp=Z,117nm,1.9s						
CLL				*i*		20 29 58.6	
CLL				*e*		20 30 08.0	
LVV	L'vov	77.40	344	*e*P	P	20 29 52.2	-0.9
SOEI	Soe	77.42	237	P	P	20 29 51.7	-2.0
KSP	Ksiaz	77.50	350	*e*P	P	20 29 53.0	-0.6
KSP	Ksiaz	77.50	350	*e*P	P	20 29 53.0	-0.6
HORU	Horodok	77.55	343	P	P	20 29 52.5	-1.4
MAK	Makhachkala	77.66	326	*e*P	P	20 29 53.2	-1.4
MAK				*e*		20 32 48.0	
MAK				*e*S	S	20 39 41.6	-1.4
MAK				pmax	pmax		
	comp=Z,52nm,1.0s						
OJC	Ojcow	77.66	347	*e*P	P	20 29 54.1	-0.4
OJC	Ojcow	77.66	347	*e*P	P	20 29 54.1	-0.4
BRG	Berggiesshubel	77.71	351	⇑*i*P	P	20 29 53.8	-1.0
	comp=Z,28nm,0.7s						
BRG	Berggiesshubel	77.71	351	⇑*i*P	P	20 29 53.8	-1.0
BRG				pmax	pmax		
	comp=Z,28nm,0.7s						
CHVC	Chvalec	77.77	350	*e*P	P	20 29 54.4	-0.8
OSTC	Ostas	77.79	350	*e*P	P	20 29 54.4	-0.8
KWP	Kalwaria Pacla	77.80	345	*e*P	P	20 29 55.7	+0.4
KWP	Kalwaria Pacla	77.80	345	*e*P	P	20 29 55.7	+0.4
GEYT	Alibeck	77.83	317	P	P	20 29 54.7	-1.0
	comp=Z,36nm,1.0s,baz=358,slow=4.5,SNR=53						
GEYT				PP	PP	20 32 48.1	-2.9
	comp=Z,7.2nm,1.0s,baz=38,slow=7.3,SNR=4.6						
UPC	Upice	77.86	350	*e*P	P	20 29 55.1	-0.5
UPC	Upice	77.86	350	*e*P	P	20 29 55.1	-0.5
SKLT	Songkhla	77.88	266	P	P	20 29 56.2	0.0
	comp=Z,36nm,1.1s						
TRTT	Trang	77.95	268	P	P	20 29 56.8	+0.2
	comp=Z,34nm,1.1s						
EDFI	Ende, Flores	77.96	239	P	P	20 29 55.2	-1.5
	comp=Z,59nm,1.4s,comp=Z,2µm						
DPC	Dobruska-Polom	77.98	349	*e*P	P	20 29 55.9	-0.4
DPC				*e*		20 30 09.6	
DPC	Dobruska-Polom	77.98	349	*e*P	P	20 29 55.9	-0.4
DPC				*e*PCP	pP	20 30 09.6	+1.7
PVCC	Panska Ves	77.99	351	*e*P	P	20 29 55.6	-0.8
PVCC	Panska Ves	77.99	351	*e*P	P	20 29 55.6	-0.8
GROC	Groznyy	78.03	328	*e*P	P	20 29 55.0	-1.7
GROC				*e*		20 30 03.9	
GROC				*e*		20 32 54.1	
GROC				*e*S	S	20 39 42.9	-4.1
GROC				pmax	pmax		
	comp=Z,26nm,0.7s						
MORS	Morshin	78.08	344	P	P	20 29 56.4	-0.5
BATI	Baumata	78.11	237	P	P	20 29 57.3	-0.1
	comp=Z,50nm,0.6s,baz=219,slow=0.2,SNR=8.2						
BATI	Baumata	78.11	237	P	P	20 29 55.7	-1.8
BEBN	Eben Emael	78.36	356	⇑P	P	20 29 58.2	-0.1
KIV	Kislovodsk	78.37	330	*e*P	P	20 29 58.4	-0.3
	comp=Z,27nm,0.9s						
KIV	Kislovodsk	78.37	330	⇓*i*P	P	20 29 58.3	-0.5
KIV	Kislovodsk	78.37	330	*i* P	P	20 29 58.2	-0.5
	SNR=17						
KIV	Kislovodsk	78.37	330	*e*P	P	20 29 58.2	-0.5
KIV				pmax	pmax		

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      comp=Z,106nm,1.1s
KIV   Kislovodsk        78.37 330   P      P      20 29 58.7  0.0
      SNR=13
NIE   Niedzica          78.37 347  eP      P      20 29 58.7 +0.2
NIE   Niedzica          78.37 347  eP      P      20 29 58.7 +0.2
HGN   Heimansgroeve     78.38 356  eP      P      20 29 57.4 -1.0
      comp=Z,121nm,0.9s
HGN                                epP     pwP    20 30 13.3 -1.5
MORC  Moravsky Berou    78.39 349⇑iP      P      20 29 58.2 -0.5
MORC  Moravsky Berou    78.39 349   P      P      20 29 58.0 -0.7
MORC  Moravsky Berou    78.39 349  eP      P      20 29 57.9 -0.7
UCC   Uccle             78.40 357 ⇑P      P      20 29 58.1 -0.5
NKC   Novy Kostel       78.49 352  eP      P      20 29 58.6 -0.5
NKC   Novy Kostel       78.49 352  eP      P      20 29 58.6 -0.5
NCK   Nalchik           78.49 329⇑eP      P      20 29 59.3  0.0
NCK                                 pmax   pmax
      comp=Z,89nm,1.1s
KBZ   Khabaz            78.51 330   P      P      20 29 59.2  0.0
      comp=Z,12nm,0.8s,baz=85,slow=2.0,SNR=20
PRU   Pruhonice         78.53 351  eP      P      20 29 58.4 -0.9
PRU   Pruhonice         78.53 351  eP      P      20 29 58.4 -0.9
MEM   Membach           78.53 356   P      P      20 29 59.2 -0.1
MEM   Membach           78.53 356 ⇑P      P      20 29 59.0 -0.3
      comp=Z,80nm,1.0s
MEM                               ⇓pP     pP     20 30 12.1 +1.2
KOLS  Kolonicke sedl    78.55 345  eP      P      20 29 59.6 +0.1
KOLS                                pmax   pmax
      comp=Z,93nm,1.5s
KOLS  Kolonicke sedl    78.55 345  eP      P      20 29 59.6 +0.1
GOPC  GO Pecny, Ondr    78.58 350  eP      P      20 29 58.5 -1.1
GOPC                               e              20 30 14.8
GOPC  GO Pecny, Ondr    78.58 350  eP      P      20 29 58.5 -1.1
GOPC                               ex      x      20 30 14.8
KSV   Kosov             78.67 343   P      P      20 29 59.2 -1.0
SNF   Seneffe           78.69 357 ⇑P      P      20 29 60.0 -0.2
BCLA  Clavier           78.75 357 ⇑P      P      20 30 00.2 -0.3
      comp=Z,45nm,0.8s
BCLA                              ⇑pP     pP     20 30 12.5 +0.4
LANS  Liptovska Anna    78.75 347  eP      P      20 30 01.2 +0.6
LANS  Liptovska Anna    78.75 347  eP      P      20 30 01.2 +0.6
PBKI  Pangkalan Bun     78.78 251   P      P      20 29 59.7 -1.5
TNS   Taunus Mts        78.79 355   P      P      20 30 00.7 -0.2
UZH   Uzhgorod          78.84 345c iP      P      20 29 59.8 -1.2
UZH                                e              20 30 06.3
UZH                                e              20 30 10.7
AKT   Akhty             78.88 326  eP      P      20 30 01.2 -0.4
AKT                                e              20 30 10.1
AKT                                 pmax   pmax
      comp=Z,33nm,0.7s
VRAC  Vranov            78.97 349⇓iP      P      20 30 01.6 -0.2
VRAC  Vranov            78.97 349   P      P      20 30 01.7 -0.1
VRAC  Vranov            78.97 349  eP      P      20 30 01.4 -0.4
NEY   Neytrino          79.00 330⇓eP      P      20 30 02.9 +0.7
NEY                                 pmax   pmax
      comp=Z,5.0nm,1.4s
ZEI   Tsey              79.03 329  eP      P      20 29 58.9 -3.6
ZEI                                 pmax   pmax
      comp=Z,56nm,0.8s
GIVF  Givet             79.08 357  eP      P      20 30 01.1 -1.3
GIVF                                pmax   pmax
      comp=Z,51nm,1.0s
DOU   Dourbes           79.09 357 ⇑P      P      20 30 02.2 -0.2
TREC  Trest             79.11 350  eP      P      20 30 01.7 -0.9
TREC  Trest             79.11 350  eP      P      20 30 01.7 -0.9
GRF   Grafenberg Arr    79.13 353   P      P      20 30 02.9 +0.3
GRFO  Grafenberg        79.13 353  eP      P      20 30 02.9 +0.3
      comp=Z,279nm,1.6s
GRFO  Grafenberg        79.13 353  eP      P      20 30 02.9 +0.3
GRFO                                pmax   pmax
      comp=Z,279nm,1.6s
KIS   Kishinev          79.19 340  eP      P      20 30 01.0 -2.0
      comp=Z,140nm,1.4s
KIS   Kishinev          79.19 340  ePcP    PcP    20 30 11.0 -0.2
KIS                                 LRM    MLR    21 04 32.0
      comp=Z,2µm,18.0s
KIS   Kishinev          79.19 340  eP      P      20 30 01.0 -2.0
KIS                                e              20 30 11.0
KIS                                 pmax   pmax
      comp=Z,140nm,1.4s
KIS                                 MLR    MLR
      comp=Z,2µm,18.0s
KRUC  Moravsky          79.24 349  eP      P      20 30 02.8 -0.4
TRSU  Trosnyk           79.25 345   P      P      20 30 02.6 -0.7
KECS  Kecovo            79.26 346  eP      P      20 30 03.2 -0.2
KECS                                pmax   pmax
      comp=Z,127nm,1.1s
KECS  Kecovo            79.26 346  eP      P      20 30 03.2 -0.2
IAS   Iasi              79.27 341⇑iP      P      20 30 02.9 -0.5
IAS   Iasi              79.27 341   P      P      20 30 03.2 -0.2
MILM  Milestii Mici     79.27 340⇑iP      P      20 30 02.7 -0.7
JAVC  Velka Javorina    79.28 348  eP      P      20 30 04.3 +0.7
TRPA  Tarpa             79.28 345⇑iP      P      20 30 03.7 +0.2
TRPA  Tarpa             79.28 345⇑eP      P      20 30 03.1 -0.4
KULM  Kulim             79.31 265   P      P      20 30 04.0 -0.1
BURAR Bucovina Array    79.31 343⇑iP      P      20 30 03.8  0.0
BURAR Bucovina Array    79.31 343   P      P      20 30 03.5 -0.3
PRAR  RASCA             79.37 342⇑iP      P      20 30 03.2 -0.8
TOD   Tromm             79.39 354   P      P      20 30 03.5 -0.6
WLF   Walferdange       79.47 356 ⇓P      P      20 30 04.5  0.0
      comp=Z,44nm,1.3s
KHC   Kasperske Hory    79.47 351  eP      P      20 30 04.5 -0.1
KHC                                e              20 30 15.0
KHC   Kasperske Hory    79.47 351  eP      P      20 30 04.5 -0.1
KHC                                ePCP    pP     20 30 15.0 -1.2
KHC                                ex      x      20 30 25.5
VYHS  Vyhne             79.48 347  eP      P      20 30 04.6  0.0
VYHS                                pmax   pmax
      comp=Z,31nm,1.3s
VYHS  Vyhne             79.48 347  eP      P      20 30 04.6  0.0
BMR   Baia Mare         79.56 344⇑iP      P      20 30 05.3 +0.3
SOC   Sochi             79.61 332  eP      P      20 30 04.0 -1.4
SOC                                ePPP    PPP    20 34 56.0
SOC                                eS      S      20 40 04.3 +0.4
SOC                                eSS     SS     20 45 10.6 -0.7
SOC                                 pmax   pmax
      comp=Z,26nm,0.9s
IPM   Ipoh              79.70 264   P      P      20 30 06.0 -0.2
KTD   Kalmit            79.71 355   P      P      20 30 05.7 -0.2
GERES GERESS Array B    79.74 351   P      P      20 30 05.5 -0.6
      comp=Z,12nm,0.5s,baz=25,slow=5.9,SNR=165
GRC1  Grafenberg Arr    79.79 352   P      P      20 30 05.9 -0.4
BIZ   Bicaz             79.80 342⇑iP      P      20 30 06.4 +0.1
MODS  Modra-Piesok      79.81 348  eP      P      20 30 05.8 -0.6
MODS                                pmax   pmax
      comp=Z,108nm,1.5s
MODS  Modra-Piesok      79.81 348  eP      P      20 30 05.8 -0.6
SIM   Simferopol'       79.90 336  eP      P      20 30 06.4 -0.5
SIM                                 pmax   pmax
      comp=Z,13nm,1.2s
PSZ   Piszkesteto       79.90 347⇑iP      P      20 30 07.2 +0.3
PSZ   Piszkesteto       79.90 347   P      P      20 30 07.1 +0.1
PSZ   Piszkesteto       79.90 347⇑eP      P      20 30 07.1 +0.1
ARCR  ARCALIA           79.98 343⇑iP      P      20 30 08.1 +0.8
ZST   Bratislava        80.00 349  eP      P      20 30 06.9 -0.5
ZST   Bratislava        80.00 349  eP      P      20 30 06.9 -0.5
MYKOM Kota Tinggi       80.02 260   P      P      20 30 08.0 +0.1
TESR  Tescani           80.10 342⇑iP      P      20 30 07.5 -0.5
PLAI  Plampang          80.18 243   P      P      20 30 06.3 -2.4
SRO2  Moca              80.26 348  eP      P      20 30 08.3 -0.5
SRO2  Moca              80.26 348  eP      P      20 30 08.3 -0.5
TPRI  Tanjung Pinang    80.28 259   P      P      20 30 10.4 +1.1
      comp=Z,78nm,1.1s
AKH   Akhalkalaki       80.40 328⇑iP      P      20 30 10.3 +0.4
AKH   Akhalkalaki       80.40 328   P      P      20 30 10.8 +0.9
CONA  Conrad Observa    80.42 349  i P     P      20 30 09.9 +0.1
      comp=Z,18nm,0.6s,SNR=35
BUD   Budapest          80.45 347   P      P      20 30 10.6 +0.8
BUD   Budapest          80.45 347⇑eP      P      20 30 10.1 +0.3
CJR   Cluj-Napoca       80.48 344⇑iP      P      20 30 10.4 +0.3
CJR   Cluj-Napoca       80.48 344   P      P      20 30 10.4 +0.3
FLN   La Foliniere      80.50   0  eP      P      20 30 08.6 -1.5
FLN                                 pmax   pmax
      comp=Z,93nm,1.0s
DRGR                    80.55 344⇓iP      P      20 30 10.2 -0.3
DRGR                    80.55 344   P      P      20 30 09.9 -0.6
SOP   Sopron            80.58 349   P      P      20 30 10.7 +0.2
SOP   Sopron            80.58 349⇑eP      P      20 30 10.1 -0.4
OZUR                    80.67 342⇑iP      P      20 30 10.8 -0.3
CSKK  Cskako            80.67 348⇑eP      P      20 30 11.0  0.0
LDF   La Druitiere      80.67   0  eP      P      20 30 09.4 -1.6
LDF                                 pmax   pmax
      comp=Z,49nm,0.6s
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MOA   Molln             80.67 350  i P     P      20 30 10.6 -0.4
      comp=Z,7.8nm,0.7s,SNR=13
BFO   Black Forest      80.69 354  eP      P      20 30 10.5 -0.6
      comp=Z,49nm,1.3s
BFO   Black Forest      80.69 354  eP      P      20 30 10.5 -0.6
BFO                                 pmax   pmax
      comp=Z,49nm,1.3s
VRI   Vrincioaia        80.70 342⇓iP      P      20 30 11.0 -0.2
VRI   Vrincioaia        80.70 342   P      P      20 30 11.2  0.0
PLOR  Plostina          80.73 342⇑iP      P      20 30 11.3 -0.1
PLOR  Plostina          80.73 342   P      P      20 30 11.9 +0.5
PETR  Petresti          80.74 341⇓iP      P      20 30 11.7 +0.3
BATM  Batumi            80.81 330⇑iP      P      20 30 11.2 -0.6
ECH   Echery            80.86 355   P      P      20 30 11.9 -0.2
DOPR  Dopca             80.87 342⇑iP      P      20 30 12.9 +0.8
GRR   Gorron            80.87   1  eP      P      20 30 10.8 -1.3
GRR                                 pmax   pmax
      comp=Z,63nm,0.8s
ROSF  Rostrenen         80.89   2  eP      P      20 30 11.0 -1.1
ROSF                                pmax   pmax
      comp=Z,152nm,1.3s
MDB   Medias            80.89 343⇓iP      P      20 30 12.6 +0.4
KMMI  Kalianget         80.91 247   P      P      20 30 12.0 -0.6
TLCR                    80.92 340⇓iP      P      20 30 12.0 -0.3
BCA   Borcka            80.97 330⇓iP      P      20 30 12.1 -0.7
SGMF  Saint Gilles      80.98   2  eP      P      20 30 11.6 -1.0
SGMF                                pmax   pmax
      comp=Z,62nm,0.6s
BISRR Bisoca            81.01 341⇑iP      P      20 30 12.7 -0.3
CFR   Carcaliu          81.07 340⇑iP      P      20 30 12.8 -0.4
CFR   Carcaliu          81.07 340   P      P      20 30 13.3 +0.1
KIZ   Kirchzarten       81.08 355   P      P      20 30 12.7 -0.5
GNI   Garni             81.11 327c iP      P      20 30 14.0 +0.3
GNI                                 pmax   pmax
      comp=Z,84nm,1.3s
GNI   Garni             81.11 327   P      P      20 30 14.4 +0.7
      SNR=5.6
GNI                                 P      P      20 30 14.4 +0.7
      SNR=5.6
HAU   Haudompre         81.11 356  eP      P      20 30 12.0 -1.4
HAU                                 pmax   pmax
      comp=Z,56nm,1.2s
ARSA  Arzberg           81.12 349  i P     P      20 30 13.7 +0.2
      comp=Z,15nm,0.6s,SNR=15
TIH   Tihany            81.17 348⇑eP      P      20 30 14.1 +0.4
MLR   Muntele Rosu      81.22 342⇑iP      P      20 30 13.9 -0.2
MLR   Muntele Rosu      81.22 342   P      P      20 30 14.8 +0.7
MOF   Molkenrain        81.23 355   P      P      20 30 13.7 -0.4
SIRR  Siria             81.23 345⇑iP      P      20 30 14.1  0.0
TPI   Tanjungpandan     81.24 255   P      P      20 30 14.6 +0.2
      comp=Z,55nm,1.1s
SLE   Schleitheim       81.24 354   P      P      20 30 13.5 -0.6
HINF  Hinteralfeld      81.28 355  eP      P      20 30 12.7 -1.6
HINF                                pmax   pmax
      comp=Z,41nm,1.4s
AMBH  Ambrzfalva        81.30 346⇑eP      P      20 30 15.1 +0.7
QUIF  Quistinic         81.31   2  eP      P      20 30 13.7 -0.7
QUIF                                pmax   pmax
      comp=Z,58nm,1.0s
WRAB  Tennant Creek     81.35 223c iP      P      20 30 14.0 -0.8
WRAB                                pmax   pmax
      comp=Z,72nm,1.4s
RETA  Reutte            81.35 353  i P     P      20 30 14.4 -0.4
      comp=Z,12nm,0.7s,SNR=16
WRA   Warramunga Arr    81.36 223   P      P      20 30 14.3 -0.6
      comp=Z,31nm,1.1s,baz=30,slow=6.2,SNR=32
DEV   Deva              81.40 344⇑iP      P      20 30 14.5 -0.4
WATA  Walderalm         81.44 352  i P     P      20 30 14.7 -0.5
      comp=Z,30nm,0.6s,SNR=59
VOIR                    81.44 343⇑iP      P      20 30 15.8 +0.5
MOTA  Moosalm           81.47 352  i P     P      20 30 15.0 -0.4
      comp=Z,11nm,0.6s,SNR=40
WTTA  Wattenberg        81.50 352  i P     P      20 30 15.7  0.0
      comp=Z,76nm,0.7s,SNR=60
KBA   Koelnbreinsper    81.53 351  i P     P      20 30 16.2 +0.4
      comp=Z,66nm,0.6s,SNR=110
KBA   Koelnbreinsper    81.53 351   P      P      20 30 15.9 +0.1
SQTA  Sankt Quirin      81.58 352  i P     P      20 30 15.9 -0.1
      comp=Z,19nm,0.6s,SNR=32
HARR  Harsova           81.58 340⇓iP      P      20 30 15.6 -0.3
ARR   Arges             81.59 343⇓iP      P      20 30 16.5 +0.5
DAVA  Damuels           81.62 353  i P     P      20 30 15.8 -0.5
      comp=Z,27nm,1.1s,SNR=15
SECR                    81.63 342⇑iP      P      20 30 16.5 +0.3
TLB   Topalu            81.66 340⇑iP      P      20 30 15.8 -0.5
LOT   Lotru             81.67 343⇑iP      P      20 30 15.8 -0.7
LHMI  Lhok Sumawe       81.68 268   P      P      20 30 17.8 +1.0
      comp=Z,267nm,1.1s
PPBI  Pangkal Pinang    81.69 256   P      P      20 30 16.9  0.0
      comp=Z,54nm,1.1s
TIRR  Tirgusor          81.70 340⇑iP      P      20 30 16.2 -0.3
BEHE  Becsehely         81.74 348⇓eP      P      20 30 15.1 -1.6
MORH  Mrgy, Hungar      81.74 347  eP      P      20 30 15.1 -1.6
SOKA  Soboth            81.74 350  i P     P      20 30 16.7 -0.1
      comp=Z,149nm,1.4s,SNR=80
LOMF  Lomont            81.75 355   P      P      20 30 16.8  0.0
FETA  Feichten          81.82 353  i P     P      20 30 17.2 -0.2
      comp=Z,44nm,1.0s,SNR=43
KOGS  Kog               81.83 349  i P     P      20 30 16.9 -0.3
BZS   Buzias            81.88 345⇑iP      P      20 30 17.1 -0.3
BZS   Buzias            81.88 345   P      P      20 30 16.7 -0.7
GZR   Gura Zlata        81.90 344⇓iP      P      20 30 17.6  0.0
GZR   Gura Zlata        81.90 344   P      P      20 30 17.0 -0.6
ABTA  Abfaltersbach     81.94 351  i P     P      20 30 17.4 -0.5
      comp=Z,89nm,1.3s,SNR=37
SULR                    81.94 342⇑iP      P      20 30 17.1 -0.6
MYKA  Terra Mystica     81.94 351  i P     P      20 30 17.3 -0.6
      SNR=19
LOR   Lormes            81.94 357  eP      P      20 30 16.5 -1.3
LOR                                 pmax   pmax
      comp=Z,67nm,1.2s
OBKA  Obir              81.97 350  i P     P      20 30 17.8 -0.2
      comp=Z,42nm,0.6s,SNR=19
TSI   Tuntungan         82.00 266   P      P      20 30 19.0 +0.5
      comp=Z,246nm,1.0s
GOLR                    82.04 342⇑iP      P      20 30 19.0 +0.7
SSF   Saint Saulge      82.16 358  eP      P      20 30 17.7 -1.2
SSF                                 pmax   pmax
      comp=Z,36nm,0.9s
PSI   Prapat            82.31 265   P      P      20 30 19.8 -0.5
CADS  Cadrg             82.33 351  i P     P      20 30 18.6 -1.3
HUMR  Humele            82.33 342⇓iP      P      20 30 19.6 -0.2
AVF   Avril sur Loir    82.44 358  eP      P      20 30 19.1 -1.2
AVF                                 pmax   pmax
      comp=Z,48nm,1.0s
CABF  La Chapelle       82.52 356  eP      P      20 30 19.8 -1.1
CABF                                pmax   pmax
      comp=Z,55nm,1.1s
SRE   Strehaia          82.53 344⇑iP      P      20 30 20.6 -0.3
CRES  Cresnjev          82.54 349  eP      P      20 30 20.1 -0.8
SMF   Signal de Mont    82.57 357  eP      P      20 30 19.8 -1.3
SMF                                 pmax   pmax
      comp=Z,60nm,0.8s
FRGS  Fruska Gora       82.61 346  eP      P      20 30 21.2 -0.1
MFF   Saint Martin d    82.66   0  eP      P      20 30 20.4 -1.1
MFF                                 pmax   pmax
      comp=Z,70nm,1.2s
MDVR  Moldovita         82.67 345⇑iP      P      20 30 21.4 -0.3
BGF   Bois d'Agland     82.68 358  eP      P      20 30 20.5 -1.1
BGF                                 pmax   pmax
      comp=Z,49nm,1.2s
CEY   Cerknica          82.74 350  eP      P      20 30 21.0 -1.0
JMBI  JAMBI             82.81 258   P      P      20 30 22.7  0.0
TRI   Trieste           82.84 350   P      P      20 30 21.7 -0.7
BOJS  Bojanci           82.88 349  i P     P      20 30 22.3 -0.4
BKNI  Bangkinang        82.90 262   P      P      20 30 23.7 +0.5
      comp=Z,171nm,1.1s
BKNI                                pP     sP     20 30 40.4 +1.0
      comp=Z,171nm,1.1s
VLAD  Vladila           82.95 343⇓iP      P      20 30 22.9 -0.2
RAZG  Razgrad           82.95 341⇑iP      P      20 30 22.4 -0.7
TCF   Toulx Ste Croi    82.96 359  eP      P      20 30 21.8 -1.3
TCF                                 pmax   pmax
      comp=Z,23nm,1.0s
ZIMR                    83.10 342⇑iP      P      20 30 23.7 -0.1
RIY   Rijeka            83.14 350  eP      P      20 30 23.2 -0.8
TEKS  Tekeris           83.24 346  eP      P      20 30 24.2 -0.4
DOB   Doboj             83.27 347  eP      P      20 30 23.7 -1.0
BLY   Banja Luka        83.38 348⇓iP      P      20 30 24.9 -0.4
MNSI  Mandailing Nat    83.45 263   P      P      20 30 23.8 -2.2
      comp=Z,46nm,0.7s
PLVB  Pleven            83.50 342⇑iP      P      20 30 25.6 -0.3
LPL   La Plagne         83.58 355  eP      P      20 30 23.7 -2.9
LPL                                 pmax   pmax
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      comp=Z,36nm,1.3s
LPG   La Plagne         83.60 355  eP      P      20 30 26.4 -0.4
LPG                                 pmax   pmax
      comp=Z,28nm,1.0s
DIVS  Divibare          83.61 346  eP      P      20 30 26.2 -0.4
HYB   Hyderabad         83.68 290  i P     P      20 30 25.0 -2.3
      comp=Z,100nm,1.0s
ELND  Elena             83.70 341⇑iP      P      20 30 26.3 -0.6
MGRS  Mrkonjic Grad     83.72 348  eP      P      20 30 26.8 -0.3
UDBI  Udbina            83.78 349  i P     P      20 30 26.6 -0.8
HAPS  Han Pijesak,BI    83.78 346  eP      P      20 30 26.5 -1.0
NVLJ  Novalja           83.85 349  i P     P      20 30 26.6 -1.1
BBLS  Lazi&#263;i       83.93 346  eP      P      20 30 28.5 +0.3
RJF   Les Rejaudoux     83.95 359  eP      P      20 30 27.1 -1.1
RJF                                 pmax   pmax
      comp=Z,49nm,1.2s
RUDO  Rudo              84.18 346  eP      P      20 30 28.5 -0.9
KIJV  Kijevo            84.21 348  i P     P      20 30 29.4 -0.2
ORIF  Oris-en-Rattie    84.22 356  eP      P      20 30 29.2 -0.5
ORIF                                pmax   pmax
      comp=Z,49nm,1.2s
PDSI  Padang            84.22 261   P      P      20 30 28.3 -1.7
      comp=Z,36nm,1.1s
GSI   Gunungsitoli      84.31 265   P      P      20 30 29.3 -1.2
CAF   Calviac           84.33 359  eP      P      20 30 29.3 -0.8
CAF                                 pmax   pmax
      comp=Z,69nm,1.2s
VIVF  Saint-Julien-l    84.33 357  eP      P      20 30 29.3 -0.9
VIVF                                pmax   pmax
      comp=Z,36nm,1.5s
MBDF  Montbardon        84.37 355  eP      P      20 30 29.9 -0.6
MBDF                                pmax   pmax
      comp=Z,23nm,0.9s
DUGI  Dugi Otok         84.39 349  i P     P      20 30 29.6 -0.9
MORI  Morici            84.44 349  i P     P      20 30 29.8 -0.8
PLE   Pljevlja          84.46 346⇓iP      P      20 30 31.2 +0.3
VTS   Vitosha           84.50 343  eP      P      20 30 31.0 -0.2
VTS   Vitosha           84.50 343   P      P      20 30 31.0 -0.2
VTS   Vitosha           84.50 343⇓iP      P      20 30 31.0 -0.2
VTS   Vitosha           84.50 343  eP      P      20 30 31.0 -0.2
KRJI  Kerinci           84.52 260   P      P      20 30 30.3 -1.3
EDRB  Edirne            84.55 340   P      P      20 30 30.6 -0.7
PHSR  Pinarhisar        84.59 340⇑iP      P      20 30 31.9 +0.4
KLI   Kotabumi          84.60 255   P      P      20 30 30.5 -1.3
LHSI  Lahat             84.60 257   P      P      20 30 30.6 -1.3
      comp=Z,125nm,1.0s
UPM   Unac-Piva         84.65 346⇓iP      P      20 30 30.7 -1.3
UPM   Unac-Piva         84.65 346  eP      P      20 30 31.3 -0.7
ZIRJ  Zirje             84.65 349  i P     P      20 30 30.8 -0.9
MDSI  Maura Dua         84.72 256   P      P      20 30 30.2 -2.2
      comp=Z,73nm,1.1s
PLD   Plovdiv           84.72 342   P      P      20 30 32.4 +0.3
BLSI  Bandar Lampung    84.76 255   P      P      20 30 30.5 -2.1
IVA   Berane            84.83 346⇓iP      P      20 30 33.0 +0.2
MAKA  Makarska          84.84 348  i P     P      20 30 31.9 -0.8
ASAR  Alice Springs     84.84 222   P      P      20 30 32.9  0.0
      comp=Z,20nm,0.9s,baz=31,slow=4.8,SNR=105
BR131 Keskin Array S    84.91 335   P      P      20 30 33.4 +0.1
      SNR=18
BRTR  Keskin Array B    84.91 335   P      P      20 30 32.8 -0.6
      comp=Z,18nm,0.9s,baz=41,slow=2.5,SNR=79
KOME  Kolasin           84.91 346⇓iP      P      20 30 32.4 -0.8
ANTO  Ankara            85.00 335⇑iP      P      20 30 33.3 -0.4
ANTO  Ankara            85.00 335   P      P      20 30 34.0 +0.3
      SNR=8.2
BRY   Bratogost         85.00 347⇓iP      P      20 30 33.2 -0.5
BRY   Bratogost         85.00 347  eP      P      20 30 33.1 -0.6
HVAR  Hvar              85.02 348  i P     P      20 30 32.5 -1.1
NKY   Niksic            85.02 346⇓iP      P      20 30 33.3 -0.5
NKME  Niksic            85.07 346⇓iP      P      20 30 32.8 -1.2
PVY   Plav              85.09 345⇓iP      P      20 30 33.7 -0.4
STON  Ston              85.15 347  i P     P      20 30 33.0 -1.2
STON  Ston              85.15 347  eP      P      20 30 32.5 -1.8
YLV   Yalova            85.19 338⇓iP      P      20 30 34.1 -0.5
SBF   Sospel            85.19 355  eP      P      20 30 33.2 -1.4
SBF                                 pmax   pmax
      comp=Z,94nm,1.1s
LWLI  Liwa              85.21 256   P      P      20 30 32.9 -2.1
TREB  Trebinje          85.21 347  eP      P      20 30 33.7 -0.9
DBRK  Dubrovnik         85.29 347  i P     P      20 30 33.8 -1.2
CEME  Cevo              85.30 346⇓iP      P      20 30 33.9 -1.2
KASI  Kota Agung        85.34 255   P      P      20 30 33.0 -2.5
PDG   Podgorica         85.36 346⇑iP      P      20 30 35.0 -0.3
PDG   Podgorica         85.36 346  eP      P      20 30 34.2 -1.0
TTG   Podgorica         85.36 346⇓iP      P      20 30 34.3 -1.0
SISI  Saibi             85.40 262   P      P      20 30 35.6 -0.3
      comp=Z,59nm,1.2s
SKO   Skopje            85.45 344  i P     P      20 30 35.5 -0.3
HCY   Herceg Novi       85.45 346⇓iP      P      20 30 35.2 -0.6
HCY   Herceg Novi       85.45 346  eP      P      20 30 34.4 -1.4
CGJI  Cibinong          85.47 254   P      P      20 30 32.9 -3.3
RDO   Rodhopi           85.48 341  eP      P      20 30 35.6 -0.3
RDO   Rodhopi           85.48 341   P      P      20 30 35.6 -0.3
FRF   La Foret Royal    85.53 355  eP      P      20 30 34.9 -1.3
FRF                                 pmax   pmax
      comp=Z,64nm,1.2s
BUM   Brajici-Budva     85.54 346⇓iP      P      20 30 34.9 -1.4
STIP  Stip              85.59 344  i P     P      20 30 34.8 -1.7
DRME  Dracevica, Mon    85.61 346⇓iP      P      20 30 35.8 -0.8
DRME  Dracevica, Mon    85.61 346  eP      P      20 30 35.9 -0.7
NVR   Nevrokopi         85.61 342   P      P      20 30 36.1 -0.6
LMR   La Mourre         85.77 355  eP      P      20 30 36.3 -1.0
LMR                                 pmax   pmax
      comp=Z,53nm,1.2s
ULC   Ulcinj            85.81 346⇓iP      P      20 30 36.1 -1.5
VAY   Valandovo         85.88 343  i P     P      20 30 37.5 -0.4
SRS   Serrai            85.89 342   P      P      20 30 38.2 +0.2
MTLF  Montolieu         85.91 358  eP      P      20 30 38.3 +0.2
MTLF                                pmax   pmax
      comp=Z,35nm,1.2s
KNT   Kendrikon         85.98 343   P      P      20 30 38.2 -0.2
AQU   L'Aquila          86.20 350   P      P      20 30 40.3 +0.7
AQU   L'Aquila          86.20 350  eP      P      20 30 38.6 -1.0
EPF   Esparros          86.23 360  eP      P      20 30 38.0 -1.7
EPF                                 pmax   pmax
      comp=Z,10.0nm,1.1s
GRG   Griva             86.27 343   P      P      20 30 44.1 +4.2
ETSF  Etsaut            86.36   1  eP      P      20 30 39.7 -0.7
ETSF                                pmax   pmax
      comp=Z,30nm,1.1s
OHR   Ohrid             86.40 345  i P     P      20 30 39.3 -1.3
PBRG  Braganca          87.27   5  eP      P      20 30 44.0 -0.8
      comp=Z,17nm,2.0s
PCAB  Cabril            87.28   6  eP      P      20 30 44.3 -0.5
      comp=Z,28nm,1.9s
POLO  Lamas de Olo      87.63   6  eP      P      20 30 45.9 -0.7
      comp=Z,11nm,1.4s
PVRL  Vila Real         87.73   6  eP      P      20 30 46.4 -0.6
      comp=Z,38nm,1.3s
JAN   Janina            87.80 344   P      P      20 30 46.5 -0.9
PTO   Porto             87.81   7  eP      P      20 30 46.8 -0.5
      comp=Z,33nm,1.5s
MVO   Moncorvo          87.89   5  eP      P      20 30 47.0 -0.8
      comp=Z,28nm,1.5s
IGT   Igoumenitsa       88.01 345  eP      P      20 30 47.6 -0.7
IGT   Igoumenitsa       88.01 345   P      P      20 30 47.6 -0.7
IGT   Igoumenitsa       88.01 345  eP      P      20 30 47.6 -0.7
PVIS  Viseu             88.28   6  eP      P      20 30 48.8 -0.8
      comp=Z,32nm,1.2s
MTE   Manteigas         88.61   6  eP      P      20 30 50.6 -0.7
      comp=Z,25nm,1.0s
SHME  Shamm             88.74 312  i P     P      20 30 50.6 -1.4
      SNR=9.3
TIP   Timpagrande       88.91 347⇑iP      P      20 30 52.0 -0.7
PCBR  Castelo Branco    89.18   6  eP      P      20 30 52.8 -1.0
      comp=Z,23nm,1.4s
MSFE  Esma-Masafi       89.32 311   P      P      20 30 53.2 -1.5
KSL   Kastellorizon     89.33 337   P      P      20 30 53.4 -1.2
PTOM  Tomar             89.33   7  eP      P      20 30 53.7 -0.8
      comp=Z,46nm,1.4s
STKA  Stephens Creek    89.35 212   P      P      20 30 55.1 +0.7
      comp=Z,44nm,1.0s,baz=357,slow=6.5,SNR=46
STKA  Stephens Creek    89.35 212  eP      P      20 30 55.2 +0.8
      comp=Z,19nm,1.1s
ESDC  Sonseca Array     89.52   3   P      P      20 30 54.5 -0.9
      comp=Z,17nm,1.3s,baz=358,slow=4.0,SNR=24
PMRV  Marv??o           89.59   6  eP      P      20 30 55.4 -0.4
      comp=Z,29nm,1.5s
PAB   San Pablo         89.63   3  eP      P      20 30 54.7 -1.4
      comp=Z,18nm,1.4s
PAB   San Pablo         89.63   3  eP      P      20 30 54.7 -1.4
PAB                                 pmax   pmax
      comp=Z,19nm,1.4s
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UOSS	Minazif	89.65	311	*e*P	P	20 30 54.9	-1.4
	comp=Z,98nm,1.5s						
UOSS	Minazif	89.65	311	*i* P	P	20 30 54.7	-1.6
	SNR=6.0						
HATD	Hatta, Dubai	89.78	311	*i* P	P	20 30 55.8	-1.1
	SNR=6.9						
NAZ	Nazwa, Dubai	89.87	312	*i* P	P	20 30 56.1	-1.2
	SNR=6.5						
PMTG	Montargil	89.89	7	*e*P	P	20 30 55.8	-1.4
	comp=Z,21nm,1.7s						
WSAR	Wadi Sarin	89.91	308	P	P	20 30 58.1	+0.6
	SNR=5.7						
ASHO	Ashiyiah	89.94	311	*i* P	P	20 30 56.9	-0.8
	SNR=6.2						
FAQ	Al Faqa, Dubai	90.11	312	*i* P	P	20 30 56.9	-1.6
	SNR=6.6						
ASUD	Al Ashush, Dub	90.33	312	*i* P	P	20 30 58.8	-0.7
	SNR=6.8						
ALNE	Al Ain	90.62	311	*i* P	P	20 31 00.0	-0.8
	SNR=7.2						
PNCL	Nicolau / Gran	90.82	7	*e*P	P	20 31 00.2	-1.3
	comp=Z,30nm,1.6s						
PBEJ	Beja	90.95	6	*e*P	P	20 31 02.8	+0.7
MHTO	MHTO	92.13	308	P	P	20 31 08.0	+0.1
	SNR=6.5						
CODC	Agustn Codazz	92.43	71	*e*P	P	20 31 14.7	+5.4
SMLC	San Martn de	92.95	72	*e*P	P	20 31 12.0	+0.3
KEST	Kesra	93.14	353	P	P	20 31 11.9	-0.5
	comp=Z,5.0nm,0.9s,baz=291,slow=8.7,SNR=4.5						
PTBC	PUERTO BERRIO,	94.50	74	*e*P	P	20 31 17.9	-1.0
SDV	Santo Domingo	94.93	69	*e*P	P	20 31 27.0	+5.9
SDV	Santo Domingo	94.93	69	*e*P	P	20 31 22.7	+1.7
BARC	Barichara	95.23	73	*e*P	P	20 31 22.5	0.0
YOTC	Yotoco, Valle	95.36	77	*e*P	P	20 31 23.6	+0.6
RAYN	Ar Rayn	95.65	319	*e*P	P	20 31 23.2	-0.8
	comp=Z,20nm,1.2s						
RAYN	Ar Rayn	95.65	319	*i* P	P	20 31 23.2	-0.8
	SNR=16						
RAYN	Ar Rayn	95.65	319	*e*P	P	20 31 23.2	-0.8
RAYN				pmax	pmax		
	comp=Z,20nm,1.2s						
RUSC	La Rusia	95.84	73	*e*P	P	20 31 27.2	+1.6
CHIC	Chingaza	96.44	75	*e*P	P	20 31 42.0	+14
SOTA	Rioblanco	96.64	78	*e*P	P	20 31 37.6	+8.4
NWAO	Narrogin (SRO)	100.29	230	P	Pdif	20 31 44.6	+0.2
	comp=Z,3.2nm,0.8s,baz=306,slow=3.2,SNR=3.5						
TOA1	Torodi Ar. Sit	115.99	358	*e*PKPdf	PKiKP	20 36 39.7	-1.6
TORD	Torodi Ar. Bea	116.00	358	PKP	PKiKP	20 36 39.7	-1.6
	comp=Z,2.3nm,0.5s,baz=350,slow=2.8,SNR=46						
TORD				PP	PP	20 37 43.8	-0.9
	comp=Z,1.4nm,0.7s,baz=2.8,slow=5.3,SNR=2.9						
TORD				PKKPbc	PKKPbc	20 47 10.9	+1.0
	comp=Z,2.2nm,0.9s,baz=175,slow=2.4,SNR=8.7						
TORD				PKKPab	PKKPab	20 47 16.0	-3.5
	comp=Z,4.4nm,1.0s,baz=175,slow=2.7,SNR=9.8						
TORD				PKKP	PKKPdf	20 47 30.2	-3.7
	comp=Z,4.4nm,0.9s,baz=183,slow=1.7,SNR=8.1						
SIV	San Ignacio	120.30	77	PKKPab	PKKPab	20 46 56.5	-1.4
	comp=Z,1.9nm,0.9s,baz=183,slow=5.7,SNR=5.6						
SIV				PKKP	PKKPdf	20 47 26.2	-0.6
	comp=Z,0.3nm,0.3s,baz=280,slow=21,SNR=2.6						
LVC	Limon Verde	120.33	89	*e*P	PKiKP	20 36 49.9	+0.1
KMBO	Kilima Mbogo	121.18	315	PKP	PKPdf	20 36 50.7	-0.9
	comp=Z,4.0nm,1.0s,baz=278,slow=3.0,SNR=7.7						
KMBO	Kilima Mbogo	121.18	315	P	PKiKP	20 36 52.3	+0.6
NBMO	Morrinhos-CE	121.69	49	*e*P	PKiKP	20 36 54.0	+1.6
DBIC	Dimbokro	122.29	6	PKP	PKPdf	20 36 52.4	-1.0
	comp=Z,7.1nm,0.5s,baz=350,slow=3.3,SNR=24						
TIC	Toumodi	122.30	6	*e*PKP1	PKPdf	20 36 53.1	-0.4
SMTB	Santa Maria do	122.53	60	*e*P	PKiKP	20 36 55.4	+1.4
KIC	Kosan Boka	122.60	6	*e*PKP1	PKPdf	20 36 53.2	-0.8
	comp=Z,32nm,1.0s						
LIC	Lamto	122.72	6	*e*PKP1	PKPdf	20 36 53.9	-0.3
	comp=Z,67nm,1.4s						
RCBR	Riachuelo	125.83	46	*e*P	PKiKP	20 37 01.2	+0.6
AQDB	Aquidauana	127.00	76	*e*P	PKiKP	20 37 03.2	+0.6
BDFB	Brasilia	127.81	65	PKP	PKPdf	20 37 02.6	-1.4
	comp=Z,1.8nm,0.5s,baz=304,slow=7.3,SNR=3.5						
VNDA	Vanda	128.87	185	PKP	PKiKP	20 37 04.8	+0.1
	comp=Z,1.2nm,0.7s,baz=306,slow=2.6,SNR=5.9						
ITRB	Iturama	129.64	71	*e*P	PKiKP	20 37 08.9	+0.9
CPUP	Villa Florida	130.29	83	PKP	PKiKP	20 37 08.7	-0.3
	comp=Z,7.2nm,1.1s,baz=340,slow=2.9,SNR=5.0						
CPUP				SKPbc	SKPbc	20 40 28.5	+0.7
	comp=Z,5.3nm,1.0s,baz=51,slow=4.1,SNR=3.6						
CPUP				SKP		20 40 39.2	
	comp=Z,2.2nm,0.7s,baz=294,slow=5.0,SNR=5.2						
CPUP	Villa Florida	130.29	83	*e*P	PKiKP	20 37 09.8	+0.8
TRCB	Terra Rica	130.61	75	*e*P	PKiKP	20 37 10.2	+0.3
PLCA	Paso Flores	131.53	107	PKP	PKiKP	20 37 10.9	-0.3
	comp=Z,12nm,1.0s,baz=321,slow=3.5,SNR=9.9						
PLCA				SKPbc	SKPab	20 40 33.4	+0.9
	comp=Z,8.0nm,1.0s,baz=346,slow=8.0,SNR=5.6						
PLCA				SKP		20 40 43.5	
	comp=Z,4.8nm,0.9s,baz=333,slow=9.2,SNR=4.2						
PLCA	Paso Flores	131.53	107	*e*P	PKiKP	20 37 11.9	+0.7
BB19B	Bebedouro	131.77	70	*e*P	PKiKP	20 37 13.0	+0.7
PTGB	Pitanga	132.38	77	*e*P	PKiKP	20 37 14.3	+0.9
BSCB	Bom Sucesso	133.92	66	*e*P	PKiKP	20 37 17.8	+1.1
SJMB	Sao Joao De Ma	134.11	61	*e*P	PKiKP	20 37 17.5	+0.5
RIB01	Linhares ES	135.04	60	*e*P	PKiKP	20 37 19.3	+0.4
TRQA	Tornquist	135.17	98	*e*PKPdf	PKPdf	20 37 17.4	+0.3
TRQA	Tornquist	135.17	98	*e*PKIKP	PKPdf	20 37 17.4	+0.3
TRQA	Tornquist	135.17	98	*e*P	PKiKP	20 37 19.1	+0.5
CPSB	Cacapava Do Su	135.58	83	*e*P	PKiKP	20 37 19.9	+0.2
ESAR	Angra dos Reis	135.68	68	*e*P	PKiKP	20 37 20.4	+0.4
CAM01	Campos-RJ	136.35	64	*e*P	PKiKP	20 37 21.7	+0.3
PLTB	Pedras Altas	136.40	85	*e*P	PKiKP	20 37 21.6	+0.3
CNLB	Canela	136.44	80	*e*P	PKiKP	20 37 21.7	+0.1
OGAUY	Aigu	137.40	89	*e*P	PKiKP	20 37 23.1	-0.1
QSPA	South Pole Qui	140.87	180	*e*PKPpre	PKPpre	20 37 20.4	
TSUM	Tsumeb	145.30	330	*e*PKPbc	PKPdf	20 37 36.4	+0.3
MAW	Mawson	145.87	217	PKPbc	PKPbc	20 37 35.9	-0.2
	comp=Z,54nm,1.0s,baz=76,slow=5.8,SNR=47						
BOSA	Boshof	150.65	310	PKPbc	PKPbc	20 37 50.4	+0.3
	comp=Z,39nm,0.7s,baz=23,slow=2.2,SNR=93						
BOSA	Boshof	150.65	310	*e*PKPbc	PKiKP	20 37 50.6	-0.2
VNA3	Neumayer Olymp	159.31	171	PKPdf	PKPdf	20 37 53.7	-1.3
SNAA	Sanae	159.33	177	PKPdf	PKPdf	20 37 53.5	-1.5
VNA1	Neumayer--Stat	160.01	172	PKPdf	PKPdf	20 37 52.0	-3.7

SJA 07 20:27:12.9±0.4,31°.50S×68°.72W,h40^{km}±999^{km},ML2.3, MW3.6,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	2.18	60	*i* P	Pn	20 27 48.4	+1.6
APLL				IAML		20 28 14.4	
	comp=Z,11nm,0.4s						
APLL				*i* S	Sn	20 28 15.0	+2.5
ACLC	CERRO LA CRUZ	2.57	37	*i* P	Pn	20 27 54.4	+2.2
VCA	Vinchina	2.79	9	*i* P	Pn	20 27 57.4	+2.2
VCA				*i* S	Sn	20 28 30.2	+2.5
VCA				IAML		20 28 32.1	
	comp=Z,21nm,0.2s						

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*BJI **07** 20:30:06.2±0.0,6°.00S×149°.75E,h60^{km},mb6.2/28, mB6.3/72,Ms6.4/96,Ms7 6.4/86*

*NEIC **07** 20:30:06.8±2.5,6°.03S×149°.71E,h56^{km},mb6.1/196, ME6.6,MW6.6,MW6.6,Error ellipse: s-maj=9.9km s-min=8.8km az=119.0,Moment Tensor Solution. s9 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.04; M$_{\theta\theta}$-0.25; M$_{\phi\phi}$-0.80; M$_{r\theta}$-0.02; M$_{\theta\phi}$-0.52; M$_{\phi r}$-0.27; Best double couple: M$_0$1.10000×10^{19} NP1:ϕ_s204.00000°,δ52.00000°, λ82.00000°. NP2:ϕ_s38.00000°,δ39.00000°,λ101.00000°. Principal axes: T 1.0900, Plg81.0000°, Azm74.0000°; N 0.0500, Plg7.0000°, Azm210.0000°; P -1.1400, Plg6.0000°, Azm300.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s5.00000°,δ35.00000°,λ90.00000°. NP2: ϕ_s185.00000°,δ55.00000°,λ90.00000°. Principal axes: T Plg80.0000°, Azm95.0000°; N Plg0.0000°, Azm0.0000°; P Plg10.0000°, Azm275.0000°; Apparent Stress 1.57 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Lae and Port Moresby.

*MOS **07** 20:30:06.8±1.0,5°.95S×149°.73E,h74^{km},mb6.2/41 Error ellipse: s-maj=6.8km s-min=4.9km az=111.0*

*ISCJB **07** 20:30:06.3±0.5,6°.00S±0°.02×149°.72E±0°.02,h68^{km}±4^{km}, mb6.0/193,Error ellipse: s-maj=3.3km s-min=2.8km az=9.8*

*NEIC **07** 20:30:07.0±0.0,6°.12S×149°.75E,h50^{km},Moment Tensor Solution. s26 Moment tensor: Scale 10^{18}Nm; M$_{rr}$7.96; M$_{\theta\theta}$-1.13; M$_{\phi\phi}$-6.83; M$_{r\theta}$1.50; M$_{\theta\phi}$-3.73; M$_{\phi r}$-4.08; Best double couple: M$_0$9.40000×10^{18} NP1:ϕ_s187.00000°, δ58.00000°,λ68.00000°. NP2:ϕ_s45.00000°,δ38.00000°, λ121.00000°. Principal axes: T 9.5700, Plg68.0000°, Azm51.0000°; N -0.3400, Plg18.0000°, Azm199.0000°; P -9.2300, Plg10.0000°, Azm292.0000°;*

*IDC **07** 20:30:07.5±0.3,6°.01S×149°.84E,h62^{km}±2^{km},mb5.3/42, mb1 5.3/44,mb1mx5.3/44,mbtmp5.6/44,MS5.9/22, Ms1 5.9/22,ms1mx5.7/28 Error ellipse: s-maj=8.8km s-min=6.7km az=60.0*

*DJA **07** 20:30:08.2±0.3,6°S±2°×15°0E±°,h69^{km}±3^{km},M6.6/109, mb6.2/109,mB6.7/106,MLv7.0/3,Mw(mB)6.6/106*

*GCMT **07** 20:30:09.8±0.1,6°.21S±0°.01×149°.78E±0°.01,h53^{km}, MW6.6/139,Moment Tensor Solution. s112,c203; s139,c420; Duration: 4^s.7 Moment tensor: Scale 10^{19} Nm; M$_{rr}$0.79±.01; M$_{\theta\theta}$-0.04±.01; M$_{\phi\phi}$-0.74±.01; M$_{r\theta}$0.11±.01; M$_{\theta\phi}$-0.30±.01; M$_{\phi r}$-0.28±.01; Best double couple: M$_0$0.87900×10^{19} NP1:ϕ_s187.00000°,δ54.00000°, λ73.00000°. NP2:ϕ_s34.00000°,δ39.00000°,λ112.00000°. Principal axes: T 0.8670, Plg74.0000°, Azm48.0000°; N 0.0230, Plg13.0000°, Azm197.0000°; P -0.8900, Plg8.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 07 20:30:07.4±0.2,6°.04S±0°.03×149°.73E±0°.03,h66^{km}±1^{km}, h66^{km}:pP-P,n1801,σ1^s.45/2053,mb6.2/195,127C-78D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.04	53	*e*Pn	Pn	20 30 54.6	+1.4
PMG	Port Moresby	4.21	217	P	Pn	20 31 11.1	+2.0
	2µm,0.3s,baz=30,slow=6.0,SNR=736						
PMG	Port Moresby	4.21	217	*e*Pn	Pn	20 31 11.1	+2.0
PMG				*e*Sn	Sn	20 31 57.7	+0.7
PMG	Port Moresby	4.21	217	*d i*P	Pn	20 31 10.8	+1.8
MANU	Manus Island	4.61	329	*e*Pn	Pn	20 31 18.3	+3.7
MMPI	Merauke	9.58	255	P	Pn	20 32 22.1	-0.5
	6µm,1.0s,87µm						
JAY	Jayapura	9.65	291	P	Pn	20 32 25.1	+1.5
	10.0nm,0.3s,baz=111,slow=10,SNR=48						
JAY				S	Sn	20 34 10.1	-0.5
	baz=97,slow=24,SNR=1.2						
JAY				LR	LR	20 36 43.8	
	comp=Z,135µm,20.0s,baz=100,slow=41						
JAY	Jayapura	9.65	291	P	Pn	20 32 27.3	+3.7
	19µm,1.2s,643µm						
GENI	Genyem	10.12	289	P	Pn	20 32 34.6	+4.5
	4µm,1.3s,123µm						
COEN	Coen	10.18	219	*e*Pn	Pn	20 32 31.5	+0.8
COEN				*e*Sn	Sn	20 34 17.1	-6.3
COEN	Coen	10.18	219	P	Pn	20 32 31.3	+0.5
	baz=10,SNR=24						
HNR	Honiara	10.67	109	P	Pn	20 32 38.5	+0.9
	93nm,0.3s,baz=268,slow=6.7,SNR=174						
HNR				S	Sn	20 34 37.8	+2.3
	21nm,0.3s,baz=180,slow=22,SNR=1.8						
HNR				LR	LR	20 36 18.9	
	comp=Z,135µm,20.9s,baz=266,slow=35						
HNR	Honiara	10.67	109	*e*Pn	Pn	20 32 39.5	+1.9
HNR				*e*Sn	Sn	20 34 44.5	+9.0
HNR	Honiara	10.67	109	*e*P	Pn	20 32 39.5	+1.9
HNR				*e*		20 34 44.6	
HNR	Honiara	10.67	109	*e*P	Pn	20 32 39.0	+1.4
HNR				*e*S	Sn	20 34 45.0	+9.5
SRPI	Serui, Papua	14.07	287	P	P	20 33 26.9	-2.5
	1µm,0.9s,24µm						
CTA	Charters Tower	14.37	193	P	Pn	20 33 29.9	+2.4
	5.4nm,0.3s,baz=16,slow=14,SNR=33						
CTA				S	Sn	20 36 10.6	+5.0
	0.8nm,0.3s,baz=122,slow=16,SNR=1.6						
CTA				LR	LR	20 38 53.3	
	comp=Z,33µm,20.0s,baz=18,slow=36						
CTAO	Charters Tower	14.37	193	*e*P	P	20 33 30.9	-1.8
CTAO	Charters Tower	14.37	193	*e*P	P	20 33 30.9	-1.8
BAKI	Biak	14.41	289	P	Pn	20 33 28.7	+0.5
	662nm,1.9s,45µm						
PATS	Pohnpei	15.39	34	*e*P	Pn	20 33 42.1	+1.4
	802nm,1.0s						
PATS	Pohnpei	15.39	34	P	Pn	20 33 41.6	+0.8
	baz=15,SNR=5.4						
QIS	Mount Isa	17.46	213	P	P	20 34 07.4	+0.5
	baz=18,SNR=330						
FAKI	Fak Fak	17.70	279	P	P	20 34 13.4	+3.8
	620nm,2.0s,28µm						
KDU	Kakadu	18.25	248	P	P	20 34 15.0	-0.7
	baz=18,SNR=831						
SAUI	Saumlaki	18.39	263	*e*P	Pn	20 34 18.3	+0.3
	4µm,0.9s						
SAUI	Saumlaki	18.39	263	P	Pn	20 34 18.3	+0.3
	6µm,1.2s,138µm						
SIJI	Sorong	19.12	285	P	P	20 34 24.3	-1.0
	4.4nm,0.3s,baz=107,slow=14,SNR=14						
SIJI				ScP	ScP	20 42 18.6	+0.8
	6.0nm,0.3s,baz=28,slow=6.3,SNR=25						
SIJI				ScS	ScS	20 46 02.3	+2.5
	0.3nm,0.3s,baz=264,slow=23,SNR=3.7						
EIDS	Eidsvold	19.27	176	*e*P	Pn	20 34 28.2	-0.1
	2µm,1.7s						
EIDS	Eidsvold	19.27	176	P	Pn	20 34 28.2	-0.1
	baz=19,SNR=95						
MTN	Manton Dam	19.54	248	*e*P	Pn	20 34 30.8	-0.9
	22µm,1.6s						
MTN	Manton Dam	19.54	248	P	Pn	20 34 30.8	-0.9
	baz=20,SNR=402						
BNDI	Bandanaira	19.79	273	P	Pn	20 34 34.3	-0.4
	6µm,2.2s,189µm						
GUMO	Guam	20.09	346	P	Pn	20 34 38.7	+0.7
	1µm,0.7s,baz=174,slow=5.7,SNR=104						
GUMO				ScS	ScS	20 46 05.5	+2.7
	30nm,0.6s,baz=73,slow=19,SNR=4.1						
GUMO	Guam	20.09	346	*e*Pn	Pn	20 34 38.6	+0.6
	14µm,1.9s						
GUMO	Guam	20.09	346	*e*P	Pn	20 34 38.6	+0.6
PALU	Palau	20.20	311	P	Pn	20 34 38.9	-0.6
	baz=20,SNR=134						
I39PW	PALAU INFRASON	20.27	311	P	Pn	20 34 45.4	+5.1
	baz=115,slow=14,SNR=11						
I39PW				*i*		22 32 50.0	
	baz=130,slow=308,SNR=2.2						
WC3	Warramunga Arr	20.35	226	*e*P	Pn	20 34 40.0	-1.2
	2µm,0.8s						
WC3				*e*S	S	20 38 20.2	-3.0
WRAB	Tennant Creek	20.35	226	*e*P	Pn	20 34 40.1	-1.1
	5µm,1.4s						
WRAB				*e*S	S	20 38 19.8	-3.4
WRAB	Tennant Creek	20.35	226	*c i*P	P	20 34 39.7	+1.1
WRAB				pmax	pmax		
	comp=Z,6µm,1.7s						
WB2	Warramunga Arr	20.36	226	*e*P	P	20 34 40.0	+1.3
	comp=Z,16µm,2.0s						
WB2				*e*S	S	20 38 20.1	-3.2
RMQ	Roma	20.36	182	P	Pn	20 34 40.3	-0.9
	baz=20,SNR=182						
WR1	Warramunga Arr	20.36	226	*e*ScP	ScP	20 42 23.6	+3.1
WRA	Warramunga Arr	20.36	226	P	P	20 34 39.9	+1.2
	comp=Z,1µm,0.6s						
WRA				S	S	20 38 20.4	-3.1
	comp=Z,792nm,1.0s,baz=46,slow=25,SNR=6.8						
WRA				ScP	ScP	20 42 23.6	+3.1
MSAI	Masohi	20.90	276	P	P	20 34 44.9	+0.3
	comp=Z,327nm,1.2s,comp=Z,10µm						
AAI	Ambon	21.58	275	P	P	20 34 54.0	+2.1
AAI				pmax	pmax		
	comp=Z,1µm,1.1s						
AAI	Ambon	21.58	275	P	P	20 34 51.9	0.0
	comp=Z,1µm,1.1s,comp=Z,34µm						
ANA2	Anatahan	22.59	350	*e*P	P	20 35 04.0	+1.4
	comp=Z,5µm,1.8s						
KNRA	Kununurra	22.68	243	P	P	20 35 03.6	-0.1
	baz=23,SNR=1000						
DZM	Mont Dzumac	22.70	136	*e*P	P	20 35 03.8	-0.1
	comp=Z,3µm,1.2s						
DZM				*e*S	S	20 39 02.7	-5.0
	comp=Z,137µm,27.6s						
DZM				*e*LR	LR	20 40 35.3	
	comp=Z,275µm,24.8s						
DZM	Mont Dzumac	22.70	136	P	P	20 35 03.8	-0.1
	comp=Z,590nm,0.8s,baz=335,slow=9.0,SNR=102						
DZM				S	S	20 39 08.0	+0.3
	comp=Z,26nm,0.9s,baz=48,slow=18,SNR=2.3						
NLAI	Namlea	22.72	276	P	P	20 35 02.8	-1.3
	comp=Z,955nm,0.8s,comp=Z,18µm						
LBMI	Labuha	22.82	283	P	P	20 35 04.4	-0.7
	comp=Z,886nm,1.9s,comp=Z,37µm						
SARN	Sarigan	22.93	350	*e*P	P	20 35 06.6	+0.5
	comp=Z,3µm,1.6s						
SARN				*e*S	S	20 39 11.0	-0.3
AS31	Alice Springs	23.22	219	*e*P	S	20 39 22.3	+6.3
AS31				*e*ScP	ScP	20 42 29.2	+1.5
AS31				*e*ScS	ScS	20 46 16.5	+2.4
ASAR	Alice Springs	23.22	219	P	P	20 35 09.3	+0.3
	comp=Z,341nm,0.9s,baz=55,slow=9.0,SNR=317						
ASAR				S	S	20 39 17.1	+1.1
	comp=Z,26nm,0.8s,baz=38,slow=20,SNR=2.9						
ASAR				ScP	ScP	20 42 29.2	+1.5
	comp=Z,125nm,0.8s,baz=44,slow=3.4,SNR=8.9						
ASAR				LR	LR	20 45 15.5	
	comp=Z,43µm,18.8s,baz=73,slow=39						
ASAR				ScS	ScS	20 46 16.5	+2.4
	comp=Z,14nm,0.8s,baz=36,slow=6.9,SNR=5.8						
ASAR				P3KP		21 09 25.7	
	comp=Z,4.5nm,1.1s,baz=165,slow=2.7,SNR=5.1						
TNTI	Ternate	23.32	286	*e*P	P	20 35 12.5	+2.4
	comp=Z,846nm,1.3s						
TNTI	Ternate	23.32	286	P	P	20 35 08.4	-1.7
	comp=Z,474nm,1.3s,comp=Z,20µm						
MARNC	Mare, Loyalty	23.45	133	*e*P	P	20 35 11.3	+0.2
PINNC	Pines Island,	23.75	136	*e*P	P	20 35 14.7	+0.9
SANI	Sanana	24.00	279	P	P	20 35 13.2	-3.1
	comp=Z,880nm,1.0s,comp=Z,26µm						
TARA	Tarawa	24.30	73	*e*P	P	20 35 19.1	+0.2
	comp=Z,1µm,1.2s						
ARMA	Armidale	24.32	176	P	P	20 35 19.8	+0.8
	baz=24,SNR=215						
SOEI	Soe	25.48	260	*e*P	P	20 35 31.4	+1.5
	comp=Z,8µm,1.2s						
SOEI	Soe	25.48	260	P	P	20 35 32.6	+2.7
	comp=Z,6µm,1.9s,comp=Z,132µm						
CMSA	Cobar Meteorol	25.65	188	P	P	20 35 31.0	0.0
	baz=26,SNR=332						
MNI	Manado	25.94	286	P	P	20 35 36.0	+2.2
MNI				pmax	pmax		
	comp=Z,759nm,0.9s						
SGSI	Sangihe	26.02	291	P	P	20 35 36.3	+1.7
	comp=Z,380nm,1.0s,comp=Z,6µm						
BATI	Baumata	26.12	259	P	P	20 35 37.7	+2.1
	comp=Z,2µm,0.6s,baz=112,slow=2.1,SNR=98						
BATI				S	S	20 40 07.6	+4.8
	comp=Z,154nm,1.0s,baz=291,slow=23,SNR=2.6						
BATI				ScP	ScP	20 42 39.2	+3.3
	comp=Z,163nm,0.7s,baz=48,slow=0.9,SNR=6.9						
BATI				LR	LR	20 48 10.9	
	comp=Z,119µm,21.6s,baz=111,slow=41						
BATI	Baumata	26.12	259	P	P	20 35 37.8	+2.2
	comp=Z,1µm,1.1s,comp=Z,36µm						
MATI	Mati	26.73	298	*e*P	P	20 35 41.5	+0.5
STKA	Stephens Creek	26.81	195	P	P	20 35 41.2	-0.3
	comp=Z,408nm,1.0s,baz=3.0,slow=9.1,SNR=105						
STKA				PP	PnPn	20 36 15.3	-11
	comp=Z,412nm,0.9s,baz=12,slow=8.9,SNR=8.1						
STKA				S	S	20 40 12.2	-0.9
	comp=Z,37nm,1.0s,baz=103,slow=20,SNR=2.0						
STKA				ScP	ScP	20 42 41.3	+3.7
	comp=Z,128nm,0.9s,baz=52,slow=4.2,SNR=9.7						
STKA				LR	LR	20 46 45.9	
	comp=Z,47µm,20.0s,baz=18,slow=37						
STKA				P3KPbc		21 08 15.0	
	comp=Z,0.9nm,0.3s,baz=330,slow=16,SNR=6.3						
STKA	Stephens Creek	26.81	195	P	P	20 35 41.2	-0.3
	baz=27,SNR=117						
LHI	Lord Howe Isla	26.82	162	*e*P	P	20 35 40.8	-0.8
	comp=Z,611nm,1.2s						
LHI	Lord Howe Isla	26.82	162	P	P	20 35 42.1	+0.6
	baz=27,SNR=4.2						
DDMP	Don Marcelino,	26.83	296	*e*P	P	20 35 54.8	+13
BBSI	Bau Bau	27.02	270	P	P	20 35 45.6	+2.0
	comp=Z,335nm,1.9s,comp=Z,7µm						
MGCD	Mangrove Creek	27.07	177	P	P	20 35 44.6	+0.8
	baz=27,SNR=27						
LUWI	Luwuk	27.35	279	P	P	20 35 43.2	-3.3
	comp=Z,691nm,1.3s,comp=Z,23µm						
MMRI	Maumere	27.38	263	*e*P	P	20 35 46.0	-0.8
	comp=Z,4µm,1.2s						
MMRI	Maumere	27.38	263	P	P	20 35 46.5	-0.4
	comp=Z,2µm,1.0s,comp=Z,52µm						
DAV	Davao City (W)	27.39	298	ScP	ScP	20 42 41.4	+1.7
	comp=Z,152nm,0.4s,baz=69,slow=3.9,SNR=5.9						
DAV				LR	LR	20 46 48.5	
	comp=Z,20µm,20.4s,baz=116,slow=36						
DAV	Davao City (W)	27.39	298	⇑*e*P	P	20 35 47.2	+0.3
GSPH	General Santos	27.51	296	⇑*i*P	P	20 35 52.6	+4.5
RIV	Riverview	27.69	177	P	P	20 35 50.6	+1.3
	baz=28,SNR=12						
KCP	Kidapawan	27.79	297	⇑*i*P	P	20 35 53.0	+2.4
WRKA	Warakurna	27.90	225	P	P	20 35 51.8	+0.3
	baz=28,SNR=241						
EDFI	Ende, Flores	27.93	263	P	P	20 35 51.0	-0.9
	comp=Z,1µm,0.9s,comp=Z,24µm						
SKMP	Bagumbayan, Su	28.06	296	*e*P	P	20 36 02.0	+9.2
YNG	Young	28.15	182	P	P	20 35 53.9	+0.4
	baz=28,SNR=85						
BUKP	Musuan	28.22	299	*e*P	P	20 36 13.0	+19
BUTP	Butuan	28.28	302	*e*P	P	20 36 13.9	+19
APSI	Ampana	28.48	279	P	P	20 35 55.2	-1.4
	comp=Z,246nm,2.5s,comp=Z,10µm						
NFK	Norfolk Island	28.64	145	P	P	20 35 58.6	+0.7
	baz=29,SNR=3.7						
CGP	Cagayan de Oro	28.81	300	⇓*e*P	P	20 36 10.3	+11
HTT	Hallett	29.05	199	P	P	20 36 01.6	+0.1
	baz=29,SNR=109						
BSSI	Bau Bau, Buton	29.07	268	P	P	20 36 01.8	-0.1
	comp=Z,1µm,0.8s,comp=Z,26µm						
CNB	Canberra Magne	29.14	181	P	P	20 36 03.0	+0.6
	baz=29,SNR=31						
CAN	Canberra	29.15	181	*e*P	P	20 36 03.0	+0.6
	comp=Z,1µm,1.6s						
CAN	Canberra	29.15	181	*e*P	P	20 36 03.0	+0.6
CAN				pmax	pmax		
	comp=Z,1µm,1.6s						
FUNA	Funafuti	29.33	97	*e*P	P	20 36 04.9	+0.7
	comp=Z,624nm,1.2s						
BKSI	Bulukumba	29.46	270	P	P	20 36 07.0	+1.6
	comp=Z,206nm,0.8s,comp=Z,8µm						
BKSI				pP	pP	20 36 16.3	-5.0
	comp=Z,206nm,0.8s,comp=Z,8µm						
MSLP	Maasin	29.52	303	*e*P	P	20 36 14.4	+8.5
BBOO	Buckleboo	29.53	204	*e*P	P	20 36 05.5	-0.2
	comp=Z,2µm,1.8s						
BBOO				*e*PcP	PcP	20 39 09.0	-0.7
BBOO	Buckleboo	29.53	204	P	P	20 36 05.4	-0.2
	baz=30,SNR=90						
PAGZ	Pagadian	29.68	297	*e*P	P	20 36 07.8	+0.5
KAPI	Kappang	29.85	270	P	P	20 36 07.9	-0.9
	comp=Z,39nm,0.5s,baz=98,slow=5.9,SNR=26						
KAPI				S	S	20 41 01.6	+0.2
	comp=Z,14nm,0.9s,baz=219,slow=13,SNR=3.6						
KAPI				ScP	ScP	20 42 48.3	+0.9
	comp=Z,152nm,1.0s,baz=58,slow=1.7,SNR=16						
KAPI				ScS	ScS	20 46 47.6	+4.6
	comp=Z,8.0nm,0.5s,baz=196,slow=23,SNR=24						
KAPI	Kappang	29.85	270	*e*P	P	20 36 10.0	+1.2
	comp=Z,753nm,0.8s						
KAPI	Kappang	29.85	270	*e*P	P	20 36 10.0	+1.2
KAPI				pmax	pmax		
	comp=Z,753nm,0.8s						
KAPI	Kappang	29.85	270	P	P	20 36 11.8	+3.0
	SNR=50						
SPSI	Sidrap Palu	29.91	273	P	P	20 36 10.6	+1.3
	comp=Z,98nm,1.5s,comp=Z,4µm						
TTSI	Tana Toraja	29.96	274	P	P	20 36 12.0	+2.3
	comp=Z,250nm,1.3s,comp=Z,8µm						
OCLP	Ormoc	30.22	304	*e*P	P	20 36 30.8	+19
WBSI	Waikabubak, Su	30.26	261	P	P	20 36 12.7	+0.2
	comp=Z,2µm,0.9s,comp=Z,64µm						
IPIL	Ipil	30.37	297	*e*P	P	20 36 23.9	+11
SNPH	Sibulan	30.50	300	*e*P	P	20 36 28.9	+14
MILA	Mila	30.88	181	P	P	20 36 18.3	+0.6
	baz=31,SNR=16						
CNP	Catarman	30.99	307	*e*P	P	20 36 17.9	-0.9
ARPS	Mount Arapiles	31.43	192	P	P	20 36 23.1	+0.7
	baz=32,SNR=229						
TOO	Toolangi	31.63	186	*e*P	P	20 36 25.1	+0.9
	comp=Z,685nm,1.3s						
TOO				*e*PcP	PcP	20 39 14.7	-0.5
TOO	Toolangi	31.63	186	P	P	20 36 25.1	+0.9
	baz=32,SNR=95						

TOO	**Toolangi**	**31.63**	**186**	*e*P	**P**	**20 36 25.1**	**+0.9**
TOO				*e*		20 39 14.7	
TOO				pmax	pmax		
	comp=Z,685nm,1.3s						
GUIM	**Jordan**	**31.69**	**301**	*e*P	**P**	**20 36 24.4**	**-0.6**
PLAI	**Plampang**	**31.80**	**263**	P	**P**	**20 36 24.8**	**-1.2**
	comp=Z,1µm,0.7s,comp=Z,17µm						
FORT	**Forrest**	**31.93**	**217**	*e*P	**P**	**20 36 27.5**	**+0.5**
	comp=Z,2µm,1.0s						
FORT	**Forrest**	**31.93**	**217**	P	**P**	**20 36 27.5**	**+0.5**
	baz=32,SNR=440						
PVCP	**Virac**	**32.02**	**308**	*e*P	**P**	**20 36 26.4**	**-1.5**
MBWA	**Marble Bar**	**32.71**	**240**	P	**P**	**20 36 35.0**	**+1.1**
	SNR=58						
OTRP	**Odiongan**	**33.06**	**304**	*e*P	**P**	**20 36 36.0**	**-0.9**
GQP	**Guinayangan**	**33.55**	**306**	⇑*e*P	P	20 36 34.0	-7.2
BOAC	**Boac**	**33.79**	**305**	*e*P	P	20 36 49.5	+6.2
SJMP	**San Jose**	**33.86**	**303**	*e*P	**P**	**20 36 48.4**	**+4.4**
SRBI	**Singaraja**	**34.31**	**265**	P	**P**	**20 36 48.7**	**+0.8**
	comp=Z,195nm,0.8s,comp=Z,9µm						
DNP	**Denpasar**	**34.32**	**263**	P	**P**	**20 36 48.0**	**0.0**
DNP				pmax	pmax		
	comp=Z,1µm,0.4s						
DNP	**Denpasar**	**34.32**	**263**	P	**P**	**20 36 48.0**	**0.0**
	comp=Z,1µm,0.4s,comp=Z,26µm						
BUSP	**Coron**	**34.40**	**301**	*e*P	**P**	**20 36 51.8**	**+3.1**
POLP	**Polilio Island**	**34.42**	**307**	*e*P	**P**	**20 36 48.5**	**-0.3**
TGY	**Tagaytay City**	**34.88**	**305**	P	**P**	**20 36 52.8**	**-0.1**
	comp=Z,174nm,0.3s,baz=224,slow=3.8,SNR=7.5						
TGY				S	**S**	**20 42 20.4**	**+0.8**
	comp=Z,57nm,0.3s,baz=30,slow=23,SNR=2.4						
TGY				ScP	**ScP**	**20 43 06.4**	**+1.8**
	comp=Z,213nm,0.8s,baz=282,slow=5.5,SNR=6.1						
BATP	**Bataraza**	**35.07**	**295**	*e*P	**P**	**20 36 54.0**	**-0.5**
LUBP	**Lubang**	**35.25**	**304**	*e*P	**P**	**20 36 55.9**	**0.0**
BALP	**Baler**	**35.29**	**308**	*e*P	**P**	**20 36 56.3**	**0.0**
JAGI	**Jajag, Banyuwa**	**35.36**	**264**	*e*P	**P**	**20 36 55.7**	**-1.3**
	comp=Z,1µm,0.7s						
JAGI	**Jajag, Banyuwa**	**35.36**	**264**	P	**P**	**20 36 55.8**	**-1.3**
	comp=Z,2µm,1.0s,comp=Z,23µm						
KMMI	**Kalianget**	**35.54**	**266**	P	**P**	**20 37 00.5**	**+2.0**
	comp=Z,242nm,1.4s,comp=Z,2µm						
CAUP	**Cauayan**	**35.81**	**310**	*e*P	**P**	**20 37 04.7**	**+4.0**
MEEK	**Meekatharra**	**36.03**	**232**	P	**P**	**20 37 03.4**	**+0.8**
	baz=36,SNR=297						
GMJI	**Gumukmas**	**36.06**	**264**	P	**P**	**20 37 03.0**	**0.0**
	comp=Z,245nm,0.9s,comp=Z,9µm						
SMPP	**San Manuel, Pa**	**36.23**	**308**	*e*P	**P**	**20 37 02.8**	**-1.5**
KMBL	**Kambalda**	**36.26**	**222**	P	**P**	**20 37 04.9**	**+0.4**
	baz=36,SNR=203						
MOO	**Moorlands**	**36.32**	**183**	P	**P**	**20 37 06.2**	**+1.4**
	baz=36,SNR=30						
OUZ	**Omahuta**	**36.43**	**146**	*e*PcP	**PcP**	**20 39 31.4**	**+2.5**
SCZP	**Santa Cruz**	**36.62**	**307**	*e*P	**P**	**20 37 10.1**	**+2.4**
TAU	**Tasmania Unive**	**36.78**	**183**	*e*P	**P**	**20 37 09.9**	**+1.2**
	comp=Z,2µm,1.7s						
TAU	**Tasmania Unive**	**36.78**	**183**	*e*P	**P**	**20 37 09.9**	**+1.2**
TAU				pmax	pmax		
	comp=Z,2µm,1.7s						
APYP	**Conner**	**36.80**	**311**	*e*P	**P**	**20 37 07.6**	**-1.6**
BOLP	**Bolinao**	**36.96**	**307**	*e*P	**P**	**20 37 10.0**	**-0.5**
ABRA	**Dolores**	**37.08**	**310**	*e*P	**P**	**20 37 09.8**	**-1.7**
BBP	**Basco**	**37.90**	**315**	*e*P	P	20 37 33.0	+15
GIRL	**Giralia**	**38.00**	**241**	P	**P**	**20 37 21.0**	**+1.8**
	baz=38,SNR=92						
NGJI	**Ngawi**	**38.02**	**266**	P	**P**	**20 37 21.9**	**+2.3**
	comp=Z,518nm,0.9s,comp=Z,13µm						
PBKI	**Pangkalan Bun**	**38.08**	**273**	P	**P**	**20 37 23.3**	**+3.2**
	comp=Z,1µm,1.2s,comp=Z,14µm						
SBUM	**Sibu**	**38.39**	**282**	P	**P**	**20 37 25.0**	**+2.3**
WOJI	**Wonogiri, Jawa**	**38.55**	**265**	P	**P**	**20 37 24.5**	**+0.4**
	comp=Z,1µm,0.9s,comp=Z,24µm						
KNTN	**Kanton**	**38.57**	**87**	*e*P	**P**	**20 37 25.5**	**+1.3**
	comp=Z,1µm,1.0s						
JOW	**Kunigami**	**38.72**	**329**	P	**P**	**20 37 27.1**	**+1.8**
	comp=Z,30nm,0.8s,baz=154,slow=13,SNR=61						
JOW				S	**S**	**20 43 19.2**	**+1.4**
	comp=Z,10nm,0.9s,baz=159,slow=13,SNR=13						
UGM	**Wanagama**	**38.95**	**265**	P	**P**	**20 37 28.9**	**+1.5**
	comp=Z,1µm,1.0s,comp=Z,28µm						
YOGI	**Yogyakarta**	**39.17**	**265**	P	**P**	**20 37 31.0**	**+1.7**
	comp=Z,3µm,1.4s,comp=Z,70µm						
MORW	**Morawa**	**39.20**	**230**	P	**P**	**20 37 29.8**	**+0.5**
	baz=39,SNR=76						
BLDU	**Ballidu**	**39.48**	**228**	P	**P**	**20 37 31.9**	**+0.3**
	baz=40,SNR=82						
YOJ	**Yonaguni jima**	**39.96**	**320**	P	**P**	**20 37 38.7**	**+3.1**
YOJ				pmax	pmax		
	comp=Z,530nm,1.4s						
JHJ2	**Mitsune**	**40.05**	**347**	*e*P	**P**	**20 37 35.4**	**-0.9**
	comp=Z,5µm,2.0s						
KSM	**Kuching**	**40.06**	**279**	P	**P**	**20 37 39.0**	**+2.4**
JHJ	**Hachijo jima 2**	**40.07**	**347**	P	**P**	**20 37 36.1**	**-0.3**
	comp=Z,276nm,0.7s,baz=180,slow=9.6,SNR=12						
JHJ				ScP	**ScP**	**20 43 25.1**	**+1.4**
	comp=Z,165nm,0.8s,baz=232,slow=10,SNR=5.3						
JHJ				S	**S**	**20 43 36.8**	**-1.0**
	comp=Z,114nm,0.8s,baz=95,slow=22,SNR=4.3						
YULB	**Yu-li**	**40.33**	**317**	*e*P	**P**	**20 37 39.7**	**+0.9**
	comp=Z,806nm,1.9s						
NWAO	**Narrogin (SRO)**	**40.36**	**224**	P	**P**	**20 37 39.3**	**+0.5**
	comp=Z,308nm,1.0s						
NWAO				ScP	**ScP**	**20 43 28.4**	**+3.4**
	comp=Z,80nm,1.0s,baz=74,slow=9.6,SNR=3.0						
NWAO	**Narrogin (SRO)**	**40.36**	**224**	*e*P	**P**	**20 37 39.1**	**+0.2**
	comp=Z,627nm,1.1s						
NWAO	**Narrogin (SRO)**	**40.36**	**224**	P	**P**	**20 37 39.1**	**+0.2**
	baz=40,SNR=77						
NWAO	**Narrogin (SRO)**	**40.36**	**224**	P	**P**	**20 37 39.6**	**+0.7**
	SNR=22						
NWAO				P	**P**	**20 37 39.6**	**+0.7**
	SNR=22						
MUN	**Mundaring**	**40.56**	**226**	P	**P**	**20 37 41.2**	**+0.6**
	baz=41,SNR=159						
URZ	**Urewera**	**40.57**	**146**	P	**P**	**20 37 40.9**	**+0.4**
	comp=Z,106nm,1.0s,baz=284,slow=1.9,SNR=24						
URZ				ScP	**ScP**	**20 43 27.9**	**+2.3**
	comp=Z,45nm,0.9s,baz=339,slow=17,SNR=7.2						
TPUB	**Ta-pu**	**40.72**	**317**	*e*P	**P**	**20 37 42.3**	**+0.3**
	comp=Z,173nm,0.8s						
SSLB	**Suanglung**	**40.83**	**318**	*e*P	**P**	**20 37 43.4**	**+0.5**
	comp=Z,114nm,0.8s						
SSLB				*e*PcP	**PcP**	**20 39 37.5**	**-5.3**
BKZ	**Black Stump Fm**	**40.89**	**148**	*e*P	**P**	**20 37 44.0**	**+0.8**
	comp=Z,235nm,1.3s						
TATO	**Taipei**	**41.30**	**319**	*e*P	**P**	**20 37 47.8**	**+1.2**
	comp=Z,631nm,1.1s						
NIUE	**Niue**	**41.34**	**112**	P	**P**	**20 37 46.3**	**-0.8**
	baz=41,SNR=5.0						
SNZO	**South Karori**	**41.60**	**151**	*e*P	**P**	**20 37 49.6**	**+0.7**
	comp=Z,3µm,1.6s						
SNZO				*e*PcP	**PcP**	**20 39 43.5**	**-1.4**
CISI	**Cisompet, Garu**	**41.63**	**265**	*e*P	**P**	**20 37 48.8**	**-0.9**
	comp=Z,2µm,0.7s						
CISI	**Cisompet, Garu**	**41.63**	**265**	P	**P**	**20 37 49.7**	**0.0**
	comp=Z,3µm,1.0s,comp=Z,47µm						
LEM	**Lembang**	**41.84**	**267**	P	**P**	**20 37 52.1**	**+0.6**
	comp=Z,766nm,0.8s,baz=29,slow=5.8,SNR=129						
LEM				ScP	**ScP**	**20 43 33.7**	**+2.3**
	comp=Z,71nm,0.8s,baz=68,slow=6.7,SNR=8.7						
LEM				S	**S**	**20 44 04.4**	**-0.6**
	comp=Z,37nm,0.9s,baz=324,slow=22,SNR=3.6						
RPZ	**Rata Peaks**	**41.95**	**157**	P	**P**	**20 37 50.4**	**-1.4**
	comp=Z,91nm,0.6s,baz=315,slow=3.4,SNR=38						
RPZ				ScP	**ScP**	**20 43 34.1**	**+3.1**
	comp=Z,16nm,0.8s,baz=49,slow=9.2,SNR=2.0						
OXZ	**Oxford**	**42.03**	**156**	*e*PcP	**PcP**	**20 39 47.0**	**+0.7**
TPI	**Tanjungpandan**	**42.06**	**273**	P	**P**	**20 37 56.1**	**+3.0**
	comp=Z,286nm,0.9s,comp=Z,6µm						
DCZ	**Deep Cove**	**42.10**	**162**	*e*P	**P**	**20 37 53.4**	**+0.4**
	comp=Z,1µm,2.0s						
LBZ	**Lake Benmore**	**42.19**	**158**	*e*PcP	**PcP**	**20 39 47.5**	**+0.5**
CBJI	**Citeko**	**42.62**	**267**	P	**P**	**20 37 58.1**	**+0.5**
	comp=Z,1µm,0.6s,comp=Z,21µm						
WHZ	**Wether Hill Ro**	**42.73**	**161**	*e*P	**P**	**20 37 58.5**	**+0.4**
	comp=Z,856nm,1.7s						
WHZ				*e*PcP	**PcP**	**20 39 51.4**	**+2.7**
JNU	**Nakatsue**	**42.86**	**337**	P	**P**	**20 38 00.4**	**+1.1**
	comp=Z,78nm,0.7s,baz=146,slow=2.6,SNR=55						
JNU				pP	**pP**	**20 38 16.6**	**+0.7**
	comp=Z,205nm,0.8s,baz=122,slow=6.1,SNR=7.7						
JNU				ScP	**ScP**	**20 43 34.8**	**-0.1**
	comp=Z,97nm,0.9s,baz=118,slow=4.9,SNR=8.1						
JNU				S	**S**	**20 44 23.2**	**+4.0**
	comp=Z,9.9nm,0.8s,baz=101,slow=24,SNR=2.7						
JNU	**Nakatsue**	**42.86**	**337**	*e*pP	**pP**	**20 38 16.6**	**+0.7**
	comp=Z,768nm,1.1s						
JNU				*e*ScP	**ScP**	**20 43 33.3**	**-1.5**
ODZ	**Otahua Downs**	**42.92**	**158**	*e*PcP	**PcP**	**20 39 51.2**	**+1.8**
QZH	**Quanzhou**	**43.20**	**317**	⇑*i*P	**P**	**20 38 01.8**	**-0.3**
QZH				ScP	**ScP**	**20 43 38.7**	**+2.4**
QZH				S	**S**	**20 44 23.4**	**-0.9**
QZH				pmax	pmax		
	comp=Z,220nm,0.9s						
QZH				pmax	pmax		
	comp=Z,5µm,7.3s						
QZH				LR	LR		
	comp=Z,24µm,24.2s						
QZH				LR	LR		
	comp=Z,29µm,24.6s						
QZH				LR	LR		
	comp=Z,60µm,27.5s						
SBJI	**Serang**	**43.34**	**267**	P	**P**	**20 38 01.7**	**-1.8**
H01W1	**Cape Leeuwin H**	**43.58**	**224**	P	**P**	**20 38 06.3**	**+1.5**
	baz=78,slow=7.3,SNR=22						
H01W3	**Cape Leeuwin H**	**43.59**	**224**	P	**P**	**20 38 07.1**	**+2.2**
	baz=78,slow=7.3,SNR=13						
H01W2	**Cape Leeuwin H**	**43.59**	**224**	P	**P**	**20 38 07.3**	**+2.4**
	baz=78,slow=7.3,SNR=16						
PPBI	**Pangkal Pinang**	**43.64**	**273**	P	**P**	**20 38 04.3**	**-1.6**
MJAR	**Matsushiro Arr**	**43.71**	**347**	P	**P**	**20 38 06.1**	**0.0**
	comp=Z,106nm,0.8s,baz=168,slow=7.9,SNR=142						
MJAR				PcP	**PcP**	**20 39 53.5**	**+1.4**
	comp=Z,31nm,1.0s,baz=176,slow=3.8,SNR=1.9						
MJAR				ScP	**ScP**	**20 43 38.4**	**+0.2**
	comp=Z,41nm,0.9s,baz=183,slow=5.0,SNR=10.0						
MJAR				S	**S**	**20 44 30.7**	**-0.8**
	comp=Z,4.2nm,1.0s,baz=149,slow=2.6,SNR=2.0						
MJAR				ScS	**ScS**	**20 48 01.5**	**+2.1**
	comp=Z,2.1nm,1.0s,baz=257,slow=33,SNR=3.4						
MJAR				LR	LR	20 55 33.7	
	comp=Z,8µm,19.9s,baz=155,slow=35						
MAJO	**Matsushiro**	**43.71**	**347**	*e*P	**P**	**20 38 06.4**	**+0.3**
	comp=Z,2µm,1.8s						
MAJO				*e*PcP	**PcP**	**20 39 53.5**	**+1.4**
MAJO				*e*ScP	**ScP**	**20 43 39.0**	**+0.8**
MAJO	**Matsushiro**	**43.71**	**347**	*c i*P	**P**	**20 38 06.3**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,1µm,1.9s						
MAT	**Matsushiro**	**43.71**	**347**	P	**P**	**20 38 06.3**	**+0.2**
MAT				S	**S**	**20 44 30.0**	**-1.5**
MJB9	**Matsu-Tunnel**	**43.71**	**347**	*e*P	**P**	**20 38 06.5**	**+0.4**
	comp=Z,2µm,1.8s						
CGJI	**Cibinong**	**43.76**	**267**	P	**P**	**20 38 04.4**	**-2.4**
XMIS	**Christmas Isla**	**43.81**	**261**	*e*P	**P**	**20 38 09.4**	**+2.1**
	comp=Z,2µm,1.1s						
BLSI	**Bandar Lampung**	**44.26**	**269**	P	**P**	**20 38 11.9**	**+1.0**
	comp=Z,345nm,1.2s,comp=Z,6µm						
KLI	**Kotabumi**	**44.67**	**269**	P	**P**	**20 38 16.3**	**+2.1**
KLI				pmax	pmax		
	comp=Z,415nm,1.6s						
KLI	**Kotabumi**	**44.67**	**269**	P	**P**	**20 38 16.4**	**+2.2**
	comp=Z,417nm,1.6s,comp=Z,7µm						
HKC	**Hong Kong Obse**	**44.77**	**310**	⇑P	P	20 38 33.0	+18
PMBI	**Palembang**	**44.91**	**272**	P	**P**	**20 38 20.3**	**+4.2**
	comp=Z,335nm,1.1s,comp=Z,11µm						
KASI	**Kota Agung**	**44.99**	**268**	P	**P**	**20 38 16.7**	**0.0**
	comp=Z,554nm,0.6s,comp=Z,9µm						
MDSI	**Maura Dua**	**45.37**	**270**	P	**P**	**20 38 15.9**	**-3.8**
LWLI	**Liwa**	**45.46**	**269**	P	**P**	**20 38 21.1**	**+0.6**
	comp=Z,374nm,0.9s,comp=Z,55µm						
TPRI	**Tanjung Pinang**	**45.65**	**277**	P	**P**	**20 38 18.1**	**-3.8**
GZH	**Guangzhou**	**45.85**	**310**	P	**P**	**20 38 25.2**	**+1.9**
GZH				pP	**pP**	**20 38 41.2**	**+1.2**
GZH				S	**S**	**20 45 06.6**	**+3.8**
GZH				LR	LR		
	comp=Z,8µm,19.7s						
GZH				LR	LR		
	comp=Z,13µm,19.4s						
SSE	**Sheshan**	**45.91**	**325**	P	**P**	**20 38 24.6**	**+1.0**
SSE				S	**S**	**20 45 06.5**	**+3.0**
SSE				pmax	pmax		
	comp=Z,1µm,4.1s						
SSE				LR	LR		
	comp=Z,1µm,23.7s						
SSE				LR	LR		
	comp=Z,7µm,22.9s						
LHSI	**Lahat**	**46.07**	**270**	P	**P**	**20 38 23.2**	**-2.0**
MYKOM	**Kota Tinggi**	**46.46**	**278**	P	**P**	**20 38 33.0**	**+4.7**
QIZ	**Qiongzhong**	**46.52**	**303**	P	**P**	**20 38 30.6**	**+2.0**
QIZ				sP	**sP**	**20 38 53.7**	**+0.7**
QIZ				PP	**PP**	**20 40 14.9**	**-4.0**
QIZ				S	**S**	**20 45 10.2**	**-2.4**
QIZ				pmax	pmax		
	comp=Z,2µm,10.8s						
QIZ				LR	LR		
	comp=Z,13µm,27.0s						
QIZ				LR	LR		
	comp=Z,14µm,26.0s						
QIZ				LR	LR		
	comp=Z,28µm,29.9s						
MNAI	**Manna**	**46.60**	**270**	*e*P	**P**	**20 38 29.8**	**+0.4**
	comp=Z,426nm,0.9s						
MNAI	**Manna**	**46.60**	**270**	P	**P**	**20 38 28.5**	**-0.9**
TJN	**Taejon**	**47.11**	**335**	*c i*P	**P**	**20 38 33.8**	**+0.9**
KSRS	**Korea Array**	**47.81**	**336**	P	**P**	**20 38 39.6**	**+1.3**
	comp=Z,58nm,0.7s,baz=154,slow=7.5,SNR=110						
KSRS				pP	**pP**	**20 38 56.6**	**+1.4**
	comp=Z,98nm,0.7s,baz=156,slow=8.3,SNR=13						
KSRS				ScP	**ScP**	**20 43 55.5**	**+0.4**
	comp=Z,28nm,0.9s,baz=153,slow=4.4,SNR=11						
KSRS				S	**S**	**20 45 37.3**	**+7.0**
	comp=Z,1.1nm,0.8s,baz=172,slow=9.5,SNR=2.7						
KSRS				ScS	**ScS**	**20 48 29.3**	**+3.5**
	comp=Z,1.3nm,0.9s,baz=259,slow=1.3,SNR=2.6						
KTGM	**Kuala Trenggan**	**47.87**	**283**	P	**P**	**20 38 42.0**	**+2.8**
NJ2	**Nanjing**	**47.96**	**324**	⇑*i*P	**P**	**20 38 40.7**	**+1.1**
NJ2				pP	**pP**	**20 38 57.3**	**+0.8**
NJ2				sP	**sP**	**20 39 02.4**	**-1.6**
NJ2				ScP	**ScP**	**20 43 55.9**	**0.0**
NJ2				S	**S**	**20 45 33.5**	**+0.9**
NJ2				sS	**sS**	**20 46 03.4**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,9µm,6.4s						
NJ2				LR	LR		
	comp=Z,28µm,24.2s						
NJ2				LR	LR		
	comp=Z,27µm,23.2s						
NJ2				LR	LR		
	comp=Z,57µm,24.3s						
ERM	**Erimo**	**48.20**	**353**	*e*P	**P**	**20 38 42.2**	**+1.1**
	comp=Z,618nm,1.4s						
ERM	**Erimo**	**48.20**	**353**	*c i*P	**P**	**20 38 42.3**	**+1.1**
ERM				pmax	pmax		
	comp=Z,325nm,1.3s						
JRMM	**Jerantut**	**48.20**	**281**	P	**P**	**20 38 46.0**	**+4.2**
KRJI	**Kerinci**	**48.29**	**273**	P	**P**	**20 38 42.8**	**+0.2**
SDSI	**Sungai Dareh**	**48.45**	**274**	P	**P**	**20 38 46.1**	**+2.3**
	comp=Z,220nm,1.2s,comp=Z,7µm						
MCQ	**Macquarie Isla**	**48.89**	**173**	*e*P	**P**	**20 38 48.2**	**+1.8**
	comp=Z,2µm,1.6s						
MCQ	**Macquarie Isla**	**48.89**	**173**	P	**P**	**20 38 48.2**	**+1.8**
	baz=49,SNR=5.5						
MCQ	**Macquarie Isla**	**48.89**	**173**	*e*P	**P**	**20 38 48.2**	**+1.8**
MCQ				pmax	pmax		
	comp=Z,2µm,1.6s						
BKNI	**Bangkinang**	**49.01**	**276**	P	**P**	**20 38 46.9**	**-1.1**
PDSI	**Padang**	**49.42**	**274**	P	**P**	**20 38 48.6**	**-2.6**
WHN	**Wuhan**	**49.70**	**319**	⇑P	**P**	**20 38 53.2**	**+0.2**
WHN				pP	**pP**	**20 39 09.9**	**0.0**
WHN				pmax	pmax		
	comp=Z,4µm,6.4s						
WHN				LR	LR		
	comp=Z,31µm,17.5s						
WHN				LR	LR		
	comp=Z,35µm,16.9s						
WHN				LR	LR		
	comp=Z,86µm,20.7s						
IPM	**Ipoh**	**49.74**	**281**	P	**P**	**20 38 54.0**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**49.96**	**356**	*c i*P	**P**	**20 38 56.8**	**+2.1**
YUK				*e*		20 40 11.7	
YUK				*e*		20 40 50.0	
YUK				*e*PPP	PPP	20 41 45.5	
YUK				*e*S	**S**	**20 46 00.6**	**+0.3**
YUK				*e*		20 48 37.8	
YUK				*e*SS	**SS**	**20 49 33.3**	**-1.0**
YUK				*e*SSS	SSS	20 51 01.3	
YUK				pmax	pmax		
	comp=Z,876nm,1.0s						
YUK				pmax	pmax		
	comp=N,448nm,1.1s						
YUK				pmax	pmax		
	comp=E,360nm,1.0s						
YUK				pmax	pmax		
	comp=Z,2µm,3.4s						
PANO	**Nakornpanom**	**50.18**	**298**	P	**P**	**20 38 57.2**	**+0.4**
	comp=Z,4.6nm,1.0s						
KULM	**Kulim**	**50.27**	**282**	P	**P**	**20 39 00.0**	**+2.4**
ASAJ	**Asahikawa**	**50.33**	**353**	P	**P**	**20 38 59.0**	**+1.5**
	comp=Z,458nm,0.9s,baz=225,slow=12,SNR=56						
ASAJ				ScP	**ScP**	**20 44 06.5**	**+0.7**
	comp=Z,12nm,1.0s,baz=267,slow=17,SNR=4.0						
ASAJ				S	**S**	**20 46 07.8**	**+2.2**
	comp=Z,8.3nm,1.0s,baz=349,slow=31,SNR=3.7						
ASAJ	**Asahikawa**	**50.33**	**353**	P	**P**	**20 38 59.0**	**+1.5**
MNSI	**Mandailing Nat**	**50.52**	**276**	P	**P**	**20 38 57.9**	**-1.6**
CHBT	**CHBT**	**50.66**	**292**	P	**P**	**20 39 03.2**	**+2.7**
	comp=Z,148nm,0.5s,comp=Z,2µm						
SKNT	**Sakolnakorn**	**50.66**	**298**	P	**P**	**20 39 00.4**	**-0.1**
	comp=Z,323nm,0.9s,comp=Z,5µm						
SKLT	**Songkhla**	**50.72**	**284**	P	**P**	**20 39 02.3**	**+1.3**
	comp=Z,50nm,3.0s,comp=Z,3µm						
SISI	**Saibi**	**50.73**	**273**	P	**P**	**20 39 00.7**	**-0.4**
KUR	**Kuril'sk**	**51.06**	**358**	*c i*P	**P**	**20 39 03.6**	**+0.6**
KUR				*i* *PP	**pP**	**20 39 20.2**	**+0.2**
KUR				*e*		20 41 03.0	
KUR				*e*S	**S**	**20 46 17.7**	**+2.1**
KUR				pmax	pmax		
	comp=Z,2µm,0.9s						
KUR				pmax	pmax		
	comp=E,316nm,0.7s						
KUR				pmax	pmax		
	comp=N,202nm,0.8s						
KUR				pmax	pmax		
	comp=Z,9µm,8.5s						
RAR	**Rarotonga**	**51.11**	**112**	P	**P**	**20 39 02.7**	**-1.1**
	comp=Z,203nm,1.1s,baz=274,slow=2.9,SNR=10						
RAR				pP	**pP**	**20 39 20.7**	**-0.2**
	comp=Z,73nm,1.0s,baz=274,slow=16,SNR=2.7						
RAR	**Rarotonga**	**51.11**	**112**	*e*P	**P**	**20 39 05.7**	**+1.9**
	comp=Z,652nm,1.4s						
RAR	**Rarotonga**	**51.11**	**112**	*e*P	**P**	**20 39 05.7**	**+1.9**
RAR				pmax	pmax		
	comp=Z,652nm,1.4s						
MSHR	**Mys Shultsa**	**51.25**	**342**	*c i*P	**P**	**20 39 05.9**	**+1.4**
PSI	**Prapat**	**51.48**	**278**	P	**P**	**20 39 07.0**	**+0.1**
	comp=Z,47nm,0.8s,baz=210,slow=14,SNR=18						
PSI				ScP	**ScP**	**20 44 12.3**	**+0.6**
	comp=Z,40nm,1.0s,baz=115,slow=3.4,SNR=6.6						
PSI				S	**S**	**20 46 19.4**	**-3.3**
	comp=Z,2.5nm,0.3s,baz=352,slow=20,SNR=2.9						
PSI	**Prapat**	**51.48**	**278**	P	**P**	**20 39 07.0**	**+0.1**
VLA	**Vladivostok**	**51.53**	**343**	*c i*P	**P**	**20 39 08.5**	**+2.0**
VLA				pmax	pmax		
	comp=Z,147nm,0.9s						
DL2	**Dalian**	**51.74**	**332**	⇑*i*P	**P**	**20 39 08.7**	**+0.5**
DL2				pP	**pP**	**20 39 25.7**	**+0.5**
DL2				ScP	**ScP**	**20 44 12.7**	**+0.7**
DL2				pmax	pmax		
	comp=Z,3µm,7.3s						
DL2				LR	LR		
	comp=Z,14µm,20.6s						
DL2				LR	LR		
	comp=Z,16µm,22.6s						
DL2				LR	LR		
	comp=Z,28µm,21.0s						
TRTT	**Trang**	**51.77**	**285**	P	**P**	**20 39 10.0**	**+1.1**
	comp=Z,76nm,0.8s,comp=Z,4µm						
NONG	**Nongkai**	**51.82**	**298**	P	**P**	**20 39 08.9**	**-0.3**
	comp=Z,4.8nm,0.8s						
TSI	**Tuntungan**	**51.96**	**279**	P	**P**	**20 39 14.2**	**+3.9**
	comp=Z,242nm,1.3s,comp=Z,7µm						
TIA	**Tai'an**	**51.97**	**326**	P	**P**	**20 39 09.5**	**-0.4**
TIA				S	**S**	**20 46 21.7**	**-6.7**
TIA				pmax	pmax		
	comp=Z,5µm,8.3s						
TIA				LR	LR		
	comp=Z,24µm,20.6s						
TIA				LR	LR		
	comp=Z,19µm,21.6s						
TIA				LR	LR		
	comp=Z,45µm,22.2s						
CHAI	**Chaiyaphum**	**52.04**	**295**	P	**P**	**20 39 10.6**	**-0.2**
	comp=Z,206µm,1.0s						
TEY	**Ternei**	**52.19**	**348**	⇑*e*P	**P**	**20 39 12.1**	**+0.7**
TEY				*e*S	**S**	**20 46 30.4**	**-0.7**
TEY				pmax	pmax		
	comp=N,400nm,8.6s						
TEY				pmax	pmax		
	comp=Z,900nm,7.0s						
TEY				pmax	pmax		
	comp=N,30nm,2.4s						
TEY				smax	smax		
	comp=N,6µm,14.7s						
USRK	**Ussuriysk Ar.**	**52.50**	**344**	P	**P**	**20 39 15.1**	**+1.4**
	comp=N,122nm,0.9s,baz=164,slow=7.5,SNR=73						
USRK				pP	**pP**	**20 39 31.8**	**+1.0**
	comp=N,102nm,0.7s,baz=178,slow=5.6,SNR=12						
USRK				ScP	**ScP**	**20 44 15.1**	**0.0**
	comp=N,18nm,0.8s,baz=164,slow=2.1,SNR=6.0						
USRK				S	**S**	**20 46 38.2**	**+2.8**
	comp=N,1.5nm,0.8s,baz=203,slow=32,SNR=2.0						
USRK				LR	LR	20 59 53.1	
	comp=N,9µm,21.2s,baz=146,slow=34						
USRK				PKPPKP	**P'P'df**	**21 09 36.3**	**-5.6**
	comp=N,3.1nm,1.0s,baz=336,slow=4.2,SNR=5.4						
USRK				PKP2bc		21 10 01.4	
	comp=N,2.2nm,0.8s,baz=68,slow=10.0,SNR=2.9						
USRK				PKP2ab		21 10 27.8	
	comp=N,8.6nm,1.1s,baz=270,slow=1.0,SNR=4.0						
GSI	**Gunungsitoli**	**52.58**	**276**	*e*P	**P**	**20 39 14.2**	**-0.6**
	comp=N,614nm,1.4s						
GSI	**Gunungsitoli**	**52.58**	**276**	P	**P**	**20 39 13.2**	**-1.7**
KCSI	**Kotacane, Aceh**	**52.74**	**279**	P	**P**	**20 39 13.7**	**-2.4**
PKDT	**Phuket**	**53.09**	**285**	P	**P**	**20 39 19.9**	**+1.2**
	comp=N,237nm,1.0s,comp=N,4µm						
YSS	**Yuzh-Sakhalins**	**53.12**	**354**	*e*P	**P**	**20 39 18.7**	**+0.5**
	comp=N,584nm,1.3s						
YSS	**Yuzh-Sakhalins**	**53.12**	**354**	⇑*e*P	**P**	**20 39 18.6**	**+0.4**
YSS				*e*		20 39 35.4	
YSS				*e**PP	**sP**	**20 39 44.0**	**+1.2**
YSS				*e*		20 40 24.7	
YSS				*e*		20 41 18.4	
YSS				*e*S	**S**	**20 46 40.1**	**-3.6**
YSS				*e*SSS	SSS	20 52 08.0	
YSS				pmax	pmax		
	comp=Z,8µm,4.0s						
YSS				pmax	pmax		
	comp=Z,200nm,1.0s						
YSS				pmax	pmax		
	comp=N,90nm,0.9s						
YSS				pmax	pmax		
	comp=E,70nm,0.8s						
YSS				smax	smax		
	comp=E,5µm,8.5s						
YSS				smax	smax		
	comp=E,5µm,8.3s						
PHET	**Kaeng Krachan**	**53.21**	**291**	P	**P**	**20 39 21.5**	**+2.0**
	comp=E,132µm,1.0s						
SNY	**Shenyang**	**53.29**	**336**	⇑P	**P**	**20 39 20.0**	**+0.5**
SNY				pP	**pP**	**20 39 35.6**	**-1.0**
SNY				S	**S**	**20 46 45.3**	**-0.9**
SNY				pmax	pmax		
	comp=E,6µm,7.0s						
SNY				LR	LR		
	comp=E,13µm,24.5s						
SNY				LR	LR		
	comp=E,9µm,22.1s						
SNY				LR	LR		
	comp=E,30µm,25.0s						
XMAS	**Kiritimati**	**53.36**	**83**	*e*P	**P**	**20 39 22.0**	**+1.4**
	comp=E,993nm,1.0s						
MDJ	**Mudanjiang**	**53.58**	**342**	P	**P**	**20 39 22.8**	**+1.2**
MDJ				pP	pP	20 39 39.3	+0.6
MDJ				sP	sP	20 39 46.7	+0.5
MDJ				PcP	**PcP**	**20 40 28.4**	**+0.9**
MDJ				PP	**PP**	**20 41 24.1**	**+1.1**
MDJ				ScP	**ScP**	**20 44 20.3**	**+0.5**
MDJ				PcS	**PcS**	**20 44 27.4**	**+0.9**
MDJ				S	**S**	**20 46 49.0**	**-1.0**
MDJ				sS	sS	20 47 21.0	+2.9
MDJ				ScS	**ScS**	**20 49 06.6**	**+1.5**
MDJ				pmax	pmax		
	comp=E,250nm,1.0s						
MDJ				pmax	pmax		
	comp=E,7µm,12.7s						
MDJ				LR	LR		
	comp=E,6µm,19.9s						

MDJ				LR	LR		
	comp=E,18µm,21.4s						
MDJ				LR	LR		
	comp=E,30µm,34.2s						
LHMI	**Lhok Sumawe**	**53.87**	**281**	P	P	20 39 15.0	-9.3
SNSI	**Sinabang, Aceh**	**53.98**	**277**	P	**P**	**20 39 22.2**	**-3.0**
UTTA	**Uttaradit**	**53.98**	**297**	P	**P**	**20 39 25.4**	**+0.3**
	comp=E,245µm,0.8s						
SRDT	**SRDT**	**54.12**	**292**	P	**P**	**20 39 27.9**	**+1.7**
	comp=E,77nm,1.4s,comp=E,2µm						
MLSI	**Meulaboh, Aceh**	**54.22**	**280**	P	**P**	**20 39 24.9**	**-2.0**
CN2	**Changchun**	**54.24**	**338**	*e*P	**P**	**20 39 26.6**	**+0.1**
CN2				*e*sP	sP	20 39 49.5	-1.6
CN2				*e*S	**S**	**20 46 58.7**	**-0.4**
CN2				LR	LR		
	comp=E,7µm,21.0s						
CN2				LR	LR		
	comp=E,5µm,21.0s						
CN2				LR	LR		
	comp=E,6µm,23.0s						
UMPA	**Umpang Tak**	**54.96**	**294**	P	**P**	**20 39 32.8**	**+0.5**
	comp=E,233µm,1.0s						
LAMP	**Lampang**	**55.08**	**297**	P	**P**	**20 39 35.4**	**+2.3**
	comp=E,165µm,0.8s						
PAYA	**Payao**	**55.18**	**298**	P	**P**	**20 39 34.3**	**+0.5**
	comp=E,216µm,1.4s						
KMI	**Kunming**	**55.19**	**306**	P	**P**	**20 39 34.8**	**+0.8**
KMI				pP	pP	20 39 51.0	-0.2
KMI				sP	sP	20 39 58.8	+0.1
KMI				PcP	**PcP**	**20 40 39.0**	**+4.5**
KMI				ScP	**ScP**	**20 44 29.2**	**+1.6**
KMI				S	**S**	**20 47 09.4**	**-3.5**
KMI				sS	sS	20 47 45.0	+3.8
KMI				pmax	pmax		
	comp=E,1µm,8.9s						
KMI				LR	LR		
	comp=E,16µm,23.2s						
KMI				LR	LR		
	comp=E,8µm,26.5s						
KMI				LR	LR		
	comp=E,31µm,31.0s						
XAN	**Xi'an**	**55.47**	**319**	P	**P**	**20 39 34.7**	**-0.9**
XAN				PcP	**PcP**	**20 40 34.9**	**-0.2**
XAN				PP	**PP**	**20 41 38.6**	**-1.7**
XAN				pmax	pmax		
	comp=E,5µm,8.2s						
XAN				LR	LR		
	comp=E,11µm,25.5s						
XAN				LR	LR		
	comp=E,18µm,23.5s						
XAN				LR	LR		
	comp=E,37µm,27.9s						
CM31	**Chiang Mai Arr**	**55.67**	**297**	P	**P**	**20 39 37.3**	**0.0**
	SNR=22						
CMAR	**Chiang Mai Arr**	**55.67**	**297**	P	**P**	**20 39 37.9**	**+0.6**
	comp=E,33nm,0.9s,baz=123,slow=5.3,SNR=69						
CMAR				ScP	**ScP**	**20 44 30.9**	**+1.2**
	comp=E,10nm,1.0s,baz=106,slow=3.2,SNR=4.3						
CMAR				S	**S**	**20 47 19.2**	**+0.1**
	comp=E,0.6nm,0.3s,baz=97,slow=12,SNR=5.6						
CMAR				PKPPKP		21 09 37.0	
	comp=E,10nm,1.1s,baz=266,slow=2.7,SNR=9.3						
CMAR				PKP2bc		21 09 52.8	
	comp=E,14nm,0.8s,baz=282,slow=2.8,SNR=18						
CMAR				PKP2ab		21 10 11.9	
	comp=E,20nm,0.9s,baz=292,slow=3.5,SNR=8.5						
CMAR				P4KPbc		21 16 57.7	
	comp=E,0.9nm,1.0s,baz=113,slow=2.1,SNR=4.8						
TIY	**Taiyuan**	**55.68**	**324**	P	**P**	**20 39 39.9**	**+2.8**
TIY				S	**S**	**20 47 21.3**	**+2.6**
TIY				pmax	pmax		
	comp=E,4µm,8.7s						
TIY				LR	LR		
	comp=E,16µm,18.1s						
TIY				LR	LR		
	comp=E,12µm,16.2s						
TIY				LR	LR		
	comp=E,51µm,29.6s						
CMMT	**Chiang Mai**	**55.79**	**297**	P	**P**	**20 39 38.5**	**+0.3**
	comp=E,29nm,1.4s,comp=E,1µm						
CHTO	**Chiang Mai**	**55.80**	**297**	*e*P	**P**	**20 39 38.5**	**+0.3**
	comp=E,74nm,0.9s						
CHTO	**Chiang Mai**	**55.80**	**297**	*e*P	**P**	**20 39 38.5**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,74nm,0.9s						
CHTO	**Chiang Mai**	**55.80**	**297**	P	**P**	**20 39 39.0**	**+0.8**
	SNR=12						
CHTO				P	**P**	**20 39 39.0**	**+0.8**
	SNR=12						
SKR	**Severo-Kuril's**	**56.76**	**5**	*e*P	**P**	**20 39 43.9**	**-0.5**
SKR				*e*		20 41 51.5	
SKR				*e*S	**S**	**20 47 30.3**	**-2.0**
SKR				*e*SSS	SSS	20 53 30.1	
SKR				pmax	pmax		
	comp=Z,6µm,6.6s						
TYV	**Tymovskoe**	**57.00**	**355**	*e*P	**P**	**20 39 47.6**	**+1.5**
TYV				*e*S	**S**	**20 47 38.4**	**+2.9**
TYV				pmax	pmax		
	comp=Z,7µm,5.9s						
TYV				pmax	pmax		
	comp=Z,302nm,0.9s						
TYV				smax	smax		
	comp=N,20nm,1.5s						
TYV				smax	smax		
	comp=E,3µm,7.2s						
KLR	**Kul'dur**	**57.23**	**346**	P	**P**	**20 39 48.8**	**+0.9**
	comp=E,45nm,0.7s,baz=160,slow=6.4,SNR=102						
KLR				pP	**pP**	**20 40 06.5**	**+1.5**
	comp=E,253nm,1.2s,baz=159,slow=5.8,SNR=13						
KLR				ScP	**ScP**	**20 44 35.8**	**+0.1**
	comp=E,19nm,0.9s,baz=238,slow=3.1,SNR=4.0						
KLR				S	**S**	**20 47 39.4**	**+0.7**
	comp=E,0.7nm,0.5s,baz=9.6,slow=15,SNR=3.5						
KLR	**Kul'dur**	**57.23**	**346**	*c i*P	**P**	**20 39 48.9**	**+1.1**
KLR				pmax	pmax		
	comp=Z,562nm,2.5s						
CD2	**Chengdu**	**57.27**	**313**	P	**P**	**20 39 48.7**	**+0.2**
CD2				pP	pP	20 40 06.1	+0.3
CD2				PP	**PP**	**20 41 56.2**	**-0.2**
CD2				S	**S**	**20 47 38.8**	**-1.1**
CD2				sS	sS	20 48 10.6	+2.5
CD2				SS	**SS**	**20 51 28.1**	**-2.2**
CD2				pmax	pmax		
	comp=Z,100nm,0.6s						
CD2				pmax	pmax		
	comp=Z,4µm,7.3s						
CD2				LR	LR		
	comp=Z,20µm,21.4s						
CD2				LR	LR		
	comp=Z,36µm,24.5s						
CD2				LR	LR		
	comp=Z,38µm,23.7s						
GRNR	**Gornyy**	**57.73**	**350**	*e*P	**P**	**20 39 53.0**	**+1.7**
GRNR				*e*		20 42 02.0	
GRNR				pmax	pmax		
	comp=Z,140nm,1.0s						
HHC	**Hu-ho-hao-te**	**58.32**	**327**	P	**P**	**20 39 55.9**	**+0.1**
HHC				pP	pP	20 40 12.3	-0.8
HHC				S	**S**	**20 47 51.5**	**-2.0**
HHC				sS	sS	20 48 21.8	-0.1
HHC				pmax	pmax		
	comp=Z,3µm,4.9s						
HHC				LR	LR		
	comp=Z,18µm,20.4s						
HHC				LR	LR		
	comp=Z,25µm,20.4s						
HHC				LR	LR		
	comp=Z,46µm,19.6s						
BTO	**Baotou**	**59.02**	**325**	*e*P	**P**	**20 40 01.0**	**+0.4**
PEA0B	**Petropavlovsk-**	**59.31**	**6**	*e*P	**P**	**20 40 02.5**	**+0.2**
	comp=Z,386nm,1.0s						
PETK	**Petropavlovsk-**	**59.31**	**6**	P	**P**	**20 40 02.3**	**+0.1**
	comp=Z,214nm,0.7s,baz=157,slow=6.4,SNR=91						
PETK				LR	LR	21 02 43.6	
	comp=Z,3µm,21.5s,baz=182,slow=33						
PETK				PKPPKP	**P'P'df**	**21 09 32.9**	**+1.4**
	comp=Z,13nm,1.2s,baz=75,slow=1.6,SNR=3.4						
PETK				PKP2bc		21 09 43.4	
	comp=Z,8.1nm,1.0s,baz=90,slow=0.6,SNR=5.6						
PET	**Petropavlovsk**	**59.32**	**6**	*e*P	**P**	**20 40 02.5**	**+0.2**
	comp=Z,180nm,0.8s						
PET	**Petropavlovsk**	**59.32**	**6**	*c i*P	**P**	**20 40 01.3**	**-1.0**
PET				*e**PP	**pP**	**20 40 18.0**	**-1.7**
PET				*e*S	**S**	**20 48 04.7**	**-1.0**
PET				pmax	pmax		
	comp=Z,5µm,7.4s						
PET				pmax	pmax		
	comp=Z,274nm,0.8s						
PET				smax	smax		
	comp=E,3µm,19.1s						
HUH	**Hualalai**	**59.33**	**63**	*e*P	**P**	**20 40 03.9**	**+0.5**
	comp=E,225nm,1.2s						
PBA	**Port Blair**	**59.34**	**287**	*e*P	P	20 40 03.5	+0.4
NKL	**Nikolayevsk**	**59.46**	**354**	⇑*i*P	**P**	**20 40 03.8**	**+0.6**
NKL				*e*		20 40 54.0	
NKL				*e*		20 42 11.5	
NKL				*e*S	**S**	**20 47 59.4**	**-8.0**
NKL				*e*		20 49 41.8	
NKL				*e*SS	**SS**	**20 51 57.7**	**-6.1**
NKL				pmax	pmax		
	comp=Z,18nm,1.2s						
NKL				pmax	pmax		
	comp=E,244nm,1.1s						
NKL				pmax	pmax		
	comp=N,57nm,1.0s						
NKL				pmax	pmax		
	comp=Z,911nm,3.7s						
DGPR	**DIGLIPUR**	**59.55**	**289**	*e*P	**P**	**20 40 04.2**	**-0.4**
POHA	**Pohakuloa**	**59.63**	**63**	*e*P	**P**	**20 40 04.6**	**-0.8**
	comp=Z,213nm,0.8s						
LZH	**Lanzhou**	**60.03**	**318**	⇑P	**P**	**20 40 08.2**	**+0.4**
LZH				pP	pP	20 40 25.8	+0.6
LZH				sP	sP	20 40 32.8	+0.2
LZH				PP	**PP**	**20 42 24.5**	**+3.5**
LZH				S	**S**	**20 48 16.4**	**+0.5**
LZH				sS	sS	20 48 43.5	-0.7
LZH				SS	**SS**	**20 52 15.0**	**+1.2**
LZH				pmax	pmax		
	comp=Z,340nm,1.3s						
LZH				pmax	pmax		
	comp=Z,4µm,6.0s						
LZH				LR	LR		
	comp=Z,17µm,17.7s						
LZH				LR	LR		
	comp=Z,25µm,17.1s						
LZH				LR	LR		
	comp=Z,36µm,18.3s						
PPT	**Papeete**	**60.29**	**107**	P	**P**	**20 40 09.0**	**-0.7**
	comp=Z,48nm,0.8s,baz=69,slow=5.8,SNR=11						
PPT				pP	**pP**	**20 40 26.7**	**-0.3**
	comp=Z,199nm,0.9s,baz=272,slow=5.4,SNR=4.8						
PPT				LR	LR	21 01 16.6	
	comp=Z,5µm,20.6s,baz=280,slow=31						
PAE	**Paea**	**60.29**	**107**	*e*P	**P**	**20 40 11.5**	**+1.8**
	comp=Z,67nm,1.2s						
PPT2	**Papeete2**	**60.29**	**107**	*e*P	**P**	**20 40 11.9**	**+2.1**
	comp=Z,394nm,1.3s						
PPT2				*e*S	**S**	**20 48 19.1**	**-0.5**
	comp=Z,11µm,28.5s						
PPT2				*e*LQ	LQ	20 55 26.7	
	comp=Z,60µm,33.5s						
PPT2				*e*LR	LR	20 58 00.7	
	comp=Z,25µm,26.8s						
TIAR	**Tiarei**	**60.51**	**107**	*e*P	**P**	**20 40 13.2**	**+2.0**
	comp=Z,294nm,1.3s						
TVO	**Taravao**	**60.61**	**107**	*e*P	**P**	**20 40 14.0**	**+2.1**
	comp=Z,503nm,1.8s						
TBI	**Tubuai**	**60.86**	**113**	*e*P	**P**	**20 40 15.3**	**+1.8**
	comp=Z,1µm,1.3s						
TBI				*e*S	**S**	**20 48 27.5**	**+0.9**
	comp=Z,9µm,30.5s						
TBI				*e*LQ	LQ	20 55 42.3	
	comp=Z,12µm,34.8s						
TBI				*e*LR	LR	20 58 15.7	
	comp=Z,71µm,35.8s,baz=286						
MEH	**Mehetia**	**61.74**	**107**	*e*P	**P**	**20 40 21.3**	**+1.8**
	comp=Z,155nm,1.2s						
PMOR	**Pomariorio Ree**	**61.81**	**104**	*e*P	**P**	**20 40 22.1**	**+2.1**
	comp=Z,3µm,1.6s						
VAH	**Vaihoa**	**62.07**	**104**	*e*P	**P**	**20 40 23.6**	**+1.9**
	comp=Z,601nm,1.1s						
SMY	**Shemya**	**62.09**	**16**	*e*P	**P**	**20 40 21.5**	**+0.4**
	comp=Z,209nm,1.1s						
SMY	**Shemya**	**62.09**	**16**	*e*P	**P**	**20 40 21.5**	**+0.4**
SMY				pmax	pmax		
	comp=Z,209nm,1.1s						
MOKO	**MOKOCHONG**	**62.41**	**304**	*e*P	**P**	**20 40 23.1**	**-0.9**
ZEA	**Zeya**	**62.49**	**345**	*e*P	**P**	**20 40 24.6**	**+0.8**
ZEA				*e*		20 40 42.0	
ZEA				*e*S	**S**	**20 48 48.0**	**+1.9**
ZEA				pmax	pmax		
	comp=N,910nm,2.5s						
ZEA				pmax	pmax		
	comp=E,460nm,2.5s						
ZEA				pmax	pmax		
	comp=Z,2µm,2.5s						
ZEA				pmax	pmax		
	comp=Z,8µm,8.0s						
ZEA				pmax	pmax		
	comp=N,3µm,6.0s						
ZEA				smax	smax		
	comp=E,8µm,8.0s						
ZEA				smax	smax		
	comp=N,8µm,10.0s						
JORH	**JORHAT**	**62.79**	**304**	*e*P	**P**	**20 40 26.5**	**+0.2**
BRDH	**Bariadhala**	**63.54**	**299**	S	**S**	**20 49 02.1**	**+1.8**
	comp=N,93nm,0.4s,baz=275,slow=20,SNR=1.7						
BELO	**BELONIA**	**63.90**	**299**	*e*P	**P**	**20 40 34.6**	**+0.9**
BELO				IAmb	IAmb	20 41 04.5	
	comp=Z,5µm,3.6s						
TEZP	**TEZPUR**	**63.94**	**303**	*e*P	**P**	**20 40 33.5**	**-0.5**
SHL	**Shillong**	**64.33**	**302**	*e*P	**P**	**20 40 36.5**	**-0.3**
	comp=Z,186nm,1.0s						
SHL	**Shillong**	**64.33**	**302**	*e*P	**P**	**20 40 36.5**	**-0.3**
SHL				pmax	pmax		
	comp=Z,186nm,1.0s						
SHL	**Shillong**	**64.33**	**302**	*e*P	**P**	**20 40 36.1**	**-0.6**
SHL				IAmb	IAmb	20 40 42.1	
	comp=Z,211nm,1.6s						
ADK	**Adak**	**64.44**	**22**	*e*P	**P**	**20 40 36.8**	**+0.1**
	comp=Z,310nm,1.2s						
ADK	**Adak**	**64.44**	**22**	*e*P	**P**	**20 40 36.8**	**+0.1**
ADK				pmax	pmax		
	comp=Z,311nm,1.2s						
GTA	**Gaotai**	**64.53**	**319**	*e*P	**P**	**20 40 37.7**	**0.0**
GTA				pP	pP	20 40 54.2	-1.1
GTA				sP	sP	20 41 01.5	-1.2
GTA				S	**S**	**20 49 09.6**	**-2.7**
GTA				sS	sS	20 49 38.1	-3.6
GTA				ScS	**SKSac**	**20 50 24.4**	**-2.1**
GTA				pmax	pmax		
	comp=Z,2µm,9.3s						
GTA				LR	LR		
	comp=Z,10µm,19.6s						
GTA				LR	LR		
	comp=Z,11µm,19.1s						
GTA				LR	LR		
	comp=Z,11µm,19.1s						
TAWA	**Tawang**	**65.07**	**304**	*e*P	**P**	**20 40 41.8**	**0.0**
MA2	**Magadan**	**65.41**	**1**	P	**P**	**20 40 42.6**	**-0.3**
	comp=Z,49nm,0.7s,baz=168,slow=6.8,SNR=24						
MA2				S	**S**	**20 49 23.2**	**+1.2**
	comp=Z,5.0nm,0.5s,baz=190,slow=19,SNR=2.0						
MA2				LR	LR	21 06 28.5	
	comp=Z,6µm,21.4s,baz=190,slow=33						
MA2				PKPPKP		21 09 22.3	
	comp=Z,4.0nm,0.5s,baz=36,slow=5.8,SNR=6.1						
MA2	**Magadan**	**65.41**	**1**	*e*P	**P**	**20 40 44.0**	**+1.1**
	comp=Z,592nm,1.9s						
MA2	**Magadan**	**65.41**	**1**	*c i*P	**P**	**20 40 42.1**	**-0.8**
MA2				pmax	pmax		
	comp=Z,318nm,3.2s						
ULN	**Ulaanbaatar**	**65.47**	**330**	*e*P	**P**	**20 40 44.1**	**+0.4**
	comp=Z,155nm,1.1s						
ULN	**Ulaanbaatar**	**65.47**	**330**	*c i*P	**P**	**20 40 43.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,57nm,0.8s						
ULN	**Ulaanbaatar**	**65.47**	**330**	P	**P**	**20 40 44.2**	**+0.4**
	SNR=38						
ULN				P	**P**	**20 40 44.2**	**+0.4**
	SNR=38						
CIT	**Chita**	**65.55**	**336**	*e*P	**P**	**20 40 44.3**	**+0.3**
CIT				*e*		20 41 21.1	
CIT				*e*		20 43 09.9	
CIT				*e*		20 49 27.5	
CIT				pmax	pmax		
	comp=Z,299nm,1.4s						
SONM	**Songino Array**	**65.78**	**330**	P	**P**	**20 40 45.7**	**0.0**
	comp=Z,38nm,0.9s,baz=141,slow=1.7,SNR=60						
SONM				pP	**pP**	**20 41 04.1**	**+0.7**
	comp=Z,106nm,1.1s,baz=141,slow=6.0,SNR=12						
SONM				ScP		20 45 14.9	
	comp=Z,15nm,0.9s,baz=136,slow=4.6,SNR=4.5						
SONM				S	**S**	**20 49 30.0**	**+2.6**
	comp=Z,1.7nm,1.0s,baz=124,slow=7.3,SNR=2.7						
SONM				LR	LR	21 07 40.6	
	comp=Z,13µm,21.8s,baz=137,slow=34						
SONM				PKPPKP	**P'P'df**	**21 09 15.9**	**-6.4**
	comp=Z,8.5nm,1.1s,baz=305,slow=1.5,SNR=9.1						
SONM				PKP2ab		21 09 30.0	
	comp=Z,18nm,1.1s,baz=329,slow=1.5,SNR=14						
CASY	**Casey**	**65.96**	**196**	*e*P	**P**	**20 40 46.7**	**+0.4**
	comp=Z,782nm,1.5s						
LSA	**Lhasa**	**66.44**	**306**	P	**P**	**20 40 49.9**	**-0.8**
LSA				LR	LR		
	comp=Z,39µm,20.6s						
LSA				LR	LR		
	comp=Z,75µm,26.3s						
LSA	**Lhasa**	**66.44**	**306**	P	**P**	**20 40 51.7**	**+1.0**
GTK	**Tadong**	**67.69**	**303**	*e*P	**P**	**20 40 58.3**	**0.0**
GTK				IAMs_20	IAMs_20	21 09 28.2	
	comp=Z,10µm,7.5s						
BWNR	**Bhubaneshwar**	**68.01**	**295**	*e*P	**P**	**20 40 59.2**	**-1.0**
BWNR				IAmb	IAmb	20 41 11.9	
SEY	**Seymchan**	**68.80**	**1**	P	**P**	**20 41 04.0**	**-0.3**
	comp=Z,46nm,0.9s,baz=184,slow=5.2,SNR=20						
SEY				PKP2bc		21 09 15.9	
	comp=Z,14nm,1.1s,baz=3.6,slow=2.0,SNR=16						
SEY	**Seymchan**	**68.80**	**1**	P	**P**	**20 41 04.0**	**-0.3**
BOK	**Bokaro**	**68.92**	**298**	*e*P	**P**	**20 41 05.1**	**-0.7**
BOK				IAmb	IAmb	20 41 11.7	
	comp=Z,604nm,3.0s						
ZAK	**Zakamensk**	**68.99**	**330**	*e*P	**P**	**20 41 05.0**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,133nm,1.3s						
TAOE	**Nuku Hiva Isla**	**69.51**	**97**	*e*LR	LR	21 02 03.5	
	comp=Z,18µm,23.3s						
YAK	**Yakutsk**	**69.61**	**350**	*e*P	**P**	**20 41 09.2**	**-0.1**
	comp=Z,884nm,1.9s						
YAK	**Yakutsk**	**69.61**	**350**	*e*P	**P**	**20 41 07.2**	**-2.1**
YAK				*e**PP	**pP**	**20 41 24.3**	**-3.0**
YAK				*e*		20 43 52.1	
YAK				*e*S	**S**	**20 50 08.4**	**-3.9**
YAK				*e**SS	**SKSac**	**20 51 01.0**	**-2.8**
TLY	**Talaya**	**69.65**	**331**	*e*P	**P**	**20 41 09.9**	**+0.1**
	comp=Z,150nm,1.5s						
TLY	**Talaya**	**69.65**	**331**	*c i*P	**P**	**20 41 09.6**	**-0.2**
TLY				*e*		20 41 27.1	
TLY				*e*S	**S**	**20 50 14.0**	**+0.8**
TLY				*e*SS	**SS**	**20 54 34.2**	**-8.5**
TLY				*e*SSS	SSS	20 57 52.9	
TLY				pmax	pmax		
	comp=Z,106nm,1.4s						
TLY	**Talaya**	**69.65**	**331**	P	**P**	**20 41 10.1**	**+0.3**
	SNR=23						
TLY				P	**P**	**20 41 10.1**	**+0.3**
	SNR=23						
JIRN	**Jiri**	**69.83**	**302**	*e*P	**P**	**20 41 12.8**	**+0.9**
	comp=Z,127nm,0.6s						
BOD	**Bodaibo**	**69.89**	**341**	*e*P	**P**	**20 41 09.9**	**-1.2**
BOD				pmax	pmax		
	comp=Z,53nm,1.4s						
PALK	**Pallekele**	**70.12**	**280**	*i* P	**P**	**20 41 12.4**	**-1.1**
	SNR=6.1						
GUN	**Gumba**	**70.17**	**302**	*e*P	**P**	**20 41 15.3**	**+1.4**
	comp=Z,172nm,0.5s						
PKI	**Pulchoki**	**70.46**	**302**	*e*P	**P**	**20 41 16.1**	**+0.4**
	comp=Z,424nm,1.5s						
PKIN	**Phulchoki**	**70.47**	**302**	*e*P	**P**	**20 41 16.1**	**+0.4**
	comp=Z,64nm,0.5s						
KKN	**Kakani**	**70.63**	**302**	*e*P	**P**	**20 41 17.8**	**+1.2**
	comp=Z,90nm,0.5s						
DMN	**Daman**	**70.72**	**302**	*e*P	**P**	**20 41 18.0**	**+0.8**
	comp=Z,142nm,0.5s						
MOY	**Mondy**	**70.92**	**330**	*e*P	**P**	**20 41 17.6**	**-0.1**
MOY				pmax	pmax		
	comp=Z,252nm,2.1s						
GKN	**Gorkha**	**71.24**	**302**	*e*P	**P**	**20 41 20.8**	**+0.6**
	comp=Z,148nm,0.5s						
VNDA	**Vanda**	**71.73**	**177**	P	**P**	**20 41 23.1**	**+1.1**
	comp=Z,136nm,0.8s,baz=332,slow=6.5,SNR=239						
VNDA				PKPPKP	P'P'df	21 09 03.9	-8.7
	comp=Z,2.2nm,1.0s,baz=188,slow=3.7,SNR=5.3						
VNDA				LR	LR	21 09 47.2	
	comp=Z,7µm,18.4s,baz=344,slow=33						
VNDA	**Vanda**	**71.73**	**177**	*e*P	**P**	**20 41 23.3**	**+1.2**
	comp=Z,2µm,1.9s						
VNDA	**Vanda**	**71.73**	**177**	*e*P	**P**	**20 41 23.3**	**+1.2**
VNDA				pmax	pmax		
	comp=Z,2µm,1.9s						
KOLN	**Koldanda**	**72.05**	**302**	*e*P	**P**	**20 41 25.6**	**+0.5**
	comp=Z,153nm,0.6s						
DANN	**Dangsing**	**72.08**	**302**	*e*P	**P**	**20 41 25.7**	**+0.3**
	comp=Z,112nm,0.5s						
SBA	**Scott Base**	**72.33**	**176**	*e*P	**P**	**20 41 27.2**	**+1.6**
	comp=Z,2µm,2.0s						
SBA	**Scott Base**	**72.33**	**176**	*e*P	**P**	**20 41 27.2**	**+1.6**
SBA				pmax	pmax		
	comp=Z,2µm,2.0s						
PYUN	**Piuthan**	**72.66**	**302**	*e*P	**P**	**20 41 28.7**	**-0.1**
	comp=Z,247nm,0.8s						
TRD	**Trivandrum**	**73.97**	**281**	*e*P	**P**	**20 41 37.7**	**+1.2**
HYB	**Hyderabad**	**74.02**	**290**	*i* P	**P**	**20 41 36.0**	**-0.7**
HYB				*e*PcP	**pP**	**20 41 55.5**	**+0.9**
HYB				*e*S	**S**	**20 51 06.0**	**+1.3**
HYB				*e*PKPPKP	**P'P'df**	**21 09 09.0**	**-1.8**
RKT	**Rikitea**	**74.15**	**112**	*e*P	**P**	**20 41 38.4**	**+1.0**
	comp=Z,755nm,1.2s						
RKT				*e*S	**S**	**20 51 06.2**	**+0.2**
	comp=Z,22µm,29.8s						
RKT	**Rikitea**	**74.15**	**112**	*e*LQ	LQ	21 01 21.0	
	comp=Z,9µm,41.0s						
RKT				*e*LR	LR	21 04 22.5	
	comp=Z,46µm,35.0s						
NGP	**Nagpur**	**74.35**	**294**	*e*P	**P**	**20 41 37.8**	**-0.8**
NGP				IAMs_20	IAMs_20	21 12 21.1	
	comp=Z,7µm,17.4s						
WMQ	**Urumqi**	**74.60**	**318**	P	**P**	**20 41 41.2**	**+1.6**
WMQ				pP	pP	20 41 59.8	+2.2
WMQ				sP	sP	20 42 06.2	+1.3
WMQ				S	**S**	**20 51 10.6**	**+0.2**
WMQ				SKS	**SKSac**	**20 51 39.0**	**-3.4**
WMQ				SS	**SS**	**20 56 00.8**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,1µm,4.1s						
WMQ				LR	LR		
	comp=Z,6µm,20.5s						
WMQ				LR	LR		
	comp=Z,6µm,19.7s						
WMQ				LR	LR		
	comp=Z,9µm,20.9s						
BILL	**Bilibino**	**74.82**	**6**	*e*P	**P**	**20 41 39.9**	**-0.4**
	comp=Z,105nm,1.0s						
BILL	**Bilibino**	**74.82**	**6**	*c i*P	**P**	**20 41 39.7**	**-0.6**
BILL				*e*		20 44 29.1	
BILL				*e*S	**S**	**20 51 12.8**	**+1.1**
BILL				*e*SS	**SS**	**20 56 03.6**	**+2.5**
BILL				pmax	pmax		
	comp=Z,87nm,1.0s						
BILL				MLR	MLR		
	comp=Z,3µm,19.0s						
BHPL	**Bhopal**	**76.28**	**296**	*e*P	**P**	**20 41 49.7**	**0.0**
H08S2	**Diego Garcia H**	**76.61**	**264**	P	**P**	**20 41 53.7**	**+2.4**
	baz=45,slow=7.4,SNR=14						
H08S3	**Diego Garcia H**	**76.62**	**264**	P	**P**	**20 41 53.3**	**+1.9**
	baz=45,slow=7.4,SNR=13						
H08S1	**Diego Carcia H**	**76.62**	**264**	P	**P**	**20 41 53.7**	**+2.3**
	baz=45,slow=7.4,SNR=6.6						
DGAR	**Diego Garcia**	**76.66**	**264**	P	**P**	**20 41 54.3**	**+2.3**
	SNR=6.5						
DGZ	**Jazzator, Alta**	**77.25**	**324**	*c i*P	**P**	**20 41 53.5**	**-1.2**
DGZ				pmax	pmax		
	comp=Z,22nm,0.7s						
DDI	**Dehra Dun**	**77.41**	**303**	*e*P	**P**	**20 41 55.9**	**0.0**
ZSN	**Zaisan**	**77.88**	**321**	*c i*P	**P**	**20 41 56.3**	**-1.8**
ZSN				*e*S	**S**	**20 51 42.4**	**-3.6**
ZSN				pmax	pmax		
	comp=Z,225nm,6.4s						
ZSN				smax	smax		
	comp=N,382nm,6.7s						
ZSN				MLR	MLR		
	comp=Z,2µm,20.0s						
ZSN	**Zaisan**	**77.88**	**321**	⇑*i*P	**P**	**20 41 56.4**	**-1.8**
	comp=Z,225nm,6.4s						
ZSN				*e*S	**S**	**20 51 42.5**	**-3.6**
	comp=Z,382nm,6.7s						
ZSN				*e*LR	LR	21 15 28.3	
	comp=Z,2µm,20.2s						

GOA	Goa	78.12	287	*e*P	P	20 42 00.6	+0.6
GOA				IAmb	IAmb	20 42 03.8	
	comp=Z,191nm,1.5s						
H08N1	Diego Carcia H	78.17	265	P	P	20 41 58.7	-1.4
	baz=133,slow=3.7,SNR=8.2						
H08N2	Diego Garcia H	78.19	265	P	P	20 41 58.8	-1.3
	baz=133,slow=3.7,SNR=10.0						
H08N3	Diego Garcia H	78.19	265	P	P	20 41 57.9	-2.2
	baz=133,slow=3.7,SNR=7.8						
SMLA	Simla	78.35	303	*e*P	P	20 42 01.3	+0.3
SMLA				IAMs_20	IAMs_20	21 13 43.7	
	comp=Z,10µm,22.5s						
POO	Poona	78.62	290	*e*P	P	20 42 02.7	-0.1
KDAK	Kodiak Island	78.66	28	*e*P	P	20 42 03.8	+1.6
	comp=Z,213nm,1.4s						
TIXI	Tiksi	78.74	353	P	P	20 42 01.0	-1.3
	comp=Z,16nm,0.8s,baz=148,slow=8.5,SNR=13						
TIXI				LR	LR	21 12 35.1	
	comp=Z,3µm,21.9s,baz=176,slow=32						
TIXI	Tiksi	78.74	353	*e*P	P	20 42 01.3	-0.9
	comp=Z,44nm,1.0s						
TIXI	Tiksi	78.74	353*c*	*i*P	P	20 42 00.4	-1.9
TIXI				pmax	pmax		
	comp=Z,25nm,1.0s						
MK31	Makanchi Array	79.26	320	*e*P	P	20 42 06.7	+0.9
	comp=Z,100nm,1.3s						
MKAR	Makanchi Array	79.26	320	P	P	20 42 05.5	-0.2
	comp=Z,14nm,0.9s,baz=97,slow=6.6,SNR=39						
MKAR				S	S	20 51 59.7	-1.2
	comp=Z,2.6nm,1.0s,baz=98,slow=7.7,SNR=3.1						
MKAR				PKKPbc	PKKPbc	21 00 56.5	-1.7
	comp=Z,3.6nm,0.8s,baz=289,slow=3.7,SNR=11						
MKAR				PKPPKP	P'P'df	21 08 56.3	-3.0
	comp=Z,2.9nm,0.9s,baz=286,slow=4.4,SNR=6.0						
MKAR				LR	LR	21 17 13.9	
	comp=Z,12µm,19.4s,baz=94,slow=36						
MKAR	Makanchi Array	79.26	320	*i* P	P	20 42 07.0	+1.3
MKAR				pmax	pmax		
	comp=Z,24nm,1.0s						
DHRM	DHARAMSHALA	79.34	304	*e*P	P	20 42 06.1	-0.6
DHRM				IAmb	IAmb	20 42 07.9	
	comp=Z,126nm,0.4s						
MAKZ	Makanchi	79.47	320	*e*P	P	20 42 06.2	-0.6
	comp=Z,180nm,1.4s						
MAKZ	Makanchi	79.47	320	*e*P	P	20 42 06.2	-0.6
MAKZ				pmax	pmax		
	comp=Z,180nm,1.4s						
PDGK	Podgornoye	79.98	316	P	P	20 42 10.6	+0.7
PDGK				pmax	pmax		
	comp=Z,74nm,1.2s						
UZB	Uzynbulak	80.25	316*c*	*e*P	P	20 42 09.8	-1.5
UZB				*i* S	S	20 52 10.2	-1.6
UZB				pmax	pmax		
	comp=Z,95nm,1.8s						
UZB				smax	smax		
	comp=N,157nm,3.1s						
UZB	Uzynbulak	80.25	316⇑	*e*P	P	20 42 09.9	-1.5
	comp=N,95nm,1.8s						
UZB				*i* S	S	20 52 10.2	-1.6
	comp=N,157nm,3.1s						
UZB				*e*LR	LR	21 14 36.3	
	comp=N,5µm,26.0s						
ZALV	Zalesovo Beam	80.50	327	P	P	20 42 12.1	-0.1
	comp=N,6.5nm,0.4s,baz=90,slow=3.6,SNR=37						
ZALV				S	S	20 52 11.2	-2.3
	comp=N,4.1nm,0.9s,baz=92,slow=7.6,SNR=4.4						
ZALV				PKKPbc	PKKPbc	21 00 54.0	-1.7
	comp=N,6.6nm,0.6s,baz=296,slow=2.8,SNR=11						
ZALV				PKPPKP	P'P'df	21 08 46.1	-10
	comp=N,5.0nm,0.9s,baz=306,slow=3.3,SNR=6.5						
ZALV				LR	LR	21 17 19.8	
	comp=N,9µm,20.6s,baz=124,slow=35						
KPKS	Kokpek	80.58	316	*e*P	P	20 42 11.6	-1.4
KPKS				*i* S	S	20 52 13.9	-1.2
KPKS				pmax	pmax		
	comp=Z,122nm,1.9s						
KPKS				smax	smax		
	comp=N,515nm,6.7s						
KPKS				MLR	MLR		
	comp=Z,4µm,18.0s						
KPKS	Kokpek	80.58	316	*e*P	P	20 42 11.6	-1.4
	comp=Z,122nm,1.9s						
KPKS				*i* S	S	20 52 13.9	-1.2
	comp=Z,515nm,6.7s						
KPKS				*e*LR	LR	21 16 29.2	
	comp=Z,4µm,18.1s						
SATY	Saty	80.65	315*c*	*e*P	P	20 42 12.1	-1.4
SATY				*i* S	S	20 52 14.3	-1.6
SATY				pmax	pmax		
	comp=Z,134nm,2.0s						
SATY				smax	smax		
	comp=E,201nm,2.7s						
SATY	Saty	80.65	315⇑	*e*P	P	20 42 12.1	-1.4
	comp=E,134nm,2.0s						
SATY				*i* S	S	20 52 14.3	-1.6
	comp=E,201nm,2.7s						
SATY				*e*LR	LR	21 14 58.3	
	comp=E,6µm,22.0s						
TDK	Taldyqorghan	81.24	317	*e*P	P	20 42 14.8	-1.6
TDK				*i* S	S	20 52 19.7	-2.0
TDK				pmax	pmax		
	comp=Z,2µm,7.7s						
TDK				smax	smax		
	comp=N,1µm,6.9s						
TDK	Taldyqorghan	81.24	317	*e*P	P	20 42 14.9	-1.6
	comp=N,2µm,7.7s						
TDK				*i* S	S	20 52 19.8	-2.0
	comp=N,1µm,6.9s						
TDK				*e*LR	LR	21 13 02.6	
	comp=N,12µm,23.1s						
KSH	Kashi	81.43	311	P	P	20 42 20.2	+2.5
KSH				pP	pP	20 42 36.5	+0.6
KSH				sP	sP	20 42 43.3	+0.2
KSH				PP	PP	20 45 29.9	+5.3
KSH				S	S	20 52 24.9	+0.8
KSH				SKS	SKSac	20 52 27.1	-4.7
KSH				SS	SS	20 57 47.0	+5.1
KSH				pmax	pmax		
	comp=N,2µm,7.9s						
KSH				LR	LR		
	comp=N,6µm,18.0s						
KSH				LR	LR		
	comp=N,15µm,20.6s						
KSH				LR	LR		
	comp=N,15µm,24.0s						
TNSS	Tian-Shan	81.67	315	*e*P	P	20 42 18.4	-0.8
TNSS	Tian-Shan	81.67	315	*e*P	P	20 42 18.4	-0.8
AAA	Alma-Ata	81.74	315	*e*P	P	20 42 18.0	-1.1
AAA				*e*S	S	20 52 25.6	-1.5
AAA				pmax	pmax		
	comp=Z,1µm,7.6s						
AAA				smax	smax		
	comp=E,2µm,7.3s						
AAA				MLR	MLR		
	comp=Z,9µm,24.0s						
AAA	Alma-Ata	81.74	315	*e*P	P	20 42 18.1	-1.1
	comp=Z,1µm,7.6s						
AAA				*e*S	S	20 52 25.7	-1.5
	comp=Z,2µm,7.3s						
AAA				*e*LR	LR	21 16 22.5	
	comp=Z,9µm,23.6s						
ULHL	Ulahol	81.95	314	P	P	20 42 22.1	+1.7
	SNR=7.1						
NIL	Nilore	82.16	305	*e*P	P	20 42 20.5	-1.0
	comp=Z,404nm,1.3s						
NIL	Nilore	82.16	305	*e*P	P	20 42 20.5	-1.0
NIL				pmax	pmax		
	comp=Z,404nm,1.3s						
TKM2	Tokmak 2	82.59	315	P	P	20 42 24.6	+0.8
	SNR=28						
KZA	Kyzart	82.62	314	P	P	20 42 26.1	+1.9
	SNR=121						
KURK	Kurchatov	82.87	323	*e*P	P	20 42 23.3	-1.5
	comp=Z,128nm,1.1s						
KURK	Kurchatov	82.87	323*c*	*e*P	P	20 42 23.2	-1.6
KURK				pmax	pmax		
	comp=Z,89nm,1.7s						
KURK	Kurchatov	82.87	323	P	P	20 42 23.5	-1.2
	SNR=48						
KURK				P	P	20 42 23.5	-1.2
	SNR=48						
KURBB	Kurchatov Arra	82.90	323	P	P	20 42 23.3	-1.6
	comp=Z,12nm,0.9s,baz=111,slow=4.2,SNR=60						
KURBB				S	S	20 52 33.9	-4.5
	comp=Z,3.2nm,1.2s,baz=145,slow=3.5,SNR=3.7						
KBK	Karagaybulak	82.99	314	P	P	20 42 27.4	+1.5
	SNR=7.5						
BWN	Browne	83.19	23	*e*P	P	20 42 24.7	-1.5
	comp=Z,762nm,1.8s						
UCH	Uchtor	83.19	314	P	P	20 42 28.8	+1.6
	SNR=53						
CHMS	Chumysh	83.21	314	P	P	20 42 27.8	+1.0
	SNR=28						
MAW	Mawson	83.26	203	P	P	20 42 26.8	+0.4
	comp=Z,100nm,1.0s,baz=86,slow=6.1,SNR=84						
MAW				pP	pP	20 42 43.5	-1.1
	comp=Z,144nm,1.1s,baz=60,slow=5.5,SNR=8.9						
MAW				S	S	20 52 39.1	-2.3
	comp=Z,7.8nm,1.3s,baz=221,slow=18,SNR=2.5						
MAW				PKKPbc	PKKPbc	21 00 48.1	-1.2
	comp=Z,1.6nm,0.7s,baz=219,slow=3.6,SNR=6.7						
MAW				LR	LR	21 17 18.6	
	comp=Z,11µm,21.8s,baz=80,slow=34						
MAW	Mawson	83.26	203	*e*P	P	20 42 26.8	+0.4
	comp=Z,3.0nm,1.7s						
MAW	Mawson	83.26	203	P	P	20 42 26.9	+0.4
	baz=83,SNR=99						
AAK	Ala-Archa	83.31	314	P	P	20 42 27.8	+0.3
	comp=Z,23nm,0.7s,baz=111,slow=4.9,SNR=26						
AAK				S	S	20 52 41.9	-1.4
	comp=Z,0.8nm,0.3s,baz=225,slow=22,SNR=6.1						
AAK				PKKPbc	PKKPbc	21 00 48.3	-0.6
	comp=Z,7.9nm,1.0s,baz=274,slow=2.6,SNR=3.8						
AAK				PKPPKP	P'P'df	21 08 43.2	-9.4
	comp=Z,2.0nm,0.5s,baz=289,slow=3.6,SNR=9.1						
AAK	Ala-Archa	83.31	314	*e*P	P	20 42 28.7	+1.2
	comp=Z,81nm,1.0s						
AAK	Ala-Archa	83.31	314	*i* P	P	20 42 27.2	-0.2
	SNR=11						
AAK	Ala-Archa	83.31	314*c*	*e*P	P	20 42 27.0	-0.5
AAK				pmax	pmax		
	comp=Z,62nm,1.0s						
AAK	Ala-Archa	83.31	314	P	P	20 42 27.0	-0.5
	SNR=28						
AAK				P	P	20 42 27.0	-0.5
	SNR=28						
AAK	Ala-Archa	83.31	314	P	P	20 42 28.7	+1.2
	SNR=25						
SGDS	Sogindy	83.41	315⇑	*i*P	P	20 42 26.4	-1.4
	comp=Z,484nm,5.5s						
SGDS				*e*S	S	20 52 41.7	-2.5
	comp=Z,277nm,3.5s						
SGDS				*e*LR	LR	21 17 27.1	
	comp=Z,5µm,22.5s						
USP	Ospenovka	83.46	315	P	P	20 42 29.2	+1.1
	SNR=67						
AML	Almayashu	83.76	313	P	P	20 42 31.6	+1.6
	SNR=57						
EKS2	Erkin-Say	83.82	314	P	P	20 42 31.5	+1.4
	SNR=64						
QSPA	South Pole Qui	83.93	180	*e*P	P	20 42 30.8	+0.6
	comp=Z,1µm,1.3s						
TCOL	CIGO, UAF Yank	84.14	22	P	P	20 42 28.3	-2.6
	baz=242						
COLA	College	84.14	22	*e*P	P	20 42 29.4	-1.5
	comp=Z,74nm,0.8s						
COLA	College	84.14	22⇓	*e*P	P	20 42 29.1	-1.8
COLA				pmax	pmax		
	comp=Z,66nm,0.8s						
BTLS	Baital	84.22	316*c*	*i*P	P	20 42 30.5	-1.3
BTLS				*i* S	SKSac	20 52 44.4	-5.3
BTLS				pmax	pmax		
	comp=Z,85nm,1.3s						
BTLS				smax	smax		
	comp=N,296nm,3.7s						
BTLS	Baital	84.22	316⇑	*i*P	P	20 42 30.5	-1.3
	comp=N,85nm,1.3s						
BTLS				*i* S	SKSac	20 52 44.4	-5.3
	comp=N,296nm,3.7s						
HDA	Harding Lake	84.27	23	P	P	20 42 29.5	-2.2
	baz=243						
POKR	Poker Plat Res	84.41	22	P	P	20 42 29.6	-2.8
	baz=243						
ILAR	Eielson Array	84.46	23	P	P	20 42 30.7	-1.9
	comp=N,44nm,0.7s,baz=248,slow=5.0,SNR=60						
ILAR				S	SKSac	20 52 49.8	-0.7
	comp=N,0.2nm,0.4s,baz=243,slow=18,SNR=2.6						
ILAR				PKKPbc	PKKPbc	21 00 48.0	+1.1
	comp=N,2.0nm,0.7s,baz=45,slow=1.3,SNR=5.4						
ILAR				PKPPKP		21 08 39.0	
	comp=N,3.1nm,1.2s,baz=0.0,slow=2.1,SNR=5.5						
ILAR				LR	LR	21 19 03.9	
	comp=N,6µm,19.7s,baz=254,slow=35						
TOLK	Toolik Lake Re	85.35	19	P	P	20 42 36.0	-1.1
	baz=240						
KBL	Kabul	85.76	305	*e*P	P	20 42 39.1	-1.0
	comp=N,41nm,1.0s						
KBL	Kabul	85.76	305	*e*P	P	20 42 39.1	-1.0
KBL				pmax	pmax		
	comp=Z,41nm,1.0s						
JBG	Jabagly	86.10	313*c*	*i*P	P	20 42 40.0	-1.5
JBG				*e*S	SKSac	20 52 59.8	-2.3
JBG				pmax	pmax		
	comp=Z,163nm,2.7s						
JBG				smax	smax		
	comp=N,292nm,3.7s						
JBG				MLR	MLR		
	comp=Z,7µm,23.0s						
OTUK	Ortayu	86.13	319	P	P	20 42 41.0	-0.4
OTUK				pmax	pmax		
	comp=Z,108nm,1.6s						
BRZS	Berezniki	86.32	321*c*	*i*P	P	20 42 40.0	-2.2
BRZS				*e*S	SKSac	20 53 00.2	-2.6
BRZS				pmax	pmax		
	comp=Z,435nm,5.7s						
BRZS	Berezniki	86.32	321⇑	*i*P	P	20 42 40.1	-2.2
	comp=Z,435nm,5.7s						
BRZS				*e*S	SKSac	20 53 00.2	-2.6
BRZS				*e*LR	LR	21 18 47.9	
	comp=Z,6µm,24.6s						
IUG	Iuzhnay	86.42	313*c*	*e*P	P	20 42 41.4	-1.6
IUG				*i* S	SKSac	20 53 00.8	-3.2
IUG	Iuzhnay	86.42	313⇑	*e*P	P	20 42 41.5	-1.6
IUG				*i* S	SKSac	20 53 00.9	-3.2
IUG				*e*LR	LR	21 18 16.7	
CHM	Chimkent	86.76	313	*e*P	P	20 42 42.5	-2.1
CHM				*e*S	SKSac	20 53 01.3	-4.6
CHM				smax	smax		
	comp=E,2µm,3.9s						
CHM				MLR	MLR		
	comp=Z,4µm,23.0s						
CHM	Chimkent	86.76	313	*e*P	P	20 42 42.6	-2.1
CHM				*e*S	SKSac	20 53 01.4	-4.6
	comp=Z,2µm,3.9s						
CHM				*e*LR	LR	21 18 00.2	
	comp=Z,4µm,23.3s						
TAS	Tashkent	86.81	312	P	P	20 42 47.2	+2.4
BVAR	Borovoye Array	88.40	324	P	P	20 42 51.8	-0.3
	comp=Z,9.1nm,0.9s,baz=90,slow=3.0,SNR=36						
BVAR				PKPPKP		21 08 40.3	
	comp=Z,2.1nm,0.9s,baz=266,slow=2.4,SNR=6.3						
BRVK	Borovoye	88.47	324	*e*P	P	20 42 50.9	-1.6
	comp=Z,60nm,1.1s						
BRVK	Borovoye	88.47	324⇓	*e*P	P	20 42 51.5	-1.0
BRVK				pmax	pmax		
	comp=Z,30nm,1.2s						
BRVK	Borovoye	88.47	324	P	P	20 42 50.4	-2.0
	SNR=14						
BRVK				P	P	20 42 50.4	-2.0
	SNR=14						
EPYK	Eagle Plains	88.97	23	P	P	20 42 53.6	-1.1
	baz=253						
BBB	Bella Bella	89.93	38	P	P	20 42 58.2	-1.1
	comp=Z,14nm,0.9s,baz=189,slow=8.9,SNR=2.9						
DLBC	Dease Lake	90.01	31	P	P	20 42 58.8	-0.8
	comp=Z,12nm,0.9s,baz=288,slow=6.5,SNR=14						
DLBC	Dease Lake	90.01	31	*e*P	P	20 42 59.2	-0.4
	comp=Z,72nm,1.3s						
MRIV	Mauritius Mete	90.02	250	*e*P	P	20 42 59.8	-0.7
	comp=Z,323nm,1.5s						
INK	Inuvik	90.70	21	P	P	20 43 01.3	-1.2
	comp=Z,11nm,0.6s,baz=296,slow=4.8,SNR=22						
INK				PKKP	PKKPdf	21 00 28.5	+0.8
	comp=Z,3.0nm,0.8s,baz=62,slow=2.8,SNR=4.5						
INK				PKPPKP	P'P'df	21 08 35.6	-1.4
	comp=Z,3.4nm,1.1s,baz=63,slow=6.5,SNR=7.0						
J01E	Myrtle Point	91.42	47	P	P	20 43 05.6	-0.8
	baz=263						
SYO	Syowa Base	91.48	200⇓	*i*P	P	20 43 04.2	-2.0
L02E	Cave Junction	91.54	48	P	P	20 43 05.0	-2.1
	baz=263						
RER	Riviere de l'E	91.54	249	*e*P	P	20 43 07.0	-0.7
	comp=Z,529nm,1.7s						
K02D	Willamette Mer	91.56	47	P	P	20 43 06.6	-0.7
	baz=263						
I02D	Swisshome	91.59	46	P	P	20 43 04.8	-2.4
	baz=263						
I03D	Drain, OR	91.90	46	P	P	20 43 07.4	-1.3
	baz=264						
O02D	Mt. Diablo Mer	91.93	50	P	P	20 43 08.9	-0.2
	baz=264						
M02C	Callahan	92.01	49	P	P	20 43 08.8	-0.6
	baz=264						
N02D	Trinity Center	92.08	49	P	P	20 43 09.6	-0.1
	baz=264						
G03D	McMinnville, O	92.13	45	P	P	20 43 09.5	-0.3
	baz=264						
YBH	Yreka Blue Hor	92.16	48	P	P	20 43 09.3	-0.7
	comp=Z,7.6nm,0.9s,baz=216,slow=1.4,SNR=14						
F04D	Rainier, OR	92.40	44	P	P	20 43 10.6	-0.4
	baz=264						
H04D	Lebanon	92.43	46	P	P	20 43 10.4	-0.7
	baz=264						
D03D	Eldon	92.51	43	P	P	20 43 10.8	-0.6
	baz=264						
D03D				S	S	20 54 12.3	+2.0
	baz=264						
L04D	Klamath Falls	92.51	48	P	P	20 43 10.6	-1.1
	baz=264						
I04A	Tendick Farm,	92.59	46	P	P	20 43 10.5	-1.4
	baz=264						
D04E	Lakebay	92.68	43	P	P	20 43 11.5	-0.6
	baz=264						
O03E	Paynes Creek	92.69	50	P	P	20 43 11.5	-1.1
	baz=264						
J04D	Umpqua Nationa	92.75	47	P	P	20 43 12.0	-1.0
	baz=264						
E04D	Cinebar	92.76	44	P	P	20 43 11.4	-1.1
	baz=264						
M04C	Macdoel	92.81	48	P	P	20 43 12.0	-1.1
	baz=264						
A04D	Lummi Island	92.88	41	P	P	20 43 12.0	-1.1
	baz=264						
K04D	Chiloquin, OR	92.95	48	P	P	20 43 12.8	-1.0
	baz=265						
B05A	Bryant	93.24	42	P	P	20 43 14.1	-0.7
	baz=265						
WSAR	Wadi Sarin	93.35	293	P	P	20 43 16.1	+0.2
	comp=Z,23nm,1.2s,baz=147,slow=1.5,SNR=6.5						
WSAR				PKKP	PKKPbc	21 00 23.8	+0.6
	comp=Z,18nm,0.7s,baz=260,slow=5.9,SNR=29						
J05D	Fort Rock, OR	93.39	47	P	P	20 43 14.9	-0.9
	baz=265,SNR=15						
I05D	Terrebonne, OR	93.41	46	P	P	20 43 14.6	-1.1
	baz=265						
F05D	White Salmon	93.46	44	P	P	20 43 15.0	-0.9
	baz=265						
G05D	Wamic, OR	93.50	45	P	P	20 43 15.3	-0.8
	baz=265						
SMMC	Simmler	93.67	55	P	P	20 43 17.3	+0.2
	baz=265						
MSEY	Mahe Island	93.72	265	P	P	20 43 16.6	-1.3
PKM	Mcpherson Peak	93.79	55	P	P	20 43 18.0	+0.2
	baz=265,SNR=12						
SBC	Santa Barbara	93.83	56	P	P	20 43 17.8	0.0
	baz=265						
BIDO	Bidbid	93.84	293	P	P	20 43 20.1	+2.0
	SNR=6.6						
SCZ2	Santa Cruz Isl	93.86	56	P	P	20 43 17.8	-0.2
	baz=265						
C06D	Leavenworth	94.02	42	P	P	20 43 17.1	-1.3
	baz=266						
VOG	Valley Oaks Go	94.25	54	P	P	20 43 18.7	-1.0
	baz=266						
BLG	Laguna Peak, P	94.34	56	P	P	20 43 19.6	-0.7
	baz=266						
VES	Vestal, Richgr	94.45	55	P	P	20 43 19.5	-1.1
	baz=266						
SVE	Sverdlovsk	94.51	327⇓	*e*P	P	20 43 19.8	-0.6
SVE				*e*PPP	PPP	20 49 13.4	
SVE				*e*S	SKSac	20 53 47.7	-2.1
SVE				pmax	pmax		
	comp=Z,49nm,1.5s						
SVE				MLR	MLR		
	comp=E,33µm,23.0s						
SVE				MLR	MLR		
	comp=Z,38µm,23.0s						
ARVC	Arvin	94.61	55	P	P	20 43 20.8	-0.6
	baz=266						
OSI	Osito Audit: C	94.66	56	P	P	20 43 21.4	-0.3
	baz=266						
SCI2	San Clemente I	94.69	57	P	P	20 43 21.5	-0.3
	baz=266						
MLAC	Mammoth, Mammo	94.78	53	P	P	20 43 22.6	+0.2
	baz=266						
CIS	Catalina Islan	94.83	57	P	P	20 43 22.2	-0.3
	baz=266						
GEYT	Alibeck	94.94	307	P	P	20 43 22.4	-0.5
	comp=Z,8.9nm,0.9s,baz=129,slow=2.1,SNR=27						
GEYT				PKKP	PKKPdf	21 00 18.9	-0.6
	comp=Z,2.1nm,0.6s,baz=282,slow=7.4,SNR=6.9						
GEYT				PKPPKP	P'P'df	21 08 26.4	-4.9
	comp=Z,0.8nm,0.5s,baz=216,slow=4.6,SNR=5.4						
GEYT				LR	LR	21 28 02.4	
	comp=Z,18µm,21.9s,baz=50,slow=37						
ISA	Isabella, Lake	94.94	55	P	P	20 43 22.7	-0.3
	baz=266						
FMP	Fort Macarthur	94.95	57	P	P	20 43 23.1	+0.1
	baz=266						
DECC	Green Verdugo	94.96	56	P	P	20 43 22.4	-0.6
	baz=266						
TIN	Tinemaha, Big	95.22	53	P	P	20 43 24.3	0.0
	baz=266						
NVAR	Mina Array Bea	95.25	52	P	P	20 43 23.6	-0.9
	comp=Z,8.4nm,0.7s,baz=249,slow=6.7,SNR=36						
NVAR				pP	pP	20 43 43.1	0.0
	comp=Z,11nm,0.8s,baz=247,slow=6.4,SNR=7.0						
NVAR				PKiKP	PKiKP	20 48 06.8	+1.5
	comp=Z,4.4nm,0.9s,baz=238,slow=2.2,SNR=4.0						
NVAR				PKKP	PKKPdf	21 00 21.0	+1.7
	comp=Z,0.5nm,0.5s,baz=107,slow=3.9,SNR=6.1						
NVAR				PKPPKP		21 08 19.9	
	comp=Z,0.2nm,0.4s,baz=83,slow=3.7,SNR=4.5						
NVAR				LR	LR	21 23 37.1	
	comp=Z,5µm,18.4s,baz=266,slow=34						
EDW2	Edwards Air Fo	95.28	56	P	P	20 43 24.7	+0.2
	baz=266,SNR=17						
CWC	Cottonwood Cre	95.31	54	P	P	20 43 25.4	+0.6
	baz=266						
J08A	Circle Bar Ran	95.41	47	*e*P	P	20 43 23.3	-1.7
	comp=Z,54nm,1.5s						
BFSC	Mount Baldy Ra	95.51	56	P	P	20 43 26.0	+0.2
	baz=266						
LRMC	Laurel Mtn Rad	95.57	55	P	P	20 43 25.9	-0.1
	baz=267						
ARU	Arti	95.63	326	P	P	20 43 24.8	-0.7
	comp=Z,1.8nm,0.5s,baz=138,slow=1.6,SNR=9.8						
ARU				PP	PP	20 47 21.6	+4.1
	comp=Z,4.5nm,0.9s,baz=104,slow=7.8,SNR=4.1						
ARU				S	SKSac	20 53 52.2	-3.6
	comp=Z,1.0nm,0.7s,baz=266,slow=22,SNR=8.6						
ARU	Arti	95.63	326	*e*P	P	20 43 23.8	-1.8
	comp=Z,34nm,1.2s						
ARU	Arti	95.63	326	P	P	20 43 23.5	-2.0
ARU				*PP	pP	20 43 45.0	+0.9
ARU						20 47 15.1	
ARU				PPP	PPP	20 49 26.6	
ARU				S	SKSac	20 53 52.0	-3.8
ARU				*SS	SKKSac	20 54 23.3	+3.5
ARU				SP	SP	20 55 51.8	-3.3
ARU				PS	PS	20 56 03.5	-0.4
ARU				MLR	MLR		
	comp=Z,31µm,22.0s						
UOSS	Minazif	95.70	294	P	P	20 43 25.2	-1.4
AKTO	Aktyubinsk	95.70	320	P	P	20 43 25.2	-0.7
	comp=Z,3.1nm,0.7s,baz=62,slow=8.2,SNR=7.1						
AKTO				S	SKSac	20 53 54.6	-1.9
	comp=Z,1.1nm,0.8s,baz=257,slow=22,SNR=13						
HATD	Hatta, Dubai	95.75	294	P	P	20 43 26.4	-0.4
MPMC	Manual Prospec	95.76	54	P	P	20 43 26.4	-0.4
	baz=267,SNR=29						
MSFE	Esma-Masafi	95.77	295	*i* P	P	20 43 26.5	-0.4
	SNR=8.2						
SHME	Shamm	95.83	296	P	P	20 43 26.9	-0.3
MURC	Murrieta	95.86	57	P	P	20 43 26.8	-0.3
	baz=267						
109C	Camp Elliot, M	95.89	58	P	P	20 43 27.7	+0.4
	baz=267						
GRAC	Grapevine Rang	95.91	54	P	P	20 43 27.8	+0.4
	baz=267						
RRX	Edison Barstow	96.10	56	P	P	20 43 28.2	0.0
	baz=267						

BBRC	Big Bear Solar	96.13	56	P	P	20 43 28.0	-0.6
	baz=267						
FAQ	Al Faqa, Dubai	96.24	294	*i* P	P	20 43 27.9	-1.1
	SNR=6.1						
GSC	Goldstone, Bar	96.28	55	P	P	20 43 29.0	-0.1
	baz=267,SNR=9.5						
FURC	Furnace Creek,	96.29	54	P	P	20 43 28.8	-0.1
	baz=267,SNR=13						
MONP2	Monument Peak	96.47	58	P	P	20 43 30.1	-0.1
	baz=267,SNR=20						
ASUD	Al Ashush, Dub	96.47	294	*i* P	P	20 43 29.1	-1.0
	SNR=5.5						
PFO	Pinyon Flats O	96.47	57	P	P	20 43 28.9	-1.2
	comp=Z,4.2nm,0.6s,baz=272,slow=4.9,SNR=11						
PFO	Pinyon Flats O	96.47	57	*e*P	P	20 43 31.2	+1.1
	comp=Z,34nm,1.4s						
PFO	Pinyon Flats O	96.47	57	P	P	20 43 29.9	-0.1
	baz=267						
NEW	Newport	96.56	42	P	P	20 43 29.1	-0.9
	comp=Z,5.8nm,0.7s,baz=249,slow=4.8,SNR=12						
NEW	Newport	96.56	42	P	P	20 43 29.0	-1.1
	baz=268						
HEC	Hector,Ludlow	96.64	56	P	P	20 43 30.7	-0.1
	baz=267						
IKP	In-Ko-Pah, Jac	96.72	58	P	P	20 43 32.8	+1.6
	baz=267						
SHOC	Shoshone, Teco	96.73	55	P	P	20 43 30.8	-0.3
	baz=267						
TPNV	Topopah Spring	96.80	54	P	P	20 43 31.6	0.0
	baz=268,SNR=29						
BELC	Belle Mtn. Jos	96.88	57	P	P	20 43 31.8	-0.1
	baz=267,SNR=11						
RPN	Rapa Nui	96.94	118	P	P	20 43 30.9	-1.3
	comp=Z,80nm,0.8s,baz=204,slow=20,SNR=1.4						
RPN				PKKP	PKKPbc	21 00 13.9	+0.3
	comp=Z,36nm,0.3s,baz=91,slow=3.4,SNR=3.9						
RPN	Rapa Nui	96.94	118	*e*P	P	20 43 30.9	-1.3
	comp=Z,164nm,1.0s						
SWSC	Sam W. Stewart	96.99	58	P	P	20 43 33.0	+0.7
	baz=267,SNR=8.3						
TUQ	Turquoise Moun	97.00	55	P	P	20 43 31.3	-1.2
	baz=268						
GMRC	Granite Mounta	97.19	56	P	Pdif	20 43 33.8	+0.4
	baz=268,SNR=13						
BC3	Big Chuckawall	97.31	57	P	Pdif	20 43 34.3	+0.4
	baz=268,SNR=10						
R11A	Troy Canyon, C	97.38	52	P	P	20 43 33.7	-0.5
	baz=268						
IRM	Iron Mountain	97.59	56	P	Pdif	20 43 35.1	0.0
	baz=268,SNR=18						
SHPR	Sheep Range	97.66	54	*e*P	Pdif	20 43 36.0	+0.5
	comp=Z,51nm,1.4s						
GLA	Glamis	97.82	58	P	Pdif	20 43 36.3	+0.2
	baz=268						
YKA	Yellowknife Ar	97.94	28	P	P	20 43 35.0	-0.8
	comp=Z,6.2nm,0.8s,baz=274,slow=4.8,SNR=28						
YKA				PKiKP	PKiKP	20 48 09.4	+0.4
	comp=Z,2.4nm,0.7s,baz=268,slow=1.3,SNR=8.6						
YKA				PKKPbc	PKKPbc	21 00 09.3	-2.9
	comp=Z,2.8nm,0.8s,baz=90,slow=2.8,SNR=9.6						
YKA				PKKP	PKKPdf	21 00 14.2	-0.4
	comp=Z,1.4nm,0.6s,baz=86,slow=2.9,SNR=7.1						
YKA				PKPPKP	P'P'df	21 08 23.3	-0.6
	comp=Z,0.2nm,0.3s,baz=90,slow=1.8,SNR=3.9						
YKA				LR	LR	21 24 48.6	
	comp=Z,608nm,20.7s,baz=289,slow=34						
NEE2	Needles Airpor	98.05	56	P	P	20 43 37.0	0.0
	baz=268						
Y12C	Blythe	98.09	57	P	Pdif	20 43 37.5	+0.3
	baz=268						
HLID	Hailey	98.37	47	P	P	20 43 38.4	-0.1
	baz=270						
PDMCI	Parker Dam,Lak	98.43	56	P	Pdif	20 43 39.3	+0.6
	baz=268						
MSO	Missoula	98.70	44	P	P	20 43 38.5	-1.3
	baz=270						
214A	Organ Pipe Nat	99.49	59	P	Pdif	20 43 44.4	+0.8
	baz=269						
DUG	Dugway, Tooele	99.56	50	P	Pdif	20 43 43.7	-0.2
	baz=270						
BOZ	Bozeman (W)	100.33	45	P	Pdif	20 43 46.0	-1.1
	baz=272						
SNAA	Sanae	100.38	189	Pdiff	Pdif	20 43 46.9	+0.1
SNAA	Sanae	100.38	189	PKKPbc	PKKPbc	21 00 03.4	-2.2
	comp=Z,2.2nm,0.9s,baz=296,slow=1.9,SNR=3.5						
SNAA	Sanae	100.38	189*c*	*i*P	Pdif	20 43 45.9	-0.8
KIRV	Kirov	100.50	328	P	Pdif	20 43 48.6	+1.3
	comp=Z,9.2nm,0.8s,baz=296,slow=17,SNR=3.7						
KIRV				PKiKP	PKiKP	20 48 15.1	+1.5
	comp=Z,16nm,0.7s,baz=125,slow=1.4,SNR=5.5						
WUAZ	Wupatki	100.72	55	P	Pdif	20 43 50.5	+1.4
	baz=270						
TUC	Tucson	101.21	58	P	Pdif	20 43 52.4	+1.1
	baz=270						
EGMT	Eagleton	101.50	42	P	Pdif	20 43 50.5	-1.7
	baz=274						
LPIG	La Paz	101.52	67	P	Pdif	20 43 52.5	-0.2
	comp=Z,7.6nm,0.3s,baz=229,slow=16,SNR=1.9						
VNA3	Neumayer Olymp	101.67	187	Pdiff	Pdif	20 43 52.3	-0.1
BW06	Boulder Array	101.94	48	P	Pdif	20 43 53.1	-1.3
	baz=273						
PDAR	Pinedale Array	101.94	48	P	Pdif	20 43 53.6	-0.9
	comp=Z,2.3nm,0.9s,baz=232,slow=1.7,SNR=12						
PDAR				PKiKP	PKiKP	20 48 18.3	+1.2
	comp=Z,2.0nm,0.6s,baz=186,slow=1.7,SNR=6.5						
PDAR				PKKPbc	PKKPbc	20 59 60.0	-0.5
	comp=Z,0.9nm,0.4s,baz=103,slow=5.0,SNR=14						
PDAR				PKKP	PKKPdf	21 00 06.3	-0.9
	comp=Z,1.2nm,0.8s,baz=102,slow=4.9,SNR=5.0						
PDAR				PKPPKP		21 08 18.2	
	comp=Z,1.7nm,1.1s,baz=75,slow=1.7,SNR=7.3						
PRGR	Permogore	101.97	332	*e*P	Pdif	20 43 52.6	-1.2
PRGR				*e*		20 48 05.9	
PRGR				*i* S	SKSac	20 54 26.3	-1.1
PRGR				pmax	pmax		
	comp=Z,11nm,1.0s						
RLMT	Red Lodge	102.02	45	P	Pdif	20 43 54.9	+0.1
	baz=274						
VNA1	Neumayer--Stat	102.06	187	Pdiff	Pdif	20 43 54.5	+0.4
W18A	Petrified Fore	102.06	56	P	Pdif	20 43 55.8	+0.6
	baz=271						
RES	Resolute Bay	102.35	14	P	Pdif	20 43 54.1	-1.2
	comp=Z,4.8nm,0.7s,baz=318,slow=4.1,SNR=13						
MVCO	Mesa Verde	103.00	53	P	Pdif	20 43 59.6	+0.3
	baz=272						
MAK	Makhachkala	103.03	313	*i* P	Pdif	20 43 57.8	-1.2
MAK				*i*		20 48 17.3	
MAK				*e*		20 54 29.5	
MAK				pmax	pmax		
	comp=Z,302nm,3.2s						
O20A	White River Ci	103.06	50	P	Pdif	20 43 58.8	-0.7
	baz=273						
121A	Cookes Peak, D	103.74	58	P	Pdif	20 44 04.6	+2.0
	baz=272						
LAO	LASA Array	104.00	43	P	Pdif	20 44 02.6	-0.7
	baz=276						
K22A	Casper	104.18	48	P	Pdif	20 44 04.1	-0.3
	baz=275						
GROC	Groznyy	104.26	313	*e*P	Pdif	20 44 04.7	+0.3
GROC				*e*		20 48 20.8	
GROC				*e*		20 54 33.5	
GROC				*e*		20 55 24.4	
GROC				*e*SP	SP	20 57 25.4	-2.9
GROC				pmax	pmax		
	comp=Z,46nm,1.2s						
S22A	4UR Ranch, Cre	104.30	53	P	Pdif	20 44 05.7	+0.5
	baz=274						
Y22D	IRIS PASSCAL I	104.41	56	P	Pdif	20 44 06.2	+0.6
	baz=272						
TASM	ASL Pad, Albuq	104.75	56	P	Pdif	20 44 07.4	+0.2
	baz=273						
TASM	ASL Pad, Albuq	104.75	56	P	Pdif	20 44 08.0	+0.9
	baz=273						
ANMO	Albuquerque	104.75	56	Pdiff	Pdif	20 44 09.3	+2.1
	baz=304,slow=6.2						
ANMO	Albuquerque	104.75	56	*e*Pdif	Pdif	20 44 12.9	+5.8
ANMO	Albuquerque	104.75	56	*e*P	Pdif	20 44 12.9	+5.8
ANMO	Albuquerque	104.75	56	P	Pdif	20 44 08.0	+0.9
	baz=273						
N23A	Red Feather La	104.76	49	P	Pdif	20 44 07.0	-0.1
	baz=275						
ISCO	Idaho Springs	105.10	51	P	PKiKP	20 48 23.6	+0.6
	baz=275						
DGMT	Dagmar	105.14	41	P	PKiKP	20 48 24.7	+2.2
	baz=278						
GNI	Garni	105.32	310	PP	PKiKP	20 48 33.4	+10
	comp=Z,15nm,1.1s,baz=237,slow=14,SNR=2.4						
GNI				PKKPab	PKKPab	21 00 06.5	0.0
	comp=Z,17nm,0.9s,baz=206,slow=9.9,SNR=5.5						
SDCO	Great Sand Dun	105.35	53	P	PKiKP	20 48 24.1	+0.5
	baz=274						
APA	Apatity	105.41	339	⇑*i*P	Pdif	20 44 24.9	+16
APA				*i* PS	PS	20 57 53.0	+5.2
APA				*i* PPS	PPS	20 58 36.0	
APA				*i* SS	SS	21 03 25.0	+2.6
APA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RAYN	Ar Rayn	105.41	293	*i* P	Pdif	20 44 09.7	-0.4
	SNR=5.5						
Q24A	Divide	105.53	51	P	PKiKP	20 48 24.1	+0.2
	baz=275						
MNTX	Cornudas Mount	105.81	59	P	PKiKP	20 48 26.3	+2.1
	baz=273						
RSSD	Black Hills	105.83	46	P	PKiKP	20 48 25.3	+1.1
	baz=277						
AKH	Akhalkalaki	106.14	311	⇓*i*P	PKKPbc	20 59 48.3	+0.5
T25A	Trinidad	106.26	53	P	PKiKP	20 48 27.1	+2.0
	baz=275						
KBZ	Khabaz	106.30	314	PKKPbc	PKKPbc	20 59 43.0	-4.0
	comp=Z,3.5nm,0.9s,baz=240,slow=2.3,SNR=3.7						
ARCES	ARCESS Array B	107.13	342	Pdiff	Pdif	20 44 17.8	+1.1
	comp=Z,2.2nm,0.6s,baz=75,slow=8.2,SNR=9.7						
ARCES				pPdiff	pPdif	20 44 33.1	-2.2
	comp=Z,3.3nm,0.7s,baz=75,slow=8.6,SNR=4.3						
ARCES				PKiKP	PKiKP	20 48 26.3	+0.7
	comp=Z,12nm,0.8s,baz=105,slow=1.7,SNR=26						
ARCES				PKKPbc	PKKPbc	20 59 42.9	-2.5
	comp=Z,8.0nm,0.5s,baz=222,slow=1.6,SNR=32						
ARCES				PKKPab	PKKPab	20 59 58.3	+0.5
	comp=Z,8.7nm,0.7s,baz=256,slow=2.0,SNR=6.9						
TXAR	Lajitas Array	107.40	61	Pdiff	Pdif	20 44 23.4	+4.5
	comp=Z,0.6nm,0.7s,baz=254,slow=4.4,SNR=5.0						
TXAR				PKiKP	PKiKP	20 48 27.7	+0.4
	comp=Z,1.9nm,0.4s,baz=243,slow=1.0,SNR=18						
TXAR				PKKPbc	PKKPbc	20 59 41.7	-1.6
	comp=Z,2.9nm,0.9s,baz=100,slow=2.2,SNR=5.7						
TXAR				PKKPab	PKKPab	20 59 58.6	+1.3
	comp=Z,5.5nm,1.0s,baz=114,slow=5.7,SNR=6.6						
TXAR				PKPPKP	P'P'df	21 08 08.0	-0.3
	comp=Z,2.1nm,1.1s,baz=90,slow=1.3,SNR=8.9						
KSCO	Kaye Shedlock'	107.48	51	P	PKiKP	20 48 29.4	+2.1
	baz=276						
BCA	Borcka	107.53	311	⇑*i*P	PKiKP	20 48 27.9	+0.8
ATD	Arta Tunnel	107.68	280	PKiKP	PKiKP	20 48 29.5	+1.4
	comp=Z,3.9nm,0.2s,baz=206,slow=5.7,SNR=7.8						
ATD				PKKPab	PKKPdf	20 59 54.3	-1.4
	comp=Z,2.4nm,0.3s,baz=145,slow=19,SNR=2.7						
OGNE	Ogallala	107.70	49	P	PKiKP	20 48 30.1	+2.6
	baz=278						
MSTX	Muleshoe	107.86	56	P	PKiKP	20 48 28.4	+0.3
	baz=275						
OBN	Obninsk	108.07	326	PKKPbc	PKKPbc	20 59 39.4	-2.5
	comp=Z,1.7nm,0.4s,baz=148,slow=4.5,SNR=7.2						
OBN				PKKPab	PKKPdf	20 59 54.7	-0.9
	comp=Z,1.7nm,0.4s,baz=343,slow=4.4,SNR=5.5						
MDND	Maddock	108.28	42	P	PKiKP	20 48 29.1	+0.8
	baz=282						
AMTX	Amarillo	108.67	55	P	PKiKP	20 48 29.9	+0.4
	baz=276						
DAG	Danmarks Havn	109.03	357	*i* P	PP	20 48 54.1	-3.1
SUSD	Miller	109.38	45	P	PKiKP	20 48 32.9	+2.4
	baz=281						
CBKS	Cedar Bluff	109.74	51	P	PKiKP	20 48 33.3	+1.9
	baz=278						
ANN	Anapa	110.00	315	*i* P	Pdif	20 44 30.3	+0.4
ANN				*e*		20 49 03.9	
ANN				*e*		20 54 58.1	
ANN				*e*		20 55 36.1	
ANN				*e*SS	SS	21 04 18.6	-7.1
ANN				pmax	pmax		
	comp=Z,27nm,1.6s						
ANN				MLR	MLR		
	comp=E,6µm,23.0s						
ANN				MLR	MLR		
	comp=Z,7µm,23.0s						
ANN				MLR	MLR		
	comp=N,5µm,23.0s						
ULM	Lac du Bonnet	110.11	39	PKiKP	PKiKP	20 48 31.3	-0.3
	comp=N,16nm,0.8s,baz=317,slow=2.3,SNR=10.0						
ULM				SKP		20 52 01.2	
	comp=N,5.5nm,0.7s,baz=213,slow=2.0,SNR=2.9						
ULM				PKKPbc	PKKPbc	20 59 33.7	-1.6
	comp=N,6.4nm,1.0s,baz=79,slow=2.6,SNR=3.2						
ULM				PKKP	PKKPdf	20 59 50.9	-0.9
	comp=N,2.3nm,0.4s,baz=72,slow=5.8,SNR=3.8						
BGNE	Belgrade	110.52	48	P	PKiKP	20 48 32.3	-0.4
	baz=280						
ABTX	Abilene, Hawle	110.59	58	P	PKiKP	20 48 32.8	-0.3
	baz=276						
AGMN	Agassiz Nation	110.62	41	P	PKiKP	20 48 32.2	-0.5
	baz=285						
JCT	Junction City	110.67	60	P	PKiKP	20 48 33.0	-0.4
	baz=275						
FINES	FINESS Array B	110.88	335	Pdiff	Pdif	20 44 33.8	+0.3
	comp=N,1.0nm,0.4s,baz=72,slow=4.6,SNR=17						
FINES				PKiKP	PKiKP	20 48 32.9	+0.2
	comp=N,7.0nm,0.7s,baz=89,slow=2.6,SNR=14						
FINES				PKKPbc	PKKPbc	20 59 30.8	-2.3
	comp=N,5.7nm,0.8s,baz=230,slow=2.6,SNR=12						
FINES				PKKPab	PKKPab	20 59 42.0	+0.8
	comp=N,6.9nm,0.9s,baz=315,slow=1.1,SNR=5.8						
WMOK	Wichita Mounta	111.06	55	P	PKiKP	20 48 33.7	-0.3
	baz=278						
ECSD	EROS Data Cent	111.18	45	P	PKiKP	20 48 33.6	-0.3
	baz=282						
833A	Chaparral WMA,	111.21	62	P	PKiKP	20 48 34.7	+0.3
	baz=275						
USHA	Ushuaia	111.55	157	PKiKP	PKiKP	20 48 35.0	+0.7
	comp=N,43nm,1.0s,baz=101,slow=6.3,SNR=6.8						
VSU	Vasula	111.93	332	*e*P	PKiKP	20 48 34.0	-0.8
VSU	Vasula	111.93	332	⇓*i*PKIKP	PKiKP	20 48 35.0	+0.2
KSU1	Kansas State U	112.10	50	P	PKiKP	20 48 35.3	-0.5
	baz=281						
KMBO	Kilima Mbogo	112.21	266	Pdiff	Pdif	20 44 42.0	+1.2
	comp=N,8.5nm,1.2s,baz=37,slow=9.3,SNR=6.4						
KMBO				PKiKP	PKiKP	20 48 37.2	+0.2
	comp=N,11nm,1.0s,baz=97,slow=4.8,SNR=3.1						
KMBO				SKP		20 52 08.7	
	comp=N,6.0nm,1.0s,baz=31,slow=2.0,SNR=3.8						
KMBO				PKKPbc	PKKPbc	20 59 28.9	+1.3
	comp=N,8.6nm,1.0s,baz=335,slow=2.2,SNR=10						
KMBO	Kilima Mbogo	112.21	266	*e*Pdif	Pdif	20 44 42.2	+1.4
KMBO	Kilima Mbogo	112.21	266	P	PKiKP	20 48 36.6	-0.4
KMBO	Kilima Mbogo	112.21	266	*e*P	Pdif	20 44 42.2	+1.4
SIM	Simferopol'	112.26	316	*i* PKIKP	PKiKP	20 48 37.0	+1.1
SIM				*e*		20 49 21.0	
SIM				*e*PPP	PPP	20 51 42.0	
SIM				pmax	pmax		
	comp=Z,12nm,0.7s						
SIM				pmax	pmax		
	comp=Z,630nm,7.9s						
ASF	Jabal al Asfar	112.49	302	PKiKP	PKiKP	20 48 37.1	+0.3
	comp=Z,5.8nm,0.9s,baz=177,slow=0.9,SNR=7.0						
ASF				PKKPbc	PKKPbc	20 59 28.6	+1.6
	comp=Z,6.2nm,0.9s,baz=201,slow=3.5,SNR=10						
ASF				PKKP	PKKPdf	20 59 45.5	-1.5
	comp=Z,8.7nm,1.1s,baz=196,slow=2.4,SNR=4.7						
WHTX	Lake Whitney,	112.51	58	P	PKiKP	20 48 36.1	-0.6
	baz=277						
435B	Jarrell	112.54	59	P	PKiKP	20 48 36.2	-0.7
	baz=277						
MICGM	Minsk	113.01	327	*e*PKP	PKiKP	20 48 37.0	0.0
MICGM				*e*pPKP	PP	20 48 54.0	-32
MICGM				*e*sPKP		20 49 20.0	
MICGM				*e*PP	PP	20 50 10.0	+44
MICGM				*e*PPP	PPP	20 52 20.0	
MICGM				*e*SKS	SKSac	20 55 16.0	+0.4
MICGM				*e*SKKS	SKKSac	20 56 22.0	-0.8
MICGM				*e*PS	PKKPbc	20 59 20.0	-5.9
MICGM				*e*SS	SKKSdf	21 06 08.0	-45
MICGM				*e*SSS	SSS	21 11 04.0	
MICGM				*e*LQ	LQ	21 21 10.0	
MICGM				LQM		21 24 12.0	
	comp=E,19nm,28.0s						
MICGM				*e*LR	LR	21 27 50.0	
MICGM				LRM	MLR	21 33 20.0	
	comp=Z,26nm,24.0s						
MICGM				LRM	MLR	21 33 22.0	
	comp=E,12nm,24.0s						
MICGM				LRM	MLR	21 33 28.0	
	comp=E,19nm,24.0s						
MICGM				LRM	MLR	21 33 40.0	
	comp=Z,46nm,24.0s						
MNK	Minsk	113.01	327	*e*PKIKP	PKiKP	20 48 37.0	0.0
MNK				*e*		20 48 54.0	
MNK				*e*		20 55 16.0	
MNK				MLR	MLR		
	comp=Z,46µm,24.0s						
TUL1	Leonard	113.30	54	P	PKiKP	20 48 37.6	-0.5
	baz=280						
SUMG	Summit	113.34	3	*e*PKIKP	PKiKP	20 48 38.3	+0.6
SUMG	Summit	113.34	3	*i* P	PKiKP	20 48 38.3	+0.6
IZAR	Zarasai	113.35	329	*e*P	PKiKP	20 48 37.0	-0.6
SPMN	Marine on St.	113.46	43	P	PKiKP	20 48 37.2	-1.0
	baz=286						
EYMN	Ely	113.53	40	P	PKiKP	20 48 36.3	-2.0
	baz=288						
IIGN	Ignalina	113.53	329	*e*P	PKiKP	20 48 23.9	-14
MMAI	Mount Meron Ar	113.63	303	PKiKP	PKiKP	20 48 39.0	+0.1
	comp=Z,7.8nm,1.0s,baz=61,slow=7.2,SNR=9.0						
MMAI				PKKPbc	PKKPbc	20 59 24.3	+1.1
	comp=Z,5.2nm,0.7s,baz=328,slow=3.0,SNR=8.1						
AKASG	Malin Array Be	113.68	323	PKiKP	PKiKP	20 48 38.3	-0.1
	comp=Z,11nm,0.6s,baz=60,slow=2.3,SNR=31						
AKASG				SKP		20 52 07.9	
	comp=Z,8.5nm,0.9s,baz=59,slow=2.6,SNR=5.2						
AKASG				PKKPbc	PKKPbc	20 59 21.9	-1.5
	comp=Z,6.2nm,0.5s,baz=264,slow=3.8,SNR=20						
AKASG				PKKP	PKKPdf	20 59 38.2	-6.9
	comp=Z,7.5nm,0.7s,baz=260,slow=3.6,SNR=8.3						
BR131	Keskin Array S	113.81	311	P	PKiKP	20 48 39.5	+0.3
	SNR=7.7						
BRTR	Keskin Array B	113.81	311	PKP	PKiKP	20 48 39.0	-0.2
	comp=Z,6.9nm,1.0s,baz=113,slow=2.8,SNR=17						
BRTR				PKKPbc	PKKPbc	20 59 23.1	+0.2
	comp=Z,4.7nm,0.8s,baz=195,slow=3.8,SNR=15						
BRTR				PKKP	PKKPdf	20 59 39.9	-5.0
	comp=Z,8.5nm,1.0s,baz=225,slow=3.2,SNR=7.9						
BRTR				SKKP		21 03 14.1	
	comp=Z,2.5nm,1.0s,baz=225,slow=4.5,SNR=3.7						
F38A	Pierce - Schro	113.88	42	P	PKiKP	20 48 38.0	-1.0
	baz=287						
E38A	The Farm, Brul	113.90	41	P	PKiKP	20 48 37.7	-1.3
	baz=288						
SCIA	State Center	114.03	47	P	PKPdf	20 48 38.6	-0.7
	baz=284						
ANTO	Ankara	114.42	311	⇓*i*P	PKiKP	20 48 40.8	+0.5
ANTO	Ankara	114.42	311	⇑*i*P	PKKPbc	20 59 21.5	+0.8
ANTO	Ankara	114.42	311	⇓PKIKP	PKiKP	20 48 40.8	+0.5
ANTO	Ankara	114.42	311	P	PKiKP	20 48 41.2	+0.9
	SNR=12						
EIL	Elat	114.47	300	PKP	PKiKP	20 48 41.1	+0.6
	comp=Z,16nm,0.8s,baz=351,slow=3.2,SNR=11						
EIL				SKP		20 52 10.4	
	comp=Z,7.2nm,0.8s,baz=62,slow=1.6,SNR=4.1						
EIL				PKKPbc	PKKPbc	20 59 18.2	-1.9
	comp=Z,9.3nm,0.5s,baz=266,slow=2.1,SNR=19						
EIL				PKPPKP		21 07 53.9	
	comp=Z,7.6nm,1.1s,baz=258,slow=2.0,SNR=3.7						
F39A	Loretta	114.53	42	P	PKPdf	20 48 38.9	-1.3
	baz=288						
G39A	Holcombe	114.55	43	P	PKPdf	20 48 39.3	-1.0
	baz=287						
NATX	Nacogdoches	114.89	58	P	PKiKP	20 48 41.4	+0.1
	baz=279						
C40A	Isle Royale Na	115.03	39	P	PKiKP	20 48 40.6	-0.5
	baz=290,SNR=11						
W39A	Magazine	115.04	54	P	PKiKP	20 48 40.3	-1.2
	baz=281						
F40A	Park Falls	115.06	42	P	PKiKP	20 48 40.2	-1.0
	baz=288						
KIS	Kishinev	115.20	320	*e*PKP	PKiKP	20 48 40.0	-1.4
KIS				MPKP		20 48 41.0	
	comp=Z,110nm,1.7s						
KIS	Kishinev	115.20	320	*e*PP	PP	20 49 59.0	+17
KIS				*i* SKS	SKSdf	20 55 26.0	-22
KIS				*e*SKKS	SKKSac	20 56 24.0	-14
KIS	Kishinev	115.20	320	*e*PS	PS	20 59 06.0	-17
KIS	Kishinev	115.20	320	*e*PKIKP	PKiKP	20 48 40.0	-1.4
KIS				*i*		20 55 26.0	
KIS				*e*		20 59 16.0	
KIS				*e*		20 59 23.0	
KIS				pmax	pmax		
	comp=Z,110nm,1.7s						
G40A	Rib Lake	115.21	42	P	PKiKP	20 48 40.2	-1.4
	baz=288						
MILM	Milestii Mici	115.23	319	⇑*i*P	PKiKP	20 48 41.3	-0.2
MILM	Milestii Mici	115.23	319	⇑*i*P	PKKPbc	20 59 17.1	-0.9
MIAR	Mount Ida	115.33	55	P	PKiKP	20 48 42.0	-0.1
	baz=281						
SCO	Scoresbysund	115.41	357	*e*PKIKP	PKiKP	20 48 37.0	-4.1
SCO	Scoresbysund	115.41	357	*i* P	PKiKP	20 48 37.0	-4.1
L40A	Anamosa	115.43	46	P	PKiKP	20 48 41.4	-0.7
	baz=286						
N40A	Mertquake, Sal	115.47	47	P	PKiKP	20 48 41.6	-0.6
	baz=285						
U40A	Yellville	115.55	53	P	PKiKP	20 48 41.8	-0.7
	baz=282						
GAZI	Gazipasa	115.57	307	*i* P	PKPdf	20 48 46.1	+3.6
GAZI				IAML_P			
	comp=Z,111nm,0.3s						
D41A	Chassel	115.70	40	P	PKiKP	20 48 42.2	-0.2
	baz=290,SNR=6.2						
SUW	Suwalki	115.71	328	*e*P	PKPdf	20 48 42.8	+0.6
SUW	Suwalki	115.71	328	*e*PKIKP	PKPdf	20 48 42.8	+0.6
TLCR		115.80	318	⇑*i*P	PKPdf	20 48 43.3	+0.7
TLCR		115.80	318	⇑PKIKP	PKPdf	20 48 43.3	+0.7
I41A	Arkdale	115.80	44	P	PKiKP	20 48 42.0	-0.7
	baz=288						
JFWS	Jewell Farm	115.88	45	P	PKPdf	20 48 42.2	-0.7
	baz=287						
X40A	Basin Creek Fa	115.94	55	P	PKPdf	20 48 43.1	-0.2
	baz=281						
KEPZ	Antalya-Kepez	115.99	308	*i* P	PKPdf	20 48 42.5	-0.8
KEPZ				IAML_P			
	comp=Z,303nm,0.7s						
CMIG	Matias Romero	116.00	74	PKP	PKiKP	20 48 44.0	+0.2
	comp=Z,12nm,0.5s,baz=320,slow=1.4,SNR=39						
CMIG				SKP		20 52 14.2	
	comp=Z,7.4nm,0.9s,baz=334,slow=4.2,SNR=5.2						
N41A	Harden Midland	116.05	47	P	PKPdf	20 48 42.8	-0.5
	baz=285						
M41A	Milan	116.10	47	P	PKPdf	20 48 42.5	-0.8
	baz=286						
FRB	Frobisher Bay	116.16	18	PKP	PKiKP	20 48 42.5	-0.3
	comp=Z,7.5nm,0.4s,baz=9.4,slow=0.2,SNR=13						
Z41A	Richland Creek	116.19	56	P	PKiKP	20 48 44.0	+0.3
	baz=280						
CFR	Carcaliu	116.25	318	⇑*i*P	PKPdf	20 48 43.4	-0.1
CFR	Carcaliu	116.25	318	⇓*i*P	PKKPbc	20 59 12.0	-2.4
CFR	Carcaliu	116.25	318	⇑PKIKP	PKPdf	20 48 43.4	-0.1
W41B	Gary Mavity, V	116.28	54	P	PKPdf	20 48 43.4	-0.5
	baz=282						
TIRR	Tirgusor	116.30	317	⇓*i*P	PKiKP	20 48 44.3	+0.7
TIRR	Tirgusor	116.30	317	⇓*i*P	PKKPbc	20 59 14.3	+0.1
TIRR	Tirgusor	116.30	317	⇓PKIKP	PKiKP	20 48 44.3	+0.7
MANR	Mangalia	116.38	316	⇑*i*P	PKiKP	20 48 44.7	+0.9
MFTR	Murfatlar	116.38	317	⇑*i*P	PKiKP	20 48 44.9	+1.1
F42A	Maple Grove Fa	116.42	41	P	PKPdf	20 48 43.1	-0.7
	baz=290						
CCM	Cathedral Cave	116.43	50	*e*PKPdf	PKPdf	20 48 43.6	-0.5
CCM	Cathedral Cave	116.43	50	*e*PKIKP	PKPdf	20 48 43.6	-0.5
CCM	Cathedral Cave	116.43	50	P	PKPdf	20 48 43.3	-0.8
	baz=284						
BOSA	Boshof	116.43	234	PKP	PKiKP	20 48 44.9	+0.3
	comp=Z,7.3nm,0.5s,baz=112,slow=1.4,SNR=34						
BOSA				pPKP	pPKPdf	20 49 02.1	-1.7
	comp=Z,8.2nm,0.6s,baz=116,slow=2.3,SNR=4.8						
BOSA				SKP		20 52 17.1	
	comp=Z,12nm,1.2s,baz=26,slow=1.3,SNR=3.2						
BOSA				PKKPab	PKKPbc	20 59 15.0	+1.5
	comp=Z,3.0nm,0.7s,baz=302,slow=3.3,SNR=7.4						
TLB	Topalu	116.51	317	⇑*i*P	PKiKP	20 48 45.0	+1.0
TLB	Topalu	116.51	317	⇓*i*P	PKKPbc	20 59 13.5	0.0
TLB	Topalu	116.51	317	⇑PKIKP	PKiKP	20 48 45.0	+1.0
I42A	Draeger Farm,	116.51	44	P	PKPdf	20 48 43.2	-0.9
	baz=288						
HARR	Harsova	116.55	317	⇓*i*P	PKiKP	20 48 45.4	+1.3
HARR	Harsova	116.55	317	⇓PKIKP	PKiKP	20 48 45.4	+1.3
L42A	Oliver, Polo	116.55	46	P	PKPdf	20 48 43.2	-1.0
	baz=287						
ISP	Isparta	116.62	309	⇑*i*P	PKKPbc	20 59 13.3	+0.2
HFS	Hagfors	116.66	337	PKP	PKPdf	20 48 42.7	-1.1
	comp=Z,6.8nm,0.9s						
HFS				PKKPbc	PKKPbc	20 59 11.1	-2.4
	comp=Z,2.8nm,0.5s,baz=199,slow=4.1,SNR=12						
HFS				PKKP	PKKPdf	20 59 37.6	-1.9
	comp=Z,6.0nm,1.0s,baz=225,slow=5.9,SNR=4.6						
PSN	Preselentsi	116.70	316	P	PKiKP	20 48 44.9	+0.5
PRAR	RASCA	116.73	321	⇓*i*P	PKiKP	20 48 45.1	+0.7

PRAR	RASCA	116.73	321	⇑iP	PKKPbc	20 59 12.6	-0.3
TESR	Tescani	116.77	320	⇑iP	PKiKP	20 48 44.6	+0.1
YLV	Yalova	116.78	313	⇓iP	PKPdf	20 48 44.6	-0.2
YLV	Yalova	116.78	313	⇑iP	PKKPbc	20 59 13.1	+0.6
YLV	Yalova	116.78	313	⇓PKIKP	PKPdf	20 48 44.6	-0.2
ICOR	Ion Corvin	116.82	317	⇓iP	PKiKP	20 48 45.6	+1.0
ICOR	Ion Corvin	116.82	317	⇑iP	PKKPbc	20 59 10.3	-2.1
KLNR	Kaliningrad	116.94	330	d iPKIKP	PKiKP	20 48 45.1	+0.6
KORT	Korkueli	116.95	309	i P	PKiKP	20 48 45.7	+0.4
KORT				IAML_P			
	comp=Z,813nm,0.5s						
VRI	Vrincioaia	116.95	319	⇓iP	PKiKP	20 48 45.1	+0.2
VRI	Vrincioaia	116.95	319	⇑iP	PKKPbc	20 59 15.5	+3.5
VRI	Vrincioaia	116.95	319	⇓PKIKP	PKiKP	20 48 45.1	+0.2
E43A	Lone Tree Farm	116.95	40	P	PKPdf	20 48 44.4	-0.5
	baz=291,SNR=11						
BIZ	Bicaz	116.96	320	⇑iP	PKiKP	20 48 45.4	+0.5
BIZ	Bicaz	116.96	320	⇑iP	PKKPab	20 59 16.7	+2.1
AMRR	Amara	116.98	317	⇑iP	PKiKP	20 48 45.8	+0.9
AMRR	Amara	116.98	317	⇑PKIKP	PKiKP	20 48 45.8	+0.9
NB2	NORSAR Subarra	116.99	339	PKPdf	PKPdf	20 48 43.7	-0.8
	comp=Z,7.8nm,1.0s,baz=44,slow=1.9						
NB2	NORSAR Subarra	116.99	339	PKPdf	PKPdf	20 48 43.7	-0.8
	baz=44,slow=1.9						
NOA	NORSAR Array B	116.99	339	PKP	PKPdf	20 48 44.2	-0.4
	comp=Z,4.5nm,0.7s,baz=52,slow=1.9,SNR=15						
NOA				pPKP	pPKPdf	20 49 01.5	-2.3
	comp=Z,7.2nm,1.1s,baz=52,slow=2.0,SNR=3.7						
NOA				SKP		20 52 13.6	
	comp=Z,4.4nm,0.8s,baz=52,slow=1.8,SNR=5.9						
NOA				PKKPab	PKKPbc	20 59 13.0	+0.6
	comp=Z,1.4nm,0.8s,baz=27,slow=3.9,SNR=20						
BRDR	BURDUR-Merkez	117.00	309	i P	PKiKP	20 48 45.9	+0.6
BRDR				IAML_P			
	comp=Z,24nm,0.2s						
PLOR	Plostina	117.00	319	⇑iP	PKPdf	20 48 44.8	-0.2
PLOR	Plostina	117.00	319	⇑iP	PKKPbc	20 59 14.7	+2.8
PLOR	Plostina	117.00	319	⇑PKIKP	PKPdf	20 48 44.8	-0.2
BISRR	Bisoca	117.07	319	⇑iP	PKiKP	20 48 46.5	+1.3
LVV	L'vov	117.09	324	ePKIKP	PKPdf	20 48 44.0	-1.0
LVV				e		20 49 52.0	
LVV				e		20 55 32.3	
LVV				e		20 59 40.1	
LVV				e		21 06 17.7	
LVV				MLR	MLR		
	comp=N,5µm,22.0s						
LVV				MLR	MLR		
	comp=E,4µm,22.0s						
LVV				MLR	MLR		
	comp=Z,9µm,22.0s						
H43A	Windswept, Lux	117.10	43	P	PKPdf	20 48 44.1	-1.1
	baz=290						
N43A	Stutzman Famil	117.22	47	P	PKPdf	20 48 44.8	-0.7
	baz=287						
M43A	Waltham Townsh	117.23	46	P	PKPdf	20 48 44.8	-0.7
	baz=287						
RASA	Rasa	117.23	317	⇓iP	PKiKP	20 48 46.7	+1.3
HDIL	Hopedale	117.24	47	P	PKPdf	20 48 45.0	-0.6
	baz=286						
BURAR	Bucovina Array	117.27	321	⇓iP	PKiKP	20 48 46.4	+0.8
BURAR	Bucovina Array	117.27	321	⇑iP	PKKPbc	20 59 11.0	-0.1
BURAR	Bucovina Array	117.27	321	⇓PKIKP	PKiKP	20 48 46.4	+0.8
KHAL	Karahalli	117.27	310	i P	PKiKP	20 48 46.3	+0.4
KHAL				IAML_P			
	comp=Z,0.5nm,0.4s						
K43A	Burlington	117.29	45	P	PKPdf	20 48 44.9	-0.7
	baz=288						
P43A	Skaggs, Pawnee	117.33	48	P	PKPdf	20 48 45.6	-0.2
	baz=286						
LEHL	Lehliu	117.37	317	⇓iP	PKiKP	20 48 46.6	+0.9
OZUR		117.48	319	⇓iP	PKiKP	20 48 47.2	+1.3
OZUR		117.48	319	⇓iP	PKKPbc	20 59 09.8	-0.4
X43A	Marvell	117.51	54	P	PKPdf	20 48 46.1	-0.2
	baz=282						
E44A	Grand Marais A	117.55	40	P	PKPdf	20 48 45.4	-0.6
	baz=292						
MLR	Muntele Rosu	117.59	319	PKP	PKiKP	20 48 46.5	+0.1
	comp=Z,32nm,0.9s,baz=12,slow=3.2,SNR=31						
MLR				SKP		20 52 15.3	
	comp=Z,11nm,0.7s,baz=55,slow=6.6,SNR=4.4						
MLR				PKKPbc	PKKPbc	20 59 08.6	-1.3
	comp=Z,11nm,0.9s,baz=305,slow=4.9,SNR=12						
MLR	Muntele Rosu	117.59	319	ePKPdf	PKPdf	20 48 46.1	-0.2
MLR	Muntele Rosu	117.59	319	⇓iP	PKiKP	20 48 46.4	+0.1
MLR	Muntele Rosu	117.59	319	⇑iP	PKKPbc	20 59 09.7	-0.2
SECR		117.68	318	⇓iP	PKiKP	20 48 47.2	+0.9
SULR		117.68	318	⇓iP	PKiKP	20 48 47.0	+0.7
SULR		117.68	318	⇑iP	PKKPbc	20 59 09.1	-0.2
AKAS	Kas	117.71	308	i P	PKPdf	20 48 46.5	-0.3
AKAS				IAML_P			
	comp=Z,808nm,0.9s						
L44A	Lake County Fo	117.75	45	P	PKPdf	20 48 45.5	-1.0
	baz=288						
EFI	East Falkland	117.78	161	c iPKIKP	PKPdf	20 48 46.2	-0.1
DOPR	Dopca	117.78	319	⇑iP	PKiKP	20 48 47.0	+0.5
DOPR	Dopca	117.78	319	⇓iP	PKKPbc	20 59 09.0	-0.1
PHSR	Pinarhisar	117.80	314	⇑iP	PKiKP	20 48 47.2	+0.5
PHSR	Pinarhisar	117.80	314	⇓iP	PKKPbc	20 59 07.9	-0.9
RAZG	Razgrad	117.89	317	⇑iP	PKiKP	20 48 47.5	+0.7
RAZG	Razgrad	117.89	317	⇓iP	PKKPbc	20 59 08.3	-0.3
M44A	Midewin, Midew	117.90	46	P	PKPdf	20 48 46.3	-0.5
	baz=288						
MANT	Manisa	117.95	311	i P	PKiKP	20 48 48.0	+0.6
MANT				IAML_P			
	comp=Z,272nm,0.5s						
KWP	Kalwaria Pacla	117.95	324	eP	PKiKP	20 48 47.2	+0.5
KWP	Kalwaria Pacla	117.95	324	ePKIKP	PKiKP	20 48 47.2	+0.5
O44A	Mansfield	117.96	48	P	PKPdf	20 48 46.6	-0.4
	baz=287						
N44A	Piper City	118.01	47	P	PKPdf	20 48 46.5	-0.5
	baz=288						
ARCR	ARCALIA	118.01	321	⇓iP	PKiKP	20 48 47.6	+0.7
ARCR	ARCALIA	118.01	321	⇑iP	PKKPbc	20 59 08.0	-0.3
BEL	Belsk	118.02	327	eP	PKiKP	20 48 47.4	+0.7
BEL	Belsk	118.02	327	ePKIKP	PKiKP	20 48 47.4	+0.7
FETY	Fethiye	118.02	308	i P	PKiKP	20 48 47.8	+0.5
FETY				IAML_P			
	comp=Z,683nm,0.8s						
S44A	Carbondale	118.04	50	P	PKPdf	20 48 46.4	-0.8
	baz=285						
F45A	CMU Biological	118.16	41	P	PKPdf	20 48 46.6	-0.6
	baz=292,SNR=7.2						
VOIR		118.20	319	⇓iP	PKiKP	20 48 48.4	+1.0
VOIR		118.20	319	⇑iP	PKKPbc	20 59 07.8	+0.1
VOIR		118.20	319	⇓PKIKP	PKiKP	20 48 48.4	+1.0
JMB	Yambol	118.20	315	P	PKiKP	20 48 47.8	+0.4
H45A	Beulah	118.20	42	P	PKPdf	20 48 46.1	-1.2
	baz=291						
SUR	Sutherland	118.22	228	ePKPdf	PKiKP	20 48 49.2	+1.1
VBMS	Vicksburg	118.28	57	P	PKPdf	20 48 47.8	0.0
	baz=281						
I45A	Fountain	118.28	43	P	PKPdf	20 48 46.5	-1.0
	baz=291						
G45A	Suttons Bay	118.31	42	P	PKPdf	20 48 46.8	-0.7
	baz=292,SNR=5.7						
BMR	Baia Mare	118.31	322	⇑iP	PKiKP	20 48 48.4	+1.0
BMR	Baia Mare	118.31	322	⇑iP	PKKPbc	20 59 06.8	-0.4
BMR	Baia Mare	118.31	322	⇑PKIKP	PKiKP	20 48 48.4	+1.0
DALY	Dalyan (Mula)	118.31	309	i P	PKiKP	20 48 49.0	+1.2
DALY				IAML_P			
	comp=Z,162nm,0.7s						
TURN	Turunc	118.33	309	i P	PKiKP	20 48 49.4	+1.6
TURN				IAML_P			
	comp=Z,73nm,0.4s						
LSZ	Lusaka	118.34	249	PKKPab	PKKPab	20 59 07.9	-1.9
	comp=Z,9.9nm,0.9s,baz=193,slow=7.7,SNR=13						
LSZ	Lusaka	118.34	249	ePKPdf	PKiKP	20 48 49.1	+0.5
LSZ	Lusaka	118.34	249	ePKIKP	PKiKP	20 48 49.1	+0.5
J45A	Montague	118.39	43	P	PKPdf	20 48 46.8	-0.9
	baz=290						
N45A	Kentland	118.45	47	P	PKPdf	20 48 47.7	-0.2
	baz=288						
M45A	Boilermakers S	118.47	46	P	PKPdf	20 48 47.3	-0.6
	baz=289						
O45A	Potomac	118.47	47	P	PKPdf	20 48 47.7	-0.3
	baz=288						
GOLR		118.48	318	⇑iP	PKiKP	20 48 49.3	+1.4
ARR	Arges	118.50	319	⇑iP	PKiKP	20 48 49.3	+1.3
KOLS	Kolonicke sedl	118.51	323	ePKIKP	PKiKP	20 48 48.5	+0.7
KOLS	Kolonicke sedl	118.51	323	ePKP	PKiKP	20 48 48.5	+0.7
KOLS				eSKPDF		20 52 19.1	
ELND	Elena	118.54	316	⇑iP	PKiKP	20 48 48.7	+0.6
ELND	Elena	118.54	316	⇑iP	PKKPbc	20 59 05.8	-0.4
Q45A	Warren Harvey,	118.55	49	P	PKPdf	20 48 47.6	-0.6
	baz=287						
COPA	Copaceanca	118.57	318	⇓iP	PKiKP	20 48 48.3	+0.3
COPA	Copaceanca	118.57	318	⇑iP	PKKPbc	20 59 06.7	+0.6
HUMR	Humele	118.58	318	⇓iP	PKPdf	20 48 48.0	0.0
HUMR	Humele	118.58	318	⇓iP	PKKPbc	20 59 06.1	0.0
R45A	Skylar, Fairfi	118.62	49	P	PKPdf	20 48 47.5	-0.8
	baz=286						
UZH	Uzhgorod	118.63	323	c iPKIKP	PKPdf	20 48 47.4	-0.6
UZH				e		20 49 04.0	
D46A	Sault St. Mari	118.64	39	P	PKPdf	20 48 47.3	-0.7
	baz=294,SNR=17						
ZIMR		118.64	317	⇑iP	PKPdf	20 48 48.1	0.0
ZIMR		118.64	317	⇑PKIKP	PKPdf	20 48 48.1	0.0
CJR	Cluj-Napoca	118.64	321	⇓iP	PKiKP	20 48 48.8	+0.6
CJR	Cluj-Napoca	118.64	321	⇓iP	PKKPbc	20 59 05.6	-0.5
CJR	Cluj-Napoca	118.64	321	⇓PKIKP	PKiKP	20 48 48.8	+0.6
E46A	Sault Ste Mari	118.67	40	P	PKPdf	20 48 47.8	-0.4
	baz=294,SNR=36						
P45A	Graceland, Par	118.67	48	P	PKPdf	20 48 48.3	-0.1
	baz=287						
AYDN	Tasoluk	118.69	310	i P	PKiKP	20 48 49.1	+0.6
AYDN				IAML_P			
	comp=Z,54nm,0.3s						
T45A	Paducah	118.69	51	P	PKPdf	20 48 48.4	0.0
	baz=285						
OXF	Oxford	118.70	54	P	PKPdf	20 48 47.8	-0.8
	baz=283						
TRPA	Tarpa	118.70	323	⇓iP	PKiKP	20 48 48.6	+0.4
TRPA	Tarpa	118.70	323	⇓iP	PKKPbc	20 59 05.5	-0.3
TRPA	Tarpa	118.70	323	eP	PKPdf	20 48 47.1	-1.0
TRPA				ePP	PP	20 50 10.1	+3.6
TRPA				eSP	SP	20 59 56.0	+10
G46A	Petoskey	118.73	41	P	PKPdf	20 48 47.1	-1.2
	baz=292,SNR=20						
MBAR	Mbarara	118.74	266	SKP	SKPdf	20 52 20.2	+0.7
	comp=Z,4.0nm,0.7s,baz=91,slow=2.6,SNR=3.6						
MBAR				PKKPab	PKKPab	20 59 07.3	-0.6
	comp=Z,2.4nm,0.5s,baz=292,slow=9.5,SNR=3.8						
MBAR	Mbarara	118.74	266	ePKPdf	PKiKP	20 48 50.1	+0.6
H46A	Fife Lake	118.79	42	P	PKPdf	20 48 48.0	-0.4
	baz=292						
I46A	Reed City	118.85	43	P	PKPdf	20 48 47.7	-0.9
	baz=291						
SFIN	Lafayette	118.89	47	P	PKPdf	20 48 48.3	-0.4
	baz=288						
J46A	Howard City	118.93	43	P	PKPdf	20 48 48.3	-0.5
	baz=291						
L46A	Eue Claire	118.94	45	P	PKPdf	20 48 47.9	-0.9
	baz=290,SNR=5.8						
N46A	Monticello	118.99	46	P	PKPdf	20 48 48.2	-0.8
	baz=289,SNR=22						
LOT	Lotru	119.03	319	⇓iP	PKPdf	20 48 49.0	0.0
P46A	Rosedale	119.04	48	P	PKiKP	20 48 49.1	0.0
	baz=288						
K46A	Dorr	119.07	44	P	PKPdf	20 48 48.3	-0.7
	baz=290,SNR=6.9						
GLMI	Grayling	119.07	41	P	PKPdf	20 48 48.5	-0.4
	baz=292						
DIM	Dimitrovgrad	119.08	315	P	PKiKP	20 48 49.1	0.0
M46A	Old House Fiel	119.10	46	P	PKPdf	20 48 48.9	-0.2
	baz=289,SNR=8.8						
Q46A	CEJHS Indians,	119.11	48	P	PKPdf	20 48 48.9	-0.3
	baz=287						
GKP	Gorka Klasztor	119.14	330	eP	PKiKP	20 48 49.3	+0.4
GKP	Gorka Klasztor	119.14	330	ePKIKP	PKiKP	20 48 49.3	+0.4
D47A	Chapleau	119.15	39	P	PKPdf	20 48 48.9	-0.2
	baz=295,SNR=54						
DRGR		119.16	321	⇑iP	PKiKP	20 48 49.3	+0.1
DRGR		119.16	321	⇑iP	PKKPbc	20 59 03.4	-0.8
DRGR		119.16	321	⇑PKIKP	PKiKP	20 48 49.4	+0.2
VLAD	Vladila	119.16	318	⇓iP	PKiKP	20 48 50.5	+1.3
DAT	Datca	119.17	309	i P	PKiKP	20 48 50.0	+0.4
DAT				IAML_P			
	comp=Z,218nm,0.8s						
GCAM	G?zelcaml?	119.17	310	i P	PKPdf	20 48 49.2	-0.2
GCAM				IAML_P			
	comp=Z,606nm,0.2s						
BDRM	Kayabasi	119.18	309	i P	PKiKP	20 48 49.7	+0.2
BDRM				IAML_P			
	comp=Z,517nm,0.8s						
S46A	Don Dixon Farm	119.22	50	P	PKPdf	20 48 48.9	-0.6
	baz=286						
U46A	Springville	119.22	52	P	PKPdf	20 48 48.9	-0.6
	baz=285						
EZN	Ezine	119.23	313	⇓iP	PKiKP	20 48 49.6	+0.2
EZN	Ezine	119.23	313	⇑iP	PKKPbc	20 59 03.1	-0.5
EZN	Ezine	119.23	313	⇓PKIKP	PKiKP	20 48 49.6	+0.2
R46A	Gibon Southern	119.23	49	P	PKPdf	20 48 49.1	-0.4
	baz=287						
PLVB	Pleven	119.24	317	⇑iP	PKiKP	20 48 49.8	+0.4
PLVB	Pleven	119.24	317	⇑iP	PKKPbc	20 59 03.4	-0.3
T46A	Princeton	119.26	51	P	PKPdf	20 48 49.5	0.0
	baz=286						
E47A	Iron Bridge	119.29	39	P	PKPdf	20 48 48.2	-1.1
	baz=294,SNR=25						
KDZ	Kurdzhali	119.29	315	P	PKPdf	20 48 49.1	-0.4
OJC	Ojcow	119.35	326	eP	PKiKP	20 48 49.6	+0.2
OJC	Ojcow	119.35	326	ePKIKP	PKiKP	20 48 49.6	+0.2
X46A	Booneville	119.35	54	P	PKPdf	20 48 49.0	-0.8
	baz=284						
W46A	Michie	119.38	53	P	PKPdf	20 48 48.7	-1.1
	baz=284						
DEV	Deva	119.41	320	⇓iP	PKiKP	20 48 50.2	+0.6
DEV	Deva	119.41	320	⇓iP	PKKPbc	20 59 03.2	+0.1
DEV	Deva	119.41	320	⇓PKIKP	PKiKP	20 48 50.2	+0.6
V46A	Holladay	119.41	52	P	PKPdf	20 48 49.1	-0.8
	baz=285						
H47A	Mio	119.43	42	P	PKPdf	20 48 49.2	-0.5
	baz=293						
G47A	Hillman	119.44	41	P	PKPdf	20 48 49.4	-0.2
	baz=293,SNR=21						
NIE	Niedzica	119.44	325	eP	PKiKP	20 48 50.2	+0.5
NIE				eS	PKKPbc	20 59 04.4	+1.2
NIE	Niedzica	119.44	325	ePKIKP	PKiKP	20 48 50.2	+0.5
I47A	Gladwin	119.45	42	P	PKPdf	20 48 49.1	-0.6
	baz=292						
J47A	Sunmer	119.53	43	P	PKPdf	20 48 49.5	-0.4
	baz=292,SNR=6.7						
WVT	Waverly	119.56	52	ePKPdf	PKPdf	20 48 49.3	-0.9
WVT	Waverly	119.56	52	ePKIKP	PKPdf	20 48 49.3	-0.9
WVT	Waverly	119.56	52	P	PKPdf	20 48 49.3	-0.9
	baz=285						
O47A	Sheridan	119.61	47	P	PKPdf	20 48 49.7	-0.5
	baz=289,SNR=23						
K47A	Vermontville	119.61	44	P	PKPdf	20 48 49.3	-0.7
	baz=291,SNR=16						
M47A	Cromwell	119.63	45	P	PKPdf	20 48 49.6	-0.6
	baz=290,SNR=6.9						
PLD	Plovdiv	119.64	315	P	PKPdf	20 48 49.8	-0.3
HOPE	Hope Point	119.68	176	ePKPdf	PKiKP	20 48 50.4	+0.5
GZR	Gura Zlata	119.69	320	⇑iP	PKPdf	20 48 50.2	0.0
GZR	Gura Zlata	119.69	320	⇑iP	PKKPbc	20 59 01.9	-0.3
GZR	Gura Zlata	119.69	320	⇑PKIKP	PKPdf	20 48 50.2	0.0
SRE	Strehaia	119.70	319	⇓iP	PKiKP	20 48 51.0	+0.8
SRE	Strehaia	119.70	319	⇓PKIKP	PKiKP	20 48 51.1	+0.8
L47A	Sherwood	119.72	45	P	PKPdf	20 48 49.5	-0.8
	baz=290,SNR=13						
N47A	Urbana	119.74	46	P	PKPdf	20 48 49.6	-0.8
	baz=290,SNR=28						
P47A	Martinsville	119.77	48	P	PKPdf	20 48 49.7	-0.8
	baz=288,SNR=39						
RZN	Rozhen	119.77	315	P	PKPdf	20 48 50.1	-0.6
Q47A	Bedord North L	119.83	48	P	PKPdf	20 48 50.0	-0.6
	baz=288,SNR=16						
MPEP	Malo Peshtene	119.85	317	P	PKiKP	20 48 51.1	+0.5
PGB	Panagyurishte	119.85	316	P	PKPdf	20 48 50.4	-0.2
BAIL	Bailesti	119.86	318	⇓iP	PKiKP	20 48 51.3	+0.7
V47A	Nunnelly	119.88	52	P	PKPdf	20 48 49.9	-0.9
	baz=285						
T47A	Sharon Grove	119.88	51	P	PKPdf	20 48 50.2	-0.5
	baz=286						
S47A	Hartford	119.89	50	P	PKPdf	20 48 50.2	-0.5
	baz=287						
U47A	Clarksville	119.89	51	P	PKPdf	20 48 50.1	-0.6
	baz=286						
D48A	Paudash Townsh	119.90	38	P	PKPdf	20 48 49.8	-0.8
	baz=296						
I48A	Sherman Twp	119.92	42	P	PKPdf	20 48 50.3	-0.3
	baz=293						
X47A	Russelville	119.94	54	P	PKPdf	20 48 49.9	-1.0
	baz=284						
R47A	Wooly Knot Far	119.95	49	P	PKPdf	20 48 50.7	-0.2
	baz=288,SNR=65						
F48A	Evansville	119.97	40	P	PKPdf	20 48 50.2	-0.4
	baz=295,SNR=16						
W47A	Westpoint	119.97	53	P	PKPdf	20 48 49.7	-1.3
	baz=285						
H48A	Harrisville	119.97	41	P	PKPdf	20 48 50.1	-0.6
	baz=294,SNR=11						
E48A	Lockeyer	119.98	39	P	PKPdf	20 48 50.2	-0.4
	baz=296,SNR=43						
COP	Copenhagen	120.00	334	ePKIKP	PKiKP	20 48 51.3	+0.9
COP	Copenhagen	120.00	334	i P	PKiKP	20 48 51.3	+0.9
SIRR	Siria	120.04	321	⇓iP	PKiKP	20 48 51.3	+0.4
SIRR	Siria	120.04	321	⇓iP	PKKPbc	20 59 00.8	-0.1
LANS	Liptovska Anna	120.05	325	ePKIKP	PKiKP	20 48 52.4	+1.5
LANS	Liptovska Anna	120.05	325	ePKP	PKiKP	20 48 52.3	+1.4
LANS				eSKPDF		20 52 22.0	
D49A	Beulah Townshi	120.13	38	P	PKPdf	20 48 50.3	-0.6
	baz=297						
WCI	Wyandotte Cave	120.14	49	ePKPdf	PKPdf	20 48 50.9	-0.3
WCI	Wyandotte Cave	120.14	49	ePKIKP	PKPdf	20 48 50.9	-0.3
WCI	Wyandotte Cave	120.14	49	P	PKPdf	20 48 50.7	-0.5
	baz=288						
K48A	Perry	120.17	43	P	PKPdf	20 48 50.7	-0.4
	baz=292,SNR=38						
J48A	Bridge Port	120.21	43	P	PKPdf	20 48 50.5	-0.7
	baz=292,SNR=16						
N48A	Decatur	120.22	46	P	PKPdf	20 48 51.1	-0.2
	baz=290,SNR=45						
M48A	Edgerton	120.23	45	P	PKPdf	20 48 50.9	-0.4
	baz=291,SNR=9.5						
L48A	N Adams	120.27	44	P	PKPdf	20 48 51.2	-0.2
	baz=291,SNR=33						
APG	El Apazote	120.31	76	PKP	PKiKP	20 48 52.6	+0.1
	comp=Z,40nm,0.8s,baz=336,slow=6.1,SNR=27						
APG				SKP		20 52 23.6	
	comp=Z,4.8nm,0.6s,baz=315,slow=16,SNR=2.2						
O48A	Farmland	120.34	46	P	PKPdf	20 48 51.2	-0.4
	baz=290,SNR=46						
BZS	Buzias	120.34	320	⇑iP	PKiKP	20 48 51.7	+0.2
BZS	Buzias	120.34	320	⇑iP	PKKPbc	20 58 59.1	-0.6
BZS	Buzias	120.34	320	⇑PKIKP	PKiKP	20 48 51.7	+0.2
Q48A	North Vernon	120.35	48	P	PKPdf	20 48 51.1	-0.5
	baz=288,SNR=42						
F49A	Sandfield	120.36	40	P	PKPdf	20 48 50.9	-0.6
	baz=295,SNR=22						
PSZ	Piszkesteto	120.39	323	⇓iP	PKiKP	20 48 52.2	+0.6
PSZ	Piszkesteto	120.39	323	⇓PKIKP	PKiKP	20 48 52.2	+0.6
PSZ	Piszkesteto	120.39	323	eP	PKPdf	20 48 51.1	-0.4
PSZ				ePP	PP	20 50 21.1	+2.9
PSZ				eSP	SP	21 00 15.1	+14
T48A	Bowling Green	120.39	50	P	PKPdf	20 48 50.4	-1.3
	baz=287,SNR=32						
P48A	Milroy	120.40	47	P	PKPdf	20 48 50.9	-0.8
	baz=289,SNR=32						
R48A	Northridge Ran	120.41	49	P	PKPdf	20 48 51.2	-0.5
	baz=288,SNR=18						
V48A	Smith Brothers	120.45	52	P	PKPdf	20 48 49.9	-2.0
	baz=286,SNR=34						
U48A	Cassie Pea, Po	120.45	51	P	PKPdf	20 48 51.0	-0.9
	baz=286,SNR=61						
BLKB	Belogradchik	120.46	318	⇓iP	PKKPbc	20 58 58.7	-0.6
VTS	Vitosha	120.47	316	ePKPdf	PKiKP	20 48 52.3	+0.3
VTS	Vitosha	120.47	316	P	PKiKP	20 48 52.3	+0.3
VTS	Vitosha	120.47	316	⇑iP	PKiKP	20 48 52.0	0.0
VTS	Vitosha	120.47	316	⇓iP	PKKPbc	20 58 59.3	-0.1
VTS	Vitosha	120.47	316	ePKIKP	PKiKP	20 48 52.3	+0.3
VTS	Vitosha	120.47	316	P	PKPdf	20 48 51.6	-0.3
S48A	Wiedeman Farm,	120.49	50	P	PKPdf	20 48 51.4	-0.5
	baz=288,SNR=65						
NVR	Nevrokopi	120.49	315	P	PKPdf	20 48 51.5	-0.4
MMB	Musomiste	120.50	315	P	PKPdf	20 48 51.4	-0.5
W48A	Pulaski	120.52	53	P	PKPdf	20 48 50.4	-1.6
	baz=285,SNR=30						
PLCA	Paso Flores	120.58	145	PKP	PKiKP	20 48 53.1	+0.8
	comp=Z,28nm,0.6s,baz=253,slow=2.8,SNR=58						
PLCA				pPKP	pPKPdf	20 49 09.9	-1.4
	comp=Z,24nm,0.6s,baz=288,slow=2.0,SNR=6.7						
PLCA				SKP		20 52 24.3	
	comp=Z,9.7nm,0.9s,baz=249,slow=5.3,SNR=4.4						
PLCA				PKKPab	PKKPab	20 59 00.6	+0.5
	comp=Z,1.5nm,0.7s,baz=52,slow=5.8,SNR=3.7						
PLCA				SKKPbc	SKKPbc	21 02 40.7	-0.4
	comp=Z,3.2nm,1.0s,baz=56,slow=4.7,SNR=2.8						
AMBH	Ambrzfalva	120.59	321	eP	PKiKP	20 48 53.0	+1.1
I49A	Point Hope	120.60	42	P	PKPdf	20 48 51.1	-0.8
	baz=294,SNR=20						
X48A	Hartselle	120.61	53	P	PKPdf	20 48 50.9	-1.3
	baz=285,SNR=22						
J49A	Marlette	120.62	43	P	PKPdf	20 48 50.5	-1.5
	baz=293,SNR=8.1						
148A	Greensboro	120.62	56	P	PKPdf	20 48 51.5	-0.8
	baz=284,SNR=14						
K49A	Clarkson	120.63	43	P	PKPdf	20 48 51.1	-1.0
	baz=292						
MDVR	Moldovita	120.63	319	⇓iP	PKiKP	20 48 52.3	+0.1
MDVR	Moldovita	120.63	319	⇓iP	PKKPab	20 58 57.5	-1.1
Y48A	Jasper	120.64	54	P	PKPdf	20 48 51.1	-1.2
	baz=284,SNR=18						
L49A	Milan	120.67	44	P	PKPdf	20 48 51.5	-0.7
	baz=292,SNR=16						
AAM	Ann Arbor	120.67	44	P	PKPdf	20 48 51.6	-0.5
	baz=292						
VYHS	Vyhne	120.73	324	ePKIKP	PKiKP	20 48 52.3	+0.1
VYHS	Vyhne	120.73	324	ePKP	PKiKP	20 48 52.3	+0.1
VYHS				eSKPDF		20 52 23.4	
BANR	Banloc	120.75	320	⇑iP	PKiKP	20 48 53.2	+0.9
M49A	Liberty Center	120.75	45	P	PKPdf	20 48 51.4	-0.9
	baz=291,SNR=18						
SRS	Serrai	120.77	315	P	PKPdf	20 48 51.3	-1.1
N49A	Columbus Grove	120.80	45	P	PKPdf	20 48 52.1	-0.3
	baz=291,SNR=40						
MORC	Moravsky Berou	120.83	326	⇑iP	PKiKP	20 48 53.0	+0.6
MORC	Moravsky Berou	120.83	326	⇓iP	PKKPab	20 58 57.7	+0.1
MORC	Moravsky Berou	120.83	326	⇑PKIKP	PKiKP	20 48 53.0	+0.6
MORC	Moravsky Berou	120.83	326	ePKP	PKiKP	20 48 52.7	+0.3
MORC				ePKKP	PKKPab	20 58 57.1	-0.5
KKB	Krupnik	120.85	316	P	PKPdf	20 48 51.4	-1.1
E50A	Wahnapitae	120.89	38	P	PKPdf	20 48 51.6	-0.8
	baz=297						
P49A	Miami Univ. Ec	120.90	47	P	PKPdf	20 48 51.3	-1.3
	baz=290,SNR=17						
TOBO	Tobermory, Bru	120.92	40	P	PKPdf	20 48 51.8	-0.7
	baz=295						
IOSP	Ios island	120.94	309	P	PKPdf	20 48 50.9	-1.9
Q49A	Aurora	120.94	48	P	PKPdf	20 48 51.5	-1.2
	baz=289,SNR=16						
KSP	Ksiaz	120.95	328	eP	PKiKP	20 48 53.0	+0.5
KSP				eS	PKKPab	20 58 58.9	+1.9
KSP	Ksiaz	120.95	328	ePKIKP	PKiKP	20 48 53.0	+0.5
O49A	Covington	120.95	46	P	PKPdf	20 48 52.6	-0.2
	baz=290,SNR=37						
R49A	Shelbyville	120.96	49	P	PKPdf	20 48 51.7	-1.1
	baz=288,SNR=23						
LRAL	Lakeview Retre	121.00	55	P	PKPdf	20 48 52.3	-0.7
	baz=284						
S49A	Springfield	121.03	49	P	PKPdf	20 48 52.3	-0.7
	baz=288,SNR=46						
U49A	Red Boiling Sp	121.04	51	P	PKPdf	20 48 52.1	-0.9
	baz=287,SNR=30						
W49A	Belvidere	121.05	52	P	PKPdf	20 48 52.1	-1.0
	baz=286,SNR=80						
T49A	Edmonton	121.05	50	P	PKPdf	20 48 52.0	-1.0
	baz=288,SNR=40						
MATQ	Matagami	121.09	34	P	PKPdf	20 48 51.5	-1.1
	baz=301						
D50A	G1974 Best Tow	121.09	37	P	PKPdf	20 48 52.1	-0.6
	baz=298						
NPS	Neapolis	121.10	308	P	PKiKP	20 48 53.3	0.0
BUD	Budapest	121.11	323	eP	PKiKP	20 48 53.1	+0.1
OSTC	Ostas	121.14	327	ePKPDF	PKiKP	20 48 53.2	+0.3
OSTC				ex	x	20 49 11.9	
OSTC				ePKKP	PKKPab	20 58 55.0	-1.2
OSTC				ex	x	20 59 12.3	
OSTC				AMS	AMS	21 39 30.0	
	comp=Z,16µm,23.1s						
249A	Camden	121.15	56	P	PKPdf	20 48 53.3	0.0
	baz=283,SNR=21						
V49A	McMinnville	121.16	52	P	PKPdf	20 48 52.4	-0.8
	baz=286,SNR=49						
X49A	Woodville	121.17	53	P	PKPdf	20 48 52.3	-1.0
	baz=286,SNR=17						
K50A	Casco	121.20	43	P	PKPdf	20 48 52.3	-0.9
	baz=293						
DPC	Dobruska-Polom	121.20	327	ePKIKP	PKiKP	20 48 53.2	+0.1
DPC				MLR	MLR		
	comp=Z,16µm,21.1s						
DPC	Dobruska-Polom	121.20	327	ePKPDF	PKiKP	20 48 53.2	+0.1
DPC				epPKP	pPKPdf	20 49 10.6	-1.7

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DPC                                     ePKKP     PKKPab   20 58 56.0  0.0
DPC                                     ex        x        20 59 11.2
DPC                                      AMS      AMS      21 41 30.0
      comp=Z,16µm,21.1s
CHVC  Chvalec           121.21 327      ePKPDF    PKiKP    20 48 53.5 +0.4
CHVC                                    ePKKP     PKKPab   20 58 55.3 -0.6
CHVC                                     AMS      AMS      21 39 30.0
      comp=Z,15µm,22.8s
JAVC  Velka Javorina    121.22 325      ePKP      PKiKP    20 48 54.5 +1.3
JAVC                                    ePKKP     PKKPbc   20 58 56.6  0.0
349A  Repton            121.23  57       P        PKiKP    20 48 54.0 +0.3
      baz=283,SNR=25
KNT   Kendrikon         121.24 315       P        PKPdf    20 48 52.4 -0.9
Y49A  Blount Mountai    121.27  54       P        PKPdf    20 48 52.9 -0.7
      baz=285,SNR=35
149A  Jones             121.27  55       P        PKPdf    20 48 53.4 -0.2
      baz=284,SNR=58
UPC   Upice             121.28 327      ePKIKP    PKiKP    20 48 53.4 +0.2
UPC                                      MLR      MLR
      comp=Z,16µm,22.4s
UPC   Upice             121.28 327      ePKPDF    PKiKP    20 48 53.4 +0.2
UPC                                     ePKKP     PKKPab   20 58 55.4 -0.2
UPC                                     ex        x        20 59 10.9
UPC                                      AMS      AMS      21 39 20.0
      comp=Z,16µm,22.4s
BASO  Ashfield          121.34  41       P        PKPdf    20 48 52.9 -0.5
      baz=295
Z49A  Columbiana        121.34  55       P        PKPdf    20 48 53.5 -0.2
      baz=285,SNR=40
449A  Pace              121.34  58       P        PKPdf    20 48 53.6 -0.1
      baz=283
L50A  Kingsville        121.35  44       P        PKPdf    20 48 52.6 -0.9
      baz=292
THE   Thessaloniki      121.38 314       P        PKPdf    20 48 52.1 -1.4
BMRO  Meriville Lake    121.39  41       P        PKPdf    20 48 53.1 -0.4
      baz=295
BRCO  Bruce Peninsul    121.39  41       P        PKPdf    20 48 52.6 -0.8
      baz=295
BRAL  Brewton           121.39  57       P        PKiKP    20 48 53.9  0.0
      baz=283,SNR=9.1
VAY   Valandovo         121.41 315      i PKP     PKPdf    20 48 52.6 -1.0
M50A  Fremont           121.43  45       P        PKPdf    20 48 52.9 -0.7
      baz=292
O50A  Cable             121.48  46       P        PKPdf    20 48 53.2 -0.5
      baz=291,SNR=35
CCSP  San Pedro de C    121.51 140      eP        PKiKP    20 49 16.6  +23
P50A  Jamestown         121.54  47       P        PKPdf    20 48 53.0 -0.9
      baz=290,SNR=24
STIP  Stip              121.54 316      i PKP     PKPdf    20 48 50.7 -3.1
PLIO  Pelee Island,     121.59  44       P        PKPdf    20 48 52.9 -1.0
      baz=292
N50A  Nevada            121.59  45       P        PKPdf    20 48 53.3 -0.6
      baz=292,SNR=24
R50A  Paris             121.59  48       P        PKPdf    20 48 53.5 -0.6
      baz=289,SNR=25
VRAC  Vranov            121.60 326       PKP      PKPdf    20 48 53.7  0.0
      comp=Z,18nm,0.9s,baz=49,slow=1.7,SNR=32
VRAC                                     SKP               20 52 26.1
      comp=Z,9.2nm,0.9s,baz=312,slow=5.7,SNR=3.6
VRAC                                     PKKPab   PKKPab   20 58 54.3 +0.1
      comp=Z,3.6nm,1.0s,baz=268,slow=3.2,SNR=7.4
VRAC  Vranov            121.60 326⇑iP             PKiKP    20 48 54.3 +0.4
VRAC  Vranov            121.60 326⇑iP             PKKPab   20 58 53.9 -0.3
VRAC  Vranov            121.60 326 ⇑PKIKP         PKiKP    20 48 54.3 +0.4
VRAC  Vranov            121.60 326      ePKP      PKiKP    20 48 54.0 +0.1
VRAC                                    ePKKP     PKKPab   20 58 53.8 -0.4
E51A  G1948 Merrick     121.60  38       P        PKPdf    20 48 53.1 -0.7
      baz=298
T50A  Nancy             121.61  50       P        PKPdf    20 48 53.6 -0.5
      baz=288,SNR=51
CSKK  Cskako            121.62 323      eP        PKPdf    20 48 53.0 -0.8
CSKK                                    ePP       PP       20 50 31.1 +4.6
CSKK                                    eSP       SP       21 00 20.0 +7.9
F51A  Arnstein          121.62  39       P        PKPdf    20 48 53.3 -0.6
      baz=297
BWLO  Walkerton         121.64  41       P        PKPdf    20 48 53.8 -0.1
      baz=295
IDI   Anoyia            121.66 308       PKP      PKPdf    20 48 54.2 -0.1
      comp=Z,73nm,1.0s,baz=207,slow=1.0,SNR=16
IDI                                      SKP               20 52 24.4
      comp=Z,34nm,1.0s,baz=23,slow=2.8,SNR=4.3
IDI                                      PKKPab   PKKPbc   20 58 55.0 +0.5
      comp=Z,82nm,1.2s,baz=267,slow=5.4,SNR=12
GRG   Griva             121.66 315       P        PKPdf    20 48 53.6 -0.5
Q50A  Georgetown        121.67  48       P        PKPdf    20 48 53.3 -0.9
      baz=290,SNR=10.0
FRGS  Fruska Gora       121.69 320      i P       PKPdf    20 48 53.8 -0.2
KLBO  Killbear Provi    121.69  39       P        PKPdf    20 48 53.3 -0.7
      baz=297
MODS  Modra-Piesok      121.69 325      ePKIKP    PKPdf    20 48 53.8 -0.1
MODS  Modra-Piesok      121.69 325      ePKP      PKPdf    20 48 53.8 -0.1
MODS                                    eSKPDF             20 52 23.4
X50B  Fort Payne        121.72  53       P        PKPdf    20 48 53.5 -0.9
      baz=286,SNR=55
S50A  Richmond          121.73  49       P        PKPdf    20 48 53.9 -0.5
      baz=289,SNR=66
W50A  Signal Mountai    121.78  52       P        PKPdf    20 48 53.7 -0.8
      baz=287,SNR=58
U50A  Jamestown         121.79  51       P        PKPdf    20 48 53.9 -0.6
      baz=288,SNR=66
SIVA  Sivas             121.80 308       P        PKPdf    20 48 54.1 -0.4
Y50A  Piedmont          121.80  54       P        PKPdf    20 48 53.7 -0.9
      baz=286
V50A  Pikevile          121.81  52       P        PKPdf    20 48 54.0 -0.5
      baz=287,SNR=38
SMIA  Simia             121.82 312       P        PKPdf    20 48 54.3 -0.2
Z50A  Ashland           121.82  55       P        PKPdf    20 48 53.6 -1.0
      baz=285
LSQQ  Lebel-sur-Quev    121.82  34       P        PKPdf    20 48 53.3 -0.8
      baz=302
FYTO  Fytoko, Volos     121.83 313      ePKPdf    PKPdf    20 48 53.8 -0.6
FYTO  Fytoko, Volos     121.83 313       P        PKPdf    20 48 53.8 -0.6
KRUC  Moravsky          121.84 326      ePKP      PKiKP    20 48 54.4 +0.1
KRUC                                    ePKKP     PKKPab   20 58 53.0 -0.2
I51A  Listowel          121.85  41       P        PKPdf    20 48 53.7 -0.7
      baz=295,SNR=13
250A  Grady             121.85  56       P        PKPdf    20 48 54.7  0.0
      baz=284,SNR=26
450A  Crestview         121.86  57       P        PKPdf    20 48 54.3 -0.5
      baz=283
ZST   Bratislava        121.89 325      ePKIKP    PKiKP    20 48 54.4  0.0
ZST   Bratislava        121.89 325      ePKP      PKiKP    20 48 54.4  0.0
ZST                                     eSKPDF             20 52 24.9
150A  Eclectic          121.90  55       P        PKPdf    20 48 54.3 -0.5
      baz=285,SNR=27
ACSO  Alum Creek Sta    121.90  46       P        PKPdf    20 48 54.0 -0.6
      baz=291
LIT   Litokhoron        121.91 314       P        PKPdf    20 48 54.0 -0.6
350A  Dozier            121.93  57       P        PKPdf    20 48 54.8  0.0
      baz=284,SNR=19
MORH  Mrgy, Hungar      121.94 322      eP        PKPdf    20 48 53.1 -1.3
MORH                                    ePP       PP       20 50 32.1 +3.4
MORH                                    eSP       SP       21 00 23.0 +8.1
SKO   Skopje            121.94 316      i PKP     PKPdf    20 48 54.4 -0.2
K51A  Iona Station      121.97  43       P        PKPdf    20 48 53.6 -1.0
      baz=294,SNR=6.3
ATAL  Atalanti          122.02 312      ePKPdf    PKPdf    20 48 54.3 -0.5
ATAL  Atalanti          122.02 312       P        PKPdf    20 48 54.3 -0.5
DIVS  Divibare          122.04 319      i P       PKPdf    20 48 54.1 -0.7
PVCC  Panska Ves        122.04 328      ePKIKP    PKiKP    20 48 55.0 +0.3
PVCC                                     MLR      MLR
      comp=Z,11µm,20.2s
PVCC  Panska Ves        122.04 328      ePKPDF    PKiKP    20 48 55.0 +0.3
PVCC                                    ePKKP     PKKPab   20 58 52.4 +0.1
PVCC                                     AMS      AMS      21 41 50.0
      comp=Z,11µm,20.2s
D52A  ZEK Kipawa Sen    122.05  37       P        PKPdf    20 48 54.0 -0.7
      baz=299
LKR   Lokris            122.05 312       P        PKPdf    20 48 54.1 -0.8
F52A  Sundridge         122.05  39       P        PKPdf    20 48 54.2 -0.5
      baz=298
M51A  Elyria            122.06  44       P        PKPdf    20 48 54.1 -0.7
      baz=293,SNR=12
TIH   Tihany            122.06 323      eP        PKiKP    20 48 55.0 +0.2
TIH                                     ePP       PP       20 50 36.0 +6.5
TIH                                     eSP       SP       21 00 27.0  +11
Q51A  Peebles           122.07  47       P        PKPdf    20 48 53.8 -1.1
      baz=290,SNR=22
N51A  Ashland           122.08  45       P        PKPdf    20 48 54.6 -0.3
      baz=292,SNR=32
P51A  Williamsport      122.12  47       P        PKPdf    20 48 54.1 -0.9
      baz=291,SNR=25
TEKS  Tekeris           122.14 320      eP        PKiKP    20 48 55.0 -0.1
R51A  Hillsboro         122.14  48       P        PKPdf    20 48 54.6 -0.4
      baz=290,SNR=15
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BUKO  Buck Lake         122.17  39       P        PKPdf    20 48 54.0 -0.9
      baz=297
BRG   Berggiesshubel    122.17 329⇑iPKP           PKiKP    20 48 55.1 +0.3
      comp=Z,83nm,1.1s
BRG                                     i SKP              20 52 25.8
      comp=Z,42nm,1.3s
BRG                                     eSKS      SKSdf    20 55 53.8 -7.3
      comp=Z,80nm,2.6s
BRG                                     ePKKP     PKKPbc   20 58 52.5 -0.5
      comp=Z,114nm,2.1s
BRG                                     i PKKS             21 02 44.9
      comp=Z,68nm,1.7s
BRG                                     eSKKS     SKKSdf   21 06 15.8  -20
      comp=Z,87nm,2.3s
BRG                                     ePKPPKP            21 07 39.5
      comp=Z,23nm,2.1s
      comp=N,11µm,23.4s
      comp=E,11µm,25.0s
      comp=Z,13µm,24.1s
BRG   Berggiesshubel    122.17 329⇑iPKIKP         PKiKP    20 48 55.2 +0.3
BRG                                     e                  20 55 53.8
BRG                                      pmax     pmax
      comp=Z,83nm,1.1s
BRG                                      pmax     pmax
      comp=N,80nm,2.6s
BRG                                      MLR      MLR
      comp=N,11µm,23.4s
BRG                                      MLR      MLR
      comp=E,11µm,25.0s
BRG                                      MLR      MLR
      comp=Z,13µm,24.1s
O51A  Pataskala         122.20  46       P        PKPdf    20 48 54.3 -0.9
      baz=292,SNR=28
H52A  Wyevale           122.22  40       P        PKPdf    20 48 54.5 -0.5
      baz=296
TREC  Trest             122.22 326      ePKIKP    PKPdf    20 48 55.0 +0.1
TREC                                    e                  20 49 11.5
TREC                                     MLR      MLR
      comp=Z,20µm,24.9s
TREC  Trest             122.22 326      ePKPDF    PKPdf    20 48 55.0 +0.1
TREC                                    epPKP     pPKPdf   20 49 11.5 -2.7
TREC                                    ePKKP     PKKPab   20 58 51.5 -0.1
TREC                                    eSKKP              21 02 34.8
TREC                                     AMS      AMS      21 38 40.0
      comp=Z,20µm,24.9s
W51A  Cleveland         122.22  52       P        PKPdf    20 48 54.8 -0.5
      baz=287,SNR=20
E52A  Mattawa           122.23  38       P        PKPdf    20 48 54.2 -0.8
      baz=299
DID   Didima            122.25 311      ePKPdf    PKPdf    20 48 54.3 -1.1
DID   Didima            122.25 311       P        PKPdf    20 48 54.3 -1.1
GOPC  GO Pecny, Ondr    122.27 327      ePKIKP    PKiKP    20 48 55.2  0.0
GOPC                                    e                  20 49 12.0
GOPC                                     MLR      MLR
      comp=Z,14µm,28.1s
GOPC  GO Pecny, Ondr    122.27 327      ePKP      PKiKP    20 48 55.2  0.0
GOPC                                    epPKP     pPKPdf   20 49 12.0 -2.3
GOPC                                    ePKKP     PKKPab   20 58 51.0 -0.4
GOPC                                    ex        x        20 59 07.9
GOPC                                    eSKKP              21 02 33.1
GOPC                                     AMS      AMS      21 37 20.0
      comp=Z,14µm,28.1s
I52A  Shelburne         122.29  41       P        PKPdf    20 48 54.3 -0.9
      baz=296
T51A  Gray              122.31  50       P        PKPdf    20 48 54.8 -0.6
      baz=289,SNR=46
CCHI  Chillan           122.31 141      eP        PKiKP    20 49 11.9  +16
IMMV  Iera Moni Meta    122.32 308       P        PKPdf    20 48 54.4 -1.1
X51A  Calhoun           122.32  53       P        PKPdf    20 48 54.6 -0.9
      baz=286,SNR=16
Y51A  Rockmart          122.34  54       P        PKPdf    20 48 54.8 -0.8
      baz=286,SNR=22
KZN   Kozani            122.35 314       P        PKPdf    20 48 54.7 -0.8
S51A  Beattyville       122.35  49       P        PKPdf    20 48 54.9 -0.6
      baz=289
V51A  Loudon            122.35  51       P        PKPdf    20 48 55.3 -0.3
      baz=288,SNR=12
PRU   Pruhonice         122.36 327      ePKIKP    PKPdf    20 48 54.7 -0.4
PRU                                      MLR      MLR
      comp=Z,11µm,23.4s
PRU   Pruhonice         122.36 327      ePKPDF    PKPdf    20 48 54.7 -0.4
PRU                                     epPKP     pPKPdf   20 49 12.2 -2.2
PRU                                     ePKKP     PKKPab   20 58 51.2 +0.3
PRU                                     ex        x        20 59 07.8
PRU                                     eSKKP              21 02 29.5
PRU                                      AMS      AMS      21 38 20.0
      comp=Z,11µm,23.4s
CLL   Collm             122.40 329⇑iPKIKP         PKiKP    20 48 55.3  0.0
CLL                                     e                  20 55 51.0
CLL                                      pmax     pmax
      comp=Z,56nm,0.8s
CLL                                      MLR      MLR
      comp=Z,23µm,21.9s
CLL   Collm             122.40 329⇑iPKPdf         PKiKP    20 48 55.3  0.0
      comp=Z,56nm,0.8s
CLL                                     i pPKPdf  pPKPdf   20 49 12.8 -1.6
CLL                                     eSKPdf    SKiKP    20 52 26.0 +0.4
CLL                                     eSKSac    SKSac    20 55 51.0 +1.1
CLL                                     ePKKPbc   PKKPbc   20 58 52.0 -0.1
      comp=Z,145nm,1.9s
CLL                                     epPKKPbc           20 59 08.0
CLL                                     esPKKPbc           20 59 18.0
CLL                                     ePKKPdf   PKKPdf   20 59 25.0 -3.4
CLL                                     eSP       SP       21 00 18.0 -0.6
CLL                                     e                  21 02 17.0
CLL                                     eSKKPbc   SKKPbc   21 02 29.0 -7.4
CLL                                     ePcPPKPre          21 02 49.0
CLL                                     ePKKSdf   PKKSdf   21 03 02.0 -3.9
CLL                                     eSKKSacre          21 06 17.0
CLL                                     epSKKSacr          21 06 39.0
CLL                                     eSS       SS       21 07 06.0 -0.8
CLL                                     eSSS      SSS      21 11 42.0
CLL                                     e                  21 19 36.0
CLL                                      Lm       MLR      21 43 00.0
      comp=N,14µm,22.0s
CLL                                      Lm       MLR      21 43 00.0
      comp=E,11µm,21.9s
CLL                                      Lm       MLR      21 43 00.0
      comp=Z,23µm,21.9s
Z51A  Franklin          122.41  54       P        PKPdf    20 48 55.4 -0.3
      baz=286,SNR=41
AGG   Agios Georgios    122.41 313       P        PKPdf    20 48 55.2 -0.4
GVD   Gavdhos           122.42 308      ePKPdf    PKPdf    20 48 55.2 -0.5
GVD   Gavdhos           122.42 308       P        PKPdf    20 48 55.2 -0.5
D53A  Lac Vacive, Po    122.42  37       P        PKPdf    20 48 54.4 -0.9
      baz=300
U51A  La Follette       122.44  50       P        PKPdf    20 48 55.2 -0.5
      baz=288,SNR=18
J52A  Paris             122.44  42       P        PKPdf    20 48 54.7 -0.8
      baz=295,SNR=14
THL   Klokotos Trika    122.45 314       P        PKPdf    20 48 54.9 -0.7
SOP   Sopron            122.46 324⇓eP             PKPdf    20 48 55.1 -0.3
SOP                                     ePP       PP       20 50 35.1 +2.9
SOP                                     eSP       SP       21 00 32.0  +13
DSF   Desfina           122.48 312       P        PKPdf    20 48 54.1 -1.7
K52A  Tillsonburg       122.48  42       P        PKPdf    20 48 54.7 -0.9
      baz=295
151A  Opelika           122.49  55       P        PKPdf    20 48 55.8 -0.1
      baz=285,SNR=66
BBLS  Lazi&#263;i       122.52 319      i P       PKPdf    20 48 55.1 -0.6
251A  Midway            122.53  56       P        PKPdf    20 48 55.5 -0.5
      baz=285,SNR=33
M52A  Chesterland       122.55  44       P        PKPdf    20 48 54.7 -1.1
      baz=294,SNR=13
ACTO  Acton             122.56  41       P        PKPdf    20 48 55.2 -0.5
      baz=296
N52A  McGinn’s Farm,    122.60  45       P        PKPdf    20 48 55.6 -0.3
      baz=293,SNR=26
451A  Vernon            122.61  57       P        PKPdf    20 48 56.0 -0.1
      baz=284
SADO  Sadowa            122.64  40       PKP      PKPdf    20 48 55.9 +0.1
      comp=Z,40nm,0.8s,baz=287,slow=2.7,SNR=47
SADO                                     pPKP     pPKPdf   20 49 13.2 -1.9
      comp=Z,11nm,0.5s,baz=317,slow=1.2,SNR=4.0
RUDO  Rudo              122.65 319      eP        PKPdf    20 48 55.4 -0.5
HAPS  Han Pijesak,Bl    122.72 320      eP        PKPdf    20 48 55.7 -0.5
ANKY  Antikythira Is    122.72 309       P        PKPdf    20 48 54.5 -1.8
OHR   Ohrid             122.72 316      i PKP     PKPdf    20 48 55.9 -0.3
S52A  Salyersville      122.72  49       P        PKPdf    20 48 56.0 -0.2
      baz=290
P52A  Corning           122.73  46       P        PKPdf    20 48 55.1 -1.1
      baz=292,SNR=43
CONA  Conrad Observa    122.74 325      i PKiKP   PKiKP    20 48 56.2  0.0
      comp=Z,122nm,1.9s,SNR=27
CONA                                    ePKKPab   PKKPbc   20 58 50.2 -0.7
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      comp=Z,56nm,1.8s,SNR=12
TZTN  Tazewell          122.74  50       P        PKPdf    20 48 56.1 -0.2
      baz=289
PHP   Peshkopia         122.74 316       P        PKPdf    20 48 56.3 +0.1
ALGO  Algonquin Park    122.76  38       P        PKPdf    20 48 55.2 -0.8
      baz=299
O52A  Adamsville        122.76  46       P        PKPdf    20 48 55.5 -0.8
      baz=292,SNR=16
KPRO  Kipourio          122.77 314       P        PKPdf    20 48 56.2 -0.1
KALE  Kalithea          122.77 312       P        PKPdf    20 48 54.9 -1.5
I53A  Kortright Cn E    122.77  41       P        PKPdf    20 48 55.5 -0.6
      baz=296
GUR   Goura             122.78 312      ePKPdf    PKPdf    20 48 56.4 -0.1
GUR   Goura             122.78 312       P        PKPdf    20 48 56.4 -0.1
CHGQ  Chibougamau       122.78  32       P        PKPdf    20 48 55.0 -1.0
      baz=305
KTHA  Kythira Island    122.79 310       P        PKPdf    20 48 56.3 -0.1
E53A  Dumoine, Ponti    122.79  37       P        PKPdf    20 48 55.4 -0.7
      baz=300
G53A  Haliburton        122.80  39       P        PKPdf    20 48 56.0 -0.2
      baz=298
NEST  Nestorio          122.82 315       P        PKPdf    20 48 56.3 -0.1
R52A  Catlettsburg      122.82  48       P        PKPdf    20 48 55.1 -1.3
      baz=290,SNR=19
SERG  Sergoula          122.83 312       P        PKPdf    20 48 55.8 -0.6
EVR   Evrytania         122.83 313       P        PKiKP    20 48 56.7  0.0
ANX   Ano Chora         122.86 313       P        PKiKP    20 48 57.4 +0.6
Q52A  Bidwell           122.88  47       P        PKPdf    20 48 55.3 -1.1
      baz=291,SNR=26
KLV   Kalavryta, Ach    122.88 312       P        PKiKP    20 48 56.7 -0.1
W52A  Murphy            122.90  52       P        PKPdf    20 48 56.3 -0.4
      baz=288,SNR=41
TYNO  Tyneside          122.91  42       P        PKPdf    20 48 55.6 -0.8
      baz=296
V52A  Sevierville       122.93  51       P        PKPdf    20 48 56.5 -0.2
      baz=288,SNR=65
U52A  Thorn Hill        122.93  50       P        PKPdf    20 48 56.4 -0.3
      baz=289
EFP   Efpalio           122.93 312       P        PKiKP    20 48 57.1 +0.3
LAKA  Lakka             122.94 312      ePKPdf    PKiKP    20 48 57.3 +0.4
LAKA  Lakka             122.94 312       P        PKiKP    20 48 57.3 +0.4
152A  Waverly Hall      122.95  55       P        PKPdf    20 48 56.9 +0.1
      baz=286,SNR=63
TRIP  Tripoli           122.97 311       P        PKPdf    20 48 56.4 -0.4
T52A  Hallie            122.99  49       P        PKPdf    20 48 56.1 -0.6
      baz=290
D54A  Lac Fusel, La     123.00  36       P        PKPdf    20 48 55.5 -0.9
      baz=301
452A  Marianna          123.03  57       P        PKiKP    20 48 57.4 +0.2
      baz=284,SNR=18
E54A  Lac Daplat, Po    123.05  37       P        PKPdf    20 48 55.7 -0.8
      baz=300
PKRO  Pickering         123.05  40       P        PKPdf    20 48 56.3 -0.3
      baz=297
Z52A  Williamson        123.05  54       P        PKPdf    20 48 56.7 -0.2
      baz=286,SNR=53
M53A  WI Miller and     123.06  44       P        PKPdf    20 48 56.0 -0.7
      baz=294,SNR=24
X52A  Dahlonega         123.07  52       P        PKPdf    20 48 57.0  0.0
      baz=287,SNR=96
352A  Blakely           123.08  56       P        PKiKP    20 48 57.3  0.0
      baz=285,SNR=18
552A  Lynn Haven        123.10  58       P        PKPdf    20 48 57.1  0.0
      baz=284
252A  Lumpkin           123.11  56       P        PKPdf    20 48 56.9 -0.3
      baz=285,SNR=20
L53A  Girard            123.13  43       P        PKPdf    20 48 55.9 -0.9
      baz=295
UPM   Unac-Piva         123.14 319      eP        PKPdf    20 48 56.8 -0.3
PVO   Paravola          123.14 313       P        PKPdf    20 48 56.9 -0.1
Y52A  Lilburn           123.15  53       P        PKPdf    20 48 57.1  0.0
      baz=287,SNR=86
O53A  New Philadelph    123.15  45       P        PKPdf    20 48 56.8 -0.2
      baz=293,SNR=40
CSGN  Cosiguina Volc    123.18  78      eP        PKPdf    20 48 57.9 +0.1
SCHQ  Schefferville     123.19  24       PKP      PKiKP    20 48 57.0 +0.1
      comp=Z,13nm,0.8s,baz=223,slow=2.1,SNR=9.1
SCHQ                                     pPKP     pPKPdf   20 49 14.4 -1.5
      comp=Z,6.7nm,0.6s,baz=265,slow=3.3,SNR=4.0
SCHQ                                     SKP               20 52 26.1
      comp=Z,9.4nm,0.8s,baz=240,slow=5.3,SNR=2.8
SCHQ                                     PKKPab   PKKPab   20 58 47.7 +0.4
      comp=Z,13nm,0.9s,baz=115,slow=5.1,SNR=6.2
N53A  Lisbon            123.20  44       P        PKiKP    20 48 57.2 -0.1
      baz=294,SNR=61
PDG   Podgorica         123.24 318⇑iP             PKPdf    20 48 56.6 -0.5
PDG   Podgorica         123.24 318⇑iP             PKKPab   20 58 48.9 +1.6
PDG   Podgorica         123.24 318      eP        PKPdf    20 48 56.5 -0.5
JAN   Janina            123.25 314       P        PKPdf    20 48 56.4 -0.8
KOGS  Kog               123.27 323      i PKPdf   PKPdf    20 48 56.9 -0.1
KOGS                                    i                  20 58 48.3
KOGS                                    e                  21 01 36.5
KOGS                                    e                  21 02 45.7
TIR   Tirane            123.28 316⇓iP             PKiKP    20 48 57.9 +0.5
TIR   Tirane            123.28 316 ⇓PKIKP         PKiKP    20 48 57.9 +0.5
BANO  Bancroft          123.28  39       P        PKPdf    20 48 56.5 -0.5
      baz=299
ARSA  Arzberg           123.29 324      i PKiKP   PKPdf    20 48 57.1  0.0
      comp=Z,37nm,1.1s,SNR=12
ARSA                                    ePKKPab   PKKPbc   20 58 48.0 -0.5
      comp=Z,50nm,2.1s,SNR=8.8
DRWO  Darlington Wes    123.31  40       P        PKPdf    20 48 56.7 -0.4
      baz=297
NKC   Novy Kostel       123.32 329      ePKIKP    PKiKP    20 48 57.3 +0.1
NKC                                      MLR      MLR
      comp=Z,13µm,19.8s
NKC   Novy Kostel       123.32 329      ePKPDF    PKiKP    20 48 57.3 +0.1
NKC                                     ePKKP     PKKPbc   20 58 48.5 -0.1
NKC                                      AMS      AMS      21 41 50.0
      comp=Z,13µm,19.8s
P53A  Whipple           123.32  46       P        PKPdf    20 48 57.0 -0.3
      baz=292,SNR=51
STCO  Saint Catharin    123.32  41       P        PKPdf    20 48 56.6 -0.5
      baz=296
DRCO  St. Marys Ceme    123.32  40       P        PKPdf    20 48 56.7 -0.4
      baz=297
R53A  Hurricane         123.33  48       P        PKPdf    20 48 57.1 -0.2
      baz=291,SNR=25
ITM   Ithomi            123.35 311       P        PKPdf    20 48 55.8 -1.7
KHC   Kasperske Hory    123.36 327      ePKIKP    PKPdf    20 48 56.9 -0.2
KHC                                      MLR      MLR
      comp=Z,18µm,25.6s
KHC   Kasperske Hory    123.36 327      ePKPDF    PKPdf    20 48 56.9 -0.2
KHC                                     epPKP     pPKPdf   20 49 15.4 -1.0
KHC                                     ex        x        20 49 26.0
KHC                                     eSKP               20 52 28.1
KHC                                     ePKKP     PKKPab   20 58 47.1 +0.4
KHC                                     ex        x        20 59 03.9
KHC                                     eSKKP              21 02 25.9
KHC                                      AMS      AMS      21 39 00.0
      comp=Z,18µm,25.6s
T53A  Wise              123.37  49       P        PKiKP    20 48 57.8  0.0
      baz=290,SNR=55
PEMO  Pembroke          123.39  38       P        PKPdf    20 48 56.3 -0.9
      baz=300
RLS   Riolos of Patr    123.39 312       P        PKiKP    20 48 58.1 +0.4
GO05  Huala             123.39 139      eP        PKiKP    20 49 14.5  +17
DRME  Dracevica, Mon    123.39 317      i P       PKPdf    20 48 55.8 -1.6
S53A  Williamson        123.43  48       P        PKPdf    20 48 57.3 -0.3
      baz=290,SNR=44
GERES GERESS Array B    123.45 327       PKP      PKPdf    20 48 57.5 +0.1
      comp=Z,25nm,0.7s,baz=65,slow=1.7,SNR=140
GERES                                    pPKP     pPKPdf   20 49 15.2 -1.5
      comp=Z,13nm,0.6s,baz=78,slow=1.4,SNR=6.5
GERES                                    SKP               20 52 27.8
      comp=Z,6.0nm,0.7s,baz=70,slow=1.6,SNR=5.1
GERES                                    PKKPab   PKKPbc   20 58 47.5 -0.5
      comp=Z,5.7nm,1.0s,baz=220,slow=3.5,SNR=16
GERES                                    PKKP     PKKPdf   20 59 27.1 +0.6
      comp=Z,1.9nm,0.6s,baz=214,slow=1.8,SNR=7.4
GERES                                    SKKPbc   SKKPbc   21 02 28.2 -4.7
      comp=Z,2.8nm,0.9s,baz=250,slow=4.0,SNR=4.2
GERES                                    SKKPab   SKKPbc   21 02 43.9  +11
      comp=Z,2.7nm,1.1s,baz=267,slow=2.4,SNR=4.0
Q53A  Leroy             123.45  47       P        PKPdf    20 48 57.1 -0.5
      baz=292,SNR=44
W53A  Cullowhee         123.47  52       P        PKPdf    20 48 57.9  0.0
      baz=288,SNR=46
WLVO  Wesleyville       123.50  40       P        PKPdf    20 48 56.7 -0.7
      baz=298
BRY   Bratogost         123.51 318      eP        PKPdf    20 48 57.3 -0.5
Y53A  Monroe            123.53  53       P        PKPdf    20 48 57.4 -0.5
      baz=287,SNR=59
BLY   Banja Luka        123.53 321⇓iP             PKiKP    20 48 58.6 +0.8
BLY   Banja Luka        123.53 321⇑iP             PKKPab   20 58 47.8 +1.8
BLY   Banja Luka        123.53 321      i P       PKPdf    20 48 56.2 -1.3
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U53A	Fall Branch	123.54	50	P	PKPdf	20 48 57.6	-0.2
	baz=289,SNR=102						
X53A	Estanollee	123.56	52	P	PKPdf	20 48 57.8	-0.1
	baz=288,SNR=42						
PYL	PYLOS	123.58	311	ePKPdf	PKPdf	20 48 56.7	-1.2
PYL	PYLOS	123.58	311	P	PKPdf	20 48 56.7	-1.2
V53A	Saluda	123.58	51	P	PKPdf	20 48 58.1	+0.1
	baz=289,SNR=60						
253A	Americus	123.59	55	P	PKPdf	20 48 58.0	0.0
	baz=286,SNR=16						
J54A	Appleton	123.64	41	P	PKPdf	20 48 57.1	-0.7
	baz=297						
L54A	Sinclairville	123.65	42	P	PKPdf	20 48 56.9	-1.0
	baz=296						
IGT	Igoumenitsa	123.67	314	ePKPdf	PKPdf	20 48 57.9	-0.1
IGT	Igoumenitsa	123.67	314	P	PKPdf	20 48 57.9	-0.1
IGT	Igoumenitsa	123.67	314	ePKIKP	PKPdf	20 48 57.9	-0.1
153A	Fort Valley	123.67	55	P	PKPdf	20 48 57.7	-0.5
	baz=286						
MOA	Molln	123.69	325	i PKiKP	PKPdf	20 48 57.7	-0.1
	comp=Z,48nm,1.6s,SNR=18						
MOA				ePKKPab	PKKPab	20 58 46.1	+0.7
	comp=Z,65nm,1.6s,SNR=24						
353A	Camilla	123.70	56	P	PKiKP	20 48 58.6	0.0
	baz=285,SNR=23						
Z53A	Monticello	123.71	54	P	PKPdf	20 48 58.0	-0.2
	baz=287,SNR=49						
LKD2	Lefkada island	123.71	313	P	PKiKP	20 48 58.3	-0.1
DELO	Deloro Mine	123.72	39	P	PKPdf	20 48 57.4	-0.5
	baz=299						
TREB	Trebinje	123.72	318	eP	PKPdf	20 48 57.5	-0.5
M54A	Oil Creek Stat	123.72	43	P	PKPdf	20 48 57.2	-0.9
	baz=295						
N54A	Moraine State	123.72	44	P	PKPdf	20 48 57.9	-0.2
	baz=294,SNR=23						
HCY	Herceg Novi	123.74	318	eP	PKPdf	20 48 57.6	-0.4
453A	Whigham	123.74	57	P	PKiKP	20 48 59.1	+0.5
	baz=285,SNR=22						
GOGA	Godfrey	123.75	54	P	PKPdf	20 48 58.2	-0.1
	baz=287						
MGRS	Mrkonjic Grad	123.75	321	eP	PKiKP	20 48 58.4	+0.1
O54A	Avella	123.77	45	P	PKiKP	20 48 58.3	-0.1
	baz=294,SNR=52						
PLVO	Plevna	123.80	38	P	PKPdf	20 48 57.6	-0.4
	baz=299						
MEDO	Medina	123.81	41	P	PKPdf	20 48 57.1	-1.0
	baz=297						
553A	Crawfordville	123.81	58	P	PKiKP	20 48 58.7	-0.1
	baz=284,SNR=7.6						
I55A	Frankford	123.82	40	P	PKPdf	20 48 57.5	-0.6
	baz=298						
F55A	Otter Lake	123.85	37	P	PKPdf	20 48 57.0	-1.1
	baz=300						
KFL	Anninata	123.87	312	P	PKiKP	20 48 58.6	-0.1
SOKA	Soboth	123.87	324	ePKiKP	PKPdf	20 48 57.9	-0.4
	comp=Z,47nm,1.0s,SNR=39						
SOKA				ePKKPab	PKKPbc	20 58 45.6	-0.8
	comp=Z,39nm,1.8s,SNR=10						
K54A	Basiliko Farm,	123.90	42	P	PKPdf	20 48 57.4	-1.0
	baz=296						
FSK	Fiskardo	123.90	313	P	PKPdf	20 48 58.1	-0.3
Q54A	Coxs Mills	123.91	46	P	PKPdf	20 48 57.9	-0.6
	baz=292,SNR=68						
G55A	Calabogie	123.92	38	P	PKPdf	20 48 57.6	-0.6
	baz=300						
P54A	Burton	123.92	46	P	PKPdf	20 48 58.1	-0.4
	baz=293						
H55A	Tweed	123.97	39	P	PKPdf	20 48 58.0	-0.4
	baz=299						
KEK	Kerkira	123.98	314	ePKPdf	PKPdf	20 48 57.4	-1.2
KEK	Kerkira	123.98	314	P	PKPdf	20 48 57.4	-1.2
S54A	Dingess, Beckl	124.00	48	P	PKPdf	20 48 57.9	-0.8
	baz=291,SNR=58						
T54A	Tazewell	124.06	49	P	PKPdf	20 48 58.1	-0.8
	baz=291,SNR=52						
CRES	Cresnjev	124.06	323	i P	PKPdf	20 48 56.8	-1.8
U54A	Nelsons Funny	124.06	50	P	PKPdf	20 48 58.4	-0.5
	baz=290,SNR=19						
STON	Ston	124.08	319	eP	PKPdf	20 48 57.7	-0.9
R54A	Victor	124.09	47	P	PKPdf	20 48 58.0	-0.9
	baz=292,SNR=36						
J55A	Hilton	124.18	41	P	PKPdf	20 48 57.9	-0.9
	baz=298						
TIGA	Tifton	124.20	56	P	PKiKP	20 48 59.4	-0.1
	baz=285						
V54A	Nebo	124.22	50	P	PKPdf	20 48 59.3	+0.1
	baz=289						
Y54A	Tignall	124.24	53	P	PKPdf	20 48 59.2	0.0
	baz=288,SNR=65						
OBKA	Obir	124.25	324	i PKiKP	PKPdf	20 48 59.0	0.0
	comp=Z,29nm,1.1s,SNR=8.6						
OBKA				ePKKPab	PKKPbc	20 58 44.7	-0.2
	comp=Z,51nm,1.5s,SNR=8.1						
K55A	Perry	124.26	41	P	PKPdf	20 48 58.4	-0.6
	baz=297						
W54A	Cherokee Point	124.26	51	P	PKPdf	20 48 59.0	-0.2
	baz=289,SNR=42						
L55A	Hinsdale	124.26	42	P	PKPdf	20 48 58.4	-0.7
	baz=296						
154A	Montrose	124.27	54	P	PKPdf	20 48 59.2	-0.1
	baz=287						
GRFO	Grafenberg	124.28	329	ePKPdf	PKiKP	20 48 59.9	+0.7
GRFO	Grafenberg	124.28	329	ePKIKP	PKiKP	20 48 59.9	+0.7
X54A	Belton	124.28	52	P	PKiKP	20 48 59.5	-0.1
	baz=288,SNR=37						
Z54A	Sparta	124.31	54	P	PKPdf	20 48 59.2	-0.1
	baz=287,SNR=36						
254A	Abbeville	124.31	55	P	PKPdf	20 48 59.4	0.0
	baz=286						
M55A	Ridgway	124.35	43	P	PKPdf	20 48 58.8	-0.4
	baz=296						
BOJS	Bojanci	124.35	323	i PKPdf	PKiKP	20 48 59.6	+0.2
BOJS				i		20 49 16.2	
BOJS				e		20 55 53.3	
BOJS				e		21 00 55.1	
MCWV	Mont Chateau	124.35	45	P	PKPdf	20 48 58.8	-0.4
	baz=294						
454A	Quitman	124.35	57	P	PKiKP	20 48 59.8	0.0
	baz=285,SNR=9.1						
PECO	Prince Edward	124.39	40	P	PKPdf	20 48 58.9	-0.3
	baz=299						
P55A	Reedsville	124.42	46	P	PKPdf	20 48 58.6	-0.8
	baz=294						
Q55A	Buckhannon	124.44	46	P	PKPdf	20 48 59.1	-0.4
	baz=293						
554A	Perry	124.47	58	P	PKiKP	20 49 00.1	+0.1
	baz=284,SNR=11						
N55A	Marion Center	124.49	44	P	PKPdf	20 48 59.0	-0.6
	baz=295						
LJU	Ljubljana	124.50	323	i PKPdf	PKiKP	20 48 59.8	+0.1
LJU				e		20 49 16.4	
LJU				i		20 58 43.2	
LJU	Ljubljana	124.50	323	i P	PKPdf	20 48 59.1	-0.3
O55A	Ligonier	124.51	45	P	PKPdf	20 48 59.3	-0.3
	baz=294						
H56A	Elgin	124.53	39	P	PKPdf	20 48 59.1	-0.3
	baz=300						
ORIO	Orleans, Innes	124.55	37	P	PKPdf	20 48 58.5	-1.0
	baz=301						
S55A	Lewisburg	124.60	48	P	PKPdf	20 48 59.1	-0.8
	baz=292,SNR=17						
T55A	Pulaski	124.63	49	P	PKPdf	20 48 59.7	-0.2
	baz=291,SNR=23						
KBA	Koelnbreinsper	124.63	325	i PKPdf	PKPdf	20 48 59.0	-0.9
	comp=Z,32nm,1.1s,SNR=25						
KBA				ePKKPab	PKKPab	20 58 42.4	+0.9
	comp=Z,17nm,0.9s,SNR=6.0						
KBA	Koelnbreinsper	124.63	325	PKIKP	PKPdf	20 48 59.2	-0.6
U55A	TA2, Sparta	124.65	49	P	PKPdf	20 48 59.9	-0.2
	baz=291,SNR=50						
R55A	Marlinton	124.69	47	P	PKPdf	20 49 00.2	+0.1
	baz=292,SNR=76						
MYKA	Terra Mystica	124.71	324	i PKPdf	PKPdf	20 48 59.3	-0.5
	comp=Z,26nm,1.0s,SNR=16						
MYKA				ePKKPab	PKKPbc	20 58 42.8	-0.2
	comp=Z,51nm,1.6s,SNR=14						
CEY	Cerknica	124.72	323	i P	PKPdf	20 48 58.5	-1.4
M56A	Emporium	124.74	43	P	PKPdf	20 48 59.1	-0.9
	baz=296						
V55A	Taylorsville	124.75	50	P	PKPdf	20 49 00.2	0.0
	baz=290,SNR=16						
MATN	Matagalpa	124.77	79	eP	PKPdf	20 49 00.1	-0.7
155A	Kite	124.79	54	P	PKPdf	20 49 00.3	0.0
	baz=287,SNR=21						
355A	Pearson	124.83	56	P	PKPdf	20 49 00.1	-0.3
	baz=286,SNR=14						
455A	Stateville	124.85	57	P	PKPdf	20 49 00.3	-0.2
	baz=285,SNR=13						
BLA	Blacksburg	124.87	48	P	PKPdf	20 48 59.8	-0.6
	baz=292						
Z55A	Blythe	124.88	53	P	PKPdf	20 49 00.3	-0.1
	baz=288,SNR=9.1						
Y55A	Saluda	124.88	53	P	PKPdf	20 49 00.4	0.0
	baz=288,SNR=40						
X55A	Gracelyn & Ava	124.88	52	P	PKiKP	20 49 00.8	0.0
	baz=289,SNR=81						
KMSC	Kings Mountain	124.90	51	P	PKPdf	20 49 00.5	0.0
	baz=290,SNR=53						
RRR	Rubha Reidh	124.90	344	eP	PKPdf	20 48 59.5	-0.2
RIY	Rijeka	124.91	323	eP	PKPdf	20 48 59.2	-0.9
N56A	West Decatur	124.91	43	P	PKPdf	20 49 00.2	-0.1
	baz=296						
WTSB	Winterswijk	124.96	333	ePKPdf	PKPdf	20 48 59.6	-0.4
	comp=Z,654nm,2.1s						
WTSB				epPKPdf	pPKPdf	20 49 16.9	-2.4
655A	Horseshoe Beac	124.97	58	P	PKiKP	20 49 00.9	-0.2
	baz=284						
255A	Hazlehurst	124.98	55	P	PKPdf	20 49 00.6	0.0
	baz=286,SNR=22						
555A	McAlpin	125.06	57	P	PKPdf	20 49 00.9	0.0
	baz=285,SNR=15						
Q56A	Snyder Ridge,	125.07	46	P	PKPdf	20 49 00.3	-0.4
	baz=294						
KAC	Achnashellach	125.07	344	eP	PKiKP	20 49 00.3	-0.2
LATQ	La Tuque	125.09	34	P	PKPdf	20 49 00.2	-0.2
	baz=305						
P56A	Dayton Farm, R	125.13	45	P	PKPdf	20 48 60.0	-0.8
	baz=294						
R56A	Bull Pasture M	125.16	47	P	PKPdf	20 49 00.6	-0.4
	baz=293						
U56A	King	125.21	49	P	PKPdf	20 49 00.6	-0.4
	baz=291						
EDU	Dundee	125.21	342	eP	PKPdf	20 49 00.5	+0.1
LMEL	Las Melosas	125.22	139	eP	PKiKP	20 49 17.0	+15
T56A	Rocky Mt	125.23	48	P	PKPdf	20 49 00.4	-0.7
	baz=292						
CLCH	Cerro Calan	125.29	139	eP	PKiKP	20 49 17.7	+16
ABTA	Abfaltersbach	125.29	325	i PKPdf	PKPdf	20 49 00.5	-0.5
	comp=Z,63nm,1.0s,SNR=36						
ABTA				ePKKPab	PKKPbc	20 58 40.2	-0.5
	comp=Z,11nm,1.0s,SNR=8.6						
SSPA	Standing Stone	125.31	44	ePKPdf	PKPdf	20 49 01.0	-0.1
SSPA	Standing Stone	125.31	44	P	PKPdf	20 49 00.6	-0.4
	baz=296						
V56A	Mocksville	125.31	50	P	PKPdf	20 49 01.0	-0.2
	baz=291						
GB1A	Borinquen Arri	125.32	81	eP	PKPdf	20 49 01.2	-0.7
S56A	Natural Bridge	125.33	47	P	PKPdf	20 49 00.9	-0.3
	baz=293						
PEL	Peldehue	125.34	138	eP	PKiKP	20 49 18.4	+17
X56A	White Oak	125.35	52	P	PKiKP	20 49 01.5	-0.1
	baz=289,SNR=38						
Y56A	Pelion	125.36	53	P	PKiKP	20 49 01.7	-0.1
	baz=289,SNR=7.0						
356A	Blackshear	125.43	56	P	PKiKP	20 49 01.9	0.0
	baz=286,SNR=25						
256A	Glennville	125.44	55	P	PKiKP	20 49 02.1	+0.1
	baz=287,SNR=12						
Z56A	Williston	125.45	53	P	PKiKP	20 49 01.8	-0.2
	baz=288,SNR=9.3						
W56A	Indian Trail	125.48	51	P	PKPdf	20 49 01.5	-0.1
	baz=290						
WATA	Walderalm	125.48	326	i PKiKP	PKPdf	20 49 01.3	-0.2
	comp=Z,26nm,0.9s,SNR=32						
N57A	Milroy	125.49	43	P	PKPdf	20 49 01.3	-0.1
	baz=296						
WTTA	Wattenberg	125.49	326	i PKiKP	PKPdf	20 49 01.6	+0.2
	comp=Z,103nm,1.0s,SNR=46						
FCH	Farellones	125.49	139	eP	PKiKP	20 49 02.6	+0.1
MESS	Mesas	125.52	81	eP	PKPdf	20 49 02.2	0.0
ACON	Acoyapa	125.53	80	eP	PKPdf	20 49 01.9	-0.3
LONY	Lake Ozonia	125.55	38	P	PKPdf	20 49 00.5	-0.9
	baz=302						
CUI	Cuipilapa	125.55	81	eP	PKPdf	20 49 01.4	-1.0
556A	Lake Butler	125.56	57	P	PKiKP	20 49 02.2	0.0
	baz=285,SNR=13						
156A	Sylvania	125.56	54	P	PKPdf	20 49 01.9	+0.1
	baz=288						
ESY	Stoneypath	125.61	341	eP	PKiKP	20 49 01.8	+0.2
656A	Willston	125.61	58	P	PKiKP	20 49 02.2	-0.2
	baz=285,SNR=14						
EBH	Black Hill	125.61	342	eP	PKPdf	20 49 01.1	-0.1
Q57A	Strasburg	125.62	46	P	PKPdf	20 49 01.5	-0.3
	baz=294						
INVG	Invergeldie, C	125.63	342	eP	PKPdf	20 49 01.2	0.0
INVG				IAMs_20	IAMs_20	21 45 43.4	
	comp=Z,9µm,23.4s						
O57A	Amberson	125.67	44	P	PKPdf	20 49 01.1	-0.7
	baz=296						
456A	Hilliard	125.69	56	P	PKiKP	20 49 02.3	-0.1
	baz=286,SNR=6.8						
P57A	Homestead Farm	125.72	45	P	PKPdf	20 49 01.1	-0.8
	baz=295						
MATE	Matera	125.74	317	⇑iP	PKPdf	20 49 01.9	0.0
MOTA	Moosalm	125.74	326	i PKiKP	PKPdf	20 49 01.8	-0.1
	comp=Z,59nm,0.9s,SNR=49						
S57A	Dark Hollow, R	125.74	47	P	PKPdf	20 49 01.4	-0.6
	baz=293						
SQTA	Sankt Quirin	125.75	326	i PKiKP	PKPdf	20 49 02.1	+0.2
	comp=Z,68nm,1.0s,SNR=46						
JTS	Las Juntas de	125.76	82	PKP	PKiKP	20 49 03.1	+0.1
	comp=Z,66nm,0.5s,baz=313,slow=1.1,SNR=52						
JTS	Las Juntas de	125.76	82	ePKPdf	PKiKP	20 49 03.0	-0.1
JTS	Las Juntas de	125.76	82	eP	PKPdf	20 49 02.2	-0.5
T57A	Hurt	125.81	48	P	PKPdf	20 49 01.9	-0.3
	baz=292						
V57A	Coltrane Farms	125.83	50	P	PKPdf	20 49 01.8	-0.4
	baz=291						
R57A	Stanardsville	125.84	46	P	PKPdf	20 49 01.8	-0.4
	baz=294						
RETA	Reutte	125.84	327	i PKiKP	PKiKP	20 49 02.2	-0.2
	comp=Z,36nm,1.1s,SNR=24						
EBL	Broad Law	125.86	341	eP	PKPdf	20 49 01.7	0.0
BINY	Binghamton	125.87	41	P	PKPdf	20 49 01.8	-0.3
	baz=299						
EAB	Aberfoyle	125.92	342	eP	PKPdf	20 49 01.6	-0.1
W57A	Gilead	125.93	51	P	PKPdf	20 49 01.9	-0.5
	baz=291						
357A	Townsend	125.93	55	P	PKPdf	20 49 02.2	-0.3
	baz=287						
157A	Early Branch	125.95	54	P	PKiKP	20 49 03.0	+0.1
	baz=288,SNR=7.7						
U57A	Blanch	125.97	49	P	PKPdf	20 49 02.2	-0.3
	baz=292						
ARE1	Arenal 1	125.99	81	eP	PKPdf	20 49 02.2	-0.9
Z57A	Bowman	125.99	53	P	PKPdf	20 49 02.5	-0.1
	baz=289						
Y57A	Sumter	126.00	52	P	PKiKP	20 49 03.0	0.0
	baz=290,SNR=16						
CEDE	Laguna Cedeo	126.01	81	eP	PKPdf	20 49 01.7	-1.5
X57A	Johnson Farm,	126.09	51	P	PKiKP	20 49 03.2	0.0
	baz=290,SNR=11						
457A	Yulee	126.10	56	P	PKPdf	20 49 02.6	-0.3
	baz=286						
757A	Oxford	126.11	58	P	PKPdf	20 49 02.7	-0.2
	baz=285,SNR=8.5						
657A	Interlachen	126.12	58	P	PKiKP	20 49 03.3	-0.1
	baz=285						
557A	Orange Park	126.12	57	P	PKiKP	20 49 03.1	-0.2
	baz=286,SNR=5.1						
FETA	Feichten	126.14	326	i PKPdf	PKPdf	20 49 02.1	-0.6
	comp=Z,73nm,1.0s,SNR=27						
257A	Skidaway Islan	126.14	55	P	PKPdf	20 49 02.9	0.0
	baz=288						
857A	Zephyrhills	126.14	59	P	PKPdf	20 49 03.2	+0.2
	baz=284,SNR=8.1						
LAWE	Loch Awe, Argy	126.17	343	eP	PKPdf	20 49 02.0	-0.2
LAWE				IAMs_20	IAMs_20	21 46 03.6	
	comp=Z,12µm,20.1s						
Q58A	Fox Den Farm,	126.18	45	P	PKPdf	20 49 02.4	-0.4
	baz=295						
HGN	Heimansgroeve	126.18	332	ePKPdf	PKiKP	20 49 02.8	-0.1
	comp=Z,171nm,1.4s						
HGN				epPKPdf	pPKPdf	20 49 20.6	-1.1
O58A	Lewisberry	126.20	44	P	PKPdf	20 49 02.4	-0.4
	baz=296						
P58A	Pank, Wackersv	126.21	45	P	PKPdf	20 49 02.4	-0.5
	baz=296						
R58A	Rapidan	126.21	46	P	PKPdf	20 49 02.4	-0.5
	baz=294						
GDLE	Glaisdale, N Y	126.22	339	eP	PKPdf	20 49 02.5	+0.1
MEM	Membach	126.25	332	⇑PKiKP	PKPdf	20 49 02.7	+0.1
MEM				⇑pPKiKP	pPKPdf	20 49 20.4	-1.5
BEBN	Eben Emael	126.28	332	⇓PKiKP	PKiKP	20 49 03.4	+0.4
957A	Wimauma	126.28	60	P	PKiKP	20 49 03.7	0.0
	baz=284						
ESK	Eskdalemuir	126.29	341	ePKPdf	PKPdf	20 49 02.0	-0.5
ESK	Eskdalemuir	126.29	341	i PKIKP	PKiKP	20 49 03.2	+0.3
CO02	Combarbal	126.30	136	eP	PKiKP	20 49 20.6	+17
TIP	Timpagrande	126.34	315	P	PKPdf	20 49 01.8	-1.4
TIP	Timpagrande	126.34	315	⇓iP	PKiKP	20 49 04.2	+0.6
T58A	Grand View Acr	126.37	48	P	PKPdf	20 49 03.0	-0.2
	baz=293						
V58A	Windy Hill, Pi	126.37	49	P	PKPdf	20 49 03.0	-0.2
	baz=292						
ESPN	Las Esperanzas	126.38	79	eP	PKPdf	20 49 03.8	0.0
DAVA	Damuels	126.44	327	i PKiKP	PKiKP	20 49 03.6	-0.2
	comp=Z,50nm,1.1s,SNR=25						
R58B	Mineral	126.44	47	P	PKPdf	20 49 02.8	-0.5
	baz=294						
S58A	Poland Farm, P	126.46	47	P	PKPdf	20 49 03.1	-0.3
	baz=294						
M59A	Waymart	126.55	41	P	PKPdf	20 49 03.2	-0.2
	baz=299						
W58A	Raeford	126.56	50	P	PKPdf	20 49 03.6	0.0
	baz=291						
U58A	Oxford	126.57	49	P	PKPdf	20 49 03.6	0.0
	baz=293						
158A	Hollywood	126.58	53	P	PKiKP	20 49 04.0	-0.2
	baz=289						
HDC	Heredia	126.59	82	eP	PKiKP	20 49 05.0	+0.2
Y58A	Scranton	126.61	52	P	PKPdf	20 49 03.9	+0.1
	baz=290						
O59A	Robesonia	126.61	43	P	PKPdf	20 49 03.6	0.0
	baz=297						
BFO	Black Forest	126.62	329	ePKPdf	PKPdf	20 49 03.2	-0.2
BFO	Black Forest	126.62	329	i PKIKP	PKiKP	20 49 03.7	-0.2
N59A	State Game Lan	126.62	42	P	PKPdf	20 49 03.8	+0.2
	baz=298						
TSUM	Tsumeb	126.62	241	PKP	PKiKP	20 49 05.5	+0.6
	comp=Z,50nm,1.0s						
TSUM				SKPbc	SKPbc	20 52 18.2	
	comp=Z,36nm,1.1s,baz=94,slow=5.7,SNR=5.9						
X58A	Rowland	126.64	51	P	PKPdf	20 49 03.9	+0.1
	baz=291						
658A	Bunnell	126.67	58	P	PKPdf	20 49 03.9	-0.1
	baz=286						
Z58A	St. Stephen	126.69	53	P	PKPdf	20 49 03.9	0.0
	baz=289						
LCR2	La Lucha 2	126.69	82	eP	PKiKP	20 49 05.6	+0.4
CBN	Corbin Frederi	126.70	46	P	PKPdf	20 49 03.7	-0.1
	baz=295						
BCLA	Clavier	126.71	332	⇑PKiKP	PKiKP	20 49 04.0	+0.1
BCLA				⇓pPKiKP	pPKPdf	20 49 21.5	-1.2
958A	Wauchula	126.72	60	P	PKPdf	20 49 04.0	-0.1
	baz=284						
DAVOX	Davos/Dischmat	126.75	326	PKP	PKiKP	20 49 04.8	+0.4
	comp=Z,64nm,0.9s,baz=142,slow=0.8,SNR=65						
DAVOX				SKPbc	SKPbc	20 52 17.9	
	comp=Z,44nm,0.9s,baz=202,slow=6.3,SNR=9.3						
DAVOX				PKKPbc	PKKPbc	20 58 34.5	-1.0
	comp=Z,5.5nm,0.9s,baz=287,slow=2.0,SNR=6.3						
DAVOX				PKKP	PKKPdf	20 59 20.1	-0.2
	comp=Z,2.6nm,0.5s,baz=225,slow=1.1,SNR=3.8						
DAVOX				SKKPbc	SKKPbc	21 02 19.4	-2.5
	comp=Z,6.6nm,1.0s,baz=242,slow=3.4,SNR=6.0						
P59A	Jarrettsville	126.76	44	P	PKPdf	20 49 03.5	-0.4
	baz=297						
058A	Arcadia	126.80	61	P	PKiKP	20 49 04.7	-0.1
	baz=284						
WLF	Walferdange	126.83	331	⇑PKiKP	PKiKP	20 49 04.5	+0.3
WLF				⇑pPKiKP	pPKPdf	20 49 22.0	-0.9
758A	Lake Helen	126.85	58	P	PKPdf	20 49 04.1	-0.2
	baz=285						
KESW	Keswick, Cumbr	126.86	341	eP	PKPdf	20 49 03.9	+0.2
KESW				IAMs_20	IAMs_20	21 40 17.0	
	comp=Z,9µm,30.7s						
DWPF	Disney Wildern	126.86	59	ePKPdf	PKiKP	20 49 05.3	+0.4
DWPF	Disney Wildern	126.86	59	P	PKPdf	20 49 04.6	+0.2
	baz=285						
HPK	Haverah Park	126.87	339	eP	PKPdf	20 49 03.4	-0.2
HPK				IAMs_20	IAMs_20	21 46 50.0	
	comp=Z,6µm,19.1s						
UCC	Uccle	126.87	333	⇓PKiKP	PKiKP	20 49 04.7	+0.5
UCC				⇓pPKiKP	pPKPdf	20 49 22.1	-0.9
R59A	King George, V	126.89	46	P	PKPdf	20 49 03.9	-0.3
	baz=295						
858A	St. Cloud	126.90	59	P	PKiKP	20 49 05.1	+0.2
	baz=285						
Q59A	Harwood	126.93	45	P	PKPdf	20 49 04.2	0.0
	baz=296						
CVTR	Volcan Turrial	126.94	82	eP	PKPdf	20 49 04.5	-0.9
S59A	Mechanicsville	126.94	47	P	PKPdf	20 49 04.1	-0.2
	baz=295						
WACR	West Acre	127.01	337	eP	PKPdf	20 49 03.9	0.0
WACR				IAMs_20	IAMs_20	21 39 53.2	
	comp=Z,15µm,27.0s						
V59A	Middlesex	127.04	49	P	PKPdf	20 49 04.3	-0.2
	baz=292						
GO04	Tololo Observa	127.04	135	eP	PKiKP	20 49 05.5	-0.1
T59A	Double "B" Far	127.08	48	P	PKPdf	20 49 04.4	-0.2
	baz=294						
N60A	Cedar Hill Far	127.09	42	P	PKPdf	20 49 03.9	-0.6
	baz=299						
AQU	L'Aquila	127.11	320	i P	PKPdf	20 49 02.9	-1.6
W59A	Clinton	127.11	50	P	PKPdf	20 49 04.8	+0.1
	baz=292						
SNF	Seneffe	127.11	333	⇓PKiKP	PKiKP	20 49 05.3	+0.6
SNF				⇓pPKiKP	pPKPdf	20 49 22.6	-0.9
Z59A	Georgetown, SC	127.14	53	P	PKPdf	20 49 04.5	-0.3
	baz=290						
O60A	Telford	127.14	43	P	PKPdf	20 49 04.6	0.0
	baz=298						
TRQA	Tornquist	127.14	149	ePKPdf	PKiKP	20 49 05.3	+0.1
GAL1	Galloway	127.15	342	eP	PKPdf	20 49 04.1	0.0
U59A	Littleton	127.15	48	P	PKPdf	20 49 04.5	-0.2
	baz=293						
Y59A	Loris	127.20	51	P	PKPdf	20 49 05.0	+0.1
	baz=291						
X59A	McDuffie Farm,	127.20	51	P	PKPdf	20 49 04.9	0.0
	baz=291						
P60A	Greenville	127.22	43	P	PKPdf	20 49 04.5	-0.2
	baz=297						
TUE	Stuetta	127.22	326	ePKPdf	PKPdf	20 49 05.0	+0.2
R60A	Leonardtown, M	127.24	46	P	PKPdf	20 49 05.0	+0.2
	baz=296						
DOU	Dourbes	127.26	332	⇑PKiKP	PKiKP	20 49 05.0	0.0
DOU				⇓pPKiKP	pPKPdf	20 49 22.9	-0.9
059Z	Ave Maria	127.28	61	P	PKiKP	20 49 05.9	+0.1
	baz=283						
ECH	Echery	127.29	329	ePKPdf	PKPdf	20 49 04.5	-0.2
ECH	Echery	127.29	329	ePKIKP	PKPdf	20 49 04.5	-0.2
859A	Kempfer Cattle	127.33	59	P	PKPdf	20 49 05.3	0.0
	baz=285						
LBNH	Lisbon	127.35	37	P	PKiKP	20 49 05.2	-0.3
	baz=304						
LBWR	Ladybower, Pea	127.36	339	eP	PKPdf	20 49 04.7	0.0
LBWR				IAMs_20	IAMs_20	21 47 11.3	
	comp=Z,11µm,20.2s						
CLGH	Cloghs, Cushen	127.39	343	eP	PKiKP	20 49 05.6	+0.5
CLGH				IAMs_20	IAMs_20	21 42 41.7	
	comp=Z,10µm,25.6s						
059A	Moore Haven	127.39	61	P	PKiKP	20 49 05.8	-0.1
	baz=284						
S60A	Water View	127.43	46	P	PKPdf	20 49 05.4	+0.2
	baz=295						
DRK0	Durika	127.44	83	eP	PKiKP	20 49 07.0	+0.3
Q60A	Greensboro	127.44	44	P	PKiKP	20 49 05.5	-0.2
	baz=297						
959A	Okeechobee	127.49	60	P	PKiKP	20 49 05.9	-0.2
	baz=284						
CNNC	Cliffs of the	127.50	50	P	PKiKP	20 49 05.8	-0.2
	baz=292						
U60A	Pendleton	127.57	48	P	PKPdf	20 49 05.4	-0.1
	baz=294						
T60A	Surry	127.61	47	P	PKPdf	20 49 05.4	-0.2
	baz=295						
IOMK	Kirk Michael	127.61	341	eP	PKPdf	20 49 04.9	-0.1
IOMK				IAMs_20	IAMs_20	21 39 08.7	
	comp=Z,16µm,25.2s						
X60A	Albert Glenn T	127.68	50	P	PKPdf	20 49 05.5	-0.2
	baz=292						
W60A	Pink Hill	127.70	50	P	PKPdf	20 49 05.7	-0.1
	baz=292						
Y60A	Bolivia	127.70	51	P	PKPdf	20 49 05.7	-0.1
	baz=291						
CWF	Charnwood Fore	127.73	338	eP	PKPdf	20 49 05.0	-0.3
CWF				IAMs_20	IAMs_20	21 48 47.9	
	comp=Z,14µm,20.0s						
M61A	Granite Spring	127.75	41	P	PKPdf	20 49 05.6	-0.1

	baz=300						
V60A	Jim Taylor Roa	127.77	49	P	PKPdf	20 49 05.7	-0.2
	baz=293						
PAL	Palisades	127.81	41	P	PKPdf	20 49 05.9	+0.1
	baz=300						
O61A	Allentown	127.82	43	P	PKPdf	20 49 05.6	-0.2
	baz=299						
061Z	Ochoppi	127.86	62	P	PKiKP	20 49 07.3	+0.4
	baz=283						
Q61A	Milford	127.86	44	P	PKiKP	20 49 06.4	-0.1
	baz=297						
P61A	Hammonton	127.86	43	P	PKPdf	20 49 06.1	+0.1
	baz=298						
CFA	Coronel Fontan	127.92	138	PKP	PKiKP	20 49 06.8	-0.2
	comp=Z,108nm,0.8s,baz=251,slow=2.8,SNR=92						
CFA				pPKP	pPKPdf	20 49 23.9	-1.7
	comp=Z,130nm,0.8s,baz=274,slow=1.0,SNR=9.8						
CFA				SKPbc	SKPbc	20 52 20.0	
	comp=Z,2.4nm,0.7s,baz=74,slow=8.7,SNR=1.3						
CFA				SKKPbc	SKKPbc	21 02 15.4	-0.9
	comp=Z,7.5nm,1.0s,baz=17,slow=1.5,SNR=5.6						
062Z	Marathon	127.97	63	P	PKiKP	20 49 07.1	-0.1
	baz=282						
BRU2	Volcan	127.98	84	*e*P	PKiKP	20 49 07.5	-0.2
060Z	West Palm Beac	128.04	61	P	PKPdf	20 49 06.9	+0.3
	baz=284						
060A	Indiantown	128.05	60	P	PKiKP	20 49 07.1	-0.2
	baz=284						
GMM	Mts of Mourne	128.06	342	*e*P	PKiKP	20 49 06.8	+0.3
R61A	Willards	128.09	45	P	PKPdf	20 49 06.7	+0.3
	baz=297						
S61A	Accomac	128.14	46	P	PKPdf	20 49 06.6	0.0
	baz=296						
U61A	Possum Corner	128.15	48	P	PKPdf	20 49 06.5	-0.1
	baz=294						
W61A	Ground Anchor	128.21	49	P	PKPdf	20 49 06.5	-0.2
	baz=293						
WME	Myndd Eilian	128.25	340	*e*P	PKPdf	20 49 06.5	+0.3
V61A	Roper	128.27	48	P	PKPdf	20 49 07.0	+0.1
	baz=294						
PKME	Peaks-Kenny Pk	128.29	35	P	PKPdf	20 49 06.5	-0.1
	baz=307						
FOEL	Foel Wylfa	128.29	339	*e*P	PKPdf	20 49 06.5	0.0
FOEL				IAMs_20	IAMs_20	21 47 52.1	
	comp=Z,10µm,21.8s						
WLF1	Llynfaes	128.37	340	*e*P	PKPdf	20 49 06.4	-0.1
WLF1				IAMs_20	IAMs_20	21 47 31.2	
	comp=Z,15µm,23.0s						
YLL	Llanberis	128.42	340	*e*P	PKPdf	20 49 06.8	+0.2
YRC	Rhoscolyn	128.46	341	*e*P	PKPdf	20 49 06.5	-0.1
HLM1	Long Mynd	128.48	339	*e*P	PKPdf	20 49 05.9	-0.9
HLM1				IAMs_20	IAMs_20	21 47 54.9	
	comp=Z,11µm,20.8s						
HRV	Adam Dziewonsk	128.53	39	*e*PKPdf	PKiKP	20 49 07.9	+0.1
HRV	Adam Dziewonsk	128.53	39	*e*PKIKP	PKiKP	20 49 07.9	+0.1
HRV	Adam Dziewonsk	128.53	39	P	PKPdf	20 49 07.3	+0.1
	baz=303						
VAE	Valguarnera	128.74	314	PKP	PKiKP	20 49 09.5	+1.0
	comp=Z,14nm,1.1s,baz=39,slow=1.3,SNR=10						
VAE				SKPbc	SKPbc	20 52 23.7	
	comp=Z,52nm,1.0s,baz=358,slow=4.3,SNR=8.9						
V62A	Hyde County Ai	128.83	48	P	PKiKP	20 49 08.5	-0.1
	baz=294						
WOL	Wolverton	128.83	337	*e*P	PKPdf	20 49 07.2	-0.2
WOL				IAMs_20	IAMs_20	21 40 41.5	
	comp=Z,17µm,31.0s						
GO03	Copiap	128.93	133	*e*P	PKiKP	20 49 09.1	-0.1
MCH1	Michaelchurch	128.95	339	*e*P	PKPdf	20 49 06.5	-1.2
MCH1				IAMs_20	IAMs_20	21 48 07.5	
	comp=Z,12µm,21.0s						
PRVC	Isla de Provid	129.19	78	*e*P	PKiKP	20 49 09.7	-0.2
RSBS	Rosebush, Pemb	129.60	340	*e*P	PKPdf	20 49 08.2	-0.8
RSBS				IAMs_20	IAMs_20	21 48 53.8	
	comp=Z,5µm,24.3s						
M65A	Busby, Falmout	129.62	39	P	PKPdf	20 49 09.0	-0.2
	baz=303						
VCA	Vinchina	129.71	135	*e*P	PKPdf	20 49 09.1	-1.0
ATAH	Atahualpa	130.24	105	PKP	PKiKP	20 49 13.9	+1.4
	comp=Z,300nm,0.9s,baz=309,slow=1.9,SNR=4.8						
ATAH				SKPbc	SKPbc	20 52 30.2	+0.9
	comp=Z,142nm,0.9s,baz=238,slow=3.6,SNR=17						
NNA	Nana	130.35	111	PKP	PKiKP	20 49 12.4	+0.1
	comp=Z,163nm,0.9s,baz=276,slow=3.8,SNR=59						
NNA				pPKP	pPKPdf	20 49 29.8	-0.9
	comp=Z,285nm,1.1s,baz=271,slow=5.4,SNR=8.6						
NNA				SKPab	SKPbc	20 52 32.6	+3.4
	comp=Z,44nm,0.9s,baz=269,slow=4.4,SNR=8.0						
NNA	Nana	130.35	111	*e*PKPdf	PKiKP	20 49 12.2	-0.1
PB14	IPOC Station P	130.45	130	*e*P	PKiKP	20 49 12.7	0.0
TCA	Tanti	130.45	141	*e*P	PKPdf	20 49 10.9	-0.5
SSB	Saint Sauveur	130.58	328	*e*PKPdf	PKiKP	20 49 12.7	+0.8
SSB	Saint Sauveur	130.58	328	*e*PKIKP	PKiKP	20 49 12.7	+0.8
GO02	Mina Guanaco	130.77	131	*e*P	PKiKP	20 49 13.4	+0.1
BCIP	Isla Barro Col	130.80	83	*e*P	PKPdf	20 49 12.5	+0.3
BCIP	Isla Barro Col	130.80	83	*e*P	PKPdf	20 49 11.5	-0.7
PB10	IPOC Station P	130.92	128	*e*P	PKiKP	20 49 13.4	+0.2
CCA1	Carnmenellis	131.24	339	*e*P	PKPdf	20 49 12.5	+0.4
CCA1				IAMs_20	IAMs_20	21 49 14.8	
	comp=Z,13µm,22.8s						
TUMC	Tumaco	131.50	93	*i* P	PKiKP	20 49 14.6	0.0
CYA	Choya	131.55	137	*e*P	PKPdf	20 49 13.7	+0.3
PB04	IPOC Station P	131.85	127	*e*P	PKiKP	20 49 14.8	-0.5
PB15	IPOC Station P	131.93	129	*e*P	PKiKP	20 49 15.5	0.0
PB06	IPOC Station P	132.11	128	*e*P	PKiKP	20 49 15.5	-0.3
GRGC	Isla de Gorgon	132.17	91	*e*P	PKiKP	20 49 15.7	-0.3
GBN	Guysborough	132.31	30	*e*PKPdf	PKiKP	20 49 15.2	-0.1
PB03	IPOC Station P	132.31	127	*e*P	PKiKP	20 49 15.9	-0.4
PB07	IPOC Station P	132.37	127	*e*P	PKPdf	20 49 15.5	+0.2
PB02	IPOC Station P	132.57	126	*e*P	PKiKP	20 49 16.2	-0.5
LVC	Limon Verde	132.68	128	PKP	PKiKP	20 49 16.7	-0.5
	comp=Z,40nm,0.6s,baz=181,slow=1.8,SNR=32						
LVC				SKPab	SKPab	20 52 41.7	+2.4
	comp=Z,31nm,0.8s,baz=263,slow=5.5,SNR=8.9						
LVC	Limon Verde	132.68	128	*e*PKPdf	PKiKP	20 49 17.8	+0.6
LVC	Limon Verde	132.68	128	*e*PKIKP	PKiKP	20 49 17.8	+0.6
PB09	IPOC Station P	132.85	127	*e*P	PKPdf	20 49 14.8	-1.4
CPAS2	Pasto	132.89	94	*e*P	PKiKP	20 49 19.4	+1.5
AHML	Horco Molle	132.91	135	*e*P	PKPdf	20 49 11.6	-4.5
BBAC	Balboa, Cauca	132.99	93	*e*P	PKPdf	20 49 15.6	-1.2
PB01	IPOC Station P	133.04	126	*e*PKPdf	PKiKP	20 49 17.5	-0.2
PB01	IPOC Station P	133.04	126	*e*P	PKiKP	20 49 17.3	-0.3
SOLC	Bahia Solano	133.15	87	*i* P	PKiKP	20 49 17.4	-0.5
KEST	Kesra	133.16	315	PKP	PKiKP	20 49 17.6	+0.2
	comp=Z,31nm,0.9s,baz=273,slow=1.1,SNR=20						
KEST				SKPbc	SKPbc	20 52 38.6	-0.1
	comp=Z,132nm,1.0s,baz=294,slow=1.0,SNR=12						
CRUC	La Cruz	133.23	94	*e*P	PKiKP	20 49 18.7	+0.1
PB11	IPOC Station P	133.54	124	*e*PKPdf	PKiKP	20 49 18.2	-0.6
POPC	Popayan, Colom	133.61	92	*e*P	PKPdf	20 49 17.9	0.0
SOTA	Rioblanco	133.64	93	*i* P	PKiKP	20 49 19.2	-0.4
PB08	IPOC Station P	133.76	125	*e*P	PKPdf	20 49 13.4	-4.8
GO01	Chusmiza	133.97	125	*e*PKPdf	PKiKP	20 49 20.4	+0.4
CMAH	Djebel Manchou	134.04	317	P	PKPdf	20 49 17.4	-0.5
SLA	San Lorenzo	134.05	133	*e*P	PKPdf	20 49 15.9	-2.5
YOTC	Yotoco, Valle	134.07	90	*i* P	PKPdf	20 49 18.5	-0.1
ABSA	Djebel Ababsia	134.19	316	P	PKPdf	20 49 18.0	-0.2
PLMC	San Jos del P	134.20	89	*e*P	PKPdf	20 49 18.5	-0.3
MARP	Paez Belalcaza	134.36	92	*e*P	PKiKP	20 49 20.1	-0.6
FLOC	Florencia	134.52	94	*e*P	PKiKP	20 49 20.2	-0.6
CKFL	Kef-Lekhel	134.63	317	P	PKPdf	20 49 19.0	-0.1
BETC	Betania	134.85	92	*e*P	PKiKP	20 49 21.0	-0.4
HELC	Santa Helena	135.01	87	*e*P	PKPdf	20 49 21.2	+0.5
DFRA	Djebel Bou Aff	135.12	318	P	PKiKP	20 49 21.1	-0.4
RREF	El Recreo	135.13	89	*i* P	PKiKP	20 49 22.4	-0.3
GUY2C	Guyana, Caldas	135.13	89	*e*P	PKiKP	20 49 22.0	-0.5
ORTC	Ortega, Tolima	135.16	91	*e*P	PKPdf	20 49 21.0	+0.4
PTLC	Puerto Leguiza	135.18	96	*i* P	PKPdf	20 49 20.7	+0.1
PRAC	Prado	135.50	91	*e*P	PKPdf	20 49 21.6	+0.4
SET	Setif	135.63	318	P	PKiKP	20 49 22.0	-0.5
NORC	Norcasia	135.64	88	*e*P	PKPdf	20 49 21.1	-0.4
ZARC	Zaragoza, Cauc	135.72	85	*i* P	PKPdf	20 49 21.8	+0.2
PTBC	PUERTO BERRIO,	136.09	87	*e*P	PKPdf	20 49 21.4	-0.8
ROSC	El Rosal	136.14	89	PKP	PKiKP	20 49 23.8	-0.7
	comp=Z,151nm,0.6s,baz=317,slow=3.4,SNR=30						
ROSC				SKPab	SKPab	20 52 54.2	-0.5
	comp=Z,52nm,0.7s,baz=76,slow=7.9,SNR=7.4						
ROSC	El Rosal	136.14	89	*e*PKPdf	PKiKP	20 49 24.5	-0.1
ROSC	El Rosal	136.14	89	*i* P	PKPdf	20 49 23.4	+0.6
SMRC	Santa Marta, M	136.28	80	*i* P	PKPdf	20 49 22.9	+0.4
MACC	Macarena, Meta	136.38	93	*e*P	PKPdf	20 49 22.9	+0.1
LPAZ	La Paz	136.47	121	PKhKP	PKPpre	20 49 11.8	
	comp=Z,33nm,1.0s,baz=179,slow=1.4,SNR=23						
LPAZ				PKP	PKiKP	20 49 25.3	-0.1
	comp=Z,120nm,0.9s,baz=11,slow=2.1,SNR=26						
LPAZ				SKPab	SKPab	20 52 57.0	+0.7
	comp=Z,57nm,0.8s,baz=260,slow=2.8,SNR=10						
LPAZ	La Paz	136.47	121	*e*PKPdf	PKiKP	20 49 25.1	-0.3
SMLC	San Martn de	136.50	84	*i* P	PKPpre	20 49 18.2	
CHIC	Chingaza	136.72	90	*e*P	PKPpre	20 49 14.9	
VILC	Villavicencio,	136.72	90	*i* P	PKPpre	20 49 17.5	
BRRC	Barranca, Sant	136.84	86	*e*P	PKPpre	20 49 17.2	
CODC	Agustn Codazz	137.10	82	*e*P	PKPpre	20 49 15.3	
OCAC	Ocana	137.25	84	*e*P	PKPpre	20 49 20.7	
BARC	Barichara	137.36	87	*e*P	PKPpre	20 49 13.2	
RUSC	La Rusia	137.43	88	*i* P	PKPpre	20 49 19.4	
YOPC	Yopal, Colombi	138.06	89	*i* P	PKPpre	20 49 15.2	
SDDR	Presa de Saban	138.06	68	*e*PKPdf	PKiKP	20 49 27.0	-0.8
UCM	Universidad Co	138.14	329	PKP	PKPdf	20 49 23.4	-1.9
UCM	Universidad Co	138.14	329	PP	PP	20 52 33.5	+20
URIC	Uribia, Colomb	138.43	79	*i* P	PKPdf	20 49 27.4	+0.9
CPUP	Villa Florida	138.48	142	PKhKP	PKPpre	20 49 17.1	
	comp=Z,5.7nm,0.5s,baz=175,slow=1.2,SNR=15						
CPUP				PKP	PKPdf	20 49 25.6	-0.8
	comp=Z,26nm,0.8s,baz=235,slow=1.7,SNR=17						
CPUP				pPKP	pPKPdf	20 49 44.1	-1.4
	comp=Z,37nm,0.7s,baz=260,slow=0.9,SNR=6.1						
CPUP				PKS	PKSbc	20 53 01.0	-1.3
	comp=Z,44nm,0.9s,baz=238,slow=4.1,SNR=9.0						
CPUP	Villa Florida	138.48	142	*e*P	PKiKP	20 49 28.1	-0.4
PBRG	Braganca	138.68	333	*e*PKPdf	PKPdf	20 49 25.3	-1.0
PBRG				*e*SKP		20 52 56.9	
TAMC	Tame, Arauca	138.73	87	*i* P	PKPpre	20 49 18.9	
ESDC	Sonseca Array	138.98	329	PKhKP	PKPpre	20 49 18.7	
	comp=Z,1.0nm,0.6s,baz=22,slow=3.1,SNR=10.0						
ESDC				PKP	PKPdf	20 49 27.9	+1.0
	comp=Z,4.1nm,0.7s,baz=31,slow=2.6,SNR=20						
ESDC				SKPbc	SKPbc	20 52 56.5	0.0
	comp=Z,11nm,0.8s,baz=25,slow=2.9,SNR=10						
ESDC				SKPab	SKPab	20 53 06.6	+0.6
	comp=Z,21nm,0.9s,baz=32,slow=4.2,SNR=6.8						
ESDC				PKKP	PKKPdf	20 58 57.0	+0.5
	comp=Z,0.4nm,0.4s,baz=272,slow=1.5,SNR=5.9						
PGAV	Gavieira, Arco	139.22	335	*e*PKPdf	PKPdf	20 49 27.4	0.0
PGAV				*e*SKP		20 52 57.7	
PGAV	Gavieira, Arco	139.22	335	*e*LQ	LQ	21 38 22.7	
PGAV				*e*LR	LR	21 48 20.4	
	comp=Z,11µm,22.0s						
PAB	San Pablo	139.27	329	*e*PKPdf	PKPdf	20 49 28.6	+1.1
PAB	San Pablo	139.27	329	*e*PKIKP	PKPdf	20 49 28.6	+1.1
MVO	Moncorvo	139.32	333	*e*PKPdf	PKPdf	20 49 26.4	-1.1
MVO				*e*SKP		20 52 56.3	
MVO	Moncorvo	139.32	333	*e*LQ	LQ	21 30 23.8	
MVO	Moncorvo	139.32	333	*e*LR	LR	21 41 07.0	
	comp=Z,6µm,20.0s						
PCAB	Cabril	139.33	334	*e*PKPdf	PKPdf	20 49 26.0	-1.5
PCAB				*e*SKP		20 52 58.0	
POLO	Lamas de Olo	139.50	334	*e*PKPdf	PKPdf	20 49 27.2	-0.7
POLO				*e*SKP		20 52 58.5	
PVRL	Vila Real	139.54	334	*e*PKPdf	PKPdf	20 49 28.8	+0.9
PVRL				*e*SKP		20 52 57.9	
SDV	Santo Domingo	139.90	83	PKhKP	PKPpre	20 49 20.8	
	comp=Z,52nm,0.6s,baz=300,slow=3.8,SNR=44						
SDV				PKP	PKPdf	20 49 29.8	+0.3
	comp=Z,396nm,0.8s,baz=266,slow=2.4,SNR=57						
SDV				SKPbc	SKPbc	20 53 01.1	+1.3
	comp=Z,142nm,0.8s,baz=248,slow=4.9,SNR=6.9						
SDV	Santo Domingo	139.90	83	*e*PKPdf	PKPdf	20 49 30.2	+0.7
SDV	Santo Domingo	139.90	83	*i* P	PKPdf	20 49 20.3	-9.2
PTO	Porto	140.04	334	*e*PKPdf	PKPdf	20 49 29.6	+0.9
PVIS	Viseu	140.08	333	*e*PKPdf	PKPdf	20 49 28.5	-0.4
PVIS				*e*SKP		20 52 56.7	
MTE	Manteigas	140.17	333	*e*PKPdf	PKPdf	20 49 27.7	-1.4
MTE				*e*SKP		20 52 59.5	
MTE	Manteigas	140.17	333	*e*LQ	LQ	21 29 29.9	
MTE	Manteigas	140.17	333	*e*LR	LR	21 41 15.4	
	comp=Z,8µm,20.0s						
MTE	Manteigas	140.17	333	*e*PKPdf	PKPdf	20 49 29.9	+0.8
PCBR	Castelo Branco	140.59	332	*e*PKPdf	PKPdf	20 49 30.3	+0.5
PCBR				*e*SKP		20 53 00.7	
PMRV	Marv??o	140.87	331	*e*PKPdf	PKPdf	20 49 29.3	-1.0
PMRV				*e*SKP		20 53 02.2	
PMRV	Marv??o	140.87	331	*e*LQ	LQ	21 31 27.1	
PMRV	Marv??o	140.87	331	*e*LR	LR	21 42 43.1	
	comp=Z,5µm,22.0s						
HORN	Hornachuelos	141.01	328	P	PKPdf	20 49 27.4	-3.3
PTOM	Tomar	141.19	333	*e*PKPdf	PKPdf	20 49 31.8	+0.9
PTOM				*e*SKP		20 53 02.9	
EMAL	Malaga-Limoner	141.35	326	PKP	PKPdf	20 49 20.0	-11
EMAL	Malaga-Limoner	141.35	326	PP	PP	20 52 59.0	+25
MELI	Melilla	141.51	323	PKP	PKPdf	20 49 24.7	-6.8
MELI	Melilla	141.51	323	PP	PP	20 53 02.1	+28
PMTG	Montargil	141.55	332	*e*PKPdf	PKPdf	20 49 29.4	-2.1
PMTG				*e*SKP		20 53 00.8	
ALMR	Almeirim	141.64	332	*e*PKPdf	PKPdf	20 49 31.2	-0.5
ALMR				AMS	AMS	21 44 26.2	
	comp=N,7µm,21.4s						
ALMR	Almeirim	141.64	332	*e*PKPdf	PKPdf	20 49 32.1	+0.4
ALMR				*e*SKP		20 53 02.3	
ALMR	Almeirim	141.64	332	*e*PKIKP	PKPdf	20 49 31.2	-0.5
JBK	JBK	141.93	321	P	PKPdf	20 49 29.0	-3.7
PMAFR	Mafra	142.13	333	*e*PKPdf	PKPdf	20 49 30.9	-1.7
PMAFR				*e*SKP		20 53 05.0	
PBEJ	Beja	142.20	331	*e*PKPdf	PKPdf	20 49 31.7	-1.0
PBEJ				*e*SKP		20 53 08.0	
LIS	Lisbon	142.26	333	*e*PKPdf	PKPdf	20 49 32.8	0.0
LIS				*e*SKP		20 53 06.4	
PVLZ	Peæn de	142.41	324	PKP	PKPdf	20 49 27.5	-5.7
PVLZ	Peæn de	142.41	324	PP	PP	20 53 00.8	+21
PNCL	Nicolau / Gran	142.46	331	*e*PKPdf	PKPdf	20 49 30.2	-3.0
PNCL				*e*SKP		20 53 05.9	
SIV	San Ignacio	142.47	126	PKhKP	PKPpre	20 49 29.7	
	comp=N,49nm,0.5s,baz=255,slow=5.3,SNR=102						
SIV				PKS	PKSdf	20 53 10.1	+0.2
	comp=N,95nm,0.9s,baz=234,slow=4.4,SNR=10.0						
FIGM	Figuig	142.49	317	P	PKPdf	20 49 31.0	-2.6
CEUT	Ceuta	142.49	326	P	PKiKP	20 49 35.1	-1.2
CEU	Ceuta	142.50	326	PKP	PKPdf	20 49 24.8	-8.5
CEU	Ceuta	142.50	326	PP	PP	20 52 54.1	+14
SFS	San Fernando	142.54	327	PKP	PKPdf	20 49 28.8	-4.6
SFS	San Fernando	142.54	327	PP	PP	20 52 58.3	+18
PCVE	Castro Verde	142.60	330	*e*PKPdf	PKPdf	20 49 31.4	-2.0
PCVE				*e*SKP		20 53 04.8	
SMIR	Smir Dam	142.66	326	P	PKiKP	20 49 37.0	+0.3
PBDV	Barranco-do-Ve	142.85	330	*e*PKPdf	PKPdf	20 49 32.3	-1.6
PTEO	Sao Teotonio	143.00	331	*e*PKPdf	PKPdf	20 49 32.2	-1.9
PTEO				*e*SKP		20 53 07.3	
SJG	San Juan	143.01	68	PKhKP	PKPpre	20 49 30.8	
	comp=N,147nm,0.7s,baz=55,slow=2.0,SNR=26						
SJG				SKP		20 53 04.4	
	comp=N,39nm,0.9s,baz=317,slow=5.4,SNR=3.1						
SJG				SKPbc	SKPbc	20 53 07.7	+0.4
	comp=N,45nm,0.7s,baz=35,slow=1.6,SNR=6.2						
SJG	San Juan	143.01	68	*i* P	PKPab	20 49 28.0	-2.0
MORF	Marmelete	143.15	331	*e*PKPdf	PKPdf	20 49 33.8	-0.8
MORF				AMS	AMS	21 54 24.8	
	comp=N,7µm,21.4s						
MORF	Marmelete	143.15	331	*e*PKPdf	PKPbc	20 49 33.0	+1.5
MORF	Marmelete	143.15	331	*e*PP	PP	20 52 46.9	+2.6
MORF	Marmelete	143.15	331	*e*PKIKP	PKPdf	20 49 33.7	-0.8
PFVI	Vila Bisbo	143.38	331	*e*PKPdf	PKPdf	20 49 33.7	-1.1
PFVI				*e*SKP		20 53 02.1	
IFR	Ifrane	144.05	323	PKP	PKPab	20 49 31.8	-2.1
IFR	Ifrane	144.05	323	PP	PP	20 53 05.5	+15
MDT	Midelt	144.21	321	PKP	PKPdf	20 49 36.3	-0.3
	comp=N,42nm,0.8s,baz=76,slow=4.3,SNR=37						
MDT				SKPbc	SKiKP	20 53 10.6	-0.2
	comp=N,85nm,1.1s,baz=33,slow=4.4,SNR=7.8						
PCRV	Puerto La Cruz	145.75	81	PKPbc	PKPdf	20 49 39.2	-0.4
	comp=N,253nm,0.5s,baz=336,slow=0.7,SNR=152						
PCRV				SKP		20 53 08.9	
	comp=N,18nm,1.0s,baz=26,slow=12,SNR=2.7						
PCRV				PKS	PKSdf	20 53 16.5	+1.2
	comp=N,34nm,0.9s,baz=251,slow=8.1,SNR=7.5						
SABA	Saba	145.81	67	*e*P	PKPdf	20 49 39.4	-0.1
SMRT	St. Maarten	145.84	67	*e*P	PKPdf	20 49 39.1	-0.5
SEUS	St. Eustatius	146.08	68	*e*P	PKPdf	20 49 40.0	0.0
BSK	Brimstone Hill	146.25	68	*e*P	PKPbc	20 49 41.5	0.0
SKDB	Saint Kitts 2	146.27	68	*e*P	PKPab	20 49 42.4	0.0
SKI	Saint Kitts	146.35	68	*e*P	PKPdf	20 49 40.4	-0.1
H07N1	FLORES T-PHASE	146.49	1	*e*PKP	PKiKP	20 49 43.7	-0.8
SKTB	Turtle Beach	146.49	68	*e*P	PKPab	20 49 42.8	-0.4
NVRH	Round Hill, Ne	146.51	68	*e*P	PKPab	20 49 43.2	-0.2
NVBH	Bath Hotel, Ne	146.52	68	*e*P	PKPab	20 49 43.3	0.0
H07S1	FLORES T-PHASE	146.79	1	*e*PKP	PKPdf	20 49 41.1	+0.4
MLYT	Lee's Yard	147.01	69	*e*P	PKPdf	20 49 41.9	+0.3
PGRA	Graciosa	147.09	357	*e*PKP	PKPab	20 49 44.4	-0.5
PGRA	Graciosa	147.09	357	*e*LR	LR	21 40 14.3	
ANWB	Willy Bob	147.13	67	*e*P	PKPdf	20 49 41.6	-0.2
BPA	Boggy Peak	147.24	68	*e*P	PKPdf	20 49 43.0	+1.0
SHEL	Horse Pasture	147.33	228	*i* PKIKP	PKPbc	20 49 44.1	-0.6
PSCM	Serra do Cume	147.36	355	*e*PKP	PKPab	20 49 46.1	+0.1
PSCM	Serra do Cume	147.36	355	*e*PP	PP	20 53 08.5	-0.2
ADH	Angra Heroismo	147.41	356	*e*PKP	PKPdf	20 49 42.4	+0.7
ROSA	Rosais	147.41	357	*e*PKP	PKPbc	20 49 44.2	0.0
ROSA	Rosais	147.41	357	*e*LR	LR	21 41 59.2	
PMAN	Manadas	147.49	357	*e*PKP	PKPbc	20 49 43.6	-0.8
PCED	Cedros	147.52	358	*e*PKP	PKiKP	20 49 46.8	+0.2
PICO	Pico	147.64	357	*e*P	PKPab	20 50 01.9	+15
PPNO	Prainha do Nor	147.66	357	*e*PKP	PKPdf	20 49 43.3	+1.1
PCAN	Candelaria	147.68	357	*e*PKP	PKPbc	20 49 45.4	+0.4
TOA0	Torodi Ar. Sit	147.72	285	*e*PKPdf	PKPdf	20 49 41.9	-0.9
TOA0	Torodi Ar. Sit	147.72	285	P	PKPdf	20 49 42.4	-0.5
	SNR=99						
TORD	Torodi Ar. Bea	147.72	285	PKPbc	PKPdf	20 49 43.0	+0.2
	comp=N,143nm,1.1s,baz=78,slow=0.5,SNR=141						
TORD				PKPab	PKPab	20 49 48.7	+0.5
	comp=N,90nm,0.5s,baz=60,slow=2.9,SNR=101						
TORD				SKPbc	SKPbc	20 53 17.8	-0.5
	comp=N,21nm,0.8s,baz=96,slow=2.0,SNR=5.2						
MDPO	Dominica; Chan	147.99	70	*e*P	PKPdf	20 49 44.2	+1.0
BART	Pico Bartolome	148.06	352	*e*PKP	PKiKP	20 49 47.7	-0.2
PCALD	Caldeiras da R	148.09	353	*e*PKP	PKPbc	20 49 45.5	-0.6
PCALD	Caldeiras da R	148.09	353	*e*PP	PP	20 53 12.6	-0.3
PSET	Sete Cidades	148.09	353	*e*PKP	PKPbc	20 49 45.2	-0.9
PSET	Sete Cidades	148.09	353	*e*LR	LR	21 40 49.3	
DWS	Wesley	148.12	70	*e*P	PKPbc	20 49 46.5	-0.2
CMLA	Cha da Macela	148.12	353	*e*PKP	PKPab	20 49 48.6	-0.5
CMLA	Cha da Macela	148.12	353	*e*PKPdf	PKPbc	20 49 45.5	-0.7
CMLA	Cha da Macela	148.12	353	*e*PKIKP	PKPbc	20 49 45.5	-0.7
PDA	Ponta Delgada	148.16	353	*e*PKP	PKPbc	20 49 45.3	-0.9
PDA	Ponta Delgada	148.16	353	*e*PP	PP	20 53 13.6	+0.3
H05N1	Guadeloupe/Mar	148.17	69	PKPbc	PKPdf	20 49 44.3	+0.8
	SNR=605						
DLPL	La Plaine	148.23	71	*e*P	PKPbc	20 49 47.1	0.0
GRGR	Grenville	148.45	77	*e*P	PKPdf	20 49 41.8	-2.3
FDF	Fort de France	148.46	72	*e*PKPbc	PKiKP	20 49 49.3	+0.1
FDF	Fort de France	148.46	72	*e*P	PKPdf	20 49 43.7	-0.4
FDF	Fort de France	148.46	72	*e*PKP2	PKiKP	20 49 49.3	+0.1
SVB	Belmont	148.65	74	*e*P	PKPdf	20 49 43.8	-0.6
SVV	Soufriere Volc	148.68	74	*e*P	PKiKP	20 49 49.8	+0.1
FCV	Fort Charlotte	148.68	75	*e*P	PKPdf	20 49 45.3	+0.9
SSV	Crater Summit	148.70	74	*e*P	PKPbc	20 49 46.8	-1.6
SLDE	Delcer	148.74	73	*e*P	PKiKP	20 49 51.0	+1.2
SLB	Belfond	148.75	73	*e*P	PKPbc	20 49 46.8	-1.7
SVCV	St. Vincent, C	148.75	74	*e*P	PKPbc	20 49 46.6	-1.9
SLBI	Saint Lucia, B	148.78	73	*e*P	PKPdf	20 49 44.3	-0.3
SLW	Petit Monier	148.81	73	*e*P	PKiKP	20 49 50.2	+0.3
PSMN	Pico do Norte,	148.81	352	*e*PKP	PKPdf	20 49 44.9	+0.8
PSMN	Pico do Norte,	148.81	352	*e*PP	PP	20 53 18.4	+1.2
PSMN	Pico do Norte,	148.81	352	*e*LR	LR	21 41 10.3	
PSMA	Santa Maria	148.83	352	*e*PKP	PKPdf	20 49 45.4	+1.3
PSMA	Santa Maria	148.83	352	*e*PP	PP	20 53 21.6	+4.3
TPP	Pointe-a-Pierr	148.86	80	*e*P	PKPbc	20 49 47.4	-1.3
SLPA	Patience	148.86	73	*e*P	PKiKP	20 49 50.3	+0.3
MCLT	Moule a Chique	148.87	73	*e*P	PKPdf	20 49 44.2	-0.5
TRN	Trinidad (W)	148.87	79	*e*P	PKPdf	20 49 45.1	+0.4
TBH	Brigand Hill	149.22	80	*e*P	PKPbc	20 49 50.0	+0.4
PTGA	Pitinga	149.60	102	PKPbc	PKPdf	20 49 47.3	+1.3
	comp=N,448nm,1.0s,baz=263,slow=2.3,SNR=114						
PTGA	Pitinga	149.60	102	*e*PKPdf	PKPdf	20 49 46.7	+0.7
PTGA				*e*PKPbc	PKiKP	20 49 51.2	-0.4
TOSP	Speyside	149.65	78	*e*P	PKPdf	20 49 46.1	+0.1
PMPST	Porto Santo, M	150.13	336	*e*PKPdf	PKPdf	20 49 46.6	+0.3
PMPST	Porto Santo, M	150.13	336	*e*PP	PP	20 53 24.9	-0.3
PMPS	Porto Santo	150.15	336	*e*PKPdf	PKPdf	20 49 47.8	+1.5
PMPS	Porto Santo	150.15	336	*e*PP	PP	20 53 26.8	+1.5
BCHC	Barbados, Cave	150.23	74	*e*P	PKPdf	20 49 48.4	+1.5
BBGH	Gun Hill	150.30	74	*e*P	PKPbc	20 49 49.9	-2.3
BBSP	Saint Philip	150.40	74	*e*P	PKPdf	20 49 49.6	+2.5
PMAR	Madeira	150.67	337	*e*PKPdf	PKPdf	20 49 46.8	-0.6
PMAR	Madeira	150.67	337	*e*PP	PP	20 53 28.4	-0.1
PMOZ	Porto Moniz, M	150.70	337	*e*PKPdf	PKPdf	20 49 47.8	+0.5
PMOZ	Porto Moniz, M	150.70	337	*e*PP	PP	20 53 28.4	-0.1
PMOZ	Porto Moniz, M	150.70	337	*e*LR	LR	21 46 31.3	
	comp=N,5µm,20.0s						
PMOZ	Porto Moniz, M	150.70	337	*e*PKPdf	PKPdf	20 49 48.8	+1.4
FUL	Funchal	150.73	336	*e*PKPdf	PKPdf	20 49 48.3	+1.1
BDFB	Brasilia	152.20	141	PKP	PKPdf	20 49 51.2	+1.2
	comp=N,174nm,1.0s,baz=228,slow=0.9,SNR=123						
KIC	Kosan Boka	154.62	272	*e*P	PKPdf	20 49 51.9	-1.6
	comp=N,889nm,1.4s						
DBIC	Dimbokro	154.73	273	PKP	PKPdf	20 49 53.0	-0.5
	comp=N,65nm,1.1s,baz=95,slow=1.5,SNR=23						
DBIC				PKPab	PKPab	20 50 18.9	+1.6
	comp=N,118nm,1.0s,baz=67,slow=4.5,SNR=12						
DBIC	Dimbokro	154.73	273	*e*PKPdf	PKPdf	20 49 52.6	-1.0
TIC	Toumodi	154.89	273	*e*P	PKPdf	20 49 53.4	-0.5
LIC	Lamto	154.90	272	*e*P	PKPdf	20 49 53.3	-0.5
	comp=N,732nm,1.5s						
MDP	Montagnes des	157.72	91	PKP	PKPdf	20 49 58.4	+0.9
	comp=N,168nm,1.0s,baz=321,slow=2.7,SNR=33						
MDP				PKPab	PKPab	20 50 29.8	-0.4
	comp=N,136nm,0.7s,baz=237,slow=5.5,SNR=21						
ASCN	Ascension	158.92	229	*e*PKPdf	PKPdf	20 50 00.8	+1.8
RCBR	Riachuelo	166.94	154	PKP	PKPdf	20 50 07.8	+1.0
	comp=N,26nm,0.6s,baz=71,slow=1.0,SNR=6.2						
RCBR				PKPab	PKPab	20 51 11.4	+1.1
	comp=N,68nm,1.0s,baz=186,slow=6.0,SNR=4.2						
RCBR	Riachuelo	166.94	154	*e*PKPdf	PKPdf	20 50 07.1	+0.3
RCBR				*e*PKPab	PKPab	20 51 11.7	+1.4
SACV	Santiago Islan	168.97	324	*e*PKPdf	PKPdf	20 50 09.4	+1.3

ISCJB ***07*** *21:12:07.1±0.6, 6.°46S±0.°05×128.°06E±0.°09, h353km, mb3.3/5, Error ellipse: s-maj=11.7km s-min=6.8km az=8.6*

IDC ***07*** *21:12:08.7±1.5, 6.°41S×128.°09E, h349km±19km, mb3.1/5, mb1 3.2/8, mb1mx3.0/29, mbtmp3.9/8, Error ellipse: s-maj=28.9km s-min=14.9km az=80.0*

ISC 07 21:12:08.0±0.7**, 6.°49S**±0.°07×**128.°1E**±0.°1**, h353km, n9, σ2.s29**/13**, mb3.2**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BATI	Baumata	5.72	229	P	Pn	21 13 36.6	+0.8
	68nm,0.3s,baz=60,slow=2.1,SNR=82						
BATI				S	S	21 14 43.0	-4.0
	31nm,0.3s,baz=326,slow=17,SNR=25						
SIJI	Sorong	6.42	30	P	Pn	21 13 44.2	+0.3
	1.9nm,0.3s,baz=274,slow=23,SNR=16						
SIJI				S	S	21 14 58.0	-3.7
	2.2nm,0.3s,baz=135,slow=23,SNR=10						
WRA	Warramunga Arr	14.69	156	P	P	21 15 20.3	+1.1
	0.8nm,0.3s,baz=334,slow=13,SNR=14						
WRA				S	S	21 17 55.1	-2.6
	0.4nm,0.3s,baz=329,slow=19,SNR=5.4						
ASAR	Alice Springs	17.98	162	P	P	21 15 56.6	+1.9
	0.4nm,0.3s,baz=342,slow=11,SNR=22						
ASAR				S	S	21 19 01.3	-1.3
	0.2nm,0.3s,baz=340,slow=17,SNR=7.6						
STKA	Stephens Creek	28.24	155	P	P	21 17 31.1	+1.3
	0.4nm,0.3s,baz=317,slow=14,SNR=3.7						
MJAR	Matsushiro Arr	43.84	12	P	P	21 19 39.9	-0.7
	1.1nm,0.6s,baz=194,slow=10,SNR=4.4						
SONM	Songino Array	57.37	343	P	P	21 21 21.2	+0.6
	0.4nm,0.5s,baz=176,slow=4.3,SNR=3.2						
MKAR	Makanchi Array	66.76	328	P	P	21 22 22.5	+0.1
	0.4nm,0.5s,baz=126,slow=8.1,SNR=11						
ZALV	Zalesovo Beam	70.29	335	P	P	21 22 46.3	+2.5
	0.9nm,0.5s,baz=88,slow=12,SNR=4.0						

IDC 07 21:30:15.7±2.2**, 56.°50S**×**143.°10W, h0km, mb4.1**/1**, mb1 4.3**/1**, mb1mx3.7**/14**, mbtmp4.1**/1**, Error ellipse: s-maj=466.8km s-min=51.1km az=179.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASAR	Alice Springs	66.79	262	P	P	21 41 09.1	+0.2
	2.4nm,1.0s,baz=150,slow=6.4,SNR=6.0						
H01W1	Cape Leeuwin H	68.08	240	T	T	22 56 15.2	
	baz=143,slow=76,SNR=30						
H01W2	Cape Leeuwin H	68.08	240	T	T	22 56 18.1	
	baz=143,slow=76,SNR=33						
H01W3	Cape Leeuwin H	68.09	240	T	T	22 56 16.4	
	baz=143,slow=76,SNR=28						
H10S3	ASCENSION HYDR	102.23	128	T	T	23 39 00.0	
	baz=207,slow=75,SNR=3.5						
H10S2	ASCENSION HYDR	102.23	128	T	T	23 39 00.6	

	baz=207,slow=75,SNR=4.4						
H10S1	**ASCENSION HYDR**	**102.25**	**128**	T	T	23 39 04.2	
	baz=207,slow=75,SNR=2.8						
H10N3	**ASCENSION HYDR**	**103.29**	**127**	T	T	23 40 15.8	
	baz=206,slow=75,SNR=3.5						
H10N1	**ASCENSION HYDR**	**103.30**	**127**	T	T	23 40 21.4	
	baz=206,slow=75,SNR=4.3						
H10N2	**ASCENSION HYDR**	**103.31**	**127**	T	T	23 40 20.8	
	baz=206,slow=75,SNR=4.5						
ESDC	**Sonseca Array**	**148.52**	**105**	PKPbc	PKPbc	21 50 03.2	-0.5
	0.1nm,0.4s,baz=197,slow=4.7,SNR=3.7						
MKAR	**Makanchi Array**	**150.72**	**270**	PKPbc	PKPbc	21 50 08.1	-0.7
	0.2nm,0.5s,baz=106,slow=3.1,SNR=3.2						

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*IDC **07** 21:30:41.7±3.3, 16.°96S×65.°35W, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.7/19, mbtmp3.6/4, ML4.2/1, Error ellipse: s-maj=121.6km s-min=24.0km az=9.0*

*ISCJB **07** 21:30:43.8±0.8, 17.°29S±0.°07×65.°59W±0.°07, h10^{km}, mb3.5/3, Error ellipse: s-maj=13.2km s-min=5.1km az=41.2*

*SCB **07** 21:30:45.4±5.8, 17.°47S×65.°78W, h5^{km}±56^{km}, ML4.7/3, Error ellipse: s-maj=15.4km s-min=4.0km az=0.0*

ISC 07 21:30:43.5±0.8**, 17.°32S**±0.°07×**65.°66W**±0.°06**, h10**^{km}**, n17, σ1**^{s}**66**/21**, mb3.4**/3**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BS10	**CO. Tuti**	**0.24**	**233**	Pg	**Pg**	**21 30 49.2**	**+0.6**
BB01	**Montecillos**	**0.84**	**153**	P	**Pb**	**21 31 01.5**	**+1.1**
BB01				S	**Sb**	**21 31 11.9**	**0.0**
BB01				AML	AML	21 31 12.1	
	4µm,0.4s						
BS05	**Cuyupaya**	**1.26**	**284**	P	**Pn**	**21 31 06.8**	**-0.8**
BS08	**Valle Grande**	**1.89**	**129**	P	**Pb**	**21 31 18.9**	**+0.7**
BBOE	**La Paz, Chanca**	**2.28**	**282**	P	**Pn**	**21 31 23.0**	**+1.3**
BBOJ	**La Paz, Jacaqu**	**2.44**	**278**	P	**Pn**	**21 31 25.7**	**+1.7**
LPAZ	**La Paz**	**2.58**	**293**	Pn	**Pn**	**21 31 28.6**	**+2.7**
	32nm,0.3s,baz=110,slow=9.6,SNR=473						
LPAZ				Sn	**Sb**	**21 32 01.1**	**-1.1**
	141nm,0.3s,baz=36,slow=21,SNR=29						
LPAZ	**La Paz**	**2.58**	**293**	P	**Pn**	**21 31 28.1**	**+2.2**
LPAZ				S	**Sb**	**21 32 01.0**	**-1.2**
LPAZ				AML	AML	21 32 01.2	
	12µm,0.3s						
BBOB	**La Paz, Bander**	**2.64**	**296**	P	**Pn**	**21 31 28.6**	**+2.0**
BBOB				S	**Sn**	**21 32 01.6**	**+2.6**
BBOB				AML	AML	21 32 02.2	
	8µm,0.8s						
BS09	**Huarina**	**3.04**	**291**	P	**Pn**	**21 31 34.0**	**+1.9**
MNMC	**Minye Minye**	**4.15**	**244**	P	**Pn**	**21 31 46.9**	**-0.4**
PB11	**IPOC Station P**	**4.50**	**237**	P	**Pn**	**21 31 51.0**	**-1.0**
YJA	**Yavi**	**4.84**	**178**	P	**Pn**	**21 31 57.9**	**+1.1**
BB08	**Puerto Suarez**	**7.65**	**104**	P	**Pn**	**21 32 36.5**	**+1.5**
TXAR	**Lajitas Array**	**59.13**	**321**	P	**P**	**21 40 44.5**	**-0.2**
	0.2nm,0.7s,baz=152,slow=10,SNR=3.0						
PDAR	**Pinedale Array**	**72.14**	**328**	P	**P**	**21 42 07.0**	**-1.6**
	0.1nm,0.4s,baz=137,slow=8.0,SNR=2.3						
TORD	**Torodi Ar. Bea**	**73.06**	**70**	P	**P**	**21 42 11.9**	**-2.5**
	1.2nm,0.6s,baz=264,slow=4.7,SNR=14						

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*SNET **07** 21:53:25.1±0.9, 13.°37N×89.°97W, h33^{km}±4^{km}, ML3.0*

*GCG **07** 21:53:26.1±0.6, 13.°44N×90.°22W, h25^{km}±3^{km}, MD3.6*

ISC 07 21:53:24.1±2.1**, 13.°4N**±0.°1×**90.°05W**±0.°05**, h29**^{km}±14^{km}**, n15, σ0**^{s}**51**/21**, 2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.63**	**41**	⇓iP	**Pn**	**21 53 37.3**	**0.0**
RTR	**El Retiro**	**0.66**	**36**	eP	**Pn**	**21 53 37.8**	**+0.1**
SNJE	**San Jose**	**0.66**	**41**	⇓iP	**Pn**	**21 53 37.7**	**0.0**
UNIC	**Universidad Ca**	**0.78**	**38**	eP	**Pn**	**21 53 39.1**	**-0.1**
UNIC				IAML		21 53 39.7	
	comp=Z,455nm,0.1s						
UNIC				eS	**Sn**	**21 53 50.5**	**+0.4**
SNET	**Serv Nac Est T**	**0.86**	**68**	eP	**Pb**	**21 53 40.8**	**+0.3**
SNET				eS	**Sn**	**21 53 51.5**	**-0.3**
SNET				IAML		21 53 54.4	
	comp=Z,550nm,0.2s						
UEES	**Universidad Ev**	**0.86**	**66**	IAML		21 53 53.4	
	comp=Z,970nm,0.2s						
LFU	**La Fuente**	**0.98**	**67**	eP	**Pn**	**21 53 42.3**	**+0.2**
PCG	**Pacaya**	**1.16**	**332**	eP	**Pb**	**21 53 45.5**	**-0.2**
PCG				eS	**Sb**	**21 54 00.3**	**-0.1**
SNVI	**San Vicente**	**1.20**	**78**	eS	**Sn**	**21 54 00.4**	**-0.2**
NBG	**Las Nubes**	**1.25**	**347**	eP	**Pb**	**21 53 47.0**	**-0.2**
NBG				eS	**Sb**	**21 54 04.2**	**+1.1**
FUG	**Fuego 3**	**1.32**	**324**	eP	**Pn**	**21 53 47.3**	**+0.5**
FUG				eS	**Sn**	**21 54 03.0**	**-0.6**
FUG				eS	**Sb**	**21 54 03.9**	**-1.2**
VICT	**Victoria**	**1.49**	**67**	eP	**Pn**	**21 53 48.7**	**-0.4**
TECA	**Tecapa**	**1.51**	**85**	eP	**Pn**	**21 53 49.5**	**+0.1**
MRL	**Marmol**	**1.74**	**12**	eP	**Pn**	**21 53 52.8**	**+0.2**
STG3	**Santiaguito 3,**	**1.99**	**312**	eP	**Pn**	**21 53 56.6**	**+0.5**
STG3				eS	**Sn**	**21 54 20.2**	**+0.1**

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*ISCJB **07** 21:56:51.8±0.6, 20.°9N±0.°2×94.°6E±0.°1, h91^{km}, mb3.9/9, Error ellipse: s-maj=25.4km s-min=4.9km az=32.3*

*IDC **07** 21:56:53.3±1.3, 20.°76N×94.°52E, h95^{km}±12^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.4/39, mbtmp4.0/11, Error ellipse: s-maj=27.3km s-min=10.0km az=33.0*

ISC 07 21:56:53.1±0.9**, 20.°8N**±0.°2×**94.°5E**±0.°1**, h91**^{km}**, n21, σ0**^{s}**86**/23**, mb4.0**/9**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**3.27**	**306**	P	**Pn**	**21 57 44.2**	**+1.9**
	24nm,0.3s,baz=188,slow=7.4,SNR=7.2						
BRDH				S	**Sn**	**21 58 21.0**	**+0.8**
	118nm,0.3s,baz=72,slow=23,SNR=16						
CMMT	**Chiang Mai**	**4.61**	**114**	P	**Pn**	**21 58 00.5**	**0.0**
	7.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**4.77**	**118**	P	**Pn**	**21 58 03.2**	**+0.5**
	2.3nm,0.3s,baz=294,slow=14,SNR=31						
CMAR				S	**Sn**	**21 58 56.7**	**-0.1**
	1.1nm,0.3s,baz=318,slow=17,SNR=4.4						
PAYA	**Payao**	**5.23**	**105**	P	**Pn**	**21 58 10.0**	**+1.1**
	28µm,0.5s						
UTTA	**Uttaradit**	**6.46**	**117**	P	**Pn**	**21 58 26.5**	**+0.9**
	16µm,0.5s,337µm						
JIRN	**Jiri**	**10.23**	**314**	eP	**Pn**	**21 59 16.5**	**-0.8**
	11nm,0.2s						
PKI	**Pulchoki**	**10.71**	**311**	eP	**Pn**	**21 59 23.2**	**-0.7**
	3.4nm,0.2s						
PKIN	**Phulchoki**	**10.72**	**311**	eP	**Pn**	**21 59 23.3**	**-0.7**
	8.8nm,0.4s						
DMN	**Daman**	**10.95**	**310**	eP	**Pn**	**21 59 26.5**	**-0.5**
	4.4nm,0.3s						
GKN	**Gorkha**	**11.52**	**311**	eP	**Pn**	**21 59 34.3**	**-0.3**
	9.7nm,0.2s						
KOLN	**Koldanda**	**12.14**	**307**	eP	**Pn**	**21 59 43.1**	**0.0**
	8.0nm,0.3s						
PYUN	**Piuthan**	**12.77**	**307**	eP	**Pn**	**21 59 51.6**	**+0.1**
	4.1nm,0.2s						
MKAR	**Makanchi Array**	**27.80**	**342**	P	**P**	**22 02 34.2**	**+0.7**
	0.6nm,0.4s,baz=162,slow=8.7,SNR=9.0						
ZALV	**Zalesovo Beam**	**33.94**	**350**	P	**P**	**22 03 28.2**	**+0.8**
	1.4nm,0.6s,baz=169,slow=6.5,SNR=5.5						
TIXI	**Tiksi**	**54.61**	**13**	P	**P**	**22 06 11.4**	**-0.4**
	1.2nm,0.3s,baz=236,slow=3.6,SNR=2.8						
AKASG	**Malin Array Be**	**58.61**	**317**	P	**P**	**22 06 40.6**	**+0.1**
	0.6nm,0.3s,baz=83,slow=7.3,SNR=4.9						
FINES	**FINESS Array B**	**61.67**	**329**	P	**P**	**22 07 01.1**	**-0.1**
	2.1nm,0.8s,baz=170,slow=12,SNR=4.0						
ARCES	**ARCESS Array B**	**63.39**	**338**	P	**P**	**22 07 11.9**	**-0.6**
	2.0nm,0.9s,baz=78,slow=7.6,SNR=4.4						
GERES	**GERESS Array B**	**68.69**	**316**	P	**P**	**22 07 47.9**	**+1.0**
	0.6nm,0.5s,baz=72,slow=8.6,SNR=8.3						
NOA	**NORSAR Array B**	**68.83**	**329**	P	**P**	**22 07 45.6**	**-1.9**
	0.3nm,0.4s,baz=95,slow=5.4,SNR=2.8						
LSZ	**Lusaka**	**74.31**	**247**	P	**P**	**22 08 21.2**	**-0.1**
	0.7nm,0.4s,baz=55,slow=4.5						

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*ISCJB **07** 21:58:45.4±0.2, 39.°90S±0.°02×176.°77E±0.°03, h49^{km}±2^{km}, mb4.9/32, MS5.0/1, Error ellipse: s-maj=4.4km s-min=2.3km az=22.4*

*MOS **07** 21:58:45.6±1.4, 39.°55S×176.°65E, h33^{km}, mb5.0/11, Error ellipse: s-maj=18.2km s-min=14.3km az=40.2*

*WEL **07** 21:58:45.9, 40°S±1°×17°7E±°, h49^{km}±2^{km}, M5.0/68, ML5.2/52, MLv5.0/68, Error ellipse: s-maj=0.0km s-min=0.0km az=102.0*

*BJI **07** 21:58:46.4±0.0, 40.°28S×176.°39E, h49^{km}, mb5.2/9, Ms5.3/2, Ms7 5.1/2*

*NEIC **07** 21:58:46.0±0.0, 39.°85S×176.°73E, h31^{km}, mb4.8/26, ML4.9(WEL), After WEL.*

NEIC Felt at Hastings and Napier.

*IDC **07** 21:58:49.5±1.9, 39.°63S×176.°50E, h61^{km}±17^{km}, mb4.5/10, mb1 4.7/10, mb1mx4.5/20, mbtmp4.8/10, Error ellipse: s-maj=17.2km s-min=13.9km az=65.0*

ISC 07 21:58:46.5±0.3**, 39.°90S**±0.°02×**176.°66E**±0.°04**, h36**^{km}±1^{km}**, n321, σ1**^{s}**44**/356**, mb5.0**/32**, 17C-19D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAHZ	**Kahuranaki**	**0.19**	**59**	P	**Pn**	**21 58 53.9**	**-0.8**
KAHZ				S	**Sn**	**21 58 59.9**	**-1.8**
PXZ	**Pawanui**	**0.20**	**132**	P	**Pn**	**21 58 54.8**	**+0.3**
PXZ				S	**Sn**	**21 59 01.7**	**+0.3**
WPHZ	**Waipukurau**	**0.24**	**225**	P	**Pn**	**21 58 55.7**	**+1.4**
WPHZ				S	**Sn**	**21 59 03.1**	**+2.2**
KRHZ	**Kereru**	**0.34**	**318**	P	**Pn**	**21 58 55.2**	**+0.3**
KRHZ				S	**Sn**	**21 59 01.7**	**+0.5**
PRHZ	**Porangahau**	**0.37**	**183**	P	**Pn**	**21 58 57.3**	**+2.1**
MCHZ	**McNeill Hill**	**0.45**	**3**	P	**Pn**	**21 58 56.4**	**0.0**
MCHZ				S	**Sn**	**21 59 03.9**	**+0.6**
KWHZ	**Kaweka Forest**	**0.51**	**338**	P	**Pn**	**21 58 57.0**	**-0.3**
KWHZ				S	**Sn**	**21 59 04.9**	**+0.2**
BHHZ	**Black Hill Sta**	**0.62**	**311**	P	**Pn**	**21 58 59.0**	**+0.2**
BHHZ				S	**Sn**	**21 59 07.8**	**+0.3**
BKZ	**Black Stump Fm**	**0.74**	**350**	ePn	**Pn**	**21 59 00.2**	**-0.3**
BKZ				eSn	**Sn**	**21 59 08.8**	**-1.6**
BKZ	**Black Stump Fm**	**0.74**	**350**	P	**Pn**	**21 59 00.2**	**-0.3**
BKZ				S	**Sn**	**21 59 10.2**	**-0.3**
NMHZ	**Naumai**	**0.81**	**8**	P	**Pn**	**21 59 01.4**	**0.0**
NMHZ				S	**Sn**	**21 59 12.5**	**+0.3**
PRWZ	**Pori Road**	**0.85**	**219**	P	**Pn**	**21 59 03.7**	**+1.9**
POWZ	**Post Office Ro**	**0.85**	**234**	P	**Pn**	**21 59 03.5**	**+1.7**
BFZ	**Birch Farm**	**0.85**	**202**	ePn	**Pn**	**21 59 03.3**	**+1.4**
BFZ				eSn	**Sn**	**21 59 15.9**	**+2.7**
WHHZ	**Waihua**	**0.93**	**29**	P	**Pn**	**21 59 02.6**	**-0.4**
TUVZ	**Tukino**	**1.00**	**308**	P	**Pn**	**21 59 05.6**	**+1.5**
RAHZ	**Arahi**	**1.03**	**19**	P	**Pn**	**21 59 04.0**	**-0.4**
WHVZ	**Whangaehu Hut**	**1.03**	**306**	P	**Pn**	**21 59 05.8**	**+1.2**
MTHZ	**Maungataniwha**	**1.05**	**8**	P	**Pn**	**21 59 04.2**	**-0.5**
DRZ	**Dome Shelter**	**1.05**	**306**	P	**Pn**	**21 59 06.4**	**+1.5**
MTVZ	**Mangateitei**	**1.05**	**299**	P	**Pn**	**21 59 06.3**	**+1.6**
TIWZ	**Tintock**	**1.06**	**214**	P	**Pn**	**21 59 06.3**	**+1.4**
FWVZ	**Far West T-bar**	**1.07**	**306**	P	**Pn**	**21 59 06.2**	**+1.0**
CPWZ	**Castlepoint**	**1.07**	**199**	P	**Pn**	**21 59 06.7**	**+1.7**
MRHZ	**Matea Rd**	**1.08**	**350**	P	**Pn**	**21 59 05.3**	**+0.2**
OHWZ	**Ohakea**	**1.08**	**253**	P	**Pn**	**21 59 08.0**	**+3.0**
NGZ	**Ngauruhoe**	**1.09**	**311**	P	**Pn**	**21 59 06.4**	**+1.0**
HATZ	**Hinemaiaia**	**1.10**	**336**	P	**Pn**	**21 59 05.8**	**+0.5**
RITZ	**Rihia Road**	**1.11**	**326**	P	**Pn**	**21 59 06.6**	**+1.1**
KRVZ	**Karewarewa**	**1.12**	**315**	P	**Pn**	**21 59 06.8**	**+1.0**
MRZ	**Mangatainoka R**	**1.13**	**227**	P	**Pn**	**21 59 06.9**	**+1.1**
WTVZ	**West Tongariro**	**1.14**	**313**	P	**Pn**	**21 59 07.0**	**+1.1**
KNZ	**Kokohu**	**1.17**	**42**	P	**Pn**	**21 59 05.2**	**-1.1**
PKVZ	**Pokaka**	**1.18**	**300**	P	**Pn**	**21 59 07.7**	**+1.1**
KATZ	**Kakaramea**	**1.19**	**320**	P	**Pn**	**21 59 08.0**	**+1.4**
MHGZ	**Mahia Peninsul**	**1.21**	**53**	P	**Pn**	**21 59 06.1**	**-0.8**
SNGZ	**Shannon Statio**	**1.23**	**25**	P	**Pn**	**21 59 06.4**	**-0.7**
RATZ	**Rangitukua**	**1.24**	**326**	P	**Pn**	**21 59 08.0**	**+0.7**
TWVZ	**Taurewa**	**1.26**	**311**	P	**Pn**	**21 59 08.4**	**+0.9**
WAZ	**Wanganui**	**1.30**	**276**	P	**Pn**	**21 59 10.6**	**+2.5**
RTZ	**Ruatahuna**	**1.30**	**11**	P	**Pn**	**21 59 07.6**	**-0.6**
HOWZ	**Holdsworth Sta**	**1.33**	**221**	P	**Pn**	**21 59 09.4**	**+0.8**
WHTZ	**Whakaora**	**1.34**	**336**	P	**Pn**	**21 59 09.4**	**+0.7**
TMWZ	**Te Maipa**	**1.35**	**206**	P	**Pn**	**21 59 09.5**	**+0.7**
ALRZ	**Allen Road**	**1.35**	**349**	P	**Pn**	**21 59 08.9**	**0.0**
PRGZ	**Paritu Road**	**1.35**	**45**	P	**Pn**	**21 59 07.9**	**-1.0**
WATZ	**Wairara**	**1.39**	**328**	P	**Pn**	**21 59 09.6**	**+0.3**
PRRZ	**Plateau Road**	**1.41**	**351**	P	**Pn**	**21 59 09.5**	**-0.1**
MUGZ	**Murupara**	**1.42**	**3**	P	**Pn**	**21 59 09.3**	**-0.5**
WPRZ	**Whakapapatarin**	**1.43**	**344**	P	**Pn**	**21 59 10.0**	**+0.1**
RIGZ	**Rimuhau**	**1.46**	**36**	P	**Pn**	**21 59 09.3**	**-1.0**
OGWZ	**Otaki Gorge**	**1.47**	**231**	P	**Pn**	**21 59 11.2**	**+0.8**
RAGZ	**Rawiri**	**1.52**	**23**	P	**Pn**	**21 59 10.1**	**-1.0**
HRRZ	**Handcock Road**	**1.53**	**349**	P	**Pn**	**21 59 11.4**	**+0.1**
MTW	**Mount Morrison**	**1.54**	**215**	P	**Pn**	**21 59 11.7**	**+0.3**
KUTZ	**Kaahu Road**	**1.55**	**335**	P	**Pn**	**21 59 11.7**	**+0.2**
RRRZ	**Republican Roa**	**1.56**	**356**	P	**Pn**	**21 59 11.4**	**-0.3**
GRRZ	**Galatos Road**	**1.60**	**344**	P	**Pn**	**21 59 12.6**	**+0.3**
HSRZ	**Hossack Road**	**1.61**	**348**	P	**Pn**	**21 59 12.4**	**0.0**
HLRZ	**Highlands Stat**	**1.66**	**352**	P	**Pn**	**21 59 11.7**	**-1.3**
TARZ	**Mount Tarawera**	**1.66**	**356**	P	**Pn**	**21 59 13.1**	**0.0**
VRZ	**Vera Road**	**1.66**	**297**	P	**Pn**	**21 59 14.1**	**+1.1**
URZ	**Urewera**	**1.67**	**12**	P	**Pn**	**21 59 11.9**	**-1.3**
	451nm,0.3s,baz=229,slow=4.4,SNR=892						
URZ				S	**Sn**	**21 59 31.5**	**-1.8**
	727nm,0.3s,baz=282,slow=20,SNR=19						
URZ	**Urewera**	**1.67**	**12**	P	**Pn**	**21 59 12.0**	**-1.1**
TRWZ	**Traveller**	**1.68**	**206**	P	**Pn**	**21 59 13.5**	**+0.2**
MWZ	**Matawai**	**1.70**	**24**	P	**Pn**	**21 59 12.2**	**-1.4**
CAW	**Cannon Point**	**1.72**	**225**	P	**Pn**	**21 59 14.3**	**+0.5**
TKGZ	**Te Karaka**	**1.72**	**33**	P	**Pn**	**21 59 12.6**	**-1.3**
UTU	**Utuhina**	**1.75**	**348**	P	**Pn**	**21 59 14.6**	**+0.2**
PAWZ	**Paruwai Farm**	**1.76**	**212**	P	**Pn**	**21 59 14.6**	**+0.2**
MKRZ	**Makatiti**	**1.76**	**355**	P	**Pn**	**21 59 14.4**	**-0.1**
EDRZ	**Edgecumbe**	**1.79**	**2**	P	**Pn**	**21 59 14.3**	**-0.6**
TLZ	**Tolley Road**	**1.79**	**330**	P	**Pn**	**21 59 14.9**	**0.0**
LREZ	**Lake Rotokare**	**1.80**	**283**	P	**Pn**	**21 59 17.8**	**+2.9**
OMRZ	**Omania**	**1.80**	**353**	P	**Pn**	**21 59 14.6**	**-0.4**
NGRZ	**Ngongotaha**	**1.83**	**348**	P	**Pn**	**21 59 15.7**	**+0.3**
CNGZ	**Carnagh Statio**	**1.85**	**41**	P	**Pn**	**21 59 14.5**	**-1.2**
MSWZ	**Moikau Station**	**1.86**	**215**	P	**Pn**	**21 59 15.7**	**-0.1**
KARZ	**Kaharoa**	**1.90**	**350**	P	**Pn**	**21 59 16.3**	**0.0**
LIRZ	**Lichensteins R**	**1.90**	**353**	P	**Pn**	**21 59 16.1**	**-0.3**
MARZ	**Manawahe**	**1.91**	**0**	P	**Pn**	**21 59 15.6**	**-0.8**
HIZ	**Hauiti**	**1.97**	**314**	eSn	**Sn**	**21 59 38.2**	**-2.5**
HIZ	**Hauiti**	**1.97**	**314**	P	**Pn**	**21 59 17.8**	**+0.5**
PLWZ	**Palliser**	**1.99**	**212**	P	**Pn**	**21 59 17.2**	**-0.3**
TWGZ	**Tauwhareparae**	**2.00**	**31**	P	**Pn**	**21 59 16.4**	**-1.3**
PREZ	**Palmer Road**	**2.01**	**285**	P	**Pn**	**21 59 21.0**	**+3.1**
DREZ	**Durham Road**	**2.03**	**290**	P	**Pn**	**21 59 20.2**	**+2.1**
BHW	**Baring Head**	**2.04**	**221**	P	**Pn**	**21 59 17.9**	**-0.2**
OPRZ	**Ohinepanea**	**2.05**	**358**	P	**Pn**	**21 59 17.3**	**-1.1**
WHRZ	**Whale Island**	**2.05**	**7**	P	**Pn**	**21 59 17.6**	**-0.8**
SNZO	**South Karori**	**2.06**	**226**	eSn	**Sn**	**21 59 44.2**	**+1.4**
KHEZ	**Kahui Hut**	**2.13**	**285**	P	**Pn**	**21 59 23.0**	**+3.4**
PKE	**Pukeiti**	**2.19**	**288**	P	**Pn**	**21 59 23.6**	**+3.3**
TGRZ	**Tauranga**	**2.19**	**352**	P	**Pn**	**21 59 19.5**	**-0.8**
NMEZ	**Namu Road**	**2.20**	**282**	P	**Pn**	**21 59 24.0**	**+3.5**
PUZ	**Puketiti**	**2.20**	**35**	P	**Pn**	**21 59 18.8**	**-1.8**
TCW	**Tory Channel**	**2.24**	**233**	P	**Pn**	**21 59 21.1**	**+0.1**
NBEZ	**Newall Road No**	**2.25**	**285**	P	**Pn**	**21 59 25.4**	**+4.2**
DUWZ	**D'Urville Isla**	**2.28**	**246**	P	**Pn**	**21 59 22.3**	**+0.7**
PKGZ	**Pakihiroa**	**2.29**	**29**	P	**Pn**	**21 59 20.3**	**-1.5**
HAZ	**Te Kaha**	**2.31**	**23**	P	**Pn**	**21 59 20.1**	**-1.8**
TOZ	**Tahuroa Road**	**2.34**	**337**	P	**Pn**	**21 59 22.3**	**-0.1**
WIZ	**White Island**	**2.40**	**10**	P	**Pn**	**21 59 21.3**	**-1.9**
WMGZ	**Waiomatatini S**	**2.48**	**34**	P	**Pn**	**21 59 22.5**	**-1.9**
TUWZ	**Tuamarina**	**2.58**	**233**	P	**Pn**	**21 59 25.1**	**-0.5**
CMWZ	**Cape Campbell**	**2.62**	**224**	P	**Pn**	**21 59 27.0**	**+0.7**
MXZ	**Matakaoa Point**	**2.66**	**29**	ePn	**Pn**	**21 59 25.3**	**-1.4**
MXZ				eSn	**Sn**	**21 59 56.3**	**-1.4**
MXZ	**Matakaoa Point**	**2.66**	**29**	P	**Pn**	**21 59 25.2**	**-1.6**
BSWZ	**Blackbirch Sta**	**2.79**	**228**	P	**Pn**	**21 59 28.0**	**-0.5**
NNZ	**Nelson**	**2.83**	**241**	P	**Pn**	**21 59 29.4**	**+0.3**
MKAZ	**Moumakai**	**3.02**	**337**	P	**Pn**	**21 59 31.9**	**+0.1**
KBAZ	**Karaka Road Bo**	**3.12**	**333**	P	**Pn**	**21 59 33.7**	**+0.6**
KUZ	**Kuaotunu**	**3.23**	**346**	P	**Pn**	**21 59 34.1**	**-0.5**
ETAZ	**East Tamaki Re**	**3.24**	**335**	P	**Pn**	**21 59 35.0**	**+0.3**
AWAZ	**Awhitu Peninsu**	**3.24**	**330**	P	**Pn**	**21 59 35.4**	**+0.7**
QRZ	**Quartz Range**	**3.29**	**252**	P	**Pn**	**21 59 35.4**	**0.0**
WIAZ	**Waiheke Island**	**3.32**	**338**	P	**Pn**	**21 59 36.3**	**+0.4**
EPAZ	**Eden Park BICE**	**3.37**	**333**	P	**Pn**	**21 59 37.3**	**+0.8**
WTAZ	**Waiatarua**	**3.38**	**330**	P	**Pn**	**21 59 37.5**	**+0.8**
HBAZ	**Herne Bay Bore**	**3.40**	**333**	P	**Pn**	**21 59 37.6**	**+0.7**
THZ	**Tophouse**	**3.41**	**236**	ePn	**Pn**	**21 59 37.3**	**+0.2**
THZ				eSn	**Sn**	**22 00 17.3**	**+1.0**
THZ	**Tophouse**	**3.41**	**236**	P	**Pn**	**21 59 36.5**	**-0.6**
MBAZ	**Motutapu North**	**3.42**	**335**	P	**Pn**	**21 59 38.1**	**+1.0**
KHZ	**Kahutara**	**3.45**	**222**	ePn	**Pn**	**21 59 38.2**	**+0.6**
KHZ				eSn	**Sn**	**22 00 16.5**	**-0.7**
KHZ	**Kahutara**	**3.45**	**222**	P	**Pn**	**21 59 36.5**	**-1.2**
RVAZ	**Riverhead Bore**	**3.52**	**332**	P	**Pn**	**21 59 39.4**	**+0.8**
GRZ	**Great Barrier**	**3.76**	**345**	P	**Pn**	**21 59 42.2**	**+0.3**
GVZ	**Greta Valley S**	**4.11**	**220**	P	**Pn**	**21 59 45.3**	**-1.4**
DSZ	**Denniston Nort**	**4.12**	**242**	P	**Pn**	**21 59 46.5**	**-0.4**
WCZ	**Waipu Caves**	**4.35**	**334**	P	**Pn**	**21 59 51.0**	**+0.9**
LTZ	**Lake Taylor**	**4.39**	**227**	eSn	**Sn**	**22 00 38.0**	**-2.4**
LTZ	**Lake Taylor**	**4.39**	**227**	P	**Pn**	**21 59 49.1**	**-1.4**
AMCZ	**Amberley**	**4.45**	**221**	P	**Pn**	**21 59 50.4**	**-0.9**
OKCZ	**Okains Bay**	**4.68**	**214**	P	**Pn**	**21 59 52.8**	**-1.8**
CRLZ	**Canterbury Las**	**4.76**	**218**	ePn	**Pn**	**21 59 56.0**	**+0.4**
CRLZ				eSn	**Sn**	**22 00 47.1**	**-2.4**
CRLZ	**Canterbury Las**	**4.76**	**218**	P	**Pn**	**21 59 55.4**	**-0.2**
INZ	**Inchbonnie**	**4.84**	**233**	P	**Pn**	**21 59 55.3**	**-1.5**
MQZ	**McQueen's Vall**	**4.84**	**217**	ePn	**Pn**	**21 59 56.3**	**-0.4**
MQZ				eSn	**Sn**	**22 00 47.2**	**-4.4**
MQZ	**McQueen's Vall**	**4.84**	**217**	P	**Pn**	**21 59 54.9**	**-1.9**
AKCZ	**Akaroa Harbour**	**4.86**	**214**	P	**Pn**	**21 59 56.3**	**-0.8**
OXZ	**Oxford**	**4.88**	**224**	ePn	**Pn**	**21 59 57.3**	**+0.1**
OXZ				eSn	**Sn**	**22 00 49.6**	**-2.8**
OXZ	**Oxford**	**4.88**	**224**	P	**Pn**	**21 59 55.1**	**-2.1**
OUZ	**Omahuta**	**5.26**	**331**	ePn	**Pn**	**22 00 03.7**	**+1.1**
WVZ	**Waitaha Valley**	**5.47**	**233**	P	**Pn**	**22 00 04.2**	**-1.1**
RPZ	**Rata Peaks**	**5.67**	**226**	P	**Pn**	**22 00 07.2**	**-0.9**
	8.6nm,0.3s,baz=155,slow=5.3,SNR=8.4						
RPZ				S	**Sn**	**22 01 07.9**	**-4.1**
	78nm,0.3s,baz=7.5,slow=22,SNR=32						
RPZ	**Rata Peaks**	**5.67**	**226**	ePn	**Pn**	**22 00 08.7**	**+0.5**
RPZ				eSn	**Sn**	**22 01 08.2**	**-3.8**
RPZ	**Rata Peaks**	**5.67**	**226**	P	**Pn**	**22 00 07.0**	**-1.1**
FOZ	**Fox Glacier**	**6.28**	**232**	ePn	**Pn**	**22 00 16.5**	**0.0**
FOZ	**Fox Glacier**	**6.28**	**232**	P	**Pn**	**22 00 15.3**	**-1.2**
CTZ	**Chatham Island**	**6.32**	**130**	P	**Pn**	**22 00 17.3**	**+0.3**
LBZ	**Lake Benmore**	**6.58**	**225**	ePn	**Pn**	**22 00 19.6**	**-1.0**
LBZ				eSn	**Sn**	**22 01 30.4**	**-4.0**
LBZ	**Lake Benmore**	**6.58**	**225**	P	**Pn**	**22 00 19.7**	**-1.0**
ODZ	**Otahua Downs**	**6.80**	**219**	ePn	**Pn**	**22 00 22.7**	**-1.0**
ODZ				eSn	**Sn**	**22 01 35.8**	**-4.0**
ODZ	**Otahua Downs**	**6.80**	**219**	P	**Pn**	**22 00 21.7**	**-1.9**
JCZ	**Jackson Bay**	**7.20**	**232**	P	**Pn**	**22 00 27.3**	**-1.9**
HHSZ	**Highcliff Hill**	**7.46**	**215**	P	**Pn**	**22 00 32.0**	**-0.7**
WKZ	**Wanaka**	**7.50**	**226**	ePn	**Pn**	**22 00 31.0**	**-2.3**
WKZ	**Wanaka**	**7.50**	**226**	P	**Pn**	**22 00 31.5**	**-1.8**
TUZ	**Tuapeka**	**7.95**	**218**	P	**Pn**	**22 00 39.5**	**+0.1**
MLZ	**Mavora Lakes**	**8.34**	**226**	ePn	**Pn**	**22 00 42.5**	**-2.3**
MLZ				eSn	**Sn**	**22 02 15.7**	**-2.0**
WHZ	**Wether Hill Ro**	**8.76**	**224**	ePn	**Pn**	**22 00 50.4**	**-0.1**
DCZ	**Deep Cove**	**8.94**	**228**	eP	Pn	22 00 45.0	-8.0
DZM	**Mont Dzumac**	**19.78**	**331**	P	**Pn**	**22 03 15.5**	**+0.1**
	2.6nm,0.3s,baz=190,slow=7.0,SNR=18						
CAN	**Canberra**	**22.35**	**273**	eP	**P**	**22 03 42.8**	**+1.6**
	12nm,0.6s						
CAN	**Canberra**	**22.35**	**273**	eP	**P**	**22 03 42.8**	**+1.6**
CAN				pmax	pmax		
	comp=Z,12nm,0.6s						
ARMA	**Armidale**	**22.48**	**287**	eP	**P**	**22 03 44.4**	**+1.5**
	comp=Z,18nm,0.9s						
TOO	**Toolangi**	**24.37**	**265**	eP	**P**	**22 04 03.1**	**+1.9**
	comp=Z,39nm,0.8s						
TOO	**Toolangi**	**24.37**	**265**	eP	**P**	**22 04 03.1**	**+1.9**
TOO				pmax	pmax		
	comp=Z,39nm,0.8s						
EIDS	**Eidsvold**	**25.84**	**296**	eP	**P**	**22 04 17.0**	**+2.4**
	comp=Z,25nm,1.3s						
STKA	**Stephens Creek**	**29.37**	**275**	P	**P**	**22 04 47.0**	**+0.9**
	comp=Z,22nm,0.6s,baz=107,slow=10,SNR=76						
STKA	**Stephens Creek**	**29.37**	**275**	eP	**P**	**22 04 47.0**	**+0.9**
	comp=Z,5.4nm,0.7s						
STKA	**Stephens Creek**	**29.37**	**275**	eP	**P**	**22 04 47.0**	**+0.9**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VNDA	**Vanda**	**38.25**	**185**	P	**P**	**22 06 04.7**	**+2.2**
	comp=Z,2.6nm,0.9s,baz=2.4,slow=8.0,SNR=14						
VNDA	**Vanda**	**38.25**	**185**	eP	**P**	**22 06 06.1**	**+3.5**
	comp=Z,2.6nm,0.9s						
VNDA	**Vanda**	**38.25**	**185**	eP	**P**	**22 06 06.1**	**+3.5**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SBA	**Scott Base**	**38.29**	**183**	eP	**P**	**22 06 06.5**	**+3.6**
	comp=Z,23nm,1.4s						
SBA	**Scott Base**	**38.29**	**183**	eP	**P**	**22 06 06.5**	**+3.6**
SBA				pmax	pmax		
	comp=Z,23nm,1.4s						
COEN	**Coen**	**39.10**	**302**	eP	**P**	**22 06 11.1**	**+0.7**
	comp=Z,28nm,0.8s						
AS31	**Alice Springs**	**39.38**	**281**	eP	**P**	**22 06 12.6**	**-0.2**
	comp=Z,9.9nm,0.8s						
ASAR	**Alice Springs**	**39.38**	**281**	P	**P**	**22 06 12.8**	**0.0**
	comp=Z,31nm,0.8s,baz=122,slow=7.5,SNR=197						
ASAR				PcP	**PcP**	**22 08 18.2**	**-2.4**
	comp=Z,2.0nm,0.7s,baz=119,slow=3.9,SNR=5.5						
ASAR				S	**S**	**22 12 07.1**	**-4.8**
	comp=Z,0.7nm,0.7s,baz=123,slow=15,SNR=4.7						
FORT	**Forrest**	**40.26**	**268**	eP	**P**	**22 06 20.0**	**+0.1**
	comp=Z,22nm,0.7s						
WB2	**Warramunga Arr**	**41.25**	**286**	eP	**P**	**22 06 28.0**	**-0.3**
	comp=Z,34nm,0.6s						
WRAB	**Tennant Creek**	**41.26**	**286**	d iP	**P**	**22 06 27.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,26nm,0.6s						
WR1	**Warramunga Arr**	**41.26**	**286**	eP	**P**	**22 06 28.0**	**-0.3**
WRA	**Warramunga Arr**	**41.26**	**286**	P	**P**	**22 06 28.0**	**-0.3**
	comp=Z,28nm,0.6s,baz=134,slow=7.3,SNR=129						
WRA	**Warramunga Arr**	**41.26**	**286**	P	**P**	**22 06 28.0**	**-0.3**
MTN	**Manton Dam**	**48.19**	**291**	eP	**P**	**22 07 23.2**	**-0.3**
	comp=Z,40nm,1.3s						
QSPA	**South Pole Qui**	**50.23**	**180**	eP	**P**	**22 07 39.1**	**+0.4**
QSPA				ePcP	**PcP**	**22 08 57.6**	**+0.2**
PSA00	**Pilbara Seismi**	**51.28**	**273**	eP	**P**	**22 07 46.3**	**-0.8**
	comp=Z,20nm,0.9s						
MAW	**Mawson**	**61.89**	**203**	P	**P**	**22 09 01.8**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=137,slow=11,SNR=6.2						
MAW	**Mawson**	**61.89**	**203**	eP	**P**	**22 09 03.8**	**+2.1**
	comp=Z,2.5nm,1.3s						
MAW	**Mawson**	**61.89**	**203**	eP	**P**	**22 09 03.8**	**+2.1**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SNAA	**Sanae**	**68.74**	**180**	P	**P**	**22 09 47.7**	**+1.6**
SNAA	**Sanae**	**68.74**	**180**	eP	**P**	**22 09 48.0**	**+1.9**
	comp=Z,12nm,1.2s						
SNAA	**Sanae**	**68.74**	**180**	⇑eP	**P**	**22 09 48.1**	**+1.9**
CISI	**Cisompet, Garu**	**68.98**	**278**	eP	**P**	**22 09 48.0**	**-0.5**
	comp=Z,74nm,0.8s						
VNA3	**Neumayer Olymp**	**69.08**	**178**	P	**P**	**22 09 50.1**	**+1.9**
VNA2	**Neumayer--Watz**	**69.45**	**179**	P	**P**	**22 09 52.3**	**+1.8**
	baz=189,slow=5.1						
VNA1	**Neumayer--Stat**	**69.71**	**178**	P	**P**	**22 09 53.8**	**+1.8**
KSM	**Kuching**	**73.01**	**287**	eP	**P**	**22 10 12.0**	**-0.8**
	comp=Z,11nm,0.8s						
PLCA	**Paso Flores**	**79.11**	**134**	P	**P**	**22 10 50.2**	**+2.8**
	comp=Z,6.1nm,0.8s,baz=245,slow=4.7,SNR=15						
PLCA	**Paso Flores**	**79.11**	**134**	eP	**P**	**22 10 50.2**	**+2.8**
	comp=Z,10nm,0.9s						
PLCA	**Paso Flores**	**79.11**	**134**	eP	**P**	**22 10 50.2**	**+2.8**
PLCA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSI	**Prapat**	**82.41**	**280**	P	**P**	**22 11 03.4**	**-2.0**
	comp=Z,9.8nm,0.6s,baz=208,slow=5.3,SNR=7.5						
PSI	**Prapat**	**82.41**	**280**	eP	**P**	**22 11 03.7**	**-1.6**
	comp=Z,15nm,0.9s						
PSI	**Prapat**	**82.41**	**280**	eP	**P**	**22 11 03.7**	**-1.6**
PSI				pmax	pmax		
	comp=Z,15nm,0.9s						
GSI	**Gunungsitoli**	**82.46**	**278**	eP	**P**	**22 11 06.1**	**+0.6**
	comp=Z,42nm,0.9s						
MJAR	**Matsushiro Arr**	**83.89**	**330**	P	**P**	**22 11 11.1**	**-1.2**
	comp=Z,3.4nm,0.8s,baz=169,slow=6.5,SNR=9.8						
MAJO	**Matsushiro**	**83.89**	**330**	eP	**P**	**22 11 11.1**	**-1.2**
MAJO	**Matsushiro**	**83.89**	**330**	deP	**P**	**22 11 09.6**	**-2.7**
MAJO				pmax	pmax		
	comp=Z,11nm,1.1s						
MAT	**Matsushiro**	**83.89**	**330**	P	**P**	**22 11 10.6**	**-1.7**
MAT				S	**S**	**22 21 28.2**	**-4.9**
PEL	**Peldehue**	**84.31**	**129**	eP	**P**	**22 11 17.2**	**+2.3**
	comp=Z,57nm,1.3s						
PEL	**Peldehue**	**84.31**	**129**	eP	**P**	**22 11 17.2**	**+2.3**
PEL				pmax	pmax		
	comp=Z,57nm,1.3s						
KSRS	**Korea Array**	**89.03**	**323**	P	**P**	**22 11 36.9**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=144,slow=5.7,SNR=13						
KS15	**Wonju Array Si**	**89.04**	**323**	eP	**P**	**22 11 36.9**	**-0.5**
	comp=Z,22nm,1.1s						
NJ2	**Nanjing**	**89.39**	**314**	eP	**P**	**22 11 40.7**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GO02	**Mina Guanaco**	**90.61**	**124**	eP	**P**	**22 11 48.5**	**+2.8**
	comp=Z,16nm,0.8s						
CM31	**Chiang Mai Arr**	**92.62**	**292**	eP	**P**	**22 11 54.3**	**-0.3**
	comp=Z,17nm,1.4s						

CMAR	Chiang Mai Arr	92.62	292	P	P	22 11 54.3	-0.3
	comp=Z,3.7nm,0.8s,baz=149,slow=3.5,SNR=17						
CMAR	Chiang Mai Arr	92.62	292	*i* P	P	22 11 55.0	+0.4
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CD2	Chengdu	97.59	304	*e*P	P	22 12 17.0	-0.1
HHC	Hu-ho-hao-te	99.82	316	P	Pdif	22 12 28.6	+1.7
LZH	Lanzhou	100.99	308	*e*P	Pdif	22 12 34.4	+2.1
LZH				pP	sPdif	22 12 48.0	+0.3
LZH				sP	sP	22 12 56.7	+8.9
LZH				LR	LR		
	comp=Z,370nm,17.0s						
LZH				LR	LR		
	comp=Z,290nm,17.1s						
LZH				LR	LR		
	comp=Z,440nm,19.1s						
TXAR	Lajitas Array	101.01	61	PKKPbc	PKKPbc	22 28 45.2	+1.9
	comp=Z,0.5nm,0.7s,baz=73,slow=4.7,SNR=8.3						
ANMO	Albuquerque	102.76	55	⇓*e*P	Pdif	22 12 37.4	-2.8
ANMO				pmax	pmax		
	comp=Z,3.0nm,2.1s						
PDAR	Pinedale Array	105.90	47	PKKPbc	PKKPbc	22 28 29.0	-0.3
	comp=Z,0.2nm,0.5s,baz=108,slow=4.8,SNR=3.9						
ILAR	Eielson Array	108.18	16	PKiKP	PKiKP	22 17 08.2	-1.4
	comp=Z,0.5nm,0.6s,baz=247,slow=1.9,SNR=3.7						
WMQ	Urumqi	115.52	307	*e*PKP	PKiKP	22 17 25.1	+0.9
YKA	Yellowknife Ar	115.86	29	PKP	PKPdf	22 17 23.8	-0.3
	comp=Z,1.4nm,0.7s,baz=246,slow=1.5,SNR=6.4						
YKB5	Yellowknife Ar	115.86	29	*e*PKPdf	PKPdf	22 17 23.8	-0.3
DGZ	Jazzator, Alta	118.63	312	⇓*i*PKIKP	PKPdf	22 17 29.3	-0.8
MKAR	Makanchi Array	120.30	307	PKP	PKPdf	22 17 31.8	-1.5
	comp=Z,2.6nm,0.9s,baz=160,slow=1.0,SNR=14						
KSH	Kashi	121.02	298	*e*PKP	PKPdf	22 17 34.9	-0.1
KSH				sPKP		22 17 49.4	
KSH				PKS	PKSdf	22 21 10.9	-0.8
ZALV	Zalesovo Beam	122.00	316	PKP	PKPdf	22 17 33.9	-2.3
	comp=Z,0.9nm,0.6s,baz=45,slow=0.4,SNR=5.7						
KURK	Kurchatov	124.16	310	*d i*PKIKP	PKPdf	22 17 38.6	-1.9
KMBO	Kilima Mbogo	124.86	232	PKP	PKiKP	22 17 44.1	+0.3
	comp=Z,6.3nm,0.9s,baz=74,slow=2.7,SNR=13						
BRVK	Borovoye	129.81	311	⇑*i*PKIKP	PKPdf	22 17 50.2	-1.0
ATD	Arta Tunnel	130.46	248	PKP	PKiKP	22 17 54.8	+0.2
	comp=Z,2.2nm,0.6s,baz=218,slow=17,SNR=2.7						
GEYT	Alibeck	132.98	288	PKP	PKPdf	22 17 57.5	-0.3
	comp=Z,3.8nm,0.8s,baz=225,slow=1.3,SNR=7.8						
ABKAR	Akbulak array	135.18	304	*e*PKPdf	PKPdf	22 18 01.5	0.0
RAYN	Ar Rayn	135.91	263	*e*PKPdf	PKPdf	22 18 04.3	+0.6
RAYN	Ar Rayn	135.91	263	*e*PKIKP	PKPdf	22 18 04.3	+0.6
ARU	Arti	137.10	314	*i* PKIKP	PKPdf	22 18 04.0	-0.8
ARU						22 20 45.2	
AKH	Akhalkalaki	144.77	288	*e*PKPdf	PKPbc	22 18 18.5	+0.1
AKH	Akhalkalaki	144.77	288	⇑*i*P	PKPbc	22 18 18.5	+0.1
AKH	Akhalkalaki	144.77	288	*e*PKIKP	PKPbc	22 18 18.5	+0.1
ZEI	Tsey	144.78	290	*e*PKIKP	PKPab	22 18 16.5	-1.9
ZEI				pmax	pmax		
	comp=Z,21nm,1.3s						
NCK	Nalchik	145.13	292	⇑*i*PKIKP	PKPbc	22 18 18.8	-0.5
LVZ	Lovozero	145.16	336	⇓*e*PKIKP	PKPdf	22 18 19.5	+0.5
KBZ	Khabaz	145.67	292	PKPbc	PKPdf	22 18 19.6	-0.9
	comp=Z,12nm,0.8s,baz=121,slow=2.6,SNR=23						
NEY	Neytrino	145.71	291	⇑*e*PKP2	PKPdf	22 18 21.0	+0.1
GOF	Gofitskoye	145.78	294	⇑*e*PKP2	PKPdf	22 18 20.4	-0.3
GOF				pmax	pmax		
	comp=Z,53nm,0.9s						
KIV	Kislovodsk	145.86	292	*e*PKIKP	PKPdf	22 18 20.1	-0.9
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
BATM	Batumi	146.13	288	⇑*i*P	PKPdf	22 18 21.7	+0.2
BCA	Borcka	146.15	287	⇑*i*P	PKPdf	22 18 21.9	+0.4
LIC	Lamto	146.44	177	*e*P	PKPbc	22 18 24.5	+0.3
	comp=Z,107nm,0.9s						
KIC	Kosan Boka	146.59	177	*e*P	PKPdf	22 18 22.9	-0.2
	comp=Z,94nm,1.0s						
ARA0	ARCESS Array S	146.62	342	*e*PKPdf	PKPbc	22 18 22.2	-0.9
ARCES	ARCESS Array B	146.62	342	PKPbc	PKPbc	22 18 22.2	-0.9
	comp=Z,15nm,0.7s,baz=44,slow=2.0,SNR=45						
ARE0	ARCESS Array S	146.62	342	*e*PKPdf	PKPbc	22 18 22.4	-0.7
TIC	Toumodi	146.86	177	*e*P	PKPdf	22 18 22.6	-1.0
DBIC	Dimbokro	146.89	177	PKPbc	PKPbc	22 18 25.9	+0.4
	comp=Z,14nm,1.0s,baz=166,slow=6.0,SNR=8.9						
VORD	Divnogorie	148.52	305	*e*PKIKP	PKPdf	22 18 26.3	+1.2
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VSR	Storozhevoye	148.58	305	*e*PKIKP	PKPbc	22 18 27.0	-1.9
VSR				pmax	pmax		
	comp=Z,30nm,1.2s						
LPSR	Galich'ya Gora	148.60	308	*e*PKIKP	PKPdf	22 18 26.9	+1.7
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
OBN	Obninsk	149.54	313	*i* PKP2	PKPbc	22 18 30.0	-1.1
OBN				pmax	pmax		
	comp=Z,17nm,1.3s						
CSS	Mathiatis	150.61	272	*e*PKPbc	PKPbc	22 18 34.1	-0.3
BR101	Keskin Array S	151.72	282	*e*PKPdf	PKPdf	22 18 29.8	-0.9
BR101				*e*PKPbc	PKPbc	22 18 36.4	-0.7
BRTR	Keskin Array B	151.72	282	PKP	PKPdf	22 18 29.8	-0.9
	comp=Z,1.1nm,1.0s,baz=126,slow=3.2,SNR=6.6						
BRTR				PKPbc	PKPbc	22 18 36.4	-0.7
	comp=Z,12nm,0.8s,baz=144,slow=5.3,SNR=64						
BZK	Bozkurt	151.85	286	⇓*i*P	PKiKP	22 18 37.3	-0.1
FINES	FINESS Array B	151.92	330	PKPbc	PKPbc	22 18 35.2	-1.4
	comp=Z,10.0nm,0.8s,baz=44,slow=2.8,SNR=40						
FINES	FINESS Array B	151.92	330	*c i*PKIKP	PKPbc	22 18 35.5	-1.1
FINES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ILGA	Ilgaz	151.92	284	*e*PKPbc	PKPbc	22 18 37.6	0.0
SIM	Simferopol'	152.07	293	*i* PKIKP	PKPbc	22 18 35.0	-2.5
SIM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TOA0	Torodi Ar. Sit	152.99	191	*e*PKPdf	PKPdf	22 18 34.3	+1.2
TORD	Torodi Ar. Bea	152.99	191	PKP	PKPdf	22 18 33.1	0.0
	comp=Z,2.1nm,1.0s,baz=240,slow=1.2,SNR=6.6						
TORD				PKPbc	PKiKP	22 18 40.6	0.0
	comp=Z,6.9nm,0.8s,baz=206,slow=1.3,SNR=27						
TORD				PKPab	PKPab	22 18 51.8	+0.2
	comp=Z,9.5nm,0.7s,baz=168,slow=2.0,SNR=31						
TOA1	Torodi Ar. Sit	153.00	191	*e*PKPdf	PKPdf	22 18 33.1	0.0
TOA1				*e*PKPbc	PKiKP	22 18 40.6	0.0
TOA1				*e*PKPab	PKPab	22 18 51.8	+0.1
AKASG	Malin Array Be	154.87	306	PKPbc	PKPbc	22 18 42.0	-1.4
	comp=Z,2.2nm,0.7s,baz=68,slow=2.4,SNR=8.9						
AKASG				PKPab	pPKPbc	22 18 55.6	+0.6
	comp=Z,4.5nm,0.7s,baz=64,slow=4.6,SNR=12						
TIRR	Tirgusor	156.12	291	⇑*i*P	PKPab	22 19 03.4	-1.0
TIRR	Tirgusor	156.12	291	⇑PKP2	PKPab	22 19 03.4	-1.0
CFR	Carcaliu	156.31	293	⇓*i*P	PKPab	22 19 04.3	-0.8
CFR	Carcaliu	156.31	293	⇓PKP2	PKPab	22 19 04.3	-0.8
TESR	Tescani	157.25	297	⇑*i*P	PKPab	22 19 08.4	-0.8
VRI	Vrincioaia	157.26	295	⇓*i*P	PKPab	22 19 08.4	-0.9
VRI	Vrincioaia	157.26	295	⇓PKP2	PKPab	22 19 08.4	-0.9
MLR	Muntele Rosu	157.83	294	⇓*i*P	PKPab	22 19 11.2	-0.7
MLR	Muntele Rosu	157.83	294	⇓PKP2	PKPab	22 19 11.2	-0.7
BURAR	Bucovina Array	158.07	300	⇓*i*P	PKPab	22 19 12.5	-0.4
BURAR	Bucovina Array	158.07	300	⇓PKP2	PKPab	22 19 12.5	-0.4
BUR08	Bucovina Ar. S	158.07	300	*e*PKPab	PKPab	22 19 12.3	-0.5
ARR	Arges	158.76	294	⇓*i*P	PKPdf	22 18 39.8	-0.2
CJR	Cluj-Napoca	159.31	298	⇑*i*P	PKPab	22 19 18.7	+0.5
CJR	Cluj-Napoca	159.31	298	⇑PKP2	PKPab	22 19 18.7	+0.5
KOLS	Kolonicke sedl	159.68	305	*e*PKP2	PKPab	22 19 18.9	-0.8
KOLS	Kolonicke sedl	159.68	305	*e*PKP	PKPab	22 19 18.9	-0.8
UZH	Uzhgorod	159.75	304	*c i*PKP2	PKPab	22 19 19.3	-0.6
DRGR		159.90	299	⇓*i*P	PKPab	22 19 20.1	-0.7
DRGR		159.90	299	⇓PKP2	PKPab	22 19 20.1	-0.7
BLKB	Belogradchik	160.27	289	⇓*i*P	PKPab	22 19 21.7	-0.8
LANS	Liptovska Anna	161.35	307	*e*PKP2	PKPab	22 19 27.6	+0.5
LANS	Liptovska Anna	161.35	307	*e*PKP	PKPab	22 19 27.5	+0.5
VYHS	Vyhne	161.97	306	*e*PKP2	PKPab	22 19 29.0	-0.7
VYHS	Vyhne	161.97	306	*e*PKP	PKPab	22 19 29.0	-0.7
VRAC	Vranov	163.01	310	⇑*i*P	PKPab	22 19 34.1	-0.1
VRAC	Vranov	163.01	310	⇑PKP2	PKPab	22 19 34.1	-0.1
CLL	Collm	163.89	320	*e*PKIKP	PKPdf	22 18 42.0	-3.1
CLL				*e*		22 19 36.0	
CLL	Collm	163.89	320	*e*PKPdf	PKPdf	22 18 42.0	-3.1
CLL				*e*PKPab	PKPab	22 19 36.0	-1.9
CONA	Conrad Observa	164.03	306	*e*PKPab	PKPab	22 19 38.2	-0.6
	comp=Z,2.4nm,1.1s						
GEC2	GERESS Array S	164.91	312	*e*PKPdf	PKPdf	22 18 47.1	+0.9
GEC2				*e*PKPab	PKPab	22 19 41.5	-1.2
GEC2	GERESS Array S	164.91	312	*e*PKIKP	PKPdf	22 18 47.1	+0.9
GEC2				*e*		22 19 41.5	
GERES	GERESS Array B	164.91	312	PKP	PKPdf	22 18 47.1	+0.9
	comp=Z,0.2nm,0.5s,baz=54,slow=2.3,SNR=3.6						
GERES				PKPab	PKPab	22 19 41.5	-1.2
	comp=Z,0.8nm,0.7s,baz=29,slow=3.0,SNR=10						
MOA	Molln	165.04	308	*e*PKPab	PKPab	22 19 43.6	+0.4
	comp=Z,6.9nm,1.1s						
ABTA	Abfaltersbach	166.59	306	*e*PKPab	PKPab	22 19 48.2	-2.0
	comp=Z,3.2nm,0.9s						
WTTA	Wattenberg	166.90	309	*e*PKPdf	PKPdf	22 18 48.5	+0.5
	comp=Z,5.3nm,1.1s						
MOTA	Moosalm	167.17	310	*e*PKPdf	PKPdf	22 18 48.1	0.0
	comp=Z,5.7nm,1.2s						
MOTA				*e*PKPab	PKPab	22 19 52.0	-0.8
	comp=Z,2.4nm,0.9s						
SQTA	Sankt Quirin	167.17	310	*i* PKPdf	PKPdf	22 18 47.7	-0.4
	comp=Z,5.8nm,1.1s						
SQTA				*e*PKPab	PKPab	22 19 51.6	-1.2
	comp=Z,7.0nm,1.3s						
RETA	Reutte	167.30	311	*e*PKPdf	PKPdf	22 18 48.8	+0.7
	comp=Z,3.8nm,1.5s						
FETA	Feichten	167.55	310	*e*PKPdf	PKPdf	22 18 47.9	-0.5
	comp=Z,3.0nm,1.4s						
FETA				*e*PKPab	PKPab	22 19 53.5	-1.1
	comp=Z,2.9nm,0.9s						
DAVA	Damuels	167.91	312	PKPab	PKPab	22 19 53.8	-2.2
	comp=Z,2.6nm,0.8s						
FUORN	Ofenpass-Fuorn	168.03	309	*e*PKPab	PKPab	22 19 56.2	-0.6
ESDC	Sonseca Array	179.47	114	PKP	PKPdf	22 18 54.1	+1.1
	comp=Z,0.3nm,0.7s,baz=344,slow=2.5,SNR=5.1						
ESDC				PKPab	pPKPab	22 20 49.0	-10
	comp=Z,3.0nm,1.0s,baz=105,slow=4.2,SNR=12						

IDC 07 22:11:57.8±2.0, 0°.16N×125°.61E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.3/37, mbtmp3.4/3, Error ellipse: s-maj=216.0km s-min=25.8km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.73	157	P	P	22 16 51.5	+0.5
	0.3nm,0.3s,baz=336,slow=12,SNR=1.6						
ASAR	Alice Springs	25.01	162	P	P	22 17 23.2	-0.5
	0.4nm,0.6s,baz=340,slow=9.8,SNR=5.6						
MKAR	Makanchi Array	59.88	327	P	P	22 22 05.5	0.0
	0.2nm,0.4s,baz=122,slow=7.0,SNR=6.6						

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*IDC **07** 22:14:50.5±1.0, 2°.75N×126°.44E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.6/35, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=74.4km s-min=18.9km az=64.0*

*ISCJB **07** 22:14:53.6±0.4, 3°.15N±0°.06×127°.03E±0°.09, h44^{km}, mb4.6/17, Error ellipse: s-maj=13.5km s-min=5.8km az=153.9*

*NEIC **07** 22:14:58.5±3.0, 3°.09N×127°.30E, h87^{km}±6^{km}, mb4.5/16, Error ellipse: s-maj=16.9km s-min=9.1km az=91.0*

ISC 07 22:14:55.0±0.6, 3°.20N±0°.07×127°.18E±0°.09, h44^{km}, n29, σ1^{s}.85/32, mb4.5/17, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.42	176	*e*Pn	Pn	22 15 34.6	+2.5
TNTI				*e*Sn	Sn	22 16 02.0	+1.4
SIJI	Sorong	5.75	135	Pn	Pn	22 16 21.1	+3.2
	0.7nm,0.3s,baz=287,slow=19,SNR=2.6						
SIJI				Sn	Sn	22 17 27.0	+4.4
	0.3nm,0.3s,baz=214,slow=12,SNR=2.4						
FAKI	Fak Fak	7.91	140	*e*Pn	Pn	22 16 48.6	+1.1
MMRI	Maumere	12.75	203	*e*Pn	Pn	22 17 52.9	-0.9
SBUM	Sibu	14.96	268	*e*P	P	22 18 29.9	+1.4
	1.9nm,0.8s						
MTN	Manton Dam	16.42	166	*e*Pn	Pn	22 18 41.1	-1.3
	26nm,1.4s						
TPUB	Ta-pu	20.96	343	*e*P	P	22 19 34.2	-0.3
	20nm,1.1s						
WRA	Warramunga Arr	24.05	163	P	P	22 20 05.7	-0.5
	2.1nm,0.4s,baz=340,slow=12,SNR=15						
WR1	Warramunga Arr	24.05	163	*e*P	P	22 20 05.7	-0.5
WB2	Warramunga Arr	24.05	163	*e*P	P	22 20 05.6	-0.7
	14nm,1.4s						
PSA00	Pilbara Seismi	25.65	196	*e*P	P	22 20 20.0	-0.7
	11nm,1.3s						
ASAR	Alice Springs	27.50	167	P	P	22 20 37.3	-0.2
	0.3nm,0.4s,baz=346,slow=11,SNR=3.4						
ASAR				PcP	PcP	22 23 56.9	+1.8
	0.2nm,0.4s,baz=337,slow=1.6,SNR=3.0						
GSI	Gunungsitoli	29.64	267	*e*P	P	22 20 56.8	+0.2
	13nm,1.0s						
FORT	Forrest	33.80	179	*e*P	P	22 21 31.7	-1.2
	16nm,1.2s						
BBOO	Buckleboo	36.79	167	*e*P	P	22 21 58.2	-0.4
	10nm,1.3s						
SONA0	Songino Array	47.94	341	*e*P	P	22 23 31.8	+2.5
SONM	Songino Array	47.94	341	P	P	22 23 31.7	+2.5
	0.6nm,0.7s,baz=148,slow=8.5,SNR=2.8						
KAAM	Kaadhehdhoo	54.22	268	*e*P	P	22 24 15.3	-1.5
	213nm,1.3s						
MK31	Makanchi Array	58.24	325	*e*P	P	22 24 46.7	+1.6
	1.5nm,1.2s						
MK32	Makanchi Array	58.24	325	*e*P	P	22 24 46.4	+1.4
MKAR	Makanchi Array	58.24	325	P	P	22 24 46.4	+1.4
	0.9nm,0.4s,baz=118,slow=8.2,SNR=30						
MAKZ	Makanchi	58.43	325	*e*P	P	22 24 46.8	+0.4
	2.9nm,1.2s						
YAK	Yakutsk	58.72	1	*e*P	P	22 24 48.1	+0.1
	16nm,0.5s						
MLZ	Mavora Lakes	60.50	148	*e*P	P	22 24 57.4	-3.2
	16nm,1.2s						
KNTN	Kanton	61.36	95	*e*P	P	22 25 05.0	-2.0
	60nm,1.0s						
KURK	Kurchatov	62.42	327	*e*P	P	22 25 14.9	+1.4
	1.9nm,0.5s						
HON	Honolulu	74.70	69	*e*P	P	22 26 27.4	-3.3
	94nm,0.9s						
TORD	Torodi Ar. Bea	123.51	288	PKP	PKiKP	22 33 49.4	+0.5
	0.5nm,1.0s,baz=82,slow=1.8,SNR=4.0						
TOA1	Torodi Ar. Sit	123.51	288	*e*PKPdf	PKiKP	22 33 49.4	+0.5

SCB 07 22:20:15.6±1.7, 17°.48S×65°.78W, h4^{km}±30^{km}, ML3.8/2, Error ellipse: s-maj=33.8km s-min=3.4km az=0.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BS10	CO. Tuti	0.08	284	Pg	Pg	22 20 19.2	+1.6
BB01	Montecillos	0.77	140	P	Pb	22 20 31.7	0.0
BB01				S	Sb	22 20 43.4	+0.7
BB01				AML	AML	22 20 43.6	
	930nm,0.3s						
BS05	Cuyupaya	1.20	292	P	Pg	22 20 37.6	-1.1
BS08	Valle Grande	1.88	123	P	Pn	22 20 47.4	-1.4
BBOE	La Paz, Chanca	2.21	287	P	Pn	22 20 54.2	+0.7
BBOJ	La Paz, Jacaqu	2.36	282	P	Pn	22 20 56.7	+1.1
LPAZ	La Paz	2.54	297	P	Pn	22 20 58.5	+0.3
LPAZ				S	Sn	22 21 30.3	+0.4
LPAZ				AML	AML	22 21 30.6	
	2µm,0.2s						
BBOB	La Paz, Bander	2.62	300	P	Pn	22 20 59.7	+0.6
BBOB				S	Sn	22 21 32.3	+0.7

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*IDC **07** 22:22:10.6±11.0, 25°.65N×97°.06E, h0^{km}, mb3.7/4, mb1 3.7/4, mb1mx3.3/39, mbtmp3.7/4, Error ellipse: s-maj=210.3km s-min=46.9km az=150.0*

ISC 07 22:21:52.5±16.0, 24°N±2°×9°9E±°, h35^{km}, n11, σ1^{s}.23/10, mb3.7/4, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRN	Jiri	12.46	292	*e*P	P	22 24 58.1	-1.1
	22nm,0.3s						
PKI	Pulchoki	13.11	290	*e*P	P	22 25 06.7	+0.3
	9.3nm,0.4s						
PKIN	Phulchoki	13.12	290	*e*P	P	22 25 06.5	+0.1
	15nm,0.4s						
KKN	Kakani	13.28	291	*e*P	P	22 25 08.2	+0.1
	6.4nm,0.2s						
DMN	Daman	13.38	290	*e*P	P	22 25 09.9	+0.6
	4.9nm,0.3s						
GKN	Gorkha	13.88	291	*e*P	P	22 25 15.6	+0.8
	7.8nm,0.3s						
PYUN	Piuthan	15.32	290	*e*P	P	22 25 33.3	+2.5
	10.0nm,0.5s						
SONM	Songino Array	24.84	11	P	P	22 27 20.5	+8.9
	0.5nm,0.4s,baz=202,slow=10,SNR=4.0						
MKAR	Makanchi Array	26.86	334	P	P	22 27 29.0	-0.9
	1.6nm,0.7s,baz=145,slow=11,SNR=7.3						
ZALV	Zalesovo Beam	32.19	344	P	P	22 28 17.7	+0.7
	0.5nm,0.5s,baz=160,slow=11,SNR=2.5						
GEYT	Alibeck	37.82	302	P	P	22 29 05.1	-0.7
	1.2nm,0.6s,baz=99,slow=8.9,SNR=2.2						

IDC 07 22:46:35.4±12.0, 22°.49S×173°.84E, h0^{km}, mb4.0/3, mb1 4.2/4, mb1mx3.7/23, mbtmp4.1/4, ML3.9/1, Error ellipse: s-maj=246.0km s-min=51.8km az=50.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.96	171	Pn	Pn	22 50 21.7	+0.3
	0.5nm,0.3s,baz=323,slow=20,SNR=2.7						
STKA	Stephens Creek	30.07	245	P	P	22 52 45.1	-1.4
	0.3nm,0.3s,baz=86,slow=13,SNR=2.2						
ASAR	Alice Springs	36.68	260	P	P	22 53 44.4	+0.1
	1.1nm,0.6s,baz=94,slow=7.7,SNR=8.9						
WRA	Warramunga Arr	36.84	266	P	P	22 53 46.6	+0.9
	1.5nm,0.3s,baz=92,slow=8.6,SNR=7.7						

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*IDC **07** 22:58:37.7±0.6, 60°.46S×26°.92W, h0^{km}, mb4.2/8, mb1 4.3/8, mb1mx4.1/17, mbtmp4.2/8, Error ellipse: s-maj=29.1km s-min=18.2km az=45.0*

*ISCJB **07** 22:58:38.3±0.4, 60°.72S±0°.09×26°.9W±0°.2, h20^{km}, mb4.4/19, Error ellipse: s-maj=18.0km s-min=7.3km az=138.6*

*NEIC **07** 22:58:41.3±1.0, 60°.42S×26°.82W, h20^{km}±4^{km}, mb4.6/15, Error ellipse: s-maj=28.6km s-min=9.1km az=61.0*

ISC 07 22:58:40.7±0.5, 60°.5S±0°.1×26°.7W±0°.1, h20^{km}, n53, σ1^{s}.27/46, mb4.5/19, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.65	151	P	Pn	23 01 37.2	-1.9
VNA3	Neumayer Olymp	12.77	155	P	Pn	23 01 38.8	-2.1
VNA2	Neumayer--Watz	13.05	151	P	Pn	23 01 42.4	-2.2
	baz=312,slow=14						
SNAA	Sanae	14.65	150	P	Pn	23 02 04.3	-2.3
SNAA	Sanae	14.65	150	Pn	Pn	23 02 03.8	-2.8
	4.8nm,0.3s,baz=316,slow=16,SNR=104						
SNAA				Sn	Sn	23 04 30.6	-18
	0.0nm,0.3s,baz=266,slow=14,SNR=2.4						
SNAA	Sanae	14.65	150	*e*Pn	Pn	23 02 04.1	-2.5
SNAA				*e*Sn	Sn	23 04 30.6	-18
QSPA	South Pole Qui	29.75	180	*e*P	P	23 04 47.7	+2.2
	37nm,1.3s						
QSPA				*e*PcP	PcP	23 07 49.6	+1.1
MAW	Mawson	36.48	140	P	P	23 05 43.3	-0.5
	5.3nm,0.9s,baz=231,slow=6.9,SNR=9.0						
MAW	Mawson	36.48	140	*e*P	P	23 05 43.3	-0.5
	1.8nm,1.0s						
GO05	Huala	38.53	291	*e*P	P	23 06 00.2	-1.4
	20nm,1.2s						
PEL	Peldehue	39.51	294	*e*P	P	23 06 09.7	-0.2
	12nm,0.9s						
CFA	Coronel Fontan	39.73	298	P	P	23 06 09.3	-2.3
	2.3nm,0.5s,baz=185,slow=6.4,SNR=9.7						
CPUP	Villa Florida	40.05	315	P	P	23 06 13.8	-0.5
	1.3nm,0.5s,baz=161,slow=8.4,SNR=6.1						
CPUP	Villa Florida	40.05	315	*e*P	P	23 06 14.1	-0.2
	8.2nm,1.2s						
GO04	Tololo Observa	42.08	296	*e*P	P	23 06 31.2	0.0
	9.1nm,1.1s						
VNDA	Vanda	42.15	183	P	P	23 06 32.7	+1.8
	1.8nm,0.9s,baz=197,slow=4.5,SNR=5.7						
VNDA	Vanda	42.15	183	*e*P	P	23 06 34.0	+3.0
	8.0nm,1.4s						
GO02	Mina Guanaco	45.90	301	*e*P	P	23 07 02.0	0.0
	13nm,0.8s						
BOSA	Boshof	46.96	71	P	P	23 07 11.1	+1.0
	2.7nm,0.9s,baz=200,slow=3.9,SNR=4.4						
PB01	IPOC Station P	49.51	303	*e*P	P	23 07 29.0	-0.7
	12nm,1.0s						
GO01	Chusmiza	50.62	304	*e*P	P	23 07 38.6	0.0
	6.3nm,0.9s						
PB11	IPOC Station P	50.72	304	*e*P	P	23 07 38.3	-0.7
	13nm,1.1s						
MNMC	Minye Minye	51.26	304	*e*P	P	23 07 43.4	+0.1
	12nm,0.6s						
H10S2	ASCENSION HYDR	52.20	15	T	T	00 04 27.8	
	baz=187,slow=75,SNR=12						
H10S3	ASCENSION HYDR	52.20	15	T	T	00 04 26.7	
	baz=187,slow=75,SNR=12						
H10S1	ASCENSION HYDR	52.21	15	T	T	00 04 29.8	
	baz=187,slow=75,SNR=15						
LPAZ	La Paz	53.24	307	P	P	23 07 57.6	-0.8
	2.4nm,0.5s,baz=120,slow=5.5,SNR=20						
LPAZ	La Paz	53.24	307	*e*P	P	23 07 57.4	-0.9
	9.2nm,1.4s						
H10N1	ASCENSION HYDR	53.31	15	T	T	00 05 50.7	
	baz=215,slow=70,SNR=5.1						
H10N3	ASCENSION HYDR	53.32	15	T	T	00 05 50.7	
	baz=215,slow=70,SNR=12						
H10N2	ASCENSION HYDR	53.33	15	T	T	00 05 50.7	
	baz=215,slow=70,SNR=7.3						
TOA0	Torodi Ar. Sit	76.81	28	*e*P	P	23 10 31.0	+0.3
	3.8nm,0.7s						
TORD	Torodi Ar. Bea	76.81	28	P	P	23 10 31.6	+0.9
	1.2nm,0.6s,baz=200,slow=5.6,SNR=14						
TOA1	Torodi Ar. Sit	76.81	28	*e*P	P	23 10 31.6	+0.9
ASAR	Alice Springs	94.67	162	P	P	23 11 59.2	-1.1
	0.3nm,0.6s,baz=185,slow=5.7,SNR=4.1						
AS31	Alice Springs	94.67	162	*e*P	P	23 11 59.2	-1.1
	0.6nm,0.9s						
CM31	Chiang Mai Arr	123.16	113	*e*PKPdf	PKiKP	23 17 35.8	0.0
CMAR	Chiang Mai Arr	123.16	113	PKP	PKiKP	23 17 35.8	0.0
	1.0nm,0.3s,baz=233,slow=5.2,SNR=5.1						
FIA0	FINESS Array S	128.16	29	*e*PKPdf	PKPdf	23 17 43.6	-0.1
FINES	FINESS Array B	128.16	29	PKP	PKPdf	23 17 43.6	-0.1
	3.6nm,1.1s,baz=250,slow=4.0,SNR=2.7						
ABKAR	Akbulak array	129.57	58	*e*PKPdf	PKiKP	23 17 47.8	+0.2
MK32	Makanchi Array	137.88	76	*e*PKPdf	PKPdf	23 18 01.9	-0.6
MKAR	Makanchi Array	137.88	76	PKP	PKPdf	23 18 01.9	-0.6
	0.8nm,1.0s,baz=297,slow=0.6,SNR=4.0						
ZALV	Zalesovo Beam	143.89	69	PKP	PKPbc	23 18 11.3	+0.3
	0.4nm,0.5s,baz=247,slow=3.7,SNR=2.6						
ZAA1	Zalesovo Array	143.90	69	*e*PKPpre	PKPbc	23 18 11.3	+0.3
SONA0	Songino Array	150.43	94	*e*PKPbc	PKiKP	23 18 30.7	+0.3
SONM	Songino Array	150.43	94	PKPbc	PKiKP	23 18 30.7	+0.3
	3.4nm,0.8s,baz=226,slow=2.2,SNR=12						
MENT	Mentasta	151.12	303	*e*PKPbc	PKiKP	23 18 31.5	+0.2
DOT	Dot Lake	151.54	304	*e*PKPbc	PKiKP	23 18 32.7	+0.6
KS15	Wonju Array Si	151.86	133	*e*PKPbc	PKiKP	23 18 34.5	+0.9
KSRS	Korea Array	151.89	134	PKPbc	PKiKP	23 18 34.5	+0.9
	1.3nm,0.8s,baz=194,slow=3.8,SNR=3.2						
ILAR	Eielson Array	153.10	305	PKPbc	PKiKP	23 18 35.2	0.0
	1.1nm,0.9s,baz=155,slow=2.2,SNR=5.2						
ILB	Eielson Array	153.10	305	*e*PKPbc	PKiKP	23 18 35.2	0.0

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*IDC **07** 23:13:34.3±1.1, 17°.65S×65°.80W, h0^{km}, mb3.9/4, mb1 4.0/6, mb1mx3.7/31, mbtmp3.8/6, ML3.2/2, Error ellipse: s-maj=30.7km s-min=15.6km az=22.0*

*SCB **07** 23:13:40.7±6.2, 17°.55S×65°.81W, h2^{km}±80^{km}, ML4.9/2, Error ellipse: s-maj=6.3km s-min=4.9km az=0.0*

*ISCJB **07** 23:13:41.9±0.4, 17°.59S±0°.05×65°.71W±0°.04, h73^{km}±5^{km}, mb4.7/27, Error ellipse: s-maj=8.4km s-min=5.4km az=20.5*

*NEIC **07** 23:13:41.9±1.7, 17°.58S×65°.63W, h54^{km}±6^{km}, mb4.6/25, Error ellipse: s-maj=11.3km s-min=9.6km az=174.0*

ISC 07 23:13:39.5±1.0, 17°.50S±0°.06×65°.76W±0°.05, h27^{km}±7^{km}, n63, σ2^{s}.23/63, mb4.9/27, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BS10	CO. Tuti	0.10	295	Pg	Pb	23 13 44.5	-0.5
BB01	Montecillos	0.74	140	P	Pn	23 13 56.6	+2.1
BB01				S	Sn	23 14 06.9	+1.9
BB01				AML	AML	23 14 07.0	
	15µm,0.4s						
BS05	Cuyupaya	1.23	293	P	Pn	23 14 04.1	+2.8
BS08	Valle Grande	1.86	122	P	Pb	23 14 14.3	+1.4
BBOE	La Paz, Chanca	2.23	288	P	Pn	23 14 19.5	+4.3
BBOJ	La Paz, Jacaqu	2.38	282	P	Pn	23 14 21.3	+4.1
LPAZ	La Paz	2.57	298	Pg	Pn	23 14 23.9	+4.0
	30nm,0.3s,baz=109,slow=13,SNR=19						
LPAZ				Lg	Lg	23 14 56.2	
	120nm,0.3s,baz=40,slow=22,SNR=19						
LPAZ	La Paz	2.57	298	*e*Pn	Pn	23 14 23.9	+4.0
LPAZ				*e*		23 14 24.2	
LPAZ				*e*Sn	Sb	23 14 56.4	-0.2
LPAZ	La Paz	2.57	298	P	Pn	23 14 23.9	+4.0
LPAZ				S	Sb	23 14 56.6	0.0

LPAZ				AML	AML	23 14 56.7	
	19µm,0.6s						
BBOB	La Paz, Bander	2.64	300	P	Pn	23 14 24.8	+4.0
BS06	Camiri	3.30	140	P	Pn	23 14 30.9	+1.4
GO01	Chusmiza	3.90	236	ePn	Pn	23 14 41.0	+2.8
MNMC	Minye Minye	3.98	245	ePn	Pn	23 14 42.9	+3.8
MNMC	Minye Minye	3.98	245	P	Pn	23 14 41.3	+2.2
PB08	IPOC Station P	4.15	230	P	Pn	23 14 44.1	+2.7
PB11	IPOC Station P	4.32	238	ePn	Pn	23 14 46.9	+3.3
PB11	IPOC Station P	4.32	238	P	Pn	23 14 45.5	+1.9
YJA	Yavi	4.66	177	P	Pn	23 14 51.9	+3.4
SIV	San Ignacio	4.74	72	Pn	Pn	23 14 50.2	+0.9
	5.0nm,0.3s,baz=276,slow=9.5,SNR=15						
SIV				Lg	Lg	23 16 03.2	
	62nm,0.3s,baz=180,slow=20,SNR=13						
PB01	IPOC Station P	4.98	224	ePn	Pn	23 14 54.6	+2.1
PB01	IPOC Station P	4.98	224	P	Pn	23 14 53.7	+1.1
LVC	Limon Verde	5.88	210	Pn	Pn	23 15 02.6	-2.7
	0.1nm,0.3s,baz=63,slow=16,SNR=1.6						
LVC	Limon Verde	5.88	210	ePn	Pn	23 15 06.4	+1.1
PB04	IPOC Station P	6.33	220	ePn	Pn	23 15 12.5	+1.2
PB10	IPOC Station P	7.48	216	ePn	Pn	23 15 29.9	+3.0
BB08	Puerto Suarez	7.70	102	P	Pn	23 15 32.5	+2.6
BB08				S	Sn	23 17 00.4	+4.1
GO02	Mina Guanaco	8.42	204	ePn	Pn	23 15 41.8	+1.8
BDFB	Brasilia	17.11	86	Lg	Lg	23 22 28.6	
	0.1nm,0.3s,baz=357,slow=19,SNR=2.6						
PTGA	Pitinga	17.61	19	P	Pn	23 17 39.3	-3.8
	0.3nm,0.3s,baz=127,slow=20,SNR=3.4						
ACON	Acoyapa	35.00	325	eP	P	23 20 30.2	+0.4
	19nm,1.1s						
ANWB	Willy Bob	35.17	7	eP	P	23 20 29.3	-1.9
	117nm,1.0s						
STVI	Saint Thomas	35.64	1	eP	P	23 20 35.6	+0.4
	32nm,1.1s						
EMPR	Esperanza - Ma	35.76	359	eP	P	23 20 35.2	-1.1
	202nm,1.2s						
HOPE	Hope Point	43.10	155	eP	P	23 21 35.6	-1.6
	78nm,1.2s						
257A	Skidaway Islan	51.32	343	eP	P	23 22 40.7	-0.8
	125nm,1.1s						
CCM	Cathedral Cave	60.23	337	eP	P	23 23 44.4	-0.9
	7.2nm,1.5s						
M52A	Chesterland	60.49	347	eP	P	23 23 46.3	-0.8
	13nm,0.9s						
H43A	Windswept, Lux	64.86	343	eP	P	23 24 15.7	-0.4
	12nm,0.8s						
Q24A	Divide	67.18	328	eP	P	23 24 28.9	-2.7
	4.7nm,0.8s						
D41A	Chassel	67.46	343	eP	P	23 24 32.6	-0.1
	42nm,1.4s						
X16A	Lo Mia Camp, P	67.48	320	eP	P	23 24 32.8	-0.5
	7.4nm,1.9s						
MVCO	Mesa Verde	67.69	324	eP	P	23 24 34.1	-0.6
	14nm,1.8s						
PMOZ	Porto Moniz, M	68.25	43	eP	P	23 24 37.1	-1.0
C40A	Isle Royale Na	68.40	343	eP	P	23 24 37.1	-1.5
	15nm,1.0s						
PV14	Lion Creek, Pa	68.81	325	eP	P	23 24 41.8	+0.1
	16nm,1.3s						
MSU	Marysvale	70.68	323	eP	P	23 24 53.0	-0.3
PDAR	Pinedale Array	72.24	328	P	P	23 25 01.7	-0.9
	0.1nm,0.4s,baz=119,slow=9.4,SNR=2.3						
TOA0	Torodi Ar. Sit	73.21	70	eP	P	23 25 07.8	-0.8
	18nm,1.8s						
TOA1	Torodi Ar. Sit	73.21	70	eP	P	23 25 07.1	-1.5
TORD	Torodi Ar. Bea	73.21	70	P	P	23 25 07.1	-1.5
	1.9nm,0.6s,baz=268,slow=5.5,SNR=33						
HVU	Hansel Valley	73.25	325	eP	P	23 25 08.1	-0.3
	20nm,0.9s						
MDPB	Devils Postpil	74.28	319	eP	P	23 25 11.0	-3.7
	29nm,0.8s						
WAKR	Walker	75.03	319	eP	P	23 25 19.8	+0.7
	18nm,1.8s						
SAO	San Andreas Ge	75.29	317	eP	P	23 25 19.7	-0.6
	18nm,1.4s						
MCMT	McKenzie Canyo	75.38	327	eP	P	23 25 21.3	+0.3
PNTR	Pine Nut	75.49	320	eP	P	23 25 21.1	-0.6
	9.3nm,1.1s						
NRS	Narsarsuaq	80.07	10	eP	P	23 25 46.6	+0.2
	17nm,0.9s						
ESDC	Sonseca Array	80.91	44	P	P	23 25 52.5	+1.1
	0.5nm,0.6s,baz=254,slow=5.5,SNR=9.3						
LLLB	Lillooet	83.77	328	eP	P	23 26 05.9	-0.2
	3.1nm,0.7s						
MAW	Mawson	87.26	163	P	P	23 26 21.3	-2.0
	0.4nm,0.3s,baz=310,slow=7.9,SNR=3.6						
MAW	Mawson	87.26	163	eP	P	23 26 21.3	-2.0
	2.1nm,1.4s						
SONA0	Songino Array	149.07	10	ePKPbc	PKPdf	23 33 24.4	+3.1
SONM	Songino Array	149.07	10	PKPbc	PKPdf	23 33 24.4	+3.1
	0.4nm,0.4s,baz=27,slow=0.3,SNR=2.8						

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*SOME **07** 23:36:14.4, 41°.95N×72°.07E, h10^{km}*

*KRNET **07** 23:36:14.4±0.1, 41°.92N×72°.16E, h12^{km}, mb2.2*

*NNC **07** 23:36:17.3±1.6, 42°.12N×72°.03E, h0^{km}, mb2.7, mpv2.7, Error ellipse: s-maj=21.7km s-min=6.9km az=171.0*

ISC 07 23:36:14.5±0.9**, 41°.92N**±0°.03×**72°.13E**±0°.02**, h10**^{km}±9^{km}**, n24, σ1^{s}23**/44**, 17C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.17	226	⇑iP	Pg	23 36 18.3	0.0
	baz=23						
ARK				⇑iS	Sg	23 36 21.2	+0.3
	baz=23						
ARSB	Arslanbob	0.87	132	⇓iP	Pg	23 36 30.6	-0.8
	baz=34						
ARSB				⇓iS	Sg	23 36 42.6	-0.2
	baz=34						
MRKS	Merke	1.16	44	P	Pg	23 36 36.5	-0.4
	2.9nm,0.1s						
MRKS				S	Sb	23 36 52.5	+0.5
	14nm,0.4s						
MRKS	Merke	1.16	44	eP	Pg	23 36 36.5	-0.4
	2.9nm,0.1s						
MRKS				eS	Sb	23 36 52.5	+0.5
	14nm,0.4s						
AML	Almayashu	1.19	79	⇑iP	Pg	23 36 36.6	-0.8
	baz=79						
AML				⇑iS	Sg	23 36 52.6	-0.3
	baz=79						
EKS2	Erkin-Say	1.44	58	⇑iP	Pn	23 36 40.8	+0.1
	baz=58						
EKS2				⇑iS	Sn	23 36 59.7	0.0
	baz=58						
IUG	Iuzhnay	1.58	279	P	Pb	23 36 43.9	+0.1
	0.5nm,0.2s						
IUG				S	Sg	23 37 05.3	+0.1
	37nm,0.2s						
IUG	Iuzhnay	1.58	279	eP	Pb	23 36 43.9	+0.1
	0.5nm,0.2s						
IUG				eS	Sg	23 37 05.3	+0.1
	37nm,0.2s						
ARLS	Aral	1.64	91	⇓iP	Pb	23 36 44.8	-0.2
	baz=91						
ARLS				⇓iS	Sb	23 37 06.4	+0.6
	baz=91						
KK31	Karatay Array	1.68	315	⇓Pn	Pb	23 36 45.0	-0.5
	0.4nm,0.2s,baz=131,slow=15						
KK31				⇓Sn	Sg	23 37 07.7	-0.9
	1.4nm,0.3s,baz=132,slow=28						
UCH	Uchtor	1.81	79	⇓iP	Pb	23 36 47.8	-0.1
	baz=79						
UCH				⇓iS	Sb	23 37 11.7	+0.9
	baz=79						
AAK	Ala-Archa	1.90	67	⇓Pn	Pg	23 36 50.4	-0.6
	1.1nm,0.3s						
AAK				⇑Sn	Sg	23 37 19.6	+4.0
	3.0nm,0.6s						
BTK	Batken	2.10	208	⇑iP	Pb	23 36 52.4	-0.4
	baz=9.0						
BTK				⇑iS	Sb	23 37 19.5	+0.5
	baz=9.0						
USP	Ospenovka	2.21	52	⇑iP	Pb	23 36 53.9	-0.7
	baz=51						
USP				⇑iS	Sb	23 37 22.3	+0.2
	baz=51						
KBK	Karagaybulak	2.22	70	⇑iP	Pb	23 36 54.3	-0.6
	baz=70						
KBK				⇑iS	Sb	23 37 23.0	+0.5
	baz=70						
KZA	Kyzart	2.33	85	⇑iP	Pb	23 36 56.1	-0.8
	baz=85						
KZA				⇑iS	Sb	23 37 26.2	+0.2
	baz=85						
SGDS	Sogindy	2.40	49	Pg	Pb	23 36 58.7	+0.9
	2.5nm,0.2s						
SGDS				Lg	Lg	23 37 30.4	
	9.2nm,0.3s						
TKM2	Tokmak 2	2.76	68	⇑Pn	Pb	23 37 03.7	-0.3
	0.3nm,0.2s						
TKM2				⇑Sn	Sg	23 37 42.7	-0.5
	2.0nm,0.4s						
DGS	Degeres	3.00	63	Pg	Pb	23 37 09.5	+1.4
	1.5nm,0.4s						
DGS				Lg	Lg	23 37 48.6	
	4.2nm,0.6s						
DGS	Degeres	3.00	63	eP	Pb	23 37 09.5	+1.4
	1.5nm,0.4s						
DGS				eS	Sg	23 37 48.6	-2.3
	4.2nm,0.6s						
KST	Kastek	3.05	67	Pg	Pb	23 37 10.8	+1.8
	1.3nm,0.2s						
KST				Lg	Lg	23 37 51.2	
	6.0nm,0.4s						
KST	Kastek	3.05	67	eP	Pb	23 37 10.8	+1.8
	1.3nm,0.2s						
KST				eS	Sg	23 37 51.2	-1.4
	6.0nm,0.4s						
KTBS	Karatobe	3.80	60	Pg	Pb	23 37 23.8	+2.1
	1.0nm,0.4s						
KTBS				Lg	Lg	23 38 13.4	
	1.5nm,0.4s						
KTBS	Karatobe	3.80	60	eP	Pb	23 37 23.8	+2.1
	1.0nm,0.4s						
KTBS				eS	Sg	23 38 13.4	-3.2
	1.5nm,0.4s						

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*IDC **07** 23:39:12.9±0.7, 31°.28N×103°.61E, h0^{km}, mb4.1/16, mb1 4.2/18, mb1mx3.9/60, mbtmp4.1/18, ML3.8/2, Error ellipse: s-maj=20.6km s-min=14.2km az=53.0*

*ISCJB **07** 23:39:13.4±0.3, 31°.29N±0°.03×103°.58E±0°.05, h13^{km}, mb4.0/22, Error ellipse: s-maj=6.8km s-min=3.5km az=169.3*

*BJI **07** 23:39:16.2±0.0, 31°.28N×103°.57E, h21^{km}, mb4.2/12, mB4.3/2, ML4.0/25, Ms3.9/13, Ms7 3.7/12*

*NEIC **07** 23:39:16.6±2.0, 31°.31N×103°.56E, h23^{km}±5^{km}, mb4.4/14, Error ellipse: s-maj=18.9km s-min=14.9km az=74.0*

ISC 07 23:39:14.8±0.5**, 31°.26N**±0°.03×**103°.55E**±0°.06**, h13**^{km}**, n60, σ1^{s}64**/69**, mb4.2**/23**, 2C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	0.40	153	⇑iPg	Pb	23 39 23.3	-0.4
CD2				Sg	Sb	23 39 29.7	0.0
CD2				smax	smax		
	comp=N,32µm,0.7s						
CD2				smax	smax		
	comp=E,21µm,0.5s						
LZH	Lanzhou	4.82	3	ePn	Pn	23 40 26.7	-0.5
LZH				Sn	Sb	23 41 33.0	-4.1
LZH				Sg	Sg	23 41 51.2	+1.8
LZH				smax	smax		
	comp=N,140nm,0.9s						
LZH				smax	smax		
	comp=E,190nm,0.8s						
LZH				LR	LR		
	comp=N,2µm,5.3s						
LZH				LR	LR		
	comp=E,1µm,6.2s						
LZH				LR	LR		
	comp=Z,1µm,6.7s						
ENH	Enshi	5.21	99	ePn	Pn	23 40 34.0	+1.6
XAN	Xi'an	5.31	57	ePn	Pn	23 40 33.2	-0.7
XAN	Xi'an	5.31	57	Pn	Pn	23 40 33.2	-0.7
XAN				Pg	Pb	23 40 48.9	+1.4
XAN				Sg	Sb	23 41 52.8	+1.6
XAN				smax	smax		
	comp=N,690nm,0.9s						
XAN				smax	smax		
	comp=E,590nm,0.8s						
GYA	Guiyang	5.51	149	⇑iPn	Pn	23 40 38.1	+1.4
GYA				Sn	Sn	23 41 41.6	+1.5
GYA				Sg	Sg	23 42 06.2	-5.7
GYA				smax	smax		
	comp=N,250nm,0.7s						
GYA				smax	smax		
	comp=E,250nm,0.9s						
GYA				LR	LR		
	comp=N,350nm,7.7s						
GYA				LR	LR		
	comp=E,250nm,10.0s						
GYA				LR	LR		
	comp=Z,450nm,9.0s						
KMI	Kunming	6.16	187	ePn	Pn	23 40 46.6	+1.0
KMI	Kunming	6.16	187	Pn	Pn	23 40 46.9	+1.2
KMI				Sn	Sn	23 41 55.5	-0.6
KMI				smax	smax		
	comp=N,38nm,1.1s						
KMI				smax	smax		
	comp=E,53nm,1.2s						
KMI				LR	LR		
	comp=N,700nm,13.0s						
KMI				LR	LR		
	comp=E,490nm,10.6s						
KMI				LR	LR		
	comp=Z,790nm,12.6s						
WHN	Wuhan	9.31	92	eP	Pn	23 41 28.6	-0.1
WHN				LR	LR		
	comp=N,800nm,9.6s						
WHN				LR	LR		
	comp=E,850nm,10.6s						
WHN				LR	LR		
	comp=Z,1µm,21.7s						
SLVN	Son La	9.89	178	ePn	Pn	23 41 38.0	+1.2
HHC	Hu-ho-hao-te	11.55	32	P	Pn	23 42 02.0	+2.5
HHC				S	Sn	23 44 20.2	+12
HHC				LR	LR		
	comp=N,450nm,7.8s						
HHC				LR	LR		
	comp=E,270nm,6.2s						
HHC				LR	LR		
	comp=Z,440nm,9.4s						
PAYA	Payao	12.31	196	P	P	23 42 25.6	+3.5
	19µm,0.9s						
CHTO	Chiang Mai	13.08	200	ePn	P	23 42 32.7	+2.1
CMMT	Chiang Mai	13.08	200	P	P	23 42 33.2	+2.6
	2.7nm,0.6s						
CM31	Chiang Mai Arr	13.41	199	ePn	Pn	23 42 26.1	+1.1
CMAR	Chiang Mai Arr	13.41	199	Pn	Pn	23 42 26.1	+1.1
	0.2nm,0.3s,baz=12,slow=12,SNR=8.7						
PANO	Nakornpanom	14.09	176	P	P	23 42 44.3	+2.5
	0.2nm,0.8s,149nm						
SKNT	Sakolnakorn	14.23	178	P	P	23 42 45.3	+1.8
	13nm,1.6s						
CHAI	Chaiyaphum	15.36	186	P	P	23 42 56.4	+0.4
	44µm,0.6s,427µm						
UMPA	Umpang Tak	15.59	197	P	P	23 43 03.2	+4.6
	30µm,0.9s						
SONA0	Songino Array	16.69	7	ePn	P	23 43 09.8	-0.9
SONM	Songino Array	16.69	7	Pn	P	23 43 09.8	-0.9
	0.3nm,0.3s,baz=190,slow=13,SNR=12						
ULN	Ulaanbaatar	16.80	8	ePn	P	23 43 10.1	-1.8
	5.5nm,0.6s						
SRAK	Srakaew	17.23	185	P	P	23 43 15.9	-0.8
	121µm,0.9s						
SRDT	SRDT	17.32	195	P	P	23 43 25.0	+7.3
	10.0nm,1.1s,328nm						
WMQ	Urumqi	17.71	319	eP	P	23 43 21.1	-0.9
WMQ				LR	LR		
	comp=N,130nm,5.7s						
WMQ				LR	LR		
	comp=E,71nm,6.9s						
WMQ				LR	LR		
	comp=Z,270nm,11.5s						
KS15	Wonju Array Si	20.99	66	eP	P	23 43 58.4	+0.5
	10nm,0.7s						
KSRS	Korea Array	21.02	66	P	P	23 43 58.6	+0.5
	13nm,0.6s,baz=261,slow=10,SNR=49						
CN2	Changchun	21.33	48	eP	P	23 44 02.3	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MK31	Makanchi Array	22.55	319	eP	P	23 44 16.5	+2.0
	7.4nm,1.3s						
MK32	Makanchi Array	22.55	319	eP	P	23 44 16.6	+2.1
MKAR	Makanchi Array	22.55	319	P	P	23 44 16.6	+2.1
	2.4nm,0.8s,baz=124,slow=10,SNR=16						
MAKZ	Makanchi	22.73	319	eP	P	23 44 18.2	+1.8
	12nm,1.6s						
USRK	Ussuriysk Ar.	25.80	52	P	P	23 44 45.0	-0.5
	1.9nm,0.6s,baz=237,slow=17,SNR=4.7						
ZAA0	Zalesovo Array	26.37	335	eP	P	23 44 48.5	-2.0
	4.0nm,0.9s						
ZALV	Zalesovo Beam	26.37	335	P	P	23 44 51.8	+1.2
	1.5nm,0.4s,baz=135,slow=8.8,SNR=9.1						
ZAA1	Zalesovo Array	26.37	335	eP	P	23 44 51.8	+1.2
KURBB	Kurchatov Arra	26.82	323	P	P	23 44 55.7	+1.0
	2.4nm,0.8s,baz=128,slow=9.6,SNR=20						
KURK	Kurchatov	26.83	324	eP	P	23 44 55.1	+0.4
	7.2nm,1.2s						
KLR	Kul'dur	27.79	42	P	P	23 45 03.5	+0.2
	0.8nm,0.6s,baz=235,slow=4.6,SNR=4.1						
GEYT	Alibeck	37.69	293	P	P	23 46 31.2	+1.2
	1.6nm,0.6s,baz=72,slow=4.8,SNR=4.5						
ARA0	ARCESS Array S	56.92	336	eP	P	23 48 58.3	-0.9
ARA0				ePcP	PcP	23 49 53.8	-0.7
ARCES	ARCESS Array B	56.92	336	P	P	23 48 58.3	-0.9
	2.5nm,0.9s,baz=82,slow=7.4,SNR=2.9						
ARCES				PcP	PcP	23 49 53.8	-0.7
	1.7nm,0.9s,baz=97,slow=4.0,SNR=5.5						
AKASG	Malin Array Be	56.92	313	P	P	23 48 59.0	-0.4
	0.1nm,0.3s,baz=31,slow=5.6,SNR=2.2						
AKBB	Malin Array Si	56.92	313	eP	P	23 48 58.7	-0.8
	12nm,1.7s						
FIA0	FINESS Array S	57.17	326	eP	P	23 49 00.1	-0.9
FINES	FINESS Array B	57.17	326	P	P	23 49 00.1	-0.9
	0.9nm,0.7s,baz=92,slow=8.3,SNR=3.5						
WRA	Warramunga Arr	58.87	146	P	P	23 49 14.2	+0.7
	5.4nm,0.6s,baz=351,slow=9.3,SNR=2.1						
WR1	Warramunga Arr	58.88	146	eP	P	23 49 14.2	+0.7
AS31	Alice Springs	61.88	148	eP	P	23 49 31.8	-2.2
	4.1nm,0.9s						
ASAR	Alice Springs	61.88	148	P	P	23 49 34.0	0.0
	1.2nm,0.7s,baz=332,slow=7.2,SNR=2.5						
ILAR	Eielson Array	69.90	25	P	P	23 50 24.3	-0.8
	0.9nm,0.5s,baz=288,slow=3.6,SNR=7.9						
ILB	Eielson Array	69.90	25	eP	P	23 50 24.3	-0.8
	14nm,1.7s						
INK	Inuvik	72.16	19	P	P	23 50 38.5	-0.2
	3.2nm,0.5s,baz=336,slow=3.9,SNR=6.9						
INK	Inuvik	72.16	19	eP	P	23 50 38.5	-0.2
	3.6nm,0.7s						
STKA	Stephens Creek	72.41	147	P	P	23 50 40.6	-0.1
	1.2nm,0.6s,baz=324,slow=8.7,SNR=1.6						
STKA	Stephens Creek	72.41	147	eP	P	23 50 40.6	-0.1
	1.6nm,0.8s						
YKA	Yellowknife Ar	81.68	17	P	P	23 51 32.4	-0.1
	0.5nm,0.6s,baz=329,slow=5.4,SNR=5.5						
YKB5	Yellowknife Ar	81.68	17	eP	P	23 51 32.4	-0.1
PTGA	Pitinga	145.85	330	PKPbc	PKPbc	23 58 53.5	-1.0
	1.1nm,0.4s,baz=318,slow=16,SNR=3.2						

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*BJI **07** 23:39:39.7±0.0, 5°.63S×126°.18E, h541^{km}, mb5.0/50, mB4.6/32*

*ISCJB **07** 23:39:41.8±0.2, 5°.42S±0°.02×125°.86E±0°.03, h533^{km}±2^{km}, mb4.8/112, Error ellipse: s-maj=4.4km s-min=3.0km az=148.3*

*DJA **07** 23:39:42.8±0.1, 5°S±2°×12°6E±°, h520^{km}±2^{km}, M4.8/58, mb5.1/58, mB5.3/36, MLv5.3/25, Mw(mB)4.7/36, Mwp7.8/1*

*IDC **07** 23:39:43.0±0.6, 5°.46S×125°.84E, h538^{km}±6^{km}, mb4.2/35, mb1 4.2/42, mb1mx4.2/49, mbtmp5.1/42, Error ellipse: s-maj=8.5km s-min=5.8km az=74.0*

*MOS **07** 23:39:42.0±0.8, 5°.40S×125°.86E, h536^{km}, mb4.8/41, Error ellipse: s-maj=10.8km s-min=6.4km az=117.6*

*NEIC **07** 23:39:42.9±1.7, 5°.44S×125°.79E, h535^{km}±4^{km}, mb4.9/73, Error ellipse: s-maj=15.0km s-min=10.4km az=67.0*

ISC 07 23:39:42.5±0.4**, 5°.43S**±0°.04×**125°.85E**±0°.05**, h532**^{km}±4^{km}**, n342, σ1^{s}39**/386**, mb4.8**/109**, 22C-14D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	2.51	30	P	P	23 40 52.8	-0.4
NLAI				S	S	23 41 46.4	-4.2
AAI	Ambon	2.91	54	P	P	23 40 54.8	-0.7
AAI	Ambon	2.91	54	P	P	23 40 53.8	-1.7
AAI				S	S	23 41 51.2	-3.7
BBSI	Bau Bau	3.26	269	P	P	23 40 59.3	+1.5
SANI	Sanana	3.36	2	P	P	23 40 57.9	-0.6
SANI				S	S	23 41 56.5	-3.8
MSAI	Masohi	3.70	56	P	P	23 40 58.7	-2.2
BNDI	Bandanaira	4.14	78	P	P	23 41 03.3	-0.9
SOEI	Soe	4.58	200	eP	P	23 41 07.5	-0.3
SOEI	Soe	4.58	200	P	P	23 41 07.6	-0.3
MMRI	Maumere	4.79	228	eP	P	23 41 09.8	+0.2
MMRI	Maumere	4.79	228	P	P	23 41 10.1	+0.5
LBMI	Labuha	5.04	19	P	P	23 41 12.5	+0.8
	176nm,1.1s,3µm1.5nm						
BATI	Baumata	5.22	204	P	P	23 41 13.4	+0.1
	138nm,0.3s,baz=23,slow=1.1,SNR=82						
BATI				S	S	23 42 24.6	-2.7
	149nm,0.3s,baz=10,slow=22,SNR=16						
BATI	Baumata	5.22	204	P	P	23 41 13.0	-0.2
	312nm,0.7s,4µm2.5nm						
EDFI	Ende, Flores	5.28	231	P	P	23 41 13.3	-0.6
	251nm,0.9s,2µm1.0nm						
LUWI	Luwuk	5.33	325	eP	P	23 41 15.1	+0.9
LUWI	Luwuk	5.33	325	P	P	23 41 15.1	+0.9
	667nm,0.5s,11µm3.1nm						
BSSI	Bau Bau, Buton	5.38	262	P	P	23 41 15.5	+0.9
	1µm,1.1s,13µm4.1nm						
BKSI	Bulukumba	5.70	271	P	P	23 41 17.6	0.0
	508nm,1.0s,4µm1.6nm						
SAUI	Saumlaki	5.98	115	eP	P	23 41 20.5	+0.4
SAUI	Saumlaki	5.98	115	P	P	23 41 21.7	+1.6
	1µm,0.9s,20µm6.2nm						
KAPI	Kappang	6.09	274	P	P	23 41 22.4	+1.3
	83nm,0.3s,baz=102,slow=5.1,SNR=423						
KAPI	Kappang	6.09	274	P	P	23 41 22.7	+1.6
	SNR=54						
APSI	Ampana	6.14	317	P	P	23 41 22.8	+1.2
	447nm,1.0s,5µm1.6nm						
SPSI	Sidrap Palu	6.23	283	P	P	23 41 22.7	+0.2
	332nm,0.8s,3µm1.0nm						
TNTI	Ternate	6.34	14	eP	P	23 41 24.9	+1.4
TNTI	Ternate	6.34	14	P	P	23 41 25.3	+1.7
	71nm,1.0s,2µm0.5nm						
TTSI	Tana Toraja	6.46	291	P	P	23 41 25.8	+1.1
	362nm,0.7s,3µm1.2nm						
FAKI	Fak Fak	6.85	69	eP	P	23 41 28.9	+0.4
FAKI	Fak Fak	6.85	69	P	P	23 41 28.9	+0.4
	1µm,0.7s,12µm3.8nm						
SIJI	Sorong	7.05	50	P	P	23 41 30.9	+0.5
	29nm,0.3s,baz=245,slow=4.7,SNR=39						
SIJI				S	S	23 42 57.8	-0.9
	12nm,0.3s,baz=287,slow=22,SNR=12						
SIJI				ScP	ScP	23 49 53.5	-2.1
	0.6nm,0.3s,baz=225,slow=1.4,SNR=3.6						
WBSI	Waikabubak, Su	7.65	236	P	P	23 41 34.4	-1.9
	104nm,0.7s,2µm1.5nm						
KMPI	Kaimana, Papua	8.03	78	P	P	23 41 43.3	+3.3
	2µm,0.6s,16µm5.9nm						
PLAI	Plampang	8.69	247	P	P	23 41 45.6	-1.2
	232nm,0.9s,2µm1.0nm						
MTN	Manton Dam	9.03	145	eP	P	23 41 50.3	+0.1
MTN	Manton Dam	9.03	145	P	P	23 41 50.5	+0.3
	baz=9.1,SNR=7.7						
SGSI	Sangihe	9.06	358	P	P	23 41 52.4	+1.8
	201nm,0.7s,4µm						
KDU	Kakadu	9.73	138	P	P	23 41 57.0	-0.4
	baz=9.8,SNR=64						
KNRA	Kununurra	10.58	165	P	P	23 42 06.4	+0.2
	baz=11,SNR=119						
KMMI	Kalianget	11.92	262	P	P	23 42 22.1	+1.8
PBKI	Pangkalan Bun	14.40	280	P	P	23 42 50.0	+3.9
GENI	Genyem	14.56	79	P	P	23 42 47.8	0.0
	868nm,0.9s,8µm						
KKM	Kota Kinabalu	14.91	320	eP	P	23 42 51.4	-0.2
JAY	Jayapura	15.10	80	P	P	23 42 52.4	-1.1
	10nm,0.3s,baz=250,slow=5.9,SNR=36						
JAY	Jayapura	15.10	80	P	P	23 42 53.0	-0.5
JAY				pmax	pmax		
	comp=Z,49nm,0.8s						
JAY	Jayapura	15.10	80	P	P	23 42 53.0	-0.5
	comp=Z,630nm,0.8s						
SBUM	Sibu	15.70	300	eP	P	23 43 00.3	+0.6
	comp=Z,50nm,0.7s						
WRAB	Tennant Creek	16.62	151	eP	P	23 43 07.9	-0.7
	comp=Z,175nm,0.8s						
WRAB	Tennant Creek	16.62	151	d iP	P	23 43 07.8	-0.7
WR1	Warramunga Arr	16.62	151	eP	P	23 43 08.1	-0.5
WR1				eS	S	23 45 54.2	-2.8
WRA	Warramunga Arr	16.62	151	P	P	23 43 08.1	-0.5

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        comp=Z,19nm,0.3s,baz=329,slow=11,SNR=312
WRA                                S      S        23 45 54.2 -2.8
        baz=317,slow=17,SNR=7.7
WB2    Warramunga Arr   16.63 151  eP     P        23 43 07.8 -0.9
        comp=Z,211nm,0.8s
KSM    Kuching          16.97 293  eP     P        23 43 11.5 -0.5
        comp=Z,166nm,0.8s
PSA00  Pilbara Seismi   17.07 199  eP     P        23 43 12.6 -0.1
        comp=Z,30nm,0.8s
CISI   Cisompet, Garu   18.04 262  eP     P        23 43 20.4 -1.5
        comp=Z,163nm,0.8s
CISI   Cisompet, Garu   18.04 262  P      P        23 43 21.6 -0.2
        comp=Z,214nm,0.7s
LEM    Lembang          18.18 265  P      P        23 43 22.9 -0.3
        comp=Z,3.6nm,0.3s,baz=47,slow=5.7,SNR=19
LEM    Lembang          18.18 265  P      P        23 43 23.7 +0.5
LEM                                pmax   pmax
        comp=Z,95nm,0.9s
TPI    Tanjungpandan    18.34 278  P      P        23 43 27.2 +2.7
        comp=Z,37nm,1.3s
CBJI   Citeko           18.92 266  P      P        23 43 34.2 +4.4
        comp=Z,83nm,0.8s
COEN   Coen             19.05 118  eP     P        23 43 30.9 -0.1
        comp=Z,78nm,0.5s
COEN   Coen             19.05 118  P      P        23 43 31.0  0.0
        baz=19,SNR=118
WRKA   Warakurna        19.64 173  P      P        23 43 36.8 +0.6
        baz=20,SNR=201
AS31   Alice Springs    19.72 158  eScP   ScP      23 50 14.3 -2.1
ASAR   Alice Springs    19.72 158  P      P        23 43 37.6 +0.6
        comp=Z,17nm,0.3s,baz=342,slow=8.1,SNR=786
ASAR                               S      S        23 46 46.1 -1.3
        baz=338,slow=21,SNR=9.0
ASAR                               ScP    ScP      23 50 14.3 -2.1
        comp=Z,0.6nm,0.3s,baz=338,slow=2.1,SNR=13
PPBI   Pangkal Pinang   19.93 279  P      P        23 43 40.7 +1.7
        comp=Z,65nm,1.0s
TGY    Tagaytay City    20.01 346  P      P        23 43 40.1 +0.4
        comp=Z,119nm,0.3s,baz=190,slow=4.7,SNR=4.4
QIS    Mount Isa        20.12 140  P      P        23 43 40.8 +0.2
        baz=20,SNR=73
PMG    Port Moresby     21.50 102  P      P        23 43 52.7 -0.4
        comp=Z,107nm,0.9s,baz=283,slow=5.0,SNR=11
PMG    Port Moresby     21.50 102  eP     P        23 43 53.8 +0.7
        comp=Z,90nm,0.8s
PMG    Port Moresby     21.50 102d iP     P        23 43 53.4 +0.3
PMG                                pmax   pmax
        comp=Z,432nm,0.9s
MEEK   Meekatharra      22.19 197  P      P        23 43 59.2 -0.1
        baz=22,SNR=16
TPRI   Tanjung Pinang   22.21 286  P      P        23 44 01.1 +1.5
        comp=Z,158nm,0.8s
MYKOM  Kota Tinggi      23.11 287  eP     P        23 44 07.8 +0.2
        comp=Z,96nm,0.8s
DLV    T  Lat           24.41 315  eP     P        23 44 19.8 +0.4
        comp=Z,30nm,0.8s
KRJI   Kerinci          24.55 277  P      P        23 44 21.4 +0.8
        comp=Z,201nm,0.9s,comp=Z,5µm
CTA    Charters Tower   24.62 128  P      P        23 44 20.6 -0.3
        comp=Z,24nm,0.9s,baz=312,slow=11,SNR=10
MORW   Morawa           25.28 200  P      P        23 44 26.7  0.0
        baz=25,SNR=5.2
FORT   Forrest          25.30 176  eP     P        23 44 26.8  0.0
        comp=Z,86nm,0.6s
FORT   Forrest          25.30 176  P      P        23 44 27.0 +0.2
        baz=25,SNR=14
BKNI   Bangkinang       25.43 282  eP     P        23 44 29.0 +0.8
        comp=Z,229nm,0.9s
BKNI   Bangkinang       25.43 282  P      P        23 44 29.4 +1.2
        comp=Z,290nm,1.0s,comp=Z,2µm
PDSI   Padang           25.73 279  P      P        23 44 30.4 -0.6
        comp=Z,102nm,0.9s
KMBL   Kambalda         26.07 188  P      P        23 44 33.8 +0.2
        baz=26,SNR=24
BLDU   Ballidu          26.49 198  P      P        23 44 37.5 +0.2
        baz=27,SNR=10
IPM    Ipoh             26.67 291  eP     P        23 44 39.3 +0.1
        comp=Z,56nm,0.8s
SISI   Saibi            27.02 278  P      P        23 44 41.8 -0.4
        comp=Z,44nm,0.6s
MUN    Mundaring        27.91 198  P      P        23 44 50.6 +0.8
        baz=28,SNR=4.5
PSI    Prapat           28.11 286  P      P        23 44 51.7 -0.2
        comp=Z,175nm,0.9s,baz=108,slow=4.0,SNR=83
NWAO   Narrogin (SRO)   28.51 195  P      P        23 44 54.5 -0.6
        comp=Z,9.2nm,0.6s,baz=34,slow=7.7,SNR=10.0
TSI    Tuntungan        28.66 287  P      P        23 44 59.1 +2.5
        comp=Z,77nm,0.4s
BBOO   Buckleboo        28.86 162  eP     P        23 44 58.1 +0.1
        comp=Z,47nm,0.8s
BBOO   Buckleboo        28.86 162  P      P        23 44 58.3 +0.2
        baz=29,SNR=50
YULB   Yu-li            28.99 351  eP     P        23 44 56.1 -3.2
        comp=Z,6.8nm,0.7s
TPUB   Ta-pu            29.01 350  eP     P        23 44 58.3 -1.2
        comp=Z,64nm,0.9s
GSI    Gunungsitoli     29.02 283  P      P        23 44 58.9 -0.8
        comp=Z,343nm,0.9s
KCSI   Kotacane, Aceh   29.42 287  P      P        23 45 02.6 -0.6
SSLB   Suanglung        29.43 351  eP     P        23 45 01.1 -2.1
        comp=Z,17nm,0.8s
STKA   Stephens Creek   30.16 153  P      P        23 45 09.8 +0.5
        comp=Z,44nm,0.6s,baz=327,slow=9.0,SNR=127
STKA                               ScP    ScP      23 50 44.1 -1.9
        comp=Z,7.1nm,0.7s,baz=354,slow=7.1,SNR=6.3
STKA   Stephens Creek   30.16 153  eP     P        23 45 09.8 +0.5
        comp=Z,18nm,1.0s
STKA                               eScP   ScP      23 50 44.1 -1.9
STKA   Stephens Creek   30.16 153  P      P        23 45 10.0 +0.7
        baz=30,SNR=83
STKA   Stephens Creek   30.16 153  eP     P        23 45 09.9 +0.5
STKA                               pmax   pmax
        comp=Z,18nm,1.0s
RMQ    Roma             30.28 136  P      P        23 45 10.8 +0.3
        baz=30,SNR=5.5
HTT    Hallett          30.40 158  P      P        23 45 12.2 +0.7
        baz=30,SNR=45
LHMI   Lhok Sumawe      30.74 290  eP     P        23 45 14.4 -0.2
        comp=Z,392nm,0.7s
LHMI   Lhok Sumawe      30.74 290  P      P        23 45 15.1 +0.5
        comp=Z,598nm,0.8s,comp=Z,5µm
MLSI   Meulaboh, Aceh   30.95 288  P      P        23 45 15.7 -0.6
        comp=Z,466nm,0.8s,comp=Z,6µm
EIDS   Eidsvold         31.27 132  P      P        23 45 18.3 -0.6
        baz=31,SNR=3.7
CMSA   Cobar Meteorol   31.95 147  P      P        23 45 25.7 +1.0
        baz=32,SNR=120
JOW    Kunigami         32.16   4  P      P        23 45 26.4 -0.1
        comp=Z,1.7nm,0.2s,baz=172,slow=14,SNR=6.5
JOW                                ScP    ScP      23 50 52.2 -0.7
        comp=Z,0.5nm,0.3s,baz=97,slow=17,SNR=5.3
JOW    Kunigami         32.16   4  eP     P        23 45 26.4 -0.1
        comp=Z,24nm,1.2s
JOW                                eScP   ScP      23 50 52.2 -0.7
HNR    Honiara          34.03  99  P      P        23 45 42.4 -0.2
        comp=Z,98nm,0.5s,baz=166,slow=4.6,SNR=3.9
ARPS   Mount Arapiles   34.46 157  P      P        23 45 46.9 +1.1
        baz=35,SNR=26
ARMA   Armidale         34.74 139  eP     P        23 45 49.5 +1.1
        comp=Z,37nm,0.7s
ARMA   Armidale         34.74 139  P      P        23 45 49.9 +1.6
        baz=35,SNR=24
YNG    Young            35.52 147  P      P        23 45 56.3 +1.6
        baz=36,SNR=22
CM31   Chiang Mai Arr   35.60 312  eP     P        23 45 56.3 +0.8
        comp=Z,39nm,0.8s
CM31                               ePcP   PcP      23 48 08.5 -1.2
CM31                               eScP   ScP      23 51 05.2 -0.1
CM31   Chiang Mai Arr   35.60 312  P      P        23 45 57.2 +1.6
        SNR=12
CMAR   Chiang Mai Arr   35.60 312  P      P        23 45 56.7 +1.1
        comp=Z,24nm,0.7s,baz=143,slow=7.0,SNR=124
CMAR                               PcP    PcP      23 48 08.5 -1.2
        comp=Z,3.6nm,0.7s,baz=165,slow=3.0,SNR=7.8
CMAR                               ScP    ScP      23 51 05.2 -0.1
        comp=Z,2.1nm,0.8s,baz=172,slow=3.4,SNR=7.5
CMAR   Chiang Mai Arr   35.60 312  i P    P        23 45 56.5 +0.9
CMAR                               pmax   pmax
        comp=Z,24nm,0.7s
CHTO   Chiang Mai       35.82 313  eP     P        23 45 58.3 +0.9
        comp=Z,42nm,0.8s
CHTO   Chiang Mai       35.82 313  eP     P        23 45 58.3 +0.9
CHTO                               pmax   pmax
        comp=Z,42nm,0.8s
CHTO   Chiang Mai       35.82 313  P      P        23 45 58.5 +1.1
        SNR=12
MGCD   Mangrove Creek   36.29 143  P      P        23 46 03.2 +2.1
        baz=36,SNR=5.1
CAN    Canberra         36.61 147  eP     P        23 46 05.3 +1.5
        comp=Z,78nm,0.6s
TOO    Toolangi         36.67 153  eP     P        23 46 05.2 +1.0
        comp=Z,62nm,1.2s
TOO    Toolangi         36.67 153  P      P        23 46 06.1 +1.9
        baz=37,SNR=18
TOO    Toolangi         36.67 153  eP     P        23 46 05.2 +1.0
TOO                                pmax   pmax
        comp=Z,62nm,1.2s
GYA    Guiyang          36.75 331⇑iP      P        23 46 05.6 +0.5
GYA                                pP     pP       23 47 39.0 +1.5
GYA                                PP     PP       23 47 49.3 +2.6
GYA                                PcP    PcP      23 48 14.4 +1.2
GYA                                ScP    S        23 51 10.7 -0.5
GYA                                S      ScP      23 51 19.4  +10
GYA                                ScS    ScS      23 55 18.8 +0.1
GYA                                pmax   pmax
        comp=Z,10.0nm,0.8s
GYA                                pmax   pmax
        comp=Z,110nm,5.4s
CNB    Canberra Magne   36.81 147  P      P        23 46 06.7 +1.3
        baz=37,SNR=13
WHN    Wuhan            37.42 344 ⇑P      P        23 46 11.1 +0.7
WHN                                pmax   pmax
        comp=Z,120nm,0.7s
KMI    Kunming          37.78 324  P      P        23 46 15.2 +1.5
KMI                                pmax   pmax
        comp=Z,31nm,1.1s
NJ2    Nanjing          37.86 350  eP     P        23 46 14.8 +0.9
NJ2                                pmax   pmax
        comp=Z,48nm,0.7s
JNU    Nakatsue         38.63   7  P      P        23 46 20.2 -0.1
        comp=Z,8.3nm,0.5s,baz=195,slow=6.9,SNR=5.7
JNU    Nakatsue         38.63   7  eP     P        23 46 20.2 -0.1
        comp=Z,16nm,0.5s
TJN    Taejon           41.61   2⇓eP      P        23 46 45.0 +1.0
CD2    Chengdu          41.85 331  eP     P        23 46 48.0 +1.9
XAN    Xi'an            42.39 339  eP     P        23 46 49.4 -0.9
        comp=Z,37nm,0.8s
XAN    Xi'an            42.39 339  P      P        23 46 49.8 -0.5
XAN                                pmax   pmax
        comp=Z,46nm,0.8s
XAN    Xi'an            42.39 339  eP     P        23 46 49.4 -0.9
XAN                                pmax   pmax
        comp=Z,37nm,0.8s
KS15   Wonju Array Si   42.69   2  eP     P        23 46 53.3 +0.9
        comp=Z,17nm,0.6s
KS15                               eScP   ScP      23 51 32.7 +0.2
KSRS   Korea Array      42.70   2  P      P        23 46 53.5 +1.0
        comp=Z,13nm,0.5s,baz=177,slow=9.3,SNR=41
KSRS                               PcP    PcP      23 48 31.6 -0.6
        comp=Z,1.8nm,0.9s,baz=193,slow=3.9,SNR=4.8
KSRS                               ScP    ScP      23 51 32.7 +0.1
        comp=Z,0.4nm,0.3s,baz=162,slow=6.0,SNR=4.5
MAJO   Matsushiro       43.33  15  eP     P        23 46 57.0 -0.5
        comp=Z,14nm,0.8s
MAJO   Matsushiro       43.33  15c iP     P        23 46 57.3 -0.2
MAJO                               pmax   pmax
        comp=Z,11nm,0.6s
MAT    Matsushiro       43.33  15  P      P        23 46 57.2 -0.3
MJAR   Matsushiro Arr   43.33  15  P      P        23 46 57.3 -0.2
        comp=Z,17nm,0.7s,baz=194,slow=9.2,SNR=39
MJB9   Matsu-Tunnel     43.33  15  eP     P        23 46 57.3 -0.2
        comp=Z,14nm,0.8s
SHL    Shillong         45.13 315  eP     P        23 47 11.4 -0.4
        comp=Z,38nm,1.0s
SHL    Shillong         45.13 315  eP     P        23 47 11.5 -0.4
SHL                                pmax   pmax
        comp=Z,38nm,1.0s
BJI    Beijing          46.11 350  P      P        23 47 18.8  0.0
BJI                                pmax   pmax
        comp=Z,11nm,0.8s
LZH    Lanzhou          46.17 335  eP     P        23 47 20.7 +1.2
LZH                                sP     sP       23 50 04.1 +7.4
LZH                                pmax   pmax
        comp=Z,35nm,1.5s
LZH                                pmax   pmax
        comp=Z,200nm,6.0s
PALK   Pallekele        46.78 285  P      P        23 47 23.9 -0.5
        comp=Z,17nm,0.7s,baz=116,slow=7.3,SNR=5.4
PALK   Pallekele        46.78 285  eP     P        23 47 23.6 -0.8
        comp=Z,88nm,1.6s
PALK   Pallekele        46.78 285  P      P        23 47 23.9 -0.5
PALK   Pallekele        46.78 285  eP     P        23 47 23.6 -0.8
PALK                               pmax   pmax
        comp=Z,88nm,1.6s
MSHR   Mys Shultsa      48.02   5c iP     P        23 47 34.2 +1.0
LSA    Lhasa            48.25 318  eP     P        23 47 36.6 +0.9
        comp=Z,46nm,0.6s
LSA    Lhasa            48.25 318  P      P        23 47 37.0 +1.3
LSA    Lhasa            48.25 318  P      P        23 47 37.2 +1.5
LSA    Lhasa            48.25 318  eP     P        23 47 36.6 +0.9
LSA                                pmax   pmax
        comp=Z,46nm,0.6s
CN2    Changchun        49.00 360  eP     P        23 47 40.5 +0.1
CN2                                pmax   pmax
        comp=Z,20nm,0.5s
USA0B  Ussuriysk Arra   49.71   6  eP     P        23 47 46.0 +0.4
        comp=Z,30nm,0.9s
USA0B  Ussuriysk Arra   49.71   6  eP     P        23 47 46.0 +0.4
USA0B                              pmax   pmax
        comp=Z,30nm,0.9s
USRK   Ussuriysk Ar.    49.71   6  P      P        23 47 46.4 +0.7
        comp=Z,19nm,0.4s,baz=203,slow=8.0,SNR=104
ERM    Erimo            49.79  17⇓eP      P        23 47 47.8 +1.6
ERM                                pmax   pmax
        comp=Z,18nm,1.0s
MDJ    Mudanjiang       49.93   3  eP     P        23 47 48.6 +1.3
        comp=Z,46nm,0.9s
JIRN   Jiri             50.47 313  eP     P        23 47 52.5 +0.5
        comp=Z,104nm,0.5s
GTA    Gaotai           50.69 334  P      P        23 47 54.0 +0.9
GTA                                pmax   pmax
        comp=Z,52nm,0.9s
GUN    Gumba            50.84 313  eP     P        23 47 55.2 +0.5
        comp=Z,178nm,0.5s
PKI    Pulchoki         51.00 312  eP     P        23 47 55.8  0.0
        comp=Z,75nm,0.5s
PKIN   Phulchoki        51.01 312  eP     P        23 47 55.7 -0.1
        comp=Z,59nm,0.4s
TEY    Ternei           51.16  10⇑iP      P        23 47 57.2 +1.0
TEY                                pmax   pmax
        comp=N,30nm,0.7s
TEY                                pmax   pmax
        comp=Z,110nm,0.6s
TEY                                pmax   pmax
        comp=E,30nm,0.6s
KKN    Kakani           51.21 312  eP     P        23 47 57.4 +0.2
        comp=E,61nm,0.4s
DMN    Daman            51.24 312  eP     P        23 47 57.7 +0.2
        comp=E,86nm,0.6s
GKN    Gorkha           51.80 312  eP     P        23 48 01.9 +0.5
        comp=E,193nm,0.3s
HYB    Hyderabad        51.92 297  i P    P        23 48 02.0 -0.3
        comp=E,80nm,1.0s
YUK    Yuzh-Kuril'sk    52.44  18  eP     P        23 48 04.8 -0.6
YUK                                e               23 49 05.0
YUK                                e               23 50 09.4
YUK                                eS     S        23 54 51.6  0.0
YUK                                eSS    SS       23 58 39.3 -0.4
KOLN   Koldanda         52.45 311  eP     P        23 48 06.7 +0.6
OUZ    Omahuta          52.98 131  P      P        23 48 11.5 +2.0
PYUN   Piuthan          53.08 311  eP     P        23 48 11.2 +0.6
        comp=E,336nm,0.8s
MSZ    Milford Sound    53.62 144  P      P        23 48 15.3 +1.4
JCZ    Jackson Bay      53.81 143  P      P        23 48 17.5 +2.1
MLZ    Mavora Lakes     54.13 144  P      P        23 48 18.1 +0.6
FOZ    Fox Glacier      54.15 141  P      P        23 48 17.8 +0.1
YSS    Yuzh-Sakhalins   54.26  14⇑eP      P        23 48 19.9 +1.6
YSS                                pmax   pmax
        comp=Z,20nm,1.1s
WHZ    Wether Hill Ro   54.33 145  P      P        23 48 18.9  0.0
GCSZ   Gaunt Creek Bo   54.36 141  P      P        23 48 20.2 +1.1
KLR    Kul'dur          54.68   5  P      P        23 48 21.6 +0.4
        comp=Z,6.0nm,0.7s,baz=195,slow=5.2,SNR=17
KLR    Kul'dur          54.68   5c iP     P        23 48 21.5 +0.3
KLR                                pmax   pmax
        comp=Z,6.0nm,0.7s
RPZ    Rata Peaks       55.02 141  eP     P        23 48 24.3 +0.5
        comp=Z,84nm,0.8s
KUZ    Kuaotunu         55.16 132  P      P        23 48 26.2 +1.3
ULN    Ulaanbaatar      55.59 345  eP     P        23 48 28.3 +0.5
        comp=Z,36nm,0.9s
ULN    Ulaanbaatar      55.59 345c iP     P        23 48 28.5 +0.7
ULN                                pmax   pmax
        comp=Z,25nm,0.6s
ULN    Ulaanbaatar      55.59 345  P      P        23 48 29.1 +1.2
        SNR=12
SONA0  Songino Array    55.73 344  ePcP   PcP      23 49 20.8 +0.5
SONA0                              eScP   ScP      23 52 26.7 -1.5
SONM   Songino Array    55.73 344  P      P        23 48 29.7 +0.8
        comp=Z,15nm,0.5s,baz=162,slow=8.0,SNR=68
SONM                               PcP    PcP      23 49 20.8 +0.5
        comp=Z,2.8nm,0.8s,baz=174,slow=5.8,SNR=2.7
SONM                               ScP    ScP      23 52 26.7 -1.5
        comp=Z,1.5nm,0.7s,baz=158,slow=4.6,SNR=5.1
SONM                               S      S        23 55 33.6 -1.6
        comp=Z,0.2nm,0.3s,baz=126,slow=29,SNR=2.1
WIZ    White Island     56.53 132  P      P        23 48 33.2 -1.2
BKZ    Black Stump Fm   56.64 134  eP     P        23 48 34.7 -0.5
        comp=Z,76nm,1.4s
URZ    Urewera          56.74 133  P      P        23 48 35.5 -0.3
RUGZ   Raukumara Rang   57.05 132  P      P        23 48 37.4 -0.8
RAGZ   Rawiri           57.05 133  P      P        23 48 38.6 +0.5
HAZ    Te Kaha          57.05 132  P      P        23 48 38.1 +0.2
MWZ    Matawai          57.08 133  P      P        23 48 38.8 +0.6
TWGZ   Tauwhareparae    57.35 132  P      P        23 48 42.5 +2.4
MXZ    Matakaoa Point   57.38 132  P      P        23 48 41.2 +1.0
WMGZ   Waiomatatini S   57.55 132  P      P        23 48 42.2 +0.9
CNGZ   Carnagh Statio   57.63 133  P      P        23 48 42.7 +0.8
ZAK    Zakamensk        58.91 343  eP     P        23 48 50.5 +0.1
ZAK                                pmax   pmax
        comp=Z,10.0nm,1.0s
ZEA    Zeya             58.96   1  eP     P        23 48 51.2 +0.7
ZEA                                pmax   pmax
        comp=Z,29nm,1.0s
WMQ    Urumqi           59.88 329  eP     P        23 48 58.8 +1.8
WMQ                                PcP    PcP      23 49 38.5 +1.7
WMQ                                pmax   pmax
        comp=Z,31nm,0.9s
WMQ                                pmax   pmax
        comp=Z,98nm,6.1s
TLY    Talaya           59.98 344  eP     P        23 48 56.2 -1.2
        comp=Z,18nm,0.7s
TLY    Talaya           59.98 344ceP      P        23 48 58.4 +1.0
MOY    Mondy            60.72 343  eP     P        23 49 03.8 +1.4
MOY                                pmax   pmax
        comp=Z,9.0nm,1.2s
NIL    Nilore           63.09 312  eP     P        23 49 18.1 -0.1
        comp=Z,62nm,0.6s
NIL    Nilore           63.09 312  eP     P        23 49 18.1 -0.1
NIL                                pmax   pmax
        comp=Z,62nm,0.6s
BOD    Bodaibo          63.77 353  eP     P        23 49 22.6 +0.7
BOD                                pmax   pmax
        comp=Z,35nm,0.9s
KSH    Kashi            64.10 319  P      P        23 49 26.0 +1.4
KSH                                PcP    PcP      23 49 55.7 +1.4
KSH                                PP     PP       23 51 59.6 +4.9
KSH                                sP     sP       23 52 11.9 +5.3
KSH                                S      S        23 57 14.3 -5.8
KSH                                pmax   pmax
        comp=Z,78nm,0.7s
KSH                                pmax   pmax
        comp=Z,110nm,6.0s
DGZ    Jazzator, Alta   64.21 333c iP     P        23 49 25.9 +0.8
DGZ                                pmax   pmax
        comp=Z,18nm,0.8s
PETK   Petropavlovsk-   64.22  21  P      P        23 49 26.5 +1.5
        comp=Z,12nm,0.7s,baz=188,slow=5.0,SNR=12
PRZ    Przheval'sk      64.23 323  eP     P        23 49 26.4 +1.0
        comp=Z,49nm,1.2s
PRZ    Przheval'sk      64.23 323  eP     P        23 49 26.4 +1.0
PRZ                                pmax   pmax
        comp=Z,49nm,1.2s
MK31   Makanchi Array   64.70 328  eP     P        23 49 28.7 +0.6
        comp=Z,36nm,0.9s
MK31   Makanchi Array   64.70 328  eP     P        23 49 28.7 +0.6
MK31                               pmax   pmax
        comp=Z,36nm,0.9s
MK32   Makanchi Array   64.70 328  ePcP   PcP      23 49 57.4 +1.0
MKAR   Makanchi Array   64.70 328  P      P        23 49 28.8 +0.6
        comp=Z,54nm,0.8s,baz=126,slow=7.9,SNR=293
MKAR                               PcP    PcP      23 49 57.4 +1.0
        comp=Z,4.6nm,0.6s,baz=133,slow=5.7,SNR=4.0
MKAR                               S      S        23 57 25.9 -0.8
        comp=Z,0.6nm,0.9s,baz=121,slow=14,SNR=3.7
MKAR   Makanchi Array   64.70 328  i P    P        23 49 28.7 +0.6
MKAR                               pmax   pmax
        comp=Z,47nm,0.7s
KDJ    Kajisay          64.77 322  eP     P        23 49 29.4 +0.5
        comp=Z,17nm,0.6s
KDJ    Kajisay          64.77 322  P      P        23 49 29.7 +0.8
KDJ                                pmax   pmax
        comp=Z,17nm,0.6s
MAKZ   Makanchi         64.87 328  eP     P        23 49 29.3 +0.1
        comp=Z,27nm,0.8s
MAKZ   Makanchi         64.87 328  eP     P        23 49 29.3 +0.1
MAKZ                               pmax   pmax
        comp=Z,27nm,0.8s
KBL    Kabul            66.61 311  eP     P        23 49 40.9 +0.3
        comp=Z,24nm,0.8s
KBL    Kabul            66.61 311  eP     P        23 49 40.9 +0.3
KBL                                pmax   pmax
        comp=Z,24nm,0.8s
AAK    Ala-Archa        66.71 321  P      P        23 49 42.2 +1.2
        comp=Z,25nm,0.6s,baz=124,slow=5.5,SNR=53
AAK    Ala-Archa        66.71 321  eP     P        23 49 42.0 +1.0
        comp=Z,30nm,0.8s
AAK    Ala-Archa        66.71 321  i P    P        23 49 42.2 +1.2
        SNR=23
AAK    Ala-Archa        66.71 321  eP     P        23 49 42.0 +1.0
AAK                                pmax   pmax
        comp=Z,30nm,0.8s
AAK    Ala-Archa        66.71 321  P      P        23 49 42.5 +1.5
        SNR=12
YAK    Yakutsk          67.33   2  eP     P        23 49 45.4 +1.3
YAK                                e               23 50 07.1
YAK                                e               23 52 27.9
YAK                                ePPP   PPP      23 54 13.7
YAK                                eS     S        23 57 55.4 -1.8
YAK                                e               23 58 47.1
YAK                                eSS    SS       00 02 30.6 -0.3
GAR    Garm             67.66 316  eP     P        23 49 46.9 +0.1
        comp=Z,63nm,0.9s
GAR    Garm             67.66 316  eP     P        23 49 46.9 +0.1
GAR                                pmax   pmax
        comp=Z,63nm,0.9s
MA2    Magadan          67.75  13  eP     P        23 49 48.5 +1.7
        comp=Z,24nm,0.8s
MA2    Magadan          67.75  13d iP     P        23 49 48.6 +1.8
MA2                                pmax   pmax
        comp=Z,22nm,0.7s
BTK    Batken           67.81 317  eP     P        23 49 47.9 +0.3
        comp=Z,9.3nm,0.6s
BTK    Batken           67.81 317  eP     P        23 49 47.9 +0.3
BTK                                pmax   pmax
        comp=Z,9.0nm,0.6s
ZAA0   Zalesovo Array   68.40 335  eP     P        23 49 50.5 -0.3
        comp=Z,48nm,1.1s
ZALV   Zalesovo Beam    68.40 335  P      P        23 49 50.6 -0.2
        comp=Z,38nm,0.7s,baz=131,slow=4.3,SNR=77
ZALV                               S      S        23 58 06.5 -3.5
        comp=Z,1.5nm,0.6s,baz=147,slow=9.6,SNR=5.4
KURBB  Kurchatov Arra   69.06 330  P      P        23 49 55.2 +0.4
        comp=Z,23nm,0.6s,baz=136,slow=5.2,SNR=250
KURBB                              S      S        23 58 13.2 -4.4
        comp=Z,0.4nm,0.6s,baz=134,slow=10,SNR=4.1
KURK   Kurchatov        69.07 330  eP     P        23 49 55.5 +0.6
        comp=Z,58nm,1.0s
KURK   Kurchatov        69.07 330c iP     P        23 49 55.2 +0.3
KURK                               pmax   pmax
        comp=Z,57nm,1.0s
KURK   Kurchatov        69.07 330  P      P        23 49 55.7 +0.8
        SNR=20
WSAR   Wadi Sarin       71.47 297  P      P        23 50 09.3 -0.5
        comp=Z,6.7nm,0.8s,baz=120,slow=5.3,SNR=4.1
UOSS   Minazif          74.04 298  P      P        23 50 24.3 -0.2
MDH    Madha            74.04 298  P      P        23 50 22.9 -1.6
HATD   Hatta, Dubai     74.08 298  P      P        23 50 25.3 +0.5
MSFE   Esma-Masafi      74.18 298  P      P        23 50 26.3 +1.0
SHME   Shamm            74.36 299  P      P        23 50 27.1 +0.7
VNDA   Vanda            74.52 172  P      P        23 50 26.4 +0.3
        comp=Z,3.9nm,0.8s,baz=316,slow=6.5,SNR=25
NAZ    Nazwa, Dubai     74.53 298  P      P        23 50 27.6 +0.3
FAQ    Al Faqa, Dubai   74.53 297  i P    P        23 50 27.6 +0.3
        SNR=9.4
BRVK   Borovoye         74.64 329  eP     P        23 50 27.9 +0.5
        comp=Z,41nm,1.0s
BRVK   Borovoye         74.64 329c iP     P        23 50 27.8 +0.5
BRVK                               pmax   pmax
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	comp=Z,43nm,1.1s						
BRVK	Borovoye	74.64	329	P	P	23 50 28.2	+0.9
	SNR=17						
ASUD	Al Ashush, Dub	74.74	297	P	P	23 50 29.4	+0.9
MAW	Mawson	74.92	201	P	P	23 50 28.0	-0.5
	comp=Z,0.9nm,0.4s,baz=75,slow=20,SNR=5.9						
MAW	Mawson	74.92	201	*e*P	P	23 50 28.9	+0.3
	comp=Z,6.3nm,1.9s						
MAW	Mawson	74.92	201	*e*P	P	23 50 28.9	+0.3
MAW				pmax	pmax		
	comp=Z,6.0nm,1.9s						
GEYT	Alibeck	76.07	311	P	P	23 50 35.8	+0.2
	comp=Z,9.5nm,0.7s,baz=174,slow=5.5,SNR=18						
GYA0B	ALIBECK ARRAY	76.07	311	*e*P	P	23 50 36.1	+0.5
	comp=Z,13nm,0.8s						
TIXI	Tiksi	76.95	1	*e*P	P	23 50 39.4	-0.3
	comp=Z,16nm,0.5s						
TIXI	Tiksi	76.95	1	⇓*i*P	P	23 50 39.7	0.0
TIXI				pmax	pmax		
	comp=Z,13nm,0.6s						
OPO	Ambohidratompo	77.56	252	P	P	23 50 44.9	+0.5
	comp=Z,8.9nm,0.7s,baz=55,slow=2.7,SNR=12						
SVE	Sverdlovsk	81.32	330	⇓*e*P	P	23 51 03.7	+0.6
SVE				pmax	pmax		
	comp=Z,22nm,0.8s						
ARU	Arti	82.22	329	P	P	23 51 08.0	+0.3
	comp=Z,5.2nm,0.6s,baz=143,slow=0.9,SNR=29						
ARU	Arti	82.22	329	*e*P	P	23 51 07.0	-0.8
	comp=Z,17nm,0.8s						
ARU	Arti	82.22	329	*d i*P	P	23 51 07.5	-0.2
ARU						23 54 22.7	
ARU				S	S	00 00 34.7	-4.2
ARU				SS	SS	00 06 13.9	-0.6
ARU				pmax	pmax		
	comp=Z,15nm,0.7s						
RAYN	Ar Rayn	83.34	294	*e*P	P	23 51 14.3	+0.1
	comp=Z,20nm,0.8s						
RAYN	Ar Rayn	83.34	294	*i* P	P	23 51 14.9	+0.7
	SNR=25						
RAYN	Ar Rayn	83.34	294	*e*P	P	23 51 14.3	+0.1
RAYN				pmax	pmax		
	comp=Z,20nm,0.8s						
QSPA	South Pole Qui	84.54	180	*e*P	P	23 51 19.6	+0.3
	comp=Z,6.5nm,0.8s						
GROC	Groznyy	86.47	314	*e*P	P	23 51 27.1	-1.8
GNI	Garni	86.70	311	⇑*e*P	P	23 51 31.3	+1.0
GNI				pmax	pmax		
	comp=Z,23nm,0.9s						
TBLG	Delisi	86.97	312	*e*P	P	23 51 32.7	+1.3
	comp=Z,21nm,1.0s						
TBLG	Delisi	86.97	312	*e*P	P	23 51 32.7	+1.3
TBLG				pmax	pmax		
	comp=Z,21nm,1.0s						
ZEI	Tsey	87.76	313	*e*P	P	23 51 34.6	-0.7
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKH	Akhalkalaki	87.84	312	*e*pP	pP	23 53 31.2	+0.2
AKH	Akhalkalaki	87.84	312	⇑*i*P	P	23 51 37.5	+1.9
NCK	Nalchik	88.10	314	⇓*e*P	P	23 51 37.5	+0.9
NCK				pmax	pmax		
	comp=Z,11nm,1.2s						
KMBO	Kilima Mbogo	88.50	269	P	P	23 51 40.2	+0.8
	comp=Z,1.8nm,0.9s,baz=53,slow=10,SNR=4.8						
KMBO	Kilima Mbogo	88.50	269	*e*P	P	23 51 40.2	+0.8
	comp=Z,24nm,2.0s						
KMBO	Kilima Mbogo	88.50	269	P	P	23 51 40.7	+1.3
KMBO	Kilima Mbogo	88.50	269	*i* P	P	23 51 41.0	+1.6
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	88.63	314	P	P	23 51 39.1	+0.2
	comp=Z,3.1nm,0.8s,baz=113,slow=4.6,SNR=7.9						
NEY	Neytrino	88.69	313	⇑*e*P	P	23 51 42.0	+2.5
NEY				pmax	pmax		
	comp=Z,2.0nm,1.6s						
KIV	Kislovodsk	88.82	314	P	P	23 51 42.9	+2.9
KIV	Kislovodsk	88.82	314	*e*P	P	23 51 39.8	-0.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BCA	Borcka	89.24	312	⇑*i*P	P	23 51 43.1	+1.2
MLY	Manley	92.10	25	*e*P	P	23 51 55.1	+0.4
	comp=Z,4.1nm,0.9s						
ILAR	Eielson Array	93.70	25	P	P	23 52 00.6	-1.4
	comp=Z,1.1nm,0.8s,baz=279,slow=4.1,SNR=5.3						
OBN	Obninsk	94.00	325	*i* P	P	23 52 01.7	-1.7
OBN				*i* *PP	pwP	23 54 03.3	-2.3
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MATP	Matopo	94.98	249	P	P	23 52 08.5	-0.4
	comp=Z,1.1nm,0.8s,baz=117,slow=6.8,SNR=3.6						
BRTR	Keskin Array B	95.13	309	P	P	23 52 08.6	-0.6
	comp=Z,1.8nm,0.7s,baz=135,slow=6.2,SNR=17						
BRTR				PP	PP	23 56 01.2	-6.8
	comp=Z,1.1nm,0.9s,baz=127,slow=3.3,SNR=5.6						
LSZ	Lusaka	95.94	254	P	P	23 52 13.2	-0.1
	comp=Z,3.7nm,0.8s,baz=110,slow=3.0,SNR=8.3						
LSZ	Lusaka	95.94	254	*e*P	P	23 52 12.5	-0.8
	comp=Z,4.2nm,0.8s						
LSZ	Lusaka	95.94	254	*e*P	P	23 52 12.5	-0.8
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	98.37	320	P	Pdif	23 52 22.3	-0.9
	comp=Z,0.2nm,0.3s,baz=68,slow=3.4,SNR=4.7						
AKASG				PP	PP	23 56 33.0	+1.1
	comp=Z,0.2nm,0.3s,baz=77,slow=5.8,SNR=3.1						
ARCES	ARCESS Array B	98.68	340	P	Pdif	23 52 23.4	-0.8
	comp=Z,5.7nm,0.9s,baz=87,slow=6.2,SNR=7.2						
CFR	Carcaliu	99.26	315	⇓*i*P	Pdif	23 52 27.2	-0.1
CFR	Carcaliu	99.26	315	⇓P	Pdif	23 52 27.2	-0.1
FINES	FINESS Array B	99.42	331	P	Pdif	23 52 25.9	-1.7
	comp=Z,2.4nm,0.9s,baz=36,slow=7.5,SNR=4.4						
FINES				PKiKP	PKiKP	23 56 54.0	+0.3
	comp=Z,1.5nm,0.8s,baz=120,slow=5.5,SNR=3.4						
FINES	FINESS Array B	99.42	331	*i* P	Pdif	23 52 26.8	-0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VRI	Vrincioaia	100.22	315	⇑*i*P	Pdif	23 52 32.6	+1.0
VRI	Vrincioaia	100.22	315	⇑P	Pdif	23 52 32.6	+1.0
TESR	Tescani	100.25	316	⇓*i*P	Pdif	23 52 31.9	+0.2
PLOR	Plostina	100.28	315	⇑*i*P	Pdif	23 52 32.4	+0.5
PLOR	Plostina	100.28	315	⇑P	Pdif	23 52 32.4	+0.5
MLR	Muntele Rosu	100.79	315	⇑*i*P	Pdif	23 52 34.1	-0.2
MLR	Muntele Rosu	100.79	315	⇑P	Pdif	23 52 34.1	-0.2
BURAR	Bucovina Array	101.16	317	⇓*i*P	Pdif	23 52 36.7	+0.9
BURAR	Bucovina Array	101.16	317	⇓P	Pdif	23 52 36.7	+0.9
BUR08	Bucovina Ar. S	101.17	317	*e*Pdif	Pdif	23 52 36.5	+0.6
VYHS	Vyhne	105.30	319	*e*P	Pdif	23 52 55.6	+1.5
VYHS	Vyhne	105.30	319	*e*PDIF	Pdif	23 52 55.6	+1.5
CLL	Collm	108.41	322	*e*PP	PP	23 57 46.0	+0.4
GERES	GERESS Array B	108.57	320	PKiKP	PKiKP	23 57 11.1	+0.1
	comp=Z,0.5nm,0.6s,baz=64,slow=3.1,SNR=6.9						
GERES				PP	PP	23 57 51.2	+4.2
	comp=Z,0.3nm,0.7s,baz=89,slow=5.6,SNR=3.7						
ESDC	Sonseca Array	123.48	315	PKP	PKPdf	23 57 38.9	-0.9
	comp=Z,0.7nm,0.7s,baz=26,slow=2.0,SNR=7.5						
TOA0	Torodi Ar. Sit	124.45	282	*e*PKPdf	PKiKP	23 57 42.5	0.0
TORD	Torodi Ar. Bea	124.45	282	PKP	PKPdf	23 57 40.7	-1.5
	comp=Z,3.5nm,0.8s,baz=67,slow=1.9,SNR=16						
TORD				SKP		00 00 26.0	
	comp=Z,0.8nm,0.6s,baz=110,slow=2.1,SNR=4.4						
TOA1	Torodi Ar. Sit	124.45	282	*e*PKPdf	PKPdf	23 57 40.7	-1.5
TXAR	Lajitas Array	127.60	57	SKPbc	SKPbc	00 00 18.8	
	comp=Z,1.9nm,0.8s,baz=262,slow=2.5,SNR=18						
WMOK	Wichita Mounta	129.56	49	*e*PKPdf	PKPdf	23 57 51.7	+0.2
WMOK	Wichita Mounta	129.56	49	*e*PKIKP	PKPdf	23 57 51.7	+0.2
SCHQ	Schefferville	129.69	10	SKPbc	SKPbc	00 00 24.4	+0.6
	comp=Z,15nm,0.7s,baz=354,slow=3.4,SNR=8.9						
DBIC	Dimbokro	130.98	274	PKP	PKiKP	23 57 55.4	-0.3
	comp=Z,4.7nm,0.8s,baz=98,slow=4.0,SNR=3.8						
DBIC				SKPbc	SKPab	00 00 30.1	-0.3
	comp=Z,4.9nm,0.6s,baz=89,slow=4.4,SNR=12						
PLCA	Paso Flores	131.66	163	SKPbc	SKPab	00 00 32.2	-0.4
	comp=Z,3.3nm,0.7s,baz=283,slow=3.3,SNR=8.7						
SADO	Sadowa	135.13	25	SKPbc	SKPbc	00 00 42.6	0.0
	comp=Z,4.1nm,0.6s,baz=288,slow=3.6,SNR=10.0						
CMIG	Matias Romero	138.50	70	SKPbc	SKPbc	00 00 53.7	+0.5
	comp=Z,1.3nm,0.5s,baz=357,slow=5.9,SNR=3.9						
GO03	Copiap	143.68	155	*e*PKPbc	PKPdf	23 58 17.4	-0.4
GO02	Mina Guanaco	146.09	154	*e*PKPdf	PKPbc	23 58 25.1	+0.9
CPUP	Villa Florida	148.28	175	PKPbc	PKiKP	23 58 30.3	-0.4
	comp=Z,1.9nm,0.6s,baz=67,slow=1.9,SNR=4.3						
LPAZ	La Paz	154.37	148	*e*PKPab	PKPab	23 59 01.8	+0.7
LPAZ	La Paz	154.37	148	*e*PKP2	PKPab	23 59 01.8	+0.7
BDFB	Brasilia	158.20	196	PP	PP	00 02 50.7	-6.8
	comp=Z,2.7nm,0.8s,baz=171,slow=3.5,SNR=3.7						

IDC 07 23:42:45.4±13.0**, 30°.83S**×**179°.59W, h537**^{km}±137^{km}**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.0**/40**, mbtmp4.0**/3**, Error ellipse: s-maj=76.0km s-min=27.2km az=67.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.73	268	P	P	23 49 47.9	+0.2
	0.8nm,0.4s,baz=106,slow=7.3,SNR=3.5						
WRA	Warramunga Arr	42.75	273	P	P	23 49 55.5	-0.3
	2.0nm,0.2s,baz=100,slow=8.8,SNR=8.7						
SNAA	Sanae	77.76	179	P	P	23 53 46.5	-0.1
	0.5nm,0.7s,baz=174,slow=14,SNR=1.9						
FINES	FINESS Array B	145.06	339	PKPbc	PKPdf	00 01 21.0	+0.2
	2.5nm,0.3s,baz=50,slow=4.5,SNR=65						
NB2	NORSAR Subarra	148.95	350	PKP	PKPbc	00 01 31.4	-0.7
	comp=Z,1.4nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.95	350	PKPbc	PKPbc	00 01 30.8	-1.3
	comp=Z,0.4nm,0.5s,baz=15,slow=4.2,SNR=2.9						
NOA				PKPab	PKPab	00 01 38.9	+0.5
	comp=Z,0.7nm,0.6s,baz=15,slow=4.2,SNR=4.6						
HFS	Hagfors	149.37	347	PKPbc	PKPbc	00 01 31.8	-1.3
	comp=Z,4.5nm,1.0s,baz=29,slow=3.4,SNR=4.7						
HFS				PKPab	PKPab	00 01 40.2	+0.1
	comp=Z,2.9nm,0.8s,baz=67,slow=3.9,SNR=5.2						
AKASG	Malin Array Be	150.79	321	PKPbc	PKiKP	00 01 37.0	-0.1
	comp=Z,0.2nm,0.3s,baz=44,slow=3.3,SNR=4.4						
AKASG				PKPab	PKPab	00 01 45.1	-1.2
	comp=Z,1.4nm,0.5s,baz=48,slow=3.2,SNR=8.9						
BRTR	Keskin Array B	151.59	297	PKPbc	PKiKP	00 01 41.0	+1.6
	comp=Z,0.3nm,0.4s,baz=133,slow=3.5,SNR=4.7						
BRTR				PKPab	PKPab	00 01 48.0	-2.4
	comp=Z,0.5nm,0.6s,baz=142,slow=4.1,SNR=5.1						

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*IDC **07** 23:53:31.4±0.8, 33°.34S×77°.67E, h0^{km}, mb3.9/9, mb1 4.0/9, mb1mx3.8/35, mbtmp3.9/9, MS3.9/2, Ms1 3.9/2, ms1mx3.2/28, Error ellipse: s-maj=26.0km s-min=22.7km az=35.0*

*ISCJB **07** 23:53:32.4±0.5, 33°.4S±0°.1×77°.8E±0°.1, h16^{km}, mb4.1/10, MS3.9/2, Error ellipse: s-maj=19.7km s-min=15.0km az=25.6*

*NEIC **07** 23:53:33.9±2.2, 33°.37S×77°.79E, h10^{km}±1^{km}, mb4.6/5, Error ellipse: s-maj=23.3km s-min=8.0km az=99.0*

ISC 07 23:53:34.3±0.7**, 33°.4S**±0°.2×**77°.7E**±0°.2**, h16**^{km}**, n30,** σ**1^s.04**/19**, mb4.2**/10**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	26.08	348	T	T	00 26 12.9	
	baz=170,slow=76,SNR=184						
H08S1	Diego Carcia H	26.08	348	T	T	00 26 14.3	
	baz=170,slow=76,SNR=108						
H08S3	Diego Garcia H	26.10	348	T	T	00 26 13.5	
	baz=170,slow=76,SNR=242						
H08N1	Diego Carcia H	27.63	345	T	T	00 28 06.4	
	baz=186,slow=74,SNR=4.5						
H08N3	Diego Garcia H	27.63	345	T	T	00 28 07.0	
	baz=186,slow=74,SNR=15						
H08N2	Diego Garcia H	27.65	345	T	T	00 28 07.5	
	baz=186						
H01W2	Cape Leeuwin H	30.07	103	T	T	00 31 04.9	
	baz=263,slow=74,SNR=34						
H01W3	Cape Leeuwin H	30.07	103	T	T	00 31 04.7	
	baz=263,slow=74,SNR=35						
H01W1	Cape Leeuwin H	30.08	103	T	T	00 31 06.5	
	baz=263,slow=74,SNR=2.6						
SUR	Sutherland	47.28	255	LR	LR	00 20 04.7	
	comp=Z,36nm,18.4s,baz=132,slow=34						
LSZ	Lusaka	48.13	280	P	P	00 02 13.1	-0.8
	5.2nm,1.1s,baz=155,slow=9.9,SNR=6.0						
LSZ	Lusaka	48.13	280	*e*P	P	00 02 15.0	+1.0
	4.2nm,0.9s						
ASAR	Alice Springs	49.79	94	P	P	00 02 26.8	+0.3
	0.8nm,0.9s,baz=253,slow=5.6,SNR=4.0						
WR1	Warramunga Arr	51.77	90	*e*P	P	00 02 41.6	+0.1
WRA	Warramunga Arr	51.77	90	P	P	00 02 41.6	+0.1
	2.1nm,0.9s,baz=238,slow=11,SNR=3.4						
SNAA	Sanae	55.73	202	P	P	00 03 09.3	-0.5
	0.4nm,0.5s,baz=67,slow=7.0,SNR=3.4						
SNAA	Sanae	55.73	202	*e*P	P	00 03 09.3	-0.5
	18nm,1.8s						
VNDA	Vanda	56.41	165	P	P	00 03 14.3	-0.2
	1.0nm,0.8s,baz=271,slow=7.0,SNR=7.2						
VNDA	Vanda	56.41	165	*e*P	P	00 03 15.5	+1.1
	3.2nm,1.3s						
RAYN	Ar Rayn	64.39	327	*e*P	P	00 04 11.3	+1.6
	2.7nm,0.9s						
RPZ	Rata Peaks	70.00	130	LR	LR	00 29 18.4	
	comp=Z,232nm,19.8s,baz=130,slow=31						
MK32	Makanchi Array	79.92	3	*e*P	P	00 05 40.1	-2.0
MKAR	Makanchi Array	79.92	3	P	P	00 05 40.1	-2.0
	0.4nm,0.8s,baz=206,slow=6.3,SNR=3.3						
BR101	Keskin Array S	83.41	327	*e*P	P	00 06 01.6	+0.7
BR131	Keskin Array S	83.41	327	*e*P	P	00 06 01.6	+0.7
	14nm,2.0s						
BRTR	Keskin Array B	83.41	327	P	P	00 06 01.6	+0.7
	1.1nm,0.8s,baz=163,slow=6.6,SNR=9.3						
TORD	Torodi Ar. Bea	85.82	289	P	P	00 06 12.6	-0.8
	1.6nm,0.8s,baz=108,slow=4.9,SNR=7.2						
TOA1	Torodi Ar. Sit	85.83	289	*e*P	P	00 06 12.6	-0.9
ZALV	Zalesovo Beam	87.20	4	P	P	00 06 18.8	-0.5
	0.6nm,0.4s,baz=172,slow=4.4,SNR=4.3						
ZAA1	Zalesovo Array	87.20	4	*e*P	P	00 06 18.8	-0.5

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*BJI **08** 00:02:54.5±0.0, 46°.61N×142°.17E, h29^{km}, mb4.5/6, mB4.4/2, ML4.3/3, Ms4.0/2*

*IDC **08** 00:02:56.7±0.6, 46°.77N×141°.90E, h0^{km}, mb3.9/17, mb1 4.1/23, mb1mx4.0/39, mbtmp3.9/23, ML3.2/6, Error ellipse: s-maj=16.1km s-min=14.6km az=142.0*

*JMA **08** 00:02:56.4±0.5, 46°.86N×141°.70E, h8^{km}, M4.4*

*MOS **08** 00:02:56.7±1.0, 46°.79N×141°.82E, h11^{km}, mb4.4/11, Error ellipse: s-maj=9.2km s-min=6.5km az=92.1*

MOS Felt (III) at Nevel'sk.

*SKHL **08** 00:02:57.4±0.5, 46°.78N×141°.69E, h8^{km}±2^{km}, mb4.8/13*

SKHL Felt (III) at Nevel'sk.

*ISCJB **08** 00:02:57.4±0.5, 46°.80N±0°.02×141°.78E±0°.03, h13^{km}±3^{km}, mb4.1/31, Error ellipse: s-maj=3.9km s-min=3.1km az=176.5*

*NEIC **08** 00:02:58.4±1.2, 46°.81N×141°.83E, h10^{km}±3^{km}, mb4.4/4, Error ellipse: s-maj=15.1km s-min=10.0km az=171.0*

ISC 08 00:02:58.9±0.8**, 46°.75N**±0°.03×**141°.81E**±0°.03**, h14**^{km}±5^{km}**, n104,** σ**1^s.55**/112**, mb4.2**/39**, 8C-5D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEVR	Nevel`sk	0.08	155	*e*PN	Pg	00 03 01.4	-0.3
NEVR				*e*S	Sg	00 03 03.8	+0.2
NEVR				pmax	pmax		
	comp=Z,150nm,0.3s						
NEVR				smax	smax		
	comp=N,9µm,0.4s						
YSS	Yuzh-Sakhalins	0.68	72	*e*Pg	Pg	00 03 11.4	-0.8
YSS	Yuzh-Sakhalins	0.68	72	⇑*i*PN	Pg	00 03 11.8	-0.3
YSS				*e*		00 03 21.8	
YSS				pmax	pmax		
	comp=Z,700nm,0.3s						
YSS				smax	smax		
	comp=N,6µm,0.5s						
YSS	Yuzh-Sakhalins	0.68	72	⇑*i*Pg	Pg	00 03 11.8	-0.3
YSS				AMB	AMB	00 03 12.8	
	comp=N,560nm,0.4s						
YSS				pP	Pn	00 03 13.8	-0.3
YSS				*e*Sg	Sb	00 03 22.2	+0.4
YSS				A	A	00 03 22.6	
	comp=N,7µm,0.7s						
YSS				A	A	00 03 22.6	
	comp=N,6µm,0.7s						
YSS				AMS	AMS	00 03 40.0	
	comp=N,9µm,9.0s						
JRBN	Rebuntou	1.42	202	P	Pn	00 03 23.1	-1.2
JRBN				*e*S	Sn	00 03 41.8	-1.0
JWK2	Keihoku	1.44	178	P	Pn	00 03 24.1	-0.4
JWK2				*e*S	Sb	00 03 44.1	+0.6
JRR	Rishiri	1.65	192	P	Pn	00 03 27.8	+0.4
JRR				*e*S	Sb	00 03 51.0	+1.3
JSE	Soyaes	1.87	163	P	Pn	00 03 30.1	-0.4
UGL	Uglegorsk	2.34	4	*e*PN	Pg	00 03 43.0	-0.6
UGL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
UGL	Uglegorsk	2.34	4	*e*Pg	Pg	00 03 43.5	-0.1
UGL				AMB	AMB	00 03 49.5	
	comp=Z,610nm,1.0s						
UGL				*e*Sg	Sg	00 04 15.0	+1.1
UGL				A	A	00 04 20.0	
	comp=Z,880nm,0.7s						
JYG	Yagishiri	2.34	187	P	Pn	00 03 37.7	+0.8
JSS	Shosan	2.35	179	P	Pn	00 03 37.8	+0.7
ASAJ	Asahikawa	2.69	168	Pn	Pn	00 03 42.1	+0.4
	comp=Z,10nm,0.3s,baz=15,slow=16,SNR=21						
ASAJ				Sn	Sn	00 04 15.0	+0.8
	comp=Z,24nm,0.3s,baz=279,slow=19,SNR=4.5						
ASAJ	Asahikawa	2.69	168	P	Pn	00 03 42.1	+0.4
JKK2	Kamakawa 2	2.95	167	P	Pn	00 03 45.8	+0.4
JMP	Maruseppu	2.95	158	P	Pn	00 03 44.6	-0.8
JHR	Hokuryu	3.01	181	P	Pn	00 03 48.0	+1.9
JTKR	Abashiri--Toko	3.15	151	P	Pn	00 03 47.1	-0.9
JAB	Ashibetsu	3.26	175	P	Pb	00 03 53.4	-3.1
TEY	Ternei	4.02	247	⇓*e*PN	Pn	00 03 59.5	-0.5
TEY				*e*		00 04 59.0	
TEY				pmax	pmax		
	comp=E,70nm,0.5s						
TEY				pmax	pmax		
	comp=Z,60nm,0.5s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.4s						
TEY	Ternei	4.02	247	*e*P	Pn	00 03 59.5	-0.5
TEY				AMB	AMB	00 04 00.2	
	comp=N,30nm,0.5s						
TEY				*e*Pg	Pg	00 04 15.9	+0.1
TEY				AMB	AMB	00 04 16.6	
	comp=N,70nm,0.6s						
TEY				*e*Sg	Sg	00 05 11.7	+3.9
TEY				A	A	00 05 12.6	
	comp=N,80nm,0.7s						
TYV	Tymovskoe	4.16	7	*e*PN	Pg	00 04 15.3	-3.1
TYV				pmax	pmax		
	comp=Z,37nm,0.9s						
TYV	Tymovskoe	4.16	7	*e*P	Pn	00 04 03.1	+1.2
TYV				AMB	AMB	00 04 03.6	
	comp=Z,10.0nm,0.4s						
TYV				*e*Pg	Pg	00 04 17.7	-0.7
TYV				AMB	AMB	00 04 18.2	
	comp=Z,21nm,0.5s						
KUR	Kuril'sk	4.49	108	PN	Pn	00 04 05.9	-0.5
KUR				MLR	MLR		
	comp=Z,800nm,14.0s						
KUR	Kuril'sk	4.49	108	*e*P	Pn	00 04 09.0	+2.6
KUR				AMB	AMB	00 04 10.3	
	comp=Z,70nm,0.4s						
KUR				*e*S	Sn	00 05 00.8	+2.4
KUR				A	A	00 05 02.2	
	comp=Z,120nm,0.7s						
ERM	Erimo	4.83	168	*e*Pn	Pn	00 04 12.3	+1.2
ERM	Erimo	4.83	168	*e*PN	Pn	00 04 12.3	+1.2
GRNR	Gornyy	5.37	320	*e*PN	Pn	00 04 18.0	-0.6
GRNR				pmax	pmax		
	comp=Z,23nm,0.2s						
GRNR				pmax	pmax		
	comp=Z,21nm,0.2s						
GRNR	Gornyy	5.37	320	*e*P	Pn	00 04 18.0	-0.6
GRNR				AMB	AMB	00 04 19.0	
	comp=Z,23nm,0.2s						
GRNR				*e*Pg	Pg	00 04 41.2	-0.5
GRNR				AMB	AMB	00 04 42.0	
	comp=Z,19nm,0.5s						
GRNR				*e*Sg	Sg	00 05 54.5	+3.3
GRNR				A	A	00 05 54.7	
	comp=Z,20nm,0.3s						
NKL	Nikolayevsk	6.45	354	*e*P	Pn	00 04 35.8	+2.5
NKL				AMB	AMB	00 06 38.1	
	comp=Z,180nm,0.7s						
OKH	Okha	6.85	6	*e*P	Pn	00 04 39.1	+0.3
OKH				AMB	AMB	00 04 39.3	
	comp=Z,210nm,0.2s						
KLR	Kul'dur	7.19	294	Pn	Pn	00 04 43.3	-0.2
	comp=Z,0.6nm,0.3s,baz=119,slow=13,SNR=8.0						
KLR				Sn	Sn	00 05 59.8	-5.2
	comp=Z,2.0nm,0.3s,baz=288,slow=16,SNR=7.2						
KLR				Lg	Lg	00 06 46.0	
	comp=Z,0.3nm,0.3s,baz=126,slow=19,SNR=3.1						
KLR	Kul'dur	7.19	294	*ce*PN	Pn	00 04 43.7	+0.1
KLR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
USA0B	Ussuriysk Arra	7.36	253	*e*Pn	Pn	00 04 45.0	-0.9
USRK	Ussuriysk Ar.	7.36	253	Pn	Pn	00 04 45.5	-0.3
	comp=Z,0.6nm,0.3s,baz=65,slow=12,SNR=11						
USRK				Lg	Lg	00 06 49.2	
	comp=Z,0.8nm,0.3s,baz=58,slow=26,SNR=4.0						
EKMR	Ekimchan	8.52	321	*e*P	Pn	00 05 02.5	+0.7
EKMR				*e*Sg	Sg	00 07 50.0	+18
EKMR				A	A	00 07 50.8	
	comp=Z,42nm,1.0s						
MSHR	Mys Shultsa	8.66	245	*ce*PN	Pn	00 05 06.0	+2.3
MAJO	Matsushiro	10.55	196	*e*Pn	Pn	00 05 31.7	+2.1
MAJO	Matsushiro	10.55	196	*e*PN	Pn	00 05 31.7	+2.1
MJAR	Matsushiro Arr	10.55	196	Pn	Pn	00 05 31.7	+2.1
	comp=Z,0.1nm,0.3s,baz=15,slow=10,SNR=3.0						
PETK	Petropavlovsk-	12.04	52	Pn	Pn	00 05 49.7	-0.3
	comp=Z,0.2nm,0.3s,baz=250,slow=10,SNR=5.3						
PEA1	Petropavlovsk-	12.04	52	*e*Pn	Pn	00 05 49.7	-0.3
KSRS	Korea Array	13.86	233	Pn	Pn	00 06 17.6	+2.8
	comp=Z,0.2nm,0.3s,baz=46,slow=13,SNR=4.0						
SEY	Seymchan	17.28	16	P	P	00 07 02.5	+1.5
	comp=Z,0.3nm,0.3s,baz=184,slow=5.5,SNR=10.0						
HHC	Hu-ho-hao-te	22.53	266	P	P	00 07 56.9	-1.4
HHC				S	S	00 12 01.7	-3.3
HHC				sS	pS	00 12 09.1	-1.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,62nm,6.0s						
HHC				LR	LR		
	comp=Z,160nm,10.8s						
HHC				LR	LR		
	comp=Z,250nm,12.3s						
ULN	Ulaanbaatar	23.48	286	⇓*e*P	P	00 08 07.7	-0.5
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SONA0	Songino Array	23.92	286	*e*P	P	00 08 13.1	+0.7
SONM	Songino Array	23.92	286	P	P	00 08 13.1	+0.7
	comp=Z,1.3nm,0.8s,baz=92,slow=8.3,SNR=7.5						
BILL	Bilibino	24.75	22	⇓*i*P	P	00 08 21.2	+1.6
BILL				*e*		00 08 54.1	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,133nm,17.0s						
ZAK	Zakamensk	25.56	292	*e*P	P	00 08 26.7	-0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WHN	Wuhan	26.68	242	P	P	00 08 35.0	-2.4
DGZ	Jazzator, Alta	35.69	295	⇓*e*P	P	00 09 57.0	+0.3
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZAA1	Zalesovo Array	36.19	303	*e*P	P	00 10 01.5	+0.8
ZALV	Zalesovo Beam	36.19	303	P	P	00 10 01.5	+0.8
	comp=Z,0.9nm,0.6s,baz=93,slow=12,SNR=3.8						
MK32	Makanchi Array	39.90	293	*e*P	P	00 10 31.7	-0.5
MKAR	Makanchi Array	39.90	293	P	P	00 10 31.7	-0.5
	comp=Z,0.8nm,0.8s,baz=67,slow=8.9,SNR=6.7						
KURK	Kurchatov	40.74	300	⇓*e*P	P	00 10 39.9	+0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
COLA	College	40.95	38	*ce*P	P	00 10 41.0	+0.5
COLA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ILAR	Eielson Array	41.37	38	P	P	00 10 43.7	-0.4
	comp=Z,4.0nm,0.7s,baz=282,slow=8.3,SNR=35						
BRVK	Borovoye	44.73	306	⇑*e*P	P	00 11 11.9	+0.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	Arti	49.56	314	P	P	00 11 51.8	+2.8
ARU						00 13 39.9	
ARU				S	S	00 19 02.6	+6.3
ARU				SS	SS	00 22 23.8	-3.9
ABKAR	Akbulak array	52.25	305	*e*P	P	00 12 09.2	-0.1
	comp=Z,5.9nm,1.4s						
RES	Resolute Bay	53.16	16	P	P	00 12 15.6	-0.1
	comp=Z,4.3nm,0.8s,baz=299,slow=6.0,SNR=8.9						
RES	Resolute Bay	53.16	16	*e*P	P	00 12 14.5	-1.2
	comp=Z,4.4nm,0.8s						
ARA0	ARCESS Array S	55.07	337	*e*P	P	00 12 29.4	-0.4
ARCES	ARCESS Array B	55.07	337	P	P	00 12 29.4	-0.4
	comp=Z,6.8nm,1.1s,baz=0.0,slow=15,SNR=3.6						
YKA	Yellowknife Ar	55.38	33	P	P	00 12 31.6	-0.4

	comp=Z,1.6nm,0.6s,baz=304,slow=6.7,SNR=7.1						
YKB5	Yellowknife Ar	55.38	33	eP	P	00 12 31.6	-0.4
FIA0	FINESS Array S	60.44	330	eP	P	00 13 07.6	+0.1
FIA0	FINESS Array S	60.44	330	eP	P	00 13 07.6	+0.1
FINES	FINESS Array B	60.44	330	P	P	00 13 07.6	+0.1
	comp=Z,1.9nm,0.8s,baz=31,slow=7.8,SNR=11						
FINES	FINESS Array B	60.44	330	i P	P	00 13 08.1	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	Obninsk	60.63	320	eP	P	00 13 10.4	+1.5
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SUMG	Summit	60.98	0	eP	P	00 13 11.2	-0.3
	comp=Z,7.4nm,1.0s						
SUMG	Summit	60.98	0	eP	P	00 13 11.2	-0.3
SUMG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	64.95	308	eP	P	00 13 39.8	+1.8
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,176nm,17.0s						
NB2	NORSAR Subarra	65.39	336	P	P	00 13 41.2	+0.7
	comp=Z,7.9nm,1.1s,baz=32,slow=6.9						
NB200	NORSAR Array S	65.39	336	eP	P	00 13 41.5	+1.0
NOA	NORSAR Array B	65.39	336	P	P	00 13 41.5	+1.0
	comp=Z,1.3nm,0.7s,baz=34,slow=6.4,SNR=6.5						
AKASG	Malin Array Be	66.89	320	P	P	00 13 50.1	-0.2
	comp=Z,0.2nm,0.3s,baz=42,slow=7.0,SNR=4.4						
KVN	Kaiserville	68.79	55	eP	P	00 14 02.3	-0.4
	comp=Z,2.3nm,0.7s						
KVN	Kaiserville	68.79	55	eP	P	00 14 02.3	-0.4
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NV01	Mina Array Sit	69.10	56	eP	P	00 14 04.1	-0.6
NVAR	Mina Array Bea	69.10	56	P	P	00 14 04.1	-0.6
	comp=Z,1.2nm,0.7s,baz=292,slow=5.8,SNR=8.5						
ASAR	Alice Springs	70.45	188	P	P	00 14 12.3	-0.4
	comp=Z,1.2nm,0.8s,baz=14,slow=6.2,SNR=9.8						
PDAR	Pinedale Array	70.77	48	P	P	00 14 14.3	-0.6
	comp=Z,1.1nm,0.8s,baz=317,slow=0.8,SNR=7.6						
BR101	Keskin Array S	72.73	310	eP	P	00 14 27.4	+0.8
BRTR	Keskin Array B	72.73	310	P	P	00 14 27.4	+0.8
	comp=Z,0.4nm,0.8s,baz=28,slow=6.5,SNR=2.6						
CLL	Collm	72.86	329	⇑iP	P	00 14 32.1	+5.1
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	Collm	72.86	329	⇑i(sP)	sP	00 14 32.1	-0.9
	comp=Z,5.0nm,1.0s						
PFO	Pinyon Flats O	73.54	58	i P	P	00 14 30.4	-1.1
KHC	Kasperske Hory	74.46	328	eP	P	00 14 34.0	-2.5
KHC	Kasperske Hory	74.46	328	eP	P	00 14 34.0	-2.5
CONA	Conrad Observa	74.58	326	ePcP	P	00 14 48.5	+11
	comp=Z,1.4nm,0.7s						
GERES	GERESS Array B	74.65	327	P	P	00 14 37.7	0.0
	comp=Z,0.2nm,0.5s,baz=51,slow=7.8,SNR=3.9						
SOKA	Soboth	75.93	325	ePcP	P	00 14 51.4	+6.3
	comp=Z,4.3nm,1.0s						
KBA	Koelnbreinsper	76.25	327	epP	P	00 14 52.4	+5.4
	comp=Z,8.1nm,1.4s						
WTTA	Wattenberg	76.73	328	ePcP	P	00 14 55.8	+6.0
	comp=Z,7.0nm,1.1s						
MOTA	Moosalm	76.86	328	ePcP	P	00 14 56.6	+6.2
	comp=Z,5.4nm,0.9s						
RETA	Reutte	76.86	328	ePcP	P	00 14 55.8	+5.5
	comp=Z,5.9nm,1.8s						
SQTA	Sankt Quirin	76.92	328	ePcP	P	00 14 57.1	+6.4
	comp=Z,4.2nm,0.9s						
DAVA	Damuels	77.35	329	ePcP	P	00 14 58.8	+5.6
	comp=Z,3.1nm,0.6s						
TXAR	Lajitas Array	83.99	53	P	P	00 15 28.8	-0.2
	comp=Z,1.3nm,0.8s,baz=293,slow=3.8,SNR=12						
ESDC	Sonseca Array	88.69	334	P	P	00 15 51.8	0.0
	comp=Z,0.6nm,0.6s,baz=11,slow=4.2,SNR=7.8						

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*MOS **08** 00:07:51.8±0.9, 33°.42S×77°.75E, h10km, mb4.9/29, Error ellipse: s-maj=18.4km s-min=8.8km az=94.2*

*IDC **08** 00:07:51.8±0.5, 33°.33S×77°.74E, h0km, mb4.4/20, mb1 4.5/20, mb1mx4.3/31, mbtmp4.3/20, MS3.9/5, Ms1 4.0/5, ms1mx3.6/23, Error ellipse: s-maj=16.7km s-min=15.7km az=151.0*

*ISCJB **08** 00:07:52.7±0.3, 33°.44S±0°.06×77°.76E±0°.08, h16km, mb4.6/54, MS4.0/5, Error ellipse: s-maj=9.7km s-min=8.4km az=21.4*

*BJI **08** 00:07:52.0±0.0, 33°.40S×77°.80E, h10km, mb4.6/14, mB4.9/8, Ms4.9/1, Ms7 4.7/1*

*NEIC **08** 00:07:53.2±1.2, 33°.40S×77°.72E, h10km±1km, mb4.8/24, Error ellipse: s-maj=17.4km s-min=16.0km az=205.0*

ISC 08 00:07:54.4±0.4, **33°.42S**±0°.08×**77°.7E**±0°.1, **h16km, n135, σ0ˢ.88**/130, **mb4.7**/54, **MS4.1**/5, **8C-13D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	26.10	348	T	T	00 40 30.6	
	baz=170,slow=76,SNR=419						
H08S1	Diego Carcia H	26.10	348	T	T	00 40 30.9	
	baz=170,slow=76,SNR=215						
H08S3	Diego Garcia H	26.12	348	T	T	00 40 32.1	
	baz=170,slow=76,SNR=466						
H01W2	Cape Leeuwin H	30.07	103	T	T	00 45 24.0	
	baz=263,slow=74,SNR=70						
H01W3	Cape Leeuwin H	30.08	103	T	T	00 45 25.1	
	baz=263,slow=74,SNR=53						
H01W1	Cape Leeuwin H	30.09	103	T	T	00 45 25.9	
	baz=263,slow=74,SNR=61						
MAW	Mawson	35.30	190	P	P	00 14 48.7	+0.5
	3.0nm,0.8s,baz=27,slow=16,SNR=6.5						
MAW	Mawson	35.30	190	eP	P	00 14 48.9	+0.7
	5.7nm,1.9s						
MAW	Mawson	35.30	190	eP	P	00 14 48.9	+0.7
MAW				pmax	pmax		
	comp=Z,6.0nm,1.9s						
BOSA	Boshof	44.83	261	P	P	00 16 08.0	0.0
	comp=Z,2.9nm,0.8s,baz=83,slow=13,SNR=4.1						
MATP	Matopo	45.36	274	P	P	00 16 12.1	-0.2
	comp=Z,9.0nm,1.1s,baz=125,slow=10,SNR=8.1						
LBTB	Lobatse	45.85	266	P	P	00 16 15.9	-0.2
	comp=Z,3.4nm,0.8s,baz=122,slow=7.0,SNR=6.6						
LBTB	Lobatse	45.85	266	eP	P	00 16 15.4	-0.7
	comp=Z,22nm,1.5s						
LBTB	Lobatse	45.85	266	eP	P	00 16 15.4	-0.7
LBTB				pmax	pmax		
	comp=Z,22nm,1.5s						
KMBO	Kilima Mbogo	49.69	302	P	P	00 16 46.6	+0.5
	comp=Z,3.8nm,0.9s,baz=70,slow=5.3,SNR=7.9						
KMBO	Kilima Mbogo	49.69	302	eP	P	00 16 45.7	-0.4
	comp=Z,6.0nm,1.0s						
KMBO	Kilima Mbogo	49.69	302	eP	P	00 16 45.9	-0.2
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ASAR	Alice Springs	49.80	94	P	P	00 16 46.2	-0.4
	comp=Z,4.0nm,1.0s,baz=242,slow=6.6,SNR=16						
ASAR	Alice Springs	49.80	94	eP	P	00 16 46.1	-0.5
ASAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WR1	Warramunga Arr	51.78	90	eP	P	00 17 01.7	+0.1
WRA	Warramunga Arr	51.78	90	P	P	00 17 01.7	+0.1
	comp=Z,6.7nm,0.9s,baz=243,slow=7.4,SNR=7.9						
WRAB	Tennant Creek	51.79	90	⇓iP	P	00 17 01.5	-0.2
WRAB				pmax	pmax		
	comp=Z,13nm,1.1s						
TSUM	Tsumeb	55.05	269	eP	P	00 17 25.6	-0.2
	comp=Z,16nm,1.2s						
CMAR	Chiang Mai Arr	55.43	25	P	P	00 17 27.8	-0.4
	comp=Z,3.2nm,0.9s,baz=210,slow=6.8,SNR=13						
CMAR				LR	LR	00 38 31.2	
	comp=Z,43nm,20.6s,baz=215,slow=33						
CMAR	Chiang Mai Arr	55.43	25	eP	P	00 17 28.3	+0.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SNAA	Sanae	55.70	202	P	P	00 17 30.1	+0.5
SNAA	Sanae	55.70	202	P	P	00 17 30.4	+0.8
	comp=Z,2.4nm,1.1s,baz=120,slow=12,SNR=7.4						
SNAA	Sanae	55.70	202	eP	P	00 17 29.8	+0.2
	comp=Z,11nm,1.5s						
VNDA	Vanda	56.38	165	P	P	00 17 34.4	+0.1
	comp=Z,3.1nm,0.7s,baz=269,slow=6.0,SNR=20						
VNDA				LR	LR	00 39 53.4	
	comp=Z,224nm,19.7s,baz=302,slow=34						
VNDA	Vanda	56.38	165	eP	P	00 17 34.1	-0.2
VNDA				esP	P	00 17 34.3	-0.1
VNDA	Vanda	56.38	165	eP	P	00 17 34.1	-0.2
QSPA	South Pole Qui	56.73	180	eP	P	00 17 37.4	+0.2
	comp=Z,55nm,1.9s						
VNA2	Neumayer--Watz	57.24	203	P	P	00 17 42.9	+2.4
	baz=90,slow=6.5						
VNA1	Neumayer--Stat	57.56	203	P	P	00 17 43.2	+0.4
VNA3	Neumayer Olymp	57.92	202	P	P	00 17 46.1	+0.8
SIJI	Sorong	59.66	69	LR	LR	00 42 00.2	
	comp=Z,72nm,21.6s,baz=174,slow=34						
SHL	Shillong	60.19	15	P	P	00 18 03.8	+2.1
SHL				pmax	pmax		
	comp=Z,18nm,0.7s						
RAYN	Ar Rayn	64.41	327	eP	P	00 18 29.9	0.0
	comp=Z,16nm,1.0s						
RAYN	Ar Rayn	64.41	327	eP	P	00 18 29.9	0.0
RAYN				pmax	pmax		
	comp=Z,16nm,1.0s						
KBL	Kabul	68.09	352	eP	P	00 18 53.6	+0.1
	comp=Z,8.7nm,1.0s						
KBL	Kabul	68.09	352	eP	P	00 18 53.6	+0.1
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WHN	Wuhan	72.44	33	P	P	00 19 26.2	+6.3
KSH	Kashi	72.59	359	P	P	00 19 25.0	+4.2
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN	Xi'an	73.23	27	eP	P	00 19 24.4	-0.2
	comp=Z,14nm,1.1s						
XAN	Xi'an	73.23	27	P	P	00 19 24.4	-0.2
XAN				pP	pwP	00 19 33.9	+0.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN	Xi'an	73.23	27	eP	P	00 19 24.4	-0.2
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
GEYT	Alibeck	73.29	344	P	P	00 19 24.5	-0.4
	comp=Z,2.2nm,0.9s,baz=193,slow=5.9,SNR=4.4						
BTK	Batken	73.39	354	eP	P	00 19 26.1	+0.7
	comp=Z,9.3nm,1.2s						
BTK	Batken	73.39	354	eP	P	00 19 26.2	+0.7
BTK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AAK	Ala-Archa	75.75	358	⇑eP	P	00 19 40.1	+0.9
AAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
PDGK	Podgornoye	76.40	1	P	P	00 19 43.0	+0.2
PDGK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KK31	Karatay Array	76.44	355	eP	P	00 19 43.4	+0.4
	comp=Z,13nm,1.1s						
KK31	Karatay Array	76.44	355	eP	P	00 19 43.4	+0.4
KK31				pmax	pmax		
	comp=Z,13nm,1.1s						
KKAR	Karatay Array	76.44	355	eP	P	00 19 43.4	+0.4
	comp=Z,13nm,1.1s						
KKAR	Karatay Array	76.44	355	eP	P	00 19 43.4	+0.4
KKAR				pmax	pmax		
	comp=Z,13nm,1.1s						
GNI	Garni	79.30	335	⇓eP	P	00 19 59.7	+0.6
GNI				pmax	pmax		
	comp=Z,41nm,1.2s						
AKT	Akhty	79.48	338	eP	P	00 20 00.9	+0.9
AKT				e		00 20 08.5	
AKT				pmax	pmax		
	comp=Z,42nm,1.3s						
MK31	Makanchi Array	79.95	3	eP	P	00 20 00.9	-1.4
	comp=Z,2.8nm,1.1s						
MK31	Makanchi Array	79.95	3	eP	P	00 20 00.9	-1.4
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK32	Makanchi Array	79.95	3	eP	P	00 20 01.1	-1.3
MKAR	Makanchi Array	79.95	3	P	P	00 20 01.1	-1.3
	comp=Z,2.1nm,1.0s,baz=178,slow=5.8,SNR=12						
HHC	Hu-ho-hao-te	80.23	25	P	P	00 20 06.1	+2.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,86nm,6.9s						
AKH	Akhalkalaki	80.85	335	⇓iP	P	00 20 08.7	+1.2
OTUK	Ortayu	81.44	356	P	P	00 20 10.8	+0.5
OTUK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NCK	Nalchik	82.65	336	⇓eP	P	00 20 17.8	+1.1
NCK				pmax	pmax		
	comp=Z,11nm,0.6s						
NEY	Neytrino	82.74	335	⇓eP	P	00 20 18.7	+1.3
NEY				pmax	pmax		
	comp=Z,1.0nm,1.3s						
KBZ	Khabaz	83.10	335	P	P	00 20 19.1	+0.1
	comp=Z,2.5nm,0.8s,baz=190,slow=4.9,SNR=5.9						
DGZ	Jazzator, Alta	83.20	6	ceP	P	00 20 20.2	+0.6
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KIV	Kislovodsk	83.37	335	eP	P	00 20 20.8	+0.3
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
BR101	Keskin Array S	83.43	327	eP	P	00 20 20.9	-0.1
BR131	Keskin Array S	83.43	327	eP	P	00 20 20.7	-0.3
	comp=Z,4.7nm,0.9s						
BR131	Keskin Array S	83.43	327	eP	P	00 20 20.7	-0.3
BR131				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRTR	Keskin Array B	83.43	327	P	P	00 20 20.9	-0.1
	comp=Z,3.7nm,1.0s,baz=160,slow=7.6,SNR=18						
KURK	Kurchatov	83.77	1	eP	P	00 20 21.8	-0.5
	comp=Z,5.0nm,1.1s						
KURK	Kurchatov	83.77	1	eP	P	00 20 21.8	-0.5
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOF	Gofitskoye	84.22	336	⇑iP	P	00 20 25.0	+0.3
GOF				pmax	pmax		
	comp=Z,42nm,1.0s						
KSRS	Korea Array	84.61	38	P	P	00 20 26.3	-0.5
	comp=Z,0.6nm,0.4s,baz=219,slow=4.4,SNR=4.1						
SONM	Songino Array	84.88	19	P	P	00 20 27.3	-0.9
	comp=Z,2.7nm,0.9s,baz=208,slow=4.4,SNR=11						
SONM				LR	LR	00 55 56.7	
	comp=Z,120nm,21.1s,baz=242,slow=34						
SONM	Songino Array	84.88	19	eP	P	00 20 27.9	-0.3
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	Ulaanbaatar	85.09	19	eP	P	00 20 28.0	-1.3
	comp=Z,6.6nm,1.2s						
ULN	Ulaanbaatar	85.09	19	⇓eP	P	00 20 28.9	-0.4
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TOA0	Torodi Ar. Sit	85.82	289	eP	P	00 20 32.5	-0.9
	comp=Z,13nm,1.2s						
TORD	Torodi Ar. Bea	85.82	289	P	P	00 20 33.4	-0.1
	comp=Z,6.9nm,1.0s,baz=115,slow=3.6,SNR=22						
TOA1	Torodi Ar. Sit	85.82	289	eP	P	00 20 33.4	-0.1
ANN	Anapa	86.03	333	eP	P	00 20 25.2	-8.6
ANN				e*PP	PcP	00 20 27.9	-8.5
ANN				e		00 23 52.6	
ANN				ePPP	PPP	00 25 46.8	
ANN				eSSS	SSS	00 40 14.8	
ANN				pmax	pmax		
	comp=Z,27nm,1.1s						
BRVK	Borovoye	86.36	356	eP	P	00 20 34.2	-1.0
	comp=Z,3.7nm,0.9s						
BRVK	Borovoye	86.36	356	⇓eP	P	00 20 35.1	-0.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZAA0	Zalesovo Array	87.23	4	eP	P	00 20 38.3	-1.1
	comp=Z,11nm,1.2s						
ZALV	Zalesovo Beam	87.23	4	P	P	00 20 38.6	-0.9
	comp=Z,2.9nm,0.6s,baz=204,slow=3.3,SNR=17						
ZALV	Zalesovo Beam	87.23	4	eP	P	00 20 38.7	-0.7
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAA1	Zalesovo Array	87.23	4	eP	P	00 20 38.6	-0.9
TLY	Talaya	87.75	16	⇓eP	P	00 20 42.1	0.0
MAJO	Matsushiro	89.61	44	eP	P	00 20 50.6	-0.6
MAJO	Matsushiro	89.61	44	eP	P	00 20 50.6	-0.6
MJAR	Matsushiro Arr	89.61	45	P	P	00 20 50.6	-0.6
	comp=Z,2.0nm,0.8s,baz=207,slow=6.3,SNR=5.3						
MJA0	Matsu Arr-Jizo	89.64	45	eP	P	00 20 52.0	+0.6
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MSHR	Mys Shultsa	90.09	36	ceP	P	00 20 53.5	+0.2
CFR	Carcaliu	90.23	327	⇑iP	P	00 20 53.9	+0.1
VSR	Storozhevoye	90.85	337	eP	P	00 20 54.4	-2.2
VSR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARU	Arti	90.97	349	P	P	00 20 56.6	-0.4
ARU						00 24 32.5	
ARU				S	SKSac	00 31 28.1	+0.3
ARU				SS	SS	00 38 01.0	+3.4
VRI	Vrincioaia	91.39	327	⇑iP	P	00 20 59.9	+0.6
VRI	Vrincioaia	91.39	327	P	P	00 21 00.7	+1.4
VRI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PLOR	Plostina	91.42	327	⇓iP	P	00 21 00.3	+0.9
MLR	Muntele Rosu	91.47	326	eP	P	00 20 59.2	-0.6
	comp=Z,7.9nm,0.9s						
MLR	Muntele Rosu	91.47	326	⇑iP	P	00 21 00.1	+0.3
MLR	Muntele Rosu	91.47	326	eP	P	00 20 59.2	-0.6
MLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USRK	Ussuriysk Ar.	91.70	36	LR	LR	01 01 46.1	
	comp=Z,68nm,19.4s,baz=292,slow=35						
VOIR		91.84	326	⇓iP	P	00 21 01.4	-0.1
ARR	Arges	91.99	326	⇓iP	P	00 21 02.1	0.0
LPSR	Galich'ya Gora	92.11	338	eP	P	00 21 01.5	-0.9
LPSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BZS	Buzias	93.62	324	⇑iP	P	00 21 09.3	-0.2
AKASG	Malin Array Be	94.05	331	P	P	00 21 11.0	-0.4
	comp=Z,1.8nm,0.8s,baz=133,slow=4.2,SNR=7.6						
AKASG	Malin Array Be	94.05	331	eP	P	00 21 11.4	0.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
OBN	Obninsk	94.98	338	eP	P	00 21 15.0	-0.5
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KLR	Kul'dur	95.28	32	⇓eP	P	00 21 15.7	-1.4
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	Tiksi	110.72	15	⇓iPKIKP	PKiKP	00 26 24.9	-0.4
TIXI				pmax	pmax		
	comp=Z,12nm,1.7s						
BILL	Bilibino	120.00	26	ePKIKP	PKiKP	00 26 44.2	+0.9
BILL				e		00 28 05.5	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	138.64	27	PKP	PKiKP	00 27 19.8	-1.0
	comp=Z,0.4nm,0.7s,baz=306,slow=4.4,SNR=4.1						
SCHQ	Schefferville	147.28	322	PKPbc	PKPbc	00 27 36.2	-0.3
	comp=Z,6.5nm,0.8s,baz=57,slow=4.0,SNR=5.3						
DLBC	Dease Lake	148.82	28	PKPbc	PKPbc	00 27 40.6	0.0
	comp=Z,3.0nm,0.9s,baz=198,slow=2.4,SNR=3.6						
DLBC	Dease Lake	148.82	28	ePKPbc	PKPbc	00 27 39.9	-0.7
BATG	Bathurst New B	149.41	308	ePKPbc	PKPbc	00 27 42.2	-0.1
YKW3	Yellowknife Ar	149.81	11	ePKPbc	PKPbc	00 27 41.6	-1.2
YKA	Yellowknife Ar	149.87	11	PKPbc	PKPbc	00 27 41.9	-1.0
	comp=Z,5.4nm,1.1s,baz=350,slow=2.8,SNR=13						
YKB5	Yellowknife Ar	149.87	11	ePKPbc	PKPbc	00 27 41.9	-1.0
PQI	Presque Isle	150.86	307	ePKPbc	PKPbc	00 27 44.5	-1.3
NV01	Mina Array Sit	166.10	64	ePKPdf	PKPdf	00 27 59.1	+0.2
NV01				ePKPab	PKPab	00 28 59.8	+0.2
NVAR	Mina Array Bea	166.10	64	PKP	PKPdf	00 27 59.1	+0.2
	comp=Z,0.6nm,0.8s,baz=243,slow=0.8,SNR=3.0						
NVAR				PKPab	PKPab	00 28 59.7	+0.2
	comp=Z,1.3nm,0.9s,baz=290,slow=3.7,SNR=5.7						
R11A	Troy Canyon, C	168.15	62	ePKPdf	PKPdf	00 28 00.9	+0.5
ECSD	EROS Data Cent	168.79	338	ePKPab	PKPab	00 29 10.8	0.0
TXAR	Lajitas Array	175.76	163	PKP	PKPdf	00 28 05.6	+1.6
	comp=Z,0.5nm,0.9s,baz=339,slow=4.8,SNR=5.8						
ANMO	Albuquerque	176.22	65	PKPab	PKPab	00 29 44.9	+0.4
	comp=Z,1.3nm,0.9s,baz=6.1,slow=2.2,SNR=3.5						
ANMO	Albuquerque	176.22	65	ePKPab	PKPab	00 29 44.5	0.0
WMOK	Wichita Mounta	176.81	295	ePKPdf	PKPdf	00 28 04.1	+0.1
WMOK	Wichita Mounta	176.81	295	ePKIKP	PKPdf	00 28 04.1	+0.1

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*IGQ **08** 00:17:34.7±0.4, 0°N±3°×8°0W±°, h10km, MLv3.9*

*ISCJB **08** 00:17:35.2±0.6, 0°.30N±0°.03×80°.01W±0°.05, h15km, Error ellipse: s-maj=7.0km s-min=4.0km az=25.8*

ISC 08 00:17:35.9±1.1, **0°.17N**±0°.05×**79°.92W**±0°.06, **h15km, n53, σ1ˢ.29**/58, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAG1	Magdalena	0.28	148	P	Pg	00 17 44.5	+2.6
PTGL	Punta Galera	0.62	350	P	Pg	00 17 44.5	-3.6
CABP	Cabo Pasado	0.75	223	P	Pg	00 17 49.5	-1.1
CABP				S	Sb	00 18 02.2	+1.5
PAC1	Pacto, Paraso	1.13	85	P	Pb	00 17 55.9	-1.4
PAC1				S	Sn	00 18 13.0	+0.3
TERV	Terraza Guagua	1.36	105	P	Pn	00 18 00.2	-0.6
GGPC	Guagua Pichinc	1.37	105	P	Pn	00 18 00.2	-0.8
YANA	Yana	1.38	102	P	Pn	00 18 00.3	-0.8
NINA	Atacazo Ninahu	1.42	113	P	Pn	00 18 01.5	-0.1
PULU	Pululahua	1.43	96	P	Pn	00 18 00.8	-0.8
ILLI	Illinizas Sur	1.48	126	P	Pn	00 18 02.2	-0.3
CUIC	Cuicocha-Domo	1.56	85	P	Pn	00 18 02.9	-0.6
COTA	Cotacachi	1.59	84	P	Pn	00 18 03.8	-0.3
PITA	Cotopaxi Volc	1.65	116	P	Pb	00 18 05.4	-0.9
BNAS	Cotopaxi Volca	1.66	120	P	Pb	00 18 05.8	-0.7
URCU	Urcuqui	1.69	81	P	Pn	00 18 04.7	-0.5
URCU				S	Sg	00 18 29.8	-0.6
BREF	Cotopaxi Volca	1.70	119	P	Pb	00 18 06.7	-0.6
BMOR	Cotopaxi Volca	1.71	121	P	Pb	00 18 06.7	-0.7
BVC2	Cotopaxi Volca	1.72	119	P	Pb	00 18 07.0	-0.5
VC1	Cotopaxi 1	1.72	118	P	Pb	00 18 06.9	-0.6
IMBA	Imbabura, San	1.72	86	P	Pn	00 18 06.7	+0.9
BTAM	Cotopaxi Volca	1.74	119	P	Pb	00 18 07.3	-0.6
COV1	Cotopaxi Volc	1.78	118	P	Pn	00 18 06.4	-0.4
ANTG	Antisana-Guama	1.79	112	P	Pn	00 18 07.7	+0.8
ANTM	Antisana-La Mi	1.84	112	P	Pn	00 18 08.1	+0.7
YAHU	Yahuarcocha	1.86	84	P	Pn	00 18 08.7	+1.1
ANTI	Antisana	1.86	109	P	Pn	00 18 08.8	+1.0
ANTS	Antisana-Sarah	1.87	111	P	Pn	00 18 08.8	+0.8
CAYA	Cayambe	1.93	93	P	Pn	00 18 10.0	+1.3
PISA	Pisayambo	1.96	128	P	Pb	00 18 11.1	-0.5
BBIL	Ulba Tungurahu	2.15	138	P	Pb	00 18 14.0	-0.9
POND	Pondoa	2.16	137	P	Pb	00 18 14.1	-0.8
RETU	Refugio	2.18	138	P	Pb	00 18 15.3	-0.1
BRUN	Tungurahua Vol	2.18	136	P	Pb	00 18 14.4	-1.0
BULB	Ulba Tungurahu	2.20	137	P	Pb	00 18 15.0	-0.6
BMAS	Trigal station	2.20	139	P	Pb	00 18 14.8	-0.8
ARRY	Arrayan	2.22	139	P	Pb	00 18 14.8	-1.1
BPAT	Tungurahua Vol	2.23	138	P	Pb	00 18 15.6	-0.6
PAT1	Patacocha	2.23	138	P	Pb	00 18 14.7	-1.5
ARDO	Archidona, Ten	2.41	119	P	Pb	00 18 17.5	-1.6
MILO	Milagro-Astudi	2.46	171	P	Pn	00 18 14.9	-0.6
COHC	Cochancay	2.70	166	P	Pn	00 18 19.1	+0.3
BBAC	Balboa, Cauca	3.25	55	eP	Pn	00 18 26.4	-0.1
BBAC				eS	Sn	00 19 06.0	+1.0
BBAC				i		00 19 11.9	
	comp=Z,61nm,0.3s						
CRUC	La Cruz	3.28	65	eP	Pn	00 18 28.6	+1.5
SOTA	Rioblanco	3.84	59	eP	Pn	00 18 35.8	+0.7
SOTA				eS	Sb	00 19 25.9	-4.4
SOTA				i		00 19 36.7	
	comp=Z,62nm,0.7s						
POPC	Popayan, Colom	4.01	54	eP	Pn	00 18 38.1	+1.0
MARP	Paez Belalcaza	4.77	56	eP	Pn	00 18 47.7	+0.1
PTLC	Puerto Leguiza	5.12	90	eP	Pn	00 18 53.9	+1.7
YOTC	Yotoco, Valle	5.21	43	eP	Pn	00 18 53.8	+0.3
YOTC				eS	Sn	00 19 53.4	+0.1
YOTC				i		00 20 16.7	
	comp=Z,8.7nm,0.6s						
ORTC	Ortega, Tolima	5.97	51	eP	Pn	00 19 06.2	+2.4
PRAC	Prado	6.14	55	eP	Pn	00 19 06.9	+0.7
MACC	Macarena, Meta	6.38	72	eP	Pn	00 19 11.7	+2.2
RREF	El Recreo	6.55	44	eP	Pn	00 19 15.1	+2.7
VILC	Villavicencio,	7.35	58	eP	Pn	00 19 26.1	+3.2

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*IDC **08** 00:26:57.8±1.1, 30°.57S×177°.43W, h0km, mb4.6/4, mb1 4.6/5, mb1mx4.0/45, mbtmp4.5/5, ML3.9/1, MS3.8/1, Ms1 3.8/1, ms1mx3.0/19, Error ellipse: s-maj=41.2km s-min=28.5km az=156.0*

*ISCJB **08** 00:27:02.1±0.9, 30°.44S±0°.09×177°.6W±0°.2, h33km, mb4.4/6, MS3.8/1, Error ellipse: s-maj=19.6km s-min=12.2km az=166.2*

*NEIC **08** 00:27:06.1±0.8, 30°.21S×177°.58W, h53km±8km, mb4.1/4, Error ellipse: s-maj=24.0km s-min=7.8km az=93.0*

ISC 08 00:27:02.9±0.8, **30°.46S**±0°.07×**177°.5W**±0°.1, **h33km, n32, σ1ˢ.88**/33, **mb4.5**/6, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.26	342	ePn	Pn	00 27 23.7	-0.5
MXZ	Matakaoa Point	7.90	205	ePn	Pn	00 28 57.3	+1.9
OUZ	Omahuta	8.88	235	ePn	Pn	00 29 12.8	+3.9
URZ	Urewera	8.97	208	Pn	Pn	00 29 05.8	-4.3
	1.4nm,0.3s,baz=268,slow=5.4,SNR=7.4						

URZ				Sn	**Sn**	**00 30 43.9**	**-6.1**
	1.9nm,0.3s,baz=252,slow=20,SNR=6.5						
URZ	**Urewera**	**8.97**	**208**	eP	**Pn**	**00 29 08.1**	**-2.1**
CTA	**Charters Tower**	**34.26**	**279**	P	**P**	**00 33 48.0**	**+2.0**
	5.6nm,0.6s,baz=102,slow=9.4,SNR=6.1						
STKA	**Stephens Creek**	**34.91**	**257**	P	**P**	**00 33 52.9**	**+1.4**
	8.3nm,0.8s,baz=97,slow=11,SNR=7.6						
STKA	**Stephens Creek**	**34.91**	**257**	eP	**P**	**00 33 53.4**	**+1.9**
	1.9nm,0.9s						
AS31	**Alice Springs**	**43.56**	**267**	eP	**P**	**00 35 04.5**	**+0.6**
	2.3nm,1.5s						
ASAR	**Alice Springs**	**43.56**	**267**	P	**P**	**00 35 02.7**	**-1.2**
	1.3nm,0.3s,baz=107,slow=7.4,SNR=27						
ASAR				LR	LR	00 52 38.5	
	comp=Z,110nm,19.1s,baz=115,slow=35						
WR1	**Warramunga Arr**	**44.55**	**272**	eP	**P**	**00 35 10.7**	**-1.1**
WRA	**Warramunga Arr**	**44.55**	**272**	P	**P**	**00 35 10.7**	**-1.1**
	3.1nm,0.3s,baz=104,slow=8.9,SNR=22						
QSPA	**South Pole Qui**	**59.65**	**180**	eP	**P**	**00 37 06.4**	**+2.8**
	9.9nm,1.1s						
SNAA	**Sanae**	**78.08**	**178**	P	**P**	**00 38 58.7**	**+0.7**
VNA3	**Neumayer Olymp**	**78.21**	**176**	P	**P**	**00 38 59.5**	**+0.8**
VNA2	**Neumayer--Watz**	**78.65**	**177**	P	**P**	**00 39 02.3**	**+1.2**
VNA1	**Neumayer--Stat**	**78.88**	**176**	P	**P**	**00 39 02.0**	**-0.3**
DLV	**T Lat**	**82.61**	**288**	eS	**S**	**00 49 37.9**	**-1.0**
MK32	**Makanchi Array**	**118.16**	**310**	ePKPdf	**PKPdf**	**00 45 45.7**	**-0.5**
MKAR	**Makanchi Array**	**118.16**	**310**	PKP	**PKPdf**	**00 45 45.7**	**-0.5**
	0.2nm,0.5s,baz=191,slow=1.0,SNR=3.7						
ARA0	**ARCESS Array S**	**138.74**	**348**	ePKPpre	PKPpre	00 46 17.4	
ARA0				ePKPdf	**PKPdf**	**00 46 24.7**	**+0.1**
ARCES	**ARCESS Array B**	**138.74**	**348**	PKhKP	PKPpre	00 46 17.4	
	5.2nm,1.1s,baz=31,slow=2.3,SNR=4.1						
ARCES				PKP	**PKPdf**	**00 46 24.7**	**+0.1**
	2.4nm,0.9s,baz=46,slow=2.6,SNR=5.2						
FIA0	**FINESS Array S**	**145.36**	**340**	ePKPbc	**PKPdf**	**00 46 36.6**	**+0.1**
FINES	**FINESS Array B**	**145.36**	**340**	PKPbc	**PKPdf**	**00 46 36.6**	**+0.1**
	5.2nm,0.3s,baz=52,slow=4.5,SNR=140						
NB2	**NORSAR Subarra**	**148.88**	**352**	PKP	**PKiKP**	**00 46 46.8**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=15,slow=2.5						
NB200	**NORSAR Array S**	**148.88**	**352**	ePKPbc	**PKPbc**	**00 46 46.6**	**+0.1**
NOA	**NORSAR Array B**	**148.88**	**352**	PKPbc	**PKPbc**	**00 46 46.6**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=12,slow=4.0,SNR=6.8						
AKASG	**Malin Array Be**	**151.62**	**323**	PKPbc	**PKiKP**	**00 46 53.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=46,slow=3.0,SNR=6.9						
BR101	**Keskin Array S**	**153.03**	**299**	ePKPbc	**PKiKP**	**00 46 57.3**	**0.0**
BRTR	**Keskin Array B**	**153.03**	**299**	PKPbc	**PKiKP**	**00 46 57.3**	**0.0**
	comp=Z,0.5nm,0.4s,baz=142,slow=4.6,SNR=9.7						
TORD	**Torodi Ar. Bea**	**162.75**	**177**	PKPab	**PKPab**	**00 47 51.4**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=191,slow=4.9,SNR=5.1						
TOA1	**Torodi Ar. Sit**	**162.76**	**177**	ePKPab	**PKPab**	**00 47 51.4**	**+0.7**

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*THR **08** 00:30:57.8, 30°.57N×48°.22E, h17^{km}, ML2.9*
*ISN **08** 00:30:57.8±4.1, 30°.58N×48°.28E, h15^{km}, ML2.8*
ISC 08 00:31:02.1±4.0**, 30°.8N**±0°.2×**48°.2E**±0°.1**, h10**^{km}**, n4, σ2^{s}.68**/6**,**
Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.39**	**20**	eAML	AML	00 31 52.0	
	119nm,0.6s						
SHGR				ePg	**Pb**	**00 31 27.2**	**-1.0**
SHGR				eSg	**Sb**	**00 31 48.7**	**+2.7**
SHGR				eAML	AML	00 31 56.1	
	184nm,0.7s						
KHMZ	**Khomeyn**	**3.27**	**26**	ePn	**Pn**	**00 31 53.6**	**-0.1**
BHD	**Baghdad**	**4.10**	**308**	ePn	**Pn**	**00 32 07.0**	**+2.1**
	baz=128						
BHD				eSn	**Sn**	**00 32 50.0**	**-2.9**
SNGE	**Sanandaj**	**4.35**	**350**	ePn	**Pn**	**00 32 08.5**	**0.0**

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*ISCJB **08** 00:55:55.6±0.4, 24°.12S±0°.03×67°.19W±0°.03, h195^{km}±5^{km}, mb3.7/2, Error ellipse: s-maj=5.6km s-min=4.1km az=31.2*
*IDC **08** 00:55:55.7±1.4, 24°.11S×67°.06W, h181^{km}±20^{km}, mb3.7/2, mb1 3.6/7, mb1mx3.2/27, mbtmp4.0/7, Error ellipse: s-maj=28.0km s-min=21.3km az=97.0*
*SJA **08** 00:55:55.7±0.9, 24°.15S×67°.13W, h195^{km}±6^{km}, ML2.9, MW3.1*
*GUC **08** 00:55:58.3±0.6, 23°.94S×67°.57W, h215^{km}±7^{km}, ML4.2*
ISC 08 00:55:55.7±0.8**, 24°.17S**±0°.04×**67°.16W**±0°.03**, h191**^{km}±8^{km}**,**
n42, σ1^{s}.49/77**, 11C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.61**	**110**	iP	**Pn**	**00 56 30.9**	**+1.1**
SLA				IAML		00 56 31.0	
	comp=Z,65nm,0.7s						
SLA				iS	**Sn**	**00 56 56.8**	**+0.5**
HJA	**Humahuaca**	**1.87**	**60**	iP	**Pn**	**00 56 33.1**	**+0.4**
HJA				IAML		00 56 34.0	
	comp=Z,52nm,0.3s						
HJA				iS	**Sn**	**00 57 01.3**	**+0.1**
AZAP	**Zapla**	**1.92**	**92**	iP	**Pn**	**00 56 33.3**	**+0.4**
AZAP				IAML		00 56 33.7	
	comp=Z,134nm,0.3s						
AZAP				iS	**Sn**	**00 57 01.9**	**+0.1**
FSA	**Cafayete**	**2.21**	**151**	iP	**Pn**	**00 56 37.0**	**+1.0**
FSA				iS	**Sn**	**00 57 03.2**	**-4.3**
LVC	**Limon Verde**	**2.23**	**314**	P	**Pn**	**00 56 37.6**	**+1.2**
	comp=Z,24nm,0.3s,baz=139,slow=8.0,SNR=150						
LVC				S	**Sn**	**00 57 07.3**	**-0.7**
	comp=Z,34nm,0.3s,baz=9.1,slow=21,SNR=11						
LVC	**Limon Verde**	**2.23**	**314**	iP	**Pn**	**00 56 37.7**	**+1.2**
LVC				iS	**Sn**	**00 57 08.3**	**+0.2**
LVC	**Limon Verde**	**2.23**	**314**	⇓iP	**Pn**	**00 56 37.6**	**+1.2**
LVC				iS	**Sn**	**00 57 07.7**	**-0.3**
PB15	**IPOC Station P**	**2.32**	**294**	iP	**Pn**	**00 56 38.7**	**+1.5**
PB15				iS	**Sn**	**00 57 11.2**	**+1.6**
PB15	**IPOC Station P**	**2.32**	**294**	⇑iP	**Pn**	**00 56 38.7**	**+1.5**
PB15				iS	**Sn**	**00 57 09.4**	**-0.1**
GO02	**Mina Guanaco**	**2.42**	**245**	⇑iP	**Pn**	**00 56 40.0**	**+1.6**
GO02				iS	**Sn**	**00 57 12.8**	**+1.1**
YJA	**Yavi**	**2.50**	**38**	iP	**Pn**	**00 56 39.8**	**+0.4**
YJA				IAML		00 56 42.1	
	comp=Z,22nm,0.4s						
YJA				iS	**Sn**	**00 57 13.9**	**+0.4**
PB06	**IPOC Station P**	**2.65**	**303**	iP	**Pn**	**00 56 42.1**	**+1.2**
PB06				iS	**Sn**	**00 57 15.5**	**-0.6**
PB06	**IPOC Station P**	**2.65**	**303**	⇑iP	**Pn**	**00 56 42.1**	**+1.2**
PB06				iS	**Sn**	**00 57 15.3**	**-0.8**
PB06				IAML		00 57 17.9	
	comp=E,746nm,0.3s						
PB09	**IPOC Station P**	**3.04**	**321**	iP	**Pn**	**00 56 47.0**	**+1.4**
PB09				iS	**Sn**	**00 57 24.5**	**+0.1**
PB09	**IPOC Station P**	**3.04**	**321**	⇑iP	**Pn**	**00 56 46.7**	**+1.2**
PB09				iS	**Sn**	**00 57 23.3**	**-1.1**
PB09				IAML		00 57 25.6	
	comp=E,281nm,0.4s						
PB05	**IPOC Station P**	**3.08**	**295**	iP	**Pn**	**00 56 46.8**	**+0.9**
PB05				iS	**Sn**	**00 57 23.5**	**-1.7**
PB05	**IPOC Station P**	**3.08**	**295**	⇑iP	**Pn**	**00 56 46.7**	**+0.7**
PB05				iS	**Sn**	**00 57 23.2**	**-2.0**
PB05				IAML		00 57 27.5	
	comp=E,190nm,0.3s						
AHML	**Horco Molle**	**3.09**	**148**	iP	**Pn**	**00 56 46.8**	**+0.9**
PB10	**IPOC Station P**	**3.17**	**281**	iP	**Pn**	**00 56 48.4**	**+1.4**
PB10				iS	**Sn**	**00 57 27.1**	**+0.2**
PB10	**IPOC Station P**	**3.17**	**281**	⇑iP	**Pn**	**00 56 48.1**	**+1.2**
PB10				iS	**Sn**	**00 57 25.3**	**-1.6**
PB03	**IPOC Station P**	**3.18**	**311**	iP	**Pn**	**00 56 48.1**	**+0.8**
PB03				iS	**Sn**	**00 57 25.5**	**-1.9**
PB03	**IPOC Station P**	**3.18**	**311**	⇑iP	**Pn**	**00 56 47.9**	**+0.6**
PB03				iS	**Sn**	**00 57 25.6**	**-1.9**
PB03				IAML		00 57 27.6	
	comp=E,573nm,0.3s						
PB04	**IPOC Station P**	**3.30**	**303**	iP	**Pn**	**00 56 49.5**	**+0.8**
PB04				iS	**Sn**	**00 57 29.2**	**-0.8**
PB04	**IPOC Station P**	**3.30**	**303**	⇑iP	**Pn**	**00 56 49.2**	**+0.6**
PB04				iS	**Sn**	**00 57 28.1**	**-1.9**
PB04				IAML		00 57 33.0	
	comp=N,419nm,0.4s						
PB07	**IPOC Station P**	**3.49**	**314**	iP	**Pn**	**00 56 51.6**	**+0.5**
PB07				iS	**Sn**	**00 57 32.4**	**-1.9**
PB07	**IPOC Station P**	**3.49**	**314**	⇑iP	**Pn**	**00 56 51.5**	**+0.5**
PB07				iS	**Sn**	**00 57 32.1**	**-2.2**
PB07				IAML		00 57 34.0	
	comp=N,512nm,0.3s						
PB01	**IPOC Station P**	**3.78**	**325**	iP	**Pn**	**00 56 54.7**	**+0.2**
PB01				iS	**Sn**	**00 57 38.5**	**-2.1**
PB01	**IPOC Station P**	**3.78**	**325**	⇑iP	**Pn**	**00 56 54.5**	**0.0**
PB01				eS	**Sn**	**00 57 38.2**	**-2.3**
PB02	**IPOC Station P**	**3.79**	**318**	iP	**Pn**	**00 56 54.9**	**+0.2**
PB02				iS	**Sn**	**00 57 38.5**	**-2.4**
PB02	**IPOC Station P**	**3.79**	**318**	⇑iP	**Pn**	**00 56 54.7**	**0.0**
PB02				eS	**Sn**	**00 57 38.4**	**-2.6**
GO03	**Copiap**	**4.39**	**218**	iP	**Pn**	**00 57 02.7**	**+0.5**
GO03				iS	**Sn**	**00 57 53.6**	**-0.9**
PB08	**IPOC Station P**	**4.41**	**335**	iP	**Pn**	**00 57 04.4**	**+1.7**
PB08				iS	**Sn**	**00 57 54.5**	**-0.8**
PB08	**IPOC Station P**	**4.41**	**335**	eP	**Pn**	**00 57 03.7**	**+0.9**
PB08				eS	**Sn**	**00 57 53.4**	**-1.9**
PB11	**IPOC Station P**	**4.96**	**332**	iP	**Pn**	**00 57 10.2**	**+0.7**
PB11				iS	**Sn**	**00 58 03.9**	**-3.7**
MNMCX	**Minye Minye**	**5.50**	**335**	iP	**Pn**	**00 57 17.8**	**+1.1**
MNMCX				iS	**Sn**	**00 58 18.1**	**-2.3**
CFA	**Coronel Fontan**	**7.47**	**187**	P	**Pn**	**00 57 42.1**	**+0.1**
	comp=N,0.4nm,0.3s,baz=356,slow=15,SNR=6.2						
CFA				S	**Sn**	**00 59 02.2**	**-4.3**
	comp=N,0.4nm,0.3s,baz=156,slow=18,SNR=4.6						
LPAZ	**La Paz**	**7.89**	**353**	P	**Pn**	**00 57 48.8**	**+0.6**
	comp=N,1.3nm,0.3s,baz=149,slow=12,SNR=35						
SIV	**San Ignacio**	**9.94**	**36**	P	**Pn**	**00 58 12.3**	**-2.2**
	comp=N,0.8nm,0.3s,baz=229,slow=15,SNR=14						
BDFB	**Brasilia**	**19.89**	**68**	P	**P**	**01 00 12.4**	**-0.3**
	comp=N,0.8nm,0.3s,baz=247,slow=11,SNR=16						
TORD	**Torodi Ar. Bea**	**76.77**	**69**	P	**P**	**01 07 26.8**	**+0.3**
	comp=N,0.6nm,0.6s,baz=234,slow=5.3,SNR=8.6						
BOSA	**Boshof**	**80.79**	**117**	P	**P**	**01 07 50.0**	**+1.5**
	comp=N,4.1nm,1.1s,baz=256,slow=4.2,SNR=4.0						
MKAR	**Makanchi Array**	**146.75**	**40**	PKPbc	**PKPbc**	**01 15 14.6**	**-0.4**
	comp=N,0.4nm,0.6s,baz=306,slow=2.7,SNR=4.9						

IDC 08 01:00:14.4±7.7**, 7°.40S**×**125°.08E, h384**^{km}±92^{km}**, mb3.1**/4**,**
mb1 3.3/6**, mb1mx3.1**/21**, mbtmp4.0**/6**, Error ellipse:**
s-maj=143.4km s-min=18.5km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.36**	**145**	P	P	01 03 31.2	-0.3
	0.5nm,0.3s,baz=330,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**18.26**	**153**	P	P	01 04 02.6	+0.1
	0.8nm,0.3s,baz=338,slow=14,SNR=18						
STKA	**Stephens Creek**	**28.81**	**150**	P	P	01 05 39.0	+0.1
	1.4nm,0.4s,baz=333,slow=11,SNR=4.9						
SONM	**Songino Array**	**57.42**	**345**	P	P	01 09 24.4	-0.1
	0.3nm,0.4s,baz=167,slow=7.2,SNR=2.5						
MKAR	**Makanchi Array**	**65.98**	**329**	P	P	01 10 20.9	+0.1
	1.0nm,0.5s,baz=127,slow=7.8,SNR=15						
VNDA	**Vanda**	**72.68**	**172**	P	P	01 11 00.9	-0.1
	0.3nm,0.5s,baz=313,slow=7.2,SNR=6.6						

MEX 08 01:18:19.8±0.8**, 15°.97N**×**98°.40W, h14**^{km}±19^{km}**, MD3.8,**
Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**1.59**	**354**	eP	Pn	01 18 43.8	-4.0
TLIG				eS	Sn	01 19 04.0	-4.2
VHO	**Vista Hermosa**	**1.94**	**55**	eP	Pn	01 18 50.1	-2.5
VHO				eS	Sn	01 19 12.8	-4.1
HUIG	**Huatulco**	**2.22**	**95**	eP	Pn	01 18 53.5	-2.8
HUIG				eS	Sn	01 19 19.2	-4.3

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*IDC **08** 01:37:13.9±4.4, 12°.43S×166°.93E, h246^{km}±43^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.3/35, mbtmp4.1/6, Error ellipse: s-maj=34.4km s-min=27.1km az=145.0*
ISC 08 01:37:10.0±0.9**, 12°.6S**±0°.1×**167°.2E**±0°.2**, h220**^{km}**, n15,**
σ1^{s}.00/15**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.40**	**184**	P	**P**	**01 39 28.0**	**-1.5**
	0.5nm,0.3s,baz=53,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**32.27**	**253**	P	**P**	**01 43 18.5**	**+0.1**
	0.7nm,0.4s,baz=86,slow=9.9,SNR=4.2						
ASAR	**Alice Springs**	**33.36**	**246**	P	**P**	**01 43 28.1**	**+0.3**
	0.6nm,0.6s,baz=71,slow=9.7,SNR=7.3						
MJAR	**Matsushiro Arr**	**56.01**	**332**	P	**P**	**01 46 25.0**	**-0.9**
	0.8nm,0.4s,baz=154,slow=6.5,SNR=3.5						
ILAR	**Eielson Array**	**84.59**	**18**	P	**P**	**01 49 17.8**	**-0.4**
	1.5nm,0.7s,baz=239,slow=5.0,SNR=11						
MKAR	**Makanchi Array**	**95.62**	**317**	P	**P**	**01 50 10.8**	**+0.4**
	1.2nm,0.5s,baz=88,slow=6.9,SNR=14						
SNAA	**Sanae**	**95.62**	**183**	P	**P**	**01 50 10.9**	**+0.9**
VNA3	**Neumayer Olymp**	**96.29**	**181**	P	**P**	**01 50 13.9**	**+0.8**
VNA2	**Neumayer--Watz**	**96.55**	**182**	P	**P**	**01 50 15.9**	**+1.7**
	baz=168,slow=3.8						
VNA1	**Neumayer--Stat**	**96.85**	**182**	P	**P**	**01 50 17.6**	**+2.1**
ARCES	**ARCESS Array B**	**118.21**	**346**	PKP	**PKPdf**	**01 55 30.4**	**0.0**
	1.5nm,0.3s,baz=82,slow=2.1,SNR=26						
FINES	**FINESS Array B**	**123.75**	**339**	PKP	**PKPdf**	**01 55 41.2**	**+0.1**
	1.0nm,0.6s,baz=44,slow=1.1,SNR=8.0						
NOA	**NORSAR Array B**	**128.59**	**345**	PKP	**PKPdf**	**01 55 50.5**	**0.0**
	0.4nm,0.6s,baz=25,slow=2.0,SNR=2.6						
HFS	**Hagfors**	**128.70**	**343**	PKP	**PKPdf**	**01 55 50.6**	**-0.1**
	2.0nm,0.9s,baz=90,slow=5.8,SNR=5.3						
ESDC	**Sonseca Array**	**151.95**	**345**	PKPbc	**PKiKP**	**01 56 39.9**	**+0.2**
	0.7nm,0.5s,baz=18,slow=2.4,SNR=8.0						

IDC 08 01:42:18.2±2.5**, 2°.05N**×**92°.89E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/4**,**
mb1mx3.4/49**, mbtmp3.7**/4**, ML3.9**/1**, MS3.3**/1**, Ms1 3.3**/1**,**
ms1mx2.7/37**, Error ellipse: s-maj=72.4km**
s-min=28.7km az=50.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**6.08**	**83**	Pn	Pn	01 43 49.4	-0.2
	2.9nm,0.3s,baz=264,slow=10,SNR=10						
PSI				Sn	Sn	01 44 48.6	-11
	1.7nm,0.3s,baz=319,slow=20,SNR=2.1						
WSAR	**Wadi Sarin**	**39.31**	**305**	LR	LR	02 03 07.2	
	comp=Z,44nm,19.4s,baz=42,slow=32						
MKAR	**Makanchi Array**	**45.51**	**350**	P	P	01 50 39.3	-0.2
	0.2nm,0.5s,baz=177,slow=7.9,SNR=3.0						
WRA	**Warramunga Arr**	**46.16**	**120**	P	P	01 50 44.9	-0.2
	0.8nm,0.4s,baz=294,slow=11,SNR=3.5						
SONM	**Songino Array**	**47.08**	**12**	P	P	01 50 51.9	-0.1
	0.9nm,0.5s,baz=190,slow=8.0,SNR=4.6						
TXAR	**Lajitas Array**	**145.00**	**26**	PKPbc	PKPab	02 01 57.1	-0.6
	0.4nm,0.5s,baz=306,slow=3.1,SNR=4.9						

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*IDC **08** 01:59:11.9±1.3, 28°.18N×57°.13E, h0^{km}, mb3.8/11, mb1 3.9/12, mb1mx3.7/59, mbtmp3.8/12, ML3.8/1, Error ellipse: s-maj=27.2km s-min=19.4km az=153.0*
*ISCJB **08** 01:59:13.7±0.4, 28°.21N±0°.03×57°.26E±0°.05, h10^{km}, mb3.8/15, Error ellipse: s-maj=6.0km s-min=4.0km az=10.0*
*THR **08** 01:59:14.4, 28°.12N×57°.24E, h17^{km}, ML3.6*
*TEH **08** 01:59:14.4, 28°.23N×57°.27E, h10^{km}, ML3.6*
*DSN **08** 01:59:15.0±2.6, 28°.16N×57°.42E, h10^{km}, ML3.6/6, Error ellipse: s-maj=81.1km s-min=16.9km az=126.0*
ISC 08 01:59:13.5±0.6**, 28°.17N**±0°.03×**57°.25E**±0°.04**, h10**^{km}**, n58,**
σ2^{s}.16/58**, mb3.7**/15**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.46**	**119**	ePg	**Pg**	**01 59 23.4**	**+0.9**
NIAN	**Nian**	**0.71**	**211**	ePg	**Pn**	**01 59 30.7**	**+1.1**
NIAN				IAMB	IAmb	01 59 50.7	
	comp=Z,0.0nm,0.3s						
GENO	**Geno**	**1.22**	**231**	ePg	**Pg**	**01 59 39.0**	**+2.0**
GENO				IAMB	IAmb	01 59 59.8	
	comp=Z,0.0nm,0.2s						
BNDS	**Bandar-Abbas**	**1.23**	**231**	ePn	**Pn**	**01 59 36.5**	**-0.3**
BNDS	**Bandar-Abbas**	**1.23**	**231**	eAML	AML	01 59 55.9	
	comp=E,2μm,0.9s						
BNDS	**Bandar-Abbas**	**1.23**	**231**	ePg	**Pn**	**01 59 36.5**	**-0.3**
NGRK	**Negar Kerman**	**1.54**	**343**	ePn	**Pn**	**01 59 41.8**	**+0.5**
NGRK				IAMB	IAmb	02 00 09.3	
	comp=Z,0.0nm,0.2s						
CHMN	**Cheshme madani**	**1.70**	**9**	ePn	**Pn**	**01 59 44.2**	**+0.6**
CHMN				IAMB	IAmb	02 00 20.7	
	comp=Z,0.0nm,0.5s						
KRBR	**Kerman**	**1.85**	**347**	eAML	AML	02 00 20.9	
	comp=N,394nm,0.4s						
KRBR				eAML	AML	02 00 21.9	
	comp=E,504nm,0.2s						
TVBK	**TV Kerman**	**1.86**	**347**	ePn	**Pb**	**01 59 47.5**	**-0.3**
TVBK				IAMB	IAmb	02 00 24.2	
	comp=Z,0.0nm,0.2s						
KHGB	**Koh Gabri**	**2.30**	**343**	ePn	**Pb**	**01 59 54.7**	**-0.5**
KHGB				IAMB	IAmb	02 00 31.4	
	comp=Z,0.0nm,1.0s						
SHME	**Shamm**	**2.33**	**205**	eP	**Pn**	**01 59 53.3**	**+1.3**
	SNR=18						
SHME				S	**Sn**	**02 00 24.7**	**+4.0**
SHME	**Shamm**	**2.33**	**205**	ePn	**Pn**	**01 59 53.4**	**+1.4**
MSFE	**Esma-Masafi**	**2.96**	**199**	P	**Pn**	**02 00 02.5**	**+1.9**
MSFE	**Esma-Masafi**	**2.96**	**199**	ePn	**Pn**	**02 00 05.0**	**+4.3**
MDH	**Madha**	**2.98**	**197**	P	**Pn**	**02 00 01.4**	**+0.5**
MDH	**Madha**	**2.98**	**197**	ePn	**Pn**	**02 00 01.1**	**+0.2**
UOSS	**Minazif**	**3.35**	**196**	P	**Pn**	**02 00 08.7**	**+2.8**
UOSS	**Minazif**	**3.35**	**196**	ePn	**Pn**	**02 00 08.5**	**+2.6**
ZHSF	**Zahedan**	**3.41**	**64**	ePn	**Pn**	**02 00 09.5**	**+2.6**
ZHSF	**Zahedan**	**3.41**	**64**	ePn	**Pn**	**02 00 09.5**	**+2.6**
NAZ	**Nazwa, Dubai**	**3.47**	**204**	P	**Pn**	**02 00 10.7**	**+3.0**
NAZ	**Nazwa, Dubai**	**3.47**	**204**	ePn	**Pn**	**02 00 11.1**	**+3.5**
HATD	**Hatta, Dubai**	**3.48**	**197**	P	**Pn**	**02 00 10.8**	**+3.1**
HATD	**Hatta, Dubai**	**3.48**	**197**	ePn	**Pb**	**02 00 13.7**	**-1.5**
IBAF	**Bafgh**	**3.71**	**337**	ePn	**Pn**	**02 00 14.2**	**+3.2**
IBAF				IAMB	IAmb	02 01 27.3	
	comp=Z,727nm,0.7s						
FAQ	**Al Faqa, Dubai**	**3.72**	**204**	ePn	**Pn**	**02 00 13.3**	**+2.3**
GHIR	**Ghir-Karzin**	**3.76**	**273**	ePn	**Pn**	**02 00 13.8**	**+2.1**
GHIR	**Ghir-Karzin**	**3.76**	**273**	eAML	AML	02 01 02.1	
	comp=N,72nm,0.4s						
GHIR				eAML	AML	02 01 06.1	
	comp=E,56nm,0.4s						
GHIR	**Ghir-Karzin**	**3.76**	**273**	ePn	**Pn**	**02 00 13.8**	**+2.1**
GHIR				eS	**Sn**	**02 00 57.1**	**+1.0**
ASUD	**Al Ashush, Dub**	**3.93**	**206**	iP	**Pn**	**02 00 16.6**	**+2.8**
	SNR=9.1						
ASUD	**Al Ashush, Dub**	**3.93**	**206**	ePn	**Pn**	**02 00 17.0**	**+3.1**
IMEH	**Mehriz**	**3.94**	**325**	ePn	**Pn**	**02 00 17.0**	**+2.7**
IMEH				IAMB	IAmb	02 01 30.8	
	comp=Z,548nm,0.7s						
BSRN	**Basiran**	**4.12**	**23**	ePn	**Pn**	**02 00 19.6**	**+3.0**
BSRN	**Basiran**	**4.12**	**23**	ePn	**Pn**	**02 00 19.6**	**+3.0**
IKOO	**Kooshah**	**4.50**	**19**	IAMB	IAmb	02 01 51.7	
	comp=Z,519nm,0.5s						
YZKH	**Yazd**	**4.79**	**332**	ePn	**Pn**	**02 00 29.0**	**+3.2**
YZKH	**Yazd**	**4.79**	**332**	ePn	**Pn**	**02 00 29.0**	**+3.2**
YZKH				eSg	**Sg**	**02 01 44.3**	**-3.1**
ISAD	**Sadrabad**	**4.84**	**321**	ePn	**Pn**	**02 00 30.1**	**+3.4**
WSAR	**Wadi Sarin**	**5.07**	**165**	Pn	**Pn**	**02 00 31.2**	**+1.7**
	comp=Z,3.3nm,0.3s,baz=356,slow=6.8,SNR=86						
WSAR				Sn	**Sn**	**02 01 26.3**	**-1.9**
	comp=Z,8.8nm,0.3s,baz=87,slow=17,SNR=16						
IRAM	**Ramesheh**	**5.56**	**312**	ePn	**Pn**	**02 00 38.6**	**+2.0**
IZEF	**Zefreh**	**6.34**	**319**	ePn	**Pn**	**02 00 49.4**	**+2.2**
IPIR	**Pirpir**	**7.09**	**311**	ePn	**Pn**	**02 01 00.3**	**+2.6**
AKTO	**Aktyubinsk**	**22.24**	**1**	P	**P**	**02 04 11.0**	**+0.7**
	comp=Z,4.8nm,0.7s,baz=179,slow=9.9,SNR=20						
BRTR	**Keskin Array B**	**22.65**	**307**	P	**P**	**02 04 15.6**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=112,slow=11,SNR=15						
BVAR	**Borovoye Array**	**26.67**	**18**	P	**P**	**02 04 52.9**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=200,slow=12,SNR=6.7						
MKAR	**Makanchi Array**	**27.03**	**40**	P	**P**	**02 04 56.2**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=224,slow=8.0,SNR=2.7						
KURBB	**Kurchatov Arra**	**27.62**	**30**	P	**P**	**02 05 01.2**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=230,slow=8.5,SNR=6.9						
ZALV	**Zalesovo Beam**	**32.71**	**30**	P	**P**	**02 05 45.5**	**-0.5**
	comp=Z,2.4nm,0.5s,baz=248,slow=10,SNR=8.3						
GERES	**GERESS Array B**	**39.17**	**314**	P	**P**	**02 06 40.6**	**-0.9**
	comp=Z,1.0nm,1.0s,baz=123,slow=9.7,SNR=5.5						
FINES	**FINESS Array B**	**39.21**	**337**	P	**P**	**02 06 40.9**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=147,slow=11,SNR=3.6						
SQTA	**Sankt Quirin**	**40.41**	**311**	eP	**P**	**02 06 50.5**	**-1.4**
	comp=Z,2.3nm,0.5s						
MOTA	**Moosalm**	**40.51**	**311**	eP	**P**	**02 06 51.2**	**-1.6**
	comp=Z,2.3nm,0.7s						
FETA	**Feichten**	**40.70**	**310**	eP	**P**	**02 06 53.5**	**-0.9**
	comp=Z,1.8nm,0.5s						
DAVOX	**Davos/Dischmat**	**41.23**	**310**	P	**P**	**02 06 57.4**	**-1.4**
	comp=Z,2.0nm,0.5s,baz=130,slow=7.3,SNR=4.9						
DAVA	**Damuels**	**41.31**	**311**	eP	**P**	**02 06 57.9**	**-1.5**
	comp=Z,2.8nm,0.6s						
ESDC	**Sonseca Array**	**51.19**	**300**	P	**P**	**02 08 16.1**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=74,slow=6.9,SNR=4.0						
TORD	**Torodi Ar. Bea**	**53.66**	**266**	P	**P**	**02 08 33.9**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=71,slow=6.8,SNR=7.6						

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*INMG **08** 02:02:58.1±1.7, 34°.93N×2°.81W, h29^{km}±6^{km}, ML2.3, Error ellipse: s-maj=8.0km s-min=5.1km az=118.0*
*CNRM **08** 02:02:58.3, 35°.35N×2°.52W, h10^{km}, ml3.6*
*MDD **08** 02:02:59.7±0.9, 34°.99N×3°.00W, h14^{km}±4^{km}, mbLg2.5/27, Error ellipse: s-maj=8.5km s-min=5.2km az=146.0, PRXIMO*
*SFS **08** 02:03:00.0, 35°.04N×2°.95W, ML3.3, NADOR (MARRUECOS)*
ISC 08 02:02:59.4±0.9**, 35°.02N**±0°.03×**2°.90W**±0°.02**, h20**^{km}±3^{km}**,**
n94, σ2^{s}.28/149**, 1C-1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MELI	**Melilla**	**0.27**	**355**	P	**Pb**	**02 03 05.6**	**-0.1**
	101nm,0.1s,SNR=7.9						
MELI				S	**Sb**	**02 03 10.0**	**0.0**
	686nm,0.2s,SNR=7.9						
MELI	**Melilla**	**0.27**	**355**	iP	**Pb**	**02 03 05.7**	**0.0**
MELI				eS	**Sb**	**02 03 10.1**	**0.0**
EMEL	**Melilla**	**0.28**	**351**	P	**Pb**	**02 03 05.5**	**-0.4**
	311nm,0.1s,SNR=7.9						
EMEL				S	**Sb**	**02 03 10.4**	**+0.1**
	2μm,0.2s,SNR=7.9						
TAF	**Taforalt**	**0.45**	**117**	P	**Pb**	**02 03 08.8**	**+0.1**
TAF				S	**Sb**	**02 03 15.8**	**+0.9**
JBK	**JBK**	**0.74**	**158**	P	**Pn**	**02 03 18.5**	**+3.6**
PALE	**Palemas**	**0.87**	**283**	P	**Pn**	**02 03 17.3**	**+0.8**
AKLM	**AKL**	**0.94**	**237**	P	Pn	02 03 24.5	+7.0
PVLZ	**Peæn de**	**1.16**	**278**	P	**Pn**	**02 03 19.2**	**-1.1**
PVLZ	**Peæn de**	**1.16**	**278**	iP	**Pn**	**02 03 19.2**	**-1.1**
PVLZ				eS	**Sb**	**02 03 39.4**	**+4.2**
EBER	**Berja**	**1.87**	**0**	P	**Pn**	**02 03 29.9**	**-0.6**
	4.1nm,0.3s,SNR=18						
EBER				S	**Sn**	**02 03 53.5**	**-0.1**
	134nm,0.7s						
CHEFC	**Chefchaouen**	**2.00**	**273**	P	**Pb**	**02 03 35.3**	**+0.2**
CHEFC				S	**Sb**	**02 04 04.0**	**+4.4**
ENIJ	**Nijar**	**2.03**	**16**	P	**Pn**	**02 03 31.7**	**-0.7**
	3.4nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**02 03 57.2**	**0.0**
	29nm,0.3s,SNR=7.9						
LCRM	**LCR**	**2.09**	**231**	P	Pb	02 03 42.0	+5.3
LCRM				S	Sb	02 04 11.9	+10
SMIR	**Smir Dam**	**2.13**	**289**	P	**Pb**	**02 03 36.6**	**-0.6**
SMIR				S	**Sb**	**02 04 07.2**	**+4.0**
EMAL	**Malaga-Limoner**	**2.13**	**325**	P	**Pn**	**02 03 32.5**	**-1.4**
EMAL				S	**Sn**	**02 03 59.2**	**-0.5**
EMAL	**Malaga-Limoner**	**2.13**	**325**	iP	**Pn**	**02 03 32.5**	**-1.4**
EMAL				eS	**Sn**	**02 03 59.2**	**-0.5**
CEUT	**Ceuta**	**2.16**	**294**	P	**Pb**	**02 03 38.0**	**+0.3**
CEUT				S	**Sb**	**02 04 07.7**	**+3.7**
EMIJ	**Mijas**	**2.16**	**316**	P	**Pn**	**02 03 32.6**	**-1.7**
	5.4nm,0.3s,SNR=53						
EMIJ				S	**Sn**	**02 03 58.4**	**-2.1**
	26nm,0.4s						
SICH	**Sidi Chahed**	**2.19**	**246**	P	**Pb**	**02 03 37.9**	**-0.4**
SICH				S	Sb	02 04 13.7	+8.7
CEU	**Ceuta**	**2.20**	**294**	iP	**Pn**	**02 03 30.9**	**-3.8**
CEU				eS	**Sn**	**02 03 56.7**	**-4.6**
ECEU	**Ceuta**	**2.20**	**294**	P	**Pn**	**02 03 33.5**	**-1.3**
	21nm,0.2s,SNR=7.9						
ECEU				S	**Sn**	**02 03 58.7**	**-2.7**
	24nm,7.0s,SNR=7.9						
EQUE	**Quentar**	**2.22**	**349**	P	**Pn**	**02 03 35.4**	**+0.2**
	12nm,0.4s,SNR=52						
EQUE				S	**Sn**	**02 04 01.3**	**-0.8**
	20nm,0.4s,SNR=6.7						
EGOR	**Sierra Gorda,**	**2.30**	**335**	P	**Pn**	**02 03 35.4**	**-0.9**
	2.7nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**02 04 02.2**	**-1.9**
	29nm,0.3s,SNR=7.9						
IFR	**Ifrane**	**2.37**	**231**	iP	**Pn**	**02 03 36.3**	**-1.0**
IFR				eS	**Sb**	**02 04 12.8**	**+2.4**
RSA	**Sarsar**	**2.40**	**268**	P	**Pb**	**02 03 43.6**	**+1.7**
RSA				S	**Sb**	**02 04 17.4**	**+6.3**
GORA	**Gorafe**	**2.46**	**357**	P	**Pn**	**02 03 38.9**	**+0.6**
	12nm,0.2s,SNR=7.9						
GORA				S	**Sn**	**02 04 06.8**	**-1.0**
	33nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.53**	**305**	P	**Pn**	**02 03 39.5**	**+0.2**
	5.7nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**02 04 06.8**	**-2.7**

	20nm,2.3s,SNR=7.9						
MDT	Midelt	2.62	213	P	Pb	02 03 46.9	+1.3
MDT				S	Sb	02 04 23.5	+6.2
MD31	MD31	2.64	216	P	Pb	02 03 44.4	-1.6
MD31				S	Sb	02 04 26.2	+8.1
CZD	Col de Zad	2.66	222	P	Pb	02 03 47.2	+0.7
CZD				S	Sb	02 04 24.2	+5.4
EQES	Quesada	2.78	357	⇓P	Pn	02 03 44.8	+1.9
	12nm,0.4s,SNR=18						
EQES				S	Sn	02 04 15.4	-0.4
	37nm,0.4s						
ESPR	Espera	3.02	308	P	Pn	02 03 45.8	-0.2
	2.5nm,0.3s,SNR=12						
ESPR				S	Sn	02 04 20.1	-1.5
	5.3nm,0.3s						
SESP	Santiago Espad	3.11	5	⇑P	Pn	02 03 49.0	+1.7
	5.9nm,0.2s,SNR=18						
SESP				S	Sn	02 04 23.9	-0.1
	67nm,0.7s,SNR=7.9						
EMUR	La Murta	3.12	25	P	Pn	02 03 47.6	+0.1
	5.8nm,0.3s,SNR=17						
EMUR				S	Sn	02 04 23.7	-0.4
	8.5nm,0.4s,SNR=5.2						
FIGM	Figuig	3.19	154	P	Pb	02 03 53.5	-1.9
FIGM				S	Sb	02 04 33.8	-0.1
HORN	Hornachuelos	3.40	327	P	Pn	02 03 51.6	+0.3
HORN				S	Sn	02 04 33.3	+2.3
EADA	Adamuz	3.42	337	P	Pn	02 03 51.6	+0.1
	9.0nm,0.3s,SNR=38						
EADA				S	Sn	02 04 29.4	-2.1
	17nm,0.5s,SNR=5.8						
ETRV	Los Montesinos	3.46	29	P	Pn	02 03 53.3	+1.3
	7.1nm,0.6s,SNR=7.9						
ZHG	ZHG	3.47	244	P	Pb	02 04 00.5	+0.3
ZHG				S	Sb	02 04 49.1	+7.2
ECAB	El Cabril	3.66	327	P	Pn	02 03 55.0	+0.2
	1.9nm,0.4s,SNR=9.3						
ECAB				S	Sn	02 04 34.6	-2.8
	2.8nm,0.2s						
GOLM	Goulmima	3.72	208	P	Pb	02 04 03.1	-1.4
GOLM				S	Sb	02 04 52.9	+3.7
ARF	Arif	3.74	197	P	Pb	02 04 02.2	-2.7
ARF				S	Sb	02 04 53.5	+3.7
ETOB	Tobarra	3.78	16	P	Pn	02 03 57.5	+1.0
	2.6nm,0.3s,SNR=29						
ETOB				S	Sn	02 04 39.4	-1.0
	8.6nm,0.4s						
EMIN	Mina Concepcio	4.09	313	P	Pn	02 03 59.8	-1.0
	3.9nm,0.3s,SNR=23						
EMIN				S	Sn	02 04 45.0	-3.1
	1.9nm,0.3s						
EBEN2	Beniarda presa	4.25	30	P	Pn	02 04 04.3	+1.3
	1.6nm,0.1s,SNR=7.9						
EBEN2				S	Sn	02 04 51.0	-0.9
	7.4nm,0.6s,SNR=7.9						
EGRO	El Granado	4.47	305	P	Pn	02 04 04.9	-1.0
	9.4nm,0.3s,SNR=29						
EGRO				S	Sn	02 04 54.0	-3.4
	4.0nm,0.3s						
PBDV	Barranco-do-Ve	4.63	300	*e*Pn	Pn	02 04 06.8	-1.4
PBDV				*e*Sn	Sn	02 04 59.5	-1.9
PBDV	Barranco-do-Ve	4.63	300	P	Pn	02 04 06.8	-1.4
PAB	San Pablo	4.66	346	P	Pn	02 04 09.2	+0.6
	1.7nm,0.2s,SNR=7.9						
PAB				S	Sn	02 05 00.3	-1.9
	6.2nm,0.6s,SNR=7.9						
ECHE	Chera	4.82	18	P	Pn	02 04 11.7	+1.0
	0.3nm,0.2s,SNR=7.9						
ECHE				S	Sn	02 05 04.3	-1.6
	1.3nm,0.4s,SNR=7.9						
SRHM	Skhour des Reh	4.88	240	P	Pn	02 04 11.1	-0.5
SRHM				S	Sb	02 05 26.5	+4.2
PCVE	Castro Verde	4.90	304	*e*Pn	Pn	02 04 10.4	-1.4
PCVE				*e*Sn	Sn	02 05 06.3	-1.6
PCVE				A	A	02 05 17.1	
	2.2nm,0.4s						
PCVE	Castro Verde	4.90	304	P	Pn	02 04 10.4	-1.4
PBEJ	Beja	5.00	308	*e*Pn	Pn	02 04 13.8	+0.6
PBEJ	Beja	5.00	308	P	Pn	02 04 13.8	+0.6
OUZM	OUZ	5.22	219	P	Pb	02 04 25.9	-4.3
OUZM				S	Sb	02 05 34.7	+2.2
PFVI	Vila Bisbo	5.24	295	*e*Pn	Pn	02 04 15.9	-0.6
PFVI				*e*Sn	Sn	02 05 13.6	-2.7
PFVI	Vila Bisbo	5.24	295	P	Pn	02 04 15.6	-0.9
	1.4nm,0.2s,SNR=4.0						
EIBI	Ibiza	5.25	39	P	Pn	02 04 17.4	+0.8
	2.4nm,0.3s,SNR=14						
EIBI				S	Sn	02 05 14.9	-1.6
	3.5nm,0.4s,SNR=7.9						
UCM	Universidad Co	5.29	357	*i* P	Pn	02 04 18.8	+1.6
PTEO	Sao Teotonio	5.33	300	*e*Pn	Pn	02 04 17.1	-0.7
PTEO	Sao Teotonio	5.33	300	P	Pn	02 04 17.1	-0.7
PNCL	Nicolau / Gran	5.48	306	*e*Pn	Pn	02 04 18.5	-1.3
PNCL				*e*Sn	Sn	02 05 19.0	-3.2
PNCL				A	A	02 05 25.0	
	2.4nm,0.5s						
PNCL	Nicolau / Gran	5.48	306	P	Pn	02 04 18.5	-1.3
PNCL				S	Sn	02 05 19.0	-3.2
	2.4nm,0.5s						
EPLA	Plasencia	5.63	334	P	Pn	02 04 22.1	+0.2
	3.8nm,0.3s,SNR=19						
EPLA				S	Sn	02 05 22.1	-3.9
	1.3nm,1.9s,SNR=7.9						
EMOS	Mosqueruela	5.67	19	P	Pn	02 04 23.5	+0.8
	1.4nm,1.6s,SNR=7.9						
PMRV	Marv??o	5.67	322	*e*Pn	Pn	02 04 22.3	-0.2
PMRV				*e*Sn	Sn	02 05 25.4	-1.6
PMRV				A	A	02 05 30.7	
	1.3nm,0.1s						
PMRV	Marv??o	5.67	322	P	Pn	02 04 22.3	-0.2
GUD	Guadarrama	5.70	350	P	Pn	02 04 23.4	+0.4
	1.6nm,0.3s,SNR=12						
GUD				S	Sn	02 05 25.2	-2.7
	5.3nm,0.8s,SNR=7.9						
PMTG	Montargil	5.87	315	*e*Pn	Pn	02 04 24.9	-0.2
PMTG				*e*Sn	Sn	02 05 29.2	-2.6
PMTG				A	A	02 05 35.8	
	1.5nm,0.3s						
PMTG	Montargil	5.87	315	P	Pn	02 04 24.9	-0.2
PMTG	Montargil	5.87	315	Pn	Sn	02 05 29.2	-2.6
	1.5nm,0.3s						
PCBR	Castelo Branco	6.03	324	*e*Pn	Pn	02 04 27.6	+0.2
PCBR				*e*Sn	Sn	02 05 32.8	-3.0
PCBR				A	A	02 05 34.9	
	1.5nm,0.5s						
PCBR	Castelo Branco	6.03	324	P	Pn	02 04 27.6	+0.2
PCBR				S	Sn	02 05 32.8	-3.0
	0.8nm,0.5s						
ALMR	Almeirim	6.13	314	*e*Pn	Pn	02 04 28.8	0.0
ALMR	Almeirim	6.13	314	P	Pn	02 04 28.8	0.0
PTOM	Tomar	6.35	318	*e*Pn	Pn	02 04 31.5	-0.2
PTOM	Tomar	6.35	318	P	Pn	02 04 31.5	-0.2
PMAFR	Mafra	6.44	309	*e*Pn	Pn	02 04 32.5	-0.5
PMAFR	Mafra	6.44	309	P	Pn	02 04 31.9	-1.1
	5.8nm,0.3s,SNR=7.3						
TTIG	Tnine Tigouga,	6.45	228	P	Pn	02 04 40.5	+7.1
TTIG				S	Sb	02 05 60.0	-7.7
MTE	Manteigas	6.51	327	*e*Pn	Pn	02 04 34.6	+0.6
MTE	Manteigas	6.51	327	P	Pn	02 04 34.6	+0.6
ETOS	Mallorca	6.57	42	P	Pn	02 04 35.2	+0.4
	1.3nm,0.3s,SNR=7.9						
PVIS	Viseu	6.92	327	*e*Pn	Pn	02 04 39.7	0.0
PVIS	Viseu	6.92	327	P	Pn	02 04 39.7	0.0
MVO	Moncorvo	6.94	333	*e*Pn	Pn	02 04 40.5	+0.5
MVO				*e*Sn	Sn	02 05 54.4	-3.9
MVO				A	A	02 05 58.0	
	2.2nm,0.7s						
MVO	Moncorvo	6.94	333	P	Pn	02 04 40.0	+0.1
	4.9nm,0.4s,SNR=13						
MVO				S	Sn	02 05 53.5	-4.9
	8.4nm,0.6s,SNR=7.9						
EPOB	Poblet	7.06	25	P	Pn	02 04 42.1	+0.5
	1.0nm,1.6s,SNR=7.9						
CFON	Fontmartina	7.93	30	P	Pn	02 04 54.4	+0.8
	0.5nm,0.6s,SNR=7.9						
CSOR	Sort	7.99	22	P	Pn	02 04 55.8	+1.3
	3.4nm,2.1s,SNR=7.9						
ELAN	Lanestosa	8.21	357	P	Pn	02 04 58.1	+0.8
	1.2nm,1.7s,SNR=7.9						
EALK	Alkurruntz	8.26	7	P	Pn	02 04 58.4	+0.4
	0.5nm,3.3s,SNR=7.9						
EARI	Arriondas	8.46	348	P	Pn	02 05 00.8	0.0
	1.4nm,3.3s,SNR=7.9						

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*INMG **08** 02:04:35.6±0.9, 42°.43N×7°.77W, h12^{km}±6^{km}, ML1.1, Error ellipse: s-maj=2.6km s-min=1.9km az=98.0*

MDD 08 02:04:35.1±0.4**, 42°.43N×7°.72W, h0^{km}, mbLg1.2**/11**, Error ellipse: s-maj=3.9km s-min=3.3km az=94.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EAGO	Agolada(Pontev	0.47	324	Pg	Pg	02 04 44.0	-0.1
	0.1nm,0.1s,SNR=7.9						
EAGO				Lg	Lg	02 04 49.5	
	27nm,0.3s,SNR=7.9						
ELOB	Lobios	0.61	205	Pg	Pg	02 04 46.7	-0.2
	0.7nm,0.1s,SNR=7.9						
ELOB				Lg	Lg	02 04 54.9	
	3.7nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	0.62	222	*e*Pg	Pg	02 04 46.6	-0.3
PGAV				*e*Sg	Sg	02 04 54.5	-0.5
PGAV				A	A	02 04 55.2	
	8.0nm,0.3s						
PGAV	Gavieira, Arco	0.62	222	Pg	Pg	02 04 46.6	-0.3
PGAV				Lg	Lg	02 04 54.5	
	8.0nm,0.3s						
PCAB	Cabril	0.75	198	*e*P	Pg	02 04 49.3	-0.2
PCAB				*e*S	Sg	02 04 59.1	-0.2
PCAB				A	A	02 04 59.9	
	6.5nm,0.1s						
PCAB	Cabril	0.75	198	Pg	Pg	02 04 49.3	-0.2
PCAB				Lg	Lg	02 04 59.1	
	3.2nm,0.1s						
EZAM	Zamans	0.78	249	Pg	Pg	02 04 49.1	-0.9
	0.6nm,0.1s,SNR=7.9						
EZAM				Lg	Lg	02 04 59.1	
	4.8nm,0.2s,SNR=7.9						
ECAL	Calabor	0.88	123	Pg	Pg	02 04 50.0	-1.9
	0.6nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	02 05 02.8	
	7.6nm,0.7s,SNR=7.9						
PBRG	Braganca	0.95	130	*e*P	Pg	02 04 52.7	-0.7
PBRG				*e*S	Sg	02 05 06.4	+0.6
PBRG	Braganca	0.95	130	Pg	Pg	02 04 52.7	-0.7
PBRG				Lg	Lg	02 05 06.4	
EPON	Pontenova	0.99	25	Pg	Pg	02 04 53.1	-1.1
	0.3nm,0.3s,SNR=7.9						
EPON				Lg	Lg	02 05 06.5	
	1.5nm,0.2s,SNR=7.9						
POLO	Lamas de Olo	1.05	183	*e*P	Pg	02 04 54.6	-0.7
POLO				*e*S	Sg	02 05 08.6	-0.4
POLO				A	A	02 05 09.5	
	1.0nm,0.1s						
POLO	Lamas de Olo	1.05	183	Pg	Pg	02 04 54.6	-0.7
POLO				Lg	Lg	02 05 08.6	
	1.0nm,0.1s						
PVRL	Vila Real	1.15	180	*e*P	Pg	02 04 56.5	-0.7
PVRL				*e*S	Sg	02 05 11.4	-0.7
PVRL				A	A	02 05 13.2	
	2.5nm,0.1s						
PVRL	Vila Real	1.15	180	Pg	Pg	02 04 56.5	-0.7
PVRL				Lg	Lg	02 05 11.4	
	1.2nm,0.1s						
MVO	Moncorvo	1.36	158	Lg	Lg	02 05 17.5	
	26nm,6.8s,SNR=7.9						
EARI	Arriondas	2.04	64	Pg	Pb	02 05 12.8	-0.3
	0.1nm,1.5s,SNR=7.9						
EARI				Lg	Lg	02 05 40.6	
	2.4nm,10.0s,SNR=7.9						

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*ISCJB **08** 02:06:42.4±0.4, 6°.24S±0°.04×152°.41E±0°.07, h38^{km}, mb4.5/29, MS4.7/1, Error ellipse: s-maj=9.9km s-min=5.8km az=17.3*

*NEIC **08** 02:06:42.6±2.5, 6°.28S×152°.47E, h30^{km}±4^{km}, mb4.5/28, Error ellipse: s-maj=17.6km s-min=12.0km az=101.0*

*DJA **08** 02:06:44.8±1.2, 6°S±5°×15°3E±°, h39^{km}±10^{km}, M5.2/10, mB5.5/2, mb4.8/10, MLv5.3/3, Mw(mB)4.9/2*

*IDC **08** 02:06:47.4±3.9, 6°.22S×152°.27E, h61^{km}±34^{km}, mb4.1/13, mb1 4.3/14, mb1mx4.0/41, mbtmp4.4/14, ML3.1/1, MS3.8/3, Ms1 3.8/3, ms1mx3.3/34, Error ellipse: s-maj=22.5km s-min=17.1km az=78.0*

ISC 08 02:06:44.2±0.5**, 6°.23S**±0°.06×**152°.44E**±0°.08**, h38^{km}, n52,** σ**1^{s}40**/55**, mb4.5**/29**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.05	352	*e*Pn	Pn	02 07 14.5	-1.6
RABL				*e*Sn	Sn	02 07 38.5	-2.0
PMG	Port Moresby	6.11	239	P	Pn	02 08 12.5	+0.6
	32nm,0.3s,baz=54,slow=8.2,SNR=25						
PMG				S	Sn	02 09 21.6	+1.0
	20nm,0.3s,baz=18,slow=19,SNR=3.9						
PMG				LR	LR	02 10 46.7	
	comp=Z,291nm,19.0s,baz=120,slow=40						
PMG	Port Moresby	6.11	239	*e*Pn	Pn	02 08 11.8	-0.1
PMG				*e*Sn	Sn	02 09 17.3	-3.3
MANU	Manus Island	6.55	309	*e*Pn	Pn	02 08 19.1	+1.0
HNR	Honiara	8.09	114	LR	LR	02 11 39.3	
	comp=Z,266nm,19.1s,baz=292,slow=35						
COEN	Coen	11.91	229	*e*Pn	Pn	02 09 30.3	-1.3
EIDS	Eidsvold	19.07	184	*e*P	P	02 11 03.1	-0.4
	10nm,0.8s						
DZM	Mont Dzumac	20.76	141	P	P	02 11 25.6	+3.5
	6.5nm,0.6s,baz=287,slow=6.1,SNR=5.9						
DZM	Mont Dzumac	20.76	141	*e*P	P	02 11 20.7	-1.4
	17nm,1.0s						
MARNC	Mare, Loyalty	21.39	137	*e*P	P	02 11 25.6	-3.2
	73nm,1.0s						
MTN	Manton Dam	22.00	251	*e*P	P	02 11 36.0	+0.7
	15nm,0.8s						
WB2	Warramunga Arr	22.23	231	*e*P	P	02 11 37.0	-0.8
	10nm,0.6s						
WR1	Warramunga Arr	22.24	231	*e*P	P	02 11 38.5	+0.5
WRA	Warramunga Arr	22.24	231	P	P	02 11 38.5	+0.5
	7.6nm,0.6s,baz=58,slow=11,SNR=13						
AS31	Alice Springs	24.86	224	*e*P	P	02 12 02.6	-0.9
	3.8nm,0.5s						
AS31				*e*PcP	PcP	02 15 37.7	-1.4
ASAR	Alice Springs	24.86	224	P	P	02 12 04.0	+0.5
	9.3nm,0.7s,baz=59,slow=7.9,SNR=24						
ASAR				PcP	PcP	02 15 37.7	-1.4
	0.7nm,0.8s,baz=45,slow=4.1,SNR=3.3						
STKA	Stephens Creek	27.45	200	P	P	02 12 25.6	-1.1
	1.4nm,0.7s,baz=5.2,slow=11,SNR=3.2						
STKA	Stephens Creek	27.45	200	*e*P	P	02 12 26.8	+0.1
	1.0nm,0.8s						
EDFI	Ende, Flores	30.58	263	P	P	02 12 53.3	-1.6
WHN	Wuhan	51.64	317	P	P	02 15 50.2	+2.8
CM31	Chiang Mai Arr	58.17	296	*e*P	P	02 16 34.8	0.0
	11nm,0.4s						
CMAR	Chiang Mai Arr	58.17	296	P	P	02 16 34.8	0.0
	2.3nm,0.4s,baz=113,slow=4.5,SNR=5.2						
PETK	Petropavlovsk-	59.28	4	P	P	02 16 42.3	+0.4
	2.1nm,0.7s,baz=160,slow=5.1,SNR=4.0						
PEA1	Petropavlovsk-	59.29	4	*e*P	P	02 16 42.3	+0.3
HHC	Hu-ho-hao-te	60.00	325	P	P	02 16 50.0	+2.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,6.1s						
SONM	Songino Array	67.34	328	P	P	02 17 35.9	+0.4
	comp=Z,2.0nm,0.4s,baz=153,slow=5.8,SNR=2.8						
VNDA	Vanda	71.42	178	P	P	02 18 01.1	+1.0
	comp=Z,2.2nm,0.8s,baz=322,slow=5.9,SNR=15						
VNDA	Vanda	71.42	178	*e*P	P	02 18 01.1	+1.0
	comp=Z,2.9nm,0.9s						
SVW2	Sparrevohn	78.28	23	*e*P	P	02 18 41.1	+1.1
	comp=Z,7.3nm,0.9s						
CNPM	China Poot	79.16	26	*e*P	P	02 18 43.5	-1.3
	comp=Z,30nm,0.8s						
TTA	Tatalina	79.23	21	*e*P	P	02 18 44.9	-0.3
	comp=Z,4.4nm,0.9s						
CAST	Castle Rocks	80.96	22	*e*P	P	02 18 52.3	-2.2
	comp=Z,8.1nm,0.8s						
MK31	Makanchi Array	81.16	319	*e*P	P	02 18 55.4	-0.6
	comp=Z,3.0nm,1.0s						
MKAR	Makanchi Array	81.16	319	P	P	02 18 56.2	+0.2
	comp=Z,1.6nm,0.9s,baz=100,slow=6.8,SNR=10.0						
MAKZ	Makanchi	81.37	319	*e*P	P	02 18 56.5	-0.6
	comp=Z,5.4nm,1.1s						
ZAA0	Zalesovo Array	82.14	327	*e*P	P	02 19 00.6	-0.4
	comp=Z,7.7nm,0.6s						
ZALV	Zalesovo Beam	82.14	327	P	P	02 18 59.8	-1.1
	comp=Z,4.7nm,0.6s,baz=112,slow=6.0,SNR=13						
ZALV				LR	LR	02 55 54.7	
	comp=Z,328nm,20.9s,baz=276,slow=36						
ZAA1	Zalesovo Array	82.14	327	*e*P	P	02 18 59.8	-1.2
ILAR	Eielson Array	83.61	22	P	P	02 19 07.9	-0.5
	comp=Z,4.6nm,0.8s,baz=258,slow=5.2,SNR=28						
QSPA	South Pole Qui	83.74	180	*e*P	P	02 19 07.7	-1.5
	comp=Z,9.8nm,0.8s						
MAW	Mawson	84.12	203	*e*P	P	02 19 10.0	-0.9
	comp=Z,1.1nm,0.9s						
KURK	Kurchatov	84.67	322	*e*P	P	02 19 14.2	+0.2
	comp=Z,11nm,0.9s						
AAK	Ala-Archa	85.39	314	*e*P	P	02 19 17.6	-0.4
	comp=Z,6.3nm,0.8s						
NV01	Mina Array Sit	93.25	52	*e*P	P	02 19 57.1	+1.6
NVAR	Mina Array Bea	93.25	52	P	P	02 19 57.1	+1.6
	comp=Z,0.2nm,0.3s,baz=261,slow=5.3,SNR=5.2						
YKA	Yellowknife Ar	96.86	28	P	P	02 20 12.7	+1.7
	comp=Z,1.1nm,0.8s,baz=276,slow=4.8,SNR=5.0						
TAM	Tamanrasset	144.12	301	*e*PKPdf	PKPbc	02 26 16.2	+1.1
PTGA	Pitinga	146.92	101	*e*PKPbc	PKPdf	02 26 23.9	+2.0
BDFB	Brasilia	150.29	137	PKPbc	PKPbc	02 26 32.9	+0.3
	comp=Z,4.5nm,0.8s,baz=124,slow=3.6,SNR=6.8						
TOA0	Torodi Ar. Sit	150.37	286	*e*PKPbc	PKPbc	02 26 32.3	-0.4
TORD	Torodi Ar. Bea	150.37	286	PKPbc	PKPbc	02 26 32.7	+0.1
	comp=Z,12nm,0.8s,baz=62,slow=3.2,SNR=50						
TOA1	Torodi Ar. Sit	150.38	286	*e*PKPbc	PKPbc	02 26 32.7	+0.1

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*DJA **08** 02:13:39.3±0.2, 9°S±3°×11°3E±°, h10^{km}, M5.9/29, mb5.9/29, mB6.2/28, MLv6.1/22, Mw(mB)5.9/28*

*BJI **08** 02:13:40.0±0.0, 8°.80S×113°.00E, h80^{km}, mb5.3/66, mB5.5/66, Ms5.2/84, Ms7 5.1/78*

*MOS **08** 02:13:40.8±1.2, 8°.61S×113°.11E, h73^{km}, mb5.7/59, Error ellipse: s-maj=6.8km s-min=4.5km az=113.2*

*NEIC **08** 02:13:40.6±2.9, 8°.80S×113°.00E, h60^{km}, mb5.5/107, ME5.5, MW5.8, MW5.7, Error ellipse: s-maj=12.3km s-min=8.2km az=183.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.55; M$_{\theta\theta}$-2.88; M$_{\phi\phi}$-2.67; M$_{r\theta}$1.25; M$_{\theta\phi}$2.43; M$_{\phi r}$-0.54; Best double couple: M$_0$5.60000×10^{17} NP1:φ$_s$129.00000°, δ52.00000°, λ85.00000°. NP2:φ$_s$318.00000°, δ38.00000°, λ97.00000°. Principal axes: T 5.7300, Plg82.0000°, Azm10.0000°; N -0.3700, Plg4.0000°, Azm133.0000°; P -5.3600, Plg7.0000°, Azm223.0000°; Apparent Stress 0.61 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from MT mechanism.*

NEIC One person injured and 124 buildings destroyed or damaged at Malang. Felt [III] at Bantul, Malang, Nganjuk, Probolinggo and Yogyakarta. Also felt at Jember. Felt [IV] at Ubud and [III] at Denpasar and Kuta, Bali. Also felt at Karangasem.

*ISCJB **08** 02:13:42.2±0.3, 8°.71S±0°.02×113°.07E±0°.02, h89^{km}±2^{km}, mb5.4/141 Error ellipse: s-maj=4.1km s-min=2.8km az=27.3*

*IDC **08** 02:13:42.5±1.3, 8°.65S×113°.13E, h75^{km}±11^{km}, mb5.0/38, mb1 5.0/41, mb1mx5.0/45, mbtmp5.3/41, MS4.6/21, Ms1 4.7/21, ms1mx4.5/30, Error ellipse: s-maj=9.8km s-min=7.6km az=56.0*

*NEIC **08** 02:13:42.0±0.0, 9°.35S×112°.75E, h60^{km}, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.06; M$_{\theta\theta}$-2.65; M$_{\phi\phi}$-0.41; M$_{r\theta}$3.21; M$_{\theta\phi}$1.94; M$_{\phi r}$-0.76; Best double couple: M$_0$4.80000×10^{17} NP1:φ$_s$107.00000°, δ67.00000°, λ78.00000°. NP2:φ$_s$316.00000°, δ25.00000°, λ116.00000°. Principal axes: T 4.5000, Plg65.0000°, Azm356.0000°; N 0.5300, Plg10.0000°, Azm111.0000°; P -5.0300, Plg21.0000°, Azm206.0000°;*

*GCMT **08** 02:13:43.6±0.2, 9°.13S±0°.01×113°.06E±0°.01, h71^{km}±1^{km}, MW5.7/113, Moment Tensor Solution. s84,c138; s113,c220; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M$_{rr}$3.50±.11; M$_{\theta\theta}$-3.89±.08; M$_{\phi\phi}$0.39±.09; M$_{r\theta}$2.69±.07; M$_{\theta\phi}$1.35±.06; M$_{\phi r}$-1.53±.07; Best double couple: M$_0$4.98300×10^{17} NP1:φ$_s$116.00000°, δ65.00000°, λ100.00000°. NP2:φ$_s$274.00000°, δ27.00000°, λ70.00000°. Principal axes: T 4.6490, Plg69.0000°, Azm45.0000°; N 0.6720, Plg9.0000°, Azm292.0000°; P -5.3170, Plg19.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 08 02:13:42.4±0.3**, 8°.73S**±0°.03×**113°.02E**±0°.03**, h79^{km}**±2^{km}**, h79^{km}:pP-P, n998,** σ**1^{s}46**/1043**, mb5.4**/156**, 71C-16D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	0.62	43	P	Pn	02 13 57.0	-0.1
JAGI	Jajag, Banyuwa	1.15	77	*e*Pn	Pn	02 14 03.3	+0.1
JAGI				*e*Sn	Sn	02 14 18.7	-0.1
JAGI	Jajag, Banyuwa	1.15	77	P	Pn	02 14 03.7	+0.5
NGJI	Ngawi	2.05	311	P	Pn	02 14 18.9	+3.9
DNP	Denpasar	2.17	89	P	Pn	02 14 16.4	-0.1
DNP	Denpasar	2.17	89	P	Pn	02 14 16.4	-0.1
WOJI	Wonogiri, Jawa	2.26	293	P	Pn	02 14 18.5	+0.8
SRBI	Singaraja	2.26	74	P	Pn	02 14 18.9	+1.1
UGM	Wanagama	2.60	288	*e*Pn	Pn	02 14 23.2	+0.8
UGM				*e*Sn	Sn	02 14 46.2	-6.9
UGM	Wanagama	2.60	288	P	Pn	02 14 23.2	+0.8
YOGI	Yogyakarta	2.85	288	P	Pn	02 14 26.4	+0.8
PLAI	Plampang	4.70	92	P	Pn	02 14 52.3	+1.4
CISI	Cisompet, Garu	5.28	282	*e*Pn	Pn	02 14 59.5	+0.6
CISI				*e*Sn	Sn	02 15 49.8	-8.8
CISI	Cisompet, Garu	5.28	282	P	Pn	02 14 59.5	+0.6
	6μm,0.7s,87μm35nm						
LEM	Lembang	5.68	289	P	Pn	02 15 07.4	+3.0
	62nm,0.3s,baz=102,slow=7.1,SNR=24						
LEM				S	Sn	02 16 15.8	+7.4
	57nm,0.3s,baz=343,slow=20,SNR=6.7						
LEM				LR	LR	02 17 35.1	
	comp=Z,9μm,20.8s,baz=94,slow=40						
PBKI	Pangkalan Bun	6.14	347	P	Pn	02 15 16.0	+5.5
	2μm,1.0s,15μm5.5nm						
WBSI	Waikabubak, Su	6.36	99	P	Pn	02 15 13.9	+0.4
	2μm,0.9s,20μm16nm						
CBJI	Citeko	6.53	290	P	Pn	02 15 16.8	+0.9
	2μm,0.5s,29μm12nm						
WSI	Waingapu	7.25	98	P	Pn	02 15 30.1	+4.5
SBJI	Serang	7.31	290	P	Pn	02 15 32.8	+6.3
XMIS	Christmas Isla	7.47	256	*e*Pn	Pn	02 15 25.6	-3.1
XMIS				*e*		02 16 34.4	
CGJI	Cibinong	7.56	286	P	Pn	02 15 31.4	+1.5
	2μm,0.6s,34μm9.3nm						
KAPI	Kappang	7.64	62	P	Pn	02 15 32.0	+1.0
	50nm,0.3s,baz=249,slow=5.3,SNR=88						
KAPI				S	Sn	02 16 58.4	+2.4
	15nm,0.3s,baz=315,slow=20,SNR=2.7						
KAPI				LR	LR	02 18 56.6	
	comp=Z,11μm,19.8s,baz=119,slow=42						
KAPI	Kappang	7.64	62	*e*Pn	Pn	02 15 31.9	+0.9
KAPI	Kappang	7.64	62	P	Pn	02 15 32.7	+1.7
	SNR=16						
BKSI	Bulukumba	7.82	65	P	Pn	02 15 34.6	+1.1
	258nm,0.8s,3μm1.1nm						
BSSI	Bau Bau, Buton	7.84	71	P	Pn	02 15 35.0	+1.2
	697nm,0.6s,13μm4.9nm						
MTKI	Muara Teweh, K	7.96	14	P	Pn	02 15 40.0	+4.6
	458nm,0.6s,16μm2.9nm						
TPI	Tanjungpandan	7.98	318	P	Pn	02 15 42.2	+6.5
	118nm,0.9s,2μm0.5nm						
SPSI	Sidrap Palu	8.21	55	P	Pn	02 15 41.1	+2.3
	267nm,1.1s,5μm1.2nm						
BKB	Balikpapan	8.37	28	P	Pn	02 15 48.3	+7.3
	472nm,1.6s,16μm						
BLSI	Bandar Lampung	8.41	293	P	Pn	02 15 44.8	+3.3
	528nm,0.5s,8μm						
EDFI	Ende, Flores	8.57	91	P	Pn	02 15 42.1	-1.8
	417nm,0.6s,13μm4.4nm						
TTSI	Tana Toraja	8.81	51	P	Pn	02 15 50.4	+3.4
	299nm,1.2s,5μm						
KLI	Kotabumi	8.97	295	P	Pn	02 15 54.2	+5.0
KLI				pmax	pmax		
	comp=Z,325nm,0.5s						
KLI	Kotabumi	8.97	295	P	Pn	02 15 54.3	+5.1
	comp=Z,336nm,0.5s,comp=Z,9μm						
KASI	Kota Agung	9.04	290	P	Pn	02 15 51.7	+1.6
	comp=Z,774nm,0.6s,comp=Z,12μm						
MMRI	Maumere	9.11	90	*e*Pn	Pn	02 15 51.0	-0.2
MMRI	Maumere	9.11	90	P	Pn	02 15 51.0	-0.2
	comp=Z,599nm,0.6s,comp=Z,15μm						
SMKI	Samarinda	9.23	27	P	Pn	02 16 00.7	+8.0
	comp=Z,342nm,1.2s,comp=Z,9μm						
PPBI	Pangkal Pinang	9.46	313	P	Pn	02 16 00.8	+4.9
	comp=Z,165nm,1.3s,comp=Z,10μm						
LWLI	Liwa	9.63	292	P	Pn	02 16 01.6	+3.3

	comp=Z,500nm,0.5s,comp=Z,20µm						
MDSI	Maura Dua	9.74	295	P	Pn	02 16 02.9	+3.2
	comp=Z,136nm,1.1s,comp=Z,3µm						
KSM	Kuching	10.49	345	ePn	Pn	02 16 14.1	+4.1
BATI	Baumata	10.60	99	P	Pn	02 16 10.9	-0.6
	comp=Z,163nm,0.3s,baz=63,slow=0.7,SNR=34						
BATI				S	Sn	02 18 05.4	-3.2
	comp=Z,26nm,0.3s,baz=319,slow=19,SNR=3.2						
BATI	Baumata	10.60	99	P	Pn	02 16 11.2	-0.3
	comp=Z,227nm,0.4s,comp=Z,5µm						
LHSI	Lahat	10.62	297	P	Pn	02 16 15.5	+3.8
	comp=Z,261nm,0.6s						
MNAI	Manna	10.90	293	ePn	Pn	02 16 15.6	+0.1
MNAI	Manna	10.90	293	P	Pn	02 16 16.3	+0.7
	comp=Z,3µm,0.9s,comp=Z,28µm						
SOEI	Soe	11.15	96	ePn	Pn	02 16 18.7	-0.4
SOEI	Soe	11.15	96	P	Pn	02 16 19.0	-0.1
	comp=Z,570nm,0.7s,comp=Z,9µm						
APSI	Ampana	11.58	48	P	Pn	02 16 31.3	+6.4
	comp=Z,307nm,1.7s,comp=Z,6µm						
LUWI	Luwuk	12.36	52	ePn	Pn	02 16 39.6	+4.2
LUWI	Luwuk	12.36	52	P	P	02 16 41.3	-3.0
	comp=Z,320nm,1.8s,comp=Z,5µm						
TPRI	Tanjung Pinang	12.79	318	P	Pn	02 16 52.2	+3.0
KRJI	Kerinci	13.26	299	P	Pn	02 16 47.9	+0.3
	comp=Z,1µm,0.6s,comp=Z,29µm						
GIRL	Giralia	13.88	175	ePn	Pn	02 16 50.5	-5.1
GIRL				e		02 19 09.3	
GIRL	Giralia	13.88	175	P	Pn	02 16 49.8	-5.8
	baz=14,SNR=127						
MYKOM	Kota Tinggi	13.88	318	eP	Pn	02 16 58.3	+2.6
MBWA	Marble Bar	13.95	153	P	Pn	02 16 50.8	-5.7
	SNR=11						
PSA00	Pilbara Seismi	14.36	154	ePn	Pn	02 16 56.0	-5.9
BKNI	Bangkinang	14.95	306	ePn	Pn	02 17 04.2	-5.3
MNI	Manado	15.52	50	P	P	02 17 22.5	+2.9
MNI				pmax	pmax		
	comp=Z,548nm,0.9s						
AAI	Ambon	15.89	73	P	Pn	02 17 25.7	+2.0
AAI				pmax	pmax		
	comp=Z,295nm,1.3s						
KNRA	Kununurra	16.86	116	P	Pn	02 17 32.5	-1.0
	baz=17,SNR=160						
TNTI	Ternate	17.13	57	eP	P	02 17 38.8	+1.4
	comp=Z,1µm,2.0s						
IPM	Ipoh	17.75	317	eP	Pn	02 17 48.0	+3.5
	comp=Z,126nm,1.3s						
BATP	Bataraza	18.05	15	eP	Pn	02 17 49.1	+1.1
SAUI	Saumlaki	18.10	89	eP	P	02 17 47.6	-0.5
	comp=Z,2µm,1.4s						
PSI	Prapat	18.13	309	P	Pn	02 17 49.7	+0.5
	comp=Z,2.5nm,0.3s,baz=126,slow=9.5,SNR=8.9						
PSI				LR	LR	02 25 56.5	
	comp=Z,5µm,18.4s,baz=136,slow=40						
PSI	Prapat	18.13	309	eP	Pn	02 17 52.7	+3.5
	comp=Z,108nm,1.1s						
MTN	Manton Dam	18.25	105	eP	P	02 17 49.6	-0.2
	comp=Z,248nm,0.5s						
MTN				eSn	S	02 20 58.3	-16
MTN	Manton Dam	18.25	105	P	P	02 17 49.9	+0.1
	baz=18,SNR=31						
GSI	Gunungsitoli	18.34	302	eP	P	02 17 45.4	-5.3
	comp=Z,41nm,0.6s						
MEEK	Meekatharra	18.58	164	P	P	02 17 52.6	-0.7
	baz=19,SNR=134						
SKMP	Bagumbayan, Su	19.01	38	eP	Pn	02 18 02.9	+3.3
CTBH	Cotabato--PC H	19.40	36	⇓iP	Pn	02 18 04.7	+0.6
DDMP	Don Marcelino,	19.43	41	eP	Pn	02 18 02.7	+0.1
PAGZ	Pagadian	19.44	32	eP	Pn	02 18 04.8	+0.2
KDU	Kakadu	19.51	103	P	P	02 18 02.6	-0.9
	baz=20,SNR=25						
KCP	Kidapawan	19.73	38	⇓iP	Pn	02 18 09.0	+0.9
SIJI	Sorong	19.78	68	P	P	02 18 05.9	-0.5
	comp=Z,14nm,0.3s,baz=241,slow=8.9,SNR=16						
SIJI				LR	LR	02 27 53.4	
	comp=Z,1µm,19.4s,baz=260,slow=43						
FAKI	Fak Fak	19.98	74	eP	P	02 18 06.5	-2.1
	comp=Z,230nm,0.7s						
SKLT	Songkhla	20.06	322	P	Pn	02 18 14.5	+2.6
	comp=Z,32nm,0.7s,comp=Z,951nm						
DAV	Davao City (W)	20.08	39	LR	LR	02 26 36.3	
	comp=Z,3µm,21.4s,baz=242,slow=39						
DAV	Davao City (W)	20.08	39	⇑iP	P	02 18 10.0	+0.3
MORW	Morawa	20.43	172	eP	P	02 18 13.1	-0.3
	comp=Z,523nm,1.3s						
MORW	Morawa	20.43	172	P	P	02 18 13.1	-0.3
	baz=20,SNR=79						
ENPP	El Nido	20.81	18	eP	Pn	02 18 20.2	-0.4
DLV	T Lat	21.03	348	eP	P	02 18 21.9	+1.8
	comp=Z,222nm,1.3s						
TRTT	Trang	21.15	321	P	P	02 18 24.5	+3.3
	comp=Z,116nm,0.8s,comp=Z,3µm						
LHMI	Lhok Sumawe	21.19	310	eP	P	02 18 21.1	-0.5
	comp=Z,164nm,0.9s						
GUIM	Jordan	21.46	27	eP	P	02 18 25.3	+0.8
WRKA	Warakurna	21.79	140	P	P	02 18 27.6	-0.5
	baz=22,SNR=95						
BLDU	Ballidu	22.04	171	P	P	02 18 30.0	-0.6
	baz=22,SNR=62						
PKDT	Phuket	22.06	318	P	P	02 18 34.2	+3.2
	comp=Z,124nm,0.8s,comp=Z,8µm						
MUN	Mundaring	23.32	173	P	P	02 18 44.1	+0.4
	baz=23,SNR=9.5						
WRA	Warramunga Arr	23.44	121	P	P	02 18 44.2	-0.8
	comp=Z,85nm,0.3s,baz=295,slow=12,SNR=306						
WRA				PcP	PcP	02 22 29.9	+0.8
	comp=Z,13nm,0.6s,baz=3.8,slow=1.3,SNR=3.3						
WRA				S	S	02 22 50.7	-1.7
	comp=Z,12nm,0.7s,baz=283,slow=19,SNR=3.3						
WRA				ScP	ScP	02 26 01.4	+1.0
	comp=Z,7.5nm,0.4s,baz=270,slow=2.5,SNR=4.4						
WRAB	Tennant Creek	23.44	121	eP	P	02 18 44.0	-1.0
	comp=Z,308nm,1.0s						
WRAB	Tennant Creek	23.44	121c	iP	P	02 18 43.9	-1.1
WRAB				pmax	pmax		
	comp=Z,327nm,1.0s						
LUBP	Lubang	23.44	18	eP	P	02 18 45.1	+0.1
KMBL	Kambalda	23.99	161	P	P	02 18 49.2	-0.5
	baz=24,SNR=70						
NWAO	Narrogin (SRO)	24.39	171	P	P	02 18 53.7	+0.4
	comp=Z,115nm,1.0s,baz=352,slow=9.9,SNR=32						
NWAO	Narrogin (SRO)	24.39	171	eP	P	02 18 53.0	-0.4
	comp=Z,166nm,1.0s						
NWAO	Narrogin (SRO)	24.39	171	P	P	02 18 53.9	+0.5
	baz=24,SNR=12						
NWAO	Narrogin (SRO)	24.39	171	P	P	02 18 54.2	+0.8
	SNR=5.0						
PVCP	Virac	24.78	27	eP	P	02 18 59.5	+2.4
AS31	Alice Springs	24.90	129	eP	P	02 18 58.0	-0.2
	comp=Z,72nm,0.8s						
AS31				ePcP	PcP	02 22 33.0	+0.7
ASAR	Alice Springs	24.90	129	P	P	02 18 57.9	-0.3
	comp=Z,166nm,0.7s,baz=304,slow=9.0,SNR=773						
ASAR				PcP	PcP	02 22 33.0	+0.7
	comp=Z,9.9nm,0.5s,baz=284,slow=1.6,SNR=4.8						
ASAR				S	S	02 23 14.3	-1.6
	comp=Z,12nm,1.1s,baz=307,slow=17,SNR=3.2						
ASAR				P3KP		02 52 55.2	
	comp=Z,0.3nm,0.4s,baz=49,slow=2.3,SNR=4.2						
SRAK	Srakaew	25.09	334	P	P	02 18 59.9	+0.1
	comp=Z,415nm,0.9s						
PHET	Kaeng Krachan	25.28	328	P	P	02 19 03.9	+2.3
	comp=Z,159nm,0.8s						
SMPP	San Manuel, Pa	25.86	17	eP	P	02 19 04.0	-2.8
FORT	Forrest	26.04	149	eP	P	02 19 08.4	+0.1
	comp=Z,388nm,0.8s						
FORT	Forrest	26.04	149	P	P	02 19 08.3	-0.1
	baz=26,SNR=179						
PALU	Palau	26.69	54	P	P	02 19 14.0	-0.3
	baz=27,SNR=5.9						
SRDT	SRDT	26.76	329	P	P	02 19 19.8	+4.9
	comp=Z,24nm,1.5s						
CHAI	Chaiyaphum	26.80	336	P	P	02 19 18.0	+2.7
	comp=Z,107µm,0.8s,comp=Z,832µm						
PANO	Nakornpanom	27.02	342	P	P	02 19 21.9	+4.6
	comp=Z,0.6nm,1.1s						
QIZ	Qiongzhong	27.76	354	P	P	02 19 26.0	+2.1
QIZ				S	S	02 24 04.4	+3.4
QIZ				pmax	pmax		
	comp=Z,590nm,14.5s						
QIZ				LR	LR		
	comp=Z,1µm,22.9s						
QIZ				LR	LR		
	comp=Z,2µm,12.9s						
QIZ				LR	LR		
	comp=Z,3µm,37.3s						
JAY	Jayapura	28.22	79	P	P	02 19 26.0	-2.1
	comp=Z,3.8nm,0.3s,baz=285,slow=8.4,SNR=6.0						
QIS	Mount Isa	28.23	118	P	P	02 19 28.2	+0.1
	baz=28,SNR=40						
UMPA	Umpang Tak	28.47	330	P	P	02 19 31.0	+0.8
DGPR	DIGLIPUR	29.53	317	eP	P	02 19 38.8	-0.8
DGPR				IAmb	IAmb	02 19 40.5	
	comp=Z,86nm,0.7s						
COEN	Coen	30.00	103	eP	P	02 19 43.9	0.0
	comp=Z,52nm,0.8s						
COEN	Coen	30.00	103	P	P	02 19 44.0	+0.1
	baz=30,SNR=53						
LAMP	Lampang	30.13	334	P	P	02 19 48.1	+3.2
	comp=Z,76µm,0.7s						
CM31	Chiang Mai Arr	30.38	333	eP	P	02 19 48.1	+1.0
	comp=Z,35nm,0.9s						
CM31				eScP	ScP	02 26 22.6	+1.5
CM31	Chiang Mai Arr	30.38	333	P	P	02 19 50.0	+2.9
	SNR=12						
CMAR	Chiang Mai Arr	30.38	333	P	P	02 19 48.2	+1.1
	comp=Z,37nm,0.9s,baz=165,slow=8.2,SNR=56						
CMAR				ScP	ScP	02 26 22.6	+1.5
	comp=Z,7.6nm,1.0s,baz=183,slow=3.4,SNR=11						
CMAR				LR	LR	02 34 33.5	
	comp=Z,895nm,18.6s,baz=154,slow=41						
CMAR	Chiang Mai Arr	30.38	333	iP	P	02 19 49.0	+1.9
CMAR				pmax	pmax		
	comp=Z,37nm,0.9s						
CHTO	Chiang Mai	30.69	333	eP	P	02 19 51.7	+1.8
	comp=Z,45nm,1.4s						
CHTO	Chiang Mai	30.69	333	eP	P	02 19 51.7	+1.8
CHTO				pmax	pmax		
	comp=Z,45nm,1.4s						
CHTO	Chiang Mai	30.69	333	P	P	02 19 52.3	+2.4
	SNR=5.9						
SLVN	Son La	31.19	343	eP	P	02 19 53.1	-1.2
	comp=Z,27nm,1.2s						
GZH	Guangzhou	31.62	1	P	P	02 20 04.8	+6.8
GZH				S	S	02 25 12.9	+11
GZH				LR	LR		
	comp=N,2µm,18.1s						
GZH				LR	LR		
	comp=E,2µm,16.8s						
BBOO	Buckleboo	32.07	142	eP	P	02 20 01.5	-0.4
BBOO				epP	pP	02 20 01.6	-0.3
BBOO				ePP	PnPn	02 21 04.3	-6.0
BBOO	Buckleboo	32.07	142	P	P	02 20 01.6	-0.3
	baz=32,SNR=91						
TPUB	Ta-pu	32.69	13	eP	P	02 20 07.4	0.0
	comp=E,44nm,1.1s						
SSLB	Suanglung	33.24	13	eP	P	02 20 12.9	+0.7
	comp=E,23nm,0.8s						
PMG	Port Moresby	33.71	94	eP	P	02 20 14.4	-2.0
	comp=E,45nm,1.0s						
PMG	Port Moresby	33.71	94c	eP	P	02 20 16.1	-0.4
PMG				pmax	pmax		
	comp=Z,261nm,1.6s						
QZH	Quanzhou	33.91	9	⇑iP	P	02 20 17.8	-0.1
QZH				pP	pP	02 20 37.1	+0.5
QZH				S	S	02 25 35.7	-1.2
QZH				pmax	pmax		
	comp=Z,460nm,7.7s						
QZH				LR	LR		
	comp=Z,2µm,19.4s						
QZH				LR	LR		
	comp=Z,1µm,15.6s						
QZH				LR	LR		
	comp=Z,3µm,32.7s						
CTA	Charters Tower	34.04	113	P	P	02 20 20.1	+0.8
	comp=Z,33nm,0.9s,baz=282,slow=11,SNR=16						
CTAO	Charters Tower	34.04	113	eP	P	02 20 18.9	-0.3
	comp=Z,206nm,1.5s						
CTAO	Charters Tower	34.04	113	eP	P	02 20 18.9	-0.3
CTAO				pmax	pmax		
	comp=Z,206nm,1.5s						
HTT	Hallett	34.28	140	P	P	02 20 21.7	+0.5
	baz=34,SNR=56						
YOJ	Yonaguni jima	34.40	16	eP	P	02 20 23.4	+1.3
	comp=Z,80nm,1.2s						
YOJ	Yonaguni jima	34.40	16	eP	P	02 20 23.5	+1.3
YOJ				pmax	pmax		
	comp=Z,80nm,1.2s						
SIMRM	Sittwe	34.86	326	eP	P	02 20 27.8	+1.5
	comp=Z,82nm,0.8s						
KMI	Kunming	35.11	344	P	P	02 20 31.1	+2.5
KMI				pP	pP	02 20 46.8	-0.6
KMI				sP	sP	02 20 57.1	+0.5
KMI				PP	PP	02 21 53.8	+4.1
KMI				S	S	02 25 59.2	+3.3
KMI				pmax	pmax		
	comp=Z,530nm,7.1s						
KMI				LR	LR		
	comp=Z,2µm,26.5s						
KMI				LR	LR		
	comp=Z,3µm,21.6s						
KMI				LR	LR		
	comp=Z,2µm,30.1s						
STKA	Stephens Creek	35.13	135	P	P	02 20 29.1	+0.6
	comp=Z,143nm,0.6s,baz=312,slow=9.0,SNR=392						
STKA				PcP	PcP	02 22 59.3	+0.8
	comp=Z,17nm,0.4s,baz=345,slow=5.0,SNR=4.9						
STKA				LR	LR	02 36 24.4	
	comp=Z,639nm,20.8s,baz=298,slow=39						
STKA	Stephens Creek	35.13	135	eP	P	02 20 28.8	+0.3
	comp=Z,43nm,0.9s						
STKA				ePcP	PcP	02 22 59.3	+0.8
STKA	Stephens Creek	35.13	135	P	P	02 20 29.2	+0.6
	baz=35,SNR=156						
GYA	Guiyang	35.52	350	⇑iP	P	02 20 33.2	+1.2
GYA				pP	pP	02 20 51.6	+0.7
GYA				PcP	PcP	02 22 59.8	0.0
GYA				S	S	02 26 04.6	+2.6
GYA				sS	sS	02 26 33.0	-0.6
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,460nm,8.9s						
GYA				LR	LR		
	comp=Z,2µm,22.0s						
GYA				LR	LR		
	comp=Z,5µm,21.6s						
PALK	Pallekele	35.92	295	P	P	02 20 36.2	+0.7
	comp=Z,41nm,0.9s,baz=116,slow=6.1,SNR=9.3						
PALK				LR	LR	02 34 03.8	
	comp=Z,436nm,21.9s,baz=115,slow=34						
PALK	Pallekele	35.92	295	eP	P	02 20 34.7	-0.8
	comp=Z,45nm,0.9s						
CMSA	Cobar Meteorol	37.91	131	P	P	02 20 53.1	+1.0
	baz=38,SNR=86						
RMQ	Roma	38.18	122	P	P	02 20 56.4	+1.8
	baz=38,SNR=32						
ARPS	Mount Arapiles	38.25	141	P	P	02 20 55.7	+0.8
	baz=38,SNR=28						
JOW	Kunigami	38.33	22	eP	P	02 20 56.1	+0.5
	comp=Z,43nm,1.4s						
GUMO	Guam	38.62	55	P	P	02 20 57.4	-0.9
	comp=Z,51nm,0.3s,baz=193,slow=9.4,SNR=7.2						
GUMO	Guam	38.62	55	eP	P	02 20 57.1	-1.2
	comp=Z,237nm,1.4s						
SILR	SILCHAR	38.71	330	eP	P	02 21 01.1	+2.3
WHN	Wuhan	39.07	2	P	P	02 21 03.8	+2.0
WHN				PP	PnPn	02 22 37.8	+1.6
WHN				pmax	pmax		
	comp=Z,42nm,0.6s						
WHN				LR	LR		
	comp=Z,8µm,24.5s						
WHN				LR	LR		
	comp=Z,1µm,12.7s						
WHN				LR	LR		
	comp=Z,10µm,32.1s						
BWNR	Bhubaneshwar	39.36	317	eP	P	02 21 03.8	-0.6
BWNR				IAmb	IAmb	02 21 06.0	
LKP	Lekhapani	39.52	336	eP	P	02 21 06.4	+0.8
LKP				IAmb	IAmb	02 21 08.0	
	comp=Z,920nm,0.1s						
EIDS	Eidsvold	39.79	119	eP	P	02 21 07.1	-0.9
	comp=Z,220nm,1.8s						
EIDS	Eidsvold	39.79	119	P	P	02 21 09.1	+1.1
	baz=40,SNR=14						
SHL	Shillong	39.82	329	eP	P	02 21 08.3	-0.1
SHL				IAmb	IAmb	02 21 11.5	
	comp=Z,81nm,1.0s						
DIBR	DIBRUGARH	40.03	335	eP	P	02 21 10.7	+0.8
H08S2	Diego Garcia H	40.12	268	T	T	03 04 22.7	
	baz=95,slow=75,SNR=52						
H08S3	Diego Garcia H	40.12	269	T	T	03 04 18.9	
	baz=95,slow=75,SNR=48						
H08S1	Diego Garcia H	40.13	268	T	T	03 03 55.9	
	baz=95,slow=75,SNR=49						
TEZP	TEZPUR	40.25	331	eP	P	02 21 12.1	+0.5
TEZP				IAmb	IAmb	02 21 13.7	
	comp=Z,24nm,0.7s						
CD2	Chengdu	40.40	348	P	P	02 21 13.4	+0.5
CD2				pP	pP	02 21 28.6	-3.4
CD2				PP	PnPn	02 22 53.2	+1.2
CD2				S	S	02 27 16.4	+0.8
CD2				sS	sS	02 27 49.0	+1.3
CD2				pmax	pmax		
	comp=Z,130nm,0.5s						
CD2				pmax	pmax		
	comp=Z,620nm,4.5s						
CD2				LR	LR		
	comp=Z,3µm,22.2s						
CD2				LR	LR		
	comp=Z,3µm,27.1s						
CD2				LR	LR		
	comp=Z,3µm,25.5s						
GUWA	GUWAHATI	40.43	330	eP	P	02 21 15.2	+2.0
GUWA				IAmb	IAmb	02 21 16.7	
	comp=Z,44nm,0.7s						
ZIRO	ZIRO	40.55	333	eP	P	02 21 15.1	+0.7
ZIRO				IAmb	IAmb	02 21 17.0	
	comp=Z,142nm,0.2s						
NJ2	Nanjing	40.94	8	eP	P	02 21 19.0	+1.8
NJ2				pP	pP	02 21 37.7	+1.4
NJ2				sP	sP	02 21 45.8	+0.5
NJ2				PP	PnPn	02 22 58.0	-0.1
NJ2				S	S	02 27 26.2	+2.9
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,870nm,4.8s						
NJ2				LR	LR		
	comp=Z,2µm,23.4s						
NJ2				LR	LR		
	comp=Z,980nm,16.6s						
NJ2				LR	LR		
	comp=Z,3µm,21.3s						
TOO	Toolangi	41.04	139	eP	P	02 21 18.1	-0.1
	comp=Z,154nm,1.0s						
TOO	Toolangi	41.04	139	P	P	02 21 19.9	+1.8
	baz=41,SNR=27						
TOO	Toolangi	41.04	139	eP	P	02 21 18.1	-0.1
TOO				pmax	pmax		
	comp=Z,154nm,1.0s						
YNG	Young	41.25	133	P	P	02 21 21.0	+1.1
	baz=41,SNR=15						
TAWA	Tawang	41.52	331	eP	P	02 21 21.9	-0.7
BOK	Bokaro	41.81	321	eP	P	02 21 24.7	+0.2
BOK				IAmb	IAmb	02 21 27.3	
	comp=Z,41nm,1.0s						
ARMA	Armidale	41.99	126	eP	P	02 21 26.1	-0.1
	comp=Z,60nm,0.9s						
ARMA	Armidale	41.99	126	P	P	02 21 28.4	+2.3
	baz=42,SNR=34						
CAN	Canberra	42.19	134	eP	P	02 21 28.7	+1.1
	comp=Z,384nm,1.7s						
CAN	Canberra	42.19	134	eP	P	02 21 28.7	+1.1
CAN				pmax	pmax		
	comp=Z,384nm,1.7s						
CNB	Canberra Magne	42.44	134	P	P	02 21 30.8	+1.1
	baz=42,SNR=16						
XAN	Xi'an	42.71	355	P	P	02 21 32.0	+0.2
XAN				pP	pP	02 21 50.3	-0.7
XAN				S	S	02 27 48.7	-1.0
XAN				sS	sS	02 28 18.2	-3.7
XAN				pmax	pmax		
	comp=Z,600nm,7.3s						
XAN				LR	LR		
	comp=Z,2µm,18.4s						
XAN				LR	LR		
	comp=Z,2µm,19.0s						
XAN				LR	LR		
	comp=Z,2µm,23.9s						
MGCD	Mangrove Creek	42.74	130	P	P	02 21 34.1	+2.1
	baz=43,SNR=12						
HYB	Hyderabad	42.84	307	iP	P	02 21 32.0	-1.1
	comp=Z,100nm,1.0s						
HYB				e		02 21 44.0	
GTK	Tadong	42.94	327	eP	P	02 21 34.5	+0.6
GTK				IAmb	IAmb	02 21 37.2	
	comp=Z,71nm,0.9s						
RIV	Riverview	43.05	131	P	P	02 21 36.3	+1.8
	baz=43,SNR=4.7						
LSA	Lhasa	43.62	332	P	P	02 21 40.8	+1.1
LSA				S	S	02 28 00.7	-3.3
LSA				LR	LR		
	comp=Z,6µm,29.2s						
LSA				LR	LR		
	comp=Z,4µm,22.1s						
LSA				LR	LR		
	comp=Z,7µm,34.9s						
LSA	Lhasa	43.62	332	iP	P	02 21 41.4	+1.7
	SNR=6.7						
JIRN	Jiri	44.53	325	eP	P	02 21 46.9	0.0
	comp=Z,275nm,0.6s						
NGP	Nagpur	44.67	312	eP	P	02 21 46.7	-0.9
NGP				IAmb	IAmb	02 21 49.5	
	comp=Z,68nm,1.1s						
TIA	Tai'an	44.87	5	P	P	02 21 48.9	-0.1
TIA				pmax	pmax		
	comp=Z,28nm,0.8s						
GUN	Gumba	44.90	325	eP	P	02 21 49.5	-0.3
	comp=Z,214nm,0.6s						
PKI	Pulchoki	44.91	324	eP	P	02 21 49.3	-0.6
	comp=Z,98nm,0.8s						
PKIN	Phulchoki	44.92	324	eP	P	02 21 49.2	-0.7
	comp=Z,82nm,0.7s						
JNU	Nakatsue	44.96	21	P	P	02 21 49.0	-0.8
	comp=Z,4.6nm,0.4s,baz=245,slow=3.5,SNR=7.4						
DMN	Daman	45.12	324	eP	P	02 21 51.0	-0.4
	comp=Z,192nm,0.7s						
KKN	Kakani	45.15	324	eP	P	02 21 51.3	-0.3
	comp=Z,147nm,0.7s						
JBP	Jabalpur	45.27	315	eP	P	02 21 52.3	-0.1
LZH	Lanzhou	45.41	350	⇑P	P	02 21 54.4	+0.9
LZH				pP	pP	02 22 16.2	+3.4
LZH				sP	sP	02 22 22.6	+0.7
LZH				PP	PP	02 23 45.6	+4.3
LZH				ScP	ScP	02 27 19.5	+2.1
LZH				S	S	02 28 31.0	+1.9
LZH				SS	ScS	02 31 44.5	+1.8
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,16.9s						
LZH				LR	LR		
	comp=Z,1µm,17.7s						
LZH				LR	LR		
	comp=Z,3µm,18.3s						
GOA	Goa	45.68	302	eP	P	02 21 56.2	+0.4
GOA				IAmb	IAmb	02 21 57.8	
	comp=Z,53nm,0.7s						
GKN	Gorkha	45.69	324	eP	P	02 21 55.4	-0.4
	comp=Z,109nm,0.3s						
KOLN	Koldanda	46.12	323	eP	P	02 21 58.8	-0.5
	comp=Z,135nm,0.5s						
TIY	Taiyuan	46.20	359	eP	P	02 21 59.9	+0.3
TIY				S	S	02 28 40.8	+0.5
TIY				pmax	pmax		
	comp=Z,450nm,4.4s						
TIY				LR	LR		
	comp=Z,1µm,15.1s						
TIY				LR	LR		
	comp=Z,270nm,10.9s						
TIY				LR	LR		
	comp=Z,1µm,19.4s						
HNR	Honiara	46.32	95	eP	P	02 22 02.0	+1.2
DANN	Dangsing	46.46	324	eP	P	02 22 01.3	-0.7
	comp=Z,224nm,0.7s						
PYUN	Piuthan	46.73	323	eP	P	02 22 03.3	-0.7
	comp=Z,161nm,0.9s						
TJN	Taejon	46.85	16	⇓eP	P	02 22 03.6	-1.0
BHPL	Bhopal	47.14	313	eP	P	02 22 06.1	-1.0
BHPL				IAmb	IAmb	02 22 08.0	
	comp=Z,191nm,1.4s						
POO	Poona	47.19	305	eP	P	02 22 07.8	+0.2
POO				IAmb	IAmb	02 22 09.1	
	comp=Z,336nm,0.1s						
KS15	Wonju Array Si	47.99	16	eP	P	02 22 13.5	+0.1
	comp=Z,59nm,1.5s						

KS15				ePcP	PcP	02 23 41.4	+1.0
KSRS	Korea Array	48.02	16	P	P	02 22 14.1	+0.5
	comp=Z,7.4nm,0.7s,baz=197,slow=7.5,SNR=19						
KSRS				PcP	PcP	02 23 41.4	+1.0
	comp=Z,6.4nm,0.8s,baz=186,slow=4.0,SNR=5.2						
KSRS				LR	LR	02 44 31.9	
	comp=Z,406nm,20.5s,baz=202,slow=39						
DL2	Dalian	48.06	9	⇑iP	P	02 22 13.5	-0.4
DL2				pP	pP	02 22 32.5	-0.9
DL2				S	S	02 29 03.2	-3.3
DL2				sS	sS	02 29 36.8	-2.4
DL2				pmax	pmax		
	comp=Z,41nm,1.0s						
DL2				pmax	pmax		
	comp=Z,610nm,6.1s						
DL2				LR	LR		
	comp=Z,980nm,28.7s						
DL2				LR	LR		
	comp=Z,850nm,27.1s						
DL2				LR	LR		
	comp=Z,2µm,29.8s						
BJI	Beijing	48.61	3	P	P	02 22 18.4	+0.3
BJI				S	S	02 29 10.4	-3.8
BJI				LR	LR		
	comp=Z,780nm,22.7s						
BJI				LR	LR		
	comp=Z,700nm,17.1s						
BJI				LR	LR		
	comp=Z,1µm,36.0s						
JHJ	Hachijo jima 2	48.80	30	LR	LR	02 44 49.5	
	comp=Z,313nm,19.6s,baz=254,slow=38						
BTO	Baotou	49.17	357	eP	P	02 22 23.0	+0.5
HHC	Hu-ho-hao-te	49.35	359	P	P	02 22 26.7	+2.8
HHC				pP	pP	02 22 45.4	+1.9
HHC				S	S	02 29 27.9	+3.1
HHC				sS	sS	02 30 00.4	+2.7
HHC				SS	SS	02 32 57.0	-0.7
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,420nm,5.7s						
HHC				LR	LR		
	comp=Z,1µm,26.7s						
HHC				LR	LR		
	comp=Z,980nm,21.4s						
HHC				LR	LR		
	comp=Z,2µm,23.7s						
GTA	Gaotai	49.44	347	eP	P	02 22 25.5	+0.8
GTA				pP	pP	02 22 44.3	0.0
GTA				sP	sP	02 22 52.7	-0.6
GTA				ScP	ScP	02 27 34.9	+0.6
GTA				S	S	02 29 23.4	-2.7
GTA				sS	sS	02 29 59.9	+0.9
GTA				ScS	ScS	02 32 08.3	-0.8
GTA				SS	SS	02 32 57.1	-2.1
GTA				pmax	pmax		
	comp=Z,540nm,10.0s						
GTA				LR	LR		
	comp=Z,1µm,22.6s						
GTA				LR	LR		
	comp=Z,1µm,22.7s						
GTA				LR	LR		
	comp=Z,2µm,22.2s						
MAJO	Matsushiro	50.88	26	eP	P	02 22 33.9	-1.5
	comp=Z,29nm,0.8s						
MAJO				ePcP	PcP	02 23 51.6	+0.6
MAJO				eScP	ScP	02 27 42.0	+1.6
MAJO	Matsushiro	50.88	26	i P	P	02 22 33.9	-1.5
MAJO				pmax	pmax		
	comp=Z,20nm,0.7s						
MAT	Matsushiro	50.88	26	P	P	02 22 33.8	-1.6
MAT				S	S	02 29 38.6	-7.4
MJAR	Matsushiro Arr	50.88	26	P	P	02 22 33.8	-1.6
	comp=Z,17nm,0.6s,baz=204,slow=8.4,SNR=38						
MJAR				PcP	PcP	02 23 51.6	+0.6
	comp=Z,14nm,0.8s,baz=205,slow=5.8,SNR=5.3						
MJAR				ScP	ScP	02 27 42.0	+1.6
	comp=Z,4.5nm,0.9s,baz=208,slow=5.8,SNR=4.9						
MJAR				LR	LR	02 44 14.2	
	comp=Z,246nm,21.8s,baz=210,slow=36						
SNY	Shenyang	51.24	10	⇑P	P	02 22 37.2	-0.7
SNY				S	S	02 29 44.6	-6.0
SNY				pmax	pmax		
	comp=Z,59nm,2.5s						
SNY				pmax	pmax		
	comp=Z,840nm,7.1s						
SNY				LR	LR		
	comp=Z,760nm,29.2s						
SNY				LR	LR		
	comp=Z,840nm,27.8s						
SNY				LR	LR		
	comp=Z,2µm,25.5s						
DDI	Dehra Dun	51.34	321	eP	P	02 22 39.0	-0.1
SMLA	Simla	52.45	321	eP	P	02 22 45.5	-1.6
DZM	Mont Dzumac	52.93	111	eP	P	02 22 52.8	+1.7
	comp=Z,174nm,1.6s						
DZM	Mont Dzumac	52.93	111	eLR	LR	02 38 16.7	
	comp=Z,2µm,32.8s						
DZM	Mont Dzumac	52.93	111	eP	P	02 22 52.6	+1.5
	comp=Z,230nm,1.8s						
CN2	Changchun	53.49	11	eP	P	02 22 53.8	-0.8
CN2				epP	pP	02 23 13.3	-1.0
CN2				eS	S	02 30 20.4	-1.0
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,950nm,20.0s						
CN2				LR	LR		
	comp=Z,680nm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
MSHR	Mys Shultsa	53.69	17	c iP	P	02 22 56.0	-0.1
DHRM	DHARAMSHALA	53.75	321	eP	P	02 22 55.5	-1.6
DHRM				IAmb	IAmb	02 22 58.3	
	comp=Z,73nm,0.5s						
MARNC	Mare, Loyalty	54.35	110	eP	P	02 23 02.7	+1.3
	comp=Z,182nm,0.8s						
VLA	Vladivostok	54.39	17	⇑iP	P	02 23 01.5	+0.3
MDJ	Mudanjiang	55.17	14	P	P	02 23 06.7	-0.1
MDJ				pP	pP	02 23 26.8	+0.2
MDJ				sP	sP	02 23 34.3	-1.2
MDJ				PP	PP	02 25 17.2	+6.1
MDJ				pmax	pmax		
	comp=Z,39nm,0.9s						
MDJ				LR	LR		
	comp=Z,830nm,24.7s						
MDJ				LR	LR		
	comp=Z,550nm,22.6s						
MDJ				LR	LR		
	comp=Z,2µm,33.1s						
USRK	Ussuriysk Ar.	55.41	16	P	P	02 23 08.4	-0.2
	comp=Z,33nm,0.7s,baz=198,slow=5.0,SNR=53						
USRK				LR	LR	02 50 15.0	
	comp=Z,155nm,18.4s,baz=199,slow=40						
NIL	Nilore	56.59	320	eP	P	02 23 15.7	-1.5
	comp=Z,200nm,1.6s						
NIL	Nilore	56.59	320	eP	P	02 23 15.7	-1.5
NIL				pmax	pmax		
	comp=Z,200nm,1.6s						
ULN	Ulaanbaatar	56.59	355	eP	P	02 23 17.7	+0.6
	comp=Z,22nm,0.8s						
ULN	Ulaanbaatar	56.59	355	c iP	P	02 23 17.4	+0.3
ULN				pmax	pmax		
	comp=Z,22nm,0.7s						
ULN	Ulaanbaatar	56.59	355	P	P	02 23 17.9	+0.7
	SNR=18						
SONM	Songino Array	56.62	355	P	P	02 23 17.7	+0.4
	comp=Z,24nm,0.6s,baz=175,slow=8.3,SNR=51						
SONM				LR	LR	02 49 12.4	
	comp=Z,931nm,21.0s,baz=172,slow=38						
WMQ	Urumqi	57.13	338	eP	P	02 23 22.7	+1.8
WMQ				pP	pP	02 23 43.2	+2.2
WMQ				sP	sP	02 23 54.3	+4.5
WMQ				S	S	02 31 08.7	-1.5
WMQ				sS	sS	02 31 43.5	-0.8
WMQ				ScS	ScS	02 33 02.3	-0.7
WMQ				SS	SS	02 34 59.0	-1.5
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,3.8s						
WMQ				LR	LR		
	comp=Z,660nm,19.5s						
WMQ				LR	LR		
	comp=Z,420nm,17.9s						
WMQ				LR	LR		
	comp=Z,1µm,25.3s						
ERM	Erimo	57.55	26	eP	P	02 23 22.9	-0.9
	comp=Z,32nm,0.8s						
ERM	Erimo	57.55	26	⇑eP	P	02 23 23.6	-0.2
ERM				pmax	pmax		
	comp=Z,39nm,1.0s						
TEY	Ternei	57.59	20	⇑eP	P	02 23 23.8	-0.1
TEY				pmax	pmax		
	comp=Z,20nm,3.0s						
TEY				pmax	pmax		
	comp=N,10.0nm,2.9s						
KSH	Kashi	59.02	327	P	P	02 23 32.7	-1.6
KSH				pP	pP	02 23 53.1	-1.2
KSH				sP	sP	02 24 01.6	-1.5
KSH				PcP	PcP	02 24 21.6	-0.9
KSH				PP	PP	02 25 47.7	+2.1
KSH				S	S	02 31 27.4	-7.7
KSH				SS	SS	02 35 24.7	-5.8
KSH				pmax	pmax		
	comp=N,190nm,2.2s						
KSH				pmax	pmax		
	comp=N,280nm,10.3s						
KSH				LR	LR		
	comp=N,170nm,9.8s						
KSH				LR	LR		
	comp=N,220nm,14.6s						
ASAJ	Asahikawa	59.03	24	P	P	02 23 33.9	-0.1
	comp=N,52nm,0.8s,baz=221,slow=7.0,SNR=31						
ZAK	Zakamensk	59.48	353	eP	P	02 23 37.0	-0.1
ZAK				pmax	pmax		
	comp=Z,18nm,1.6s						
KBL	Kabul	59.86	318	eP	P	02 23 39.0	-1.2
	comp=Z,127nm,1.8s						
KBL	Kabul	59.86	318	eP	P	02 23 39.0	-1.2
KBL				pmax	pmax		
	comp=Z,127nm,1.8s						
PRZ	Przheval'sk	59.98	331	P	P	02 23 41.9	+1.0
KLR	Kul'dur	60.01	14	P	P	02 23 40.1	-0.6
	comp=Z,14nm,0.5s,baz=182,slow=6.8,SNR=52						
KLR	Kul'dur	60.01	14	c iP	P	02 23 39.7	-1.0
KLR				pmax	pmax		
	comp=Z,17nm,0.8s						
UZB	Uzynbulak	60.19	332	c iP	P	02 23 42.3	0.0
UZB				pmax	pmax		
	comp=Z,70nm,1.7s						
UZB	Uzynbulak	60.19	332	⇑iP	P	02 23 42.4	0.0
	comp=Z,70nm,1.7s						
YUK	Yuzh-Kuril'sk	60.36	27	eP	P	02 23 41.0	-2.2
YUK				e		02 24 22.6	
YUK				eS	S	02 31 51.9	+0.1
YUK				e		02 33 19.4	
YUK				pmax	pmax		
	comp=Z,118nm,0.9s						
YUK				pmax	pmax		
	comp=N,32nm,0.8s						
YUK				pmax	pmax		
	comp=E,34nm,0.9s						
YUK				pmax	pmax		
	comp=Z,201nm,2.5s						
YUK				pmax	pmax		
	comp=E,374nm,20.0s						
SATY	Saty	60.41	331	eP	P	02 23 43.2	-0.5
SATY				eS	S	02 31 52.6	-0.4
SATY				pmax	pmax		
	comp=Z,258nm,3.2s						
SATY				smax	smax		
	comp=E,174nm,3.6s						
SATY	Saty	60.41	331	eP	P	02 23 43.3	-0.5
	comp=E,258nm,3.2s						
SATY				eS	S	02 31 52.6	-0.4
	comp=E,174nm,3.6s						
CIT	Chita	60.51	0	eP	P	02 23 43.8	-0.3
CIT				e		02 24 05.4	
CIT				e		02 24 33.3	
CIT				pmax	pmax		
	comp=Z,121nm,1.9s						
KPKS	Kokpek	60.60	332	ceP	P	02 23 44.7	-0.2
KPKS				pmax	pmax		
	comp=Z,99nm,1.3s						
KPKS	Kokpek	60.60	332	⇑eP	P	02 23 44.8	-0.2
	comp=Z,98nm,1.2s						
TLY	Talaya	60.71	353	c iP	P	02 23 45.8	+0.3
TLY				eS	S	02 31 56.4	+0.3
TLY				pmax	pmax		
	comp=Z,59nm,0.9s						
TLY				MLR	MLR		
	comp=Z,2µm,18.0s						
TLY	Talaya	60.71	353	P	P	02 23 46.4	+1.0
	SNR=22						
MOY	Mondy	61.04	351	eP	P	02 23 48.4	+0.6
MOY				pmax	pmax		
	comp=Z,98nm,2.9s						
RPZ	Rata Peaks	61.10	135	P	P	02 23 49.2	+0.8
	comp=Z,51nm,0.7s,baz=323,slow=6.8,SNR=8.6						
RPZ	Rata Peaks	61.10	135	eP	P	02 23 48.3	0.0
	comp=Z,118nm,1.0s						
TNSS	Tian-Shan	61.10	330	eP	P	02 23 48.4	-0.3
TNSS	Tian-Shan	61.10	330	eP	P	02 23 48.5	-0.3
IRK	Irkutsk	61.19	354	eP	P	02 23 48.0	-0.7
IRK				pmax	pmax		
	comp=Z,118nm,2.7s						
ZSN	Zaisan	61.26	339	ceP	P	02 23 49.3	0.0
ZSN				eS	S	02 32 02.2	-1.1
ZSN				smax	smax		
	comp=E,31nm,5.5s						
ZSN	Zaisan	61.26	339	⇑eP	P	02 23 49.3	0.0
ZSN				eS	S	02 32 02.3	-1.1
	comp=E,31nm,5.5s						
YSS	Yuzh-Sakhalins	61.44	23	eP	P	02 23 49.6	-0.8
	comp=E,224nm,1.3s						
YSS	Yuzh-Sakhalins	61.44	23	α iP	P	02 23 50.5	+0.1
YSS				e*SP	sP	02 24 16.5	-2.8
YSS				e		02 26 06.3	
YSS				eS	S	02 31 55.0	-10
YSS				eSS	SS	02 36 02.2	-5.6
YSS				pmax	pmax		
	comp=Z,70nm,0.7s						
YSS				pmax	pmax		
	comp=Z,400nm,7.0s						
MKAR	Makanchi Array	61.69	336	P	P	02 23 52.0	-0.2
	comp=Z,33nm,0.5s,baz=148,slow=7.1,SNR=224						
MKAR				PKP2bc		02 53 08.2	
	comp=Z,0.2nm,0.3s,baz=345,slow=4.5,SNR=4.2						
CHKK	Chushkaly	61.69	331	eP	P	02 23 51.3	-1.0
CHKK	Chushkaly	61.69	331	eP	P	02 23 51.3	-1.0
MAKZ	Makanchi	61.82	336	eP	P	02 23 52.7	-0.4
	comp=Z,36nm,1.0s						
MAKZ	Makanchi	61.82	336	eP	P	02 23 52.7	-0.4
MAKZ				pmax	pmax		
	comp=Z,36nm,1.0s						
THZ	Tophouse	61.89	133	eP	P	02 23 55.3	+1.5
	comp=Z,74nm,1.0s						
TDK	Taldyqorghan	61.91	333	eP	P	02 23 53.3	-0.4
TDK				eS	S	02 32 10.4	-1.2
TDK				pmax	pmax		
	comp=Z,185nm,1.0s						
TDK				smax	smax		
	comp=N,378nm,4.0s						
TDK	Taldyqorghan	61.91	333	eP	P	02 23 53.4	-0.4
	comp=N,185nm,1.0s						
TDK				eS	S	02 32 10.4	-1.2
	comp=N,378nm,4.0s						
WSAR	Wadi Sarin	61.95	302	P	P	02 23 54.4	0.0
	SNR=7.6						
KUU	Kurty	62.03	331	c iP	P	02 23 53.9	-0.7
KUU				eS	S	02 32 09.2	-4.0
KUU				pmax	pmax		
	comp=Z,176nm,1.8s						
KUU				smax	smax		
	comp=N,244nm,4.3s						
KUU	Kurty	62.03	331	⇑iP	P	02 23 53.9	-0.7
	comp=N,176nm,1.8s						
KUU				eS	S	02 32 09.3	-4.0
	comp=N,244nm,4.3s						
AAK	Ala-Archa	62.04	329	P	P	02 23 55.1	+0.3
	comp=N,40nm,1.0s,baz=134,slow=5.5,SNR=37						
AAK	Ala-Archa	62.04	329	eP	P	02 23 55.0	+0.2
	comp=N,47nm,0.9s						
AAK	Ala-Archa	62.04	329	i P	P	02 23 55.6	+0.8
	SNR=13						
AAK	Ala-Archa	62.04	329	c iP	P	02 23 54.7	-0.1
AAK				pmax	pmax		
	comp=Z,71nm,1.3s						
AAK	Ala-Archa	62.04	329	P	P	02 23 55.3	+0.5
	SNR=21						
KUR	Kuril'sk	62.19	27	ceP	P	02 23 55.5	0.0
KUR				eS	S	02 32 11.9	-3.1
KUR				pmax	pmax		
	comp=Z,251nm,1.1s						
KUR				pmax	pmax		
	comp=E,84nm,0.7s						
KUR				pmax	pmax		
	comp=N,76nm,1.2s						
KUR				pmax	pmax		
	comp=Z,900nm,3.1s						
KUR				pmax	pmax		
	comp=N,2µm,33.0s						
DGZ	Jazzator, Alta	62.34	342	c iP	P	02 23 57.0	+0.3
DGZ				pmax	pmax		
	comp=Z,126nm,1.1s						
BIDO	Bidbid	62.48	302	P	P	02 23 57.9	0.0
	SNR=5.7						
SGDS	Sogindy	62.55	329	⇑iP	P	02 23 57.4	-0.7
	comp=Z,70nm,1.9s						
SGDS				eS	S	02 32 17.9	-1.9
	comp=Z,110nm,4.7s						
GRNR	Gornyy	62.64	16	eP	P	02 23 58.0	-0.4
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
ZEA	Zeya	63.39	9	eP	P	02 24 03.4	+0.1
ZEA				e		02 24 23.5	
ZEA				eS	S	02 32 30.0	+0.3
ZEA				e		02 33 03.5	
ZEA				pmax	pmax		
	comp=N,74nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,92nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,800nm,7.0s						
ZEA				smax	smax		
	comp=N,500nm,5.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
JBG	Jabagly	63.99	326	ceP	P	02 24 07.5	-0.2
JBG				pmax	pmax		
	comp=Z,40nm,0.6s						
BKZ	Black Stump Fm	64.02	129	eP	P	02 24 09.0	+1.1
	comp=Z,58nm,0.9s						
IUG	Iuzhnay	64.09	326	ceP	P	02 24 07.8	-0.5
IUG	Iuzhnay	64.09	326	⇑eP	P	02 24 07.8	-0.5
URZ	Urewera	64.34	128	P	P	02 24 10.3	+0.4
	comp=Z,17nm,0.5s,baz=223,slow=4.1,SNR=8.2						
OPO	Ambohidratompo	64.43	254	P	P	02 24 12.8	+1.7
	comp=Z,4.0nm,0.4s,baz=83,slow=8.1,SNR=10.0						
UOSS	Minazif	64.66	303	i P	P	02 24 11.6	-0.7
	SNR=11						
TYV	Tymovskoe	64.67	20	eP	P	02 24 12.8	+1.1
TYV				pmax	pmax		
	comp=Z,800nm,4.2s						
TYV				pmax	pmax		
	comp=Z,27nm,0.9s						
HATD	Hatta, Dubai	64.68	303	i P	P	02 24 12.2	-0.3
	SNR=16						
HATD	Hatta, Dubai	64.68	303	P	P	02 24 12.1	-0.3
	SNR=6.6						
ASHO	Ashiyiah	64.68	302	i P	P	02 24 12.7	+0.2
	SNR=17						
ASHO	Ashiyiah	64.68	302	P	P	02 24 12.2	-0.3
ALNE	Al Ain	64.69	302	P	P	02 24 12.8	+0.3
MDH	Madha	64.73	303	i P	P	02 24 11.9	-0.8
	SNR=7.0						
MSFE	Esma-Masafi	64.87	303	i P	P	02 24 13.7	0.0
	SNR=8.3						
FAQ	Al Faqa, Dubai	65.09	302	i P	P	02 24 14.6	-0.5
	SNR=77						
FAQ	Al Faqa, Dubai	65.09	302	P	P	02 24 15.0	-0.1
	SNR=21						
NAZ	Nazwa, Dubai	65.13	303	i P	P	02 24 14.7	-0.7
	SNR=12						
NAZ	Nazwa, Dubai	65.13	303	P	P	02 24 15.1	-0.3
	SNR=6.0						
SHME	Shamm	65.16	304	P	P	02 24 15.8	+0.3
ASUD	Al Ashush, Dub	65.27	302	i P	P	02 24 16.1	-0.1
	SNR=16						
ASUD	Al Ashush, Dub	65.27	302	P	P	02 24 16.1	-0.1
UMQ	Umm Al-Quwin	65.34	303	P	P	02 24 16.9	+0.2
AJN	Ajban	65.53	302	P	P	02 24 17.9	0.0
	SNR=7.9						
NKL	Nikolayevsk	65.98	18	eP	P	02 24 17.1	-3.1
NKL				e		02 24 50.0	
NKL				e		02 26 50.6	
NKL				eS	S	02 32 51.0	-11
NKL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NKL				pmax	pmax		
	comp=N,31nm,1.2s						
NKL				pmax	pmax		
	comp=E,22nm,1.3s						
NKL				pmax	pmax		
	comp=Z,154nm,2.7s						
KURBB	Kurchatov Arra	66.25	337	P	P	02 24 21.6	-0.4
	comp=Z,36nm,0.7s,baz=156,slow=5.3,SNR=128						
KURK	Kurchatov	66.29	337	eP	P	02 24 21.9	-0.4
	comp=Z,60nm,0.8s						
KURK	Kurchatov	66.29	337	ceP	P	02 24 21.3	-0.9
KURK				pmax	pmax		
	comp=Z,60nm,0.7s						
KURK	Kurchatov	66.29	337	P	P	02 24 22.2	0.0
	SNR=25						
BOD	Bodaibo	66.32	1	eP	P	02 24 21.4	-0.9
BOD				pmax	pmax		
	comp=Z,70nm,1.7s						
ZALV	Zalesovo Beam	66.84	342	P	P	02 24 25.0	-0.6
	comp=Z,69nm,0.5s,baz=156,slow=4.3,SNR=213						
ZALV				S	S	02 33 08.1	-3.9
	comp=Z,1.2nm,0.3s,baz=147,slow=8.6,SNR=3.6						
MAW	Mawson	67.54	199	P	P	02 24 31.0	+1.1
	comp=Z,18nm,0.8s,baz=66,slow=6.6,SNR=34						
MAW				LR	LR	02 48 07.0	
	comp=Z,1µm,21.8s,baz=57,slow=30						
MAW	Mawson	67.54	199	P	P	02 24 31.4	+1.5
	baz=68,SNR=20						
MAW	Mawson	67.54	199	P	P	02 24 31.0	+1.1
BRZS	Berezniki	68.21	333	ceP	P	02 24 34.0	-0.4
BRZS				pmax	pmax		
	comp=Z,189nm,3.0s						
BRZS	Berezniki	68.21	333	⇑eP	P	02 24 34.0	-0.4
	comp=Z,189nm,3.0s						
GEYT	Alibeck	69.08	316	P	P	02 24 40.1	-0.1
	comp=Z,4.9nm,0.3s,baz=134,slow=4.2,SNR=24						
GEYT				LR	LR	02 58 40.1	
	comp=Z,294nm,19.6s,baz=345,slow=39						
BRVK	Borovoye	71.46	334	eP	P	02 24 53.9	-0.4
	comp=Z,22nm,0.9s						
BRVK	Borovoye	71.46	334	ceP	P	02 24 54.0	-0.2
BRVK				pmax	pmax		
	comp=Z,45nm,1.7s						
BRVK	Borovoye	71.46	334	P	P	02 24 54.1	-0.2
	SNR=13						
YAK	Yakutsk	71.73	8	eP	P	02 24 55.1	-0.6
	comp=Z,95nm,0.8s						
YAK	Yakutsk	71.73	8	eP	P	02 24 55.0	-0.6
YAK				e		02 25 12.3	
YAK				e*PP	sP	02 25 22.3	-2.5
YAK				e		02 27 35.6	
YAK				eS	S	02 34 04.8	-4.5
YAK				e		02 34 43.2	
YAK				e*SS	ScS	02 35 00.9	+7.1
YAK				eSS	SS	02 38 47.4	+0.6
DAMY	Dhamar	71.87	288	esP	sP	02 25 19.1	-7.9
	comp=Z,86nm,1.2s						
PETK	Petropavlovsk-	72.33	26	P	P	02 24 59.6	+0.1
	comp=Z,22nm,0.6s,baz=157,slow=2.0,SNR=29						
PETK				LR	LR	03 00 35.3	
	comp=Z,101nm,18.9s,baz=240,slow=39						
PET	Petropavlovsk	72.70	27	c iP	P	02 25 02.3	+0.6
PET				e*PP	pP	02 25 23.1	+0.8
PET				eS	S	02 34 21.2	+0.5
PET				pmax	pmax		
	comp=Z,700nm,5.8s						
PET				pmax	pmax		
	comp=Z,500nm,17.4s						
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
VNDA	Vanda	73.22	170	P	P	02 25 04.7	+0.3
	comp=Z,6.8nm,0.7s,baz=311,slow=7.8,SNR=36						
VNDA				LR	LR	02 57 04.2	
	comp=Z,2µm,18.1s,baz=324,slow=36						
RAYN	Ar Rayn	73.31	298	eP	P	02 25 05.5	-0.5
	comp=Z,34nm,1.0s						

RAYN	**Ar Rayn**	73.31	298	*i* P	P	02 25 05.6	-0.4
	SNR=26						
RAYN	**Ar Rayn**	73.31	298	*e*P	P	02 25 05.5	-0.5
RAYN				pmax	pmax		
	comp=Z,34nm,1.0s						
SBA	**Scott Base**	74.26	170	P	P	02 25 11.8	+1.3
MA2	**Magadan**	74.45	19	P	P	02 25 12.4	+0.5
	comp=Z,15nm,0.6s,baz=196,slow=7.2,SNR=9.9						
MA2	**Magadan**	74.45	19	*e*P	P	02 25 12.2	+0.4
	comp=Z,85nm,1.5s						
MA2	**Magadan**	74.45	19	*ce*P	P	02 25 12.5	+0.7
MA2				pmax	pmax		
	comp=Z,91nm,2.5s						
KMBO	**Kilima Mbogo**	75.76	271	P	P	02 25 21.8	+1.1
	comp=Z,11nm,0.8s,baz=62,slow=9.9,SNR=29						
KMBO				LR	LR	02 53 01.7	
	comp=Z,990nm,21.8s,baz=104,slow=31						
KMBO	**Kilima Mbogo**	75.76	271	*e*P	P	02 25 20.1	-0.6
	comp=Z,13nm,0.8s						
KMBO	**Kilima Mbogo**	75.76	271	*i* P	P	02 25 22.4	+1.7
	SNR=12						
SYO	**Syowa Base**	75.98	201	⇑*e*X	P	02 25 19.0	-1.5
SYO	**Syowa Base**	75.98	201	⇑*e*X	P	02 25 30.2	+10
SYO	**Syowa Base**	75.98	201	⇓*e*pP	pP	02 25 37.0	-3.7
SEY	**Seymchan**	77.55	17	P	P	02 25 29.5	+0.1
	comp=Z,12nm,0.3s,baz=213,slow=10,SNR=34						
AKT	**Akhty**	77.82	316	*e*P	P	02 25 32.5	+1.0
AKT				*e*		02 25 40.7	
AKT				*e**PP	pP	02 25 52.4	+0.1
AKT				pmax	pmax		
	comp=Z,41nm,1.3s						
SVE	**Sverdlovsk**	78.13	334	*d i*P	P	02 25 32.9	+0.2
SVE				*e*S	S	02 35 16.4	-4.2
SVE				pmax	pmax		
	comp=Z,86nm,1.3s						
MAK	**Makhachkala**	78.56	317	*e*P	P	02 25 32.1	-3.3
MAK				*e**PP	pP	02 25 55.6	-0.6
MAK				*e*S	S	02 35 19.6	-6.2
MAK				*e**SS	sS	02 36 04.8	+3.0
MAK				pmax	pmax		
	comp=Z,153nm,1.4s						
ARU	**Arti**	78.82	333	*e*P	P	02 25 35.9	-0.7
	comp=Z,47nm,1.0s						
ARU	**Arti**	78.82	333	*c i*P	P	02 25 36.2	-0.3
ARU				*PP	pP	02 25 53.9	-3.6
ARU				S	S	02 35 27.5	-0.6
ARU				pmax	pmax		
	comp=Z,60nm,1.1s						
ARU				MLR	MLR		
	comp=Z,787nm,26.0s						
GNI	**Garni**	79.42	314	*e*P	P	02 25 40.5	+0.1
	comp=Z,23nm,0.9s						
GNI	**Garni**	79.42	314	*i* P	P	02 25 42.6	+2.2
	SNR=5.5						
GNI	**Garni**	79.42	314	*ce*P	P	02 25 42.6	+2.2
GNI				pmax	pmax		
	comp=Z,294nm,2.5s						
GNI	**Garni**	79.42	314	P	P	02 25 41.4	+1.0
	SNR=5.8						
BLIS	**Bitlis-Merkez**	80.75	311	*i* P	P	02 25 46.3	-1.3
BLIS				IAML_P			
	comp=Z,75nm,0.2s						
AKH	**Akhalkalaki**	80.75	314	⇑*i*P	P	02 25 49.6	+2.0
TIXI	**Tiksi**	80.90	5	P	P	02 25 46.6	-0.8
	comp=Z,55nm,0.7s,baz=164,slow=4.7,SNR=48						
TIXI	**Tiksi**	80.90	5	*e*P	P	02 25 45.8	-1.6
	comp=Z,54nm,0.7s						
TIXI	**Tiksi**	80.90	5	*ce*P	P	02 25 46.8	-0.6
TIXI				pmax	pmax		
	comp=Z,52nm,0.7s						
EATA	**Eleskirt**	80.95	313	*i* P	P	02 25 50.0	+1.2
EATA				IAML_P			
	comp=Z,236nm,0.4s						
ZEI	**Tsey**	80.95	316	*e*P	P	02 25 48.0	-0.6
ZEI				*e**PP	pP	02 26 09.5	-0.1
ZEI				*e*S	S	02 35 49.6	-1.9
ZEI				pmax	pmax		
	comp=Z,21nm,0.6s						
QSPA	**South Pole Qui**	81.26	180	*e*P	P	02 25 50.4	+0.6
	comp=Z,81nm,1.4s						
MUSM	**Mu-Merkez**	81.30	311	*i* P	P	02 25 51.6	+1.2
MUSM				IAML_P			
	comp=Z,22nm,0.3s						
EPOS	**Posof**	81.32	314	*i* P	P	02 25 52.7	+2.1
NCK	**Nalchik**	81.41	316	⇑*e*P	P	02 25 53.0	+2.2
HOMI	**Horasan**	81.43	313	*i* P	P	02 25 53.3	+2.0
HOMI				IAML_P			
	comp=Z,929nm,0.4s						
VRTB	**Varto-Mus**	81.48	312	*i* P	P	02 25 54.7	+3.2
VRTB				IAML_P			
	comp=Z,2µm,0.6s						
DAGI	**Agillar**	81.76	314	*i* P	P	02 25 53.8	+1.0
DAGI				IAML_P			
	comp=Z,118nm,0.5s						
DBAD	**Bademkaya**	81.90	314	*i* P	P	02 25 55.2	+1.7
DBAD				IAML_P			
	comp=Z,642nm,0.6s						
NEY	**Neytrino**	81.92	316	*i* P	P	02 25 54.8	+1.1
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	81.96	316	P	P	02 25 54.2	+0.5
	comp=Z,17nm,0.8s,baz=98,slow=3.0,SNR=30						
DBOC	**Borcka**	82.03	314	*i* P	P	02 25 54.6	+0.5
DBOC				IAML_P			
	comp=Z,949nm,0.5s						
BCA	**Borcka**	82.09	314	⇑*i*P	P	02 25 55.0	+0.6
BATM	**Batumi**	82.09	314	⇑*i*P	P	02 25 55.2	+0.8
KIV	**Kislovodsk**	82.19	317	*e*P	P	02 25 55.3	+0.3
	comp=Z,25nm,1.0s						
KIV	**Kislovodsk**	82.19	317	*i* P	P	02 25 56.5	+1.6
	SNR=8.0						
KIV	**Kislovodsk**	82.19	317	*e*P	P	02 25 55.0	0.0
KIV				*e*S	S	02 36 04.5	+0.5
KIV				pmax	pmax		
	comp=Z,585nm,4.6s						
KIV				pmax	pmax		
	comp=Z,44nm,1.0s						
KIV	**Kislovodsk**	82.19	317	P	P	02 25 55.6	+0.7
	SNR=8.4						
MBAR	**Mbarara**	82.28	271	*e*P	P	02 25 57.8	+1.6
	comp=Z,34nm,1.0s						
MBAR	**Mbarara**	82.28	271	*e*P	P	02 25 57.8	+1.6
MBAR				pmax	pmax		
	comp=Z,34nm,1.0s						
GOF	**Gofitskoye**	82.33	318	⇑*e*P	P	02 25 55.8	+0.2
GOF				pmax	pmax		
	comp=Z,35nm,1.0s						
KOPT	**Kop Dagi**	82.45	312	*i* P	P	02 25 58.6	+2.0
KOPT				IAML_P			
	comp=Z,354nm,0.7s						
LSZ	**Lusaka**	82.79	256	*e*P	P	02 25 59.1	+0.4
	comp=Z,32nm,0.8s						
LSZ	**Lusaka**	82.79	256	*e*P	P	02 25 59.2	+0.4
LSZ				pmax	pmax		
	comp=Z,31nm,0.8s						
EUZM	**Uzumlu**	82.94	312	*i* P	P	02 26 01.3	+2.2
EUZM				IAML_P			
	comp=Z,199nm,0.2s						
KELT	**Kelkit**	83.40	312	*i* P	P	02 26 03.1	+1.6
KELT				IAML_P			
	comp=Z,510nm,0.7s						
JDRJ	**Daraweish**	83.70	302	P	P	02 26 04.2	+1.0
KEMA	**Kemaliye**	83.70	311	*i* P	P	02 26 04.8	+1.9
KEMA				IAML_P			
	comp=Z,953nm,0.7s						
AKCD	**Akcadag**	83.86	310	*i* P	P	02 26 05.7	+1.9
AKCD				IAML_P			
	comp=Z,677nm,0.3s						
BOSA	**Boshof**	83.93	242	P	P	02 26 05.6	+1.2
	comp=Z,5.8nm,0.4s,baz=102,slow=4.1,SNR=29						
BOSA				LR	LR	02 56 36.9	
	comp=Z,2µm,21.3s,baz=98,slow=31						
BOSA	**Boshof**	83.93	242	*e*P	P	02 26 05.1	+0.7
	comp=Z,34nm,1.0s						
AQBJ	**Aqaba**	83.98	301	P	P	02 26 05.9	+1.5
HRFI	**Mount Harif**	84.07	301	P	P	02 26 06.1	+1.2
SOC	**Sochi**	84.10	316	*c i*P	P	02 26 04.3	-0.4
SOC				*e**PP	pP	02 26 23.9	-1.8
SOC				*e**SP	sP	02 26 33.2	-1.0
SOC				*e*PPP	PPP	02 31 10.8	
SOC				*i* S	SKSac	02 36 18.7	-2.4
SOC				*e*SS	SS	02 41 57.3	+3.5
SOC				*e*SSS	SSS	02 45 26.7	
SOC				pmax	pmax		
	comp=Z,26nm,0.9s						
SUSE	**Susehri**	84.19	312	*i* P	P	02 26 07.1	+1.6
SUSE				IAML_P			
	comp=Z,24nm,0.5s						
CUZAR	**Zara_SIVAS**	84.41	312	*i* P	P	02 26 08.5	+1.9
CUGUR	**Gurin_SVAS**	84.47	310	*i* P	P	02 26 09.9	+3.0
CUKAN	**kangal_SIVAS**	84.48	311	*i* P	P	02 26 08.9	+1.9
AMAZ	**Amatzia**	84.52	303	P	P	02 26 07.5	+0.4
KZIT	**Kziot**	84.81	302	P	P	02 26 09.9	+1.3
CUALT	**Altinyayla-SIV**	85.00	311	*i* P	P	02 26 11.3	+1.7
BILL	**Bilibino**	85.25	18	*e*P	P	02 26 09.4	-0.6
BILL				*e*		02 29 28.6	
BILL				*e*PPP	PPP	02 31 20.2	
BILL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,479nm,19.0s						
ERBA	**Erbaa**	85.38	312	*i* P	P	02 26 13.9	+2.6
ERBA				IAML_P			
	comp=Z,96nm,0.1s						
CUSAR	**Sarkisla-SIVAS**	85.42	311	*i* P	P	02 26 09.5	-2.2
TOKA	**Tokat**	85.49	312	*i* P	P	02 26 13.9	+2.1
TOKA				IAML_P			
	comp=Z,764nm,0.8s						
ANN	**Anapa**	86.03	316	*e*P	P	02 26 11.3	-3.0
ANN				*e**PP	pP	02 26 34.1	-1.3
ANN				*e*PPP	PPP	02 31 35.4	
ANN				*e*S	SKSac	02 36 28.4	-4.9
ANN				*e*SS	SS	02 42 17.7	-4.3
ANN				pmax	pmax		
	comp=Z,47nm,1.3s						
CSS	**Mathiatis**	86.60	306	P	P	02 26 18.6	+1.2
VORD	**Divnogorie**	86.66	323	*e*P	P	02 26 16.6	-0.6
VORD				pmax	pmax		
	comp=Z,50nm,1.6s						
DIKM	**Dikmen**	86.72	313	⇑*i*P	P	02 26 19.3	+1.5
VSR	**Storozhevoye**	86.81	323	*e*P	P	02 26 16.9	-1.1
VSR				pmax	pmax		
	comp=Z,90nm,1.1s						
VORR	**Voronezh**	86.93	323	*e*P	P	02 26 18.0	-0.5
VORR				pmax	pmax		
	comp=Z,300nm,2.2s						
PRGR	**Permogore**	87.19	334	⇑*i*P	P	02 26 18.8	-0.8
PRGR				*i* *PP	pP	02 26 39.8	-0.9
PRGR				*e*S	SKSac	02 36 38.0	-1.7
PRGR				pmax	pmax		
	comp=Z,28nm,0.7s						
LPSR	**Galich'ya Gora**	87.38	324	*e*P	P	02 26 20.0	-0.7
LPSR				pmax	pmax		
	comp=Z,70nm,0.8s						
BRTR	**Keskin Array B**	87.45	311	P	P	02 26 21.4	-0.1
	comp=Z,24nm,0.8s,baz=135,slow=6.5,SNR=82						
BRTR				PKKPbc	PKKPbc	02 44 10.4	-1.8
	comp=Z,0.3nm,0.5s,baz=169,slow=0.7,SNR=4.3						
BRTR				LR	LR	03 11 23.2	
	comp=Z,146nm,18.7s,baz=86,slow=40						
BR131	**Keskin Array S**	87.45	311	P	P	02 26 21.1	-0.5
	SNR=23						
BZK	**Bozkurt**	87.71	313	⇓*i*P	P	02 26 23.1	+0.6
ANTO	**Ankara**	88.12	311	*e*P	P	02 26 24.6	-0.1
	comp=Z,21nm,0.8s						
ANTO	**Ankara**	88.12	311	⇑*i*P	P	02 26 25.2	+0.5
ANTO	**Ankara**	88.12	311	⇑P	P	02 26 25.2	+0.5
ANTO	**Ankara**	88.12	311	P	P	02 26 24.9	+0.3
	SNR=5.6						
SIM	**Simferopol'**	88.34	316	*e*P	P	02 26 25.6	+0.1
SIM				*e*S	SKSac	02 36 49.0	+1.5
SIM				pmax	pmax		
	comp=Z,15nm,1.0s						
MOS	**Moscow**	89.05	327	*e*P	P	02 26 28.0	-0.5
MOS				*e*		02 26 47.6	
MOS				*e*		02 37 05.3	
MOS				pmax	pmax		
	comp=Z,77nm,1.4s						
ISP	**Isparta**	89.42	308	*i* P	P	02 26 30.3	-0.6
ISP				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN	**Obninsk**	89.45	326	*e*P	P	02 26 30.3	-0.1
	comp=Z,125nm,1.3s						
OBN	**Obninsk**	89.45	326	*ce*P	P	02 26 30.8	+0.4
OBN				*e**PP	pP	02 26 49.8	-1.8
OBN				*e*PPP	PPP	02 31 59.5	
OBN				pmax	pmax		
	comp=Z,70nm,1.7s						
OBN				MLR	MLR		
	comp=Z,895nm,24.0s						
SNAA	**Sanae**	89.62	197	P	P	02 26 32.5	+1.4
SNAA	**Sanae**	89.62	197	P	P	02 26 32.4	+1.3
	comp=Z,22nm,0.9s,baz=102,slow=3.5,SNR=85						
SNAA	**Sanae**	89.62	197	*e*P	P	02 26 32.4	+1.3
	comp=Z,40nm,1.0s						
SNAA				*e*PP	PP	02 30 03.6	+0.2
SNAA	**Sanae**	89.62	197	*i* P	P	02 26 32.5	+1.4
VNA1	**Neumayer--Stat**	91.66	197	P	P	02 26 42.0	+1.5
VNA3	**Neumayer Olymp**	91.72	196	P	P	02 26 42.0	+1.2
TIRR	**Tirgusor**	92.22	314	⇓*i*P	P	02 26 43.6	0.0
TIRR	**Tirgusor**	92.22	314	⇓P	P	02 26 43.6	0.0
TSUM	**Tsumeb**	92.25	250	LR	LR	03 01 44.6	
	comp=Z,801nm,21.7s,baz=104,slow=31						
TLB	**Topalu**	92.50	315	⇑*i*P	P	02 26 45.1	+0.2
TLB	**Topalu**	92.50	315	⇑P	P	02 26 45.1	+0.2
CFR	**Carcaliu**	92.54	315	⇓*i*P	P	02 26 44.8	-0.2
CFR	**Carcaliu**	92.54	315	⇓P	P	02 26 44.8	-0.2
AKASG	**Malin Array Be**	92.78	321	P	P	02 26 45.0	-0.9
	comp=Z,8.9nm,0.8s,baz=82,slow=4.6,SNR=26						
AKASG				PP	PP	02 30 28.4	-0.7
	comp=Z,1.5nm,0.7s,baz=83,slow=6.7,SNR=4.7						
TBI	**Tubuai**	93.41	114	*e*S	S	02 37 51.0	-0.5
	comp=Z,436nm,39.8s						
TBI	**Tubuai**	93.41	114	*e*LR	LR	02 56 55.3	
	comp=Z,985nm,28.2s						
VRI	**Vrincioaia**	93.62	316	⇓*i*P	P	02 26 50.8	+0.7
VRI	**Vrincioaia**	93.62	316	⇓P	P	02 26 50.8	+0.7
PLOR	**Plostina**	93.68	316	⇑*i*P	P	02 26 51.0	+0.7
PLOR	**Plostina**	93.68	316	⇑P	P	02 26 51.1	+0.7
TESR	**Tescani**	93.78	316	⇑*i*P	P	02 26 51.9	+1.2
ELND	**Elena**	93.79	313	⇑*i*P	P	02 26 50.8	-0.1
APA	**Apatity**	94.06	338	⇑*i*P	P	02 26 55.1	+3.6
APA				*i*		02 30 48.0	
APA				*i*		02 37 19.0	
APA				*i* S	S	02 38 00.0	+4.7
APA				*i* PS	PS	02 39 20.0	-0.4
APA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MLR	**Muntele Rosu**	94.11	315	⇑*i*P	P	02 26 52.9	+0.4
MLR	**Muntele Rosu**	94.11	315	⇑P	P	02 26 52.9	+0.4
BIZ	**Bicaz**	94.21	317	⇑*i*P	P	02 26 53.0	+0.3
PPT2	**Papeete2**	94.37	108	*e*S	S	02 37 59.0	-1.3
	comp=Z,732nm,25.8s						
PPT2	**Papeete2**	94.37	108	*e*LR	LR	02 57 15.8	
	comp=Z,704nm,30.8s						
BURAR	**Bucovina Array**	94.90	317	⇓*i*P	P	02 26 57.4	+1.4
BURAR	**Bucovina Array**	94.90	317	⇓P	P	02 26 57.4	+1.4
ARR	**Arges**	95.01	315	⇑*i*P	P	02 26 56.5	0.0
VSU	**Vasula**	95.43	328	⇓*i*P	P	02 26 59.6	+1.6
VSU				pmax	pmax		
	comp=Z,21nm,0.7s						
VTS	**Vitosha**	95.68	312	⇑*i*P	P	02 26 59.9	+0.2
VTS	**Vitosha**	95.68	312	⇑P	P	02 26 59.9	+0.2
LVV	**L'vov**	95.95	319	*e*P	P	02 27 15.4	+15
FINES	**FINESS Array B**	96.14	331	P	P	02 27 00.8	-0.3
	comp=Z,3.8nm,0.7s,baz=82,slow=3.6,SNR=14						
FINES				PKiKP	PKiKP	02 31 39.2	+0.1
	comp=Z,2.7nm,0.8s,baz=103,slow=3.7,SNR=5.8						
FINES				PKKPbc	PKKPbc	02 43 50.5	-0.1
	comp=Z,2.9nm,1.1s,baz=293,slow=7.1,SNR=4.1						
FINES	**FINESS Array B**	96.14	331	*i* P	P	02 27 02.0	+0.9
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BLKB	**Belogradchik**	96.20	313	⇑*i*P	P	02 27 01.1	-0.8
KOLS	**Kolonicke sedl**	97.00	318	*e*P	P	02 27 05.8	+0.4
KOLS	**Kolonicke sedl**	97.00	318	*e*P	P	02 27 05.8	+0.4
BZS	**Buzias**	97.15	315	⇑*i*P	P	02 27 05.9	-0.2
BZS	**Buzias**	97.15	315	⇑P	P	02 27 05.9	-0.2
ARCES	**ARCESS Array B**	97.24	339	P	Pdif	02 27 06.2	+0.1
	comp=Z,2.8nm,0.8s,baz=112,slow=1.3,SNR=8.0						
VYHS	**Vyhne**	99.24	318	*e*P	Pdif	02 27 10.6	-4.9
VYHS	**Vyhne**	99.24	318	*e*PDIF	Pdif	02 27 10.6	-4.9
TOLK	**Toolik Lake Re**	100.78	22	P	Pdif	02 27 22.3	+0.4
	baz=274						
TOLK				S	SKSac	02 37 55.7	+2.1
	baz=274						
DPC	**Dobruska-Polom**	100.93	320	AMS	AMS	03 17 10.0	
	comp=Z,600nm,20.0s						
OSTC	**Ostas**	101.00	320	AMS	AMS	03 17 20.0	
	comp=Z,800nm,17.7s						
CHVC	**Chvalec**	101.11	320	AMS	AMS	03 17 20.0	
	comp=Z,800nm,22.8s						
UPC	**Upice**	101.13	320	AMS	AMS	03 17 10.0	
	comp=Z,900nm,20.7s						
TCOL	**CIGO, UAF Yank**	101.73	26	P	Pdif	02 27 26.9	+0.8
	baz=274						
CCB	**Clear Creek Bu**	101.77	26	*e*Pdif	Pdif	02 27 26.0	-0.3
POKR	**Poker Plat Res**	101.89	25	P	Pdif	02 27 27.4	+0.6
	baz=275						
GOPC	**GO Pecny, Ondr**	101.92	319	AMS	AMS	03 18 00.0	
	comp=Z,900nm,22.2s						
PRU	**Pruhonice**	102.08	319	AMS	AMS	03 17 50.0	
	comp=Z,700nm,21.5s						
ILAR	**Eielson Array**	102.15	26	P	Pdif	02 27 27.0	-1.0
	comp=Z,0.6nm,0.6s,baz=263,slow=4.3,SNR=6.0						
ILAR				PP	PP	02 31 39.5	-1.2
	comp=Z,0.2nm,0.4s,baz=231,slow=5.7,SNR=4.2						
ILAR				PKKPbc	PKKPbc	02 43 31.4	-2.4
	comp=Z,0.7nm,0.7s,baz=97,slow=0.8,SNR=7.7						
ILAR	**Eielson Array**	102.15	26	P	Pdif	02 27 27.0	-1.0
GERES	**GERESS Array B**	102.65	318	PP	PP	02 31 43.9	-1.1
	comp=Z,1.6nm,1.0s,baz=75,slow=5.3,SNR=5.4						
GERES				PKiKP	PKiKP	02 31 51.9	+0.5
	comp=Z,0.7nm,0.7s,baz=77,slow=4.4,SNR=4.6						
KHC	**Kasperske Hory**	102.72	318	*e*PKKP	PKKPbc	02 43 30.5	-1.1
CLL	**Collm**	103.02	321	*e*SKSac	SKSac	02 38 03.0	-1.9
CLL				*e*Sdif	Sdif	02 39 11.0	-1.0
CLL				*e*SS	SS	02 46 21.0	-2.4
NOA	**NORSAR Array B**	103.31	331	PP	PP	02 31 42.3	-7.1
	comp=Z,0.4nm,0.7s,baz=83,slow=6.9,SNR=3.4						
TAOE	**Nuku Hiva Isla**	105.06	102	*e*LR	LR	03 02 14.3	
	comp=Z,591nm,28.9s						
EPYK	**Eagle Plains**	106.02	23	P	PKiKP	02 31 58.0	+1.0
	baz=285						
INK	**Inuvik**	106.64	21	PKKPbc	PKKPbc	02 43 16.6	-3.7
	comp=Z,2.4nm,0.7s,baz=85,slow=4.0,SNR=3.2						
RES	**Resolute Bay**	112.18	8	PKiKP	PKiKP	02 32 08.0	-0.2
	comp=Z,0.9nm,0.7s,baz=62,slow=3.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	112.60	281	PKiKP	PKiKP	02 32 09.9	-0.8
	comp=Z,4.0nm,0.5s,baz=78,slow=1.4,SNR=58						
TORD				SKP		02 35 39.6	
	comp=Z,2.4nm,0.8s,baz=72,slow=1.6,SNR=5.7						
TORD				PKKPbc	PKKPbc	02 42 59.3	-0.2
	comp=Z,0.7nm,0.5s,baz=290,slow=4.7,SNR=17						
SESP	**Santiago Espad**	115.42	308	P	PKPdf	02 32 16.1	+0.4
ESDC	**Sonseca Array**	116.24	310	PKP	PKiKP	02 32 17.5	+0.3
	comp=Z,1.5nm,0.6s,baz=18,slow=2.7,SNR=19						
ESDC				PKKPbc	PKKPbc	02 42 48.6	+0.8
	comp=Z,0.7nm,0.7s,baz=280,slow=3.7,SNR=7.6						
ESDC				PKKP	PKKPdf	02 43 08.6	-4.9
	comp=Z,1.2nm,0.9s,baz=265,slow=4.0,SNR=4.5						
YKW3	**Yellowknife Ar**	116.25	22	*e*PKPdf	PKiKP	02 32 16.6	+0.3
YKA	**Yellowknife Ar**	116.29	22	PKP	PKPdf	02 32 16.4	0.0
	comp=Z,3.9nm,0.6s,baz=321,slow=1.8,SNR=25						
PAB	**San Pablo**	116.55	310	*e*PKPdf	PKiKP	02 32 18.7	+0.9
PAB	**San Pablo**	116.55	310	*e*PKIKP	PKiKP	02 32 18.7	+0.9
HORN	**Hornachuelos**	117.57	308	P	PKiKP	02 32 20.2	+0.5
PBRG	**Braganca**	117.84	313	*e*PKPdf	PKPdf	02 32 20.1	0.0
MDT	**Midelt**	117.86	302	P	PKiKP	02 32 21.7	+1.2
MVO	**Moncorvo**	118.20	312	*e*PKPdf	PKiKP	02 32 21.9	+1.0
KIC	**Kosan Boka**	118.31	273	*e*PKP1	PKPdf	02 32 21.3	-0.5
	comp=Z,84nm,1.4s						
DBIC	**Dimbokro**	118.46	273	PKP	PKiKP	02 32 22.2	+0.1
	comp=Z,9.8nm,0.6s,baz=113,slow=2.0,SNR=21						
LIC	**Lamto**	118.58	272	*e*PKP1	PKPdf	02 32 21.7	-0.6
	comp=Z,29nm,0.5s						
TIC	**Toumodi**	118.62	273	*e*PKP1	PKPdf	02 32 22.1	-0.3
PVRL	**Vila Real**	118.68	312	*e*PKPdf	PKiKP	02 32 22.3	+0.5
POLO	**Lamas de Olo**	118.71	313	*e*PKPdf	PKiKP	02 32 22.9	+1.0
MTE	**Manteigas**	118.77	311	*e*PKPdf	PKiKP	02 32 23.1	+1.1
PCAB	**Cabril**	118.80	313	*e*PKPdf	PKiKP	02 32 23.1	+1.1
PCBR	**Castelo Branco**	118.85	311	*e*PKPdf	PKiKP	02 32 23.2	+1.1
PMRV	**Marv??o**	118.88	310	*e*PKPdf	PKiKP	02 32 23.2	+1.0
PGAV	**Gavieira, Arco**	118.91	313	*e*PKPdf	PKiKP	02 32 22.6	+0.3
PVIS	**Viseu**	118.95	312	*e*PKPdf	PKiKP	02 32 22.5	+0.2
D03D	**Eldon**	118.97	40	P	PKiKP	02 32 22.6	+0.5
	baz=290						
B05A	**Bryant**	119.34	39	P	PKiKP	02 32 23.6	+0.9
	baz=292,SNR=5.6						
ZHG	**ZHG**	119.46	303	P	PKiKP	02 32 24.4	+0.8
PBEJ	**Beja**	119.56	309	*e*PKPdf	PKiKP	02 32 25.7	+2.2
PMTG	**Montargil**	119.59	310	*e*PKPdf	PKiKP	02 32 24.6	+1.0
PTOM	**Tomar**	119.60	311	*e*PKPdf	PKiKP	02 32 24.6	+1.0
E04D	**Cinebar**	119.65	41	P	PKiKP	02 32 24.3	+0.9
	baz=290						
PBDV	**Barranco-do-Ve**	119.78	308	*e*PKPdf	PKiKP	02 32 25.3	+1.3
PCVE	**Castro Verde**	119.78	308	*e*PKPdf	PKiKP	02 32 25.0	+1.0
ALMR	**Almeirim**	119.84	310	*e*PKPdf	PKPdf	02 32 23.8	-0.2
ALMR	**Almeirim**	119.84	310	*e*PKPdf	PKiKP	02 32 25.2	+1.2
OUZM	**OUZ**	119.94	301	P	PKiKP	02 32 26.0	+1.3
PNCL	**Nicolau / Gran**	120.05	309	*e*PKPdf	PKiKP	02 32 25.7	+1.2
I03D	**Drain, OR**	120.06	44	P	PKiKP	02 32 25.0	+0.7
	baz=288						
H04D	**Lebanon**	120.22	43	P	PKiKP	02 32 25.7	+1.0
	baz=289						
MORF	**Marmelete**	120.32	308	*e*PKPdf	PKPdf	02 32 24.9	-0.1
MORF	**Marmelete**	120.32	308	*e*PKPdf	PKiKP	02 32 25.3	+0.2
I04A	**Tendick Farm,**	120.68	44	P	PKiKP	02 32 26.4	+0.8
	baz=289						
J04D	**Umpqua Nationa**	121.06	44	P	PKiKP	02 32 27.2	+0.5
	baz=289,SNR=5.1						
M02C	**Callahan**	121.11	47	P	PKiKP	02 32 27.4	+0.8
	baz=287						
I05D	**Terrebonne, OR**	121.22	43	P	PKiKP	02 32 27.5	+0.8
	baz=290						
L04D	**Klamath Falls**	121.25	46	P	PKiKP	02 32 27.4	+0.5
	baz=288						
N02D	**Trinity Center**	121.34	47	P	PKiKP	02 32 28.0	+1.0
	baz=287						
O02D	**Mt. Diablo Mer**	121.50	48	P	PKiKP	02 32 28.3	+0.9
	baz=286						
J05D	**Fort Rock, OR**	121.65	44	P	PKiKP	02 32 28.9	+1.2
	baz=290,SNR=6.5						
M04C	**Macdoel**	121.71	46	P	PKiKP	02 32 28.6	+0.7
	baz=288						
O03E	**Paynes Creek**	122.19	48	P	PKiKP	02 32 29.2	+0.4
	baz=287						
NEW	**Newport**	122.38	37	P	PKiKP	02 32 29.5	+0.7
	baz=296						
MSO	**Missoula**	124.95	38	P	PKiKP	02 32 34.3	+0.3
	baz=298						
PKM	**Mcpherson Peak**	125.23	53	P	PKiKP	02 32 35.9	+0.8
	baz=285						
NVAR	**Mina Array Bea**	125.35	49	PKP	PKiKP	02 32 36.5	+1.2
	comp=Z,2.8nm,0.7s,baz=256,slow=2.2,SNR=20						
SCZ2	**Santa Cruz Isl**	125.60	54	P	PKPdf	02 32 35.4	+0.2
	baz=285						
ARVC	**Arvin**	125.94	53	P	PKiKP	02 32 36.5	+0.2
	baz=286						
ISA	**Isabella, Lake**	126.07	52	P	PKiKP	02 32 36.9	+0.3
	baz=287						
HLID	**Hailey**	126.13	42	P	PKiKP	02 32 37.7	+1.0
	baz=296,SNR=15						
CWC	**Cottonwood Cre**	126.14	51	P	PKiKP	02 32 37.7	+0.8
	baz=288						
FFC	**Flin Flon**	126.34	24	*e*PKPdf	PKiKP	02 32 37.4	+1.0
FFC	**Flin Flon**	126.34	24	*e*PKIKP	PKiKP	02 32 37.4	+1.0
GRAC	**Grapevine Rang**	126.51	50	P	PKiKP	02 32 38.2	+0.8
	baz=289						
DECC	**Green Verdugo**	126.58	54	P	PKiKP	02 32 38.3	+0.7
	baz=286						
EDW2	**Edwards Air Fo**	126.67	53	P	PKiKP	02 32 38.8	+1.0
	baz=287,SNR=7.2						
MPMC	**Manual Prospec**	126.71	51	P	PKiKP	02 32 38.9	+0.9
	baz=288,SNR=6.8						
ELK	**Elko**	126.73	45	PKP	PKiKP	02 32 39.0	+1.0
	comp=Z,3.5nm,0.7s,baz=310,slow=4.1,SNR=15						
ELK	**Elko**	126.73	45	*e*PKPdf	PKiKP	02 32 39.5	+1.5
ELK	**Elko**	126.73	45	*e*PKIKP	PKiKP	02 32 39.5	+1.5
LRMC	**Laurel Mtn Rad**	126.74	52	P	PKiKP	02 32 38.9	+0.9
	baz=287						
EGMT	**Eagleton**	126.79	35	P	PKiKP	02 32 38.2	+0.5
	baz=303						
BOZ	**Bozeman (W)**	126.95	38	P	PKiKP	02 32 38.8	+0.7
	baz=300						
FURC	**Furnace Creek,**	127.06	51	P	PKiKP	02 32 38.9	+0.6
	baz=289						
BFSC	**Mount Baldy Ra**	127.12	53	P	PKiKP	02 32 39.3	+0.5
	baz=286						
TPNV	**Topopah Spring**	127.37	50	P	PKiKP	02 32 39.9	+0.6
	baz=290						
R11A	**Troy Canyon, C**	127.38	48	P	PKiKP	02 32 40.0	+0.8
	baz=291,SNR=7.3						
GSC	**Goldstone, Bar**	127.47	52	P	PKiKP	02 32 40.2	+0.8
	baz=288						

MURC	Murrieta	127.67	54	P	PKiKP	02 32 40.6	+0.8
	baz=286						
SHOC	Shoshone, Teco	127.70	51	P	PKiKP	02 32 40.7	+0.9
	baz=289						
TUQ	Turquoise Moun	128.12	52	P	PKiKP	02 32 41.5	+0.7
	baz=289						
PFO	Pinyon Flats O	128.25	54	PKP	PKiKP	02 32 41.8	+0.7
	comp=Z,1.4nm,0.3s,baz=157,slow=3.0,SNR=5.0						
PFO	Pinyon Flats O	128.25	54	*e*PKPdf	PKiKP	02 32 42.1	+1.0
PFO				*e*PP	PP	02 34 43.4	-1.8
PFO	Pinyon Flats O	128.25	54	*e*PKIKP	PKiKP	02 32 42.1	+1.0
PFO				*e*		02 34 43.4	
PFO	Pinyon Flats O	128.25	54	P	PKiKP	02 32 41.6	+0.6
	baz=287						
SHPR	Sheep Range	128.35	50	*e*PKPdf	PKiKP	02 32 43.0	+1.7
MONP2	Monument Peak	128.49	55	P	PKiKP	02 32 42.7	+1.0
	baz=286						
BELC	Belle Mtn. Jos	128.50	53	P	PKiKP	02 32 42.9	+1.3
	baz=288						
GMRC	Granite Mounta	128.53	52	P	PKiKP	02 32 42.6	+1.0
	baz=288,SNR=7.5						
RLMT	Red Lodge	128.63	38	P	PKiKP	02 32 41.9	+0.3
	baz=302						
DUG	Dugway, Tooele	128.65	45	P	PKiKP	02 32 42.2	+0.5
	baz=295						
IKP	In-Ko-Pah, Jac	128.81	55	P	PKiKP	02 32 42.6	+0.5
	baz=286						
BC3	Big Chuckawall	129.04	54	P	PKiKP	02 32 43.0	+0.4
	baz=288						
IRM	Iron Mountain	129.13	53	P	PKiKP	02 32 43.2	+0.5
	baz=288						
LAO	LASA Array	129.53	34	P	PKiKP	02 32 43.8	+0.7
	baz=306						
DGMT	Dagmar	129.53	31	P	PKPdf	02 32 42.5	+0.2
	baz=309						
BW06	Boulder Array	129.65	40	P	PKiKP	02 32 43.9	+0.1
	baz=300						
PDAR	Pinedale Array	129.65	40	PKP	PKPdf	02 32 43.0	0.0
	comp=Z,0.5nm,0.4s,baz=147,slow=2.4,SNR=7.0						
PDAR				SKPbc	SKPab	02 35 57.2	-0.4
	comp=Z,0.8nm,0.5s,baz=225,slow=0.3,SNR=4.1						
GLA	Glamis	129.72	54	P	PKiKP	02 32 44.5	+0.6
	baz=288						
Y12C	Blythe	129.75	53	P	PKiKP	02 32 44.6	+0.8
	baz=288						
PLCA	Paso Flores	130.67	176	PKP	PKiKP	02 32 46.2	+0.5
	comp=Z,1.8nm,0.6s,baz=250,slow=2.0,SNR=5.3						
PLCA				SKPbc	SKPab	02 36 03.4	+1.4
	comp=Z,19nm,1.1s,baz=200,slow=5.8,SNR=12						
WUAZ	Wupatki	131.57	50	P	PKiKP	02 32 48.0	+0.2
	baz=292						
K22A	Casper	131.62	39	P	PKiKP	02 32 47.7	+0.1
	baz=303						
214A	Organ Pipe Nat	131.68	55	P	PKiKP	02 32 47.9	0.0
	baz=288						
O20A	White River Ci	131.80	43	P	PKiKP	02 32 48.3	+0.2
	baz=299,SNR=8.2						
ULM	Lac du Bonnet	132.16	25	PKP	PKiKP	02 32 48.0	-0.2
	comp=Z,3.9nm,0.6s,baz=329,slow=2.4,SNR=5.5						
ULM				SKPbc	SKPbc	02 36 06.8	+0.1
	comp=Z,17nm,0.8s,baz=322,slow=5.4,SNR=13						
MDND	Maddock	132.24	29	P	PKiKP	02 32 49.0	+0.5
	baz=314						
RSSD	Black Hills	132.28	36	*e*PKPdf	PKiKP	02 32 48.9	-0.1
RSSD	Black Hills	132.28	36	*e*PKIKP	PKiKP	02 32 48.9	-0.1
RSSD	Black Hills	132.28	36	P	PKiKP	02 32 48.8	-0.2
	baz=306						
N23A	Red Feather La	132.93	41	P	PKiKP	02 32 50.3	-0.2
	baz=302						
W18A	Petrified Fore	132.95	49	P	PKiKP	02 32 50.8	+0.2
	baz=294						
MVCO	Mesa Verde	132.98	46	P	PKiKP	02 32 51.0	+0.3
	baz=296						
TUC	Tucson	133.19	54	P	PKiKP	02 32 51.1	+0.1
	baz=290						
TRQA	Tornquist	133.22	185	*e*PKPdf	PKPdf	02 32 50.1	+0.4
TRQA	Tornquist	133.22	185	*e*PKIKP	PKPdf	02 32 50.1	+0.4
AGMN	Agassiz Nation	133.65	26	P	PKiKP	02 32 52.2	+0.8
	baz=319						
ISCO	Idaho Springs	133.72	42	P	PKiKP	02 32 51.7	-0.4
	baz=301						
S22A	4UR Ranch, Cre	133.91	45	P	PKiKP	02 32 52.3	-0.2
	baz=298						
SCHQ	Schefferville	134.02	360	PKP	PKiKP	02 32 52.0	+0.1
	comp=Z,7.0nm,0.5s,baz=360,slow=5.7,SNR=4.3						
SCHQ				SKPbc	SKPbc	02 36 14.0	+1.1
	comp=Z,8.5nm,0.7s,baz=24,slow=6.4,SNR=4.7						
Q24A	Divide	134.46	42	P	PKPdf	02 32 52.6	+0.4
	baz=301						
SDCO	Great Sand Dun	134.83	44	P	PKiKP	02 32 54.0	-0.5
	baz=300						
121A	Cookes Peak, D	135.46	52	P	PKiKP	02 32 55.6	-0.1
	baz=293						
TASM	ASL Pad, Albuq	135.47	48	P	PKiKP	02 32 55.5	-0.2
	baz=296						
TASM	ASL Pad, Albuq	135.47	48	P	PKiKP	02 32 55.6	-0.2
	baz=296						
ANMO	Albuquerque	135.47	48	PKP	PKiKP	02 32 55.3	-0.4
	comp=Z,3.0nm,0.8s,baz=263,slow=4.0,SNR=9.7						
ANMO	Albuquerque	135.47	48	*e*PKPdf	PKPdf	02 32 54.6	+0.5
ANMO	Albuquerque	135.47	48	*c i*PKIKP	PKiKP	02 32 57.6	+1.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	135.47	48	P	PKiKP	02 32 55.3	-0.4
	baz=296						
Y22D	IRIS PASSCAL I	135.50	49	P	PKiKP	02 32 55.6	-0.1
	baz=295						
EYMN	Ely	135.75	24	P	PKiKP	02 32 55.6	0.0
	baz=324						
T25A	Trinidad	135.89	44	P	PKiKP	02 32 56.1	-0.4
	baz=300						
CFA	Coronel Fontan	139.88	178	PKhKP	PKPdf	02 32 54.0	-8.2
	comp=Z,1.9nm,0.6s,baz=183,slow=3.9,SNR=6.0						
CFA	Coronel Fontan	139.88	178	*e*P	PKPdf	02 32 54.0	-8.2
TXAR	Lajitas Array	139.97	54	PKhKP	PKPpre	02 32 54.3	
	comp=Z,3.0nm,0.6s,baz=237,slow=2.9,SNR=27						
TXAR				SKPbc	SKPbc	02 36 32.8	+1.2
	comp=Z,2.4nm,0.8s,baz=268,slow=2.3,SNR=5.6						
TCA	Tanti	140.09	183	*e*P	PKPdf	02 33 00.2	-2.5
SADO	Sadowa	142.58	14	PKhKP	PKPpre	02 33 02.2	
	comp=Z,4.3nm,0.5s,baz=309,slow=1.6,SNR=9.8						
VCA	Vinchina	142.73	178	*e*P	PKPdf	02 33 04.3	-3.3
CYA	Choya	143.03	182	*i* P	PKPbc	02 33 05.4	+0.5
GBN	Guysborough	143.16	354	*e*PKPdf	PKPdf	02 33 06.5	-1.0
WHTX	Lake Whitney,	143.46	46	P	PKPbc	02 33 06.0	+0.1
	baz=303						
AAM	Ann Arbor	143.48	21	P	PKPbc	02 33 05.6	0.0
	baz=332,SNR=6.1						
N46A	Monticello	143.48	26	P	PKPbc	02 33 05.4	-0.2
	baz=326,SNR=7.0						
L48A	N Adams	143.51	22	P	PKPbc	02 33 05.8	0.0
	baz=330,SNR=30						
CCM	Cathedral Cave	143.52	33	*e*PKPpre	PKPbc	02 33 05.5	-0.3
CCM	Cathedral Cave	143.52	33	*e*PKIKP	PKPbc	02 33 05.5	-0.4
CCM	Cathedral Cave	143.52	33	P	PKPbc	02 33 05.4	-0.5
	baz=317						
PKME	Peaks-Kenny Pk	143.55	3	P	PKPbc	02 33 05.9	+0.2
	baz=356						
M47A	Cromwell	143.55	24	P	PKPbc	02 33 05.6	-0.3
	baz=328						
WLVO	Wesleyville	143.56	14	P	PKPbc	02 33 06.0	+0.2
	baz=341						
O45A	Potomac	143.57	27	P	PKPbc	02 33 05.7	-0.3
	baz=324,SNR=10						
L49A	Milan	143.61	21	P	PKPbc	02 33 06.1	+0.2
	baz=331,SNR=9.6						
LONY	Lake Ozonia	143.64	9	P	PKPbc	02 33 06.0	0.0
	baz=347,SNR=5.2						
J52A	Paris	143.65	17	P	PKPbc	02 33 05.8	-0.3
	baz=337						
SFIN	Lafayette	143.75	26	P	PKPbc	02 33 06.4	0.0
	baz=325,SNR=15						
GO03	Copiap	143.75	175	*i* P	PKPbc	02 33 07.8	+0.8
833A	Chaparral WMA,	143.80	53	P	PKPbc	02 33 07.4	+0.4
	baz=296						
M48A	Edgerton	143.80	23	P	PKPbc	02 33 06.6	0.0
	baz=329,SNR=22						
U40A	Yellville	143.81	37	P	PKPbc	02 33 06.5	-0.3
	baz=313,SNR=61						
K51A	Iona Station	143.82	18	P	PKPbc	02 33 06.8	+0.2
	baz=335						
PECO	Prince Edward	143.86	12	P	PKPbc	02 33 06.5	-0.2
	baz=343						
CPUP	Villa Florida	143.91	195	PKP	PKPdf	02 33 08.5	-1.0
	comp=Z,14nm,0.7s,baz=159,slow=2.1,SNR=32						
N47A	Urbana	143.93	24	P	PKPbc	02 33 06.8	-0.1
	baz=328,SNR=32						
TYNO	Tyneside	143.95	16	P	PKPbc	02 33 07.3	+0.3
	baz=338,SNR=7.9						
K52A	Tillsonburg	144.00	17	P	PKPbc	02 33 07.0	-0.2
	baz=336						
L50A	Kingsville	144.00	20	P	PKPbc	02 33 07.0	-0.2
	baz=333						
435B	Jarrell	144.00	48	P	PKPbc	02 33 07.7	+0.1
	baz=301						
W39A	Magazine	144.02	39	P	PKPbc	02 33 07.4	0.0
	baz=311,SNR=6.5						
STCO	Saint Catharin	144.03	15	P	PKPbc	02 33 07.3	+0.1
	baz=339						
M49A	Liberty Center	144.09	22	P	PKPbc	02 33 07.6	+0.1
	baz=331,SNR=6.7						
J54A	Appleton	144.11	15	P	PKPbc	02 33 07.2	-0.2
	baz=340						
P45A	Graceland, Par	144.15	28	P	PKPbc	02 33 07.7	+0.1
	baz=323,SNR=26						
N48A	Decatur	144.21	24	P	PKPbc	02 33 07.9	+0.1
	baz=328,SNR=42						
MEDO	Medina	144.26	14	P	PKPbc	02 33 08.1	+0.2
	baz=340,SNR=15						
O47A	Sheridan	144.27	26	P	PKPbc	02 33 08.1	0.0
	baz=326,SNR=23						
J55A	Hilton	144.31	14	P	PKPbc	02 33 07.9	-0.2
	baz=342						
P46A	Rosedale	144.32	27	P	PKPbc	02 33 08.5	+0.3
	baz=324,SNR=8.4						
PLIO	Pelee Island,	144.32	20	P	PKPab	02 33 07.8	0.0
	baz=333						
LBNH	Lisbon	144.37	6	P	PKPdf	02 33 09.1	-0.6
	baz=352,SNR=7.2						
Q45A	Warren Harvey,	144.45	29	P	PKPbc	02 33 09.0	+0.3
	baz=322,SNR=12						
M50A	Fremont	144.49	21	P	PKPbc	02 33 08.8	+0.1
	baz=332,SNR=6.8						
N49A	Columbus Grove	144.49	23	P	PKPbc	02 33 08.9	+0.2
	baz=330,SNR=37						
MIAR	Mount Ida	144.57	40	P	PKPbc	02 33 09.5	+0.4
	baz=310,SNR=66						
AHML	Horco Molle	144.66	183	*i* P	PKPdf	02 33 10.9	0.0
AHML				*i* P	PKPbc	02 33 11.1	+1.3
O48A	Farmland	144.67	24	P	PKPbc	02 33 09.4	+0.1
	baz=328,SNR=70						
K54A	Basiliko Farm,	144.72	15	P	PKPbc	02 33 09.7	+0.3
	baz=340,SNR=25						
Q46A	CEJHS Indians,	144.73	28	P	PKPbc	02 33 09.7	+0.2
	baz=324,SNR=6.4						
K55A	Perry	144.76	14	P	PKPbc	02 33 09.8	+0.2
	baz=341,SNR=25						
S44A	Carbondale	144.84	31	P	PKPbc	02 33 09.9	0.0
	baz=320,SNR=25						
P47A	Martinsville	144.84	26	P	PKPbc	02 33 10.1	+0.2
	baz=326,SNR=111						
M51A	Elyria	144.85	20	P	PKPab	02 33 09.7	-0.1
	baz=333,SNR=8.0						
R45A	Skylar, Fairfi	144.87	30	P	PKPdf	02 33 10.5	-0.3
	baz=322,SNR=25						
L53A	Girard	144.90	17	P	PKPdf	02 33 10.4	-0.3
	baz=337,SNR=12						
L54A	Sinclairville	144.91	16	P	PKPdf	02 33 10.5	-0.3
	baz=338,SNR=27						
M52A	Chesterland	144.94	19	P	PKPdf	02 33 10.7	-0.1
	baz=335,SNR=20						
W41B	Gary Mavity, V	144.97	38	P	PKPbc	02 33 10.4	-0.1
	baz=313,SNR=42						
N50A	Nevada	145.01	22	P	PKPdf	02 33 11.0	0.0
	baz=331,SNR=68						
O49A	Covington	145.06	24	P	PKPdf	02 33 10.9	-0.1
	baz=329,SNR=99						
X40A	Basin Creek Fa	145.07	39	P	PKPab	02 33 10.9	+0.1
	baz=311,SNR=14						
LNIG	Linares	145.13	59	*e*PKPbc	PKPdf	02 33 11.7	+0.1
N51A	Ashland	145.15	21	P	PKPab	02 33 10.9	0.0
	baz=333,SNR=27						
L55A	Hinsdale	145.19	15	P	PKPdf	02 33 11.4	+0.1
	baz=340,SNR=44						
Q47A	Bedord North L	145.22	27	P	PKPdf	02 33 11.4	+0.1
	baz=325,SNR=135						
P48A	Milroy	145.23	25	P	PKPbc	02 33 11.2	0.0
	baz=327						
M53A	WI Miller and	145.24	18	P	PKPdf	02 33 11.5	+0.2
	baz=336,SNR=62						
R46A	Gibon Southern	145.30	29	P	PKPab	02 33 11.8	+0.3
	baz=323,SNR=16						
FSA	Cafayete	145.35	182	*i* P	PKPab	02 33 13.7	+1.4
O50A	Cable	145.37	23	P	PKPab	02 33 12.0	+0.2
	baz=330,SNR=171						
P49A	Miami Univ. Ec	145.46	25	P	PKPab	02 33 12.2	0.0
	baz=328,SNR=144						
M54A	Oil Creek Stat	145.48	17	P	PKPab	02 33 12.3	+0.2
	baz=338,SNR=60						
N52A	McGinn's Farm,	145.48	20	P	PKPab	02 33 12.1	0.0
	baz=334,SNR=39						
ACSO	Alum Creek Sta	145.54	22	P	PKPab	02 33 12.5	+0.2
	baz=331,SNR=23						
Q48A	North Vernon	145.54	26	P	PKPab	02 33 12.6	+0.1
	baz=326,SNR=7.8						
NATX	Nacogdoches	145.56	44	P	PKPab	02 33 13.3	+0.6
	baz=306,SNR=9.2						
S46A	Don Dixon Farm	145.62	30	P	PKPab	02 33 12.6	-0.1
	baz=322,SNR=43						
T45A	Paducah	145.66	32	P	PKPab	02 33 12.7	-0.2
	baz=320,SNR=13						
R47A	Wooly Knot Far	145.70	28	P	PKPab	02 33 12.9	-0.2
	baz=324,SNR=89						
HKT	Hockley	145.73	48	*e*PKPdf	PKPab	02 33 14.5	+1.2
BINY	Binghamton	145.73	12	P	PKPab	02 33 13.3	+0.2
	baz=344,SNR=30						
O51A	Pataskala	145.75	22	P	PKPab	02 33 13.4	+0.2
	baz=332,SNR=118						
N53A	Lisbon	145.76	19	P	PKPab	02 33 13.2	0.0
	baz=335,SNR=24						
M55A	Ridgway	145.77	16	P	PKPab	02 33 13.3	0.0
	baz=339,SNR=64						
P50A	Jamestown	145.77	23	P	PKPab	02 33 13.1	-0.1
	baz=330,SNR=89						
RCBR	Riachuelo	145.81	246	PKPbc	PKPab	02 33 15.1	+0.9
	comp=Z,36nm,0.6s,baz=92,slow=2.6,SNR=6.8						
RCBR	Riachuelo	145.81	246	*e*PKPdf	PKPbc	02 33 13.9	+0.2
Q49A	Aurora	145.84	25	P	PKPab	02 33 13.4	-0.1
	baz=327,SNR=37						
WCI	Wyandotte Cave	145.86	28	*e*PKPdf	PKPab	02 33 13.5	-0.2
WCI	Wyandotte Cave	145.86	28	*e*PKP2	PKPab	02 33 13.5	-0.2
WCI	Wyandotte Cave	145.86	28	P	PKPab	02 33 13.7	0.0
	baz=324						
Z41A	Richland Creek	145.89	41	P	PKPab	02 33 14.1	+0.2
	baz=310,SNR=10						
N54A	Moraine State	145.89	18	P	PKPab	02 33 13.7	0.0
	baz=337,SNR=53						
M56A	Emporium	145.91	15	P	PKPab	02 33 13.6	-0.1
	baz=340,SNR=71						
R48A	Northridge Ran	145.91	27	P	PKPab	02 33 14.0	+0.1
	baz=325,SNR=62						
T46A	Princeton	146.03	31	P	PKPab	02 33 14.4	+0.1
	baz=321						
O52A	Adamsville	146.05	21	P	PKPbc	02 33 14.0	+0.3
	baz=333,SNR=36						
S47A	Hartford	146.10	29	P	PKPbc	02 33 13.8	-0.1
	baz=323,SNR=36						
HRV	Adam Dziewonsk	146.12	6	*e*PKPbc	PKPab	02 33 14.5	+0.1
HRV	Adam Dziewonsk	146.12	6	*e*PKP2	PKPab	02 33 14.5	+0.1
HRV	Adam Dziewonsk	146.12	6	P	PKPab	02 33 14.2	-0.3
	baz=352						
O53A	New Philadelph	146.15	20	P	PKPab	02 33 14.5	-0.1
	baz=334,SNR=38						
P51A	Williamsport	146.16	23	P	PKPbc	02 33 14.1	+0.1
	baz=331,SNR=56						
X43A	Marvell	146.24	37	P	PKPab	02 33 15.0	-0.2
	baz=314,SNR=7.7						
R49A	Shelbyville	146.31	26	P	PKPab	02 33 15.1	-0.2
	baz=326,SNR=55						
N55A	Marion Center	146.35	17	P	PKPbc	02 33 15.0	+0.4
	baz=338,SNR=25						
Q50A	Georgetown	146.35	24	P	PKPbc	02 33 14.8	+0.2
	baz=329,SNR=12						
P52A	Corning	146.38	21	P	PKPbc	02 33 14.9	+0.2
	baz=332,SNR=115						
N56A	West Decatur	146.41	16	P	PKPab	02 33 15.3	-0.3
	baz=340,SNR=44						
U46A	Springville	146.41	32	P	PKPab	02 33 15.4	-0.4
	baz=320,SNR=34						
S48A	Wiedeman Farm,	146.43	28	P	PKPbc	02 33 15.3	+0.5
	baz=324,SNR=35						
Q51A	Peebles	146.45	23	P	PKPbc	02 33 15.1	+0.2
	baz=330,SNR=32						
T47A	Sharon Grove	146.47	30	P	PKPbc	02 33 15.5	+0.5
	baz=322,SNR=56						
M59A	Waymart	146.48	12	P	PKPab	02 33 15.7	-0.2
	baz=345,SNR=41						
O54A	Avella	146.48	19	P	PKPab	02 33 15.7	-0.3
	baz=336,SNR=82						
S49A	Springfield	146.68	27	P	PKPbc	02 33 15.8	+0.2
	baz=326,SNR=67						
R50A	Paris	146.68	25	P	PKPbc	02 33 15.6	0.0
	baz=328,SNR=11						
T48A	Bowling Green	146.72	29	P	PKPbc	02 33 16.2	+0.5
	baz=323,SNR=33						
SLA	San Lorenzo	146.72	182	*i* P	PKPab	02 33 18.0	+0.5
N57A	Milroy	146.75	15	P	PKPbc	02 33 16.1	+0.4
	baz=341,SNR=41						
WVT	Waverly	146.76	32	P	PKPbc	02 33 16.3	+0.4
	baz=320						
P53A	Whipple	146.77	21	P	PKPab	02 33 16.5	-0.6
	baz=333,SNR=93						
SSPA	Standing Stone	146.78	15	*e*PKPbc	PKPbc	02 33 16.1	+0.4
SSPA	Standing Stone	146.78	15	P	PKPbc	02 33 16.4	+0.6
	baz=340						
O55A	Ligonier	146.78	17	P	PKPbc	02 33 16.2	+0.4
	baz=337,SNR=26						
U47A	Clarksville	146.80	31	P	PKPbc	02 33 16.5	+0.6
	baz=321,SNR=123						
V46A	Holladay	146.86	32	P	PKPbc	02 33 16.4	+0.3
	baz=319,SNR=79						
Q52A	Bidwell	146.92	22	P	PKPbc	02 33 16.5	+0.3
	baz=332,SNR=34						
O56A	Blue Knob Stat	146.94	16	P	PKPbc	02 33 17.0	+0.7
	baz=339,SNR=29						
P54A	Burton	146.97	19	P	PKPbc	02 33 17.1	+0.7
	baz=335,SNR=70						
R51A	Hillsboro	146.98	24	P	PKPbc	02 33 16.5	+0.1
	baz=329,SNR=17						
M61A	Granite Spring	147.00	9	P	PKPbc	02 33 17.0	+0.6
	baz=348,SNR=12						
N59A	State Game Lan	147.01	12	P	PKPbc	02 33 17.2	+0.8
	baz=344,SNR=70						
OXF	Oxford	147.10	35	P	PKPbc	02 33 17.3	+0.4
	baz=316,SNR=82						
U48A	Cassie Pea, Po	147.12	30	P	PKPbc	02 33 17.5	+0.6
	baz=322,SNR=16						
MCWV	Mont Chateau	147.12	18	P	PKPbc	02 33 17.6	+0.8
	baz=336,SNR=16						
T49A	Edmonton	147.12	28	P	PKPbc	02 33 17.3	+0.4
	baz=325,SNR=7.4						
M65A	Busby, Falmout	147.14	5	P	PKPbc	02 33 17.1	+0.4
	baz=353						
V47A	Nunnelly	147.16	32	P	PKPbc	02 33 17.4	+0.4
	baz=320,SNR=67						
S50A	Richmond	147.16	26	P	PKPbc	02 33 17.0	+0.1
	baz=327,SNR=20						
N60A	Cedar Hill Far	147.19	11	P	PKPbc	02 33 17.4	+0.5
	baz=345,SNR=21						
AZAP	Zapla	147.19	183	*e*P	PKPbc	02 33 16.9	-0.8
W46A	Michie	147.22	34	P	PKPbc	02 33 17.1	-0.1
	baz=318,SNR=12						
O57A	Amberson	147.24	15	P	PKPbc	02 33 17.6	+0.5
	baz=340,SNR=22						
P55A	Reedsville	147.27	19	P	PKPbc	02 33 17.8	+0.6
	baz=336,SNR=68						
PAL	Palisades	147.28	10	P	PKPbc	02 33 17.9	+0.8
	baz=347,SNR=18						
Q53A	Leroy	147.28	21	P	PKPbc	02 33 17.9	+0.7
	baz=333,SNR=30						
R52A	Catlettsburg	147.32	23	P	PKPbc	02 33 17.5	+0.1
	baz=330,SNR=10						
Q54A	Coxs Mills	147.41	20	P	PKPbc	02 33 18.2	+0.6
	baz=334,SNR=59						
U49A	Red Boiling Sp	147.49	29	P	PKPbc	02 33 18.4	+0.5
	baz=324,SNR=42						
O59A	Robesonia	147.50	13	P	PKPbc	02 33 18.3	+0.5
	baz=343,SNR=28						
O58A	Lewisberry	147.50	14	P	PKPbc	02 33 18.3	+0.4
	baz=342,SNR=12						
T50A	Nancy	147.51	27	P	PKPbc	02 33 18.2	+0.3
	baz=326,SNR=34						
S51A	Beattyville	147.53	25	P	PKPbc	02 33 18.2	+0.2
	baz=328,SNR=13						
X46A	Booneville	147.54	34	P	PKPbc	02 33 18.3	+0.2
	baz=317,SNR=36						
W47A	Westpoint	147.56	32	P	PKPbc	02 33 18.3	+0.2
	baz=320,SNR=32						
P56A	Dayton Farm, R	147.57	17	P	PKPbc	02 33 18.7	+0.7
	baz=338,SNR=48						
V48A	Smith Brothers	147.59	31	P	PKPbc	02 33 18.3	+0.2
	baz=321,SNR=54						
R53A	Hurricane	147.59	22	P	PKPbc	02 33 18.6	+0.5
	baz=332,SNR=37						
Q55A	Buckhannon	147.65	19	P	PKPbc	02 33 18.9	+0.6
	baz=335,SNR=52						
O60A	Telford	147.66	12	P	PKPbc	02 33 18.7	+0.5
	baz=344,SNR=10.0						
S52A	Salyersville	147.71	24	P	PKPbc	02 33 18.8	+0.3
	baz=329,SNR=83						
P57A	Homestead Farm	147.82	16	P	PKPbc	02 33 19.3	+0.6
	baz=339,SNR=30						
Q56A	Snyder Ridge,	147.89	18	P	PKPbc	02 33 19.3	+0.4
	baz=337,SNR=16						
T51A	Gray	147.95	26	P	PKPbc	02 33 19.4	+0.2
	baz=327,SNR=64						
X47A	Russelville	147.97	34	P	PKPbc	02 33 19.1	-0.2
	baz=318,SNR=50						
W48A	Pulaski	147.99	32	P	PKPbc	02 33 19.4	+0.2
	baz=321,SNR=41						
U50A	Jamestown	148.01	28	P	PKPbc	02 33 19.9	+0.6
	baz=325,SNR=213						
P58A	Pank, Wackersv	148.01	15	P	PKPbc	02 33 19.7	+0.5
	baz=340,SNR=34						
VBMS	Vicksburg	148.02	40	P	PKiKP	02 33 20.5	-0.7
	baz=312,SNR=7.8						
V49A	McMinnville	148.02	30	P	PKPbc	02 33 19.3	-0.1
	baz=323,SNR=17						
O61A	Allentown	148.05	11	P	PKPbc	02 33 19.7	+0.5
	baz=346						
R54A	Victor	148.07	21	P	PKPbc	02 33 19.7	+0.3
	baz=333,SNR=15						
S53A	Williamson	148.09	23	P	PKPbc	02 33 20.0	+0.5
	baz=331,SNR=20						
P60A	Greenville	148.10	13	P	PKPbc	02 33 19.8	+0.4
	baz=344,SNR=16						
P59A	Jarrettsville	148.11	14	P	PKPbc	02 33 19.9	+0.5
	baz=342,SNR=17						
Q57A	Strasburg	148.13	17	P	PKPbc	02 33 20.0	+0.5
	baz=338,SNR=27						
PB15	IPOC Station P	148.16	176	*e*P	PKPab	02 33 23.0	-0.3
HJA	Humahuaca	148.22	183	*e*P	PKPbc	02 33 20.0	-0.7
T52A	Hallie	148.24	25	P	PKPbc	02 33 20.3	+0.4
	baz=329,SNR=9.9						
R55A	Marlinton	148.28	20	P	PKPbc	02 33 20.5	+0.4
	baz=335,SNR=15						
S54A	Dingess, Beckl	148.29	22	P	PKPbc	02 33 20.5	+0.4
	baz=332,SNR=34						
W49A	Belvidere	148.35	31	P	PKPbc	02 33 20.3	+0.1
	baz=322,SNR=40						
R56A	Bull Pasture M	148.41	19	P	PKPbc	02 33 20.9	+0.5
	baz=336,SNR=22						
P61A	Hammonton	148.41	12	P	PKPbc	02 33 20.4	+0.2
	baz=345						
U51A	La Follette	148.41	27	P	PKPbc	02 33 20.7	+0.3
	baz=326,SNR=29						
Q58A	Fox Den Farm,	148.42	16	P	PKPbc	02 33 20.8	+0.5
	baz=340,SNR=36						
PB05	IPOC Station P	148.45	174	*i* P	PKPbc	02 33 19.8	-1.2
X48A	Hartselle	148.46	33	P	PKPbc	02 33 20.2	-0.3
	baz=320,SNR=34						
TZTN	Tazewell	148.48	26	P	PKPbc	02 33 21.2	+0.6
	baz=327,SNR=30						
V50A	Pikevile	148.49	29	P	PKPbc	02 33 20.8	+0.3
	baz=324,SNR=19						
T53A	Wise	148.53	24	P	PKPbc	02 33 21.1	+0.4
	baz=330,SNR=17						
S55A	Lewisburg	148.61	21	P	PKPbc	02 33 21.0	+0.1
	baz=334,SNR=14						
PB06	IPOC Station P	148.65	175	⇓*i*P	PKiKP	02 33 23.4	+0.3
U52A	Thorn Hill	148.69	26	P	PKPbc	02 33 21.6	+0.6
	baz=328,SNR=21						
V51A	Loudon	148.74	28	P	PKPbc	02 33 21.8	+0.6
	baz=325,SNR=22						
Q59A	Harwood	148.76	15	P	PKPbc	02 33 21.6	+0.4
	baz=341						
W50A	Signal Mountai	148.77	30	P	PKPbc	02 33 21.8	+0.4
	baz=323,SNR=30						
R57A	Stanardsville	148.78	18	P	PKiKP	02 33 22.0	-0.6
	baz=338,SNR=34						
X49A	Woodville	148.79	32	P	PKPbc	02 33 21.8	+0.4
	baz=321,SNR=49						
LVC	Limon Verde	148.79	177	PKPbc	PKPbc	02 33 20.7	-1.5

	comp=Z,11nm,0.5s,baz=189,slow=1.1,SNR=4.0						
LVC	Limon Verde	148.79	177	*e*PKPdf	PKPdf	02 33 16.9	-1.4
LVC				*e*PKPbc	PKiKP	02 33 24.1	+0.5
LVC	Limon Verde	148.79	177	*e*P	PKPab	02 33 24.8	-1.2
LVC	Limon Verde	148.79	177	*e*PKHKP	PKPdf	02 33 16.9	-1.4
LVC				*e*		02 33 24.1	
Y48A	Jasper	148.80	34	P	PKPbc	02 33 21.3	-0.1
	baz=319,SNR=21						
Q60A	Greensboro	148.83	13	P	PKiKP	02 33 22.0	-0.6
	baz=343,SNR=5.2						
T54A	Tazewell	148.84	23	P	PKPbc	02 33 22.0	+0.4
	baz=331,SNR=56						
R58A	Rapidan	148.93	17	P	PKiKP	02 33 22.3	-0.6
	baz=339,SNR=30						
PB04	IPOC Station P	148.97	174	*i* P	PKiKP	02 33 24.2	+0.5
S56A	Natural Bridge	149.02	20	P	PKPbc	02 33 22.2	+0.3
	baz=335,SNR=11						
U53A	Fall Branch	149.05	25	P	PKPbc	02 33 22.3	+0.3
	baz=329,SNR=17						
V52A	Sevierville	149.05	27	P	PKiKP	02 33 22.8	-0.4
	baz=327,SNR=94						
Q61A	Milford	149.06	13	P	PKPbc	02 33 21.9	+0.1
	baz=344						
W51A	Cleveland	149.07	29	P	PKPbc	02 33 22.6	+0.5
	baz=324,SNR=17						
147A	Livingston	149.08	37	P	PKPbc	02 33 22.6	+0.5
	baz=316,SNR=7.6						
T55A	Pulaski	149.09	22	P	PKPbc	02 33 22.7	+0.6
	baz=333,SNR=36						
S57A	Dark Hollow, R	149.14	19	P	PKPbc	02 33 22.7	+0.5
	baz=336,SNR=11						
BLA	Blacksburg	149.14	21	P	PKPbc	02 33 22.4	+0.2
	baz=334						
X50B	Fort Payne	149.18	31	P	PKPbc	02 33 22.6	+0.2
	baz=322,SNR=42						
CBN	Corbin Frederi	149.19	16	P	PKiKP	02 33 23.0	-0.5
	baz=340,SNR=5.4						
U54A	Nelsons Funny	149.22	24	P	PKPbc	02 33 22.8	+0.3
	baz=330,SNR=15						
Y49A	Blount Mountai	149.25	33	P	PKPbc	02 33 22.9	+0.3
	baz=320,SNR=122						
YJA	Yavi	149.25	183	*e*P	PKPbc	02 33 21.7	-1.7
R59A	King George, V	149.27	16	P	PKPbc	02 33 23.0	+0.6
	baz=340						
R58B	Mineral	149.28	17	P	PKPbc	02 33 23.0	+0.6
	baz=339,SNR=28						
PB03	IPOC Station P	149.29	175	*i* P	PKiKP	02 33 24.9	+0.5
R60A	Leonardtown, M	149.34	15	P	PKiKP	02 33 23.5	-0.2
	baz=341						
BDFB	Brasilia	149.35	218	PKP	PKPdf	02 33 20.9	+1.8
	comp=Z,44nm,0.6s,baz=196,slow=4.9,SNR=7.1						
BDFB				PKPbc	PKiKP	02 33 24.8	+0.3
	comp=Z,44nm,0.6s,baz=122,slow=3.3,SNR=86						
BDFB	Brasilia	149.35	218	*e*PKPdf	PKPdf	02 33 20.2	+1.2
BDFB				*e*PKPbc	PKiKP	02 33 24.6	0.0
T56A	Rocky Mt	149.44	21	P	PKPbc	02 33 23.3	+0.3
	baz=334,SNR=48						
X51A	Calhoun	149.50	30	P	PKiKP	02 33 23.7	-0.5
	baz=323,SNR=33						
148A	Greensboro	149.51	36	P	PKiKP	02 33 23.8	-0.5
	baz=317						
W52A	Murphy	149.51	28	P	PKiKP	02 33 24.0	-0.3
	baz=326,SNR=48						
V53A	Saluda	149.54	26	P	PKiKP	02 33 24.0	-0.3
	baz=328,SNR=68						
U55A	TA2, Sparta	149.54	23	P	PKPbc	02 33 23.7	+0.4
	baz=332,SNR=54						
LRAL	Lakeview Retre	149.55	35	P	PKiKP	02 33 23.8	-0.5
	baz=318,SNR=29						
S58A	Poland Farm, P	149.55	18	P	PKPbc	02 33 23.7	+0.5
	baz=338,SNR=30						
PB09	IPOC Station P	149.58	176	*i* P	PKiKP	02 33 26.4	+1.4
Y50A	Piedmont	149.58	32	P	PKPbc	02 33 23.5	+0.1
	baz=321,SNR=39						
R61A	Willards	149.58	13	P	PKiKP	02 33 23.8	-0.5
	baz=344						
PB07	IPOC Station P	149.60	175	*i* P	PKiKP	02 33 25.9	+0.8
S59A	Mechanicsville	149.63	16	P	PKiKP	02 33 24.4	+0.1
	baz=340,SNR=23						
Z49A	Columbiana	149.69	34	P	PKPbc	02 33 24.1	+0.4
	baz=319,SNR=42						
T57A	Hurt	149.74	20	P	PKPbc	02 33 24.1	+0.5
	baz=335,SNR=28						
W53A	Cullowhee	149.80	27	P	PKiKP	02 33 25.0	0.0
	baz=327,SNR=35						
V54A	Nebo	149.81	25	P	PKiKP	02 33 24.5	-0.3
	baz=330,SNR=21						
S60A	Water View	149.86	15	P	PKiKP	02 33 25.0	+0.2
	baz=341,SNR=6.9						
Y51A	Rockmart	149.92	31	P	PKPbc	02 33 24.4	+0.1
	baz=322,SNR=18						
U56A	King	149.92	22	P	PKiKP	02 33 24.6	-0.4
	baz=333,SNR=11						
X52A	Dahlonega	149.93	29	P	PKiKP	02 33 25.2	0.0
	baz=325,SNR=44						
Z50A	Ashland	149.97	33	P	PKPbc	02 33 24.7	+0.4
	baz=320,SNR=45						
149A	Jones	149.99	35	P	PKiKP	02 33 25.2	-0.1
	baz=318,SNR=53						
PB02	IPOC Station P	150.00	175	*i* P	PKiKP	02 33 26.7	+0.9
T58A	Grand View Acr	150.02	19	P	PKiKP	02 33 25.0	-0.2
	baz=337,SNR=21						
V55A	Taylorsville	150.04	24	P	PKiKP	02 33 25.0	-0.3
	baz=331,SNR=9.8						
S61A	Accomac	150.13	14	P	PKiKP	02 33 25.5	+0.1
	baz=343						
U57A	Blanch	150.22	20	P	PKPbc	02 33 25.2	+0.3
	baz=335,SNR=29						
249A	Camden	150.25	36	P	PKiKP	02 33 26.0	+0.2
	baz=317,SNR=21						
X53A	Estanollee	150.29	28	P	PKiKP	02 33 26.1	+0.2
	baz=326,SNR=22						
T59A	Double "B" Far	150.29	17	P	PKiKP	02 33 26.1	+0.3
	baz=339,SNR=50						
W54A	Cherokee Point	150.30	26	P	PKiKP	02 33 25.8	-0.1
	baz=328,SNR=12						
PB01	IPOC Station P	150.31	175	*i* P	PKiKP	02 33 27.2	+0.8
Z51A	Franklin	150.32	32	P	PKPbc	02 33 25.4	+0.2
	baz=322						
V56A	Mocksville	150.36	23	P	PKiKP	02 33 25.8	-0.1
	baz=332,SNR=36						
T60A	Surry	150.37	16	P	PKiKP	02 33 26.1	+0.2
	baz=340,SNR=15						
150A	Eclectic	150.41	34	P	PKiKP	02 33 25.9	-0.2
	baz=319,SNR=13						
Y52A	Lilburn	150.45	30	P	PKiKP	02 33 26.6	+0.3
	baz=324,SNR=32						
U58A	Oxford	150.52	19	P	PKiKP	02 33 26.4	+0.1
	baz=336,SNR=26						
V57A	Coltrane Farms	150.56	21	P	PKiKP	02 33 26.1	-0.3
	baz=334,SNR=35						
KMSC	Kings Mountain	150.61	24	P	PKiKP	02 33 26.4	-0.1
	baz=330,SNR=25						
349A	Repton	150.66	37	P	PKiKP	02 33 27.4	+0.7
	baz=316,SNR=12						
X54A	Belton	150.67	27	P	PKiKP	02 33 26.8	+0.2
	baz=328,SNR=30						
Y53A	Monroe	150.69	29	P	PKiKP	02 33 26.9	+0.2
	baz=325,SNR=21						
250A	Grady	150.75	35	P	PKiKP	02 33 27.0	+0.1
	baz=318,SNR=19						
U59A	Littleton	150.79	18	P	PKiKP	02 33 26.9	0.0
	baz=338,SNR=8.3						
Z52A	Williamson	150.81	31	P	PKiKP	02 33 27.3	+0.4
	baz=323,SNR=34						
151A	Opelika	150.85	33	P	PKiKP	02 33 27.0	-0.1
	baz=320,SNR=25						
V58A	Windy Hill, Pi	150.87	21	P	PKiKP	02 33 26.8	-0.2
	baz=335,SNR=20						
U60A	Pendleton	150.87	17	P	PKiKP	02 33 27.0	+0.1
	baz=339,SNR=28						
BRAL	Brewton	150.88	37	P	PKiKP	02 33 27.7	+0.6
	baz=316,SNR=20						
W56A	Indian Trail	150.92	23	P	PKiKP	02 33 27.0	-0.1
	baz=332,SNR=20						
X55A	Gracelyn & Ava	151.06	26	P	PKiKP	02 33 27.5	+0.1
	baz=329,SNR=47						
152A	Waverly Hall	151.07	32	P	PKiKP	02 33 27.8	+0.3
	baz=322,SNR=23						
449A	Pace	151.07	38	P	PKiKP	02 33 27.8	+0.2
	baz=315						
Y54A	Tignall	151.11	28	P	PKiKP	02 33 27.9	+0.4
	baz=326,SNR=44						
GOGA	Godfrey	151.11	29	P	PKiKP	02 33 27.7	+0.1
	baz=325						
350A	Dozier	151.12	36	P	PKiKP	02 33 28.0	+0.4
	baz=317,SNR=9.3						
W57A	Gilead	151.13	22	P	PKiKP	02 33 27.5	0.0
	baz=333,SNR=34						
251A	Midway	151.14	34	P	PKiKP	02 33 28.1	+0.4
	baz=320,SNR=32						
Z53A	Monticello	151.16	30	P	PKiKP	02 33 27.9	+0.3
	baz=324,SNR=32						
V59A	Middlesex	151.19	19	P	PKiKP	02 33 27.7	0.0
	baz=336,SNR=27						
U61A	Possum Corner	151.21	16	P	PKiKP	02 33 27.8	+0.2
	baz=340						
PB08	IPOC Station P	151.23	176	*i* P	PKiKP	02 33 30.2	+1.5
X56A	White Oak	151.29	25	P	PKiKP	02 33 28.1	+0.2
	baz=330,SNR=15						
450A	Crestview	151.42	37	P	PKiKP	02 33 28.3	+0.1
	baz=316						
Y55A	Saluda	151.42	26	P	PKiKP	02 33 28.5	+0.3
	baz=328,SNR=25						
V60A	Jim Taylor Roa	151.50	18	P	PKiKP	02 33 28.5	+0.2
	baz=338,SNR=12						
W58A	Raeford	151.53	21	P	PKiKP	02 33 28.4	+0.1
	baz=334,SNR=18						
153A	Fort Valley	151.54	31	P	PKiKP	02 33 28.7	+0.3
	baz=323,SNR=6.6						
Z54A	Sparta	151.55	29	P	PKiKP	02 33 28.9	+0.4
	baz=326,SNR=53						
PB11	IPOC Station P	151.56	175	*i* P	PKiKP	02 33 30.0	+0.9
252A	Lumpkin	151.58	33	P	PKiKP	02 33 28.9	+0.4
	baz=321,SNR=14						
CMIG	Matias Romero	151.59	70	PKP	PKPdf	02 33 23.3	+1.1
	comp=Z,3.0nm,0.7s,baz=137,slow=6.6,SNR=7.5						
CMIG				PKPbc	PKiKP	02 33 29.4	+0.5
	comp=Z,24nm,0.7s,baz=319,slow=2.0,SNR=48						
351A	Pinckard	151.65	35	P	PKPbc	02 33 28.4	+0.1
	baz=318						
W59A	Clinton	151.67	20	P	PKiKP	02 33 28.7	+0.1
	baz=336						
V61A	Roper	151.68	17	P	PKiKP	02 33 29.1	+0.5
	baz=340						
PSGCX	Pisagua	151.68	174	*i* P	PKiKP	02 33 30.1	+0.9
X57A	Johnson Farm,	151.70	23	P	PKiKP	02 33 28.9	+0.2
	baz=332,SNR=14						
Y56A	Pelion	151.78	26	P	PKiKP	02 33 29.5	+0.6
	baz=329,SNR=17						
CNNC	Cliffs of the	151.79	19	P	PKiKP	02 33 29.2	+0.3
	baz=337,SNR=5.3						
253A	Americus	151.85	32	P	PKiKP	02 33 29.6	+0.5
	baz=322,SNR=13						
352A	Blakely	151.87	34	P	PKiKP	02 33 29.8	+0.6
	baz=320,SNR=14						
Z55A	Blythe	151.89	28	P	PKiKP	02 33 30.1	+0.9
	baz=327,SNR=24						
X58A	Rowland	151.90	22	P	PKiKP	02 33 29.3	+0.1
	baz=333,SNR=16						
154A	Montrose	151.93	30	P	PKiKP	02 33 29.3	0.0
	baz=324						
Y57A	Sumter	151.97	24	P	PKiKP	02 33 29.7	+0.4
	baz=331,SNR=10						
W60A	Pink Hill	152.02	19	P	PKiKP	02 33 29.5	+0.2
	baz=337,SNR=13						
451A	Vernon	152.05	36	P	PKiKP	02 33 30.2	+0.7
	baz=317,SNR=5.1						
W61A	Ground Anchor	152.13	18	P	PKiKP	02 33 29.8	+0.2
	baz=338						
Z56A	Williston	152.15	26	P	PKiKP	02 33 30.3	+0.6
	baz=328,SNR=9.5						
X59A	McDuffie Farm,	152.16	21	P	PKiKP	02 33 29.9	+0.3
	baz=335,SNR=12						
MNMCX	Minye Minye	152.19	175	*e*P	PKPbc	02 33 27.5	-2.8
452A	Marianna	152.20	35	P	PKiKP	02 33 30.4	+0.6
	baz=319						
155A	Kite	152.23	29	P	PKiKP	02 33 30.7	+0.8
	baz=326,SNR=11						
Y58A	Scranton	152.35	23	P	PKiKP	02 33 30.2	+0.1
	baz=332,SNR=8.9						
353A	Camilla	152.36	33	P	PKiKP	02 33 30.7	+0.5
	baz=321,SNR=13						
X60A	Albert Glenn T	152.37	20	P	PKiKP	02 33 30.5	+0.4
	baz=336,SNR=16						
254A	Abbeville	152.38	31	P	PKiKP	02 33 30.7	+0.5
	baz=323,SNR=11						
Z57A	Bowman	152.46	25	P	PKiKP	02 33 30.8	+0.5
	baz=330,SNR=21						
Y59A	Loris	152.58	22	P	PKiKP	02 33 30.7	+0.1
	baz=334						
TIGA	Tifton	152.62	32	P	PKiKP	02 33 31.4	+0.6
	baz=322,SNR=6.6						
156A	Sylvania	152.66	27	P	PKiKP	02 33 31.6	+0.9
	baz=327,SNR=5.3						
552A	Lynn Haven	152.67	36	P	PKiKP	02 33 31.7	+0.9
	baz=318						
453A	Whigham	152.68	34	P	PKiKP	02 33 31.8	+0.9
	baz=320,SNR=14						
Z58A	St. Stephen	152.80	24	P	PKiKP	02 33 31.3	+0.3
	baz=331,SNR=7.3						
255A	Hazlehurst	152.80	30	P	PKiKP	02 33 32.0	+0.9
	baz=325,SNR=6.4						
Y60A	Bolivia	152.80	21	P	PKiKP	02 33 31.2	+0.2
	baz=335						
157A	Early Branch	152.86	27	P	PKPbc	02 33 31.1	+0.1
	baz=328						
256A	Glennville	153.04	29	P	PKPbc	02 33 31.4	0.0
	baz=326						
355A	Pearson	153.08	31	P	PKiKP	02 33 31.9	+0.2
	baz=323						
Z59A	Georgetown, SC	153.09	23	P	PKiKP	02 33 31.7	+0.1
	baz=332						
553A	Crawfordville	153.12	35	P	PKiKP	02 33 32.1	+0.3
	baz=319						
158A	Hollywood	153.16	25	P	PKPbc	02 33 31.5	-0.2
	baz=330						
356A	Blackshear	153.46	30	P	PKiKP	02 33 32.5	0.0
	baz=325						
455A	Stateville	153.47	32	P	PKiKP	02 33 32.6	+0.1
	baz=322						
555A	McAlpin	153.99	33	P	PKiKP	02 33 34.5	+1.0
	baz=322						
557A	Orange Park	154.72	31	P	PKiKP	02 33 35.5	+0.4
	baz=324						
SIV	San Ignacio	154.75	193	PKP	PKPdf	02 33 28.4	+1.5
	comp=Z,1.7nm,0.7s,baz=84,slow=1.9,SNR=13						
656A	Willston	154.81	33	P	PKiKP	02 33 35.7	+0.4
	baz=322						
LPAZ	La Paz	155.12	177	PKP	PKPdf	02 33 29.8	+1.6
	comp=Z,2.1nm,0.8s,baz=259,slow=2.5,SNR=7.5						
LPAZ	La Paz	155.12	177	*e*PKPdf	PKPdf	02 33 29.6	+1.5
LPAZ				*e*PKPab	pPKPdf	02 33 49.2	-0.9
LPAZ	La Paz	155.12	177	*e*P	PKPdf	02 33 29.7	+1.5
APG	El Apazote	156.20	73	PKP	PKPdf	02 33 30.0	+0.8
	comp=Z,3.8nm,0.4s,baz=277,slow=23,SNR=4.1						
MDP	Montagnes des	165.32	257	PKPab	PKPab	02 34 37.9	+1.1
	comp=Z,7.0nm,0.7s,baz=130,slow=4.2,SNR=6.8						
SDV	Santo Domingo	176.39	87	*e*PKPdf	PKPdf	02 33 43.7	-1.1
SDV				*e*PKPab	PKPab	02 35 27.5	+1.3

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*ISCJB **08** 02:20:33.8±0.5, 50°.93N±0°.06×101°.62W±0°.04, h10^{km}, mb2.8/1, Error ellipse: s-maj=8.6km s-min=3.7km az=173.1*

*PGC **08** 02:20:38.4, 50°.81N×101°.78W, h1^{km}, ML3.7/2, 48km Nne of Esterhazy, Sk Manitoba, Canada*

*IDC **08** 02:20:39.7±1.1, 50°.75N×101°.73W, h0^{km}, mb2.8/1, mb1 3.6/4, mb1mx3.3/54, mbtmp3.2/4, ML2.3/2, Error ellipse: s-maj=16.9km s-min=8.6km az=169.0*

ISC 08 02:20:37.2±0.8**, 50°.95N**±0°.08×**101°.72W**±0°.05**, h10^{km}, n23, σ2^{s}.47**/34**, Manitoba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULM	Lac du Bonnet	3.79	98	Pn	Pn	02 21 39.0	+3.4
	0.4nm,0.3s,baz=278,slow=13,SNR=2.7						
ULM				Pg	Pb	02 21 47.4	+3.3
	3.1nm,0.3s,baz=281,slow=17,SNR=12						
ULM				Sn	Sn	02 22 21.9	+1.7
	2.8nm,0.3s,baz=277,slow=17,SNR=3.4						
ULM				Lg	Lg	02 22 34.6	
	16nm,0.3s,baz=220,slow=11,SNR=14						
ULM	Lac du Bonnet	3.79	98	Pn	Pn	02 21 37.6	+2.0
ULM				Pg	Pb	02 21 45.9	+1.8
ULM				Sg	Sg	02 22 35.4	-3.3
EPLO	Experimental L	5.28	101	Pn	Pn	02 21 58.2	+2.1
EPLO				Sn	Sn	02 22 56.7	-0.2
SOLO	Sioux Lookout	6.22	95	Pn	Pn	02 22 10.8	+1.7
SOLO				Sn	Sn	02 23 17.4	-2.7
ATKO	Atikokan Iron	6.87	104	Pn	Pn	02 22 18.8	+0.8
ATKO				Sn	Sn	02 23 34.2	-2.0
PKLO	Pickle Lake	7.16	81	Pn	Pn	02 22 23.2	+1.3
PKLO				Sn	Sn	02 23 40.8	-2.5
LYMT	Lyon Mountain	8.02	244	Pn	Pn	02 22 33.8	-0.1
WALA	Waterton Lakes	8.08	261	Pn	Pn	02 22 33.9	-0.9
WALA				Sn	Sn	02 24 01.8	-4.3
TBO	Thunder Bay	8.29	101	Pn	Pn	02 22 38.2	+0.7
TBO				Sn	Sn	02 24 08.2	-2.9
OVMT	Ovando	8.37	247	Pn	Pn	02 22 39.0	+0.3
ELMT	Elliston	8.39	242	Pn	Pn	02 22 38.8	-0.2
SLMT	Seeley Lake	8.57	249	Pn	Pn	02 22 41.5	+0.1
LRM	Limekiln Ridge	8.79	238	Pn	Pn	02 22 43.6	-0.9
HBMT	Mount Humbug	8.89	239	Pn	Pn	02 22 44.5	-1.5
BPMT	Black Pine Rid	8.97	244	Pn	Pn	02 22 46.4	-0.7
FCC	Fort Churchill	8.98	26	Pn	Pn	02 22 50.4	+3.6
FCC				Sn	Sn	02 24 27.5	-0.3
FCC				Sg	Sg	02 25 15.2	-10
GTO	Geraldton	9.51	92	Pn	Pn	02 22 54.3	+0.1
GTO				Sn	Sn	02 24 36.0	-5.1
PDAR	Pinedale Array	9.78	216	Pn	Pn	02 22 58.5	+0.4
	0.3nm,0.3s,baz=40,slow=15,SNR=9.9						
PDAR				Pg		02 23 30.2	
	0.1nm,0.3s,baz=45,slow=18,SNR=2.6						
PDAR				Lg	Lg	02 25 35.3	
	0.2nm,0.3s,baz=37,slow=35,SNR=5.2						
PNPO	Pukaskwa Natio	10.26	97	Sn	Sn	02 24 54.7	-4.6
VIMO	Victor Mine	11.27	73	Sn	Sn	02 25 19.2	-4.7
VIMO				Sg		02 26 27.1	
KAPO	Kapuskasing	12.40	89	Sn	Sn	02 25 41.9	-10
KAPO				Sg		02 26 60.0	
YKA	Yellowknife Ar	13.53	334	Pn	Pn	02 23 49.5	+0.6
	0.2nm,0.3s,baz=142,slow=13,SNR=4.1						
YKA				Lg	Lg	02 27 39.6	
	0.0nm,0.3s,baz=142,slow=27,SNR=3.0						
TXAR	Lajitas Array	21.64	185	P	P	02 25 29.5	+1.8
	0.2nm,0.5s,baz=13,slow=9.3,SNR=3.3						

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*SOME **08** 02:46:13.5, 41°.88N×77°.17E, h5^{km}*

*NNC **08** 02:46:14.8±1.1, 41°.95N×77°.18E, h0^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=7.1km s-min=4.3km az=4.0*

*ISCJB **08** 02:46:16.2±1.3, 41°.95N±0°.05×77°.20E±0°.05, h8^{km}±5^{km}, Error ellipse: s-maj=8.9km s-min=5.7km az=172.0*

*KRNET **08** 02:46:17.7±0.1, 42°.14N×77°.26E, mb1.7*

ISC 08 02:46:14.7±1.6**, 41°.93N**±0°.06×**77°.17E**±0°.03**, h14^{km}**±10^{km}**, n21, σ0^{s}.73**/41**, 6C, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	0.20	2	⇑*i*P	Pb	02 46 21.6	+1.2
	baz=58						
KDJ				⇑*e*S	Sb	02 46 24.1	-0.1
	baz=58						
BOOM	Boomskoye usch	1.08	302	⇑*i*P	Pg	02 46 36.8	+1.3
	baz=90						
BOOM				⇑*i*S	Sn	02 46 51.2	+0.8
	baz=90						
TNSS	Tian-Shan	1.12	352	*e*P	Pb	02 46 35.3	-0.8
	3.1nm,0.2s						
TNSS				*e*S	Sg	02 46 51.2	+0.1
	4.9nm,0.1s						
IZV	Izvestkoviy	1.19	340	P	Pn	02 46 36.2	-0.9
IZV				S	Sn	02 46 52.9	-0.2
IZV	Izvestkoviy	1.19	340	*e*P	Pn	02 46 36.2	-0.9
	2.1nm,0.3s						
IZV				*e*S	Sb	02 46 52.5	+0.1
	8.2nm,0.3s						
KOTS	Kotyrbulak	1.31	358	P	Pn	02 46 38.5	-0.3
	2.6nm,0.3s						
KOTS				S	Sn	02 46 56.4	+0.3
	6.5nm,0.1s						
KOTS	Kotyrbulak	1.31	358	*e*P	Pn	02 46 38.5	-0.3
	2.6nm,0.3s						
KOTS				*e*S	Sn	02 46 56.5	+0.3
	6.5nm,0.1s						
KST	Kastek	1.43	322	P	Pb	02 46 41.0	-0.3
	1.3nm,0.2s						
KST				S	Sg	02 47 01.0	+0.1
	6.8nm,0.2s						
KST	Kastek	1.43	322	*e*P	Pb	02 46 41.0	-0.3
	1.1nm,0.2s						
KST				*e*S	Sg	02 47 00.9	+0.1
	5.5nm,0.3s						
SATY	Saty	1.46	38	P	Pb	02 46 41.4	-0.3
	1.4nm,0.2s						
SATY				S	Sg	02 47 01.5	-0.2
	6.8nm,0.1s						
SATY	Saty	1.46	38	*e*P	Pb	02 46 41.4	-0.3
	1.4nm,0.2s						
SATY				*e*S	Sg	02 47 01.5	-0.2
	6.8nm,0.1s						
DGS	Degeres	1.67	322	P	Pb	02 46 45.0	-0.3
	0.7nm,0.3s						
DGS				S	Sg	02 47 07.8	-0.8
	5.1nm,0.2s						
DGS	Degeres	1.67	322	*e*P	Pb	02 46 45.0	-0.3
	0.6nm,0.2s						
DGS				*e*S	Sg	02 47 07.8	-0.8
	5.1nm,0.2s						
KTBS	Karatobe	1.82	349	P	Pb	02 46 47.7	-0.2
	0.9nm,0.3s						
KTBS				S	Sg	02 47 12.2	-1.1
	9.6nm,0.3s						
KTBS	Karatobe	1.82	349	*e*P	Pb	02 46 47.7	-0.2
	0.9nm,0.3s						
KTBS				*e*S	Sg	02 47 12.2	-1.1
	9.6nm,0.3s						
UZB	Uzynbulak	1.83	48	*e*P	Pb	02 46 47.7	-0.4
	0.8nm,0.2s						
UZB				*e*S	Sb	02 47 12.2	+1.2
	2.0nm,0.2s						
KPKS	Kokpek	1.90	35	*e*P	Pb	02 46 48.5	-0.8
	1.6nm,0.2s						
KPKS				*e*S	Sb	02 47 13.4	+0.5
	6.9nm,0.3s						
KUU	Kurty	2.06	343	*e*P	Pb	02 46 51.4	-0.5
	0.7nm,0.3s						
KUU				*e*S	Sb	02 47 18.5	+1.1
	2.5nm,0.2s						
ARLS	Aral	2.13	269	⇑*i*P	Pg	02 46 55.7	+0.2
	baz=64						
ARLS				⇑*i*S	Sg	02 47 22.5	-0.6
	baz=64						
ARXS	Arharly	2.34	12	Pg	Pb	02 46 56.9	+0.3
	0.7nm,0.4s						
ARXS				Lg	Lg	02 47 27.8	
	1.7nm,0.4s						
ARXS	Arharly	2.34	12	*e*P	Pb	02 46 56.6	-0.1
	0.9nm,0.5s						
ARXS				*e*S	Sg	02 47 27.8	-2.0
	1.9nm,0.4s						

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*GCG **08** 02:52:22.2±2.8, 11°.88N×88°.63W, h0^{km}±829^{km}, MD5.5*

*NEIC **08** 02:52:42.8±3.1, 13°.29N×89°.17W, h55^{km}, mb5.7/538, ME5.5, MW5.7, MW5.7, MD5.8(SNET), Error ellipse: s-maj=13.9km s-min=9.0km az=221.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.96; $M_{\theta\theta}$1.56; $M_{\phi\phi}$0.40; $M_{r\theta}$2.93; $M_{\theta\phi}$0.36; $M_{\phi r}$-1.74; Best double couple: $M_0$3.90000×10^{17} NP1:ϕ_s294.00000°, δ78.00000°, λ-79.00000°. NP2:ϕ_s71.00000°, δ17.00000°, λ-132.00000°. Principal axes: T 3.3400, Plg32.0000°, Azm14.0000°; N 0.9000, Plg11.0000°, Azm111.0000°; P -4.2400, Plg56.0000°, Azm218.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s325.00000°, δ15.00000°, λ90.00000°. NP2:ϕ_s145.00000°, δ75.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm55.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm235.0000°; Apparent Stress 0.43 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [VI] at San Salvador, [V] at Antiguo Cuscatlan and [IV] at Nueva San Salvador, Panchimalco and Soyapango. Felt [III] at Guatemala, Guatemala. Felt as far as Quetzaltenango, Guatemala and Yamaranguila, Honduras.

*GCMT **08** 02:52:43.8±0.1, 13°.25N±0°.01×89°.48W±0°.01, h69^{km}±2^{km}, MW5.7/121, Moment Tensor Solution. s79,c129; s121,c244; Duration: 1^{s}.8 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.54±.10; $M_{\theta\theta}$1.08±.08; $M_{\phi\phi}$-0.53±.08; $M_{r\theta}$3.24±.06; $M_{\theta\phi}$-0.90±.06; $M_{\phi r}$-3.46±.06; Best double couple: $M_0$4.88900×10^{17} NP1:ϕ_s318.00000°, δ85.00000°, λ-80.00000°. NP2:ϕ_s72.00000°, δ11.00000°,* *λ-155.00000°. Principal axes: T 5.1750, Plg39.0000°, Azm38.0000°; N -0.5680, Plg10.0000°, Azm137.0000°; P -4.6020, Plg49.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

SNET ***08*** *02:52:43.6±1.0, 13°.14N×89°.38W, h61^{km}±9^{km}, ML5.9, MW6.1*

IDC ***08*** *02:52:44.0±0.7, 13°.55N×88°.80W, h67^{km}±5^{km}, mb4.9/35, mb1 5.0/37, mb1mx5.0/38, mbtmp5.2/37, MS4.8/21, Ms1 4.9/21, ms1mx4.8/25, Error ellipse: s-maj=11.5km s-min=6.1km az=50.0*

ISCJB ***08*** *02:52:46.0±0.2, 13°.22N±0°.01×89°.15W±0°.02, h113^{km}±2^{km}, mb5.2/182, Error ellipse: s-maj=3.2km s-min=1.9km az=142.5*

BJI ***08*** *02:52:46.5±0.0, 13°.40N×89°.10W, h100^{km}, mB5.3/28*

MOS ***08*** *02:52:46.5±1.1, 13°.53N×88°.83W, h103^{km}, mb5.3/62, Error ellipse: s-maj=6.7km s-min=4.7km az=75.8*

NEIC ***08*** *02:52:47.0±0.0, 13°.36N×89°.18W, h45^{km}, Moment Tensor Solution. s16 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.26; $M_{\theta\theta}$2.30; $M_{\phi\phi}$-0.04; $M_{r\theta}$1.88; $M_{\theta\phi}$-1.24; $M_{\phi r}$-2.22; Best double couple: $M_0$3.90000×10^{17} NP1:ϕ_s314.00000°, δ71.00000°, λ-72.00000°. NP2:ϕ_s91.00000°, δ26.00000°, λ-130.00000°. Principal axes: T 3.9900, Plg23.0000°, Azm30.0000°; N -0.1900, Plg16.0000°, Azm127.0000°; P -3.8000, Plg60.0000°, Azm249.0000°;*

UCR ***08*** *02:53:02.4±0.7, 12°.80N×87°.90W, h20^{km}±999^{km}, MW4.8*

ISC 08 02:52:44.2±0.4**, 13°.27N**±0°.03×**89°.24W**±0°.03**, h77**^{km}±2^{km}**, h77**^{km}**:pP-P, n1289,** σ1^{s}69/1413**, mb5.3**/195**, 59C-23D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.41	0	eP	Pn	02 52 56.5	-0.7
SNET				IAML		02 52 58.6	
	comp=Z,283µm,0.3s						
SNET				eS	Sn	02 53 07.3	+0.7
CLUB	Club Campestre	0.43	357	eP	Pn	02 52 56.6	-0.7
CLUB				eS	Sn	02 53 07.3	+0.5
CLUB				AML	AML	02 53 09.7	
	comp=Z,518µm,0.3s						
OPAM	Oficina de Pla	0.44	5	eP	Pn	02 52 57.0	-0.4
OPAM				eS	Sn	02 53 07.8	+0.8
OPAM				IAML		02 53 09.8	
	comp=Z,267µm,0.2s						
LFU	La Fuente	0.49	14	eP	Pn	02 52 57.7	0.0
PAVA	Las Pavas	0.53	33	eP	Pn	02 52 58.4	+0.3
PAVA				eS	Sn	02 53 09.2	+0.9
PAVA				IAML		02 53 11.9	
	comp=Z,179µm,0.5s						
CEVE	Cerro Verde	0.67	326	eP	Pn	02 52 58.8	-0.9
CEVE				eS	Sn	02 53 10.6	-0.4
CEVE				IAML		02 53 12.7	
	comp=Z,723µm,0.4s						
SBLS	San Blas	0.68	326	eP	Pn	02 52 58.7	-1.0
RTR	El Retiro	0.74	327	eP	Pn	02 52 59.7	-0.6
PACA	Pacayal	0.91	77	eP	Pn	02 53 03.3	+1.1
PACA				eS	Sn	02 53 18.4	+2.9
LLGN	La Laguna	0.93	18	eP	Pn	02 53 03.1	+0.7
LLGN				eS	Sn	02 53 19.1	+3.1
LCND	La Caada	1.31	88	eP	Pn	02 53 08.5	+1.5
CNCH	Conchagua	1.36	90	eP	Pn	02 53 09.2	+1.4
CSGN	Cosiguina Volc	1.66	100	ePn	Pn	02 53 13.2	+1.6
NBG	Las Nubes	1.69	321	eP	Pn	02 53 13.8	+1.5
PCG	Pacaya	1.74	310	eP	Pn	02 53 13.5	+0.7
MRL	Marmol	1.85	346	eP	Pn	02 53 16.6	+2.3
FUG	Fuego 3	1.95	307	eP	Pn	02 53 15.9	+0.3
FUG				eS	Sn	02 53 57.7	+18
TGUH	Tegucigalpa,Un	2.06	68	ePn	Pn	02 53 18.6	+1.6
TGUH				eSn	Sn	02 53 26.9	-15
APG	El Apazote	2.09	325	P	Pn	02 53 18.3	+0.7
	comp=Z,190nm,0.3s,baz=159,slow=10,SNR=1087						
APG				S	Sn	02 53 46.5	+3.5
	comp=Z,645nm,0.3s,baz=88,slow=7.2,SNR=8.7						
APG				LR	LR	02 53 52.3	
	comp=Z,9µm,18.4s,baz=130,slow=32						
STG3	Santiaguito 3,	2.68	303	eP	Pn	02 53 25.8	+0.4
STG3				eS	Sn	02 54 14.9	+18
ESTN	Estel	2.80	93	ePn	Pn	02 53 28.2	+1.3
ESTN				eSn	Sn	02 53 45.7	-14
ESTN	Estel	2.80	93⇑	eP	Pn	02 53 28.2	+1.3
MATN	Matagalpa	3.24	96⇑	eP	Pn	02 53 34.4	+1.4
MASN	Masaya	3.27	113	eP	Pn	02 53 34.3	+1.0
CCIG	Comitan	4.10	317	ePn	Pn	02 53 46.7	+2.0
CCIG				eSn	Sn	02 54 20.2	-11
ACON	Acoyapa	4.17	108	ePn	Pn	02 53 45.4	-0.1
ACON	Acoyapa	4.17	108	eP	Pn	02 53 46.1	+0.6
GB1A	Borinquen Arri	4.48	123	eP	Pn	02 53 51.0	+1.3
BUEV	Buena Vista	4.48	123	eP	Pn	02 53 50.9	+1.1
MESS	Mesas	4.69	122⇑	eP	Pn	02 53 53.6	+1.0
CUI	Cuipilapa	4.76	123	eP	Pn	02 53 54.3	+0.7
ESPN	Las Esperanzas	4.93	102	ePn	Pn	02 53 57.0	+1.2
ESPN				e		02 54 37.3	
ESPN	Las Esperanzas	4.93	102⇑	eP	Pn	02 53 57.5	+1.7
JTS	Las Juntas de	5.13	125	P	Pn	02 54 00.1	+1.5
	comp=Z,96nm,0.3s,baz=13,slow=15,SNR=291						
JTS				S	Sn	02 54 57.0	+0.3
	comp=Z,37nm,0.3s,baz=6.0,slow=19,SNR=3.0						
JTS	Las Juntas de	5.13	125	ceP	Pn	02 53 59.3	+0.6
JTS	Las Juntas de	5.13	125	eP	Pn	02 54 00.7	+2.1
CEDE	Laguna Cedeo	5.23	121	eP	Pn	02 54 02.2	+2.2
ARE1	Arenal 1	5.23	122	eP	Pn	02 54 02.3	+2.4
SRA1	San Ramn	5.63	124	eP	Pn	02 54 07.8	+2.2
HDC	Heredia	5.98	122	ePn	Pn	02 54 11.9	+1.6
HDC				eSn	Sn	02 55 09.9	-7.6
HDC	Heredia	5.98	122	eP	Pn	02 54 12.1	+1.8
LCR2	La Lucha 2	6.21	124	eP	Pn	02 54 14.9	+1.3
CVTR	Volcan Turrial	6.26	121	eP	Pn	02 54 16.2	+1.8
CMIG	Matias Romero	6.64	306	P	Pn	02 54 19.9	+0.6
	comp=Z,31nm,0.3s,baz=97,slow=8.9,SNR=104						
CMIG				S	Sn	02 55 33.5	-0.1
	comp=Z,150nm,0.3s,baz=251,slow=23,SNR=9.0						
EDLM	Las Mercedes	6.81	125	eP	Pn	02 54 24.8	+3.1
DRK0	Durika	7.10	124	eP	Pn	02 54 28.4	+2.8
EDPN	Palmar Norte	7.11	126	eP	Pn	02 54 28.7	+3.1
EDBA	Buenos Aires	7.13	124	eP	Pn	02 54 28.2	+2.3
PTJ1	Puerto Jimnez	7.49	128	eP	Pn	02 54 33.0	+2.1
EDSV	San Vito	7.57	125⇓	eP	Pn	02 54 35.5	+3.4
PRVC	Isla de Provid	7.66	88	eP	Pn	02 54 33.2	0.0
BRU2	Volcan	7.81	124⇑	eP	Pn	02 54 37.5	+2.1
LVIG	Laguna Verde	9.41	314	ePn	Pn	02 54 57.2	+0.2
FSCY	Frank Sound, G	9.79	51	ePn	Pn	02 55 04.9	+2.7
TLIG	Tlapa	9.96	297	ePn	Pn	02 55 05.5	+0.9
TLIG				eSn	Sn	02 56 52.4	-2.4
BCIP	Isla Barro Col	10.08	113	ePn	Pn	02 55 06.3	+0.1
BCIP	Isla Barro Col	10.08	113	eP	Pn	02 55 06.3	+0.1
BCIP	Isla Barro Col	10.08	113	eP	Pn	02 55 06.5	+0.3
BCIP	Isla Barro Col	10.08	113⇑	eP	Pn	02 55 07.5	+1.2
ZANG	Zanguenga, Cho	10.14	114	eP	Pn	02 55 08.7	+1.6
UPA	Univ. de Panam	10.43	113⇑	eP	Pn	02 55 12.3	+1.3
CBCY	The Bluff, Cay	11.13	53	ePn	Pn	02 55 22.3	+1.8
NEJ	Negril	11.60	63	i P	Pn	02 55 29.5	+2.5
MCJ	Malvern	12.05	66⇑	iP	Pn	02 55 35.1	+2.1
MCJ				i P	Pn	02 55 38.8	+5.8
CVJ	Coleyville	12.29	65	i P	Pn	02 55 39.5	+3.0
MTDJ	Mount Denham	12.29	65	ePn	Pn	02 55 38.0	+1.6
PCJ	Portland Cotta	12.46	68	i P	Pn	02 55 41.6	+3.0
BBJ	Bamboo Saint A	12.59	65⇓	iP	Pn	02 55 43.5	+3.1
STH	Stony Hill	12.88	67	i PA		02 55 48.5	
HOJ	Hope	12.91	67	i P	Pn	02 55 48.3	+3.6
062Z	Marathon	13.77	33	P	Pn	02 55 58.1	+2.1
	baz=215,SNR=6.0						
PAYG	Puerto Ayora	13.90	184	ePn	Pn	02 55 59.2	+1.4
DBBC	Dabeiba	14.24	115	eP	Pn	02 56 02.4	0.0
061Z	Ochoppi	14.77	31	ePn	Pn	02 56 10.4	+1.3
061Z	Ochoppi	14.77	31	P	Pn	02 56 10.8	+1.8
	baz=213,SNR=10						
SMRC	Santa Marta, M	14.82	96	eP	Pn	02 56 06.4	-3.4
059Z	Ave Maria	14.91	28	P	Pn	02 56 12.4	+1.5
	baz=210,SNR=49						
MALC	Bahia Malaga	14.93	127	eP	P	02 56 14.4	-0.5
GRGC	Isla de Gorgon	14.96	132	eP	Pn	02 56 13.0	+1.4
GTBY	Guantanamo Bay	15.06	62	ePn	Pn	02 56 13.4	+0.5
GTBY	Guantanamo Bay	15.06	62	i P	Pn	02 56 13.7	+0.9
LNIG	Linares	15.06	322	ePn	P	02 56 14.6	-1.8
	comp=Z,796nm,1.3s						
ARGC	Ariguani, Magd	15.07	101	eP	Pn	02 56 11.7	-1.3
HELC	Santa Helena	15.22	116	eP	Pn	02 56 14.4	-1.0
PLMC	San Jos del P	15.25	122	eP	Pn	02 56 14.4	-0.9
ZARC	Zaragoza, Cauc	15.26	111	eP	Pn	02 56 13.0	-2.4
058A	Arcadia	15.38	26	P	P	02 56 18.8	-1.1
	baz=208,SNR=91						
060Z	West Palm Beac	15.40	31	P	P	02 56 19.3	-0.7
	baz=213,SNR=14						
TUMC	Tumaco	15.41	137	eP	P	02 56 24.4	+4.0
SMLC	San Martn de	15.53	105	eP	Pn	02 56 17.0	-1.8
059A	Moore Haven	15.59	28	eP	Pn	02 56 20.7	+1.2
	comp=Z,2µm,1.0s						
059A	Moore Haven	15.59	28	P	P	02 56 21.5	-0.7
	baz=210,SNR=58						
YOTC	Yotoco, Valle	15.72	125	eP	Pn	02 56 21.7	+0.3
957A	Wimauma	15.75	23	eP	Pn	02 56 22.7	+1.2
	comp=Z,1µm,1.0s						
957A	Wimauma	15.75	23	P	P	02 56 23.6	-0.3
	baz=206,SNR=37						
ZAIG	Zacatecas	15.80	309	eP	P	02 56 24.7	-0.1
	comp=Z,215nm,1.3s						
CODC	Agustn Codazz	15.82	100	eP	Pn	02 56 20.4	-2.1
GUY2C	Guyana, Caldas	15.85	119	eP	Pn	02 56 23.7	+0.4
958A	Wauchula	15.86	25	P	P	02 56 25.2	0.0
	baz=207,SNR=34						
060A	Indiantown	16.02	30	eP	Pn	02 56 25.2	+0.4
	comp=Z,2µm,1.0s						
060A	Indiantown	16.02	30	P	P	02 56 27.4	+0.4
	baz=213,SNR=16						
PTBC	PUERTO BERRIO,	16.02	113	eP	Pn	02 56 21.7	-3.3
RREF	El Recreo	16.03	120	eP	Pn	02 56 25.7	-0.1
NORC	Norcasia	16.10	117	eP	Pn	02 56 26.4	+0.2
959A	Okeechobee	16.19	28	P	P	02 56 28.9	+0.1
	baz=210,SNR=15						
857A	Zephyrhills	16.29	23	P	P	02 56 30.6	+0.7
	baz=205,SNR=31						
BBAC	Balboa, Cauca	16.30	132	eP	P	02 56 30.4	0.0
KVTX	Kingsville	16.34	332	eP	P	02 56 29.9	-0.7
	comp=Z,2µm,1.5s						
POPC	Popayan, Colom	16.37	130	eP	Pn	02 56 29.7	0.0
OCAC	Ocana	16.41	106	eP	Pn	02 56 29.0	-1.1
DWPF	Disney Wildern	16.46	25	eP	P	02 56 32.5	+0.7
	comp=Z,905nm,1.0s						
DWPF	Disney Wildern	16.46	25	P	P	02 56 32.7	+0.8
	baz=208						
858A	St. Cloud	16.58	25	P	P	02 56 34.1	+1.0
	baz=208,SNR=29						
859A	Kempfer Cattle	16.64	27	P	P	02 56 35.2	+1.4
	baz=209,SNR=48						
ORTC	Ortega, Tolima	16.66	123	eP	P	02 56 34.3	+0.2
SOTA	Rioblanco	16.69	130	eP	P	02 56 35.7	+0.7
MARP	Paez Belalcaza	16.73	127	eP	P	02 56 36.3	+1.1
LGNH	Logne	16.82	70	i P	P	02 56 37.3	+1.5
LGNH				eS	S	03 00 22.3	+35
URIC	Uribia, Colomb	16.91	93	eP	Pn	02 56 34.3	-1.7
ROSC	El Rosal	16.93	118	P	P	02 56 39.5	+1.9
	comp=Z,3.2nm,0.3s,baz=333,slow=9.5,SNR=54						
ROSC				PcP	PcP	03 01 21.8	+2.1
	comp=Z,1.4nm,0.3s,baz=174,slow=1.1,SNR=5.5						
ROSC				LR	LR	03 05 06.2	
	comp=Z,1µm,19.1s,baz=320,slow=44						
ROSC	El Rosal	16.93	118	eP	P	02 56 37.7	+0.1
	comp=Z,202nm,1.4s						
ROSC	El Rosal	16.93	118	eP	P	02 56 39.0	+1.4
757A	Oxford	16.95	22	P	P	02 56 39.0	+1.7
	baz=204,SNR=110						
PRAC	Prado	17.06	123	eP	P	02 56 39.7	+1.0
655A	Horseshoe Beac	17.08	18	P	P	02 56 40.5	+1.8
	baz=200,SNR=18						
552A	Lynn Haven	17.17	12	P	P	02 56 42.1	+2.5
	baz=193,SNR=17						
656A	Willston	17.18	20	P	P	02 56 42.1	+2.3
	baz=202,SNR=46						
BETC	Betania	17.23	126	eP	P	02 56 41.7	+1.2
PAMC	Pamplona, Colo	17.30	108	eP	Pn	02 56 39.7	-1.7
758A	Lake Helen	17.31	24	P	P	02 56 43.5	+2.4
	baz=207,SNR=20						
553A	Crawfordville	17.41	14	P	P	02 56 45.1	+2.8
	baz=196,SNR=21						
554A	Perry	17.50	16	P	P	02 56 45.9	+2.6
	baz=198						
449A	Pace	17.50	6	P	P	02 56 46.9	+3.6
	baz=186,SNR=23						
RUSC	La Rusia	17.52	113	eP	Pn	02 56 43.0	-1.1
CHIC	Chingaza	17.55	118	eP	P	02 56 45.0	+0.6
451A	Vernon	17.56	10	P	P	02 56 47.3	+3.3
	baz=191,SNR=44						
657A	Interlachen	17.61	22	P	Pn	02 56 47.1	+2.5
	baz=204,SNR=55						
450A	Crestview	17.62	8	P	Pn	02 56 48.1	+3.4
	baz=188,SNR=23						
HKT	Hockley	17.68	341	eP	Pn	02 56 46.6	+1.2
	comp=Z,270nm,1.4s						
HKT	Hockley	17.68	341	eP	Pn	02 56 46.6	+1.2
HKT				pmax	pmax		
	comp=Z,270nm,1.4s						
658A	Bunnell	17.69	23	P	Pn	02 56 48.0	+2.5
	baz=206,SNR=6.4						
833A	Chaparral WMA,	17.72	329	P	Pn	02 56 47.0	+1.1
	baz=146,SNR=135						
555A	McAlpin	17.74	18	P	Pn	02 56 49.2	+3.0
	baz=200,SNR=50						
FLOC	Florencia	17.77	130	eP	Pn	02 56 48.3	+1.7
556A	Lake Butler	17.81	20	P	Pn	02 56 49.6	+2.7
	baz=202,SNR=39						
VILC	Villavicencio,	17.84	119	eP	Pn	02 56 48.3	+0.7
452A	Marianna	17.89	11	P	Pn	02 56 51.1	+3.2
	baz=193,SNR=91						
BRAL	Brewton	17.93	6	P	Pn	02 56 51.3	+3.0
	baz=187,SNR=31						
557A	Orange Park	18.05	21	P	Pn	02 56 52.3	+2.4
	baz=204,SNR=31						
453A	Whigham	18.07	14	P	Pn	02 56 53.7	+3.5
	baz=195,SNR=67						
349A	Repton	18.09	6	P	Pn	02 56 53.1	+2.8
	baz=186,SNR=46						
454A	Quitman	18.11	16	P	Pn	02 56 53.9	+3.3
	baz=198						
SDDR	Presa de Saban	18.15	69	i P	Pn	02 56 52.6	+1.4
350A	Dozier	18.26	8	P	Pn	02 56 54.8	+2.4
	baz=189,SNR=32						
455A	Stateville	18.31	17	P	Pn	02 56 55.5	+2.5
	baz=199,SNR=34						
YOPC	Yopal, Colombi	18.35	114	eP	Pn	02 56 53.6	-0.2
TAMC	Tame, Arauca	18.47	110	eP	P	02 56 53.0	-1.2
352A	Blakely	18.55	12	P	Pn	02 56 58.3	+2.4
	baz=193,SNR=80						
353A	Camilla	18.57	14	P	Pn	02 56 58.6	+2.4
	baz=195,SNR=88						
456A	Hilliard	18.60	20	P	Pn	02 56 58.7	+2.2
	baz=202						
457A	Yulee	18.66	21	P	Pn	02 56 59.3	+2.0
	baz=204,SNR=8.5						
249A	Camden	18.72	6	P	Pn	02 56 59.8	+1.9
	baz=186,SNR=70						
SDV	Santo Domingo	18.77	102	P	P	02 56 57.5	-0.1
	comp=Z,25nm,0.3s,baz=287,slow=5.7,SNR=137						
SDV				PcP	PcP	03 01 24.7	+2.2
	comp=Z,1.4nm,0.3s,baz=283,slow=4.1,SNR=6.0						
SDV	Santo Domingo	18.77	102	eP	P	02 56 57.9	+0.3
	comp=Z,171nm,0.6s						
SDV				ePcP	PcP	03 01 25.5	+3.1
SDV	Santo Domingo	18.77	102	eP	P	02 56 56.3	-1.2
SDV	Santo Domingo	18.77	102	eP	P	02 56 58.1	+0.5
SC01	Santiago de lo	18.78	69	i P	Pn	02 57 00.3	+1.6
SC01				eS	Sn	03 00 43.4	+15
TIGA	Tifton	18.81	15	P	Pn	02 57 01.1	+2.1
	baz=197,SNR=123						
MACC	Macarena, Meta	18.82	125	eP	P	02 56 58.3	+0.4
250A	Grady	18.82	8	P	Pn	02 57 00.5	+1.4
	baz=189,SNR=83						
BANI	BANI	18.86	72	i P	Pn	02 57 01.3	+1.5
VBMS	Vicksburg	18.89	357	P	Pn	02 57 02.2	+2.2
	baz=176,SNR=79						
355A	Pearson	18.92	17	P	Pn	02 57 01.6	+1.3
	baz=199,SNR=23						
435B	Jarrell	19.05	337	P	Pn	02 57 01.5	-0.4
	baz=154,SNR=56						
251A	Midway	19.06	10	P	Pn	02 57 03.3	+1.3
	baz=191,SNR=140						
NATX	Nacogdoches	19.06	346	P	Pn	02 57 02.6	+0.6
	baz=164,SNR=40						
252A	Lumpkin	19.09	12	P	Pn	02 57 03.9	+1.6
	baz=193,SNR=78						
356A	Blackshear	19.12	19	P	Pn	02 57 03.9	+1.3
	baz=201,SNR=46						
253A	Americus	19.28	13	P	Pn	02 57 05.4	+0.9
	baz=195,SNR=63						
SDD	Santo Domingo	19.28	72	i P	Pn	02 57 05.1	+0.4
147A	Livingston	19.33	2	P	Pn	02 57 06.6	+1.4
	baz=183,SNR=59						
PTLC	Puerto Leguiza	19.34	131	eP	Pn	02 57 07.6	+2.1
148A	Greensboro	19.34	4	P	Pn	02 57 06.6	+1.3
	baz=185						
149A	Jones	19.37	6	P	Pn	02 57 06.8	+1.2
	baz=187,SNR=161						
254A	Abbeville	19.37	15	P	Pn	02 57 06.5	+0.9
	baz=197,SNR=118						
357A	Townsend	19.42	20	P	Pn	02 57 07.1	+0.9
	baz=203,SNR=10						
150A	Eclectic	19.47	8	P	Pn	02 57 07.9	+1.1
	baz=189,SNR=124						
151A	Opelika	19.50	10	P	Pn	02 57 08.3	+1.1
	baz=191,SNR=212						
255A	Hazlehurst	19.58	17	P	Pn	02 57 09.0	+1.0
	baz=200,SNR=66						
JCT	Junction City	19.71	332	P	P	02 57 08.5	+1.0
	baz=148,SNR=87						
152A	Waverly Hall	19.74	11	P	Pn	02 57 10.8	+0.8
	baz=193,SNR=111						
LRAL	Lakeview Retre	19.78	6	ePn	Pn	02 57 11.1	+0.7
	comp=Z,338nm,1.1s						
LRAL	Lakeview Retre	19.78	6	P	Pn	02 57 11.3	+0.9
	baz=186,SNR=181						
256A	Glennville	19.80	19	P	Pn	02 57 11.7	+1.0
	baz=201,SNR=58						
153A	Fort Valley	19.91	13	P	Pn	02 57 12.0	0.0
	baz=195,SNR=42						
Z49A	Columbiana	19.98	7	P	Pn	02 57 13.5	+0.7
	baz=188,SNR=192						
154A	Montrose	20.05	15	P	Pn	02 57 13.9	+0.2
	baz=197,SNR=104						
257A	Skidaway Islan	20.08	21	P	Pn	02 57 14.8	+0.8
	baz=204,SNR=10.0						
WHTX	Lake Whitney,	20.10	339	P	P	02 57 12.9	+1.2
	baz=156,SNR=159						
Z50A	Ashland	20.12	8	P	Pn	02 57 14.6	+0.1
	baz=189,SNR=162						
Z41A	Richland Creek	20.16	351	P	Pn	02 57 14.6	-0.3
	baz=170,SNR=138						
155A	Kite	20.23	17	P	Pn	02 57 16.1	+0.3
	baz=199,SNR=302						
Z51A	Franklin	20.29	10	P	Pn	02 57 16.4	-0.1
	baz=191,SNR=17						
Z52A	Williamson	20.31	12	P	Pn	02 57 16.4	-0.2
	baz=193,SNR=92						
HPIG		20.53	314	eP	Pn	02 57 18.3	-1.2
	comp=Z,179nm,1.3s						
156A	Sylvania	20.55	19	P	Pn	02 57 19.6	+0.2
	baz=202,SNR=61						
Z53A	Monticello	20.58	14	P	Pn	02 57 19.2	-0.6
	baz=196,SNR=100						
Y48A	Jasper	20.63	5	P	Pn	02 57 20.1	-0.4
	baz=186,SNR=203						
Y49A	Blount Mountai	20.65	7	P	Pn	02 57 20.3	-0.4
	baz=188,SNR=143						
Z54A	Sparta	20.71	15	P	Pn	02 57 20.5	-0.9
	baz=198,SNR=50						
GOGA	Godfrey	20.73	14	eP	Pn	02 57 20.8	-0.7
	comp=Z,898nm,1.4s						
GOGA	Godfrey	20.73	14	eP	Pn	02 57 20.8	-0.7
GOGA				pmax	pmax		
	comp=Z,899nm,1.4s						
GOGA	Godfrey	20.73	14	P	Pn	02 57 20.7	-0.8
	baz=196,SNR=79						
157A	Early Branch	20.73	20	P	Pn	02 57 21.9	+0.3
	baz=203,SNR=58						
Y50A	Piedmont	20.77	8	P	Pn	02 57 21.1	-0.9
	baz=189,SNR=28						
TXAR	Lajitas Array	20.85	322	P	Pn	02 57 21.7	-1.4
	comp=Z,50nm,0.7s,baz=142,slow=9.9,SNR=223						
TXAR				PcP	PcP	03 01 27.6	+1.7
	comp=Z,15nm,0.8s,baz=151,slow=1.5,SNR=10						
TXAR				ScP	ScP	03 04 58.5	+2.6
	comp=Z,2.1nm,0.6s,baz=151,slow=5.7,SNR=6.8						
TXAR				PKiKP	PKiKP	03 09 13.3	-0.4
	comp=Z,0.5nm,0.5s,baz=92,slow=5.0,SNR=7.6						
Y51A	Rockmart	20.88	10	P	Pn	02 57 22.6	-0.8
	baz=191,SNR=262						
Z55A	Blythe	20.89	17	P	Pn	02 57 22.6	-0.8
	baz=200,SNR=24						
Y52A	Lilburn	21.03	12	P	P	02 57 24.1	+2.4
	baz=194,SNR=102						
158A	Hollywood	21.07	22	P	P	02 57 25.0	+2.9
	baz=205,SNR=14						
Y53A	Monroe	21.13	13	P	P	02 57 24.7	+1.9
	baz=195,SNR=113						
OXF	Oxford	21.15	360	P	P	02 57 25.1	+2.1
	baz=179,SNR=94						
X48A	Hartselle	21.18	5	P	P	02 57 25.2	+1.9
	baz=186,SNR=114						
X47A	Russelville	21.19	3	P	P	02 57 25.5	+2.0
	baz=184,SNR=150						
X46A	Booneville	21.20	1	P	P	02 57 25.7	+2.2
	baz=182,SNR=74						
X43A	Marvell	21.20	356	P	P	02 57 25.8	+2.2
	baz=175,SNR=30						
Z56A	Williston	21.21	18	P	P	02 57 26.2	+2.6
	baz=201,SNR=72						
X49A	Woodville	21.31	7	P	P	02 57 26.7	+2.0
	baz=188,SNR=60						
X50B	Fort Payne	21.34	8	P	P	02 57 26.9	+1.8
	baz=189,SNR=106						
Y54A	Tignall	21.34	15	P	P	02 57 26.9	+1.8
	baz=198,SNR=71						
X40A	Basin Creek Fa	21.37	352	P	P	02 57 26.8	+1.5
	baz=170,SNR=89						
Z57A	Bowman	21.40	20	P	P	02 57 28.1	+2.5
	baz=203,SNR=96						
ABTX	Abilene, Hawle	21.49	335	eP	P	02 57 26.9	+0.2
	comp=Z,940nm,1.5s						
ABTX	Abilene, Hawle	21.49	335	P	P	02 57 27.0	+0.3
	baz=151,SNR=146						
MIAR	Mount Ida	21.54	350	eP	P	02 57 28.3	+1.1
	comp=Z,1µm,1.6s						
MIAR	Mount Ida	21.54	350	eP	P	02 57 28.3	+1.1
MIAR				pmax	pmax		
	comp=Z,1µm,1.6s						
MIAR	Mount Ida	21.54	350	P	P	02 57 28.5	+1.3
	baz=168,SNR=327						
X51A	Calhoun	21.57	10	P	P	02 57 28.8	+1.3
	baz=192,SNR=28						
Y55A	Saluda	21.64	17	P	P	02 57 30.0	+1.7
	baz=200,SNR=69						
Y56A	Pelion	21.66	18	P	P	02 57 30.7	+2.2
	baz=201,SNR=25						
Z58A	St. Stephen	21.74	22	P	P	02 57 31.7	+2.4
	baz=205,SNR=64						
W46A	Michie	21.78	2	P	P	02 57 31.4	+1.7
	baz=182,SNR=18						
X52A	Dahlonega	21.78	12	P	P	02 57 31.3	+1.6
	baz=194,SNR=101						
X53A	Estanollee	21.81	13	P	P	02 57 31.7	+1.6
	baz=196,SNR=68						
Z59A	Georgetown, SC	21.86	23	P	P	02 57 32.9	+2.4
	baz=207,SNR=21						
W48A	Pulaski	21.87	5	P	P	02 57 32.5	+1.8
	baz=186,SNR=87						
W49A	Belvidere	21.92	7	P	P	02 57 32.7	+1.5
	baz=188,SNR=81						
W49A				S	S	03 01 29.4	+0.5
	baz=188						
W47A	Westpoint	21.93	4	P	P	02 57 33.0	+1.6
	baz=184,SNR=78						
W41B	Gary Mavity, V	21.98	353	P	P	02 57 33.3	+1.5
	baz=172,SNR=150						
X54A	Belton	22.07	15	P	P	02 57 34.6	+1.7
	baz=198,SNR=64						
W50A	Signal Mountai	22.12	9	P	P	02 57 34.6	+1.1
	baz=190,SNR=27						
Y57A	Sumter	22.16	20	P	P	02 57 35.9	+2.0
	baz=203,SNR=36						
W51A	Cleveland	22.16	10	P	P	02 57 35.5	+1.6
	baz=191,SNR=102						
X55A	Gracelyn & Ava	22.20	17	P	P	02 57 36.3	+2.1
	baz=200,SNR=81						
W39A	Magazine	22.21	350	P	P	02 57 35.5	+1.2
	baz=168,SNR=129						
W52A	Murphy	22.25	12	P	P	02 57 36.3	+1.5
	baz=194,SNR=34						
OBIP	Obispado Ponce	22.29	75	eP	P	02 57 34.5	-0.9
	comp=Z,340nm,1.7s						
Y58A	Scranton	22.31	21	P	P	02 57 37.1	+1.7
	baz=205,SNR=31						
X56A	White Oak	22.40	18	P	P	02 57 38.4	+2.1
	baz=201,SNR=31						
V46A	Holladay	22.45	2	P	P	02 57 37.5	+0.6
	baz=183,SNR=89						

V48A	Smith Brothers baz=186,SNR=87	22.48	5	P	P	02 57 38.3	+1.0
W53A	Cullowhee baz=195,SNR=27	22.48	13	P	P	02 57 38.8	+1.4
V47A	Nunnelly baz=184,SNR=169	22.51	4	P	P	02 57 38.4	+0.8
V49A	McMinnville baz=188,SNR=82	22.60	7	P	P	02 57 39.2	+0.7
V50A	Pikevile baz=190,SNR=75	22.61	9	P	P	02 57 39.5	+0.9
W54A	Cherokee Point baz=198,SNR=121	22.63	15	P	P	02 57 40.9	+2.0
LPIG	La Paz comp=Z,219nm,1.1s,baz=225,slow=1.3,SNR=15	22.65	301	P	P	02 57 42.0	+2.8
LPIG	comp=Z,3µm,21.8s,baz=116,slow=36			LR	LR	03 06 17.3	
X57A	Johnson Farm, baz=203,SNR=29	22.67	20	P	P	02 57 41.0	+1.7
Y59A	Loris baz=207,SNR=15	22.67	23	P	P	02 57 40.6	+1.4
SJG	San Juan comp=Z,31nm,0.5s,baz=268,slow=8.8,SNR=22	22.73	75	P	P	02 57 37.7	-2.4
SJG	comp=Z,47nm,0.9s,baz=2.8,slow=3.4,SNR=7.0			PcP	PcP	03 01 29.5	-0.1
SJG	comp=Z,18nm,0.9s,baz=263,slow=5.6,SNR=4.2			ScP	ScP	03 05 00.7	0.0
SJG	San Juan comp=Z,241nm,1.4s	22.73	75	*e*P	P	02 57 38.7	-1.4
SJG				*e*PcP	PcP	03 01 27.8	-1.9
SJG	San Juan	22.73	75	*e*P	P	02 57 38.7	-1.4
SJG				*e*		03 01 27.8	
SJG	comp=Z,241nm,1.4s			pmax	pmax		
SJG	San Juan	22.73	75	*e*P	P	02 57 36.9	-3.2
WVT	Waverly comp=Z,327nm,1.2s	22.80	3	*e*P	P	02 57 40.6	+0.1
WVT	Waverly	22.80	3	*e*P	P	02 57 40.6	+0.1
WVT	comp=Z,327nm,1.2s			pmax	pmax		
WVT	Waverly baz=183	22.80	3	P	P	02 57 41.0	+0.4
V51A	Loudon baz=192,SNR=26	22.86	10	P	P	02 57 42.1	+0.9
KMSC	Kings Mountain baz=200,SNR=70	22.92	17	P	P	02 57 43.3	+1.6
Y60A	Bolivia baz=208,SNR=10	22.94	24	P	P	02 57 43.2	+1.2
ATAH	Atahualpa comp=Z,23nm,1.0s,baz=337,slow=12,SNR=27	22.96	151	P	P	02 57 45.3	+2.5
ATAH	comp=Z,14nm,0.8s,baz=17,slow=5.2,SNR=4.6			PcP	PcP	03 01 32.9	+2.3
ATAH	comp=Z,14nm,0.9s,baz=21,slow=3.5,SNR=8.0			ScP	ScP	03 05 07.3	+5.5
U46A	Springville baz=182,SNR=227	23.01	2	P	P	02 57 43.2	+0.5
X58A	Rowland baz=205,SNR=30	23.01	21	P	P	02 57 44.1	+1.4
HUMP	Col San Antoni comp=Z,199nm,1.5s	23.02	75	*e*P	P	02 57 40.6	-2.4
HUMP				*e*PcP	PcP	03 01 30.7	+0.5
V52A	Sevierville baz=194,SNR=39	23.04	12	P	P	02 57 43.8	+0.8
V53A	Saluda baz=196,SNR=125	23.04	13	P	P	02 57 44.2	+1.1
WMOK	Wichita Mounta baz=156,SNR=366	23.05	340	P	P	02 57 42.3	-0.9
W56A	Indian Trail baz=202,SNR=78	23.13	18	P	P	02 57 45.0	+1.1
U47A	Clarksville baz=185,SNR=69	23.14	4	P	P	02 57 44.0	0.0
U40A	Yellville baz=171,SNR=221	23.21	353	P	P	02 57 45.7	+1.1
U48A	Cassie Pea, Po baz=186,SNR=78	23.27	6	P	P	02 57 45.2	+0.1
MTP	Monte Pirata comp=Z,91nm,0.7s	23.29	75	*e*P	P	02 57 43.5	-2.1
X59A	McDuffie Farm, baz=207,SNR=21	23.29	23	P	P	02 57 46.4	+1.0
TUL1	Leonard baz=164,SNR=65	23.30	346	P	P	02 57 45.2	-0.3
W57A	Gilead baz=203,SNR=90	23.33	19	P	P	02 57 46.5	+0.7
U49A	Red Boiling Sp baz=188,SNR=181	23.35	7	P	P	02 57 46.3	+0.3
V54A	Nebo baz=198,SNR=92	23.35	15	P	P	02 57 47.1	+1.1
U50A	Jamestown baz=191,SNR=76	23.38	9	P	P	02 57 46.7	+0.5
PBMO	Poplar Bluff comp=Z,1µm,1.3s	23.43	358	*e*P	P	02 57 47.5	+0.9
PBMO				*e*PcP	PcP	03 01 30.9	+0.1
W58A	Raeford baz=205,SNR=120	23.47	21	P	P	02 57 48.2	+1.2
U51A	La Follette baz=193,SNR=68	23.48	11	P	P	02 57 47.7	+0.6
X60A	Albert Glenn T baz=208,SNR=40	23.54	24	P	P	02 57 48.5	+0.9
MNTX	Cornudas Mount baz=137,SNR=92	23.59	324	P	P	02 57 48.0	-0.1
V55A	Taylorsville baz=200,SNR=28	23.61	16	P	P	02 57 49.5	+1.2
U52A	Thorn Hill baz=194,SNR=44	23.62	12	P	P	02 57 48.9	+0.5
T45A	Paducah baz=181,SNR=25	23.65	1	P	P	02 57 49.2	+0.5
T47A	Sharon Grove baz=185,SNR=219	23.69	4	P	P	02 57 49.5	+0.5
T46A	Princeton baz=183,SNR=59	23.70	3	P	P	02 57 49.6	+0.5
TZTN	Tazewell baz=194,SNR=51	23.73	11	P	P	02 57 50.2	+0.8
U53A	Fall Branch baz=196,SNR=190	23.76	13	P	P	02 57 50.4	+0.7
V56A	Mocksville baz=201,SNR=118	23.78	18	P	P	02 57 50.8	+1.0
T48A	Bowling Green baz=187,SNR=35	23.87	6	P	P	02 57 50.6	-0.1
W59A	Clinton baz=206,SNR=9.3	23.88	22	P	P	02 57 51.5	+0.8
T49A	Edmonton baz=189,SNR=5.4	23.96	7	P	P	02 57 52.1	+0.6
T50A	Nancy baz=190,SNR=38	23.97	9	P	P	02 57 51.8	+0.3
MSTX	Muleshoe baz=146,SNR=133	24.00	331	P	P	02 57 51.6	-0.3
W60A	Pink Hill baz=208,SNR=34	24.06	24	P	P	02 57 53.4	+1.2
T51A	Gray baz=192,SNR=45	24.07	10	P	P	02 57 53.2	+0.9
V57A	Coltrane Farms baz=203,SNR=97	24.07	19	P	P	02 57 53.5	+1.0
U54A	Nelsons Funny baz=198,SNR=133	24.09	15	P	P	02 57 53.7	+1.0
CNNC	Cliffs of the baz=208,SNR=20	24.15	23	P	P	02 57 54.4	+1.3
V58A	Windy Hill, Pi baz=204,SNR=90	24.21	20	P	P	02 57 54.8	+1.2
U55A	TA2, Sparta baz=200,SNR=104	24.27	16	P	P	02 57 55.5	+1.2
PCRV	Puerto La Cruz comp=Z,44nm,0.6s,baz=230,slow=4.1,SNR=24	24.28	95	P	P	02 57 53.6	-0.9
PCRV	comp=Z,16nm,0.8s,baz=216,slow=5.4,SNR=8.2			ScP	ScP	03 05 06.2	+1.3
AMTX	Amarillo baz=149	24.29	334	P	P	02 57 55.1	+0.6
S47A	Hartford baz=185,SNR=46	24.31	5	P	P	02 57 54.6	+0.1
U56A	King baz=201,SNR=32	24.31	18	P	P	02 57 56.0	+1.4
S44A	Carbondale baz=180,SNR=81	24.32	360	P	P	02 57 55.6	+1.0
S46A	Don Dixon Farm baz=183,SNR=42	24.35	3	P	P	02 57 55.3	+0.4
T53A	Wise baz=196,SNR=35	24.36	13	P	P	02 57 55.8	+0.7
T52A	Hallie baz=195,SNR=30	24.39	12	P	P	02 57 56.0	+0.7
S48A	Wiedeman Farm, baz=187,SNR=35	24.45	6	P	P	02 57 55.9	0.0
W61A	Ground Anchor baz=210,SNR=15	24.46	25	P	P	02 57 57.3	+1.5
V59A	Middlesex baz=206,SNR=60	24.49	22	P	P	02 57 57.0	+0.8
T54A	Tazewell baz=198,SNR=58	24.66	15	P	P	02 57 58.2	+0.4
S49A	Springfield baz=189,SNR=43	24.66	8	P	P	02 57 57.9	+0.1
S50A	Richmond baz=191,SNR=17	24.69	9	P	P	02 57 58.4	+0.4
U57A	Blanch baz=203,SNR=109	24.71	19	P	P	02 57 59.3	+1.1
CCM	Cathedral Cave comp=Z,599nm,1.0s	24.75	356	*e*P	P	02 57 59.1	+0.6
CCM				*e*ScP	ScP	03 05 06.8	+1.0
CCM	Cathedral Cave	24.75	356	*e*P	P	02 57 59.1	+0.6
CCM	comp=Z,599nm,1.0s			pmax	pmax		
CCM	Cathedral Cave baz=175	24.75	356	P	P	02 57 59.2	+0.7
S51A	Beattyville baz=193,SNR=61	24.78	11	P	P	02 57 59.5	+0.6
V60A	Jim Taylor Roa baz=208,SNR=26	24.86	24	P	P	02 58 00.7	+1.2
R46A	Gibon Southern baz=184,SNR=18	24.89	3	P	P	02 58 00.3	+0.5
S52A	Salyersville baz=194,SNR=32	24.92	12	P	P	02 58 00.7	+0.6
T55A	Pulaski baz=200,SNR=57	24.92	16	P	P	02 58 01.2	+1.0
R45A	Skylar, Fairfi baz=182,SNR=40	24.93	2	P	P	02 58 01.0	+0.8
U58A	Oxford baz=205,SNR=27	24.94	21	P	P	02 58 00.9	+0.5
WCI	Wyandotte Cave comp=Z,615nm,1.0s	24.99	5	*e*P	P	02 58 01.0	+0.3
WCI	Wyandotte Cave	24.99	5	*e*P	P	02 58 01.0	+0.3
WCI	comp=Z,615nm,1.0s			pmax	pmax		
WCI	Wyandotte Cave baz=187	24.99	5	P	P	02 58 01.1	+0.3
R47A	Wooly Knot Far baz=186,SNR=36	25.04	5	P	P	02 58 01.2	+0.1
T56A	Rocky Mt baz=201,SNR=41	25.05	18	P	P	02 58 02.5	+1.2
BLA	Blacksburg baz=200,SNR=46	25.11	17	P	P	02 58 03.1	+1.2
S53A	Williamson baz=196,SNR=27	25.12	13	P	P	02 58 02.5	+0.5
V61A	Roper baz=210,SNR=12	25.16	25	P	P	02 58 03.6	+1.4
U59A	Littleton baz=207,SNR=51	25.18	22	P	P	02 58 03.4	+0.9
R49A	Shelbyville baz=189,SNR=35	25.18	8	P	P	02 58 02.6	+0.2
R48A	Northridge Ran baz=188,SNR=21	25.20	6	P	P	02 58 03.0	+0.3
V62A	Hyde County Ai baz=211	25.22	26	P	P	02 58 04.1	+1.3
T57A	Hurt baz=203,SNR=42	25.26	19	P	P	02 58 04.4	+1.2
R50A	Paris baz=191,SNR=20	25.29	9	P	P	02 58 03.8	+0.4
S54A	Dingess, Beckl baz=198,SNR=29	25.43	15	P	P	02 58 05.4	+0.6
R51A	Hillsboro baz=193,SNR=20	25.43	10	P	P	02 58 05.4	+0.6
T58A	Grand View Acr baz=205,SNR=33	25.45	20	P	P	02 58 05.6	+0.7
U60A	Pendleton baz=208,SNR=25	25.52	23	P	P	02 58 06.6	+1.0
HSIG		25.53	311	*e*P	P	02 58 05.7	-0.1
HSIG				*e*PcP	PcP	03 01 37.4	+1.9
HSIG				*e*ScP	ScP	03 05 13.2	+4.9
Q45A	Warren Harvey, baz=182,SNR=52	25.54	2	P	P	02 58 06.4	+0.7
121A	Cookes Peak, D baz=134,SNR=6.5	25.60	322	P	P	02 58 08.6	+2.0
S55A	Lewisburg baz=200,SNR=32	25.61	16	P	P	02 58 07.5	+1.0
R52A	Catlettsburg baz=195,SNR=10	25.64	12	P	P	02 58 06.9	+0.2
SRIG	Santa Rosalia comp=Z,382nm,1.3s	25.64	307	*e*P	P	02 58 09.0	+2.2
U61A	Possum Corner baz=210	25.68	24	P	P	02 58 08.1	+1.1
Q47A	Bedord North L baz=186,SNR=54	25.68	5	P	P	02 58 07.2	+0.2
Q46A	CEJHS Indians, baz=184	25.70	3	P	P	02 58 07.6	+0.4
Q48A	North Vernon baz=188,SNR=30	25.74	6	P	P	02 58 07.5	-0.1
R53A	Hurricane baz=196,SNR=21	25.78	13	P	P	02 58 08.6	+0.7
S56A	Natural Bridge baz=202,SNR=29	25.79	18	P	P	02 58 09.1	+1.1
T59A	Double "B" Far baz=207,SNR=78	25.81	22	P	P	02 58 09.3	+1.1
R54A	Victor baz=198,SNR=19	25.87	15	P	P	02 58 09.4	+0.6
Q50A	Georgetown baz=192,SNR=8.2	25.89	9	P	P	02 58 09.1	+0.2
Q49A	Aurora baz=190,SNR=35	25.92	8	P	P	02 58 09.3	+0.2
S57A	Dark Hollow, R baz=203,SNR=32	26.05	19	P	P	02 58 11.2	+0.8
Q51A	Peebles baz=193,SNR=31	26.18	10	P	P	02 58 12.3	+0.8
P45A	Graceland, Par baz=183,SNR=13	26.18	3	P	P	02 58 12.1	+0.5
R55A	Marlinton baz=200,SNR=50	26.19	16	P	P	02 58 13.0	+1.3
Y22D	IRIS PASSCAL I baz=138,SNR=14	26.21	325	P	P	02 58 13.8	+1.8
S58A	Poland Farm, P baz=205,SNR=18	26.21	20	P	P	02 58 12.5	+0.7
P47A	Martinsville baz=186,SNR=24	26.24	5	P	P	02 58 12.0	0.0
P43A	Skaggs, Pawnee baz=179,SNR=48	26.27	360	P	P	02 58 12.9	+0.6
T60A	Surry baz=208,SNR=15	26.27	23	P	P	02 58 13.2	+0.9
P48A	Milroy baz=188,SNR=38	26.30	7	P	P	02 58 12.2	-0.4
P46A	Rosedale baz=184,SNR=21	26.30	4	P	P	02 58 13.0	+0.4
Q52A	Bidwell baz=195,SNR=18	26.32	12	P	P	02 58 13.4	+0.6
Q53A	Leroy baz=197,SNR=39	26.38	14	P	P	02 58 14.3	+1.0
P49A	Miami Univ. Ec baz=190,SNR=32	26.46	8	P	P	02 58 13.6	-0.5
R56A	Bull Pasture M baz=202,SNR=32	26.51	17	P	P	02 58 15.8	+1.2
KSU1	Kansas State U baz=164,SNR=99	26.54	347	P	P	02 58 15.2	+0.4
R58B	Mineral baz=205,SNR=33	26.59	20	P	P	02 58 16.2	+1.0
S59A	Mechanicsville baz=206,SNR=8.1	26.61	21	P	P	02 58 16.4	+1.0
ANMO	Albuquerque comp=Z,15nm,1.0s,baz=147,slow=10,SNR=33	26.61	327	P	P	02 58 16.7	+0.9
ANMO	comp=Z,17nm,0.7s,baz=136,slow=5.2,SNR=7.7			PcP	PcP	03 01 39.1	+0.9
ANMO	comp=Z,1.9nm,0.6s,baz=123,slow=4.8,SNR=3.4			ScP	ScP	03 05 16.3	+4.8
ANMO	Albuquerque comp=Z,48nm,1.3s	26.61	327	*e*P	P	02 58 16.9	+1.1
ANMO				*e*PcP	PcP	03 01 39.1	+0.9
ANMO	Albuquerque	26.61	327*c*	*i*P	P	02 58 16.8	+1.1
ANMO	comp=Z,53nm,2.1s			pmax	pmax		
ANMO	Albuquerque baz=140	26.61	327	P	P	02 58 16.8	+1.0
TASM	ASL Pad, Albuq baz=140,SNR=30	26.61	327	P	P	02 58 16.9	+1.1
TASM	ASL Pad, Albuq baz=140,SNR=26	26.61	327	P	P	02 58 16.9	+1.1
P50A	Jamestown baz=192,SNR=25	26.67	9	P	P	02 58 16.1	+0.2
Q54A	Coxs Mills baz=198,SNR=73	26.67	15	P	P	02 58 16.9	+0.9
P51A	Williamsport baz=193,SNR=19	26.67	11	P	P	02 58 16.3	+0.4
R57A	Stanardsville baz=204,SNR=42	26.68	19	P	P	02 58 16.9	+0.9
O44A	Mansfield baz=182,SNR=26	26.79	1	P	P	02 58 17.4	+0.4
S60A	Water View baz=208,SNR=16	26.80	23	P	P	02 58 18.3	+1.3
R58A	Rapidan baz=205,SNR=40	26.85	20	P	P	02 58 18.6	+1.1
Q55A	Buckhannon baz=200,SNR=27	26.87	16	P	P	02 58 18.7	+0.9
O45A	Potomac baz=183,SNR=12	26.91	3	P	P	02 58 18.5	+0.5
CBN	Corbin Frederi baz=206,SNR=22	26.98	21	P	P	02 58 20.1	+1.4
O47A	Sheridan baz=186,SNR=52	26.99	5	P	P	02 58 18.5	-0.3
P52A	Corning baz=195,SNR=7.5	27.00	12	P	P	02 58 19.2	+0.4
P53A	Whipple baz=197,SNR=40	27.02	13	P	P	02 58 20.0	+1.0
R59A	King George, V baz=206,SNR=40	27.07	21	P	P	02 58 20.9	+1.4
SFIN	Lafayette baz=184,SNR=11	27.07	4	P	P	02 58 19.4	-0.1
CBKS	Cedar Bluff baz=157,SNR=20	27.09	342	P	P	02 58 20.3	+0.5
O48A	Farmland baz=189,SNR=16	27.12	7	P	P	02 58 19.5	-0.4
O49A	Covington baz=190,SNR=27	27.16	8	P	P	02 58 20.1	-0.2
Q56A	Snyder Ridge, baz=202,SNR=36	27.16	17	P	P	02 58 22.0	+1.6
HDIL	Hopedale baz=180,SNR=28	27.18	360	P	P	02 58 20.9	+0.4
O50A	Cable baz=192,SNR=72	27.22	9	P	P	02 58 21.2	+0.3
R60A	Leonardtown, M baz=208,SNR=6.0	27.32	22	P	P	02 58 23.3	+1.5
P54A	Burton baz=199,SNR=92	27.34	15	P	P	02 58 22.7	+0.7
TUC	Tucson comp=Z,66nm,1.1s	27.36	317	*e*P	P	02 58 24.1	+1.8
TUC				*e*PcP	PcP	03 01 41.9	+2.1
TUC				*e*ScP	ScP	03 05 18.0	+4.4
TUC	Tucson	27.36	317	*e*P	P	02 58 24.1	+1.8
TUC				*e*		03 01 41.9	
TUC	comp=Z,66nm,1.1s			pmax	pmax		
TUC	Tucson baz=129	27.36	317	P	P	02 58 23.7	+1.5
N41A	Harden Midland baz=176,SNR=11	27.37	357	P	P	02 58 22.4	+0.2
T25A	Trinidad baz=146,SNR=120	27.37	333	P	P	02 58 24.1	+1.6
Q57A	Strasburg baz=203,SNR=26	27.39	19	P	P	02 58 23.5	+1.1
O51A	Pataskala baz=194,SNR=32	27.40	11	P	P	02 58 22.7	+0.2
ACSO	Alum Creek Sta baz=193,SNR=30	27.41	10	P	P	02 58 23.0	+0.4
P55A	Reedsville baz=200,SNR=28	27.42	16	P	P	02 58 23.6	+0.9
N44A	Piper City baz=182,SNR=36	27.43	2	P	P	02 58 22.7	-0.1
N45A	Kentland baz=184,SNR=6.8	27.51	3	P	P	02 58 23.3	-0.2
O52A	Adamsville baz=196,SNR=27	27.52	12	P	P	02 58 23.9	+0.3
Q58A	Fox Den Farm, baz=205,SNR=15	27.54	20	P	P	02 58 24.6	+0.9
MCWV	Mont Chateau baz=200,SNR=26	27.56	16	P	P	02 58 24.6	+0.8
N43A	Stutzman Famil baz=180,SNR=45	27.56	0	P	P	02 58 24.6	+0.7
N40A	Mertquake, Sal baz=175,SNR=28	27.58	356	P	P	02 58 24.4	+0.3
N46A	Monticello baz=185,SNR=22	27.60	4	P	P	02 58 24.0	-0.3
N47A	Urbana baz=187,SNR=15	27.68	6	P	P	02 58 24.2	-0.7
P56A	Dayton Farm, R baz=202,SNR=37	27.69	17	P	P	02 58 26.4	+1.3
N48A	Decatur baz=189,SNR=22	27.73	7	P	P	02 58 24.9	-0.5
O53A	New Philadelph baz=197,SNR=38	27.78	13	P	P	02 58 26.3	+0.4
Q59A	Harwood baz=207	27.82	21	P	P	02 58 27.4	+1.2
R61A	Willards baz=210	27.84	24	P	P	02 58 28.1	+1.7
N49A	Columbus Grove baz=190,SNR=18	27.90	8	P	P	02 58 26.7	-0.2
N50A	Nevada baz=193,SNR=20	27.91	10	P	P	02 58 27.1	+0.1
O54A	Avella baz=198,SNR=38	27.91	15	P	P	02 58 27.5	+0.4
P57A	Homestead Farm baz=204,SNR=54	27.93	19	P	P	02 58 28.6	+1.4
NNA	Nana comp=Z,3.9nm,0.3s,baz=304,slow=7.5,SNR=5.3	27.95	153	P	P	02 58 30.0	+2.4
NNA	comp=Z,5.1nm,0.3s,baz=320,slow=4.7,SNR=5.0			PcP	PcP	03 01 42.8	+1.3
NNA	Nana comp=Z,48nm,1.4s	27.95	153	*e*P	P	02 58 27.2	-0.4
NNA	Nana	27.95	153	*i* P	P	02 58 30.6	+3.0
M41A	Milan baz=177,SNR=40	28.02	358	P	P	02 58 28.4	+0.4
M44A	Midewin, Midew baz=182,SNR=11	28.03	2	P	P	02 58 27.8	-0.2
M43A	Waltham Townsh baz=180,SNR=45	28.06	0	P	P	02 58 28.6	+0.2
M45A	Boilermakers S baz=184	28.06	3	P	P	02 58 28.1	-0.2
M46A	Old House Fiel baz=186,SNR=7.7	28.14	5	P	P	02 58 28.4	-0.6
M47A	Cromwell baz=187,SNR=19	28.16	6	P	P	02 58 28.8	-0.5
P58A	Pank, Wackersv baz=205,SNR=22	28.16	20	P	P	02 58 30.4	+1.1
N51A	Ashland baz=194,SNR=9.8	28.19	11	P	P	02 58 29.5	0.0
O55A	Ligonier baz=201,SNR=16	28.22	16	P	P	02 58 30.3	+0.5
N52A	McGinn’s Farm, baz=196,SNR=11	28.22	12	P	P	02 58 30.0	+0.2
Q60A	Greensboro baz=208	28.24	22	P	P	02 58 31.1	+1.2
KSCO	Kaye Shedlock’ baz=152,SNR=14	28.25	338	P	P	02 58 30.9	+0.7
X18A	Snowflake comp=Z,109nm,1.6s	28.29	322	*e*P	P	02 58 32.3	+1.6
X18A				*e*PcP	PcP	03 01 44.1	+1.9
Q61A	Milford baz=209	28.33	23	P	P	02 58 32.4	+1.7
SDCO	Great Sand Dun baz=145,SNR=39	28.36	332	P	P	02 58 32.8	+1.4
M48A	Edgerton baz=189	28.38	7	P	P	02 58 30.5	-0.7
N53A	Lisbon baz=197,SNR=30	28.40	13	P	P	02 58 31.7	+0.3
M49A	Liberty Center baz=191,SNR=8.0	28.47	8	P	P	02 58 31.6	-0.4
O56A	Blue Knob Stat baz=202,SNR=27	28.48	17	P	P	02 58 33.0	+0.9
214A	Organ Pipe Nat baz=125,SNR=41	28.51	315	P	P	02 58 34.2	+1.6
M50A	Fremont baz=192,SNR=31	28.54	10	P	P	02 58 32.8	+0.1
P59A	Jarrettsville baz=207,SNR=22	28.56	21	P	P	02 58 33.8	+1.0
W18A	Petrified Fore baz=134,SNR=15	28.57	323	P	P	02 58 34.8	+1.6
M51A	Elyria baz=194,SNR=7.0	28.62	11	P	P	02 58 33.3	0.0
L42A	Oliver, Polo baz=179,SNR=46	28.63	359	P	P	02 58 33.7	+0.3
O57A	Amberson baz=204,SNR=28	28.71	19	P	P	02 58 34.9	+0.8
L40A	Anamosa baz=176,SNR=118	28.74	357	P	P	02 58 34.9	+0.6
SCIA	State Center baz=172,SNR=8.9	28.74	354	P	P	02 58 34.8	+0.4
N54A	Moraine State baz=199,SNR=55	28.75	15	P	P	02 58 35.1	+0.6
L46A	Eue Claire baz=186,SNR=8.6	28.75	5	P	P	02 58 33.5	-1.0
L47A	Sherwood baz=188,SNR=54	28.81	6	P	P	02 58 34.3	-0.7
L44A	Lake County Fo baz=182,SNR=11	28.82	2	P	P	02 58 34.8	-0.3
N55A	Marion Center baz=201,SNR=33	28.84	16	P	P	02 58 35.7	+0.4
O58A	Lewisberry baz=205,SNR=24	28.86	20	P	P	02 58 36.4	+1.0
L48A	N Adams baz=190,SNR=16	28.87	7	P	P	02 58 35.0	-0.6
PLIO	Pelee Island, baz=193,SNR=14	28.95	10	P	P	02 58 36.3	+0.1
S22A	4UR Ranch, Cre baz=143,SNR=74	28.98	330	P	P	02 58 38.5	+1.5
M52A	Chesterland	28.99	12	P	P	02 58 36.5	-0.1

	baz=196,SNR=6.6						
SSPA	Standing Stone	29.02	18	*e*P	P	02 58 37.4	+0.6
	comp=Z,228nm,1.4s						
SSPA	Standing Stone	29.02	18	P	P	02 58 37.6	+0.7
	baz=203						
P60A	Greenville	29.02	22	P	P	02 58 37.7	+0.8
	baz=208,SNR=21						
M53A	WI Miller and	29.04	13	P	P	02 58 37.3	+0.3
	baz=197,SNR=20						
BGNE	Belgrade	29.09	346	P	P	02 58 38.4	+0.9
	baz=162,SNR=16						
L49A	Milan	29.12	8	P	P	02 58 37.6	-0.2
	baz=191,SNR=7.1						
N56A	West Decatur	29.16	17	P	P	02 58 38.8	+0.6
	baz=202,SNR=54						
L50A	Kingsville	29.20	10	P	P	02 58 38.5	0.0
	baz=193,SNR=12						
Q24A	Divide	29.21	334	P	P	02 58 40.0	+1.0
	baz=147,SNR=11						
P61A	Hammonton	29.22	23	P	P	02 58 39.5	+0.9
	baz=210						
N57A	Milroy	29.23	18	P	P	02 58 39.2	+0.4
	baz=204,SNR=14						
O59A	Robesonia	29.27	21	P	P	02 58 40.2	+1.1
	baz=206,SNR=32						
AAM	Ann Arbor	29.32	8	P	P	02 58 39.4	-0.2
	baz=191,SNR=13						
K43A	Burlington	29.34	1	P	P	02 58 39.3	-0.3
	baz=182,SNR=18						
M54A	Oil Creek Stat	29.34	15	P	P	02 58 40.1	+0.3
	baz=199,SNR=29						
MVCO	Mesa Verde	29.41	328	P	P	02 58 42.0	+1.3
	baz=139,SNR=34						
BBSR	BB Station	29.42	46	*e*P	P	02 58 41.7	+1.2
	comp=Z,791nm,1.8s						
K46A	Dorr	29.46	5	P	P	02 58 39.4	-1.3
	baz=187,SNR=24						
K47A	Vermontville	29.52	6	P	P	02 58 40.5	-0.8
	baz=188,SNR=55						
M55A	Ridgway	29.54	16	P	P	02 58 42.0	+0.5
	baz=201,SNR=46						
JFWS	Jewell Farm	29.55	358	P	P	02 58 42.0	+0.4
	baz=178,SNR=59						
O60A	Telford	29.55	22	P	P	02 58 42.6	+1.0
	baz=208,SNR=12						
L53A	Girard	29.62	14	P	P	02 58 42.4	+0.2
	baz=198,SNR=15						
O61A	Allentown	29.68	23	P	P	02 58 43.4	+0.8
	baz=210,SNR=10						
M56A	Emporium	29.71	17	P	P	02 58 43.6	+0.6
	baz=202,SNR=51						
K48A	Perry	29.75	8	P	P	02 58 42.7	-0.7
	baz=190,SNR=38						
OGNE	Ogallala	29.76	340	P	P	02 58 44.6	+1.1
	baz=154						
WUAZ	Wupatki	29.81	322	P	P	02 58 45.9	+1.7
	baz=132,SNR=18						
K49A	Clarkson	29.83	9	P	P	02 58 43.7	-0.3
	baz=191,SNR=55						
K50A	Casco	29.95	10	P	P	02 58 44.7	-0.3
	baz=193,SNR=6.2						
N59A	State Game Lan	29.96	21	P	P	02 58 46.2	+1.0
	baz=207,SNR=42						
K51A	Iona Station	30.10	11	P	P	02 58 45.8	-0.6
	baz=195						
J47A	Sunmer	30.10	6	P	P	02 58 45.5	-0.9
	baz=188,SNR=23						
ISCO	Idaho Springs	30.11	334	P	P	02 58 48.1	+1.2
	baz=147,SNR=126						
L54A	Sinclairville	30.11	15	P	P	02 58 46.7	+0.1
	baz=199,SNR=11						
J46A	Howard City	30.13	5	P	P	02 58 45.6	-1.1
	baz=187,SNR=5.5						
N60A	Cedar Hill Far	30.15	22	P	P	02 58 47.7	+0.8
	baz=208,SNR=16						
J45A	Montague	30.16	4	P	P	02 58 45.7	-1.2
	baz=185						
J48A	Bridge Port	30.29	8	P	P	02 58 47.3	-0.7
	baz=190,SNR=13						
L55A	Hinsdale	30.29	16	P	P	02 58 48.6	+0.4
	baz=201,SNR=38						
K52A	Tillsonburg	30.31	12	P	P	02 58 48.1	-0.2
	baz=196,SNR=9.3						
J49A	Marlette	30.44	9	P	P	02 58 48.7	-0.7
	baz=192,SNR=28						
I42A	Draeger Farm,	30.51	0	P	P	02 58 50.4	+0.3
	baz=180,SNR=94						
GLA	Glamis	30.54	314	P	P	02 58 52.4	+1.9
	baz=124,SNR=26						
K54A	Basiliko Farm,	30.62	15	P	P	02 58 51.4	+0.3
	baz=200,SNR=19						
M59A	Waymart	30.63	21	P	P	02 58 51.9	+0.8
	baz=207,SNR=45						
I41A	Arkdale	30.68	359	P	P	02 58 52.0	+0.4
	baz=179,SNR=162						
PAL	Palisades	30.71	23	P	P	02 58 52.5	+0.7
	baz=210,SNR=17						
Y12C	Blythe	30.73	316	*e*P	P	02 58 54.3	+2.2
	comp=Z,108nm,1.4s						
Y12C				*e*PcP	PcP	03 01 50.3	+2.1
Y12C				*e*ScP	ScP	03 05 27.8	+3.7
Y12C	Blythe	30.73	316	P	P	02 58 53.6	+1.5
	baz=126,SNR=7.8						
I46A	Reed City	30.73	5	P	P	02 58 50.9	-1.1
	baz=187,SNR=14						
I45A	Fountain	30.77	4	P	P	02 58 51.6	-0.6
	baz=186,SNR=18						
PDMCI	Parker Dam,Lak	30.79	317	P	P	02 58 54.0	+1.3
	baz=127,SNR=28						
TYNO	Tyneside	30.80	13	P	P	02 58 52.5	0.0
	baz=198,SNR=11						
J52A	Paris	30.80	13	P	P	02 58 52.4	-0.2
	baz=197,SNR=31						
K55A	Perry	30.90	16	P	P	02 58 53.8	+0.2
	baz=201,SNR=26						
I47A	Gladwin	30.91	7	P	P	02 58 52.6	-1.0
	baz=189,SNR=20						
ECSD	EROS Data Cent	31.01	350	P	P	02 58 54.2	-0.3
	baz=166,SNR=109						
M61A	Granite Spring	31.03	23	P	P	02 58 55.2	+0.6
	baz=210,SNR=35						
BINY	Binghamton	31.03	19	P	P	02 58 55.2	+0.6
	baz=206,SNR=25						
I49A	Point Hope	31.05	9	P	P	02 58 54.2	-0.6
	baz=192,SNR=22						
STCO	Saint Catharin	31.07	14	P	P	02 58 54.9	-0.1
	baz=199						
H43A	Windswept, Lux	31.12	2	P	P	02 58 55.1	-0.2
	baz=183,SNR=16						
SWSC	Sam W. Stewart	31.16	313	P	P	02 58 57.8	+1.9
	baz=123,SNR=23						
N23A	Red Feather La	31.16	335	P	P	02 58 57.3	+1.1
	baz=147,SNR=54						
I48A	Sherman Twp	31.17	8	P	P	02 58 55.3	-0.6
	baz=190,SNR=17						
MEDO	Medina	31.20	15	P	P	02 58 56.4	+0.2
	baz=200,SNR=14						
IKP	In-Ko-Pah, Jac	31.22	313	P	P	02 58 58.8	+2.2
	baz=122,SNR=26						
I51A	Listowel	31.23	12	P	P	02 58 56.0	-0.4
	baz=195,SNR=32						
ACTO	Acton	31.24	13	P	P	02 58 56.5	0.0
	baz=197,SNR=27						
J54A	Appleton	31.26	15	P	P	02 58 56.8	+0.2
	baz=200,SNR=17						
BC3	Big Chuckawall	31.31	315	P	P	02 58 59.2	+1.9
	baz=124,SNR=56						
BASO	Ashfield	31.32	11	P	P	02 58 56.9	-0.2
	baz=194,SNR=22						
H46A	Fife Lake	31.35	6	P	P	02 58 56.1	-1.4
	baz=187,SNR=17						
H45A	Beulah	31.36	4	P	P	02 58 56.7	-0.8
	baz=186,SNR=9.9						
IRM	Iron Mountain	31.38	316	P	P	02 58 59.8	+1.9
	baz=125,SNR=11						
NEE2	Needles Airpor	31.39	317	P	P	02 58 59.4	+1.5
	baz=127						
TORO	Toronto--Lesli	31.41	14	P	P	02 58 57.7	-0.3
	baz=199						
J55A	Hilton	31.47	16	P	P	02 58 58.5	0.0
	baz=202,SNR=15						
BWLO	Walkerton	31.51	11	P	P	02 58 58.8	-0.1
	baz=195,SNR=24						
H47A	Mio	31.52	7	P	P	02 58 58.0	-0.8
	baz=189,SNR=12						
O20A	White River Ci	31.55	331	P	P	02 59 01.1	+1.7
	baz=143,SNR=107						
I53A	Kortright Cn E	31.55	13	P	P	02 58 58.9	-0.3
	baz=198						
MONP2	Monument Peak	31.57	313	P	P	02 59 01.5	+1.7
	baz=122,SNR=28						
BRCO	Bruce Peninsul	31.58	11	P	P	02 58 59.3	-0.1
	baz=194,SNR=10						
BAR	Barrett	31.64	312	*e*P	P	02 59 02.8	+2.6
	comp=Z,88nm,1.7s						
BAR				*e*PcP	PcP	03 01 52.8	+2.0
BAR				*e*ScP	ScP	03 05 31.4	+4.1
I52A	Shelburne	31.66	12	P	P	02 58 59.9	-0.3
	baz=197						
GLMI	Grayling	31.69	6	P	P	02 58 59.7	-0.8
	baz=188,SNR=10.0						
H48A	Harrisville	31.73	8	P	P	02 59 00.3	-0.4
	baz=191,SNR=44						
DRWO	Darlington Wes	31.80	14	P	P	02 59 01.2	-0.1
	baz=200,SNR=12						
PKRO	Pickering	31.80	14	P	P	02 59 01.3	-0.1
	baz=199,SNR=18						
G45A	Suttons Bay	31.81	5	P	P	02 59 00.9	-0.5
	baz=186,SNR=32						
DRCO	St. Marys Ceme	31.81	15	P	P	02 59 01.7	+0.2
	baz=200,SNR=5.9						
BELC	Belle Mtn. Jos	31.88	315	P	P	02 59 04.0	+1.6
	baz=124,SNR=19						
G40A	Rib Lake	31.90	359	P	P	02 59 02.4	+0.1
	baz=178,SNR=101						
WLVO	Wesleyville	31.93	15	P	P	02 59 02.8	+0.3
	baz=200,SNR=38						
G39A	Holcombe	31.95	357	P	P	02 59 02.7	0.0
	baz=176,SNR=139						
BMRO	Meriville Lake	31.96	11	P	P	02 59 02.4	-0.3
	baz=195,SNR=20						
PFO	Pinyon Flats O	31.98	314	P	P	02 59 05.0	+1.7
	comp=Z,20nm,1.1s,baz=123,slow=10,SNR=16						
PFO				PcP	PcP	03 01 53.3	+1.5
	comp=Z,24nm,0.9s,baz=110,slow=4.1,SNR=11						
PFO	Pinyon Flats O	31.98	314	*e*P	P	02 59 05.3	+2.0
	comp=Z,92nm,1.4s						
PFO	Pinyon Flats O	31.98	314	*e*P	P	02 59 05.3	+2.0
PFO				pmax	pmax		
	comp=Z,92nm,1.4s						
PFO	Pinyon Flats O	31.98	314	P	P	02 59 04.4	+1.1
	baz=123,SNR=17						
SPMN	Marine on St.	31.99	355	P	P	02 59 02.9	-0.1
	baz=173,SNR=117						
109C	Camp Elliot, M	32.06	312	P	P	02 59 05.7	+1.8
	baz=121,SNR=8.0						
CPE	Camp Elliot	32.06	312	*e*P	P	02 59 06.2	+2.4
	comp=Z,82nm,1.3s						
CPE				*e*PcP	PcP	03 01 53.9	+2.1
GMRC	Granite Mounta	32.09	316	P	P	02 59 06.1	+1.9
	baz=125,SNR=34						
G47A	Hillman	32.12	7	P	P	02 59 03.3	-0.8
	baz=190,SNR=24						
G46A	Petoskey	32.15	6	P	P	02 59 03.7	-0.8
	baz=188						
SUSD	Miller	32.16	347	P	P	02 59 04.7	+0.2
	baz=162,SNR=18						
PTGA	Pitinga	32.18	113	P	P	02 59 03.7	-1.4
	comp=Z,14nm,0.6s,baz=304,slow=9.2,SNR=27						
PTGA				PcP	PcP	03 01 53.4	+1.0
	comp=Z,17nm,0.7s,baz=286,slow=4.5,SNR=7.1						
PTGA				ScP	ScP	03 05 32.1	+2.7
	comp=Z,5.8nm,0.8s,baz=249,slow=2.9,SNR=7.3						
PTGA	Pitinga	32.18	113	*e*P	P	02 59 03.8	-1.3
	comp=Z,150nm,1.8s						
PTGA	Pitinga	32.18	113	*e*P	P	02 59 04.1	-1.0
H52A	Wyevale	32.27	13	P	P	02 59 05.3	-0.2
	baz=197,SNR=32						
PECO	Prince Edward	32.31	17	P	P	02 59 05.7	-0.1
	baz=203,SNR=9.9						
I55A	Frankford	32.39	16	P	P	02 59 06.5	0.0
	baz=201,SNR=43						
F42A	Maple Grove Fa	32.39	1	P	P	02 59 05.8	-0.7
	baz=182,SNR=10						
F45A	CMU Biological	32.46	5	P	P	02 59 06.5	-0.6
	baz=187,SNR=20						
F37A	Hinrichs Farm,	32.47	356	P	P	02 59 07.0	-0.2
	baz=174,SNR=17						
MURC	Murrieta	32.50	313	P	P	02 59 09.6	+2.0
	baz=122,SNR=12						
M65A	Busby, Falmout	32.51	26	P	P	02 59 07.5	-0.1
	baz=215						
TOBO	Tobermory, Bru	32.52	10	P	P	02 59 07.2	-0.4
	baz=194,SNR=20						
F40A	Park Falls	32.55	359	P	P	02 59 08.0	+0.1
	baz=178,SNR=232						
SADO	Sadowa	32.55	13	P	P	02 59 07.2	-0.7
	comp=Z,57nm,0.5s,baz=248,slow=6.4,SNR=98						
F39A	Loretta	32.57	358	P	P	02 59 07.8	-0.3
	baz=177,SNR=60						
HEC	Hector,Ludlow	32.57	316	P	P	02 59 10.3	+2.0
	baz=124,SNR=12						
TUQ	Turquoise Moun	32.64	317	P	P	02 59 10.8	+1.7
	baz=126,SNR=19						
F38A	Pierce - Schro	32.66	357	P	P	02 59 08.8	-0.1
	baz=175,SNR=115						
BBRC	Big Bear Solar	32.66	315	P	P	02 59 10.8	+1.5
	baz=123						
DELO	Deloro Mine	32.69	15	P	P	02 59 09.0	-0.1
	baz=201,SNR=41						
H55A	Tweed	32.83	16	P	P	02 59 10.2	-0.2
	baz=202,SNR=32						
K22A	Casper	32.88	336	P	P	02 59 12.1	+1.1
	baz=148,SNR=64						
KLBO	Killbear Provi	32.88	12	P	P	02 59 10.3	-0.5
	baz=196,SNR=18						
HRV	Adam Dziewonsk	32.91	24	*e*P	P	02 59 11.8	+0.7
	comp=Z,225nm,1.5s						
HRV	Adam Dziewonsk	32.91	24	*e*P	P	02 59 11.8	+0.7
HRV				pmax	pmax		
	comp=Z,225nm,1.5s						
F48A	Evansville	32.93	9	P	P	02 59 10.5	-0.7
	baz=192,SNR=64						
F49A	Sandfield	32.95	9	P	P	02 59 10.4	-1.0
	baz=193,SNR=28						
G53A	Haliburton	33.00	14	P	P	02 59 11.7	-0.2
	baz=199,SNR=59						
RRX	Edison Barstow	33.05	315	P	P	02 59 14.5	+2.0
	baz=124						
E43A	Lone Tree Farm	33.05	3	P	P	02 59 11.9	-0.3
	baz=184,SNR=23						
BANO	Bancroft	33.08	15	P	P	02 59 12.3	-0.2
	baz=200,SNR=26						
H56A	Elgin	33.12	17	P	P	02 59 13.0	+0.1
	baz=203,SNR=25						
BUKO	Buck Lake	33.13	13	P	P	02 59 12.8	-0.2
	baz=198,SNR=58						
SHOC	Shoshone, Teco	33.15	318	P	P	02 59 14.9	+1.5
	baz=126,SNR=5.6						
GSC	Goldstone, Bar	33.16	316	*e*P	P	02 59 15.8	+2.3
	comp=Z,39nm,1.2s						
GSC				*e*PcP	PcP	03 01 56.6	+1.7
GSC				*e*ScP	ScP	03 05 37.4	+4.8
GSC	Goldstone, Bar	33.16	316	P	P	02 59 15.5	+2.0
	baz=124,SNR=16						
SCI2	San Clemente I	33.16	311	P	P	02 59 15.0	+1.6
	baz=119						
BFSC	Mount Baldy Ra	33.16	314	P	P	02 59 15.5	+1.9
	baz=122,SNR=9.8						
E46A	Sault Ste Mari	33.25	6	P	P	02 59 13.3	-0.7
	baz=189,SNR=15						
RSSD	Black Hills	33.26	340	*e*P	P	02 59 15.6	+1.2
	comp=Z,65nm,0.9s						
RSSD				*e*PcP	PcP	03 01 55.1	-0.1
RSSD	Black Hills	33.26	340	*e*P	P	02 59 15.6	+1.2
RSSD				*e*		03 01 55.1	
RSSD				pmax	pmax		
	comp=Z,65nm,0.9s						
CIS	Catalina Islan	33.27	312	P	P	02 59 16.2	+1.8
	baz=120						
E38A	The Farm, Brul	33.28	357	P	P	02 59 14.3	0.0
	baz=176,SNR=43						
PSUT	Pine Spring	33.31	323	*e*P	P	02 59 16.7	+1.8
	comp=Z,48nm,1.3s						
PSUT				*e*PcP	PcP	03 01 57.4	+2.0
PSUT				*e*ScP	ScP	03 05 35.5	+2.3
PLVO	Plevna	33.31	16	P	P	02 59 14.5	-0.1
	baz=202,SNR=32						
E44A	Grand Marais A	33.36	4	P	P	02 59 15.4	+0.5
	baz=186						
F52A	Sundridge	33.49	13	P	P	02 59 15.7	-0.4
	baz=198,SNR=40						
F51A	Arnstein	33.49	12	P	P	02 59 15.4	-0.7
	baz=196,SNR=10						
PASC	Pasadena Art C	33.50	313	*e*P	P	02 59 18.4	+2.0
	comp=Z,148nm,1.4s						
PASC				*e*PcP	PcP	03 01 57.1	+1.3
PASC				*e*ScP	ScP	03 05 37.3	+3.6
G55A	Calabogie	33.60	16	P	P	02 59 17.2	+0.1
	baz=202,SNR=34						
E48A	Lockeyer	33.63	9	P	P	02 59 17.0	-0.4
	baz=192,SNR=27						
DECC	Green Verdugo	33.65	313	P	P	02 59 19.8	+2.1
	baz=121,SNR=9.9						
LONY	Lake Ozonia	33.66	19	P	P	02 59 17.6	0.0
	baz=206,SNR=34						
D41A	Chassel	33.69	1	P	P	02 59 17.5	-0.3
	baz=181,SNR=20						
EDW2	Edwards Air Fo	33.74	315	P	P	02 59 20.0	+1.5
	baz=122,SNR=17						
TPNV	Topopah Spring	33.76	319	P	P	02 59 21.0	+2.2
	baz=127,SNR=43						
D46A	Sault St. Mari	33.80	6	P	P	02 59 18.1	-0.7
	baz=189,SNR=30						
E50A	Wahnapitae	33.81	11	P	P	02 59 18.1	-0.8
	baz=195,SNR=17						
LRMC	Laurel Mtn Rad	33.85	316	P	P	02 59 21.4	+1.8
	baz=124,SNR=12						
PEMO	Pembroke	33.86	15	P	P	02 59 19.2	-0.1
	baz=201,SNR=22						
FURC	Furnace Creek,	33.87	318	P	P	02 59 21.1	+1.6
	baz=126,SNR=23						
DUG	Dugway, Tooele	33.88	327	P	P	02 59 21.2	+1.4
	baz=136,SNR=17						
ALGO	Algonquin Park	33.92	14	P	P	02 59 19.7	-0.2
	baz=200,SNR=49						
MPMC	Manual Prospec	34.04	317	P	P	02 59 22.9	+1.6
	baz=125,SNR=48						
D47A	Chapleau	34.07	7	P	P	02 59 20.4	-0.8
	baz=191,SNR=14						
BLG	Laguna Peak, P	34.09	313	P	P	02 59 23.6	+2.0
	baz=120						
E52A	Mattawa	34.10	13	P	P	02 59 20.9	-0.5
	baz=198,SNR=14						
OSI	Osito Audit: C	34.11	314	P	P	02 59 23.4	+1.6
	baz=121						
ORHO	Orleans, Herit	34.12	17	P	P	02 59 21.3	-0.3
	baz=204						
ORIO	Orleans, Innes	34.12	17	P	P	02 59 21.4	-0.2
	baz=204,SNR=27						
E51A	G1948 Merrick	34.16	12	P	P	02 59 21.7	-0.2
	baz=197,SNR=59						
R11A	Troy Canyon, C	34.21	322	P	P	02 59 24.5	+1.7
	baz=130,SNR=20						
LBNH	Lisbon	34.24	22	P	P	02 59 22.8	+0.2
	baz=211,SNR=9.5						
BW06	Boulder Array	34.24	333	P	P	02 59 23.4	+0.5
	baz=143						
PDAR	Pinedale Array	34.24	333	P	P	02 59 23.7	+0.7
	comp=Z,19nm,0.6s,baz=130,slow=9.5,SNR=39						
PDAR				PcP	PcP	03 01 57.9	-0.2
	comp=Z,20nm,0.7s,baz=148,slow=5.3,SNR=14						
PDAR				ScP	ScP	03 05 37.5	+1.1
	comp=Z,5.9nm,0.8s,baz=144,slow=6.3,SNR=10						
PDAR				PKiKP	PKiKP	03 09 20.8	-0.8
	comp=Z,1.8nm,0.7s,baz=125,slow=2.5,SNR=9.5						
F55A	Otter Lake	34.24	16	P	P	02 59 22.6	0.0
	baz=202,SNR=25						
D48A	Paudash Townsh	34.37	9	P	P	02 59 23.2	-0.6
	baz=193,SNR=28						
E53A	Dumoine, Ponti	34.41	14	P	P	02 59 24.0	-0.1
	baz=200,SNR=30						
SCZ2	Santa Cruz Isl	34.45	312	P	P	02 59 26.5	+1.9
	baz=119						
ARVC	Arvin	34.45	314	P	P	02 59 26.6	+2.0
	baz=122,SNR=15						
ISA	Isabella, Lake	34.49	315	*e*P	P	02 59 26.5	+1.5
	comp=Z,122nm,1.4s						
ISA				*e*PcP	PcP	03 02 00.6	+1.9
ISA				*e*ScP	ScP	03 05 41.1	+3.9
ISA	Isabella, Lake	34.49	315	*e*P	P	02 59 26.5	+1.5
ISA				*e*		03 02 00.6	
ISA				pmax	pmax		
	comp=Z,122nm,1.4s						
ISA	Isabella, Lake	34.49	315	P	P	02 59 27.0	+2.0
	baz=123,SNR=16						
GRAC	Grapevine Rang	34.50	318	P	P	02 59 27.2	+2.1
	baz=126,SNR=17						
D49A	Beulah Townshi	34.53	9	P	P	02 59 24.6	-0.6
	baz=194,SNR=37						
C40A	Isle Royale Na	34.54	0	P	P	02 59 24.9	-0.3
	baz=180,SNR=23						
E54A	Lac Daplat, Po	34.58	15	P	P	02 59 25.4	-0.2
	baz=201,SNR=58						
EYMN	Ely	34.62	357	P	P	02 59 25.4	-0.5
	baz=176,SNR=71						
CWC	Cottonwood Cre	34.65	317	P	P	02 59 28.2	+1.7
	baz=124						
D50A	G1974 Best Tow	34.70	11	P	P	02 59 26.1	-0.5
	baz=196						
SBC	Santa Barbara	34.72	313	P	P	02 59 28.9	+2.0
	baz=120						
D52A	ZEK Kipawa Sen	34.81	13	P	P	02 59 27.6	+0.1
	baz=198,SNR=41						
VES	Vestal, Richgr	35.00	315	P	P	02 59 31.0	+1.7
	baz=122,SNR=39						
PKM	Mcpherson Peak	35.02	313	P	P	02 59 31.4	+1.6
	baz=120,SNR=14						
D53A	Lac Vacive, Po	35.06	14	P	P	02 59 30.1	+0.3
	baz=200,SNR=93						
TIN	Tinemaha, Big	35.10	318	P	P	02 59 32.4	+2.0
	baz=125						
AGMN	Agassiz Nation	35.35	352	P	P	02 59 32.0	-0.2
	baz=169,SNR=107						
SMMC	Simmler	35.36	314	P	P	02 59 34.6	+2.1
	baz=121,SNR=9.5						
D54A	Lac Fusel, La	35.38	15	P	P	02 59 32.4	-0.1
	baz=201,SNR=71						
VOG	Valley Oaks Go	35.46	316	P	P	02 59 34.4	+1.1
	baz=123						
MDND	Maddock	35.54	348	P	P	02 59 34.4	+0.6
	baz=162,SNR=94						
FLWY	Flagg Ranch	35.79	333	*e*P	P	02 59 37.5	+1.3
	comp=Z,226nm,1.5s						
FLWY				*e*PcP	PcP	03 02 03.4	+0.8
FLWY				*e*ScP	ScP	03 05 45.3	+3.4
MLAC	Mammoth, Mammo	35.82	318	P	P	02 59 38.0	+1.3
	baz=125						
NVAR	Mina Array Bea	35.95	319	P	P	02 59 39.4	+1.7
	comp=Z,51nm,0.9s,baz=132,slow=6.8,SNR=94						
NVAR				PcP	PcP	03 02 04.6	+1.5
	comp=Z,38nm,0.7s,baz=126,slow=2.8,SNR=19						
NVAR				ScP	ScP	03 05 45.1	+2.5
	comp=Z,9.2nm,0.7s,baz=133,slow=4.5,SNR=21						
NVAR				PKiKP	PKiKP	03 09 24.0	+0.9
	comp=Z,1.2nm,0.6s,baz=183,slow=2.3,SNR=7.0						
NVAR				LR	LR	03 16 11.8	
	comp=Z,4µm,20.5s,baz=131,slow=39						
H17A	Grant Village	35.98	334	P	P	02 59 39.6	+1.6
	baz=143						
LPAZ	La Paz	36.03	144	P	P	02 59 40.6	+1.6
	comp=Z,7.1nm,0.7s,baz=332,slow=5.5,SNR=32						
LPAZ				PKiKP	PKiKP	03 09 25.7	+1.6
	comp=Z,2.0nm,0.7s,baz=206,slow=0.9,SNR=4.8						
LPAZ				LR	LR	03 14 55.1	
	comp=Z,1µm,20.6s,baz=319,slow=37						
RLMT	Red Lodge	36.03	336	P	P	02 59 39.0	+0.7
	baz=145,SNR=56						
PKME	Peaks-Kenny Pk	36.11	24	P	P	02 59 39.0	+0.4
	baz=214,SNR=25						
YFT	Old Faithful	36.14	333	*e*P	P	02 59 42.2	+2.9
	comp=Z,206nm,1.5s						
YFT				*e*PcP	PcP	03 02 06.3	+2.7
YFT				*e*ScP	ScP	03 05 47.4	+4.2
LAO	LASA Array	36.25	340	P	P	02 59 40.9	+0.9
	baz=151,SNR=38						
LATQ	La Tuque	36.69	19	P	P	02 59 43.6	0.0
	baz=207,SNR=26						
MDP	Montagnes des	36.98	99	P	P	02 59 45.3	-1.2
	comp=Z,9.6nm,1.1s,baz=314,slow=4.7,SNR=2.8						
MDP				PcP	PcP	03 02 06.7	+0.3
	comp=Z,21nm,0.7s,baz=335,slow=1.1,SNR=10						
MDP				ScP	ScP	03 05 49.0	+2.4
	comp=Z,16nm,0.9s,baz=290,slow=3.0,SNR=4.6						
CMB	Columbia Colle	37.07	317	*e*P	P	02 59 48.1	+1.1
	comp=Z,44nm,1.2s						
CMB				*e*PcP	PcP	03 02 07.6	+1.4
CMB				*e*ScP	ScP	03 05 50.2	+3.6
CMB	Columbia Colle	37.07	317	*e*P	P	02 59 48.2	+1.1
CMB				*e*		03 02 07.6	
CMB				pmax	pmax		
	comp=Z,44nm,1.2s						
LSQQ	Lebel-sur-Quev	37.09	13	P	P	02 59 46.7	-0.3
	baz=200						

HLID	**Hailey**	37.14	329	P	P	02 59 48.7	+1.0
	baz=137,SNR=7.8						
DGMT	**Dagmar**	37.23	344	P	P	02 59 49.5	+1.3
	baz=155,SNR=104						
ULM	**Lac du Bonnet**	37.27	353	P	P	02 59 47.7	-0.8
	comp=Z,139nm,0.8s,baz=171,slow=9.1,SNR=75						
ULM				S	S	03 05 26.8	-3.3
	comp=Z,5.9nm,0.8s,baz=283,slow=22,SNR=1.8						
ULM				ScP	ScP	03 05 48.1	+1.2
	comp=Z,9.2nm,0.5s,baz=216,slow=3.2,SNR=8.4						
ULM				LR	LR	03 17 04.5	
	comp=Z,5µm,21.1s,baz=172,slow=39						
BOZ	**Bozeman (W)**	37.39	334	P	P	02 59 51.2	+1.4
	baz=142,SNR=38						
MATQ	**Matagami**	37.61	12	P	P	02 59 51.2	-0.2
	baz=199,SNR=74						
AFDM	**Forest Hills D**	37.95	318	*e*P	P	02 59 55.8	+1.3
	comp=Z,26nm,1.3s						
AFDM				*e*PcP	PcP	03 02 09.7	+0.7
PB11	**IPOC Station P**	38.07	149	*e*P	P	02 59 57.2	+1.5
	comp=Z,291nm,1.7s						
PB11				*e*PcP	PcP	03 02 11.5	+1.8
CHGQ	**Chibougamau**	38.51	15	P	P	02 59 58.5	-0.5
	baz=204,SNR=24						
EGMT	**Eagleton**	38.63	338	P	P	03 00 01.1	+1.1
	baz=147,SNR=111						
O03E	**Paynes Creek**	39.23	319	P	P	03 00 05.7	+0.4
	baz=124						
MSO	**Missoula**	39.36	333	P	P	03 00 06.9	+0.6
	baz=140,SNR=29						
O02D	**Mt. Diablo Mer**	39.80	319	P	P	03 00 11.0	+1.0
	baz=123						
WDC	**Whiskeytown Da**	39.86	319	*e*P	P	03 00 09.5	-0.8
	comp=Z,57nm,1.8s						
WDC				*e*PcP	PcP	03 02 14.9	0.0
WDC	**Whiskeytown Da**	39.86	319	*e*P	P	03 00 09.5	-0.8
WDC				*e*		03 02 14.9	
WDC				pmax	pmax		
	comp=Z,57nm,1.8s						
M04C	**Macdoel**	40.10	321	P	P	03 00 12.9	+0.4
	baz=126,SNR=8.3						
I07A	**Izee**	40.17	326	*e*P	P	03 00 13.4	+0.4
	comp=Z,58nm,1.6s						
N02D	**Trinity Center**	40.18	320	P	P	03 00 13.2	+0.1
	baz=124						
KMRM	**Mail Ridge**	40.42	318	*e*P	P	03 00 16.8	+1.7
	comp=Z,134nm,1.2s						
M02C	**Callahan**	40.51	320	P	P	03 00 15.9	+0.1
	baz=124						
YBH	**Yreka Blue Hor**	40.61	321	P	P	03 00 16.0	-0.6
	comp=Z,2.7nm,0.6s,baz=111,slow=4.7,SNR=20						
YBH				PcP	PcP	03 02 17.5	+0.1
	comp=Z,8.8nm,0.8s,baz=86,slow=5.8,SNR=6.7						
YBH				ScP	ScP	03 06 02.2	+2.1
	comp=Z,3.1nm,0.8s,baz=167,slow=4.0,SNR=4.5						
YBH	**Yreka Blue Hor**	40.61	321	*e*P	P	03 00 16.1	-0.6
	comp=Z,21nm,1.4s						
YBH	**Yreka Blue Hor**	40.61	321	*e*P	P	03 00 16.1	-0.6
YBH				pmax	pmax		
	comp=Z,21nm,1.4s						
J05D	**Fort Rock, OR**	40.64	324	P	P	03 00 17.6	+0.7
	baz=128						
L04D	**Klamath Falls**	40.64	322	P	P	03 00 17.3	+0.4
	baz=125						
G08A	**Pilot Rock**	40.67	328	*e*P	P	03 00 17.7	+0.5
	comp=Z,33nm,1.5s						
KHMM	**Horse Mountain**	40.78	319	*e*P	P	03 00 20.0	+1.8
	comp=Z,40nm,0.9s						
LVC	**Limon Verde**	40.85	151	*e*P	P	03 00 20.6	+1.5
	comp=Z,92nm,1.2s						
LVC	**Limon Verde**	40.85	151	*e*P	P	03 00 20.6	+1.5
LVC				pmax	pmax		
	comp=Z,92nm,1.2s						
CLDB	**Colider**	40.95	124	*e*P	P	03 00 17.7	-1.9
J04D	**Umpqua Nationa**	41.12	323	P	P	03 00 21.2	+0.2
	baz=126,SNR=9.3						
I05D	**Terrebonne, OR**	41.35	325	P	P	03 00 23.2	+0.5
	baz=128						
L02E	**Cave Junction**	41.40	321	P	P	03 00 23.2	+0.2
	baz=124						
I04A	**Tendick Farm,**	41.63	323	P	P	03 00 24.7	-0.2
	baz=127,SNR=6.4						
K02D	**Willamette Mer**	41.74	321	P	P	03 00 25.7	-0.2
	baz=124						
NEW	**Newport**	41.86	332	P	P	03 00 26.6	-0.2
	baz=137,SNR=8.8						
G05D	**Wamic, OR**	41.90	326	P	P	03 00 27.8	+0.7
	baz=129						
I03D	**Drain, OR**	42.12	323	P	P	03 00 29.4	+0.6
	baz=126,SNR=6.0						
J01E	**Myrtle Point**	42.16	322	P	P	03 00 29.3	+0.1
	baz=124						
H04D	**Lebanon**	42.26	324	P	P	03 00 29.6	-0.3
	baz=127						
F05D	**White Salmon**	42.39	326	P	P	03 00 32.0	+0.9
	baz=130						
FFC	**Flin Flon**	42.55	349	*e*P	P	03 00 32.7	+0.5
	comp=Z,123nm,0.6s						
FFC	**Flin Flon**	42.55	349	*i* P	P	03 00 32.4	+0.2
I02D	**Swisshome**	42.65	323	P	P	03 00 33.1	0.0
	baz=125						
G03D	**McMinnville, O**	42.97	325	P	P	03 00 36.1	+0.4
	baz=127						
HJA	**Humahuaca**	43.11	147	*e*P	P	03 00 39.2	+1.6
F04D	**Rainier, OR**	43.36	326	P	P	03 00 38.8	0.0
	baz=128						
E04D	**Cinebar**	43.41	327	P	P	03 00 39.2	0.0
	baz=129						
C06D	**Leavenworth**	43.43	329	P	P	03 00 39.4	0.0
	baz=132						
AZAP	**Zapla**	44.12	148	*e*P	P	03 00 48.0	+2.6
AZAP				IAML		03 01 14.1	
	comp=Z,13nm,0.5s						
B05A	**Bryant**	44.26	329	P	P	03 00 45.1	-0.9
	baz=131,SNR=8.2						
D03D	**Eldon**	44.30	327	P	P	03 00 46.2	-0.2
	baz=129						
DRLN	**Deer Lake**	44.36	30	*e*P	P	03 00 45.7	-1.1
	comp=Z,145nm,0.9s						
RPN	**Rapa Nui**	44.65	206	P	P	03 00 51.7	+2.4
	comp=Z,223nm,1.2s,baz=358,slow=5.2,SNR=11						
RPN	**Rapa Nui**	44.65	206	*e*P	P	03 00 50.4	+1.1
	comp=Z,1µm,1.6s						
A04D	**Lummi Island**	44.86	329	P	P	03 00 50.5	-0.3
	baz=130,SNR=17						
SCHQ	**Schefferville**	45.02	18	P	P	03 00 51.2	-0.7
	comp=Z,98nm,0.6s,baz=219,slow=6.5,SNR=43						
SCHQ				PcP	PcP	03 02 30.9	-0.9
	comp=Z,14nm,0.3s,baz=230,slow=2.7,SNR=9.1						
SCHQ				LR	LR	03 19 12.2	
	comp=Z,2µm,20.8s,baz=229,slow=36						
FSA	**Cafayete**	45.22	150	*e*P	P	03 00 54.3	+0.2
AHML	**Horco Molle**	46.09	150	*e*P	P	03 01 03.6	+2.7
VCA	**Vinchina**	46.45	154	*e*P	P	03 01 04.8	+1.1
VCA				IAML		03 01 33.5	
	comp=Z,9.6nm,0.5s						
SMTB	**Santa Maria do**	46.84	116	*e*P	P	03 01 05.0	-1.9
AQDB	**Aquidauana**	47.03	135	*e*P	P	03 01 08.4	+0.2
PEXB	**Peixe**	47.79	120	*e*P	P	03 01 12.2	-2.0
CFA	**Coronel Fontan**	48.96	156	P	P	03 01 24.1	+1.1
	comp=Z,20nm,1.0s,baz=328,slow=7.1,SNR=25						
BDFB	**Brasilia**	49.88	124	P	P	03 01 29.3	-1.0
	comp=Z,24nm,0.6s,baz=302,slow=7.4,SNR=46						
BDFB				PcP	PcP	03 02 51.6	+1.7
	comp=Z,29nm,0.9s,baz=358,slow=4.1,SNR=4.7						
BDFB				LR	LR	03 26 33.4	
	comp=Z,817nm,18.2s,baz=320,slow=41						
BDFB	**Brasilia**	49.88	124	*e*P	P	03 01 29.1	-1.2
	comp=Z,187nm,1.6s						
BDFB				*e*PcP	PcP	03 02 51.3	+1.4
CPUP	**Villa Florida**	50.12	142	P	P	03 01 31.8	-0.1
	comp=Z,7.9nm,0.7s,baz=330,slow=9.6,SNR=19						
CPUP	**Villa Florida**	50.12	142	*e*P	P	03 01 32.2	+0.3
ITRB	**Iturama**	50.38	130	*e*P	P	03 01 33.7	-0.2
TRCB	**Terra Rica**	50.70	135	*e*P	P	03 01 35.9	-0.5
GO05	**Huala**	50.75	162	*e*P	P	03 01 36.2	-0.3
	comp=Z,109nm,1.1s						
PTGB	**Pitanga**	52.36	136	*e*P	P	03 01 48.5	-0.3
YKA	**Yellowknife Ar**	52.37	345	P	P	03 01 47.8	-0.3
	comp=Z,135nm,0.8s,baz=136,slow=8.0,SNR=325						
YKA				PcP	PcP	03 02 57.4	-0.7
	comp=Z,12nm,0.8s,baz=144,slow=4.1,SNR=4.0						
YKA				ScP	ScP	03 06 47.9	-0.6
	comp=Z,2.0nm,0.6s,baz=146,slow=4.4,SNR=4.0						
YKA				LR	LR	03 27 16.4	
	comp=Z,198nm,20.6s,baz=144,slow=40						
YKA				PKPPKP	P'P'df	03 32 21.1	+1.2
	comp=Z,1.3nm,1.0s,baz=357,slow=3.5,SNR=4.1						
FRB	**Frobisher Bay**	52.45	11	P	P	03 01 47.7	-1.1
	comp=Z,171nm,0.6s,baz=216,slow=11,SNR=158						
BB19B	**Bebedouro**	52.57	130	*e*P	P	03 01 50.0	-0.3
PMNB	**Patos De Minas**	52.72	126	*e*P	P	03 01 51.3	-0.2
FRTB	**Fartura**	53.21	133	*e*P	P	03 01 56.0	+1.0
RCLB	**Rio Claro- Sao**	54.12	131	*e*P	P	03 02 01.5	-0.2
SPB	**Sao Paulo**	54.90	132	*e*P	P	03 02 07.0	-0.2
NBPA	**Parau_RN**	55.10	107	*e*P	P	03 02 08.4	-0.5
TAOE	**Nuku Hiva Isla**	55.13	249	*e*S	S	03 09 39.8	-7.0
	comp=Z,1µm,26.2s						
TAOE				*e*LR	LR	03 17 57.8	
	comp=Z,7µm,28.1s,baz=64						
TAOE	**Nuku Hiva Isla**	55.13	249	*e*T	T	04 00 37.5	
	comp=Z,69nm,0.2s						
BSCB	**Bom Sucesso**	55.39	127	*e*P	P	03 02 10.6	-0.4
CPSB	**Cacapava Do Su**	55.43	142	*e*P	P	03 02 10.8	-0.1
NBLI	**Livramento-PB**	55.83	108	*e*P	P	03 02 12.8	-1.4
RCBR	**Riachuelo**	56.26	106	*e*P	P	03 02 14.8	-2.4
	comp=Z,25nm,0.8s						
RCBR	**Riachuelo**	56.26	106	*e*P	P	03 02 14.8	-2.4
RCBR				pmax	pmax		
	comp=Z,25nm,0.8s						
RCBR	**Riachuelo**	56.26	106	*e*P	P	03 02 15.5	-1.7
CNLB	**Canela**	56.26	139	*e*P	P	03 02 16.5	-0.5
PLTB	**Pedras Altas**	56.32	143	*e*P	P	03 02 17.8	+0.5
PLCA	**Paso Flores**	56.45	163	P	P	03 02 19.3	+1.1
	comp=Z,26nm,1.1s,baz=4.8,slow=8.3,SNR=21						
PLCA	**Paso Flores**	56.45	163	*e*P	P	03 02 19.6	+1.5
ESAR	**Angra dos Reis**	56.78	129	*e*P	P	03 02 20.9	+0.2
SJMB	**Sao Joao De Ma**	57.03	123	*e*P	P	03 02 21.2	-1.4
TRQA	**Tornquist**	57.10	154	*e*P	P	03 02 22.6	-0.1
	comp=Z,120nm,1.4s						
TRQA	**Tornquist**	57.10	154	*e*P	P	03 02 23.6	+0.9
TRQA	**Tornquist**	57.10	154	*e*P	P	03 02 22.9	+0.2
NRS	**Narsarsuaq**	57.31	24	*e*P	P	03 02 22.4	-1.4
	comp=Z,91nm,0.7s						
NRS	**Narsarsuaq**	57.31	24	*e*P	P	03 02 22.4	-1.4
NRS				pmax	pmax		
	comp=Z,91nm,0.7s						
NRS	**Narsarsuaq**	57.31	24	⇑*i*P	P	03 02 22.3	-1.4
	comp=Z,88nm,0.7s						
	comp=Z,5µm,26.0s						
BSFB	**Barra de Sao F**	57.37	123	*e*P	P	03 02 23.4	-1.5
RKT	**Rikitea**	57.55	231	*e*LR	LR	03 19 07.0	
	comp=Z,8µm,42.0s						
RKT	**Rikitea**	57.55	231	*e*T	T	04 03 37.2	
	comp=Z,11nm,0.3s						
OGAUY	**Aigu**	57.61	146	*e*P	P	03 02 26.8	+0.5
RIB01	**Linhares ES**	57.98	123	*e*P	P	03 02 28.5	-0.7
CAM01	**Campos-RJ**	58.27	126	*e*P	P	03 02 31.2	+0.1
PICO	**Pico**	59.07	53	*e*P	P	03 02 37.3	+0.6
	comp=Z,141nm,1.5s						
PPNO	**Prainha do Nor**	59.19	53	*e*P	P	03 02 38.5	+1.0
	comp=Z,160nm,1.5s						
ROSA	**Rosais**	59.24	53	*e*P	P	03 02 38.4	+0.6
PMAN	**Manadas**	59.35	53	*e*P	P	03 02 38.6	+0.1
	comp=Z,102nm,1.6s						
SFJD	**Kangerlussuaq**	59.42	17	P	P	03 02 36.4	-2.0
	comp=Z,52nm,0.8s,baz=228,slow=7.5,SNR=18						
SFJD	**Kangerlussuaq**	59.42	17	*e*P	P	03 02 37.2	-1.3
	comp=Z,247nm,1.6s						
SFJD	**Kangerlussuaq**	59.42	17	*e*P	P	03 02 37.2	-1.3
SFJD				pmax	pmax		
	comp=Z,247nm,1.6s						
SFJD	**Kangerlussuaq**	59.42	17	⇑*i*P	P	03 02 37.1	-1.3
ADH	**Angra Heroismo**	60.01	53	*e*P	P	03 02 43.4	+0.4
PSCM	**Serra do Cume**	60.11	53	*e*P	P	03 02 45.3	+1.5
ILULI	**Ilulissat**	60.89	15	*e*P	P	03 02 47.1	-1.3
	comp=Z,53nm,0.8s						
ILULI	**Ilulissat**	60.89	15	⇑*i*P	P	03 02 47.2	-1.3
ILULI				pmax	pmax		
	comp=Z,53nm,0.8s						
ILULI				MLR	MLR		
	comp=Z,5µm,29.0s						
ILULI	**Ilulissat**	60.89	15	⇑*i*P	P	03 02 47.2	-1.3
	comp=Z,53nm,0.8s						
	comp=Z,5µm,29.0s						
PSET	**Sete Cidades**	61.11	54	*e*P	P	03 02 52.0	+1.4
PDA	**Ponta Delgada**	61.15	54	*e*P	P	03 02 51.4	+0.6
BART	**Pico Bartolome**	61.54	54	*e*P	P	03 02 54.4	+0.8
	comp=Z,88nm,0.8s						
PSMN	**Pico do Norte,**	61.55	55	*e*P	P	03 02 53.1	-0.5
EPYK	**Eagle Plains**	61.71	340	P	P	03 02 53.6	-0.5
	baz=125,SNR=22						
INK	**Inuvik**	61.91	343	P	P	03 02 55.0	-0.3
	comp=Z,75nm,0.8s,baz=120,slow=7.9,SNR=59						
INK	**Inuvik**	61.91	343	P	P	03 02 55.0	-0.3
EYAK	**Cordova Ski Ar**	62.37	332	*e*P	P	03 02 59.7	+1.2
	comp=Z,36nm,0.9s						
KULLO	**Kullorsuaq**	63.85	9	⇑*i*P	P	03 03 07.3	-0.8
KULLO				pmax	pmax		
	comp=Z,130nm,1.2s						
KULLO				MLR	MLR		
	comp=Z,4µm,28.0s						
KULLO	**Kullorsuaq**	63.85	9	⇑*i*P	P	03 03 07.3	-0.8
	comp=Z,128nm,1.2s						
	comp=Z,4µm,28.0s						
VAH	**Vaihoa**	64.34	246	*e*P	P	03 03 14.3	+2.0
	comp=Z,308nm,1.4s						
HDA	**Harding Lake**	64.45	336	P	P	03 03 11.6	-0.6
	baz=114						
PMOR	**Pomariorio Ree**	64.49	246	*e*P	P	03 03 15.4	+2.1
	comp=Z,285nm,1.4s						
PMOR	**Pomariorio Ree**	64.49	246	*e*T	T	04 12 17.5	
	comp=Z,16nm,0.3s						
ILAR	**Eielson Array**	64.57	336	P	P	03 03 12.4	-0.6
	comp=Z,19nm,0.6s,baz=164,slow=4.9,SNR=140						
ILAR				PP	PP	03 05 35.6	-0.1
	comp=Z,7.2nm,1.1s,baz=109,slow=6.6,SNR=3.7						
ILAR				PKPPKP	P'P'df	03 32 01.0	-0.4
	comp=Z,1.4nm,1.1s,baz=303,slow=3.2,SNR=5.9						
ILAR				LR	LR	03 34 17.0	
	comp=Z,1µm,20.9s,baz=118,slow=39						
POKR	**Poker Plat Res**	64.93	337	P	P	03 03 14.7	-0.6
	baz=114,SNR=27						
OHAK	**Old Harbor**	64.97	327	*e*P	P	03 03 15.5	-0.1
	comp=Z,93nm,1.6s						
COLA	**College**	64.99	336	*e*P	P	03 03 15.0	-0.7
	comp=Z,66nm,1.3s						
COLA	**College**	64.99	336	*c* *i*P	P	03 03 14.6	-1.1
COLA				pmax	pmax		
	comp=Z,34nm,1.1s						
TCOL	**CIGO, UAF Yank**	64.99	336	P	P	03 03 14.9	-0.9
	baz=113,SNR=8.6						
SUMG	**Summit**	66.23	15	⇑*i*P	P	03 03 23.7	-0.4
SUMG				pmax	pmax		
	comp=Z,830nm,1.5s						
SUMG				MLR	MLR		
	comp=Z,10µm,28.0s						
SUMG	**Summit**	66.23	15	⇑*i*P	P	03 03 23.7	-0.4
	comp=Z,829nm,1.5s						
	comp=Z,10µm,28.0s						
TIAR	**Tiarei**	66.77	244	*e*P	P	03 03 29.6	+1.6
	comp=Z,46nm,1.3s						
PPT	**Papeete**	66.97	244	LR	LR	03 24 39.1	
	comp=Z,1µm,20.5s,baz=52,slow=28						
PPT2	**Papeete2**	66.98	244	*e*S	S	03 12 11.6	-5.7
	comp=Z,464nm,23.8s						
PPT2	**Papeete2**	66.98	244	*e*LR	LR	03 23 30.7	
	comp=Z,9µm,28.0s,baz=59						
PAE	**Paea**	67.01	244	*e*P	P	03 03 31.2	+1.7
	comp=Z,19nm,1.1s						
PAE				*e*pP	sP	03 03 54.2	-3.9
	comp=Z,51nm,1.6s						
TOLK	**Toolik Lake Re**	67.12	340	P	P	03 03 29.4	0.0
	baz=113,SNR=12						
PMOZ	**Porto Moniz, M**	67.92	60	*e*P	P	03 03 36.2	+1.0
PMOZ				*e*S	S	03 12 25.1	-3.2
PMOZ				*e*LQ	LQ	03 20 53.9	
PMOZ				*e*LR	LR	03 24 30.4	
	comp=Z,2µm,24.0s						
PMAR	**Madeira**	68.16	60	*e*P	P	03 03 36.8	0.0
XMAS	**Kiritimati**	68.33	267	*e*P	P	03 03 38.2	+0.3
	comp=Z,322nm,1.4s						
PMPS	**Porto Santo**	68.64	60	*e*P	P	03 03 39.8	+0.3
	comp=Z,158nm,1.7s						
TBI	**Tubuai**	69.24	239	*e*S	S	03 12 37.6	-6.3
	comp=Z,794nm,29.0s						
TBI	**Tubuai**	69.24	239	*e*LR	LR	03 24 34.0	
	comp=Z,6µm,28.8s,baz=64						
TBI	**Tubuai**	69.24	239	*e*T	T	04 18 12.3	
	comp=Z,14nm,0.2s						
SCO	**Scoresbysund**	70.05	19	⇑*i*P	P	03 03 46.5	-1.0
SCO				pmax	pmax		
	comp=Z,16nm,0.7s						
SCO				MLR	MLR		
	comp=Z,4µm,25.0s						
SCO	**Scoresbysund**	70.05	19	⇑*i*P	P	03 03 46.5	-1.0
	comp=Z,16nm,0.7s						
	comp=Z,5µm,25.0s						
DAG	**Danmarks Havn**	72.75	13	⇑*i*P	P	03 04 02.5	-1.2
DAG				pmax	pmax		
	comp=Z,30nm,0.7s						
DAG				MLR	MLR		
	comp=Z,5µm,26.0s						
DAG	**Danmarks Havn**	72.75	13	⇑*i*P	P	03 04 02.5	-1.2
	comp=Z,44nm,0.7s						
	comp=Z,4µm,26.0s						
LIS	**Lisbon**	74.14	53	*e*P	P	03 04 11.3	-1.3
LIS				AMb	AMB	03 04 13.6	
	comp=Z,68nm,1.9s						
LIS	**Lisbon**	74.14	53	*e*P	P	03 04 11.3	-1.3
ALMR	**Almeirim**	74.55	53	*e*P	P	03 04 13.4	-1.6
ALMR				AMb	AMB	03 04 16.2	
	comp=Z,109nm,1.4s						
ALMR	**Almeirim**	74.55	53	*e*P	P	03 04 12.9	-2.1
	comp=Z,111nm,1.6s						
ALMR	**Almeirim**	74.55	53	*e*P	P	03 04 13.4	-1.6
PGAV	**Gavieira, Arco**	74.57	50	*e*P	P	03 04 13.1	-2.1
	comp=Z,34nm,1.6s						
PGAV				*e*S	S	03 13 45.6	+0.7
PGAV	**Gavieira, Arco**	74.57	50	*e*LR	LR	03 27 29.3	
	comp=Z,2µm,24.0s						
PTEO	**Sao Teotonio**	74.57	54	*e*P	P	03 04 13.1	-2.0
	comp=Z,90nm,1.5s						
PTOM	**Tomar**	74.64	52	*e*P	P	03 04 13.9	-1.6
	comp=Z,75nm,1.5s						
MORF	**Marmelete**	74.65	55	*e*P	P	03 04 14.3	-1.4
MORF				AMb	AMB	03 04 17.8	
	comp=Z,74nm,1.8s						
MORF				*e*S	S	03 13 42.3	-3.6
MORF	**Marmelete**	74.65	55	*e*P	P	03 04 14.2	-1.4
MORF				*e*S	S	03 13 42.2	-3.6
PNCL	**Nicolau / Gran**	74.68	54	*e*P	P	03 04 16.3	+0.6
	comp=Z,27nm,1.8s						
PMTG	**Montargil**	74.83	53	*e*P	P	03 04 14.9	-1.7
	comp=Z,76nm,1.6s						
PVIS	**Viseu**	74.95	51	*e*P	P	03 04 15.6	-1.7
	comp=Z,40nm,1.5s						
POLO	**Lamas de Olo**	74.97	50	*e*P	P	03 04 15.2	-2.3
	comp=Z,20nm,1.5s						
PVRL	**Vila Real**	75.04	51	*e*P	P	03 04 16.1	-1.7
	comp=Z,29nm,1.6s						
PCVE	**Castro Verde**	75.11	54	*e*P	P	03 04 17.5	-0.7
PBEJ	**Beja**	75.21	54	*e*P	P	03 04 18.7	-0.1
	comp=Z,32nm,1.8s						
PBDV	**Barranco-do-Ve**	75.23	55	*e*P	P	03 04 18.5	-0.5
	comp=Z,90nm,1.7s						
MTE	**Manteigas**	75.24	51	*e*P	P	03 04 16.5	-2.5
	comp=Z,54nm,1.4s						
MTE				*e*S	S	03 13 56.0	+3.7
MTE	**Manteigas**	75.24	51	*e*LQ	LQ	03 24 49.8	
MTE				*e*LR	LR	03 27 54.4	
	comp=Z,2µm,22.0s						
MTE	**Manteigas**	75.24	51	*e*P	P	03 04 16.9	-2.1
	comp=Z,112nm,1.9s						
CLGH	**Cloghs, Cushen**	75.31	36	*e*P	P	03 04 15.7	-3.3
PCBR	**Castelo Branco**	75.34	52	*e*P	P	03 04 17.4	-2.1
	comp=Z,51nm,1.4s						
RRR	**Rubha Reidh**	75.38	33	*e*P	P	03 04 16.8	-2.5
GMM	**Mts of Mourne**	75.43	37	*e*P	P	03 04 17.0	-2.7
PMRV	**Marv??o**	75.45	52	*e*P	P	03 04 17.6	-2.6
	comp=Z,48nm,1.5s						
PMRV				*e*S	S	03 13 55.4	+0.9
PMRV	**Marv??o**	75.45	52	*e*LR	LR	03 27 46.7	
	comp=Z,2µm,22.0s						
KPL	**Plockton**	75.48	34	*e*P	P	03 04 17.4	-2.5
KPL				IAmb	IAmb	03 04 19.1	
	comp=Z,76nm,1.4s						
MVO	**Moncorvo**	75.56	51	*e*P	P	03 04 18.7	-2.2
	comp=Z,47nm,1.5s						
MVO				*e*S	S	03 13 56.1	+0.3
MVO	**Moncorvo**	75.56	51	*e*LR	LR	03 28 10.1	
	comp=Z,1µm,20.0s						
KAC	**Achnashellach**	75.67	34	*e*P	P	03 04 18.4	-2.6
RSC	**Scourie**	75.70	33	*e*P	P	03 04 19.1	-2.1
PBRG	**Braganca**	75.72	50	*e*P	P	03 04 19.3	-2.4
	comp=Z,58nm,1.4s						
SRHM	**Skhour des Reh**	75.77	60	P	P	03 04 22.0	-0.2
GAL1	**Galloway**	76.12	36	*e*P	P	03 04 21.0	-2.7
PGBU	**Glenifferbraes**	76.20	35	*e*P	P	03 04 21.4	-2.6
PGBU				IAmb	IAmb	03 04 22.7	
	comp=Z,76nm,1.4s						
IOMK	**Kirk Michael**	76.24	37	*e*P	P	03 04 21.4	-2.9
IOMK				IAmb	IAmb	03 04 23.6	
	comp=Z,245nm,1.7s						
EAB	**Aberfoyle**	76.26	35	*e*P	P	03 04 21.6	-2.8
RSBS	**Rosebush, Pemb**	76.29	39	*e*P	P	03 04 22.2	-2.4
RSBS				IAmb	IAmb	03 04 23.5	
	comp=Z,44nm,1.6s						
YRC	**Rhoscolyn**	76.30	38	*e*P	P	03 04 22.1	-2.6
INVG	**Invergeldie, C**	76.41	35	*e*P	P	03 04 22.5	-2.7
INVG				IAmb	IAmb	03 04 23.9	
	comp=Z,23nm,0.7s						
WME	**Myndd Eilian**	76.45	38	*e*P	P	03 04 22.7	-2.9
HTL	**Hartland**	76.52	40	*e*P	P	03 04 23.3	-2.6
HTL				IAmb	IAmb	03 04 23.7	
	comp=Z,90nm,1.8s						
EBH	**Black Hill**	76.72	35	*e*P	P	03 04 23.9	-3.1
ESK	**Eskdalemuir**	76.95	36	*e*P	P	03 04 25.4	-2.9
ESK				IAmb	IAmb	03 04 26.9	
	comp=Z,32nm,0.9s						
ESK	**Eskdalemuir**	76.95	36	*i* P	P	03 04 26.0	-2.3
EDU	**Dundee**	76.97	35	*e*P	P	03 04 26.1	-2.3
EKA	**Eskdalemuir Ar**	76.98	36	P	P	03 04 25.3	-3.2
EKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ESY	**Stoneypath**	77.24	35	*e*P	P	03 04 27.4	-2.5
MCH1	**Michaelchurch**	77.36	39	*e*P	P	03 04 28.3	-2.4
MCH1				IAmb	IAmb	03 04 30.8	
	comp=Z,17nm,1.0s						
HLM1	**Long Mynd**	77.38	39	*e*P	P	03 04 27.2	-3.6
HLM1				IAmb	IAmb	03 04 29.2	
	comp=Z,37nm,1.1s						
MONM	**Monmouth**	77.50	39	*e*P	P	03 04 28.7	-2.7
MONM				IAmb	IAmb	03 04 30.1	
	comp=Z,27nm,1.0s						
ROSF	**Rostrenen**	77.55	43	*e*P	P	03 04 28.7	-3.1
ROSF				pmax	pmax		
	comp=Z,20nm,0.9s						
QUIF	**Quistinic**	77.66	43	*e*P	P	03 04 29.5	-2.9
QUIF				pmax	pmax		
	comp=Z,21nm,0.8s						
PAB	**San Pablo**	77.77	52	*e*P	P	03 04 31.6	-1.8
	comp=Z,43nm,1.4s						
PAB	**San Pablo**	77.77	52	*e*P	P	03 04 31.6	-1.8
PAB				pmax	pmax		
	comp=Z,43nm,1.4s						
SGMF	**Saint Gilles**	78.03	43	*e*P	P	03 04 31.1	-3.4
SGMF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ESDC	**Sonseca Array**	78.05	52	P	P	03 04 32.7	-2.2
	comp=Z,5.4nm,0.5s,baz=287,slow=5.4,SNR=34						
ESDC				LR	LR	03 32 38.2	
	comp=Z,1µm,22.0s,baz=280,slow=31						
ADK	**Adak**	78.12	321	*e*P	P	03 04 35.1	+0.2
	comp=Z,49nm,0.6s						
ADK	**Adak**	78.12	321	*e*P	P	03 04 35.1	+0.2
ADK				pmax	pmax		
	comp=Z,49nm,0.6s						
LCRM	**LCR**	78.14	58	P	P	03 04 36.2	+0.6
GDLE	**Glaisdale, N Y**	78.42	37	*e*P	P	03 04 34.2	-2.3
GDLE				IAmb	IAmb	03 04 35.4	
	comp=Z,40nm,1.1s						
MDT	**Midelt**	78.47	59	P	P	03 04 35.5	-1.9
AKLM	**AKL**	78.84	57	P	P	03 04 41.0	+1.7
GRR	**Gorron**	79.14	43	*e*P	P	03 04 37.6	-3.0
GRR				pmax	pmax		
	comp=Z,26nm,0.8s						
KBS	**Kingsbay**	79.20	11	*e*P	P	03 04 40.9	+0.6
	comp=Z,70nm,1.1s						
KBS	**Kingsbay**	79.20	11	*c* *i*P	P	03 04 41.1	+0.7
KBS				pmax	pmax		
	comp=Z,294nm,1.3s						
KBS	**Kingsbay**	79.20	11	*e*P	P	03 04 40.8	+0.5
FLN	**La Foliniere**	79.33	42	*e*P	P	03 04 38.8	-2.8
FLN				pmax	pmax		
	comp=Z,29nm,0.8s						
LDF	**La Druitiere**	79.59	42	*e*P	P	03 04 40.1	-3.0
LDF				pmax	pmax		

	comp=Z,25nm,0.9s						
MFF	Saint Martin d	79.87	44	eP	P	03 04 41.6	-3.0
MFF				pmax	pmax		
	comp=Z,12nm,0.7s						
JBK	JBK	79.93	57	P	P	03 04 44.0	-1.4
PMSA	Palmer Station	80.13	169	eP	P	03 04 45.7	+0.3
ETSF	Etsaut	80.14	48	eP	P	03 04 43.8	-2.4
ETSF				pmax	pmax		
	comp=Z,24nm,1.1s						
SPA0	Spitsbergen Ar	80.26	12	eP	P	03 04 46.2	+0.2
SPITS	Spitsbergen Ar	80.26	12	P	P	03 04 46.3	+0.2
SPITS				pmax	pmax		
	comp=Z,8.0nm,0.3s						
HSPB	Hornsund (broa	80.44	13	eP	P	03 04 48.5	+1.4
HSPB	Hornsund (broa	80.44	13	eP	P	03 04 48.5	+1.4
HSPB	Hornsund (broa	80.44	13	eP	P	03 04 46.5	-0.6
TDRA	Tendrara	80.58	58	P	P	03 04 45.0	-4.0
LFF	La Frestale	80.74	46	eP	P	03 04 46.4	-2.9
LFF				pmax	pmax		
	comp=Z,19nm,0.9s						
EPF	Esparros	80.77	48	eP	P	03 04 46.8	-2.8
EPF				pmax	pmax		
	comp=Z,24nm,1.2s						
RJF	Les Rejaudoux	81.22	46	eP	P	03 04 49.2	-2.7
RJF				pmax	pmax		
	comp=Z,66nm,1.4s						
TCF	Toulx Ste Croi	81.53	44	eP	P	03 04 50.1	-3.4
TCF				pmax	pmax		
	comp=Z,13nm,0.9s						
CAF	Calviac	81.67	46	eP	P	03 04 51.6	-2.7
CAF				pmax	pmax		
	comp=Z,43nm,1.5s						
BGF	Bois d'Agland	81.91	44	eP	P	03 04 52.2	-3.3
BGF				pmax	pmax		
	comp=Z,18nm,0.8s						
MTLF	Montolieu	82.07	47	eP	P	03 04 53.4	-3.0
MTLF				pmax	pmax		
	comp=Z,33nm,1.4s						
BAIF	Baives	82.14	41	eP	P	03 04 55.1	-1.5
BAIF				pmax	pmax		
	comp=Z,31nm,1.4s						
AVF	Avril sur Loir	82.21	44	eP	P	03 04 53.4	-3.6
AVF				pmax	pmax		
	comp=Z,14nm,1.0s						
MIDW	Midway	82.23	297	eP	P	03 04 59.1	+1.6
	comp=Z,206nm,1.0s						
DOMB	Dombas	82.24	28	eP	P	03 04 55.9	-1.1
SSF	Saint Saulge	82.26	44	eP	P	03 04 53.8	-3.5
SSF				pmax	pmax		
	comp=Z,13nm,0.8s						
DOU	Dourbes	82.38	40	⇑P	P	03 04 55.1	-2.7
LOR	Lormes	82.46	43	eP	P	03 04 55.2	-3.1
LOR				pmax	pmax		
	comp=Z,38nm,1.1s						
LOF	Lofoten	82.48	22	eP	P	03 04 57.6	-0.4
TBLU	Trondheim	82.49	27	eP	P	03 04 57.6	-0.5
GIVF	Givet	82.52	40	eP	P	03 04 55.6	-3.0
GIVF				pmax	pmax		
	comp=Z,23nm,1.1s						
SMF	Signal de Mont	82.57	44	eP	P	03 04 55.3	-3.6
SMF				pmax	pmax		
	comp=Z,11nm,0.8s						
BCLA	Clavier	82.76	40	⇓P	P	03 04 56.9	-2.9
KONS	Konsvik	82.79	23	eP	P	03 04 59.2	-0.5
TIC	Toumodi	82.89	85	eP	P	03 05 00.3	-0.9
LIC	Lamto	82.98	85	eP	P	03 05 00.4	-1.2
	comp=Z,74nm,0.7s						
DBIC	Dimbokro	83.05	85	P	P	03 04 59.8	-2.2
	comp=Z,8.0nm,0.6s,baz=275,slow=4.4,SNR=16						
DBIC				LR	LR	03 38 32.2	
	comp=Z,707nm,21.9s,baz=267,slow=33						
DBIC	Dimbokro	83.05	85	eP	P	03 05 00.3	-1.7
	comp=Z,69nm,1.6s						
DBIC	Dimbokro	83.05	85	eP	P	03 05 00.3	-1.7
DBIC				pmax	pmax		
	comp=Z,69nm,1.6s						
HGN	Heimansgroeve	83.08	40	eP	P	03 04 59.0	-2.4
BILL	Bilibino	83.12	338	eP	P	03 05 01.1	-0.2
	comp=Z,134nm,1.4s						
BILL	Bilibino	83.12	338c	iP	P	03 05 00.8	-0.5
BILL				e		03 08 12.2	
BILL				ePPP	PPP	03 10 04.0	
BILL				pmax	pmax		
	comp=Z,94nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,23.0s						
STEI	Steigen	83.15	22	eP	P	03 05 00.8	-0.7
MEM	Membach	83.16	40	P	P	03 04 59.9	-1.9
MEM	Membach	83.16	40	⇑P	P	03 04 59.4	-2.4
KIC	Kosan Boka	83.23	85	eP	P	03 05 01.7	-1.2
	comp=Z,182nm,1.5s						
WTSB	Winterswijk	83.34	38	eP	P	03 05 00.1	-2.7
NAO01	NORSAR Array S	83.39	29	eP	P	03 05 02.2	-0.6
MOR8	Moi Rana	83.40	23	eP	P	03 05 02.7	-0.1
WLF	Walferdange	83.45	41	P	P	03 05 01.6	-1.8
WLF	Walferdange	83.45	41	⇓P	P	03 05 01.2	-2.2
NB2	NORSAR Subarra	83.49	29	P	P	03 05 02.2	-1.2
	comp=Z,5.5nm,0.6s,baz=286,slow=5.1						
NB2	NORSAR Subarra	83.49	29	P	P	03 05 02.2	-1.2
	baz=286,slow=5.1						
NOA	NORSAR Array B	83.49	29	P	P	03 05 02.4	-1.0
	comp=Z,6.4nm,0.6s,baz=288,slow=5.0,SNR=43						
NOA				LR	LR	03 38 13.5	
	comp=Z,1µm,21.9s,baz=290,slow=33						
VIVF	Saint-Julien-l	83.50	46	eP	P	03 05 01.5	-2.3
VIVF				pmax	pmax		
	comp=Z,18nm,1.2s						
NORES	NORESS Array B	83.73	29	P	P	03 05 03.8	-0.8
NORES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TRO	Tromso	83.83	20	eP	P	03 05 05.8	+0.9
HAU	Haudompre	83.95	42	eP	P	03 05 03.0	-3.0
HAU				pmax	pmax		
	comp=Z,18nm,0.8s						
CABF	La Chapelle	84.09	44	eP	P	03 05 04.2	-2.6
CABF				pmax	pmax		
	comp=Z,35nm,1.2s						
HINF	Hinteralfeld	84.32	42	eP	P	03 05 04.7	-3.2
HINF				pmax	pmax		
	comp=Z,22nm,1.0s						
ORIF	Oris-en-Rattie	84.33	45	eP	P	03 05 07.0	-1.1
ORIF				pmax	pmax		
	comp=Z,14nm,1.0s						
ECH	Echery	84.43	42	P	P	03 05 06.1	-2.3
CDF	Champ du Feu	84.46	42	eP	P	03 05 05.7	-3.0
CDF				pmax	pmax		
	comp=Z,19nm,0.9s						
MOF	Molkenrain	84.50	42	P	P	03 05 07.0	-1.9
LANF	Langenberg	84.66	41	P	P	03 05 07.7	-1.9
KTD	Kalmit	84.76	41	P	P	03 05 07.8	-2.3
TNS	Taunus Mts	84.77	40	P	P	03 05 08.1	-2.0
LPL	La Plagne	84.78	45	eP	P	03 05 08.2	-2.3
LPL				pmax	pmax		
	comp=Z,29nm,1.3s						
LPG	La Plagne	84.79	45	eP	P	03 05 08.4	-2.3
LPG				pmax	pmax		
	comp=Z,23nm,1.1s						
BNI	Bardonecchia	84.85	45	P	P	03 05 09.7	-1.1
MBDF	Montbardon	84.99	45	eP	P	03 05 09.6	-1.9
MBDF				pmax	pmax		
	comp=Z,11nm,0.8s						
LMR	La Mourre	85.13	47	eP	P	03 05 10.5	-1.5
LMR				pmax	pmax		
	comp=Z,37nm,1.4s						
TOD	Tromm	85.14	40	P	P	03 05 10.0	-2.0
BFO	Black Forest	85.16	42	i P	P	03 05 10.4	-1.7
FRF	La Foret Royal	85.17	47	eP	P	03 05 09.5	-2.8
FRF				pmax	pmax		
	comp=Z,45nm,1.2s						
SLE	Schleitheim	85.41	42	P	P	03 05 11.8	-1.6
KTK1	Kautokeino	85.48	20	eP	P	03 05 13.9	+0.6
STU	Stuttgart	85.60	41	P	P	03 05 14.1	-0.2
SBF	Sospel	85.66	46	eP	P	03 05 13.2	-1.5
SBF				pmax	pmax		
	comp=Z,47nm,1.1s						
ARCES	ARCESS Array B	85.97	19	P	P	03 05 14.1	-1.6
	comp=Z,8.5nm,0.6s,baz=282,slow=4.4,SNR=38						
ARCES				PKKPbc	PKKPbc	03 23 18.3	+0.3
	comp=Z,5.2nm,1.1s,baz=48,slow=2.8,SNR=4.1						
ARCES				LR	LR	03 43 44.4	
	comp=Z,288nm,18.1s,baz=298,slow=36						
ARE0	ARCESS Array S	85.97	19	eP	P	03 05 15.0	-0.7
DFRA	Djebel Bou Aff	86.25	53	P	P	03 05 16.8	-1.1
DAVA	Damuels	86.44	42	eP	P	03 05 16.8	-1.8
	comp=Z,27nm,0.8s,SNR=23						
DAVA				ePP	PP	03 08 40.4	-0.3
	comp=Z,12nm,1.4s						
GRFO	Grafenberg	86.63	40	eP	P	03 05 18.4	-0.9
	comp=Z,123nm,1.7s						
GRFO	Grafenberg	86.63	40	eP	P	03 05 18.4	-0.9
GRFO				pmax	pmax		
	comp=Z,123nm,1.7s						
GRF	Grafenberg Arr	86.63	40	P	P	03 05 18.6	-0.8
CKFL	Kef-Lekhel	86.94	53	P	P	03 05 19.5	-1.8
RETA	Reutte	86.96	42	eP	P	03 05 19.1	-2.0
	comp=Z,19nm,0.7s,SNR=22						
GRC1	Grafenberg Arr	87.02	40	P	P	03 05 20.2	-1.1
FETA	Feichten	87.07	42	eP	P	03 05 19.9	-1.8
	comp=Z,12nm,0.9s,SNR=17						
PGF	Pioggiola	87.10	47	eP	P	03 05 18.8	-3.1
PGF				pmax	pmax		
	comp=Z,16nm,0.6s						
MOTA	Moosalm	87.22	42	eP	P	03 05 20.2	-2.3
	comp=Z,12nm,0.9s,SNR=13						
MOTA				ePP	PP	03 08 47.9	+0.9
	comp=Z,16nm,1.2s						
NKC	Novy Kostel	87.23	39	eP	P	03 05 20.8	-1.5
NKC				MLR	MLR		
	comp=Z,1µm,23.1s						
NKC	Novy Kostel	87.23	39	eP	P	03 05 20.8	-1.5
NKC				AMS	AMS	03 39 10.0	
	comp=Z,1µm,23.1s						
CLL	Collm	87.25	38⇑	iP	P	03 05 20.3	-1.9
CLL				i *PP	pP	03 05 44.1	+0.9
CLL				pmax	pmax		
	comp=Z,23nm,0.9s						
CLL	Collm	87.25	38⇑	iP	P	03 05 20.3	-1.9
	comp=Z,23nm,0.9s						
CLL				i sP	pP	03 05 44.1	+0.9
CLL				e		03 08 43.0	
CLL				i PP	PP	03 08 48.2	+1.4
CLL				epPP		03 09 04.0	
CLL				e		03 09 25.0	
SQTA	Sankt Quirin	87.33	42	eP	P	03 05 20.4	-2.5
	comp=Z,3.8nm,0.5s,SNR=13						
SQTA				ePP	PP	03 08 52.5	+4.7
	comp=Z,10nm,1.1s						
CMAH	Djebel Manchou	87.44	53	P	P	03 05 20.7	-2.9
WATA	Walderalm	87.53	42	eP	P	03 05 21.6	-2.3
	comp=Z,4.8nm,0.6s						
ABSA	Djebel Ababsia	87.57	53	P	P	03 05 22.9	-1.4
WTTA	Wattenberg	87.59	42	eP	P	03 05 22.2	-2.1
	comp=Z,5.3nm,0.6s						
WTTA				ePP	PP	03 08 49.9	-0.1
	comp=Z,9.2nm,1.1s						
TORD	Torodi Ar. Bea	87.93	77	P	P	03 05 21.5	-4.7
	comp=Z,3.8nm,0.5s,baz=308,slow=4.0,SNR=80						
TORD				PKiKP	PKiKP	03 10 27.9	-0.6
	comp=Z,0.7nm,0.7s,baz=262,slow=1.3,SNR=3.9						
TORD				PKKPbc	PKKPbc	03 23 14.5	+2.9
	comp=Z,0.7nm,0.7s,baz=122,slow=3.7,SNR=6.9						
TORD				PKPPKP		03 31 24.2	
	comp=Z,0.4nm,0.6s,baz=289,slow=2.6,SNR=4.7						
TORD				LR	LR	03 44 24.8	
	comp=Z,371nm,18.3s,baz=310,slow=36						
BRG	Berggiesshubel	87.94	38	i P	P	03 05 23.8	-1.8
	comp=Z,72nm,1.9s						
BRG				i pP	pP	03 05 48.2	+1.6
	comp=Z,34nm,1.7s						
BRG				ePP	PP	03 08 47.3	-5.1
	comp=Z,19nm,1.4s						
BRG				e		03 23 33.2	
	comp=Z,13nm,1.7s						
	comp=N,669nm,20.5s						
	comp=E,523nm,20.0s						
	comp=Z,1µm,18.9s						
BRG	Berggiesshubel	87.94	38	i P	P	03 05 23.8	-1.8
BRG				i *PP	pP	03 05 48.2	+1.6
BRG				e		03 08 47.3	
BRG				pmax	pmax		
	comp=Z,72nm,1.9s						
BRG				pmax	pmax		
	comp=Z,34nm,1.7s						
BRG				MLR	MLR		
	comp=N,669nm,20.5s						
BRG				MLR	MLR		
	comp=E,523nm,20.0s						
BRG				MLR	MLR		
	comp=Z,1µm,18.9s						
KHC	Kasperske Hory	88.27	40	eP	P	03 05 25.6	-1.7
KHC				e		03 05 48.8	
KHC	Kasperske Hory	88.27	40	eP	P	03 05 25.6	-1.7
KHC				epP	pP	03 05 48.8	+0.5
KHC				ex	x	03 08 44.5	
ABTA	Abfaltersbach	88.32	42	eP	P	03 05 25.5	-2.1
	comp=Z,26nm,0.9s,SNR=16						
ABTA				ePP	PP	03 08 57.4	+1.7
	comp=Z,13nm,1.3s						
PVCC	Panska Ves	88.43	38	eP	P	03 05 26.6	-1.3
PVCC				MLR	MLR		
	comp=Z,900nm,21.6s						
PVCC	Panska Ves	88.43	38	eP	P	03 05 26.6	-1.3
PVCC				AMS	AMS	03 39 50.0	
	comp=Z,900nm,21.6s						
GERES	GERESS Array B	88.44	40	P	P	03 05 26.1	-2.0
	comp=Z,3.9nm,0.7s,baz=298,slow=2.9,SNR=33						
GERES				PP	PP	03 08 53.2	-3.4
	comp=Z,0.5nm,0.7s,baz=283,slow=8.9,SNR=2.4						
GERES				LR	LR	03 40 29.6	
	comp=Z,1µm,21.9s,baz=294,slow=33						
PRU	Pruhonice	88.59	39	eP	P	03 05 26.6	-2.1
PRU				MLR	MLR		
	comp=Z,1µm,19.4s						
PRU	Pruhonice	88.59	39	eP	P	03 05 26.6	-2.1
PRU				ex	x	03 05 47.0	
PRU				AMS	AMS	03 41 30.0	
	comp=Z,1µm,19.4s						
KBA	Koelnbreinsper	88.76	42	eP	P	03 05 27.6	-2.2
	comp=Z,29nm,1.4s,SNR=17						
KBA				ePP	PP	03 09 03.9	+4.6
	comp=Z,20nm,1.1s						
KBA	Koelnbreinsper	88.76	42	P	P	03 05 28.1	-1.7
GOPC	GO Pecny, Ondr	88.77	39	AMS	AMS	03 39 40.0	
	comp=Z,1µm,20.6s						
GKP	Gorka Klasztor	89.05	35	eP	P	03 05 28.9	-1.8
GKP	Gorka Klasztor	89.05	35	eP	P	03 05 28.9	-1.8
MYKA	Terra Mystica	89.10	42	eP	P	03 05 29.0	-2.3
	comp=Z,34nm,1.8s,SNR=5.3						
MYKA				ePP	PP	03 09 01.2	-0.7
	comp=Z,10nm,1.6s						
MOA	Molln	89.11	41	eP	P	03 05 29.3	-1.9
	comp=Z,6.3nm,0.9s,SNR=7.1						
KEST	Kesra	89.17	54	P	P	03 05 29.8	-2.1
	comp=Z,8.3nm,0.8s,baz=227,slow=1.3,SNR=14						
KEST				LR	LR	03 39 21.4	
	comp=Z,592nm,21.9s,baz=228,slow=32						
CADS	Cadrg	89.28	43	i P	P	03 05 29.9	-2.2
CHVC	Chvalec	89.31	38	eP	P	03 05 30.1	-2.0
CHVC				AMS	AMS	03 40 40.0	
	comp=Z,900nm,18.8s						
UPC	Upice	89.31	38	eP	P	03 05 30.7	-1.4
UPC				MLR	MLR		
	comp=Z,1µm,30.7s						
UPC	Upice	89.31	38	eP	P	03 05 30.7	-1.4
UPC				ex	x	03 05 52.3	
UPC				AMS	AMS	03 40 30.0	
	comp=Z,1µm,30.7s						
KSP	Ksiaz	89.36	38	eP	P	03 05 31.4	-0.9
KSP	Ksiaz	89.36	38	eP	P	03 05 31.4	-0.9
TREC	Trest	89.40	39	eP	P	03 05 30.7	-1.8
TREC				MLR	MLR		
	comp=Z,1µm,24.1s						
TREC	Trest	89.40	39	eP	P	03 05 30.7	-1.8
TREC				AMS	AMS	03 39 50.0	
	comp=Z,1µm,24.1s						
OSTC	Ostas	89.41	38	eP	P	03 05 30.6	-2.0
OSTC				ex	x	03 05 53.2	
OSTC				AMS	AMS	03 40 40.0	
	comp=Z,1µm,18.5s						
APA	Apatity	89.48	19⇓	iP	P	03 05 30.7	-1.8
APA				i		03 09 00.4	
APA				i S	SKSac	03 16 03.0	+7.4
APA				i PS	PS	03 17 27.0	-4.3
APA				i SS	SS	03 22 12.0	-0.5
APA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DPC	Dobruska-Polom	89.55	38	eP	P	03 05 32.0	-1.2
DPC				MLR	MLR		
	comp=Z,1µm,21.0s						
DPC	Dobruska-Polom	89.55	38	eP	P	03 05 32.0	-1.2
DPC				ex	x	03 05 51.9	
DPC				AMS	AMS	03 40 30.0	
	comp=Z,1µm,21.0s						
LVZ	Lovozero	89.67	18	eP	P	03 05 32.5	-1.0
	comp=Z,59nm,1.4s						
LVZ	Lovozero	89.67	18⇑	eP	P	03 05 33.0	-0.4
LVZ				pmax	pmax		
	comp=Z,33nm,1.7s						
OBKA	Obir	89.73	42	eP	P	03 05 31.9	-2.4
	comp=Z,21nm,1.7s						
LJU	Ljubljana	89.86	43	i P	P	03 05 32.6	-2.2
SOKA	Soboth	89.99	42	eP	P	03 05 32.8	-2.7
	comp=Z,24nm,1.3s,SNR=9.8						
FINES	FINESS Array B	90.00	26	P	P	03 05 33.3	-1.7
	comp=Z,4.3nm,0.6s,baz=318,slow=2.6,SNR=19						
FINES				LR	LR	03 45 48.1	
	comp=Z,580nm,21.1s,baz=292,slow=36						
KRUC	Moravsky	90.04	39	eP	P	03 05 33.4	-2.1
VRAC	Vranov	90.08	39⇓	iP	P	03 05 35.0	-0.6
VRAC	Vranov	90.08	39	⇓P	P	03 05 35.1	-0.6
VRAC	Vranov	90.08	39	eP	P	03 05 33.7	-2.0
CONA	Conrad Observa	90.10	40	eP	P	03 05 34.4	-1.6
	comp=Z,26nm,1.8s,SNR=12						
CONA				ePP	PP	03 09 12.2	+2.4
	comp=Z,13nm,1.7s						
ARSA	Arzberg	90.11	41	eP	P	03 05 33.5	-2.4
	comp=Z,4.2nm,1.0s						
ARSA				ePP	PP	03 09 13.7	+3.9
	comp=Z,6.4nm,0.9s						
KLNR	Kaliningrad	90.17	33⇑	eP	P	03 05 32.6	-3.3
KLNR				pmax	pmax		
	comp=Z,80nm,0.9s						
MORC	Moravsky Berou	90.49	38⇑	iP	P	03 05 37.3	-0.3
MORC	Moravsky Berou	90.49	38	⇑P	P	03 05 37.3	-0.3
MORC	Moravsky Berou	90.49	38	eP	P	03 05 36.1	-1.5
SOP	Sopron	90.62	41	P	P	03 05 39.2	+1.0
SOP	Sopron	90.62	41⇓	eP	P	03 05 37.0	-1.2
ZST	Bratislava	90.78	40	eP	P	03 05 36.7	-2.3
ZST	Bratislava	90.78	40	eP	P	03 05 36.7	-2.3
MODS	Modra-Piesok	90.83	40	eP	P	03 05 37.0	-2.2
MODS				pmax	pmax		
	comp=Z,51nm,1.7s						
MODS	Modra-Piesok	90.83	40	eP	P	03 05 37.0	-2.2
JAVC	Velka Javorina	90.90	39	eP	P	03 05 38.9	-0.7
TIXI	Tiksi	91.51	349	eP	P	03 05 40.8	-1.1
	comp=Z,30nm,0.8s						
TIXI	Tiksi	91.51	349c	iP	P	03 05 40.2	-1.6
TIXI				pmax	pmax		
	comp=Z,30nm,0.7s						
BEL	Belsk	91.60	36	eP	P	03 05 42.4	-0.3
BEL	Belsk	91.60	36	eP	P	03 05 42.4	-0.3
OJC	Ojcow	91.67	37	eP	P	03 05 41.5	-1.5
OJC	Ojcow	91.67	37	eP	P	03 05 41.5	-1.5
VSU	Vasula	91.72	28	eP	P	03 05 40.9	-2.2
VSU				IAmb	IAmb	03 05 43.3	
	comp=Z,77nm,0.9s						
VSU	Vasula	91.72	28⇑	eP	P	03 05 41.0	-2.0
VSU				pmax	pmax		
	comp=Z,137nm,1.3s						
VYHS	Vyhne	91.75	39	eP	P	03 05 42.1	-1.4
VYHS	Vyhne	91.75	39	eP	P	03 05 42.1	-1.4
TIH	Tihany	91.75	41	eP	P	03 05 42.0	-1.4
CSKK	Cskako	91.81	40	eP	P	03 05 49.0	+5.3
LANS	Liptovska Anna	91.89	38	eP	P	03 05 44.1	0.0
LANS	Liptovska Anna	91.89	38	eP	P	03 05 44.1	0.0
SUW	Suwalki	92.00	33	eP	P	03 05 42.5	-2.0
SUW	Suwalki	92.00	33	eP	P	03 05 42.5	-2.0
BLY	Banja Luka	92.06	43⇓	iP	P	03 05 43.6	-1.4
BUD	Budapest	92.25	40	eP	P	03 05 41.1	-4.7
NIE	Niedzica	92.28	38	eP	P	03 05 44.7	-1.2
NIE	Niedzica	92.28	38	eP	P	03 05 44.7	-1.2
MORH	Mrgy, Hungar	92.49	41⇓	eP	P	03 05 45.0	-1.8
PSZ	Piszkesteto	92.63	40⇑	iP	P	03 05 47.7	+0.1
PSZ	Piszkesteto	92.63	40	⇑P	P	03 05 47.7	+0.1
PSZ	Piszkesteto	92.63	40	eP	P	03 05 43.0	-4.6
PETK	Petropavlovsk-	92.75	326	P	P	03 05 49.2	+1.2
	comp=Z,7.4nm,0.7s,baz=74,slow=11,SNR=10						
PETK				LR	LR	03 46 57.9	
	comp=Z,272nm,21.8s,baz=58,slow=35						
ISAL	Salakas	92.81	31	eP	P	03 05 46.8	-1.4
ISAL				IAmb	IAmb	03 05 50.9	
	comp=Z,8.3nm,1.0s						
MA2	Magadan	92.94	334⇓	eP	P	03 05 48.8	+0.1
IIGN	Ignalina	92.97	31	eP	P	03 05 47.1	-1.8
IIGN				IAmb	IAmb	03 05 50.5	
	comp=Z,36nm,1.5s						
KWP	Kalwaria Pacla	93.63	37	eP	P	03 05 51.6	-0.5
KWP	Kalwaria Pacla	93.63	37	eP	P	03 05 51.6	-0.5
KOLS	Kolonicke sedl	93.66	38	eP	P	03 05 52.2	-0.1
KOLS				pmax	pmax		
	comp=Z,22nm,1.4s						
KOLS	Kolonicke sedl	93.66	38	eP	P	03 05 52.2	-0.1
TIP	Timpagrande	93.72	48⇑	iP	P	03 05 51.2	-1.7
UZH	Uzhgorod	93.80	38	eP	P	03 05 51.3	-1.6
UZH				e		03 06 17.2	
TRPA	Tarpa	94.16	39⇓	iP	P	03 05 55.3	+0.8
LVV	L'vov	94.32	37	eP	P	03 05 53.4	-1.9
SIRR	Siria	94.39	41⇑	iP	P	03 05 55.0	-0.7
BZS	Buzias	94.63	41⇑	iP	P	03 05 54.9	-1.9
BZS	Buzias	94.63	41	⇑P	P	03 05 54.9	-1.9
DRGR		94.83	40⇑	iP	P	03 05 55.6	-2.2
DRGR		94.83	40	⇑P	P	03 05 55.6	-2.2
GZR	Gura Zlata	95.47	41⇓	iP	P	03 05 59.1	-1.6
GZR	Gura Zlata	95.47	41	⇓P	P	03 05 59.1	-1.6
BURAR	Bucovina Array	96.01	38⇑	iP	P	03 06 01.5	-1.7
BURAR	Bucovina Array	96.01	38	⇑P	P	03 06 01.5	-1.7
ARR	Arges	96.66	40⇑	iP	P	03 06 05.2	-0.9
AKASG	Malin Array Be	96.83	34	P	P	03 06 03.6	-3.0
	comp=Z,1.6nm,0.6s,baz=274,slow=4.7,SNR=10						
AKASG				PP	PP	03 09 57.6	-4.5
	comp=Z,2.1nm,0.7s,baz=305,slow=6.8,SNR=4.9						
AKASG				LR	LR	03 48 03.4	
	comp=Z,518nm,20.8s,baz=285,slow=34						
BIZ	Bicaz	96.86	39⇑	iP	P	03 06 05.9	-1.0
DOPR	Dopca	96.86	40⇑	iP	P	03 06 06.0	-1.0
VOIR		96.89	40⇓	iP	P	03 06 06.6	-0.6
VOIR		96.89	40	⇓P	P	03 06 06.6	-0.6
PRGR	Permogore	97.33	20	eP	P	03 06 06.2	-2.4
PRGR				pmax	pmax		
	comp=Z,39nm,1.5s						
MLR	Muntele Rosu	97.42	40⇑	iP	P	03 06 08.9	-0.8
MLR	Muntele Rosu	97.42	40	⇑P	P	03 06 08.9	-0.8
VRI	Vrincioaia	97.74	39⇑	iP	Pdif	03 06 14.2	+3.2
VRI	Vrincioaia	97.74	39	⇑P	Pdif	03 06 14.2	+3.2
OBN	Obninsk	98.08	28d	eP	P	03 06 10.9	-1.2
OBN				e*PP	pP	03 06 36.3	+3.0
OBN				e		03 10 07.3	
OBN				pmax	pmax		
	comp=Z,21nm,0.7s						
MOS	Moscow	98.17	27	eP	P	03 06 10.1	-2.5
MOS				e*PP	pP	03 06 34.2	+0.5
MOS				e		03 06 46.9	
MOS				e		03 10 09.2	
MOS				pmax	pmax		
	comp=Z,38nm,1.1s						
MOS				MLR	MLR		
	comp=Z,1µm,22.0s						
CFR	Carcaliu	98.94	39⇑	iP	P	03 06 14.4	-1.8
CFR	Carcaliu	98.94	39	⇑P	P	03 06 14.4	-1.8
VNA3	Neumayer Olymp	99.14	161	P	Pdif	03 06 17.9	+1.4
VNA1	Neumayer--Stat	99.45	161	P	Pdif	03 06 19.1	+1.3
SNAA	Sanae	101.36	161	P	Pdif	03 06 28.4	+1.9
BRTR	Keskin Array B	105.21	42	PKiKP	PKiKP	03 10 57.4	-1.1
	comp=Z,0.8nm,0.6s,baz=271,slow=2.3,SNR=6.2						
BRTR				PKKPbc	PKKPbc	03 22 26.4	+0.8
	comp=Z,0.9nm,1.0s,baz=180,slow=4.0,SNR=5.0						
BRTR				PKKP	PKKPab	03 22 43.6	-0.7
	comp=Z,4.1nm,1.1s,baz=147,slow=3.5,SNR=13						
DZM	Mont Dzumac	107.98	251	eSP	SP	03 20 42.0	-0.5
	comp=Z,627nm,30.9s						
DZM	Mont Dzumac	107.98	251	eLR	LR	03 42 58.0	
	comp=Z,2µm,28.8s						
KBZ	Khabaz	108.44	35	PKiKP	PKiKP	03 11 04.8	+0.7
	comp=Z,1.6nm,0.7s,baz=225,slow=1.4,SNR=4.6						
AKTO	Aktyubinsk	110.38	22	PKiKP	PKiKP	03 11 08.1	+0.4
	comp=Z,0.6nm,0.4s,baz=346,slow=4.2,SNR=4.8						
AKTO				PKKPab	PKKPab	03 22 18.6	-2.7
	comp=Z,0.9nm,0.5s,baz=133,slow=7.4,SNR=4.6						
MAK	Makhachkala	111.44	33	i P	Pdif	03 07 08.1	-3.8
MAK				i		03 11 07.1	
MAK				e		03 11 35.0	
MAK				e		03 11 47.8	
MAK				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,166nm,1.1s						
BRVK	**Borovoye**	**111.63**	**13**	⇓*i*PKIKP	**PKiKP**	**03 11 11.0**	**+1.1**
BVAR	**Borovoye Array**	**111.69**	**13**	PKiKP	**PKiKP**	**03 11 09.2**	**-0.8**
	comp=Z,2.7nm,0.5s,baz=306,slow=0.7,SNR=16						
BVAR				PP	**PP**	**03 11 46.6**	**-5.3**
	comp=Z,1.7nm,0.6s,baz=331,slow=5.6,SNR=3.8						
BVAR				PKKPbc	**PKKPbc**	**03 22 05.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=145,slow=5.3,SNR=3.3						
BVAR				PKKP	**PKKPdf**	**03 22 23.4**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=119,slow=1.8,SNR=8.1						
ZALV	**Zalesovo Beam**	**112.86**	**4**	PKiKP	**PKiKP**	**03 11 11.1**	**-1.1**
	comp=Z,3.1nm,0.4s,baz=291,slow=2.2,SNR=14						
ZALV				PP	**PP**	**03 11 57.9**	**-2.2**
	comp=Z,19nm,0.8s,baz=353,slow=7.7,SNR=19						
ZALV				SKP		03 14 41.5	
	comp=Z,1.2nm,0.5s,baz=350,slow=1.8,SNR=3.0						
MSHR	**Mys Shultsa**	**113.20**	**329**	⇓*i*PKIKP	**PKiKP**	**03 11 13.4**	**+0.2**
MJAR	**Matsushiro Arr**	**113.27**	**320**	PKiKP	**PKiKP**	**03 11 12.7**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=115,slow=0.3,SNR=7.5						
MJAR				PKKPbc	**PKKPbc**	**03 21 58.5**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=223,slow=3.4,SNR=4.8						
MAJO	**Matsushiro**	**113.27**	**320***c*	*i*PKIKP	**PKiKP**	**03 11 13.4**	**-0.1**
CN2	**Changchun**	**114.98**	**333**	Pdif	**Pdif**	**03 07 27.4**	**-0.3**
CN2				LR	LR		
	comp=Z,580nm,22.0s						
CN2				LR	LR		
	comp=Z,600nm,22.0s						
CN2				LR	LR		
	comp=Z,820nm,22.0s						
KURK	**Kurchatov**	**115.40**	**9**	*e*PKPdf	**PKiKP**	**03 11 15.6**	**-1.5**
KURK	**Kurchatov**	**115.40**	**9***c*	*i*PKIKP	**PKiKP**	**03 11 16.2**	**-1.0**
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KURBB	**Kurchatov Arra**	**115.48**	**9**	PKP	**PKiKP**	**03 11 16.6**	**-0.7**
	comp=Z,4.9nm,0.5s,baz=351,slow=1.8,SNR=87						
KURBB				PP	**PP**	**03 12 13.9**	**-4.8**
	comp=Z,6.1nm,1.1s,baz=345,slow=5.9,SNR=8.7						
KURBB				SKP		03 14 47.0	
	comp=Z,0.8nm,0.5s,baz=350,slow=1.8,SNR=6.6						
KURBB				PKKPbc	**PKKPbc**	**03 21 51.7**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=174,slow=2.6,SNR=7.2						
KURBB				PKKP	**PKKPdf**	**03 22 10.1**	**-6.0**
	comp=Z,2.7nm,1.1s,baz=173,slow=3.3,SNR=7.6						
SYO	**Syowa Base**	**115.64**	**162**	⇑*e*P	**PKPdf**	**03 11 17.9**	**+0.9**
ZAK	**Zakamensk**	**115.67**	**351**	*e*PKIKP	**PKiKP**	**03 11 17.4**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,20nm,0.9s						
DGZ	**Jazzator, Alta**	**117.23**	**2***d*	*i*PKIKP	**PKPdf**	**03 11 20.6**	**-0.4**
ULN	**Ulaanbaatar**	**117.43**	**348**	*e*PKPdf	**PKiKP**	**03 11 21.6**	**+0.2**
ULN	**Ulaanbaatar**	**117.43**	**348***c*	*i*PKIKP	**PKPdf**	**03 11 21.3**	**-0.1**
SONM	**Songino Array**	**117.59**	**348**	PKP	**PKPdf**	**03 11 21.5**	**-0.2**
	comp=Z,11nm,0.6s,baz=344,slow=1.7,SNR=59						
SONM				SKP		03 14 53.1	
	comp=Z,2.9nm,0.9s,baz=26,slow=3.7,SNR=4.7						
SONM				PKKPbc	**PKKPbc**	**03 21 46.7**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=186,slow=4.2,SNR=6.6						
BOSA	**Boshof**	**117.62**	**115**	PKP	**PKiKP**	**03 11 22.6**	**+0.4**
	comp=Z,30nm,0.8s,baz=268,slow=2.1,SNR=43						
BOSA				SKP		03 14 53.9	
	comp=Z,5.2nm,0.9s,baz=271,slow=3.4,SNR=4.5						
BOSA				PKKPbc	**PKKPab**	**03 21 46.3**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=69,slow=2.4,SNR=8.9						
LBTB	**Lobatse**	**117.83**	**111**	PKP	**PKiKP**	**03 11 23.2**	**+0.6**
	comp=Z,4.4nm,0.4s,baz=284,slow=3.2,SNR=18						
KSRS	**Korea Array**	**118.64**	**327**	PKP	**PKiKP**	**03 11 24.2**	**+0.4**
	comp=Z,9.6nm,0.8s,baz=22,slow=1.2,SNR=21						
KSRS				SKP		03 14 55.2	
	comp=Z,2.7nm,0.8s,baz=20,slow=1.6,SNR=6.8						
LSZ	**Lusaka**	**119.50**	**100**	PKP	**PKiKP**	**03 11 27.1**	**+0.9**
	comp=Z,11nm,0.7s,baz=153,slow=0.6,SNR=28						
LSZ	**Lusaka**	**119.50**	**100**	*e*PKPdf	**PKPdf**	**03 11 25.9**	**-0.2**
MKAR	**Makanchi Array**	**119.73**	**7**	PKP	**PKPdf**	**03 11 24.4**	**-1.3**
	comp=Z,4.1nm,0.6s,baz=308,slow=3.0,SNR=35						
MKAR				PP	PP	03 12 39.4	-8.9
	comp=Z,2.0nm,0.6s,baz=9.1,slow=4.6,SNR=2.5						
MKAR				PKKPbc	**PKKPbc**	**03 21 36.2**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=193,slow=5.0,SNR=4.0						
JNU	**Nakatsue**	**120.05**	**321**	PKP	**PKPdf**	**03 11 26.1**	**-0.6**
	comp=Z,7.1nm,0.8s,baz=326,slow=3.6,SNR=3.7						
GUMO	**Guam**	**120.12**	**294**	PKP	**PKiKP**	**03 11 27.8**	**+0.5**
	comp=Z,46nm,0.6s,baz=100,slow=6.1,SNR=4.5						
MATP	**Matopo**	**120.27**	**106**	PKP	**PKiKP**	**03 11 27.8**	**+0.2**
	comp=Z,24nm,0.7s,baz=272,slow=1.2,SNR=84						
GEYT	**Alibeck**	**120.57**	**30**	PKP	**PKPdf**	**03 11 26.5**	**-1.1**
	comp=Z,9.1nm,0.7s,baz=289,slow=4.5,SNR=14						
GEYT				PKKPbc	**PKKPbc**	**03 21 34.4**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=123,slow=5.3,SNR=4.8						
BJI	**Beijing**	**121.94**	**337**	PKP	**PKPdf**	**03 11 30.0**	**0.0**
BJI				LR	LR		
	comp=Z,390nm,21.8s						
BJI				LR	LR		
	comp=Z,220nm,25.6s						
BJI				LR	LR		
	comp=Z,630nm,24.2s						
AAK	**Ala-Archa**	**122.39**	**14**	PKP	**PKPdf**	**03 11 30.6**	**-0.5**
	comp=Z,7.4nm,0.7s,baz=158,slow=2.0,SNR=14						
AAK	**Ala-Archa**	**122.39**	**14**	*e*PKPdf	**PKPdf**	**03 11 31.3**	**+0.1**
AAK	**Ala-Archa**	**122.39**	**14**	*i* PKiKP	**PKPdf**	**03 11 31.2**	**+0.1**
	SNR=8.1						
AAK	**Ala-Archa**	**122.39**	**14**	⇓*i*PKIKP	**PKPdf**	**03 11 30.2**	**-0.9**
RAYN	**Ar Rayn**	**122.58**	**51**	*e*PKPdf	**PKPdf**	**03 11 30.2**	**-1.6**
RAYN	**Ar Rayn**	**122.58**	**51**	PKiKP	**PKPdf**	**03 11 31.2**	**-0.7**
RAYN	**Ar Rayn**	**122.58**	**51**	*e*PKIKP	**PKPdf**	**03 11 30.2**	**-1.6**
MAW	**Mawson**	**122.72**	**168**	PKP	**PKiKP**	**03 11 33.1**	**+2.3**
	comp=Z,17nm,0.7s,baz=201,slow=3.1,SNR=53						
MAW	**Mawson**	**122.72**	**168**	*e*PKPdf	**PKiKP**	**03 11 30.8**	**0.0**
MAW	**Mawson**	**122.72**	**168**	*e*PKIKP	**PKiKP**	**03 11 30.8**	**0.0**
HHC	**Hu-ho-hao-te**	**122.81**	**341**	PKP	**PKPdf**	**03 11 31.2**	**-0.7**
HHC				PP	**PP**	**03 13 13.5**	**+4.0**
HHC				SKS	**SKSac**	**03 18 31.8**	**+5.4**
HHC				SS	**SS**	**03 29 43.6**	**-2.3**
HHC				AMB	AMB		
	comp=Z,110nm,5.4s						
HHC				LR	LR		
	comp=Z,1μm,23.3s						
HHC				LR	LR		
	comp=Z,660nm,23.7s						
HHC				LR	LR		
	comp=Z,2μm,24.5s						
WMQ	**Urumqi**	**123.11**	**3**	*e*PKP	**PKPdf**	**03 11 32.0**	**-0.3**
WMQ				LR	LR		
	comp=Z,4μm,25.9s						
WMQ				LR	LR		
	comp=Z,1μm,24.7s						
WMQ				LR	LR		
	comp=Z,3μm,28.5s						
TIA	**Tai'an**	**124.84**	**334**	PKP	**PKiKP**	**03 11 36.3**	**+0.2**
KMBO	**Kilima Mbogo**	**125.68**	**82**	PKP	**PKiKP**	**03 11 39.7**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=54,slow=6.5,SNR=7.0						
KMBO	**Kilima Mbogo**	**125.68**	**82**	*e*PKPdf	**PKPdf**	**03 11 38.2**	**-0.1**
KSH	**Kashi**	**125.70**	**14**	*e*PKP	**PKiKP**	**03 11 38.1**	**+0.2**
KSH				sPKP		03 12 15.6	
KSH				PP	**PP**	**03 13 33.4**	**+4.5**
KSH				PKS		03 15 13.5	
KSH				SKS	**SKSdf**	**03 18 38.4**	**-4.5**
KSH				SKKS	**SKKSac**	**03 20 15.9**	**-5.5**
KSH				SS	**SS**	**03 30 22.9**	**+0.6**
KSH				AMB	AMB		
	comp=Z,180nm,6.1s						
KSH				LR	LR		
	comp=Z,750nm,15.4s						
KSH				LR	LR		
	comp=Z,190nm,8.8s						
KSH				LR	LR		
	comp=Z,2μm,30.6s						
CTA	**Charters Tower**	**126.61**	**255**	PKP	**PKiKP**	**03 11 42.1**	**+2.1**
	comp=Z,6.6nm,0.6s,baz=125,slow=4.8,SNR=12						
GTA	**Gaotai**	**126.92**	**351**	PKP	**PKiKP**	**03 11 40.2**	**-0.1**
GTA				LR	LR		
	comp=Z,970nm,22.1s						
GTA				LR	LR		
	comp=Z,520nm,22.0s						
GTA				LR	LR		
	comp=Z,2μm,22.5s						
NJ2	**Nanjing**	**127.51**	**330**	⇓PKP	**PKPdf**	**03 11 41.1**	**+0.1**
KBL	**Kabul**	**128.16**	**23**	*e*PKPdf	**PKPdf**	**03 11 40.7**	**-1.7**
KBL	**Kabul**	**128.16**	**23**	*e*PKIKP	**PKPdf**	**03 11 40.7**	**-1.7**
SHME	**Shamm**	**128.40**	**41**	*i* PKiKP	**PKPdf**	**03 11 41.9**	**-1.0**
	SNR=5.7						
NAZ	**Nazwa, Dubai**	**128.83**	**42**	*i* PKiKP	**PKPdf**	**03 11 42.8**	**-0.9**
	SNR=8.4						
ASUD	**Al Ashush, Dub**	**128.86**	**43**	*i* PKiKP	**PKPdf**	**03 11 43.5**	**-0.2**
	SNR=13						
MSFE	**Esma-Masafi**	**128.89**	**41**	*i* PKiKP	**PKPdf**	**03 11 42.8**	**-1.0**
	SNR=16						
FAQ	**Al Faqa, Dubai**	**128.95**	**42**	PKPdf	**PKPdf**	**03 11 42.5**	**-1.4**
MDH	**Madha**	**129.03**	**41**	PKPdf	**PKPdf**	**03 11 42.0**	**-2.0**
UOSS	**Minazif**	**129.21**	**42**	*e*PKPdf	**PKPdf**	**03 11 43.0**	**-1.4**
UOSS	**Minazif**	**129.21**	**42**	PKPdf	**PKPdf**	**03 11 43.0**	**-1.4**
HATD	**Hatta, Dubai**	**129.25**	**42**	*i* PKPdf	**PKPdf**	**03 11 43.3**	**-1.2**
	SNR=11						
ASHO	**Ashiyiah**	**129.30**	**42**	*i* PKPdf	**PKPdf**	**03 11 43.2**	**-1.4**
	SNR=8.1						
LZH	**Lanzhou**	**129.38**	**346**	⇑PKP	**PKPdf**	**03 11 45.0**	**+0.3**
LZH				sPKP		03 12 24.1	
LZH				SS	SS	03 31 07.3	-0.7
LZH				AMB	AMB		
	comp=Z,190nm,7.1s						
LZH				LR	LR		
	comp=Z,690nm,19.5s						
LZH				LR	LR		
	comp=Z,690nm,19.6s						
LZH				LR	LR		
	comp=Z,1μm,20.6s						
XAN	**Xi'an**	**129.88**	**340**	PKP	**PKiKP**	**03 11 46.1**	**-0.2**
STKA	**Stephens Creek**	**130.02**	**239**	PKP	**PKiKP**	**03 11 47.9**	**+1.4**
	comp=Z,7.2nm,0.7s,baz=119,slow=3.1,SNR=16						
STKA	**Stephens Creek**	**130.02**	**239**	*e*PKPdf	**PKiKP**	**03 11 47.5**	**+1.0**
NIL	**Nilore**	**130.44**	**19**	*e*PKPdf	**PKPdf**	**03 11 46.0**	**-0.6**
NIL	**Nilore**	**130.44**	**19**	*e*PKIKP	**PKPdf**	**03 11 46.0**	**-0.6**
WHN	**Wuhan**	**130.88**	**333**	*i* PKP	**PKiKP**	**03 11 48.1**	**-0.2**
WHN				sPKP		03 12 25.0	
WHN				PP	**PP**	**03 14 06.1**	**+3.1**
WHN				SS	SS	03 31 27.8	+1.1
WHN				LR	LR		
	comp=Z,2μm,25.9s						
WHN				LR	LR		
	comp=Z,1μm,20.8s						
WHN				LR	LR		
	comp=Z,2μm,23.0s						
WSAR	**Wadi Sarin**	**131.98**	**41**	PKP	**PKPdf**	**03 11 48.8**	**-0.9**
	comp=Z,9.5nm,0.6s,baz=267,slow=7.3,SNR=9.6						
WSAR				SKPbc	**SKPbc**	**03 15 08.6**	**-0.6**
	comp=Z,22nm,0.8s,baz=330,slow=2.2,SNR=17						
BAKI	**Biak**	**133.54**	**281**	PKP	**PKiKP**	**03 11 56.4**	**+2.3**
BAKI				PKP	**PKPdf**	**03 11 57.6**	**+4.7**
CD2	**Chengdu**	**134.33**	**344**	PKP	**PKPdf**	**03 11 52.5**	**-1.5**
CD2				PP	**PP**	**03 14 24.4**	**-0.5**
CD2				AMB	AMB		
	comp=Z,480nm,10.8s						
CD2				LR	LR		
	comp=Z,1μm,29.4s						
CD2				LR	LR		
	comp=Z,1μm,29.4s						
CD2				LR	LR		
	comp=Z,1μm,22.6s						
LSA	**Lhasa**	**137.28**	**360**	PKP	**PKPdf**	**03 12 00.8**	**+0.7**
LSA	**Lhasa**	**137.28**	**360**	*i* PKiKP	**PKiKP**	**03 12 01.2**	**-0.8**
	SNR=9.4						
GYA	**Guiyang**	**137.59**	**339**	PKP	**PKPdf**	**03 11 56.4**	**-3.9**
GYA				AMB	AMB		
	comp=Z,240nm,9.3s						
GYA				LR	LR		
	comp=Z,900nm,23.2s						
GYA				LR	LR		
	comp=Z,510nm,21.7s						
GYA				LR	LR		
	comp=Z,1μm,24.4s						
FAKI	**Fak Fak**	**137.73**	**280**	*e*PKPdf	**PKPdf**	**03 11 59.6**	**-1.1**
WB2	**Warramunga Arr**	**137.80**	**255**	*e*PKPdf	**PKPdf**	**03 11 59.7**	**-0.9**
WRAB	**Tennant Creek**	**137.80**	**255**	⇓*e*PKIKP	**PKPdf**	**03 11 59.9**	**-0.7**
WRA	**Warramunga Arr**	**137.81**	**255**	PKhKP	PKPpre	03 11 51.1	
	comp=Z,1.9nm,0.6s,baz=84,slow=2.6,SNR=4.2						
WRA				PKP	**PKiKP**	**03 12 02.8**	**+0.2**
	comp=Z,28nm,0.6s,baz=117,slow=1.0,SNR=46						
WRA				SKPbc	**SKiKP**	**03 15 32.4**	**+0.4**
	comp=Z,16nm,0.8s,baz=87,slow=3.0,SNR=17						
OPO	**Ambohidratompo**	**137.84**	**103**	PKP	**PKPdf**	**03 12 01.7**	**+0.8**
	comp=Z,13nm,0.5s,baz=246,slow=3.6,SNR=19						
ABPO	**Ambohimpanom**	**137.87**	**104**	*e*PKPdf	**PKPdf**	**03 12 00.1**	**-0.8**
ABPO	**Ambohimpanom**	**137.87**	**104**	*e*PKIKP	**PKPdf**	**03 12 00.2**	**-0.8**
ASAR	**Alice Springs**	**137.94**	**249**	PKhKP	PKPpre	03 11 52.1	
	comp=Z,3.5nm,0.6s,baz=108,slow=3.1,SNR=20						
ASAR				PKP	**PKiKP**	**03 12 03.9**	**+1.0**
	comp=Z,8.9nm,0.7s,baz=96,slow=1.7,SNR=31						
ASAR				SKPbc	**SKiKP**	**03 15 31.8**	**-0.5**
	comp=Z,11nm,1.0s,baz=108,slow=2.9,SNR=9.3						
ASAR				PKKP	**PKKPdf**	**03 21 31.4**	**-2.2**
	comp=Z,0.3nm,0.4s,baz=302,slow=1.8,SNR=4.1						
DANN	**Dangsing**	**138.07**	**9**	*e*P	**PKPdf**	**03 11 59.2**	**-2.1**
	comp=Z,174nm,0.6s						
PYUN	**Piuthan**	**138.19**	**10**	*e*P	**PKPdf**	**03 11 58.5**	**-3.0**
	comp=Z,113nm,0.7s						
GKN	**Gorkha**	**138.54**	**8**	*e*P	**PKPdf**	**03 11 58.1**	**-3.9**
	comp=Z,57nm,0.4s						
KOLN	**Koldanda**	**138.61**	**10**	*e*P	**PKPdf**	**03 11 58.4**	**-3.8**
	comp=Z,60nm,0.7s						
GUN	**Gumba**	**138.79**	**7**	*e*P	**PKPdf**	**03 11 57.5**	**-5.2**
	comp=Z,122nm,0.8s						
KKN	**Kakani**	**138.84**	**7**	*e*P	**PKPdf**	**03 11 56.7**	**-6.0**
	comp=Z,100nm,1.0s						
DMN	**Daman**	**138.99**	**8**	*e*P	**PKPdf**	**03 11 56.7**	**-6.3**
	comp=Z,56nm,0.9s						
PKIN	**Phulchoki**	**139.06**	**7**	*e*P	**PKPdf**	**03 11 57.0**	**-6.1**
	comp=Z,54nm,0.8s						
PKI	**Pulchoki**	**139.07**	**7**	*e*P	**PKPdf**	**03 11 57.1**	**-6.1**
	comp=Z,48nm,0.6s						
KMI	**Kunming**	**140.09**	**343**	PKP	**PKiKP**	**03 12 06.6**	**-0.9**
KMI				sPKP		03 12 43.2	
KMI				PP	**PP**	**03 15 03.3**	**+2.3**
KMI				PKS	**PKSdf**	**03 15 39.3**	**-2.1**
KMI				SKKS		03 21 46.9	
KMI				SS	**SS**	**03 33 10.8**	**-6.2**
KMI				AMB	AMB		
	comp=Z,190nm,4.2s						
KMI				LR	LR		
	comp=Z,510nm,26.3s						
KMI				LR	LR		
	comp=Z,390nm,24.2s						
KMI				LR	LR		
	comp=Z,2μm,28.4s						
NLAI	**Namlea**	**142.74**	**282**	PKP	**PKPdf**	**03 12 09.4**	**-0.3**
NLAI				PKP	**PKiKP**	**03 12 10.8**	**-2.1**
QIZ	**Qiongzhong**	**142.80**	**329**	PKP	**PKPdf**	**03 12 09.9**	**+0.2**
QIZ				PP	**PP**	**03 15 22.5**	**+4.8**
QIZ				LR	LR		
	comp=Z,530nm,22.1s						
QIZ				LR	LR		
	comp=Z,360nm,26.5s						
QIZ				LR	LR		
	comp=Z,510nm,20.6s						
SANI	**Sanana**	**143.41**	**285**	PKP	**PKPdf**	**03 12 10.5**	**-0.4**
SANI				PKP	**PKPdf**	**03 12 10.5**	**-0.4**
MSEY	**Mahe Island**	**144.16**	**79**	PKiKP	**PKPdf**	**03 12 13.4**	**+1.1**
RER	**Riviere de l'E**	**145.70**	**108**	*e*PKPdf	**PKPab**	**03 12 16.1**	**+0.5**
LUWI	**Luwuk**	**146.06**	**288**	PKP	**PKiKP**	**03 12 18.5**	**-1.2**
LUWI				PKP	**PKPab**	**03 12 19.9**	**+2.8**
PAYA	**Payao**	**146.36**	**344**	P	**PKPdf**	**03 12 16.5**	**+0.6**
	comp=Z,230μm,0.8s						
SOEI	**Soe**	**147.00**	**272**	PKP	**PKPab**	**03 12 20.5**	**-0.4**
APSI	**Ampana**	**147.04**	**289**	PKP	**PKPab**	**03 12 20.7**	**-0.2**
APSI				PKP	**PKiKP**	**03 12 21.3**	**-0.4**
CHTO	**Chiang Mai**	**147.11**	**346**	*e*PKPdf	**PKPdf**	**03 12 17.4**	**+0.2**
CHTO	**Chiang Mai**	**147.11**	**346**	*e*PKIKP	**PKPdf**	**03 12 17.4**	**+0.2**
CMMT	**Chiang Mai**	**147.11**	**346**	P	**PKPdf**	**03 12 18.0**	**+0.8**
	comp=Z,44nm,0.9s,comp=Z,561nm						
HYB	**Hyderabad**	**147.21**	**22**	*i* PKP	**PKPdf**	**03 12 17.0**	**-0.4**
HYB				*e*pPKP	**sPKPdf**	**03 12 45.0**	**-2.4**
HYB				*e*sPKP		03 12 55.0	
LAMP	**Lampang**	**147.22**	**344**	P	**PKPbc**	**03 12 19.6**	**0.0**
	comp=Z,158μm,0.8s						
CMAR	**Chiang Mai Arr**	**147.46**	**345**	PKPbc	**PKPdf**	**03 12 18.4**	**+0.6**
	comp=Z,72nm,0.8s,baz=342,slow=3.8,SNR=69						
CMAR				SKPbc	**SKiKP**	**03 15 54.7**	**+2.6**
	comp=Z,4.6nm,0.9s,baz=340,slow=1.9,SNR=5.7						
NWAO	**Narrogin (SRO)**	**148.92**	**227**	PKPbc	**PKiKP**	**03 12 25.9**	**+0.9**
	comp=Z,40nm,0.7s,baz=114,slow=4.1,SNR=17						
NWAO	**Narrogin (SRO)**	**148.92**	**227**	*e*PKPbc	**PKiKP**	**03 12 24.8**	**-0.3**
EDFI	**Ende, Flores**	**149.33**	**275**	PKP	**PKPdf**	**03 12 22.9**	**+1.9**
EDFI				PKP	**PKPbc**	**03 12 23.2**	**-2.2**
UMPA	**Umpang Tak**	**149.64**	**344**	P	**PKPbc**	**03 12 26.2**	**+0.2**
	comp=Z,164μm,0.7s						
SPSI	**Sidrap Palu**	**149.90**	**285**	PKP	**PKPbc**	**03 12 24.6**	**-2.1**
SPSI				PKP	**PKiKP**	**03 12 24.9**	**-2.7**
BKSI	**Bulukumba**	**150.00**	**283**	PKP	**PKPbc**	**03 12 24.9**	**-2.0**
BKSI				PKP	**PKiKP**	**03 12 25.2**	**-2.6**
KAPI	**Kappang**	**150.26**	**283**	*e*PKPdf	**PKPbc**	**03 12 25.3**	**-2.3**
KAPI				*e*PKPbc	**PKiKP**	**03 12 30.1**	**+1.7**
KAPI	**Kappang**	**150.26**	**283**	*e*PKIKP	**PKPbc**	**03 12 25.3**	**-2.3**
PSA00	**Pilbara Seismi**	**151.09**	**249**	*e*PKPdf	**PKPdf**	**03 12 24.0**	**+0.6**
WBSI	**Waikabubak, Su**	**151.72**	**274**	PKP	**PKPdf**	**03 12 27.4**	**+2.8**
WBSI				PKP	**PKPbc**	**03 12 28.4**	**-2.6**
KCSI	**Kotacane, Aceh**	**161.92**	**337**	PKP	**PKPdf**	**03 12 37.4**	**-0.3**
KCSI				PKP	**PKPdf**	**03 12 38.4**	**+0.7**
CISI	**Cisompet, Garu**	**162.30**	**287**	PKP	**PKPdf**	**03 12 39.8**	**+1.7**
CISI				PKP	**PKPdf**	**03 12 40.2**	**+2.1**
CGJI	**Cibinong**	**163.88**	**293**	PKP	**PKPdf**	**03 12 39.4**	**-0.1**
CGJI				PKP	**PKPdf**	**03 12 40.5**	**+1.0**
MDSI	**Maura Dua**	**164.14**	**302**	PKP	**PKPdf**	**03 12 39.3**	**-0.5**
MDSI				PKP	**PKPdf**	**03 12 39.6**	**-0.2**
PDSI	**Padang**	**164.41**	**321**	PKP	**PKPdf**	**03 12 39.8**	**-0.3**
PDSI				PKP	**PKPdf**	**03 12 40.5**	**+0.4**
KASI	**Kota Agung**	**164.43**	**298**	PKP	**PKPdf**	**03 12 40.5**	**+0.5**
KASI				PKP	**PKPdf**	**03 12 41.3**	**+1.3**
SISI	**Saibi**	**165.55**	**325**	PKP	**PKPdf**	**03 12 42.3**	**+1.3**
SISI				PKP	**PKPdf**	**03 12 43.5**	**+2.5**

NNC 08 03:04:21.9±12.0**,36°.48N**×**70°.05E,h0^{km},mb3.8,mpv3.4, 2C,Error ellipse: s-maj=122.0km s-min=71.8km az=158.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.63**	**3**	P	Pn	03 06 03.2	+2.6
	0.6nm,0.3s,baz=178,slow=12,SNR=13						
KK31				S	Sn	03 07 18.2	+1.3
	1.5nm,0.3s,baz=187,slow=24,SNR=4.9						
AAK	**Ala-Archa**	**7.04**	**28**	⇑P	Pn	03 06 04.5	-1.9
	1.9nm,0.5s						
AAK				⇑S	Sn	03 07 28.2	+0.8
	7.5nm,1.0s						
AB31	**Akbulak array**	**14.75**	**333**	P	Pn	03 07 51.9	+0.2
	0.9nm,0.5s,baz=150,slow=13,SNR=14						

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*SJA **08** 03:20:15.6±0.5,29°.90S×72°.51W,h22^{km}±25^{km},ML3.5, MW3.6*

*ISCJB **08** 03:20:23.6±1.0,29°.81S±0°.04×71°.68W±0°.08,h10^{km},Error ellipse: s-maj=9.8km s-min=5.6km az=3.6*

*GUC **08** 03:20:23.4±0.8,29°.77S×71°.65W,h16^{km}±3^{km},ML3.7*

ISC 08 03:20:23.0±1.7**,29°.77S**±0°.05×**71°.70W**±0°.09**,h10^{km},n14,** σ**1^{s}81**/22**,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.42**	**109**	*e*P	**Pg**	**03 20 31.4**	**+0.2**
LSCH				*i* S	**Sb**	**03 20 37.2**	**-1.7**
GO04	**Tololo Observa**	**0.88**	**117**	*e*P	**Pg**	**03 20 39.1**	**-0.9**
GO04				*i* S	**Sb**	**03 20 51.4**	**-1.0**
GO04				IAML		03 20 52.9	
	comp=N,5μm,0.2s						
CO02	**Combarbal**	**1.55**	**157**	*e*P	**Pn**	**03 20 50.2**	**-0.6**
CO02				*i* S	**Sn**	**03 21 10.5**	**-0.5**
GO03	**Copiap**	**2.52**	**31**	*e*P	**Pn**	**03 21 04.9**	**+0.8**
GO03				*i* S	**Sb**	**03 21 37.4**	**-2.2**
VCA	**Vinchina**	**3.23**	**72**	*e*P	**Pb**	**03 21 18.3**	**-2.1**
VCA				IAML		03 21 23.8	
	comp=Z,127nm,0.3s						
CFA	**Coronel Fontan**	**3.50**	**122**	*e*P	**Pn**	**03 21 19.5**	**+2.0**
CFA				*e*S	**Sb**	**03 22 07.4**	**-0.2**
FCH	**Farellones**	**3.74**	**162**	*e*P	**Pn**	**03 21 23.4**	**+2.3**
ACLC	**CERRO LA CRUZ**	**4.15**	**86**	*e*P	**Pn**	**03 21 28.5**	**+1.9**
ACLC				*e*S	**Sb**	**03 22 27.6**	**+1.1**
LMEL	**Las Melosas**	**4.26**	**163**	*e*P	**Pn**	**03 21 29.7**	**+1.6**
LMEL				*i* S	**Sn**	**03 22 20.0**	**+2.1**
APLL	**PUNTA DE LOS L**	**4.53**	**99**	*e*P	**Pn**	**03 21 33.4**	**+1.8**
APLL				*i* S	**Sb**	**03 22 37.2**	**0.0**
APLL				IAML		03 22 45.8	
	comp=Z,29nm,0.8s						
CYA	**Choya**	**5.33**	**77**	*e*P	**Pn**	**03 21 43.8**	**+1.1**
CYA				IAML		03 21 51.8	
	comp=Z,10nm,0.3s						
MRA	**San Martin**	**5.77**	**119**	*e*P	**Pn**	**03 21 49.3**	**+0.5**
MRA				IAML		03 23 32.9	
	comp=Z,23nm,0.7s						
TCA	**Tanti**	**6.33**	**106**	*e*P	**Pn**	**03 21 57.0**	**+0.6**
TCA				IAML		03 23 48.4	
	comp=Z,11nm,0.5s						
AHML	**Horco Molle**	**6.35**	**64**	*e*P	**Pn**	**03 22 01.3**	**+4.6**
AHML				*e*S	Sn	03 23 18.5	+9.1
AHML				IAML		03 23 46.5	
	comp=Z,4.5nm,0.5s						

SNET 08 03:21:02.7±1.3**,13°.18N**×**89°.37W,h61^{km}**±7^{km}**,ML3.5,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.53**	**15**	*e*P	Pn	03 21 15.3	+0.2
SNET				*e*S	Sn	03 21 25.7	+1.5
SNET				IAML		03 21 27.7	
	comp=Z,1μm,0.3s						
UEES	**Universidad Ev**	**0.55**	**14**	*e*P	Pn	03 21 15.7	+0.1
UEES				*e*S	Sn	03 21 26.3	+1.4
OPAM	**Oficina de Pla**	**0.56**	**18**	*e*P	Pn	03 21 15.9	+0.4
OPAM				*e*S	Sn	03 21 26.5	+1.7
OPAM				IAML		03 21 32.3	
	comp=Z,1μm,0.3s						
UDBS	**Universidad Do**	**0.58**	**22**	*e*P	Pn	03 21 16.0	+0.2
UDBS				*e*S	Sn	03 21 26.9	+1.6
UDBS				IAML		03 21 28.4	
	comp=Z,2μm,0.2s						
LFU	**La Fuente**	**0.62**	**24**	*e*P	Pn	03 21 16.8	+0.6
LFU				*e*S	Sn	03 21 27.3	+1.2
PAVA	**Las Pavas**	**0.68**	**39**	*e*P	Pn	03 21 17.3	+0.3
PAVA				*e*S	Sn	03 21 28.8	+1.5
PAVA				IAML		03 21 29.9	
	comp=Z,2μm,0.3s						
CEVE	**Cerro Verde**	**0.69**	**339**	*e*P	Pn	03 21 17.5	+0.3
CEVE				*e*S	Sn	03 21 28.8	+1.1
CEVE				IAML		03 21 30.8	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**0.70**	**340**	*e*P	Pn	03 21 17.7	+0.4
SNJE	**San Jose**	**0.72**	**342**	*e*P	Pn	03 21 18.1	+0.5
SNJE				*e*S	Sn	03 21 30.0	+1.6
UESV	**Universidad de**	**0.73**	**51**	*e*P	Pn	03 21 17.5	+1.6
UESV				*e*S	Sn	03 21 28.7	+3.1
RTR	**El Retiro**	**0.76**	**340**	*e*P	Pn	03 21 18.7	+0.7
UNIC	**Universidad Ca**	**0.82**	**348**	*e*P	Pn	03 21 19.5	+0.8
VICT	**Victoria**	**1.06**	**43**	*e*P	Pn	03 21 22.1	+0.4
VICT				*e*S	Sn	03 21 36.8	+1.1
PACA	**Pacayal**	**1.06**	**74**	*e*P	Pn	03 21 22.2	+0.5
PACA				*e*S	Sn	03 21 37.5	+1.6
LCY	**Lacayo**	**1.08**	**77**	*e*P	Pn	03 21 22.4	+0.5
LCY				*e*S	Sn	03 21 38.0	+1.8
VSM	**San Miguel**	**1.10**	**77**	*e*P	Pn	03 21 23.0	+0.7
VSM				*e*S	Sn	03 21 37.6	+0.7
MTO3	**Montecristo**	**1.22**	**1**	*e*P	Pn	03 21 24.2	+0.3
MTO3				*e*S	Sn	03 21 40.4	+0.8
LCND	**La Caada**	**1.45**	**85**	*e*P	Pn	03 21 26.9	+0.2
LCND				*e*S	Sn	03 21 45.9	+1.0
LCND				IAML		03 21 48.6	
	comp=Z,563nm,0.3s						
CNCH	**Conchagua**	**1.50**	**86**	*e*P	Pn	03 21 27.9	+0.3
CNCH				*e*S	Sn	03 21 47.9	+1.6

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*ISCJB **08** 03:28:35.0±1.3,5°.77S±0°.09×146°.9E±0°.2,h78^{km},mb3.5/3, Error ellipse: s-maj=24.9km s-min=9.7km az=158.0*

*IDC **08** 03:28:36.2±3.0,5°.77S×146°.97E,h74^{km}±27^{km},mb3.4/3, mb1 3.8/7,mb1mx3.5/26,mbtmp4.0/7,Error ellipse: s-maj=36.3km s-min=18.0km az=69.0*

ISC 08 03:28:36.3±1.3**,5°.8S**±0°.1×**146°.9E**±0°.2**,h78^{km},n8,**σ**0^{s}93**/9**, mb3.6**/3**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.63**	**176**	P	**Pn**	**03 29 29.7**	**-0.5**
	19nm,0.3s,baz=3.0,slow=6.3,SNR=20						
PMG				S	**Sn**	**03 30 12.0**	**+0.2**
	23nm,0.3s,baz=131,slow=18,SNR=8.0						
JAY	**Jayapura**	**6.99**	**297**	P	**Pn**	**03 30 16.7**	**+0.6**
	1.8nm,0.3s,baz=135,slow=5.8,SNR=7.3						
SIJI	**Sorong**	**16.37**	**287**	P	**Pn**	**03 32 20.7**	**-0.7**
	1.9nm,0.3s,baz=90,slow=8.2,SNR=8.4						
WRA	**Warramunga Arr**	**18.67**	**220**	P	**P**	**03 32 46.8**	**-1.5**
	0.3nm,0.3s,baz=45,slow=12,SNR=5.3						
ASAR	**Alice Springs**	**21.77**	**214**	P	**P**	**03 33 22.6**	**+0.8**
	0.5nm,0.4s,baz=55,slow=8.9,SNR=9.8						
STKA	**Stephens Creek**	**26.46**	**190**	P	**P**	**03 34 07.1**	**+1.1**
	1.2nm,0.7s,baz=356,slow=14,SNR=3.5						
ILAR	**Eielson Array**	**85.29**	**23**	P	**P**	**03 41 04.0**	**-0.3**

	0.8nm,0.8s,baz=266,slow=6.0,SNR=6.1						
TORD	**Torodi Ar. Bea**	**144.96**	**285**	PKPbc	**PKPdf**	**03 48 05.7**	**+0.1**
	0.7nm,1.0s,baz=103,slow=4.5,SNR=4.6						

IDC 08 03:40:59.3±1.0,**23°.17S**×**69°.36E**,**h0**^{km},**mb3.8**/6, **mb1 3.9**/6,**mb1mx3.6**/42,**mbtmp3.8**/6,**Error ellipse: s-maj=37.3km s-min=28.0km az=59.0**,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**15.72**	**11**	T	T	04 00 46.0	
	baz=192,slow=76,SNR=91						
H08S2	**Diego Garcia H**	**15.73**	**12**	T	T	04 00 47.1	
	baz=192,slow=76,SNR=69						
H08S3	**Diego Garcia H**	**15.74**	**11**	T	T	04 00 47.6	
	baz=192,slow=76,SNR=100						
H01W2	**Cape Leeuwin H**	**40.55**	**117**	T	T	04 32 00.5	
	baz=274,slow=75,SNR=7.1						
H01W3	**Cape Leeuwin H**	**40.56**	**117**	T	T	04 32 01.1	
	baz=274,slow=75,SNR=5.8						
H01W1	**Cape Leeuwin H**	**40.57**	**117**	T	T	04 31 59.3	
	baz=274,slow=75,SNR=5.6						
ASAR	**Alice Springs**	**58.75**	**104**	P	P	03 50 59.6	+0.1
	0.9nm,0.7s,baz=251,slow=6.1,SNR=10						
VNDA	**Vanda**	**68.09**	**166**	P	P	03 52 00.3	-0.1
	0.7nm,0.9s,baz=268,slow=7.4,SNR=3.6						
MKAR	**Makanchi Array**	**70.61**	**9**	P	P	03 52 16.7	+0.4
	0.5nm,0.6s,baz=205,slow=5.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**75.39**	**291**	P	P	03 52 45.5	+0.1
	1.2nm,1.0s,baz=130,slow=3.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**77.95**	**9**	P	P	03 52 58.5	-0.4
	0.4nm,0.3s,baz=191,slow=4.4,SNR=2.6						
SONM	**Songino Array**	**78.12**	**25**	P	P	03 53 00.2	0.0
	0.2nm,0.3s,baz=201,slow=7.7,SNR=2.4						

*NEIC **08** 03:44:20.1±2.3,23°.84N×91°.36E,h10^{km}±5^{km},mb4.1/12, Error ellipse: s-maj=21.5km s-min=14.1km az=77.0*
*IDC **08** 03:44:22.1±1.2,24°.16N×91°.61E,h0^{km},mb4.0/3, mb1 4.0/4,mb1mx3.4/40,mbtmp3.9/4,ML4.2/1,Error ellipse: s-maj=48.0km s-min=12.3km az=86.0*
*NDI **08** 03:44:25.6±2.6,24°.16N×91°.34E,h28^{km}±9^{km},ML4.1, mb4.1(NEIC)*
ISC 08 03:44:21.9±1.2,**24°.15N**±0°.03×**91°.42E**±0°.04,**h15**^{km}±9^{km}, **n41**,σ**2^{s}.00**/50,**mb4.0**/14,**India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT	**Agartala**	**0.30**	**210**	*e*P	**Pn**	**03 44 32.7**	**+0.8**
AGT				*e*S	**Sb**	**03 44 39.2**	**+5.3**
AGT				IAML		03 44 39.7	
	comp=N,126μm,0.4s						
AGT				IAML		03 44 39.8	
	comp=E,141μm,0.6s						
BELO	**BELONIA**	**0.90**	**178**	*e*P	**Pn**	**03 44 41.2**	**+1.2**
BELO				*e*S	**Sn**	**03 44 56.1**	**+3.5**
SILR	**SILCHAR**	**1.41**	**63**	*e*P	**Pg**	**03 44 48.4**	**-0.7**
SHL	**Shillong**	**1.48**	**17**	*e*Pn	**Pg**	**03 44 50.1**	**-0.2**
SHL				*e*Sn	**Sg**	**03 45 09.3**	**-0.3**
SHL	**Shillong**	**1.48**	**17**	*e*P	**Pg**	**03 44 50.2**	**-0.2**
SHL				*e*S	**Sg**	**03 45 09.2**	**-0.3**
SHL				IAML		03 45 10.2	
	comp=N,2μm,0.6s						
SHL				IAML		03 45 11.1	
	comp=E,1μm,0.7s						
BRDH	**Bariadhala**	**1.48**	**172**	Pg	**Pg**	**03 44 50.2**	**-0.1**
	comp=E,37nm,0.3s,baz=331,slow=4.3,SNR=9.0						
BRDH				Lg	Lg	03 45 08.8	
	comp=E,562nm,0.3s,baz=11,slow=22,SNR=17						
GUWA	**GUWAHATI**	**2.05**	**7**	*e*P	**Pb**	**03 44 59.3**	**+0.4**
GUWA				*e*S	**Sb**	**03 45 24.2**	**0.0**
GUWA				IAML		03 45 28.5	
	comp=E,460nm,0.0s						
SAIH	**SAIHA**	**2.19**	**139**	*e*P	**Pb**	**03 45 00.5**	**-0.9**
SAIH				*e*S	**Sb**	**03 45 28.5**	**+0.1**
IMP	**Imphal**	**2.40**	**73**	*e*P	**Pb**	**03 45 04.4**	**-0.5**
TEZP	**TEZPUR**	**2.76**	**27**	*e*P	**Pn**	**03 45 07.3**	**+1.7**
TEZP				*e*S	**Sn**	**03 45 39.7**	**+1.1**
TAWA	**Tawang**	**3.46**	**7**	*e*P	**Pn**	**03 45 18.5**	**+3.0**
JORH	**JORHAT**	**3.64**	**44**	*e*S	**Sn**	**03 46 00.1**	**-0.2**
ZIRO	**ZIRO**	**4.01**	**33**	*e*P	**Pn**	**03 45 26.6**	**+3.5**
ZIRO				*e*S	**Sn**	**03 46 10.9**	**+0.9**
ZIRO				IAML		03 46 13.9	
	comp=E,825nm,0.2s						
ZIRO				IAML		03 46 14.0	
	comp=N,816nm,0.2s						
GTK	**Tadong**	**4.05**	**322**	*e*P	Pn	03 45 19.4	-4.2
GTK				*e*S	**Sn**	**03 46 11.1**	**+0.3**
GTK				IAML		03 46 45.7	
	comp=N,286nm,0.5s						
GTK				IAML		03 46 45.8	
	comp=E,363nm,0.5s						
BOK	**Bokaro**	**5.07**	**267**	*e*P	**Pn**	**03 45 38.3**	**+0.9**
BOK				*e*S	**Sn**	**03 46 31.9**	**-3.9**
LKP	**Lekhapani**	**5.10**	**51**	*e*P	**Pn**	**03 45 39.4**	**+1.6**
LKP				*e*S	**Sn**	**03 46 36.6**	**+0.2**
LSA	**Lhasa**	**5.54**	**358**	*e*Pn	Pn	03 45 49.3	+5.1
LSA				*e*Sn	**Sn**	**03 46 44.7**	**-3.1**
BWNR	**Bhubaneshwar**	**6.46**	**235**	*e*x	x	03 45 52.5	
CHTO	**Chiang Mai**	**8.79**	**126**	*e*Pn	**Pn**	**03 46 26.6**	**-1.9**
CM31	**Chiang Mai Arr**	**9.01**	**127**	*e*Pn	**Pn**	**03 46 30.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**9.01**	**127**	Pn	**Pn**	**03 46 30.7**	**-0.9**
	comp=E,0.7nm,0.3s,baz=303,slow=12,SNR=3.2						
BHPL	**Bhopal**	**12.86**	**269**	*e*P	**Pn**	**03 47 23.1**	**-1.2**
BHPL				*e*S	Sn	03 49 35.8	-11
HYB	**Hyderabad**	**13.77**	**243**	*i* P	**Pn**	**03 47 35.0**	**-1.7**
HYB				*e*S	**Sn**	**03 50 06.0**	**-3.4**
NIL	**Nilore**	**18.49**	**305**	*e*P	**P**	**03 48 37.5**	**0.0**
	comp=E,17nm,0.9s						
KDJ	**Kajisay**	**21.48**	**330**	*e*P	**P**	**03 49 11.6**	**+1.4**
	comp=E,8.0nm,0.8s						
KBL	**Kabul**	**22.04**	**303**	*e*P	**P**	**03 49 17.6**	**+1.4**
	comp=E,16nm,1.1s						
BOOM	**Boomskoye usch**	**22.34**	**329**	*e*P	**P**	**03 49 20.2**	**+0.8**
	comp=E,2.6nm,0.9s						
ARSB	**Arslanbob**	**23.03**	**322**	*e*P	**P**	**03 49 28.1**	**+1.5**
AAK	**Ala-Archa**	**23.15**	**327**	*e*P	**P**	**03 49 28.4**	**+0.5**
	comp=E,4.5nm,1.1s						
GAR	**Garm**	**23.21**	**315**	*e*P	**P**	**03 49 29.5**	**+0.9**
	comp=E,8.3nm,1.1s						
BTK	**Batken**	**23.50**	**317**	*e*P	**P**	**03 49 31.9**	**+0.6**
	comp=E,8.8nm,0.6s						
MK32	**Makanchi Array**	**23.75**	**344**	*e*P	**P**	**03 49 37.2**	**+3.5**
MKAR	**Makanchi Array**	**23.75**	**344**	P	**P**	**03 49 37.2**	**+3.5**
	comp=E,0.7nm,0.6s,baz=152,slow=8.8,SNR=8.4						
CHGR	**Chuyangaron**	**23.80**	**313**	*e*P	**P**	**03 49 35.2**	**+1.0**
	comp=E,5.0nm,0.8s						
MAKZ	**Makanchi**	**23.85**	**344**	*e*P	**P**	**03 49 36.0**	**+1.5**
	comp=E,2.0nm,0.9s						
KKAR	**Karatay Array**	**25.58**	**323**	*e*P	**P**	**03 49 50.4**	**0.0**
	comp=E,1.2nm,0.5s						
SONA0	**Songino Array**	**26.47**	**23**	*e*P	**P**	**03 50 00.7**	**+2.2**
SONM	**Songino Array**	**26.47**	**23**	P	**P**	**03 50 00.7**	**+2.2**
	comp=E,0.8nm,0.5s,baz=215,slow=7.0,SNR=4.5						
KURBB	**Kurchatov Arra**	**28.26**	**343**	P	**P**	**03 50 16.1**	**+1.7**
	comp=E,0.5nm,0.2s,baz=165,slow=8.4,SNR=2.3						
KAAM	**Kaadhehdhoo**	**29.53**	**220**	*e*P	P	03 50 21.6	-4.4
	comp=E,135nm,1.1s						
KKM	**Kota Kinabalu**	**29.85**	**123**	*e*P	**P**	**03 50 25.1**	**-3.9**
	comp=E,4.6nm,0.6s						

*ISCJB **08** 04:03:15.2±0.2,43°.12N±0°.01×3°.65W±0°.02,h10^{km},Error ellipse: s-maj=2.3km s-min=1.3km az=151.1*
*MDD **08** 04:03:19.7±0.2,43°.20N×3°.65W,h12^{km},mbLg3.2/55, Error ellipse: s-maj=3.4km s-min=1.8km az=160.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA.
*IGIL **08** 04:03:20.3,43°.18N×3°.64W,h11^{km}*
*INMG **08** 04:03:20.2±1.7,43°.05N×3°.64W,h11^{km}±5^{km},MD3.5, ML3.3,Error ellipse: s-maj=3.6km s-min=3.2km az=4.0*
*LDG **08** 04:03:20.2±0.1,43°.18N×3°.66W,h11^{km},Md3.4/1,Ml3.5/39, Error ellipse: s-maj=1.6km s-min=1.0km az=147.0*
*STR **08** 04:03:21.3±0.9,43°N±6°×°±1°8,h6^{km}±20^{km},MLv3.3/7*
ISC 08 04:03:17.4±0.7,**43°.18N**±0°.03×**3°.62W**±0°.02,**h10**^{km},**n187**, σ**2^{s}.54**/363,**5C-4D**,**Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELAN	**Lanestosa**	**0.14**	**68**	⇑Pg	**Pg**	**04 03 23.3**	**+2.6**
	36nm,0.1s,SNR=18						
ELAN				Lg	Lg	04 03 26.0	
	2μm,0.1s,SNR=5.0						
EARI	**Arriondas**	**1.17**	**277**	Pg	**Pb**	**04 03 41.1**	**+1.3**
	34nm,0.1s,SNR=477						
EARI				Lg	Lg	04 03 55.6	
	407nm,0.2s,SNR=18						
EALK	**Alkurruntz**	**1.54**	**88**	Pn	**Pn**	**04 03 47.8**	**+2.7**
EALK				Sn	**Sn**	**04 04 07.2**	**+2.0**
EALK	**Alkurruntz**	**1.54**	**88**	Pg	**Pn**	**04 03 47.4**	**+2.3**
	3.1nm,0.2s,SNR=44						
EALK				Lg	Lg	04 04 08.9	
	261nm,0.4s,SNR=7.5						
EARA	**Aranguren**	**1.55**	**104**	Pn	**Pb**	**04 03 48.7**	**+2.6**
EARA				Sn	**Sb**	**04 04 09.1**	**+3.2**
EARA	**Aranguren**	**1.55**	**104**	⇓Pg	**Pn**	**04 03 47.8**	**+2.7**
	40nm,0.3s,SNR=18						
EARA				Lg	Lg	04 04 09.0	
	198nm,0.2s,SNR=4.8						
IUNC	**Unciti**	**1.61**	**104**	Pg	**Pn**	**04 03 48.8**	**+2.8**
	36nm,0.3s,SNR=7.9						
IUNC				Lg	Lg	04 04 10.9	
	280nm,0.3s,SNR=7.9						
IZUN	**Zunzarren**	**1.61**	**101**	Pg	**Pn**	**04 03 48.7**	**+2.7**
	15nm,0.2s,SNR=7.9						
IZUN				Lg	Lg	04 04 11.2	
	77nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**1.71**	**99**	Pg	**Pn**	**04 03 50.4**	**+3.0**
	0.4nm,0.1s,SNR=34						
EORO				Lg	Lg	04 04 14.4	
	242nm,0.4s,SNR=16						
TERF	**Tercis-les-Bai**	**1.89**	**74**	Pn	**Pn**	**04 03 51.7**	**+1.9**
TERF				Sn	**Sn**	**04 04 14.6**	**+1.0**
ATE	**Arette**	**2.14**	**91**	Pn	**Pn**	**04 03 56.2**	**+3.0**
ATE				Sn	**Sn**	**04 04 22.3**	**+2.6**
ETSF	**Etsaut**	**2.26**	**96**	*e*Pn	**Pn**	**04 03 57.1**	**+2.2**
ETSF				*e*Sn	**Sn**	**04 04 23.6**	**+0.8**
	60nm,0.3s,SNR=1.0						
ETSF	**Etsaut**	**2.26**	**96**	Pn	**Pn**	**04 03 57.1**	**+2.2**
ETSF				Sn	**Sn**	**04 04 23.6**	**+0.8**
	30nm,0.3s						
GUD	**Guadarrama**	**2.56**	**189**	Pn	**Pn**	**04 03 59.6**	**+0.5**
	0.1nm,0.3s,SNR=7.9						
GUD				Pg	**Pb**	**04 04 05.6**	**+2.0**
	0.1nm,0.2s,SNR=16						
GUD				Sn	**Sn**	**04 04 30.7**	**+0.2**
	12nm,0.2s,SNR=7.9						
GUD				Lg	Lg	04 04 40.0	
	117nm,0.3s,SNR=12						
EPON	**Pontenova**	**2.59**	**275**	Pn	**Pn**	**04 04 00.7**	**+1.4**
	6.0nm,0.2s,SNR=56						
EPON				Pg	**Pb**	**04 04 04.9**	**+1.0**
	28nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**04 04 29.6**	**-1.2**
	28nm,0.2s,SNR=7.2						
EPON				Lg	Lg	04 04 38.8	
	116nm,0.2s,SNR=7.8						
ECAL	**Calabor**	**2.62**	**243**	⇑Pn	**Pn**	**04 04 00.9**	**+1.1**
	9.2nm,0.1s,SNR=18						
ECAL				Pg	**Pb**	**04 04 06.4**	**+2.0**
	16nm,0.1s,SNR=7.9						
ECAL				Sn	**Sn**	**04 04 30.5**	**-1.2**
	43nm,0.1s,SNR=5.9						
ECAL				Lg	Lg	04 04 40.1	
	91nm,0.3s,SNR=42						
PBRG	**Braganca**	**2.69**	**240**	*e*Pn	**Pn**	**04 04 01.7**	**+0.9**
PBRG	**Braganca**	**2.69**	**240**	*e*Pg	**Pb**	**04 04 08.9**	**+3.3**
PBRG				*e*Sn	**Sn**	**04 04 31.7**	**-1.7**
PBRG				*e*Sg	**Sb**	**04 04 41.7**	**+3.0**
PBRG				A	A	04 04 44.8	
	195nm,0.5s						
PBRG	**Braganca**	**2.69**	**240**	Pn	**Pn**	**04 04 01.7**	**+0.9**
PBRG				Sn	**Sn**	**04 04 31.7**	**-1.7**
PBRG				Lg	Lg	04 04 41.7	
	98nm,0.5s						
ESAC	**San Caprasio**	**2.75**	**121**	⇓Pn	**Pn**	**04 04 03.3**	**+1.7**
	8.3nm,0.1s,SNR=18						
ESAC				Pg	**Pb**	**04 04 09.2**	**+2.6**
	34nm,1.4s,SNR=7.9						
ESAC				Sn	**Sn**	**04 04 35.2**	**+0.3**
	37nm,0.2s,SNR=4.7						
ESAC				Lg	Lg	04 04 45.4	
	452nm,0.2s,SNR=7.9						
ECHI	**Chisagues Biel**	**2.85**	**99**	Pn	**Pn**	**04 04 05.5**	**+2.5**
ECHI	**Chisagues Biel**	**2.85**	**99**	Pn	**Pn**	**04 04 05.1**	**+2.1**
	0.4nm,0.2s,SNR=7.9						
ECHI				Pg	**Pb**	**04 04 10.8**	**+2.4**
	42nm,3.4s,SNR=7.9						
ECHI				Sn	**Sn**	**04 04 37.2**	**-0.2**
	2.4nm,0.2s,SNR=7.9						
ECHI				Lg	Lg	04 04 48.6	
	6.6nm,0.1s,SNR=7.9						
EPF	**Esparros**	**2.90**	**92**	*e*Pn	**Pn**	**04 04 06.1**	**+2.4**
	SNR=1.0						
EPF				*e*Sn	**Sn**	**04 04 39.0**	**+0.3**
	43nm,0.4s,SNR=1.0						
EPF	**Esparros**	**2.90**	**92**	Pn	**Pn**	**04 04 06.1**	**+2.4**
EPF				Sn	**Sn**	**04 04 39.0**	**+0.3**
	21nm,0.4s						
LRVF	**chteau la Riv**	**2.97**	**52**	Pn	**Pn**	**04 04 06.1**	**+1.5**
LRVF				Sn	**Sn**	**04 04 39.9**	**-0.2**
MVO	**Moncorvo**	**3.24**	**233**	*e*Pn	**Pn**	**04 04 08.9**	**+0.6**
MVO	**Moncorvo**	**3.24**	**233**	*e*Pg	**Pb**	**04 04 19.1**	**+4.1**
MVO				*e*Sn	**Sn**	**04 04 44.7**	**-2.3**
MVO				*e*Sg	**Sb**	**04 04 58.9**	**+4.4**
MVO				A	A	04 05 02.8	
	139nm,0.3s						
MVO	**Moncorvo**	**3.24**	**233**	⇑Pn	**Pn**	**04 04 09.0**	**+0.6**
	2.7nm,0.2s,SNR=18						
MVO				Pg	**Pb**	**04 04 17.2**	**+2.2**
	12nm,0.1s,SNR=7.9						
MVO				Sn	**Sn**	**04 04 45.3**	**-1.6**
	3.2nm,0.2s,SNR=7.9						
MVO				Lg	Lg	04 04 59.7	
	119nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**3.30**	**265**	Pn	**Pn**	**04 04 10.2**	**+1.0**
	7.8nm,0.2s,SNR=7.9						
EAGO				Pg	**Pb**	**04 04 18.2**	**+2.1**
	107nm,2.7s,SNR=7.9						
EAGO				Sn	**Sn**	**04 04 46.9**	**-1.6**
	5.3nm,0.2s,SNR=7.9						
EAGO				Lg	Lg	04 05 01.3	
	37nm,0.1s,SNR=7.9						
MLS	**Moulis**	**3.46**	**92**	Pn	**Pn**	**04 04 14.9**	**+3.5**
ELOB	**Lobios**	**3.54**	**250**	Pn	**Pn**	**04 04 13.3**	**+0.8**
	2.4nm,0.1s,SNR=30						
ELOB				Pg	**Pb**	**04 04 21.6**	**+1.5**
	23nm,2.6s,SNR=7.9						
ELOB				Sn	**Sn**	**04 04 53.1**	**-1.3**
	1.6nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	04 05 08.9	
	82nm,0.3s,SNR=5.0						
PCAB	**Cabril**	**3.58**	**247**	*e*Pn	**Pn**	**04 04 13.7**	**+0.7**
PCAB				*e*Sn	**Sn**	**04 04 54.2**	**-1.1**
PCAB				*e*Sg	**Sb**	**04 05 09.0**	**+4.7**
PCAB				A	A	04 05 16.9	
	78nm,0.4s						
PCAB	**Cabril**	**3.58**	**247**	Pn	**Pn**	**04 04 13.7**	**+0.7**
PCAB				Sn	**Sn**	**04 04 54.2**	**-1.1**
PCAB				Lg	Lg	04 05 09.0	
	39nm,0.4s						
POLO	**Lamas de Olo**	**3.59**	**241**	*e*Pn	**Pn**	**04 04 13.8**	**+0.6**
POLO				*e*Sn	**Sn**	**04 04 53.6**	**-2.0**
POLO				*e*Sg	**Sg**	**04 05 12.0**	**-0.6**
POLO				A	A	04 05 12.3	
	30nm,0.4s						
POLO	**Lamas de Olo**	**3.59**	**241**	Pn	**Pn**	**04 04 13.8**	**+0.6**
POLO				Sn	**Sn**	**04 04 53.6**	**-2.0**
POLO				Lg	Lg	04 05 12.0	
	30nm,0.4s						
CSOR	**Sort**	**3.59**	**101**	Pn	**Pn**	**04 04 14.6**	**+1.4**
	0.1nm,0.3s,SNR=10						
CSOR				Pg	**Pb**	**04 04 23.5**	**+2.5**
	0.8nm,0.9s,SNR=7.9						
CSOR				Sn	**Sn**	**04 04 54.7**	**-1.0**
	3.3nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	04 05 11.7	
	22nm,0.5s,SNR=5.0						
LFF	**La Frestale**	**3.60**	**59**	*e*Pn	**Pn**	**04 04 14.9**	**+1.7**
	SNR=1.0						
LFF				*e*Sn	**Sn**	**04 04 55.0**	**-0.8**
	SNR=1.0						
LFF				*e*Sg	**Sg**	**04 05 12.4**	**-0.6**
	76nm,0.5s,SNR=1.0						
LFF	**La Frestale**	**3.60**	**59**	Pn	**Pn**	**04 04 14.9**	**+1.7**
LFF				Sn	**Sn**	**04 04 55.0**	**-0.8**
LFF				Lg	Lg	04 05 12.4	
	38nm,0.5s						
EPLA	**Plasencia**	**3.62**	**212**	Pn	**Pn**	**04 04 13.7**	**+0.2**
	0.1nm,0.2s,SNR=49						
EPLA				Pg	**Pb**	**04 04 24.1**	**+2.7**
	1.4nm,0.2s,SNR=7.9						
EPLA				Sn	**Sn**	**04 04 54.4**	**-1.9**
	3.9nm,0.3s,SNR=7.9						
EPLA				Lg	Lg	04 05 12.0	
	44nm,0.3s,SNR=7.9						
PGAV	**Gavieira, Arco**	**3.64**	**252**	*e*Pn	**Pn**	**04 04 14.8**	**+0.8**
PGAV				*e*Sn	**Sn**	**04 04 56.7**	**-0.4**
PGAV				*e*Sg	**Sg**	**04 05 12.9**	**-1.5**
PGAV				A	A	04 05 21.3	
	56nm,0.5s						
PGAV	**Gavieira, Arco**	**3.64**	**252**	Pn	**Pn**	**04 04 14.8**	**+0.8**
PGAV				Sn	**Sn**	**04 04 56.7**	**-0.4**
PGAV				Lg	Lg	04 05 12.9	
	56nm,0.5s						
EMOS	**Mosqueruela**	**3.67**	**139**	Pn	**Pn**	**04 04 16.4**	**+2.1**
	0.1nm,0.2s,SNR=16						
EMOS				Pg	**Pb**	**04 04 24.6**	**+2.2**
	53nm,4.0s,SNR=7.9						
EMOS				Sn	**Sn**	**04 04 57.2**	**-0.4**
	1.0nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	04 05 14.6	
	18nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**3.67**	**189**	Pn	**Pn**	**04 04 15.3**	**+1.0**
	1.2nm,0.1s,SNR=7.9						
PAB				Pg	**Pb**	**04 04 25.3**	**+2.9**
	1.9nm,0.1s,SNR=7.9						
PAB				Sn	**Sn**	**04 04 55.7**	**-1.9**
	6.5nm,0.2s,SNR=7.9						
PAB				Lg	Lg	04 05 13.5	
	17nm,0.1s,SNR=7.9						
MONQ	**Montcuq**	**3.68**	**70**	Pn	**Pn**	**04 04 15.7**	**+1.3**
MONQ				Sn	**Sn**	**04 04 57.0**	**-0.9**
CHIF	**Chize**	**3.74**	**37**	Pn	**Pn**	**04 04 16.0**	**+0.8**
CHIF				Sn	**Sn**	**04 04 56.9**	**-2.3**
EBR	**Ebro Roquetas**	**3.86**	**126**	Pn	**Pn**	**04 04 18.4**	**+1.5**
	2.4nm,0.2s,SNR=7.9						
EBR				Sn	**Sn**	**04 05 01.2**	**-1.1**
	20nm,0.1s,SNR=7.9						
EBR				Lg	Lg	04 05 20.0	
	293nm,0.5s,SNR=7.9						
EZAM	**Zamans**	**3.88**	**256**	Pn	**Pn**	**04 04 18.1**	**+1.0**
	3.1nm,0.2s,SNR=7.9						
EZAM				Sn	**Sn**	**04 05 01.2**	**-1.6**
	7.6nm,0.1s,SNR=7.9						
EZAM				Lg	Lg	04 05 19.2	
	15nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**3.93**	**116**	Pn	**Pn**	**04 04 19.3**	**+1.4**
	2.8nm,0.2s,SNR=22						
EPOB				Pg	**Pb**	**04 04 29.6**	**+2.8**
	33nm,3.9s,SNR=7.9						
EPOB				Sn	**Sn**	**04 05 03.2**	**-0.9**
	0.5nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	04 05 22.4	
	47nm,0.5s,SNR=7.9						
EMIR	**Miracle**	**4.00**	**107**	Pn	**Pn**	**04 04 20.6**	**+1.7**
	0.9nm,0.2s,SNR=7.9						
EMIR				Sn	**Sn**	**04 05 05.2**	**-0.6**
	6.8nm,0.3s,SNR=7.9						
EMIR				Lg	Lg	04 05 24.3	
	30nm,0.3s,SNR=7.9						
PVIS	**Viseu**	**4.03**	**234**	*e*Pn	**Pn**	**04 04 19.4**	**+0.2**
PVIS	**Viseu**	**4.03**	**234**	*e*Pg	**Pg**	**04 04 33.7**	**-0.9**
PVIS				*e*Sn	**Sn**	**04 05 03.7**	**-2.8**
PVIS				*e*Sg	**Sb**	**04 05 23.2**	**+5.9**
PVIS				A	A	04 05 39.6	
	37nm,0.3s						
PVIS	**Viseu**	**4.03**	**234**	Pn	**Pn**	**04 04 19.4**	**+0.2**
PVIS				Sn	**Sn**	**04 05 03.7**	**-2.8**
PVIS				Lg	Lg	04 05 23.2	
	19nm,0.3s						
MTE	**Manteigas**	**4.04**	**228**	*e*Pn	**Pn**	**04 04 19.5**	**+0.1**
MTE	**Manteigas**	**4.04**	**228**	*e*Pg	**Pg**	**04 04 34.3**	**-0.5**
MTE				*e*Sn	**Sn**	**04 05 04.3**	**-2.5**
MTE				*e*Sg	**Sb**	**04 05 24.1**	**+6.5**
MTE				A	A	04 05 29.7	
	90nm,0.4s						
MTE	**Manteigas**	**4.04**	**228**	Pn	**Pn**	**04 04 19.5**	**+0.1**
MTE				Sn	**Sn**	**04 05 04.3**	**-2.5**
MTE				Lg	Lg	04 05 24.1	
	45nm,0.4s						
ECHE	**Chera**	**4.10**	**150**	Pn	**Pn**	**04 04 22.2**	**+2.0**
	1.4nm,0.2s,SNR=7.9						
ECHE				Sn	**Sn**	**04 05 06.9**	**-1.3**
	2.1nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	04 05 27.5	
	34nm,2.7s,SNR=7.9						
CLLI	**Llivia**	**4.17**	**98**	Pn	**Pn**	**04 04 23.2**	**+2.0**
	0.3nm,0.2s,SNR=12						
CLLI				Sn	**Sn**	**04 05 08.8**	**-1.3**
	0.7nm,0.4s,SNR=7.9						
CLLI				Lg	Lg	04 05 29.4	
	4.8nm,1.3s,SNR=7.9						
MFF	**Saint Martin d**	**4.22**	**35**	*e*Pn	**Pn**	**04 04 22.0**	**+0.2**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**04 05 08.8**	**-2.3**
	9.5nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	**4.22**	**35**	Pn	**Pn**	**04 04 22.0**	**+0.2**
MFF				Sn	**Sn**	**04 05 08.8**	**-2.3**
	4.8nm,0.2s						
PTO	**Porto**	**4.23**	**243**	*e*Pn	**Pn**	**04 04 23.0**	**+1.1**
PTO				*e*Sg	**Sb**	**04 05 29.6**	**+6.6**
PTO				A	A	04 05 35.8	
	54nm,0.7s						
PTO	**Porto**	**4.23**	**243**	Pn	**Pn**	**04 04 23.0**	**+1.1**
PTO				Lg	Lg	04 05 29.6	
	27nm,0.7s						
RJF	**Les Rejaudoux**	**4.26**	**58**	*e*Pn	**Pn**	**04 04 23.5**	**+1.2**
	SNR=1.0						
RJF				*e*Sn	**Sn**	**04 05 09.9**	**-2.1**
RJF	**Les Rejaudoux**	**4.26**	**58**	Pn	**Pn**	**04 04 23.5**	**+1.2**
RJF				Sn	**Sn**	**04 05 09.9**	**-2.1**
MTLF	**Montolieu**	**4.26**	**86**	*e*Pn	**Pn**	**04 04 24.1**	**+1.7**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**04 05 10.3**	**-1.9**
	8.1nm,0.4s,SNR=1.0						
MTLF	**Montolieu**	**4.26**	**86**	Pn	**Pn**	**04 04 24.1**	**+1.7**
MTLF				Sn	**Sn**	**04 05 10.3**	**-1.9**
	4.1nm,0.4s						
PCBR	**Castelo Branco**	**4.42**	**222**	*e*Pn	**Pn**	**04 04 25.6**	**+1.1**
PCBR	**Castelo Branco**	**4.42**	**222**	*e*Pg	**Pg**	**04 04 41.3**	**-0.7**
PCBR				*e*Sn	**Sn**	**04 05 13.0**	**-3.0**
PCBR				*e*Sg	**Sb**	**04 05 35.4**	**+7.0**
PCBR				A	A	04 05 47.5	
	38nm,0.6s						
PCBR	**Castelo Branco**	**4.42**	**222**	Pn	**Pn**	**04 04 25.6**	**+1.1**
PCBR				Sn	**Sn**	**04 05 13.0**	**-3.0**
PCBR				Lg	Lg	04 05 35.4	
	19nm,0.6s						
CAF	**Calviac**	**4.45**	**65**	*e*Pn	**Pn**	**04 04 25.8**	**+0.8**
	SNR=1.0						
CAF				*e*Sn	**Sn**	**04 05 14.0**	**-2.9**
	21nm,0.2s						
CAF	**Calviac**	**4.45**	**65**	Pn	**Pn**	**04 04 25.8**	**+0.8**
CAF				Sn	**Sn**	**04 05 14.0**	**-2.9**
	10nm,0.2s						
CFON	**Fontmartina**	**4.70**	**105**	Pn	**Pn**	**04 04 29.8**	**+1.4**
	9.5nm,0.2s,SNR=7.9						
CFON				Sn	**Sn**	**04 05 21.7**	**-1.2**
	8.8nm,0.2s,SNR=7.9						
CFON				Lg	Lg	04 05 46.2	
	44nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**4.70**	**218**	*e*Pn	**Pn**	**04 04 28.4**	**0.0**
PMRV	**Marv??o**	**4.70**	**218**	*e*Pg	**Pg**	**04 04 46.2**	**-1.3**
PMRV				*e*Sn	**Sn**	**04 05 19.6**	**-3.4**
PMRV				*e*Sg	**Sg**	**04 05 46.5**	**-1.9**
PMRV				A	A	04 05 59.7	
	36nm,0.5s						
PMRV	**Marv??o**	**4.70**	**218**	Pn	**Pn**	**04 04 28.4**	**0.0**
PMRV				Sn	**Sn**	**04 05 19.6**	**-3.4**
PMRV				Lg	Lg	04 05 46.5	
	36nm,0.5s						
QUIF	**Quistinic**	**4.75**	**4**	*e*Pn	**Pn**	**04 04 29.8**	**+0.8**
	SNR=1.0						
QUIF				*e*Sn	**Sn**	**04 05 21.9**	**-2.2**
	23nm,0.3s,SNR=1.0						
QUIF	**Quistinic**	**4.75**	**4**	Pn	**Pn**	**04 04 29.8**	**+0.8**
QUIF				Sn	**Sn**	**04 05 21.9**	**-2.2**
	12nm,0.3s						
ETOB	**Tobarra**	**4.79**	**160**	Pn	**Pn**	**04 04 31.5**	**+1.8**
	4.7nm,0.2s,SNR=54						
ETOB				Sn	**Sn**	**04 05 23.4**	**-1.9**
	4.1nm,0.2s,SNR=7.9						

ETOB				Lg	Lg	04 05 49.2	
	17nm,0.4s,SNR=7.9						
SJAF	Saint Jean de	4.83	96	Pn	Pn	04 04 32.5	+2.3
	0.4nm,0.1s,SNR=7.9						
SJAF				Sn	Sn	04 05 24.5	-1.7
	0.1nm,0.2s,SNR=7.9						
SJAF				Lg	Lg	04 05 49.5	
	4.5nm,0.3s,SNR=7.9						
EJON	La Jonquera	4.84	96	Pn	Pn	04 04 32.3	+1.9
	24nm,4.8s,SNR=7.9						
EJON				Lg	Lg	04 05 50.5	
	1.6nm,0.9s,SNR=7.9						
EADA	Adamuz	5.06	189	Pn	Pn	04 04 34.4	+1.0
	1.0nm,0.1s,SNR=20						
EADA				Sn	Sn	04 05 29.1	-2.7
	5.0nm,0.3s,SNR=7.9						
EADA				Lg	Lg	04 05 56.8	
	19nm,0.3s,SNR=7.9						
PTOM	Tomar	5.06	227	*e*Pn	Pn	04 04 34.0	+0.6
PTOM				*e*Sn	Sn	04 05 29.6	-2.3
PTOM				*e*Sg	Sg	04 05 57.5	-2.5
PTOM				A	A	04 06 04.8	
	50nm,0.4s						
PTOM	Tomar	5.06	227	Pn	Pn	04 04 34.0	+0.6
PTOM				Sn	Sn	04 05 29.6	-2.3
PTOM				Lg	Lg	04 05 57.5	
	25nm,0.4s						
SESP	Santiago Espad	5.12	170	Pn	Pn	04 04 34.9	+0.6
	0.2nm,0.2s,SNR=7.9						
SESP				Sn	Sn	04 05 31.7	-1.8
	7.4nm,0.2s,SNR=7.9						
SESP				Lg	Lg	04 05 58.9	
	14nm,0.2s,SNR=7.9						
SESP	Santiago Espad	5.12	170	P	Pn	04 04 41.8	+7.6
SESP				S	Sb	04 05 47.8	-0.9
SGMF	Saint Gilles	5.13	8	*e*Pn	Pn	04 04 34.2	-0.1
	SNR=1.0						
SGMF				*e*Sn	Sn	04 05 30.4	-3.1
	8.3nm,0.2s,SNR=1.0						
SGMF	Saint Gilles	5.13	8	Pn	Pn	04 04 34.2	-0.1
SGMF				Sn	Sn	04 05 30.4	-3.1
	4.2nm,0.2s						
ROSF	Rostrenen	5.17	3	*e*Pn	Pn	04 04 35.5	+0.8
	SNR=1.0						
ROSF				*e*Sn	Sn	04 05 30.0	-4.4
ROSF	Rostrenen	5.17	3	Pn	Pn	04 04 35.5	+0.8
ROSF				Sn	Sn	04 05 30.0	-4.4
TCF	Toulx Ste Croi	5.19	51	*e*Pn	Pn	04 04 35.5	+0.4
	SNR=1.0						
TCF				*e*Sn	Sn	04 05 33.0	-1.9
	19nm,0.3s,SNR=1.0						
TCF	Toulx Ste Croi	5.19	51	Pn	Pn	04 04 35.5	+0.4
TCF				Sn	Sn	04 05 33.0	-1.9
	9.6nm,0.3s						
EBEN2	Beniarda presa	5.19	149	Pn	Pn	04 04 37.0	+1.8
	2.0nm,0.2s,SNR=7.9						
EBEN2				Sn	Sn	04 05 32.5	-2.5
	5.7nm,0.1s,SNR=7.9						
ECAB	El Cabril	5.28	196	Pn	Pn	04 04 36.7	+0.4
	0.4nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	04 05 33.6	-3.6
	3.4nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	04 06 03.0	
	25nm,0.3s,SNR=7.9						
PMTG	Montargil	5.38	222	*e*Pn	Pn	04 04 37.6	-0.1
PMTG				*e*Sn	Sn	04 05 36.9	-2.8
PMTG				A	A	04 06 19.1	
	14nm,0.8s						
PMTG	Montargil	5.38	222	Pn	Pn	04 04 37.6	-0.1
PMTG				Sn	Sn	04 05 36.9	-2.8
	14nm,0.8s						
EQES	Quesada	5.38	175	Pn	Pn	04 04 39.0	+1.1
	0.3nm,0.1s,SNR=7.9						
EQES				Sn	Sn	04 05 37.7	-2.3
	0.9nm,0.1s,SNR=7.9						
EQES				Lg	Lg	04 06 07.0	
	9.0nm,0.3s,SNR=7.9						
HORN	Hornachuelos	5.47	194	P	Pn	04 04 47.3	+8.4
HORN				S	Sb	04 05 58.3	-0.4
ALMR	Almeirim	5.49	225	*e*P	Pn	04 04 39.7	+0.5
ALMR	Almeirim	5.49	225	*e*Pn	Pn	04 04 40.0	+0.8
ALMR				*e*Sn	Sn	04 05 39.0	-3.4
ALMR				*e*Sg	Sg	04 06 11.0	-2.7
ALMR				A	A	04 06 26.1	
	50nm,0.4s						
ALMR	Almeirim	5.49	225	Pn	Pn	04 04 40.0	+0.8
ALMR				Sn	Sn	04 05 39.0	-3.4
LASF	Ste Croix	5.50	78	*e*Pn	Pn	04 04 40.7	+1.3
	SNR=1.0						
LASF				*e*Sn	Sn	04 05 40.0	-2.6
	18nm,0.4s,SNR=1.0						
LASF	Ste Croix	5.50	78	Pn	Pn	04 04 40.7	+1.3
LASF				Sn	Sn	04 05 40.0	-2.6
	9.1nm,0.4s						
GRR	Gorron	5.56	19	*e*Pn	Pn	04 04 39.9	-0.2
	SNR=1.0						
GRR				*e*Sn	Sn	04 05 39.1	-4.9
GRR	Gorron	5.56	19	Pn	Pn	04 04 39.9	-0.2
GRR				Sn	Sn	04 05 39.1	-4.9
EIBI	Ibiza	5.59	136	Pn	Pn	04 04 42.0	+1.5
	0.9nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	04 05 42.0	-2.8
	1.2nm,0.2s,SNR=7.9						
ETRV	Los Montesinos	5.59	156	Sn	Sn	04 05 42.2	-2.7
	79nm,6.1s,SNR=7.9						
EMUR	La Murta	5.63	160	Pn	Pn	04 04 43.0	+1.8
	1.1nm,0.3s,SNR=7.9						
EMUR				Sn	Sn	04 05 43.9	-2.0
	12nm,4.4s,SNR=7.9						
EMUR				Lg	Lg	04 06 14.3	
	24nm,0.7s,SNR=7.9						
BGF	Bois d'Agland	5.70	51	*e*Pn	Pn	04 04 43.0	+0.9
	SNR=1.0						
BGF				*e*Sn	Sn	04 05 44.3	-3.3
	37nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	5.70	51	Pn	Pn	04 04 43.0	+0.9
BGF				Sn	Sn	04 05 44.3	-3.3
	18nm,0.4s						
GORA	Gorafe	5.71	175	Pn	Pn	04 04 43.5	+1.1
	10nm,2.6s,SNR=7.9						
GORA				Sn	Sn	04 05 45.4	-2.5
	5.7nm,0.7s,SNR=7.9						
GORA				Lg	Lg	04 06 17.1	
	9.0nm,4.8s,SNR=7.9						
EMIN	Mina Concepcio	5.88	204	Pn	Pn	04 04 45.5	+0.9
	0.4nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	04 05 49.2	-2.9
	0.5nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	04 06 21.9	
	11nm,0.3s,SNR=7.9						
ETOS	Mallorca	5.91	123	Pn	Pn	04 04 47.0	+2.0
	0.1nm,0.1s,SNR=4.0						
ETOS				Sn	Sn	04 05 50.3	-2.5
	0.1nm,0.2s,SNR=4.0						
LDF	La Druitiere	5.94	23	*e*Pn	Pn	04 04 44.6	-0.8
	SNR=1.0						
LDF				*e*Sn	Sn	04 05 48.4	-5.0
EQUE	Quentar	5.97	179	Pn	Pn	04 04 47.5	+1.6
	2.3nm,0.3s,SNR=10.0						
EQUE				Sn	Sn	04 05 51.8	-2.6
	16nm,4.1s,SNR=7.9						
EQUE				Lg	Lg	04 06 25.0	
	5.5nm,0.2s,SNR=7.9						
FLN	La Foliniere	6.00	20	*e*Pn	Pn	04 04 45.7	-0.5
	baz=201,SNR=1.0						
FLN				*e*Sn	Sn	04 05 49.8	-5.0
	baz=203						
FLN	La Foliniere	6.00	20	Pn	Pn	04 04 45.7	-0.5
FLN				Sn	Sn	04 05 49.8	-5.0
PMAFR	Mafra	6.01	227	*e*Pn	Pn	04 04 46.9	+0.5
PMAFR				*e*Sn	Sn	04 05 51.4	-3.8
PMAFR				A	A	04 06 42.1	
	18nm,0.5s						
PMAFR	Mafra	6.01	227	Pn	Pn	04 04 46.9	+0.5
	3.5nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	04 05 51.7	-3.5
	4.1nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	04 06 24.7	
	61nm,0.4s,SNR=7.9						
HYF	Humbligny	6.02	45	*e*Pn	Pn	04 04 47.4	+0.9
HYF				*e*Sn	Sn	04 05 52.4	-3.0
HYF	Humbligny	6.02	45	Pn	Pn	04 04 47.4	+0.9
HYF				Sn	Sn	04 05 52.4	-3.0
EGOR	Sierra Gorda,	6.07	184	Pn	Pn	04 04 48.3	+0.9
	48nm,6.1s,SNR=7.9						
EGOR				Lg	Lg	04 06 28.3	
	4.8nm,0.7s,SNR=7.9						
PBEJ	Beja	6.08	214	*e*Pn	Pn	04 04 48.2	+0.9
PBEJ				*e*Sn	Sn	04 05 53.5	-3.4
PBEJ				A	A	04 06 42.3	
	10nm,0.7s						
PBEJ	Beja	6.08	214	Pn	Pn	04 04 48.2	+0.9
PBEJ				Sn	Sn	04 05 53.5	-3.4
	5.2nm,0.7s						
AVF	Avril sur Loir	6.12	51	*e*Pn	Pn	04 04 48.1	+0.2
	SNR=1.0						
AVF				*e*Sn	Sn	04 05 54.8	-3.1
	4.9nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	6.12	51	Pn	Pn	04 04 48.1	+0.2
AVF				Sn	Sn	04 05 54.8	-3.1
	2.5nm,0.2s						
VIVF	Saint-Julien-l	6.21	71	*e*Pn	Pn	04 04 50.4	+1.3
	SNR=1.0						
VIVF				*e*Sn	Sn	04 05 56.7	-3.4
	5.3nm,0.3s						
VIVF	Saint-Julien-l	6.21	71	Pn	Pn	04 04 50.4	+1.3
VIVF				Sn	Sn	04 05 56.7	-3.4
	2.7nm,0.3s						
PNCL	Nicolau / Gran	6.29	218	*e*Pn	Pn	04 04 50.5	+0.3
PNCL				*e*Sn	Sn	04 05 57.6	-4.5
PNCL				A	A	04 06 40.8	
	14nm,0.6s						
PNCL	Nicolau / Gran	6.29	218	Pn	Pn	04 04 50.5	+0.3
PNCL				Sn	Sn	04 05 57.6	-4.5
	14nm,0.6s						
EBER	Berja	6.30	175	Pn	Pn	04 04 52.1	+1.6
	0.1nm,0.1s,SNR=7.9						
EBER				Sn	Sn	04 05 59.8	-2.8
	4.7nm,4.7s,SNR=7.9						
EBER				Lg	Lg	04 06 35.4	
	17nm,0.5s,SNR=7.9						
SMF	Signal de Mont	6.33	54	*e*Pn	Pn	04 04 51.5	+0.8
	SNR=1.0						
SMF				*e*Sn	Sn	04 06 00.1	-3.0
	4.8nm,0.3s						
SMF	Signal de Mont	6.33	54	Pn	Pn	04 04 51.5	+0.8
SMF				Sn	Sn	04 06 00.1	-3.0
	2.4nm,0.3s						
SSF	Saint Saulge	6.36	50	*e*Pn	Pn	04 04 51.3	+0.1
	SNR=1.0						
SSF				*e*Sn	Sn	04 05 59.9	-3.9
	6.2nm,0.2s						
SSF	Saint Saulge	6.36	50	Pn	Pn	04 04 51.3	+0.1
SSF				Sn	Sn	04 05 59.9	-3.9
	3.1nm,0.2s						
EGRO	El Granado	6.36	209	Pn	Pn	04 04 51.5	+0.3
	1.7nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	04 06 00.6	-3.3
	0.1nm,0.3s,SNR=7.9						
EGRO				Lg	Lg	04 06 36.4	
	12nm,0.3s,SNR=4.5						
PCVE	Castro Verde	6.49	213	*e*Pn	Pn	04 04 52.4	-0.5
PCVE				*e*Sn	Sn	04 06 02.6	-4.3
PCVE				*e*Sg	Sg	04 06 40.7	-4.9
PCVE				A	A	04 06 53.2	
	12nm,0.4s						
PCVE	Castro Verde	6.49	213	Sn	Sn	04 06 02.6	-4.3
PCVE				Lg	Lg	04 06 40.7	
	12nm,0.4s						
ESPR	Espera	6.53	196	Pn	Pn	04 04 55.3	+1.8
	8.0nm,4.1s,SNR=7.9						
ESPR				Sn	Sn	04 06 04.3	-3.8
	0.5nm,0.5s,SNR=7.9						
ESPR				Lg	Lg	04 06 41.9	
	9.0nm,0.4s,SNR=7.9						
EMIJ	Mijas	6.67	188	Pn	Pn	04 04 57.0	+1.6
	0.9nm,0.2s,SNR=7.9						
EMIJ				Pg	Pb	04 05 17.1	+3.7
	0.6nm,1.3s,SNR=7.9						
EMIJ				Sn	Sn	04 06 07.8	-3.6
	0.4nm,0.3s,SNR=7.9						
EMIJ				Lg	Lg	04 06 45.9	
	4.6nm,0.4s,SNR=7.9						
LOR	Lormes	6.68	50	*e*Pn	Pn	04 04 55.5	0.0
	baz=232,SNR=1.0						
LOR				*e*Sn	Sn	04 06 08.8	-2.8
	5.6nm,0.3s						
LOR	Lormes	6.68	50	Pn	Pn	04 04 55.5	0.0
LOR				Sn	Sn	04 06 08.8	-2.8
	2.8nm,0.3s						
SMRF	Simiane la Rot	6.72	80	*e*Pn	Pn	04 04 57.2	+1.0
	SNR=1.0						
SMRF				*e*Sn	Sn	04 06 09.6	-3.2
	1.2nm,0.2s						
SMRF	Simiane la Rot	6.72	80	Pn	Pn	04 04 57.2	+1.0
SMRF				Sn	Sn	04 06 09.6	-3.2
	1.2nm,0.2s						
PBDV	Barranco-do-Ve	6.78	211	*e*Pn	Pn	04 04 57.0	0.0
PBDV				*e*Sn	Sn	04 06 09.9	-4.4
PBDV				*e*Sg	Sg	04 06 53.9	-1.2
PBDV				A	A	04 07 05.8	
	11nm,0.6s						
PBDV	Barranco-do-Ve	6.78	211	Pn	Pn	04 04 57.0	0.0
PBDV				Sn	Sn	04 06 09.9	-4.4
PTEO	Sao Teotonio	6.84	216	*e*Sn	Sn	04 06 11.5	-4.3
PTEO				*e*Sg	Sg	04 06 54.7	-2.3
PTEO				A	A	04 07 03.1	
	13nm,0.6s						
PTEO	Sao Teotonio	6.84	216	Sn	Sn	04 06 11.5	-4.3
MORF	Marmelete	7.01	215	*e*P	Pn	04 04 60.0	-0.3
MORF	Marmelete	7.01	215	*e*Pn	Pn	04 04 59.7	-0.5
MORF				*e*Sn	Sn	04 06 13.8	-6.2
ORIF	Oris-en-Rattie	7.06	72	*e*Pn	Pn	04 05 02.3	+1.4
	SNR=1.0						
ORIF				*e*Sn	Sn	04 06 17.0	-4.2
	5.4nm,0.4s						
ORIF	Oris-en-Rattie	7.06	72	Pn	Pn	04 05 02.3	+1.4
ORIF				Sn	Sn	04 06 17.0	-4.2
	2.7nm,0.4s						
PFVI	Vila Bisbo	7.24	215	Pn	Pn	04 05 05.2	+1.9
	37nm,2.6s,SNR=7.9						
PFVI				Sn	Sn	04 06 21.2	-4.2
	20nm,4.7s,SNR=7.9						
LMR	La Mourre	7.39	85	*e*Pn	Pn	04 05 06.5	+1.1
	SNR=1.0						
LMR	La Mourre	7.39	85	*e*Sn	Sn	04 06 25.6	-3.7
	1.3nm,0.3s						
LMR	La Mourre	7.39	85	Pn	Pn	04 05 06.5	+1.1
LMR				Sn	Sn	04 06 25.6	-3.7
	0.6nm,0.3s						
FRF	La Foret Royal	7.49	84	*e*Pn	Pn	04 05 07.7	+1.0
	SNR=1.0						
FRF				*e*Sn	Sn	04 06 28.1	-3.5
	1.7nm,0.3s						
FRF	La Foret Royal	7.49	84	Pn	Pn	04 05 07.7	+1.0
FRF				Sn	Sn	04 06 28.1	-3.5
	0.9nm,0.3s						
MBDF	Montbardon	7.66	75	*e*Pn	Pn	04 05 10.1	+1.0
MBDF				*e*Sn	Sn	04 06 32.3	-3.6
	4.6nm,0.5s						
MBDF	Montbardon	7.66	75	Pn	Pn	04 05 10.1	+1.0
MBDF				Sn	Sn	04 06 32.3	-3.6
	2.3nm,0.5s						
CABF	La Chapelle	7.70	60	*e*Pn	Pn	04 05 10.6	+1.0
CABF				*e*Sn	Sn	04 06 33.0	-3.9
	1.7nm,0.3s						
CABF	La Chapelle	7.70	60	Pn	Pn	04 05 10.6	+1.0
CABF				Sn	Sn	04 06 33.0	-3.9
	0.9nm,0.3s						
LPL	La Plagne	7.78	69	*e*Pn	Pn	04 05 11.4	+0.6
LPL				*e*Sn	Sn	04 06 34.2	-4.8
	1.0nm,0.2s						
LPL	La Plagne	7.78	69	Pn	Pn	04 05 11.4	+0.6
LPL				Sn	Sn	04 06 34.2	-4.8
	0.5nm,0.2s						
LPG	La Plagne	7.79	69	*e*Pn	Pn	04 05 11.6	+0.6
LPG				*e*Sn	Sn	04 06 35.5	-3.8
	0.8nm,0.2s						
LPG	La Plagne	7.79	69	Pn	Pn	04 05 11.6	+0.6
LPG				Sn	Sn	04 06 35.5	-3.8
	0.4nm,0.2s						
SFTF	Sexfontaines	7.87	47	*e*Pn	Pn	04 05 12.7	+0.8
SFTF				*e*Sn	Sn	04 06 36.1	-4.9
	2.4nm,0.2s						
SFTF	Sexfontaines	7.87	47	Pn	Pn	04 05 12.7	+0.8
SFTF				Sn	Sn	04 06 36.1	-4.9
	2.4nm,0.2s						
MEZF	Maizieres J'vi	8.06	46	*e*Sn	Sn	04 06 41.2	-4.4
	6.7nm,0.4s						
MEZF	Maizieres J'vi	8.06	46	Sn	Sn	04 06 41.2	-4.4
	6.7nm,0.4s						
SBF	Sospel	8.06	81	*e*Pn	Pn	04 05 16.1	+1.5
SBF				*e*Sn	Sn	04 06 42.3	-3.5
	1.4nm,0.2s						
SBF	Sospel	8.06	81	Pn	Pn	04 05 16.1	+1.5
SBF				Sn	Sn	04 06 42.3	-3.5
	0.7nm,0.2s						
PAGF	Fort de Pagny	8.45	47	*e*Pn	Pn	04 05 20.5	+0.7
PAGF				*e*Sn	Sn	04 06 50.4	-4.7
	3.2nm,0.3s						
HAU	Haudompre	8.49	52	*e*Sn	Sn	04 06 51.6	-4.6
	2.1nm,0.3s						
HAU	Haudompre	8.49	52	Sn	Sn	04 06 51.6	-4.6
	1.1nm,0.3s						
HINF	Hinteralfeld	8.69	54	*e*Pn	Pn	04 05 23.9	+0.7
HINF				*e*Sn	Sn	04 06 56.4	-4.8
	1.7nm,0.3s						
HINF	Hinteralfeld	8.69	54	Pn	Pn	04 05 23.9	+0.7
HINF				Sn	Sn	04 06 56.4	-4.8
	0.9nm,0.3s						
BAIF	Baives	8.73	35	*e*Pn	Pn	04 05 24.1	+0.4
BAIF				*e*Sn	Sn	04 06 56.0	-6.2
	4.0nm,0.3s						
BAIF	Baives	8.73	35	Pn	Pn	04 05 24.1	+0.4
BAIF				Sn	Sn	04 06 56.0	-6.2
	2.0nm,0.3s						
DOU	Dourbes	8.93	36	⇓Pn	Pn	04 05 26.9	+0.5
DOU				⇓Sn	Sn	04 06 59.7	-7.2
	comp=N,9.1nm,0.0s						
GIVF	Givet	9.03	37	*e*Pn	Pn	04 05 27.7	-0.1
	SNR=1.0						
GIVF				*e*Sn	Sn	04 07 03.8	-5.7
	comp=N,6.4nm,0.3s						
GIVF	Givet	9.03	37	Pn	Pn	04 05 27.7	-0.1
GIVF				Sn	Sn	04 07 03.8	-5.7
	comp=N,3.2nm,0.3s						
CDF	Champ du Feu	9.23	52	*e*Pn	Pn	04 05 30.0	-0.6
CDF				*e*Sn	Sn	04 07 09.0	-5.5
	comp=N,1.7nm,0.3s						
CDF	Champ du Feu	9.23	52	Pn	Pn	04 05 30.0	-0.6
CDF				Sn	Sn	04 07 09.0	-5.5
	comp=N,0.9nm,0.3s						
PGF	Pioggiola	9.29	90	*e*Pn	Pn	04 05 32.2	+0.8
	SNR=1.0						
PGF	Pioggiola	9.29	90	Pn	Pn	04 05 32.2	+0.8
BCLA	Clavier	9.47	37	⇑Pn	Pn	04 05 33.9	+0.1
	comp=Z,9.3nm,0.0s						
BCLA				⇑Sn	Sn	04 07 12.8	-7.6
MD31	MD31	10.33	185	P	Pn	04 05 39.6	-6.1
MD31				S	Sn	04 07 32.6	-9.1
MDT	Midelt	10.38	185	P	Pn	04 05 40.1	-6.3
MDT				S	Sn	04 07 34.2	-8.6

GEN ***08*** *04:05:12.8, 43°.82N×8°.38E, h16^{km}±6^{km}, Ml0.7*
LDG ***08*** *04:05:12.7±0.1, 43°.83N×8°.38E, h18^{km}±1^{km}, Md1.7/1, Ml1.4/4, Error ellipse: s-maj=3.3km s-min=2.0km az=171.0*
ROM 08 04:05:13.3±0.2**, 43°.870N**±0°.010×**8°.35E**±0°.01**, h10**^{km}**,** **ML1.0**/3**, Error ellipse: s-maj=1.3km s-min=0.7km az=319.0, Corsica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINB	Finale Ligure	0.31	357	P	Pg	04 05 20.2	+0.7
FINB				S	Sb	04 05 24.9	-1.1
RORO	Rocca Rossa	0.32	320	P	Pg	04 05 20.3	+0.7
RORO				S	Sb	04 05 25.3	-1.0
RORO	Rocca Rossa	0.32	320	P	Pg	04 05 20.3	+0.7
RORO				S	Sb	04 05 25.3	-1.0
RORO				AML	AML		
	comp=E,41µm,0.9s						
RORO				AML	AML		
	comp=N,44µm,0.5s						
RORO				AML	AML		
	comp=E,41µm,0.9s						
RORO				AML	AML		
	comp=N,44µm,0.5s						
RORO				END			
RORO				END			
IMI	Imperia	0.33	277	P	Pg	04 05 20.2	+0.3
IMI				S	Sg	04 05 25.4	+1.0
IMI	Imperia	0.33	277	P	Pg	04 05 20.2	+0.3
IMI				S	Sb	04 05 25.6	-1.2
IMI				END			
IMI				END			
MGRO	Montegrosso	0.43	294	P	Pg	04 05 22.1	+0.4
MGRO				S	Sb	04 05 28.8	-0.8
MGRO	Montegrosso	0.43	294	P	Pg	04 05 22.1	+0.4
MGRO				S	Sb	04 05 28.8	-0.8
MGRO				AML	AML		
	comp=E,21µm,1.2s						
MGRO				AML	AML		
	comp=N,26µm,1.3s						
MGRO				AML	AML		
	comp=N,26µm,1.3s						
MGRO				AML	AML		
	comp=E,21µm,1.2s						
MGRO				END			
MGRO				END			
GBOS	Grotte di Boss	0.52	315	S	Sb	04 05 31.5	-0.8
GBOS	Grotte di Boss	0.52	315	P	Pb	04 05 24.2	-0.4
GBOS				S	Sb	04 05 31.5	-0.8
GBOS				END			
GBOS				END			
SBF	Sospel	0.66	270	*e*Pg	Pg	04 05 26.0	-0.1
SBF				*e*Sg	Sg	04 05 34.7	-0.1
	comp=E,4.4nm,0.2s						
PCP	Piancastagn	0.69	12	P	Pg	04 05 26.6	+0.1
ENR	Entracque	0.76	298	P	Pg	04 05 28.0	+0.1
ENR				AML	AML		
	comp=E,16µm,1.6s						
ENR				AML	AML		
	comp=N,20µm,0.5s						
ENR				AML	AML		
	comp=E,16µm,1.6s						
ENR				AML	AML		
	comp=N,20µm,0.5s						
FRF	La Foret Royal	1.27	257	*e*Pn	Pn	04 05 34.0	-3.1
FRF				*e*Sn	Sb	04 05 50.4	-3.4
	comp=N,0.6nm,0.2s						
PGF	Pioggiola	1.40	160	*e*Pn	Pn	04 05 35.3	-3.7
PGF				*e*Sn	Sb	04 05 51.9	-5.7
	comp=N,0.7nm,0.3s						
LMR	La Mourre	1.44	249	*e*Pn	Pn	04 05 36.1	-3.3
LMR				*e*Sn	Sn	04 05 53.7	-4.7
	comp=N,0.4nm,0.3s						
LMR	La Mourre	1.44	249	*e*Pg	Pn	04 05 35.9	-3.5

IDC ***08*** *04:16:00.8±0.6, 55°.64S×26°.48W, h0^{km}, mb4.4/8, mb1 4.5/9, mb1mx4.2/24, mbtmp4.3/9, ML4.0/1, MS3.8/1, Ms1 3.8/1, ms1mx3.0/24, Error ellipse: s-maj=24.9km s-min=17.7km az=52.0*
ISCJB ***08*** *04:16:03.9±0.4, 55°.67S±0°.08×26°.6W±0°.1, h35^{km}, mb4.6/22, MS4.2/2, Error ellipse: s-maj=13.6km s-min=7.5km az=43.9*
NEIC ***08*** *04:16:04.7±1.3, 55°.67S×26°.69W, h25^{km}±4^{km}, mb4.7/21, Error ellipse: s-maj=20.8km s-min=15.2km az=213.0*
ISC 08 04:16:05.8±0.4**, 55°.84S**±0°.10×**26°.94W**±0°.08**, h35**^{km}**, n65,** σ**1^{s}.62**/65**, mb4.7**/20**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.70	282	*e*Pn	Pn	04 17 29.1	+1.3
HOPE				*e*Sn	Sn	04 18 27.6	-4.3
VNA1	Neumayer--Stat	16.94	158	P	P	04 20 04.7	+3.4
VNA3	Neumayer Olymp	17.14	161	P	P	04 20 04.7	+1.2
EFI	East Falkland	18.77	270	*e*P	P	04 20 19.6	-1.9
	72nm,1.1s						
SNAA	Sanae	18.88	156	P	P	04 20 23.0	+0.3
SNAA	Sanae	18.88	156	P	P	04 20 22.7	0.0
	0.5nm,0.3s,baz=297,slow=8.8,SNR=20						
SNAA				PcP	PcP	04 24 48.2	+0.6
	0.2nm,0.3s,baz=252,slow=4.5,SNR=8.1						
SNAA	Sanae	18.88	156	*e*P	P	04 20 22.7	0.0
	5.2nm,0.8s						
SNAA				*e*PcP	PcP	04 24 48.4	+0.8
PMSA	Palmer Station	20.14	229	LR	LR	04 26 41.1	
	comp=Z,248nm,18.3s,baz=12,slow=31						
PMSA	Palmer Station	20.14	229	*e*P	P	04 20 32.5	-3.9
	24nm,0.7s						
TRQA	Tornquist	29.37	292	*e*P	P	04 22 06.4	+1.2
	9.2nm,0.6s						
SYO	Syowa Base	31.66	141	⇑*e*P	P	04 22 23.9	-1.2
QSPA	South Pole Qui	34.41	180	*e*P	P	04 22 50.7	+1.3

	9.3nm,0.7s						
QSPA				*e*PcP	PcP	04 25 24.6	+0.6
CPUP	Villa Florida	36.78	311	P	P	04 23 10.4	+0.5
	3.3nm,0.6s,baz=152,slow=7.6,SNR=13						
CPUP				PcP	PcP	04 25 32.0	+0.5
	3.0nm,1.0s,baz=192,slow=18,SNR=3.5						
PEL	Peldehue	37.70	288	*e*P	P	04 23 17.4	-0.3
	14nm,0.8s						
GO04	Tololo Observa	40.08	291	*e*P	P	04 23 37.9	0.0
	7.7nm,0.6s						
MAW	Mawson	40.23	144	P	P	04 23 39.2	+0.8
	3.6nm,0.8s,baz=224,slow=5.0,SNR=7.4						
MAW	Mawson	40.23	144	*e*P	P	04 23 39.7	+1.3
	0.9nm,0.9s						
MAW				*e*PP	PP	04 25 04.5	-6.5
GO03	Copiap	41.85	294	*e*P	P	04 23 52.9	+0.6
	16nm,0.8s						
GO02	Mina Guanaco	43.52	297	*e*P	P	04 24 07.8	+1.7
	19nm,0.6s						
LVC	Limon Verde	45.32	300	*e*P	P	04 24 21.6	+1.1
	20nm,1.1s						
BOSA	Boshof	45.78	76	P	P	04 24 22.2	-1.8
	2.5nm,0.8s,baz=227,slow=5.6,SNR=4.8						
SBA	Scott Base	46.30	184	*e*P	P	04 24 28.7	+1.5
	3.4nm,0.7s						
VNDA	Vanda	46.79	183	P	P	04 24 32.6	+1.5
	3.5nm,0.5s,baz=187,slow=6.5,SNR=54						
VNDA	Vanda	46.79	183	*e*P	P	04 24 32.4	+1.3
	5.4nm,0.9s						
PB01	IPOC Station P	46.92	300	*e*P	P	04 24 33.3	+0.4
	16nm,0.7s						
H10S2	ASCENSION HYDR	47.76	17	T	T	05 15 53.5	
	baz=190,slow=75,SNR=37						
H10S3	ASCENSION HYDR	47.77	16	T	T	05 15 51.6	
	baz=190,slow=75,SNR=23						
H10S1	ASCENSION HYDR	47.78	17	T	T	05 15 53.7	
	baz=190,slow=75,SNR=28						
GO01	Chusmiza	47.95	301	*e*P	P	04 24 43.1	+1.7
	12nm,0.8s						
MNMC	Minye Minye	48.61	301	*e*P	P	04 24 48.0	+1.9
	13nm,0.6s						
LBTB	Lobatse	48.82	73	P	P	04 24 46.3	-1.3
	2.5nm,0.8s,baz=216,slow=8.7,SNR=3.7						
LBTB	Lobatse	48.82	73	*e*P	P	04 24 46.3	-1.3
	7.9nm,1.1s						
H10N1	ASCENSION HYDR	48.88	16	T	T	05 17 19.2	
	baz=189,slow=75,SNR=10.0						
H10N3	ASCENSION HYDR	48.88	16	T	T	05 17 13.9	
	baz=189,slow=75,SNR=26						
H10N2	ASCENSION HYDR	48.90	16	T	T	05 17 30.3	
	baz=189,slow=75,SNR=17						
LPAZ	La Paz	50.37	305	P	P	04 25 01.5	+1.5
	8.2nm,0.8s,baz=150,slow=6.2,SNR=25						
PTGA	Pitinga	61.10	322	*e*P	P	04 26 15.3	-0.9
	3.1nm,0.8s						
TORD	Torodi Ar. Bea	72.81	29	P	P	04 27 28.1	-2.4
	0.6nm,0.4s,baz=207,slow=6.2,SNR=18						
TOA1	Torodi Ar. Sit	72.81	29	*e*P	P	04 27 28.1	-2.4
SDV	Santo Domingo	73.96	315	*e*P	P	04 27 37.9	+0.3
	7.3nm,1.0s						
ASAR	Alice Springs	99.14	162	P	Pdif	04 29 43.2	-0.2
	1.1nm,0.7s,baz=180,slow=3.8,SNR=8.5						
AS31	Alice Springs	99.15	162	*e*P	Pdif	04 29 42.5	-1.0
	0.9nm,0.9s						
NV01	Mina Array Sit	121.44	293	*e*PKPdf	PKiKP	04 34 56.3	+1.3
NVAR	Mina Array Bea	121.44	293	PKP	PKiKP	04 34 56.3	+1.3
	0.3nm,0.6s,baz=152,slow=2.6,SNR=3.4						
FIA0	FINESS Array S	124.14	28	*e*PKPdf	PKPdf	04 34 58.6	-0.3
FINES	FINESS Array B	124.14	28	PKP	PKPdf	04 34 58.6	-0.3
	2.3nm,0.9s,baz=124,slow=1.4,SNR=4.8						
CM31	Chiang Mai Arr	125.01	110	*e*PKPdf	PKPdf	04 35 02.2	+0.1
CMAR	Chiang Mai Arr	125.01	110	PKP	PKPdf	04 35 02.2	+0.1
	0.8nm,0.3s,baz=230,slow=4.3,SNR=4.5						
MSO	Missoula	125.45	303	*e*PKPdf	PKiKP	04 35 03.0	+0.4
ARA0	ARCESS Array S	130.70	22	*e*PKPdf	PKPdf	04 35 11.5	+0.2
ARCES	ARCESS Array B	130.70	22	PKP	PKPdf	04 35 11.5	+0.2
	3.9nm,0.8s,baz=240,slow=1.8,SNR=3.9						
YKA	Yellowknife Ar	136.11	318	PKP	PKPdf	04 35 21.7	+0.1
	1.8nm,0.6s,baz=131,slow=2.0,SNR=21						
YKW3	Yellowknife Ar	136.15	318	*e*PKPdf	PKPdf	04 35 21.8	+0.1
RES	Resolute Bay	137.72	339	*e*PKPdf	PKPdf	04 35 24.7	+0.4
LZH	Lanzhou	141.51	100	*e*PKP	PKiKP	04 35 36.4	+1.0
LZH				pPKP	sPKPdf	04 35 46.0	-0.9
LZH				sPKP		04 35 51.9	
LZH				LR	LR		
	comp=N,130nm,18.1s						
LZH				LR	LR		
	comp=E,130nm,18.3s						
LZH				LR	LR		
	comp=Z,150nm,20.0s						
ZALV	Zalesovo Beam	142.15	63	PKP	PKPdf	04 35 33.6	+0.7
	comp=Z,1.1nm,0.5s,baz=217,slow=5.5,SNR=3.0						
ZAA1	Zalesovo Array	142.16	63	*e*PKPdf	PKPdf	04 35 33.6	+0.7
INK	Inuvik	145.73	321	*e*PKPdf	PKPbc	04 35 39.4	+0.1
EGAK	Eagle	147.70	313	*e*PKPdf	PKPdf	04 35 43.8	+1.6
DOT	Dot Lake	148.62	310	*e*PKPbc	PKPbc	04 35 48.4	+0.9
ILAR	Eielson Array	150.08	312	PKPbc	PKPbc	04 35 51.5	+0.4
	comp=Z,12nm,0.8s,baz=130,slow=1.9,SNR=82						
COLA	College	150.50	312	*e*PKPdf	PKPdf	04 35 48.6	+1.9
SONA0	Songino Array	150.58	86	*e*PKPbc	PKPbc	04 35 52.1	-0.8
SONM	Songino Array	150.58	86	PKPbc	PKPbc	04 35 52.1	-0.8
	comp=Z,1.6nm,0.6s,baz=231,slow=2.9,SNR=8.9						
MLY	Manley	151.74	312	*e*PKPdf	PKPdf	04 35 51.0	+2.4
MLY				*e*PKPbc	PKiKP	04 35 55.7	+0.3

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*ISCJB **08** 04:18:51.7±0.6, 37°.10N±0°.04×42°.52E±0°.04, h10^{km}, Error ellipse: s-maj=6.4km s-min=4.2km az=26.3*
*DDA **08** 04:18:51.8, 37°.27N×42°.50E, h3^{km}±1^{km}, ML2.6*
*ISK **08** 04:18:52.1, 37°.22N×42°.51E, h8^{km}, ML2.4/4*
*ISN **08** 04:18:52.9±0.7, 37°.11N×42°.65E, h15^{km}, ML2.5*
ISC 08 04:18:51.4±0.9**, 37°.15N**±0°.04×**42°.51E**±0°.04**, h10**^{km}**, n12, σ0^{s}.75**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRN	Sırnak	0.35	347	*i* P	Pg	04 18 57.0	-1.4
SIRN				IAML_P			
	comp=Z,5μm,0.1s						
CUKT	Cukurca	0.88	83	PG	Pb	04 19 09.4	+0.5
CUKT				SG	Sb	04 19 21.9	+1.2
CUKT	Cukurca	0.88	83	*i* P	Pb	04 19 09.6	+0.7
CUKT				IAML_P			
	comp=Z,350nm,0.1s						
MSL	Mosul	0.89	147	*e*Pg	Pg	04 19 07.5	-1.1
	baz=332						
MSL				AML	AML	04 19 09.1	
	comp=Z,225nm,0.2s						
MSL				*e*Sg	Sg	04 19 19.4	-0.8
HAKT	HAKKARI	1.03	67	*i* P	Pb	04 19 12.0	+0.4
HAKT				*i* S	Sb	04 19 26.1	+0.8
HAKT				IAML_P			
	comp=Z,377nm,0.2s						
AKDM	Akdamar-Van	1.23	17	PN	Pn	04 19 14.9	0.0
AKDM				SN	Sn	04 19 31.3	-0.4
BTMN	Batman	1.23	307	*i* P	Pg	04 19 15.6	+0.5
MARD	Mardin	1.39	277	*i* P	Pg	04 19 18.7	+0.5
SVAN	Silvan-Diyarba	1.44	314	PN	Pb	04 19 18.3	-0.1
SVAN				SN	Sg	04 19 37.7	-0.2
MAZI	Mazidag	1.68	281	PN	Pb	04 19 22.2	-0.2
MUSM	Mu-Merkez	1.76	334	*i* P	Pb	04 19 23.7	-0.1
MUSM				IAML_P			
	comp=Z,391nm,0.2s						
BNGL	BINGOL	2.09	330	*i* P	Pn	04 19 27.4	+0.6
BNGL				*i* S	Sg	04 19 57.9	-0.9

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*IDC **08** 04:25:20.0±1.1, 61°.75S×159°.33W, h0^{km}, mb4.3/3, mb1 4.5/3, mb1mx4.0/21, mbtmp4.3/3, MS4.2/12, Ms1 4.2/12, ms1mx4.1/22, Error ellipse: s-maj=107.7km s-min=30.2km az=16.0*
*NEIC **08** 04:25:20.6±2.1, 62°.48S×158°.91W, h10^{km}±3^{km}, mb4.0/4, Error ellipse: s-maj=34.7km s-min=12.5km az=148.0*
ISC 08 04:25:20.1±1.2**, 62°.4S**±0°.2×**158°.9W**±0°.2**, h10**^{km}**, n40, σ1^{s}.06**/18**, mb4.4**/4**, MS4.2**/14**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	Scott Base	18.82	202	*e*P	P	04 29 38.9	-0.6
	7.1nm,0.8s						
VNDA	Vanda	19.54	204	LR	LR	04 36 09.3	
	comp=Z,742nm,18.2s,baz=62,slow=32						
VNDA	Vanda	19.54	204	*e*P	P	04 29 48.1	+0.8
VNDA				*e*Pn	Pn	04 29 48.5	-0.1
URZ	Urewera	28.30	318	LR	LR	04 41 09.7	
	comp=Z,340nm,18.0s,baz=164,slow=34						
TBI	Tubuai	39.60	14	*e*T	T	05 12 28.8	
	22nm,0.3s						
RKT	Rikitea	42.52	34	*e*T	T	05 16 14.4	
	5.0nm,0.3s						
TVO	Taravao	45.12	13	*e*T	T	05 19 22.3	
	1.2nm,0.3s						
MEH	Mehetia	45.16	15	*e*T	T	05 19 26.2	
	42nm,0.3s						
PAE	Paea	45.21	13	*e*T	T	05 19 28.7	
	2.2nm,0.4s						
PPT2	Papeete2	45.28	13	*e*LQ	LQ	04 44 04.2	
	2μm,31.5s						
PPT2				*e*LR	LR	04 45 54.0	
	comp=Z,1μm,28.8s,baz=191						
PPT2	Papeete2	45.28	13	*e*T	T	05 19 34.1	
	3.4nm,0.4s						
PPT	Papeete	45.30	13	LR	LR	04 48 24.9	
	comp=Z,291nm,18.0s,baz=182,slow=31						
DZM	Mont Dzumac	46.71	314	*e*LR	LR	04 47 01.7	
	comp=Z,602nm,24.7s						
MAW	Mawson	46.78	201	LR	LR	04 52 23.0	
	comp=Z,264nm,18.6s,baz=84,slow=34						
VAH	Vaihoa	47.82	15	*e*T	T	05 22 45.0	
	80nm,0.3s						
PMOR	Pomariorio Ree	48.02	14	*e*T	T	05 23 01.3	
	3.6nm,0.3s						
STKA	Stephens Creek	48.23	281	P	P	04 33 59.5	-1.3
	4.1nm,0.8s,baz=132,slow=9.1,SNR=9.2						
STKA	Stephens Creek	48.23	281	*e*P	P	04 34 03.3	+2.5
	2.2nm,1.1s						
PLCA	Paso Flores	54.16	110	LR	LR	04 53 46.8	
	comp=Z,186nm,18.8s,baz=234,slow=31						
TAOE	Nuku Hiva Isla	55.21	23	*e*LR	LR	04 50 30.9	
	comp=Z,476nm,28.8s						
ASAR	Alice Springs	58.75	279	P	P	04 35 16.6	-1.6
	3.9nm,1.0s,baz=146,slow=7.6,SNR=17						
AS31	Alice Springs	58.75	279	*e*P	P	04 35 18.7	+0.6
	1.5nm,1.0s						
WR1	Warramunga Arr	61.78	281	*e*P	P	04 35 38.9	0.0
WRA	Warramunga Arr	61.78	281	P	P	04 35 38.8	0.0
	3.1nm,0.9s,baz=164,slow=7.5,SNR=5.6						
CPUP	Villa Florida	72.14	113	LR	LR	05 05 06.3	
	comp=Z,87nm,18.7s,baz=209,slow=33						
BATI	Baumata	75.19	276	LR	LR	05 07 20.1	
	comp=Z,237nm,21.8s,baz=162,slow=34						
LPAZ	La Paz	76.08	98	LR	LR	05 04 13.9	
	comp=Z,104nm,19.9s,baz=186,slow=31						
BDFB	Brasilia	85.56	115	LR	LR	05 13 47.1	
	comp=Z,177nm,20.0s,baz=206,slow=34						
LEM	Lembang	85.61	264	LR	LR	05 09 12.5	
	comp=Z,111nm,21.3s,baz=223,slow=31						
BOSA	Boshof	89.20	184	LR	LR	05 16 36.6	
	comp=Z,258nm,18.3s,baz=150,slow=34						
ROSC	El Rosal	91.75	83	LR	LR	05 12 36.6	
	comp=Z,72nm,18.9s,baz=243,slow=31						
ILAR	Eielson Array	127.22	6	PKP	PKPdf	04 44 23.2	+0.2
	0.3nm,0.6s,baz=258,slow=1.6,SNR=3.6						
ILB	Eielson Array	127.22	6	*e*PKPdf	PKPdf	04 44 23.1	+0.2
MK32	Makanchi Array	142.86	274	*e*PKPdf	PKPdf	04 44 51.7	-1.0
MKAR	Makanchi Array	142.86	274	PKP	PKPdf	04 44 51.7	-1.0
	0.2nm,0.6s,baz=128,slow=2.4,SNR=2.7						
MDT	Midelt	146.14	139	PKPbc	PKiKP	04 45 03.1	0.0
	2.6nm,0.9s,baz=166,slow=2.3,SNR=3.7						
GEYT	Alibeck	146.67	240	PKPbc	PKiKP	04 45 03.2	-0.8
	1.1nm,0.4s,baz=201,slow=7.7,SNR=2.5						
ZALV	Zalesovo Beam	146.69	285	PKPbc	PKPbc	04 45 00.7	0.0
	0.5nm,0.5s,baz=137,slow=3.2,SNR=2.8						
ZAA1	Zalesovo Array	146.69	285	*e*PKPdf	PKPbc	04 45 00.7	-0.1
ESDC	Sonseca Array	152.64	135	PKPbc	PKiKP	04 45 17.9	+1.6
	0.2nm,0.4s,baz=227,slow=1.4,SNR=2.6						

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*GCG **08** 04:39:33.4±0.4, 14°.27N×92°.16W, h151^{km}±7^{km}, MD3.8*
*MEX **08** 04:39:37.3±0.8, 13°.66N×92°.31W, h19^{km}±66^{km}, MD3.7*
ISC 08 04:39:35.4±4.7**, 13°.6N**±0°.2×**92°.31W**±0°.09**, h34**^{km}±6^{km}**, n8, σ0^{s}.85**/16**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.26	2	*i* P	Pn	04 39 57.0	+0.3
THIG				*e*S	Sn	04 40 11.3	-1.2
STG3	Santiaguito 3,	1.29	34	*e*P	Pn	04 39 56.9	-0.3
STG3				*e*S	Sb	04 40 15.5	0.0
FUG	Fuego 3	1.64	60	*e*P	Pn	04 40 01.9	-0.1
FUG				*e*S	Sn	04 40 23.9	+1.9
PCG	Pacaya	1.81	65	*e*P	Pn	04 40 04.5	0.0
PCG				*e*S	Sn	04 40 26.9	+0.4
NBG	Las Nubes	2.13	63	*e*P	Pn	04 40 07.6	-1.2
NBG				*e*S	Sn	04 40 34.1	-0.1
PCIG		2.23	337	*e*P	Pn	04 40 10.8	+0.8
PCIG				*i* S	Sn	04 40 35.7	-0.8
CCIG	Comitan	2.63	4	*e*P	Pn	04 40 16.2	+0.5
CCIG				*e*S	Sn	04 40 47.1	+0.4
TGIG		3.22	346	*i* P	Pn	04 40 23.5	-0.1
TGIG				*e*S	Sn	04 41 00.7	-0.2

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*IGIL **08** 04:52:04.7, 36°.60N×11°.31W, h30^{km}, ML3.2*
*CNRM **08** 04:52:04.3, 36°.20N×10°.95W, h30^{km}, ml3.2*
*MDD **08** 04:52:04.5±0.6, 36°.63N×11°.33W, h50^{km}, mb4.1/17, Error ellipse: s-maj=8.0km s-min=5.6km az=144.0, PRXIMO*
*INMG **08** 04:52:06.0±1.1, 36°.64N×11°.27W, h31^{km}, MD2.8, ML3.0, Error ellipse: s-maj=4.0km s-min=3.2km az=79.0*
*LDG **08** 04:52:06.5±1.0, 36°.82N×10°.97W, h30^{km}, Ml3.3/3, Error ellipse: s-maj=19.2km s-min=12.5km az=50.0*
ISC 08 04:52:00.3±1.4**, 36°.68N**±0°.06×**11°.27W**±0°.07**, h10**^{km}**, n109, σ1^{s}.87**/138**, 7C-2D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	2.01	76⇑	*e*Pn	Pn	04 52 36.2	+1.9
PFVI				*e*Sn	Sn	04 52 57.9	-1.6
PFVI				A	A	04 52 59.4	
	165nm,0.5s						
PFVI	Vila Bisbo	2.01	76	⇑P	Pn	04 52 36.2	+1.9
	22nm,0.1s,SNR=18						
PFVI				S	Sn	04 52 58.9	-0.6
	192nm,0.2s,SNR=21						
PFVI	Vila Bisbo	2.01	76	P	Pn	04 52 36.0	+1.7
MORF	Marmelete	2.19	73	*e*P	Pn	04 52 38.7	+1.9
MORF				*e*S	Sn	04 53 02.8	-1.2
MORF				AML	AML	04 53 04.9	
	comp=N,184nm,0.4s						
MORF	Marmelete	2.19	73⇓	*e*Pn	Pn	04 52 38.8	+1.9
MORF				*e*Sn	Sn	04 53 03.0	-1.0
MORF				A	A	04 53 07.8	
	comp=N,67nm,0.2s						
MORF	Marmelete	2.19	73	P	Pn	04 52 38.8	+1.9
MORF				S	Sn	04 53 03.0	-1.0
	comp=N,67nm,0.2s						
PTEO	Sao Teotonio	2.21	66	*e*Pn	Pn	04 52 39.2	+2.1
PTEO				*e*Sn	Sn	04 53 03.5	-1.0
PTEO				A	A	04 53 06.7	
	comp=N,63nm,0.4s						
PTEO	Sao Teotonio	2.21	66	P	Pn	04 52 39.2	+2.1
PTEO				S	Sn	04 53 03.5	-1.0
	comp=N,32nm,0.4s						
PNCL	Nicolau / Gran	2.61	56	*e*Pn	Pn	04 52 44.7	+2.1
PNCL				*e*Sn	Sn	04 53 13.4	-0.9
PNCL				A	A	04 53 15.5	
	comp=N,36nm,0.2s						
PNCL	Nicolau / Gran	2.61	56	P	Pn	04 52 44.7	+2.1
PNCL				S	Sn	04 53 13.4	-0.9
	comp=N,36nm,0.2s						
LIS	Lisbon	2.64	39	*e*P	Pn	04 52 45.2	+2.2
LIS				*e*S	Sn	04 53 14.4	-0.7
LIS				AML	AML	04 53 19.1	
	comp=N,95nm,0.4s						
LIS	Lisbon	2.64	39	P	Pn	04 52 45.2	+2.2
LIS				S	Sn	04 53 14.4	-0.7
	comp=N,95nm,0.4s						
PBDV	Barranco-do-Ve	2.73	77	*e*Pn	Pn	04 52 46.6	+2.3
PBDV				*e*Sn	Sn	04 53 16.5	-0.9
PBDV				A	A	04 53 24.2	
	comp=N,24nm,0.2s						
PBDV	Barranco-do-Ve	2.73	77	P	Pn	04 52 46.6	+2.3
PBDV				S	Sn	04 53 16.5	-0.9
	comp=N,24nm,0.2s						
PCVE	Castro Verde	2.75	69⇑	*e*Pn	Pn	04 52 46.6	+2.1
PCVE				*e*Sn	Sn	04 53 16.4	-1.4
PCVE				A	A	04 53 19.9	
	comp=N,40nm,0.3s						
PCVE	Castro Verde	2.75	69	P	Pn	04 52 46.6	+2.1
PCVE				S	Sn	04 53 16.4	-1.4
	comp=N,40nm,0.3s						
PMAFR	Mafra	2.77	34⇑	*e*Pn	Pn	04 52 46.8	+2.1
PMAFR				*e*Sn	Sn	04 53 17.7	-0.5
PMAFR				A	A	04 53 21.5	
	comp=N,46nm,0.2s						
PMAFR	Mafra	2.77	34	⇑P	Pn	04 52 46.8	+2.1
	comp=N,13nm,0.1s,SNR=18						
PMAFR				S	Sn	04 53 17.7	-0.5
	comp=N,89nm,0.3s,SNR=14						
PBEJ	Beja	3.03	63	*e*Pn	Pn	04 52 51.2	+2.9
PBEJ				*e*Sn	Sn	04 53 23.7	-0.9
PBEJ				A	A	04 53 25.3	
	comp=N,27nm,0.2s						
PBEJ	Beja	3.03	63	P	Pn	04 52 51.2	+2.9
PBEJ				S	Sn	04 53 23.7	-0.9
	comp=N,13nm,0.2s						
EGRO	El Granado	3.15	73	P	Pn	04 52 51.9	+2.0
	comp=N,1.1nm,0.1s,SNR=13						
EGRO				S	Sn	04 53 26.9	-0.7
	comp=N,25nm,0.2s,SNR=13						
ALMR	Almeirim	3.27	40	*e*P	Pn	04 52 53.9	+2.3
ALMR				*e*S	Sn	04 53 29.5	-0.9
ALMR				AML	AML	04 53 32.5	
	comp=N,45nm,0.1s						
ALMR	Almeirim	3.27	40	*e*Pn	Pn	04 52 53.9	+2.3
ALMR				*e*Sn	Sn	04 53 29.8	-0.7
ALMR				A	A	04 53 33.8	
	comp=N,34nm,0.2s						
ALMR	Almeirim	3.27	40	P	Pn	04 52 53.9	+2.3
ALMR				S	Sn	04 53 29.8	-0.7
	comp=N,17nm,0.2s						
PMTG	Montargil	3.39	44⇑	*e*Pn	Pn	04 52 55.0	+1.7
PMTG				*e*Sn	Sn	04 53 32.7	-0.9
PMTG				A	A	04 53 38.5	
	comp=N,14nm,0.5s						
PMTG	Montargil	3.39	44	P	Pn	04 52 55.0	+1.7
PMTG				S	Sn	04 53 32.7	-0.9
	comp=N,14nm,0.5s						
PBAR	Barrancos	3.69	65	*e*Sn	Sn	04 53 38.7	-2.1
PBAR				A	A	04 53 40.7	
	comp=N,29nm,0.3s						
PBAR	Barrancos	3.69	65	S	Sn	04 53 38.7	-2.1
	comp=N,29nm,0.3s						
PTOM	Tomar	3.70	37	*e*Pn	Pn	04 53 00.2	+2.6
PTOM				*e*Sn	Sn	04 53 41.3	+0.1
PTOM				A	A	04 53 44.7	
	comp=N,17nm,0.2s						
PTOM	Tomar	3.70	37	P	Pn	04 53 00.2	+2.6
PTOM				S	Sn	04 53 41.3	+0.1
	comp=N,8.6nm,0.2s						
EMIN	Mina Concepcio	3.83	72	P	Pn	04 53 00.9	+1.6
	comp=N,1.9nm,0.1s,SNR=29						
EMIN				S	Sn	04 53 42.1	-2.2
	comp=N,16nm,0.2s,SNR=18						
PMRV	Marv??o	4.11	47⇑	*e*Pn	Pn	04 53 04.9	+1.7
PMRV				*e*Sn	Sn	04 53 49.3	-2.1
PMRV				A	A	04 53 51.6	
	comp=N,27nm,0.6s						
PMRV	Marv??o	4.11	47	P	Pn	04 53 04.9	+1.7
PMRV				S	Sn	04 53 49.3	-2.1
	comp=N,27nm,0.6s						
PCBR	Castelo Branco	4.35	42	*e*Pn	Pn	04 53 08.5	+2.1
PCBR				*e*Sn	Sn	04 53 55.1	-2.0
PCBR	Castelo Branco	4.35	42	P	Pn	04 53 08.5	+2.1
PCBR				S	Sn	04 53 55.1	-2.0
ESPR	Espera	4.35	86	P	Pn	04 53 08.4	+2.0
	comp=N,11nm,0.1s,SNR=30						
ESPR				S	Sn	04 53 55.2	-2.0
	comp=N,108nm,0.3s,SNR=8.8						
EJIF	Jimena Fronter	4.67	91	P	Pn	04 53 12.6	+1.6
	comp=N,2.3nm,0.2s,SNR=7.9						
EJIF				S	Sn	04 54 02.7	-2.5
	comp=N,3.7nm,0.2s,SNR=7.9						
MTE	Manteigas	4.73	37	*e*Pn	Pn	04 53 13.7	+2.0
MTE				*e*Sn	Sn	04 54 04.6	-2.0
MTE				A	A	04 54 09.0	
	comp=N,11nm,0.4s						
MTE	Manteigas	4.73	37	P	Pn	04 53 13.7	+2.0
MTE				S	Sn	04 54 04.6	-2.0
	comp=N,5.4nm,0.4s						
RSA	Sarsar	4.78	110	P	Pn	04 53 09.1	-3.3
RSA				S	Sn	04 54 01.8	-6.0
PVIS	Viseu	4.82	32	*e*Pn	Pn	04 53 14.7	+1.7
PVIS				*e*Sn	Sn	04 54 07.1	-1.8
PVIS				A	A	04 54 12.0	
	comp=N,12nm,0.7s						
PVIS	Viseu	4.82	32	P	Pn	04 53 14.7	+1.7
PVIS				S	Sn	04 54 07.1	-1.8
	comp=N,5.8nm,0.7s						
ECAB	El Cabril	4.87	72	P	Pn	04 53 15.5	+1.9
	comp=N,2.6nm,0.3s,SNR=32						
ECAB				S	Sn	04 54 07.1	-2.9
	comp=N,13nm,0.2s,SNR=12						
SMIR	Smir Dam	4.87	100	P	Pn	04 53 11.3	-2.3
SMIR				S	Sn	04 54 05.1	-4.9
HORN	Hornachuelos	4.94	75	P	Pn	04 53 15.4	+0.9
HORN				S	Sn	04 54 09.1	-2.6
ZHG	ZHG	4.98	129	P	Pn	04 53 11.5	-3.7
ZHG				S	Sn	04 54 04.5	-8.4
SRHM	Skhour des Reh	5.03	145	P	Pn	04 53 12.7	-3.2
SRHM				S	Sn	04 54 06.9	-7.3
CHEFC	Chefchaouen	5.06	106	P	Pn	04 53 13.3	-3.1
CHEFC				S	Sn	04 54 05.7	-9.2
EAH	EAH	5.21	164	P	Pn	04 53 13.3	-5.0
EAH				S	Sn	04 54 06.6	-12
EMIJ	Mijas	5.23	89	P	Pn	04 53 20.7	+2.2
	comp=N,0.9nm,0.2s,SNR=6.2						
EMIJ				S	Sn	04 54 16.0	-2.9
	comp=N,6.4nm,0.3s,SNR=4.6						
EPLA	Plasencia	5.30	49	P	Pn	04 53 21.5	+2.0
	comp=N,4.0nm,0.3s,SNR=15						
EPLA				S	Sn	04 54 18.4	-2.3
	comp=N,9.8nm,0.2s,SNR=14						
PVRL	Vila Real	5.36	30	*e*Sn	Sn	04 54 19.4	-2.8
PVRL	Vila Real	5.36	30	S	Sn	04 54 19.4	-2.8
POLO	Lamas de Olo	5.42	29	*e*Pn	Pn	04 53 22.8	+1.6
POLO				*e*Sn	Sn	04 54 21.0	-2.6
POLO				A	A	04 54 23.5	
	comp=N,3.2nm,0.6s						
POLO	Lamas de Olo	5.42	29	P	Pn	04 53 22.8	+1.6
POLO				S	Sn	04 54 21.0	-2.6
	comp=N,3.2nm,0.6s						
PMPST	Porto Santo, M	5.50	231	*e*Pn	Pn	04 53 22.1	-0.1
PMPST				*e*Sn	Sn	04 54 17.9	-7.6
PMPST				A	A	04 54 23.5	
	comp=N,17nm,0.6s						
PMPS	Porto Santo	5.51	231	*e*Pn	Pn	04 53 22.1	-0.3
PMPS				*e*Sn	Sn	04 54 17.1	-8.7
PMPS				A	A	04 54 24.3	
	comp=N,13nm,0.5s						
PMPS	Porto Santo	5.51	231	P	Pn	04 53 22.1	-0.3
PMPS				S	Sn	04 54 17.9	-7.9
	comp=N,8.7nm,0.6s						
EADA	Adamuz	5.53	72	P	Pn	04 53 24.8	+2.1
	comp=N,1.1nm,0.1s,SNR=16						
EADA				S	Sn	04 54 23.1	-3.3
	comp=N,9.5nm,0.3s,SNR=12						
MVO	Moncorvo	5.57	35⇓	*e*Pn	Pn	04 53 25.0	+1.7
MVO				*e*Sn	Sn	04 54 24.4	-3.0
MVO				A	A	04 54 26.5	
	comp=N,8.5nm,0.5s						
MVO	Moncorvo	5.57	35	P	Pn	04 53 24.9	+1.7
	comp=N,7.0nm,0.2s,SNR=27						
MVO				S	Sn	04 54 24.3	-3.1
	comp=N,9.9nm,0.2s,SNR=7.2						
PCAB	Cabril	5.62	26	*e*Pn	Pn	04 53 25.8	+1.8
PCAB				*e*Sn	Sn	04 54 25.4	-3.2
PCAB	Cabril	5.62	26	P	Pn	04 53 25.8	+1.8
PCAB				S	Sn	04 54 25.4	-3.2
ELOB	Lobios	5.75	25	P	Pn	04 53 27.3	+1.5
	comp=N,4.9nm,0.2s,SNR=20						
ELOB				S	Sn	04 54 29.0	-2.9
	comp=N,5.2nm,0.1s,SNR=5.7						
EGOR	Sierra Gorda,	5.75	84	P	Pn	04 53 27.9	+2.0
	comp=N,5.8nm,3.5s,SNR=7.9						
EGOR				S	Sn	04 54 29.3	-2.8
	comp=N,8.6nm,0.3s,SNR=7.9						
PGAV	Gavieira, Arco	5.77	23	*e*Pn	Pn	04 53 27.8	+1.7
PGAV				*e*Sn	Sn	04 54 29.3	-3.1
PGAV				A	A	04 54 32.7	
	comp=N,6.0nm,0.6s						
PGAV	Gavieira, Arco	5.77	23	P	Pn	04 53 27.8	+1.7
PGAV				S	Sn	04 54 29.3	-3.1
	comp=N,6.0nm,0.6s						
EZAM	Zamans	5.82	19	P	Pn	04 53 28.2	+1.6

	comp=N,0.6nm,0.0s,SNR=7.9						
EZAM				S	Sn	04 54 30.1	-3.3
	comp=N,1.7nm,0.0s,SNR=7.9						
LCRM	LCR	6.04	118	P	Pn	04 53 26.0	-3.8
LCRM				S	Sn	04 54 29.9	-9.2
PMAR	Madeira	6.09	231	*e*Pn	Pn	04 53 30.3	-0.3
PMAR				*e*Sn	Sn	04 54 31.4	-9.1
PMAR				A	A	04 54 38.6	
	comp=N,20nm,0.6s						
PMAR	Madeira	6.09	231	P	Pn	04 53 30.3	-0.3
PMAR	Madeira	6.09	231	P	Pn	04 53 29.2	-1.5
FUL	Funchal	6.13	231	*e*Pn	Pn	04 53 30.9	-0.1
FUL	Funchal	6.13	231	P	Pn	04 53 30.9	-0.1
PAB	San Pablo	6.16	60	P	Pn	04 53 33.5	+2.0
	comp=N,0.7nm,0.3s,SNR=7.9						
PAB				S	Sn	04 54 38.3	-3.8
	comp=N,9.2nm,0.3s,SNR=7.9						
PBRG	Braganca	6.21	33	*e*Pn	Pn	04 53 33.6	+1.5
PBRG				*e*Sn	Sn	04 54 39.9	-3.2
PBRG				A	A	04 54 42.4	
	comp=N,4.4nm,0.2s						
PBRG	Braganca	6.21	33	P	Pn	04 53 33.6	+1.5
PBRG				S	Sn	04 54 39.9	-3.2
	comp=N,2.2nm,0.2s						
PMOZ	Porto Moniz, M	6.21	233	*e*Pn	Pn	04 53 32.5	+0.3
PMOZ				*e*Sn	Sn	04 54 36.5	-6.8
PMOZ				A	A	04 54 44.3	
	comp=N,21nm,0.7s						
PMOZ	Porto Moniz, M	6.21	233	P	Pn	04 53 32.5	+0.3
PMOZ				S	Sn	04 54 36.5	-6.8
	comp=N,21nm,0.7s						
CZD	Col de Zad	6.28	124	P	Pn	04 53 28.7	-4.5
CZD				S	Sn	04 54 33.2	-12
EQUE	Quentar	6.29	83	P	Pn	04 53 34.8	+1.6
	comp=N,1.2nm,0.2s,SNR=7.9						
EQUE				S	Sn	04 54 40.9	-4.4
	comp=N,3.3nm,0.3s,SNR=7.9						
ECAL	Calabor	6.32	32	P	Pn	04 53 35.3	+1.6
	comp=N,3.1nm,0.3s,SNR=11						
ECAL				S	Sn	04 54 42.1	-3.9
	comp=N,5.1nm,0.3s,SNR=5.9						
AKLM	AKL	6.41	108	P	Pn	04 53 31.1	-3.7
AKLM				S	Sn	04 54 36.1	-12
ESDC	Sonseca Array	6.49	60	S	Sn	04 54 46.4	-3.6
	SNR=7.9						
TTIG	Tnine Tigouga,	6.55	158	P	Pn	04 53 32.2	-4.6
TTIG				S	Sn	04 54 38.0	-14
MD31	MD31	6.57	123	P	Pn	04 53 34.1	-2.9
MD31				S	Sn	04 54 42.6	-9.5
EAGO	Agolada(Pontev	6.59	21	P	Pn	04 53 38.8	+1.5
	comp=N,0.5nm,0.3s,SNR=7.9						
EAGO				S	Sn	04 54 48.7	-3.8
	comp=N,3.5nm,0.1s,SNR=7.9						
EQES	Quesada	6.64	78	P	Pn	04 53 40.0	+2.0
	comp=N,0.8nm,0.2s,SNR=7.9						
EQES				S	Sn	04 54 50.0	-3.7
	comp=N,6.9nm,0.2s,SNR=11						
MDT	Midelt	6.70	123	P	Pn	04 53 34.6	-4.3
MDT				S	Sn	04 54 45.3	-10
EBER	Berja	6.73	86	P	Pn	04 53 41.3	+2.0
	comp=N,0.7nm,0.2s,SNR=7.9						
EBER				S	Sn	04 54 51.7	-4.4
	comp=N,4.4nm,0.4s,SNR=7.9						
GUD	Guadarrama	6.83	52	P	Pn	04 53 42.4	+1.7
	comp=N,0.6nm,0.2s,SNR=5.9						
GUD				S	Sn	04 54 54.6	-4.0
	comp=N,3.4nm,0.2s,SNR=9.7						
OUZM	OUZ	6.87	146	P	Pn	04 53 37.1	-4.1
OUZM				S	Sn	04 54 50.1	-9.4
SESP	Santiago Espad	7.09	76	P	Pn	04 53 46.3	+2.0
	comp=N,0.2nm,0.1s,SNR=7.9						
SESP				S	Sn	04 55 00.7	-4.3
	comp=N,1.3nm,0.3s,SNR=7.9						
SESP	Santiago Espad	7.09	76	P	Pn	04 53 44.4	+0.1
SESP				S	Sn	04 55 01.1	-4.0
GOLM	Goulmima	7.21	132	P	Pn	04 53 41.2	-4.7
GOLM				S	Sn	04 54 53.4	-14
EPON	Pontenova	7.36	24	P	Pn	04 53 49.3	+1.5
	comp=N,8.2nm,0.3s,SNR=14						
EPON				S	Sn	04 55 06.8	-4.5
	comp=N,4.4nm,0.3s,SNR=9.1						
JBK	JBK	7.47	106	P	Pn	04 53 45.6	-3.9
JBK				S	Sn	04 55 03.3	-11
ETOB	Tobarra	7.96	73	P	Pn	04 53 57.4	+1.3
	comp=N,0.9nm,0.2s,SNR=7.9						
ETOB				S	Sn	04 55 21.3	-4.9
	comp=N,1.2nm,0.2s,SNR=5.6						
EMUR	La Murta	8.08	79	P	Pn	04 53 59.3	+1.5
	comp=N,4.4nm,5.1s,SNR=7.9						
EMUR				S	Sn	04 55 24.2	-5.0
	comp=N,6.5nm,0.6s,SNR=7.9						
EARI	Arriondas	8.09	33	P	Pn	04 53 59.6	+1.8
	comp=N,0.6nm,0.2s,SNR=7.5						
EARI				S	Sn	04 55 24.1	-5.1
	comp=N,2.0nm,0.3s,SNR=7.9						
ELAN	Lanestosa	8.89	40	P	Pn	04 54 11.4	+2.6
	comp=N,1.9nm,9.5s,SNR=7.9						
ELAN				S	Sn	04 55 43.9	-5.1
	comp=N,1.1nm,4.3s,SNR=7.9						
EMOS	Mosqueruela	9.23	63	S	Sn	04 55 50.9	-6.7
	comp=N,2.5nm,0.2s,SNR=7.9						
ESAC	San Caprasio	9.78	56	S	Sn	04 56 04.4	-6.4
	comp=N,18nm,6.2s,SNR=7.9						
EALK	Alkurruntz	9.94	46	P	Pn	04 54 25.2	+1.9
	comp=N,1.2nm,3.1s,SNR=7.9						
EALK				S	Sn	04 56 07.9	-7.0
	comp=N,4.9nm,8.7s,SNR=7.9						
SJPF	Ste Jean	10.04	47	*e*Pn	Pn	04 54 21.3	-3.3
SJPF				*e*Sn	Sn	04 56 02.4	-15
	comp=N,0.8nm,0.3s						
ETSF	Etsaut	10.32	50	*e*P	Pn	04 54 30.4	+2.0
ETSF				*e*Sn	Sn	04 56 08.7	-15
	comp=N,0.6nm,0.2s						
ETSF	Etsaut	10.32	50	P	Pn	04 54 30.4	+2.0
EPF	Esparros	10.95	51	*e*P	Pn	04 54 39.1	+2.1
EPF				*e*Sn	Sn	04 56 24.5	-15
	comp=N,1.2nm,0.2s						
EPF	Esparros	10.95	51	P	Pn	04 54 39.1	+2.1

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*ISCJB **08** 04:56:16.9±0.7, 9°.06N±0°.03×126°.80E±0°.06, h64^{km}±7^{km}, mb4.2/27, Error ellipse: s-maj=9.5km s-min=4.8km az=164.0*

*NEIC **08** 04:56:17.0±2.0, 9°.02N×126°.69E, h46^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=15.6km s-min=12.3km az=114.0*

*IDC **08** 04:56:18.9±2.8, 9°.06N×126°.69E, h58^{km}±27^{km}, mb3.8/16, mb1 3.9/17, mb1mx3.8/35, mbtmp4.1/17, ML4.3/1, Error ellipse: s-maj=25.5km s-min=12.7km az=78.0*

*MAN **08** 04:56:19.8, 8°.92N×126°.45E, h12^{km}, MS4.3*

ISC 08 04:56:17.8±1.1**, 8°.99N**±0°.04×**126°.81E**±0°.07**, h53**^{km}±11^{km}**, n61,** σ**2^s.18**/72**, mb4.2**/27**, 4C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.91	209	⇑*e*P	Pn	04 56 32.3	-2.2
BIPH				*i* S	Sn	04 56 45.2	-1.5
BUTP	Butuan	1.17	269	*e*P	Pn	04 56 35.2	-2.7
BUTP				*e*S	Sn	04 56 53.2	+0.3
SCPH	Surigao	1.52	301	*e*P	Pn	04 56 48.6	+5.9
SCPH				*e*S	Sn	04 57 07.9	+6.5
BUKP	Musuan	2.05	238	*e*P	Pn	04 56 51.1	+1.1
BUKP				*e*S	Sn	04 57 18.4	+4.0
MATI	Mati	2.10	195	*e*P	Pn	04 56 52.3	+1.7
MATI				*e*S	Sn	04 57 20.8	+5.3
CGP	Cagayan de Oro	2.16	256	⇓*e*P	Pn	04 56 50.6	-0.8
CGP				*e*S	Sn	04 57 18.3	+1.4
MSLP	Maasin	2.24	301	*e*P	Pn	04 56 51.0	-1.4
MSLP				*e*S	Sn	04 57 17.7	-1.2
DAV	Davao City (W)	2.26	213	P	Pn	04 56 54.5	+1.7
	86nm,0.3s,baz=12,slow=1.7,SNR=8.1						
DAV				S	Sn	04 57 21.2	+1.7
	58nm,0.3s,baz=222,slow=21,SNR=4.5						
DAV	Davao City (W)	2.26	213	*e*Pn	Pn	04 56 55.6	+2.8
DAV				*e*Sn	Sn	04 57 11.2	-8.3
DMPH	Davao City--Mi	2.29	214	⇓*e*P	Pn	04 56 56.7	+3.5
DMPH				*e*S	Sn	04 57 39.1	+19
KCP	Kidapawan	2.60	221	⇑*i*P	Pn	04 56 59.0	+1.6
KCP				*i* S	Sn	04 57 26.4	-1.6
PLP	Palo	2.82	320	⇑*e*P	Pn	04 56 58.4	-2.1
PLP				*i* S	Sn	04 57 36.9	+3.7
BESP	Borongan	2.93	333	*e*P	Pn	04 57 00.9	-1.0
BESP				*e*S	Sn	04 57 35.4	-0.5
DDMP	Don Marcelino,	3.06	201	*e*P	Pn	04 57 06.8	+3.0
DDMP				*e*S	Sn	04 57 44.2	+5.0
CTBH	Cotabato--PC H	3.08	236	⇓*i*P	Pn	04 57 05.8	+1.8
LLP	Lapu-Lapu	3.10	295	⇑*e*P	Pn	04 57 03.9	-0.4
LLP				*e*S	Sn	04 57 45.5	+5.3
GUIM	Jordan	4.47	292	*e*P	Pn	04 57 22.9	-0.2
GUIM				*e*S	Sn	04 58 15.5	+1.7
LUWI	Luwuk	10.74	202	*e*Pn	Pn	04 58 47.3	-1.7
FAKI	Fak Fak	13.01	155	*e*Pn	Pn	04 59 20.9	+0.8
TPUB	Ta-pu	15.42	338	*e*Pn	Pn	04 59 52.6	+0.6
	12nm,1.0s						
KAPI	Kappang	15.59	207	*e*Pn	Pn	04 59 52.7	-1.5
	11nm,1.0s						
SBUM	Sibu	15.90	247	*e*Pn	Pn	04 59 57.9	-0.3
	5.5nm,1.1s						
PMG	Port Moresby	27.28	132	*e*P	P	05 01 56.1	-1.4
	26nm,0.9s						
KS15	Wonju Array Si	28.35	2	*e*P	P	05 02 06.4	-0.4
	4.1nm,1.1s						
KSRS	Korea Array	28.36	2	P	P	05 02 08.3	+1.4
	1.1nm,0.6s,baz=195,slow=8.7,SNR=4.2						
XMIS	Christmas Isla	28.59	228	*e*P	P	05 02 08.8	-0.3
	56nm,0.9s						
CM31	Chiang Mai Arr	28.62	292	*e*P	P	05 02 08.5	-1.0
	6.5nm,1.0s						
CMAR	Chiang Mai Arr	28.62	292	P	P	05 02 09.5	0.0
	0.9nm,0.3s,baz=88,slow=9.1,SNR=5.9						
WRAB	Tennant Creek	29.68	166	*e*P	P	05 02 18.2	-0.6
	18nm,0.6s						
WR1	Warramunga Arr	29.69	166	*e*P	P	05 02 20.0	+1.1
WRA	Warramunga Arr	29.69	166	P	P	05 02 20.0	+1.1
	1.3nm,0.5s,baz=350,slow=11,SNR=7.9						
AS31	Alice Springs	33.18	168	*e*P	P	05 02 50.4	+0.7
	0.8nm,0.9s						
ASAR	Alice Springs	33.19	168	P	P	05 02 50.4	+0.7
	0.6nm,0.5s,baz=354,slow=6.7,SNR=13						
ASAR				PcP	PcP	05 05 31.7	+0.1
	0.6nm,0.7s,baz=343,slow=2.3,SNR=4.4						
H11S3	WAKE ISLAND Hy	39.79	72	T	T	05 46 45.5	
	baz=262,slow=74,SNR=28						
H11S1	WAKE ISLAND Hy	39.81	72	T	T	05 46 44.7	
	baz=262,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	39.81	72	T	T	05 46 44.9	
	baz=262,slow=74,SNR=21						
KLR	Kul'dur	40.33	5	P	P	05 03 49.7	-0.3
	1.0nm,0.5s,baz=185,slow=1.4,SNR=5.0						
SONA0	Songino Array	42.40	340	*e*P	P	05 04 05.1	-2.2
SONM	Songino Array	42.40	340	P	P	05 04 05.1	-2.2
	0.4nm,0.6s,baz=163,slow=10,SNR=1.9						
STKA	Stephens Creek	43.02	161	P	P	05 04 12.6	+0.4
	0.9nm,0.5s,baz=340,slow=12,SNR=4.2						
PETK	Petropavlovsk-	50.59	24	P	P	05 05 11.7	+0.5
	3.6nm,0.8s,baz=216,slow=7.3,SNR=3.8						
PEA1	Petropavlovsk-	50.59	24	*e*P	P	05 05 11.7	+0.5
MK32	Makanchi Array	53.37	323	*e*P	P	05 05 31.2	-0.7
MK32				*e*PcP	PcP	05 06 38.9	+0.1
MKAR	Makanchi Array	53.37	323	P	P	05 05 31.2	-0.7
	3.9nm,0.6s,baz=122,slow=8.1,SNR=42						
MKAR				PcP	PcP	05 06 38.9	+0.1
	1.2nm,0.9s,baz=101,slow=4.8,SNR=2.6						
MAKZ	Makanchi	53.56	323	*e*P	P	05 05 31.9	-1.4
	3.0nm,0.6s						
NIL	Nilore	54.90	305	*e*P	P	05 05 41.7	-1.7
	11nm,0.8s						
ZALV	Zalesovo Beam	56.00	332	P	P	05 05 49.6	-1.3
	1.3nm,0.6s,baz=116,slow=6.4,SNR=4.9						
ZAA1	Zalesovo Array	56.00	332	*e*P	P	05 05 49.6	-1.3
KURK	Kurchatov	57.42	326	*e*P	P	05 06 00.0	-0.9
	7.6nm,0.9s						
BRVK	Borovoye	63.09	326	*e*P	P	05 06 38.9	-0.9
	5.1nm,0.6s						
GEYT	Alibeck	67.74	307	P	P	05 07 10.6	+0.4
	2.2nm,0.5s,baz=99,slow=7.6,SNR=3.6						
RAYN	Ar Rayn	78.54	292	*e*P	P	05 08 13.6	-0.6
	5.8nm,1.1s						
ILAR	Eielson Array	80.36	26	P	P	05 08 24.1	+0.9
	0.4nm,0.7s,baz=240,slow=5.5,SNR=5.6						
ILB	Eielson Array	80.36	26	*e*P	P	05 08 24.1	+0.9
	2.2nm,1.0s						
ARA0	ARCESS Array S	85.58	340	*e*P	P	05 08 49.0	-1.1
ARCES	ARCESS Array B	85.58	340	P	P	05 08 49.0	-1.1
	1.9nm,0.7s,baz=93,slow=6.6,SNR=5.0						
FIA0	FINESS Array S	87.27	332	*e*P	P	05 08 57.9	-0.6
FINES	FINESS Array B	87.27	332	P	P	05 08 57.9	-0.6
	3.6nm,1.0s,baz=57,slow=7.0,SNR=4.8						
VNDA	Vanda	88.60	173	P	P	05 09 06.8	+2.4
	0.4nm,0.5s,baz=288,slow=6.4,SNR=4.6						
YKA	Yellowknife Ar	94.71	24	P	P	05 09 34.8	+1.7
	0.3nm,0.6s,baz=299,slow=4.1,SNR=5.2						
YKB5	Yellowknife Ar	94.71	24	*e*P	P	05 09 34.8	+1.7

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*ISCJB **08** 05:13:20.2±0.3, 20°.76S±0°.02×69°.28W±0°.06, h129^{km}±3^{km}, mb4.2/7, Error ellipse: s-maj=8.7km s-min=3.1km az=179.5*

*SJA **08** 05:13:20.1±1.0, 20°.74S×69°.30W, h129^{km}±6^{km}, ML3.0, MW2.8*

*NEIC **08** 05:13:21.0±0.0, 20°.70S×69°.18W, h106^{km}, mb4.4/7, ML4.0(GUC), After GUC.*

*GUC **08** 05:13:21.7±0.7, 20°.70S×69°.18W, h106^{km}±3^{km}, ML4.0*

*IDC **08** 05:13:22.5±1.5, 20°.74S×68°.76W, h113^{km}±14^{km}, mb3.9/5, mb1 3.7/8, mb1mx3.5/27, mbtmp4.1/8, Error ellipse: s-maj=39.8km s-min=13.1km az=103.0*

ISC 08 05:13:20.7±0.6**, 20°.76S**±0°.03×**69°.22W**±0°.05**, h123**^{km}±5^{km}**, n64,** σ**1^s.38**/104**, mb4.3**/7**, 7C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.38	223	*e*Pn	Pn	05 13 38.0	-0.4
PB01				*e*Sn	Sn	05 13 50.8	-1.0
PB01	IPOC Station P	0.38	223	*i* P	Pn	05 13 38.4	-0.1
PB01				*e*S	Sn	05 13 50.8	-1.0
PB01	IPOC Station P	0.38	223	⇑*i*P	Pn	05 13 38.3	-0.1
PB01				*e*S	Sn	05 13 50.7	-1.0
PB01				IAML		05 13 51.3	
	comp=N,16µm,0.3s						
PB08	IPOC Station P	0.62	5	*e*P	Pn	05 13 39.6	-0.6
PB08				*i* S	Sn	05 13 53.1	-1.8
PB08	IPOC Station P	0.62	5	⇓*i*P	Pn	05 13 39.5	-0.7
PB08				*e*S	Sn	05 13 52.9	-2.0
PB08				IAML		05 13 54.0	
	comp=E,8µm,0.2s						
PB02	IPOC Station P	0.84	229	*e*P	Pn	05 13 42.6	+0.9
PB02				*e*S	Sn	05 13 58.3	+0.9
PB02	IPOC Station P	0.84	229	⇑*i*P	Pn	05 13 42.5	+0.9
PB02				*e*S	Sn	05 13 57.9	+0.5
PB09	IPOC Station P	1.03	181	*i* P	Pn	05 13 44.4	+1.0
PB09				*i* S	Sn	05 14 01.9	+1.3
PB09	IPOC Station P	1.03	181	⇑*i*P	Pn	05 13 44.3	+0.9
PB09				*e*S	Sn	05 14 01.5	+0.8
PB09				IAML		05 14 02.2	
	comp=N,3µm,0.3s						
PB11	IPOC Station P	1.08	337	*e*Pn	Pn	05 13 43.4	-0.6
PB11				*e*Sn	Sn	05 14 00.7	-0.9
PB11	IPOC Station P	1.08	337	*i* P	Pn	05 13 44.0	0.0
PB11				*i* S	Sn	05 14 00.8	-0.8
PB11	IPOC Station P	1.08	337	⇑*i*P	Pn	05 13 43.9	0.0
PB11				*e*S	Sn	05 14 00.6	-0.9
GO01	Chusmiza	1.09	1	*e*Pn	Pn	05 13 44.1	-0.4
GO01				*e*Sn	Sn	05 14 01.4	-0.9
GO01	Chusmiza	1.09	1	⇓*i*P	Pn	05 13 44.0	-0.4
GO01				*e*S	Sn	05 14 01.0	-1.3
PB07	IPOC Station P	1.14	213	*i* P	Pn	05 13 45.6	+1.0
PB07				*i* S	Sn	05 14 03.2	+0.4
PB07	IPOC Station P	1.14	213	⇑*i*P	Pn	05 13 45.6	+1.0
PB07				*e*S	Sn	05 14 03.1	+0.4
PB07				IAML		05 14 03.5	
	comp=N,3µm,0.3s						
PB03	IPOC Station P	1.37	201	*e*P	Pn	05 13 48.1	+1.1
PB03				*e*S	Sn	05 14 07.5	+0.4
PB03	IPOC Station P	1.37	201	⇑*i*P	Pn	05 13 48.1	+1.1
PB03				*e*S	Sn	05 14 07.6	+0.6
PB03				IAML		05 14 09.5	
	comp=E,2µm,0.4s						
PSGC	Pisagua	1.44	324	⇑*i*P	Pn	05 13 47.7	-0.1
PSGC				*e*S	Sn	05 14 07.4	-0.9
PSGC				IAML		05 14 09.0	
	comp=E,3µm,0.5s						
PSGCX	Pisagua	1.44	324	*e*P	Pn	05 13 47.7	0.0
PSGCX				*e*S	Sn	05 14 07.2	-1.1
MNMC	Minye Minye	1.66	348	*e*Pn	Pn	05 13 50.9	+0.4
MNMC				*e*Sn	Sn	05 14 13.2	0.0
MNMC	Minye Minye	1.66	348	⇓*i*P	Pn	05 13 50.8	+0.3
MNMC				*e*S	Sn	05 14 12.7	-0.6
MNMCX	Minye Minye	1.66	348	*e*P	Pn	05 13 50.9	+0.3
MNMCX				*i* S	Sn	05 14 13.7	+0.5
PB04	IPOC Station P	1.79	209	*e*Pn	Pn	05 13 53.2	+1.3
PB04				*e*Sn	Sn	05 14 15.7	0.0
PB04	IPOC Station P	1.79	209	*e*P	Pn	05 13 53.1	+1.3
PB04				*e*S	Sn	05 14 15.8	+0.2
LVC	Limon Verde	1.86	171	P	Pn	05 13 54.5	+1.5
	comp=E,32nm,0.3s,baz=20,slow=8.5,SNR=456						
LVC				S	Sn	05 14 18.7	+1.2
	comp=E,146nm,0.3s,baz=298,slow=20,SNR=40						
LVC	Limon Verde	1.86	171	*e*Pn	Pn	05 13 54.4	+1.5
LVC				*e*Sn	Sn	05 14 16.8	-0.7
LVC	Limon Verde	1.86	171	*e*P	Pn	05 13 54.6	+1.7
LVC				*e*S	Sn	05 14 19.2	+1.7
PB06	IPOC Station P	1.96	190	*e*P	Pn	05 13 55.1	+1.2
PB06				*e*S	Sn	05 14 17.9	-1.5
PB05	IPOC Station P	2.27	204	*e*P	Pn	05 13 58.9	+1.1
PB05				*e*S	Sn	05 14 23.2	-3.1
PB12	IPOC Station P	2.38	334	*e*P	Pn	05 13 58.9	-0.3
PB12				*e*S	Sn	05 14 27.7	-1.1
PB16	IPOC Station P	2.43	353	*e*P	Pn	05 14 01.5	+1.2
PB16				*e*S	Sn	05 14 32.3	+1.7
PB15	IPOC Station P	2.44	186	*e*P	Pn	05 14 01.4	+1.3
PB15				*e*S	Sn	05 14 31.2	+0.9
PB10	IPOC Station P	3.00	204	*e*Pn	Pn	05 14 07.7	+0.6
PB10				*e*Sn	Sn	05 14 41.7	-1.3
PB10	IPOC Station P	3.00	204	*e*P	Pn	05 14 07.6	+0.5
PB10				*e*S	Sn	05 14 34.1	-8.8
YJA	Yavi	3.72	113	*i* P	Pn	05 14 18.5	+1.5
YJA				IAML		05 14 19.3	
	comp=Z,21nm,0.7s						
YJA				*e*S	Sn	05 14 57.7	-2.8
PB14	IPOC Station P	4.00	196	*e*P	Pn	05 14 20.7	+0.1
PB14				*e*S	Sn	05 15 02.2	-4.7
HJA	Humahuaca	4.29	125	*e*P	Pn	05 14 26.1	+1.6
GO02	Mina Guanaco	4.39	184	*e*Pn	Pn	05 14 26.3	+0.5
GO02				*e*Sn	Sn	05 15 16.1	-0.2
LPAZ	La Paz	4.57	13	P	Pn	05 14 30.4	+1.9
	comp=Z,3.4nm,0.3s,baz=211,slow=5.8,SNR=127						
LPAZ	La Paz	4.57	13	*e*Pn	Pn	05 14 29.1	+0.6
LPAZ				*e*Sn	Sn	05 15 16.4	-4.7
LPAZ	La Paz	4.57	13	*e*P	Pn	05 14 30.7	+2.2
AZAP	Zapla	5.16	133	*i* P	Pn	05 14 36.6	+0.6
GO03	Copiap	6.86	188	*e*Pn	Pn	05 14 58.2	-0.6
GO03				*e*Sn	Sn	05 16 12.9	-2.6
SIV	San Ignacio	9.07	60	P	Pn	05 15 24.9	-3.8
	comp=Z,1.6nm,0.3s,baz=253,slow=13,SNR=26						
GO04	Tololo Observa	9.48	188	*e*Pn	Pn	05 15 31.8	-2.5
GO04				*e*Sn	Sn	05 17 17.4	-1.7
CFA	Coronel Fontan	10.83	176	P	Pn	05 15 50.0	-2.4
	comp=Z,2.1nm,0.3s,baz=350,slow=14,SNR=52						
PLCA	Paso Flores	19.94	183	P	Pn	05 17 45.8	0.0
	comp=Z,0.2nm,0.3s,baz=39,slow=12,SNR=5.4						
PLCA	Paso Flores	19.94	183	*e*P	Pn	05 17 46.1	+0.2
	comp=Z,2.7nm,0.8s						
BDFB	Brasilia	20.77	79	P	P	05 17 51.0	-1.2
	comp=Z,3.5nm,0.3s,baz=242,slow=7.1,SNR=12						
BDFB	Brasilia	20.77	79	*e*P	P	05 17 51.0	-1.2
BDFB				*e*P	Pn	05 17 52.8	-3.0
PTGA	Pitinga	21.87	26	P	P	05 18 02.7	-1.1
	comp=Z,1.6nm,0.2s,baz=307,slow=20,SNR=4.2						
PTGA	Pitinga	21.87	26	*e*P	P	05 18 03.2	-0.6
	comp=Z,3.4nm,0.6s						
PAYG	Puerto Ayora	28.68	311	*e*P	P	05 19 06.6	+0.3
	comp=Z,29nm,0.9s						
MDP	Montagnes des	30.42	34	P	P	05 19 21.9	+0.2
	comp=Z,4.0nm,0.9s,baz=194,slow=8.3,SNR=3.8						
RCBR	Riachuelo	35.55	70	*e*P	P	05 20 08.0	+1.6
	comp=Z,9.8nm,1.1s						
ESTN	Estel	37.64	332	*e*P	P	05 20 23.6	-0.4
	comp=Z,5.9nm,1.1s						
OBIP	Obispado Ponce	38.65	4	*e*P	P	05 20 34.1	+1.7
DBIC	Dimbokro	68.80	74	P	P	05 24 12.7	+0.5
	comp=Z,5.2nm,0.8s,baz=204,slow=5.7,SNR=4.8						
DBIC	Dimbokro	68.80	74	*e*P	P	05 24 12.7	+0.5
	comp=Z,11nm,1.1s						
TOA1	Torodi Ar. Sit	77.38	71	*e*P	P	05 25 03.4	+0.7
TORD	Torodi Ar. Bea	77.38	71	P	P	05 25 03.4	+0.7
	comp=Z,0.8nm,0.5s,baz=255,slow=5.4,SNR=18						
MK32	Makanchi Array	145.20	35	*e*PKPbc	PKiKP	05 32 46.7	-1.1
MKAR	Makanchi Array	145.20	35	PKP	PKiKP	05 32 46.7	-1.1
	comp=Z,0.3nm,0.6s,baz=318,slow=1.9,SNR=3.2						

MEX 08 05:13:44.4±0.9**, 16°.30N×98°.29W, h15**^{km}±13^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.29	348	*e*P	Pn	05 14 04.3	-3.7
TLIG				*e*S	Sb	05 14 19.0	-5.8
VHO	Vista Hermosa	1.68	62	*e*P	Pn	05 14 09.6	-3.8
VHO				*e*S	Sn	05 14 30.6	-4.2
HUIG	Huatulco	2.16	104	*i* P	Pn	05 14 17.2	-2.6
HUIG				*i* S	Sn	05 14 41.2	-5.2

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*IDC **08** 05:23:16.3±4.0, 6°.62S×147°.48E, h44^{km}±33^{km}, mb3.5/4, mb1 3.9/7, mb1mx3.6/25, mbtmp3.9/7, ML3.8/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/22, Error ellipse: s-maj=41.1km s-min=25.1km az=75.0*

*ISCJB **08** 05:23:17.5±0.9, 6°.72S±0°.07×147°.3E±0°.1, h63^{km}, mb3.8/6, Error ellipse: s-maj=15.8km s-min=9.8km az=177.8*

*NEIC **08** 05:23:20.9±1.4, 6°.83S×147°.28E, h77^{km}±10^{km}, mb4.0/5, Error ellipse: s-maj=28.5km s-min=17.3km az=103.0*

ISC 08 05:23:18.6±0.9**, 6°.68S**±0°.09×**147°.3E**±0°.2**, h63**^{km}**, n23,** σ**0^s.89**/22**, mb3.6**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.72	183	P	Pn	05 24 00.1	+0.2
	32nm,0.3s,baz=318,slow=7.2,SNR=29						
PMG				S	Sn	05 24 30.7	-0.9
	41nm,0.3s,baz=58,slow=8.3,SNR=4.2						
JAY	Jayapura	7.77	302	LR	LR	05 28 56.6	
	comp=Z,157nm,21.2s,baz=186,slow=43						
COEN	Coen	8.30	209	*e*Pn	Pn	05 25 16.6	+0.3
COEN				*e*Sn	Sn	05 26 46.8	-1.8
CTAO	Charters Tower	13.37	184	*e*Pn	Pn	05 26 24.3	-1.3
SIJI	Sorong	17.00	289	P	Pn	05 27 12.3	-0.1
	2.3nm,0.3s,baz=77,slow=9.2,SNR=5.7						
WB2	Warramunga Arr	18.22	222	*e*P	Pn	05 27 27.8	+0.5
	12nm,1.1s						
WR1	Warramunga Arr	18.23	222	*e*P	Pn	05 27 27.7	+0.2
WRA	Warramunga Arr	18.23	222	P	Pn	05 27 27.7	+0.2
	0.3nm,0.3s,baz=52,slow=11,SNR=8.2						
EIDS	Eidsvold	18.94	169	*e*P	P	05 27 35.6	+0.9
	43nm,1.8s						
AS31	Alice Springs	21.24	216	*e*P	P	05 28 01.5	+1.8
	1.2nm,0.5s						
ASAR	Alice Springs	21.24	216	P	P	05 28 00.8	+1.2
	1.1nm,0.5s,baz=52,slow=8.8,SNR=16						
DAV	Davao City (W)	25.61	302	LR	LR	05 40 38.5	
	comp=Z,11nm,19.4s,baz=98,slow=40						
STKA	Stephens Creek	25.63	191	P	P	05 28 41.8	-0.6
	1.5nm,0.6s,baz=6.3,slow=9.2,SNR=4.3						
STKA	Stephens Creek	25.63	191	*e*P	P	05 28 42.4	0.0
	3.3nm,1.7s						
HHC	Hu-ho-hao-te	57.56	328	*e*P	P	05 33 09.2	+7.2
VNDA	Vanda	71.22	177	P	P	05 34 31.2	+0.6
	0.8nm,0.5s,baz=341,slow=7.5,SNR=11						
QSPA	South Pole Qui	83.30	180	*e*P	P	05 35 38.8	+0.3
	16nm,1.8s						
ILAR	Eielson Array	85.98	23	P	P	05 35 50.5	-1.2
	0.4nm,0.7s,baz=233,slow=6.3,SNR=6.3						
TORD	Torodi Ar. Bea	145.54	283	PKPbc	PKPdf	05 42 50.9	+0.1
	0.8nm,0.4s,baz=58,slow=4.1,SNR=12						
TOA1	Torodi Ar. Sit	145.54	283	*e*PKPdf	PKPdf	05 42 50.9	+0.1
DBIC	Dimbokro	152.35	272	PKPbc	PKPbc	05 43 08.6	0.0
	4.4nm,1.0s,baz=41,slow=3.1,SNR=4.7						
DBIC	Dimbokro	152.35	272	*e*PKPbc	PKPbc	05 43 09.1	+0.5
BDFB	Brasilia	153.13	146	PKPbc	PKPbc	05 43 09.8	-0.7
	1.8nm,0.5s,baz=204,slow=5.4,SNR=4.7						

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*IDC **08** 05:33:37.8±1.6, 39°.01N×29°.61E, h0^{km}, mb3.5/2, mb1 3.5/3, mb1mx3.2/34, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=57.9km s-min=16.3km az=158.0*

*ISCJB **08** 05:33:39.5±0.3, 39°.06N±0°.02×29°.76E±0°.02, h7^{km}±3^{km}, mb3.5/2, Error ellipse: s-maj=3.0km s-min=2.7km az=139.1*

*DDA **08** 05:33:39.3, 39°.06N×29°.76E, h7^{km}±3^{km}, ML3.8*

ISK ***08*** *05:33:39.1, 39°.06N×29°.76E, h8^{km}, ML3.8/44*

ISC 08 05:33:39.9±0.9**, 39°.06N**±0°.02×**29°.75E**±0°.02**, h12**^{km}±7^{km}**,**
n102, σ0^s.83/109**, 12C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	0.21	279	*i* P	Pg	05 33 44.7	+0.1
GEDZ	**Gediz**	0.27	268	PG	Pg	05 33 45.3	-0.1
GEDZ				SG	Sg	05 33 49.6	+0.4
KUTH	**Kutahya**	0.40	32	PG	Pg	05 33 47.4	-0.5
KUTH				SG	Sg	05 33 53.8	+0.5
TVSB	**Tavsanli**	0.45	330	PG	Pg	05 33 48.5	-0.4
TVSB				SG	Sg	05 33 54.9	-0.1
AFYO	**Afyonkarahisar**	0.50	122	*i* P	Pb	05 33 51.3	+0.7
AFYO				IAML_P			
	comp=Z,6µm,0.2s						
AUKIR	**Kırka- Seyitga**	0.65	70	*i* P	Pg	05 33 52.4	-0.1
AUKIR				*i* S	Sb	05 34 01.6	-0.5
USAK	**Uak-Merkez**	0.67	239	*i* P	Pb	05 33 53.2	-0.3
USAK				*i* S	Sb	05 34 02.5	-0.1
USAK				IAML_P			
	comp=Z,33µm,0.1s						
KHAL	**Karahalli**	0.71	197	*i* P	Pg	05 33 53.5	-0.2
KHAL				IAML_P			
	comp=Z,25µm,0.1s						
KHL	**Karahalli**	0.75	194	PG	Pg	05 33 54.1	-0.4
SHUT	**Suhut-Afyon**	0.80	129	PG	Pb	05 33 55.8	0.0
AUKUT	**KUTAHYA**	0.92	13	*i* P	Pg	05 33 48.7	-9.0
ESKT	**Eskisehir**	0.97	61	PG	Pg	05 33 57.6	-1.0
BORA	**Eskisehir**	0.99	33	PG	Pg	05 33 57.9	-1.0
BORA	**Eskisehir**	0.99	33	*i* P	Pb	05 33 59.0	0.0
BORA				IAML_P			
	comp=Z,46µm,0.2s						
BOLV	**Bolvadin**	0.99	109	*i* P	Pn	05 33 59.6	-0.1
BOLV				IAML_P			
	comp=Z,16µm,0.2s						
KULA	**Kula-Manisa**	1.01	238	PG	Pg	05 33 58.9	-0.4
CIFT	**Cifteler, Eski**	1.06	73	PG	Pb	05 33 59.4	-0.8
CIFT	**Cifteler, Eski**	1.06	73	*i* P	Pb	05 33 59.8	-0.4
CIFT				IAML_P			
	comp=Z,3µm,0.2s						
MANT	**Manisa**	1.09	239	*i* P	Pb	05 34 00.6	-0.2
MANT				*i* S	Sb	05 34 14.1	-0.9
MANT				IAML_P			
	comp=Z,14µm,0.1s						
DURS	**Dursunbey**	1.13	299	*i* P	Pb	05 34 01.1	-0.2
ORLT	**Orhaneli**	1.19	327	PN	Pg	05 34 02.6	-0.2
SRCK	**Saricakaya, Es**	1.20	34	PN	Pn	05 34 01.7	-0.7
SRCK	**Saricakaya, Es**	1.20	34	*i* P	Pg	05 34 02.6	-0.3
SRCK				IAML_P			
	comp=Z,27µm,0.3s						
IZI	**Iznik**	1.30	351	PN	Pn	05 34 03.9	+0.1
BAGO	**Egridir - ISPA**	1.34	142	*i* P	Pb	05 34 04.9	0.0
ISP	**Isparta**	1.37	154	PN	Pn	05 34 04.7	-0.1
ISP	**Isparta**	1.37	154	⇓*i*P	Pn	05 34 04.8	-0.1
ISP	**Isparta**	1.37	154	S	Sn	05 34 23.3	+0.3
ADVT	**Abdulvahap**	1.38	360	PN	Pb	05 34 05.4	-0.1
BRDR	**BURDUR-Merkez**	1.38	170	*i* P	Pg	05 34 06.8	+0.4
BRDR				IAML_P			
	comp=Z,13µm,0.3s						
DENT	**Denizli**	1.42	204	PN	Pb	05 34 05.9	-0.3
SVRH	**Sivrihisar-ESK**	1.43	74	PN	Pn	05 34 05.9	+0.2
AUSIV	**SIVRIHISAR**	1.44	74	PN	Pn	05 34 05.9	+0.1
AUSIV	**SIVRIHISAR**	1.44	74	*i* P	Pb	05 34 06.6	-0.1
GEMT	**Gemlik**	1.44	343	PN	Pn	05 34 06.1	+0.3
GOMA	**Golmarmara-Man**	1.47	257	PN	Pb	05 34 07.2	+0.1
MDNY	**Mudanya-Bursa**	1.47	333	PN	Pb	05 34 06.8	-0.3
GEYV	**SAKARYA_Geyve**	1.49	16	*i* P	Pg	05 34 08.5	+0.1
GULT	**Gulveren**	1.50	23	PN	Pn	05 34 06.8	+0.2
AKHS	**Akhisar**	1.52	264	*i* P	Pg	05 34 08.8	-0.2
AKHS				IAML_P			
	comp=Z,11µm,0.2s						
AKS	**Akhisar**	1.52	264	PN	Pb	05 34 07.7	-0.3
YLV	**Yalova**	1.54	349	PN	Pn	05 34 07.6	+0.5
YLV	**Yalova**	1.54	349	⇑*i*P	Pg	05 34 09.5	+0.1
YLV	**Yalova**	1.54	349	S	Sg	05 34 31.1	+1.7
BALB	**Balikesir**	1.56	293	PN	Pb	05 34 08.5	-0.2
AUMIH	**MIHALICIK**	1.57	58	PN	Pb	05 34 08.2	-0.6
AUMIH	**MIHALICIK**	1.57	58	*i* P	Pb	05 34 08.2	-0.6
STEP	**BALIKESIR_Sava**	1.61	282	*i* P	Pb	05 34 09.0	-0.5
STEP				*i* S	Sg	05 34 31.6	-0.1
KCTX	**Karacabey (Bur**	1.62	319	PN	Pn	05 34 08.8	+0.6
ARMT	**Armutlu**	1.66	336	PN	Pn	05 34 09.1	+0.4
KIZT	**Kizilcal**	1.67	95	PN	Pn	05 34 09.4	+0.4
SPNC	**Sapanca-Adapaz**	1.68	15	PN	Pb	05 34 10.0	-0.7
BCK	**Bucak**	1.72	157	PN	Pb	05 34 10.7	-0.8
SAUV	**Serdivan-Sakar**	1.74	15	PN	Pb	05 34 10.7	-1.0
HRT	**Hereke**	1.77	358	PN	Pn	05 34 10.3	+0.1
MDUB	**Mudurnu**	1.80	38	PN	Pn	05 34 11.4	+0.6
AYDB	**Zeytinkoy-Aydi**	1.83	233	PN	Pn	05 34 11.4	+0.2
BUY	**Buyukada**	1.86	345	PN	Pn	05 34 11.9	+0.4
BUY	**Buyukada**	1.86	345	*i* P	Pn	05 34 12.2	+0.7
GONE	**Gonen-Balikesi**	1.88	302	PN	Pn	05 34 12.7	+1.0
EDC	**Edincik**	1.94	312	PN	Pn	05 34 13.4	+0.7
AYDN	**Tasoluk**	2.03	227	*i* P	Pb	05 34 15.8	-0.9
KAVV	**Kandilli-Istan**	2.08	345	PN	Pn	05 34 15.3	+0.9
ISK	**Istanbul-Kandi**	2.08	345	PN	Pn	05 34 15.2	+0.7
SILT	**Sile**	2.10	358	PN	Pn	05 34 15.6	+0.9
SILT	**Sile**	2.10	358	⇑*i*P	Pb	05 34 17.9	+0.1
SILT	**Sile**	2.10	358	S	Sg	05 34 47.3	0.0
KORT	**Korkueli**	2.10	167	PN	Pn	05 34 15.1	+0.1
DKL	**Dikili**	2.21	271	PN	Pn	05 34 17.5	+1.2
BLCB	**Balcova**	2.22	253	PN	Pn	05 34 17.1	+0.6
YER	**Yerkesik**	2.24	212	PN	Pn	05 34 17.5	+0.7
BGKT	**Bogazkoy**	2.25	341	PN	Pn	05 34 17.9	+1.0
KLYT	**Kilyos**	2.26	346	PN	Pn	05 34 17.5	+0.5
KLYT	**Kilyos**	2.26	346	⇓*i*P	Pb	05 34 19.3	-1.3
KLYT	**Kilyos**	2.26	346	S	Sb	05 34 49.3	+0.8
MRMT	**Marmara Adasi**	2.27	314	PN	Pn	05 34 17.9	+0.7
ELL	**Elmali**	2.31	177	PN	Pn	05 34 18.8	+1.1
CTKS	**Kestanelik-??a**	2.38	337	PN	Pn	05 34 19.9	+1.3
DALY	**Dalyan (Mula)**	2.40	202	PN	Pn	05 34 19.9	+1.1
GCAM	**G?zelcaml?**	2.40	236	PN	Pn	05 34 19.3	+0.5
ANTO	**Ankara**	2.49	70	⇑*i*P	Pb	05 34 23.7	-0.9
URLA	**Izmir**	2.56	255	PN	Pn	05 34 21.9	+0.7
CTYL	**Yalikoy Yolu**	2.66	336	⇑*i*P	Pn	05 34 23.7	+1.2
CTYL	**Yalikoy Yolu**	2.66	336	S	Sb	05 34 57.7	-2.3
EZN	**Ezine**	2.76	287	⇑*i*P	Pn	05 34 21.8	-2.1
BRTR	**Keskin Array B**	3.09	76	Pn	Pn	05 34 29.4	+0.9
	comp=Z,1.4nm,0.3s,baz=256,slow=14,SNR=28						
BRTR				Pg	Pg	05 34 39.1	+0.1
	comp=Z,4.4nm,0.3s,baz=261,slow=16,SNR=36						
BRTR				Lg	Lg	05 35 21.5	
	comp=Z,3.5nm,0.3s,baz=256,slow=24,SNR=9.8						
ELND	**Elena**	4.86	324	⇑*i*P	Pn	05 34 53.3	+0.6
TIRR	**Tirgusor**	5.49	350	⇓*i*P	Pn	05 35 02.7	+1.4
TIRR	**Tirgusor**	5.49	350	S	Sn	05 36 04.5	+0.1
TLB	**Topalu**	5.67	348	⇓*i*P	Pn	05 35 06.4	+2.6
PLVB	**Pleven**	5.80	320	⇑*i*P	Pn	05 35 05.3	-0.4
CFR	**Carcaliu**	6.24	349	⇓*i*P	Pn	05 35 12.6	+1.0
STIP	**Stip**	6.35	297	*i* Pn	Pn	05 35 12.6	-0.6
BISRR	**Bisoca**	6.87	342	⇑*i*P	Pn	05 35 23.0	+2.6
MLR	**Muntele Rosu**	7.02	338	⇑*i*P	Pn	05 35 23.6	+1.1
VRI	**Vrincioaia**	7.16	343	⇑*i*P	Pn	05 35 26.4	+2.0
PLOR	**Plostina**	7.17	342	⇑*i*P	Pn	05 35 26.7	+2.3
VOIR		7.27	333	⇓*i*P	Pn	05 35 26.5	+0.7
GZR	**Gura Zlata**	8.18	323	⇓*i*P	Pn	05 35 37.8	-0.5
MDVR	**Moldovita**	8.28	316	⇑*i*P	Pn	05 35 40.0	+0.3
TORD	**Torodi Ar. Bea**	35.79	232	P	P	05 40 38.3	-0.7
	comp=Z,0.5nm,0.6s,baz=27,slow=9.2,SNR=6.8						
MKAR	**Makanchi Array**	38.62	61	P	P	05 41 03.4	+0.7
	comp=Z,0.3nm,0.5s,baz=270,slow=9.3,SNR=3.5						

ISCJB ***08*** *06:04:06.0±0.7, 39°.05N±0°.03×29°.78E±0°.04, h1^{km}±8^{km},*
Error ellipse: s-maj=5.8km s-min=5.2km az=14.1

ISK ***08*** *06:04:05.9, 39°.07N×29°.75E, h5^{km}, ML2.3/5*

DDA ***08*** *06:04:06.0, 39°.07N×29°.74E, h7^{km}±2^{km}, ML2.6*

ISC 08 06:04:06.4±1.0**, 39°.06N**±0°.03×**29°.75E**±0°.03**, h11**^{km}±11^{km}**,**
n20, σ0^s.42/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	0.21	277	*i* P	Pg	06 04 11.6	+0.5
GDZ				*i* S	Sg	06 04 14.1	-0.2
GDZ				IAML_P			
	comp=Z,5µm,0.1s						
GEDZ	**Gediz**	0.27	266	PG	Pg	06 04 11.8	-0.2
GEDZ				SG	Sg	06 04 15.9	+0.2
TVSB	**Tavsanli**	0.45	330	PG	Pg	06 04 15.1	-0.2
TVSB				SG	Sg	06 04 21.5	+0.2
AUKIR	**Kırka- Seyitga**	0.64	70	*i* P	Pn	06 04 26.6	+5.1
USAK	**Uak-Merkez**	0.67	239	*i* P	Pg	06 04 19.2	-0.2
KHAL	**Karahalli**	0.72	197	*i* P	Pg	06 04 20.6	+0.2
KHAL				*i* S	Sg	06 04 29.1	-0.8
KHAL				IAML_P			
	comp=Z,1µm,0.1s						
KHL	**Karahalli**	0.76	194	PG	Pg	06 04 21.1	0.0
SHUT	**Suhut-Afyon**	0.80	129	PG	Pb	06 04 22.1	-0.3
BORA	**Eskisehir**	0.98	33	PG	Pg	06 04 24.7	-0.6
BORA	**Eskisehir**	0.98	33	*i* P	Pg	06 04 25.3	-0.1
BORA				*i* S	Sg	06 04 38.1	0.0
BORA				IAML_P			
	comp=Z,3µm,0.2s						
KULA	**Kula-Manisa**	1.01	238	PG	Pg	06 04 25.7	-0.3
MANT	**Manisa**	1.09	239	*i* P	Pn	06 04 28.0	+0.1
DURS	**Dursunbey**	1.13	299	*i* P	Pb	06 04 27.9	-0.1
DURS				IAML_P			
	comp=Z,314nm,0.1s						
SRCK	**Saricakaya, Es**	1.19	34	PN	Pb	06 04 28.9	-0.1
SRCK	**Saricakaya, Es**	1.19	34	*i* P	Pg	06 04 29.4	+0.1
SRCK				IAML_P			
	comp=Z,1µm,0.2s						
YLV	**Yalova**	1.53	349	PN	Pb	06 04 34.4	-0.5
AUMIH	**MIHALICIK**	1.56	58	*i* P	Pg	06 04 36.7	+0.3
KCTX	**Karacabey (Bur**	1.61	319	PN	Pb	06 04 35.8	-0.4
ARMT	**Armutlu**	1.65	336	PN	Pb	06 04 36.4	-0.5
AYDB	**Zeytinkoy-Aydi**	1.84	233	PN	Pn	06 04 39.0	+1.0

ISCJB ***08*** *06:35:07.7±0.5, 10°.44S±0°.04×120°.47E±0°.04, h42^{km}±5^{km},*
mb4.4/23, MS3.4/6, Error ellipse: s-maj=7.1km
s-min=5.0km az=44.4

DJA ***08*** *06:35:09.5±1.0, 10°S±8°×12°0E±°, h17^{km}±3^{km}, M4.2/8,*
MLv4.2/8

NEIC ***08*** *06:35:10.1±2.0, 10°.44S×120°.43E, h46^{km}±8^{km}, mb4.3/13,*
Error ellipse: s-maj=11.0km s-min=9.6km az=212.0

IDC ***08*** *06:35:14.5±2.5, 10°.19S×120°.64E, h79^{km}±21^{km}, mb3.9/13,*
mb1 4.1/17, mb1mx3.9/39, mbtmp4.3/17, MS3.3/7,
Ms1 3.3/7, ms1mx2.9/35, Error ellipse: s-maj=23.7km
s-min=10.5km az=49.0

ISC 08 06:35:08.4±1.0**, 10°.41S**±0°.06×**120°.44E**±0°.04**, h27**^{km}±7^{km}**,**
n68, σ1^s.48/65**, mb4.4**/23**, MS3.2**/6**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	0.24	36	P	Pb	06 35 14.6	-0.2
BASI				S	Sb	06 35 18.9	-0.3
WSI	**Waingapu**	0.75	350	P	Pb	06 35 23.2	+0.3
WBSI	**Waikabubak, Su**	1.28	307	P	Pb	06 35 31.7	-0.3
EDFI	**Ende, Flores**	2.06	37	P	Pn	06 35 42.1	+0.7
MMRI	**Maumere**	2.50	45	*e*Pn	Pn	06 35 48.5	+1.0
MMRI	**Maumere**	2.50	45	P	Pn	06 35 48.4	+1.0
PLAI	**Plampang**	3.06	301	P	Pn	06 35 56.7	+1.7
PLAI				S	Sn	06 36 32.5	+1.7
BATI	**Baumata**	3.18	87	P	Pn	06 35 59.5	+2.8
	34nm,0.3s,baz=289,slow=2.0,SNR=14						
BATI				S	Sn	06 36 34.9	+1.0
	87nm,0.3s,baz=267,slow=7.5,SNR=23						
BATI	**Baumata**	3.18	87	P	Pn	06 35 59.1	+2.3
BATI				S	Sn	06 36 36.5	+2.6
SOEI	**Soe**	3.83	81	*e*Pn	Pn	06 36 06.9	+1.2
SOEI	**Soe**	3.83	81	P	Pn	06 36 06.9	+1.2
BSSI	**Bau Bau, Buton**	4.24	1	P	Pn	06 36 11.7	+0.4
KAPI	**Kappang**	5.41	353	P	Pn	06 36 29.8	+2.5
	4.8nm,0.3s,baz=185,slow=12,SNR=9.7						
KAPI				S	Sn	06 37 30.3	+1.6
	baz=139,slow=20,SNR=1.8						
KAPI				LR	LR	06 38 56.4	
	comp=Z,559nm,18.0s,baz=283,slow=43						
KAPI	**Kappang**	5.41	353	*e*Pn	Pn	06 36 28.5	+1.2
JAGI	**Jajag, Banyuwa**	6.49	287	*e*Pn	Pn	06 36 43.0	+0.8
LUWI	**Luwuk**	9.59	14	*e*Pn	Pn	06 37 26.7	+1.9
UGM	**Wanagama**	10.10	283	*e*Pn	Pn	06 37 32.8	+1.0
MTN	**Manton Dam**	10.75	104	*e*Pn	Pn	06 37 41.0	+0.3
PSA00	**Pilbara Seismi**	11.11	183	*e*Pn	Pn	06 37 44.9	-0.8
GIRL	**Giralia**	13.53	205	*e*Pn	Pn	06 38 17.3	-1.5
FAKI	**Fak Fak**	13.89	58	*e*Pn	Pn	06 38 23.6	-0.1
SIJI	**Sorong**	14.35	49	P	Pn	06 38 29.6	-0.3
	1.4nm,0.3s,baz=258,slow=6.2,SNR=7.7						
WR1	**Warramunga Arr**	16.41	127	*e*P	Pn	06 38 54.8	-2.3
WR1				*e*Sn	Sn	06 41 42.9	-16
WRA	**Warramunga Arr**	16.41	127	P	Pn	06 38 54.8	-2.3
	1.1nm,0.3s,baz=302,slow=13,SNR=25						
WRA				S	Sn	06 41 42.9	-16
	0.2nm,0.3s,baz=312,slow=21,SNR=2.9						
WRAB	**Tennant Creek**	16.42	127	*e*Pn	Pn	06 38 55.0	-2.1
	12nm,0.6s						
WB2	**Warramunga Arr**	16.43	127	*e*Pn	Pn	06 38 54.6	-2.6
	7.9nm,0.6s						
DAV	**Davao City (W)**	18.11	17	LR	LR	06 46 29.6	
	comp=Z,41nm,20.4s,baz=164,slow=38						
AS31	**Alice Springs**	18.41	137	*e*P	P	06 39 21.7	0.0
	4.7nm,0.4s						
ASAR	**Alice Springs**	18.41	137	P	Pn	06 39 22.1	+0.3
	2.6nm,0.3s,baz=315,slow=12,SNR=118						
ASAR				S	Sn	06 42 33.9	-13
	0.0nm,0.3s,baz=311,slow=23,SNR=3.1						
MORW	**Morawa**	19.01	192	*e*P	Pn	06 39 29.4	+0.3
	82nm,2.0s						
FORT	**Forrest**	21.47	162	*e*P	P	06 39 55.9	+1.0
	17nm,1.0s						
JAY	**Jayapura**	21.60	70	P	P	06 39 57.2	+0.7
	14nm,0.7s,baz=204,slow=12,SNR=3.0						
NWAO	**Narrogin (SRO)**	22.60	187	LR	LR	06 49 40.7	
	comp=Z,43nm,18.6s,baz=52,slow=38						
PSI	**Prapat**	25.12	300	P	P	06 40 31.6	+0.1
	7.8nm,0.8s,baz=156,slow=4.5,SNR=5.2						
BBOO	**Buckleboo**	26.54	149	*e*P	P	06 40 44.7	+0.7
	41nm,1.5s						
CTA	**Charters Tower**	26.67	114	LR	LR	06 52 50.6	
	comp=Z,251nm,20.7s,baz=342,slow=40						
STKA	**Stephens Creek**	28.97	141	P	P	06 41 07.5	+1.7
	2.1nm,0.7s,baz=289,slow=8.3,SNR=5.5						
STKA				LR	LR	06 52 57.1	
	comp=Z,59nm,18.9s,baz=4.2,slow=37						
STKA	**Stephens Creek**	28.97	141	*e*P	P	06 41 05.9	+0.1
	3.0nm,1.5s						
CMAR	**Chiang Mai Arr**	35.67	323	LR	LR	06 58 31.9	
	comp=Z,47nm,18.9s,baz=172,slow=39						
WHN	**Wuhan**	41.14	352	P	P	06 42 55.2	+4.9
H08S2	**Diego Garcia H**	47.40	269	T	T	07 34 09.4	
	baz=96,slow=76,SNR=5.1						
H08S3	**Diego Garcia H**	47.41	269	T	T	07 34 12.0	
	baz=96,slow=76,SNR=6.6						
H08S1	**Diego Carcia H**	47.41	269	T	T	07 34 10.5	
	baz=96,slow=76,SNR=5.0						
KSRS	**Korea Array**	48.13	8	LR	LR	07 02 22.2	
	comp=Z,9.2nm,21.2s,baz=320,slow=34						
MJAR	**Matsushiro Arr**	49.61	19	P	P	06 43 54.4	-3.1
	1.3nm,0.5s,baz=192,slow=8.8,SNR=4.0						
MAJO	**Matsushiro**	49.61	19	*e*P	P	06 43 54.4	-3.1
HHC	**Hu-ho-hao-te**	51.66	351	P	P	06 44 18.7	+5.7
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,85nm,5.6s						
USRK	**Ussuriysk Ar.**	55.35	10	P	P	06 44 37.8	-2.1
	comp=Z,1.7nm,0.6s,baz=188,slow=5.5,SNR=5.7						
SONA0	**Songino Array**	59.31	349	*e*P	P	06 45 06.8	-1.2
SONM	**Songino Array**	59.31	349	P	P	06 45 06.7	-1.2
	comp=Z,2.9nm,0.5s,baz=167,slow=7.7,SNR=15						
KSH	**Kashi**	64.58	323	P	P	06 45 43.1	-0.4
KSH				PcP	PcP	06 46 18.1	+0.7
KSH				PP	PP	06 48 09.2	+3.3
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,140nm,8.4s						
KSH				LR	LR		
	comp=N,220nm,13.6s						
KSH				LR	LR		
	comp=E,160nm,12.9s						
MK31	**Makanchi Array**	66.35	332	*e*P	P	06 45 54.6	-0.1
	comp=E,1.6nm,0.6s						
MK32	**Makanchi Array**	66.35	332	*e*P	P	06 45 54.7	-0.1
MKAR	**Makanchi Array**	66.35	332	P	P	06 45 54.7	-0.1
	comp=E,2.5nm,0.6s,baz=144,slow=7.5,SNR=22						
VNDA	**Vanda**	70.38	171	P	P	06 46 21.1	+1.6
	comp=E,0.4nm,0.6s,baz=341,slow=4.5,SNR=5.8						
VNDA	**Vanda**	70.38	171	*e*P	P	06 46 20.9	+1.4
KURBB	**Kurchatov Arra**	70.86	333	P	P	06 46 22.1	-0.6
	comp=E,1.3nm,0.7s,baz=150,slow=5.3,SNR=9.7						
ZAA0	**Zalesovo Array**	70.86	339	*e*P	P	06 46 21.9	-0.7
	comp=E,25nm,1.0s						
ZALV	**Zalesovo Beam**	70.86	339	P	P	06 46 21.4	-1.3
	comp=E,4.8nm,0.6s,baz=150,slow=5.0,SNR=8.0						
ZAA1	**Zalesovo Array**	70.86	339	*e*P	P	06 46 21.4	-1.3
KURK	**Kurchatov**	70.88	333	*e*P	P	06 46 22.6	-0.3
	comp=E,2.5nm,0.8s						
SBA	**Scott Base**	71.38	171	*e*P	P	06 46 27.3	+1.7
	comp=E,13nm,1.8s						
BVAR	**Borovoye Array**	76.20	332	P	P	06 46 53.8	-0.4
	comp=E,1.0nm,0.6s,baz=134,slow=8.5,SNR=5.5						
BRVK	**Borovoye**	76.27	332	*e*P	P	06 46 53.3	-1.2
	comp=E,1.9nm,0.7s						
QSPA	**South Pole Qui**	79.59	180	*e*P	P	06 47 11.8	-1.2
	comp=E,18nm,1.8s						
AKTO	**Aktyubinsk**	81.19	325	P	P	06 47 21.8	+0.1
	comp=E,1.9nm,0.6s,baz=103,slow=6.9,SNR=7.3						
KBZ	**Khabaz**	88.27	315	P	P	06 47 58.1	+0.7
	comp=E,1.2nm,0.5s,baz=113,slow=2.2,SNR=3.7						
ILAR	**Eielson Array**	100.48	26	P	Pdif	06 48 51.4	-1.6
	comp=E,0.2nm,0.6s,baz=251,slow=5.5,SNR=3.6						

WEL 08 06:55:58.1±1.8**, 34°S**±34°×**17°9E**±5°5**, h344**^{km}±32^{km}**,**
M3.6/7**, MLv3.6**/7**, Error ellipse: s-maj=0.1km**
s-min=0.0km az=113.7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	3.71	193	P	Pn	06 57 03.0	-0.6
WMGZ				S	S	06 57 58.2	+1.7
HAZ	**Te Kaha**	3.80	201	P	Pn	06 57 04.4	-0.2
HAZ				S	S	06 58 00.1	+1.9
PKGZ	**Pakihiroa**	3.85	197	P	Pn	06 57 05.4	+0.3
PUZ	**Puketiti**	3.99	194	P	Pn	06 57 06.3	-0.2
RUGZ	**Raukumara Rang**	4.03	201	P	Pn	06 57 06.5	-0.5
MWZ	**Matawai**	4.42	200	P	Pn	06 57 10.6	-0.4
TKGZ	**Te Karaka**	4.43	197	P	Pn	06 57 11.4	+0.3
TKGZ				S	S	06 58 08.3	-1.7
URZ	**Urewera**	4.48	205	P	Pn	06 57 11.3	-0.3
RIGZ	**Rimuhau**	4.70	197	P	Pn	06 57 14.6	+0.5
MUGZ	**Murupara**	4.79	206	P	Pn	06 57 14.7	-0.3
RTZ	**Ruatahuna**	4.84	204	P	Pn	06 57 15.2	-0.4
NMHZ	**Naumai**	5.34	203	P	Pn	06 57 22.1	+1.0
KAHZ	**Kahuranaki**	5.96	200	P	Pn	06 57 29.2	+1.1
PXZ	**Pawanui**	6.18	199	P	Pn	06 57 31.1	+0.5

DJA 08 07:10:15.0±1.0**, 8°S**±4°×**10°8E**±°**, h22**^{km}±9^{km}**, M4.2**/5**,**
MLv4.2/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	0.65	345	P	Pb	07 10 28.4	+0.6
LEM	**Lembang**	1.40	345	P	Pn	07 10 39.3	-0.1
YOGI	**Yogyakarta**	2.31	81	P	Pn	07 10 51.7	-0.1
UGM	**Wanagama**	2.52	84	S	Sn	07 11 26.4	+1.5
WOJI	**Wonogiri, Jawa**	2.93	83	S	Sn	07 11 35.8	+1.1
PWJI	**Pagerwojo**	3.78	88	S	Sn	07 11 56.3	+0.5

ISCJB ***08*** *07:26:55.0±0.2, 46°.05N±0°.03×149°.88E±0°.04, h178^{km},*
mb4.4/136, Error ellipse: s-maj=5.1km s-min=2.2km
az=139.3

NEIC ***08*** *07:26:55.8±1.6, 46°.19N×149°.72E, h167^{km}±6^{km}, mb4.4/90,*
Error ellipse: s-maj=12.5km s-min=10.3km az=139.0

MOS ***08*** *07:26:55.5±1.1, 46°.24N×149°.86E, h175^{km}, mb4.5/59,*
Error ellipse: s-maj=7.9km s-min=5.3km az=85.8

SKHL ***08*** *07:26:55.1±0.6, 46°.03N×150°.05E, h162^{km}±10^{km},*
mb4.9/10, msh5.8/3

IDC ***08*** *07:26:57.5±1.6, 46°.34N×149°.77E, h178^{km}±14^{km},*
mb3.9/23, mb1 4.1/29, mb1mx3.9/44, mbtmp4.5/29, Error
ellipse: s-maj=12.0km s-min=8.9km az=141.0

JMA ***08*** *07:26:57.4±0.6, 45°.47N×150°.05E, h181^{km}, M4.6*

ISC 08 07:26:56.8±0.4**, 46°.22N**±0°.05×**149°.81E**±0°.05**, h178**^{km}**,**
n334, σ1^s.37/336**, mb4.4**/140**, 12C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	1.68	235	*d i*PN	Pn	07 27 29.2	-1.1
KUR				*i* S	Sn	07 27 54.5	-1.7
KUR				pmax	pmax		
	comp=Z,376nm,0.4s						
KUR				pmax	pmax		
	comp=N,74nm,0.2s						
KUR				pmax	pmax		
	comp=E,13nm,0.1s						
KUR				smax	smax		
	comp=E,3µm,0.4s						
KUR				smax	smax		
	comp=N,3µm,0.6s						
KUR	**Kuril'sk**	1.68	235	*i* P	Pn	07 27 29.0	-1.3
KUR				AMB	AMB	07 27 29.7	
	comp=N,70nm,0.4s						
KUR				AMB	AMB	07 27 29.7	
	comp=N,20nm,0.4s						
KUR				AMB	AMB	07 27 29.7	
	comp=N,440nm,0.4s						
KUR				*i* S	Sn	07 27 54.7	-1.5
KUR				A	A	07 27 58.7	
	comp=N,360nm,0.3s						
KUR				A	A	07 27 58.7	
	comp=N,670nm,0.3s						
YUK	**Yuzh-Kuril'sk**	3.54	233	*d i*PN	Pn	07 27 53.4	+1.4
YUK				*i* S	Sn	07 28 36.0	+0.9
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				pmax	pmax		
	comp=N,364nm,0.1s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
YUK				smax	smax		
	comp=N,601nm,0.2s						
YUK	**Yuzh-Kuril'sk**	3.54	233	*i* P	Pn	07 27 53.0	+1.0
YUK				AMB	AMB	07 27 54.0	
	comp=N,360nm,0.4s						
YUK				AMB	AMB	07 27 54.0	
	comp=N,100nm,0.4s						
YUK				*i* S	Sn	07 28 35.9	+0.9
YUK				A	A	07 28 37.0	
	comp=N,600nm,0.4s						
YUK				A	A	07 28 37.0	
	comp=N,150nm,0.4s						
GRPR	**Tuman**	3.62	234	⇓*i*PN	Pn	07 27 52.0	-1.0
GRPR				*i* S	Sn	07 28 35.4	-1.4
GRPR				pmax	pmax		
	comp=E,210nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,532nm,0.3s						
GRPR				pmax	pmax		
	comp=N,351nm,0.2s						
GRPR				smax	smax		
	comp=N,1µm,0.2s						
GRPR				smax	smax		
	comp=E,884nm,0.2s						
GRPR	**Tuman**	3.62	234	*i* P	Pn	07 27 52.0	-1.0
GRPR				AMB	AMB	07 27 53.0	
	comp=E,350nm,0.2s						
GRPR				AMB	AMB	07 27 53.0	
	comp=E,210nm,0.2s						
GRPR				AMB	AMB	07 27 53.0	
	comp=E,50nm,0.2s						
GRPR				*i* S	Sn	07 28 35.0	-1.8
GRPR				A	A	07 28 38.0	
	comp=E,160nm,0.4s						
GRPR				A	A	07 28 38.0	
	comp=E,880nm,0.4s						
JRA	**Rausu**	4.02	237	P	Pn	07 27 57.4	-0.7
JRA				*e*S	Sn	07 28 44.7	-1.3
NEM2	**Nemuro 2**	4.06	227	P	Pn	07 27 55.3	-3.3
NEM2				*e*S	Sn	07 28 39.8	-7.1
JNK	**Nakash**	4.47	236	P	Pn	07 28 02.6	-1.2
JTKR	**Abashiri--Toko**	4.74	244	P	Pn	07 28 07.0	-0.3
YSS	**Yuzh-Sakhalins**	4.92	281	*e*Pn	Pn	07 28 07.6	-2.0
YSS				*e*Sn	Sn	07 29 00.2	-6.4
YSS	**Yuzh-Sakhalins**	4.92	281	⇓*e*PN	Pn	07 28 11.5	+1.9
YSS				*e*S	Sn	07 29 09.1	+2.5
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				smax	smax		
	comp=N,50nm,1.0s						
YSS	**Yuzh-Sakhalins**	4.92	281	*e*P	Pn	07 28 11.3	+1.7
YSS				AMB	AMB	07 28 12.5	
	comp=N,40nm,0.8s						
YSS				*e*S	Sn	07 29 10.6	+4.0
YSS				A	A	07 29 15.6	
	comp=N,20nm,0.5s						

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JMP   Maruseppu          5.07 246  P      Pn     07 28 11.6  0.0
JAR   Ashorobuto         5.20 238  P      Pn     07 28 12.3 -0.9
JSE   Soyaes             5.22 259  P      Pn     07 28 14.7 +1.2
JOB   Onbets             5.40 234  P      Pn     07 28 13.6 -2.3
JOB                                eS     Sn     07 29 12.8 -5.2
JKA   Kamikawa-asahi     5.51 250  eP     Pn     07 28 18.3 +1.0
ASAJ  Asahikawa          5.51 250  P      Pn     07 28 18.3 +1.0
      comp=N,47nm,0.3s,baz=78,slow=13,SNR=321
ASAJ                               S      Sn     07 29 23.2 +2.6
      baz=57,slow=19,SNR=0.6
ASAJ  Asahikawa          5.51 250  P      Pn     07 28 18.5 +1.1
JKK2  Kamakawa 2         5.52 247  P      Pn     07 28 18.1 +0.6
JWK2  Keihoku            5.61 264  P      Pn     07 28 21.0 +2.5
JCH   Churui             5.85 234  P      Pn     07 28 19.1 -2.7
JCH                                eS     Sn     07 29 21.6 -7.1
JSS   Shosan             5.90 255  P      Pn     07 28 25.0 +2.6
JFR   Furan              5.98 242  P      Pn     07 28 23.4 -0.1
JAB   Ashibetsu          6.03 246  P      Pn     07 28 25.0 +0.8
SKR   Severo-Kuril's     6.13  41  i PN   Pn     07 28 22.9 -2.4
SKR   Severo-Kuril's     6.13  41  eP     Pn     07 28 23.1 -2.2
SKR                                AMB    AMB    07 28 23.7
      comp=N,70nm,0.6s
JHR   Hokuryu            6.24 250  P      Pn     07 28 28.2 +1.3
JBT2  Biratori 2         6.33 240  P      Pn     07 28 26.3 -1.8
JEM   Erimo              6.37 231  P      Pn     07 28 26.3 -2.2
ERM   Erimo              6.37 231  ePn    Pn     07 28 26.1 -2.4
ERM                                eSn    Sn     07 29 27.3  -13
ERM   Erimo              6.37 231  i PN   Pn     07 28 26.2 -2.3
JNBK  Urakawa-nobuka     6.41 235  P      Pn     07 28 25.6 -3.6
JNBK                               eS     Sn     07 29 34.5 -7.4
TYV   Tymovskoe          6.64 317  eP     Pn     07 28 35.6 +3.5
TYV                                AMB    AMB    07 28 36.9
      comp=N,20nm,0.4s
JEW   Eniwo              6.86 244  P      Pn     07 28 34.7 -0.3
JNB   Noboribetsu        7.32 242  P      Pn     07 28 38.7 -2.3
JNB                                eS     Sn     07 29 59.0 -4.4
JKB   Kayabe             7.66 239  P      Pn     07 28 42.0 -3.5
JKB                                eS     Sn     07 30 03.2 -8.3
JSH   Shimam             7.85 246  P      Pn     07 28 47.3 -0.7
JYM2  Yakumo 2           7.92 242  P      Pn     07 28 46.8 -2.2
JSR   Shiriuchi          8.24 239  P      Pn     07 28 50.3 -2.9
JTM   Tenmabayashi       8.35 233  P      Pn     07 28 50.2 -4.5
JTM                                S      Sn     07 30 16.5  -12
JANG  Nango              8.40 229  P      Pn     07 28 50.5 -4.9
JANG                               eS     Sn     07 30 17.8  -12
JOSM  Okushiri--Mats     8.50 245  P      Pn     07 28 54.6 -2.0
JTH   Tanohata           8.55 226  P      Pn     07 28 51.4 -5.9
PEA0B Petropavlovsk-     8.59  34  ePn    Pn     07 28 56.5 -1.2
PETK  Petropavlovsk-     8.59  34  P      Pn     07 28 55.7 -1.9
      comp=N,2.5nm,0.3s,baz=208,slow=10.0,SNR=28
PETK                               S      Sn     07 30 42.8 +9.3
      comp=N,0.2nm,0.3s,baz=332,slow=18,SNR=1.0
PEA1  Petropavlovsk-     8.59  34  ePn    Pn     07 28 55.7 -2.0
PEA1                               eSn    Sn     07 30 42.8 +9.2
PET   Petropavlovsk      8.91  37  ePn    Pn     07 29 01.3 -0.5
PET   Petropavlovsk      8.91  37  ePN    Pn     07 29 01.3 -0.5
PET   Petropavlovsk      8.91  37  eP     Pn     07 29 01.6 -0.2
NKL   Nikolayevsk        9.12 323  eP     Pn     07 29 08.3 +3.7
NKL                                AMB    AMB    07 29 09.3
      comp=N,20nm,0.8s
OFUJ  Ofunato            9.31 223  P      Pn     07 29 02.5 -4.8
OFUJ                               eS     Sn     07 30 40.2  -11
TEY   Ternei             9.33 267⇑ePN    Pn     07 29 08.5 +1.0
TEY                                pmax   pmax
      comp=Z,30nm,0.7s
TEY                                pmax   pmax
      comp=E,20nm,1.5s
TEY   Ternei             9.33 267  eP     Pn     07 29 09.5 +2.0
TEY                                AMB    AMB    07 29 10.6
      comp=E,10.0nm,0.8s
JRG   Rokugo             9.58 228  P      Pn     07 29 06.8 -4.0
JRG                                eS     Sn     07 30 48.7 -8.8
JIO   Ouri               9.96 222  P      Pn     07 29 10.9 -4.9
JIO                                eS     Sn     07 30 54.8  -12
JYA   Atsumi            10.66 228  P      Pn     07 29 21.3 -3.6
JFK   Kawauchi          11.07 220  P      Pn     07 29 26.0 -4.3
JFY   Yanaizu           11.58 224  P      Pn     07 29 33.6 -3.3
KLR   Kul'dur           12.53 290  P      Pn     07 29 49.1 +0.2
      comp=E,0.1nm,0.3s,baz=110,slow=14,SNR=4.3
KLR   Kul'dur           12.53 290  ePN    Pn     07 29 50.6 +1.7
KLR   Kul'dur           12.53 290  eP     Pn     07 29 50.6 +1.7
USA0B Ussuriysk Arra    12.73 267  ePn    Pn     07 29 52.2 +0.8
USRK  Ussuriysk Ar.     12.73 267  P      Pn     07 29 51.9 +0.5
      comp=E,1.6nm,0.3s,baz=83,slow=12,SNR=20
EKMR  Ekimchan          12.88 308  eP     P      07 29 55.4 -2.0
EKMR                               AMB    AMB    07 30 07.0
      comp=E,7.0nm,0.7s
MAJO  Matsushiro        12.99 226  ePn    Pn     07 29 53.7 -1.3
MAJO                               eS     S      07 32 24.8 -0.1
MAJO  Matsushiro        12.99 226  i PN   Pn     07 29 51.9 -3.1
MAT   Matsushiro        12.99 226  P      Pn     07 29 51.5 -3.5
MAT                                eS     Sn     07 32 12.1 -7.3
MJAR  Matsushiro Arr    12.99 226  P      Pn     07 29 52.4 -2.6
      comp=E,0.2nm,0.3s,baz=30,slow=12,SNR=17
MJAR                               S      S      07 32 24.8 -0.1
      comp=E,0.1nm,0.3s,baz=98,slow=26,SNR=1.7
MA2   Magadan           13.40   2  P      Pn     07 29 58.2 -1.5
      comp=E,1.0nm,0.3s,baz=173,slow=17,SNR=7.1
MA2   Magadan           13.40   2  ePn    Pn     07 29 59.9 +0.1
MA2   Magadan           13.40   2  i PN   Pn     07 29 58.5 -1.3
MDJ   Mudanjiang        14.29 271  P      P      07 30 13.9 +0.8
MDJ                                pmax   pmax
      comp=Z,14nm,0.6s
MDJ                                pmax   pmax
      comp=Z,130nm,5.1s
INU   Inuyama           14.53 226  ePn    Pn     07 30 11.1 -3.0
JHJ2  Mitsune           15.16 214  eP     Pn     07 30 22.6 +0.7
      comp=Z,194nm,1.2s
JHJ   Hachijo jima 2    15.17 214  S      Sn     07 32 59.7  -12
      comp=Z,10nm,0.3s,baz=71,slow=21,SNR=1.5
BMKR  Bomnak            15.78 310  eP     P      07 30 29.8 +0.3
BMKR                               AMB    AMB    07 30 31.0
      comp=Z,10.0nm,0.9s
ZEA   Zeya              16.30 306  eP     Pn     07 30 37.0 +1.5
ZEA                                pmax   pmax
      comp=Z,29nm,1.0s
ZEA   Zeya              16.30 306  eP     Pn     07 30 37.0 +1.5
ZEA                                AMB    AMB    07 30 38.0
      comp=Z,30nm,1.0s
KROS  Kirovskiy         16.68 308  eP     Pn     07 30 39.9 -0.3
KROS                               AMB    AMB    07 30 43.2
      comp=Z,10.0nm,0.8s
SEY   Seymchan          16.82   4  P      Pn     07 30 40.8 -0.9
      comp=Z,1.0nm,0.3s,baz=178,slow=8.4,SNR=29
SEY   Seymchan          16.82   4  i P    Pn     07 30 41.0 -0.7
SEY   Seymchan          16.82   4  eP     Pn     07 30 41.0 -0.7
KSRS  Korea Array       18.46 249  P      P      07 31 00.5 +1.5
      comp=Z,2.4nm,0.3s,baz=56,slow=11,SNR=27
TJN   Taejon            19.46 248  i P    P      07 31 09.1 -0.7
YAK   Yakutsk           19.61 331  eP     P      07 31 09.9 -1.2
      comp=Z,52nm,0.7s
YAK   Yakutsk           19.61 331  eP     P      07 31 08.4 -2.8
YAK                                eS     S      07 34 39.5 -3.0
YAK   Yakutsk           19.61 331  eP     Pn     07 31 13.2 -1.4
BILL  Bilibino          23.47  16  eP     P      07 31 50.3 +0.4
      comp=Z,6.5nm,1.0s
BILL  Bilibino          23.47  16  eP     P      07 31 49.4 -0.5
BILL                               e*PP   pwP    07 32 24.5 -2.2
BILL                               e             07 32 32.9
BILL                               e*SP   PP     07 32 46.6 -0.3
BILL                               pmax   pmax
      comp=Z,2.0nm,0.8s
BILL  Bilibino          23.47  16  eP     P      07 31 49.4 -0.5
TIXI  Tiksi             27.38 346  P      P      07 32 23.3 -1.7
      comp=Z,6.1nm,0.3s,baz=125,slow=9.1,SNR=7.1
TIXI  Tiksi             27.38 346  eP     P      07 32 23.4 -1.5
      comp=Z,11nm,1.1s
TIXI  Tiksi             27.38 346  eP     P      07 32 23.5 -1.5
TIXI                               pmax   pmax
      comp=Z,11nm,1.1s
TIXI  Tiksi             27.38 346  eP     P      07 32 23.5 -1.5
H11N2 WAKE ISLAND Hy    29.92 146  T      T      08 04 16.1
      baz=335,slow=75,SNR=309
H11N1 WAKE ISLAND Hy    29.93 146  T      T      08 04 05.8
      baz=335,slow=75,SNR=293
H11N3 WAKE ISLAND Hy    29.94 146  T      T      08 04 07.4
      baz=335,slow=75,SNR=225
H11S1 WAKE ISLAND Hy    30.96 148  T      T      08 05 18.7
      baz=337,slow=76,SNR=300
H11S3 WAKE ISLAND Hy    30.97 148  T      T      08 05 25.5
      baz=337,slow=76,SNR=142
H11S2 WAKE ISLAND Hy    30.98 148  T      T      08 05 19.9
      baz=337,slow=76,SNR=197
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WHN   Wuhan             31.59 253  P      P      07 33 11.5 +8.9
TTA   Tatalina          34.33  41  eP     P      07 33 26.9 +0.8
      comp=Z,4.3nm,0.7s
TTA   Tatalina          34.33  41  eP     P      07 33 26.9 +0.8
TTA                                pmax   pmax
      comp=Z,4.0nm,0.7s
SVW2  Sparrevohn        34.48  44  eP     P      07 33 29.2 +1.8
      comp=Z,4.7nm,1.1s
LZH   Lanzhou           35.61 270  eP     P      07 33 36.8 -0.7
LZH                                pP     pP     07 34 15.5 +1.6
LZH                                sP     sP     07 34 33.6 -0.2
LZH                                PP     PnPn   07 35 10.3 +7.0
LZH                                pmax   pmax
      comp=Z,21nm,1.4s
LZH                                pmax   pmax
      comp=Z,130nm,4.3s
PPLA  Purkeypile        36.08  41  eP     P      07 33 42.9 +1.7
      comp=Z,7.1nm,1.2s
SPU   Mount Spurr       36.19  44  eP     P      07 33 41.6 -0.4
KDAK  Kodiak Island     36.20  50  eP     P      07 33 41.9 -0.1
      comp=Z,7.7nm,0.9s
KDAK  Kodiak Island     36.20  50  eP     P      07 33 41.9 -0.1
KDAK                               pmax   pmax
      comp=Z,8.0nm,0.9s
BPAW  Bear Paw Mtn.     36.62  39  eP     P      07 33 46.4 +0.8
      comp=Z,4.3nm,0.8s
KTH   Kantishna Hill    36.65  40  eP     P      07 33 47.0 +1.2
      comp=Z,11nm,1.0s
CNPM  China Poot        36.71  47  eP     P      07 33 46.2 -0.2
      comp=Z,17nm,1.4s
MLY   Manley            36.74  38  eP     P      07 33 48.0 +1.4
      comp=Z,4.7nm,0.7s
COLD  Coldfoot          37.06  34  eP     P      07 33 50.0 +0.8
      comp=Z,2.7nm,0.7s
BWN   Browne            37.29  39  eP     P      07 33 52.6 +1.4
      comp=Z,62nm,1.1s
RC01  Rabbit Creek A    37.31  44  eP     P      07 33 52.2 +0.7
      comp=Z,18nm,1.0s
TOLK  Toolik Lake Re    37.40  32  eP     P      07 33 53.4 +1.2
      comp=Z,7.5nm,0.9s
MCK   McKinley          37.53  40  eP     P      07 33 55.1 +1.9
      comp=Z,6.8nm,1.0s
SEW   Seward            37.55  46  eP     P      07 33 52.8 -0.6
      comp=Z,28nm,1.4s
PMR   Palmer            37.56  43  eP     P      07 33 52.7 -0.8
      comp=Z,5.7nm,1.2s
PMR   Palmer            37.56  43  eP     P      07 33 52.7 -0.8
PMR                                pmax   pmax
      comp=Z,6.0nm,1.2s
RND   Reindeer          37.58  40  eP     P      07 33 53.8 +0.1
      comp=Z,4.4nm,1.0s
RND   Reindeer          37.58  40  eP     P      07 33 53.8 +0.1
RND                                pmax   pmax
      comp=Z,4.0nm,1.0s
WRH   Wood River Hil    37.88  39  eP     P      07 33 55.4 -0.7
      comp=Z,3.7nm,0.9s
SML   Sawmill           37.93  43  eP     P      07 33 56.9 +0.3
      comp=Z,8.8nm,0.7s
SML   Sawmill           37.93  43  eP     P      07 33 56.9 +0.3
SML                                pmax   pmax
      comp=Z,9.0nm,0.7s
COLA  College           37.97  38  i P    P      07 33 56.6 -0.2
COLA                               pmax   pmax
      comp=Z,9.0nm,0.8s
CCB   Clear Creek Bu    37.99  38  eP     P      07 33 58.1 +1.1
      comp=Z,3.9nm,0.6s
DHY   Denali Highway    38.27  41  eP     P      07 34 00.2 +0.7
      comp=Z,7.3nm,1.3s
HDA   Harding Lake      38.38  39  eP     P      07 34 00.7 +0.4
      comp=Z,5.7nm,0.9s
ILAR  Eielson Array     38.38  38  P      P      07 34 00.7 +0.4
      comp=Z,3.4nm,0.7s,baz=267,slow=7.7,SNR=44
ILB   Eielson Array     38.38  38  eP     P      07 34 00.9 +0.6
      comp=Z,7.1nm,1.2s
SCM   Sheep Creek Mo    38.40  43  eP     P      07 34 01.3 +0.7
      comp=Z,12nm,1.3s
SCM   Sheep Creek Mo    38.40  43  eP     P      07 34 01.3 +0.7
SCM                                pmax   pmax
      comp=Z,12nm,1.3s
FYU   Fort Yukon        39.01  35  eP     P      07 34 06.3 +0.9
      comp=Z,14nm,0.7s
EYAK  Cordova Ski Ar    39.32  45  eP     P      07 34 07.8 -0.3
      comp=Z,15nm,1.2s
DOT   Dot Lake          39.70  40  eP     P      07 34 11.2 -0.1
      comp=Z,2.6nm,0.8s
EGAK  Eagle             40.83  38  eP     P      07 34 21.0 +0.5
      comp=Z,12nm,1.3s
ZAA1  Zalesovo Array    41.06 305  ePcP   PcP    07 36 18.7 +0.1
ZALV  Zalesovo Beam     41.06 305  PcP    PcP    07 36 18.7 +0.1
      comp=Z,2.2nm,0.6s,baz=70,slow=6.3,SNR=2.8
DAWY  Dawson            41.69  39  eP     P      07 34 28.8 +1.2
      comp=Z,5.8nm,1.5s
EPYK  Eagle Plains      42.42  35  eP     P      07 34 34.5 +1.1
      comp=Z,15nm,1.0s
KMI   Kunming           42.90 257  P      P      07 34 37.7 -0.3
KMI                                pmax   pmax
      comp=Z,9.0nm,0.5s
WMQ   Urumqi            42.98 290  eP     P      07 34 38.7 +0.4
WMQ                                pP     pwP    07 35 20.1 -0.1
WMQ                                LR     LR
      comp=N,250nm,21.3s
WMQ                                LR     LR
      comp=E,170nm,29.1s
WMQ                                LR     LR
      comp=Z,320nm,26.1s
HYT   Haines Junctio    43.23  43  eP     P      07 34 41.9 +1.7
      comp=Z,9.1nm,0.9s
INK   Inuvik            43.32  32  P      P      07 34 40.9 +0.4
      comp=Z,4.4nm,0.5s,baz=299,slow=7.7,SNR=26
INK   Inuvik            43.32  32  eP     P      07 34 41.4 +0.9
      comp=Z,6.0nm,0.6s
INK   Inuvik            43.32  32  eP     P      07 34 41.4 +0.9
INK                                pmax   pmax
      comp=Z,6.0nm,0.6s
MK31  Makanchi Array    45.15 296  eP     P      07 34 55.3 -0.1
      comp=Z,5.1nm,0.9s
MK32  Makanchi Array    45.15 296  eP     P      07 34 55.6 +0.2
MKAR  Makanchi Array    45.15 296  P      P      07 34 55.6 +0.2
      comp=Z,1.3nm,0.5s,baz=68,slow=7.9,SNR=5.4
MAKZ  Makanchi          45.33 297  eP     P      07 34 53.8 -3.1
      comp=Z,9.9nm,0.8s
MAKZ  Makanchi          45.33 297  eP     P      07 34 53.8 -3.1
MAKZ                               pmax   pmax
      comp=Z,10.0nm,0.8s
KURK  Kurchatov         45.75 303  eP     P      07 35 00.3 +0.3
      comp=Z,25nm,0.9s
KURK  Kurchatov         45.75 303  eP     P      07 35 00.3 +0.3
KURK                               pmax   pmax
      comp=Z,25nm,0.9s
KURK  Kurchatov         45.75 303  eP     P      07 35 00.3 +0.3
KURBB Kurchatov Arra    45.84 303  P      P      07 35 00.5 -0.2
      comp=Z,6.3nm,0.7s,baz=74,slow=8.4,SNR=8.6
JAY   Jayapura          49.19 192  P      P      07 35 29.1 +2.2
      comp=Z,15nm,1.0s,baz=273,slow=12,SNR=1.3
BVAR  Borovoye Array    49.42 309  P      P      07 35 28.1 -0.1
      comp=Z,1.9nm,0.7s,baz=79,slow=7.9,SNR=6.1
BVAR                               PcP    PcP    07 36 47.5 -0.2
      comp=Z,2.3nm,0.7s,baz=63,slow=4.8,SNR=3.7
BRVK  Borovoye          49.46 309  eP     P      07 35 28.7 +0.1
      comp=Z,4.2nm,0.8s
BRVK  Borovoye          49.46 309  i P    P      07 35 28.6  0.0
BRVK                               pmax   pmax
      comp=Z,4.0nm,0.9s
BRVK  Borovoye          49.46 309  eP     P      07 35 28.6  0.0
CMAR  Chiang Mai Arr    50.02 254  P      P      07 35 35.1 +1.8
      comp=Z,1.6nm,0.4s,baz=43,slow=7.4,SNR=7.5
KDJ   Kajisay           50.57 293  eP     P      07 35 36.4 -0.9
      comp=Z,3.7nm,0.8s
KDJ   Kajisay           50.57 293  eP     P      07 35 36.4 -0.9
KDJ                                pmax   pmax
      comp=Z,4.0nm,0.8s
BOOM  Boomskoye usch    51.17 294  eP     P      07 35 42.1 +0.3
      comp=Z,4.1nm,0.6s
BOOM  Boomskoye usch    51.17 294  eP     P      07 35 42.1 +0.3
BOOM                               pmax   pmax
      comp=Z,4.0nm,0.6s
RES   Resolute Bay      52.06  18  eP     P      07 35 47.6 +0.1
      comp=Z,16nm,0.7s
RES   Resolute Bay      52.06  18  eP     P      07 35 47.7 +0.1
RES                                pmax   pmax
      comp=Z,16nm,0.7s
YKW3  Yellowknife Ar    52.66  35  eP     P      07 35 52.8 +0.6
      comp=Z,3.8nm,0.5s
YKA   Yellowknife Ar    52.70  36  P      P      07 35 53.1 +0.6
      comp=Z,2.5nm,0.7s,baz=299,slow=7.0,SNR=18
YKA                                PcP    PcP    07 37 00.2 +0.4
      comp=Z,0.5nm,0.7s,baz=300,slow=3.4,SNR=2.2
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YKB5  Yellowknife Ar    52.70  36  eP     P      07 35 53.1 +0.6
YKB5                               ePcP   PcP    07 37 00.2 +0.4
KSH   Kashi             52.73 291  eP     P      07 35 56.1 +2.9
ARU   Arti              53.84 317  P      P      07 36 00.2 -0.8
      comp=Z,2.3nm,0.3s,baz=39,slow=4.1,SNR=8.7
ARU   Arti              53.84 317  eP     P      07 36 00.4 -0.5
      comp=Z,10nm,0.8s
ARU   Arti              53.84 317d iP     P      07 36 00.1 -0.8
ARU                                S      S      07 43 21.3 -0.3
ARU                                SS     SS     07 47 01.9 -2.5
ARU                                pmax   pmax
      comp=Z,14nm,1.0s
KK31  Karatay Array     54.24 298  eP     P      07 36 03.2 -0.8
      comp=Z,3.7nm,1.0s
KK31  Karatay Array     54.24 298  eP     P      07 36 03.2 -0.8
KK31                               pmax   pmax
      comp=Z,4.0nm,1.0s
TULEG Thule             55.08  10  eP     P      07 36 09.3 -0.2
      comp=Z,8.8nm,0.8s
PRGR  Permogore         56.56 326  eP     P      07 36 18.1 -2.2
PRGR                               pmax   pmax
      comp=Z,10.0nm,0.4s
GAR   Garm              56.65 293  eP     P      07 36 23.0 +1.5
      comp=Z,15nm,1.0s
GAR   Garm              56.65 293  eP     P      07 36 23.0 +1.5
GAR                                pmax   pmax
      comp=Z,15nm,1.0s
ABKAR Akbulak array     56.99 309  eP     P      07 36 23.0 -0.5
      comp=Z,5.5nm,1.0s
AKTO  Aktyubinsk        57.36 311  P      P      07 36 26.5 +0.4
      comp=Z,1.4nm,0.8s,baz=38,slow=9.6,SNR=2.8
ARA0  ARCESS Array S    57.59 340  eP     P      07 36 27.3 -0.1
ARCES ARCESS Array B    57.59 340  P      P      07 36 27.3 -0.1
      comp=Z,2.1nm,0.5s,baz=40,slow=10.0,SNR=8.2
NIL   Nilore            57.89 287  eP     P      07 36 31.5 +1.4
      comp=Z,9.9nm,0.9s
NIL   Nilore            57.89 287  eP     P      07 36 31.5 +1.4
NIL                                pmax   pmax
      comp=Z,10.0nm,0.9s
KBL   Kabul             60.12 290  eP     P      07 36 45.8 +0.2
      comp=Z,7.4nm,0.6s
KBL   Kabul             60.12 290  eP     P      07 36 45.8 +0.2
KBL                                pmax   pmax
      comp=Z,7.0nm,0.6s
SUMG  Summit            61.37   3  eP     P      07 36 53.9 +0.2
      comp=Z,14nm,0.6s
SUMG  Summit            61.37   3  eP     P      07 36 53.9 +0.2
SUMG                               pmax   pmax
      comp=Z,14nm,0.6s
SUMG  Summit            61.37   3  i P    P      07 36 53.8 +0.2
      comp=Z,32nm,0.7s
FFC   Flin Flon         62.60  38  eP     P      07 37 02.3 +0.7
      comp=Z,4.3nm,0.8s
FFC   Flin Flon         62.60  38  eP     P      07 37 02.3 +0.7
FFC                                pmax   pmax
      comp=Z,4.0nm,0.8s
HRY   Holter Researc    63.09  50  eP     P      07 37 06.0 +0.8
FIA1  FINESS Array S    63.52 333  eP     P      07 37 06.2 -1.4
      comp=Z,20nm,0.6s
FIA0  FINESS Array S    63.52 333  eP     P      07 37 06.8 -0.8
FIA0  FINESS Array S    63.52 333  eP     P      07 37 06.8 -0.8
FINES FINESS Array B    63.52 333  P      P      07 37 06.8 -0.8
      comp=Z,16nm,0.6s,baz=34,slow=8.0,SNR=46
FINES FINESS Array B    63.52 333  i P    P      07 37 06.6 -1.0
FINES                              pmax   pmax
      comp=Z,16nm,0.6s
BOZ   Bozeman (W)       63.91  51  eP     P      07 37 10.1 -0.5
      comp=Z,1.6nm,0.6s
BOZ   Bozeman (W)       63.91  51  eP     P      07 37 10.1 -0.5
BOZ                                pmax   pmax
      comp=Z,2.0nm,0.6s
OBN   Obninsk           64.43 324  eP     P      07 37 11.9 -1.7
OBN                                e             07 37 44.8
OBN                                e             07 39 40.8
OBN                                pmax   pmax
      comp=Z,7.0nm,1.0s
OBN   Obninsk           64.43 324  eP     P      07 37 11.9 -1.7
NV01  Mina Array Sit    64.69  60  eP     P      07 37 16.7 +0.8
NVAR  Mina Array Bea    64.69  60  P      P      07 37 16.7 +0.8
      comp=Z,0.8nm,0.5s,baz=292,slow=7.4,SNR=12
GEYT  Alibeck           64.89 299  P      P      07 37 17.8 +0.8
      comp=Z,5.0nm,0.6s,baz=42,slow=2.4,SNR=10
LPSR  Galich'ya Gora    65.21 321  eP     P      07 37 18.5 -0.2
LPSR                               pmax   pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye      66.08 320  eP     P      07 37 23.2 -1.1
VSR                                pmax   pmax
      comp=Z,5.0nm,0.4s
VORD  Divnogorie        66.19 320  eP     P      07 37 24.8 -0.2
VORD                               pmax   pmax
      comp=Z,7.0nm,0.6s
BW06  Boulder Array     66.89  52  eP     P      07 37 30.6 +0.7
      comp=Z,1.4nm,0.8s
PDAR  Pinedale Array    66.89  52  P      P      07 37 30.3 +0.4
      comp=Z,1.0nm,0.6s,baz=287,slow=1.9,SNR=16
WRAB  Tennant Creek     67.31 196  eP     P      07 37 31.5 -0.8
      comp=Z,16nm,0.5s
WRAB  Tennant Creek     67.31 196  i P    P      07 37 31.5 -0.8
WRAB                               pmax   pmax
      comp=Z,8.0nm,1.3s
WR1   Warramunga Arr    67.32 196  eP     P      07 37 32.5 +0.1
WRA   Warramunga Arr    67.32 196  P      P      07 37 32.5 +0.1
      comp=Z,1.5nm,0.6s,baz=10,slow=5.1,SNR=4.5
NC405 NORSAR Array S    67.78 339  eP     P      07 37 34.1 -0.8
      comp=Z,28nm,0.6s
NC204 NORSAR Array S    67.87 340  eP     P      07 37 35.2 -0.2
      comp=Z,12nm,1.5s
NB201 NORSAR Array S    67.94 340  eP     P      07 37 35.2 -0.7
      comp=Z,22nm,0.7s
NB2   NORSAR Subarra    67.97 340  P      P      07 37 35.6 -0.5
      comp=Z,4.9nm,0.4s,baz=30,slow=6.2
NB200 NORSAR Array S    67.97 340  eP     P      07 37 35.6 -0.5
NOA   NORSAR Array B    67.97 340  P      P      07 37 35.6 -0.5
      comp=Z,7.7nm,0.5s,baz=29,slow=6.5,SNR=26
NBO00 NORSAR Array S    68.08 340  eP     P      07 37 36.5 -0.3
      comp=Z,10nm,0.8s
NC602 NORSAR Array S    68.15 339  eP     P      07 37 36.8 -0.4
      comp=Z,35nm,1.4s
NORES NORESS Array B    68.15 339  P      P      07 37 36.3 -0.9
NORES                              pmax   pmax
      comp=Z,3.0nm,0.3s
NAO01 NORSAR Array S    68.22 340  eP     P      07 37 37.6  0.0
      comp=Z,14nm,0.8s
SRU   San Rafael Swe    68.81  55  eP     P      07 37 42.8 +0.9
      comp=Z,3.7nm,1.0s
SRU   San Rafael Swe    68.81  55  eP     P      07 37 42.8 +0.9
SRU                                pmax   pmax
      comp=Z,4.0nm,1.0s
KIV   Kislovodsk        69.51 313  eP     P      07 37 46.4 +0.4
KIV                                pmax   pmax
      comp=Z,19nm,0.9s
KIV   Kislovodsk        69.51 313  eP     P      07 37 46.4 +0.4
KBZ   Khabaz            69.56 312  P      P      07 37 47.0 +0.9
      comp=Z,2.2nm,0.5s,baz=106,slow=7.8,SNR=7.8
PV17  East Wray Mesa    70.28  55  eP     P      07 37 51.9 +1.0
      comp=Z,3.9nm,0.6s
PV13  Radium Mtn., P    70.44  55  eP     P      07 37 52.3 +0.4
      comp=Z,2.6nm,0.6s
AKASG Malin Array Be    70.69 325  P      P      07 37 52.3 -0.6
      comp=Z,2.2nm,0.3s,baz=36,slow=6.2,SNR=21
AKBB  Malin Array Si    70.69 325  eP     P      07 37 52.4 -0.5
      comp=Z,5.8nm,0.7s
AKBB  Malin Array Si    70.69 325  eP     P      07 37 52.4 -0.5
AKBB                               pmax   pmax
      comp=Z,6.0nm,0.7s
AS31  Alice Springs     71.03 195  eP     P      07 37 56.0 +0.8
      comp=Z,2.2nm,1.5s
ASAR  Alice Springs     71.03 195  P      P      07 37 56.4 +1.2
      comp=Z,1.3nm,0.6s,baz=10,slow=5.9,SNR=15
GNI   Garni             71.11 309  i P    P      07 37 57.6 +1.8
GNI                                pmax   pmax
      comp=Z,15nm,1.1s
ECSD  EROS Data Cent    72.88  44  eP     P      07 38 06.3 +0.2
      comp=Z,1.8nm,0.8s
ANMO  Albuquerque       74.04  56  eP     P      07 38 14.1 +0.8
      comp=Z,1.4nm,0.9s
ANMO  Albuquerque       74.04  56  eP     P      07 38 14.1 +0.8
ANMO                               pmax   pmax
      comp=Z,1.0nm,0.9s
BUR08 Bucovina Ar. S    74.72 325  eP     P      07 38 17.3 +0.4
      comp=Z,8.0nm,0.6s
BURAR Bucovina Array    74.74 325⇑iP     P      07 38 17.3 +0.3
BURAR Bucovina Array    74.74 325  P      P      07 38 17.2 +0.3
DIKM  Dikmen            74.92 315⇑iP     P      07 38 18.8 +0.9
BIZ   Bicaz             74.92 324⇑iP     P      07 38 18.5 +0.6
TESR  Tescani           75.04 323⇓iP     P      07 38 19.0 +0.4
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TRPA	Tarpa	75.37	327	⇑iP	P	07 38 21.8	+1.4
LANS	Liptovska Anna	75.66	329	eP	P	07 38 23.7	+1.6
LANS	Liptovska Anna	75.66	329	eP	P	07 38 23.7	+1.6
OZUR		75.73	323	⇓iP	P	07 38 23.3	+0.7
MORC	Moravsky Berou	75.81	330	eP	P	07 38 23.8	+0.8
	comp=Z,5.5nm,0.9s						
MORC	Moravsky Berou	75.81	330	⇑iP	P	07 38 24.1	+1.2
MORC	Moravsky Berou	75.81	330	eP	P	07 38 23.8	+0.8
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	75.97	334	eP	P	07 38 24.0	+0.3
	comp=Z,9.3nm,0.7s						
CLL	Collm	75.97	334	eP	P	07 38 24.0	+0.3
CLL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CLL	Collm	75.97	334	i P	P	07 38 23.5	-0.2
	comp=Z,10.0nm,0.7s						
TLB	Topalu	75.98	321	⇑iP	P	07 38 24.9	+1.0
TLB	Topalu	75.98	321	P	P	07 38 24.9	+1.0
ILGA	Ilgaz	76.12	316	eP	P	07 38 26.6	+1.5
	comp=Z,12nm,1.2s						
MLR	Muntele Rosu	76.15	323	eP	P	07 38 26.0	+0.9
	comp=Z,6.0nm,0.9s						
MLR	Muntele Rosu	76.15	323	⇑iP	P	07 38 26.0	+0.9
MLR	Muntele Rosu	76.15	323	eP	P	07 38 26.0	+0.9
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VYHS	Vyhne	76.44	329	eP	P	07 38 27.2	+0.7
VYHS	Vyhne	76.44	329	eP	P	07 38 27.2	+0.7
VOIR		76.57	324	⇑iP	P	07 38 28.6	+1.2
VOIR		76.57	324	P	P	07 38 28.5	+1.2
AMTX	Amarillo	76.79	53	eP	P	07 38 29.4	+0.5
	comp=Z,4.7nm,0.9s						
BR101	Keskin Array S	77.18	315	eP	P	07 38 31.5	+0.6
BRTR	Keskin Array B	77.18	315	P	P	07 38 31.5	+0.6
	comp=Z,0.8nm,0.4s,baz=45,slow=3.7,SNR=6.2						
GZR	Gura Zlata	77.53	325	⇑iP	P	07 38 33.6	+0.9
KHC	Kasperske Hory	77.69	332	eP	P	07 38 33.1	-0.4
	comp=Z,2.1nm,0.6s						
KHC	Kasperske Hory	77.69	332	eP	P	07 38 34.0	+0.5
KHC	Kasperske Hory	77.69	332	eP	P	07 38 34.0	+0.5
BZS	Buzias	77.80	326	⇑iP	P	07 38 35.1	+1.0
GEC2	GERESS Array S	77.90	332	eP	P	07 38 32.9	-1.8
	comp=Z,3.1nm,0.7s						
GEC2	GERESS Array S	77.90	332	eP	P	07 38 32.9	-1.8
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GERES	GERESS Array B	77.90	332	P	P	07 38 35.1	+0.4
	comp=Z,1.2nm,0.4s,baz=43,slow=8.0,SNR=11						
CONA	Conrad Observa	77.97	330	eP	P	07 38 36.1	+1.1
	comp=Z,2.2nm,0.6s						
ARSA	Arzberg	78.67	330	eP	P	07 38 38.6	-0.2
	comp=Z,1.9nm,0.5s						
KBA	Koelnbreinsper	79.56	331	ePcP	P	07 38 45.4	+1.5
	comp=Z,2.3nm,0.4s						
KBA	Koelnbreinsper	79.56	331	P	P	07 38 46.9	+3.0
KBA				pmax	pmax		
	comp=Z,12nm,0.8s						
VTS	Vitosha	79.62	323	eP	P	07 38 44.9	+0.6
	comp=Z,6.0nm,0.7s						
VTS	Vitosha	79.62	323	⇑iP	P	07 38 44.9	+0.6
VTS	Vitosha	79.62	323	eP	P	07 38 44.9	+0.6
VTS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBKA	Obir	79.64	330	eP	P	07 38 45.6	+1.3
	comp=Z,3.5nm,0.7s						
WATA	Walderalm	79.91	333	ePcP	P	07 38 47.2	+1.5
	comp=Z,3.7nm,0.4s						
WTTA	Wattenberg	79.95	333	ePcP	P	07 38 47.3	+1.3
	comp=Z,2.0nm,0.3s						
TRQ	Mont Tremblant	80.02	30	eP	P	07 38 45.9	-0.3
MOTA	Moosalm	80.05	333	eP	P	07 38 47.2	+0.7
	comp=Z,1.7nm,0.5s						
SQTA	Sankt Quirin	80.12	333	ePcP	P	07 38 48.1	+1.2
	comp=Z,1.6nm,0.4s						
CDF	Champ du Feu	80.24	336	eP	P	07 38 48.7	+1.3
CDF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ECH	Echery	80.45	336	eP	P	07 38 48.7	+0.2
	comp=Z,4.2nm,1.0s						
ECH	Echery	80.45	336	eP	P	07 38 48.7	+0.2
ECH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DAVA	Damuels	80.48	334	ePcP	P	07 38 50.3	+1.4
	comp=Z,5.6nm,0.9s						
MANT	Manisa	80.60	317	eP	P	07 38 49.7	0.0
	comp=Z,52nm,0.3s						
CSS	Mathiatis	81.01	312	eP	P	07 38 52.1	+0.5
	comp=Z,6.3nm,0.7s						
TUE	Stuetta	81.37	334	eP	P	07 38 54.6	+1.0
	comp=Z,3.3nm,0.7s						
MOQ	Mont Orford	81.60	29	eP	P	07 38 55.0	+0.4
LOR	Lormes	82.23	337	eP	P	07 38 58.1	+0.3
LOR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GRR	Gorron	82.36	341	eP	P	07 38 58.9	+0.5
GRR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AVF	Avril sur Loir	82.81	337	eP	P	07 39 01.3	+0.5
AVF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SMF	Signal de Mont	82.81	337	eP	P	07 39 02.3	+1.5
SMF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SGMF	Saint Gilles	82.87	342	eP	P	07 39 01.8	+0.7
SGMF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ROSF	Rostrenen	82.94	342	eP	P	07 39 02.2	+0.8
ROSF				pmax	pmax		
	comp=Z,12nm,0.8s						
WVT	Waverly	83.02	44	eP	P	07 39 02.3	+0.2
	comp=Z,3.2nm,0.8s						
WVT	Waverly	83.02	44	eP	P	07 39 02.3	+0.2
WVT				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPL	La Plagne	83.03	335	eP	P	07 39 03.1	+0.9
LPL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
LPG	La Plagne	83.04	335	eP	P	07 39 03.3	+0.9
LPG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
QUIF	Quistinic	83.32	342	eP	P	07 39 03.9	+0.5
QUIF				pmax	pmax		
	comp=Z,41nm,1.6s						
TCF	Toulx Ste Croi	83.57	338	eP	P	07 39 06.3	+1.5
TCF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ORIF	Oris-en-Rattie	83.82	335	eP	P	07 39 08.6	+2.5
ORIF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MFF	Saint Martin d	83.87	340	eP	P	07 39 07.2	+1.0
MFF				pmax	pmax		
	comp=Z,11nm,0.8s						
SSB	Saint Sauveur	83.87	336	eP	P	07 39 07.3	+1.0
	comp=Z,7.1nm,1.2s						
SSB	Saint Sauveur	83.87	336	eP	P	07 39 07.3	+1.0
SSB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SWET	Sewanee	84.66	43	eP	P	07 39 10.6	+0.1
	comp=Z,3.8nm,0.8s						
ITM	Ithomi	84.69	321	eP	P	07 39 10.7	+0.1
	comp=Z,14nm,0.9s						
CAF	Calviac	84.88	338	eP	P	07 39 12.9	+1.5
CAF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PGF	Pioggiola	85.00	332	eP	P	07 39 12.1	0.0
PGF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LFF	La Frestale	85.21	339	eP	P	07 39 14.3	+1.4
LFF				pmax	pmax		
	comp=Z,14nm,0.6s						
Z50A	Ashland	86.27	44	eP	P	07 39 18.5	0.0
	comp=Z,4.9nm,0.6s						
MTLF	Montolieu	86.30	337	eP	P	07 39 19.8	+1.4
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ETSF	Etsaut	87.45	339	eP	P	07 39 25.3	+1.3
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TOA1	Torodi Ar. Sit	114.31	326	ePKiKP	PKiKP	07 45 15.3	-0.2
TORD	Torodi Ar. Bea	114.31	326	PKP	PKiKP	07 45 15.3	-0.3
	comp=Z,0.5nm,1.0s,baz=52,slow=2.1,SNR=3.3						
BDFB	Brasilia	146.07	32	PKPbc	PKPdf	07 46 15.9	+1.0
	comp=Z,1.6nm,0.4s,baz=255,slow=0.9,SNR=4.8						
PLCA	Paso Flores	150.44	94	PKPbc	PKPbc	07 46 27.0	+0.2
	comp=Z,0.8nm,0.8s,baz=251,slow=6.0,SNR=4.1						
PLCA	Paso Flores	150.44	94	ePKPbc	PKiKP	07 46 28.0	+0.5
PLCA	Paso Flores	150.44	94	PKIKP	PKPbc	07 46 27.0	+0.2
CPUP	Villa Florida	150.69	57	PKPbc	PKPbc	07 46 27.9	+0.2
	comp=Z,1.2nm,0.6s,baz=252,slow=3.2,SNR=2.6						

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*TEH **08** 07:27:24.6, 32°.41N×49°.84E, h5km, ML3.2*
*ISCJB **08** 07:27:26.5±0.6, 32°.39N±0°.06×49°.81E±0°.05, h11km, Error ellipse: s-maj=9.1km s-min=4.8km az=22.6*
*THR **08** 07:27:26.9, 32°.47N×49°.82E, h14km, ML3.1*
ISC 08 07:27:24.8±1.1, **32°.41N**±0°.05×**49°.80E**±0°.03, **h11km, n28, σ1ˢ35**/30, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHBN	Jahan bin	0.75	104	ePg	Pb	07 27 39.5	-0.6
SHGR	Shooshtar-Gavs	0.90	251	eAML	AML	07 28 00.8	
	comp=N,614nm,0.2s						
SHGR				ePg	Pn	07 27 44.4	+1.0
SHGR				eAML	AML	07 28 07.8	
	comp=E,477nm,0.3s						
ZNGN	Zangian	0.94	108	ePg	Pn	07 27 43.5	-0.7
IPIR	Pirpir	0.96	73	ePg	Pg	07 27 43.1	-0.2
IPIR				IAMB	IAmb	07 27 59.3	
	comp=Z,6μm,0.5s						
ROKH	ROKH	1.04	93	ePg	Pn	07 27 45.1	-0.5
KHMZ	Khomeyn	1.33	6	ePn	Pg	07 27 50.5	+0.1
KHMZ	Khomeyn	1.33	6	ePg	Pg	07 27 50.5	+0.1
IKMR	Kamar-syah	1.63	313	ePn	Pb	07 27 54.8	0.0
IKLH	Kolahrood	1.75	58	ePn	Pb	07 27 56.9	-0.1
IKLH				IAMB	IAmb	07 27 59.8	
	comp=Z,3μm,0.4s						
IGAR	Gharneh	1.89	90	ePn	Pg	07 28 00.8	-0.3
IGAR				IAMB	IAmb	07 28 36.5	
	comp=Z,3μm,0.6s						
IDOB	Doab	1.94	316	ePn	Pb	07 27 59.8	-0.4
IKFM	Kafar-mosalman	1.98	305	ePn	Pb	07 28 00.7	-0.2
HSAM	Samen	2.06	331	ePn	Pb	07 28 02.6	+0.2
KLNJ	Kolanjah	2.07	132	ePn	Pb	07 28 02.7	+0.1
ASAO	Ashtian	2.14	5	ePn	Pb	07 28 03.6	-0.1
ASAO	Ashtian	2.14	5	ePn	Pb	07 28 03.6	-0.1
ASAO				eSg	Sg	07 28 32.2	-1.4
IZEF	Zefreh	2.18	77	ePn	Pb	07 28 04.5	0.0
IZEF				IAMB	IAmb	07 28 42.6	
	comp=Z,1μm,0.7s						
IRAM	Ramesheh	2.27	105	ePn	Pb	07 28 05.7	-0.2
IRAM				IAMB	IAmb	07 28 50.8	
	comp=Z,2μm,0.6s						
GHVR	GHOM	2.41	31	ePn	Pb	07 28 07.2	-1.1
GHVR	GHOM	2.41	31	ePn	Pb	07 28 07.2	-1.1
HAGD	Aghdareh	2.47	347	ePn	Pb	07 28 08.7	-0.6
NASN	Na'in	2.56	81	ePn	Pb	07 28 09.6	-1.4
NASN	Na'in	2.56	81	ePn	Pb	07 28 09.6	-1.4
NASN				eSg	Sg	07 28 46.7	-0.5
IKOM	Komasi	2.60	313	ePn	Pb	07 28 09.7	-1.9
QABG	Abgarm-Qazvin	3.29	357	ePn	Pb	07 28 20.3	-3.1
ANAR	Anarak	3.40	76	ePn	Pn	07 28 21.0	+3.1
IDHR	Dehrash	3.65	310	ePn	Pn	07 28 22.1	+0.6
ISHM	Shahmirzad	4.46	40	ePn	Pn	07 28 36.3	+3.7

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*ASRS **08** 07:30:49.2, 53°.74N×90°.99E, M3.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
IDC 08 07:30:54.7±3.2, **53°.79N**×**90°.72E, h0km, mb1 3.4**/3, **mb1mx3.2**/41, **mbtmp3.4**/3, **ML2.9**/3, **Error ellipse: s-maj=27.3km s-min=22.2km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.50	275	i		07 52 18.6	
	baz=91,slow=297,SNR=4.0						
ZALV	Zalesovo Beam	3.50	275	Pn	Pn	07 31 50.6	+0.3
	0.5nm,0.3s,baz=92,slow=13,SNR=4.0						
ZALV				Pg	Pb	07 31 57.0	-0.5
	2.8nm,0.3s,baz=85,slow=18,SNR=20						
ZALV				Lg	Lg	07 32 46.0	
	2.4nm,0.3s,baz=93,slow=25,SNR=4.9						
ZALV				Rg	Rg	07 33 02.9	
	91nm,1.1s,baz=91,slow=33,SNR=5.6						
KURBB	Kurchatov Arra	8.13	252	Pn	Pn	07 32 54.2	+0.3
	0.4nm,0.3s,baz=66,slow=14,SNR=15						
KURBB				Sn	Sn	07 34 24.1	-2.3
	0.1nm,0.3s,baz=69,slow=27,SNR=2.8						
KURBB				Lg	Lg	07 35 13.2	
	0.1nm,0.3s,baz=66,slow=32,SNR=5.0						
MKAR	Makanchi Array	8.84	221	Pn	Pn	07 33 03.8	+0.1
	0.5nm,0.3s,baz=35,slow=12,SNR=9.9						
MKAR				Sn	Sn	07 34 44.5	+0.6
	0.3nm,0.3s,baz=37,slow=22,SNR=4.1						
MKAR				Lg	Lg	07 35 31.4	
	0.1nm,0.3s,baz=31,slow=21,SNR=6.5						
SONM	Songino Array	11.56	115	Lg	Lg	07 36 46.8	
	0.4nm,0.3s,baz=300,slow=27,SNR=9.3						

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*ISCJB **08** 07:38:51.8±0.6, 15°.41N±0°.03×43°.2E±0°.2, h10km, Error ellipse: s-maj=22.9km s-min=4.7km az=179.8*
*ARO **08** 07:38:54.6, 15°N±20°×4°3E±10°0, h15km±99km, Ml3.3*
*SGS **08** 07:38:55, 15°.48N×43°.19E, h19km, Ml3.4*
ISC 08 07:38:50.7±1.0, **15°.55N**±0°.05×**43°.3E**±0°.1, **h10km, n14, σ0ˢ50**/16, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAZS	Jizan	1.54	348	P	Pg	07 39 21.3	+0.9
JAZS				S	Sg	07 39 41.1	+0.6
FRSS	Farasan al Kab	1.61	317	P	Pg	07 39 21.9	+0.2
BESHS	BESHS	1.85	347	P	Pg	07 39 25.8	-0.4
DJNS	Zahran al Janu	2.16	7	P	Pg	07 39 31.4	-0.7
NJRNS	Najran	2.27	23	P	Pb	07 39 32.2	+0.3
DRBS	Ad Darb	2.44	338	P	Pb	07 39 34.1	-0.7
KNGHS	KNGHS	2.74	5	P	Pb	07 39 39.4	-0.5
OBO	Obock	3.54	180	eP	Pn	07 39 45.7	-0.1
MAOD	Malaho	3.58	196	eP	Pn	07 39 46.1	-0.2
TDD	Tadjoura Ara	3.74	185	eP	Pn	07 39 48.3	-0.2
ATD	Arta Tunnel	4.02	186	eP	Pn	07 39 52.6	+0.2
ATD				eS	Sn	07 40 39.6	0.0
ATD	Arta Tunnel	4.02	186	eP	Pn	07 39 52.6	+0.2
ATA	Atar	4.07	181	eP	Pn	07 39 53.7	+0.6
SGH	Sud-Ghoubbet	4.13	189	eP	Pn	07 39 53.8	-0.2

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*ISCJB **08** 07:43:43.6±1.2, 6°.06S±0°.09×146°.7E±0°.2, h78km, mb3.7/4, Error ellipse: s-maj=29.1km s-min=11.5km az=168.1*
*IDC **08** 07:43:45.8±4.6, 6°.10S×146°.88E, h83km±44km, mb3.5/4, mb1 3.7/6, mb1mx3.4/36, mbtmp3.8/6, ML3.8/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/17, Error ellipse: s-maj=44.9km s-min=32.5km az=102.0*
ISC 08 07:43:45.1±1.3, **6°.1S**±0°.1×**146°.9E**±0°.3, **h78km, n9, σ0ˢ84**/8, **mb3.6**/4, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.34	175	P	Pn	07 44 34.6	-0.4
	9.6nm,0.3s,baz=341,slow=14,SNR=9.9						
PMG				S	Sn	07 45 14.6	+1.0
	8.4nm,0.3s,baz=159,slow=24,SNR=1.8						
PMG				LR	LR	07 46 15.9	
	comp=Z,220nm,21.2s,baz=329,slow=46						
JAY	Jayapura	7.07	300	LR	LR	07 48 43.9	
	comp=Z,68nm,20.9s,baz=140,slow=42						
WRA	Warramunga Arr	18.39	220	P	P	07 47 52.8	-1.2
	0.3nm,0.3s,baz=42,slow=11,SNR=3.1						
ASAR	Alice Springs	21.48	214	P	P	07 48 27.9	+0.4
	0.5nm,0.4s,baz=54,slow=9.0,SNR=16						
DZM	Mont Dzumac	24.74	132	LR	LR	07 57 32.3	
	comp=Z,69nm,19.6s,baz=28,slow=34						
STKA	Stephens Creek	26.15	190	P	P	07 49 11.6	-0.5
	0.6nm,0.4s,baz=0.0,slow=13,SNR=3.5						
CMAR	Chiang Mai Arr	53.14	298	P	P	07 52 56.0	+0.6
	1.0nm,0.3s,baz=115,slow=6.1,SNR=1.2						
ILAR	Eielson Array	85.59	23	P	P	07 56 14.4	-0.2
	0.7nm,0.7s,baz=249,slow=4.5,SNR=3.2						
TORD	Torodi Ar. Bea	144.96	284	PKPbc	PKPbc	08 03 14.0	+0.3
	1.0nm,0.9s,baz=92,slow=3.4,SNR=3.8						

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*EAF **08** 07:47:19.3±3.0, 20°.24S×35°.53E, h10km, MD3.6*
*BUL **08** 07:47:26.6±0.6, 20°.69S×34°.91E, h10km, MD3.9*
*PRE **08** 07:47:43.0±1.2, 21°.24S×33°.66E, h10km, ML3.6*
*IDC **08** 07:47:47.2±1.8, 21°.11S×32°.89E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.6/34, mbtmp4.1/3, ML4.4/1, MS3.0/1, Ms1 2.9/1, ms1mx2.6/23, Error ellipse: s-maj=45.8km s-min=29.1km az=92.0*
*NEIC **08** 07:47:47.1±2.1, 21°.03S×32°.90E, h15km±6km, mb4.4/3, Error ellipse: s-maj=19.5km s-min=8.8km az=95.0*
*ISCJB **08** 07:47:47.0±1.0, 21°.02S±0°.05×32°.80E±0°.08, h15km, mb4.2/3, Error ellipse: s-maj=12.0km s-min=6.6km az=21.5*
ISC 08 07:47:46.9±1.0, **21°.05S**±0°.06×**33°.03E**±0°.07, **h15km, n32, σ2ˢ22**/46, **mb4.1**/3, **Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	3.08	245	i P	Pb	07 48 39.4	-2.0
MSNA	Messina	3.08	245	eP	Pb	07 48 40.0	-1.4
MSNA				eS	Sb	07 49 19.4	+0.6
MSNA				AML	AML	07 49 38.9	
	comp=Z,282nm,0.2s						
MSNA	Messina	3.08	245	i P	Pb	07 48 39.4	-2.0
BLWY	Bulawayo	4.24	282	i P	Pn	07 48 54.8	+3.7
BLWY				i S	Sg	07 50 03.7	+0.6
BLWY	Bulawayo	4.24	282	i P	Pn	07 48 54.8	+3.7
BLWY				i S	Sg	07 50 03.7	+0.6
MATP	Matopo	4.29	278	i P	Pn	07 48 56.0	+4.2
MATP	Matopo	4.29	278	i P	Pn	07 48 56.0	+4.2
LSZ	Lusaka	7.36	321	ePn	Pn	07 49 33.2	-0.8
LSZ				eSn	Sn	07 50 55.0	-2.4
PRYS	Parys	7.81	220	eP	Pn	07 49 41.2	+1.0
PRYS				eS	Sn	07 51 08.4	-0.1
PRYS				AML	AML	07 52 06.0	
	comp=Z,47nm,0.6s						
LBTB	Lobatse	7.90	239	ePn	Pn	07 49 41.7	+0.3
LBTB				eSn	Sn	07 51 08.3	-2.3
LBTB	Lobatse	7.90	239	eP	Pn	07 49 45.1	+3.7
LBTB				eS	Sn	07 51 14.3	+3.7
LBTB				AML	AML	07 52 04.2	
	comp=Z,63nm,0.6s						
SWZ	Schweizer	9.31	228	eP	Pn	07 50 02.5	+1.8
SWZ				eS	Sn	07 51 45.6	+0.3
SWZ				AML	AML	07 52 27.1	
	comp=Z,18nm,0.6s						
BOSA	Boshof	10.32	222	i P	Pn	07 50 15.0	+0.5
BOSA	Boshof	10.32	222	Pn	Pn	07 50 16.9	+2.3
	comp=Z,2.1nm,0.3s,baz=46,slow=13,SNR=24						
BOSA				Sn	Sn	07 52 08.2	-1.8
	comp=Z,1.7nm,0.3s,baz=92,slow=7.2,SNR=5.5						
BOSA				Lg	Lg	07 53 09.2	
	comp=Z,1.8nm,0.3s,baz=129,slow=20,SNR=3.9						
BOSA				LR	LR	07 54 20.1	
	comp=Z,87nm,19.4s,baz=35,slow=38						
BOSA	Boshof	10.32	222	ePn	Pn	07 50 14.8	+0.2
BOSA				eSn	Sn	07 52 06.9	-3.1
BOSA	Boshof	10.32	222	eP	Pn	07 50 16.1	+1.6
BOSA				eS	Sn	07 52 07.2	-2.8
BOSA				AML	AML	07 53 18.2	
	comp=Z,22nm,0.7s						
BOSA	Boshof	10.32	222	i P	Pn	07 50 15.0	+0.5
UPI	Upington	12.94	233	eP	Pn	07 50 53.2	+2.9
UPI				eS	Sn	07 53 13.1	-1.1
UPI				AML	AML	07 54 49.6	
	comp=Z,20nm,0.7s						
KEIM	Keimoes	13.33	233	eP	Pn	07 50 59.4	+3.7
KEIM				eS	Sn	07 53 22.6	-1.2
KEIM				AML	AML	07 53 31.9	
	comp=Z,8.7nm,0.6s						
TSUM	Tsumeb	14.62	275	i P	Pn	07 51 15.9	+2.4
TSUM	Tsumeb	14.62	275	ePn	Pn	07 51 13.0	-0.5
TSUM				eSn	Sn	07 53 52.7	-2.8
TSUM	Tsumeb	14.62	275	i P	Pn	07 51 15.9	+2.4
SUR	Sutherland	15.68	221	ePn	Pn	07 51 28.7	+1.2
	comp=Z,51nm,1.5s						
SUR				eSn	Sn	07 54 19.9	-1.3
TOA0	Torodi Ar. Sit	45.86	315	eP	P	07 56 08.2	-0.6
	comp=Z,13nm,1.5s						
TORD	Torodi Ar. Bea	45.86	315	P	P	07 56 09.7	+0.9
	comp=Z,1.8nm,0.8s,baz=134,slow=8.2,SNR=8.2						
TOA1	Torodi Ar. Sit	45.86	315	eP	P	07 56 09.7	+0.8
MAW	Mawson	50.18	166	P	P	07 56 42.9	+1.3
	comp=Z,1.2nm,0.8s,baz=335,slow=12,SNR=2.3						
MAW	Mawson	50.18	166	eP	P	07 56 42.7	+1.1
	comp=Z,1.4nm,1.4s						
KHC	Kasperske Hory	71.99	347	ePcP	PcP	07 59 25.1	-3.3
BLO	Bloomington	125.65	304	ePKPpre	PKPpre	08 06 39.2	
NV01	Mina Array Sit	149.85	311	ePKPab	PKPab	08 07 41.6	-0.9
NVAR	Mina Array Bea	149.85	311	PKPbc	PKPab	08 07 41.6	-0.9
	comp=Z,0.2nm,0.6s,baz=49,slow=4.2,SNR=3.2						

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*EAF **08** 08:04:22.7±1.4, 20°.84S×33°.68E, h10km, MD3.9*
*PRE **08** 08:04:22.2±0.7, 21°.55S×33°.68E, h5km, ML3.4*
*IDC **08** 08:04:24.3±1.8, 21°.12S×32°.98E, h0km, mb3.8/2, mb1 3.8/3, mb1mx3.5/27, mbtmp3.8/3, ML4.0/1, MS2.7/1, Ms1 2.5/1, ms1mx2.3/40, Error ellipse: s-maj=46.0km s-min=29.9km az=94.0*
*BUL **08** 08:04:24.6±2.0, 20°.83S×33°.66E, h10km, MD4.3*
*NEIC **08** 08:04:25.8±2.7, 21°.05S×33°.03E, h10km±2km, mb4.1/3, Error ellipse: s-maj=19.6km s-min=3.3km az=92.0*
ISC 08 08:04:22.0±1.5, **21°.30S**±0°.07×**33°.6E**±0°.1, **h10km, n31, σ2ˢ73**/40, **mb4.0**/3, **Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	3.45	252	i P	Pn	08 05 19.7	+3.8
MSNA				i S	Sn	08 06 01.3	+4.6
MSNA	Messina	3.45	252	eP	Pn	08 05 17.8	+2.0
MSNA				eS	Sn	08 05 58.6	+1.8
MSNA				AML	AML	08 06 16.0	
	comp=Z,178nm,0.4s						
MSNA	Messina	3.45	252	i P	Pn	08 05 19.7	+3.8
MSNA				i S	Sn	08 06 01.3	+4.6
MSNA	Messina	3.45	252	i P	Pn	08 05 19.7	+3.8
MSNA				i S	Sn	08 06 01.3	+4.6
BLWY	Bulawayo	4.77	283	i P	Pn	08 05 34.4	+0.2
BLWY	Bulawayo	4.77	283	i P	Pn	08 05 34.4	+0.2
BLWY	Bulawayo	4.77	283	i P	Pn	08 05 34.4	+0.2
MATP	Matopo	4.81	280	i P	Pn	08 05 35.4	+0.7
MATP				i S	Sn	08 06 29.1	-1.5
MATP	Matopo	4.81	280	i P	Pn	08 05 35.4	+0.7
MATP				i S	Sn	08 06 29.1	-1.5
MATP	Matopo	4.81	280	i P	Pn	08 05 35.4	+0.7
MATP				i S	Sn	08 06 29.1	-1.5
LSZ	Lusaka	7.87	319	i P	Pn	08 06 14.1	-2.6
LSZ				i S	Sn	08 07 31.2	-15
LSZ	Lusaka	7.87	319	ePn	Pn	08 06 13.9	-2.9
LSZ				eSn	Sn	08 07 36.4	-10
LSZ	Lusaka	7.87	319	i P	Pn	08 06 14.1	-2.6
LSZ				i S	Sn	08 07 31.2	-15
LSZ	Lusaka	7.87	319	i P	Pn	08 06 14.1	-2.6
LSZ				i S	Sn	08 07 31.2	-15
LBTB	Lobatse	8.21	242	ePn	Pn	08 06 22.4	+1.1
LBTB				eSn	Sn	08 07 51.6	-2.6
LBTB	Lobatse	8.21	242	eP	Pn	08 06 23.0	+1.7
LBTB				eS	Sn	08 07 51.5	-2.7
LBTB				AML	AML	08 08 39.7	
	comp=Z,32nm,0.6s						
BOSA	Boshof	10.47	224	i P	Pn	08 06 54.3	+1.9
BOSA				i S	Sn	08 08 48.0	-1.9
BOSA	Boshof	10.47	224	Pn	Pn	08 06 53.6	+1.2
	comp=Z,0.8nm,0.3s,baz=48,slow=13,SNR=11						
BOSA				Sn	Sn	08 08 45.5	-4.4
	comp=Z,0.7nm,0.3s,baz=315,slow=20,SNR=4.5						
BOSA				Lg	Lg	08 09 49.2	
	comp=Z,1.1nm,0.3s,baz=319,slow=22,SNR=5.9						
BOSA				LR	LR	08 11 19.1	
	comp=Z,38nm,20.0s,baz=20,slow=40						
BOSA	Boshof	10.47	224	ePn	Pn	08 06 53.7	+1.3
BOSA				eSn	Sn	08 08 47.8	-2.1
BOSA	Boshof	10.47	224	eP	Pn	08 06 53.3	+0.9
BOSA				eS	Sn	08 08 43.0	-6.9
BOSA				AML	AML	08 10 16.6	
	comp=Z,12nm,0.7s						
BOSA	Boshof	10.47	224	i P	Pn	08 06 54.3	+1.9
BOSA				i S	Sn	08 08 48.0	-1.9
BOSA	Boshof	10.47	224	i P	Pn	08 06 54.3	+1.9
BOSA				i S	Sn	08 08 48.0	-1.9
TSUM	Tsumeb	15.14	275	ePn	Pn	08 07 52.9	-3.3
SUR	Sutherland	15.83	223	ePn	P	08 08 07.4	-1.7
	comp=Z,13nm,1.2s						
TOA0	Torodi Ar. Sit	46.38	315	eP	P	08 12 49.2	+0.3
	comp=Z,9.3nm,1.4s						

TORD	Torodi Ar. Bea	46.38	315	P	P	08 12 47.5	-1.3
	comp=Z,1.2nm,0.8s,baz=139,slow=7.2,SNR=5.2						
TOA1	Torodi Ar. Sit	46.39	315	*e*P	P	08 12 47.5	-1.4
MAW	Mawson	49.82	166	P	P	08 13 20.1	+5.3
	comp=Z,0.9nm,0.7s,baz=315,slow=4.3,SNR=1.7						
MAW	Mawson	49.82	166	*e*P	P	08 13 20.4	+5.6
	comp=Z,1.2nm,1.4s						
NV01	Mina Array Sit	150.39	311	*e*PKPbc	PKiKP	08 24 18.5	+3.4
NVAR	Mina Array Bea	150.39	311	PKPbc	PKiKP	08 24 18.5	+3.4
	comp=Z,0.2nm,0.5s,baz=74,slow=6.8,SNR=2.6						

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*WEL **08** 08:15:50.5±0.6, 34°S±4°×17°9W±°, h33km, M4.7/92, mB5.3/51, ML5.1/73, MLv4.9/92, Mw(mB)4.7/51, Error ellipse: s-maj=0.0km s-min=0.0km az=108.2*

*IDC **08** 08:16:06.7±3.6, 35.15S×179.77W, h200km±34km, mb3.7/5, mb1 4.0/7, mb1mx3.6/23, mbtmp4.3/7, MS3.0/2, Ms1 3.0/2, ms1mx2.6/15, Error ellipse: s-maj=41.8km s-min=24.7km az=180.0*

ISC 08 08:15:49.9±0.7**, 34.06S**±0.06×**178.88W**±0.09**, h50**km**, n152, σ2.33**/152**, mb4.1**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.17	212	P	Pn	08 16 53.9	+2.9
MXZ				S	Sn	08 17 38.7	+0.2
WMGZ	Waiomatatini S	4.34	210	P	Pn	08 16 56.2	+2.9
WMGZ				S	Sn	08 17 44.3	+1.6
PKGZ	Pakihiroa	4.55	212	P	Pn	08 16 58.0	+1.8
HAZ	Te Kaha	4.58	215	P	Pn	08 16 59.1	+2.7
PUZ	Puketiti	4.63	209	P	Pn	08 16 59.2	+2.0
WIZ	White Island	4.71	222	P	Pn	08 17 00.8	+2.5
WIZ				S	Sn	08 17 50.1	-1.5
WSRZ	White Island S	4.71	222	P	Pn	08 17 02.4	+4.1
RUGZ	Raukumara Rang	4.79	215	P	Pn	08 17 01.2	+1.6
TWGZ	Tauwhareparae	4.83	211	P	Pn	08 17 01.9	+1.8
GLKZ	Green Lake	4.85	10	P	Pn	08 17 00.7	+0.4
GLKZ				S	Sn	08 17 54.9	-0.3
CNGZ	Carnagh Statio	5.00	207	P	Pn	08 17 04.8	+2.5
WHRZ	Whale Island	5.06	220	P	Pn	08 17 07.1	+3.9
MYRZ	Mayor Island	5.11	230	P	Pn	08 17 07.3	+3.5
TKGZ	Te Karaka	5.11	210	P	Pn	08 17 04.8	+1.1
TKGZ				S	Sn	08 17 59.3	-2.1
GRZ	Great Barrier	5.13	243	P	Pn	08 17 05.5	+1.4
KUZ	Kuaotunu	5.16	237	P	Pn	08 17 06.3	+1.8
MWZ	Matawai	5.16	213	P	Pn	08 17 05.6	+1.0
OPRZ	Ohinepanea	5.29	223	P	Pn	08 17 09.0	+2.7
URZ	Urewera	5.30	217	P	Pn	08 17 08.6	+2.2
	30nm,0.3s,baz=264,slow=4.6,SNR=273						
URZ				S	Sn	08 18 02.2	-3.9
	30nm,0.3s,baz=350,slow=21,SNR=13						
URZ	Urewera	5.30	217	P	Pn	08 17 07.3	+0.9
MARZ	Manawahe	5.32	221	P	Pn	08 17 09.8	+3.0
RAGZ	Rawiri	5.34	213	P	Pn	08 17 08.2	+1.1
RIGZ	Rimuhau	5.37	209	P	Pn	08 17 09.3	+1.9
RIGZ				S	Sn	08 18 05.3	-2.6
EDRZ	Edgecumbe	5.37	220	P	Pn	08 17 10.0	+2.4
TGRZ	Tauranga	5.38	226	P	Pn	08 17 10.1	+2.5
LIRZ	Lichensteins R	5.50	223	P	Pn	08 17 11.7	+2.6
PRGZ	Paritu Road	5.51	207	P	Pn	08 17 10.5	+1.2
OMRZ	Omania	5.57	222	P	Pn	08 17 12.8	+2.6
KARZ	Kaharoa	5.59	224	P	Pn	08 17 12.8	+2.4
TARZ	Mount Tarawera	5.59	221	P	Pn	08 17 13.1	+2.5
WIAZ	Waiheke Island	5.59	239	P	Pn	08 17 12.4	+1.9
SNGZ	Shannon Statio	5.61	212	P	Pn	08 17 12.3	+1.6
SNGZ	Shannon Statio	5.61	212	P	Sn	08 18 16.9	+3.0
MUGZ	Murupara	5.64	217	P	Pn	08 17 11.5	+0.4
RTZ	Ruatahuna	5.64	215	P	Pn	08 17 12.1	+0.9
RTZ	Ruatahuna	5.64	215	P	Sn	08 18 18.4	+3.8
KMRZ	Kaimai	5.65	227	P	Pn	08 17 13.5	+2.3
RRRZ	Republican Roa	5.66	220	P	Pn	08 17 13.8	+2.3
KNZ	Kokohu	5.67	208	P	Pn	08 17 13.7	+2.1
KNZ	Kokohu	5.67	208	P	Sn	08 18 19.0	+3.6
MHGZ	Mahia Peninsul	5.70	206	P	Pn	08 17 13.4	+1.4
UTU	Utuhina	5.72	223	P	Pn	08 17 16.8	+4.5
MKAZ	Moumakai	5.73	236	P	Pn	08 17 14.4	+2.1
MBAZ	Motutapu North	5.75	240	P	Pn	08 17 14.4	+1.8
HSRZ	Hossack Road	5.79	221	P	Pn	08 17 16.1	+3.0
ETAZ	East Tamaki Re	5.82	238	P	Pn	08 17 16.0	+2.5
HRRZ	Handcock Road	5.83	221	P	Pn	08 17 16.4	+2.7
RAHZ	Arahi	5.83	213	P	Pn	08 17 15.7	+1.9
PRRZ	Plateau Road	5.85	219	P	Pn	08 17 14.8	+0.8
TOZ	Tahuroa Road	5.85	230	P	Pn	08 17 16.5	+2.5
WCZ	Waipu Caves	5.87	249	P	Pn	08 17 15.4	+1.2
GRRZ	Galatos Road	5.89	222	P	Pn	08 17 16.5	+1.9
MTHZ	Maungataniwha	5.89	215	P	Pn	08 17 15.9	+1.3
WHHZ	Waihua	5.90	211	P	Pn	08 17 17.5	+2.8
ALRZ	Allen Road	5.92	219	P	Pn	08 17 17.0	+2.0
WPRZ	Whakapapatarin	5.99	221	P	Pn	08 17 17.6	+1.8
MRHZ	Matea Rd	6.09	217	P	Pn	08 17 18.0	+0.8
NMHZ	Naumai	6.11	213	P	Pn	08 17 18.2	+0.7
KUTZ	Kaahu Road	6.15	223	P	Pn	08 17 20.3	+2.2
ARHZ	Aropaoanui	6.16	211	P	Pn	08 17 19.7	+1.5
TLZ	Tolley Road	6.21	225	P	Pn	08 17 20.7	+1.8
OUZ	Omahuta	6.31	257	P	Pn	08 17 20.2	0.0
BKZ	Black Stump Fm	6.31	215	P	Pn	08 17 20.5	+0.2
WATZ	Wairara	6.35	222	P	Pn	08 17 22.6	+1.7
MCHZ	McNeill Hill	6.44	212	P	Pn	08 17 23.8	+1.8
RATZ	Rangitukua	6.45	220	P	Pn	08 17 23.4	+1.2
CKHZ	Cape Kidnapper	6.46	209	P	Pn	08 17 23.5	+1.2
RITZ	Rihia Road	6.48	219	P	Pn	08 17 23.3	+0.6
KWHZ	Kaweka Forest	6.55	214	P	Pn	08 17 23.7	+0.1
KAHZ	Kahuranaki	6.66	209	P	Pn	08 17 25.3	+0.2
KRVZ	Karewarewa	6.68	220	P	Pn	08 17 26.5	+1.0
OTVZ	Oturere	6.72	219	P	Pn	08 17 27.5	+1.4
WTVZ	West Tongariro	6.72	220	P	Pn	08 17 26.5	+0.4
HIZ	Hauiti	6.73	227	P	Pn	08 17 29.1	+3.0
KRHZ	Kereru	6.75	213	P	Pn	08 17 26.1	-0.2
NGZ	Ngauruhoe	6.76	219	P	Pn	08 17 28.1	+1.4
BHHZ	Black Hill Sta	6.77	215	P	Pn	08 17 27.0	+0.4
TWVZ	Taurewa	6.77	221	P	Pn	08 17 28.5	+1.7
TUVZ	Tukino	6.80	219	P	Pn	08 17 28.5	+1.3
FWVZ	Far West T-bar	6.85	219	P	Pn	08 17 28.8	+1.0
WHVZ	Whangaehu Hut	6.85	219	P	Pn	08 17 29.0	+1.2
DRZ	Dome Shelter	6.86	219	P	Pn	08 17 29.7	+1.6
MOVZ	Moawhango	6.86	217	P	Pn	08 17 28.4	+0.5
PXZ	Pawanui	6.86	208	P	Pn	08 17 28.8	+1.0
PKVZ	Pokaka	6.98	220	P	Pn	08 17 30.7	+1.1
MTVZ	Mangateitei	6.99	219	P	Pn	08 17 30.3	+0.6
WPHZ	Waipukurau	7.06	211	P	Pn	08 17 30.9	+0.3
PRHZ	Porangahau	7.15	209	P	Pn	08 17 31.7	-0.2
VRZ	Vera Road	7.19	224	P	Pn	08 17 33.9	+1.6
DVHZ	Dannevirke	7.37	211	P	Pn	08 17 34.4	-0.5
ANWZ	Angora Road	7.38	209	P	Pn	08 17 35.4	+0.5
WAZ	Wanganui	7.51	219	P	Pn	08 17 37.0	+0.3
DREZ	Durham Road	7.56	225	P	Pn	08 17 39.8	+2.4
LREZ	Lake Rotokare	7.62	223	P	Pn	08 17 39.2	+0.9
POWZ	Post Office Ro	7.62	212	P	Pn	08 17 38.9	+0.6
BFZ	Birch Farm	7.66	209	P	Pn	08 17 37.9	-0.9
PRWZ	Pori Road	7.67	211	P	Pn	08 17 39.4	+0.5
PKE	Pukeiti	7.69	226	P	Pn	08 17 41.9	+2.7
KHEZ	Kahui Hut	7.74	225	P	Pn	08 17 41.7	+1.8
CPWZ	Castlepoint	7.87	208	P	Pn	08 17 42.0	+0.3
TIWZ	Tintock	7.89	210	P	Pn	08 17 41.5	-0.5
MRZ	Mangatainoka R	7.93	212	P	Pn	08 17 40.3	-2.1
HOWZ	Holdsworth Sta	8.15	211	P	Pn	08 17 43.4	-2.1
TMWZ	Te Maipa	8.16	209	P	Pn	08 17 44.7	-1.1
MTW	Mount Morrison	8.37	211	P	Pn	08 17 46.5	-2.0
TRWZ	Traveller	8.49	209	P	Pn	08 17 47.5	-2.7
CAW	Cannon Point	8.52	213	P	Pn	08 17 48.5	-2.1
PAWZ	Paruwai Farm	8.59	210	P	Pn	08 17 49.6	-1.9
MSWZ	Moikau Station	8.69	211	P	Pn	08 17 51.5	-1.4
PLWZ	Palliser	8.81	210	P	Pn	08 17 52.4	-2.3
DUWZ	D'Urville Isla	8.83	218	P	Pn	08 17 52.5	-2.3
BHW	Baring Head	8.85	212	P	Pn	08 17 53.0	-2.0
TCW	Tory Channel	8.96	215	P	Pn	08 17 53.7	-3.0
TUWZ	Tuamarina	9.29	216	P	Pn	08 17 57.6	-3.5
NNZ	Nelson	9.41	218	P	Pn	08 17 59.6	-3.2
BSWZ	Blackbirch Sta	9.54	215	P	Pn	08 18 01.6	-3.0
QRZ	Quartz Range	9.60	223	P	Pn	08 18 01.8	-3.6
CTZ	Chatham Island	9.82	170	P	Pn	08 18 16.3	+8.0
CTZ				S	Sn	08 19 54.9	-2.2
THZ	Tophouse	10.06	218	P	Pn	08 18 07.9	-3.8
KHZ	Kahutara	10.25	213	P	Pn	08 18 11.6	-2.6
DSZ	Denniston Nort	10.62	221	P	Pn	08 18 15.8	-3.6
GVZ	Greta Valley S	10.91	213	P	Pn	08 18 19.3	-4.0
LTZ	Lake Taylor	11.13	216	P	Pn	08 18 21.7	-4.6
INZ	Inchbonnie	11.50	218	P	Pn	08 18 26.8	-4.5
OXZ	Oxford	11.65	215	P	Pn	08 18 28.4	-4.9
MQZ	McQueen's Vall	11.67	212	P	Pn	08 18 28.3	-5.2
AKCZ	Akaroa Harbour	11.69	211	P	Pn	08 18 30.0	-3.9
WVZ	Waitaha Valley	12.12	219	P	Pn	08 18 38.3	-1.4
RPZ	Rata Peaks	12.42	216	P	Pn	08 18 38.7	-5.1
	4.6nm,0.3s,baz=60,slow=1.9,SNR=18						
RPZ				S	Sn	08 20 46.4	-14
	2.5nm,0.3s,baz=117,slow=20,SNR=10						
RPZ	Rata Peaks	12.42	216	P	Pn	08 18 39.1	-4.7
LBZ	Lake Benmore	13.33	216	P	Pn	08 18 51.2	-5.1
ODZ	Otahua Downs	13.61	213	P	Pn	08 18 55.0	-5.1
WKZ	Wanaka	14.23	217	P	Pn	08 19 04.2	-4.3
WHZ	Wether Hill Ro	15.52	216	P	Pn	08 19 21.5	-3.8
PPT	Papeete	30.93	65	LR	LR	08 35 00.8	
	comp=Z,29nm,19.2s,baz=202,slow=35						
CTA	Charters Tower	33.84	285	P	P	08 22 26.9	-0.7
	7.8nm,0.9s,baz=127,slow=7.7,SNR=2.2						
ASAR	Alice Springs	42.30	271	P	P	08 23 35.7	-3.2
	1.1nm,0.4s,baz=114,slow=7.2,SNR=19						
ASAR				PcP	PcP	08 25 27.7	-4.2
	0.7nm,0.6s,baz=114,slow=4.2,SNR=2.6						
WRA	Warramunga Arr	43.62	276	P	P	08 23 46.3	-3.3
	1.3nm,0.3s,baz=106,slow=7.9,SNR=24						
WRA				PcP	PP	08 25 32.9	+1.2
	0.7nm,0.7s,baz=110,slow=4.8,SNR=2.5						
SNAA	Sanae	74.53	179	P	P	08 27 26.9	+4.1
VNA3	Neumayer Olymp	74.71	176	P	P	08 27 28.0	+4.2
VNA2	Neumayer--Watz	75.14	177	P	P	08 27 30.9	+4.7
	baz=173,slow=5.1						
VNA1	Neumayer--Stat	75.37	177	P	P	08 27 32.2	+4.6
KSRS	Korea Array	86.66	320	LR	LR	09 05 38.6	
	comp=Z,5.9nm,18.1s,baz=290,slow=34						
PETK	Petropavlovsk-	89.17	346	P	P	08 28 42.5	+2.9
	2.8nm,0.7s,baz=111,slow=7.9,SNR=5.2						
NVAR	Mina Array Bea	91.42	43	P	P	08 28 56.9	+6.2
	0.3nm,0.7s,baz=205,slow=7.7,SNR=3.3						
ARCES	ARCESS Array B	141.98	346	PKP	PKPdf	08 35 13.4	-1.8
	2.1nm,0.8s,baz=46,slow=2.1,SNR=5.6						
FINES	FINESS Array B	148.27	337	PKPbc	PKPbc	08 35 30.0	+0.4
	5.1nm,0.5s,baz=43,slow=3.5,SNR=42						
NB2	NORSAR Subarra	152.22	349	PKP	PKiKP	08 35 40.3	+0.8
	comp=Z,1.2nm,0.4s,baz=14,slow=4.1						
NOA	NORSAR Array B	152.22	349	PKPbc	PKiKP	08 35 39.4	-0.1
	comp=Z,1.4nm,0.5s,baz=14,slow=4.1,SNR=8.8						
HFS	Hagfors	152.64	346	PKPbc	PKiKP	08 35 40.5	+0.2
	comp=Z,3.5nm,0.8s,baz=49,slow=4.5,SNR=11						
AKASG	Malin Array Be	153.62	318	PKPbc	PKPbc	08 35 41.2	-1.4
	comp=Z,0.4nm,0.4s,baz=66,slow=2.1,SNR=3.4						
TORD	Torodi Ar. Bea	159.18	182	PKPbc	PKPbc	08 36 01.2	
	comp=Z,0.3nm,0.5s,baz=157,slow=2.7,SNR=4.5						

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*ISCJB **08** 08:34:15.8±0.7, 35.45N±0.05×21.34E±0.05, h10km, mb3.5/5, Error ellipse: s-maj=7.4km s-min=5.1km az=28.8*

*ATH **08** 08:34:17.9, 35.60N×21.55E, h10km±2km, ML3.1/8, Error ellipse: s-maj=4.1km s-min=1.9km az=45.0*

*IDC **08** 08:34:20.6±3.7, 36.11N×21.86E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.4/40, mbtmp3.5/7, ML2.6/2, MS3.3/3, Ms1 3.3/3, ms1mx2.5/44, Error ellipse: s-maj=78.0km s-min=20.8km az=30.0*

ISC 08 08:34:17.2±1.1**, 35.61N**±0.06×**21.46E**±0.05**, h10**km**, n46, σ2.31**/56**, mb3.7**/5**, 1C, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	1.30	10	P	Pb	08 34 42.5	+0.8
PYL				S	Sg	08 35 01.0	+1.9
PYL	PYLOS	1.30	10	P	Pb	08 34 42.6	+0.9
PYL				S	Sg	08 35 00.5	+1.4
PYL				AML	AML	08 35 07.3	
	comp=N,824µm,0.6s						
PYL				AML	AML	08 35 10.3	
	comp=E,947µm,0.4s						
KTHR	Kythira	1.41	62	P	Pg	08 34 44.5	+0.2
KTHA	Kythira Island	1.45	63	P	Pg	08 34 44.4	-0.6
KTHA	Kythira Island	1.45	63	P	Pb	08 34 43.8	-0.5
KTHA				S	Sn	08 35 02.2	-0.5
KTHA				AML	AML	08 35 07.0	
	comp=N,1115µm,0.4s						
KTHA				AML	AML	08 35 10.6	
	comp=E,1993µm,0.6s						
ANKY	Antikythira Is	1.52	80	P	Pg	08 34 46.1	-0.3
ANKY	Antikythira Is	1.52	80	P	Pg	08 34 45.7	-0.7
ANKY				S	Sg	08 35 05.1	-1.0
ANKY				AML	AML	08 35 13.6	
	comp=N,888µm,0.8s						
ANKY				AML	AML	08 35 14.1	
	comp=E,1028µm,0.5s						
ITM	Ithomi	1.61	13	P	Pb	08 34 47.8	+0.8
ITM	Ithomi	1.61	13	P	Pb	08 34 47.5	+0.5
ITM				S	Sg	08 35 10.3	+1.4
ITM				AML	AML	08 35 16.9	
	comp=N,997µm,0.4s						
ITM				AML	AML	08 35 18.6	
	comp=E,1160µm,0.4s						
VLI	Veliai	1.63	47	P	Pg	08 34 47.8	-0.6
VLI	Veliai	1.63	47	P	Pg	08 34 47.9	-0.6
VLI				S	Sg	08 35 09.6	+0.1
VLI				AML	AML	08 35 16.6	
	comp=E,1389µm,0.8s						
VLI				AML	AML	08 35 20.2	
	comp=N,1143µm,0.7s						
VLX	Vlachokerasia	1.90	23	P	Pb	08 34 52.1	0.0
VLX				S	Sg	08 35 18.5	0.0
VLX				AML	AML	08 35 26.9	
	comp=E,1210µm,0.4s						
VLX				AML	AML	08 35 30.4	
	comp=N,802µm,0.9s						
AMT	Artemida-Makis	1.93	6	P	Pb	08 34 52.9	+0.5
AMT	Artemida-Makis	1.93	6	P	Pb	08 34 53.0	+0.5
AMT				S	Sg	08 35 20.2	+1.1
AMT				AML	AML	08 35 35.8	
	comp=N,1429µm,0.6s						
AMT				AML	AML	08 35 37.8	
	comp=E,884µm,1.1s						
TRIP	Tripoli	2.02	19	P	Pb	08 34 54.9	+0.9
TRIP				S	Sb	08 35 20.0	+0.7
TRIP				AML	AML	08 35 31.1	
	comp=N,515µm,0.6s						
TRIP				AML	AML	08 35 31.4	
	comp=E,510µm,0.5s						
IMMV	Iera Moni Meta	2.06	93	P	Pb	08 34 53.9	-0.8
VAM	Vamos	2.25	94	P	Pb	08 34 56.4	-1.4
DID	Didima	2.37	37	P	Pb	08 34 58.7	-1.3
DID	Didima	2.37	37	P	Pn	08 34 57.7	+1.5
GUR	Goura	2.42	17	P	Pb	08 34 59.6	-1.3
KLV	Kalavryta, Ach	2.49	13	P	Pn	08 34 59.9	+2.0
IDI	Anoyia	2.82	96	Pn	Pn	08 35 04.4	+2.0
	comp=E,1.2nm,0.3s,baz=294,slow=12,SNR=6.1						
IDI				Sn	Sn	08 35 36.6	+0.1
	comp=E,6.4nm,0.3s,baz=310,slow=19,SNR=7.2						
KALE	Kalithea	2.83	11	P	Pb	08 35 06.5	-1.3
EFP	Efpalio	2.83	7	P	Pb	08 35 07.8	0.0
FSK	Fiskardo	2.93	346	P	Pb	08 35 08.0	-1.5
KEK	Kerkira	4.30	343	P	Pn	08 35 26.1	+3.4
DBRK	Dubrovnik	7.50	341	*e*Pn	Pn	08 36 05.6	-1.0
DBRK				Sn	Sn	08 37 26.4	-5.3
STON	Ston	7.81	339	*e*Pn	Pn	08 36 12.6	+1.8
STON				Sn	Sn	08 37 33.0	-6.3
MAKA	Makarska	8.40	337	*e*Pn	Pn	08 36 20.9	+2.0
MAKA				Sn	Sn	08 37 48.5	-5.2
HVAR	Hvar	8.49	334	Sn	Sn	08 37 47.5	-8.5
ZIRJ	Zirje	9.20	333	*e*Pn	Pn	08 36 31.5	+1.7
ZIRJ				Sn	Sn	08 38 06.0	-7.3
KIJV	Kijevo	9.24	337	*e*Pn	Pn	08 36 31.5	+1.1
MORI	Morici	9.35	334	*i* Pn	Pn	08 36 34.6	+2.6
MORI				Sn	Sn	08 38 12.4	-4.8
DUGI	Dugi Otok	9.71	331	*e*Pn	Pn	08 36 40.1	+3.2
UDBI	Udbina	9.91	336	Sn	Sn	08 38 25.1	-5.9
NVLJ	Novalja	10.26	333	Sn	Sn	08 38 33.4	-6.1
MLR	Muntele Rosu	10.44	18	LR	LR	08 41 47.2	
	comp=E,92nm,18.3s,baz=108,slow=45						
BRTR	Keskin Array B	10.49	63	Pn	Pn	08 36 48.7	+1.0
	comp=E,0.1nm,0.3s,baz=258,slow=13,SNR=3.1						
BURAR	Bucovina Array	12.31	12	⇑*i*P	Pn	08 37 12.5	-0.1
ASF	Jabal al Asfar	13.28	101	LR	LR	08 42 51.0	
	comp=E,206nm,21.6s,baz=352,slow=39						
KVAR	Kislovodsk Arr	18.29	56	LR	LR	08 46 53.3	
	comp=E,105nm,21.2s,baz=93,slow=42						
HFS	Hagfors	25.05	351	P	P	08 39 42.0	+0.7
	comp=E,2.2nm,0.9s,baz=161,slow=9.2,SNR=5.7						
EKA	Eskdalemuir Ar	25.97	327	P	P	08 39 53.0	+3.3
	comp=E,0.4nm,0.5s,baz=127,slow=7.9,SNR=5.2						
NOA	NORSAR Array B	26.28	349	P	P	08 39 54.0	+1.4
	comp=E,0.2nm,0.4s,baz=159,slow=9.2,SNR=2.4						
ARCES	ARCESS Array B	34.05	3	P	P	08 41 01.2	0.0
	comp=E,1.4nm,0.6s,baz=187,slow=8.6,SNR=5.6						
MKAR	Makanchi Array	46.05	56	P	P	08 42 40.7	-0.3
	comp=E,0.4nm,0.5s,baz=281,slow=7.3,SNR=6.0						

IDC 08 08:44:58.9±2.4**, 54.15N**×**86.40E, h0**km**, mb1 3.2**/2**, mb1mx3.0**/33**, mbtmp3.2**/2**, ML3.0**/2**, Error ellipse: s-maj=18.5km s-min=11.8km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.95	258	*i*		08 52 09.8	
	baz=76,slow=310,SNR=3.6						
ZALV	Zalesovo Beam	0.95	258	Pg	Pg	08 45 16.0	-1.2
	2.5nm,0.3s,baz=78,slow=17,SNR=11						
ZALV				Lg	Lg	08 45 29.8	
	4.8nm,0.3s,baz=76,slow=27,SNR=13						
ZALV				Rg	Rg	08 45 36.3	
	4.9nm,0.5s,baz=79,slow=25,SNR=6.0						
KURBB	Kurchatov Arra	5.97	237	Pn	Pn	08 46 29.7	+1.2
	0.3nm,0.3s,baz=54,slow=13,SNR=16						
KURBB				Sn	Sn	08 47 39.2	+1.7
	baz=58,slow=17,SNR=2.4						
KURBB				Lg	Lg	08 48 09.3	
	0.0nm,0.3s,baz=61,slow=31,SNR=5.3						
MKAR	Makanchi Array	7.82	201	Pn	Pn	08 46 54.8	+0.9
	0.4nm,0.3s,baz=25,slow=14,SNR=13						
MKAR				Sn	Sn	08 48 21.1	-2.0
	0.1nm,0.3s,baz=21,slow=28,SNR=3.2						
MKAR				Lg	Lg	08 49 04.7	
	0.1nm,0.3s,baz=22,slow=31,SNR=3.4						

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*ISCJB **08** 08:51:46.2±1.7, 14.2N±0.1×91.20W±0.08, h82km±12km, Error ellipse: s-maj=23.8km s-min=8.9km az=22.8*

*MEX **08** 08:51:46.4±0.5, 14.19N×91.16W, h97km±13km, MD3.7*

*GCG **08** 08:51:48.3±0.9, 14.16N×91.20W, h40km±36km, MD3.4*

ISC 08 08:51:47.3±2.8**, 14.2N**±0.2×**91.22W**±0.07**, h71**km±17km**, n8, σ0.80**/14**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	0.43	58	*e*P	Pn	08 51 59.3	-0.4
STG3	Santiaguito 3,	0.60	325	*e*P	Pn	08 52 01.3	-0.1
STG3				*e*S	Sn	08 52 12.2	+0.5
PCG	Pacaya	0.61	74	*e*P	Pn	08 52 01.2	-0.4
PCG				*e*S	Sn	08 52 11.4	-0.7
NBG	Las Nubes	0.92	66	*e*P	Pn	08 52 06.3	+1.1
THIG		1.23	304	*e*P	Pn	08 52 08.5	-0.2
THIG				*e*S	Sn	08 52 26.3	+1.6
CCIG	Comitan	2.23	337	*i* P	Pn	08 52 21.9	-0.4
CCIG				*i* S	Sn	08 52 49.5	+0.5
PCIG		2.44	308	*i* P	Pn	08 52 24.4	-0.5
PCIG				*e*S	Sn	08 52 53.8	+0.2
TGIG		3.14	324	*i* P	Pn	08 52 34.3	-0.2
TGIG				*i* S	Sn	08 53 10.1	-0.8

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*IDC **08** 08:54:21.9±2.5, 53.57N×87.77E, h0km, mb1 3.6/3, mb1mx3.3/34, mbtmp3.6/3, ML3.3/3, Error ellipse: s-maj=22.0km s-min=13.0km az=59.0*

NNC 08 08:54:25.2±1.7**, 53.45N**×**87.50E, h0**km**, mb4.0, mpv3.7, 3C-5D, Error ellipse: s-maj=15.9km s-min=10.8km az=177.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.67	289	*i*		09 05 40.7	
	baz=100,slow=311,SNR=13						
ZALV	Zalesovo Beam	1.67	289	Pg	Pn	08 54 53.8	-2.0
	11nm,0.3s,baz=103,slow=14,SNR=25						
ZALV				Lg	Lg	08 55 19.0	
	9.2nm,0.3s,baz=97,slow=19,SNR=12						
KURK	Kurchatov	6.12	247	⇓Pn	Pn	08 55 56.7	-0.1
	2.7nm,0.5s						
KURK				⇑Sn	Sn	08 57 09.3	+1.7
	2.0nm,0.7s						
KURK				⇓Lg	Lg	08 57 40.2	
	7.1nm,0.8s						
KURBB	Kurchatov Arra	6.22	247	Pn	Pn	08 55 58.0	-0.1
	0.5nm,0.3s,baz=62,slow=14,SNR=36						
KURBB				Sn	Sn	08 57 10.3	+0.4
	baz=54,slow=20,SNR=2.7						
KURBB				Lg	Lg	08 57 44.4	
	0.1nm,0.3s,baz=62,slow=32,SNR=12						
KURBB	Kurchatov Arra	6.22	247	⇓Pn	Pn	08 55 58.0	-0.2
	7.7nm,0.5s						
KURBB				⇓Sn	Sn	08 57 10.4	+0.5
	6.5nm,0.6s						
KURBB				⇑Lg	Lg	08 57 43.7	
	15nm,0.7s						
MK31	Makanchi Array	7.45	209	Pn	Pn	08 56 15.8	+0.6
	1.0nm,0.5s,baz=29,slow=14,SNR=16						
MK31				⇑Sn	Sn	08 57 41.3	+0.8
	2.1nm,0.8s,baz=30,slow=24,SNR=4.6						
MK31				⇓Lg	Lg	08 58 21.6	
	3.5nm,0.7s,baz=24,slow=31,SNR=4.3						
MKAR	Makanchi Array	7.45	209	Pn	Pn	08 56 15.7	+0.5
	0.6nm,0.3s,baz=19,slow=12,SNR=16						
MKAR				Sn	Sn	08 57 41.8	+1.3
	0.3nm,0.3s,baz=29,slow=25,SNR=7.5						
MKAR				Lg	Lg	08 58 21.6	
	0.3nm,0.3s,baz=30,slow=32,SNR=5.4						
BVAR	Borovoye Array	10.27	275	Pn	Pn	08 56 51.1	-2.7
	0.2nm,0.3s,baz=76,slow=18,SNR=4.3						
BVAR				Sn	Sn	08 58 45.8	-3.8
	0.2nm,0.3s,baz=78,slow=21,SNR=2.5						

MEX 08 09:01:01.0±0.7**, 15.93N**×**96.86W, h8**km±7km**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.74	102	*e*P	Pg	09 01 14.1	-1.2
HUIG				*e*S	Sg	09 01 23.1	-1.9
VHO	Vista Hermosa	1.15	6	*e*P	Pg	09 01 19.5	-3.6
VHO				*i* S	Sg	09 01 33.8	-4.1
CMIG	Matias Romero	2.22	58	*i* P	Pn	09 01 35.5	-2.7
CMIG				*i* S	Sn	09 02 01.2	-4.7
TLIG	Tlapa	2.30	315	*e*P	Pn	09 01 36.9	-2.5
TLIG				*i* S	Sn	09 02 03.0	-5.0

SNET 08 09:10:41.7±1.2**, 13.18N**×**89.36W, h60**km±6km**, ML3.5, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNET	Serv Nac Est T	0.52	14	*e*P	Pn	09 10 54.0	+0.1
SNET				*e*S	Sn	09 11 03.9	+1.1
SNET				IAML		09 11 08.0	
	comp=Z,2µm,0.3s						
UEES	Universidad Ev	0.54	12	*e*P	Pn	09 10 54.6	+0.2
UEES				*e*S	Sn	09 11 04.5	+0.9
UEES				IAML		09 11 08.9	
	comp=Z,3µm,0.1s						
OPAM	Oficina de Pla	0.55	16	*e*P	Pn	09 10 54.6	+0.3
OPAM				*e*S	Sn	09 11 04.8	+1.3
OPAM				IAML		09 11 08.8	
	comp=Z,2µm,0.2s						
UDBS	Universidad Do	0.57	20	*e*P	Pn	09 10 54.8	+0.3
UDBS				*e*S	Sn	09 11 04.5	+0.6
UDBS				IAML		09 11 06.6	
	comp=Z,2µm,0.2s						
LFU	La Fuente	0.61	23	*e*P	Pn	09 10 55.6	+0.6
LFU				*e*S	Sn	09 11 06.3	+1.6
SNVI	San Vicente	0.66	50	*e*P	Pn	09 10 55.9	+0.2
SNVI				*e*S	Sn	09 11 06.5	+0.6
PAVA	Las Pavas	0.67	38	*e*P	Pn	09 10 56.1	+0.4
PAVA				*e*S	Sn	09 11 07.2	+1.3
PAVA				IAML		09 11 08.4	
	comp=Z,1µm,0.2s						
CEVE	Cerro Verde	0.69	338	*e*P	Pn	09 10 56.4	+0.3
CEVE				*e*S	Sn	09 11 08.1	+1.5
CEVE				IAML		09 11 09.2	
	comp=Z,2µm,0.3s						
SBLS	San Blas	0.70	339	*e*P	Pn	09 10 56.5	+0.3
SBLS				*e*S	Sn	09 11 09.1	+2.3
UESV	Universidad de	0.72	51	*e*P	Pn	09 10 56.4	+1.7
SNJE	San Jose	0.72	341	*e*P	Pn	09 10 56.7	+0.2
SNJE				*e*S	Sn	09 11 08.8	+1.6
RTR	El Retiro	0.77	339	*e*P	Pn	09 10 57.4	+0.5

RTR				eS	Sn	09 11 10.0	+2.0
UNIC	Universidad Ca	0.82	347	eP	Pn	09 10 58.0	+0.3
UNIC				eS	Sn	09 11 10.5	+1.2
VICT	Victoria	1.04	42	eP	Pn	09 11 00.6	+0.1
VICT				eS	Sn	09 11 15.3	+1.0
PACA	Pacayal	1.05	74	eP	Pn	09 11 00.7	+0.2
PACA				eS	Sn	09 11 16.2	+1.8
LLGN	La Laguna	1.05	22	eP	Pn	09 11 00.5	-0.2
LCY	Lacayo	1.06	77	eP	Pn	09 11 01.1	+0.4
LCY				eS	Sn	09 11 16.6	+1.9
VSM	San Miguel	1.08	77	eP	Pn	09 11 01.6	+0.5
MTO3	Montecristo	1.21	360	eP	Pn	09 11 03.0	+0.2
MTO3				eS	Sn	09 11 19.1	+0.7
LCND	La Caada	1.44	85	eP	Pn	09 11 05.7	+0.2
LCND				IAML		09 11 06.1	
	comp=Z,255nm,0.3s						
CNCH	Conchagua	1.49	86	eP	Pn	09 11 06.3	0.0
CNCH				eS	Sn	09 11 26.8	+1.9

NEIC **08** 09:14:12.7±0.0, 17°.63N×61°.71W, h25^{km}, mb4.9/300, MW4.7, MD4.8(TRN), Moment Tensor Solution. s29 Moment tensor: Scale 10^{16}Nm; M_{rr}1.21; $M_{\theta\theta}$0.43; $M_{\phi\phi}$-1.63; $M_{r\theta}$0.19; $M_{\theta\phi}$0.28; $M_{\phi r}$0.57; Best double couple: $M_0$1.60000×10^{16} NP1:ϕ_s7.00000°, δ57.00000°, λ108.00000°. NP2:ϕ_s155.00000°, δ37.00000°, λ64.00000°. Principal axes: T 1.3800, Plg71.0000°, Azm321.0000°; N 0.3900, Plg15.0000°, Azm177.0000°; P -1.7700, Plg10.0000°, Azm84.0000°; After TRN.

NEIC Felt at Bolands and Codrington. Also felt at Les Abymes, Marigot and Pointe-a-Pitre, Guadeloupe. Felt at Cotton Ground, Nevis.

TRN **08** 09:14:12.4, 17°.64N×61°.69W, h25^{km}, MD4.8

TRN Felt in Antigua and Barbuda MMI III.

ISCJB **08** 09:14:12.8±0.3, 17°.71N±0°.02×61°.66W±0°.02, h54^{km}±3^{km}, mb4.8/65, MS4.2/20, Error ellipse: s-maj=3.8km s-min=1.9km az=144.0

MOS **08** 09:14:13.9±1.1, 17°.60N×61°.85W, h58^{km}, mb5.1/33, Error ellipse: s-maj=8.9km s-min=6.8km az=95.7

IDC **08** 09:14:14.0±1.3, 17°.68N×61°.65W, h52^{km}±12^{km}, mb4.4/24, mb1 4.6/28, mb1mx4.5/34, mbtmp4.7/28, ML4.1/4, MS4.2/20, Ms1 4.2/20, ms1mx4.1/30, Error ellipse: s-maj=10.8km s-min=7.4km az=37.0

GCMT **08** 09:14:17.7±0.4, 18°.24N±0°.03×61°.58W±0°.03, h37^{km}±1^{km}, MW5.1/59, Moment Tensor Solution. s28,c39; s59,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.97±.38; $M_{\theta\theta}$-1.23±.24; $M_{\phi\phi}$-3.74±.24; $M_{r\theta}$-1.40±.26; $M_{\theta\phi}$2.19±.14; $M_{\phi r}$2.97±.21; Best double couple: $M_0$5.97300×10^{16} NP1:ϕ_s333.00000°, δ62.00000°, λ93.00000°. NP2: ϕ_s147.00000°, δ28.00000°, λ85.00000°. Principal axes: T 5.9590, Plg73.0000°, Azm249.0000°; N 0.0280, Plg2.0000°, Azm151.0000°; P -5.9870, Plg17.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 08 09:14:12.1±0.9**, 17°.69N**±0°.03×**61°.61W**±0°.03**, h34**^{km}±6^{km}**, n855, σ1^{s}16**/894**, mb4.8**/65**, MS4.2**/20**, 10C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	0.17	262	ePg	Pn	09 14 18.2	+1.7
ANWB				eSg	Sb	09 14 21.0	-1.8
ANWB	Willy Bob	0.17	262	eP	Pn	09 14 18.2	+1.7
ANWB				eS	Sn	09 14 22.4	+5.2
BPA	Boggy Peak	0.68	200	ePn	Pn	09 14 27.1	+1.7
BPA				eSn	Sn	09 14 36.7	+1.8
BPA	Boggy Peak	0.68	200	eP	Pn	09 14 27.1	+1.7
BPA				eS	Sn	09 14 36.7	+1.8
NEV	Hard Times	1.07	239	ePn	Pb	09 14 32.3	+0.2
NEV	Hard Times	1.07	239⇓	eP	Pn	09 14 27.2	-3.5
NVRH	Round Hill, Ne	1.07	242	eP	Pb	09 14 32.5	+0.4
MLYT	Lee's Yard	1.11	210	eP	Pb	09 14 32.3	-0.5
MLYT				eS	Sb	09 14 47.3	+0.3
NVBH	Bath Hotel, Ne	1.12	239	eP	Pb	09 14 33.1	+0.2
SKI	Saint Kitts	1.13	252	ePn	Pb	09 14 32.3	-0.9
SKI				eSn	Sb	09 14 47.6	0.0
SKI	Saint Kitts	1.13	252	eP	Pb	09 14 32.1	-1.1
SKI				eS	Sb	09 14 48.0	+0.3
SKI	Saint Kitts	1.13	252	eP	Pb	09 14 32.3	-0.9
SKI				e		09 14 47.6	
SKDB	Saint Kitts 2	1.18	256	ePn	Pb	09 14 34.0	0.0
SKDB				eSn	Sb	09 14 49.5	+0.6
SKDB	Saint Kitts 2	1.18	256	eP	Pb	09 14 34.0	0.0
SKDB				eS	Sb	09 14 49.5	+0.6
BSK	Brimstone Hill	1.22	254	ePn	Pb	09 14 34.8	+0.1
BSK	Brimstone Hill	1.22	254	eP	Pb	09 14 34.8	+0.1
SEUS	St. Eustatius	1.32	262	ePn	Pb	09 14 35.1	-1.2
SEUS				eSn	Sn	09 14 50.9	+0.3
SEUS	St. Eustatius	1.32	262	eP	Pb	09 14 35.1	-1.2
SEUS				eS	Sb	09 14 53.0	+0.1
SMRT	St. Maarten	1.44	285	ePn	Pn	09 14 36.3	+0.5
SMRT				eSn	Sn	09 14 53.4	-0.1
SMRT	St. Maarten	1.44	285	eP	Pb	09 14 36.8	-1.5
SMRT				eS	Sb	09 14 56.0	-0.3
H05N1	Guadeloupe/Mar	1.47	159	P	Pn	09 14 37.3	+1.2
H05N1				S	Sb	09 14 56.5	-0.6
H05N1				T	T	09 16 08.8	
DEG	La Desirade	1.47	159	ePn	Pb	09 14 38.0	-0.8
DEG	La Desirade	1.47	159	eP	Pb	09 14 38.0	-0.8
SABA	Saba	1.56	268	ePn	Pb	09 14 39.3	-1.0
SABA				eSg	Sb	09 14 58.7	-1.0
SABA	Saba	1.56	268	eP	Pb	09 14 39.3	-1.0
SABA				eS	Sb	09 14 58.7	-1.0
MAGL	Barre de l’ile	1.76	170	eP	Pb	09 14 42.3	-1.5
MDPO	Dominica; Chan	2.11	176	eP	Pb	09 14 47.3	-2.3
MDPO				eS	Sb	09 15 13.4	-2.1
DWS	Wesley	2.13	172	ePn	Pn	09 14 47.4	+2.1
DWS				eSn	Sb	09 15 13.8	-2.4
DWS	Wesley	2.13	172	eP	Pn	09 14 47.4	+2.1
DWS				eS	Sb	09 15 13.8	-2.4
MDN	Morne-Daniel	2.37	175	ePn	Pb	09 14 51.6	-2.5
MDN				eSn	Sn	09 15 18.8	+2.3
MDN	Morne-Daniel	2.37	175	eP	Pb	09 14 51.6	-2.5
MDN				eS	Sn	09 15 18.8	+2.3
DLPL	La Plaine	2.37	171	eP	Pb	09 14 51.7	-2.5
DLPL				eS	Sn	09 15 19.4	+2.8
DBCT	Belle View Cho	2.42	174	ePn	Pn	09 14 51.6	+2.3
DBCT				eSn	Sn	09 15 20.4	+2.6
DBCT	Belle View Cho	2.42	174	eP	Pn	09 14 51.6	+2.3
DBCT				eS	Sn	09 15 20.4	+2.6
DPMT	Pointe Michel	2.43	175	ePn	Pb	09 14 52.6	-2.5
DPMT	Pointe Michel	2.43	175	eP	Pb	09 14 52.6	-2.5
PCM	Pelee Case Pet	2.89	172	eP	Pn	09 14 57.5	+1.8
BAMF	Morne Balai	2.90	171	eP	Pn	09 14 58.5	+2.6
CXM	Morne La Croix	2.90	171	eP	Pn	09 14 58.0	+2.0
GBMF	Grand Be	2.91	171	eP	Pn	09 14 57.6	+1.5
PML	Morne Lenard	2.92	172	eP	Pn	09 14 58.3	+2.0
FDF	Fort de France	2.98	171	ePn	Pn	09 14 58.1	+1.1
FDF	Fort de France	2.98	171	eP	Pn	09 14 58.5	+1.6
FDF				eS	Sn	09 15 33.7	+2.2
FDF	Fort de France	2.98	171	eP	Pn	09 14 58.1	+1.1
TRMF	Trois Ilets	3.18	170	eP	Pn	09 15 01.8	+2.0
MVM	Montagne Vaucl	3.19	167	eP	Pn	09 15 01.3	+1.3
BIM	Bigot	3.20	171	eP	Pn	09 15 02.3	+2.3
STVI	Saint Thomas	3.25	282	ePn	Pn	09 15 00.9	+0.3
STVI				eSn	Sn	09 15 40.9	+2.8
H05S1	Guadeloupe/Mar	3.33	167	P	Pn	09 15 03.1	+1.3
H05S1				S	Sn	09 15 41.8	+1.5
CUPR	Culebra, Puert	3.55	280	ePn	Pn	09 15 05.1	+0.4
CUPR				eSn	Sn	09 15 46.3	+0.7
SLBI	Saint Lucia, B	3.70	170	eP	Pn	09 15 09.7	+2.8
SLBI				eS	Sn	09 15 52.2	+2.9
SLW	Petit Monier	3.71	170	eS	Sn	09 15 51.6	+2.0
MTP	Monte Pirata	3.77	277	ePn	Pn	09 15 09.1	+1.2
SLB	Belfond	3.88	172	eP	Pn	09 15 12.9	+3.5
SLB				eS	Sn	09 15 56.2	+2.3
MCLT	Moule a Chique	4.01	171	eP	Pn	09 15 14.4	+3.2
MCLT				eS	Sn	09 15 58.8	+1.7
CBYP	Canovanas	4.08	279	ePn	Pn	09 15 12.7	+0.5
CBYP				eSn	Sn	09 15 59.8	+0.9
SJG	San Juan	4.34	276	P	Pn	09 15 16.7	+1.0
	259nm,0.3s,baz=83,slow=10,SNR=159						
SJG				S	Sn	09 16 07.4	+2.3
	176nm,0.3s,baz=19,slow=20,SNR=13						
SJG				LR	LR	09 17 12.3	
	comp=Z,5µm,18.0s,baz=60,slow=41						
SJG	San Juan	4.34	276	ePn	Pn	09 15 16.6	+1.0
SJG				eSn	Sn	09 16 07.0	+1.9
SJG	San Juan	4.34	276	eP	Pn	09 15 16.6	+0.9
SJG				e		09 16 07.0	
SJG	San Juan	4.34	276	eP	Pn	09 15 16.5	+0.8
SSV	Crater Summit	4.36	175	ePn	Pn	09 15 19.2	+3.1
SSV	Crater Summit	4.36	175	eP	Pn	09 15 19.2	+3.1
SVV	Soufriere Volc	4.37	175	ePn	Pn	09 15 18.7	+2.7
SVV	Soufriere Volc	4.37	175	eP	Pn	09 15 18.7	+2.7
SVB	Belmont	4.41	175	ePn	Pn	09 15 18.7	+2.0
SVB	Belmont	4.41	175	eP	Pn	09 15 19.7	+3.0
SVB	Belmont	4.41	175	eS	Sn	09 16 08.7	+1.9
SVCV	St. Vincent, C	4.42	174	eP	Pn	09 15 19.2	+2.5
SVCV	St. Vincent, C	4.42	174	eS	Sn	09 16 09.3	+2.3
FCV	Fort Charlotte	4.52	175	ePn	Pn	09 15 20.9	+2.7
FCV				eSn	Sn	09 16 10.7	+1.1
FCV	Fort Charlotte	4.52	175	eP	Pn	09 15 20.9	+2.7
FCV	Fort Charlotte	4.52	175	eS	Sn	09 16 10.7	+1.1
EMPR	Esperanza - Ma	4.74	280	ePn	Pn	09 15 20.8	-0.4
OBIP	Obispado Ponce	4.77	275	ePn	Pn	09 15 22.8	+1.2
OBIP				eSn	Sn	09 16 20.0	+4.3
BCHC	Barbados, Cave	4.92	157	eP	Pn	09 15 27.6	+4.0
AOPR	Arecibo Observ	4.94	278	ePn	Pn	09 15 24.3	+0.4
BBGH	Gun Hill	4.94	156	ePn	Pn	09 15 27.0	+3.1
BBGH	Gun Hill	4.94	156	eP	Pn	09 15 27.0	+3.1
BBSP	Saint Philip	5.01	155	ePn	Pn	09 15 28.4	+3.4
BBSP	Saint Philip	5.01	155	eP	Pn	09 15 28.4	+3.4
GRGR	Grenville	5.53	180	ePn	Pn	09 15 34.1	+2.1
TOSP	Speyside	6.44	171	eP	Pn	09 15 48.6	+4.0
TOSP	Speyside	6.44	171	eS	Sn	09 16 57.4	+0.4
PCDR	Punta Cana, DR	6.49	278	ePn	Pn	09 15 47.0	+1.8
TBH	Brigand Hill	7.18	176	ePn	Pn	09 15 58.4	+3.5
TBH	Brigand Hill	7.18	176	eP	Pn	09 15 58.4	+3.5
TBH	Brigand Hill	7.18	176	eP	Pn	09 15 58.4	+3.5
TPP	Pointe-a-Pierr	7.33	179	ePn	Pn	09 16 00.2	+3.4
TPP				eSn	Sn	09 17 18.4	-0.5
TPP	Pointe-a-Pierr	7.33	179	eP	Pn	09 16 00.2	+3.4
TPP	Pointe-a-Pierr	7.33	179	eS	Sn	09 17 18.4	-0.5
TPP	Pointe-a-Pierr	7.33	179	eP	Pn	09 16 00.2	+3.4
TPP				e		09 17 18.4	
PCRV	Puerto La Cruz	8.03	202	P	Pn	09 16 07.2	+0.8
	8.2nm,0.3s,baz=31,slow=4.1,SNR=26						
PCRV				S	Sn	09 17 33.6	-2.5
	2.7nm,0.3s,baz=318,slow=22,SNR=1.2						
PCRV				LR	LR	09 19 37.0	
	comp=Z,1µm,18.4s,slow=40						
BANI	BANI	8.35	276	ePn	Pn	09 16 13.3	+2.4
GRTK	Grand Turk	9.74	294	ePn	Pn	09 16 25.9	-3.9
SDV	Santo Domingo	12.39	226	P	Pn	09 17 07.4	+1.0
	1.6nm,0.3s,baz=60,slow=9.5,SNR=21						
SDV				S	Sn	09 19 19.6	-3.8
	baz=255,slow=17,SNR=1.5						
SDV	Santo Domingo	12.39	226	ePn	Pn	09 17 08.7	+2.3
SDV	Santo Domingo	12.39	226	eP	Pn	09 17 10.3	+3.9
SDV	Santo Domingo	12.39	226	eP	Pn	09 17 08.2	+1.9
CODC	Agustn Codazz	13.83	238	eP	P	09 17 32.8	-0.9
ARGC	Ariguani, Magd	14.53	239	eP	P	09 17 40.1	-1.4
OCAC	Ocana	14.77	232	eP	Pn	09 17 38.9	+0.1
PAMC	Pamplona, Colo	14.92	228	eP	Pn	09 17 43.6	+2.4
TAMC	Tame, Arauca	14.96	223	eP	Pn	09 17 41.6	+0.3
SMLC	San Martn de	15.00	235	eP	Pn	09 17 40.2	-1.5
MTDJ	Mount Denham	15.16	274	ePn	P	09 17 46.9	-1.8
	397nm,0.8s						
MDP	Montagnes des	15.28	144	P	Pn	09 17 41.7	-3.8
	1.7nm,0.3s,baz=326,slow=13,SNR=11						
MDP				S	Sn	09 20 19.8	-14
	2.6nm,0.3s,baz=246,slow=19,SNR=7.4						
MDP				LR	LR	09 23 40.7	
	comp=Z,838nm,21.7s,baz=322,slow=37						
BRRC	Barranca, Sant	15.81	230	eP	Pn	09 17 52.5	+0.3
YOPC	Yopal, Colombi	16.19	222	eP	P	09 18 00.9	+0.8
RUSC	La Rusia	16.22	225	eP	P	09 17 59.5	-1.3
ZARC	Zaragoza, Cauc	16.41	234	eP	Pn	09 17 58.2	-1.8
PTBC	PUERTO BERRIO,	16.74	230	eP	Pn	09 18 03.5	-0.6
CBCY	The Bluff, Cay	17.31	280	ePn	Pn	09 18 10.3	-0.9
	208nm,0.9s						
CHIC	Chingaza	17.59	224	eP	P	09 18 15.9	0.0
NORC	Norcasia	17.70	229	eP	Pn	09 18 16.2	0.0
DBBC	Dabeiba	17.76	235	eP	P	09 18 18.1	+0.7
HELC	Santa Helena	17.76	232	eP	Pn	09 18 16.8	-0.3
ROSC	El Rosal	17.83	226	P	P	09 18 18.4	-0.1
	5.1nm,0.3s,baz=334,slow=5.0,SNR=31						
ROSC				S	S	09 21 44.6	+2.5
	1.4nm,0.3s,baz=146,slow=21,SNR=2.1						
ROSC				LR	LR	09 26 37.7	
	comp=Z,1µm,19.0s,baz=43,slow=42						
ROSC	El Rosal	17.83	226	eP	P	09 18 20.4	+1.8
	60nm,0.9s						
ROSC	El Rosal	17.83	226	eP	P	09 18 18.8	+0.3
VILC	Villavicencio,	17.95	223	eP	P	09 18 20.2	+0.5
GUY2C	Guyana, Caldas	18.29	229	eP	Pn	09 18 24.8	+1.0
PTGA	Pitinga	18.38	175	P	P	09 18 23.7	-0.5
	5.8nm,0.3s,baz=1.6,slow=14,SNR=24						
PTGA				S	Sn	09 21 40.3	-8.5
	0.6nm,0.3s,baz=340,slow=22,SNR=1.6						
PTGA				LR	LR	09 26 09.4	
	comp=Z,804nm,21.6s,baz=356,slow=39						
PTGA	Pitinga	18.38	175	eP	P	09 18 24.2	0.0
	34nm,0.6s						
RREF	El Recreo	18.50	228	eP	Pn	09 18 28.1	+1.6
GUVC	San Jose del G	18.53	217	eP	P	09 18 25.5	-0.4
FSCY	Frank Sound, G	18.63	278	eP	P	09 18 24.3	-2.7
	234nm,1.1s						
PRAC	Prado	19.03	225	eP	Pn	09 18 32.1	-0.2
062Z	Marathon	19.42	294	P	Pn	09 18 36.3	-0.5
	baz=108						
060Z	West Palm Beac	19.57	300	P	P	09 18 37.3	+0.2
	baz=113						
MACC	Macarena, Meta	19.57	219	eP	P	09 18 36.8	-0.5
BCIP	Isla Barro Col	19.63	247	eP	P	09 18 38.6	+0.6
	157nm,1.0s						
BCIP	Isla Barro Col	19.63	247	eP	P	09 18 38.6	+0.6
BCIP				pmax	pmax		
	comp=Z,157nm,1.0s						
060A	Indiantown	19.66	302	P	P	09 18 38.5	+0.4
	baz=115						
061Z	Ochoppi	19.66	298	P	P	09 18 38.3	+0.1
	baz=111						
YOTC	Yotoco, Valle	19.85	228	eP	Pn	09 18 42.1	-0.1
059A	Moore Haven	20.27	301	P	P	09 18 44.8	0.0
	baz=114						
959A	Okeechobee	20.28	302	P	P	09 18 45.1	+0.2
	baz=115						
059Z	Ave Maria	20.28	299	P	P	09 18 44.9	0.0
	baz=112						
MARP	Paez Belalcaza	20.39	225	eP	P	09 18 45.5	-1.1
859A	Kempfer Cattle	20.52	304	P	P	09 18 47.8	+0.2
	baz=116,SNR=12						
MALC	Bahia Malaga	20.54	230	eP	P	09 18 47.5	-0.4
058A	Arcadia	20.84	300	P	P	09 18 51.0	-0.1
	baz=113						
858A	St. Cloud	20.95	304	P	P	09 18 52.3	+0.1
	baz=116						
DWPF	Disney Wildern	20.97	303	eP	P	09 18 52.6	+0.2
	comp=Z,105nm,1.0s						
DWPF	Disney Wildern	20.97	303	P	P	09 18 52.4	+0.1
	baz=116						
958A	Wauchula	21.01	302	P	P	09 18 52.9	+0.1
	baz=114						
POPC	Popayan, Colom	21.10	226	eP	P	09 18 50.8	-3.4
FLOC	Florencia	21.13	222	eP	P	09 18 53.7	-0.6
758A	Lake Helen	21.16	306	P	P	09 18 54.4	-0.1
	baz=118,SNR=5.4						
SOTA	Rioblanco	21.35	225	eP	P	09 18 58.8	+1.7
658A	Bunnell	21.43	307	P	P	09 18 57.5	+0.2
	baz=119,SNR=5.6						
957A	Wimauma	21.43	301	P	P	09 18 57.3	-0.1
	baz=114						
857A	Zephyrhills	21.67	303	P	P	09 19 00.0	+0.1
	baz=115,SNR=7.2						
PTLC	Puerto Leguiza	21.71	218	eP	P	09 19 03.4	+3.0
757A	Oxford	21.83	305	P	P	09 19 01.7	+0.1
	baz=117,SNR=16						
GRGC	Isla de Gorgon	21.84	230	eP	P	09 19 01.4	-0.4
V62A	Hyde County Ai	21.89	327	P	P	09 19 02.4	+0.2
	baz=141						
657A	Interlachen	21.97	306	P	P	09 19 03.3	+0.2
	baz=118,SNR=5.6						
Y60A	Bolivia	22.02	321	P	P	09 19 03.6	0.0
	baz=134						
557A	Orange Park	22.07	307	P	P	09 19 03.9	-0.3
	baz=120,SNR=6.8						
W61A	Ground Anchor	22.15	325	P	P	09 19 05.2	+0.2
	baz=138						
Z59A	Georgetown, SC	22.18	318	P	P	09 19 05.3	0.0
	baz=130						
457A	Yulee	22.24	309	P	P	09 19 06.3	+0.3
	baz=121						
X60A	Albert Glenn T	22.28	322	P	P	09 19 06.8	+0.4
	baz=135						
656A	Willston	22.39	305	P	P	09 19 07.4	-0.2
	baz=117						
V61A	Roper	22.39	327	P	P	09 19 08.1	+0.6
	baz=140						
Y59A	Loris	22.41	320	P	P	09 19 08.7	+0.9
	baz=132,SNR=7.1						
158A	Hollywood	22.46	315	P	P	09 19 08.8	+0.4
	baz=128						
W60A	Pink Hill	22.46	323	P	P	09 19 08.8	+0.5
	baz=137,SNR=6.2						
556A	Lake Butler	22.58	307	P	P	09 19 09.4	-0.3
	baz=119						
Z58A	St. Stephen	22.58	317	P	P	09 19 09.5	-0.2
	baz=130,SNR=9.1						
ESPN	Las Esperanzas	22.58	259	eP	P	09 19 09.3	-0.5
	comp=Z,71nm,0.9s						
257A	Skidaway Islan	22.59	313	P	P	09 19 09.5	-0.2
	baz=125						
357A	Townsend	22.61	311	P	P	09 19 09.7	-0.3
	baz=123						
456A	Hilliard	22.64	309	P	P	09 19 10.3	0.0
	baz=121						
X59A	McDuffie Farm,	22.64	321	P	P	09 19 09.4	-0.9
	baz=134						
CNNC	Cliffs of the	22.70	324	P	P	09 19 10.4	-0.5
	baz=137						
V60A	Jim Taylor Roa	22.73	325	P	P	09 19 12.0	+0.8
	baz=139						
U61A	Possum Corner	22.74	328	P	P	09 19 11.7	+0.5
	baz=141						
Y58A	Scranton	22.85	318	P	P	09 19 12.9	+0.5
	baz=131						
W59A	Clinton	22.96	323	P	P	09 19 13.7	+0.1
	baz=135						
157A	Early Branch	22.97	314	P	P	09 19 14.0	+0.2
	baz=126,SNR=6.3						
655A	Horseshoe Beac	23.01	305	P	P	09 19 14.0	-0.2
	baz=116						
356A	Blackshear	23.02	310	P	P	09 19 13.9	-0.4
	baz=122						
555A	McAlpin	23.06	306	P	P	09 19 14.8	+0.1
	baz=118						
X58A	Rowland	23.07	320	P	P	09 19 14.8	+0.1
	baz=133						
Z57A	Bowman	23.14	316	P	P	09 19 15.0	-0.4
	baz=128						
256A	Glennville	23.20	312	P	P	09 19 15.6	-0.5
	baz=123						
U60A	Pendleton	23.21	327	P	P	09 19 16.0	-0.1
	baz=140						
V59A	Middlesex	23.27	324	P	P	09 19 17.0	+0.3
	baz=137,SNR=5.7						
156A	Sylvania	23.30	314	P	P	09 19 17.0	0.0
	baz=125						
W58A	Raeford	23.33	321	P	P	09 19 17.2	0.0
	baz=134,SNR=7.1						
Y57A	Sumter	23.39	318	P	P	09 19 17.5	-0.4
	baz=130						
455A	Stateville	23.40	308	P	P	09 19 18.3	+0.3
	baz=119						
S61A	Accomac	23.43	331	P	P	09 19 18.7	+0.5
	baz=145						
U59A	Littleton	23.46	326	P	P	09 19 18.3	-0.2
	baz=138						
X57A	Johnson Farm,	23.48	319	P	P	09 19 18.7	-0.2
	baz=131						
T60A	Surry	23.51	328	P	P	09 19 19.3	+0.3
	baz=142						
355A	Pearson	23.57	309	P	P	09 19 20.0	+0.3
	baz=121						
255A	Hazlehurst	23.59	311	P	P	09 19 19.9	0.0
	baz=122						
554A	Perry	23.60	306	P	P	09 19 19.1	-0.9
	baz=117						
Z56A	Williston	23.60	315	P	P	09 19 19.1	-0.8
	baz=127						
V58A	Windy Hill, Pi	23.79	323	P	P	09 19 21.7	-0.1
	baz=135,SNR=7.3						
JTS	Las Juntas de	23.80	255	P	P	09 19 20.6	-1.4
	comp=Z,20nm,0.8s,baz=167,slow=3.8,SNR=6.8						
JTS				LR	LR	09 28 58.9	
	comp=Z,338nm,19.2s,baz=124,slow=37						
JTS	Las Juntas de	23.80	255	eP	P	09 19 21.8	-0.2
	comp=Z,28nm,1.0s						
JTS	Las Juntas de	23.80	255	iP	P	09 19 21.4	-0.6
JTS				pmax	pmax		
	comp=Z,14nm,1.0s						
T59A	Double "B" Far	23.80	327	P	P	09 19 21.7	-0.1
	baz=140						
R61A	Willards	23.81	332	P	P	09 19 21.6	-0.3
	baz=146						
Y56A	Pelion	23.84	316	P	P	09 19 22.3	+0.1
	baz=128						
454A	Quitman	23.85	307	P	P	09 19 23.0	+0.7
	baz=118,SNR=6.0						
W57A	Gilead	23.88	320	P	P	09 19 22.5	0.0
	baz=132,SNR=13						
U58A	Oxford	23.90	325	P	P	09 19 22.7	0.0
	baz=137,SNR=18						
S60A	Water View	23.91	329	P	P	09 19 21.3	-1.5
	baz=143						
155A	Kite	23.96	312	P	P	09 19 23.0	-0.3
	baz=124						
Z55A	Blythe	24.07	314	P	P	09 19 24.4	+0.1
	baz=125						
X56A	White Oak	24.10	318	P	P	09 19 24.6	0.0
	baz=130,SNR=6.9						
TIGA	Tifton	24.16	309	P	P	09 19 25.7	+0.4
	baz=120						
254A	Abbeville	24.20	310	P	P	09 19 25.6	0.0
	baz=121,SNR=5.1						
W56A	Indian Trail	24.23	320	P	P	09 19 25.7	-0.1
	baz=131,SNR=7.8						
553A	Crawfordville	24.23	305	P	P	09 19 25.1	-0.7
	baz=116						
V57A	Coltrane Farms	24.24	322	P	P	09 19 25.6	-0.4
	baz=134,SNR=7.2						
Q61A	Milford	24.26	333	P	P	09 19 26.5	+0.5
	baz=147						
S59A	Mechanicsville	24.27	329	P	P	09 19 23.8	-2.3
	baz=142,SNR=5.8						
Y55A	Saluda	24.30	316	P	P	09 19 26.5	0.0
	baz=127,SNR=5.8						
T58A	Grand View Acr	24.30	325	P	P	09 19 26.3	-0.1
	baz=138,SNR=7.9						
R60A	Leonardtown, M	24.33	330	P	P	09 19 27.2	+0.6
	baz=144						
U57A	Blanch	24.37	323	P	P	09 19 27.3	+0.2
	baz=136						
154A	Montrose	24.41	312	P	P	09 19 27.8	+0.3
	baz=123,SNR=6.8						
453A	Whigham	24.44	307	P	P	09 19 28.3	+0.6
	baz=118,SNR=7.1						
X55A	Gracelyn & Ava	24.47	317	P	P	09 19 28.1	+0.1
	baz=128,SNR=7.1						
R59A	King George, V	24.53	330	P	P	09 19 28.5	0.0
	baz=142						
S58A	Poland Farm, P	24.54	327	P	P	09 19 28.7	+0.1
	baz=140,SNR=14						
Z54A	Sparta	24.56	313	P	P	09 19 29.0	+0.2
	baz=124,SNR=12						
353A	Camilla	24.59	308	P	P	09 19 29.5	+0.4
	baz=119,SNR=8.3						
Q60A	Greensboro	24.59	333	P	P	09 19 29.7	+0.7
	baz=146,SNR=6.4						
V56A	Mocksville	24.62	321	P	P	09 19 29.2	-0.2
	baz=133,SNR=7.9						
CBN	Corbin Frederi	24.66	329	P	P	09 19 29.9	+0.2
	baz=142						
KMSC	Kings Mountain	24.70	319	P	P	09 19 30.1	0.0
	baz=130,SNR=11						
P61A	Hammonton	24.71	335	P	P	09 19 30.4	+0.3
	baz=149						
R58B	Mineral	24.72	328	P	P	09 19 30.3	0.0
	baz=141,SNR=9.9						
T57A	Hurt	24.73	325	P	P	09 19 30.3	-0.1
	baz=137,SNR=6.1						
Y54A	Tignall	24.81	315	P	P	09 19 31.3	+0.1
	baz=126,SNR=15						
Q59A	Harwood	24.84	331	P	P	09 19 31.8	+0.5
	baz=144						

253A	**Americus** baz=120,SNR=14	**24.87**	**309**	P	**P**	**09 19 31.8**	**+0.1**
552A	**Lynn Haven** baz=115	**24.88**	**304**	P	**P**	**09 19 32.0**	**+0.2**
U56A	**King** baz=134,SNR=6.3	**24.91**	**322**	P	**P**	**09 19 32.4**	**+0.3**
153A	**Fort Valley** baz=122	**24.95**	**311**	P	**P**	**09 19 32.6**	**+0.3**
O61A	**Allentown** baz=150	**24.98**	**336**	P	**P**	**09 19 32.6**	**+0.1**
X54A	**Belton** baz=127,SNR=21	**25.00**	**316**	P	**P**	**09 19 33.1**	**+0.3**
M65A	**Busby, Falmout** baz=160	**25.02**	**344**	P	**P**	**09 19 33.1**	**+0.2**
R58A	**Rapidan** baz=141,SNR=12	**25.04**	**328**	P	**P**	**09 19 33.4**	**+0.2**
V55A	**Taylorsville** baz=131	**25.08**	**320**	P	**P**	**09 19 34.0**	**+0.4**
GOGA	**Godfrey** baz=124,SNR=20	**25.09**	**313**	P	**P**	**09 19 33.8**	**+0.1**
Z53A	**Monticello** baz=123,SNR=15	**25.10**	**312**	P	**P**	**09 19 33.9**	**+0.1**
452A	**Marianna** baz=116,SNR=6.9	**25.10**	**306**	P	**P**	**09 19 34.3**	**+0.6**
S57A	**Dark Hollow, R** baz=138,SNR=10.0	**25.12**	**326**	P	**P**	**09 19 34.3**	**+0.4**
P60A	**Greenville** baz=148	**25.17**	**334**	P	**P**	**09 19 34.2**	**-0.1**
T56A	**Rocky Mt** baz=135	**25.19**	**324**	P	**P**	**09 19 34.7**	**+0.2**
352A	**Blakely** baz=118,SNR=7.7	**25.19**	**307**	P	**P**	**09 19 34.9**	**+0.3**
W54A	**Cherokee Point** baz=128,SNR=11	**25.21**	**317**	P	**P**	**09 19 35.2**	**+0.5**
252A	**Lumpkin** baz=119,SNR=5.5	**25.29**	**309**	P	**P**	**09 19 35.9**	**+0.5**
R57A	**Stanardsville** baz=140,SNR=19	**25.30**	**328**	P	**P**	**09 19 36.0**	**+0.5**
TEIG	**Tepich** comp=Z,136nm,1.1s	**25.33**	**280**	*e*P	**P**	**09 19 36.5**	**+0.5**
P59A	**Jarrettsville** baz=146	**25.35**	**333**	P	**P**	**09 19 36.2**	**+0.3**
Q58A	**Fox Den Farm,** baz=142,SNR=11	**25.39**	**330**	P	**P**	**09 19 36.3**	**+0.1**
S56A	**Natural Bridge** baz=137	**25.39**	**325**	P	**P**	**09 19 36.6**	**+0.3**
U55A	**TA2, Sparta** baz=133,SNR=20	**25.41**	**321**	P	**P**	**09 19 37.2**	**+0.6**
Y53A	**Monroe** baz=124,SNR=16	**25.42**	**314**	P	**P**	**09 19 36.8**	**+0.1**
451A	**Vernon** baz=115	**25.44**	**305**	P	**P**	**09 19 37.3**	**+0.5**
V54A	**Nebo** baz=130,SNR=17	**25.49**	**319**	P	**P**	**09 19 37.8**	**+0.5**
O60A	**Telford** baz=148	**25.50**	**335**	P	**P**	**09 19 37.8**	**+0.5**
PAL	**Palisades** baz=152	**25.53**	**338**	P	**P**	**09 19 37.9**	**+0.4**
BLA	**Blacksburg** baz=135,SNR=23	**25.54**	**323**	P	**P**	**09 19 38.3**	**+0.6**
X53A	**Estanollee** baz=126,SNR=11	**25.59**	**315**	P	**P**	**09 19 38.9**	**+0.7**
152A	**Waverly Hall** baz=120,SNR=12	**25.60**	**310**	P	**P**	**09 19 38.7**	**+0.4**
351A	**Pinckard** baz=117	**25.61**	**306**	P	**P**	**09 19 38.0**	**-0.4**
P58A	**Pank, Wackersv** baz=144,SNR=7.7	**25.64**	**331**	P	**P**	**09 19 38.5**	**-0.1**
Z52A	**Williamson** baz=122	**25.65**	**311**	P	**P**	**09 19 38.9**	**+0.2**
T55A	**Pulaski** baz=134	**25.68**	**323**	P	**P**	**09 19 39.6**	**+0.6**
M61A	**Granite Spring** baz=153	**25.75**	**339**	P	**P**	**09 19 40.0**	**+0.5**
Y52A	**Lilburn** baz=124	**25.76**	**313**	P	**P**	**09 19 39.8**	**+0.1**
Q57A	**Strasburg** baz=141,SNR=6.4	**25.81**	**329**	P	**P**	**09 19 40.9**	**+0.7**
O59A	**Robesonia** baz=147	**25.82**	**334**	P	**P**	**09 19 41.1**	**+0.9**
251A	**Midway** baz=118,SNR=25	**25.84**	**308**	P	**P**	**09 19 40.6**	**+0.2**
R56A	**Bull Pasture M** baz=138,SNR=9.0	**25.84**	**327**	P	**P**	**09 19 41.4**	**+0.9**
N60A	**Cedar Hill Far** baz=150,SNR=5.2	**25.86**	**336**	P	**P**	**09 19 41.5**	**+0.9**
U54A	**Nelsons Funny** baz=131,SNR=6.5	**25.89**	**320**	P	**P**	**09 19 41.4**	**+0.4**
W53A	**Cullowhee** baz=127,SNR=16	**25.89**	**316**	P	**P**	**09 19 41.9**	**+0.9**
V53A	**Saluda** baz=128,SNR=15	**25.97**	**318**	P	**P**	**09 19 42.0**	**+0.3**
P57A	**Homestead Farm** baz=142	**25.97**	**330**	P	**P**	**09 19 42.0**	**+0.4**
S55A	**Lewisburg** baz=136,SNR=5.5	**25.98**	**324**	P	**P**	**09 19 42.3**	**+0.6**
151A	**Opelika** baz=119,SNR=8.6	**25.98**	**309**	P	**P**	**09 19 41.6**	**-0.1**
O58A	**Lewisberry** baz=145,SNR=5.9	**25.98**	**332**	P	**P**	**09 19 42.4**	**+0.7**
X52A	**Dahlonega** baz=125	**26.05**	**315**	P	**P**	**09 19 42.6**	**+0.1**
T54A	**Tazewell** baz=133,SNR=15	**26.10**	**322**	P	**P**	**09 19 43.4**	**+0.5**
R55A	**Marlinton** baz=137	**26.13**	**325**	P	**P**	**09 19 44.1**	**+1.0**
HRV	**Adam Dziewonsk** baz=158	**26.15**	**343**	P	**P**	**09 19 43.6**	**+0.5**
N59A	**State Game Lan** baz=148	**26.16**	**335**	P	**P**	**09 19 44.0**	**+0.7**
450A	**Crestview** baz=114	**26.17**	**305**	P	**P**	**09 19 43.6**	**+0.1**
Q56A	**Snyder Ridge,** baz=140,SNR=6.5	**26.20**	**328**	P	**P**	**09 19 44.8**	**+1.1**
350A	**Dozier** baz=116,SNR=6.6	**26.24**	**306**	P	**P**	**09 19 44.6**	**+0.5**
U53A	**Fall Branch** baz=130,SNR=7.1	**26.25**	**319**	P	**P**	**09 19 44.5**	**+0.2**
Z51A	**Franklin** baz=121	**26.26**	**311**	P	**P**	**09 19 44.5**	**+0.2**
W52A	**Murphy** baz=126	**26.36**	**315**	P	**P**	**09 19 45.2**	**+0.1**
O57A	**Amberson** baz=144,SNR=11	**26.37**	**332**	P	**P**	**09 19 46.2**	**+0.9**
P56A	**Dayton Farm, R** baz=141,SNR=11	**26.39**	**329**	P	**P**	**09 19 46.4**	**+1.1**
250A	**Grady** baz=117,SNR=7.8	**26.43**	**307**	P	**P**	**09 19 46.0**	**+0.1**
S54A	**Dingess, Beckl** baz=134	**26.45**	**323**	P	**P**	**09 19 46.2**	**+0.2**
Y51A	**Rockmart** baz=122	**26.48**	**312**	P	**P**	**09 19 46.8**	**+0.5**
150A	**Eclectic** baz=118	**26.53**	**309**	P	**P**	**09 19 47.1**	**+0.3**
R54A	**Victor** baz=135	**26.54**	**324**	P	**P**	**09 19 47.4**	**+0.6**
M59A	**Waymart** baz=150,SNR=11	**26.56**	**336**	P	**P**	**09 19 47.7**	**+0.8**
V52A	**Sevierville** baz=128,SNR=8.5	**26.58**	**317**	P	**P**	**09 19 47.3**	**+0.2**
T53A	**Wise** baz=131,SNR=5.9	**26.63**	**320**	P	**P**	**09 19 48.2**	**+0.6**
Q55A	**Buckhannon** baz=138	**26.63**	**327**	P	**P**	**09 19 48.1**	**+0.5**
449A	**Pace** baz=114	**26.65**	**304**	P	**P**	**09 19 48.0**	**+0.2**
BRAL	**Brewton** baz=115	**26.69**	**305**	P	**P**	**09 19 48.6**	**+0.5**
X51A	**Calhoun** baz=124	**26.69**	**314**	P	**P**	**09 19 48.6**	**+0.4**
U52A	**Thorn Hill** baz=129	**26.77**	**318**	P	**P**	**09 19 49.1**	**+0.2**
Z50A	**Ashland** baz=120,SNR=22	**26.77**	**310**	P	**P**	**09 19 48.9**	**0.0**
N57A	**Milroy** baz=145,SNR=5.7	**26.78**	**332**	P	**P**	**09 19 49.3**	**+0.5**
SSPA	**Standing Stone** comp=Z,26nm,0.9s	**26.83**	**332**	*e*P	**P**	**09 19 50.2**	**+0.8**
SSPA	**Standing Stone** baz=144	**26.83**	**332**	P	**P**	**09 19 50.2**	**+0.8**
S53A	**Williamson** baz=133,SNR=6.4	**26.84**	**322**	P	**P**	**09 19 49.9**	**+0.3**
O56A	**Blue Knob Stat** baz=142,SNR=9.4	**26.85**	**330**	P	**P**	**09 19 50.3**	**+0.7**
349A	**Repton** baz=115	**26.87**	**305**	P	**P**	**09 19 50.6**	**+0.8**
P55A	**Reedsville** baz=139	**26.88**	**328**	P	**P**	**09 19 50.7**	**+0.8**
Y50A	**Piedmont** baz=121,SNR=5.8	**26.95**	**311**	P	**P**	**09 19 50.7**	**+0.2**
W51A	**Cleveland** baz=125	**26.95**	**315**	P	**P**	**09 19 50.7**	**+0.2**
TZTN	**Tazewell** baz=129,SNR=8.6	**26.98**	**318**	P	**P**	**09 19 51.1**	**+0.3**
T52A	**Hallie** baz=130	**26.98**	**320**	P	**P**	**09 19 51.1**	**+0.4**
MCWV	**Mont Chateau** baz=139	**27.01**	**328**	P	**P**	**09 19 51.6**	**+0.7**
Q54A	**Coxs Mills** baz=137,SNR=10	**27.02**	**326**	P	**P**	**09 19 51.6**	**+0.5**
V51A	**Loudon** baz=126	**27.05**	**316**	P	**P**	**09 19 51.4**	**0.0**
249A	**Camden** baz=116,SNR=5.8	**27.08**	**306**	P	**P**	**09 19 51.9**	**+0.2**
149A	**Jones** baz=117	**27.11**	**308**	P	**P**	**09 19 51.8**	**-0.1**
O55A	**Ligonier** baz=141	**27.16**	**329**	P	**P**	**09 19 53.0**	**+0.7**
U51A	**La Follette** baz=128,SNR=8.0	**27.18**	**318**	P	**P**	**09 19 52.5**	**0.0**
R53A	**Hurricane** baz=134,SNR=5.6	**27.18**	**323**	P	**P**	**09 19 53.1**	**+0.5**
Z49A	**Columbiana** baz=119,SNR=8.7	**27.19**	**309**	P	**P**	**09 19 52.9**	**+0.2**
X50B	**Fort Payne** baz=122	**27.19**	**313**	P	**P**	**09 19 52.4**	**-0.3**
N56A	**West Decatur** baz=144	**27.24**	**332**	P	**P**	**09 19 53.6**	**+0.5**
P54A	**Burton** baz=138	**27.29**	**327**	P	**P**	**09 19 54.1**	**+0.6**
Q53A	**Leroy** baz=135,SNR=9.1	**27.31**	**325**	P	**P**	**09 19 54.5**	**+0.8**
BINY	**Binghamton** baz=149,SNR=5.1	**27.34**	**336**	P	**P**	**09 19 54.9**	**+1.0**
W50A	**Signal Mountai** baz=124	**27.35**	**314**	P	**P**	**09 19 54.6**	**+0.5**
S52A	**Salyersville** baz=131	**27.41**	**321**	P	**P**	**09 19 54.9**	**+0.3**
Y49A	**Blount Mountai** baz=120	**27.42**	**311**	P	**P**	**09 19 54.7**	**-0.1**
N55A	**Marion Center** baz=142,SNR=5.3	**27.45**	**331**	P	**P**	**09 19 56.0**	**+1.0**
LRAL	**Lakeview Retre** baz=118,SNR=8.1	**27.46**	**309**	P	**P**	**09 19 55.4**	**+0.3**
V50A	**Pikevile** baz=125	**27.47**	**315**	P	**P**	**09 19 55.5**	**+0.3**
T51A	**Gray** baz=129,SNR=6.9	**27.49**	**319**	P	**P**	**09 19 55.6**	**+0.3**
R52A	**Catlettsburg** baz=133	**27.59**	**322**	P	**P**	**09 19 56.3**	**+0.2**
M56A	**Emporium** baz=144,SNR=6.1	**27.65**	**332**	P	**P**	**09 19 57.5**	**+0.9**
O54A	**Avella** baz=139	**27.67**	**328**	P	**P**	**09 19 57.1**	**+0.2**
P53A	**Whipple** baz=136	**27.69**	**326**	P	**P**	**09 19 57.8**	**+0.7**
X49A	**Woodville** baz=121	**27.69**	**312**	P	**P**	**09 19 57.5**	**+0.3**
S51A	**Beattyville** baz=130,SNR=8.1	**27.69**	**320**	P	**P**	**09 19 57.6**	**+0.5**
148A	**Greensboro** baz=116	**27.71**	**307**	P	**P**	**09 19 57.2**	**-0.2**
U50A	**Jamestown** baz=126,SNR=8.8	**27.73**	**317**	P	**P**	**09 19 57.7**	**+0.2**
Q52A	**Bidwell** baz=134,SNR=5.6	**27.80**	**324**	P	**P**	**09 19 58.5**	**+0.5**
APG	**El Apazote** comp=Z,25nm,0.7s,baz=96,slow=3.1,SNR=28	**27.80**	**269**	P	**P**	**09 19 58.9**	**+0.3**
APG	comp=Z,529nm,20.5s,baz=83,slow=34			LR	LR	09 30 11.0	
LBNH	**Lisbon** baz=159	**27.86**	**344**	P	**P**	**09 19 59.3**	**+0.8**
M55A	**Ridgway** baz=143,SNR=15	**27.89**	**332**	P	**P**	**09 19 59.7**	**+0.8**
W49A	**Belvidere** baz=122	**27.96**	**313**	P	**P**	**09 19 59.9**	**+0.3**
Y48A	**Jasper** baz=119,SNR=5.8	**28.00**	**310**	P	**P**	**09 19 59.7**	**-0.2**
V49A	**McMinnville** baz=124	**28.07**	**315**	P	**P**	**09 20 00.6**	**+0.1**
N54A	**Moraine State** baz=141,SNR=5.6	**28.07**	**330**	P	**P**	**09 20 01.3**	**+0.9**
T50A	**Nancy** baz=127,SNR=15	**28.09**	**318**	P	**P**	**09 20 01.3**	**+0.6**
R51A	**Hillsboro** baz=131,SNR=9.4	**28.11**	**321**	P	**P**	**09 20 01.6**	**+0.7**
O53A	**New Philadelph** baz=138	**28.15**	**327**	P	**P**	**09 20 01.9**	**+0.7**
X48A	**Hartselle** baz=120	**28.17**	**311**	P	**P**	**09 20 01.5**	**+0.1**
P52A	**Corning** baz=135,SNR=7.3	**28.19**	**325**	P	**P**	**09 20 02.0**	**+0.4**
S50A	**Richmond** baz=129,SNR=5.7	**28.21**	**319**	P	**P**	**09 20 02.4**	**+0.6**
PKME	**Peaks-Kenny Pk** baz=165	**28.23**	**348**	P	**P**	**09 20 02.4**	**+0.6**
147A	**Livingston** baz=116,SNR=9.2	**28.26**	**307**	P	**P**	**09 20 02.6**	**+0.4**
L55A	**Hinsdale** baz=145,SNR=5.2	**28.32**	**333**	P	**P**	**09 20 03.8**	**+1.1**
M54A	**Oil Creek Stat** baz=142	**28.34**	**331**	P	**P**	**09 20 03.2**	**+0.3**
N53A	**Lisbon** baz=139	**28.37**	**328**	P	**P**	**09 20 03.8**	**+0.7**
O52A	**Adamsville** baz=136	**28.38**	**326**	P	**P**	**09 20 03.7**	**+0.5**
U49A	**Red Boiling Sp** baz=125,SNR=8.2	**28.40**	**316**	P	**P**	**09 20 03.7**	**+0.3**
W48A	**Pulaski** baz=122	**28.44**	**313**	P	**P**	**09 20 04.0**	**+0.2**
Q51A	**Peebles** baz=132	**28.46**	**323**	P	**P**	**09 20 04.5**	**+0.6**
R50A	**Paris** baz=130,SNR=5.8	**28.55**	**321**	P	**P**	**09 20 05.8**	**+1.0**
T49A	**Edmonton** baz=126	**28.59**	**317**	P	**P**	**09 20 05.4**	**+0.3**
P51A	**Williamsport** baz=134	**28.60**	**324**	P	**P**	**09 20 05.5**	**+0.3**
K55A	**Perry** baz=146	**28.61**	**334**	P	**P**	**09 20 05.8**	**+0.5**
V48A	**Smith Brothers** baz=122	**28.68**	**314**	P	**P**	**09 20 06.4**	**+0.5**
Q50A	**Georgetown** baz=131	**28.70**	**322**	P	**P**	**09 20 06.7**	**+0.6**
L54A	**Sinclairville** baz=143	**28.75**	**332**	P	**P**	**09 20 07.0**	**+0.5**
M53A	**WI Miller and** baz=140	**28.77**	**329**	P	**P**	**09 20 07.2**	**+0.5**
K54A	**Basiliko Farm,** baz=145	**28.78**	**333**	P	**P**	**09 20 07.1**	**+0.3**
X47A	**Russelville** baz=119,SNR=14	**28.79**	**311**	P	**P**	**09 20 07.2**	**+0.3**
N52A	**McGinn’s Farm,** baz=138	**28.81**	**327**	P	**P**	**09 20 07.4**	**+0.4**
O51A	**Pataskala** baz=135,SNR=7.1	**28.81**	**325**	P	**P**	**09 20 07.5**	**+0.4**
S49A	**Springfield** baz=128,SNR=5.9	**28.83**	**319**	P	**P**	**09 20 07.9**	**+0.6**
U48A	**Cassie Pea, Po** baz=124	**28.91**	**315**	P	**P**	**09 20 08.3**	**+0.3**
MOQ	**Mont Orford**	**28.94**	**344**	*e*P	**P**	**09 20 09.5**	**+1.3**
J55A	**Hilton** baz=147	**28.96**	**335**	P	**P**	**09 20 08.7**	**+0.5**
CLDB	**Colider**	**28.96**	**168**	*e*P	**P**	**09 20 10.4**	**+1.9**
L53A	**Girard** baz=141	**28.96**	**330**	P	**P**	**09 20 08.8**	**+0.4**
W47A	**Westpoint** baz=121	**28.96**	**312**	P	**P**	**09 20 08.7**	**+0.2**
LONY	**Lake Ozonia** baz=154	**28.97**	**341**	P	**P**	**09 20 08.9**	**+0.5**
R49A	**Shelbyville** baz=129	**29.07**	**320**	P	**P**	**09 20 09.9**	**+0.5**
ACSO	**Alum Creek Sta** baz=135	**29.08**	**325**	P	**P**	**09 20 09.8**	**+0.4**
P50A	**Jamestown** baz=133	**29.11**	**323**	P	**P**	**09 20 10.5**	**+0.8**
MEDO	**Medina** baz=146	**29.14**	**334**	P	**P**	**09 20 10.8**	**+0.9**
T48A	**Bowling Green** baz=125,SNR=6.1	**29.15**	**317**	P	**P**	**09 20 10.8**	**+0.7**
M52A	**Chesterland** baz=139	**29.18**	**329**	P	**P**	**09 20 10.3**	**0.0**
PECO	**Prince Edward** baz=149	**29.20**	**337**	P	**P**	**09 20 10.7**	**+0.2**
V47A	**Nunnelly** baz=122	**29.21**	**313**	P	**P**	**09 20 10.3**	**-0.3**
N51A	**Ashland** baz=137	**29.24**	**327**	P	**P**	**09 20 11.3**	**+0.5**
S48A	**Wiedeman Farm,** baz=126	**29.25**	**318**	P	**P**	**09 20 10.8**	**-0.2**
J54A	**Appleton** baz=146,SNR=5.2	**29.30**	**334**	P	**P**	**09 20 12.0**	**+0.7**
X46A	**Booneville** baz=118	**29.34**	**310**	P	**P**	**09 20 11.8**	**0.0**
Q49A	**Aurora** baz=130	**29.35**	**321**	P	**P**	**09 20 12.4**	**+0.5**
O50A	**Cable** baz=134,SNR=6.1	**29.37**	**324**	P	**P**	**09 20 12.8**	**+0.7**
U47A	**Clarksville** baz=123	**29.38**	**315**	P	**P**	**09 20 12.1**	**0.0**
M51A	**Elyria** baz=137	**29.44**	**327**	P	**P**	**09 20 12.9**	**+0.3**
W46A	**Michie** baz=120	**29.46**	**311**	P	**P**	**09 20 12.9**	**0.0**
STCO	**Saint Catharin** baz=145	**29.47**	**333**	P	**P**	**09 20 13.3**	**+0.4**
H56A	**Elgin** baz=151	**29.51**	**338**	P	**P**	**09 20 13.4**	**+0.2**
N50A	**Nevada** baz=135	**29.55**	**326**	P	**P**	**09 20 14.0**	**+0.5**
T47A	**Sharon Grove** baz=124	**29.55**	**316**	P	**P**	**09 20 13.9**	**+0.2**
R48A	**Northridge Ran** baz=128	**29.57**	**319**	P	**P**	**09 20 14.6**	**+0.7**
WVT	**Waverly** comp=Z,6.8nm,0.9s	**29.58**	**314**	*e*P	**P**	**09 20 13.7**	**-0.2**
WVT	**Waverly**	**29.58**	**314**	*e*P	**P**	**09 20 13.7**	**-0.2**
WVT	comp=Z,7.0nm,0.9s			pmax	pmax		
WVT	**Waverly** baz=122	**29.58**	**314**	P	**P**	**09 20 13.6**	**-0.2**
P49A	**Miami Univ. Ec** baz=131,SNR=7.1	**29.59**	**322**	P	**P**	**09 20 14.2**	**+0.3**
V46A	**Holladay** baz=121	**29.61**	**313**	P	**P**	**09 20 14.0**	**-0.2**
TYNO	**Tyneside** baz=143	**29.68**	**332**	P	**P**	**09 20 15.0**	**+0.2**
I55A	**Frankford** baz=148	**29.70**	**336**	P	**P**	**09 20 15.4**	**+0.5**
ATAH	**Atahualpa** comp=Z,60nm,0.8s,baz=48,slow=3.7,SNR=34	**29.72**	**215**	P	**P**	**09 20 15.7**	**-0.2**
WCI	**Wyandotte Cave** comp=Z,19nm,1.1s	**29.74**	**318**	*e*P	**P**	**09 20 16.4**	**+1.1**
WCI	**Wyandotte Cave**	**29.74**	**318**	*e*P	**P**	**09 20 16.4**	**+1.1**
WCI	comp=Z,19nm,1.1s			pmax	pmax		
WCI	**Wyandotte Cave** baz=127	**29.74**	**318**	P	**P**	**09 20 15.6**	**+0.4**
WLVO	**Wesleyville** baz=147	**29.74**	**335**	P	**P**	**09 20 15.5**	**+0.3**
S47A	**Hartford** baz=125	**29.74**	**317**	P	**P**	**09 20 15.8**	**+0.5**
SMTB	**Santa Maria do**	**29.80**	**151**	*e*P	**P**	**09 20 17.8**	**+1.7**
H55A	**Tweed** baz=149	**29.80**	**337**	P	**P**	**09 20 15.8**	**0.0**
O49A	**Covington** baz=132,SNR=7.4	**29.80**	**323**	P	**P**	**09 20 16.2**	**+0.4**
NBMO	**Morrinhos-CE**	**29.80**	**132**	*e*P	**P**	**09 20 17.4**	**+1.3**
Q48A	**North Vernon** baz=129,SNR=6.1	**29.81**	**320**	P	**P**	**09 20 16.4**	**+0.5**
VBMS	**Vicksburg** baz=112	**29.82**	**305**	P	**P**	**09 20 16.3**	**+0.3**
K52A	**Tillsonburg** baz=142	**29.82**	**331**	P	**P**	**09 20 16.7**	**+0.8**
OXF	**Oxford** baz=117,SNR=11	**29.92**	**309**	P	**P**	**09 20 17.0**	**0.0**
R47A	**Wooly Knot Far** baz=127	**29.92**	**318**	P	**P**	**09 20 17.2**	**+0.3**
DELO	**Deloro Mine** baz=148	**29.94**	**337**	P	**P**	**09 20 17.2**	**+0.2**
M50A	**Fremont** baz=136	**29.94**	**327**	P	**P**	**09 20 17.3**	**+0.2**
U46A	**Springville** baz=122	**29.94**	**314**	P	**P**	**09 20 17.1**	**0.0**
P48A	**Milroy** baz=130,SNR=5.9	**29.96**	**321**	P	**P**	**09 20 17.1**	**-0.1**
PLIO	**Pelee Island,** baz=137	**29.98**	**328**	P	**P**	**09 20 18.0**	**+0.7**
ORIO	**Orleans, Innes** baz=153	**30.01**	**340**	P	**P**	**09 20 18.1**	**+0.5**
ORHO	**Orleans, Herit** baz=153	**30.02**	**340**	P	**P**	**09 20 17.9**	**+0.2**
PKRO	**Pickering** baz=146	**30.05**	**334**	P	**P**	**09 20 18.1**	**+0.2**
J52A	**Paris** baz=142	**30.07**	**332**	P	**P**	**09 20 18.6**	**+0.4**
T46A	**Princeton** baz=123	**30.11**	**315**	P	**P**	**09 20 18.5**	**-0.1**
K51A	**Iona Station** baz=140	**30.15**	**330**	P	**P**	**09 20 18.7**	**-0.2**
I53A	**Kortright Cn E** baz=144	**30.15**	**334**	P	**P**	**09 20 18.8**	**-0.1**
ACTO	**Acton** baz=143	**30.18**	**333**	P	**P**	**09 20 19.5**	**+0.4**
PLVO	**Plevna** baz=150	**30.18**	**338**	P	**P**	**09 20 19.4**	**+0.3**
N49A	**Columbus Grove** baz=134	**30.21**	**325**	P	**P**	**09 20 19.4**	**-0.1**
G55A	**Calabogie** baz=151	**30.24**	**339**	P	**P**	**09 20 19.7**	**0.0**
Q47A	**Bedord North L** baz=128	**30.24**	**319**	P	**P**	**09 20 19.7**	**0.0**
L50A	**Kingsville** baz=137	**30.28**	**328**	P	**P**	**09 20 20.3**	**+0.3**
O48A	**Farmland** baz=131,SNR=6.6	**30.32**	**323**	P	**P**	**09 20 20.3**	**-0.1**
S46A	**Don Dixon Farm** baz=124,SNR=13	**30.34**	**316**	P	**P**	**09 20 20.7**	**+0.1**
BANO	**Bancroft** baz=148	**30.48**	**337**	P	**P**	**09 20 22.1**	**+0.4**
M49A	**Liberty Center** baz=135	**30.48**	**326**	P	**P**	**09 20 22.3**	**+0.5**
P47A	**Martinsville** baz=129	**30.49**	**320**	P	**P**	**09 20 22.3**	**+0.4**
R46A	**Gibon Southern** baz=125	**30.50**	**317**	P	**P**	**09 20 22.4**	**+0.3**
I52A	**Shelburne** baz=144	**30.60**	**333**	P	**P**	**09 20 23.0**	**+0.2**
T45A	**Paducah** baz=122	**30.60**	**314**	P	**P**	**09 20 23.5**	**+0.5**
F55A	**Otter Lake** baz=152	**30.62**	**340**	P	**P**	**09 20 23.2**	**+0.2**
N48A	**Decatur** baz=132,SNR=6.8	**30.64**	**324**	P	**P**	**09 20 23.3**	**+0.1**
K50A	**Casco** baz=138	**30.73**	**329**	P	**P**	**09 20 24.2**	**+0.3**
I51A	**Listowel** baz=142	**30.76**	**332**	P	**P**	**09 20 24.2**	**0.0**
PEMO	**Pembroke** baz=150	**30.80**	**338**	P	**P**	**09 20 24.8**	**+0.3**
L49A	**Milan** baz=136	**30.82**	**327**	P	**P**	**09 20 25.2**	**+0.4**
G53A	**Haliburton** baz=147,SNR=6.5	**30.83**	**336**	P	**P**	**09 20 25.3**	**+0.4**
Q46A	**CEJHS Indians,** baz=126	**30.88**	**319**	P	**P**	**09 20 26.0**	**+0.6**
M48A	**Edgerton** baz=134	**30.89**	**325**	P	**P**	**09 20 25.8**	**+0.3**
O47A	**Sheridan** baz=130,SNR=6.3	**30.90**	**322**	P	**P**	**09 20 25.6**	**+0.1**
AAM	**Ann Arbor** baz=136	**30.90**	**327**	P	**P**	**09 20 26.0**	**+0.5**
H52A	**Wyevale** baz=145	**30.94**	**334**	P	**P**	**09 20 25.9**	**+0.1**
LATQ	**La Tuque** baz=159	**31.00**	**345**	P	**P**	**09 20 27.2**	**+0.9**
X43A	**Marvell** baz=116	**31.01**	**308**	P	**P**	**09 20 26.9**	**+0.3**
N47A	**Urbana** baz=131,SNR=8.1	**31.04**	**323**	P	**P**	**09 20 27.1**	**+0.4**
R45A	**Skylar, Fairfi** baz=124,SNR=22	**31.05**	**317**	P	**P**	**09 20 27.4**	**+0.5**
BWLO	**Walkerton** baz=142	**31.06**	**332**	P	**P**	**09 20 27.0**	**+0.1**
L48A	**N Adams** baz=134,SNR=5.4	**31.06**	**326**	P	**P**	**09 20 27.4**	**+0.4**
P46A	**Rosedale** baz=128,SNR=8.7	**31.14**	**320**	P	**P**	**09 20 28.4**	**+0.7**
K49A	**Clarkson** baz=137	**31.15**	**328**	P	**P**	**09 20 27.9**	**+0.2**
BASO	**Ashfield** baz=141	**31.21**	**331**	P	**P**	**09 20 28.8**	**+0.6**
BRCO	**Bruce Peninsul** baz=142	**31.29**	**332**	P	**P**	**09 20 28.9**	**0.0**

Q45A	Warren Harvey,	31.31	318	P	P	09 20 29.8	+0.6
	baz=125,SNR=5.9						
M47A	Cromwell	31.31	324	P	P	09 20 29.6	+0.4
	baz=132						
ALGO	Algonquin Park	31.32	338	P	P	09 20 29.4	+0.2
	baz=149						
S44A	Carbondale	31.37	315	P	P	09 20 30.2	+0.5
	baz=122,SNR=6.5						
BUKO	Buck Lake	31.40	336	P	P	09 20 30.2	+0.4
	baz=146						
J49A	Marlette	31.41	329	P	P	09 20 30.1	+0.1
	baz=138						
P45A	Graceland, Par	31.42	319	P	P	09 20 30.6	+0.5
	baz=127,SNR=5.7						
E54A	Lac Daplat, Po	31.43	339	P	P	09 20 30.4	+0.2
	baz=151						
BMRO	Meriville Lake	31.47	333	P	P	09 20 30.6	+0.1
	baz=142						
L47A	Sherwood	31.49	325	P	P	09 20 30.8	0.0
	baz=133,SNR=5.4						
K48A	Perry	31.50	327	P	P	09 20 30.9	+0.1
	baz=136,SNR=8.4						
SFIN	Lafayette	31.54	321	P	P	09 20 31.7	+0.6
	baz=129						
E53A	Dumoine, Ponti	31.55	339	P	P	09 20 31.4	+0.3
	baz=150,SNR=5.6						
N46A	Monticello	31.65	322	P	P	09 20 32.8	+0.7
	baz=130						
KLBO	Killbear Provi	31.66	335	P	P	09 20 32.2	+0.1
	baz=145						
F52A	Sundridge	31.66	336	P	P	09 20 32.6	+0.4
	baz=147,SNR=7.5						
J48A	Bridge Port	31.69	328	P	P	09 20 28.5	-3.9
	baz=137						
I49A	Point Hope	31.70	330	P	P	09 20 32.7	+0.2
	baz=139						
M46A	Old House Fiel	31.76	323	P	P	09 20 33.6	+0.5
	baz=131						
E52A	Mattawa	31.82	337	P	P	09 20 34.0	+0.4
	baz=148						
O45A	Potomac	31.84	320	P	P	09 20 34.0	+0.2
	baz=128						
K47A	Vermontville	31.86	326	P	P	09 20 34.1	+0.1
	baz=134,SNR=7.8						
D54A	Lac Fusel, La	31.89	340	P	P	09 20 34.1	0.0
	baz=152						
Z41A	Richland Creek	31.99	305	P	P	09 20 35.4	+0.2
	baz=112						
F51A	Arnstein	32.00	336	P	P	09 20 35.4	+0.2
	baz=146,SNR=8.2						
N45A	Kentland	32.08	321	P	P	09 20 36.5	+0.6
	baz=129,SNR=6.7						
TOBO	Tobermory, Bru	32.10	333	P	P	09 20 36.1	+0.1
	baz=143						
L46A	Eue Claire	32.12	324	P	P	09 20 36.5	+0.2
	baz=132						
D53A	Lac Vacive, Po	32.17	339	P	P	09 20 37.0	+0.4
	baz=150						
J47A	Sunmer	32.17	327	P	P	09 20 37.2	+0.5
	baz=135,SNR=6.5						
O44A	Mansfield	32.23	320	P	P	09 20 37.9	+0.6
	baz=126,SNR=5.9						
M45A	Boilermakers S	32.26	322	P	P	09 20 38.0	+0.5
	baz=130						
K46A	Dorr	32.29	326	P	P	09 20 37.8	0.0
	baz=133,SNR=5.5						
I48A	Sherman Twp	32.30	330	P	P	09 20 37.6	-0.2
	baz=138						
W41B	Gary Mavity, V	32.31	309	P	P	09 20 38.1	+0.1
	baz=115,SNR=14						
D52A	ZEK Kipawa Sen	32.33	338	P	P	09 20 38.5	+0.5
	baz=149,SNR=5.6						
E51A	G1948 Merrick	32.34	337	P	P	09 20 38.6	+0.4
	baz=147,SNR=5.1						
PEXB	Peixe	32.40	155	*e*P	P	09 20 40.5	+1.6
N44A	Piper City	32.42	321	P	P	09 20 39.2	+0.4
	baz=128,SNR=5.9						
X40A	Basin Creek Fa	32.47	307	P	P	09 20 39.6	+0.1
	baz=113,SNR=23						
H48A	Harrisville	32.51	331	P	P	09 20 39.7	+0.1
	baz=139						
I47A	Gladwin	32.57	329	P	P	09 20 40.4	+0.2
	baz=137						
P43A	Skaggs, Pawnee	32.60	318	P	P	09 20 41.1	+0.6
	baz=124,SNR=8.9						
J46A	Howard City	32.68	327	P	P	09 20 41.0	-0.1
	baz=134						
M44A	Midewin, Midew	32.73	322	P	P	09 20 41.8	+0.3
	baz=129,SNR=6.6						
E50A	Wahnapitae	32.74	335	P	P	09 20 41.7	+0.1
	baz=145						
F49A	Sandfield	32.75	333	P	P	09 20 41.5	-0.2
	baz=142						
H47A	Mio	32.85	330	P	P	09 20 42.7	+0.1
	baz=138						
CCM	Cathedral Cave	32.91	314	*e*P	P	09 20 43.2	-0.1
CCM	Cathedral Cave	32.91	314	*e*P	P	09 20 43.2	-0.1
CCM	Cathedral Cave	32.91	314	P	P	09 20 43.1	-0.1
	baz=120						
NATX	Nacogdoches	32.98	301	P	P	09 20 44.6	+0.6
	baz=108,SNR=5.8						
HDIL	Hopedale	32.98	319	P	P	09 20 44.4	+0.5
	baz=126,SNR=6.4						
I46A	Reed City	32.99	328	P	P	09 20 44.0	+0.1
	baz=135						
F48A	Evansville	33.05	333	P	P	09 20 44.4	0.0
	baz=142						
MIAR	Mount Ida	33.06	307	P	P	09 20 44.5	-0.1
	baz=113,SNR=11						
NNA	Nana	33.10	208	*e*P	P	09 20 44.9	-0.2
	comp=Z,48nm,0.6s						
NNA	Nana	33.10	208	*i* P	P	09 20 44.8	-0.4
G47A	Hillman	33.11	331	P	P	09 20 45.4	+0.5
	baz=139,SNR=6.4						
J45A	Montague	33.13	326	P	P	09 20 45.1	0.0
	baz=133						
N43A	Stutzman Famil	33.13	320	P	P	09 20 45.2	+0.1
	baz=126						
L44A	Lake County Fo	33.14	323	P	P	09 20 45.8	+0.6
	baz=130,SNR=8.4						
GLMI	Grayling	33.21	329	P	P	09 20 46.1	+0.3
	baz=137						
U40A	Yellville	33.26	310	P	P	09 20 45.9	-0.4
	baz=116,SNR=12						
H46A	Fife Lake	33.29	329	P	P	09 20 46.4	-0.1
	baz=136						
M43A	Waltham Townsh	33.30	321	P	P	09 20 46.8	+0.2
	baz=127,SNR=8.5						
E48A	Lockeyer	33.37	334	P	P	09 20 47.7	+0.6
	baz=143,SNR=9.1						
I45A	Fountain	33.46	327	P	P	09 20 48.3	+0.3
	baz=134						
W39A	Magazine	33.47	308	P	P	09 20 49.1	+0.9
	baz=113,SNR=15						
HKT	Hockley	33.47	298	*e*P	P	09 20 47.5	-0.7
	comp=Z,8.4nm,1.0s						
HKT	Hockley	33.47	298	*e*P	P	09 20 47.5	-0.7
HKT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SIV	San Ignacio	33.48	179	P	P	09 20 49.3	+0.9
	comp=Z,26nm,0.5s,baz=17,slow=8.4,SNR=211						
PAYG	Puerto Ayora	33.61	240	*e*P	P	09 20 50.3	+0.7
	comp=Z,94nm,1.1s						
D49A	Beulah Townshi	33.67	335	P	P	09 20 50.2	+0.4
	baz=145						
LSQQ	Lebel-sur-Quev	33.68	342	P	P	09 20 50.4	+0.7
	baz=153						
G46A	Petoskey	33.69	330	P	P	09 20 50.4	+0.4
	baz=138						
K43A	Burlington	33.72	323	P	P	09 20 50.3	+0.1
	baz=130						
CHGQ	Chibougamau	33.74	345	P	P	09 20 51.2	+0.8
	baz=158,SNR=5.8						
D48A	Paudash Townsh	33.78	335	P	P	09 20 51.1	+0.4
	baz=144						
G45A	Suttons Bay	33.88	329	P	P	09 20 52.1	+0.5
	baz=136						
N41A	Harden Midland	34.05	318	P	P	09 20 52.9	-0.2
	baz=124						
L42A	Oliver, Polo	34.06	321	P	P	09 20 53.5	+0.2
	baz=127,SNR=9.4						
E46A	Sault Ste Mari	34.22	332	P	P	09 20 55.2	+0.8
	baz=139,SNR=12						
D47A	Chapleau	34.22	334	P	P	09 20 54.8	+0.2
	baz=142,SNR=5.3						
M41A	Milan	34.23	320	P	P	09 20 54.3	-0.4
	baz=125						
F45A	CMU Biological	34.27	330	P	P	09 20 55.6	+0.7
	baz=137						
LPAZ	La Paz	34.37	191	P	P	09 20 56.1	-0.7
	comp=Z,5.8nm,0.8s,baz=6.3,slow=9.8,SNR=15						
LPAZ	La Paz	34.37	191	*e*P	P	09 20 54.9	-1.9
	comp=Z,5.1nm,0.8s						
LPAZ	La Paz	34.37	191	*e*P	P	09 20 54.9	-1.9
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
D46A	Sault St. Mari	34.49	332	P	P	09 20 57.3	+0.4
	baz=140						
MATQ	Matagami	34.50	342	P	P	09 20 57.3	+0.4
	baz=153						
H43A	Windswept, Lux	34.56	326	P	P	09 20 57.7	+0.2
	baz=132						
N40A	Mertquake, Sal	34.61	318	P	P	09 20 57.9	-0.1
	baz=123						
I42A	Draeger Farm,	34.80	324	P	P	09 20 59.9	+0.3
	baz=130,SNR=6.7						
NBLI	Livramento-PB	34.83	134	*e*P	P	09 21 01.1	+0.9
JFWS	Jewell Farm	34.95	322	P	P	09 21 00.9	0.0
	baz=127,SNR=8.0						
L40A	Anamosa	35.04	320	P	P	09 21 01.5	-0.2
	baz=125,SNR=11						
435B	Jarrell	35.14	299	P	P	09 21 02.7	0.0
	baz=104,SNR=7.9						
E44A	Grand Marais A	35.15	330	P	P	09 21 03.6	+1.0
	baz=137						
TUL1	Leonard	35.26	308	P	P	09 21 03.5	-0.1
	baz=112,SNR=12						
WHTX	Lake Whitney,	35.33	301	P	P	09 21 04.4	+0.1
	baz=105,SNR=6.6						
I41A	Arkdale	35.44	324	P	P	09 21 05.5	+0.4
	baz=129,SNR=7.3						
E43A	Lone Tree Farm	35.49	329	P	P	09 21 05.8	+0.4
	baz=136						
F42A	Maple Grove Fa	35.63	328	P	P	09 21 06.8	+0.1
	baz=133						
BDFB	Brasilia	35.73	157	P	P	09 21 08.6	+0.6
	comp=Z,5.4nm,0.8s,baz=327,slow=9.8,SNR=6.8						
BDFB	Brasilia	35.73	157	*e*P	P	09 21 08.6	+0.6
BDFB				*e*P	P	09 21 10.2	+2.2
SCIA	State Center	36.19	319	P	P	09 21 11.7	+0.1
	baz=122						
833A	Chaparral WMA,	36.22	294	P	P	09 21 11.5	-0.5
	baz=99,SNR=7.0						
G40A	Rib Lake	36.39	325	P	P	09 21 13.7	+0.4
	baz=130,SNR=9.6						
D41A	Chassel	36.74	329	P	P	09 21 16.9	+0.8
	baz=134						
F40A	Park Falls	36.77	326	P	P	09 21 16.9	+0.4
	baz=131,SNR=9.6						
G39A	Holcombe	36.94	325	P	P	09 21 18.2	+0.4
	baz=129,SNR=14						
JCT	Junction City	36.94	297	P	P	09 21 17.8	-0.4
	baz=102,SNR=48						
KSU1	Kansas State U	37.12	312	P	P	09 21 18.4	-1.2
	baz=115,SNR=9.1						
WMOK	Wichita Mounta	37.16	305	P	P	09 21 19.3	-0.7
	baz=108,SNR=14						
F39A	Loretta	37.19	326	P	P	09 21 20.7	+0.7
	baz=130,SNR=14						
ABTX	Abilene, Hawle	37.28	301	P	P	09 21 20.7	-0.3
	baz=104,SNR=17						
SCHQ	Schefferville	37.29	355	LR	LR	09 34 25.0	
	comp=Z,292nm,21.2s,baz=193,slow=32						
C40A	Isle Royale Na	37.62	329	P	P	09 21 24.1	+0.5
	baz=134,SNR=6.9						
F38A	Pierce - Schro	37.74	325	P	P	09 21 25.2	+0.6
	baz=129,SNR=11						
SPMN	Marine on St.	37.81	323	P	P	09 21 25.1	-0.2
	baz=127,SNR=8.4						
E38A	The Farm, Brul	37.97	326	P	P	09 21 26.8	+0.1
	baz=130						
F37A	Hinrichs Farm,	38.01	324	P	P	09 21 27.1	+0.2
	baz=127						
AQDB	Aquidauana	38.37	171	*e*P	P	09 21 31.8	+1.6
ITRB	Iturama	38.77	163	*e*P	P	09 21 35.5	+1.9
EYMN	Ely	38.80	328	P	P	09 21 33.7	+0.1
	baz=131						
BGNE	Belgrade	39.18	315	P	P	09 21 36.4	-0.5
	baz=116,SNR=9.2						
CBKS	Cedar Bluff	39.25	310	P	P	09 21 37.2	-0.4
	baz=112,SNR=9.6						
ECSD	EROS Data Cent	39.27	319	P	P	09 21 37.4	-0.3
	baz=120,SNR=22						
AMTX	Amarillo	39.49	304	P	P	09 21 39.3	-0.4
	baz=106						
MSTX	Muleshoe	40.14	302	P	P	09 21 44.6	-0.5
	baz=104,SNR=22						
BB19B	Bebedouro	40.60	161	*e*P	P	09 21 50.4	+1.5
LVC	Limon Verde	40.69	190	P	P	09 21 48.1	-1.8
	comp=Z,10nm,0.8s,baz=18,slow=4.8,SNR=11						
LVC	Limon Verde	40.69	190	*e*P	P	09 21 48.5	-1.4
	comp=Z,12nm,0.9s						
LVC	Limon Verde	40.69	190	*e*P	P	09 21 48.5	-1.4
LVC				pmax	pmax		
	comp=Z,12nm,0.9s						
SUSD	Miller	41.09	319	P	P	09 21 52.2	-0.6
	baz=119						
TRCB	Terra Rica	41.19	167	*e*P	P	09 21 54.8	+1.1
AGMN	Agassiz Nation	41.32	325	P	P	09 21 54.2	-0.3
	baz=126,SNR=18						
SJMB	Sao Joao De Ma	41.37	150	*e*P	P	09 21 56.6	+1.4
KSCO	Kaye Shedlock'	41.43	309	P	P	09 21 55.4	-0.3
	baz=109,SNR=8.9						
BSFB	Barra de Sao F	41.64	150	*e*P	P	09 21 58.6	+1.3
OGNE	Ogallala	41.67	312	P	P	09 21 57.1	-0.5
	baz=112						
BSCB	Bom Sucesso	41.84	156	*e*P	P	09 22 00.2	+1.1
MNTX	Cornudas Mount	41.86	298	P	P	09 21 59.2	0.0
	baz=99,SNR=41						
RCLB	Rio Claro- Sao	42.18	160	*e*P	P	09 22 03.2	+1.4
T25A	Trinidad	42.22	306	P	P	09 22 02.4	+0.1
	baz=106,SNR=15						
RIB01	Linhares ES	42.27	149	*e*P	P	09 22 03.9	+1.4
FRTB	Fartura	42.45	163	*e*P	P	09 22 06.7	+2.7
ULM	Lac du Bonnet	42.49	328	P	P	09 22 03.2	-0.8
	comp=Z,15nm,0.7s,baz=128,slow=8.6,SNR=26						
ULM				LR	LR	09 38 45.4	
	comp=Z,240nm,21.1s,baz=140,slow=35						
ULM	Lac du Bonnet	42.49	328	*e*P	P	09 22 03.4	-0.6
	comp=Z,21nm,0.8s						
ULM	Lac du Bonnet	42.49	328	*e*P	P	09 22 03.4	-0.6
ULM				pmax	pmax		
	comp=Z,21nm,0.8s						
PTGB	Pitanga	43.17	167	*e*P	P	09 22 11.6	+1.7
MDND	Maddock	43.17	323	P	P	09 22 09.3	-0.3
	baz=121,SNR=5.7						
SDCO	Great Sand Dun	43.22	307	P	P	09 22 10.5	0.0
	baz=105,SNR=24						
Q24A	Divide	43.29	308	P	P	09 22 10.9	-0.1
	baz=107						
SPB	Sao Paulo	43.31	161	*e*P	P	09 22 12.6	+1.7
ANMO	Albuquerque	43.32	302	*e*P	P	09 22 11.6	+0.4
	comp=Z,7.8nm,0.9s						
ANMO	Albuquerque	43.32	302	*ce*P	P	09 22 11.7	+0.4
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANMO	Albuquerque	43.32	302	P	P	09 22 11.6	+0.4
	baz=102						
TASM	ASL Pad, Albuq	43.33	302	P	P	09 22 11.6	+0.4
	baz=102,SNR=18						
TASM	ASL Pad, Albuq	43.33	302	P	P	09 22 11.7	+0.4
	baz=102,SNR=17						
Y22D	IRIS PASSCAL I	43.54	301	P	P	09 22 13.6	+0.7
	baz=100						
ESAR	Angra dos Reis	43.81	157	*e*P	P	09 22 16.4	+1.6
CAM01	Campos-RJ	43.87	153	*e*P	P	09 22 16.9	+1.5
ISCO	Idaho Springs	43.88	309	P	P	09 22 16.0	+0.2
	baz=107,SNR=8.3						
CPUP	Villa Florida	43.96	174	P	P	09 22 15.3	-0.7
	comp=Z,7.4nm,0.8s,baz=353,slow=6.9,SNR=13						
CPUP	Villa Florida	43.96	174	*e*P	P	09 22 15.4	-0.7
	comp=Z,10.0nm,0.9s						
CPUP	Villa Florida	43.96	174	*e*P	P	09 22 15.4	-0.6
CPUP				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CPUP	Villa Florida	43.96	174	*e*P	P	09 22 15.7	-0.4
121A	Cookes Peak, D	44.00	299	P	P	09 22 17.9	+1.2
	baz=98,SNR=22						
S22A	4UR Ranch, Cre	44.24	306	P	P	09 22 18.9	+0.2
	baz=104,SNR=13						
RSSD	Black Hills	44.25	316	*e*P	P	09 22 19.4	+0.9
	comp=Z,5.2nm,0.8s						
RSSD	Black Hills	44.25	316	*e*P	P	09 22 19.4	+0.9
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RSSD	Black Hills	44.25	316	P	P	09 22 18.5	0.0
	baz=113						
N23A	Red Feather La	44.45	311	P	P	09 22 20.1	-0.2
	baz=108						
MVCO	Mesa Verde	45.41	305	P	P	09 22 27.9	0.0
	baz=102						
K22A	Casper	45.41	313	P	P	09 22 28.0	+0.1
	baz=109,SNR=11						
W18A	Petrified Fore	46.00	302	P	P	09 22 33.2	+0.6
	baz=100,SNR=17						
DGMT	Dagmar	46.17	321	P	P	09 22 33.6	+0.1
	baz=117						
TUC	Tucson	46.49	298	*e*P	P	09 22 37.4	+1.1
	comp=Z,45nm,1.0s						
TUC	Tucson	46.49	298	*e*P	P	09 22 37.4	+1.1
TUC				pmax	pmax		
	comp=Z,45nm,1.0s						
TUC	Tucson	46.49	298	P	P	09 22 37.5	+1.1
	baz=96						
LAO	LASA Array	46.66	318	P	P	09 22 37.8	+0.3
	baz=113,SNR=12						
WUAZ	Wupatki	47.39	302	P	P	09 22 44.1	+0.7
	baz=99,SNR=27						
BW06	Boulder Array	47.58	312	P	P	09 22 44.9	0.0
	baz=107,SNR=25						
PDAR	Pinedale Array	47.58	312	P	P	09 22 44.9	0.0
	comp=Z,7.9nm,0.7s,baz=114,slow=9.6,SNR=96						
PDAR				PcP	PcP	09 24 14.0	-0.4
	comp=Z,3.9nm,0.9s,baz=108,slow=4.8,SNR=3.0						
CNLB	Canela	47.87	167	*e*P	P	09 22 48.6	+1.7
RLMT	Red Lodge	48.09	315	P	P	09 22 49.2	+0.4
	baz=109,SNR=18						
FFC	Flin Flon	48.13	330	*e*P	P	09 22 48.9	+0.2
FFC	Flin Flon	48.13	330	*i* P	P	09 22 48.4	-0.3
214A	Organ Pipe Nat	48.17	297	P	P	09 22 50.4	+1.0
	baz=95,SNR=11						
GO04	Tololo Observa	48.40	191	*e*P	P	09 22 50.1	-1.2
	comp=Z,20nm,0.9s						
CPSB	Cacapava Do Su	48.46	171	*e*P	P	09 22 52.3	+0.9
SNOW	Snow King Moun	48.62	313	*e*P	P	09 22 53.6	+0.7
	comp=Z,5.8nm,0.8s						
DUG	Dugway, Tooele	49.33	308	P	P	09 22 58.9	+0.6
DUG				pmax	pmax		
	comp=Z,25nm,1.0s						
DUG	Dugway, Tooele	49.33	308	P	P	09 22 58.8	+0.6
	baz=102,SNR=21						
EGMT	Eagleton	49.39	319	P	P	09 22 59.0	+0.4
	baz=111,SNR=14						
PDMCI	Parker Dam,Lak	49.49	300	P	P	09 23 00.1	+0.6
	baz=96						
Y12C	Blythe	49.76	299	P	P	09 23 02.1	+0.7
	baz=95,SNR=5.3						
PLTB	Pedras Altas	49.77	171	*e*P	P	09 23 02.7	+1.3
BOZ	Bozeman (W)	49.82	315	P	P	09 23 02.4	+0.4
	baz=107,SNR=15						
NEE2	Needles Airpor	49.93	301	P	P	09 23 03.2	+0.4
	baz=96						
GLA	Glamis	49.95	299	P	P	09 23 04.1	+1.0
	baz=94,SNR=7.7						
IRM	Iron Mountain	50.31	300	P	P	09 23 06.9	+1.2
	baz=95,SNR=30						
BC3	Big Chuckawall	50.52	299	P	P	09 23 08.2	+0.8
	baz=94,SNR=31						
SWSC	Sam W. Stewart	50.76	298	P	P	09 23 10.0	+0.9
	baz=94,SNR=8.1						
GMRC	Granite Mounta	50.79	301	P	P	09 23 10.1	+0.7
	baz=95,SNR=7.0						
BELC	Belle Mtn. Jos	51.00	300	P	P	09 23 12.0	+0.9
	baz=94,SNR=21						
IKP	In-Ko-Pah, Jac	51.01	298	P	P	09 23 12.1	+1.0
	baz=93,SNR=7.9						
TUQ	Turquoise Moun	51.06	301	P	P	09 23 12.4	+0.9
	baz=96,SNR=21						
R11A	Troy Canyon, C	51.13	305	P	P	09 23 12.9	+0.8
	baz=98,SNR=14						
HLID	Hailey	51.22	312	P	P	09 23 13.0	+0.4
	baz=103,SNR=12						
MONP2	Monument Peak	51.28	298	P	P	09 23 14.6	+1.3
	baz=93,SNR=31						
HEC	Hector,Ludlow	51.34	301	P	P	09 23 14.6	+1.1
	baz=95,SNR=13						
PFO	Pinyon Flats O	51.36	299	*e*P	P	09 23 14.6	+0.9
	comp=Z,14nm,1.1s						
PFO	Pinyon Flats O	51.36	299	*e*P	P	09 23 14.6	+0.9
PFO				pmax	pmax		
	comp=Z,14nm,1.1s						
PFO	Pinyon Flats O	51.36	299	P	P	09 23 14.7	+0.9
	baz=94,SNR=8.7						
SHOC	Shoshone, Teco	51.39	302	P	P	09 23 14.7	+0.9
	baz=96,SNR=8.8						
TPNV	Topopah Spring	51.48	303	P	P	09 23 15.9	+1.3
	baz=97,SNR=18						
GSC	Goldstone, Bar	51.77	301	P	P	09 23 17.8	+1.0
	baz=95,SNR=14						
BBRC	Big Bear Solar	51.78	300	P	P	09 23 18.3	+1.3
	baz=94,SNR=8.9						
109C	Camp Elliot, M	51.86	298	P	P	09 23 18.3	+1.0
	baz=93,SNR=8.3						
RRX	Edison Barstow	51.89	301	P	P	09 23 18.7	+1.1
	baz=94						
FURC	Furnace Creek,	51.92	303	P	P	09 23 18.9	+1.2
	baz=96,SNR=6.5						
MURC	Murrieta	51.97	299	P	P	09 23 19.0	+0.8
	baz=93,SNR=14						
OGAUY	Aigu	52.15	173	*e*P	P	09 23 20.0	+0.7
GRAC	Grapevine Rang	52.38	303	P	P	09 23 22.1	+0.9
	baz=96,SNR=13						
MPMC	Manual Prospec	52.39	302	P	P	09 23 22.2	+0.7
	baz=95,SNR=18						
BFSC	Mount Baldy Ra	52.39	300	P	P	09 23 22.1	+0.7
	baz=94,SNR=9.3						
LRMC	Laurel Mtn Rad	52.50	301	P	P	09 23 22.9	+0.7
	baz=94,SNR=7.9						
EDW2	Edwards Air Fo	52.71	301	P	P	09 23 24.6	+0.9
	baz=94,SNR=21						
FMP	Fort Macarthur	52.89	299	P	P	09 23 25.9	+0.9
	baz=93						
CWC	Cottonwood Cre	52.90	303	P	P	09 23 26.3	+1.2
	baz=95						
DECC	Green Verdugo	52.95	300	P	P	09 23 25.9	+0.5
	baz=93,SNR=5.4						
CIS	Catalina Islan	52.98	299	P	P	09 23 26.5	+0.9
	baz=92						
H10N3	ASCENSION HYDR	53.00	115	T	T	10 20 33.4	
	baz=299,slow=75,SNR=1459						
H10N2	ASCENSION HYDR	53.00	115	T	T	10 20 40.1	
	baz=299,slow=75,SNR=1394						
H10N1	ASCENSION HYDR	53.02	115	T	T	10 20 34.9	
	baz=299,slow=75,SNR=1918						
TIN	Tinemaha, Big	53.07	303	P	P	09 23 27.3	+0.9
	baz=95						
ISA	Isabella, Lake	53.15	302	P	P	09 23 28.0	+1.0
	baz=94,SNR=8.4						
NVAR	Mina Array Bea	53.27	305	P	P	09 23 28.1	+0.2
	comp=Z,4.7nm,0.7s,baz=92,slow=7.1,SNR=48						
NVAR				PcP	PcP	09 24 36.3	+0.8
	comp=Z,3.9nm,0.8s,baz=109,slow=4.9,SNR=5.9						
NVAR				LR	LR	09 46 25.1	
	comp=Z,318nm,22.0s,baz=108,slow=36						
OSI	Osito Audit: C	53.29	300	P	P	09 23 28.2	+0.3
	baz=93						
H10S3	ASCENSION HYDR	53.40	116	T	T	10 21 08.4	
	baz=300,slow=75,SNR=4814						
H10S1	ASCENSION HYDR	53.41	116	T	T	10 21 08.9	
	baz=300,slow=75,SNR=4316						
ARVC	Arvin	53.41	301	P	P	09 23 30.0	+1.3
	baz=94,SNR=11						
H10S2	ASCENSION HYDR	53.42	116	T	T	10 21 09.8	
	baz=300,slow=75,SNR=4322						
BLG	Laguna Peak, P	53.55	300	P	P	09 23 30.1	+0.3
	baz=93						
VES	Vestal, Richgr	53.66	302	P	P	09 23 31.5	+0.9
	baz=94,SNR=14						
VOG	Valley Oaks Go	53.93	302	P	P	09 23 32.6	+0.1
	baz=94						
SCZ2	Santa Cruz Isl	54.02	299	P	P	09 23 33.8	+0.5
	baz=92						
SBC	Santa Barbara	54.10	300	P	P	09 23 34.4	+0.5
	baz=92						
ESDC	Sonseca Array	54.14	54	P	P	09 23 35.0	+0.9
	comp=Z,0.6nm,0.6s,baz=273,slow=7.0,SNR=6.3						
ESDC				LR	LR	09 41 41.1	
	comp=Z,143nm,20.7s,baz=140,slow=30						
NEW	Newport	54.17	317	P	P	09 23 33.8	-0.4
NEW				pmax	pmax		
	comp=Z,30nm,1.1s						
NEW	Newport	54.17	317	P	P	09 23 33.9	-0.2
	baz=104,SNR=23						

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PKM   Mcpherson Peak    54.20 301    P        P         09 23 35.7 +0.9
      baz=93,SNR=9.0
SMMC  Simmler           54.37 301    P        P         09 23 37.1 +1.2
      baz=93,SNR=14
TRQA  Tornquist         55.45 180   eP        P         09 23 44.9 +1.5
J05D  Fort Rock, OR     56.05 311    P        P         09 23 48.3 +0.3
      baz=98
O03E  Paynes Creek      56.15 307    P        P         09 23 49.5 +0.8
      baz=95
I05D  Terrebonne, OR    56.27 312    P        P         09 23 49.9 +0.4
      baz=98
M04C  Macdoel           56.32 309    P        P         09 23 50.3 +0.4
      baz=96
K04D  Chiloquin, OR     56.35 310    P        P         09 23 50.6 +0.5
      baz=97
DBIC  Dimbokro          56.36  94    P        P         09 23 50.4  0.0
      comp=Z,3.3nm,0.4s,baz=268,slow=8.2,SNR=9.5
DBIC                                 LR       LR        09 43 17.0
      comp=Z,372nm,21.8s,baz=239,slow=31
DBIC  Dimbokro          56.36  94   eP        P         09 23 50.4  0.0
      comp=Z,12nm,1.0s
DBIC  Dimbokro          56.36  94   eP        P         09 23 50.4  0.0
DBIC                                 pmax     pmax
      comp=Z,12nm,1.0s
SUMG  Summit            56.49   8   eP        P         09 23 50.9  0.0
      comp=Z,17nm,1.0s
SUMG  Summit            56.49   8⇑ iP        P         09 23 51.3 +0.4
SUMG                                 pmax     pmax
      comp=Z,44nm,1.0s
SUMG  Summit            56.49   8⇑ iP        P         09 23 51.3 +0.4
      comp=Z,44nm,1.0s
F05D  White Salmon      56.59 314    P        P         09 23 52.3 +0.7
      baz=99
J04D  Umpqua Nationa    56.68 310    P        P         09 23 52.8 +0.3
      baz=97,SNR=6.1
L04D  Klamath Falls     56.71 309    P        P         09 23 53.0 +0.4
      baz=96
O02D  Mt. Diablo Mer    56.89 307    P        P         09 23 53.9 -0.1
      baz=94
N02D  Trinity Center    56.89 308    P        P         09 23 54.8 +0.9
      baz=95
M02C  Callahan          57.04 308    P        P         09 23 55.2 +0.3
      baz=95
H04D  Lebanon           57.29 312    P        P         09 23 57.6 +1.0
      baz=97
B05A  Bryant            57.42 316    P        P         09 23 57.7 +0.4
      baz=100
E04D  Cinebar           57.45 314    P        P         09 23 58.7 +1.0
      baz=99
YKA   Yellowknife Ar    57.73 334    P        P         09 23 58.5 -0.8
      comp=Z,15nm,0.8s,baz=107,slow=7.4,SNR=186
YKA                                  LR       LR        09 47 52.8
      comp=Z,17nm,21.4s,baz=120,slow=35
YKW3  Yellowknife Ar    57.76 334   eP        P         09 23 58.9 -0.6
      comp=Z,19nm,0.9s
PLCA  Paso Flores       58.72 188    P        P         09 24 06.0 -0.5
      comp=Z,6.8nm,0.9s,baz=29,slow=7.7,SNR=17
PLCA                                 LR       LR        09 53 05.1
      comp=Z,124nm,18.5s,baz=30,slow=40
PLCA  Paso Flores       58.72 188   eP        P         09 24 06.7 +0.2
      comp=Z,9.5nm,1.0s
PLCA  Paso Flores       58.72 188   eP        P         09 24 06.7 +0.2
PLCA                                 pmax     pmax
      comp=Z,10.0nm,1.0s
PLCA  Paso Flores       58.72 188   eP        P         09 24 07.1 +0.6
MTLF  Montolieu         59.12  50    P        P         09 24 12.0 +2.6
MTLF                                 pmax     pmax
      comp=Z,6.0nm,1.3s
LOR   Lormes            60.61  45    P        P         09 24 23.1 +3.5
LOR                                  pmax     pmax
      comp=Z,28nm,1.4s
TOA1  Torodi Ar. Sit    60.96  85   eP        P         09 24 22.2 -0.2
TOA0  Torodi Ar. Sit    60.96  85   eP        P         09 24 22.9 +0.4
      comp=Z,8.4nm,1.1s
TORD  Torodi Ar. Bea    60.96  85    P        P         09 24 22.2 -0.2
      comp=Z,2.7nm,0.6s,baz=266,slow=6.0,SNR=13
TORD                                 LR       LR        09 46 19.2
      comp=Z,223nm,21.6s,baz=305,slow=32
ISO   Isola             62.66  49    P        P         09 24 38.1 +4.6
ISO                                  pmax     pmax
      comp=Z,7.0nm,1.0s
DAG   Danmarks Havn     62.96  10⇑ iP        P         09 24 34.9 +0.1
DAG                                  pmax     pmax
      comp=Z,6.0nm,0.8s
DAG   Danmarks Havn     62.96  10⇑ iP        P         09 24 34.9 +0.1
      comp=Z,7.8nm,0.8s
KEST  Kesra             64.62  58    P        P         09 24 46.4 -0.2
      comp=Z,3.7nm,0.8s,baz=204,slow=4.3,SNR=5.3
KEST                                 LR       LR        09 49 49.1
      comp=Z,133nm,20.5s,baz=254,slow=33
NB2   NORSAR Subarra    66.37  31    P        P         09 24 58.2 +0.8
      comp=Z,2.0nm,0.7s,baz=264,slow=6.9
NB200 NORSAR Array S    66.37  31   eP        P         09 24 57.4  0.0
NOA   NORSAR Array B    66.37  31    P        P         09 24 57.4  0.0
      comp=Z,4.4nm,0.8s,baz=264,slow=6.5,SNR=16
NOA                                  LR       LR        09 49 17.1
      comp=Z,217nm,20.4s,baz=265,slow=32
CLL   Collm             66.80  41   iP        P         09 25 01.2 +0.9
CLL                                  pmax     pmax
      comp=Z,8.0nm,1.1s
CLL   Collm             66.80  41   iP        P         09 25 01.2 +0.9
      comp=Z,8.0nm,1.1s
CLL                                  LmV                09 50 00.0
      comp=Z,200nm,18.5s
INK   Inuvik            67.02 337   eP        P         09 25 00.9 -0.4
      comp=Z,28nm,1.0s
INK   Inuvik            67.02 337   eP        P         09 25 00.9 -0.4
INK                                  pmax     pmax
      comp=Z,28nm,1.0s
KBA   Koelnbreinsper    67.07  46    P        P         09 25 05.9 +3.6
KBA                                  pmax     pmax
      comp=Z,6.0nm,1.2s
GERES GERESS Array B    67.27  44    P        P         09 25 03.3 -0.1
      comp=Z,0.3nm,0.3s,baz=281,slow=5.7,SNR=4.1
EPYK  Eagle Plains      67.96 335    P        P         09 25 07.2 -0.2
      baz=96,SNR=6.8
MODS  Modra-Piesok      69.66  44   eP        P         09 25 21.7 +3.4
MODS  Modra-Piesok      69.66  44   eP        P         09 25 21.7 +3.4
ILAR  Eielson Array     72.15 333    P        P         09 25 32.7 -0.4
      comp=Z,10nm,0.8s,baz=99,slow=5.1,SNR=76
ILAR                                 LR       LR        09 59 54.5
      comp=Z,96nm,18.5s,baz=94,slow=38
HDA   Harding Lake      72.20 333    P        P         09 25 32.7 -0.6
      baz=86
POKR  Poker Plat Res    72.36 334    P        P         09 25 34.3  0.0
      baz=86,SNR=8.3
COLA  College           72.55 333c  iP        P         09 25 35.1 -0.3
COLA                                 pmax     pmax
      comp=Z,14nm,1.0s
TCOL  CIGO, UAF Yank    72.56 333    P        P         09 25 35.1 -0.3
      baz=86
ARA0  ARCESS Array S    72.57  22   eP        P         09 25 36.0 +0.6
ARCES ARCESS Array B    72.57  22    P        P         09 25 36.0 +0.6
      comp=Z,4.1nm,0.8s,baz=233,slow=5.5,SNR=6.8
TOLK  Toolik Lake Re    72.93 337    P        P         09 25 37.6 -0.2
      baz=85,SNR=5.4
FIA0  FINESS Array S    73.54  30   eP        P         09 25 40.9 -0.4
FIA0  FINESS Array S    73.54  30   eP        P         09 25 40.9 -0.4
FINES FINESS Array B    73.54  30    P        P         09 25 40.9 -0.4
      comp=Z,3.8nm,0.7s,baz=242,slow=4.1,SNR=9.3
FINES                                LR       LR        09 53 09.5
      comp=Z,216nm,20.9s,baz=272,slow=32
MLY   Manley            73.76 334   eP        P         09 25 42.4 -0.3
      comp=Z,15nm,0.8s
VSU   Vasula            74.25  33c eP        P         09 25 47.5 +1.9
VSU                                  pmax     pmax
      comp=Z,30nm,1.1s
SVW2  Sparrevohn        76.59 330   eP        P         09 25 58.8 -0.2
      comp=Z,8.4nm,0.8s
AKASG Malin Array Be    77.04  41    P        P         09 26 01.8 +0.1
      comp=Z,0.2nm,0.3s,baz=275,slow=4.7,SNR=4.1
AKASG                                LR       LR        09 57 21.1
      comp=Z,228nm,19.4s,baz=305,slow=34
AKASG Malin Array Be    77.04  41c eP        P         09 26 04.6 +2.9
OBN   Obninsk           80.25  35   eP        P         09 26 20.3 +1.0
OBN                                 e                   09 29 24.9
OBN                                 ePPP      PPP       09 31 13.2
OBN                                  pmax     pmax
      comp=Z,11nm,0.4s
LPSR  Galich'ya Gora    82.36  37   eP        P         09 26 37.6 +7.1
LPSR                                 pmax     pmax
      comp=Z,10.0nm,0.5s
PRGR  Permogore         82.50  27   eP        P         09 26 30.8 -0.3
PRGR                                 pmax     pmax
      comp=Z,19nm,0.5s
BR101 Keskin Array S    82.82  51   eP        P         09 26 33.4  0.0
BRTR  Keskin Array B    82.82  51    P        P         09 26 33.4  0.0
      comp=Z,2.1nm,0.7s,baz=277,slow=6.1,SNR=10.0
BRTR                                 LR       LR        10 00 17.1
      comp=Z,99nm,21.0s,baz=275,slow=33
BRTR  Keskin Array B    82.82  51c eP        P         09 26 36.0 +2.6
BRTR                                 pmax     pmax
      comp=Z,2.0nm,0.7s
VSR   Storozhevoye      82.95  39   eP        P         09 26 35.5 +1.9
VSR                                  pmax     pmax
      comp=Z,10.0nm,1.1s
ANN   Anapa             83.95  45   eP        P         09 26 36.2 -2.7
ANN                                 eS        S         09 36 54.9 -5.6
ANN                                 eSS       SS        09 42 26.3 -2.1
ANN                                  pmax     pmax
      comp=Z,24nm,1.1s
BILL  Bilibino          87.74 344   eP        P         09 26 57.8 +0.6
BILL                                e                   09 30 24.3
BILL                                ePPP      PPP       09 32 17.9
BILL                                 pmax     pmax
      comp=Z,12nm,1.0s
BILL                                 MLR      MLR
      comp=Z,239nm,22.0s
KIV   Kislovodsk        87.77  44   eP        P         09 26 59.9 +1.9
KIV                                  pmax     pmax
      comp=Z,21nm,1.1s
KIV                                  MLR      MLR
      comp=Z,168nm,20.0s
KBZ   Khabaz            88.00  45    P        P         09 27 00.0 +1.1
      comp=Z,6.5nm,1.2s,baz=322,slow=5.9,SNR=6.0
NEY   Neytrino          88.06  45   iP        P         09 27 02.0 +2.5
NEY                                  pmax     pmax
      comp=Z,2.0nm,0.9s
NCK   Nalchik           88.56  45   iP        P         09 27 02.8 +1.2
NCK                                  pmax     pmax
      comp=Z,9.0nm,0.9s
GNI   Garni             90.67  47c eP        P         09 27 13.5 +1.7
GNI                                  pmax     pmax
      comp=Z,23nm,0.9s
ARU   Arti              90.86  29d iP        P         09 27 12.1  0.0
ARU                                                     09 30 47.5
ARU                                  S        SKSac     09 37 40.7 -0.7
ARU                                  pmax     pmax
      comp=Z,7.0nm,1.3s
SEY   Seymchan          95.33 345   iP        P         09 27 33.5 +1.0
MA2   Magadan           98.61 344   iP        Pdif      09 27 48.1 +0.6
MA2                                  pmax     pmax
      comp=Z,9.0nm,1.2s
MKAR  Makanchi Array   108.05  25    PKKPbc   PKKPbc    09 43 48.1 -1.8
      comp=Z,1.3nm,0.9s,baz=121,slow=5.8,SNR=5.8
MKAR                                 PKKP     PKKPdf    09 44 01.6 -1.3
      comp=Z,0.4nm,0.6s,baz=111,slow=6.8,SNR=4.2
KSH   Kashi            110.67  34   ePKP      PKiKP     09 32 40.5 -1.3
KSH                                  PKS      PKSdf     09 36 15.1 -3.5
WMQ   Urumqi           112.64  24   ePKP      PKiKP     09 32 45.9 +0.5
WMQ                                  LR       LR
      comp=Z,390nm,28.1s
WMQ                                  LR       LR
      comp=Z,320nm,25.9s
USRK  Ussuriysk Ar.    117.17 349    PKP      PKPdf     09 32 53.6 -0.3
      comp=Z,0.3nm,0.4s,baz=72,slow=1.8,SNR=4.2
MAW   Mawson           119.07 159    PKP      PKPdf     09 32 56.8  0.0
      comp=Z,0.7nm,0.5s,baz=189,slow=0.7,SNR=7.1
MAJO  Matsushiro       122.90 341   ePKPdf    PKPdf     09 33 04.9 -0.4
MAJO  Matsushiro       122.90 341   ePKIKP    PKPdf     09 33 04.9 -0.4
MJAR  Matsushiro Arr   122.90 341    PKP      PKPdf     09 33 04.9 -0.4
      comp=Z,1.9nm,0.6s,baz=73,slow=2.0,SNR=5.5
KSRS  Korea Array      124.42 351    PKP      PKPdf     09 33 07.9 -0.1
      comp=Z,1.6nm,0.7s,baz=226,slow=30,SNR=5.7
LZH   Lanzhou          124.77  14   ePKP      PKPdf     09 33 08.4 -0.6
LZH                                  sPKP               09 33 24.8
LZH                                  LR       LR
      comp=Z,150nm,18.1s
LZH                                  LR       LR
      comp=Z,150nm,18.3s
LZH                                  LR       LR
      comp=Z,170nm,20.0s
CD2   Chengdu          129.67  16    PKP      PKPdf     09 33 18.0 -0.4
NJ2   Nanjing          130.54 359   ePKP      PKPdf     09 33 19.8 -0.1
WHN   Wuhan            131.89   5    PKP      PKPdf     09 33 22.4 -0.1
CMAR  Chiang Mai Arr   139.31  29    PKP      PKPdf     09 33 35.9 -0.7
      comp=Z,1.0nm,0.4s,baz=318,slow=2.6,SNR=6.3
ARMA  Armidale         147.24 241   ePKPbc    PKPab     09 33 54.1 -0.3
CAN   Canberra         147.65 231   ePKPbc    PKPbc     09 33 54.3 +0.8
CAN   Canberra         147.65 231   ePKP2     PKPbc     09 33 54.3 +0.8
TOO   Toolangi         149.06 225   ePKPab    PKPab     09 34 02.7 +1.3
TOO   Toolangi         149.06 225   ePKP2     PKPab     09 34 02.7 +1.3
STKA  Stephens Creek   154.71 232    PKPbc    PKPbc     09 34 09.4 -0.8
      comp=Z,2.3nm,0.8s,baz=74,slow=7.4,SNR=4.4
ASAR  Alice Springs    164.32 245    PKP      PKPdf     09 34 12.7 -0.3
      comp=Z,2.3nm,1.0s,baz=92,slow=1.3,SNR=11
ASAR                                 PKPab    PKPab     09 35 07.0 -0.2
      comp=Z,5.9nm,0.9s,baz=112,slow=4.4,SNR=28
WR1   Warramunga Arr   164.73 259   ePKPab    PKPab     09 35 09.4 +0.3
WRA   Warramunga Arr   164.73 259    PKPab    PKPab     09 35 09.4 +0.3
      comp=Z,4.6nm,1.0s,baz=99,slow=5.2,SNR=9.1
```

IDC 08 09:15:35.2±26.0**, 40°.04S**×**88°.74W, h0**km**, mb3.8**/2**, mb1 4.3**/3**, mb1mx3.9**/24**, mbtmp3.9**/3**, ML3.6**/1**, MS4.1**/10**, Ms1 4.0**/10**, ms1mx3.9**/15**, Error ellipse: s-maj=1022.0km s-min=52.3km az=24.0, West Chile Rise**

```
Code  Station Name       Δ°    AZ°   Phase ID           Time        Res
                                     Op       ISC       h  m  s     ISC
PLCA  Paso Flores       13.88  99    Pn       Pn        09 18 53.2 -0.1
      0.1nm,0.3s,baz=276,slow=16,SNR=3.1
PLCA                                 LR       LR        09 23 00.3
      comp=Z,496nm,21.1s,baz=284,slow=32
CPUP  Villa Florida     29.46  72    LR       LR        09 32 51.7
      comp=Z,513nm,18.9s,baz=252,slow=35
ATAH  Atahualpa         34.05  19    LR       LR        09 33 57.8
      comp=Z,635nm,19.1s,baz=307,slow=32
BDFB  Brasilia          42.92  67    LR       LR        09 41 17.3
      comp=Z,499nm,18.6s,baz=256,slow=36
ROSC  El Rosal          46.59  20    LR       LR        09 42 44.4
      comp=Z,246nm,18.6s,baz=193,slow=35
TAOE  Nuku Hiva Isla    55.16 290   eS        S         09 32 56.1 +1.9
      82nm,24.4s
TAOE                                eLR       LR        09 41 10.9
      comp=Z,244nm,24.9s
VNDA  Vanda             55.26 194    LR       LR        09 42 45.0
      comp=Z,154nm,22.0s,baz=110,slow=30
PPT   Papeete           56.70 275    LR       LR        09 42 24.1
      comp=Z,96nm,21.9s,baz=119,slow=28
MAW   Mawson            70.55 169    LR       LR        09 55 49.8
      comp=Z,84nm,19.4s,baz=218,slow=34
NVAR  Mina Array Bea    82.66 337    P        P         09 28 00.2 -0.2
      0.7nm,0.9s,baz=171,slow=6.4,SNR=3.7
PDAR  Pinedale Array    84.55 345    P        P         09 28 10.4 +0.3
      0.4nm,0.6s,baz=153,slow=8.1,SNR=4.3
DBIC  Dimbokro          89.58  81    LR       LR        10 05 58.0
      comp=Z,37nm,18.4s,baz=213,slow=34
SCHQ  Schefferville     96.34  13    LR       LR        10 10 52.1
      comp=Z,40nm,19.6s,baz=31,slow=34
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*NSSC **08** 09:19:08.9±0.5, 33°.58N×35°.63E, h13km±3km, ML1.7*
*GRAL **08** 09:19:09.2±0.3, 33°.38N×35°.63E, h12km±3km, MD2.6*
ISC 08 09:19:08.3±2.3**, 33°.39N**±0°.09×**35°.59E**±0°.10**, h14**km±8km**,**
n8, σ0s.39/13**, Jordan-Syria region**

```
Code  Station Name       Δ°    AZ°   Phase ID           Time        Res
                                     Op       ISC       h  m  s     ISC
SHBL  Chebaa             0.13 107   eP        Pg        09 19 12.0  0.0
SHBL                                eS        Sg        09 19 14.1 -0.4
QRWL  Qaraoun            0.18  26   eP        Pb        09 19 13.1 -0.4
QRWL                                eS        Sg        09 19 15.8 +0.4
RCY   Rachaya            0.23  62   eP        Pg        09 19 13.6 +0.2
BRBR  Barbar             0.30  86   eP        Pb        09 19 15.7  0.0
BRBR                                eS        Sb        09 19 20.3 -0.3
BRBR                                 AML      AML       09 19 22.4
      comp=N,65nm,0.4s
BRBR                                 AML      AML       09 19 25.4
      comp=E,48nm,0.5s
DQRL  Deir Qamar         0.32 357   eP        Pb        09 19 15.6 -0.3
BHL   Bhannes            0.52   6   eP        Pg        09 19 18.9 +0.4
QASN  Qassioun           0.59  76   eP        Pg        09 19 19.9  0.0
QASN                                eS        Sg        09 19 27.3 -0.4
QASN                                 AML      AML       09 19 30.6
      comp=E,169nm,0.3s
QASN                                 AML      AML       09 19 31.8
      comp=N,97nm,0.3s
TOTH  TOTAH              0.70  92   eP        Pb        09 19 22.6 +0.3
TOTH                                eS        Sb        09 19 32.5 +0.5
TOTH                                 AML      AML       09 19 36.8
      comp=N,23nm,0.3s
TOTH                                 AML      AML       09 19 40.9
      comp=E,20nm,0.6s
```

IDC 08 09:19:46.7±2.1**, 9°.38S**×**125°.23E, h0**km**, mb3.6**/1**, mb1 3.8**/3**, mb1mx3.5**/20**, mbtmp3.6**/3**, ML3.5**/2**, Error ellipse: s-maj=210.9km s-min=34.0km az=57.0, Timor region**

```
Code  Station Name       Δ°    AZ°   Phase ID           Time        Res
                                     Op       ISC       h  m  s     ISC
WRA   Warramunga Arr    13.70 141    Pn       Pn        09 23 02.1 -0.3
      0.3nm,0.3s,baz=320,slow=14,SNR=22
WRA                                  Sn       Sn        09 25 30.6 -4.9
      0.2nm,0.3s,baz=324,slow=24,SNR=2.3
ASAR  Alice Springs     16.45 151    Pn       Pn        09 23 39.4 +0.3
      0.1nm,0.3s,baz=322,slow=11,SNR=9.3
ASAR                                 Sn       Sn        09 26 36.5 -5.9
      0.1nm,0.3s,baz=317,slow=19,SNR=4.0
MKAR  Makanchi Array    67.75 330    P        P         09 30 46.2  0.0
      0.3nm,0.5s,baz=121,slow=5.4,SNR=3.0
```

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*ATH **08** 09:20:05.7, 41°.21N×20°.21E, h20km±1km, ML2.6/13, Error ellipse: s-maj=2.8km s-min=1.2km az=6.0*
*SKO **08** 09:20:05.7, 41°.11N×20°.15E, h11km*
*TIR **08** 09:20:05.6, 41°.18N×20°.15E, h3km, Md2.9/5*
*PDG **08** 09:20:06.9±0.2, 41°.24N×20°.18E, h3km, ML3.0/10, Error ellipse: s-maj=0.4km s-min=0.3km az=90.0*
*THE **08** 09:20:06.5, 41°.19N×20°.16E, h0km±2km, ML2.6/2, Error ellipse: s-maj=2.2km s-min=0.7km az=327.0*
*BEO **08** 09:20:07.9±0.4, 41°.15N×20°.22E, h0km, ML2.6/13*
ISC 08 09:20:06.6±1.0**, 41°.19N**±0°.01×**20°.18E**±0°.02**, h9**km±8km**,**
n106, σ1s.31/154**, 11C-5D, Albania**

```
Code  Station Name       Δ°    AZ°   Phase ID           Time        Res
                                     Op       ISC       h  m  s     ISC
TIR   Tirane             0.28 305   ePg       Pg        09 20 11.7 -0.6
TIR                                 eSg       Sb        09 20 18.3 -0.5
TIR   Tirane             0.28 305    P        Pg        09 20 11.7 -0.6
TIR   Tirane             0.28 305⇑  iPg       Pg        09 20 11.8 -0.6
TIR   Tirane             0.28 305   iPG       Pg        09 20 11.7 -0.6
TIR                                 iSG       Sg        09 20 16.3 +0.2
TIR   Tirane             0.28 305    P        Pg        09 20 11.7 -0.6
TIR                                  S        Sb        09 20 17.5 -1.3
TIR                                  AML      AML       09 20 18.7
      comp=E,8605µm,0.3s
TIR                                  AML      AML       09 20 20.4
      comp=N,6496µm,0.4s
OHR   Ohrid              0.47  99⇑  iPg       Pg        09 20 14.8 -1.0
OHR                                 iSg       Sg        09 20 22.8 +0.7
PHP   Peshkopia          0.54  22    P        Pg        09 20 16.7 -0.3
PHP   Peshkopia          0.54  22   iPG       Pg        09 20 16.9 -0.1
PHP                                 iSG       Sb        09 20 25.3 -0.7
NEST  Nestorio           1.02 139    P        Pg        09 20 24.3 -1.8
NEST  Nestorio           1.02 139    P        Pg        09 20 23.9 -2.2
NEST                                 AML      AML       09 20 41.8
      comp=N,385µm,0.5s
NEST                                 AML      AML       09 20 46.0
      comp=E,560µm,0.5s
ULC   Ulcinj             1.04 318⇑  iPg       Pg        09 20 25.2 -1.5
ULC                                 iSg       Sb        09 20 41.2 +0.5
ULC   Ulcinj             1.04 318   iPg       Pg        09 20 25.1 -1.5
BCI   Bajram Curri       1.18 356   iPG       Pg        09 20 29.0 -0.3
BCI                                 iSG       Sn        09 20 46.7 +1.2
PENT  Pentalofos         1.23 143    P        Pg        09 20 29.4 -0.8
PENT  Pentalofos         1.23 143    P        Pg        09 20 29.3 -0.9
PENT                                 S        Sn        09 20 47.3 +0.5
PENT                                 AML      AML       09 20 54.7
      comp=E,297µm,0.7s
PENT                                 AML      AML       09 20 56.4
      comp=N,420µm,0.4s
SKO   Skopje             1.23  50   ePg       Pn        09 20 30.4 +0.4
SKO                                 eSg       Sb        09 20 46.1 +0.1
SKO   Skopje             1.23  50   iPg       Pg        09 20 29.1 -1.1
SKO                                 iSg       Sn        09 20 46.8 +0.1
DRME  Dracevica, Mon     1.25 324⇑  iPg       Pb        09 20 28.9 -1.4
DRME                                iSg       Sn        09 20 47.9 +0.8
DRME  Dracevica, Mon     1.25 324   ePn       Pb        09 20 28.8 -1.5
SRN   Sarande            1.31 186    P        Pn        09 20 31.2 +0.2
SRN                                  S        Sn        09 20 49.8 +1.2
SRN   Sarande            1.31 186   iPN       Pg        09 20 32.1 +0.4
SRN                                 iSN       Sn        09 20 50.1 +1.5
PVY   Plav               1.42 353⇑  iPg       Pn        09 20 31.7 -0.9
PVY                                 iSg       Sg        09 20 53.1 +0.9
PDG   Podgorica          1.42 331   ePg       Pn        09 20 33.0 +0.4
PDG                                 eSg       Sg        09 20 55.2 +2.9
PDG   Podgorica          1.42 331   iPg       Pn        09 20 32.0 -0.6
PDG   Podgorica          1.42 331   ePn       Pn        09 20 32.1 -0.5
TTG   Podgorica          1.42 331⇑  iPg       Pn        09 20 32.1 -0.5
TTG                                 iSg       Sg        09 20 53.7 +1.4
KASA  Kassiopi           1.45 187    P        Pb        09 20 34.0 +0.3
KASA                                 S        Sg        09 20 53.3 +0.1
KASA                                 AML      AML       09 20 57.9
      comp=E,489µm,0.4s
KASA                                 AML      AML       09 21 02.7
      comp=N,348µm,0.6s
BUM   Brajici-Budva      1.47 320⇑  iPg       Pn        09 20 33.1 -0.2
BUM                                 iSg       Sg        09 20 55.7 +1.8
KZN   Kozani             1.50 125    P        Pn        09 20 34.0 +0.3
KZN                                  S        Sg        09 20 55.7 +1.0
KZN   Kozani             1.50 125    P        Pn        09 20 33.7  0.0
KZN                                  AML      AML       09 21 01.0
      comp=N,292µm,0.4s
KZN                                  AML      AML       09 21 01.2
      comp=E,384µm,0.6s
KEK   Kerkira            1.50 191    P        Pb        09 20 34.4 -0.2
KEK                                  S        Sg        09 20 55.5 +0.7
KEK   Kerkira            1.50 191    P        Pn        09 20 34.0 +0.3
KEK                                  S        Sg        09 20 55.2 +0.4
KEK                                  AML      AML       09 21 02.3
      comp=E,361µm,0.5s
KEK                                  AML      AML       09 21 05.2
      comp=N,274µm,0.5s
KPRO  Kipourio           1.53 143    P        Pn        09 20 34.6 +0.5
KPRO  Kipourio           1.53 143    P        Pn        09 20 33.8 -0.3
KPRO                                 AML      AML       09 21 04.7
      comp=N,447µm,0.8s
KPRO                                 AML      AML       09 21 07.9
      comp=E,496µm,0.6s
STIP  Stip               1.59  71   iPn       Pg        09 20 37.9 +0.7
STIP                                iSn       Sg        09 21 05.0 +7.2
JAN   Janina             1.61 161    P        Pb        09 20 36.5  0.0
JAN                                  AML      AML       09 21 06.9
      comp=N,323µm,0.6s
JAN                                  AML      AML       09 21 10.1
      comp=E,487µm,0.5s
MEV   Metsovon           1.61 150    P        Pg        09 20 37.1 -0.4
CEME  Cevo               1.65 326⇓  iPn       Pn        09 20 36.5 +0.7
CEME                                iSn       Sg        09 21 01.8 +2.1
IGT   Igoumenitsa        1.66 176    P        Pn        09 20 36.4 +0.6
IGT   Igoumenitsa        1.66 176   iPN       Pb        09 20 37.0 -0.2
IGT                                 iSN       Sg        09 21 00.6 +0.8
IGT   Igoumenitsa        1.66 176    P        Pn        09 20 36.3 +0.6
IGT                                  S        Sb        09 20 58.3 +0.1
IGT                                  AML      AML       09 21 02.5
      comp=E,420µm,1.1s
IGT                                  AML      AML       09 21 12.7
      comp=N,270µm,1.0s
BEY   Berane             1.70 353   iPg       Pb        09 20 37.5 -0.6
GRG   Griva              1.70  97    P        Pn        09 20 36.4  0.0
GRG   Griva              1.70  97   iPg       Pn        09 20 36.3 -0.1
GRG   Griva              1.70  97    P        Pn        09 20 36.3 -0.1
IVA   Berane             1.70 353⇓  iPn       Pn        09 20 37.3 +0.8
IVA                                 iSn       Sg        09 21 02.6 +1.4
SCTE  Santa Cesarea      1.71 230    P        Pb        09 20 37.8 -0.4
KOME  Kolasin            1.73 344⇑  iPn       Pb        09 20 38.0 -0.7
KOME                                iSn       Sg        09 21 03.9 +1.5
HCY   Herceg Novi        1.78 316⇑  iPn       Pb        09 20 39.1 -0.3
HCY                                 iSn       Sg        09 21 05.4 +1.6
HCY   Herceg Novi        1.78 316   ePn       Pb        09 20 38.7 -0.7
VAY   Valandovo          1.81  85   ePg       Pb        09 20 40.0 +0.2
VAY                                 eSg       Sg        09 21 03.9 -0.8
VAY   Valandovo          1.81  85   iPn       Pn        09 20 38.5 +0.6
VAY                                 iSn       Sg        09 21 04.5 -0.2
NKME  Niksic             1.82 330⇓  iPn       Pb        09 20 39.7 -0.5
NKME                                iSn       Sg        09 21 06.3 +1.1
NKY   Niksic             1.85 332⇑  iPn       Pb        09 20 40.0 -0.6
NKY                                 iSn       Sg        09 21 06.4 +0.4
BARS  Barje              2.04  36   ePg       Pb        09 20 44.3 +0.6
BARS  Barje              2.04  36   ePn       Sn        09 21 00.3 -6.3
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BARS				*e*Sg	**Sg**	**09 21 12.8**	**+0.8**
TREB	**Trebinje**	**2.05**	**319**	*e*Pn	**Pb**	**09 20 44.6**	**+0.7**
TREB	**Trebinje**	**2.05**	**319**	*e*Pn	**Pn**	**09 20 41.6**	**+0.4**
KNT	**Kendrikon**	**2.05**	**90**	P	**Pn**	**09 20 42.0**	**+0.7**
KNT	**Kendrikon**	**2.05**	**90**	P	**Pn**	**09 20 41.7**	**+0.4**
KNT				AML	AML	09 21 14.2	
	comp=N,69µm,0.4s						
KNT				AML	AML	09 21 23.6	
	comp=E,65µm,0.6s						
LIT	**Litokhoron**	**2.07**	**121**	P	**Pn**	**09 20 41.0**	**-0.5**
LIT				AML	AML	09 21 19.5	
	comp=E,201µm,0.6s						
LIT				AML	AML	09 21 20.4	
	comp=N,166µm,0.6s						
SJES	**Sjenica**	**2.08**	**356**	*e*Pg	**Pg**	**09 20 45.9**	**-0.5**
SJES				*e*Sg	**Sg**	**09 21 15.8**	**+2.4**
BRY	**Bratogost**	**2.10**	**325**	⇑*i*Pn	**Pb**	**09 20 43.8**	**-1.2**
BRY				*i* Sn	**Sg**	**09 21 12.8**	**-1.4**
BRY	**Bratogost**	**2.10**	**325**	*e*Pn	**Pb**	**09 20 44.5**	**-0.5**
DBRK	**Dubrovnik**	**2.12**	**315**	*e*Pn	**Pb**	**09 20 44.5**	**-0.7**
DBRK				Sn	**Sg**	**09 21 15.8**	**+1.1**
THL	**Klokotos Trika**	**2.14**	**138**	P	**Pn**	**09 20 42.4**	**-0.1**
THL				AML	AML	09 21 17.9	
	comp=E,104µm,0.5s						
THL				AML	AML	09 21 18.6	
	comp=N,165µm,0.7s						
SELS	**Selova**	**2.15**	**19**	*e*Pg	**Pb**	**09 20 46.4**	**+0.7**
SELS				*e*Sg	**Sg**	**09 21 16.7**	**+1.1**
PLE	**Pljevlja**	**2.22**	**345**	⇓*i*Pn	**Pn**	**09 20 45.0**	**+1.3**
PLE				*i* Sn	**Sb**	**09 21 15.3**	**+0.7**
UPM	**Unac-Piva**	**2.23**	**335**	⇓*i*Pn	**Pn**	**09 20 45.4**	**+1.6**
UPM				*i* Sn	**Sb**	**09 21 15.6**	**+0.8**
UPM	**Unac-Piva**	**2.23**	**335**	*e*Pn	**Pb**	**09 20 46.4**	**-0.7**
IVAS	**Ivanjica**	**2.39**	**360**	*e*Pg	**Pg**	**09 20 51.4**	**-1.0**
IVAS				*e*Sg	**Sg**	**09 21 23.6**	**+0.3**
LKD2	**Lefkada island**	**2.42**	**171**	P	**Pn**	**09 20 46.6**	**+0.2**
LKD2	**Lefkada island**	**2.42**	**171**	P	**Pn**	**09 20 46.5**	**+0.1**
STON	**Ston**	**2.50**	**313**	*e*Pn	**Pn**	**09 20 48.1**	**+0.8**
STON	**Ston**	**2.50**	**313**	*e*Pn	**Pn**	**09 20 47.6**	**+0.2**
RUDO	**Rudo**	**2.50**	**346**	*e*Pn	**Pb**	**09 20 51.1**	**-0.6**
SRS	**Serrai**	**2.58**	**90**	P	**Pn**	**09 20 48.8**	**+0.2**
EVGI	**Lefkada island**	**2.59**	**172**	P	**Pn**	**09 20 48.2**	**-0.4**
EVR	**Evrytania**	**2.59**	**151**	P	**Pn**	**09 20 49.3**	**+0.5**
PLG	**Polygyros**	**2.61**	**107**	P	**Pn**	**09 20 49.8**	**+0.9**
BOVS	**Bovan**	**2.70**	**24**	*e*Pn	**Pb**	**09 20 52.8**	**-2.2**
BOVS				*e*Sg	**Sg**	**09 21 33.6**	**+0.4**
AGG	**Agios Georgios**	**2.72**	**142**	P	**Pn**	**09 20 50.1**	**-0.3**
AGG				AML	AML	09 21 33.2	
	comp=E,92µm,0.4s						
AGG				AML	AML	09 21 35.1	
	comp=N,134µm,0.5s						
GRUS	**Gruza**	**2.73**	**8**	*e*Pn	**Pb**	**09 20 53.6**	**-1.9**
GRUS				*e*Sg	**Sg**	**09 21 35.2**	**+0.9**
BBLS	**Lazići**	**2.74**	**348**	*e*Pn	**Pb**	**09 20 53.5**	**-2.2**
BBLS				*e*Sg	**Sg**	**09 21 36.6**	**+2.1**
BBLS	**Lazići**	**2.74**	**348**	*e*Pn	**Pg**	**09 20 59.2**	**+0.1**
FSK	**Fiskardo**	**2.74**	**174**	P	**Pn**	**09 20 50.2**	**-0.5**
ZAPS	**Zavoj**	**2.77**	**40**	*e*Pn	**Pb**	**09 20 54.5**	**-1.8**
ZAPS				*e*Sn	**Sb**	**09 21 28.2**	**-2.1**
DIVS	**Divibare**	**2.91**	**357**	*e*Pn	**Pb**	**09 20 56.2**	**-2.5**
DIVS				*e*Sg	**Sg**	**09 21 42.2**	**+2.0**
DIVS	**Divibare**	**2.91**	**357**	*e*Pn	**Pn**	**09 20 54.7**	**+1.5**
XOR	**Xorichti**	**2.94**	**127**	P	**Pn**	**09 20 53.0**	**-0.4**
VLS	**Valsamata**	**3.02**	**174**	P	**Pn**	**09 20 53.8**	**-0.8**
ZAGS	**Zajecar**	**3.03**	**29**	*e*Pn	**Pn**	**09 20 57.7**	**+3.0**
HAPS	**Han Pijesak,Bl**	**3.04**	**343**	*e*Pn	Pn	09 20 47.9	-7.0
TRUS	**Trudelj**	**3.04**	**3**	*e*Pn	**Pb**	**09 20 58.3**	**-2.5**
KFL	**Anninata**	**3.11**	**171**	P	**Pn**	**09 20 55.5**	**-0.3**
SERG	**Sergoula**	**3.12**	**152**	P	**Pn**	**09 20 57.6**	**+1.6**
MAKA	**Makarska**	**3.15**	**313**	Sn	**Sn**	**09 21 35.4**	**+1.4**
KALE	**Kalithea**	**3.17**	**151**	P	**Pn**	**09 20 57.2**	**+0.4**
KUBS	**Kucevo**	**3.41**	**18**	*e*Pn	**Pn**	**09 21 02.0**	**+2.1**
KIJV	**Kijevo**	**3.96**	**317**	*e*Pn	**Pn**	**09 21 08.0**	**+0.5**
KIJV				Sn	**Sn**	**09 21 55.3**	**+1.3**
ZIRJ	**Zirje**	**4.16**	**308**	*e*Pn	**Pn**	**09 21 09.8**	**-0.4**
ZIRJ				Sn	**Sn**	**09 21 59.5**	**+0.5**
MORI	**Morici**	**4.25**	**311**	*e*Pn	**Pn**	**09 21 11.1**	**-0.4**
UDBI	**Udbina**	**4.66**	**317**	*e*Pn	**Pn**	**09 21 18.4**	**+1.3**
DUGI	**Dugi Otok**	**4.71**	**308**	*e*Pn	**Pn**	**09 21 17.9**	**+0.2**
DUGI				Sn	**Sn**	**09 22 12.0**	**-0.4**
NVLJ	**Novalja**	**5.16**	**313**	*e*Pn	**Pn**	**09 21 22.5**	**-1.4**
NVLJ				Sn	**Sn**	**09 22 22.6**	**-0.8**
VYHS	**Vyhne**	**7.37**	**353**	*e*PN	**Pn**	**09 21 55.2**	**+0.9**

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*MOS **08** 09:20:40.5±2.3, 51°.60N×104°.63E, h14^{km}, mb3.9/1, Error ellipse: s-maj=12.1km s-min=11.4km az=75.5*

*BYKL **08** 09:20:40.7±0.3, 51°.66N×104°.56E, h22^{km}±3^{km}, FELT I=II-III MSK at Irkutsk, II at Shelekhov,Angarsk,Usolye-Sibirskoye.*

ISC 08 09:20:40.6±0.9**, 51°.66N**±0°.02×**104°.60E**±0°.02**, h12**^{km}±6^{km}**, n43,** σ**2**^{s}**29**/78**, 6C-5D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVK	**Ivanovka**	**0.18**	**321**	⇑*i*Pg	**Pb**	**09 20 45.5**	**-0.3**
IVK				*e*Sg	**Sg**	**09 20 48.6**	**+1.2**
LSTR	**Listvyanka**	**0.25**	**36**	⇑*i*Pg	**Pb**	**09 20 46.7**	**-0.4**
LSTR				*i* Sg	**Sb**	**09 20 50.8**	**-0.7**
TLY	**Talaya**	**0.59**	**272**	*e*Pg	**Pg**	**09 20 52.1**	**-0.1**
TLY				*e*		09 20 53.4	
TLY				*e*Sg	**Sg**	**09 21 00.4**	**+0.5**
TLY				Pmax			
	375nm,0.2s						
TLY				Smax			
	5µm,0.4s						
TLY	**Talaya**	**0.59**	**272**	*c* *i*PG	**Pg**	**09 20 52.0**	**-0.1**
TLY				*e*		09 21 00.0	
TLY				pmax	pmax		
	comp=Z,1µm,0.3s						
TLY				smax	smax		
	comp=E,9.0nm,0.3s						
IRK	**Irkutsk**	**0.61**	**341**	⇑*i*Pg	**Pg**	**09 20 52.5**	**0.0**
IRK				*e*Sg	**Sg**	**09 21 01.0**	**+0.3**
IRK				*e*Sb	**Sn**	**09 21 04.8**	**-0.2**
IRK				Pmax			
	comp=E,2µm,0.2s						
IRK				Smax			
	comp=E,15µm,0.2s						
IRK	**Irkutsk**	**0.61**	**341**	*e*PG	**Pg**	**09 20 52.7**	**+0.2**
IRK				*e*		09 21 01.0	
IRK				pmax	pmax		
	comp=Z,2µm,0.2s						
IRK				smax	smax		
	comp=E,15µm,0.4s						
BGT	**Bolshoye Golou**	**0.63**	**52**	⇓*i*Pg	**Pg**	**09 20 53.0**	**+0.1**
BGT				*e*Pb	**Pn**	**09 20 54.9**	**-0.5**
BGT				*e*		09 20 58.2	
BGT				*e*Sg	**Sg**	**09 21 01.6**	**+0.4**
BGT				*e*Sb	**Sn**	**09 21 05.4**	**0.0**
BGT				Pmax			
	comp=E,89nm,0.1s						
BGT				Smax			
	comp=E,1µm,0.3s						
STDB	**Stepnoy Dvoret**	**1.21**	**64**	⇓*i*Pg	**Pg**	**09 21 04.3**	**+0.5**
STDB				*e*Sg	**Sn**	**09 21 20.9**	**+1.3**
STDB				*e*Sb	**Sg**	**09 21 22.7**	**+3.2**
KAB	**Kabansk**	**1.33**	**72**	*e*	Pg	09 21 12.9	+6.7
KAB				*e*		09 21 22.4	
KAB				*e*Sg	**Sg**	**09 21 24.3**	**+0.8**
KAB				Smax			
	comp=E,3µm,0.5s						
KAB	**Kabansk**	**1.33**	**72**	*e*PG	**Pg**	**09 21 06.7**	**+0.5**
KAB				*e*		09 21 22.4	
KAB				pmax	pmax		
	comp=Z,162nm,0.4s						
KAB				smax	smax		
	comp=N,3µm,1.0s						
ARS	**Arshan**	**1.37**	**282**	⇑*i*Pg	**Pn**	**09 21 05.3**	**-0.3**
ARS				*e*		09 21 07.2	
ARS				*e*Sg	**Sb**	**09 21 23.1**	**-0.6**
ARS				*e*		09 21 27.3	
ARS				max			
	comp=N,346nm,0.6s						
ARS				max			
	comp=N,3µm,0.6s						
ARS	**Arshan**	**1.37**	**282**	*e*PG	**Pn**	**09 21 05.4**	**-0.2**
ARS				*e*		09 21 22.8	
ARS				pmax	pmax		
	comp=Z,216nm,0.2s						
ARS				smax	smax		
	comp=E,2µm,0.5s						
ZAK	**Zakamensk**	**1.53**	**213**	⇓*i*Pg	**Pb**	**09 21 08.7**	**-0.2**
ZAK				*e*Pb	**Pg**	**09 21 09.4**	**-0.5**
ZAK				*e*Sg	**Sb**	**09 21 28.8**	**+0.6**
ZAK				*e*		09 21 31.3	
ZAK				max			
	comp=E,121nm,0.4s						
ZAK				Smax			
	comp=E,931nm,0.4s						
ZAK	**Zakamensk**	**1.53**	**213**	*e*PN	**Pb**	**09 21 08.5**	**-0.4**
ZAK				*e*		09 21 28.5	
ZAK				pmax	pmax		
	comp=Z,114nm,0.2s						
ZAK				smax	smax		
	comp=E,933nm,0.4s						
TRG	**Tyrgan**	**1.54**	**44**	⇓*i*Pg	**Pb**	**09 21 08.6**	**-0.4**
TRG				*e*Sg	**Sb**	**09 21 28.7**	**+0.2**
TRG				Pmax			
	comp=E,217nm,0.5s						
TRG				Smax			
	comp=E,3µm,0.4s						
TRG	**Tyrgan**	**1.54**	**44**	*e*PN	**Pb**	**09 21 08.8**	**-0.2**
TRG				*e*		09 21 28.5	
TRG				pmax	pmax		
	comp=Z,141nm,0.1s						
TRG				smax	smax		
	comp=E,3µm,0.4s						
ZRHB	**Zarechye**	**1.81**	**59**	*e*Pn	**Pn**	**09 21 11.8**	**+0.2**
ZRHB				*e*Pg	**Pb**	**09 21 14.5**	**+0.8**
ZRHB				*e*Sg	**Sg**	**09 21 38.4**	**-0.4**
ZRHB				Pmax			
	comp=E,147nm,0.7s						
ZRHB				Smax			
	comp=E,1µm,0.8s						
UUDB	**Ulan-Yde**	**1.92**	**83**	*e*Pg	**Pb**	**09 21 15.4**	**-0.1**
UUDB				*e*Sn	**Sn**	**09 21 37.3**	**+0.2**
UUDB				*e*Sg	**Sg**	**09 21 40.8**	**-1.4**
UUDB				Pmax			
	comp=E,126nm,0.8s						
UUDB				Smax			
	comp=E,541nm,0.6s						
TRTB	**Turuntaevo**	**1.96**	**72**	⇑*i*Pn	**Pn**	**09 21 13.7**	**0.0**
TRTB				*e*Pg	**Pb**	**09 21 16.5**	**+0.3**
TRTB				*e*Sn	**Sn**	**09 21 38.0**	**-0.2**
TRTB				*e*Sg	**Sg**	**09 21 43.2**	**-0.4**
MOY	**Mondy**	**2.24**	**272**	*e*Pn	**Pn**	**09 21 17.5**	**-0.1**
MOY				*e*Pg	**Pb**	**09 21 20.5**	**-0.6**
MOY				*e*Sg	**Sb**	**09 21 50.2**	**+1.4**
MOY				Pmax			
	comp=E,116nm,0.3s						
MOY				Smax			
	comp=E,564nm,0.6s						
MOY	**Mondy**	**2.24**	**272**	*e*PN	**Pb**	**09 21 20.7**	**-0.4**
MOY				*e*		09 21 50.0	
MOY				pmax	pmax		
	comp=Z,116nm,0.3s						
MOY				smax	smax		
	comp=N,565nm,0.4s						
KELR	**Kotokel**	**2.41**	**61**	*e*	**Pn**	**09 21 20.8**	**+1.0**
KELR				*e*		09 21 24.1	
KELR				*e*Sg	**Sb**	**09 21 54.8**	**+1.3**
OGRR	**Ongureny**	**2.70**	**41**	⇓*i*Pn	**Pn**	**09 21 25.2**	**+1.5**
OGRR				*e*Pg	**Pb**	**09 21 28.3**	**-0.4**
OGRR				*e*Sg	**Sb**	**09 22 03.9**	**+2.1**
OGRR				Pmax			
	comp=N,49nm,0.4s						
OGRR				Smax			
	comp=N,407nm,0.3s						
OGRR	**Ongureny**	**2.70**	**41**	*e*PN	**Pn**	**09 21 25.4**	**+1.7**
OGRR				*e*		09 21 29.7	
OGRR				*e*		09 22 03.6	
OGRR				pmax	pmax		
	comp=Z,49nm,0.4s						
OGRR				smax	smax		
	comp=E,406nm,0.6s						
MXMB	**Maximikha**	**3.00**	**56**	*e*Pg	**Pb**	**09 21 34.6**	**+0.7**
MXMB				*e*		09 21 59.7	
MXMB				*e*Sn	**Sn**	**09 22 03.1**	**-0.7**
MXMB				*e*Sg	**Sg**	**09 22 15.0**	**-1.9**
ORL	**Orlik**	**3.08**	**288**	*e*	**Pb**	**09 21 32.8**	**-2.5**
ORL				*e*Pg	Pg	09 21 34.4	-5.1
ORL				*e*Sg	**Sb**	**09 22 14.2**	**+1.4**
ORL				Pmax			
	comp=E,53nm,0.5s						
ORL				Smax			
	comp=E,432nm,0.9s						
ORL	**Orlik**	**3.08**	**288**	*e*PN	**Pb**	**09 21 35.6**	**+0.3**
ORL				*e*		09 22 14.0	
ORL				pmax	pmax		
	comp=Z,57nm,0.4s						
ORL				smax	smax		
	comp=N,428nm,1.0s						
SYVR	**Suvo**	**3.85**	**57**	*e*Pg	**Pb**	**09 21 49.9**	**+1.5**
SYVR				*e*Sg	**Sg**	**09 22 41.4**	**-2.7**
SYVR				*e*		09 22 45.5	
SYVR				Pmax			
	comp=N,21nm,0.5s						
SYVR				max			
	comp=N,53nm,0.6s						
ULN	**Ulaanbaatar**	**4.12**	**156**	*e*Pn	**Pn**	**09 21 44.3**	**+0.8**
ULN				*e*Pg	**Pb**	**09 21 54.1**	**+1.0**
ULN				*e*		09 22 44.9	
ULN				*e*Sg	**Sg**	**09 22 49.1**	**-3.7**
ULN	**Ulaanbaatar**	**4.12**	**156**	*i* PN	**Pn**	**09 21 44.3**	**+0.8**
NIZ	**Nizh Angarsk**	**5.06**	**34**	*e*Pn	**Pn**	**09 21 56.3**	**+0.1**
YLYR	**Ulyunkhan**	**5.09**	**48**	*e*Pn	**Pn**	**09 21 56.3**	**-0.3**
YLYR				*e*		09 22 00.4	
YLYR				*e*		09 22 12.7	
YLYR				*e*Sg	**Sg**	**09 23 19.3**	**-4.5**
YLYR				max			
	comp=N,5.0nm,0.4s						
YLYR				Smax			
	comp=N,75nm,1.1s						
TDJR	**Todzha**	**5.30**	**281**	*e*Pg	**Pb**	**09 22 14.8**	**+1.8**
TDJR				*e*		09 22 44.2	
TDJR				*e*Sg	**Sg**	**09 23 23.7**	**-6.8**
TDJR				*e*		09 23 29.6	
KPC	**Khapcheranga**	**5.32**	**109**	*e*Pn	**Pn**	**09 21 58.3**	**-1.6**
KPC				*e*		09 22 01.2	
KPC				*e*Pg	**Pb**	**09 22 15.9**	**+2.4**
KPC				*e*Sg	**Sg**	**09 23 26.0**	**-5.3**
KPC				*e*		09 23 32.5	
KPC				Pmax			
	comp=N,11nm,0.7s						
KPC				Smax			
	comp=N,115nm,1.1s						
KPC	**Khapcheranga**	**5.32**	**109**	*e*PN	**Pn**	**09 21 58.4**	**-1.5**
KPC				*e*		09 22 14.5	
KPC				*e*		09 23 24.7	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KPC				smax	smax		
	comp=N,114nm,1.3s						
YOA	**Uoyan**	**6.15**	**40**	Sg	**Sg**	**09 23 50.9**	**-6.8**
YOA				Smax			
	comp=N,234nm,0.5s						
SVKR	**Severomuysk**	**6.92**	**46**	Sg	**Sg**	**09 24 14.9**	**-7.7**
SVKR				Smax			
	comp=N,240nm,0.2s						
BOD	**Bodaibo**	**8.22**	**38**	*e*Sn	**Sn**	**09 24 19.5**	**+7.3**
BOD				*e*Sg	**Sg**	**09 24 57.2**	**-6.9**
BOD				Smax			
	comp=N,42nm,1.4s						
CRS	**Chara**	**9.56**	**51**	Sg	Sn	09 25 37.2	+52
CRS				Smax			
	comp=N,24nm,1.1s						
TUP	**Tupik**	**9.65**	**67**	*e*	Pn	09 23 09.3	+10
TUP				*e*Sg	Sn	09 25 41.3	+54
TUP				Smax			
	comp=N,29nm,1.1s						
DGZ	**Jazzator, Alta**	**11.07**	**267**	*i* P	**Pn**	**09 23 18.5**	**-0.2**
KURK	**Kurchatov**	**16.29**	**277**	*i* P	**Pn**	**09 24 29.4**	**+0.5**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KLR	**Kul'dur**	**17.43**	**87**	*i* P	**P**	**09 24 44.5**	**-0.1**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.9s						

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*ISCJB **08** 09:37:38.9±0.3, 7°.96S±0°.05×107°.95E±0°.03, h70^{km}, mb4.2/26, Error ellipse: s-maj=7.7km s-min=3.6km az=22.1*

*DJA **08** 09:37:39.6±0.6, 8°S±4°×10°8E±°, h33^{km}±9^{km}, M4.9/17, mb4.9/5, mB5.2/3, MLv4.8/17, Mw(mB)4.6/3*

*NEIC **08** 09:37:40.0±2.0, 7°.92S×107°.90E, h68^{km}±5^{km}, mb4.3/14, Error ellipse: s-maj=10.9km s-min=8.5km az=218.0*

*IDC **08** 09:37:44.0±0.8, 7°.69S×108°.10E, h99^{km}±6^{km}, mb4.0/18, mb1 4.1/20, mb1mx4.0/34, mbtmp4.4/20, MS3.5/9, Ms1 3.5/9, ms1mx3.2/31, Error ellipse: s-maj=18.1km s-min=10.8km az=53.0*

ISC 08 09:37:40.3±0.4**, 8°.01S**±0°.05×**107°.95E**±0°.04**, h70**^{km}**, n77,** σ**1**^{s}**38**/83**, mb4.3**/26**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.47**	**344**	*e*Pn	**Pn**	**09 37 51.6**	**-1.4**
CISI				*e*Sn	**Sn**	**09 37 60.0**	**-2.3**
CISI	**Cisompet, Garu**	**0.47**	**344**	P	**Pn**	**09 37 51.3**	**-1.7**
LEM	**Lembang**	**1.22**	**345**	P	**Pn**	**09 38 02.8**	**+0.9**
	442nm,0.3s,baz=359,slow=18,SNR=139						
LEM				S	**Sn**	**09 38 20.6**	**+2.7**
	336nm,0.3s,baz=300,slow=23,SNR=6.0						
LEM	**Lembang**	**1.22**	**345**	P	**Pn**	**09 38 02.2**	**+0.4**
YOGI	**Yogyakarta**	**2.34**	**85**	P	**Pn**	**09 38 16.2**	**-0.3**
UGM	**Wanagama**	**2.56**	**88**	*e*Pn	**Pn**	**09 38 19.7**	**+0.1**
UGM				*e*Sn	**Sn**	**09 38 48.8**	**-0.9**
UGM	**Wanagama**	**2.56**	**88**	P	**Pn**	**09 38 19.5**	**0.0**
SBJI	**Serang**	**2.60**	**316**	P	**Pn**	**09 38 21.3**	**+1.1**
CGJI	**Cibinong**	**2.63**	**302**	P	**Pn**	**09 38 20.0**	**-0.5**
WOJI	**Wonogiri, Jawa**	**2.96**	**87**	P	**Pn**	**09 38 24.7**	**-0.2**
XMIS	**Christmas Isla**	**3.34**	**223**	*e*Pn	**Pn**	**09 38 27.5**	**-2.6**
XMIS				*e*Sn	Sn	09 39 01.7	-6.9
PWJI	**Pagerwojo**	**3.82**	**90**	P	**Pn**	**09 38 36.6**	**-0.2**
KASI	**Kota Agung**	**4.22**	**306**	P	**Pn**	**09 38 42.4**	**+0.1**
KASI				S	**Sn**	**09 39 32.1**	**+1.7**
KLI	**Kotabumi**	**4.38**	**315**	P	**Pn**	**09 38 44.1**	**-0.3**
GRJI	**Gresik**	**4.63**	**77**	P	**Pn**	**09 38 48.6**	**+0.8**
GRJI				S	**Sn**	**09 39 40.4**	**+0.2**
LWLI	**Liwa**	**4.88**	**307**	P	**Pn**	**09 38 51.1**	**-0.2**
MDSI	**Maura Dua**	**5.13**	**313**	P	**Pn**	**09 38 56.6**	**+2.0**
GMJI	**Gumukmas**	**5.45**	**93**	P	**Pn**	**09 38 59.7**	**+0.7**
MNAI	**Manna**	**6.14**	**306**	*e*Pn	**Pn**	**09 39 09.3**	**+0.8**
MNAI	**Manna**	**6.14**	**306**	P	**Pn**	**09 39 09.7**	**+1.1**
JAGI	**Jajag, Banyuwa**	**6.16**	**95**	*e*Pn	**Pn**	**09 39 11.5**	**+2.7**
JAGI				*e*Sn	**Sn**	**09 40 15.7**	**-2.2**
JAGI	**Jajag, Banyuwa**	**6.16**	**95**	P	**Pn**	**09 39 09.6**	**+0.8**
KAPI	**Kappang**	**12.10**	**76**	P	**Pn**	**09 40 29.8**	**-0.2**
	1.0nm,0.3s,baz=237,slow=17,SNR=2.6						
KAPI				LR	LR	09 45 43.2	
	comp=Z,122nm,19.1s,baz=284,slow=40						
BATI	**Baumata**	**15.67**	**99**	P	**Pn**	**09 41 18.1**	**+1.0**
	6.3nm,0.3s,baz=295,slow=14,SNR=2.0						
GIRL	**Giralia**	**15.75**	**158**	*e*Pn	**Pn**	**09 41 15.9**	**-2.1**
	68nm,1.1s						
SOEI	**Soe**	**16.22**	**97**	*e*P	**P**	**09 41 25.4**	**-0.6**
	52nm,0.9s						
PSA00	**Pilbara Seismi**	**17.71**	**141**	*e*P	**P**	**09 41 42.1**	**-0.1**
	6.6nm,0.6s						
DAV	**Davao City (W)**	**23.10**	**50**	LR	LR	09 53 49.5	
	comp=Z,43nm,19.1s,baz=179,slow=42						
MTN	**Manton Dam**	**23.30**	**104**	*e*P	**P**	**09 42 43.1**	**+0.7**
	16nm,1.0s						
SIJI	**Sorong**	**24.30**	**74**	P	**P**	**09 42 49.7**	**-1.8**
	12nm,0.7s,baz=252,slow=20,SNR=3.3						
FAKI	**Fak Fak**	**24.71**	**80**	*e*P	**P**	**09 42 54.9**	**-0.3**
	9.1nm,0.7s						
NWAO	**Narrogin (SRO)**	**26.24**	**162**	LR	LR	09 52 53.8	
	comp=Z,57nm,20.0s,baz=313,slow=34						
CMAR	**Chiang Mai Arr**	**27.76**	**341**	P	**P**	**09 43 20.5**	**-2.2**
	2.2nm,0.3s,baz=174,slow=9.6,SNR=3.1						
CMAR				LR	LR	09 54 24.1	
	comp=Z,46nm,19.2s,baz=179,slow=36						
WRA	**Warramunga Arr**	**28.17**	**118**	P	**P**	**09 43 27.3**	**+0.9**
	1.1nm,0.4s,baz=291,slow=12,SNR=13						
WRA				PcP	**PcP**	**09 46 39.4**	**+0.5**
	1.5nm,0.7s,baz=290,slow=2.4,SNR=2.4						
WR1	**Warramunga Arr**	**28.17**	**118**	*e*P	**P**	**09 43 27.3**	**+0.9**
WB2	**Warramunga Arr**	**28.18**	**118**	*e*P	**P**	**09 43 27.1**	**+0.6**
	5.5nm,1.0s						
ASAR	**Alice Springs**	**29.34**	**125**	P	**P**	**09 43 38.0**	**+1.2**
	1.3nm,0.9s,baz=308,slow=8.1,SNR=9.0						
ASAR				PcP	**PcP**	**09 46 43.0**	**+1.1**
	0.5nm,0.5s,baz=294,slow=1.7,SNR=3.9						
H08S2	**Diego Garcia H**	**35.12**	**268**	T	T	10 21 42.6	
	baz=93,slow=76,SNR=160						
H08S3	**Diego Garcia H**	**35.13**	**268**	T	T	10 21 40.1	
	baz=93,slow=76,SNR=177						
H08S1	**Diego Carcia H**	**35.13**	**268**	T	T	10 21 41.3	
	baz=93,slow=76,SNR=55						
BBOO	**Buckleboo**	**35.88**	**137**	*e*P	**P**	**09 44 34.6**	**+0.9**
	1.8nm,0.6s						
STKA	**Stephens Creek**	**39.27**	**132**	P	**P**	**09 45 04.0**	**+1.6**
	3.7nm,0.5s,baz=311,slow=7.6,SNR=25						
STKA	**Stephens Creek**	**39.27**	**132**	*e*P	**P**	**09 45 04.3**	**+1.9**
	1.6nm,0.6s						
HHC	**Hu-ho-hao-te**	**48.73**	**4**	P	P	09 46 23.0	+4.9
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,6.3s						
MJAR	**Matsushiro Arr**	**52.64**	**31**	PcP	**PcP**	**09 47 56.3**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=221,slow=4.8,SNR=3.3						
SONA0	**Songino Array**	**55.62**	**359**	*e*P	**P**	**09 47 08.2**	**-0.8**
SONM	**Songino Array**	**55.62**	**359**	P	**P**	**09 47 08.2**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=177,slow=9.0,SNR=10						
SONM				PcP	**PcP**	**09 48 07.3**	**-0.6**
	comp=Z,3.2nm,0.4s,baz=175,slow=4.0,SNR=14						
BTK	**Batken**	**58.85**	**327**	*e*P	**P**	**09 47 31.5**	**-0.5**
	comp=Z,4.9nm,0.6s						
AAK	**Ala-Archa**	**58.92**	**332**	LR	LR	10 17 28.8	
	comp=Z,114nm,18.5s,baz=318,slow=41						
MK31	**Makanchi Array**	**59.15**	**340**	*e*P	**P**	**09 47 32.3**	**-1.5**
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**59.15**	**340**	P	**P**	**09 47 32.0**	**-1.8**
	comp=Z,4.4nm,0.5s,baz=151,slow=6.3,SNR=42						
MKAR				LR	LR	10 15 30.9	
	comp=Z,136nm,20.8s,baz=320,slow=38						
ZALV	**Zalesovo Beam**	**64.74**	**345**	P	**P**	**09 48 09.4**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=159,slow=7.6,SNR=2.9						
ZALV				pP	**pP**	**09 48 32.0**	**+2.4**
	comp=Z,0.7nm,0.4s,baz=138,slow=6.9,SNR=1.6						
ZALV				sP	**PcP**	**09 48 42.3**	**-1.8**
	comp=Z,1.5nm,0.4s,baz=160,slow=5.6,SNR=3.3						
ZAA1	**Zalesovo Array**	**64.75**	**345**	*e*P	**P**	**09 48 09.4**	**-1.8**
GEYT	**Alibeck**	**65.14**	**318**	P	**P**	**09 48 13.0**	**-1.1**
	comp=Z,2.5nm,0.4s,baz=165,slow=7.7,SNR=4.5						
GEYT				pP	**sP**	**09 48 36.8**	**-3.2**
	comp=Z,1.7nm,0.5s,baz=108,slow=4.7,SNR=1.8						
MAW	**Mawson**	**66.68**	**197**	P	**P**	**09 48 25.9**	**+2.5**
	comp=Z,1.3nm,0.5s,baz=93,slow=6.5,SNR=9.9						
VNDA	**Vanda**	**74.81**	**170**	P	**P**	**09 49 14.5**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=320,slow=6.3,SNR=7.4						
VNDA				LR	LR	10 16 42.1	
	comp=Z,54nm,21.6s,baz=123,slow=31						
KBZ	**Khabaz**	**78.03**	**318**	P	**P**	**09 49 30.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=134,slow=3.4,SNR=2.8						
BOSA	**Boshof**	**79.82**	**242**	P	**P**	**09 49 43.9**	**+2.1**
	comp=Z,2.1nm,0.9s,baz=89,slow=3.9,SNR=5.5						
BR101	**Keskin Array S**	**83.20**	**312**	*e*P	**P**	**09 49 58.5**	**-0.8**
BRTR	**Keskin Array B**	**83.20**	**312**	P	**P**	**09 49 58.5**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=133,slow=8.6,SNR=7.2						
OBN	**Obninsk**	**86.08**	**327**	LR	LR	10 32 38.8	
	comp=Z,12nm,21.5s,baz=349,slow=38						
SNAA	**Sanae**	**88.84**	**197**	P	**P**	**09 50 28.3**	**+1.8**
	comp=Z,1.5nm,0.7s,baz=117,slow=7.7,SNR=9.0						
AKASG	**Malin Array Be**	**89.07**	**321**	P	**P**	**09 50 26.9**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=91,slow=4.7,SNR=4.0						
AKASG				LR	LR	10 34 24.5	
	comp=Z,29nm,19.4s,baz=0.0,slow=38						
AKBB	**Malin Array Si**	**89.07**	**321**	*e*P	**P**	**09 50 26.9**	**-0.8**
	comp=Z,3.3nm,1.1s						
FINES	**FINESS Array B**	**93.10**	**332**	P	**P**	**09 50 45.8**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=130,slow=8.0,SNR=8.6						
ARA0	**ARCESS Array S**	**94.81**	**340**	*e*P	**P**	**09 50 53.2**	**-0.8**
ARCES	**ARCESS Array B**	**94.81**	**340**	P	**P**	**09 50 53.2**	**-0.8**
	comp=Z,3.5nm,1.0s,baz=90,slow=1.2,SNR=5.3						
TORD	**Torodi Ar. Bea**	**107.53**	**281**	PKiKP	**PKiKP**	**09 56 00.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=91,slow=1.9,SNR=6.3						
YKA	**Yellowknife Ar**	**117.48**	**21**	PKP	**PKPdf**	**09 56 17.7**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=343,slow=1.9,SNR=13						
YKB5	**Yellowknife Ar**	**117.48**	**21**	*e*PKPdf	**PKPdf**	**09 56 17.7**	**-0.1**
NV01	**Mina Array Sit**	**128.58**	**47**	*e*PKPdf	**PKPdf**	**09 56 38.0**	**-2.1**
NVAR	**Mina Array Bea**	**128.58**	**47**	PKP	**PKPdf**	**09 56 38.1**	**-2.1**
	comp=Z,0.8nm,1.0s,baz=278,slow=2.6,SNR=2.9						
PDAR	**Pinedale Array**	**132.24**	**37**	PKP	**PKPdf**	**09 56 47.1**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=231,slow=0.6,SNR=3.4						
BDFB	**Brasilia**	**146.54**	**225**	PKPbc	**PKPbc**	**09 57 15.4**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=197,slow=3.0,SNR=6.2						
SIV	**San Ignacio**	**153.79**	**205**	PKP	**PKPdf**	**09 57 25.3**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=126,slow=8.9,SNR=4.2						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SIV				PKPbc	**PKiKP**	**09 57 33.2**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=127,slow=4.2,SNR=4.5						
SIV				PKPab	**PKPab**	**09 57 47.0**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=141,slow=6.1,SNR=4.8						
LPAZ	**La Paz**	**155.54**	**189**	PKPab	**PKPab**	**09 57 55.9**	**+2.3**
	comp=Z,0.4nm,0.5s,baz=214,slow=3.6,SNR=2.8						
CBYP	**Canovanas**	**168.15**	**330**	*e*PKPdf	**PKPdf**	**09 57 39.6**	**-0.4**

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*NSSC **08** 09:40:10.2±1.2, 34°.14N×35°.65E, h5km±46km, MD1.6, ML2.6*

*GRAL **08** 09:40:13.2±0.3, 34°.05N×35°.73E, h1km±10km, MD3.1*

*JSO **08** 09:40:23.0±4.3, 33°N±31°×3°6E±1°4, h5km, M2.8/7, Mjma2.7/7, ML3.1/1, MLv2.7/7*

ISC 08 09:40:12.4±1.4, 34°.05N±0°.05×35°.70E±0°.07, h9km±11km, n13, σ0s.49/21, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.15**	**194**	*e*P	**Pg**	**09 40 16.0**	**+0.1**
BHL				*e*S	**Sg**	**09 40 18.2**	**0.0**
HWQ	**Hawqa**	**0.30**	**42**	*e*P	**Pg**	**09 40 18.4**	**-0.1**
HWQ				*e*S	**Sg**	**09 40 22.3**	**-0.3**
DQRL	**Deir Qamar**	**0.36**	**197**	*e*P	**Pg**	**09 40 19.8**	**+0.1**
DQRL				*e*S	**Sg**	**09 40 24.7**	**+0.3**
RCY	**Rachaya**	**0.57**	**169**	*e*P	**Pg**	**09 40 23.1**	**-0.4**
RCY				*e*S	**Sg**	**09 40 30.6**	**-0.4**
BRBR	**Barbar**	**0.67**	**162**	*e*P	**Pg**	**09 40 25.2**	**-0.3**
BRBR				*e*S	**Sb**	**09 40 35.6**	**-0.4**
BRBR				AML	AML	09 40 38.8	
	comp=N,340nm,0.6s						
BRBR				AML	AML	09 40 40.7	
	comp=E,173nm,0.6s						
SHBL	**Chebaa**	**0.70**	**177**	*e*P	**Pg**	**09 40 25.7**	**-0.3**
SHBL				*e*S	**Sg**	**09 40 35.1**	**-0.2**
QASN	**Qassioun**	**0.71**	**137**	*e*P	**Pg**	**09 40 25.7**	**-0.4**
QASN				*e*S	**Sg**	**09 40 35.9**	**+0.5**
QASN				AML	AML	09 40 43.8	
	comp=N,446nm,0.4s						
QASN				AML	AML	09 40 45.8	
	comp=E,588nm,0.6s						
KSDI	**Kefar Szold**	**0.86**	**182**	P	**Pg**	**09 40 28.1**	**-0.9**
TOTH	**TOTAH**	**0.92**	**139**	*e*P	**Pg**	**09 40 30.1**	**-0.1**
TOTH				*e*S	**Sb**	**09 40 44.2**	**+1.2**
TOTH				AML	AML	09 40 52.4	
	comp=E,92nm,0.6s						
TOTH				AML	AML	09 40 57.0	
	comp=N,75nm,0.4s						
SHMJ	**Saham**	**1.32**	**178**	P	**Pb**	**09 40 37.9**	**+0.4**
MMLI	**Mount Malkishu**	**1.63**	**188**	P	**Pb**	**09 40 42.6**	**-0.1**
ASF	**Jabal al Asfar**	**2.13**	**152**	P	**Pb**	**09 40 50.8**	**-0.4**
WALJ	**Wala**	**2.49**	**178**	P	**Pb**	**09 40 57.5**	**+0.2**

IDC 08 09:40:23.9±3.9, 6°.42S×150°.47E, h0km, mb3.7/2, mb1 4.1/2, mb1mx3.5/26, mbtmp3.8/2, Error ellipse: s-maj=150.5km s-min=50.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.64**	**228**	P	P	09 45 05.5	+0.2
	4.4nm,0.5s,baz=54,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**23.40**	**221**	P	P	09 45 34.5	-0.2
	0.5nm,0.6s,baz=48,slow=10,SNR=2.9						
TORD	**Torodi Ar. Bea**	**148.53**	**285**	PKPbc	PKPbc	10 00 13.2	-0.6
	1.0nm,0.7s,baz=84,slow=2.1,SNR=6.6						

IDC 08 09:42:30.9±4.4, 7°.22S×151°.72E, h0km, mb3.4/2, mb1 3.8/2, mb1mx3.4/24, mbtmp3.6/2, Error ellipse: s-maj=197.6km s-min=54.7km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.08**	**231**	P	P	09 47 16.1	-1.0
	1.7nm,0.4s,baz=56,slow=10,SNR=4.1						
ASAR	**Alice Springs**	**23.67**	**224**	P	P	09 47 44.7	+0.3
	0.4nm,0.4s,baz=57,slow=10,SNR=1.5						
TORD	**Torodi Ar. Bea**	**149.93**	**284**	PKPbc	PKPbc	10 02 24.4	0.0
	0.5nm,0.7s,baz=85,slow=3.6,SNR=2.1						

TRN 08 09:56:38.1, 17°.61N×61°.70W, h25km, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.10**	**306**	*e*P	Pb	09 56 43.4	+0.6
ANWB				*e*S	Sb	09 56 47.7	+1.8
BPA	**Boggy Peak**	**0.58**	**195**	*e*P	Pn	09 56 52.5	+1.7
BPA				*e*S	Sn	09 57 01.7	+2.3
NEV	**Hard Times**	**0.95**	**240**	*e*P	Pb	09 56 57.7	+1.7
NEV				*e*S	Sn	09 57 11.6	+3.0
NVRH	**Round Hill, Ne**	**0.95**	**244**	*e*P	Pb	09 56 58.1	+2.1
NVRH				*e*S	Sn	09 57 12.3	+3.6
MLYT	**Lee's Yard**	**1.00**	**208**	*e*P	Pb	09 56 57.5	+0.7
MLYT				*e*S	Sn	09 57 12.4	+2.6
NVBH	**Bath Hotel, Ne**	**1.00**	**241**	*e*P	Pb	09 56 58.6	+1.9
NVBH				*e*S	Sn	09 57 12.5	+2.7
SKI	**Saint Kitts**	**1.03**	**255**	*e*P	Pb	09 56 57.8	+0.6
SKI				*e*S	Sn	09 57 12.6	+2.1
SKDB	**Saint Kitts 2**	**1.07**	**259**	*e*P	Pb	09 56 59.5	+1.5
SKDB				*e*S	Sb	09 57 14.1	+2.4
BSK	**Brimstone Hill**	**1.12**	**257**	*e*P	Pb	09 57 00.3	+1.6
BSK				*e*S	Sb	09 57 15.3	+2.5
SEUS	**St. Eustatius**	**1.22**	**265**	*e*P	Pb	09 57 00.7	+0.2
SEUS				*e*S	Sb	09 57 17.9	+1.9
SMRT	**St. Maarten**	**1.38**	**289**	*e*P	Pb	09 57 03.2	+0.1
SMRT				*e*S	Sb	09 57 22.1	+1.8
SABA	**Saba**	**1.47**	**271**	*e*P	Pb	09 57 05.0	+0.2
SABA				*e*S	Sb	09 57 23.5	+0.5
MDPO	**Dominica; Chan**	**2.04**	**173**	*e*P	Pn	09 57 12.3	+1.5
MDPO				*e*S	Sn	09 57 37.0	+1.6
DWS	**Wesley**	**2.07**	**169**	*e*P	Pn	09 57 12.7	+1.5
DWS				*e*S	Sb	09 57 39.3	-0.9
MDN	**Morne-Daniel**	**2.30**	**172**	*e*P	Pn	09 57 16.6	+2.2
MDN				*e*S	Sn	09 57 43.2	+1.3
DLPL	**La Plaine**	**2.31**	**169**	*e*P	Pn	09 57 16.2	+1.7
DLPL				*e*S	Sn	09 57 44.6	+2.5
DSTT	**Stowe**	**2.38**	**171**	*e*P	Pn	09 57 16.6	+1.1
DSTT				*e*S	Sn	09 57 46.2	+2.2
FDF	**Fort de France**	**2.91**	**169**	*e*P	Pn	09 57 25.0	+2.2
FDF				*e*S	Sn	09 57 58.3	+1.3
SLBI	**Saint Lucia, B**	**3.64**	**169**	*e*P	Pn	09 57 34.3	+1.6
SLBI				*e*S	Sn	09 58 17.0	+2.1
SLB	**Belfond**	**3.82**	**170**	*e*P	Pn	09 57 37.4	+2.1
SLB				*e*S	Sn	09 58 21.3	+1.9
MCLT	**Moule a Chique**	**3.95**	**169**	*e*S	Sn	09 58 23.9	+1.3
SVCV	**St. Vincent, C**	**4.35**	**173**	*e*P	Pn	09 57 44.9	+2.3
SVCV	**St. Vincent, C**	**4.35**	**173**	*e*S	Sn	09 58 33.5	+1.0

GUC 08 09:57:53.6±0.7, 35°.69S×72°.79W, h11km±3km, ML3.6, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COCH	**Cobquecura**	**0.45**	**180**	⇑*i*P	Pg	09 58 02.2	-0.1
COCH				*e*S	Sg	09 58 08.0	-0.3
GO05	**Huala**	**0.97**	**46**	⇓*i*P	Pg	09 58 10.5	-1.8
GO05				*e*S	Sg	09 58 23.7	-1.3
CCHI	**Chillan**	**1.08**	**148**	*e*P	Pb	09 58 11.8	-2.5
CCHI				*e*S	Sb	09 58 26.4	-2.0
CCHI				IAML		09 58 31.5	
	comp=E,2μm,0.3s						
CCSP	**San Pedro de C**	**1.19**	**193**	*e*P	Pb	09 58 13.6	-2.5
CCSP				*e*S	Sb	09 58 29.6	-1.9
CCSP				IAML		09 58 33.0	
	comp=E,4μm,0.4s						

JMA 08 10:03:52.6±0.1, 24°.61N×123°.84E, h8km±5km, M2.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.29**	**200**	P	Pg	10 03 58.5	+0.1
IRIF				*e*S	Sg	10 04 03.0	+0.7
JIJ	**Ishigaki jima**	**0.37**	**132**	P	Pg	10 03 59.6	-0.2
JIJ				S	Sg	10 04 04.5	-0.2
JKRS	**Kuro-shima**	**0.40**	**157**	P	Pg	10 04 00.5	+0.1
JKRS				S	Sg	10 04 06.5	+0.8
JISG	**Ishigakijimahi**	**0.43**	**93**	P	Pg	10 04 01.2	+0.2
JISG				S	Sg	10 04 07.1	+0.5
HATJ	**Hateruma jima**	**0.55**	**183**	P	Pg	10 04 03.3	0.0
HATJ				S	Sg	10 04 11.4	+0.9
YOJ	**Yonaguni jima**	**0.77**	**259**	P	Pg	10 04 07.1	-0.3
YOJ				*e*S	Sg	10 04 17.7	+0.3
JTJ	**Tarama**	**0.79**	**88**	P	Pg	10 04 08.0	+0.3
JTJ				S	Sg	10 04 18.5	+0.6
JYNG	**Yonagunijimaku**	**0.83**	**259**	P	Pg	10 04 08.0	-0.6
JYNG				S	Sg	10 04 19.2	-0.2

TAP 08 10:03:52.3, 24°.87N×122°.05E, h7km, ML2.7, 2C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.15**	**340**	⇑*i*P	Pg	10 03 56.0	+0.6
	baz=342						
TWB1				S	Sg	10 03 58.6	+1.1
	baz=342						
NTC	**Toucheng**	**0.20**	**266**	P	Pg	10 03 57.5	+1.3
	baz=265						
NTC				*e*S	Sg	10 04 01.2	+2.3
	baz=265						
TIPB	**Shuangxi**	**0.22**	**297**	⇑*i*P	Pg	10 03 58.0	+1.2
	baz=297						
TIPB				S	Sg	10 04 01.4	+1.5
	baz=297						
TWC	**Suao**	**0.31**	**215**	*e*P	Pg	10 03 59.1	+0.7
	baz=213						
TWC				*e*S	Sb	10 04 04.9	-0.6
	baz=213						
EOS1	**EOS1**	**0.33**	**167**	*e*P	Pb	10 03 59.9	-0.5
	baz=166						
EOS1				*e*S	Sb	10 04 05.1	-0.7
	baz=166						
TWE	**Neicheng**	**0.37**	**247**	*e*P	Pb	10 04 00.5	-0.7
	baz=245						
TWE				*e*S	Sb	10 04 06.4	-0.8
	baz=245						
TWA	**Mucha**	**0.43**	**285**	*e*P	Pb	10 04 01.9	-0.4
	baz=284						
TWA				*e*S	Sb	10 04 07.9	-1.1
	baz=284						
YM01	**YM01**	**0.51**	**303**	*e*P	Pb	10 04 03.8	+0.2
	baz=302						
YM01				*e*S	Sb	10 04 11.0	-0.3
	baz=302						
NANB	**Nanao**	**0.51**	**212**	*e*P	Pb	10 04 03.0	-0.6
	baz=211						
NANB				*e*S	Sb	10 04 10.3	-1.0
	baz=211						
ENA	**Nanau**	**0.52**	**212**	*e*P	Pb	10 04 03.5	-0.2
	baz=211						
ENA				*e*S	Sb	10 04 10.5	-0.9
	baz=211						
YM08	**YM08**	**0.52**	**308**	*e*P	Pb	10 04 03.7	-0.1
	baz=307						
YM10	**YM10**	**0.52**	**303**	*e*P	Pb	10 04 04.1	+0.2
	baz=303						
YM10				*e*S	Sb	10 04 11.8	+0.1
	baz=303						
YM05	**YM05**	**0.53**	**304**	*e*P	Pb	10 04 04.0	+0.2
	baz=304						
NDT	**Datong Townshi**	**0.55**	**241**	*e*P	Pb	10 04 03.9	-0.4
	baz=241						
YM03	**YM03**	**0.55**	**304**	*e*P	Pb	10 04 04.4	+0.1
	baz=304						
TWY	**Chenhua**	**0.57**	**315**	*e*P	Pb	10 04 04.9	+0.3
	baz=315						
TWS1	**Kuangyinshan**	**0.61**	**292**	*e*P	Pb	10 04 06.1	+0.7
	baz=292						
YHNB	**Yeheng**	**0.64**	**252**	*e*P	Pb	10 04 05.2	-0.6
	baz=251						
YHNB				*e*S	Sb	10 04 15.7	+0.7
	baz=251						
NSK	**Sanguang**	**0.65**	**253**	*e*P	Pg	10 04 05.4	+0.5
	baz=252						
NSK				*e*S	Sb	10 04 15.8	+0.4
	baz=252						
NNSB	**Datong**	**0.74**	**234**	*e*P	Pb	10 04 08.1	+0.4
	baz=233						
NNSB				*e*S	Sb	10 04 18.7	+0.7
	baz=233						
PCYT	**Pengchaiyu**	**0.76**	**2**	*e*P	Pb	10 04 08.3	+0.5
	baz=2.0						
NACB	**Ninganchiao**	**0.80**	**211**	P	Pb	10 04 08.4	-0.2
	baz=210						
NACB				*e*S	Sb	10 04 19.7	+0.1
	baz=210						
ETLH	**Xiulin Townshi**	**0.83**	**218**	*e*P	Pb	10 04 09.8	+0.6
	baz=217						
ETLH				*e*S	Sb	10 04 21.0	+0.4
	baz=217						
TWD	**Chiawan**	**0.89**	**208**	*e*P	Pb	10 04 10.2	+0.3
	baz=207						
LIOB	**Emei**	**0.96**	**257**	*e*P	Pn	10 04 12.6	+0.4
	baz=256						
WHF	**Hehuan Shan**	**1.01**	**225**	*e*P	Pn	10 04 13.0	-0.3
	baz=224						
CHGB	**Renai**	**1.13**	**225**	*e*P	Pn	10 04 15.5	+0.8
	baz=224						
NSY	**Sanyi**	**1.25**	**249**	*e*S	Sn	10 04 34.3	+1.0
	baz=248						
VWDT	**VWDT**	**1.38**	**217**	*e*P	Pg	10 04 20.1	+1.3
	baz=216						
VWDT				*e*S	Sg	10 04 37.7	+1.0
	baz=216						
YULB	**Yu-li**	**1.62**	**205**	*e*P	Pg	10 04 23.3	-0.1
	baz=204						

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*ISCJB **08** 10:13:23.8±1.4, 2°.9S±0°.2×89°.0E±0°.2, h10km, mb3.7/6, Error ellipse: s-maj=40.4km s-min=15.3km az=135.7*

*IDC **08** 10:13:25.1±1.6, 2°.80S×89°.21E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/41, mbtmp3.8/7, ML4.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/28, Error ellipse: s-maj=52.3km s-min=20.6km az=54.0*

ISC 08 10:13:26.2±1.5, 2°.8S±0°.2×89°.1E±0°.2, h10km, n14, σ0s.96/8, mb3.7/6, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**11.30**	**60**	LR	LR	10 20 06.9	
	comp=Z,74nm,18.2s,baz=206,slow=36						
PALK	**Pallekele**	**13.07**	**320**	Pn	**Pn**	**10 16 30.9**	**-1.1**
	2.6nm,0.3s,baz=116,slow=14,SNR=7.9						
PALK				Sn	Sn	10 18 45.6	-12
	4.1nm,0.3s,baz=116,slow=8.5,SNR=6.6						
H08S2	**Diego Garcia H**	**17.21**	**253**	T	T	10 34 59.9	
	baz=74,slow=74,SNR=208						
H08S3	**Diego Garcia H**	**17.22**	**253**	T	T	10 35 00.3	
	baz=74,slow=74,SNR=540						
H08S1	**Diego Carcia H**	**17.23**	**253**	T	T	10 35 01.3	
	baz=74,slow=74,SNR=124						
CMAR	**Chiang Mai Arr**	**23.26**	**24**	P	**P**	**10 18 33.8**	**-0.2**
	1.3nm,0.9s,baz=216,slow=9.0,SNR=3.7						
H01W3	**Cape Leeuwin H**	**39.48**	**147**	T	T	11 02 42.8	
	baz=320,slow=76,SNR=5.1						
H01W2	**Cape Leeuwin H**	**39.49**	**147**	T	T	11 02 43.7	
	baz=320,slow=76,SNR=5.9						
H01W1	**Cape Leeuwin H**	**39.50**	**147**	T	T	11 02 43.1	
	baz=320,slow=76,SNR=5.6						
WRA	**Warramunga Arr**	**47.30**	**115**	P	**P**	**10 21 59.3**	**-1.0**
	0.6nm,0.8s,baz=308,slow=7.0,SNR=2.3						
ASAR	**Alice Springs**	**47.99**	**120**	P	**P**	**10 22 06.1**	**+0.4**
	0.2nm,0.5s,baz=292,slow=7.7,SNR=6.2						
ASAR				PcP	**PcP**	**10 23 33.6**	**-0.3**
	0.3nm,0.5s,baz=296,slow=3.1,SNR=4.7						
GEYT	**Alibeck**	**49.67**	**328**	P	**P**	**10 22 19.6**	**+1.3**
	1.4nm,0.4s,baz=130,slow=6.0,SNR=2.7						
MKAR	**Makanchi Array**	**49.77**	**354**	P	**P**	**10 22 19.5**	**+0.6**
	0.7nm,1.0s,baz=167,slow=7.2,SNR=3.4						
SONM	**Songino Array**	**52.67**	**15**	P	**P**	**10 22 40.7**	**-0.1**
	0.5nm,0.4s,baz=200,slow=7.5,SNR=3.4						

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*JMA **08** 10:30:28.6±0.4, 46°.79N×141°.57E, h0km, M3.0*

*SKHL **08** 10:30:29.6±0.4, 46°.77N×141°.75E, h10km, mb3.8/3*

ISC 08 10:30:28.7±2.7, 46°.8N±0°.1×141°.6E±0°.1, h9km, n4, σ0s.60/8, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.79**	**80**	*e*Pg	**Pg**	**10 30 43.9**	**+0.1**
YSS				AMB	AMB	10 30 44.6	
	20nm,0.4s						
YSS				*e*Sg	**Sg**	**10 30 53.4**	**-0.6**
YSS				A	A	10 30 54.8	
	180nm,0.3s						
YSS				A	A	10 30 54.8	
	160nm,0.3s						
JRBN	**Rebuntou**	**1.45**	**196**	P	**Pn**	**10 30 55.3**	**+0.2**
JRBN				*e*S	**Sn**	**10 31 13.7**	**-0.5**
JWK2	**Keihoku**	**1.52**	**173**	P	**Pn**	**10 30 56.4**	**+0.4**
JWK2				*e*S	**Sb**	**10 31 15.8**	**-0.5**
JSE	**Soyaes**	**1.98**	**160**	P	**Pn**	**10 31 02.9**	**+0.5**
JSE				*e*S	**Sn**	**10 31 27.8**	**+0.5**

TAP 08 10:33:06.0, 23°.79N×121°.78E, h33km, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.20**	**305**	*e*P	Pb	10 33 10.2	-2.4
	baz=305						
ENLB				*e*S	Sn	10 33 16.0	-1.0
	baz=305						
ESL	**Shilin**	**0.32**	**275**	P	Pn	10 33 14.5	0.0
	baz=274						
ESL				*e*S	Sn	10 33 20.4	+0.4
	baz=274						
TWD	**Chiawan**	**0.34**	**330**	P	Pn	10 33 14.8	+0.1
	baz=331						
TWD				S	Sn	10 33 20.9	+0.5
	baz=331						
EGFH	**Guangfu**	**0.35**	**250**	*e*P	Pn	10 33 15.1	+0.3
	baz=250						
EGFH				*e*S	Sn	10 33 21.4	+0.7
	baz=250						
NACB	**Ninganchiao**	**0.42**	**336**	*e*P	Pn	10 33 15.8	0.0
	baz=336						
HGSD	**Ruisui**	**0.44**	**228**	*e*P	Pn	10 33 16.0	-0.1
	baz=228						
HGSD				*e*S	Sn	10 33 23.1	+0.1
	baz=228						
ETLH	**Xiulin Townshi**	**0.50**	**327**	*e*P	Pn	10 33 17.2	+0.2
	baz=326						
VWDT	**VWDT**	**0.59**	**267**	*e*P	Pn	10 33 18.7	+0.6
	baz=266						
VWDT				*e*S	Sn	10 33 27.3	+0.7
	baz=266						
WHF	**Hehuan Shan**	**0.59**	**307**	*e*P	Pn	10 33 18.6	+0.1
	baz=307						
WHF				*e*S	Sn	10 33 27.2	-0.2
	baz=307						
YULB	**Yu-li**	**0.59**	**229**	*e*P	Pn	10 33 18.3	+0.1
	baz=228						
YULB				*e*S	Sb	10 33 26.4	0.0
	baz=228						
CHGB	**Renai**	**0.62**	**296**	*e*P	Pn	10 33 19.2	+0.4
	baz=296						
CHGB				*e*S	Sn	10 33 28.1	+0.4
	baz=296						
TWF1	**Yuli**	**0.62**	**226**	*e*P	Pn	10 33 18.8	+0.2
	baz=225						
TWF1				*e*S	Sn	10 33 27.4	0.0
	baz=225						
NANB	**Nanao**	**0.64**	**357**	*e*S	Sn	10 33 28.3	+0.4
	baz=357						
ENA	**Nanau**	**0.64**	**357**	*e*S	Sn	10 33 28.4	+0.5
	baz=357						
TWT	**Tachien**	**0.72**	**310**	*e*P	Pn	10 33 20.2	0.0
	baz=309						
TWT				*e*S	Sn	10 33 31.3	+1.1
	baz=309						
NNSB	**Datong**	**0.73**	**330**	*e*P	Pb	10 33 21.1	+0.5
	baz=330						
NNSB				*e*S	Sn	10 33 30.9	+0.5
	baz=330						
TDCB	**Techi**	**0.73**	**309**	*e*S	Sn	10 33 30.6	+0.2
	baz=309						
NNS	**Nan Shan**	**0.75**	**330**	*e*S	Sb	10 33 31.5	+0.6
	baz=330						
SSLB	**Suanglung**	**0.76**	**270**	*e*S	Sn	10 33 30.9	0.0
	baz=270						
YHNB	**Yeheng**	**0.95**	**337**	*e*P	Pb	10 33 24.5	+0.3
	baz=337						
YHNB				*e*S	Sn	10 33 35.5	-0.3
	baz=337						
CHN5	**Tsauling**	**1.03**	**260**	*e*P	Pb	10 33 25.5	+0.1
	baz=259						
CHN5				*e*S	Sb	10 33 39.8	+1.1
	baz=259						
LIOB	**Emei**	**1.10**	**321**	*e*P	Pb	10 33 26.4	-0.3
	baz=320						
YOJ	**Yonaguni jima**	**1.31**	**59**	*e*P	Pb	10 33 29.5	-0.6
	baz=58						
YOJ				*e*S	Sb	10 33 45.9	-0.6
	baz=58						

TAP 08 10:33:16.9, 24°.33N×121°.78E, h11km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.10**	**346**	P	Pg	10 33 20.3	+0.7
	baz=346						
NANB				S	Sg	10 33 22.4	+0.8
	baz=346						
ENA	**Nanau**	**0.10**	**342**	P	Pg	10 33 20.3	+0.7
	baz=345						
ENA				S	Sg	10 33 22.5	+0.8
	baz=345						
NACB	**Ninganchiao**	**0.23**	**226**	*e*P	Pb	10 33 22.6	-0.5
	baz=225						
NACB				*e*S	Sg	10 33 25.9	+0.9
	baz=225						
NACB	**Ninganchiao**	**0.23**	**226**	*e*S	Pb	10 33 22.6	-0.5
	baz=336						
TWC	**Suao**	**0.28**	**14**	*e*P	Pb	10 33 23.7	-0.3
	baz=15						
ETLH	**Xiulin Townshi**	**0.30**	**245**	*e*P	Pb	10 33 24.4	+0.2
	baz=244						
ETLH	**Xiulin Townshi**	**0.30**	**245**	S	Pb	10 33 24.4	+0.1
	baz=326						
TWD	**Chiawan**	**0.30**	**213**	*e*P	Pb	10 33 24.0	-0.3
	baz=211						
NDT	**Datong Townshi**	**0.36**	**318**	*e*P	Pb	10 33 25.3	0.0
	baz=318						
NDT				S	Sb	10 33 30.7	-0.2
	baz=318						
NNSB	**Datong**	**0.37**	**285**	*e*P	Pb	10 33 25.4	-0.2
	baz=284						
EOS1	**EOS1**	**0.39**	**56**	*e*P	Pb	10 33 26.7	+1.0
	baz=56						
EOS1				*e*S	Sb	10 33 31.1	-0.6
	baz=56						
TWE	**Neicheng**	**0.40**	**346**	*e*P	Pb	10 33 26.1	+0.1
	baz=347						

IDC 08 10:41:24.3±50.0, 16°.03S×174°.76W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/18, mbtmp4.1/3, Error ellipse: s-maj=943.0km s-min=182.4km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.59**	**240**	P	P	10 49 22.8	+0.4
	1.5nm,0.7s,baz=84,slow=9.2,SNR=4.2						
WRA	**Warramunga Arr**	**48.43**	**257**	P	P	10 50 08.4	-0.4
	1.2nm,0.9s,baz=94,slow=8.1,SNR=6.9						
ASAR	**Alice Springs**	**48.68**	**252**	P	P	10 50 10.5	-0.2
	6.2nm,0.7s,baz=88,slow=8.2,SNR=108						

IDC 08 10:45:25.8±2.7, 6°.90S×153°.53E, h0km, mb3.3/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.4/3, Error ellipse: s-maj=191.1km s-min=28.4km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.69**	**233**	P	P	10 50 29.3	+0.1
	1.6nm,0.9s,baz=58,slow=8.9,SNR=3.0						
ASAR	**Alice Springs**	**25.16**	**226**	P	P	10 50 52.5	-0.5
	0.3nm,0.7s,baz=58,slow=9.2,SNR=2.7						
ILAR	**Eielson Array**	**83.82**	**22**	P	P	10 57 57.1	+0.3
	0.3nm,0.7s,baz=243,slow=5.7,SNR=2.6						
TORD	**Torodi Ar. Bea**	**151.59**	**285**	PKPbc	PKPbc	11 05 22.9	-0.2
	0.2nm,0.7s,baz=73,slow=3.6,SNR=3.1						

IDC 08 10:48:22.4±4.3**,5°.78S**×**148°.30E,h0^{km},mb3.1**/1**,**
mb1 3.8/2**,mb1mx3.4**/18**,mbtmp3.5**/2**,ML4.1**/1**,Error**
ellipse: s-maj=165.7km s-min=47.2km az=112.0,New
Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.56**	**223**	P	P	10 52 51.6	-0.3
	0.5nm,0.3s,baz=48,slow=11,SNR=28						
ASAR	**Alice Springs**	**22.55**	**216**	P	P	10 53 24.1	-0.2
	0.5nm,0.6s,baz=47,slow=8.2,SNR=12						
TORD	**Torodi Ar. Bea**	**146.29**	**285**	PKPbc	PKPdf	11 08 05.5	+0.5
	0.3nm,0.7s,baz=78,slow=3.9,SNR=2.7						

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*SKO **08** 11:24:50.6,41°.93N×23°.15E,h22^{km},M2.7,ML2.9*
*ISCJB **08** 11:24:50.0±0.4,41°.95N±0°.01×23°.14E±0°.03,h0^{km}±4^{km},*
Error ellipse: s-maj=3.3km s-min=2.5km az=170.8
*BEO **08** 11:24:51.7±0.3,41°.96N×23°.14E,h5^{km}±3^{km},ML2.8/8*
*THE **08** 11:24:51.3,41°.93N×23°.15E,h2^{km}±2^{km},ML2.7/3,Error*
ellipse: s-maj=2.9km s-min=0.7km az=282.0
*ATH **08** 11:24:51.7,41°.88N×23°.20E,h26^{km}±1^{km},ML2.8/12,Error*
ellipse: s-maj=3.4km s-min=1.3km az=182.0
*SOF **08** 11:24:51.1,41°.97N×23°.26E,h1^{km},MD3.0*
ISC 08 11:24:51.4±0.8**,41°.94N**±0°.01×**23°.12E**±0°.02**,h14^{km}**±5^{km}**,**
n75,σ**1^{s}.12**/105**,11C-8D,Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.08**	**198**	⇑*i*Pg	**Pg**	**11 24 54.5**	**+0.2**
KKB				*i* Sg	**Sg**	**11 24 56.6**	**+0.3**
KKB	**Krupnik**	**0.08**	**198**	Pg	**Pg**	**11 24 54.4**	**+0.2**
MMB	**Musomiste**	**0.58**	**127**	⇑*i*Pg	**Pg**	**11 25 02.5**	**-0.3**
MMB				*i* Sg	**Sg**	**11 25 10.5**	**+0.1**
MMB	**Musomiste**	**0.58**	**127**	Pg	**Pg**	**11 25 02.4**	**-0.3**
VTS	**Vitosha**	**0.68**	**7**	*e*Pg	**Pg**	**11 25 04.0**	**-0.7**
VTS				*e*Sg	**Sg**	**11 25 12.8**	**-1.0**
VTS	**Vitosha**	**0.68**	**7**	P	**Pg**	**11 25 04.0**	**-0.7**
VTS				S	**Sg**	**11 25 12.7**	**-1.0**
VTS	**Vitosha**	**0.68**	**7**	⇑*i*P	**Pg**	**11 25 04.1**	**-0.7**
VTS				S	**Sg**	**11 25 12.7**	**-1.0**
VTS	**Vitosha**	**0.68**	**7**	⇑*i*Pg	**Pg**	**11 25 04.1**	**-0.7**
VTS				*i* Sg	**Sg**	**11 25 12.8**	**-1.0**
VTS	**Vitosha**	**0.68**	**7**	Pg	**Pg**	**11 25 04.0**	**-0.7**
STIP	**Stip**	**0.74**	**251**	*i* Pg	**Pg**	**11 25 01.9**	**-3.8**
STIP				*i* Sg	**Sg**	**11 25 10.0**	**-5.4**
STIP				*e*Lg	Lg	11 25 10.4	
	comp=N,352nm,0.3s						
STIP				*e*Lg	Lg	11 25 10.6	
	comp=E,248nm,0.3s						
VAY	**Valandovo**	**0.74**	**214**	*e*Pg	**Pb**	**11 25 06.3**	**+0.2**
VAY				*e*Sg	**Sb**	**11 25 16.7**	**+0.6**
VAY	**Valandovo**	**0.74**	**214**	*i* Pg	**Pg**	**11 25 06.2**	**+0.3**
VAY				*i* Sg	**Sb**	**11 25 16.4**	**+0.3**
VAY				*e*Lg	Lg	11 25 18.5	
	comp=N,435nm,0.4s						
VAY				*e*Lg	Lg	11 25 18.6	
	comp=E,231nm,0.2s						
KNT	**Kendrikon**	**0.80**	**192**	P	**Pg**	**11 25 06.5**	**-0.3**
KNT				S	**Sg**	**11 25 17.0**	**-0.3**
	comp=E,960nm,0.2s						
KNT	**Kendrikon**	**0.80**	**192**	*i* Pg	**Pg**	**11 25 06.6**	**-0.3**
KNT				*i* Sg	**Sg**	**11 25 17.4**	**+0.2**
KNT	**Kendrikon**	**0.80**	**192**	P	**Pg**	**11 25 06.5**	**-0.3**
KNT				S	**Sg**	**11 25 16.7**	**-0.5**
KNT				AML	AML	11 25 17.4	
	comp=E,1743μm,0.2s						
KNT				AML	AML	11 25 17.9	
	comp=N,2018μm,0.2s						
NVR	**Nevrokopi**	**0.81**	**136**	P	**Pg**	**11 25 06.2**	**-1.0**
NVR	**Nevrokopi**	**0.81**	**136**	P	**Pg**	**11 25 06.2**	**-1.0**
NVR				S	**Sg**	**11 25 16.0**	**-1.8**
NVR				AML	AML	11 25 17.3	
	comp=N,1141μm,0.2s						
NVR				AML	AML	11 25 17.4	
	comp=E,1624μm,0.3s						
SRS	**Serrai**	**0.90**	**156**	*e*Pg	**Pg**	**11 25 08.0**	**-0.7**
SRS				*e*Sg	**Sg**	**11 25 20.2**	**-0.3**
SRS	**Serrai**	**0.90**	**156**	P	**Pg**	**11 25 08.0**	**-0.7**
SRS				S	**Sb**	**11 25 20.6**	**0.0**
	comp=E,362nm,0.3s						
SRS	**Serrai**	**0.90**	**156**	⇑*i*Pg	**Pg**	**11 25 08.1**	**-0.7**
SRS				*i* Sg	**Sg**	**11 25 20.3**	**-0.3**
SRS	**Serrai**	**0.90**	**156**	P	**Pg**	**11 25 08.1**	**-0.7**
SRS				S	**Sg**	**11 25 19.3**	**-1.2**
SRS				AML	AML	11 25 23.4	
	comp=E,670μm,0.2s						
SRS				AML	AML	11 25 24.4	
	comp=N,785μm,0.3s						
PGB	**Panagyurishte**	**0.99**	**52**	Pg	**Pb**	**11 25 08.8**	**-1.6**
GRG	**Griva**	**1.12**	**209**	P	**Pb**	**11 25 12.8**	**+0.2**
GRG				S	**Sn**	**11 25 28.2**	**+0.2**
	comp=N,322nm,0.4s						
GRG	**Griva**	**1.12**	**209**	⇑*i*Pg	**Pb**	**11 25 12.8**	**+0.2**
GRG				*i* Sg	**Sg**	**11 25 28.0**	**+0.4**
GRG	**Griva**	**1.12**	**209**	P	**Pb**	**11 25 12.6**	**0.0**
GRG				S	**Sg**	**11 25 28.0**	**+0.4**
GRG				AML	AML	11 25 28.7	
	comp=E,649μm,0.6s						
GRG				AML	AML	11 25 30.8	
	comp=N,558μm,0.4s						
SOH	**Sokhos**	**1.13**	**171**	P	**Pb**	**11 25 12.4**	**-0.4**
SOH	**Sokhos**	**1.13**	**171**	⇑*i*Pg	**Pb**	**11 25 12.5**	**-0.3**
SOH				*i* Sg	**Sb**	**11 25 27.7**	**+0.3**
SOH	**Sokhos**	**1.13**	**171**	P	**Pb**	**11 25 12.5**	**-0.3**
SOH				S	**Sb**	**11 25 27.5**	**+0.1**
SOH				AML	AML	11 25 28.3	
	comp=E,843μm,0.6s						
SOH				AML	AML	11 25 28.9	
	comp=N,1978μm,0.4s						
PLD	**Plovdiv**	**1.19**	**82**	*e*Pg	**Pn**	**11 25 13.1**	**-0.6**
PLD				*e*Sg	**Sb**	**11 25 28.9**	**-0.2**
PLD	**Plovdiv**	**1.19**	**82**	*i* Pg	**Pn**	**11 25 13.4**	**-0.2**
PLD				*i* Sg	**Sb**	**11 25 28.9**	**-0.2**
PLD	**Plovdiv**	**1.19**	**82**	Pg	**Pn**	**11 25 13.5**	**-0.2**
RZN	**Rozhen**	**1.22**	**101**	Pg	**Pn**	**11 25 13.8**	**-0.5**
BARS	**Barje**	**1.30**	**313**	*e*Pn	**Pn**	**11 25 15.8**	**+0.6**
BARS	**Barje**	**1.30**	**313**	*e*Pn	**Sb**	**11 25 29.4**	**-2.9**
BARS				*e*Sg	**Sn**	**11 25 32.7**	**+0.3**
THE	**Thessaloniki**	**1.31**	**185**	P	**Pb**	**11 25 16.1**	**+0.3**
THE	**Thessaloniki**	**1.31**	**185**	*i* Pg	**Pn**	**11 25 15.8**	**+0.5**
THE				*i* Sg	**Sg**	**11 25 33.5**	**-0.2**
THE	**Thessaloniki**	**1.31**	**185**	P	**Pn**	**11 25 15.7**	**+0.4**
THE				AML	AML	11 25 35.2	
	comp=E,841μm,0.3s						
THE				AML	AML	11 25 36.2	
	comp=N,809μm,0.3s						
ZAPS	**Zavoj**	**1.38**	**345**	*e*Pn	**Pb**	**11 25 17.7**	**+0.7**
KVLA	**Kavala**	**1.39**	**136**	P	**Pn**	**11 25 15.6**	**-0.7**
KVLA				S	**Sn**	**11 25 34.1**	**-0.3**
KVLA				AML	AML	11 25 37.2	
	comp=E,613μm,0.3s						
KVLA				AML	AML	11 25 37.5	
	comp=N,932μm,0.3s						
MPEP	**Malo Peshtene**	**1.49**	**18**	P	**Pb**	**11 25 19.4**	**+0.6**
PLG	**Polygyros**	**1.58**	**171**	P	**Pn**	**11 25 19.3**	**+0.2**
PLG	**Polygyros**	**1.58**	**171**	P	**Pn**	**11 25 19.1**	**0.0**
PLG				AML	AML	11 25 43.9	
	comp=N,273μm,0.4s						
PLG				AML	AML	11 25 44.0	
	comp=E,323μm,0.4s						
OUR	**Ouranopolis**	**1.73**	**158**	P	**Pn**	**11 25 21.0**	**-0.1**
OUR	**Ouranopolis**	**1.73**	**158**	P	**Pn**	**11 25 20.9**	**-0.1**
OUR				AML	AML	11 25 47.0	
	comp=E,454μm,0.4s						
OUR				AML	AML	11 25 50.6	
	comp=N,465μm,0.4s						
THAS	**Thassos island**	**1.80**	**137**	P	**Pn**	**11 25 21.4**	**-0.6**
THAS				AML	AML	11 25 49.6	
	comp=E,724μm,0.3s						
THAS				AML	AML	11 25 52.0	
	comp=N,337μm,0.3s						
PLVB	**Pleven**	**1.82**	**37**	⇓*i*P	**Pb**	**11 25 24.2**	**-0.3**
PLVB	**Pleven**	**1.82**	**37**	S	**Sg**	**11 25 49.4**	**-0.6**
LIT	**Litokhoron**	**1.90**	**195**	P	**Pn**	**11 25 24.4**	**+1.0**
SELS	**Selova**	**1.95**	**312**	*e*Pn	**Pn**	**11 25 24.7**	**+0.5**
ZAGS	**Zajecar**	**1.98**	**341**	*e*Pn	**Pn**	**11 25 25.2**	**+0.7**
RDO	**Rodhopi**	**1.98**	**113**	P	**Pn**	**11 25 24.7**	**+0.2**
RDO				AML	AML	11 25 55.8	
	comp=E,600μm,0.3s						
RDO				AML	AML	11 25 56.5	
	comp=N,897μm,0.4s						
BOVS	**Bovan**	**1.99**	**329**	*e*Pn	**Pn**	**11 25 26.2**	**+1.6**
BOVS				*e*Sg	**Sg**	**11 25 54.3**	**-1.0**
VLAD	**Vladila**	**2.26**	**24**	⇑*i*P	**Pn**	**11 25 29.2**	**+0.8**
ELND	**Elena**	**2.27**	**63**	⇑*i*P	**Pn**	**11 25 30.2**	**+1.7**
ELND	**Elena**	**2.27**	**63**	S	**Sb**	**11 26 00.6**	**+0.5**
SMTH	**Samothraki Isl**	**2.34**	**128**	P	**Pn**	**11 25 29.3**	**-0.2**
ALN	**Alexandroupoli**	**2.44**	**114**	P	**Pn**	**11 25 31.0**	**+0.3**
ALN				AML	AML	11 26 12.3	
	comp=E,236μm,0.6s						
ALN				AML	AML	11 26 13.6	
	comp=N,164μm,0.8s						
XOR	**Xorichti**	**2.57**	**179**	P	**Pn**	**11 25 32.2**	**-0.5**
GRUS	**Gruza**	**2.63**	**319**	*e*Pn	**Pn**	**11 25 34.9**	**+1.5**
SJES	**Sjenica**	**2.67**	**301**	*e*Pn	**Pn**	**11 25 35.1**	**+1.0**
KUBS	**Kucevo**	**2.69**	**337**	*e*Pn	**Pn**	**11 25 35.5**	**+1.3**
SRE	**Strehaia**	**2.72**	**1**	⇓*i*P	**Pn**	**11 25 34.5**	**-0.2**
IVAS	**Ivanjica**	**2.73**	**308**	*e*Pn	**Pn**	**11 25 36.5**	**+1.7**
IVAS				*e*Sn	**Sn**	**11 26 10.7**	**+3.1**
HERR	**Herculane**	**2.98**	**350**	⇓*i*P	**Pn**	**11 25 37.6**	**-0.7**
MDVR	**Moldovita**	**3.02**	**341**	⇓*i*P	**Pn**	**11 25 39.3**	**+0.5**
TRUS	**Trudelj**	**3.02**	**320**	*e*Pn	**Pn**	**11 25 40.5**	**+1.6**
DIVS	**Divibare**	**3.15**	**314**	*e*Pn	**Pn**	**11 25 42.0**	**+1.4**
BBLS	**Lazići**	**3.34**	**306**	*e*Pn	**Pn**	**11 25 43.4**	**+0.2**
BBLS				*e*Sn	**Sn**	**11 26 25.2**	**+2.5**
GZR	**Gura Zlata**	**3.46**	**356**	⇑*i*P	**Pn**	**11 25 45.6**	**+0.7**
LOT	**Lotru**	**3.54**	**7**	⇓*i*P	**Pn**	**11 25 47.2**	**+1.2**
VOIR		**3.77**	**21**	⇓*i*P	**Pn**	**11 25 50.5**	**+1.4**
BZS	**Buzias**	**3.83**	**344**	⇓*i*P	**Pn**	**11 25 50.4**	**+0.4**
MLR	**Muntele Rosu**	**4.10**	**29**	⇑*i*P	**Pn**	**11 25 54.5**	**+0.8**
MLR	**Muntele Rosu**	**4.10**	**29**	S	**Sn**	**11 26 44.0**	**+2.4**
TSCT	**Constanta Port**	**4.63**	**59**	⇓*i*P	**Pn**	**11 26 01.8**	**+0.9**

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*ISCJB **08** 11:34:05.5±0.3,37°.53N±0°.04×95°.79E±0°.04,h12^{km},*
mb4.2/39,MS3.3/4,Error ellipse: s-maj=6.2km
s-min=4.0km az=27.4
*MOS **08** 11:34:05.6±1.1,37°.53N×95°.82E,h13^{km},mb4.5/9,Error*
ellipse: s-maj=10.1km s-min=6.1km az=121.6
*IDC **08** 11:34:05.6±0.6,37°.60N×95°.96E,h0^{km},mb4.1/23,*
mb1 4.1/27,mb1mx4.0/61,mbtmp4.1/27,ML3.5/4,MS3.3/5,
Ms1 3.3/5,ms1mx2.8/44,Error ellipse: s-maj=20.3km
s-min=11.6km az=36.0
*NEIC **08** 11:34:07.2±1.5,37°.56N×95°.80E,h10^{km},mb4.2/25,Error*
ellipse: s-maj=14.1km s-min=12.5km az=212.0
*BJI **08** 11:34:08.0±0.0,37°.60N×95°.85E,h10^{km},mb4.3/5,*
mB4.2/2,ML4.1/12,Ms3.9/13,Ms7 3.7/10
ISC 08 11:34:07.9±0.4**,37°.56N**±0°.05×**95°.85E**±0°.04**,h12^{km},n110,**
σ**1^{s}.58**/117**,mb4.2**/39**,MS3.3**/4**,4C-1D,Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**6.58**	**100**	*e*Pn	**Pn**	**11 35 46.1**	**+1.5**
LZH				Pg	**Pb**	**11 36 05.9**	**+3.6**
LZH				Sn	**Sn**	**11 36 58.3**	**-1.2**
LZH				Sg	**Sg**	**11 37 33.1**	**-5.8**
LZH				smax	smax		
	comp=N,160nm,1.0s						
LZH				smax	smax		
	comp=E,170nm,0.8s						
LZH				LR	LR		
	comp=N,610nm,6.5s						
LZH				LR	LR		
	comp=E,540nm,7.1s						
LZH				LR	LR		
	comp=Z,490nm,7.6s						
LSA	**Lhasa**	**8.76**	**208**	*e*Pn	**Pn**	**11 36 14.9**	**0.0**
LSA	**Lhasa**	**8.76**	**208**	*e*P	**Pn**	**11 36 14.9**	**0.0**
WMQ	**Urumqi**	**8.80**	**318**	*e*P	**Pn**	**11 36 18.1**	**+3.1**
WMQ				S	**Sn**	**11 37 52.0**	**-2.2**
WMQ				smax	smax		
	comp=N,35nm,1.1s						
WMQ				smax	smax		
	comp=E,72nm,1.1s						
WMQ				LR	LR		
	comp=N,310nm,9.1s						
WMQ				LR	LR		
	comp=E,350nm,9.1s						
SHL	**Shillong**	**12.42**	**197**	*e*Pn	**Pn**	**11 37 03.8**	**-0.9**
SHL	**Shillong**	**12.42**	**197**	*e*P	**Pn**	**11 37 03.8**	**-0.9**
HHC	**Hu-ho-hao-te**	**12.62**	**70**	P	Pn	11 37 11.5	+4.2
HHC				S	**Sn**	**11 39 25.2**	**-2.7**
HHC				LR	LR		
	comp=N,140nm,6.7s						
HHC				LR	LR		
	comp=E,180nm,6.1s						
HHC				LR	LR		
	comp=Z,160nm,7.3s						
SONA0	**Songino Array**	**12.86**	**34**	*e*Pn	**Pn**	**11 37 11.5**	**+1.0**
SONM	**Songino Array**	**12.86**	**34**	Pn	**Pn**	**11 37 11.5**	**+1.0**
	1.6nm,0.3s,baz=218,slow=16,SNR=17						
SONM				LR	LR	11 42 43.2	
	comp=Z,61nm,20.4s,baz=240,slow=40						
ULN	**Ulaanbaatar**	**13.17**	**35**	*e*Pn	**Pn**	**11 37 15.2**	**+0.3**
ULN	**Ulaanbaatar**	**13.17**	**35**	*ce*P	**Pn**	**11 37 15.5**	**+0.6**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ENH	**Enshi**	**13.44**	**119**	*e*Pn	**Pn**	**11 37 17.4**	**-1.2**
DGZ	**Jazzator, Alta**	**13.57**	**336**	*i* P	**Pn**	**11 37 21.2**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**13.63**	**317**	*e*Pn	**Pn**	**11 37 19.4**	**-1.6**
MK31				*e*Sn	**Sn**	**11 39 49.9**	**-2.5**
MK31	**Makanchi Array**	**13.63**	**317**	*e*P	**Pn**	**11 37 19.4**	**-1.6**
MK31				*e*		11 39 49.9	
MK32	**Makanchi Array**	**13.63**	**317**	*e*Pn	**Pn**	**11 37 19.0**	**-2.0**
MKAR	**Makanchi Array**	**13.63**	**317**	Pn	**Pn**	**11 37 19.0**	**-2.1**
	comp=Z,1.0nm,0.3s,baz=125,slow=14,SNR=26						
MKAR				Sn	Sn	11 39 41.8	-11
	comp=Z,0.2nm,0.3s,baz=129,slow=27,SNR=3.3						
MAKZ	**Makanchi**	**13.81**	**316**	*e*Pn	**Pn**	**11 37 21.7**	**-1.8**
MAKZ				*e*Sn	**Sn**	**11 39 53.5**	**-3.3**
MAKZ	**Makanchi**	**13.81**	**316**	*e*P	**Pn**	**11 37 21.7**	**-1.8**
MAKZ				*e*		11 39 53.5	
ZAK	**Zakamensk**	**13.88**	**20**	*e*P	**P**	**11 37 34.0**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
PRZ	**Przheval'sk**	**14.25**	**296**	*e*Pn	**Pn**	**11 37 28.1**	**-1.5**
PRZ				*e*Sn	**Sn**	**11 40 03.9**	**-3.7**
PRZ	**Przheval'sk**	**14.25**	**296**	*e*P	**Pn**	**11 37 28.1**	**-1.5**
PRZ				*e*		11 40 03.9	
MOY	**Mondy**	**14.57**	**13**	*e*P	**P**	**11 37 43.1**	**+2.7**
MOY				pmax	pmax		
	comp=Z,15nm,1.6s						
KDJ	**Kajisay**	**15.05**	**293**	*e*Pn	**Pn**	**11 37 39.0**	**-1.5**
	comp=Z,10nm,1.0s						
KDJ				*e*Sn	**Sn**	**11 40 23.7**	**-3.5**
KDJ	**Kajisay**	**15.05**	**293**	*e*P	**Pn**	**11 37 39.0**	**-1.5**
KDJ				*e*		11 40 23.7	
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOOM	**Boomskoye usch**	**16.02**	**294**	*e*Pn	**Pn**	**11 37 51.8**	**-1.4**
	comp=Z,6.1nm,0.8s						
BOOM	**Boomskoye usch**	**16.02**	**294**	*e*P	**Pn**	**11 37 51.8**	**-1.4**
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WHN	**Wuhan**	**16.84**	**109**	P	**P**	**11 38 09.8**	**+4.3**
AAK	**Ala-Archa**	**17.10**	**294**	P	**P**	**11 38 07.1**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=83,slow=7.4,SNR=5.0						
AAK	**Ala-Archa**	**17.10**	**294**	*e*Pn	**Pn**	**11 38 05.9**	**-1.0**
	comp=Z,5.8nm,1.1s						
AAK	**Ala-Archa**	**17.10**	**294**	*i* P	**P**	**11 38 09.3**	**+0.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURBB	**Kurchatov Arra**	**17.98**	**322**	P	**P**	**11 38 17.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=136,slow=11,SNR=17						
KURK	**Kurchatov**	**18.00**	**322**	*e*P	**P**	**11 38 17.4**	**-0.9**
	comp=Z,8.0nm,1.0s						
KURK	**Kurchatov**	**18.00**	**322**	*ce*P	**P**	**11 38 18.7**	**+0.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAA0	**Zalesovo Array**	**18.07**	**339**	*e*P	**P**	**11 38 18.0**	**-1.0**
	comp=Z,7.4nm,1.0s						
ZALV	**Zalesovo Beam**	**18.07**	**339**	P	**P**	**11 38 18.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=152,slow=6.7,SNR=5.8						
ZALV	**Zalesovo Beam**	**18.07**	**339**	*i* P	**P**	**11 38 19.1**	**0.0**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NIL	**Nilore**	**18.78**	**265**	*e*P	**P**	**11 38 25.5**	**-1.5**
	comp=Z,7.6nm,0.8s						
NIL	**Nilore**	**18.78**	**265**	*e*P	**P**	**11 38 25.5**	**-1.5**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**19.22**	**171**	P	**Pn**	**11 38 32.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=347,slow=9.5,SNR=6.0						
CMAR	**Chiang Mai Arr**	**19.22**	**171**	*ce*P	**Pn**	**11 38 33.5**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BTK	**Batken**	**19.65**	**285**	*e*P	**P**	**11 38 36.3**	**-0.4**
	comp=Z,3.7nm,0.8s						
BTK	**Batken**	**19.65**	**285**	*e*P	**P**	**11 38 36.3**	**-0.4**
BTK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**20.06**	**294**	*e*P	**P**	**11 38 40.6**	**-0.4**
	comp=Z,8.4nm,1.1s						
GAR	**Garm**	**20.09**	**282**	*e*P	**P**	**11 38 39.5**	**-1.9**
	comp=Z,9.4nm,0.7s						
GAR	**Garm**	**20.09**	**282**	*e*P	**P**	**11 38 39.5**	**-1.9**
GAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KBL	**Kabul**	**21.86**	**270**	*e*P	**P**	**11 39 00.4**	**-0.3**
	comp=Z,10nm,1.0s						
KBL	**Kabul**	**21.86**	**270**	*e*P	**P**	**11 39 00.4**	**-0.3**
KBL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BVAR	**Borovoye Array**	**23.49**	**319**	P	**P**	**11 39 16.9**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=108,slow=9.5,SNR=9.1						
BRVK	**Borovoye**	**23.56**	**319**	*e*P	**P**	**11 39 17.9**	**-0.2**
	comp=Z,3.4nm,0.6s						
BRVK	**Borovoye**	**23.56**	**319**	*i* P	**P**	**11 39 18.6**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YHNB	**Yeheng**	**25.25**	**113**	*e*P	**P**	**11 39 34.2**	**+0.2**
	comp=Z,20nm,1.2s						
KS15	**Wonju Array Si**	**25.35**	**80**	*e*P	**P**	**11 39 34.5**	**-0.2**
KSRS	**Korea Array**	**25.38**	**80**	P	**P**	**11 39 34.2**	**-0.7**
	comp=Z,8.3nm,0.6s,baz=278,slow=9.7,SNR=30						
ABKAR	**Akbulak array**	**28.32**	**306**	*e*P	**P**	**11 40 01.2**	**-0.1**
	comp=Z,1.9nm,0.9s						
JNU	**Nakatsue**	**28.81**	**88**	LR	LR	11 52 22.1	
	comp=Z,36nm,19.2s,baz=349,slow=38						
AKTO	**Aktyubinsk**	**29.77**	**308**	P	**P**	**11 40 14.5**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=110,slow=16,SNR=9.1						
ARU	**Arti**	**31.14**	**319**	P	**P**	**11 40 26.2**	**0.0**
	comp=Z,0.8nm,0.3s,baz=141,slow=14,SNR=4.0						
ARU	**Arti**	**31.14**	**319**	*e*P	**P**	**11 40 26.1**	**-0.2**
	comp=Z,6.8nm,1.0s						
ARU	**Arti**	**31.14**	**319**	*d i*P	**P**	**11 40 26.8**	**+0.6**
ARU						11 41 25.1	
ARU				S	**S**	**11 45 32.6**	**+1.1**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ASAJ	**Asahikawa**	**35.58**	**64**	P	**P**	**11 41 04.2**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=318,slow=8.0,SNR=5.4						
VSR	**Storozhevoye**	**41.72**	**308**	*e*P	**P**	**11 41 59.9**	**+3.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPSR	**Galich'ya Gora**	**41.80**	**310**	*e*P	**P**	**11 42 01.0**	**+3.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	**Obninsk**	**43.11**	**314**	*e*P	**P**	**11 42 08.3**	**+0.6**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**44.74**	**49**	*e*P	**P**	**11 42 21.2**	**+0.3**
	comp=Z,68nm,1.5s						
PETK	**Petropavlovsk-**	**44.74**	**49**	P	**P**	**11 42 18.6**	**-2.3**
	comp=Z,3.1nm,1.0s,baz=271,slow=9.7,SNR=4.3						
BR131	**Keskin Array S**	**47.77**	**293**	*e*P	**P**	**11 42 44.6**	**-0.5**
	comp=Z,1.8nm,0.8s						
BRTR	**Keskin Array B**	**47.77**	**293**	P	**P**	**11 42 46.0**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=104,slow=8.1,SNR=9.2						
KAPI	**Kappang**	**47.84**	**147**	LR	LR	12 03 31.8	
	comp=Z,28nm,18.2s,baz=102,slow=37						
AKASG	**Malin Array Be**	**48.02**	**308**	P	**P**	**11 42 46.0**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=70,slow=7.0,SNR=2.1						
FIA0	**FINESS Array S**	**48.37**	**323**	*e*P	**P**	**11 42 48.8**	**-0.4**
FIA0	**FINESS Array S**	**48.37**	**323**	*e*P	**P**	**11 42 48.8**	**-0.4**
FINES	**FINESS Array B**	**48.37**	**323**	P	**P**	**11 42 48.8**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=77,slow=10.0,SNR=4.4						
FINES				LR	LR	12 05 33.2	
	comp=Z,57nm,19.0s,baz=76,slow=39						
FINES	**FINESS Array B**	**48.37**	**323**	*i* P	**P**	**11 42 49.0**	**-0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BILL	**Bilibino**	**48.50**	**28**	*e*P	**P**	**11 42 50.5**	**+0.3**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARA0	**ARCESS Array S**	**48.53**	**334**	*e*P	**P**	**11 42 50.4**	**0.0**
ARCES	**ARCESS Array B**	**48.53**	**334**	P	**P**	**11 42 50.4**	**0.0**
	comp=Z,2.4nm,0.9s,baz=90,slow=9.3,SNR=3.5						
KWP	**Kalwaria Pacla**	**52.34**	**308**	*e*P	**P**	**11 43 19.3**	**-0.2**
	comp=Z,110nm,0.9s						
KWP	**Kalwaria Pacla**	**52.34**	**308**	*e*P	**P**	**11 43 19.3**	**-0.2**
HFS	**Hagfors**	**54.57**	**323**	P	**P**	**11 43 35.3**	**-0.4**
	comp=Z,3.1nm,1.0s,baz=88,slow=9.2,SNR=3.2						
VYHS	**Vyhne**	**55.11**	**308**	*e*P	**P**	**11 43 43.1**	**+3.3**
VYHS	**Vyhne**	**55.11**	**308**	*e*P	**P**	**11 43 43.1**	**+3.3**
NB200	**NORSAR Array S**	**55.50**	**324**	*e*P	**P**	**11 43 41.6**	**-0.8**
NOA	**NORSAR Array B**	**55.50**	**324**	P	**P**	**11 43 41.6**	**-0.8**
	comp=Z,1.9nm,1.0s,baz=72,slow=7.2,SNR=3.6						
NOA				LR	LR	12 07 31.2	
	comp=Z,29nm,18.4s,baz=5.0,slow=36						
IDI	**Anoyia**	**55.87**	**291**	P	**P**	**11 43 45.0**	**-0.5**
	comp=Z,13nm,1.0s,baz=63,slow=11,SNR=3.6						
MSEY	**Mahe Island**	**56.34**	**231**	*i* P	**P**	**11 43 52.4**	**+3.4**
GEC2	**GERESS Array S**	**58.17**	**310**	*e*P	**P**	**11 44 00.8**	**-0.9**
	comp=Z,3.6nm,1.1s						
GEC2	**GERESS Array S**	**58.17**	**310**	*e*P	**P**	**11 44 00.8**	**-0.9**
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GERES	**GERESS Array B**	**58.17**	**310**	P	**P**	**11 44 02.4**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=61,slow=8.0,SNR=2.9						
DAVOX	**Davos/Dischmat**	**61.36**	**309**	P	**P**	**11 44 24.1**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=46,slow=7.5,SNR=4.1						
TUE	**Stuetta**	**61.83**	**309**	*e*P	**P**	**11 44 26.2**	**-0.7**
	comp=Z,4.7nm,1.1s						
TOLK	**Toolik Lake Re**	**63.66**	**22**	*e*P	**P**	**11 44 38.5**	**-0.1**
	comp=Z,3.9nm,0.9s						
COLD	**Coldfoot**	**64.31**	**23**	*e*P	**P**	**11 44 43.1**	**+0.3**
	comp=Z,2.9nm,1.0s						
EKA	**Eskdalemuir Ar**	**64.72**	**321**	P	**P**	**11 44 45.1**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=64,slow=6.4,SNR=3.6						
ILAR	**Eielson Array**	**66.90**	**24**	P	**P**	**11 44 59.1**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=296,slow=5.1,SNR=12						
PMG	**Port Moresby**	**66.94**	**123**	*ce*P	**P**	**11 44 59.5**	**-1.0**
PMG				pmax	pmax		
	comp=Z,141nm,1.3s						
WRA	**Warramunga Arr**	**67.70**	**141**	P	**P**	**11 45 04.7**	**-0.5**
	comp=Z,2.5nm,1.0s,baz=339,slow=8.2,SNR=4.9						
WR1	**Warramunga Arr**	**67.70**	**141**	*e*P	**P**	**11 45 04.7**	**-0.5**
WB2	**Warramunga Arr**	**67.71**	**141**	*e*P	**P**	**11 45 05.2**	**0.0**
	comp=Z,13nm,1.4s						
EGAK	**Eagle**	**68.72**	**23**	*e*P	**P**	**11 45 11.2**	**+0.2**
	comp=Z,4.0nm,1.0s						
AS31	**Alice Springs**	**70.64**	**143**	*e*P	**P**	**11 45 22.6**	**-0.8**
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**70.64**	**143**	P	**P**	**11 45 22.8**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=329,slow=6.0,SNR=26						
ESDC	**Sonseca Array**	**73.66**	**308**	P	**P**	**11 45 40.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=44,slow=6.2,SNR=5.5						
YKA	**Yellowknife Ar**	**77.32**	**14**	P	**P**	**11 46 00.5**	**-1.5**
	comp=Z,2.7nm,1.3s,baz=335,slow=5.2,SNR=6.5						
YKB5	**Yellowknife Ar**	**77.32**	**14**	*e*P	**P**	**11 46 00.5**	**-1.5**
STKA	**Stephens Creek**	**81.20**	**142**	P	**P**	**11 46 23.1**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=328,slow=7.4,SNR=8.9						
STKA	**Stephens Creek**	**81.20**	**142**	*e*P	**P**	**11 46 23.2**	**-0.3**
	comp=Z,0.5nm,0.6s						
STKA	**Stephens Creek**	**81.20**	**142**	*e*P	**P**	**11 46 23.2**	**-0.3**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TOA1	**Torodi Ar. Sit**	**85.35**	**283**	*e*P	**P**	**11 46 44.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**85.35**	**283**	P	**P**	**11 46 44.7**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=55,slow=5.7,SNR=4.2						

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*ISCJB **08** 11:37:00.6±0.5,38°.99N±0°.03×34°.93E±0°.03,h10^{km},Error*
ellipse: s-maj=5.0km s-min=3.3km az=163.8
*DDA **08** 11:37:00.3,39°.01N×34°.88E,h7^{km}±5^{km},ML2.7*
*ISK **08** 11:37:00.1,39°.01N×34°.92E,h5^{km},ML2.2/4*
ISC 08 11:36:59.7±0.9**,39°.01N**±0°.03×**35°.04E**±0°.03**,h10^{km},n13,**
σ**1^{s}.82**/24**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNS	**Nevsehir-Avano**	**0.25**	**216**	*i* P	**Pg**	**11 37 04.7**	**-0.2**
AVNS				*i* S	**Sb**	**11 37 15.6**	**+4.6**
SIRC	**Yozgat**	**0.34**	**15**	*i* P	**Pb**	**11 37 08.0**	**+0.2**
SIRC				*i* S	**Sb**	**11 37 15.0**	**+1.6**
SIRC				IAML_P			
	comp=Z,3μm,0.2s						

BNN	**Bunyan**	0.65	104	PG	Pn	11 37 15.0	-0.1
BNN				SG	Sn	11 37 25.8	+0.3
YOZ	**Yozgat**	0.66	19	PG	Pn	11 37 14.0	-1.3
YOZ				SG	Sn	11 37 24.4	-1.5
CDAG	**Cicekdag**	0.80	320	*i* P	Pg	11 37 14.0	-1.1
CDAG				*i* S	Sb	11 37 25.9	-0.7
KIRS	**Kırehir-Merke**	0.88	278	*i* P	Pg	11 37 15.9	-0.7
KIRS				*i* S	Sg	11 37 25.8	-2.3
KIRS				IAML_P			
	comp=Z,621nm,0.1s						
YAYX	**Yaylak**	0.96	266	PG	Pg	11 37 17.2	-0.9
CUSAR	**Sarkisla-SIVAS**	1.02	66	*i* P	Pg	11 37 17.5	-1.9
CUSAR				*i* S	Sn	11 37 35.3	+0.6
AKSY	**AKSARAY - Alti**	1.06	250	*i* P	Pn	11 37 21.5	+0.8
AKSY				*i* S	Sg	11 37 33.2	-0.7
AKSY				IAML_P			
	comp=Z,202nm,0.1s						
SERE	**Sereflikochisa**	1.15	267	PG	Pb	11 37 20.8	-0.9
SERE				SG	Sb	11 37 35.9	-0.8
CORM	**Corum**	1.21	345	PN	Pn	11 37 23.4	+0.7
COAL	**Corum-Alaca**	1.24	358	*i* P	Pg	11 37 25.3	+1.7
COAL				*i* S	Sn	11 37 44.7	+4.6
COAL				IAML_P			
	comp=Z,181nm,0.2s						
DELI	**KIRIKKALE**	1.31	319	*i* P	Pg	11 37 25.8	+1.0
DELI				*i* S	Sn	11 37 41.1	-0.7
DELI				IAML_P			
	comp=Z,798nm,0.2s						

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*IDC **08** 11:38:55.8±0.8, 37°.58N×96°.03E, h0^{km}, mb3.8/9, mb1 3.8/14, mb1mx3.6/64, mbtmp3.8/14, ML3.8/5, Error ellipse: s-maj=23.9km s-min=14.8km az=40.0*

*ISCJB **08** 11:38:56.0±0.6, 37°.59N±0°.07×95°.92E±0°.06, h12^{km}, mb3.8/9, Error ellipse: s-maj=10.4km s-min=6.6km az=17.4*

*BJI **08** 11:38:58.1±0.0, 37°.53N×95°.84E, h6^{km}, mb4.1/1, ML3.7/12, Ms3.5/3, Ms7 3.4/3*

ISC 08 11:38:57.7±0.7**, 37°.62N**±0°.07×**95°.85E**±0°.05**, h12^{km}, n17, σ2s.25**/23**, mb3.8**/9**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	3.59	59	Pn	Pn	11 39 56.3	+3.0
GTA				Pg	Pb	11 40 01.8	+0.7
GTA				Sn	Sn	11 40 34.5	-1.1
GTA				Sg	Sb	11 40 42.4	-2.3
GTA				smax	smax		
	comp=N,58nm,1.0s						
GTA				smax	smax		
	comp=E,44nm,0.9s						
GTA				LR	LR		
	comp=N,550nm,9.6s						
GTA				LR	LR		
	comp=E,460nm,6.9s						
GTA				LR	LR		
	comp=Z,510nm,8.6s						
LZH	**Lanzhou**	6.59	101	*e*Pn	Pn	11 40 37.1	+2.6
LZH				Pg	Pb	11 40 50.5	-1.8
LZH				Sn	Sn	11 41 50.2	+0.6
LZH				smax	smax		
	comp=N,82nm,0.7s						
LZH				smax	smax		
	comp=E,110nm,0.8s						
LZH				LR	LR		
	comp=N,350nm,7.6s						
LZH				LR	LR		
	comp=E,260nm,7.0s						
LZH				LR	LR		
	comp=Z,270nm,7.0s						
WMQ	**Urumqi**	8.76	318	*e*P	Pn	11 41 08.5	+4.3
SONM	**Songino Array**	12.80	34	Pn	Pn	11 42 00.7	+1.1
	0.9nm,0.3s,baz=219,slow=16,SNR=5.8						
MKAR	**Makanchi Array**	13.59	317	Pn	Pn	11 42 09.3	-0.9
	0.7nm,0.3s,baz=122,slow=14,SNR=7.3						
MKAR				Sn	Sn	11 44 34.5	-6.6
	0.1nm,0.3s,baz=132,slow=24,SNR=2.7						
KURBB	**Kurchatov Arra**	17.93	322	P	Pn	11 43 06.9	+0.1
	0.1nm,0.3s,baz=134,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	18.02	339	P	Pn	11 43 08.4	+0.6
	0.8nm,0.3s,baz=160,slow=9.2,SNR=4.5						
CMAR	**Chiang Mai Arr**	19.28	171	P	Pn	11 43 23.0	-0.4
	0.3nm,0.3s,baz=348,slow=11,SNR=3.0						
BVAR	**Borovoye Array**	23.44	319	P	P	11 44 07.1	+0.4
	1.1nm,0.6s,baz=108,slow=9.7,SNR=5.6						
KSRS	**Korea Array**	25.37	80	P	P	11 44 22.7	-1.9
	4.6nm,0.6s,baz=278,slow=9.0,SNR=20						
ASAJ	**Asahikawa**	35.55	64	P	P	11 45 54.0	-0.6
	2.5nm,0.8s,baz=246,slow=20,SNR=3.9						
BRTR	**Keskin Array B**	47.75	293	P	P	11 47 35.8	+1.0
	0.4nm,0.5s,baz=96,slow=10,SNR=2.5						
AKASG	**Malin Array Be**	47.98	308	P	P	11 47 37.6	+1.5
	0.2nm,0.3s,baz=72,slow=6.6,SNR=4.8						
FINES	**FINESS Array B**	48.32	323	P	P	11 47 38.8	+0.2
	0.9nm,0.7s,baz=57,slow=10,SNR=2.7						
ILAR	**Eielson Array**	66.84	24	P	P	11 49 48.9	-0.1
	0.5nm,0.9s,baz=303,slow=5.5,SNR=4.2						
ASAR	**Alice Springs**	70.69	143	P	P	11 50 12.9	-0.5
	0.6nm,0.7s,baz=325,slow=5.7,SNR=12						
STKA	**Stephens Creek**	81.25	142	P	P	11 51 12.2	-1.4
	1.4nm,0.8s,baz=359,slow=7.9,SNR=4.7						

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*ISCJB **08** 11:46:28.5±0.3, 24°.16N±0°.02×122°.23E±0°.02, h19^{km}±4^{km}, Error ellipse: s-maj=3.9km s-min=2.3km az=156.4*

*TAP **08** 11:46:28.6, 24°.22N×122°.19E, h20^{km}, ML2.8, C*

*JMA **08** 11:46:28.6±0.1, 24°.11N×122°.20E, h34^{km}±4^{km}, M1.7*

ISC 08 11:46:26.4±1.2**, 24°.15N**±0°.02×**122°.23E**±0°.02**, h3^{km}**±10^{km}**, n55, σ0s.78**/96**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	0.41	347	*e*P	Pb	11 46 36.6	+0.3
	baz=350						
EOS1				*e*S	Sb	11 46 42.2	-0.8
	baz=350						
NANB	**Nanao**	0.52	302	*e*P	Pb	11 46 38.2	-0.1
	baz=297						
NANB				S	Sb	11 46 45.5	-0.8
	baz=297						
ENA	**Nanau**	0.53	302	P	Pb	11 46 38.2	-0.2
	baz=297						
ENA				*e*S	Sb	11 46 45.7	-0.8
	baz=297						
TWC	**Suao**	0.58	323	P	Pb	11 46 38.6	-0.6
	baz=322						
TWC				*e*S	Sg	11 46 45.2	+0.2
	baz=322						
NACB	**Ninganchiao**	0.58	273	*e*P	Pb	11 46 40.0	+0.7
	baz=265						
NACB				*e*S	Sb	11 46 49.0	+0.9
	baz=265						
ETLH	**Xiulin Townshi**	0.69	275	*e*P	Pb	11 46 41.8	+0.6
	baz=269						
JYNG	**Yonagunijimaku**	0.72	65	P	Pn	11 46 42.8	-0.7
JYNG				S	Sb	11 46 52.9	+1.1
EGS		0.74	338	*e*P	Pb	11 46 42.5	+0.4
	baz=340						
EGS				*e*S	Sb	11 46 52.0	-0.7
	baz=340						
TWE	**Neicheng**	0.77	318	*e*P	Pb	11 46 42.4	-0.1
	baz=317						
TWE				*e*S	Sg	11 46 51.8	+0.6
	baz=317						
YOJ	**Yonaguni jima**	0.78	66	*e*P	Pn	11 46 43.8	-0.5
	baz=71						
YOJ				*e*S	Sn	11 46 56.0	-0.5
	baz=71						
YOJ	**Yonaguni jima**	0.78	66	P	Pn	11 46 43.8	-0.5
YOJ				*e*S	Sb	11 46 54.4	+0.9
NDT	**Datong Townshi**	0.80	305	*e*P	Pb	11 46 43.4	+0.4
	baz=301						
NDT				*e*S	Sb	11 46 53.6	-0.6
	baz=301						
ESL	**Shilin**	0.81	246	*e*P	Pb	11 46 43.2	+0.1
	baz=239						
ESL				*e*S	Sb	11 46 55.1	+0.7
	baz=239						
NNSB	**Datong**	0.82	290	*e*P	Pb	11 46 43.8	+0.3
	baz=286						
NNSB				*e*S	Sb	11 46 55.1	0.0
	baz=286						
NNS	**Nan Shan**	0.84	290	*e*P	Pb	11 46 44.2	+0.5
	baz=286						
NNS				*e*S	Sb	11 46 55.8	+0.4
	baz=286						
WHF	**Hehuan Shan**	0.89	270	*e*P	Pb	11 46 45.1	+0.4
	baz=265						
WHF				*e*S	Sb	11 46 57.1	0.0
	baz=265						
TIPB	**Shuangxi**	0.90	336	P	Pb	11 46 44.6	-0.1
	baz=336						
TIPB				*e*S	Sg	11 46 55.7	+0.3
	baz=336						
YHNB	**Yeheng**	0.94	304	*e*P	Pb	11 46 45.5	0.0
	baz=301						
YHNB				*e*S	Sb	11 46 58.1	-0.2
	baz=301						
NSK	**Sanguang**	0.95	303	*e*P	Pb	11 46 45.9	+0.1
	baz=301						
NSK				*e*S	Sb	11 46 58.5	-0.3
	baz=301						
TWT	**Tachien**	0.97	276	*e*P	Pn	11 46 46.8	-0.4
	baz=272						
CHGB	**Renai**	0.97	265	*e*P	Pb	11 46 46.5	+0.4
	baz=260						
CHGB				*e*S	Sb	11 46 59.7	+0.3
	baz=260						
TDCB	**Techi**	0.99	276	*e*P	Pn	11 46 46.9	-0.5
	baz=272						
TDCB				*e*S	Sb	11 47 00.5	+0.7
	baz=272						
HGSD	**Ruisui**	0.99	229	*e*P	Pb	11 46 46.1	-0.1
	baz=224						
TWA	**Mucha**	1.02	325	*e*P	Pn	11 46 47.9	+0.2
	baz=324						
TWA				*e*S	Sb	11 46 59.9	-0.7
	baz=324						
EHY	**Hungye**	1.05	233	*e*P	Pb	11 46 47.0	-0.3
	baz=227						
EHY				*e*S	Sg	11 47 00.1	-0.1
	baz=227						
VWDT	**VWDT**	1.07	249	*e*P	Pn	11 46 49.1	+0.7
	baz=244						
VWDT				*e*S	Sb	11 47 01.9	-0.3
	baz=244						
WLTB	**Daxi**	1.14	308	*e*P	Pn	11 46 50.5	+1.3
	baz=306						
YULB	**Yu-li**	1.14	229	*e*P	Pg	11 46 48.0	-0.3
	baz=224						
YULB				*e*S	Sg	11 47 02.4	-0.7
	baz=224						
YM01	**YM01**	1.16	329	*e*P	Pb	11 46 48.6	-0.6
	baz=328						
TWF1	**Yuli**	1.17	227	*e*P	Pg	11 46 48.5	-0.3
	baz=223						
TWF1				*e*S	Sg	11 47 04.5	+0.5
	baz=223						
YM10	**YM10**	1.17	329	*e*P	Pb	11 46 49.0	-0.4
	baz=328						
YM05	**YM05**	1.18	329	*e*P	Pb	11 46 49.0	-0.5
	baz=329						
WHP	**Taichung City**	1.18	276	*e*P	Pn	11 46 51.2	+1.2
	baz=273						
YM08	**YM08**	1.19	331	*e*P	Pn	11 46 50.2	+0.1
	baz=330						
LIOB	**Emei**	1.22	294	*e*P	Pn	11 46 50.6	+0.2
	baz=291						
NSTT	**Nanjuang**	1.22	293	*e*P	Pg	11 46 49.6	-0.2
	baz=290						
SSLB	**Suanglung**	1.22	253	*e*P	Pn	11 46 50.7	+0.1
	baz=249						
SMLT	**Sun Moon Lake**	1.25	258	*e*P	Pg	11 46 50.3	0.0
	baz=254						
SMLT				*e*S	Sb	11 47 07.2	-0.1
	baz=254						
YUS	**Yu-Shan**	1.34	241	*e*P	Pn	11 46 52.5	-0.1
	baz=237						
YUS				*e*S	Sg	11 47 09.3	-0.4
	baz=237						
TWQ1	**Liyutan**	1.35	279	*e*P	Pn	11 46 52.0	-0.2
	baz=275						
TWQ1				*e*S	Sg	11 47 09.6	-0.1
	baz=275						
IRIF	**Iriomote-Funau**	1.38	82	P	Pb	11 46 53.1	+0.2
IRIF				S	Sn	11 47 11.0	-0.4
HATJ	**Hateruma jima**	1.44	93	P	Pg	11 46 54.5	+0.5
HATJ				*e*S	Sn	11 47 17.2	+4.3
ALS	**Alishan**	1.45	244	*e*S	Sg	11 47 12.4	-0.8
	baz=240						
ELDTW	**Lidau**	1.47	230	*e*P	Pn	11 46 53.0	-1.0
	baz=226						
ELDTW				*e*S	Sb	11 47 10.9	-2.7
	baz=226						
CHN5	**Tsauling**	1.53	249	*e*P	Pg	11 46 57.1	+1.4
	baz=245						
CHN5				*e*S	Sg	11 47 15.6	+0.1
	baz=245						
JKRS	**Kuro-shima**	1.62	87	P	Pg	11 46 57.1	-0.5
JKRS				S	Sb	11 47 17.5	-0.5
TPUB	**Ta-pu**	1.69	240	*e*P	Pb	11 46 58.4	+0.1
	baz=237						
TPUB				*e*S	Sb	11 47 19.9	-0.2
	baz=237						
WTP	**Ta-pu**	1.73	239	*e*P	Pb	11 46 58.5	-0.5
	baz=235						
WTP				*e*S	Sn	11 47 20.8	+0.5
	baz=235						
JIJ	**Ishigaki jima**	1.76	83	P	Pn	11 46 58.2	+0.4
JIJ				*e*S	Sn	11 47 19.8	-0.9
TWK	**Hsinying**	1.82	242	*e*P	Pb	11 46 59.8	-0.8
	baz=238						
TWK				*e*S	Sn	11 47 22.9	+0.3
	baz=238						
CHN1	**Nanshi**	1.83	239	*e*P	Pb	11 47 00.5	-0.2
	baz=235						
CHN1				*e*S	Sn	11 47 23.1	+0.4
	baz=235						
JISG	**Ishigakijimahi**	1.94	77	P	Pn	11 47 00.5	+0.1
JISG				S	Sn	11 47 23.7	-1.7
SSD	**Sandimen**	2.03	227	*e*P	Pn	11 47 02.7	+1.2
	baz=224						
SSD				*e*S	Sn	11 47 28.0	+0.5
	baz=224						
MASBT	**Mashibuluo**	2.12	224	*e*P	Pn	11 47 02.9	+0.1
	baz=221						
MASBT				*e*S	Sn	11 47 30.0	+0.2
	baz=221						
PHUB	**P'eng-hu**	2.52	256	*e*S	Sn	11 47 38.2	-1.3
	baz=253						

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*ISCJB **08** 11:57:59.6±0.3, 7°.41S±0°.03×128°.57E±0°.04, h151^{km}, mb4.0/14, Error ellipse: s-maj=5.3km s-min=4.3km az=17.1*

*NEIC **08** 11:58:01.4±2.2, 7°.47S×128°.60E, h154^{km}±9^{km}, mb4.1/15, Error ellipse: s-maj=9.6km s-min=8.7km az=143.0*

*IDC **08** 11:58:02.5±2.0, 7°.42S×128°.58E, h162^{km}±17^{km}, mb3.8/6, mb1 3.9/9, mb1mx3.6/27, mbtmp4.3/9, MS3.0/2, Ms1 3.1/2, ms1mx2.4/28, Error ellipse: s-maj=33.2km s-min=15.5km az=105.0*

ISC 08 11:58:00.9±0.5**, 7°.46S**±0°.05×**128°.61E**±0°.05**, h151^{km}, n38, σ1s.55**/44**, mb4.0**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	2.72	101	*e*Pn	Pn	11 58 46.0	+1.2
SAUI				*e*Sn	Sn	11 59 21.2	+2.5
SOEI	**Soe**	4.86	242	*e*Pn	Pn	11 59 14.2	+1.5
SOEI				*e*Sn	Sn	12 00 07.7	-0.9
BATI	**Baumata**	5.59	240	P	Pn	11 59 23.6	+1.2
	52nm,0.3s,baz=335,slow=0.7,SNR=31						
BATI				S	Sn	12 00 24.5	-1.4
	82nm,0.3s,baz=328,slow=2.2,SNR=10						
FAKI	**Fak Fak**	5.79	39	*e*Pn	Pn	11 59 25.1	+0.2
FAKI				*e*Sn	Sn	12 00 27.2	-3.4
MTN	**Manton Dam**	5.90	155	*e*Pn	Pn	11 59 27.1	+0.8
MTN				*e*Sn	Sn	12 00 30.4	-2.7
SIJI	**Sorong**	7.07	22	P	Pn	11 59 43.4	+1.4
	2.9nm,0.3s,baz=195,slow=19,SNR=13						
SIJI				S	Sn	12 00 59.4	-1.8
	3.4nm,0.3s,baz=230,slow=23,SNR=8.1						
TNTI	**Ternate**	8.27	351	*e*Pn	Pn	11 59 57.3	-0.7
WRAB	**Tennant Creek**	13.59	156	*e*Pn	Pn	12 01 07.5	-0.2
WR1	**Warramunga Arr**	13.59	156	*e*Pn	Pn	12 01 05.7	-2.0
WRA	**Warramunga Arr**	13.59	156	P	Pn	12 01 05.7	-2.0
	0.5nm,0.3s,baz=328,slow=14,SNR=15						
WRA				S	Sn	12 03 26.5	-12
	1.3nm,0.3s,baz=327,slow=23,SNR=9.5						
WB2	**Warramunga Arr**	13.60	156	*e*Pn	Pn	12 01 06.5	-1.3
COEN	**Coen**	15.70	115	*e*P	P	12 01 36.4	+1.5
	28nm,1.3s						
PSA00	**Pilbara Seismi**	16.38	210	*e*P	Pn	12 01 42.7	+0.4
	18nm,1.4s						
AS31	**Alice Springs**	16.89	163	*e*P	Pn	12 01 49.9	+1.4
	3.0nm,0.6s						
AS31				*e*S	S	12 04 51.0	-5.5
ASAR	**Alice Springs**	16.89	163	P	Pn	12 01 49.5	+1.0
	1.3nm,0.3s,baz=338,slow=10.0,SNR=188						
ASAR				S	S	12 04 46.0	-10
	0.9nm,0.3s,baz=343,slow=26,SNR=9.5						
ASAR				ScP	ScP	12 09 45.9	-1.6
	0.1nm,0.3s,baz=348,slow=2.0,SNR=5.0						
UGM	**Wanagama**	17.93	267	*e*P	P	12 01 59.5	0.0
	226nm,1.5s						
KKM	**Kota Kinabalu**	18.25	317	*e*P	P	12 02 03.0	-0.1
	7.4nm,0.9s						
GIRL	**Giralia**	20.48	221	*e*P	P	12 02 28.2	+1.2
	252nm,1.5s						
FORT	**Forrest**	23.20	181	*e*P	P	12 02 55.6	+1.2
	14nm,0.7s						
MORW	**Morawa**	24.54	207	*e*P	P	12 03 08.3	+1.6
	9.4nm,0.6s						
BBOO	**Buckleboo**	26.15	166	*e*P	P	12 03 22.1	+0.9
	8.3nm,1.3s						
STKA	**Stephens Creek**	27.14	155	pP	pP	12 04 05.5	+4.0
	0.7nm,0.4s,baz=335,slow=11,SNR=2.3						
STKA	**Stephens Creek**	27.14	155	*e*P	P	12 03 29.7	-0.3
	0.9nm,1.4s						
NWAO	**Narrogin (SRO)**	27.45	201	P	P	12 03 33.8	+1.0
	3.0nm,0.4s,baz=40,slow=10,SNR=3.4						
NWAO				LR	LR	12 16 28.6	
	comp=Z,29nm,19.8s,baz=12,slow=40						
NWAO	**Narrogin (SRO)**	27.45	201	*e*P	P	12 03 33.6	+0.8
	25nm,1.3s						
CMAR	**Chiang Mai Arr**	38.99	312	LR	LR	12 21 08.3	
	comp=Z,21nm,21.6s,baz=138,slow=36						
MJAR	**Matsushiro Arr**	44.69	11	P	P	12 05 58.1	-0.7
	0.8nm,0.5s,baz=195,slow=9.7,SNR=3.7						
SONA0	**Songino Array**	58.45	343	*e*P	P	12 07 41.8	+0.8
SONM	**Songino Array**	58.45	343	P	P	12 07 41.8	+0.8
	1.3nm,0.6s,baz=166,slow=6.3,SNR=5.9						
PETK	**Petropavlovsk-**	65.20	19	P	P	12 08 26.5	+0.6
	3.3nm,0.8s,baz=158,slow=4.3,SNR=3.5						
PEA1	**Petropavlovsk-**	65.20	19	*e*P	P	12 08 26.5	+0.6
MK31	**Makanchi Array**	67.86	328	*e*P	P	12 08 42.6	-0.4
	1.6nm,1.1s						
MK32	**Makanchi Array**	67.86	328	*e*P	P	12 08 43.4	+0.4
MKAR	**Makanchi Array**	67.86	328	P	P	12 08 43.4	+0.4
	1.2nm,0.4s,baz=115,slow=8.4,SNR=16						
ZAA0	**Zalesovo Array**	71.39	334	*e*P	P	12 09 04.4	0.0
	1.8nm,0.8s						
ZALV	**Zalesovo Beam**	71.39	334	P	P	12 09 03.6	-0.7
	1.4nm,0.5s,baz=134,slow=6.7,SNR=5.5						
KURK	**Kurchatov**	72.20	329	*e*P	P	12 09 09.2	0.0
	3.5nm,1.0s						
ABKAR	**Akbulak array**	82.02	322	*e*P	P	12 10 04.3	+0.2
	2.1nm,1.1s						

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*ISCJB **08** 12:03:40.3±0.9, 59°.2S±0°.1×26°.2W±0°.3, h100^{km}, mb3.8/6, Error ellipse: s-maj=23.1km s-min=14.1km az=155.5*

*IDC **08** 12:03:45.5±7.8, 59°.20S×26°.28W, h136^{km}±71^{km}, mb3.5/6, mb1 3.6/6, mb1mx3.5/17, mbtmp3.9/6, Error ellipse: s-maj=26.3km s-min=22.0km az=41.0*

ISC 08 12:03:41.5±0.8**, 59°.2S**±0°.1×**26°.2W**±0°.2**, h100^{km}, n18, σ0s.93**/12**, mb3.8**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	13.66	154	P	Pn	12 06 49.7	-0.8
VNA3	**Neumayer Olymp**	13.82	157	P	Pn	12 06 51.9	-0.8
SNAA	**Sanae**	15.63	152	P	Pn	12 07 16.7	+0.8
PLCA	**Paso Flores**	33.18	284	P	P	12 10 08.7	+0.4
	0.8nm,0.4s,baz=157,slow=6.3,SNR=6.6						
MAW	**Mawson**	37.30	141	P	P	12 10 43.5	+0.3
	1.5nm,0.9s,baz=243,slow=6.7,SNR=3.3						
VNDA	**Vanda**	43.40	183	P	P	12 11 34.6	+1.2
	1.0nm,0.7s,baz=187,slow=8.9,SNR=10.0						
BOSA	**Boshof**	46.36	72	P	P	12 11 57.8	+0.2
	2.6nm,1.0s,baz=207,slow=8.3,SNR=3.6						
H10S2	**ASCENSION HYDR**	50.94	15	T	T	13 08 18.3	
	baz=188,slow=75,SNR=13						
H10S3	**ASCENSION HYDR**	50.94	15	T	T	13 08 17.9	
	baz=188,slow=75,SNR=12						
H10S1	**ASCENSION HYDR**	50.96	15	T	T	13 08 19.5	
	baz=188,slow=75,SNR=7.9						
H10N1	**ASCENSION HYDR**	52.06	15	T	T	13 09 42.2	
	baz=192,slow=25,SNR=9.2						
H10N3	**ASCENSION HYDR**	52.06	15	T	T	13 09 42.6	
	baz=192,slow=25,SNR=5.1						
H10N2	**ASCENSION HYDR**	52.07	15	T	T	13 09 43.3	
	baz=192,slow=25,SNR=6.8						
TORD	**Torodi Ar. Bea**	75.61	28	P	P	12 15 15.5	+0.3
	0.8nm,0.5s,baz=196,slow=6.4,SNR=4.6						
ASAR	**Alice Springs**	95.78	162	P	P	12 16 55.8	-0.6
	0.2nm,0.6s,baz=188,slow=3.7,SNR=3.0						
YKA	**Yellowknife Ar**	138.85	315	PKP	PKPdf	12 22 53.5	-0.8
	0.2nm,0.5s,baz=129,slow=2.2,SNR=3.3						
SONM	**Songino Array**	150.27	91	PKPbc	PKPbc	12 23 20.4	+0.5
	0.3nm,0.5s,baz=232,slow=1.6,SNR=2.7						
ILAR	**Eielson Array**	152.55	307	PKPbc	PKPbc	12 23 22.8	-1.6
	0.2nm,0.7s,baz=146,slow=2.0,SNR=4.2						

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*NSSC **08** 12:16:12.0±0.9, 34°.34N×36°.28E, h12^{km}±12^{km}, ML1.7*

JSO 08 12:16:10.9±0.4**, 33°N**±3°×**3°6E**±°**, h10^{km}, M2.1**/7**, Mjma2.1**/7**, ML2.0**/4**, MLv2.2**/7**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHMJ	**Saham**	0.23	341	P	Pg	12 16 16.8	+1.2
HSUJ	**Al Zarqa**	0.50	144	P	Pg	12 16 20.5	-0.1
KSDI	**Kefar Szold**	0.70	347	P	Pg	12 16 24.7	+0.3
BRBR	**Barbar**	0.90	5	*e*P	Pb	12 16 29.3	+0.5
BRBR				*e*S	Sn	12 16 43.4	+0.3
BRBR				AML	AML	12 16 48.1	
	comp=E,11nm,0.5s						
BRBR				AML	AML	12 16 49.4	
	comp=N,25nm,0.6s						
ASF	**Jabal al Asfar**	0.95	111	P	Pb	12 16 29.9	+0.4
TOTH	**TOTAH**	0.98	30	*e*P	Pn	12 16 30.8	+0.1
TOTH				*e*S	Sb	12 16 43.1	+0.1
TOTH				AML	AML	12 16 47.3	
	comp=E,28nm,0.7s						
TOTH				AML	AML	12 16 55.4	
	comp=N,20nm,0.5s						
QASN	**Qassioun**	1.08	19	*e*P	Pg	12 16 28.1	-3.6
QASN				*e*S	Sg	12 16 38.4	-7.4
QASN				AML	AML	12 16 42.2	
	comp=E,52nm,0.3s						
QASN				AML	AML	12 16 48.0	
	comp=N,40nm,0.3s						

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*SJA **08** 12:25:05.8±1.1, 24°.21S×67°.20W, h192^{km}±8^{km}, ML2.7, MW3.2*

*ISCJB **08** 12:25:06.5±0.8, 24°.23S±0°.03×67°.27W±0°.03, h181^{km}±10^{km}, Error ellipse: s-maj=6.5km s-min=4.0km az=38.4*

*GUC **08** 12:25:08.4±0.6, 23°.99S×67°.64W, h220^{km}±11^{km}, ML3.7*

ISC 08 12:25:04.7±1.9**, 24°.22S**±0°.04×**67°.21W**±0°.04**, h205^{km}**±17^{km}**, n29, σ1s.40**/55**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	1.64	108	*i* P	Pn	12 25 41.2	+0.9
SLA				IAML		12 25 42.3	
	comp=Z,108nm,0.6s						
SLA				*e*S	Sn	12 26 06.8	-1.0
HJA	**Humahuaca**	1.94	59	*e*P	Pn	12 25 44.1	+0.6
HJA				IAML		12 25 46.0	
	comp=Z,50nm,0.4s						
HJA				*e*S	Sn	12 26 12.5	-0.9
AZAP	**Zapla**	1.96	90	*i* P	Pn	12 25 44.0	+0.5
AZAP				IAML		12 25 44.5	
	comp=Z,235nm,0.9s						
AZAP				*e*S	Sn	12 26 12.9	-0.6
FSA	**Cafayete**	2.19	149	*i* P	Pn	12 25 46.8	+1.1
FSA				IAML		12 25 51.6	
	comp=Z,6.7nm,0.4s						
FSA				*i* S	Sn	12 26 16.6	-1.3
LVC	**Limon Verde**	2.24	316	*i* P	Pn	12 25 47.9	+1.4
LVC				*e*S	Sn	12 26 19.0	0.0
PB15	**IPOC Station P**	2.30	296	*i* P	Pn	12 25 48.6	+1.6

PB15				*e*S	**Sn**	**12 26 19.3**	**-0.6**
PB15	**IPOC Station P**	**2.30**	**296**	*e*P	**Pn**	**12 25 48.5**	**+1.4**
PB15				*i* S	**Sn**	**12 26 19.2**	**-0.6**
YJA	**Yavi**	**2.57**	**38**	*e*P	**Pn**	**12 25 51.2**	**+1.1**
YJA				IAML		12 25 55.5	
	comp=Z,5.7nm,0.3s						
PB06	**IPOC Station P**	**2.64**	**304**	*i* P	**Pn**	**12 25 52.2**	**+1.5**
PB06				*e*S	**Sn**	**12 26 25.4**	**-1.1**
PB06	**IPOC Station P**	**2.64**	**304**	*e*P	**Pn**	**12 25 52.1**	**+1.5**
PB06				*i* S	**Sn**	**12 26 25.1**	**-1.4**
PB06				IAML		12 26 27.7	
	comp=E,292nm,0.4s						
PB14	**IPOC Station P**	**2.94**	**261**	*e*P	**Pn**	**12 25 55.7**	**+1.5**
PB14				*e*S	**Sn**	**12 26 31.4**	**-1.4**
PB09	**IPOC Station P**	**3.05**	**322**	*i* P	**Pn**	**12 25 57.5**	**+2.0**
PB09				*e*S	**Sn**	**12 26 35.0**	**-0.1**
PB09	**IPOC Station P**	**3.05**	**322**	*e*P	**Pn**	**12 25 57.1**	**+1.7**
PB09				*i* S	**Sn**	**12 26 34.7**	**-0.5**
PB05	**IPOC Station P**	**3.06**	**296**	*e*P	**Pn**	**12 25 56.8**	**+1.3**
PB05				*e*S	**Sn**	**12 26 33.0**	**-2.2**
PB05	**IPOC Station P**	**3.06**	**296**	*e*P	**Pn**	**12 25 56.8**	**+1.3**
PB05				*i* S	**Sn**	**12 26 33.0**	**-2.2**
PB05				IAML		12 26 34.9	
	comp=E,88nm,0.1s						
AHML	**Horco Molle**	**3.06**	**147**	*e*P	**Pn**	**12 25 55.8**	**+0.4**
AHML				IAML		12 25 57.1	
	comp=Z,6.7nm,0.4s						
AHML				*e*S	**Sn**	**12 26 34.8**	**-0.4**
PB10	**IPOC Station P**	**3.14**	**282**	*i* P	**Pn**	**12 25 57.9**	**+1.7**
PB10				*i* S	**Sn**	**12 26 35.9**	**-0.7**
PB10	**IPOC Station P**	**3.14**	**282**	*e*P	**Pn**	**12 25 57.7**	**+1.4**
PB10				*i* S	**Sn**	**12 26 35.5**	**-1.1**
PB03	**IPOC Station P**	**3.19**	**312**	*e*P	**Pn**	**12 25 58.3**	**+1.3**
PB03				*e*S	**Sn**	**12 26 35.8**	**-2.1**
PB03	**IPOC Station P**	**3.19**	**312**	*e*P	**Pn**	**12 25 58.2**	**+1.3**
PB03				*i* S	**Sn**	**12 26 35.8**	**-2.1**
PB04	**IPOC Station P**	**3.29**	**304**	*i* P	**Pn**	**12 25 59.7**	**+1.5**
PB04				*e*S	**Sn**	**12 26 38.1**	**-2.0**
PB04	**IPOC Station P**	**3.29**	**304**	*e*P	**Pn**	**12 25 59.4**	**+1.1**
PB07	**IPOC Station P**	**3.50**	**315**	*e*P	**Pn**	**12 26 02.1**	**+1.4**
PB07				*e*S	**Sn**	**12 26 43.0**	**-1.7**
PB07	**IPOC Station P**	**3.50**	**315**	*e*P	**Pn**	**12 26 01.9**	**+1.2**
PB07				*i* S	**Sn**	**12 26 42.7**	**-2.0**
PB01	**IPOC Station P**	**3.80**	**326**	*e*P	**Pn**	**12 26 05.2**	**+0.8**
PB01				*e*S	**Sn**	**12 26 48.8**	**-2.3**
PB02	**IPOC Station P**	**3.81**	**319**	*e*P	**Pn**	**12 26 05.3**	**+0.9**
PB02				*e*S	**Sn**	**12 26 49.4**	**-1.8**
GO03	**Copiap**	**4.32**	**218**	*e*P	**Pn**	**12 26 11.6**	**+0.9**
GO03				*e*S	**Sn**	**12 27 01.4**	**-1.3**
PB08	**IPOC Station P**	**4.44**	**336**	*e*P	**Pn**	**12 26 14.3**	**+1.6**
PB08				*e*S	**Sn**	**12 27 05.8**	**-0.3**
PB11	**IPOC Station P**	**4.99**	**332**	*e*P	**Pn**	**12 26 19.8**	**+0.5**

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*ISCJB **08** 12:30:13.2±0.6, 33°.47N±0°.03×140°.27E±0°.08, h100^{km}±4^{km}, mb3.3/4, Error ellipse: s-maj=10.5km s-min=5.8km az=178.4*

*JMA **08** 12:30:14.7±0.1, 33°.52N×140°.29E, h87^{km}±1^{km}, M3.0*

*IDC **08** 12:30:15.5±1.2, 33°.29N×139°.68E, h90^{km}±14^{km}, mb3.0/4, mb1 3.2/5, mb1mx3.0/45, mbtmp3.3/5, Error ellipse: s-maj=104.2km s-min=10.6km az=71.0*

ISC 08 12:30:14.1±1.0, 33°.47N±0°.04×140°.27E±0°.07, h94^{km}±7^{km}, n24, σ0^{s}70/33, mb3.2/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.52**	**227**	P	**Pn**	**12 30 29.9**	**+0.5**
JHJ2				S	**Sn**	**12 30 40.7**	**0.0**
JHJ	**Hachijo jima 2**	**0.53**	**230**	P	**Pn**	**12 30 30.0**	**+0.5**
	128nm,0.3s,baz=284,slow=12,SNR=129						
JHJ				S	**Sn**	**12 30 39.9**	**-1.1**
	250nm,0.3s,baz=72,slow=20,SNR=43						
JHCJ	**Hachijojimakas**	**0.55**	**225**	P	**Pn**	**12 30 30.0**	**+0.3**
JHCJ				S	**Sn**	**12 30 41.4**	**+0.1**
JMKN	**Mikurajimanish**	**0.71**	**307**	P	**Pn**	**12 30 30.9**	**-0.1**
JMKN				S	**Sn**	**12 30 43.4**	**-0.3**
JAOM	**Aogashimamukai**	**1.08**	**203**	P	**Pn**	**12 30 36.3**	**+1.2**
JKO	**Kozu shima**	**1.18**	**308**	P	**Pn**	**12 30 36.5**	**+0.3**
JKO				S	**Sn**	**12 30 52.8**	**0.0**
BSO1	**Boso 1**	**1.32**	**26**	P	**Pn**	**12 30 37.6**	**+0.3**
BSO1				S	**Sn**	**12 30 55.5**	**+0.6**
JTHY	**Toshimahigashi**	**1.33**	**323**	P	**Pn**	**12 30 38.4**	**+0.4**
JTHY				S	**Sn**	**12 30 56.2**	**+0.2**
BSO3	**Boso 3**	**1.35**	**9**	P	**Pn**	**12 30 38.5**	**+0.6**
BSO3				S	**Sn**	**12 30 56.8**	**+0.9**
JIM2	**Oshima 3**	**1.43**	**331**	P	**Pn**	**12 30 39.3**	**+0.1**
JIM2				S	**Sn**	**12 30 57.5**	**-0.6**
JIZS	**Izushimoda**	**1.70**	**318**	P	**Pn**	**12 30 43.0**	**+0.4**
JIZS				S	**Sn**	**12 31 04.1**	**-0.1**
JOD2	**Odawara 2**	**2.04**	**332**	P	**Pn**	**12 30 47.3**	**+0.3**
TK04	**Tokai 4**	**2.19**	**295**	P	**Pn**	**12 30 50.3**	**+1.5**
SHZ3	**Shizuoka 3**	**2.33**	**314**	P	**Pn**	**12 30 52.4**	**+1.5**
JYN	**Shimob**	**2.48**	**325**	P	**Pn**	**12 30 53.8**	**+1.0**
MJAR	**Matsushiro Arr**	**3.50**	**332**	P	**Pn**	**12 31 06.7**	**+0.2**
	0.3nm,0.3s,baz=160,slow=13,SNR=33						
MJAR				S	**Sn**	**12 31 46.2**	**-0.7**
	0.1nm,0.3s,baz=140,slow=23,SNR=4.5						
MAT	**Matsushiro**	**3.50**	**332**	P	**Pn**	**12 31 07.5**	**+1.0**
MAT				*e*S	**Sn**	**12 31 46.4**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**27.36**	**113**	T	T	13 04 49.5	
	baz=306,slow=75,SNR=9.3						
H11N1	**WAKE ISLAND Hy**	**27.37**	**113**	T	T	13 04 51.2	
	baz=306,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**27.38**	**113**	T	T	13 04 51.3	
	baz=306,slow=75,SNR=9.5						
MKAR	**Makanchi Array**	**45.30**	**305**	P	**P**	**12 38 22.7**	**+0.2**
	0.2nm,0.6s,baz=86,slow=8.7,SNR=2.8						
KURBB	**Kurchatov Arra**	**47.53**	**310**	P	**P**	**12 38 39.3**	**-0.5**
	0.2nm,0.5s,baz=86,slow=7.4,SNR=3.5						
WRA	**Warramunga Arr**	**53.41**	**187**	P	**P**	**12 39 23.6**	**-0.7**
	0.4nm,0.3s,baz=4.2,slow=7.3,SNR=3.5						
ASAR	**Alice Springs**	**57.14**	**187**	P	**P**	**12 39 50.6**	**-0.4**
	0.2nm,0.8s,baz=2.7,slow=6.9,SNR=4.7						

IDC 08 12:37:57.3±5.5, 7°.35S×155°.71E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/29, mbtmp3.4/3, Error ellipse: s-maj=169.9km s-min=39.3km az=114.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.20**	**237**	P	P	12 43 15.8	-0.1
	1.6nm,0.9s,baz=61,slow=8.9,SNR=2.9						
ASAR	**Alice Springs**	**26.48**	**230**	P	P	12 43 36.2	-0.3
	0.4nm,1.0s,baz=58,slow=9.9,SNR=3.4						
MKAR	**Makanchi Array**	**84.14**	**319**	P	P	12 50 30.8	+0.3
	0.2nm,0.6s,baz=115,slow=6.8,SNR=2.4						

SVSA 08 12:41:39.2±0.8, 38°.53N×26°.84W, h0^{km}±3^{km}, MD3.5, ML2.9, Error ellipse: s-maj=4.5km s-min=1.2km az=31.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSCM	**Serra do Cume**	**0.27**	**308**	*e*P	Pg	12 41 44.6	+0.1
PSCM				*e*S	Sg	12 41 48.7	+0.7
PSCM				A	A	12 41 53.4	
	664nm,0.3s						
ADH	**Angra Heroismo**	**0.33**	**292**	*e*P	Pg	12 41 45.3	-0.3
ADH				*e*S	Sg	12 41 50.1	+0.2
ADH				A	A	12 41 58.0	
	825nm,0.5s						
PMAN	**Manadas**	**0.98**	**276**	*e*P	Pg	12 41 54.9	-3.1
PMAN				*e*S	Sg	12 42 07.5	-3.3
PMAN				A	A	12 42 09.2	
	115nm,0.1s						
PGRA	**Graciosa**	**1.02**	**300**	*e*P	Pg	12 41 55.9	-2.9
PGRA				*e*S	Sg	12 42 08.2	-3.8
PGRA				A	A	12 42 11.3	
	64nm,0.2s						
ROSA	**Rosais**	**1.11**	**280**	*e*P	Pg	12 41 57.0	-3.5
ROSA				*e*S	Sg	12 42 10.7	-4.2
ROSA				A	A	12 42 11.4	
	78nm,0.2s						
PPNO	**Prainha do Nor**	**1.12**	**267**	*e*P	Pg	12 41 57.1	-3.5
PPNO				*e*S	Sg	12 42 11.0	-4.1
PPNO				A	A	12 42 15.1	
	82nm,0.2s						
PSET	**Sete Cidades**	**1.13**	**128**	*e*P	Pg	12 41 57.5	-3.4
PSET				*e*S	Sg	12 42 11.2	-4.3
PSET				A	A	12 42 17.0	
	212nm,0.4s						
PDA	**Ponta Delgada**	**1.22**	**130**	*e*P	Pg	12 41 58.5	-4.0
PDA				*e*S	Sg	12 42 13.1	-5.1
PDA				A	A	12 42 14.7	
	91nm,0.2s						
PICO	**Pico**	**1.24**	**269**	*e*P	Pg	12 41 59.0	-4.0
PICO				*e*S	Sg	12 42 14.0	-5.1
PICO				A	A	12 42 18.3	
	51nm,0.2s						
CMLA	**Cha da Macela**	**1.29**	**126**	*e*P	Pg	12 41 59.7	-4.2
CMLA				*e*S	Sg	12 42 15.0	-5.7
CMLA				A	A	12 42 18.8	
	208nm,0.3s						
PCAN	**Candelaria**	**1.29**	**268**	*e*P	Pg	12 41 59.6	-4.3
PCAN				*e*S	Sg	12 42 15.2	-5.5
PCAN				A	A	12 42 18.9	
	38nm,0.2s						
PCALD	**Caldeiras da R**	**1.29**	**124**	*e*P	Pg	12 41 59.5	-4.5
PCALD				*e*S	Sg	12 42 15.0	-5.8
PCALD				A	A	12 42 17.1	
	185nm,0.4s						
CALA	**Caldeira**	**1.46**	**273**	*e*S	Sg	12 42 19.1	-7.0
PCED	**Cedros**	**1.46**	**274**	*e*P	Pn	12 42 01.5	-5.3
PCED				*e*S	Sg	12 42 18.6	-7.5
PCED				A	A	12 42 22.5	
	55nm,0.4s						
BART	**Pico Bartolome**	**1.52**	**119**	*e*P	Pn	12 42 02.4	-5.3
BART				*e*S	Sg	12 42 20.6	-7.4
BART				A	A	12 42 37.1	
	57nm,0.4s						
PSMA	**Santa Maria**	**2.05**	**138**	*e*P	Pn	12 42 10.2	-4.7
PSMA				*e*S	Sn	12 42 33.2	-7.9
PSMA				A	A	12 42 37.1	
	36nm,0.2s						
PSMN	**Pico do Norte,**	**2.08**	**137**	*e*P	Pn	12 42 10.5	-4.8
PSMN				*e*S	Sn	12 42 34.0	-7.8
PSMN				A	A	12 42 36.6	
	28nm,0.2s						

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*ISCJB **08** 12:55:54.8±0.3, 46°.82N±0°.01×6°.63E±0°.02, h11^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.1km az=1.6*

*ZUR **08** 12:55:56.3, 46°.83N×6°.75E, h8^{km}±2^{km}, MLh1.8/8, Error ellipse: s-maj=5.5km s-min=1.0km az=174.0*

*LDG **08** 12:55:56.7±0.1, 46°.83N×6°.73E, h8^{km}, Md2.6/4, Ml2.5/20, Error ellipse: s-maj=1.2km s-min=1.0km az=79.0*

ISC 08 12:55:55.6±1.0, 46°.82N±0°.02×6°.70E±0°.02, h18^{km}±3^{km}, n47, σ0^{s}75/87, 3C-4D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORNY	**Torny/Romont**	**0.18**	**106**	⇓Pg	**Pb**	**12 55 59.7**	**-0.2**
TORNY				Sg	**Sb**	**12 56 02.6**	**-0.2**
BRANT	**Les Verrieres**	**0.20**	**306**	⇓Pg	**Pg**	**12 56 01.0**	**+0.5**
SCOU	**Cournillens**	**0.28**	**84**	⇓Pg	**Pg**	**12 56 01.6**	**-0.1**
SCOU				Sg	**Sg**	**12 56 05.7**	**-0.3**
GIMEL	**St. Georges /**	**0.42**	**226**	⇑Pg	**Pb**	**12 56 05.1**	**+0.5**
CHMF	**Charmoille**	**0.43**	**355**	⇑Pg	**Pg**	**12 56 04.8**	**+0.4**
CHMF				Sg	**Sb**	**12 56 11.0**	**+0.2**
CABF	**La Chapelle**	**0.47**	**243**	*e*Pg	**Pb**	**12 56 06.3**	**+0.8**
CABF	**La Chapelle**	**0.47**	**243**	*e*Pn	**Pn**	**12 56 07.8**	**+0.2**
CABF				*e*Sg	**Sb**	**12 56 12.9**	**+0.8**
	24nm,0.3s						
CABF				*e*Sn	**Sn**	**12 56 16.3**	**+0.8**
	52nm,0.4s						
SENIN	**Lac Senin/Sane**	**0.62**	**138**	⇑Pg	**Pg**	**12 56 08.3**	**+0.4**
GRYON	**Gryon**	**0.64**	**154**	⇓Pg	**Pg**	**12 56 08.6**	**+0.3**
BOURR	**Bourrignon**	**0.67**	**32**	Pg	**Pg**	**12 56 09.5**	**+0.6**
HINF	**Hinteralfeld**	**1.00**	**6**	*e*Pg	**Pn**	**12 56 15.1**	**+0.4**
HINF	**Hinteralfeld**	**1.00**	**6**	*e*P	**Pg**	**12 56 16.5**	**+1.5**
HINF				*e*Sg	**Sb**	**12 56 27.9**	**+0.7**
HINF				*e*Sn	**Sn**	**12 56 29.5**	**+1.1**
	26nm,0.2s						
HAU	**Haudompre**	**1.21**	**349**	*e*Pg	**Pg**	**12 56 19.0**	**+0.1**
HAU	**Haudompre**	**1.21**	**349**	*e*P	**Pg**	**12 56 19.6**	**+0.7**
HAU				*e*Sg	**Sn**	**12 56 34.4**	**+0.9**
	32nm,0.2s						
LPL	**La Plagne**	**1.31**	**179**	*e*Pg	**Pg**	**12 56 21.3**	**+0.4**
LPL				*e*Sg	**Sg**	**12 56 38.1**	**+0.1**
	6.1nm,0.2s						
LPG	**La Plagne**	**1.33**	**179**	*e*Pg	**Pg**	**12 56 21.6**	**+0.3**
LPG				*e*Sg	**Sg**	**12 56 38.8**	**+0.2**
	2.8nm,0.2s						
CDF	**Champ du Feu**	**1.64**	**14**	*e*Pn	**Pn**	**12 56 24.2**	**+0.7**
CDF	**Champ du Feu**	**1.64**	**14**	*e*Pg	**Pg**	**12 56 27.0**	**-0.1**
CDF				*e*Sn	**Sn**	**12 56 43.4**	**-0.7**
CDF				*e*Sg	**Sg**	**12 56 47.9**	**-0.5**
	6.7nm,0.2s						
SFTF	**Sexfontaines**	**1.78**	**321**	*e*Pg	**Pg**	**12 56 29.8**	**-0.1**
	baz=146						
SFTF				*e*Sn	**Sn**	**12 56 47.6**	**-0.1**
SFTF				*e*Sg	**Sg**	**12 56 53.0**	**-0.1**
	8.9nm,0.2s						
PAGF	**Fort de Pagny**	**1.85**	**339**	*e*Pn	**Pn**	**12 56 27.7**	**+1.3**
PAGF	**Fort de Pagny**	**1.85**	**339**	*e*Pg	**Pg**	**12 56 31.2**	**0.0**
	baz=172						
PAGF				*e*Sn	**Sn**	**12 56 49.0**	**-0.4**
	baz=160						
PAGF				*e*Sg	**Sg**	**12 56 55.0**	**-0.3**
	2.1nm,0.2s						
SMF	**Signal de Mont**	**1.98**	**266**	*e*Pn	**Pn**	**12 56 29.3**	**+1.2**
SMF	**Signal de Mont**	**1.98**	**266**	*e*Pg	**Pg**	**12 56 34.0**	**+0.5**
SMF				*e*Sn	**Sn**	**12 56 52.5**	**+0.1**
SMF				*e*Sg	**Sg**	**12 56 59.5**	**+0.3**
	3.6nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.99**	**197**	*e*Pn	**Pb**	**12 56 30.7**	**-0.6**
ORIF	**Oris-en-Rattie**	**1.99**	**197**	*e*Pg	**Pg**	**12 56 33.6**	**-0.2**
ORIF				*e*Sn	**Sn**	**12 56 52.1**	**-0.8**
ORIF				*e*Sg	**Sg**	**12 56 59.7**	**0.0**
	9.8nm,0.4s						
LOR	**Lormes**	**2.00**	**284**	*e*P	**Pb**	**12 56 30.7**	**-0.6**
LOR	**Lormes**	**2.00**	**284**	*e*Pg	**Pg**	**12 56 33.7**	**-0.2**
	baz=105						
LOR				*e*Sn	**Sn**	**12 56 53.1**	**+0.2**
LOR				*e*Sg	**Sg**	**12 56 59.4**	**-0.4**
	4.0nm,0.2s						
MEZF	**Maizieres J'vi**	**2.02**	**327**	*e*Pn	**Pn**	**12 56 29.7**	**+1.1**
MEZF	**Maizieres J'vi**	**2.02**	**327**	*e*Pg	**Pg**	**12 56 34.1**	**-0.2**
MEZF				*e*Sn	**Sn**	**12 56 54.1**	**+0.7**
	baz=150						
MEZF				*e*Sg	**Sg**	**12 56 59.7**	**-0.8**
	10nm,0.3s,baz=130						
MBDF	**Montbardon**	**2.10**	**179**	*e*P	**Pb**	**12 56 32.3**	**-0.9**
MBDF	**Montbardon**	**2.10**	**179**	*e*Pg	**Pg**	**12 56 35.6**	**-0.3**
MBDF				*e*Sn	**Sn**	**12 56 54.5**	**-1.1**
MBDF				*e*Sg	**Sg**	**12 57 02.6**	**-0.5**
	2.7nm,0.3s						
SSF	**Saint Saulge**	**2.20**	**277**	*e*P	**Pb**	**12 56 34.4**	**-0.5**
SSF	**Saint Saulge**	**2.20**	**277**	*e*Pg	**Pg**	**12 56 38.3**	**+0.4**
SSF				*e*Sn	**Sn**	**12 56 58.3**	**+0.3**
SSF				*e*Sg	**Sg**	**12 57 06.5**	**0.0**
	3.8nm,0.2s						
AVF	**Avril sur Loir**	**2.30**	**270**	*e*Pn	**Pn**	**12 56 32.5**	**-0.1**
AVF	**Avril sur Loir**	**2.30**	**270**	*e*P	**Pb**	**12 56 35.1**	**-1.4**
AVF	**Avril sur Loir**	**2.30**	**270**	*e*Pg	**Pg**	**12 56 40.1**	**+0.4**
AVF				*e*Sn	**Sn**	**12 57 00.3**	**-0.1**
AVF				*e*Sg	**Sg**	**12 57 09.5**	**-0.1**
	2.2nm,0.2s						
VIVF	**Saint-Julien-l**	**2.43**	**217**	*e*Pn	**Pn**	**12 56 35.7**	**+1.4**
VIVF	**Saint-Julien-l**	**2.43**	**217**	*e*Pg	**Pg**	**12 56 42.9**	**+0.8**
VIVF				*e*Sn	**Sn**	**12 57 02.8**	**-0.8**
VIVF				*e*Sg	**Sg**	**12 57 13.4**	**-0.2**
	3.9nm,0.3s						
BGF	**Bois d'Agland**	**2.67**	**266**	*e*Pn	**Pn**	**12 56 38.2**	**+0.6**
BGF	**Bois d'Agland**	**2.67**	**266**	*e*P	**Pb**	**12 56 41.0**	**-1.8**
BGF	**Bois d'Agland**	**2.67**	**266**	*e*Pg	**Pg**	**12 56 46.8**	**+0.1**
BGF				*e*Sn	**Sn**	**12 57 09.0**	**-0.5**
BGF				*e*Sg	**Sg**	**12 57 20.3**	**-1.0**
	7.8nm,0.3s						
HYF	**Humbligny**	**2.81**	**281**	*e*Pn	**Pn**	**12 56 41.0**	**+1.4**
HYF	**Humbligny**	**2.81**	**281**	*e*Pg	**Pg**	**12 56 49.3**	**-0.2**
HYF				*e*Sn	**Sn**	**12 57 12.2**	**-0.9**
HYF				*e*Sg	**Sg**	**12 57 26.0**	**0.0**
LASF	**Ste Croix**	**3.40**	**217**	*e*Pn	**Pn**	**12 56 48.8**	**+1.1**
LASF	**Ste Croix**	**3.40**	**217**	*e*Pg	**Pg**	**12 57 00.9**	**+0.2**
LASF				*e*Sn	**Sn**	**12 57 26.4**	**-1.2**
LASF				*e*Sg	**Sg**	**12 57 43.8**	**-1.0**
	1.2nm,0.3s						
BAIF	**Baives**	**3.64**	**334**	*e*Pn	**Pn**	**12 56 52.0**	**+1.1**
BAIF	**Baives**	**3.64**	**334**	*e*Pg	**Pg**	**12 57 03.8**	**-1.5**
BAIF				*e*Sn	**Sn**	**12 57 32.2**	**-1.2**
BAIF				*e*Sg	**Sg**	**12 57 50.3**	**-2.1**
	1.7nm,0.2s						

MEX 08 13:22:22.1±0.6, 15°.68N×93°.52W, h84^{km}±5^{km}, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.29**	**86**	*e*P	Pn	13 22 33.3	-1.5
PCIG				*e*S	Sn	13 22 42.4	-1.7
TGIG		**1.15**	**19**	*e*P	Pn	13 22 42.3	-1.1
TGIG				*e*S	Sn	13 22 57.2	-2.0
CCIG	**Comitan**	**1.46**	**66**	*i* P	Pn	13 22 46.3	-0.8
CCIG				*e*S	Sn	13 23 04.7	-1.4

DJA 08 13:27:18.7±0.5, 9°S±4°×11°0E±°, h10^{km}, M3.7/8, MLv3.7/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.11**	**2**	P	Pb	13 27 39.8	-0.3
UGM				S	Sb	13 27 54.6	0.0
YOGI	**Yogyakarta**	**1.22**	**351**	P	Pg	13 27 42.7	+0.5
YOGI				S	Sg	13 27 57.9	-0.1
WOJI	**Wonogiri, Jawa**	**1.26**	**20**	P	Pg	13 27 43.6	+0.6
WOJI				S	Sb	13 27 57.9	-1.1
PWJI	**Pagerwojo**	**1.65**	**53**	P	Pn	13 27 45.9	-1.8
PWJI				S	Sn	13 28 03.0	-6.0
NGJI	**Ngawi**	**1.92**	**31**	P	Pb	13 27 54.0	+0.2
CISI	**Cisompet, Garu**	**3.02**	**299**	P	Pn	13 28 05.2	-1.4
CISI				S	Sn	13 28 42.5	-0.4
GMJI	**Gumukmas**	**3.03**	**76**	P	Pn	13 28 06.4	-0.3
GMJI				S	Sn	13 28 38.6	-4.4
JAGI	**Jajag, Banyuwa**	**3.67**	**82**	P	Pn	13 28 15.3	-0.3

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*IDC **08** 13:27:39.4±1.1, 24°.41N×96°.15E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.5/56, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=112.1km s-min=18.7km az=57.0*

*ISCJB **08** 13:27:42.6±0.6, 24°.4N±0°.1×96°.2E±0°.1, h35^{km}, mb4.1/7, Error ellipse: s-maj=18.5km s-min=7.0km az=42.5*

*NEIC **08** 13:27:46.6±1.1, 24°.14N×95°.80E, h58^{km}±12^{km}, mb4.3/1, Error ellipse: s-maj=35.6km s-min=6.1km az=49.0*

ISC 08 13:27:44.4±0.9, 24°.5N±0°.2×96°.2E±0°.1, h35^{km}, n15, σ0^{s}94/16, mb4.0/7, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**4.07**	**287**	*e*Pn	**Pn**	**13 28 43.6**	**-0.7**
SHL	**Shillong**	**4.07**	**287**	*e*PN	**Pn**	**13 28 44.5**	**+0.2**
SHL				*e*SN	**Sn**	**13 29 32.0**	**+1.1**
CHTO	**Chiang Mai**	**6.16**	**155**	*e*Pn	**Pn**	**13 29 13.0**	**0.0**
CM31	**Chiang Mai Arr**	**6.49**	**156**	*e*Pn	**Pn**	**13 29 18.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**6.49**	**156**	Pn	**Pn**	**13 29 17.9**	**+0.5**
	0.8nm,0.3s,baz=330,slow=13,SNR=7.6						
CMAR				Lg	Lg	13 31 07.9	
	0.4nm,0.3s,baz=322,slow=27,SNR=6.2						
MK32	**Makanchi Array**	**24.92**	**337**	*e*P	**P**	**13 33 05.5**	**+1.4**
MKAR	**Makanchi Array**	**24.92**	**337**	P	**P**	**13 33 05.5**	**+1.4**
	2.5nm,0.6s,baz=142,slow=8.2,SNR=2.2						
ANTO	**Ankara**	**54.77**	**303**	*e*P	**P**	**13 37 08.7**	**-2.1**
	33nm,0.9s						
WR1	**Warramunga Arr**	**57.67**	**137**	*e*P	**P**	**13 37 31.2**	**-0.3**
WRA	**Warramunga Arr**	**57.67**	**137**	P	**P**	**13 37 31.2**	**-0.3**
	0.5nm,0.6s,baz=313,slow=7.3,SNR=2.5						
AS31	**Alice Springs**	**60.21**	**140**	*e*P	**P**	**13 37 49.5**	**+0.4**
	4.1nm,1.8s						
ASAR	**Alice Springs**	**60.21**	**140**	P	**P**	**13 37 49.5**	**+0.4**
	0.3nm,0.6s,baz=321,slow=6.7,SNR=8.0						
HFS	**Hagfors**	**65.43**	**327**	P	**P**	**13 38 23.9**	**+0.5**
	1.8nm,0.7s,baz=122,slow=7.0,SNR=4.2						
NB200	**NORSAR Array S**	**66.53**	**328**	*e*P	**P**	**13 38 30.3**	**-0.2**
NOA	**NORSAR Array B**	**66.53**	**328**	P	**P**	**13 38 30.3**	**-0.2**
	0.6nm,0.7s,baz=95,slow=6.7,SNR=2.6						

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*SOME **08** 13:27:41.3, 43°.43N×83°.78E, h10^{km}, MS3.4*

*BJI **08** 13:27:42.4±0.0, 43°.70N×83°.86E, h8^{km}, mb3.8/2, ML3.9/8*

*IDC **08** 13:27:43.2±0.7, 43°.74N×83°.75E, h0^{km}, mb3.7/11, mb1 3.9/18, mb1mx3.7/59, mbtmp3.8/18, ML3.5/7, MS2.8/4, Ms1 2.8/4, ms1mx2.5/34, Error ellipse: s-maj=15.2km s-min=8.8km az=64.0*

*NNC **08** 13:27:45.2±1.4, 43°.79N×83°.62E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=13.0km s-min=5.4km az=136.0*

ISC 08 13:27:45.5±0.6, 43°.74N±0°.04×83°.87E±0°.03, h10^{km}, n78, σ2^{s}33/102, mb3.8/10, 10C-14D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.57**	**265**	Pg	**Pn**	**13 28 28.3**	**+0.9**
	492nm,0.3s						
KTMS				Lg	Lg	13 29 02.7	
	805nm,0.4s						
KTMS	**Ketmen**	**2.57**	**265**	*e*P	**Pn**	**13 28 28.3**	**+0.9**
	492nm,0.3s						
KTMS				*e*S	**Sb**	**13 29 02.8**	**-0.8**
	805nm,0.4s						
WMQ	**Urumqi**	**2.77**	**87**	*e*Pn	**Pn**	**13 28 32.0**	**+2.0**
WMQ				smax	smax		
	comp=N,460nm,0.5s						
WMQ				smax	smax		
	comp=E,430nm,0.5s						
DJR	**Jarkent**	**3.00**	**283**	Pg	**Pn**	**13 28 36.3**	**+3.1**
	292nm,0.4s						
DJR				Lg	Lg	13 29 16.3	
	423nm,0.4s						
DJR	**Jarkent**	**3.00**	**283**	*e*P	**Pn**	**13 28 36.3**	**+3.1**
	247nm,0.3s						
DJR				*e*S	**Sb**	**13 29 16.3**	**+0.4**
	439nm,0.3s						
PDGK	**Podgornoye**	**3.21**	**264**	Pg	**Pn**	**13 28 39.3**	**+3.1**
	115nm,0.3s						
PDGK				Lg	Lg	13 29 21.2	
	161nm,0.3s						
PDGK	**Podgornoye**	**3.21**	**264**	⇓Pn	**Pn**	**13 28 36.1**	**-0.1**
	82nm,0.3s						
PDGK				⇑Lg	Lg	13 29 19.3	
	254nm,0.4s						
MK31	**Makanchi Array**	**3.25**	**340**	⇓Pn	**Pn**	**13 28 37.4**	**+0.8**
	2.3nm,0.2s,baz=157,slow=14,SNR=1219						
MK31				⇓Pg	**Pb**	**13 28 44.1**	**+0.8**
	59nm,0.5s,baz=154,slow=17,SNR=108						
MK31				⇓Lg	Lg	13 29 26.3	
	134nm,0.4s,baz=158,slow=27,SNR=7.4						
MKAR	**Makanchi Array**	**3.25**	**340**	Pn	**Pn**	**13 28 37.4**	**+0.8**
	5.7nm,0.3s,baz=158,slow=14,SNR=378						
MKAR				Pg	**Pb**	**13 28 43.9**	**+0.6**
	35nm,0.3s,baz=154,slow=18,SNR=110						
MKAR				Sn	**Sn**	**13 29 16.9**	**+1.5**
	36nm,0.3s,baz=158,slow=25,SNR=9.3						
MKAR				Lg	Lg	13 29 25.0	
	110nm,0.3s,baz=162,slow=29,SNR=13						
UZB	**Uzynbulak**	**3.58**	**262**	Pg	**Pb**	**13 28 46.9**	**-2.1**
	85nm,0.4s						
UZB				Lg	Lg	13 29 34.4	
	161nm,0.5s						
UZB	**Uzynbulak**	**3.58**	**262**	*e*P	**Pb**	**13 28 46.9**	**-2.1**
	85nm,0.4s						
UZB				*e*S	**Sb**	**13 29 34.4**	**+1.8**
	161nm,0.5s						
ZSN	**Zaisan**	**3.77**	**10**	Pg	**Pb**	**13 28 54.2**	**+1.9**
	62nm,0.3s						
ZSN				Lg	Lg	13 29 46.5	
	104nm,0.5s						
ZSN	**Zaisan**	**3.77**	**10**	*e*P	**Pb**	**13 28 54.2**	**+1.9**
	62nm,0.3s						
ZSN				*e*S	**Sg**	**13 29 46.5**	**-0.2**
	104nm,0.5s						
KPKS	**Kokpek**	**3.78**	**268**	*e*P	Pn	13 28 48.7	+4.8
	152nm,0.2s						
KPKS				*e*S	**Sb**	**13 29 37.8**	**-0.4**
	616nm,0.4s						
MNBS	**Baschi**	**3.97**	**277**	Pg	Pn	13 28 51.9	+5.4
	243nm,0.6s						
MNBS				Lg	Lg	13 29 42.5	
	382nm,0.4s						
MNBS	**Baschi**	**3.97**	**277**	*e*P	Pn	13 28 51.9	+5.4
	243nm,0.6s						
MNBS				*e*S	**Sb**	**13 29 42.5**	**-1.2**
	382nm,0.4s						
SATY	**Saty**	**4.04**	**262**	*e*P	**Pb**	**13 28 55.3**	**-1.5**
	136nm,0.6s						
SATY				*e*S	**Sb**	**13 29 48.3**	**+2.5**
	321nm,0.3s						

TDK	Taldyqorghan	4.12	290	Pg	Pb	13 28 58.6	+0.5
	426nm,0.6s						
TDK				Lg	Lg	13 29 53.9	
	747nm,0.8s						
TDK	Taldyqorghan	4.12	290	eP	Pb	13 28 58.1	+0.1
	426nm,0.6s						
TDK				eS	Sg	13 29 53.9	-3.7
	739nm,0.6s						
KURS	Kuram	4.15	268	Pg	Pb	13 28 58.4	-0.2
	68nm,0.5s						
KURS				Lg	Lg	13 29 55.2	
	145nm,0.7s						
KURS	Kuram	4.15	268	⇓iP	Pb	13 28 58.4	-0.2
	67nm,0.5s						
KURS				eS	Sb	13 29 54.5	+5.7
	113nm,0.6s						
ARXS	Arharly	4.39	278	eP	Pb	13 28 59.5	-3.2
	87nm,0.4s						
ARXS				eS	Sb	13 29 56.0	+0.3
	349nm,0.7s						
KOTS	Kotyrbulak	4.94	266	Pg	Pb	13 29 10.8	-1.4
	46nm,0.3s						
KOTS				Lg	Lg	13 30 15.0	
	608nm,0.8s						
KOTS	Kotyrbulak	4.94	266	eP	Pb	13 29 10.8	-1.4
	46nm,0.3s						
KOTS				eS	Sb	13 30 14.9	+3.1
	608nm,0.8s						
CHKK	Chushkaly	4.98	274	Pg	Pb	13 29 11.7	-1.2
	56nm,0.3s						
CHKK				Lg	Lg	13 30 16.9	
	168nm,0.3s						
CHKK	Chushkaly	4.98	274	eP	Pb	13 29 12.0	-0.9
	56nm,0.3s						
CHKK				eS	Sb	13 30 17.4	+4.6
	168nm,0.3s						
KNDC	Almaty	5.05	266	⇑Pg	Pb	13 29 14.0	-0.1
KNDC				⇓Lg	Lg	13 30 22.8	
AAA	Alma-Ata	5.09	266	Pg	Pb	13 29 15.2	+0.6
	50nm,0.3s						
AAA				Lg	Lg	13 30 23.3	
	107nm,0.5s						
AAA	Alma-Ata	5.09	266	eP	Pb	13 29 15.2	+0.6
	50nm,0.3s						
AAA				eS	Sb	13 30 23.3	+7.3
	107nm,0.5s						
TNSS	Tian-Shan	5.09	264	Pg	Pb	13 29 12.7	-2.3
	57nm,0.6s						
TNSS				Lg	Lg	13 30 18.7	
	90nm,0.5s						
TNSS	Tian-Shan	5.09	264	eP	Pb	13 29 12.7	-2.3
	57nm,0.6s						
TNSS				eS	Sb	13 30 18.7	+2.3
	90nm,0.5s						
KTBS	Karatobe	5.21	272	Pg	Pb	13 29 15.5	-1.3
	42nm,0.3s						
KTBS				Lg	Lg	13 30 22.8	
	138nm,0.5s						
KTBS	Karatobe	5.21	272	eP	Pb	13 29 15.4	-1.3
	42nm,0.3s						
KTBS				eS	Sb	13 30 22.8	+3.4
	138nm,0.5s						
IZV	Izvestkoviy	5.34	265	Pg	Pb	13 29 20.0	+1.0
	49nm,0.6s						
IZV				Lg	Lg	13 30 30.8	
	126nm,0.7s						
IZV	Izvestkoviy	5.34	265	eP	Pb	13 29 20.0	+1.0
	49nm,0.6s						
IZV				eS	Sb	13 30 30.8	+7.7
	126nm,0.7s						
KUU	Kurty	5.45	274	Pg	Pb	13 29 20.1	-0.8
	36nm,0.6s						
KUU				Lg	Lg	13 30 31.6	
	130nm,0.3s						
KUU	Kurty	5.45	274	eP	Pb	13 29 24.8	+3.9
	36nm,0.6s						
KUU				eS	Sg	13 30 39.4	-1.1
	130nm,0.3s						
MTBS	Maitube	5.45	266	Pg	Pb	13 29 20.2	-0.7
	24nm,0.2s						
MTBS				Lg	Lg	13 30 32.2	
	104nm,0.5s						
MTBS	Maitube	5.45	266	eP	Pb	13 29 20.2	-0.7
	24nm,0.2s						
MTBS				eS	Sb	13 30 31.2	+4.9
	104nm,0.5s						
ULHL	Ulahol	5.79	258	P	Pn	13 29 11.6	0.0
	SNR=21						
KST	Kastek	5.80	266	Pg	Pb	13 29 26.1	-0.8
	44nm,0.4s						
KST				Lg	Lg	13 30 42.2	
	89nm,0.8s						
KST	Kastek	5.80	266	eP	Pb	13 29 26.1	-0.8
	23nm,0.5s						
KST				eS	Sb	13 30 41.6	+5.0
	89nm,0.8s						
DGS	Degeres	5.91	268	Pg	Pb	13 29 30.8	+2.1
	44nm,0.3s						
DGS				Lg	Lg	13 30 50.1	
	115nm,0.4s						
DGS	Degeres	5.91	268	eP	Pb	13 29 30.8	+2.1
	44nm,0.3s						
DGS				eS	Sg	13 30 50.1	-5.2
	115nm,0.4s						
TKM2	Tokmak 2	6.09	265	⇑Pn	Pn	13 29 16.3	+0.5
	9.7nm,0.6s						
TKM2				⇓Pg	Pb	13 29 34.9	+3.1
	32nm,0.7s						
TKM2				⇓Lg	Lg	13 30 53.0	
	60nm,0.7s						
TKM2	Tokmak 2	6.09	265	P	Pn	13 29 17.7	+1.9
	SNR=22						
KZA	Kyzart	6.54	258	P	Pn	13 29 22.6	+0.4
	SNR=33						
USP	Ospenovka	6.83	269	P	Pn	13 29 26.5	+0.7
	SNR=5.6						
AAK	Ala-Archa	6.94	264	Pn	Pn	13 29 26.7	-0.7
	0.7nm,0.3s,baz=90,slow=20,SNR=3.5						
AAK				Lg	Lg	13 31 21.1	
	2.7nm,0.3s,baz=221,slow=20,SNR=3.4						
AAK				LR	LR	13 32 14.4	
	comp=Z,88nm,18.4s,baz=52,slow=40						
AAK	Ala-Archa	6.94	264	⇑Pn	Pn	13 29 27.6	+0.1
	1.9nm,0.4s						
AAK				⇑Pg	Pb	13 29 47.8	+1.5
	13nm,0.6s						
UCH	Uchtor	7.03	261	P	Pn	13 29 29.8	+0.9
	SNR=25						
SEM	Semipalatinsk	7.11	341	Pg	Pb	13 29 54.3	+5.1
	8.3nm,0.2s						
SEM				Lg	Lg	13 31 30.3	
	139nm,0.6s						
KSH	Kashi	7.27	237	ePn	Pn	13 29 28.7	-3.1
KSH				Sn	Sn	13 30 54.5	+0.1
KSH				smax	smax		
	comp=N,32nm,1.0s						
KSH				smax	smax		
	comp=E,37nm,0.9s						
KURBB	Kurchatov Arra	7.79	334	Pn	Pn	13 29 37.9	-0.9
	comp=E,0.3nm,0.3s,baz=145,slow=13,SNR=20						
KURBB				Sn	Sn	13 31 05.9	-1.0
	comp=E,0.8nm,0.3s,baz=156,slow=21,SNR=8.5						
KURBB				Lg	Lg	13 31 49.0	
	comp=E,1.1nm,0.3s,baz=157,slow=31,SNR=5.7						
KURBB	Kurchatov Arra	7.79	334	⇓Pn	Pn	13 29 37.6	-1.2
	comp=E,2.6nm,0.4s						
KURBB				⇑Pg	Pb	13 30 00.2	-0.2
	comp=E,8.1nm,0.8s						
KURBB				⇑Sn	Sn	13 31 05.0	-1.9
	comp=E,35nm,0.5s						
KURBB				⇓Lg	Lg	13 31 50.0	
	comp=E,115nm,0.6s						
KURK	Kurchatov	7.84	335	⇓Pn	Pn	13 29 38.0	-1.5
	comp=E,1.1nm,0.4s						
KURK				⇑Lg	Lg	13 31 47.6	
	comp=E,38nm,0.7s						
MRKS	Merke	7.84	266	Pg	Pb	13 30 06.2	+4.7
	comp=E,14nm,0.7s						
MRKS				Lg	Lg	13 31 51.0	
	comp=E,18nm,0.5s						
KK31	Karatay Array	9.74	271	⇑Pn	Pn	13 30 05.9	+0.2
	comp=E,2.2nm,0.7s,baz=102,slow=16,SNR=19						
KK31				⇑Lg	Lg	13 32 53.4	
	comp=E,14nm,0.7s,baz=76,slow=28,SNR=4.1						
ZAA0	Zalesovo Array	10.23	3	⇓Pn	Pn	13 30 10.4	-1.9
	comp=E,0.5nm,0.6s						
ZAA0				⇓Sn	Sn	13 32 01.7	-5.3
	comp=E,0.8nm,0.3s						
ZALV	Zalesovo Beam	10.23	3	Pn	Pn	13 30 10.7	-1.7
	comp=E,1.6nm,0.3s,baz=186,slow=15,SNR=15						
ZALV				Sn	Sn	13 32 02.9	-4.2
	comp=E,2.5nm,0.3s,baz=188,slow=24,SNR=8.5						
ZALV				Lg	Lg	13 33 08.2	
	comp=E,1.5nm,0.3s,baz=147,slow=12,SNR=4.7						
ZALV				LR	LR	13 33 58.1	
	comp=E,30nm,18.1s,baz=76,slow=37						
BVA2	Borovoye Array	12.88	321	⇓P	Pn	13 30 47.0	-1.5
	comp=E,1.6nm,0.5s						
BVAR	Borovoye Array	12.89	321	Pn	Pn	13 30 47.2	-1.4
	comp=E,0.7nm,0.3s,baz=113,slow=13,SNR=11						
BVAR				Lg	Lg	13 34 32.0	
	comp=E,0.4nm,0.3s,baz=122,slow=26,SNR=5.9						
SONM	Songino Array	16.22	68	Pn	Pn	13 31 34.0	+0.5
	comp=E,0.3nm,0.3s,baz=261,slow=11,SNR=7.6						
SONM				Lg	Lg	13 36 21.5	
	comp=E,0.1nm,0.3s,baz=265,slow=32,SNR=2.4						
SONM				LR	LR	13 38 24.8	
	comp=E,56nm,18.7s,baz=251,slow=39						
AKTO	Aktyubinsk	18.78	300	P	P	13 32 04.0	-0.7
	comp=E,0.2nm,0.3s,baz=111,slow=9.0,SNR=5.1						
ARU	Arti	20.47	317	P	P	13 32 22.2	-0.9
	comp=E,1.2nm,0.5s,baz=80,slow=9.3,SNR=3.1						
HHC	Hu-ho-hao-te	20.65	88	P	Pn	13 32 31.6	+4.0
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,95nm,5.8s						
WHN	Wuhan	27.47	108	P	P	13 33 34.7	+3.0
CMAR	Chiang Mai Arr	28.22	149	P	P	13 33 40.1	+1.5
	comp=Z,0.9nm,0.5s,baz=325,slow=8.6,SNR=5.3						
GNI	Garni	29.14	277	LR	LR	13 46 59.7	
	comp=Z,19nm,18.3s,baz=52,slow=40						
BRTR	Keskin Array B	37.24	282	P	P	13 34 56.8	-0.5
	comp=Z,0.5nm,0.5s,baz=76,slow=5.6,SNR=3.5						
FINES	FINESS Array B	37.83	318	P	P	13 35 00.9	-1.0
	comp=Z,1.2nm,0.7s,baz=106,slow=10,SNR=3.1						
ARCES	ARCESS Array B	38.86	331	P	P	13 35 10.3	-0.2
	comp=Z,1.6nm,0.7s,baz=95,slow=9.9,SNR=5.5						
NOA	NORSAR Array B	45.01	319	P	P	13 35 58.6	-2.2
	comp=Z,0.3nm,0.4s,baz=77,slow=7.9,SNR=2.3						
ILAR	Eielson Array	64.79	22	P	P	13 38 22.9	-0.9
	comp=Z,0.3nm,0.8s,baz=312,slow=5.2,SNR=4.6						
YKA	Yellowknife Ar	73.08	9	P	P	13 39 12.9	-2.5
	comp=Z,0.1nm,0.3s,baz=345,slow=5.9,SNR=2.5						
TORD	Torodi Ar. Bea	75.41	274	P	P	13 39 27.6	-2.1
	comp=Z,0.6nm,0.4s,baz=39,slow=5.0,SNR=11						
WRA	Warramunga Arr	78.44	132	P	P	13 39 46.4	-0.1
	comp=Z,1.4nm,0.7s,baz=319,slow=5.8,SNR=7.7						
ASAR	Alice Springs	81.27	135	P	P	13 40 01.7	-0.1
	comp=Z,0.6nm,0.7s,baz=329,slow=5.1,SNR=11						

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*ISCJB **08** 13:43:29.5±1.1, 34°.13S±0°.03×72°.38W±0°.04, h1^{km}±7^{km}, mb4.4/26, MS3.6/10, Error ellipse: s-maj=5.9km s-min=4.6km az=27.4*

*NEIC **08** 13:43:32.4±1.2, 34°.15S×72°.15W, h11^{km}±2^{km}, mb4.6/23, ML4.3(GUC), Error ellipse: s-maj=13.5km s-min=6.4km az=79.0*

NEIC Felt [III] at Constitucion and Pichilemu; [II] at Curico, Paredones and Rio Claro.

*GUC **08** 13:43:32.7±0.7, 34°.22S×72°.37W, h51^{km}±47^{km}, ML4.3*

*IDC **08** 13:43:37.1±2.6, 34°.14S×72°.06W, h44^{km}±23^{km}, mb4.0/12, mb1 4.2/16, mb1mx4.1/28, mbtmp4.2/16, ML4.1/4, MS3.7/14, Ms1 3.6/14, ms1mx3.5/24, Error ellipse: s-maj=25.7km s-min=12.8km az=105.0*

ISC 08 13:43:31.9±2.0**, 34°.12S**±0°.04×**72°.24W**±0°.08**, h10**^{km}±11^{km}**, n82,** σ1^{s}**17**/84**, mb4.5**/26**, MS3.6**/10**, 6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.93	164	ePg	Pb	13 43 49.3	-0.8
GO05	Huala	0.93	164	⇓iP	Pb	13 43 49.4	-0.8
GO05				i S	Sb	13 44 00.8	-1.8
GO05				IAML		13 44 03.5	
	comp=E,49µm,0.5s						
ANTU	Antumapu	1.44	68	⇓iP	Pg	13 43 59.8	+0.1
ANTU				i S	Sg	13 44 19.9	+1.5
ANTU				IAML		13 44 26.9	
	comp=E,5µm,0.3s						
STL	Santa Lucia	1.49	63	IAML		13 44 34.1	
	comp=N,4µm,0.6s						
CLCH	Cerro Calan	1.59	64	⇓iP	Pb	13 44 01.5	0.0
CLCH				i S	Sg	13 44 23.4	+0.3
CLCH				IAML		13 44 32.3	
	comp=E,6µm,0.8s						
PEL	Peldehue	1.62	54	ePn	Pb	13 44 01.8	-0.2
PEL	Peldehue	1.62	54	⇓iP	Pb	13 44 01.9	-0.2
PEL				i S	Sg	13 44 24.2	+0.1
PEL				IAML		13 44 33.5	
	comp=N,3µm,0.5s						
LMEL	Las Melosas	1.71	82	⇓iP	Pb	13 44 02.9	-0.8
LMEL				i S	Sg	13 44 26.5	-0.5
LMEL				IAML		13 44 32.0	
	comp=N,3µm,0.4s						
FCH	Farellones	1.81	65	⇓iP	Pb	13 44 04.5	-0.9
FCH				i S	Sg	13 44 29.2	-0.8
FCH				IAML		13 44 34.4	
	comp=E,2µm,0.7s						
CO02	Combarbal	3.09	20	eP	Pn	13 44 21.8	+0.9
GO04	Tololo Observa	4.12	18	ePn	Pn	13 44 36.0	+0.8
CFA	Coronel Fontan	4.20	54	P	Pn	13 44 37.8	+1.7
	comp=E,2.6nm,0.3s,baz=229,slow=12,SNR=21						
CFA				S	Sn	13 45 24.9	-0.3
	comp=E,6.2nm,0.3s,baz=250,slow=13,SNR=4.2						
CFA				LR	LR	13 46 36.4	
	comp=E,646nm,19.2s,baz=262,slow=44						
MRA	San Martin	5.72	75	eP	Pn	13 44 59.1	+2.0
VCA	Vinchina	6.38	34	eP	Pn	13 45 06.2	0.0
VCA				eS	Sn	13 46 29.0	+10
VCA				IAML		13 47 13.7	
	comp=Z,122nm,0.6s						
GO03	Copiap	6.73	15	ePn	Pn	13 45 10.9	0.0
PLCA	Paso Flores	6.74	169	P	Pn	13 45 11.1	0.0
	comp=Z,2.4nm,0.3s,baz=0.8,slow=11,SNR=29						
PLCA				S	Sn	13 46 31.5	+3.5
	baz=323,slow=20,SNR=1.3						
PLCA				LR	LR	13 48 01.8	
	comp=Z,611nm,19.1s,baz=10.0,slow=40						
PLCA	Paso Flores	6.74	169	ePn	Pn	13 45 11.5	+0.5
PLCA				eSn	Sn	13 46 31.5	+3.5
TCA	Tanti	7.01	69	eP	Pn	13 45 16.5	+1.6
TCA				IAML		13 47 24.0	
	comp=Z,38nm,0.6s						
TRQA	Tornquist	9.19	118	ePn	Pn	13 45 45.4	+0.8
AHML	Horco Molle	9.43	41	eP	Pn	13 45 47.7	-0.3
FSA	Cafayete	9.64	36	eP	Pn	13 45 50.5	-0.6
LVC	Limon Verde	11.83	15	LR	LR	13 51 25.0	
	comp=Z,301nm,20.7s,baz=204,slow=40						
GO01	Chusmiza	14.64	11	ePn	Pn	13 47 00.0	+0.2
CPUP	Villa Florida	15.03	63	P	Pn	13 47 06.0	+1.5
	comp=Z,0.1nm,0.3s,baz=45,slow=19,SNR=3.2						
CPUP				LR	LR	13 53 32.4	
	comp=Z,366nm,18.4s,baz=239,slow=40						
MNMC	Minye Minye	15.11	10	ePn	Pn	13 47 07.3	+1.4
	comp=Z,18nm,0.9s						
LPAZ	La Paz	18.14	13	P	P	13 47 46.0	+0.9
	comp=Z,0.2nm,0.3s,baz=205,slow=8.2,SNR=12						
LPAZ	La Paz	18.14	13	eP	Pn	13 47 44.6	-0.1
	comp=Z,7.5nm,0.8s						
SIV	San Ignacio	20.66	32	P	P	13 48 12.0	0.0
	comp=Z,6.6nm,0.9s,baz=218,slow=8.8,SNR=20						
SIV				LR	LR	13 57 44.8	
	comp=Z,286nm,18.9s,baz=270,slow=41						
USHA	Ushuaia	20.88	174	P	Pn	13 48 15.7	-0.9
	comp=Z,6.9nm,0.7s,baz=339,slow=14,SNR=2.7						
NNA	Nana	22.43	348	LR	LR	13 55 28.9	
	comp=Z,96nm,18.7s,baz=154,slow=32						
ATAH	Atahualpa	27.45	347	LR	LR	13 58 12.8	
	comp=Z,97nm,18.6s,baz=227,slow=32						
BDFB	Brasilia	28.54	56	P	P	13 49 26.7	-1.4
	comp=Z,2.0nm,0.5s,baz=204,slow=14,SNR=3.2						
BDFB				LR	LR	14 03 05.1	
	comp=Z,78nm,19.2s,baz=138,slow=41						
PMSA	Palmer Station	31.09	173	LR	LR	14 01 50.5	
	comp=Z,240nm,18.3s,baz=318,slow=35						
PTGA	Pitinga	35.15	22	P	P	13 50 25.7	-0.3
	comp=Z,4.4nm,0.9s,baz=253,slow=20						
PTGA				LR	LR	14 07 07.4	
	comp=Z,114nm,19.6s,baz=196,slow=40						
PTGA	Pitinga	35.15	22	eP	P	13 50 25.7	-0.3
	comp=Z,5.2nm,0.9s						
MDP	Montagnes des	43.18	29	P	P	13 51 32.3	-0.9
	comp=Z,8.1nm,0.6s,baz=212,slow=9.6						
VNA3	Neumayer Olymp	49.31	158	P	P	13 52 21.3	+0.5
VNA1	Neumayer--Stat	49.63	157	P	P	13 52 22.1	-1.1
SNAA	Sanae	51.54	158	P	P	13 52 38.1	+0.4
SNAA	Sanae	51.54	158	eP	P	13 52 37.4	-0.4
	comp=Z,20nm,1.3s						
QSPA	South Pole Qui	56.12	180	eP	P	13 53 11.8	+0.4
	comp=Z,12nm,1.0s						
VNDA	Vanda	63.95	191	P	P	13 54 05.8	+1.0
	comp=Z,1.1nm,0.7s,baz=143,slow=4.9,SNR=8.4						
X51A	Calhoun	69.34	349	eP	P	13 54 39.8	+0.2
	comp=Z,8.4nm,0.8s						
TXAR	Lajitas Array	69.76	331	P	P	13 54 43.4	+0.9
	comp=Z,0.7nm,0.6s,baz=162,slow=9.2,SNR=3.8						
TXAR				LR	LR	14 20 22.8	
	comp=Z,65nm,19.0s,baz=0.0,slow=32						
SWET	Sewanee	70.16	348	eP	P	13 54 44.8	+0.2
	comp=Z,8.0nm,0.7s						
V48A	Smith Brothers	70.82	347	eP	P	13 54 49.0	+0.3
	comp=Z,15nm,0.9s						
CLTN	Cedars of Leba	71.08	348	eP	P	13 54 50.7	+0.5
	comp=Z,3.0nm,0.7s						
WVT	Waverly	71.39	347	eP	P	13 54 52.4	+0.3
	comp=Z,15nm,0.8s						
MAW	Mawson	73.11	164	P	P	13 55 01.9	-0.2
	comp=Z,4.9nm,0.8s,baz=195,slow=6.3,SNR=12						
MAW				LR	LR	14 29 29.9	
	comp=Z,52nm,19.0s,baz=228,slow=38						
MAW	Mawson	73.11	164	eP	P	13 55 02.2	+0.1
	comp=Z,0.9nm,0.7s						
CCM	Cathedral Cave	73.95	344	eP	P	13 55 07.6	+0.3
	comp=Z,6.5nm,0.8s						
DBIC	Dimbokro	75.37	71	LR	LR	14 24 41.5	
	comp=Z,30nm,21.4s,baz=160,slow=33						
X16A	Lo Mia Camp, P	77.45	328	eP	P	13 55 29.3	+1.7
	comp=Z,10nm,1.8s						
U15A	North Rim	79.51	328	eP	P	13 55 40.9	+1.7
	comp=Z,2.1nm,0.9s						
BOSA	Boshof	80.16	118	P	P	13 55 42.6	-0.3
	comp=Z,2.9nm,0.7s,baz=209,slow=7.1,SNR=4.2						
ECSD	EROS Data Cent	80.61	342	eP	P	13 55 44.7	+0.1
	comp=Z,5.0nm,0.8s						
R11A	Troy Canyon, C	82.56	327	eP	P	13 55 56.8	+1.6
	comp=Z,1.9nm,0.9s						
PD31	Pinedale Array	83.79	333	eP	P	13 56 02.2	+0.7
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	83.79	333	P	P	13 56 02.2	+0.7
	comp=Z,0.5nm,0.7s,baz=169,slow=3.0,SNR=5.3						
NV01	Mina Array Sit	83.89	325	eP	P	13 56 03.8	+1.7
NVAR	Mina Array Bea	83.89	325	P	P	13 56 03.8	+1.7
	comp=Z,0.8nm,0.6s,baz=152,slow=5.7,SNR=9.2						
ELK	Elko	84.38	329	eP	P	13 56 05.7	+1.1
	comp=Z,1.6nm,0.8s						
TOA0	Torodi Ar. Sit	84.41	70	eP	P	13 56 04.9	-0.2
	comp=Z,17nm,1.4s						
TORD	Torodi Ar. Bea	84.41	70	P	P	13 56 04.6	-0.5
	comp=Z,3.3nm,0.8s,baz=272,slow=4.4,SNR=12						
TORD				LR	LR	14 32 47.3	
	comp=Z,37nm,18.7s,baz=270,slow=35						
TOA1	Torodi Ar. Sit	84.41	70	eP	P	13 56 04.6	-0.5
YHH	Holmes Hill	86.01	334	eP	P	13 56 13.7	+1.0
	comp=Z,2.3nm,0.8s						
HLID	Hailey	86.36	331	eP	P	13 56 15.3	+1.0
	comp=Z,9.1nm,1.9s						
AS31	Alice Springs	117.39	207	ePKPdf	PKPdf	14 02 16.8	-1.6
ASAR	Alice Springs	117.39	207	PKP	PKPdf	14 02 16.8	-1.6
	comp=Z,0.3nm,0.8s,baz=126,slow=2.4,SNR=4.5						
WR1	Warramunga Arr	120.58	209	ePKPdf	PKPdf	14 02 23.2	-1.4
WRA	Warramunga Arr	120.58	209	PKP	PKPdf	14 02 23.2	-1.4
	comp=Z,0.8nm,0.5s,baz=150,slow=1.5,SNR=4.0						
H11S2	WAKE ISLAND Hy	125.60	269	T	T	16 21 02.6	
	baz=120,slow=75,SNR=6.9						
H11S1	WAKE ISLAND Hy	125.62	269	T	T	16 21 01.3	
	baz=120,slow=75,SNR=6.4						
H11S3	WAKE ISLAND Hy	125.62	269	T	T	16 21 01.0	
	baz=120,slow=75,SNR=5.3						
BRVK	Borovoye	147.41	43	ePKPbc	PKPbc	14 03 16.0	+0.4
NIL	Nilore	151.43	81	ePKPbc	PKPbc	14 03 24.8	-1.4
NIL				ePKPab	PKPab	14 03 34.1	-0.5
ZAA1	Zalesovo Array	154.41	32	ePKPbc	PKiKP	14 03 32.3	+0.1
ZAA1				ePKPab	PKPab	14 03 47.1	+0.7
ZAA0	Zalesovo Array	154.41	32	ePKPbc	PKiKP	14 03 32.4	+0.2
ZALV	Zalesovo Beam	154.41	32	PKPbc	PKiKP	14 03 32.3	+0.1
	comp=Z,3.4nm,0.6s,baz=297,slow=3.4,SNR=15						
ZALV				PKPab	PKPab	14 03 47.1	+0.7
	comp=Z,3.0nm,0.6s,baz=299,slow=4.5,SNR=7.2						
MK32	Makanchi Array	156.97	49	ePKPab	PKPab	14 03 57.5	-0.2
MKAR	Makanchi Array	156.97	49	PKPab	PKPab	14 03 57.5	-0.2
	comp=Z,1.1nm,0.8s,baz=305,slow=4.3,SNR=6.8						
LZH	Lanzhou	176.24	57	ePKP	PKPdf	14 03 38.4	-4.3
LZH				pPKP	sPKPdf	14 03 48.6	+1.6
LZH				sPKP		14 03 54.2	

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*SOME **08** 13:51:23.0, 41°.73N×79°.42E, h10^{km}*

*KRNET **08** 13:51:24.3±0.1, 41°.79N×79°.39E, h19^{km}, mb2.8*

*NNC **08** 13:51:24.7±1.1, 41°.78N×79°.43E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=7.5km s-min=4.8km az=153.0*

ISC 08 13:51:24.2±1.7**, 41°.79N**±0°.07×**79°.45E**±0°.05**, h10**^{km}**, n39,** σ1^{s}**09**/65**, 9C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	1.05	312	⇓iP	Pg	13 51 43.4	-1.0
	baz=14						
PRZ				⇓iS	Sg	13 51 57.4	-0.6
	baz=14						
UZB	Uzynbulak	1.40	347	P	Pg	13 51 50.6	-0.4
	3.3nm,0.1s						
UZB				S	Sg	13 52 10.0	+0.8
	17nm,0.3s						
UZB	Uzynbulak	1.40	347	eP	Pb	13 51 50.2	-0.3
	3.3nm,0.1s						
UZB				eS	Sg	13 52 09.9	+0.7
	17nm,0.3s						
SATY	Saty	1.49	329	P	Pb	13 51 51.8	-0.2
	9.5nm,0.1s						
SATY				S	Sg	13 52 12.5	+0.3
	28nm,0.1s						
SATY	Saty	1.49	329	⇓iP	Pb	13 51 51.8	-0.2
	5.7nm,0.2s						
SATY				⇑iS	Sg	13 52 12.5	+0.3
	30nm,0.1s						
PDGK	Podgornoye	1.54	1	P	Pb	13 51 52.7	-0.2
	4.5nm,0.2s						
PDGK				S	Sg	13 52 14.3	+0.5
	23nm,0.5s						
PDGK	Podgornoye	1.54	1	⇓P	Pg	13 51 53.1	-0.7
	3.0nm,0.3s						
PDGK				⇓S	Sg	13 52 14.1	+0.3
	3.1nm,0.3s						
PDGK	Podgornoye	1.54	1	⇑iP	Pg	13 51 53.0	-0.7
	baz=2.0						
PDGK				⇑iS	Sg	13 52 13.7	-0.1
	baz=2.0						
KDJ	Kajisay	1.73	282	⇓iP	Pb	13 51 55.1	-1.1
	baz=82						
KDJ				⇓iS	Sb	13 52 17.8	-0.2
	baz=82						
KPKS	Kokpek	1.77	342	eP	Pg	13 51 57.3	-0.9
	48nm,0.2s						
KPKS				eS	Sg	13 52 22.0	+0.9
	59nm,0.5s						
KTMS	Ketmen	1.79	21	P	Pb	13 51 56.8	-0.4
	8.6nm,0.3s						
KTMS				S	Sg	13 52 21.1	-0.5
	9.3nm,0.2s						
KTMS	Ketmen	1.79	21	eP	Pb	13 51 56.8	-0.4
	8.6nm,0.3s						
KTMS				eS	Sg	13 52 21.1	-0.5
	9.3nm,0.2s						
KURS	Kuram	1.95	331	Pg	Pb	13 52 00.2	+0.4
	11nm,0.2s						
KURS				Lg	Lg	13 52 27.3	
	7.6nm,0.5s						
KURS	Kuram	1.95	331	⇓iP	Pb	13 52 00.2	+0.4
	11nm,0.2s						
KURS				eS	Sg	13 52 27.3	+0.5
	6.0nm,0.5s						
TNSS	Tian-Shan	2.24	305	Pg	Pb	13 52 04.9	0.0
	12nm,0.4s						
TNSS				Lg	Lg	13 52 35.5	
	13nm,0.3s						
TNSS	Tian-Shan	2.24	305	⇑iP	Pb	13 52 04.9	0.0
	11nm,0.5s						
TNSS				eS	Sg	13 52 35.3	-0.8

	13nm,0.3s						
KOTS	**Kotyrbulak**	**2.26**	**311**	Pg	**Pb**	**13 52 05.5**	**+0.4**
	12nm,0.2s						
KOTS				Lg	Lg	13 52 36.2	
	54nm,0.3s						
KOTS	**Kotyrbulak**	**2.26**	**311**	*e*P	**Pb**	**13 52 05.5**	**+0.4**
	12nm,0.2s						
KOTS				*e*S	**Sg**	**13 52 36.2**	**-0.5**
	54nm,0.3s						
MNBS	**Baschi**	**2.42**	**342**	Pg	**Pb**	**13 52 07.9**	**0.0**
	5.7nm,0.3s						
MNBS	**Baschi**	**2.42**	**342**	*e*P	**Pg**	**13 52 08.8**	**-1.7**
	5.7nm,0.3s						
MNBS				*e*S	**Sg**	**13 52 41.8**	**-0.1**
	27nm,0.4s						
ULHL	**Ulahol**	**2.44**	**282**	⇓*e*P	**Pb**	**13 52 06.7**	**-1.5**
	baz=82						
ULHL				⇓*i*S	**Sb**	**13 52 37.2**	**-1.2**
	baz=82						
IZV	**Izvestkoviy**	**2.45**	**302**	Pg	**Pb**	**13 52 08.3**	**-0.1**
	9.0nm,0.3s						
IZV				Lg	Lg	13 52 41.8	
	28nm,0.5s						
IZV	**Izvestkoviy**	**2.45**	**302**	*e*P	**Pb**	**13 52 08.8**	**+0.4**
	9.0nm,0.3s						
IZV				*e*S	**Sg**	**13 52 41.8**	**-1.0**
	28nm,0.5s						
DJR	**Jarkent**	**2.56**	**5**	Pg	**Pg**	**13 52 11.2**	**-2.0**
	3.0nm,0.3s						
DJR				Lg	Lg	13 52 45.6	
	11nm,0.3s						
DJR	**Jarkent**	**2.56**	**5**	*e*P	**Pg**	**13 52 11.2**	**-2.0**
	2.4nm,0.2s						
DJR				*e*S	**Sg**	**13 52 45.6**	**-0.7**
	12nm,0.3s						
MTBS	**Maitube**	**2.61**	**302**	Pg	**Pb**	**13 52 11.7**	**+0.6**
	4.8nm,0.3s						
MTBS				Lg	Lg	13 52 46.8	
	11nm,0.3s						
MTBS	**Maitube**	**2.61**	**302**	*e*P	**Pb**	**13 52 11.7**	**+0.6**
	4.8nm,0.3s						
MTBS				*e*S	**Sg**	**13 52 46.8**	**-1.2**
	11nm,0.3s						
ARXS	**Arharly**	**2.70**	**334**	Pg	**Pb**	**13 52 12.8**	**+0.1**
	4.3nm,0.3s						
ARXS	**Arharly**	**2.70**	**334**	*e*P	**Pb**	**13 52 12.8**	**+0.1**
	3.1nm,0.3s						
ARXS				*e*S	**Sg**	**13 52 48.6**	**-2.4**
	13nm,0.4s						
BOOM	**Boomskoye usch**	**2.71**	**286**	⇓*i*P	**Pb**	**13 52 10.3**	**-2.5**
	baz=87						
BOOM				⇓*i*S	**Sb**	**13 52 43.4**	**-2.7**
	baz=87						
CHKK	**Chushkaly**	**2.75**	**320**	Pg	**Pb**	**13 52 14.3**	**+0.8**
	8.0nm,0.4s						
CHKK				Lg	Lg	13 52 51.4	
	24nm,0.3s						
CHKK	**Chushkaly**	**2.75**	**320**	⇑*i*P	**Pb**	**13 52 14.3**	**+0.8**
	8.0nm,0.4s						
CHKK				*e*S	**Sg**	**13 52 51.4**	**-1.1**
	24nm,0.3s						
KTBS	**Karatobe**	**2.81**	**314**	Pg	**Pb**	**13 52 15.2**	**+0.8**
	5.2nm,0.2s						
KTBS				Lg	Lg	13 52 52.5	
	26nm,0.5s						
KTBS	**Karatobe**	**2.81**	**314**	*e*P	**Pb**	**13 52 15.2**	**+0.8**
	5.2nm,0.2s						
KTBS				*e*S	**Sg**	**13 52 52.5**	**-1.8**
	26nm,0.5s						
TKM2	**Tokmak 2**	**3.08**	**293**	⇑Pg	**Pg**	**13 52 23.2**	**+0.1**
	1.5nm,0.6s						
TKM2				⇓Lg	Lg	13 52 59.5	
	7.6nm,0.6s						
KUU	**Kurty**	**3.11**	**314**	Pg	**Pb**	**13 52 20.5**	**+0.9**
	2.2nm,0.2s						
KUU				Lg	Lg	13 53 00.7	
	9.7nm,0.3s						
KUU	**Kurty**	**3.11**	**314**	*e*P	**Pb**	**13 52 20.5**	**+0.9**
	2.2nm,0.2s						
KUU				*e*S	**Sg**	**13 53 01.9**	**-2.2**
	9.4nm,0.3s						
KZA	**Kyzart**	**3.15**	**277**	⇑*i*P	**Pn**	**13 52 16.7**	**+2.5**
	baz=77						
KZA				⇑*i*S	**Sn**	**13 52 54.6**	**+2.5**
	baz=77						
AAK	**Ala-Archa**	**3.78**	**285**	Pg	**Pg**	**13 52 36.9**	**+0.3**
	3.0nm,0.8s						
AAK				⇑Lg	Lg	13 53 21.6	
	3.1nm,0.6s						

GUC 08 13:52:51.8±0.6**, 34°.27S×72°.27W, h59^{km}**±19^{km}**, ML3.6, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	**Huala**	**0.79**	**160**	⇓*i*P	Pn	13 53 07.3	+0.2
GO05				*i* S	Sn	13 53 18.6	+0.2
GO05				IAML		13 53 21.2	
	comp=E,8µm,0.3s						
ANTU	**Antumapu**	**1.53**	**63**	*e*P	Pn	13 53 17.8	+0.9
ANTU				*i* S	Sn	13 53 36.5	+0.8
ANTU				IAML		13 53 42.3	
	comp=E,1µm,0.5s						
CLCH	**Cerro Calan**	**1.68**	**59**	*e*P	Pn	13 53 19.4	+0.4
CLCH				*i* S	Sn	13 53 41.2	+1.6
CLCH				IAML		13 53 48.0	
	comp=E,1µm,0.6s						
PEL	**Peldehue**	**1.73**	**50**	⇑*i*P	Pn	13 53 20.3	+0.7
PEL				*i* S	Sn	13 53 42.2	+1.5
PEL				IAML		13 53 49.0	
	comp=N,497nm,0.7s						
LMEL	**Las Melosas**	**1.76**	**77**	⇑*i*P	Pn	13 53 20.9	+0.8
LMEL				*i* S	Sn	13 53 43.4	+1.8
LMEL				IAML		13 53 47.2	
	comp=N,1µm,0.2s						
FCH	**Farellones**	**1.89**	**61**	⇓*i*P	Pn	13 53 22.5	+0.4
FCH				*i* S	Sn	13 53 46.5	+1.4
FCH				IAML		13 53 54.1	
	comp=E,653nm,0.3s						
CCHI	**Chillan**	**2.33**	**176**	IAML		13 54 13.3	
	comp=N,506nm,0.6s						

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*SJA **08** 14:20:48.7±0.3, 21°.88S×68°.62W, h137^{km}±3^{km}, ML2.2, MW2.7*

*GUC **08** 14:20:50.0±0.7, 21°.83S×68°.70W, h130^{km}±5^{km}, ML3.4*

ISC 08 14:20:49.7±1.7**, 21°.85S**±0°.04×**68°.66W**±0°.06**, h136^{km}**±13^{km}**, n22, σ0^s.50**/38**, 10C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.55**	**275**	*e*P	**Pn**	**14 21 09.8**	**-0.2**
PB09				*e*S	**Sn**	**14 21 25.6**	**+0.3**
PB09	**IPOC Station P**	**0.55**	**275**	⇑*i*P	**Pn**	**14 21 09.8**	**-0.2**
PB09				*i* S	**Sn**	**14 21 25.1**	**-0.2**
PB09				IAML		14 21 27.5	
	comp=N,368nm,0.1s						
LVC	**Limon Verde**	**0.80**	**197**	*e*P	**Pn**	**14 21 11.4**	**-0.5**
PB03	**IPOC Station P**	**1.04**	**259**	⇑*i*P	**Pn**	**14 21 13.9**	**+0.2**
PB03				*i* S	**Sn**	**14 21 31.3**	**-0.7**
PB03				IAML		14 21 32.7	
	comp=E,1µm,0.1s						
PB01	**IPOC Station P**	**1.11**	**316**	⇑*i*P	**Pn**	**14 21 14.2**	**-0.1**
PB01				*i* S	**Sn**	**14 21 32.8**	**-0.3**
PB01				IAML		14 21 34.1	
	comp=E,950nm,0.3s						
PB07	**IPOC Station P**	**1.15**	**276**	*e*P	**Pn**	**14 21 15.0**	**+0.3**
PB07				*e*S	**Sn**	**14 21 34.2**	**+0.3**
PB07	**IPOC Station P**	**1.15**	**276**	⇑*i*P	**Pn**	**14 21 15.0**	**+0.3**
PB07				*i* S	**Sn**	**14 21 33.6**	**-0.2**
PB07				IAML		14 21 35.3	
	comp=E,2µm,0.2s						
PB06	**IPOC Station P**	**1.20**	**225**	⇑*i*P	**Pn**	**14 21 15.7**	**+0.3**
PB06				*i* S	**Sn**	**14 21 34.6**	**-0.2**
PB06				IAML		14 21 36.0	
	comp=E,720nm,0.4s						
PB02	**IPOC Station P**	**1.27**	**294**	⇑*i*P	**Pn**	**14 21 16.1**	**+0.2**
PB02				*i* S	**Sn**	**14 21 35.7**	**-0.1**
PB02				IAML		14 21 38.6	
	comp=E,1µm,0.1s						
PB04	**IPOC Station P**	**1.47**	**250**	*e*P	**Pn**	**14 21 18.3**	**+0.3**
PB04				*e*S	**Sn**	**14 21 40.0**	**+0.3**
PB04	**IPOC Station P**	**1.47**	**250**	⇑*i*P	**Pn**	**14 21 18.4**	**+0.3**
PB04				*i* S	**Sn**	**14 21 39.5**	**-0.2**
PB04				IAML		14 21 41.6	
	comp=N,681nm,0.2s						
PB15	**IPOC Station P**	**1.55**	**209**	*e*P	**Pn**	**14 21 18.8**	**-0.2**
PB15	**IPOC Station P**	**1.55**	**209**	*e*P	**Pn**	**14 21 19.5**	**+0.5**
PB15				*i* S	**Sn**	**14 21 41.9**	**+0.5**
PB05	**IPOC Station P**	**1.75**	**235**	⇑*i*P	**Pn**	**14 21 21.6**	**+0.5**
PB05				*i* S	**Sn**	**14 21 44.9**	**-0.4**
PB05				IAML		14 21 47.0	
	comp=N,187nm,0.5s						
PB08	**IPOC Station P**	**1.76**	**345**	⇑*i*P	**Pn**	**14 21 22.5**	**+0.9**
PB08				*i* S	**Sn**	**14 21 46.4**	**+0.4**
PB08				IAML		14 21 47.6	
	comp=E,214nm,0.2s						
GO01	**Chusmiza**	**2.22**	**347**	⇓*i*P	**Pn**	**14 21 27.8**	**+0.5**
GO01				*i* S	**Sn**	**14 21 56.6**	**+0.6**
GO01				IAML		14 21 59.2	
	comp=N,266nm,0.1s						
PB11	**IPOC Station P**	**2.27**	**336**	⇑*i*P	**Pn**	**14 21 27.6**	**0.0**
PB11				*i* S	**Sn**	**14 21 56.2**	**-0.4**
PB11				IAML		14 22 01.5	
	comp=N,262nm,0.3s						
PSGC	**Pisagua**	**2.62**	**328**	*e*P	**Pn**	**14 21 30.9**	**-1.0**
PSGC				*i* S	**Sn**	**14 22 02.6**	**-1.7**
PSGC				IAML		14 22 05.3	
	comp=E,92nm,0.4s						
MNMC	**Minye Minye**	**2.84**	**342**	⇓*i*P	**Pn**	**14 21 35.3**	**+0.5**
MNMC				IAML		14 22 13.5	
	comp=E,184nm,0.2s						
YJA	**Yavi**	**2.94**	**97**	*e*P	**Pn**	**14 21 36.4**	**+0.3**
YJA				IAML		14 21 41.9	
	comp=Z,5.7nm,0.7s						
HJA	**Humahuaca**	**3.29**	**115**	*e*P	**Pn**	**14 21 40.6**	**-0.1**
HJA				IAML		14 21 42.9	
	comp=Z,4.5nm,0.4s						
AZAP	**Zapla**	**4.07**	**126**	*e*P	**Pn**	**14 21 50.5**	**-0.2**

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*ISK **08** 14:32:00.5, 38°.15N×38°.21E, h3^{km}, ML1.9/3*

*DDA **08** 14:32:01.7, 38°.22N×38°.23E, h7^{km}±2^{km}, ML2.7*

ISC 08 14:32:01.3±1.3**, 38°.16N**±0°.04×**38°.22E**±0°.04**, h6^{km}**±12^{km}**, n8, σ0^s.74**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.27**	**301**	*i* P	**Pb**	**14 32 07.3**	**-1.3**
AKCD				*i* S	**Sg**	**14 32 11.0**	**+0.9**
ELZG	**Elazig**	**0.69**	**61**	*i* P	**Pg**	**14 32 14.7**	**+0.1**
ELZG				*i* S	**Sb**	**14 32 24.7**	**-1.1**
DARE	**Darende-Malaty**	**0.71**	**306**	PG	**Pg**	**14 32 14.9**	**0.0**
DARE				SG	**Sb**	**14 32 25.5**	**-0.7**
HEKM	**Malatya_Hekimh**	**0.75**	**344**	*i* P	**Pb**	**14 32 16.5**	**-0.3**
HEKM				*i* S	**Sb**	**14 32 27.3**	**-0.1**
HEKM				IAML_P			
	comp=Z,3µm,0.2s						
URFA	**Urfa**	**0.86**	**146**	PG	**Pg**	**14 32 17.8**	**0.0**
URFA				SG	**Sb**	**14 32 30.3**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.89**	**75**	PG	**Pg**	**14 32 18.3**	**0.0**
SVRC				SG	**Sb**	**14 32 31.4**	**0.0**
GZT	**Gaziantep**	**0.95**	**213**	*i* P	**Pn**	**14 32 21.9**	**+0.5**
GZT				*i* S	**Sn**	**14 32 36.0**	**+0.5**
GZT				IAML_P			
	comp=Z,2µm,0.1s						
KEMA	**Kemaliye**	**1.13**	**11**	*i* P	**Pb**	**14 32 22.6**	**-0.7**
KEMA				*i* S	**Sn**	**14 32 40.7**	**+1.0**
KEMA				IAML_P			
	comp=Z,479nm,0.2s						

IDC 08 14:33:37.1±1.9**, 6°.91S×131°.70E, h0^{km}, mb3.3**/1**, mb1 3.8**/5**, mb1mx3.5**/31**, mbtmp3.7**/5**, ML3.7**/4**, Error ellipse: s-maj=52.8km s-min=26.9km az=87.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.01**	**356**	Pn	Pn	14 35 09.4	+1.9
	2.5nm,0.3s,baz=192,slow=23,SNR=12						
SIJI				Sn	Sn	14 36 13.1	-4.0
	3.3nm,0.3s,baz=115,slow=23,SNR=13						
BATI	**Baumata**	**8.60**	**247**	Pn	Pn	14 35 45.0	+2.0
	1.6nm,0.3s,baz=297,slow=16,SNR=3.7						
BATI				Sn	Sn	14 37 18.8	-1.9
	1.9nm,0.3s,baz=15,slow=20,SNR=5.5						
WRA	**Warramunga Arr**	**13.21**	**169**	Pn	Pn	14 36 46.6	+0.5
	0.3nm,0.3s,baz=349,slow=13,SNR=10						
WRA				Sn	Sn	14 39 02.6	-11
	0.4nm,0.3s,baz=347,slow=24,SNR=4.3						
ASAR	**Alice Springs**	**16.80**	**173**	Pn	Pn	14 37 33.5	-0.5
	0.2nm,0.3s,baz=358,slow=14,SNR=17						
ASAR				Sn	Sn	14 40 33.6	-7.8
	0.2nm,0.3s,baz=0.1,slow=28,SNR=5.2						
MKAR	**Makanchi Array**	**69.08**	**326**	P	P	14 44 44.2	-0.8
	0.2nm,0.6s,baz=125,slow=7.6,SNR=2.6						

TAP 08 14:51:42.5, 24°.36N×120°.94E, h10^{km}±1^{km}**, ML1.4, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHP	**Taichung City**	**0.09**	**174**	*i* P	Pg	14 51 45.7	+0.6
	baz=174						
WHP				*i* S	Sg	14 51 47.6	+0.7
	baz=174						
TWQ1	**Liyutan**	**0.15**	**264**	*e*P	Pg	14 51 46.1	+0.2
	baz=263						
TWQ1				*e*S	Sg	14 51 48.8	+0.5
	baz=263						
NSY	**Sanyi**	**0.17**	**288**	*i* P	Pg	14 51 46.8	+0.6
	baz=288						
NSY				*e*S	Sg	14 51 50.2	+1.4
	baz=288						
PTSB	**Yuanli**	**0.23**	**292**	P	Pb	14 51 48.2	-0.5
	baz=291						
PTSB				S	Sg	14 51 52.1	+1.7
	baz=291						
TDCB	**Techi**	**0.23**	**118**	*e*P	Pb	14 51 48.6	-0.3
	baz=118						
TDCB				*e*S	Sg	14 51 52.1	+1.4
	baz=118						
WDJ	**Dajia District**	**0.27**	**267**	*e*P	Pb	14 51 49.2	-0.3
	baz=266						
WDJ				*e*S	Sb	14 51 53.7	-0.4
	baz=266						
NSTT	**Nanjuang**	**0.27**	**12**	*e*P	Pb	14 51 49.1	-0.4
	baz=13						
NSTT				*e*S	Sb	14 51 53.5	-0.8
	baz=13						
LIOB	**Emei**	**0.29**	**14**	P	Pb	14 51 49.6	-0.3
	baz=14						
LIOB				S	Sb	14 51 54.4	-0.4
	baz=14						
WHF	**Hehuan Shan**	**0.37**	**126**	*e*P	Pb	14 51 51.9	+0.4
	baz=125						
CHGB	**Renai**	**0.37**	**144**	*e*P	Pb	14 51 51.4	0.0
	baz=144						
CHGB				*e*S	Sb	14 51 56.7	-0.6
	baz=144						
CHGB	**Renai**	**0.37**	**144**	*e*P	Pb	14 51 51.4	0.0
	baz=346						
CHGB				*e*S	Sb	14 51 56.7	-0.6
	baz=346						
NNS	**Nan Shan**	**0.41**	**79**	*e*P	Pb	14 51 51.7	-0.2
	baz=79						
NNS				*e*S	Sb	14 51 57.5	-0.7
	baz=79						
NNSB	**Datong**	**0.41**	**81**	*e*P	Pb	14 51 52.1	+0.1
	baz=80						
NNSB				*e*S	Sb	14 51 57.4	-1.0
	baz=80						
NSK	**Sanguang**	**0.49**	**51**	*e*P	Pb	14 51 53.3	-0.1
	baz=51						
NSK				*e*S	Sb	14 52 00.8	+0.1
	baz=51						
YHNB	**Yeheng**	**0.50**	**53**	*e*P	Pb	14 51 53.2	-0.3
	baz=52						

TAP 08 14:51:45.2, 23°.79N×121°.24E, h12^{km}±1^{km}**, ML1.1, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VWDT	**VWDT**	**0.10**	**251**	*e*P	Pg	14 51 48.9	+0.9
	baz=250						
VWDT				*e*S	Sg	14 51 50.8	+0.7
	baz=250						
ESL	**Shilin**	**0.17**	**81**	*e*P	Pb	14 51 50.6	+0.2
	baz=81						
ESL				*e*S	Sg	14 51 53.2	+1.3
	baz=81						
SSLB	**Suanglung**	**0.27**	**270**	*e*P	Pb	14 51 51.5	-0.5
	baz=270						
SSLB				*e*S	Sg	14 51 54.7	+0.2
	baz=270						
EHY	**Hungye**	**0.29**	**166**	*e*P	Pb	14 51 52.7	+0.4
	baz=164						
EHY				*e*S	Sb	14 51 56.9	-0.2
	baz=164						
TYC	**Yuchr**	**0.37**	**288**	*e*P	Pb	14 51 53.4	-0.4
	baz=289						
TYC				*e*S	Sb	14 51 59.2	-0.4
	baz=289						
YULB	**Yu-li**	**0.40**	**173**	*e*P	Pb	14 51 54.6	+0.4
	baz=172						
YULB				*e*S	Sb	14 51 59.8	-0.3
	baz=172						
TWF1	**Yuli**	**0.43**	**174**	*e*P	Pb	14 51 55.4	+0.6
	baz=172						
TWF1				*e*S	Sb	14 52 01.4	+0.1
	baz=172						

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*JMA **08** 15:11:01.0±0.4, 46°.80N×141°.74E, h7^{km}, M3.4*

*SKHL **08** 15:11:01.4±0.5, 46°.76N×141°.72E, h10^{km}, mb3.8/2*

SKHL Felt (II) at Nevel'sk.

ISC 08 15:11:02.0±2.2**, 46°.7N**±0°.1×**141°.8E**±0°.1**, h8^{km}**±14^{km}**, n10, σ0^s.85**/16**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.70**	**71**	*e*Pg	**Pg**	**15 11 15.6**	**+0.1**
YSS				AMB	AMB	15 11 16.6	
	50nm,0.4s						
YSS				*e*Sg	**Sb**	**15 11 26.0**	**-0.2**
YSS				A	A	15 11 26.8	
	430nm,0.3s						
YSS				A	A	15 11 26.8	
	320nm,0.3s						
YSS				AMS	AMS	15 11 44.0	
	800nm,9.0s						
JRBN	**Rebuntou**	**1.40**	**201**	P	**Pn**	**15 11 27.0**	**-0.7**
JRBN				*e*S	**Sb**	**15 11 45.5**	**-0.7**
JWK2	**Keihoku**	**1.41**	**177**	P	**Pn**	**15 11 27.9**	**0.0**
JWK2				*e*S	**Sg**	**15 11 47.4**	**+0.1**
JRR	**Rishiri**	**1.62**	**192**	P	**Pb**	**15 11 31.8**	**-0.3**
JRR				*e*S	**Sb**	**15 11 53.5**	**+0.8**
JSE	**Soyaes**	**1.85**	**162**	P	**Pn**	**15 11 33.5**	**-0.5**
JSE				*e*S	**Sn**	**15 11 57.8**	**+0.3**
JYG	**Yagishiri**	**2.31**	**186**	P	**Pn**	**15 11 41.5**	**+1.2**
JYG				*e*S	**Sb**	**15 12 11.3**	**-1.3**
ASAJ	**Asahikawa**	**2.67**	**167**	P	**Pn**	**15 11 46.0**	**+0.8**
JKK2	**Kamakawa 2**	**2.93**	**166**	P	**Pn**	**15 11 49.5**	**+0.7**
JTKR	**Abashiri--Toko**	**3.13**	**151**	P	**Pn**	**15 11 50.8**	**-0.8**
JAB	**Ashibetsu**	**3.23**	**174**	P	**Pn**	**15 11 54.4**	**+1.4**

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*IDC **08** 15:15:40.9±1.0, 6°.88S×155°.24E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.8/27, mbtmp3.9/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/25, Error ellipse: s-maj=40.7km s-min=22.9km az=133.0*

*ISCJB **08** 15:15:45.8±0.5, 6°.8S±0°.1×155°.12E±0°.09, h41^{km}, mb4.0/10, Error ellipse: s-maj=16.2km s-min=12.1km az=146.1*

*NEIC **08** 15:15:46.2±1.8, 6°.83S×155°.07E, h35^{km}, mb4.6/4, Error ellipse: s-maj=28.7km s-min=17.2km az=227.0*

ISC 08 15:15:47.1±0.7**, 6°.8S**±0°.2×**155°.1E**±0°.1**, h41^{km}, n22, σ0^s.75**/21**, mb3.9**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.43**	**119**	LR	LR	15 19 04.0	
	comp=Z,266nm,21.6s,baz=242,slow=38						
HNR	**Honiara**	**5.43**	**119**	*e*Pn	**Pn**	**15 17 06.4**	**+0.8**
WR1	**Warramunga Arr**	**24.00**	**235**	*e*P	**P**	**15 20 59.0**	**+0.8**
WRA	**Warramunga Arr**	**24.00**	**235**	P	**P**	**15 20 59.0**	**+0.8**
	0.9nm,0.5s,baz=63,slow=9.3,SNR=2.9						
AS31	**Alice Springs**	**26.36**	**228**	*e*P	**P**	**15 21 19.1**	**-0.6**
	0.9nm,0.9s						
ASAR	**Alice Springs**	**26.36**	**228**	P	**P**	**15 21 19.6**	**-0.2**
	1.0nm,0.9s,baz=58,slow=9.4,SNR=9.5						
PETK	**Petropavlovsk-**	**59.76**	**2**	P	**P**	**15 25 48.9**	**+1.1**
	3.4nm,0.8s,baz=172,slow=6.1,SNR=3.9						
PEA1	**Petropavlovsk-**	**59.77**	**2**	*e*P	**P**	**15 25 48.9**	**+1.0**
CMAR	**Chiang Mai Arr**	**60.83**	**295**	P	**P**	**15 25 56.4**	**+0.6**
	1.5nm,0.7s,baz=115,slow=4.8,SNR=11						
ILAR	**Eielson Array**	**83.19**	**21**	P	**P**	**15 28 08.0**	**-0.8**
	0.7nm,0.8s,baz=246,slow=5.6,SNR=8.8						
ILB	**Eielson Array**	**83.19**	**21**	*e*P	**P**	**15 28 07.9**	**-0.8**
	2.2nm,0.9s						
MK32	**Makanchi Array**	**83.37**	**319**	*e*P	**P**	**15 28 10.2**	**+0.1**
MKAR	**Makanchi Array**	**83.37**	**319**	P	**P**	**15 28 10.2**	**+0.1**
	0.3nm,0.7s,baz=106,slow=4.3,SNR=4.9						
EPYK	**Eagle Plains**	**87.68**	**22**	*e*P	**P**	**15 28 31.5**	**+0.4**
	6.4nm,0.8s						
NV01	**Mina Array Sit**	**91.54**	**52**	*e*P	**P**	**15 28 50.0**	**-0.1**
NVAR	**Mina Array Bea**	**91.54**	**52**	P	**P**	**15 28 50.0**	**-0.1**
	0.2nm,0.5s,baz=264,slow=6.3,SNR=3.1						
AHID	**Auburn Hatcher**	**97.38**	**48**	*e*P	**P**	**15 29 16.0**	**-0.8**
	16nm,0.6s						
T49A	**Edmonton**	**117.40**	**52**	*e*PKPdf	**PKPdf**	**15 34 27.9**	**-1.0**
PAULI	**Pauline**	**120.87**	**53**	*e*PKPdf	**PKPdf**	**15 34 34.9**	**-0.6**
BDFB	**Brasilia**	**148.00**	**134**	PKPbc	**PKPbc**	**15 35 28.8**	**-0.5**
	2.8nm,0.6s,baz=171,slow=8.3,SNR=4.9						
TORD	**Torodi Ar. Bea**	**153.10**	**286**	PKPbc	**PKPbc**	**15 35 40.5**	**-0.9**
	0.3nm,0.5s,baz=29,slow=3.4,SNR=4.3						
TOA1	**Torodi Ar. Sit**	**153.10**	**286**	*e*PKPbc	**PKPbc**	**15 35 40.5**	**-0.9**

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*ISCJB **08** 15:23:15.8±1.1, 37°.09N±0°.07×39°.25E±0°.04, h0^{km}±8^{km}, Error ellipse: s-maj=12.4km s-min=4.8km az=5.6*

*DDA **08** 15:23:15.2, 37°.03N×39°.21E, h7^{km}±1^{km}, ML2.6*

*ISK **08** 15:23:15.6, 37°.12N×39°.25E, h5^{km}, ML2.0/3*

ISC 08 15:23:15.6±1.7**, 37°.06N**±0°.09×**39°.24E**±0°.04**, h7^{km}**±10^{km}**, n8, σ0^s.79**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANL	**SANLIURFA_Merk**	**0.23**	**300**	*i* P	**Pg**	**15 23 20.2**	**-0.1**
SANL				*i* S	**Sg**	**15 23 24.3**	**+0.9**
SANL				IAML_P			
	comp=Z,5µm,0.2s						
URFA	**Urfa**	**0.51**	**319**	PG	**Pg**	**15 23 25.3**	**-0.2**
URFA				SG	**Sg**	**15 23 32.4**	**+0.2**
MAZI	**Mazidag**	**1.04**	**67**	PG	**Pg**	**15 23 35.5**	**-0.1**
MAZI				SG	**Sb**	**15 23 50.0**	**+0.1**
MARD	**Mardin**	**1.25**	**78**	*i* P	**Pg**	**15 23 38.5**	**-1.1**
MARD				*i* S	**Sn**	**15 23 58.7**	**+1.8**
MARD				IAML_P			
	comp=Z,1µm,0.3s						
SVRC	**Sivrice-ELAZID**	**1.32**	**2**	PN	**Pn**	**15 23 40.2**	**-0.4**
GZT	**Gaziantep**	**1.37**	**283**	*i* P	**Pg**	**15 23 41.6**	**-0.3**
GZT				*i* S	**Sn**	**15 24 00.4**	**+0.5**
GZT				IAML_P			
	comp=Z,495nm,0.1s						
ELZG	**Elazig**	**1.45**	**352**	*i* P	**Pg**	**15 23 43.7**	**+0.2**
ELZG				*i* S	**Sb**	**15 24 01.3**	**-0.6**
AKCD	**Akcadag**	**1.62**	**320**	*i* P	**Pg**	**15 23 46.2**	**-0.5**
AKCD				*i* S	**Sn**	**15 24 05.6**	**-0.4**

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*SGS **08** 15:30:23, 16°.63N×40°.75E, h15^{km}, Ml4.8*

*ISCJB **08** 15:30:25.0±0.5, 16°.61N±0°.02×40°.79E±0°.02, h3^{km}±3^{km}, mb5.1/248, MS5.1/595, Error ellipse: s-maj=4.1km s-min=2.7km az=20.5*

*MOS **08** 15:30:25.7±0.9, 16°.68N×40°.78E, h6^{km}, mb5.3/105, MS4.8/50, Error ellipse: s-maj=6.0km s-min=3.0km az=104.4*

*BJI **08** 15:30:26.1±0.0, 16°.35N×41°.03E, h10^{km}, mb4.9/69, mB5.4/60, Ms5.6/76, Ms7 5.4/71*

*IDC **08** 15:30:26.2±0.6, 16°.63N×40°.80E, h0^{km}, mb4.7/34, mb1 4.7/40, mb1mx4.7/47, mbtmp4.7/40, ML3.9/6, MS5.1/38, Ms1 5.1/38, ms1mx5.0/45, Error ellipse: s-maj=13.0km s-min=12.6km az=42.0*

*GII **08** 15:30:27.9±0.0, 16°.63N×40°.84E, h10^{km}*

*NEIC **08** 15:30:28.1±1.6, 16°.71N×40°.83E, h10^{km}±2^{km}, mb5.3/109, MS5.1/562, MW5.5, Error ellipse: s-maj=11.4km* *s-min=9.6km az=99.0, Moment Tensor Solution. s40 Moment tensor: Scale 10^{17}Nm; M_{rr}0.26; $M_{\theta\theta}$-1.30; $M_{\phi\phi}$1.04; $M_{r\theta}$-0.32; $M_{\theta\phi}$-1.39; $M_{\phi r}$-0.58; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s201.00000°,δ89.00000°, λ20.00000°. NP2:ϕ_s110.00000°,δ70.00000°,λ178.00000°. Principal axes: T 1.8000, Plg15.0000°, Azm67.0000°; N 0.2800, Plg70.0000°, Azm205.0000°; P -2.0800, Plg13.0000°, Azm334.0000°;*

*GCMT **08** 15:30:30.1±0.1, 16°.81N±0°.01×40°.86E±0°.01, h14^{km}, MW5.5/117, Moment Tensor Solution. s92,c160; s117,c259; Duration: $1^{s}4$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.47±.03; $M_{\theta\theta}$-1.17±.03; $M_{\phi\phi}$1.64±.03; $M_{r\theta}$-0.39±.06; $M_{\theta\phi}$-2.08±.03; $M_{\phi r}$-0.23±.06; Best double couple: $M_0$2.56400×10^{17} NP1:ϕ_s16.00000°,δ81.00000°, λ-10.00000°. NP2:ϕ_s108.00000°,δ80.00000°, λ-171.00000°. Principal axes: T 2.7450, Plg0.0000°, Azm62.0000°; N -0.3640, Plg77.0000°, Azm153.0000°; P -2.3820, Plg13.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*DSN **08** 15:30:31.9±1.6, 17°.03N×41°.03E, h10^{km}, mb5.7/18 Error ellipse: s-maj=25.2km s-min=10.1km az=11.0*

ISC 08 15:30:28.2±0.5, **16°.72N**±0°.03×**40°.85E**±0°.03, **h8**^{km}±2^{km}, **h8**^{km}**:pP-P, n1159,** σ**1**^{s}**98**/838, **mb5.1**/253, **MS5.1**/599, **52C-32D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRSS	Farasan al Kab	1.22	89	P	Pb	15 30 45.2	-6.2
DRBS	Ad Darb	1.77	51	P	Pn	15 30 52.9	-6.3
DRBS				S	Sn	15 31 16.2	-5.8
AMGES	AMGES	1.85	21	P	Pn	15 30 54.4	-5.9
BESHS	BESHS	2.01	71	P	Pn	15 30 56.1	-6.3
JAZS	Jizan	2.01	80	P	Pn	15 30 56.4	-6.1
DJNS	Zahran al Janu	2.76	69	P	Pn	15 31 08.2	-4.8
DAMY	Dhamar	4.03	122	ePn	Pn	15 31 28.8	-1.8
ATD	Arta Tunnel	5.52	159	Pn	Pn	15 31 48.4	-2.4
	23nm,0.3s,baz=93,slow=7.3,SNR=25						
ATD				Sn	Sn	15 32 56.7	+2.3
	11nm,0.3s,baz=270,slow=20,SNR=3.1						
ATD	Arta Tunnel	5.52	159	P	Pn	15 31 48.2	-2.5
	SNR=76						
DESE	Dese	5.69	192	eP	Pn	15 31 53.3	-0.1
DESE				eS	Sn	15 32 58.9	-0.4
DESE	Dese	5.69	192	eP	Pn	15 31 51.7	-1.8
DESE				eS	Sn	15 33 02.8	+3.6
DESE	Dese	5.69	192	eP	Pn	15 31 53.3	-0.1
DESE				eS	Sn	15 32 58.9	-0.4
ANKE	Ethiopia-Afar	7.17	189	eP	Pn	15 32 10.7	-3.0
ANKE				eS	Sn	15 33 42.3	+6.6
ANKE	Ethiopia-Afar	7.17	189	eP	Pn	15 32 13.8	+0.1
ANKE				eS	Sn	15 33 40.1	+4.4
ANKE	Ethiopia-Afar	7.17	189	eP	Pn	15 32 10.7	-3.0
ANKE				eS	Sn	15 33 42.3	+6.6
RAYN	Ar Rayn	8.05	32	ePn	Pn	15 32 22.7	-2.9
RAYN	Ar Rayn	8.05	32	iP	Pn	15 32 23.6	-2.0
	SNR=11						
RAYN	Ar Rayn	8.05	32	eP	Pn	15 32 22.7	-2.9
FURI	Furi	8.06	195	ePn	Pn	15 32 22.8	-3.2
EIL	Elat	13.97	338	Pn	Pn	15 33 46.7	+0.1
	0.3nm,0.3s,baz=162,slow=12,SNR=12						
EIL				LR	LR	15 38 10.3	
	comp=Z,13μm,20.3s,baz=154,slow=33						
EIL	Elat	13.97	338	Pn	Pn	15 33 47.0	+0.4
AQBJ	Aqaba	13.99	339	P	P	15 33 53.3	-1.6
	98nm,0.9s						
MBRI	Mt Berech	14.10	338	Pn	Pn	15 33 48.7	+0.3
HRFI	Mount Harif	14.28	339	Pn	Pn	15 33 51.2	+0.4
HRFI	Mount Harif	14.28	339	P	Pn	15 33 51.7	+0.9
	103nm,1.6s						
KRMI	Paran Flat	14.46	338	Pn	Pn	15 33 53.7	+0.4
PRNI	Paran	14.58	340	Pn	Pn	15 33 55.9	+1.0
ZFRI	Zfri	14.71	340	Pn	Pn	15 33 57.7	+1.1
JDRJ	Daraweish	14.72	342	P	P	15 34 01.2	-2.0
	239nm,1.7s						
LISJ	El Lisan	15.26	342	P	P	15 34 11.1	+2.2
	80nm,2.0s						
KZIT	Kziot	15.29	339	Pn	Pn	15 34 05.2	+0.7
KZIT	Kziot	15.29	339	P	Pn	15 34 05.6	+1.1
	190nm,1.6s						
AJN	Ajban	15.36	57	iP	Pn	15 34 04.5	-0.8
	SNR=29						
AJN	Ajban	15.36	57	P	Pn	15 34 06.7	+1.3
	SNR=24						
MZDA	Masada	15.36	342	Pn	Pn	15 34 05.4	+0.2
YTIR	Yattir	15.48	341	Pn	Pn	15 34 07.5	+0.5
ASUD	Al Ashush, Dub	15.66	57	iP	Pn	15 34 09.6	+0.3
	SNR=30						
ASUD	Al Ashush, Dub	15.66	57	P	Pn	15 34 10.8	+1.5
	SNR=31						
AMAZ	Amatzia	15.70	341	P	Pn	15 34 10.8	+1.0
	244nm,1.4s						
ALNE	Al Ain	15.76	60	iP	Pn	15 34 09.3	-1.3
	SNR=11						
ASF	Jabal al Asfar	15.79	348	Pn	Pn	15 34 10.8	-0.3
	0.3nm,0.3s,baz=132,slow=7.5,SNR=25						
ASF				LR	LR	15 39 46.6	
	comp=Z,7μm,19.6s,baz=129,slow=35						
ASF	Jabal al Asfar	15.79	348	P	P	15 34 14.4	-0.6
	118nm,2.3s						
FAQ	Al Faqa, Dubai	15.93	58	iP	Pn	15 34 13.4	+0.6
	SNR=30						
FAQ	Al Faqa, Dubai	15.93	58	P	Pn	15 34 14.0	+1.2
	SNR=45						
NAZ	Nazwa, Dubai	16.09	57	iP	Pn	15 34 14.0	-0.9
	SNR=24						
NAZ	Nazwa, Dubai	16.09	57	P	Pn	15 34 16.3	+1.4
	SNR=35						
ARQ	Araqi	16.13	63	P	P	15 34 17.6	-1.1
	SNR=11						
HMDT	Nahal Hemdat	16.20	344	Pn	Pn	15 34 16.4	+0.2
ASHO	Ashiyiah	16.28	58	iP	Pn	15 34 16.5	-0.9
	SNR=46						
ASHO	Ashiyiah	16.28	58	P	Pn	15 34 17.7	+0.3
	SNR=55						
ASHO				P	Pn	15 34 17.7	+0.3
	SNR=55						
SLTI	Sal'it	16.32	342	Pn	Pn	15 34 17.9	+0.1
UMQ	Umm Al-Quwin	16.35	55	iP	Pn	15 34 16.6	-1.7
	SNR=10						
MMLI	Mount Malkishu	16.40	344	Pn	Pn	15 34 19.3	+0.5
MMLI	Mount Malkishu	16.40	344	P	Pn	15 34 20.0	+1.2
	100nm,1.6s						
HATD	Hatta, Dubai	16.40	58	iP	Pn	15 34 18.7	-0.2
	SNR=39						
HATD	Hatta, Dubai	16.40	58	P	Pn	15 34 18.8	-0.2
	SNR=35						
HATD				P	Pn	15 34 18.8	-0.2
	SNR=35						
UOSS	Minazif	16.51	58	ePn	Pn	15 34 18.7	-1.6
	304nm,1.0s						
UOSS	Minazif	16.51	58	iP	Pn	15 34 19.6	-0.7
	SNR=34						
UOSS	Minazif	16.51	58	P	Pn	15 34 19.7	-0.7
	SNR=30						
UOSS				P	Pn	15 34 19.7	-0.7
	SNR=30						
BSY	Bisya	16.52	66	P	P	15 34 22.6	-0.4
	SNR=24						
MSFE	Esma-Masafi	16.67	56	iP	Pn	15 34 21.2	-1.1
	SNR=29						
OFRI	`Ofer	16.69	343	Pn	Pn	15 34 23.3	+0.7
MDH	Madha	16.75	57	iP	Pn	15 34 24.0	+0.7
	SNR=48						
MDH	Madha	16.75	57	P	Pn	15 34 23.6	+0.3
	SNR=40						
MHTO	MHTO	16.75	73	P	Pn	15 34 21.2	-2.2
	SNR=28						
HOQ	Hoqain	16.89	64	P	Pn	15 34 25.0	-0.1
	SNR=59						
MMAI	Mount Meron Ar	16.95	344	P	Pn	15 34 26.0	+0.1
	0.2nm,0.3s,baz=168,slow=23,SNR=10						
MMAI				S	Sn	15 37 39.1	+4.6
	0.2nm,0.3s,baz=162,slow=24,SNR=4.4						
MMAI				Lg	Lg	15 39 17.6	
	0.9nm,0.3s,baz=258,slow=28,SNR=4.2						
MMAI				LR	LR	15 40 30.0	
	comp=Z,8μm,18.1s,baz=180,slow=36						
MMA0B	Mount Meron ar	16.95	344	Pn	Pn	15 34 26.2	+0.3
SHME	Shamm	16.99	54	iP	Pn	15 34 27.1	+0.8
	SNR=41						
BANOM	Banah	17.05	55	iP	Pn	15 34 26.6	-0.5
	SNR=29						
BANOM	Banah	17.05	55	P	P	15 34 28.9	0.0
	SNR=32						
KSDI	Kefar Szold	17.05	345	Pn	Pn	15 34 27.9	+0.8
KSDI	Kefar Szold	17.05	345	P	P	15 34 28.5	-0.4
	253nm,1.3s						
GEM	Giv'at Ha'Em	17.07	345	Pn	Pn	15 34 28.2	+0.9
HNTI	Hanita	17.08	344	Pn	Pn	15 34 28.2	+0.8
NATI	Neve Ativ	17.10	345	Pn	Pn	15 34 28.4	+0.8
JMDO	Jabal Madar	17.20	68	P	Pn	15 34 29.0	-0.1
	SNR=65						
RCY	Rachaya	17.30	346	eP	P	15 34 31.3	-0.5
SMDO	Samad	17.36	66	P	Pn	15 34 31.4	+0.3
	SNR=21						
BIDO	Bidbid	17.57	65	P	P	15 34 34.4	-0.3
	SNR=28						
BIDO				P	P	15 34 34.4	-0.3
	SNR=28						
BHL	Bhannes	17.73	346	eP	P	15 34 36.2	-0.4
WSAR	Wadi Sarin	17.92	66	P	Pn	15 34 36.9	-1.1
	0.5nm,0.3s,baz=268,slow=14,SNR=16						
WSAR				S	S	15 38 02.1	-2.6
	0.3nm,0.3s,baz=217,slow=20,SNR=2.9						
WSAR				Lg	Lg	15 39 50.5	
	0.2nm,0.3s,baz=79,slow=5.2,SNR=3.6						
WSAR				LR	LR	15 42 34.1	
	comp=Z,21μm,19.5s,baz=267,slow=40						
WSAR	Wadi Sarin	17.92	66	P	Pn	15 34 35.7	-2.3
	SNR=21						
WBK	Wadi Bani Khal	18.04	68	P	P	15 34 39.9	0.0
	SNR=76						
KMBO	Kilima Mbogo	18.09	192	P	P	15 34 40.6	-0.1
	baz=25,slow=13,SNR=14						
KMBO				Lg	Lg	15 39 58.9	
	0.2nm,0.3s,baz=229,slow=19,SNR=1.9						
KMBO				LR	LR	15 41 00.0	
	comp=Z,8μm,18.5s,baz=0.0,slow=35						
KMBO	Kilima Mbogo	18.09	192	eP	P	15 34 40.6	-0.1
	243nm,1.9s						
KMBO	Kilima Mbogo	18.09	192	eP	P	15 34 40.6	-0.1
KMBO				pmax	pmax		
	comp=Z,243nm,1.9s						
KMBO	Kilima Mbogo	18.09	192	P	P	15 34 42.0	+1.3
	SNR=28						
JLN	Jalan Bani Buh	18.32	70	P	P	15 34 44.0	+1.0
	SNR=24						
CSS	Mathiatis	19.37	341	eP	P	15 34 54.5	+0.1
	comp=Z,140nm,1.4s						
CSS	Mathiatis	19.37	341	Pn	P	15 34 54.3	-0.1
MBAR	Mbarara	19.89	211	P	P	15 34 59.9	-0.5
	comp=Z,0.6nm,0.3s,baz=40,slow=8.9,SNR=11						
MBAR				S	Sn	15 38 46.5	+0.5
	comp=Z,0.6nm,0.3s,baz=72,slow=20,SNR=1.8						
MBAR				Lg	Lg	15 40 45.0	
	comp=Z,0.6nm,0.3s,baz=355,slow=2.4,SNR=8.2						
MBAR				LR	LR	15 41 36.3	
	comp=Z,7μm,18.2s,baz=32,slow=34						
MBAR	Mbarara	19.89	211	eP	P	15 34 59.7	-0.7
	comp=Z,93nm,1.5s						
MBAR				eS	Sn	15 38 46.5	+0.5
MBAR	Mbarara	19.89	211	c iP	Pn	15 35 01.3	-0.7
GZT	Gaziantep	20.76	353	iP	Pn	15 35 12.1	0.0
GZT				IAML_P			
	comp=Z,72nm,0.3s						
HCB	Kahramanmara	20.83	351	iP	Pn	15 35 12.9	+0.1
HCB				IAML_P			
	comp=Z,36nm,0.3s						
DED	Mersin	20.86	346	iP	Pn	15 35 12.5	-0.6
DED				IAML_P			
	comp=Z,744nm,0.6s						
BTMN	Batman	21.09	1	iP	P	15 35 16.7	+3.5
ANDN	Andirin	21.15	350	iP	P	15 35 16.6	+2.7
ANDN				IAML_P			
	comp=Z,824nm,0.7s						
KERG	Konya-Eregli	21.45	345	iP	P	15 35 22.2	+5.1
KERG				IAML_P			
	comp=Z,238nm,0.7s						
HANI	Diyarbakir_Han	21.61	359	iP	P	15 35 21.2	+2.4
HANI				IAML_P			
	comp=Z,81nm,0.1s						
ELZG	Elazig	21.75	356	iP	P	15 35 27.2	+6.7
ELZG				IAML_P			
	comp=Z,72nm,0.1s						
YAHY	KAYSERI_Yahyal	21.83	348	iP	P	15 35 26.5	+5.3
YAHY				IAML_P			
	comp=Z,156nm,0.2s						
BNGL	BINGOL	22.15	1	iP	P	15 35 27.9	+3.2
TNCL	Tunceli-Merkez	22.34	357	iP	P	15 35 30.6	+4.0
TNCL				IAML_P			
	comp=Z,25nm,0.1s						
KARP	Karpathos	22.37	330	eP	P	15 35 27.2	+0.3
	comp=Z,158nm,0.9s						
KARP				LR	LR		
	comp=Z,4μm,22.0s						
KARP	Karpathos	22.37	330	P	P	15 35 26.9	0.0
ARG	Arkhangelos	22.46	332	P	P	15 35 28.3	+0.4
ARG	Arkhangelos	22.46	332	P	P	15 35 32.2	+4.3
ARG				pmax	pmax		
	comp=Z,100nm,1.6s						
KEMA	Kemaliye	22.56	355	iP	P	15 35 33.4	+4.4
KEMA				IAML_P			
	comp=Z,231nm,0.1s						
CUKAN	kangal_SIVAS	22.70	353	iP	P	15 35 38.1	+7.6
ISP	Isparta	22.90	339	eP	P	15 35 32.6	0.0
	comp=Z,48nm,0.9s						
ISP				LR	LR		
	comp=Z,1μm,20.0s						
ISP	Isparta	22.90	339	iP	P	15 35 33.0	+0.4
ISP				pmax	pmax		
	comp=Z,149nm,2.2s						
ISP	Isparta	22.90	339	Pn	P	15 35 32.0	-0.6
LAST	Lasithi	22.93	326	P	P	15 35 21.9	-11
NPS	Neapolis	22.93	327	P	P	15 35 33.4	+0.6
CUSAR	Sarkisla-SIVAS	22.97	351	iP	P	15 35 33.5	+0.2
SIRC	Yozgat	23.07	349	iP	P	15 35 34.5	+0.1
SIRC				IAML_P			
	comp=Z,41nm,0.2s						
YER	Yerkesik	23.17	334	eP	P	15 35 29.2	-6.1
YER	Yerkesik	23.17	334	P	P	15 35 29.2	-6.1
YER	Yerkesik	23.17	334	eP	P	15 35 29.2	-6.1
IDI	Anoyia	23.34	325	P	P	15 35 37.9	+0.8
	comp=Z,32nm,0.9s,baz=160,slow=12,SNR=5.8						
IDI				S	S	15 39 53.1	+2.9
	comp=Z,3.7nm,0.8s,baz=36,slow=19,SNR=1.5						
KELT	Kelkit	23.38	357	iP	P	15 35 40.4	+2.8
KELT				IAML_P			
	comp=Z,353nm,0.7s						
SUSE	Susehri	23.51	355	iP	P	15 35 41.0	+2.1
SUSE				IAML_P			
	comp=Z,17nm,0.1s						
GNI	Garni	23.59	7	P	P	15 35 41.0	+1.4
	comp=Z,39nm,1.2s,baz=222,slow=2.6,SNR=23						
GNI				LR	LR	15 46 33.0	
	comp=Z,3μm,18.4s,baz=165,slow=41						
GNI	Garni	23.59	7	eP	P	15 35 40.5	+0.9
	comp=Z,317nm,1.8s						
GNI				LR	LR		
	comp=Z,3μm,19.0s						
GNI	Garni	23.59	7	iP	P	15 35 42.0	+2.4
	SNR=31						
GNI	Garni	23.59	7	d iP	P	15 35 41.8	+2.2
GNI	Garni	23.59	7	P	P	15 35 42.4	+2.8
	SNR=28						
BR101	Keskin Array S	23.76	346	eP	P	15 35 42.2	+0.9
BR101				ePcP	PcP	15 39 23.6	-1.5
BR131	Keskin Array S	23.76	346	eP	P	15 35 41.8	+0.5
	comp=Z,286nm,1.9s						
BR131	Keskin Array S	23.76	346	P	P	15 35 42.8	+1.5
	SNR=48						
BRTR	Keskin Array B	23.76	346	P	P	15 35 42.2	+0.9
	comp=Z,9.7nm,0.7s,baz=167,slow=12,SNR=63						
BRTR				PcP	PcP	15 39 23.6	-1.5
	comp=Z,2.9nm,0.8s,baz=162,slow=4.7,SNR=5.5						
BRTR				LR	LR	15 44 55.4	
	comp=Z,3μm,19.5s,baz=145,slow=36						
VAM	Vamos	23.80	325	P	P	15 35 40.9	-0.7
IMMV	Iera Moni Meta	23.97	324	P	P	15 35 43.2	+0.1
ANTO	Ankara	24.10	345	eP	P	15 35 45.0	+0.5
	comp=Z,124nm,1.5s						
ANTO				LR	LR		
	comp=Z,2μm,20.0s						
ANTO	Ankara	24.10	345	eP	P	15 35 45.0	+0.5
ANTO				pmax	pmax		
	comp=Z,123nm,1.5s						
ANTO				MLR	MLR		
	comp=Z,2μm,20.0s						
ANTO	Ankara	24.10	345	P	P	15 35 47.1	+2.7
	SNR=14						
ANTO				P	P	15 35 47.1	+2.7
	SNR=14						
KULA	Kula-Manisa	24.20	336	P	P	15 35 45.9	+0.5
MANT	Manisa	24.22	336	eP	P	15 35 45.7	0.0
	comp=Z,453nm,1.5s						
MANT				LR	LR		
	comp=Z,4μm,20.0s						
ANKY	Antikythira Is	24.64	324	eP	P	15 35 48.7	-0.6
ANKY	Antikythira Is	24.64	324	P	P	15 35 48.7	-0.6
AKH	Akhalkalaki	24.71	5	eP	P	15 35 51.1	+1.0
	comp=Z,51nm,1.4s						
AKH				LR	LR		
	comp=Z,4μm,19.0s						
AKH	Akhalkalaki	24.71	5	⇑iP	P	15 35 53.8	+3.7
AKH	Akhalkalaki	24.71	5	eP	P	15 35 51.1	+1.0
AKH				pmax	pmax		
	comp=Z,51nm,1.4s						
AKH				MLR	MLR		
	comp=Z,4μm,19.0s						
ILGA	Ilgaz	25.01	347	eP	P	15 35 53.3	+0.4
	comp=Z,158nm,1.3s						
ILGA				LR	LR		
	comp=Z,5μm,19.0s						
MDUB	Mudurnu	25.10	342	eP	P	15 35 54.1	+0.6
	comp=Z,177nm,1.1s						
MDUB				LR	LR		
	comp=Z,7μm,22.0s						
TBLG	Delisi	25.15	7	eP	P	15 35 54.6	+0.8
	comp=Z,56nm,1.2s						
TBLG	Delisi	25.15	7	eP	P	15 35 54.6	+0.8
TBLG				pmax	pmax		
	comp=Z,56nm,1.2s						
AKT	Akhty	25.38	12	eP	P	15 35 57.9	+1.9
AKT				e		15 36 31.8	
AKT				eS	S	15 40 23.7	+0.9
AKT				pmax	pmax		
	comp=Z,83nm,1.2s						
BALB	Balikesir	25.48	336	eP	P	15 35 56.7	-0.1
	comp=Z,278nm,1.3s						
BALB				LR	LR		
	comp=Z,4μm,18.0s						
MSEY	Mahe Island	25.72	145	eP	P	15 35 59.8	+0.5
	comp=Z,409nm,1.5s						
MSEY				LR	LR		
	comp=Z,4μm,21.0s						
MSEY	Mahe Island	25.72	145	iP	P	15 36 02.0	+2.7
MSEY	Mahe Island	25.72	145	P	P	15 36 01.9	+2.6
	SNR=9.8						
MSEY				P	P	15 36 01.9	+2.6
	SNR=9.8						
GEYT	Alibeck	26.02	32	P	P	15 36 01.6	-0.3
	comp=Z,7.2nm,0.9s,baz=217,slow=7.1,SNR=14						
GEYT				S	S	15 40 38.2	+5.2
	comp=Z,0.5nm,0.4s,baz=61,slow=27,SNR=2.5						
GEYT				LR	LR	15 46 28.9	
	comp=Z,9μm,19.7s,baz=215,slow=37						
GYA0B	ALIBECK ARRAY	26.02	32	eP	P	15 36 01.7	-0.2
	comp=Z,45nm,1.0s						
GYA0B				LR	LR		
	comp=Z,8μm,22.0s						
PYL	PYLOS	26.25	324	eP	P	15 36 06.4	+2.4
PYL	PYLOS	26.25	324	P	P	15 36 06.4	+2.4
ITM	Ithomi	26.35	324	eP	P	15 36 04.6	-0.2
	comp=Z,108nm,1.5s						
ITM				LR	LR		
	comp=Z,2μm,18.0s						
ITM	Ithomi	26.35	324	P	P	15 35 47.2	-18
NEY	Neytrino	26.49	3	iP	P	15 36 06.7	+0.5
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAK	Makhachkala	26.76	11	eP	P	15 36 03.3	-5.1
MAK				eS	S	15 40 37.6	-6.9
MAK				pmax	pmax		
	comp=Z,156nm,1.2s						
MAK				MLR	MLR		
	comp=Z,3μm,16.0s						
NCK	Nalchik	26.79	4	iP	P	15 36 10.6	+1.9
NCK				pmax	pmax		
	comp=Z,14nm,0.4s						
SOC	Sochi	26.79	358	eP	P	15 36 08.3	-0.4
SOC				ePPP	PPP	15 36 56.5	
SOC				eS	S	15 40 46.5	+1.6
SOC				eSSS	SSS	15 42 10.9	
SOC				MLR	MLR		
	comp=Z,3μm,11.0s						
KLV	Kalavryta, Ach	26.85	326	P	P	15 36 08.9	-0.5
LKR	Lokris	26.86	328	P	P	15 36 08.4	-1.0
KBZ	Khabaz	26.98	3	P	P	15 36 11.5	+1.2
	comp=Z,7.5nm,1.1s,baz=211,slow=6.4,SNR=11						
KBZ				PcP	PcP	15 39 31.9	-0.1
	comp=Z,4.3nm,0.8s,baz=358,slow=1.7,SNR=4.3						
KBZ				LR	LR	15 47 35.6	
	comp=Z,7μm,18.4s,baz=196,slow=38						
KALE	Kalithea	27.11	326	eP	P	15 36 08.8	-3.0
KALE	Kalithea	27.11	326	P	P	15 36 08.8	-3.0
KIV	Kislovodsk	27.19	3	eP	P	15 36 12.6	+0.1
	comp=Z,28nm,1.0s						
KIV				LR	LR		
	comp=Z,5μm,18.0s						
KIV	Kislovodsk	27.19	3	iP	P	15 36 13.4	+1.0
	SNR=7.6						
KIV	Kislovodsk	27.19	3	eP	P	15 36 12.5	+0.1
KIV				e		15 36 55.8	
KIV				eS	S	15 40 52.2	+0.8
KIV				MLR	MLR		
	comp=Z,10μm,15.0s						
KIV	Kislovodsk	27.19	3	P	P	15 36 14.4	+2.0
	SNR=9.0						
KIV				P	P	15 36 14.4	+2.0
	SNR=9.0						
KVAR	Kislovodsk Arr	27.19	3	P	P	15 36 13.2	+0.8
	comp=Z,2.1nm,0.4s,baz=253,slow=19,SNR=6.5						
KVAR				LR	LR	15 46 25.6	
	comp=Z,5μm,19.7s,baz=98,slow=35						
ALN	Alexandroupoli	27.28	335	PFAKE		15 36 20.0	+6.9
ALN				LR	LR		
	comp=Z,600nm,21.0s						
AGG	Agios Georgios	27.48	328	eP	P	15 36 15.2	+0.2
	comp=Z,59nm,1.0s						
AGG				LR	LR		
	comp=Z,1μm,20.0s						
AGG	Agios Georgios	27.48	328	P	P	15 36 15.2	+0.2
AGG	Agios Georgios	27.48	328	eP	P	15 36 15.2	+0.2
AGG				pmax	pmax		
	comp=Z,59nm,1.0s						
AGG				MLR	MLR		
	comp=Z,1μm,20.0s						
PVO	Paravola	27.61	326	P	P	15 36 11.5	-4.6
KFL	Anninata	27.65	324	P	P	15 36 19.1	+2.6
RDO	Rodhopi	27.69	335	eP	P	15 36 16.8	0.0
RDO	Rodhopi	27.69	335	P	P	15 36 16.8	0.0
OUR	Ouranopolis	27.70	332	eP	P	15 36 17.2	+0.3
OUR	Ouranopolis	27.70	332	P	P	15 36 17.2	+0.3
OUR	Ouranopolis	27.70	332	eP	P	15 36 17.2	+0.3
ANN	Anapa	28.14	355	eP	P	15 36 15.2	-5.5
ANN				e*PP	pP	15 36 18.0	-4.8
ANN				ePPP	PPP	15 37 13.8	
ANN				eS	S	15 40 57.9	-8.2
ANN				pmax	pmax		
	comp=Z,25nm,0.9s						
ANN				MLR	MLR		
	comp=E,2μm,14.0s						
ANN				MLR	MLR		
	comp=N,2μm,14.0s						
ANN				MLR	MLR		
	comp=Z,3μm,14.0s						
LIT	Litokhoron	28.23	329	eP	P	15 36 21.0	-0.7
	comp=Z,22nm,0.9s						
LIT				LR	LR		
	comp=Z,2μm,22.0s						
LIT	Litokhoron	28.23	329	P	P	15 36 20.3	-1.3
LIT	Litokhoron	28.23	329	eP	P	15 36 21.0	-0.7
LIT				pmax	pmax		
	comp=Z,22nm,0.9s						
LIT				MLR	MLR		
	comp=Z,2μm,22.0s						
GOF	Gofitskoye	28.31	3	⇑eP	P	15 36 23.3	+1.0
GOF				pmax	pmax		
	comp=Z,29nm,0.6s						
NVR	Nevrokopi	28.57	333	P	P	15 36 24.9	+0.1
SIM	Simferopol'	28.70	350	eP	P	15 36 26.3	+0.5
SIM				iS	S	15 41 15.0	-0.1
SIM				pmax	pmax		
	comp=Z,27nm,1.4s						
PLD	Plovdiv	28.84	335	P	P	15 36 28.8	+1.8

KNT	Kendrikon	28.86	331	P	P	15 36 29.2	+1.9
KNT				pmax	pmax		
	comp=Z,11nm,1.8s						
IGT	Igoumenitsa	28.91	326	P	P	15 36 30.2	+2.5
GRG	Griva	28.93	330	P	P	15 36 28.7	+0.8
ELND	Elena	29.07	337	⇓*i*P	P	15 36 29.6	+0.5
VAY	Valandovo	29.14	331	*i* P	P	15 36 37.5	+7.8
TIRR	Tirgusor	29.57	342	*e*P	P	15 36 33.3	-0.2
	comp=Z,79nm,1.1s						
TIRR				LR	LR		
	comp=Z,4µm,21.0s						
TIRR	Tirgusor	29.57	342	⇑*i*P	P	15 36 34.0	+0.5
TIRR	Tirgusor	29.57	342	*e*P	P	15 36 33.3	-0.2
TIRR				pmax	pmax		
	comp=Z,79nm,1.1s						
TIRR				MLR	MLR		
	comp=Z,4µm,21.0s						
STIP	Stip	29.61	331	*i* P	P	15 36 36.2	+2.3
OHR	Ohrid	29.83	329	*i* P	P	15 36 44.1	+8.2
VTS	Vitosha	29.88	333	*e*P	P	15 36 36.6	+0.2
	comp=Z,59nm,1.8s						
VTS				LR	LR		
	comp=Z,1µm,22.0s						
VTS	Vitosha	29.88	333	⇑*i*P	P	15 36 37.7	+1.3
VTS	Vitosha	29.88	333	*e*P	P	15 36 36.6	+0.2
VTS				pmax	pmax		
	comp=Z,59nm,1.8s						
VTS				MLR	MLR		
	comp=Z,1µm,22.0s						
PLVB	Pleven	29.94	336	⇑*i*P	P	15 36 37.8	+1.0
WDD	Wied Dalam	30.16	314	*e*P	P	15 36 38.7	-0.2
	comp=Z,95nm,1.0s						
WDD				LR	LR		
	comp=Z,5µm,19.0s						
SKO	Skopje	30.17	330	*i* P	P	15 36 39.6	+0.7
CFR	Carcaliu	30.31	342	⇓*i*P	P	15 36 40.2	+0.2
CFR	Carcaliu	30.31	342	P	P	15 36 40.2	+0.2
CEL	Celeste	30.65	319	PFAKE		15 36 50.0	+6.8
CEL				LR	LR		
	comp=Z,2µm,22.0s						
TIP	Timpagrande	30.70	322	*e*P	P	15 36 43.2	-0.4
	comp=Z,26nm,1.0s						
TIP				LR	LR		
	comp=Z,900nm,21.0s						
TIP	Timpagrande	30.70	322	⇑*i*P	P	15 36 44.0	+0.4
KBL	Kabul	30.85	50	*e*P	P	15 36 44.7	-0.5
	comp=Z,15nm,0.8s						
KBL				LR	LR		
	comp=Z,5µm,19.0s						
KBL	Kabul	30.85	50	*e*P	P	15 36 44.7	-0.5
KBL				pmax	pmax		
	comp=Z,15nm,0.8s						
KBL				MLR	MLR		
	comp=Z,5µm,19.0s						
VAE	Valguarnera	31.14	317	LR	LR	15 49 22.0	
	comp=Z,3µm,18.5s,baz=174,slow=36						
ULC	Ulcinj	31.24	328	⇓*i*P	P	15 36 58.0	+10
MLR	Muntele Rosu	31.28	340	LR	LR	15 52 28.3	
	comp=Z,1µm,18.0s,baz=160,slow=42						
MLR	Muntele Rosu	31.28	340	*e*P	P	15 36 49.1	+0.3
	comp=Z,46nm,0.9s						
MLR				LR	LR		
	comp=Z,1µm,21.0s						
MLR	Muntele Rosu	31.28	340	⇑*i*P	P	15 36 50.2	+1.4
MLR	Muntele Rosu	31.28	340	*e*P	P	15 36 49.1	+0.3
MLR				pmax	pmax		
	comp=Z,46nm,0.9s						
MLR				MLR	MLR		
	comp=Z,1µm,21.0s						
PVY	Plav	31.36	330	⇓*i*P	P	15 36 48.3	-1.2
VRI	Vrincioaia	31.36	341	⇑*i*P	P	15 36 50.4	+1.1
VRI	Vrincioaia	31.36	341	P	P	15 36 50.4	+1.1
PLOR	Plostina	31.37	341	⇑*i*P	P	15 36 51.3	+1.8
PLOR	Plostina	31.37	341	P	P	15 36 51.2	+1.8
DRME	Dracevica, Mon	31.44	328	⇓*i*P	P	15 36 53.5	+3.5
VOIR		31.54	339	⇑*i*P	P	15 36 51.8	+0.7
VOIR		31.54	339	P	P	15 36 51.7	+0.7
PDG	Podgorica	31.58	329	⇓*i*P	P	15 36 52.0	+0.7
TTG	Podgorica	31.58	329	⇓*i*P	P	15 36 51.3	0.0
TTG	Podgorica	31.58	329	*e*P	P	15 36 51.2	-0.1
	comp=Z,44nm,1.0s						
TTG				LR	LR		
	comp=Z,2µm,20.0s						
TTG	Podgorica	31.58	329	*e*P	P	15 36 51.2	-0.1
TTG				pmax	pmax		
	comp=Z,44nm,1.0s						
TTG				MLR	MLR		
	comp=Z,2µm,20.0s						
IVA	Berane	31.60	330	⇓*i*P	P	15 36 48.6	-3.0
ARR	Arges	31.63	338	⇓*i*P	P	15 36 51.4	-0.4
BUM	Brajici-Budva	31.67	328	⇓*i*P	P	15 36 52.8	+0.6
KOME	Kolasin	31.77	329	⇓*i*P	P	15 36 48.3	-4.7
KIS	Kishinev	31.79	344	⇑*i*P	P	15 36 53.0	-0.1
	comp=Z,210nm,2.0s						
KIS	Kishinev	31.79	344	*e*PP	PP	15 38 02.0	-2.9
KIS	Kishinev	31.79	344	*e*PcP	PcP	15 39 04.0	-40
KIS				*i* S	S	15 42 04.0	+0.6
	comp=Z,1µm,12.0s						
KIS				*e*SS	SS	15 44 55.0	+35
KIS				*e*Li		15 45 50.0	
KIS				*e*LQ	LQ	15 46 58.0	
KIS				*e*LR	LR	15 48 00.0	
	comp=Z,800nm,18.0s						
KIS	Kishinev	31.79	344	⇑*i*P	P	15 36 53.0	-0.1
KIS				*e*		15 38 02.0	
KIS				*e*PPP	PPP	15 38 12.0	
KIS				*i* S	S	15 42 04.0	+0.6
KIS				pmax	pmax		
	comp=Z,210nm,2.0s						
KIS				smax	smax		
	comp=N,1µm,12.0s						
KIS				MLR	MLR		
	comp=Z,800nm,16.0s						
CEME	Cevo	31.84	328	⇓*i*P	P	15 36 54.0	+0.4
DOPR	Dopca	31.89	339	⇑*i*P	P	15 36 53.9	-0.1
TESR	Tescani	31.96	341	⇑*i*P	P	15 36 54.3	-0.3
HCY	Herceg Novi	31.98	328	⇓*i*P	P	15 36 55.0	+0.2
NKME	Niksic	31.98	329	⇓*i*P	P	15 36 53.2	-1.7
CLTB	Caltabellotta	31.99	316	*e*P	P	15 36 54.7	-0.3
	comp=Z,22nm,0.8s						
CLTB				LR	LR		
	comp=Z,3µm,18.0s						
NKY	Niksic	31.99	329	⇓*i*P	P	15 36 52.5	-2.6
LOT	Lotru	32.01	337	⇑*i*P	P	15 36 55.4	+0.2
HERR	Herculane	32.07	335	⇓*i*P	P	15 36 55.8	+0.3
PLE	Pljevlja	32.19	330	⇓*i*P	P	15 36 55.6	-1.2
MDVR	Moldovita	32.28	334	⇓*i*P	P	15 36 58.0	+0.5
BRY	Bratogost	32.28	329	⇓*i*P	P	15 36 57.7	0.0
UPM	Unac-Piva	32.33	329	⇓*i*P	P	15 36 58.5	+0.4
GZR	Gura Zlata	32.35	336	⇑*i*P	P	15 36 58.6	+0.5
GZR	Gura Zlata	32.35	336	P	P	15 36 58.6	+0.5
BIZ	Bicaz	32.51	341	⇓*i*P	P	15 37 00.0	+0.6
BZS	Buzias	32.99	335	⇓*i*P	P	15 37 02.4	-1.3
BZS	Buzias	32.99	335	P	P	15 37 02.3	-1.4
CHGR	Chuyangaron	33.03	43	PFAKE		15 37 20.0	+16
CHGR				LR	LR		
	comp=Z,17µm,21.0s						
ARCR	ARCALIA	33.21	339	⇑*i*P	P	15 37 06.6	+1.1
BURAR	Bucovina Array	33.39	341	⇑*i*P	P	15 37 08.5	+1.2
BURAR	Bucovina Array	33.39	341	P	P	15 37 08.4	+1.2
BUR08	Bucovina Ar. S	33.42	341	*e*P	P	15 37 07.1	-0.4
	comp=Z,52nm,1.5s						
SIRR	Siria	33.51	336	⇑*i*P	P	15 37 08.3	+0.1
DRGR		33.54	337	⇑*i*P	P	15 37 09.2	+0.7
DRGR		33.54	337	P	P	15 37 09.1	+0.6
NIL	Nilore	33.64	54	*e*P	P	15 37 10.3	+0.8
	comp=Z,166nm,1.9s						
NIL				LR	LR		
	comp=Z,4µm,20.0s						
NIL	Nilore	33.64	54	P	P	15 37 10.3	+0.8
TAM	Tamanrasset	33.73	286	*e*P	P	15 37 09.7	-0.9
	comp=Z,17nm,0.9s						
TAM				LR	LR		
	comp=Z,6µm,20.0s						
TAM	Tamanrasset	33.73	286	*e*P	P	15 37 09.7	-0.9
TAM				pmax	pmax		
	comp=Z,17nm,0.9s						
TAM				MLR	MLR		
	comp=Z,6µm,20.0s						
KEST	Kesra	33.80	310	P	P	15 37 11.8	+0.9
	comp=Z,30nm,0.8s,baz=279,slow=0.4,SNR=38						
KEST				S	S	15 42 38.3	+3.2
	comp=Z,1.8nm,0.8s,baz=198,slow=16,SNR=2.1						
KEST				LR	LR	15 51 59.8	
	comp=Z,4µm,18.9s,baz=72,slow=38						
KEST	Kesra	33.80	310	*e*P	P	15 37 11.2	+0.3
	comp=Z,41nm,0.9s						
KEST				LR	LR		
	comp=Z,4µm,20.0s						
AMBH	Ambrzfalva	33.95	335	⇑*e*P	P	15 37 13.0	+1.0
GAR	Garm	33.97	43	*e*P	P	15 37 12.6	+0.1
	comp=Z,123nm,1.1s						
GAR				LR	LR		
	comp=Z,12µm,18.0s						
GAR	Garm	33.97	43	*e*P	P	15 37 12.6	+0.1
GAR				pmax	pmax		
	comp=Z,123nm,1.1s						
GAR				MLR	MLR		
	comp=Z,12µm,18.0s						
LSZ	Lusaka	34.16	202	PFAKE		15 37 30.0	+16
LSZ				LR	LR		
	comp=Z,4µm,19.0s						
VORD	Divnogorie	34.18	358	*e*P	P	15 37 13.9	0.0
VORD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BLY	Banja Luka	34.30	330	*e*P	P	15 37 15.5	+0.4
	comp=Z,84nm,1.5s						
BLY				LR	LR		
	comp=Z,1µm,20.0s						
BLY	Banja Luka	34.30	330	⇑*i*P	P	15 37 15.8	+0.7
VSR	Storozhevoye	34.44	358	*e*P	P	15 37 15.9	-0.2
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR				MLR	MLR		
	comp=Z,2µm,16.0s						
AQU	L'Aquila	34.68	323	PFAKE		15 37 30.0	+12
AQU				LR	LR		
	comp=Z,1µm,21.0s						
MORH	Mrgy, Hungar	34.73	333	*e*P	P	15 37 18.0	-0.7
MORH				*e*PP	PnPn	15 38 34.1	-0.6
MORH				*e*S	S	15 42 53.0	+4.0
TRPA	Tarpa	34.74	338	*e*P	P	15 37 18.0	-0.7
TRPA				*e*PP	PnPn	15 38 35.1	+0.4
TRPA				*e*S	S	15 42 53.0	+3.9
BTK	Batken	34.87	42	*e*P	P	15 37 20.0	-0.2
	comp=Z,77nm,1.1s						
BTK				LR	LR		
	comp=Z,7µm,20.0s						
BTK	Batken	34.87	42	*e*P	P	15 37 20.0	-0.2
BTK				pmax	pmax		
	comp=Z,77nm,1.1s						
BTK				MLR	MLR		
	comp=Z,7µm,20.0s						
AKASG	Malin Array Be	35.16	347	P	P	15 37 21.5	-0.9
	comp=Z,2.2nm,0.3s,baz=162,slow=7.1,SNR=23						
AKASG				PcP	PcP	15 39 52.4	-1.2
	comp=Z,1.8nm,0.7s,baz=162,slow=2.2,SNR=5.3						
AKASG				S	S	15 42 54.7	-0.8
	comp=Z,0.2nm,0.3s,baz=146,slow=9.9,SNR=2.2						
AKASG				LR	LR	15 54 04.4	
	comp=Z,2µm,18.2s,baz=125,slow=40						
AKBB	Malin Array Si	35.16	347	*e*P	P	15 37 21.4	-0.9
	comp=Z,27nm,1.0s						
AKBB				*e*PcP	PcP	15 39 52.4	-1.2
AKBB				*e*S	S	15 42 54.7	-0.8
AKBB				LR	LR		
	comp=Z,2µm,18.0s						
AKBB	Malin Array Si	35.16	347	*e*P	P	15 37 21.4	-0.9
AKBB				*e*		15 39 52.4	
AKBB				*e*S	S	15 42 54.7	-0.8
AKBB				pmax	pmax		
	comp=Z,27nm,1.0s						
AKBB				MLR	MLR		
	comp=Z,2µm,18.0s						
UZH	Uzhgorod	35.25	339	*e*P	P	15 37 22.8	-0.4
UZH				*e*		15 37 25.7	
UZH				*e*		15 38 49.0	
UZH				*e*		15 40 00.8	
UZH				*e*S	S	15 42 54.9	-2.1
KOLS	Kolonicke sedl	35.51	339	*e*P	P	15 37 26.2	+0.7
KOLS				pmax	pmax		
	comp=Z,35nm,1.3s						
KOLS	Kolonicke sedl	35.51	339	*e*P	P	15 37 26.2	+0.7
PSZ	Piszkesteto	35.55	336	*e*P	P	15 37 25.0	-0.9
	comp=Z,33nm,1.0s						
PSZ				LR	LR		
	comp=Z,800nm,21.0s						
PSZ	Piszkesteto	35.55	336	⇓*i*P	P	15 37 25.6	-0.3
PSZ	Piszkesteto	35.55	336	*e*P	P	15 37 25.0	-0.9
PSZ				pmax	pmax		
	comp=Z,33nm,1.0s						
PSZ				MLR	MLR		
	comp=Z,800nm,21.0s						
PSZ	Piszkesteto	35.55	336	*e*P	P	15 37 26.0	+0.1
PSZ				*e*PP	PnPn	15 38 45.0	+0.1
PSZ				*e*S	S	15 43 06.0	+4.1
BUD	Budapest	35.56	334	⇓*e*P	P	15 37 26.1	+0.2
IUG	Iuzhnay	35.58	39	c*e*P	P	15 37 26.7	+0.4
IUG				*e*S	S	15 43 06.8	+4.3
IUG	Iuzhnay	35.58	39	⇑*e*P	P	15 37 26.7	+0.4
IUG				*e*S	S	15 43 06.8	+4.3
TIH	Tihany	35.59	333	*e*P	P	15 37 26.0	-0.1
TIH				*e*PP	PP	15 38 47.0	+0.1
TIH				*e*S	S	15 43 04.1	+1.8
LVV	L'vov	35.71	341	*e*P	P	15 37 26.0	-1.1
KECS	Kecovo	35.78	337	*e*P	P	15 37 28.9	+1.1
KECS				pmax	pmax		
	comp=Z,68nm,1.1s						
KECS	Kecovo	35.78	337	*e*P	P	15 37 28.9	+1.1
CSKK	Cskako	35.79	333	⇑*e*P	P	15 37 20.1	-7.8
CSKK				*e*PP	PnPn	15 38 11.0	-37
LPSR	Galich'ya Gora	35.83	358	*e*P	P	15 37 26.9	-1.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,2µm,13.0s						
KWP	Kalwaria Pacla	35.96	340	*e*P	P	15 37 30.4	+1.1
KWP				LMZ	LR	15 49 43.1	
	comp=Z,2µm,33.0s						
KWP	Kalwaria Pacla	35.96	340	*e*P	P	15 37 28.7	-0.7
	comp=Z,392nm,1.1s						
KWP				LR	LR		
	comp=Z,11µm,22.0s						
KWP	Kalwaria Pacla	35.96	340	*e*P	P	15 37 28.7	-0.7
KWP				pmax	pmax		
	comp=Z,392nm,1.1s						
KWP				MLR	MLR		
	comp=Z,11µm,22.0s						
BRLS	Borolday	36.00	37	*e*S	S	15 43 10.1	+1.4
KOGS	Kog	36.00	331	*i* P	P	15 37 29.9	+0.3
HYB	Hyderabad	36.02	83	⇑*i*P	P	15 37 28.0	-2.2
HYB				*e*S	S	15 43 10.0	+0.4
JBG	Jabagly	36.05	39	*e*P	P	15 37 30.0	-0.3
JBG				pmax	pmax		
	comp=Z,78nm,2.0s						
JBG				MLR	MLR		
	comp=Z,2µm,14.0s						
ABPO	Ambohimpanom	36.07	170	PFAKE		15 37 40.0	+9.3
ABPO				LR	LR		
	comp=Z,2µm,20.0s						
ABPO	Ambohimpanom	36.07	170	*i* P	P	15 37 37.3	+6.6
STHS	Stebnicka Huta	36.28	338	*e*P	P	15 37 33.7	+1.6
STHS	Stebnicka Huta	36.28	338	*e*P	P	15 37 33.7	+1.6
AKTO	Aktyubinsk	36.36	19	*i* P	P	15 37 33.1	+0.4
AKTO				pmax	pmax		
	comp=Z,19nm,0.8s						
KK31	Karatay Array	36.43	38	*e*P	P	15 37 33.9	+0.4
	comp=Z,28nm,0.8s						
KK31	Karatay Array	36.43	38	*e*P	P	15 37 33.9	+0.4
KK31				pmax	pmax		
	comp=Z,28nm,0.8s						
VYHS	Vyhne	36.44	335	*e*P	P	15 37 33.7	+0.3
VYHS				pmax	pmax		
	comp=Z,119nm,2.0s						
VYHS	Vyhne	36.44	335	*e*P	P	15 37 33.7	+0.3
VYHS				*e*S	S	15 43 17.1	+1.8
LJU	Ljubljana	36.54	329	*i* P	P	15 37 34.5	+0.2
NIE	Niedzica	36.63	337	*e*P	P	15 37 35.0	0.0
NIE				*e*S	S	15 43 26.0	+7.8
NIE				LMZ	LR	15 51 10.9	
	comp=Z,800nm,28.2s						
NIE	Niedzica	36.63	337	*e*P	P	15 37 35.0	0.0
NIE				*e*S	S	15 43 26.0	+7.8
NIE				MLR	MLR		
	comp=Z,800nm,28.2s						
TRI	Trieste	36.69	328	*e*P	P	15 37 35.5	-0.1
	comp=Z,56nm,1.0s						
TRI				LR	LR		
	comp=Z,900nm,21.0s						
TRI	Trieste	36.69	328	*e*P	P	15 37 35.5	-0.1
TRI				pmax	pmax		
	comp=Z,56nm,1.0s						
TRI				MLR	MLR		
	comp=Z,900nm,21.0s						
SOKA	Soboth	36.74	330	*e*P	P	15 37 37.4	+1.2
	comp=Z,22nm,1.5s,SNR=12						
SOP	Sopron	36.77	332	*e*P	P	15 37 22.1	-14
SOP				*e*S	S	15 43 23.1	+2.6
OBKA	Obir	36.86	329	*e*P	P	15 37 37.8	+0.7
	comp=Z,20nm,0.9s						
ARSA	Arzberg	36.92	331	*e*P	P	15 37 38.0	+0.4
	comp=Z,18nm,0.7s,SNR=14						
ZST	Bratislava	36.93	333	*e*P	P	15 37 36.8	-0.8
ZST				*e*S	S	15 43 22.3	-0.4
ZST	Bratislava	36.93	333	*e*P	P	15 37 36.8	-0.8
ZST				*e*S	S	15 43 22.3	-0.4
MODS	Modra-Piesok	36.99	334	*e*P	P	15 37 37.6	-0.5
MODS				pmax	pmax		
	comp=Z,103nm,1.6s						
MODS	Modra-Piesok	36.99	334	*e*P	P	15 37 37.6	-0.5
MODS				*e*S	S	15 43 21.1	-2.6
CADS	Cadrg	37.06	328	*i* P	P	15 37 38.5	-0.4
JAVC	Velka Javorina	37.20	335	*e*P	P	15 37 40.5	+0.5
JAVC				*e*S	S	15 43 31.1	+4.1
CONA	Conrad Observa	37.27	332	*e*P	P	15 37 40.9	+0.3
	comp=Z,44nm,2.0s,SNR=14						
MYKA	Terra Mystica	37.39	329	*e*P	P	15 37 42.2	+0.6
	comp=Z,16nm,1.2s,SNR=6.4						
OJC	Ojcow	37.47	338	*e*P	P	15 37 40.6	-1.5
OJC				*e*S	S	15 43 31.9	+0.9
OJC				LMZ	LR	15 49 40.2	
	comp=Z,2µm,47.6s						
OJC	Ojcow	37.47	338	*e*P	P	15 37 41.0	-1.1
	comp=Z,33nm,1.0s						
OJC	Ojcow	37.47	338	*e*P	P	15 37 40.7	-1.5
OJC				*e*S	S	15 43 31.9	+0.9
VLC	Villacollemand	37.53	323	PFAKE		15 37 50.0	+7.2
VLC				LR	LR		
	comp=Z,900nm,22.0s						
OKC	Ostrava-Krasne	37.78	336	*e*P	P	15 37 44.9	+0.1
OKC				*e*		15 37 47.5	
OKC				*e*S	S	15 43 27.9	-7.8
OKC				MLR	MLR		
	comp=Z,1µm,16.3s						
OKC	Ostrava-Krasne	37.78	336	*e*P	P	15 37 44.9	+0.1
OKC				*e*pP	sP	15 37 47.5	-0.1
OKC				*e*S	S	15 43 27.9	-7.8
OKC				AMS	AMS	15 56 10.0	
	comp=Z,1µm,16.3s						
KBA	Koelnbreinsper	37.84	329	*e*P	P	15 37 45.8	+0.2
	comp=Z,18nm,0.9s,SNR=14						
KBA	Koelnbreinsper	37.84	329	P	P	15 37 46.6	+1.0
KRUC	Moravsky	37.89	334	*e*P	P	15 37 45.2	-0.6
KRUC				*e*S	S	15 43 37.4	0.0
TOC2	Torodi Ar. Sit	37.93	270	PFAKE		15 38 00.0	+14
TOC2				LR	LR		
	comp=Z,4µm,18.0s						
TOC3	Torodi Ar. Sit	37.93	270	PFAKE		15 38 00.0	+13
TOC3				LR	LR		
	comp=Z,4µm,18.0s						
TOB2	Torodi Ar. Sit	37.94	270	PFAKE		15 38 00.0	+13
TOB2				LR	LR		
	comp=Z,11µm,18.0s						
TOC1	Torodi Ar. Sit	37.94	270	PFAKE		15 38 00.0	+13
TOC1				LR	LR		
	comp=Z,4µm,20.0s						
MOA	Molln	37.95	331	*e*P	P	15 37 46.4	+0.1
	comp=Z,14nm,0.8s,SNR=16						
TOB3	Torodi Ar. Sit	37.95	270	PFAKE		15 38 00.0	+13
TOB3				LR	LR		
	comp=Z,10µm,18.0s						
TOA2	Torodi Ar. Sit	37.95	270	PFAKE		15 38 00.0	+13
TOA2				LR	LR		
	comp=Z,10µm,18.0s						
TOA0	Torodi Ar. Sit	37.95	270	*e*P	P	15 37 45.2	-1.5
	comp=Z,77nm,0.8s						
TOA0				LR	LR		
	comp=Z,4µm,18.0s						
TOA0	Torodi Ar. Sit	37.95	270	P	P	15 37 45.8	-0.9
	SNR=13						
TOC4	Torodi Ar. Sit	37.95	270	PFAKE		15 38 00.0	+13
TOC4				LR	LR		
	comp=Z,6µm,22.0s						
TORD	Torodi Ar. Bea	37.95	270	P	P	15 37 43.9	-2.8
	comp=Z,80nm,0.9s,baz=24,slow=8.1,SNR=167						
TORD				LR	LR	15 54 18.4	
	comp=Z,6µm,18.8s,baz=15,slow=38						
TOA1	Torodi Ar. Sit	37.95	270	*e*P	P	15 37 43.9	-2.8
TOA1				LR	LR		
	comp=Z,4µm,20.0s						
TOA3	Torodi Ar. Sit	37.95	270	PFAKE		15 38 00.0	+13
TOA3				LR	LR		
	comp=Z,4µm,18.0s						
TOB4	Torodi Ar. Sit	37.97	270	PFAKE		15 38 00.0	+13
TOB4				LR	LR		
	comp=Z,6µm,22.0s						
TOB5	Torodi Ar. Sit	37.97	270	PFAKE		15 38 00.0	+13
TOB5				LR	LR		
	comp=Z,4µm,22.0s						
TOC7	Torodi Ar. Sit	37.97	270	PFAKE		15 38 00.0	+13
TOC7				LR	LR		
	comp=Z,4µm,18.0s						
MORC	Moravsky Berou	37.97	335	*e*P	P	15 37 45.8	-0.7
	comp=Z,48nm,1.3s						
MORC				LR	LR		
	comp=Z,1µm,22.0s						
MORC	Moravsky Berou	37.97	335	⇓*i*P	P	15 37 46.4	-0.1
MORC	Moravsky Berou	37.97	335	*e*P	P	15 37 45.8	-0.7
MORC				pmax	pmax		
	comp=Z,48nm,1.3s						
MORC				MLR	MLR		
	comp=Z,1µm,22.0s						
MORC	Moravsky Berou	37.97	335	*e*P	P	15 37 46.1	-0.4
MORC				*e*S	S	15 43 39.1	+0.4
TOC5	Torodi Ar. Sit	37.98	270	PFAKE		15 38 00.0	+13
TOC5				LR	LR		
	comp=Z,7µm,22.0s						
VRAC	Vranov	38.00	334	P	P	15 37 46.7	0.0
	comp=Z,15nm,1.0s,baz=147,slow=7.4,SNR=3.8						
VRAC	Vranov	38.00	334	⇑*i*P	P	15 37 46.8	+0.1
VRAC	Vranov	38.00	334	P	P	15 37 46.8	+0.1
VRAC	Vranov	38.00	334	*e*P	P	15 37 46.2	-0.5
VRAC				*e*S	S	15 43 40.2	+1.2
ABTA	Abfaltersbach	38.03	328	*e*P	P	15 37 47.8	+0.7
	comp=Z,23nm,1.4s,SNR=11						
KSH	Kashi	38.05	46	P	P	15 37 43.8	-3.6
KSH				pP	pP	15 37 48.0	-1.4
KSH				sP	sP	15 37 51.0	+0.8
KSH				PP	PP	15 39 11.7	-2.6
KSH				PcP	PcP	15 40 02.6	-0.2
KSH				S	S	15 43 32.2	-8.1
KSH				SS	SnSn	15 46 06.5	-16
KSH				ScS	ScS	15 47 55.1	-5.3
KSH				pmax	pmax		
	comp=Z,15nm,1.3s						
KSH				pmax	pmax		
	comp=Z,170nm,6.5s						
KSH				LR	LR		
	comp=Z,3µm,16.3s						
KSH				LR	LR		
	comp=Z,2µm,17.5s						
KSH				LR	LR		
	comp=Z,3µm,24.0s						
OBN	Obninsk	38.46	356	P	P	15 37 50.1	-0.3
	comp=Z,2.2nm,0.3s,baz=202,slow=6.8,SNR=7.5						
OBN	Obninsk	38.46	356	*e*P	P	15 37 50.1	-0.3
	comp=Z,127nm,1.5s						
OBN				LR	LR		
	comp=Z,2µm,18.0s						
OBN	Obninsk	38.46	356	*e*P	P	15 37 50.6	+0.2
OBN				*e*		15 39 18.6	
OBN				*e*PPP	PPP	15 39 37.8	
OBN				*e*S	S	15 43 44.7	-1.0
OBN				*e*SS	SS	15 46 32.6	-2.3
OBN				pmax	pmax		
	comp=Z,51nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
TREC	Trest	38.46	333	*e*P	P	15 37 50.1	-0.5
TREC				*e*		15 37 53.0	
TREC	Trest	38.46	333	*e*P	P	15 37 50.1	-0.5
TREC				*e*pP	pP	15 37 53.0	+0.3
AAK	Ala-Archa	38.59	41	*e*P	P	15 37 52.6	+0.6
	comp=Z,22nm,1.1s						

AAK				LR	LR		
	comp=Z,4µm,20.0s						
AAK	**Ala-Archa**	**38.59**	**41**	*i* P	**P**	**15 37 53.4**	**+1.4**
	SNR=24						
AAK	**Ala-Archa**	**38.59**	**41***c*	*e*P	**P**	**15 37 53.3**	**+1.4**
AAK				pmax	pmax		
	comp=Z,64nm,2.1s						
AAK	**Ala-Archa**	**38.59**	**41**	P	**P**	**15 37 53.6**	**+1.6**
	SNR=30						
AAK				P	**P**	**15 37 53.6**	**+1.6**
	SNR=30						
FRU1	**Bishkek**	**38.77**	**41**	PFAKE		15 38 00.0	+6.7
FRU1				LR	LR		
	comp=Z,5µm,22.0s						
WTTA	**Wattenberg**	**38.83**	**328**	*e*P	**P**	**15 37 54.0**	**+0.1**
	comp=Z,22nm,1.5s,SNR=12						
WATA	**Walderalm**	**38.91**	**328**	*e*P	**P**	**15 37 54.8**	**+0.3**
	comp=Z,22nm,1.0s,SNR=5.2						
DPC	**Dobruska-Polom**	**38.91**	**335**	*e*P	**P**	**15 37 54.1**	**-0.3**
DPC				*e*		15 37 57.2	
DPC				*e*S	**S**	**15 43 54.0**	**+1.1**
DPC				MLR	MLR		
	comp=Z,1µm,14.1s						
DPC	**Dobruska-Polom**	**38.91**	**335**	*e*P	**P**	**15 37 54.1**	**-0.3**
DPC				*e*pP	**sP**	**15 37 57.2**	**0.0**
DPC				*e*S	**S**	**15 43 54.0**	**+1.1**
DPC				AMS	AMS	15 58 40.0	
	comp=Z,1µm,14.1s						
GEC2	**GERESS Array S**	**38.92**	**331**	*e*P	**P**	**15 37 53.9**	**-0.7**
	comp=Z,53nm,1.1s						
GEC2				LR	LR		
	comp=Z,1µm,22.0s						
GEC2	**GERESS Array S**	**38.92**	**331**	*e*P	**P**	**15 37 53.9**	**-0.7**
GEC2				pmax	pmax		
	comp=Z,53nm,1.1s						
GEC2				MLR	MLR		
	comp=Z,1µm,22.0s						
GERES	**GERESS Array B**	**38.92**	**331**	P	**P**	**15 37 54.1**	**-0.5**
	comp=Z,21nm,0.9s,baz=126,slow=6.8,SNR=67						
GERES				LR	LR	15 56 05.7	
	comp=Z,895nm,20.4s,baz=132,slow=40						
SQTA	**Sankt Quirin**	**39.02**	**328**	*e*P	**P**	**15 37 55.2**	**-0.1**
	comp=Z,20nm,1.3s,SNR=6.8						
MICGM	**Minsk**	**39.02**	**348**⇓	*e*P	**P**	**15 37 55.0**	**-0.1**
MICGM				PM		15 37 56.0	
	comp=Z,0.2nm,1.0s						
MICGM				*e*LR	LR	15 51 40.0	
MNK	**Minsk**	**39.02**	**348**⇓	*e*P	**P**	**15 37 55.0**	**-0.1**
MNK				pmax	pmax		
	comp=Z,150nm,1.0s						
MOS	**Moscow**	**39.02**	**357**	*e*P	**P**	**15 37 54.1**	**-1.0**
MOS				*e*		15 39 25.7	
MOS				pmax	pmax		
	comp=Z,200nm,2.1s						
MOS				pmax	pmax		
	comp=Z,90nm,1.7s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
SGDS	**Sogindy**	**39.11**	**40**	*e*P	**P**	**15 37 56.2**	**+0.1**
	comp=Z,157nm,3.0s						
SGDS				*e*S	**S**	**15 43 58.5**	**+2.5**
	comp=Z,112nm,5.9s						
SGDS				*e*LR	LR	15 55 52.3	
	comp=Z,2µm,12.9s						
OSTC	**Ostas**	**39.12**	**335**	*e*P	**P**	**15 37 56.8**	**+0.7**
OSTC				*e*x	x	15 37 59.8	
OSTC				AMS	AMS	15 58 50.0	
	comp=Z,1µm,19.5s						
FUORN	**Ofenpass-Fuorn**	**39.12**	**326**	*e*P	**P**	**15 37 56.6**	**+0.1**
	comp=Z,37nm,1.1s						
FETA	**Feichten**	**39.13**	**327**	*e*P	**P**	**15 37 56.7**	**+0.2**
	comp=Z,37nm,1.1s,SNR=16						
MOTA	**Moosalm**	**39.15**	**328**	*e*P	**P**	**15 37 56.4**	**-0.1**
	comp=Z,18nm,0.9s,SNR=5.2						
UPC	**Upice**	**39.16**	**335**	*e*P	**P**	**15 37 56.4**	**0.0**
UPC				*e*S	**S**	**15 43 54.0**	**-2.6**
UPC				MLR	MLR		
	comp=Z,900nm,14.6s						
UPC	**Upice**	**39.16**	**335**	*e*P	**P**	**15 37 56.4**	**0.0**
UPC				*e*S	**S**	**15 43 54.0**	**-2.6**
UPC				AMS	AMS	16 03 00.0	
	comp=Z,900nm,14.6s						
KHC	**Kasperske Hory**	**39.19**	**332**	*e*P	**P**	**15 37 55.2**	**-1.4**
	comp=Z,8.1nm,0.9s						
KHC				LR	LR		
	comp=Z,600nm,22.0s						
KHC	**Kasperske Hory**	**39.19**	**332**	*e*P	**P**	**15 37 55.5**	**-1.2**
KHC				*e*S	**S**	**15 43 56.2**	**-0.8**
KHC	**Kasperske Hory**	**39.19**	**332**	*e*P	**P**	**15 37 55.5**	**-1.2**
KHC				*e*x	x	15 38 04.5	
KHC				*e*S	**S**	**15 43 56.2**	**-0.8**
CHVC	**Chvalec**	**39.21**	**335**	*e*P	**P**	**15 37 56.1**	**-0.7**
CHVC				AMS	AMS	15 59 00.0	
	comp=Z,1µm,17.2s						
GOPC	**GO Pecny, Ondr**	**39.22**	**333**	*e*P	**P**	**15 37 56.8**	**-0.2**
GOPC				*e*		15 38 00.1	
GOPC				*e*S	**S**	**15 43 53.1**	**-4.5**
GOPC				MLR	MLR		
	comp=Z,1µm,12.9s						
GOPC	**GO Pecny, Ondr**	**39.22**	**333**	*e*P	**P**	**15 37 56.8**	**-0.2**
GOPC				*e*pP	**sP**	**15 38 00.1**	**+0.3**
GOPC				*e*S	**S**	**15 43 53.1**	**-4.5**
GOPC				AMS	AMS	16 01 40.0	
	comp=Z,1µm,12.9s						
KSP	**Ksiaz**	**39.31**	**335**	*e*P	**P**	**15 37 57.2**	**-0.4**
KSP				*e*S	**S**	**15 44 00.6**	**+1.8**
KSP				LMZ	LR	15 50 27.2	
	comp=Z,2µm,42.2s						
KSP	**Ksiaz**	**39.31**	**335**	*e*P	**P**	**15 37 57.2**	**-0.4**
KSP				*e*S	**S**	**15 44 00.6**	**+1.8**
PRU	**Pruhonice**	**39.38**	**333**	*e*P	**P**	**15 37 58.8**	**+0.5**
PRU				*e*		15 38 03.9	
PRU				*e*		15 39 28.4	
PRU				*e*S	**S**	**15 43 54.4**	**-5.5**
PRU				MLR	MLR		
	comp=Z,900nm,13.2s						
PRU	**Pruhonice**	**39.38**	**333**	*e*P	**P**	**15 37 58.8**	**+0.5**
PRU				*e*pP	**sP**	**15 38 03.9**	**+2.8**
PRU				*e*PP	**PP**	**15 39 28.4**	**-0.2**
PRU				*e*S	**S**	**15 43 54.4**	**-5.5**
PRU				AMS	AMS	16 01 30.0	
	comp=Z,900nm,13.2s						
FRF	**La Foret Royal**	**39.42**	**320**	*e*P	**P**	**15 37 57.5**	**-1.2**
FRF				pmax	pmax		
	comp=Z,28nm,1.1s						
RETA	**Reutte**	**39.42**	**328**	*e*P	**P**	**15 37 57.9**	**-0.8**
	comp=Z,7.4nm,1.0s,SNR=7.0						
TKM2	**Tokmak 2**	**39.43**	**41**	*i* P	**P**	**15 37 58.3**	**-0.8**
TKM2				pmax	pmax		
	comp=Z,13nm,1.0s						
BOOM	**Boomskoye usch**	**39.43**	**42**	*e*P	**P**	**15 38 00.2**	**+1.2**
	comp=Z,58nm,1.4s						
BOOM				LR	LR		
	comp=Z,3µm,19.0s						
TUE	**Stuetta**	**39.52**	**325**	*e*P	**P**	**15 37 59.0**	**-0.7**
	comp=Z,30nm,1.2s						
BTLS	**Baital**	**39.63**	**37***c*	*i*P	**P**	**15 38 01.0**	**+0.6**
BTLS				*e*S	**S**	**15 43 57.7**	**-6.1**
BTLS				pmax	pmax		
	comp=Z,56nm,2.0s						
BTLS				smax	smax		
	comp=E,46nm,5.4s						
BTLS				MLR	MLR		
	comp=Z,1µm,13.0s						
BTLS	**Baital**	**39.63**	**37**⇑	*i*P	**P**	**15 38 01.1**	**+0.6**
	comp=Z,56nm,2.0s						
BTLS				*e*S	**S**	**15 43 57.7**	**-6.1**
	comp=Z,46nm,5.4s						
BTLS				*e*LR	LR	15 56 20.4	
	comp=Z,1µm,12.8s						
SUW	**Suwalki**	**39.67**	**344**	*e*P	**P**	**15 38 00.7**	**+0.1**
SUW	**Suwalki**	**39.67**	**344**	*e*P	**P**	**15 37 59.9**	**-0.7**
	comp=Z,69nm,1.0s						
SUW				LR	LR		
	comp=Z,2µm,20.0s						
SUW	**Suwalki**	**39.67**	**344**	*e*P	**P**	**15 37 59.9**	**-0.7**
SUW				pmax	pmax		
	comp=Z,69nm,1.0s						
SUW				MLR	MLR		
	comp=Z,2µm,20.0s						
DAVA	**Damuels**	**39.75**	**327**	*e*P	**P**	**15 38 01.3**	**-0.2**
	comp=Z,41nm,1.0s,SNR=18						
PVCC	**Panska Ves**	**39.78**	**334**	*e*P	**P**	**15 38 01.8**	**+0.3**
PVCC				MLR	MLR		
	comp=Z,1µm,11.9s						
PVCC	**Panska Ves**	**39.78**	**334**	*e*P	**P**	**15 38 01.8**	**+0.3**
PVCC				AMS	AMS	16 01 10.0	
	comp=Z,1µm,11.9s						
MBDF	**Montbardon**	**39.97**	**322**	*e*P	**P**	**15 38 03.9**	**+0.5**
MBDF				pmax	pmax		
	comp=Z,24nm,0.8s						
PALK	**Pallekele**	**40.03**	**99**	LR	LR	15 53 09.2	
	comp=Z,897nm,18.3s,baz=312,slow=34						
PALK	**Pallekele**	**40.03**	**99**	PFAKE		15 38 20.0	+16
PALK				LR	LR		
	comp=Z,1µm,19.0s						
GRC1	**Grafenberg Arr**	**40.05**	**330**	P	**P**	**15 38 04.1**	**+0.2**
KDJ	**Kajisay**	**40.06**	**43**	*e*P	**P**	**15 38 04.6**	**+0.3**
	comp=Z,80nm,1.6s						
KDJ				LR	LR		
	comp=Z,3µm,20.0s						
IIGN	**Ignalina**	**40.15**	**347**	*e*P	**P**	**15 38 03.0**	**-1.6**
BNI	**Bardonecchia**	**40.21**	**322**	*e*P	**P**	**15 38 03.8**	**-1.6**
	comp=Z,59nm,1.6s						
BNI				LR	LR		
	comp=Z,900nm,18.0s						
BNI	**Bardonecchia**	**40.21**	**322**	*e*P	**P**	**15 38 03.8**	**-1.6**
BNI				pmax	pmax		
	comp=Z,59nm,1.6s						
BNI				MLR	MLR		
	comp=Z,900nm,18.0s						
BRG	**Berggiesshubel**	**40.30**	**334**	*i* P	**P**	**15 38 05.2**	**-0.7**
	comp=Z,31nm,1.2s						
BRG				*e*PP	**PP**	**15 39 37.4**	**-1.1**
	comp=Z,55nm,2.0s						
BRG				S	**S**	**15 44 12.0**	**-1.6**
	comp=N,941nm,11.9s						
	comp=E,891nm,15.5s						
	comp=Z,1µm,13.8s						
BRG	**Berggiesshubel**	**40.30**	**334**	*i* P	**P**	**15 38 05.2**	**-0.7**
BRG				*e*		15 39 37.4	
BRG				S	**S**	**15 44 12.0**	**-1.6**
BRG				pmax	pmax		
	comp=Z,31nm,1.2s						
BRG				pmax	pmax		
	comp=Z,55nm,2.1s						
BRG				MLR	MLR		
	comp=N,941nm,11.9s						
BRG				MLR	MLR		
	comp=E,891nm,15.5s						
BRG				MLR	MLR		
	comp=Z,1µm,13.8s						
TNSS	**Tian-Shan**	**40.35**	**42**	*e*P	**P**	**15 38 07.6**	**+0.7**
TNSS	**Tian-Shan**	**40.35**	**42**	*e*P	**P**	**15 38 07.6**	**+0.7**
ISAL	**Salakas**	**40.38**	**347**	*e*P	**P**	**15 38 04.5**	**-1.9**
PYUN	**Piuthan**	**40.39**	**66**	*e*P	**P**	**15 38 07.4**	**+0.2**
	comp=Z,86nm,0.8s						
KUU	**Kurty**	**40.39**	**40**	*e*P	**P**	**15 38 08.6**	**+1.8**
KUU				*e*S	**S**	**15 44 22.3**	**+7.0**
KUU				pmax	pmax		
	comp=Z,178nm,3.2s						
KUU				smax	smax		
	comp=N,143nm,4.6s						
KUU				MLR	MLR		
	comp=Z,3µm,15.0s						
KUU	**Kurty**	**40.39**	**40**	*e*P	**P**	**15 38 08.7**	**+1.8**
	comp=Z,178nm,3.2s						
KUU				*e*S	**S**	**15 44 22.3**	**+7.0**
	comp=Z,143nm,4.6s						
KUU				*e*LR	LR	15 56 33.0	
	comp=Z,3µm,14.9s						
LPG	**La Plagne**	**40.41**	**323**	*e*P	**P**	**15 38 06.2**	**-1.0**
LPG				pmax	pmax		
	comp=Z,12nm,0.8s						
LPL	**La Plagne**	**40.43**	**323**	*e*P	**P**	**15 38 05.5**	**-1.8**
LPL				pmax	pmax		
	comp=Z,16nm,0.9s						
NKC	**Novy Kostel**	**40.49**	**332**	*e*P	**P**	**15 38 05.7**	**-1.8**
NKC				*e*		15 38 07.9	
NKC				*e*S	**S**	**15 44 12.6**	**-3.9**
NKC				MLR	MLR		
	comp=Z,1µm,11.6s						
NKC	**Novy Kostel**	**40.49**	**332**	*e*P	**P**	**15 38 05.7**	**-1.8**
NKC				*e*pP	**pP**	**15 38 07.9**	**-1.7**
NKC				*e*S	**S**	**15 44 12.6**	**-3.9**
NKC				AMS	AMS	16 02 30.0	
	comp=Z,1µm,11.6s						
IZAR	**Zarasai**	**40.52**	**347**	*e*P	**P**	**15 38 06.8**	**-0.8**
SENIN	**Lac Senin/Sane**	**40.59**	**324**	*e*P	**P**	**15 38 07.4**	**-1.2**
	comp=Z,42nm,1.2s						
SENIN				LR	LR		
	comp=Z,700nm,21.0s						
GRA1	**Grafenberg Arr**	**40.67**	**330**	*e*P	**P**	**15 38 08.3**	**-0.7**
	comp=Z,26nm,1.1s						
GRA1				LR	LR		
	comp=Z,600nm,20.0s						
GRF	**Grafenberg Arr**	**40.67**	**330**	*e*P	**P**	**15 38 08.3**	**-0.7**
GRF				pmax	pmax		
	comp=Z,27nm,1.1s						
GRF				MLR	MLR		
	comp=Z,600nm,20.0s						
GRFO	**Grafenberg**	**40.67**	**330**	PFAKE		15 38 20.0	+11
GRFO				LR	LR		
	comp=Z,400nm,21.0s						
CHKK	**Chushkaly**	**40.78**	**41**	*e*P	**P**	**15 38 09.9**	**0.0**
CHKK	**Chushkaly**	**40.78**	**41**	*e*P	**P**	**15 38 10.0**	**0.0**
SLE	**Schleitheim**	**40.78**	**326**	P	**P**	**15 38 09.8**	**-0.2**
KOLN	**Koldanda**	**40.89**	**67**	*e*P	**P**	**15 38 11.4**	**+0.1**
	comp=Z,160nm,0.8s						
CLL	**Collm**	**41.02**	**333**	*e*P	**P**	**15 38 10.6**	**-1.2**
	comp=Z,19nm,1.0s						
CLL				LR	LR		
	comp=Z,900nm,21.0s						
CLL	**Collm**	**41.02**	**333**⇓	*i*P	**P**	**15 38 10.6**	**-1.2**
CLL				*i*		15 38 13.9	
CLL				*e*S	**S**	**15 44 22.0**	**-2.3**
CLL				pmax	pmax		
	comp=Z,33nm,1.4s						
CLL				MLR	MLR		
	comp=Z,900nm,19.5s						
CLL	**Collm**	**41.02**	**333**⇓	*i*P	**P**	**15 38 10.6**	**-1.2**
	comp=Z,33nm,1.4s						
CLL				*i* pP	**pP**	**15 38 13.9**	**0.0**
CLL				*i*		15 38 27.5	
CLL				*e*PP	**PP**	**15 39 43.0**	**-3.4**
CLL				*e*		15 40 00.0	
CLL				*e*PPPP		15 40 17.0	
CLL				*e*S	**S**	**15 44 22.0**	**-2.3**
CLL				*e*SS	**SS**	**15 47 30.0**	**+3.7**
CLL				Lm	MLR	16 00 00.0	
	comp=Z,900nm,19.5s						
STU	**Stuttgart**	**41.05**	**328**	PFAKE		15 38 20.0	+7.9
STU				LR	LR		
	comp=Z,1µm,20.0s						
DANN	**Dangsing**	**41.09**	**66**	*e*P	**P**	**15 38 13.3**	**+0.2**
	comp=Z,232nm,0.8s						
BFO	**Black Forest**	**41.22**	**327**	*e*P	**P**	**15 38 12.7**	**-0.9**
	comp=Z,42nm,1.2s						
BFO	**Black Forest**	**41.22**	**327**	*i* P	**P**	**15 38 14.1**	**+0.6**
SATY	**Saty**	**41.30**	**43**	*e*P	**P**	**15 38 15.0**	**+0.6**
SATY				*e*S	**S**	**15 44 32.6**	**+3.6**
SATY				pmax	pmax		
	comp=Z,126nm,2.3s						
SATY				smax	smax		
	comp=E,86nm,4.2s						
SATY				MLR	MLR		
	comp=Z,2µm,16.0s						
SATY	**Saty**	**41.30**	**43**	*e*P	**P**	**15 38 15.1**	**+0.6**
	comp=Z,126nm,2.3s						
SATY				*e*S	**S**	**15 44 32.6**	**+3.6**
	comp=Z,86nm,4.2s						
SATY				*e*LR	LR	15 57 03.0	
	comp=Z,2µm,15.5s						
VIVF	**Saint-Julien-l**	**41.31**	**321**	*e*P	**P**	**15 38 12.9**	**-1.4**
VIVF				pmax	pmax		
	comp=Z,11nm,1.3s						
CABF	**La Chapelle**	**41.42**	**324**	*e*P	**P**	**15 38 13.8**	**-1.5**
CABF				pmax	pmax		
	comp=Z,50nm,1.1s						
LOMF	**Lomont**	**41.43**	**325**	P	**P**	**15 38 15.8**	**+0.4**
SSB	**Saint Sauveur**	**41.60**	**321**	*e*P	**P**	**15 38 15.5**	**-1.3**
	comp=Z,15nm,0.8s						
SSB				LR	LR		
	comp=Z,600nm,20.0s						
SSB	**Saint Sauveur**	**41.60**	**321**	*e*P	**P**	**15 38 15.5**	**-1.3**
SSB				pmax	pmax		
	comp=Z,15nm,0.8s						
SSB				MLR	MLR		
	comp=Z,600nm,20.0s						
KPKS	**Kokpek**	**41.67**	**42***c*	*i*P	**P**	**15 38 17.6**	**+0.2**
KPKS				pmax	pmax		
	comp=Z,85nm,2.2s						
KPKS	**Kokpek**	**41.67**	**42**⇑	*i*P	**P**	**15 38 17.6**	**+0.2**
	comp=Z,85nm,2.2s						
KPKS				*e*S	S	15 44 51.4	+17
HINF	**Hinteralfeld**	**41.69**	**325**	*e*P	**P**	**15 38 16.2**	**-1.3**
HINF				pmax	pmax		
	comp=Z,30nm,1.2s						
UZB	**Uzynbulak**	**41.74**	**43***c*	*i*P	**P**	**15 38 18.6**	**+0.5**
UZB				*e*S	S	15 44 45.4	+10
UZB				pmax	pmax		
	comp=Z,86nm,2.2s						
UZB				MLR	MLR		
	comp=Z,1µm,16.0s						
UZB	**Uzynbulak**	**41.74**	**43**⇑	*i*P	**P**	**15 38 18.6**	**+0.5**
	comp=Z,86nm,2.2s						
UZB				*e*S	S	15 44 45.4	+10
UZB				*e*LR	LR	15 57 15.6	
	comp=Z,1µm,15.5s						
ECH	**Echery**	**41.77**	**326**	*e*P	**P**	**15 38 17.2**	**-0.9**
	comp=Z,27nm,1.2s						
ECH	**Echery**	**41.77**	**326**	*e*P	**P**	**15 38 17.2**	**-0.9**
ECH				pmax	pmax		
	comp=Z,27nm,1.2s						
TOD	**Tromm**	**41.79**	**329**	P	**P**	**15 38 17.4**	**-0.8**
CDF	**Champ du Feu**	**41.82**	**326**	*e*P	**P**	**15 38 17.4**	**-1.2**
CDF				pmax	pmax		
	comp=Z,31nm,1.3s						
GKN	**Gorkha**	**41.82**	**67**	*e*P	**P**	**15 38 18.4**	**-0.6**
	comp=Z,41nm,0.7s						
ARU	**Arti**	**41.85**	**15**	P	**P**	**15 38 18.7**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=192,slow=6.8,SNR=19						
ARU	**Arti**	**41.85**	**15**	*e*P	**P**	**15 38 18.4**	**-0.2**
	comp=Z,83nm,1.5s						
ARU	**Arti**	**41.85**	**15***d*	*i*P	**P**	**15 38 19.0**	**+0.5**
ARU						15 39 54.1	
ARU						15 40 15.3	
ARU				S	**S**	**15 44 39.2**	**+2.7**
ARU				SS	**SS**	**15 47 40.2**	**-2.4**
ARU				pmax	pmax		
	comp=Z,29nm,1.2s						
ARU				MLR	MLR		
	comp=Z,3µm,16.0s						
LANF	**Langenberg**	**41.90**	**327**	P	**P**	**15 38 19.3**	**+0.2**
BRZS	**Berezniki**	**41.93**	**31***c*	*e*P	**P**	**15 38 19.7**	**+0.4**
BRZS				pmax	pmax		
	comp=Z,145nm,3.0s						
BRZS				MLR	MLR		
	comp=Z,2µm,16.0s						
BRZS	**Berezniki**	**41.93**	**31**⇑	*e*P	**P**	**15 38 19.8**	**+0.4**
	comp=Z,145nm,3.0s						
BRZS				*e*LR	LR	15 56 32.0	
	comp=Z,2µm,16.5s						
HAU	**Haudompre**	**42.08**	**325**	*e*P	**P**	**15 38 19.3**	**-1.3**
HAU				pmax	pmax		
	comp=Z,14nm,1.0s						
MTLF	**Montolieu**	**42.12**	**317**	*e*P	**P**	**15 38 22.4**	**+1.4**
MTLF				pmax	pmax		
	comp=Z,16nm,1.6s						
PDGK	**Podgornoye**	**42.13**	**43**	*i* P	**P**	**15 38 21.0**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,19nm,1.1s						
DMN	**Daman**	**42.20**	**67**	*e*P	**P**	**15 38 21.8**	**-0.4**
	comp=Z,54nm,0.7s						
KIRV	**Kirov**	**42.28**	**7**	P	**P**	**15 38 21.8**	**-0.2**
	comp=Z,8.6nm,0.5s,baz=172,slow=10,SNR=8.1						
TNS	**Taunus Mts**	**42.36**	**329**	P	**P**	**15 38 25.9**	**+3.0**
KKN	**Kakani**	**42.37**	**67**	*e*P	**P**	**15 38 23.2**	**-0.3**
	comp=Z,97nm,0.7s						
TSUM	**Tsumeb**	**42.40**	**214**	LR	LR	15 56 42.6	
	comp=Z,4µm,20.0s,baz=30,slow=37						
TSUM	**Tsumeb**	**42.40**	**214**	PFAKE		15 38 30.0	+6.4
TSUM				LR	LR		
	comp=Z,6µm,19.0s						
PKIN	**Phulchoki**	**42.45**	**67**	*e*P	**P**	**15 38 23.6**	**-0.6**
	comp=Z,49nm,0.7s						
PKI	**Pulchoki**	**42.46**	**67**	*e*P	**P**	**15 38 23.8**	**-0.6**
	comp=Z,56nm,0.7s						
SVE	**Sverdlovsk**	**42.73**	**16**	*e*P	**P**	**15 38 26.3**	**+0.6**
SVE				*e*S	**S**	**15 44 54.5**	**+5.0**
SVE				pmax	pmax		
	comp=Z,40nm,1.4s						
SVE				MLR	MLR		
	comp=Z,2µm,18.0s						
SMF	**Signal de Mont**	**42.73**	**322**	*e*P	**P**	**15 38 25.1**	**-0.9**
SMF				pmax	pmax		
	comp=Z,17nm,1.0s						
GUN	**Gumba**	**42.91**	**67**	*e*P	**P**	**15 38 27.7**	**-0.3**
	comp=Z,202nm,1.1s						
CAF	**Calviac**	**42.95**	**319**	*e*P	**P**	**15 38 27.0**	**-0.8**
CAF				pmax	pmax		
	comp=Z,30nm,1.2s						
BRVK	**Borovoye**	**42.97**	**26**	*e*P	**P**	**15 38 27.5**	**-0.2**
	comp=Z,25nm,1.1s						
BRVK				LR	LR		
	comp=Z,2µm,20.0s						
BRVK	**Borovoye**	**42.97**	**26**	*i* P	**P**	**15 38 27.8**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,38nm,2.0s						
BRVK	**Borovoye**	**42.97**	**26**	P	**P**	**15 38 28.3**	**+0.5**
	SNR=19						
BVAR	**Borovoye Array**	**42.99**	**26**	P	**P**	**15 38 27.7**	**-0.2**
	baz=216,slow=6.2						
LOR	**Lormes**	**43.06**	**323**	*e*P	**P**	**15 38 27.2**	**-1.4**
LOR				pmax	pmax		
	comp=Z,58nm,1.2s						
MELI	**Melilla**	**43.08**	**304**	*e*P	**P**	**15 38 30.6**	**+1.7**
MELI				*e*S	**S**	**15 44 57.4**	**+2.3**
AVF	**Avril sur Loir**	**43.10**	**322**	*e*P	**P**	**15 38 27.2**	**-1.7**
AVF				pmax	pmax		
	comp=Z,24nm,1.1s						
SSF	**Saint Saulge**	**43.15**	**323**	*e*P	**P**	**15 38 27.7**	**-1.6**
SSF				pmax	pmax		
	comp=Z,25nm,1.0s						
JIRN	**Jiri**	**43.16**	**67**	*e*P	**P**	**15 38 29.4**	**-0.7**
	comp=Z,157nm,1.0s						
WLF	**Walferdange**	**43.17**	**327**	*e*P	**P**	**15 38 29.0**	**-0.4**
	comp=Z,159nm,1.1s						
WLF	**Walferdange**	**43.17**	**327**	*e*P	**P**	**15 38 29.0**	**-0.4**
WLF				pmax	pmax		
	comp=Z,159nm,1.1s						
WLF	**Walferdange**	**43.17**	**327**	⇑P	**P**	**15 38 29.0**	**-0.4**
EPF	**Esparros**	**43.22**	**316**	*e*P	**P**	**15 38 28.4**	**-1.6**
EPF				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BGF	**Bois d'Agland**	**43.28**	**322**	*e*P	**P**	**15 38 29.4**	**-0.9**
BGF				pmax	pmax		
	comp=Z,72nm,1.1s						
RGN	**Rugen**	**43.32**	**337**	PFAKE		15 38 40.0	+10
RGN				LR	LR		
	comp=Z,1µm,20.0s						
RJF	**Les Rejaudoux**	**43.47**	**319**	*e*P	**P**	**15 38 32.0**	**+0.1**
RJF				pmax	pmax		
	comp=Z,34nm,1.2s						
TCF	**Toulx Ste Croi**	**43.52**	**321**	*e*P	**P**	**15 38 34.1**	**+1.8**
TCF				pmax	pmax		
	comp=Z,18nm,1.3s						
ETSF	**Etsaut**	**43.77**	**315**	*e*P	**P**	**15 38 33.9**	**-0.6**
ETSF				pmax	pmax		
	comp=Z,29nm,1.0s						
LFF	**La Frestale**	**43.79**	**319**	*e*P	**P**	**15 38 33.7**	**-0.8**
LFF				pmax	pmax		
	comp=Z,18nm,0.8s						
MEM	**Membach**	**43.82**	**328**	P	**P**	**15 38 34.9**	**+0.3**
MEM	**Membach**	**43.82**	**328**	⇑P	**P**	**15 38 35.2**	**+0.6**
BCLA	**Clavier**	**44.06**	**328**	⇑P	**P**	**15 38 37.0**	**+0.4**
	comp=Z,49nm,1.4s						
LBTB	**Lobatse**	**44.07**	**200**	LR	LR	15 55 33.2	
	comp=Z,3µm,19.1s,baz=22,slow=34						
LBTB	**Lobatse**	**44.07**	**200**	*e*P	**P**	**15 38 36.7**	**-0.3**
	comp=Z,21nm,1.1s						
LBTB	**Lobatse**	**44.07**	**200**	*e*P	**P**	**15 38 36.7**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,21nm,1.1s						
GIVF	**Givet**	**44.12**	**327**	*e*P	**P**	**15 38 36.0**	**-1.1**
GIVF				pmax	pmax		
	comp=Z,23nm,0.9s						
PVLZ	**Peæn de**	**44.14**	**303**	*e*S	**S**	**15 45 07.5**	**-3.2**
DOU	**Dourbes**	**44.24**	**327**	⇑P	**P**	**15 38 37.4**	**-0.6**
	comp=Z,17nm,1.2s						
CLF	**Chambon-Foret**	**44.38**	**323**	*e*P	**P**	**15 38 38.8**	**-0.3**
	comp=Z,80nm,1.1s						
BAIF	**Baives**	**44.42**	**327**	*e*P	**P**	**15 38 39.1**	**-0.3**
BAIF				pmax	pmax		
	comp=Z,37nm,1.1s						
IFR	**Ifrane**	**44.48**	**301**	*e*P	**P**	**15 38 40.2**	**-0.2**
IFR				*e*S	**S**	**15 45 18.8**	**+2.7**

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EMAL  Malaga-Limoner    44.61 306  eP      P       15 38 38.7 -2.4
EMAL                               eS      S       15 45 17.4 -0.1
SNF   Seneffe           44.64 327 ⇑P       P       15 38 41.3 +0.2
      comp=Z,42nm,1.0s
PRGR  Permogore         44.99   3  eP      P       15 38 42.9 -0.9
PRGR                                pmax   pmax
      comp=Z,33nm,0.9s
ESDC  Sonseca Array     45.05 310   P      P       15 38 44.7  0.0
      comp=Z,7.0nm,0.7s,baz=103,slow=7.2,SNR=45
ESDC                                LR     LR      16 00 00.7
      comp=Z,758nm,18.0s,baz=170,slow=39
ESLA  Sonseca Array     45.05 310  eP      P       15 38 43.8 -0.9
      comp=Z,30nm,1.3s
ESLA                                LR     LR
      comp=Z,1µm,20.0s
MFF   Saint Martin d    45.10 320  eP      P       15 38 43.4 -1.6
MFF                                 pmax   pmax
      comp=Z,14nm,1.0s
CEU   Ceuta             45.15 304  eP      P       15 38 37.5 -7.9
CEU                                eS      S       15 45 23.5 -1.8
MAKZ  Makanchi          45.28  39  eP      P       15 38 46.6 +0.2
      comp=Z,26nm,0.9s
MAKZ                                LR     LR
      comp=Z,3µm,18.0s
MAKZ  Makanchi          45.28  39  eP      P       15 38 46.6 +0.2
MAKZ                                pmax   pmax
      comp=Z,26nm,0.9s
MAKZ                                MLR    MLR
      comp=Z,3µm,18.0s
PAB   San Pablo         45.29 309  eP      P       15 38 45.9 -0.8
      comp=Z,20nm,1.0s
PAB                                 LR     LR
      comp=Z,2µm,19.0s
PAB   San Pablo         45.29 309  eP      P       15 38 45.9 -0.8
PAB                                 pmax   pmax
      comp=Z,20nm,1.0s
PAB                                 MLR    MLR
      comp=Z,2µm,19.0s
KURK  Kurchatov         45.39  33  eP      P       15 38 47.6 +0.4
      comp=Z,41nm,1.3s
KURK                                LR     LR
      comp=Z,2µm,22.0s
KURK  Kurchatov         45.39  33  i P     P       15 38 47.4 +0.2
KURK                                pmax   pmax
      comp=Z,43nm,1.4s
KURK  Kurchatov         45.39  33   P      P       15 38 48.1 +0.9
      SNR=30
WIN   Windhoek          45.44 211   PFAKE          15 39 00.0  +12
WIN                                 LR     LR
      comp=Z,3µm,20.0s
MK31  Makanchi Array    45.47  40  eP      P       15 38 48.1 +0.2
      comp=Z,71nm,1.8s
MK31  Makanchi Array    45.47  40  eP      P       15 38 48.1 +0.2
MK31                                pmax   pmax
      comp=Z,71nm,1.8s
MK32  Makanchi Array    45.47  40  eP      P       15 38 48.2 +0.3
MKAR  Makanchi Array    45.47  40   P      P       15 38 48.2 +0.3
      comp=Z,4.8nm,0.4s,baz=233,slow=8.2,SNR=82
MKAR                                LR     LR      16 00 20.3
      comp=Z,3µm,18.8s,baz=240,slow=39
KIC   Kosan Boka        45.73 262  eP      P       15 38 48.7 -1.7
      comp=Z,110nm,0.9s
DBIC  Dimbokro          45.75 263   P      P       15 38 48.9 -1.7
      comp=Z,57nm,0.9s,baz=60,slow=9.1,SNR=26
DBIC                                LR     LR      15 57 43.2
      comp=Z,5µm,18.0s,baz=56,slow=36
DBIC  Dimbokro          45.75 263  eP      P       15 38 48.7 -1.9
      comp=Z,75nm,1.0s
DBIC  Dimbokro          45.75 263  eP      P       15 38 48.7 -1.9
DBIC                                pmax   pmax
      comp=Z,75nm,1.0s
FIA0  FINESS Array S    45.89 350  eP      P       15 38 50.4 -0.5
FIA0  FINESS Array S    45.89 350  eP      P       15 38 50.4 -0.5
FINES FINESS Array B    45.89 350   P      P       15 38 50.4 -0.5
      comp=Z,6.8nm,0.7s,baz=149,slow=9.9,SNR=13
FINES                               LR     LR      15 59 41.9
      comp=Z,969nm,18.7s,baz=150,slow=38
FINES FINESS Array B    45.89 350  i P     P       15 38 50.9  0.0
FINES                               pmax   pmax
      comp=Z,7.0nm,0.6s
TIC   Toumodi           45.91 263  eP      P       15 38 50.0 -1.9
SFS   San Fernando      45.93 305   PFAKE          15 39 00.0 +8.4
SFS                                 LR     LR
      comp=Z,3µm,19.0s
SFS   San Fernando      45.93 305  eS      S       15 45 40.5 +3.9
RTC   Rabat Centre      45.98 301   PFAKE          15 39 00.0 +7.9
RTC                                 LR     LR
      comp=Z,21µm,18.0s
LDF   La Druitiere      46.03 323  eP      P       15 38 50.3 -2.0
LDF                                 pmax   pmax
      comp=Z,35nm,1.1s
LIC   Lamto             46.05 262  eP      P       15 38 51.1 -1.8
      comp=Z,210nm,1.0s
MUD   Monsted U'grnd    46.32 336  i P     P       15 38 55.2 +0.8
MUD                                 pmax   pmax
      comp=Z,41nm,0.9s
MUD   Monsted U'grnd    46.32 336  i P     P       15 38 55.2 +0.8
      comp=Z,41nm,0.9s
FLN   La Foliniere      46.33 323  eP      P       15 38 52.6 -2.0
FLN                                 pmax   pmax
      comp=Z,57nm,1.0s
GRR   Gorron            46.37 322  eP      P       15 38 56.4 +1.5
GRR                                 pmax   pmax
      comp=Z,53nm,1.4s
SGMF  Saint Gilles      47.31 321  eP      P       15 39 05.1 +2.8
SGMF                                pmax   pmax
      comp=Z,26nm,1.2s
ZSN   Zaisan            47.34  40  eP      P       15 39 03.7 +1.1
ZSN                                eS      S       15 46 00.6 +4.0
ZSN   Zaisan            47.34  40  eP      P       15 39 03.7 +1.1
ZSN                                eS      S       15 46 00.6 +4.0
PBDV  Barranco-do-Ve    47.45 305  eP      P       15 39 03.6  0.0
      comp=Z,67nm,1.5s
BOSA  Boshof            47.53 199   LR     LR      15 58 59.1
      comp=Z,4µm,18.2s,baz=23,slow=36
PMRV  Marv??o           47.53 308  eP      P       15 39 03.6 -0.6
      comp=Z,32nm,1.1s
PMRV                               eS      S       15 46 00.2 +0.7
PMRV                               eSS     SS      15 49 35.4 +8.1
PMRV                               eLR     LR      15 56 38.8
      comp=Z,1µm,16.0s
PBEJ  Beja              47.56 306  eP      P       15 39 05.1 +0.6
      comp=Z,30nm,1.2s
HFS   Hagfors           47.60 342   P      P       15 39 02.9 -1.4
      comp=Z,3.7nm,0.7s,baz=157,slow=8.0,SNR=5.8
PCVE  Castro Verde      47.61 306  eP      P       15 39 04.4 -0.4
      comp=Z,24nm,1.4s
LSA   Lhasa             47.66  65  eP      P       15 39 05.8 -0.1
      comp=Z,93nm,1.8s
LSA                                 LR     LR
      comp=Z,2µm,22.0s
LSA   Lhasa             47.66  65   P      P       15 39 06.1 +0.2
LSA                                 S      S       15 46 01.8 -0.8
LSA                                 pmax   pmax
      comp=Z,69nm,1.5s
LSA                                 LR     LR
      comp=Z,7µm,19.2s
LSA                                 LR     LR
      comp=Z,6µm,18.5s
LSA                                 LR     LR
      comp=Z,9µm,21.4s
LSA   Lhasa             47.66  65   P      P       15 39 06.1 +0.2
LSA   Lhasa             47.66  65  eP      P       15 39 05.8 -0.1
LSA                                 pmax   pmax
      comp=Z,93nm,1.8s
LSA                                 MLR    MLR
      comp=Z,2µm,22.0s
PBRG  Braganca          47.69 312  eP      P       15 39 08.5 +3.0
      comp=Z,26nm,1.7s
PCBR  Castelo Branco    47.70 309  eP      P       15 39 05.4  0.0
      comp=Z,27nm,1.3s
MVO   Moncorvo          47.72 311  eP      P       15 39 05.3 -0.4
      comp=Z,26nm,1.3s
MVO                                eS      S       15 46 05.8 +3.6
MVO                                eSS     SS      15 49 38.9 +8.5
MVO                                eLR     LR      15 57 09.8
      comp=Z,1µm,20.0s
WMQ   Urumqi            47.80  45   PFAKE          15 39 20.0  +14
WMQ                                 LR     LR
      comp=Z,2µm,20.0s
WMQ   Urumqi            47.80  45  eP      P       15 39 09.0 +2.7
WMQ                                 pP     sP      15 39 12.7 +3.6
WMQ                                 S      S       15 46 02.5 -0.9
WMQ                                 pmax   pmax
      comp=Z,36nm,1.3s
WMQ                                 pmax   pmax
      comp=Z,150nm,3.6s
WMQ                                 LR     LR
      comp=Z,4µm,22.9s
WMQ                                 LR     LR
      comp=Z,2µm,20.1s
WMQ                                 LR     LR
      comp=Z,3µm,25.7s
MTE   Manteigas         47.89 310  eP      P       15 39 06.3 -0.7
      comp=Z,30nm,1.6s
MTE                                eS      S       15 45 51.2  -13
MTE                                eSS     SS      15 49 34.3 +1.0
MTE                                eLR     LR      15 57 09.1
      comp=Z,1µm,16.0s
MTE   Manteigas         47.89 310  eP      P       15 39 06.4 -0.7
      comp=Z,18nm,1.1s
MTE                                 LR     LR
      comp=Z,2µm,20.0s
MORF  Marmelete         48.02 305  eS      S       15 46 06.2 -0.5
MORF                                AMS    AMS     15 58 28.7
      comp=E,2µm,19.5s
PMTG  Montargil         48.07 308  eP      P       15 39 07.9 -0.5
      comp=E,19nm,1.0s
PNCL  Nicolau / Gran    48.09 306  eP      P       15 39 08.3 -0.2
      comp=E,33nm,1.4s
PFVI  Vila Bisbo        48.12 305   PFAKE          15 39 20.0  +11
PFVI                                LR     LR
      comp=Z,2µm,18.0s
SHL   Shillong          48.17  70  eP      P       15 39 08.2 -1.3
      comp=Z,96nm,1.6s
SHL                                 LR     LR
      comp=Z,3µm,19.0s
SHL   Shillong          48.17  70  eP      P       15 39 08.2 -1.3
SHL                                 pmax   pmax
      comp=Z,96nm,1.6s
SHL                                 MLR    MLR
      comp=Z,3µm,19.0s
PVIS  Viseu             48.23 310  eP      P       15 39 09.3 -0.3
      comp=Z,40nm,1.2s
POLO  Lamas de Olo      48.33 311  eP      P       15 39 10.5  0.0
      comp=Z,22nm,1.2s
ALMR  Almeirim          48.36 308  eP      P       15 39 09.6 -0.9
ALMR                               eS      S       15 46 10.8 -0.5
ALMR                                AMS    AMS     15 57 43.0
      comp=N,2µm,26.0s
ALMR  Almeirim          48.36 308  eP      P       15 39 09.7 -0.9
      comp=N,62nm,1.3s
ALMR  Almeirim          48.36 308  eP      P       15 39 09.6 -0.9
ALMR                               eS      S       15 46 10.7 -0.5
COI   Coimbra           48.48 309   PFAKE          15 39 20.0 +8.5
COI                                 LR     LR
      comp=Z,2µm,20.0s
NC602 NORSAR Array S    48.73 341  eP      P       15 39 11.5 -1.6
      comp=Z,146nm,1.8s
STRD  Stroud            48.74 326  eP      P       15 39 13.1 -0.2
PGAV  Gavieira, Arco    48.83 311  eP      P       15 39 14.7 +0.4
      comp=Z,51nm,1.3s
PGAV                               eS      S       15 46 15.8 -2.2
PGAV                               eSS     SS      15 49 49.7 +1.2
PGAV                               eLR     LR      15 57 20.3
      comp=Z,2µm,22.0s
NAO01 NORSAR Array S    49.01 341  eP      P       15 39 14.4 -0.8
      comp=Z,170nm,1.5s
NB2   NORSAR Subarra    49.06 341   P      P       15 39 13.9 -1.8
      comp=Z,6.3nm,0.9s,baz=118,slow=8.6
NB200 NORSAR Array S    49.06 341  eP      P       15 39 14.2 -1.5
NOA   NORSAR Array B    49.06 341   P      P       15 39 14.2 -1.5
      comp=Z,5.5nm,1.0s,baz=138,slow=8.0,SNR=9.7
NOA                                 LR     LR      16 02 32.2
      comp=Z,830nm,18.9s,baz=150,slow=39
MONM  Monmouth          49.12 326  eP      P       15 39 14.8 -1.4
MONM                                IAmb   IAmb    15 39 16.2
      comp=Z,17nm,0.8s
NBO00 NORSAR Array S    49.19 341  eP      P       15 39 15.5 -1.1
      comp=Z,176nm,1.8s
SIMRM Sittwe            49.33  78   PFAKE          15 39 30.0  +12
SIMRM                               LR     LR
      comp=Z,500nm,20.0s
NC204 NORSAR Array S    49.39 341  eP      P       15 39 16.9 -1.3
      comp=Z,131nm,1.8s
GDLE  Glaisdale, N Y    49.43 329  eP      P       15 39 17.9 -0.6
GDLE                                IAmb   IAmb    15 39 21.6
      comp=Z,59nm,0.9s
HLM1  Long Mynd         49.49 326  eP      P       15 39 18.3 -0.8
HLM1                                IAmb   IAmb    15 39 21.8
      comp=Z,18nm,0.9s
DGZ   Jazzator, Alta    49.83  38c iP      P       15 39 22.1 +0.2
DGZ                                 pmax   pmax
      comp=Z,12nm,0.8s
FOEL  Foel Wylfa        49.85 327  eP      P       15 39 21.3 -0.5
FOEL                                IAmb   IAmb    15 39 25.0
      comp=Z,27nm,0.9s
LLW   Llanuwychllyn     50.07 326⇑eP       P       15 39 22.7 -0.7
EDMD  Edmundbyers       50.21 329  eP      P       15 39 23.1 -1.4
EDMD                                IAmb   IAmb    15 39 24.7
      comp=Z,29nm,0.7s
ZAA0  Zalesovo Array    50.34  32  eP      P       15 39 24.6 -0.8
      comp=Z,52nm,1.1s
ZALV  Zalesovo Beam     50.34  32   P      P       15 39 24.9 -0.5
      comp=Z,20nm,0.7s,baz=244,slow=8.2,SNR=83
ZALV                                LR     LR      16 03 15.7
      comp=Z,4µm,18.5s,baz=244,slow=39
ZAA1  Zalesovo Array    50.34  32  eP      P       15 39 24.9 -0.5
PBA   Port Blair        50.46  89   PFAKE          15 39 40.0  +13
PBA                                 LR     LR
      comp=Z,3µm,18.0s
BHH   Howats Hill       50.96 329⇑eP       P       15 39 30.0 -0.2
APA   Apatity           51.04 356⇓iP       P       15 39 29.6 -1.0
APA                                 pmax   pmax
      comp=Z,10.0nm,0.8s
APA                                 MLR    MLR
      comp=Z,1µm,15.0s
EKA   Eskdalemuir Ar    51.06 329   P      P       15 39 30.0 -0.9
      comp=Z,6.2nm,0.7s,baz=119,slow=7.3,SNR=36
ESK   Eskdalemuir       51.07 329  eP      P       15 39 29.6 -1.4
      comp=Z,12nm,0.9s
ESK                                 LR     LR
      comp=Z,500nm,20.0s
ESK   Eskdalemuir       51.07 329⇑eP       P       15 39 29.8 -1.2
ESK                                 IAmb   IAmb    15 39 33.6
      comp=Z,12nm,1.0s
ESK   Eskdalemuir       51.07 329  i P     P       15 39 30.8 -0.2
ESY   Stoneypath        51.10 330⇑eP       P       15 39 30.4 -0.8
IOMK  Kirk Michael      51.23 328  eP      P       15 39 31.8 -0.4
IOMK                                IAmb   IAmb    15 39 35.2
      comp=Z,26nm,0.9s
LVZ   Lovozero          51.30 357   PFAKE          15 39 40.0 +7.4
LVZ                                 LR     LR
      comp=Z,2µm,21.0s
EDI   Edinburgh         51.38 330  eP      P       15 39 32.8 -0.4
GAL1  Galloway          51.59 328  eP      P       15 39 33.9 -1.0
GAL1                                IAmb   IAmb    15 39 35.2
      comp=Z,7.3nm,0.9s
DSB   Dublin            51.71 326  eP      P       15 39 34.8 -0.9
      comp=Z,17nm,1.0s
DSB                                 LR     LR
      comp=Z,800nm,20.0s
INVG  Invergeldie, C    52.05 330  eP      P       15 39 37.3 -1.0
INVG                                IAmb   IAmb    15 39 41.1
      comp=Z,11nm,0.8s
EAB   Aberfoyle         52.07 330  eP      P       15 39 37.7 -0.7
CLGH  Cloghs, Cushen    52.41 328  eP      P       15 39 40.1 -0.9
SUR   Sutherland        52.46 201   PFAKE          15 39 50.0 +8.2
SUR                                 LR     LR
      comp=Z,4µm,20.0s
ARA0  ARCESS Array S    53.65 353  eP      P       15 39 48.5 -1.5
ARCES ARCESS Array B    53.65 353   P      P       15 39 48.5 -1.5
      comp=Z,4.7nm,0.8s,baz=188,slow=3.7,SNR=8.0
ARCES                               LR     LR      16 03 37.7
      comp=Z,827nm,20.7s,baz=148,slow=37
ARE0  ARCESS Array S    53.65 353   PFAKE          15 40 00.0  +10
ARE0                                LR     LR
      comp=Z,100nm,18.0s
PMOZ  Porto Moniz, M    54.45 299  eS      S       15 47 35.9 +0.1
PMOZ                               eSS     SS      15 51 49.8  +32
PMOZ                               eLR     LR      16 00 59.8
      comp=Z,2µm,18.0s
CHTO  Chiang Mai        55.16  78   PFAKE          15 40 10.0 +8.3
CHTO                                LR     LR
      comp=Z,1µm,21.0s
CMMT  Chiang Mai        55.16  78   P      P       15 40 03.2 +1.4
      comp=Z,5.2nm,2.9s,comp=Z,237nm
CM31  Chiang Mai Arr    55.20  79   P      P       15 40 02.2 +0.1
      SNR=7.2
CMAR  Chiang Mai Arr    55.20  79   P      P       15 40 01.3 -0.8
      comp=Z,4.0nm,1.0s,baz=283,slow=8.0,SNR=21
GTA   Gaotai            55.70  53  eP      P       15 40 05.6 +0.1
GTA                                 pP     sP      15 40 09.9 +1.6
GTA                                 sP     pP      15 40 13.5 +6.0
GTA                                 S      S       15 47 57.5 +5.1
GTA                                 pmax   pmax
      comp=Z,18nm,1.3s
GTA                                 pmax   pmax
      comp=Z,240nm,6.2s
GTA                                 LR     LR
      comp=Z,1µm,15.8s
GTA                                 LR     LR
      comp=Z,2µm,18.9s
GTA                                 LR     LR
      comp=Z,3µm,18.2s
PAYA  Payao             55.95  78   P      P       15 40 08.3 +0.8
      comp=Z,27µm,0.9s,comp=Z,315µm
UTTA  Uttaradit         56.82  79   P      P       15 40 16.0 +2.4
      comp=Z,17µm,1.3s
KMI   Kunming           58.00  71   P      P       15 40 21.8 -0.3
KMI                                 pP     sP      15 40 26.2 +1.2
KMI                                 sP     pP      15 40 27.5 +3.3
KMI                                 S      S       15 48 24.0 +0.6
KMI                                 sS     sS      15 48 30.7 +3.9
KMI                                 SS     SS      15 52 13.7 -0.8
KMI                                 pmax   pmax
      comp=Z,15nm,0.9s
KMI                                 pmax   pmax
      comp=Z,290nm,4.8s
KMI                                 LR     LR
      comp=Z,1µm,21.6s
KMI                                 LR     LR
      comp=Z,560nm,22.2s
KMI                                 LR     LR
      comp=Z,980nm,21.6s
CD2   Chengdu           58.59  64   P      P       15 40 25.3 -0.7
CD2                                 sP     sP      15 40 32.0 +3.2
CD2                                 PP     PP      15 42 39.0 +3.5
CD2                                 S      S       15 48 29.2 -1.4
CD2                                 sS     sS      15 48 35.5 +1.5
CD2                                 SS     SS      15 52 26.2 +3.0
CD2                                 pmax   pmax
      comp=Z,30nm,0.5s
CD2                                 pmax   pmax
      comp=Z,200nm,6.4s
CD2                                 LR     LR
      comp=Z,3µm,19.8s
CD2                                 LR     LR
      comp=Z,2µm,22.0s
CD2                                 LR     LR
      comp=Z,2µm,16.9s
MOY   Mondy             58.61  39  eP      P       15 40 29.5 +3.6
MOY                                 pmax   pmax
      comp=Z,77nm,2.3s
LZH   Lanzhou           58.66  58 ⇑P       P       15 40 26.9 +0.4
LZH                                 pP     sP      15 40 30.8 +1.4
LZH                                 sP     pP      15 40 32.8 +4.2
LZH                                 S      S       15 48 27.0 -4.6
LZH                                 sS     sS      15 48 38.9 +3.9
LZH                                 pmax   pmax
      comp=Z,25nm,1.4s
LZH                                 pmax   pmax
      comp=Z,130nm,4.8s
LZH                                 LR     LR
      comp=Z,2µm,16.8s
LZH                                 LR     LR
      comp=Z,2µm,17.3s
LZH                                 LR     LR
      comp=Z,3µm,19.5s
PSI   Prapat            58.67  97  eP      P       15 40 27.6 +0.7
      comp=Z,66nm,1.7s
PSI                                 LR     LR
      comp=Z,1µm,21.0s
PSI   Prapat            58.67  97  eP      P       15 40 27.6 +0.7
PSI                                 pmax   pmax
      comp=Z,66nm,1.7s
PSI                                 MLR    MLR
      comp=Z,1µm,21.0s
NONG  Nongkai           59.21  79   P      P       15 40 29.7 -0.7
      comp=Z,0.7nm,1.4s
SLVN  Son La            59.46  75  eP      P       15 40 32.4 +0.3
      comp=Z,44nm,1.8s
SLVN                                LR     LR
      comp=Z,1µm,22.0s
KULM  Kulim             59.59  94  eP      P       15 40 33.6 +0.5
      comp=Z,46nm,1.4s
KULM                                LR     LR
      comp=Z,1µm,18.0s
ZAK   Zakamensk         59.76  41  eP      P       15 40 32.9 -0.9
ZAK                                 pmax   pmax
      comp=Z,10.0nm,2.0s
IPM   Ipoh              60.18  94   PFAKE          15 40 50.0  +13
IPM                                 LR     LR
      comp=Z,800nm,21.0s
TLY   Talaya            60.23  40   PFAKE          15 40 50.0  +13
TLY                                 LR     LR
      comp=Z,4µm,18.0s
TLY   Talaya            60.23  40  eP      P       15 40 37.2 +0.3
TLY                                e               15 42 51.6
TLY                                ePPP    PPP     15 44 26.7
TLY                                eS      S       15 48 57.3 +6.2
TLY                                 pmax   pmax
      comp=Z,71nm,2.1s
TLY                                 MLR    MLR
      comp=Z,10µm,18.0s
TLY   Talaya            60.23  40   P      P       15 40 37.3 +0.4
      SNR=15
TLY                                 P      P       15 40 37.3 +0.4
      SNR=15
IRK   Irkutsk           60.72  39  eP      P       15 40 41.1 +0.9
IRK                                 pmax   pmax
      comp=Z,94nm,2.9s
GYA   Guiyang           61.41  69⇑iP       P       15 40 44.2 -1.3
GYA                                 PcP    PcP     15 41 24.7 -3.0
GYA                                 PP     PP      15 43 02.9 +2.3
GYA                                 ScP    ScP     15 45 24.3 -5.6
GYA                                 S      S       15 49 05.8 -1.3
GYA                                 pmax   pmax
      comp=Z,30nm,1.0s
GYA                                 pmax   pmax
      comp=Z,200nm,6.4s
GYA                                 LR     LR
      comp=Z,700nm,15.4s
GYA                                 LR     LR
      comp=Z,600nm,15.1s
GYA                                 LR     LR
      comp=Z,700nm,18.6s
SONA0 Songino Array     61.41  44  eP      P       15 40 45.8 +0.6
SONM  Songino Array     61.41  44   P      P       15 40 45.8 +0.6
      comp=Z,14nm,0.8s,baz=260,slow=7.5,SNR=49
SONM                                LR     LR      16 11 00.7
      comp=Z,3µm,18.4s,baz=268,slow=40
SACV  Santiago Islan    61.78 278   PFAKE          15 41 00.0  +12
SACV                                LR     LR
      comp=Z,2µm,18.0s
ULN   Ulaanbaatar       61.85  44  eP      P       15 40 47.8 -0.4
      comp=Z,21nm,1.1s
ULN                                 LR     LR
      comp=Z,3µm,18.0s
ULN   Ulaanbaatar       61.85  44  i P     P       15 40 48.1 -0.1
ULN                                 pmax   pmax
      comp=Z,65nm,2.3s
ULN   Ulaanbaatar       61.85  44   P      P       15 40 48.1 -0.1
      SNR=21
ULN                                 P      P       15 40 48.1 -0.1
      SNR=21
SPA0  Spitsbergen Ar    62.63 354  eP      P       15 40 53.0 +0.3
      comp=Z,110nm,1.3s
SPITS Spitsbergen Ar    62.63 354   P      P       15 40 53.3 +0.6
      comp=Z,30nm,0.7s,baz=142,slow=9.6,SNR=23
XAN   Xi'an             62.84  60  eP      P       15 40 53.7 -1.2
      comp=Z,19nm,0.9s
XAN                                 LR     LR
      comp=Z,2µm,18.0s
XAN   Xi'an             62.84  60   P      P       15 40 53.8 -1.2
XAN                                 pP     sP      15 41 03.0 +5.2
XAN                                 sP     pP      15 41 07.2  +10
XAN                                 S      S       15 49 12.5  -12
XAN                                 pmax   pmax
      comp=Z,12nm,1.6s
XAN                                 pmax   pmax
      comp=Z,150nm,5.1s
XAN                                 LR     LR
      comp=Z,2µm,17.9s
XAN                                 LR     LR
      comp=Z,1µm,18.8s
XAN                                 LR     LR
      comp=Z,2µm,13.7s
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XAN	**Xi'an**	**62.84**	**60**	*e*P	**P**	**15 40 53.7**	**-1.2**
XAN				pmax	pmax		
	comp=Z,19nm,0.9s						
XAN				MLR	MLR		
	comp=Z,2µm,18.0s						
ENH	**Enshi**	**63.55**	**64**	*e*P	**P**	**15 40 58.9**	**-0.8**
	comp=Z,82nm,1.8s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
BTO	**Baotou**	**63.59**	**53**	*e*P	**P**	**15 41 02.9**	**+3.0**
MYKOM	**Kota Tinggi**	**63.66**	**96**	*e*P	**P**	**15 40 59.8**	**-0.8**
	comp=Z,13nm,0.8s						
MYKOM				LR	LR		
	comp=Z,600nm,21.0s						
MYKOM	**Kota Tinggi**	**63.66**	**96**	P	**P**	**15 41 01.0**	**+0.4**
KBS	**Kingsbay**	**63.72**	**354**	PFAKE		15 41 10.0	+10
KBS				LR	LR		
	comp=Z,1µm,20.0s						
KBS	**Kingsbay**	**63.72**	**354**	*ce*P	**P**	**15 41 00.8**	**+0.9**
KBS				pmax	pmax		
	comp=Z,169nm,2.5s						
HHC	**Hu-ho-hao-te**	**64.76**	**52**	P	**P**	**15 41 08.4**	**+0.8**
HHC				S	**S**	**15 49 47.2**	**-1.5**
HHC				sS	sS	15 49 54.9	+2.8
HHC				SS	**SS**	**15 54 00.2**	**+0.6**
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,420nm,5.8s						
HHC				LR	LR		
	comp=Z,600nm,14.9s						
HHC				LR	LR		
	comp=Z,2µm,18.8s						
HHC				LR	LR		
	comp=Z,3µm,18.4s						
QIZ	**Qiongzhong**	**65.32**	**76**	PFAKE		15 41 20.0	+8.6
QIZ				LR	LR		
	comp=Z,800nm,21.0s						
QIZ	**Qiongzhong**	**65.32**	**76**	P	**P**	**15 41 09.8**	**-1.6**
QIZ				S	**S**	**15 49 54.9**	**-1.0**
QIZ				SS	**SS**	**15 54 08.6**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
QIZ				LR	LR		
	comp=Z,720nm,20.6s						
QIZ				LR	LR		
	comp=Z,750nm,18.1s						
QIZ				LR	LR		
	comp=Z,760nm,17.3s						
SCO	**Scoresbysund**	**65.38**	**341**	*e*P	**P**	**15 41 10.4**	**-0.5**
	comp=Z,20nm,1.3s						
SCO				LR	LR		
	comp=Z,600nm,19.0s						
SCO	**Scoresbysund**	**65.38**	**341**	*e*P	**P**	**15 41 10.4**	**-0.5**
SCO				pmax	pmax		
	comp=Z,20nm,1.3s						
SCO				MLR	MLR		
	comp=Z,600nm,19.0s						
DLV	**T Lat**	**65.45**	**84**	*e*P	**P**	**15 41 11.5**	**-1.0**
	comp=Z,118nm,1.9s						
DLV				LR	LR		
	comp=Z,1µm,20.0s						
BOD	**Bodaibo**	**67.04**	**34**	*e*P	**P**	**15 41 20.4**	**-1.3**
BOD				pmax	pmax		
	comp=Z,53nm,1.8s						
WHN	**Wuhan**	**67.71**	**63**	P	**P**	**15 41 21.9**	**-4.6**
WHN				S	**S**	**15 50 21.4**	**-3.2**
WHN				SS	**SS**	**15 54 48.6**	**+3.1**
WHN				LR	LR		
	comp=Z,4µm,19.4s						
WHN				LR	LR		
	comp=Z,4µm,19.6s						
WHN				LR	LR		
	comp=Z,3µm,17.1s						
HKPS	**Hong Kong Po S**	**68.72**	**72**	PFAKE		15 41 40.0	+7.0
HKPS				LR	LR		
	comp=Z,800nm,20.0s						
TIA	**Tai'an**	**69.39**	**57**	P	**P**	**15 41 40.4**	**+3.5**
TIA				pmax	pmax		
	comp=Z,19nm,1.7s						
KSM	**Kuching**	**69.92**	**95**	*e*P	**P**	**15 41 40.2**	**-0.3**
	comp=Z,33nm,1.0s						
KSM				LR	LR		
	comp=Z,500nm,21.0s						
KSM	**Kuching**	**69.92**	**95**	P	**P**	**15 41 42.0**	**+1.5**
ANGG	**Ammassalik, Gr**	**70.15**	**334**	PFAKE		15 41 50.0	+9.0
ANGG				LR	LR		
	comp=Z,500nm,19.0s						
HIA	**Hailar**	**70.31**	**43**	PFAKE		15 41 50.0	+7.6
HIA				LR	LR		
	comp=Z,3µm,19.0s						
NJ2	**Nanjing**	**71.33**	**61**	*e*P	**P**	**15 41 49.5**	**+0.6**
NJ2				pP	**sP**	**15 41 53.2**	**+1.5**
NJ2				S	**S**	**15 51 11.9**	**+4.7**
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.7s						
NJ2				LR	LR		
	comp=Z,2µm,16.1s						
NJ2				LR	LR		
	comp=Z,2µm,15.2s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
SBUM	**Sibu**	**71.46**	**93**	*e*P	**P**	**15 41 49.5**	**-0.5**
	comp=Z,34nm,1.7s						
SBUM				LR	LR		
	comp=Z,400nm,20.0s						
SBUM	**Sibu**	**71.46**	**93**	P	**P**	**15 41 52.0**	**+2.1**
KNMB	**Chin-men Tao**	**72.17**	**69**	PFAKE		15 42 10.0	+16
KNMB				LR	LR		
	comp=Z,800nm,20.0s						
QZH	**Quanzhou**	**72.27**	**69**	*e*P	**P**	**15 41 53.6**	**-1.0**
QZH				S	**S**	**15 51 22.7**	**+4.4**
QZH				LR	LR		
	comp=Z,910nm,17.1s						
QZH				LR	LR		
	comp=Z,960nm,17.7s						
QZH				LR	LR		
	comp=Z,1µm,15.7s						
DL2	**Dalian**	**72.62**	**54**	P	**P**	**15 42 00.4**	**+3.9**
DL2				S	**SKiKP**	**15 51 27.5**	**-4.2**
DL2				SS	**SS**	**15 56 01.4**	**+0.6**
DL2				pmax	pmax		
	comp=Z,30nm,1.4s						
DL2				pmax	pmax		
	comp=Z,290nm,3.6s						
DL2				LR	LR		
	comp=Z,2µm,19.7s						
DL2				LR	LR		
	comp=Z,1µm,22.1s						
DL2				LR	LR		
	comp=Z,2µm,20.3s						
SNY	**Shenyang**	**73.70**	**51**	⇑P	**P**	**15 42 02.2**	**-0.6**
SNY				PP	**PP**	**15 44 50.8**	**+3.8**
SNY				S	**S**	**15 51 37.5**	**+3.5**
SNY				pmax	pmax		
	comp=Z,200nm,8.2s						
SNY				LR	LR		
	comp=Z,850nm,16.5s						
SNY				LR	LR		
	comp=Z,3µm,17.8s						
SNY				LR	LR		
	comp=Z,4µm,17.3s						
KKM	**Kota Kinabalu**	**74.30**	**88**	*e*P	**P**	**15 42 06.7**	**-0.2**
	comp=Z,129nm,1.8s						
KKM				LR	LR		
	comp=Z,800nm,20.0s						
KKM	**Kota Kinabalu**	**74.30**	**88**	P	**P**	**15 42 08.0**	**+1.1**
TPUB	**Ta-pu**	**74.41**	**70**	PFAKE		15 42 20.0	+13
TPUB				LR	LR		
	comp=Z,800nm,22.0s						
ZEA	**Zeya**	**74.59**	**38**	*e*P	**P**	**15 42 10.8**	**+3.0**
ZEA				*e*S	**S**	**15 51 48.0**	**+4.4**
ZEA				*e*PS	**PnS**	**15 52 19.0**	**+1.9**
ZEA				pmax	pmax		
	comp=Z,100nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,4.0s						
ZEA				smax	smax		
	comp=E,500nm,8.0s						
ZEA				smax	smax		
	comp=N,400nm,10.0s						
ZEA				MLR	MLR		
	comp=E,1µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
SSLB	**Suanglung**	**74.61**	**69**	PFAKE		15 42 20.0	+12
SSLB				LR	LR		
	comp=Z,700nm,20.0s						
CN2	**Changchun**	**74.78**	**48**	*e*P	**P**	**15 42 12.9**	**+3.8**
CN2				*e*sP	PcP	15 42 20.0	-3.2
CN2				*e*S	**S**	**15 51 47.9**	**+1.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,3µm,20.0s						
YHNB	**Yeheng**	**74.80**	**68**	PFAKE		15 42 20.0	+10
YHNB				LR	LR		
	comp=Z,1µm,18.0s						
TATO	**Taipei**	**74.84**	**68**	PFAKE		15 42 20.0	+10
TATO				LR	LR		
	comp=Z,700nm,18.0s						
YAK	**Yakutsk**	**74.85**	**29**	*e*P	**P**	**15 42 08.6**	**-0.4**
	comp=Z,14nm,0.9s						
YAK				LR	LR		
	comp=Z,1µm,19.0s						
YAK	**Yakutsk**	**74.85**	**29**	*e*P	**P**	**15 42 09.6**	**+0.5**
YAK				*e**PP	**sP**	**15 42 15.3**	**+3.4**
YAK				*e*		15 42 25.9	
YAK				*e*		15 44 54.7	
YAK				*e*PPP	PPP	15 46 43.1	
YAK				*e*S	**S**	**15 51 47.8**	**+1.7**
YAK				*e*		15 52 24.0	
YAK				*e*SS	**SS**	**15 56 40.4**	**+6.8**
YAK				*e*SSS	SSS	15 59 56.1	
TWG	**Pinlang**	**74.91**	**70**	PFAKE		15 42 20.0	+10
TWG				LR	LR		
	comp=Z,3µm,22.0s						
YULB	**Yu-li**	**74.99**	**70**	PFAKE		15 42 20.0	+9.3
YULB				LR	LR		
	comp=Z,700nm,20.0s						
NACB	**Ninganchiao**	**75.10**	**69**	PFAKE		15 42 20.0	+8.7
NACB				LR	LR		
	comp=Z,1µm,18.0s						
ILULI	**Ilulissat**	**75.20**	**338**	PFAKE		15 42 20.0	+9.1
ILULI				LR	LR		
	comp=Z,700nm,19.0s						
SFJD	**Kangerlussuaq**	**75.33**	**336**	PFAKE		15 42 20.0	+8.3
SFJD				LR	LR		
	comp=Z,800nm,18.0s						
YOJ	**Yonaguni jima**	**76.30**	**68**	PFAKE		15 42 30.0	+12
YOJ				LR	LR		
	comp=Z,800nm,20.0s						
MDJ	**Mudanjiang**	**77.58**	**47**	PFAKE		15 42 40.0	+15
MDJ				LR	LR		
	comp=Z,2µm,18.0s						
MDJ	**Mudanjiang**	**77.58**	**47**	P	**P**	**15 42 29.0**	**+4.0**
MDJ				pP	PcP	15 42 33.7	-1.5
MDJ				sP	sP	15 42 36.0	+8.1
MDJ				PP	**PP**	**15 45 24.0**	**+4.4**
MDJ				S	**S**	**15 52 19.8**	**+3.0**
MDJ				sS	sS	15 52 25.1	+4.8
MDJ				pmax	pmax		
	comp=Z,18nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,3.3s						
MDJ				LR	LR		
	comp=Z,2µm,17.3s						
MDJ				LR	LR		
	comp=Z,960nm,15.7s						
MDJ				LR	LR		
	comp=Z,2µm,18.2s						
KS15	**Wonju Array Si**	**77.73**	**54**	*e*P	**P**	**15 42 25.2**	**-0.7**
	comp=Z,69nm,1.6s						
KSRS	**Korea Array**	**77.76**	**54**	P	**P**	**15 42 25.2**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=272,slow=6.5,SNR=11						
KSRS				LR	LR	16 22 26.4	
	comp=Z,1µm,18.8s,baz=280,slow=40						
TULEG	**Thule**	**78.32**	**347**	PFAKE		15 42 40.0	+12
TULEG				LR	LR		
	comp=Z,600nm,19.0s						
RCBR	**Riachuelo**	**79.06**	**261**	PFAKE		15 42 40.0	+6.2
RCBR				LR	LR		
	comp=Z,1µm,18.0s						
USRK	**Ussuriysk Ar.**	**79.34**	**47**	P	**P**	**15 42 34.5**	**-0.2**
	comp=Z,3.8nm,0.8s,baz=280,slow=4.2,SNR=12						
USRK				LR	LR	16 21 39.2	
	comp=Z,1µm,18.1s,baz=275,slow=39						
GRNR	**Gornyy**	**80.69**	**40**	*e*P	**P**	**15 42 43.4**	**+1.5**
KAPI	**Kappang**	**80.86**	**98**	LR	LR	16 15 49.1	
	comp=Z,223nm,19.9s,baz=120,slow=34						
KAPI	**Kappang**	**80.86**	**98**	*e*P	**P**	**15 42 41.5**	**-2.0**
	comp=Z,103nm,1.6s						
KAPI				LR	LR		
	comp=Z,500nm,20.0s						
KAPI	**Kappang**	**80.86**	**98**	*e*P	**P**	**15 42 41.5**	**-2.0**
KAPI				pmax	pmax		
	comp=Z,103nm,1.6s						
KAPI				MLR	MLR		
	comp=Z,500nm,20.0s						
KAPI	**Kappang**	**80.86**	**98**	P	**P**	**15 42 46.5**	**+3.1**
	SNR=6.4						
DRLN	**Deer Lake**	**82.83**	**319**	*e*P	**P**	**15 42 51.6**	**-1.6**
	comp=Z,15nm,0.8s						
RES	**Resolute Bay**	**84.65**	**349**	PFAKE		15 43 10.0	+8.0
RES				LR	LR		
	comp=Z,600nm,20.0s						
INU	**Inuyama**	**85.38**	**55**	*e*P	**P**	**15 43 05.2**	**-1.3**
	comp=Z,41nm,1.2s						
INU				LR	LR		
	comp=Z,1µm,22.0s						
MA2	**Magadan**	**85.41**	**29**	PFAKE		15 43 20.0	+14
MA2				LR	LR		
	comp=Z,2µm,18.0s						
SYO	**Syowa Base**	**85.50**	**180**	⇑*e*PcP	**PcP**	**15 43 10.0**	**+0.9**
MAW	**Mawson**	**85.63**	**172**	P	**P**	**15 43 06.9**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=296,slow=8.3,SNR=6.4						
MAW				LR	LR	16 17 12.0	
	comp=Z,626nm,19.9s,baz=330,slow=33						
MAW	**Mawson**	**85.63**	**172**	*e*P	**P**	**15 43 06.8**	**+0.1**
	comp=Z,12nm,1.9s						
MAW				LR	LR		
	comp=Z,100nm,20.0s						
MAW	**Mawson**	**85.63**	**172**	*e*P	**P**	**15 43 06.9**	**+0.1**
MAW				pmax	pmax		
	comp=Z,12nm,1.9s						
MAW				MLR	MLR		
	comp=Z,100nm,20.0s						
MORW	**Morawa**	**85.64**	**122**	*e*P	**P**	**15 43 07.0**	**-0.8**
	comp=Z,73nm,1.8s						
YSS	**Yuzh-Sakhalins**	**85.82**	**42**	PFAKE		15 43 20.0	+12
YSS				LR	LR		
	comp=Z,2µm,19.0s						
YSS	**Yuzh-Sakhalins**	**85.82**	**42**	*e*P	**P**	**15 43 05.7**	**-2.7**
YSS				*e*		15 46 29.4	
YSS				*e*S	**S**	**15 53 34.3**	**-7.6**
YSS				*e*SS	**SS**	**15 59 23.1**	**+4.9**
MJB9	**Matsu-Tunnel**	**85.94**	**53**	*e*P	**P**	**15 43 08.7**	**-0.6**
	comp=Z,19nm,1.2s						
MJB9				LR	LR		
	comp=Z,900nm,20.0s						
MAJO	**Matsushiro**	**85.95**	**53**	*e*P	**P**	**15 43 08.6**	**-0.7**
	comp=Z,19nm,1.2s						
MAJO				LR	LR		
	comp=Z,900nm,20.0s						
MAJO	**Matsushiro**	**85.95**	**53**	*e*P	**P**	**15 43 08.6**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,19nm,1.2s						
MAJO				MLR	MLR		
	comp=Z,900nm,20.0s						
MAT	**Matsushiro**	**85.95**	**53**	P	**P**	**15 43 08.1**	**-1.2**
MAT				S	**S**	**15 53 42.0**	**-1.6**
MJAR	**Matsushiro Arr**	**85.95**	**53**	P	**P**	**15 43 09.2**	**-0.2**
	comp=Z,7.7nm,1.1s,baz=297,slow=5.4,SNR=7.5						
MJAR				LR	LR	16 25 18.2	
	comp=Z,865nm,19.5s,baz=290,slow=38						
PSA00	**Pilbara Seismi**	**86.24**	**114**	*e*P	**P**	**15 43 10.2**	**-0.7**
	comp=Z,72nm,1.5s						
GBN	**Guysborough**	**86.65**	**316**	PFAKE		15 43 20.0	+7.5
GBN				LR	LR		
	comp=Z,1µm,19.0s						
BILL	**Bilibino**	**86.79**	**18**	*e*P	**P**	**15 43 13.0**	**+0.2**
	comp=Z,40nm,1.6s						
BILL				LR	LR		
	comp=Z,2µm,18.0s						
BILL	**Bilibino**	**86.79**	**18**	*e*P	**P**	**15 43 13.5**	**+0.7**
BILL				*e*		15 46 38.0	
BILL				*e*PPP	PPP	15 48 33.6	
BILL				pmax	pmax		
	comp=Z,48nm,2.5s						
BILL				MLR	MLR		
	comp=Z,2µm,23.0s						
ERM	**Erimo**	**87.80**	**47**	PFAKE		15 43 30.0	+12
ERM				LR	LR		
	comp=Z,2µm,21.0s						
HAL	**Halifax**	**88.30**	**316**	PFAKE		15 43 30.0	+9.5
HAL				LR	LR		
	comp=Z,600nm,20.0s						
PQI	**Presque Isle**	**90.34**	**319**	PFAKE		15 43 40.0	+10
PQI				LR	LR		
	comp=Z,500nm,20.0s						
SIJI	**Sorong**	**90.65**	**91**	LR	LR	16 26 02.5	
	comp=Z,43nm,18.3s,baz=254,slow=37						
EMMW	**East Machias**	**90.81**	**317**	PFAKE		15 43 40.0	+7.8
EMMW				LR	LR		
	comp=Z,600nm,19.0s						
PKME	**Peaks-Kenny Pk**	**91.75**	**318**	PFAKE		15 43 50.0	+13
PKME				LR	LR		
	comp=Z,600nm,20.0s						
PEA0B	**Petropavlovsk-**	**91.88**	**33**	PFAKE		15 43 50.0	+13
PEA0B				LR	LR		
	comp=Z,2µm,18.0s						
PETK	**Petropavlovsk-**	**91.88**	**33**	LR	LR	16 27 15.6	
	comp=Z,1µm,19.1s,baz=295,slow=37						
WVL	**Waterville**	**92.29**	**318**	PFAKE		15 43 50.0	+11
WVL				LR	LR		
	comp=Z,700nm,19.0s						
PET	**Petropavlovsk**	**92.41**	**32**	PFAKE		15 43 50.0	+10
PET				LR	LR		
	comp=Z,1µm,18.0s						
SNAA	**Sanae**	**92.98**	**193**	PFAKE		15 43 50.0	+8.3
SNAA				LR	LR		
	comp=Z,1µm,20.0s						
BDFB	**Brasilia**	**93.34**	**255**	LR	LR	16 21 04.1	
	comp=Z,622nm,20.8s,baz=67,slow=33						
BDFB	**Brasilia**	**93.34**	**255**	PFAKE		15 44 00.0	+15
BDFB				LR	LR		
	comp=Z,1µm,20.0s						
RDOG	**Red Dog Mine**	**93.71**	**9**	PFAKE		15 44 00.0	+15
RDOG				LR	LR		
	comp=Z,900nm,22.0s						
BBSR	**BB Station**	**93.72**	**305**	PFAKE		15 44 00.0	+14
BBSR				LR	LR		
	comp=Z,500nm,21.0s						
LBNH	**Lisbon**	**93.88**	**318**	PFAKE		15 44 00.0	+13
LBNH				LR	LR		
	comp=Z,600nm,20.0s						
FFD	**Franklin Falls**	**94.07**	**318**	PFAKE		15 44 00.0	+13
FFD				LR	LR		
	comp=Z,500nm,20.0s						
WES	**Weston**	**94.35**	**317**	PFAKE		15 44 00.0	+11
WES				LR	LR		
	comp=Z,500nm,19.0s						
HNH	**Hanover**	**94.36**	**318**	PFAKE		15 44 00.0	+11
HNH				LR	LR		
	comp=Z,500nm,21.0s						
VT1	**Waterbury**	**94.37**	**319**	PFAKE		15 44 00.0	+11
VT1				LR	LR		
	comp=Z,600nm,20.0s						
HRV	**Adam Dziewonsk**	**94.45**	**317**	PFAKE		15 44 00.0	+11
HRV				LR	LR		
	comp=Z,500nm,19.0s						
TOLK	**Toolik Lake Re**	**94.54**	**4**	PFAKE		15 44 00.0	+11
TOLK				LR	LR		
	comp=Z,700nm,22.0s						
FRNY	**Flat Rock**	**94.65**	**319**	PFAKE		15 44 00.0	+10
FRNY				LR	LR		
	comp=Z,600nm,20.0s						
BRYW	**Bryant College**	**94.70**	**316**	PFAKE		15 44 00.0	+10
BRYW				LR	LR		
	comp=Z,500nm,19.0s						
SPB	**Sao Paulo**	**95.01**	**247**	PFAKE		15 44 00.0	+8.0
SPB				LR	LR		
	comp=Z,1µm,18.0s						
QUA2	**Belchertown**	**95.07**	**317**	PFAKE		15 44 00.0	+8.0
QUA2				LR	LR		
	comp=Z,500nm,18.0s						
INK	**Inuvik**	**95.11**	**358**	PFAKE		15 44 00.0	+8.4
INK				LR	LR		
	comp=Z,400nm,20.0s						
LONY	**Lake Ozonia**	**95.37**	**320**	PFAKE		15 44 00.0	+6.6
LONY				LR	LR		
	comp=Z,500nm,20.0s						
ACCN	**Adirondack Com**	**95.40**	**318**	PFAKE		15 44 00.0	+6.5
ACCN				LR	LR		
	comp=Z,400nm,21.0s						
TRY	**Troy**	**95.71**	**318**	PFAKE		15 44 10.0	+15
TRY				LR	LR		
	comp=Z,600nm,20.0s						
GAMB	**Gambell**	**95.89**	**14**	PFAKE		15 44 10.0	+15
GAMB				LR	LR		
	comp=Z,1µm,18.0s						
YLE	**Yale**	**95.91**	**316**	PFAKE		15 44 10.0	+14
YLE				LR	LR		
	comp=Z,500nm,18.0s						
D53A	**Lac Vacive, Po**	**95.98**	**323**	PFAKE		15 44 10.0	+14
D53A				LR	LR		
	comp=Z,500nm,20.0s						
FORT	**Forrest**	**96.06**	**120**	PFAKE		15 44 10.0	+13
FORT				LR	LR		
	comp=Z,1µm,20.0s						
KSCT	**Kent School, K**	**96.08**	**317**	PFAKE		15 44 10.0	+13
KSCT				LR	LR		
	comp=Z,500nm,21.0s						
FCC	**Fort Churchill**	**96.24**	**338**	PFAKE		15 44 10.0	+13
FCC				LR	LR		
	comp=Z,600nm,20.0s						
ANM	**Nome**	**96.51**	**11**	PFAKE		15 44 10.0	+12
ANM				LR	LR		
	comp=Z,600nm,22.0s						
ANWB	**Willy Bob**	**96.52**	**291**	PFAKE		15 44 10.0	+11
ANWB				LR	LR		
	comp=Z,1µm,20.0s						
PAL	**Palisades**	**96.70**	**316**	PFAKE		15 44 10.0	+11
PAL				LR	LR		
	comp=Z,600nm,20.0s						
FYU	**Fort Yukon**	**96.83**	**2**	PFAKE		15 44 10.0	+11
FYU				LR	LR		
	comp=Z,500nm,21.0s						
CPNY	**Central Park**	**96.84**	**316**	PFAKE		15 44 10.0	+10
CPNY				LR	LR		
	comp=Z,1µm,22.0s						
ODNJ	**Ogdensburg**	**97.13**	**317**	PFAKE		15 44 10.0	+8.5
ODNJ				LR	LR		
	comp=Z,500nm,20.0s						
EPYK	**Eagle Plains**	**97.13**	**359**	PFAKE		15 44 10.0	+9.0
EPYK				LR	LR		
	comp=Z,300nm,22.0s						
BRNJ	**Basking Ridge**	**97.30**	**316**	PFAKE		15 44 10.0	+7.8
BRNJ				LR	LR		
	comp=Z,600nm,18.0s						
SVB	**Belmont**	**97.49**	**286**	PFAKE		15 44 10.0	+6.4
SVB				LR	LR		
	comp=Z,800nm,20.0s						
SMRT	**St. Maarten**	**97.54**	**291**	PFAKE		15 44 10.0	+6.2
SMRT				LR	LR		
	comp=Z,600nm,20.0s						
SEUS	**St. Eustatius**	**97.65**	**291**	PFAKE		15 44 10.0	+5.8
SEUS				LR	LR		
	comp=Z,1µm,21.0s						
KSPA	**Keystone Colle**	**97.65**	**317**	PFAKE		15 44 10.0	+6.2
KSPA				LR	LR		
	comp=Z,500nm,20.0s						
LUPA	**Lehigh Univers**	**97.87**	**316**	PFAKE		15 44 20.0	+15
LUPA				LR	LR		
	comp=Z,100nm,19.0s						
N59A	**State Game Lan**	**97.97**	**317**	PFAKE		15 44 20.0	+15
N59A				LR	LR		
	comp=Z,400nm,20.0s						
MLY	**Manley**	**98.02**	**5**	PFAKE		15 44 20.0	+15
MLY				LR	LR		
	comp=Z,500nm,20.0s						
J55A	**Hilton**	**98.07**	**320**	PFAKE		15 44 20.0	+14
J55A				LR	LR		
	comp=Z,700nm,20.0s						
SADO	**Sadowa**	**98.07**	**321**	PFAKE		15 44 20.0	+14
SADO				LR	LR		
	comp=Z,700nm,20.0s						
PSUB	**Penn St. - Bra**	**98.26**	**316**	PFAKE		15 44 20.0	+13
PSUB				LR	LR		
	comp=Z,400nm,20.0s						
MDM	**Murphy Dome**	**98.28**	**4**	PFAKE		15 44 20.0	+14

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MDM                                     LR      LR
      comp=Z,400nm,21.0s
COLA  College           98.38   4  PFAKE             15 44 20.0  +13
COLA                                LR      LR
      comp=Z,400nm,22.0s
MMNY  Mt. Morris Dam    98.41 319  PFAKE             15 44 20.0  +13
MMNY                                LR      LR
      comp=Z,600nm,19.0s
MEDO  Medina            98.52 320  PFAKE             15 44 20.0  +12
MEDO                                LR      LR
      comp=Z,700nm,21.0s
ILAR  Eielson Array     98.54   3  P        P        15 44 06.0  -1.3
      comp=Z,0.5nm,0.8s,baz=327,slow=3.0,SNR=5.6
ILAR                                PP      PP       15 48 11.3  +4.4
      comp=Z,2.4nm,1.1s,baz=353,slow=7.1,SNR=10
ILAR                                LR      LR       16 35 47.8
      comp=Z,187nm,18.2s,baz=320,slow=40
ILB   Eielson Array     98.54   3  eP       P        15 44 06.0  -1.3
      comp=Z,18nm,2.0s
J54A  Appleton          98.58 320  PFAKE             15 44 20.0  +12
J54A                                LR      LR
      comp=Z,700nm,21.0s
CCB   Clear Creek Bu    98.61   4  PFAKE             15 44 20.0  +12
CCB                                 LR      LR
      comp=Z,400nm,22.0s
YKW3  Yellowknife Ar    98.65 349  PFAKE             15 44 20.0  +12
YKW3                                LR      LR
      comp=Z,500nm,21.0s
YKA   Yellowknife Ar    98.71 349  P        Pdif     15 44 08.6 +0.6
      comp=Z,0.4nm,0.5s,baz=32,slow=4.8,SNR=4.8
YKA                                 PP      PP       15 48 08.2 +0.1
      comp=Z,0.1nm,0.3s,baz=18,slow=7.5,SNR=4.0
YKA                                 LR      LR       16 29 17.0
      comp=Z,37nm,21.1s,baz=16,slow=36
YKB5  Yellowknife Ar    98.71 349  eP       Pdif     15 44 08.6 +0.6
YKB5                               ePP      PP       15 48 08.2 +0.1
WRA   Warramunga Arr    98.74 108  P        P        15 44 08.8  -0.2
      comp=Z,1.7nm,0.9s,baz=294,slow=5.2,SNR=2.2
WR1   Warramunga Arr    98.74 108  eP       P        15 44 08.8  -0.2
EGAK  Eagle             98.74   1  PFAKE             15 44 20.0  +12
EGAK                                LR      LR
      comp=Z,500nm,21.0s
WB2   Warramunga Arr    98.75 108  PFAKE             15 44 20.0  +11
WB2                                 LR      LR
      comp=Z,600nm,22.0s
WRH   Wood River Hil    98.77   4  PFAKE             15 44 20.0  +12
WRH                                 LR      LR
      comp=Z,500nm,21.0s
MVL   Millersville      98.82 316  PFAKE             15 44 20.0  +11
MVL                                 LR      LR
      comp=Z,115µm,20.0s
HDA   Harding Lake      98.90   3  PFAKE             15 44 20.0  +11
HDA                                 LR      LR
      comp=Z,400nm,21.0s
BPAW  Bear Paw Mtn.     98.92   5  PFAKE             15 44 20.0  +11
BPAW                                LR      LR
      comp=Z,600nm,22.0s
PAGS  Pennsylvania G    98.95 317  PFAKE             15 44 20.0  +10
PAGS                                LR      LR
      comp=Z,500nm,19.0s
BWN   Browne            98.97   5  PFAKE             15 44 20.0  +11
BWN                                 LR      LR
      comp=Z,600nm,20.0s
ASAR  Alice Springs     99.27 112  P        Pdif     15 44 10.4  -0.9
      comp=Z,0.3nm,0.7s,baz=285,slow=4.4,SNR=4.1
ASAR                                LR      LR       16 27 15.3
      comp=Z,278nm,18.1s,baz=286,slow=34
AS31  Alice Springs     99.27 112  eP       Pdif     15 44 10.4  -0.9
      comp=Z,2.5nm,1.5s
MCK   McKinley          99.44   4  PFAKE             15 44 20.0 +8.7
MCK                                 LR      LR
      comp=Z,500nm,20.0s
SDMD  Soldier's Deli    99.44 316  PFAKE             15 44 20.0 +8.2
SDMD                                LR      LR
      comp=Z,300nm,19.0s
KTH   Kantishna Hill    99.46   5  PFAKE             15 44 20.0 +8.5
KTH                                 LR      LR
      comp=Z,700nm,21.0s
DAWY  Dawson            99.47   0  PFAKE             15 44 20.0 +8.5
DAWY                                LR      LR
      comp=Z,400nm,20.0s
CAST  Castle Rocks      99.48   6  PFAKE             15 44 20.0 +8.5
CAST                                LR      LR
      comp=Z,600nm,21.0s
SSPA  Standing Stone    99.50 317  PFAKE             15 44 20.0 +7.9
SSPA                                LR      LR
      comp=Z,400nm,18.0s
TTA   Tatalina          99.51   8  PFAKE             15 44 20.0 +8.3
TTA                                 LR      LR
      comp=Z,600nm,18.0s
S61A  Accomac           99.52 314  PFAKE             15 44 20.0 +7.8
S61A                                LR      LR
      comp=Z,700nm,20.0s
RND   Reindeer          99.77   4  PFAKE             15 44 20.0 +7.1
RND                                 LR      LR
      comp=Z,400nm,20.0s
DOT   Dot Lake          99.80   2  PFAKE             15 44 20.0 +7.1
DOT                                 LR      LR
      comp=Z,400nm,20.0s
PPLA  Purkeypile        99.98   6  PFAKE             15 44 20.0 +6.1
PPLA                                LR      LR
      comp=Z,600nm,21.0s
E46A  Sault Ste Mari   100.12 325  PFAKE             15 44 30.0  +15
E46A                                LR      LR
      comp=Z,500nm,18.0s
N55A  Marion Center    100.13 318  PFAKE             15 44 30.0  +15
N55A                                LR      LR
      comp=Z,600nm,18.0s
O56A  Blue Knob Stat   100.13 317  PFAKE             15 44 30.0  +15
O56A                                LR      LR
      comp=Z,500nm,20.0s
M54A  Oil Creek Stat   100.17 319  PFAKE             15 44 30.0  +15
M54A                                LR      LR
      comp=Z,400nm,20.0s
SJG   San Juan         100.25 292  PFAKE             15 44 30.0  +14
SJG                                 LR      LR
      comp=Z,800nm,20.0s
PAX   Paxson           100.41   3  PFAKE             15 44 30.0  +14
PAX                                 LR      LR
      comp=Z,400nm,18.0s
CBN   Corbin Frederi   100.42 315  PFAKE             15 44 30.0  +14
CBN                                 LR      LR
      comp=Z,300nm,20.0s
MENT  Mentasta         100.52   2  PFAKE             15 44 30.0  +14
MENT                                LR      LR
      comp=Z,500nm,19.0s
T60A  Surry            100.52 314  PFAKE             15 44 30.0  +13
T60A                                LR      LR
      comp=Z,500nm,20.0s
H48A  Harrisville      100.56 323  PFAKE             15 44 30.0  +13
H48A                                LR      LR
      comp=Z,500nm,20.0s
PTGA  Pitinga          100.56 272  PFAKE             15 44 30.0  +13
PTGA                                LR      LR
      comp=Z,1µm,20.0s
N54A  Moraine State    100.67 319  PFAKE             15 44 30.0  +13
N54A                                LR      LR
      comp=Z,600nm,21.0s
I49A  Point Hope       100.72 322  PFAKE             15 44 30.0  +13
I49A                                LR      LR
      comp=Z,400nm,20.0s
U61A  Possum Corner    100.72 313  PFAKE             15 44 30.0  +12
U61A                                LR      LR
      comp=Z,800nm,18.0s
V62A  Hyde County Ai   100.76 312  PFAKE             15 44 30.0  +12
V62A                                LR      LR
      comp=Z,800nm,22.0s
E44A  Grand Marais A   100.84 326  PFAKE             15 44 30.0  +12
E44A                                LR      LR
      comp=Z,500nm,18.0s
R58B  Mineral          100.88 315  PFAKE             15 44 30.0  +12
R58B                                LR      LR
      comp=Z,500nm,18.0s
V61A  Roper            101.09 313  PFAKE             15 44 30.0  +11
V61A                                LR      LR
      comp=Z,600nm,18.0s
T59A  Double "B" Far   101.17 314  PFAKE             15 44 30.0  +10
T59A                                LR      LR
      comp=Z,700nm,18.0s
S58A  Poland Farm, P   101.18 315  PFAKE             15 44 30.0  +10
S58A                                LR      LR
      comp=Z,500nm,21.0s
M52A  Chesterland      101.21 320  PFAKE             15 44 30.0  +10
M52A                                LR      LR
      comp=Z,500nm,21.0s
GLMI  Grayling         101.23 324  PFAKE             15 44 30.0  +10
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GLMI                                LR      LR
      comp=Z,600nm,18.0s
K50A  Casco            101.28 321  PFAKE             15 44 30.0  +10
K50A                                LR      LR
      comp=Z,500nm,22.0s
MCWV  Mont Chateau     101.29 317  PFAKE             15 44 30.0  +10
MCWV                                LR      LR
      comp=Z,200nm,19.0s
N53A  Lisbon           101.30 319  PFAKE             15 44 30.0  +10
N53A                                LR      LR
      comp=Z,500nm,20.0s
SVW2  Sparrevohn       101.34   8  PFAKE             15 44 30.0  +10
SVW2                                LR      LR
      comp=Z,800nm,18.0s
SML   Sawmill          101.39   4  PFAKE             15 44 30.0  +10
SML                                 LR      LR
      comp=Z,400nm,21.0s
SCM   Sheep Creek Mo   101.44   4  PFAKE             15 44 30.0  +10
SCM                                 LR      LR
      comp=Z,400nm,21.0s
PMR   Palmer           101.55   5  PFAKE             15 44 30.0 +9.4
PMR                                 LR      LR
      comp=Z,500nm,21.0s
E43A  Lone Tree Farm   101.57 326  PFAKE             15 44 30.0 +8.8
E43A                                LR      LR
      comp=Z,400nm,20.0s
V60A  Jim Taylor Roa   101.58 313  PFAKE             15 44 30.0 +8.6
V60A                                LR      LR
      comp=Z,600nm,20.0s
I47A  Gladwin          101.65 323  PFAKE             15 44 30.0 +8.5
I47A                                LR      LR
      comp=Z,500nm,19.0s
U59A  Littleton        101.65 314  PFAKE             15 44 30.0 +8.3
U59A                                LR      LR
      comp=Z,700nm,22.0s
J48A  Bridge Port      101.66 322  PFAKE             15 44 30.0 +8.4
J48A                                LR      LR
      comp=Z,600nm,22.0s
G45A  Suttons Bay      101.68 324  PFAKE             15 44 30.0 +8.4
G45A                                LR      LR
      comp=Z,600nm,19.0s
C40A  Isle Royale Na   101.70 328  PFAKE             15 44 30.0 +8.4
C40A                                LR      LR
      comp=Z,400nm,18.0s
S57A  Dark Hollow, R   101.71 315  PFAKE             15 44 30.0 +8.0
S57A                                LR      LR
      comp=Z,600nm,19.0s
KNK   Knik Glacier     101.78   5  PFAKE             15 44 30.0 +8.2
KNK                                 LR      LR
      comp=Z,300nm,22.0s
SPIA  Saint Paul Isl   101.95  17  PFAKE             15 44 30.0 +7.5
SPIA                                LR      LR
      comp=Z,1µm,18.0s
D41A  Chassel          101.96 327  PFAKE             15 44 30.0 +7.2
D41A                                LR      LR
      comp=Z,800nm,18.0s
RC01  Rabbit Creek A   101.99   5  PFAKE             15 44 30.0 +7.3
RC01                                LR      LR
      comp=Z,700nm,22.0s
FFC   Flin Flon        102.12 339  PFAKE             15 44 30.0 +6.6
FFC                                 LR      LR
      comp=Z,500nm,19.0s
AAM   Ann Arbor        102.17 321  PFAKE             15 44 30.0 +6.1
AAM                                 LR      LR
      comp=Z,500nm,21.0s
N51A  Ashland          102.19 320  PFAKE             15 44 30.0 +6.0
N51A                                LR      LR
      comp=Z,600nm,19.0s
R55A  Marlinton        102.21 316  PFAKE             15 44 30.0 +5.7
R55A                                LR      LR
      comp=Z,500nm,20.0s
CNNC  Cliffs of the    102.29 313  PFAKE             15 44 40.0  +15
CNNC                                LR      LR
      comp=Z,800nm,21.0s
Q54A  Coxs Mills       102.30 317  PFAKE             15 44 40.0  +15
Q54A                                LR      LR
      comp=Z,600nm,20.0s
J47A  Sunmer           102.30 323  PFAKE             15 44 40.0  +16
J47A                                LR      LR
      comp=Z,700nm,22.0s
O52A  Adamsville       102.31 319  PFAKE             15 44 40.0  +15
O52A                                LR      LR
      comp=Z,400nm,20.0s
T57A  Hurt             102.32 315  PFAKE             15 44 40.0  +15
T57A                                LR      LR
      comp=Z,500nm,18.0s
M50A  Fremont          102.33 320  PFAKE             15 44 40.0  +15
M50A                                LR      LR
      comp=Z,600nm,19.0s
P53A  Whipple          102.38 318  PFAKE             15 44 40.0  +15
P53A                                LR      LR
      comp=Z,400nm,21.0s
GLI   Glacier Island   102.40   4  PFAKE             15 44 40.0  +15
GLI                                 LR      LR
      comp=Z,400nm,19.0s
BALM  Baldy            102.47   2  PFAKE             15 44 40.0  +15
BALM                                LR      LR
      comp=Z,300nm,20.0s
I45A  Fountain         102.63 324  PFAKE             15 44 40.0  +14
I45A                                LR      LR
      comp=Z,800nm,18.0s
HYT   Haines Junctio   102.71 359  PFAKE             15 44 40.0  +14
HYT                                 LR      LR
      comp=Z,400nm,21.0s
WHY   Whitehorse       102.81 358  PFAKE             15 44 40.0  +14
WHY                                 LR      LR
      comp=Z,400nm,20.0s
EYAK  Cordova Ski Ar   102.81   3  PFAKE             15 44 40.0  +14
EYAK                                LR      LR
      comp=Z,700nm,19.0s
EYMN  Ely              102.84 329  PFAKE             15 44 40.0  +13
EYMN                                LR      LR
      comp=Z,500nm,22.0s
COWI  Conover          102.89 327  PFAKE             15 44 40.0  +13
COWI                                LR      LR
      comp=Z,500nm,20.0s
ACSO  Alum Creek Sta   102.97 319  PFAKE             15 44 40.0  +13
ACSO                                LR      LR
      comp=Z,600nm,18.0s
SEW   Seward           102.99   5  PFAKE             15 44 40.0  +13
SEW                                 LR      LR
      comp=Z,900nm,20.0s
BLA   Blacksburg       102.99 316  PFAKE             15 44 40.0  +12
BLA                                 LR      LR
      comp=Z,500nm,18.0s
J45A  Montague         103.09 323  PFAKE             15 44 40.0  +12
J45A                                LR      LR
      comp=Z,500nm,19.0s
Y60A  Bolivia          103.15 312  PFAKE             15 44 40.0  +12
Y60A                                LR      LR
      comp=Z,600nm,21.0s
BRLK  Bradley Lake     103.19   6  PFAKE             15 44 40.0  +12
BRLK                                LR      LR
      comp=Z,700nm,19.0s
H43A  Windswept, Lux   103.21 325  PFAKE             15 44 40.0  +12
H43A                                LR      LR
      comp=Z,700nm,18.0s
HOM   Homer            103.21   6  PFAKE             15 44 40.0  +12
HOM                                 LR      LR
      comp=Z,600nm,21.0s
ULM   Lac du Bonnet    103.21 333  PFAKE             15 44 40.0  +12
ULM                                 LR      LR
      comp=Z,500nm,18.0s
GRTK  Grand Turk       103.28 297  PFAKE             15 44 40.0  +11
GRTK                                LR      LR
      comp=Z,1µm,19.0s
M48A  Edgerton         103.30 321  PFAKE             15 44 40.0  +11
M48A                                LR      LR
      comp=Z,900nm,20.0s
N49A  Columbus Grove   103.31 320  PFAKE             15 44 40.0  +11
N49A                                LR      LR
      comp=Z,500nm,21.0s
CNPM  China Poot       103.39   6  PFAKE             15 44 40.0  +11
CNPM                                LR      LR
      comp=Z,800nm,18.0s
R53A  Hurricane        103.39 317  PFAKE             15 44 40.0  +11
R53A                                LR      LR
      comp=Z,600nm,18.0s
SDD   Santo Domingo    103.44 294  PFAKE             15 44 40.0  +10
SDD                                 LR      LR
      comp=Z,900nm,19.0s
PCA   Pinnacle         103.45   1  PFAKE             15 44 40.0  +11
PCA                                 LR      LR
      comp=Z,600nm,20.0s
P51A  Williamsport     103.45 319  PFAKE             15 44 40.0  +10
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P51A                                LR      LR
      comp=Z,400nm,19.0s
BCPM  Bancas Point     103.59   0  PFAKE             15 44 40.0  +10
BCPM                                LR      LR
      comp=Z,500nm,20.0s
X58A  Rowland          103.66 313  PFAKE             15 44 40.0 +9.3
X58A                                LR      LR
      comp=Z,600nm,19.0s
E38A  The Farm, Brul   103.79 328  PFAKE             15 44 40.0 +9.0
E38A                                LR      LR
      comp=Z,500nm,18.0s
V56A  Mocksville       103.80 314  PFAKE             15 44 40.0 +8.7
V56A                                LR      LR
      comp=Z,600nm,20.0s
W57A  Gilead           103.80 314  PFAKE             15 44 40.0 +8.7
W57A                                LR      LR
      comp=Z,600nm,20.0s
O49A  Covington        103.83 320  PFAKE             15 44 40.0 +8.7
O49A                                LR      LR
      comp=Z,500nm,20.0s
Q51A  Peebles          103.89 318  PFAKE             15 44 40.0 +8.4
Q51A                                LR      LR
      comp=Z,400nm,19.0s
L46A  Eue Claire       103.91 322  PFAKE             15 44 40.0 +8.4
L46A                                LR      LR
      comp=Z,400nm,19.0s
G40A  Rib Lake         104.00 327  PFAKE             15 44 40.0 +8.0
G40A                                LR      LR
      comp=Z,600nm,19.0s
SKAG  Skagway          104.03 358  PFAKE             15 44 40.0 +8.3
SKAG                                LR      LR
      comp=Z,500nm,20.0s
I42A  Draeger Farm,    104.21 325  PFAKE             15 44 40.0 +7.1
I42A                                LR      LR
      comp=Z,500nm,19.0s
Y58A  Scranton         104.23 312  PFAKE             15 44 40.0 +6.8
Y58A                                LR      LR
      comp=Z,700nm,18.0s
ADK   Adak             104.28  23  PFAKE             15 44 40.0 +7.0
ADK                                 LR      LR
      comp=Z,800nm,19.0s
U54A  Nelsons Funny    104.31 316  PFAKE             15 44 40.0 +6.4
U54A                                LR      LR
      comp=Z,500nm,19.0s
M46A  Old House Fiel   104.32 322  PFAKE             15 44 40.0 +6.5
M46A                                LR      LR
      comp=Z,700nm,20.0s
SDDR  Presa de Saban   104.43 295  PFAKE             15 44 50.0  +16
SDDR                                LR      LR
      comp=Z,900nm,22.0s
I41A  Arkdale          104.62 326  PFAKE             15 44 50.0  +15
I41A                                LR      LR
      comp=Z,500nm,20.0s
AGMN  Agassiz Nation   104.65 332  PFAKE             15 44 50.0  +15
AGMN                                LR      LR
      comp=Z,400nm,21.0s
K43A  Burlington       104.65 324  PFAKE             15 44 50.0  +15
K43A                                LR      LR
      comp=Z,500nm,21.0s
Y57A  Sumter           104.68 313  PFAKE             15 44 50.0  +15
Y57A                                LR      LR
      comp=Z,700nm,18.0s
KMSC  Kings Mountain   104.73 314  PFAKE             15 44 50.0  +15
KMSC                                LR      LR
      comp=Z,700nm,20.0s
T52A  Hallie           104.75 317  PFAKE             15 44 50.0  +14
T52A                                LR      LR
      comp=Z,500nm,19.0s
S51A  Beattyville      104.85 317  PFAKE             15 44 50.0  +14
S51A                                LR      LR
      comp=Z,500nm,19.0s
ATKA  Atka Island      104.92  21  PFAKE             15 44 50.0  +14
ATKA                                LR      LR
      comp=Z,1µm,19.0s
KDAK  Kodiak Island    104.94   7  PFAKE             15 44 50.0  +14
KDAK                                LR      LR
      comp=Z,900nm,20.0s
P48A  Milroy           104.94 320  PFAKE             15 44 50.0  +14
P48A                                LR      LR
      comp=Z,500nm,20.0s
R50A  Paris            104.95 318  PFAKE             15 44 50.0  +14
R50A                                LR      LR
      comp=Z,700nm,20.0s
JSC   Jenkinsville     105.15 313  PFAKE             15 49 00.0 +8.2
JSC                                 LR      LR
      comp=Z,700nm,18.0s
JIS   Juneau Island    105.17 357  PFAKE             15 49 00.0 +8.9
JIS                                 LR      LR
      comp=Z,500nm,22.0s
PAULI Pauline          105.24 314  PFAKE             15 49 00.0 +8.0
PAULI                               LR      LR
      comp=Z,500nm,20.0s
M44A  Midewin, Midew   105.33 323  PFAKE             15 49 00.0 +8.1
M44A                                LR      LR
      comp=Z,500nm,21.0s
SPMN  Marine on St.    105.37 328  PFAKE             15 49 00.0 +8.1
SPMN                                LR      LR
      comp=Z,500nm,20.0s
OHAK  Old Harbor       105.40   8  PFAKE             15 49 00.0 +8.5
OHAK                                LR      LR
      comp=Z,800nm,20.0s
SFIN  Lafayette        105.40 321  PFAKE             15 49 00.0 +7.9
SFIN                                LR      LR
      comp=Z,700nm,20.0s
TZTN  Tazewell         105.45 316  PFAKE             15 49 00.0 +7.7
TZTN                                LR      LR
      comp=Z,700nm,19.0s
V53A  Saluda           105.45 315  PFAKE             15 49 00.0 +7.6
V53A                                LR      LR
      comp=Z,700nm,20.0s
CHGN  Chignik          105.47  11  PFAKE             15 49 00.0 +8.3
CHGN                                LR      LR
      comp=Z,900nm,19.0s
R49A  Shelbyville      105.48 319  PFAKE             15 49 00.0 +7.7
R49A                                LR      LR
      comp=Z,500nm,20.0s
JFWS  Jewell Farm      105.59 325  PFAKE             15 49 00.0 +7.6
JFWS                                LR      LR
      comp=Z,500nm,19.0s
Z56A  Williston        105.74 313  PFAKE             15 49 00.0 +7.1
Z56A                                LR      LR
      comp=Z,700nm,18.0s
FALS  False Pass       105.77  14  PFAKE             15 49 00.0 +7.7
FALS                                LR      LR
      comp=Z,1µm,20.0s
BLO   Bloomington      105.79 320  PFAKE             15 49 00.0 +7.1
BLO                                 LR      LR
      comp=Z,400nm,20.0s
AKUT  Akutan           105.84  16  PFAKE             15 49 00.0 +7.6
AKUT                                LR      LR
      comp=Z,1µm,18.0s
L42A  Oliver, Polo     105.86 324  PFAKE             15 49 00.0 +7.1
L42A                                LR      LR
      comp=Z,700nm,21.0s
HODGE Hodges           105.87 314  PFAKE             15 49 00.0 +6.9
HODGE                               LR      LR
      comp=Z,600nm,19.0s
V52A  Sevierville      105.88 316  PFAKE             15 49 00.0 +6.9
V52A                                LR      LR
      comp=Z,600nm,19.0s
UNV   Unalaska Valle   105.90  16  PFAKE             15 49 00.0 +7.4
UNV                                 LR      LR
      comp=Z,900nm,20.0s
BG3   Lake Jocassee    105.91 315  PFAKE             15 49 00.0 +6.8
BG3                                 LR      LR
      comp=Z,400nm,20.0s
SDPT  Sand Point       105.97  12  PFAKE             15 49 00.0 +7.3
SDPT                                LR      LR
      comp=Z,900nm,19.0s
NIKH  Nikolski High    106.00  18  PFAKE             15 49 00.0 +7.2
NIKH                                LR      LR
      comp=Z,700nm,22.0s
257A  Skidaway Islan   106.22 311  PFAKE             15 49 00.0 +6.2
257A                                LR      LR
      comp=Z,700nm,20.0s
WCI   Wyandotte Cave   106.22 319  PFAKE             15 49 00.0 +6.3
WCI                                 LR      LR
      comp=Z,500nm,18.0s
P45A  Graceland, Par   106.32 321  PFAKE             15 49 00.0 +6.2
P45A                                LR      LR
      comp=Z,500nm,18.0s
V51A  Loudon           106.40 316  PFAKE             15 49 00.0 +5.9
V51A                                LR      LR
      comp=Z,600nm,18.0s
T49A  Edmonton         106.42 318  PFAKE             15 49 00.0 +5.9
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T49A                             LR         LR
      comp=Z,800nm,22.0s
W52A  Murphy          106.53 315 PFAKE                15 49 10.0  +16
W52A                             LR         LR
      comp=Z,600nm,20.0s
HDIL  Hopedale        106.58 323 PFAKE                15 49 10.0  +16
HDIL                             LR         LR
      comp=Z,600nm,22.0s
QSPA  South Pole Qui  106.64 180 PFAKE                15 49 00.0 +6.4
QSPA                             LR         LR
      comp=Z,1µm,20.0s
MDND  Maddock         106.64 333 PFAKE                15 49 10.0  +16
MDND                             LR         LR
      comp=Z,400nm,20.0s
L40A  Anamosa         106.69 325 PFAKE                15 49 10.0  +16
L40A                             LR         LR
      comp=Z,500nm,19.0s
CPCT  Cooper Cave     106.72 316 PFAKE                15 49 10.0  +15
CPCT                             LR         LR
      comp=Z,600nm,19.0s
WRAK  Wrangell Islan  106.92 356 PFAKE                15 49 10.0  +16
WRAK                             LR         LR
      comp=Z,600nm,19.0s
OLIL  Olney           107.03 320 PFAKE                15 49 10.0  +15
OLIL                             LR         LR
      comp=Z,500nm,19.0s
GOGA  Godfrey         107.16 314 PFAKE                15 49 10.0  +14
GOGA                             LR         LR
      comp=Z,500nm,19.0s
USIN  University of   107.24 320 PFAKE                15 49 10.0  +14
USIN                             LR         LR
      comp=Z,600nm,18.0s
255A  Hazlehurst      107.28 312 PFAKE                15 49 10.0  +14
255A                             LR         LR
      comp=Z,800nm,19.0s
Y52A  Lilburn         107.32 314 PFAKE                15 49 10.0  +14
Y52A                             LR         LR
      comp=Z,400nm,20.0s
GTBY  Guantanamo Bay  107.32 298 PFAKE                15 49 10.0  +14
GTBY                             LR         LR
      comp=Z,700nm,20.0s
154A  Montrose        107.35 313 PFAKE                15 49 10.0  +14
154A                             LR         LR
      comp=Z,700nm,19.0s
N41A  Harden Midland  107.39 324 PFAKE                15 49 10.0  +14
N41A                             LR         LR
      comp=Z,700nm,22.0s
W50A  Signal Mountai  107.39 316 PFAKE                15 49 10.0  +14
W50A                             LR         LR
      comp=Z,600nm,19.0s
X51A  Calhoun         107.46 315 PFAKE                15 49 10.0  +14
X51A                             LR         LR
      comp=Z,600nm,21.0s
T47A  Sharon Grove    107.49 319 PFAKE                15 49 10.0  +14
T47A                             LR         LR
      comp=Z,700nm,21.0s
CLTN  Cedars of Leba  107.53 317 PFAKE                15 49 10.0  +14
CLTN                             LR         LR
      comp=Z,300nm,18.0s
456A  Hilliard        107.60 311 PFAKE                15 49 10.0  +14
456A                             LR         LR
      comp=Z,700nm,19.0s
658A  Bunnell         107.73 309 PFAKE                15 49 10.0  +13
658A                             LR         LR
      comp=Z,600nm,21.0s
SWET  Sewanee         107.79 316 PFAKE                15 49 10.0  +13
SWET                             LR         LR
      comp=Z,700nm,20.0s
SCIA  State Center    107.89 326 PFAKE                15 49 10.0  +13
SCIA                             LR         LR
      comp=Z,8158µm,20.0s
DGMT  Dagmar          108.01 336 PFAKE                15 49 10.0  +13
DGMT                             LR         LR
      comp=Z,400nm,21.0s
V48A  Smith Brothers  108.06 317 PFAKE                15 49 10.0  +13
V48A                             LR         LR
      comp=Z,500nm,18.0s
060A  Indiantown      108.27 307 PFAKE                15 49 10.0  +12
060A                             LR         LR
      comp=Z,900nm,21.0s
TIGA  Tifton          108.34 312 PFAKE                15 49 10.0  +12
TIGA                             LR         LR
      comp=Z,600nm,19.0s
ECSD  EROS Data Cent  108.35 329 PFAKE                15 49 10.0  +12
ECSD                             LR         LR
      comp=Z,700nm,20.0s
253A  Americus        108.38 313 PFAKE                15 49 10.0  +12
253A                             LR         LR
      comp=Z,700nm,18.0s
SLM   Saint Louis     108.38 322 PFAKE                15 49 10.0  +12
SLM                              LR         LR
      comp=Z,700nm,22.0s
T45A  Paducah         108.44 319 PFAKE                15 49 10.0  +12
T45A                             LR         LR
      comp=Z,400nm,20.0s
152A  Waverly Hall    108.45 314 PFAKE                15 49 10.0  +12
152A                             LR         LR
      comp=Z,600nm,22.0s
WVT   Waverly         108.47 318 PFAKE                15 49 10.0  +12
WVT                              LR         LR
      comp=Z,500nm,18.0s
DWPF  Disney Wildern  108.54 308 PFAKE                15 49 10.0  +12
DWPF                             LR         LR
      comp=Z,800nm,20.0s
555A  McAlpin         108.61 311 PFAKE                15 49 10.0  +12
555A                             LR         LR
      comp=Z,800nm,20.0s
656A  Willston        108.70 310 PFAKE                15 49 10.0  +11
656A                             LR         LR
      comp=Z,600nm,20.0s
059A  Moore Haven     108.91 307 PFAKE                15 49 10.0  +11
059A                             LR         LR
      comp=Z,800nm,20.0s
Y49A  Blount Mountai  108.91 316 PFAKE                15 49 10.0  +11
Y49A                             LR         LR
      comp=Z,600nm,18.0s
Z50A  Ashland         108.94 315 PFAKE                15 49 10.0  +11
Z50A                             LR         LR
      comp=Z,600nm,18.0s
X48A  Hartselle       108.98 316 PFAKE                15 49 10.0  +11
X48A                             LR         LR
      comp=Z,600nm,20.0s
453A  Whigham         109.19 312 PFAKE                15 49 10.0  +11
453A                             LR         LR
      comp=Z,800nm,20.0s
352A  Blakely         109.27 313 PFAKE                15 49 10.0  +10
352A                             LR         LR
      comp=Z,700nm,20.0s
061Z  Ochoppi         109.28 306 PFAKE                15 49 10.0  +10
061Z                             LR         LR
      comp=Z,600nm,19.0s
GLAT  Glass           109.31 319 PFAKE                15 49 10.0  +11
GLAT                             LR         LR
      comp=Z,600nm,19.0s
PLAL  Pickwick Lake   109.34 317 PFAKE                15 49 10.0  +10
PLAL                             LR         LR
      comp=Z,600nm,20.0s
PARMO Parma           109.35 320 PFAKE                15 49 10.0  +10
PARMO                            LR         LR
      comp=Z,500nm,22.0s
CCM   Cathedral Cave  109.36 322 PFAKE                15 49 10.0  +10
CCM                              LR         LR
      comp=Z,500nm,19.0s
957A  Wimauma         109.38 308 PFAKE                15 49 10.0  +10
957A                             LR         LR
      comp=Z,700nm,20.0s
PVMO  Portageville    109.48 319 PFAKE                15 49 10.0  +10
PVMO                             LR         LR
      comp=Z,600nm,20.0s
HALT  Halls           109.57 319 PFAKE                15 49 10.0  +10
HALT                             LR         LR
      comp=Z,500nm,20.0s
PBMO  Poplar Bluff    109.70 320 PFAKE                15 49 10.0  +10
PBMO                             LR         LR
      comp=Z,700nm,18.0s
LRAL  Lakeview Retre  109.80 315 PFAKE                15 49 10.0  +10
LRAL                             LR         LR
      comp=Z,500nm,21.0s
250A  Grady           109.92 314 PFAKE                15 49 10.0 +9.2
250A                             LR         LR
      comp=Z,700nm,20.0s
GNAR  Gosnell         109.96 319 PFAKE                15 49 10.0 +9.3
GNAR                             LR         LR
      comp=Z,600nm,19.0s
TRQA  Tornquist       110.09 235 PFAKE                15 49 10.0 +9.2
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TRQA                             LR         LR
      comp=Z,2µm,20.0s
MTDJ  Mount Denham    110.12 297 PFAKE                15 49 10.0 +8.4
MTDJ                             LR         LR
      comp=Z,700nm,18.0s
DIB   Dawson Inlet,   110.13 356 PFAKE                15 49 10.0  +10
DIB                              LR         LR
      comp=Z,500nm,20.0s
LAO   LASA Array      110.26 336 PFAKE                15 49 10.0 +8.9
LAO                              LR         LR
      comp=Z,500nm,20.0s
451A  Vernon          110.33 312 PFAKE                15 49 10.0 +8.4
451A                             LR         LR
      comp=Z,600nm,20.0s
EGMT  Eagleton        110.39 339 PFAKE                15 49 10.0 +8.7
EGMT                             LR         LR
      comp=Z,500nm,20.0s
OXF   Oxford          110.49 318 PFAKE                15 49 10.0 +8.2
OXF                              LR         LR
      comp=Z,700nm,20.0s
HBAR  Harrisburg      110.62 319 PFAKE                15 49 10.0 +8.0
HBAR                             LR         LR
      comp=Z,600nm,18.0s
WALA  Waterton Lakes  110.78 343 PFAKE                15 49 10.0 +7.9
WALA                             LR         LR
      comp=Z,400nm,20.0s
147A  Livingston      110.87 316 PFAKE                15 49 10.0 +7.5
147A                             LR         LR
      comp=Z,500nm,21.0s
BRAL  Brewton         110.93 314 PFAKE                15 49 10.0 +7.3
BRAL                             LR         LR
      comp=Z,700nm,19.0s
FCAR  Ozark Folk Cen  111.31 320 PFAKE                15 49 10.0 +6.7
FCAR                             LR         LR
      comp=Z,600nm,20.0s
X43A  Marvell         111.43 319 PFAKE                15 49 10.0 +6.5
X43A                             LR         LR
      comp=Z,600nm,20.0s
RSSD  Black Hills     111.47 334 PFAKE                15 49 10.0 +6.3
RSSD                             LR         LR
      comp=Z,500nm,20.0s
KSU1  Kansas State U  111.70 326 PFAKE                15 49 10.0 +6.1
KSU1                             LR         LR
      comp=Z,700nm,19.0s
WHAR  Wooly Hollow    111.81 320 PFAKE                15 49 20.0  +16
WHAR                             LR         LR
      comp=Z,400nm,18.0s
W41B  Gary Mavity, V  111.86 320 PFAKE                15 49 20.0  +16
W41B                             LR         LR
      comp=Z,600nm,19.0s
UALR  University of   112.18 320 PFAKE                15 49 20.0  +15
UALR                             LR         LR
      comp=Z,700nm,20.0s
NEW   Newport         112.38 344 PFAKE                15 49 20.0  +15
NEW                              LR         LR
      comp=Z,400nm,21.0s
ROSC  El Rosal        112.46 283 PFAKE                15 49 20.0  +13
ROSC                             LR         LR
      comp=Z,500nm,18.0s
VBMS  Vicksburg       112.64 316 PFAKE                15 49 20.0  +14
VBMS                             LR         LR
      comp=Z,400nm,19.0s
X40A  Basin Creek Fa  112.67 320 PFAKE                15 49 20.0  +14
X40A                             LR         LR
      comp=Z,500nm,21.0s
W39A  Magazine        112.78 321 PFAKE                15 49 20.0  +14
W39A                             LR         LR
      comp=Z,700nm,22.0s
MSO   Missoula        112.79 342 PFAKE                15 49 20.0  +14
MSO                              LR         LR
      comp=Z,700nm,19.0s
OGNE  Ogallala        113.08 330 PFAKE                15 49 20.0  +13
OGNE                             LR         LR
      comp=Z,600nm,22.0s
MIAR  Mount Ida       113.09 320 PFAKE                15 49 20.0  +13
MIAR                             LR         LR
      comp=Z,500nm,20.0s
C09A  Chrisman Ranch  113.10 345 PFAKE                15 49 20.0  +14
C09A                             LR         LR
      comp=Z,700nm,19.0s
BOZ   Bozeman (W)     113.14 339 PFAKE                15 49 20.0  +13
BOZ                              LR         LR
      comp=Z,600nm,21.0s
WLAR  White Oak Lake  113.37 319 PFAKE                15 49 20.0  +13
WLAR                             LR         LR
      comp=Z,700nm,18.0s
Z41A  Richland Creek  113.46 319 PFAKE                15 49 20.0  +13
Z41A                             LR         LR
      comp=Z,600nm,19.0s
TUL1  Leonard         113.49 323 PFAKE                15 49 20.0  +13
TUL1                             LR         LR
      comp=Z,700nm,20.0s
LKWY  Lake            113.61 338 PFAKE                15 49 20.0  +12
LKWY                             LR         LR
      comp=Z,900nm,19.0s
DLMT  Dillon          113.67 340 PFAKE                15 49 20.0  +12
DLMT                             LR         LR
      comp=Z,500nm,21.0s
K22A  Casper          113.72 334 PFAKE                15 49 20.0  +12
K22A                             LR         LR
      comp=Z,700nm,18.0s
H17A  Grant Village   113.82 338 PFAKE                15 49 20.0  +12
H17A                             LR         LR
      comp=Z,700nm,18.0s
D08A  Wollman Farm,   113.96 345 PFAKE                15 49 20.0  +12
D08A                             LR         LR
      comp=Z,500nm,21.0s
FLWY  Flagg Ranch     114.13 338 PFAKE                15 49 20.0  +11
FLWY                             LR         LR
      comp=Z,400nm,20.0s
X37A  Clayton         114.15 321 PFAKE                15 49 20.0  +11
X37A                             LR         LR
      comp=Z,700nm,19.0s
LTY   Liberty         114.18 346 PFAKE                15 49 20.0  +11
LTY                              LR         LR
      comp=Z,400nm,18.0s
E09A  Wood Farm, Sta  114.26 344 PFAKE                15 49 20.0  +11
E09A                             LR         LR
      comp=Z,500nm,20.0s
PHWY  Pilot Hill      114.37 333 PFAKE                15 49 20.0  +11
PHWY                             LR         LR
      comp=Z,500nm,20.0s
IMW   Indian Meadow   114.38 338 PFAKE                15 49 20.0  +11
IMW                              LR         LR
      comp=Z,400nm,20.0s
MOOW  Moose Ponds     114.44 338 PFAKE                15 49 20.0  +11
MOOW                             LR         LR
      comp=Z,500nm,18.0s
E08A  Dider Farm, El  114.52 345 PFAKE                15 49 20.0  +11
E08A                             LR         LR
      comp=Z,500nm,21.0s
F10A  Beach Ranch, E  114.52 343 PFAKE                15 49 20.0  +11
F10A                             LR         LR
      comp=Z,400nm,19.0s
SNOW  Snow King Moun  114.69 338 PFAKE                15 49 20.0  +10
SNOW                             LR         LR
      comp=Z,400nm,20.0s
NLWA  Neilton Lookou  114.72 349 PFAKE                15 49 20.0  +10
NLWA                             LR         LR
      comp=Z,800nm,19.0s
RWWY  Rawlins         114.80 334 PFAKE                15 49 20.0  +10
RWWY                             LR         LR
      comp=Z,700nm,19.0s
BW06  Boulder Array   114.84 336 PFAKE                15 49 20.0  +10
BW06                             LR         LR
      comp=Z,500nm,20.0s
PD31  Pinedale Array  114.84 336 ePKiKP     PKiKP     15 49 08.5 -1.7
PDAR  Pinedale Array  114.84 336 PKP        PKiKP     15 49 08.5 -1.7
      comp=Z,0.4nm,0.8s,baz=108,slow=4.8,SNR=4.5
KSCO  Kaye Shedlock'  114.87 329 PFAKE                15 49 20.0  +10
KSCO                             LR         LR
      comp=Z,600nm,22.0s
N23A  Red Feather La  114.91 333 PFAKE                15 49 20.0  +10
N23A                             LR         LR
      comp=Z,600nm,19.0s
LON   Longmire        114.92 347 PFAKE                15 49 20.0  +10
LON                              LR         LR
      comp=Z,400nm,19.0s
U32A  Winter Ranch,   114.97 325 PFAKE                15 49 20.0  +10
U32A                             LR         LR
      comp=Z,600nm,20.0s
PLID  Pearl Lake      114.98 342 PFAKE                15 49 20.0  +10
PLID                             LR         LR
      comp=Z,2µm,20.0s
F07A  Phinny Hill Vi  115.29 345 PFAKE                15 49 20.0 +9.4
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F07A                             LR         LR
      comp=Z,400nm,19.0s
BMO   Blue Mountains  115.57 343 PFAKE                15 49 20.0 +8.7
BMO                              LR         LR
      comp=Z,500nm,20.0s
G08A  Pilot Rock      115.61 344 PFAKE                15 49 20.0 +8.6
G08A                             LR         LR
      comp=Z,500nm,20.0s
NATX  Nacogdoches     115.62 319 PFAKE                15 49 20.0 +8.4
NATX                             LR         LR
      comp=Z,200nm,21.0s
ISCO  Idaho Springs   115.66 332 PFAKE                15 49 20.0 +8.1
ISCO                             LR         LR
      comp=Z,700nm,20.0s
HLID  Hailey          115.86 340 PFAKE                15 49 20.0 +8.0
HLID                             LR         LR
      comp=Z,600nm,21.0s
ARMA  Armidale        115.96 116 PFAKE                15 49 20.0 +7.6
ARMA                             LR         LR
      comp=Z,1µm,18.0s
WMOK  Wichita Mounta  116.04 324 PFAKE                15 49 20.0 +7.6
WMOK                             LR         LR
      comp=Z,500nm,19.0s
G06A  Carlson Farm,   116.08 346 PFAKE                15 49 20.0 +7.8
G06A                             LR         LR
      comp=Z,2µm,21.0s
Q24A  Divide          116.11 331 PFAKE                15 49 20.0 +7.2
Q24A                             LR         LR
      comp=Z,600nm,20.0s
O20A  White River Ci  116.53 334 PFAKE                15 49 20.0 +6.5
O20A                             LR         LR
      comp=Z,700nm,20.0s
SMCO  Snowmass        116.77 332 PFAKE                15 49 30.0  +16
SMCO                             LR         LR
      comp=Z,800nm,18.0s
H04A  Detroit Lake    116.96 346 PFAKE                15 49 20.0 +6.1
H04A                             LR         LR
      comp=Z,400nm,22.0s
WHTX  Lake Whitney,   117.20 321 PFAKE                15 49 30.0  +15
WHTX                             LR         LR
      comp=Z,700nm,20.0s
T25A  Trinidad        117.21 329 PFAKE                15 49 30.0  +15
T25A                             LR         LR
      comp=Z,600nm,22.0s
SDCO  Great Sand Dun  117.26 330 PFAKE                15 49 30.0  +15
SDCO                             LR         LR
      comp=Z,600nm,18.0s
J08A  Circle Bar Ran  117.27 343 PFAKE                15 49 30.0  +15
J08A                             LR         LR
      comp=Z,600nm,20.0s
PINE  Pine Mountain   117.51 345 PFAKE                15 49 30.0  +15
PINE                             LR         LR
      comp=Z,400nm,21.0s
HKT   Hockley         117.58 318 PFAKE                15 49 30.0  +15
HKT                              LR         LR
      comp=Z,600nm,19.0s
S22A  4UR Ranch, Cre  117.88 331 PFAKE                15 49 30.0  +14
S22A                             LR         LR
      comp=Z,800nm,19.0s
TEIG  Tepich          118.00 304 PFAKE                15 49 30.0  +13
TEIG                             LR         LR
      comp=Z,700nm,20.0s
ABTX  Abilene, Hawle  118.06 323 PFAKE                15 49 30.0  +14
ABTX                             LR         LR
      comp=Z,600nm,20.0s
PV22  Blue Mesa, Par  118.10 333 PFAKE                15 49 30.0  +13
PV22                             LR         LR
      comp=Z,600nm,19.0s
435B  Jarrell         118.12 320 PFAKE                15 49 30.0  +13
435B                             LR         LR
      comp=Z,600nm,19.0s
WVOR  Wild Horse Val  118.17 343 PFAKE                15 49 30.0  +14
WVOR                             LR         LR
      comp=Z,500nm,20.0s
PV12  Saucer Basin,   118.28 333 PFAKE                15 49 30.0  +13
PV12                             LR         LR
      comp=Z,500nm,22.0s
DUG   Dugway, Tooele  118.29 337 PFAKE                15 49 30.0  +13
DUG                              LR         LR
      comp=Z,500nm,19.0s
PV01  Paradox Valley  118.34 333 PFAKE                15 49 30.0  +13
PV01                             LR         LR
      comp=Z,700nm,22.0s
PV20  West Nyswonger  118.34 333 PFAKE                15 49 30.0  +13
PV20                             LR         LR
      comp=Z,800nm,20.0s
PV02  Paradox Valley  118.35 333 PFAKE                15 49 30.0  +13
PV02                             LR         LR
      comp=Z,2µm,18.0s
PV03  Paradox Valley  118.36 333 PFAKE                15 49 30.0  +13
PV03                             LR         LR
      comp=Z,700nm,20.0s
PV18  Skein Mesa, Pa  118.39 333 PFAKE                15 49 30.0  +13
PV18                             LR         LR
      comp=Z,800nm,18.0s
PV05  Paradox Valley  118.61 333 PFAKE                15 49 30.0  +12
PV05                             LR         LR
      comp=Z,600nm,21.0s
ESPN  Las Esperanzas  118.64 294 PFAKE                15 49 30.0  +12
ESPN                             LR         LR
      comp=Z,500nm,19.0s
ELK   Elko            118.66 339 PFAKE                15 49 30.0  +12
ELK                              LR         LR
      comp=Z,500nm,21.0s
MSTX  Muleshoe        118.82 326 PFAKE                15 49 30.0  +12
MSTX                             LR         LR
      comp=Z,600nm,20.0s
MVCO  Mesa Verde      119.07 332 PFAKE                15 49 30.0  +11
MVCO                             LR         LR
      comp=Z,700nm,21.0s
HUMO  Hull Mountain   119.11 346 PFAKE                15 49 30.0  +12
HUMO                             LR         LR
      comp=Z,400nm,20.0s
MOD   Modoc Plateau   119.12 344 PFAKE                15 49 30.0  +12
MOD                              LR         LR
      comp=Z,400nm,20.0s
JCT   Junction City   119.69 321 PFAKE                15 49 30.0  +10
JCT                              LR         LR
      comp=Z,600nm,22.0s
YBH   Yreka Blue Hor  119.88 346 PFAKE                15 49 30.0  +10
YBH                              LR         LR
      comp=Z,600nm,22.0s
ANMO  Albuquerque     119.96 329 PFAKE                15 49 30.0  +10
ANMO                             LR         LR
      comp=Z,600nm,21.0s
KVTX  Kingsville      120.53 317 PFAKE                15 49 30.0 +8.7
KVTX                             LR         LR
      comp=Z,1µm,21.0s
Y22D  IRIS PASSCAL I  120.89 329 PFAKE                15 49 30.0 +8.0
Y22D                             LR         LR
      comp=Z,500nm,20.0s
PAHR  Pah Rah Range   120.91 342 PFAKE                15 49 30.0 +8.1
PAHR                             LR         LR
      comp=Z,500nm,19.0s
R11A  Troy Canyon, C  120.92 339 PFAKE                15 49 30.0 +8.0
R11A                             LR         LR
      comp=Z,600nm,21.0s
BEKR  Beckworth       121.04 343 PFAKE                15 49 30.0 +7.8
BEKR                             LR         LR
      comp=Z,400nm,20.0s
KVN   Kaiserville     121.12 341 PFAKE                15 49 30.0 +7.6
KVN                              LR         LR
      comp=Z,600nm,21.0s
W18A  Petrified Fore  121.36 332 PFAKE                15 49 30.0 +7.0
W18A                             LR         LR
      comp=Z,500nm,18.0s
YERR  Yerington       121.53 342 PFAKE                15 49 30.0 +6.8
YERR                             LR         LR
      comp=Z,500nm,20.0s
PNTR  Pine Nut        121.54 342 PFAKE                15 49 30.0 +6.7
PNTR                             LR         LR
      comp=Z,500nm,20.0s
ORV   Oroville        121.64 344 PFAKE                15 49 30.0 +6.8
ORV                              LR         LR
      comp=Z,400nm,20.0s
RYN   Ryan            121.64 341 PFAKE                15 49 30.0 +6.6
RYN                              LR         LR
      comp=Z,400nm,22.0s
RUBR  Rubicon Trail   121.74 343 PFAKE                15 49 30.0 +6.3
RUBR                             LR         LR
      comp=Z,500nm,21.0s
WUAZ  Wupatki         121.75 333 PFAKE                15 49 30.0 +6.3
WUAZ                             LR         LR
      comp=Z,700nm,21.0s
NV01  Mina Array Sit  121.75 341 ePKPdf     PKPdf     15 49 23.3 -0.3
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NVAR	Mina Array Bea	121.75	341	PKP	PKPdf	15 49 23.3	-0.3
	comp=Z,1.5nm,0.8s,baz=121,slow=0.5,SNR=12						
SHPR	Sheep Range	122.41	337	PFAKE		15 49 40.0	+15
SHPR				LR	LR		
	comp=Z,500nm,19.0s						
TPNV	Topopah Spring	122.41	338	PFAKE		15 49 40.0	+15
TPNV				LR	LR		
	comp=Z,600nm,19.0s						
EPT	El Paso	122.50	327	PFAKE		15 49 40.0	+15
EPT				LR	LR		
	comp=Z,500nm,22.0s						
X16A	Lo Mia Camp, P	122.71	333	PFAKE		15 49 40.0	+14
X16A				LR	LR		
	comp=Z,500nm,20.0s						
OMMB	Old Mammoth Mi	122.72	341	PFAKE		15 49 40.0	+14
OMMB				LR	LR		
	comp=Z,600nm,20.0s						
MDPB	Devils Postpil	122.73	341	PFAKE		15 49 40.0	+14
MDPB				LR	LR		
	comp=Z,700nm,21.0s						
CMB	Columbia Colle	122.75	342	PFAKE		15 49 40.0	+15
CMB				LR	LR		
	comp=Z,500nm,20.0s						
TXAR	Lajitas Array	122.81	323	PKP	PKPdf	15 49 25.0	-0.7
	comp=Z,1.3nm,0.8s,baz=46,slow=3.6,SNR=4.2						
W13A	Hualapai Mount	123.15	335	PFAKE		15 49 40.0	+13
W13A				LR	LR		
	comp=Z,600nm,21.0s						
Y14A	Wickenburg	123.79	334	PFAKE		15 49 40.0	+12
Y14A				LR	LR		
	comp=Z,400nm,19.0s						
319A	Douglas	124.23	329	PFAKE		15 49 40.0	+11
319A				LR	LR		
	comp=Z,500nm,20.0s						
113A	Mohawk Valley,	125.12	334	PFAKE		15 49 40.0	+10
113A				LR	LR		
	comp=Z,600nm,21.0s						
HSIG		126.98	329	PFAKE		15 49 40.0	+6.0
HSIG				LR	LR		
	comp=Z,500nm,19.0s						
DZM	Mont Dzumac	128.63	105	*e*LR	LR	16 29 57.4	
	comp=Z,657nm,22.1s						
OXZ	Oxford	131.00	133	PFAKE		15 49 50.0	+8.4
OXZ				LR	LR		
	comp=Z,1µm,20.0s						
MQZ	McQueen's Vall	131.31	134	PFAKE		15 49 50.0	+7.8
MQZ				LR	LR		
	comp=Z,2µm,22.0s						
BFZ	Birch Farm	134.80	131	PFAKE		15 50 00.0	+11
BFZ				LR	LR		
	comp=Z,700nm,19.0s						
BKZ	Black Stump Fm	135.44	129	PFAKE		15 50 00.0	+9.2
BKZ				LR	LR		
	comp=Z,900nm,20.0s						
TBI	Tubuai	168.29	126	*e*SS	SS	16 16 33.8	+8.6
	comp=Z,416nm,28.5s						
TBI	Tubuai	168.29	126	*e*LR	LR	16 48 31.6	
	comp=Z,801nm,28.0s						
PPT2	Papeete2	170.00	96	*e*SS	SS	16 16 49.2	+5.2
	comp=Z,607nm,27.8s						
PPT2	Papeete2	170.00	96	*e*LR	LR	16 49 20.5	
	comp=Z,1µm,24.0s						

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*SGS **08** 15:47:00, 15°.80N×40°.13E, h7km, Ml3.8*
*ISCJB **08** 15:47:11.0±0.6, 16°.47N±0°.08×40°.77E±0°.06, h8km, mb4.1/20, Error ellipse: s-maj=11.2km s-min=8.3km az=8.0*
*IDC **08** 15:47:11.2±1.2, 16°.43N×40°.62E, h0km, mb4.0/13, mb1 4.1/15, mb1mx3.9/42, mbtmp4.0/15, ML3.8/2, Error ellipse: s-maj=25.6km s-min=20.4km az=170.0*
*NEIC **08** 15:47:12.7±0.4, 16°.47N×40°.65E, h10km, mb4.4/8, Error ellipse: s-maj=9.1km s-min=7.5km az=205.0*
ISC 08 15:47:13.2±0.8, **16°.58N**±0°.08×**40°.77E**±0°.09, **h8km, n36,** σ**1ˢ41**/34, **mb4.2**/19, **Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRSS	Farasan al Kab	1.30	83	P	Pn	15 47 34.4	-3.4
DRBS	Ad Darb	1.92	49	P	Pn	15 47 45.0	-1.3
JAZS	Jizan	2.11	76	P	Pn	15 47 45.8	-3.1
BESHS	BESHS	2.13	68	P	Pn	15 47 46.9	-2.3
DAMY	Dhamar	4.02	119	*e*Pn	Pn	15 48 15.7	+0.3
ATD	Arta Tunnel	5.41	158	Pn	Pn	15 48 33.2	-1.1
	5.8nm,0.3s,baz=307,slow=10.0,SNR=14						
UOSS	Minazif	16.65	57	*e*Pn	Pn	15 51 07.3	+0.2
	23nm,0.8s						
WSAR	Wadi Sarin	18.05	66	P	P	15 51 26.7	+1.7
	0.2nm,0.3s,baz=251,slow=17,SNR=4.2						
BR101	Keskin Array S	23.89	346	*e*P	P	15 52 28.5	+0.9
BRTR	Keskin Array B	23.89	346	P	P	15 52 28.5	+0.9
	1.1nm,0.8s,baz=169,slow=14,SNR=4.5						
GEYT	Alibeck	26.18	32	P	P	15 52 48.9	+0.5
	1.1nm,0.6s,baz=175,slow=7.2,SNR=2.8						
GAR	Garm	34.13	43	*e*P	P	15 53 59.5	+0.6
	16nm,1.1s						
BTK	Batken	35.03	42	*e*P	P	15 54 07.3	+0.7
	11nm,1.1s						
AKTO	Aktyubinsk	36.52	19	P	P	15 54 20.8	+1.7
	2.9nm,1.1s,baz=203,slow=12,SNR=3.6						
KK31	Karatay Array	36.59	38	*e*P	P	15 54 20.7	+0.8
	3.8nm,0.8s						
TORD	Torodi Ar. Bea	37.88	270	P	P	15 54 28.9	-2.3
	8.1nm,0.9s,baz=82,slow=7.9,SNR=16						
TOA1	Torodi Ar. Sit	37.88	270	*e*P	P	15 54 28.9	-2.3
GEC2	GERESS Array S	39.02	331	*e*P	P	15 54 39.6	-0.8
	6.7nm,1.3s						
GERES	GERESS Array B	39.02	331	P	P	15 54 39.2	-1.1
	0.5nm,0.6s,baz=118,slow=17,SNR=4.7						
CLL	Collm	41.12	334	*e*P	P	15 54 59.0	+1.3
	comp=Z,6.0nm,1.3s						
BVAR	Borovoye Array	43.15	26	P	P	15 55 15.9	+1.7
	comp=Z,0.8nm,0.6s,baz=225,slow=10,SNR=5.3						
MAKZ	Makanchi	45.44	39	*e*P	P	15 55 32.0	-0.7
	comp=Z,5.8nm,1.1s						
KURBB	Kurchatov Arra	45.45	33	P	P	15 55 34.2	+1.5
	comp=Z,0.7nm,0.3s,baz=238,slow=7.9,SNR=8.1						
MK31	Makanchi Array	45.63	40	*e*P	P	15 55 33.4	-0.8
	comp=Z,3.7nm,1.1s						
MK32	Makanchi Array	45.63	40	*e*P	P	15 55 33.6	-0.6
MKAR	Makanchi Array	45.63	40	P	P	15 55 33.6	-0.6
	comp=Z,1.4nm,0.7s,baz=233,slow=7.6,SNR=10						
FIA0	FINESS Array S	46.02	350	*e*P	P	15 55 37.2	+0.2
FINES	FINESS Array B	46.02	350	P	P	15 55 37.2	+0.2
	comp=Z,2.2nm,0.9s,baz=162,slow=9.9,SNR=2.4						
ZAA0	Zalesovo Array	50.50	32	*e*P	P	15 56 10.7	-1.0
	comp=Z,4.4nm,0.8s						
ZALV	Zalesovo Beam	50.50	32	P	P	15 56 11.2	-0.6
	comp=Z,2.8nm,0.8s,baz=247,slow=7.7,SNR=8.1						
ZAA1	Zalesovo Array	50.50	32	*e*P	P	15 56 11.2	-0.6
CMAR	Chiang Mai Arr	55.30	79	P	P	15 56 47.7	-0.1
	comp=Z,0.8nm,1.0s,baz=288,slow=6.4,SNR=4.2						
SONA0	Songino Array	61.56	44	*e*P	P	15 57 31.8	+0.5
SONM	Songino Array	61.56	44	P	P	15 57 31.8	+0.5
	comp=Z,1.9nm,0.9s,baz=269,slow=7.5,SNR=6.7						
YKA	Yellowknife Ar	98.84	349	P	Pdif	16 00 53.4	-0.2
	comp=Z,0.2nm,0.4s,baz=23,slow=3.8,SNR=3.5						
YKB5	Yellowknife Ar	98.84	349	*e*P	Pdif	16 00 53.4	-0.2

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*ISCJB **08** 15:47:56.6±0.7, 16°.58N±0°.07×40°.8E±0°.1, h8km, mb4.0/8, Error ellipse: s-maj=20.6km s-min=9.0km az=165.6*
*IDC **08** 15:47:57.2±1.2, 16°.56N×40°.75E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.8/39, mbtmp4.0/9, Error ellipse: s-maj=25.8km s-min=24.7km az=100.0*
ISC 08 15:47:58.4±0.9, **16°.57N**±0°.09×**40°.7E**±0°.2, **h8km, n9,** σ**1ˢ05**/10, **mb4.1**/8, **Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	5.42	157	Pn	Pn	15 49 18.6	-1.0
	baz=99,slow=19,SNR=2.2						
ATD				Sn	Sn	15 50 23.2	+1.0
	baz=273,slow=19,SNR=1.8						
GEYT	Alibeck	26.20	32	P	P	15 53 32.5	-1.3
	1.0nm,0.5s,baz=239,slow=8.1,SNR=2.3						
TORD	Torodi Ar. Bea	37.85	270	P	P	15 55 16.1	+0.1
	3.5nm,0.9s,baz=87,slow=8.1,SNR=4.0						
GERES	GERESS Array B	39.00	332	P	P	15 55 24.9	-0.6
	1.1nm,0.8s,baz=146,slow=11,SNR=2.7						
KURBB	Kurchatov Arra	45.48	33	P	P	15 56 18.7	+0.7
	1.2nm,0.6s,baz=234,slow=8.2,SNR=3.5						
MKAR	Makanchi Array	45.65	40	P	P	15 56 19.5	0.0
	1.4nm,0.9s,baz=236,slow=6.5,SNR=4.6						
FINES	FINESS Array B	46.02	350	P	P	15 56 23.1	+1.0
	2.3nm,0.9s,baz=144,slow=10,SNR=2.6						
ZALV	Zalesovo Beam	50.52	32	P	P	15 56 55.9	-1.2
	3.0nm,0.8s,baz=243,slow=9.8,SNR=4.6						
SONM	Songino Array	61.59	44	P	P	15 58 17.6	+1.0
	1.9nm,1.0s,baz=264,slow=7.1,SNR=2.9						

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*ISCJB **08** 16:06:38.0±0.7, 29°.13S±0°.03×69°.45W±0°.04, h120km±9km, Error ellipse: s-maj=5.7km s-min=4.5km az=21.7*
*SJA **08** 16:06:38.3±0.9, 29°.15S×69°.35W, h135km±6km, ML3.4, MW3.5*
*GUC **08** 16:06:38.4±0.6, 29°.14S×69°.55W, h106km±6km, ML3.7*
ISC 08 16:06:37.4±1.6, **29°.12S**±0°.04×**69°.49W**±0°.04, **h133km**±14km, **n23,** σ**1ˢ42**/43, **4C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	1.19	71	*i* P	Pn	16 07 03.7	+1.0
VCA				*e*S	Sn	16 07 21.8	+0.1
VCA				IAML		16 07 22.4	
	comp=Z,4µm,0.3s						
VCA	Vinchina	1.19	71	⇑*i*P	Pn	16 07 03.6	+1.0
VCA				*i* S	Sn	16 07 21.9	+0.1
VCA				IAML		16 07 22.4	
	comp=N,7µm,0.3s						
GO04	Tololo Observa	1.55	227	*e*P	Pn	16 07 06.8	+0.2
GO04				*e*S	Sn	16 07 28.3	-0.4
GO04	Tololo Observa	1.55	227	⇑*i*P	Pn	16 07 06.7	+0.2
GO04				*i* S	Sn	16 07 28.0	-0.7
GO03	Copiap	1.66	336	⇓*i*P	Pn	16 07 08.0	+0.3
GO03				*i* S	Sn	16 07 30.0	-0.6
GO03				IAML		16 07 31.5	
	comp=E,588nm,0.1s						
LSCH	La Serena	1.72	242	⇑*i*P	Pn	16 07 08.0	-0.2
LSCH				*i* S	Sn	16 07 30.0	-1.7
LSCH				IAML		16 07 31.7	
	comp=E,318nm,0.4s						
AMOG	MOGNA	2.01	155	*e*P	Pn	16 07 12.5	+0.8
AMOG				*e*S	Sn	16 07 36.5	-1.5
ACLC	CERRO LA CRUZ	2.24	98	*i* P	Pn	16 07 15.3	+0.7
ACLC				*e*S	Sn	16 07 41.8	-1.3
RTLL	Cerro Villicun	2.37	158	*i* P	Pn	16 07 17.6	+1.5
RTLL				*i* S	Sn	16 07 46.1	+0.2
RTLL				IAML		16 07 47.9	
	comp=Z,169nm,0.7s						
CO02	Combarbal	2.45	212	⇑*i*P	Pn	16 07 17.7	+0.4
CO02				*i* S	Sn	16 07 47.8	-0.1
RTLS	Leoncito	2.67	176	*i* P	Pn	16 07 22.1	+1.9
RTLS				*i* S	Sn	16 07 54.3	+1.1
RTLS				IAML		16 07 56.3	
	comp=Z,99nm,0.5s						
CFA	Coronel Fontan	2.70	157	*e*P	Pn	16 07 21.5	+1.2
CFA				*i* S	Sn	16 07 53.5	0.0
RTCV	Cerro Valdivia	2.85	164	*i* P	Pn	16 07 23.9	+1.6
RTCV				*i* S	Sn	16 07 57.1	+0.2
APLL	PUNTA DE LOS L	2.87	117	*i* P	Pn	16 07 23.2	+0.8
APLL				*i* S	Sn	16 07 55.8	-1.4
APLL				IAML		16 08 01.4	
	comp=Z,56nm,0.4s						
AUSP	Uspallata	3.09	178	*e*P	Pn	16 07 27.7	+2.1
AUSP				*e*S	Sn	16 08 04.0	+1.2
CYA	Choya	3.31	79	*e*P	Pn	16 07 28.7	+0.6
CYA				IAML		16 07 30.1	
	comp=Z,92nm,0.2s						
CYA				*e*S	Sn	16 08 05.6	-1.8
ACAN	Cantantal	3.71	148	*e*P	Pn	16 07 35.0	+1.5
ACAN				*e*S	Sn	16 08 15.6	-1.3
FSA	Cafayete	4.32	47	*i* P	Pn	16 07 43.5	+1.8
FSA				IAML		16 07 43.8	
	comp=Z,13nm,0.6s						
FSA				*e*S	Sn	16 08 33.1	+1.5
AHML	Horco Molle	4.35	59	*e*P	Pn	16 07 41.8	-0.1
MRA	San Martin	4.62	136	*e*P	Pn	16 07 46.3	+0.8
MRA				*e*S	Sn	16 08 37.1	-1.4
MRA				IAML		16 09 06.4	
	comp=Z,21nm,0.5s						
TCA	Tanti	4.78	119	*e*P	Pn	16 07 47.8	+0.2
TCA				*e*S	Sn	16 08 37.4	-4.9
TCA				IAML		16 08 40.0	
	comp=Z,22nm,0.3s						
GO05	Huala	6.22	199	*e*P	Pn	16 08 04.2	-2.7
AZAP	Zapla	6.28	40	*e*P	Pn	16 08 08.7	+0.7

IDC 08 16:14:00.7±1.2, **11°.50N**×**142°.27E, h0km, mb3.5**/4, **mb1 3.7**/5, **mb1mx3.3**/45, **mbtmp3.5**/5, **ML3.6**/1, **Error ellipse: s-maj=35.4km s-min=21.7km az=106.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.29	50	Pn	Pn	16 14 53.8	+0.4
	6.6nm,0.3s,baz=172,slow=23,SNR=23						
GUMO				Sn	Sn	16 15 33.7	+0.4
	8.0nm,0.3s,baz=111,slow=23,SNR=6.6						
WRA	Warramunga Arr	32.20	194	P	P	16 20 30.1	-0.5
	2.1nm,1.2s,baz=15,slow=9.7,SNR=2.9						
ASAR	Alice Springs	35.89	193	P	P	16 21 03.1	+0.4
	0.2nm,0.6s,baz=25,slow=11,SNR=9.5						
MKAR	Makanchi Array	61.26	317	P	P	16 24 17.1	-0.7
	0.4nm,0.8s,baz=119,slow=5.6,SNR=4.1						
KURBB	Kurchatov Arra	64.60	321	P	P	16 24 40.4	+0.5
	0.2nm,0.3s,baz=101,slow=6.7,SNR=5.2						

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*ISCJB **08** 16:17:40.8±0.8, 23°.82N±0°.02×122°.76E±0°.02, h15km±5km, Error ellipse: s-maj=3.7km s-min=2.3km az=160.7*
*JMA **08** 16:17:41.9±0.1, 23°.89N×122°.75E, h42km, M2.1*
*TAP **08** 16:17:41.4, 23°.91N×122°.83E, h55km±1km, ML2.6, D*
ISC 08 16:17:37.8±1.1, **23°.64N**±0°.03×**122°.78E**±0°.02, **h19km**±3km, **n67,** σ**1ˢ08**/119, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.83	10	P	Pb	16 17 53.8	+0.2
JYNG				*e*S	Sb	16 18 01.9	-2.4
YOJ	Yonaguni jima	0.85	14	P	Pb	16 17 54.1	+0.2
	baz=15						
YOJ				S	Sb	16 18 03.5	-1.5
	baz=15						
YOJ	Yonaguni jima	0.85	14	P	Pb	16 17 54.4	+0.5
YOJ				*e*S	Sb	16 18 03.4	-1.5
HATJ	Hateruma jima	1.03	66	P	Pg	16 17 59.7	+2.0
HATJ				*e*S	Sg	16 18 12.4	+1.1
EOS1	EOS1	1.09	327	*e*P	Pb	16 17 58.6	+0.6
	baz=322						
EOS1				*e*S	Sb	16 18 11.1	-0.7
	baz=322						
IRIF	Iriomote-Funau	1.11	51	P	Pg	16 18 00.0	+0.6
IRIF				*e*S	Sb	16 18 12.8	+0.2
TWD	Chiawan	1.17	292	*e*P	Pg	16 18 00.4	-0.1
	baz=280						
TWD				*e*S	Sg	16 18 16.8	+0.9
	baz=280						
NACB	Ninganchiao	1.21	297	*e*P	Pb	16 18 00.9	+0.7
	baz=275						
NACB				*e*S	Sn	16 18 14.9	-0.8
	baz=275						
NANB	Nanao	1.23	310	P	Pb	16 18 00.8	+0.3
	baz=299						
NANB				*e*S	Sn	16 18 16.1	0.0
	baz=299						
ENA	Nanau	1.24	310	*e*P	Pn	16 18 00.5	+0.4
	baz=299						
ENA				*e*S	Sn	16 18 16.4	+0.1
	baz=299						
EGFH	Guangfu	1.24	272	*e*P	Pg	16 18 03.0	+1.2
	baz=252						
EGFH				*e*S	Sg	16 18 18.3	+0.2
	baz=252						
ESL	Shilin	1.25	278	P	Pg	16 18 02.0	0.0
	baz=259						
ESL				*e*S	Sn	16 18 16.8	+0.2
	baz=259						
HGSD	Ruisui	1.25	264	*e*P	Pg	16 18 03.0	+0.9
	baz=253						
HGSD				*e*S	Sg	16 18 18.1	-0.3
	baz=253						
JKRS	Kuro-shima	1.27	62	P	Pg	16 18 03.0	+0.6
JKRS				*e*S	Sg	16 18 18.8	-0.3
TWC	Suao	1.29	319	*e*S	Sn	16 18 15.4	-2.2
	baz=309						
ETLH	Xiulin Townshi	1.32	296	P	Pb	16 18 02.6	+0.6
	baz=285						
ETLH				*e*S	Sn	16 18 17.8	-0.7
	baz=285						
EHY	Hungye	1.34	265	*e*P	Pg	16 18 04.7	+0.9
	baz=255						
EHY				*e*S	Sg	16 18 21.1	-0.2
	baz=255						
YULB	Yu-li	1.38	260	P	Pg	16 18 05.7	+1.2
	baz=244						
YULB				*e*S	Sg	16 18 21.7	-0.9
	baz=244						
TWF1	Yuli	1.39	259	*e*P	Pg	16 18 05.7	+1.0
	baz=242						
TWF1				*e*S	Sg	16 18 23.9	+1.1
	baz=242						
CHKT	Chengkung	1.41	248	*e*P	Pg	16 18 05.8	+0.9
	baz=232						
CHKT				*e*S	Sg	16 18 23.0	-0.3
	baz=232						
JIJ	Ishigaki jima	1.44	60	P	Pb	16 18 04.5	+0.5
JIJ				*e*S	Sn	16 18 21.0	-0.3
WHF	Hehuan Shan	1.48	290	*e*P	Pb	16 18 05.7	+0.7
	baz=280						
TWE	Neicheng	1.48	317	*e*S	Sn	16 18 20.8	-1.6
	baz=309						
NNSB	Datong	1.50	302	*e*P	Pb	16 18 05.3	+0.2
	baz=293						
NNSB				*e*S	Sn	16 18 22.3	-0.7
	baz=293						
NDT	Datong Townshi	1.51	310	*e*P	Pn	16 18 04.3	+0.5
	baz=301						
NDT				*e*S	Sn	16 18 22.1	-0.9
	baz=301						
VWDT	VWDT	1.51	275	*e*P	Pg	16 18 06.6	-0.3
	baz=266						
VWDT				*e*S	Sb	16 18 25.1	+1.2
	baz=266						
NNS	Nan Shan	1.52	302	*e*S	Sn	16 18 22.6	-0.7
	baz=293						
CHGB	Renai	1.53	286	P	Pb	16 18 06.6	+0.9
	baz=277						
CHGB				*e*S	Sb	16 18 25.1	+0.3
	baz=277						
TIPB	Shuangxi	1.59	327	*e*P	Pn	16 18 05.2	+0.2
	baz=320						
TIPB				*e*S	Sn	16 18 22.0	-3.1
	baz=320						
TWT	Tachien	1.59	293	*e*P	Pn	16 18 05.9	+0.8
	baz=284						
TWT				*e*S	Sb	16 18 26.8	+0.2
	baz=284						
TDCB	Techi	1.61	293	*e*P	Pb	16 18 07.4	+0.4
	baz=285						
TDCB				*e*S	Sn	16 18 26.3	+0.6
	baz=285						
YHNB	Yeheng	1.65	309	*e*P	Pb	16 18 07.3	-0.3
	baz=301						
YHNB				*e*S	Sn	16 18 25.3	-1.2
	baz=301						
NSK	Sanguang	1.66	309	*e*P	Pb	16 18 07.5	-0.4
	baz=301						
NSK				*e*S	Sn	16 18 25.6	-1.3
	baz=301						
ELDTW	Lidau	1.68	255	*e*P	Pg	16 18 09.9	-0.3
	baz=247						
ELDTW				*e*S	Sb	16 18 29.4	+0.4
	baz=247						
SSLB	Suanglung	1.68	276	*e*P	Pb	16 18 09.0	+0.8
	baz=266						
YUS	Yu-Shan	1.69	265	*e*P	Pg	16 18 10.3	0.0
	baz=257						
YUS				*e*S	Sb	16 18 29.7	+0.2
	baz=257						
JISG	Ishigakijimahi	1.69	56	P	Pb	16 18 07.5	-0.8
JISG				*e*S	Sn	16 18 26.5	-0.9
SMLT	Sun Moon Lake	1.74	279	*e*P	Pb	16 18 10.4	+1.2
	baz=262						
TWGBT	Beinan	1.76	243	*e*P	Pg	16 18 11.2	-0.5
	baz=230						
TWGBT				*e*S	Sg	16 18 32.9	-1.8
	baz=230						
TWG	Pinlang	1.77	243	*e*P	Pg	16 18 11.7	-0.1
	baz=230						
TWG				*e*S	Sg	16 18 33.0	-1.8
	baz=230						
WHYT	Xinyi Township	1.77	272	*e*P	Pg	16 18 10.9	-0.9
	baz=259						
TYC	Yuchr	1.78	279	*e*P	Pg	16 18 11.9	-0.2
	baz=262						
WHP	Taichung City	1.80	291	*e*P	Pg	16 18 12.0	-0.4
	baz=284						
WHP				*e*S	Sb	16 18 34.3	+1.9
	baz=284						
YM01	YM01	1.87	324	*e*P	Pn	16 18 09.6	+0.8
	baz=317						
WJS	Zhushan	1.89	276	*e*P	Pg	16 18 14.2	0.0
	baz=263						
WJS				S	Sg	16 18 38.7	0.0
	baz=263						
LIOB	Emei	1.90	302	*e*P	Pb	16 18 11.9	0.0
	baz=296						
LIOB				*e*S	Sn	16 18 34.3	+1.6
	baz=296						
NSTT	Nanjuang	1.91	302	*e*P	Pb	16 18 11.6	-0.4
	baz=295						
NSTT				*e*S	Sn	16 18 33.9	+1.1
	baz=295						
CHN5	Tsauling	1.93	269	P	Pg	16 18 14.3	-0.6
	baz=262						
CHN5				*e*S	Sb	16 18 37.7	+1.5
	baz=262						
WNT	Mingjian	1.94	278	*e*P	Pg	16 18 14.1	-1.0
	baz=271						
WNT				*e*S	Sb	16 18 37.7	+1.4
	baz=271						
LAY	Lan-yu	1.95	216	*e*S	Sb	16 18 36.8	0.0
	baz=212						
ECL	Taimali	1.97	239	*e*S	Sb	16 18 37.7	+0.3
	baz=242						
TCU	Taichung	1.99	285	*e*P	Pb	16 18 14.4	+0.9
	baz=279						
TCU				*e*S	Sb	16 18 39.4	+1.4
	baz=279						
TPUB	Ta-pu	2.00	261	*e*P	Pg	16 18 15.9	-0.4
	baz=250						
TPUB				*e*S	Sg	16 18 40.8	-1.6
	baz=250						
JTJ	Tarama	2.02	60	P	Pb	16 18 12.7	-1.2
WTP	Ta-pu	2.03	259	*e*P	Pg	16 18 16.4	-0.4
	baz=253						
WTP				*e*S	Sg	16 18 41.0	-2.1
	baz=253						
WDLH	Douliu	2.06	272	*e*P	Pg	16 18 17.2	-0.2
	baz=266						
WDLH				*e*S	Sg	16 18 42.9	-1.2
	baz=266						
SLGT	Liugui	2.06	252	*e*P	Pg	16 18 16.4	-1.0
	baz=242						
SLGT				*e*S	Sg	16 18 44.2	-0.1
	baz=242						
CHN1	Nanshi	2.12	258	*e*P	Pg	16 18 18.2	-0.3
	baz=261						
CHN1				*e*S	Sg	16 18 45.0	-1.0
	baz=261						
SNST	Tainan City	2.14	259	*e*P	Pg	16 18 18.6	-0.3
	baz=262						
SNST				*e*S	Sg	16 18 44.7	-2.0
	baz=262						
TWK	Hsinying	2.14	261	*e*P	Pg	16 18 18.3	-0.6
	baz=254						
TWK				*e*S	Sg	16 18 44.8	-1.9
	baz=254						
SSD	Sandimen	2.17	246	*e*P	Pg	16 18 20.0	+0.6
	baz=236						
EAST	Anshuo	2.17	235	*e*P	Pg	16 18 17.9	-1.6
	baz=237						
EAST				*e*S	Sb	16 18 42.9	-0.3
	baz=237						
MASBT	Mashibuluo	2.23	243	*e*P	Pg	16 18 18.3	-2.2
	baz=235						
MASBT				*e*S	Sg	16 18 46.3	-3.2
	baz=235						
RLNB	Erlin	2.23	277	*e*P	Pb	16 18 18.9	+1.4
	baz=287						
RLNB				*e*S	Sb	16 18 46.5	+1.7
	baz=287						
SCZT	Fangliau	2.35	238	*e*P	Pg	16 18 22.8	-0.2
	baz=229						

SCZT				eS	Sb	16 18 46.8	-1.6
	baz=229						
JIRB	Irabujima	2.48	61	eS	Sn	16 18 48.2	+1.1
PTMZ	Houxiangcun	3.62	293	eP	Pn	16 18 34.7	+1.8
	baz=289						

GEN 08 16:22:19.3, 44°.21N×10°.13E, h4^{km}, Ml0.5, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	Equi	0.05	163	P	Pg	16 22 20.8	+0.3
EQUI				S	Sg	16 22 21.8	+0.6
GRAM	Graiana	0.28	350	P	Pg	16 22 25.2	+0.3
GRAM				S	Sg	16 22 29.6	+1.1

ROM 08 16:22:51.4±0.1, 44°.214N±0°.003×10°.095E±0°.006, h5^{km}±1^{km}, ML1.2/2, Error ellipse: s-maj=0.3km s-min=0.3km az=278.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIVI	Fivizzano	0.03	42	P	Pg	16 22 52.8	+0.3
FIVI				S	Sg	16 22 53.5	+0.2
EQUI	Equi	0.06	139	P	Pg	16 22 53.2	+0.3
EQUI				S	Sg	16 22 54.3	+0.4
T0912	Minucciano (LU	0.09	119	P	Pg	16 22 53.6	+0.2
T0912				S	Sg	16 22 55.2	+0.5
T0912				AML	AML		
	comp=E,361µm,0.1s						
T0912				AML	AML		
	comp=N,646µm,0.1s						
T0912				AML	AML		
	comp=N,646µm,0.1s						
T0912				AML	AML		
	comp=E,361µm,0.1s						
PLMA	Palmaria, Port	0.24	227	P	Pg	16 22 56.9	+0.9
PLMA				S	Sg	16 23 00.6	+1.4
GRAM	Graiana	0.28	356	P	Pg	16 22 57.9	+1.1
GRAM				S	Sg	16 23 02.0	+1.4
GRAM				AML	AML		
	comp=E,49µm,0.2s						
GRAM				AML	AML		
	comp=N,53µm,0.7s						
GRAM				AML	AML		
	comp=E,49µm,0.2s						
GRAM				AML	AML		
	comp=N,53µm,0.7s						

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*ISCJB **08** 16:25:28.2±0.4, 37°.53N±0°.05×95°.92E±0°.06, h12^{km}, mb3.9/9, Error ellipse: s-maj=8.0km s-min=6.3km az=25.9*

*IDC **08** 16:25:28.2±0.8, 37°.46N×95°.90E, h0^{km}, mb3.8/7, mb1 3.8/12, mb1mx3.6/51, mbtmp3.7/12, ML3.3/4, Error ellipse: s-maj=30.1km s-min=15.7km az=44.0*

*NEIC **08** 16:25:29.6±1.8, 37°.49N×95°.82E, h10^{km}, mb4.1/5, Error ellipse: s-maj=17.8km s-min=11.2km az=339.0*

*BJI **08** 16:25:30.7±0.0, 37°.59N×95°.89E, h7^{km}, mb4.0/5, ML3.6/10, Ms3.4/5, Ms7 3.3/2*

ISC 08 16:25:30.3±0.6, 37°.54N±0°.08×95°.90E±0°.06, h12^{km}, n27, σ1^{s}38/31, mb3.9/9, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	3.60	58	Pn	Pn	16 26 28.7	+2.7
GTA				Pg	Pb	16 26 33.9	0.0
GTA				Sn	Sn	16 27 06.8	-1.7
GTA				Sg	Sb	16 27 15.4	-2.2
WMQ	Urumqi	8.84	318	eP	Pn	16 27 40.5	+2.6
SONA0	Songino Array	12.85	34	ePn	Pn	16 28 33.6	+0.8
SONM	Songino Array	12.85	34	Pn	Pn	16 28 33.6	+0.8
	0.5nm,0.3s,baz=216,slow=14,SNR=6.3						
ENH	Enshi	13.41	119	ePn	Pn	16 28 39.9	-0.5
MK31	Makanchi Array	13.67	317	ePn	Pn	16 28 41.9	-2.1
MK32	Makanchi Array	13.67	317	ePn	Pn	16 28 41.6	-2.3
MKAR	Makanchi Array	13.67	317	Pn	Pn	16 28 41.6	-2.3
	0.7nm,0.3s,baz=122,slow=14,SNR=28						
MAKZ	Makanchi	13.85	316	ePn	Pn	16 28 44.8	-1.6
KDJ	Kajisay	15.09	294	ePn	Pn	16 29 04.3	+0.9
	3.6nm,0.8s						
WHN	Wuhan	16.80	109	P	P	16 29 29.7	+2.2
AAK	Ala-Archa	17.14	294	eP	Pn	16 29 29.8	+0.1
	2.9nm,0.9s						
SIMRM	Sittwe	17.54	189	eP	P	16 29 34.7	-1.1
	46nm,1.2s						
KURBB	Kurchatov Arra	18.02	322	P	Pn	16 29 39.4	-1.0
	0.1nm,0.3s,baz=133,slow=11,SNR=8.0						
ZALV	Zalesovo Beam	18.10	339	P	P	16 29 42.7	+0.9
	0.1nm,0.3s,baz=138,slow=13,SNR=2.2						
ZAA1	Zalesovo Array	18.11	339	eP	P	16 29 42.7	+0.9
CMAR	Chiang Mai Arr	19.20	171	P	P	16 29 53.6	-0.5
	baz=342,slow=9.9,SNR=4.7						
BVAR	Borovoye Array	23.52	319	P	P	16 30 40.8	+0.6
	0.7nm,0.5s,baz=107,slow=9.9,SNR=4.7						
KS15	Wonju Array Si	25.32	80	eP	P	16 30 56.9	+0.1
	74nm,1.8s						
KS15				eS	S	16 35 23.2	+0.5
KSRS	Korea Array	25.35	80	P	P	16 30 56.5	-0.6
	2.9nm,0.6s,baz=278,slow=9.6,SNR=14						
AKTO	Aktyubinsk	29.81	308	P	P	16 31 37.4	+0.4
	2.0nm,0.8s,baz=104,slow=13,SNR=5.2						
BR101	Keskin Array S	47.81	293	eP	P	16 34 07.3	-0.5
BRTR	Keskin Array B	47.81	293	P	P	16 34 07.3	-0.5
	0.6nm,0.7s,baz=120,slow=8.5,SNR=3.2						
AS31	Alice Springs	70.60	143	eP	P	16 36 45.7	+0.1
	1.3nm,1.2s						
ASAR	Alice Springs	70.60	143	P	P	16 36 45.5	-0.1
	0.9nm,0.8s,baz=331,slow=6.2,SNR=15						
ESDC	Sonseca Array	73.69	308	P	P	16 37 04.0	-0.1
	0.3nm,0.4s,baz=37,slow=6.8,SNR=2.9						
STKA	Stephens Creek	81.17	142	P	P	16 37 44.6	-1.1
	0.8nm,0.5s,baz=318,slow=3.8,SNR=5.3						

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*IDC **08** 16:39:49.2±4.0, 36°.39N×71°.21E, h207^{km}±35^{km}, mb3.3/8, mb1 3.4/14, mb1mx3.1/46, mbtmp3.9/14, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=28.5km s-min=17.3km az=30.0*

*ISCJB **08** 16:39:51.5±0.5, 36°.53N±0°.04×71°.34E±0°.08, h250^{km}, mb3.5/8, Error ellipse: s-maj=8.8km s-min=4.6km az=168.2*

*NNC **08** 16:39:54.8±3.5, 36°.84N×71°.12E, h224^{km}±39^{km}, mb3.1, mpv4.4, Error ellipse: s-maj=33.3km s-min=21.8km az=1.0*

ISC 08 16:39:52.1±0.7, 36°.54N±0°.06×71°.34E±0°.09, h250^{km}, n42, σ1^{s}73/46, mb3.5/8, 10C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.75	170	⇑P	Pn	16 40 39.8	-2.3
CHCP	Chirah Chowk	3.28	151	⇑P	Pn	16 40 46.4	-1.3
THW	Thamme Wali	3.75	175	⇑P	Pn	16 40 50.8	-2.3
AML	Almayashu	5.88	17	P	Pn	16 41 18.1	-0.8
	SNR=280						
UCH	Uchtor	6.19	22	P	Pn	16 41 22.8	-0.1
	SNR=68						
KZA	Kyzart	6.31	28	P	Pn	16 41 23.5	-0.8
	SNR=30						
EKS2	Erkin-Say	6.40	16	P	Pn	16 41 25.0	-0.2
	SNR=39						
AAK	Ala-Archa	6.56	21	P	Pn	16 41 27.4	+0.2
	11nm,0.3s,baz=193,slow=6.4,SNR=57						
AAK				S	S	16 42 41.3	-2.3
	1.5nm,0.3s,baz=314,slow=23,SNR=21						
AAK	Ala-Archa	6.56	21	⇑P	Pn	16 41 27.1	-0.1
	20nm,0.5s						
AAK				⇓S	S	16 42 41.6	-1.9
	39nm,0.7s						
AAK	Ala-Archa	6.56	21	P	Pn	16 41 27.4	+0.2
	SNR=29						
KK31	Karatay Array	6.59	355	⇑P	Pn	16 41 26.3	-1.2
	5.2nm,0.3s,baz=180,slow=14,SNR=113						
KK31				⇑S	S	16 42 37.4	-6.5
	6.2nm,0.3s,baz=175,slow=17,SNR=9.9						
KBK	Karagaybulak	6.71	23	P	Pn	16 41 29.7	+0.5
	SNR=27						
ULHL	Ulahol	6.85	32	P	Pn	16 41 30.7	-0.2
	SNR=19						
CHMS	Chumysh	6.96	21	P	Pn	16 41 32.8	+0.6
	SNR=15						
USP	Ospenovka	7.14	19	P	Pn	16 41 34.6	+0.1
	SNR=12						
TKM2	Tokmak 2	7.17	26	⇑P	Pn	16 41 34.4	-0.6
	24nm,0.5s						
TKM2				⇓S	S	16 42 56.1	-1.5
	14nm,0.9s						
TKM2	Tokmak 2	7.17	26	P	Pn	16 41 35.1	+0.2
	SNR=65						
PYUN	Piuthan	12.95	127	eP	P	16 42 47.7	-1.8
	17nm,0.5s						
MKAR	Makanchi Array	13.10	35	P	P	16 42 49.7	-1.1
	0.5nm,0.3s,baz=223,slow=14,SNR=11						
MKAR				S	S	16 45 19.3	+4.8
	0.1nm,0.3s,baz=212,slow=19,SNR=2.8						
MKAR				LR	LR	16 48 20.8	
	comp=Z,111nm,20.3s,baz=294,slow=38						
MK31	Makanchi Array	13.10	35	⇑P	P	16 42 50.2	-0.5
	0.5nm,0.3s,baz=219,slow=12,SNR=20						
KOLN	Koldanda	13.57	127	eP	P	16 42 56.4	+0.1
	8.8nm,0.3s						
DMN	Daman	14.67	123	eP	Pn	16 43 09.0	+0.4
	12nm,0.3s						
KKN	Kakani	14.67	123	eP	Pn	16 43 08.6	+0.1
	31nm,0.5s						
PKIN	Phulchoki	14.88	123	eP	Pn	16 43 11.6	+0.4
	12nm,0.3s						
PKI	Pulchoki	14.90	123	eP	Pn	16 43 12.1	+0.7
	14nm,0.2s						
KURBB	Kurchatov Arra	15.00	18	P	Pn	16 43 11.8	-0.2
	0.1nm,0.3s,baz=208,slow=12,SNR=11						
KURBB	Kurchatov Arra	15.00	18	⇓P	Pn	16 43 11.5	-0.5
	1.3nm,0.6s						
GUN	Gumba	15.00	121	eP	Pn	16 43 12.1	-0.6
	15nm,0.3s						
AB31	Akbulak array	15.18	330	⇑P	Pn	16 43 15.2	+1.0
	1.1nm,0.5s,baz=142,slow=13,SNR=40						
JIRN	Jiri	15.37	121	eP	Pn	16 43 17.9	+0.7
BVAR	Borovoye Array	16.50	358	P	Pn	16 43 30.8	+1.0
	0.3nm,0.3s,baz=159,slow=13,SNR=13						
AKTO	Aktyubinsk	16.88	330	P	Pn	16 43 34.0	-0.4
	1.7nm,0.3s,baz=136,slow=11,SNR=37						
AKTO	Aktyubinsk	16.88	330	⇑P	Pn	16 43 33.7	-0.6
	4.6nm,0.4s						
ZALV	Zalesovo Beam	19.77	24	P	Pn	16 44 05.2	-2.9
	1.2nm,0.3s,baz=215,slow=12,SNR=13						
ARU	Arti	21.68	341	P	P	16 44 24.8	+1.9
	1.1nm,0.4s,baz=134,slow=6.7,SNR=6.7						
FINES	FINESS Array B	37.60	326	P	P	16 46 44.3	+1.8
	1.2nm,0.5s,baz=111,slow=9.6,SNR=8.9						
ARCES	ARCESS Array B	41.21	337	P	P	16 47 13.7	+1.5
	1.5nm,0.5s,baz=116,slow=8.2,SNR=6.5						
NOA	NORSAR Array B	44.51	323	P	P	16 47 39.8	+1.1
	0.8nm,0.5s,baz=97,slow=7.7,SNR=4.3						
TORD	Torodi Ar. Bea	65.99	269	P	P	16 50 12.4	+0.3
	0.3nm,0.3s,baz=38,slow=7.1,SNR=5.7						
YKA	Yellowknife Ar	81.19	3	P	P	16 51 42.1	+2.5
	0.4nm,0.4s,baz=355,slow=6.0,SNR=4.8						
WRA	Warramunga Arr	81.78	122	P	P	16 51 45.8	+2.5
	0.8nm,0.7s,baz=327,slow=5.4,SNR=3.1						
ASAR	Alice Springs	84.05	125	P	P	16 51 56.1	+1.3
	0.3nm,0.6s,baz=307,slow=4.7,SNR=8.1						

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*IDC **08** 17:02:06.7±1.2, 13°.33N×86°.63W, h0^{km}, mb3.8/3, mb1 4.0/5, mb1mx3.6/44, mbtmp3.6/5, ML3.1/2, Error ellipse: s-maj=65.3km s-min=16.1km az=59.0*

*ISCJB **08** 17:02:08.0±0.8, 12°.07N±0°.08×87°.74W±0°.07, h48^{km}, mb4.2/9, Error ellipse: s-maj=12.7km s-min=6.7km az=38.5*

*SNET **08** 17:02:09.1±1.4, 12°.21N×87°.91W, h10^{km}, ML4.5*

*NEIC **08** 17:02:10.4±2.1, 12°.10N×87°.60W, h69^{km}±10^{km}, mb4.1/7, MD4.5(SNET), MD4.1(SNET), Error ellipse: s-maj=16.2km s-min=8.9km az=221.0*

NEIC Felt [I] at La Union, El Salvador.

ISC 08 17:02:09.0±1.0, 12°.14N±0°.08×87°.72W±0°.08, h48^{km}, n29, σ1^{s}44/30, mb4.0/9, 1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	0.84	10	ePn	Pn	17 02 25.7	+1.0
CNCH	Conchagua	1.13	354	iP	Pn	17 02 28.8	+0.2
CNCH				eS	Sn	17 02 44.6	+1.5
CNCH				IAML		17 02 47.1	
	comp=Z,6µm,0.2s						
VSM	San Miguel	1.39	337	eP	Pn	17 02 32.2	0.0
LCY	Lacayo	1.39	336	eP	Pn	17 02 32.0	-0.2
PACA	Pacayal	1.45	336	eP	Pn	17 02 32.8	-0.1
PACA				eS	Sn	17 02 50.8	0.0
PACA				IAML		17 02 54.8	
	comp=E,17µm,0.2s						
TECA	Tecapa	1.55	330	eP	Pn	17 02 33.6	-0.8
ESTN	Estel	1.62	54	ePn	Pn	17 02 36.5	+1.2
TGUH	Tegucigalpa,Un	1.95	13	ePn	Pn	17 02 40.8	+0.9
TGUH	Tegucigalpa,Un	1.95	13	⇓iP	Pn	17 02 41.1	+1.2
ACON	Acoyapa	2.49	94	ePn	Pn	17 02 45.1	-2.0
SNJE	San Jose	2.52	313	eP	Pn	17 02 49.4	+1.7
MTO3	Montecristo	2.75	325	eP	Pn	17 02 51.4	+0.4
JTS	Las Juntas de	3.28	124	Pn	Pn	17 03 00.6	+2.7
	comp=E,4.4nm,0.3s,baz=2.6,slow=2.7,SNR=16						
JTS				Lg	Lg	17 03 56.1	
	comp=E,6.1nm,0.3s,baz=191,slow=23,SNR=7.6						
JTS	Las Juntas de	3.28	124	ePn	Pn	17 02 58.4	+0.4
ESPN	Las Esperanzas	3.34	89	ePn	Pn	17 03 00.2	+1.4
APG	El Apazote	3.90	317	Pn	Pn	17 03 10.0	+3.3
	comp=E,0.5nm,0.3s,baz=99,slow=13,SNR=3.1						
LVIG	Laguna Verde	11.26	313	ePn	Pn	17 04 48.2	+0.9
GOGA	Godfrey	21.52	10	eP	P	17 06 54.6	+0.6
	comp=E,4.9nm,0.8s						
TXAR	Lajitas Array	22.65	321	P	P	17 07 07.3	+1.0
	comp=E,1.6nm,0.6s,baz=134,slow=11,SNR=5.9						
TX31	Lajitas Ar. Si	22.65	321	eP	P	17 07 07.7	+1.3
	comp=E,2.5nm,0.9s						
Y58A	Scranton	22.88	17	eP	P	17 07 06.2	-2.2
	comp=E,40nm,0.7s						
MIAR	Mount Ida	22.93	348	eP	P	17 07 09.7	+0.6
	comp=E,4.1nm,0.6s						
MSTX	Muleshoe	25.70	330	eP	P	17 07 36.1	+1.1
	comp=E,20nm,1.6s						
N54A	Moraine State	29.50	12	ePcP	PcP	17 11 11.6	-1.7
N59A	State Game Lan	30.52	18	eP	P	17 08 15.3	-2.5
	comp=E,48nm,1.2s						
YKA	Yellowknife Ar	53.84	345	P	P	17 11 26.3	-0.5
	comp=E,0.7nm,0.7s,baz=136,slow=8.0,SNR=7.6						
YKB5	Yellowknife Ar	53.84	345	eP	P	17 11 26.3	-0.5
PLCA	Paso Flores	54.96	164	P	P	17 11 47.0	+12
	comp=E,1.4nm,0.8s,baz=309,slow=6.5,SNR=2.9						
CMAR	Chiang Mai Arr	148.89	348	PKPbc	PKPbc	17 21 51.9	-0.6
	comp=E,0.6nm,0.6s,baz=334,slow=3.1,SNR=5.6						

MAN 08 17:17:58.2, 18°.17N×121°.04E, h2^{km}, mb3.8, ML2.5, MS2.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.36	147	eP	Pb	17 18 07.7	+0.3
APYP				eS	Sb	17 18 14.5	+1.1
ABRA	Dolores	0.60	211	eP	Pb	17 18 10.8	-0.7
ABRA				eS	Sb	17 18 19.8	-0.6
CVP	Callao Caves	0.88	122	⇓iP	Pg	17 18 15.1	0.0
CVP				iS	Sg	17 18 26.9	+0.5
SGCP	Mt. Cagua	0.96	85	eP	Pg	17 18 16.0	-0.7
SGCP				eS	Sg	17 18 29.2	0.0
CAUP	Cauayan	1.43	148	eP	Pn	17 18 22.4	-2.8
CAUP				eS	Sg	17 18 41.4	-2.7

JMA 08 17:38:18.5, 24°.42N×123°.98E, h0^{km}, M0.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIJ	Ishigaki jima	0.16	111	P	Pg	17 38 21.9	+0.4
JIJ				S	Sg	17 38 24.4	+0.8
JKRS	Kuro-shima	0.18	172	P	Pg	17 38 22.6	+0.6
JKRS				S	Sg	17 38 25.7	+1.3
IRIF	Iriomote-Funau	0.24	250	P	Pg	17 38 23.6	+0.4
IRIF				S	Sg	17 38 27.4	+1.1
JISG	Ishigakijimahi	0.34	61	P	Pg	17 38 25.7	+0.6
JISG				S	Sg	17 38 31.3	+1.7

TAP 08 17:39:15.3, 24°.46N×121°.93E, h14^{km}±1^{km}, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.17	333	P	Pb	17 39 20.1	-0.1
	baz=335						
TWC				eS	Sb	17 39 23.1	-0.4
	baz=335						
NANB	Nanao	0.17	259	P	Pb	17 39 20.4	+0.1
	baz=259						
NANB				eS	Sb	17 39 23.1	-0.4
	baz=259						
ENA	Nanau	0.18	260	P	Pb	17 39 20.3	-0.1
	baz=258						
ENA				eS	Sb	17 39 23.1	-0.7
	baz=258						
EOS1	EOS1	0.20	63	P	Pb	17 39 20.4	-0.4
	baz=63						
EOS1				S	Sb	17 39 24.2	-0.2
	baz=63						
NDT	Datong Townshi	0.41	291	eS	Sb	17 39 30.6	+0.2
	baz=290						
NACB	Ninganchiao	0.42	227	P	Pb	17 39 24.5	0.0
	baz=227						
NACB				S	Sb	17 39 31.2	+0.5
	baz=227						
ETLH	Xiulin Townshi	0.48	239	eP	Pb	17 39 25.5	-0.1
	baz=238						
NNSB	Datong	0.50	267	eS	Sb	17 39 33.6	+0.4
	baz=266						
NNS	Nan Shan	0.51	268	eS	Sb	17 39 33.6	+0.1
	baz=267						
TIPB	Shuangxi	0.52	349	eP	Pb	17 39 27.0	+0.7
	baz=349						
TIPB				eS	Sb	17 39 34.3	+0.6
	baz=349						
YHNB	Yeheng	0.55	293	eP	Pb	17 39 27.6	+0.8
	baz=292						
YHNB				eS	Sb	17 39 34.9	+0.3
	baz=292						
NSK	Sanguang	0.57	293	eS	Sb	17 39 35.3	+0.3
	baz=292						
TDCB	Techi	0.73	254	eS	Sb	17 39 39.7	-0.3
	baz=253						

SCB 08 17:59:15.2±5.2, 17°.50S×65°.79W, h6^{km}±50^{km}, ML3.9/1, Error ellipse: s-maj=14.7km s-min=3.1km az=0.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BS10	CO. Tuti	0.07	300	Pg	Pg	17 59 18.9	+1.5
BB01	Montecillos	0.76	139	Pg	Pb	17 59 30.6	-0.5
BB01				Sg	Sb	17 59 41.9	+0.1
BB01				AML	AML	17 59 42.1	
	5µm,0.3s						
BS05	Cuyupaya	1.20	293	P	Pg	17 59 38.2	-0.1
BS08	Valle Grande	1.88	122	P	Pn	17 59 48.2	0.0
BBOE	La Paz, Chanca	2.20	288	P	Pn	17 59 53.1	+0.3
BBOJ	La Paz, Jacaqu	2.35	282	P	Pn	17 59 54.9	+0.1
LPAZ	La Paz	2.54	298	P	Pn	17 59 58.0	+0.5
LPAZ				S	Sn	18 00 29.9	+0.8
BBOB	La Paz, Bander	2.62	301	P	Pn	17 59 57.7	-0.8
BS09	Huarina	3.00	295	P	Pn	18 00 02.5	-1.2
BS09				S	Sn	18 00 40.4	+0.2
MNMC	Minye Minye	3.96	245	P	Pn	18 00 16.5	-0.3
YJA	Yavi	4.66	177	P	Pn	18 00 25.8	-0.8

MEX 08 18:01:44.4±0.3, 18°.10N×103°.37W, h5^{km}±2^{km}, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.19	6	iP	Pg	18 01 47.8	-0.3
MMIG				iS	Sg	18 01 50.5	0.0
EZ5V		1.39	351	eP	Pn	18 02 06.9	-3.8
EZ5V				iS	Sg	18 02 24.3	-4.8
ZIIG	Zihuatanejo	1.88	105	iP	Pn	18 02 13.9	-3.3
ZIIG				iS	Sn	18 02 36.4	-4.9
CJM	Chamela	2.11	311	iP	Pn	18 02 17.2	-3.2
CJM				iS	Sn	18 02 42.3	-4.8

MEX 08 18:03:04.5±0.3, 18°.10N×103°.32W, h5^{km}±2^{km}, MD3.6, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.19	354	iP	Pg	18 03 08.0	-0.2
MMIG				iS	Sg	18 03 10.7	0.0
EZ5V		1.40	349	eP	Pn	18 03 27.2	-3.7
EZ5V				eS	Sg	18 03 44.6	-4.8
ZIIG	Zihuatanejo	1.84	105	eP	Pn	18 03 32.6	-4.1
ZIIG				iS	Sn	18 03 56.0	-4.4
CJM	Chamela	2.14	311	eP	Pn	18 03 37.9	-3.0
CJM				iS	Sn	18 04 03.1	-4.8

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*SKO **08** 18:16:50.2, 41°.93N×23°.13E, h22^{km}, M1.9, ML2.2*

*SOF **08** 18:16:50.8, 41°.97N×23°.24E, h1^{km}, MD2.7*

*ATH **08** 18:16:51.6, 41°.89N×23°.19E, h9^{km}±2^{km}, ML2.3/10, Error ellipse: s-maj=3.1km s-min=1.2km az=194.0*

*BEO **08** 18:16:51.6±0.3, 41°.96N×23°.13E, h6^{km}±6^{km}, ML2.6/5*

*THE **08** 18:16:52.9, 41°.82N×23°.18E, h11^{km}, ML2.1/6, Error ellipse: s-maj=1.4km s-min=0.8km az=156.0*

ISC 08 18:16:50.8±0.8, 41°.94N±0°.01×23°.14E±0°.02, h15^{km}±5^{km}, n63, σ1^{s}05/95, 3C-5D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.08	210	⇓iPg	Pg	18 16 54.0	+0.1
KKB				iSg	Sg	18 16 56.2	+0.3
KKB	Krupnik	0.08	210	iPg	Pg	18 16 54.0	+0.1
MMB	Musomiste	0.56	128	⇑iPg	Pb	18 17 02.1	-0.3
MMB				iSg	Sb	18 17 10.1	-0.1
MMB	Musomiste	0.56	128	iPg	Pb	18 17 02.0	-0.3
VTS	Vitosha	0.69	6	ePg	Pg	18 17 03.6	-0.7
VTS				eSg	Sg	18 17 12.3	-1.1
VTS	Vitosha	0.69	6	⇑iP	Pg	18 17 03.6	-0.7
VTS				S	Sg	18 17 12.2	-1.1
VTS	Vitosha	0.69	6	⇑iPg	Pg	18 17 03.6	-0.7
VTS				iSg	Sg	18 17 12.3	-1.1
VTS	Vitosha	0.69	6	iPg	Pg	18 17 03.6	-0.7
VAY	Valandovo	0.75	215	ePg	Pb	18 17 06.2	+0.7
VAY				eSg	Sg	18 17 15.7	+0.5
VAY	Valandovo	0.75	215	iPg	Pg	18 17 05.6	+0.2
VAY				iSg	Sb	18 17 16.0	+0.5
VAY				eLg	Lg	18 17 18.2	
	comp=N,72nm,0.4s						
VAY				eLg	Lg	18 17 18.3	
	comp=E,53nm,0.4s						
STIP	Stip	0.75	252	⇓iPg	Pg	18 17 01.5	-3.9
STIP				iSg	Sg	18 17 09.6	-5.8
STIP				eLg	Lg	18 17 10.0	
	comp=N,319nm,0.2s						
STIP				eLg	Lg	18 17 10.1	
	comp=E,154nm,0.2s						
KNT	Kendrikon	0.80	193	P	Pg	18 17 06.0	-0.2
KNT				S	Sg	18 17 16.3	-0.4
	comp=E,305nm,0.1s						
KNT	Kendrikon	0.80	193	iPg	Pg	18 17 06.0	-0.2
KNT	Kendrikon	0.80	193	P	Pg	18 17 06.1	-0.2
KNT				S	Sg	18 17 16.5	-0.2
KNT				AML	AML	18 17 16.9	
	comp=E,475µm,0.2s						
KNT				AML	AML	18 17 17.4	
	comp=N,723µm,0.2s						
NVR	Nevrokopi	0.80	137	P	Pg	18 17 05.7	-0.6
NVR				S	Sg	18 17 16.1	-0.7
	comp=N,225nm,0.2s						
NVR	Nevrokopi	0.80	137	P	Pg	18 17 05.7	-0.6
NVR				S	Sg	18 17 16.2	-0.7
NVR				AML	AML	18 17 16.5	
	comp=N,446µm,0.2s						
NVR				AML	AML	18 17 17.0	
	comp=E,452µm,0.3s						
SRS	Serrai	0.89	157	ePg	Pg	18 17 07.7	-0.3
SRS				eSg	Sn	18 17 21.4	0.0
SRS	Serrai	0.89	157	P	Pg	18 17 07.6	-0.4
SRS				S	Sb	18 17 19.3	-0.3
	comp=E,148nm,0.2s						
SRS	Serrai	0.89	157	iPg	Pg	18 17 07.6	-0.4
SRS	Serrai	0.89	157	P	Pg	18 17 07.6	-0.4
SRS				S	Sg	18 17 18.8	-0.8
SRS				AML	AML	18 17 23.2	
	comp=N,288µm,0.2s						
SRS				AML	AML	18 17 23.7	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=E,279μm,0.2s						
PGB	**Panagyurishte**	**0.98**	**51**	*i* Pg	**Pb**	**18 17 08.4**	**-1.1**
GRG	**Griva**	**1.12**	**210**	P	**Pb**	**18 17 12.3**	**+0.3**
GRG				S	**Sg**	**18 17 27.4**	**+0.2**
	comp=E,92nm,0.3s						
GRG	**Griva**	**1.12**	**210**	P	**Pb**	**18 17 12.3**	**+0.3**
GRG				S	**Sg**	**18 17 27.5**	**+0.2**
GRG				AML	AML	18 17 28.0	
	comp=N,95μm,0.2s						
GRG				AML	AML	18 17 28.2	
	comp=E,197μm,0.2s						
SOH	**Sokhos**	**1.13**	**172**	P	**Pb**	**18 17 12.0**	**0.0**
SOH				S	**Sg**	**18 17 26.9**	**-0.4**
	comp=E,170nm,0.4s						
SOH	**Sokhos**	**1.13**	**172**	*i* Pg	**Pb**	**18 17 12.1**	**0.0**
SOH	**Sokhos**	**1.13**	**172**	P	**Pb**	**18 17 12.1**	**+0.1**
SOH				S	**Sg**	**18 17 26.8**	**-0.4**
SOH				AML	AML	18 17 28.5	
	comp=N,456μm,0.3s						
SOH				AML	AML	18 17 29.9	
	comp=E,234μm,0.3s						
PLD	**Plovdiv**	**1.18**	**81**	*i* Pg	**Pg**	**18 17 13.5**	**0.0**
PLD	**Plovdiv**	**1.18**	**81**	*i* Pg	**Pg**	**18 17 13.6**	**0.0**
RZN	**Rozhen**	**1.21**	**101**	*i* P	**Pn**	**18 17 13.4**	**+0.1**
THE	**Thessaloniki**	**1.31**	**186**	*i* Pg	**Pg**	**18 17 15.7**	**-0.3**
THE	**Thessaloniki**	**1.31**	**186**	P	**Pb**	**18 17 15.6**	**+0.5**
THE				S	**Sg**	**18 17 33.3**	**+0.2**
THE				AML	AML	18 17 34.7	
	comp=E,176μm,0.3s						
THE				AML	AML	18 17 35.7	
	comp=N,206μm,0.3s						
BARS	**Barje**	**1.32**	**312**	*e*Pg	**Pn**	**18 17 15.4**	**+0.7**
BARS	**Barje**	**1.32**	**312**	*e*Pg	**Sb**	**18 17 31.1**	**-0.9**
BARS				*e*Sg	**Sn**	**18 17 33.3**	**+1.3**
KVLA	**Kavala**	**1.37**	**136**	P	**Pn**	**18 17 15.7**	**+0.3**
KVLA				S	**Sg**	**18 17 34.1**	**-1.0**
ZAPS	**Zavoj**	**1.39**	**345**	*e*Pg	**Pb**	**18 17 16.9**	**+0.4**
ZAPS				*e*Sg	**Sg**	**18 17 35.7**	**+0.1**
MPEP	**Malo Peshtene**	**1.49**	**17**	P	**Pb**	**18 17 18.2**	**+0.1**
PLG	**Polygyros**	**1.58**	**171**	P	**Pn**	**18 17 18.9**	**+0.6**
PLG				S	**Sn**	**18 17 37.9**	**-0.6**
	comp=N,32nm,0.3s						
PLG	**Polygyros**	**1.58**	**171**	P	**Pn**	**18 17 19.1**	**+0.8**
PLG				S	**Sg**	**18 17 42.0**	**+0.4**
PLG				AML	AML	18 17 43.5	
	comp=E,63μm,0.3s						
PLG				AML	AML	18 17 44.5	
	comp=N,65μm,0.4s						
BLKB	**Belogradchik**	**1.72**	**349**	S	**Sn**	**18 17 42.8**	**+0.8**
OUR	**Ouranopolis**	**1.72**	**158**	P	**Pn**	**18 17 20.5**	**+0.3**
OUR	**Ouranopolis**	**1.72**	**158**	P	**Pg**	**18 17 23.1**	**-0.8**
OUR				S	**Sg**	**18 17 46.1**	**-0.2**
KDZ	**Kurdzhali**	**1.73**	**99**	*i* P	**Pn**	**18 17 19.0**	**-1.3**
THAS	**Thassos island**	**1.79**	**138**	P	**Pg**	**18 17 24.3**	**-0.8**
THAS				S	**Sg**	**18 17 46.8**	**-1.4**
THAS				AML	AML	18 17 49.2	
	comp=E,252μm,0.3s						
THAS				AML	AML	18 17 51.2	
	comp=N,132μm,0.3s						
DIM	**Dimitrovgrad**	**1.79**	**86**	P	**Pg**	**18 17 24.3**	**-0.9**
PLVB	**Pleven**	**1.82**	**37**	⇓*i*P	**Pg**	**18 17 25.2**	**-0.5**
PLVB	**Pleven**	**1.82**	**37**	S	**Sg**	**18 17 49.2**	**-0.1**
RDO	**Rodhopi**	**1.97**	**113**	P	**Pb**	**18 17 25.2**	**-1.1**
RDO	**Rodhopi**	**1.97**	**113**	P	**Pb**	**18 17 26.8**	**+0.5**
RDO				S	**Sg**	**18 17 52.3**	**-1.8**
RDO				AML	AML	18 17 56.3	
	comp=E,181μm,0.2s						
RDO				AML	AML	18 17 56.7	
	comp=N,277μm,0.2s						
SELS	**Selova**	**1.97**	**311**	*e*Pg	**Pn**	**18 17 25.2**	**+1.6**
SELS				*e*Sg	**Sg**	**18 17 54.2**	**+0.1**
ZAGS	**Zajecar**	**1.99**	**341**	*e*Pg	**Pb**	**18 17 27.3**	**+0.6**
BOVS	**Bovan**	**2.00**	**329**	*e*Pg	**Pb**	**18 17 27.2**	**+0.3**
BOVS				*e*Sg	**Sg**	**18 17 54.4**	**-0.7**
ELND	**Elena**	**2.26**	**63**	⇓*i*P	**Pb**	**18 17 32.3**	**+1.1**
ELND	**Elena**	**2.26**	**63**	S	**Sg**	**18 18 02.4**	**-0.9**
VLAD	**Vladila**	**2.26**	**24**	S	**Sb**	**18 17 59.2**	**+0.1**
ZIMR		**2.38**	**43**	S	**Sb**	**18 18 02.4**	**0.0**
ALN	**Alexandroupoli**	**2.42**	**114**	P	**Pn**	**18 17 31.1**	**+1.3**
ALN	**Alexandroupoli**	**2.42**	**114**	P	**Pb**	**18 17 33.8**	**-0.2**
ALN				AML	AML	18 18 11.9	
	comp=E,77μm,1.0s						
ALN				AML	AML	18 18 13.9	
	comp=N,56μm,0.7s						
GRUS	**Gruza**	**2.64**	**318**	*e*Pg	**Pb**	**18 17 37.3**	**-0.5**
GRUS				*e*Sg	**Sg**	**18 18 15.7**	**0.0**
KUBS	**Kucevo**	**2.70**	**337**	*e*Pg	**Pb**	**18 17 38.8**	**0.0**
IVAS	**Ivanjica**	**2.74**	**308**	*e*Pg	**Pb**	**18 17 39.6**	**0.0**
MDVR	**Moldovita**	**3.03**	**340**	⇓*i*P	**Pn**	**18 17 38.8**	**+0.6**
DIVS	**Divibare**	**3.16**	**314**	*e*Pn	**Pn**	**18 17 41.4**	**+1.3**
DIVS				*e*Sg	**Sg**	**18 18 30.7**	**-1.6**
VOIR		**3.76**	**21**	S	**Sn**	**18 18 35.6**	**+3.2**

TAP 08 18:17:29.9, 24.°46N × 121.°89E, h18km±1km, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.13**	**254**	P	Pg	18 17 34.7	+0.8
	baz=254						
NANB				S	Sg	18 17 37.6	+1.0
	baz=254						
ENA	**Nanau**	**0.14**	**255**	*i* P	Pg	18 17 34.7	+0.7
	baz=253						
ENA				*i* S	Sg	18 17 37.6	+0.8
	baz=253						
TWC	**Suao**	**0.15**	**347**	P	Pg	18 17 35.0	+0.8
	baz=350						
TWC				S	Sg	18 17 37.7	+0.7
	baz=350						
EOS1	**EOS1**	**0.24**	**69**	P	Pb	18 17 35.9	+0.3
	baz=68						
TWE	**Neicheng**	**0.33**	**322**	*e*S	Sb	18 17 43.3	+1.1
	baz=323						
NDT	**Datong Townshi**	**0.37**	**292**	P	Pb	18 17 39.1	+1.1
	baz=292						
EGS		**0.38**	**6**	*e*S	Sn	18 17 45.7	-1.8
	baz=7.0						
NACB	**Ninganchiao**	**0.39**	**223**	*e*P	Pb	18 17 38.4	0.0
	baz=222						
NACB				*e*S	Sg	18 17 42.2	-1.4
	baz=222						
ETLH	**Xiulin Townshi**	**0.45**	**235**	P	Pb	18 17 39.4	0.0
	baz=235						
ETLH				*e*S	Sg	18 17 43.7	-1.6
	baz=235						
NNSB	**Datong**	**0.46**	**266**	*e*S	Sg	18 17 45.8	+0.1
	baz=265						
NNS	**Nan Shan**	**0.47**	**267**	*e*S	Sg	18 17 45.4	-0.5
	baz=266						
YHNB	**Yeheng**	**0.51**	**294**	P	Pn	18 17 41.6	-0.8
	baz=293						
TIPB	**Shuangxi**	**0.51**	**354**	*e*P	Pb	18 17 41.3	+0.9
	baz=353						
NSK	**Sanguang**	**0.53**	**294**	*e*P	Pn	18 17 41.7	-0.9
	baz=293						
NSK				*e*S	Sb	18 17 48.5	+0.5
	baz=293						

TAP 08 18:17:34.2, 24.°39N × 121.°95E, h15km, ML2.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.18**	**282**	P	Pb	18 17 39.2	-0.1
	baz=281						
NANB				S	Sb	18 17 43.0	+0.2
	baz=281						
ENA	**Nanau**	**0.19**	**281**	S	Sb	18 17 43.1	+0.1
	baz=281						
EOS1	**EOS1**	**0.23**	**46**	P	Pb	18 17 40.1	0.0
	baz=45						
EOS1				S	Sb	18 17 44.0	0.0
	baz=45						
TWC	**Suao**	**0.24**	**338**	S	Sb	18 17 43.7	-0.6
	baz=339						
NACB	**Ninganchiao**	**0.39**	**236**	S	Sb	18 17 48.6	0.0
	baz=236						
TWE	**Neicheng**	**0.42**	**322**	*e*S	Sb	18 17 49.9	+0.5
	baz=323						
NDT	**Datong Townshi**	**0.45**	**298**	*e*P	Pb	18 17 44.5	+0.6
	baz=298						
NDT				*i* S	Sb	18 17 50.6	+0.2
	baz=298						
EGS		**0.45**	**358**	*e*S	Sb	18 17 51.1	+0.6
	baz=359						
ETLH	**Xiulin Townshi**	**0.46**	**247**	*e*S	Sb	18 17 51.0	+0.2
	baz=246						
NNSB	**Datong**	**0.52**	**274**	P	Pb	18 17 45.2	+0.2
	baz=274						
NNSB				*e*S	Sb	18 17 53.0	+0.6
	baz=274						
NNS	**Nan Shan**	**0.53**	**276**	*e*S	Sb	18 17 52.9	+0.1
	baz=275						
TIPB	**Shuangxi**	**0.59**	**349**	*e*P	Pb	18 17 47.1	+0.8
	baz=349						
TIPB				*e*S	Sb	18 17 55.0	+0.5
	baz=349						
YHNB	**Yeheng**	**0.59**	**298**	*e*P	Pb	18 17 47.1	+0.8
	baz=298						
YHNB				S	Sb	18 17 55.2	+0.7
	baz=298						
NSK	**Sanguang**	**0.61**	**298**	*e*S	Sb	18 17 55.7	+0.7
	baz=298						
WHF	**Hehuan Shan**	**0.67**	**249**	*e*P	Pg	18 17 47.5	+0.2
	baz=248						
TDCB	**Techi**	**0.73**	**259**	S	Sb	18 17 59.5	+0.8
	baz=259						
CHGB	**Renai**	**0.78**	**245**	*e*P	Pb	18 17 49.6	0.0
	baz=245						
CHGB				*e*S	Sn	18 18 01.4	-1.0
	baz=245						
YM10	**YM10**	**0.84**	**335**	*e*P	Pn	18 17 51.1	-0.4
	baz=335						
YM10				*e*S	Sn	18 18 02.9	-0.8
	baz=335						
LIOB	**Emei**	**0.89**	**287**	*e*S	Sn	18 18 04.9	+0.1
	baz=286						
NSTT	**Nanjuang**	**0.90**	**286**	*e*S	Sn	18 18 04.9	-0.1
	baz=285						
WHP	**Taichung City**	**0.92**	**263**	*e*S	Sn	18 18 05.8	+0.1
	baz=263						

JMA 08 18:17:39.4±0.1, 24.°73N × 123.°41E, h12km±3km, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.45**	**234**	P	Pg	18 17 48.2	-0.1
YOJ				S	Sg	18 17 54.3	0.0
IRIF	**Iriomote-Funau**	**0.49**	**143**	P	Pg	18 17 49.0	0.0
IRIF				S	Sg	18 17 55.5	0.0
JYNG	**Yonagunijimaku**	**0.51**	**237**	P	Pg	18 17 49.2	-0.1
JYNG				S	Sg	18 17 56.0	0.0
JKRS	**Kuro-shima**	**0.73**	**132**	P	Pg	18 17 53.5	-0.1
JKRS				S	Sg	18 18 03.4	+0.1
HATJ	**Hateruma jima**	**0.76**	**152**	P	Pg	18 17 54.0	-0.1
HATJ				S	Sg	18 18 03.8	-0.3
JIJ	**Ishigaki jima**	**0.76**	**119**	P	Pg	18 17 54.0	-0.1
JIJ				S	Sg	18 18 03.5	-0.6
JISG	**Ishigakijimahi**	**0.83**	**100**	P	Pg	18 17 55.1	-0.4
JISG				*e*S	Sg	18 18 05.5	-0.9
JTJ	**Tarama**	**1.18**	**94**	P	Pb	18 18 01.0	-0.7
JTJ				*e*S	Sb	18 18 16.9	0.0
JIRB	**Irabujima**	**1.60**	**86**	P	Pn	18 18 08.0	+0.4

JMA 08 18:31:26.1±0.2, 24.°84N × 123.°23E, h25km, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**208**	P	Pb	18 31 34.7	-0.4
YOJ				*e*S	Sb	18 31 40.7	-0.5
JYNG	**Yonagunijimaku**	**0.47**	**214**	P	Pb	18 31 35.5	-0.2
JYNG				*e*S	Sb	18 31 41.5	-0.8
IRIF	**Iriomote-Funau**	**0.68**	**138**	P	Pb	18 31 39.0	-0.3
IRIF				*e*S	Sb	18 31 48.6	+0.3
JKRS	**Kuro-shima**	**0.93**	**130**	P	Pb	18 31 43.1	-0.5
HATJ	**Hateruma jima**	**0.94**	**146**	P	Pn	18 31 43.6	-0.1
HATJ				*e*S	Sn	18 31 56.2	-0.1
JIJ	**Ishigaki jima**	**0.96**	**120**	P	Pn	18 31 43.0	-0.9
JISG	**Ishigakijimahi**	**1.01**	**104**	P	Pn	18 31 44.0	-0.7
JTJ	**Tarama**	**1.35**	**98**	P	Pb	18 31 50.3	-0.5

TAP 08 18:31:33.0, 24.°46N × 121.°78E, h10km±1km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.04**	**214**	P	Pg	18 31 35.6	+0.7
	baz=214						
NANB				S	Sg	18 31 36.9	+0.6
	baz=214						
ENA	**Nanau**	**0.05**	**222**	P	Pg	18 31 35.7	+0.7
	baz=214						
ENA				*i* S	Sg	18 31 37.0	+0.7
	baz=214						
TWC	**Suao**	**0.16**	**24**	P	Pg	18 31 37.8	+1.3
	baz=27						
TWC				S	Sg	18 31 40.1	+1.2
	baz=27						
NDT	**Datong Townshi**	**0.28**	**300**	P	Pb	18 31 40.3	+0.2
	baz=299						
NDT				*e*S	Sb	18 31 44.5	-0.3
	baz=299						
NACB	**Ninganchiao**	**0.33**	**210**	P	Pg	18 31 40.3	+0.6
	baz=209						
NACB				*e*S	Sg	18 31 44.5	+0.4
	baz=209						
NNSB	**Datong**	**0.36**	**264**	*e*S	Sg	18 31 46.0	+1.0
	baz=264						
NNS	**Nan Shan**	**0.37**	**266**	*e*S	Sb	18 31 47.1	-0.5
	baz=265						
ETLH	**Xiulin Townshi**	**0.37**	**227**	*e*S	Sb	18 31 47.5	-0.1
	baz=226						
YHNB	**Yeheng**	**0.42**	**299**	*e*P	Pb	18 31 42.6	0.0
	baz=299						
YHNB				S	Sb	18 31 48.8	-0.2
	baz=299						
NSK	**Sanguang**	**0.44**	**299**	*e*S	Sb	18 31 48.9	-0.6
	baz=299						
TIPB	**Shuangxi**	**0.51**	**5**	*e*S	Sb	18 31 51.1	-0.5
	baz=5.0						
WHF	**Hehuan Shan**	**0.56**	**236**	P	Pb	18 31 44.8	-0.4
	baz=235						
WHF				*e*S	Sb	18 31 54.1	+0.5
	baz=235						
CHGB	**Renai**	**0.68**	**234**	*e*P	Pg	18 31 46.3	+0.1
	baz=233						
CHGB				*e*S	Sb	18 31 56.1	-0.5
	baz=233						

IDC ***08*** *19:27:13.7±1.0, 36.°80N×23.°13E, h0km, mb3.7/7, mb1 3.6/10, mb1mx3.4/57, mbtmp3.5/10, ML2.7/2, MS2.5/1, Ms1 2.5/1, ms1mx1.9/39, Error ellipse: s-maj=22.5km s-min=17.1km az=40.0*

ISK ***08*** *19:27:15.9, 36.°88N×23.°20E, h10km, ML3.5/13*

ATH ***08*** *19:27:16.4, 36.°84N×23.°17E, h24km, ML3.2/36, Error ellipse: s-maj=0.8km s-min=0.5km az=216.0*

ISCJB ***08*** *19:27:17.6±0.2, 36.°83N±0.°01×23.°18E±0.°02, h22km±2km, mb3.5/7, MS2.3/1, Error ellipse: s-maj=2.9km s-min=2.0km az=151.3*

THE ***08*** *19:27:17.6, 36.°84N×23.°16E, h13km, ML3.3/22, Error ellipse: s-maj=0.9km s-min=0.4km az=248.0*

ISC 08 19:27:16.6±0.8, 36.°83N±0.°01×23.°20E±0.°02, h15km±6km, n148, σ0.s97/214, mb3.7/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNVA	**Monemvasia**	**0.19**	**222**	P	**Pg**	**19 27 21.5**	**+0.4**
MNVA				S	**Sb**	**19 27 24.9**	**-0.4**
MNVA				AML	AML	19 27 25.0	
	comp=N,21711μm,0.2s						
MNVA				AML	AML	19 27 25.1	
	comp=E,28227μm,0.1s						
VLI	**Veliai**	**0.24**	**241**	P	**Pg**	**19 27 21.9**	**0.0**
VLI				S	**Sg**	**19 27 25.1**	**-0.4**
	comp=E,41μm,0.3s						
VLI	**Veliai**	**0.24**	**241**	P	**Pg**	**19 27 22.0**	**0.0**
VLI				S	**Sg**	**19 27 25.4**	**-0.1**
VLI				AML	AML	19 27 25.6	
	comp=N,81595μm,0.3s						
VLI				AML	AML	19 27 25.6	
	comp=E,81395μm,0.2s						
KRND	**KRANIDI**	**0.55**	**356**	P	**Pg**	**19 27 27.5**	**0.0**
KRND				S	**Sb**	**19 27 37.2**	**+1.6**
	comp=E,4μm,0.3s						
KRND	**KRANIDI**	**0.55**	**356**	P	**Pg**	**19 27 27.6**	**0.0**
KRND				S	**Sb**	**19 27 35.9**	**+0.2**
KRND				AML	AML	19 27 39.3	
	comp=N,8412μm,0.3s						
KRND				AML	AML	19 27 41.9	
	comp=E,8096μm,0.3s						
YDRA	**Hydra**	**0.56**	**22**	P	**Pg**	**19 27 27.8**	**+0.1**
YDRA				S	**Sb**	**19 27 36.0**	**+0.2**
YDRA				AML	AML	19 27 41.1	
	comp=E,6408μm,0.6s						
YDRA				AML	AML	19 27 42.3	
	comp=N,6759μm,0.5s						
KTHA	**Kythira Island**	**0.58**	**191**	P	**Pb**	**19 27 28.8**	**+0.3**
KTHA	**Kythira Island**	**0.58**	**191**	P	**Pb**	**19 27 28.8**	**+0.3**
KTHA				S	**Sb**	**19 27 37.5**	**+0.9**
KTHR	**Kythira**	**0.59**	**195**	P	**Pb**	**19 27 29.2**	**+0.6**
KTHR				S	**Sb**	**19 27 38.0**	**+1.2**
DID	**Didima**	**0.67**	**3**	P	**Pg**	**19 27 29.5**	**-0.3**
DID				S	**Sb**	**19 27 40.2**	**+1.0**
	comp=N,4μm,0.6s						
DID	**Didima**	**0.67**	**3**	P	**Pg**	**19 27 29.9**	**+0.1**
DID				S	**Sb**	**19 27 40.2**	**+1.0**
DID				AML	AML	19 27 43.2	
	comp=E,8347μm,0.7s						
DID				AML	AML	19 27 43.4	
	comp=N,6062μm,0.3s						
EPID	**Epidavros**	**0.78**	**355**	P	**Pb**	**19 27 31.9**	**0.0**
EPID				S	**Sb**	**19 27 43.2**	**+0.9**
VLX	**Vlachokerasia**	**0.85**	**310**	P	**Pb**	**19 27 32.6**	**-0.4**
VLX	**Vlachokerasia**	**0.85**	**310**	P	**Pb**	**19 27 32.8**	**-0.3**
VLX				S	**Sb**	**19 27 43.5**	**-0.8**
VLX				AML	AML	19 27 45.4	
	comp=N,2262μm,0.9s						
VLX				AML	AML	19 27 47.0	
	comp=E,3596μm,0.4s						
ANKY	**Antikythira Is**	**0.97**	**175**	P	**Pn**	**19 27 36.0**	**+0.4**
ANKY				S	**Sn**	**19 27 50.0**	**+1.0**
	comp=E,1μm,0.3s						
ANKY	**Antikythira Is**	**0.97**	**175**	P	**Pn**	**19 27 36.2**	**+0.6**
ANKY				S	**Sg**	**19 27 48.4**	**+0.4**
ANKY				AML	AML	19 27 51.4	
	comp=N,2811μm,0.3s						
ANKY				AML	AML	19 27 54.1	
	comp=E,2476μm,0.4s						
MHLO	**Agia Marina, M**	**0.98**	**98**	P	**Pn**	**19 27 36.7**	**+1.0**
MHLO				S	**Sn**	**19 27 51.8**	**+2.5**
	comp=E,5μm,0.3s						
MHLO	**Agia Marina, M**	**0.98**	**98**	P	**Pn**	**19 27 36.9**	**+1.1**
MHLO				S	**Sg**	**19 27 48.8**	**+0.5**
MHLO				AML	AML	19 27 55.7	
	comp=N,9001μm,0.3s						
MHLO				AML	AML	19 27 56.9	
	comp=E,9184μm,0.3s						
MHLA	**Plaka, Milos I**	**0.99**	**95**	P	**Pn**	**19 27 37.1**	**+1.3**
MHLA				S	**Sn**	**19 27 50.9**	**+1.4**
MHLA				AML	AML	19 27 57.0	
	comp=N,2813μm,0.6s						
MHLA				AML	AML	19 28 02.9	
	comp=E,2495μm,0.8s						
TRIP	**Tripoli**	**1.01**	**313**	P	**Pb**	**19 27 35.5**	**-0.4**
TRIP	**Tripoli**	**1.01**	**313**	P	**Pb**	**19 27 35.7**	**-0.2**
TRIP				S	**Sb**	**19 27 49.1**	**0.0**
TRIP				AML	AML	19 27 52.2	
	comp=E,1842μm,0.5s						
TRIP				AML	AML	19 27 53.0	
	comp=N,1089μm,0.4s						
ITM	**Ithomi**	**1.07**	**289**	PG	**Pb**	**19 27 36.9**	**0.0**
ITM				SG	**Sn**	**19 27 52.1**	**+0.4**
ITM	**Ithomi**	**1.07**	**289**	P	**Pb**	**19 27 36.8**	**-0.1**
ITM	**Ithomi**	**1.07**	**289**	P	**Pb**	**19 27 36.6**	**-0.2**
ITM				S	**Sn**	**19 27 51.7**	**0.0**
SERI	**Serifos**	**1.08**	**72**	P	**Pn**	**19 27 37.4**	**+0.2**
SERI	**Serifos**	**1.08**	**72**	P	**Pn**	**19 27 37.5**	**+0.2**
SERI				S	**Sg**	**19 27 51.9**	**+0.2**
SERI				AML	AML	19 27 56.9	
	comp=N,2117μm,0.4s						
SERI				AML	AML	19 27 57.3	
	comp=E,2544μm,0.6s						
ACOR	**Acrocorinthos**	**1.09**	**346**	P	**Pn**	**19 27 37.4**	**+0.1**
ACOR				S	**Sn**	**19 27 52.3**	**+0.3**
ACOR				AML	AML	19 27 54.8	
	comp=E,2331μm,0.6s						
ACOR				AML	AML	19 27 56.6	
	comp=N,2120μm,0.3s						
VLY	**Voula,Athens**	**1.12**	**25**	P	**Pb**	**19 27 37.8**	**+0.1**
VLY	**Voula,Athens**	**1.12**	**25**	P	**Pb**	**19 27 37.8**	**+0.1**
VLY				AML	AML	19 27 58.6	
	comp=E,4085μm,0.4s						
VLY				AML	AML	19 27 59.0	
	comp=N,3679μm,0.6s						
LOUT	**Loutraki**	**1.17**	**351**	P	**Pg**	**19 27 39.3**	**+0.1**
LOUT				S	**Sg**	**19 27 55.9**	**+1.5**
	comp=N,1μm,0.5s						
LOUT	**Loutraki**	**1.17**	**351**	P	**Pg**	**19 27 39.3**	**+0.1**
LOUT				S	**Sg**	**19 27 54.9**	**+0.5**
LOUT				AML	AML	19 27 58.9	
	comp=N,481μm,0.5s						
LOUT				AML	AML	19 28 03.8	
	comp=E,538μm,0.5s						
PYL	**PYLOS**	**1.17**	**274**	P	**Pn**	**19 27 38.1**	**-0.3**
PYL	**PYLOS**	**1.17**	**274**	P	**Pn**	**19 27 38.2**	**-0.1**
PYL				AML	AML	19 28 00.7	
	comp=N,1429μm,0.6s						
PYL				AML	AML	19 28 01.9	
	comp=E,1767μm,0.9s						
ATH	**Athens Observa**	**1.21**	**20**	P	**Pb**	**19 27 39.5**	**+0.3**
ATH				S	**Sn**	**19 27 55.5**	**+0.4**
	comp=E,825nm,0.5s						
ATH	**Athens Observa**	**1.21**	**20**	P	**Pb**	**19 27 39.2**	**+0.1**
ATH				S	**Sn**	**19 27 55.4**	**+0.4**
ATH				AML	AML	19 28 01.3	
	comp=E,1572μm,0.5s						
ATH				AML	AML	19 28 01.5	
	comp=N,1739μm,0.4s						
ATHU	**Athens Univers**	**1.23**	**22**	P	**Pn**	**19 27 39.2**	**0.0**
ATHU				S	**Sg**	**19 27 56.1**	**-0.1**
	comp=N,298nm,0.5s						
ATHU	**Athens Univers**	**1.23**	**22**	P	**Pn**	**19 27 39.4**	**+0.2**
ATHU				S	**Sg**	**19 27 57.5**	**+1.3**
ATHU				AML	AML	19 28 01.1	
	comp=N,684μm,0.4s						
ATHU				AML	AML	19 28 02.1	
	comp=E,529μm,0.6s						
THAL	**Thalero**	**1.28**	**341**	P	**Pb**	**19 27 40.3**	**0.0**
THAL				S	**Sg**	**19 27 58.0**	**+0.2**
	comp=E,3μm,0.3s						
THAL	**Thalero**	**1.28**	**341**	P	**Pb**	**19 27 40.5**	**+0.3**
THAL				S	**Sg**	**19 27 57.6**	**-0.2**
THAL				AML	AML	19 28 02.7	
	comp=N,5490μm,0.3s						
THAL				AML	AML	19 28 03.9	
	comp=E,5314μm,0.4s						
GUR	**Goura**	**1.29**	**329**	P	**Pn**	**19 27 39.9**	**-0.3**
GUR				S	**Sg**	**19 27 58.0**	**-0.5**
	comp=E,3μm,0.5s						
GUR	**Goura**	**1.29**	**329**	P	**Pn**	**19 27 39.6**	**-0.6**
GUR				S	**Sn**	**19 27 57.6**	**+0.3**
GUR				AML	AML	19 28 00.4	
	comp=N,4863μm,0.7s						
GUR				AML	AML	19 28 02.7	
	comp=E,6360μm,0.3s						
PTL	**Penteli**	**1.32**	**23**	P	**Pn**	**19 27 40.8**	**+0.2**
PTL				S	**Sb**	**19 27 58.4**	**+0.4**
	comp=E,445nm,0.5s						
PTL	**Penteli**	**1.32**	**23**	P	**Pb**	**19 27 41.0**	**-0.2**
PTL				S	**Sg**	**19 27 58.9**	**-0.5**
PTL				AML	AML	19 28 05.6	
	comp=E,959μm,0.5s						
PTL				AML	AML	19 28 08.9	
	comp=N,656μm,0.5s						
VILL	**Villia**	**1.33**	**4**	P	**Pn**	**19 27 41.0**	**+0.3**
VILL				S	**Sb**	**19 27 58.9**	**+0.7**
	comp=N,1μm,0.5s						
VIL2	**Platees**	**1.38**	**2**	P	**Pn**	**19 27 40.9**	**-0.4**
VIL2				S	**Sn**	**19 27 59.1**	**-0.2**
VIL2				AML	AML	19 28 03.3	
	comp=N,1677μm,0.4s						
VIL2				AML	AML	19 28 05.8	
	comp=E,2507μm,0.6s						
AMT	**Artemida-Makis**	**1.38**	**301**	P	**Pb**	**19 27 42.0**	**-0.1**
AMT	**Artemida-Makis**	**1.38**	**301**	P	**Pb**	**19 27 42.6**	**+0.5**
PROD	**Prodromos**	**1.44**	**351**	P	**Pb**	**19 27 43.1**	**0.0**
PROD				S	**Sb**	**19 28 02.1**	**+0.8**
PROD				AML	AML	19 28 06.5	

	comp=N,1674µm,0.4s						
PROD				AML	AML	19 28 10.4	
	comp=E,1366µm,0.3s						
KLV	Kalavryta, Ach	1.47	326	P	Pn	19 27 42.5	-0.1
KLV				S	Sb	19 28 02.3	+0.2
	comp=E,680nm,0.5s						
KLV	Kalavryta, Ach	1.47	326	P	Pn	19 27 42.7	+0.1
KLV				S	Sg	19 28 03.2	-0.8
KLV				AML	AML	19 28 05.0	
	comp=E,1380µm,0.5s						
KLV				AML	AML	19 28 07.1	
	comp=N,1319µm,0.5s						
IMMV	Iera Moni Meta	1.51	155	PN	Pb	19 27 44.1	-0.2
IMMV				SN	Sg	19 28 04.7	-0.5
IMMV	Iera Moni Meta	1.51	155	P	Pb	19 27 43.9	-0.4
IMMV				S	Sb	19 28 03.3	+0.1
	comp=N,1µm,0.4s						
IMMV	Iera Moni Meta	1.51	155	P	Pn	19 27 43.7	+0.7
TRAZ	Trapeza	1.55	330	P	Pn	19 27 44.0	+0.4
TRAZ				S	Sb	19 28 04.7	+0.3
	comp=N,1µm,0.5s						
TRAZ	Trapeza	1.55	330	P	Pn	19 27 44.1	+0.4
TRAZ				S	Sb	19 28 05.4	+1.0
TRAZ				AML	AML	19 28 07.7	
	comp=E,1716µm,0.3s						
TRAZ				AML	AML	19 28 10.6	
	comp=N,2553µm,0.3s						
VAM	Vamos	1.64	150	P	Pb	19 27 45.8	-0.7
VAM	Vamos	1.64	150	P	Pn	19 27 45.5	+0.7
VAM				S	Sg	19 28 08.4	-1.0
DSF	Desfina	1.66	342	P	Pn	19 27 45.9	+0.7
DSF				S	Sb	19 28 07.6	-0.1
	comp=N,372nm,0.4s						
DSF	Desfina	1.66	342	P	Pn	19 27 46.0	+0.7
DSF				S	Sb	19 28 07.5	-0.2
DSF				AML	AML	19 28 13.0	
	comp=N,629µm,0.3s						
DSF				AML	AML	19 28 14.7	
	comp=E,751µm,0.3s						
AIG2	Aigio	1.67	328	P	Pn	19 27 46.0	+0.7
AIG2				S	Sb	19 28 08.0	+0.2
ALIK	Aliki, Aigiali	1.67	329	P	Pn	19 27 46.1	+0.9
AIG4	Aigion	1.68	328	P	Pb	19 27 46.4	-0.7
AIG4				S	Sb	19 28 08.0	0.0
IOSP	Ios island	1.68	93	P	Pb	19 27 46.7	-0.5
IOSP	Ios island	1.68	93	P	Pb	19 27 46.7	-0.5
EREA	Eretria	1.69	20	P	Pn	19 27 46.0	+0.5
EREA				S	Sb	19 28 08.2	-0.2
EREA				AML	AML	19 28 17.8	
	comp=N,689µm,0.3s						
EREA				AML	AML	19 28 25.8	
	comp=E,675µm,0.4s						
LAKA	Lakka	1.71	326	P	Pn	19 27 46.1	+0.3
LAKA				S	Sn	19 28 07.2	-0.2
	comp=E,302nm,0.4s						
LAKA	Lakka	1.71	326	P	Pn	19 27 46.1	+0.3
LAKA				S	Sb	19 28 09.6	+0.7
LAKA				AML	AML	19 28 11.0	
	comp=E,513µm,0.4s						
LAKA				AML	AML	19 28 11.7	
	comp=N,751µm,0.5s						
TNSA	Tinos	1.72	65	P	Pb	19 27 47.4	-0.5
TNSA				S	Sb	19 28 09.0	-0.2
KALE	Kalithea	1.77	332	P	Pn	19 27 46.7	+0.1
KALE	Kalithea	1.77	332	P	Pn	19 27 46.8	+0.1
KALE				S	Sb	19 28 10.0	-0.7
KALE				AML	AML	19 28 14.6	
	comp=E,667µm,0.4s						
KALE				AML	AML	19 28 18.4	
	comp=N,702µm,0.4s						
TRIZ	Trizonia	1.77	330	P	Pn	19 27 46.9	+0.2
TRIZ				S	Sn	19 28 09.1	+0.2
	comp=N,442nm,0.4s						
TRIZ	Trizonia	1.77	330	P	Pn	19 27 47.0	+0.4
TRIZ				S	Sn	19 28 09.1	+0.2
LKR	Lokris	1.82	355	P	Pn	19 27 48.1	+0.8
LKR	Lokris	1.82	355	P	Pn	19 27 48.1	+0.8
LKR				S	Sn	19 28 11.1	+0.9
LKR				AML	AML	19 28 21.8	
	comp=N,554µm,0.3s						
LKR				AML	AML	19 28 22.5	
	comp=E,629µm,0.5s						
RLS	Riolos of Patr	1.84	312	P	Pn	19 27 48.6	+1.0
RLS				AML	AML	19 28 18.8	
	comp=N,344µm,0.4s						
RLS				AML	AML	19 28 24.4	
	comp=E,368µm,0.4s						
ATAL	Atalanti	1.86	356	P	Pn	19 27 48.5	+0.6
ATAL				S	Sn	19 28 12.2	+1.0
	comp=E,275nm,0.5s						
ATAL	Atalanti	1.86	356	P	Pn	19 27 48.7	+0.8
ATAL				AML	AML	19 28 20.9	
	comp=E,562µm,0.6s						
ATAL				AML	AML	19 28 24.6	
	comp=N,572µm,0.5s						
APE	Apeiranthos	1.88	82	PN	Pn	19 27 48.9	+0.7
APE	Apeiranthos	1.88	82	P	Pn	19 27 49.1	+0.9
APE	Apeiranthos	1.88	82	P	Pn	19 27 49.1	+0.9
APE				S	Sn	19 28 12.8	+1.1
EFP	Efpalio	1.89	328	P	Pn	19 27 48.8	+0.5
EFP				S	Sb	19 28 13.7	-0.6
EFP				AML	AML	19 28 16.5	
	comp=N,610µm,0.3s						
EFP				AML	AML	19 28 16.6	
	comp=E,595µm,0.5s						
MRKA	Markates	1.90	9	P	Pn	19 27 49.0	+0.6
MRKA				S	Sn	19 28 13.0	+1.0
	comp=E,250nm,0.6s						
MRKA	Markates	1.90	9	P	Pn	19 27 49.0	+0.6
MRKA				S	Sn	19 28 12.9	+1.0
MRKA				AML	AML	19 28 18.0	
	comp=E,444µm,0.5s						
MRKA				AML	AML	19 28 21.7	
	comp=N,474µm,0.9s						
VTN	Vitineika	1.93	305	P	Pb	19 27 50.9	-0.6
SMIA	Simia	2.04	0	P	Pn	19 27 50.6	+0.2
SMIA				S	Sn	19 28 16.8	+1.1
IDI	Anoyia	2.06	138	PN	Pn	19 27 51.9	+1.2
IDI	Anoyia	2.06	138	Pn	Pn	19 27 51.9	+1.2
	comp=N,4.8nm,0.3s,baz=323,slow=11,SNR=40						
IDI				Sn	Sn	19 28 16.7	+0.6
	comp=N,14nm,0.3s,baz=130,slow=13,SNR=6.8						
IDI	Anoyia	2.06	138	P	Pn	19 27 52.0	+1.3
GVD	Gavdhos	2.12	160	PN	Pn	19 27 52.9	+1.5
GVD	Gavdhos	2.12	160	P	Pb	19 27 54.0	-0.6
AMGA	Amorgos Island	2.16	89	P	Pn	19 27 53.5	+1.4
PVO	Paravola	2.22	324	P	Pn	19 27 53.7	+0.9
PVO				AML	AML	19 28 35.4	
	comp=N,500µm,0.4s						
PVO				AML	AML	19 28 36.1	
	comp=E,536µm,0.4s						
SIVA	Sivas	2.23	144	P	Pb	19 27 55.9	-0.7
AGG	Agios Georgios	2.29	343	PN	Pn	19 27 54.2	+0.4
AGG	Agios Georgios	2.29	343	P	Pn	19 27 54.8	+1.0
AGG	Agios Georgios	2.29	343	P	Pn	19 27 54.9	+1.1
SKY	Skiros Island	2.31	27	P	Pn	19 27 54.4	+0.3
SKIA	Skiathos	2.34	5	P	Pn	19 27 55.4	+0.9
SKIA				S	Sn	19 28 24.3	+1.3
EVR	Evrytania	2.35	333	P	Pn	19 27 55.9	+1.1
EVR	Evrytania	2.35	333	P	Pn	19 27 55.6	+0.8
EVR				S	Sn	19 28 25.0	+1.6
EVR				AML	AML	19 28 38.6	
	comp=E,394µm,0.9s						
EVR				AML	AML	19 28 41.9	
	comp=N,408µm,0.6s						
NEO	Neokhori	2.47	0	P	Pn	19 27 57.0	+0.7
NEO	Neokhori	2.47	0	P	Pn	19 27 57.1	+0.8
LAST	Lasithi	2.49	131	P	Pn	19 27 58.1	+1.5
LAST	Lasithi	2.49	131	P	Pn	19 27 58.1	+1.5
XOR	Xorichti	2.53	360	P	Pn	19 27 57.9	+0.8
FYTO	Fytoko, Volos	2.58	356	P	Pn	19 27 58.7	+0.9
FYTO				S	Sn	19 28 29.8	+1.0
CHOS	Chios island	2.75	55	PN	Pn	19 28 00.8	+0.7
CHOS	Chios island	2.75	55	P	Pn	19 28 00.8	+0.7
LKD2	Lefkada island	2.80	315	P	Pn	19 28 02.8	+1.9
TSLK	Tsoukalades, L	2.83	315	P	Pn	19 28 02.9	+1.7
THL	Klokotos Trika	2.88	341	P	Pn	19 28 03.0	+1.1
THL	Klokotos Trika	2.88	341	P	Pn	19 28 02.9	+1.0
THL				S	Sn	19 28 37.3	+1.0
THL				AML	AML	19 28 39.4	
	comp=E,90µm,0.5s						
THL				AML	AML	19 28 39.9	
	comp=N,74µm,0.6s						
ZKR	Zakros	2.99	124	PN	Pn	19 28 04.7	+1.3
URLA	Izmir	3.10	60	PN	Pn	19 28 06.0	+1.0
URLA	Izmir	3.10	60	*i* P	Pn	19 28 05.9	+0.9
URLA				IAML_P			
	comp=Z,2µm,0.2s						
SIGR	SIGRI	3.17	41	PN	Pn	19 28 06.7	+0.8
SIGR	SIGRI	3.17	41	P	Pn	19 28 06.5	+0.7
BODT	Bodrum	3.30	85	PN	Pn	19 28 09.0	+1.3
LIT	Litokhoron	3.31	351	P	Pn	19 28 08.8	+1.0
BDRM	Kayabasi	3.41	85	*i* P	Pn	19 28 11.7	+2.5
BDRM				IAML_P			
	comp=Z,72nm,0.1s						
KPRO	Kipourio	3.43	336	P	Pn	19 28 10.7	+1.1
LIA	Limnos Island	3.44	26	P	Pn	19 28 09.6	+0.1
KARP	Karpathos	3.45	111	PN	Pn	19 28 11.4	+1.6
IGT	Igoumenitsa	3.52	321	P	Pn	19 28 13.0	+2.3
DAT	Datca	3.52	90	PN	Pn	19 28 12.3	+1.5
DAT	Datca	3.52	90	*i* P	Pn	19 28 12.8	+2.0
DAT				IAML_P			
	comp=Z,107nm,0.2s						
OUR	Ouranopolis	3.55	10	PN	Pn	19 28 11.9	+0.8
OUR	Ouranopolis	3.55	10	P	Pn	19 28 11.9	+0.8
AYDN	Tasoluk	3.83	76	*i* P	Pb	19 28 21.9	-1.9
AYDN				IAML_P			
	comp=Z,124nm,0.2s						
ARG	Arkhangelos	4.02	97	PN	Pn	19 28 19.4	+1.9
GRG	Griva	4.17	352	PN	Pn	19 28 20.8	+1.2
GRG	Griva	4.17	352	P	Pn	19 28 20.8	+1.2
KNT	Kendrikon	4.33	357	PN	Pn	19 28 23.2	+1.4
KNT	Kendrikon	4.33	357	P	Pn	19 28 23.3	+1.5
DALY	Dalyan (Mula)	4.38	89	*i* P	Pb	19 28 29.9	-3.2
DALY				IAML_P			
	comp=Z,48nm,0.2s						
GELI	Tayfur-Gelibol	4.39	35	PN	Pn	19 28 23.7	+1.1
FETY	Fethiye	4.73	91	*i* P	Pb	19 28 34.7	-4.5
FETY				IAML_P			
	comp=Z,179nm,0.4s						
STIP	Stip	4.92	351	*i* Pn	Pn	19 28 32.3	+2.4
BRTR	Keskin Array B	8.70	67	Pn	Pn	19 29 25.6	+3.6
	comp=Z,0.0nm,0.3s,baz=256,slow=15,SNR=4.7						
GERES	GERESS Array B	13.87	333	Pn	Pn	19 30 33.6	+1.1
	baz=131,slow=12,SNR=2.3						
MDT	Midelt	23.14	268	LR	LR	19 43 14.2	
	comp=Z,12nm,19.8s,baz=92,slow=42						
HFS	Hagfors	24.10	348	P	P	19 32 30.2	-1.1
	comp=Z,0.7nm,0.5s,baz=156,slow=11,SNR=4.8						
EKA	Eskdalemuir Ar	25.76	324	P	P	19 32 46.8	+0.4
	comp=Z,0.7nm,0.6s,baz=125,slow=9.3,SNR=5.5						
GEYT	Alibeck	27.68	77	P	P	19 33 03.6	-0.3
	comp=Z,0.8nm,0.5s,baz=212,slow=5.1,SNR=3.1						
TORD	Torodi Ar. Bea	30.45	225	P	P	19 33 27.0	-1.7
	comp=Z,1.0nm,1.2s,baz=51,slow=7.9,SNR=3.1						
MKAR	Makanchi Array	44.20	58	P	P	19 35 24.3	-0.6
	comp=Z,0.4nm,0.3s,baz=270,slow=7.9,SNR=17						
ZALV	Zalesovo Beam	45.02	47	P	P	19 35 30.3	-0.9
	comp=Z,0.7nm,0.4s,baz=267,slow=10.0,SNR=4.0						
CMAR	Chiang Mai Arr	67.95	83	P	P	19 38 14.8	-0.3
	comp=Z,0.3nm,0.5s,baz=304,slow=9.0,SNR=3.8						

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*ISCJB **08** 19:30:44.9±0.5, 41°.09N±0°.04×112°.83W±0°.06, h0^{km}, Error ellipse: s-maj=7.2km s-min=5.3km az=31.6*

*NEIC **08** 19:30:45.5±0.4, 41°.08N×112°.79W, h0^{km}, ML1.9, Error ellipse: s-maj=5.8km s-min=4.1km az=121.0, Suspected Mining explosion.*

NEIC 70 km [44 miles] WSW of Ogden.

*IDC **08** 19:30:45.8±1.2, 41°.14N×112°.86W, h0^{km}, mb1 2.6/2, mb1mx2.6/47, mbtmp2.1/2, ML2.8/2, Error ellipse: s-maj=39.4km s-min=5.2km az=157.0*

ISC 08 19:30:44.3±1.0, **41°.15N**±0°.03×**112°.81W**±0°.04, **h0^{km}, n22, σ0^{s}.88**/22, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGU	Big Grassy Mou	0.28	217	*e*Pg	Pg	19 30 50.0	+0.3
SPUT	South Promonto	0.31	60	*e*Pg	Pb	19 30 52.7	-0.1
HVU	Hansel Valley	0.62	2	*e*Pg	Pb	19 30 58.2	0.0
DUG	Dugway, Tooele	0.96	180	*e*Pg	Pb	19 31 03.4	-0.4
HWUT	Hardware Ranch	1.04	64	*e*Pn	Pn	19 31 06.3	0.0
JLU	Jordanelle	1.17	118	*e*Pn	Pb	19 31 07.3	-0.1
NLU	North Lily Min	1.32	155	*e*Pn	Pn	19 31 10.1	-0.1
MPU	Maple Canyon	1.45	142	*e*Pn	Pb	19 31 12.0	-0.2
ELK	Elko	1.89	258	Pn	Pn	19 31 18.5	+0.5
	1.4nm,0.3s,baz=80,slow=10,SNR=24						
ELK				Lg	Lg	19 31 44.1	
	2.9nm,0.3s,baz=182,slow=23,SNR=13						
ELK	Elko	1.89	258	*e*Pn	Pn	19 31 18.1	+0.1
ELK				Lg	Lg	19 31 44.1	
TMUT	Trail Mountain	2.22	146	*e*Pn	Pn	19 31 22.9	+0.3
MSU	Marysvale	2.68	169	*e*Pn	Pn	19 31 29.3	+0.4
HLID	Hailey	2.69	334	*e*Pn	Pb	19 31 31.6	-1.7
SRU	San Rafael Swe	2.69	139	*e*Pn	Pn	19 31 29.1	+0.1
PSUT	Pine Spring	2.74	197	*e*Pn	Pn	19 31 29.9	+0.2
FXWY	Fox Creek	2.81	27	*e*Pn	Pn	19 31 32.6	+1.9
BW06	Boulder Array	2.91	55	*e*Pn	Pn	19 31 33.5	+1.4
PDAR	Pinedale Array	2.91	55	Pn	Pb	19 31 35.6	-1.6
	0.2nm,0.3s,baz=210,slow=12,SNR=4.6						
PDAR				Pg	Pg	19 31 39.7	-0.3
	1.1nm,0.3s,baz=236,slow=14,SNR=17						
PDAR				Lg	Lg	19 32 20.0	
	1.4nm,0.3s,baz=234,slow=20,SNR=8.3						
R11A	Troy Canyon, C	3.53	218	*e*Pn	Pn	19 31 40.5	0.0
NV01	Mina Array Sit	5.03	239	*e*Pn	Pn	19 32 02.5	+1.2
NVAR	Mina Array Bea	5.03	239	Pn	Pn	19 32 02.5	+1.2
	0.2nm,0.3s,baz=78,slow=9.5,SNR=3.1						
I56US	NEWPORT INFRAS	7.75	338	*i*		20 14 20.0	
	baz=158,slow=316,SNR=3.9						

ROM 08 19:48:17.2±0.1, **43°.446N**±0°.004×**13°.136E**±0°.007, **h9^{km}, Md1.2**/4, **Error ellipse: s-maj=0.7km s-min=0.3km az=57.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	Cingoli	0.08	149	P	Pg	19 48 20.0	+0.6
CING				S	Sg	19 48 21.5	+0.5
CING				AML	AML		
	comp=E,4895µm,1.0s						
CING				AML	AML		
	comp=N,4670µm,0.1s						
CING				AML	AML		
	comp=N,4670µm,0.1s						
CING				AML	AML		
	comp=E,4895µm,1.0s						
CING				END			
CING				END			
CING				END			
CING				END			
EL6	Elcito	0.12	192	P	Pg	19 48 20.5	+0.5
EL6				S	Sg	19 48 22.7	+0.8
EL6				AML	AML		
	comp=E,4785µm,0.4s						
EL6				AML	AML		
	comp=N,2745µm,0.3s						
EL6				AML	AML		
	comp=E,4780µm,0.4s						
EL6				AML	AML		
	comp=N,2750µm,0.3s						
EL6				AML	AML		
	comp=E,4780µm,0.4s						
EL6				AML	AML		
	comp=N,2755µm,0.3s						
EL6				END			
EL6				END			
EL6				END			
ARVD	Arcevia	0.15	290	*e*P	Pg	19 48 20.9	+0.5
ARVD				S	Sg	19 48 23.6	+0.9
ARVD				AML	AML		
	comp=E,1505µm,0.5s						
ARVD				AML	AML		
	comp=N,1475µm,0.2s						
ARVD				AML	AML		
	comp=E,1505µm,0.5s						
ARVD				AML	AML		
	comp=N,1475µm,0.2s						
ARVD				AML	AML		
	comp=E,1505µm,0.5s						
ARVD				AML	AML		
	comp=N,1475µm,0.2s						
ARVD				END			
ARVD				END			
ARVD				END			
ARVD				END			
COR1	Corinaldo	0.21	332	P	Pg	19 48 23.0	+1.5
COR1				AML	AML		
	comp=E,1650µm,0.2s						
COR1				AML	AML		
	comp=N,4105µm,1.6s						
COR1				AML	AML		
	comp=E,1652µm,0.2s						
COR1				AML	AML		
	comp=N,4085µm,1.6s						
COR1				AML	AML		
	comp=E,1652µm,0.2s						
COR1				AML	AML		
	comp=N,4085µm,1.6s						
COR1				END			
COR1				END			
SNTG	Esanatoglia	0.24	217	P	Pg	19 48 22.5	+0.5
SNTG				S	Sg	19 48 26.6	+1.3
SNTG				AML	AML		
	comp=E,487µm,0.6s						
SNTG				AML	AML		
	comp=N,635µm,0.7s						
SNTG				AML	AML		
	comp=E,487µm,0.6s						
SNTG				AML	AML		
	comp=N,635µm,0.7s						
SNTG				AML	AML		
	comp=E,487µm,0.6s						
SNTG				AML	AML		
	comp=N,635µm,0.7s						
SNTG				END			
SNTG				END			
SNTG				END			
SNTG				END			
FRON	Frontone	0.31	284	P	Pg	19 48 23.8	+0.6
FRON				S	Sb	19 48 29.2	-0.8
FRON				AML	AML		
	comp=E,764µm,0.1s						
FRON				AML	AML		
	comp=N,1096µm,0.1s						
FRON				AML	AML		
	comp=E,763µm,0.1s						
FRON				AML	AML		
	comp=N,1094µm,0.1s						
FRON				END			
FRON				END			
MPAG	Monte Paganucc	0.33	304	P	Pg	19 48 24.1	+0.4
MPAG				S	Sb	19 48 29.8	-1.0
MPAG				AML	AML		
	comp=E,436µm,0.6s						
MPAG				AML	AML		
	comp=N,490µm,0.6s						
MPAG				AML	AML		
	comp=E,436µm,0.6s						
MPAG				AML	AML		
	comp=N,489µm,0.6s						
MPAG				AML	AML		
	comp=E,436µm,0.6s						
MPAG				AML	AML		
	comp=N,490µm,0.6s						
MPAG				END			
MPAG				END			
CSP1	Cessapalombo	0.36	172	P	Pg	19 48 24.9	+0.7
CSP1				S	Sb	19 48 30.8	-0.8
CSP1				END			
CSP1				END			
FSSB	Fossombrone	0.36	313	P	Pg	19 48 24.9	+0.7
FSSB				S	Sb	19 48 30.9	-0.6
FSSB				AML	AML		
	comp=E,1440µm,0.2s						
FSSB				AML	AML		
	comp=N,2495µm,0.3s						
FSSB				AML	AML		
	comp=E,1440µm,0.2s						
FSSB				AML	AML		
	comp=N,2495µm,0.3s						
FSSB				AML	AML		
	comp=E,1440µm,0.2s						
FSSB				AML	AML		
	comp=N,2495µm,0.3s						
FSSB				END			
FSSB				END			
ATFO	Monte Foce - G	0.42	259	P	Pb	19 48 26.1	-0.7
ATFO				S	Sb	19 48 32.9	-0.4
ATFO				AML	AML		
	comp=E,724µm,0.2s						
ATFO				AML	AML		
	comp=N,1018µm,0.5s						
ATFO				AML	AML		
	comp=E,724µm,0.2s						
ATFO				AML	AML		
	comp=N,1019µm,0.5s						
ATFO				AML	AML		
	comp=N,1019µm,0.5s						
ATFO				AML	AML		
	comp=E,724µm,0.2s						
NARO	Abbazia di Nar	0.44	292	P	Pg	19 48 26.0	+0.3
NARO				S	Sb	19 48 33.5	-0.3
NARO				AML	AML		
	comp=E,306µm,0.2s						
NARO				AML	AML		
	comp=N,310µm,0.1s						
NARO				AML	AML		
	comp=E,306µm,0.2s						
NARO				AML	AML		
	comp=N,310µm,0.1s						
NARO				END			
NARO				END			
PIEI	Pieia	0.45	282	P	Pg	19 48 26.1	+0.2
PIEI				S	Sb	19 48 33.6	-0.5
PIEI				AML	AML		
	comp=E,574µm,1.0s						
PIEI				AML	AML		
	comp=N,352µm,1.6s						
PIEI				AML	AML		
	comp=N,352µm,1.6s						
PIEI				AML	AML		
	comp=E,574µm,1.0s						
ASSB	Assisi San Ben	0.53	221	P	Pg	19 48 27.8	+0.3
ASSB				S	Sb	19 48 36.2	-0.4
ATVO	AVT- Monte Val	0.54	263	P	Pb	19 48 28.2	-0.6
ATVO				S	Sb	19 48 36.4	-0.3
ATVO				AML	AML		
	comp=E,256µm,0.3s						
ATVO				AML	AML		
	comp=N,240µm,0.5s						
ATVO				AML	AML		
	comp=N,240µm,0.5s						
ATVO				AML	AML		
	comp=E,256µm,0.3s						
NRCA	Norcia	0.61	182	P	Pg	19 48 29.3	+0.3
NRCA				AML	AML		
	comp=E,370µm,1.2s						
NRCA				AML	AML		
	comp=N,290µm,0.4s						
NRCA				AML	AML		
	comp=N,290µm,0.4s						
NRCA				AML	AML		
	comp=E,370µm,1.2s						
ABTA	Abfaltersbach	3.33	353	*e*Pn	Pg	19 49 25.7	+4.8
	comp=E,0.4nm,0.1s						
WTTA	Wattenberg	3.96	345	*e*Pn	Pg	19 49 36.8	+3.7
	comp=E,0.8nm,0.3s						
WATA	Walderalm	4.04	345	*e*Pn	Pg	19 49 37.3	+2.7
	comp=E,0.4nm,0.1s						

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*ROM **08** 19:48:31.8±0.1, 43°.443N±0°.003×13°.124E±0°.005, h9^{km}, ML2.3/27, Error ellipse: s-maj=0.4km s-min=0.2km az=227.0*

*ISCJB **08** 19:48:32.3±0.2, 43°.44N±0°.02×13°.12E±0°.02, h11^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.4km az=40.5*

ISC 08 19:48:32.0±0.8, **43°.44N**±0°.02×**13°.13E**±0°.02, **h12^{km}**±5^{km}, **n48, σ0^{s}.57**/72, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	Cingoli	0.08	144	P	Pg	19 48 34.4	-0.3
CING				S	Sg	19 48 36.0	-0.5
CING				AML	AML		
	comp=E,4895µm,1.0s						
CING				AML	AML		
	comp=N,4670µm,0.1s						
CING				AML	AML		
	comp=N,4670µm,0.1s						
CING				AML	AML		

	comp=E,4895µm,1.0s						
MMUR	**Monte Murano**	**0.10**	**269**	P	**Pg**	**19 48 34.6**	**-0.2**
MMUR				S	**Sg**	**19 48 36.5**	**-0.4**
MMUR				AML	AML		
	comp=E,8790µm,0.4s						
MMUR				AML	AML		
	comp=N,8190µm,0.4s						
MMUR				AML	AML		
	comp=E,8765µm,0.4s						
MMUR				AML	AML		
	comp=N,8190µm,0.4s						
MMUR				AML	AML		
	comp=E,8785µm,0.4s						
MMUR				AML	AML		
	comp=N,8190µm,0.4s						
MMUR				AML	AML		
	comp=E,8785µm,0.4s						
MMUR				AML	AML		
	comp=N,8190µm,0.4s						
EL6	**Elcito**	**0.12**	**190**	*i* P	**Pg**	**19 48 35.0**	**-0.1**
EL6				S	**Sg**	**19 48 37.3**	**0.0**
EL6				AML	AML		
	comp=E,4785µm,0.4s						
EL6				AML	AML		
	comp=N,2745µm,0.3s						
EL6				AML	AML		
	comp=E,4785µm,0.4s						
EL6				AML	AML		
	comp=N,2750µm,0.3s						
EL6				AML	AML		
	comp=E,4780µm,0.4s						
EL6				AML	AML		
	comp=N,2750µm,0.3s						
EL6				AML	AML		
	comp=E,4780µm,0.4s						
EL6				AML	AML		
	comp=N,2755µm,0.3s						
ARVD	**Arcevia**	**0.15**	**292**	*i* P	**Pg**	**19 48 35.4**	**-0.2**
ARVD				S	**Sg**	**19 48 38.0**	**0.0**
ARVD				AML	AML		
	comp=E,1505µm,0.5s						
ARVD				AML	AML		
	comp=N,1475µm,0.2s						
ARVD				AML	AML		
	comp=E,1505µm,0.5s						
ARVD				AML	AML		
	comp=N,1475µm,0.2s						
ARVD				AML	AML		
	comp=E,1505µm,0.5s						
ARVD				AML	AML		
	comp=N,1475µm,0.2s						
ARVD				AML	AML		
	comp=E,1505µm,0.5s						
ARVD				AML	AML		
	comp=N,1475µm,0.2s						
MTL1	**Matelica**	**0.20**	**205**	P	**Pg**	**19 48 36.6**	**+0.2**
MTL1				S	**Sg**	**19 48 40.3**	**+0.9**
GAG1	**Gagliole**	**0.21**	**192**	P	**Pg**	**19 48 36.6**	**+0.1**
GAG1				S	**Sg**	**19 48 40.2**	**+0.6**
COR1	**Corinaldo**	**0.21**	**334**	P	**Pg**	**19 48 37.3**	**+0.7**
COR1				AML	AML		
	comp=E,1650µm,0.2s						
COR1				AML	AML		
	comp=N,4105µm,1.6s						
COR1				AML	AML		
	comp=E,1655µm,0.2s						
COR1				AML	AML		
	comp=N,4090µm,1.6s						
SNTG	**Esanatoglia**	**0.23**	**216**	*i* P	**Pg**	**19 48 37.0**	**+0.1**
SNTG				S	**Sg**	**19 48 41.1**	**+0.9**
SNTG				AML	AML		
	comp=E,487µm,0.6s						
SNTG				AML	AML		
	comp=N,635µm,0.7s						
SNTG				AML	AML		
	comp=E,487µm,0.6s						
SNTG				AML	AML		
	comp=N,635µm,0.7s						
SNTG				AML	AML		
	comp=E,487µm,0.6s						
SNTG				AML	AML		
	comp=N,635µm,0.7s						
SNTG				AML	AML		
	comp=E,487µm,0.6s						
SNTG				AML	AML		
	comp=N,635µm,0.7s						
CRM1	**Catelraimondo**	**0.24**	**193**	P	**Pg**	**19 48 37.3**	**+0.2**
CRM1				S	**Sg**	**19 48 41.6**	**+1.2**
MDAR	**Monte D'Aria**	**0.25**	**178**	P	**Pg**	**19 48 37.3**	**0.0**
MDAR				S	**Sb**	**19 48 41.8**	**-1.1**
SSFR	**Montelago di S**	**0.25**	**269**	P	**Pg**	**19 48 37.3**	**0.0**
SSFR				S	**Sg**	**19 48 41.5**	**+0.7**
SSFR				AML	AML		
	comp=E,2125µm,0.5s						
SSFR				AML	AML		
	comp=N,2905µm,1.1s						
SSFR				AML	AML		
	comp=E,2090µm,0.2s						
SSFR				AML	AML		
	comp=N,2905µm,1.1s						
SSFR				AML	AML		
	comp=E,2120µm,0.5s						
SSFR				AML	AML		
	comp=N,2905µm,1.1s						
SSFR				AML	AML		
	comp=E,2090µm,0.2s						
SSFR				AML	AML		
	comp=N,2905µm,1.1s						
SSFR				AML	AML		
	comp=E,2090µm,0.2s						
SSFR				AML	AML		
	comp=E,2120µm,0.5s						
SSFR				AML	AML		
	comp=N,2905µm,1.1s						
SSFR				AML	AML		
	comp=N,2905µm,1.1s						
SENI	**Senigallia**	**0.27**	**16**	P	**Pb**	**19 48 38.6**	**-0.3**
FRON	**Frontone**	**0.30**	**284**	P	**Pg**	**19 48 38.2**	**0.0**
FRON				S	**Sb**	**19 48 43.5**	**-1.0**
FRON				AML	AML		
	comp=E,764µm,0.1s						
FRON				AML	AML		
	comp=N,1096µm,0.1s						
FRON				AML	AML		
	comp=E,764µm,0.1s						
FRON				AML	AML		
	comp=N,1096µm,0.1s						
FRON				AML	AML		
	comp=E,763µm,0.1s						
FRON				AML	AML		
	comp=N,1094µm,0.1s						
FOSV	**Fossato di Vic**	**0.31**	**241**	P	**Pg**	**19 48 37.9**	**-0.4**
FOSV				AML	AML		
	comp=E,562µm,0.3s						
FOSV				AML	AML		
	comp=N,523µm,0.2s						
FOSV				AML	AML		
	comp=E,562µm,0.3s						
FOSV				AML	AML		
	comp=N,523µm,0.2s						
FOSV				AML	AML		
	comp=E,562µm,0.3s						
FOSV				AML	AML		
	comp=N,523µm,0.2s						
FOSV				AML	AML		
	comp=N,523µm,0.2s						
FOSV				AML	AML		
	comp=E,562µm,0.3s						
MPAG	**Monte Paganucc**	**0.33**	**305**	P	**Pg**	**19 48 38.5**	**-0.2**
MPAG				S	**Sb**	**19 48 44.1**	**-1.1**
MPAG				AML	AML		
	comp=E,436µm,0.6s						
MPAG				AML	AML		
	comp=N,490µm,0.6s						
MPAG				AML	AML		
	comp=E,436µm,0.6s						
MPAG				AML	AML		
	comp=N,489µm,0.6s						
MPAG				AML	AML		
	comp=E,436µm,0.6s						
MPAG				AML	AML		
	comp=N,490µm,0.6s						
PCRO	**Pietralacroce**	**0.34**	**61**	P	**Pb**	**19 48 39.6**	**-0.4**
CSP1	**Cessapalombo**	**0.35**	**171**	P	**Pg**	**19 48 39.3**	**+0.1**
CSP1				S	**Sb**	**19 48 45.5**	**-0.5**
FSSB	**Fossombrone**	**0.36**	**314**	P	**Pg**	**19 48 39.2**	**0.0**
FSSB				S	**Sb**	**19 48 45.3**	**-0.7**
FSSB				AML	AML		
	comp=E,1440µm,0.2s						
FSSB				AML	AML		
	comp=N,2495µm,0.3s						
FSSB				AML	AML		
	comp=E,1440µm,0.2s						
FSSB				AML	AML		
	comp=N,2490µm,0.3s						
FSSB				AML	AML		
	comp=E,1440µm,0.2s						
FSSB				AML	AML		
	comp=N,2495µm,0.3s						
FSSB				AML	AML		
	comp=E,1440µm,0.2s						
FSSB				AML	AML		
	comp=N,2495µm,0.3s						
AOI	**Ancona**	**0.36**	**73**	P	**Pg**	**19 48 39.0**	**-0.2**
AOI				S	**Sb**	**19 48 45.6**	**-0.5**
MNTP	**Montappone**	**0.39**	**141**	P	**Pb**	**19 48 40.5**	**-0.5**
FDMO	**Fiordimonte**	**0.41**	**184**	P	**Pg**	**19 48 40.2**	**+0.1**
FDMO				S	**Sb**	**19 48 47.1**	**-0.3**
FDMO				AML	AML		
	comp=E,328µm,0.4s						
FDMO				AML	AML		
	comp=N,294µm,0.9s						
FDMO				AML	AML		
	comp=E,328µm,0.4s						
FDMO				AML	AML		
	comp=N,294µm,0.9s						
FDMO				AML	AML		
	comp=N,294µm,0.9s						
FDMO				AML	AML		
	comp=E,328µm,0.4s						
ATFO	**Monte Foce - G**	**0.41**	**260**	P	**Pg**	**19 48 40.3**	**+0.1**
ATFO				S	**Sb**	**19 48 47.2**	**-0.4**
ATFO				AML	AML		
	comp=E,724µm,0.2s						
ATFO				AML	AML		
	comp=N,1018µm,0.5s						
ATFO				AML	AML		
	comp=E,724µm,0.2s						
ATFO				AML	AML		
	comp=N,1019µm,0.5s						
ATFO				AML	AML		
	comp=N,1019µm,0.5s						
ATFO				AML	AML		
	comp=E,724µm,0.2s						
CIMA	**Civitanova Mar**	**0.42**	**109**	P	**Pb**	**19 48 41.5**	**+0.1**
NARO	**Abbazia di Nar**	**0.43**	**293**	P	**Pg**	**19 48 40.5**	**-0.1**
NARO				S	**Sb**	**19 48 47.6**	**-0.5**
NARO				AML	AML		
	comp=E,306µm,0.2s						
NARO				AML	AML		
	comp=N,310µm,0.1s						
NARO				AML	AML		
	comp=E,306µm,0.2s						
NARO				AML	AML		
	comp=N,310µm,0.1s						
NARO				AML	AML		
	comp=E,306µm,0.2s						
NARO				AML	AML		
	comp=N,310µm,0.1s						
PIEI	**Pieia**	**0.44**	**282**	P	**Pg**	**19 48 40.6**	**-0.2**
PIEI				S	**Sb**	**19 48 47.7**	**-0.8**
PIEI				AML	AML		
	comp=E,574µm,1.0s						
PIEI				AML	AML		
	comp=N,352µm,1.6s						
PIEI				AML	AML		
	comp=E,574µm,1.0s						
PIEI				AML	AML		
	comp=N,352µm,1.6s						
PIEI				AML	AML		
	comp=E,574µm,1.0s						
PIEI				AML	AML		
	comp=N,352µm,1.6s						
CESI	**CESI - Serrava**	**0.47**	**201**	P	**Pg**	**19 48 41.3**	**0.0**
CESI				S	**Sb**	**19 48 49.2**	**0.0**
CESI				AML	AML		
	comp=E,108µm,0.4s						
CESI				AML	AML		
	comp=N,276µm,1.1s						
CESI				AML	AML		
	comp=E,108µm,0.4s						
CESI				AML	AML		
	comp=N,276µm,1.1s						
CESI				AML	AML		
	comp=N,276µm,1.1s						
CESI				AML	AML		
	comp=E,108µm,0.4s						
MURB	**Monte Urbino**	**0.48**	**248**	P	**Pb**	**19 48 41.8**	**-0.6**
MURB				AML	AML		
	comp=E,797µm,0.3s						
MURB				AML	AML		
	comp=N,693µm,1.5s						
MURB				AML	AML		
	comp=E,920µm,0.9s						
MURB				AML	AML		
	comp=N,720µm,1.0s						
MURB				AML	AML		
	comp=E,798µm,0.3s						
MURB				AML	AML		
	comp=N,693µm,1.5s						
MURB				AML	AML		
	comp=E,920µm,0.9s						
MURB				AML	AML		
	comp=N,720µm,1.0s						
MURB				AML	AML		
	comp=E,920µm,0.9s						
MURB				AML	AML		
	comp=E,798µm,0.3s						
MURB				AML	AML		
	comp=N,720µm,1.0s						
MURB				AML	AML		
	comp=N,693µm,1.5s						
PE3	**Peglio**	**0.53**	**299**	P	**Pb**	**19 48 42.6**	**-0.7**
PE3				AML	AML		
	comp=E,592µm,0.4s						
PE3				AML	AML		
	comp=N,899µm,0.3s						
PE3				AML	AML		
	comp=E,592µm,0.4s						
PE3				AML	AML		
	comp=N,902µm,0.3s						
PE3				AML	AML		
	comp=E,592µm,0.4s						
PE3				AML	AML		
	comp=N,902µm,0.3s						
ATPI	**Pietralunga -**	**0.53**	**271**	P	**Pg**	**19 48 42.4**	**0.0**
ATPI				S	**Sb**	**19 48 51.2**	**+0.2**
ATPI				AML	AML		
	comp=E,306µm,0.6s						
ATPI				AML	AML		
	comp=N,338µm,0.3s						
ATPI				AML	AML		
	comp=E,306µm,0.6s						
ATPI				AML	AML		
	comp=N,338µm,0.3s						
ATPI				AML	AML		
	comp=E,306µm,0.6s						
ATPI				AML	AML		
	comp=N,338µm,0.3s						
ATVO	**AVT- Monte Val**	**0.53**	**264**	P	**Pg**	**19 48 42.4**	**0.0**
ATVO				S	**Sb**	**19 48 50.9**	**-0.1**
ATVO				AML	AML		
	comp=E,256µm,0.3s						
ATVO				AML	AML		
	comp=N,240µm,0.5s						
ATVO				AML	AML		
	comp=E,256µm,0.3s						
ATVO				AML	AML		
	comp=N,240µm,0.5s						
ATVO				AML	AML		
	comp=N,240µm,0.5s						
ATVO				AML	AML		
	comp=E,256µm,0.3s						
PESA	**Pesaro**	**0.54**	**337**	P	**Pb**	**19 48 42.9**	**-0.6**
PESA				AML	AML		
	comp=E,1105µm,0.2s						
PESA				AML	AML		
	comp=N,1105µm,0.2s						
PESA				AML	AML		
	comp=E,1105µm,0.2s						
PESA				AML	AML		
	comp=N,1105µm,0.2s						
PESA				AML	AML		
	comp=N,1105µm,0.2s						
PESA				AML	AML		
	comp=E,1105µm,0.2s						
BADI	**Badiali**	**0.65**	**276**	P	**Pg**	**19 48 44.6**	**0.0**
BADI				AML	AML		
	comp=E,272µm,0.3s						
BADI				AML	AML		
	comp=N,491µm,0.4s						
BADI				AML	AML		
	comp=E,272µm,0.3s						
BADI				AML	AML		
	comp=N,491µm,0.4s						
BADI				AML	AML		
	comp=E,272µm,0.3s						
BADI				AML	AML		
	comp=N,491µm,0.4s						
PARC	**Parchiule**	**0.68**	**288**	P	**Pg**	**19 48 45.0**	**-0.2**
PARC				AML	AML		
	comp=E,182µm,0.2s						
PARC				AML	AML		
	comp=N,142µm,0.3s						
PARC				AML	AML		
	comp=E,182µm,0.2s						
PARC				AML	AML		
	comp=N,142µm,0.3s						
PARC				AML	AML		
	comp=N,142µm,0.3s						
PARC				AML	AML		
	comp=E,182µm,0.2s						
CPGN	**Carpegna, Ital**	**0.69**	**302**	P	**Pb**	**19 48 46.0**	**-0.1**
GUMA	**Gualdo di Mace**	**0.70**	**123**	P	Pg	19 48 40.5	-5.1
GUMA				AML	AML		
	comp=E,2140µm,0.4s						
GUMA				AML	AML		
	comp=N,1550µm,0.3s						
GUMA				AML	AML		
	comp=E,2980µm,0.4s						
GUMA				AML	AML		
	comp=N,1180µm,1.0s						
GUMA				AML	AML		
	comp=E,2145µm,0.4s						
GUMA				AML	AML		
	comp=N,1555µm,0.3s						
GUMA				AML	AML		
	comp=E,2980µm,0.4s						
GUMA				AML	AML		
	comp=N,1180µm,1.0s						
GUMA				AML	AML		
	comp=N,1180µm,1.0s						
GUMA				AML	AML		
	comp=E,2980µm,0.4s						
GUMA				AML	AML		
	comp=N,1555µm,0.3s						
GUMA				AML	AML		
	comp=E,2145µm,0.4s						
MOMA	**Monte Martano**	**0.76**	**213**	P	**Pg**	**19 48 46.0**	**-0.7**
MOMA				AML	AML		
	comp=E,114µm,0.9s						
MOMA				AML	AML		
	comp=N,101µm,0.2s						
MOMA				AML	AML		
	comp=E,114µm,0.9s						
MOMA				AML	AML		
	comp=N,101µm,0.2s						
MOMA				AML	AML		
	comp=N,101µm,0.2s						
MOMA				AML	AML		
	comp=E,114µm,0.9s						
SMA1	**SAN MARTINO**	**0.83**	**169**	P	**Pg**	**19 48 47.3**	**-0.7**
LNSS	**Leonessa**	**0.84**	**184**	P	**Pg**	**19 48 48.0**	**-0.3**
LNSS				AML	AML		
	comp=E,186µm,1.2s						
LNSS				AML	AML		
	comp=N,143µm,0.4s						
LNSS				AML	AML		
	comp=E,186µm,1.2s						
LNSS				AML	AML		
	comp=N,143µm,0.4s						
LNSS				AML	AML		
	comp=E,186µm,1.2s						
LNSS				AML	AML		
	comp=N,143µm,0.4s						
CAFI	**Castiglion Fio**	**0.85**	**263**	P	**Pb**	**19 48 48.8**	**-0.1**
CAFI				AML	AML		
	comp=E,101µm,0.7s						
CAFI				AML	AML		
	comp=N,64µm,0.7s						
CAFI				AML	AML		
	comp=E,102µm,0.7s						
CAFI				AML	AML		
	comp=N,64µm,0.7s						
CAFI				AML	AML		
	comp=E,102µm,0.7s						
CAFI				AML	AML		
	comp=N,64µm,0.7s						
TERO	**Teramo**	**0.89**	**157**	P	**Pg**	**19 48 48.8**	**-0.4**
FIAM	**Fiamignano**	**1.17**	**180**	P	**Pg**	**19 48 53.6**	**-1.0**
FIAM				AML	AML		
	comp=E,52µm,0.7s						
FIAM				AML	AML		
	comp=N,61µm,0.5s						
FIAM				AML	AML		
	comp=E,52µm,0.7s						
FIAM				AML	AML		
	comp=N,61µm,0.5s						
DUGI	**Dugi Otok**	**1.50**	**68**	*e*Pn	**Pg**	**19 49 01.5**	**+0.6**
DUGI				Sn	**Sg**	**19 49 19.9**	**-0.5**
NVLJ	**Novalja**	**1.68**	**48**	*e*Pn	**Pn**	**19 49 01.5**	**+0.2**
NVLJ				Sn	**Sn**	**19 49 22.6**	**-0.2**
ZIRJ	**Zirje**	**1.84**	**83**	*e*Pn	**Pb**	**19 49 04.8**	**-0.8**
ZIRJ				Sn	**Sb**	**19 49 28.0**	**-0.6**
MORI	**Morici**	**1.92**	**76**	*e*Pn	**Pn**	**19 49 05.8**	**+1.3**
UDBI	**Udbina**	**2.19**	**59**	Sn	**Sb**	**19 49 38.5**	**-0.3**
HVAR	**Hvar**	**2.44**	**95**	*e*Pn	**Pn**	**19 49 12.6**	**+0.9**
KIJV	**Kijevo**	**2.44**	**76**	*e*Pn	**Pn**	**19 49 13.4**	**+1.7**

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*NIED **08** 20:02:00, 38.°50N×141.°80E, h56km, Mw3.6 Best double couple: M0 2.89000×10^14 NP1:φs257.00000°, δ25.00000°, λ152.00000°. NP2:φs13.00000°, δ78.00000°, λ68.00000°.*

*ISCJB **08** 20:02:42.8±0.8, 38.°52N±0.°03×141.°79E±0.°09, h59km±4km, mb3.8/6, MS3.2/1, Error ellipse: s-maj=11.3km s-min=5.3km az=11.6*

*IDC **08** 20:02:42.9±5.6, 38.°48N×141.°92E, h51km±37km, mb3.5/6, mb1 3.7/9, mb1mx3.4/36, mbtmp3.8/9, ML2.6/3, MS3.1/1, Ms1 3.1/1, ms1mx2.1/47, Error ellipse: s-maj=65.8km s-min=17.0km az=77.0*

*JMA **08** 20:02:44.2, 38.°53N×141.°72E, h54km±1km, M3.7*

JMA Felt II J1.

ISC 08 20:02:43.3±1.1**, 38.°50N**±0.°04×**141.°84E**±0.°09**, h50**km±6km**, n23, σ0.s79**/37**, mb3.7**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.35**	**237**	P	**Pn**	**20 02 53.7**	**+0.8**
JIKH				S	**Sn**	**20 03 00.2**	**+0.5**
JIO	**Ouri**	**0.39**	**263**	P	**Pn**	**20 02 53.7**	**+0.4**
JIO				S	**Sn**	**20 03 00.2**	**-0.2**
JKMT	**Kesennumamotoy**	**0.42**	**317**	P	**Pn**	**20 02 54.2**	**+0.5**
JKMT				S	**Sn**	**20 03 00.9**	**-0.2**
OFUJ	**Ofunato**	**0.59**	**347**	P	**Pn**	**20 02 56.3**	**+0.6**
OFUJ				S	**Sn**	**20 03 04.7**	**0.0**
JMK	**Ichinoseki**	**0.66**	**313**	P	**Pn**	**20 02 56.8**	**+0.2**
JMK				S	**Sn**	**20 03 05.6**	**-0.6**
JOU	**Okura**	**0.93**	**262**	P	**Pn**	**20 02 59.9**	**-0.3**
JOU				S	**Sn**	**20 03 11.8**	**-0.8**
JMM	**Marumori**	**1.04**	**233**	P	**Pn**	**20 03 01.4**	**-0.2**
JMM				S	**Sn**	**20 03 14.4**	**-0.6**
JOM	**Ohasama**	**1.06**	**336**	P	**Pn**	**20 03 02.1**	**+0.2**
JOM				S	**Sn**	**20 03 15.3**	**-0.3**
JYK	**Kaneyama**	**1.23**	**290**	P	**Pn**	**20 03 04.0**	**-0.2**
JRG	**Rokugo**	**1.30**	**314**	P	**Pn**	**20 03 05.0**	**-0.1**
JRG				*e*S	**Sn**	**20 03 20.8**	**-0.5**
JFK	**Kawauchi**	**1.37**	**214**	P	**Pn**	**20 03 06.4**	**+0.4**
JFK				S	**Sn**	**20 03 22.7**	**-0.3**
JYS	**Shirataka**	**1.42**	**259**	P	**Pn**	**20 03 06.9**	**+0.1**
JYS				*e*S	**Sn**	**20 03 24.1**	**-0.3**
MJAR	**Matsushiro Arr**	**3.49**	**237**	P	**Pn**	**20 03 36.5**	**+1.4**
	0.3nm,0.3s,baz=37,slow=12,SNR=22						
MAT	**Matsushiro**	**3.49**	**237**	P	**Pn**	**20 03 37.1**	**+2.0**
MAT				*e*S	**Sn**	**20 04 16.8**	**+1.7**
JHJ	**Hachijo jima 2**	**5.62**	**198**	P	**Pn**	**20 04 05.5**	**+1.1**
	2.8nm,0.3s,baz=73,slow=19,SNR=3.6						
JHJ				S	**Sn**	**20 05 05.6**	**-2.0**

	7.8nm,0.3s,baz=270,slow=20,SNR=3.1						
USRK	**Ussuriysk Ar.**	9.34	311	P	Pn	20 04 55.3	+0.1
	0.2nm,0.3s,baz=124,slow=13,SNR=5.4						
ZALV	**Zalesovo Beam**	41.19	311	P	P	20 10 22.6	-0.1
	0.5nm,0.5s,baz=96,slow=10,SNR=3.1						
CMAR	**Chiang Mai Arr**	42.21	254	P	P	20 10 32.5	+1.0
	0.4nm,0.3s,baz=82,slow=7.5,SNR=4.9						
MKAR	**Makanchi Array**	43.64	301	P	P	20 10 42.5	-0.3
	0.8nm,0.8s,baz=86,slow=8.6,SNR=6.9						
MKAR				pP	sP	20 11 01.6	-0.3
	1.0nm,0.8s,baz=86,slow=7.2,SNR=5.8						
KURBB	**Kurchatov Arra**	45.38	307	P	P	20 10 55.6	-1.0
	1.9nm,0.5s,baz=80,slow=8.0,SNR=24						
KURBB				pP	sP	20 11 15.4	-0.3
	2.0nm,0.6s,baz=82,slow=8.3,SNR=9.7						
BVAR	**Borovoye Array**	49.85	311	P	P	20 11 30.8	-0.4
	0.5nm,0.5s,baz=97,slow=6.0,SNR=3.8						
ARU	**Arti**	55.49	318	LR	LR	20 36 07.3	
	comp=Z,17nm,18.0s,baz=16,slow=36						
WRA	**Warramunga Arr**	58.56	188	P	P	20 12 34.5	-0.4
	1.6nm,0.9s,baz=0.5,slow=9.4,SNR=2.6						

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*ISCJB **08** 20:15:30.9±0.3, 43°.45N±0°.02×13°.13E±0°.03, h10^{km}±3^{km}, Error ellipse: s-maj=4.6km s-min=3.0km az=43.4*

*ROM **08** 20:15:30.3±0.1, 43°.448N±0°.004×13°.130E±0°.007, h9^{km}, ML2.0/22, Error ellipse: s-maj=0.7km s-min=0.2km az=53.0*

ISC 08 20:15:30.5±0.8**, 43°.44N**±0°.03×**13°.16E**±0°.02**, h11**^{km}±5^{km}**, n32,** σ**1^{s}.03**/50**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	**Cingoli**	0.07	159	P	Pg	20 15 33.0	0.0
CING				S	Sg	20 15 34.8	0.0
CING				AML	AML		
	comp=E,2590µm,0.5s						
CING				AML	AML		
	comp=N,2730µm,0.1s						
CING				AML	AML		
	comp=N,2730µm,0.1s						
CING				AML	AML		
	comp=E,2590µm,0.5s						
MMUR	**Monte Murano**	0.12	269	P	Pg	20 15 33.3	-0.3
EL6	**Elcito**	0.12	200	*i* P	Pg	20 15 33.7	0.0
EL6				S	Sg	20 15 35.9	+0.1
EL6				AML	AML		
	comp=E,2410µm,0.4s						
EL6				AML	AML		
	comp=N,1630µm,1.1s						
EL6				AML	AML		
	comp=E,2410µm,0.4s						
EL6				AML	AML		
	comp=N,1622µm,1.1s						
EL6				AML	AML		
	comp=E,2410µm,0.4s						
EL6				AML	AML		
	comp=N,1630µm,1.1s						
ARVD	**Arcevia**	0.17	289	*i* P	Pg	20 15 34.0	-0.3
ARVD				S	Sg	20 15 36.5	-0.4
ARVD				AML	AML		
	comp=E,680µm,0.5s						
ARVD				AML	AML		
	comp=N,508µm,0.4s						
ARVD				AML	AML		
	comp=E,680µm,0.5s						
ARVD				AML	AML		
	comp=N,508µm,0.4s						
ARVD				AML	AML		
	comp=N,508µm,0.4s						
ARVD				AML	AML		
	comp=E,680µm,0.5s						
COR1	**Corinaldo**	0.22	329	P	Pg	20 15 35.9	+0.6
COR1				AML	AML		
	comp=E,585µm,1.6s						
COR1				AML	AML		
	comp=N,1345µm,0.3s						
COR1				AML	AML		
	comp=N,1345µm,0.3s						
COR1				AML	AML		
	comp=E,585µm,1.6s						
SSFR	**Montelago di S**	0.28	269	P	Pg	20 15 35.9	-0.3
SSFR				AML	AML		
	comp=E,898µm,0.5s						
SSFR				AML	AML		
	comp=N,1635µm,0.3s						
SSFR				AML	AML		
	comp=E,830µm,0.5s						
SSFR				AML	AML		
	comp=N,1575µm,1.1s						
SSFR				AML	AML		
	comp=E,830µm,0.5s						
SSFR				AML	AML		
	comp=E,898µm,0.5s						
SSFR				AML	AML		
	comp=N,1635µm,0.3s						
SSFR				AML	AML		
	comp=N,1575µm,1.1s						
FRON	**Frontone**	0.32	283	P	Pg	20 15 36.9	-0.2
FRON				S	Sb	20 15 42.1	-1.5
FRON				AML	AML		
	comp=E,334µm,0.1s						
FRON				AML	AML		
	comp=N,534µm,0.7s						
FRON				AML	AML		
	comp=E,334µm,0.1s						
FRON				AML	AML		
	comp=N,534µm,0.7s						
FOSV	**Fossato di Vic**	0.33	243	P	Pg	20 15 37.0	-0.1
FOSV				S	Sg	20 15 41.9	+0.4
FOSV				AML	AML		
	comp=E,309µm,0.3s						
FOSV				AML	AML		
	comp=N,287µm,0.2s						
FOSV				AML	AML		
	comp=E,308µm,0.3s						
FOSV				AML	AML		
	comp=N,287µm,0.2s						
FOSV				AML	AML		
	comp=N,287µm,0.2s						
FOSV				AML	AML		
	comp=E,309µm,0.3s						
MPAG	**Monte Paganucc**	0.34	303	P	Pg	20 15 37.1	-0.4
MPAG				S	Sb	20 15 42.6	-1.6
MPAG				AML	AML		
	comp=E,161µm,0.5s						
MPAG				AML	AML		
	comp=N,172µm,0.6s						
MPAG				AML	AML		
	comp=E,161µm,0.5s						
MPAG				AML	AML		
	comp=N,172µm,0.6s						
MPAG				AML	AML		
	comp=E,161µm,0.5s						
MPAG				AML	AML		
	comp=N,172µm,0.6s						
CSP1	**Cessapalombo**	0.35	175	P	Pg	20 15 37.9	+0.3
CSP1				S	Sb	20 15 44.0	-0.5
FSSB	**Fossombrone**	0.37	312	P	Pg	20 15 37.8	-0.1
FSSB				S	Sb	20 15 44.0	-1.0
FSSB				AML	AML		
	comp=E,392µm,1.3s						
FSSB				AML	AML		
	comp=N,871µm,0.3s						
FSSB				AML	AML		
	comp=E,392µm,1.3s						
FSSB				AML	AML		
	comp=N,871µm,0.3s						
FSSB				AML	AML		
	comp=E,392µm,1.3s						
FSSB				AML	AML		
	comp=N,871µm,0.3s						
FDMO	**Fiordimonte**	0.41	187	P	Pg	20 15 38.8	+0.2
FDMO				S	Sb	20 15 45.8	-0.2
FDMO				AML	AML		
	comp=E,221µm,0.7s						
FDMO				AML	AML		
	comp=N,190µm,0.2s						
FDMO				AML	AML		
	comp=E,221µm,0.7s						
FDMO				AML	AML		
	comp=N,190µm,0.2s						
ATFO	**Monte Foce - G**	0.43	260	P	Pg	20 15 38.9	-0.2
ATFO				S	Sb	20 15 46.1	-0.7
ATFO				AML	AML		
	comp=E,326µm,0.2s						
ATFO				AML	AML		
	comp=N,435µm,0.5s						
ATFO				AML	AML		
	comp=E,326µm,0.2s						
ATFO				AML	AML		
	comp=N,436µm,0.5s						
ATFO				AML	AML		
	comp=N,435µm,0.5s						
ATFO				AML	AML		
	comp=E,326µm,0.2s						
PIEI	**Pieia**	0.46	282	P	Pg	20 15 39.2	-0.5
PIEI				S	Sb	20 15 46.4	-1.3
PIEI				AML	AML		
	comp=E,226µm,0.2s						
PIEI				AML	AML		
	comp=N,204µm,1.0s						
PIEI				AML	AML		
	comp=E,226µm,0.2s						
PIEI				AML	AML		
	comp=N,204µm,1.0s						
PIEI				AML	AML		
	comp=N,204µm,1.0s						
PIEI				AML	AML		
	comp=E,226µm,0.2s						
CESI	**CESI - Serrava**	0.48	203	P	Pg	20 15 39.9	0.0
CESI				S	Sb	20 15 47.8	-0.2
CESI				AML	AML		
	comp=E,50µm,1.4s						
CESI				AML	AML		
	comp=N,150µm,0.2s						
CESI				AML	AML		
	comp=N,150µm,0.2s						
CESI				AML	AML		
	comp=E,50µm,1.4s						
MURB	**Monte Urbino**	0.50	249	P	Pb	20 15 40.3	-1.0
MURB				AML	AML		
	comp=E,394µm,0.3s						
MURB				AML	AML		
	comp=N,424µm,0.3s						
MURB				AML	AML		
	comp=E,394µm,0.3s						
MURB				AML	AML		
	comp=N,424µm,0.3s						
ASSB	**Assisi San Ben**	0.54	223	P	Pg	20 15 40.8	-0.3
ASSB				AML	AML		
	comp=E,109µm,1.3s						
ASSB				AML	AML		
	comp=N,120µm,1.0s						
ASSB				AML	AML		
	comp=E,109µm,1.3s						
ASSB				AML	AML		
	comp=N,120µm,1.0s						
PE3	**Peglio**	0.54	298	P	Pb	20 15 41.1	-1.0
PE3				AML	AML		
	comp=E,210µm,0.5s						
PE3				AML	AML		
	comp=N,328µm,0.5s						
PE3				AML	AML		
	comp=N,328µm,0.5s						
PE3				AML	AML		
	comp=E,210µm,0.5s						
PESA	**Pesaro**	0.55	335	P	Pb	20 15 41.5	-0.6
PESA				AML	AML		
	comp=E,367µm,1.5s						
PESA				AML	AML		
	comp=N,387µm,0.2s						
PESA				AML	AML		
	comp=E,367µm,1.5s						
PESA				AML	AML		
	comp=N,387µm,0.2s						
ATPI	**Pietralunga -**	0.55	271	P	Pg	20 15 41.0	-0.3
ATPI				S	Sb	20 15 49.6	-0.5
ATPI				AML	AML		
	comp=E,156µm,0.2s						
ATPI				AML	AML		
	comp=N,121µm,1.4s						
ATPI				AML	AML		
	comp=E,156µm,0.2s						
ATPI				AML	AML		
	comp=N,121µm,1.4s						
ATVO	**AVT- Monte Val**	0.55	264	P	Pg	20 15 40.9	-0.4
ATVO				S	Sb	20 15 49.4	-0.7
ATVO				AML	AML		
	comp=E,108µm,1.3s						
ATVO				AML	AML		
	comp=N,116µm,0.6s						
ATVO				AML	AML		
	comp=E,108µm,1.3s						
ATVO				AML	AML		
	comp=N,116µm,0.6s						
BADI	**Badiali**	0.67	276	P	Pg	20 15 43.1	-0.4
BADI				AML	AML		
	comp=E,104µm,1.3s						
BADI				AML	AML		
	comp=N,210µm,0.4s						
BADI				AML	AML		
	comp=N,210µm,0.4s						
BADI				AML	AML		
	comp=E,104µm,1.3s						
GUMA	**Gualdo di Mace**	0.68	124	P	Pg	20 15 39.2	-4.6
GUMA				AML	AML		
	comp=E,744µm,0.3s						
GUMA				AML	AML		
	comp=N,766µm,0.3s						
GUMA				AML	AML		
	comp=E,1210µm,0.4s						
GUMA				AML	AML		
	comp=N,486µm,0.3s						
GUMA				AML	AML		
	comp=N,766µm,0.3s						
GUMA				AML	AML		
	comp=E,1210µm,0.4s						
GUMA				AML	AML		
	comp=E,744µm,0.3s						
GUMA				AML	AML		
	comp=N,486µm,0.3s						
PARC	**Parchiule**	0.70	287	P	Pg	20 15 43.6	-0.5
PARC				AML	AML		
	comp=E,71µm,1.5s						
PARC				AML	AML		
	comp=N,60µm,0.2s						
PARC				AML	AML		
	comp=E,71µm,1.5s						
PARC				AML	AML		
	comp=N,60µm,0.2s						
SMA1	**SAN MARTINO**	0.82	171	P	Pg	20 15 46.0	-0.5
TERO	**Teramo**	0.88	158	P	Pg	20 15 47.4	-0.2
TERO				AML	AML		
	comp=E,31µm,0.3s						
TERO				AML	AML		
	comp=N,28µm,0.8s						
TERO				AML	AML		
	comp=E,31µm,0.3s						
TERO				AML	AML		
	comp=N,28µm,0.8s						
DUGI	**Dugi Otok**	1.48	68	*e*Pn	Pg	20 15 59.5	+0.6
NVLJ	**Novalja**	1.67	47	*i* Pn	Pn	20 16 00.3	+0.7
NVLJ				Sn	Sn	20 16 21.6	+0.6
ZIRJ	**Zirje**	1.82	82	*e*Pn	Pn	20 16 03.0	+1.3
ZIRJ				Sn	Sb	20 16 26.4	-0.1
MORI	**Morici**	1.90	76	*e*Pn	Pg	20 16 06.5	-0.4
MORI				Sn	Sn	20 16 27.9	+1.3
HVAR	**Hvar**	2.42	95	Sn	Sn	20 16 41.1	+1.6
KIJV	**Kijevo**	2.42	75	*e*Pn	Pn	20 16 12.1	+2.1
KIJV				Sn	Sb	20 16 42.4	-1.4

ROM 08 20:16:19.7±0.2**, 43°.444N**±0°.004×**13°.121E**±0°.006**, h8**^{km}±1^{km}**, ML0.7**/1**, Error ellipse: s-maj=0.5km s-min=0.3km az=214.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	**Cingoli**	0.09	141	P	Pg	20 16 22.2	+0.3
CING				S	Sg	20 16 24.0	+0.5
CING				AML	AML		
	comp=E,73µm,0.5s						
CING				AML	AML		
	comp=N,79µm,0.5s						
CING				AML	AML		
	comp=N,79µm,0.5s						
CING				AML	AML		
	comp=E,73µm,0.5s						
EL6	**Elcito**	0.12	187	P	Pg	20 16 22.9	+0.5
ARVD	**Arcevia**	0.14	293	P	Pg	20 16 23.2	+0.4
ARVD				S	Sg	20 16 25.8	+1.0
SNTG	**Esanatoglia**	0.23	215	P	Pg	20 16 24.9	+0.6
SNTG				S	Sg	20 16 29.0	+1.5
FAGN	**Fagnano**	1.23	164	AML	AML		
	comp=N,95µm,0.5s						
FAGN				AML	AML		
	comp=E,158µm,0.5s						
FAGN				AML	AML		
	comp=N,95µm,0.5s						
FAGN				AML	AML		
	comp=E,158µm,0.5s						

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*NIED **08** 20:17:00, 44°.00N×148°.00E, h56^{km}, Mw3.7 Best double couple: M$_0$3.41000×10^{14} NP1:ϕ_s192.00000°, δ19.00000°, λ73.00000°. NP2:ϕ_s30.00000°, δ71.00000°, λ96.00000°.*

*JMA **08** 20:17:23.6±0.2, 44°.03N×148°.04E, h0^{km}, M4.4*

*SKHL **08** 20:17:26.2±0.4, 44°.54N×148°.15E, h66^{km}±2^{km}, mb3.7/2*

ISC 08 20:17:20.3±3.2**, 44°.35N**±0°.09×**148°.4E**±0°.1**, h14**^{km}±16^{km}**, n17,** σ**1^{s}.46**/26**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	0.95	338	*i* P	Pn	20 17 40.0	+0.8
KUR				AMB	AMB	20 17 41.0	
	20nm,0.4s						
KUR				AMB	AMB	20 17 41.0	
	60nm,0.4s						
KUR				*i* S	Sg	20 17 50.7	-0.4
KUR				A	A	20 17 53.0	
	650nm,0.3s						
KUR				A	A	20 17 53.0	
	180nm,0.3s						
YUK	**Yuzh-Kuril'sk**	1.83	261	*i* P	Pb	20 17 53.7	+0.2
YUK				AMB	AMB	20 17 57.0	
	20nm,0.4s						
YUK				AMB	AMB	20 17 57.0	
	40nm,0.4s						
YUK				*i* S	Sn	20 18 14.0	-0.2
YUK				A	A	20 18 19.0	
	110nm,0.2s						
GRPR	**Tuman**	1.90	260	*e*P	Pn	20 17 53.3	+1.0
NEM2	**Nemuro 2**	2.14	243	P	Pn	20 17 56.2	+0.7
NEM2				*e*S	Sn	20 18 19.6	-2.2
JRA	**Rausu**	2.37	261	P	Pb	20 18 00.9	-1.9
JRA				*e*S	Sn	20 18 28.3	+0.7
JNSB	**Nemuroshibetsu**	2.49	258	P	Pn	20 18 02.4	+2.0
JNSB				*e*S	Sn	20 18 30.6	+0.1
JKHN	**Kushirohamanak**	2.65	242	P	Pn	20 18 03.6	+1.1
JNK	**Nakash**	2.74	255	P	Pn	20 18 05.7	+1.9
JNK				*e*S	Sn	20 18 36.4	-0.3
JAR	**Ashorobuto**	3.49	254	P	Pn	20 18 16.5	+2.4
JAR				*e*S	Sn	20 18 55.6	+0.4
JCH	**Churui**	4.04	246	P	Pn	20 18 22.9	+1.3
JCH				*e*S	Sn	20 19 07.4	-1.2
JNBK	**Urakawa-nobuka**	4.59	245	P	Pn	20 18 31.1	+1.9
YSS	**Yuzh-Sakhalins**	4.72	305	*e*P	Pn	20 18 32.6	+1.7
JKB	**Kayabe**	5.91	248	P	Pn	20 18 49.4	+2.1
JKB				*e*S	Sn	20 19 53.2	-1.5
JOT	**Ohata**	6.14	244	P	Pn	20 18 52.1	+1.6
SEY	**Seymchan**	18.76	6	*e*P	P	20 21 39.2	+0.6
MKAR	**Makanchi Array**	45.08	298	*e*P	P	20 25 34.5	-1.2
BRVK	**Borovoye**	49.85	309	*e*P	P	20 26 12.7	+0.1

IDC 08 20:37:59.0±48.0**, 17°.80S**×**171°.66W, h0**^{km}**, mb4.1**/3**, mb1 4.2**/3**, mb1mx3.7**/33**, mbtmp4.1**/3**, Error ellipse: s-maj=941.8km s-min=189.4km az=82.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	44.35	242	P	P	20 46 10.8	-0.4
	0.4nm,0.3s,baz=84,slow=18,SNR=4.5						
WRA	**Warramunga Arr**	50.96	258	P	P	20 47 02.8	0.0
	3.0nm,1.2s,baz=95,slow=6.8,SNR=7.3						
ASAR	**Alice Springs**	51.00	254	P	P	20 47 03.0	-0.1
	2.7nm,0.6s,baz=92,slow=8.2,SNR=58						

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*IDC **08** 21:01:12.8±4.0, 43°.91N×29°.23W, h0^{km}, mb3.3/4, mb1 3.4/5, mb1mx3.2/58, mbtmp3.3/5, ML4.5/1, MS2.9/4, Ms1 2.9/4, ms1mx2.6/22, Error ellipse: s-maj=79.5km s-min=36.0km az=78.0*

ISC 08 21:01:14.5±3.0**, 43°.7N**±0°.1×**29°.2W**±0°.4**, h14**^{km}**, n15,** σ**1^{s}.54**/12**, mb3.5**/3**, MS2.7**/4**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	**Serra do Cume**	5.26	162	*e*P	Pn	21 02 32.4	-0.3
PSET	**Sete Cidades**	6.46	155	*e*P	Pn	21 02 48.4	-0.8
PDA	**Ponta Delgada**	6.55	155	*e*P	Pn	21 02 49.3	-1.1
CMLA	**Cha da Macela**	6.58	154	*e*P	Pn	21 02 49.5	-1.3
BART	**Pico Bartolome**	6.69	151	*e*P	Pn	21 02 50.8	-1.5
PSMA	**Santa Maria**	7.41	154	*e*P	Pn	21 03 00.8	-1.4
PSMN	**Pico do Norte,**	7.42	153	*e*P	Pn	21 03 01.4	-1.0
ESDC	**Sonseca Array**	19.25	93	P	P	21 05 38.0	-0.4
	0.3nm,0.3s,baz=294,slow=12,SNR=6.3						
EKA	**Eskdalemuir Ar**	20.37	46	P	P	21 05 49.1	-1.3
	0.1nm,0.4s,baz=247,slow=9.2,SNR=2.7						
BORG	**Borgarnes**	21.52	9	LR	LR	21 12 18.1	
	comp=Z,18nm,20.3s,baz=160,slow=31						
MDT	**Midelt**	22.09	111	P	P	21 06 12.4	+3.2
	1.7nm,0.9s,baz=297,slow=12,SNR=4.1						
MDT				LR	LR	21 13 05.3	
	comp=Z,28nm,18.2s,baz=335,slow=32						
DAVOX	**Davos/Dischmat**	27.49	70	LR	LR	21 15 27.9	
	comp=Z,20nm,20.4s,baz=280,slow=31						
TORD	**Torodi Ar. Bea**	40.39	129	P	P	21 08 52.9	+0.8
	0.6nm,0.8s,baz=329,slow=8.6,SNR=2.8						
ULM	**Lac du Bonnet**	44.57	303	LR	LR	21 26 38.8	
	comp=Z,32nm,19.7s,baz=193,slow=34						
MKAR	**Makanchi Array**	71.46	42	P	P	21 12 34.7	+0.3
	0.4nm,0.6s,baz=316,slow=5.1,SNR=4.5						

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*ISCJB **08** 21:03:05.5±0.6, 16°.69N±0°.08×40°.80E±0°.09, h8^{km}, mb3.9/6, MS3.0/5, Error ellipse: s-maj=14.1km s-min=10.5km az=40.6*

*IDC **08** 21:03:06.6±2.7, 16°.69N×40°.73E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.4/45, mbtmp3.8/5, MS3.0/5, Ms1 3.0/5, ms1mx2.7/32, Error ellipse: s-maj=81.2km s-min=25.5km az=160.0*

*NEIC **08** 21:03:07.2±3.0, 16°.72N×40°.76E, h10^{km}±3^{km}, mb4.1/2, Error ellipse: s-maj=22.8km s-min=11.1km az=108.0*

ISC 08 21:03:06.7±0.8**, 16°.65N**±0°.07×**40°.87E**±0°.09**, h8**^{km}**, n18,** σ**2^{s}.23**/17**, mb4.0**/6**, MS3.0**/5**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAMY	**Dhamar**	3.97	121	*e*Pn	Pn	21 04 10.3	+2.1
FURI	**Furi**	8.00	196	*e*Pn	Pn	21 05 04.1	+0.5
FURI				*e*Sn	Sn	21 06 30.9	-3.6
RAYN	**Ar Rayn**	8.10	32	*e*Pn	Pn	21 05 06.2	+1.5
RAYN				*e*Sn	Sn	21 06 33.2	-3.4
UOSS	**Minazif**	16.53	58	*e*Pn	Pn	21 06 57.8	-1.2
	9.8nm,0.9s						
UOSS				*e*Sn	Sn	21 09 58.8	-3.9
GNI	**Garni**	23.65	7	*e*P	P	21 08 17.6	-1.1
	7.6nm,0.8s						
BRTR	**Keskin Array B**	23.84	346	LR	LR	21 17 34.6	
	comp=Z,21nm,19.3s,baz=124,slow=36						
KBZ	**Khabaz**	27.04	3	LR	LR	21 20 14.6	
	comp=Z,42nm,18.6s,baz=192,slow=38						
TORD	**Torodi Ar. Bea**	37.98	270	P	P	21 10 25.1	-0.3
	3.5nm,0.8s,baz=84,slow=7.6,SNR=14						
TORD				LR	LR	21 24 19.7	
	comp=Z,30nm,19.2s,baz=325,slow=34						
TOA1	**Torodi Ar. Sit**	37.98	270	*e*P	P	21 10 25.1	-0.3
GERES	**GERESS Array B**	39.00	331	P	P	21 10 34.4	+0.7
	0.3nm,0.4s,baz=122,slow=8.5,SNR=4.0						
MK32	**Makanchi Array**	45.51	40	*e*P	P	21 11 28.6	+1.9
MKAR	**Makanchi Array**	45.51	40	P	P	21 11 28.6	+1.9
	0.7nm,0.9s,baz=238,slow=7.0,SNR=3.8						
NOA	**NORSAR Array B**	49.14	341	LR	LR	21 35 10.5	
	comp=Z,9.5nm,18.2s,baz=350,slow=39						
ZALV	**Zalesovo Beam**	50.38	32	P	P	21 12 04.1	-0.1
	0.4nm,0.4s,baz=243,slow=6.3,SNR=2.3						
ZAA1	**Zalesovo Array**	50.38	32	*e*P	P	21 12 04.1	-0.1
SONA0	**Songino Array**	61.44	44	*e*P	P	21 13 26.3	+2.5
SONM	**Songino Array**	61.44	44	P	P	21 13 26.3	+2.5
	1.5nm,0.9s,baz=276,slow=5.2,SNR=7.0						
KSRS	**Korea Array**	77.78	54	LR	LR	21 53 19.1	
	comp=Z,10nm,19.3s,baz=195,slow=39						

*ISCJB **08** 21:38:37.9±0.3, 43°.73N±0°.03×105°.19W±0°.04, h0^{km}, mb4.1/7, MS2.8/1, Error ellipse: s-maj=4.5km s-min=3.6km az=136.1*

*IDC **08** 21:38:39.4±1.9, 43°.82N×105°.53W, h0^{km}, mb4.0/7, mb1 4.1/11, mb1mx3.8/40, mbtmp3.9/11, ML3.1/3, MS2.7/3, Ms1 2.7/3, ms1mx2.4/48, Error ellipse: s-maj=73.2km s-min=7.8km az=147.0*

*NEIC **08** 21:38:39.6±2.9, 43°.74N×105°.31W, h0^{km}, MN3.1, Error ellipse: s-maj=12.3km s-min=7.5km az=152.0, Suspected Mining explosion.*

NEIC 63 km [39 miles] SSE of Gillette.

ISC 08 21:38:39.1±0.6, 43°.75N±0°.05×105°.27W±0°.05, h0^{km}, n54, σ1^{s}40/58, mb4.0/7, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.96	67	ePg	Pb	21 38 58.7	-0.1
K22A	Casper	1.43	220	ePn	Pn	21 39 04.8	-1.6
K22A				eSn	Sg	21 39 24.2	-0.8
PHWY	Pilot Hill	2.45	183	ePn	Pn	21 39 20.8	+0.2
PHWY				eSn	Sn	21 39 51.0	-0.3
RWWY	Rawlins	2.51	216	ePn	Pn	21 39 22.5	+1.1
RWWY				eSn	Sn	21 39 53.5	+0.8
N23A	Red Feather La	2.89	190	ePn	Pn	21 39 27.8	+1.1
N23A				eSn	Sn	21 39 58.9	-3.4
LAO	LASA Array	3.02	347	ePn	Pn	21 39 29.3	+1.0
RLMT	Red Lodge	3.18	297	ePn	Pn	21 39 31.3	+0.8
BW06	Boulder Array	3.29	254	ePn	Pn	21 39 32.5	+0.4
PDAR	Pinedale Array	3.29	254	Pn	Pn	21 39 32.6	+0.6
	8.8nm,0.3s,baz=67,slow=21,SNR=86						
PDAR				Sn	Sn	21 40 13.4	+1.5
	26nm,0.3s,baz=72,slow=33,SNR=4.9						
OGNE	Ogallala	3.68	138	ePn	Pn	21 39 38.8	+1.4
GCMT	Greycliff	3.74	305	ePn	Pn	21 39 39.5	+1.3
GCMT				eSn	Sn	21 40 19.9	-3.2
LKWY	Lake	3.79	284	ePn	Pn	21 39 40.8	+1.9
LOHW	Long Hollow	3.88	270	ePn	Pn	21 39 41.4	+1.3
H17A	Grant Village	3.88	281	ePn	Pn	21 39 42.2	+1.9
FLWY	Flagg Ranch	3.94	277	ePn	Pn	21 39 41.9	+0.8
ISCO	Idaho Springs	3.95	184	ePn	Pn	21 39 42.4	+1.2
SNOW	Snow King Moun	4.00	268	ePn	Pn	21 39 43.6	+1.8
YMR	Madison River	4.20	285	ePn	Pn	21 39 43.7	-0.9
DGMT	Dagmar	4.78	9	ePn	Pn	21 39 55.1	+2.7
KSCO	Kaye Shedlock’	5.13	156	ePn	Pn	21 39 57.7	+0.4
EGMT	Eagleton	5.30	325	ePn	Pn	21 40 01.0	+1.4
BGNE	Belgrade	5.75	112	ePn	Pn	21 40 03.0	-2.6
ECSD	EROS Data Cent	6.27	87	ePn	Pn	21 40 15.1	+2.3
CBKS	Cedar Bluff	6.45	138	ePn	Pn	21 40 15.2	-0.2
MVCO	Mesa Verde	6.98	202	ePn	Pn	21 40 25.9	+3.2
AGMN	Agassiz Nation	7.97	52	ePn	Pn	21 40 36.2	+0.1
ELK	Elko	7.98	251	Pn	Pn	21 40 37.3	+0.7
	0.2nm,0.3s,baz=80,slow=14,SNR=7.1						
ELK				Lg	Lg	21 42 42.7	
	baz=16,slow=15,SNR=2.5						
ELK				LR	LR	21 43 34.0	
	comp=Z,18nm,18.3s,baz=94,slow=38						
SPMN	Marine on St.	9.03	76	ePn	Pn	21 40 53.1	+2.4
ULM	Lac du Bonnet	9.13	41	Pn	Pn	21 40 51.3	-0.7
	2.2nm,0.3s,baz=222,slow=11,SNR=10						
ULM				Lg	Lg	21 43 24.9	
	0.4nm,0.3s,baz=131,slow=19,SNR=2.6						
ULM	Lac du Bonnet	9.13	41	ePn	Pn	21 40 51.8	-0.2
WUAZ	Wupatki	9.47	212	ePn	Pn	21 40 56.4	-0.5
KVN	Kaiserville	10.72	248	ePn	Pn	21 41 15.6	+1.5
NV11	Mina Array Sit	11.08	246	ePn	Pn	21 41 20.1	+1.2
NV01	Mina Array Sit	11.18	246	ePn	Pn	21 41 22.4	+2.0
NVAR	Mina Array Bea	11.18	246	Pn	Pn	21 41 22.4	+2.0
	0.3nm,0.3s,baz=49,slow=12,SNR=8.2						
FFC	Flin Flon	11.20	10	ePn	Pn	21 41 20.2	-0.1
ABTX	Abilene, Hawle	11.95	156	ePn	Pn	21 41 30.2	-0.5
C40A	Isle Royale Na	11.99	64	ePn	Pn	21 41 30.2	-0.9
W39A	Magazine	12.30	130	ePn	Pn	21 41 33.8	-1.7
YBH	Yreka Blue Hor	12.98	267	LR	LR	21 46 48.1	
	comp=Z,51nm,19.1s,baz=112,slow=38						
FRB	Frobisher Bay	28.90	33	LR	LR	21 56 30.9	
	comp=Z,27nm,21.9s,baz=329,slow=37						
ARCES	ARCESS Array B	61.41	18	P	P	21 48 56.2	-0.2
	1.7nm,0.5s,baz=339,slow=6.5,SNR=13						
FIA0	FINESS Array S	68.02	23	eP	P	21 49 40.0	+0.2
FINES	FINESS Array B	68.02	23	P	P	21 49 40.0	+0.2
	4.1nm,1.0s,baz=349,slow=5.8,SNR=5.8						
GEC2	GERESS Array S	73.42	37	eP	P	21 50 13.5	+0.6
GERES	GERESS Array B	73.42	37	P	P	21 50 13.5	+0.6
	0.2nm,0.5s,baz=325,slow=4.9,SNR=2.3						
AKASG	Malin Array Be	77.95	28	P	P	21 50 38.5	-0.3
	0.6nm,0.4s,baz=320,slow=5.4,SNR=3.7						
AKBB	Malin Array Si	77.95	28	eP	P	21 50 38.5	-0.3
ZAA1	Zalesovo Array	82.30	354	eP	P	21 51 02.0	-0.2
ZALV	Zalesovo Beam	82.30	354	P	P	21 51 02.0	-0.2
	1.2nm,0.5s,baz=359,slow=4.5,SNR=6.5						
SONA0	Songino Array	84.63	339	eP	P	21 51 14.4	0.0
SONM	Songino Array	84.63	339	P	P	21 51 14.4	0.0
	0.5nm,0.5s,baz=9.5,slow=3.3,SNR=3.2						
MK32	Makanchi Array	89.60	355	eP	P	21 51 38.8	+0.4
MKAR	Makanchi Array	89.60	355	P	P	21 51 38.8	+0.4
	0.5nm,0.6s,baz=20,slow=4.9,SNR=5.8						

SJA 08 21:53:02.1±0.5, 28°.26S×67°.32W, h136^{km}±5^{km}, ML3.0, MW4.0, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCA	Vinchina	0.92	238	eP	Pn	21 53 25.7	+0.7
VCA				eS	Sn	21 53 42.9	+0.6
VCA				IAML		21 53 45.9	
	comp=Z,300nm,0.2s						
ACLC	CERRO LA CRUZ	1.21	165	eP	Pn	21 53 28.6	+0.9
ACLC				eS	Sn	21 53 47.7	+0.4
CYA	Choya	1.35	98	eP	Pn	21 53 29.7	+0.7
CYA				eS	Sn	21 53 50.2	+0.7
CYA				IAML		21 53 50.4	
	comp=Z,79nm,0.4s						
AGUA	GUANDACOL	1.60	220	eP	Pn	21 53 32.5	+0.7
AHML	Horco Molle	2.29	51	eP	Pn	21 53 40.6	+0.6
FSA	Cafayete	2.45	29	eP	Pn	21 53 43.3	+1.2

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*ISCJB **08** 22:13:27.9±1.2, 19°.13S±0°.06×69°.27W±0°.10, h130^{km}±8^{km}, Error ellipse: s-maj=16.3km s-min=9.0km az=156.4*

*GUC **08** 22:13:27.4±0.7, 19°.10S×69°.19W, h122^{km}±3^{km}, ML2.9*

*SJA **08** 22:13:27.7±0.5, 19°.10S×69°.14W, h118^{km}±6^{km}, ML2.9, MW2.6*

ISC 08 22:13:28.7±2.0, 19°.11S±0°.06×69°.23W±0°.09, h120^{km}±13^{km}, n14, σ0^{s}38/23, 7C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNMC	Minye Minye	0.35	267	⇑iP	Pn	22 13 46.0	-0.3
MNMC				iS	Sn	22 13 59.7	+0.2
MNMC				IAML		22 14 03.5	
	comp=N,922nm,0.3s						
MNMCX	Minye Minye	0.35	267	eP	Pn	22 13 46.0	-0.3
MNMCX				eS	Sn	22 13 59.4	-0.1
GO01	Chusmiza	0.56	177	⇑eP	Pn	22 13 47.3	-0.4
GO01				iS	Sn	22 14 02.2	+0.3
GO01				IAML		22 14 04.5	
	comp=E,585nm,0.2s						
PB11	IPOC Station P	0.76	212	eP	Pn	22 13 48.4	-0.4
PB11				eS	Sn	22 14 04.1	+0.2
PB11	IPOC Station P	0.76	212	⇑iP	Pn	22 13 48.5	-0.3
PB11				eS	Sn	22 14 04.2	+0.2
PB11				IAML		22 14 05.0	
	comp=E,302nm,0.3s						
PB16	IPOC Station P	0.82	341	⇓iP	Pn	22 13 49.5	-0.3
PB16				iS	Sn	22 14 06.2	+0.6
PSGC	Pisagua	0.97	240	⇑iP	Pn	22 13 50.3	-0.3
PSGC				iS	Sn	22 14 07.5	+0.2
PSGCX	Pisagua	0.97	240	eP	Pn	22 13 50.9	+0.2
PB08	IPOC Station P	1.03	176	eP	Pn	22 13 51.3	-0.2
PB08	IPOC Station P	1.03	176	⇑eP	Pn	22 13 51.2	-0.2
PB08				eS	Sn	22 14 09.6	+0.8
PB08				IAML		22 14 10.9	
	comp=N,184nm,0.3s						
PB12	IPOC Station P	1.15	295	⇑eP	Pn	22 13 52.2	-0.3
PB12				eS	Sn	22 14 10.7	+0.3
PB12				IAML		22 14 11.2	
	comp=E,229nm,0.9s						
PB01	IPOC Station P	1.94	187	⇑eP	Pn	22 14 01.1	-0.5
PB01				IAML		22 14 26.9	
	comp=N,188nm,0.2s						
HJA	Humahuaca	5.42	139	eP	Pn	22 14 47.3	-0.4
HJA				IAML		22 14 50.1	
	comp=Z,12nm,0.1s						
AZAP	Zapla	6.39	143	IAML		22 14 58.2	
	comp=Z,1.4nm,0.2s						
AZAP				eP	Pn	22 15 00.8	+0.1

IDC 08 22:20:49.8±3.8, 11°.09S×162°.92E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.7/20, mbtmp3.8/4, Error ellipse: s-maj=156.2km s-min=34.3km az=135.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	28.87	249	P	P	22 26 50.7	+0.3
	1.8nm,0.9s,baz=78,slow=8.7,SNR=3.5						
H11S2	WAKE ISLAND Hy	29.62	7	T	T	22 57 52.1	
	baz=188,slow=76,SNR=39						
H11S3	WAKE ISLAND Hy	29.63	7	T	T	22 57 41.7	
	baz=188,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	29.64	7	T	T	22 57 50.7	
	baz=188,slow=76,SNR=20						
ASAR	Alice Springs	30.31	242	P	P	22 27 02.8	-0.4
	0.7nm,0.7s,baz=64,slow=10,SNR=9.2						
H11N1	WAKE ISLAND Hy	30.85	7	T	T	22 59 24.5	
	baz=188,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.86	7	T	T	22 59 21.7	
	baz=188,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	30.87	7	T	T	22 59 20.6	
	baz=188,slow=76,SNR=10						
ILAR	Eielson Array	84.45	19	P	P	22 33 23.8	-0.3
	0.3nm,0.6s,baz=224,slow=3.8,SNR=2.5						
MKAR	Makanchi Array	91.66	317	P	P	22 33 59.6	+0.5
	0.3nm,0.6s,baz=99,slow=5.5,SNR=4.0						

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*DDA **08** 22:55:03.1, 37°.16N×42°.43E, h4^{km}±3^{km}, ML3.4*

*ISK **08** 22:55:03.6, 37°.08N×42°.47E, h16^{km}, ML3.3/10*

*ISCJB **08** 22:55:04.6±0.6, 37°.08N±0°.03×42°.45E±0°.03, h16^{km}±6^{km}, Error ellipse: s-maj=4.7km s-min=3.8km az=17.3*

*ISN **08** 22:55:04.8±1.0, 37°.03N×42°.66E, h5^{km}±4^{km}, ML3.1*

ISC 08 22:55:03.6±1.2, 37°.11N±0°.03×42°.47E±0°.02, h6^{km}±10^{km}, n43, σ0^{s}97/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRN	Sırnak	0.39	353	iP	Pg	22 55 09.4	-1.8
SIRN				IAML_P			
	comp=Z,15µm,0.2s						
MSL	Mosul	0.87	144	ePg	Pb	22 55 21.0	-0.1
	baz=330						
MSL				AML	AML	22 55 22.9	
	comp=Z,904nm,0.4s						
MSL				eSg	Sb	22 55 32.2	-0.8
CUKT	Cukurca	0.92	81	PG	Pg	22 55 21.7	+0.6
CUKT				SG	Sb	22 55 35.2	+0.8
CUKT	Cukurca	0.92	81	iP	Pg	22 55 21.8	+0.6
CUKT				iS	Sb	22 55 35.1	+0.7
CUKT				IAML_P			
	comp=Z,4µm,0.3s						
SRTM	Siirt_Merkez	0.98	334	iP	Pg	22 55 22.5	0.0
SRTM				iS	Sg	22 55 34.7	-0.6
SRTM				IAML_P			
	comp=Z,2µm,0.1s						
HAKT	HAKKARI	1.08	65	iP	Pg	22 55 23.9	-0.4
HAKT				iS	Sn	22 55 40.6	-0.3
HAKT				IAML_P			
	comp=Z,3µm,0.1s						
BTMN	Batman	1.24	310	iP	Pn	22 55 27.0	-0.4
BTMN				iS	Sb	22 55 42.4	-1.2
BTMN				IAML_P			
	comp=Z,969nm,0.3s						
AKDM	Akdamar-Van	1.28	18	PN	Pn	22 55 27.8	-0.4
AKDM				SN	Sb	22 55 45.5	+0.5
GEVA	Gevas	1.29	21	iP	Pn	22 55 28.6	+0.3
GEVA				iS	Sn	22 55 46.3	+0.4
GEVA				IAML_P			
	comp=Z,2µm,0.2s						
BLIS	Bitlis-Merkez	1.33	348	iP	Pn	22 55 27.7	-1.1
BLIS				iS	Sb	22 55 45.1	-1.4
BLIS				IAML_P			
	comp=Z,5µm,0.3s						
MARD	Mardin	1.37	279	iP	Pn	22 55 29.2	-0.1
MARD				iS	Sg	22 55 48.4	+0.8
MARD				IAML_P			
	comp=Z,6µm,0.1s						
SVAN	Silvan-Diyarba	1.45	316	PN	Pn	22 55 30.1	-0.3
SVAN				SN	Sn	22 55 49.2	-0.5
SVAN	Silvan-Diyarba	1.45	316	iP	Pn	22 55 29.2	-1.1
SVAN				iS	Sn	22 55 49.9	+0.1
SVAN				IAML_P			
	comp=Z,2µm,0.2s						
BASK	Baskale_VAN	1.54	52	iP	Pn	22 55 32.3	+0.6
BASK				IAML_P			
	comp=Z,2µm,0.2s						
TVAN	Van	1.60	27	iP	Pn	22 55 33.2	+0.6
TVAN				iS	Sg	22 55 55.7	+0.7
VANB	Van	1.65	26	PN	Pn	22 55 32.0	-1.2
MAZI	Mazidag	1.65	283	PN	Pn	22 55 32.8	-0.4
MUSM	Mu-Merkez	1.78	335	iP	Pn	22 55 34.5	-0.5
MUSM				iS	Sn	22 55 57.7	-0.3
MUSM				IAML_P			
	comp=Z,2µm,0.3s						
MLAZ	Malazgirt-MUS	2.03	2	PN	Pn	22 55 38.4	0.0
DYBB	Diyarbakir	2.04	295	PN	Pn	22 55 38.3	-0.1
DIYA	Diyarbakir	2.04	294	iP	Pb	22 55 41.7	+0.7
DIYA				iS	Sb	22 56 06.9	+0.2
DIYA				IAML_P			
	comp=Z,2µm,0.3s						
HANI	Diyarbakir_Han	2.10	309	iP	Pg	22 55 45.8	+2.0
HANI				iS	Sn	22 56 06.3	+0.5
HANI				IAML_P			
	comp=Z,1µm,0.2s						
VRTB	Varto-Mus	2.20	339	PN	Pn	22 55 40.8	0.0
TUTA	Tutak	2.31	7	iP	Pn	22 55 44.1	+1.8
TUTA				IAML_P			
	comp=Z,847nm,0.1s						
BNGB	Bingl	2.35	324	PN	Pn	22 55 42.9	+0.1
BGOL	Bingol	2.35	323	iP	Pn	22 55 44.6	+1.8
BGOL				iS	Sb	22 56 15.9	+0.1
AGRB	Hanur-Agry	2.50	9	PN	Pn	22 55 45.1	+0.2
EATA	Eleskirt	2.75	0	iP	Pb	22 55 52.0	-1.3
YEDI	Yedisu-Bingol	2.78	327	PN	Pn	22 55 49.0	+0.3
SANL	SANLIURFA_Merk	2.79	272	iP	Pn	22 55 50.5	+1.8
SANL				IAML_P			
	comp=Z,462nm,0.3s						
SVRC	Sivrice-ELAZID	2.81	298	PN	Pn	22 55 49.6	+0.4
KOPR	Koprukoy-ERZUR	2.92	351	PN	Pn	22 55 51.2	+0.5
URFA	Urfa	2.93	278	PN	Pn	22 55 50.9	+0.2
TNCL	Tunceli-Merkez	3.06	312	iP	Pg	22 56 02.0	-0.1
TNCL				IAML_P			
	comp=Z,109nm,0.3s						
SURC	SANLIURFA_SURC	3.10	267	iP	Pn	22 55 53.8	+0.8
SURC				IAML_P			
	comp=Z,91nm,0.2s						
GZT	Gaziantep	3.93	275	iP	Pg	22 56 17.6	-1.1
GZT				IAML_P			
	comp=Z,364nm,0.3s						
KELT	Kelkit	3.94	321	iP	Pg	22 56 19.2	+0.1
DBAD	Bademkaya	3.95	351	iP	Pg	22 56 21.9	+2.6
DAGI	Agillar	3.99	354	iP	Pg	22 56 19.5	-0.5
BHD	Baghdad	4.13	157	ePn	Pn	22 56 07.5	+0.3
BHD				AML	AML	22 56 10.5	
	comp=Z,87nm,0.7s						
BHD				eSn	Sn	22 56 53.0	-2.8
GAZ	Gaziantep	4.21	272	PN	Pn	22 56 09.1	+0.9
DARE	Darende-Malaty	4.21	292	PN	Pn	22 56 09.3	+1.0
KMRS	Kahramanmaras	4.46	277	PN	Pn	22 56 12.7	+1.0

KRSC 08 23:04:40.7±2.5, 49°.67N×156°.67E, h28^{km}±37^{km}, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril’s	1.08	341	eP	Pn	23 05 00.1	+0.2
SKR				eS	Sb	23 05 14.6	+0.1
ALID	Alaid	1.41	330	eP	Pn	23 05 04.6	+0.1
ALID				S	Sn	23 05 21.6	-0.6
PAU	Pauzhetka	1.81	3	eP	Pb	23 05 12.3	-0.8
PAU				eS	Sb	23 05 36.0	+0.7
KDTR	Khodutka, Kamc	2.33	22	eP	Pb	23 05 19.8	-2.1
KDTR				eS	Sb	23 05 48.5	-1.6
MTVR	Mutnovka	2.98	18	eP	Pn	23 05 28.0	+1.9
MTVR				eS	Sn	23 06 02.7	+1.8
RUS	Russkaya	3.00	22	eP	Pn	23 05 28.9	+2.6
RUS				eS	Sn	23 06 05.0	+3.6
DALK	Dalny	3.62	20	eP	Pn	23 05 38.0	+3.3
DALK				eS	Sn	23 06 21.4	+5.0
UGLR	Uglovaya	3.80	20	eP	Pb	23 05 42.2	-4.8
AVH	Avacha	3.83	19	eP	Pb	23 05 42.7	-4.8
SMAR	Somma	3.84	19	P	Pn	23 05 42.9	+4.9
KRER	Koryakskii	3.87	19	eP	Pb	23 05 43.4	-4.9
SDLR	Sedlovina	3.87	20	eP	Pb	23 05 44.0	-4.3
KRX	Arik	3.90	18	eP	Pb	23 05 44.1	-4.7
SPN	Mys Shipunski	4.03	30	eP	Pn	23 05 44.5	+4.1
SPN				eS	Sn	23 06 32.1	+5.5
GNL	Ganaly	4.11	11	eP	Pn	23 05 46.6	+4.9
MKZ	Mys Kozlova	5.80	31	eP	Pn	23 06 08.1	+3.3

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*DDA **08** 23:31:12.9, 38°.00N×44°.19E, h5^{km}±3^{km}, ML2.8*

*ISK **08** 23:31:12.2, 38°.02N×44°.11E, h5^{km}, ML2.6/7*

ISC 08 23:31:12.0±1.7, 38°.05N±0°.03×44°.30E±0°.07, h9^{km}±10^{km}, n20, σ1^{s}36/30, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASK	Baskale_VAN	0.24	271	iP	Pg	23 31 16.6	-0.2
BASK				iS	Sg	23 31 20.6	+0.5
HAKT	HAKKARI	0.68	224	iP	Pb	23 31 25.5	-0.8
HAKT				iS	Sn	23 31 37.3	-1.7
HAKT				IAML_P			
	comp=Z,7µm,0.3s						
TVAN	Van	0.85	304	iP	Pg	23 31 28.4	0.0
TVAN				iS	Sb	23 31 40.5	-0.4
TVAN				IAML_P			
	comp=Z,2µm,0.2s						
VANB	Van	0.90	307	PG	Pg	23 31 27.4	-2.0
VANB				SG	Sg	23 31 39.2	-1.9
CUKT	Cukurca	0.97	215	PG	Pg	23 31 30.2	-0.5
CUKT	Cukurca	0.97	215	iP	Pb	23 31 30.9	-0.3
CUKT				IAML_P			
	comp=Z,2µm,0.2s						
GEVA	Gevas	1.01	285	iP	Pg	23 31 30.0	-1.5
GEVA				iS	Sn	23 31 45.6	-1.6
AKDM	Akdamar-Van	1.08	285	PG	Pg	23 31 31.2	-1.6
AKDM				SG	Sg	23 31 45.5	-1.3
VMUR	Van-Muradiye	1.10	329	iP	Pn	23 31 34.8	+1.0
VMUR				iS	Sn	23 31 51.0	+1.7
VMUR				IAML_P			
	comp=Z,258nm,0.2s						
ADCV	BITLIS_Adilcev	1.45	302	iP	Pg	23 31 39.9	-0.1
ADCV				IAML_P			
	comp=Z,254nm,0.2s						
SIRN	Sırnak	1.60	250	iP	Pg	23 31 42.5	-0.2
SIRN				iS	Sg	23 32 06.9	+3.6
MLAZ	Malazgirt-MUS	1.75	309	PN	Pn	23 31 43.5	+0.7
MLAZ				SN	Sb	23 32 06.6	-0.1
BLIS	Bitlis-Merkez	1.76	283	iP	Pb	23 31 44.5	-0.1
BLIS				iS	Sg	23 32 11.4	+2.8
BLIS				IAML_P			
	comp=Z,1µm,0.4s						
AGRB	Hanur-Agry	1.84	327	PN	Pb	23 31 45.3	-0.6
SRTM	Siirt_Merkez	1.88	269	iP	Pg	23 31 47.0	-1.1
SRTM				IAML_P			
	comp=Z,744nm,0.3s						
GNI	Garni	2.12	9	PN	Pb	23 31 50.9	+0.1
MUSM	Mu-Merkez	2.29	288	iP	Pb	23 31 54.1	+0.4
MUSM				IAML_P			
	comp=Z,190nm,0.5s						
EATA	Eleskirt	2.30	323	iP	Pb	23 31 54.6	+0.8
SVAN	Silvan-Diyarba	2.45	273	PN	Pn	23 31 52.7	+0.4
SVAN	Silvan-Diyarba	2.45	273	iP	Pb	23 31 56.8	+0.5
SVAN				IAML_P			
	comp=Z,366nm,0.2s						

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*ROM **08** 23:31:54.0±0.1, 44°.146N±0°.006×10°.172E±0°.006, h6^{km}, ML3.5/105, Mw3.4, Error ellipse: s-maj=0.7km s-min=0.2km az=11.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.22; $M_{\theta\theta}$1.26; $M_{\phi\phi}$-0.03; $M_{r\theta}$0.25; $M_{\theta\phi}$0.13; $M_{\phi r}$0.31; Fault plane solution: $M_0$1.31021×10^{14} NP1:ϕ_s97.00000°, δ40.00000°, λ-71.00000°. NP2:ϕ_s252.00000°, δ53.00000°, λ-106.00000°.*

*IDC **08** 23:31:54.3±1.1, 44°.15N×10°.20E, h0^{km}, mb3.5/3, mb1 3.7/10, mb1mx3.5/43, mbtmp3.5/10, ML3.7/7, MS2.9/8, Ms1 2.9/8, ms1mx2.6/42 Error ellipse: s-maj=25.5km s-min=12.2km az=122.0*

*ISCJB **08** 23:31:54.2±0.2, 44°.13N±0°.01×10°.15E±0°.01, h13^{km}±1^{km}, mb3.5/3, MS3.2/1, Error ellipse: s-maj=2.1km s-min=1.4km az=175.5*

*GEN **08** 23:31:54.4, 44°.17N×10°.18E, h3^{km}, Ml3.4*

*LDG **08** 23:31:54.6±0.1, 44°.17N×10°.16E, h2^{km}, Ml3.5/38, Error ellipse: s-maj=1.5km s-min=1.0km az=26.0*

*STR **08** 23:31:55.5±0.6, 44°N±2°×1°0E±°, h0^{km}, MLv3.5/7*

*PRU **08** 23:31:56.8±0.0, 44°.13N×10°.22E, h13^{km}*

ISC 08 23:31:54.6±0.7, 44°.14N±0°.02×10°.15E±0°.01, h7^{km}±4^{km}, n303, σ2^{s}12/364, mb3.6/3, 4C-11D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	Equi	0.02	12	P	Pg	23 31 55.2	-0.7
EQUI				S	Sg	23 31 55.5	-1.4
EQUI	Equi	0.02	12	iP	Pg	23 31 55.2	-0.7
T0912	Minucciano (LU	0.05	61	eP	Pg	23 31 55.7	-0.6
T0912				S	Sg	23 31 56.3	-1.1
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0911	Castelpoggio (	0.06	239	iP	Pg	23 31 56.7	+0.4
T0911				S	Sg	23 31 58.2	+0.7
T0911				AML	AML		
	comp=E,39900µm,1.1s						
T0911				AML	AML		
	comp=N,47050µm,0.3s						
T0911				AML	AML		
	comp=E,39700µm,1.1s						
T0911				AML	AML		
	comp=N,46450µm,0.3s						
FIVI	Fivizzano	0.10	352	iP	Pg	23 31 56.4	-0.5
FIVI				S	Sg	23 31 57.7	-0.7
FOSD	Fosdinovo	0.11	252	iP	Pg	23 31 57.6	+0.6
FOSD				S	Sg	23 32 00.0	+1.3
FOSD				AML	AML		
	comp=E,61400µm,1.1s						
FOSD				AML	AML		
	comp=N,84950µm,0.3s						
FOSD				AML	AML		
	comp=E,61400µm,1.1s						
FOSD				AML	AML		
	comp=N,84950µm,0.3s						
FOSD				AML	AML		
	comp=E,61400µm,1.1s						
FOSD				AML	AML		
	comp=N,85000µm,0.3s						
FOSD				AML	AML		
	comp=N,85000µm,0.3s						
FOSD				AML	AML		
	comp=E,61400µm,1.1s						
VLC	Villacollemand	0.17	85	iP	Pg	23 31 58.0	-0.2
VLC				S	Sg	23 32 00.6	+0.1
VLC				AML	AML		
	comp=E,49250µm,0.4s						
VLC				AML	AML		
	comp=N,27750µm,1.5s						
VLC				AML	AML		
	comp=E,50500µm,0.4s						
VLC				AML	AML		
	comp=N,28150µm,1.6s						
VLC				AML	AML		
	comp=E,49250µm,0.4s						
VLC				AML	AML		
	comp=N,27750µm,1.5s						
VLC				AML	AML		
	comp=E,50500µm,0.4s						
VLC				AML	AML		
	comp=N,28150µm,1.6s						
VLC				AML	AML		
	comp=E,50500µm,0.4s						
VLC				AML	AML		
	comp=N,28150µm,1.6s						

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VLC                               AML     AML
      comp=N,27750µm,1.5s
VLC                               AML     AML
      comp=E,49250µm,0.4s
PLMA  Palmaria, Port    0.23 246 i P      Pg      23 31 59.8 +0.6
PLMA                              S       Sg      23 32 03.6 +1.3
PLMA                              AML     AML
      comp=E,8415µm,0.5s
PLMA                              AML     AML
      comp=N,9260µm,0.5s
PLMA                              AML     AML
      comp=E,8415µm,0.5s
PLMA                              AML     AML
      comp=N,9260µm,0.5s
PLMA                              AML     AML
      comp=E,8415µm,0.5s
PLMA                              AML     AML
      comp=N,9260µm,0.5s
PLMA                              AML     AML
      comp=E,8415µm,0.5s
PLMA                              AML     AML
      comp=N,9260µm,0.5s
CARD  Cardoso           0.27 116   P      Pg      23 31 59.7 -0.2
CARD                              S       Sg      23 32 03.7 +0.2
CARD  Cardoso           0.27 116 eP       Pg      23 31 59.7 -0.2
CARD                              S       Sg      23 32 03.6 +0.2
CARD                              AML     AML
      comp=E,26300µm,0.6s
CARD                              AML     AML
      comp=N,24350µm,0.8s
CARD                              AML     AML
      comp=E,26300µm,0.6s
CARD                              AML     AML
      comp=N,24350µm,0.8s
BDI   Bagni Di Lucca    0.34 104 i P      Pg      23 32 00.8 -0.3
BDI                               S       Sg      23 32 05.8 +0.2
BDI                               AML     AML
      comp=E,15400µm,0.4s
BDI                               AML     AML
      comp=N,8715µm,0.5s
BDI                               AML     AML
      comp=E,17250µm,0.4s
BDI                               AML     AML
      comp=N,9890µm,0.3s
BDI                               AML     AML
      comp=E,15400µm,0.4s
BDI                               AML     AML
      comp=N,8680µm,0.5s
BDI                               AML     AML
      comp=E,17250µm,0.4s
BDI                               AML     AML
      comp=N,9890µm,0.3s
BDI                               AML     AML
      comp=N,9890µm,0.3s
BDI                               AML     AML
      comp=E,17250µm,0.4s
BDI                               AML     AML
      comp=E,15400µm,0.4s
BDI                               AML     AML
      comp=N,8680µm,0.5s
MAIM  Mastiano          0.34 132   P      Pg      23 32 01.4 +0.2
MAIM                              S       Sg      23 32 06.3 +0.6
MAIM  Mastiano          0.34 132   P      Pg      23 32 01.1 -0.1
MAIM                              S       Sg      23 32 06.3 +0.6
MAIM                              AML     AML
      comp=E,27250µm,0.3s
MAIM                              AML     AML
      comp=N,16650µm,0.5s
MAIM                              AML     AML
      comp=E,27250µm,0.3s
MAIM                              AML     AML
      comp=N,16650µm,0.5s
MAIM                              AML     AML
      comp=E,27250µm,0.3s
MAIM                              AML     AML
      comp=N,16650µm,0.5s
MAIM                              AML     AML
      comp=E,27250µm,0.3s
MAIM                              AML     AML
      comp=N,16650µm,0.5s
GRAM  Graiana           0.35 351   P      Pg      23 32 01.4 -0.1
GRAM                              S       Sg      23 32 06.4 +0.2
GRAM  Graiana           0.35 351 i P      Pg      23 32 01.4 -0.1
GRAM                              S       Sg      23 32 06.5 +0.3
GRAM                              AML     AML
      comp=E,49500µm,0.2s
GRAM                              AML     AML
      comp=N,40650µm,0.8s
GRAM                              AML     AML
      comp=E,49500µm,0.2s
GRAM                              AML     AML
      comp=N,40650µm,0.8s
GRAM                              AML     AML
      comp=E,49500µm,0.2s
GRAM                              AML     AML
      comp=N,40650µm,0.8s
GRAM                              AML     AML
      comp=E,49500µm,0.2s
GRAM                              AML     AML
      comp=N,40650µm,0.8s
POPM  Popiglio          0.45 102   P      Pg      23 32 03.0 -0.3
POPM                              S       Sg      23 32 09.7 +0.5
POPM  Popiglio          0.45 102 eP       Pg      23 32 03.0 -0.3
POPM                              S       Sg      23 32 09.8 +0.5
POPM                              AML     AML
      comp=E,16050µm,0.3s
POPM                              AML     AML
      comp=N,18250µm,0.5s
POPM                              AML     AML
      comp=E,16050µm,0.3s
POPM                              AML     AML
      comp=N,18250µm,0.5s
POPM                              AML     AML
      comp=N,18250µm,0.5s
POPM                              AML     AML
      comp=E,16050µm,0.3s
NEVI  Neviano degli     0.46  15   P      Pb      23 32 04.4 -0.7
MSSA  Maissana          0.48 291   P      Pg      23 32 04.1 +0.1
MSSA                              AML     AML
      comp=E,7900µm,1.3s
MSSA                              AML     AML
      comp=N,6020µm,1.4s
MSSA                              AML     AML
      comp=E,7895µm,1.3s
MSSA                              AML     AML
      comp=N,6020µm,1.4s
MSSA                              AML     AML
      comp=E,7895µm,1.3s
MSSA                              AML     AML
      comp=N,6020µm,1.4s
MTCR  Monte La Croce    0.62 100 eP       Pg      23 32 06.1 -0.6
MTCR                              S       Sb      23 32 15.8 -1.2
MTCR                              AML     AML
      comp=E,9095µm,0.4s
MTCR                              AML     AML
      comp=N,11700µm,0.3s
MTCR                              AML     AML
      comp=E,9100µm,0.4s
MTCR                              AML     AML
      comp=N,11700µm,0.3s
MTCR                              AML     AML
      comp=E,9100µm,0.4s
MTCR                              AML     AML
      comp=N,11700µm,0.3s
PRMA  PARMA             0.63  11   P      Pb      23 32 07.8 -0.1
PRMA                              AML     AML
      comp=E,23200µm,1.5s
PRMA                              AML     AML
      comp=N,26300µm,0.7s
PRMA                              AML     AML
      comp=E,23200µm,1.5s
PRMA                              AML     AML
      comp=N,26300µm,0.7s
PRMA                              AML     AML
      comp=E,23200µm,1.5s
PRMA                              AML     AML
      comp=N,26300µm,0.7s
ZCCA  Zocca             0.63  71   P      Pb      23 32 07.8 -0.2
ZCCA                              AML     AML
      comp=E,4805µm,1.1s
ZCCA                              AML     AML
      comp=N,6025µm,0.7s
ZCCA                              AML     AML
      comp=E,5225µm,0.4s
ZCCA                              AML     AML
      comp=N,6040µm,1.1s
ZCCA                              AML     AML
      comp=E,4925µm,1.4s
ZCCA                              AML     AML
      comp=N,6025µm,0.7s
ZCCA                              AML     AML
      comp=E,5225µm,0.4s
ZCCA                              AML     AML
      comp=N,6040µm,1.1s
ZCCA                              AML     AML
      comp=N,6025µm,0.7s
ZCCA                              AML     AML
      comp=E,5225µm,0.4s
ZCCA                              AML     AML
      comp=N,6040µm,1.1s
ZCCA                              AML     AML
      comp=E,4925µm,1.4s
PTF   Prato             0.69 105   P      Pg      23 32 07.3 -0.6
CRMI  Carmignano        0.69 120   P      Pg      23 32 08.0 +0.1
CRMI                              AML     AML
      comp=E,4380µm,0.4s
CRMI                              AML     AML
      comp=N,5180µm,0.8s
CRMI                              AML     AML
      comp=E,1815µm,0.4s
CRMI                              AML     AML
      comp=N,2200µm,0.8s
CRMI                              AML     AML
      comp=E,4385µm,0.4s
CRMI                              AML     AML
      comp=N,5180µm,0.8s
CRMI                              AML     AML
      comp=E,1815µm,0.4s
CRMI                              AML     AML
      comp=N,2200µm,0.8s
CRMI                              AML     AML
      comp=N,2200µm,0.8s
CRMI                              AML     AML
      comp=N,5180µm,0.8s
CRMI                              AML     AML
      comp=E,4385µm,0.4s
CRMI                              AML     AML
      comp=E,1815µm,0.4s
FNVD  Fontana Vidola    0.70  88 i P      Pg      23 32 07.8 -0.3
FNVD                              AML     AML
      comp=E,8790µm,1.3s
FNVD                              AML     AML
      comp=N,4480µm,0.5s
FNVD                              AML     AML
      comp=N,4480µm,0.5s
FNVD                              AML     AML
      comp=E,8790µm,1.3s
GROG  Isola di Gorgo    0.74 194   P      Pg      23 32 09.2 +0.3
GROG                              AML     AML
      comp=E,4255µm,0.3s
GROG                              AML     AML
      comp=N,2915µm,0.6s
GROG                              AML     AML
      comp=E,4255µm,0.3s
GROG                              AML     AML
      comp=N,2915µm,0.6s
GROG                              AML     AML
      comp=N,2915µm,0.6s
GROG                              AML     AML
      comp=E,4255µm,0.3s
MODE  Modena            0.75  50   P      Pb      23 32 10.7 +0.7
GORR  Gorreto           0.77 307   P      Pg      23 32 08.9 -0.5
GORR                              S       Sg      23 32 20.7 +1.4
GORR  Gorreto           0.77 307   P      Pg      23 32 08.8 -0.5
NOVE  Novellara         0.77  32   P      Pb      23 32 10.7 +0.3
NOVE                              AML     AML
      comp=E,23150µm,0.9s
NOVE                              AML     AML
      comp=N,34900µm,0.6s
NOVE                              AML     AML
      comp=E,23150µm,0.9s
NOVE                              AML     AML
      comp=N,34900µm,0.6s
NOVE                              AML     AML
      comp=E,23150µm,0.9s
NOVE                              AML     AML
      comp=N,34900µm,0.6s
BOB   Bobbio (Coli)     0.80 322   P      Pg      23 32 09.7 -0.3
BOB                               AML     AML
      comp=E,4910µm,1.0s
BOB                               AML     AML
      comp=N,3830µm,0.9s
BOB                               AML     AML
      comp=E,5400µm,1.0s
BOB                               AML     AML
      comp=N,3560µm,0.9s
BOB                               AML     AML
      comp=E,4915µm,1.0s
BOB                               AML     AML
      comp=N,3830µm,0.9s
BOB                               AML     AML
      comp=E,5400µm,1.0s
BOB                               AML     AML
      comp=N,3565µm,0.9s
BOB                               AML     AML
      comp=E,4915µm,1.0s
BOB                               AML     AML
      comp=E,5400µm,1.0s
BOB                               AML     AML
      comp=N,3565µm,0.9s
BOB                               AML     AML
      comp=N,3830µm,0.9s
SEI   Scarperia         0.88  95   P      Pg      23 32 10.8 -0.6
SEI                               AML     AML
      comp=E,7710µm,0.4s
SEI                               AML     AML
      comp=N,21350µm,0.5s
SEI                               AML     AML
      comp=E,7710µm,0.4s
SEI                               AML     AML
      comp=N,21350µm,0.5s
RAVA  Ravarino          0.93  48   AML    AML
      comp=E,11900µm,0.8s
RAVA                              AML     AML
      comp=E,10760µm,0.6s
RAVA                              AML     AML
      comp=N,10505µm,0.7s
RAVA                              AML     AML
      comp=E,11900µm,0.8s
RAVA                              AML     AML
      comp=N,10500µm,0.7s
RAVA                              AML     AML
      comp=N,10500µm,0.7s
CAVE  Cavezzo           0.95  40   P      Pb      23 32 13.9 +0.6
CAVE                              AML     AML
      comp=E,19650µm,0.6s
CAVE                              AML     AML
      comp=N,9390µm,0.9s
CAVE                              AML     AML
      comp=E,19650µm,0.6s
CAVE                              AML     AML
      comp=N,9660µm,0.8s
CAVE                              AML     AML
      comp=N,9660µm,0.8s
CAVE                              AML     AML
      comp=E,19650µm,0.6s
BRIS  BRISIGHELLA       0.98  89   P      Pn      23 32 17.7 +2.9
BRIS                              AML     AML
      comp=E,2665µm,0.7s
BRIS                              AML     AML
      comp=N,3255µm,0.6s
BRIS                              AML     AML
      comp=E,2665µm,0.7s
BRIS                              AML     AML
      comp=N,3255µm,0.6s
BRIS                              AML     AML
      comp=E,2665µm,0.7s
BRIS                              AML     AML
      comp=N,3255µm,0.6s
CSNT  Castellina Chi    1.07 129   P      Pg      23 32 15.1 +0.1
CSNT                              AML     AML
      comp=E,2865µm,0.9s
CSNT                              AML     AML
      comp=N,4440µm,0.5s
CSNT                              AML     AML
      comp=E,2865µm,0.9s
CSNT                              AML     AML
      comp=N,4440µm,0.5s
CSNT                              AML     AML
      comp=N,4440µm,0.5s
CSNT                              AML     AML
      comp=E,2865µm,0.9s
FIU   Minerbio Fiu      1.08  62   AML    AML
      comp=E,7470µm,0.6s
FIU                               AML     AML
      comp=E,7470µm,0.6s
FIU                               AML     AML
      comp=N,6815µm,0.6s
FIU                               AML     AML
      comp=N,6815µm,0.6s
TRIF  Trifonti          1.17 152   P      Pg      23 32 16.5 -0.5
TRIF                              AML     AML
      comp=E,1650µm,0.7s
TRIF                              AML     AML
      comp=N,1180µm,0.6s
TRIF                              AML     AML
      comp=E,1650µm,0.7s
TRIF                              AML     AML
      comp=N,1180µm,0.6s
TRIF                              AML     AML
      comp=N,1180µm,0.6s
TRIF                              AML     AML
      comp=E,1650µm,0.7s
FROS  Frosini           1.19 142   P      Pg      23 32 16.8 -0.6
FROS                              AML     AML
      comp=E,5250µm,0.6s
FROS                              AML     AML
      comp=N,5405µm,0.7s
FROS                              AML     AML
      comp=E,5250µm,0.6s
FROS                              AML     AML
      comp=N,5405µm,0.7s
FROS                              AML     AML
      comp=E,5250µm,0.6s
FROS                              AML     AML
      comp=N,5405µm,0.7s
SERM  Sermide           1.19  43   AML    AML
      comp=N,2680µm,0.7s
SERM                              AML     AML
      comp=E,4515µm,0.9s
SERM                              AML     AML
      comp=N,2680µm,0.7s
SERM                              AML     AML
      comp=E,8895µm,0.9s
SERM                              AML     AML
      comp=N,5795µm,0.9s
SERM                              AML     AML
      comp=E,8895µm,0.9s
SERM                              AML     AML
      comp=E,4515µm,0.9s
SERM                              AML     AML
      comp=N,5795µm,0.9s
PCP   Piancastagn       1.22 290   P      Pg      23 32 17.2 -0.7
PCP                               AML     AML
      comp=E,770µm,0.9s
PCP                               AML     AML
      comp=N,953µm,1.6s
PCP                               AML     AML
      comp=E,770µm,0.9s
PCP                               AML     AML
      comp=N,953µm,1.6s
PCP                               AML     AML
      comp=N,953µm,1.6s
PCP                               AML     AML
      comp=E,770µm,0.9s
ASQU  Asqua             1.24 106   P      Pg      23 32 16.9 -1.4
ASQU                              AML     AML
      comp=E,1078µm,0.5s
ASQU                              AML     AML
      comp=N,880µm,1.1s
ASQU                              AML     AML
      comp=N,880µm,1.1s
ASQU                              AML     AML
      comp=E,1078µm,0.5s
SFI   Santa Sofia       1.25 100   P      Pg      23 32 17.7 -0.9
SFI                               AML     AML
      comp=E,1370µm,0.8s
SFI                               AML     AML
      comp=N,1500µm,1.6s
SFI                               AML     AML
      comp=E,1230µm,0.6s
SFI                               AML     AML
      comp=N,1585µm,1.6s
SFI                               AML     AML
      comp=E,1370µm,0.8s
SFI                               AML     AML
      comp=N,1500µm,1.6s
SFI                               AML     AML
      comp=N,1585µm,1.6s
SFI                               AML     AML
      comp=E,1230µm,0.6s
QLNO  Quiliano          1.31 279   P      Pg      23 32 18.4 -1.2
QLNO                              AML     AML
      comp=E,512µm,0.9s
QLNO                              AML     AML
      comp=N,892µm,0.8s
QLNO                              AML     AML
      comp=E,512µm,0.9s
QLNO                              AML     AML
      comp=N,892µm,0.8s
QLNO                              AML     AML
      comp=N,892µm,0.8s
QLNO                              AML     AML
      comp=E,512µm,0.9s
FINB  Finale Ligure     1.31 272   P      Pn      23 32 18.2 -1.1
FINB                              AML     AML
      comp=E,624µm,0.6s
FINB                              AML     AML
      comp=N,578µm,0.3s
FINB                              AML     AML
      comp=E,624µm,0.6s
FINB                              AML     AML
      comp=N,579µm,0.3s
FINB                              AML     AML
      comp=N,579µm,0.3s
FINB                              AML     AML
      comp=E,624µm,0.6s
CASP  Castiglione de    1.45 159   P      Pn      23 32 20.5 -0.7
CASP                              AML     AML
      comp=E,799µm,1.0s
CASP                              AML     AML
      comp=N,808µm,1.1s
CASP                              AML     AML
      comp=E,799µm,1.0s
CASP                              AML     AML
      comp=N,808µm,1.1s
ROTM  Rocchetta Tana    1.47 299   AML    AML
      comp=E,5160µm,1.5s
ROTM                              AML     AML
      comp=E,5160µm,1.5s
ROTM                              AML     AML
      comp=N,6420µm,0.6s
ROTM                              AML     AML
      comp=N,6420µm,0.6s
RORO  Rocca Rossa       1.50 270   P      Pn      23 32 20.6 -1.3
RORO                              AML     AML
      comp=E,324µm,0.8s
RORO                              AML     AML
      comp=N,403µm,0.9s
RORO                              AML     AML
      comp=N,403µm,0.9s
RORO                              AML     AML
      comp=E,324µm,0.8s
CAFI  Castiglion Fio    1.55 121   P      Pn      23 32 21.8 -0.9
CAFI                              AML     AML
      comp=E,432µm,0.6s
CAFI                              AML     AML
      comp=N,566µm,1.0s
CAFI                              AML     AML
      comp=E,432µm,0.6s
CAFI                              AML     AML
      comp=N,566µm,1.0s
PARC  Parchiule         1.59 107   P      Pn      23 32 22.1 -1.2
PARC                              AML     AML
      comp=E,579µm,0.9s
PARC                              AML     AML
      comp=N,686µm,1.2s
PARC                              AML     AML
      comp=E,579µm,0.9s
PARC                              AML     AML
      comp=N,686µm,1.2s
BALD  Monte Baldo       1.61  17  ePg     Pb      23 32 24.6 -0.3
BALD                              eSg     Sg      23 32 48.2 +1.7
TEOL  Teolo             1.63  41⇑ePg     Pn      23 32 24.1 +0.4
TEOL                              eSg     Sg      23 32 47.7 +0.7
ROVR  Rover Verones     1.64  23   P      Pn      23 32 24.3 +0.3
ROVR                              AML     AML
      comp=E,1695µm,0.8s
ROVR                              AML     AML
      comp=N,2255µm,1.0s
ROVR                              AML     AML
      comp=E,708µm,0.8s
ROVR                              AML     AML
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	comp=N,914µm,0.4s						
ROVR				AML	AML		
	comp=E,1695µm,0.8s						
ROVR				AML	AML		
	comp=N,2255µm,1.0s						
ROVR				AML	AML		
	comp=E,708µm,0.8s						
ROVR				AML	AML		
	comp=N,914µm,0.4s						
CDCA	**Citt‘ di Caste**	**1.66**	**114**	AML	AML		
	comp=E,910µm,1.6s						
CDCA				AML	AML		
	comp=E,910µm,1.6s						
CDCA				AML	AML		
	comp=N,985µm,0.8s						
CDCA				AML	AML		
	comp=N,985µm,0.8s						
GBOS	**Grotte di Boss**	**1.66**	**274**	P	**Pn**	**23 32 23.5**	**-0.7**
GBOS				AML	AML		
	comp=E,292µm,1.4s						
GBOS				AML	AML		
	comp=N,318µm,0.7s						
GBOS				AML	AML		
	comp=E,292µm,1.4s						
GBOS				AML	AML		
	comp=N,318µm,0.7s						
MDI	**Monti di Nese**	**1.66**	**349**	AML	AML		
	comp=N,1175µm,1.0s						
MDI				AML	AML		
	comp=E,1545µm,0.6s						
MDI				AML	AML		
	comp=N,1170µm,1.0s						
MDI				AML	AML		
	comp=E,1595µm,0.6s						
MDI				AML	AML		
	comp=E,1595µm,0.6s						
MDI				AML	AML		
	comp=N,1170µm,1.0s						
MDI				AML	AML		
	comp=N,1175µm,1.0s						
MDI				AML	AML		
	comp=E,1545µm,0.6s						
MAGA	**Magasa**	**1.67**	**12**	P	**Pn**	**23 32 24.7**	**+0.3**
MAGA				AML	AML		
	comp=E,9880µm,0.6s						
MAGA				AML	AML		
	comp=N,3925µm,0.6s						
MAGA				AML	AML		
	comp=N,3925µm,0.6s						
MAGA				AML	AML		
	comp=E,9880µm,0.6s						
MARN	**Marana (Italy)**	**1.68**	**26**	*e*Pn	**Pn**	**23 32 25.2**	**+0.8**
MARN				*e*Sn	**Sg**	**23 32 49.7**	**+1.2**
MGRO	**Montegrosso**	**1.69**	**267**	P	**Pn**	**23 32 23.9**	**-0.8**
MGRO				AML	AML		
	comp=E,712µm,0.4s						
MGRO				AML	AML		
	comp=N,673µm,0.8s						
MGRO				AML	AML		
	comp=N,673µm,0.8s						
MGRO				AML	AML		
	comp=E,712µm,0.4s						
ATMI	**Monte Miggiano**	**1.74**	**117**	P	**Pn**	**23 32 24.8**	**-0.5**
ATMI				AML	AML		
	comp=E,1255µm,0.8s						
ATMI				AML	AML		
	comp=N,1610µm,0.5s						
ATMI				AML	AML		
	comp=E,1255µm,0.8s						
ATMI				AML	AML		
	comp=N,1610µm,0.5s						
PE3	**Peglio**	**1.76**	**104**	P	**Pn**	**23 32 25.3**	**-0.2**
PE3				AML	AML		
	comp=E,1695µm,0.5s						
PE3				AML	AML		
	comp=N,1850µm,0.4s						
PE3				AML	AML		
	comp=N,1850µm,0.4s						
PE3				AML	AML		
	comp=E,1695µm,0.5s						
ATPI	**Pietralunga -**	**1.77**	**112**	AML	AML		
	comp=E,522µm,0.6s						
ATPI				AML	AML		
	comp=E,522µm,0.6s						
ATPI				AML	AML		
	comp=N,552µm,1.0s						
ATPI				AML	AML		
	comp=N,552µm,1.0s						
NEGI	**Seborga**	**1.79**	**261**	P	**Pn**	**23 32 25.2**	**-0.8**
NEGI				AML	AML		
	comp=E,408µm,1.6s						
NEGI				AML	AML		
	comp=N,505µm,1.0s						
NEGI				AML	AML		
	comp=N,505µm,1.0s						
NEGI				AML	AML		
	comp=E,408µm,1.6s						
PGF	**Pioggiola**	**1.80**	**208**	*e*Pn	**Pn**	**23 32 25.3**	**-0.9**
PGF				*e*Sn	**Sn**	**23 32 47.3**	**-2.0**
	comp=E,126nm,0.3s						
PGF	**Pioggiola**	**1.80**	**208**	Pn	**Pn**	**23 32 25.7**	**-0.5**
ATVO	**AVT- Monte Val**	**1.81**	**114**	AML	AML		
	comp=N,926µm,0.8s						
ATVO				AML	AML		
	comp=E,654µm,0.6s						
ATVO				AML	AML		
	comp=E,654µm,0.6s						
ATVO				AML	AML		
	comp=N,926µm,0.8s						
PIEI	**Pieia**	**1.83**	**109**	P	**Pn**	**23 32 25.5**	**-1.0**
PIEI				AML	AML		
	comp=E,346µm,0.4s						
PIEI				AML	AML		
	comp=N,358µm,1.5s						
PIEI				AML	AML		
	comp=E,346µm,0.4s						
PIEI				AML	AML		
	comp=N,358µm,1.5s						
MONC	**Moncucco Torin**	**1.84**	**301**	P	**Pb**	**23 32 29.1**	**+0.5**
MONC				AML	AML		
	comp=E,1885µm,0.7s						
MONC				AML	AML		
	comp=N,1350µm,1.5s						
MONC				AML	AML		
	comp=E,1885µm,0.7s						
MONC				AML	AML		
	comp=N,1350µm,1.5s						
MAON	**Monte Argentar**	**1.86**	**157**	P	**Pn**	**23 32 26.3**	**-0.6**
MAON				AML	AML		
	comp=E,276µm,1.2s						
MAON				AML	AML		
	comp=N,458µm,0.8s						
MAON				AML	AML		
	comp=N,458µm,0.8s						
MAON				AML	AML		
	comp=E,276µm,1.2s						
ATTE	**AVT- Monte Tez**	**1.86**	**120**	AML	AML		
	comp=N,576µm,0.4s						
ATTE				AML	AML		
	comp=E,596µm,1.6s						
ATTE				AML	AML		
	comp=N,576µm,0.4s						
ATTE				AML	AML		
	comp=E,596µm,1.6s						
RNI	**Roncone**	**1.87**	**10**	*e*Pn	**Pn**	**23 32 27.9**	**+0.7**
SAOF	**Saorge**	**1.87**	**266**	Pn	**Pn**	**23 32 26.9**	**-0.2**
SAOF				Sn	**Sn**	**23 32 50.1**	**-1.0**
SAOF	**Saorge**	**1.87**	**266**	P	**Pn**	**23 32 26.8**	**-0.4**
SAOF				AML	AML		
	comp=E,996µm,0.7s						
SAOF				AML	AML		
	comp=N,1100µm,1.0s						
SAOF				AML	AML		
	comp=E,996µm,0.7s						
SAOF				AML	AML		
	comp=N,1100µm,1.0s						
MGAB	**Montegabbione**	**1.89**	**130**	P	**Pn**	**23 32 26.8**	**-0.5**
MGAB				AML	AML		
	comp=E,566µm,0.7s						
MGAB				AML	AML		
	comp=N,386µm,1.5s						
MGAB				AML	AML		
	comp=E,612µm,0.8s						
MGAB				AML	AML		
	comp=N,389µm,1.6s						
MGAB				AML	AML		
	comp=E,612µm,0.8s						
MGAB				AML	AML		
	comp=N,386µm,1.5s						
MGAB				AML	AML		
	comp=N,389µm,1.6s						
MGAB				AML	AML		
	comp=E,566µm,0.7s						
DOSS	**Dosso del Somm**	**1.89**	**23**	*e*Pn	**Pn**	**23 32 28.0**	**+0.5**
ATFO	**Monte Foce - G**	**1.92**	**113**	P	**Pn**	**23 32 26.6**	**-1.3**
ATFO				AML	AML		
	comp=E,613µm,1.1s						
ATFO				AML	AML		
	comp=N,448µm,0.5s						
ATFO				AML	AML		
	comp=E,613µm,1.1s						
ATFO				AML	AML		
	comp=N,448µm,0.5s						
MABI	**Malga Bissina**	**1.93**	**8**	P	**Pn**	**23 32 28.6**	**+0.6**
MABI				AML	AML		
	comp=E,652µm,0.6s						
MABI				AML	AML		
	comp=N,520µm,0.5s						
MABI				AML	AML		
	comp=E,652µm,0.6s						
MABI				AML	AML		
	comp=N,520µm,0.5s						
MURB	**Monte Urbino**	**1.94**	**116**	AML	AML		
	comp=E,1105µm,1.2s						
MURB				AML	AML		
	comp=N,1300µm,0.4s						
MURB				AML	AML		
	comp=E,1145µm,1.2s						
MURB				AML	AML		
	comp=N,1275µm,0.4s						
MURB				AML	AML		
	comp=N,1275µm,0.4s						
MURB				AML	AML		
	comp=E,1145µm,1.2s						
MURB				AML	AML		
	comp=E,1105µm,1.2s						
MURB				AML	AML		
	comp=N,1300µm,0.4s						
MUGIO	**Muggio**	**1.94**	**337**	P	**Pn**	**23 32 28.9**	**+0.8**
MUGIO				AML	AML		
	comp=E,664µm,0.6s						
MUGIO				AML	AML		
	comp=N,516µm,0.6s						
MUGIO				AML	AML		
	comp=E,664µm,0.6s						
MUGIO				AML	AML		
	comp=N,516µm,0.6s						
PESA	**Pesaro**	**1.95**	**95**	AML	AML		
	comp=N,538µm,0.9s						
PESA				AML	AML		
	comp=E,678µm,1.3s						
PESA				AML	AML		
	comp=N,538µm,0.9s						
PESA				AML	AML		
	comp=E,678µm,1.3s						
MPAG	**Monte Paganucc**	**1.96**	**104**	AML	AML		
	comp=E,328µm,0.8s						
MPAG				AML	AML		
	comp=E,328µm,0.8s						
MPAG				AML	AML		
	comp=N,502µm,0.7s						
MPAG				AML	AML		
	comp=N,502µm,0.7s						
ENR	**Entracque**	**1.96**	**273**	P	**Pn**	**23 32 28.2**	**-0.2**
ENR				AML	AML		
	comp=E,294µm,0.5s						
ENR				AML	AML		
	comp=N,616µm,0.7s						
ENR				AML	AML		
	comp=N,616µm,0.7s						
ENR				AML	AML		
	comp=E,294µm,0.5s						
SBF	**Sospel**	**1.98**	**263**	*e*Pn	**Pn**	**23 32 27.7**	**-0.9**
SBF				*e*Sn	**Sn**	**23 32 51.8**	**-1.8**
	comp=E,359nm,0.5s						
VARE	**Varese**	**1.98**	**331**	AML	AML		
	comp=E,891µm,0.8s						
VARE				AML	AML		
	comp=E,891µm,0.8s						
VARE				AML	AML		
	comp=N,1174µm,1.1s						
VARE				AML	AML		
	comp=N,1174µm,1.1s						
MON	**Monaco**	**2.01**	**259**	Pn	**Pn**	**23 32 28.7**	**-0.3**
GAGG	**Gaggia**	**2.02**	**16**	*e*Pn	**Pn**	**23 32 30.0**	**+0.6**
GAGG				*e*Sn	**Sg**	**23 32 58.7**	**-1.0**
ESCA	**l'Escarene**	**2.02**	**262**	Pn	**Pn**	**23 32 28.9**	**-0.3**
REVF	**Revere**	**2.05**	**260**	Pn	**Pn**	**23 32 29.1**	**-0.4**
FOSV	**Fossato di Vic**	**2.08**	**113**	AML	AML		
	comp=N,283µm,0.5s						
FOSV				AML	AML		
	comp=E,308µm,0.5s						
FOSV				AML	AML		
	comp=N,283µm,0.5s						
FOSV				AML	AML		
	comp=E,308µm,0.5s						
PANI	**Panarotta**	**2.08**	**23**	*e*Pn	**Pn**	**23 32 30.8**	**+0.6**
CGRP	**Cima Grappa**	**2.10**	**33**	*e*Pn	**Pn**	**23 32 30.7**	**+0.4**
CGRP				*e*Sn	**Sb**	**23 32 59.8**	**+0.4**
CGRP	**Cima Grappa**	**2.10**	**33**	AML	AML		
	comp=E,1455µm,0.6s						
CGRP				AML	AML		
	comp=E,1455µm,0.6s						
CGRP				AML	AML		
	comp=N,1590µm,0.6s						
CGRP				AML	AML		
	comp=N,1590µm,0.6s						
DOI	**San Damiano**	**2.11**	**281**	AML	AML		
	comp=N,689µm,0.9s						
DOI				AML	AML		
	comp=E,420µm,1.2s						
DOI				AML	AML		
	comp=N,689µm,0.9s						
DOI				AML	AML		
	comp=E,420µm,1.2s						
ASSB	**Assisi San Ben**	**2.13**	**120**	AML	AML		
	comp=E,296µm,1.3s						
ASSB				AML	AML		
	comp=N,330µm,0.7s						
ASSB				AML	AML		
	comp=E,296µm,1.3s						
ASSB				AML	AML		
	comp=N,330µm,0.7s						
SMPL	**Sampolo**	**2.14**	**197**	Pn	**Pn**	**23 32 31.3**	**+0.5**
SMPL				Sn	**Sn**	**23 32 56.8**	**-0.9**
SMPL	**Sampolo**	**2.14**	**197**	AML	AML		
	comp=E,12700µm,0.7s						
SMPL				AML	AML		
	comp=E,12700µm,0.7s						
SMPL				AML	AML		
	comp=N,8865µm,0.7s						
SMPL				AML	AML		
	comp=N,8865µm,0.7s						
MTLO	**Montello**	**2.17**	**39**	*e*Pn	**Pn**	**23 32 31.4**	**+0.2**
CTI	**Castel Tesino**	**2.18**	**29**	P	**Pn**	**23 32 32.0**	**+0.5**
CTI				AML	AML		
	comp=E,1016µm,0.7s						
CTI				AML	AML		
	comp=N,948µm,0.4s						
CTI				AML	AML		
	comp=N,948µm,0.4s						
CTI				AML	AML		
	comp=E,1016µm,0.7s						
TRAV	**Traversella**	**2.19**	**310**	AML	AML		
	comp=N,464µm,0.6s						
TRAV				AML	AML		
	comp=E,697µm,0.7s						
TRAV				AML	AML		
	comp=N,464µm,0.6s						
TRAV				AML	AML		
	comp=E,697µm,0.7s						
PZZ	**Stroppo**	**2.21**	**281**	P	**Pn**	**23 32 31.0**	**-0.8**
PZZ				AML	AML		
	comp=E,443µm,0.9s						
PZZ				AML	AML		
	comp=N,504µm,0.6s						
PZZ				AML	AML		
	comp=E,443µm,0.9s						
PZZ				AML	AML		
	comp=N,504µm,0.6s						
MOMA	**Monte Martano**	**2.21**	**126**	P	**Pn**	**23 32 31.6**	**-0.3**
MOMA				AML	AML		
	comp=E,286µm,1.1s						
MOMA				AML	AML		
	comp=N,314µm,0.4s						
MOMA				AML	AML		
	comp=N,314µm,0.4s						
MOMA				AML	AML		
	comp=E,286µm,1.1s						
ISO	**Isola**	**2.23**	**272**	Pn	**Pn**	**23 32 32.5**	**+0.4**
ISO				Sn	**Sn**	**23 32 58.9**	**-1.0**
EILF	**Villa Eilenroc**	**2.26**	**256**	Pn	**Pn**	**23 32 32.3**	**-0.1**
EILF				Sn	**Sn**	**23 32 57.5**	**-3.0**
BERNI	**Berninapass**	**2.27**	**358**	AML	AML		
	comp=N,354µm,1.4s						
BERNI				AML	AML		
	comp=E,454µm,0.5s						
BERNI				AML	AML		
	comp=E,454µm,0.5s						
BERNI				AML	AML		
	comp=N,354µm,1.4s						
CESI	**CESI - Serrava**	**2.31**	**119**	AML	AML		
	comp=E,72µm,0.5s						
CESI				AML	AML		
	comp=E,72µm,0.5s						
CESI				AML	AML		
	comp=N,124µm,0.9s						
CESI				AML	AML		
	comp=N,124µm,0.9s						
CARE	**Lago del Cares**	**2.31**	**9**	*e*Pn	**Pn**	**23 32 34.6**	**+1.2**
CING	**Cingoli**	**2.34**	**108**	AML	AML		
	comp=N,254µm,0.6s						
CING				AML	AML		
	comp=E,296µm,0.8s						
CING				AML	AML		
	comp=N,254µm,0.6s						
CING				AML	AML		
	comp=E,296µm,0.8s						
CESX	**Cesi**	**2.34**	**130**	P	**Pn**	**23 32 33.5**	**0.0**
CESX				AML	AML		
	comp=E,274µm,0.5s						
CESX				AML	AML		
	comp=N,284µm,0.6s						
CESX				AML	AML		
	comp=N,284µm,0.6s						
CESX				AML	AML		
	comp=E,274µm,0.5s						
OZOL	**Ozolo**	**2.35**	**15**	*e*Pn	**Pn**	**23 32 35.1**	**+1.4**
CALF	**Calern**	**2.36**	**262**	Pn	**Pn**	**23 32 33.5**	**-0.4**
CALF				Sn	**Sn**	**23 33 01.2**	**-2.0**
TUE	**Stuetta**	**2.40**	**347**	AML	AML		
	comp=E,451µm,0.4s						
TUE				AML	AML		
	comp=E,354µm,0.4s						
TUE				AML	AML		
	comp=N,398µm,0.6s						
TUE				AML	AML		
	comp=N,468µm,0.6s						
TUE				AML	AML		
	comp=N,398µm,0.6s						
TUE				AML	AML		
	comp=E,354µm,0.4s						
TUE				AML	AML		
	comp=E,451µm,0.4s						
TUE				AML	AML		
	comp=N,468µm,0.6s						
FDMO	**Fiordimonte**	**2.41**	**116**	AML	AML		
	comp=N,172µm,1.0s						
FDMO				AML	AML		
	comp=E,169µm,0.6s						
FDMO				AML	AML		
	comp=E,169µm,0.6s						
FDMO				AML	AML		
	comp=N,172µm,1.0s						
SURF	**Saint Ours**	**2.42**	**279**	Pn	**Pn**	**23 32 34.5**	**-0.3**
SURF				Sn	**Sn**	**23 33 03.3**	**-1.4**
MMK	**Mattmark**	**2.46**	**322**	AML	AML		
	comp=E,279µm,0.8s						
MMK				AML	AML		
	comp=N,454µm,1.4s						
MMK				AML	AML		
	comp=N,454µm,1.4s						
MMK				AML	AML		
	comp=E,279µm,0.8s						
KOSI	**Kohlern**	**2.48**	**20**	AML	AML		
	comp=E,793µm,0.7s						
KOSI				AML	AML		
	comp=E,793µm,0.7s						
KOSI				AML	AML		
	comp=N,917µm,0.8s						
KOSI				AML	AML		
	comp=N,917µm,0.8s						
FUORN	**Ofenpass-Fuorn**	**2.48**	**2**	AML	AML		
	comp=N,302µm,0.9s						
FUORN				AML	AML		
	comp=E,348µm,0.8s						
FUORN				AML	AML		
	comp=E,348µm,0.8s						
FUORN				AML	AML		
	comp=N,302µm,0.9s						
TOLF	**Tolfa**	**2.48**	**146**	P	**Pn**	**23 32 35.3**	**-0.2**
TOLF				AML	AML		
	comp=E,96µm,1.3s						
TOLF				AML	AML		
	comp=N,111µm,0.8s						
TOLF				AML	AML		
	comp=N,111µm,0.8s						
TOLF				AML	AML		
	comp=E,96µm,1.3s						
MBDF	**Montbardon**	**2.49**	**285**	*e*Pn	**Pn**	**23 32 35.1**	**-0.6**
MBDF	**Montbardon**	**2.49**	**285**	*e*Pg	**Pb**	**23 32 41.1**	**+1.4**
MBDF				*e*Sn	**Sn**	**23 33 02.4**	**-4.0**
	comp=E,52nm,0.5s						
MBDF				*e*Sg	**Sg**	**23 33 13.5**	**-1.0**
	comp=E,110nm,0.6s						
POLC	**Polcenigo**	**2.52**	**41**	AML	AML		
	comp=E,1072µm,0.8s						
POLC				AML	AML		
	comp=N,1119µm,0.7s						
POLC				AML	AML		
	comp=N,1119µm,0.7s						
POLC				AML	AML		
	comp=E,1072µm,0.8s						
FUSIO	**Fusio**	**2.54**	**336**	AML	AML		
	comp=E,443µm,0.8s						
FUSIO				AML	AML		
	comp=N,396µm,1.6s						
FUSIO				AML	AML		
	comp=E,443µm,0.8s						
FUSIO				AML	AML		
	comp=N,396µm,1.6s						
FRF	**La Foret Royal**	**2.60**	**258**	*e*Pn	**Pn**	**23 32 36.3**	**-0.8**
FRF	**La Foret Royal**	**2.60**	**258**	*e*Pg	**Pb**	**23 32 42.9**	**+1.4**
FRF				*e*Sn	**Sn**	**23 33 06.3**	**-2.6**
	comp=N,30nm,0.2s						
LNSS	**Leonessa**	**2.61**	**125**	AML	AML		
	comp=N,354µm,1.0s						
LNSS				AML	AML		
	comp=E,376µm,0.5s						
LNSS				AML	AML		
	comp=N,354µm,1.0s						
LNSS				AML	AML		
	comp=E,376µm,0.5s						
DAVOX	**Davos/Dischmat**	**2.64**	**356**	Pn	**Pn**	**23 32 40.2**	**+2.3**
	comp=E,16nm,0.3s,baz=193,slow=9.0,SNR=88						
DAVOX				Sn	**Sn**	**23 33 11.2**	**+0.9**
	comp=E,7.5nm,0.3s,baz=160,slow=21,SNR=7.2						
DAVOX				LR	LR	23 34 00.7	
	comp=E,208nm,21.2s,baz=228,slow=48						
DAVOX	**Davos/Dischmat**	**2.64**	**356**	AML	AML		
	comp=N,402µm,0.5s						
DAVOX				AML	AML		
	comp=E,420µm,0.5s						
DAVOX				AML	AML		
	comp=N,402µm,0.5s						
DAVOX				AML	AML		
	comp=E,420µm,0.5s						
ABSI	**Aberstueckl**	**2.71**	**17**	AML	AML		
	comp=N,1940µm,0.7s						
ABSI				AML	AML		
	comp=E,2820µm,0.6s						
ABSI				AML	AML		
	comp=E,2820µm,0.6s						
ABSI				AML	AML		
	comp=N,1940µm,0.7s						
REMY	**Saint-Rhmy-en**	**2.71**	**310**	AML	AML		
	comp=E,512µm,0.7s						
REMY				AML	AML		
	comp=E,512µm,0.7s						
REMY				AML	AML		
	comp=N,598µm,0.7s						
REMY				AML	AML		

	comp=N,598µm,0.7s						
LMR	La Mourre	2.76	254	ePn	Pn	23 32 38.2	-1.0
LMR				eSn	Sn	23 33 09.5	-3.3
	comp=N,27nm,0.2s						
LPG	La Plagne	2.77	300	eP	Pn	23 32 40.9	+1.2
LPG	La Plagne	2.77	300	ePg	Pg	23 32 47.2	-0.5
LPG				eSn	Sn	23 33 10.0	-3.5
	comp=N,35nm,0.4s						
LPG				eSg	Sg	23 33 22.3	-1.3
	comp=N,35nm,0.4s						
STAL	STALIGIAL	2.79	40	AML	AML		
	comp=E,555µm,1.1s						
STAL				AML	AML		
	comp=E,555µm,1.1s						
STAL				AML	AML		
	comp=N,431µm,0.4s						
STAL				AML	AML		
	comp=E,782µm,1.1s						
STAL				AML	AML		
	comp=N,440µm,0.4s						
STAL				AML	AML		
	comp=N,431µm,0.4s						
STAL				AML	AML		
	comp=N,440µm,0.4s						
STAL				AML	AML		
	comp=E,782µm,1.1s						
LPL	La Plagne	2.79	301	eP	Pn	23 32 41.1	+1.2
LPL	La Plagne	2.79	301	ePg	Pb	23 32 46.9	+2.0
LPL				eSn	Sn	23 33 10.6	-3.3
	comp=E,24nm,0.3s						
LPL				eSg	Sb	23 33 22.3	+2.9
	comp=E,75nm,0.4s						
FETA	Feichten	2.91	8	Pn	Pn	23 32 43.9	+2.4
	comp=E,6.5nm,0.3s						
FETA				Sn	Sb	23 33 20.6	-2.1
	comp=E,54nm,0.6s						
ROSI	Rosskopf	2.92	17	AML	AML		
	comp=E,1200µm,0.6s						
ROSI				AML	AML		
	comp=E,1200µm,0.6s						
ROSI				AML	AML		
	comp=N,1575µm,0.7s						
ROSI				AML	AML		
	comp=N,1575µm,0.7s						
T0104	Madonna delle	2.94	126	AML	AML		
	comp=N,249µm,0.6s						
T0104				AML	AML		
	comp=E,179µm,0.7s						
T0104				AML	AML		
	comp=N,249µm,0.6s						
T0104				AML	AML		
	comp=E,179µm,0.7s						
TERO	Teramo	2.94	120	AML	AML		
	comp=E,87µm,1.0s						
TERO				AML	AML		
	comp=N,86µm,0.9s						
TERO				AML	AML		
	comp=N,86µm,0.9s						
TERO				AML	AML		
	comp=E,87µm,1.0s						
PLONS	Plons/SG	2.96	350	AML	AML		
	comp=E,308µm,0.7s						
PLONS				AML	AML		
	comp=E,308µm,0.7s						
PLONS				AML	AML		
	comp=N,338µm,0.6s						
PLONS				AML	AML		
	comp=N,338µm,0.6s						
BLAF	les Blancs	2.96	268	Pn	Pn	23 32 42.9	+0.8
AQU	L'Aquila	2.98	126	ePn	Pn	23 32 43.1	+0.8
AQU	L'Aquila	2.98	126	AML	AML		
	comp=E,180µm,1.0s						
AQU				AML	AML		
	comp=E,180µm,1.0s						
AQU				AML	AML		
	comp=N,184µm,1.1s						
AQU				AML	AML		
	comp=N,184µm,1.1s						
BNALP	Bannalp	2.98	337	AML	AML		
	comp=E,202µm,1.6s						
BNALP				AML	AML		
	comp=N,277µm,1.1s						
BNALP				AML	AML		
	comp=N,277µm,1.1s						
BNALP				AML	AML		
	comp=E,202µm,1.6s						
RMP	Rome, Mte Porz	2.99	140	AML	AML		
	comp=N,106µm,1.6s						
RMP				AML	AML		
	comp=E,108µm,1.2s						
RMP				AML	AML		
	comp=N,106µm,1.6s						
RMP				AML	AML		
	comp=E,108µm,1.2s						
GEPF	Gemona	3.00	44	AML	AML		
	comp=N,370µm,0.8s						
GEPF				AML	AML		
	comp=E,325µm,0.7s						
GEPF				AML	AML		
	comp=N,370µm,0.8s						
GEPF				AML	AML		
	comp=E,325µm,0.7s						
SABO	M.te Sabotino	3.06	52	AML	AML		
	comp=E,554µm,0.8s						
SABO				AML	AML		
	comp=E,554µm,0.8s						
SABO				AML	AML		
	comp=N,636µm,0.6s						
SABO				AML	AML		
	comp=N,636µm,0.6s						
FVI	Forni Avoltri	3.08	36	AML	AML		
	comp=E,421µm,0.7s						
FVI				AML	AML		
	comp=N,344µm,0.6s						
FVI				AML	AML		
	comp=E,421µm,0.7s						
FVI				AML	AML		
	comp=N,344µm,0.6s						
ABTA	Abfaltersbach	3.09	32	i Pn	Pn	23 32 45.4	+1.5
	comp=N,3.1nm,0.4s,SNR=36						
ABTA				Sn	Sn	23 33 24.7	+3.5
	comp=N,103nm,0.9s						
RISI	Rein	3.12	25	AML	AML		
	comp=N,888µm,0.5s						
RISI				AML	AML		
	comp=E,1010µm,0.5s						
RISI				AML	AML		
	comp=N,888µm,0.5s						
RISI				AML	AML		
	comp=E,1010µm,0.5s						
FAGN	Fagnano	3.14	126	AML	AML		
	comp=E,452µm,0.6s						
FAGN				AML	AML		
	comp=N,302µm,1.5s						
FAGN				AML	AML		
	comp=N,302µm,1.5s						
FAGN				AML	AML		
	comp=E,452µm,0.6s						
ORIF	Oris-en-Rattie	3.15	286	eP	Pn	23 32 46.5	+1.8
ORIF	Oris-en-Rattie	3.15	286	ePg	Pb	23 32 52.8	+1.9
ORIF				eSn	Sn	23 33 18.5	-4.1
	comp=E,123nm,0.6s						
DAVA	Damuels	3.15	357	i Pn	Pn	23 32 47.3	+2.5
	comp=E,40nm,0.5s,SNR=80						
DAVA				Sn	Sb	23 33 26.8	-2.9
	comp=E,73nm,0.5s						
SQTA	Sankt Quirin	3.17	13	ePn	Pn	23 32 47.9	+2.9
	comp=E,8.1nm,0.2s,SNR=61						
SQTA				eSn	Sb	23 33 29.8	-0.3
	comp=E,64nm,0.4s						
ARTF	Artigues	3.19	261	Pn	Pn	23 32 45.3	+0.1
ASEAF	Site Antares,	3.20	246	Pn	Pn	23 32 45.2	+0.2
PTCC	Patocco-Chiusa	3.20	44	AML	AML		
	comp=E,280µm,0.7s						
PTCC				AML	AML		
	comp=E,280µm,0.7s						
PTCC				AML	AML		
	comp=N,198µm,0.6s						
PTCC				AML	AML		
	comp=N,198µm,0.6s						
BSTF	la Bastide-des	3.26	267	Pn	Pn	23 32 45.8	-0.3
BSTF				Sn	Sn	23 33 22.1	-3.1
MOTA	Moosalm	3.27	11	ePn	Pn	23 32 49.6	+3.2
	comp=N,22nm,0.2s,SNR=32						
WTTA	Wattenberg	3.29	18	ePn	Pn	23 32 49.6	+2.8
	comp=N,18nm,0.2s,SNR=22						
WTTA				Sn	Sb	23 33 33.9	+0.2
	comp=N,250nm,0.7s						
WTTA	Wattenberg	3.29	18	AML	AML		
	comp=E,730µm,0.7s						
WTTA				AML	AML		
	comp=N,478µm,0.9s						
WTTA				AML	AML		
	comp=N,478µm,0.9s						
WTTA				AML	AML		
	comp=E,730µm,0.7s						
SMRF	Simiane la Rot	3.30	269	eP	Pn	23 32 47.7	+1.0
SMRF	Simiane la Rot	3.30	269	ePg	Pg	23 32 56.3	-1.5
SMRF				eSn	Sn	23 33 22.9	-3.3
	comp=E,10nm,0.3s						
SMRF				eSg	Sb	23 33 38.0	+4.1
RIY	Rijeka	3.31	68	ePn		23 32 46.7	
RIY				Sn	Sn	23 33 25.7	-0.7
RIY	Rijeka	3.31	68	ePn	Pn	23 32 46.7	-0.1
WATA	Walderalm	3.35	17	ePn	Pn	23 32 50.2	+2.7
	comp=E,14nm,0.2s,SNR=16						
WATA				eSn	Sb	23 33 34.8	-0.5
	comp=E,51nm,0.6s						
RUSF	Rustrel	3.37	268	Pn	Pn	23 32 48.8	+1.1
RETA	Reutte	3.37	7	ePn	Pn	23 32 50.0	+2.2
	comp=E,7.7nm,0.4s,SNR=14						
RETA				eSn	Sn	23 33 32.2	+4.1
	comp=E,63nm,0.8s						
ACOM	Acomizza, Ital	3.38	43	AML	AML		
	comp=E,895µm,0.6s						
ACOM				AML	AML		
	comp=E,895µm,0.6s						
ACOM				AML	AML		
	comp=N,518µm,0.9s						
ACOM				AML	AML		
	comp=N,518µm,0.9s						
NVLJ	Novalja	3.42	81	ePn	Pn	23 32 49.2	+1.0
NVLJ				Sn	Sn	23 33 29.5	+0.5
OG02	Monnetier-Morn	3.43	307	Pn	Pn	23 32 50.7	+2.2
CEY	Cerknica	3.43	61	ePn	Pn	23 32 48.2	-0.4
MYKA	Terra Mystica	3.50	43	ePn	Pn	23 32 52.2	+2.7
	comp=N,3.1nm,0.2s						
MYKA				Sn	Sn	23 33 35.1	+3.9
	comp=N,14nm,0.4s						
MYKA				Sg	Sg	23 33 52.1	+5.2
	comp=N,40nm,0.5s						
DUGI	Dugi Otok	3.54	91	ePn	Pn	23 32 50.8	+0.7
DUGI				Sn	Sn	23 33 31.0	-1.2
GIMEL	St. Georges /	3.63	313	AML	AML		
	comp=E,108µm,1.6s						
GIMEL				AML	AML		
	comp=N,121µm,1.2s						
GIMEL				AML	AML		
	comp=E,108µm,1.6s						
GIMEL				AML	AML		
	comp=N,121µm,1.2s						
LJU	Ljubljana	3.64	57	ePn	Pn	23 32 51.2	-0.2
LJU	Ljubljana	3.64	57	AML	AML		
	comp=E,530µm,0.7s						
LJU				AML	AML		
	comp=N,778µm,0.5s						
LJU				AML	AML		
	comp=E,530µm,0.7s						
LJU				AML	AML		
	comp=N,778µm,0.5s						
KBA	Koelnbreinsper	3.69	36	ePn	Pn	23 32 54.9	+2.6
	comp=N,3.2nm,0.2s,SNR=10						
KBA				Sg	Sg	23 33 56.1	+2.8
	comp=N,54nm,0.5s						
VISS	Visnje	3.72	62	i Pn	Pn	23 32 52.7	+0.2
VISS				i Sn	Sn	23 33 36.7	+0.1
	comp=Z,101nm,0.9s						
CABF	La Chapelle	3.78	312	eP	Pn	23 32 55.0	+1.6
CABF				eSn	Sn	23 33 32.8	-5.3
	comp=Z,65nm,0.9s						
CABF				eSg	Sg	23 33 52.6	-3.3
	comp=Z,114nm,0.9s						
BOJS	Bojanci	3.88	68	AML	AML		
	comp=E,87µm,0.7s						
BOJS				AML	AML		
	comp=N,106µm,0.7s						
BOJS				AML	AML		
	comp=N,106µm,0.7s						
BOJS				AML	AML		
	comp=E,87µm,0.7s						
OBKA	Obir	3.90	51	ePn	Pn	23 32 56.3	+1.2
	comp=E,13nm,0.3s						
OBKA				Sn	Sn	23 33 44.0	+2.8
	comp=E,32nm,0.6s						
CHMF	Charmoille	3.95	323	Pn	Pn	23 32 57.8	+2.0
CHMF				Sn	Sn	23 33 41.8	-0.6
VIVF	Saint-Julien-l	3.98	282	ePn	Pn	23 32 56.1	0.0
VIVF				eSn	Sn	23 33 38.9	-4.1
	comp=E,6.7nm,0.4s						
ZIRJ	Zirje	4.00	95	i Pn	Pn	23 32 56.8	+0.5
ZIRJ				Sn	Sn	23 33 43.1	-0.4
MORI	Morici	4.02	92	i Pn	Pn	23 32 57.7	+1.1
MORI				Sn	Sn	23 33 44.5	+0.5
UDBI	Udbina	4.05	83	ePn	Pn	23 32 58.0	+0.9
UDBI				Sn	Sn	23 33 45.3	+0.5
OZLJ	Ozalj	4.06	67	ePn	Pn	23 32 59.0	+1.9
CRES	Cresnjev	4.13	64	ePn	Pn	23 32 58.5	+0.4
SOKA	Soboth	4.27	52	ePn	Pn	23 33 00.9	+0.8
	comp=E,25nm,0.6s,SNR=19						
SOKA				eSn	Sn	23 33 51.5	+1.2
	comp=E,19nm,0.6s						
HINF	Hinteralfeld	4.33	329	ePn	Pn	23 33 01.9	+1.0
HINF				eSn	Sn	23 33 46.2	-5.5
	comp=E,38nm,0.4s						
PTJ	Puntijarka	4.49	65	ePn		23 33 04.2	
KIJV	Kijevo	4.51	90	ePn	Pn	23 33 04.7	+1.3
KIJV				Sn	Sn	23 33 57.8	+1.7
LASF	Ste Croix	4.53	271	ePn	Pn	23 33 03.0	-0.6
LASF				eSn	Sn	23 33 51.9	-4.7
	comp=E,10nm,0.4s						
HVAR	Hvar	4.67	100	i Pn	Pn	23 33 05.8	+0.2
HVAR				Sn	Sn	23 33 57.5	-2.5
HAU	Haudompre	4.68	327	ePn	Pn	23 33 07.3	+1.6
HAU				eSn	Sn	23 33 55.1	-5.2
	comp=E,186nm,0.6s						
MOA	Molln	4.69	36	ePn	Pn	23 33 07.1	+1.3
	comp=E,2.6nm,0.3s,SNR=16						
MOA				Sn	Sn	23 34 03.1	+2.7
	comp=E,6.2nm,0.4s						
CDF	Champ du Feu	4.71	336	ePn	Pn	23 33 06.4	+0.2
CDF	Champ du Feu	4.71	336	eP	Pn	23 33 08.7	+2.5
CDF				eSn	Sn	23 33 56.3	-4.8
	comp=E,42nm,0.4s						
ARSA	Arzberg	4.88	49	ePn	Pn	23 33 08.9	+0.4
	comp=E,3.9nm,0.3s,SNR=29						
ARSA				eSn	Sn	23 34 05.4	+0.2
	comp=E,13nm,0.7s						
KALN	Kalnik	4.89	64	ePn	Pn	23 33 09.7	+1.2
MGRS	Mrkonjic Grad	4.99	84	ePn	Pn	23 33 11.2	+1.3
MAKA	Makarska	5.05	97	i Pn	Pn	23 33 11.6	+0.8
MAKA				Sn	Sn	23 34 08.7	-0.8
BLY	Banja Luka	5.08	81	⇓iP	Pn	23 33 12.6	+1.5
BLY	Banja Luka	5.08	81	S	Sn	23 34 11.1	+1.1
BLY	Banja Luka	5.08	81	ePn	Pn	23 33 12.1	+1.0
SMF	Signal de Mont	5.10	302	ePn	Pn	23 33 10.7	-0.7
SMF	Signal de Mont	5.10	302	eP	Pn	23 33 13.7	+2.3
SMF				eSn	Sn	23 34 06.2	-4.3
	comp=E,40nm,0.6s						
GERES	GERESS Array B	5.30	26	Pn	Pn	23 33 14.7	+0.3
	comp=E,1.9nm,0.3s,baz=202,slow=13,SNR=34						
GERES				Sn	Sn	23 34 14.3	-1.4
	comp=E,2.2nm,0.3s,baz=204,slow=16,SNR=5.6						
GERES				LR	LR	23 35 43.0	
	comp=E,99nm,19.5s,baz=300,slow=43						
PAGF	Fort de Pagny	5.37	327	eP	Pn	23 33 17.3	+2.2
	baz=141						
PAGF				eSn	Sn	23 34 12.8	-4.4
	comp=E,66nm,0.7s						
SFTF	Sexfontaines	5.39	321	eP	Pn	23 33 17.4	+1.9
	baz=139						
SFTF				eSn	Sn	23 34 12.6	-5.2
	comp=E,42nm,0.6s						
LOR	Lormes	5.40	308	ePn	Pn	23 33 14.2	-1.4
	baz=124						
LOR	Lormes	5.40	308	eP	Pn	23 33 17.7	+2.1
LOR				eSn	Sn	23 34 13.3	-4.7
	comp=E,24nm,0.3s						
AVF	Avril sur Loir	5.46	301	ePn	Pn	23 33 16.5	+0.1
AVF	Avril sur Loir	5.46	301	eP	Pn	23 33 18.8	+2.4
AVF				eSn	Sn	23 34 13.9	-5.6
	comp=E,23nm,0.6s						
CONA	Conrad Observa	5.49	44	ePn	Pn	23 33 17.9	+1.1
	comp=E,10nm,0.4s,SNR=16						
CONA				Sn	Sn	23 34 21.5	+1.1
	comp=E,24nm,0.8s						
SSF	Saint Saulge	5.50	304	ePn	Pn	23 33 15.4	-1.5
SSF	Saint Saulge	5.50	304	eP	Pn	23 33 18.5	+1.6
SSF				eSn	Sn	23 34 15.9	-4.5
	comp=E,19nm,0.4s						
KHC	Kasperske Hory	5.52	24	ePN	Pn	23 33 17.8	+0.6
KHC				ex	x	23 33 45.5	
KHC				eSN	Sn	23 34 18.4	-2.6
KHC				ex	x	23 34 53.0	
MEZF	Maizieres J'vi	5.61	323	eP	Pn	23 33 20.3	+1.9
	baz=145						
MEZF				eSn	Sn	23 34 17.7	-5.3
	comp=E,48nm,0.7s						
STON	Ston	5.64	100	ePn	Pn	23 33 19.6	+0.8
STON				Sn	Sn	23 34 23.0	-0.8
STON	Ston	5.64	100	ePn	Pn	23 33 18.1	-0.7
BGF	Bois d'Agland	5.68	298	eP	Pn	23 33 20.9	+1.5
BGF				eSn	Sn	23 34 19.5	-5.4
	comp=E,19nm,0.4s						
SOP	Sopron	5.70	49	ePn	Pn	23 33 20.0	+0.3
SOP				Sn	Sn	23 34 24.1	-1.4
MTLF	Montolieu	5.80	265	ePn	Pn	23 33 20.8	-0.3
MTLF				eSn	Sn	23 34 22.5	-5.3
	comp=E,11nm,0.6s						
CAF	Calviac	5.83	281	ePn	Pn	23 33 21.3	-0.2
CAF				eSn	Sn	23 34 23.5	-5.1
	comp=E,6.9nm,0.6s						
MATE	Matera	5.98	123	⇓iP	Pn	23 33 23.8	+0.3
TCF	Toulx Ste Croi	6.00	294	ePn	Pn	23 33 22.2	-1.7
TCF	Toulx Ste Croi	6.00	294	eP	Pn	23 33 26.5	+2.6
TCF				eSn	Sn	23 34 26.9	-5.9
	comp=E,15nm,0.6s						
DBRK	Dubrovnik	6.01	101	ePn	Pn	23 33 24.0	+0.1
DBRK				Sn	Sn	23 34 25.4	-7.7
TIH	Tihany	6.10	60	ePn	Pn	23 33 21.1	-4.1
TIH				Sn	Sn	23 34 35.1	-0.1
HYF	Humbligny	6.12	303	eP	Pn	23 33 26.7	+1.3
HYF				eSn	Sn	23 34 30.7	-4.9
TREB	Trebinje	6.14	101	ePn	Pn	23 33 25.2	-0.5
BRY	Bratogost	6.23	99	ePn	Pn	23 33 27.9	+0.8
RJF	Les Rejaudoux	6.26	284	ePn	Pn	23 33 25.6	-1.7
RJF	Les Rejaudoux	6.26	284	eP	Pn	23 33 29.9	+2.6
RJF				eSn	Sn	23 34 34.7	-4.4
	comp=E,6.3nm,0.6s						
ZST	Bratislava	6.30	48	ePN	Pn	23 33 29.0	+1.0
HCY	Herceg Novi	6.32	103	ePn	Pn	23 33 29.4	+1.2
HAPS	Han Pijesak,Bl	6.34	87	ePn	Pn	23 33 28.0	-0.6
MORH	Mrgy, Hungar	6.35	68	ePn	Pn	23 33 29.1	+0.5
MORH				Sn	Sn	23 34 42.0	+0.6
MORH				eSg	Sg	23 35 16.1	-2.4
UPM	Unac-Piva	6.42	95	ePn	Pn	23 33 31.5	+1.7
MODS	Modra-Piesok	6.51	47	ePN	Pn	23 33 31.5	+0.7
MODS				eSN	Sn	23 34 42.3	-2.9
MODS				eLG	Lg	23 34 49.1	
CSKK	Cskako	6.53	58	ePn	Pn	23 33 32.0	+1.0
CSKK				Sn	Sn	23 34 43.1	-2.6
KRUC	Moravsky	6.54	39	ePN	Pn	23 33 32.3	+1.2
KRUC				eSN	Sn	23 34 44.5	-1.4
PRU	Pruhonice	6.57	26	ePN	Pn	23 33 31.2	-0.4
PRU				eSN	Sn	23 34 44.7	-2.1
GOPC	GO Pecny, Ondr	6.59	27	ePN	Pn	23 33 32.5	+0.7
GOPC				eSN	Sn	23 34 44.9	-2.3
BBLS	Lazići	6.68	89	ePn	Pn	23 33 34.3	+1.0
RUDO	Rudo	6.69	91	ePn	Pn	23 33 33.6	+0.4
LFF	La Frestale	6.77	280	ePn	Pn	23 33 32.4	-1.9
LFF				eSn	Sn	23 34 45.7	-6.0
	comp=E,5.3nm,0.6s						
VRAC	Vranov	6.80	38	Pn	Pn	23 33 35.2	+0.4
	comp=E,0.8nm,0.3s,baz=224,slow=11,SNR=7.5						
VRAC				Sn	Sn	23 34 49.8	-2.8
	comp=E,0.5nm,0.3s,baz=266,slow=20,SNR=3.8						
VRAC				Lg	Lg	23 35 28.7	
	comp=E,0.3nm,0.3s,baz=136,slow=22,SNR=4.6						
VRAC				LR	LR	23 36 57.5	
	comp=E,63nm,20.2s,baz=236,slow=45						
VRAC	Vranov	6.80	38	⇓iP	Pn	23 33 36.9	+2.1
VRAC	Vranov	6.80	38	ePN	Pn	23 33 35.6	+0.8
VRAC				eSN	Sn	23 34 51.4	-1.1
PDG	Podgorica	6.86	101	⇑iP	Pn	23 33 37.1	+1.5
PDG	Podgorica	6.86	101	S	Sn	23 34 54.5	+0.5
PDG	Podgorica	6.86	101	ePn	Pn	23 33 35.8	+0.2
DRME	Dracevica, Mon	6.89	103	ePn	Pn	23 33 35.7	-0.3
JAVC	Velka Javorina	7.01	45	ePN	Pn	23 33 39.9	+2.1
PVCC	Panska Ves	7.06	24	eSN	Sn	23 34 56.3	-2.4
DIVS	Divibare	7.09	87	ePn	Pn	23 33 37.6	-1.2
DIVS	Divibare	7.09	87	ePn	Pn	23 33 38.3	-0.5
BAIF	Baives	7.17	328	eP	Pn	23 33 42.5	+2.7
BRG	Berggiesshubel	7.21	20	PN	Pn	23 33 41.3	+1.0
BRG				PG	Pg	23 34 16.6	+4.0
BRG				SN	Sn	23 35 00.2	-2.2
BRG				SG	Sg	23 35 45.5	-0.3
	comp=E,18nm,1.1s						
EPF	Esparros	7.21	265	ePn	Pn	23 33 39.4	-1.0
EPF				eSn	Sn	23 34 56.5	-6.1
	comp=E,6.1nm,0.7s						
KOLL	Kolacno	7.23	49	ePN	Pn	23 33 41.8	+1.1
KOLL				eSN	Sn	23 35 01.6	-1.4
CLL	Collm	7.42	14	ePn	Pn	23 33 45.0	+1.7
CLL				e(sn)		23 35 07.0	
CLL				e		23 35 18.0	
CLL				e		23 35 26.0	
CLL				eSg	Sg	23 35 53.0	+0.3
	comp=Z,22nm,0.9s						
VYHS	Vyhne	7.42	51	ePN	Pn	23 33 43.8	+0.5
VYHS				eSN	Sn	23 35 06.1	-1.7
DPC	Dobruska-Polom	7.50	32	ePN	Pn	23 33 44.8	+0.4
DPC				AMS	AMS	23 36 50.0	
	comp=Z,100nm,14.1s						
MORC	Moravsky Berou	7.57	39	⇓iP	Pn	23 33 47.3	+1.9
MORC	Moravsky Berou	7.57	39	S	Sn	23 35 12.9	+1.4
MORC	Moravsky Berou	7.57	39	ePN	Pn	23 33 46.7	+1.3
MORC				eSN	Sn	23 35 09.6	-1.9
CHVC	Chvalec	7.59	30	ePN	Pn	23 33 45.4	-0.2
OSTC	Ostas	7.62	31	ePN	Pn	23 33 45.8	-0.3
MFF	Saint Martin d	7.65	292	ePn	Pn	23 33 44.4	-2.1
MFF	Saint Martin d	7.65	292	eP	Pn	23 33 50.0	+3.5
MFF				eSn	Sn	23 35 06.2	-7.2
	comp=Z,1.8nm,0.4s						
PSZ	Piszkesteto	7.76	57	⇓iP	Pn	23 33 51.1	+3.1
PSZ	Piszkesteto	7.76	57	ePn	Pn	23 33 50.1	+2.0
PSZ				Sn	Sn	23 35 15.1	-1.1
PSZ				eSg	Sg	23 35 59.1	-4.6
ETSF	Etsaut	7.88	265	ePn	Pn	23 33 47.9	-1.8
ETSF	Etsaut	7.88	265	eP	Pn	23 33 52.9	+3.2
ETSF				eSn	Sn	23 35 12.3	-6.8
	comp=Z,6.5nm,0.7s						
BZS	Buzias	8.28	76	⇓iP	Pn	23 33 56.0	+0.9
MDVR	Moldovita	8.30	82	⇓iP	Pn	23 33 56.2	+0.8
LDF	La Druitiere	8.38	306	ePn	Pn	23 33 53.7	-2.7
LDF	La Druitiere	8.38	306	eP	Pn	23 33 59.7	+3.3
SIRR	Siria	8.40	71	⇓iP	Pn	23 33 59.5	+2.7
KEST	Kesra	8.42	184	LR	LR	23 37 33.3	
	comp=Z,59nm,18.2s,baz=155,slow=40						
FLN	La Foliniere	8.67	306	eP	Pn	23 34 04.0	+3.6
	baz=125						
GRR	Gorron	8.72	303	ePn	Pn	23 33 59.3	-1.8
GRR	Gorron	8.72	303	eP	Pn	23 34 04.5	+3.4
GRR				eSn	Sn	23 35 32.2	-7.5
GZR	Gura Zlata	9.07	78	⇓iP	Pn	23 34 08.3	+2.3
DRGR		9.22	69	⇓iP	Pn	23 34 10.4	+2.4
TRPA	Tarpa	9.48	61	ePn	Pn	23 34 13.0	+1.5
VTS	Vitosha	9.65	95	⇓iP	Pn	23 34 15.7	+1.6
PLVB	Pleven	10.50	89	⇑iP	Pn	23 34 26.4	+0.9
VOIR		10.68	78	⇑iP	Pn	23 34 30.6	+2.6
ESDC	Sonseca Array	11.42	252	Pn	Pn	23 34 39.1	+0.9
	comp=Z,0.1nm,0.3s,baz=65,slow=14,SNR=7.3						
EKA	Eskdalemuir Ar	14.09	327	Pn	Pn	23 35 17.2	+2.7
	baz=138,slow=14,SNR=4.0						
HFS	Hagfors	16.16	6	LR	LR	23 42 28.9	
	comp=Z,51nm,20.2s,baz=268,slow=39						
NOA	NORSAR Array B	16.94	2	LR	LR	23 43 21.0	
	comp=Z,30nm,19.5s,baz=185,slow=40						
BRTR	Keskin Array B	18.01	96	P	P	23 36 07.4	+1.4
	comp=Z,0.1nm,0.3s,baz=277,slow=9.1,SNR=4.2						
FINES	FINESS Array B	19.73	23	P	Pn	23 36 26.1	+0.1
	comp=Z,0.2nm,0.3s,baz=217,slow=12,SNR=10						
FINES				LR	LR	23 44 57.2	
	comp=Z,45nm,19.4s,baz=251,slow=40						
TORD	Torodi Ar. Bea	31.73	196	P	P	23 38 19.3	+0.1
	comp=Z,0.7nm,0.9s,baz=7.1,slow=9.7,SNR=3.9						
AAK	Ala-Archa	45.70	68	LR	LR	00 02 52.2	
	comp=Z,27nm,18.9s,baz=344,slow=41						
MKAR	Makanchi Array	49.01	60	P	P	23 40 42.5	+0.7

	comp=Z,0.8nm,0.7s,baz=290,slow=6.2,SNR=8.7						
ILAR	Eielson Array	69.94	350	P	P	23 43 05.9	-0.2
	comp=Z,0.1nm,0.5s,baz=24,slow=6.9,SNR=3.1						

MEX 08 23:54:00.8±0.4, 14°.75N×93°.29W, h24km±83km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.95	4	iP	Pb	23 54 15.7	-2.9
PCIG				iS	Sb	23 54 27.4	-3.4
THIG		1.00	81	iP	Pn	23 54 16.9	-2.5
THIG				iS	Sb	23 54 28.2	-4.1
CCIG	Comitan	1.88	36	iP	Pn	23 54 29.9	-1.8
CCIG				eS	Sn	23 54 51.3	-3.5
TGIG		2.02	5	iP	Pn	23 54 30.4	-3.1
TGIG				eS	Sn	23 54 54.3	-3.7

UCR 09 00:11:15.3±2.3, 9°.67N×84°.05W, h56km±7km, MW3.7, 8C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.08	30	eP	Pn	00 11 23.7	-0.4
LCR2				eS	Sn	00 11 29.7	-0.7
HDC	Heredia	0.34	348	⇑eP	Pn	00 11 25.1	-0.4
HDC				⇑eS	Sn	00 11 33.5	+0.6
CVTR	Volcan Turrial	0.45	39	eP	Pn	00 11 26.8	-0.1
CVTR				eS	Sn	00 11 36.6	+1.4
EDLM	Las Mercedes	0.59	131	⇑eP	Pn	00 11 27.1	-1.0
EDLM				eS	Sn	00 11 38.1	+0.6
SRA1	San Ramn	0.59	314	eP	Pn	00 11 27.4	-0.8
SRA1				eS	Sn	00 11 38.9	+1.4
DRK0	Durika	0.89	117	⇑eP	Pn	00 11 31.1	-0.8
DRK0				eS	Sn	00 11 44.0	-0.1
EDBA	Buenos Aires	0.91	123	eS	Sn	00 11 44.5	+0.1
EDPN	Palmar Norte	0.91	140	eP	Pn	00 11 32.4	+0.3
EDPN				eS	Sn	00 11 45.6	+1.2
ARE1	Arenal 1	1.03	320	⇑iP	Pn	00 11 33.5	-0.2
CEDE	Laguna Cedeo	1.04	321	⇑eP	Pn	00 11 33.7	-0.1
CEDE				⇑eS	Sn	00 11 48.5	+1.1
JTS	Las Juntas de	1.09	305	⇓eP	Pn	00 11 33.5	-0.9
JTS				eS	Sn	00 11 50.8	+2.3
MESS	Mesas	1.55	313	eP	Pn	00 11 41.0	+0.3
MESS				eS	Sn	00 12 00.9	+1.1
BRU2	Volcan	1.59	123	eP	Pn	00 11 40.3	-1.0
BRU2				eS	Sn	00 12 02.0	+1.0
BUEV	Buena Vista	1.75	310	eP	Pn	00 11 42.6	-0.8
BUEV				eS	Sn	00 12 05.3	+0.7
GB1A	Borinquen Arri	1.75	311	eP	Pn	00 11 42.7	-0.7
ACON	Acoyapa	2.54	334	⇑iP	Pn	00 11 53.4	-0.7

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*ISCJB **09** 00:20:38.9±0.3, 15°.14S±0°.06×173°.69W±0°.08, h10km, mb4.2/28, MS3.5/20, Error ellipse: s-maj=11.4km s-min=7.6km az=22.5*

*IDC **09** 00:20:40.2±0.6, 15°.14S×173°.71W, h0km, mb4.3/12, mb1 4.6/12, mb1mx4.3/34, mbtmp4.3/12, MS3.5/17, Ms1 3.5/17, ms1mx3.4/29, Error ellipse: s-maj=29.6km s-min=15.4km az=122.0*

*NEIC **09** 00:20:40.4±1.8, 15°.14S×173°.59W, h10km±2km, mb4.3/35, Error ellipse: s-maj=20.4km s-min=9.8km az=84.0*

ISC 09 00:20:40.6±0.5, 15°.18S±0°.07×173°.5W±0°.1, h10km, n72, σ1ˢ.30/60, mb4.4/28, MS3.6/20, 3C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.19	139	ePn	Pn	00 22 00.1	+1.8
NIUE				eSn	Sn	00 22 53.3	-4.9
FUNA	Funafuti	9.71	312	ePn	Pn	00 22 58.7	-1.8
KNTN	Kanton	12.46	8	ePn	Pn	00 23 36.4	-1.7
KNTN				eSn	Sn	00 25 39.5	-18
DZM	Mont Dzumac	20.16	247	eLR	LR	00 30 03.8	
	comp=Z,488nm,27.2s						
PPT	Papeete	23.11	99	LR	LR	00 34 30.5	
	comp=Z,32nm,18.2s,baz=348,slow=36						
PPT2	Papeete2	23.11	99	eLR	LR	00 31 14.6	
	comp=Z,70nm,26.0s						
URZ	Urewera	24.43	198	P	P	00 25 60.0	+0.6
	4.3nm,0.3s,baz=27,slow=9.0,SNR=7.0						
URZ	Urewera	24.43	198	eP	P	00 25 56.7	-2.7
	15nm,1.0s						
BKZ	Black Stump Fm	25.45	198	eP	P	00 26 06.8	-1.9
	12nm,1.1s						
BFZ	Birch Farm	26.92	197	eP	P	00 26 20.2	-1.8
	28nm,1.1s						
THZ	Tophouse	28.96	201	eP	P	00 26 40.9	+0.6
	16nm,1.2s						
KHZ	Kahutara	29.33	200	eP	P	00 26 43.2	-0.2
	22nm,1.2s						
RPZ	Rata Peaks	31.33	202	P	P	00 27 00.7	-0.5
	8.2nm,0.8s,baz=36,slow=8.7,SNR=2.6						
TAOE	Nuku Hiva Isla	33.23	83	eLR	LR	00 36 13.8	
	comp=Z,139nm,26.7s						
STKA	Stephens Creek	44.03	240	P	P	00 28 48.0	-0.7
	1.5nm,0.4s,baz=79,slow=10.0,SNR=4.9						
STKA				LR	LR	00 44 50.3	
	comp=Z,58nm,18.8s,baz=25,slow=33						
WR1	Warramunga Arr	49.76	257	eP	P	00 29 33.6	-0.1
WRA	Warramunga Arr	49.77	257	P	P	00 29 33.6	-0.1
	1.4nm,0.3s,baz=89,slow=8.1,SNR=22						
ASAR	Alice Springs	50.05	252	P	P	00 29 35.9	0.0
	8.7nm,0.6s,baz=88,slow=7.7,SNR=92						
ASAR				LR	LR	00 49 16.3	
	comp=Z,81nm,21.3s,baz=96,slow=34						
VNDA	Vanda	63.58	186	P	P	00 31 13.4	+2.4
	2.5nm,0.8s,baz=8.9,slow=7.1,SNR=13						
VNDA	Vanda	63.58	186	eP	P	00 31 10.7	-0.3
	3.0nm,0.8s						
MJAR	Matsushiro Arr	68.69	320	LR	LR	00 56 04.4	
	comp=Z,26nm,21.9s,baz=90,slow=31						
ASAJ	Asahikawa	71.29	328	LR	LR	00 57 16.5	
	comp=Z,16nm,21.6s,baz=80,slow=31						
PETK	Petropavlovsk-	72.39	342	P	P	00 32 07.0	+0.3
	1.9nm,0.8s,baz=115,slow=9.7,SNR=3.5						
PETK				LR	LR	01 02 06.0	
	comp=Z,12nm,18.9s,baz=132,slow=34						
PEA1	Petropavlovsk-	72.39	342	eP	P	00 32 07.0	+0.3
CMB	Columbia Colle	72.69	41	eP	P	00 32 08.7	-0.2
	4.4nm,1.0s						
YBH	Yreka Blue Hor	73.51	37	LR	LR	00 56 59.7	
	comp=Z,49nm,20.8s,baz=218,slow=30						
NVAR	Mina Array Bea	74.26	42	P	P	00 32 19.7	+1.3
	1.8nm,0.7s,baz=228,slow=10,SNR=14						
NVAR				LR	LR	00 56 54.3	
	comp=Z,65nm,22.0s,baz=250,slow=29						
PAHR	Pah Rah Range	74.30	41	eP	P	00 32 16.6	-1.9
	3.2nm,1.0s						
NV11	Mina Array Sit	74.36	42	eP	P	00 32 19.4	+0.5
	0.3nm,1.1s						
KVN	Kaiserville	74.74	42	eP	P	00 32 21.1	0.0
	2.4nm,0.8s						
QSPA	South Pole Qui	74.86	180	eP	P	00 32 21.4	+0.1
	10nm,0.8s						
MOD	Modoc Plateau	75.03	38	eP	P	00 32 22.4	-0.3
	2.1nm,0.8s						
PINE	Pine Mountain	75.81	36	eP	P	00 32 26.9	-0.2
	9.6nm,1.1s						
KSRS	Korea Array	75.91	316	LR	LR	01 00 55.7	
	comp=Z,8.9nm,21.1s,baz=160,slow=32						
R11A	Troy Canyon, C	75.99	43	eP	P	00 32 29.3	+1.0
	0.1nm,0.7s						
TUC	Tucson	76.36	51	eP	P	00 32 30.0	-0.4
	4.4nm,1.0s						
X16A	Lo Mia Camp, P	76.87	49	eP	P	00 32 33.6	+0.3
	2.7nm,0.9s						
USRK	Ussuriysk Ar.	77.13	323	LR	LR	01 00 36.3	
	comp=Z,28nm,21.7s,baz=118,slow=31						
BBB	Bella Bella	77.75	27	LR	LR	00 59 37.4	
	comp=Z,43nm,20.2s,baz=192,slow=30						
G08A	Pilot Rock	77.84	36	eP	P	00 32 38.4	0.0
	2.8nm,1.0s						
HLID	Hailey	79.55	39	eP	P	00 32 48.4	+0.4
	3.0nm,1.0s						
MA2	Magadan	79.92	342	LR	LR	01 01 03.6	
	comp=Z,17nm,21.3s,baz=175,slow=30						
TXAR	Lajitas Array	80.60	56	P	P	00 32 55.9	+2.0
	0.4nm,0.3s,baz=231,slow=7.9,SNR=4.3						
TXAR				LR	LR	01 01 33.3	
	comp=Z,33nm,20.1s,baz=0.0,slow=30						
NEW	Newport	80.61	34	LR	LR	01 00 33.1	
	comp=Z,29nm,19.8s,baz=254,slow=30						
PDAR	Pinedale Array	82.19	42	P	P	00 33 03.5	+1.2
	0.9nm,0.6s,baz=214,slow=2.7,SNR=10						
ILAR	Eielson Array	82.26	11	P	P	00 33 02.5	+0.7
	0.8nm,0.6s,baz=222,slow=6.4,SNR=11						
ILAR				LR	LR	01 02 56.2	
	comp=Z,35nm,21.6s,baz=198,slow=31						
MAW	Mawson	87.95	199	P	P	00 33 31.8	+1.3
	4.4nm,0.6s,baz=140,slow=5.6,SNR=26						
MAW				LR	LR	01 10 13.4	
	comp=Z,51nm,20.6s,baz=131,slow=34						
ULM	Lac du Bonnet	93.85	39	LR	LR	01 10 55.5	
	comp=Z,50nm,19.9s,baz=216,slow=32						
AKASG	Malin Array Be	140.09	337	PKP	PKiKP	00 40 10.6	-1.3
	0.5nm,0.4s,baz=27,slow=2.1,SNR=3.5						
KOLS	Kolonicke sedl	143.93	342	ePKP	PKiKP	00 40 18.0	-1.8
JAVC	Velka Javorina	145.18	347	ePKP	PKiKP	00 40 20.4	-2.1
KRUC	Moravsky	145.25	349	ePKP	PKPdf	00 40 19.8	+1.2
VYHS	Vyhne	145.25	346	ePKP	PKPdf	00 40 20.1	+1.4
KHC	Kasperske Hory	145.65	352	ePKP	PKiKP	00 40 21.5	-1.9
KHC				ex	x	00 40 33.5	
BR101	Keskin Array S	145.91	321	ePKPdf	PKPab	00 40 22.2	+0.9
BRTR	Keskin Array B	145.91	321	PKPbc	PKPab	00 40 22.2	+0.9
	3.4nm,0.7s,baz=100,slow=2.3,SNR=27						
GERES	GERESS Array B	145.91	351	PKPbc	PKPab	00 40 21.8	+0.9
	0.8nm,0.6s,baz=20,slow=4.3,SNR=9.4						
VOIR		146.01	336	⇑iP	PKiKP	00 40 23.5	-0.8
ARR	Arges	146.23	337	⇓iP	PKiKP	00 40 24.3	-0.5
CONA	Conrad Observa	146.44	349	ePKiKP	PKiKP	00 40 24.0	-1.1
	4.0nm,1.0s						
MOA	Molln	146.79	350	ePKiKP	PKiKP	00 40 24.9	-0.9
	2.2nm,0.7s						
BZS	Buzias	147.09	340	⇑iP	PKPab	00 40 25.1	-0.3
KBA	Koelnbreinsper	147.69	351	ePKiKP	PKiKP	00 40 26.6	-1.2
	1.3nm,0.5s						
MOTA	Moosalm	147.70	354	eP	PKPab	00 40 27.9	-0.1
	0.9nm,0.5s						
WTTA	Wattenberg	147.73	353	epPKPbc	PKiKP	00 40 27.2	-0.7
	3.9nm,0.6s						
SOKA	Soboth	147.79	349	ePKiKP	PKPbc	00 40 26.6	+0.6
	3.1nm,1.0s						
SQTA	Sankt Quirin	147.81	354	eP	PKPab	00 40 28.4	-0.1
	2.8nm,0.8s						
DAVA	Damuels	147.87	356	eP	PKPab	00 40 28.4	-0.2
	7.1nm,1.2s						
PLVB	Pleven	147.89	335	⇑iP	PKPab	00 40 28.5	-0.2
FETA	Feichten	148.06	354	epPKPbc	PKiKP	00 40 28.6	0.0
	2.9nm,1.2s						
MYKA	Terra Mystica	148.08	351	ePKPab	PKiKP	00 40 27.4	-1.1
	2.8nm,0.6s						
ABTA	Abfaltersbach	148.13	352	ePKPab	PKiKP	00 40 27.9	-0.7
	4.1nm,0.8s						

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*SJA **09** 00:28:50.9±0.5, 25°.63S×72°.39W, h10km, ML4.3, MW3.4*

*IDC **09** 00:29:03.3±0.7, 26°.02S×70°.60W, h0km, mb4.0/9, mb1 4.1/13, mb1mx4.0/32, mbtmp4.0/13, ML3.6/4, MS3.3/8, Ms1 3.3/8, ms1mx3.1/24, Error ellipse: s-maj=23.1km s-min=12.1km az=101.0*

*ISCJB **09** 00:29:07.3±0.6, 25°.87S±0°.03×70°.92W±0°.09, h40km±6km, mb4.0/11, MS3.2/2, Error ellipse: s-maj=13.3km s-min=4.2km az=179.9*

*NEIC **09** 00:29:09.0±0.0, 26°.00S×70°.63W, h43km, mb4.5/6, ML4.0(GUC), After GUC.*

*GUC **09** 00:29:09.1±0.7, 26°.00S×70°.63W, h43km±5km, ML4.0*

ISC 09 00:29:05.9±1.5, 25°.89S±0°.03×70°.97W±0°.07, h23km±10km, n76, σ1ˢ.97/79, mb4.2/11, 2C-10D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRCH	Chaqaral	0.55	146	⇑iP	Pn	00 29 18.5	+0.1
CRCH				iS	Sb	00 29 25.5	+1.0
CRCH				IAML		00 29 25.8	
	comp=E,30µm,0.2s						
PB14	IPOC Station P	1.35	22	⇓iP	Pb	00 29 31.1	+0.3
PB14				iS	Sb	00 29 47.9	+0.1
PB14				IAML		00 29 54.2	
	comp=E,3µm,0.4s						
GO02	Mina Guanaco	1.44	60	ePn	Pb	00 29 32.5	+0.3
GO02				eSn	Sn	00 29 46.3	-2.9
GO02	Mina Guanaco	1.44	60	⇓iP	Pb	00 29 32.5	+0.3
GO02				iS	Sb	00 29 50.5	+0.3
GO02				IAML		00 29 56.7	
	comp=E,7µm,0.6s						
GO03	Copiap	1.82	159	ePn	Pb	00 29 37.8	-0.9
GO03				eSn	Sn	00 29 58.7	+0.4
GO03	Copiap	1.82	159	eP	Pn	00 29 37.2	+1.3
GO03	Copiap	1.82	159	⇑iP	Pb	00 29 37.7	-1.0
GO03				iS	Sn	00 29 58.7	+0.4
GO03				IAML		00 30 01.3	
	comp=E,2µm,0.4s						
PB10	IPOC Station P	2.39	9	ePn	Pn	00 29 44.6	+0.8
PB10	IPOC Station P	2.39	9	⇓iP	Pn	00 29 44.5	+0.8
PB15	IPOC Station P	2.99	27	⇓iP	Pn	00 29 54.6	+2.4
PB05	IPOC Station P	3.10	13	⇓iP	Pn	00 29 54.4	+0.9
LCO	Las Campanas	3.12	176	ePn	Pn	00 29 54.7	+0.7
LCO				eSn	Sn	00 30 27.5	-3.2
PB06	IPOC Station P	3.41	22	⇓iP	Pn	00 29 59.3	+1.4
PB04	IPOC Station P	3.61	12	ePn	Pn	00 30 01.4	+0.7
PB04	IPOC Station P	3.61	12	⇓iP	Pn	00 30 01.2	+0.5
VCA	Vinchina	3.75	140	eP	Pb	00 30 07.3	-4.3
VCA				eS	Sb	00 31 04.4	+7.6
VCA				IAML		00 31 10.6	
	comp=Z,246nm,0.4s						
LVC	Limon Verde	3.76	30	Pn	Pn	00 30 04.0	+1.1
	comp=Z,7.3nm,0.3s,baz=194,slow=7.4,SNR=220						
LVC				Pg	Pb	00 30 12.4	+0.5
	comp=Z,37nm,0.3s,baz=210,slow=11,SNR=42						
LVC				Sn	Sn	00 30 46.8	+0.1
	comp=Z,25nm,0.3s,baz=208,slow=20,SNR=3.9						
LVC				Lg	Lg	00 31 01.3	
	comp=Z,67nm,0.3s,baz=225,slow=1.7,SNR=6.2						
LVC				LR	LR	00 31 46.1	
	comp=Z,558nm,20.4s,baz=208,slow=44						
LVC	Limon Verde	3.76	30	ePn	Pn	00 30 05.3	+2.4
PB03	IPOC Station P	3.98	16	⇓iP	Pn	00 30 06.4	+0.7
AGUA	GUANDACOL	4.21	149	eP	Pn	00 30 12.5	+3.8
PB07	IPOC Station P	4.26	14	⇓iP	Pn	00 30 10.1	+0.5
GO04	Tololo Observa	4.27	178	ePn	Pn	00 30 10.6	+0.7
PB09	IPOC Station P	4.37	22	⇓iP	Pn	00 30 12.9	+1.9
PB01	IPOC Station P	5.01	16	ePn	Pn	00 30 20.6	+0.8
ACLC	CERRO LA CRUZ	5.01	136	eP	Pn	00 30 25.5	+5.6
CYA	Choya	5.26	120	eP	Pn	00 30 29.9	+6.7
CYA				IAML		00 30 32.4	
	comp=Z,65nm,0.4s						
AZAP	Zapla	5.60	74	eP	Pn	00 30 34.6	+6.5
APLL	PUNTA DE LOS L	5.96	140	eP	Pn	00 30 37.4	+4.5
CFA	Coronel Fontan	6.18	158	Pn	Pn	00 30 32.0	-3.8
	comp=Z,0.2nm,0.3s,baz=17,slow=14,SNR=2.0						
CFA				Sn	Sn	00 31 43.4	-2.4
	comp=Z,5.0nm,0.3s,baz=352,slow=19,SNR=3.3						
CFA				Lg	Lg	00 32 10.5	
	comp=Z,6.4nm,0.3s,baz=288,slow=20,SNR=4.5						
CFA				LR	LR	00 33 24.0	
	comp=Z,57nm,20.3s,baz=75,slow=44						
PB11	IPOC Station P	6.21	11	ePn	Pn	00 30 36.0	-0.4
GO01	Chusmiza	6.40	15	ePn	Pn	00 30 39.8	+0.5
GO01				eSn	Sn	00 31 47.8	-4.1
MNMC	Minye Minye	6.84	11	ePn	Pn	00 30 45.2	+0.1
MNMC				eSn	Sn	00 31 57.9	-4.6
PEL	Peldehue	7.24	178	ePn	Pn	00 30 49.0	-1.3
LPAZ	La Paz	9.91	16	Pn	Pn	00 31 29.2	+1.6
	comp=Z,0.4nm,0.3s,baz=160,slow=3.3,SNR=21						
LPAZ				Lg	Lg	00 34 20.9	
	comp=Z,0.1nm,0.3s,baz=207,slow=2.3,SNR=5.7						
LPAZ				LR	LR	00 35 55.7	
	comp=Z,103nm,21.3s,baz=170,slow=41						
LPAZ	La Paz	9.91	16	ePn	Pn	00 31 29.6	+2.0
LPAZ				eSn	Sn	00 33 07.5	-11
CPUP	Villa Florida	12.26	95	LR	LR	00 37 09.6	
	comp=Z,227nm,18.3s,baz=246,slow=41						
CPUP	Villa Florida	12.26	95	ePn	Pn	00 31 57.1	-2.1
SIV	San Ignacio	13.50	45	Pn	Pn	00 32 12.7	-3.4
	comp=Z,0.5nm,0.3s,baz=239,slow=8.1,SNR=23						
SIV				LR	LR	00 38 05.7	
	comp=Z,107nm,19.7s,baz=279,slow=41						
TRQA	Tornquist	14.32	150	ePn	Pn	00 32 28.1	+0.8
PLCA	Paso Flores	14.81	179	LR	LR	00 38 38.3	
	comp=Z,239nm,18.3s,baz=24,slow=39						
BDFB	Brasilia	23.72	69	P	P	00 34 14.6	-2.0
	comp=Z,7.8nm,0.8s,baz=237,slow=11,SNR=8.4						
BDFB				LR	LR	00 45 10.4	
	comp=Z,73nm,18.3s,baz=224,slow=41						
BDFB	Brasilia	23.72	69	eP	P	00 34 14.6	-2.0
BDFB				eP	P	00 34 15.6	-1.0
PTGA	Pitinga	27.16	25	P	P	00 34 48.5	+0.8
	comp=Z,5.8nm,0.8s,baz=202,slow=11,SNR=12						
PTGA				LR	LR	00 46 03.4	
	comp=Z,90nm,21.4s,baz=204,slow=38						
PTGA	Pitinga	27.16	25	eP	P	00 34 48.2	+0.5
	comp=Z,8.1nm,0.9s						
EFI	East Falkland	27.56	163	eP	P	00 34 49.8	-1.1
	comp=Z,33nm,1.0s						
VNA3	Neumayer Olymp	56.58	160	P	P	00 38 47.3	+0.9
SNAA	Sanae	58.80	160	P	P	00 39 02.2	+0.2
QSPA	South Pole Qui	64.32	180	eP	P	00 39 41.6	+2.1
	comp=Z,5.0nm,0.8s						
DBIC	Dimbokro	71.80	73	P	P	00 40 25.9	-1.2
	comp=Z,6.9nm,1.2s,baz=302,slow=17,SNR=1.6						
DBIC	Dimbokro	71.80	73	eP	P	00 40 25.9	-1.2
	comp=Z,6.2nm,1.0s						
VNDA	Vanda	72.22	190	P	P	00 40 30.3	+1.7
	comp=Z,0.7nm,0.9s,baz=152,slow=4.2,SNR=4.0						
PDAR	Pinedale Array	77.01	332	P	P	00 40 59.8	+2.7
	comp=Z,0.1nm,0.3s,baz=111,slow=4.9,SNR=2.3						
NV01	Mina Array Sit	77.84	324	eP	P	00 41 04.4	+2.6
NVAR	Mina Array Bea	77.84	324	P	P	00 41 04.4	+2.6
	comp=Z,0.3nm,0.6s,baz=133,slow=6.6,SNR=4.0						
TOA1	Torodi Ar. Sit	80.60	70	eP	P	00 41 17.5	+0.4
TORD	Torodi Ar. Bea	80.60	70	P	P	00 41 17.5	+0.4
	comp=Z,1.7nm,0.7s,baz=264,slow=4.8,SNR=14						
MAW	Mawson	80.68	164	P	P	00 41 17.5	+0.8
	comp=Z,4.1nm,0.9s,baz=208,slow=6.6,SNR=8.1						
MAW	Mawson	80.68	164	eP	P	00 41 17.5	+0.8
	comp=Z,0.6nm,0.7s						
ESDC	Sonseca Array	90.26	45	P	P	00 42 05.3	+0.5
	comp=Z,0.1nm,0.3s,baz=325,slow=18,SNR=3.7						
AS31	Alice Springs	125.17	208	ePKPdf	PKPdf	00 48 05.3	+0.1
ASAR	Alice Springs	125.17	208	PKP	PKPdf	00 48 05.3	+0.1
	comp=Z,0.8nm,0.8s,baz=147,slow=2.4,SNR=6.9						
H11S2	WAKE ISLAND Hy	126.44	275	T	T	03 07 38.3	
	baz=108,slow=75,SNR=53						
H11S1	WAKE ISLAND Hy	126.45	275	T	T	03 07 34.2	
	baz=108,slow=75,SNR=73						
H11S3	WAKE ISLAND Hy	126.46	275	T	T	03 07 40.3	
	baz=108,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	126.65	276	T	T	03 07 59.5	
	baz=108,slow=79,SNR=6.1						
H11N1	WAKE ISLAND Hy	126.66	276	T	T	03 07 45.4	
	baz=108,slow=79,SNR=5.3						
H11N2	WAKE ISLAND Hy	126.66	276	T	T	03 07 51.8	
	baz=108,slow=79,SNR=5.7						
WR1	Warramunga Arr	128.24	211	ePKPdf	PKiKP	00 48 11.6	-0.2
WRA	Warramunga Arr	128.24	211	PKP	PKiKP	00 48 11.6	-0.2
	comp=Z,2.3nm,0.8s,baz=198,slow=2.4,SNR=5.2						
ZAA1	Zalesovo Array	146.70	26	ePKPdf	PKPbc	00 48 45.5	0.0
ZALV	Zalesovo Beam	146.71	26	PKPbc	PKPbc	00 48 45.5	0.0
	comp=Z,2.6nm,0.7s,baz=298,slow=2.7,SNR=11						
KSH	Kashi	149.22	56	ePKPbc	PKPdf	00 48 47.6	-1.0
KSH				epPKP	sPKPdf	00 48 58.5	+0.2
MK32	Makanchi Array	150.25	39	ePKPbc	PKiKP	00 48 56.0	+0.2
MKAR	Makanchi Array	150.25	39	PKPbc	PKiKP	00 48 56.0	+0.2
	comp=Z,2.0nm,0.9s,baz=329,slow=2.0,SNR=11						
KLR	Kul'dur	150.76	329	PKPbc	PKiKP	00 48 57.8	+1.0
	comp=Z,0.6nm,0.3s,baz=30,slow=8.4,SNR=3.7						
LZH	Lanzhou	168.90	22	ePKP	PKPdf	00 49 09.8	-1.7
LZH				pPKP	sPKPdf	00 49 22.0	+0.7
LZH				sPKP		00 49 25.2	

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*IDC **09** 00:32:59.6±1.9, 37°.92N×141°.03E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/37, mbtmp3.3/4, ML2.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/23, Error ellipse: s-maj=39.3km s-min=18.2km az=141.0*

*NIED **09** 00:33:00, 37°.50N×141°.40E, h56km, Mw3.6 Best double couple: M₀2.46000×10¹⁴ NP1:φs234.00000°, δ36.00000°, λ113.00000°. NP2:φs27.00000°, δ58.00000°, λ75.00000°.*

*JMA **09** 00:33:03.4, 37°.52N×141°.33E, h52km±1km, M3.7*

JMA Felt II J1.

ISC 09 00:33:01.6±1.8, 37°.53N±0°.05×141°.42E±0°.07, h28km±12km, n18, σ1ˢ.22/29, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.47	250	P	Pn	00 33 13.6	+1.2
JFK				iS	Sn	00 33 20.6	+0.9
JMST	Minamisoumatoc	0.47	295	P	Pn	00 33 13.7	+1.3
JMST				S	Sn	00 33 21.0	+1.2
JMM	Marumori	0.60	304	P	Pn	00 33 15.5	+1.2
JMM				S	Sn	00 33 24.1	+1.0
ONAJ	Iwakimizuishiy	0.65	230	P	Pn	00 33 15.8	+0.8
ONAJ				S	Sn	00 33 24.4	0.0
JFFD	Fukushimafurud	0.81	238	P	Pn	00 33 17.8	+0.6
JFFD				S	Sn	00 33 27.8	-0.5
JFT	Otama	0.86	270	P	Pb	00 33 19.0	+1.0
JFT				S	Sn	00 33 30.0	+0.5
JIO	Ouri	0.93	356	P	Pb	00 33 20.3	+1.2
JIO				S	Sn	00 33 32.0	+0.9
JOU	Okura	1.03	325	P	Pb	00 33 21.1	+0.2
JOU				S	Sb	00 33 33.8	-0.2
JYS	Shirataka	1.28	303	P	Pb	00 33 24.5	-0.5
JYS				S	Sb	00 33 40.1	-1.0
JFY	Yanaizu	1.37	266	P	Pb	00 33 25.5	-1.1
JFY				S	Sn	00 33 41.9	-0.2
JMK	Ichinoseki	1.43	354	P	Pb	00 33 27.0	-0.6
JMK				eS	Sb	00 33 44.3	-1.2
JYK	Kaneyama	1.62	329	P	Pb	00 33 29.7	-1.2
MJAR	Matsushiro Arr	2.75	250	Pn	Pn	00 33 45.0	+1.1
	0.4nm,0.3s,baz=53,slow=8.2,SNR=9.2						
MJAR				Lg	Lg	00 34 21.3	
	0.4nm,0.3s,baz=58,slow=40,SNR=4.4						
MAT	Matsushiro	2.75	250	P	Pn	00 33 45.6	+1.7
MAT				S	Sn	00 34 18.9	+2.7
PETK	Petropavlovsk-	19.26	31	LR	LR	00 44 32.2	
	comp=Z,21nm,19.4s,baz=150,slow=36						
ZALV	Zalesovo Beam	41.59	312	P	P	00 40 44.7	-2.0
	0.6nm,0.6s,baz=28,slow=6.5,SNR=3.8						
MKAR	Makanchi Array	43.87	302	P	P	00 41 03.6	-1.7
	0.6nm,0.8s,baz=85,slow=8.0,SNR=6.1						
ILAR	Eielson Array	49.08	33	P	P	00 41 46.5	+0.6
	0.1nm,0.5s,baz=254,slow=6.6,SNR=2.5						

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*ISCJB **09** 00:34:26.6±0.9, 26°.8S±0°.2×177°.4W±0°.2, h200km, mb3.4/6, Error ellipse: s-maj=25.7km s-min=18.9km az=0.5*

*IDC **09** 00:34:26.0±7.6, 26°.67S×177°.35W, h180km±67km, mb3.4/6, mb1 3.7/7, mb1mx3.5/28, mbtmp3.9/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/13, Error ellipse: s-maj=28.3km s-min=22.1km az=82.0*

ISC 09 00:34:27.5±0.8, 26°.6S±0°.2×177°.3W±0°.2, h200km, n18, σ1ˢ.29/14, mb3.6/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.49	283	eLR	LR	00 41 35.0	
	comp=Z,130nm,27.6s						
DZM	Mont Dzumac	15.49	283	P	P	00 37 56.8	+0.9
	0.3nm,0.3s,baz=102,slow=18,SNR=2.7						
RAR	Rarotonga	16.89	75	LR	LR	00 44 36.5	
	comp=Z,38nm,19.1s,baz=180,slow=36						
TBI	Tubuai	25.42	89	eLR	LR	00 45 32.5	
	comp=Z,98nm,28.8s						
PPT2	Papeete2	27.16	76	eLR	LR	00 46 30.5	
	comp=Z,93nm,26.0s						
STKA	Stephens Creek	36.10	252	LR	LR	00 53 39.1	
	comp=Z,46nm,18.8s,baz=24,slow=32						
ASAR	Alice Springs	44.06	263	P	P	00 42 15.3	-0.6
	0.5nm,0.4s,baz=94,slow=7.1,SNR=13						
WRA	Warramunga Arr	44.71	268	P	P	00 42 20.5	-0.6
	2.4nm,0.9s,baz=97,slow=8.9,SNR=5.1						
VNDA	Vanda	51.92	186	P	P	00 43 15.2	0.0
	0.5nm,0.6s,baz=6.2,slow=8.4,SNR=3.0						
MAW	Mawson	76.07	200	P	P	00 45 52.7	+0.2
	1.0nm,0.5s,baz=126,slow=14,SNR=5.7						
NVAR	Mina Array Bea	85.04	43	P	P	00 46 41.5	+0.7
	0.8nm,0.7s,baz=224,slow=9.0,SNR=8.5						
PDAR	Pinedale Array	92.96	43	P	P	00 47 18.9	+0.8
	0.3nm,0.6s,baz=195,slow=1.8,SNR=4.3						
ARCES	ARCESS Array B	135.01	349	PKP	PKiKP	00 53 24.1	+0.6
	3.3nm,0.9s,baz=2.5,slow=6.3,SNR=2.8						
NB2	NORSAR Subarra	145.09	353	PKP	PKiKP	00 53 41.1	-3.3
	comp=Z,3.5nm,1.1s,baz=6.6,slow=3.8						
NOA	NORSAR Array B	145.09	353	PKPbc	PKPab	00 53 40.2	-0.3
	comp=Z,0.9nm,0.8s,baz=3.8,slow=2.3,SNR=3.6						
AKASG	Malin Array Be	148.56	327	PKPbc	PKiKP	00 53 50.8	-0.9
	comp=Z,0.5nm,0.4s,baz=40,slow=3.4,SNR=4.9						
BRTR	Keskin Array B	151.14	305	PKPbc	PKiKP	00 53 57.5	-0.1

	comp=Z,0.4nm,0.6s,baz=114,slow=1.7,SNR=3.2						
BRTR				PKPab	**PKPab**	**00 54 07.5**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=85,slow=3.5,SNR=5.3						
TORD	**Torodi Ar. Bea**	**166.58**	**176**	PKPab	**PKPab**	**00 55 13.3**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=200,slow=6.3,SNR=4.4						

*ISCJB **09** 00:51:25.1±0.8, 22°.72S±0°.04×69°.13W±0°.05, h92^{km}±8^{km}, Error ellipse: s-maj=7.5km s-min=7.2km az=136.1*
*GUC **09** 00:51:25.1±0.7, 22°.71S×69°.13W, h87^{km}±3^{km}, ML3.2*
*SJA **09** 00:51:25.1±0.3, 22°.77S×69°.05W, h84^{km}±2^{km}, ML2.2, MW2.6*
ISC 09 00:51:26.1±1.5, **22°.71S**±0°.05×**69°.14W**±0°.05, **h84**^{km}±9^{km}, **n16**, σ**0^{s}.42**/28, **2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.23**	**64**	*e*P	**Pn**	**00 51 38.5**	**-0.5**
LVC				*e*S	**Sn**	**00 51 48.6**	**0.0**
LVC	**Limon Verde**	**0.23**	**64**⇓	*e*P	**Pn**	**00 51 38.6**	**-0.5**
LVC				*e*S	**Sn**	**00 51 48.1**	**-0.4**
PB06	**IPOC Station P**	**0.40**	**271**	*e*P	**Pn**	**00 51 40.0**	**+0.3**
PB06	**IPOC Station P**	**0.40**	**271**	*e*P	**Pn**	**00 51 39.4**	**-0.4**
PB06				*e*S	**Sn**	**00 51 50.2**	**+0.4**
PB06				IAML		00 51 51.0	
	comp=E,2µm,0.1s						
PB15	**IPOC Station P**	**0.58**	**212**	*e*P	**Pn**	**00 51 41.2**	**0.0**
PB15				*e*S	**Sn**	**00 51 52.8**	**+0.4**
PB15	**IPOC Station P**	**0.58**	**212**	*e*P	**Pn**	**00 51 41.1**	**-0.1**
PB15				*e*S	**Sn**	**00 51 53.2**	**+0.8**
PB03	**IPOC Station P**	**0.87**	**319**	*e*P	**Pn**	**00 51 43.8**	**-0.3**
PB03				*e*S	**Sn**	**00 51 58.0**	**+0.4**
PB03				IAML		00 51 58.4	
	comp=E,1µm,0.2s						
PB09	**IPOC Station P**	**0.92**	**354**⇓	*e*P	**Pn**	**00 51 44.8**	**+0.1**
PB09				*e*S	**Sn**	**00 51 58.9**	**+0.3**
PB05	**IPOC Station P**	**0.99**	**262**	*e*P	**Pn**	**00 51 45.0**	**-0.5**
PB05				*e*S	**Sn**	**00 52 00.5**	**+0.5**
PB04	**IPOC Station P**	**1.01**	**292**	*e*P	**Pn**	**00 51 45.2**	**-0.5**
PB04				*e*S	**Sn**	**00 52 00.9**	**+0.5**
PB04				IAML		00 52 03.4	
	comp=N,577nm,0.2s						
PB07	**IPOC Station P**	**1.20**	**325**	*e*P	**Pn**	**00 51 47.8**	**-0.3**
PB07				*e*S	**Sn**	**00 52 04.8**	**+0.2**
PB07				IAML		00 52 05.7	
	comp=N,620nm,0.2s						
PB10	**IPOC Station P**	**1.53**	**238**	*e*P	**Pn**	**00 51 51.4**	**-0.6**
PB10				*e*S	**Sn**	**00 52 11.7**	**+0.1**
PB02	**IPOC Station P**	**1.56**	**333**	*e*P	**Pn**	**00 51 52.1**	**-0.3**
PB02				*e*S	**Sn**	**00 52 12.4**	**+0.1**
PB02				IAML		00 52 14.8	
	comp=E,509nm,0.3s						
YJA	**Yavi**	**3.40**	**82**	*e*P	**Pn**	**00 52 17.6**	**+0.3**
YJA				IAML		00 52 21.1	
	comp=Z,2.4nm,0.5s						
HJA	**Humahuaca**	**3.47**	**99**	*e*P	**Pn**	**00 52 18.2**	**-0.1**
HJA				IAML		00 52 20.9	
	comp=Z,9.8nm,0.6s						
AZAP	**Zapla**	**4.03**	**113**	*e*P	**Pn**	**00 52 25.3**	**-0.4**

*ISK **09** 00:52:36.3, 42°.35N×40°.98E, h9^{km}, ML2.2/2*
*TIF **09** 00:52:36.1, 42°.38N×40°.92E, h41^{km}±3^{km}*
*DDA **09** 00:52:37.6, 42°.25N×41°.10E, h6^{km}±2^{km}, ML2.7*
ISC 09 00:52:35.7±2.0, **42°.37N**±0°.02×**41°.01E**±0°.05, **h4**^{km}±18^{km}, **n21**, σ**0^{s}.73**/41, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.92**	**146**	PG	**Pb**	**00 52 54.7**	**+0.4**
BATM				SG	**Sn**	**00 53 07.7**	**-1.4**
BATM	**Batumi**	**0.92**	**146**	P	**Pb**	**00 52 54.9**	**+0.6**
BATM				S	**Sn**	**00 53 08.6**	**-0.5**
BATM	**Batumi**	**0.92**	**146**	*i* P	**Pn**	**00 52 55.8**	**+0.3**
BATM				*i* S	**Sn**	**00 53 08.5**	**-0.7**
BCA	**Borcka**	**1.03**	**153**	PG	**Pb**	**00 52 56.1**	**-0.1**
BCA				SG	**Sb**	**00 53 10.3**	**+0.2**
DBOC	**Borcka**	**1.14**	**154**	*i* P	**Pn**	**00 52 58.7**	**+0.2**
DBOC				*i* S	**Sb**	**00 53 13.1**	**0.0**
DBOC				IAML_P			
	comp=Z,1µm,0.1s						
ARXR	**Arkhyz**	**1.21**	**9**	*e*Pg	**Pb**	**00 52 58.5**	**-0.8**
ARXR				*e*Sg	**Sb**	**00 53 13.6**	**-1.7**
DBAD	**Bademkaya**	**1.45**	**159**	*i* P	**Pn**	**00 53 02.9**	**+0.1**
DBAD				*i* S	**Sb**	**00 53 22.0**	**-0.1**
DBAD				IAML_P			
	comp=Z,487nm,0.1s						
DAGI	**Agillar**	**1.46**	**152**	*i* P	**Pb**	**00 53 03.4**	**-0.1**
DAGI				*i* S	**Sn**	**00 53 21.7**	**-0.9**
DAGI				IAML_P			
	comp=Z,142nm,0.1s						
TKB	**Tkibuli**	**1.47**	**90**	P	**Pn**	**00 53 02.9**	**-0.2**
TKB				S	**Sn**	**00 53 22.2**	**-0.6**
NEY	**Neytrino**	**1.54**	**55**	*e*Pg	**Pn**	**00 53 03.8**	**-0.3**
NEY				*e*Sg	**Sn**	**00 53 24.1**	**-0.5**
SOC	**Sochi**	**1.54**	**322**	*e*Pg	**Pb**	**00 53 04.8**	**-0.1**
SOC				*e*Sg	**Sg**	**00 53 25.4**	**+0.2**
EPOS	**Posof**	**1.55**	**123**	*i* P	**Pn**	**00 53 04.5**	**+0.3**
EPOS				*i* S	**Sb**	**00 53 25.4**	**+0.3**
ONI	**Oni**	**1.82**	**82**	PN	**Pn**	**00 53 08.9**	**+1.0**
ONI				SN	**Sb**	**00 53 32.8**	**-0.1**
ONI	**Oni**	**1.82**	**82**	P	**Pb**	**00 53 09.5**	**-0.2**
ONI				S	**Sb**	**00 53 33.3**	**+0.4**
SHA1	**Shidzhatmaz**	**1.82**	**41**	*e*Pg	**Pn**	**00 53 09.1**	**+0.9**
SHA1				*e*Sg	**Sn**	**00 53 32.5**	**+0.7**
LZRR	**Lazarevskoye**	**1.97**	**323**	*e*Pg	**Pb**	**00 53 12.8**	**+0.7**
LZRR				*e*Sg	**Sg**	**00 53 38.4**	**-0.5**
DIGR	**Digorskoe uzhe**	**1.97**	**74**	*e*Pg	**Pn**	**00 53 11.5**	**+1.4**
DIGR				*e*Sg	**Sn**	**00 53 36.3**	**+1.0**
KIV	**Kislovodsk**	**2.00**	**37**	PN	**Pn**	**00 53 11.7**	**+1.2**
KIV				SN	**Sn**	**00 53 37.2**	**+1.1**
KIV0	**Kislovodsk Arr**	**2.01**	**37**	*i* Pg	**Pb**	**00 53 12.4**	**-0.5**
KIV0				*i* Sg	**Sb**	**00 53 37.9**	**-0.4**
SENK	**Senkaya-Erzuru**	**2.07**	**150**	PN	**Pn**	**00 53 12.1**	**+0.6**
LACR	**Lac**	**2.47**	**78**	*e*Pn	**Pb**	**00 53 20.6**	**-0.2**
LACR				*e*Sn	**Sb**	**00 53 50.7**	**-0.9**

*BJI **09** 01:05:35.1±0.0, 1°.87N×96°.27E, h26^{km}, mb4.9/47, mB4.8/32, Ms4.4/25, Ms7 4.2/23*
*IDC **09** 01:05:35.0±0.8, 2°.16N×96°.21E, h0^{km}, mb4.3/19, mb1 4.4/21, mb1mx4.2/37, mbtmp4.3/21, ML4.5/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/38, Error ellipse: s-maj=25.1km s-min=13.6km az=40.0*
*ISCJB **09** 01:05:37.4±0.7, 2°.09N±0°.03×96°.25E±0°.03, h29^{km}±5^{km}, mb4.6/62, MS4.0/14, Error ellipse: s-maj=6.3km s-min=3.4km az=144.1*
*DJA **09** 01:05:38.2±0.6, 2°N±2°×9°6E±°, h15^{km}±3^{km}, M5.0/14, mB5.5/7, mb5.2/9, MLv4.9/14, Mw(mB)4.9/7*
*NEIC **09** 01:05:40.1±1.1, 2°.15N×96°.26E, h32^{km}±5^{km}, mb4.6/31, Error ellipse: s-maj=15.1km s-min=6.4km az=60.0*
*MOS **09** 01:05:41.2±1.0, 2°.22N×96°.37E, h57^{km}, mb4.9/25, Error ellipse: s-maj=10.5km s-min=6.0km az=103.2*
ISC 09 01:05:39.6±0.7, **2°.11N**±0°.04×**96°.28E**±0°.05, **h30**^{km}±4^{km}, **n191**, σ**1^{s}.53**/202, **mb4.7**/68, **MS4.0**/15, **7C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.30**	**10**	P	**Pb**	**01 05 45.4**	**-1.8**
SNSI				S	**Sb**	**01 05 50.1**	**-2.1**
GSI	**Gunungsitoli**	**1.53**	**122**	*e*Pn	**Pn**	**01 06 05.7**	**+0.8**
GSI				*e*Sn	**Sn**	**01 06 23.9**	**+0.1**
GSI	**Gunungsitoli**	**1.53**	**122**	P	**Pn**	**01 06 05.6**	**+0.7**
GSI				S	**Sn**	**01 06 24.7**	**+0.9**
KCSI	**Kotacane, Aceh**	**2.05**	**47**	P	**Pn**	**01 06 11.8**	**-0.3**
KCSI				S	**Sb**	**01 06 39.3**	**-2.0**
MLSI	**Meulaboh, Aceh**	**2.14**	**3**	P	**Pn**	**01 06 12.0**	**-1.4**
MLSI				S	**Sn**	**01 06 39.5**	**+0.5**
TSI	**Tuntungan**	**2.67**	**59**	P	**Pn**	**01 06 21.8**	**+1.2**
PSI	**Prapat**	**2.73**	**75**	Pn	**Pn**	**01 06 22.1**	**+0.6**
	32nm,0.3s,baz=278,slow=9.8,SNR=87						
PSI				LR	LR	01 07 33.1	
	comp=Z,603nm,18.8s,baz=5.5,slow=43						
PBSI	**Pulau Batu**	**2.94**	**137**	P	**Pn**	**01 06 25.6**	**+1.3**
PBSI				S	**Sn**	**01 06 57.2**	**-1.5**
LHMI	**Lhok Sumawe**	**3.17**	**12**	*e*Pn	**Pn**	**01 06 27.4**	**-0.1**
LHMI				*e*Sn	**Sn**	**01 07 04.1**	**-0.1**
LHMI	**Lhok Sumawe**	**3.17**	**12**	P	**Pn**	**01 06 27.7**	**+0.2**
SISI	**Saibi**	**4.43**	**140**	P	**Pn**	**01 06 46.3**	**+1.5**
SISI				S	**Sn**	**01 07 33.2**	**-2.1**
BKNI	**Bangkinang**	**5.08**	**110**	*e*Pn	**Pn**	**01 06 54.9**	**+1.1**
BKNI				*e*Sn	**Sn**	**01 07 51.9**	**+0.4**
BKNI	**Bangkinang**	**5.08**	**110**	P	**Pn**	**01 06 54.8**	**+1.0**
PDSI	**Padang**	**5.15**	**126**	P	**Pn**	**01 06 56.9**	**+2.1**
PDSI				S	**Sn**	**01 07 48.8**	**-4.5**
KULM	**Kulim**	**5.39**	**54**	*e*Pn	**Pn**	**01 06 58.3**	**+0.3**
KULM				*e*Sn	**Sn**	**01 07 57.4**	**-1.7**
TRTT	**Trang**	**6.63**	**31**	P	**Pn**	**01 07 14.7**	**-0.3**
	51nm,0.8s,0.3nm						
SKLT	**Songkhla**	**6.63**	**41**	P	**Pn**	**01 07 14.6**	**-0.5**
	90nm,0.9s,832nm0.3nm						
KRJI	**Kerinci**	**6.66**	**129**	P	**Pn**	**01 07 16.0**	**+0.4**
MYKOM	**Kota Tinggi**	**7.58**	**92**	*e*Pn	**Pn**	**01 07 28.3**	**+0.2**
MNAI	**Manna**	**9.27**	**134**	*e*Pn	**Pn**	**01 07 52.0**	**+0.7**
MNAI				*e*Sn	**Sn**	**01 09 31.6**	**-3.1**
MNAI	**Manna**	**9.27**	**134**	P	**Pn**	**01 07 52.1**	**+0.7**
LHSI	**Lahat**	**9.34**	**129**	P	**Pn**	**01 07 53.2**	**+0.9**
PBA	**Port Blair**	**10.11**	**340**	*e*P	Pn	01 08 01.2	-1.6
MDSI	**Maura Dua**	**10.26**	**130**	P	**Pn**	**01 08 04.9**	**-0.1**
KASI	**Kota Agung**	**11.18**	**133**	P	**Pn**	**01 08 16.4**	**-1.1**
CHBT	**CHBT**	**12.15**	**29**	P	**P**	**01 08 46.7**	**+3.6**
LEM	**Lembang**	**14.39**	**128**	LR	LR	01 15 43.5	
	comp=Z,507nm,19.4s,baz=234,slow=42						
CHAI	**Chaiyaphum**	**14.81**	**22**	P	**P**	**01 09 12.2**	**-0.5**
UTTA	**Uttaradit**	**16.09**	**15**	P	**P**	**01 09 26.2**	**-0.7**
	30µm,0.8s						
PALK	**Pallekele**	**16.34**	**289**	LR	LR	01 15 40.4	
	comp=Z,231nm,18.9s,baz=116,slow=37						
CM31	**Chiang Mai Arr**	**16.45**	**9**	*e*Pn	**Pn**	**01 09 28.6**	**+0.2**
	22nm,1.0s						
CMAR	**Chiang Mai Arr**	**16.45**	**9**	Pn	**Pn**	**01 09 28.6**	**+0.2**
	1.2nm,0.3s,baz=195,slow=12,SNR=23						
CMAR				LR	LR	01 16 21.6	
	comp=Z,422nm,19.1s,baz=195,slow=39						
CMAR	**Chiang Mai Arr**	**16.45**	**9**	*i* P	**P**	**01 09 29.7**	**-1.2**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SKNT	**Sakolnakorn**	**16.60**	**27**	P	**P**	**01 09 39.6**	**+7.1**
CHTO	**Chiang Mai**	**16.80**	**9**	*e*Pn	**Pn**	**01 09 30.9**	**-1.9**
	comp=Z,5.1nm,0.7s						
CHTO	**Chiang Mai**	**16.80**	**9**	*e*P	**Pn**	**01 09 30.9**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMMT	**Chiang Mai**	**16.80**	**9**	P	**Pn**	**01 09 32.9**	**0.0**
	comp=Z,3.5nm,0.7s						
PANO	**Nakornpanom**	**17.04**	**28**	P	**Pn**	**01 09 35.0**	**-0.8**
	comp=Z,0.9nm,1.2s						
NONG	**Nongkai**	**17.23**	**23**	P	**Pn**	**01 09 38.6**	**+0.5**
	comp=Z,0.3nm,0.9s,comp=Z,205nm						
PAYA	**Payao**	**17.50**	**11**	P	**P**	**01 09 43.2**	**+0.7**
	comp=Z,23µm,0.9s						
TRD	**Trivandrum**	**20.25**	**289**	*e*P	**P**	**01 10 13.0**	**+0.3**
KKM	**Kota Kinabalu**	**20.27**	**78**	*e*P	**P**	**01 10 13.9**	**+0.8**
	comp=Z,51nm,0.9s						
SLVN	**Son La**	**20.50**	**21**	*e*P	**P**	**01 10 15.1**	**-0.4**
	comp=Z,23nm,1.0s						
SAIH	**SAIHA**	**20.51**	**351**	*e*P	**P**	**01 10 14.3**	**-1.3**
SAIH				IAmb	IAmb	01 10 21.1	
	comp=Z,27nm,1.3s						
BWNR	**Bhubaneshwar**	**20.76**	**331**	*e*P	**P**	**01 10 18.4**	**+0.1**
BWNR				IAmb	IAmb	01 10 19.0	
	comp=Z,30nm,1.2s						
QIZ	**Qiongzhong**	**21.43**	**37**	P	**P**	**01 10 26.2**	**+0.8**
QIZ				S	**S**	**01 14 24.2**	**+2.4**
QIZ				LR	LR		
	comp=Z,780nm,14.1s						
QIZ				LR	LR		
	comp=Z,490nm,13.3s						
QIZ				LR	LR		
	comp=Z,820nm,14.1s						
SILR	**SILCHAR**	**22.79**	**352**	*e*P	**P**	**01 10 37.9**	**-1.9**
KOHI	**KOHIMA**	**23.57**	**355**	*e*P	**P**	**01 10 46.1**	**-1.8**
SHL	**Shillong**	**23.70**	**350**	*e*P	**P**	**01 10 47.2**	**-2.0**
	comp=Z,39nm,0.7s						
SHL	**Shillong**	**23.70**	**350**	*e*P	**P**	**01 10 47.2**	**-2.0**
SHL				pmax	pmax		
	comp=Z,39nm,0.7s						
SHL	**Shillong**	**23.70**	**350**	*e*P	**P**	**01 10 48.4**	**-0.8**
SHL				IAmb	IAmb	01 10 49.4	
	comp=Z,24nm,0.7s						
KMI	**Kunming**	**23.71**	**15**	P	**P**	**01 10 50.4**	**+1.0**
KMI				pP	pP	01 10 55.9	-2.0
KMI				S	**S**	**01 15 01.4**	**-1.4**
KMI				pmax	pmax		
	comp=Z,21nm,0.6s						
KMI				pmax	pmax		
	comp=Z,130nm,3.2s						
KMI				LR	LR		
	comp=Z,300nm,21.8s						
KMI				LR	LR		
	comp=Z,170nm,15.3s						
KMI				LR	LR		
	comp=Z,340nm,14.6s						
BOK	**Bokaro**	**23.79**	**336**	*e*P	**P**	**01 10 48.0**	**-1.9**
MNCY	**Minicoy**	**23.93**	**286**	*e*P	**P**	**01 10 51.5**	**+0.2**
GUWA	**GUWAHATI**	**24.34**	**350**	*e*P	**P**	**01 10 53.8**	**-1.1**
GUWA				IAmb	IAmb	01 10 55.2	
	comp=Z,28nm,1.1s						
KAPI	**Kappang**	**24.50**	**107**	P	**P**	**01 10 57.1**	**+0.6**
	comp=Z,15nm,0.8s,baz=287,slow=7.8,SNR=6.8						
KAPI	**Kappang**	**24.50**	**107**	*e*P	**P**	**01 10 57.2**	**+0.6**
	comp=Z,17nm,0.8s						
KAPI	**Kappang**	**24.50**	**107**	*e*P	**P**	**01 10 57.2**	**+0.6**
KAPI				pmax	pmax		
	comp=Z,17nm,0.8s						
TEZP	**TEZPUR**	**24.59**	**353**	*e*P	**P**	**01 10 55.6**	**-1.6**
NGP	**Nagpur**	**25.30**	**320**	*e*P	**P**	**01 11 02.7**	**-1.0**
ZIRO	**ZIRO**	**25.38**	**355**	*e*P	**P**	**01 11 03.4**	**-1.1**
ZIRO				IAmb	IAmb	01 11 04.1	
	comp=Z,174nm,0.1s						
H08S2	**Diego Garcia H**	**25.63**	**248**	T	T	01 37 41.7	
	baz=67,slow=75,SNR=1569						
H08S3	**Diego Garcia H**	**25.63**	**248**	T	T	01 37 41.8	
	baz=67,slow=75,SNR=3922						
H08S1	**Diego Carcia H**	**25.65**	**248**	T	T	01 37 43.0	
	baz=67,slow=75,SNR=3915						
TAWA	**Tawang**	**25.69**	**351**	*e*P	**P**	**01 11 07.0**	**-0.6**
TAWA				IAmb	IAmb	01 11 08.2	
	comp=Z,24nm,1.1s						
GOA	**Goa**	**25.82**	**302**	*e*P	**P**	**01 11 08.5**	**0.0**
GTK	**Tadong**	**26.12**	**344**	*e*P	**P**	**01 11 11.6**	**+0.3**
GTK				IAmb	IAmb	01 11 14.1	
	comp=Z,20nm,0.8s						
GYA	**Guiyang**	**26.18**	**21**⇓	*i*P	**P**	**01 11 11.3**	**-0.5**
GYA				pP	pP	01 11 22.0	+1.4
GYA				S	**S**	**01 15 42.1**	**0.0**
GYA				SS	**SnSn**	**01 16 50.3**	**+7.8**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,60nm,7.3s						
GYA				LR	LR		
	comp=Z,200nm,12.9s						
GYA				LR	LR		
	comp=Z,180nm,12.7s						
GYA				LR	LR		
	comp=Z,310nm,13.4s						
JIRN	**Jiri**	**27.18**	**340**	*e*P	**P**	**01 11 21.9**	**+0.9**
	comp=Z,70nm,0.7s						
PKI	**Pulchoki**	**27.37**	**339**	*e*P	**P**	**01 11 23.1**	**+0.4**
	comp=Z,19nm,0.7s						
PKIN	**Phulchoki**	**27.38**	**339**	*e*P	**P**	**01 11 23.1**	**+0.3**
	comp=Z,8.0nm,0.6s						
GUN	**Gumba**	**27.51**	**340**	*e*P	**P**	**01 11 25.3**	**+1.3**
	comp=Z,46nm,0.6s						
DMN	**Daman**	**27.52**	**338**	*e*P	**P**	**01 11 24.5**	**+0.5**
	comp=Z,18nm,0.7s						
KKN	**Kakani**	**27.61**	**339**	*e*P	**P**	**01 11 25.4**	**+0.6**
	comp=Z,32nm,0.9s						
LSA	**Lhasa**	**27.87**	**350**	P	**P**	**01 11 27.4**	**+0.1**
LSA				pmax	pmax		
	comp=Z,49nm,0.9s						
LSA	**Lhasa**	**27.87**	**350**	P	**P**	**01 11 28.1**	**+0.8**
LSA				pmax	pmax		
	comp=Z,130nm,1.1s						
GKN	**Gorkha**	**28.05**	**338**	*e*P	**P**	**01 11 29.5**	**+0.9**
	comp=Z,52nm,0.7s						
KOLN	**Koldanda**	**28.25**	**336**	*e*P	**P**	**01 11 30.9**	**+0.4**
	comp=Z,35nm,0.8s						
DANN	**Dangsing**	**28.70**	**337**	*e*P	**P**	**01 11 36.0**	**+1.4**
	comp=Z,28nm,0.6s						
PYUN	**Piuthan**	**28.79**	**335**	*e*P	**P**	**01 11 36.2**	**+0.9**
	comp=Z,26nm,0.8s						
CD2	**Chengdu**	**29.50**	**13**	*e*P	**P**	**01 11 42.5**	**+1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
QZH	**Quanzhou**	**31.29**	**42**	*e*P	P	01 12 04.0	+6.9
QZH				S	**S**	**01 17 08.3**	**+6.2**
QZH				LR	LR		
	comp=N,320nm,16.8s						
QZH				LR	LR		
	comp=E,190nm,12.8s						
QZH				LR	LR		
	comp=Z,320nm,16.5s						
YULB	**Yu-li**	**32.17**	**47**	*e*P	**P**	**01 12 03.4**	**-1.6**
	comp=Z,8.2nm,0.6s						
WHN	**Wuhan**	**33.06**	**29**	P	**P**	**01 12 12.8**	**+0.2**
WHN				S	**S**	**01 17 22.8**	**-6.9**
WHN				LR	LR		
	comp=Z,570nm,13.7s						
WHN				LR	LR		
	comp=Z,380nm,7.3s						
WHN				LR	LR		
	comp=Z,590nm,15.5s						
XAN	**Xi'an**	**33.89**	**19**	*e*P	**P**	**01 12 18.8**	**-1.1**
	comp=Z,60nm,0.7s						
XAN	**Xi'an**	**33.89**	**19**	P	**P**	**01 12 19.0**	**-0.9**
XAN				pP	pP	01 12 25.0	-3.5
XAN				pmax	pmax		
	comp=Z,81nm,0.9s						
XAN				pmax	pmax		
	comp=Z,63nm,3.8s						
XAN	**Xi'an**	**33.89**	**19**	*e*P	**P**	**01 12 18.8**	**-1.1**
XAN				pmax	pmax		
	comp=Z,59nm,0.7s						
SMLA	**Simla**	**34.05**	**330**	*e*P	**P**	**01 12 20.8**	**-0.4**
SMLA				IAmb	IAmb	01 12 22.9	
	comp=Z,4.7nm,0.6s						
LZH	**Lanzhou**	**34.52**	**11**	⇑P	**P**	**01 12 25.1**	**-0.4**
LZH				pP	pP	01 12 33.2	-1.2
LZH				sP	sP	01 12 39.0	+1.4
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.3s						
LZH				LR	LR		
	comp=Z,140nm,16.3s						
LZH				LR	LR		
	comp=Z,250nm,17.9s						
LZH				LR	LR		
	comp=Z,170nm,17.4s						
DHRM	**DHARAMSHALA**	**35.39**	**330**	*e*P	**P**	**01 12 35.0**	**+2.0**
DHRM				IAmb	IAmb	01 12 40.3	
	comp=Z,52nm,0.1s						
NJ2	**Nanjing**	**36.59**	**33**	*e*P	**P**	**01 12 45.1**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GTA	**Gaotai**	**37.26**	**5**	*e*P	**P**	**01 12 48.6**	**-0.3**
GTA				pP	pP	01 12 53.0	-4.8
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
H01W3	**Cape Leeuwin H**	**40.44**	**157**	T	T	01 56 12.2	
	baz=334,slow=76,SNR=196						
H01W2	**Cape Leeuwin H**	**40.45**	**157**	T	T	01 56 19.6	
	baz=334,slow=76,SNR=203						
H01W1	**Cape Leeuwin H**	**40.45**	**157**	T	T	01 56 21.6	
	baz=334,slow=76,SNR=183						
HHC	**Hu-ho-hao-te**	**40.97**	**18**	P	**P**	**01 13 20.5**	**+0.7**
HHC				pP	pP	01 13 27.8	-0.7
HHC				S	**S**	**01 19 31.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.3s						
HHC				LR	LR		
	comp=Z,230nm,16.1s						
HHC				LR	LR		
	comp=Z,170nm,13.2s						
HHC				LR	LR		
	comp=Z,270nm,16.4s						
KSH	**Kashi**	**41.57**	**336**	P	**P**	**01 13 23.6**	**-1.2**
KSH				sP	sP	01 13 35.3	-1.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,110nm,5.4s						
KSH				LR	LR		
	comp=Z,52nm,6.8s						
KSH				LR	LR		
	comp=Z,110nm,6.7s						
BJT	**Baijiatuau**	**41.83**	**23**	*e*P	**P**	**01 13 26.9**	**+0.1**
	comp=Z,37nm,0.7s						
BJT	**Baijiatuau**	**41.83**	**23**	*e*P	**P**	**01 13 26.9**	**+0.1**
BJT				pmax	pmax		
	comp=Z,37nm,0.7s						
WMQ	**Urumqi**	**42.23**	**351**	*e*P	**P**	**01 13 30.7**	**+0.6**
WMQ				pP	pP	01 13 37.8	-0.9
WMQ				LR	LR		
	comp=Z,140nm,29.2s						
WMQ				LR	LR		
	comp=Z,400nm,29.1s						
WMQ				LR	LR		
	comp=Z,98nm,20.9s						
WR1	**Warramunga Arr**	**43.30**	**122**	*e*P	**P**	**01 13 39.6**	**+0.5**
WRA	**Warramunga Arr**	**43.30**	**122**	P	**P**	**01 13 39.6**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=295,slow=9.9,SNR=11						
WRAB	**Tennant Creek**	**43.30**	**122**	*ce*P	**P**	**01 13 37.4**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
WB2	**Warramunga Arr**	**43.31**	**122**	*e*P	**P**	**01 13 39.1**	**-0.1**
	comp=Z,9.2nm,0.8s						
KDJ	**Kajisay**	**43.37**	**339**	*e*P	**P**	**01 13 37.3**	**-2.2**
	comp=Z,11nm,0.8s						
KDJ	**Kajisay**	**43.37**	**339**	*e*P	**P**	**01 13 37.3**	**-2.2**
KDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
PDGK	**Podgornoye**	**43.68**	**342**	P	**P**	**01 13 43.3**	**+1.4**
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GAR	**Garm**	**43.69**	**330**	*e*P	**P**	**01 13 42.4**	**+0.3**
	comp=Z,9.1nm,0.6s						
GAR	**Garm**	**43.69**	**330**	*e*P	**P**	**01 13 42.4**	**+0.3**
GAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BOOM	**Boomskoye usch**	**44.13**	**338**	*e*P	**P**	**01 13 46.2**	**+0.6**
	comp=Z,4.9nm,0.8s						
BOOM	**Boomskoye usch**	**44.13**	**338**	*e*P	**P**	**01 13 46.3**	**+0.6**
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BTK	**Batken**	**44.27**	**332**	*e*P	**P**	**01 13 46.5**	**-0.1**
	comp=Z,15nm,1.1s						
BTK	**Batken**	**44.27**	**332**	*e*P	**P**	**01 13 46.6**	**-0.1**
BTK				pmax	pmax		
	comp=Z,15nm,1.1s						
JAY	**Jayapura**	**44.66**	**96**	LR	LR	01 35 21.8	
	comp=Z,56nm,19.7s,baz=220,slow=40						
ASAR	**Alice Springs**	**44.68**	**127**	P	**P**	**01 13 50.6**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=302,slow=7.9,SNR=16						
AS31	**Alice Springs**	**44.68**	**127**	*e*P	**P**	**01 13 50.6**	**+0.4**
	comp=Z,1.5nm,0.8s						
AAK	**Ala-Archa**	**44.81**	**337**	*ce*P	**P**	**01 13 52.2**	**+1.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KS15	**Wonju Array Si**	**45.61**	**36**	*e*P	**P**	**01 13 56.5**	**-0.7**
	comp=Z,26nm,1.4s						
KSRS	**Korea Array**	**45.64**	**36**	P	**P**	**01 13 56.5**	**-1.0**
	comp=Z,4.3nm,1.1s,baz=218,slow=9.1,SNR=7.9						
MK31	**Makanchi Array**	**46.14**	**347**	*e*P	**P**	**01 14 01.0**	**-0.4**
	comp=Z,13nm,0.8s						
MK31	**Makanchi Array**	**46.14**	**347**	*e*P	**P**	**01 14 01.0**	**-0.4**
MK31				pmax	pmax		
	comp=Z,13nm,0.8s						
MK32	**Makanchi Array**	**46.14**	**347**	*e*P	**P**	**01 14 01.1**	**-0.3**
MKAR	**Makanchi Array**	**46.14**	**347**	P	**P**	**01 14 01.1**	**-0.3**
	comp=Z,21nm,0.9s,baz=160,slow=7.6,SNR=101						
MAKZ	**Makanchi**	**46.23**	**346**	*e*P	**P**	**01 14 02.0**	**0.0**
	comp=Z,14nm,0.8s						
MAKZ	**Makanchi**	**46.23**	**346**	*e*P	**P**	**01 14 02.0**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,14nm,0.8s						
SONA0	**Songino Array**	**46.38**	**9**	*e*P	**P**	**01 14 03.4**	**+0.1**
SONA0				*e*PcP	**PcP**	**01 15 38.5**	**+0.5**
SONM	**Songino Array**	**46.38**	**9**	P	**P**	**01 14 03.4**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=189,slow=8.7,SNR=28						
SONM				PcP	**PcP**	**01 15 38.5**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=216,slow=2.1,SNR=4.1						
SONM				LR	LR	01 35 43.9	
	comp=Z,181nm,19.2s,baz=226,slow=39						
ULN	**Ulaanbaatar**	**46.52**	**10**	*e*P	**P**	**01 14 04.2**	**-0.3**
	comp=Z,7.2nm,1.1s						

ULN	Ulaanbaatar	46.52	10	ceP	P	01 14 03.8	-0.7
ULN				pmax	pmax		
	comp=Z,16nm,2.5s						
KK31	Karatay Array	46.84	334	eP	P	01 14 06.9	+0.1
	comp=Z,4.4nm,0.8s						
KK31	Karatay Array	46.84	334	eP	P	01 14 06.9	+0.1
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	46.84	334	eP	P	01 14 07.4	+0.5
	comp=Z,4.4nm,0.8s						
KKAR	Karatay Array	46.84	334	eP	P	01 14 07.4	+0.5
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAK	Zakamensk	48.46	6	eP	P	01 14 19.1	-0.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.9s						
MOY	Mondy	49.54	4	eP	P	01 14 28.8	+1.1
TLY	Talaya	49.78	6	eP	P	01 14 30.9	+1.5
TLY				pmax	pmax		
	comp=Z,15nm,0.9s						
TLY				MLR	MLR		
	comp=Z,224nm,14.0s						
GEYT	Alibeck	49.93	320	P	P	01 14 31.2	+0.4
	comp=Z,2.3nm,0.6s,baz=140,slow=9.1,SNR=6.8						
GEYT				LR	LR	01 37 36.8	
	comp=Z,67nm,20.8s,baz=80,slow=39						
OTUK	Ortayu	50.37	339	P	P	01 14 34.2	+0.2
OTUK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURK	Kurchatov	50.68	346	eP	P	01 14 36.5	+0.3
	comp=Z,6.1nm,1.1s						
KURK	Kurchatov	50.68	346	⇑eP	P	01 14 35.2	-1.0
MAJO	Matsushiro	51.65	43	eP	P	01 14 42.7	-1.1
MAJO	Matsushiro	51.65	43	eP	P	01 14 42.7	-1.1
MJAR	Matsushiro Arr	51.66	43	P	P	01 14 42.7	-1.2
	comp=Z,0.9nm,0.5s,baz=208,slow=5.8,SNR=4.4						
USRK	Ussuriysk Ar.	52.48	32	P	P	01 14 48.9	-0.9
	comp=Z,1.6nm,0.6s,baz=242,slow=4.1,SNR=8.5						
ZAA0	Zalesovo Array	52.52	351	eP	P	01 14 49.7	-0.2
	comp=Z,17nm,0.6s						
ZALV	Zalesovo Beam	52.52	351	P	P	01 14 49.7	-0.2
	comp=Z,15nm,0.4s,baz=174,slow=7.1,SNR=61						
ZALV				LR	LR	01 41 36.1	
	comp=Z,68nm,20.4s,baz=249,slow=41						
ZAA1	Zalesovo Array	52.52	351	eP	P	01 14 49.7	-0.2
RAYN	Ar Rayn	53.52	298	eP	P	01 14 58.5	+0.6
	comp=Z,2.9nm,0.8s						
RAYN	Ar Rayn	53.52	298	eP	P	01 14 58.5	+0.6
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
STKA	Stephens Creek	54.65	132	P	P	01 15 06.8	+0.9
	comp=Z,3.2nm,0.7s,baz=310,slow=11,SNR=5.6						
STKA	Stephens Creek	54.65	132	eP	P	01 15 07.0	+1.0
	comp=Z,1.5nm,0.8s						
STKA	Stephens Creek	54.65	132	eP	P	01 15 07.0	+1.0
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLR	Kul'dur	55.87	27	c iP	P	01 15 13.5	-0.9
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABKAR	Akbulak array	56.28	332	eP	P	01 15 17.2	-0.1
	comp=Z,4.5nm,0.8s						
SVE	Sverdlovsk	61.51	339	eP	P	01 15 52.8	-0.7
ARU	Arti	61.99	337	c iP	P	01 15 56.1	-0.7
ARU				S	S	01 24 21.3	+2.2
ARU				SS	SS	01 28 21.8	-0.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NKL	Nikolayevsk	62.66	28	eP	P	01 15 54.6	-6.7
NKL				e		01 16 39.1	
NKL				e		01 18 19.1	
NKL				eS	S	01 24 40.1	+12
NKL				e		01 25 51.6	
NKL				pmax	pmax		
	comp=E,17nm,1.0s						
NKL				pmax	pmax		
	comp=N,4.0nm,0.6s						
NKL				pmax	pmax		
	comp=Z,21nm,1.1s						
NKL				pmax	pmax		
	comp=Z,62nm,2.8s						
KBZ	Khabaz	62.78	319	P	P	01 16 02.2	-0.1
	comp=Z,1.9nm,0.7s,baz=124,slow=9.1,SNR=5.1						
YAK	Yakutsk	64.81	17	eP	P	01 16 14.7	-0.6
	comp=Z,38nm,0.8s						
YAK	Yakutsk	64.81	17	eP	P	01 16 14.7	-0.6
YAK				pmax	pmax		
	comp=Z,37nm,0.8s						
BR101	Keskin Array S	67.82	312	eP	P	01 16 34.1	-1.1
BRTR	Keskin Array B	67.82	312	P	P	01 16 34.1	-1.1
	comp=Z,0.6nm,0.8s,baz=112,slow=8.1,SNR=5.2						
VSR	Storozhevoye	68.30	325	eP	P	01 16 35.0	-2.8
VSR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PRGR	Permogore	70.44	337	eP	P	01 16 49.2	-1.6
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	Petropavlovsk-	71.50	34	P	P	01 16 57.4	0.0
	comp=Z,1.4nm,0.7s,baz=200,slow=12,SNR=3.2						
PEA1	Petropavlovsk-	71.50	34	eP	P	01 16 57.4	0.0
KIS	Kishinev	73.21	319	eP	P	01 17 10.0	+2.2
KIS	Kishinev	73.21	319	eP	P	01 17 10.0	+2.2
AKASG	Malin Array Be	73.98	322	P	P	01 17 10.5	-1.7
	comp=Z,0.2nm,0.2s,baz=90,slow=5.0,SNR=3.1						
AKASG				PKKP	PKKPdf	01 36 28.1	-3.4
	comp=Z,0.7nm,0.5s,baz=217,slow=14,SNR=4.7						
AKBB	Malin Array Si	73.98	322	eP	P	01 17 10.5	-1.7
	comp=Z,2.2nm,0.6s						
AKBB	Malin Array Si	73.98	322	eP	P	01 17 10.5	-1.7
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LVZ	Lovozero	77.67	340	eP	P	01 17 33.2	+0.2
	comp=Z,12nm,0.9s						
LVZ	Lovozero	77.67	340	eP	P	01 17 33.2	+0.2
LVZ				pmax	pmax		
	comp=Z,12nm,0.9s						
KOLS	Kolonicke sedl	77.93	320	eP	P	01 17 36.4	+1.6
KOLS				e		01 17 51.0	
KOLS	Kolonicke sedl	77.93	320	eP	P	01 17 36.4	+1.6
KOLS				esP	sP	01 17 51.0	+3.3
FIA0	FINESS Array S	78.77	333	eP	P	01 17 39.0	-0.1
FIA0	FINESS Array S	78.77	333	eP	P	01 17 39.1	-0.1
FINES	FINESS Array B	78.77	333	P	P	01 17 39.0	-0.1
	comp=Z,2.5nm,0.7s,baz=95,slow=6.0,SNR=9.6						
FINES				LR	LR	01 56 24.2	
	comp=Z,49nm,20.2s,baz=94,slow=39						
ARA0	ARCESS Array S	81.37	340	eP	P	01 17 53.4	+0.3
ARCES	ARCESS Array B	81.37	340	P	P	01 17 53.4	+0.3
	comp=Z,2.2nm,0.6s,baz=91,slow=6.1,SNR=10						
GEC2	GERESS Array S	83.52	319	eP	P	01 18 05.0	+0.1
	comp=Z,3.8nm,1.2s						
GEC2	GERESS Array S	83.52	319	eP	P	01 18 05.0	+0.1
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GERES	GERESS Array B	83.52	319	P	P	01 18 05.0	+0.1
	comp=Z,0.5nm,0.6s,baz=98,slow=5.8,SNR=6.6						
NB200	NORSAR Array S	85.76	331	eP	P	01 18 15.8	-0.1
NOA	NORSAR Array B	85.76	331	P	P	01 18 15.8	-0.1
	comp=Z,1.0nm,0.8s,baz=94,slow=5.2,SNR=3.0						
NOA				LR	LR	02 00 37.1	
	comp=Z,35nm,20.3s,baz=70,slow=38						
TAM	Tamanrasset	89.89	293	epP	pP	01 18 45.5	-0.4
TAM	Tamanrasset	89.89	293	eP	P	01 18 45.5	+8.9
NV01	Mina Array Sit	128.58	35	ePKPdf	PKiKP	01 24 45.1	0.0
NVAR	Mina Array Bea	128.58	35	PKP	PKiKP	01 24 45.1	0.0
	comp=Z,0.2nm,0.6s,baz=337,slow=3.4,SNR=3.6						
TXAR	Lajitas Array	143.36	30	PKP	PKPdf	01 25 10.9	-1.1
	comp=Z,0.6nm,0.6s,baz=186,slow=1.3,SNR=3.6						
152A	Waverly Hall	145.40	1	ePKPbc	PKPdf	01 25 15.8	+0.4

SVSA 09 01:09:14.8±0.7, 38°.55N×29°.75W, h10km, MD3.5, ML2.6, Error ellipse: s-maj=15.2km s-min=6.8km az=2.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	0.82	88	eS	Sg	01 09 37.6	-3.7
PCED	Cedros	0.82	84	eP	Pg	01 09 27.4	-3.2
PCED				eS	Sg	01 09 37.3	-4.0
PCED				A	A	01 09 38.5	
	135nm,0.2s						
HOR	Horta	0.88	91	eS	Sg	01 09 38.6	-4.4
HOR				A	A	01 09 40.4	
	194nm,0.2s						
PCAN	Candelaria	0.99	95	eS	Sg	01 09 41.5	-5.3
PCAN				A	A	01 09 45.5	
	56nm,0.2s						
PICO	Pico	1.04	92	eP	Pg	01 09 31.2	-3.5
PICO				eS	Sg	01 09 42.8	-5.4
PICO				A	A	01 09 45.5	
	198nm,0.3s						
ROSA	Rosais	1.19	81	eP	Pb	01 09 32.8	-4.6
ROSA				eS	Sb	01 09 46.5	-6.4
ROSA				A	A	01 09 48.6	
	81nm,0.2s						
PMAN	Manadas	1.30	86	eS	Sb	01 09 49.0	-7.1
PMAN				A	A	01 09 51.0	
	39nm,0.2s						

MEX 09 01:19:02.4±0.6, 14°.21N×90°.94W, h91km±27km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.46	299	i P	Pn	01 19 27.2	-0.4
THIG				eS	Sn	01 19 44.7	-2.0
PCIG		2.65	304	eP	Pn	01 19 42.7	-0.6
PCIG				i S	Sn	01 20 13.0	-1.7

*IDC **09** 01:24:19.7±0.6, 15°.64S×177°.33W, h0km, mb4.5/17, mb1 4.7/18, mb1mx4.7/25, mbtmp4.5/18, ML3.4/1, MS4.4/22, Ms1 4.4/22, ms1mx4.4/23, Error ellipse: s-maj=22.7km s-min=15.9km az=135.0*

*GCMT **09** 01:24:26.6±0.2, 15°.58S±0°.01×177°.13W±0°.01, h18km±1km, MW5.2/106, Moment Tensor Solution. s61,c78; s106,c175; Duration: 1^s.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-1.11±.19; $M_{\theta\theta}$-1.32±.19; $M_{\phi\phi}$2.43±.18; $M_{r\theta}$0.46±.38; $M_{\theta\phi}$8.13±.17; $M_{\phi r}$-0.06±.37; Best double couple: $M_0$8.35800×10^{16} NP1:ϕ_s263.00000°, δ89.00000°, λ-3.00000°. NP2:ϕ_s354.00000°, δ87.00000°, λ-179.00000°. Principal axes: T 8.9040, Plg1.0000°, Azm309.0000°; N -1.0920, Plg86.0000°, Azm60.0000°; P -7.8120, Plg3.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **09** 01:24:31.8±0.2, 15°.73S±0°.06×177°.60W±0°.05, h100km, mb4.5/124 Error ellipse: s-maj=10.3km s-min=5.4km az=146.9*

*NEIC **09** 01:24:31.6±2.2, 15°.74S×177°.50W, h87km±6km, mb4.6/116, Error ellipse: s-maj=21.1km s-min=15.2km az=134.0*

ISC 09 01:24:32.4±0.4, 15°.84S±0°.09×177°.31W±0°.08, h100km, n212, σ1^s.55/198, mb4.6/124, 4C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.56	246	eLR	LR	01 32 07.4	
	comp=Z,1µm,25.9s						
DZM	Mont Dzumac	16.56	246	Pn	Pn	01 28 15.8	-3.0
	0.1nm,0.3s,baz=94,slow=19,SNR=2.1						
DZM				LR	LR	01 33 42.3	
	comp=Z,1µm,19.3s,baz=72,slow=34						
DZM	Mont Dzumac	16.56	246	ePn	Pn	01 28 15.8	-3.0
	95nm,1.5s						
RAR	Rarotonga	17.46	110	LR	LR	01 33 31.8	
	comp=Z,1µm,18.7s,baz=279,slow=32						
OUZ	Omahuta	20.95	201	eP	P	01 29 07.6	+0.4
	85nm,1.4s						
URZ	Urewera	22.86	191	LR	LR	01 37 06.3	
	comp=Z,2µm,18.4s,baz=33,slow=33						
HNR	Honiara	23.08	283	LR	LR	01 37 01.6	
	comp=Z,6µm,19.5s,baz=124,slow=33						
PPT2	Papeete2	26.61	98	eS	S	01 34 25.0	-4.5
PPT2				eLQ	LQ	01 35 22.9	
	3µm,28.5s						
PPT2				eLR	LR	01 36 36.5	
	comp=Z,3µm,25.8s						
PPT	Papeete	26.61	98	LR	LR	01 37 52.0	
	comp=Z,808nm,20.5s,baz=264,slow=30						
TBI	Tubuai	27.24	110	eS	S	01 34 33.4	-5.8
	223nm,25.8s						
TBI				eLR	LR	01 36 47.1	
	comp=Z,4µm,28.2s						
RPZ	Rata Peaks	29.49	197	LR	LR	01 41 00.4	
	comp=Z,926nm,21.6s,baz=18,slow=34						
TAOE	Nuku Hiva Isla	36.91	84	eLR	LR	01 41 18.5	
	comp=Z,507nm,23.8s						
H11S2	WAKE ISLAND Hy	37.58	335	T	T	02 11 11.2	
	baz=155,slow=76,SNR=7.4						
H11S3	WAKE ISLAND Hy	37.59	335	T	T	02 11 12.4	
	baz=155,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	37.59	335	T	T	02 11 15.4	
	baz=155,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	38.60	336	T	T	02 12 28.0	
	baz=158						
H11N1	WAKE ISLAND Hy	38.60	336	T	T	02 12 28.0	
	baz=158,slow=74						
H11N2	WAKE ISLAND Hy	38.61	336	T	T	02 12 29.6	
	baz=158,slow=74						
TOO	Toolangi	39.30	229	eP	P	01 31 52.8	+1.1
	21nm,1.0s						
RKT	Rikitea	40.45	107	eLR	LR	01 42 58.7	
	comp=Z,2µm,28.5s						
STKA	Stephens Creek	40.56	239	P	P	01 32 01.4	-0.8
	22nm,1.0s,baz=72,slow=7.1,SNR=12						
STKA				LR	LR	01 47 01.5	
	comp=Z,645nm,20.1s,baz=59,slow=34						
STKA	Stephens Creek	40.56	239	eP	P	01 32 02.0	-0.2
	6.0nm,1.0s						
BBOO	Buckleboo	45.34	239	eP	P	01 32 42.5	+1.8
	38nm,1.4s						
WB2	Warramunga Arr	46.06	257	eP	P	01 32 45.8	-0.8
	11nm,1.0s						
WR1	Warramunga Arr	46.08	257	eP	P	01 32 45.3	-1.4
WRA	Warramunga Arr	46.08	257	P	P	01 32 45.3	-1.4
	4.7nm,0.9s,baz=85,slow=9.4,SNR=5.9						
AS31	Alice Springs	46.39	252	eP	P	01 32 48.0	-1.2
	5.4nm,0.7s						
AS31				ePcP	PcP	01 34 25.6	+3.0
ASAR	Alice Springs	46.39	252	P	P	01 32 48.0	-1.2
	14nm,0.7s,baz=84,slow=8.4,SNR=81						
ASAR				PcP	PcP	01 34 25.6	+3.0
	1.4nm,0.8s,baz=90,slow=4.0,SNR=4.2						
ASAR				LR	LR	01 51 52.4	
	comp=Z,572nm,19.8s,baz=92,slow=36						
MTN	Manton Dam	49.95	266	eP	P	01 33 15.3	-1.2
	51nm,1.3s						
SOEI	Soe	57.15	269	eP	P	01 34 09.1	-0.2
	198nm,1.0s						
SBA	Scott Base	62.53	184	eP	P	01 34 45.5	+0.4
	7.0nm,1.0s						
VNDA	Vanda	62.58	185	P	P	01 34 46.4	+1.0
	1.6nm,0.9s,baz=44,slow=5.5,SNR=6.8						
VNDA				LR	LR	01 55 44.6	
	comp=Z,106nm,21.9s,baz=31,slow=30						
VNDA	Vanda	62.58	185	eP	P	01 34 44.5	-0.9
	5.5nm,1.3s						
MJAR	Matsushiro Arr	66.91	322	P	P	01 35 12.3	-1.8
	4.4nm,0.9s,baz=163,slow=6.2,SNR=8.1						
MJAR				LR	LR	01 58 46.2	
	comp=Z,238nm,21.8s,baz=165,slow=31						
MAJO	Matsushiro	66.91	322	eP	P	01 35 12.3	-1.8
MAT	Matsushiro	66.91	322	P	P	01 35 13.5	-0.6
MAT				S	S	01 43 47.8	-12
PETK	Petropavlovsk-	71.97	344	P	P	01 35 44.0	-1.0
	6.2nm,0.9s,baz=126,slow=7.5,SNR=6.6						
PETK				LR	LR	02 04 06.4	
	comp=Z,325nm,19.2s,baz=169,slow=33						
PEA1	Petropavlovsk-	71.98	344	eP	P	01 35 44.0	-1.0
KSRS	Korea Array	73.89	317	P	P	01 35 56.3	-0.2
	2.6nm,0.8s,baz=133,slow=6.5,SNR=10						
KSRS				LR	LR	02 02 32.6	
	comp=Z,378nm,21.9s,baz=128,slow=31						
KS15	Wonju Array Si	73.91	317	eP	P	01 35 56.3	-0.4
	9.1nm,1.0s						
QSPA	South Pole Qui	74.20	180	eP	P	01 35 57.9	-0.3
	17nm,1.1s						
USRK	Ussuriysk Ar.	75.53	325	P	P	01 36 05.7	-0.2
	2.1nm,0.9s,baz=108,slow=4.2,SNR=8.6						
USRK				LR	LR	02 04 12.2	
	comp=Z,257nm,21.1s,baz=125,slow=32						
CMB	Columbia Colle	75.62	43	eP	P	01 36 07.1	+0.4
	7.7nm,0.9s						
ISA	Isabella, Lake	75.63	46	eP	P	01 36 08.7	+1.9
	11nm,1.1s						
AFDM	Forest Hills D	75.75	42	eP	P	01 36 06.5	-0.9
	7.3nm,0.9s						
YBH	Yreka Blue Hor	76.27	39	eP	P	01 36 10.7	+0.4
	11nm,0.8s						
OMMB	Old Mammoth Mi	76.31	44	eP	P	01 36 12.3	+1.4
	8.5nm,1.2s						
WAKR	Walker	76.50	43	eP	P	01 36 12.5	+0.6
	9.1nm,0.9s						
HUMO	Hull Mountain	76.64	38	eP	P	01 36 15.2	+3.0
	14nm,1.1s						
BEKR	Beckworth	76.66	42	eP	P	01 36 14.3	+1.7
	6.5nm,0.9s						
PNTR	Pine Nut	76.72	43	eP	P	01 36 14.7	+1.6
	17nm,0.9s						
RYN	Ryan	77.17	43	eP	P	01 36 15.8	+0.2
	6.9nm,0.9s						
PAHR	Pah Rah Range	77.19	42	eP	P	01 36 16.5	+0.8
	7.6nm,0.9s						
NV01	Mina Array Sit	77.21	44	eP	P	01 36 15.4	-0.5
NVAR	Mina Array Bea	77.21	44	P	P	01 36 15.4	-0.5
	8.1nm,0.8s,baz=230,slow=8.3,SNR=31						
NVAR				LR	LR	02 02 15.9	
	comp=Z,162nm,20.2s,baz=235,slow=30						
NV11	Mina Array Sit	77.31	44	eP	P	01 36 16.9	+0.6
	0.9nm,1.0s						
NJ2	Nanjing	77.46	309	eP	P	01 36 16.8	-0.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
KVN	Kaiserville	77.68	43	eP	P	01 36 18.6	+0.2
	comp=Z,7.1nm,0.9s						
MOD	Modoc Plateau	77.83	40	eP	P	01 36 20.1	+0.9
	comp=Z,8.0nm,0.9s						
TPNV	Topopah Spring	77.83	46	eP	P	01 36 21.1	+1.8
	comp=Z,6.8nm,0.9s						
K05A	Summer Lake	77.94	39	eP	P	01 36 22.1	+2.3
	comp=Z,20nm,1.3s						
SHPR	Sheep Range	78.37	47	eP	P	01 36 22.0	-0.2
	comp=Z,6.9nm,1.2s						
PINE	Pine Mountain	78.53	38	eP	P	01 36 23.7	+0.7
	comp=Z,14nm,0.8s						
W13A	Hualapai Mount	78.59	48	eP	P	01 36 25.9	+2.3
	comp=Z,8.2nm,1.4s						
BMN	Battle Mountai	78.98	42	eP	P	01 36 25.9	+0.4
	comp=Z,9.9nm,0.9s						
R11A	Troy Canyon, C	79.00	45	eP	P	01 36 25.1	-0.5
	comp=Z,5.8nm,1.3s						
WVOR	Wild Horse Val	79.16	40	eP	P	01 36 29.5	+3.1
	comp=Z,7.1nm,0.9s						
I07A	Izee	79.54	38	eP	P	01 36 30.8	+2.3
	comp=Z,8.8nm,0.9s						
TUC	Tucson	79.61	52	eP	P	01 36 30.4	+1.4
	comp=Z,7.8nm,0.9s						
D05A	Enumclaw	79.92	35	eP	P	01 36 31.6	+1.4
	comp=Z,40nm,1.5s						
X16A	Lo Mia Camp, P	80.06	50	eP	P	01 36 34.1	+2.6
	comp=Z,6.6nm,1.0s						
CCUT	Cedar City	80.13	46	eP	P	01 36 34.0	+2.1
	comp=Z,4.1nm,1.0s						
WHN	Wuhan	80.26	306	P	P	01 36 25.5	-6.9
KNB	Kanab	80.26	47	eP	P	01 36 34.5	+2.0
	comp=Z,9.8nm,1.3s						
PSUT	Pine Spring	80.27	45	eP	P	01 36 33.3	+0.8
	comp=Z,4.1nm,1.0s						
TTA	Tatalina	80.27	10	eP	P	01 36 32.3	+0.5
	comp=Z,12nm,1.0s						
319A	Douglas	80.36	54	eP	P	01 36 34.7	+1.6
	comp=Z,12nm,1.1s						
U15A	North Rim	80.36	48	eP	P	01 36 35.7	+2.5
	comp=Z,7.8nm,1.3s						
ELK	Elko	80.44	43	eP	P	01 36 33.3	-0.2
	comp=Z,3.9nm,0.8s						
G08A	Pilot Rock	80.54	38	eP	P	01 36 32.5	-1.2
	comp=Z,9.4nm,0.9s						
PKCU	Pink Cliffs	80.82	47	eP	P	01 36 36.1	+0.4
	comp=Z,16nm,1.4s						
E08A	Dider Farm, El	81.15	36	eP	P	01 36 38.6	+1.8
	comp=Z,10.0nm,1.0s						
MTPU	Mount Pierson	81.19	46	eP	P	01 36 38.7	+1.0
	comp=Z,7.7nm,1.4s						
BMO	Blue Mountains	81.28	39	eP	P	01 36 39.0	+1.3
	comp=Z,7.3nm,1.1s						
MSU	Marysvale	81.41	46	eP	P	01 36 41.5	+2.8
D08A	Wollman Farm,	81.55	36	eP	P	01 36 41.7	+2.8
	comp=Z,8.2nm,0.9s						
DUG	Dugway, Tooele	81.78	44	eP	P	01 36 43.0	+2.5
	comp=Z,2.7nm,0.9s						
F10A	Beach Ranch, E	81.93	38	eP	P	01 36 41.7	+0.6
	comp=Z,6.8nm,0.9s						
RND	Reindeer	82.04	13	eP	P	01 36 41.2	+0.1
	comp=Z,11nm,1.0s						
MCK	McKinley	82.31	12	eP	P	01 36 41.8	-0.7
	comp=Z,9.2nm,1.0s						
HLID	Hailey	82.39	41	eP	P	01 36 45.5	+1.8
	comp=Z,6.6nm,0.9s						
TMUT	Trail Mountain	82.45	46	eP	P	01 36 47.1	+2.9
	comp=Z,9.7nm,1.0s						
SRU	San Rafael Swe	82.84	46	eP	P	01 36 47.9	+1.8
	comp=Z,6.3nm,1.0s						
JLU	Jordanelle	82.89	44	eP	P	01 36 48.7	+2.3
	comp=Z,4.5nm,0.9s						
MLY	Manley	83.12	11	eP	P	01 36 46.3	-0.5
	comp=Z,5.6nm,1.0s						
WRH	Wood River Hil	83.14	12	eP	P	01 36 47.4	+0.6
	comp=Z,13nm,1.2s						
TCUT	Toone Canyon	83.15	44	eP	P	01 36 48.5	+0.7
	comp=Z,15nm,0.8s						
IPM	Ipoh	83.22	277	eP	P	01 36 49.5	+1.1
	comp=Z,17nm,0.8s						
LENM	Lemitar	83.29	52	eP	P	01 36 51.7	+3.2
Y22D	IRIS PASSCAL I	83.29	52	eP	P	01 36 51.9	+3.4
	comp=Z,66nm,0.5s						
DOT	Dot Lake	83.31	14	eP	P	01 36 46.3	-1.5
	comp=Z,4.1nm,0.9s						
HDA	Harding Lake	83.32	13	eP	P	01 36 49.6	+1.9
	comp=Z,7.4nm,1.1s						
CCB	Clear Creek Bu	83.35	12	eP	P	01 36 47.0	-0.9
	comp=Z,5.9nm,1.0s						
MNTX	Cornudas Mount	83.53	55	eP	P	01 36 51.0	+1.4
	comp=Z,8.2nm,1.0s						
PV09	Paradox Valley	83.54	47	eP	P	01 36 52.1	+2.3
BNM	Barren Site	83.54	52	eP	P	01 36 51.2	+1.3
PV14	Lion Creek, Pa	83.56	47	eP	P	01 36 51.5	+1.6
	comp=Z,8.3nm,0.9s						
PV17	East Wray Mesa	83.56	47	eP	P	01 36 50.3	+0.4
	comp=Z,13nm,1.4s						
PV20	West Nyswonger	83.58	47	eP	P	01 36 51.3	+1.4
	comp=Z,8.2nm,0.9s						
PV23	Carpenter Ridg	83.60	47	eP	P	01 36 51.8	+1.7
	comp=Z,11nm,0.8s						
PV16	Nyswonger Mesa	83.61	47	eP	P	01 36 51.5	+1.4
	comp=Z,11nm,1.5s						
PV13	Radium Mtn., P	83.61	48	eP	P	01 36 51.7	+1.5
	comp=Z,9.9nm,1.3s						
PV03	Paradox Valley	83.63	47	eP	P	01 36 51.2	+1.0
	comp=Z,3.0nm,1.0s						
PV11	David Mesa, Pa	83.63	47	eP	P	01 36 51.2	+1.0
	comp=Z,8.0nm,1.0s						
ILAR	Eielson Array	83.65	13	P	P	01 36 48.4	-1.1
	comp=Z,2.6nm,1.0s,baz=220,slow=5.0,SNR=12						
ILAR				LR	LR	02 09 34.0	
	comp=Z,88nm,19.5s,baz=241,slow=32						
ILB	Eielson Array	83.65	13	eP	P	01 36 49.3	-0.2
	comp=Z,16nm,1.4s						
PV04	Paradox Valley	83.65	47	eP	P	01 36 52.5	+2.2
	comp=Z,9.4nm,1.0s						
PV21	Cone Mtn., Par	83.67	47	eP	P	01 36 52.9	+2.4
	comp=Z,9.1nm,1.0s						
PV12	Saucer Basin,	83.69	47	eP	P	01 36 51.9	+1.4
	comp=Z,15nm,1.3s						
PV01	Paradox Valley	83.78	48	eP	P	01 36 51.6	+0.6
	comp=Z,5.7nm,0.9s						
MCMT	McKenzie Canyo	83.99	40	eP	P	01 36 53.5	+1.6
ANMO	Albuquerque	83.99	51	eP	P	01 36 51.8	-0.3
	comp=Z,9.6nm,1.1s						
TX31	Lajitas Ar. Si	84.00	57	eP	P	01 36 53.1	+1.0
	comp=Z,12nm,1.3s						
TXAR	Lajitas Array	84.00	57	P	P	01 36 52.5	+0.3
	comp=Z,8.0nm,0.4s,baz=187,slow=7.0,SNR=4.3						
TXAR				LR	LR	02 06 31.0	
	comp=Z,307nm,20.5s,baz=0.0,slow=30						
MSO	Missoula	84.32	38	eP	P	01 36 55.0	+1.6
	comp=Z,7.5nm,1.4s						
DLMT	Dillon	84.41	40	eP	P	01 36 55.7	+1.8
	comp=Z,8.4nm,0.9s						
TPAW	Teton Pass	84.56	42	eP	P	01 36 56.3	+1.5
	comp=Z,6.8nm,0.9s						
FXWY	Fox Creek	84.58	42	eP	P	01 36 56.0	+1.1
	comp=Z,4.1nm,0.9s						
PRP	Porcupine Dome	84.59	13	eP	P	01 36 55.3	+0.9
	comp=Z,14nm,0.8s						
LRM	Limekiln Ridge	84.72	39	eP	P	01 36 53.6	-2.0

DAWY	Dawson	84.83	16	*e*P	P	01 36 54.9	-0.5
	comp=Z,5.3nm,1.0s						
LOHW	Long Hollow	84.84	42	*e*P	P	01 36 56.7	+0.5
	comp=Z,5.8nm,1.3s						
S22A	4UR Ranch, Cre	84.86	49	*e*P	P	01 36 58.5	+1.9
	comp=Z,8.2nm,1.1s						
O20A	White River Ci	84.87	46	*e*P	P	01 36 58.1	+1.7
	comp=Z,12nm,1.4s						
QLMT	Earthquake Lak	84.88	41	*e*P	P	01 36 59.4	+3.0
EGAK	Eagle	84.96	15	*e*P	P	01 36 57.2	+1.1
	comp=Z,6.5nm,0.9s						
YPP	Pitchstone Pla	85.01	41	*e*P	P	01 36 57.4	+0.2
	comp=Z,17nm,0.9s						
BOZ	Bozeman (W)	85.12	40	*e*P	P	01 36 58.2	+0.7
	comp=Z,8.9nm,1.3s						
BW06	Boulder Array	85.14	43	*e*P	P	01 36 58.6	+0.9
	comp=Z,6.1nm,1.1s						
PD31	Pinedale Array	85.14	43	*e*P	P	01 36 57.0	-0.7
	comp=Z,0.7nm,0.8s						
PDAR	Pinedale Array	85.14	43	P	P	01 36 57.0	-0.7
	comp=Z,2.9nm,0.9s,baz=180,slow=1.5,SNR=19						
COLD	Coldfoot	85.20	10	*e*P	P	01 36 57.1	-0.1
	comp=Z,5.6nm,1.0s						
YHH	Holmes Hill	85.22	41	*e*P	P	01 36 59.0	+0.8
	comp=Z,6.8nm,1.1s						
SDCO	Great Sand Dun	85.82	49	*e*P	P	01 37 01.9	+0.6
	comp=Z,2.1nm,0.9s						
LNIG	Linares	85.96	63	*e*P	P	01 37 02.8	+0.9
	comp=Z,11nm,1.0s						
MAW	Mawson	86.15	199	P	P	01 37 03.5	+1.5
	comp=Z,1.6nm,0.8s,baz=90,slow=10,SNR=3.7						
MAW				LR	LR	02 13 26.6	
	comp=Z,259nm,18.2s,baz=110,slow=34						
MAW	Mawson	86.15	199	*e*P	P	01 37 03.5	+1.5
	comp=Z,1.0nm,1.3s						
TOLK	Toolik Lake Re	86.58	10	*e*P	P	01 37 05.3	+1.3
	comp=Z,10nm,1.4s						
HHC	Hu-ho-hao-te	86.60	314	P	P	01 37 04.8	0.0
HHC				sP	sP	01 38 34.7	+54
HHC	Hu-ho-hao-te	86.60	314	S	S	01 47 13.3	-20
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,85nm,5.1s						
N23A	Red Feather La	86.78	46	*e*P	P	01 37 05.6	-0.3
	comp=Z,5.2nm,1.1s						
KMI	Kunming	87.84	297	P	P	01 37 08.3	-3.0
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				LR	LR		
	comp=N,160nm,18.8s						
KMI				LR	LR		
	comp=E,280nm,21.8s						
KMI				LR	LR		
	comp=Z,460nm,24.1s						
CM31	Chiang Mai Arr	89.19	289	*e*P	P	01 37 17.8	+0.2
	comp=Z,8.9nm,0.4s						
CMAR	Chiang Mai Arr	89.19	289	P	P	01 37 17.8	+0.2
	comp=Z,1.5nm,0.3s,baz=110,slow=2.8,SNR=7.7						
CMAR				LR	LR	02 13 51.3	
	comp=Z,187nm,20.2s,baz=106,slow=33						
RSSD	Black Hills	89.35	44	*e*P	P	01 37 18.9	+0.9
	comp=Z,4.7nm,0.9s						
LZH	Lanzhou	90.48	307	*e*P	P	01 37 24.0	+0.6
LZH				pP	sP	01 38 16.2	+17
LZH				sP	pwP	01 38 44.4	+53
LZH				PP	PP	01 41 04.8	+5.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,92nm,5.4s						
PLCA	Paso Flores	91.98	133	P	P	01 37 33.2	+2.9
	comp=Z,2.8nm,0.9s,baz=306,slow=8.2,SNR=3.4						
PLCA				LR	LR	02 10 04.2	
	comp=Z,169nm,21.7s,baz=248,slow=30						
PLCA	Paso Flores	91.98	133	*e*P	P	01 37 33.2	+2.9
	comp=Z,4.9nm,1.0s						
YKA	Yellowknife Ar	92.03	24	P	P	01 37 29.5	-0.2
	comp=Z,1.5nm,1.1s,baz=240,slow=4.9,SNR=3.6						
YKA				LR	LR	02 12 48.6	
	comp=Z,49nm,19.8s,baz=256,slow=32						
YKB5	Yellowknife Ar	92.03	24	*e*P	P	01 37 29.5	-0.2
SNAA	Sanae	92.62	178	P	P	01 37 33.5	+0.9
SONA0	Songino Array	92.69	319	*e*P	P	01 37 34.2	+0.9
SONM	Songino Array	92.69	319	P	P	01 37 34.2	+0.9
	comp=Z,0.5nm,0.5s,baz=122,slow=1.9,SNR=4.9						
SONM				LR	LR	02 15 02.5	
	comp=Z,101nm,21.1s,baz=120,slow=33						
VNA3	Neumayer Olymp	92.72	176	P	P	01 37 34.0	+1.0
VNA2	Neumayer--Watz	93.17	177	P	P	01 37 36.1	+1.1
	baz=162,slow=3.6						
ECSD	EROS Data Cent	94.25	46	*e*P	P	01 37 39.6	-0.8
	comp=Z,5.4nm,1.1s						
W41B	Gary Mavity, V	95.03	55	*e*P	P	01 37 44.5	+0.4
	comp=Z,6.3nm,1.1s						
CCM	Cathedral Cave	96.57	52	*e*P	P	01 37 51.5	+0.4
	comp=Z,4.3nm,1.0s						
ULM	Lac du Bonnet	96.66	40	LR	LR	02 14 30.2	
	comp=Z,427nm,21.5s,baz=258,slow=31						
MK32	Makanchi Array	108.45	315	*e*PKiKP	PKiKP	01 42 49.5	+0.2
MKAR	Makanchi Array	108.45	315	PKiKP	PKiKP	01 42 49.6	+0.2
	comp=Z,0.4nm,0.7s,baz=104,slow=4.0,SNR=3.9						
GEYT	Alibeck	126.73	306	PKP	PKiKP	01 43 24.7	-0.4
	comp=Z,1.5nm,0.8s,baz=102,slow=4.7,SNR=3.4						
AKASG	Malin Array Be	139.20	334	PKP	PKiKP	01 43 49.8	0.0
	comp=Z,0.2nm,0.3s,baz=341,slow=2.0,SNR=3.7						
AKBB	Malin Array Si	139.20	334	*e*PKPdf	PKiKP	01 43 49.8	0.0
KOLS	Kolonicke sedl	143.32	338	*e*PKP	PKiKP	01 43 56.5	-1.9
BR101	Keskin Array S	144.03	318	*e*PKPdf	PKPdf	01 43 55.7	-1.0
BRTR	Keskin Array B	144.03	318	PKP	PKPdf	01 43 55.7	-1.0
	comp=Z,2.7nm,1.0s,baz=116,slow=2.9,SNR=12						
MORC	Moravsky Berou	144.07	344	*e*PKP	PKPdf	01 43 55.3	-1.1
PRU	Pruhonice	144.61	347	*e*PKP	PKPdf	01 43 56.6	-0.6
VRAC	Vranov	144.75	344	⇑*i*P	PKPdf	01 43 56.5	-1.0
VRAC	Vranov	144.75	344	*e*PKP	PKPdf	01 43 57.0	-0.5
VYHS	Vyhne	144.84	341	*e*PKP	PKPdf	01 43 57.5	-0.2
JAVC	Velka Javorina	144.86	343	*e*PKP	PKPdf	01 43 58.5	+0.7
PSZ	Piszkesteto	145.01	340	⇓*i*P	PKPdf	01 43 58.5	+0.4
KRUC	Moravsky	145.03	344	*e*PKP	PKPdf	01 43 57.3	-0.7
TREC	Trest	145.04	345	*e*PKP	PKPdf	01 43 57.8	-0.2
MEM	Membach	145.22	356	⇑PKP	PKPdf	01 43 58.5	+0.2
MODS	Modra-Piesok	145.41	343	*e*PKP	PKPab	01 43 58.8	-0.3
BCLA	Clavier	145.45	357	⇓PKP	PKPab	01 43 58.4	-0.7
KHC	Kasperske Hory	145.63	347	*e*PKP	PKPab	01 44 00.1	+0.2
KHC				*e*x	x	01 44 10.5	
DOU	Dourbes	145.80	358	⇓PKP	PKPbc	01 43 58.8	-1.1
GEC2	GERESS Array S	145.88	347	*e*PKPdf	PKiKP	01 44 01.4	-2.4
GERES	GERESS Array B	145.88	347	PKPbc	PKPab	01 44 00.2	-0.6
	comp=Z,1.9nm,1.0s,baz=27,slow=3.6,SNR=14						
WLF	Walferdange	146.15	356	⇑PKP	PKPab	01 44 01.5	-0.2
CONA	Conrad Observa	146.21	344	*e*PKPab	PKPab	01 44 02.0	-0.2
	comp=Z,19nm,1.7s						
MOA	Molln	146.69	346	PKPab	PKiKP	01 44 03.4	-1.9
	comp=Z,9.8nm,1.1s						
ARSA	Arzberg	146.92	344	*e*PKPab	PKPab	01 44 04.0	-0.9
	comp=Z,12nm,1.6s						
SOKA	Soboth	147.58	344	PKPbc	PKPbc	01 44 04.5	-0.7
	comp=Z,5.8nm,1.0s						
KBA	Koelnbreinsper	147.62	346	PKPab	PKiKP	01 44 05.6	-1.9
	comp=Z,8.2nm,1.0s						
WATA	Walderalm	147.75	349	PKPab	PKiKP	01 44 06.6	-1.1
	comp=Z,1.6nm,0.7s						
RETA	Reutte	147.75	350	PKPbc	PKPbc	01 44 05.0	-0.7
	comp=Z,7.2nm,1.7s						
WTTA	Wattenberg	147.80	349	*e*PKPbc	PKPbc	01 44 05.0	-1.0
	comp=Z,6.9nm,1.3s						
MOTA	Moosalm	147.82	349	PKPab	PKiKP	01 44 06.7	-1.2
	comp=Z,4.4nm,1.0s						
OBKA	Obir	147.87	345	*e*PKPdf	PKPdf	01 44 00.0	-3.0
	comp=Z,0.1nm,0.1s						
MYKA	Terra Mystica	147.98	346	PKiKP	PKPab	01 44 07.5	-1.6
	comp=Z,8.6nm,1.0s						
VTS	Vitosha	148.03	331	⇑*i*P	PKPbc	01 44 05.6	-1.1
DAVA	Damuels	148.09	351	*e*PKPbc	PKPbc	01 44 05.6	-1.1
	comp=Z,14nm,1.7s						
ABTA	Abfaltersbach	148.12	347	*e*PKiKP	PKiKP	01 44 06.7	-1.7
	comp=Z,4.3nm,0.9s						
FETA	Feichten	148.20	350	*e*PKPab	PKPab	01 44 09.2	-0.9
	comp=Z,6.0nm,1.2s						
ESDC	Sonseca Array	155.56	12	PKPab	PKPab	01 44 40.7	-0.2
	comp=Z,0.1nm,0.4s,baz=290,slow=4.3,SNR=4.0						
ESDC				SKP		01 47 46.4	
	comp=Z,0.2nm,0.5s,baz=318,slow=8.6,SNR=4.6						
TORD	Torodi Ar. Bea	177.15	160	PKP	PKPdf	01 44 31.6	-0.3
	comp=Z,1.1nm,0.9s,baz=169,slow=33,SNR=4.1						
TOA1	Torodi Ar. Sit	177.15	160	*e*PKPdf	PKPdf	01 44 31.6	-0.3

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*THR **09** 01:26:32.9, 32°.47N×55°.65E, h15^{km}, ML3.4*
*TEH **09** 01:26:32.7, 32°.42N×55°.60E, h10^{km}, ML3.5*
*ISCJB **09** 01:26:33.4±0.4, 32°.43N±0°.03×55°.57E±0°.04, h10^{km}, Error ellipse: s-maj=5.0km s-min=4.4km az=136.2*

ISC 09 01:26:32.8±0.9, 32°.43N±0°.03×55°.64E±0°.03, h10^{km}, n28, σ1^{s}78/30, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.84	184	*e*Pg	Pg	01 26 48.6	-0.3
IBAF				*e*Sg	Sb	01 27 00.6	-0.3
IBAF				IAMB	IAmb	01 27 01.1	
	comp=Z,20μm,0.2s						
YZKH	Yazd	0.89	268	*e*Pg	Pb	01 26 49.9	-0.5
YZKH	Yazd	0.89	268	*e*Pg	Pb	01 26 49.9	-0.5
IMEH	Mehriz	1.35	221	*e*Pg	Pg	01 26 58.3	-0.5
IMEH				IAMB	IAmb	01 27 21.9	
	comp=Z,6μm,0.3s						
TKDS	Koohdasht(Taba	1.72	46	*e*Pn	Pn	01 27 03.7	+0.8
ISAD	Sadrabad	1.74	253	*e*Sg	Sg	01 27 28.8	+0.1
ISAD				*e*Pg	Pg	01 27 05.0	-1.2
ISAD				IAMB	IAmb	01 27 30.2	
	comp=Z,6μm,0.4s						
TABS	Tabas	1.74	45	*e*Pn	Pn	01 27 04.1	+0.9
TABS	Tabas	1.74	45	*e*Pn	Pn	01 27 04.1	+0.9
TABS				*e*Sg	Sb	01 27 27.1	+0.2
ANAR	Anarak	1.78	296	*e*Pg	Pg	01 27 05.8	-1.2
KHGB	Koh Gabri	2.17	161	*e*Pn	Pb	01 27 11.6	-0.6
TVBK	TV Kerman	2.61	158	*e*Pn	Pn	01 27 17.6	+2.2
TVBK				IAMB	IAmb	01 28 01.3	
	comp=Z,0.0nm,0.3s						
KRBR	Kerman	2.62	158	*e*Pn	Pb	01 27 17.9	-2.1
KRBR	Kerman	2.62	158	*e*AML	AML	01 28 03.0	
	comp=E,139nm,0.3s						
KRBR	Kerman	2.62	158	*e*Pn	Pb	01 27 17.9	-2.1
KRBR				*e*Sg	Sg	01 27 56.3	-0.6
ITEG	Tejag	2.66	79	*e*Pn	Pn	01 27 17.7	+1.8
ITEG				IAMB	IAmb	01 28 08.1	
	comp=N,5μm,0.3s						
IZEF	Zefreh	2.83	280	*e*Pn	Pb	01 27 21.1	-2.6
IRAM	Ramesheh	2.83	258	*e*Pn	Pn	01 27 20.2	+1.8
NGRK	Negar Kerman	2.93	161	*e*Pn	Pn	01 27 22.4	+2.6
BSRN	Basiran	2.99	98	*e*Pn	Pn	01 27 21.7	+1.3
BSRN	Basiran	2.99	98	*e*Pn	Pn	01 27 21.7	+1.3
CHMN	Cheshme madani	3.03	147	*e*Pn	Pn	01 27 23.9	+2.7
CHMN				IAMB	IAmb	01 28 15.9	
	comp=Z,0.0nm,0.4s						
KRSH	Karshahi	3.32	299	*e*Pn	Pn	01 27 27.2	+2.2
IKLH	Kolahrood	3.53	286	IAMB	IAmb	01 28 31.1	
	comp=Z,270nm,0.3s						
SBZV	Sabzevar	4.27	22	*e*Pn	Pn	01 27 40.3	+2.2
IDMV	Damavand	4.34	317	*e*Pn	Pn	01 27 41.5	+2.3
IAKL	Akhelmad	4.89	31	*e*Pn	Pn	01 27 49.5	+2.8
ISFR	Sfrayin	5.01	22	*e*Pn	Pn	01 27 50.7	+2.4
JRKH	Jarkhoshk	5.22	47	*e*Pn	Pn	01 27 53.3	+2.2

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*DDA **09** 01:37:10.6, 42°.32N×40°.88E, h11^{km}, ML2.6*

TIF 09 01:36:25.2, 42°.27N×40°.73E, h41^{km}±1^{km}, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.98	132	P	Pn	01 36 44.0	+1.5
BATM				S	Sn	01 36 57.5	+2.3
BATM	Batumi	0.98	132	*i* P	Pn	01 36 45.0	+2.4
BATM				*i* S	Sn	01 36 57.9	+2.7
DBOC	Borcka	1.16	142	*i* P	Pn	01 36 47.0	+2.0
DBOC				*i* S	Sn	01 37 02.3	+2.6
DBOC				IAML_P			
	comp=Z,702nm,0.1s						
DBAD	Bademkaya	1.45	150	*i* P	Pn	01 36 52.1	+3.1
DBAD				*i* S	Sn	01 37 10.7	+3.8
DBAD				IAML_P			
	comp=Z,252nm,0.1s						
DAGI	Agillar	1.49	143	*i* P	Pn	01 36 52.7	+3.1
DAGI				*i* S	Sn	01 37 11.1	+3.3
DAGI				IAML_P			
	comp=Z,94nm,0.1s						
EPOS	Posof	1.68	117	*i* P	Pn	01 36 54.8	+2.5
EPOS				*i* S	Sn	01 37 14.1	+1.5

SVSA 09 01:40:18.9±0.9, 38°.55N×29°.78W, h10^{km}, MD3.6, ML3.4, Error ellipse: s-maj=8.1km s-min=4.4km az=147.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	0.84	87	*e*P	Pg	01 40 32.5	-2.7
CALA				*e*S	Sg	01 40 42.5	-3.7
PCED	Cedros	0.85	84	*e*P	Pg	01 40 32.1	-3.1
PCED				*e*S	Sg	01 40 42.2	-4.1
PCED				A	A	01 40 43.3	
	714nm,0.2s						
HOR	Horta	0.90	91	*e*P	Pg	01 40 32.7	-3.5
HOR				*e*S	Sg	01 40 43.3	-4.7
HOR				A	A	01 40 45.2	
	847nm,0.2s						
PCAN	Candelaria	1.02	94	*e*P	Pg	01 40 34.4	-4.1
PCAN				*e*S	Sg	01 40 46.3	-5.4
PCAN				A	A	01 40 50.3	
	442nm,0.5s						
PICO	Pico	1.06	92	*e*P	Pg	01 40 35.4	-3.9
PICO				*e*S	Sg	01 40 47.5	-5.6
PICO				A	A	01 40 50.3	
	1μm,0.3s						
ROSA	Rosais	1.22	81	*e*P	Pn	01 40 37.3	-4.7
ROSA				*e*S	Sb	01 40 51.0	-6.8
ROSA				A	A	01 40 53.5	
	528nm,0.1s						
PMAN	Manadas	1.33	86	*e*S	Sb	01 40 53.5	-7.4
PMAN				A	A	01 40 55.9	
	279nm,0.3s						
H07S1	FLORES T-PHASE	1.39	307	*e*P	Pg	01 40 49.3	+3.7
SRBC	Serra Branca	1.44	70	*e*S	Sn	01 40 56.4	-7.7
SRBC				A	A	01 40 57.3	
	80nm,0.2s						
PGRA	Graciosa	1.48	70	*e*S	Sn	01 40 57.2	-7.9
PGRA				A	A	01 40 58.6	
	49nm,0.2s						
H07N1	FLORES T-PHASE	1.55	318	*e*P	Pg	01 40 51.1	+2.5
ADH	Angra Heroismo	2.00	86	*e*P	Pn	01 40 48.4	-4.3
ADH				*e*S	Sn	01 41 10.3	-7.4
ADH				A	A	01 41 13.9	
	152nm,0.4s						
PSCM	Serra do Cume	2.09	85	*e*P	Pn	01 40 49.4	-4.6
PSCM				*e*S	Sn	01 41 12.2	-7.9
PSCM				A	A	01 41 16.2	
	84nm,0.3s						
PSET	Sete Cidades	3.28	101	*e*P	Pn	01 41 06.3	-4.0
PDA	Ponta Delgada	3.34	103	*e*P	Pn	01 41 06.9	-4.3
BART	Pico Bartolome	3.71	101	*e*P	Pn	01 41 12.2	-4.2
PSMA	Santa Maria	4.00	111	*e*P	Pn	01 41 15.4	-4.8
PSMN	Pico do Norte,	4.04	111	*e*P	Pn	01 41 15.9	-4.9

SVSA 09 01:45:38.6±0.9, 38°.53N×29°.78W, h10^{km}, MD3.8, ML3.4, Error ellipse: s-maj=4.7km s-min=4.1km az=146.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	0.85	86	*e*P	Pg	01 45 52.4	-2.5
CALA				*e*S	Sg	01 46 01.9	-4.1
PCED	Cedros	0.85	83	*e*P	Pg	01 45 51.4	-3.6
PCED				*e*S	Sg	01 46 01.8	-4.3
PCED				A	A	01 46 02.7	
	566nm,0.2s						
HOR	Horta	0.90	90	*e*P	Pg	01 45 52.5	-3.5
HOR				*e*S	Sg	01 46 02.9	-4.8
HOR				A	A	01 46 04.7	
	928nm,0.2s						
PCAN	Candelaria	1.02	93	*e*P	Pg	01 45 54.2	-4.0
PCAN				*e*S	Sg	01 46 05.9	-5.5
PCAN				A	A	01 46 09.8	
	278nm,0.2s						
PICO	Pico	1.06	91	*e*P	Pg	01 45 55.1	-3.9
PICO				*e*S	Sg	01 46 07.3	-5.6
PICO				A	A	01 46 09.9	
	960nm,0.3s						
PPNO	Prainha do Nor	1.19	92	*e*P	Pb	01 45 56.9	-4.4
PPNO				*e*S	Sb	01 46 10.3	-6.5
PPNO				A	A	01 46 13.9	
	342nm,0.3s						
ROSA	Rosais	1.22	81	*e*P	Pn	01 45 57.0	-4.7
ROSA				*e*S	Sb	01 46 10.7	-6.9
ROSA				A	A	01 46 12.9	
	336nm,0.2s						
PMAN	Manadas	1.33	85	*e*P	Pn	01 45 58.4	-4.8
PMAN				*e*S	Sb	01 46 13.6	-7.1
PMAN				A	A	01 46 15.2	
	171nm,0.2s						
SRBC	Serra Branca	1.45	69	*e*S	Sn	01 46 16.5	-7.5
SRBC				A	A	01 46 18.0	
	61nm,0.3s						
PGRA	Graciosa	1.49	70	*e*S	Sn	01 46 17.1	-7.9
PGRA				A	A	01 46 19.8	
	44nm,0.2s						
ADH	Angra Heroismo	2.00	86	*e*P	Pn	01 46 07.9	-4.5
ADH				*e*S	Sn	01 46 30.4	-7.1
ADH				A	A	01 46 32.3	
	136nm,0.3s						
PSCM	Serra do Cume	2.09	85	*e*P	Pn	01 46 09.4	-4.3
PSCM				*e*S	Sn	01 46 32.4	-7.4
PSCM				A	A	01 46 36.0	
	72nm,0.5s						
PSET	Sete Cidades	3.28	101	*e*P	Pn	01 46 26.0	-4.0
PSET				*e*S	Sn	01 47 00.9	-8.2
PSET				A	A	01 47 04.2	
	27nm,0.3s						
PDA	Ponta Delgada	3.34	102	*e*P	Pn	01 46 26.8	-4.0
PDA				*e*S	Sn	01 47 02.7	-7.8
PDA				A	A	01 47 05.3	
	18nm,0.2s						
CMLA	Cha da Macela	3.44	102	*e*P	Pn	01 46 28.2	-4.1
CMLA				*e*S	Sn	01 47 04.9	-8.2
CMLA				A	A	01 47 13.7	
	39nm,0.6s						
BART	Pico Bartolome	3.71	100	*e*P	Pn	01 46 31.4	-4.7
PSMA	Santa Maria	3.99	111	*e*P	Pn	01 46 35.1	-4.7
PSMA				*e*S	Sn	01 47 18.2	-8.5
PSMA				A	A	01 47 20.1	
	14nm,0.4s						
PSMN	Pico do Norte,	4.04	111	*e*P	Pn	01 46 36.0	-4.4
PSMN				*e*S	Sn	01 47 19.2	-8.6
PSMN				A	A	01 47 22.0	
	18nm,0.5s						

DJA 09 01:55:55.1±0.5, 9°S±6°×11°0E±°, h48^{km}±9^{km}, M4.0/10, MLv4.0/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	0.75	6	P	Pn	01 56 10.0	+0.5
UGM				S	Sn	01 56 21.7	+1.9
YOGI	Yogyakarta	0.85	350	P	Pn	01 56 11.1	+0.3
YOGI				S	Sn	01 56 23.4	+1.2
WOJI	Wonogiri, Jawa	0.95	30	P	Pn	01 56 11.9	-0.2
WOJI				S	Sn	01 56 24.4	-0.1
PWJI	Pagerwojo	1.49	65	P	Pn	01 56 19.0	-0.5
PWJI				S	Sn	01 56 34.9	-2.9
NGJI	Ngawi	1.64	38	P	Pn	01 56 21.6	+0.2
NGJI				S	Sn	01 56 42.6	+1.3
CISI	Cisompet, Garu	2.82	293	P	Pn	01 56 37.5	-0.3
CISI				S	Sn	01 57 09.7	-0.9
LEM	Lembang	3.34	303	P	Pn	01 56 46.7	+1.7
JAGI	Jajag, Banyuwa	3.68	87	P	Pn	01 56 49.5	0.0

UCR 09 02:02:00.3±1.2, 9°.19N×85°.84W, h18^{km}±11^{km}, MW3.6, 3C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	Las Juntas de	1.41	38	*e*P	Pn	02 02 24.1	-0.9
JTS				*e*S	Sn	02 02 42.3	-0.8
BUEV	Buena Vista	1.66	15	⇑*i*P	Pn	02 02 28.2	-0.4
BUEV				*e*S	Sn	02 02 49.1	-0.4
MESS	Mesas	1.67	22	⇑*e*P	Pn	02 02 28.5	-0.3
MESS				*e*S	Sn	02 02 50.2	+0.4
GB1A	Borinquen Arri	1.68	15	*e*P	Pn	02 02 28.6	-0.3
ARE1	Arenal 1	1.68	41	⇑*e*P	Pn	02 02 29.0	+0.2
CEDE	Laguna Cedeo	1.71	41	*e*P	Pn	02 02 29.6	+0.3
LCR2	La Lucha 2	1.90	73	*e*P	Pn	02 02 31.5	-0.4
DRK0	Durika	2.56	88	*e*P	Pn	02 02 41.3	+0.2

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*IDC **09** 02:04:13.8±3.8, 11°.68S×166°.51E, h30^{km}±25^{km}, mb4.2/19, mb1 4.4/21, mb1mx4.3/28, mbtmp4.4/21, ML4.2/2, MS3.6/18, Ms1 3.6/18, ms1mx3.5/26, Error ellipse: s-maj=18.9km s-min=13.5km az=98.0*
*ISCJB **09** 02:04:15.9±0.3, 11°.76S±0°.04×166°.38E±0°.05, h59^{km}, mb4.8/59, MS3.7/21, Error ellipse: s-maj=7.5km s-min=4.9km az=166.2*
*BJI **09** 02:04:18.9±0.0, 11°.67S×166°.11E, h69^{km}, mb4.9/34, mB5.0/23, Ms4.8/4, Ms7 4.5/1*
*NEIC **09** 02:04:19.2±1.8, 11°.74S×166°.41E, h79^{km}±4^{km}, mb4.8/40, Error ellipse: s-maj=17.4km s-min=12.9km az=77.0*

ISC 09 02:04:17.0±0.4, 11°.74S±0°.06×166°.44E±0°.07, h59^{km}, n112, σ1^{s}31/108, mb4.8/59, MS3.7/21, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.78	289	Pn	Pn	02 05 53.3	-0.7
	49nm,0.3s,baz=88,slow=5.0,SNR=4.2						
HNR				Sn	Sn	02 07 07.4	-2.4
	28nm,0.3s,baz=72,slow=19,SNR=3.3						
HNR	Honiara	6.78	289	*e*Pn	Pn	02 05 54.2	+0.2
HNR				*e*Sn	Sn	02 07 08.4	-1.5
MARNC	Mare, Loyalty	9.81	171	*e*Pn	Pn	02 06 38.0	+2.5
DZM	Mont Dzumac	10.28	180	*e*Pn	Pn	02 06 44.2	+2.3
	14nm,0.3s						
DZM				*e*Sn	Sn	02 08 30.8	-4.9
	7.5nm,0.3s						
DZM				*e*LR	LR	02 09 07.7	
	comp=Z,936nm,24.1s						
DZM	Mont Dzumac	10.28	180	Pn	Pn	02 06 40.5	-1.4
	0.2nm,0.3s,baz=41,slow=20,SNR=2.0						
DZM				Sn	Sn	02 08 34.3	-1.4
	1.8nm,0.3s,baz=323,slow=20,SNR=3.6						
ONTNC	Ouen Toro	10.51	180	*e*Pn	Pn	02 06 47.4	+2.4
PINNC	Pines Island,	10.86	175	*e*Pn	Pn	02 06 50.2	+0.4
EIDS	Eidsvold	19.86	225	*e*P	Pn	02 08 45.7	+0.2
	16nm,0.8s						
PATS	Pohnpei	20.14	336	*e*P	Pn	02 08 47.5	-1.3
	68nm,1.0s						
CTA	Charters Tower	21.09	244	P	P	02 08 56.8	0.0
	8.0nm,0.9s,baz=70,slow=11,SNR=6.8						
CTAO	Charters Tower	21.09	244	*e*P	P	02 08 58.3	+1.5
	50nm,1.4s						
ARMA	Armidale	23.11	214	*e*P	P	02 09 19.4	+1.1
	48nm,0.8s						
OUZ	Omahuta	24.27	166	*e*P	P	02 09 29.4	+0.7
	44nm,1.4s						
BKZ	Black Stump Fm	28.74	164	*e*P	P	02 10 09.5	+0.5
	16nm,1.2s						
BFZ	Birch Farm	30.10	165	*e*P	P	02 10 19.9	-1.1
	43nm,1.3s						
STKA	Stephens Creek	30.42	225	P	P	02 10 25.3	+1.4
	11nm,0.7s,baz=38,slow=8.6,SNR=22						
STKA				LR	LR	02 21 45.2	
	comp=Z,237nm,20.6s,baz=32,slow=34						
STKA	Stephens Creek	30.42	225	*e*P	P	02 10 25.0	+1.0
	2.7nm,0.8s						
THZ	Tophouse	30.44	170	*e*P	P	02 10 24.8	+0.7
	45nm,1.4s						
KHZ	Kahutara	31.18	170	*e*P	P	02 10 30.0	-0.5
	23nm,1.2s						
FOZ	Fox Glacier	31.82	175	*e*P	P	02 10 37.6	+1.5
	122nm,1.4s						
TOO	Toolangi	31.85	213	*e*P	P	02 10 36.6	+0.1
	13nm,0.8s						
WB2	Warramunga Arr	31.88	251	*e*P	P	02 10 36.1	-0.9
	9.1nm,1.1s						
WR1	Warramunga Arr	31.89	251	*e*P	P	02 10 36.8	-0.3
WRA	Warramunga Arr	31.89	251	P	P	02 10 36.8	-0.3
	4.9nm,0.7s,baz=78,slow=7.8,SNR=18						
RPZ	Rata Peaks	32.11	174	P	P	02 10 39.3	+0.6
	14nm,0.7s,baz=341,slow=18,SNR=6.6						
RPZ	Rata Peaks	32.11	174	*e*P	P	02 10 38.8	+0.1
	21nm,0.9s						
LBZ	Lake Benmore	32.69	175	*e*P	P	02 10 44.2	+0.5
	40nm,1.5s						
GUMO	Guam	33.02	319	LR	LR	02 24 14.3	
	comp=Z,72nm,19.4s,baz=128,slow=36						
AS31	Alice Springs	33.10	245	*e*P	P	02 10 47.4	-0.3

	1.8nm,0.8s						
AS31				*e*PcP	PcP	02 13 29.7	-0.3
ASAR	**Alice Springs**	33.10	245	P	P	02 10 46.9	-0.8
	6.7nm,0.8s,baz=75,slow=9.3,SNR=44						
ASAR				PcP	PcP	02 13 29.7	-0.3
	3.2nm,0.8s,baz=82,slow=3.4,SNR=12						
ASAR				ScP	ScP	02 17 13.6	+4.2
	1.2nm,0.9s,baz=100,slow=2.8,SNR=3.2						
ASAR				LR	LR	02 23 23.7	
	comp=Z,132nm,18.7s,baz=76,slow=35						
MLZ	**Mavora Lakes**	33.55	178	*e*P	P	02 10 50.7	-0.5
	42nm,1.3s						
MTN	**Manton Dam**	34.50	264	*e*P	P	02 10 58.4	-1.4
	15nm,0.9s						
BBOO	**Buckleboo**	34.87	228	*e*P	P	02 11 03.2	+0.4
	22nm,1.3s						
SIJI	**Sorong**	36.53	285	LR	LR	02 26 23.9	
	comp=Z,160nm,21.8s,baz=174,slow=36						
FORT	**Forrest**	40.21	236	*e*P	P	02 11 47.3	-0.7
	37nm,1.0s						
BATI	**Baumata**	41.99	268	LR	LR	02 29 51.4	
	comp=Z,134nm,19.1s,baz=134,slow=37						
PPT	**Papeete**	42.88	103	LR	LR	02 25 59.1	
	comp=Z,47nm,18.3s,baz=237,slow=30						
PPT2	**Papeete2**	42.88	103	*e*LQ	LQ	02 22 22.4	
	3µm,33.5s						
PPT2				*e*LR	LR	02 24 09.9	
	comp=Z,372nm,29.2s						
TBI	**Tubuai**	43.45	112	*e*LR	LR	02 24 25.5	
	comp=Z,326nm,29.8s						
PSA00	**Pilbara Seismi**	45.55	251	*e*P	P	02 12 31.4	0.0
	43nm,1.3s						
KAPI	**Kappang**	46.62	274	LR	LR	02 33 57.6	
	comp=Z,22nm,18.8s,baz=88,slow=38						
NPOC	**North of Pu‘u**	48.91	51	*e*P	P	02 12 54.8	-2.7
	359nm,0.6s						
GIRL	**Giralia**	50.81	250	*e*P	P	02 13 13.4	+1.5
	203nm,1.3s						
MJAR	**Matsushiro Arr**	54.89	332	P	P	02 13 40.0	-1.7
	0.5nm,0.3s,baz=164,slow=8.3,SNR=5.1						
MJAR				LR	LR	02 35 04.5	
	comp=Z,22nm,21.2s,baz=140,slow=34						
MAJO	**Matsushiro**	54.90	332	*e*P	P	02 13 40.0	-1.7
ASAJ	**Asahikawa**	59.67	340	LR	LR	02 35 10.4	
	comp=Z,73nm,20.2s,baz=340,slow=31						
KSRS	**Korea Array**	60.83	325	P	P	02 14 23.6	+0.3
	1.0nm,0.6s,baz=129,slow=6.6,SNR=3.9						
KSRS				LR	LR	02 39 31.1	
	comp=Z,21nm,18.9s,baz=126,slow=35						
KS15	**Wonju Array Si**	60.84	325	*e*P	P	02 14 23.6	+0.2
	20nm,1.3s						
NJ2	**Nanjing**	62.98	315	*e*P	P	02 14 39.0	+1.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	**Ussuriysk Ar.**	63.87	333	P	P	02 14 43.8	+0.4
	1.8nm,0.7s,baz=158,slow=6.0,SNR=7.3						
PETK	**Petropavlovsk-**	65.02	354	P	P	02 14 50.7	-0.1
	0.9nm,0.4s,baz=155,slow=7.2,SNR=2.5						
PETK				LR	LR	02 39 18.9	
	comp=Z,38nm,20.0s,baz=152,slow=32						
PEA1	**Petropavlovsk-**	65.02	354	*e*P	P	02 14 50.7	-0.1
WHN	**Wuhan**	65.36	312	P	P	02 14 52.2	-1.3
VNDA	**Vanda**	65.82	181	P	P	02 14 56.6	+0.9
	2.1nm,0.8s,baz=346,slow=8.3,SNR=9.8						
VNDA				LR	LR	02 41 02.4	
	comp=Z,43nm,18.6s,baz=350,slow=34						
VNDA	**Vanda**	65.82	181	*e*P	P	02 14 55.0	-0.7
	6.5nm,1.3s						
SBA	**Scott Base**	66.11	180	*e*P	P	02 14 58.8	+1.2
	11nm,1.0s						
PANO	**Nakornpanom**	67.49	294	P	P	02 15 09.4	+2.1
	0.4nm,1.2s						
SKNT	**Sakolnakorn**	67.99	294	P	P	02 15 11.7	+1.2
	38nm,0.9s,4µm						
NONG	**Nongkai**	69.12	295	P	P	02 15 18.7	+1.2
	0.5nm,0.9s,135nm						
CHAI	**Chaiyaphum**	69.43	292	P	P	02 15 20.6	+1.1
XAN	**Xi'an**	71.08	312	*e*P	P	02 15 29.9	+0.6
	13nm,0.8s						
XAN	**Xi'an**	71.08	312	P	P	02 15 30.1	+0.7
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
KMI	**Kunming**	72.06	301	P	P	02 15 37.9	+2.3
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
LAMP	**Lampang**	72.41	294	P	P	02 15 40.4	+2.8
	53µm,0.8s						
HHC	**Hu-ho-hao-te**	72.80	319	P	P	02 15 41.2	+1.7
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.5s						
CM31	**Chiang Mai Arr**	73.01	294	*e*P	P	02 15 41.4	+0.3
	23nm,0.9s						
CMAR	**Chiang Mai Arr**	73.01	294	P	P	02 15 42.8	+1.7
	15nm,0.9s,baz=122,slow=4.5,SNR=36						
CMAR				LR	LR	02 44 56.0	
	comp=Z,17nm,22.0s,baz=325,slow=33						
CMMT	**Chiang Mai**	73.12	294	P	P	02 15 43.4	+1.6
CHTO	**Chiang Mai**	73.12	294	*e*P	P	02 15 42.8	+1.0
	23nm,1.3s						
CD2	**Chengdu**	73.56	307	*e*P	P	02 15 45.0	+0.8
LZH	**Lanzhou**	75.72	312	⇑P	P	02 15 58.7	+1.9
LZH				pP	sP	02 16 18.1	-1.0
LZH				sP	pwP	02 16 28.1	+15
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
QSPA	**South Pole Qui**	78.27	180	*e*P	P	02 16 09.9	-0.6
	15nm,0.9s						
ULN	**Ulaanbaatar**	79.26	324	*e*P	P	02 16 16.8	+0.6
	11nm,1.2s						
SONA0	**Songino Array**	79.62	324	*e*P	P	02 16 18.7	+0.6
SONM	**Songino Array**	79.62	324	P	P	02 16 18.7	+0.6
	2.4nm,0.9s,baz=136,slow=5.2,SNR=12						
GTA	**Gaotai**	80.02	314	*e*P	P	02 16 22.3	+1.7
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TLY	**Talaya**	83.07	326	LR	LR	02 50 12.1	
	comp=Z,64nm,21.7s,baz=177,slow=33						
CCB	**Clear Creek Bu**	83.58	18	*e*P	P	02 16 38.3	-0.2
	2.3nm,0.6s						
HDA	**Harding Lake**	83.68	19	*e*P	P	02 16 38.9	-0.1
	5.0nm,0.6s						
ILAR	**Eielson Array**	83.95	18	P	P	02 16 40.0	-0.4
	1.1nm,0.6s,baz=229,slow=5.3,SNR=19						
ILAR				LR	LR	02 47 15.4	
	comp=Z,26nm,21.3s,baz=138,slow=31						
ILB	**Eielson Array**	83.95	18	*e*P	P	02 16 41.8	+1.4
	1.7nm,0.8s						
DOT	**Dot Lake**	84.09	20	*e*P	P	02 16 41.9	+0.8
	2.4nm,0.8s						
MAW	**Mawson**	84.34	202	P	P	02 16 41.3	-1.1
	2.3nm,0.7s,baz=83,slow=9.5,SNR=4.7						
EGAK	**Eagle**	85.79	20	*e*P	P	02 16 48.7	-1.0
	2.8nm,0.6s						
NVAR	**Mina Array Bea**	85.95	50	P	P	02 16 51.5	+0.1
	0.6nm,0.6s,baz=244,slow=6.3,SNR=6.8						
NVAR				LR	LR	02 48 55.4	
	comp=Z,74nm,18.4s,baz=270,slow=31						
NV01	**Mina Array Sit**	85.95	50	*e*P	P	02 16 51.5	+0.1
U15A	**North Rim**	89.98	53	*e*P	P	02 17 11.4	+0.7
	1.6nm,0.6s						
WMQ	**Urumqi**	90.06	315	*e*P	P	02 17 12.2	+1.6
WMQ				LR	LR		
	comp=N,320nm,29.0s						
WMQ				LR	LR		
	comp=E,430nm,28.9s						
PDAR	**Pinedale Array**	93.52	47	P	P	02 17 25.5	-1.4
	0.1nm,0.2s,baz=265,slow=4.3,SNR=2.7						
MK31	**Makanchi Array**	94.49	317	*e*P	P	02 17 30.0	-1.0
	3.7nm,0.9s						
MK32	**Makanchi Array**	94.49	317	*e*P	P	02 17 31.3	+0.3
MKAR	**Makanchi Array**	94.49	317	P	P	02 17 31.3	+0.3
	4.0nm,0.7s,baz=95,slow=6.4,SNR=31						
ZALV	**Zalesovo Beam**	94.51	324	P	P	02 17 30.9	0.0
	1.0nm,0.5s,baz=97,slow=3.7,SNR=4.1						
ZALV				LR	LR	02 58 49.6	
	comp=Z,24nm,20.4s,baz=70,slow=35						
ZAA1	**Zalesovo Array**	94.51	324	*e*P	P	02 17 30.9	0.0
YKA	**Yellowknife Ar**	95.27	27	P	P	02 17 35.7	+1.6
	0.3nm,0.5s,baz=256,slow=4.6,SNR=4.0						
YKB5	**Yellowknife Ar**	95.27	27	*e*P	P	02 17 35.7	+1.6
TXAR	**Lajitas Array**	95.56	61	LR	LR	02 51 28.8	
	comp=Z,55nm,21.8s,baz=0.0,slow=30						
ARA0	**ARCESS Array S**	117.17	346	*e*PKPdf	PKiKP	02 22 54.6	-0.5
ARCES	**ARCESS Array B**	117.17	346	PKP	PKiKP	02 22 54.6	-0.5
	2.5nm,0.7s,baz=117,slow=1.4,SNR=7.4						
FIA0	**FINESS Array S**	122.66	339	*e*PKPdf	PKiKP	02 23 04.9	-1.1
FINES	**FINESS Array B**	122.66	339	PKP	PKiKP	02 23 04.9	-1.1
	0.8nm,0.4s,baz=8.5,slow=3.9,SNR=9.2						
BOSA	**Boshof**	125.07	222	PKP	PKiKP	02 23 12.6	+0.5
	3.0nm,0.9s,baz=114,slow=10.0,SNR=3.1						
NB200	**NORSAR Array S**	127.54	345	*e*PKPdf	PKiKP	02 23 14.4	-1.3
NOA	**NORSAR Array B**	127.54	345	PKP	PKiKP	02 23 14.4	-1.3
	0.4nm,0.6s,baz=344,slow=1.9,SNR=2.4						
MATP	**Matopo**	127.72	233	PKP	PKiKP	02 23 17.3	-0.2
	2.8nm,1.0s,baz=213,slow=4.7,SNR=4.1						
BR101	**Keskin Array S**	129.93	312	*e*PKPdf	PKiKP	02 23 22.2	+0.8
BRTR	**Keskin Array B**	129.93	312	PKP	PKiKP	02 23 22.2	+0.8
	0.2nm,0.5s,baz=51,slow=1.3,SNR=2.7						
LSZ	**Lusaka**	130.71	238	PKP	PKiKP	02 23 24.0	+0.4
	0.3nm,0.3s,baz=64,slow=6.2,SNR=3.7						
KEST	**Kesra**	148.37	323	PKPbc	PKPbc	02 23 55.8	-1.7
	2.0nm,0.7s,baz=333,slow=7.1,SNR=4.9						
ESDC	**Sonseca Array**	150.90	345	PKPbc	PKPbc	02 24 02.1	-1.4
	0.2nm,0.5s,baz=347,slow=4.6,SNR=4.7						
TORD	**Torodi Ar. Bea**	165.03	277	PKPab	PKPab	02 25 11.9	-0.7
	2.0nm,0.9s,baz=22,slow=3.7,SNR=7.0						
TOA1	**Torodi Ar. Sit**	165.03	277	*e*PKPab	PKPab	02 25 11.9	-0.7

SVSA 09 02:11:34.7±0.7**, 38°.64N**×**29°.82W, h10^{km}, MD3.5, ML2.6, Error ellipse: s-maj=8.7km s-min=5.4km az=179.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	0.87	91	*e*P	Pg	02 11 48.4	-3.1
PCED				*e*S	Sg	02 11 58.5	-4.4
PCED				A	A	02 12 01.1	
	91nm,0.2s						
CALA	**Caldeira**	0.88	94	*e*P	Pg	02 11 48.7	-2.9
CALA				*e*S	Sg	02 11 58.5	-4.5
HOR	**Horta**	0.94	97	*e*S	Sg	02 12 00.1	-4.8
HOR				A	A	02 12 01.3	
	202nm,0.6s						
PCAN	**Candelaria**	1.06	99	*e*S	Sg	02 12 03.1	-5.7
PCAN				A	A	02 12 06.6	
	88nm,0.5s						
PICO	**Pico**	1.10	97	*e*P	Pg	02 11 51.0	-4.8
PICO				*e*S	Sg	02 12 04.2	-5.9
PICO				A	A	02 12 06.7	
	204nm,0.3s						
ROSA	**Rosais**	1.23	86	*e*P	Pn	02 11 53.5	-4.5
ROSA				*e*S	Sb	02 12 07.3	-6.8
ROSA				A	A	02 12 11.7	
	100nm,0.4s						
PMAN	**Manadas**	1.35	90	*e*P	Pn	02 11 54.9	-4.7
PMAN				*e*S	Sb	02 12 10.4	-7.1
PMAN				A	A	02 12 13.1	
	40nm,0.2s						
PGRA	**Graciosa**	1.48	74	*e*S	Sn	02 12 13.3	-7.6
PGRA				A	A	02 12 15.1	
	15nm,0.5s						
ADH	**Angra Heroismo**	2.02	89	*e*S	Sn	02 12 26.5	-7.6
ADH				A	A	02 12 30.1	
	27nm,0.3s						
PSCM	**Serra do Cume**	2.11	88	*e*S	Sn	02 12 28.7	-7.7
PSCM				A	A	02 12 32.2	
	18nm,0.3s						

SVSA 09 02:16:38.9±0.8**, 38°.57N**×**29°.85W, h10^{km}, MD3.5, ML2.5, 1D, Error ellipse: s-maj=10.3km s-min=4.4km az=168.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	0.90	89	*e*P	Pg	02 16 53.0	-3.2
CALA				*e*S	Sg	02 17 03.5	-4.5
PCED	**Cedros**	0.90	86	*e*P	Pg	02 16 52.8	-3.5
PCED				*e*S	Sg	02 17 03.0	-5.0
PCED				A	A	02 17 03.8	
	72nm,0.1s						
HOR	**Horta**	0.96	92	*e*P	Pg	02 16 53.5	-3.8
HOR				*e*S	Sg	02 17 04.8	-5.0
HOR				A	A	02 17 05.9	
	124nm,0.1s						
PCAN	**Candelaria**	1.08	95	*e*P	Pg	02 16 55.0	-4.6
PCAN				*e*S	Sg	02 17 07.8	-5.8
PCAN				A	A	02 17 10.9	
	57nm,0.1s						
PICO	**Pico**	1.12	93	*e*P	Pb	02 16 56.1	-4.3
PICO				*e*S	Sg	02 17 08.9	-6.1
PICO				A	A	02 17 11.5	
	105nm,0.2s						
PPNO	**Prainha do Nor**	1.25	94	*e*P	Pn	02 16 58.1	-4.4
PPNO				*e*S	Sb	02 17 12.2	-6.5
PPNO				A	A	02 17 14.8	
	49nm,0.1s						
ROSA	**Rosais**	1.27	83	*e*P	Pn	02 16 58.2	-4.5
ROSA				*e*S	Sb	02 17 12.2	-7.1
ROSA				A	A	02 17 14.1	
	58nm,0.2s						
PMAN	**Manadas**	1.38	87	*e*P	Pn	02 16 59.6	-4.6
PMAN				*e*S	Sb	02 17 15.2	-7.3
PMAN				A	A	02 17 16.6	
	24nm,0.1s						
ADH	**Angra Heroismo**	2.05	87	*e*P	Pn	02 17 09.1	-4.3
ADH				*e*S	Sn	02 17 31.3	-7.7
ADH				A	A	02 17 32.7	
	11nm,0.3s						
PSCM	**Serra do Cume**	2.14	86	⇓*e*P	Pn	02 17 10.2	-4.5
PSCM				*e*S	Sn	02 17 33.7	-7.7
PSCM				A	A	02 17 36.4	
	10nm,0.2s						
PSET	**Sete Cidades**	3.34	102	*e*P	Pn	02 17 26.4	-4.8
PDA	**Ponta Delgada**	3.40	103	*e*P	Pn	02 17 28.0	-4.0
CMLA	**Cha da Macela**	3.50	102	*e*P	Pn	02 17 29.3	-4.1
BART	**Pico Bartolome**	3.77	101	*e*P	Pn	02 17 33.2	-4.0
PSMA	**Santa Maria**	4.06	111	*e*P	Pn	02 17 36.2	-4.8

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*ISCJB **09** 02:31:12.7±0.5, 37°.12N±0°.04×71°.89E±0°.06, h130^{km}, mb3.2/6, Error ellipse: s-maj=7.5km s-min=5.0km az=154.1*

*IDC **09** 02:31:16.5±4.0, 37°.43N×71°.85E, h142^{km}±29^{km}, mb3.1/6, mb1 3.2/12, mb1mx3.1/36, mbtmp3.5/12, Error ellipse: s-maj=42.9km s-min=16.5km az=158.0*

*NNC **09** 02:31:19.2±3.9, 37°.56N×71°.68E, h128^{km}±72^{km}, mb3.5, mpv4.2, Error ellipse: s-maj=33.1km s-min=23.1km az=21.0*

ISC 09 02:31:13.9±0.8**, 37°.26N**±0°.07×**71°.80E**±0°.06**, h130^{km}, n35,** σ**2^{s}.23**/42**, mb3.2**/6**, 7C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	5.08	16	P	Pn	02 32 30.5	+2.2
	SNR=6.2						
UCH	**Uchtor**	5.38	22	P	Pn	02 32 34.3	+1.9
	SNR=85						
KZA	**Kyzart**	5.49	28	P	Pn	02 32 34.9	+0.9
	SNR=12						
EKS2	**Erkin-Say**	5.60	15	P	Pn	02 32 37.2	+2.1
	SNR=19						
AAK	**Ala-Archa**	5.75	20	P	Pn	02 32 38.8	+1.6
	4.9nm,0.3s,baz=189,slow=6.5,SNR=43						
AAK				S	Sn	02 33 40.5	-1.5
	2.1nm,0.3s,baz=306,slow=23,SNR=10						
AAK	**Ala-Archa**	5.75	20	⇓P	Pn	02 32 38.7	+1.6
	22nm,0.8s						
AAK				S	Sn	02 33 41.3	-0.8
	12nm,0.5s						
AAK	**Ala-Archa**	5.75	20	P	Pn	02 32 39.4	+2.2
	SNR=19						
KBK	**Karagaybulak**	5.90	23	P	Pn	02 32 41.5	+2.3
	SNR=9.1						
KK31	**Karatay Array**	5.92	351	⇑P	Pn	02 32 41.3	+2.1
	38nm,0.7s,baz=171,slow=17,SNR=204						
KK31				⇓S	Sn	02 33 44.7	-1.1
	14nm,0.5s,baz=169,slow=23,SNR=16						
ULHL	**Ulahol**	6.04	33	P	Pn	02 32 42.3	+1.3
	SNR=10						
CHMS	**Chumysh**	6.16	21	P	Pn	02 32 44.5	+2.1
	SNR=8.0						
USP	**Ospenovka**	6.34	18	P	Pn	02 32 46.4	+1.5
	SNR=20						
TKM2	**Tokmak 2**	6.36	26	⇑P	Pn	02 32 46.3	+1.0
	5.9nm,0.6s						
TKM2				⇑S	Sn	02 33 58.3	+1.6
	4.3nm,0.8s						
TKM2	**Tokmak 2**	6.36	26	P	Pn	02 32 46.8	+1.5
	SNR=12						
GEYT	**Alibeck**	10.88	278	P	Pn	02 33 47.7	+1.8
	0.4nm,0.3s,baz=99,slow=8.9,SNR=2.9						
GEYT				S	Sn	02 35 41.9	-4.0
	0.2nm,0.3s,baz=104,slow=35,SNR=2.1						
MKAR	**Makanchi Array**	12.30	36	P	Pn	02 34 05.1	+0.6
	0.1nm,0.3s,baz=229,slow=13,SNR=3.8						
PYUN	**Piuthan**	13.12	131	*e*P	Pn	02 34 12.4	-3.1
	8.8nm,0.3s						
DANN	**Dangsing**	13.41	128	*e*P	Pn	02 34 17.3	-2.1
	15nm,0.3s						
KOLN	**Koldanda**	13.73	130	*e*P	Pn	02 34 20.4	-2.9
	6.9nm,0.5s						
KURBB	**Kurchatov Arra**	14.20	18	P	Pn	02 34 27.7	-1.2
	0.0nm,0.3s,baz=210,slow=12,SNR=3.9						
GKN	**Gorkha**	14.21	127	*e*P	Pn	02 34 27.3	-2.1
	9.3nm,0.2s						
AB31	**Akbulak array**	14.75	328	⇑P	P	02 34 38.1	-0.4
	2.4nm,0.4s,baz=133,slow=15,SNR=105						
AB31				⇑S	Sn	02 37 13.5	-5.5
	2.1nm,0.5s,baz=159,slow=22,SNR=10						
DMN	**Daman**	14.78	127	*e*P	Pn	02 34 34.2	-2.5
PKIN	**Phulchoki**	14.99	126	*e*P	Pn	02 34 37.1	-2.3
	6.9nm,0.4s						
PKI	**Pulchoki**	15.00	126	*e*P	Pn	02 34 37.0	-2.6
	7.4nm,0.4s						
JIRN	**Jiri**	15.45	124	*e*P	Pn	02 34 42.6	-2.6
	22nm,0.3s						
BVAR	**Borovoye Array**	15.79	357	P	Pn	02 34 47.3	-1.6
	0.1nm,0.3s,baz=164,slow=16,SNR=3.6						
AKTO	**Aktyubinsk**	16.46	327	⇑P	P	02 35 00.8	+3.4
	2.2nm,0.9s						
AKTO				⇑S	Sn	02 37 56.6	-3.5
	5.5nm,1.2s						
ZALV	**Zalesovo Beam**	18.96	24	P	Pn	02 35 25.9	-1.0
	0.8nm,0.3s,baz=216,slow=10,SNR=4.0						
SONM	**Songino Array**	27.38	56	P	P	02 36 48.0	+1.0
	0.4nm,0.7s,baz=315,slow=14,SNR=2.9						
BRTR	**Keskin Array B**	29.82	287	P	P	02 37 11.3	+2.6
	0.3nm,0.6s,baz=87,slow=8.8,SNR=3.2						
FINES	**FINESS Array B**	37.21	325	P	P	02 38 13.8	+1.5
	0.7nm,0.5s,baz=130,slow=9.7,SNR=5.9						
ESDC	**Sonseca Array**	57.67	298	P	P	02 40 51.7	+1.0
	0.1nm,0.4s,baz=68,slow=8.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	66.38	269	P	P	02 41 49.6	+0.5
	0.3nm,0.9s,baz=49,slow=5.8,SNR=4.2						
YKA	**Yellowknife Ar**	80.45	3	P	P	02 43 10.3	-0.4
	0.3nm,0.5s,baz=351,slow=5.7,SNR=3.2						

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*IDC **09** 02:46:32.7±5.6, 37°.49N×71°.42E, h180^{km}±43^{km}, mb1 3.1/6, mb1mx2.8/44, mbtmp3.7/6, Error ellipse: s-maj=82.5km s-min=23.3km az=147.0*

*NNC **09** 02:46:33.1±6.2, 37°.43N×71°.67E, h164^{km}±83^{km}, mb2.8, mpv3.8, Error ellipse: s-maj=53.7km s-min=35.6km az=17.0*

ISC 09 02:46:30.7±1.9**, 37°.3N**±0°.1×**71°.64E**±0°.09**, h150^{km}, n18,** σ**1^{s}.45**/23**, 4C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	5.08	18	P	Pn	02 47 37.2	-8.2
	SNR=6.2						
UCH	**Uchtor**	5.40	23	P	Pn	02 47 50.2	+0.5
	SNR=31						
KZA	**Kyzart**	5.53	29	P	Pn	02 47 51.8	+0.3
	SNR=13						
EKS2	**Erkin-Say**	5.61	16	P	Pn	02 47 53.8	+1.6
	SNR=20						
AAK	**Ala-Archa**	5.77	21	P	Pn	02 47 55.4	+1.0
	5.9nm,0.3s,baz=178,slow=14,SNR=19						
AAK				S	Sn	02 49 00.0	+0.2
	1.4nm,0.3s,baz=288,slow=20,SNR=10						
AAK	**Ala-Archa**	5.77	21	⇑P	Pn	02 47 55.4	+1.0
	5.5nm,0.3s						
AAK				⇑S	Sn	02 48 59.6	-0.2
	15nm,0.8s						
AAK	**Ala-Archa**	5.77	21	P	Pn	02 47 55.7	+1.4
	SNR=11						
KK31	**Karatay Array**	5.87	352	⇓P	Pn	02 47 57.6	+2.1
	4.8nm,0.3s,baz=171,slow=12,SNR=144						
KK31				⇓S	Sn	02 49 03.4	+1.5
	21nm,0.3s,baz=177,slow=22,SNR=35						
CHMS	**Chumysh**	6.18	22	P	Pn	02 48 00.9	+1.2
	SNR=6.7						
USP	**Ospenovka**	6.35	19	P	Pn	02 48 03.1	+1.0
	SNR=6.3						
TKM2	**Tokmak 2**	6.39	27	⇓P	Pn	02 48 01.9	-0.7
	2.6nm,0.7s						
TKM2				⇓S	Sn	02 49 13.9	-0.7
	2.2nm,0.6s						
GEYT	**Alibeck**	10.75	277	P	Pn	02 48 59.5	-1.0
	1.1nm,0.3s,baz=96,slow=12,SNR=6.6						
MKAR	**Makanchi Array**	12.35	36	P	Pn	02 49 23.4	+2.0
	0.2nm,0.3s,baz=216,slow=12,SNR=5.6						
KURBB	**Kurchatov Arra**	14.21	18	P	Pn	02 49 44.6	-0.4
	0.0nm,0.3s,baz=202,slow=11,SNR=6.7						
AB31	**Akbulak array**	14.66	328	⇓P	Pn	02 49 52.4	+1.8
	0.2nm,0.3s,baz=134,slow=15,SNR=12						
AB31				⇓S	Sn	02 52 31.5	-1.7
	0.6nm,0.3s,baz=150,slow=23,SNR=8.3						
BVAR	**Borovoye Array**	15.76	357	P	Pn	02 50 01.8	-2.4
	0.2nm,0.3s,baz=168,slow=12,SNR=2.9						
AKTO	**Aktyubinsk**	16.37	328	⇑P	P	02 50 13.4	+1.7
	1.1nm,0.8s						
AKTO				⇑S	S	02 53 11.9	-1.4
	3.2nm,0.9s						
ZALV	**Zalesovo Beam**	18.98	24	P	P	02 50 38.5	-1.8
	1.3nm,0.3s,baz=214,slow=11,SNR=12						

IGQ 09 02:59:35.7±0.6**, 2°S**±4°×**7°8W**±°**, h12^{km}, MLv3.6, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APUY	**Puyo**	0.93	347	P	Pg	02 59 52.7	-1.0
APUY				S	Sb	03 00 06.8	+0.5
BPAT	**Tungurahua Vol**	1.08	323	P	Pg	02 59 54.0	-2.5
BPAT				S	Sb	03 00 11.0	+0.1
PAT1	**Patacocha**	1.08	323	P	Pg	02 59 54.8	-1.8
ARRY	**Arrayan**	1.09	322	P	Pb	02 59 54.9	-1.9
BMAS	**Trigal station**	1.11	321	P	Pb	02 59 55.4	-1.6
BULB	**Ulba Tungurahu**	1.12	326	P	Pb	02 59 56.0	-1.3
BULB				S	Sb	03 00 11.7	-0.2
RETU	**Refugio**	1.13	324	P	Pb	02 59 55.8	-1.7
BRUN	**Tungurahua Vol**	1.13	327	P	Pb	02 59 55.8	-1.7
RUN5	**Runtun**	1.14	326	P	Pb	02 59 57.5	-0.2
BBIL	**Ulba Tungurahu**	1.15	323	P	Pb	02 59 56.2	-1.6
POND	**Pondoa**	1.15	325	P	Pb	02 59 56.2	-1.7
POND				S	Sn	03 00 13.8	-0.1
ARDO	**Archidona, Ten**	1.37	359	P	Pn	02 59 59.1	-1.6
ARDO				S	Sb	03 00 18.2	-0.6
PIS1	**Pisayambo**	1.44	335	P	Pn	03 00 01.3	-0.8
PISA	**Pisayambo**	1.44	335	P	Pn	03 00 01.0	-1.1
COHC	**Cochancay**	1.47	266	P	Pn	03 00 01.7	-0.3
BMOR	**Cotopaxi Volca**	1.76	338	P	Pn	03 00 06.7	+0.1
BMOR				S	Sg	03 00 31.9	-0.7
MILO	**Milagro-Astudi**	1.77	273	P	Pb	03 00 07.4	-0.7
MILO				S	Sg	03 00 33.4	+0.7
BTAM	**Cotopaxi Volca**	1.79	340	P	Pn	03 00 07.2	+0.2
BREF	**Cotopaxi Volca**	1.81	339	P	Pn	03 00 08.0	+0.7
BVC2	**Cotopaxi Volca**	1.81	340	P	Pn	03 00 07.8	+0.4
BNAS	**Cotopaxi Volca**	1.82	338	P	Pn	03 00 07.9	+0.5
VC1	**Cotopaxi 1**	1.82	340	P	Pn	03 00 08.1	+0.6
PITA	**Cotopaxi Volc**	1.91	340	P	Pb	03 00 09.8	-1.1
ANTI	**Antisana**	1.95	349	P	Pn	03 00 08.2	-0.9
ZUMB	**Zumba**	2.82	209	P	Pn	03 00 19.2	-1.6
MCRA	**Macar, Loja**	2.94	227	P	Pn	03 00 18.3	-4.0

ECX 09 03:04:22.9±0.6**, 31°.06N**×**115°.57W, h5^{km}, MD3.3, ML3.5, 1C-2D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPX	**San Pedro Mart**	0.09	100	⇑*i*P	Pg	03 04 24.8	-0.3
SPX				*e*S	Sg	03 04 26.8	+0.2
SPX				IAML		03 04 27.0	
	comp=E,22µm,0.1s						
SPX				⇓*e*		03 04 27.0	
CPBX	**Cerro Prieto**	1.37	9	*e*P	Pn	03 04 46.7	-2.0

CBX	Cerro Bola	1.56	324	eP	Pn	03 04 49.7	-1.7
RMX	La Rumorosa	1.60	344	eP	Pn	03 04 49.4	-2.6
RMX				eS	Sn	03 05 09.8	-3.3
RMX				IAML		03 05 11.9	
	comp=E,451nm,0.3s						
RMX				⇓e		03 05 11.9	
IKP	In-Ko-Pah, Jac	1.65	344	eP	Pn	03 04 51.3	-1.3
BAR	Barrett	1.87	330	eP	Pn	03 04 54.9	-0.7
MONP2	Monument Peak	1.96	339	eP	Pn	03 04 56.4	-0.7
EML	El Monte Cty P	2.12	330	eP	Pn	03 04 58.6	-0.4

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*DDA **09** 03:13:57.9,38°.51N×41°.73E,$h7^{km}\pm3^{km}$,ML2.5*

*ISK **09** 03:13:57.3,38°.53N×41°.76E,$h10^{km}$,ML2.3/10*

*ISCJB **09** 03:13:58.3±0.4,38°.53N±0°.03×41°.75E±0°.03,$h6^{km}\pm4^{km}$, Error ellipse: s-maj=4.7km s-min=3.2km az=32.0*

ISC 09 03:13:58.0±1.0,38°.51N±0°.03×41°.74E±0°.02,$h11^{km}\pm9^{km}$, n21,$\sigma0^{s}.57$/34,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUSM	Mu-Merkez	0.27	320	iP	Pb	03 14 04.3	-0.7
MUSM				iS	Sg	03 14 08.0	+0.6
MUSM				IAML_P			
	comp=Z,5µm,0.1s						
BLIS	Bitlis-Merkez	0.31	108	iP	Pg	03 14 04.5	0.0
BLIS				iS	Sg	03 14 09.2	+0.5
SRTM	Siirt_Merkez	0.54	164	iP	Pb	03 14 09.0	-0.6
SRTM				iS	Sb	03 14 17.9	+0.5
SRTM				IAML_P			
	comp=Z,763nm,0.1s						
SVAN	Silvan-Diyarba	0.56	230	PG	Pg	03 14 09.1	+0.2
SVAN				SG	Sb	03 14 17.5	-0.3
SVAN	Silvan-Diyarba	0.56	230	iP	Pb	03 14 09.8	-0.1
SVAN				iS	Sb	03 14 17.9	+0.1
SVAN				IAML_P			
	comp=Z,1µm,0.1s						
BNGL	BINGOL	0.63	314	iP	Pb	03 14 11.4	+0.2
BNGL				iS	Sb	03 14 21.1	+0.9
BTMN	Batman	0.72	211	iP	Pn	03 14 14.3	0.0
BNGB	Bingl	0.95	300	PG	Pb	03 14 16.3	-0.3
BNGB				SG	Sb	03 14 30.1	+0.8
KARO	Karliova-Bingo	0.96	326	PG	Pb	03 14 16.3	-0.5
KARO				SG	Sb	03 14 29.8	+0.3
BGOL	Bingol	0.96	300	iP	Pb	03 14 16.8	0.0
BGOL				iS	Sn	03 14 30.7	-0.5
AKDM	Akdamar-Van	0.99	100	PG	Pg	03 14 16.6	-0.6
AKDM				SG	Sb	03 14 30.3	-0.3
HANI	Diyarbakir_Han	1.05	265	iP	Pg	03 14 16.5	-1.8
HANI				iS	Sn	03 14 34.1	+0.6
GEVA	Gevas	1.06	101	iP	Pn	03 14 18.9	-0.1
GEVA				iS	Sn	03 14 34.4	+0.6
GEVA				IAML_P			
	comp=Z,454nm,0.3s						
YEDI	Yedisu-Bingol	1.31	315	PN	Pn	03 14 22.4	0.0
DYBB	Diyarbakir	1.38	246	PN	Pb	03 14 23.5	-0.3
MARD	Mardin	1.42	213	iP	Pg	03 14 24.8	-0.5
MARD				iS	Sg	03 14 43.9	+0.3
AGRB	Hanur-Agry	1.44	42	PN	Pn	03 14 23.9	-0.4
MAZI	Mazidag	1.47	224	PN	Pn	03 14 24.5	0.0
EATA	Eleskirt	1.47	23	iP	Pg	03 14 26.2	-0.1
EATA				IAML_P			
	comp=Z,115nm,0.1s						
SVRC	Sivrice-ELAZID	1.91	267	PN	Pn	03 14 31.1	+0.4
URFA	Urfa	2.54	246	PN	Pn	03 14 40.1	+0.8

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*TIF **09** 03:31:38.3,42°.39N×40°.95E,$h42^{km}\pm2^{km}$*

*ISK **09** 03:31:38.3,42°.29N×40°.83E,$h19^{km}$,ML2.6/1*

*ISCJB **09** 03:31:39.3±0.9,42°.36N±0°.03×40°.88E±0°.08,$h22^{km}\pm7^{km}$, Error ellipse: s-maj=9.4km s-min=4.4km az=0.0*

*DDA **09** 03:31:40.0,42°.25N×41°.13E,$h8^{km}\pm2^{km}$,ML2.7*

ISC 09 03:31:38.5±1.5,42°.40N±0°.03×41°.05E±0°.06,$h11^{km}\pm11^{km}$, n19,$\sigma0^{s}.73$/36,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.93	149	PG	Pg	03 31 56.9	+0.5
BATM				SG	Sn	03 32 10.5	-0.3
BATM	Batumi	0.93	149	P	Pg	03 31 57.0	+0.6
BATM				S	Sn	03 32 10.7	0.0
BATM	Batumi	0.93	149	iP	Pb	03 31 57.2	+0.6
BATM				iS	Sn	03 32 10.1	-0.7
BATM	Batumi	0.93	149	ePg	Pg	03 31 57.0	+0.6
BATM				eSg	Sn	03 32 10.7	0.0
BCA	Borcka	1.04	156	PG	Pb	03 31 58.2	-0.4
BCA				SG	Sg	03 32 12.9	+0.7
DBOC	Borcka	1.15	156	iP	Pb	03 32 00.9	+0.5
DBOC				iS	Sn	03 32 16.3	0.0
ARXR	Arkhyz	1.17	8	iPg	Pn	03 32 02.0	+1.0
ARXR				iSg	Sb	03 32 16.1	-0.1
TKB	Tkibuli	1.44	91	P	Pb	03 32 05.2	-0.2
TKB				S	Sg	03 32 24.5	-0.4
DBAD	Bademkaya	1.46	161	iP	Pn	03 32 05.2	+0.3
DBAD				iS	Sn	03 32 23.4	-0.7
DBAD				IAML_P			
	comp=Z,639nm,0.1s						
DAGI	Agillar	1.47	154	iP	Pn	03 32 05.3	+0.3
DAGI				iS	Sn	03 32 23.8	-0.5
DAGI				IAML_P			
	comp=Z,237nm,0.1s						
NEY	Neytrino	1.50	55	iPg	Pn	03 32 06.1	+0.6
NEY				iSg	Sg	03 32 26.4	-0.3
EPOS	Posof	1.54	125	iP	Pb	03 32 07.4	+0.3
EPOS				iS	Sg	03 32 27.1	-1.0
SHA1	Shidzhatmaz	1.78	41	iPg	Pb	03 32 11.7	+0.4
SHA1				eSg	Sg	03 32 35.1	-0.8
ONI	Oni	1.79	83	PN	Pb	03 32 11.5	+0.2
ONI	Oni	1.79	83	P	Pg	03 32 11.7	-1.1
ONI				S	Sg	03 32 36.4	+0.4
ONI	Oni	1.79	83	ePg	Pg	03 32 11.7	-1.1
ONI				eSg	Sg	03 32 36.4	+0.4
KIV	Kislovodsk	1.96	37	PN	Pb	03 32 14.2	-0.1
KIV0	Kislovodsk Arr	1.97	37	iPg	Pb	03 32 14.6	+0.2
KIV0				iSg	Sb	03 32 39.9	+1.0
KELT	Kelkit	2.62	212	iP	Pn	03 32 18.8	-2.2
KELT				iS	Sn	03 32 54.1	+1.2

MEX 09 03:50:09.1±0.5,15°.15N×93°.34W,$h70^{km}\pm8^{km}$,MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.56	12	iP	Pn	03 50 21.3	-1.3
PCIG				eS	Sn	03 50 30.6	-1.8
THIG		1.06	103	eP	Pn	03 50 27.3	-1.1
THIG				eS	Sn	03 50 41.0	-1.8
CCIG	Comitan	1.61	46	iP	Pn	03 50 34.8	-1.0
CCIG				iS	Sn	03 50 54.4	-1.5
TGIG		1.63	7	eP	Pn	03 50 34.1	-1.8
TGIG				iS	Sn	03 50 53.6	-2.6

IDC 09 03:50:33.7±1.8,9°.41S×126°.18E,$h0^{km}$,mb3.8/2, mb1 3.8/3,mb1mx3.5/19,mbtmp3.8/3,ML4.0/1,Error ellipse: s-maj=620.7km s-min=30.4km az=60.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.11	144	Pn	Pn	03 53 33.8	-7.6
	1.2nm,0.3s,baz=335,slow=13,SNR=6.5						
WRA				Sn	Sn	03 55 51.3	-17
ASAR	Alice Springs	15.99	153	Pn	Pn	03 54 19.9	-0.3
	0.6nm,0.3s,baz=332,slow=9.4,SNR=12						
ASAR				Sn	Sn	03 57 13.3	-4.9
	0.2nm,0.3s,baz=356,slow=26,SNR=2.1						
STKA	Stephens Creek	26.54	150	P	P	03 56 13.4	+0.1
	1.5nm,0.6s,baz=329,slow=12,SNR=4.1						
MKAR	Makanchi Array	68.25	329	P	P	04 01 36.4	0.0
	0.3nm,0.5s,baz=126,slow=7.4,SNR=4.0						

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*KRNET **09** 03:57:19.6±0.1,41°.72N×71°.77E,$h17^{km}$,mb2.8*

*SOME **09** 03:57:20.2,41°.77N×71°.75E,$h20^{km}$*

*NNC **09** 03:57:20.2±1.2,41°.88N×71°.68E,$h0^{km}$,mb3.3,mpv3.1, Error ellipse: s-maj=10.7km s-min=4.6km az=4.0*

ISC 09 03:57:18.4±1.4,41°.76N±0°.04×71°.72E±0°.03,$h4^{km}\pm11^{km}$, n43,$\sigma2^{s}.14$/71,21C-15D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.19	78	⇓iP	Pg	03 57 23.2	+1.0
	baz=70						
ARK				⇓iS	Sg	03 57 26.0	+1.3
	baz=70						
ARSB	Arslanbob	1.04	114	⇓iP	Pb	03 57 38.3	-0.9
	baz=13						
ARSB				⇓iS	Sg	03 57 52.0	0.0
	baz=13						
IUG	Iuzhnay	1.32	288	P	Pn	03 57 43.4	-0.3
	4.2nm,0.1s						
IUG				S	Sn	03 58 01.1	-0.7
	59nm,0.2s						
IUG	Iuzhnay	1.32	288	eP	Pn	03 57 43.4	-0.3
	2.4nm,0.2s						
IUG				eS	Sn	03 58 01.1	-0.7
	59nm,0.2s						
MRKS	Merke	1.49	48	P	Pb	03 57 46.6	-0.2
	13nm,0.2s						
MRKS				S	Sb	03 58 06.3	+0.1
	28nm,0.1s						
MRKS	Merke	1.49	48	eP	Pb	03 57 46.6	-0.2
	4.5nm,0.2s						
MRKS				eS	Sb	03 58 06.3	+0.1
	37nm,0.4s						
KK31	Karatay Array	1.61	327	⇓P	Pn	03 57 48.4	+0.7
	1.8nm,0.5s,baz=151,slow=17,SNR=29						
KK31				⇑S	Sn	03 58 08.2	-0.9
	4.9nm,0.4s,baz=146,slow=30,SNR=13						
EKS2	Erkin-Say	1.78	59	⇓iP	Pb	03 57 51.8	+0.1
	baz=57						
EKS2				⇓iS	Sg	03 58 15.6	0.0
	baz=57						
EKS2	Erkin-Say	1.78	59	P	Pb	03 57 51.8	+0.1
	SNR=8.6						
BTK	Batken	1.83	202	⇑iP	Pb	03 57 52.9	+0.3
	baz=4.0						
BTK				⇑iS	Sg	03 58 17.5	+0.3
	baz=4.0						
ARLS	Aral	1.95	86	⇓eP	Pb	03 57 54.7	0.0
	baz=85						
ARLS				⇓iS	Sg	03 58 20.5	-0.6
	baz=85						
UCH	Uchtor	2.14	76	⇑iP	Pb	03 57 58.0	0.0
	baz=75						
UCH				⇑iS	Sg	03 58 25.8	-1.3
	baz=75						
UCH	Uchtor	2.14	76	P	Pb	03 57 58.4	+0.4
	SNR=10						
AAK	Ala-Archa	2.24	66	Pn	Pb	03 58 00.5	+0.8
	8.1nm,0.5s						
AAK				Lg	Lg	03 58 31.4	
	14nm,0.8s						
AAK	Ala-Archa	2.24	66	⇑iP	Pb	03 57 59.2	-0.5
	baz=65						
AAK				⇑iS	Sb	03 58 28.2	+0.3
	baz=65						
AAK	Ala-Archa	2.24	66	P	Pb	03 58 00.7	+1.0
	SNR=7.8						
FRU1	Bishkek	2.40	63	⇑iP	Pb	03 58 01.5	-0.8
	baz=62						
FRU1				⇑iS	Sb	03 58 32.0	-0.4
	baz=62						
USP	Ospenovka	2.55	53	⇑iP	Pb	03 58 03.3	-1.5
	baz=52						
USP				⇑iS	Sb	03 58 35.6	-1.0
	baz=52						
USP	Ospenovka	2.55	53	P	Pb	03 58 04.9	0.0
	SNR=6.2						
KBK	Karagaybulak	2.56	68	⇓iP	Pb	03 58 03.6	-1.5
	baz=67						
KBK				⇓iS	Sb	03 58 35.9	-1.2
	baz=67						
CHMS	Chumysh	2.57	60	⇑iP	Pb	03 58 03.5	-1.6
	baz=59						
CHMS				⇑iS	Sb	03 58 35.9	-1.2
	baz=59						
KZA	Kyzart	2.66	82	⇑iP	Pb	03 58 05.1	-1.7
	baz=81						
KZA				⇑iS	Sb	03 58 38.3	-1.7
	baz=81						
KZA	Kyzart	2.66	82	P	Pb	03 58 06.2	-0.7
	SNR=12						
TKM2	Tokmak 2	3.10	67	⇓Pn	Pb	03 58 11.9	-2.4
	1.9nm,0.4s						
TKM2				⇓Lg	Lg	03 58 56.7	
	16nm,0.7s						
TKM2	Tokmak 2	3.10	67	⇑iP	Pb	03 58 11.2	-3.1
	baz=66						
TKM2				⇑iS	Sb	03 58 49.0	-3.6
	baz=66						
TKM2	Tokmak 2	3.10	67	P	Sb	03 58 55.9	+3.3
	SNR=9.9						
BOOM	Boomskoye usch	3.23	75	⇑iP	Pb	03 58 12.8	-3.6
	baz=75						
BOOM				⇑iS	Sb	03 58 51.8	-4.3
	baz=75						
DGS	Degeres	3.35	62	Pg	Pb	03 58 20.0	+1.6
	3.4nm,0.3s						
DGS				Lg	Lg	03 59 02.9	
	28nm,0.6s						
DGS	Degeres	3.35	62	eP	Pb	03 58 20.0	+1.6
	3.2nm,0.3s						
DGS				eS	Sg	03 59 02.9	-3.0
	28nm,0.6s						
KST	Kastek	3.40	66	Pg	Pb	03 58 20.2	+0.9
	4.6nm,0.5s						
KST				Lg	Lg	03 59 03.9	
	21nm,0.5s						
KST	Kastek	3.40	66	eP	Pb	03 58 20.2	+0.9
	4.6nm,0.5s						
KST				eS	Sb	03 59 03.4	+2.3
	21nm,0.5s						
ULHL	Ulahol	3.41	80	⇓iP	Pb	03 58 15.4	-4.1
	baz=80						
ULHL				⇓iS	Sb	03 58 56.2	-5.2
	baz=80						
ULHL	Ulahol	3.41	80	P	Sg	03 59 05.8	-2.1
	SNR=5.4						
KUU	Kurty	4.01	56	Pg	Pb	03 58 31.9	+2.2
	1.4nm,0.3s						
KUU				Lg	Lg	03 59 22.9	
	9.9nm,0.4s						
KUU	Kurty	4.01	56	eP	Pb	03 58 31.9	+2.2
	1.4nm,0.4s						
KUU				eS	Sg	03 59 22.9	-4.4
	13nm,0.7s						
TNSS	Tian-Shan	4.08	70	Pg	Pb	03 58 33.1	+2.0
	2.0nm,0.5s						
TNSS				Lg	Lg	03 59 25.6	
	5.0nm,0.4s						
TNSS	Tian-Shan	4.08	70	eP	Pb	03 58 33.1	+2.0
	2.0nm,0.5s						
TNSS				eS	Sg	03 59 25.6	-3.9
	5.0nm,0.4s						
KDJ	Kajisay	4.09	83	⇑eP	Pn	03 58 24.7	+2.7
	baz=82						
KDJ				⇑iS	Sn	03 59 12.7	+2.3
	baz=82						
KTBS	Karatobe	4.15	60	Pg	Pb	03 58 33.2	+1.2
	1.2nm,0.5s						
KTBS				Lg	Lg	03 59 25.6	
	18nm,0.4s						
KTBS	Karatobe	4.15	60	eP	Pb	03 58 33.2	+1.2
	1.2nm,0.5s						
KTBS				eS	Sb	03 59 25.6	+3.1
	18nm,0.4s						
CHKK	Chushkaly	4.41	60	Pg	Pb	03 58 38.9	+2.4
CHKK				Lg	Lg	03 59 35.0	
CHKK	Chushkaly	4.41	60	eP	Pb	03 58 38.9	+2.4
	0.5nm,0.1s						
CHKK				eS	Sg	03 59 35.0	-5.0
	7.4nm,0.5s						
ARXS	Arharly	5.11	59	eP	Pb	03 58 50.7	+2.2
	1.1nm,0.4s						
ARXS				eS	Sb	03 59 54.6	+4.4
	7.6nm,0.5s						

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*SNET **09** 05:02:45.7±1.1,14°.30N×92°.46W,$h15^{km}$,ML3.6*

*IDC **09** 05:02:47.6±1.8,14°.10N×92°.27W,$h0^{km}$,mb3.7/4, mb1 4.0/7,mb1mx3.7/34,mbtmp3.7/7,ML3.3/3,Error ellipse: s-maj=34.0km s-min=15.6km az=1.0*

*GCG **09** 05:02:48.2±0.7,13°.83N×92°.42W,$h27^{km}\pm999^{km}$,MD4.1*

*MEX **09** 05:02:50.5±0.6,13°.97N×92°.20W,$h52^{km}\pm28^{km}$,MD4.0*

ISC 09 05:02:47.9±2.3,14°.12N±0°.08×92°.28W±0°.06,$h2^{km}\pm14^{km}$, n21,$\sigma1^{s}.31$/29,mb3.8/4,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.76	65	eP	Pn	05 03 06.6	+1.1
ERG				eS	Sn	05 03 21.0	+3.4
THIG		0.79	1	eP	Pn	05 03 06.0	0.0
THIG				eS	Sn	05 03 18.0	-0.4
FUG	Fuego 3	1.43	76	eP	Pg	05 03 15.2	-0.1
PCG	Pacaya	1.64	80	eP	Pb	05 03 18.8	-0.1
PCIG		1.82	330	eP	Pn	05 03 19.7	-0.5
PCIG				iS	Sb	05 03 43.3	-2.0
NBG	Las Nubes	1.93	76	eP	Pb	05 03 23.6	-0.3
NBG				eS	Sg	05 03 50.4	+0.6
APG	El Apazote	1.96	63	Pn	Pb	05 03 23.7	-0.8
	20nm,0.3s,baz=2.4,slow=23,SNR=179						
APG				LR	LR	05 03 43.9	
	comp=Z,54nm,21.9s,baz=240,slow=29						
APG				Lg	Lg	05 03 49.6	
	15nm,0.3s,baz=296,slow=13,SNR=3.6						
CCIG	Comitan	2.16	4	iP	Pn	05 03 24.9	-0.1
CCIG				iS	Sn	05 03 51.1	-1.3
RTR	El Retiro	2.56	95	eP	Pn	05 03 30.3	-0.3
CEVE	Cerro Verde	2.59	96	eP	Pn	05 03 30.7	-0.3
CEVE				eS	Sb	05 04 05.2	-2.4
CEVE				IAML		05 04 13.1	
	comp=Z,656nm,0.4s						
SBLS	San Blas	2.59	96	eP	Pn	05 03 29.8	-1.2
TGIG		2.77	343	eP	Pn	05 03 33.7	+0.4
TGIG				iS	Sn	05 04 07.6	+0.2
LFU	La Fuente	3.09	96	eP	Pn	05 03 36.5	-1.3
CMIG	Matias Romero	3.88	320	Pn	Pn	05 03 49.9	+1.4
	comp=Z,0.9nm,0.3s,baz=166,slow=12,SNR=16						
CMIG				Sn	Sn	05 04 34.8	0.0
	comp=Z,15nm,0.3s,baz=100,slow=17,SNR=4.5						
CMIG				Lg	Lg	05 04 42.9	
	comp=Z,15nm,0.3s,baz=296,slow=6.9,SNR=6.3						
JTS	Las Juntas de	8.11	117	Pn	Pn	05 04 48.0	+1.3
	comp=Z,0.4nm,0.3s,baz=16,slow=20,SNR=2.8						
JTS				Lg	Lg	05 06 40.8	
	comp=Z,0.3nm,0.3s,baz=252,slow=20,SNR=2.2						
TXAR	Lajitas Array	18.45	327	P	Pn	05 07 06.9	+1.9
	comp=Z,0.0nm,0.3s,baz=155,slow=15,SNR=12						
ANMO	Albuquerque	24.37	331	P	P	05 08 08.5	+0.9
	comp=Z,1.3nm,0.7s,baz=146,slow=11,SNR=8.9						
NVAR	Mina Array Bea	33.41	321	P	P	05 09 29.8	+1.6
	comp=Z,0.9nm,0.8s,baz=140,slow=7.2,SNR=4.4						
YKA	Yellowknife Ar	50.85	347	P	P	05 11 48.9	-0.8
	comp=Z,1.3nm,0.8s,baz=149,slow=7.6,SNR=10						
ILAR	Eielson Array	62.63	337	P	P	05 13 13.0	-0.5
	comp=Z,0.9nm,1.0s,baz=119,slow=4.4,SNR=6.6						
CMAR	Chiang Mai Arr	145.80	341	PKPbc	PKPdf	05 22 27.6	-1.6
	comp=Z,2.1nm,0.5s,baz=348,slow=2.7,SNR=7.3						

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*SOME **09** 05:14:35.6,38°.18N×74°.85E,$h0^{km}$*

*ISCJB **09** 05:14:49.7±1.1,38°.06N±0°.08×73°.97E±0°.08,$h152^{km}$, mb3.4/2,Error ellipse: s-maj=11.8km s-min=8.6km az=27.9*

*IDC **09** 05:14:51.1±5.5,38°.11N×74°.12E,$h155^{km}\pm42^{km}$,mb3.4/2, mb1 3.5/8,mb1mx3.1/48,mbtmp3.9/8,MS2.8/2,Ms1 2.8/2, ms1mx2.2/38,Error ellipse: s-maj=57.6km s-min=36.4km az=52.0*

*NNC **09** 05:14:56.2±4.0,38°.48N×73°.81E,$h183^{km}\pm44^{km}$,mb2.8, mpv3.8,Error ellipse: s-maj=38.7km s-min=26.0km az=15.0*

ISC 09 05:14:50.2±1.4,38°.2N±0°.1×74°.05E±0°.08,$h152^{km}$,n27, $\sigma2^{s}.95$/33,5C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	2.02	47	Pg	Pn	05 15 24.4	-1.4
KSH				Sg	Sn	05 15 46.7	-6.6
KSH				smax	smax		
	comp=N,1µm,0.5s						
KSH				smax	smax		
	comp=E,1µm,0.8s						
KZA	Kyzart	4.02	13	P	Pn	05 15 53.8	+2.6
	SNR=37						
UCH	Uchtor	4.08	5	P	Pn	05 15 54.8	+2.8
	SNR=27						
ULHL	Ulahol	4.42	22	P	Pn	05 15 59.0	+2.9
	SNR=8.7						
AAK	Ala-Archa	4.49	4	P	Pn	05 15 59.5	+2.5
	comp=E,2.0nm,0.3s,baz=125,slow=6.4,SNR=16						
AAK				S	Sn	05 16 51.6	+2.5
	comp=E,3.3nm,0.3s,baz=312,slow=9.6,SNR=9.5						
AAK	Ala-Archa	4.49	4	⇑P	Pn	05 15 59.7	+2.7
	comp=E,17nm,1.2s						
AAK				⇑S	Sn	05 16 51.8	+2.7
	comp=E,42nm,1.1s						
AAK	Ala-Archa	4.49	4	P	Pn	05 16 00.1	+3.1
	SNR=8.2						
EKS2	Erkin-Say	4.51	357	P	Pn	05 16 01.3	+4.1
	SNR=8.9						
KBK	Karagaybulak	4.55	8	P	Pn	05 16 01.1	+3.3
	SNR=21						
MRKS	Merke	4.63	352	eP	Pn	05 16 03.8	+5.0
	comp=E,16nm,0.2s						
MRKS				eS	Sn	05 17 06.9	+15
	comp=E,16nm,0.4s						
CHMS	Chumysh	4.87	6	P	Pn	05 16 04.9	+3.0
	SNR=8.5						
TKM2	Tokmak 2	4.90	13	⇑P	Pn	05 16 05.1	+2.6
	comp=E,26nm,0.6s						
TKM2				⇓S	Sn	05 16 59.7	+0.8
	comp=E,21nm,0.7s						
TKM2	Tokmak 2	4.90	13	P	Pn	05 16 05.4	+2.9
	SNR=14						
USP	Ospenovka	5.12	4	P	Pn	05 16 07.9	+2.7
	SNR=6.6						
TNSS	Tian-Shan	5.35	23	eP	Pn	05 16 11.0	+2.4
	comp=E,34nm,0.3s						
TNSS				eS	Sn	05 17 38.2	+28
	comp=E,16nm,0.5s						
KK31	Karatay Array	5.63	333	⇓P	Pn	05 16 13.9	+2.0
	comp=E,4.1nm,0.5s,baz=134,slow=12,SNR=38						
KK31				⇓S	Sn	05 17 13.9	-2.0
	comp=E,21nm,0.4s,baz=138,slow=21,SNR=22						
MKAR	Makanchi Array	10.55	33	P	Pn	05 17 18.3	+0.9
	comp=E,0.2nm,0.3s,baz=214,slow=14,SNR=28						
WMQ	Urumqi	11.76	57	eP	Pn	05 17 34.4	+1.2
KURBB	Kurchatov Arra	12.87	13	P	Pn	05 17 46.8	-0.6
	comp=E,0.0nm,0.3s,baz=200,slow=11,SNR=7.0						
AB31	Akbulak array	15.05	322	⇑P	P	05 18 16.1	-0.5
	comp=E,0.5nm,0.4s,baz=136,slow=12,SNR=15						
AB31				⇑S	Sn	05 20 57.4	-4.6
	comp=E,0.7nm,0.4s,baz=134,slow=25,SNR=5.6						
BVAR	Borovoye Array	15.09	351	P	Pn	05 18 15.5	+0.1
	comp=E,0.3nm,0.3s,baz=167,slow=9.9,SNR=15						
AKTO	Aktyubinsk	16.76	322	P	Pn	05 18 37.1	+1.2
	comp=E,0.2nm,0.3s,baz=137,slow=20,SNR=2.5						
AKTO				S	S	05 21 36.2	-5.8
	comp=E,0.2nm,0.3s,baz=337,slow=22,SNR=2.8						
AKTO				LR	LR	05 24 27.2	
	comp=E,9.7nm,18.8s,baz=228,slow=34						
AKTO	Aktyubinsk	16.76	322	⇓P	Pn	05 18 36.8	+0.9
	comp=E,2.2nm,0.9s						
AKTO				⇓S	S	05 21 37.4	-4.6
	comp=E,2.2nm,0.7s						
ZALV	Zalesovo Beam	17.44	22	P	Pn	05 18 44.7	+0.7
	comp=E,0.6nm,0.3s,baz=216,slow=10,SNR=19						
ARCES	ARCESS Array B	40.58	336	LR	LR	05 40 27.6	
	comp=E,30nm,18.1s,baz=300,slow=38						
YKA	Yellowknife Ar	79.45	4	P	P	05 26 40.1	+0.9
	comp=E,0.3nm,0.7s,baz=340,slow=5.3,SNR=3.7						
WRA	Warramunga Arr	80.85	124	P	P	05 26 47.4	+0.1
	comp=E,2.0nm,0.9s,baz=307,slow=5.8,SNR=2.9						

SVSA 09 05:21:39.9±0.9,38°.63N×29°.76W,$h10^{km}$,MD3.5,ML2.6, Error ellipse: s-maj=9.6km s-min=5.7km az=177.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	Cedros	0.83	90	eP	Pg	05 21 52.6	-3.3
PCED				eS	Sg	05 22 02.6	-4.1
PCED				A	A	05 22 03.7	
	120nm,0.2s						
CALA	Caldeira	0.83	93	eS	Sg	05 22 02.9	-3.9
HOR	Horta	0.89	97	eP	Pg	05 21 54.1	-3.0
HOR				eS	Sg	05 22 04.0	-4.7
HOR				A	A	05 22 05.5	
	184nm,0.2s						
PCAN	Candelaria	1.01	99	eP	Pg	05 21 55.4	-4.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PCAN				*e*S	Sg	05 22 07.0	-5.6
PCAN				A	A	05 22 10.6	
	48nm,0.1s						
PICO	Pico	1.06	97	*e*P	Pg	05 21 56.4	-3.8
PICO				*e*S	Sg	05 22 08.2	-5.7
PICO				A	A	05 22 10.7	
	198nm,0.3s						
PPNO	Prainha do Nor	1.19	97	*e*P	Pb	05 21 58.1	-4.4
PPNO				*e*S	Sb	05 22 11.7	-6.2
PPNO				A	A	05 22 15.1	
	77nm,0.3s						
ROSA	Rosais	1.19	85	*e*P	Pb	05 21 57.9	-4.7
ROSA				*e*S	Sb	05 22 11.7	-6.4
ROSA				A	A	05 22 13.8	
	80nm,0.2s						
PMAN	Manadas	1.31	90	*e*S	Sb	05 22 13.9	-7.6
PMAN				A	A	05 22 16.0	
	34nm,0.3s						
PGRA	Graciosa	1.45	74	*e*S	Sn	05 22 17.7	-7.5
PGRA				A	A	05 22 20.8	
	9.3nm,0.2s						
ADH	Angra Heroismo	1.98	89	*e*P	Pn	05 22 08.9	-4.5
ADH				*e*S	Sn	05 22 31.3	-7.0
ADH				A	A	05 22 33.1	
	26nm,0.3s						
PSCM	Serra do Cume	2.07	87	*e*P	Pn	05 22 10.0	-4.7
PSCM				*e*S	Sn	05 22 32.8	-7.8
PSCM				A	A	05 22 36.0	
	12nm,0.2s						

*BJI **09** 05:28:37.0±0.0, 7.°30S×129.°60E, h104^{km}, mb4.7/6, mB4.7/3*
*ISCJB **09** 05:28:38.4±0.3, 7.°23S±0.°03×129.°52E±0.°04, h139^{km}, mb4.4/21, Error ellipse: s-maj=5.0km s-min=3.7km az=170.1*
*NEIC **09** 05:28:38.0±2.6, 7.°12S×129.°42E, h116^{km}±8^{km}, mb4.5/12, Error ellipse: s-maj=8.6km s-min=8.3km az=169.0*
*IDC **09** 05:28:38.7±2.0, 7.°05S×129.°42E, h118^{km}±18^{km}, mb3.8/10, mb1 4.0/13, mb1mx3.8/42, mbtmp4.3/13, MS2.5/1, Ms1 2.5/1, ms1mx2.3/27, Error ellipse: s-maj=18.2km s-min=13.4km az=108.0*
*DJA **09** 05:28:40.4±0.2, 7°S±2°×12°9E±°, h127^{km}±6^{km}, M4.8/19, mB5.4/10, mb4.7/19, MLv4.9/15, Mw(mB)4.8/10*
ISC 09 05:28:39.9±0.4**, 7.°20S**±0.°04×**129.°52E**±0.°05**, h139**^{km}**, n65, σ2.^{s}42**/72**, mb4.3**/21**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.93	114	*e*Pn	Pn	05 29 14.6	+1.1
SAUI				*e*Sn	Sn	05 29 36.5	-2.8
SAUI	Saumlaki	1.93	114	P	Pn	05 29 14.1	+0.6
BNDI	Bandanaira	2.69	8	P	Pn	05 29 22.8	-0.1
AAI	Ambon	3.73	339	P	Pn	05 29 36.4	0.0
MSAI	Masohi	3.88	351	P	Pn	05 29 38.6	+0.3
FAKI	Fak Fak	5.05	33	*e*Pn	Pn	05 29 51.7	-2.1
FAKI				*e*Sn	Sn	05 30 44.4	-7.1
FAKI	Fak Fak	5.05	33	P	Pn	05 29 52.1	-1.7
	106nm,0.5s,10µm2.4nm						
SOEI	Soe	5.78	244	*e*Pn	Pn	05 30 01.5	-2.2
SOEI				*e*Sn	Sn	05 31 06.4	-2.7
SOEI	Soe	5.78	244	P	Pn	05 30 04.5	+0.8
	146nm,0.7s,2.0nm						
SOEI				S	Sn	05 31 08.2	-0.9
	146nm,0.7s,2.0nm						
MTN	Manton Dam	5.83	164	*e*Pn	Pn	05 30 04.0	-0.1
MTN				*e*Sn	Sn	05 31 08.2	-1.8
SANI	Sanana	6.21	325	P	Pn	05 30 11.0	+1.6
	28nm,0.8s,650nm0.1nm						
BATI	Baumata	6.51	242	P	Pn	05 30 13.3	-0.1
	22nm,0.3s,baz=99,slow=2.6,SNR=5.8						
BATI				S	Sn	05 31 22.9	-3.7
	45nm,0.3s,baz=64,slow=20,SNR=12						
BATI	Baumata	6.51	242	P	Pn	05 30 13.5	+0.1
	46nm,0.6s,0.5nm						
BATI				S	Sn	05 31 24.9	-1.7
	46nm,0.6s,0.5nm						
SIJI	Sorong	6.53	16	P	Pn	05 30 12.0	-1.7
	25nm,0.3s,baz=202,slow=12,SNR=32						
SIJI				S	Sn	05 31 20.1	-6.9
	32nm,0.3s,baz=26,slow=20,SNR=16						
SWI	Sorong	6.53	15	P	Pn	05 30 15.6	+1.9
	78nm,0.5s,3µm1.5nm						
LBMI	Labuha	6.83	343	P	Pn	05 30 19.6	+2.0
	95nm,0.8s,0.5nm						
EDFI	Ende, Flores	7.91	258	P	Pn	05 30 32.8	+0.6
BAKI	Biak	8.88	48	P	Pn	05 30 45.8	+0.7
	268nm,0.8s,3µm						
KAPI	Kappang	9.95	282	LR	LR	05 35 10.5	
	comp=Z,28nm,19.6s,baz=121,slow=40						
APSI	Ampana	10.03	308	P	Pn	05 31 01.5	+0.9
SPSI	Sidrap Palu	10.22	288	P	Pn	05 30 58.8	-4.3
GENI	Genyem	11.55	67	P	Pn	05 31 20.4	-0.3
JAY	Jayapura	12.08	68	P	Pn	05 31 27.6	0.0
	2.0nm,0.3s,baz=124,slow=12,SNR=7.6						
WRAB	Tennant Creek	13.49	160	*e*Pn	Pn	05 31 43.5	-2.4
WR1	Warramunga Arr	13.50	160	*e*Pn	Pn	05 31 42.8	-3.1
WR1				*e*Sn	Sn	05 34 05.6	-10
WRA	Warramunga Arr	13.50	160	P	Pn	05 31 42.8	-3.1
	8.1nm,0.3s,baz=337,slow=14,SNR=147						
WRA				S	Sn	05 34 05.6	-10
WB2	Warramunga Arr	13.50	160	*e*Pn	Pn	05 31 43.1	-2.9
COEN	Coen	15.00	118	*e*Pn	Pn	05 32 05.8	+0.8
	20nm,1.0s						
AS31	Alice Springs	16.90	166	*e*P	P	05 32 27.9	-0.1
	14nm,0.5s						
AS31				*e*S	Sn	05 35 30.5	-6.5
ASAR	Alice Springs	16.90	166	P	P	05 32 27.1	-0.9
	3.3nm,0.3s,baz=343,slow=13,SNR=157						
ASAR				S	Sn	05 35 30.5	-6.5
	1.7nm,0.3s,baz=345,slow=25,SNR=4.4						
PSA00	Pilbara Seismi	17.07	212	*e*P	P	05 32 30.0	+0.2
	46nm,0.6s						
PMG	Port Moresby	17.59	98	P	Pn	05 32 40.3	+3.7
	2.7nm,0.3s,baz=332,slow=4.9,SNR=4.7						
TGY	Tagaytay City	22.82	338	P	P	05 33 31.3	+0.2
	212nm,0.2s,baz=142,slow=19,SNR=4.3						
FORT	Forrest	23.49	183	*e*P	P	05 33 39.5	+2.3
	55nm,0.8s						
MORW	Morawa	25.19	209	*e*P	P	05 33 54.0	+1.4
	12nm,0.7s						
BBOO	Buckleboo	26.19	167	*e*P	P	05 34 03.6	+2.0
	16nm,1.0s						
STKA	Stephens Creek	27.01	157	P	P	05 34 10.7	+1.7
	2.5nm,0.5s,baz=328,slow=8.2,SNR=4.2						
STKA	Stephens Creek	27.01	157	*e*P	P	05 34 10.7	+1.7
	1.4nm,1.0s						
CM31	Chiang Mai Arr	39.50	311	*e*P	P	05 35 56.3	-0.9
	6.4nm,0.4s						
CMAR	Chiang Mai Arr	39.50	311	P	P	05 35 56.3	-0.9
	3.0nm,1.0s,baz=147,slow=6.8,SNR=6.3						
WHN	Wuhan	40.25	340	*e*P	P	05 36 07.2	+4.0
NJ2	Nanjing	40.34	346	*e*P	P	05 36 07.8	+3.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MJAR	Matsushiro Arr	44.27	10	P	P	05 36 33.5	-2.2
	1.9nm,0.5s,baz=190,slow=10,SNR=5.1						
MAJO	Matsushiro	44.27	10	*e*P	P	05 36 33.5	-2.2
HHC	Hu-ho-hao-te	50.59	342	P	P	05 37 32.6	+8.0
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,6.0s						
SONA0	Songino Array	58.48	342	*e*P	P	05 38 21.6	+0.1
SONM	Songino Array	58.48	342	P	P	05 38 21.6	+0.1
	1.1nm,0.7s,baz=145,slow=5.4,SNR=4.6						
PETK	Petropavlovsk-	64.67	18	P	P	05 39 02.9	+0.2
	2.4nm,0.8s,baz=225,slow=5.1,SNR=2.7						
PEA1	Petropavlovsk-	64.67	18	*e*P	P	05 39 02.9	+0.2
KSH	Kashi	67.85	318	*e*P	P	05 39 28.5	+5.1
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MK31	Makanchi Array	68.14	327	*e*P	P	05 39 24.8	-0.1
	3.0nm,0.7s						
MK32	Makanchi Array	68.14	327	*e*P	P	05 39 25.3	+0.4
MKAR	Makanchi Array	68.14	327	P	P	05 39 25.3	+0.4
	4.3nm,0.5s,baz=124,slow=7.9,SNR=43						
MAKZ	Makanchi	68.31	327	*e*P	P	05 39 26.7	+0.6
	3.0nm,0.6s						
ZALV	Zalesovo Beam	71.56	334	P	P	05 39 45.1	-0.5
	1.4nm,0.7s,baz=126,slow=5.1,SNR=4.6						
ZAA1	Zalesovo Array	71.56	334	*e*P	P	05 39 45.1	-0.6
MAW	Mawson	74.59	201	P	P	05 40 05.8	+2.6
	0.9nm,0.5s,baz=58,slow=9.5,SNR=3.9						
AKTO	Aktyubinsk	83.94	322	P	P	05 40 54.9	+0.6
	1.3nm,0.6s,baz=117,slow=6.8,SNR=4.1						
ILAR	Eielson Array	93.73	25	P	P	05 41 39.8	-0.8
	0.5nm,0.7s,baz=258,slow=4.4,SNR=5.3						
MENT	Mentasta	94.88	27	*e*P	P	05 41 46.7	+0.7
	28nm,0.2s						
CLL	Collm	112.03	323	*e*PKiKP	PKiKP	05 47 02.0	+3.3
TXAR	Lajitas Array	125.44	59	PKP	PKiKP	05 47 27.2	+1.5
	0.7nm,0.6s,baz=183,slow=2.8,SNR=7.5						
CPUP	Villa Florida	146.01	169	PKPbc	PKPab	05 48 04.8	0.0
	1.5nm,0.6s,baz=27,slow=6.9,SNR=3.2						
LPAZ	La Paz	150.84	143	PKPbc	PKiKP	05 48 19.6	+1.3
	0.9nm,0.4s,baz=43,slow=2.9,SNR=12						
LPAZ	La Paz	150.84	143	*e*PKPbc	PKiKP	05 48 20.6	+2.2

*SOME **09** 05:32:00.5, 43.°57N×84.°00E, h5^{km}*
*NNC **09** 05:32:04.8±2.3, 43.°77N×83.°83E, h7^{km}±11^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=17.7km s-min=8.6km az=127.0*
ISC 09 05:32:04.0±1.9**, 43.°76N**±0.°08×**83.°90E**±0.°08**, h10**^{km}**, n25, σ1.^{s}53**/38**, 7C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.59	264	Pg	Pb	05 32 50.0	-0.7
	26nm,0.3s						
KTMS				Lg	Lg	05 33 27.2	
	68nm,0.5s						
KTMS	Ketmen	2.59	264	*e*P	Pb	05 32 50.0	-0.7
	26nm,0.3s						
KTMS				*e*S	Sg	05 33 26.6	-0.7
	68nm,0.5s						
DJR	Jarkent	3.02	282	Pg	Pb	05 32 59.5	+1.6
	12nm,0.4s						
DJR				Lg	Lg	05 33 42.6	
	27nm,0.4s						
DJR	Jarkent	3.02	282	*e*P	Pb	05 32 59.5	+1.6
	12nm,0.4s						
DJR				*e*S	Sg	05 33 42.6	+1.7
	38nm,0.5s						
PDGK	Podgornoye	3.23	264	Pg	Pb	05 33 01.3	-0.2
	2.9nm,0.3s						
PDGK				Lg	Lg	05 33 45.6	
	8.6nm,0.4s						
PDGK	Podgornoye	3.23	264	⇓Pn	Pn	05 32 57.2	+2.3
	5.4nm,0.9s						
PDGK				⇑Lg	Lg	05 33 45.4	
	19nm,0.6s						
MK31	Makanchi Array	3.24	340	⇓Pn	Pn	05 32 57.3	+2.3
	0.5nm,0.3s,baz=154,slow=14,SNR=61						
MK31				⇑Lg	Lg	05 33 46.5	
	13nm,0.6s,baz=158,slow=29,SNR=9.7						
MAKZ	Makanchi	3.34	337	⇑Pn	Pn	05 32 57.4	+1.1
	1.1nm,0.6s						
MAKZ				⇑Pg	Pg	05 33 06.9	-1.1
	2.3nm,0.4s						
MAKZ				⇑Lg	Lg	05 33 48.5	
	21nm,0.8s						
KAPS	Kapalarasan	3.59	297	Pg	Pb	05 33 09.1	+1.5
	5.3nm,0.4s						
KAPS				Lg	Lg	05 34 00.1	
	20nm,0.5s						
KAPS	Kapalarasan	3.59	297	*e*P	Pb	05 33 09.1	+1.5
	5.3nm,0.4s						
KAPS				*e*S	Sg	05 33 59.1	-0.1
	20nm,0.5s						
UZB	Uzynbulak	3.60	262	Pg	Pb	05 33 07.7	-0.1
	2.7nm,0.3s						
UZB				Lg	Lg	05 33 57.2	
	15nm,0.3s						
UZB	Uzynbulak	3.60	262	*e*P	Pb	05 33 07.8	-0.1
	2.7nm,0.3s						
UZB				*e*S	Sg	05 33 56.9	-2.8
	15nm,0.3s						
ZSN	Zaisan	3.76	10	Pg	Pb	05 33 11.5	+1.0
	4.4nm,0.4s						
ZSN				Lg	Lg	05 34 03.3	
	12nm,0.5s						
ZSN	Zaisan	3.76	10	*e*P	Pb	05 33 11.4	+1.0
	4.4nm,0.4s						
ZSN				*e*S	Sg	05 34 03.2	-1.4
	12nm,0.5s						
KPKS	Kokpek	3.79	267	*e*P	Pb	05 33 11.5	+0.4
	8.8nm,0.2s						
KPKS				*e*S	Sg	05 34 03.1	-2.8
	30nm,0.4s						
MNBS	Baschi	3.98	277	Pg	Pb	05 33 16.1	+1.8
	7.7nm,0.5s						
MNBS				Lg	Lg	05 34 10.9	
	29nm,0.4s						
MNBS	Baschi	3.98	277	*e*P	Pb	05 33 16.1	+1.8
	7.7nm,0.5s						
MNBS				*e*S	Sg	05 34 10.9	-1.0
	29nm,0.4s						
SATY	Saty	4.06	262	Pg	Pb	05 33 16.6	+0.9
	11nm,0.5s						
SATY				Lg	Lg	05 34 12.5	
	20nm,0.4s						
SATY	Saty	4.06	262	*e*P	Pb	05 33 16.6	+0.9
	3.0nm,0.3s						
SATY				*e*S	Sg	05 34 12.3	-2.1
	20nm,0.4s						
KURS	Kuram	4.17	268	*e*P	Pb	05 33 19.3	+1.9
	2.9nm,0.7s						
KURS				*e*S	Sg	05 34 16.4	-1.3
	5.7nm,0.8s						
ARXS	Arharly	4.40	278	Pg	Pb	05 33 23.0	+1.5
	5.7nm,0.3s						
ARXS				Lg	Lg	05 34 23.5	
	14nm,0.4s						
ARXS	Arharly	4.40	278	*e*P	Pb	05 33 23.0	+1.5
	5.7nm,0.3s						
ARXS				*e*S	Sg	05 34 23.1	-2.3
	14nm,0.4s						
TKM2	Tokmak 2	6.11	265	⇓Pg	Pg	05 34 01.8	+0.8
	1.9nm,0.9s						
TKM2				⇑Lg	Lg	05 35 18.4	
	1.2nm,0.4s						
KURBB	Kurchatov Arra	7.78	334	⇓Pn	Pn	05 33 56.0	-1.2
	1.0nm,0.6s						
KURBB				⇓Sn	Sn	05 35 23.5	-1.8
	3.6nm,0.6s						
KURBB				⇓Lg	Lg	05 36 13.9	
	12nm,0.6s						
KURK	Kurchatov	7.83	335	⇓Pn	Pn	05 33 56.6	-1.3
	1.0nm,1.1s						
KURK				⇑Sn	Sn	05 35 26.5	-0.1
	1.4nm,0.5s						
KURK				⇓Lg	Lg	05 36 13.8	
	11nm,1.0s						

*ISCJB **09** 05:33:56.8±0.3, 16.°62N±0.°03×40.°87E±0.°04, h10^{km}, mb4.3/39, MS3.8/22, Error ellipse: s-maj=5.0km s-min=4.6km az=164.3*
*IDC **09** 05:33:56.3±0.8, 16.°53N×40.°80E, h0^{km}, mb4.2/23, mb1 4.2/27, mb1mx4.1/48, mbtmp4.2/27, ML4.0/3, MS3.7/24, Ms1 3.7/24, ms1mx3.6/40, Error ellipse: s-maj=17.2km s-min=14.9km az=1.0*
*SGS **09** 05:33:56, 16.°74N×40.°89E, h15^{km}, Ml3.8*
*NEIC **09** 05:33:58.7±2.6, 16.°68N×40.°79E, h10^{km}±2^{km}, mb4.5/20, Error ellipse: s-maj=13.2km s-min=10.2km az=113.0*
ISC 09 05:33:58.7±0.4**, 16.°74N**±0.°04×**40.°94E**±0.°05**, h10**^{km}**, n95, σ2.^{s}10**/101**, mb4.4**/39**, MS3.8**/22**, 3C-6D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRSS	Farasan al Kab	1.12	90	P	Pn	05 34 16.6	-3.8
FRSS				S	Sb	05 34 33.9	-1.0
DRBS	Ad Darb	1.69	50	P	Pn	05 34 24.7	-3.6
DRBS				S	Sn	05 34 45.5	-4.5
AMGES	AMGES	1.81	18	P	Pn	05 34 25.7	-4.2
BESHS	BESHS	1.92	71	P	Pn	05 34 28.0	-3.5
BESHS				S	Sn	05 34 51.7	-4.0
QNF02	Al Qunfudhah	2.37	13	P	Pn	05 34 33.8	-3.8
QNF01	Al Qunfudhah	2.66	7	P	Pn	05 34 38.0	-3.7
DAMY	Dhamar	3.96	122	*e*Pn	Pn	05 35 02.0	+2.3
ATD	Arta Tunnel	5.49	160	Pn	Pn	05 35 18.1	-2.6
	6.0nm,0.3s,baz=90,slow=6.5,SNR=8.8						
ATD				Sn	Sn	05 36 23.1	-0.9
	12nm,0.3s,baz=91,slow=23,SNR=2.4						
ATD				LR	LR	05 37 09.2	
	comp=Z,496nm,20.1s,baz=162,slow=36						
DESE	Dese	5.73	193	*e*P	Pn	05 35 24.3	+0.2
DESE				*e*S	Sg	05 36 59.3	-3.4
DESE				*e*SG	Sg	05 36 59.3	-3.4
ANKE	Ethiopia-Afar	7.20	190	*e*P	Pn	05 35 42.9	-1.5
ANKE				*e*S	Sg	05 37 54.6	+4.7
RAYN	Ar Rayn	8.00	32	*e*Pn	Pn	05 35 53.4	-1.6
RAYN				*e*Sn	Sn	05 37 31.3	+5.7
FURI	Furi	8.10	196	*e*Pn	Pn	05 35 55.2	-1.5
ASF	Jabal al Asfar	15.80	347	Pn	P	05 37 43.2	-2.1
	0.5nm,0.3s,baz=146,slow=9.4,SNR=3.3						
UOSS	Minazif	16.43	58	*e*Pn	Pn	05 37 50.2	+0.8
	45nm,0.9s						
MMAI	Mount Meron Ar	16.96	344	P	P	05 37 57.1	-1.1
	baz=161,slow=13,SNR=3.4						
MMAI				LR	LR	05 43 38.9	
	comp=Z,344nm,19.3s,baz=180,slow=34						
WSAR	Wadi Sarin	17.83	66	P	P	05 38 08.8	+1.0
	0.5nm,0.3s,baz=254,slow=6.5,SNR=4.4						
WSAR				LR	LR	05 45 40.6	
	comp=Z,238nm,19.9s,baz=273,slow=39						
KMBO	Kilima Mbogo	18.12	192	P	P	05 38 11.0	-0.2
	0.2nm,0.3s,baz=22,slow=12,SNR=7.1						
KMBO				LR	LR	05 44 37.8	
	comp=Z,318nm,20.9s,baz=356,slow=36						
KMBO	Kilima Mbogo	18.12	192	*e*P	P	05 38 10.2	-1.0
	11nm,1.1s						
GNI	Garni	23.56	7	P	P	05 39 12.7	+3.2
	3.3nm,0.3s,baz=231,slow=2.1,SNR=5.9						
GNI				LR	LR	05 48 19.2	
	comp=Z,173nm,18.2s,baz=190,slow=36						
BRTR	Keskin Array B	23.77	346	P	P	05 39 13.1	+1.5
	4.1nm,0.9s,baz=164,slow=13,SNR=12						
BRTR				LR	LR	05 48 03.8	
	comp=Z,154nm,18.3s,baz=150,slow=35						
BR101	Keskin Array S	23.77	346	*e*P	P	05 39 13.1	+1.5
ILGA	Ilgaz	25.02	347	*e*P	P	05 39 21.8	-1.4
	10nm,1.0s						
GEYT	Alibeck	25.96	32	P	P	05 39 32.9	+1.4
	1.7nm,0.6s,baz=135,slow=55,SNR=2.5						
KBZ	Khabaz	26.96	3	P	P	05 39 43.0	+2.6
	3.2nm,0.9s,baz=189,slow=6.2,SNR=4.8						
KBZ				LR	LR	05 51 16.3	
	comp=Z,170nm,18.0s,baz=191,slow=38						
KVAR	Kislovodsk Arr	27.17	3	LR	LR	05 49 36.0	
	comp=Z,232nm,21.2s,baz=97,slow=34						
CFR	Carcaliu	30.33	342	⇑*i*P	P	05 40 12.6	+2.3
MLR	Muntele Rosu	31.30	339	P	P	05 40 20.2	+1.1
	4.2nm,0.9s,baz=148,slow=20,SNR=6.3						
MLR	Muntele Rosu	31.30	339	*e*P	P	05 40 20.1	+1.0
	7.4nm,0.9s						
MLR	Muntele Rosu	31.30	339	⇓*i*P	P	05 40 21.1	+2.0
VRI	Vrincioaia	31.38	341	⇓*i*P	P	05 40 22.4	+2.7
PLOR	Plostina	31.39	341	⇓*i*P	P	05 40 21.4	+1.6
HERR	Herculane	32.10	335	⇑*i*P	P	05 40 24.6	-1.4
GZR	Gura Zlata	32.37	336	⇑*i*P	P	05 40 29.1	+0.6
BIZ	Bicaz	32.53	341	⇓*i*P	P	05 40 31.0	+1.2
BURAR	Bucovina Array	33.41	341	⇓*i*P	P	05 40 39.0	+1.4
DRGR		33.57	337	⇓*i*P	P	05 40 39.4	+0.5
KEST	Kesra	33.86	310	P	P	05 40 41.8	+0.1
	5.6nm,0.8s,baz=317,slow=3.9,SNR=7.0						
KEST				LR	LR	05 55 38.5	
	comp=Z,177nm,19.1s,baz=308,slow=38						
KEST	Kesra	33.86	310	*e*P	P	05 40 41.7	0.0
	6.0nm,0.8s						
GAR	Garm	33.90	43	*e*P	P	05 40 43.4	+1.4
	16nm,1.0s						
AKASG	Malin Array Be	35.17	347	P	P	05 40 52.1	-0.5
	0.2nm,0.3s,baz=167,slow=7.2,SNR=7.2						
AKASG				LR	LR	05 57 23.3	
	comp=Z,58nm,18.8s,baz=110,slow=40						
KWP	Kalwaria Pacla	35.98	340	*e*P	P	05 41 02.3	+2.6
	65nm,0.9s						
AKTO	Aktyubinsk	36.32	18	P	P	05 41 03.5	+1.0
	4.9nm,1.0s,baz=200,slow=8.8,SNR=7.3						
KK31	Karatay Array	36.37	38	*e*P	P	05 41 04.5	+1.4
	8.2nm,0.8s						
KKAR	Karatay Array	36.37	38	*e*P	P	05 41 05.0	+1.9
	8.2nm,0.8s						
VYHS	Vyhne	36.47	335	*e*P	P	05 41 03.7	-0.2
MODS	Modra-Piesok	37.02	334	*e*P	P	05 41 09.9	+1.3
JAVC	Velka Javorina	37.23	334	*e*P	P	05 41 11.6	+1.2
KRUC	Moravsky	37.92	334	*e*P	P	05 41 16.7	+0.5
KSH	Kashi	37.97	46	*e*P	P	05 41 15.4	-1.5
KSH				pP	pP	05 41 20.0	+0.2
KSH				sP	sP	05 41 22.4	+1.5
KSH				*e*PcP	PP	05 42 43.5	-0.2
KSH				pmax	pmax		
	comp=Z,67nm,5.6s						
KSH				LR	LR		
	comp=N,160nm,7.6s						
KSH				LR	LR		
	comp=E,87nm,7.8s						
MORC	Moravsky Berou	38.00	335	*e*P	P	05 41 17.7	+0.8
	comp=E,6.5nm,1.1s						
MORC	Moravsky Berou	38.00	335	*e*P	P	05 41 16.6	-0.3
VRAC	Vranov	38.03	334	P	P	05 41 17.5	+0.5
	comp=E,1.1nm,0.4s,baz=155,slow=7.8,SNR=3.7						
VRAC	Vranov	38.03	334	*e*P	P	05 41 17.0	-0.1
TOA0	Torodi Ar. Sit	38.05	270	*e*P	P	05 41 16.3	-1.4
	comp=E,10.0nm,1.1s						
TORD	Torodi Ar. Bea	38.05	270	P	P	05 41 15.9	-1.8
	comp=E,4.1nm,0.6s,baz=82,slow=7.8,SNR=22						
TORD				LR	LR	05 55 31.3	
	comp=E,152nm,18.5s,baz=10.0,slow=34						
TOA1	Torodi Ar. Sit	38.05	270	*e*P	P	05 41 15.9	-1.8
GERES	GERESS Array B	38.96	331	P	P	05 41 24.4	-0.6
	comp=E,2.2nm,0.8s,baz=132,slow=7.6,SNR=13						
GERES				LR	LR	05 59 34.1	
	comp=E,34nm,18.9s,baz=112,slow=39						
FUORN	Ofenpass-Fuorn	39.16	326	*e*P	P	05 41 27.9	+0.9
	comp=E,6.5nm,0.9s						
KHC	Kasperske Hory	39.22	331	*e*P	P	05 41 26.0	-1.1
KHC				*e*x	x	05 41 40.5	
BRG	Berggiesshubel	40.33	334	*e*P	P	05 41 35.2	-1.1
	comp=E,4.4nm,1.0s						
CLL	Collm	41.05	333	*i* P	P	05 41 43.4	+1.2
CLL				*e*S	S	05 47 58.0	+3.3
CLL				*e*SS	SnSn	05 51 01.0	-3.6
ARU	Arti	41.81	15	P	P	05 41 50.2	+1.8
	comp=E,2.4nm,0.2s,baz=191,slow=8.3,SNR=5.2						
BRVK	Borovoye	42.92	26	*e*P	P	05 41 59.3	+1.8
	comp=E,4.7nm,1.1s						
ESDC	Sonseca Array	45.11	310	P	P	05 42 14.1	-1.3
	comp=E,0.3nm,0.3s,baz=104,slow=7.5,SNR=8.9						
MAKZ	Makanchi	45.21	39	*e*P	P	05 42 16.8	+0.8
	comp=E,5.0nm,0.9s						
KURK	Kurchatov	45.33	33	*e*P	P	05 42 18.4	+1.5
	comp=E,7.8nm,1.1s						
MKAR	Makanchi Array	45.40	40	P	P	05 42 18.4	+0.9
	comp=E,3.4nm,0.9s,baz=238,slow=7.0,SNR=14						
MKAR				LR	LR	06 03 51.3	
	comp=E,97nm,20.5s,baz=232,slow=39						
DBIC	Dimbokro	45.85	263	P	P	05 42 18.3	-3.1
	comp=E,3.8nm,0.7s,baz=83,slow=8.1,SNR=4.4						
DBIC				LR	LR	05 59 41.1	
	comp=E,66nm,19.7s,baz=54,slow=34						
DBIC	Dimbokro	45.85	263	*e*P	P	05 42 18.3	-3.1
	comp=E,14nm,1.0s						
FIA0	FINESS Array S	45.90	350	*e*P	P	05 42 21.3	+0.2
FINES	FINESS Array B	45.90	350	P	P	05 42 21.3	+0.2
	comp=E,1.1nm,0.6s,baz=155,slow=9.5,SNR=5.2						
FINES				LR	LR	06 03 20.7	
	comp=E,40nm,18.4s,baz=174,slow=38						
BOSA	Boshof	47.57	199	LR	LR	06 02 48.5	
	comp=E,252nm,18.8s,baz=21,slow=37						
HFS	Hagfors	47.62	342	P	P	05 42 34.1	-0.6
	comp=E,1.5nm,0.9s,baz=129,slow=11,SNR=2.7						
WMQ	Urumqi	47.73	45	*e*P	P	05 42 39.5	+3.6
WMQ				pP	sP	05 42 43.6	+3.7
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=N,750nm,28.1s						
WMQ				LR	LR		
	comp=E,470nm,24.7s						
WMQ				LR	LR		
	comp=Z,190nm,21.1s						
NB200	NORSAR Array S	49.08	341	*e*P	P	05 42 45.5	-0.6
NOA	NORSAR Array B	49.08	341	P	P	05 42 45.5	-0.6
	comp=Z,1.6nm,0.9s,baz=138,slow=8.7,SNR=3.0						
NOA				LR	LR	06 04 11.6	
	comp=Z,35nm,20.6s,baz=135,slow=37						
ZALV	Zalesovo Beam	50.27	32	P	P	05 42 55.5	+0.3
	comp=Z,5.6nm,0.8s,baz=248,slow=7.8,SNR=17						
ZALV				LR	LR	06 06 45.9	
	comp=Z,176nm,18.6s,baz=250,slow=39						
ARA0	ARCESS Array S	53.65	353	*e*P	P	05 43 19.8	-0.3
ARCES	ARCESS Array B	53.65	353	P	P	05 43 19.8	-0.3

	comp=Z,4.7nm,1.0s,baz=169,slow=6.4,SNR=3.0						
CMAR	Chiang Mai Arr	55.11	79	P	P	05 43 31.5	0.0
	comp=Z,0.9nm,0.4s,baz=266,slow=8.7,SNR=3.1						
KMI	Kunming	57.90	71	P	P	05 43 54.8	+3.2
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
LZH	Lanzhou	58.58	58	*e*P	P	05 43 57.6	+1.5
LZH				pP	sP	05 44 02.6	+2.4
LZH				sP	pP	05 44 05.2	+6.1
LZH				PP	PP	05 46 00.3	-5.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,91nm,5.0s						
SONA0	Songino Array	61.34	44	*e*P	P	05 44 15.8	+0.9
SONM	Songino Array	61.34	44	P	P	05 44 15.8	+0.9
	comp=Z,2.2nm,0.7s,baz=262,slow=6.5,SNR=13						
SONM				LR	LR	06 13 50.3	
	comp=Z,90nm,19.2s,baz=40,slow=39						
HHC	Hu-ho-hao-te	64.68	52	P	P	05 44 38.6	+1.4
HHC				S	S	05 53 17.3	-0.3
HHC				sS	sS	05 53 31.0	+8.6
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,6.4s						
HHC				LR	LR		
	comp=N,180nm,16.3s						
HHC				LR	LR		
	comp=E,110nm,12.4s						
HHC				LR	LR		
	comp=Z,120nm,16.5s						
WHN	Wuhan	67.62	63	*e*P	P	05 45 03.2	+7.1
KSRS	Korea Array	77.67	54	LR	LR	06 26 05.2	
	comp=Z,37nm,18.2s,baz=158,slow=40						
KLR	Kul'dur	78.04	42	LR	LR	06 24 14.2	
	comp=Z,97nm,19.8s,baz=280,slow=39						
USRK	Ussuriysk Ar.	79.27	47	LR	LR	06 25 07.5	
	comp=Z,78nm,18.2s,baz=219,slow=39						
MAJO	Matsushiro	85.86	53	*e*P	P	05 46 38.6	-0.4
MJAR	Matsushiro Arr	85.87	53	P	P	05 46 38.6	-0.4
	comp=Z,1.3nm,0.8s,baz=288,slow=6.1,SNR=4.0						
MJAR				LR	LR	06 28 45.8	
	comp=Z,36nm,20.1s,baz=195,slow=38						
PETK	Petropavlovsk-	91.82	33	LR	LR	06 32 29.7	
	comp=Z,56nm,19.1s,baz=267,slow=38						
NV01	Mina Array Sit	121.77	341	*e*PKPdf	PKiKP	05 52 54.5	+0.6
NVAR	Mina Array Bea	121.77	341	PKP	PKiKP	05 52 54.5	+0.6
	comp=Z,0.4nm,0.8s,baz=108,slow=2.0,SNR=3.2						
TXAR	Lajitas Array	122.86	323	PKP	PKiKP	05 52 56.2	+0.1
	comp=Z,0.3nm,0.8s,baz=66,slow=3.0,SNR=3.6						

ISK ***09*** *05:35:13.8, 36°.63N×31°.15E, h73^{km}±1^{km}, ML3.2/20*
HLW ***09*** *05:35:14.0, 36°.47N×31°.13E, h33^{km}±23^{km}, Ml3.2*
ISCJB ***09*** *05:35:14.0±0.3, 36°.57N±0°.02×31°.15E±0°.02, h79^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=2.6km az=15.2*
DDA ***09*** *05:35:15.1, 36°.67N×31°.09E, h50^{km}±3^{km}, ML3.6*
ISC 09 05:35:14.9±1.1**, 36°.58N**±0°.03×**31°.17E**±0°.02**, h69**^{km}±9^{km}**, n76,** σ1^s.**54**/108**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEPZ	Antalya-Kepez	0.48	47	*i* P	Pn	05 35 27.2	-0.2
KEPZ				*i* S	Sn	05 35 36.7	+0.1
KEPZ				IAML_P			
	comp=Z,12μm,0.2s						
ANTB	Antalya	0.53	308	PG	Pn	05 35 27.3	-0.5
ANTB				SG	Sn	05 35 36.8	-0.5
ALAN	Alanya-ANTALYA	0.70	91	PG	Pn	05 35 29.7	+0.1
ALAN				SG	Sn	05 35 40.9	+0.4
AKUM	Antalya-Kumluc	0.71	249	*i* P	Pn	05 35 30.8	+1.0
AKUM				*i* S	Sn	05 35 46.1	+5.3
AKUM				IAML_P			
	comp=Z,3μm,0.1s						
KORT	Korkueli	0.78	303	PG	Pn	05 35 30.5	-0.3
KORT	Korkueli	0.78	303	*i* P	Pn	05 35 31.3	+0.6
GAZI	Gazipasa	0.99	110	PG	Pn	05 35 33.7	+0.6
GAZI	Gazipasa	0.99	110	*i* P	Pn	05 35 33.0	-0.1
GAZI				*i* S	Sn	05 35 47.3	+0.6
GAZI				IAML_P			
	comp=Z,5μm,0.2s						
BCK	Bucak	1.00	332	PG	Pn	05 35 33.0	-0.4
ELL	Elmali	1.03	280	PG	Pn	05 35 33.2	-0.6
AKAS	Kas	1.31	255	PN	Pn	05 35 37.1	-0.3
AKAS	Kas	1.31	255	*i* P	Pn	05 35 37.8	+0.5
AKAS				IAML_P			
	comp=Z,5μm,0.2s						
KSL	Kastellorizon	1.35	252	P	Pn	05 35 38.0	+0.2
KSL				S	Sn	05 35 55.0	0.0
ERMK	Ermenek	1.41	87	*i* P	Pn	05 35 41.1	+2.4
ERMK				*i* S	Sn	05 36 00.2	+3.6
ERMK				IAML_P			
	comp=Z,5μm,0.2s						
BRDR	BURDUR-Merkez	1.43	322	*i* P	Pn	05 35 40.2	+1.3
BRDR				*i* S	Sn	05 35 58.2	+1.3
BAGO	Egridir - ISPA	1.44	348	*i* P	Pn	05 35 38.8	-0.3
BAGO				*i* S	Sn	05 35 56.8	-0.6
KMER	Konya-Meram	1.53	38	*i* P	Pn	05 35 41.1	+0.8
KMER				*i* S	Sn	05 36 00.2	+0.8
KMER				IAML_P			
	comp=Z,594nm,0.2s						
DOGA	KONYA_Doganhis	1.58	14	*i* P	Pn	05 35 42.7	+1.7
DOGA				*i* S	Sn	05 36 01.7	+1.0
DOGA				IAML_P			
	comp=Z,3μm,0.2s						
TEKE	Tekeli-Mersin	1.63	105	PN	Pn	05 35 42.4	+0.9
KONT	Konya--Tatoy	1.67	34	PN	Pn	05 35 41.6	-0.4
KONT	Konya--Tatoy	1.67	34	*i* P	Pn	05 35 43.1	+1.0
KONT				*i* S	Sn	05 36 02.1	-0.4
KONT				IAML_P			
	comp=Z,1μm,0.1s						
BERE	Bereket-Mersin	1.67	97	PN	Pn	05 35 42.4	+0.2
FETY	Fethiye	1.68	273	P	Pn	05 35 42.6	+0.4
FETY				S	Sn	05 36 03.3	+0.4
FETY	Fethiye	1.68	273	*i* P	Pn	05 35 43.2	+1.1
FETY				*i* S	Sn	05 36 04.1	+1.2
FETY				IAML_P			
	comp=Z,5μm,0.2s						
TEVE	Tevekalti-Mers	1.84	94	PN	Pn	05 35 44.9	+0.5
YORU	Yoruktepe-Mers	1.85	102	PN	Pn	05 35 45.4	+0.9
LADK	Ladik-KONYA	1.88	30	PN	Pn	05 35 44.4	-0.6
GULN	MERSIN_Gulnar	1.96	101	*i* P	Pn	05 35 48.1	+2.2
GULN				*i* S	Sn	05 36 13.3	+3.9
GULN				IAML_P			
	comp=Z,2μm,0.3s						
TEPE	Tepekoy-Mersin	1.96	100	PN	Pn	05 35 46.7	+0.7
AKKU	Akkuyu-Mersin	1.97	102	PN	Pn	05 35 46.5	+0.5
AKK2	Akkuyu-Mersin	1.97	102	PN	Pn	05 35 46.3	+0.2
LEF	Lefka	2.02	136	PN	Pn	05 35 45.5	-1.2
LEF	Lefka	2.02	136	*i* P	Pn	05 35 45.4	-1.3
LEF				*i* S	Sn	05 36 07.4	-3.6
SHUT	Suhut-Afyon	2.03	346	PN	Pn	05 35 46.6	-0.5
DALY	Dalyan (Mula)	2.04	278	*i* P	Pn	05 35 47.1	+0.2
DALY				*i* S	Sn	05 36 11.9	+0.5
DALY				IAML_P			
	comp=Z,3μm,0.2s						
KEBE	Keben-Mersin	2.05	93	PN	Pn	05 35 47.9	+0.6
IKL	Isikli	2.06	99	PN	Pn	05 35 47.6	+0.4
TISA	Tisan-Mersin	2.07	101	PN	Pn	05 35 47.9	+0.5
TURN	Turunc	2.08	279	*i* P	Pn	05 35 51.1	+3.5
TURN				*i* S	Sn	05 36 19.2	+6.7
KARG	Kargicak-Mersi	2.08	100	PN	Pn	05 35 48.4	+0.8
KDHN	Kadinhani	2.08	21	*i* P	Pn	05 35 47.6	-0.1
KDHN				*i* S	Sn	05 36 13.5	+0.8
BOLV	Bolvadin	2.15	355	*i* P	Pn	05 35 48.9	+0.3
BOLV				IAML_P			
	comp=Z,2μm,0.3s						
KHL	Karahalli	2.18	324	PN	Pn	05 35 48.1	-0.9
SILI	Silifke-Mersin	2.23	95	PN	Pn	05 35 50.5	+0.9
KHAL	Karahalli	2.23	324	*i* P	Pn	05 35 50.0	+0.3
KHAL				*i* S	Sn	05 36 17.6	+1.2
KHAL				IAML_P			
	comp=Z,2μm,0.3s						
SLFK	Silifke-Mersin	2.25	94	PN	Pn	05 35 50.2	+0.4
KIZT	Kizilcal	2.37	14	PN	Pn	05 35 51.1	-0.5
YER	Yerkesik	2.38	284	P	Pn	05 35 52.2	+0.5
YER				S	Sn	05 36 20.2	+0.3
CSS	Mathiatis	2.38	132	PN	Pn	05 35 52.2	+0.5
CHBY	Cihanbeyli	2.42	34	PN	Pn	05 35 51.9	-0.4
ARG	Arkhangelos	2.48	263	P	Pn	05 35 52.4	-0.6
KERG	Konya-Eregli	2.51	70	*i* P	Pn	05 35 53.6	+0.1
KERG				*i* S	Sn	05 36 25.1	+2.0
KERG				IAML_P			
	comp=Z,265nm,0.2s						
EREN	Erenkoy	2.65	112	PN	Pn	05 35 56.2	+1.0
MERS	Mersin	2.71	83	PN	Pn	05 35 57.1	+0.9
USAK	Uak-Merkez	2.73	322	*i* P	Pn	05 35 56.4	0.0
USAK				*i* S	Sn	05 36 28.5	+0.1
USAK				IAML_P			
	comp=Z,1μm,0.1s						
KULA	Kula-Manisa	2.78	315	P	Pn	05 35 57.1	0.0
KULA				S	Sn	05 36 29.4	-0.2
CIFT	Cifteler, Eski	2.78	358	*i* P	Pn	05 35 57.8	+0.7
MANT	Manisa	2.82	313	*i* P	Pn	05 35 58.4	+0.6
MANT				*i* S	Sn	05 36 31.6	+0.8
MANT				IAML_P			
	comp=Z,1μm,0.2s						
GDZ	Gediz	2.84	332	*i* P	Pn	05 35 59.0	+0.9
GDZ				*i* S	Sn	05 36 31.2	0.0
GDZ				IAML_P			
	comp=Z,2μm,0.3s						
AYDN	Tasoluk	2.84	293	*i* P	Pn	05 35 58.2	+0.3
AYDN				IAML_P			
	comp=Z,869nm,0.2s						
AUSIV	SIVRIHISAR	2.87	6	PN	Pn	05 35 57.9	-0.5
AUSIV	SIVRIHISAR	2.87	6	*i* P	Pn	05 35 58.2	-0.2
AUSIV				*i* S	Sn	05 36 31.3	-0.7
SVRH	Sivrihisar-ESK	2.88	5	PN	Pn	05 35 58.1	-0.4
DAT	Datca	2.89	274	*i* P	Pn	05 35 59.4	+0.7
DAT				*i* S	Sn	05 36 32.9	+0.5
DAT				IAML_P			
	comp=Z,365nm,0.2s						
BDRM	Kayabasi	3.03	280	*i* P	Pn	05 36 00.8	+0.4
BDRM				*i* S	Sn	05 36 35.9	+0.3
BODT	Bodrum	3.13	280	P	Pn	05 36 01.8	-0.1
YAYX	Yaylak	3.15	41	PN	Pn	05 36 01.7	-0.6
GCAM	G?zelcaml?	3.34	291	*i* P	Pn	05 36 04.3	-0.3
BORA	Eskisehir	3.35	351	*i* P	Pn	05 36 04.7	-0.1
BORA				*i* S	Sn	05 36 42.9	-0.6
BORA				IAML_P			
	comp=Z,679nm,0.2s						
KARP	Karpathos	3.41	254	P	Pn	05 36 05.2	-0.4
SRCK	Saricakaya, Es	3.49	353	*i* P	Pn	05 36 06.8	+0.1
SRCK				IAML_P			
	comp=Z,1μm,0.3s						
DURS	Dursunbey	3.69	326	*i* P	Pn	05 36 10.4	+0.8
DURS				*i* S	Sn	05 36 48.7	-3.2
RSH		5.99	158	P	Pn	05 36 39.5	-1.4
	baz=157						
KOT	Kottamia	6.65	175	P	Pn	05 36 48.5	-1.6
	baz=174						
KOT				S	Sn	05 37 57.5	-7.0
	baz=174						
SLUM	Salum	7.08	226	P	Pn	05 36 54.9	-1.0
	baz=227						
HFRF	Wahat Farafira	9.71	195	P	Pn	05 37 30.4	-1.4
	baz=196						

IDC ***09*** *05:54:10.2±1.3, 3°.94S×80°.26W, h0^{km}, mb3.7/6, mb1 4.0/9, mb1mx3.8/29, mbtmp3.8/9, ML3.8/3, MS3.2/3, Ms1 3.2/3, ms1mx2.7/32, Error ellipse: s-maj=65.2km s-min=17.5km az=54.0*
ISCJB ***09*** *05:54:18.5±0.6, 4°.6S±0°.1×80°.7W±0°.1, h100^{km}, mb4.0/15, Error ellipse: s-maj=26.3km s-min=6.2km az=142.2*
NEIC ***09*** *05:54:18.9±1.7, 4°.63S×80°.62W, h87^{km}±11^{km}, mb4.2/12, ML4.1(ARE), Error ellipse: s-maj=34.8km s-min=15.7km az=45.0*
NEIC Felt [II] at Sullana, Peru.
ISC 09 05:54:19.0±0.8**, 4°.8S**±0°.1×**80°.8W**±0°.2**, h100**^{km}**, n32,** σ1^s.**13**/24**, mb4.1**/15**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.39	134	Pn	Pn	05 55 10.8	+0.4
	8.8nm,0.3s,baz=351,slow=7.8,SNR=89						
ATAH				Sn	Sn	05 55 50.6	+0.6
	27nm,0.3s,baz=151,slow=21,SNR=10						
ATAH				Lg	Lg	05 56 04.7	
	19nm,0.3s,baz=141,slow=14,SNR=11						
NNA	Nana	8.20	152	Pn	Pn	05 56 15.7	+0.3
	2.7nm,0.3s,baz=336,slow=14,SNR=4.9						
NNA				LR	LR	06 00 14.8	
	comp=Z,98nm,18.3s,baz=251,slow=42						
NNA	Nana	8.20	152	*e*Pn	Pn	05 56 13.5	-1.9
LPAZ	La Paz	16.94	134	P	P	05 58 11.5	+0.5
	0.1nm,0.3s,baz=314,slow=12,SNR=8.1						
LPAZ	La Paz	16.94	134	*e*P	P	05 58 11.6	+0.5
	2.2nm,0.8s						
ESPN	Las Esperanzas	17.18	348	*e*P	P	05 58 13.2	+0.1
	10nm,0.7s						
PTGA	Pitinga	21.21	80	P	P	05 58 55.3	-1.7
	3.8nm,0.6s,baz=256,slow=12,SNR=8.9						
PTGA				LR	LR	06 07 08.1	
	comp=Z,84nm,21.8s,baz=243,slow=38						
SIV	San Ignacio	22.39	121	P	P	05 59 09.3	-0.2
	1.1nm,0.7s,baz=279,slow=8.0,SNR=6.0						
250A	Grady	36.89	352	*e*S	S	06 06 56.2	+0.8
R55A	Marlinton	42.82	1	*e*PcP	PcP	06 03 59.4	+2.7
ANMO	Albuquerque	46.27	331	*e*P	P	06 02 36.8	+2.0
	3.3nm,0.9s						
SDCO	Great Sand Dun	48.10	334	*e*P	P	06 02 50.9	+1.7
	1.7nm,0.8s						
PV13	Radium Mtn., P	49.97	331	*e*P	P	06 03 05.2	+1.9
	3.3nm,0.7s						
PV03	Paradox Valley	50.06	331	*e*P	P	06 03 05.6	+1.6
	3.5nm,1.0s						
PV12	Saucer Basin,	50.09	331	*e*P	P	06 03 06.1	+1.9
	4.6nm,0.9s						
SRU	San Rafael Swe	51.55	331	*e*P	P	06 03 12.0	-3.0
	2.9nm,0.7s						
PD31	Pinedale Array	53.99	334	*e*P	P	06 03 33.1	+0.1
	0.7nm,0.8s						
PDAR	Pinedale Array	53.99	334	P	P	06 03 33.1	+0.1
	0.6nm,0.7s,baz=126,slow=7.0,SNR=6.6						
AGMN	Agassiz Nation	54.44	348	*e*P	P	06 03 35.9	0.0
	5.0nm,0.9s						
NV01	Mina Array Sit	55.23	324	*e*P	P	06 03 42.6	+0.5
NVAR	Mina Array Bea	55.23	324	P	P	06 03 42.6	+0.5
	1.0nm,0.7s,baz=133,slow=6.5,SNR=9.1						
ULM	Lac du Bonnet	56.30	348	P	P	06 03 48.5	-0.7
	3.0nm,0.7s,baz=152,slow=12,SNR=3.6						
HLID	Hailey	56.83	331	*e*P	P	06 03 55.4	+2.0
	1.5nm,0.8s						
YKA	Yellowknife Ar	71.83	344	P	P	06 05 30.5	-0.1
	0.4nm,0.8s,baz=138,slow=5.4,SNR=4.6						
YKB5	Yellowknife Ar	71.83	344	*e*P	P	06 05 30.5	-0.1
MDT	Midelt	81.05	56	LR	LR	06 39 28.2	
	comp=Z,14nm,18.0s,baz=170,slow=34						
TOA1	Torodi Ar. Sit	83.81	76	*e*P	P	06 06 38.4	+0.3
TORD	Torodi Ar. Bea	83.82	76	P	P	06 06 38.4	+0.3
	0.3nm,0.6s,baz=262,slow=6.3,SNR=3.9						
AS31	Alice Springs	135.90	229	*e*PKPdf	PKiKP	06 13 31.1	+0.3
ASAR	Alice Springs	135.90	229	PKhKP	PKPpre	06 13 31.1	
	0.4nm,0.6s,baz=132,slow=2.5,SNR=5.4						
WR1	Warramunga Arr	137.61	233	*e*PKPdf	PKiKP	06 13 33.8	-0.5
WRA	Warramunga Arr	137.61	233	PKhKP	PKPpre	06 13 33.8	
	0.7nm,0.7s,baz=85,slow=1.8,SNR=4.0						

IDC ***09*** *06:31:36.0±3.2, 60°.42N×43°.52W, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.3/44, mbtmp3.6/4, MS3.7/2, Ms1 3.7/2, ms1mx2.7/36, Error ellipse: s-maj=97.7km s-min=32.8km az=173.0*
ISC 09 06:31:38.4±1.5**, 60°.7N**±0°.2×**44°.0W**±0°.1**, h10**^{km}**, n10,** σ1^s.**91**/9**, mb3.5**/4**, Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	Narsarsuaq	0.84	303	*i* P	Pb	06 31 54.0	-1.1
NRS				*e*S	Sb	06 32 05.1	-1.4
SFJD	Kangerlussuaq	6.96	338	*i* P	Pn	06 33 21.6	+1.3
SFJD				*i* S	Sn	06 34 34.7	-4.7
SUMG	Summit	12.11	8	*i* P	Pn	06 34 31.6	+0.5
SUMG				*e*S	Sn	06 36 40.0	-6.2
ILAR	Eielson Array	42.31	322	P	P	06 39 33.3	+1.6
	0.8nm,0.8s,baz=38,slow=7.1,SNR=7.5						
TIXI	Tiksi	47.83	3	LR	LR	07 01 10.4	
	comp=Z,55nm,18.6s,baz=230,slow=37						
NVAR	Mina Array Bea	49.97	279	P	P	06 40 34.1	+1.5
	0.2nm,0.5s,baz=44,slow=5.4,SNR=2.7						
AKTO	Aktyubinsk	52.84	52	P	P	06 40 52.0	-1.6
	1.0nm,0.6s,baz=326,slow=3.6,SNR=1.6						
SEY	Seymchan	56.06	351	LR	LR	07 05 57.6	
	comp=Z,97nm,18.1s,baz=334,slow=37						
MKAR	Makanchi Array	64.35	38	P	P	06 42 14.8	+0.8
	0.3nm,0.6s,baz=340,slow=6.4,SNR=3.9						
ASAR	Alice Springs	142.96	3	PKP	PKPdf	06 51 09.0	-2.9
	0.2nm,0.6s,baz=347,slow=2.9,SNR=1.6						

IDC ***09*** *06:50:06.1±0.7, 51°.32N×167°.25W, h0^{km}, mb4.1/31, mb1 4.3/31, mb1mx4.2/44, mbtmp4.1/31, MS3.5/28, Ms1 3.5/28, ms1mx3.5/44, Error ellipse: s-maj=20.9km s-min=11.1km az=172.0*
ISCJB ***09*** *06:50:06.7±0.2, 51°.54N±0°.03×167°.15W±0°.03, h10^{km}, mb4.4/75, MS3.7/34, Error ellipse: s-maj=4.7km s-min=2.7km az=164.7*
MOS ***09*** *06:50:06.5±0.9, 51°.35N×167°.19W, h10^{km}, mb4.7/30, Error ellipse: s-maj=13.1km s-min=8.8km az=117.5*
NEIC ***09*** *06:50:08.5±2.0, 51°.57N×167°.18W, h14^{km}±5^{km}, mb4.2/70, ML3.8(AEIC), Error ellipse: s-maj=11.3km s-min=7.2km az=165.0*
GCMT ***09*** *06:50:09.5±0.3, 51°.46N±0°.02×167°.16W±0°.07, h12^{km}, MW4.8/76, Moment Tensor Solution. s14,c15; s76,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.04±.06; $M_{\theta\theta}$1.86±.06; $M_{\phi\phi}$0.17±.06; $M_{r\theta}$0.04±.27; $M_{\theta\phi}$0.09±.07; $M_{\phi r}$-0.01±.37; Best double couple: $M_0$1.95300×10^{16} NP1:ϕ_s267.00000°, δ46.00000°, λ-90.00000°. NP2: ϕ_s87.00000°, δ44.00000°, λ-90.00000°. Principal axes: T 1.8650, Plg1.0000°, Azm357.0000°; N 0.1720, Plg0.0000°, Azm87.0000°; P -2.0400, Plg89.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
AEIC ***09*** *06:50:09.5±0.0, 51°.56N×167°.10W, h57^{km}*
ISC 09 06:50:08.1±0.5**, 51°.48N**±0°.06×**167°.15W**±0°.04**, h10**^{km}**, n202,** σ1^s.**35**/199**, mb4.4**/76**, MS3.8**/34**, 11C-3D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.83	326	*e*Pn	Pn	06 50 38.5	-1.0
NIKH				*e*Sn	Sn	06 50 59.7	-3.0
OKTU	Okmok Mt. Tuli	1.98	344	*e*Pn	Pn	06 50 40.5	-1.2
OKER	Okmok East Rim	2.05	345	*e*Pn	Pn	06 50 41.9	-0.8
OKAK	Okmok	2.23	341	*e*Pn	Pn	06 50 41.9	-3.2
MREP	Makushin Rep't	2.35	6	*e*Pn	Pn	06 50 45.3	-1.4
UNV	Unalaska Valle	2.40	9	*e*Pn	Pn	06 50 45.8	-1.6
UNV				*e*Sn	Sn	06 51 14.0	-2.8
MSW	Makushin Switc	2.45	5	*e*Pn	Pn	06 50 46.8	-1.3
MSW				*e*Sn	Sn	06 51 16.2	-1.8
MCIR	Makushin Cirqu	2.48	3	*e*Pn	Pn	06 50 47.8	-0.7
AKRB	Akutan Reef Bi	2.73	13	*e*Pn	Pn	06 50 50.6	-1.4
AKUT	Akutan	2.79	17	*e*Pn	Pn	06 50 51.9	-0.8
AKSA	Akutan Strait	2.80	18	*e*Pn	Pn	06 50 51.0	-1.9
WEBT	Westdahl Beart	3.44	24	*e*Pn	Pn	06 51 01.3	-0.3
FALS	False Pass	4.06	32	*e*Pn	Pn	06 51 09.6	-0.5
FALS				*e*Sn	Sn	06 51 55.9	-1.8
KOSE	Korovin Southe	4.36	284	*e*Pn	Pn	06 51 15.0	+0.7
KOFP	Korovin Flat P	4.38	283	*e*Pn	Pn	06 51 14.6	-0.1
ATKA	Atka Island	4.43	282	*e*Pn	Pn	06 51 14.5	-0.8
ATKA				*e*Sn	Sn	06 52 05.0	-1.9
KOKL	Mount Kliuchef	4.45	284	*e*Pn	Pn	06 51 15.0	-0.6
KOWE	Korovin West	4.49	284	*e*Pn	Pn	06 51 16.7	+0.6
SDPT	Sand Point	5.56	43	*e*Pn	Pn	06 51 29.5	-1.2
GSMY	Great Sitkin M	5.56	279	*e*Pn	Pn	06 51 30.8	0.0
GSTR	Great Sitkin T	5.57	280	*e*Pn	Pn	06 51 31.1	+0.2
GSTR				*e*Sn	Sn	06 52 31.8	-3.1
GSTD	Great Sitkin T	5.62	279	*e*Pn	Pn	06 51 31.7	0.0
ETKA	Kagalaska Isla	5.78	277	*e*Pn	Pn	06 51 33.2	-0.6
ADAG	Mount Adagdak	5.90	279	*e*Pn	Pn	06 51 36.0	+0.6
ADK	Adak	5.95	278	*e*Pn	Pn	06 51 35.8	-0.3
ADK				*e*Pg	Pn	06 51 36.2	+0.2
ADK				*e*		06 52 40.2	
ADK				*e*Sn	Sn	06 52 40.8	-3.4
ADK	Adak	5.95	278	*e*P	Pn	06 51 35.8	-0.3
ADK				*e*		06 52 40.8	
SPIA	Saint Paul Isl	5.99	344	*e*Pn	Pn	06 51 38.4	+1.7
KIWB	Kanaga Island	6.24	277	*e*Pn	Pn	06 51 40.5	+0.4
KIWB				*e*Sn	Sn	06 52 48.6	-2.8
KIKV	Kanaga Island	6.25	278	*e*Pn	Pn	06 51 40.7	+0.5
KICM	Kanaga Island	6.26	278	*e*Pn	Pn	06 51 41.5	+1.0
KIMD	Kanaga Island	6.29	277	*e*Pn	Pn	06 51 41.1	+0.3
TAFP	Tanaga Falls P	6.75	278	*e*Pn	Pn	06 51 47.8	+0.6
TASE	Tanaga Southea	6.79	277	*e*Pn	Pn	06 51 48.7	+1.0
CHGN	Chignik	7.07	43	*e*Pn	Pn	06 51 51.0	-0.3
GAEA	Gareloi East	7.23	277	*e*Pn	Pn	06 51 54.7	+1.0
SII	Sitkinak Islan	9.16	51	*e*Pn	Pn	06 52 20.0	-0.2
OHAK	Old Harbor	9.92	49	*e*Pn	Pn	06 52 28.6	-1.9
KDAK	Kodiak Island	10.53	47	*e*Pn	Pn	06 52 37.5	-1.3
KDAK	Kodiak Island	10.53	47	*e*P	Pn	06 52 37.5	-1.3
SEW	Seward	13.14	42	*e*Pn	Pn	06 53 12.4	-2.1
RC01	Rabbit Creek A	13.60	38	*e*Pn	Pn	06 53 18.3	-2.5
PPLA	Purkeypile	13.97	29	*e*Pn	Pn	06 53 26.9	+0.9
KNK	Knik Glacier	14.29	39	*e*Pn	Pn	06 53 28.1	-2.1
GLI	Glacier Island	14.54	42	*e*Pn	Pn	06 53 32.7	-1.0
SML	Sawmill	14.57	38	*e*Pn	Pn	06 53 32.8	-1.3
SML	Sawmill	14.57	38	*e*P	Pn	06 53 32.8	-1.3
KTH	Kantishna Hill	14.85	29	*e*Pn	Pn	06 53 38.2	+0.3
EYAK	Cordova Ski Ar	14.95	44	*e*Pn	Pn	06 53 37.5	-1.7
HMT	Hamilton	15.52	46	*e*Pn	Pn	06 53 44.1	-2.7
	11nm,0.6s						
BALM	Baldy	16.67	45	*e*Pn	Pn	06 54 01.1	-0.4
	6.5nm,0.6s						
BALM	Baldy	16.67	45	*e*P	Pn	06 54 01.2	-0.4
BALM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HDA	Harding Lake	16.70	31	*e*Pn	Pn	06 54 00.4	-1.5
	comp=Z,4.8nm,0.6s						
ILAR	Eielson Array	16.97	31	P	Pn	06 54 02.8	-2.4
	comp=Z,0.2nm,0.3s,baz=228,slow=12,SNR=7.3						
ILAR				S	S	06 57 21.0	-2.7
	comp=Z,0.1nm,0.3s,baz=223,slow=17,SNR=2.8						
ILAR				LR	LR	07 01 18.1	
	comp=Z,306nm,19.4s,baz=241,slow=39						
ILB	Eielson Array	16.97	31	*e*P	Pn	06 54 04.1	-1.1
	comp=Z,4.5nm,1.1s						
FYU	Fort Yukon	18.69	28	*e*P	Pn	06 54 27.1	+0.7
	comp=Z,7.7nm,1.0s						
BESE	Bessie Mountai	19.67	56	*e*P	P	06 54 35.9	-1.1
	comp=Z,8.8nm,0.8s						
WHY	Whitehorse	20.02	50	*e*P	Pn	06 54 43.6	+1.1
	comp=Z,18nm,1.0s						
PET	Petropavlovsk	20.88	288	*e*P	P	06 54 46.0	-4.1
PET				*e*S	S	06 58 29.3	-13
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
BILL	Bilibino	21.03	332	⇑*i*P	P	06 54 52.5	+0.9
BILL				pmax	pmax		
	comp=Z,23nm,1.3s						
BILL				MLR	MLR		
	comp=Z,288nm,14.0s						
EPYK	Eagle Plains	21.33	34	*e*P	P	06 54 55.5	+0.6
	comp=Z,49nm,0.8s						
PEA0B	Petropavlovsk-	21.44	288	*e*P	P	06 54 56.4	+0.3
	comp=Z,55nm,1.0s						
PEA0B	Petropavlovsk-	21.44	288	*e*P	P	06 54 56.4	+0.3
PEA0B				pmax	pmax		
	comp=Z,55nm,1.0s						
PEA1	Petropavlovsk-	21.44	288	*e*P	P	06 54 56.2	+0.1
PETK	Petropavlovsk-	21.44	288	P	P	06 54 56.2	+0.1
	comp=Z,31nm,1.0s,baz=90,slow=13,SNR=20						
PETK				LR	LR	07 02 57.4	
	comp=Z,93nm,21.7s,baz=92,slow=36						
DLBC	Dease Lake	22.19	57	P	P	06 55 06.0	+1.8
	comp=Z,4.1nm,0.9s,baz=252,slow=3.2,SNR=3.9						
DLBC				LR	LR	07 02 15.1	
	comp=Z,114nm,18.0s,baz=296,slow=33						
INK	Inuvik	23.36	31	P	P	06 55 16.9	+0.6
	comp=Z,7.8nm,0.7s,baz=244,slow=9.7,SNR=12						
INK				LR	LR	07 04 47.4	
	comp=Z,368nm,21.2s,baz=232,slow=37						
INK	Inuvik	23.36	31	*e*P	P	06 55 17.0	+0.8
	comp=Z,24nm,1.0s						
INK	Inuvik	23.36	31	*e*P	P	06 55 17.0	+0.8
INK				pmax	pmax		
	comp=Z,24nm,1.0s						
BBB	Bella Bella	23.94	73	LR	LR	07 02 20.2	
	comp=Z,38nm,19.4s,baz=192,slow=30						
SEY	Seymchan	24.28	314	P	P	06 55 24.1	-1.0
	comp=Z,2.5nm,0.9s,baz=99,slow=13,SNR=4.7						
MA2	Magadan	24.78	306	LR	LR	07 04 57.6	
	comp=Z,62nm,19.3s,baz=98,slow=36						
YKA	Yellowknife Ar	29.80	48	P	P	06 56 15.5	+0.9
	comp=Z,0.6nm,0.6s,baz=266,slow=7.5,SNR=11						

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YKA                               LR      LR      07 09 08.7
      comp=Z,22nm,19.9s,baz=278,slow=38
NEW   Newport           31.89  76 P       P       06 56 34.1 +0.8
      comp=Z,1.4nm,0.5s,baz=284,slow=5.1,SNR=5.9
NEW   Newport           31.89  76 eP      P       06 56 34.1 +0.8
      comp=Z,2.3nm,0.8s
NEW   Newport           31.89  76 eP      P       06 56 34.1 +0.8
NEW                               pmax    pmax
      comp=Z,2.0nm,0.8s
I07A  Izee              32.37  84 eP      P       06 56 38.2 +0.6
      comp=Z,2.3nm,0.8s
YSS   Yuzh-Sakhalins    32.51 282 eP      P       06 56 39.4 +0.7
YSS                               pmax    pmax
      comp=Z,10.0nm,1.0s
GRNR  Gornyy            34.67 292 eP      P       06 56 58.5 +1.0
GRNR                              pmax    pmax
      comp=Z,21nm,1.0s
YAK   Yakutsk           34.79 312⇑iP      P       06 56 59.8 +1.5
MCMT  McKenzie Canyo    36.10  79 eP      P       06 57 10.6 +0.5
NVAR  Mina Array Bea    36.27  92 P       P       06 57 12.4 +0.9
      comp=Z,0.8nm,0.7s,baz=291,slow=9.2,SNR=7.9
NVAR                              LR      LR      07 10 00.2
      comp=Z,42nm,20.2s,baz=267,slow=33
RES   Resolute Bay      36.59  25 P       P       06 57 14.9 +1.3
      comp=Z,2.5nm,0.7s,baz=262,slow=13,SNR=3.1
RES   Resolute Bay      36.59  25 eP      P       06 57 14.8 +1.2
      comp=Z,8.2nm,1.1s
RES   Resolute Bay      36.59  25 eP      P       06 57 14.8 +1.2
RES                               pmax    pmax
      comp=Z,8.0nm,1.1s
TEY   Ternei            37.19 283⇓eP      P       06 57 18.2 -0.9
TEY                               pmax    pmax
      comp=Z,10.0nm,1.3s
H11N2 WAKE ISLAND Hy    37.67 222 T       T       07 37 14.5
      baz=23,slow=75
H11N3 WAKE ISLAND Hy    37.68 222 T       T       07 37 12.8
      baz=23
H11N1 WAKE ISLAND Hy    37.69 222 T       T       07 37 15.9
      baz=23,slow=75
KLR   Kul'dur           38.06 291 P       P       06 57 25.5 -0.9
      comp=Z,4.1nm,1.0s,baz=52,slow=9.5,SNR=8.2
KLR   Kul'dur           38.06 291⇑iP      P       06 57 26.9 +0.5
KLR                               pmax    pmax
      comp=Z,5.0nm,1.0s
TPNV  Topopah Spring    38.46  92 eP      P       06 57 31.1 +1.0
      comp=Z,3.3nm,0.9s
TPNV  Topopah Spring    38.46  92 eP      P       06 57 31.2 +1.0
TPNV                              pmax    pmax
      comp=Z,3.0nm,0.9s
ZEA   Zeya              38.63 300 eP      P       06 57 30.6 -0.6
ZEA                               pmax    pmax
      comp=Z,46nm,1.4s
DUG   Dugway, Tooele    38.65  85 eP      P       06 57 32.6 +0.9
      comp=Z,3.0nm,1.0s
DUG   Dugway, Tooele    38.65  85 eP      P       06 57 32.6 +0.9
DUG                               pmax    pmax
      comp=Z,3.0nm,1.0s
H11S1 WAKE ISLAND Hy    38.84 222 T       T       07 38 39.1
      baz=19
H11S2 WAKE ISLAND Hy    38.86 222 T       T       07 38 39.6
      baz=19
H11S3 WAKE ISLAND Hy    38.86 222 T       T       07 38 42.6
      baz=19
BW06  Boulder Array     39.22  80 eP      P       06 57 36.8 +0.3
      comp=Z,3.0nm,1.0s
PDAR  Pinedale Array    39.22  80 P       P       06 57 36.5 +0.1
      comp=Z,0.9nm,0.6s,baz=298,slow=4.5,SNR=14
USRK  Ussuriysk Ar.     40.44 284 P       P       06 57 44.6 -1.7
      comp=Z,2.2nm,0.8s,baz=50,slow=8.4,SNR=5.1
USRK                              LR      LR      07 17 10.3
      comp=Z,31nm,18.4s,baz=334,slow=40
SRU   San Rafael Swe    40.72  85 eP      P       06 57 49.0 +0.1
      comp=Z,3.7nm,0.8s
SRU   San Rafael Swe    40.72  85 eP      P       06 57 49.0 +0.1
SRU                               pmax    pmax
      comp=Z,4.0nm,0.8s
MAJO  Matsushiro        41.06 271 eP      P       06 57 51.1 -0.5
MAJO  Matsushiro        41.06 271⇑iP      P       06 57 51.7 +0.1
MAJO                              pmax    pmax
      comp=Z,9.0nm,1.1s
MAT   Matsushiro        41.06 271 P       P       06 57 50.7 -0.9
MAT                               S       S       07 04 03.8 -0.2
MJAR  Matsushiro Arr    41.06 271 P       P       06 57 51.1 -0.5
      comp=Z,2.0nm,0.7s,baz=44,slow=6.2,SNR=7.9
MJAR                              LR      LR      07 14 46.2
      comp=Z,16nm,20.4s,baz=70,slow=36
MSHR  Mys Shultsa       41.84 283⇑iP      P       06 57 58.3 +0.5
PV23  Carpenter Ridg    42.06  85 eP      P       06 57 59.5 -0.6
      comp=Z,4.2nm,0.7s
PV22  Blue Mesa, Par    42.15  84 eP      P       06 58 00.6 -0.1
      comp=Z,3.3nm,0.7s
PV16  Nyswonger Mesa    42.20  85 eP      P       06 58 00.3 -0.8
      comp=Z,4.9nm,1.0s
PV07  Paradox Valley    42.29  84 eP      P       06 58 01.8 -0.1
      comp=Z,3.0nm,0.7s
PV02  Paradox Valley    42.38  85 eP      P       06 58 02.3 -0.3
      comp=Z,7.4nm,1.2s
MVCO  Mesa Verde        43.14  86 eP      P       06 58 08.7 -0.2
      comp=Z,1.9nm,0.8s
TUC   Tucson            44.89  93 eP      P       06 58 22.8 +0.1
      comp=Z,2.2nm,0.8s
TUC   Tucson            44.89  93 eP      P       06 58 22.8 +0.1
TUC                               pmax    pmax
      comp=Z,2.0nm,0.8s
ANMO  Albuquerque       45.86  87 P       P       06 58 28.0 -2.5
      comp=Z,0.8nm,0.9s,baz=315,slow=10,SNR=4.5
ANMO                              PcP     PcP     07 00 07.5 -0.2
      comp=Z,0.9nm,0.9s,baz=302,slow=4.3,SNR=6.2
ANMO  Albuquerque       45.86  87 eP      P       06 58 31.4 +0.9
      comp=Z,1.1nm,1.0s
ANMO  Albuquerque       45.86  87⇑iP      P       06 58 30.5  0.0
ANMO                              pmax    pmax
      comp=Z,2.0nm,1.3s
ECSD  EROS Data Cent    46.48  70 eP      P       06 58 33.5 -1.6
KSRS  Korea Array       46.89 279 P       P       06 58 38.3  0.0
      comp=Z,1.3nm,0.9s,baz=67,slow=9.4,SNR=3.1
KSRS                              LR      LR      07 18 24.1
      comp=Z,14nm,20.3s,baz=114,slow=36
JNU   Nakatsue          47.86 273 P       P       06 58 43.4 -2.6
      comp=Z,7.0nm,1.0s,baz=27,slow=9.0,SNR=3.0
SPA0  Spitsbergen Ar    50.59 359 eP      P       06 59 06.8 +0.6
      comp=Z,28nm,1.1s
SPITS Spitsbergen Ar    50.59 359 P       P       06 59 06.8 +0.6
      comp=Z,6.4nm,0.8s,baz=352,slow=5.1,SNR=8.8
TXAR  Lajitas Array     51.38  90 P       P       06 59 12.5 -0.4
      comp=Z,2.1nm,0.5s,baz=306,slow=6.2,SNR=3.8
TXAR                              LR      LR      07 20 23.3
      comp=Z,64nm,18.3s,baz=0.0,slow=35
E46A  Sault Ste Mari    51.91  61 eP      P       06 59 15.6 -0.9
      comp=Z,12nm,1.1s
TLY   Talaya            51.97 308d iP     P       06 59 17.8 +0.8
TLY                               pmax    pmax
      comp=Z,81nm,1.1s
ULN   Ulaanbaatar       52.57 302⇑iP      P       06 59 22.5 +0.8
ULN                               pmax    pmax
      comp=Z,4.0nm,1.0s
SONA0 Songino Array     52.94 303 eP      P       06 59 25.5 +1.2
SONM  Songino Array     52.94 303 P       P       06 59 25.5 +1.2
      comp=Z,5.1nm,1.2s,baz=42,slow=4.6,SNR=19
ZAK   Zakamensk         52.95 307 eP      P       06 59 25.4 +1.0
ZAK                               pmax    pmax
      comp=Z,14nm,1.4s
MOY   Mondy             53.28 309 eP      P       06 59 27.7 +0.9
HHC   Hu-ho-hao-te      54.53 293 P       P       06 59 36.9 +0.8
HHC                               pmax    pmax
      comp=Z,11nm,1.0s
HHC                               pmax    pmax
      comp=Z,93nm,4.8s
SCHQ  Schefferville     55.13  44 LR      LR      07 23 37.5
      comp=Z,106nm,21.2s,baz=339,slow=36
WVT   Waverly           56.50  73 eP      P       06 59 48.9 -1.2
      comp=Z,2.9nm,0.8s
WVT   Waverly           56.50  73 eP      P       06 59 48.9 -1.2
WVT                               pmax    pmax
      comp=Z,3.0nm,0.8s
ARA0  ARCESS Array S    58.94 355 eP      P       07 00 07.2 +0.4
ARCES ARCESS Array B    58.94 355 P       P       07 00 07.2 +0.4
      comp=Z,2.6nm,0.8s,baz=19,slow=9.0,SNR=6.6
ARCES                             LR      LR      07 28 27.3
      comp=Z,89nm,18.6s,baz=28,slow=39
ZAA1  Zalesovo Array    59.00 319 eP      P       07 00 08.1 +0.6
ZALV  Zalesovo Beam     59.00 319 P       P       07 00 08.1 +0.6
      comp=Z,1.7nm,0.5s,baz=28,slow=6.7,SNR=8.6
ZALV                              LR      LR      07 28 32.4
      comp=Z,32nm,18.5s,baz=70,slow=39
LZH   Lanzhou           62.20 294 eP      P       07 00 30.9 +1.1
LZH                               pP      pwP     07 00 36.8 -1.3
LZH                               sP      sP      07 00 38.8 +6.8
LZH                               PP      PP      07 02 22.5  -24
LZH                               pmax    pmax
      comp=Z,18nm,1.3s
KURK  Kurchatov         63.95 320 eP      P       07 00 41.7 +0.7
      comp=Z,8.7nm,0.9s
KURK  Kurchatov         63.95 320c iP     P       07 00 42.0 +1.1
KURK                              pmax    pmax
      comp=Z,8.0nm,1.0s
WMQ   Urumqi            65.16 310 eP      P       07 00 50.2 +1.1
WMQ                               pP      sP      07 00 54.2 +2.9
WMQ                               sP      pwP     07 00 59.0 +1.6
WMQ                               pmax    pmax
      comp=Z,28nm,0.9s
WMQ                               LR      LR
      comp=N,2μm,29.0s
WMQ                               LR      LR
      comp=E,2μm,29.0s
WMQ                               LR      LR
      comp=Z,120nm,29.3s
BRVK  Borovoye          65.23 326 eP      P       07 00 48.5 -0.7
      comp=Z,8.7nm,0.8s
BRVK  Borovoye          65.23 326⇑iP      P       07 00 50.8 +1.5
BRVK                              pmax    pmax
      comp=Z,16nm,1.2s
MKAR  Makanchi Array    65.41 315 P       P       07 00 50.7 +0.1
      comp=Z,1.1nm,0.8s,baz=48,slow=6.6,SNR=11
MKAR                              LR      LR      07 32 03.9
      comp=Z,60nm,18.8s,baz=30,slow=38
ARU   Arti              66.03 334d iP     P       07 00 55.2 +0.8
ARU                               S       S       07 09 46.0 +4.1
ARU                               pmax    pmax
      comp=Z,37nm,1.7s
FINES FINESS Array B    66.93 353 P       P       07 01 00.8 +0.7
      comp=Z,7.7nm,1.1s,baz=48,slow=8.5,SNR=6.0
FINES                             LR      LR      07 33 08.2
      comp=Z,92nm,18.9s,baz=14,slow=38
FINES FINESS Array B    66.93 353 i P     P       07 01 00.8 +0.7
FINES                             pmax    pmax
      comp=Z,4.0nm,0.8s
NB200 NORSAR Array S    67.82   1 eP      P       07 01 06.6 +0.8
NOA   NORSAR Array B    67.82   1 P       P       07 01 06.6 +0.8
      comp=Z,1.7nm,0.9s,baz=358,slow=6.3,SNR=3.6
NOA                               LR      LR      07 32 51.7
      comp=Z,18nm,19.2s,baz=0.0,slow=38
OTUK  Ortayu            68.40 322 P       P       07 01 10.6 +1.0
OTUK                              pmax    pmax
      comp=Z,11nm,1.4s
PDGK  Podgornoye        69.35 314 P       P       07 01 16.8 +1.0
PDGK                              pmax    pmax
      comp=Z,10.0nm,1.2s
PPT   Papeete           70.45 162 LR      LR      07 25 52.9
      comp=Z,104nm,21.3s,baz=318,slow=30
PPT2  Papeete2          70.47 162 eS      S       07 10 34.8 -0.8
      comp=Z,63nm,26.0s
PPT2  Papeete2          70.47 162 eLR     LR      07 22 27.1
      comp=Z,437nm,30.2s
KMI   Kunming           70.83 286 P       P       07 01 26.1 +0.9
KMI                               pmax    pmax
      comp=Z,14nm,0.6s
BOOM  Boomskoye usch    71.59 316 eP      P       07 01 30.5 +1.0
      comp=Z,5.5nm,0.8s
BOOM  Boomskoye usch    71.59 316 eP      P       07 01 30.5 +1.0
BOOM                              pmax    pmax
      comp=Z,6.0nm,0.8s
ABKAR Akbulak array     71.91 330 eP      P       07 01 31.9 +0.8
      comp=Z,5.6nm,0.8s
OBN   Obninsk           71.95 346⇑eP      P       07 01 31.6 +0.4
OBN                               e               07 01 47.5
OBN                               e               07 04 12.4
OBN                               eS      S       07 10 47.8 -4.1
OBN                               pmax    pmax
      comp=Z,6.0nm,0.9s
OBN                               MLR     MLR
      comp=Z,80nm,16.0s
AAK   Ala-Archa         72.09 317⇑iP      P       07 01 33.9 +1.4
AAK                               pmax    pmax
      comp=Z,8.0nm,1.1s
TBI   Tubuai            76.11 163 eLR     LR      07 25 11.8
      comp=Z,269nm,31.0s
DZM   Mont Dzumac       76.82 205 eLR     LR      07 25 39.2
      comp=Z,320nm,22.9s
GAR   Garm              76.88 318 eP      P       07 01 59.6 -0.7
      comp=Z,15nm,0.8s
GAR   Garm              76.88 318 eP      P       07 01 59.6 -0.7
GAR                               pmax    pmax
      comp=Z,15nm,0.8s
AKASG Malin Array Be    77.25 349 P       P       07 02 02.1 +0.1
      comp=Z,1.0nm,0.4s,baz=12,slow=6.2,SNR=8.4
AKASG                             LR      LR      07 38 44.4
      comp=Z,66nm,21.8s,baz=320,slow=38
CLL   Collm             77.59 360 eP      P       07 02 05.0 +1.1
CLL   Collm             77.59 360 eP      P       07 02 05.0 +1.1
BRG   Berggiesshubel    78.02 359 ePKP    P       07 02 07.7 +1.4
      comp=Z,26nm,1.9s
BRG   Berggiesshubel    78.02 359 eP      P       07 02 07.7 +1.4
BRG                               pmax    pmax
      comp=Z,26nm,1.9s
CMAR  Chiang Mai Arr    78.17 285 P       P       07 02 07.8 +0.1
      comp=Z,1.6nm,0.5s,baz=28,slow=6.5,SNR=10
DPC   Dobruska-Polom    78.50 358 P       P       07 02 11.7 +2.6
DPC                               pmax    pmax
      comp=Z,58nm,1.7s
MORC  Moravsky Berou    79.04 357 eP      P       07 02 13.1 +1.1
VRAC  Vranov            79.54 358 eP      P       07 02 15.3 +0.6
LANS  Liptovska Anna    79.59 356 eP      P       07 02 17.4 +2.4
LANS  Liptovska Anna    79.59 356 eP      P       07 02 17.4 +2.4
KHC   Kasperske Hory    79.77 360 eP      P       07 02 17.5 +1.5
KHC   Kasperske Hory    79.77 360 eP      P       07 02 17.5 +1.5
KRUC  Moravsky          79.79 358 eP      P       07 02 17.0 +0.9
JAVC  Velka Javorina    79.95 357 eP      P       07 02 18.9 +1.9
GERES GERESS Array B    80.05 359 P       P       07 02 17.8 +0.1
      comp=Z,0.4nm,0.4s,baz=3.4,slow=6.7,SNR=4.7
VYHS  Vyhne             80.27 356 eP      P       07 02 20.3 +1.5
VYHS  Vyhne             80.27 356 eP      P       07 02 20.2 +1.5
KIV   Kislovodsk        81.49 339 eP      P       07 02 26.3 +0.9
KIV                               pmax    pmax
      comp=Z,17nm,1.1s
KBZ   Khabaz            81.66 338 P       P       07 02 28.1 +2.0
      comp=Z,0.5nm,0.4s,baz=34,slow=14,SNR=3.1
SHA1  Shidzhatmaz       81.70 339 i P     P       07 02 27.6 +0.9
KBA   Koelnbreinsper    81.82 360 P       P       07 02 30.8 +3.6
KBA                               pmax    pmax
      comp=Z,10.0nm,1.9s
GEYT  Alibeck           82.55 325 P       P       07 02 32.6 +1.6
      comp=Z,1.5nm,0.7s,baz=231,slow=9.4,SNR=4.2
GEYT                              LR      LR      07 43 52.2
      comp=Z,34nm,19.7s,baz=40,slow=39
BNI   Bardonecchia      83.70   4 P       P       07 02 39.6 +2.7
BNI                               pmax    pmax
      comp=Z,4.0nm,0.9s
GNI   Garni             84.59 336 LR      LR      07 45 44.4
      comp=Z,51nm,21.0s,baz=1.5,slow=39
BR101 Keskin Array S    87.37 344 eP      P       07 02 54.2 -1.2
BRTR  Keskin Array B    87.37 344 P       P       07 02 54.2 -1.2
      comp=Z,0.6nm,0.5s,baz=29,slow=2.8,SNR=4.3
BRTR                              LR      LR      07 47 12.0
      comp=Z,18nm,19.4s,baz=12,slow=39
BRTR  Keskin Array B    87.37 344 i P     P       07 02 56.0 +0.7
BRTR                              pmax    pmax
      comp=Z,1.0nm,0.6s
WR1   Warramunga Arr    87.55 233 eP      P       07 02 54.7 -1.4
WRA   Warramunga Arr    87.56 233 P       P       07 02 54.7 -1.5
      comp=Z,1.8nm,0.9s,baz=29,slow=7.1,SNR=3.6
ESDC  Sonseca Array     88.04  13 P       P       07 02 57.9 -0.5
      comp=Z,0.2nm,0.4s,baz=350,slow=5.7,SNR=4.1
ESDC                              LR      LR      07 41 49.0
      comp=Z,40nm,21.9s,baz=300,slow=35
ASAR  Alice Springs     90.90 232 P       P       07 03 10.6 -1.2
      comp=Z,2.3nm,0.8s,baz=28,slow=4.4,SNR=25
ASAR                              LR      LR      07 38 38.7
      comp=Z,58nm,21.1s,baz=68,slow=32
MMAI  Mount Meron Ar    93.56 341 LR      LR      07 51 12.6
      comp=Z,18nm,18.9s,baz=320,slow=39
STKA  Stephens Creek    94.43 222 LR      LR      07 39 18.4
      comp=Z,50nm,21.1s,baz=26,slow=31
EIL   Elat              96.89 341 LR      LR      07 52 55.0
      comp=Z,26nm,18.5s,baz=58,slow=39
```

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*SJA **09** 07:12:44.6±0.3, 22°.18S×68°.99W, h154km±5km, ML2.2, MW2.6*
*ISCJB **09** 07:12:47.3±0.9, 21°.85S±0°.04×68°.79W±0°.08, h128km±11km, Error ellipse: s-maj=12.6km s-min=6.4km az=174.8*
*GUC **09** 07:12:47.4±0.6, 21°.83S×68°.81W, h122km±4km, ML2.7*
ISC 09 07:12:47.8±1.9, **21°.85S**±0°.04×**68°.80W**±0°.08, **h125km**±17km, **n17**, σ**0s.62**/30, **1D**, **Chile-Bolivia border region**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                    Op      ISC       h  m  s   ISC
PB09  IPOC Station P     0.41 277 eP      Pn      07 13 06.0 -0.1
PB09                              eS      Sn      07 13 19.6 -0.2
PB03  IPOC Station P     0.91 257 eP      Pn      07 13 09.6  0.0
PB03                              eS      Sn      07 13 25.7 -0.4
PB03                              IAML            07 13 27.0
      comp=E,213nm,0.3s
PB07  IPOC Station P     1.02 277 eP      Pn      07 13 10.1 -0.5
PB07                              eS      Sn      07 13 28.8 +0.9
PB07  IPOC Station P     1.02 277 eP      Pn      07 13 10.8 +0.2
PB07                              eS      Sn      07 13 28.1 +0.2
PB07                              IAML            07 13 29.6
      comp=N,281nm,0.1s
PB01  IPOC Station P     1.02 321 eP      Pn      07 13 09.4 -1.2
PB01                              eS      Sn      07 13 27.7 -0.2
PB01  IPOC Station P     1.02 321 eP      Pn      07 13 10.3 -0.3
PB01                              eS      Sn      07 13 27.6 -0.3
PB01                              IAML            07 13 29.2
      comp=E,252nm,0.3s
PB06  IPOC Station P     1.12 220 eP      Pn      07 13 11.6  0.0
PB06                              eS      Sn      07 13 29.8 +0.2
PB06                              IAML            07 13 31.4
      comp=E,145nm,0.2s
PB02  IPOC Station P     1.15 297 eP      Pn      07 13 12.1 +0.2
PB02  IPOC Station P     1.15 297 eP      Pn      07 13 12.0 +0.1
PB02                              eS      Sn      07 13 29.9 -0.2
PB02                              IAML            07 13 34.5
      comp=E,237nm,0.1s
PB04  IPOC Station P     1.34 249 eP      Pn      07 13 14.1 +0.1
PB04                              eS      Sn      07 13 34.3 +0.4
PB04                              IAML            07 13 36.4
      comp=N,108nm,0.2s
PB15  IPOC Station P     1.49 205 eP      Pn      07 13 15.6 -0.1
PB15                              eS      Sn      07 13 37.9 +0.9
PB08  IPOC Station P     1.73 349 eP      Pn      07 13 19.0 +0.3
PB08                              eP      Sn      07 13 42.8 +0.6
PB08                              IAML            07 13 44.5
      comp=N,61nm,0.1s
GO01  Chusmiza           2.20 350⇓eP      Pn      07 13 24.4 -0.1
GO01                              eS      Sn      07 13 53.1 +0.6
PB11  IPOC Station P     2.22 339 eP      Pn      07 13 23.8 -0.7
PB11                              eS      Sn      07 13 52.8 +0.2
YJA   Yavi               3.06  97 eP      Pn      07 13 36.7 +1.2
HJA   Humahuaca          3.41 114 eP      Pn      07 13 39.9 -0.2
HJA                               IAML            07 13 41.0
      comp=Z,3.8nm,0.4s
AZAP  Zapla              4.17 125 eP      Pn      07 13 48.3 -1.7
AZAP                              IAML            07 13 50.0
      comp=Z,2.4nm,0.3s
```

MEX 09 07:16:54.7±0.4, **13°.87N**×**92°.61W**, **h10km**±137km, **MD3.8**, **Off coast of Chiapas**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                    Op      ISC       h  m  s   ISC
THIG                     1.09  18 eP      Pb      07 17 12.5 -3.1
THIG                              i S     Sg      07 17 26.2 -3.6
PCIG                     1.92 342 i P     Pn      07 17 23.5 -4.0
PCIG                              i S     Sn      07 17 47.1 -4.6
CCIG  Comitan            2.44  11 i P     Pn      07 17 31.9 -3.0
CCIG                              eS      Sn      07 18 00.5 -4.5
TGIG                     2.94 350 eP      Pn      07 17 39.6 -1.9
TGIG                              i S     Sn      07 18 13.5 -3.5
```

IDC 09 07:33:41.4±3.4, **42°.34N**×**129°.07E**, **h0km**, **mb1 2.5**/2, **mb1mx2.5**/47, **mbtmp2.5**/2, **ML1.7**/2, **Error ellipse: s-maj=59.0km s-min=20.7km az=124.0**, **North Korea**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                    Op      ISC       h  m  s   ISC
I45RU USSURIYSK INFR     2.82  48 i                07 54 04.1
      baz=230,slow=308,SNR=2.1
USRK  Ussuriysk Ar.      2.83  48 Pn      Pn      07 34 27.9 +0.1
      0.1nm,0.3s,baz=239,slow=16,SNR=2.4
USRK                              Pg      Pb      07 34 33.0 +0.3
      0.3nm,0.3s,baz=229,slow=16,SNR=6.6
USRK                              Lg      Lg      07 35 10.8
      0.8nm,0.3s,baz=239,slow=29,SNR=6.5
KSRS  Korea Array        4.96 191 Pn      Pn      07 34 57.4 +0.3
      0.3nm,0.3s,baz=8.8,slow=14,SNR=2.6
```

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*NEIC **09** 07:34:18.5±1.6, 1°.36N×90°.53W, h10km, mb4.5/49, Error ellipse: s-maj=22.2km s-min=12.2km az=261.0*
*IDC **09** 07:34:18.4±1.4, 1°.39N×90°.72W, h0km, mb3.8/11, mb1 4.1/12, mb1mx3.9/38, mbtmp3.8/12, ML3.6/1, MS3.7/22, Ms1 3.7/22, ms1mx3.6/31, Error ellipse: s-maj=55.6km s-min=16.2km az=43.0*
*IGQ **09** 07:34:18.1±4.4, 1°N±16°×9°1W±1°5, h3km*
ISC 09 07:34:17.2±0.5, **1°.19N**±0°.05×**91°.01W**±0°.08, **h10km**, **n81**, σ**1s.98**/59, **mb4.5**/39, **MS3.7**/19, **Galapagos Islands region**

```
Code  Station Name        Δ°   AZ°  Phase ID          Time      Res
                                    Op      ISC       h  m  s   ISC
FER2  Fernandina2, P     1.70 194 P       Pb      07 34 49.3 +0.8
FER1  Fernandina1, P     1.73 195 P       Pn      07 34 45.8 -1.5
ALCE  Alcedo, Punta      1.89 211 P       Pn      07 34 46.3 -3.3
ALCE                              S       Sn      07 35 09.9 -3.6
VCH1  Volcn Chico        1.97 183 P       Pn      07 34 52.2 +1.4
PAYG  Puerto Ayora       1.99 159 ePn     Pn      07 34 51.1 +0.2
PAYG  Puerto Ayora       1.99 159 P       Pb      07 34 53.4 -0.1
CEAZ  Cerra Azul, Ca     2.03 191 P       Pn      07 34 53.6 +2.2
JTS   Las Juntas de     10.86  33 LR      LR      07 39 59.1
      comp=Z,1μm,19.9s,baz=290,slow=32
ACON  Acoyapa           12.17  28 ePn     Pn      07 37 08.0 -2.7
TGUH  Tegucigalpa,Un    13.30  16 ePn     Pn      07 37 23.3 -3.1
APG   El Apazote        13.73   2 LR      LR      07 41 41.5
      comp=Z,430nm,20.7s,baz=178,slow=33
CCIG  Comitan           15.04 356 ePn     Pn      07 37 49.6 -0.4
ATAH  Atahualpa         15.06 123 Pn      Pn      07 37 51.4 +0.8
      0.2nm,0.3s,baz=315,slow=19,SNR=2.3
ATAH                              LR      LR      07 42 40.7
      comp=Z,432nm,19.0s,baz=315,slow=34
CMIG  Matias Romero     16.25 347 LR      LR      07 42 10.2
      comp=Z,101nm,21.6s,baz=172,slow=29
ROSC  El Rosal          17.05  77 LR      LR      07 43 42.4
      comp=Z,287nm,21.7s,baz=216,slow=34
ROSC  El Rosal          17.05  77 ePn     Pn      07 38 08.2 -8.1
      5.7nm,1.1s
TLIG  Tlapa             17.88 336 ePn     Pn      07 38 26.9 +0.6
      13nm,1.3s
NNA   Nana              19.22 133 LR      LR      07 44 35.9
      comp=Z,250nm,21.5s,baz=305,slow=32
SDV   Santo Domingo     21.67  69 P       P       07 39 07.9 -0.5
      5.3nm,0.8s,baz=225,slow=10.0,SNR=5.8
SDV                               LR      LR      07 46 26.3
      comp=Z,226nm,21.9s,baz=248,slow=34
SDV   Santo Domingo     21.67  69 eP      P       07 39 03.8 -4.6
      11nm,0.9s
H06E1 SOCORRO T-PHAS    26.21 313 T       T       08 07 18.9
      SNR=35
LPAZ  La Paz            28.49 129 P       P       07 40 15.1 +1.5
      0.8nm,0.8s,baz=280,slow=4.1,SNR=2.9
LPAZ                              LR      LR      07 51 36.2
      comp=Z,84nm,18.3s,baz=298,slow=37
LPAZ  La Paz            28.49 129 eP      P       07 40 12.9 -0.7
SJG   San Juan          29.64  54 LR      LR      07 50 54.4
      comp=Z,244nm,19.3s,baz=240,slow=34
TXAR  Lajitas Array     30.48 338 P       P       07 40 32.9 +2.5
      1.1nm,1.2s,baz=160,slow=11,SNR=3.2
TXAR                              LR      LR      07 51 36.6
      comp=Z,75nm,18.6s,baz=0.0,slow=34
PTGA  Pitinga           31.10  93 LR      LR      07 51 55.0
      comp=Z,117nm,19.2s,baz=278,slow=34
LVC   Limon Verde       32.00 139 LR      LR      07 51 16.8
      comp=Z,96nm,19.1s,baz=304,slow=32
MNTX  Cornudas Mount    33.24 337 eP      P       07 40 56.8 +2.1
      4.1nm,1.4s
X51A  Calhoun           33.69   9 eP      P       07 40 56.8 -1.8
      7.8nm,1.0s
SIV   San Ignacio       34.14 121 P       P       07 41 05.1 +2.3
      0.7nm,0.7s,baz=294,slow=14,SNR=4.6
MSTX  Muleshoe          34.42 343 eP      P       07 41 06.9 +1.9
      8.2nm,0.8s
V48A  Smith Brothers    34.59   6 eP      P       07 41 05.1 -1.3
      6.8nm,1.1s
V51A  Loudon            34.99   9 eP      P       07 41 08.1 -1.6
```

	20nm,1.4s						
T47A	Sharon Grove	35.80	5	*e*P	P	07 41 15.5	-1.3
	8.7nm,0.8s						
BNM	Barren Site	35.90	338	*e*P	P	07 41 19.2	+1.3
U54A	Nelsons Funny	36.17	13	*e*P	P	07 41 17.7	-2.3
	14nm,1.3s						
ANMO	Albuquerque	36.54	338	*e*P	P	07 41 25.5	+2.2
	3.4nm,0.9s						
CCM	Cathedral Cave	36.68	360	*e*P	P	07 41 23.9	-0.4
	21nm,0.8s						
OLIL	Olney	37.46	4	*e*P	P	07 41 30.6	-0.2
	33nm,1.5s						
T25A	Trinidad	37.85	342	*e*P	P	07 41 35.9	+1.5
	7.5nm,1.1s						
P45A	Graceland, Par	38.27	4	*e*P	P	07 41 37.4	-0.3
	13nm,0.9s						
Q51A	Peebles	38.30	10	*e*P	P	07 41 37.2	-0.8
	13nm,0.8s						
SDCO	Great Sand Dun	38.74	342	*e*P	P	07 41 43.0	+0.9
	4.2nm,1.0s						
WUAZ	Wupatki	39.05	333	*e*P	P	07 41 47.0	+2.4
	13nm,1.1s						
HDIL	Hopedale	39.21	2	*e*P	P	07 41 45.8	+0.2
	24nm,1.4s						
MVCO	Mesa Verde	39.31	338	*e*P	P	07 41 48.3	+1.6
	5.0nm,0.9s						
ISCO	Idaho Springs	40.66	343	*e*P	P	07 42 00.2	+2.2
	6.0nm,0.8s						
PKCU	Pink Cliffs	41.07	334	*e*P	P	07 42 03.7	+2.2
	17nm,1.3s						
JFWS	Jewell Farm	41.54	1	*e*P	P	07 42 05.3	+0.4
	7.1nm,0.8s						
CPUP	Villa Florida	42.48	133	LR	LR	08 00 14.1	
	comp=Z,86nm,18.6s,baz=306,slow=37						
ECSD	EROS Data Cent	42.65	354	*e*P	P	07 42 14.3	+0.4
	3.9nm,0.9s						
PDAR	Pinedale Array	44.60	341	P	P	07 42 32.3	+2.3
	0.7nm,1.0s,baz=157,slow=12,SNR=3.1						
SADO	Sadowa	44.65	12	*e*P	P	07 42 28.9	-1.1
	10nm,0.9s						
NVAR	Mina Array Bea	44.72	329	P	P	07 42 35.0	+4.1
	1.7nm,0.9s,baz=151,slow=8.3,SNR=16						
NVAR				LR	LR	07 59 51.2	
	comp=Z,35nm,19.7s,baz=130,slow=34						
ELK	Elko	45.08	334	P	P	07 42 37.6	+3.8
	2.0nm,0.8s,baz=146,slow=6.4,SNR=4.5						
KVN	Kaiserville	45.09	330	*e*P	P	07 42 35.0	+1.2
	7.2nm,1.1s						
LONY	Lake Ozonia	45.63	16	*e*P	P	07 42 35.7	-2.1
	12nm,1.3s						
BDFB	Brasilia	45.65	113	LR	LR	08 02 29.7	
	comp=Z,115nm,18.0s,baz=91,slow=37						
D53A	Lac Vacive, Po	47.15	12	*e*P	P	07 42 48.5	-1.3
	5.8nm,0.8s						
ULM	Lac du Bonnet	49.05	356	LR	LR	08 04 09.1	
	comp=Z,77nm,21.4s,baz=161,slow=37						
YBH	Yreka Blue Hor	49.43	329	P	P	07 43 08.4	+0.8
	1.9nm,0.9s,baz=135,slow=1.4,SNR=3.2						
TAOE	Nuku Hiva Isla	49.97	257	*e*LR	LR	07 57 47.0	
	comp=Z,152nm,25.2s						
SCHQ	Schefferville	57.00	16	LR	LR	08 07 47.4	
	comp=Z,83nm,21.6s,baz=126,slow=35						
PPT2	Papeete2	60.59	249	*e*LR	LR	08 02 47.5	
	comp=Z,226nm,25.8s						
TBI	Tubuai	61.80	243	*e*LR	LR	08 03 19.5	
	comp=Z,251nm,29.0s						
YKA	Yellowknife Ar	63.66	348	P	P	07 44 48.7	+0.4
	0.6nm,0.7s,baz=148,slow=6.7,SNR=6.8						
DAWY	Dawson	71.91	340	*e*P	P	07 45 42.8	+2.4
	6.1nm,1.3s						
EGAK	Eagle	72.95	340	*e*P	P	07 45 49.0	+2.4
	4.4nm,1.3s						
PRP	Porcupine Dome	74.89	339	*e*P	P	07 46 00.1	+2.0
	14nm,1.6s						
ILAR	Eielson Array	74.99	338	P	P	07 46 00.5	+2.0
	2.4nm,0.8s,baz=137,slow=3.3,SNR=12						
ILAR				LR	LR	08 20 52.8	
	comp=Z,24nm,18.8s,baz=128,slow=37						
ILB	Eielson Array	74.99	338	*e*P	P	07 46 00.1	+1.6
	8.4nm,1.4s						
ESDC	Sonseca Array	86.97	51	P	P	07 47 03.9	+0.9
	0.2nm,0.3s,baz=254,slow=5.4,SNR=3.1						
TORD	Torodi Ar. Bea	92.36	77	LR	LR	08 25 28.3	
	comp=Z,40nm,21.9s,baz=315,slow=33						
NOA	NORSAR Array B	94.87	29	LR	LR	08 26 44.3	
	comp=Z,25nm,20.6s,baz=305,slow=33						
ARCES	ARCESS Array B	97.91	19	LR	LR	08 30 41.3	
	comp=Z,47nm,18.3s,baz=248,slow=35						
GERES	GERESS Array B	98.75	40	LR	LR	08 27 29.3	
	comp=Z,55nm,19.4s,baz=280,slow=32						
H11S2	WAKE ISLAND Hy	101.27	289	T	T	09 41 19.2	
	baz=86,slow=75,SNR=68						
H11S1	WAKE ISLAND Hy	101.27	289	T	T	09 41 29.0	
	baz=86,slow=75,SNR=38						
H11S3	WAKE ISLAND Hy	101.28	289	T	T	09 41 21.7	
	baz=86,slow=75,SNR=56						
KSH	Kashi	137.76	15	*e*PKP	PKiKP	07 53 44.9	+0.5
KSH				PKS	PKSdf	07 57 19.4	+0.7
LZH	Lanzhou	140.41	341	*e*PKP	PKPdf	07 53 44.1	-3.3
LZH				pPKP	sPKPdf	07 53 56.8	+5.5
LZH				sPKP		07 54 01.3	

NNC ***09*** *07:43:21.8±0.6, 42°.30N×72°.49E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=7.7km s-min=3.0km az=169.0*
IDC ***09*** *07:43:21.1±1.2, 42°.38N×72°.44E, h0^{km}, mb3.7/4, mb1 3.9/11, mb1mx3.6/52, mbtmp3.8/11, ML3.5/7, Error ellipse: s-maj=16.9km s-min=10.3km az=179.0*
KRNET ***09*** *07:43:21.8±0.1, 42°.33N×72°.46E, h18^{km}, mb4.2*
SOME ***09*** *07:43:22.9, 42°.38N×72°.47E, h20^{km}*
MOS ***09*** *07:43:23.3±1.5, 42°.66N×72°.35E, h17^{km}, mb4.4/4, Error ellipse: s-maj=9.9km s-min=7.8km az=87.6*
KNET ***09*** *07:43:24.5±0.6, 42°.36N×72°.71E, h8^{km}±3^{km}, ml3.6, Error ellipse: s-maj=5.0km s-min=3.3km az=127.0*
ISC 09 07:43:21.6±0.9, **42°.37N**±0°.02×**72°.47E**±0°.01, **h1**^{km}±6^{km}, **n147**, σ1^{s}99/236, **mb3.7**/11, **MS3.1**/3, **57C-41D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	0.68	56	P	Pg	07 43 35.4	+0.8
	399nm,0.3s						
MRKS				S	Sg	07 43 44.9	+1.6
	1µm,0.3s						
MRKS	Merke	0.68	56	⇓*i*P	Pg	07 43 35.4	+0.8
	baz=53						
MRKS				⇓*e*S	Sg	07 43 45.0	+1.6
	baz=53						
MRKS	Merke	0.68	56	⇓*i*P	Pg	07 43 35.4	+0.8
	99nm,0.1s						
MRKS				*e*S	Sg	07 43 45.0	+1.6
	950nm,0.3s						
ARK	Arkit	0.68	213	⇓*i*P	Pg	07 43 34.3	-0.4
	baz=13						
ARK				⇓*i*S	Sg	07 43 43.6	+0.1
	baz=13						
AML	Almayashu	0.94	104	⇑*i*P	Pg	07 43 39.5	-0.2
	baz=2.0						
AML				⇑*i*S	Sg	07 43 51.8	-0.1
	baz=2.0						
AML	Almayashu	0.94	104	⇓P	Pg	07 43 39.4	-0.4
	90nm,0.2s,SNR=7.2						
AML				⇓S	Sg	07 43 51.8	-0.1
	605nm,0.2s						
DZA	Taraz	0.99	302	P	Pg	07 43 40.5	-0.1
	1µm,0.4s						
DZA				S	Sg	07 43 54.0	+0.7
	3µm,0.3s						
DZA	Taraz	0.99	302	⇑*i*P	Pg	07 43 40.5	-0.1
	baz=4.0						
DZA				⇑*e*S	Sg	07 43 53.7	+0.3
	baz=4.0						
DZA	Taraz	0.99	302	⇑*i*P	Pg	07 43 40.5	-0.1
	1µm,0.2s						
DZA				*e*S	Sg	07 43 53.6	+0.3
	3µm,0.3s						
EKS2	Erkin-Say	1.01	73	⇓*i*P	Pg	07 43 41.2	+0.1
	baz=71						
EKS2				⇓*i*S	Sg	07 43 54.6	+0.4
	baz=71						
EKS2	Erkin-Say	1.01	73	⇓P	Pg	07 43 41.1	+0.1
	56nm,0.2s,SNR=68						
EKS2				⇑S	Sg	07 43 53.9	-0.3
	222nm,0.2s						
ARSB	Arslanbob	1.11	160	⇓*i*P	Pg	07 43 41.6	-1.4
	baz=59						
ARSB				⇓*i*S	Sg	07 43 56.4	-1.0
	baz=59						
ARLS	Aral	1.47	110	⇑*i*P	Pn	07 43 48.4	-1.1
	baz=8.0						
ARLS				⇑*i*S	Sn	07 44 08.3	-1.2
	baz=8.0						
AAK	Ala-Archa	1.52	79	Pg	Pn	07 43 50.3	+0.1
	36nm,0.3s,baz=199,slow=1.8,SNR=82						
AAK				LR	LR	07 44 03.4	
	comp=Z,22nm,20.3s,baz=293,slow=28						
AAK				Lg	Lg	07 44 09.3	
	45nm,0.3s,baz=207,slow=15,SNR=16						
AAK	Ala-Archa	1.52	79	P	Pn	07 43 50.0	-0.2
	44nm,0.4s						
AAK				S	Sb	07 44 10.7	-0.1
	131nm,0.5s						
AAK	Ala-Archa	1.52	79	PN	Pn	07 43 50.0	-0.2
AAK				S	Sb	07 44 10.6	-0.1
AAK				pmax	pmax		
	comp=Z,44nm,0.4s						
AAK				smax	smax		
	comp=N,131nm,0.5s						
AAK	Ala-Archa	1.52	79	⇑*i*P	Pn	07 43 50.0	-0.2
	baz=78						
AAK				⇑*i*S	Sn	07 44 10.3	-0.5
	baz=78						
AAK	Ala-Archa	1.52	79	⇓P	Pn	07 43 50.1	-0.2
	comp=N,156nm,0.4s,SNR=93						
AAK				⇑S	Sb	07 44 10.5	-0.2
	comp=N,228nm,0.3s						
UCH	Uchtor	1.53	95	⇓*i*P	Pn	07 43 49.8	-0.7
	baz=93						
UCH				⇓*i*S	Sn	07 44 10.1	-1.1
	baz=93						
UCH	Uchtor	1.53	95	⇓P	Pn	07 43 49.6	-0.9
	comp=N,54nm,0.2s,SNR=96						
UCH				⇓S	Sn	07 44 10.2	-1.1
	comp=N,633nm,0.3s						
KK31	Karatay Array	1.61	298	⇓P	Pn	07 43 51.6	+0.3
	comp=N,119nm,0.3s,baz=123,slow=15,SNR=2314						
KK31				⇓S	Sb	07 44 13.2	0.0
	comp=N,217nm,0.3s,baz=127,slow=28,SNR=7.8						
KK31	Karatay Array	1.61	298	PG	Pn	07 43 51.3	0.0
KK31				pmax	pmax		
	comp=Z,119nm,0.3s						
FRU1	Bishkek	1.66	74	⇑*i*P	Pb	07 43 52.8	-0.2
	baz=72						
FRU1				⇑*i*S	Sb	07 44 14.5	0.0
	baz=72						
USP	Ospenovka	1.75	58	⇑*i*P	Pb	07 43 54.3	-0.2
	baz=57						
USP				⇑*i*S	Sb	07 44 17.2	+0.3
	baz=57						
USP	Ospenovka	1.75	58	⇑P	Pb	07 43 54.1	-0.4
	comp=Z,408nm,0.3s,SNR=787						
USP				⇑S	Sb	07 44 17.4	+0.5
	comp=Z,2µm,0.5s						
CHMS	Chumysh	1.80	69	⇑*i*P	Pn	07 43 54.8	+0.9
	baz=68						
CHMS				⇑*i*S	Sb	07 44 18.6	+0.1
	baz=68						
CHMS	Chumysh	1.80	69	⇑P	Pn	07 43 54.7	+0.9
	comp=Z,53nm,0.2s,SNR=38						
CHMS				⇑S	Sb	07 44 18.6	+0.1
	comp=Z,674nm,0.4s						
IUG	Iuzhnay	1.82	264	P	Pb	07 43 55.8	0.0
	comp=Z,173nm,0.4s						
IUG				S	Sb	07 44 20.4	+1.3
	comp=Z,1µm,0.4s						
IUG	Iuzhnay	1.82	264	*e*P	Pb	07 43 55.8	0.0
	baz=65						
IUG				*e*S	Sb	07 44 19.8	+0.6
	baz=65						
IUG	Iuzhnay	1.82	264	*e*P	Pb	07 43 55.8	0.0
	comp=Z,173nm,0.4s						
IUG				*e*S	Sb	07 44 19.8	+0.6
	comp=Z,1µm,0.4s						
KBK	Karagaybulak	1.86	80	⇑*i*P	Pb	07 43 56.1	-0.4
	baz=79						
KBK				⇑*i*S	Sb	07 44 20.3	0.0
	baz=79						
KBK	Karagaybulak	1.86	80	⇓P	Pb	07 43 56.1	-0.4
	comp=Z,102nm,0.2s,SNR=88						
SGDS	Sogindy	1.92	55	P	Pb	07 43 57.2	-0.3
	comp=Z,404nm,0.3s						
SGDS				S	Sb	07 44 22.7	+0.6
	comp=Z,992nm,0.3s						
BRLS	Borolday	2.05	290	Pg	Pb	07 44 00.7	+1.1
	comp=Z,25nm,0.4s						
BRLS				Lg	Lg	07 44 27.5	
	comp=Z,173nm,0.4s						
BRLS	Borolday	2.05	290	*e*P	Pb	07 44 00.7	+1.1
	baz=91						
BRLS				*e*S	Sg	07 44 27.5	+0.1
	baz=91						
BRLS	Borolday	2.05	290	*e*P	Pb	07 44 00.7	+1.1
	comp=Z,25nm,0.4s						
BRLS				*e*S	Sg	07 44 27.5	+0.1
	comp=Z,173nm,0.4s						
KZA	Kyzart	2.09	97	⇑*i*P	Pn	07 43 59.3	+1.1
	baz=96						
KZA				⇑*i*S	Sb	07 44 26.1	-1.1
	baz=96						
KZA	Kyzart	2.09	97	⇓P	Pb	07 44 00.1	-0.5
	comp=Z,138nm,0.3s,SNR=187						
TKM2	Tokmak 2	2.38	76	⇑Pn	Pn	07 44 03.8	+1.9
	comp=Z,32nm,0.3s						
TKM2				⇑Lg	Lg	07 44 35.8	
	comp=Z,213nm,0.5s						
TKM2	Tokmak 2	2.38	76	*i* PN	Pn	07 44 03.8	+1.9
TKM2				pmax	pmax		
	comp=Z,32nm,0.3s						
TKM2	Tokmak 2	2.38	76	⇑*i*P	Pn	07 44 03.6	+1.7
	baz=75						
TKM2				⇑*i*S	Sn	07 44 32.7	+0.9
	baz=75						
TKM2	Tokmak 2	2.38	76	⇑P	Pb	07 44 04.0	-1.3
	comp=Z,88nm,0.3s,SNR=14						
BOOM	Boomskoye usch	2.58	86	⇑*e*P	Pn	07 44 05.8	+1.1
	baz=85						
BOOM				⇑*i*S	Sn	07 44 37.6	+0.9
	baz=85						
DGS	Degeres	2.58	69	*e*P	Pb	07 44 10.7	+1.8
	baz=68						
DGS				*e*S	Sg	07 44 44.6	-0.1
	baz=68						
DGS	Degeres	2.58	69	*e*P	Pb	07 44 10.7	+1.8
	comp=Z,28nm,0.5s						
DGS				*e*S	Sg	07 44 44.5	-0.1
	comp=Z,477nm,0.9s						
TAS	Tashkent	2.59	247	⇑*e*P	Pn	07 44 06.4	+1.7
	baz=48						
TAS				⇑*e*S	Sn	07 44 38.1	+1.2
	baz=48						
BTK	Batken	2.62	209	⇑*i*P	Pn	07 44 06.3	+1.1
	baz=9.0						
BTK				⇑*e*S	Sn	07 44 38.1	+0.4
	baz=9.0						
KST	Kastek	2.67	74	Pg	Pb	07 44 10.8	+0.6
	comp=Z,110nm,0.3s						
KST				Lg	Lg	07 44 44.8	
	comp=Z,622nm,0.5s						
KST	Kastek	2.67	74	*e*P	Pb	07 44 10.8	+0.6
	baz=73						
KST				*e*S	Sb	07 44 44.8	+1.3
	baz=73						
KST	Kastek	2.67	74	*e*P	Pb	07 44 10.8	+0.6
	comp=Z,110nm,0.3s						
KST				*e*S	Sb	07 44 44.8	+1.3
	comp=Z,622nm,0.5s						
ULHL	Ulahol	2.80	91	⇓*i*P	Pn	07 44 09.1	+1.3
	baz=90						
ULHL				⇓*i*S	Sn	07 44 43.3	+0.9
	baz=90						
ULHL	Ulahol	2.80	91	⇑P	Pb	07 44 11.1	-1.5
	comp=Z,66nm,0.4s,SNR=98						
BTLS	Baital	2.91	23	Pg	Pb	07 44 13.5	-0.7
	comp=Z,35nm,0.3s						
BTLS				Lg	Lg	07 44 48.7	
	comp=Z,75nm,0.5s						
BTLS	Baital	2.91	23	*e*P	Pb	07 44 13.1	-1.2
	baz=22						
BTLS				*e*S	Sb	07 44 48.3	-2.0
	baz=22						
BTLS	Baital	2.91	23	*e*P	Pb	07 44 13.1	-1.2
	comp=Z,35nm,0.3s						
BTLS				*e*S	Sb	07 44 48.3	-2.0
	comp=Z,177nm,0.5s						
DRK	Karamyk	2.93	190	⇓*i*P	Pn	07 44 10.5	+0.9
	baz=90						
DRK				⇓*i*S	Sn	07 44 45.9	+0.3
	baz=90						
MTBS	Maitube	3.02	74	Pg	Pb	07 44 17.1	+0.9
	comp=Z,49nm,0.4s						
MTBS				Lg	Lg	07 44 55.6	
	comp=Z,177nm,0.5s						
MTBS	Maitube	3.02	74	*e*P	Pb	07 44 17.1	+0.9
	baz=73						
MTBS				⇓*i*S	Sb	07 44 55.6	+2.0
	baz=73						
MTBS	Maitube	3.02	74	*e*P	Pb	07 44 17.1	+0.9
	comp=Z,49nm,0.4s						
MTBS				⇓*i*S	Sb	07 44 55.6	+2.0
	comp=Z,177nm,0.5s						
IZV	Izvestkoviy	3.13	76	Pg	Pb	07 44 19.2	+1.0
	comp=Z,50nm,0.5s						
IZV				Lg	Lg	07 44 59.8	
	comp=Z,386nm,0.6s						
IZV	Izvestkoviy	3.13	76	*e*P	Pb	07 44 19.2	+1.0
	baz=76						
IZV				*e*S	Sb	07 44 59.9	+3.0
	baz=76						
IZV	Izvestkoviy	3.13	76	*e*P	Pb	07 44 19.2	+1.0
	comp=Z,50nm,0.5s						
IZV				*e*S	Sb	07 44 59.8	+3.0
	comp=Z,386nm,0.6s						
KUU	Kurty	3.22	60	Pg	Pb	07 44 20.6	+1.0
	comp=Z,36nm,0.4s						
KUU				Lg	Lg	07 45 01.6	
	comp=Z,417nm,0.5s						
KUU	Kurty	3.22	60	*e*P	Pb	07 44 20.6	+1.0
	baz=60						
KUU				*e*S	Sb	07 45 01.6	+2.3
	baz=60						
KUU	Kurty	3.22	60	*e*P	Pb	07 44 20.6	+1.0
	comp=Z,36nm,0.4s						
KUU				*e*S	Sb	07 45 01.6	+2.3
	comp=Z,417nm,0.5s						
KTBS	Karatobe	3.37	65	Pg	Pb	07 44 23.1	+0.9
	comp=Z,38nm,0.4s						
KTBS				Lg	Lg	07 45 06.9	
	comp=Z,224nm,0.6s						
KTBS	Karatobe	3.37	65	*e*P	Pb	07 44 23.1	+0.9
	baz=63						
KTBS				*e*S	Sb	07 45 06.9	+3.2
	baz=63						
KTBS	Karatobe	3.37	65	*e*P	Pb	07 44 23.1	+0.9
	comp=Z,38nm,0.4s						
KTBS				*e*S	Sb	07 45 06.8	+3.2
	comp=Z,224nm,0.6s						
TNSS	Tian-Shan	3.37	77	Pg	Pb	07 44 24.1	+1.7
	comp=Z,38nm,0.3s						
TNSS				Lg	Lg	07 45 07.5	
	comp=Z,227nm,0.5s						
TNSS	Tian-Shan	3.37	77	*e*P	Pb	07 44 24.1	+1.7
	baz=76						
TNSS				*e*S	Sg	07 45 07.6	-2.3
	baz=76						
TNSS	Tian-Shan	3.37	77	*e*P	Pb	07 44 24.1	+1.7
	comp=Z,38nm,0.3s						
TNSS				*e*S	Sg	07 45 07.5	-2.3
	comp=Z,227nm,0.5s						
AAA	Alma-Ata	3.38	74	Pg	Pb	07 44 24.2	+1.8
	comp=Z,40nm,0.2s						
AAA				Lg	Lg	07 45 07.8	
	comp=Z,215nm,0.5s						
AAA	Alma-Ata	3.38	74	*e*P	Pb	07 44 24.2	+1.8
	baz=73						
AAA				*e*S	Sg	07 45 07.8	-2.5
	baz=73						
AAA	Alma-Ata	3.38	74	*e*P	Pb	07 44 24.2	+1.8
	comp=Z,40nm,0.2s						
AAA				*e*S	Sg	07 45 07.8	-2.5
	comp=Z,215nm,0.5s						
KNDC	Almaty	3.42	74	⇓Pg	Pb	07 44 23.7	+0.7
	comp=Z,24nm,0.3s						
KNDC				⇑Lg	Lg	07 45 08.8	
	comp=Z,223nm,0.7s						
KDJ	Kajisay	3.51	92	⇓*e*P	Pn	07 44 18.7	+1.2
	baz=92						
KDJ				⇓*i*S	Sn	07 44 59.7	0.0
	baz=92						
KOTS	Kotyrbulak	3.53	74	Pg	Pb	07 44 26.5	+1.6
	comp=Z,32nm,0.5s						
KOTS				Lg	Lg	07 45 12.5	
	comp=Z,148nm,0.5s						
KOTS	Kotyrbulak	3.53	74	*e*P	Pb	07 44 26.5	+1.6
	baz=74						
KOTS				*e*S	Sg	07 45 12.5	-2.4
	baz=74						
KOTS	Kotyrbulak	3.53	74	*e*P	Pb	07 44 26.5	+1.6
	comp=Z,32nm,0.5s						
KOTS				*e*S	Sg	07 45 12.5	-2.4
	comp=Z,148nm,0.5s						
CHKK	Chushkaly	3.63	64	Pg	Pb	07 44 28.3	+1.7
	comp=Z,28nm,0.6s						
CHKK				Lg	Lg	07 45 15.4	
	comp=Z,274nm,0.3s						
CHKK	Chushkaly	3.63	64	*e*P	Pb	07 44 28.3	+1.7
	baz=64						
CHKK				*e*S	Sg	07 45 15.4	-2.8
	baz=64						
CHKK	Chushkaly	3.63	64	*e*P	Pb	07 44 28.3	+1.7
	comp=Z,28nm,0.6s						
CHKK				*e*S	Sg	07 45 15.4	-2.8
	comp=Z,274nm,0.3s						
ARXS	Arharly	4.33	63	Pg	Pb	07 44 40.3	+1.8
	comp=Z,35nm,0.6s						
ARXS				Lg	Lg	07 45 36.2	
	comp=Z,197nm,0.6s						
ARXS	Arharly	4.33	63	*e*P	Pb	07 44 40.3	+1.8
	comp=Z,35nm,0.6s						
ARXS				*e*S	Sb	07 45 36.1	+4.9
	comp=Z,197nm,0.6s						
KURS	Kuram	4.34	73	Pg	Pb	07 44 40.9	+2.3
	comp=Z,15nm,0.6s						
KURS				Lg	Lg	07 45 37.5	
	comp=Z,57nm,0.6s						
KURS	Kuram	4.34	73	*e*P	Pb	07 44 41.0	+2.3
	baz=73						
KURS				*e*S	Sg	07 45 37.5	-3.4
	baz=73						
KURS	Kuram	4.34	73	*e*P	Pb	07 44 41.0	+2.3
	comp=Z,15nm,0.6s						
KURS				*e*S	Sg	07 45 37.5	-3.4
	comp=Z,57nm,0.6s						
SATY	Saty	4.43	79	Pg	Pb	07 44 43.5	+3.2
	comp=Z,29nm,0.3s						
SATY				Lg	Lg	07 45 42.2	
	comp=Z,92nm,0.5s						
SATY	Saty	4.43	79	*e*P	Pb	07 44 43.5	+3.2
	comp=Z,29nm,0.3s						
SATY				*e*S	Sg	07 45 41.1	-2.9
	comp=Z,92nm,0.5s						
MNBS	Baschi	4.66	67	Pg	Pg	07 44 49.0	-2.0
	comp=Z,15nm,0.6s						
MNBS				Lg	Lg	07 45 50.1	
	comp=Z,183nm,0.3s						
MNBS	Baschi	4.66	67	*e*P	Pg	07 44 49.0	-2.0
	baz=68						
MNBS				*e*S	Sg	07 45 50.2	-1.2
	baz=68						
MNBS	Baschi	4.66	67	*e*P	Pg	07 44 49.0	-2.0
	comp=Z,15nm,0.6s						
MNBS				*e*S	Sg	07 45 50.1	-1.2
	comp=Z,183nm,0.3s						
KPKS	Kokpek	4.70	74	*e*P	Pb	07 44 47.8	+2.9
	baz=74						
KPKS				*e*S	Sg	07 45 48.2	-4.3
	baz=74						
KPKS	Kokpek	4.70	74	*e*P	Pb	07 44 47.8	+2.9
	comp=Z,53nm,0.5s						
KPKS				*e*S	Sg	07 45 48.1	-4.4
	comp=Z,130nm,0.4s						
UZB	Uzynbulak	4.89	79	Pg	Pb	07 44 52.1	+3.9
	comp=Z,17nm,0.5s						
UZB				Lg	Lg	07 45 55.5	
	comp=Z,61nm,0.5s						
UZB	Uzynbulak	4.89	79	*e*P	Pb	07 44 52.1	+3.9
	baz=78						
UZB				*e*S	Sg	07 45 55.6	-3.1
	baz=78						
UZB	Uzynbulak	4.89	79	*e*P	Pb	07 44 52.1	+3.9
	comp=Z,17nm,0.5s						
UZB				*e*S	Sg	07 45 55.5	-3.1
	comp=Z,61nm,0.5s						
TDK	Taldyqorghan	5.05	57	Pg	Pb	07 44 54.8	+4.1
	comp=Z,100nm,0.3s						

TDK				Lg	Lg	07 46 00.3	
	comp=Z,257nm,0.6s						
TDK	Taldyqorghan	5.05	57	*e*P	Pb	07 44 54.8	+4.1
	comp=Z,100nm,0.3s						
TDK				*e*S	Sg	07 46 00.3	-3.4
	comp=Z,257nm,0.6s						
PDGK	Podgornoye	5.25	77	Pg	Pb	07 44 58.0	+3.7
	comp=Z,7.7nm,0.4s						
PDGK				Lg	Lg	07 46 05.7	
	comp=Z,33nm,0.7s						
PDGK	Podgornoye	5.25	77	⇑Pn	Pn	07 44 44.0	+2.6
	comp=Z,4.6nm,0.8s						
PDGK				⇓Pg	Pb	07 44 58.1	+3.7
	comp=Z,9.6nm,0.5s						
PDGK				⇑Lg	Lg	07 46 06.9	
	comp=Z,34nm,0.8s						
PDGK	Podgornoye	5.25	77	PN	Pn	07 44 44.2	+2.8
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DJR	Jarkent	5.69	67	Pg	Pg	07 45 08.1	-2.5
	comp=Z,16nm,0.4s						
DJR				Lg	Lg	07 46 21.6	
	comp=Z,32nm,0.5s						
DJR	Jarkent	5.69	67	*e*P	Pg	07 45 08.1	-2.5
	comp=Z,16nm,0.4s						
DJR				*e*S	Sg	07 46 23.1	-1.2
	comp=Z,32nm,0.5s						
KAPS	Kapalarasan	5.77	57	Pg	Pg	07 45 10.3	-1.9
	comp=Z,12nm,0.7s						
KAPS				Lg	Lg	07 46 25.4	
	comp=Z,45nm,0.7s						
KAPS	Kapalarasan	5.77	57	*e*P	Pg	07 45 10.3	-1.9
	comp=Z,12nm,0.7s						
KAPS				*e*S	Sg	07 46 26.6	-0.4
	comp=Z,45nm,0.7s						
OTUK	Ortayu	5.88	359	⇑Pn	Pn	07 44 50.3	+0.5
	comp=Z,5.1nm,0.6s						
OTUK				⇓Lg	Lg	07 46 29.8	
	comp=Z,52nm,0.6s						
OTUK	Ortayu	5.88	359	PN	Pn	07 44 50.3	+0.5
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KTMS	Ketmen	5.89	77	Pg	Pg	07 45 12.7	-1.8
	comp=Z,7.8nm,0.4s						
KTMS				Lg	Lg	07 46 30.8	
	comp=Z,38nm,0.5s						
KTMS	Ketmen	5.89	77	*e*P	Pg	07 45 12.7	-1.8
	baz=76						
KTMS				*e*S	Sg	07 46 30.8	0.0
	baz=76						
KTMS	Ketmen	5.89	77	*e*P	Pg	07 45 12.7	-1.8
	comp=Z,7.8nm,0.4s						
KTMS				*e*S	Sg	07 46 30.8	0.0
	comp=Z,38nm,0.5s						
MAKZ	Makanchi	8.11	54	⇑Pn	Pn	07 45 21.7	+1.2
	comp=Z,1.4nm,0.5s						
MAKZ				⇓Sn	Sn	07 46 57.4	+4.6
	comp=Z,3.7nm,0.8s						
MAKZ				⇑Lg	Lg	07 47 41.2	
	comp=Z,26nm,1.3s						
MK31	Makanchi Array	8.29	54	⇑Pn	Pn	07 45 24.5	+1.5
	comp=Z,0.7nm,0.3s,baz=233,slow=14,SNR=40						
MK31				⇑Sn	Sn	07 47 01.9	+4.7
	comp=Z,1.8nm,0.5s,baz=238,slow=23,SNR=4.4						
MK31				⇑Lg	Lg	07 47 46.8	
	comp=Z,5.4nm,0.7s,baz=229,slow=25,SNR=3.6						
MK31	Makanchi Array	8.29	54	P	Pn	07 45 24.3	+1.3
MK31						07 47 03.9	
MK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31				smax	smax		
	comp=N,2.0nm,0.5s						
MK31				smax	smax		
	comp=N,5.0nm,0.4s						
MKAR	Makanchi Array	8.29	54	Pn	Pn	07 45 24.3	+1.3
	comp=N,1.3nm,0.3s,baz=235,slow=14,SNR=36						
MKAR				Sn	Sb	07 47 14.6	-10
	comp=N,1.3nm,0.3s,baz=239,slow=27,SNR=5.9						
MKAR				Lg	Lg	07 47 39.8	
	comp=N,1.0nm,0.3s,baz=236,slow=27,SNR=5.5						
CEP	Cherat	8.54	183	P	Pn	07 45 29.2	+2.6
CEP	Cherat	8.54	183	P	Pn	07 45 30.2	+3.6
CHCP	Chirah Chowk	8.72	176	P	Pn	07 45 30.6	+1.7
KURBB	Kurchatov Arra	9.25	25	Pn	Pn	07 45 35.0	-1.1
	comp=N,0.3nm,0.3s,baz=215,slow=12,SNR=11						
KURBB				Sn	Sn	07 47 17.6	-3.1
	comp=N,0.5nm,0.3s,baz=213,slow=16,SNR=7.9						
KURBB				Lg	Lg	07 48 12.6	
	comp=N,0.5nm,0.3s,baz=218,slow=30,SNR=6.3						
KURBB	Kurchatov Arra	9.25	25	⇓Pn	Pn	07 45 39.0	+2.9
	comp=N,1.1nm,0.2s						
KURBB				⇑Sn	Sn	07 47 21.8	+1.1
	comp=N,4.8nm,0.4s						
KURBB				⇑Lg	Lg	07 48 19.4	
	comp=N,22nm,0.7s						
KURK	Kurchatov	9.36	25	⇓Pn	Pn	07 45 36.9	-0.7
	comp=N,0.9nm,0.5s						
KURK				⇓Sn	Sn	07 47 23.9	+0.5
	comp=N,2.8nm,0.5s						
KURK				⇑Lg	Lg	07 48 22.0	
	comp=N,39nm,0.9s						
KURK	Kurchatov	9.36	25	*i* P	Pn	07 45 36.4	-1.2
BVAR	Borovoye Array	10.75	353	Pn	Pn	07 45 54.7	-2.0
	comp=N,1.5nm,0.3s,baz=147,slow=11,SNR=21						
BVAR				Sn	Sn	07 47 48.4	-9.2
	comp=N,0.6nm,0.3s,baz=170,slow=20,SNR=2.9						
BVAR				Lg	Lg	07 49 01.9	
	comp=N,1.1nm,0.3s,baz=164,slow=27,SNR=4.2						
BRVK	Borovoye	10.79	353	⇓Pn	Pn	07 45 55.0	-2.2
	comp=N,1.8nm,0.4s						
BRVK				⇑Sn	Sn	07 47 58.5	-0.1
	comp=N,3.5nm,0.5s						
BRVK	Borovoye	10.79	353	*i* P	Pn	07 45 56.1	-1.1
AB31	Akbulak array	11.12	313	⇑P	Pn	07 45 59.9	-1.7
	comp=N,9.8nm,0.4s,baz=120,slow=14,SNR=330						
AB31				⇓S	Sn	07 48 06.7	+0.2
	comp=N,2.7nm,0.6s,baz=118,slow=24,SNR=7.0						
AB31	Akbulak array	11.12	313	*i* P	Pn	07 45 59.9	-1.7
AB31				pmax	pmax		
	comp=Z,10.0nm,0.4s						
GEYT	Alibeck	11.84	253	Pn	Pn	07 46 10.0	-1.6
	comp=Z,0.5nm,0.3s,baz=88,slow=15,SNR=2.9						
AKTO	Aktyubinsk	12.81	314	Pn	Pn	07 46 22.6	-2.1
	comp=Z,0.7nm,0.3s,baz=113,slow=12,SNR=13						
AKTO	Aktyubinsk	12.81	314	⇓P	Pn	07 46 22.5	-2.3
	comp=Z,3.5nm,0.6s						
AKTO				⇓S	Sn	07 48 49.5	+1.6
	comp=Z,3.1nm,0.7s						
ZALV	Zalesovo Beam	14.19	31	Pn	Pn	07 46 43.9	+0.2
	comp=Z,0.9nm,0.3s,baz=228,slow=15,SNR=6.5						
ZALV				Sn	Sn	07 49 12.2	-9.5
	comp=Z,0.3nm,0.3s,baz=234,slow=26,SNR=2.6						
ZALV				Lg	Lg	07 50 51.3	
	comp=Z,0.1nm,0.3s,baz=215,slow=25,SNR=2.1						
ARU	Arti	16.68	332	Pn	Pn	07 47 11.7	-4.7
	comp=Z,0.0nm,0.3s,baz=166,slow=10,SNR=6.6						
ARU				Lg	Lg	07 52 14.6	
	baz=347,slow=18,SNR=3.5						
ARU	Arti	16.68	332*c*	*i*P	Pn	07 47 11.4	-5.0
ARU				S	Sn	07 50 12.9	-9.2
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBZ	Khabaz	21.60	284	P	P	07 48 18.1	+5.3
	comp=Z,1.0nm,0.5s,baz=73,slow=11,SNR=3.5						
KIV	Kislovodsk	21.73	284	*e*P	P	07 48 14.5	+0.2
KIV				pmax	pmax		
	comp=Z,17nm,0.9s						
KIV				MLR	MLR		
	comp=Z,50nm,14.0s						
ULN	Ulaanbaatar	24.88	65	⇑*i*P	P	07 48 45.6	-0.3
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
OBN	Obninsk	26.56	311	⇓*e*P	P	07 48 59.5	-1.3
OBN				*e*		07 49 37.7	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,46nm,16.0s						
HHC	Hu-ho-hao-te	29.10	80	P	P	07 49 24.9	+1.0
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,4.7s						
BRTR	Keskin Array B	29.23	278	P	P	07 49 26.2	+1.1
	comp=Z,0.3nm,0.3s,baz=89,slow=6.3,SNR=3.2						
WHN	Wuhan	35.36	96	*e*P	P	07 50 18.5	-0.2
HFS	Hagfors	39.32	318	P	P	07 50 51.0	-0.9
	comp=Z,1.2nm,0.6s,baz=94,slow=12,SNR=4.1						
TIXI	Tiksi	39.94	24	⇑*i*P	P	07 50 57.2	+0.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MSHR	Mys Shultsa	42.52	69	⇑*i*P	P	07 51 16.0	-2.5
BILL	Bilibino	52.87	28	⇑*e*P	P	07 52 37.9	-0.6
BILL				*e*		07 54 36.4	
BILL				*e*S	S	08 00 13.1	+5.2
BILL				*e*SS	SS	08 03 44.2	-1.7
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,42nm,16.0s						
ILAR	Eielson Array	68.83	17	P	P	07 54 26.1	-1.2
	comp=Z,0.3nm,0.6s,baz=320,slow=5.8,SNR=5.2						
YKA	Yellowknife Ar	75.33	3	P	P	07 55 05.4	-0.7
	comp=Z,0.5nm,0.5s,baz=352,slow=6.0,SNR=6.0						
ANMO	Albuquerque	103.05	359	⇑*i*P	Pdif	07 57 20.3	-2.1
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.3s						

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*ROM **09** 08:01:59.6±0.1, 44°.167N±0°.006×10°.168E±0°.006, h6^{km}, ML2.9/30, Error ellipse: s-maj=0.7km s-min=0.1km az=196.0*

*ISCJB **09** 08:01:60.0±0.2, 44°.09N±0°.02×10°.12E±0°.02, h8^{km}±1^{km}, Error ellipse: s-maj=2.8km s-min=1.9km az=179.7*

*GEN **09** 08:02:00.1, 44°.16N×10°.17E, h3^{km}, Ml2.8*

*STR **09** 08:02:00.5±1.2, 44˚N±3˚×1˚0E±˚, h3^{km}±10^{km}, mb3.7/1, MLv3.4/7*

*LDG **09** 08:02:01.3±0.1, 44°.07N×10°.20E, h2^{km}, Ml3.2/25, Error ellipse: s-maj=2.5km s-min=1.5km az=3.0*

*PRU **09** 08:02:03.1±0.0, 44°.07N×10°.27E, h10^{km}*

ISC 09 08:02:00.1±0.8, **44°.09N**±0°.02×**10°.11E**±0°.02, **h7**^{km}±4^{km}, **n107**, σ**1**^{s}**58**/162, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T0911	Castelpoggio (	0.04	306	P	Pg	08 02 02.4	+0.8
T0911				S	Sg	08 02 04.2	+1.6
T0911				AML	AML		
	comp=E,35050µm,0.7s						
T0911				AML	AML		
	comp=N,35900µm,1.1s						
T0911				AML	AML		
	comp=E,35200µm,0.7s						
T0911				AML	AML		
	comp=N,35750µm,1.1s						
T0911				AML	AML		
	comp=E,35050µm,0.7s						
T0911				AML	AML		
	comp=N,35900µm,1.1s						
T0911				AML	AML		
	comp=E,35200µm,0.7s						
T0911				AML	AML		
	comp=N,35700µm,1.1s						
EQUI	Equi	0.08	21	P	Pg	08 02 01.0	-1.1
EQUI				S	Sg	08 02 01.2	-2.3
EQUI	Equi	0.08	21	*i* P	Pg	08 02 01.0	-1.1
EQUI				S	Sg	08 02 01.4	-2.1
FOSD	Fosdinovo	0.09	281	P	Pg	08 02 03.3	+1.2
FOSD				S	Sg	08 02 05.7	+2.2
T0912	Minucciano (LU	0.10	42	P	Pg	08 02 01.4	-1.1
T0912				S	Sg	08 02 02.2	-1.9
FIVI	Fivizzano	0.15	4	*i* P	Pg	08 02 02.0	-1.2
FIVI				S	Sg	08 02 03.3	-2.0
FIVI				AML	AML		
	comp=E,49300µm,0.3s						
FIVI				AML	AML		
	comp=N,51800µm,0.7s						
PLMA	Palmaria, Port	0.19	258	P	Pg	08 02 05.5	+1.5
PLMA				S	Sg	08 02 09.1	+2.5
PLMA				AML	AML		
	comp=E,4715µm,0.4s						
PLMA				AML	AML		
	comp=N,7535µm,1.6s						
PLMA				AML	AML		
	comp=E,4715µm,0.4s						
PLMA				AML	AML		
	comp=N,7535µm,1.6s						
VLC	Villacollemand	0.21	71	P	Pg	08 02 03.6	-0.6
VLC				S	Sg	08 02 06.4	-0.7
VLC				AML	AML		
	comp=E,6025µm,0.7s						
VLC				AML	AML		
	comp=N,4025µm,0.9s						
VLC				AML	AML		
	comp=E,6000µm,0.7s						
VLC				AML	AML		
	comp=N,4065µm,0.9s						
VLC				AML	AML		
	comp=E,6025µm,0.7s						
VLC				AML	AML		
	comp=N,4025µm,0.9s						
VLC				AML	AML		
	comp=E,6000µm,0.7s						
VLC				AML	AML		
	comp=N,4065µm,0.9s						
VLC				AML	AML		
	comp=E,6025µm,0.7s						
VLC				AML	AML		
	comp=N,4025µm,0.9s						
VLC				AML	AML		
	comp=E,6000µm,0.7s						
VLC				AML	AML		
	comp=N,4065µm,0.9s						
VLC				AML	AML		
	comp=N,4025µm,0.9s						
VLC				AML	AML		
	comp=N,4065µm,0.9s						
VLC				AML	AML		
	comp=E,6025µm,0.7s						
VLC				AML	AML		
	comp=E,6000µm,0.7s						
VLC				AML	AML		
	comp=N,4065µm,0.9s						
VLC				AML	AML		
	comp=N,4025µm,0.9s						
VLC				AML	AML		
	comp=E,6025µm,0.7s						
VLC				AML	AML		
	comp=E,6000µm,0.7s						
CARD	Cardoso	0.27	104	P	Pg	08 02 05.7	+0.2
CARD				S	Sg	08 02 09.3	+0.2
CARD	Cardoso	0.27	104	P	Pg	08 02 05.7	+0.2
CARD				S	Sg	08 02 09.3	+0.2
CARD				AML	AML		
	comp=E,5035µm,0.7s						
CARD				AML	AML		
	comp=N,7215µm,0.7s						
CARD				AML	AML		
	comp=E,5035µm,0.7s						
CARD				AML	AML		
	comp=N,7215µm,0.7s						
CARD				AML	AML		
	comp=E,5035µm,0.7s						
CARD				AML	AML		
	comp=N,7220µm,0.7s						
CARD				AML	AML		
	comp=N,7220µm,0.7s						
CARD				AML	AML		
	comp=E,5035µm,0.7s						
CARD				AML	AML		
	comp=N,7220µm,0.7s						
CARD				AML	AML		
	comp=E,5035µm,0.7s						
MAIM	Mastiano	0.33	123	P	Pb	08 02 07.0	-1.1
MAIM				S	Sb	08 02 12.0	-1.7
MAIM	Mastiano	0.33	123	P	Pb	08 02 07.1	-1.1
MAIM				S	Sb	08 02 11.9	-1.7
MAIM				AML	AML		
	comp=E,6805µm,0.3s						
MAIM				AML	AML		
	comp=N,4910µm,0.6s						
MAIM				AML	AML		
	comp=E,6805µm,0.3s						
MAIM				AML	AML		
	comp=N,4910µm,0.6s						
MAIM				AML	AML		
	comp=E,6805µm,0.3s						
MAIM				AML	AML		
	comp=N,4910µm,0.6s						
MAIM				AML	AML		
	comp=E,6805µm,0.3s						
MAIM				AML	AML		
	comp=N,4910µm,0.6s						
MAIM				AML	AML		
	comp=E,6805µm,0.3s						
MAIM				AML	AML		
	comp=N,4910µm,0.6s						
BDI	Bagni Di Lucca	0.35	94	P	Pg	08 02 06.6	-0.3
BDI				S	Sg	08 02 11.5	0.0
BDI				AML	AML		
	comp=E,3175µm,0.5s						
BDI				AML	AML		
	comp=N,1910µm,0.7s						
BDI				AML	AML		
	comp=E,3375µm,0.4s						
BDI				AML	AML		
	comp=N,2220µm,0.5s						
BDI				AML	AML		
	comp=E,3175µm,0.5s						
BDI				AML	AML		
	comp=N,1910µm,0.7s						
BDI				AML	AML		
	comp=E,3375µm,0.4s						
BDI				AML	AML		
	comp=N,2220µm,0.5s						
BDI				AML	AML		
	comp=E,3175µm,0.5s						
BDI				AML	AML		
	comp=N,1910µm,0.7s						
BDI				AML	AML		
	comp=N,2220µm,0.5s						
BDI				AML	AML		
	comp=E,3375µm,0.4s						
BDI				AML	AML		
	comp=E,3175µm,0.5s						
BDI				AML	AML		
	comp=N,1910µm,0.7s						
BDI				AML	AML		
	comp=N,2220µm,0.5s						
BDI				AML	AML		
	comp=E,3375µm,0.4s						
GRAM	Graiana	0.40	355	P	Pg	08 02 07.0	-0.9
GRAM				S	Sg	08 02 11.8	-1.5
GRAM	Graiana	0.40	355	*e*P	Pg	08 02 07.0	-0.9
GRAM				S	Sg	08 02 12.1	-1.1
GRAM				AML	AML		
	comp=E,8820µm,0.8s						
GRAM				AML	AML		
	comp=N,9355µm,0.3s						
GRAM				AML	AML		
	comp=E,8820µm,0.8s						
GRAM				AML	AML		
	comp=N,9355µm,0.3s						
GRAM				AML	AML		
	comp=E,8820µm,0.8s						
GRAM				AML	AML		
	comp=N,9355µm,0.3s						
GRAM				AML	AML		
	comp=E,8820µm,0.8s						
GRAM				AML	AML		
	comp=N,9355µm,0.3s						
GRAM				AML	AML		
	comp=E,8820µm,0.8s						
GRAM				AML	AML		
	comp=N,9355µm,0.3s						
POPM	Popiglio	0.47	95	P	Pg	08 02 08.7	-0.4
POPM				S	Sg	08 02 15.3	+0.2
POPM	Popiglio	0.47	95	P	Pg	08 02 08.7	-0.4
POPM				S	Sg	08 02 15.4	+0.2
POPM				AML	AML		
	comp=E,2285µm,0.4s						
POPM				AML	AML		
	comp=N,3270µm,0.2s						
POPM				AML	AML		
	comp=E,2285µm,0.4s						
POPM				AML	AML		
	comp=N,3270µm,0.2s						
POPM				AML	AML		
	comp=E,2285µm,0.4s						
POPM				AML	AML		
	comp=N,3270µm,0.2s						
POPM				AML	AML		
	comp=E,2285µm,0.4s						
POPM				AML	AML		
	comp=N,3270µm,0.2s						
MSSA	Maissana	0.48	298	P	Pg	08 02 09.6	+0.2
MSSA				AML	AML		
	comp=E,1560µm,1.5s						
MSSA				AML	AML		
	comp=N,1325µm,0.8s						
MSSA				AML	AML		
	comp=E,1560µm,1.5s						
MSSA				AML	AML		
	comp=N,1325µm,0.8s						
MSSA				AML	AML		
	comp=E,1560µm,1.5s						
MSSA				AML	AML		
	comp=N,1325µm,0.8s						
MSSA				AML	AML		
	comp=N,1325µm,0.8s						
MSSA				AML	AML		
	comp=E,1560µm,1.5s						
MSSA				AML	AML		
	comp=N,1325µm,0.8s						
MSSA				AML	AML		
	comp=E,1560µm,1.5s						
MTCR	Monte La Croce	0.64	95	P	Pg	08 02 12.1	-0.3
MTCR				S	Sb	08 02 21.6	-1.3
MTCR				AML	AML		
	comp=E,1650µm,0.5s						
MTCR				AML	AML		
	comp=N,2870µm,0.3s						
MTCR				AML	AML		
	comp=E,1650µm,0.5s						
MTCR				AML	AML		
	comp=N,2870µm,0.3s						
MTCR				AML	AML		
	comp=E,1650µm,0.5s						
MTCR				AML	AML		
	comp=N,2870µm,0.3s						
MTCR				AML	AML		
	comp=E,1650µm,0.5s						
MTCR				AML	AML		
	comp=N,2870µm,0.3s						
ZCCA	Zocca	0.67	67	P	Pg	08 02 13.4	+0.4
ZCCA				AML	AML		
	comp=E,950µm,1.3s						
ZCCA				AML	AML		
	comp=N,1355µm,0.4s						
ZCCA				AML	AML		
	comp=E,935µm,1.3s						
ZCCA				AML	AML		
	comp=N,1365µm,0.5s						
ZCCA				AML	AML		
	comp=E,949µm,1.3s						
ZCCA				AML	AML		
	comp=N,1350µm,0.5s						
ZCCA				AML	AML		
	comp=E,935µm,1.3s						
ZCCA				AML	AML		
	comp=N,1365µm,0.5s						
ZCCA				AML	AML		
	comp=E,949µm,1.3s						
ZCCA				AML	AML		
	comp=E,935µm,1.3s						
ZCCA				AML	AML		
	comp=N,1350µm,0.5s						
ZCCA				AML	AML		
	comp=N,1365µm,0.5s						
ZCCA				AML	AML		
	comp=E,935µm,1.3s						
ZCCA				AML	AML		
	comp=E,949µm,1.3s						
ZCCA				AML	AML		
	comp=N,1350µm,0.5s						
ZCCA				AML	AML		
	comp=N,1365µm,0.5s						
GROG	Isola di Gorgo	0.68	194	P	Pb	08 02 14.9	+0.6
GROG				AML	AML		
	comp=E,2175µm,0.3s						
GROG				AML	AML		
	comp=N,1680µm,0.5s						
GROG				AML	AML		
	comp=E,2175µm,0.3s						
GROG				AML	AML		
	comp=N,1680µm,0.5s						
GROG				AML	AML		
	comp=E,2175µm,0.3s						
GROG				AML	AML		
	comp=N,1680µm,0.5s						

GROG				AML	AML		
	comp=E,2175µm,0.3s						
GROG				AML	AML		
	comp=N,1680µm,0.5s						
CRMI	**Carmignano**	**0.69**	**116**	P	**Pb**	**08 02 14.1**	**-0.3**
CRMI				AML	AML		
	comp=E,528µm,0.5s						
CRMI				AML	AML		
	comp=N,541µm,1.2s						
CRMI				AML	AML		
	comp=E,528µm,0.5s						
CRMI				AML	AML		
	comp=N,541µm,1.2s						
CRMI				AML	AML		
	comp=N,541µm,1.2s						
CRMI				AML	AML		
	comp=E,528µm,0.5s						
CRMI				AML	AML		
	comp=N,541µm,1.2s						
CRMI				AML	AML		
	comp=E,528µm,0.5s						
GORR	**Gorreto**	**0.78**	**312**	P	**Pg**	**08 02 14.8**	**-0.3**
GORR				S	**Sg**	**08 02 25.4**	**+0.1**
GORR				AML	AML		
	comp=E,1315µm,0.6s						
GORR				AML	AML		
	comp=N,1445µm,0.7s						
BOB	**Bobbio (Coli)**	**0.83**	**325**	P	**Pg**	**08 02 15.4**	**-0.6**
BOB				AML	AML		
	comp=E,1054µm,1.1s						
BOB				AML	AML		
	comp=N,1080µm,0.5s						
BOB				AML	AML		
	comp=E,1215µm,1.1s						
BOB				AML	AML		
	comp=N,1275µm,0.5s						
BOB				AML	AML		
	comp=E,1215µm,1.1s						
BOB				AML	AML		
	comp=N,1280µm,0.5s						
BOB				AML	AML		
	comp=E,1215µm,1.1s						
BOB				AML	AML		
	comp=N,1280µm,0.5s						
BOB				AML	AML		
	comp=E,1215µm,1.1s						
BOB				AML	AML		
	comp=N,1280µm,0.5s						
SEI	**Scarperia**	**0.90**	**92**	P	**Pg**	**08 02 17.1**	**-0.1**
SEI				AML	AML		
	comp=E,1320µm,0.5s						
SEI				AML	AML		
	comp=N,3305µm,0.5s						
SEI				AML	AML		
	comp=N,3305µm,0.5s						
SEI				AML	AML		
	comp=E,1320µm,0.5s						
SEI				AML	AML		
	comp=N,3305µm,0.5s						
SEI				AML	AML		
	comp=E,1320µm,0.5s						
RUFI	**Rufina**	**1.04**	**103**	P	**Pg**	**08 02 19.6**	**-0.4**
RUFI				AML	AML		
	comp=E,532µm,0.4s						
RUFI				AML	AML		
	comp=N,448µm,0.8s						
RUFI				AML	AML		
	comp=E,532µm,0.4s						
RUFI				AML	AML		
	comp=N,450µm,0.8s						
RUFI				AML	AML		
	comp=E,532µm,0.4s						
RUFI				AML	AML		
	comp=N,450µm,0.8s						
RUFI				AML	AML		
	comp=E,532µm,0.4s						
RUFI				AML	AML		
	comp=N,450µm,0.8s						
CSNT	**Castellina Chi**	**1.05**	**126**	P	**Pb**	**08 02 20.8**	**+0.1**
CSNT				AML	AML		
	comp=E,674µm,1.2s						
CSNT				AML	AML		
	comp=N,1190µm,0.5s						
CSNT				AML	AML		
	comp=E,674µm,1.2s						
CSNT				AML	AML		
	comp=N,1190µm,0.5s						
CSNT				AML	AML		
	comp=N,1190µm,0.5s						
CSNT				AML	AML		
	comp=E,674µm,1.2s						
CSNT				AML	AML		
	comp=N,1190µm,0.5s						
CSNT				AML	AML		
	comp=E,674µm,1.2s						
TRIF	**Trifonti**	**1.13**	**149**	P	**Pn**	**08 02 22.5**	**+0.1**
TRIF				AML	AML		
	comp=E,486µm,0.7s						
TRIF				AML	AML		
	comp=N,438µm,0.9s						
TRIF				AML	AML		
	comp=E,486µm,0.7s						
TRIF				AML	AML		
	comp=N,439µm,0.9s						
TRIF				AML	AML		
	comp=E,486µm,0.7s						
TRIF				AML	AML		
	comp=N,439µm,0.9s						
TRIF				AML	AML		
	comp=E,486µm,0.7s						
TRIF				AML	AML		
	comp=N,439µm,0.9s						
PCP	**Piancastagn**	**1.21**	**292**	P	**Pg**	**08 02 22.8**	**-0.6**
PCP				AML	AML		
	comp=E,232µm,1.0s						
PCP				AML	AML		
	comp=N,312µm,0.6s						
ASQU	**Asqua**	**1.25**	**103**	AML	AML		
	comp=E,214µm,0.5s						
ASQU				AML	AML		
	comp=N,248µm,0.5s						
ASQU				AML	AML		
	comp=N,248µm,0.5s						
ASQU				AML	AML		
	comp=E,214µm,0.5s						
ASQU				AML	AML		
	comp=N,248µm,0.5s						
ASQU				AML	AML		
	comp=E,214µm,0.5s						
SFI	**Santa Sofia**	**1.27**	**98**	P	**Pg**	**08 02 23.7**	**-0.6**
SFI				AML	AML		
	comp=E,286µm,1.0s						
SFI				AML	AML		
	comp=N,364µm,1.2s						
SFI				AML	AML		
	comp=N,364µm,1.2s						
SFI				AML	AML		
	comp=E,286µm,1.0s						
SFI				AML	AML		
	comp=N,364µm,1.2s						
SFI				AML	AML		
	comp=E,286µm,1.0s						
FINB	**Finale Ligure**	**1.29**	**274**	P	**Pn**	**08 02 23.9**	**-0.6**
FINB				AML	AML		
	comp=E,221µm,0.4s						
FINB				AML	AML		
	comp=N,223µm,0.4s						
FINB				AML	AML		
	comp=E,221µm,0.4s						
FINB				AML	AML		
	comp=N,222µm,0.4s						
FINB				AML	AML		
	comp=E,221µm,0.4s						
FINB				AML	AML		
	comp=N,222µm,0.4s						
FINB				AML	AML		
	comp=E,221µm,0.4s						
FINB				AML	AML		
	comp=N,222µm,0.4s						
QLNO	**Quiliano**	**1.29**	**281**	P	**Pn**	**08 02 24.5**	**0.0**
QLNO				AML	AML		
	comp=E,218µm,0.7s						
QLNO				AML	AML		
	comp=N,276µm,0.8s						
QLNO				AML	AML		
	comp=E,218µm,0.7s						
QLNO				AML	AML		
	comp=N,276µm,0.8s						
QLNO				AML	AML		
	comp=N,276µm,0.8s						
QLNO				AML	AML		
	comp=E,218µm,0.7s						
QLNO				AML	AML		
	comp=N,276µm,0.8s						
QLNO				AML	AML		
	comp=E,218µm,0.7s						
CASP	**Castiglione de**	**1.41**	**157**	P	**Pn**	**08 02 26.3**	**+0.1**
CASP				AML	AML		
	comp=E,256µm,0.3s						
CASP				AML	AML		
	comp=N,212µm,0.7s						
CASP				AML	AML		
	comp=E,256µm,0.3s						
CASP				AML	AML		
	comp=N,212µm,0.7s						
CASP				AML	AML		
	comp=E,256µm,0.3s						
CASP				AML	AML		
	comp=N,212µm,0.7s						
CASP				AML	AML		
	comp=E,256µm,0.3s						
CASP				AML	AML		
	comp=N,212µm,0.7s						
SALO	**Salr**	**1.56**	**11**	AML	AML		
	comp=E,776µm,1.0s						
SALO				AML	AML		
	comp=N,2265µm,1.0s						
SALO				AML	AML		
	comp=E,776µm,1.0s						
SALO				AML	AML		
	comp=N,2265µm,1.0s						
SALO				AML	AML		
	comp=E,776µm,1.0s						
SALO				AML	AML		
	comp=N,2265µm,1.0s						
IMI	**Imperia**	**1.61**	**264**	P	**Pn**	**08 02 28.5**	**-0.5**
IMI				AML	AML		
	comp=E,132µm,0.3s						
IMI				AML	AML		
	comp=N,252µm,1.2s						
IMI				AML	AML		
	comp=E,132µm,0.3s						
IMI				AML	AML		
	comp=N,252µm,1.2s						
IMI				AML	AML		
	comp=N,252µm,1.2s						
IMI				AML	AML		
	comp=E,132µm,0.3s						
IMI				AML	AML		
	comp=N,252µm,1.2s						
IMI				AML	AML		
	comp=E,132µm,0.3s						
GBOS	**Grotte di Boss**	**1.64**	**276**	P	**Pn**	**08 02 29.1**	**-0.4**
GBOS				AML	AML		
	comp=E,118µm,0.6s						
GBOS				AML	AML		
	comp=N,105µm,1.5s						
GBOS				AML	AML		
	comp=E,118µm,0.6s						
GBOS				AML	AML		
	comp=N,105µm,1.5s						
GBOS				AML	AML		
	comp=E,118µm,0.6s						
GBOS				AML	AML		
	comp=N,105µm,1.5s						
GBOS				AML	AML		
	comp=E,118µm,0.6s						
GBOS				AML	AML		
	comp=N,105µm,1.5s						
ROVR	**Rover Verones**	**1.70**	**23**	P	**Pn**	**08 02 30.7**	**+0.5**
ROVR				AML	AML		
	comp=E,170µm,0.5s						
ROVR				AML	AML		
	comp=N,350µm,0.4s						
ROVR				AML	AML		
	comp=N,350µm,0.4s						
ROVR				AML	AML		
	comp=E,170µm,0.5s						
ROVR				AML	AML		
	comp=N,350µm,0.4s						
ROVR				AML	AML		
	comp=E,170µm,0.5s						
MAGA	**Magasa**	**1.72**	**12**	AML	AML		
	comp=E,1750µm,0.9s						
MAGA				AML	AML		
	comp=E,1750µm,0.9s						
MAGA				AML	AML		
	comp=N,1016µm,0.4s						
MAGA				AML	AML		
	comp=N,1016µm,0.4s						
MAGA				AML	AML		
	comp=E,1750µm,0.9s						
MAGA				AML	AML		
	comp=N,1016µm,0.4s						
PGF	**Pioggiola**	**1.74**	**208**	*e*Pn	**Pn**	**08 02 31.2**	**+0.4**
PGF				*e*Sn	**Sn**	**08 02 52.8**	**-0.5**
	comp=N,60nm,0.2s						
PGF	**Pioggiola**	**1.74**	**208**	Pn	**Pn**	**08 02 31.2**	**+0.4**
PGF				Sn	**Sn**	**08 02 53.1**	**-0.2**
NEGI	**Seborga**	**1.76**	**263**	P	**Pn**	**08 02 31.2**	**+0.2**
NEGI				AML	AML		
	comp=E,107µm,0.9s						
NEGI				AML	AML		
	comp=N,156µm,1.3s						
NEGI				AML	AML		
	comp=E,107µm,0.9s						
NEGI				AML	AML		
	comp=N,156µm,1.3s						
NEGI				AML	AML		
	comp=E,107µm,0.9s						
NEGI				AML	AML		
	comp=N,156µm,1.3s						
ENR	**Entracque**	**1.94**	**275**	AML	AML		
	comp=N,117µm,1.0s						
ENR				AML	AML		
	comp=E,72µm,0.5s						
ENR				AML	AML		
	comp=N,117µm,1.0s						
ENR				AML	AML		
	comp=N,117µm,1.0s						
ENR				AML	AML		
	comp=E,72µm,0.5s						
ENR				AML	AML		
	comp=E,72µm,0.5s						
SBF	**Sospel**	**1.95**	**264**	*e*Pn	**Pn**	**08 02 33.6**	**0.0**
SBF				*e*Sn	**Sn**	**08 02 56.5**	**-1.8**
	comp=E,103nm,0.3s						
ESCA	**l'Escarene**	**2.00**	**263**	Pn	**Pn**	**08 02 34.9**	**+0.7**
SMPL	**Sampolo**	**2.09**	**197**	Pn	**Pn**	**08 02 37.0**	**+1.5**
ISO	**Isola**	**2.21**	**273**	Pn	**Pn**	**08 02 38.8**	**+1.6**
ISO				Sn	**Sn**	**08 03 05.6**	**+0.8**
MBDF	**Montbardon**	**2.48**	**286**	*e*Pn	**Pn**	**08 02 41.5**	**+0.5**
MBDF				*e*Sn	**Sn**	**08 03 11.8**	**+0.2**
	comp=E,18nm,0.4s						
FRF	**La Foret Royal**	**2.56**	**259**	*e*Pn	**Pn**	**08 02 42.1**	**+0.1**
FRF				*e*Sn	**Sn**	**08 03 12.8**	**-0.7**
	comp=E,11nm,0.2s						
LMR	**La Mourre**	**2.72**	**255**	*e*Pn	**Pn**	**08 02 44.2**	**0.0**
LMR				*e*Sn	**Sn**	**08 03 15.5**	**-1.8**
	comp=E,11nm,0.2s						
LPG	**La Plagne**	**2.78**	**302**	*e*Pn	**Pn**	**08 02 46.9**	**+1.7**
LPG				*e*Sn	**Sn**	**08 03 19.6**	**+0.5**
	comp=E,33nm,0.6s						
LPL	**La Plagne**	**2.80**	**302**	*e*Pn	**Pn**	**08 02 46.5**	**+1.1**
LPL				*e*Sn	**Sn**	**08 03 19.9**	**+0.4**
	comp=E,21nm,0.5s						
FETA	**Feichten**	**2.96**	**8**	Pn	**Pn**	**08 02 49.6**	**+1.9**
	comp=E,3.8nm,0.7s						
SABO	**M.te Sabotino**	**3.11**	**51**	AML	AML		
	comp=N,154µm,0.5s						
SABO				AML	AML		
	comp=E,112µm,0.8s						
SABO				AML	AML		
	comp=N,154µm,0.5s						
SABO				AML	AML		
	comp=E,112µm,0.8s						
SABO				AML	AML		
	comp=N,154µm,0.5s						
SABO				AML	AML		
	comp=E,112µm,0.8s						
ORIF	**Oris-en-Rattie**	**3.14**	**287**	*e*Pn	**Pn**	**08 02 51.3**	**+1.3**
ORIF				*e*Sn	**Sn**	**08 03 27.8**	**0.0**
	comp=E,17nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.14**	**287**	Pn	**Pn**	**08 02 52.4**	**+2.4**
ABTA	**Abfaltersbach**	**3.15**	**32**	*e*Pn	**Pn**	**08 02 53.0**	**+2.9**
	comp=E,2.8nm,0.2s						
ABTA				*e*Sn	**Sn**	**08 03 30.3**	**+2.3**
	comp=E,13nm,0.6s						
ASEAF	**Site Antares,**	**3.15**	**247**	Pn	**Pn**	**08 02 50.7**	**+0.9**
ASEAF				Sn	**Sn**	**08 03 27.7**	**+0.1**
DAVA	**Damuels**	**3.20**	**357**	*e*Pn	**Pn**	**08 02 53.5**	**+2.5**
	comp=E,9.0nm,0.5s,SNR=7.1						
DAVA				*e*Sn	**Sn**	**08 03 32.4**	**+3.0**
	comp=E,24nm,0.5s						
SQTA	**Sankt Quirin**	**3.22**	**13**	*e*Pn	**Pn**	**08 02 53.5**	**+2.3**
	comp=E,16nm,0.3s,SNR=10						
SQTA				*e*Sn	**Sn**	**08 03 33.2**	**+3.3**
	comp=E,10nm,0.3s						
SMRF	**Simiane la Rot**	**3.27**	**270**	*e*Pn	**Pn**	**08 02 52.8**	**+1.0**
SMRF				*e*Sn	**Sn**	**08 03 29.4**	**-1.7**
	comp=E,7.2nm,0.3s						
MOTA	**Moosalm**	**3.33**	**12**	*e*Pn	**Pn**	**08 02 55.7**	**+3.1**
	comp=E,12nm,0.3s						
RUSF	**Rustrel**	**3.34**	**269**	Pn	**Pn**	**08 02 54.9**	**+2.2**
WTTA	**Wattenberg**	**3.35**	**18**	*e*Pn	**Pn**	**08 02 55.5**	**+2.5**
	comp=E,5.5nm,0.3s,SNR=6.7						
WTTA				Sn	**Sn**	**08 03 36.2**	**+3.2**
	comp=E,52nm,0.6s						
WATA	**Walderalm**	**3.40**	**17**	*e*Pn	**Pn**	**08 02 57.0**	**+3.3**
	comp=E,4.7nm,0.3s						
RETA	**Reutte**	**3.43**	**7**	*e*Pn	**Pn**	**08 02 56.6**	**+2.6**
	comp=E,4.9nm,0.3s						
RETA				*e*Sn	**Sn**	**08 03 37.8**	**+3.0**
	comp=E,17nm,0.5s						
NVLJ	**Novalja**	**3.45**	**80**	*i* Pn	**Pn**	**08 02 53.6**	**-0.5**
NVLJ				Sn	**Sn**	**08 03 34.7**	**-0.4**
OGSM	**Saint Maurice**	**3.49**	**297**	Pn	**Pn**	**08 02 57.5**	**+2.8**
MYKA	**Terra Mystica**	**3.55**	**43**	*e*Pn	**Pn**	**08 02 57.3**	**+1.6**
	comp=E,2.4nm,0.3s						
MYKA				*e*Sn	**Sn**	**08 03 41.5**	**+3.6**
	comp=E,6.6nm,0.4s						
DUGI	**Dugi Otok**	**3.57**	**90**	*e*Pn	**Pn**	**08 02 56.5**	**+0.7**
DUGI				Sn	**Sn**	**08 03 38.4**	**+0.3**
KBA	**Koelnbreinsper**	**3.75**	**36**	*e*Pn	**Pn**	**08 03 01.4**	**+2.9**
	comp=E,1.1nm,0.2s						
KBA				*e*Sn	**Sn**	**08 03 45.3**	**+2.3**
	comp=E,8.5nm,0.5s						
CABF	**La Chapelle**	**3.80**	**313**	*e*Pn	**Pn**	**08 03 00.1**	**+1.1**
CABF				*e*Sn	**Sn**	**08 03 43.3**	**-0.7**
	comp=E,29nm,0.8s						
BRANT	**Les Verrieres**	**3.83**	**319**	Pn	**Pn**	**08 03 01.9**	**+2.4**
SLE	**Schleitheim**	**3.84**	**343**	Pn	**Pn**	**08 03 02.0**	**+2.3**
VIVF	**Saint-Julien-l**	**3.97**	**283**	*e*Pn	**Pn**	**08 03 02.5**	**+1.1**
VIVF				*e*Sn	**Sn**	**08 03 46.3**	**-1.9**
	comp=E,2.1nm,0.3s						
CHMF	**Charmoille**	**3.98**	**324**	Pn	**Pn**	**08 03 03.0**	**+1.5**
LOMF	**Lomont**	**3.99**	**326**	Pn	**Pn**	**08 03 04.1**	**+2.4**
ZIRJ	**Zirje**	**4.02**	**94**	*e*Pn	**Pn**	**08 03 02.4**	**+0.3**
ZIRJ				Sn	**Sn**	**08 03 47.2**	**-2.2**
MORI	**Morici**	**4.04**	**91**	*e*Pn	**Pn**	**08 03 03.6**	**+1.3**
MORI				Sn	**Sn**	**08 03 50.3**	**+0.4**
SSB	**Saint Sauveur**	**4.15**	**289**	Pn	**Pn**	**08 03 05.7**	**+1.9**
KIZ	**Kirchzarten**	**4.16**	**339**	Pn	**Pn**	**08 03 05.7**	**+1.7**
MOF	**Molkenrain**	**4.30**	**332**	Pn	**Pn**	**08 03 07.9**	**+2.0**
SOKA	**Soboth**	**4.32**	**52**	*e*Pn	**Pn**	**08 03 07.7**	**+1.4**
	comp=E,3.0nm,0.3s						
SOKA				*e*Sn	**Sn**	**08 03 57.5**	**+0.5**
	comp=E,5.5nm,0.6s						
HINF	**Hinteralfeld**	**4.37**	**330**	*e*Pn	**Pn**	**08 03 07.3**	**+0.5**
HINF				*e*Sn	**Sn**	**08 03 56.4**	**-1.5**
	comp=E,14nm,0.4s						
LASF	**Ste Croix**	**4.51**	**272**	*e*Pn	**Pn**	**08 03 09.7**	**+0.9**
LASF				*e*Sn	**Sn**	**08 03 59.8**	**-1.6**
	comp=E,3.6nm,0.3s						
KIJV	**Kijevo**	**4.54**	**89**	*i* Pn	**Pn**	**08 03 11.2**	**+2.1**
KIJV				Sn	**Sn**	**08 04 02.2**	**+0.1**
ECH	**Echery**	**4.61**	**335**	Pn	**Pn**	**08 03 11.4**	**+1.2**
HAU	**Haudompre**	**4.71**	**328**	*e*Pn	**Pn**	**08 03 12.1**	**+0.5**
HAU				*e*Sn	**Sn**	**08 04 04.7**	**-1.7**
	comp=E,54nm,0.5s						
WLS	**Welschbruch**	**4.73**	**337**	Pn	**Pn**	**08 03 14.0**	**+2.2**
MOA	**Molln**	**4.74**	**36**	*e*Pn	**Pn**	**08 03 14.7**	**+2.7**
	comp=E,2.4nm,0.2s,SNR=5.4						
MOA				Sn	**Sn**	**08 04 11.1**	**+3.9**
	comp=E,6.2nm,0.5s						
CDF	**Champ du Feu**	**4.75**	**337**	*e*Pn	**Pn**	**08 03 12.5**	**+0.4**
CDF				*e*Sn	**Sn**	**08 04 05.4**	**-2.0**
	comp=E,16nm,0.4s						
ARSA	**Arzberg**	**4.94**	**48**	*e*Pn	**Pn**	**08 03 16.2**	**+1.5**
	comp=E,9.2nm,0.4s,SNR=7.3						
LBL	**Lubilhac**	**5.03**	**286**	Pn	**Pn**	**08 03 18.0**	**+2.0**
SMF	**Signal de Mont**	**5.10**	**302**	*e*Pn	**Pn**	**08 03 17.9**	**+1.0**
SMF				*e*Sn	**Sn**	**08 04 14.5**	**-1.6**
	comp=E,10nm,0.5s						
LOR	**Lormes**	**5.41**	**308**	*e*Pn	**Pn**	**08 03 21.6**	**+0.4**
	baz=125						
LOR				*e*Sn	**Sn**	**08 04 22.7**	**-1.0**
	comp=E,9.8nm,0.4s,baz=125						
LOR	**Lormes**	**5.41**	**308**	Pn	**Pn**	**08 03 23.3**	**+2.1**
SFTF	**Sexfontaines**	**5.42**	**321**	*e*Pn	**Pn**	**08 03 21.5**	**+0.3**
	baz=138						
AVF	**Avril sur Loir**	**5.47**	**302**	*e*Pn	**Pn**	**08 03 22.7**	**+0.8**
AVF				*e*Sn	**Sn**	**08 04 23.1**	**-2.0**
	comp=E,2.8nm,0.4s						
CONA	**Conrad Observa**	**5.54**	**44**	Pn	**Pn**	**08 03 25.1**	**+2.1**
	comp=E,0.7nm,0.2s						
CONA				Sn	**Sn**	**08 04 29.3**	**+2.3**
	comp=E,1.7nm,0.3s						
KHC	**Kasperske Hory**	**5.58**	**24**	*e*PN	**Pn**	**08 03 24.4**	**+0.9**
KHC				*e*SN	**Sn**	**08 04 26.7**	**-1.1**
KHC				*e*SG	**Sg**	**08 04 59.0**	**-0.1**
BGF	**Bois d'Agland**	**5.69**	**298**	*e*Pn	**Pn**	**08 03 27.2**	**+2.3**
BGF				*e*Sn	**Sn**	**08 04 27.7**	**-2.7**
	comp=E,9.5nm,0.4s						
MTLF	**Montolieu**	**5.77**	**265**	*e*Pn	**Pn**	**08 03 27.1**	**+1.0**
MTLF				*e*Sn	**Sn**	**08 04 30.5**	**-2.0**
	comp=E,1.5nm,0.3s						
CAF	**Calviac**	**5.82**	**281**	*e*Pn	**Pn**	**08 03 27.4**	**+0.7**
CAF				*e*Sn	**Sn**	**08 04 31.3**	**-2.4**
	comp=E,2.3nm,0.3s						
FNEB	**Nbias**	**5.94**	**261**	Pn	**Pn**	**08 03 30.3**	**+1.8**
ABH	**Alteburg**	**6.05**	**344**	Pn	**Pn**	**08 03 32.1**	**+2.2**
MODS	**Modra-Piesok**	**6.56**	**47**	*e*PN	**Pn**	**08 03 37.4**	**+0.5**
MODS				*e*SN	**Sn**	**08 04 49.9**	**-2.0**
VYHS	**Vyhne**	**7.47**	**51**	*e*PN	Pn	08 03 44.6	-4.9

IDC ***09*** *08:09:12.8±1.3, 24°.47S×116°.13W, h0^{km}, mb4.1/7, mb1 4.4/7, mb1mx4.0/31, mbtmp4.1/7, MS3.6/8, Ms1 3.7/8, ms1mx3.4/20, Error ellipse: s-maj=42.9km s-min=26.1km az=29.0*

ISCJB ***09*** *08:09:19.5±0.6, 23°.79S±0°.08×115°.2W±0°.1, h21^{km}, mb4.4/39, MS3.6/8, Error ellipse: s-maj=20.7km s-min=9.3km az=157.4*

NEIC ***09*** *08:09:19.9±0.6, 23°.83S×115°.08W, h10^{km}, mb4.5/48, Error ellipse: s-maj=27.7km s-min=20.7km az=269.0*

ISC 09 08:09:20.8±0.6**, 23°.8S**±0°.1×**115°.4W**±0°.1**, h21^{km}, n61, σ1.^{s}39**/51**, mb4.5**/39**, MS3.7**/8**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**39.13**	**71**	P	**P**	**08 16 50.1**	**+2.4**
	9.2nm,0.9s,baz=234,slow=6.6,SNR=4.7						
PEL	**Peldehue**	**40.09**	**114**	*e*P	**P**	**08 16 54.2**	**-0.9**
	25nm,1.4s						
LCO	**Las Campanas**	**40.14**	**107**	*e*P	**P**	**08 16 54.7**	**-1.1**
	9.9nm,0.8s						
PLCA	**Paso Flores**	**40.98**	**125**	LR	LR	08 29 18.3	
	comp=Z,111nm,20.5s,baz=256,slow=29						
PLCA	**Paso Flores**	**40.98**	**125**	*e*P	**P**	**08 17 01.3**	**-1.1**
	1.1nm,1.0s						
RAR	**Rarotonga**	**40.99**	**265**	LR	LR	08 29 07.5	
	comp=Z,48nm,18.7s,baz=109,slow=30						
GO10	**Punta Arenas**	**44.32**	**143**	*e*P	**P**	**08 17 29.5**	**+0.3**
	83nm,1.4s						
LPAZ	**La Paz**	**44.83**	**89**	P	**P**	**08 17 35.7**	**+1.3**
	7.4nm,1.0s,baz=242,slow=5.1,SNR=22						
LPAZ				LR	LR	08 32 22.1	
	comp=Z,87nm,18.2s,baz=276,slow=30						
LPAZ	**La Paz**	**44.83**	**89**	*e*P	**P**	**08 17 34.5**	**+0.1**
	10nm,1.0s						
CMIG	**Matias Romero**	**45.32**	**28**	LR	LR	08 32 52.1	
	comp=Z,51nm,20.7s,baz=203,slow=31						
SRIG	**Santa Rosalia**	**50.95**	**4**	*e*P	**P**	**08 18 21.5**	**+0.8**
	36nm,0.9s						
CPUP	**Villa Florida**	**52.23**	**106**	LR	LR	08 37 55.0	
	comp=Z,57nm,18.8s,baz=222,slow=33						
TXAR	**Lajitas Array**	**54.05**	**13**	P	**P**	**08 18 45.1**	**+1.2**
	1.1nm,1.1s,baz=202,slow=19,SNR=4.4						

SDV	Santo Domingo	54.46	59	eP	P	08 18 46.0	-1.4
	11nm,1.4s						
319A	Douglas	55.20	6	eP	P	08 18 53.2	+0.9
	15nm,1.4s						
JCT	Junction City	56.03	16	eP	P	08 18 58.9	+0.7
	9.9nm,0.8s						
MNTX	Cornudas Mount	56.04	10	eP	P	08 18 58.9	+0.7
	3.6nm,1.1s						
HKT	Hockley	56.67	20	eP	P	08 19 03.2	+0.7
	5.7nm,1.1s						
435B	Jarrell	56.92	18	eP	P	08 19 04.6	+0.2
	7.6nm,0.9s						
X16A	Lo Mia Camp, P	58.05	4	eP	P	08 19 13.4	+0.9
	3.9nm,1.4s						
WHTX	Lake Whitney,	58.09	18	eP	P	08 19 13.0	+0.4
	7.5nm,1.1s						
X18A	Snowflake	58.27	5	eP	P	08 19 14.6	+0.5
	7.2nm,1.3s						
PTGA	Pitinga	58.32	75	eP	P	08 19 13.7	-1.0
	9.5nm,1.1s						
AMTX	Amarillo	59.82	13	eP	P	08 19 25.0	+0.3
	5.2nm,0.8s						
U15A	North Rim	60.01	3	eP	P	08 19 27.3	+1.1
	6.3nm,1.3s						
SHPR	Sheep Range	60.02	0	eP	P	08 19 26.9	+0.8
	6.6nm,1.4s						
MVCO	Mesa Verde	61.06	6	eP	P	08 19 34.2	+0.8
	4.1nm,1.1s						
CCUT	Cedar City	61.09	2	eP	P	08 19 34.8	+1.3
	5.2nm,1.2s						
SZCU	Shurtz Canyon	61.14	2	eP	P	08 19 34.9	+1.1
	3.7nm,1.3s						
S22A	4UR Ranch, Cre	61.78	8	eP	P	08 19 39.2	+1.0
	5.3nm,1.5s						
R11A	Troy Canyon, C	61.85	360	eP	P	08 19 39.9	+1.2
	2.1nm,1.2s						
SDCO	Great Sand Dun	61.95	9	eP	P	08 19 39.9	+0.5
	3.8nm,1.2s						
NV01	Mina Array Sit	62.00	357	eP	P	08 19 40.5	+0.8
NVAR	Mina Array Bea	62.00	357	P	P	08 19 40.5	+0.8
	0.3nm,0.6s,baz=183,slow=5.9,SNR=4.8						
NVAR				LR	LR	08 40 19.0	
	comp=Z,39nm,21.7s,baz=164,slow=30						
SRU	San Rafael Swe	62.78	4	eP	P	08 19 44.7	-0.1
	3.7nm,1.1s						
BDFB	Brasilia	63.41	96	P	P	08 19 48.6	-0.9
	4.4nm,0.7s,baz=251,slow=9.3,SNR=5.4						
BDFB				LR	LR	08 43 10.3	
	comp=Z,94nm,21.2s,baz=102,slow=32						
VNDA	Vanda	65.34	194	LR	LR	08 42 02.3	
	comp=Z,51nm,18.2s,baz=159,slow=30						
VNDA	Vanda	65.34	194	eP	P	08 20 01.9	+0.9
	3.1nm,1.4s						
QSPA	South Pole Qui	66.32	180	eP	P	08 20 09.0	+1.3
	3.0nm,1.0s						
PDAR	Pinedale Array	66.48	5	P	P	08 20 07.2	-1.8
	1.0nm,0.8s,baz=176,slow=4.5,SNR=9.6						
K22A	Casper	66.65	7	eP	P	08 20 09.9	-0.1
	6.0nm,1.0s						
V53A	Saluda	66.72	28	eP	P	08 20 09.8	-0.6
	4.9nm,1.1s						
FXWY	Fox Creek	67.26	3	eP	P	08 20 13.8	-0.1
	4.4nm,1.3s						
QLMT	Earthquake Lak	68.42	3	eP	P	08 20 21.8	+0.6
C09A	Chrisman Ranch	71.35	358	eP	P	08 20 39.6	+0.8
	3.0nm,1.1s						
NEW	Newport	71.78	359	eP	P	08 20 42.5	+1.0
	3.9nm,1.1s						
TRQ	Mont Tremblant	78.93	28	eP	P	08 21 22.8	+0.1
YKA	Yellowknife Ar	86.03	0	P	P	08 21 57.8	-1.4
	1.9nm,1.1s,baz=177,slow=4.9,SNR=13						
H11S2	WAKE ISLAND Hy	86.85	292	T	T	09 57 38.8	
	baz=118,slow=75,SNR=231						
H11S1	WAKE ISLAND Hy	86.86	292	T	T	09 57 30.1	
	baz=118,slow=75,SNR=159						
H11S3	WAKE ISLAND Hy	86.87	292	T	T	09 57 30.5	
	baz=118,slow=75,SNR=114						
H11N3	WAKE ISLAND Hy	87.22	293	T	T	09 58 10.2	
	baz=113,slow=78,SNR=10						
H11N1	WAKE ISLAND Hy	87.23	293	T	T	09 58 03.1	
	baz=113,slow=78,SNR=8.7						
H11N2	WAKE ISLAND Hy	87.24	293	T	T	09 58 08.3	
	baz=113,slow=78,SNR=16						
CLL	Collm	132.03	42	ePKPdf	PKPdf	08 28 32.0	-0.6
LZH	Lanzhou	144.14	299	ePKP	PKPab	08 28 51.1	-2.0
LZH				pPKP	PKiKP	08 29 01.6	+2.6
LZH				sPKP		08 29 06.6	
ZALV	Zalesovo Beam	146.32	338	PKPbc	PKPdf	08 28 56.0	-2.4
	0.7nm,0.3s,baz=27,slow=0.7,SNR=4.4						
CMAR	Chiang Mai Arr	147.62	267	PKPbc	PKPdf	08 28 56.9	-4.8
	1.2nm,0.3s,baz=132,slow=1.3,SNR=4.4						
BRTR	Keskin Array B	149.44	51	PKPbc	PKPdf	08 29 06.4	+2.1
	0.7nm,0.7s,baz=294,slow=1.4,SNR=4.3						
MKAR	Makanchi Array	153.06	333	PKPbc	PKPdf	08 29 12.6	+3.2
	0.4nm,0.7s,baz=64,slow=3.4,SNR=2.6						
KSH	Kashi	161.66	331	ePKP	PKPdf	08 29 22.1	+1.6
KSH				PKS	PKSdf	08 32 55.6	+1.7

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*SAR **09** 08:18:13.6±0.6, 42°.49N×19°.87E, h9^{km}±2^{km}, ML2.5/9*
*TIR **09** 08:18:13.8, 42°.57N×19°.76E, h7^{km}, Md2.7/3*
*PDG **09** 08:18:14.5±0.3, 42°.55N×19°.75E, h11^{km}, MD2.7/2, ML2.6/10, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*
*BEO **09** 08:18:15.7±0.3, 42°.57N×19°.76E, h4^{km}±4^{km}, ML2.4/12*
ISC 09 08:18:14.6±0.9**, 42°.56N**±0°.02×**19°.77E**±0°.02**, h11**^{km}±7^{km}**, n55, σ1^{s}14**/103**, 12C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVY	Plav	0.14	74	⇑iPg	Pg	08 18 17.6	-0.5
PVY				i Sg	Sg	08 18 20.4	-0.2
BCI	Bajram Curri	0.29	131	i PG	Pg	08 18 20.2	-0.3
BCI				i SG	Sg	08 18 24.9	+0.5
IVA	Berane	0.33	16	⇑iPg	Pg	08 18 21.2	-0.1
IVA				i Sg	Sg	08 18 26.5	+0.8
KOME	Kolasin	0.35	327	⇑iPg	Pg	08 18 21.4	-0.3
KOME				i Sg	Sb	08 18 27.1	-1.4
PDG	Podgorica	0.40	252	ePg	Pg	08 18 21.8	-0.8
PDG				eSg	Sb	08 18 29.2	-0.7
PDG	Podgorica	0.40	252	ePg	Pg	08 18 21.7	-0.8
PDG				eSg	Sb	08 18 28.9	-1.0
TTG	Podgorica	0.40	252	⇑iPg	Pg	08 18 21.8	-0.8
TTG				i Sg	Sg	08 18 28.1	+0.2
PUK	Puka	0.52	170	i PG	Pg	08 18 24.7	-0.1
PUK				i SG	Sb	08 18 32.9	-0.5
DRME	Dracevica, Mon	0.57	230	⇑iPg	Pg	08 18 24.6	-1.2
DRME				i Sg	Sg	08 18 33.6	+0.3
DRME	Dracevica, Mon	0.57	230	ePg	Pg	08 18 24.5	-1.2
DRME				eSg	Sg	08 18 33.9	+0.6
NKY	Niksic	0.63	294	⇑iPg	Pb	08 18 27.7	0.0
NKY				i Sg	Sb	08 18 36.0	-0.5
CEME	Cevo	0.63	269	⇑iPg	Pg	08 18 25.7	-1.2
CEME				i Sg	Sg	08 18 35.6	+0.4
NKME	Niksic	0.64	290	⇑iPg	Pg	08 18 26.1	-0.9
NKME				i Sg	Sb	08 18 36.2	-0.6
BUM	Brajici-Budva	0.70	249	⇑iPg	Pg	08 18 27.0	-1.1
BUM				i Sg	Sb	08 18 37.9	-0.6
ULC	Ulcinj	0.71	214	⇑iPg	Pg	08 18 26.9	-1.5
ULC				i Sg	Sb	08 18 38.5	-0.3
SJES	Sjenica	0.72	12	ePg	Pg	08 18 28.4	-0.2
SJES				eSg	Sg	08 18 38.1	0.0
PLE	Pljevlja	0.82	340	⇑iPg	Pg	08 18 29.6	-0.9
PLE				i Sg	Sb	08 18 42.7	+0.5
UPM	Unac-Piva	0.91	316	⇓iPg	Pg	08 18 31.2	-1.0
UPM				i Sg	Sb	08 18 45.5	+0.8
UPM	Unac-Piva	0.91	316	ePg	Pb	08 18 32.1	-0.4
UPM				eSg	Sn	08 18 45.7	-1.0
HCY	Herceg Novi	0.95	264	⇑iPg	Pg	08 18 32.8	-0.1
HCY				i Sg	Sb	08 18 46.5	+0.8
HCY	Herceg Novi	0.95	264	ePg	Pg	08 18 32.3	-0.6
HCY				eSg	Sb	08 18 46.3	+0.6
BRY	Bratogost	0.97	291	⇓iPg	Pg	08 18 32.2	-1.2
BRY				i Sg	Sn	08 18 47.5	-0.7
BRY	Bratogost	0.97	291	ePg	Pg	08 18 32.7	-0.7
BRY				eSg	Sn	08 18 47.5	-0.7
PHP	Peshkopia	1.00	150	i PG	Pg	08 18 34.0	0.0
PHP				i SG	Sg	08 18 46.8	-0.2
IVAS	Ivanjica	1.06	15	ePg	Pg	08 18 33.9	-1.1
IVAS				eSg	Sg	08 18 48.3	-0.5
TREB	Trebinje	1.06	279	ePg	Pg	08 18 34.4	-0.6
TREB				eSg	Sb	08 18 49.3	+0.4
TREB	Trebinje	1.06	279	ePg	Pg	08 18 33.4	-1.6
TREB				eSg	Sn	08 18 50.2	0.0
RUDO	Rudo	1.10	345	ePg	Pg	08 18 34.2	-1.6
RUDO				eSg	Sn	08 18 51.1	-0.1
SELS	Selova	1.19	56	ePg	Pb	08 18 37.1	-0.1
SELS				eSg	Sn	08 18 54.0	+0.5
DBRK	Dubrovnik	1.21	276	i Pn	Pb	08 18 37.1	-0.3
DBRK				Sn	Sn	08 18 55.5	+1.7
BBLS	Lazići	1.34	349	ePg	Pn	08 18 39.4	+0.1
BBLS				eSg	Sg	08 18 57.7	0.0
BBLS	Lazići	1.34	349	ePg	Pn	08 18 39.2	-0.1
BBLS				eSg	Sg	08 18 59.0	+1.3
SKO	Skopje	1.37	115	eSg	Sg	08 19 00.0	+1.3
GRUS	Gruza	1.50	27	ePg	Pg	08 18 43.2	-0.2
GRUS				eSg	Sg	08 19 03.4	+0.5
BARS	Barje	1.53	80	ePg	Pb	08 18 43.4	+0.4
BARS	Barje	1.53	80	ePg	Sn	08 18 56.2	-5.5
BARS				eSg	Sg	08 19 03.8	0.0
DIVS	Divibare	1.55	6	ePg	Pb	08 18 43.5	+0.1
DIVS				eSg	Sg	08 19 04.7	+0.2
DIVS	Divibare	1.55	6	ePn	Pn	08 18 41.9	-0.3
DIVS				eSn	Sb	08 19 03.4	+0.4
STON	Ston	1.56	282	ePn	Pb	08 18 43.0	-0.4
STON				Sn	Sg	08 19 06.6	+1.8
STON	Ston	1.56	282	ePn	Pn	08 18 42.1	-0.1
STON				eSn	Sg	08 19 03.9	-0.9
HAPS	Han Pijesak,Bl	1.64	339	ePn	Pb	08 18 44.3	-0.7
HAPS				eSn	Sg	08 19 06.3	-1.2
TRUS	Trudelj	1.73	15	ePg	Pb	08 18 46.9	+0.5
TRUS				eSg	Sg	08 19 09.9	-0.3
BOVS	Bovan	1.78	52	ePg	Pb	08 18 48.0	+0.8
BOVS				eSg	Sg	08 19 12.0	+0.1
TEKS	Tekeris	2.00	355	ePg	Pb	08 18 51.2	+0.2
TEKS				eSg	Sg	08 19 18.7	-0.2
TEKS	Tekeris	2.00	355	ePn	Pn	08 18 48.8	+0.4
TEKS				eSn	Sn	08 19 14.1	+0.7
MAKA	Makarska	2.15	291	ePn	Pb	08 18 53.5	0.0
MAKA				Sn	Sg	08 19 23.0	-0.7
ZAGS	Zajecar	2.19	54	ePg	Pb	08 18 54.0	-0.3
ZAPS	Zavoj	2.22	70	ePn	Pb	08 18 53.5	-1.3
ZAPS				eSg	Sg	08 19 26.5	+0.5
KUBS	Kucevo	2.32	36	ePg	Pb	08 18 57.3	+0.9
HVAR	Hvar	2.52	285	ePn	Pb	08 18 59.5	-0.4
HVAR				Sn	Sb	08 19 31.7	+0.9
KIJV	Kijevo	2.85	302	ePn	Pb	08 19 04.8	-0.7
KIJV				Sn	Sb	08 19 41.9	+1.4
BLY	Banja Luka	2.89	320	eSn	Sn	08 19 36.7	+1.5
ZIRJ	Zirje	3.22	291	ePn	Pn	08 19 08.2	+3.2
ZIRJ				Sn	Sb	08 19 47.2	-3.7
MORI	Morici	3.25	295	ePn	Pn	08 19 08.8	+3.3
DUGI	Dugi Otok	3.73	294	ePn	Pn	08 19 14.8	+2.7

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*STR **09** 08:30:32.2±1.2, 44°N±4°×1°1E±°, h16^{km}±8^{km}, MLv3.6/6*
*GEN **09** 08:30:32.9, 44°.17N×10°.17E, h3^{km}, Ml3.0*
*ISCJB **09** 08:30:32.8±0.2, 44°.12N±0°.01×10°.14E±0°.01, h9^{km}±1^{km}, Error ellipse: s-maj=2.5km s-min=1.8km az=3.8*
*ROM **09** 08:30:32.5±0.1, 44°.163N±0°.005×10°.178E±0°.005, h6^{km}, ML3.1/66, Error ellipse: s-maj=0.6km s-min=0.2km az=197.0*
*LDG **09** 08:30:34.1±0.1, 44°.10N×10°.20E, h2^{km}, Ml3.3/25, Error ellipse: s-maj=2.5km s-min=1.9km az=15.0*
*PRU **09** 08:30:36.6±0.0, 44°.12N×10°.18E, h23^{km}*
ISC 09 08:30:32.4±0.8**, 44°.13N**±0°.02×**10°.14E**±0°.01**, h7**^{km}±4^{km}**, n166, σ1^{s}65**/197**, 3C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	Equi	0.04	17	P	Pg	08 30 33.8	-0.1
EQUI				S	Sg	08 30 34.2	-0.8
EQUI	Equi	0.04	17	i P	Pg	08 30 33.9	-0.1
EQUI				S	Sg	08 30 34.3	-0.8
T0911	Castelpoggio (	0.05	250	P	Pg	08 30 35.3	+1.2
T0911				S	Sg	08 30 37.1	+1.8
T0911				AML	AML		
	comp=E,17650μm,1.5s						
T0911				AML	AML		
	comp=N,20800μm,1.1s						
T0911				AML	AML		
	comp=E,17800μm,1.5s						
T0911				AML	AML		
	comp=N,20750μm,0.6s						
T0911				AML	AML		
	comp=E,17700μm,1.5s						
T0911				AML	AML		
	comp=N,20800μm,1.1s						
T0911				AML	AML		
	comp=E,17850μm,1.5s						
T0911				AML	AML		
	comp=N,20750μm,0.6s						
T0912	Minucciano (LU	0.07	53	eP	Pg	08 30 34.2	-0.1
T0912				S	Sg	08 30 35.0	-0.7
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
T0912				AML	AML		
FOSD	Fosdinovo	0.10	258	P	Pg	08 30 36.2	+1.5
FOSD				S	Sg	08 30 38.6	+2.3
FOSD				AML	AML		
	comp=E,28300μm,0.4s						
FOSD				AML	AML		
	comp=N,32250μm,0.4s						
FOSD				AML	AML		
	comp=N,32250μm,0.4s						
FOSD				AML	AML		
	comp=E,28300μm,0.4s						
FOSD				AML	AML		
	comp=N,32250μm,0.4s						
FOSD				AML	AML		
	comp=E,28300μm,0.4s						
FIVI	Fivizzano	0.11	356	eP	Pg	08 30 34.9	-0.1
FIVI				S	Sg	08 30 36.2	-0.5
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
FIVI				AML	AML		
VLC	Villacollemand	0.18	80	P	Pg	08 30 36.5	+0.3
VLC				S	Sg	08 30 39.2	+0.5
VLC				AML	AML		
	comp=E,18150μm,0.6s						
VLC				AML	AML		
	comp=N,16500μm,0.1s						
VLC				AML	AML		
	comp=E,18300μm,0.6s						
VLC				AML	AML		
	comp=N,17900μm,0.1s						
VLC				AML	AML		
	comp=E,18150μm,0.6s						
VLC				AML	AML		
	comp=N,16500μm,0.1s						
VLC				AML	AML		
	comp=E,18300μm,0.6s						
VLC				AML	AML		
	comp=N,17900μm,0.1s						
VLC				AML	AML		
	comp=E,18150μm,0.6s						
VLC				AML	AML		
	comp=N,16500μm,0.1s						
VLC				AML	AML		
	comp=E,18300μm,0.6s						
VLC				AML	AML		
	comp=N,17900μm,0.1s						
VLC				AML	AML		
	comp=E,18300μm,0.6s						
VLC				AML	AML		
	comp=N,17900μm,0.1s						
VLC				AML	AML		
	comp=N,16500μm,0.1s						
VLC				AML	AML		
	comp=E,18150μm,0.6s						
VLC				AML	AML		
	comp=E,18300μm,0.6s						
VLC				AML	AML		
	comp=N,17900μm,0.1s						
VLC				AML	AML		
	comp=N,16500μm,0.1s						
VLC				AML	AML		
	comp=E,18150μm,0.6s						
PLMA	Palmaria, Port	0.22	249	P	Pg	08 30 38.4	+1.6
PLMA				S	Sg	08 30 42.0	+2.3
PLMA				AML	AML		
	comp=E,3800μm,1.5s						
PLMA				AML	AML		
	comp=N,4140μm,0.4s						
PLMA				AML	AML		
	comp=E,3800μm,1.5s						
PLMA				AML	AML		
	comp=N,4140μm,0.4s						
PLMA				AML	AML		
	comp=E,3800μm,1.5s						
PLMA				AML	AML		
	comp=N,4140μm,0.4s						
PLMA				AML	AML		
	comp=E,3800μm,1.5s						
PLMA				AML	AML		
	comp=N,4140μm,0.4s						
PLMA				AML	AML		
	comp=E,3800μm,1.5s						
PLMA				AML	AML		
	comp=N,4140μm,0.4s						
CARD	Cardoso	0.27	112	P	Pg	08 30 38.6	+0.8
CARD				S	Sg	08 30 42.2	+0.9
CARD	Cardoso	0.27	112	P	Pg	08 30 38.6	+0.8
CARD				S	Sg	08 30 42.2	+0.9
CARD				AML	AML		
	comp=E,10085μm,1.3s						
CARD				AML	AML		
	comp=N,10950μm,1.0s						
CARD				AML	AML		
	comp=E,10085μm,1.3s						
CARD				AML	AML		
	comp=N,10950μm,1.0s						
CARD				AML	AML		
	comp=E,10085μm,1.3s						
CARD				AML	AML		
	comp=N,10950μm,1.0s						
CARD				AML	AML		
	comp=N,10950μm,1.0s						
CARD				AML	AML		
	comp=E,10085μm,1.3s						
CARD				AML	AML		
	comp=N,10950μm,1.0s						
CARD				AML	AML		
	comp=E,10085μm,1.3s						
MAIM	Mastiano	0.33	130	P	Pb	08 30 40.0	-0.7
MAIM				S	Sb	08 30 44.9	-1.3
MAIM	Mastiano	0.33	130	P	Pb	08 30 39.9	-0.8
MAIM				S	Sb	08 30 44.9	-1.3
MAIM				AML	AML		
	comp=E,11670μm,0.3s						
MAIM				AML	AML		
	comp=N,6825μm,0.5s						
MAIM				AML	AML		
	comp=E,11670μm,0.3s						
MAIM				AML	AML		
	comp=N,6825μm,0.5s						
MAIM				AML	AML		
	comp=E,11670μm,0.3s						
MAIM				AML	AML		
	comp=N,6825μm,0.5s						
MAIM				AML	AML		
	comp=E,11670μm,0.3s						
MAIM				AML	AML		
	comp=N,6825μm,0.5s						
MAIM				AML	AML		
	comp=E,11670μm,0.3s						
MAIM				AML	AML		
	comp=N,6825μm,0.5s						
BDI	Bagni Di Lucca	0.34	101	P	Pg	08 30 39.5	+0.4
BDI				S	Sg	08 30 44.3	+0.8
BDI				AML	AML		
	comp=E,6895μm,0.9s						
BDI				AML	AML		
	comp=N,3940μm,0.3s						
BDI				AML	AML		
	comp=E,6300μm,0.9s						
BDI				AML	AML		
	comp=N,5460μm,0.3s						
BDI				AML	AML		
	comp=E,6895μm,0.9s						
BDI				AML	AML		
	comp=N,3945μm,0.3s						
BDI				AML	AML		
	comp=E,6300μm,0.9s						
BDI				AML	AML		
	comp=N,5460μm,0.3s						
BDI				AML	AML		
	comp=E,6300μm,0.9s						
BDI				AML	AML		
	comp=E,6895μm,0.9s						
BDI				AML	AML		
	comp=N,5460μm,0.3s						
BDI				AML	AML		
	comp=N,3945μm,0.3s						
BDI				AML	AML		
	comp=E,6300μm,0.9s						
BDI				AML	AML		
	comp=E,6895μm,0.9s						
BDI				AML	AML		
	comp=N,5460μm,0.3s						
BDI				AML	AML		
	comp=N,3945μm,0.3s						
GRAM	Graiana	0.37	352	P	Pg	08 30 39.9	+0.3
GRAM				S	Sg	08 30 44.9	+0.4
GRAM	Graiana	0.37	352	P	Pg	08 30 39.9	+0.3
GRAM				S	Sg	08 30 45.0	+0.5
GRAM				AML	AML		
	comp=E,41000μm,0.3s						
GRAM				AML	AML		
	comp=N,29300μm,0.3s						
GRAM				AML	AML		
	comp=E,41000μm,0.3s						
GRAM				AML	AML		
	comp=N,29300μm,0.3s						
GRAM				AML	AML		
	comp=E,41000μm,0.3s						
GRAM				AML	AML		
	comp=N,29300μm,0.3s						
GRAM				AML	AML		
	comp=E,41000μm,0.3s						
GRAM				AML	AML		
	comp=N,29300μm,0.3s						
POPM	Popiglio	0.46	100	P	Pg	08 30 41.5	+0.3
POPM				S	Sg	08 30 48.3	+1.1
POPM	Popiglio	0.46	100	P	Pg	08 30 41.6	+0.3
POPM				S	Sg	08 30 48.3	+1.1
POPM				AML	AML		
	comp=E,6080μm,1.3s						
POPM				AML	AML		
	comp=N,8600μm,1.2s						
POPM				AML	AML		
	comp=E,6080μm,1.3s						
POPM				AML	AML		
	comp=N,8600μm,1.2s						
POPM				AML	AML		
	comp=N,8600μm,1.2s						
POPM				AML	AML		
	comp=E,6080μm,1.3s						
POPM				AML	AML		
	comp=N,8600μm,1.2s						
POPM				AML	AML		
	comp=E,6080μm,1.3s						
MSSA	Maissana	0.48	293	P	Pg	08 30 42.6	+0.7
MSSA				AML	AML		
	comp=E,2005μm,1.6s						
MSSA				AML	AML		
	comp=N,2145μm,0.8s						
MSSA				AML	AML		
	comp=E,2005μm,1.6s						
MSSA				AML	AML		
	comp=N,2145μm,0.8s						
MSSA				AML	AML		
	comp=E,2005μm,1.6s						
MSSA				AML	AML		
	comp=N,2145μm,0.8s						
MSSA				AML	AML		
	comp=E,2005μm,1.6s						
MSSA				AML	AML		
	comp=N,2145μm,0.8s						
MTCR	Monte La Croce	0.63	99	P	Pg	08 30 44.9	+0.3
MTCR				S	Sb	08 30 54.7	-0.1
MTCR				AML	AML		
	comp=E,3075μm,0.5s						
MTCR				AML	AML		
	comp=N,4620μm,0.6s						
MTCR				AML	AML		

	comp=E,3080μm,0.5s						
MTCR				AML	AML		
	comp=N,4630μm,0.6s						
MTCR				AML	AML		
	comp=E,3080μm,0.5s						
MTCR				AML	AML		
	comp=N,4630μm,0.6s						
MTCR				AML	AML		
	comp=E,3080μm,0.5s						
MTCR				AML	AML		
	comp=N,4630μm,0.6s						
ZCCA	**Zocca**	**0.64**	**69**	AML	AML		
	comp=E,2305μm,0.5s						
ZCCA				AML	AML		
	comp=E,1890μm,0.4s						
ZCCA				AML	AML		
	comp=N,2980μm,0.6s						
ZCCA				AML	AML		
	comp=E,2305μm,0.5s						
ZCCA				AML	AML		
	comp=N,3245μm,0.6s						
ZCCA				AML	AML		
	comp=E,1890μm,0.4s						
ZCCA				AML	AML		
	comp=N,2980μm,0.6s						
ZCCA				AML	AML		
	comp=N,3245μm,0.6s						
ZCCA				AML	AML		
	comp=N,2980μm,0.6s						
ZCCA				AML	AML		
	comp=E,2305μm,0.5s						
ZCCA				AML	AML		
	comp=E,1890μm,0.4s						
ZCCA				AML	AML		
	comp=N,3245μm,0.6s						
ZCCA				AML	AML		
	comp=N,2980μm,0.6s						
ZCCA				AML	AML		
	comp=E,2305μm,0.5s						
ZCCA				AML	AML		
	comp=E,1890μm,0.4s						
ZCCA				AML	AML		
	comp=N,3245μm,0.6s						
PRMA	**PARMA**	**0.65**	**11**	AML	AML		
	comp=E,4800μm,0.7s						
PRMA				AML	AML		
	comp=N,8860μm,0.6s						
PRMA				AML	AML		
	comp=E,4795μm,0.7s						
PRMA				AML	AML		
	comp=N,8860μm,0.6s						
PRMA				AML	AML		
	comp=N,8860μm,0.6s						
PRMA				AML	AML		
	comp=E,4795μm,0.7s						
PRMA				AML	AML		
	comp=N,8860μm,0.6s						
PRMA				AML	AML		
	comp=E,4795μm,0.7s						
CRMI	**Carmignano**	**0.69**	**119**	P	**Pb**	**08 30 46.7**	**-0.1**
CRMI				AML	AML		
	comp=E,822μm,0.7s						
CRMI				AML	AML		
	comp=N,1305μm,0.8s						
CRMI				AML	AML		
	comp=E,822μm,0.7s						
CRMI				AML	AML		
	comp=N,1305μm,0.8s						
CRMI				AML	AML		
	comp=E,822μm,0.7s						
CRMI				AML	AML		
	comp=N,1305μm,0.8s						
PTF	**Prato**	**0.69**	**104**	P	**Pg**	**08 30 46.0**	**+0.2**
FNVD	**Fontana Vidola**	**0.71**	**86**	AML	AML		
	comp=N,2275μm,1.4s						
FNVD				AML	AML		
	comp=E,2235μm,1.6s						
FNVD				AML	AML		
	comp=N,2275μm,1.4s						
FNVD				AML	AML		
	comp=E,2235μm,1.6s						
FNVD				AML	AML		
	comp=N,2275μm,1.4s						
FNVD				AML	AML		
	comp=E,2235μm,1.6s						
GROG	**Isola di Gorgo**	**0.72**	**194**	P	**Pb**	**08 30 47.8**	**+0.5**
GROG				AML	AML		
	comp=E,1605μm,0.3s						
GROG				AML	AML		
	comp=N,1785μm,0.4s						
GROG				AML	AML		
	comp=E,1605μm,0.3s						
GROG				AML	AML		
	comp=N,1790μm,0.4s						
GROG				AML	AML		
	comp=E,1605μm,0.3s						
GROG				AML	AML		
	comp=N,1790μm,0.4s						
GROG				AML	AML		
	comp=E,1605μm,0.3s						
GROG				AML	AML		
	comp=N,1790μm,0.4s						
GORR	**Gorreto**	**0.77**	**309**	P	**Pg**	**08 30 47.5**	**+0.3**
GORR	**Gorreto**	**0.77**	**309**	P	**Pg**	**08 30 47.6**	**+0.4**
GORR				S	**Sb**	**08 30 59.1**	**+0.2**
GORR				AML	AML		
	comp=E,1330μm,0.9s						
GORR				AML	AML		
	comp=N,1705μm,0.7s						
GORR				AML	AML		
	comp=E,1330μm,0.9s						
GORR				AML	AML		
	comp=N,1705μm,0.7s						
GORR				AML	AML		
	comp=N,1705μm,0.7s						
GORR				AML	AML		
	comp=E,1330μm,0.9s						
GORR				AML	AML		
	comp=N,1705μm,0.7s						
GORR				AML	AML		
	comp=E,1330μm,0.9s						
BOB	**Bobbio (Coli)**	**0.81**	**323**	AML	AML		
	comp=N,1615μm,1.5s						
BOB				AML	AML		
	comp=E,1735μm,1.2s						
BOB				AML	AML		
	comp=E,1880μm,1.3s						
BOB				AML	AML		
	comp=N,1715μm,0.5s						
BOB				AML	AML		
	comp=N,1615μm,1.5s						
BOB				AML	AML		
	comp=N,1715μm,0.5s						
BOB				AML	AML		
	comp=E,1880μm,1.3s						
BOB				AML	AML		
	comp=E,1735μm,1.2s						
BOB				AML	AML		
	comp=N,1615μm,1.5s						
BOB				AML	AML		
	comp=N,1715μm,0.5s						
BOB				AML	AML		
	comp=E,1880μm,1.3s						
BOB				AML	AML		
	comp=E,1735μm,1.2s						
SEI	**Scarperia**	**0.88**	**94**	AML	AML		
	comp=N,5650μm,0.5s						
SEI				AML	AML		
	comp=E,2475μm,0.3s						
SEI				AML	AML		
	comp=N,5650μm,0.5s						
SEI				AML	AML		
	comp=E,2475μm,0.3s						
SEI				AML	AML		
	comp=N,5650μm,0.5s						
SEI				AML	AML		
	comp=E,2475μm,0.3s						
SEI				AML	AML		
	comp=N,5650μm,0.5s						
SEI				AML	AML		
	comp=E,2475μm,0.3s						
BRIS	**BRISIGHELLA**	**0.99**	**88**	AML	AML		
	comp=N,956μm,0.5s						
BRIS				AML	AML		
	comp=E,877μm,1.0s						
BRIS				AML	AML		
	comp=N,956μm,0.5s						
BRIS				AML	AML		
	comp=E,877μm,1.0s						
BRIS				AML	AML		
	comp=E,877μm,1.0s						
BRIS				AML	AML		
	comp=N,956μm,0.5s						
OSSC	**Osservatorio P**	**1.00**	**127**	P	**Pn**	**08 30 52.9**	**-0.1**
OSSC				AML	AML		
	comp=E,2470μm,1.0s						
OSSC				AML	AML		
	comp=N,2380μm,0.9s						
OSSC				AML	AML		
	comp=E,2475μm,1.1s						
OSSC				AML	AML		
	comp=N,2365μm,0.9s						
OSSC				AML	AML		
	comp=N,2365μm,0.9s						
OSSC				AML	AML		
	comp=E,2475μm,1.1s						
OSSC				AML	AML		
	comp=E,2470μm,1.0s						
OSSC				AML	AML		
	comp=N,2380μm,0.9s						
OSSC				AML	AML		
	comp=N,2380μm,0.9s						
OSSC				AML	AML		
	comp=E,2475μm,1.1s						
OSSC				AML	AML		
	comp=E,2470μm,1.0s						
OSSC				AML	AML		
	comp=N,2365μm,0.9s						
RUFI	**Rufina**	**1.03**	**106**	AML	AML		
	comp=N,776μm,0.6s						
RUFI				AML	AML		
	comp=E,885μm,0.6s						
CSNT	**Castellina Chi**	**1.06**	**128**	P	**Pn**	**08 30 53.6**	**-0.2**
CSNT				AML	AML		
	comp=E,1060μm,1.3s						
CSNT				AML	AML		
	comp=N,1430μm,0.5s						
CSNT				AML	AML		
	comp=E,1060μm,1.3s						
CSNT				AML	AML		
	comp=N,1430μm,0.5s						
CSNT				AML	AML		
	comp=N,1430μm,0.5s						
CSNT				AML	AML		
	comp=E,1060μm,1.3s						
CSNT				AML	AML		
	comp=N,1430μm,0.5s						
CSNT				AML	AML		
	comp=E,1060μm,1.3s						
TRIF	**Trifonti**	**1.16**	**151**	P	**Pn**	**08 30 55.3**	**+0.3**
TRIF				AML	AML		
	comp=E,626μm,0.7s						
TRIF				AML	AML		
	comp=N,630μm,0.9s						
TRIF				AML	AML		
	comp=E,626μm,0.7s						
TRIF				AML	AML		
	comp=N,630μm,0.9s						
TRIF				AML	AML		
	comp=N,630μm,0.9s						
TRIF				AML	AML		
	comp=E,626μm,0.7s						
TRIF				AML	AML		
	comp=N,630μm,0.9s						
TRIF				AML	AML		
	comp=E,626μm,0.7s						
PCP	**Piancastagn**	**1.21**	**290**	P	**Pg**	**08 30 55.7**	**0.0**
PCP				AML	AML		
	comp=E,346μm,0.5s						
PCP				AML	AML		
	comp=N,451μm,1.6s						
PCP				AML	AML		
	comp=E,346μm,0.5s						
PCP				AML	AML		
	comp=N,451μm,1.6s						
PCP				AML	AML		
	comp=N,451μm,1.6s						
PCP				AML	AML		
	comp=E,346μm,0.5s						
PCP				AML	AML		
	comp=N,451μm,1.6s						
PCP				AML	AML		
	comp=E,346μm,0.5s						
ASQU	**Asqua**	**1.24**	**105**	P	**Pg**	**08 30 55.5**	**-0.7**
ASQU				AML	AML		
	comp=E,400μm,0.5s						
ASQU				AML	AML		
	comp=N,524μm,0.5s						
ASQU				AML	AML		
	comp=E,400μm,0.5s						
ASQU				AML	AML		
	comp=N,524μm,0.5s						
ASQU				AML	AML		
	comp=E,400μm,0.5s						
ASQU				AML	AML		
	comp=N,524μm,0.5s						
SFI	**Santa Sofia**	**1.25**	**100**	AML	AML		
	comp=E,461μm,1.2s						
SFI				AML	AML		
	comp=E,590μm,0.8s						
SFI				AML	AML		
	comp=N,500μm,0.6s						
SFI				AML	AML		
	comp=E,460μm,1.2s						
SFI				AML	AML		
	comp=N,578μm,1.0s						
SFI				AML	AML		
	comp=E,461μm,1.2s						
SFI				AML	AML		
	comp=N,578μm,1.0s						
SFI				AML	AML		
	comp=N,578μm,1.0s						
SFI				AML	AML		
	comp=E,461μm,1.2s						
SFI				AML	AML		
	comp=N,578μm,1.0s						
QLNO	**Quiliano**	**1.30**	**279**	AML	AML		
	comp=N,340μm,0.9s						
QLNO				AML	AML		
	comp=E,222μm,0.5s						
QLNO				AML	AML		
	comp=N,340μm,0.9s						
QLNO				AML	AML		
	comp=E,222μm,0.5s						
QLNO				AML	AML		
	comp=N,340μm,0.9s						
QLNO				AML	AML		
	comp=E,222μm,0.5s						
QLNO				AML	AML		
	comp=E,222μm,0.5s						
QLNO				AML	AML		
	comp=N,340μm,0.9s						
CASP	**Castiglione de**	**1.44**	**158**	P	**Pn**	**08 30 59.1**	**+0.2**
CASP				AML	AML		
	comp=E,324μm,0.4s						
CASP				AML	AML		
	comp=N,294μm,0.5s						
CASP				AML	AML		
	comp=E,324μm,0.4s						
CASP				AML	AML		
	comp=N,294μm,0.5s						
CASP				AML	AML		
	comp=E,324μm,0.4s						
CASP				AML	AML		
	comp=N,294μm,0.5s						
CAFI	**Castiglion Fio**	**1.55**	**120**	P	**Pn**	**08 31 00.6**	**+0.2**
CAFI				AML	AML		
	comp=E,200μm,0.6s						
CAFI				AML	AML		
	comp=N,261μm,1.3s						
CAFI				AML	AML		
	comp=E,200μm,0.6s						
CAFI				AML	AML		
	comp=N,261μm,1.3s						
CAFI				AML	AML		
	comp=E,200μm,0.6s						
CAFI				AML	AML		
	comp=N,261μm,1.3s						
PARC	**Parchiule**	**1.59**	**107**	P	**Pn**	**08 31 00.8**	**-0.2**
PARC				AML	AML		
	comp=E,252μm,0.8s						
PARC				AML	AML		
	comp=N,288μm,0.8s						
PARC				AML	AML		
	comp=E,252μm,0.8s						
PARC				AML	AML		
	comp=N,288μm,0.8s						
PARC				AML	AML		
	comp=E,252μm,0.8s						
PARC				AML	AML		
	comp=N,288μm,0.8s						
PARC				AML	AML		
	comp=E,252μm,0.8s						
PARC				AML	AML		
	comp=N,288μm,0.8s						
BALD	**Monte Baldo**	**1.63**	**17**⇑	*e*Pg	**Pb**	**08 31 03.2**	**+0.3**
BALD				*e*Sg	**Sg**	**08 31 26.3**	**+1.5**
IMI	**Imperia**	**1.63**	**263**	P	**Pn**	**08 31 01.4**	**-0.2**
IMI				AML	AML		
	comp=E,194μm,0.5s						
IMI				AML	AML		
	comp=N,255μm,1.2s						
IMI				AML	AML		
	comp=E,194μm,0.5s						
IMI				AML	AML		
	comp=N,255μm,1.2s						
IMI				AML	AML		
	comp=E,194μm,0.5s						
IMI				AML	AML		
	comp=N,255μm,1.2s						
BADI	**Badiali**	**1.65**	**111**	P	**Pn**	**08 31 01.8**	**0.0**
BADI				AML	AML		
	comp=E,276μm,0.8s						
BADI				AML	AML		
	comp=N,318μm,1.4s						
BADI				AML	AML		
	comp=N,318μm,1.4s						
BADI				AML	AML		
	comp=E,276μm,0.8s						
BADI				AML	AML		
	comp=N,318μm,1.4s						
BADI				AML	AML		
	comp=E,276μm,0.8s						
TEOL	**Teolo**	**1.65**	**41**⇑	*e*Pg	**Pb**	**08 31 03.0**	**-0.1**
GBOS	**Grotte di Boss**	**1.66**	**275**	P	**Pn**	**08 31 02.2**	**+0.3**
GBOS				AML	AML		
	comp=E,94μm,0.8s						
GBOS				AML	AML		
	comp=N,124μm,0.9s						
GBOS				AML	AML		
	comp=E,94μm,0.8s						
GBOS				AML	AML		
	comp=N,124μm,0.9s						
GBOS				AML	AML		
	comp=E,94μm,0.8s						
GBOS				AML	AML		
	comp=N,124μm,0.9s						
GBOS				AML	AML		
	comp=E,94μm,0.8s						
GBOS				AML	AML		
	comp=N,124μm,0.9s						
ROVR	**Rover Verones**	**1.66**	**23**	P	**Pb**	**08 31 03.0**	**-0.4**
ROVR				AML	AML		
	comp=E,376μm,0.7s						
ROVR				AML	AML		
	comp=N,724μm,0.8s						
ROVR				AML	AML		
	comp=E,376μm,0.7s						
ROVR				AML	AML		
	comp=N,724μm,0.8s						
ROVR				AML	AML		
	comp=E,376μm,0.7s						
ROVR				AML	AML		
	comp=N,724μm,0.8s						
MDI	**Monti di Nese**	**1.68**	**350**	P	**Pb**	**08 31 03.7**	**0.0**
MDI				AML	AML		
	comp=E,682μm,0.3s						
MDI				AML	AML		
	comp=N,465μm,0.4s						
MDI				AML	AML		
	comp=N,465μm,0.4s						
MDI				AML	AML		
	comp=E,682μm,0.3s						
MDI				AML	AML		
	comp=N,465μm,0.4s						
MDI				AML	AML		
	comp=E,682μm,0.3s						
MGRO	**Montegrosso**	**1.68**	**268**	AML	AML		
	comp=E,382μm,0.4s						
MGRO				AML	AML		
	comp=E,382μm,0.4s						
MGRO				AML	AML		
	comp=N,268μm,0.7s						
MGRO				AML	AML		
	comp=N,268μm,0.7s						
MGRO				AML	AML		
	comp=N,268μm,0.7s						
MGRO				AML	AML		
	comp=E,382μm,0.4s						
MAGA	**Magasa**	**1.68**	**12**	P	**Pb**	**08 31 03.5**	**-0.3**
MAGA				AML	AML		
	comp=E,3950μm,0.6s						
MAGA				AML	AML		
	comp=N,1420μm,0.6s						
MAGA				AML	AML		
	comp=E,3950μm,0.6s						
MAGA				AML	AML		
	comp=N,1420μm,0.6s						
MAGA				AML	AML		
	comp=E,3950μm,0.6s						
MAGA				AML	AML		
	comp=N,1420μm,0.6s						
MAGA				AML	AML		
	comp=E,3950μm,0.6s						
MAGA				AML	AML		
	comp=N,1420μm,0.6s						
MARN	**Marana (Italy)**	**1.69**	**26**	*e*Pg	**Pb**	**08 31 03.9**	**0.0**
MARN				*e*Sg	**Sg**	**08 31 27.0**	**+0.2**
PGF	**Pioggiola**	**1.78**	**208**	*e*Pn	**Pn**	**08 31 04.0**	**+0.3**
PGF				*e*Sn	**Sn**	**08 31 26.0**	**-0.7**
	comp=N,52nm,0.3s						
PGF	**Pioggiola**	**1.78**	**208**	Pn	**Pn**	**08 31 04.1**	**+0.3**
PGF				Sn	**Sn**	**08 31 24.9**	**-1.8**
ATVO	**AVT- Monte Val**	**1.81**	**114**	AML	AML		
	comp=E,258μm,0.4s						
ATVO				AML	AML		
	comp=E,258μm,0.4s						
ATVO				AML	AML		
	comp=N,244μm,1.0s						
ATVO				AML	AML		
	comp=N,244μm,1.0s						
ATVO				AML	AML		
	comp=N,244μm,1.0s						
ATVO				AML	AML		
	comp=E,258μm,0.4s						
SACS	**San Casciano d**	**1.82**	**134**	AML	AML		
	comp=N,99μm,0.9s						
SACS				AML	AML		
	comp=E,79μm,0.7s						
SACS				AML	AML		
	comp=E,79μm,0.7s						
SACS				AML	AML		
	comp=N,99μm,0.9s						
SACS				AML	AML		
	comp=E,79μm,0.7s						
SACS				AML	AML		
	comp=N,99μm,0.9s						
PIEI	**Pieia**	**1.83**	**108**	AML	AML		
	comp=N,112μm,0.6s						
PIEI				AML	AML		
	comp=E,126μm,1.2s						
PIEI				AML	AML		
	comp=N,112μm,0.6s						
PIEI				AML	AML		
	comp=E,126μm,1.2s						
PIEI				AML	AML		
	comp=N,112μm,0.6s						
PIEI				AML	AML		
	comp=E,126μm,1.2s						
MAON	**Monte Argentar**	**1.85**	**157**	P	**Pn**	**08 31 05.0**	**+0.5**
MAON				AML	AML		
	comp=E,145μm,0.9s						
MAON				AML	AML		
	comp=N,154μm,0.7s						
MAON				AML	AML		
	comp=E,145μm,0.9s						
MAON				AML	AML		
	comp=N,154μm,0.7s						
MAON				AML	AML		
	comp=E,145μm,0.9s						
MAON				AML	AML		
	comp=N,154μm,0.7s						
ATTE	**AVT- Monte Tez**	**1.86**	**119**	P	**Pn**	**08 31 04.9**	**+0.2**
ATTE				AML	AML		

	comp=E,240µm,0.8s						
ATTE				AML	AML		
	comp=N,223µm,1.5s						
ATTE				AML	AML		
	comp=E,240µm,0.8s						
ATTE				AML	AML		
	comp=N,223µm,1.5s						
ATTE				AML	AML		
	comp=E,240µm,0.8s						
ATTE				AML	AML		
	comp=N,223µm,1.5s						
SAOF	**Saorge**	**1.87**	**267**	P	Pn	08 31 05.2	+0.3
SAOF				AML	AML		
	comp=E,301µm,0.8s						
SAOF				AML	AML		
	comp=N,350µm,0.9s						
SAOF				AML	AML		
	comp=N,350µm,0.9s						
SAOF				AML	AML		
	comp=E,301µm,0.8s						
SAOF				AML	AML		
	comp=N,350µm,0.9s						
SAOF				AML	AML		
	comp=E,301µm,0.8s						
MGAB	**Montegabbione**	**1.88**	**130**	P	Pn	08 31 05.7	+0.7
MGAB				AML	AML		
	comp=E,147µm,0.9s						
MGAB				AML	AML		
	comp=N,175µm,0.5s						
MGAB				AML	AML		
	comp=N,175µm,0.5s						
MGAB				AML	AML		
	comp=E,147µm,0.9s						
MGAB				AML	AML		
	comp=N,175µm,0.5s						
MGAB				AML	AML		
	comp=E,147µm,0.9s						
RNI	**Roncone**	**1.88**	**10**	*e*Pn	Pb	08 31 06.5	-0.8
RNI				*e*Sn	Sg	08 31 32.6	-0.4
DOSS	**Dosso del Somm**	**1.90**	**23**	*e*Pn	Pn	08 31 06.5	+1.1
MABI	**Malga Bissina**	**1.94**	**8**	AML	AML		
	comp=E,264µm,1.4s						
MABI				AML	AML		
	comp=E,264µm,1.4s						
MABI				AML	AML		
	comp=N,197µm,0.8s						
MABI				AML	AML		
	comp=N,197µm,0.8s						
MABI				AML	AML		
	comp=N,197µm,0.8s						
MABI				AML	AML		
	comp=E,264µm,1.4s						
SBF	**Sospel**	**1.97**	**263**	*e*Pn	Pn	08 31 06.6	+0.4
SBF				*e*Sn	Sn	08 31 29.8	-1.4
	comp=E,204nm,0.5s						
VARE	**Varese**	**1.99**	**331**	AML	AML		
	comp=E,360µm,0.7s						
VARE				AML	AML		
	comp=E,360µm,0.7s						
VARE				AML	AML		
	comp=N,392µm,0.8s						
VARE				AML	AML		
	comp=N,392µm,0.8s						
VARE				AML	AML		
	comp=E,360µm,0.7s						
VARE				AML	AML		
	comp=N,392µm,0.8s						
GAGG	**Gaggia**	**2.04**	**16**	*e*Pn	Pn	08 31 08.5	+1.2
PANI	**Panarotta**	**2.10**	**23⇑**	*e*Pn	Pn	08 31 09.4	+1.2
CGRP	**Cima Grappa**	**2.11**	**33**	*e*Pn	Pn	08 31 09.7	+1.3
CGRP				*e*Sn	Sb	08 31 37.6	0.0
CGRP	**Cima Grappa**	**2.11**	**33**	AML	AML		
	comp=E,486µm,0.7s						
CGRP				AML	AML		
	comp=N,473µm,0.7s						
CGRP				AML	AML		
	comp=N,473µm,0.7s						
CGRP				AML	AML		
	comp=E,486µm,0.7s						
CGRP				AML	AML		
	comp=N,473µm,0.7s						
CGRP				AML	AML		
	comp=E,486µm,0.7s						
TRAV	**Traversella**	**2.19**	**310**	AML	AML		
	comp=E,240µm,0.9s						
TRAV				AML	AML		
	comp=E,240µm,0.9s						
TRAV				AML	AML		
	comp=N,202µm,1.0s						
TRAV				AML	AML		
	comp=N,202µm,1.0s						
TRAV				AML	AML		
	comp=N,202µm,1.0s						
TRAV				AML	AML		
	comp=E,240µm,0.9s						
CTI	**Castel Tesino**	**2.20**	**29**	AML	AML		
	comp=E,444µm,1.0s						
CTI				AML	AML		
	comp=E,444µm,1.0s						
CTI				AML	AML		
	comp=N,460µm,0.3s						
CTI				AML	AML		
	comp=E,444µm,1.0s						
CTI				AML	AML		
	comp=N,460µm,0.3s						
CTI				AML	AML		
	comp=N,460µm,0.3s						
ISO	**Isola**	**2.22**	**272**	Pn	Pn	08 31 11.5	+1.8
EILF	**Villa Eilenroc**	**2.25**	**256**	Pn	Pn	08 31 11.5	+1.5
OZOL	**Ozolo**	**2.37**	**16**	*e*Pn	Pn	08 31 13.4	+1.6
FDMO	**Fiordimonte**	**2.41**	**116**	AML	AML		
	comp=N,67µm,0.8s						
FDMO				AML	AML		
	comp=E,77µm,0.5s						
FDMO				AML	AML		
	comp=N,67µm,0.8s						
FDMO				AML	AML		
	comp=E,77µm,0.5s						
FDMO				AML	AML		
	comp=N,67µm,0.8s						
FDMO				AML	AML		
	comp=E,77µm,0.5s						
TUE	**Stuetta**	**2.41**	**347**	AML	AML		
	comp=E,358µm,0.5s						
TUE				AML	AML		
	comp=E,296µm,0.5s						
TUE				AML	AML		
	comp=N,227µm,0.5s						
TUE				AML	AML		
	comp=E,358µm,0.5s						
TUE				AML	AML		
	comp=N,257µm,0.5s						
TUE				AML	AML		
	comp=E,358µm,0.5s						
TUE				AML	AML		
	comp=E,296µm,0.5s						
TUE				AML	AML		
	comp=N,257µm,0.5s						
TUE				AML	AML		
	comp=N,227µm,0.5s						
TUE				AML	AML		
	comp=E,296µm,0.5s						
TUE				AML	AML		
	comp=N,257µm,0.5s						
TUE				AML	AML		
	comp=N,227µm,0.5s						
TOLF	**Tolfa**	**2.47**	**146**	AML	AML		
	comp=N,127µm,0.0s						
TOLF				AML	AML		
	comp=E,86µm,0.3s						
TOLF				AML	AML		
	comp=N,127µm,0.0s						
TOLF				AML	AML		
	comp=E,86µm,0.3s						
TOLF				AML	AML		
	comp=N,127µm,0.0s						
TOLF				AML	AML		
	comp=E,86µm,0.3s						
MBDF	**Montbardon**	**2.48**	**285**	*e*Pn	Pn	08 31 14.6	+1.2
MBDF				*e*Sn	Sn	08 31 44.4	+0.4
	comp=E,31nm,0.4s						
KOSI	**Kohlern**	**2.49**	**20**	AML	AML		
	comp=N,316µm,0.6s						
KOSI				AML	AML		
	comp=E,290µm,0.9s						
KOSI				AML	AML		
	comp=N,316µm,0.6s						
KOSI				AML	AML		
	comp=E,290µm,0.9s						
KOSI				AML	AML		
	comp=N,316µm,0.6s						
KOSI				AML	AML		
	comp=E,290µm,0.9s						
FUSIO	**Fusio**	**2.55**	**336**	AML	AML		
	comp=N,152µm,0.4s						
FUSIO				AML	AML		
	comp=E,204µm,0.9s						
FUSIO				AML	AML		
	comp=N,152µm,0.4s						
FUSIO				AML	AML		
	comp=E,204µm,0.9s						
FUSIO				AML	AML		
	comp=N,152µm,0.4s						
FUSIO				AML	AML		
	comp=E,204µm,0.9s						
FRF	**La Foret Royal**	**2.59**	**259**	*e*Pn	Pn	08 31 15.3	+0.6
FRF				*e*Sn	Sn	08 31 45.9	-0.5
	comp=E,33nm,0.3s						
DAVOX	**Davos/Dischmat**	**2.66**	**356**	AML	AML		
	comp=E,160µm,0.5s						
DAVOX				AML	AML		
	comp=E,160µm,0.5s						
DAVOX				AML	AML		
	comp=N,148µm,0.5s						
DAVOX				AML	AML		
	comp=N,148µm,0.5s						
DAVOX				AML	AML		
	comp=E,160µm,0.5s						
DAVOX				AML	AML		
	comp=N,148µm,0.5s						
LMR	**La Mourre**	**2.75**	**254**	*e*Pn	Pn	08 31 17.1	+0.2
LMR				*e*Sn	Sn	08 31 48.7	-1.6
	comp=N,14nm,0.3s						
LPG	**La Plagne**	**2.77**	**301**	*e*Pn	Pn	08 31 18.8	+1.3
LPG				*e*Sn	Sn	08 31 52.7	+1.4
	comp=N,19nm,0.3s						
LPL	**La Plagne**	**2.79**	**301**	*e*Pn	Pn	08 31 18.8	+1.1
LPL				*e*Sn	Sn	08 31 51.7	0.0
	comp=N,25nm,0.4s						
FETA	**Feichten**	**2.92**	**8**	Pn	Pn	08 31 21.6	+2.2
	comp=N,1.3nm,0.2s						
FETA				Sn	Sn	08 31 57.9	+3.0
	comp=N,11nm,0.6s						
ROSI	**Rosskopf**	**2.94**	**17**	AML	AML		
	comp=N,558µm,0.6s						
ROSI				AML	AML		
	comp=E,334µm,1.5s						
ROSI				AML	AML		
	comp=N,558µm,0.6s						
ROSI				AML	AML		
	comp=E,334µm,1.5s						
ROSI				AML	AML		
	comp=N,558µm,0.6s						
ROSI				AML	AML		
	comp=E,334µm,1.5s						
BLAF	**les Blancs**	**2.96**	**268**	Pn	Pb	08 31 22.9	-2.5
PLONS	**Plons/SG**	**2.97**	**350**	AML	AML		
	comp=N,120µm,1.3s						
PLONS				AML	AML		
	comp=E,98µm,1.0s						
PLONS				AML	AML		
	comp=N,120µm,1.3s						
PLONS				AML	AML		
	comp=E,98µm,1.0s						
PLONS				AML	AML		
	comp=E,98µm,1.0s						
PLONS				AML	AML		
	comp=N,120µm,1.3s						
BNALP	**Bannalp**	**3.00**	**337**	AML	AML		
	comp=E,102µm,0.3s						
BNALP				AML	AML		
	comp=N,91µm,0.8s						
BNALP				AML	AML		
	comp=N,91µm,0.8s						
BNALP				AML	AML		
	comp=E,102µm,0.3s						
BNALP				AML	AML		
	comp=N,91µm,0.8s						
BNALP				AML	AML		
	comp=E,102µm,0.3s						
TRI	**Trieste**	**3.02**	**57**	AML	AML		
	comp=N,57µm,0.9s						
TRI				AML	AML		
	comp=E,74µm,0.7s						
TRI				AML	AML		
	comp=N,57µm,0.9s						
TRI				AML	AML		
	comp=E,74µm,0.7s						
TRI				AML	AML		
	comp=N,57µm,0.9s						
TRI				AML	AML		
	comp=E,74µm,0.7s						
SABO	**M.te Sabotino**	**3.07**	**52**	AML	AML		
	comp=E,266µm,1.5s						
SABO				AML	AML		
	comp=E,266µm,1.5s						
SABO				AML	AML		
	comp=N,252µm,0.7s						
SABO				AML	AML		
	comp=N,252µm,0.7s						
SABO				AML	AML		
	comp=E,266µm,1.5s						
SABO				AML	AML		
	comp=N,252µm,0.7s						
ABTA	**Abfaltersbach**	**3.11**	**32**	*e*Pn	Pn	08 31 23.7	+1.8
	comp=N,1.6nm,0.2s						
ABTA				*e*Sn	Sn	08 32 02.3	+3.0
	comp=N,33nm,0.6s						
RISI	**Rein**	**3.13**	**25**	AML	AML		
	comp=N,440µm,0.4s						
RISI				AML	AML		
	comp=E,367µm,0.5s						
RISI				AML	AML		
	comp=N,440µm,0.4s						
RISI				AML	AML		
	comp=E,367µm,0.5s						
RISI				AML	AML		
	comp=E,367µm,0.5s						
RISI				AML	AML		
	comp=N,440µm,0.4s						
ORIF	**Oris-en-Rattie**	**3.15**	**286**	*e*Pn	Pn	08 31 23.7	+1.3
ORIF				*e*Sn	Sn	08 32 00.1	-0.2
	comp=N,29nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.15**	**286**	Pn	Pn	08 31 25.0	+2.5
DAVA	**Damuels**	**3.16**	**357**	*e*Pn	Pn	08 31 26.0	+3.3
	comp=N,12nm,0.3s						
DAVA				*e*Sn	Sb	08 32 05.3	-2.5
	comp=N,70nm,0.5s						
SQTA	**Sankt Quirin**	**3.18**	**13**	*i* Pn	Pn	08 31 26.3	+3.4
	comp=N,16nm,0.2s						
SQTA				*e*Sn	Sb	08 32 07.5	-0.9
	comp=N,30nm,0.4s						
ASEAF	**Site Antares,**	**3.19**	**247**	Pn	Pn	08 31 24.6	+2.0
ASEAF				Sn	Sn	08 32 01.0	+0.4
PTCC	**Patocco-Chiusa**	**3.22**	**44**	AML	AML		
	comp=E,77µm,1.6s						
PTCC				AML	AML		
	comp=N,66µm,0.5s						
PTCC				AML	AML		
	comp=N,66µm,0.5s						
PTCC				AML	AML		
	comp=E,77µm,1.6s						
PTCC				AML	AML		
	comp=N,66µm,0.5s						
PTCC				AML	AML		
	comp=E,77µm,1.6s						
MOTA	**Moosalm**	**3.29**	**12**	*i* Pn	Pb	08 31 28.1	-3.1
	comp=E,4.1nm,0.2s						
SMRF	**Simiane la Rot**	**3.29**	**269**	*e*Sn	Sn	08 32 02.5	-1.3
	comp=E,9.3nm,0.3s						
WTTA	**Wattenberg**	**3.31**	**18**	*i* Pn	Pb	08 31 28.8	-2.7
	comp=E,3.4nm,0.2s						
WTTA				Sn	Sb	08 32 09.4	-2.5
	comp=E,41nm,0.4s						
RIY	**Rijeka**	**3.32**	**67**	ePn	Pn	08 31 25.6	+0.8
WATA	**Walderalm**	**3.36**	**17**	*e*Pn	Pn	08 31 28.6	+3.2
	comp=E,3.0nm,0.2s						
RETA	**Reutte**	**3.39**	**7**	*e*Pn	Pn	08 31 27.9	+2.1
	comp=E,2.1nm,0.2s						
RETA				*e*Sn	Sb	08 32 11.6	-2.6
	comp=E,3.7nm,0.2s						
ACOM	**Acomizza, Ital**	**3.39**	**43**	AML	AML		
	comp=N,162µm,1.2s						
ACOM				AML	AML		
	comp=E,217µm,0.6s						
ACOM				AML	AML		
	comp=N,162µm,1.2s						
ACOM				AML	AML		
	comp=E,217µm,0.6s						
ACOM				AML	AML		
	comp=N,162µm,1.2s						
ACOM				AML	AML		
	comp=E,217µm,0.6s						
NVLJ	**Novalja**	**3.42**	**81**	*e*Pn	Pn	08 31 27.7	+1.5
TORNY	**Torny/Romont**	**3.46**	**321**	Pn	Pn	08 31 30.3	+3.5
OGSM	**Saint Maurice**	**3.49**	**297**	Pn	Pn	08 31 30.8	+3.8
MYKA	**Terra Mystica**	**3.52**	**43**	*e*Pn	Pn	08 31 30.2	+2.7
	comp=E,1.2nm,0.2s						
MYKA				*e*Sn	Sn	08 32 11.4	+2.1
	comp=E,17nm,0.5s						
DUGI	**Dugi Otok**	**3.55**	**90**	*e*Pn	Pn	08 31 29.1	+1.2
DUGI				Sn	Sn	08 32 10.3	+0.2
BALST	**Balsthal**	**3.63**	**333**	Pn	Pn	08 31 31.8	+2.6
GIMEL	**St. Georges /**	**3.64**	**313**	Pn	Pn	08 31 33.0	+3.8
SULZ	**Cheisacher**	**3.68**	**338**	Pn	Pn	08 31 31.5	+1.7
KBA	**Koelnbreinsper**	**3.71**	**36**	*e*Pn	Pn	08 31 32.8	+2.5
	comp=E,4.9nm,0.2s						
KBA				*e*Sn	Sn	08 32 16.1	+1.8
	comp=E,14nm,0.6s						
OG35	**Corcelles**	**3.76**	**302**	Pn	Pn	08 31 34.1	+3.3
CABF	**La Chapelle**	**3.78**	**312**	*e*Pn	Pn	08 31 32.1	+0.9
CABF				*e*Sn	Sn	08 32 15.1	-0.9
	comp=E,8.4nm,0.2s						
BRANT	**Les Verrieres**	**3.81**	**319**	Pn	Pn	08 31 34.8	+3.2
SLE	**Schleitheim**	**3.81**	**343**	Pn	Pn	08 31 32.8	+1.2
BOURR	**Bourrignon**	**3.85**	**329**	Pn	Pn	08 31 35.4	+3.3
BOJS	**Bojanci**	**3.89**	**68**	AML	AML		
	comp=E,36µm,1.5s						
BOJS				AML	AML		
	comp=N,38µm,0.6s						
BOJS				AML	AML		
	comp=N,38µm,0.6s						
BOJS				AML	AML		
	comp=E,36µm,1.5s						
BOJS				AML	AML		
	comp=N,38µm,0.6s						
BOJS				AML	AML		
	comp=E,36µm,1.5s						
OBKA	**Obir**	**3.92**	**51**	*e*Pn	Pn	08 31 35.5	+2.5
	comp=E,3.6nm,0.2s						
CHMF	**Charmoille**	**3.96**	**323**	Pn	Pn	08 31 36.3	+2.7
LOMF	**Lomont**	**3.97**	**325**	Pn	Pn	08 31 36.8	+3.0
VIVF	**Saint-Julien-l**	**3.98**	**282**	*e*Pn	Pn	08 31 35.6	+1.8
VIVF				*e*Sn	Sn	08 32 19.5	-1.2
	comp=E,2.7nm,0.3s						
ZIRJ	**Zirje**	**4.01**	**95**	*e*Pn	Pn	08 31 35.1	+0.9
MORI	**Morici**	**4.03**	**92**	*e*Pn	Pn	08 31 35.9	+1.4
UDBI	**Udbina**	**4.06**	**82**	*e*Pn	Pn	08 31 37.5	+2.5
UDBI				Sn	Sn	08 32 22.5	-0.2
OZLJ	**Ozalj**	**4.07**	**67**	*e*Pn	Pn	08 31 36.4	+1.3
KIZ	**Kirchzarten**	**4.13**	**339**	Pn	Pn	08 31 37.3	+1.4
SSB	**Saint Sauveur**	**4.15**	**288**	Pn	Pn	08 31 40.1	+3.8
MOF	**Molkenrain**	**4.27**	**332**	Pn	Pn	08 31 40.3	+2.4
SOKA	**Soboth**	**4.29**	**52**	*e*Pn	Pn	08 31 39.8	+1.7
	comp=E,5.0nm,0.3s,SNR=6.0						
SOKA				*e*Sn	Sn	08 32 31.1	+2.7
	comp=E,9.4nm,0.6s						
HINF	**Hinteralfeld**	**4.34**	**329**	*e*Pn	Pn	08 31 39.5	+0.7
HINF				*e*Sn	Sn	08 32 28.2	-1.5
	comp=E,18nm,0.3s						
PTJ	**Puntijarka**	**4.50**	**65**	ePn		08 31 43.1	
KIJV	**Kijevo**	**4.52**	**89**	*i* Pn	Pn	08 31 43.8	+2.5
LASF	**Ste Croix**	**4.52**	**272**	*e*Pn	Pn	08 31 42.2	+0.9
LASF				*e*Sn	Sn	08 32 33.0	-1.1
	comp=E,3.5nm,0.3s						
OPP	**Oppenau**	**4.57**	**344**	Pn	Pn	08 31 43.3	+1.3
ECH	**Echery**	**4.58**	**334**	Pn	Pn	08 31 43.6	+1.5
HVAR	**Hvar**	**4.68**	**100**	*e*Pn	Pn	08 31 44.7	+1.3
HVAR				Sn	Sn	08 32 38.3	+0.4
HAU	**Haudompre**	**4.69**	**327**	*e*Pn	Pn	08 31 45.6	+2.0
HAU				*e*Sn	Sn	08 32 36.5	-1.7
	comp=E,57nm,0.4s						
MOA	**Molln**	**4.70**	**36**	*e*Pn	Pn	08 31 46.0	+2.2
	comp=E,6.0nm,0.2s						
MOA				*e*Sn	Sn	08 32 42.1	+3.5
	comp=E,5.9nm,0.4s						
CDF	**Champ du Feu**	**4.72**	**336**	*e*Pn	Pn	08 31 44.7	+0.6
CDF				*e*Sn	Sn	08 32 37.2	-1.9
	comp=E,32nm,0.4s						
ARSA	**Arzberg**	**4.90**	**49**	*e*Pn	Pn	08 31 48.8	+2.3
	comp=E,16nm,0.4s,SNR=9.2						
ARSA				Sn	Sn	08 32 42.6	-0.8
	comp=E,1.7nm,0.3s						
ARSA	**Arzberg**	**4.90**	**49**	AML	AML		
	comp=N,18µm,0.3s						
ARSA				AML	AML		
	comp=E,15µm,1.0s						
ARSA				AML	AML		
	comp=N,18µm,0.3s						
ARSA				AML	AML		
	comp=E,15µm,1.0s						
ARSA				AML	AML		
	comp=N,18µm,0.3s						
ARSA				AML	AML		
	comp=E,15µm,1.0s						
MAKA	**Makarska**	**5.06**	**97**	*e*Pn	Pn	08 31 49.9	+1.2
SMF	**Signal de Mont**	**5.10**	**302**	*e*Pn	Pn	08 31 51.1	+1.9
SMF				*e*Sn	Sn	08 32 47.6	-0.7
	comp=E,8.8nm,0.2s						
SFTF	**Sexfontaines**	**5.40**	**321**	*e*Pn	Pn	08 31 54.8	+1.5
	baz=138						
LOR	**Lormes**	**5.40**	**308**	*e*Pn	Pn	08 31 54.8	+1.4
	baz=124						
LOR				*e*Sn	Sn	08 32 55.9	+0.1
	comp=E,11nm,0.3s,baz=125						
LOR	**Lormes**	**5.40**	**308**	Pn	Pn	08 31 55.6	+2.2
AVF	**Avril sur Loir**	**5.46**	**302**	*e*Pn	Pn	08 31 55.9	+1.7
AVF				*e*Sn	Sn	08 32 55.9	-1.4
	comp=E,2.8nm,0.3s						
SSF	**Saint Saulge**	**5.50**	**305**	*e*Pn	Pn	08 31 55.5	+0.8
SSF				*e*Sn	Sn	08 32 56.2	-2.0
	comp=E,6.5nm,0.3s						
CONA	**Conrad Observa**	**5.51**	**44**	*e*Pn	Pn	08 31 56.7	+1.9
	comp=E,4.2nm,0.4s,SNR=5.2						
CONA				Sn	Sn	08 33 00.9	+2.5
	comp=E,2.5nm,0.3s						
KHC	**Kasperske Hory**	**5.54**	**24**	*e*PN	Pn	08 31 56.4	+1.2
KHC				*e*SN	Sn	08 32 58.0	-1.1
KHC				*e*SG	Sg	08 33 30.0	-0.1
STON	**Ston**	**5.64**	**100**	*e*Pn	Pn	08 31 57.4	+0.7
STON				Sn	Sn	08 33 02.9	+1.3
BGF	**Bois d'Agland**	**5.68**	**298**	*e*Pn	Pn	08 31 58.0	+0.8
BGF				*e*Sn	Sn	08 33 01.1	-1.6
	comp=E,12nm,0.4s						
MTLF	**Montolieu**	**5.79**	**265**	*e*Pn	Pn	08 31 59.4	+0.7
MTLF				*e*Sn	Sn	08 33 03.2	-2.2
	comp=E,1.7nm,0.4s						
ZST	**Bratislava**	**6.32**	**47**	*e*PN	Pn	08 32 07.3	+1.4
MODS	**Modra-Piesok**	**6.52**	**47**	*e*PN	Pn	08 32 10.1	+1.4
MODS				*e*SN	Sn	08 33 18.0	-5.3
BRG	**Berggiesshubel**	**7.22**	**20**	SN	Sn	08 33 38.9	-1.7
BRG				SG	Sg	08 34 24.6	+0.4
	comp=E,4.4nm,0.8s						
KOLL	**Kolacno**	**7.25**	**49**	*e*PN	Pn	08 32 20.4	+1.8
CLL	**Collm**	**7.44**	**14**	*e*	Sn	08 33 43.0	-2.8
CLL				*e*		08 33 58.0	
CLL				*e*Sg	Sg	08 34 28.0	-3.0
VYHS	**Vyhne**	**7.44**	**51**	*e*PN	Pn	08 32 22.4	+1.1
CHVC	**Chvalec**	**7.61**	**30**	*e*SG	Sg	08 34 38.5	+2.0
OSTC	**Ostas**	**7.64**	**31**	*e*SG	Sg	08 34 38.2	+0.7

ISCJB ***09*** *08:54:49.8±0.4, 4°.91S±0°.06×151°.97E±0°.08, h100^{km}, mb4.4/32, Error ellipse: s-maj=11.8km s-min=6.5km az=31.6*

NEIC ***09*** *08:54:53.1±1.0, 4°.94S×151°.95E, h118^{km}±6^{km}, mb4.6/22, Error ellipse: s-maj=17.1km s-min=10.3km az=113.0*

IDC ***09*** *08:54:56.2±3.9, 5°.12S×152°.04E, h152^{km}±36^{km}, mb3.9/14, mb1 4.1/15, mb1mx3.7/40, mbtmp4.3/15, MS3.0/2, Ms1 3.0/2, ms1mx2.6/25, Error ellipse: s-maj=23.5km s-min=19.0km az=40.0*

ISC 09 08:54:51.8±0.5, **5°.00S**±0°.07×**151°.99E**±0°.09, **h100^{km}, n49,** σ**1^{s}.45**/50, **mb4.3**/32, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.82**	**13**	*e*Pn	Pn	08 55 13.1	+2.7
RABL				*e*Sn	Sn	08 55 27.9	+3.5
PMG	**Port Moresby**	**6.49**	**227**	P	Pn	08 56 27.3	+2.5
	2.6nm,0.3s,baz=52,slow=9.7,SNR=6.2						

PMG				S	Sn	08 57 38.4	+0.9
	5.7nm,0.3s,baz=155,slow=19,SNR=6.6						
PMG	Port Moresby	6.49	227	ePn	Pn	08 56 27.1	+2.3
PMG				eSn	Sn	08 57 38.9	+1.4
HNR	Honiara	9.04	120	LR	LR	09 00 58.8	
	comp=Z,59nm,18.2s,baz=250,slow=41						
CTAO	Charters Tower	16.01	200	eP	P	08 58 34.1	+1.3
	35nm,1.4s						
EIDS	Eidsvold	20.28	182	eP	P	08 59 21.6	+2.0
	24nm,1.4s						
SIJI	Sorong	21.09	281	P	P	08 59 30.1	+1.6
	8.8nm,0.6s,baz=316,slow=23,SNR=5.1						
DZM	Mont Dzumac	22.00	142	P	P	08 59 38.9	+0.8
	8.7nm,0.9s,baz=311,slow=10,SNR=5.6						
DZM	Mont Dzumac	22.00	142	eP	P	08 59 38.7	+0.5
	48nm,1.5s						
MTN	Manton Dam	22.01	248	eP	P	08 59 38.1	-0.1
	21nm,1.2s						
WRAB	Tennant Creek	22.70	228	eP	P	08 59 43.8	-1.6
	15nm,0.6s						
WB2	Warramunga Arr	22.70	228	eP	P	08 59 44.5	-0.8
	19nm,0.4s						
WR1	Warramunga Arr	22.71	228	eP	P	08 59 44.6	-0.9
WRA	Warramunga Arr	22.71	228	P	P	08 59 44.6	-0.9
	14nm,0.4s,baz=54,slow=10,SNR=125						
AS31	Alice Springs	25.46	221	eP	P	09 00 10.7	-0.1
	1.8nm,0.4s						
ASAR	Alice Springs	25.46	221	P	P	09 00 10.1	-0.7
	3.9nm,0.6s,baz=54,slow=8.7,SNR=26						
SOEI	Soe	27.88	259	eP	P	09 00 32.3	-0.4
	46nm,1.5s						
STKA	Stephens Creek	28.46	199	eP	P	09 00 37.7	+0.2
	1.9nm,1.5s						
BBOO	Buckleboo	31.42	206	eP	P	09 01 02.4	-1.2
	28nm,1.5s						
FORT	Forrest	34.13	218	eP	P	09 01 25.8	-1.4
	36nm,1.1s						
PSA00	Pilbara Seismi	35.23	239	eP	P	09 01 35.5	-1.4
	28nm,1.4s						
JAGI	Jajag, Banyuwa	37.72	263	eP	P	09 01 57.6	-0.5
	149nm,1.6s						
GIRL	Giralia	40.46	241	eP	P	09 02 20.4	-0.6
	133nm,1.4s						
MORW	Morawa	41.59	231	eP	P	09 02 28.7	-1.4
	52nm,1.6s						
CISI	Cisompet, Garu	43.97	264	eP	P	09 02 48.5	-1.0
	78nm,1.2s						
KSRS	Korea Array	47.81	334	LR	LR	09 22 02.0	
	comp=Z,25nm,20.1s,baz=190,slow=34						
CMAR	Chiang Mai Arr	57.23	296	P	P	09 04 29.9	+0.7
	1.1nm,0.4s,baz=108,slow=5.0,SNR=5.8						
SONA0	Songino Array	66.06	328	eP	P	09 05 27.8	-0.4
SONM	Songino Array	66.06	328	P	P	09 05 27.8	-0.4
	0.9nm,0.5s,baz=138,slow=5.6,SNR=5.6						
CNPM	China Poot	78.24	26	eP	P	09 06 39.2	-1.2
	42nm,1.6s						
MK31	Makanchi Array	79.94	319	eP	P	09 06 49.1	-0.8
	2.2nm,1.1s						
MK32	Makanchi Array	79.94	319	eP	P	09 06 49.4	-0.6
MKAR	Makanchi Array	79.94	319	P	P	09 06 49.4	-0.6
	1.9nm,0.9s,baz=101,slow=6.3,SNR=9.2						
MAKZ	Makanchi	80.15	319	eP	P	09 06 50.3	-0.8
	2.2nm,0.8s						
ZALV	Zalesovo Beam	80.87	327	P	P	09 06 53.2	-1.5
	1.4nm,0.5s,baz=70,slow=5.4,SNR=2.8						
ZAA1	Zalesovo Array	80.87	327	eP	P	09 06 53.2	-1.5
ILAR	Eielson Array	82.64	22	P	P	09 07 02.4	-1.5
	0.4nm,0.7s,baz=247,slow=5.6,SNR=7.7						
DOT	Dot Lake	83.23	24	eP	P	09 07 06.0	-0.9
	3.8nm,1.2s						
KURBB	Kurchatov Arra	83.45	322	P	P	09 07 07.5	-0.7
	1.0nm,0.8s,baz=105,slow=4.1,SNR=5.6						
AAK	Ala-Archa	84.21	314	P	P	09 07 12.2	-0.3
	1.1nm,0.3s,baz=154,slow=3.3,SNR=4.5						
QSPA	South Pole Qui	84.97	180	eP	P	09 07 15.3	-0.5
	1.3nm,1.0s						
BVAR	Borovoye Array	88.91	323	P	P	09 07 33.4	-1.6
	3.3nm,0.8s,baz=225,slow=37,SNR=4.8						
NV01	Mina Array Sit	92.84	52	eP	P	09 07 53.2	-0.7
NVAR	Mina Array Bea	92.84	52	P	P	09 07 53.2	-0.7
	0.4nm,0.7s,baz=248,slow=4.8,SNR=4.1						
YKA	Yellowknife Ar	95.98	28	P	P	09 08 05.3	-2.1
	0.2nm,0.6s,baz=266,slow=4.2,SNR=4.3						
YKB5	Yellowknife Ar	95.98	28	eP	P	09 08 05.3	-2.1
TORD	Torodi Ar. Bea	149.59	287	PKPbc	PKPdf	09 14 28.6	+2.5
	1.1nm,0.6s,baz=96,slow=2.6,SNR=26						
TOA1	Torodi Ar. Sit	149.59	287	ePKPbc	PKPdf	09 14 28.6	+2.5
BDFB	Brasilia	151.49	136	PKPbc	PKPdf	09 14 31.1	+1.9
	2.1nm,0.4s,baz=220,slow=7.9,SNR=3.8						

IDC 09 09:15:00.8±2.3**, 1°.19N**×**126°.12E, h0^{km}, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.3**/30**, mbtmp3.3**/3**, Error ellipse: s-maj=191.1km s-min=28.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.50	159	P	P	09 20 02.0	-0.2
	0.5nm,0.4s,baz=338,slow=13,SNR=1.7						
ASAR	Alice Springs	25.84	163	P	P	09 20 34.3	+0.1
	0.2nm,0.3s,baz=344,slow=10.0,SNR=7.2						
MKAR	Makanchi Array	59.30	326	P	P	09 25 04.4	-0.1
	0.1nm,0.4s,baz=136,slow=5.7,SNR=1.9						

MEX 09 09:27:28.7±0.7**, 15°.14N**×**93°.06W, h89^{km}**±6^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.59	345	i P	Pn	09 27 42.8	-1.3
PCIG				eS	Sn	09 27 54.1	-1.5
THIG		0.80	106	eP	Pn	09 27 45.3	-0.9
THIG				eS	Sn	09 27 57.2	-2.0
CCIG	Comitan	1.45	38	eP	Pn	09 27 53.2	-0.7
CCIG				eS	Sn	09 28 11.4	-1.6
TGIG		1.64	358	i P	Pn	09 27 54.4	-1.8
TGIG				i S	Sn	09 28 14.9	-2.2

ISCJB ***09*** *09:35:15.1±0.5, 30°.36S±0°.08×178°.5W±0°.2, h350^{km}, Error ellipse: s-maj=25.0km s-min=5.8km az=21.9*

IDC ***09*** *09:35:19.3±3.7, 30°.47S×179°.30W, h388^{km}±37^{km}, mb3.2/4, mb1 3.5/6, mb1mx3.2/20, mbtmp4.2/6, Error ellipse: s-maj=36.8km s-min=27.7km az=19.0*

ISC 09 09:35:13.6±0.8**, 30°.32S**±0°.07×**178°.5W**±0°.1**, h350^{km}, n71, σ1^s.50**/77**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.18	27	P	Pn	09 36 02.5	+2.3
GLKZ				S	S	09 36 35.7	-1.8
RIZ	Raoul Island	1.19	26	P	Pn	09 36 03.0	+2.7
RIZ				S	S	09 36 39.4	+1.8
MXZ	Matakaoa Point	7.69	199	P	Pn	09 37 07.5	+3.6
MXZ				S	S	09 38 33.3	-0.5
GRZ	Great Barrier	7.77	219	P	Pn	09 37 09.2	+4.3
WMGZ	Waiomatatini S	7.90	198	P	P	09 37 08.4	+1.9
WIZ	White Island	8.02	205	P	Pn	09 37 07.6	-0.2
HAZ	Te Kaha	8.03	201	P	P	09 37 10.5	-0.5
HAZ				S	S	09 38 42.1	+0.9
PKGZ	Pakihiroa	8.06	200	P	P	09 37 10.3	-1.1
PUZ	Puketiti	8.18	198	P	P	09 37 11.7	-1.1
PUZ				S	S	09 38 44.9	+0.3
WCZ	Waipu Caves	8.19	225	P	P	09 37 13.8	+1.0
OUZ	Omahuta	8.24	232	P	P	09 37 14.8	+1.4
RUGZ	Raukumara Rang	8.25	201	P	P	09 37 13.8	+0.2
TWGZ	Tauwhareparae	8.36	199	P	P	09 37 14.9	+0.2
MBAZ	Motutapu North	8.45	219	P	P	09 37 18.2	+2.4
OPRZ	Ohinepanea	8.54	207	P	P	09 37 18.8	+2.1
MKAZ	Moumakai	8.57	216	P	P	09 37 19.5	+2.4
CNGZ	Carnagh Statio	8.58	197	P	P	09 37 17.2	0.0
MARZ	Manawahe	8.62	206	P	P	09 37 19.0	+1.4
MWZ	Matawai	8.63	201	P	P	09 37 17.0	-0.8
TKGZ	Te Karaka	8.64	199	P	P	09 37 16.2	-1.6
URZ	Urewera	8.70	203	P	P	09 37 17.8	-0.7
	7.0nm,0.3s,baz=269,slow=4.7,SNR=55						
URZ				S	S	09 38 54.4	-1.6
	4.1nm,0.3s,baz=50,slow=22,SNR=14						
URZ	Urewera	8.70	203	P	P	09 37 17.9	-0.7
RAGZ	Rawiri	8.82	201	P	P	09 37 19.2	-0.7
TOZ	Tahuroa Road	8.90	212	P	P	09 37 22.3	+1.6
RIGZ	Rimuhau	8.91	199	P	P	09 37 21.9	+1.0
MUGZ	Murupara	9.02	204	P	P	09 37 22.1	+0.1
RTZ	Ruatahuna	9.07	203	P	P	09 37 23.6	+0.9
PRGZ	Paritu Road	9.08	198	P	P	09 37 23.1	+0.3
SNGZ	Shannon Statio	9.10	201	P	P	09 37 21.8	-1.2
PRRZ	Plateau Road	9.17	206	P	P	09 37 24.6	+0.8
ALRZ	Allen Road	9.25	206	P	P	09 37 25.4	+0.8
RAHZ	Arahi	9.31	202	P	P	09 37 24.8	-0.5
MTHZ	Maungataniwha	9.33	203	P	P	09 37 25.6	+0.1
TLZ	Tolley Road	9.38	210	P	P	09 37 29.2	+3.1
WHHZ	Waihua	9.41	201	P	P	09 37 28.6	+2.3
MRHZ	Matea Rd	9.46	205	P	P	09 37 27.4	+0.4
NMHZ	Naumai	9.56	202	P	Pn	09 37 26.8	+0.5
ARHZ	Aropaoanui	9.65	201	P	P	09 37 29.0	0.0
BKZ	Black Stump Fm	9.73	204	P	P	09 37 29.6	-0.4
HIZ	Hauiti	9.83	212	P	P	09 37 34.8	+3.7
MCHZ	McNeill Hill	9.91	202	P	P	09 37 32.6	+0.6
KWHZ	Kaweka Forest	9.98	203	P	P	09 37 33.5	+0.7
FWVZ	Far West T-bar	10.15	207	P	Pn	09 37 33.9	+0.4
WHVZ	Whangaehu Hut	10.16	207	P	P	09 37 34.3	-0.7
BHHZ	Black Hill Sta	10.17	204	P	P	09 37 34.6	-0.3
KAHZ	Kahuranaki	10.18	200	P	Pn	09 37 33.7	+0.1
KRHZ	Kereru	10.20	203	P	Pn	09 37 33.1	-0.7
MOVZ	Moawhango	10.21	206	P	P	09 37 34.8	-0.6
MTVZ	Mangateitei	10.30	207	P	P	09 37 37.4	+1.1
VRZ	Vera Road	10.37	210	P	P	09 37 38.7	+1.7
PXZ	Pawanui	10.40	200	P	P	09 37 37.5	+0.2
PRHZ	Porangahau	10.68	200	P	P	09 37 41.3	+0.8
WAZ	Wanganui	10.81	208	P	P	09 37 42.8	+0.9
DVHZ	Dannevirke	10.86	202	P	P	09 37 42.9	+0.4
ANWZ	Angora Road	10.91	201	P	P	09 37 44.1	+1.1
POWZ	Post Office Ro	11.07	203	P	P	09 37 45.7	+0.9
PRWZ	Pori Road	11.15	202	P	P	09 37 47.4	+1.7
TIWZ	Tintock	11.38	202	P	P	09 37 48.8	+0.5
TMWZ	Te Maipa	11.68	201	P	P	09 37 52.7	+1.1
DZM	Mont Dzumac	15.78	298	P	P	09 38 35.7	-1.2
	1.4nm,0.3s,baz=166,slow=9.7,SNR=11						
ASAR	Alice Springs	42.66	267	P	P	09 42 34.3	-3.0
	0.3nm,0.5s,baz=104,slow=7.1,SNR=12						
WRA	Warramunga Arr	43.64	272	P	P	09 42 42.0	-3.1
	1.5nm,0.7s,baz=102,slow=8.4,SNR=2.3						
PETK	Petropavlovsk-	85.62	346	P	P	09 47 13.7	+0.8
	1.6nm,0.6s,baz=123,slow=5.3,SNR=2.7						
NVAR	Mina Array Bea	88.49	43	P	P	09 47 31.6	+4.4
	1.1nm,0.9s,baz=224,slow=7.5,SNR=5.9						
MKAR	Makanchi Array	117.37	310	PKP	PKiKP	09 53 17.9	+0.2
	0.3nm,0.6s,baz=120,slow=2.3,SNR=2.3						
KURBB	Kurchatov Arra	120.70	314	PKP	PKiKP	09 53 24.2	+0.2
	0.8nm,0.6s,baz=111,slow=1.7,SNR=5.8						
BVAR	Borovoye Array	126.03	316	PKP	PKiKP	09 53 35.0	+0.5
	0.9nm,0.7s,baz=354,slow=1.5,SNR=4.6						
FINES	FINESS Array B	144.91	340	PKP	PKPab	09 54 08.4	-0.7
	3.0nm,0.5s,baz=48,slow=4.2,SNR=14						
NB2	NORSAR Subarra	148.60	351	PKP	PKiKP	09 54 19.7	-0.6
	comp=Z,0.7nm,0.5s,baz=19,slow=2.7						
NOA	NORSAR Array B	148.60	351	PKP	PKPbc	09 54 16.6	-2.4
	comp=Z,1.3nm,0.7s,baz=15,slow=4.6,SNR=4.5						
NOA				PKPbc	PKiKP	09 54 19.9	-0.3
	comp=Z,1.4nm,0.7s,baz=16,slow=4.4,SNR=4.5						
AKASG	Malin Array Be	150.96	322	PKPbc	PKiKP	09 54 25.7	+0.4
	comp=Z,1.8nm,0.6s,baz=52,slow=2.9,SNR=7.9						

MOS ***09*** *09:43:10.8±1.1, 23°.62N×44°.91W, h10^{km}, mb5.0/72, Error ellipse: s-maj=5.8km s-min=5.7km az=36.9*

NEIC ***09*** *09:43:11.8±1.8, 23°.54N×44°.84W, h10^{km}, mb4.9/384, Error ellipse: s-maj=17.0km s-min=15.2km az=154.0*

IDC ***09*** *09:43:11.2±0.4, 23°.59N×44°.84W, h0^{km}, mb4.6/34, mb1 4.6/34, mb1mx4.5/49, mbtmp4.5/34, MS3.8/33, Ms1 3.8/33, ms1mx3.7/46, Error ellipse: s-maj=14.2km s-min=10.5km az=141.0*

ISCJB ***09*** *09:43:11.1±0.2, 23°.52N±0°.04×44°.82W±0°.02, h15^{km}, mb4.8/389, MS3.9/36, Error ellipse: s-maj=5.1km s-min=2.8km az=176.5*

BJI ***09*** *09:43:11.9±0.0, 23°.60N×44°.80W, h10^{km}, mb5.3/1, mB5.5/2, Ms5.1/4*

GCMT ***09*** *09:43:13.9±0.4, 23°.52N±0°.04×44°.85W±0°.02, h14^{km}±1^{km}, MW4.9/73, Moment Tensor Solution. s14,c14; s73,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.67±.17; $M_{\theta\theta}$-0.14±.10; $M_{\phi\phi}$1.81±.12; $M_{r\theta}$-2.02±.39; $M_{\theta\phi}$0.09±.06; $M_{\phi r}$0.25±.20; Best double couple: $M_0$2.45500×10^{16} NP1:ϕ_s149.00000°, δ60.00000°, λ-130.00000°. NP2: ϕ_s28.00000°, δ49.00000°, λ-42.00000°. Principal axes: T 1.8310, Plg6.0000°, Azm266.0000°; N 1.2450, Plg34.0000°, Azm172.0000°; P -3.0790, Plg55.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 09:43:12.9±0.3**, 23°.53N**±0°.07×**44°.84W**±0°.05**, h15^{km}, n921, σ0^s.96**/903**, mb4.9**/399**, MS3.8**/36**, 7C-4D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H05N1	Guadeloupe/Mar	16.85	248	T	T	10 04 30.6	
FDF	Fort de France	17.71	243	eP	P	09 47 20.0	0.0
	143nm,1.4s						
FDF	Fort de France	17.71	243	eP	P	09 47 20.0	0.0
FDF				pmax	pmax		
	comp=Z,143nm,1.4s						
CDVI	St. Croix	19.51	257	eP	Pn	09 47 42.2	+1.2
	comp=Z,0.9nm,0.6s						
BBSR	BB Station	19.61	301	eP	P	09 47 41.0	+0.2
	comp=Z,40nm,1.6s						
CUPR	Culebra, Puert	19.79	259	eP	P	09 47 42.5	-0.3
	comp=Z,31nm,1.0s						
MDP	Montagnes des	19.81	204	LR	LR	09 53 40.2	
	comp=Z,164nm,18.4s,baz=24,slow=32						
MTP	Monte Pirata	20.10	258	eP	P	09 47 46.6	+0.4
	comp=Z,80nm,1.4s						
CBYP	Canovanas	20.32	259	eP	P	09 47 49.0	+0.3
	comp=Z,38nm,1.1s						
SJG	San Juan	20.63	259	P	P	09 47 52.4	+0.4
	comp=Z,8.4nm,0.2s,baz=111,slow=12,SNR=4.2						
SJG				LR	LR	09 54 04.3	
	comp=Z,263nm,21.9s,baz=86,slow=32						
SJG	San Juan	20.63	259	eP	P	09 47 51.2	-0.7
	comp=Z,60nm,1.3s						
ROSA	Rosais	20.71	39	eP	P	09 47 50.9	-1.9
	comp=Z,286nm,2.0s						
OBIP	Obispado Ponce	21.06	259	eP	P	09 47 55.6	-1.0
	comp=Z,45nm,0.9s						
AOPR	Arecibo Observ	21.10	260	eP	P	09 47 56.1	-1.1
	comp=Z,55nm,1.1s						
MPR	Mayaguez	21.49	260	eP	P	09 47 57.7	-3.6
	comp=Z,76nm,1.2s						
GRTK	Grand Turk	24.36	270	eP	P	09 48 28.5	-2.1
	comp=Z,185nm,1.1s						
SDDR	Presa de Saban	25.05	265	eP	P	09 48 36.1	-0.7
	comp=Z,53nm,1.4s						
MACI	Morro de la Ar	25.89	74	eP	P	09 48 44.6	+0.1
	comp=Z,46nm,0.9s						
HAL	Halifax	26.05	328	eP	P	09 48 45.5	-0.1
	comp=Z,14nm,1.1s						
HAL	Halifax	26.05	328	eP	P	09 48 45.5	-0.1
HAL				pmax	pmax		
	comp=Z,14nm,1.1s						
LMN	Caledonia Moun	27.52	329	eP	P	09 48 58.1	-0.8
	comp=Z,11nm,1.2s						
DRLN	Deer Lake	27.55	342	eP	P	09 48 59.6	+0.5
	comp=Z,25nm,1.4s						
GGN	Saint George	28.01	326	eP	P	09 49 03.2	0.0
	comp=Z,5.0nm,0.8s						
EMMW	East Machias	28.07	324	eP	P	09 49 03.6	-0.1
	comp=Z,30nm,1.7s						
PTGA	Pitinga	28.25	213	P	P	09 49 06.7	+1.0
	comp=Z,1.1nm,0.3s,baz=17,slow=13,SNR=4.2						
PTGA				LR	LR	09 59 19.1	
	comp=Z,148nm,18.4s,baz=29,slow=34						
PTGA	Pitinga	28.25	213	eP	P	09 49 04.0	-1.7
	comp=Z,5.8nm,1.0s						
SDV	Santo Domingo	28.66	244	P	P	09 49 11.3	+1.8
	comp=Z,9.0nm,0.9s,baz=64,slow=5.9,SNR=10.0						
SDV				LR	LR	09 59 20.9	
	comp=Z,214nm,21.8s,baz=68,slow=34						
SDV	Santo Domingo	28.66	244	eP	P	09 49 08.9	-0.7
	comp=Z,13nm,1.0s						
BCX	Boston College	28.80	317	eP	P	09 49 09.5	-0.9
	comp=Z,53nm,1.8s						
WES	Weston	28.93	317	eP	P	09 49 11.7	+0.3
	comp=Z,15nm,1.1s						
WES	Weston	28.93	317	eP	P	09 49 11.7	+0.3
WES				pmax	pmax		
	comp=Z,15nm,1.1s						
HRV	Adam Dziewonsk	29.14	317	eP	P	09 49 13.3	0.0
	comp=Z,17nm,1.2s						
HRV	Adam Dziewonsk	29.14	317	eP	P	09 49 13.3	0.0
HRV				pmax	pmax		
	comp=Z,17nm,1.2s						
WVL	Waterville	29.18	322	eP	P	09 49 12.2	-1.5
	comp=Z,25nm,1.5s						
PKME	Peaks-Kenny Pk	29.41	323	P	P	09 49 16.3	+0.5
	baz=129						
PQI	Presque Isle	29.67	327	eP	P	09 49 17.6	-0.4
	comp=Z,14nm,0.8s						
PAL	Palisades	29.94	313	eP	P	09 49 16.7	-3.7
	comp=Z,22nm,1.3s						
PAL	Palisades	29.94	313	eP	P	09 49 16.7	-3.7
PAL				pmax	pmax		
	comp=Z,22nm,1.3s						
V61A	Roper	30.03	301	eP	P	09 49 18.9	-2.4
	comp=Z,59nm,0.9s						
BRNJ	Basking Ridge	30.24	312	eP	P	09 49 20.9	-2.2
	comp=Z,15nm,1.1s						
LBNH	Lisbon	30.31	320	eP	P	09 49 22.2	-1.5
	comp=Z,26nm,1.4s						
LBNH	Lisbon	30.31	320	eP	P	09 49 22.2	-1.5
LBNH				pmax	pmax		
	comp=Z,26nm,1.4s						
ODNJ	Ogdensburg	30.44	312	eP	P	09 49 23.9	-1.0
	comp=Z,8.4nm,1.2s						
T60A	Surry	30.53	304	eP	P	09 49 23.4	-2.3
	comp=Z,27nm,0.8s						
T60A	Surry	30.53	304	P	P	09 49 26.3	+0.6
	baz=107						
PSUB	Penn St. - Bra	30.55	310	eP	P	09 49 24.0	-1.9
	comp=Z,41nm,1.9s						
V60A	Jim Taylor Roa	30.57	301	eP	P	09 49 22.4	-3.7
	comp=Z,83nm,0.2s						
V60A	Jim Taylor Roa	30.57	301	P	P	09 49 27.0	+1.0
	baz=105						
U60A	Pendleton	30.67	302	P	P	09 49 27.5	+0.5
	baz=106						
O60A	Telford	30.67	310	P	P	09 49 27.6	+0.6
	baz=114						
N60A	Cedar Hill Far	30.69	312	P	P	09 49 27.6	+0.5
	baz=115						
W60A	Pink Hill	30.75	299	P	P	09 49 28.7	+1.0
	baz=103						
X60A	Albert Glenn T	30.86	298	P	P	09 49 29.7	+1.1
	baz=102						
ACCN	Adirondack Com	30.92	317	eP	P	09 49 26.9	-2.3
	comp=Z,7.5nm,1.1s						
Y60A	Bolivia	30.94	297	P	P	09 49 30.0	+0.6
	baz=101						
MOQ	Mont Orford	31.11	321	eP	P	09 49 30.4	-0.5
T59A	Double "B" Far	31.11	303	eP	P	09 49 29.6	-1.2
	comp=Z,6.3nm,0.9s						
P59A	Jarrettsville	31.13	308	P	P	09 49 32.4	+1.4
	baz=112						
U59A	Littleton	31.13	302	eP	P	09 49 30.9	-0.1
	comp=Z,9.0nm,1.3s						
U59A	Littleton	31.13	302	P	P	09 49 32.3	+1.3
	baz=105						
N59A	State Game Lan	31.17	311	eP	P	09 49 30.9	-0.5
	comp=Z,8.3nm,1.0s						
N59A	State Game Lan	31.17	311	P	P	09 49 32.7	+1.3
	baz=114						
M59A	Waymart	31.20	312	P	P	09 49 32.7	+1.0
	baz=116						
O59A	Robesonia	31.22	310	P	P	09 49 32.7	+0.9
	baz=113						
V59A	Middlesex	31.34	301	P	P	09 49 33.3	+0.4
	baz=104						
CBN	Corbin Frederi	31.34	305	eP	P	09 49 31.6	-1.2
	comp=Z,14nm,0.5s						
SDMD	Soldier's Deli	31.35	308	eP	P	09 49 31.5	-1.5
	comp=Z,4.3nm,0.7s						
Y59A	Loris	31.48	297	P	P	09 49 35.0	+0.9
	baz=100						
NCB	Newcomb	31.56	317	eP	P	09 49 34.5	-0.4
	comp=Z,5.2nm,0.8s						
PAGS	Pennsylvania G	31.57	309	eP	P	09 49 31.5	-3.3
	comp=Z,13nm,1.2s						
FRNY	Flat Rock	31.63	319	eP	P	09 49 34.5	-0.9
	comp=Z,17nm,1.0s						
R58B	Mineral	31.65	305	eP	P	09 49 34.6	-1.0
	comp=Z,4.7nm,1.0s						
R58B	Mineral	31.65	305	P	P	09 49 36.7	+1.2
	baz=108						
O58A	Lewisberry	31.67	309	P	P	09 49 36.8	+1.0
	baz=112						
P58A	Pank, Wackersv	31.71	308	P	P	09 49 36.7	+0.6
	baz=110						
U58A	Oxford	31.73	302	P	P	09 49 37.5	+1.1
	baz=104						
R58A	Rapidan	31.84	305	P	P	09 49 37.4	+0.1
	baz=108						
T58A	Grand View Acr	31.86	303	P	P	09 49 37.8	+0.3
	baz=105						
BINY	Binghamton	31.86	313	eP	P	09 49 35.9	-1.6
	comp=Z,17nm,1.4s						
W58A	Raeford	31.96	299	P	P	09 49 38.8	+0.4
	baz=102						
V58A	Windy Hill, Pi	32.03	300	P	P	09 49 40.1	+1.1
	baz=103						
Y58A	Scranton	32.11	297	P	P	09 49 40.8	+1.1
	baz=100						
LONY	Lake Ozonia	32.12	318	eP	P	09 49 39.8	+0.2
	comp=Z,7.8nm,1.1s						
LONY	Lake Ozonia	32.12	318	P	P	09 49 40.6	+0.9
	baz=121						
O57A	Amberson	32.21	309	P	P	09 49 41.6	+1.1
	baz=111						
P57A	Homestead Farm	32.23	307	P	P	09 49 41.5	+0.8
	baz=110						
060A	Indiantown	32.25	284	eP	P	09 49 38.8	-2.1
	comp=Z,210nm,1.3s						
N57A	Milroy	32.35	310	P	P	09 49 41.8	+0.1
	baz=112						
U57A	Blanch	32.36	301	P	P	09 49 41.9	0.0
	baz=104,SNR=7.1						
Q57A	Strasburg	32.38	306	P	P	09 49 42.9	+0.9
	baz=109						
S57A	Dark Hollow, R	32.40	304	eP	P	09 49 41.0	-1.3
	comp=Z,9.5nm,1.0s						
S57A	Dark Hollow, R	32.40	304	P	P	09 49 43.0	+0.8
	baz=106						
T57A	Hurt	32.43	302	eP	P	09 49 42.3	-0.2
	comp=Z,6.0nm,1.0s						
T57A	Hurt	32.43	302	P	P	09 49 43.4	+0.9
	baz=105						
060Z	West Palm Beac	32.45	283	P	P	09 49 43.7	+1.0
	baz=87						
SSPA	Standing Stone	32.54	310	eP	P	09 49 42.3	-1.1
	comp=Z,13nm,1.2s						
SSPA	Standing Stone	32.54	310	P	P	09 49 45.0	+1.5
	baz=112						
X57A	Johnson Farm,	32.56	298	P	P	09 49 44.5	+0.9
	baz=100						
V57A	Coltrane Farms	32.58	300	P	P	09 49 44.3	+0.5
	baz=103						
W57A	Gilead	32.60	299	eP	P	09 49 44.0	0.0
	comp=Z,21nm,1.0s						
W57A	Gilead	32.60	299	P	P	09 49 44.6	+0.6
	baz=101						
P56A	Dayton Farm, R	32.84	307	P	P	09 49 46.9	+0.9
	baz=109						
Z57A	Bowman	32.88	295	P	P	09 49 46.8	+0.4
	baz=98						
BIRD	Birdtown, Kers	32.89	298	eP	P	09 49 47.3	+0.8
	comp=Z,21nm,1.0s						
O56A	Blue Knob Stat	32.90	309	eP	P	09 49 47.2	+0.6
	comp=Z,8.9nm,1.1s						
O56A	Blue Knob Stat	32.90	309	P	P	09 49 47.5	+0.9
	baz=110						
R56A	Bull Pasture M	32.92	305	P	P	09 49 47.8	+0.9
	baz=107						
N56A	West Decatur	32.94	310	P	P	09 49 47.8	+0.9
	baz=112						
Q56A	Snyder Ridge,	32.95	306	P	P	09 49 48.0	+0.9
	baz=108						
TRQ	Mont Tremblant	32.95	321	eP	P	09 49 46.4	-0.6
758A	Lake Helen	32.97	287	P	P	09 49 47.5	+0.2
	baz=91						
658A	Bunnell	33.03	288	eP	P	09 49 48.4	+0.6
	comp=Z,150nm,2.0s						
T56A	Rocky Mt	33.04	302	P	P	09 49 48.6	+0.8
	baz=104						
W56A	Indian Trail	33.07	299	P	P	09 49 48.6	+0.5
	baz=101						
ORIO	Orleans, Innes	33.11	319	P	P	09 49 48.8	+0.5

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      baz=121
V56A  Mocksville        33.14 300  eP     P      09 49 49.3 +0.6
      comp=Z,16nm,1.1s
V56A  Mocksville        33.14 300  P      P      09 49 48.8 +0.1
      baz=102
H56A  Elgin             33.14 317  P      P      09 49 49.8 +1.2
      baz=119
U56A  King              33.16 301  P      P      09 49 49.7 +0.8
      baz=103
DWPF  Disney Wildern    33.18 286  eP     P      09 49 48.3  -0.8
      comp=Z,105nm,1.7s
DWPF  Disney Wildern    33.18 286  P      P      09 49 49.8 +0.7
      baz=89
059Z  Ave Maria         33.24 283  P      P      09 49 50.2 +0.5
      baz=87
PECO  Prince Edward     33.30 316  eP     P      09 49 48.0  -1.9
      comp=Z,5.0nm,1.0s
X56A  White Oak         33.33 297  P      P      09 49 51.3 +0.9
      baz=99
N55A  Marion Center     33.38 309  eP     P      09 49 50.7  -0.1
      comp=Z,8.3nm,1.0s
N55A  Marion Center     33.38 309  P      P      09 49 51.6 +0.9
      baz=111
BLA   Blacksburg        33.39 302  eP     P      09 49 49.6  -1.3
      comp=Z,28nm,1.0s
R55A  Marlinton         33.43 304  eP     P      09 49 52.0 +0.7
      comp=Z,16nm,1.2s
156A  Sylvania          33.46 294  P      P      09 49 52.3 +0.8
      baz=96
M55A  Ridgway           33.47 310  P      P      09 49 51.7 +0.2
      baz=112,SNR=11
JSC   Jenkinsville      33.48 297  eP     P      09 49 49.4  -2.3
      comp=Z,19nm,0.9s
JSC   Jenkinsville      33.48 297  eP     P      09 49 49.4  -2.3
JSC                                pmax   pmax
      comp=Z,19nm,0.9s
K55A  Perry             33.48 313  P      P      09 49 52.7 +1.0
      baz=114
L55A  Hinsdale          33.51 312  P      P      09 49 52.5 +0.6
      baz=113
S55A  Lewisburg         33.59 303  P      P      09 49 53.8 +1.1
      baz=105
T55A  Pulaski           33.65 302  P      P      09 49 54.1 +1.0
      baz=104
KMSC  Kings Mountain    33.68 298  eP     P      09 49 53.3  -0.2
      comp=Z,18nm,1.0s
KMSC  Kings Mountain    33.68 298  P      P      09 49 54.0 +0.5
      baz=100,SNR=8.1
U55A  TA2, Sparta       33.72 301  P      P      09 49 54.7 +0.9
      baz=102
X55A  Gracelyn & Ava    33.81 297  P      P      09 49 55.2 +0.6
      baz=99,SNR=11
K54A  Basiliko Farm,    33.85 312  P      P      09 49 55.5 +0.6
      baz=114
PLVO  Plevna            33.87 317  P      P      09 49 55.8 +0.9
      baz=119
857A  Zephyrhills       33.88 286  P      P      09 49 56.5 +1.3
      baz=89
MEDO  Medina            33.92 313  P      P      09 49 56.3 +0.9
      baz=114
Y55A  Saluda            33.92 296  P      P      09 49 56.2 +0.7
      baz=98,SNR=6.2
ROSC  El Rosal          33.96 241  LR     LR     10 03 34.4
      comp=Z,139nm,21.5s,baz=22,slow=36
PAULI Pauline           34.02 298  eP     P      09 49 56.3   0.0
      comp=Z,13nm,0.9s
556A  Lake Butler       34.05 289  P      P      09 49 57.2 +0.6
      baz=92
R54A  Victor            34.07 304  P      P      09 49 57.8 +1.0
      baz=105
J54A  Appleton          34.09 314  P      P      09 49 57.7 +0.9
      baz=114
L54A  Sinclairville     34.13 311  P      P      09 49 57.9 +0.6
      baz=112
255A  Hazlehurst        34.22 293  eP     P      09 49 58.0  -0.1
      comp=Z,41nm,1.4s
S54A  Dingess, Beckl    34.22 303  P      P      09 49 58.9 +0.7
      baz=104
T54A  Tazewell          34.25 302  P      P      09 49 59.2 +0.8
      baz=103,SNR=9.5
155A  Kite              34.27 294  P      P      09 49 59.5 +0.9
      baz=96
PEMO  Pembroke          34.28 318  P      P      09 49 59.5 +1.0
      baz=119
V54A  Nebo              34.29 299  P      P      09 49 59.6 +0.9
      baz=101
HODGE Hodges            34.29 297  eP     P      09 49 59.0 +0.3
      comp=Z,20nm,1.0s
U54A  Nelsons Funny     34.33 301  eP     P      09 49 59.4 +0.3
      comp=Z,15nm,0.9s
U54A  Nelsons Funny     34.33 301  P      P      09 50 00.0 +0.9
      baz=102
W54A  Cherokee Point    34.36 298  P      P      09 49 60.0 +0.6
      baz=99,SNR=13
DRWO  Darlington Wes    34.40 314  P      P      09 50 00.7 +1.2
      baz=115
X54A  Belton            34.43 297  P      P      09 50 00.2 +0.3
      baz=98
Y54A  Tignall           34.59 296  P      P      09 50 02.2 +0.9
      baz=97,SNR=13
455A  Stateville        34.61 290  P      P      09 50 02.1 +0.6
      baz=92
E54A  Lac Daplat, Po    34.62 319  P      P      09 50 01.2  -0.2
      baz=120,SNR=7.5
Q53A  Leroy             34.65 305  P      P      09 50 02.3 +0.6
      baz=105
Z54A  Sparta            34.65 295  P      P      09 50 02.4 +0.6
      baz=96
D54A  Lac Fusel, La     34.67 321  P      P      09 50 02.8 +0.9
      baz=122
P53A  Whipple           34.72 306  P      P      09 50 02.8 +0.4
      baz=106
655A  Horseshoe Beac    34.78 288  P      P      09 50 04.1 +1.1
      baz=91
154A  Montrose          34.81 294  eP     P      09 50 03.9 +0.7
      comp=Z,18nm,0.8s
154A  Montrose          34.81 294  P      P      09 50 04.0 +0.7
      baz=95
TYNO  Tyneside          34.84 313  P      P      09 50 03.9 +0.5
      baz=113
E53A  Dumoine, Ponti    34.88 319  P      P      09 50 04.9 +1.2
      baz=120
G53A  Haliburton        34.88 316  P      P      09 50 04.5 +0.9
      baz=117
U53A  Fall Branch       34.90 300  P      P      09 50 04.7 +0.7
      baz=101,SNR=6.9
ALGO  Algonquin Park    34.91 318  P      P      09 50 04.7 +0.8
      baz=119
BG3   Lake Jocassee     34.95 298  eP     P      09 50 05.2 +0.8
      comp=Z,9.1nm,1.1s
V53A  Saluda            34.96 299  eP     P      09 50 05.2 +0.6
      comp=Z,7.6nm,0.9s
V53A  Saluda            34.96 299  P      P      09 50 05.3 +0.6
      baz=100
T53A  Wise              34.98 301  P      P      09 50 05.5 +0.7
      baz=102
CHGQ  Chibougamau       35.01 326  P      P      09 50 04.7   0.0
      baz=128,SNR=18
SADO  Sadowa            35.05 316  LR     LR     10 01 37.0
      comp=Z,228nm,20.8s,baz=151,slow=32
W53A  Cullowhee         35.16 298  P      P      09 50 07.4 +0.9
      baz=99,SNR=7.3
X53A  Estanollee        35.18 297  P      P      09 50 07.6 +1.2
      baz=98,SNR=9.2
GOGA  Godfrey           35.19 295  eP     P      09 50 07.3 +0.8
      comp=Z,19nm,1.3s
GOGA  Godfrey           35.19 295  eP     P      09 50 07.3 +0.8
GOGA                               pmax   pmax
      comp=Z,19nm,1.3s
GOGA  Godfrey           35.19 295  P      P      09 50 07.6 +1.1
      baz=96,SNR=6.4
Q52A  Bidwell           35.23 305  P      P      09 50 07.7 +0.9
      baz=105
D53A  Lac Vacive, Po    35.25 320  eP     P      09 50 06.5  -0.3
      comp=Z,9.3nm,0.9s
D53A  Lac Vacive, Po    35.25 320  P      P      09 50 07.5 +0.6
      baz=120,SNR=8.1
Z53A  Monticello        35.26 295  P      P      09 50 08.0 +0.9
      baz=96
K52A  Tillsonburg       35.30 312  P      P      09 50 07.9 +0.6
      baz=112
SCHQ  Schefferville     35.30 338  LR     LR     10 02 52.5
      comp=Z,126nm,21.1s,baz=88,slow=34
J52A  Paris             35.31 313  P      P      09 50 08.1 +0.7
      baz=112,SNR=5.2
M52A  Chesterland       35.32 309  eP     P      09 50 07.9 +0.4
      comp=Z,10nm,0.8s
Y53A  Monroe            35.33 296  P      P      09 50 08.6 +0.8
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      baz=97,SNR=8.4
T52A  Hallie            35.36 301  eP     P      09 50 07.4  -0.6
      comp=Z,25nm,1.4s
T52A  Hallie            35.36 301  P      P      09 50 08.6 +0.6
      baz=102
E52A  Mattawa           35.43 318  P      P      09 50 09.2 +0.8
      baz=118
BUKO  Buck Lake         35.51 317  P      P      09 50 09.9 +0.8
      baz=116
U52A  Thorn Hill        35.53 300  P      P      09 50 09.9 +0.4
      baz=100,SNR=5.2
V52A  Sevierville       35.62 299  eP     P      09 50 10.4 +0.2
      comp=Z,20nm,1.4s
V52A  Sevierville       35.62 299  P      P      09 50 10.7 +0.5
      baz=99
D52A  ZEK Kipawa Sen    35.62 319  P      P      09 50 10.7 +0.6
      baz=119
F52A  Sundridge         35.62 317  P      P      09 50 10.3 +0.2
      baz=117
253A  Americus          35.63 293  P      P      09 50 10.9 +0.6
      baz=94
VLDQ  Val d'Or          35.64 322  eP     P      09 50 12.7 +2.5
      comp=Z,9.0nm,1.0s
353A  Camilla           35.66 291  P      P      09 50 11.5 +0.9
      baz=93
X52A  Dahlonega         35.68 297  P      P      09 50 11.8 +1.0
      baz=98
TZTN  Tazewell          35.70 300  eP     P      09 50 09.6  -1.3
      comp=Z,25nm,1.0s
TZTN  Tazewell          35.70 300  P      P      09 50 11.6 +0.7
      baz=100,SNR=11
Y52A  Lilburn           35.73 296  eP     P      09 50 10.2  -1.0
      comp=Z,9.1nm,1.0s
Y52A  Lilburn           35.73 296  P      P      09 50 12.1 +0.9
      baz=96
453A  Whigham           35.73 291  eP     P      09 50 11.3 +0.1
      comp=Z,46nm,1.4s
W52A  Murphy            35.77 298  eP     P      09 50 11.8 +0.2
      comp=Z,18nm,1.0s
W52A  Murphy            35.77 298  P      P      09 50 12.1 +0.5
      baz=98,SNR=7.2
LSQQ  Lebel-sur-Quev    35.88 323  P      P      09 50 12.8 +0.5
      baz=124
I51A  Listowel          35.89 313  P      P      09 50 12.5 +0.1
      baz=112,SNR=6.0
S51A  Beattyville       35.95 302  eP     P      09 50 13.4 +0.4
      comp=Z,6.6nm,1.1s
S51A  Beattyville       35.95 302  P      P      09 50 13.1 +0.2
      baz=102
Z52A  Williamson        35.96 295  P      P      09 50 14.0 +0.8
      baz=95
P51A  Williamsport      35.96 305  eP     P      09 50 13.7 +0.6
      comp=Z,15nm,1.4s
KLBO  Killbear Provi    35.99 316  P      P      09 50 13.6 +0.4
      baz=115
U51A  La Follette       36.04 300  P      P      09 50 13.9 +0.1
      baz=100
F51A  Arnstein          36.05 317  P      P      09 50 13.5  -0.2
      baz=116
Q51A  Peebles           36.06 305  P      P      09 50 14.4 +0.5
      baz=104
R51A  Hillsboro         36.08 303  P      P      09 50 14.7 +0.6
      baz=103
BWLO  Walkerton         36.09 314  P      P      09 50 14.1   0.0
      baz=113
T51A  Gray              36.09 301  P      P      09 50 14.5 +0.2
      baz=101
ACSO  Alum Creek Sta    36.10 307  P      P      09 50 14.6 +0.4
      baz=106
252A  Lumpkin           36.14 292  P      P      09 50 15.8 +1.1
      baz=93
152A  Waverly Hall      36.17 294  P      P      09 50 15.7 +0.8
      baz=94,SNR=6.6
352A  Blakely           36.27 292  eP     P      09 50 13.7  -2.2
      comp=Z,22nm,0.9s
352A  Blakely           36.27 292  P      P      09 50 16.6 +0.7
      baz=92
CPCT  Cooper Cave       36.30 298  eP     P      09 50 15.7  -0.4
      comp=Z,3.7nm,0.8s
W51A  Cleveland         36.46 298  P      P      09 50 17.9 +0.6
      baz=98
X51A  Calhoun           36.46 297  eP     P      09 50 16.4  -1.0
      comp=Z,25nm,0.9s
X51A  Calhoun           36.46 297  P      P      09 50 17.9 +0.5
      baz=97,SNR=7.5
P50A  Jamestown         36.55 305  P      P      09 50 19.0 +1.0
      baz=104
Y51A  Rockmart          36.56 296  P      P      09 50 19.0 +0.7
      baz=96,SNR=7.4
S50A  Richmond          36.58 302  P      P      09 50 19.0 +0.6
      baz=101
MATQ  Matagami          36.63 324  P      P      09 50 19.4 +0.7
      baz=124
R50A  Paris             36.65 303  eP     P      09 50 17.7  -1.2
      comp=Z,3.9nm,0.8s
151A  Opelika           36.67 293  P      P      09 50 20.2 +1.0
      baz=94,SNR=7.8
U50A  Jamestown         36.71 300  P      P      09 50 20.1 +0.5
      baz=99,SNR=6.5
251A  Midway            36.71 293  P      P      09 50 20.5 +0.9
      baz=93,SNR=7.6
TOBO  Tobermory, Bru    36.77 315  P      P      09 50 20.4 +0.4
      baz=114
V50A  Pikevile          36.80 299  P      P      09 50 21.1 +0.7
      baz=98,SNR=6.7
T50A  Nancy             36.80 301  P      P      09 50 20.8 +0.4
      baz=100,SNR=9.6
W50A  Signal Mountai    36.91 298  eP     P      09 50 19.2  -2.1
      comp=Z,25nm,1.1s
W50A  Signal Mountai    36.91 298  P      P      09 50 22.0 +0.7
      baz=97,SNR=7.3
451A  Vernon            36.95 290  P      P      09 50 22.0 +0.4
      baz=91
X50B  Fort Payne        37.10 296  P      P      09 50 23.7 +0.7
      baz=96,SNR=9.2
Y50A  Piedmont          37.12 296  P      P      09 50 24.0 +1.0
      baz=95,SNR=7.3
J49A  Marlette          37.16 312  P      P      09 50 23.1  -0.2
      baz=110
N49A  Columbus Grove    37.17 307  eP     P      09 50 23.9 +0.6
      comp=Z,4.3nm,0.8s
N49A  Columbus Grove    37.17 307  P      P      09 50 23.3  -0.1
      baz=106
AAM   Ann Arbor         37.19 310  eP     P      09 50 22.2  -1.2
      comp=Z,32nm,0.3s
AAM   Ann Arbor         37.19 310  eP     P      09 50 22.3  -1.2
AAM                                pmax   pmax
      comp=Z,32nm,0.3s
L49A  Milan             37.20 309  P      P      09 50 23.8 +0.1
      baz=108
Z50A  Ashland           37.22 294  eP     P      09 50 23.3  -0.6
      comp=Z,13nm,1.0s
Z50A  Ashland           37.22 294  P      P      09 50 24.8 +0.9
      baz=94,SNR=9.2
Q49A  Aurora            37.23 304  P      P      09 50 24.4 +0.5
      baz=102
150A  Eclectic          37.26 293  P      P      09 50 25.1 +0.9
      baz=93,SNR=9.7
S49A  Springfield       37.29 302  P      P      09 50 25.0 +0.6
      baz=101
R49A  Shelbyville       37.30 303  eP     P      09 50 24.1  -0.4
      comp=Z,19nm,1.0s
R49A  Shelbyville       37.30 303  P      P      09 50 25.2 +0.7
      baz=101,SNR=5.1
T49A  Edmonton          37.37 301  eP     P      09 50 25.8 +0.7
      comp=Z,21nm,1.3s
T49A  Edmonton          37.37 301  P      P      09 50 25.8 +0.7
      baz=100,SNR=7.7
SWET  Sewanee           37.42 298  eP     P      09 50 23.6  -2.0
      comp=Z,10.0nm,1.0s
250A  Grady             37.44 292  eP     P      09 50 26.0 +0.2
      comp=Z,42nm,1.4s
250A  Grady             37.44 292  P      P      09 50 26.8 +1.0
      baz=92
V49A  McMinnville       37.46 299  P      P      09 50 26.5 +0.6
      baz=98
U49A  Red Boiling Sp    37.47 300  P      P      09 50 26.3 +0.3
      baz=99
350A  Dozier            37.48 291  P      P      09 50 26.9 +0.8
      baz=92
D49A  Beulah Townshi    37.53 318  P      P      09 50 26.9 +0.5
      baz=116,SNR=9.3
J48A  Bridge Port       37.59 311  eP     P      09 50 26.3  -0.6
      comp=Z,17nm,1.1s
X49A  Woodville         37.66 296  P      P      09 50 28.2 +0.6
      baz=96
K48A  Perry             37.66 310  P      P      09 50 27.1  -0.4
      baz=108
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Y49A  Blount Mountai    37.67 295  eP     P      09 50 27.7   0.0
      comp=Z,10nm,0.9s
Y49A  Blount Mountai    37.67 295  P      P      09 50 28.3 +0.5
      baz=95,SNR=5.3
W49A  Belvidere         37.68 297  P      P      09 50 28.2 +0.4
      baz=96,SNR=12
PAB   San Pablo         37.68  55  eP     P      09 50 26.9  -0.9
      comp=Z,14nm,1.6s
PAB   San Pablo         37.68  55  eP     P      09 50 26.9  -0.9
PAB                                pmax   pmax
      comp=Z,14nm,1.6s
E48A  Lockeyer          37.70 317  P      P      09 50 28.3 +0.5
      baz=114,SNR=7.4
O48A  Farmland          37.71 306  P      P      09 50 28.1 +0.1
      baz=104
Z49A  Columbiana        37.72 294  P      P      09 50 28.6 +0.4
      baz=94
P48A  Milroy            37.73 305  P      P      09 50 28.7 +0.5
      baz=103
H48A  Harrisville       37.76 314  P      P      09 50 29.3 +1.0
      baz=111
D48A  Paudash Townsh    37.77 318  P      P      09 50 28.4 +0.1
      baz=116,SNR=5.0
N48A  Decatur           37.77 307  P      P      09 50 28.9 +0.5
      baz=105
I48A  Sherman Twp       37.83 313  P      P      09 50 28.8  -0.1
      baz=110
CLTN  Cedars of Leba    37.85 299  eP     P      09 50 28.1  -1.1
      comp=Z,8.3nm,1.1s
CLTN                               ePcP   PcP    09 52 46.8 +1.3
Q48A  North Vernon      37.85 304  P      P      09 50 29.7 +0.5
      baz=102
R48A  Northridge Ran    37.86 303  P      P      09 50 29.9 +0.7
      baz=101
S48A  Wiedeman Farm,    37.87 302  P      P      09 50 29.4 +0.1
      baz=100,SNR=6.5
149A  Jones             37.91 293  P      P      09 50 30.3 +0.6
      baz=93
ESDC  Sonseca Array     37.99  55  PcP    PcP    09 52 47.2 +1.2
      comp=Z,0.2nm,0.4s,baz=277,slow=2.6,SNR=4.3
ESDC                               LR     LR     10 02 50.7
      comp=Z,118nm,20.2s,baz=245,slow=31
ESLA  Sonseca Array     37.99  55  eP     P      09 50 29.1  -1.4
      comp=Z,14nm,1.6s
T48A  Bowling Green     38.05 301  P      P      09 50 31.7 +0.9
      baz=99
U48A  Cassie Pea, Po    38.07 300  P      P      09 50 32.1 +1.0
      baz=98
BRAL  Brewton           38.08 291  P      P      09 50 32.2 +1.0
      baz=91
LRAL  Lakeview Retre    38.10 294  eP     P      09 50 31.5 +0.1
      comp=Z,12nm,1.0s
LRAL  Lakeview Retre    38.10 294  P      P      09 50 32.4 +1.0
      baz=93,SNR=9.3
WCI   Wyandotte Cave    38.15 302  eP     P      09 50 30.4  -1.3
      comp=Z,12nm,1.0s
WCI   Wyandotte Cave    38.15 302  eP     P      09 50 30.4  -1.3
WCI                                pmax   pmax
      comp=Z,12nm,1.0s
WCI   Wyandotte Cave    38.15 302  P      P      09 50 32.5 +0.8
      baz=100
249A  Camden            38.16 292  P      P      09 50 33.0 +1.1
      baz=92,SNR=9.8
L47A  Sherwood          38.19 309  P      P      09 50 32.4 +0.4
      baz=106
V48A  Smith Brothers    38.20 298  P      P      09 50 32.8 +0.6
      baz=97,SNR=5.8
349A  Repton            38.21 291  P      P      09 50 33.2 +0.9
      baz=91
W48A  Pulaski           38.22 297  P      P      09 50 32.5 +0.2
      baz=96
K47A  Vermontville      38.24 310  P      P      09 50 33.0 +0.6
      baz=107
X48A  Hartselle         38.25 296  eP     P      09 50 31.3  -1.2
      comp=Z,18nm,1.0s
X48A  Hartselle         38.25 296  P      P      09 50 33.0 +0.4
      baz=95,SNR=8.6
N47A  Urbana            38.26 307  P      P      09 50 32.4  -0.2
      baz=104
G47A  Hillman           38.28 314  P      P      09 50 33.1 +0.4
      baz=111
J47A  Sunmer            38.29 311  eP     P      09 50 32.8   0.0
      comp=Z,39nm,1.8s
Y48A  Jasper            38.31 295  P      P      09 50 33.9 +0.8
      baz=94
Q47A  Bedord North L    38.39 304  P      P      09 50 34.1 +0.4
      baz=101
E47A  Iron Bridge       38.39 316  P      P      09 50 34.1 +0.5
      baz=113
O47A  Sheridan          38.47 306  P      P      09 50 34.2  -0.1
      baz=103
S47A  Hartford          38.50 301  P      P      09 50 35.4 +0.7
      baz=99,SNR=6.1
D47A  Chapleau          38.52 317  P      P      09 50 35.7 +0.9
      baz=114
148A  Greensboro        38.57 293  P      P      09 50 35.7 +0.4
      baz=92
T47A  Sharon Grove      38.59 300  eP     P      09 50 35.4   0.0
      comp=Z,12nm,0.9s
T47A  Sharon Grove      38.59 300  P      P      09 50 36.1 +0.7
      baz=98
U47A  Clarksville       38.66 299  P      P      09 50 36.4 +0.4
      baz=97
W47A  Westpoint         38.77 297  P      P      09 50 37.5 +0.5
      baz=96
V47A  Nunnelly          38.77 298  P      P      09 50 37.5 +0.5
      baz=96,SNR=8.4
K46A  Dorr              38.80 310  P      P      09 50 37.4 +0.3
      baz=106
M46A  Old House Fiel    38.88 307  eP     P      09 50 37.4  -0.4
      comp=Z,26nm,1.0s
M46A  Old House Fiel    38.88 307  P      P      09 50 38.3 +0.5
      baz=104
X47A  Russelville       38.92 296  P      P      09 50 39.1 +0.9
      baz=95,SNR=14
H46A  Fife Lake         38.96 313  P      P      09 50 38.3  -0.1
      baz=109
E46A  Sault Ste Mari    39.01 316  eP     P      09 50 39.1 +0.3
      comp=Z,9.3nm,0.8s
E46A  Sault Ste Mari    39.01 316  P      P      09 50 39.1 +0.3
      baz=112
N46A  Monticello        39.03 306  P      P      09 50 39.7 +0.6
      baz=103
D46A  Sault St. Mari    39.04 317  P      P      09 50 39.2 +0.1
      baz=113
BDFB  Brasilia          39.05 185  LR     LR     10 05 20.2
      comp=Z,133nm,19.0s,baz=122,slow=34
WVT   Waverly           39.06 299  eP     P      09 50 39.8 +0.4
      comp=Z,16nm,0.9s
WVT   Waverly           39.06 299  eP     P      09 50 39.8 +0.4
WVT                                pmax   pmax
      comp=Z,16nm,0.9s
WVT   Waverly           39.06 299  P      P      09 50 40.0 +0.7
      baz=97
R46A  Gibon Southern    39.10 302  P      P      09 50 40.3 +0.6
      baz=99
P46A  Rosedale          39.11 304  P      P      09 50 40.1 +0.3
      baz=101
PLAL  Pickwick Lake     39.14 297  eP     P      09 50 40.6 +0.5
      comp=Z,41nm,1.3s
147A  Livingston        39.16 293  eP     P      09 50 39.8  -0.4
      comp=Z,29nm,0.6s
147A  Livingston        39.16 293  P      P      09 50 41.2 +0.9
      baz=92,SNR=5.5
S46A  Don Dixon Farm    39.17 301  P      P      09 50 40.9 +0.6
      baz=99,SNR=6.1
SFIN  Lafayette         39.19 306  eP     P      09 50 40.4   0.0
      comp=Z,26nm,1.3s
SFIN  Lafayette         39.19 306  P      P      09 50 40.6 +0.2
      baz=102
T46A  Princeton         39.22 300  P      P      09 50 40.8 +0.1
      baz=98
V46A  Holladay          39.25 298  P      P      09 50 41.4 +0.4
      baz=96,SNR=9.0
G45A  Suttons Bay       39.43 313  eP     P      09 50 42.6 +0.2
      comp=Z,19nm,0.9s
G45A  Suttons Bay       39.43 313  P      P      09 50 42.6 +0.2
      baz=109
X46A  Booneville        39.52 296  P      P      09 50 43.8 +0.6
      baz=94,SNR=6.8
N45A  Kentland          39.60 306  P      P      09 50 44.1 +0.3
      baz=103
R45A  Skylar, Fairfi    39.71 302  P      P      09 50 45.6 +0.8
      baz=99,SNR=7.6
Q45A  Warren Harvey,    39.71 303  P      P      09 50 45.4 +0.7
      baz=100
UTMT  University of     39.91 299  eP     P      09 50 45.6  -0.9
      comp=Z,64nm,0.8s
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N44A	Piper City	40.05	306	P	P	09 50 47.6	+0.1
	baz=102						
M44A	Midewin, Midew	40.11	307	P	P	09 50 48.8	+0.8
	baz=103						
E44A	Grand Marais A	40.14	315	*e*P	P	09 50 47.1	-1.1
	comp=Z,18nm,0.9s						
E44A	Grand Marais A	40.14	315	P	P	09 50 49.4	+1.2
	baz=111						
O44A	Mansfield	40.17	305	P	P	09 50 49.4	+0.9
	baz=101						
L44A	Lake County Fo	40.19	308	P	P	09 50 49.1	+0.4
	baz=104						
OXF	Oxford	40.20	296	*e*P	P	09 50 49.0	+0.1
	comp=Z,34nm,1.0s						
OXF	Oxford	40.20	296	*e*P	P	09 50 49.0	+0.1
OXF				pmax	pmax		
	comp=Z,34nm,1.0s						
OXF	Oxford	40.20	296	P	P	09 50 49.0	+0.1
	baz=94,SNR=8.7						
TEIG	Tepich	40.34	274	*e*P	P	09 50 48.6	-1.6
	comp=Z,84nm,1.8s						
S44A	Carbondale	40.38	301	P	P	09 50 51.0	+0.6
	baz=98,SNR=7.0						
JTS	Las Juntas de	40.43	258	*i* P	P	09 50 52.5	+1.5
JTS				pmax	pmax		
	comp=Z,21nm,3.1s						
K43A	Burlington	40.62	309	P	P	09 50 52.4	+0.2
	baz=104						
PARMO	Parma	40.66	299	*e*P	P	09 50 51.4	-1.2
	comp=Z,48nm,1.0s						
H43A	Windswept, Lux	40.69	312	P	P	09 50 53.4	+0.6
	baz=106						
E43A	Lone Tree Farm	40.76	315	*e*P	P	09 50 53.0	-0.4
	comp=Z,12nm,0.9s						
E43A	Lone Tree Farm	40.76	315	P	P	09 50 53.6	+0.3
	baz=109,SNR=6.3						
M43A	Waltham Townsh	40.79	307	P	P	09 50 53.7	+0.1
	baz=102						
N43A	Stutzman Famil	40.85	306	P	P	09 50 54.8	+0.6
	baz=101						
P43A	Skaggs, Pawnee	40.88	304	P	P	09 50 54.6	+0.1
	baz=100						
VBMS	Vicksburg	41.05	293	*e*P	P	09 50 55.6	-0.3
	comp=Z,13nm,0.6s						
VBMS	Vicksburg	41.05	293	P	P	09 50 56.2	+0.3
	baz=90						
TGUH	Tegucigalpa,Un	41.13	265	*e*P	P	09 50 57.5	+0.5
	comp=Z,31nm,1.0s						
PBMO	Poplar Bluff	41.21	299	*e*P	P	09 50 57.2	0.0
	comp=Z,11nm,0.9s						
HBAR	Harrisburg	41.29	298	*e*P	P	09 50 58.1	+0.3
	comp=Z,30nm,1.1s						
I42A	Draeger Farm,	41.33	310	P	P	09 50 58.2	+0.2
	baz=105						
X43A	Marvell	41.41	296	*e*P	P	09 50 58.4	-0.5
	comp=Z,58nm,1.0s						
X43A	Marvell	41.41	296	P	P	09 50 59.3	+0.4
	baz=93						
L42A	Oliver, Polo	41.43	307	*e*P	P	09 50 58.8	-0.1
	comp=Z,10nm,0.7s						
L42A	Oliver, Polo	41.43	307	P	P	09 50 59.4	+0.5
	baz=102						
CSGN	Cosiguina Volc	41.77	263	*e*P	P	09 51 00.9	-1.2
	comp=Z,137nm,1.6s						
DBIC	Dimbokro	41.89	107	P	P	09 51 02.4	-0.6
	comp=Z,3.7nm,0.6s,baz=270,slow=9.1,SNR=3.1						
DBIC				LR	LR	10 05 49.1	
	comp=Z,323nm,19.6s,baz=262,slow=32						
DBIC	Dimbokro	41.89	107	*e*P	P	09 51 01.5	-1.6
	comp=Z,42nm,1.6s						
M41A	Milan	41.95	306	P	P	09 51 03.3	+0.1
	baz=101						
CCM	Cathedral Cave	41.99	301	*e*P	P	09 51 03.4	-0.2
	comp=Z,30nm,1.1s						
CCM	Cathedral Cave	41.99	301	*e*P	P	09 51 03.4	-0.2
CCM				pmax	pmax		
	comp=Z,30nm,1.1s						
CCM	Cathedral Cave	41.99	301	P	P	09 51 04.2	+0.6
	baz=96						
D41A	Chassel	42.00	315	*e*P	P	09 51 01.6	-2.0
	comp=Z,27nm,1.0s						
D41A	Chassel	42.00	315	P	P	09 51 03.9	+0.4
	baz=109,SNR=7.2						
I41A	Arkdale	42.04	310	*e*P	P	09 51 04.0	+0.2
	comp=Z,12nm,1.2s						
I41A	Arkdale	42.04	310	P	P	09 51 04.3	+0.4
	baz=104						
JFWS	Jewell Farm	42.04	309	*e*P	P	09 51 04.2	+0.3
	comp=Z,26nm,1.4s						
JFWS	Jewell Farm	42.04	309	*e*P	P	09 51 04.2	+0.3
JFWS				pmax	pmax		
	comp=Z,26nm,1.4s						
JFWS	Jewell Farm	42.04	309	P	P	09 51 04.6	+0.6
	baz=103						
N41A	Harden Midland	42.06	305	*e*P	P	09 51 04.1	0.0
	comp=Z,38nm,1.1s						
N41A	Harden Midland	42.06	305	P	P	09 51 04.3	+0.1
	baz=100						
COWI	Conover	42.08	314	*e*P	P	09 51 04.0	-0.3
	comp=Z,17nm,1.4s						
CCAR	Cane Creek	42.13	295	*e*P	P	09 51 03.9	-0.8
	comp=Z,38nm,1.2s						
SIV	San Ignacio	42.36	204	P	P	09 51 08.0	+1.2
	comp=Z,2.5nm,0.7s,baz=39,slow=7.3,SNR=14						
FCAR	Ozark Folk Cen	42.51	298	*e*P	P	09 51 07.5	-0.3
	comp=Z,15nm,1.2s						
W41B	Gary Mavity, V	42.57	297	*e*P	P	09 51 08.2	-0.1
	comp=Z,30nm,0.9s						
W41B	Gary Mavity, V	42.57	297	P	P	09 51 08.6	+0.2
	baz=93,SNR=27						
G40A	Rib Lake	42.57	312	*e*P	P	09 51 07.8	-0.4
	comp=Z,12nm,1.1s						
G40A	Rib Lake	42.57	312	P	P	09 51 08.8	+0.5
	baz=105,SNR=5.7						
L40A	Anamosa	42.57	307	*e*P	P	09 51 07.6	-0.7
	comp=Z,16nm,1.2s						
L40A	Anamosa	42.57	307	P	P	09 51 08.2	-0.1
	baz=101						
WHAR	Wooly Hollow	42.61	297	*e*P	P	09 51 08.5	-0.2
	comp=Z,28nm,1.0s						
UALR	University of	42.63	296	*e*P	P	09 51 08.1	-0.7
	comp=Z,11nm,0.8s						
N40A	Mertquake, Sal	42.64	305	P	P	09 51 08.7	-0.1
	baz=99						
C40A	Isle Royale Na	42.65	316	*e*P	P	09 51 08.9	+0.1
	comp=Z,17nm,1.0s						
C40A	Isle Royale Na	42.65	316	P	P	09 51 09.2	+0.4
	baz=109,SNR=11						
F40A	Park Falls	42.69	313	P	P	09 51 09.4	+0.1
	baz=106,SNR=8.4						
Z41A	Richland Creek	42.98	294	*e*P	P	09 51 11.9	+0.3
	comp=Z,32nm,1.0s						
Z41A	Richland Creek	42.98	294	P	P	09 51 12.4	+0.7
	baz=90						
H10N2	ASCENSION HYDR	43.02	133	T	T	10 37 18.2	
	baz=317,slow=75,SNR=363						
H10N3	ASCENSION HYDR	43.02	133	T	T	10 37 13.8	
	baz=317,slow=75,SNR=192						
X40A	Basin Creek Fa	43.02	296	*e*P	P	09 51 11.5	-0.6
	comp=Z,5.2nm,0.7s						
X40A	Basin Creek Fa	43.02	296	P	P	09 51 12.1	+0.1
	baz=92						
H10N1	ASCENSION HYDR	43.04	133	T	T	10 37 19.5	
	baz=317,slow=75,SNR=474						
U40A	Yellville	43.12	299	P	P	09 51 12.8	-0.1
	baz=94,SNR=17						
FRB	Frobisher Bay	43.17	345	P	P	09 51 13.3	+0.5
	comp=Z,3.9nm,0.7s,baz=108,slow=9.6,SNR=2.9						
ASCN	Ascension	43.19	133	*e*P	P	09 51 11.6	-1.9
	comp=Z,274nm,1.5s						
F39A	Loretta	43.23	313	P	P	09 51 13.9	+0.4
	baz=105,SNR=6.0						
G39A	Holcombe	43.24	312	P	P	09 51 14.3	+0.7
	baz=104						
WLAR	White Oak Lake	43.24	295	*e*P	P	09 51 13.9	+0.1
	comp=Z,68nm,1.0s						
SFJD	Kangerlussuaq	43.62	357	*e*P	P	09 51 13.8	-2.6
	comp=Z,27nm,0.8s						
SFJD	Kangerlussuaq	43.62	357	*e*P	P	09 51 13.8	-2.6
SFJD				pmax	pmax		
	comp=Z,27nm,0.8s						
MIAR	Mount Ida	43.64	296	*e*P	P	09 51 16.6	-0.4
	comp=Z,11nm,1.0s						
MIAR	Mount Ida	43.64	296	*e*P	P	09 51 16.6	-0.4
MIAR				pmax	pmax		
	comp=Z,11nm,1.0s						
MIAR	Mount Ida	43.64	296	P	P	09 51 17.7	+0.6
	baz=91,SNR=9.9						
H10S3	ASCENSION HYDR	43.73	134	T	T	10 38 07.1	
	baz=318,slow=75,SNR=482						
H10S1	ASCENSION HYDR	43.73	134	T	T	10 38 07.7	
	baz=318,slow=75,SNR=323						
H10S2	ASCENSION HYDR	43.75	134	T	T	10 38 08.9	
	baz=318,slow=75,SNR=424						
W39A	Magazine	43.83	297	*e*P	P	09 51 18.4	-0.2
	comp=Z,14nm,0.9s						
W39A	Magazine	43.83	297	P	P	09 51 19.0	+0.5
	baz=92,SNR=10.0						
E38A	The Farm, Brul	43.83	314	*e*P	P	09 51 17.6	-0.8
	comp=Z,7.9nm,1.1s						
E38A	The Farm, Brul	43.83	314	P	P	09 51 19.0	+0.6
	baz=105						
F38A	Pierce - Schro	43.88	313	P	P	09 51 19.1	+0.2
	baz=104,SNR=7.0						
HHAR	Hobbs	43.99	298	*e*P	P	09 51 19.6	-0.3
	comp=Z,12nm,0.9s						
SCIA	State Center	44.01	307	*e*P	P	09 51 19.5	-0.4
	comp=Z,33nm,1.1s						
SCIA	State Center	44.01	307	P	P	09 51 20.4	+0.4
	baz=99						
ESK	Eskdalemuir	44.12	33	*e*P	P	09 51 20.3	-0.3
	comp=Z,29nm,1.8s						
ESK	Eskdalemuir	44.12	33	*e*P	P	09 51 20.3	-0.3
ESK				pmax	pmax		
	comp=Z,29nm,1.8s						
EYMN	Ely	44.16	315	*e*P	P	09 51 20.8	-0.2
	comp=Z,5.3nm,0.8s						
EYMN	Ely	44.16	315	P	P	09 51 20.4	-0.7
	baz=107,SNR=5.4						
SPMN	Marine on St.	44.34	311	*e*P	P	09 51 22.4	-0.1
	comp=Z,19nm,0.9s						
SPMN	Marine on St.	44.34	311	P	P	09 51 22.8	+0.2
	baz=103,SNR=8.6						
NATX	Nacogdoches	44.58	292	*e*P	P	09 51 24.8	+0.2
	comp=Z,22nm,0.5s						
CCIG	Comitan	44.90	270	*e*P	P	09 51 27.5	0.0
	comp=Z,21nm,1.4s						
TOA1	Torodi Ar. Sit	45.18	95	*e*P	P	09 51 28.2	-1.4
TOA0	Torodi Ar. Sit	45.19	95	*e*P	P	09 51 29.4	-0.2
	comp=Z,12nm,0.8s						
TORD	Torodi Ar. Bea	45.19	95	P	P	09 51 28.2	-1.4
	comp=Z,12nm,0.9s,baz=315,slow=9.6,SNR=37						
TORD				LR	LR	10 08 12.2	
	comp=Z,320nm,20.6s,baz=310,slow=33						
TUL1	Leonard	45.48	298	*e*P	P	09 51 31.1	-0.6
	comp=Z,13nm,1.1s						
TUL1	Leonard	45.48	298	P	P	09 51 31.2	-0.6
	baz=91						
LPAZ	La Paz	45.66	212	P	P	09 51 35.4	+1.5
	comp=Z,3.1nm,0.7s,baz=25,slow=7.6,SNR=12						
LPAZ				LR	LR	10 09 30.6	
	comp=Z,107nm,21.4s,baz=20,slow=35						
LPAZ	La Paz	45.66	212	*e*P	P	09 51 34.6	+0.7
	comp=Z,8.3nm,1.2s						
LPAZ	La Paz	45.66	212	*e*P	P	09 51 34.6	+0.7
LPAZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TAM	Tamanrasset	46.11	80	*e*P	P	09 51 38.2	+1.1
	comp=Z,26nm,1.7s						
TAM	Tamanrasset	46.11	80	*e*P	P	09 51 38.2	+1.1
TAM				pmax	pmax		
	comp=Z,26nm,1.7s						
KSU1	Kansas State U	46.27	302	P	P	09 51 37.0	-0.9
	baz=94,SNR=9.5						
ECSD	EROS Data Cent	46.76	309	*e*P	P	09 51 40.9	-0.8
	comp=Z,5.9nm,0.9s						
ECSD	EROS Data Cent	46.76	309	P	P	09 51 41.5	-0.2
	baz=98,SNR=7.0						
BNI	Bardonecchia	46.77	50	*e*P	P	09 51 41.4	-0.6
	comp=Z,14nm,1.1s						
BNI	Bardonecchia	46.77	50	*e*P	P	09 51 41.4	-0.6
BNI				pmax	pmax		
	comp=Z,14nm,1.1s						
ISO	Isola	46.90	51	P	P	09 51 44.9	+2.0
ISO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WHTX	Lake Whitney,	46.94	292	*e*P	P	09 51 43.0	-0.3
	comp=Z,69nm,1.8s						
WHTX	Lake Whitney,	46.94	292	P	P	09 51 43.2	-0.1
	baz=87,SNR=6.5						
AGMN	Agassiz Nation	47.08	315	*e*P	P	09 51 42.3	-1.8
	comp=Z,11nm,0.8s						
AGMN	Agassiz Nation	47.08	315	P	P	09 51 44.0	-0.1
	baz=103,SNR=7.9						
435B	Jarrell	47.13	291	P	P	09 51 44.9	+0.1
	baz=85						
WLF	Walferdange	47.38	43	*e*P	P	09 51 45.4	-1.0
	comp=Z,38nm,0.6s						
WLF	Walferdange	47.38	43	*e*P	P	09 51 45.4	-1.0
WLF				pmax	pmax		
	comp=Z,38nm,0.6s						
SENIN	Lac Senin/Sane	47.43	48	*e*P	P	09 51 46.3	-0.8
	comp=Z,25nm,1.9s						
ULM	Lac du Bonnet	47.56	317	P	P	09 51 48.3	+0.5
	comp=Z,16nm,1.0s,baz=101,slow=7.8,SNR=11						
ULM				LR	LR	10 09 30.2	
	comp=Z,192nm,20.8s,baz=104,slow=33						
ULM	Lac du Bonnet	47.56	317	*e*P	P	09 51 47.1	-0.7
	comp=Z,21nm,1.0s						
BGNE	Belgrade	47.62	305	*e*P	P	09 51 48.0	-0.4
	comp=Z,34nm,1.1s						
BGNE	Belgrade	47.62	305	P	P	09 51 48.9	+0.4
	baz=95						
ECH	Echery	47.69	45	*e*P	P	09 51 48.8	-0.1
	comp=Z,9.1nm,1.2s						
ECH	Echery	47.69	45	*e*P	P	09 51 48.8	-0.1
ECH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WMOK	Wichita Mounta	47.93	296	*e*P	P	09 51 51.2	+0.2
	comp=Z,23nm,0.9s						
WMOK	Wichita Mounta	47.93	296	*e*P	P	09 51 51.2	+0.2
WMOK				pmax	pmax		
	comp=Z,23nm,0.9s						
WMOK	Wichita Mounta	47.93	296	P	P	09 51 51.2	+0.2
	baz=88,SNR=38						
U32A	Winter Ranch,	48.08	298	*e*P	P	09 51 52.1	0.0
	comp=Z,35nm,0.9s						
KEST	Kesra	48.10	62	P	P	09 51 53.5	+1.2
	comp=Z,10nm,0.7s,baz=253,slow=3.4,SNR=10						
KEST				LR	LR	10 09 44.5	
	comp=Z,74nm,20.8s,baz=316,slow=33						
KEST	Kesra	48.10	62	*e*P	P	09 51 51.3	-1.1
	comp=Z,12nm,0.8s						
BFO	Black Forest	48.48	46	*e*P	P	09 51 54.1	-0.9
	comp=Z,9.1nm,0.8s						
BFO	Black Forest	48.48	46	*ce*P	P	09 51 56.0	+1.0
CBKS	Cedar Bluff	48.69	302	*e*P	P	09 51 56.6	-0.2
	comp=Z,18nm,0.7s						
CBKS	Cedar Bluff	48.69	302	*e*P	P	09 51 56.6	-0.2
CBKS				pmax	pmax		
	comp=Z,18nm,0.7s						
CBKS	Cedar Bluff	48.69	302	P	P	09 51 56.5	-0.2
	baz=92						
ABTX	Abilene, Hawle	48.75	293	*e*P	P	09 51 55.7	-1.6
	comp=Z,18nm,1.0s						
ABTX	Abilene, Hawle	48.75	293	P	P	09 51 57.4	+0.1
	baz=86						
TUE	Stuetta	48.84	48	*e*P	P	09 51 57.5	-0.6
	comp=Z,5.8nm,0.7s						
TNS	Taunus Mts	48.95	43	P	P	09 52 02.2	+3.6
TNS				pmax	pmax		
	comp=Z,11nm,1.5s						
833A	Chaparral WMA,	48.96	288	*e*P	P	09 51 58.2	-0.8
	comp=Z,23nm,1.1s						
JCT	Junction City	49.06	291	*e*P	P	09 51 59.2	-0.6
	comp=Z,15nm,0.9s						
JCT	Junction City	49.06	291	*e*P	P	09 51 59.3	-0.6
JCT				pmax	pmax		
	comp=Z,15nm,0.9s						
JCT	Junction City	49.06	291	P	P	09 51 59.2	-0.6
	baz=84,SNR=7.1						
DAVOX	Davos/Dischmat	49.25	48	LR	LR	10 09 10.4	
	comp=Z,139nm,18.2s,baz=266,slow=32						
DAVA	Damuels	49.33	47	*e*pP	P	09 52 03.1	+1.4
	comp=Z,12nm,0.9s						
PB11	IPOC Station P	49.37	211	*e*P	P	09 52 01.5	-0.8
	comp=Z,25nm,0.8s						
MDND	Maddock	49.45	314	*e*P	P	09 52 01.6	-0.9
	comp=Z,20nm,0.9s						
MDND	Maddock	49.45	314	P	P	09 52 02.4	-0.1
	baz=99						
FUORN	Ofenpass-Fuorn	49.49	48	*e*P	P	09 52 01.9	-1.2
	comp=Z,6.9nm,1.0s						
LNIG	Linares	49.56	283	*e*P	P	09 52 02.5	-1.1
	comp=Z,12nm,1.0s						
FETA	Feichten	49.86	48	*e*pP	P	09 52 06.6	+0.8
	comp=Z,7.2nm,1.1s						
SQTA	Sankt Quirin	50.22	47	*e*pP	P	09 52 08.9	+0.5
	comp=Z,23nm,1.2s						
AMTX	Amarillo	50.31	297	*e*P	P	09 52 09.4	+0.1
	comp=Z,48nm,1.0s						
AMTX	Amarillo	50.31	297	P	P	09 52 09.2	-0.1
	baz=87						
PB01	IPOC Station P	50.39	210	*e*P	P	09 52 09.7	-0.2
	comp=Z,16nm,1.3s						
WATA	Walderalm	50.48	47	*e*pP	P	09 52 10.8	+0.4
	comp=Z,17nm,1.2s						
WTTA	Wattenberg	50.51	47	*e*pP	P	09 52 11.4	+0.7
	comp=Z,14nm,0.9s						
OGNE	Ogallala	50.52	304	*e*P	P	09 52 10.5	-0.3
	comp=Z,46nm,0.9s						
OGNE	Ogallala	50.52	304	P	P	09 52 10.8	0.0
	baz=92,SNR=5.7						
GRA1	Grafenberg Arr	50.60	44	*e*P	P	09 52 10.5	-0.7
	comp=Z,15nm,0.6s						
GRF	Grafenberg Arr	50.60	44	*e*P	P	09 52 10.5	-0.7
GRF				pmax	pmax		
	comp=Z,15nm,0.6s						
KSCO	Kaye Shedlock’	50.95	302	*e*P	P	09 52 12.3	-1.8
	comp=Z,29nm,1.3s						
KSCO	Kaye Shedlock’	50.95	302	P	P	09 52 14.6	+0.5
	baz=90						
CPUP	Villa Florida	51.02	194	P	P	09 52 15.0	+0.6
	comp=Z,3.4nm,1.0s,baz=32,slow=13,SNR=2.6						
CPUP				LR	LR	10 12 44.1	
	comp=Z,50nm,18.5s,baz=30,slow=35						
CPUP	Villa Florida	51.02	194	P	P	09 52 15.0	+0.6
MOX	Moxa	51.02	43	P	P	09 52 18.2	+3.9
MOX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ABTA	Abfaltersbach	51.04	48	*e*pP	P	09 52 15.3	+0.7
	comp=Z,7.1nm,0.9s						
MSTX	Muleshoe	51.27	295	*e*P	P	09 52 16.1	-0.5
	comp=Z,32nm,0.9s						
MSTX	Muleshoe	51.27	295	P	P	09 52 16.1	-0.5
	baz=86,SNR=25						
NKC	Novy Kostel	51.48	44	P	P	09 52 19.3	+1.6
NKC				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LVC	Limon Verde	51.49	209	*e*P	P	09 52 16.8	-1.7
	comp=Z,27nm,1.7s						
LVC	Limon Verde	51.49	209	*e*P	P	09 52 16.8	-1.7
LVC				pmax	pmax		
	comp=Z,27nm,1.7s						
KBA	Koelnbreinsper	51.65	48	*e*pP	P	09 52 19.5	+0.2
	comp=Z,7.9nm,0.7s						
MYKA	Terra Mystica	51.80	48	*e*pP	P	09 52 20.9	+0.6
	comp=Z,7.4nm,1.0s						
JMIC	Jan Mayen	51.88	14	LR	LR	10 08 59.7	
	comp=Z,36nm,19.2s,baz=234,slow=30						
CLL	Collm	52.00	42	*e*P	P	09 52 20.2	-1.3
	comp=Z,12nm,1.2s						
CLL	Collm	52.00	42	*e*P	P	09 52 22.0	+0.4
CLL				*e*		09 52 31.0	
CLL	Collm	52.00	42	*e*P	P	09 52 22.0	+0.4
CLL				*e*		09 52 31.0	
KHC	Kasperske Hory	52.04	45	*e*P	P	09 52 20.4	-1.6
	comp=Z,3.5nm,1.1s						
KHC	Kasperske Hory	52.04	45	*e*P	P	09 52 22.4	+0.4
KHC				*e*		09 52 30.6	
KHC	Kasperske Hory	52.04	45	*e*P	P	09 52 22.4	+0.4
KHC				*e*x	x	09 52 30.6	
GEC2	GERESS Array S	52.09	46	*e*P	P	09 52 21.9	-0.5
	comp=Z,11nm,1.2s						
GEC2	GERESS Array S	52.09	46	*e*P	P	09 52 21.9	-0.5
GEC2				pmax	pmax		
	comp=Z,11nm,1.2s						
GERES	GERESS Array B	52.09	46	P	P	09 52 22.5	+0.1
	comp=Z,1.9nm,0.7s,baz=243,slow=5.8,SNR=10						
GERES				LR	LR	10 10 37.8	
	comp=Z,84nm,19.8s,baz=294,slow=32						
RSSD	Black Hills	52.13	308	*e*P	P	09 52 23.0	0.0
	comp=Z,3.6nm,0.9s						
RSSD	Black Hills	52.13	308	P	P	09 52 23.2	+0.3
	baz=93						
VAE	Valguarnera	52.13	60	LR	LR	10 10 13.1	
	comp=Z,105nm,20.0s,baz=352,slow=31						
FFC	Flin Flon	52.25	322	*e*P	P	09 52 21.9	-1.5
	comp=Z,153nm,1.0s						
FFC	Flin Flon	52.25	322	*ce*P	P	09 52 23.9	+0.5
CPRX	Cap Rock	52.26	294	*e*P	P	09 52 22.5	-1.5
MOA	Molln	52.35	47	*e*P	P	09 52 23.4	-0.8
	comp=Z,4.5nm,0.6s						
T25A	Trinidad	52.41	300	*e*P	P	09 52 24.3	-0.9
	comp=Z,7.2nm,1.0s						
T25A	Trinidad	52.41	300	P	P	09 52 25.6	+0.5
	baz=87						
OBKA	Obir	52.42	49	*e*pP	P	09 52 25.5	+0.6
	comp=Z,5.7nm,0.6s						
BRG	Berggiesshubel	52.52	43	*e*P	P	09 52 26.0	+0.6
	comp=Z,4.6nm,0.9s						
BRG				*e*		09 52 34.8	
	comp=Z,10nm,1.3s						
BRG	Berggiesshubel	52.52	43	*e*P	P	09 52 26.0	+0.6
BRG				*e*		09 52 34.8	
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,11nm,1.3s						
TXAR	Lajitas Array	52.53	290	P	P	09 52 25.8	-0.3
	comp=Z,5.3nm,0.8s,baz=99,slow=7.8,SNR=60						
TXAR				LR	LR	10 13 26.5	
	comp=Z,90nm,21.8s,baz=0.0,slow=35						
TX31	Lajitas Ar. Si	52.54	290	*e*P	P	09 52 25.1	-0.9
	comp=Z,6.8nm,0.9s						
DGMT	Dagmar	52.59	314	*e*P	P	09 52 25.1	-0.9
	comp=Z,18nm,1.0s						
DGMT	Dagmar	52.59	314	P	P	09 52 26.3	+0.3
	baz=96						
GDL2	Guadalupe Moun	52.76	293	*e*P	P	09 52 28.2	+0.4
SOKA	Soboth	52.76	48	*e*P	P	09 52 24.7	-2.7
	comp=Z,5.6nm,0.9s						
ZAIG	Zacatecas	52.77	281	*e*P	P	09 52 27.6	-0.5
	comp=Z,13nm,1.2s						
Q24A	Divide	52.92	302	*e*P	P	09 52 29.8	+0.8
	comp=Z,22nm,0.9s						
Q24A	Divide	52.92	302	P	P	09 52 29.8	+0.8
	baz=88						
PHWY	Pilot Hill	53.11	305	*e*P	P	09 52 30.4	0.0
	comp=Z,8.0nm,1.0s						
ARSA	Arzberg	53.14	48	*e*P	P	09 52 29.6	-0.6
	comp=Z,8.4nm,0.7s						
SDCO	Great Sand Dun	53.24	300	*e*P	P	09 52 30.6	-0.8
	comp=Z,6.9nm,1.4s						
SDCO	Great Sand Dun	53.24	300	P	P	09 52 32.0	+0.6
	baz=87,SNR=6.3						
ISCO	Idaho Springs	53.25	303	*e*P	P	09 52 31.1	-0.4
	comp=Z,5.3nm,0.9s						
ISCO	Idaho Springs	53.25	303	*e*P	P	09 52 31.1	-0.4
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ISCO	Idaho Springs	53.25	303	P	P	09 52 32.4	+0.9
	baz=88,SNR=14						
NB2	NORSAR Subarra	53.40	30	P	P	09 52 31.8	0.0
	comp=Z,8.4nm,1.1s,baz=251,slow=7.9						
NB200	NORSAR Array S	53.40	30	*e*P	P	09 52 32.2	+0.4
NOA	NORSAR Array B	53.40	30	P	P	09 52 32.2	+0.4
	comp=Z,2.8nm,0.8s,baz=252,slow=7.5,SNR=6.4						
NOA				LR	LR	10 11 10.3	
	comp=Z,85nm,21.1s,baz=250,slow=32						
CONA	Conrad Observa	53.42	47	*e*pP	P	09 52 32.3	0.0
	comp=Z,2.9nm,0.7s						
N23A	Red Feather La	53.48	304	*e*P	P	09 52 32.8	-0.3
	comp=Z,8.4nm,0.9s						
N23A	Red Feather La	53.48	304	P	P	09 52 33.1	0.0
	baz=89,SNR=9.2						
MNTX	Cornudas Mount	53.68	293	*e*P	P	09 52 33.7	-0.7
	comp=Z,18nm,1.8s						
MNTX	Cornudas Mount	53.68	293	P	P	09 52 35.3	+0.9
	baz=83,SNR=5.1						
UPC	Upice	53.77	44	*e*P	P	09 52 44.3	+10
LAO	LASA Array	53.81	312	*e*P	P	09 52 33.6	-1.5
	comp=Z,4.4nm,0.7s						
LAO	LASA Array	53.81	312	P	P	09 52 35.8	+0.7
	baz=93						
CHVC	Chvalec	53.81	44	*e*P	P	09 52 35.5	+0.5
CHVC				*e*x	x	09 52 45.0	
K22A	Casper	53.91	307	*e*P	P	09 52 35.2	-0.9
	comp=Z,7.8nm,0.8s						
K22A	Casper	53.91	307	P	P	09 52 35.7	-0.3
	baz=90,SNR=5.5						
DPC	Dobruska-Polom	53.95	44	*e*P	P	09 52 36.7	+0.6
DPC				*e*		09 52 45.8	

DPC	Dobruska-Polom	53.95	44	*e*P	P	09 52 36.7	+0.6
DPC				*e*x	x	09 52 45.8	
GO02	Mina Guanaco	54.02	208	*e*P	P	09 52 37.1	0.0
	comp=Z,14nm,0.9s						
ANMO	Albuquerque	54.22	297	*e*P	P	09 52 38.7	+0.2
	comp=Z,15nm,1.0s						
ANMO	Albuquerque	54.22	297*c*	*i*P	P	09 52 39.6	+1.1
ANMO				pmax	pmax		
	comp=Z,15nm,1.0s						
TASM	ASL Pad, Albuq	54.22	297	P	P	09 52 39.0	+0.6
	baz=84,SNR=26						
TASM	ASL Pad, Albuq	54.22	297	P	P	09 52 39.2	+0.7
	baz=84,SNR=25						
S22A	4UR Ranch, Cre	54.29	300	*e*P	P	09 52 40.2	+1.1
	comp=Z,16nm,1.0s						
S22A	4UR Ranch, Cre	54.29	300	P	P	09 52 40.0	+0.9
	baz=86,SNR=22						
HFS	Hagfors	54.30	32	LR	LR	10 11 35.9	
	comp=Z,98nm,19.8s,baz=266,slow=31						
SMCO	Snowmass	54.33	302	*e*P	P	09 52 37.7	-1.7
	comp=Z,5.2nm,0.9s						
TULEG	Thule	54.38	353	*e*P	P	09 52 38.7	0.0
	comp=Z,16nm,1.1s						
MODS	Modra-Piesok	54.40	46	*e*P	P	09 52 38.8	-0.6
MODS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MODS	Modra-Piesok	54.40	46	*e*P	P	09 52 38.8	-0.6
RWWY	Rawlins	54.42	305	*e*P	P	09 52 40.2	+0.2
	comp=Z,31nm,1.0s						
BNM	Barren Site	54.44	296	*e*P	P	09 52 39.1	-1.0
HPIG		54.67	287	*e*P	P	09 52 42.6	+0.7
	comp=Z,17nm,1.0s						
MORC	Moravsky Berou	54.68	45	*e*P	P	09 52 40.9	-0.5
	comp=Z,6.9nm,1.2s						
MORC	Moravsky Berou	54.68	45	*e*P	P	09 52 40.9	-0.5
MORC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
Y22D	IRIS PASSCAL I	54.69	296	P	P	09 52 42.9	+1.1
	baz=84						
LENM	Lemitar	54.72	296	*e*P	P	09 52 43.3	+1.2
LAZ	Ladron	54.83	296	*e*P	P	09 52 42.5	-0.4
O20A	White River Ci	55.26	303	*e*P	P	09 52 46.5	+0.6
	comp=Z,20nm,1.1s						
O20A	White River Ci	55.26	303	P	P	09 52 47.1	+1.2
	baz=87,SNR=10						
VYHS	Vyhne	55.45	46	*e*P	P	09 52 47.3	+0.4
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VYHS	Vyhne	55.45	46	*e*P	P	09 52 47.3	+0.4
121A	Cookes Peak, D	55.59	294	P	P	09 52 49.6	+1.2
	baz=82,SNR=21						
PV01	Paradox Valley	55.64	301	*e*P	P	09 52 49.0	+0.2
	comp=Z,15nm,1.0s						
MVCO	Mesa Verde	55.66	300	*e*P	P	09 52 49.4	+0.5
	comp=Z,24nm,1.1s						
MVCO	Mesa Verde	55.66	300	P	P	09 52 50.1	+1.2
	baz=85,SNR=17						
TTG	Podgorica	55.69	54	*e*P	P	09 52 48.8	+0.1
	comp=Z,14nm,1.0s						
TTG	Podgorica	55.69	54	*e*P	P	09 52 48.8	+0.1
TTG				pmax	pmax		
	comp=Z,14nm,1.0s						
PV22	Blue Mesa, Par	55.78	302	*e*P	P	09 52 49.2	-0.6
	comp=Z,5.4nm,0.9s						
PV03	Paradox Valley	55.85	301	*e*P	P	09 52 49.0	-1.3
	comp=Z,5.8nm,1.0s						
PV04	Paradox Valley	55.88	301	*e*P	P	09 52 48.4	-2.0
	comp=Z,6.0nm,1.0s						
RLMT	Red Lodge	55.89	310	*e*P	P	09 52 49.6	-0.8
	comp=Z,25nm,1.0s						
RLMT	Red Lodge	55.89	310	P	P	09 52 51.2	+0.8
	baz=90,SNR=28						
PV20	West Nyswonger	55.94	301	*e*P	P	09 52 49.6	-1.2
	comp=Z,6.9nm,1.0s						
PDAR	Pinedale Array	56.14	307	P	P	09 52 52.3	0.0
	comp=Z,14nm,0.9s,baz=95,slow=7.0,SNR=53						
BW06	Boulder Array	56.14	307	*e*P	P	09 52 51.1	-1.2
	comp=Z,24nm,1.1s						
BW06	Boulder Array	56.14	307	P	P	09 52 52.2	-0.1
	baz=88,SNR=42						
OJC	Ojcow	56.16	44	*e*P	P	09 52 51.4	-0.6
	comp=Z,10nm,1.0s						
OJC	Ojcow	56.16	44	*e*P	P	09 52 51.4	-0.6
OJC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GCMT	Greycliff	56.17	310	*e*P	P	09 52 52.3	0.0
EGMT	Eagleton	56.26	313	*e*P	P	09 52 52.9	+0.1
	comp=Z,20nm,0.9s						
EGMT	Eagleton	56.26	313	P	P	09 52 53.0	+0.2
	baz=92,SNR=18						
GO03	Copiap	56.43	207	*e*P	P	09 52 52.2	-2.0
	comp=Z,13nm,1.2s						
LKWY	Lake	56.70	309	*e*P	P	09 52 54.6	-1.7
	comp=Z,19nm,1.1s						
LKWY	Lake	56.70	309	*e*P	P	09 52 54.6	-1.7
LKWY				pmax	pmax		
	comp=Z,19nm,1.1s						
H17A	Grant Village	56.83	309	*e*P	P	09 52 55.2	-2.0
	comp=Z,3.4nm,0.8s						
H17A	Grant Village	56.83	309	P	P	09 52 58.3	+1.1
	baz=88						
W18A	Petrified Fore	56.87	298	*e*P	P	09 52 55.6	-1.9
	comp=Z,30nm,1.0s						
W18A	Petrified Fore	56.87	298	P	P	09 52 57.8	+0.2
	baz=83,SNR=8.9						
LOHW	Long Hollow	56.88	308	*e*P	P	09 52 55.9	-1.5
	comp=Z,11nm,0.9s						
FLWY	Flagg Ranch	56.93	308	*e*P	P	09 52 56.7	-1.1
	comp=Z,12nm,0.9s						
MOOW	Moose Ponds	56.97	308	*e*P	P	09 52 57.8	-0.3
	comp=Z,5.3nm,1.0s						
SNOW	Snow King Moun	56.99	308	*e*P	P	09 52 57.4	-0.9
	comp=Z,7.7nm,0.8s						
YPP	Pitchstone Pla	57.00	309	*e*P	P	09 52 57.2	-1.2
	comp=Z,6.6nm,1.3s						
YFT	Old Faithful	57.02	309	*e*P	P	09 52 56.0	-2.5
	comp=Z,10nm,1.0s						
YHH	Holmes Hill	57.02	309	*e*P	P	09 52 57.6	-0.9
	comp=Z,4.0nm,0.9s						
319A	Douglas	57.02	293	*e*P	P	09 52 56.5	-2.0
	comp=Z,22nm,1.0s						
SRU	San Rafael Swe	57.09	302	*e*P	P	09 52 58.4	-0.6
	comp=Z,30nm,0.9s						
SRU	San Rafael Swe	57.09	302	*e*P	P	09 52 58.4	-0.6
SRU				pmax	pmax		
	comp=Z,30nm,0.9s						
YMR	Madison River	57.10	309	*e*P	P	09 52 58.8	-0.3
	comp=Z,18nm,0.9s						
IMW	Indian Meadow	57.11	308	*e*P	P	09 52 57.9	-1.4
	comp=Z,18nm,1.0s						
X18A	Snowflake	57.12	297	*e*P	P	09 52 59.3	0.0
	comp=Z,6.1nm,1.1s						
TPAW	Teton Pass	57.13	308	*e*P	P	09 52 57.8	-1.6
	comp=Z,19nm,1.1s						
FXWY	Fox Creek	57.18	308	*e*P	P	09 52 59.9	+0.2
	comp=Z,14nm,1.0s						
P17A	Butcher Ranch,	57.22	303	*e*P	P	09 52 59.8	-0.2
	comp=Z,18nm,1.3s						
YHB	Horse Butte	57.26	309	*e*P	P	09 53 00.2	0.0
	comp=Z,36nm,1.0s						
AHID	Auburn Hatcher	57.27	307	*e*P	P	09 52 59.4	-0.9
	comp=Z,7.7nm,0.6s						
QLMT	Earthquake Lak	57.43	309	*e*P	P	09 53 01.1	-0.3
BOZ	Bozeman (W)	57.55	310	*e*P	P	09 53 02.0	-0.1
	comp=Z,12nm,1.1s						
BOZ	Bozeman (W)	57.55	310	*e*P	P	09 53 02.0	-0.1
BOZ				pmax	pmax		
	comp=Z,12nm,1.1s						
BOZ	Bozeman (W)	57.55	310	P	P	09 53 02.3	+0.2
	baz=89,SNR=21						
TMUT	Trail Mountain	57.60	303	*e*P	P	09 53 03.2	+0.5
	comp=Z,23nm,1.4s						
TCUT	Toone Canyon	57.60	305	*e*P	P	09 53 02.3	-0.4
	comp=Z,36nm,1.3s						
HRY	Holter Researc	57.67	311	*e*P	P	09 53 01.9	-0.9
JLU	Jordanelle	57.67	304	*e*P	P	09 53 02.3	-1.0
	comp=Z,15nm,1.0s						
HWUT	Hardware Ranch	57.69	305	*e*P	P	09 53 01.9	-1.3
	comp=Z,8.5nm,0.9s						
UZH	Uzhgorod	57.75	46	*e*P	P	09 53 03.9	+0.7
UZH				*e*		09 53 12.9	
MPU	Maple Canyon	57.86	304	*e*P	P	09 53 04.8	+0.3
	comp=Z,21nm,1.0s						
LRM	Limekiln Ridge	58.12	310	*e*P	P	09 53 06.4	+0.2
ITM	Ithomi	58.12	60	*e*P	P	09 53 06.8	+0.6
	comp=Z,12nm,0.7s						
TUC	Tucson	58.14	294	*e*P	P	09 53 05.3	-1.1
	comp=Z,19nm,1.0s						
TUC	Tucson	58.14	294	*e*P	P	09 53 05.3	-1.1
TUC				pmax	pmax		
	comp=Z,19nm,1.0s						
TUC	Tucson	58.14	294	P	P	09 53 07.2	+0.8
	baz=81						
WUAZ	Wupatki	58.15	298	P	P	09 53 07.9	+1.3
	baz=82,SNR=18						
DLMT	Dillon	58.23	310	*e*P	P	09 53 07.4	+0.4
	comp=Z,9.4nm,1.0s						
X16A	Lo Mia Camp, P	58.36	297	*e*P	P	09 53 08.8	+0.8
	comp=Z,12nm,1.0s						
SPUT	South Promonto	58.37	305	*e*P	P	09 53 08.0	0.0
	comp=Z,36nm,1.0s						
MSU	Marysvale	58.43	302	*e*P	P	09 53 09.2	+0.7
MCMT	McKenzie Canyo	58.44	309	*e*P	P	09 53 09.1	+0.6
MTPU	Mount Pierson	58.49	301	*e*P	P	09 53 08.9	-0.2
	comp=Z,11nm,1.0s						
HVU	Hansel Valley	58.58	306	*e*P	P	09 53 09.0	-0.4
	comp=Z,9.9nm,1.0s						
HVU	Hansel Valley	58.58	306	*e*P	P	09 53 09.0	-0.4
HVU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TCRU	Three Creeks R	58.63	302	*e*P	P	09 53 09.6	-0.3
	comp=Z,23nm,0.4s						
PKCU	Pink Cliffs	58.66	301	*e*P	P	09 53 10.6	+0.4
	comp=Z,12nm,1.1s						
DUG	Dugway, Tooele	58.75	304	*e*P	P	09 53 11.4	+0.8
	comp=Z,21nm,0.8s						
DUG	Dugway, Tooele	58.75	304	*e*P	P	09 53 11.4	+0.8
DUG				pmax	pmax		
	comp=Z,21nm,0.8s						
DUG	Dugway, Tooele	58.75	304	P	P	09 53 11.1	+0.5
	baz=84,SNR=28						
BGU	Big Grassy Mou	58.84	305	*e*P	P	09 53 11.7	+0.4
	comp=Z,21nm,1.0s						
WALA	Waterton Lakes	59.03	314	*e*P	P	09 53 11.5	-0.9
	comp=Z,9.1nm,1.1s						
MSO	Missoula	59.11	312	*e*P	P	09 53 12.6	-0.4
	comp=Z,7.1nm,1.2s						
MSO	Missoula	59.11	312	P	P	09 53 13.2	+0.2
	baz=88						
KNB	Kanab	59.11	300	*e*P	P	09 53 13.0	-0.2
	comp=Z,12nm,1.1s						
KNB	Kanab	59.11	300	*e*P	P	09 53 13.0	-0.2
KNB				pmax	pmax		
	comp=Z,12nm,1.1s						
SZCU	Shurtz Canyon	59.25	301	*e*P	P	09 53 13.0	-1.2
	comp=Z,6.9nm,0.9s						
LPIG	La Paz	59.38	285	LR	LR	10 20 03.0	
	comp=Z,67nm,19.5s,baz=64,slow=37						
LCMT	Little Creek M	59.45	300	*e*P	P	09 53 15.3	-0.2
	comp=Z,6.8nm,0.9s						
CCUT	Cedar City	59.47	301	*e*P	P	09 53 16.4	+0.7
	comp=Z,32nm,1.1s						
HLID	Hailey	59.64	308	*e*P	P	09 53 14.6	-2.2
	comp=Z,11nm,0.9s						
HLID	Hailey	59.64	308	P	P	09 53 17.1	+0.3
	baz=85,SNR=29						
Y14A	Wickenburg	59.71	297	*e*P	P	09 53 15.2	-2.1
	comp=Z,21nm,0.9s						
BUR08	Bucovina Ar. S	59.71	47	*e*P	P	09 53 15.6	-1.5
	comp=Z,4.1nm,0.9s						
PSUT	Pine Spring	59.73	302	*e*P	P	09 53 16.6	-0.9
	comp=Z,17nm,1.1s						
214A	Organ Pipe Nat	59.89	294	P	P	09 53 20.1	+1.6
	baz=80,SNR=12						
YKA	Yellowknife Ar	60.07	330	P	P	09 53 18.4	-0.7
	comp=Z,2.4nm,0.8s,baz=97,slow=7.6,SNR=17						
YKA				PcP	PcP	09 54 04.4	-0.5
	comp=Z,1.9nm,0.8s,baz=92,slow=5.3,SNR=7.5						
YKA				LR	LR	10 18 23.8	
	comp=Z,7.9nm,19.6s,baz=73,slow=35						
YKB5	Yellowknife Ar	60.07	330	*e*P	P	09 53 18.4	-0.7
YKB5				*e*PcP	PcP	09 54 04.4	-0.5
W13A	Hualapai Mount	60.24	298	*e*P	P	09 53 19.1	-2.0
	comp=Z,12nm,1.3s						
MLR	Muntele Rosu	60.35	50	*e*P	P	09 53 21.6	0.0
	comp=Z,17nm,0.8s						
MLR	Muntele Rosu	60.35	50	*e*P	P	09 53 21.6	0.0
MLR				pmax	pmax		
	comp=Z,17nm,0.8s						
FIA0	FINESS Array S	60.51	31	*e*P	P	09 53 22.1	+0.1
FIA0	FINESS Array S	60.51	31	*e*P	P	09 53 22.2	+0.1
FINES	FINESS Array B	60.51	31	P	P	09 53 22.1	+0.1
	comp=Z,4.0nm,0.8s,baz=298,slow=4.1,SNR=7.4						
FINES				LR	LR	10 16 24.5	
	comp=Z,77nm,18.5s,baz=281,slow=33						
FIA1	FINESS Array S	60.51	31	*e*P	P	09 53 21.6	-0.5
	comp=Z,11nm,1.0s						
ELK	Elko	60.53	305	*e*P	P	09 53 23.1	+0.1
	comp=Z,18nm,1.0s						
ELK	Elko	60.53	305	*e*P	P	09 53 23.1	+0.1
ELK				pmax	pmax		
	comp=Z,18nm,1.0s						
113A	Mohawk Valley,	60.54	295	*e*P	P	09 53 23.6	+0.7
	comp=Z,12nm,1.0s						
PDMCI	Parker Dam,Lak	60.58	297	P	P	09 53 24.1	+0.9
	baz=80						
PLID	Pearl Lake	60.65	310	*e*P	P	09 53 24.1	+0.4
	comp=Z,21nm,0.9s						
IDI	Anoyia	60.76	62	LR	LR	10 15 56.7	
	comp=Z,21nm,20.9s,baz=282,slow=32						
Y12C	Blythe	60.99	297	*e*P	P	09 53 24.9	-1.0
	comp=Z,10nm,1.0s						
Y12C	Blythe	60.99	297	P	P	09 53 27.0	+1.0
	baz=80						
SHPR	Sheep Range	61.05	300	*e*P	P	09 53 26.9	+0.4
	comp=Z,9.3nm,1.2s						
R11A	Troy Canyon, C	61.10	302	*e*P	P	09 53 26.8	-0.1
	comp=Z,9.0nm,1.2s						
R11A	Troy Canyon, C	61.10	302	P	P	09 53 27.6	+0.7
	baz=82,SNR=20						
NEW	Newport	61.19	313	*e*P	P	09 53 27.1	0.0
	comp=Z,34nm,1.1s						
NEW	Newport	61.19	313	*e*P	P	09 53 27.1	0.0
NEW				pmax	pmax		
	comp=Z,34nm,1.1s						
NEW	Newport	61.19	313	P	P	09 53 27.3	+0.2
	baz=86,SNR=35						
ARA0	ARCESS Array S	61.30	22	*e*P	P	09 53 26.9	-0.6
ARCES	ARCESS Array B	61.30	22	P	P	09 53 26.9	-0.6
	comp=Z,11nm,0.9s,baz=244,slow=5.9,SNR=19						
GLA	Glamis	61.37	296	*e*P	P	09 53 27.8	-0.8
	comp=Z,17nm,0.8s						
GLA	Glamis	61.37	296	*e*P	P	09 53 27.8	-0.8
GLA				pmax	pmax		
	comp=Z,17nm,0.8s						
GLA	Glamis	61.37	296	P	P	09 53 29.3	+0.7
	baz=79						
IRM	Iron Mountain	61.42	297	P	P	09 53 29.8	+0.9
	baz=80						
F10A	Beach Ranch, E	61.44	311	*e*P	P	09 53 27.3	-1.6
	comp=Z,13nm,1.2s						
BMO	Blue Mountains	61.60	310	*e*P	P	09 53 30.1	+0.1
	comp=Z,5.1nm,0.9s						
BMO	Blue Mountains	61.60	310	*e*P	P	09 53 30.1	+0.1
BMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GMRC	Granite Mounta	61.73	298	P	P	09 53 32.2	+1.1
	baz=80,SNR=20						
BC3	Big Chuckawall	61.77	297	P	P	09 53 31.9	+0.5
	baz=79						
TUQ	Turquoise Moun	61.83	299	P	P	09 53 33.0	+1.2
	baz=80,SNR=9.2						
TPNV	Topopah Spring	61.84	301	*e*P	P	09 53 33.2	+1.4
	comp=Z,24nm,1.1s						
TPNV	Topopah Spring	61.84	301	P	P	09 53 33.3	+1.4
	baz=81,SNR=27						
C09A	Chrisman Ranch	61.99	313	*e*P	P	09 53 31.8	-0.7
	comp=Z,7.7nm,0.8s						
E09A	Wood Farm, Sta	62.02	311	*e*P	P	09 53 33.4	+0.7
	comp=Z,24nm,1.0s						
BMN	Battle Mountai	62.07	305	*e*P	P	09 53 34.0	+0.6
	comp=Z,7.7nm,0.9s						
BELC	Belle Mtn. Jos	62.15	297	P	P	09 53 35.3	+1.3
	baz=79,SNR=9.1						
AKASG	Malin Array Be	62.18	44	P	P	09 53 33.5	-0.2
	comp=Z,4.1nm,0.5s,baz=273,slow=5.9,SNR=22						
AKBB	Malin Array Si	62.18	44	*e*P	P	09 53 32.8	-0.9
	comp=Z,5.7nm,0.7s						
AKBB	Malin Array Si	62.18	44	*e*P	P	09 53 32.8	-0.9
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SWSC	Sam W. Stewart	62.19	296	P	P	09 53 35.4	+1.4
	baz=79						
HEC	Hector,Ludlow	62.27	298	P	P	09 53 35.7	+1.0
	baz=80						
FURC	Furnace Creek,	62.41	300	P	P	09 53 37.0	+1.6
	baz=80,SNR=11						
D08A	Wollman Farm,	62.50	312	*e*P	P	09 53 36.2	+0.3
	comp=Z,35nm,1.1s						
IKP	In-Ko-Pah, Jac	62.50	296	P	P	09 53 37.0	+0.8
	baz=78						
GSC	Goldstone, Bar	62.56	299	*e*P	P	09 53 36.3	-0.3
	comp=Z,12nm,1.0s						
GSC	Goldstone, Bar	62.56	299	P	P	09 53 37.8	+1.1
	baz=80,SNR=8.9						
PFO	Pinyon Flats O	62.60	297	LR	LR	10 16 46.4	
	comp=Z,107nm,20.4s,baz=116,slow=32						
PFO	Pinyon Flats O	62.60	297	*e*P	P	09 53 36.3	-0.7
	comp=Z,11nm,1.3s						
PFO	Pinyon Flats O	62.60	297	*e*P	P	09 53 36.3	-0.7
PFO				pmax	pmax		
	comp=Z,11nm,1.3s						
PFO	Pinyon Flats O	62.60	297	P	P	09 53 38.2	+1.2
	baz=79						
J08A	Circle Bar Ran	62.60	308	*e*P	P	09 53 36.5	-0.3
	comp=Z,7.1nm,1.0s						
E08A	Dider Farm, El	62.65	312	*e*P	P	09 53 36.8	-0.1
	comp=Z,14nm,0.9s						
MONP2	Monument Peak	62.71	296	P	P	09 53 38.9	+1.1
	baz=78						
GRAC	Grapevine Rang	62.71	301	P	P	09 53 38.7	+1.1
	baz=80,SNR=13						
G08A	Pilot Rock	62.72	310	*e*P	P	09 53 37.8	+0.2
	comp=Z,9.7nm,1.2s						
WVOR	Wild Horse Val	62.84	307	*e*P	P	09 53 36.7	-1.7
	comp=Z,7.0nm,1.1s						
WVOR	Wild Horse Val	62.84	307	*e*P	P	09 53 36.7	-1.7
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BBRC	Big Bear Solar	62.85	298	P	P	09 53 39.8	+1.1
	baz=79						
KVN	Kaiserville	62.94	303	*e*P	P	09 53 38.6	-0.6
	comp=Z,8.0nm,1.1s						
KVN	Kaiserville	62.94	303	*e*P	P	09 53 38.6	-0.6
KVN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MPMC	Manual Prospec	62.98	300	P	P	09 53 40.5	+0.9
	baz=80,SNR=16						
HAWA	Hanford	62.99	311	*e*P	P	09 53 39.1	0.0
	comp=Z,22nm,1.0s						
DAC	Darwin (Calif)	63.02	300	*e*P	P	09 53 39.0	-0.8
DAC	Darwin (Calif)	63.02	300	*e*P	P	09 53 39.0	-0.8
NV11	Mina Array Sit	63.09	302	*e*P	P	09 53 39.7	-0.5
	comp=Z,0.4nm,1.0s						
NV01	Mina Array Sit	63.20	302	*e*P	P	09 53 41.4	+0.4
NVAR	Mina Array Bea	63.20	302	P	P	09 53 41.4	+0.4
	comp=Z,4.1nm,0.9s,baz=85,slow=6.5,SNR=21						
NVAR				LR	LR	10 19 00.7	
	comp=Z,277nm,20.9s,baz=76,slow=34						
I07A	Izee	63.25	309	*e*P	P	09 53 40.9	-0.2
	comp=Z,11nm,1.1s						
F07A	Phinny Hill Vi	63.32	311	*e*P	P	09 53 41.0	-0.4
	comp=Z,11nm,0.8s						
RYN	Ryan	63.34	303	*e*P	P	09 53 42.0	+0.2
	comp=Z,12nm,0.9s						
CWC	Cottonwood Cre	63.38	300	P	P	09 53 43.4	+1.2
	baz=79						
BFSC	Mount Baldy Ra	63.46	298	P	P	09 53 44.1	+1.4
	baz=78						
EDW2	Edwards Air Fo	63.60	299	P	P	09 53 44.5	+1.0
	baz=79,SNR=5.8						
LTY	Liberty	63.66	313	*e*P	P	09 53 43.4	-0.4
	comp=Z,18nm,1.1s						
MWC	Mount Wilson	63.78	298	*e*P	P	09 53 44.4	-0.5
	comp=Z,18nm,1.3s						
MWC	Mount Wilson	63.78	298	*e*P	P	09 53 44.4	-0.5
MWC				pmax	pmax		
	comp=Z,18nm,1.3s						
PAHR	Pah Rah Range	63.82	304	*e*P	P	09 53 44.2	-0.7
	comp=Z,8.4nm,0.9s						
YERR	Yerington	63.83	303	*e*P	P	09 53 43.9	-1.2
	comp=Z,3.4nm,0.9s						
ISA	Isabella, Lake	63.84	299	*e*P	P	09 53 46.1	+1.1
	comp=Z,47nm,1.0s						
ISA	Isabella, Lake	63.84	299	*e*P	P	09 53 46.1	+1.1
ISA				pmax	pmax		
	comp=Z,47nm,1.0s						
ISA	Isabella, Lake	63.84	299	P	P	09 53 46.7	+1.7
	baz=79,SNR=31						
OMMB	Old Mammoth Mi	63.89	302	*e*P	P	09 53 46.3	+0.7
	comp=Z,14nm,1.0s						
G06A	Carlson Farm,	63.90	310	*e*P	P	09 53 43.5	-1.7
	comp=Z,28nm,1.1s						
MDPB	Devils Postpil	63.95	302	*e*P	P	09 53 44.8	-1.2
	comp=Z,16nm,1.1s						
WAKR	Walker	64.07	303	*e*P	P	09 53 46.8	+0.1
	comp=Z,14nm,1.0s						
LLLB	Lillooet	64.08	316	*e*P	P	09 53 44.2	-2.1
	comp=Z,12nm,1.0s						
PNTR	Pine Nut	64.09	303	*e*P	P	09 53 45.7	-1.1
	comp=Z,6.8nm,0.6s						
VCNR	Virginia City	64.09	304	*e*P	P	09 53 45.5	-1.4
	comp=Z,7.0nm,1.0s						
PINE	Pine Mountain	64.32	309	*e*P	P	09 53 50.1	+1.9
	comp=Z,9.3nm,1.3s						
G05D	Wamic, OR	64.37	310	P	P	09 53 48.8	+0.5
	baz=82						
K05A	Summer Lake	64.45	308	*e*P	P	09 53 50.0	+0.9
	comp=Z,46nm,1.1s						
B05A	Bryant	64.50	314	P	P	09 53 48.9	-0.1
	baz=83						
I05D	Terrebonne, OR	64.52	309	P	P	09 53 50.4	+1.0
	baz=81,SNR=8.2						
J05D	Fort Rock, OR	64.61	308	P	P	09 53 51.0	+0.9
	baz=81,SNR=19						
CMB	Columbia Colle	64.89	302	*e*P	P	09 53 49.5	-2.4
	comp=Z,7.7nm,1.0s						
CMB	Columbia Colle	64.89	302	*e*P	P	09 53 49.5	-2.4
CMB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
H04A	Detroit Lake	65.07	310	*e*P	P	09 53 52.8	-0.1
	comp=Z,15nm,1.0s						
AFDM	Forest Hills D	65.16	303	*e*P	P	09 53 52.6	-1.0
	comp=Z,21nm,0.6s						
PAGB	Antelope Grade	65.24	300	*e*P	P	09 53 53.8	-0.4
	comp=Z,16nm,1.0s						
J04D	Umpqua Nationa	65.25	308	P	P	09 53 55.5	+1.2
	baz=80,SNR=8.1						
M04C	Macdoel	65.30	307	P	P	09 53 55.9	+1.3
	baz=80,SNR=6.7						
I04A	Tendick Farm,	65.37	309	P	P	09 53 55.9	+1.0
	baz=80						
L04D	Klamath Falls	65.56	307	P	P	09 53 56.7	+0.4
	baz=80						
YBH	Yreka Blue Hor	65.95	307	LR	LR	10 20 26.1	
	comp=Z,147nm,21.2s,baz=67,slow=34						
YBH	Yreka Blue Hor	65.95	307	*e*P	P	09 53 59.8	+1.0
	comp=Z,8.2nm,0.9s						
WDC	Whiskeytown Da	66.04	305	*e*P	P	09 53 59.4	+0.2
	comp=Z,13nm,1.4s						
WDC	Whiskeytown Da	66.04	305	*e*P	P	09 53 59.4	+0.2
WDC				pmax	pmax		
	comp=Z,13nm,1.4s						
N02D	Trinity Center	66.09	306	P	P	09 53 59.6	0.0
	baz=79						
OBN	Obninsk	66.19	38	P	P	09 54 00.6	+0.7
	comp=Z,3.7nm,0.4s,baz=289,slow=22,SNR=4.5						
OBN	Obninsk	66.19	38⇓	*i*P	P	09 54 00.3	+0.4
OBN				*e*		09 54 27.3	
OBN				*e*		09 56 25.8	
OBN				*e*S	S	10 03 16.7	+29
OBN				pmax	pmax		
	comp=Z,31nm,1.0s						
K02D	Willamette Mer	66.47	308	P	P	09 54 02.5	+0.5
	baz=79						
L02E	Cave Junction	66.52	307	P	P	09 54 03.1	+0.8
	baz=79						
BR101	Keskin Array S	66.79	55	*e*P	P	09 54 05.3	+1.1
BR131	Keskin Array S	66.79	55	*e*P	P	09 54 05.3	+1.1
	comp=Z,6.9nm,0.9s						
BR131	Keskin Array S	66.79	55	*e*P	P	09 54 05.3	+1.1
BR131				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	66.79	55	P	P	09 54 05.3	+1.1
	comp=Z,3.0nm,0.7s,baz=261,slow=5.5,SNR=17						
BRTR				LR	LR	10 19 13.1	
	comp=Z,35nm,21.6s,baz=276,slow=32						
DLBC	Dease Lake	67.78	326	*e*P	P	09 54 09.0	-1.1
	comp=Z,9.0nm,1.1s						
INK	Inuvik	67.89	336	*e*P	P	09 54 09.1	-1.4
	comp=Z,4.3nm,0.9s						
INK	Inuvik	67.89	336	*e*P	P	09 54 09.1	-1.4

INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PLCA	**Paso Flores**	**68.26**	**201**	P	**P**	**09 54 14.4**	**+1.3**
	comp=Z,3.2nm,0.7s,baz=53,slow=6.3,SNR=8.9						
PLCA	**Paso Flores**	**68.26**	**201**	eP	**P**	**09 54 14.3**	**+1.1**
	comp=Z,48nm,1.9s						
EPYK	**Eagle Plains**	**69.44**	**335**	eP	**P**	**09 54 20.3**	**0.0**
	comp=Z,8.6nm,1.0s						
EPYK	**Eagle Plains**	**69.44**	**335**	P	**P**	**09 54 20.6**	**+0.4**
	baz=78						
HYT	**Haines Junctio**	**71.03**	**329**	eP	**P**	**09 54 29.3**	**-0.8**
	comp=Z,16nm,1.3s						
DAWY	**Dawson**	**71.07**	**332**	eP	**P**	**09 54 30.3**	**+0.1**
EGAK	**Eagle**	**71.62**	**333**	eP	**P**	**09 54 32.9**	**-0.6**
	comp=Z,5.3nm,1.0s						
KIV	**Kislovodsk**	**72.35**	**49**	eP	**P**	**09 54 40.6**	**+2.2**
KIV				pmax	pmax		
	comp=Z,31nm,0.9s						
KBZ	**Khabaz**	**72.56**	**49**	P	**P**	**09 54 41.1**	**+1.6**
	comp=Z,4.1nm,0.8s,baz=294,slow=5.7,SNR=8.1						
FYU	**Fort Yukon**	**72.69**	**336**	eP	**P**	**09 54 40.5**	**+0.6**
	comp=Z,15nm,1.1s						
PRP	**Porcupine Dome**	**73.15**	**335**	eP	**P**	**09 54 41.8**	**-1.0**
	comp=Z,12nm,0.9s						
DOT	**Dot Lake**	**73.17**	**333**	eP	**P**	**09 54 42.6**	**-0.2**
	comp=Z,5.9nm,1.0s						
BALM	**Baldy**	**73.24**	**330**	eP	**P**	**09 54 43.0**	**-0.4**
	comp=Z,16nm,0.8s						
BALM	**Baldy**	**73.24**	**330**	eP	**P**	**09 54 43.0**	**-0.4**
BALM				pmax	pmax		
	comp=Z,17nm,0.8s						
MENT	**Mentasta**	**73.25**	**332**	eP	**P**	**09 54 41.7**	**-1.6**
	comp=Z,6.8nm,1.0s						
RIDG	**Independent Ri**	**73.47**	**333**	eP	**P**	**09 54 44.5**	**-0.2**
	comp=Z,10nm,1.1s						
TOLK	**Toolik Lake Re**	**73.51**	**338**	P	**P**	**09 54 45.8**	**+1.0**
	baz=68						
ILAR	**Eielson Array**	**73.95**	**334**	P	**P**	**09 54 47.6**	**+0.3**
	comp=Z,14nm,0.9s,baz=69,slow=4.6,SNR=54						
ILAR				LR	LR	10 27 53.5	
	comp=Z,118nm,18.2s,baz=99,slow=36						
ILB	**Eielson Array**	**73.95**	**334**	eP	**P**	**09 54 46.6**	**-0.7**
	comp=Z,20nm,1.0s						
PAX	**Paxson**	**74.00**	**332**	eP	**P**	**09 54 48.0**	**+0.2**
	comp=Z,9.7nm,1.0s						
PAX	**Paxson**	**74.00**	**332**	eP	**P**	**09 54 48.0**	**+0.2**
PAX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
POKR	**Poker Plat Res**	**74.04**	**335**	P	**P**	**09 54 49.2**	**+1.3**
	baz=69						
HDA	**Harding Lake**	**74.10**	**334**	eP	**P**	**09 54 48.0**	**-0.2**
	comp=Z,8.4nm,1.2s						
HDA	**Harding Lake**	**74.10**	**334**	P	**P**	**09 54 49.0**	**+0.8**
	baz=69						
COLD	**Coldfoot**	**74.28**	**337**	eP	**P**	**09 54 50.0**	**+0.8**
	comp=Z,7.7nm,1.1s						
COLA	**College**	**74.29**	**334**	eP	**P**	**09 54 50.2**	**+0.9**
	comp=Z,18nm,0.9s						
COLA	**College**	**74.29**	**334**c	iP	**P**	**09 54 50.2**	**+0.9**
COLA				pmax	pmax		
	comp=Z,19nm,1.0s						
TCOL	**CIGO, UAF Yank**	**74.30**	**334**	P	**P**	**09 54 50.6**	**+1.3**
	baz=68						
CCB	**Clear Creek Bu**	**74.36**	**334**	eP	**P**	**09 54 49.5**	**-0.2**
	comp=Z,16nm,0.9s						
MDM	**Murphy Dome**	**74.41**	**335**	eP	**P**	**09 54 48.8**	**-1.3**
	comp=Z,14nm,0.7s						
WRH	**Wood River Hil**	**74.54**	**334**	eP	**P**	**09 54 49.4**	**-1.4**
	comp=Z,21nm,1.0s						
DHY	**Denali Highway**	**74.77**	**333**	eP	**P**	**09 54 51.5**	**-0.8**
	comp=Z,10nm,0.9s						
GNI	**Garni**	**74.92**	**53**	P	**P**	**09 54 54.9**	**+1.2**
	comp=Z,8.8nm,0.7s,baz=222,slow=22,SNR=3.5						
GNI	**Garni**	**74.92**	**53**	eP	**P**	**09 54 53.2**	**-0.5**
	comp=Z,20nm,0.8s						
GNI	**Garni**	**74.92**	**53**d	iP	**P**	**09 54 55.6**	**+1.9**
GNI				pmax	pmax		
	comp=Z,36nm,0.9s						
MCK	**McKinley**	**75.17**	**333**	eP	**P**	**09 54 53.5**	**-1.0**
	comp=Z,19nm,1.0s						
MCK	**McKinley**	**75.17**	**333**	eP	**P**	**09 54 53.5**	**-1.0**
MCK				pmax	pmax		
	comp=Z,19nm,1.0s						
BWN	**Browne**	**75.21**	**334**	eP	**P**	**09 54 52.8**	**-1.8**
	comp=Z,34nm,0.9s						
RND	**Reindeer**	**75.26**	**333**	eP	**P**	**09 54 55.6**	**+0.5**
	comp=Z,10.0nm,1.2s						
RND	**Reindeer**	**75.26**	**333**	eP	**P**	**09 54 55.6**	**+0.5**
RND				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MLY	**Manley**	**75.36**	**335**	eP	**P**	**09 54 54.7**	**-1.0**
	comp=Z,10nm,0.9s						
BPAW	**Bear Paw Mtn.**	**75.85**	**334**	eP	**P**	**09 54 58.5**	**+0.1**
	comp=Z,9.2nm,0.8s						
KNK	**Knik Glacier**	**75.87**	**331**	eP	**P**	**09 54 58.8**	**+0.2**
	comp=Z,20nm,1.1s						
KTH	**Kantishna Hill**	**76.05**	**334**	eP	**P**	**09 54 59.7**	**+0.1**
	comp=Z,35nm,1.1s						
PMR	**Palmer**	**76.10**	**331**	eP	**P**	**09 54 59.7**	**-0.1**
	comp=Z,16nm,1.1s						
PMR	**Palmer**	**76.10**	**331**	eP	**P**	**09 54 59.7**	**-0.1**
PMR				pmax	pmax		
	comp=Z,16nm,1.1s						
CAST	**Castle Rocks**	**76.58**	**334**	eP	**P**	**09 55 00.9**	**-1.6**
	comp=Z,31nm,0.4s						
PPLA	**Purkeypile**	**76.85**	**333**	eP	**P**	**09 55 04.9**	**+0.7**
	comp=Z,29nm,1.0s						
SPU	**Mount Spurr**	**77.55**	**332**	eP	**P**	**09 55 07.5**	**-0.6**
BRLK	**Bradley Lake**	**77.65**	**330**	eP	**P**	**09 55 09.3**	**+0.7**
	comp=Z,27nm,1.1s						
ARU	**Arti**	**77.77**	**34**	P	**P**	**09 55 10.2**	**+0.9**
	comp=Z,2.0nm,0.2s,baz=216,slow=6.6,SNR=4.2						
ARU	**Arti**	**77.77**	**34**	eP	**P**	**09 55 08.6**	**-0.7**
	comp=Z,6.2nm,0.5s						
RDOG	**Red Dog Mine**	**78.14**	**340**	eP	**P**	**09 55 12.5**	**+1.3**
	comp=Z,24nm,0.8s						
AKTO	**Aktyubinsk**	**79.94**	**39**	P	**P**	**09 55 22.7**	**+1.3**
	comp=Z,5.4nm,0.7s,baz=292,slow=5.4,SNR=16						
ABKAR	**Akbulak array**	**81.58**	**40**	eP	**P**	**09 55 30.2**	**+0.1**
	comp=Z,4.4nm,1.2s						
TIXI	**Tiksi**	**84.98**	**2**	P	**P**	**09 55 48.6**	**+1.3**
	comp=Z,1.7nm,0.3s,baz=50,slow=6.9,SNR=3.8						
TIXI	**Tiksi**	**84.98**	**2**	eP	**P**	**09 55 45.9**	**-1.3**
	comp=Z,5.4nm,1.0s						
TIXI	**Tiksi**	**84.98**	**2**⇑	iP	**P**	**09 55 48.0**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOSA	**Boshof**	**85.09**	**124**	LR	LR	10 27 54.0	
	comp=Z,72nm,19.6s,baz=348,slow=32						
BRVK	**Borovoye**	**85.33**	**33**	eP	**P**	**09 55 48.0**	**-1.4**
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**85.33**	**33**d	iP	**P**	**09 55 50.6**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BVAR	**Borovoye Array**	**85.41**	**33**	P	**P**	**09 55 51.3**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=298,slow=3.2,SNR=12						
BILL	**Bilibino**	**85.86**	**349**⇓	eP	**P**	**09 55 53.0**	**+1.3**
BILL				e		09 59 05.9	
BILL				eS	S	10 07 50.3	+86
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	**Kurchatov**	**90.87**	**32**	eP	**P**	**09 56 15.1**	**-0.9**
	comp=Z,8.0nm,1.4s						
KURK	**Kurchatov**	**90.87**	**32**c	eP	**P**	**09 56 16.6**	**+0.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURBB	**Kurchatov Arra**	**90.89**	**32**	P	**P**	**09 56 16.8**	**+0.8**
	comp=Z,2.5nm,0.9s,baz=312,slow=5.0,SNR=13						
ZAA1	**Zalesovo Array**	**91.49**	**27**	eP	**P**	**09 56 18.6**	**-0.2**
ZAA0	**Zalesovo Array**	**91.49**	**27**	eP	**P**	**09 56 17.8**	**-0.9**
	comp=Z,6.4nm,1.2s						
ZALV	**Zalesovo Beam**	**91.49**	**27**	P	**P**	**09 56 18.6**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=305,slow=5.2,SNR=7.0						
ZALV				LR	LR	10 35 05.4	
	comp=Z,30nm,20.7s,baz=248,slow=34						
ZALV	**Zalesovo Beam**	**91.49**	**27**	i P	**P**	**09 56 19.7**	**+1.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WSAR	**Wadi Sarin**	**92.34**	**64**	P	**P**	**09 56 25.3**	**+2.0**
	comp=Z,6.4nm,0.8s,baz=286,slow=21,SNR=3.6						
SEY	**Seymchan**	**92.76**	**352**	i P	**P**	**09 56 25.6**	**+1.2**
AAK	**Ala-Archa**	**93.66**	**40**⇑	iP	**P**	**09 56 30.5**	**+1.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YAK	**Yakutsk**	**94.63**	**3**	i P	**P**	**09 56 34.8**	**+1.8**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MK32	**Makanchi Array**	**95.29**	**33**	eP	**P**	**09 56 37.4**	**+0.9**
MKAR	**Makanchi Array**	**95.29**	**33**	P	**P**	**09 56 37.4**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=336,slow=2.7,SNR=4.0						
MKAR				LR	LR	10 36 48.9	
	comp=Z,44nm,20.5s,baz=324,slow=34						
KSH	**Kashi**	**96.43**	**42**	eP	**P**	**09 56 41.7**	**-0.2**
KSH				pP	pP	09 56 46.3	+0.6
WMQ	**Urumqi**	**100.09**	**33**	eP	**Pdif**	**09 56 59.8**	**+1.6**
WMQ				LR	LR		
	comp=Z,280nm,28.9s						
WMQ				LR	LR		
	comp=Z,540nm,29.1s						
HHC	**Hu-ho-hao-te**	**112.30**	**19**	ePKP	**PKiKP**	**10 01 49.0**	**+0.4**
HHC				LR	LR		
	comp=Z,150nm,16.1s						
HHC				LR	LR		
	comp=Z,160nm,16.2s						
LZH	**Lanzhou**	**113.72**	**27**	ePKP	**PKiKP**	**10 01 46.5**	**-5.0**
LZH				sPKP		10 02 00.4	
LZH				LR	LR		
	comp=Z,130nm,18.1s						
LZH				LR	LR		
	comp=Z,130nm,18.3s						
CD2	**Chengdu**	**118.06**	**30**	PKP	**PKPdf**	**10 01 58.5**	**-1.3**
NJ2	**Nanjing**	**122.57**	**16**	ePKP	**PKPdf**	**10 02 07.9**	**-0.5**
WHN	**Wuhan**	**122.65**	**21**	ePKP	**PKiKP**	**10 02 12.2**	**+3.4**
CMAR	**Chiang Mai Arr**	**125.31**	**43**	PKP	**PKiKP**	**10 02 14.9**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=310,slow=3.1,SNR=4.2						
KSM	**Kuching**	**145.33**	**48**	ePKPbc	**PKPab**	**10 02 51.0**	**-0.1**
SBUM	**Sibu**	**145.85**	**44**	ePKPdf	**PKPdf**	**10 02 52.2**	**+0.2**
ASAR	**Alice Springs**	**178.84**	**97**	PKP	**PKPdf**	**10 03 23.2**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=161,slow=1.0,SNR=5.5						
ASAR				PKPab	**pPKPab**	**10 05 16.4**	**-2.6**
	comp=Z,1.3nm,0.8s,baz=301,slow=3.4,SNR=7.5						

IDC 09 09:55:24.6±6.9**,42.°01N**×**29.°62W,h0**^{km}**,mb3.6**/3**,**
mb1 4.0/3**,mb1mx3.3**/65**,mbtmp3.6**/3**,MS3.7**/1**,Ms1 3.7**/1**,**
ms1mx2.7/42**,Error ellipse: s-maj=268.6km**
s-min=39.8km az=169.0,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**2.58**	**207**	Pn	Pn	09 55 55.3	-12
H07N1				T	T	09 58 21.0	
H07S1	**FLORES T-PHASE**	**2.89**	**205**	Pn	Pn	09 55 59.6	-12
SDV	**Santo Domingo**	**48.85**	**239**	LR	LR	10 22 49.9	
	comp=Z,72nm,18.2s,baz=54,slow=34						
PDAR	**Pinedale Array**	**56.84**	**300**	P	P	10 05 11.2	+0.1
	0.3nm,0.7s,baz=74,slow=9.6,SNR=3.7						
TXAR	**Lajitas Array**	**59.75**	**284**	P	P	10 05 31.3	-0.2
	0.4nm,0.7s,baz=66,slow=6.6,SNR=6.3						
MKAR	**Makanchi Array**	**72.94**	**42**	P	P	10 06 55.7	0.0
	0.3nm,0.7s,baz=324,slow=7.1,SNR=3.7						

IDC ***09*** *10:04:33.8±1.6,51.°64N×167.°48W,h0*^{km}*,mb3.6/5,*
mb1 3.9/6,mb1mx3.5/64,mbtmp3.5/6,Error ellipse:
s-maj=47.9km s-min=27.5km az=130.0
NEIC ***09*** *10:04:38.1±0.0,51.°56N×167.°04W,h65*^{km}*,mb3.4/4,*
ML3.1(AEIC),After AEIC.
ISC 09 10:04:36.8±2.9**,51.°68N**±0.°08×**167.°21W**±0.°06**,**
h14^{km}±17^{km}**,n37,**σ**1**^{s}**.39**/47**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.64**	**323**	ePn	**Pb**	**10 05 06.5**	**-0.3**
NIKH				eSn	**Sg**	**10 05 29.2**	**-0.3**
OKTU	**Okmok Mt. Tuli**	**1.78**	**344**	ePn	**Pb**	**10 05 09.3**	**+0.1**
OKER	**Okmok East Rim**	**1.85**	**344**	ePn	**Pb**	**10 05 10.2**	**-0.2**
OKER				eSn	**Sg**	**10 05 36.0**	**-0.2**
OKAK	**Okmok**	**2.03**	**340**	ePn	**Pn**	**10 05 10.2**	**-0.3**
MREP	**Makushin Rep't**	**2.15**	**7**	ePn	**Pn**	**10 05 12.7**	**+0.4**
UNV	**Unalaska Valle**	**2.21**	**11**	ePn	**Pn**	**10 05 13.9**	**+0.8**
UNV				eSn	**Sb**	**10 05 42.3**	**-1.5**
MSW	**Makushin Switc**	**2.25**	**6**	ePn	**Pn**	**10 05 15.2**	**+1.5**
MSW				eSn	**Sb**	**10 05 44.9**	**-0.2**
AKRB	**Akutan Reef Bi**	**2.55**	**15**	ePn	**Pn**	**10 05 19.1**	**+1.4**
AKRB				eSn	**Sn**	**10 05 49.7**	**+1.1**
AKUT	**Akutan**	**2.61**	**19**	ePn	**Pn**	**10 05 19.2**	**+0.7**
AKUT				eSn	**Sb**	**10 05 52.7**	**-2.5**
FALS	**False Pass**	**3.91**	**34**	ePn	**Pn**	**10 05 35.7**	**-0.7**
FALS				eSn	**Sn**	**10 06 21.6**	**-0.5**
ATKA	**Atka Island**	**4.35**	**280**	ePn	**Pn**	**10 05 43.1**	**+0.6**
ATKA				eSn	**Sn**	**10 06 32.9**	**0.0**
SDPT	**Sand Point**	**5.45**	**45**	ePn	**Pn**	**10 05 58.0**	**+0.6**
SDPT				eSn	**Sn**	**10 07 00.4**	**+0.5**
GSTR	**Great Sitkin T**	**5.49**	**278**	ePn	**Pn**	**10 06 00.0**	**+1.8**
SPIA	**Saint Paul Isl**	**5.79**	**343**	ePn	**Pn**	**10 06 06.1**	**+4.0**
ADK	**Adak**	**5.88**	**276**	ePn	**Pn**	**10 06 04.7**	**+1.2**
ADK				eSn	**Sn**	**10 07 08.3**	**-2.4**
KIWB	**Kanaga Island**	**6.17**	**276**	ePn	**Pn**	**10 06 08.6**	**+1.1**
CHIA	**Chirikof Islan**	**8.05**	**54**	ePn	**Pn**	**10 06 33.1**	**-0.1**
SII	**Sitkinak Islan**	**9.07**	**52**	ePn	**Pn**	**10 06 46.2**	**-1.1**
OHAK	**Old Harbor**	**9.82**	**50**	ePn	**Pn**	**10 06 57.4**	**0.0**
KDAK	**Kodiak Island**	**10.43**	**48**	ePn	**Pn**	**10 07 05.1**	**-0.6**
SEW	**Seward**	**13.02**	**43**	ePn	**Pn**	**10 07 41.7**	**+0.6**
RC01	**Rabbit Creek A**	**13.47**	**39**	ePn	**Pn**	**10 07 46.6**	**-0.6**
PPLA	**Purkeypile**	**13.82**	**30**	ePn	**Pn**	**10 07 53.8**	**+1.6**
PMR	**Palmer**	**14.00**	**38**	ePn	**Pn**	**10 07 52.9**	**-1.6**
SML	**Sawmill**	**14.44**	**38**	ePn	**Pn**	**10 07 59.1**	**-1.4**
KTH	**Kantishna Hill**	**14.70**	**30**	ePn	**Pn**	**10 08 02.8**	**-1.3**
SCM	**Sheep Creek Mo**	**14.84**	**39**	ePn	**Pn**	**10 08 02.7**	**-3.4**
BPAW	**Bear Paw Mtn.**	**15.08**	**28**	eP	**Pn**	**10 08 09.6**	**+0.4**
	5.5nm,1.0s						
PAX	**Paxson**	**16.20**	**37**	eP	**Pn**	**10 08 24.1**	**+0.3**
	2.0nm,0.7s						
ILAR	**Eielson Array**	**16.82**	**31**	Pn	**Pn**	**10 08 29.5**	**-2.1**
	baz=237,slow=12,SNR=3.7						
RIDG	**Independent Ri**	**16.87**	**36**	eP	**Pn**	**10 08 31.8**	**-0.5**
	2.6nm,0.8s						
DOT	**Dot Lake**	**17.11**	**37**	eP	**Pn**	**10 08 33.7**	**-1.5**
	1.5nm,1.0s						
INK	**Inuvik**	**23.21**	**32**	P	**P**	**10 09 45.0**	**+2.0**
	5.3nm,0.9s,baz=236,slow=8.5,SNR=6.3						
YKA	**Yellowknife Ar**	**29.70**	**48**	P	**P**	**10 10 43.0**	**+1.1**
	0.1nm,0.6s,baz=265,slow=7.0,SNR=2.8						
PDAR	**Pinedale Array**	**39.22**	**80**	P	**P**	**10 12 05.3**	**+0.6**
	0.2nm,0.5s,baz=309,slow=5.7,SNR=3.3						
TXAR	**Lajitas Array**	**51.42**	**90**	P	**P**	**10 13 41.2**	**-0.2**
	0.3nm,0.6s,baz=293,slow=5.9,SNR=5.1						
ASAR	**Alice Springs**	**90.99**	**232**	P	**P**	**10 17 38.8**	**-1.5**
	0.5nm,0.7s,baz=28,slow=4.9,SNR=6.7						

ISCJB ***09*** *10:11:56.9±0.8,33.°81N±0.°04×35.°75E±0.°05,h10*^{km}*,Error*
ellipse: s-maj=6.8km s-min=5.2km az=38.0
NSSC ***09*** *10:11:56.1±0.4,33.°81N×35.°69E,h14*^{km}*±2*^{km}*,ML1.5*
GRAL ***09*** *10:11:57.4±0.3,33.°80N×35.°79E,h4*^{km}*±15*^{km}*,MD2.5*
ISC 09 10:11:57.0±1.3**,33.°81N**±0.°04×**35.°76E**±0.°05**,h10**^{km}**,n7,**
σ**0**^{s}**.49**/12**,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.13**	**318**	eP	**Pg**	**10 12 00.3**	**+0.2**
DQRL	**Deir Qamar**	**0.19**	**238**	eP	**Pg**	**10 12 01.2**	**+0.2**
DQRL				eS	**Sg**	**10 12 04.0**	**+0.2**
RCY	**Rachaya**	**0.32**	**169**	eP	**Pg**	**10 12 02.9**	**-0.4**
RCY				eS	**Sg**	**10 12 06.9**	**-0.6**
BRBR	**Barbar**	**0.42**	**158**	eP	**Pg**	**10 12 05.3**	**-0.1**
BRBR				eS	**Sg**	**10 12 11.9**	**+0.9**
BRBR				AML	AML	10 12 14.5	
	comp=N,45nm,0.3s						
BRBR				AML	AML	10 12 18.2	
	comp=E,20nm,0.5s						
HWQ	**Hawqa**	**0.49**	**18**	eP	**Pg**	**10 12 06.4**	**-0.3**
QASN	**Qassioun**	**0.51**	**122**	eP	**Pg**	**10 12 07.5**	**+0.6**
QASN				eS	**Sb**	**10 12 15.2**	**-0.4**
QASN				AML	AML	10 12 17.9	
	comp=N,71nm,0.2s						
TOTH	**TOTAH**	**0.71**	**128**	eP	**Pg**	**10 12 10.9**	**+0.2**
TOTH				eS	**Sb**	**10 12 21.1**	**-0.3**
TOTH				AML	AML	10 12 26.7	
	comp=N,8.7nm,0.3s						

NIED ***09*** *10:33:00,23.°10N×123.°40E,h8*^{km}*,Mw3.7 Best double*
couple: M$_0$*3.69000×10*^{14} *NP1:*ϕ_s*246.00000°,δ39.00000°,*
λ70.00000°. NP2:ϕ_s*92.00000°,δ54.00000°,λ106.00000°.*
IDC ***09*** *10:33:15.2±1.2,23.°25N×123.°27E,h0*^{km}*,mb3.8/7,*
mb1 3.8/9,mb1mx3.6/44,mbtmp3.7/9,ML2.9/2,MS3.0/1,
Ms1 3.0/1,ms1mx2.3/35,Error ellipse: s-maj=36.8km
s-min=22.2km az=68.0
JMA ***09*** *10:33:16.8±0.2,23.°10N×123.°38E,h57*^{km}*,M3.6*
NEIC ***09*** *10:33:16.6±2.0,23.°22N×123.°24E,h10*^{km}*±1*^{km}*,mb4.2/6,*
Error ellipse: s-maj=7.8km s-min=4.9km az=174.0
ISC 09 10:33:16.5±1.8**,23.°21N**±0.°06×**123.°30E**±0.°03**,h13**^{km}±10^{km}**,**
n43,σ**1**^{s}**.25**/63**,mb3.9**/13**,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.96**	**29**	P	**Pn**	**10 33 35.4**	**-0.3**
HATJ				S	**Sn**	**10 33 48.7**	**-0.6**
IRIF	**Iriomote-Funau**	**1.19**	**20**	P	**Pg**	**10 33 38.8**	**-0.5**
IRIF				S	**Sn**	**10 33 54.6**	**-0.2**
JKRS	**Kuro-shima**	**1.21**	**33**	P	**Pg**	**10 33 39.1**	**-0.7**
JKRS				S	**Sn**	**10 33 54.8**	**-0.7**
YOJ	**Yonaguni jima**	**1.27**	**348**	ePn	**Pg**	**10 33 40.6**	**-0.3**
YOJ				eSn	**Sg**	**10 33 56.6**	**-0.9**
YOJ	**Yonaguni jima**	**1.27**	**348**	P	**Pg**	**10 33 40.6**	**-0.3**
YOJ				S	**Sg**	**10 33 58.2**	**+0.7**
JYNG	**Yonagunijimaku**	**1.27**	**345**	P	**Pg**	**10 33 40.6**	**-0.4**
JYNG				S	**Sg**	**10 33 58.5**	**+0.9**
JIJ	**Ishigaki jima**	**1.38**	**34**	P	**Pn**	**10 33 40.8**	**-0.7**
JIJ				eS	**Sb**	**10 33 57.9**	**-1.9**
JISG	**Ishigakijimahi**	**1.65**	**34**	P	**Pn**	**10 33 44.5**	**-0.8**
JISG				S	**Sn**	**10 34 05.1**	**-1.3**
NACB	**Ninganchiao**	**1.83**	**302**	ePn	**Pn**	**10 33 47.5**	**-0.2**
NACB				eSn	**Sn**	**10 34 08.5**	**-2.2**
YULB	**Yu-li**	**1.85**	**276**	ePn	**Pn**	**10 33 47.8**	**-0.2**
YULB				eSn	**Sn**	**10 34 09.8**	**-1.4**
JTJ	**Tarama**	**1.92**	**42**	P	**Pn**	**10 33 48.4**	**-0.5**
JTJ				S	**Sn**	**10 34 11.6**	**-1.3**
TWG	**Pinlang**	**2.09**	**260**	ePn	**Pn**	**10 33 51.0**	**-0.2**
TWG				eSn	**Sn**	**10 34 16.2**	**-0.9**
SSLB	**Suanglung**	**2.23**	**285**	ePn	**Pn**	**10 33 52.9**	**-0.2**
SSLB				eSn	**Sn**	**10 34 16.5**	**-4.1**
YHNB	**Yeheng**	**2.28**	**310**	ePn	**Pn**	**10 33 55.3**	**+1.3**
YHNB				eSn	**Sn**	**10 34 20.4**	**-1.6**
JIRB	**Irabujima**	**2.35**	**46**	P	**Pn**	**10 33 53.9**	**-1.0**
JIRB				eS	**Sn**	**10 34 21.9**	**-1.7**
JMJ2	**Miyako jima3**	**2.40**	**50**	P	**Pn**	**10 33 54.6**	**-0.9**
JMJ2				S	**Sn**	**10 34 23.0**	**-1.9**
TATO	**Taipei**	**2.41**	**317**	ePn	**Pn**	**10 33 57.4**	**+1.7**
TPUB	**Ta-pu**	**2.45**	**273**	ePn	**Pn**	**10 33 56.7**	**+0.4**
TPUB				eSn	**Sn**	**10 34 23.3**	**-2.9**
JIKM	**Ikemajima**	**2.47**	**46**	P	**Pn**	**10 33 55.6**	**-0.8**
JIKM				S	**Sn**	**10 34 25.1**	**-1.3**
JOGS	**Gusukube**	**2.47**	**51**	P	**Pn**	**10 33 56.1**	**-0.4**
JOGS				S	**Sn**	**10 34 25.5**	**-1.0**
KNMB	**Chin-men Tao**	**4.66**	**286**	ePn	**Pn**	**10 34 26.3**	**-0.3**
KNMB				eSn	**Sn**	**10 35 19.1**	**-1.6**
JOW	**Kunigami**	**5.78**	**50**	ePn	**Pn**	**10 34 42.0**	**+0.1**
JOW				eSn	**Sn**	**10 35 50.3**	**+2.1**
KS15	**Wonju Array Si**	**14.72**	**15**	ePn	**Pn**	**10 36 46.0**	**+1.5**
KSRS	**Korea Array**	**14.74**	**15**	Pn	**Pn**	**10 36 45.8**	**+1.0**
	0.1nm,0.3s,baz=196,slow=11,SNR=2.8						
MAJO	**Matsushiro**	**18.50**	**41**	eP	**Pn**	**10 37 33.3**	**+0.6**
MJAR	**Matsushiro Arr**	**18.51**	**41**	P	**Pn**	**10 37 33.3**	**+0.6**
	0.0nm,0.3s,baz=226,slow=8.1,SNR=4.5						
KLR	**Kul'dur**	**26.81**	**12**	LR	LR	10 49 42.4	
	comp=Z,34nm,19.7s,baz=45,slow=37						
SONA0	**Songino Array**	**28.03**	**335**	eP	**P**	**10 39 08.1**	**+0.6**
SONM	**Songino Array**	**28.03**	**335**	P	**P**	**10 39 08.1**	**+0.6**
	1.7nm,0.7s,baz=150,slow=9.6,SNR=8.7						
TLY	**Talaya**	**32.21**	**337**	P	**P**	**10 39 44.2**	**0.0**
	1.1nm,0.6s,baz=33,slow=1.8,SNR=4.1						
MK31	**Makanchi Array**	**40.38**	**316**	eP	**P**	**10 40 55.9**	**+1.7**
	1.0nm,0.8s						
MK32	**Makanchi Array**	**40.38**	**316**	eP	**P**	**10 40 54.0**	**-0.2**
MKAR	**Makanchi Array**	**40.38**	**316**	P	**P**	**10 40 53.9**	**-0.2**
	1.1nm,0.7s,baz=96,slow=12,SNR=8.2						
ZAA0	**Zalesovo Array**	**42.11**	**327**	eP	**P**	**10 41 08.8**	**+0.5**
	1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**42.11**	**327**	P	**P**	**10 41 07.4**	**-0.9**
	0.9nm,0.4s,baz=125,slow=9.9,SNR=3.6						
ZAA1	**Zalesovo Array**	**42.11**	**327**	eP	**P**	**10 41 07.4**	**-0.9**
KURK	**Kurchatov**	**44.08**	**320**	eP	**P**	**10 41 25.4**	**+1.2**
	3.8nm,1.2s						
KURBB	**Kurchatov Arra**	**44.09**	**320**	P	**P**	**10 41 25.5**	**+1.2**
	0.4nm,0.4s,baz=110,slow=8.0,SNR=3.5						
AS31	**Alice Springs**	**47.73**	**167**	eP	**P**	**10 41 53.8**	**+0.5**
	4.9nm,1.8s						
ASAR	**Alice Springs**	**47.73**	**167**	P	**P**	**10 41 54.3**	**+1.0**
	0.4nm,0.5s,baz=353,slow=7.1,SNR=12						
ABKAR	**Akbulak array**	**55.50**	**315**	eP	**P**	**10 42 53.4**	**+2.2**
	7.4nm,1.8s						
ARU	**Arti**	**57.04**	**323**	eP	**P**	**10 43 00.8**	**-1.2**
	5.5nm,1.1s						
ILAR	**Eielson Array**	**69.18**	**27**	P	**P**	**10 44 22.5**	**-0.1**
	0.2nm,0.7s,baz=268,slow=5.1,SNR=3.4						

ISK ***09*** *10:33:41.3,37.°18N×39.°24E,h12*^{km}*,ML2.5/6*
DDA ***09*** *10:33:42.7,37.°18N×39.°14E,h7*^{km}*±4*^{km}*,ML3.0*
ISC 09 10:33:42.5±1.1**,37.°18N**±0.°05×**39.°22E**±0.°03**,h13**^{km}±8^{km}**,**
n15,σ**1**^{s}**.38**/25**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANL	**SANLIURFA_Merk**	**0.19**	**269**	i P	**Pg**	**10 33 46.2**	**-0.5**
SANL				i S	**Sg**	**10 33 52.1**	**+2.4**
SANL				IAML_P			
	comp=Z,19μm,0.2s						
URFA	**Urfa**	**0.42**	**310**	PG	**Pg**	**10 33 50.0**	**-0.8**
URFA				SG	**Sb**	**10 33 56.6**	**-1.5**
SURC	**SANLIURFA_SURC**	**0.57**	**239**	i P	**Pb**	**10 33 53.5**	**-0.9**
SURC				i S	**Sb**	**10 34 02.8**	**+0.4**
SURC				IAML_P			
	comp=Z,914nm,0.1s						
ATAB	**Bozova**	**0.80**	**292**	i P	**Pg**	**10 33 57.0**	**-0.9**
ATAB				i S	**Sn**	**10 34 10.9**	**-0.3**
ATAB				IAML_P			
	comp=Z,4μm,0.3s						
MAZI	**Mazidag**	**1.01**	**73**	PG	**Pg**	**10 34 00.8**	**-1.3**
MAZI				SG	**Sg**	**10 34 15.7**	**+0.3**
DIYA	**Diyarbakir**	**1.03**	**43**	i P	**Pn**	**10 34 03.0**	**+0.3**
DIYA				i S	**Sn**	**10 34 20.9**	**+3.8**
DIYA				IAML_P			
	comp=Z,5μm,0.2s						
DYBB	**Diyarbakir**	**1.06**	**43**	PG	**Pg**	**10 34 01.9**	**-1.1**
SVRC	**Sivrice-ELAZID**	**1.20**	**3**	PN	**Pb**	**10 34 04.3**	**-1.0**
ELZG	**Elazig**	**1.33**	**352**	i P	**Pg**	**10 34 08.7**	**+0.5**
ELZG				i S	**Sg**	**10 34 26.6**	**+1.1**
ELZG				IAML_P			
	comp=Z,805nm,0.3s						
GZT	**Gaziantep**	**1.34**	**278**	i P	**Pg**	**10 34 07.1**	**-1.1**
GZT				i S	**Sn**	**10 34 27.3**	**+2.5**
GZT				IAML_P			
	comp=Z,1μm,0.2s						
AKCD	**Akcadag**	**1.52**	**318**	i P	**Pg**	**10 34 10.6**	**-1.2**
AKCD				i S	**Sg**	**10 34 31.1**	**-0.5**
AKCD				IAML_P			
	comp=Z,1μm,0.3s						
GAZ	**Gaziantep**	**1.61**	**271**	PN	**Pn**	**10 34 10.5**	**-0.2**
KUZU	**Kuzuini**	**1.77**	**258**	i P	**Pb**	**10 34 14.7**	**-0.1**
KUZU				i S	**Sg**	**10 34 39.7**	**+0.3**
KUZU				IAML_P			
	comp=Z,1μm,0.2s						
SVAN	**Silvan-Diyarba**	**1.84**	**58**	PN	**Pn**	**10 34 13.3**	**-0.6**
KMRS	**Kahramanmaras**	**1.88**	**281**	PN	**Pn**	**10 34 14.4**	**0.0**

BJI 09 10:39:14.1±0.0**,38.°63N**×**113.°02E,h17**^{km}**,ML3.5**/14**,**
Ms3.3/2**,Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIY	**Taiyuan**	**1.02**	**207**	ePg	Pb	10 39 33.2	-0.2
TIY				Sg	Sb	10 39 46.9	+0.3
TIY				smax	smax		
	comp=N,390nm,0.5s						
TIY				smax	smax		
	comp=E,1μm,0.9s						
HHC	**Hu-ho-hao-te**	**2.48**	**334**	Pn	Pb	10 39 58.2	-0.2
HHC				Pg	Pg	10 39 59.9	-1.9
HHC				Sg	Sg	10 40 31.9	-2.1
HHC				smax	smax		
	comp=N,260nm,0.5s						
HHC				smax	smax		
	comp=E,290nm,0.5s						
BTO	**Baotou**	**3.04**	**311**	ePg	Pg	10 40 10.6	-1.8
BTO				Sg	Sg	10 40 50.7	-1.2
TIA	**Tai'an**	**4.06**	**125**	Pn	Pn	10 40 16.7	+1.2
TIA				Sg	Sb	10 41 18.3	+4.3

TIA				smax	smax		
	comp=N,61nm,0.7s						
TIA				smax	smax		
	comp=E,64nm,0.5s						
XAN	**Xi'an**	5.65	217	Pg	Pg	10 40 57.5	-4.8
XAN				Sg	Sg	10 42 10.0	-5.4
XAN				smax	smax		
	comp=N,35nm,0.7s						
XAN				smax	smax		
	comp=E,21nm,0.8s						
WHN	**Wuhan**	8.14	172	P	Pn	10 41 18.2	+6.7
WMQ	**Urumqi**	19.71	293	*e*P	Pn	10 43 47.4	+3.3

*NIED **09** 10:39:00, 24°.80N×127°.80E, h5^{km}, Mw3.9 Best double couple: M$_0$8.90000×10^{14} NP1:φ$_s$196.00000°, δ44.00000°, λ-114.00000°. NP2:φ$_s$48.00000°, δ51.00000°, λ-69.00000°.*

*IDC **09** 10:39:20.3±0.7, 24°.76N×127°.85E, h0^{km}, mb4.1/13, mb1 4.2/16, mb1mx4.0/46, mbtmp4.1/16, ML3.1/4, MS3.3/5, Ms1 3.3/5, ms1mx2.8/34, Error ellipse: s-maj=27.6km s-min=14.6km az=81.0*

*BJI **09** 10:39:20.2±0.0, 24°.67N×127°.76E, h9^{km}, mb4.4/32, mB4.7/21, Ms4.0/14, Ms7 3.7/12*

*MOS **09** 10:39:20.7±0.6, 24°.59N×127°.85E, h19^{km}, mb4.5/17, Error ellipse: s-maj=17.9km s-min=8.8km az=132.6*

*NEIC **09** 10:39:21.3±2.3, 24°.69N×127°.81E, h10^{km}±1^{km}, mb4.6/19, Error ellipse: s-maj=9.1km s-min=2.4km az=73.0*

*JMA **09** 10:39:23.1±0.2, 24°.79N×127°.79E, h75^{km}, M3.8*

ISC 09 10:39:23.4±2.0**, 24°.68N**±0°.05×**127°.84E**±0°.04**, h25**^{km}±14^{km}**, n129, σ2^{s}.16**/162**, mb4.5**/45**, MS3.7**/8**, 8C-1D, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	1.46	358	P	Pn	10 39 46.7	-1.5
JJT3				S	Sn	10 40 03.8	-2.8
JNTH	**Nagotoyohara**	1.84	5	P	Pn	10 39 51.4	-2.0
JNTH				*e*S	Sn	10 40 11.8	-4.1
JKE	**Kume jima 2**	1.89	330	P	Pn	10 39 52.7	-1.5
JKE				S	Sn	10 40 14.2	-3.1
JAGN	**Aguni-jima**	1.98	344	P	Pn	10 39 54.1	-1.2
JAGN				S	Sn	10 40 15.8	-3.5
JOW	**Kunigami**	2.18	10	Pn	Pn	10 39 56.5	-1.7
	6.3nm,0.3s,baz=169,slow=13,SNR=144						
JOW				Sn	Sn	10 40 19.1	-5.3
	13nm,0.3s,baz=86,slow=20,SNR=14						
JOW	**Kunigami**	2.18	10	*e*Pn	Pn	10 39 56.5	-1.7
JOW				*e*Sn	Sn	10 40 23.3	-1.1
JOW	**Kunigami**	2.18	10	P	Pn	10 39 56.4	-1.7
JOW				*e*S	Sn	10 40 22.2	-2.2
JOGS	**Gusukube**	2.21	273	P	Pn	10 39 58.5	-0.1
JOGS				S	Sn	10 40 23.4	-1.7
JMJ2	**Miyako jima3**	2.28	272	P	Pn	10 39 58.9	-0.6
JMJ2				*e*S	Sn	10 40 25.5	-1.4
JIH	**Iheya**	2.35	3	S	Sn	10 40 25.8	-2.7
JIKM	**Ikemajima**	2.37	276	P	Pn	10 39 59.7	-1.0
JIKM				S	Sn	10 40 27.1	-1.8
JYRO	**Yoronjima**	2.40	13	P	Pn	10 39 59.1	-2.1
JYRO				S	Sn	10 40 27.4	-2.4
JIRB	**Irabujima**	2.43	274	P	Pn	10 40 00.3	-1.2
JIRB				S	Sn	10 40 27.3	-3.1
JOKE	**Okinoerabujima**	2.75	14	P	Pn	10 40 04.2	-1.8
JTJ	**Tarama**	2.85	270	P	Pn	10 40 06.2	-1.2
JTJ				S	Sn	10 40 37.5	-3.5
JISG	**Ishigakijimahi**	3.21	269	P	Pn	10 40 10.7	-1.6
JISG				*e*S	Sn	10 40 45.0	-4.8
JTK	**Tokunoshima**	3.25	18	P	Pn	10 40 12.2	-0.7
JTK				S	Sn	10 40 47.2	-3.6
JMZ	**Minamidaito 2**	3.27	69	P	Pn	10 40 09.7	-3.4
JMZ				*e*S	Sn	10 40 46.0	-5.2
JKDJ	**Kitadaitoujima**	3.38	67	P	Pn	10 40 11.5	-3.1
JKDJ				S	Sn	10 40 49.3	-4.6
JIJ	**Ishigaki jima**	3.38	265	P	Pn	10 40 13.1	-1.5
JIJ				S	Sn	10 40 49.1	-4.9
JKRS	**Kuro-shima**	3.52	264	P	Pn	10 40 08.9	-7.6
JKRS				S	Sn	10 40 53.4	-3.9
HATJ	**Hateruma jima**	3.73	261	*e*S	Sn	10 40 57.1	-5.5
JAMN	**Amaminishikomi**	3.75	18	P	Pn	10 40 18.8	-0.9
JAMN				S	Sn	10 41 01.2	-1.8
IRIF	**Iriomote-Funau**	3.76	266	P	Pn	10 40 19.1	-0.7
IRIF				S	Sn	10 40 59.7	-3.6
JAM	**Amami Oshima**	4.04	23	P	Pn	10 40 22.7	-1.0
JZK	**Kikaishima**	4.09	27	P	Pn	10 40 23.5	-1.0
JZK				S	Sn	10 41 07.1	-4.5
YOJ	**Yonaguni jima**	4.40	268	*e*Pn	Pn	10 40 28.1	-0.6
YOJ	**Yonaguni jima**	4.40	268	*e*P	Pn	10 40 28.1	-0.6
YOJ	**Yonaguni jima**	4.40	268	P	Pn	10 40 28.0	-0.7
YOJ				S	Sn	10 41 16.9	-2.2
JYNG	**Yonagunijimaku**	4.46	268	P	Pn	10 40 27.5	-2.0
JYNG				*e*S	Sn	10 41 16.2	-4.4
JTAJ	**Takarajima**	4.62	15	P	Pn	10 40 30.2	-1.5
JTAJ				*e*S	Sn	10 41 21.4	-3.1
NACB	**Ninganchiao**	5.71	266	*e*Pn	Pn	10 40 44.4	-2.3
YHNB	**Yeheng**	5.88	271	*e*Pn	Pn	10 40 48.9	-0.2
YHNB				*e*Sn	Sn	10 41 54.5	-1.3
YULB	**Yu-li**	6.11	259	*e*Pn	Pn	10 40 48.8	-3.5
YULB				*e*Sn	Sn	10 41 56.4	-5.1
SSLB	**Suanglung**	6.34	263	*e*Pn	Pn	10 40 53.0	-2.4
SSLB				*e*Sn	Sn	10 42 05.4	-1.8
TWG	**Pinlang**	6.47	255	*e*Pn	Pn	10 40 54.8	-2.3
TPUB	**Ta-pu**	6.73	260	*e*Pn	Pn	10 40 59.6	-1.1
TPUB				*e*Sn	Sn	10 42 17.8	+1.1
JNU	**Nakatsue**	8.82	17	Pn	Pn	10 41 28.0	-1.4
	0.7nm,0.3s,baz=218,slow=3.5,SNR=11						
JNU	**Nakatsue**	8.82	17	*e*Pn	Pn	10 41 28.4	-1.1
JNU				*e*Sn	Sn	10 43 09.1	+1.0
NJ2	**Nanjing**	10.79	315	*e*P	Pn	10 41 57.1	+0.7
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KS15	**Wonju Array Si**	12.72	0	*e*Pn	Pn	10 42 21.4	-1.3
KSRS	**Korea Array**	12.73	0	Pn	Pn	10 42 21.3	-1.6
	0.1nm,0.3s,baz=178,slow=13,SNR=6.4						
KSRS				LR	LR	10 47 49.5	
	comp=Z,58nm,19.2s,baz=190,slow=40						
WHN	**Wuhan**	13.30	299	P	P	10 42 41.6	+1.4
WHN				S	S	10 45 14.0	-7.7
WHN				LR	LR		
	comp=N,510nm,12.9s						
WHN				LR	LR		
	comp=E,280nm,6.4s						
WHN				LR	LR		
	comp=Z,330nm,11.4s						
MAJO	**Matsushiro**	14.80	35	*e*Pn	Pn	10 42 48.0	-3.2
MAJO	**Matsushiro**	14.80	35	*e*P	Pn	10 42 48.0	-3.2
CN2	**Changchun**	19.18	355	*e*P	Pn	10 43 46.8	+0.7
GYA	**Guiyang**	19.18	280⇑	*i*P	P	10 43 10.1	-35
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	**Ussuriysk Ar.**	19.77	9	P	P	10 43 50.7	-0.9
	comp=Z,0.1nm,0.3s,baz=195,slow=9.0,SNR=3.5						
HHC	**Hu-ho-hao-te**	21.09	324	P	P	10 44 07.5	+1.4
HHC				S	S	10 48 01.2	+1.5
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,60nm,5.0s						
HHC				LR	LR		
	comp=Z,140nm,9.1s						
HHC				LR	LR		
	comp=Z,150nm,8.5s						
HHC				LR	LR		
	comp=Z,150nm,10.0s						
CD2	**Chengdu**	22.16	292	*e*P	P	10 44 17.0	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.5s						
KMI	**Kunming**	22.76	276	P	P	10 44 26.0	+1.7
KMI				pP	pP	10 44 29.0	-0.1
KMI				sP	sP	10 44 30.2	-1.2
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH	**Lanzhou**	23.55	304	*e*P	P	10 44 32.4	+0.3
LZH				pP	pP	10 44 36.7	-0.6
LZH				sP	sP	10 44 39.7	+0.2
LZH				PP	PnPn	10 45 02.7	+3.4
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
LZH				pmax	pmax		
	comp=Z,98nm,4.8s						
LZH				LR	LR		
	comp=Z,160nm,14.1s						
LZH				LR	LR		
	comp=Z,170nm,12.5s						
LZH				LR	LR		
	comp=Z,190nm,14.6s						
KLR	**Kul'dur**	24.70	6	P	P	10 44 43.1	+0.7
	comp=Z,3.9nm,0.9s,baz=191,slow=7.9,SNR=11						
KLR	**Kul'dur**	24.70	6	*i* P	P	10 44 42.4	0.0
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	25.22	24⇑	*e*P	P	10 44 52.4	+5.2
YSS				*e*		10 45 02.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ULN	**Ulaanbaatar**	28.39	330*c*	*i*P	P	10 45 15.9	-0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	28.68	329	LR	LR	10 58 33.7	
	comp=Z,62nm,19.3s,baz=118,slow=40						
SHL	**Shillong**	32.50	279	*e*P	P	10 45 53.5	+0.9
	comp=Z,8.7nm,0.9s						
SHL	**Shillong**	32.50	279	*e*P	P	10 45 53.5	+0.9
SHL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LSA	**Lhasa**	32.92	287	*e*P	P	10 45 56.5	0.0
	comp=Z,6.6nm,0.8s						
LSA	**Lhasa**	32.92	287	*e*P	P	10 45 56.5	0.0
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GUN	**Gumba**	37.62	284	*e*P	P	10 46 38.0	+1.1
	comp=Z,14nm,0.4s						
WMQ	**Urumqi**	37.83	310	*e*P	P	10 46 39.2	+1.1
WMQ				sP	pP	10 46 44.8	+1.3
WMQ				pmax	pmax		
	comp=Z,36nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,53nm,4.1s						
WMQ				LR	LR		
	comp=Z,460nm,29.1s						
WMQ				LR	LR		
	comp=Z,770nm,29.2s						
WMQ				LR	LR		
	comp=Z,140nm,28.9s						
PKI	**Pulchoki**	38.07	284	*e*P	P	10 46 41.2	+0.6
	comp=Z,20nm,1.0s						
PKIN	**Phulchoki**	38.08	284	*e*P	P	10 46 41.1	+0.4
	comp=Z,9.7nm,0.7s						
KKN	**Kakani**	38.16	284	*e*P	P	10 46 41.9	+0.6
	comp=Z,14nm,0.6s						
DMN	**Daman**	38.33	284	*e*P	P	10 46 43.3	+0.5
	comp=Z,6.2nm,0.4s						
DANN	**Dangsing**	39.45	285	*e*P	P	10 46 53.6	+1.4
	comp=Z,38nm,0.7s						
KOLN	**Koldanda**	39.65	284	*e*P	P	10 46 54.1	+0.4
	comp=Z,20nm,0.8s						
PYUN	**Piuthan**	40.15	285	*e*P	P	10 46 58.9	+1.0
	comp=Z,39nm,0.9s						
MK31	**Makanchi Array**	42.32	313	*e*P	P	10 47 15.0	-0.2
	comp=Z,1.8nm,0.8s						
MK31	**Makanchi Array**	42.32	313	*e*P	P	10 47 15.0	-0.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	**Makanchi Array**	42.32	313	*e*P	P	10 47 15.3	+0.1
MKAR	**Makanchi Array**	42.32	313	P	P	10 47 15.3	+0.1
	comp=Z,1.8nm,0.6s,baz=96,slow=10,SNR=15						
MAKZ	**Makanchi**	42.53	313	*e*P	P	10 47 16.8	-0.1
	comp=Z,5.5nm,1.1s						
MAKZ	**Makanchi**	42.53	313	*e*P	P	10 47 16.8	-0.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZAA0	**Zalesovo Array**	43.27	324	*e*P	P	10 47 21.2	-1.6
	comp=Z,2.8nm,0.6s						
ZALV	**Zalesovo Beam**	43.27	324	P	P	10 47 22.5	-0.3
	comp=Z,2.8nm,0.6s,baz=117,slow=7.5,SNR=9.2						
ZALV				LR	LR	11 07 00.5	
	comp=Z,26nm,19.7s,baz=72,slow=38						
ZAA1	**Zalesovo Array**	43.27	324	*e*P	P	10 47 22.5	-0.4
PDGK	**Podgornoye**	43.52	308	P	P	10 47 25.2	0.0
PDGK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRAB	**Tennant Creek**	44.80	171	*e*P	P	10 47 34.3	-1.1
	comp=Z,49nm,1.9s						
WRAB	**Tennant Creek**	44.80	171	*e*P	P	10 47 34.3	-1.1
WRAB				pmax	pmax		
	comp=Z,49nm,1.9s						
WRA	**Warramunga Arr**	44.80	171	P	P	10 47 36.4	+1.0
	comp=Z,5.5nm,0.7s,baz=356,slow=10.0,SNR=19						
WR1	**Warramunga Arr**	44.80	171	*e*P	P	10 47 36.4	+1.0
WB2	**Warramunga Arr**	44.80	171	*e*P	P	10 47 36.1	+0.7
	comp=Z,7.4nm,0.7s						
WC3	**Warramunga Arr**	44.82	171	*e*P	P	10 47 36.3	+0.7
	comp=Z,8.5nm,0.8s						
KDJ	**Kajisay**	45.05	306	*e*P	P	10 47 37.2	-0.3
	comp=Z,4.5nm,0.8s						
KDJ	**Kajisay**	45.05	306	*e*P	P	10 47 37.2	-0.3
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	45.71	318	*e*P	P	10 47 43.0	+0.6
	comp=Z,14nm,0.9s						
KURK	**Kurchatov**	45.71	318⇑	*i*P	P	10 47 43.8	+1.5
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURBB	**Kurchatov Arra**	45.74	318	P	P	10 47 42.7	+0.1
	comp=Z,1.2nm,0.3s,baz=104,slow=7.4,SNR=4.3						
KSH	**Kashi**	45.76	302	P	P	10 47 47.4	+4.3
KSH				*e*pP	sP	10 47 51.8	+1.2
KSH				PcP	PcP	10 49 23.5	+2.9
KSH				PP	PP	10 49 34.3	+4.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	**Tiksi**	47.00	0	*i* P	P	10 47 52.3	+0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	**Ala-Archa**	47.08	306⇑	*i*P	P	10 47 53.3	-0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AS31	**Alice Springs**	48.42	173	*e*P	P	10 48 03.1	-0.7
	comp=Z,1.8nm,1.2s						
ASAR	**Alice Springs**	48.42	173	P	P	10 48 05.0	+1.3
	comp=Z,1.7nm,0.7s,baz=357,slow=8.7,SNR=19						
KK31	**Karatay Array**	50.03	306	*e*P	P	10 48 17.2	+1.2
	comp=Z,5.3nm,0.9s						
KK31	**Karatay Array**	50.03	306	*e*P	P	10 48 17.2	+1.2
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	50.03	306	*e*P	P	10 48 17.2	+1.2
	comp=Z,5.3nm,0.9s						
KKAR	**Karatay Array**	50.03	306	*e*P	P	10 48 17.2	+1.2
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GAR	**Garm**	50.14	301	*e*P	P	10 48 18.4	+1.4
	comp=Z,19nm,1.1s						
GAR	**Garm**	50.14	301	*e*P	P	10 48 18.4	+1.4
GAR				pmax	pmax		
	comp=Z,19nm,1.1s						
BRVK	**Borovoye**	51.27	319	*e*P	P	10 48 25.9	+0.7
	comp=Z,6.1nm,1.0s						
BRVK	**Borovoye**	51.27	319⇑	*i*P	P	10 48 26.2	+1.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBL	**Kabul**	51.43	295	*e*P	P	10 48 24.7	-2.2
	comp=Z,12nm,0.7s						
KBL	**Kabul**	51.43	295	*e*P	P	10 48 24.7	-2.2
KBL				pmax	pmax		
	comp=Z,12nm,0.7s						
ABKAR	**Akbulak array**	57.45	314	*e*P	P	10 49 10.8	+0.6
	comp=Z,7.0nm,0.9s						
STKA	**Stephens Creek**	57.76	166	P	P	10 49 13.4	+1.0
	comp=Z,0.5nm,0.4s,baz=9.5,slow=6.1,SNR=2.8						
ARU	**Arti**	58.39	322	*e*P	P	10 49 17.1	+0.5
	comp=Z,48nm,1.1s						
ARU	**Arti**	58.39	322*d*	*i*P	P	10 49 17.3	+0.7
ARU						10 51 22.5	
ARU				S	S	10 57 21.1	+3.2
ARU				SS	SS	11 01 07.6	-2.3
ARU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GEYT	**Alibeck**	59.77	301	P	P	10 49 27.9	+1.3
	comp=Z,5.2nm,0.7s,baz=48,slow=2.2,SNR=9.4						
GYA0B	**ALIBECK ARRAY**	59.77	301	*e*P	P	10 49 28.2	+1.7
	comp=Z,8.6nm,0.8s						
GNI	**Garni**	69.48	306	*i* P	P	10 50 30.6	+0.5
KBZ	**Khabaz**	69.87	310	P	P	10 50 32.5	+0.4
	comp=Z,3.3nm,0.8s,baz=106,slow=6.0,SNR=7.3						
KIV	**Kislovodsk**	69.95	310	*e*P	P	10 50 33.0	+0.1
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
SHA1	**Shidzhatmaz**	70.03	310	*i* P	P	10 50 33.6	0.0
OBN	**Obninsk**	70.83	323⇑	*e*P	P	10 50 38.6	+0.7
OBN				*e*		10 53 11.8	
OBN				*e*S	S	10 59 49.3	-2.0
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,33nm,15.0s						
FIA0	**FINESS Array S**	74.03	331	*e*P	P	10 50 57.9	+1.0
FIA0	**FINESS Array S**	74.03	331	*e*P	P	10 50 57.9	+1.0
FINES	**FINESS Array B**	74.03	331	P	P	10 50 57.9	+1.0
	comp=Z,1.0nm,0.5s,baz=64,slow=5.3,SNR=12						
AKASG	**Malin Array Be**	76.48	320	LR	LR	11 27 10.5	
	comp=Z,39nm,19.8s,baz=30,slow=38						
BR101	**Keskin Array S**	77.70	308	*e*P	P	10 51 18.5	0.0
BRTR	**Keskin Array B**	77.70	308	P	P	10 51 18.5	0.0
	comp=Z,1.3nm,0.9s,baz=102,slow=5.2,SNR=5.7						
BRTR	**Keskin Array B**	77.70	308*c*	*e*P	P	10 51 19.8	+1.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	80.08	25	P	P	10 51 31.2	+0.4
	comp=Z,0.2nm,0.7s,baz=307,slow=5.2,SNR=3.5						
YKB5	**Yellowknife Ar**	80.08	25	*e*P	P	10 51 31.2	+0.4
NB200	**NORSAR Array S**	80.54	334	*e*P	P	10 51 33.7	+0.3
NOA	**NORSAR Array B**	80.54	334	P	P	10 51 33.7	+0.3
	comp=Z,1.1nm,0.8s,baz=54,slow=5.1,SNR=3.1						
GERES	**GERESS Array B**	86.22	323	LR	LR	11 36 09.5	
	comp=Z,21nm,18.4s,baz=64,slow=40						

*IDC **09** 10:40:43.8±1.4, 14°.01S×166°.68E, h0^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.7/38, mbtmp4.1/5, ML4.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/29, Error ellipse: s-maj=41.8km s-min=28.1km az=117.0*

*ISCJB **09** 10:40:47.5±0.8, 14°.18S±0°.05×166°.5E±0°.1, h35^{km}, mb4.1/1, Error ellipse: s-maj=19.1km s-min=7.0km az=167.9*

*NEIC **09** 10:40:47.7±0.8, 14°.07S×166°.65E, h24^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=23.3km s-min=11.5km az=71.0*

ISC 09 10:40:49.2±1.0**, 14°.10S**±0°.08×**166°.6E**±0°.2**, h35**^{km}**, n17, σ0^{s}.76**/21**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	7.93	181	Pn	Pn	10 42 42.1	0.0
	2.7nm,0.3s,baz=197,slow=16,SNR=16						
DZM				Sn	Sn	10 44 08.9	-1.7
	1.0nm,0.3s,baz=150,slow=20,SNR=2.7						
DZM	**Mont Dzumac**	7.93	181	*e*Pn	Pn	10 42 41.7	-0.4
DZM				*e*Sn	Sn	10 44 09.3	-1.4
HNR	**Honiara**	8.01	305	Pn	Pn	10 42 42.7	-0.4
	20nm,0.3s,baz=192,slow=7.7,SNR=4.8						
HNR				LR	LR	10 46 13.5	
	comp=Z,129nm,18.4s,baz=156,slow=41						
HNR	**Honiara**	8.01	305	*e*Pn	Pn	10 42 42.6	-0.5
ONTNC	**Ouen Toro**	8.16	181	*e*Pn	Pn	10 42 45.1	-0.1
ONTNC				*e*Sn	Sn	10 44 16.8	+0.5
PINNC	**Pines Island,**	8.50	175	*e*Pn	Pn	10 42 50.2	+0.4
PINNC				*e*Sn	Sn	10 44 25.4	+0.8
BKZ	**Black Stump Fm**	26.44	163	*e*P	P	10 46 22.3	-0.6
	57nm,1.6s						
STKA	**Stephens Creek**	28.93	228	P	P	10 46 46.2	+1.0
	1.0nm,0.5s,baz=18,slow=9.6,SNR=3.0						
STKA	**Stephens Creek**	28.93	228	*e*P	P	10 46 46.6	+1.4
	1.2nm,1.1s						
AS31	**Alice Springs**	32.31	248	*e*P	P	10 47 15.2	0.0
	1.2nm,1.1s						
ASAR	**Alice Springs**	32.31	248	P	P	10 47 14.9	-0.3
	0.3nm,0.7s,baz=73,slow=10.0,SNR=8.4						
QSPA	**South Pole Qui**	75.92	180	*e*P	P	10 52 32.4	+0.2
	5.8nm,1.6s						
BALM	**Baldy**	85.10	22	*e*P	P	10 53 21.4	+0.1
	7.6nm,1.4s						
ILAR	**Eielson Array**	86.13	18	P	P	10 53 25.8	-0.5
	0.4nm,0.4s,baz=239,slow=5.0,SNR=11						
ILB	**Eielson Array**	86.13	18	*e*P	P	10 53 26.1	-0.1
	0.7nm,0.6s						
ARA0	**ARCESS Array S**	119.49	345	*e*PKPdf	PKPdf	10 59 34.6	+0.1
ARCES	**ARCESS Array B**	119.49	345	PKP	PKPdf	10 59 34.6	+0.1
	5.7nm,1.1s,baz=48,slow=1.3,SNR=7.4						

KRSC 09 10:51:41.2±1.2**, 52°.50N×160°.10E, h49**^{km}±15^{km}**, ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	0.60	356	*e*P	Pn	10 51 54.8	+1.2
SPN				*e*S	Sn	10 52 03.8	+1.2
NLC	**Nalytchevo**	0.81	326	*i* P	Pn	10 51 57.7	+1.4
NLC				*e*S	Sn	10 52 08.7	+1.3
RUS	**Russkaya**	0.97	267	*e*P	Pn	10 51 59.5	+1.0
RUS				*e*S	Sn	10 52 12.2	+1.0
DALK	**Dalny**	0.97	304	*e*P	Pn	10 51 59.3	+0.8
DALK				*e*S	Sn	10 52 11.3	+0.1
UGLR	**Uglovaya**	1.05	313	*e*P	Pn	10 52 01.2	+1.6
UGLR				*e*S	Sn	10 52 15.3	+2.1
SDLR	**Sedlovina**	1.07	317	*e*P	Pn	10 52 01.3	+1.3
SDLR				*e*S	Sn	10 52 15.3	+1.5
SMAR	**Somma**	1.09	315	*e*P	Pn	10 52 01.4	+1.0
AVH	**Avacha**	1.12	313	*e*P	Pn	10 52 02.3	+1.7
AVH				*e*S	Sn	10 52 16.2	+1.2
KRER	**Koryakskii**	1.15	315	*e*P	Pn	10 52 02.7	+1.6
MTVR	**Mutnovka**	1.17	270	*e*P	Pn	10 52 02.7	+1.4
MTVR				*e*S	Sn	10 52 18.1	+1.9
KOK	**Koryaka**	1.19	312	*e*P	Pn	10 52 03.5	+2.0
KRX	**Arik**	1.23	315	*e*P	Pn	10 52 03.7	+1.6
KRMR	**Karymshinskiy**	1.24	286	*e*P	Pn	10 52 03.3	+1.2
KRMR				*e*S	Sn	10 52 19.1	+1.4
ASAK	**Asacha**	1.35	266	*e*P	Pn	10 52 05.6	+1.9
ASAK				*e*S	Sn	10 52 22.7	+2.2
KDTR	**Khodutka, Kamc**	1.42	242	*e*P	Pn	10 52 06.6	+2.0
KDTR				*e*S	Sn	10 52 24.5	+2.3
GNL	**Ganaly**	1.77	313	*e*P	Pn	10 52 12.1	+2.7
APC	**Apacha**	1.84	285	*e*P	Pn	10 52 13.0	+2.7
APC				*e*S	Sn	10 52 35.2	+2.9
MKZ	**Mys Kozlova**	2.28	25	*e*P	Pn	10 52 19.2	+2.9
MKZ				*e*S	Sn	10 52 46.2	+3.1
PAU	**Pauzhetka**	2.28	244	*e*P	Pn	10 52 19.4	+3.1
KZV	**Kizimen**	2.62	2	*e*P	Pn	10 52 25.2	+4.1
KZV				*e*S	Sn	10 52 56.4	+4.6
TUMD	**Tumrok D**	2.71	4	*e*P	Pn	10 52 25.8	+3.5
TUMD				*e*S	Sn	10 52 58.0	+4.1
TUMR	**Tumrok**	2.79	1	*e*P	Pn	10 52 27.7	+4.3
SRDR	**Sredinnyy**	3.83	357	P	Pn	10 52 42.4	+4.8
KBTR	**Krutoberegovo**	4.04	22	*e*P	Pn	10 52 44.9	+4.4
KBTR				*e*S	Sn	10 53 30.6	+4.1
KBG	**Krutoberegovo**	4.06	21	*e*S	Sn	10 53 31.2	+4.4
BDR	**Baidarnaya**	4.13	9	*e*P	Pn	10 52 46.9	+5.2
BDR				*e*S	Sn	10 53 33.5	+4.8
SRKR	**Sorokina**	4.21	8	P	Pn	10 52 47.2	+4.4
SRKR				*e*S	Sn	10 53 33.8	+3.1
BKI	**Bering**	4.41	50	*e*P	Pn	10 52 47.9	+2.4
BKI				*e*S	Sn	10 53 35.1	-0.3

*DDA **09** 10:53:25.5, 39°.04N×29°.77E, h7^{km}±3^{km}, ML2.6*

*ISK **09** 10:53:25.5, 39°.09N×29°.74E, h2^{km}, ML2.2/14*

ISC 09 10:53:25.9±1.1**, 39°.06N**±0°.03×**29°.76E**±0°.02**, h6**^{km}±10^{km}**, n22, σ0^{s}.97**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	**Gediz**	0.22	277	*i* P	Pg	10 53 30.9	+0.6
GDZ				*i* S	Sg	10 53 34.5	+1.3
GDZ				IAML_P			
	comp=Z,4μm,0.1s						
GEDZ	**Gediz**	0.27	266	PG	Pg	10 53 31.6	+0.3
GEDZ				SG	Sb	10 53 36.1	-2.1
TVSB	**Tavsanli**	0.45	329	PG	Pg	10 53 34.7	0.0
TVSB				SG	Sg	10 53 40.9	+0.3
AUKIR	**Kırka- Seyitga**	0.64	70	*i* P	Pb	10 53 38.7	-0.8
AUKIR				*i* S	Sg	10 53 47.3	+0.7
USAK	**Uak-Merkez**	0.68	239	*i* P	Pb	10 53 39.5	-0.6
USAK				*i* S	Sb	10 53 48.5	-1.2
USAK				IAML_P			
	comp=Z,1μm,0.2s						
KHAL	**Karahalli**	0.72	197	*i* P	Pg	10 53 39.9	0.0
KHAL				*i* S	Sg	10 53 49.3	+0.1
KHAL				IAML_P			
	comp=Z,959nm,0.1s						

SHUT	Suhut-Afyon	0.80	129	PG	Pb	10 53 42.2	-0.1
BORA	Eskisehir	0.98	33	PG	Pg	10 53 44.6	-0.1
BORA	Eskisehir	0.98	33	iP	Pb	10 53 44.8	-0.6
BORA				iS	Sb	10 53 58.2	-0.3
BORA				IAML_P			
	comp=Z,2µm,0.1s						
KULA	Kula-Manisa	1.02	238	PG	Pb	10 53 45.5	-0.5
CIFT	Cifteler, Eski	1.06	73	PG	Pn	10 53 47.5	+0.2
DURS	Dursunbey	1.13	299	iP	Pn	10 53 48.1	-0.3
DURS				iS	Sn	10 54 06.2	+2.0
DURS				IAML_P			
	comp=Z,648nm,0.1s						
SRCK	Saricakaya, Es	1.19	34	PN	Pg	10 53 47.9	-0.8
SRCK	Saricakaya, Es	1.19	34	iP	Pn	10 53 49.0	-0.1
SRCK				iS	Sn	10 54 08.3	+2.8
SRCK				IAML_P			
	comp=Z,632nm,0.2s						
SVRH	Sivrihisar-ESK	1.42	74	PN	Pg	10 53 52.8	-0.4
AUSIV	SIVRIHISAR	1.43	74	PN	Pg	10 53 53.7	+0.3
GULT	Gulveren	1.49	23	PN	Pg	10 53 53.9	-0.6
YLV	Yalova	1.53	349	PN	Pg	10 53 54.6	-0.7
AUMIH	MIHALICIK	1.56	58	PN	Pg	10 53 55.2	-0.6
BALB	Balikesir	1.57	292	PN	Pg	10 53 55.3	-0.7
ARMT	Armutlu	1.65	336	PN	Pb	10 53 56.4	-0.4
KIZT	Kizilcal	1.66	96	PN	Pg	10 53 57.2	-0.6

ISCJB ***09*** *11:01:20.9±1.1, 34°.74S±0°.03×72°.62W±0°.05, h2^{km}±7^{km}, mb3.7/5, MS3.4/3, Error ellipse: s-maj=7.4km s-min=4.7km az=25.3*

SJA ***09*** *11:01:21.6±0.6, 35°.35S×71°.85W, h20^{km}±49^{km}, ML4.0, MW3.6*

IDC ***09*** *11:01:22.0±1.5, 34°.75S×72°.56W, h0^{km}, mb3.7/5, mb1 4.0/8, mb1mx3.8/31, mbtmp3.7/8, ML3.9/3, MS3.4/7, Ms1 3.4/7, ms1mx3.1/26, Error ellipse: s-maj=35.1km s-min=27.1km az=126.0*

NEIC ***09*** *11:01:23.0±0.0, 34°.82S×72°.41W, h24^{km}, mb4.0/4, ML4.2(GUC), After GUC.*

GUC ***09*** *11:01:23.9±0.6, 34°.81S×72°.41W, h25^{km}±3^{km}, ML4.2*

ISC 09 11:01:21.8±2.0**, 34°.72S**±0°.04×**72°.58W**±0°.07**, h3**^{km}±12^{km}**, n40, σ1^{s}66**/51**, mb3.9**/5**, MS3.4**/3**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.61	119	ePg	Pg	11 01 34.4	+1.0
GO05				eSg	Sg	11 01 40.6	-0.7
GO05	Huala	0.61	119	eP	Pg	11 01 34.0	+0.5
GO05				eS	Sg	11 01 40.7	-0.7
GO05				IAML		11 01 41.7	
	comp=N,38µm,0.2s						
COCH	Cobquecura	1.42	187	eP	Pn	11 01 47.7	-0.7
COCH				eS	Sn	11 02 06.2	-1.4
CCHI	Chillan	1.92	168	eP	Pn	11 01 55.4	0.0
CCHI				eS	Sn	11 02 19.5	-0.5
CCHI				IAML		11 02 28.1	
	comp=E,3µm,0.3s						
ANTU	Antumapu	1.98	55⇑	iP	Pn	11 01 57.1	+0.9
ANTU				eS	Sb	11 02 23.2	-0.4
ANTU				IAML		11 02 31.4	
	comp=E,3µm,0.4s						
CLCH	Cerro Calan	2.15	53	eP	Pb	11 02 00.3	-1.1
CLCH				eS	Sb	11 02 27.8	-0.6
CLCH				IAML		11 02 34.3	
	comp=N,3µm,0.6s						
LMEL	Las Melosas	2.15	67	eP	Pn	11 01 59.8	+1.2
LMEL				eS	Sb	11 02 27.3	-1.3
LMEL				IAML		11 02 29.9	
	comp=E,3µm,0.6s						
PEL	Peldehue	2.23	46	ePn	Pn	11 02 00.8	+1.2
PEL				eSn	Sn	11 02 24.2	-3.4
PEL	Peldehue	2.23	46	eP	Pb	11 02 02.3	-0.4
PEL				eS	Sg	11 02 33.1	-0.2
PEL	Peldehue	2.23	46	eP	Pn	11 02 00.6	+1.0
PEL				eS	Sn	11 02 27.9	+0.3
FCH	Farellones	2.35	55	eP	Pn	11 02 02.1	+0.5
FCH				eS	Sn	11 02 30.8	-0.4
AUSP	Uspallata	3.65	48	eP	Pn	11 02 22.2	+2.8
AUSP				eS	Sn	11 03 06.5	+3.4
RTLS	Leoncito	4.01	44	eP	Pn	11 02 27.9	+3.7
RTLS				IAML		11 03 36.5	
	comp=Z,231nm,0.8s						
RTCV	Cerro Valdivia	4.42	51	eP	Pn	11 02 31.6	+1.8
GO04	Tololo Observa	4.78	19	ePn	Pn	11 02 35.7	+0.9
GO04				eSn	Sn	11 03 29.6	-1.2
CFA	Coronel Fontan	4.79	51	Pn	Pn	11 02 36.6	+1.8
	comp=Z,1.4nm,0.3s,baz=235,slow=12,SNR=21						
CFA				Sn	Sn	11 03 32.5	+1.7
	comp=Z,4.2nm,0.3s,baz=204,slow=20,SNR=2.5						
CFA				Lg	Lg	11 03 44.1	
	comp=Z,12nm,0.3s,baz=49,slow=17,SNR=11						
CFA				LR	LR	11 04 49.0	
	comp=Z,154nm,21.1s,baz=232,slow=43						
ACAN	Cantantal	5.12	63	eP	Pn	11 02 38.9	-0.5
LCO	Las Campanas	5.91	16	ePn	Pn	11 02 51.0	+0.5
LCO				eSn	Sn	11 03 55.8	-3.0
PLCA	Paso Flores	6.21	166	Pn	Pn	11 02 55.0	+0.6
	comp=Z,1.0nm,0.3s,baz=353,slow=10,SNR=25						
PLCA				Lg	Lg	11 04 29.1	
	comp=Z,0.3nm,0.3s,baz=292,slow=19,SNR=2.4						
PLCA				LR	LR	11 05 31.1	
	comp=Z,287nm,22.0s,baz=1.5,slow=40						
PLCA	Paso Flores	6.21	166	ePn	Pn	11 02 54.9	+0.4
APLL	PUNTA DE LOS L	6.68	52	eP	Pn	11 03 01.6	+0.7
APLL				IAML		11 04 29.8	
	comp=Z,20nm,0.5s						
GO03	Copiap	7.38	16	ePn	Pn	11 03 10.8	+0.4
GO03				eSn	Sn	11 04 31.1	-3.7
TRQA	Tornquist	9.17	114	ePn	Pn	11 03 35.3	+0.3
GO02	Mina Guanaco	9.87	16	ePn	Pn	11 03 42.3	-2.6
LVC	Limon Verde	12.49	16	LR	LR	11 09 27.4	
	comp=Z,178nm,20.3s,baz=218,slow=39						
CPUP	Villa Florida	15.56	62	LR	LR	11 11 26.7	
	comp=Z,118nm,19.1s,baz=229,slow=39						
MNMC	Minye Minye	15.75	10	ePn	Pn	11 05 00.9	-3.9
	comp=Z,9.4nm,0.8s						
LPAZ	La Paz	18.78	13	P	Pn	11 05 45.4	+2.1
	comp=Z,0.2nm,0.3s,baz=203,slow=13,SNR=8.1						
LPAZ	La Paz	18.78	13	eP	Pn	11 05 44.1	+0.9
	comp=Z,12nm,1.8s						
USHA	Ushuaia	20.32	173	LR	LR	11 13 39.6	
	comp=Z,348nm,20.3s,baz=136,slow=36						
SIV	San Ignacio	21.32	32	P	P	11 06 09.4	-0.4
	comp=Z,2.3nm,0.7s,baz=221,slow=11,SNR=15						
NNA	Nana	22.96	349	LR	LR	11 13 38.2	
	comp=Z,60nm,18.3s,baz=134,slow=32						
BDFB	Brasilia	29.11	55	LR	LR	11 20 32.6	
	comp=Z,91nm,21.7s,baz=179,slow=40						
TXAR	Lajitas Array	70.14	331	P	P	11 12 37.3	+1.7
	comp=Z,0.5nm,0.5s,baz=156,slow=8.0,SNR=11						
ANMO	Albuquerque	76.20	332	P	P	11 13 12.8	+1.3
	comp=Z,0.5nm,0.5s,baz=169,slow=5.2,SNR=3.8						
ANMO	Albuquerque	76.20	332	eP	P	11 13 12.8	+1.3
	comp=Z,2.5nm,1.2s						
PD31	Pinedale Array	84.20	334	eP	P	11 13 53.8	-0.7
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	84.20	334	P	P	11 13 53.8	-0.7
	comp=Z,0.2nm,0.4s,baz=128,slow=5.9,SNR=3.2						
NV01	Mina Array Sit	84.22	326	eP	P	11 13 55.5	+0.8
NVAR	Mina Array Bea	84.22	326	P	P	11 13 55.5	+0.8
	comp=Z,0.1nm,0.3s,baz=145,slow=6.6,SNR=4.9						

ISCJB ***09*** *11:35:00.2±1.1, 23°.73N±0°.03×122°.51E±0°.02, h10^{km}±8^{km}, Error ellipse: s-maj=4.7km s-min=2.8km az=157.7*

TAP ***09*** *11:35:01.1, 23°.75N×122°.61E, h47^{km}±1^{km}, ML2.6, C*

JMA ***09*** *11:35:01.3±0.1, 23°.81N×122°.47E, h20^{km}, M1.9*

ISC 09 11:35:00.9±1.1**, 23°.74N**±0°.04×**122°.53E**±0°.02**, h28**^{km}±13^{km}**, n34, σ0^{s}82**/62**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.80	28	P	Pn	11 35 15.8	-0.5
JYNG				S	Sb	11 35 25.8	-1.0
YOJ	Yonaguni jima	0.84	32	eP	Pn	11 35 16.4	-0.4
	baz=26						
YOJ				S	Sb	11 35 27.3	-0.7
	baz=26						
YOJ	Yonaguni jima	0.84	32	P	Pn	11 35 16.7	-0.2
YOJ				eS	Sb	11 35 27.1	-0.9
EOS1	EOS1	0.88	336	eP	Pb	11 35 18.0	+0.3
	baz=321						
EOS1				S	Sb	11 35 30.8	+1.7
	baz=321						
NACB	Ninganchiao	0.95	297	eP	Pn	11 35 17.5	-0.9
	baz=295						
NACB				eS	Sn	11 35 30.3	-0.8
	baz=295						
NANB	Nanao	0.98	314	eP	Pb	11 35 19.2	-0.2
	baz=320						
NANB				eS	Sb	11 35 32.9	+0.9
	baz=320						
ENA	Nanau	0.99	314	eP	Pb	11 35 19.6	+0.2
	baz=320						
ENA				eS	Sb	11 35 33.4	+1.2
	baz=320						
EHY	Hungye	1.13	258	eP	Pn	11 35 21.3	+0.5
	baz=258						
EHY				eS	Sb	11 35 36.1	-0.1
	baz=258						
YULB	Yu-li	1.18	253	P	Pn	11 35 21.8	+0.3
	baz=247						
YULB				eS	Sn	11 35 36.7	0.0
	baz=247						
TWF1	Yuli	1.19	251	eP	Pn	11 35 22.0	+0.3
	baz=245						
TWF1				S	Sn	11 35 37.5	+0.5
	baz=245						
WHF	Hehuan Shan	1.22	289	eP	Pn	11 35 22.9	+0.5
	baz=280						
WHF				eS	Sb	11 35 38.8	-0.4
	baz=280						
CHKT	Chengkung	1.24	239	eS	Sn	11 35 36.7	-1.5
	baz=232						
NNSB	Datong	1.25	303	eP	Pn	11 35 22.7	+0.1
	baz=301						
NNSB				eS	Sn	11 35 38.9	+0.4
	baz=301						
IRIF	Iriomote-Funau	1.25	62	P	Pb	11 35 24.5	+0.7
IRIF				eS	Sb	11 35 40.4	+0.9
NDT	Datong Townshi	1.26	313	eP	Pn	11 35 22.8	+0.2
	baz=311						
NDT				eS	Sb	11 35 39.9	-0.1
	baz=311						
VWDT	VWDT	1.27	271	eP	Pn	11 35 23.1	+0.3
	baz=271						
VWDT				eS	Sn	11 35 38.9	+0.1
	baz=271						
CHGB	Renai	1.28	285	eP	Pn	11 35 22.8	-0.2
	baz=278						
CHGB				S	Sb	11 35 40.1	-0.5
	baz=278						
TIPB	Shuangxi	1.38	333	eP	Pn	11 35 24.8	+0.5
	baz=330						
TIPB				eS	Sn	11 35 42.0	+0.3
	baz=330						
YHNB	Yeheng	1.40	312	eP	Pn	11 35 25.2	+0.6
	baz=309						
YHNB				eS	Sb	11 35 43.0	-0.9
	baz=309						
NSK	Sanguang	1.42	311	eP	Pn	11 35 25.7	+0.8
	baz=309						
NSK				eS	Sb	11 35 43.6	-0.7
	baz=309						
SSLB	Suanglung	1.44	272	eP	Pn	11 35 25.8	+0.6
	baz=272						
JKRS	Kuro-shima	1.44	70	P	Pb	11 35 27.5	+0.4
JKRS				eS	Sb	11 35 46.0	+0.9
ELDTW	Lidau	1.49	249	eS	Sn	11 35 43.9	-0.6
	baz=249						
TYC	Yuchr	1.54	276	eP	Pn	11 35 27.4	+1.0
	baz=276						
TYC				eS	Sb	11 35 47.0	-0.8
	baz=276						
WHP	Taichung City	1.54	291	eP	Pb	11 35 29.0	+0.1
	baz=289						
WHP				eS	Sb	11 35 47.4	-0.6
	baz=289						
JIJ	Ishigaki jima	1.60	67	P	Pb	11 35 29.0	-0.8
JIJ				S	Sb	11 35 48.4	-1.3
LIOB	Emei	1.65	303	eP	Pb	11 35 29.9	-0.7
	baz=293						
LIOB				eS	Sb	11 35 50.4	-0.6
	baz=293						
TPUB	Ta-pu	1.79	256	eP	Pn	11 35 31.6	+1.6
	baz=251						
TPUB				eS	Sb	11 35 53.9	-1.3
	baz=251						
WTP	Ta-pu	1.82	255	eP	Pn	11 35 32.2	+1.7
	baz=255						
WTP				eS	Sb	11 35 55.2	-0.9
	baz=255						
JISG	Ishigakijimahi	1.83	62	P	Pb	11 35 33.4	-0.4
SLGT	Liugui	1.88	247	eP	Pn	11 35 32.9	+1.7
	baz=243						
SLGT				eS	Sn	11 35 55.5	+1.5
	baz=243						
CHN1	Nanshi	1.92	254	eS	Sb	11 35 58.9	+0.1
	baz=254						
TWK	Hsinying	1.93	256	eP	Pb	11 35 34.2	-1.3
	baz=256						
TWK				eS	Sb	11 35 58.9	-0.3
	baz=256						
JIKM	Ikemajima	2.75	64	P	Pb	11 35 49.5	+0.2

IDC ***09*** *11:35:00.8±1.0, 30°.49S×177°.27W, h0^{km}, mb4.5/6, mb1 4.6/8, mb1mx4.3/23, mbtmp4.4/8, ML4.0/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/33, Error ellipse: s-maj=38.1km s-min=22.7km az=137.0*

NEIC ***09*** *11:35:01.8±2.7, 30°.41S×177°.63W, h10^{km}±1^{km}, mb4.9/27, Error ellipse: s-maj=11.9km s-min=7.3km az=95.0*

ISCJB ***09*** *11:35:04.8±0.5, 30°.58S±0°.04×177°.70W±0°.09, h33^{km}, mb4.8/23, MS3.6/8, Error ellipse: s-maj=11.7km s-min=4.7km az=13.1*

ISC 09 11:35:06.0±0.6**, 30°.46S**±0°.06×**177°.7W**±0°.1**, h33**^{km}**, n90, σ2^{s}07**/88**, mb4.8**/23**, MS3.5**/8**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.22	351	ePn	Pn	11 35 24.9	-1.9
RAO				eSg	Sn	11 35 39.0	-3.0
MXZ	Matakaoa Point	7.83	204	ePn	Pn	11 36 56.5	-1.0
MXZ				eSn	Sn	11 38 25.6	+0.6
OUZ	Omahuta	8.73	235	ePn	Pn	11 37 08.7	-1.4
URZ	Urewera	8.89	207	Pn	Pn	11 37 10.5	-1.7
	1.0nm,0.3s,baz=267,slow=4.4,SNR=15						
URZ				Sn	Sn	11 38 53.1	+2.0
	2.7nm,0.3s,baz=206,slow=23,SNR=7.2						
URZ	Urewera	8.89	207	ePn	Pn	11 37 10.6	-1.5
URZ				eSn	Sn	11 38 51.0	-0.1
BKZ	Black Stump Fm	9.91	207	ePn	Pn	11 37 23.6	-2.7
BKZ				eSn	Sn	11 39 18.0	+1.6
HIZ	Hauiti	10.12	215	ePn	Pn	11 37 29.3	+0.3
HIZ				eSn	Sn	11 39 20.2	-1.0
BFZ	Birch Farm	11.33	204	ePn	Pn	11 37 41.7	-3.9
BFZ				eSn	Sn	11 39 50.0	-1.0
SNZO	South Karori	12.46	208	ePn	Pn	11 37 59.5	-1.4
SNZO				eSn	Sn	11 40 14.7	-3.8
NIUE	Niue	13.34	34	ePn	Pn	11 38 06.7	-6.4
THZ	Tophouse	13.59	211	ePn	Pn	11 38 16.3	-0.2
KHZ	Kahutara	13.86	208	ePn	Pn	11 38 17.0	-3.1
LTZ	Lake Taylor	14.69	210	ePn	Pn	11 38 30.8	-0.6
OXZ	Oxford	15.23	210	ePn	Pn	11 38 36.5	-2.1
	30nm,0.5s						
MQZ	McQueen’s Vall	15.29	207	ePn	Pn	11 38 39.3	0.0
	84nm,1.3s						
RPZ	Rata Peaks	15.97	211	Pn	Pn	11 38 47.5	-0.7
	0.7nm,0.3s,baz=334,slow=4.6,SNR=2.8						
RPZ				Sn	Sn	11 41 33.4	-11
	0.4nm,0.3s,baz=54,slow=19,SNR=2.5						
FOZ	Fox Glacier	16.41	214	ePn	Pn	11 38 53.4	-0.3
	76nm,1.2s						
DZM	Mont Dzumac	16.49	297	eLR	LR	11 42 43.7	
	comp=Z,546nm,26.9s						
DZM	Mont Dzumac	16.49	297	LR	LR	11 43 55.0	
	comp=Z,323nm,21.7s,baz=190,slow=32						
DZM	Mont Dzumac	16.49	297	eP	Pn	11 38 55.9	+0.9
	68nm,1.4s						
LBZ	Lake Benmore	16.89	211	ePn	Pn	11 38 57.4	-2.5
	122nm,1.9s						
ODZ	Otahua Downs	17.21	209	ePn	Pn	11 39 02.4	-1.5
	45nm,1.4s						
WKZ	Wanaka	17.76	212	eP	Pn	11 39 10.5	-0.2
	125nm,1.7s						
RAR	Rarotonga	18.55	64	LR	LR	11 45 50.7	
	comp=Z,84nm,18.6s,baz=260,slow=36						
MLZ	Mavora Lakes	18.58	213	eP	Pn	11 39 20.6	-0.2
	154nm,1.9s						
WHZ	Wether Hill Ro	19.06	212	eP	Pn	11 39 25.6	-0.9
	97nm,1.7s						
TBI	Tubuai	26.11	81	eLR	LR	11 47 01.9	
	comp=Z,176nm,26.2s						
TBI	Tubuai	26.11	81	eT	T	12 07 28.1	
	12nm,0.4s						
ARMA	Armidale	26.42	262	eP	P	11 40 38.1	-1.7
	54nm,1.8s						
EIDS	Eidsvold	28.01	273	eP	P	11 40 54.1	+0.1
	73nm,1.8s						
MILA	Mila	28.24	248	P	P	11 40 58.8	+2.6
	baz=29,SNR=4.1						
CAN	Canberra	28.31	251	eP	P	11 40 53.1	-3.6
	18nm,1.2s						
PAE	Paea	28.56	70	eT	T	12 10 17.2	
	3.3nm,0.3s						
PPT2	Papeete2	28.61	70	eLR	LR	11 48 17.8	
	comp=Z,130nm,23.8s						
PPT2	Papeete2	28.61	70	eT	T	12 10 21.1	
	2.5nm,0.3s						
TVO	Taravao	28.77	71	eT	T	12 10 33.9	
	0.8nm,0.3s						
HNR	Honiara	29.54	310	LR	LR	11 50 58.0	
	comp=Z,83nm,18.7s,baz=26,slow=32						
RMQ	Roma	29.70	269	P	P	11 41 14.7	+5.6
	baz=31,SNR=4.1						
TOO	Toolangi	31.19	247	eP	P	11 41 23.6	+1.4
	51nm,1.9s						
TOO	Toolangi	31.19	247	P	P	11 41 27.4	+5.2
	baz=32,SNR=7.9						
CMSA	Cobar Meteorol	31.32	258	P	P	11 41 28.9	+5.5
	baz=32,SNR=12						
CTAO	Charters Tower	34.07	279	eP	P	11 41 45.0	-2.5
	64nm,1.6s						
STKA	Stephens Creek	34.73	257	P	P	11 41 57.5	+4.3
	9.5nm,0.8s,baz=90,slow=9.7,SNR=19						
STKA				LR	LR	11 55 21.7	
	comp=Z,160nm,18.0s,baz=31,slow=35						
STKA	Stephens Creek	34.73	257	eP	P	11 41 51.1	-2.0
	2.9nm,0.9s						
STKA	Stephens Creek	34.73	257	P	P	11 41 57.6	+4.5
	baz=36,SNR=15						
HTT	Hallett	36.74	254	P	P	11 42 14.8	+4.3
	baz=38,SNR=15						
BBOO	Buckleboo	39.21	254	eP	P	11 42 30.6	-0.6
	30nm,1.3s						
BBOO	Buckleboo	39.21	254	P	P	11 42 34.1	+2.9
	baz=40,SNR=6.5						
AS31	Alice Springs	43.37	267	eP	P	11 43 08.2	+2.7
	4.0nm,1.4s						
ASAR	Alice Springs	43.37	267	P	P	11 43 07.7	+2.1
	3.7nm,0.5s,baz=103,slow=7.0,SNR=31						
ASAR				PcP	PcP	11 44 54.5	+0.7
	1.7nm,0.8s,baz=119,slow=3.9,SNR=4.9						
ASAR				LR	LR	12 00 55.5	
	comp=Z,175nm,18.1s,baz=103,slow=36						
WC3	Warramunga Arr	44.33	272	eP	P	11 43 14.9	+1.7
	42nm,1.6s						
WB2	Warramunga Arr	44.36	272	eP	P	11 43 15.3	+1.9
	32nm,1.4s						
WRAB	Tennant Creek	44.36	272	eP	P	11 43 12.8	-0.7
	10nm,0.6s						
WR1	Warramunga Arr	44.37	272	eP	P	11 43 15.4	+1.9
WRA	Warramunga Arr	44.37	272	P	P	11 43 15.4	+1.9
	6.6nm,0.4s,baz=99,slow=8.4,SNR=119						
FORT	Forrest	46.29	255	eP	P	11 43 28.4	-0.3
	30nm,1.1s						
WRKA	Warakurna	47.74	263	P	P	11 43 41.4	+1.3
	baz=49,SNR=12						
VNDA	Vanda	48.07	186	eP	P	11 43 41.9	+0.1
	13nm,1.8s						
MTN	Manton Dam	50.26	279	eP	P	11 43 58.9	-0.6
	105nm,2.0s						
KNRA	Kununurra	50.98	274	P	P	11 44 06.7	+1.9
	baz=52,SNR=3.2						
MORW	Morawa	56.77	253	eP	P	11 44 48.5	+1.4
	59nm,1.8s						
KAPI	Kappang	63.88	280	eP	P	11 45 35.2	-0.7
	43nm,1.5s						
MAW	Mawson	72.35	200	eP	P	11 46 26.8	-1.3
	4.0nm,0.9s						
SNAA	Sanae	78.09	178	P	P	11 47 03.0	+1.7
SNAA	Sanae	78.09	178	eP	P	11 47 00.3	-0.9
	17nm,1.7s						
VNA3	Neumayer Olymp	78.23	176	P	P	11 47 03.2	+1.2
VNA2	Neumayer--Watz	78.67	177	P	P	11 47 06.1	+1.7
	baz=184,slow=5.6						
LPIG	La Paz	84.34	58	LR	LR	12 16 39.9	
	comp=Z,26nm,21.9s,baz=164,slow=30						
PETK	Petropavlovsk-	85.93	345	P	P	11 47 42.6	+0.3
	5.4nm,1.0s,baz=122,slow=8.2,SNR=6.9						
PEA1	Petropavlovsk-	85.94	345	eP	P	11 47 42.6	+0.3
USRK	Ussuriysk Ar.	87.36	326	P	P	11 47 50.4	+1.0
	1.5nm,0.7s,baz=121,slow=5.6,SNR=4.8						
NV01	Mina Array Sit	88.10	43	eP	P	11 47 52.9	-0.5
NVAR	Mina Array Bea	88.10	43	P	P	11 47 52.9	-0.5
	0.5nm,0.7s,baz=223,slow=8.6,SNR=4.8						
NVAR				LR	LR	12 26 32.3	
	comp=Z,31nm,18.2s,baz=178,slow=35						
CMAR	Chiang Mai Arr	93.67	289	LR	LR	12 31 44.6	
	comp=Z,7.3nm,19.4s,baz=215,slow=36						
MK32	Makanchi Array	118.01	310	ePKPdf	PKPdf	11 53 48.8	-0.4
MKAR	Makanchi Array	118.01	310	PKP	PKPdf	11 53 48.8	-0.4
	0.2nm,0.4s,baz=344,slow=1.3,SNR=4.2						
AKH	Akhalkalaki	145.20	300	ePKPbc	PKPdf	11 54 42.3	+1.9
FIA1	FINESS Array S	145.29	340	ePKPbc	PKPdf	11 54 39.6	0.0
FIA0	FINESS Array S	145.29	340	ePKPbc	PKPbc	11 54 39.5	0.0
FINES	FINESS Array B	145.29	340	PKPbc	PKPbc	11 54 39.5	0.0
	10nm,0.6s,baz=47,slow=3.7,SNR=32						
KBZ	Khabaz	145.37	304	PKPbc	PKPab	11 54 40.6	+0.2
	4.9nm,0.9s,baz=310,slow=7.2,SNR=5.7						
NB2	NORSAR Subarra	148.85	352	PKP	PKPbc	11 54 49.4	-0.2
	comp=Z,0.7nm,0.5s,baz=13,slow=2.8						
NB200	NORSAR Array S	148.85	352	ePKPbc	PKPbc	11 54 49.1	-0.5
NOA	NORSAR Array B	148.85	352	PKPbc	PKPbc	11 54 49.1	-0.5
	comp=Z,1.5nm,0.7s,baz=17,slow=4.1,SNR=4.9						
AKASG	Malin Array Be	151.51	323	PKPbc	PKPbc	11 54 56.5	+0.2
	comp=Z,1.6nm,0.5s,baz=45,slow=2.7,SNR=7.2						
AKASG				PKPab	pPKPbc	11 55 05.4	-0.4
	comp=Z,3.0nm,0.6s,baz=46,slow=3.3,SNR=6.7						
AKBB	Malin Array Si	151.51	323	ePKPbc	PKiKP	11 54 57.2	+0.5
AKBB				ePKPab	PKPab	11 55 05.2	+0.4
BR101	Keskin Array S	152.86	298	ePKPbc	PKiKP	11 55 00.3	+0.2
BR101				ePKPab	pPKPbc	11 55 08.8	-0.6
BRTR	Keskin Array B	152.86	298	PKPbc	PKiKP	11 55 00.3	+0.2
	comp=Z,1.2nm,0.6s,baz=79,slow=2.6,SNR=6.6						
BRTR				PKPab	pPKPbc	11 55 08.8	-0.6
	comp=Z,1.1nm,0.5s,baz=121,slow=4.8,SNR=5.7						
TORD	Torodi Ar. Bea	162.77	178	PKPab	PKPab	11 55 54.6	+0.6
	comp=Z,0.4nm,0.6s,baz=206,slow=3.5,SNR=4.1						
TOA1	Torodi Ar. Sit	162.77	178	ePKPab	PKPab	11 55 54.6	+0.6

ISCJB ***09*** *11:57:06.6±0.4, 13°.61N±0°.03×120°.62E±0°.05, h125^{km}±3^{km}, mb3.9/9, Error ellipse: s-maj=7.6km s-min=4.2km az=176.7*

IDC ***09*** *11:57:07.5±0.7, 13°.72N×120°.94E, h121^{km}±5^{km}, mb3.5/9, mb1 3.7/9, mb1mx3.4/42, mbtmp3.9/9, Error ellipse: s-maj=36.3km s-min=14.6km az=63.0*

MAN ***09*** *11:57:08.1, 13°.63N×120°.61E, h100^{km}, MS3.4*

ISC 09 11:57:07.4±0.7**, 13°.62N**±0°.03×**120°.62E**±0°.05**, h115**^{km}±5^{km}**, n26, σ1^{s}44**/44**, mb3.9**/9**, 2C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.35	110⇑	eP	Pn	11 57 21.9	-2.1
PGP				iS	Pn	11 57 24.5	+0.5
LUBP	Lubang	0.38	288	eP	Pn	11 57 25.1	+1.1
LUBP				eS	Sn	11 57 37.4	+0.8
TGY	Tagaytay City	0.57	33	P	Pn	11 57 26.1	+0.8
	269nm,0.3s,baz=203,slow=1.2,SNR=10						
TGY				S	Sn	11 57 39.8	+0.9
	362nm,0.3s,baz=351,slow=8.7,SNR=14						
TGY	Tagaytay City	0.57	33⇓	eP	Pn	11 57 26.6	+1.3
TGY				eS	Sn	11 57 35.1	-3.7
BOAC	Boac	1.21	97	eP	Pn	11 57 31.8	+0.6
BOAC				eS	Sn	11 57 50.2	+1.1
SJMP	San Jose	1.25	157	eP	Pn	11 57 32.6	+0.9
SJMP				eS	Sn	11 57 50.4	+0.4
BUSP	Coron	1.66	194	eP	Pn	11 57 37.3	+0.9
BUSP				eS	Sn	11 57 59.1	+0.6
POLP	Polilio Island	1.69	49	eP	Pn	11 57 37.4	+0.7
POLP				eS	Sn	11 58 00.3	+1.1
GQP	Guinayangan	1.80	81⇓	eP	Pn	11 57 38.4	+0.2

GQP				eS	Sn	11 58 06.4	+4.9
OTRP	Odiongan	1.85	132	eP	Pn	11 57 39.2	+0.4
OTRP				eS	Sn	11 58 02.0	-0.8
SCZP	Santa Cruz	2.25	342	eP	Pn	11 57 44.2	+0.5
SCZP				eS	Sn	11 58 12.5	+0.8
BALP	Baler	2.31	24	eP	Pn	11 57 45.5	+1.0
BALP				eS	Sn	11 58 14.7	+1.8
SMPP	San Manuel, Pa	2.52	1	eP	Pn	11 57 47.7	+0.4
SMPP				eS	Sn	11 58 17.6	-0.2
ENPP	El Nido	2.67	206	eP	Pn	11 57 50.9	+1.7
ENPP				eS	Sn	11 58 21.7	+0.4
CUYO	Cuyo Island	2.78	172	eP	Pn	11 57 51.6	+0.9
CUYO				eS	Sn	11 58 24.4	+0.4
BOLP	Bolinao	2.83	346	eP	Pn	11 57 52.3	+1.1
BOLP				eS	Sn	11 58 25.5	+0.4
RCP	Roxas	2.92	134	⇑eP	Pn	11 57 53.8	+1.3
CMAR	Chiang Mai Arr	21.37	286	P	P	12 01 48.8	+2.9
	2.9nm,0.7s,baz=97,slow=7.7,SNR=14						
WRA	Warramunga Arr	35.98	158	P	P	12 03 56.4	-1.0
	1.9nm,1.0s,baz=339,slow=11,SNR=3.9						
WRA				pP	pP	12 04 21.8	-1.3
	0.8nm,0.5s,baz=342,slow=12,SNR=2.3						
SONM	Songino Array	36.11	344	P	P	12 03 58.0	-0.3
	0.9nm,0.4s,baz=158,slow=9.5,SNR=3.9						
ASAR	Alice Springs	39.27	161	P	P	12 04 24.2	-0.9
	0.2nm,0.4s,baz=338,slow=7.1,SNR=3.2						
ASAR				pP	pP	12 04 52.0	+0.8
	0.5nm,0.6s,baz=339,slow=7.1,SNR=2.9						
MKAR	Makanchi Array	46.05	324	P	P	12 05 20.3	+0.6
	1.2nm,0.5s,baz=134,slow=9.7,SNR=14						
ZALV	Zalesovo Beam	49.09	333	P	P	12 05 42.4	-0.6
	2.2nm,0.4s,baz=132,slow=6.2,SNR=8.1						
BVAR	Borovoye Array	55.79	326	P	P	12 06 30.9	-1.6
	0.6nm,0.5s,baz=108,slow=9.4,SNR=5.1						
ARCES	ARCESS Array B	79.13	339	P	P	12 08 58.3	-0.7
	2.8nm,0.9s,baz=82,slow=6.5,SNR=6.5						
YKA	Yellowknife Ar	92.88	22	P	P	12 10 06.0	-1.1
	0.2nm,0.4s,baz=309,slow=4.1,SNR=4.1						

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*ISCJB **09** 12:03:29.8±0.5, 13°.12N±0°.05×89°.32W±0°.03, h72^{km}±4^{km}, mb3.7/5, Error ellipse: s-maj=10.0km s-min=3.3km az=25.9*

*NEIC **09** 12:03:30.0±0.0, 13°.18N×89°.37W, h60^{km}, mb3.9/5, MD4.1(SNET), After SNET.*

NEIC Felt [II] at San Salvador.

*IDC **09** 12:03:30.8±2.0, 13°.05N×89°.37W, h85^{km}±15^{km}, mb3.2/3, mb1 3.6/6, mb1mx3.3/32, mbtmp3.6/6, MS3.1/4, Ms1 3.1/4, ms1mx2.7/21, Error ellipse: s-maj=51.2km s-min=10.5km az=44.0*

*SNET **09** 12:03:30.3±1.0, 13°.18N×89°.37W, h60^{km}±5^{km}, ML4.2*

*GCG **09** 12:03:31.6±0.5, 13°.17N×89°.40W, h74^{km}±28^{km}, MD4.2*

ISC 09 12:03:31.0±1.0**, 13°.23N**±0°.07×**89°.30W**±0°.04**, h66**^{km}±7^{km}**, n49, σ1^{s}.47**/64**, mb3.8**/5**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIES	Las Flores	0.32	48	eP	Pn	12 03 41.2	-0.8
AIES				AML	AML	12 03 41.8	
	comp=Z,16µm,0.2s						
AIES				eS	Sn	12 03 50.0	0.0
SNET	Serv Nac Est T	0.46	8	IAML		12 03 56.5	
	comp=Z,6µm,0.4s						
OPAM	Oficina de Pla	0.49	12	eP	Pn	12 03 43.3	-0.2
OPAM				IAML		12 03 59.1	
	comp=Z,6µm,0.4s						
UDBS	Universidad Do	0.50	16	eP	Pn	12 03 43.5	-0.2
UDBS				eS	Sn	12 03 53.9	+0.9
LFU	La Fuente	0.55	19	eP	Pn	12 03 44.1	+0.1
SNVI	San Vicente	0.59	50	eS	Sn	12 03 55.3	+0.8
PAVA	Las Pavas	0.59	36	eP	Pn	12 03 44.8	+0.1
PAVA				eS	Sn	12 03 56.3	+1.7
PAVA				IAML		12 03 57.7	
	comp=Z,6µm,0.3s						
UESV	Universidad de	0.64	51	eP	Pn	12 03 45.0	+1.3
UESV				eS	Sn	12 03 56.1	+3.1
CEVE	Cerro Verde	0.67	332	eP	Pn	12 03 45.0	-0.6
CEVE				eS	Sn	12 03 56.9	+0.5
CEVE				IAML		12 03 58.4	
	comp=Z,22µm,0.3s						
SBLS	San Blas	0.68	333	eP	Pn	12 03 45.1	-0.6
SNJE	San Jose	0.70	335	eP	Pn	12 03 45.4	-0.6
RTR	El Retiro	0.74	333	eP	Pn	12 03 46.0	-0.3
UNIC	Universidad Ca	0.79	342	eP	Pn	12 03 46.8	-0.1
UNIC				IAML		12 04 02.2	
	comp=Z,2µm,0.4s						
VICT	Victoria	0.97	41	eS	Sn	12 04 04.3	+1.9
PACA	Pacayal	0.98	76	eP	Pn	12 03 49.7	+0.5
PACA				eS	Sn	12 04 05.3	+2.6
LCY	Lacayo	1.00	79	eP	Pn	12 03 49.9	+0.5
VSM	San Miguel	1.02	79	eP	Pn	12 03 50.4	+0.6
MTO3	Montecristo	1.16	357	eP	Pn	12 03 51.7	0.0
LCND	La Caada	1.37	87	eS	Sn	12 04 13.0	+1.4
LCND				IAML		12 04 15.9	
	comp=Z,5µm,0.5s						
CNCH	Conchagua	1.43	88	eS	Sn	12 04 15.1	+2.1
NBG	Las Nubes	1.69	323	eP	Pn	12 04 00.4	+1.7
CSGN	Cosiguina Volc	1.71	98	ePn	Pn	12 04 00.0	+1.2
CSGN				eSn	Sn	12 04 20.2	+0.3
PCG	Pacaya	1.72	312	eP	Pn	12 03 60.0	+0.9
PCG				eS	Sn	12 04 22.3	+2.1
MRL	Marmol	1.88	349	eP	Pn	12 04 03.1	+1.9
FUG	Fuego 3	1.93	309	eP	Pn	12 04 02.5	+0.7
FUG				eS	Sn	12 04 27.0	+1.8
APG	El Apazote	2.10	327	P	Pn	12 04 04.5	+0.4
	comp=Z,9.0nm,0.3s,baz=156,slow=12,SNR=11						
APG				S	Sn	12 04 33.6	+4.3
	comp=Z,21nm,0.3s,baz=327,slow=18,SNR=6.2						
APG				LR	LR	12 04 34.9	
	comp=Z,62nm,21.3s,baz=16,slow=29						
TGUH	Tegucigalpa,Un	2.13	67	ePn	Pn	12 04 05.2	+0.8
TGUH				eSn	Sn	12 04 29.9	0.0
STG3	Santiaguito 3,	2.65	304	eP	Pn	12 04 12.4	+0.8
STG3				eS	Sn	12 04 44.2	+1.4
ESTN	Estel	2.86	92	ePn	Pn	12 04 14.5	+0.1
ESTN				eSn	Sn	12 04 48.5	+0.9
CCIG	Comitan	4.09	318	ePn	Pn	12 04 28.9	-2.5
CCIG				ePn	Pn	12 04 32.8	+1.5
CCIG				eSn	Sn	12 05 15.2	-2.9
ACON	Acoyapa	4.22	107	ePn	Pn	12 04 32.7	-0.2
ACON				eSn	Sn	12 05 21.9	+1.0
ESPN	Las Esperanzas	4.98	101	ePn	Pn	12 04 43.6	+0.2
ESPN				eSn	Sn	12 05 38.5	-1.2
JTS	Las Juntas de	5.16	124	P	Pn	12 04 46.8	+0.9
	comp=Z,3.2nm,0.3s,baz=338,slow=16,SNR=15						
JTS				S	Sn	12 05 42.5	-1.6
	baz=322,slow=19,SNR=1.8						
JTS	Las Juntas de	5.16	124	ePn	Pn	12 04 46.7	+0.9
JTS				eSn	Sn	12 05 43.8	-0.3
HDC	Heredia	6.01	122	ePn	Pn	12 04 56.8	-0.7
HDC				eSn	Sn	12 06 02.8	-2.3
CMIG	Matias Romero	6.62	306	P	Pn	12 05 07.3	+1.6
	comp=Z,0.7nm,0.3s,baz=135,slow=12,SNR=8.6						
CMIG				S	Sn	12 06 19.5	-0.3
	comp=Z,1.8nm,0.3s,baz=259,slow=22,SNR=8.1						
TEIG	Tepich	7.03	8	ePn	Pn	12 05 09.6	-1.7
SDV	Santo Domingo	18.82	101	LR	LR	12 16 46.3	
	comp=Z,86nm,21.4s,baz=227,slow=42						
JCT	Junction City	19.72	332	eP	P	12 07 52.2	-3.2
	comp=Z,10nm,1.5s						
WLAR	White Oak Lake	20.66	351	eP	P	12 08 05.1	-0.4
	comp=Z,18nm,0.4s						
TXAR	Lajitas Array	20.85	322	P	P	12 08 08.9	+1.3
	comp=Z,0.3nm,0.4s,baz=147,slow=12,SNR=9.5						
Y52A	Lilburn	21.09	12	eP	P	12 08 11.4	+1.4
	comp=Z,4.2nm,0.7s						
MIAR	Mount Ida	21.57	350	eP	P	12 08 16.4	+1.1
	comp=Z,3.3nm,0.8s						
FCAR	Ozark Folk Cen	22.71	354	eP	P	12 08 28.0	+0.6
	comp=Z,4.1nm,1.0s						
ULM	Lac du Bonnet	37.31	353	LR	LR	12 27 15.8	
	comp=Z,39nm,18.8s,baz=200,slow=38						
SIV	San Ignacio	40.27	135	LR	LR	12 27 41.0	
	comp=Z,78nm,19.0s,baz=210,slow=36						
YKA	Yellowknife Ar	52.40	345	P	P	12 12 35.0	-1.3
	comp=Z,0.9nm,0.7s,baz=143,slow=7.8,SNR=16						
VAH	Vaihoa	64.27	246	eT	T	12 13 50.6	
	comp=Z,16nm,0.2s						
ILAR	Eielson Array	64.59	336	P	P	12 13 59.0	-2.2
	comp=Z,0.4nm,0.8s,baz=132,slow=4.2,SNR=4.4						

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*IDC **09** 12:09:38.2±1.4, 6°.92S×150°.96E, h0^{km}, mb3.8/4, mb1 4.1/5, mb1mx3.7/27, mbtmp4.0/5, ML2.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=67.9km s-min=24.1km az=124.0*

*ISCJB **09** 12:09:42.0±0.5, 6°.91S±0°.09×150°.63E±0°.09, h35^{km}, mb3.9/7, MS2.7/1, Error ellipse: s-maj=17.5km s-min=6.2km az=136.2*

*NEIC **09** 12:09:44.0±0.7, 6°.82S×150°.59E, h36^{km}±10^{km}, mb4.1/7, Error ellipse: s-maj=14.2km s-min=4.7km az=160.0*

ISC 09 12:09:43.9±0.8**, 6°.8S**±0°.1×**150°.6E**±0°.1**, h35**^{km}**, n22, σ0^{s}.63**/24**, mb4.1**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.04	31	ePn	Pn	12 10 29.8	+0.2
PMG	Port Moresby	4.27	233	Pn	Pn	12 10 48.2	+1.8
	7.4nm,0.3s,baz=46,slow=9.8,SNR=18						
PMG				Sn	Sn	12 11 35.1	0.0
	28nm,0.3s,baz=345,slow=12,SNR=8.8						
PMG	Port Moresby	4.27	233	ePn	Pn	12 10 46.6	+0.1
PMG				eSn	Sn	12 11 35.1	0.0
HNR	Honiara	9.60	106	ePn	Pn	12 12 00.1	+0.5
COEN	Coen	10.18	225	ePn	Pn	12 12 06.9	-0.7
COEN				eSn	Sn	12 14 00.5	-0.2
CTAO	Charters Tower	13.84	197	ePn	Pn	12 12 56.7	-1.0
SIJI	Sorong	20.18	286	LR	LR	12 24 02.9	
	comp=Z,33nm,20.1s,baz=210,slow=42						
WB2	Warramunga Arr	20.47	229	eP	P	12 14 18.9	+0.1
	8.1nm,0.8s						
WR1	Warramunga Arr	20.48	229	eP	P	12 14 18.9	0.0
WRA	Warramunga Arr	20.48	229	P	P	12 14 18.9	0.0
	6.7nm,0.9s,baz=56,slow=9.8,SNR=17						
AS31	Alice Springs	23.19	222	eP	P	12 14 48.3	+0.5
	1.0nm,0.7s						
ASAR	Alice Springs	23.19	222	P	P	12 14 48.1	+0.3
	1.1nm,0.7s,baz=55,slow=9.4,SNR=21						
STKA	Stephens Creek	26.30	198	P	P	12 15 16.5	+0.2
	1.7nm,0.6s,baz=27,slow=11,SNR=6.9						
STKA	Stephens Creek	26.30	198	eP	P	12 15 17.0	+0.7
	0.8nm,0.9s						
RSO	Redoubt South	80.33	25	eP	P	12 21 50.8	-0.7
RND	Reindeer	83.44	23	eP	P	12 22 07.5	-0.1
	1.6nm,0.7s						
DHY	Denali Highway	83.86	24	eP	P	12 22 09.7	-0.2
	4.1nm,1.2s						
CCB	Clear Creek Bu	84.44	22	eP	P	12 22 11.2	-1.4
	3.7nm,1.4s						
ILAR	Eielson Array	84.85	22	P	P	12 22 14.3	-0.3
	0.9nm,0.9s,baz=254,slow=5.0,SNR=8.2						
ILB	Eielson Array	84.85	22	eP	P	12 22 14.4	-0.3
	2.3nm,1.3s						
TORD	Torodi Ar. Bea	148.77	284	PKPbc	PKPbc	12 29 29.0	+0.2
	1.2nm,0.6s,baz=57,slow=2.3,SNR=11						
TOA1	Torodi Ar. Sit	148.78	284	ePKPbc	PKPbc	12 29 29.0	+0.2

IDC 09 12:16:10.9±2.6**, 6°.86S**×**150°.82E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/30**, mbtmp3.9**/4**, ML2.1**/1**, Error ellipse: s-maj=77.7km s-min=41.8km az=121.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.42	235	Pn	Pn	12 17 20.4	+1.0
	7.4nm,0.3s,baz=56,slow=6.6,SNR=18						
PMG				Sn	Sn	12 18 07.6	-4.0
	14nm,0.3s,baz=118,slow=19,SNR=7.6						
WRA	Warramunga Arr	20.62	229	P	P	12 20 51.2	-0.8
	3.6nm,0.6s,baz=53,slow=13,SNR=11						
ASAR	Alice Springs	23.31	222	P	P	12 21 20.1	-0.7
	1.0nm,0.7s,baz=55,slow=9.2,SNR=17						
STKA	Stephens Creek	26.34	198	P	P	12 21 49.0	+0.3
	1.2nm,0.7s,baz=30,slow=13,SNR=4.3						
TORD	Torodi Ar. Bea	148.98	284	PKPbc	PKPbc	12 36 01.9	-0.2
	0.5nm,0.5s,baz=104,slow=1.8,SNR=6.5						

IDC 09 12:16:52.2±7.8**, 6°.34S**×**129°.98E, h140**^{km}±105^{km}**, mb3.0**/1**, mb1 3.2**/4**, mb1mx3.0**/29**, mbtmp3.6**/4**, ML3.6**/3**, Error ellipse: s-maj=197.2km s-min=20.5km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.59	13	P	Pn	12 18 15.2	+1.8
	1.3nm,0.3s,baz=187,slow=24,SNR=15						
SIJI				S	Sn	12 19 15.7	-1.0
	1.1nm,0.3s,baz=233,slow=20,SNR=3.7						
WRA	Warramunga Arr	14.17	163	P	Pn	12 20 06.9	+0.1
	0.4nm,0.3s,baz=332,slow=12,SNR=17						
WRA				S	Sn	12 22 31.0	-13
ASAR	Alice Springs	17.63	168	P	P	12 20 47.5	-0.8
	0.1nm,0.3s,baz=341,slow=9.8,SNR=14						
ASAR				S	S	12 23 54.8	-10
	0.1nm,0.3s,baz=44,slow=1.1,SNR=3.2						
MKAR	Makanchi Array	67.67	327	P	P	12 27 34.4	+0.1
	0.2nm,0.4s,baz=113,slow=6.9,SNR=2.8						

IDC 09 12:19:05.7±9.0**, 21°.73S**×**178°.85W, h624**^{km}±125^{km}**, mb2.9**/5**, mb1 3.3**/6**, mb1mx3.0**/31**, mbtmp4.0**/6**, Error ellipse: s-maj=77.2km s-min=32.6km az=179.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	16.84	191	P	P	12 22 29.0	-0.4
	0.8nm,0.3s,baz=24,slow=14,SNR=7.8						
ASAR	Alice Springs	43.48	258	P	P	12 26 16.6	+0.5
	0.5nm,0.5s,baz=101,slow=7.7,SNR=7.2						
WRA	Warramunga Arr	43.66	263	P	P	12 26 17.2	-0.3
	1.5nm,0.9s,baz=93,slow=7.5,SNR=4.8						
NVAR	Mina Array Bea	82.46	44	P	P	12 30 25.0	+0.4
	0.4nm,0.7s,baz=224,slow=8.0,SNR=4.0						
ILAR	Eielson Array	89.68	13	P	P	12 30 57.0	-1.1
	0.3nm,0.4s,baz=231,slow=5.3,SNR=4.3						
PDAR	Pinedale Array	90.40	44	P	P	12 31 03.0	+0.7
	0.4nm,0.6s,baz=245,slow=3.6,SNR=3.7						
AKASG	Malin Array Be	143.68	330	PKP	PKPbc	12 37 29.9	0.0
	1.4nm,0.4s,baz=44,slow=3.8,SNR=7.3						

SVSA 09 12:23:57.5±1.1**, 38°.06N**×**26°.35W, h4**^{km}±7^{km}**, MD3.6, ML2.3, Error ellipse: s-maj=5.6km s-min=4.3km az=35.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSET	Sete Cidades	0.55	115	eP	Pg	12 24 07.1	-1.0
PSET				eS	Sg	12 24 14.2	-1.1
PSET				A	A	12 24 15.7	
	83nm,0.2s						
PDA	Ponta Delgada	0.63	120	eS	Sg	12 24 16.1	-1.6
PDA				A	A	12 24 16.5	
	70nm,0.1s						
CMLA	Cha da Macela	0.72	114	eS	Sg	12 24 18.7	-1.9
CMLA				A	A	12 24 20.3	
	92nm,0.2s						
PCALD	Caldeiras da R	0.73	111	eS	Sg	12 24 18.5	-2.6
PCALD				A	A	12 24 19.6	
	111nm,0.3s						
PSCM	Serra do Cume	0.88	317	eP	Pg	12 24 11.7	-2.6
PSCM				eS	Sg	12 24 22.5	-3.2
PSCM				A	A	12 24 23.6	
	43nm,0.1s						
BART	Pico Bartolome	0.98	106	eP	Pg	12 24 12.6	-3.6
BART				eS	Sg	12 24 25.0	-3.9
BART				A	A	12 24 27.5	
	23nm,0.3s						
PSMA	Santa Maria	1.44	137	eS	Sb	12 24 36.4	-7.2
PSMA				A	A	12 24 38.3	
	12nm,0.2s						
PSMN	Pico do Norte,	1.47	136	eS	Sb	12 24 36.4	-8.0
PSMN				A	A	12 24 38.1	
	16nm,0.6s						
ROSA	Rosais	1.62	294	eP	Pn	12 24 22.2	-4.7
ROSA				eS	Sn	12 24 40.4	-7.8
ROSA				A	A	12 24 40.6	
	25nm,0.3s						
PICO	Pico	1.69	286	eP	Pn	12 24 23.2	-4.6
PICO				eS	Sn	12 24 42.1	-7.8
PICO				A	A	12 24 43.7	
	5.1nm,0.2s						
PCAN	Candelaria	1.73	284	eP	Pn	12 24 23.6	-4.7
PCAN				eS	Sn	12 24 42.7	-8.1
PCAN				A	A	12 24 43.9	
	6.0nm,0.2s						

IDC 09 12:30:05.1±21.0**, 19°.91S**×**177°.00W, h418**^{km}±176^{km}**, mb3.7**/4**, mb1 3.8**/5**, mb1mx3.2**/28**, mbtmp4.5**/5**, Error ellipse: s-maj=182.0km s-min=37.3km az=43.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	18.98	194	P	P	12 33 58.6	-0.2
	1.2nm,0.3s,baz=255,slow=4.9,SNR=13						
CTA	Charters Tower	34.49	263	P	P	12 36 16.9	+0.5
	4.5nm,0.6s,baz=72,slow=9.6,SNR=4.8						
STKA	Stephens Creek	38.89	244	P	P	12 36 53.0	+0.2
	2.4nm,0.6s,baz=85,slow=7.4,SNR=7.7						
ASAR	Alice Springs	45.57	256	P	P	12 37 45.6	-0.5
	12nm,0.8s,baz=90,slow=6.8,SNR=184						
ASAR				PcP	PcP	12 39 16.6	+0.1
	0.6nm,0.7s,baz=101,slow=5.4,SNR=3.9						
WRA	Warramunga Arr	45.62	261	P	P	12 37 45.7	-0.7
	2.4nm,0.3s,baz=97,slow=7.0,SNR=36						

DJA 09 12:46:14.9±0.4**, 1°S**±4°×**12°0E**±°**, h10**^{km}**, M3.6**/8**, MLv3.6**/8**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	Ampana	1.37	82	P	Pn	12 46 37.5	-2.6
APSI				S	Sb	12 46 57.3	-1.0
TTSI	Tana Toraja	1.98	194	P	Pn	12 46 48.0	-0.5
LUWI	Luwuk	2.48	88	P	Pn	12 46 55.3	-0.1
SPSI	Sidrap Palu	2.88	190	P	Pn	12 47 00.5	-0.4
BNSI	Bone	3.27	183	P	Pn	12 47 06.4	+0.1
BKSI	Bulukumba	4.19	182	P	Pn	12 47 18.7	-0.2

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*IDC **09** 12:46:06.3±10.0, 25°.15N×142°.13E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.5/37, mbtmp3.8/4, MS3.5/1, Ms1 3.5/1, ms1mx2.2/33, Error ellipse: s-maj=325.0km s-min=108.3km az=16.0*

*ISCJB **09** 12:47:15.5±0.7, 27°.7N±0°.1×140°.2E±0°.1, h500^{km}, mb3.3/4, Error ellipse: s-maj=17.0km s-min=10.1km az=43.3*

*JMA **09** 12:47:17.2±0.2, 27°.91N×140°.29E, h486^{km}, M3.7*

ISC 09 12:47:16.5±1.0**, 27°.9N**±0°.1×**140°.3E**±0°.1**, h500**^{km}**, n15, σ1^{s}.85**/17**, mb3.4**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.81	114	P	P	12 48 20.7	0.0
CBIJ				eS	S	12 49 10.5	-2.3
JHH2	Haha-jima-NKT2	2.04	126	P	P	12 48 22.3	+0.4
JHH2				eS	S	12 49 13.3	-1.5
JHJ	Hachijo jima 2	5.28	355	LR	LR	12 50 31.7	
	comp=Z,323nm,21.7s,baz=88,slow=32						
BSO1	Boso 1	6.81	4	P	P	12 49 01.9	+1.9
JIE	Ise	7.22	335	P	P	12 49 06.8	+2.0
JKN2	Miekihoku	7.26	332	P	P	12 49 06.8	+1.6
JRY	Ryogami san	8.23	352	P	P	12 49 16.2	+1.0
JAG	Ashikaga	8.58	355	P	P	12 49 18.4	-0.4
JAG				eS	S	12 50 55.3	-4.0
JAMN	Amaminishikomi	9.87	275	P	P	12 49 31.6	-0.8
JSJ	Shimokoshiki	9.98	295	P	P	12 49 32.5	-1.1
JMK	Ichinoseki	11.10	4	P	P	12 49 48.0	+2.7
SONM	Songino Array	33.03	316	P	P	12 53 09.6	-0.2
	0.8nm,0.7s,baz=134,slow=8.4,SNR=3.1						
ZALV	Zalesovo Beam	47.84	319	P	P	12 55 09.5	+1.5
	0.5nm,0.3s,baz=96,slow=5.9,SNR=3.2						
MKAR	Makanchi Array	48.73	309	P	P	12 55 15.0	+0.2
	0.6nm,0.6s,baz=99,slow=7.8,SNR=6.1						
FINES	FINESS Array B	76.54	333	P	P	12 58 15.4	+0.9
	0.7nm,0.3s,baz=73,slow=5.0,SNR=9.8						

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*NSSC **09** 12:48:19.9±1.7, 34°.27N×36°.91E, h3^{km}±69^{km}, ML1.7*

JSO 09 12:48:14.4±0.5**, 32°N**±3°×**3°6E**±°**, h5**^{km}±6^{km}**, M2.3**/7**, Mjma2.3**/7**, ML2.2**/6**, MLv2.4**/7**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSUJ	Al Zarqa	0.17	42	P	Pg	12 48 18.1	+0.3
WALJ	Wala	0.47	207	P	Pg	12 48 23.7	+0.3
ASF	Jabal al Asfar	0.74	75	P	Pg	12 48 28.6	0.0
SHMJ	Saham	0.79	341	P	Pg	12 48 29.8	+0.3
LISJ	El Lisan	0.89	214	P	Pg	12 48 31.6	+0.2
JDRJ	Daraweish	1.29	195	P	Pg	12 48 37.7	-1.5
TOTH	TOTAH	1.41	13	eP	Pn	12 48 40.3	-0.6
TOTH				eS	Sb	12 48 52.1	-7.5
TOTH				eS	Sg	12 48 59.5	-0.3
TOTH				AML	AML	12 49 01.5	
	comp=E,37nm,0.4s						
TOTH				AML	AML	12 49 04.0	
	comp=N,37nm,0.5s						
BRBR	Barbar	1.43	356	eP	Pn	12 48 40.9	-0.3
BRBR				eS	Sb	12 48 58.8	-1.6
BRBR				AML	AML	12 49 04.5	
	comp=N,16nm,0.4s						
BRBR				AML	AML	12 49 08.3	
	comp=E,9.5nm,0.4s						
QASN	Qassioun	1.56	7	eP	Pn	12 48 38.1	-4.8

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*SOME **09** 12:50:57.9, 40°.83N×70°.08E, h10^{km}*

*NNC **09** 12:51:06.4±5.2, 41°.32N×69°.93E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=46.1km s-min=26.2km az=23.0*

ISC 09 12:51:01.8±4.4**, 41°.0N**±0°.2×**69°.2E**±0°.2**, h35**^{km}**, n7, σ2^{s}.02**/11**, 3C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	1.31	28	eP	Pn	12 51 23.9	+0.2
	11nm,0.1s						
IUG				eS	Sn	12 51 43.0	+3.0
	91nm,0.3s						
BRLS	Borolday	2.09	13	eP	Pn	12 51 33.1	-1.3
	10nm,0.2s						
BRLS				eS	Sn	12 51 58.8	-0.3
	27nm,0.5s						
KK31	Karatay Array	2.32	25	⇑Pn	Pn	12 51 37.6	0.0
	3.9nm,0.4s,baz=194,slow=17,SNR=41						
KK31				⇓Lg	Lg	12 52 06.7	
	12nm,0.6s,baz=192,slow=28,SNR=5.9						
DZA	Taraz	2.48	39	eP	Pn	12 51 39.8	+0.1
DZA				eS	Sn	12 52 09.3	+0.6
MRKS	Merke	3.48	59	eP	Pn	12 51 51.7	-1.8
	10.0nm,0.4s						
MRKS				eS	Sn	12 52 30.0	-3.6
	11nm,0.6s						
AAK	Ala-Archa	4.29	66	Pn	Pn	12 52 05.7	+1.0
	4.2nm,0.8s						
AAK				Lg	Lg	12 52 59.8	
	6.2nm,0.8s						
TKM2	Tokmak 2	5.15	66	⇑Pn	Pn	12 52 18.5	+2.0
	4.3nm,0.8s						
TKM2				⇑Lg	Lg	12 53 28.7	
	7.0nm,0.9s						

SJA 09 12:56:24.8±0.4**, 31°.32S**×**65°.15W, h10**^{km}±4^{km}**, ML2.5, MW3.7, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCA	Tanti	0.48	92	eP	Pb	12 56 34.8	-0.6
TCA				IAML		12 56 35.5	
	comp=Z,121nm,0.5s						
TCA				eS	Sb	12 56 41.8	-0.6
MRA	San Martin	1.20	204	eP	Pb	12 56 47.5	-0.2
MRA				IAML		12 57 06.5	
	comp=Z,350nm,0.5s						
APLL	PUNTA DE LOS L	1.50	307	eP	Pb	12 56 53.0	+0.2
APLL				eS	Sg	12 57 13.7	+0.7
ACAN	Cantantal	1.98	241	eP	Pb	12 57 00.7	-0.3
ACLC	CERRO LA CRUZ	2.44	320	eP	Pb	12 57 07.4	-1.6
CYA	Choya	2.92	349	eP	Pn	12 57 13.9	+2.6
AGUA	GUANDACOL	3.41	301	eP	Pn	12 57 21.2	+3.0
VCA	Vinchina	3.69	313	eP	Pn	12 57 24.8	+2.7

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*ISCJB **09** 13:31:18.1±0.6, 5°.91N±0°.08×127°.6E±0°.1, h52^{km}, mb3.8/10, Error ellipse: s-maj=19.0km s-min=7.7km az=152.9*

IDC ***09*** *13:31:18.6±3.5, 5°.92N×127°.49E, h35^{km}±27^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.5/42, mbtmp4.0/10, ML4.0/1, Error ellipse: s-maj=35.4km s-min=14.5km az=60.0*

MAN ***09*** *13:31:19.6, 6°.03N×127°.45E, h26^{km}, MS2.9*

NEIC ***09*** *13:31:19.6±1.2, 5°.93N×127°.48E, h44^{km}±11^{km}, mb4.1/4, Error ellipse: s-maj=12.2km s-min=6.4km az=58.0*

ISC 09 13:31:20.1±0.7**, 5°.86N**±0°.09×**127°.6E**±0°.1**, h52^{km}, n19, σ1^{s}29**/22**, mb3.8**/10**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**3.86**	**312**	*e*P	**Pn**	**13 32 17.7**	**+0.7**
SIJI	**Sorong**	**7.62**	**151**	Pn	**Pn**	**13 33 08.4**	**-0.2**
	2.1nm,0.3s,baz=57,slow=23,SNR=18						
SIJI				Sn	**Sn**	**13 34 30.2**	**-3.5**
	0.7nm,0.3s,baz=253,slow=19,SNR=3.3						
FAKI	**Fak Fak**	**9.88**	**152**	*e*Pn	**Pn**	**13 33 40.8**	**+1.1**
KAPI	**Kappang**	**13.34**	**216**	*e*Pn	**Pn**	**13 34 26.9**	**+0.1**
NACB	**Ninganchiao**	**19.10**	**343**	*e*P	**P**	**13 35 37.4**	**-1.3**
	14nm,0.7s						
WR1	**Warramunga Arr**	**26.48**	**166**	*e*P	**P**	**13 36 53.2**	**+0.5**
WRA	**Warramunga Arr**	**26.48**	**166**	P	**P**	**13 36 53.3**	**+0.5**
	0.7nm,0.3s,baz=343,slow=12,SNR=16						
PSI	**Prapat**	**28.74**	**265**	P	**P**	**13 37 13.0**	**-0.1**
	3.5nm,0.2s,baz=157,slow=15,SNR=9.1						
PSI	**Prapat**	**28.74**	**265**	*e*P	**P**	**13 37 13.0**	**-0.1**
	17nm,1.2s						
AS31	**Alice Springs**	**29.98**	**168**	*e*P	**P**	**13 37 25.2**	**+1.2**
	5.4nm,2.0s						
ASAR	**Alice Springs**	**29.98**	**168**	P	**P**	**13 37 25.0**	**+1.1**
	0.4nm,0.7s,baz=352,slow=6.9,SNR=12						
ASAR				PcP	**PcP**	**13 40 24.4**	**-1.0**
	0.2nm,0.5s,baz=349,slow=2.3,SNR=3.1						
ASAR				ScP	**ScP**	**13 44 05.8**	**+2.3**
	0.2nm,0.8s,baz=336,slow=3.1,SNR=3.4						
CMAR	**Chiang Mai Arr**	**30.61**	**297**	P	**P**	**13 37 28.2**	**-1.4**
	0.6nm,0.8s,baz=76,slow=6.3,SNR=3.1						
STKA	**Stephens Creek**	**39.83**	**161**	P	**P**	**13 38 49.7**	**+1.1**
	3.5nm,0.4s,baz=337,slow=8.7,SNR=17						
STKA	**Stephens Creek**	**39.83**	**161**	*e*P	**P**	**13 38 49.6**	**+1.1**
	1.2nm,0.5s						
MK32	**Makanchi Array**	**56.33**	**324**	*e*P	**P**	**13 40 55.2**	**-0.6**
MKAR	**Makanchi Array**	**56.33**	**324**	P	**P**	**13 40 55.2**	**-0.6**
	0.4nm,0.6s,baz=116,slow=8.2,SNR=4.9						
KURBB	**Kurchatov Arra**	**60.44**	**326**	P	**P**	**13 41 23.8**	**-0.5**
	1.4nm,0.6s,baz=125,slow=6.4,SNR=16						
BVAR	**Borovoye Array**	**66.03**	**326**	P	**P**	**13 42 01.4**	**0.0**
	1.0nm,0.6s,baz=139,slow=12,SNR=6.3						
ILAR	**Eielson Array**	**82.83**	**26**	P	**P**	**13 43 39.5**	**+0.8**
	0.3nm,0.8s,baz=247,slow=5.6,SNR=4.4						

UCR 09 13:41:08.5±1.6**, 11°.40N×85°.72W, h164^{km}**±7^{km}**, MW3.7, 5C-1D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GB1A	**Borinquen Arri**	**0.66**	**152**	⇑*e*P	Pn	13 41 32.5	0.0
GB1A				*e*S	Sn	13 41 52.2	+1.4
BUEV	**Buena Vista**	**0.67**	**153**	⇑*e*P	Pn	13 41 32.7	+0.2
BUEV				*e*S	Sn	13 41 51.4	+0.5
ACON	**Acoyapa**	**0.77**	**43**	*e*P	Pn	13 41 33.0	0.0
ACON				*e*S	Sn	13 41 51.8	-0.1
MESS	**Mesas**	**0.83**	**142**	⇑*i*P	Pn	13 41 34.0	+0.5
MESS				*e*S	Sn	13 41 53.5	+0.8
CUI	**Cuipilapa**	**0.92**	**144**	⇑*i*P	Pn	13 41 34.8	+0.7
CUI				*e*S	Sn	13 41 54.5	+0.8
JTS	**Las Juntas de**	**1.33**	**146**	*e*P	Pn	13 41 37.2	-0.4
JTS				*e*S	Sn	13 41 58.2	-1.8
CEDE	**Laguna Cedeo**	**1.35**	**132**	*e*P	Pn	13 41 38.5	+0.7
CEDE				*e*S	Sn	13 42 01.6	+1.3
ARE1	**Arenal 1**	**1.35**	**134**	⇑*i*P	Pn	13 41 38.4	+0.6
ARE1				*e*S	Sn	13 42 06.1	+5.8
ESPN	**Las Esperanzas**	**1.59**	**60**	⇓*i*P	Pn	13 41 40.2	+0.1
LCR2	**La Lucha 2**	**2.36**	**134**	*e*P	Pn	13 41 50.0	+1.1
LCR2				*e*S	Sn	13 42 19.7	-0.4
CSGN	**Cosiguina Volc**	**2.39**	**311**	*e*P	Pn	13 41 49.9	+0.8

NNC ***09*** *13:49:09.8±5.7, 32°.44N×78°.00E, h0^{km}, mb5.0, Error ellipse: s-maj=70.9km s-min=56.0km az=117.0*

IDC ***09*** *13:49:12.2±0.4, 32°.67N×78°.20E, h0^{km}, mb4.6/39, mb1 4.6/44, mb1mx4.6/56, mbtmp4.6/44, ML3.8/5, MS3.9/31, Ms1 3.9/31, ms1mx3.8/57, Error ellipse: s-maj=10.6km s-min=9.1km az=17.0*

ISCJB ***09*** *13:49:15.8±0.1, 32°.73N±0°.02×78°.27E±0°.02, h33^{km}, mb5.0/254, MS4.2/53, Error ellipse: s-maj=2.6km s-min=1.7km az=40.2*

NDI ***09*** *13:49:15.6±5.6, 32°.76N×78°.42E, h16^{km}±39^{km}, ML5.0, mb5.0(NEIC)*

GCMT ***09*** *13:49:15.9±0.3, 32°.51N±0°.03×78°.17E±0°.02, h25^{km}±1^{km}, MW4.9/64, Moment Tensor Solution. s27,c32; s64,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.38±.17; M$_{\theta\theta}$-0.48±.12; M$_{\phi\phi}$2.86±.11; M$_{r\theta}$0.39±.33; M$_{\theta\phi}$-0.64±.08; M$_{\phi r}$-1.21±.20; Best double couple: M$_0$2.96800×10^{16} NP1:φ$_s$345.00000°, δ58.00000°, λ-95.00000°. NP2: φ$_s$175.00000°, δ33.00000°, λ-82.00000°. Principal axes: T 3.2620, Plg13.0000°, Azm79.0000°; N -0.5900, Plg4.0000°, Azm348.0000°; P -2.6740, Plg77.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***09*** *13:49:16.5±0.0, 32°.77N×78°.53E, h9^{km}, mb4.8/54, mB4.8/41, ML4.7/3, Ms4.5/58, Ms7 4.4/51*

MOS ***09*** *13:49:16.0±1.0, 32°.72N×78°.25E, h36^{km}, mb5.2/114, MS4.2/15, Error ellipse: s-maj=6.2km s-min=3.2km az=128.6*

NEIC ***09*** *13:49:18.9±2.0, 32°.77N×78°.20E, h50^{km}±2^{km}, mb5.0/110, Error ellipse: s-maj=11.9km s-min=10.6km az=173.0*

ISC 09 13:49:17.9±0.2**, 32°.69N**±0°.03×**78°.20E**±0°.03**, h35^{km}, n652, σ1^{s}91**/675**, mb5.0**/254**, MS4.2**/55**, 41C-32D, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHRM	**DHARAMSHALA**	**1.67**	**255**	*e*P	**Pn**	**13 49 45.9**	**+1.0**
DHRM				*e*S	**Sn**	**13 50 10.2**	**+5.0**
DHRM				IAML		13 50 17.3	
	comp=E,28μm,0.7s						
DHRM				IAML		13 50 18.0	
	comp=N,22μm,0.3s						
SMLA	**Simla**	**1.79**	**210**	*e*P	**Pn**	**13 49 48.7**	**+2.3**
SMLA				*e*S	**Sn**	**13 50 13.9**	**+6.1**
SMLA				IAML		13 50 16.1	
	comp=N,28μm,0.6s						
SMLA				IAML		13 50 18.4	
	comp=E,44μm,0.5s						
BHK	**Bhakra**	**1.98**	**231**	*e*P	**Pn**	**13 49 50.2**	**+1.2**
BHK				*e*x	**Sn**	**13 50 16.0**	**+3.4**
DDI	**Dehra Dun**	**2.36**	**183**	*e*P	**Pn**	**13 49 57.3**	**+3.0**
DDI				*e*S	**Sn**	**13 50 24.6**	**+2.5**
DDI				IAML		13 50 32.9	
	comp=E,16μm,1.9s						
DDI				IAML		13 50 36.0	
	comp=N,28μm,0.9s						
PTH	**Pithoragarh**	**3.57**	**151**	*e*P	Pn	13 50 19.7	+8.6
PTH				*e*S	Sn	13 51 04.2	+12
NDI	**New Delhi**	**4.08**	**192**	*e*P	**Pn**	**13 50 20.0**	**+2.1**
NDI				*e*x	x	13 51 18.0	
CHCP	**Chirah Chowk**	**4.25**	**284**	P	**Pn**	**13 50 22.4**	**+2.1**
CHCP				S	**Sn**	**13 51 15.0**	**+6.3**
NIL	**Nilore**	**4.26**	**284**	*e*Pn	**Pn**	**13 50 22.0**	**+1.6**
NIL	**Nilore**	**4.26**	**284**	*e*P	**Pn**	**13 50 22.0**	**+1.6**
SONA	**Sohna**	**4.53**	**193**	*e*P	**Pn**	**13 50 24.8**	**+0.7**
SONA				*e*S	**Sn**	**13 51 16.1**	**+0.6**
SONA				IAML		13 51 48.4	
	comp=N,1μm,0.8s						
SARP	**Sargodha**	**4.75**	**262**	P	**Pn**	**13 50 28.1**	**+1.1**
KUDL	**Kundal**	**4.77**	**199**	*e*P	Pn	13 50 15.7	-12
KUDL				*e*S	Sn	13 51 00.7	-21
CEP	**Cherat**	**5.39**	**284**	P	**Pn**	**13 50 36.8**	**+0.8**
THW	**Thamme Wali**	**5.45**	**273**	P	**Pn**	**13 50 37.0**	**+0.3**
PYUN	**Piuthan**	**6.17**	**137**	*e*Pn	**Pn**	**13 50 46.3**	**-0.4**
PYUN				*e*Sn	**Sn**	**13 51 56.2**	**+0.1**
	comp=N,431nm,0.5s						
DANN	**Dangsing**	**6.46**	**131**	*e*Pn	**Pn**	**13 50 51.1**	**+0.3**
DANN				*e*Sn	**Sn**	**13 52 05.3**	**+1.9**
	comp=N,345nm,0.8s						
KOLN	**Koldanda**	**6.77**	**135**	*e*Pn	**Pn**	**13 50 54.7**	**-0.3**
KOLN				*e*Sn	**Sn**	**13 52 11.5**	**+0.5**
	comp=N,279nm,0.7s						
KSH	**Kashi**	**7.05**	**346**	Pn	**Pn**	**13 50 57.0**	**-1.7**
KSH				Sn	**Sn**	**13 52 15.0**	**-2.6**
KSH				smax	smax		
	comp=N,980nm,1.0s						
KSH				smax	smax		
	comp=N,1μm,1.1s						
KSH				LR	LR		
	comp=N,2μm,6.0s						
KSH				LR	LR		
	comp=N,3μm,5.4s						
JHNI	**Jhansi**	**7.21**	**178**	*e*x	Pn	13 50 51.0	-10
JHNI				*e*x	x	13 52 50.0	
GKN	**Gorkha**	**7.26**	**128**	*e*Pn	**Pn**	**13 51 01.4**	**-0.3**
GKN				*e*Sn	**Sn**	**13 52 23.5**	**+0.5**
	comp=N,284nm,0.6s						
KKN	**Kakani**	**7.83**	**127**	*e*Pn	**Pn**	**13 51 09.6**	**0.0**
KKN				*e*Sn	**Sn**	**13 52 37.4**	**+0.3**
	comp=N,411nm,0.9s						
DMN	**Daman**	**7.83**	**128**	*e*Pn	**Pn**	**13 51 09.5**	**-0.1**
DMN				*e*Sn	**Sn**	**13 52 38.3**	**+1.1**
	comp=N,520nm,1.0s						
KBL	**Kabul**	**7.86**	**286**	*e*Pn	**Pn**	**13 51 10.0**	**0.0**
KBL	**Kabul**	**7.86**	**286**	*e*P	**Pn**	**13 51 10.0**	**0.0**
PKIN	**Phulchoki**	**8.04**	**127**	*e*Pn	**Pn**	**13 51 12.8**	**+0.2**
PKIN				*e*Sn	**Sn**	**13 52 43.4**	**+0.9**
	comp=N,366nm,1.0s						
PKI	**Pulchoki**	**8.06**	**127**	*e*Pn	**Pn**	**13 51 12.5**	**-0.3**
PKI				*e*Sn	**Sn**	**13 52 43.4**	**+0.5**
	comp=N,217nm,0.8s						
GUN	**Gumba**	**8.17**	**124**	*e*Pn	**Pn**	**13 51 14.2**	**-0.1**
GUN				*e*Sn	**Sn**	**13 52 46.8**	**+1.2**
	comp=N,242nm,0.7s						
JIRN	**Jiri**	**8.54**	**124**	*e*Pn	**Pn**	**13 51 19.3**	**-0.1**
JIRN				*e*Sn	**Sn**	**13 52 55.2**	**+0.5**
	comp=N,216nm,0.5s						
JASL	**Jaisalmer**	**8.56**	**230**	*e*P	**Pn**	**13 51 20.6**	**+1.3**
GAR	**Garm**	**8.98**	**317**	*e*Pn	**Pn**	**13 51 22.5**	**-2.7**
GAR	**Garm**	**8.98**	**317**	*e*P	**Pn**	**13 51 22.5**	**-2.7**
BHPL	**Bhopal**	**9.44**	**184**	*e*P	**Pn**	**13 51 31.6**	**+0.1**
BHPL				*e*x	x	13 53 15.3	
BTK	**Batken**	**9.46**	**323**	*e*Pn	**Pn**	**13 51 29.8**	**-1.9**
BTK	**Batken**	**9.46**	**323**	*e*P	**Pn**	**13 51 29.8**	**-1.9**
KDJ	**Kajisay**	**9.46**	**355**	*e*Pn	**Pn**	**13 51 32.4**	**+0.6**
KDJ	**Kajisay**	**9.46**	**355**	P	**Pn**	**13 51 29.7**	**-2.1**
ARSB	**Arslanbob**	**9.57**	**336**	*e*Pn	**Pn**	**13 51 31.5**	**-1.9**
JBP	**Jabalpur**	**9.62**	**170**	⇑*e*P	**Pn**	**13 51 34.2**	**+0.4**
JBP				*e*S	**Sn**	**13 53 13.3**	**-7.4**
KZA	**Kyzart**	**9.66**	**347**	P	**Pn**	**13 51 35.5**	**+0.8**
	SNR=30						
PRZ	**Przheval'sk**	**9.78**	**1**	*e*Pn	Pn	13 51 30.7	-5.5
PRZ	**Przheval'sk**	**9.78**	**1**	*e*P	Pn	13 51 30.7	-5.5
BOOM	**Boomskoye usch**	**9.95**	**350**	*e*Pn	Pn	13 51 33.1	-5.4
BOOM	**Boomskoye usch**	**9.95**	**350**	*e*P	Pn	13 51 33.1	-5.4
UCH	**Uchtor**	**9.96**	**344**	P	**Pn**	**13 51 38.8**	**-0.1**
	SNR=27						
AML	**Almayashu**	**10.08**	**340**	P	Pn	13 51 34.4	-6.2
	SNR=6.3						
KBK	**Karagaybulak**	**10.28**	**346**	P	**Pn**	**13 51 44.1**	**+1.1**
	SNR=16						
AAK	**Ala-Archa**	**10.36**	**345**	Pn	**Pn**	**13 51 43.9**	**-0.2**
	comp=N,1.4nm,0.3s,baz=168,slow=13,SNR=35						
AAK				Sn	**Sn**	**13 53 39.8**	**+0.9**
	comp=N,1.5nm,0.3s,baz=135,slow=18,SNR=1.9						
AAK				LR	LR	13 56 05.0	
	comp=N,481nm,20.3s,baz=148,slow=40						
AAK	**Ala-Archa**	**10.36**	**345**	*e*Pn	Pn	13 51 38.0	-6.1
AAK	**Ala-Archa**	**10.36**	**345**	⇑P	**Pn**	**13 51 44.2**	**+0.1**
	comp=N,93nm,1.1s						
AAK				⇓S	**Sn**	**13 53 42.7**	**+3.7**
	comp=N,78nm,1.2s						
AAK	**Ala-Archa**	**10.36**	**345**	*i* P	**Pn**	**13 51 43.9**	**-0.2**
	SNR=28						
AAK	**Ala-Archa**	**10.36**	**345**	*d iP*	**Pn**	**13 51 44.2**	**+0.1**
AAK	**Ala-Archa**	**10.36**	**345**	P	**Pn**	**13 51 45.1**	**+1.0**
	SNR=44						
AAK	**Ala-Archa**	**10.36**	**345**	P	**Pn**	**13 51 44.1**	**+0.1**
	SNR=15						
TKM2	**Tokmak 2**	**10.42**	**349**	⇓P	**Pn**	**13 51 45.2**	**+0.2**
	comp=N,73nm,1.2s						
TKM2				⇑S	**Sn**	**13 53 45.2**	**+4.6**
	comp=N,40nm,1.4s						
TKM2	**Tokmak 2**	**10.42**	**349**	P	**Pn**	**13 51 45.2**	**+0.2**
TKM2				S	**Sn**	**13 53 45.2**	**+4.6**
TKM2				pmax	pmax		
	comp=Z,73nm,1.2s						
TKM2				smax	smax		
	comp=N,40nm,1.3s						
TKM2	**Tokmak 2**	**10.42**	**349**	P	**Pn**	**13 51 45.7**	**+0.7**
	SNR=16						
AAA	**Alma-Ata**	**10.55**	**355**	*e*P	**Pn**	**13 51 48.3**	**+1.6**
AAA				*e*S	**Sn**	**13 53 46.5**	**+2.9**
AAA				smax	smax		
	comp=N,100nm,2.1s						
AAA				MLR	MLR		
	comp=Z,1μm,10.0s						
EKS2	**Erkin-Say**	**10.55**	**342**	P	**Pn**	**13 51 47.0**	**+0.3**
	SNR=14						
CHMS	**Chumysh**	**10.64**	**346**	P	**Pn**	**13 51 48.3**	**+0.4**
	SNR=11						
PDGK	**Podgornoye**	**10.67**	**5**	⇑P	**Pn**	**13 51 48.3**	**0.0**
	comp=Z,34nm,0.6s						
PDGK				⇓S	**Sn**	**13 53 50.1**	**+3.5**
	comp=Z,97nm,0.9s						
PDGK	**Podgornoye**	**10.67**	**5**	P	**Pn**	**13 51 48.3**	**0.0**
PDGK				S	**Sn**	**13 53 50.1**	**+3.5**
PDGK				pmax	pmax		
	comp=Z,34nm,0.6s						
PDGK				smax	smax		
	comp=N,97nm,0.9s						
USP	**Ospenovka**	**10.96**	**346**	P	**Pn**	**13 51 51.8**	**-0.4**
	SNR=10						
BOK	**Bokaro**	**11.15**	**141**	*e*P	**Pn**	**13 51 53.2**	**-1.6**
TAS	**Tashkent**	**11.18**	**323**	P	**Pn**	**13 51 54.6**	**-0.7**
TAS				pmax	pmax		
	comp=Z,70nm,0.5s						
NGP	**Nagpur**	**11.52**	**176**	⇑*e*P	**Pn**	**13 51 58.1**	**-1.9**
NGP				*e*S	**Sn**	**13 53 58.5**	**-8.9**
KK31	**Karatay Array**	**12.03**	**332**	*e*Pn	Pn	13 51 59.1	-7.8
KK31	**Karatay Array**	**12.03**	**332**	⇑P	Pn	13 52 00.8	-6.1
	comp=Z,30nm,0.6s,baz=167,slow=15,SNR=203						
KK31				⇓S	**Sn**	**13 54 22.2**	**+2.3**
	comp=Z,66nm,0.8s,baz=161,slow=23,SNR=4.0						
KK31	**Karatay Array**	**12.03**	**332**	P	Pn	13 52 01.8	-5.1
KK31				S	**Sn**	**13 54 15.7**	**-4.1**
KK31				pmax	pmax		
	comp=Z,30nm,0.6s						
KK31				smax	smax		
	comp=N,45nm,0.7s						
KKAR	**Karatay Array**	**12.03**	**332**	*e*Pn	Pn	13 51 58.9	-8.0
KKAR	**Karatay Array**	**12.03**	**332**	*e*P	Pn	13 51 58.9	-8.0
BHJ	**Bhuj**	**12.05**	**221**	*e*P	**Pn**	**13 52 08.1**	**+0.8**
BHJ				*e*x	x	13 54 17.4	
DHUB	**DHUBRI**	**12.24**	**120**	*e*P	**Pn**	**13 52 05.6**	**-4.1**
WMQ	**Urumqi**	**13.37**	**31**	*e*P	**P**	**13 52 31.3**	**-3.0**
WMQ				pP	Pn	13 52 36.3	+11
WMQ				sP		13 52 40.2	
WMQ				S	Sn	13 55 02.6	+10
WMQ				SS	**S**	**13 55 21.0**	**+5.3**
WMQ				pmax	pmax		
	comp=Z,35nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,81nm,5.3s						
WMQ				LR	LR		
	comp=N,2μm,10.5s						
WMQ				LR	LR		
	comp=E,860nm,9.9s						
WMQ				LR	LR		
	comp=Z,630nm,13.9s						
WMQ	**Urumqi**	**13.37**	**31**	*e*P	**Pn**	**13 52 25.3**	**+0.1**
WMQ				pP	P	13 52 29.3	-5.0
WMQ				sP		13 52 31.3	
WMQ				PP		13 52 36.5	
WMQ				S	**Sn**	**13 54 51.5**	**-1.1**
WMQ				sS	S	13 55 00.1	-16
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,77nm,3.7s						
WMQ				LR	LR		
	comp=Z,1μm,17.7s						
WMQ				LR	LR		
	comp=Z,1μm,16.3s						
WMQ				LR	LR		
	comp=Z,720nm,18.5s						
SHL	**Shillong**	**13.90**	**117**	*e*Pn	Pn	13 52 25.3	-7.2
SHL	**Shillong**	**13.90**	**117**	*e*P	Pn	13 52 25.3	-7.3
SHL	**Shillong**	**13.90**	**117**	*e*x	Pn	13 52 21.6	-11
SHL				*e*x	x	13 55 01.0	
BWNR	**Bhubaneshwar**	**14.09**	**149**	*e*P	**Pn**	**13 52 33.7**	**-1.3**
MAKZ	**Makanchi**	**14.39**	**10**	*e*Pn	Pn	13 52 32.2	-6.9
MAKZ	**Makanchi**	**14.39**	**10**	⇑P	**Pn**	**13 52 36.8**	**-2.3**
	comp=Z,35nm,1.1s						
MAKZ	**Makanchi**	**14.39**	**10**	P	**Pn**	**13 52 36.7**	**-2.3**
MAKZ				pmax	pmax		
	comp=Z,35nm,1.1s						
MK31	**Makanchi Array**	**14.43**	**11**	*e*Pn	Pn	13 52 33.4	-6.2
MK31	**Makanchi Array**	**14.43**	**11**	⇑P	**Pn**	**13 52 38.2**	**-1.4**
	comp=Z,30nm,0.9s,baz=176,slow=21,SNR=51						
MK31	**Makanchi Array**	**14.43**	**11**	P	**Pn**	**13 52 38.1**	**-1.4**
MK31				pmax	pmax		
	comp=Z,30nm,0.9s						
MK32	**Makanchi Array**	**14.43**	**11**	*e*Pn	**Pn**	**13 52 35.9**	**-3.7**
MKAR	**Makanchi Array**	**14.43**	**11**	Pn	**Pn**	**13 52 35.9**	**-3.7**
	comp=Z,0.6nm,0.3s,baz=185,slow=12,SNR=17						
MKAR				LR	LR	13 59 07.4	
	comp=Z,382nm,21.1s,baz=188,slow=41						
MKAR	**Makanchi Array**	**14.43**	**11**	*i* P	**Pn**	**13 52 38.2**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZIRO	**ZIRO**	**14.48**	**107**	*e*P	**Pn**	**13 52 36.6**	**-4.0**
POO	**Poona**	**14.63**	**197**	*e*P	**Pn**	**13 52 42.2**	**-0.3**
POO				*i* S	Sn	13 55 13.0	-11
HYB	**Hyderabad**	**15.21**	**179**	*i* P	**Pn**	**13 52 44.0**	**-6.2**
HYB				*e*S	**Sn**	**13 55 33.0**	**-4.6**
KOHI	**KOHIMA**	**15.52**	**112**	*e*x	**Pn**	**13 52 53.3**	**-1.0**
VIS	**Vishakhapatnam**	**15.61**	**162**	*i* P	**Pn**	**13 52 53.7**	**-1.6**
OTUK	**Ortayu**	**16.16**	**346**	⇑P	**Pn**	**13 52 58.9**	**-3.3**
	comp=Z,38nm,0.7s						
OTUK	**Ortayu**	**16.16**	**346**	P	**Pn**	**13 52 58.9**	**-3.3**
OTUK				pmax	pmax		
	comp=Z,38nm,0.7s						
GEYT	**Alibeck**	**17.20**	**293**	P	**Pn**	**13 53 12.3**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=114,slow=13,SNR=15						
GEYT				LR	LR	14 01 37.9	
	comp=Z,242nm,19.3s,baz=120,slow=43						
GYA0B	**ALIBECK ARRAY**	**17.20**	**293**	*e*Pn	**Pn**	**13 53 10.3**	**-5.2**
	comp=Z,95nm,1.6s						
GYA0B	**ALIBECK ARRAY**	**17.20**	**293**	⇓P	**Pn**	**13 53 11.1**	**-4.4**
KURBB	**Kurchatov Arra**	**17.92**	**1**	P	**Pn**	**13 53 21.2**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=190,slow=11,SNR=84						
KURBB	**Kurchatov Arra**	**17.92**	**1**	⇓P	**Pn**	**13 53 21.8**	**-2.4**
	comp=Z,46nm,1.1s						
KURK	**Kurchatov**	**18.01**	**1**	*e*Pn	**Pn**	**13 53 20.6**	**-4.8**
	comp=Z,68nm,0.9s						
KURK	**Kurchatov**	**18.01**	**1**	⇑P	**Pn**	**13 53 22.5**	**-2.9**
	comp=Z,75nm,1.0s						
KURK	**Kurchatov**	**18.01**	**1**	*i* P	**Pn**	**13 53 24.0**	**-1.4**
KURK				pmax	pmax		
	comp=Z,71nm,1.0s						
KURK	**Kurchatov**	**18.01**	**1**	P	**Pn**	**13 53 23.3**	**-2.1**
	SNR=37						
GTA	**Gaotai**	**18.69**	**63**	*e*P	**P**	**13 53 31.3**	**-2.0**
GTA				pP	Pn	13 53 36.0	+2.1
GTA				sP	pP	13 53 38.8	-5.1
GTA				S	**Sn**	**13 56 54.9**	**-7.1**
GTA				sS	S	13 57 05.2	+0.8
GTA				SS	**SnSn**	**13 57 22.0**	**+6.1**
GTA				pmax	pmax		
	comp=Z,140nm,5.8s						
GTA				LR	LR		
	comp=Z,880nm,16.8s						
GTA				LR	LR		
	comp=Z,580nm,11.0s						
GTA				LR	LR		
	comp=Z,860nm,10.0s						
MDRS	**Chennai**	**19.62**	**174**	*e*P	**Pn**	**13 53 46.6**	**+1.6**
WSAR	**Wadi Sarin**	**19.66**	**246**	P	**P**	**13 53 42.8**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=58,slow=12,SNR=4.2						
WSAR				LR	LR	14 03 32.9	
	comp=Z,424nm,19.2s,baz=82,slow=44						
BIDO	**Bidbid**	**19.90**	**248**	P	**Pn**	**13 53 54.2**	**+5.9**
SMDO	**Samad**	**20.21**	**247**	P	Pn	13 53 55.3	+3.3
BANOM	**Banah**	**20.24**	**256**	P	Pn	13 53 54.0	+1.7
BANOM	**Banah**	**20.24**	**256**	P	Pn	13 53 54.9	+2.6
SHME	**Shamm**	**20.32**	**257**	*i* P	Pn	13 53 52.9	-0.3
	SNR=7.0						
MDH	**Madha**	**20.51**	**255**	P	Pn	13 53 56.8	+1.4
HOQ	**Hoqain**	**20.51**	**249**	P	Pn	13 54 01.1	+5.6
	SNR=5.2						
MSFE	**Esma-Masafi**	**20.59**	**255**	*i* P	Pn	13 53 56.6	+0.1
	SNR=9.0						
UOSS	**Minazif**	**20.74**	**254**	*e*P	**P**	**13 53 54.4**	**-1.2**
	comp=Z,67nm,1.1s						
UOSS	**Minazif**	**20.74**	**254**	*i* P	Pn	13 53 59.3	+1.1
	SNR=8.1						
UOSS	**Minazif**	**20.74**	**254**	P	Pn	13 53 59.5	+1.4
HATD	**Hatta, Dubai**	**20.85**	**254**	P	Pn	13 54 01.0	+1.6
HATD	**Hatta, Dubai**	**20.85**	**254**	P	Pn	13 54 01.1	+1.6
ASHO	**Ashiyiah**	**20.98**	**253**	*i* P	Pn	13 54 01.1	+0.2
	SNR=32						
ASHO	**Ashiyiah**	**20.98**	**253**	P	Pn	13 54 03.7	+2.8
	SNR=25						
BSY	**Bisya**	**21.04**	**247**	P	P	13 54 06.4	+7.6
BVAR	**Borovoye Array**	**21.09**	**347**	P	**P**	**13 53 58.1**	**-1.0**
	comp=Z,24nm,0.7s,baz=163,slow=11,SNR=112						
BRVK	**Borovoye**	**21.14**	**347**	*e*P	**P**	**13 53 57.2**	**-2.5**
	comp=Z,73nm,0.9s						
BRVK	**Borovoye**	**21.14**	**347**	⇑P	**P**	**13 53 57.5**	**-2.2**
	comp=Z,77nm,0.9s						
BRVK	**Borovoye**	**21.14**	**347**	*d iP*	**P**	**13 53 58.4**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,46nm,1.1s						
BRVK	**Borovoye**	**21.14**	**347**	P	**P**	**13 53 58.9**	**-0.8**
	SNR=48						
NAZ	**Nazwa, Dubai**	**21.16**	**255**	*i* P	**P**	**13 54 05.0**	**+4.8**
	SNR=11						
ARQ	**Araqi**	**21.26**	**250**	P	**P**	**13 54 08.3**	**+7.1**
	SNR=7.7						
FAQ	**Al Faqa, Dubai**	**21.32**	**254**	*i* P	**P**	**13 54 07.1**	**+5.2**
	SNR=7.0						
FAQ	**Al Faqa, Dubai**	**21.32**	**254**	P	**P**	**13 54 08.3**	**+6.4**
	SNR=12						
LZH	**Lanzhou**	**21.41**	**74**	⇑P	**P**	**13 54 03.2**	**+0.3**
LZH				pP	pP	13 54 09.0	-4.6
LZH				sP	sP	13 54 12.9	-5.8
LZH				S	**S**	**13 57 58.3**	**-0.4**
LZH				sS	Sn	13 58 08.8	+1.3
LZH				SS		13 58 27.2	
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,210nm,5.4s						
LZH				LR	LR		
	comp=Z,460nm,13.0s						
LZH				LR	LR		
	comp=Z,1μm,13.8s						
LZH				LR	LR		
	comp=Z,1μm,14.4s						
AB31	**Akbulak array**	**21.45**	**326**	⇓P	**P**	**13 54 02.3**	**-0.7**
	comp=Z,31nm,0.8s,baz=133,slow=12,SNR=284						
AB31	**Akbulak array**	**21.45**	**326**	*i* P	**P**	**13 54 01.6**	**-1.4**
AB31				pmax	pmax		
	comp=Z,31nm,0.8s						
ABKAR	**Akbulak array**	**21.45**	**326**	*e*P	**P**	**13 54 00.5**	**-2.5**
	comp=Z,56nm,1.0s						
MHTO	**MHTO**	**21.45**	**242**	P	**P**	**13 54 08.6**	**+5.4**
ALNE	**Al Ain**	**21.52**	**252**	*i* P	**P**	**13 54 07.3**	**+3.4**
	SNR=6.8						
ASUD	**Al Ashush, Dub**	**21.59**	**254**	P	**P**	**13 54 10.0**	**+5.2**
ZAA0	**Zalesovo Array**	**21.77**	**11**	*e*P	**P**	**13 54 03.6**	**-2.7**
	comp=Z,30nm,0.7s						
ZAA0	**Zalesovo Array**	**21.77**	**11**	⇓P	**P**	**13 54 04.5**	**-1.8**
	comp=Z,5.0nm,0.8s						
ZALV	**Zalesovo Beam**	**21.77**	**11**	P	**P**	**13 54 05.5**	**-0.9**
	comp=Z,14nm,0.6s,baz=200,slow=9.5,SNR=25						
ZALV	**Zalesovo Beam**	**21.77**	**11**	*i* P	**P**	**13 54 07.0**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,18nm,0.6s						
ZAA1	**Zalesovo Array**	**21.77**	**11**	*e*P	**P**	**13 54 05.5**	**-0.9**
CD2	**Chengdu**	**21.78**	**88**	P	**P**	**13 54 05.6**	**-1.2**
CD2				pP	pP	13 54 16.0	-1.5
CD2				sP	sP	13 54 21.7	-0.9
CD2				S	**S**	**13 58 04.7**	**-1.1**
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
CD2				pmax	pmax		
	comp=Z,120nm,4.3s						
CD2				LR	LR		
	comp=Z,2μm,13.5s						

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CD2                                 LR       LR
      comp=Z,2µm,12.9s
CD2                                 LR       LR
      comp=Z,2µm,11.8s
KMI   Kunming           22.73 103   P        P        13 54 16.8  -0.4
KMI                                 pP       pP       13 54 21.2  -6.8
KMI                                 sP       sP       13 54 23.5   -10
KMI                                 PP                13 54 44.1
KMI                                 S        S        13 58 19.0  -4.7
KMI                                 sS       Sn       13 58 28.0   -11
KMI                                 pmax     pmax
      comp=Z,80nm,0.9s
KMI                                 pmax     pmax
      comp=Z,140nm,3.7s
KMI                                 LR       LR
      comp=Z,330nm,12.3s
KMI                                 LR       LR
      comp=Z,360nm,11.0s
KMI                                 LR       LR
      comp=Z,520nm,15.0s
AKTO  Aktyubinsk        23.17 326   P        P        13 54 20.1  -1.1
      comp=Z,36nm,0.9s,baz=118,slow=9.0,SNR=40
AKTO                                LR       LR       14 04 00.9
      comp=Z,788nm,21.3s,baz=140,slow=38
AKTO  Aktyubinsk        23.17 326 ⇑P        P        13 54 20.4  -0.8
      comp=Z,76nm,0.8s
AKTO  Aktyubinsk        23.17 326   P        P        13 54 20.0  -1.2
AKTO                                pmax     pmax
      comp=Z,76nm,0.9s
CHTO  Chiang Mai        23.18 122  eP        P        13 54 19.7  -1.9
      comp=Z,97nm,1.8s
CHTO  Chiang Mai        23.18 122  eP        P        13 54 19.7  -1.9
CHTO                                pmax     pmax
      comp=Z,97nm,1.8s
CHTO  Chiang Mai        23.18 122   P        P        13 54 23.2  +1.6
      SNR=9.5
CMMT  Chiang Mai        23.18 122   P        P        13 54 22.2  +0.6
      comp=Z,12nm,1.1s
CM31  Chiang Mai Arr    23.41 122  eP        P        13 54 22.5  -1.4
CM31                               ePcP      PcP      13 58 09.8  +0.1
CM31                               eScP      ScP      14 01 47.6  +2.5
CMAR  Chiang Mai Arr    23.41 122   P        P        13 54 23.1  -0.8
      comp=Z,19nm,0.7s,baz=311,slow=10,SNR=25
CMAR                                PcP      PcP      13 58 09.8  +0.1
      comp=Z,1.9nm,0.9s,baz=290,slow=4.1,SNR=3.2
CMAR                                ScP      ScP      14 01 47.6  +2.5
      comp=Z,0.4nm,0.5s,baz=289,slow=2.8,SNR=3.2
LAMP  Lampang           23.86 121   P        P        13 54 37.6  +9.4
PHRA  Phrae             24.31 120   P        P        13 54 33.7  +1.4
      comp=Z,5.7nm,1.0s
LKRN  Lenkeran, Azer    24.58 292   P        P        13 54 35.4  +0.8
UMPA  Umpang Tak        24.88 126   P        P        13 54 45.5  +7.9
      comp=Z,42µm,1.0s,comp=Z,742µm
MOY   Mondy             25.21  34  eP        P        13 54 45.1  +4.7
PALK  Pallekele         25.40 174   P        P        13 54 42.4  +0.2
      comp=Z,3.6nm,0.4s,baz=295,slow=8.2,SNR=3.0
PALK                                LR       LR       14 05 34.0
      comp=Z,231nm,18.5s,baz=294,slow=39
PALK  Pallekele         25.40 174  eP        P        13 54 41.7  -0.5
      comp=Z,97nm,1.4s
PALK  Pallekele         25.40 174  eP        P        13 54 41.7  -0.5
PALK                                pmax     pmax
      comp=Z,97nm,1.4s
SLVN  Son La            25.47 110  eP        P        13 54 42.6  -0.3
      comp=Z,27nm,1.0s
GYA   Guiyang           25.47  97⇑iP        P        13 54 44.6  +1.6
GYA                                 pP       pP       13 54 54.2  -0.1
GYA                                 PP       PnPn     13 55 26.3  +7.2
GYA                                 S        S        13 59 15.8  +7.8
GYA                                 pmax     pmax
      comp=Z,20nm,0.6s
GYA                                 pmax     pmax
      comp=Z,70nm,5.0s
GYA                                 LR       LR
      comp=Z,570nm,18.1s
GYA                                 LR       LR
      comp=Z,270nm,11.0s
GYA                                 LR       LR
      comp=Z,350nm,11.5s
ZAK   Zakamensk         25.59  39  eP        P        13 54 43.8   0.0
ZAK                                 pmax     pmax
      comp=Z,20nm,1.0s
XAN   Xi'an             25.65  79  eP        P        13 54 43.3  -1.1
      comp=Z,34nm,0.8s
XAN   Xi'an             25.65  79   P        P        13 54 43.7  -0.7
XAN                                 S        S        13 59 09.7  -0.8
XAN                                 sS       sS       13 59 19.5   -10
XAN                                 pmax     pmax
      comp=Z,12nm,0.9s
XAN                                 pmax     pmax
      comp=Z,100nm,3.9s
XAN                                 LR       LR
      comp=Z,410nm,13.0s
XAN                                 LR       LR
      comp=Z,600nm,11.9s
XAN                                 LR       LR
      comp=Z,700nm,14.7s
XAN   Xi'an             25.65  79  eP        P        13 54 43.3  -1.1
XAN                                 pmax     pmax
      comp=Z,34nm,0.8s
SEKA  Sheki             26.09 298   P        P        13 54 48.0  -0.4
SONA0 Songino Array     26.11  46  eP        P        13 54 49.2  +0.6
SONA0                              ePcP      PcP      13 58 15.7  +0.3
SONM  Songino Array     26.11  46   P        P        13 54 49.2  +0.6
      comp=Z,27nm,0.8s,baz=244,slow=9.5,SNR=49
SONM                                PcP      PcP      13 58 15.7  +0.3
      comp=Z,0.5nm,0.4s,baz=242,slow=3.1,SNR=2.4
SONM                                LR       LR       14 05 55.7
      comp=Z,376nm,19.3s,baz=252,slow=38
MNGR  Mingechevir, A    26.11 297   P        P        13 54 49.0  +0.5
MAK   Makhachkala       26.20 302  eP        P        13 54 44.1  -5.1
MAK                                eS        S        13 59 13.4  -5.5
MAK                                 pmax     pmax
      comp=Z,17nm,0.3s
MAK                                 MLR      MLR
      comp=Z,648nm,15.0s
SRDT  SRDT              26.39 129   P        P        13 54 55.9  +4.7
      comp=Z,17nm,0.7s,comp=Z,1µm
TLY   Talaya            26.52  37   P        P        13 54 51.9  -0.2
      comp=Z,2.4nm,0.7s,baz=150,slow=20,SNR=3.9
TLY                                 LR       LR       14 06 30.8
      comp=Z,1µm,19.2s,baz=227,slow=39
TLY   Talaya            26.52  37  eP        P        13 54 54.6  +2.5
TLY                                eSS                14 00 38.0
TLY                                 pmax     pmax
      comp=Z,10.0nm,0.7s
TLY                                 MLR      MLR
      comp=Z,783nm,12.0s
ULN   Ulaanbaatar       26.52  47  eP        P        13 54 50.5  -1.8
      comp=Z,28nm,0.8s
ULN   Ulaanbaatar       26.52  47diP        P        13 54 52.3   0.0
ULN                                 pmax     pmax
      comp=Z,15nm,0.9s
ZKTA  Zakatala          26.59 299   P        P        13 54 53.0  +0.2
BTO   Baotou            26.61  64  eP        P        13 54 54.5  +1.3
GANJ  Ganja             26.67 296   P        P        13 54 54.0  +0.4
ENH   Enshi             26.74  87  eP        P        13 54 53.6  -0.7
      comp=Z,25nm,0.8s
NONG  Nongkai           26.74 117   P        P        13 54 56.6  +2.3
      comp=Z,0.3nm,0.8s,comp=Z,107nm
SVE   Sverdlovsk        27.00 339⇓eP        P        13 54 56.5  +0.1
SVE                                 pmax     pmax
      comp=Z,25nm,1.1s
SVE                                 MLR      MLR
      comp=Z,280nm,11.0s
NAX   Nakhchivan        27.17 293   P        P        13 54 58.7  +0.6
CHAI  Chaiyaphum        27.27 122   P        P        13 55 01.4  +2.3
      comp=Z,58µm,0.8s,comp=Z,629µm
ARU   Arti              27.36 336   P        P        13 54 58.8  -0.7
      comp=Z,2.3nm,0.8s,baz=142,slow=6.6,SNR=6.6
ARU                                 LR       LR       14 06 37.1
      comp=Z,265nm,19.3s,baz=138,slow=38
ARU   Arti              27.36 336  eP        P        13 54 56.8  -2.7
      comp=Z,16nm,0.9s
ARU   Arti              27.36 336   P        P        13 54 59.1  -0.4
ARU                                                   13 55 40.4
ARU                                 S        S        13 59 40.9  +4.0
ARU                                 SS       SnSn     14 00 46.4  -1.1
ARU                                 MLR      MLR
      comp=N,536nm,16.0s
HHC   Hu-ho-hao-te      27.81  63   P        P        13 55 00.2  -3.7
HHC                                 sP       pP       13 55 08.4  -6.9
HHC                                 PP       PP       13 55 50.3   -17
HHC                                 S        S        13 59 43.4  -1.2
HHC                                 sS       sS       13 59 49.1   -15
HHC                                 pmax     pmax
      comp=Z,21nm,0.9s
HHC                                 pmax     pmax
      comp=Z,91nm,6.7s
HHC                                 LR       LR
      comp=N,360nm,10.0s
HHC                                 LR       LR
      comp=E,500nm,10.9s
HHC                                 LR       LR
      comp=Z,510nm,16.1s
GNI   Garni             27.82 295   P        P        13 55 04.2  +0.2
      comp=Z,12nm,0.7s,baz=133,slow=19,SNR=8.2
GNI                                 LR       LR       14 08 19.8
      comp=Z,205nm,19.0s,baz=100,slow=41
GNI   Garni             27.82 295   P        P        13 55 07.0  +3.0
      SNR=9.7
SKNT  Sakolnakorn       28.04 118   P        P        13 55 08.5  +2.5
      comp=Z,27nm,1.3s
PANO  Nakornpanom       28.40 117   P        P        13 55 12.2  +3.0
      comp=Z,0.8nm,1.2s,comp=Z,107nm
ZEI   Tsey              28.77 300  eP        P        13 55 12.2  -0.3
ZEI                                 pmax     pmax
      comp=Z,20nm,0.9s
AKH   Akhalkalaki       28.88 298  eP        P        13 55 12.8  -0.7
      comp=Z,76nm,1.6s
AKH   Akhalkalaki       28.88 298  eP        P        13 55 12.9  -0.7
AKH                                 pmax     pmax
      comp=Z,76nm,1.6s
KBZ   Khabaz            29.64 302   P        P        13 55 20.1  +0.1
      comp=Z,2.5nm,0.8s,baz=147,slow=7.2,SNR=5.3
KIV   Kislovodsk        29.83 302  eP        P        13 55 22.5  +0.7
KIV                                eS        S        14 00 19.3  +3.0
KIV                                 pmax     pmax
      comp=Z,18nm,1.0s
KIV                                 MLR      MLR
      comp=Z,941nm,15.0s
RAYN  Ar Rayn           30.16 261  eP        P        13 55 24.9   0.0
      comp=Z,36nm,1.0s
RAYN  Ar Rayn           30.16 261  i P       P        13 55 25.3  +0.4
      SNR=21
RAYN  Ar Rayn           30.16 261  eP        P        13 55 24.9   0.0
RAYN                                pmax     pmax
      comp=Z,36nm,1.0s
WHN   Wuhan             30.77  84   P        P        13 55 33.6  +3.5
WHN                                 S        S        14 00 34.9  +3.9
WHN                                 LR       LR
      comp=Z,730nm,9.5s
WHN                                 LR       LR
      comp=Z,2µm,11.3s
WHN                                 LR       LR
      comp=Z,2µm,10.6s
TRTT  Trang             31.77 136   P        P        13 55 44.2  +5.2
      comp=Z,18nm,1.2s
VORD  Divnogorie        33.77 314  eP        P        13 55 56.0  -0.1
VORD                                pmax     pmax
      comp=Z,20nm,0.9s
VSR   Storozhevoye      33.92 315  eP        P        13 55 56.8  -0.7
VSR                                 pmax     pmax
      comp=Z,30nm,1.0s
NJ2   Nanjing           34.19  80  eP        P        13 55 59.3  -0.8
NJ2                                 pmax     pmax
      comp=Z,12nm,0.7s
NJ2                                 LR       LR
      comp=Z,510nm,10.9s
NJ2                                 LR       LR
      comp=Z,440nm,11.4s
NJ2                                 LR       LR
      comp=Z,790nm,19.9s
LPSR  Galich'ya Gora    34.50 317  eP        P        13 56 02.4  -0.1
LPSR                                pmax     pmax
      comp=Z,20nm,0.8s
SNSI  Sinabang, Aceh    34.60 147   P        P        13 56 08.0  +4.3
ASF   Jabal al Asfar    34.71 281   P        P        13 56 04.6  -0.1
      comp=Z,1.1nm,0.5s,baz=140,slow=7.3,SNR=3.4
PSI   Prapat            35.52 143   LR       LR       14 12 38.3
      comp=Z,106nm,18.5s,baz=336,slow=40
DAMY  Dhamar            35.63 248  eP        P        13 56 13.1  +0.1
      comp=Z,196nm,1.9s
PRGR  Permogore         35.75 334  eP        P        13 56 12.2  -0.9
PRGR                                pmax     pmax
      comp=Z,11nm,0.5s
MMAI  Mount Meron Ar    35.77 282   LR       LR       14 13 09.4
      comp=Z,239nm,18.2s,baz=65,slow=40
SIM   Simferopol'       36.04 303  eP        P        13 56 17.6  +1.7
SIM                                 pmax     pmax
      comp=Z,12nm,1.6s
GSI   Gunungsitoli      36.15 146   P        P        13 56 17.5  +0.4
ILGA  Ilgaz             36.23 296  eP        P        13 56 16.7  -1.2
      comp=Z,46nm,1.2s
MOS   Moscow            36.34 322  eP        P        13 56 16.2  -2.0
MOS                                 pmax     pmax
      comp=Z,44nm,0.6s
BR101 Keskin Array S    36.34 294  eP        P        13 56 19.1  +0.5
BR131 Keskin Array S    36.34 294  eP        P        13 56 18.1  -0.6
      comp=Z,34nm,1.1s
BR131 Keskin Array S    36.34 294   P        P        13 56 19.2  +0.5
      SNR=23
BRTR  Keskin Array B    36.34 294   P        P        13 56 19.2  +0.5
      comp=Z,18nm,1.0s,baz=99,slow=7.6,SNR=53
BRTR                                LR       LR       14 13 57.3
      comp=Z,115nm,21.4s,baz=86,slow=41
BRTR  Keskin Array B    36.34 294  i P       P        13 56 19.3  +0.6
BRTR                                pmax     pmax
      comp=Z,18nm,1.0s
OBN   Obninsk           36.67 320   LR       LR       14 14 19.0
      comp=Z,56nm,21.4s,baz=110,slow=41
OBN   Obninsk           36.67 320⇑iP        P        13 56 21.4  +0.3
OBN                                eS        S        14 01 58.3  -3.5
OBN                                eSS       SnSn     14 04 28.0  -5.7
OBN                                 pmax     pmax
      comp=Z,9.0nm,0.9s
OBN                                 MLR      MLR
      comp=Z,331nm,16.0s
EIL   Elat              36.94 277   P        P        13 56 23.4  -0.4
      comp=Z,25nm,1.0s,baz=359,slow=5.6,SNR=6.5
EIL                                 LR       LR       14 13 15.8
      comp=Z,239nm,20.7s,baz=60,slow=39
ANTO  Ankara            36.98 294  eP        P        13 56 22.5  -1.5
      comp=Z,31nm,1.0s
ANTO  Ankara            36.98 294  eP        P        13 56 22.5  -1.5
ANTO                                pmax     pmax
      comp=Z,31nm,1.0s
ANTO  Ankara            36.98 294   P        P        13 56 25.5  +1.5
      SNR=7.0
MDUB  Mudurnu           38.17 295  eP        P        13 56 32.9  -1.2
      comp=Z,102nm,1.0s
CN2   Changchun         38.26  59  eP        P        13 56 36.8  +2.1
CN2                                eS        S        14 02 29.6  +3.4
CN2                                 LR       LR
      comp=Z,230nm,13.0s
CN2                                 LR       LR
      comp=Z,310nm,13.0s
CN2                                 LR       LR
      comp=Z,350nm,13.0s
TWG   Pinlang           38.97  93  eP        P        13 56 42.2  +1.4
      comp=Z,145nm,1.2s
YLV   Yalova            39.55 296⇑iP        P        13 56 46.1  +0.5
GDZ   Gediz             39.60 293  i P       P        13 56 46.2   0.0
KHAL  Karahalli         39.68 292  i P       P        13 56 46.0  -0.8
KHAL                                IAML_P
      comp=Z,8.0nm,0.1s
KIS   Kishinev          39.86 306  eP        P        13 56 49.0  +1.0
KIS                                 LRM      MLR      14 15 20.0
      comp=Z,300nm,16.0s
KIS   Kishinev          39.86 306  eP        P        13 56 49.0  +1.0
KIS                                e                  14 06 12.0
KIS                                 MLR      MLR
      comp=Z,300nm,16.0s
AKASG Malin Array Be    39.93 312   P        P        13 56 47.5  -1.1
      comp=Z,3.0nm,0.6s,baz=80,slow=6.8,SNR=19
AKASG                               PP       PP       13 58 20.6  -0.1
      comp=Z,15nm,1.1s,baz=91,slow=12,SNR=6.7
AKASG                               LR       LR       14 15 22.5
      comp=Z,164nm,18.0s,baz=85,slow=39
AKBB  Malin Array Si    39.93 312  eP        P        13 56 47.5  -1.1
      comp=Z,9.1nm,0.8s
AKBB                               ePP       PnPn     13 58 24.0  -0.1
AKBB  Malin Array Si    39.93 312  eP        P        13 56 47.5  -1.1
AKBB                               e                  13 58 24.0
AKBB                                pmax     pmax
      comp=Z,9.0nm,0.8s
USAK  Uak-Merkez        40.01 293  i P       P        13 56 50.2  +0.8
USAK                                IAML_P
      comp=Z,18nm,0.1s
CFR   Carcaliu          40.29 303⇑iP        P        13 56 53.5  +1.9
CFR   Carcaliu          40.29 303   P        P        13 56 52.3  +0.7
CFR                                 pmax     pmax
      comp=Z,15nm,1.3s
TJN   Taejon            40.32  71ceP        P        13 56 53.9  +1.9
ZEA   Zeya              40.47  44  eP        P        13 56 56.4  +3.4
ZEA                                 pmax     pmax
      comp=Z,12nm,1.0s
ZEA                                 MLR      MLR
      comp=Z,500nm,12.0s
ZEA                                 MLR      MLR
      comp=E,400nm,13.0s
KS15  Wonju Array Si    40.56  69  eP        P        13 56 53.1  -0.9
      comp=E,38nm,1.7s
KSRS  Korea Array       40.59  69   P        P        13 56 53.1  -1.1
      comp=E,2.1nm,0.9s,baz=268,slow=8.2,SNR=8.0
KSRS                                LR       LR       14 16 22.6
      comp=E,99nm,19.1s,baz=284,slow=40
MDJ   Mudanjiang        41.23  58  eP        P        13 56 57.8  -1.5
      comp=E,43nm,1.3s
VRI   Vrincioaia        41.28 304⇓iP        P        13 57 02.1  +2.2
VRI   Vrincioaia        41.28 304   P        P        13 57 02.0  +2.2
VRI                                 pmax     pmax
      comp=Z,31nm,1.0s
PLOR  Plostina          41.33 304⇑iP        P        13 57 02.0  +1.7
PLOR  Plostina          41.33 304   P        P        13 57 01.9  +1.7
TESR  Tescani           41.34 305⇓iP        P        13 57 01.8  +1.5
HORU  Horodok           41.59 309   P        P        13 57 02.4  +0.1
BIZ   Bicaz             41.72 306⇑iP        P        13 57 04.9  +1.5
MLR   Muntele Rosu      41.83 303  eP        P        13 57 05.1  +0.6
      comp=Z,82nm,1.0s
MLR   Muntele Rosu      41.83 303⇓iP        P        13 57 07.0  +2.5
MLR   Muntele Rosu      41.83 303  eP        P        13 57 05.1  +0.6
MLR                                 pmax     pmax
      comp=Z,82nm,1.0s
OZUR                    41.93 304⇓iP        P        13 57 07.1  +1.9
EZN   Ezine             41.95 295⇑iP        P        13 57 05.1  -0.2
EZN   Ezine             41.95 295   P        P        13 57 05.1  -0.2
KARP  Karpathos         41.97 289  eP        P        13 57 03.4  -2.3
      comp=Z,84nm,0.8s
ELND  Elena             41.99 300⇑iP        P        13 57 06.7  +1.1
ALN   Alexandroupoli    42.04 297  eP        P        13 57 05.8  -0.2
      comp=Z,22nm,1.0s
ALN   Alexandroupoli    42.04 297  eP        P        13 57 05.8  -0.2
ALN                                 pmax     pmax
      comp=Z,22nm,1.0s
DOPR  Dopca             42.21 304⇓iP        P        13 57 09.3  +1.9
BURAR Bucovina Array    42.33 307⇑iP        P        13 57 09.4  +0.9
BUR08 Bucovina Ar. S    42.34 307  eP        P        13 57 08.3  -0.3
      comp=Z,14nm,1.0s
KSV   Kosov             42.45 308   P        P        13 57 09.2  -0.1
VOIR                    42.46 303⇑iP        P        13 57 10.2  +0.6
VOIR                    42.46 303   P        P        13 57 10.0  +0.4
VOIR                                pmax     pmax
      comp=Z,11nm,1.2s
KLR   Kul'dur           42.75  51   P        P        13 57 10.9  -0.7
      comp=Z,7.3nm,0.9s,baz=280,slow=8.1,SNR=14
KLR                                 LR       LR       14 16 24.0
      comp=Z,196nm,18.1s,baz=307,slow=38
KLR   Kul'dur           42.75  51⇓iP        P        13 57 14.1  +2.4
KLR                                 pmax     pmax
      comp=Z,9.0nm,0.9s
ARR   Arges             42.76 303⇑iP        P        13 57 12.7  +0.8
PLD   Plovdiv           42.92 299   P        P        13 57 13.5  +0.3
PLD                                 pmax     pmax
      comp=Z,1.0nm,1.2s
USRK  Ussuriysk Ar.     42.96  58   P        P        13 57 13.1  -0.4
      comp=Z,3.6nm,0.7s,baz=270,slow=5.6,SNR=4.8
LVV   L'vov             43.18 310  eP        P        13 57 15.3  +0.1
LVV                                 MLR      MLR
      comp=Z,200nm,17.0s
LVV                                 MLR      MLR
      comp=N,100nm,14.0s
LVV                                 MLR      MLR
      comp=E,200nm,17.0s
LVZ   Lovozero          43.21 338  eP        P        13 57 14.8  -0.5
      comp=E,37nm,0.9s
LVZ   Lovozero          43.21 338  eP        P        13 57 14.8  -0.5
LVZ                                 pmax     pmax
      comp=Z,37nm,0.9s
MORS  Morshin           43.24 309   P        P        13 57 16.7  +1.0
PGB   Panagyurishte     43.27 299  i P       P        13 57 18.4  +2.3
KSM   Kuching           43.30 129  eP        P        13 57 17.6  +1.1
      comp=Z,18nm,1.0s
APA   Apatity           43.45 337⇓iP        P        13 57 19.2  +2.1
APA                                 pmax     pmax
      comp=Z,3.0nm,1.0s
APA                                 MLR      MLR
      comp=Z,200nm,12.0s
MMB   Musomiste         43.70 298   P        P        13 57 19.2  -0.4
YAK   Yakutsk           43.81  32  eP        P        13 57 19.9  -0.1
      comp=Z,23nm,0.8s
YAK   Yakutsk           43.81  32  eP        P        13 57 21.9  +1.8
JNU   Nakatsue          43.83  74   P        P        13 57 21.9  +1.2
      comp=Z,19nm,1.0s,baz=280,slow=2.7,SNR=7.1
JNU   Nakatsue          43.83  74  eP        P        13 57 20.9  +0.2
      comp=Z,34nm,1.1s
SBUM  Sibu              43.85 126  eP        P        13 57 20.7  -0.3
      comp=Z,4.9nm,0.8s
TRSU  Trosnyk           43.85 307   P        P        13 57 21.4  +0.8
SRS   Serrai            43.86 297   P        P        13 57 20.8   0.0
SRS                                 pmax     pmax
      comp=Z,27nm,1.1s
FIA0  FINESS Array S    43.93 327  eP        P        13 57 20.9  -0.1
FINES FINESS Array B    43.93 327   P        P        13 57 20.9  -0.1
      comp=Z,6.4nm,0.5s,baz=121,slow=9.2,SNR=12
FINES                               LR       LR       14 18 07.3
      comp=Z,114nm,19.3s,baz=112,slow=40
FINES FINESS Array B    43.93 327  i P       P        13 57 22.7  +1.6
FINES                               pmax     pmax
      comp=Z,6.0nm,0.5s
VTS   Vitosha           43.95 299  eP        P        13 57 19.8  -1.9
      comp=Z,20nm,1.0s
VTS   Vitosha           43.95 299⇑iP        P        13 57 23.0  +1.3
VTS   Vitosha           43.95 299  eP        P        13 57 19.8  -1.9
VTS                                 pmax     pmax
      comp=Z,20nm,1.0s
VTS   Vitosha           43.95 299  i P       P        13 57 22.6  +0.9
KWP   Kalwaria Pacla    44.03 310  eP        P        13 57 22.9  +0.8
KWP   Kalwaria Pacla    44.03 310  eP        P        13 57 20.9  -1.1
      comp=Z,457nm,1.2s
KWP   Kalwaria Pacla    44.03 310  eP        P        13 57 22.9  +0.8
DRGR                    44.05 305⇑iP        P        13 57 24.0  +1.7
DRGR                    44.05 305   P        P        13 57 24.0  +1.7
DRGR                                pmax     pmax
      comp=Z,41nm,1.2s
GZR   Gura Zlata        44.06 303⇓iP        P        13 57 23.3  +0.8
GZR   Gura Zlata        44.06 303   P        P        13 57 23.2  +0.8
SOH   Sokhos            44.07 297   P        P        13 57 22.6   0.0
SOH                                 pmax     pmax
      comp=Z,12nm,1.2s
TRPA  Tarpa             44.13 307⇑iP        P        13 57 25.3  +2.4
TRPA  Tarpa             44.13 307⇓eP        P        13 57 23.0  +0.1
KKB   Krupnik           44.15 298  i P       P        13 57 23.9  +0.8
UZH   Uzhgorod          44.30 308  eP        P        13 57 24.5  +0.3
UZH                                e                  13 57 38.5
VAY   Valandovo         44.59 298  i P       P        13 57 26.6   0.0
GRG   Griva             44.77 297   P        P        13 57 28.8  +0.7
GRG                                 pmax     pmax
      comp=Z,23nm,1.2s
SIRR  Siria             44.79 305⇑iP        P        13 57 30.0  +1.8
LIT   Litokhoron        44.83 296  eP        P        13 57 26.5  -2.1
      comp=Z,13nm,0.7s
LIT   Litokhoron        44.83 296  eP        P        13 57 26.5  -2.1
LIT                                 pmax     pmax
      comp=Z,13nm,0.7s
STIP  Stip              44.83 298  i P       P        13 57 27.0  -1.6
MDVR  Moldovita         44.86 303⇑iP        P        13 57 30.2  +1.4
BZS   Buzias            44.86 304⇑iP        P        13 57 29.9  +1.2
BZS   Buzias            44.86 304   P        P        13 57 30.0  +1.2
BZS                                 pmax     pmax
      comp=Z,16nm,1.2s
AGG   Agios Georgios    45.12 294  eP        P        13 57 29.8  -1.2
      comp=Z,89nm,1.7s
AGG   Agios Georgios    45.12 294  eP        P        13 57 29.8  -1.2
AGG                                 pmax     pmax
      comp=Z,89nm,1.7s
SKO   Skopje            45.35 299  i P       P        13 57 32.8  +0.1
AMBH  Ambrzfalva        45.44 305⇓eP        P        13 57 25.0  -8.3
NIE   Niedzica          45.60 309  eP        P        13 57 36.1  +1.5
NIE   Niedzica          45.60 309  eP        P        13 57 36.1  +1.5
GRNR  Gornyy            45.79  49  eP        P        13 57 39.0  +2.9
GRNR                                pmax     pmax
      comp=Z,26nm,1.0s
OJC   Ojcow             45.91 310  eP        P        13 57 37.3  +0.3
OJC   Ojcow             45.91 310  eP        P        13 57 36.8  -0.2
      comp=Z,15nm,0.9s
OJC   Ojcow             45.91 310  eP        P        13 57 36.8  -0.2
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OJC				pmax	pmax		
	comp=Z,15nm,0.9s						
PSZ	Piszkesteto	45.92	307	eP	P	13 57 37.1	-0.1
	comp=Z,23nm,0.9s						
PSZ	Piszkesteto	45.92	307	⇑iP	P	13 57 38.6	+1.4
PSZ	Piszkesteto	45.92	307	eP	P	13 57 37.1	-0.1
PSZ				pmax	pmax		
	comp=Z,23nm,0.9s						
PSZ	Piszkesteto	45.92	307	⇓eP	P	13 57 37.0	-0.1
BUD	Budapest	46.53	307	⇓eP	P	13 57 43.0	+1.1
IGT	Igoumenitsa	46.56	296	P	P	13 57 44.9	+2.6
VYHS	Vyhne	46.59	308	eP	P	13 57 43.4	+1.0
VYHS				pmax	pmax		
	comp=Z,14nm,1.3s						
VYHS	Vyhne	46.59	308	eP	P	13 57 43.3	+0.9
KOLL	Kolacno	46.88	308	eP	P	13 57 45.8	+1.2
MORH	Mrgy, Hungar	46.89	305	eP	P	13 57 44.0	-0.7
PDG	Podgorica	46.89	300	⇑iP	P	13 57 44.5	-0.3
TTG	Podgorica	46.89	300	eP	P	13 57 43.6	-1.2
	comp=Z,32nm,1.2s						
TTG	Podgorica	46.89	300	eP	P	13 57 43.6	-1.2
TTG				pmax	pmax		
	comp=Z,32nm,1.2s						
ARA0	ARCESS Array S	46.93	337	eP	P	13 57 45.2	+0.5
ARCES	ARCESS Array B	46.93	337	P	P	13 57 45.2	+0.5
	comp=Z,9.1nm,0.8s,baz=111,slow=5.0,SNR=16						
ARCES				LR	LR	14 19 00.0	
	comp=Z,128nm,18.3s,baz=151,slow=38						
ARE0	ARCESS Array S	46.93	337	eP	P	13 57 44.2	-0.5
	comp=Z,1.4nm,0.9s						
OKC	Ostrava-Krasne	46.99	310	eP	P	13 57 46.6	+1.2
OKC				e		13 57 52.7	
OKC	Ostrava-Krasne	46.99	310	eP	P	13 57 46.6	+1.2
OKC				ex	x	13 57 52.7	
CSKK	Cskako	47.05	307	eP	P	13 57 54.1	+8.1
TIXI	Tiksi	47.22	19	P	P	13 57 46.4	-0.5
	comp=Z,4.8nm,0.4s,baz=232,slow=4.0,SNR=14						
TIXI	Tiksi	47.22	19	eP	P	13 57 45.3	-1.6
	comp=Z,30nm,1.3s						
TIXI	Tiksi	47.22	19	ceP	P	13 57 45.9	-1.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JAVC	Velka Javorina	47.35	309	eP	P	13 57 50.1	+1.8
MORC	Moravsky Berou	47.38	310	eP	P	13 57 48.3	-0.3
	comp=Z,25nm,0.8s						
MORC	Moravsky Berou	47.38	310	⇑iP	P	13 57 50.0	+1.4
MORC	Moravsky Berou	47.38	310	eP	P	13 57 48.3	-0.3
MORC				pmax	pmax		
	comp=Z,25nm,0.8s						
MORC	Moravsky Berou	47.38	310	eP	P	13 57 49.6	+1.0
MODS	Modra-Piesok	47.64	308	eP	P	13 57 50.5	-0.1
MODS				pmax	pmax		
	comp=Z,27nm,1.3s						
MODS	Modra-Piesok	47.64	308	eP	P	13 57 50.5	-0.1
ZST	Bratislava	47.77	308	eP	P	13 57 52.0	+0.5
ZST	Bratislava	47.77	308	eP	P	13 57 52.0	+0.5
VRAC	Vranov	48.02	309	eP	P	13 57 54.5	+1.0
BLY	Banja Luka	48.07	303	eP	P	13 57 52.1	-1.8
	comp=Z,26nm,1.3s						
KSP	Ksiaz	48.13	311	eP	P	13 57 55.0	+0.7
KSP	Ksiaz	48.13	311	eP	P	13 57 55.0	+0.7
DPC	Dobruska-Polom	48.14	311	eP	P	13 57 55.8	+1.4
DPC				e		14 05 06.5	
DPC				MLR	MLR		
	comp=Z,200nm,14.5s						
DPC	Dobruska-Polom	48.14	311	eP	P	13 57 55.8	+1.4
DPC				ex	x	13 58 00.6	
DPC				AMS	AMS	14 20 20.0	
	comp=Z,200nm,14.5s						
KRUC	Moravsky	48.17	309	P	P	13 57 55.9	+1.2
KRUC				pmax	pmax		
	comp=Z,16nm,1.1s						
KRUC	Moravsky	48.17	309	eP	P	13 57 55.7	+1.0
SOP	Sopron	48.18	307	P	P	13 57 56.3	+1.6
SOP				pmax	pmax		
	comp=Z,49nm,1.0s						
SOP	Sopron	48.18	307	eP	P	13 57 54.1	-0.6
OSTC	Ostas	48.20	311	eP	P	13 57 56.0	+1.1
OSTC				ex	x	13 58 01.6	
OSTC				AMS	AMS	14 20 10.0	
	comp=Z,200nm,13.1s						
CHVC	Chvalec	48.30	311	eP	P	13 57 56.6	+1.0
CHVC				ex	x	13 58 02.9	
UPC	Upice	48.33	311	eP	P	13 57 57.0	+1.1
UPC				e		13 58 03.3	
UPC				MLR	MLR		
	comp=Z,200nm,14.8s						
UPC	Upice	48.33	311	eP	P	13 57 57.0	+1.1
UPC				ex	x	13 58 03.3	
UPC				AMS	AMS	14 20 20.0	
	comp=Z,200nm,14.8s						
NKL	Nikolayevsk	48.41	46	eP	P	13 57 52.9	-3.5
NKL				e		13 59 23.8	
NKL				e		13 59 52.3	
NKL				eS	S	14 04 59.9	+5.5
NKL				pmax	pmax		
	comp=Z,11nm,1.2s						
NKL				pmax	pmax		
	comp=E,4.0nm,1.0s						
NKL				pmax	pmax		
	comp=N,4.0nm,0.6s						
NKL				pmax	pmax		
	comp=Z,62nm,3.5s						
NKL				MLR	MLR		
	comp=N,387nm,17.0s						
NKL				MLR	MLR		
	comp=Z,289nm,18.0s						
CONA	Conrad Observa	48.62	307	iP	P	13 57 59.0	+0.8
	comp=Z,65nm,1.0s,SNR=36						
TREC	Trest	48.75	309	eP	P	13 58 00.3	+1.2
TREC				e		14 05 09.1	
TREC				MLR	MLR		
	comp=Z,200nm,16.6s						
TREC	Trest	48.75	309	eP	P	13 58 00.3	+1.2
TREC				ex	x	13 58 03.9	
TREC				AMS	AMS	14 18 20.0	
	comp=Z,200nm,16.6s						
MAJO	Matsushiro	48.84	68	eP	P	13 57 58.7	-1.3
	comp=Z,9.4nm,0.9s						
MAJO	Matsushiro	48.84	68	iP	P	13 58 01.0	+1.0
MAT	Matsushiro	48.84	68	P	P	13 58 02.0	+2.0
MAT				S	S	14 04 58.6	-2.5
MJAR	Matsushiro Arr	48.84	68	P	P	13 57 59.7	-0.3
	comp=Z,4.0nm,1.0s,baz=278,slow=9.4,SNR=8.9						
MJAR				LR	LR	14 20 18.6	
	comp=Z,88nm,18.0s,baz=175,slow=38						
ARSA	Arzberg	48.92	307	iP	P	13 58 01.5	+1.0
	comp=Z,15nm,0.9s,SNR=8.5						
GROS	Grobnik	49.02	306	iP	P	13 58 01.8	+0.4
MATE	Matera	49.08	298	⇑iP	P	13 58 01.9	+0.1
GOPC	GO Pecny, Ondr	49.15	310	eP	P	13 58 03.2	+1.0
GOPC				MLR	MLR		
	comp=Z,200nm,20.2s						
GOPC	GO Pecny, Ondr	49.15	310	eP	P	13 58 03.2	+1.0
GOPC				ex	x	13 58 07.8	
GOPC				AMS	AMS	14 19 40.0	
	comp=Z,200nm,20.2s						
PVCC	Panska Ves	49.25	311	eP	P	13 58 09.4	+6.5
PVCC	Panska Ves	49.25	311	eP	P	13 58 09.4	+6.5
PRU	Pruhonice	49.30	310	eP	P	13 58 04.7	+1.4
PRU	Pruhonice	49.30	310	eP	P	13 58 04.7	+1.4
PRU				ex	x	13 58 09.5	
SOKA	Soboth	49.32	306	iP	P	13 58 04.6	+1.0
	comp=Z,52nm,1.0s,SNR=29						
TIP	Timpagrande	49.35	296	eP	P	13 58 02.5	-1.4
	comp=Z,22nm,1.1s						
TIP	Timpagrande	49.35	296	⇑iP	P	13 58 03.8	-0.1
BRG	Berggiesshubel	49.62	311	eP	P	13 58 06.7	+1.0
	comp=Z,25nm,1.2s						
BRG				i		13 58 12.2	
	comp=Z,26nm,0.8s						
BRG				ePP	PP	14 00 00.5	+0.4
	comp=Z,8.9nm,1.2s						
BRG				S	S	14 05 12.0	+0.5
	comp=N,206nm,28.3s						
	comp=E,128nm,12.8s						
	comp=Z,276nm,14.0s						
BRG	Berggiesshubel	49.62	311	eP	P	13 58 06.7	+1.0
BRG				e		14 00 00.5	
BRG				S	S	14 05 12.0	+0.5
BRG				pmax	pmax		
	comp=Z,25nm,1.2s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BRG				MLR	MLR		
	comp=N,206nm,28.3s						
BRG				MLR	MLR		
	comp=E,128nm,12.8s						
BRG				MLR	MLR		
	comp=Z,276nm,14.0s						
OBKA	Obir	49.67	306	iP	P	13 58 07.6	+1.3
	comp=Z,39nm,1.0s,SNR=13						
MOA	Molln	49.70	307	iP	P	13 58 06.5	+0.1
	comp=Z,20nm,0.9s,SNR=14						
TYV	Tymovskoe	49.74	49	eP	P	13 58 09.8	+3.2
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
LJU	Ljubljana	49.75	305	iP	P	13 58 07.7	+0.9
LJU				i		13 58 12.2	
GEC2	GERESS Array S	49.96	309	eP	P	13 58 08.9	+0.5
	comp=Z,11nm,0.9s						
GERES	GERESS Array B	49.96	309	P	P	13 58 07.3	-1.1
	comp=Z,3.4nm,0.8s,baz=93,slow=6.7,SNR=14						
GERES				LR	LR	14 22 03.3	
	comp=Z,112nm,18.2s,baz=90,slow=39						
KHC	Kasperske Hory	50.01	309	eP	P	13 58 08.9	+0.1
	comp=Z,7.4nm,1.0s						
KHC	Kasperske Hory	50.01	309	eP	P	13 58 09.4	+0.6
KHC				e		13 58 15.6	
KHC				MLR	MLR		
	comp=Z,200nm,14.7s						
KHC	Kasperske Hory	50.01	309	eP	P	13 58 09.4	+0.6
KHC				ex	x	13 58 15.6	
KHC				AMS	AMS	14 20 00.0	
	comp=Z,200nm,14.7s						
CLL	Collm	50.17	312	eP	P	13 58 09.3	-0.6
	comp=Z,12nm,1.1s						
CLL	Collm	50.17	312	⇓iP	P	13 58 10.1	+0.2
CLL				eS	S	14 05 22.0	+2.7
CLL				pmax	pmax		
	comp=Z,18nm,1.4s						
CLL	Collm	50.17	312	⇓iP	P	13 58 10.1	+0.2
	comp=Z,18nm,1.4s						
CLL				i		13 58 14.3	
CLL				eS	S	14 05 22.0	+2.7
CLL				eSS	SS	14 09 00.0	+7.5
YSS	Yuzh-Sakhalins	50.22	54	eP	P	13 58 11.0	+0.7
	comp=Z,25nm,1.0s						
YSS	Yuzh-Sakhalins	50.22	54	⇓iP	P	13 58 12.9	+2.6
YSS				e		13 58 30.3	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
MYKA	Terra Mystica	50.27	306	eP	P	13 58 11.5	+0.6
	comp=Z,9.5nm,1.0s						
KBA	Koelnbreinsper	50.41	307	iP	P	13 58 12.4	+0.3
	comp=Z,17nm,0.9s						
KBA	Koelnbreinsper	50.41	307	P	P	13 58 12.6	+0.6
KBA				pmax	pmax		
	comp=Z,21nm,1.2s						
ROBS	Robic	50.42	306	iP	P	13 58 11.9	+0.1
NKC	Novy Kostel	50.62	311	eP	P	13 58 14.3	+0.9
NKC				MLR	MLR		
	comp=Z,200nm,16.8s						
NKC	Novy Kostel	50.62	311	eP	P	13 58 14.3	+0.9
NKC				ex	x	13 58 19.4	
NKC				AMS	AMS	14 20 20.0	
	comp=Z,200nm,16.8s						
NB2	NORSAR Subarra	50.95	325	P	P	13 58 15.0	-0.7
	comp=Z,39nm,1.7s,baz=94,slow=7.9						
NB2	NORSAR Subarra	50.95	325	P	P	13 58 15.0	-0.7
	baz=94,slow=7.9						
NB200	NORSAR Array S	50.95	325	eP	P	13 58 15.1	-0.7
NOA	NORSAR Array B	50.95	325	P	P	13 58 15.1	-0.7
	comp=Z,2.1nm,0.8s,baz=91,slow=7.4,SNR=6.1						
NOA				LR	LR	14 20 59.4	
	comp=Z,276nm,19.6s,baz=95,slow=37						
ABTA	Abfaltersbach	51.03	306	eP	P	13 58 16.5	0.0
	comp=Z,9.8nm,0.7s						
MOX	Moxa	51.11	311	P	P	13 58 17.6	+0.6
MOX				pmax	pmax		
	comp=Z,15nm,0.9s						
KMBO	Kilima Mbogo	51.23	237	P	P	13 58 19.1	+0.5
	comp=Z,11nm,0.8s,baz=41,slow=9.5,SNR=13						
KMBO	Kilima Mbogo	51.23	237	eP	P	13 58 17.6	-1.0
	comp=Z,17nm,1.0s						
KMBO	Kilima Mbogo	51.23	237	iP	P	13 58 19.7	+1.1
KMBO				pmax	pmax		
	comp=Z,11nm,0.8s						
GRB1	Grafenberg Arr	51.23	310	P	P	13 58 19.6	+1.6
GRB1				pmax	pmax		
	comp=Z,57nm,1.0s						
GRF	Grafenberg Arr	51.47	310	P	P	13 58 20.5	+0.7
GRF				pmax	pmax		
	comp=Z,20nm,1.2s						
WTTA	Wattenberg	51.54	307	iP	P	13 58 20.2	-0.3
	comp=Z,16nm,0.9s,SNR=8.0						
WATA	Walderalm	51.57	307	iP	P	13 58 20.4	-0.3
	comp=Z,6.9nm,0.6s						
FUR	Furstenfeldbru	51.65	308	P	P	13 58 21.9	+0.8
FUR				pmax	pmax		
	comp=Z,58nm,1.0s						
SQTA	Sankt Quirin	51.84	307	iP	P	13 58 22.3	-0.4
	comp=Z,22nm,0.9s,SNR=9.2						
MOTA	Moosalm	51.89	307	iP	P	13 58 22.7	-0.4
	comp=Z,31nm,0.9s,SNR=9.8						
RETA	Reutte	52.09	307	iP	P	13 58 24.1	-0.4
	comp=Z,12nm,0.9s,SNR=6.1						
FETA	Feichten	52.19	307	eP	P	13 58 25.0	-0.3
	comp=Z,39nm,1.1s,SNR=16						
CLTB	Caltabellotta	52.43	295	eP	P	13 58 25.1	-2.1
	comp=Z,33nm,0.7s						
FUORN	Ofenpass-Fuorn	52.58	306	eP	P	13 58 26.5	-1.8
	comp=Z,12nm,1.0s						
DAVA	Damuels	52.72	307	iP	P	13 58 29.1	-0.1
	comp=Z,62nm,1.0s,SNR=21						
VLC	Villacollemand	52.96	303	eP	P	13 58 30.5	-0.4
	comp=Z,21nm,1.0s						
TNS	Taunus Mts	53.17	311	P	P	13 58 32.9	+0.5
TNS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TUE	Stuetta	53.22	306	eP	P	13 58 31.0	-2.0
	comp=Z,9.3nm,1.0s						
BFO	Black Forest	53.56	309	iP	P	13 58 36.0	+0.7
CDF	Champ du Feu	54.24	309	eP	P	13 58 40.1	-0.2
CDF				pmax	pmax		
	comp=Z,15nm,1.2s						
ECH	Echery	54.35	309	eP	P	13 58 39.5	-1.6
	comp=Z,8.3nm,1.0s						
ECH	Echery	54.35	309	eP	P	13 58 39.5	-1.6
ECH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HINF	Hinteralfeld	54.63	308	eP	P	13 58 42.5	-0.6
HINF				pmax	pmax		
	comp=Z,27nm,1.2s						
SENIN	Lac Senin/Sane	54.63	307	eP	P	13 58 42.9	-0.4
	comp=Z,31nm,0.8s						
MEM	Membach	54.65	312	P	P	13 58 43.4	+0.3
MEM				pmax	pmax		
	comp=Z,12nm,0.9s						
HAU	Haudompre	54.93	309	eP	P	13 58 44.8	-0.4
HAU				pmax	pmax		
	comp=Z,42nm,1.0s						
SBF	Sospel	55.10	304	eP	P	13 58 46.2	-0.4
SBF				pmax	pmax		
	comp=Z,58nm,1.0s						
LPG	La Plagne	55.20	306	eP	P	13 58 47.4	-0.1
LPG				pmax	pmax		
	comp=Z,40nm,0.8s						
LPL	La Plagne	55.21	306	eP	P	13 58 47.4	-0.1
LPL				pmax	pmax		
	comp=Z,39nm,0.8s						
ISO	Isola	55.30	304	P	P	13 58 48.3	+0.3
ISO				pmax	pmax		
	comp=Z,28nm,0.9s						
BNI	Bardonecchia	55.35	305	eP	P	13 58 48.0	-0.4
	comp=Z,26nm,1.0s						
BNI	Bardonecchia	55.35	305	eP	P	13 58 48.0	-0.4
BNI				pmax	pmax		
	comp=Z,26nm,1.0s						
MBDF	Montbardon	55.36	305	eP	P	13 58 47.6	-1.0
MBDF				pmax	pmax		
	comp=Z,32nm,1.2s						
CABF	La Chapelle	55.40	307	eP	P	13 58 48.4	-0.3
CABF				pmax	pmax		
	comp=Z,15nm,1.0s						
GIVF	Givet	55.49	312	eP	P	13 58 49.4	+0.2
GIVF				pmax	pmax		
	comp=Z,22nm,1.0s						
DOU	Dourbes	55.64	312	P	P	13 58 50.8	+0.6
DOU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MBAR	Mbarara	55.64	243	eP	P	13 58 50.8	-0.1
	comp=Z,26nm,1.3s						
MBAR	Mbarara	55.64	243	eP	P	13 58 50.8	-0.1
MBAR				pmax	pmax		
	comp=Z,26nm,1.3s						
FRF	La Foret Royal	55.73	303	eP	P	13 58 50.3	-0.8
FRF				pmax	pmax		
	comp=Z,16nm,0.8s						
BAIF	Baives	55.89	312	eP	P	13 58 52.3	+0.3
BAIF				pmax	pmax		
	comp=Z,42nm,1.6s						
ORIF	Oris-en-Rattie	55.93	305	P	P	13 58 53.2	+0.6
ORIF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KEST	Kesra	55.95	294	P	P	13 58 52.5	-0.3
	comp=Z,21nm,0.8s,baz=50,slow=1.7,SNR=19						
KEST	Kesra	55.95	294	eP	P	13 58 52.6	-0.2
	comp=Z,28nm,0.9s						
LOR	Lormes	56.73	308	P	P	13 58 58.2	+0.1
LOR				pmax	pmax		
	comp=Z,17nm,1.1s						
SSB	Saint Sauveur	56.76	306	eP	P	13 58 57.7	-0.7
	comp=Z,14nm,0.8s						
SSB	Saint Sauveur	56.76	306	eP	P	13 58 57.7	-0.7
SSB				pmax	pmax		
	comp=Z,14nm,0.8s						
VIVF	Saint-Julien-l	56.78	305	eP	P	13 58 58.2	-0.3
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SMF	Signal de Mont	56.89	308	eP	P	13 58 58.7	-0.6
SMF				pmax	pmax		
	comp=Z,33nm,0.8s						
SSF	Saint Saulge	57.02	308	eP	P	13 58 59.5	-0.6
SSF				pmax	pmax		
	comp=Z,35nm,1.0s						
AVF	Avril sur Loir	57.18	308	eP	P	13 59 00.6	-0.7
AVF				pmax	pmax		
	comp=Z,28nm,0.9s						
BGF	Bois d'Agland	57.58	308	eP	P	13 59 03.4	-0.7
BGF				pmax	pmax		
	comp=Z,14nm,1.0s						
TCF	Toulx Ste Croi	58.08	308	eP	P	13 59 07.4	-0.2
TCF				pmax	pmax		
	comp=Z,23nm,0.9s						
SKR	Severo-Kuril’s	58.19	47	eP	P	13 59 15.3	+7.0
SKR				eS	S	14 07 07.4	0.0
SKR				MLR	MLR		
	comp=Z,200nm,16.0s						
JMIC	Jan Mayen	58.42	337	LR	LR	14 23 42.1	
	comp=Z,153nm,20.1s,baz=76,slow=35						
CAF	Calviac	58.55	306	eP	P	13 59 10.8	-0.2
CAF				pmax	pmax		
	comp=Z,17nm,0.9s						
PEA1	Petropavlovsk-	58.56	44	eP	P	13 59 11.3	+0.5
PETK	Petropavlovsk-	58.56	44	P	P	13 59 11.4	+0.4
	comp=Z,2.9nm,0.7s,baz=272,slow=6.8,SNR=3.3						
PETK				LR	LR	14 25 36.8	
	comp=Z,118nm,19.8s,baz=276,slow=37						
RJF	Les Rejaudoux	58.81	307	eP	P	13 59 12.8	0.0
RJF				pmax	pmax		
	comp=Z,16nm,1.0s						
MTLF	Montolieu	58.90	304	eP	P	13 59 14.0	+0.6
MTLF				pmax	pmax		
	comp=Z,22nm,1.2s						
OPO	Ambohidratompo	58.98	215	P	P	13 59 14.2	-0.1
	comp=Z,8.6nm,0.9s,baz=8.9,slow=6.5,SNR=4.1						
LDF	La Druitiere	58.99	311	eP	P	13 59 13.1	-0.8
LDF				pmax	pmax		
	comp=Z,24nm,0.9s						
ESK	Eskdalemuir	59.13	319	eP	P	13 59 12.4	-2.4
	comp=Z,17nm,1.0s						
ESK	Eskdalemuir	59.13	319	iP	P	13 59 15.0	+0.2
FLN	La Foliniere	59.17	311	eP	P	13 59 14.3	-0.9
FLN				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL	Bilibino	59.42	26	eP	P	13 59 15.1	-1.5
	comp=Z,13nm,1.1s						
BILL	Bilibino	59.42	26	⇑iP	P	13 59 18.0	+1.4
BILL				e		14 00 07.8	
BILL				e		14 01 31.4	
BILL				eS	S	14 07 29.9	+7.0
BILL				eSS	SS	14 11 16.6	-0.9
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,294nm,16.0s						
LFF	La Frestale	59.44	306	eP	P	13 59 16.9	-0.2
LFF				pmax	pmax		
	comp=Z,11nm,0.6s						
GRR	Gorron	59.51	311	eP	P	13 59 16.7	-0.8
GRR				pmax	pmax		
	comp=Z,38nm,1.1s						
MFF	Saint Martin d	59.55	308	eP	P	13 59 17.0	-0.9
MFF				pmax	pmax		
	comp=Z,14nm,0.9s						
DAG	Danmarks Havn	60.01	345	⇓iP	P	13 59 20.4	-0.1
DAG				pmax	pmax		
	comp=Z,11nm,0.9s						
DAG	Danmarks Havn	60.01	345	⇓iP	P	13 59 20.4	-0.1
	comp=Z,13nm,0.9s						
SIJI	Sorong	60.09	113	P	P	13 59 22.3	+0.3
	comp=Z,7.7nm,1.0s,baz=253,slow=19,SNR=2.1						
EPF	Esparros	60.30	304	eP	P	13 59 22.4	-0.7
EPF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SGMF	Saint Gilles	60.64	311	eP	P	13 59 24.8	-0.4
SGMF				pmax	pmax		
	comp=Z,28nm,1.0s						
EBR	Ebro Roquetas	60.91	302	P	P	13 59 27.5	+0.3
ETSF	Etsaut	60.97	304	eP	P	13 59 27.5	-0.2
ETSF				pmax	pmax		
	comp=Z,20nm,0.9s						
ROSF	Rostrenen	61.07	311	eP	P	13 59 27.5	-0.7
ROSF				pmax	pmax		
	comp=Z,39nm,0.9s						
QUIF	Quistinic	61.13	311	eP	P	13 59 27.7	-0.9
QUIF				pmax	pmax		
	comp=Z,27nm,1.0s						
TAM	Tamanrasset	63.98	281	eP	P	13 59 46.7	-1.5
	comp=Z,8.9nm,0.9s						
TAM	Tamanrasset	63.98	281	eP	P	13 59 46.7	-1.5
TAM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ESDC	Sonseca Array	64.50	302	P	P	13 59 51.3	0.0
	comp=Z,11nm,0.8s,baz=62,slow=7.0,SNR=69						
ESLA	Sonseca Array	64.50	302	eP	P	13 59 50.1	-1.2
	comp=Z,18nm,0.9s						
PAB	San Pablo	64.83	302	eP	P	13 59 52.4	-1.0
	comp=Z,34nm,1.0s						
PAB	San Pablo	64.83	302	eP	P	13 59 52.4	-1.0
PAB				pmax	pmax		
	comp=Z,34nm,1.0s						
PBRG	Braganca	65.64	305	eP	P	13 59 59.1	+0.5
MVO	Moncorvo	66.09	305	eP	P	14 00 01.9	+0.4
	comp=Z,34nm,1.0s						
SUMG	Summit	66.51	343	eP	P	14 00 02.8	-1.3
	comp=Z,83nm,1.6s						
SUMG	Summit	66.51	343	iP	P	14 00 04.8	+0.7
SUMG				pmax	pmax		
	comp=Z,77nm,1.1s						
SUMG	Summit	66.51	343	iP	P	14 00 04.8	+0.7
	comp=Z,77nm,1.1s						
PVRL	Vila Real	66.52	305	eP	P	14 00 04.3	0.0
	comp=Z,17nm,1.0s						
POLO	Lamas de Olo	66.53	305	eP	P	14 00 04.7	+0.3
	comp=Z,10nm,1.6s						
PGAV	Gavieira, Arco	66.62	306	eP	P	14 00 05.6	+0.6
	comp=Z,27nm,1.3s						
MTE	Manteigas	66.75	304	eP	P	14 00 06.5	+0.7
	comp=Z,43nm,1.7s						
MTE	Manteigas	66.75	304	eP	P	14 00 05.1	-0.7
	comp=Z,23nm,1.0s						
PVIS	Viseu	66.87	304	eP	P	14 00 06.9	+0.4
	comp=Z,25nm,1.0s						
PCBR	Castelo Branco	66.93	303	eP	P	14 00 07.7	+0.9
	comp=Z,19nm,1.5s						
PMRV	Marv??o	67.03	303	eP	P	14 00 08.1	+0.5
	comp=Z,22nm,1.6s						
LSZ	Lusaka	67.53	233	eP	P	14 00 11.3	+0.3
	comp=Z,7.4nm,0.8s						
LSZ	Lusaka	67.53	233	eP	P	14 00 11.3	+0.3
LSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						

PTOM	Tomar	67.67	304	eP	P	14 00 12.3	+0.7
	comp=Z,54nm,1.1s						
PMTG	Montargil	67.77	303	eP	P	14 00 12.4	+0.2
	comp=Z,18nm,1.2s						
PBEJ	Beja	67.95	302	eP	P	14 00 14.1	+0.7
	comp=Z,32nm,1.2s						
PVAQ	Vaqueiros	68.11	301	eP	P	14 00 14.1	-0.2
	comp=Z,38nm,1.0s						
PCVE	Castro Verde	68.24	301	eP	P	14 00 15.6	+0.4
	comp=Z,27nm,1.6s						
PBDV	Barranco-do-Ve	68.33	301	eP	P	14 00 16.3	+0.5
	comp=Z,72nm,1.1s						
PNCL	Nicolau / Gran	68.39	302	eP	P	14 00 16.7	+0.6
	comp=Z,19nm,1.2s						
PTEO	Sao Teotonio	68.77	302	eP	P	14 00 19.4	+0.9
	comp=Z,48nm,1.5s						
PFVI	Vila Bisbo	69.02	301	eP	P	14 00 20.6	+0.6
	comp=Z,47nm,1.1s						
TULEG	Thule	69.09	352	eP	P	14 00 19.5	-0.3
	comp=Z,24nm,0.9s						
ANGG	Ammassalik, Gr	70.34	337	eP	P	14 00 26.2	-1.4
	comp=Z,29nm,0.8s						
TOA0	Torodi Ar. Sit	71.75	274	eP	P	14 00 35.7	-1.3
	comp=Z,96nm,1.2s						
TOA0	Torodi Ar. Sit	71.75	274	P	P	14 00 36.4	-0.7
	SNR=20						
TOA1	Torodi Ar. Sit	71.75	274	eP	P	14 00 35.1	-1.9
TORD	Torodi Ar. Bea	71.75	274	P	P	14 00 35.1	-1.9
	comp=Z,36nm,0.9s,baz=55,slow=5.3,SNR=113						
TORD				LR	LR	14 36 06.2	
	comp=Z,113nm,18.1s,baz=5.0,slow=39						
ILULI	Ilulissat	71.86	343	eP	P	14 00 34.4	-2.3
	comp=Z,121nm,0.2s						
ILULI	Ilulissat	71.86	343	⇓iP	P	14 00 36.9	+0.2
ILULI				pmax	pmax		
	comp=Z,30nm,0.9s						
ILULI	Ilulissat	71.86	343	⇓iP	P	14 00 36.9	+0.2
	comp=Z,30nm,0.9s						
TOLK	Toolik Lake Re	72.99	16	eP	P	14 00 42.8	-0.8
	comp=Z,31nm,0.7s						
TOLK	Toolik Lake Re	72.99	16	P	P	14 00 43.5	-0.1
	baz=319						
SFJD	Kangerlussuaq	73.35	341	eP	P	14 00 45.3	-0.4
	comp=Z,33nm,1.1s						
SFJD	Kangerlussuaq	73.35	341	eP	P	14 00 45.3	-0.4
SFJD				pmax	pmax		
	comp=Z,33nm,1.1s						
SFJD	Kangerlussuaq	73.35	341	i P	P	14 00 45.3	-0.4
	comp=Z,21nm,1.0s						
NWAO	Narrogin (SRO)	74.92	147	P	P	14 00 54.3	-0.9
	comp=Z,18nm,1.1s,baz=270,slow=1.0,SNR=4.5						
WRA	Warramunga Arr	74.94	126	P	P	14 00 55.0	-0.7
	comp=Z,5.8nm,0.8s,baz=308,slow=5.4,SNR=16						
WRA	Warramunga Arr	74.94	126	P	P	14 00 55.0	-0.7
WR1	Warramunga Arr	74.94	126	eP	P	14 00 55.0	-0.7
WB2	Warramunga Arr	74.95	126	eP	P	14 00 54.9	-0.8
	comp=Z,15nm,0.9s						
FYU	Fort Yukon	75.65	16	eP	P	14 00 59.3	+0.2
	comp=Z,15nm,0.8s						
BPAW	Bear Paw Mtn.	76.06	20	eP	P	14 01 00.7	-0.8
	comp=Z,16nm,0.9s						
LBTB	Lobatse	76.20	228	eP	P	14 01 02.9	+0.1
	comp=Z,93nm,1.4s						
CAST	Castle Rocks	76.25	21	eP	P	14 01 02.5	0.0
	comp=Z,25nm,0.8s						
POKR	Poker Plat Res	76.25	18	P	P	14 01 02.6	0.0
	baz=322						
TCOL	CIGO, UAF Yank	76.33	18	P	P	14 01 02.1	-0.9
	baz=321						
COLA	College	76.34	18	eP	P	14 01 01.8	-1.1
	comp=Z,34nm,0.8s						
COLA	College	76.34	18	eP	P	14 01 01.8	-1.1
COLA				pmax	pmax		
	comp=Z,34nm,0.8s						
KTH	Kantishna Hill	76.49	20	eP	P	14 01 02.7	-1.3
	comp=Z,18nm,0.9s						
CCB	Clear Creek Bu	76.53	19	eP	P	14 01 03.1	-1.0
	comp=Z,7.9nm,0.8s						
WRH	Wood River Hil	76.59	19	eP	P	14 01 03.2	-1.2
	comp=Z,12nm,0.8s						
PPLA	Purkeypile	76.61	21	ePcP	P	14 01 09.9	+5.1
ILAR	Eielson Array	76.67	18	P	P	14 01 04.0	-0.9
	comp=Z,5.1nm,0.8s,baz=316,slow=4.8,SNR=24						
ILAR				PP	PP	14 03 55.5	-1.4
	comp=Z,2.2nm,0.9s,baz=311,slow=6.8,SNR=6.6						
ILAR				LR	LR	14 39 49.5	
	comp=Z,120nm,18.2s,baz=328,slow=40						
ILAR	Eielson Array	76.67	18	P	P	14 01 04.0	-0.9
ILB	Eielson Array	76.67	18	eP	P	14 01 03.1	-1.8
	comp=Z,14nm,0.8s						
ILB				ePP	PP	14 03 55.5	-1.4
SVW2	Sparrevohn	76.83	24	ePcP	PcP	14 01 12.0	-5.0
MCK	McKinley	76.93	20	eP	P	14 01 05.1	-1.3
	comp=Z,7.1nm,0.9s						
MCK	McKinley	76.93	20	eP	P	14 01 05.1	-1.3
MCK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HDA	Harding Lake	76.94	18	eP	P	14 01 05.0	-1.4
	comp=Z,7.7nm,0.8s						
HDA	Harding Lake	76.94	18	P	P	14 01 05.5	-0.9
	baz=322						
RND	Reindeer	77.20	20	eP	P	14 01 06.7	-1.3
	comp=Z,7.4nm,0.9s						
RND	Reindeer	77.20	20	eP	P	14 01 06.7	-1.3
RND				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AS31	Alice Springs	77.22	129	eP	P	14 01 07.9	-0.7
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	77.22	129	P	P	14 01 08.2	-0.4
	comp=Z,1.7nm,0.7s,baz=316,slow=5.9,SNR=36						
TSUM	Tsumeb	77.57	237	eP	P	14 01 10.2	-0.6
	comp=Z,16nm,1.0s						
EPYK	Eagle Plains	77.69	14	eP	P	14 01 09.9	-0.7
	comp=Z,11nm,0.7s						
EPYK	Eagle Plains	77.69	14	P	P	14 01 09.7	-1.0
	baz=330						
DHY	Denali Highway	77.88	19	eP	P	14 01 10.8	-1.2
	comp=Z,8.7nm,0.7s						
RIDG	Independent Ri	78.04	18	eP	P	14 01 11.4	-1.2
	comp=Z,23nm,0.8s						
EGAK	Eagle	78.09	16	eP	P	14 01 12.3	-0.6
	comp=Z,7.1nm,0.8s						
DOT	Dot Lake	78.31	18	eP	P	14 01 13.4	-0.8
	comp=Z,19nm,0.8s						
PAX	Paxson	78.49	19	eP	P	14 01 14.4	-0.8
	comp=Z,17nm,0.8s						
PMR	Palmer	78.53	21	eP	P	14 01 14.0	-1.3
	comp=Z,7.2nm,0.9s						
PMR	Palmer	78.53	21	eP	P	14 01 14.0	-1.3
PMR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RC01	Rabbit Creek A	78.74	22	ePcP	PcP	14 01 21.8	-3.4
FORT	Forrest	78.80	138	eP	P	14 01 16.7	-0.4
	comp=Z,26nm,0.8s						
KNK	Knik Glacier	78.88	21	eP	P	14 01 15.4	-1.9
	comp=Z,20nm,1.0s						
SCM	Sheep Creek Mo	78.88	20	eP	P	14 01 16.1	-1.2
	comp=Z,23nm,0.7s						
SCM	Sheep Creek Mo	78.88	20	eP	P	14 01 16.1	-1.2
SCM				pmax	pmax		
	comp=Z,23nm,0.7s						
BOSA	Boshof	79.01	226	P	P	14 01 17.9	-0.7
	comp=Z,12nm,1.0s,baz=52,slow=6.5,SNR=16						
BOSA				LR	LR	14 33 10.7	
	comp=Z,65nm,19.5s,baz=29,slow=33						
BOSA	Boshof	79.01	226	eP	P	14 01 18.4	-0.1
	comp=Z,42nm,1.3s						
BOSA	Boshof	79.01	226	eP	P	14 01 18.4	-0.1
BOSA				pmax	pmax		
	comp=Z,42nm,1.3s						
DAWY	Dawson	79.11	16	eP	P	14 01 17.6	-0.9
	comp=Z,9.0nm,0.8s						
SEW	Seward	79.59	22	eP	P	14 01 20.4	-0.7
	comp=Z,18nm,1.2s						
KDAK	Kodiak Island	80.31	25	eP	P	14 01 25.7	+0.6
	comp=Z,22nm,0.7s						
KDAK	Kodiak Island	80.31	25	eP	P	14 01 25.7	+0.6
KDAK				pmax	pmax		
	comp=Z,22nm,0.7s						
EYAK	Cordova Ski Ar	80.37	20	ePcP	PcP	14 01 29.5	-2.8
DBIC	Dimbokro	80.61	272	P	P	14 01 26.8	-0.6
	comp=Z,15nm,0.9s,baz=31,slow=7.5,SNR=8.6						
DBIC				LR	LR	14 41 31.1	
	comp=Z,132nm,18.6s,baz=36,slow=39						
DBIC	Dimbokro	80.61	272	eP	P	14 01 26.9	-0.5
	comp=Z,64nm,1.4s						
DBIC	Dimbokro	80.61	272	eP	P	14 01 26.9	-0.5
DBIC				pmax	pmax		
	comp=Z,64nm,1.4s						
KIC	Kosan Boka	80.67	272	eP	P	14 01 27.4	-0.4
	comp=Z,83nm,1.2s						
TIC	Toumodi	80.76	272	eP	P	14 01 27.7	-0.5
BALM	Baldy	80.93	19	ePcP	PcP	14 01 32.4	-2.5
BALM	Baldy	80.93	19	⇑eP	PcP	14 01 32.4	-2.5
LIC	Lamto	80.98	272	eP	P	14 01 28.9	-0.5
	comp=Z,64nm,1.1s						
HYT	Haines Junctio	82.35	17	eP	P	14 01 35.1	-0.9
	comp=Z,12nm,0.8s						
YKW3	Yellowknife Ar	84.52	6	eP	P	14 01 45.0	-1.9
	comp=Z,7.4nm,1.1s						
YKA	Yellowknife Ar	84.59	6	P	P	14 01 46.8	-0.4
	comp=Z,1.9nm,0.5s,baz=343,slow=5.1,SNR=18						
YKB5	Yellowknife Ar	84.59	6	eP	P	14 01 46.9	-0.4
STKA	Stephens Creek	87.77	130	P	P	14 02 01.6	-1.7
	comp=Z,1.4nm,0.6s,baz=343,slow=4.3,SNR=3.8						
STKA	Stephens Creek	87.77	130	eP	P	14 02 01.6	-1.7
	comp=Z,7.3nm,1.9s						
SCHQ	Schefferville	87.79	341	LR	LR	14 42 21.8	
	comp=Z,61nm,18.9s,baz=33,slow=36						
BATG	Bathurst New B	94.15	337	eP	P	14 02 33.5	+0.5
	comp=Z,13nm,1.0s						
CHGQ	Chibougamau	94.23	343	P	P	14 02 31.8	-1.5
	baz=23						
MATQ	Matagami	95.15	345	P	P	14 02 36.5	-1.0
	baz=20						
ULM	Lac du Bonnet	97.26	356	LR	LR	14 50 56.4	
	comp=Z,54nm,18.9s,baz=354,slow=38						
SYO	Syowa Base	105.31	193	⇑eX	Pdif	14 03 32.4	+10
SYO	Syowa Base	105.31	193	⇓epPKiKP	PKiKP	14 07 50.3	+14
SNAA	Sanae	117.93	201	PKiKP	PKPdf	14 07 58.9	-0.9
VNA2	Neumayer--Watz	119.10	202	PKiKP	PKiKP	14 08 03.3	+1.2
	baz=24,slow=3.6						
VNA3	Neumayer Olymp	119.90	202	PKiKP	PKPdf	14 08 03.2	-0.3
CPUP	Villa Florida	141.00	267	PKP	PKPdf	14 08 42.1	-2.6
	comp=Z,2.1nm,0.8s,baz=14,slow=7.4,SNR=2.9						
LPAZ	La Paz	145.47	290	PKPbc	PKPdf	14 08 50.7	-2.9
	comp=Z,2.5nm,1.0s,baz=80,slow=6.7,SNR=6.2						
LPAZ	La Paz	145.47	290	ePKPdf	PKPdf	14 08 52.1	-1.5
LPAZ	La Paz	145.47	290	eP	PKPdf	14 08 52.8	-0.9
YJA	Yavi	146.28	279	eP	PKPbc	14 08 56.1	+0.3
HJA	Humahuaca	146.63	277	eP	PKPbc	14 08 57.0	+0.2
AZAP	Zapla	146.76	275	eP	PKPbc	14 08 56.1	-0.8
TRQA	Tornquist	147.28	249	ePKPbc	PKPbc	14 08 57.7	0.0
TRQA	Tornquist	147.28	249	ePKP2	PKPbc	14 08 57.7	0.0
SLA	San Lorenzo	147.32	275	eP	PKPdf	14 08 56.7	+0.7
PB16	IPOC Station P	147.69	288	eP	PKPdf	14 08 57.3	0.0
AHML	Horco Molle	147.91	271	eP	PKPbc	14 08 58.8	-1.0
AHML				eP	PKPdf	14 08 59.1	+2.4
GO01	Chusmiza	148.13	286	ePKPbc	PKPbc	14 09 00.2	-0.9
MNMCX	Minye Minye	148.18	287	⇑eP	PKPbc	14 09 00.9	-0.1
FSA	Cafayete	148.22	272	eP	PKPdf	14 08 58.5	+1.0
TCA	Tanti	148.53	262	eP	PKPbc	14 09 01.2	-0.1
PB11	IPOC Station P	148.56	286	eP	PKPab	14 09 05.2	-0.1
CYA	Choya	148.81	268	eP	PKPbc	14 09 00.6	-1.5
CYA				eP	PKiKP	14 09 01.5	-1.9
CYA				eP	PKPdf	14 09 01.9	+3.7
PB01	IPOC Station P	149.05	284	ePKPbc	PKPbc	14 09 02.9	-0.1
PB01	IPOC Station P	149.05	284	eP	PKPbc	14 09 02.5	-0.5
LVC	Limon Verde	149.30	281	PKPbc	PKPbc	14 09 02.5	-1.4
	comp=Z,8.9nm,0.7s,baz=74,slow=2.5,SNR=4.6						
LVC	Limon Verde	149.30	281	ePKPbc	PKPbc	14 09 03.7	-0.2
PB02	IPOC Station P	149.52	284	eP	PKPbc	14 09 04.3	+0.2
PB07	IPOC Station P	149.70	283	eP	PKPdf	14 09 01.9	+1.9
PB03	IPOC Station P	149.74	282	eP	PKiKP	14 09 05.5	-0.2
APLL	PUNTA DE LOS L	149.94	265	eP	PKiKP	14 09 05.5	-0.3
ACLC	CERRO LA CRUZ	150.05	267	eP	PKiKP	14 09 06.1	-0.1
VCA	Vinchina	150.92	269	eP	PKiKP	14 09 08.5	+0.6
AGUA	GUANDACOL	151.37	267	eP	PKiKP	14 09 08.8	0.0
CFA	Coronel Fontan	151.63	263	PKPbc	PKiKP	14 09 09.4	+0.2
	comp=Z,18nm,0.8s,baz=40,slow=1.9,SNR=26						
CFA	Coronel Fontan	151.63	263	eP	PKiKP	14 09 09.4	+0.2
PLCA	Paso Flores	153.80	243	PKPbc	PKiKP	14 09 13.7	+0.3
	comp=Z,4.5nm,0.8s,baz=125,slow=3.5,SNR=4.1						

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*IDC **09** 13:55:20.0±1.1, 4°.17N×93°.40E, h0^{km}, mb4.3/14, mb1 4.3/15, mb1mx3.9/71, mbtmp4.2/15, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/48, Error ellipse: s-maj=37.3km s-min=20.4km az=40.0*

*ISCJB **09** 13:55:21.9±0.6, 4°.10N±0°.09×93°.47E±0°.06, h28^{km}, mb4.3/18, MS3.2/1, Error ellipse: s-maj=13.8km s-min=6.5km az=23.3*

*NEIC **09** 13:55:26.9±2.1, 4°.19N×93°.59E, h53^{km}±19^{km}, mb4.2/8, Error ellipse: s-maj=20.4km s-min=9.3km az=63.0*

ISC 09 13:55:24.5±0.8**, 4°.3N**±0°.1×**93°.57E**±0°.09**, h28**^{km}**, n47, σ0^{s}.80**/37**, mb4.3**/18**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	2.82	90	P	Pn	13 56 07.2	-0.5
LHMI	Lhok Sumawe	3.49	74	ePn	Pn	13 56 18.1	+1.1
KCSI	Kotacane, Aceh	4.26	100	P	Pn	13 56 28.1	+0.6
PSI	Prapat	5.54	105	Pn	Pn	13 56 47.0	+1.8
	1.5nm,0.3s,baz=279,slow=7.8,SNR=6.8						
PSI				Sn	Sn	13 57 47.1	-1.0
	0.5nm,0.3s,baz=319,slow=20,SNR=2.1						
KULM	Kulim	7.12	82	ePn	Pn	13 57 07.0	+0.2
PALK	Pallekele	13.14	284	Sn	Sn	14 00 41.0	-14
	0.7nm,0.3s,baz=116,slow=18,SNR=2.5						
CM31	Chiang Mai Arr	15.03	20	ePn	P	13 58 59.2	-0.9
	13nm,1.3s						
CMAR	Chiang Mai Arr	15.03	20	Pn	P	13 58 59.2	-0.9
	0.7nm,0.3s,baz=215,slow=12,SNR=18						
CHTO	Chiang Mai	15.36	20	ePn	Pn	13 59 01.1	+1.7
	7.7nm,0.8s						
DLV	T Lat	16.60	62	ePn	P	13 59 17.2	-0.6
	40nm,1.4s						
SLVN	Son La	19.69	30	eP	P	13 59 50.2	-1.5
	4.3nm,0.7s						
H08S3	Diego Garcia H	24.14	241	T	T	14 25 30.9	
	baz=60,slow=75,SNR=1517						
H08S2	Diego Garcia H	24.14	241	T	T	14 25 32.6	
	baz=60,slow=75,SNR=332						
H08S1	Diego Carcia H	24.16	241	T	T	14 25 33.7	
	baz=60,slow=75,SNR=1620						
H08N1	Diego Carcia H	24.88	245	T	T	14 26 40.0	
	baz=53,slow=79,SNR=4.3						
H08N2	Diego Garcia H	24.88	245	T	T	14 26 38.9	
	baz=53,slow=79,SNR=5.6						
H08N3	Diego Garcia H	24.90	245	T	T	14 26 38.9	
	baz=53,slow=79,SNR=6.5						
LSA	Lhasa	25.38	355	eP	P	14 00 50.8	+0.8
	12nm,0.6s						
KAPI	Kappang	27.73	109	LR	LR	14 11 45.1	
	comp=Z,61nm,19.9s,baz=68,slow=35						
MK31	Makanchi Array	43.46	349	eP	P	14 03 25.3	+0.2
	2.2nm,0.7s						
MK32	Makanchi Array	43.46	349	eP	P	14 03 25.6	+0.5
MKAR	Makanchi Array	43.46	349	P	P	14 03 25.6	+0.5
	2.8nm,0.7s,baz=171,slow=8.6,SNR=18						
H01W3	Cape Leeuwin H	43.51	155	T	T	14 49 46.4	
	baz=331,slow=76,SNR=54						
H01W2	Cape Leeuwin H	43.52	155	T	T	14 49 48.4	
	baz=331,slow=76,SNR=45						
H01W1	Cape Leeuwin H	43.52	155	T	T	14 49 48.6	
	baz=331,slow=76,SNR=51						
SONA0	Songino Array	44.76	12	eP	P	14 03 35.7	0.0
SONM	Songino Array	44.76	12	P	P	14 03 35.7	0.0
	2.0nm,0.7s,baz=216,slow=7.3,SNR=7.8						
GEYT	Alibeck	46.54	321	P	P	14 03 48.6	-1.2
	3.3nm,0.7s,baz=141,slow=9.6,SNR=6.4						
WRA	Warramunga Arr	46.74	122	P	P	14 03 51.8	+0.2
	2.2nm,0.8s,baz=289,slow=10,SNR=3.8						
WR1	Warramunga Arr	46.74	122	eP	P	14 03 51.8	+0.2
KURBB	Kurchatov Arra	47.88	347	P	P	14 04 00.7	+0.8
	3.6nm,0.7s,baz=171,slow=7.0,SNR=36						
ZAA0	Zalesovo Array	50.02	353	eP	P	14 04 16.7	+0.4
	19nm,1.3s						
ZALV	Zalesovo Beam	50.02	353	P	P	14 04 17.1	+0.9
	8.7nm,0.6s,baz=184,slow=7.1,SNR=29						
ZAA1	Zalesovo Array	50.02	353	eP	P	14 04 17.1	+0.8
BVAR	Borovoye Array	52.20	342	P	P	14 04 33.0	+0.3
	3.1nm,0.7s,baz=141,slow=9.6,SNR=12						
ABKAR	Akbulak array	53.12	333	eP	P	14 04 39.9	+0.3
	6.0nm,1.2s						
KBZ	Khabaz	59.38	319	P	P	14 05 23.3	-1.1
	0.8nm,0.4s,baz=190,slow=6.1,SNR=2.4						
BR101	Keskin Array S	64.37	312	eP	P	14 05 58.0	-0.2
BRTR	Keskin Array B	64.37	312	P	P	14 05 58.0	-0.2
	1.2nm,0.6s,baz=167,slow=7.6,SNR=5.5						
IDI	Anoyia	70.17	306	P	P	14 06 35.3	+0.3
	4.9nm,0.7s,baz=46,slow=7.7,SNR=3.9						
FIA0	FINESS Array S	75.61	333	eP	P	14 07 06.2	-0.3
FINES	FINESS Array B	75.61	333	P	P	14 07 06.2	-0.3
	1.7nm,0.8s,baz=46,slow=8.0,SNR=3.0						
ARA0	ARCESS Array S	78.43	341	eP	P	14 07 22.2	-0.2
ARCES	ARCESS Array B	78.43	341	P	P	14 07 22.2	-0.2
	3.9nm,1.0s,baz=93,slow=7.3,SNR=4.5						
GERES	GERESS Array B	80.12	319	P	P	14 07 33.1	+1.0
	0.4nm,0.3s,baz=76,slow=4.1,SNR=3.9						
HFS	Hagfors	81.26	330	P	P	14 07 37.5	-0.3
	0.9nm,0.6s,baz=74,slow=5.1,SNR=3.2						
CPUP	Villa Florida	144.56	229	PKP	PKPab	14 14 57.1	-0.5
	2.6nm,0.9s,baz=69,slow=2.9,SNR=4.4						

WEL 09 13:58:39.2±1.7**, 32°S**±22°×**18°0E**±2°4**, h434**^{km}±43^{km}**, M4.2**/16**, mB4.4**/4**, MLv4.3**/16**, Mw(mB)3.5**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=49.9, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.32	193	P	P	14 00 06.8	+1.0
WMGZ	Waiomatatini S	5.55	192	P	P	14 00 09.2	+1.2
WMGZ				S	S	14 01 22.4	+1.7
HAZ	Te Kaha	5.62	197	P	P	14 00 08.8	0.0
HAZ				S	S	14 01 22.5	+0.4
WCZ	Waipu Caves	5.76	230	P	P	14 00 10.4	+0.1
PUZ	Puketiti	5.82	192	P	P	14 00 11.4	+0.5
PUZ				S	S	14 01 24.1	-1.9
RUGZ	Raukumara Rang	5.84	197	P	P	14 00 10.6	-0.6
OUZ	Omahuta	5.91	240	P	P	14 00 11.1	-0.7
TWGZ	Tauwhareparae	5.98	194	P	P	14 00 11.4	-1.1
TWGZ				S	S	14 01 30.3	+1.3
MWZ	Matawai	6.23	197	P	P	14 00 13.9	-1.3
CNGZ	Carnagh Statio	6.23	192	P	P	14 00 16.6	+1.4
TKGZ	Te Karaka	6.26	194	P	P	14 00 14.3	-1.1
URZ	Urewera	6.27	200	P	P	14 00 13.9	-1.7
TOZ	Tahuroa Road	6.41	212	P	P	14 00 19.4	+2.4
RAGZ	Rawiri	6.41	197	P	P	14 00 17.5	+0.4
RIGZ	Rimuhau	6.53	194	P	P	14 00 19.4	+0.9
MUGZ	Murupara	6.57	201	P	P	14 00 19.6	+0.6
RTZ	Ruatahuna	6.64	200	P	P	14 00 19.0	-0.7
RAHZ	Arahi	6.89	198	P	P	14 00 22.5	0.0
KUTZ	Kaahu Road	6.91	207	P	P	14 00 24.5	+1.9
NMHZ	Naumai	7.14	199	P	P	14 00 24.7	-0.4
BKZ	Black Stump Fm	7.29	201	P	P	14 00 25.8	-0.9
HIZ	Hauiti	7.34	212	P	P	14 00 29.7	+2.5
BHHZ	Black Hill Sta	7.72	202	P	P	14 00 30.2	-1.3
KAHZ	Kahuranaki	7.77	197	P	P	14 00 32.2	+0.3
PXZ	Pawanui	8.00	197	P	P	14 00 33.1	-1.3

MAN 09 14:01:56.5, 17°.86N×119°.53E, h16^{km}**, MS3.5, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	1.14	100	eP	Pn	14 02 16.5	-1.4
ABRA				eS	Sb	14 02 31.3	-1.3
BOLP	Bolinao	1.51	166	eP	Pg	14 02 25.4	-0.3
BOLP				eS	Sg	14 02 45.9	+0.5
APYP	Conner	1.63	90	eP	Pn	14 02 24.6	0.0
APYP				eS	Sn	14 02 45.0	-0.3
SMPP	San Manuel, Pa	2.02	147	eP	Pn	14 02 31.3	+1.3
SMPP				eS	Sb	14 02 57.7	-0.2
SCZP	Santa Cruz	2.10	170	eP	Pb	14 02 33.4	-0.8
SCZP				eS	Sb	14 03 00.4	+0.3
CVP	Callao Caves	2.19	94	⇑iP	Pn	14 02 33.4	+1.1
CVP				i S	Sn	14 02 41.8	-17
SGCP	Mt. Cagua	2.42	80	eP	Pn	14 02 36.4	+0.8
SGCP				eS	Sn	14 03 04.1	-0.8
PALP	Palanan	2.87	106	eP	Pn	14 02 43.2	+1.5
PALP				eS	Sn	14 03 17.0	+1.1
BALP	Baler	2.87	137	eP	Pn	14 02 43.7	+2.0
BALP				eS	Sn	14 03 17.2	+1.2

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*ISCJB **09** 14:02:30.8±0.6, 34°.76N±0°.07×137°.03E±0°.07, h338^{km}±5^{km}, mb3.1/3, Error ellipse: s-maj=11.9km s-min=9.0km az=13.0*

*JMA **09** 14:02:30.9±0.3, 34°.76N×136°.96E, h339^{km}±3^{km}, M2.6*

*IDC **09** 14:02:31.4±0.7, 34°.71N×136°.98E, h323^{km}±11^{km}, mb3.0/3, mb1 3.0/9, mb1mx2.8/67, mbtmp3.6/9, Error ellipse: s-maj=22.5km s-min=11.2km az=64.0*

ISC 09 14:02:31.7±0.9**, 34°.77N**±0°.08×**137°.00E**±0°.07**, h332**^{km}±8^{km}**, n25, σ1^{s}.05**/33**, mb3.0**/3**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	0.45	212	P	Pn	14 03 14.3	+0.5
JAO	Obara	0.54	23	eS	S	14 03 47.5	-0.3
JYTA	Yamagatataniai	0.85	345	P	Pn	14 03 15.0	+0.2
JNY	Yasuok	0.92	50	P	Pn	14 03 15.6	+0.4
JNY				eS	S	14 03 50.7	+0.8
TK02	Tokai 2	1.03	142	P	Pn	14 03 16.7	+1.3
JWT	Wachi	1.41	292	P	Pn	14 03 17.1	-0.3
JYN	Shimob	1.46	60	P	Pn	14 03 18.4	+0.6
JKG	Kaga	1.60	340	P	Pn	14 03 18.2	-0.2
JRY	Ryogami san	1.99	51	P	Pn	14 03 22.4	+1.2
MJAR	Matsushiro Arr	2.02	29	P	Pn	14 03 22.0	+0.6
	0.2nm,0.3s,baz=210,slow=8.7,SNR=14						
MJAR				S	S	14 04 00.3	-0.9
	0.1nm,0.3s,baz=220,slow=16,SNR=7.1						
JHU	Hanno	2.16	59	P	Pn	14 03 23.1	+0.7
JHU				eS	S	14 04 02.4	-0.6
JAG	Ashikaga	2.59	50	P	Pn	14 03 25.8	-0.2
BSO4	Boso 4	2.75	85	P	Pn	14 03 27.8	+0.5
BSO4				S	S	14 04 11.6	-0.3
JHJ	Hachijo jima 2	2.84	125	P	Pn	14 03 26.6	-1.7
	5.5nm,0.3s,baz=252,slow=19,SNR=2.2						
JHJ				S	S	14 04 13.0	-0.7
	4.3nm,0.3s,baz=252,slow=20,SNR=1.8						
BSO3	Boso 3	2.89	88	P	Pn	14 03 28.4	+0.1
BSO3				S	S	14 04 13.5	-0.3
JYT	Yasato	2.98	60	P	Pn	14 03 28.9	-0.5
JYT				S	S	14 04 11.6	-4.2
BSO1	Boso 1	3.28	91	P	Pn	14 03 31.7	0.0
BSO1				eS	S	14 04 20.1	+0.1
JHO	Hitachi	3.44	57	P	Pn	14 03 33.1	-0.7
JNU	Nakatsue	5.35	254	P	Pn	14 03 53.5	-0.9
	0.5nm,0.3s,baz=341,slow=15,SNR=5.6						
KSRS	Korea Array	7.82	293	P	Pn	14 04 23.6	+0.3
	0.3nm,0.3s,baz=107,slow=13,SNR=9.0						
ASAJ	Asahikawa	10.28	23	P	Pn	14 04 52.4	-0.5
	0.6nm,0.3s,baz=223,slow=12,SNR=8.2						
KLR	Kul'dur	14.96	347	P	Pn	14 05 48.5	+0.1
	0.2nm,0.3s,baz=184,slow=19,SNR=3.0						
SONM	Songino Array	26.24	309	P	P	14 07 38.5	+1.1
	0.5nm,0.7s,baz=120,slow=8.5,SNR=2.1						
MKAR	Makanchi Array	42.33	304	P	P	14 09 54.5	+0.5
	0.2nm,0.4s,baz=88,slow=9.1,SNR=2.9						
WRA	Warramunga Arr	54.47	183	P	P	14 11 25.6	-0.4
	1.2nm,0.3s,baz=6.1,slow=8.6,SNR=10						

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*ISCJB **09** 14:02:45.2±0.5, 2°.84N±0°.04×128°.59E±0°.06, h10^{km}, mb4.0/13, Error ellipse: s-maj=8.2km s-min=5.8km az=161.0*

*DJA **09** 14:02:51.1±1.0, 3°N±4°×12°8E±°, h19^{km}±9^{km}, M4.4/13, mB4.7/5, mb4.5/13, MLv4.6/13, Mw(mB)3.9/5*

*IDC **09** 14:02:53.2±2.2, 2°.73N×128°.56E, h67^{km}±21^{km}, mb3.7/13, mb1 3.9/14, mb1mx3.6/50, mbtmp4.0/14, MS3.2/2, Ms1 3.2/2, ms1mx2.6/40, Error ellipse: s-maj=28.3km s-min=11.1km az=73.0*

ISC 09 14:02:47.8±0.5**, 2°.68N**±0°.05×**128°.63E**±0°.07**, h10**^{km}**, n39, σ3^{s}.10**/35**, mb4.1**/13**, 2C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.27	214	P	Pb	14 03 26.5	-2.5
SGSI	Sangihe	3.25	288	P	Pn	14 03 37.3	-1.6
LBMI	Labuha	3.48	199	P	Pn	14 03 44.1	+2.0
SWI	Sorong	4.39	143	P	Pn	14 03 59.9	+5.3
SIJI	Sorong	4.40	143	P	Pn	14 04 00.2	+5.4
	9.3nm,0.3s,baz=316,slow=22,SNR=28						
SIJI				S	Sn	14 04 49.4	+3.3
	baz=265,slow=9.3,SNR=4.5						
DDMP	Don Marcelino,	4.47	320	eP	Pn	14 03 58.3	+2.6
DDMP				eS	Sn	14 04 51.3	+3.4

DMPH	Davao City--Mi	5.37	325	eP	Pg	14 04 31.6	+1.0
DMPH				eS	Sb	14 05 24.1	-2.1
SANI	Sanana	5.39	209	P	Pn	14 04 09.8	+1.5
KCP	Kidapawan	5.56	321	⇑eP	Pn	14 04 14.9	+4.2
KCP				i S	Sn	14 05 20.6	+5.8
SKMP	Bagumbayan, Su	5.58	313	eP	Pn	14 04 10.9	0.0
SKMP				eS	Sn	14 05 11.1	-4.1
BUKP	Musuan	6.27	326	eP	Pn	14 04 25.3	+4.9
BUKP				eS	Sn	14 05 38.7	+6.5
CTBH	Cotabato--PC H	6.28	316	⇑iP	Pn	14 04 23.2	+2.7
FAKI	Fak Fak	6.64	147	P	Pn	14 04 30.0	+4.5
LUWI	Luwuk	6.92	238	P	Pn	14 04 31.1	+1.7
APSI	Ampana	7.83	243	P	Pn	14 04 41.9	0.0
	39nm,0.7s,387nm0.2nm						
TTSI	Tana Toraja	10.48	237	P	Pn	14 05 17.8	-0.4
SPSI	Sidrap Palu	11.04	233	P	Pn	14 05 25.7	-0.2
JAY	Jayapura	13.13	113	LR	LR	14 10 29.4	
	comp=Z,63nm,21.7s,baz=353,slow=34						
GUMO	Guam	19.37	55	LR	LR	14 13 37.9	
	comp=Z,120nm,20.1s,baz=194,slow=33						
PWJI	Pagerwojo	19.86	238	P	P	14 07 17.6	-1.7
WRA	Warramunga Arr	23.17	166	P	P	14 07 55.2	+0.4
	12nm,0.8s,baz=344,slow=12,SNR=30						
ASAR	Alice Springs	26.69	169	P	P	14 08 26.9	-0.4
	1.4nm,0.7s,baz=353,slow=7.4,SNR=13						
ASAR				PcP	PcP	14 11 48.8	-2.3
	0.4nm,0.5s,baz=359,slow=2.1,SNR=5.2						
ASAR				ScP	ScP	14 15 22.8	-8.7
	0.3nm,0.8s,baz=344,slow=2.4,SNR=3.4						
CMAR	Chiang Mai Arr	33.03	300	P	P	14 09 21.5	-2.2
	0.5nm,0.6s,baz=113,slow=7.1,SNR=3.0						
KSRS	Korea Array	34.61	359	P	P	14 09 36.5	-0.6
	3.4nm,0.7s,baz=174,slow=9.6,SNR=18						
MJAR	Matsushiro Arr	34.84	14	P	P	14 09 37.5	-1.6
	2.2nm,0.7s,baz=187,slow=10,SNR=8.1						
STKA	Stephens Creek	36.51	161	P	P	14 09 52.9	-0.6
	7.5nm,0.7s,baz=332,slow=9.5,SNR=15						
H11S3	WAKE ISLAND Hy	40.45	64	T	T	14 53 47.2	
	baz=252,slow=75,SNR=34						
H11S2	WAKE ISLAND Hy	40.46	64	T	T	14 53 48.2	
	baz=252,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	40.46	64	T	T	14 53 47.6	
	baz=252,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	41.02	63	T	T	14 54 22.7	
	baz=250,slow=75,SNR=25						
H11N2	WAKE ISLAND Hy	41.03	63	T	T	14 54 24.2	
	baz=250,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	41.04	63	T	T	14 54 24.2	
	baz=250,slow=75,SNR=25						
USRK	Ussuriysk Ar.	41.45	4	P	P	14 10 33.8	-1.0
	3.3nm,0.8s,baz=189,slow=9.4,SNR=8.9						
KLR	Kul'dur	46.45	3	P	P	14 11 11.4	-3.4
	0.7nm,0.6s,baz=262,slow=11,SNR=2.7						
SONM	Songino Array	48.91	340	P	P	14 11 30.6	-3.5
	0.8nm,0.7s,baz=158,slow=8.7,SNR=4.6						
PETK	Petropavlovsk-	55.71	21	P	P	14 12 22.9	-1.5
	1.4nm,0.6s,baz=240,slow=2.9,SNR=3.8						
MKAR	Makanchi Array	59.50	325	P	P	14 12 49.3	-2.0
	1.3nm,0.4s,baz=118,slow=7.9,SNR=7.2						
ZALV	Zalesovo Beam	62.38	332	P	P	14 13 08.3	-2.4
	0.4nm,0.3s,baz=116,slow=6.6,SNR=2.7						
ILAR	Eielson Array	85.23	25	P	P	14 15 21.9	-2.5
	0.1nm,0.4s,baz=260,slow=5.7,SNR=3.6						

*SJA **09** 14:22:22.4±0.4, 31°.35S×68°.92W, h104^{km}±2^{km}, ML2.5, MW3.6*
*ISCJB **09** 14:22:23.4±1.1, 31°.38S±0°.06×68°.83W±0°.06, h106^{km}±9^{km}, Error ellipse: s-maj=9.1km s-min=8.5km az=174.3*
*GUC **09** 14:22:23.4±0.7, 31°.35S×68°.86W, h86^{km}±5^{km}, ML3.1*
ISC 09 14:22:24.6±1.8, **31°.37S**±0°.06×**68°.86W**±0°.05, **h96**^{km}±12^{km}, **n13**, σ**0^s.61**/18, **2C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.33	84	eP	Pn	14 22 38.7	-0.4
RTLL				i S	Sn	14 22 50.4	+0.6
AMOG	MOGNA	0.53	37	eP	Pn	14 22 39.8	-0.6
AMOG				eS	Sn	14 22 52.4	+0.3
RTCV	Cerro Valdivia	0.57	151	eP	Pn	14 22 40.0	-0.6
RTCV				eS	Sn	14 22 53.5	+0.9
RTLS	Leoncito	0.57	221	eP	Pn	14 22 40.4	-0.5
RTLS				IAML		14 22 55.1	
	comp=Z,203nm,0.2s						
ACCO	Cerro Coronel	0.80	347	eP	Pn	14 22 42.5	-0.6
ACCO				IAML		14 23 00.1	
	comp=Z,56nm,0.2s						
AUSP	Uspallata	0.96	207	eP	Pn	14 22 44.2	-0.6
ACAN	Cantantal	1.69	123	eP	Pn	14 22 52.9	-0.2
CO02	Combarbal	1.84	275	⇑iP	Pn	14 22 54.7	-0.3
CO02				i S	Sn	14 23 18.8	+0.6
GO04	Tololo Observa	2.05	305	⇑iP	Pn	14 22 57.4	-0.6
GO04				i S	Sn	14 23 24.0	+0.7
LSCH	La Serena	2.52	305	IAML		14 23 34.9	
	comp=E,82nm,0.3s						
ACLC	CERRO LA CRUZ	2.54	41	eP	Pn	14 23 03.8	-0.5
VCA	Vinchina	2.68	12	eP	Pn	14 23 05.6	-0.6
VCA	Vinchina	2.68	12	eP	Pn	14 23 06.5	+0.3
VCA				eS	Sn	14 23 38.6	+0.4
VCA				IAML		14 23 45.5	
	comp=E,70nm,0.3s						

*IGQ **09** 14:25:13.8±0.8, 1°N±6°×7°9W±°, h10^{km}, MLv3.5*
ISC 09 14:25:10.0±2.8, **1°.38N**±0°.07×**79°.2W**±0°.1, **h16**^{km}±15^{km}, **n17**, σ**1^s.04**/22, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMC	Tumaco	0.67	49	eP	Pb	14 25 23.9	+0.7
TUMC				eS	Sn	14 25 35.2	+0.3
TUMC				i		14 25 43.9	
	comp=N,290nm,0.7s						
LITE1	Lita	1.04	124	P	Pn	14 25 30.7	+0.6
PAC1	Pacto, Paraso	1.19	158	P	Pg	14 25 32.3	-0.7
PAC1				S	Sg	14 25 48.7	+0.1
URCU	Urcuqui	1.35	134	P	Pg	14 25 36.1	0.0
CUSE	Cuicocha Este	1.35	142	P	Pg	14 25 37.2	+1.1
CUSE				S	Sg	14 25 55.1	+1.3
CUIC	Cuicocha-Domo	1.38	141	P	Pg	14 25 36.5	-0.1
CUIC				S	Sg	14 25 55.2	+0.6
IMBA	Imbabura, San	1.50	137	P	Pg	14 25 39.3	+0.3
PULU	Pululahua	1.53	152	P	Pg	14 25 40.2	+0.7
YANA	Yana	1.63	156	P	Pg	14 25 40.8	-0.6
BBAC	Balboa, Cauca	2.08	72	eP	Pn	14 25 45.6	+1.2
BBAC				eS	Sb	14 26 12.3	-0.9
BBAC				i		14 26 19.8	
	comp=E,186nm,0.3s						
PITA	Cotopaxi Volc	2.08	158	P	Pg	14 25 48.6	-1.4
ANTS	Antisana-Sarah	2.15	150	P	Pb	14 25 48.5	-0.3
VC1	Cotopaxi 1	2.17	158	P	Pg	14 25 50.0	-1.8
BREF	Cotopaxi Volca	2.18	159	P	Pb	14 25 49.4	-0.1
BTAM	Cotopaxi Volca	2.21	158	P	Pb	14 25 50.1	+0.3
CRUC	La Cruz	2.28	85	eP	Pb	14 25 50.0	-1.1
CRUC				i		14 26 27.2	
	comp=Z,49nm,0.6s						
SOTA	Rioblanco	2.72	74	eP	Pb	14 25 56.4	-2.3

*TIF **09** 14:26:05.0, 42°.41N×40°.88E, h38^{km}±3^{km}*
*NORS **09** 14:26:08.2±0.0, 42°.51N×41°.13E, h9^{km}, MPVA3.7*
ISC 09 14:26:06.6±3.1, **42°.43N**±0°.03×**41°.02E**±0°.03, **h7**^{km}±23^{km}, **n19**, σ**0^s.77**/38, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.97	149	P	Pb	14 26 24.9	-0.7
BATM				S	Sb	14 26 38.9	+0.3
BATM	Batumi	0.97	149	ePg	Pb	14 26 24.9	-0.7
BATM				eSg	Sb	14 26 38.9	+0.3
ARXR	Arkhyz	1.15	9	ePg	Pb	14 26 28.1	-0.7
ARXR				eSg	Sb	14 26 42.9	-1.0
RPOR	Krasnaya Polya	1.38	337	i Pg	Pn	14 26 31.5	-0.8
RPOR				i Sg	Sn	14 26 50.1	-0.8
TKB	Tkibuli	1.46	92	P	Pn	14 26 32.7	-0.7
TKB				S	Sn	14 26 52.5	-0.3
NEY	Neytrino	1.49	56	ePg	Pn	14 26 33.3	-0.7
NEY				eSg	Sn	14 26 52.8	-1.0
SOC	Sochi	1.50	321	ePg	Pn	14 26 33.3	-0.6
SOC				eSg	Sn	14 26 53.1	-0.6
SHA1	Shidzhatmaz	1.77	42	ePg	Pn	14 26 38.8	+0.9
SHA1				eSg	Sb	14 27 02.1	+0.1
ONI	Oni	1.80	84	P	Pn	14 26 38.5	+0.3
ONI				S	Sn	14 27 01.4	+0.1
ONI	Oni	1.80	84	ePg	Pn	14 26 38.5	+0.3
ONI				eSg	Sn	14 27 01.4	+0.1
LZRR	Lazarevskoye	1.93	322	ePg	Pb	14 26 41.8	-0.2
LZRR				eSg	Sb	14 27 06.6	+0.4
DIGR	Digorskoe uzhe	1.94	75	ePg	Pn	14 26 41.2	+1.1
DIGR				eSg	Sn	14 27 05.8	+0.8
KIV0	Kislovodsk Arr	1.95	38	i Pg	Pb	14 26 41.9	-0.6
KIV0				i Sg	Sb	14 27 07.0	-0.2
AKH	Akhalkalaki	2.11	118	P	Pn	14 26 42.3	-0.1
AKH				S	Sn	14 27 09.1	+0.2
AKH	Akhalkalaki	2.11	118	ePg	Pn	14 26 42.3	-0.1
AKH				eSg	Sn	14 27 09.1	+0.2
ZEI	Tsey	2.15	80	ePg	Pn	14 26 44.5	+1.4
ZEI				eSg	Sb	14 27 12.5	-0.5
LSNR	Lesken	2.23	67	ePg	Pb	14 26 47.7	+0.5
LSNR				eSg	Sb	14 27 16.0	+1.0
AGYR	Agha	2.25	320	ePg	Pb	14 26 48.7	+1.3
AGYR				eSg	Sb	14 27 17.4	+2.0
LACR	Lac	2.45	80	ePn	Pb	14 26 50.4	-0.6
LACR				eSn	Sb	14 27 21.6	+0.3

*ISCJB **09** 14:29:09.3±0.5, 26°.48N±0°.07×141°.6E±0°.2, h10^{km}, mb4.0/10, Error ellipse: s-maj=29.0km s-min=10.1km az=177.0*
*IDC **09** 14:29:09.5±0.7, 26°.48N×141°.83E, h0^{km}, mb4.0/9, mb1 4.2/10, mb1mx3.8/48, mbtmp4.0/10, ML2.9/1, MS2.5/1, Ms1 2.5/1, ms1mx2.1/51, Error ellipse: s-maj=46.0km s-min=17.3km az=90.0*
*NEIC **09** 14:29:11.1±0.3, 26°.47N×141°.78E, h10^{km}, mb4.1/2, Error ellipse: s-maj=18.7km s-min=6.8km az=86.0*
ISC 09 14:29:11.1±0.8, **26°.5N**±0°.1×**141°.8E**±0°.3, **h10**^{km}, **n20**, σ**0^s.57**/19, **mb4.1**/10, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	10.48	344	Pn	Pn	14 31 41.5	-0.1
	0.1nm,0.3s,baz=161,slow=16,SNR=7.4						
MAJO	Matsushiro	10.49	344	ePn	Pn	14 31 41.5	-0.1
KSRS	Korea Array	16.04	316	LR	LR	14 38 40.9	
	comp=Z,16nm,18.5s,baz=140,slow=36						
WR1	Warramunga Arr	46.70	190	eP	P	14 37 40.6	+0.3
WRA	Warramunga Arr	46.70	190	P	P	14 37 40.6	+0.3
	3.6nm,0.5s,baz=5.3,slow=8.0,SNR=48						
AS31	Alice Springs	50.42	189	eP	P	14 38 08.6	-0.3
	1.4nm,1.1s						
ASAR	Alice Springs	50.42	189	P	P	14 38 08.5	-0.5
	0.3nm,0.4s,baz=19,slow=9.5,SNR=20						
STKA	Stephens Creek	58.02	180	P	P	14 39 04.2	0.0
	1.1nm,0.7s,baz=17,slow=11,SNR=2.5						
STKA	Stephens Creek	58.02	180	eP	P	14 39 04.0	-0.2
	5.7nm,1.8s						
YKA	Yellowknife Ar	72.86	28	P	P	14 40 39.3	-0.7
	0.2nm,0.4s,baz=302,slow=6.3,SNR=3.6						
YKB5	Yellowknife Ar	72.86	28	eP	P	14 40 39.2	-0.7
ARA0	ARCESS Array S	74.00	341	eP	P	14 40 45.9	-0.7
ARCES	ARCESS Array B	74.00	341	P	P	14 40 45.9	-0.7
	3.1nm,0.8s,baz=62,slow=13,SNR=4.2						
FIA0	FINESS Array S	78.34	334	eP	P	14 41 12.3	+0.9
FINES	FINESS Array B	78.34	334	P	P	14 41 12.3	+0.9
	1.6nm,0.4s,baz=73,slow=5.2,SNR=28						
NV01	Mina Array Sit	81.19	52	eP	P	14 41 28.2	+0.6
NVAR	Mina Array Bea	81.19	52	P	P	14 41 28.2	+0.6
	0.5nm,0.6s,baz=285,slow=5.6,SNR=5.1						
HFS	Hagfors	83.84	337	P	P	14 41 40.4	-0.3
	2.0nm,0.7s,baz=71,slow=9.3,SNR=3.6						
NB200	NORSAR Array S	84.05	338	eP	P	14 41 42.2	+0.4
NOA	NORSAR Array B	84.05	338	P	P	14 41 42.2	+0.4
	0.7nm,0.6s,baz=45,slow=5.0,SNR=2.7						

UCR 09 14:30:19.5±1.0, **8°.50N**×**83°.10W**, **h2**^{km}±4^{km}, **MW3.5, 2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTJ1	Puerto Jimnez	0.20	282	eP	Pg	14 30 24.6	+1.2
PTJ1				eS	Sg	14 30 29.6	+3.5
EDSV	San Vito	0.35	22	eP	Pb	14 30 28.1	-0.4
BRU2	Volcan	0.50	54	⇓eP	Pb	14 30 30.3	-0.9
BRU2				eS	Sb	14 30 38.6	-0.4
EDPN	Palmar Norte	0.58	323	eP	Pg	14 30 31.3	+0.6
EDPN				eS	Sb	14 30 40.5	-0.6
DRK0	Durika	0.78	349	⇓eP	Pg	14 30 34.6	+0.2
DRK0				eS	Sb	14 30 46.3	-0.6
LCR2	La Lucha 2	1.53	324	eP	Pn	14 30 47.1	-0.9
LCR2				eS	Sg	14 31 09.3	+0.6
CVTR	Volcan Turrial	1.65	337	eP	Pn	14 30 49.1	-0.7
CVTR				eS	Sg	14 31 12.7	+0.1

*ISK **09** 14:37:05.9, 39°.63N×28°.88E, h5^{km}, ML2.5/17*
*ISCJB **09** 14:37:06.3±0.5, 39°.64N±0°.02×28°.89E±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=4.0km az=157.8*
*DDA **09** 14:37:06.0, 39°.66N×28°.87E, h7^{km}±3^{km}, ML2.9*
ISC 09 14:37:06.2±1.1, **39°.65N**±0°.02×**28°.87E**±0°.03, **h11**^{km}±12^{km}, **n25**, σ**0^s.56**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	Dursunbey	0.31	261	i P	Pg	14 37 13.0	+0.5
DURS				i S	Sb	14 37 17.9	-1.0
DURS				IAML_P			
	comp=Z,5μm,0.1s						
ORLT	Orhaneli	0.40	3	PG	Pg	14 37 14.5	+0.4
ORLT				SG	Sb	14 37 20.9	-0.6
TVSB	Tavsanli	0.50	113	PG	Pg	14 37 15.8	-0.2
TVSB				SG	Sg	14 37 23.1	+0.5
MDNY	Mudanya-Bursa	0.72	1	PG	Pg	14 37 20.4	+0.2
KCTX	Karacabey (Bur	0.73	328	PG	Pb	14 37 21.2	+0.2
GDZ	Gediz	0.73	139	i P	Pg	14 37 20.3	-0.1
GDZ				i S	Sg	14 37 29.3	-0.8
BALB	Balikesir	0.76	270	PG	Pb	14 37 21.8	+0.3
ARMT	Armutlu	0.92	360	PG	Pb	14 37 24.5	+0.3
STEP	BALIKESIR_Sava	0.93	253	i P	Pg	14 37 23.2	-1.0
STEP				IAML_P			
	comp=Z,1μm,0.2s						
USAK	Uak-Merkez	0.94	173	i P	Pb	14 37 24.3	-0.2
USAK				i S	Sg	14 37 35.9	-0.7
YLV	Yalova	0.99	23	PG	Pb	14 37 25.7	+0.1
ADVT	Abdulvahap	1.03	40	PG	Pb	14 37 26.5	+0.4
EDC	Edincik	1.04	312	PG	Pn	14 37 27.0	+0.2
AKHS	Akhisar	1.12	227	i P	Pn	14 37 29.3	+1.3
AKHS				IAML_P			
	comp=Z,2μm,0.2s						
KULA	Kula-Manisa	1.14	188	PN	Pg	14 37 28.0	-0.2
MANT	Manisa	1.18	192	i P	Pn	14 37 29.7	+0.8
BORA	Eskisehir	1.24	79	PN	Pn	14 37 30.1	+0.5
HRT	Hereke	1.32	27	PN	Pg	14 37 31.4	-0.2
KHAL	Karahalli	1.36	159	i P	Pg	14 37 33.2	+0.7
KHAL				IAML_P			
	comp=Z,685nm,0.2s						
MRMT	Marmara Adasi	1.36	315	PN	Pg	14 37 32.3	-0.2
SRCK	Saricakaya, Es	1.41	73	PN	Pg	14 37 32.8	-0.5
KAVV	Kandilli-Istan	1.42	6	PN	Pg	14 37 33.4	-0.1
ISK	Istanbul-Kandi	1.42	6	PN	Pg	14 37 33.2	-0.4
GULT	Gulveren	1.49	58	PN	Pb	14 37 33.9	0.0
SILT	Sile	1.61	21	PN	Pb	14 37 35.8	-0.3

*ISCJB **09** 14:40:18.4±0.4, 8°.32S±0°.05×119°.68E±0°.05, h200^{km}, mb3.9/6, Error ellipse: s-maj=7.6km s-min=5.8km az=144.0*
*DJA **09** 14:40:20.6±0.4, 8°S±3°×12°0E±°, h171^{km}±5^{km}, M4.2/10, mb4.7/1, MLv4.0/10*
*IDC **09** 14:40:23.1±2.0, 7°.78S×120°.32E, h217^{km}±14^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.3/57, mbtmp4.2/10, Error ellipse: s-maj=67.6km s-min=6.9km az=56.0*
ISC 09 14:40:19.6±0.7, **8°.29S**±0°.05×**119°.70E**±0°.06, **h200**^{km}, **n22**, σ**2^s.01**/30, **mb4.0**/6, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	1.38	193	P	Pn	14 40 51.1	-1.2
WBSI				S	Sn	14 41 15.5	-2.4
WSI	Waingapu	1.50	157	P	Pn	14 40 52.4	-0.9
WSI				S	Sn	14 41 16.3	-3.2
PLAI	Plampang	1.97	254	P	Pn	14 40 57.6	-0.2
PLAI				S	Sn	14 41 26.3	-1.3
EDFI	Ende, Flores	2.02	103	P	Pn	14 40 57.3	-1.2
BSSI	Bau Bau, Buton	2.27	20	P	Pn	14 40 59.1	-1.9
MMRI	Maumere	2.54	98	P	Pn	14 41 03.6	-0.3
BKSI	Bulukumba	2.98	8	P	Pn	14 41 08.7	-0.3
KAPI	Kappang	3.25	1	P	Pn	14 41 12.2	-0.1
	6.8nm,0.3s,baz=173,slow=9.2,SNR=30						
KAPI				S	Sn	14 41 50.0	-3.6
	0.7nm,0.3s,baz=205,slow=19,SNR=3.0						
BNSI	Bone	3.88	6	P	Pn	14 41 20.8	+0.8
BATI	Baumata	4.36	116	P	Pn	14 41 26.0	+0.1
	23nm,0.3s,baz=292,slow=1.8,SNR=25						
BATI				S	Sn	14 42 16.4	-1.6
	31nm,0.3s,baz=190,slow=22,SNR=7.5						
BATI	Baumata	4.36	116	P	Pn	14 41 25.8	-0.1
SOEI	Soe	4.74	108	P	Pn	14 41 30.9	0.0
SANI	Sanana	8.81	46	P	Pn	14 42 25.6	+2.1
WRA	Warramunga Arr	18.31	131	P	P	14 44 20.6	+1.7
	2.9nm,0.3s,baz=294,slow=14,SNR=114						
WRA				S	S	14 47 31.7	-6.1
	0.1nm,0.3s,baz=301,slow=22,SNR=2.6						
ASAR	Alice Springs	20.47	140	P	P	14 44 44.3	+2.1
	5.1nm,0.5s,baz=315,slow=10,SNR=148						
ASAR				S	S	14 48 21.7	+1.5
	1.3nm,0.8s,baz=320,slow=20,SNR=6.0						
ASAR				ScP	ScP	14 52 02.3	-0.9
	0.6nm,0.7s,baz=332,slow=2.1,SNR=4.5						
STKA	Stephens Creek	31.07	142	P	P	14 46 22.3	+3.2
	4.8nm,0.5s,baz=318,slow=8.8,SNR=21						
SONM	Songino Array	57.11	349	P	P	14 49 43.8	-1.4
	0.4nm,0.5s,baz=161,slow=9.2,SNR=3.1						
MKAR	Makanchi Array	64.14	332	P	P	14 50 33.9	+1.2
	2.3nm,0.6s,baz=138,slow=7.7,SNR=21						
ZALV	Zalesovo Beam	68.63	339	P	P	14 51 01.0	+0.1
	2.5nm,0.3s,baz=136,slow=5.5,SNR=9.2						
KURBB	Kurchatov Arra	68.64	333	P	P	14 51 01.7	+0.7
	0.8nm,0.5s,baz=141,slow=5.6,SNR=13						
AKTO	Aktyubinsk	79.04	325	P	P	14 52 01.4	0.0
	0.6nm,0.5s,baz=71,slow=9.8,SNR=3.7						
NVAR	Mina Array Bea	120.04	50	PKP	PKiKP	14 58 48.3	+1.0
	0.2nm,0.6s,baz=343,slow=0.9,SNR=2.7						

*IDC **09** 14:48:44.2±2.0, 16°.00N×122°.00E, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.4/58, mbtmp3.7/4, ML3.9/1, MS2.9/5, Ms1 2.9/5, ms1mx2.6/38, Error ellipse: s-maj=31.2km s-min=23.8km az=122.0*
*MAN **09** 14:48:48.9, 16°.10N×121°.82E, h14^{km}, MS4.0*
MAN INTENSITY IV- NAGTIPUNAN QUIRINO; INTENSITY III - MADDELA QUIRINO.
*ISCJB **09** 14:48:49.3±0.7, 16°.14N±0°.02×121°.81E±0°.05, h22^{km}±6^{km}, mb3.5/3, MS2.7/5, Error ellipse: s-maj=7.8km s-min=3.9km az=8.6*
ISC 09 14:48:48.1±1.5, **16°.12N**±0°.03×**121°.78E**±0°.05, **h18**^{km}±10^{km}, **n24**, σ**1^s.53**/30, **mb3.5**/3, **MS2.8**/5, **1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.42	207	eP	Pb	14 48 58.2	+1.1
BALP				eS	Sn	14 49 06.3	-0.4
CAUP	Cauayan	0.82	3	eP	Pg	14 49 03.6	-0.6
CAUP				eS	Sn	14 49 16.6	0.0
SMPP	San Manuel, Pa	1.05	272	eP	Pb	14 49 07.6	-0.3
SMPP				eS	Sb	14 49 21.7	+0.3
PALP	Palanan	1.12	33	eP	Pn	14 49 08.9	-0.1
PALP				eS	Sn	14 49 26.0	+1.9
POLP	Polilio Island	1.39	174	eP	Pn	14 49 12.6	-0.1
POLP				eS	Sb	14 49 32.0	+0.9
CVP	Callao Caves	1.57	2	⇑iP	Pn	14 49 14.9	-0.3
CVP				i S	Sn	14 49 34.4	-0.8
APYP	Conner	1.81	344	eP	Pn	14 49 18.1	-0.3
APYP				eS	Sn	14 49 40.7	-0.2
BOLP	Bolinao	1.81	279	eP	Pb	14 49 21.5	+0.7
BOLP				eS	Sg	14 49 46.6	+0.1
SCZP	Santa Cruz	1.83	259	eP	Pb	14 49 21.6	+0.5
SCZP				eS	Sg	14 49 47.8	+0.7
ABRA	Dolores	1.83	326	eP	Pn	14 49 20.0	+1.3
ABRA				eS	Sb	14 49 44.8	+1.1
SGCP	Mt. Cagua	2.13	7	eP	Pn	14 49 24.4	+1.6
SGCP				eS	Sb	14 49 52.7	+0.4
TGY	Tagaytay City	2.16	202	Pn	Pn	14 49 19.6	-3.8
	36nm,0.3s,baz=66,slow=20,SNR=2.5						
TGY				Lg	Lg	14 49 53.4	
	31nm,0.3s,baz=60,slow=20,SNR=5.7						
BOAC	Boac	2.65	179	eP	Pn	14 49 31.4	+1.5
BOAC				eS	Sn	14 50 04.3	+2.7
LUBP	Lubang	2.79	212	eP	Pb	14 49 38.0	+0.5
LUBP				eS	Sn	14 50 08.2	+2.8
KAPI	Kappang	21.09	186	LR	LR	15 03 29.8	
	comp=Z,15nm,18.2s,baz=301,slow=42						
CMAR	Chiang Mai Arr	21.92	279	P	P	14 53 42.2	+1.4
	1.7nm,0.9s,baz=89,slow=9.1,SNR=5.5						
CMAR				LR	LR	15 02 02.6	
	comp=Z,35nm,19.9s,baz=92,slow=36						
GUMO	Guam	22.46	93	LR	LR	15 01 42.4	
	comp=Z,19nm,18.6s,baz=264,slow=35						
BATI	Baumata	26.22	176	LR	LR	15 06 56.5	
	comp=Z,44nm,18.0s,baz=134,slow=42						
WRA	Warramunga Arr	37.90	161	P	P	14 56 02.1	-2.5
	1.4nm,0.9s,baz=341,slow=12,SNR=5.0						
ASAR	Alice Springs	41.28	163	P	P	14 56 30.0	-2.7
	0.6nm,1.0s,baz=344,slow=7.9,SNR=8.9						
H11S3	WAKE ISLAND Hy	42.86	80	T	T	15 42 08.4	
	baz=274,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	42.87	80	T	T	15 42 09.6	
	baz=274,slow=75,SNR=4.9						
H11S2	WAKE ISLAND Hy	42.88	80	T	T	15 42 09.9	
	baz=274,slow=75,SNR=6.6						
NOA	NORSAR Array B	85.60	333	LR	LR	15 41 58.8	
	comp=Z,5.1nm,20.5s,baz=300,slow=37						

*IDC **09** 14:50:51.8±0.7, 32°.65N×78°.11E, h0^{km}, mb3.9/17, mb1 4.0/19, mb1mx3.8/61, mbtmp3.9/19, ML3.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.6/48, Error ellipse: s-maj=18.3km s-min=15.0km az=48.0*
*ISCJB **09** 14:50:55.8±0.5, 32°.89N±0°.05×78°.18E±0°.06, h33^{km}, mb3.9/18, Error ellipse: s-maj=7.5km s-min=7.1km az=42.4*
*NEIC **09** 14:50:57.5±1.2, 32°.74N×78°.17E, h37^{km}±10^{km}, mb4.1/5, Error ellipse: s-maj=9.9km s-min=8.1km az=150.0*
ISC 09 14:50:57.7±0.6, **32°.83N**±0°.07×**78°.22E**±0°.07, **h35**^{km}, **n53**, σ**1^s.87**/52, **mb3.9**/19, **1D, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHK	Bhakra	2.08	228	eP	Pn	14 51 33.0	+2.8
BHK				eS	Sn	14 51 57.2	+2.3
JMU	Jammu	2.80	269	eP	Pn	14 51 27.0	-13
JMU				eS	Sn	14 52 05.5	-7.1
CHCP	Chirah Chowk	4.24	283	P	Pn	14 52 02.6	+2.8
CHCP				S	Sn	14 52 54.0	+5.9
NIL	Nilore	4.25	282	ePn	Pn	14 52 02.4	+2.4
SARP	Sargodha	4.78	261	P	Pn	14 52 09.7	+2.4
CEP	Cherat	5.38	282	⇓P	Pn	14 52 17.0	+1.4
THW	Thamme Wali	5.46	271	P	Pn	14 52 17.7	+1.1
KBL	Kabul	7.84	285	ePn	Pn	14 52 48.6	-0.9
GAR	Garm	8.89	316	ePn	Pn	14 53 02.6	-1.1
KDJ	Kajisay	9.32	355	ePn	Pn	14 53 10.9	+1.2
BTK	Batken	9.36	323	ePn	Pn	14 53 08.3	-1.8
CHGR	Chuyangaron	9.38	311	ePn	Pn	14 53 08.6	-1.9
ARSB	Arslanbob	9.45	335	ePn	Pn	14 53 11.3	-0.2
PRZ	Przheval'sk	9.64	1	ePn	Pn	14 53 12.1	-2.0
BOOM	Boomskoye usch	9.81	350	ePn	Pn	14 53 14.5	-2.0
AAK	Ala-Archa	10.22	344	Pn	Pn	14 53 22.0	-0.1
	0.6nm,0.3s,baz=162,slow=13,SNR=1.8						
AAK				Lg	Lg	14 56 08.7	
	1.1nm,0.3s,baz=218,slow=18,SNR=3.2						
AAK	Ala-Archa	10.22	344	ePn	Pn	14 53 21.7	-0.4
AAK				Lg	Lg	14 56 08.7	
KK31	Karatay Array	11.92	332	ePn	Pn	14 53 44.6	-0.5
KKAR	Karatay Array	11.92	332	ePn	Pn	14 53 44.5	-0.6
KURBB	Kurchatov Arra	17.78	1	P	P	14 55 03.6	+0.8
	0.1nm,0.3s,baz=190,slow=11,SNR=14						
KURK	Kurchatov	17.88	1	ePn	Pn	14 55 03.1	-0.3
	6.3nm,0.8s						
WSAR	Wadi Sarin	19.73	246	LR	LR	15 03 54.3	
	comp=Z,30nm,20.7s,baz=52,slow=40						
BVAR	Borovoye Array	20.96	347	P	P	14 55 37.2	-0.3
	2.8nm,0.4s,baz=149,slow=13,SNR=15						
BRVK	Borovoye	21.01	347	eP	P	14 55 37.8	-0.3
	6.0nm,0.8s						
ABKAR	Akbulak array	21.34	326	eP	P	14 55 41.7	+0.1
	5.8nm,1.0s						

ZALV	Zalesovo Beam	21.63	11	P	P	14 55 46.0	+1.3
	2.0nm,0.5s,baz=205,slow=11,SNR=4.1						
ZAA1	Zalesovo Array	21.63	11	*e*P	P	14 55 46.0	+1.2
AKTO	Aktyubinsk	23.06	326	P	P	14 56 00.7	+0.8
	2.0nm,0.7s,baz=120,slow=12,SNR=6.5						
CMAR	Chiang Mai Arr	23.47	123	P	P	14 56 02.1	-2.1
	1.3nm,0.7s,baz=313,slow=11,SNR=5.4						
SONA0	Songino Array	26.00	47	*e*P	P	14 56 28.5	+1.1
SONM	Songino Array	26.00	47	P	P	14 56 28.5	+1.1
	5.2nm,0.9s,baz=246,slow=9.1,SNR=12						
BR101	Keskin Array S	36.30	294	*e*P	P	14 57 58.0	-0.1
BRTR	Keskin Array B	36.30	294	P	P	14 57 58.0	-0.1
	0.9nm,0.7s,baz=82,slow=8.9,SNR=4.3						
FIA0	FINESS Array S	43.83	327	*e*P	P	14 58 59.9	-0.1
FINES	FINESS Array B	43.83	327	P	P	14 58 59.9	-0.1
	1.3nm,0.9s,baz=79,slow=7.2,SNR=2.2						
ARA0	ARCESS Array S	46.81	337	*e*P	P	14 59 22.1	-1.4
ARCES	ARCESS Array B	46.81	337	P	P	14 59 22.1	-1.4
	2.5nm,0.8s,baz=105,slow=11,SNR=2.7						
TIXI	Tiksi	47.09	20	P	P	14 59 26.1	+0.5
	1.6nm,0.5s,baz=226,slow=2.8,SNR=4.1						
TIXI	Tiksi	47.09	20	*e*P	P	14 59 26.4	+0.8
	3.2nm,1.1s						
NOA	NORSAR Array B	50.85	325	LR	LR	15 23 42.9	
	comp=Z,10nm,18.1s,baz=230,slow=39						
KMBO	Kilima Mbogo	51.31	237	P	P	14 59 56.8	-2.2
	0.9nm,0.6s,baz=64,slow=7.4,SNR=3.5						
SEY	Seymchan	54.20	33	LR	LR	15 25 50.6	
	comp=Z,89nm,19.6s,baz=344,slow=39						
ESDC	Sonseca Array	64.44	302	P	P	15 01 30.4	-0.2
	1.4nm,0.8s,baz=60,slow=7.1,SNR=10						
ESDC				LR	LR	15 37 18.1	
	comp=Z,16nm,18.0s,baz=110,slow=43						
TOA0	Torodi Ar. Sit	71.76	274	*e*P	P	15 02 16.1	-0.8
	5.2nm,0.8s						
TOA1	Torodi Ar. Sit	71.76	274	*e*P	P	15 02 15.1	-1.7
TORD	Torodi Ar. Bea	71.76	274	P	P	15 02 15.1	-1.7
	4.2nm,0.8s,baz=32,slow=6.4,SNR=17						
WR1	Warramunga Arr	75.01	126	*e*P	P	15 02 35.4	-0.4
WRA	Warramunga Arr	75.01	126	P	P	15 02 35.4	-0.4
	1.3nm,0.7s,baz=313,slow=6.8,SNR=5.4						
ILAR	Eielson Array	76.54	18	P	P	15 02 45.0	+1.0
	0.7nm,0.8s,baz=317,slow=4.8,SNR=10						
ASAR	Alice Springs	77.30	129	P	P	15 02 48.2	-0.6
	0.6nm,0.7s,baz=318,slow=6.1,SNR=11						
DBIC	Dimbokro	80.62	272	P	P	15 03 07.1	-0.2
	1.2nm,0.5s,baz=90,slow=2.0,SNR=2.5						
YKA	Yellowknife Ar	84.45	6	P	P	15 03 27.0	+0.7
	0.5nm,0.5s,baz=338,slow=6.0,SNR=3.6						
YKB5	Yellowknife Ar	84.45	6	*e*P	P	15 03 27.1	+0.7

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*IDC **09** 14:51:50.1±0.8, 42°.23N×85°.47E, h0^{km}, mb3.9/10, mb1 3.9/14, mb1mx3.7/61, mbtmp3.8/14, ML3.1/4, Error ellipse: s-maj=28.3km s-min=14.2km az=61.0*

*BJI **09** 14:51:53.6±0.0, 42°.23N×85°.22E, h8^{km}, mb3.7/1, ML3.6/10*

*NEIC **09** 14:51:55.9±0.8, 42°.21N×85°.28E, h39^{km}±8^{km}, mb4.3/4, Error ellipse: s-maj=8.3km s-min=7.8km az=132.0*

*NNC **09** 14:52:01.0±3.8, 42°.44N×84°.82E, h30^{km}±20^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=26.3km s-min=10.1km az=129.0*

*SOME **09** 14:52:04.7, 42°.42N×84°.80E, h15^{km}*

ISC 09 14:51:53.1±0.6**, 42°.29N**±0°.06×**85°.24E**±0°.04**, h10^{km}, n62, σ1^{s}.93**/79**, mb4.0**/11**, 9C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	2.37	49	*e*Pn	Pn	14 52 35.0	+2.9
WMQ	Urumqi	2.37	49	*e*Pn	Pb	14 52 35.7	-0.2
WMQ				Sn	Sb	14 53 07.0	+1.8
WMQ				smax	smax		
	comp=N,170nm,0.7s						
WMQ				smax	smax		
	comp=E,360nm,0.7s						
PDGK	Podgornoye	4.35	286	⇓Pn	Pn	14 53 00.8	+1.3
	1.6nm,0.3s						
PDGK				⇓Pg	Pg	14 53 14.3	-2.2
	14nm,0.5s						
PDGK				⇓Lg	Lg	14 54 09.6	
	36nm,0.5s						
DJR	Jarkent	4.47	299	*e*P	Pg	14 53 19.9	+1.3
	15nm,0.4s						
DJR				*e*S	Sg	14 54 14.1	-2.5
	32nm,0.4s						
UZB	Uzynbulak	4.66	283	*e*P	Pg	14 53 24.6	+2.3
	6.4nm,0.4s						
UZB				*e*S	Sg	14 54 22.6	0.0
	48nm,0.5s						
KPKS	Kokpek	4.96	286	*e*P	Pg	14 53 29.9	+1.9
	10.0nm,0.2s						
KPKS				*e*S	Sg	14 54 30.8	-1.4
	183nm,0.6s						
MK31	Makanchi Array	4.97	336	*e*Pn	Pn	14 53 09.7	+1.8
MK31	Makanchi Array	4.97	336	⇑Pn	Pn	14 53 11.0	+3.1
	1.8nm,0.3s,baz=154,slow=15,SNR=39						
MK31				⇓Pg	Pg	14 53 26.5	-1.8
	17nm,0.7s,baz=154,slow=16,SNR=5.3						
MK31				⇑Lg	Lg	14 54 29.2	
	26nm,0.4s,baz=150,slow=29,SNR=8.4						
MK32	Makanchi Array	4.97	336	*e*Pn	Pn	14 53 09.4	+1.6
MK32				*e*Lg	Lg	14 54 26.1	
MKAR	Makanchi Array	4.97	336	Pn	Pn	14 53 09.5	+1.6
	0.8nm,0.3s,baz=151,slow=14,SNR=32						
MKAR				Lg	Lg	14 54 26.1	
	22nm,0.3s,baz=145,slow=30,SNR=15						
MAKZ	Makanchi	5.09	334	*e*Pn	Pn	14 53 12.5	+3.1
MAKZ	Makanchi	5.09	334	⇑Pn	Pn	14 53 12.7	+3.3
	6.6nm,0.7s						
MAKZ				⇑Pg	Pg	14 53 30.0	-0.5
	15nm,0.5s						
MAKZ				⇑Lg	Lg	14 54 32.5	
	72nm,0.8s						
SATY	Saty	5.09	281	*e*P	Pg	14 53 33.1	+2.4
	15nm,0.3s						
SATY				*e*S	Sg	14 54 36.8	+0.2
	20nm,0.5s						
KAPS	Kapalarasan	5.21	307	*e*P	Pg	14 53 34.6	+1.9
	9.0nm,0.8s						
KAPS				*e*S	Sg	14 54 39.5	-0.6
	41nm,0.7s						
KURS	Kuram	5.33	285	*e*P	Pg	14 53 37.2	+2.1
	5.9nm,0.5s						
KURS				*e*S	Sg	14 54 44.2	+0.1
	24nm,0.6s						
TDK	Taldyqorghan	5.65	301	*e*P	Pg	14 53 45.1	+3.9
	58nm,0.2s						
TDK				*e*S	Sg	14 54 58.0	+3.6
	127nm,0.8s						
ARXS	Arharly	5.74	292	*e*P	Pg	14 53 46.5	+3.5
	6.3nm,0.4s						
ARXS				*e*S	Sg	14 55 00.1	+2.7
	52nm,0.6s						
KDJ	Kajisay	5.98	271	*e*Pn	Pn	14 53 23.1	+1.2
KOTS	Kotyrbulak	6.05	282	*e*P	Pg	14 53 50.9	+1.9
	3.1nm,0.3s						
KOTS				*e*S	Sg	14 55 06.8	-0.6
	88nm,0.8s						
TNSS	Tian-Shan	6.16	280	*e*P	Pg	14 53 52.4	+1.4
	7.5nm,0.7s						
TNSS				*e*S	Sg	14 55 09.8	-0.9
	22nm,0.8s						
KTBS	Karatobe	6.43	286	*e*P	Pg	14 53 56.6	+0.4
	4.6nm,0.9s						
KTBS				*e*S	Sg	14 55 16.7	-2.8
	57nm,0.6s						
KST	Kastek	6.88	279	*e*P	Pg	14 54 06.6	+1.8
	5.2nm,0.5s						
KST				*e*S	Sg	14 55 33.9	+0.1
	32nm,0.8s						
BOOM	Boomskoye usch	6.89	275	*e*Pn	Pn	14 53 35.5	+1.2
DGS	Degeres	7.03	281	*e*P	Pg	14 54 09.1	+1.4
	2.9nm,0.4s						
DGS				*e*S	Sg	14 55 38.2	-0.5
	24nm,0.6s						
TKM2	Tokmak 2	7.14	278	⇓Pn	Pn	14 53 38.4	+0.7
	2.2nm,0.3s						
TKM2				⇑Lg	Lg	14 55 38.3	
	15nm,0.9s						
AAK	Ala-Archa	7.95	276	Pn	Pn	14 53 49.1	+0.2
	3.9nm,0.8s						
AAK				Lg	Lg	14 56 07.0	
	11nm,0.8s						
KURBB	Kurchatov Arra	9.53	333	Pn	Pn	14 54 10.2	-0.2
	0.1nm,0.3s,baz=143,slow=13,SNR=4.7						
KURBB				Lg	Lg	14 56 53.9	
	0.3nm,0.3s,baz=148,slow=25,SNR=6.5						
KURBB	Kurchatov Arra	9.53	333	⇓Pn	Pn	14 54 11.2	+0.9
	2.1nm,0.6s						
KURBB				⇓Lg	Lg	14 56 55.3	
	10nm,0.7s						
KURK	Kurchatov	9.58	334	*e*Pn	Pn	14 54 11.6	+0.6
KURK	Kurchatov	9.58	334	⇑Pn	Pn	14 54 11.7	+0.7
	0.5nm,0.6s						
KURK				⇑Lg	Lg	14 56 56.0	
	9.5nm,0.6s						
OTUK	Ortayu	10.86	308	⇑Pn	Pn	14 54 30.0	+1.4
	7.2nm,1.5s						
OTUK				⇓Lg	Lg	14 57 37.7	
	13nm,1.2s						
ZAA0	Zalesovo Array	11.68	359	*e*Pn	Pn	14 54 39.8	+0.1
ZALV	Zalesovo Beam	11.68	359	Pn	Pn	14 54 37.0	-2.7
	0.4nm,0.3s,baz=182,slow=15,SNR=4.9						
ZALV				Sn	Sn	14 56 42.5	-7.4
	0.5nm,0.3s,baz=168,slow=25,SNR=5.2						
ZAA1	Zalesovo Array	11.68	359	*e*Pn	Pn	14 54 37.0	-2.7
ZAA1				*e*Sn	Sn	14 56 42.5	-7.5
GAR	Garm	11.80	259	*e*Pn	Pn	14 54 41.3	-0.3
CHGR	Chuyangaron	12.77	259	*e*Pn	Pn	14 54 54.5	-0.2
BVAR	Borovoye Array	14.65	322	Pn	Pn	14 55 18.7	-1.5
	0.2nm,0.3s,baz=125,slow=12,SNR=7.2						
BRVK	Borovoye	14.72	322	*e*Pn	Pn	14 55 21.6	+0.4
ABKAR	Akbulak array	18.91	300	*e*P	Pn	14 56 15.0	+0.6
	3.4nm,1.0s						
HHC	Hu-ho-hao-te	19.73	85	P	Pn	14 56 27.5	+3.1
WHN	Wuhan	26.07	107	P	P	14 57 33.8	+7.1
CM31	Chiang Mai Arr	26.46	150	*e*P	P	14 57 28.1	-2.3
	5.8nm,1.1s						
CMAR	Chiang Mai Arr	26.46	150	P	P	14 57 27.4	-2.9
	0.7nm,0.5s,baz=327,slow=9.7,SNR=2.5						
BR101	Keskin Array S	38.53	284	*e*P	P	14 59 16.6	+0.8
BRTR	Keskin Array B	38.53	284	P	P	14 59 16.6	+0.8
	1.4nm,0.7s,baz=85,slow=8.9,SNR=5.6						
FIA0	FINESS Array S	39.59	320	*e*P	P	14 59 23.8	-0.3
FINES	FINESS Array B	39.59	320	P	P	14 59 23.8	-0.3
	0.6nm,0.3s,baz=91,slow=9.5,SNR=5.5						
ARA0	ARCESS Array S	40.62	332	*e*P	P	14 59 32.0	-0.7
ARCES	ARCESS Array B	40.62	332	P	P	14 59 32.0	-0.7
	1.9nm,0.5s,baz=93,slow=7.3,SNR=8.6						
ARCES	ARCESS Array B	40.62	332	P	P	14 59 32.0	-0.7
NB2	NORSAR Subarra	46.76	320	P	P	15 00 21.6	-0.7
	comp=Z,1.4nm,0.5s,baz=78,slow=7.9						
NB200	NORSAR Array S	46.76	320	*e*P	P	15 00 21.3	-0.9
NOA	NORSAR Array B	46.76	320	P	P	15 00 21.3	-0.9
	comp=Z,1.9nm,0.6s,baz=77,slow=7.7,SNR=6.3						
KMBO	Kilima Mbogo	61.09	238	P	P	15 02 06.7	-1.0
	comp=Z,2.0nm,0.4s,baz=30,slow=20,SNR=4.2						
KMBO	Kilima Mbogo	61.09	238	*e*P	P	15 02 06.7	-1.0
	comp=Z,16nm,1.7s						
ILAR	Eielson Array	65.77	22	P	P	15 02 36.4	-1.4
	comp=Z,0.3nm,0.7s,baz=323,slow=7.7,SNR=4.9						
ILB	Eielson Array	65.77	22	*e*P	P	15 02 36.4	-1.4
	comp=Z,7.8nm,1.8s						
TOA1	Torodi Ar. Sit	76.53	276	*e*P	P	15 03 42.9	-0.9
TORD	Torodi Ar. Bea	76.54	276	P	P	15 03 42.9	-0.9
	comp=Z,0.7nm,0.8s,baz=72,slow=4.7,SNR=2.6						
WR1	Warramunga Arr	76.72	133	*e*P	P	15 03 42.7	-1.9
WRA	Warramunga Arr	76.72	133	P	P	15 03 42.7	-1.9
	comp=Z,2.1nm,1.2s,baz=321,slow=5.7,SNR=3.7						
ASAR	Alice Springs	79.53	136	P	P	15 03 58.1	-2.0
	comp=Z,0.4nm,0.8s,baz=322,slow=5.2,SNR=2.9						

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*ISCJB **09** 15:19:06.0±0.6, 37°.87N±0°.07×135°.48E±0°.08, h366^{km}, mb2.4/1, Error ellipse: s-maj=9.0km s-min=8.1km az=158.7*

*JMA **09** 15:19:06.0±0.2, 37°.84N×135°.45E, h370^{km}, M2.9*

*IDC **09** 15:19:07.3±1.8, 37°.96N×135°.44E, h345^{km}±23^{km}, mb2.4/1, mb1 2.5/5, mb1mx2.4/48, mbtmp3.1/5, Error ellipse: s-maj=40.0km s-min=28.4km az=9.0*

ISC 09 15:19:06.7±1.2**, 37°.82N**±0°.09×**135°.50E**±0°.08**, h366^{km}, n17, σ1^{s}.00**/20**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSD	Sado	2.20	83	P	Pn	15 20 00.7	-0.1
JKY	Yasaka	2.21	188	P	Pn	15 20 00.8	-0.2
JKSM	Kasumi	2.32	197	P	Pn	15 20 01.5	-0.4
JNG	Nsakai	2.51	123	P	Pn	15 20 04.1	+0.7
MJAR	Matsushiro Arr	2.51	120	P	Pn	15 20 03.8	+0.5
	0.1nm,0.3s,baz=299,slow=9.3,SNR=6.2						
JWT	Wachi	2.53	182	P	Pn	15 20 03.5	0.0
JWT				*e*S	S	15 20 48.4	-0.7
JHS	Saijyo	3.41	215	P	Pn	15 20 10.8	-0.3
JIE	Ise	3.56	164	P	Pn	15 20 13.6	+1.2
JMM	Marumori	4.19	88	P	Pn	15 20 19.3	+0.7
JFK	Kawauchi	4.29	94	P	Pn	15 20 19.6	-0.1
JFK				*e*S	S	15 21 16.5	-2.2
JMK	Ichinoseki	4.64	74	P	Pn	15 20 23.3	+0.2
BSO1	Boso 1	5.44	124	P	Pn	15 20 31.4	+0.1
BSO1				S	S	15 21 39.1	-0.9
JOT	Ohata	5.57	49	P	Pn	15 20 33.8	+0.6
KSRS	Korea Array	6.02	269	P	Pn	15 20 37.4	-0.9
	0.2nm,0.3s,baz=77,slow=11,SNR=3.0						
USRK	Ussuriysk Ar.	6.91	339	P	Pn	15 20 47.6	-0.6
	0.1nm,0.3s,baz=150,slow=11,SNR=2.1						
ASAJ	Asahikawa	8.27	38	P	Pn	15 21 02.2	-1.8
	1.0nm,0.3s,baz=212,slow=6.9,SNR=2.7						
ILAR	Eielson Array	51.36	32	P	P	15 27 36.5	+1.7
	0.1nm,0.4s,baz=272,slow=7.0,SNR=1.9						

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*NIED **09** 15:21:00, 35°.10N×139°.10E, h8^{km}, Mw3.7 Best double couple: $M_0$4.02000×10^{14} NP1:ϕ_s182.00000°, δ37.00000°, λ26.00000°. NP2:ϕ_s70.00000°, δ75.00000°, λ124.00000°.*

*ISCJB **09** 15:21:46.6±0.5, 35°.07N±0°.03×139°.13E±0°.06, h29^{km}±3^{km}, mb3.8/10, MS3.6/2, Error ellipse: s-maj=8.4km s-min=5.2km az=162.9*

*JMA **09** 15:21:47.1, 35°.15N×139°.15E, h10^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s256.00000°, δ85.00000°, λ-98.00000°. NP2: ϕ_s136.00000°, δ9.00000°, λ-30.00000°. Principal axes: T Plg40.0000°, Azm353.0000°; N Plg8.0000°, Azm256.0000°; P Plg49.0000°, Azm157.0000°;*

JMA Felt IV J1.

*IDC **09** 15:21:50.0±1.6, 35°.06N×139°.06E, h44^{km}±15^{km}, mb3.6/10, mb1 3.8/14, mb1mx3.6/42, mbtmp3.8/14, ML3.4/4, MS3.1/4, Ms1 3.2/4, ms1mx2.6/46 Error ellipse: s-maj=23.6km s-min=9.7km az=78.0*

ISC 09 15:21:46.4±0.8**, 35°.15N**±0°.03×**139°.17E**±0°.05**, h16^{km}**±5^{km}**, n35, σ0^{s}.71**/35**, mb3.9**/10**, 4C-2D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AJI	Ajiro2	0.13	212	⇑P	Pg	15 21 50.1	0.0
AJI				S	Sg	15 21 52.6	+0.1
JOD2	Odawara 2	0.13	327	⇓P	Pg	15 21 50.1	-0.1
JOD2				S	Sg	15 21 52.7	0.0
KTJ3	Kamata3	0.23	201	⇑P	Pb	15 21 51.7	-0.5
KTJ3				S	Sb	15 21 55.3	-0.9
JFNN	Fujinakano	0.40	276	P	Pb	15 21 54.9	-0.2
JFNN				S	Sb	15 22 01.0	0.0
JIM2	Oshima 3	0.48	154	⇓P	Pg	15 21 56.2	+0.2
JIZS	Izushimoda	0.50	209	P	Pg	15 21 56.3	0.0
JIZS				S	Sb	15 22 03.6	-0.2
JYN	Shimob	0.62	304	⇑P	Pb	15 21 58.5	-0.3
JYN				S	Sg	15 22 07.3	+0.4
SHZ3	Shizuoka 3	0.80	264	P	Pg	15 22 02.1	+0.2
JRY	Ryogami san	0.89	346	⇑P	Pb	15 22 03.1	-0.3
I30JP	ISUMI INFRASON	0.94	80	P	Pg	15 22 11.7	+7.0
	baz=261,slow=16						
I30JP				*i*		15 25 17.6	
	baz=256,slow=296,SNR=2.8						
MJAR	Matsushiro Arr	1.59	331	P	Pb	15 22 14.7	-0.7
	30nm,0.3s,baz=79,slow=26,SNR=982						
MJAR				S	Sb	15 22 35.4	+0.1
	49nm,0.3s,baz=164,slow=26,SNR=25						
MAT	Matsushiro	1.59	331	P	Pb	15 22 15.3	-0.1
MAT				S	Sb	15 22 36.0	+0.7
JHJ	Hachijo jima 2	2.09	166	P	Pn	15 22 21.6	+0.9
	59nm,0.3s,baz=299,slow=10,SNR=30						
JHJ				S	Sb	15 22 50.5	+0.8
	60nm,0.3s,baz=7.4,slow=22,SNR=6.6						
JNU	Nakatsue	7.17	256	P	Pn	15 23 31.6	+1.0
	0.7nm,0.3s,baz=81,slow=5.0,SNR=9.2						
JNU				LR	LR	15 26 47.9	
	comp=Z,69nm,18.3s,baz=360,slow=42						
ASAJ	Asahikawa	9.33	15	P	Pn	15 23 59.4	-0.7
	0.6nm,0.3s,baz=231,slow=9.9,SNR=5.9						
ASAJ				S	Sn	15 25 31.6	-13
	baz=323,slow=20,SNR=1.2						
KSRS	Korea Array	9.37	287	P	Pn	15 24 01.6	+1.0
	0.1nm,0.3s,baz=100,slow=14,SNR=2.7						
KSRS				LR	LR	15 27 26.8	
	comp=Z,38nm,19.0s,baz=134,slow=36						
USRK	Ussuriysk Ar.	10.59	331	P	Pn	15 24 22.2	+4.9
	0.1nm,0.3s,baz=136,slow=11,SNR=7.4						
KLR	Kul'dur	15.09	341	P	P	15 25 22.7	-1.3
	0.2nm,0.3s,baz=165,slow=16,SNR=4.0						
H11N2	WAKE ISLAND Hy	28.88	115	T	T	15 57 59.7	
	baz=308,slow=75,SNR=183						
H11N1	WAKE ISLAND Hy	28.88	115	T	T	15 58 00.6	
	baz=308,slow=75,SNR=152						
H11N3	WAKE ISLAND Hy	28.89	115	T	T	15 58 01.5	
	baz=308,slow=75,SNR=211						
H11S3	WAKE ISLAND Hy	29.49	117	T	T	15 58 44.4	
	baz=310,slow=76,SNR=43						
H11S1	WAKE ISLAND Hy	29.50	117	T	T	15 58 45.3	
	baz=310,slow=76,SNR=63						
H11S2	WAKE ISLAND Hy	29.51	117	T	T	15 58 46.6	
	baz=310,slow=76,SNR=54						
MKAR	Makanchi Array	43.61	303	P	P	15 29 50.0	+0.2
	0.4nm,0.5s,baz=89,slow=9.8,SNR=4.6						
ILAR	Eielson Array	52.05	31	P	P	15 30 55.6	+0.8
	1.3nm,0.7s,baz=276,slow=6.0,SNR=19						
WRA	Warramunga Arr	54.98	186	P	P	15 31 15.9	-1.0
	2.1nm,0.7s,baz=354,slow=6.5,SNR=14						
ASAR	Alice Springs	58.71	186	P	P	15 31 42.5	-0.8
	1.0nm,0.7s,baz=15,slow=9.3,SNR=12						
ARCES	ARCESS Array B	65.11	339	P	P	15 32 25.9	+0.1
	3.3nm,1.0s,baz=57,slow=7.4,SNR=6.6						
ARCES				LR	LR	16 04 09.6	
	comp=Z,25nm,20.6s,baz=278,slow=39						
STKA	Stephens Creek	66.72	178	LR	LR	16 02 17.1	
	comp=Z,63nm,18.2s,baz=194,slow=36						
FINES	FINESS Array B	69.62	332	P	P	15 32 54.7	+0.2
	0.9nm,0.4s,baz=54,slow=5.4,SNR=10						
AKASG	Malin Array Be	74.66	322	P	P	15 33 23.3	-1.5
	0.4nm,0.4s,baz=50,slow=5.9,SNR=2.9						
NOA	NORSAR Array B	75.20	337	P	P	15 33 27.9	0.0
	0.4nm,0.4s,baz=45,slow=5.6,SNR=2.7						
NVAR	Mina Array Bea	77.57	52	P	P	15 33 43.5	+1.5
	0.4nm,0.6s,baz=258,slow=7.5,SNR=5.1						
PDAR	Pinedale Array	80.28	44	P	P	15 33 56.7	0.0
	0.2nm,0.6s,baz=342,slow=2.1,SNR=3.5						

TAP 09 15:28:23.6, 24°.04N×121°.64E, h11^{km}, ML2.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	Chiawan	0.06	317	*i* P	Pg	15 28 26.4	+0.6
	baz=323						
TWD				*i* S	Sg	15 28 27.7	+0.2
	baz=323						
HWA	Hwalien	0.07	209	P	Pg	15 28 26.9	+1.1
	baz=202						
HWA				S	Sg	15 28 28.6	+1.0
	baz=202						
NACB	Ninganchiao	0.14	343	*e*P	Pg	15 28 27.4	+0.5
	baz=342						
ETLH	Xiulin Townshi	0.22	319	*e*P	Pb	15 28 29.0	-0.7
	baz=319						
ETLH				*e*S	Sg	15 28 33.2	+1.7
	baz=319						
ESL	Shilin	0.29	221	*i* P	Pg	15 28 30.1	+0.6
	baz=219						
ESL				S	Sb	15 28 35.2	-0.5
	baz=219						
WHF	Hehuan Shan	0.36	288	*i* P	Pb	15 28 31.6	-0.6
	baz=287						
WHF				*i* S	Sb	15 28 37.5	-0.6
	baz=287						
ENA	Nanau	0.40	13	*i* P	Pb	15 28 32.2	-0.5
	baz=14						
ENA				S	Sb	15 28 38.0	-0.9
	baz=14						
NANB	Nanao	0.40	14	*e*P	Pb	15 28 32.2	-0.6
	baz=14						
NANB				*e*S	Sg	15 28 37.8	+0.9
	baz=14						
EGFH	Guangfu	0.41	208	*e*P	Pb	15 28 32.8	-0.1
	baz=208						
EGFH				*e*S	Sb	15 28 39.0	-0.2
	baz=208						
CHGB	Renai	0.43	273	*e*P	Pb	15 28 33.1	-0.2
	baz=273						
CHGB				*e*S	Sg	15 28 38.7	+0.9
	baz=273						
NNSB	Datong	0.46	329	*e*P	Pb	15 28 33.4	-0.3
	baz=328						
NNSB				*e*S	Sb	15 28 40.5	-0.1
	baz=328						
NNS	Nan Shan	0.47	329	P	Pb	15 28 33.7	-0.2
	baz=329						
NNS				S	Sb	15 28 40.9	-0.1
	baz=329						
TDCB	Techi	0.49	296	*e*P	Pb	15 28 34.1	-0.3
	baz=296						
TDCB				*e*S	Sb	15 28 40.9	-0.7
	baz=296						
VWDT	VWDT	0.54	239	*e*P	Pb	15 28 35.2	+0.2
	baz=238						
VWDT				*e*S	Sb	15 28 42.5	-0.2
	baz=238						
NDT	Datong Townshi	0.58	348	P	Pb	15 28 35.9	+0.2
	baz=348						
NDT				S	Sb	15 28 43.8	-0.1
	baz=348						
HGSD	Ruisui	0.58	200	*e*P	Pb	15 28 35.8	+0.1
	baz=200						
HGSD				*e*S	Sb	15 28 44.4	+0.5
	baz=200						
TWC	Suao	0.60	18	*e*P	Pb	15 28 36.1	0.0
	baz=19						
TWC				*e*S	Sb	15 28 44.8	+0.2
	baz=19						
EHY	Hungye	0.60	209	P	Pb	15 28 36.0	-0.1
	baz=208						
EHY				*e*S	Sb	15 28 45.3	+0.6
	baz=208						
DPDB	Guoxing	0.65	270	*e*P	Pb	15 28 36.9	-0.2
	baz=269						
DPDB				*e*S	Sb	15 28 46.4	+0.2
	baz=269						
SSLB	Suanglung	0.68	249	*e*P	Pb	15 28 37.6	+0.2
	baz=248						
SSLB				*e*S	Sb	15 28 47.5	+0.7
	baz=248						
YHNB	Yeheng	0.68	339	*e*P	Pb	15 28 37.8	+0.3
	baz=339						
YHNB				*e*S	Sb	15 28 47.6	+0.8
	baz=339						
EOS1	EOS1	0.68	41	*e*P	Pb	15 28 37.5	+0.1
	baz=41						
EOS1				*e*S	Sb	15 28 47.5	+0.8
	baz=41						
WHP	Taichung City	0.68	291	*e*P	Pb	15 28 37.7	+0.2
	baz=290						
TWE	Neicheng	0.68	2	*e*P	Pb	15 28 37.2	-0.3
	baz=3.0						
TWE				*e*S	Sb	15 28 47.7	+0.8
	baz=3.0						
NSK	Sanguang	0.69	338	P	Pb	15 28 38.0	+0.4
	baz=338						
NSK				S	Sb	15 28 47.7	+0.5
	baz=338						
SMLT	Sun Moon Lake	0.69	257	*e*P	Pb	15 28 37.9	+0.1
	baz=257						
SMLT				*e*S	Sb	15 28 47.9	+0.5
	baz=257						
YULB	Yu-li	0.71	206	*e*P	Pb	15 28 37.9	-0.2
	baz=206						
YULB				*e*S	Sb	15 28 48.5	+0.6
	baz=206						
SLBB	Yuanshan	0.71	360	*e*P	Pb	15 28 38.5	+0.4
	baz=359						
SLBB				*e*S	Sb	15 28 48.7	+0.7
	baz=359						
TYC	Yuchr	0.73	260	*e*P	Pg	15 28 37.9	+0.2
	baz=259						
TYC				*e*S	Sb	15 28 48.1	-0.2
	baz=259						
TWF1	Yuli	0.75	205	P	Pg	15 28 38.0	0.0
	baz=204						
TWF1				*e*S	Sb	15 28 49.4	+0.5
	baz=204						

WHYT	**Xinyi Township**	**0.80**	**245**	*e*P	Pb	15 28 39.9	+0.4
	baz=244						
WHYT				*e*S	Sb	15 28 50.6	+0.4
	baz=244						
NSTT	**Nanjuang**	**0.83**	**316**	*e*P	Pb	15 28 40.3	+0.3
	baz=315						
NSTT				*e*S	Sb	15 28 52.4	+1.1
	baz=315						
LIOB	**Emei**	**0.83**	**317**	*e*P	Pb	15 28 40.6	+0.6
	baz=316						
LIOB				*e*S	Sb	15 28 51.7	+0.4
	baz=316						
YUS	**Yu-Shan**	**0.83**	**229**	*e*P	Pb	15 28 40.6	+0.3
	baz=228						
YUS				*e*S	Sb	15 28 52.1	+0.3
	baz=228						
TWQ1	**Liyutan**	**0.85**	**292**	*e*P	Pg	15 28 40.1	+0.1
	baz=291						
TWQ1				*e*S	Sb	15 28 52.9	+1.1
	baz=291						
WJS	**Zhushan**	**0.86**	**256**	*e*P	Pb	15 28 40.5	-0.1
	baz=255						
WJS				*e*S	Sb	15 28 53.1	+0.9
	baz=255						
TIPB	**Shuangxi**	**0.95**	**10**	*e*P	Pb	15 28 42.4	+0.4
	baz=10.0						
TIPB				*e*S	Sb	15 28 55.3	+0.7
	baz=10.0						
CHKT	**Chengkung**	**0.97**	**195**	*e*P	Pn	15 28 42.9	-0.2
	baz=194						
CHKT				*e*S	Sb	15 28 55.9	+0.8
	baz=194						

TAP 09 15:28:26.8, 24.°06N×121.°63E, h13^{km}, ML2.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.03**	**306**	*i* P	Pg	15 28 29.7	+0.5
	baz=317						
TWD				*i* S	Sg	15 28 31.0	+0.3
	baz=317						
HWA	**Hwalien**	**0.09**	**193**	P	Pg	15 28 30.2	+0.7
	baz=187						
HWA				S	Sg	15 28 32.6	+1.1
	baz=187						
NACB	**Ninganchiao**	**0.12**	**346**	*e*P	Pb	15 28 30.6	-0.3
	baz=345						
NACB				*e*S	Sb	15 28 33.0	-0.6
	baz=345						
NACB	**Ninganchiao**	**0.12**	**346**	*e*S	Pb	15 28 30.6	-0.3
	baz=342						
ENLB	**Shoufeng**	**0.16**	**188**	*e*P	Pb	15 28 31.5	-0.1
	baz=188						
ENLB				*e*S	Sb	15 28 34.4	-0.4
	baz=188						
ETLH	**Xiulin Townshi**	**0.20**	**318**	P	Pb	15 28 31.9	-0.5
	baz=317						
ETLH				*e*S	Sb	15 28 35.7	-0.3
	baz=317						
ESL	**Shilin**	**0.30**	**216**	P	Pb	15 28 33.8	-0.3
	baz=214						
ESL				S	Sb	15 28 38.5	-0.5
	baz=214						
WHF	**Hehuan Shan**	**0.34**	**284**	P	Pg	15 28 34.4	+0.5
	baz=284						
WHF				*i* S	Sb	15 28 40.0	-0.5
	baz=284						
ENA	**Nanau**	**0.38**	**16**	P	Pb	15 28 35.5	+0.1
	baz=17						
ENA				S	Sb	15 28 41.3	+0.1
	baz=17						
NANB	**Nanao**	**0.38**	**17**	*e*P	Pb	15 28 35.6	+0.2
	baz=17						
NANB				*e*S	Sb	15 28 41.2	-0.1
	baz=17						
CHGB	**Renai**	**0.41**	**270**	*e*P	Pb	15 28 36.0	-0.1
	baz=270						
CHGB				*e*S	Sb	15 28 42.6	+0.3
	baz=270						
NNSB	**Datong**	**0.43**	**329**	*e*P	Pb	15 28 36.3	0.0
	baz=328						
NNSB				*e*S	Sb	15 28 42.9	+0.2
	baz=328						
EGFH	**Guangfu**	**0.43**	**205**	P	Pg	15 28 35.7	+0.4
	baz=205						
EGFH				S	Sb	15 28 42.0	-0.6
	baz=205						
NNS	**Nan Shan**	**0.44**	**329**	P	Pg	15 28 35.8	+0.2
	baz=329						
NNS				S	Sb	15 28 42.8	-0.4
	baz=329						
TDCB	**Techi**	**0.47**	**294**	*e*P	Pb	15 28 36.7	-0.3
	baz=294						
TDCB				*e*S	Sb	15 28 44.0	+0.1
	baz=294						
VWDT	**VWDT**	**0.54**	**236**	*e*P	Pb	15 28 37.9	-0.2
	baz=235						
VWDT				*e*S	Sb	15 28 46.2	+0.4
	baz=235						
NDT	**Datong Townshi**	**0.55**	**349**	P	Pb	15 28 38.1	-0.2
	baz=349						
NDT				*e*S	Sb	15 28 46.0	-0.2
	baz=349						
TWC	**Suao**	**0.58**	**20**	*e*P	Pb	15 28 38.7	-0.2
	baz=21						
HGSD	**Ruisui**	**0.59**	**198**	*e*P	Pb	15 28 39.3	+0.2
	baz=198						
HGSD				*e*S	Sb	15 28 48.4	+1.0
	baz=198						
EHY	**Hungye**	**0.62**	**207**	*e*P	Pb	15 28 39.3	-0.2
	baz=206						
EHY				*e*S	Sb	15 28 48.2	+0.1
	baz=206						
YHNB	**Yeheng**	**0.65**	**339**	*e*P	Pb	15 28 40.3	+0.2
	baz=339						
YHNB				*e*S	Sb	15 28 48.8	-0.2
	baz=339						
TWE	**Neicheng**	**0.66**	**3**	*e*P	Pb	15 28 40.2	+0.1
	baz=4.0						
TWE				S	Sb	15 28 49.9	+0.6
	baz=4.0						
NSK	**Sanguang**	**0.66**	**338**	P	Pb	15 28 40.0	-0.3
	baz=338						
SSLB	**Suanglung**	**0.67**	**246**	*e*P	Pb	15 28 40.4	0.0
	baz=246						
SMLT	**Sun Moon Lake**	**0.69**	**255**	*e*P	Pb	15 28 40.6	-0.1
	baz=254						
SLBB	**Yuanshan**	**0.69**	**1**	*e*P	Pb	15 28 40.6	-0.2
SLBB				*e*S	Sb	15 28 50.6	+0.3

*MOS **09** 15:44:10.8±0.8, 13.°15S×169.°54E, h611^{km}, mb4.9/48, Error ellipse: s-maj=9.4km s-min=7.7km az=51.0*

*IDC **09** 15:44:10.8±0.9, 13.°19S×169.°64E, h595^{km}±10^{km}, mb4.1/30, mb1 4.3/32, mb1mx4.2/40, mbtmp5.1/32, Error ellipse: s-maj=9.7km s-min=8.3km az=75.0*

*BJI **09** 15:44:10.6±0.0, 13.°00S×169.°78E, h610^{km}, mb4.4/39, mB4.5/21*

*ISCJB **09** 15:44:10.9±0.5, 13.°23S±0.°03×169.°55E±0.°03, h614^{km}±7^{km}, mb4.8/246, Error ellipse: s-maj=4.6km s-min=3.9km az=4.6*

*NEIC **09** 15:44:10.9±0.1, 13.°14S×169.°58E, mb4.9/203, Error ellipse: s-maj=3.7km s-min=2.4km az=136.0*

*GCMT **09** 15:44:11.9±0.7, 13.°32S±0.°06×169.°61E±0.°05, h613^{km}±4^{km}, MW5.3/51, Moment Tensor Solution. s51,c61; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.14±.04; $M_{\theta\theta}$0.33±.07; $M_{\phi\phi}$-0.47±.06; $M_{r\theta}$-0.35±.08; $M_{\theta\phi}$-0.03±.07; $M_{\phi r}$0.84±.06; Best double couple: $M_0$0.99100×10^{17} NP1:ϕ_s334.00000°,δ84.00000°,λ71.00000°. NP2: ϕ_s226.00000°,δ20.00000°,λ161.00000°. Principal axes: T 0.8990, Plg48.0000°, Azm224.0000°; N 0.1840, Plg19.0000°, Azm336.0000°; P -1.0830, Plg36.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 09 15:44:11.2±0.5**, 13.°18S**±0.°05×**169.°61E**±0.°05**, h604**^{km}±4^{km}**, h605**^{km}**:pP-P, n556,** σ0^s**94**/586**, mb4.9**/244**, 4C-3D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**8.39**	**190**	*e*P	**P**	**15 46 14.3**	**0.0**
DZM	**Mont Dzumac**	**9.34**	**198**	P	**P**	**15 46 24.6**	**+1.0**
	8.5nm,0.3s,baz=330,slow=22,SNR=58						
DZM				S	**S**	**15 48 09.5**	**-2.8**
	baz=357,slow=19,SNR=2.5						
ONTNC	**Ouen Toro**	**9.56**	**198**	*e*P	**P**	**15 46 26.7**	**+1.0**
PINNC	**Pines Island,**	**9.61**	**192**	*e*P	**P**	**15 46 27.1**	**+1.1**
HNR	**Honiara**	**10.18**	**290**	P	**P**	**15 46 31.9**	**0.0**
	36nm,0.3s,baz=181,slow=2.6,SNR=48						
HNR				S	**S**	**15 48 25.2**	**-2.2**
	baz=90,slow=20,SNR=4.7						
HNR	**Honiara**	**10.18**	**290**	*e*P	**P**	**15 46 31.6**	**-0.3**
HNR				S	**S**	**15 48 25.2**	**-2.2**
HNR	**Honiara**	**10.18**	**290**	*e*P	**P**	**15 46 31.0**	**-0.9**
HNR				*e*S	**S**	**15 48 29.0**	**+1.6**
FUNA	**Funafuti**	**10.49**	**65**	*e*P	**P**	**15 46 35.0**	**0.0**
TARA	**Tarawa**	**14.81**	**13**	*e*P	**P**	**15 47 17.2**	**-0.4**
NFK	**Norfolk Island**	**15.86**	**185**	P	**P**	**15 47 29.4**	**+2.4**
	baz=16,SNR=4.7						
RABL	**Rabaul**	**19.41**	**296**	*e*P	**P**	**15 47 59.0**	**-0.5**
	57nm,0.4s						
EIDS	**Eidsvold**	**21.25**	**232**	*e*P	**P**	**15 48 16.0**	**0.0**
	46nm,1.1s						
EIDS	**Eidsvold**	**21.25**	**232**	P	**P**	**15 48 16.5**	**+0.5**
	baz=21,SNR=13						
OUZ	**Omahuta**	**22.24**	**171**	P	**P**	**15 48 26.6**	**+2.0**
PMG	**Port Moresby**	**22.33**	**277**	P	**P**	**15 48 26.5**	**+0.7**
	30nm,0.8s,baz=83,slow=4.0,SNR=4.1						
PMG	**Port Moresby**	**22.33**	**277**	*i* P	**P**	**15 48 25.8**	**0.0**
PMG				pmax	pmax		
	comp=Z,258nm,1.1s						
CTA	**Charters Tower**	**23.39**	**250**	P	**P**	**15 48 35.6**	**+0.5**
	comp=Z,13nm,0.6s,baz=70,slow=11,SNR=16						
CTA				PcP	**PcP**	**15 51 59.4**	**0.0**
	comp=Z,4.0nm,0.6s,baz=63,slow=2.3,SNR=3.5						
CTA				ScP	**ScP**	**15 54 42.8**	**+1.5**
	comp=Z,4.5nm,0.8s,baz=68,slow=8.3,SNR=3.1						
GRZ	**Great Barrier**	**23.57**	**168**	P	**P**	**15 48 37.8**	**+1.4**
RMQ	**Roma**	**23.62**	**233**	P	**P**	**15 48 38.2**	**+1.1**
	baz=24,SNR=87						
ARMA	**Armidale**	**23.88**	**221**	*e*P	**P**	**15 48 40.3**	**+0.9**
	comp=Z,141nm,1.4s						
ARMA	**Armidale**	**23.88**	**221**	P	**P**	**15 48 40.4**	**+1.0**
	baz=24,SNR=48						
MKAZ	**Moumakai**	**24.34**	**169**	P	**P**	**15 48 44.2**	**+1.0**
MTSU	**Mount Surprise**	**24.84**	**255**	P	**P**	**15 48 48.7**	**+0.7**
	baz=25,SNR=27						
TOZ	**Tahuroa Road**	**25.01**	**169**	P	**P**	**15 48 49.8**	**+0.7**
OPRZ	**Ohinepanea**	**25.33**	**167**	P	**P**	**15 48 53.4**	**+1.4**
MXZ	**Matakaoa Point**	**25.49**	**164**	P	**P**	**15 48 52.0**	**-1.4**
HAZ	**Te Kaha**	**25.54**	**165**	P	**P**	**15 48 53.4**	**-0.4**
OMRZ	**Omania**	**25.55**	**168**	P	**P**	**15 48 55.3**	**+1.4**
HIZ	**Hauiti**	**25.66**	**170**	P	**P**	**15 48 56.0**	**+1.2**
COEN	**Coen**	**25.71**	**265**	*e*P	**P**	**15 48 56.2**	**+0.6**
	comp=Z,33nm,0.8s						
COEN	**Coen**	**25.71**	**265**	P	**P**	**15 48 56.8**	**+1.2**
	baz=26,SNR=13						
RUGZ	**Raukumara Rang**	**25.71**	**165**	P	**P**	**15 48 54.0**	**-1.4**
PKGZ	**Pakihiroa**	**25.74**	**164**	P	**P**	**15 48 54.8**	**-0.8**
WMGZ	**Waiomatatini S**	**25.76**	**164**	P	**P**	**15 48 54.5**	**-1.3**
RRRZ	**Republican Roa**	**25.80**	**167**	P	**P**	**15 48 58.0**	**+1.9**
HRRZ	**Handcock Road**	**25.80**	**168**	P	**P**	**15 48 55.9**	**-0.2**
URZ	**Urewera**	**25.85**	**166**	P	**P**	**15 48 55.8**	**-0.7**
	comp=Z,31nm,0.6s,baz=349,slow=2.5,SNR=22						
URZ	**Urewera**	**25.85**	**166**	*e*P	**P**	**15 48 55.9**	**-0.7**
	comp=Z,32nm,0.6s						
URZ	**Urewera**	**25.85**	**166**	P	**P**	**15 48 55.9**	**-0.7**
PRRZ	**Plateau Road**	**25.93**	**168**	P	**P**	**15 48 58.5**	**+1.3**
PUZ	**Puketiti**	**25.96**	**164**	P	**P**	**15 48 55.8**	**-1.7**
MUGZ	**Murupara**	**25.99**	**167**	P	**P**	**15 48 57.9**	**+0.2**
MWZ	**Matawai**	**26.02**	**166**	P	**P**	**15 48 57.3**	**-0.8**
MGCD	**Mangrove Creek**	**26.12**	**217**	P	**P**	**15 48 60.0**	**+1.0**
	baz=26,SNR=14						
RAGZ	**Rawiri**	**26.15**	**166**	P	**P**	**15 48 58.2**	**-1.0**
TKGZ	**Te Karaka**	**26.20**	**165**	P	**P**	**15 48 58.8**	**-0.8**
HATZ	**Hinemaiaia**	**26.25**	**169**	P	**P**	**15 49 00.6**	**+0.6**
CNGZ	**Carnagh Statio**	**26.33**	**165**	P	**P**	**15 48 59.5**	**-1.2**
RAHZ	**Arahi**	**26.48**	**167**	P	**P**	**15 49 01.7**	**-0.4**
RIV	**Riverview**	**26.54**	**216**	P	**P**	**15 49 03.8**	**+1.2**
	baz=27,SNR=7.9						
BKZ	**Black Stump Fm**	**26.59**	**168**	*e*P	**P**	**15 49 02.1**	**-0.9**
	comp=Z,51nm,0.5s						
MHGZ	**Mahia Peninsul**	**26.89**	**166**	P	**P**	**15 49 04.2**	**-1.4**
QLP	**Quilpie**	**27.27**	**237**	P	**P**	**15 49 09.5**	**+0.4**
	baz=27						
YNG	**Young**	**28.50**	**219**	P	**P**	**15 49 20.4**	**+0.6**
	baz=29,SNR=8.8						
CMSA	**Cobar Meteorol**	**28.58**	**226**	P	**P**	**15 49 20.8**	**+0.3**
	baz=29,SNR=160						
THZ	**Tophouse**	**28.62**	**175**	*e*P	**P**	**15 49 21.0**	**+0.3**
	comp=Z,65nm,0.5s						
CNB	**Canberra Magne**	**28.63**	**216**	P	**P**	**15 49 21.8**	**+0.9**
	baz=29,SNR=73						
CAN	**Canberra**	**28.85**	**217**	*e*P	**P**	**15 49 23.2**	**+0.4**
	comp=Z,112nm,1.8s						
CAN	**Canberra**	**28.85**	**217**	*e*P	**P**	**15 49 23.2**	**+0.4**
CAN				pmax	pmax		
	comp=Z,112nm,1.8s						
LTZ	**Lake Taylor**	**29.59**	**176**	*e*P	**P**	**15 49 28.7**	**-0.3**
	comp=Z,38nm,0.6s						
QIS	**Mount Isa**	**29.60**	**252**	P	**P**	**15 49 29.7**	**+0.3**
	baz=30,SNR=28						
MILA	**Mila**	**30.00**	**214**	P	**P**	**15 49 33.2**	**+0.5**
	baz=30,SNR=5.4						
OXZ	**Oxford**	**30.11**	**176**	*e*P	**P**	**15 49 33.4**	**-0.1**
	comp=Z,44nm,0.7s						
FOZ	**Fox Glacier**	**30.25**	**180**	*e*P	**P**	**15 49 34.8**	**+0.2**
	comp=Z,98nm,0.6s						
RPZ	**Rata Peaks**	**30.45**	**178**	P	**P**	**15 49 35.8**	**-0.6**
	comp=Z,47nm,0.6s,baz=306,slow=2.4,SNR=34						
RPZ	**Rata Peaks**	**30.45**	**178**	*e*P	**P**	**15 49 35.7**	**-0.7**
	comp=Z,53nm,0.7s						
JAY	**Jayapura**	**30.49**	**288**	P	**P**	**15 49 36.9**	**-0.3**
	comp=Z,6.8nm,0.4s,baz=121,slow=5.3,SNR=15						
LBZ	**Lake Benmore**	**31.10**	**179**	*e*P	**P**	**15 49 41.3**	**-0.6**
	comp=Z,39nm,0.6s						
WKZ	**Wanaka**	**31.55**	**181**	*e*P	**P**	**15 49 45.7**	**0.0**
	comp=Z,228nm,1.6s						
STKA	**Stephens Creek**	**31.72**	**229**	P	**P**	**15 49 48.3**	**+0.9**
	comp=Z,34nm,0.4s,baz=52,slow=8.3,SNR=352						
STKA				PcP	**PcP**	**15 52 20.2**	**+0.3**
	comp=Z,7.6nm,0.9s,baz=84,slow=5.3,SNR=3.0						
STKA				ScP	**ScP**	**15 55 08.1**	**+1.2**
	comp=Z,6.8nm,0.8s,baz=64,slow=2.9,SNR=7.6						
STKA	**Stephens Creek**	**31.72**	**229**	*e*P	**P**	**15 49 47.4**	**0.0**
	comp=Z,54nm,1.7s						
STKA				*e*PcP	**PcP**	**15 52 20.2**	**+0.3**
STKA				ScP	**ScP**	**15 55 08.1**	**+1.2**
STKA	**Stephens Creek**	**31.72**	**229**	P	**P**	**15 49 48.2**	**+0.8**
	baz=32,SNR=29						
STKA	**Stephens Creek**	**31.72**	**229**	*e*P	**P**	**15 49 47.4**	**0.0**
STKA				*e*		15 52 20.2	
STKA				pmax	pmax		
	comp=Z,54nm,1.7s						
MLZ	**Mavora Lakes**	**32.10**	**182**	*e*P	**P**	**15 49 50.5**	**0.0**
	comp=Z,29nm,0.8s						
DCZ	**Deep Cove**	**32.25**	**183**	*e*P	**P**	**15 49 51.4**	**-0.2**
	comp=Z,28nm,0.6s						
TOO	**Toolangi**	**32.45**	**217**	*e*P	**P**	**15 49 54.2**	**+0.7**
	comp=Z,66nm,0.6s						
TOO	**Toolangi**	**32.45**	**217**	P	**P**	**15 49 54.4**	**+1.0**
	baz=33,SNR=241						
TOO	**Toolangi**	**32.45**	**217**	*e*P	**P**	**15 49 54.2**	**+0.7**
TOO				pmax	pmax		
	comp=Z,66nm,0.6s						
WHZ	**Wether Hill Ro**	**32.64**	**182**	*e*P	**P**	**15 49 54.2**	**-0.7**
	comp=Z,29nm,0.8s						
ARPS	**Mount Arapiles**	**34.21**	**222**	P	**P**	**15 50 09.0**	**+0.8**
	baz=34,SNR=25						
WB2	**Warramunga Arr**	**34.41**	**254**	*e*P	**P**	**15 50 09.5**	**-0.6**
	comp=Z,85nm,0.8s						
WRAB	**Tennant Creek**	**34.41**	**254**	*e*P	**P**	**15 50 09.2**	**-1.0**
	comp=Z,74nm,0.6s						
WRAB	**Tennant Creek**	**34.41**	**254**	*c i*P	**P**	**15 50 09.3**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,73nm,0.7s						
WR1	**Warramunga Arr**	**34.42**	**254**	*e*P	**P**	**15 50 09.6**	**-0.7**
WR1				*e*ScP	**ScP**	**15 55 17.3**	**+0.6**
WRA	**Warramunga Arr**	**34.42**	**254**	P	**P**	**15 50 09.6**	**-0.7**
	comp=Z,58nm,0.5s,baz=83,slow=8.5,SNR=560						
WRA				S	**S**	**15 54 52.9**	**-4.2**
	comp=Z,11nm,1.1s,baz=90,slow=13,SNR=9.0						
WRA				ScP	**ScP**	**15 55 17.3**	**+0.6**
	comp=Z,21nm,1.0s,baz=82,slow=3.5,SNR=7.0						
HTT	**Hallett**	**34.45**	**229**	P	**P**	**15 50 11.1**	**+0.8**
	baz=35,SNR=171						
SRPI	**Serui, Papua**	**34.88**	**286**	P	**P**	**15 50 17.0**	**+2.9**
MOO	**Moorlands**	**35.04**	**209**	P	**P**	**15 50 16.1**	**+1.1**
	baz=35,SNR=6.7						
TAU	**Tasmania Unive**	**35.33**	**209**	*e*P	**P**	**15 50 17.7**	**+0.3**
	comp=Z,192nm,1.6s						
TAU	**Tasmania Unive**	**35.33**	**209**	*e*P	**P**	**15 50 17.7**	**+0.3**
TAU				pmax	pmax		
	comp=Z,192nm,1.6s						
AS31	**Alice Springs**	**35.35**	**248**	*e*P	**P**	**15 50 17.5**	**-0.5**
	comp=Z,58nm,0.9s						
AS31				*e*PcP	**PcP**	**15 52 30.8**	**+0.1**
ASAR	**Alice Springs**	**35.35**	**248**	P	**P**	**15 50 17.8**	**-0.2**
	comp=Z,108nm,0.4s,baz=78,slow=9.5,SNR=4419						
ASAR				PcP	**PcP**	**15 52 30.8**	**+0.1**
	comp=Z,7.3nm,0.9s,baz=79,slow=3.2,SNR=7.1						
ASAR				S	**S**	**15 55 08.2**	**-2.9**
	comp=Z,22nm,0.8s,baz=80,slow=15,SNR=38						
KDU	**Kakadu**	**36.18**	**266**	P	**P**	**15 50 24.8**	**+0.1**
	baz=36,SNR=31						
BBOO	**Buckleboo**	**36.32**	**232**	*e*P	**P**	**15 50 26.0**	**+0.3**
	comp=Z,298nm,1.4s						
BBOO	**Buckleboo**	**36.32**	**232**	P	**P**	**15 50 26.3**	**+0.6**
	baz=36,SNR=128						
MTN	**Manton Dam**	**37.47**	**266**	*e*P	**P**	**15 50 35.2**	**-0.1**
	comp=Z,116nm,1.3s						
MTN	**Manton Dam**	**37.47**	**266**	P	**P**	**15 50 35.4**	**+0.1**
	baz=38,SNR=43						
PPT	**Papeete**	**39.54**	**102**	P	**P**	**15 50 53.4**	**+1.4**
	comp=Z,44nm,0.7s,baz=18,slow=5.3,SNR=6.0						
KNRA	**Kununurra**	**39.60**	**261**	P	**P**	**15 50 52.3**	**-0.1**
	baz=40,SNR=25						
SIJI	**Sorong**	**39.90**	**285**	P	**P**	**15 50 55.2**	**+0.3**
	comp=Z,59nm,0.8s,baz=76,slow=5.3,SNR=19						
WRKA	**Warakurna**	**40.63**	**247**	P	**P**	**15 51 00.7**	**+0.1**
	baz=41,SNR=101						
AAI	**Ambon**	**41.98**	**279**	P	**P**	**15 51 12.5**	**+1.2**
AAI				pmax	pmax		
	comp=Z,78nm,0.8s						
AAI	**Ambon**	**41.98**	**279**	P	**P**	**15 51 11.3**	**0.0**
	comp=Z,80nm,0.8s,comp=Z,1µm						
FORT	**Forrest**	**42.04**	**238**	*e*P	**P**	**15 51 11.6**	**+0.1**
	comp=Z,133nm,0.6s						
FORT	**Forrest**	**42.04**	**238**	P	**P**	**15 51 11.7**	**+0.2**
	baz=42,SNR=151						
NLAI	**Namlea**	**43.15**	**279**	P	**P**	**15 51 21.3**	**+0.9**
	comp=Z,60nm,0.7s,comp=Z,3µm						
LBMI	**Labuha**	**43.53**	**283**	P	**P**	**15 51 23.8**	**+0.4**
	comp=Z,64nm,1.1s,comp=Z,76µm						
SOEI	**Soe**	**44.52**	**269**	*e*P	**P**	**15 51 31.9**	**+0.7**
	comp=Z,75nm,0.8s						
SOEI	**Soe**	**44.52**	**269**	P	**P**	**15 51 31.9**	**+0.7**
	comp=Z,116nm,1.1s						
SANI	**Sanana**	**44.55**	**281**	P	**P**	**15 51 30.2**	**-1.0**
	comp=Z,39nm,0.8s,comp=Z,602nm						
BATI	**Baumata**	**45.05**	**269**	P	**P**	**15 51 37.0**	**+2.0**
	comp=Z,208nm,0.7s,baz=127,slow=2.0,SNR=34						
BATI	**Baumata**	**45.05**	**269**	P	**P**	**15 51 36.3**	**+1.3**
	comp=Z,124nm,0.8s						
MMRI	**Maumere**	**46.68**	**271**	*e*P	**P**	**15 51 46.6**	**-0.8**
	comp=Z,166nm,1.0s						
MMRI	**Maumere**	**46.68**	**271**	P	**P**	**15 51 47.6**	**+0.2**
	comp=Z,197nm,1.0s,comp=Z,2µm						
SGSI	**Sangihe**	**46.86**	**288**	P	**P**	**15 51 52.2**	**+3.5**
EDFI	**Ende, Flores**	**47.20**	**270**	P	**P**	**15 51 51.2**	**-0.2**
	comp=Z,103nm,1.1s,comp=Z,1µm						
KMBL	**Kambalda**	**47.33**	**239**	P	**P**	**15 51 51.8**	**-0.2**
	baz=47,SNR=21						
HMH	**Humu'ula Sheep**	**47.35**	**47**	*e*P	**P**	**15 51 52.5**	**-0.1**
	comp=Z,343nm,1.2s						
LUWI	**Luwuk**	**47.91**	**281**	*e*P	**P**	**15 51 55.4**	**-1.2**
	comp=Z,125nm,0.9s						
LUWI	**Luwuk**	**47.91**	**281**	P	**P**	**15 51 57.3**	**+0.7**
	comp=Z,163nm,0.9s,comp=Z,1µm						
PSA00	**Pilbara Seismi**	**48.06**	**253**	*e*P	**P**	**15 51 57.8**	**+0.2**
	comp=Z,94nm,0.6s						
APSI	**Ampana**	**49.03**	**280**	P	**P**	**15 52 05.8**	**+1.0**
	comp=Z,74nm,1.1s,comp=Z,707nm						
WBSI	**Waikabubak, Su**	**49.29**	**269**	P	**P**	**15 52 08.0**	**+1.2**
	comp=Z,118nm,0.9s,comp=Z,1µm						
MEEK	**Meekatharra**	**49.48**	**246**	P	**P**	**15 52 08.0**	**0.0**
	baz=50,SNR=46						
BNSI	**Bone**	**49.61**	**275**	P	**P**	**15 52 10.0**	**+0.9**
	comp=Z,88nm,0.9s,comp=Z,837nm						
KAPI	**Kappang**	**49.82**	**275**	P	**P**	**15 52 11.0**	**+0.4**
	comp=Z,33nm,0.9s,baz=107,slow=5.9,SNR=12						
KAPI	**Kappang**	**49.82**	**275**	*e*P	**P**	**15 52 10.7**	**+0.1**
	comp=Z,43nm,0.9s						
KAPI	**Kappang**	**49.82**	**275**	*ce*P	**P**	**15 52 11.4**	**+0.8**
KAPI				pmax	pmax		
	comp=Z,39nm,0.8s						
SPSI	**Sidrap Palu**	**50.04**	**276**	P	**P**	**15 52 12.0**	**-0.2**
NWAO	**Narrogin (SRO)**	**51.49**	**238**	P	**P**	**15 52 22.1**	**-0.3**
	comp=Z,48nm,0.5s,baz=92,slow=5.6,SNR=112						
NWAO	**Narrogin (SRO)**	**51.49**	**238**	*e*P	**P**	**15 52 22.1**	**-0.3**
	comp=Z,6.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**51.49**	**238**	P	**P**	**15 52 22.1**	**-0.3**
	baz=52,SNR=20						
NWAO	**Narrogin (SRO)**	**51.49**	**238**	*e*P	**P**	**15 52 22.1**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BLDU	**Ballidu**	**51.59**	**241**	P	**P**	**15 52 22.8**	**-0.4**
	baz=52,SNR=10						
MORW	**Morawa**	**51.99**	**243**	*e*P	**P**	**15 52 26.0**	**-0.1**
	comp=Z,77nm,1.0s						
MORW				*e*pP	**pP**	**15 54 16.9**	**+0.5**
MORW	**Morawa**	**51.99**	**243**	P	**P**	**15 52 26.1**	**+0.1**
	baz=52,SNR=16						
MUN	**Mundaring**	**52.20**	**240**	P	**P**	**15 52 27.4**	**-0.1**
	baz=52,SNR=10						
GIRL	**Giralia**	**53.27**	**252**	P	**P**	**15 52 36.3**	**+1.0**
	baz=53,SNR=10						
KKM	**Kota Kinabalu**	**56.37**	**286**	*e*P	**P**	**15 52 55.7**	**-1.4**
	comp=Z,86nm,1.5s						
JOW	**Kunigami**	**56.51**	**315**	P	**P**	**15 52 58.4**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=132,slow=10.0,SNR=4.1						
MJAR	**Matsushiro Arr**	**57.64**	**330**	P	**P**	**15 53 05.0**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=152,slow=5.5,SNR=9.5						
MAJO	**Matsushiro**	**57.64**	**330**	*e*P	**P**	**15 53 05.0**	**-0.2**
MAJO	**Matsushiro**	**57.64**	**330**	*e*P	**P**	**15 53 05.0**	**-0.2**
JNU	**Nakatsue**	**59.04**	**322**	P	**P**	**15 53 14.7**	**0.0**
	comp=Z,3.7nm,0.8s,baz=315,slow=4.3,SNR=4.1						
JNU	**Nakatsue**	**59.04**	**322**	*e*P	**P**	**15 53 14.7**	**0.0**
	comp=Z,18nm,1.3s						
KSM	**Kuching**	**60.58**	**279**	*e*P	**P**	**15 53 24.9**	**-0.2**
	comp=Z,35nm,1.2s						
CISI	**Cisompet, Garu**	**60.92**	**269**	*e*P	**P**	**15 53 26.4**	**-1.1**
	comp=Z,97nm,0.8s						
LEM	**Lembang**	**61.26**	**269**	P	**P**	**15 53 30.2**	**+0.4**
	comp=Z,136nm,0.8s,baz=14,slow=8.3,SNR=9.0						
ASAJ	**Asahikawa**	**62.11**	**338**	P	**P**	**15 53 35.2**	**+0.8**
	comp=Z,14nm,0.8s,baz=209,slow=9.8,SNR=12						
KSRS	**Korea Array**	**63.79**	**324**	P	**P**	**15 53 46.1**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=136,slow=5.3,SNR=6.2						
KS15	**Wonju Array Si**	**63.80**	**324**	*e*P	**P**	**15 53 46.1**	**+0.7**
	comp=Z,39nm,1.7s						
KSAR	**Wonju Array Be**	**63.80**	**324**	P	**P**	**15 53 46.1**	**+0.7**
KSAR	**Wonju Array Be**	**63.80**	**324**	P	**P**	**15 53 46.2**	**+0.7**
VNDA	**Vanda**	**64.47**	**182**	P	**P**	**15 53 49.6**	**+0.6**
	comp=Z,8.7nm,0.6s,baz=5.0,slow=6.2,SNR=56						
VNDA	**Vanda**	**64.47**	**182**	*e*P	**P**	**15 53 49.3**	**+0.3**
	comp=Z,68nm,1.8s						
VNDA	**Vanda**	**64.47**	**182**	*e*P	**P**	**15 53 49.3**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,68nm,1.8s						
YSS	**Yuzh-Sakhalins**	**64.52**	**340**	*e*P	**P**	**15 53 50.6**	**+0.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SBA	**Scott Base**	**64.69**	**181**	*e*P	**P**	**15 53 51.2**	**+0.8**
	comp=Z,146nm,1.6s						
SBA	**Scott Base**	**64.69**	**181**	*e*P	**P**	**15 53 51.2**	**+0.8**
SBA				pmax	pmax		
	comp=Z,146nm,1.6s						
CASY	**Casey**	**65.81**	**202**	*e*P	**P**	**15 53 57.7**	**+0.1**
	comp=Z,32nm,0.8s						
NJ2	**Nanjing**	**66.20**	**314**	*e*P	**P**	**15 54 00.9**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**66.58**	**331**	P	**P**	**15 54 03.6**	**+1.0**
	comp=Z,1.4nm,0.4s,baz=210,slow=7.1,SNR=14						
USRK				pP	**pP**	**15 56 02.6**	**+0.8**
	comp=Z,3.6nm,1.1s,baz=142,slow=7.3,SNR=3.7						
ATKA	**Atka Island**	**66.60**	**11**	*e*P	**P**	**15 54 01.9**	**-0.7**
	comp=Z,48nm,1.2s						
PEA0B	**Petropavlovsk-**	**66.81**	**352**	*e*P	**P**	**15 54 03.9**	**0.0**
	comp=Z,58nm,1.3s						
PEA0B	**Petropavlovsk-**	**66.81**	**352**	*e*P	**P**	**15 54 03.9**	**0.0**
PEA0B				pmax	pmax		
	comp=Z,58nm,1.3s						
PETK	**Petropavlovsk-**	**66.81**	**352**	P	**P**	**15 54 04.4**	**+0.5**
	comp=Z,14nm,0.8s,baz=145,slow=7.7,SNR=20						
PEA1	**Petropavlovsk-**	**66.81**	**352**	*e*P	**P**	**15 54 04.4**	**+0.5**

MYKOM	Kota Tinggi	66.88	278	*e*P	P	15 54 02.2	-3.0
	comp=Z,20nm,1.0s						
TYV	Tymovskoe	67.98	342	*e*P	P	15 54 11.5	+0.5
TYV				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NIKH	Nikolski High	68.44	14	*e*P	P	15 54 13.2	-0.6
	comp=Z,183nm,1.1s						
WHN	Wuhan	68.64	310	⇓P	P	15 54 16.3	+0.8
WHN				pmax	pmax		
	comp=Z,58nm,0.9s						
BKNI	Bangkinang	69.23	275	*e*P	P	15 54 17.7	-1.7
	comp=Z,87nm,0.9s						
UNV	Unalaska Valle	69.80	15	*e*P	P	15 54 20.9	-1.0
	comp=Z,37nm,1.0s						
IPM	Ipoh	70.31	280	*e*P	P	15 54 24.6	-1.2
	comp=Z,46nm,1.0s						
KLR	Kul'dur	70.55	335	P	P	15 54 27.3	+0.8
	comp=Z,2.3nm,0.6s,baz=159,slow=8.6,SNR=6.2						
KLR	Kul'dur	70.55	335	*i* P	P	15 54 26.7	+0.3
KLR				pmax	pmax		
	comp=Z,12nm,2.2s						
KULM	Kulim	70.89	280	*e*P	P	15 54 28.2	-1.0
	comp=Z,17nm,0.9s						
SKNT	Sakolnakorn	71.41	293	P	P	15 54 32.8	+0.7
PSI	Prapat	71.90	277	*e*P	P	15 54 34.0	-1.2
	comp=Z,38nm,0.9s						
PSI	Prapat	71.90	277	*e*P	P	15 54 34.0	-1.2
PSI				pmax	pmax		
	comp=Z,38nm,0.9s						
TRTT	Trang	72.50	283	P	P	15 54 39.9	+1.4
NONG	Nongkai	72.53	294	P	P	15 54 39.3	+0.7
GSI	Gunungsitoli	72.83	276	*e*P	P	15 54 40.6	+0.1
	comp=Z,73nm,0.8s						
CHAI	Chaiyaphum	72.84	291	P	P	15 54 41.1	+0.7
SLVN	Son La	73.04	297	*e*P	P	15 54 40.0	-1.6
	comp=Z,20nm,1.5s						
MA2	Magadan	74.09	350	*i* P	P	15 54 46.6	0.0
MA2				pmax	pmax		
	comp=Z,17nm,1.0s						
PHRA	Phrae	75.28	293	P	P	15 54 55.3	+1.2
KMI	Kunming	75.45	301	P	P	15 54 55.2	0.0
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
HHC	Hu-ho-hao-te	75.91	318	P	P	15 54 58.5	+1.2
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
CM31	Chiang Mai Arr	76.42	293	*e*P	P	15 55 01.0	+0.6
	comp=Z,36nm,0.9s						
CMAR	Chiang Mai Arr	76.42	293	P	P	15 55 01.8	+1.3
	comp=Z,22nm,0.9s,baz=121,slow=4.3,SNR=86						
CMMT	Chiang Mai	76.53	293	P	P	15 55 02.0	+1.0
CHTO	Chiang Mai	76.54	293	*e*P	P	15 55 01.4	+0.4
	comp=Z,26nm,0.9s						
CHTO	Chiang Mai	76.54	293	*e*P	P	15 55 01.4	+0.4
CHTO				pmax	pmax		
	comp=Z,27nm,0.9s						
OHAK	Old Harbor	76.56	20	*e*P	P	15 55 00.5	+0.3
	comp=Z,43nm,0.9s						
QSPA	South Pole Qui	76.84	180	*e*P	P	15 55 02.4	+0.4
	comp=Z,88nm,1.6s						
CD2	Chengdu	76.90	306	*e*P	P	15 55 02.0	-0.8
SEY	Seymchan	77.05	352	*i* P	P	15 55 02.8	0.0
LZH	Lanzhou	78.99	311	⇑P	P	15 55 15.4	+1.3
LZH				pP	pP	15 57 18.8	-0.6
LZH				sP	sP	15 58 17.4	-2.8
LZH				PP	PP	15 58 25.5	+0.8
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,5.0s						
SVW2	Sparrevohn	79.02	16	*e*P	P	15 55 13.6	+0.2
	comp=Z,19nm,1.3s						
CNPM	China Poot	79.04	19	*e*P	P	15 55 13.7	+0.1
	comp=Z,82nm,1.5s						
RSO	Redoubt South	79.31	18	*e*P	P	15 55 14.6	-0.6
BRLK	Bradley Lake	79.34	19	*e*P	P	15 55 14.6	-0.6
	comp=Z,47nm,1.0s						
SEW	Seward	80.07	19	*e*P	P	15 55 18.5	-0.4
	comp=Z,44nm,1.1s						
TTA	Tatalina	80.43	15	*e*P	P	15 55 20.8	0.0
	comp=Z,19nm,1.1s						
TTA	Tatalina	80.43	15	*e*P	P	15 55 20.8	0.0
TTA				pmax	pmax		
	comp=Z,19nm,1.1s						
RC01	Rabbit Creek A	80.73	19	*e*P	P	15 55 22.4	+0.1
	comp=Z,100nm,1.2s						
BILL	Bilibino	81.03	359	*e*P	P	15 55 22.8	-0.9
	comp=Z,32nm,1.2s						
BILL	Bilibino	81.03	359	⇓*i*P	P	15 55 23.7	0.0
BILL				*i* *PP	pP	15 57 30.0	+0.3
BILL				*e*		15 58 41.7	
BILL				*e*PPP	PPP	16 00 40.2	
BILL				*e*S	S	16 04 42.5	-1.4
BILL				pmax	pmax		
	comp=Z,36nm,1.3s						
YAK	Yakutsk	81.24	342	*e*P	P	15 55 25.2	+0.3
KCPM	Cahto Peak	81.26	46	*e*P	P	15 55 26.1	+0.4
	comp=Z,88nm,1.3s						
PMR	Palmer	81.30	19	*e*P	P	15 55 25.0	-0.2
	comp=Z,42nm,1.2s						
PMR	Palmer	81.30	19	*e*P	P	15 55 25.0	-0.2
PMR				pmax	pmax		
	comp=Z,42nm,1.2s						
HOPS	Hopland Field	81.33	47	*e*P	P	15 55 25.7	-0.2
	comp=Z,49nm,1.1s						
KNK	Knik Glacier	81.38	19	*e*P	P	15 55 25.1	-0.6
	comp=Z,54nm,1.2s						
PPLA	Purkeypile	81.42	17	*e*P	P	15 55 25.1	-0.9
	comp=Z,32nm,1.3s						
GLI	Glacier Island	81.42	20	*e*P	P	15 55 24.8	-1.1
	comp=Z,47nm,1.1s						
GDXM	Geysers	81.45	47	*e*P	P	15 55 27.1	+0.5
	comp=Z,22nm,1.1s						
SAO	San Andreas Ge	81.60	49	*e*P	P	15 55 25.5	-1.9
	comp=Z,29nm,1.2s						
SAO	San Andreas Ge	81.60	49	*e*P	P	15 55 25.5	-1.9
SAO				pmax	pmax		
	comp=Z,29nm,1.2s						
EYAK	Cordova Ski Ar	81.63	21	*e*P	P	15 55 26.5	-0.4
	comp=Z,19nm,0.8s						
KHMM	Horse Mountain	81.67	45	*e*P	P	15 55 27.9	+0.1
	comp=Z,56nm,1.3s						
SML	Sawmill	81.72	19	*e*P	P	15 55 27.3	-0.1
	comp=Z,47nm,1.3s						
SML	Sawmill	81.72	19	*e*P	P	15 55 27.3	-0.1
SML				pmax	pmax		
	comp=Z,47nm,1.3s						
HMT	Hamilton	82.00	21	*e*P	P	15 55 28.8	-0.1
	comp=Z,59nm,1.2s						
SBC	Santa Barbara	82.02	52	P	P	15 55 31.1	+1.6
	baz=248						
O02D	Mt. Diablo Mer	82.02	46	P	P	15 55 30.6	+1.1
	baz=245,SNR=17						
SCM	Sheep Creek Mo	82.05	19	*e*P	P	15 55 29.1	0.0
	comp=Z,28nm,0.9s						
SCM	Sheep Creek Mo	82.05	19	*e*P	P	15 55 29.1	0.0
SCM				pmax	pmax		
	comp=Z,28nm,0.9s						
PKM	Mcpherson Peak	82.11	52	P	P	15 55 31.2	+1.0
	baz=248						
ULN	Ulaanbaatar	82.26	323	*i* P	P	15 55 31.2	+0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KTH	Kantishna Hill	82.29	17	*e*P	P	15 55 29.3	-1.0
	comp=Z,36nm,1.0s						
L02E	Cave Junction	82.30	44	P	P	15 55 32.1	+1.3
	baz=245						
WDC	Whiskeytown Da	82.36	45	*e*P	P	15 55 29.9	-1.2
	comp=Z,36nm,1.2s						
WDC	Whiskeytown Da	82.36	45	*e*P	P	15 55 29.9	-1.2
WDC				pmax	pmax		
	comp=Z,36nm,1.2s						
N02D	Trinity Center	82.41	45	P	P	15 55 32.9	+1.4
	baz=245,SNR=13						
M02C	Callahan	82.48	45	P	P	15 55 33.4	+1.5
	baz=245,SNR=11						
K02D	Willamette Mer	82.49	43	P	P	15 55 32.8	+1.0
	baz=244						
J01E	Myrtle Point	82.52	43	P	P	15 55 33.0	+1.2
	baz=244						
SONA0	Songino Array	82.63	323	*e*P	P	15 55 32.7	+0.3
SONM	Songino Array	82.63	323	P	P	15 55 32.7	+0.3
	comp=Z,0.9nm,0.4s,baz=143,slow=4.7,SNR=6.9						
ORV	Oroville	82.67	47	*e*P	P	15 55 32.8	+0.1
	comp=Z,24nm,1.0s						
ORV	Oroville	82.67	47	P	P	15 55 32.8	+0.1
ORV				pmax	pmax		
	comp=Z,24nm,1.0s						
BPAW	Bear Paw Mtn.	82.70	16	*e*P	P	15 55 31.5	-0.9
	comp=Z,19nm,1.1s						
YBH	Yreka Blue Hor	82.72	44	*e*P	P	15 55 33.6	+0.5
	comp=Z,32nm,1.0s						
O03E	Paynes Creek	82.76	46	P	P	15 55 33.9	+0.7
	baz=246,SNR=15						
RND	Reindeer	82.77	18	*e*P	P	15 55 32.0	-0.7
	comp=Z,36nm,1.1s						
RND	Reindeer	82.77	18	*e*P	P	15 55 32.0	-0.7
RND				pmax	pmax		
	comp=Z,36nm,1.1s						
AFDM	Forest Hills D	82.81	47	*e*P	P	15 55 33.4	0.0
	comp=Z,32nm,1.0s						
OSI	Osito Audit: C	82.84	52	P	P	15 55 34.6	+0.9
	baz=249						
CMB	Columbia Colle	82.88	48	*e*P	P	15 55 34.0	+0.2
	comp=Z,21nm,0.9s						
HUMO	Hull Mountain	82.93	43	*e*P	P	15 55 34.5	+0.5
	comp=Z,32nm,1.0s						
ARVC	Arvin	82.95	52	P	P	15 55 34.9	+0.7
	baz=249						
DHY	Denali Highway	82.96	18	*e*P	P	15 55 33.4	-0.4
	comp=Z,7.9nm,0.8s						
DHY				*e*pP	pP	15 57 41.7	+1.8
VOG	Valley Oaks Go	82.97	50	P	P	15 55 35.1	+0.8
	baz=248						
I02D	Swisshome	82.98	42	P	P	15 55 35.2	+1.1
	baz=244						
MCK	McKinley	83.00	17	*e*P	P	15 55 33.3	-0.5
	comp=Z,30nm,1.1s						
MCK	McKinley	83.00	17	*e*P	P	15 55 33.3	-0.5
MCK				pmax	pmax		
	comp=Z,30nm,1.1s						
DECC	Green Verdugo	83.01	53	P	P	15 55 35.3	+0.8
	baz=249						
VES	Vestal, Richgr	83.02	51	P	P	15 55 35.0	+0.6
	baz=248						
I03D	Drain, OR	83.13	42	P	P	15 55 35.7	+0.9
	baz=245						
BALM	Baldy	83.16	21	*e*P	P	15 55 34.0	-0.7
	comp=Z,37nm,1.3s						
BWN	Browne	83.18	17	*e*P	P	15 55 34.2	-0.4
	comp=Z,38nm,0.7s						
L04D	Klamath Falls	83.20	44	P	P	15 55 36.2	+0.7
	baz=246,SNR=12						
MWC	Mount Wilson	83.22	53	*e*P	P	15 55 33.9	-1.9
	comp=Z,62nm,1.4s						
MWC	Mount Wilson	83.22	53	*e*P	P	15 55 33.9	-1.9
MWC				pmax	pmax		
	comp=Z,62nm,1.4s						
GTA	Gaotai	83.26	313	*e*P	P	15 55 37.4	+1.6
GTA				pP	pwP	15 57 44.6	-1.5
GTA				sP	sP	15 58 42.2	-1.3
GTA				pmax	pmax		
	comp=Z,17nm,0.9s						
M04C	Macdoel	83.34	44	P	P	15 55 36.8	+0.6
	baz=246,SNR=6.0						
RDOG	Red Dog Mine	83.40	10	*e*P	P	15 55 36.1	+0.4
	comp=Z,31nm,1.0s						
RDOG				*e*pP	pP	15 57 43.2	+1.0
ISA	Isabella, Lake	83.41	51	*e*P	P	15 55 37.0	+0.4
	comp=Z,52nm,1.2s						
ISA	Isabella, Lake	83.41	51	P	P	15 55 37.0	+0.4
ISA				pmax	pmax		
	comp=Z,51nm,1.2s						
ISA	Isabella, Lake	83.41	51	P	P	15 55 37.4	+0.9
	baz=249,SNR=16						
PAX	Paxson	83.48	19	*e*P	P	15 55 36.3	0.0
	comp=Z,23nm,1.8s						
PAX	Paxson	83.48	19	*e*P	P	15 55 36.3	0.0
PAX				pmax	pmax		
	comp=Z,23nm,1.8s						
109C	Camp Elliot, M	83.50	54	P	P	15 55 37.7	+0.8
	baz=250						
EDW2	Edwards Air Fo	83.50	52	P	P	15 55 37.9	+0.9
	baz=249,SNR=14						
BFSC	Mount Baldy Ra	83.53	53	P	P	15 55 37.7	+0.5
	baz=249,SNR=14						
BEKR	Beckworth	83.61	47	*e*P	P	15 55 37.2	-0.3
	comp=Z,25nm,1.0s						
MURC	Murrieta	83.67	54	P	P	15 55 38.7	+0.8
	baz=250						
MDPB	Devils Postpil	83.68	49	*e*P	P	15 55 38.2	+0.1
	comp=Z,53nm,1.2s						
OMMB	Old Mammoth Mi	83.73	49	*e*P	P	15 55 38.4	0.0
	comp=Z,30nm,1.2s						
WAKR	Walker	83.75	48	*e*P	P	15 55 38.5	+0.1
	comp=Z,47nm,1.1s						
J04D	Umpqua Nationa	83.76	43	P	P	15 55 39.3	+1.0
	baz=246,SNR=6.1						
BAR	Barrett	83.77	55	*e*P	P	15 55 38.3	0.0
	comp=Z,19nm,1.1s						
I04A	Tendick Farm,	83.79	42	P	P	15 55 38.6	+0.4
	baz=245,SNR=6.8						
WRH	Wood River Hil	83.80	17	*e*P	P	15 55 36.8	-0.9
	comp=Z,16nm,0.9s						
G03D	McMinnville, O	83.83	41	P	P	15 55 39.4	+1.1
	baz=244						
PNTR	Pine Nut	83.85	48	*e*P	P	15 55 39.0	+0.2
	comp=Z,45nm,1.3s						
MLAC	Mammoth, Mammo	83.86	49	P	P	15 55 40.1	+1.2
	baz=248						
H04D	Lebanon	83.88	42	P	P	15 55 39.4	+0.8
	baz=245						
VCNR	Virginia City	83.89	47	*e*P	P	15 55 39.3	+0.2
	comp=Z,49nm,1.7s						
LRMC	Laurel Mtn Rad	83.95	52	P	P	15 55 40.3	+0.9
	baz=249,SNR=16						
CWC	Cottonwood Cre	83.99	51	P	P	15 55 40.5	+1.0
	baz=249						
CCB	Clear Creek Bu	84.01	17	*e*P	P	15 55 37.4	-1.3
	comp=Z,15nm,0.9s						
MONP2	Monument Peak	84.04	54	P	P	15 55 41.0	+1.1
	baz=250,SNR=11						
YERR	Yerington	84.07	48	*e*P	P	15 55 40.2	+0.3
	comp=Z,31nm,1.3s						
HDA	Harding Lake	84.08	17	*e*P	P	15 55 38.5	-0.6
	comp=Z,33nm,0.9s						
HDA				*e*pP	pP	15 57 45.9	+0.4
HDA	Harding Lake	84.08	17	P	P	15 55 39.3	+0.1
	baz=222						
TIN	Tinemaha, Big	84.10	50	P	P	15 55 41.1	+1.1
	baz=249						
MAW	Mawson	84.16	202	P	P	15 55 40.1	+0.6
	comp=Z,22nm,1.0s,baz=94,slow=5.9,SNR=26						
MAW	Mawson	84.16	202	*e*P	P	15 55 39.5	0.0
	comp=Z,13nm,1.3s						
MAW	Mawson	84.16	202	P	P	15 55 40.2	+0.7
	baz=84,SNR=18						
TCOL	CIGO, UAF Yank	84.17	17	P	P	15 55 39.1	-0.4
	baz=221						
COLA	College	84.17	17	*e*P	P	15 55 37.8	-1.7
	comp=Z,25nm,0.8s						
COLA	College	84.17	17	*i* P	P	15 55 38.7	-0.8
COLA				pmax	pmax		
	comp=Z,26nm,0.9s						
IKP	In-Ko-Pah, Jac	84.20	55	P	P	15 55 41.6	+1.1
	baz=250						
E03A	Lebam	84.22	40	*e*P	P	15 55 40.2	+0.1
	comp=Z,64nm,1.0s						
RIDG	Independent Ri	84.23	19	*e*P	P	15 55 39.0	-0.9
	comp=Z,15nm,0.8s						
RIDG				*e*pP	pP	15 57 47.6	+0.9
PAHR	Pah Rah Range	84.24	47	*e*P	P	15 55 39.2	-1.4
	comp=Z,33nm,1.1s						
PFO	Pinyon Flats O	84.25	54	*e*P	P	15 55 40.0	-0.8
	comp=Z,17nm,0.9s						
PFO	Pinyon Flats O	84.25	54	P	P	15 55 41.6	+0.8
	baz=250,SNR=8.7						
RRX	Edison Barstow	84.26	52	P	P	15 55 41.6	+0.9
	baz=250						
DAC	Darwin (Calif)	84.30	51	*e*P	P	15 55 42.2	+1.2
	comp=Z,27nm,1.3s						
DAC	Darwin (Calif)	84.30	51	P	P	15 55 42.3	+1.2
DAC				pmax	pmax		
	comp=Z,27nm,1.2s						
MPMC	Manual Prospec	84.30	51	P	P	15 55 42.0	+0.9
	baz=249,SNR=16						
H04A	Detroit Lake	84.31	42	*e*P	P	15 55 40.6	-0.1
	comp=Z,24nm,1.0s						
J05D	Fort Rock, OR	84.36	43	P	P	15 55 42.1	+1.0
	baz=246,SNR=14						
K05A	Summer Lake	84.36	44	*e*P	P	15 55 41.2	0.0
	comp=Z,43nm,1.1s						
F04D	Rainier, OR	84.37	40	P	P	15 55 41.7	+0.8
	baz=245						
ILAR	Eielson Array	84.37	17	P	P	15 55 39.3	-1.2
	comp=Z,9.5nm,0.4s,baz=234,slow=5.6,SNR=109						
ILAR				pP	pP	15 57 47.9	+0.8
	comp=Z,3.2nm,1.0s,baz=228,slow=5.8,SNR=8.0						
ILAR				S	SKSac	16 05 06.3	-0.5
	comp=Z,0.1nm,0.5s,baz=268,slow=2.7,SNR=3.7						
ILB	Eielson Array	84.37	17	*e*P	P	15 55 39.2	-1.2
	comp=Z,24nm,1.0s						
ILB				*e*pP	pP	15 57 48.1	+1.1
NLWA	Neilton Lookou	84.41	39	*e*P	P	15 55 41.4	+0.2
	comp=Z,14nm,0.8s						
DOT	Dot Lake	84.41	19	*e*P	P	15 55 39.9	-0.8
	comp=Z,11nm,0.9s						
DOT				*e*pP	pP	15 57 48.9	+1.4
MOD	Modoc Plateau	84.44	45	*e*P	P	15 55 41.5	-0.1
	comp=Z,22nm,1.1s						
RYN	Ryan	84.46	48	*e*P	P	15 55 42.0	+0.2
	comp=Z,25nm,1.2s						
POKR	Poker Plat Res	84.47	17	P	P	15 55 40.4	-0.6
	baz=222						
NV01	Mina Array Sit	84.54	49	*e*P	P	15 55 43.0	+0.7
NVAR	Mina Array Bea	84.54	49	P	P	15 55 42.9	+0.7
	comp=Z,19nm,1.1s,baz=229,slow=7.0,SNR=64						
NVAR				PP	PP	15 59 07.2	-2.4
	comp=Z,0.1nm,0.3s,baz=236,slow=6.4,SNR=3.0						
SWSC	Sam W. Stewart	84.55	55	P	P	15 55 43.0	+0.9
	baz=251,SNR=6.7						
GSC	Goldstone, Bar	84.56	52	*e*P	P	15 55 42.3	+0.1
	comp=Z,37nm,1.4s						
GSC	Goldstone, Bar	84.56	52	*e*P	P	15 55 42.3	+0.1
GSC				pmax	pmax		
	comp=Z,37nm,1.4s						
GSC	Goldstone, Bar	84.56	52	P	P	15 55 43.2	+1.0
	baz=250,SNR=8.9						
NV11	Mina Array Sit	84.65	49	*e*P	P	15 55 43.2	+0.5
	comp=Z,2.2nm,1.1s						
I05D	Terrebonne, OR	84.72	42	P	P	15 55 43.6	+0.9
	baz=246						
GRAC	Grapevine Rang	84.72	50	P	P	15 55 44.2	+1.2
	baz=249,SNR=16						
BELC	Belle Mtn. Jos	84.74	53	P	P	15 55 44.4	+1.1
	baz=250,SNR=24						
PINE	Pine Mountain	84.76	43	*e*P	P	15 55 43.6	+0.5
	comp=Z,32nm,1.1s						
HEC	Hector,Ludlow	84.76	53	P	P	15 55 44.1	+0.9
	baz=250,SNR=15						
HYT	Haines Junctio	84.81	23	*e*P	P	15 55 42.2	-0.7
E04D	Cinebar	84.85	40	P	P	15 55 44.3	+1.1
	baz=245						
SHL	Shillong	84.85	298	*e*P	P	15 55 42.8	-1.2
	comp=Z,31nm,1.0s						
SHL	Shillong	84.85	298	*e*P	P	15 55 42.8	-1.2
SHL				pmax	pmax		
	comp=Z,31nm,1.0s						
FURC	Furnace Creek,	84.92	51	P	P	15 55 44.9	+1.1
	baz=250,SNR=20						
KVN	Kaiserville	84.92	48	*e*P	P	15 55 43.9	-0.1
	comp=Z,36nm,1.3s						
KVN	Kaiserville	84.92	48	*e*P	P	15 55 43.9	-0.1
KVN				pmax	pmax		
	comp=Z,36nm,1.3s						
D03D	Eldon	84.95	39	P	P	15 55 45.0	+1.3
	baz=244						
D04E	Lakebay	84.99	39	P	P	15 55 45.3	+1.4
	baz=245						
BC3	Big Chuckawall	85.06	54	P	P	15 55 46.0	+1.2
	baz=251,SNR=13						
G05D	Wamic, OR	85.10	41	P	P	15 55 45.0	+0.5
	baz=246						
SHOC	Shoshone, Teco	85.17	52	P	P	15 55 45.9	+0.8
	baz=250,SNR=11						
PGC	Sidney	85.21	38	*e*P	P	15 55 45.3	+0.4
GMRC	Granite Mounta	85.27	53	P	P	15 55 46.7	+1.0
	baz=250,SNR=14						
F05D	White Salmon	85.27	41	P	P	15 55 46.3	+1.0
	baz=246						
TUQ	Turquoise Moun	85.28	52	P	P	15 55 46.8	+1.0
	baz=250,SNR=24						
PRP	Porcupine Dome	85.31	17	*e*P	P	15 55 44.2	-1.0
	comp=Z,4.9nm,1.0s						
COLD	Coldfoot	85.36	15	*e*P	P	15 55 45.2	0.0
	comp=Z,13nm,1.7s						
GLA	Glamis	85.36	55	*e*P	P	15 55 47.0	+0.9
	comp=Z,32nm,0.9s						
GLA	Glamis	85.36	55	*e*P	P	15 55 47.0	+0.9
GLA				pmax	pmax		
	comp=Z,33nm,0.9s						
GLA	Glamis	85.36	55	P	P	15 55 47.4	+1.4
	baz=251,SNR=7.2						
IRM	Iron Mountain	85.46	54	P	P	15 55 47.8	+1.2
	baz=251,SNR=16						
D05A	Enumclaw	85.48	40	*e*P	P	15 55 44.6	-1.7
	comp=Z,85nm,1.4s						
TPNV	Topopah Spring	85.55	51	*e*P	P	15 55 47.4	+0.3
	comp=Z,15nm,0.8s						
TPNV	Topopah Spring	85.55	51	*e*P	P	15 55 47.4	+0.3
TPNV				pmax	pmax		
	comp=Z,15nm,0.8s						
TPNV	Topopah Spring	85.55	51	P	P	15 55 48.1	+1.1
	baz=250,SNR=25						
A04D	Lummi Island	85.69	38	P	P	15 55 48.4	+1.2
	baz=245						
WVOR	Wild Horse Val	85.79	45	*e*P	P	15 55 48.2	+0.2
	comp=Z,33nm,1.4s						
WVOR	Wild Horse Val	85.79	45	*e*P	P	15 55 48.2	+0.2
WVOR				pmax	pmax		
	comp=Z,33nm,1.4s						
LDFC	Landfair	85.79	53	*e*P	P	15 55 48.7	+0.5
	comp=Z,107nm,1.3s						
Y12C	Blythe	85.82	54	*e*P	P	15 55 48.0	-0.2
	comp=Z,38nm,1.1s						
Y12C	Blythe	85.82	54	P	P	15 55 49.6	+1.4
	baz=251						
I07A	Izee	85.83	43	*e*P	P	15 55 48.6	+0.5
	comp=Z,29nm,1.3s						
B05A	Bryant	85.86	38	P	P	15 55 49.0	+1.0
	baz=245						
BMN	Battle Mountai	86.05	47	*e*P	P	15 55 49.7	+0.3
	comp=Z,28nm,1.3s						
BMN	Battle Mountai	86.05	47	*e*P	P	15 55 49.7	+0.3
BMN				pmax	pmax		
	comp=Z,28nm,1.3s						
113A	Mohawk Valley,	86.11	55	*e*P	P	15 55 48.1	-1.5
	comp=Z,70nm,2.0s						
EGAK	Eagle	86.11	19	*e*P	P	15 55 48.2	-0.7
EGAK				*e*pP	pP	15 57 58.0	+1.4
DAWY	Dawson	86.21	20	*e*P	P	15 55 48.3	-1.1
	comp=Z,14nm,1.4s						
SHPR	Sheep Range	86.22	51	*e*P	P	15 55 50.6	+0.4
	comp=Z,52nm,1.3s						
J08A	Circle Bar Ran	86.24	44	*e*P	P	15 55 50.5	+0.4
	comp=Z,42nm,1.4s						
PDMCI	Parker Dam,Lak	86.30	54	P	P	15 55 51.8	+1.4
	baz=251,SNR=12						
LTY	Liberty	86.33	40	*e*P	P	15 55 50.5	+0.2
	comp=Z,13nm,0.6s						
R11A	Troy Canyon, C	86.52	49	*e*P	P	15 55 51.9	+0.3
	comp=Z,21nm,1.3s						
R11A	Troy Canyon, C	86.52	49	P	P	15 55 52.3	+0.6
	baz=250,SNR=25						
TOLK	Toolik Lake Re	86.60	14	P	P	15 55 51.5	+0.3
	baz=220						
214A	Organ Pipe Nat	86.63	56	P	P	15 55 53.6	+1.4
	baz=252						
G08A	Pilot Rock	86.65	42	*e*P	P	15 55 52.3	+0.3
	comp=Z,31nm,1.0s						
HAWA	Hanford	86.70	41	*e*P	P	15 55 52.5	+0.5
	comp=Z,29nm,1.0s						
W13A	Hualapai Mount	86.75	53	*e*P	P	15 55 52.9	0.0
	comp=Z,29nm,1.1s						
LLLB	Lillooet	86.98	36	*e*P	P	15 55 53.6	+0.3
E08A	Dider Farm, El	87.04	41	*e*P	P	15 55 54.2	+0.6
	comp=Z,63nm,1.1s						
Y14A	Wickenburg	87.08	54	*e*P	P	15 55 54.4	+0.2
	comp=Z,18nm,1.3s						
D08A	Wollman Farm,	87.34	40	*e*P	P	15 55 55.6	+0.5
	comp=Z,29nm,1.1s						
ELK	Elko	87.57	47	*e*P	P	15 55 56.8	+0.2
	comp=Z,15nm,0.9s						
ELK	Elko	87.57	47	*e*P	P	15 55 56.8	+0.2
ELK				pmax	pmax		
	comp=Z,15nm,0.9s						
BMO	Blue Mountains	87.57	43	*e*P	P	15 55 56.5	+0.2
	comp=Z,29nm,1.2s						
BMO	Blue Mountains	87.57	43	*e*P	P	15 55 56.5	+0.2

BMO				pmax	pmax		
	comp=Z,29nm,1.2s						
E09A	Wood Farm, Sta	87.63	41	eP	P	15 55 56.8	+0.4
	comp=Z,43nm,1.3s						
LCMT	Little Creek M	87.84	51	eP	P	15 55 58.4	+0.6
	comp=Z,41nm,1.1s						
PSUT	Pine Spring	87.86	50	eP	P	15 55 58.0	0.0
	comp=Z,13nm,0.9s						
CCUT	Cedar City	87.92	51	eP	P	15 55 59.1	+0.8
	comp=Z,31nm,1.2s						
F10A	Beach Ranch, E	88.03	42	eP	P	15 55 58.7	+0.2
	comp=Z,28nm,0.6s						
C09A	Chrisman Ranch	88.03	40	eP	P	15 55 58.4	+0.2
	comp=Z,11nm,0.9s						
SZCU	Shurtz Canyon	88.14	51	eP	P	15 55 59.9	+0.6
	comp=Z,30nm,1.3s						
KNB	Kanab	88.16	51	eP	P	15 56 00.2	+0.9
	comp=Z,51nm,1.3s						
KNB	Kanab	88.16	51	eP	P	15 56 00.3	+0.9
KNB				pmax	pmax		
	comp=Z,51nm,1.3s						
TUC	Tucson	88.38	56	eP	P	15 56 00.7	+0.4
	comp=Z,19nm,1.1s						
TUC	Tucson	88.38	56	eP	P	15 56 00.7	+0.4
TUC				pmax	pmax		
	comp=Z,19nm,1.1s						
TUC	Tucson	88.38	56	P	P	15 56 01.9	+1.6
	baz=253						
U15A	North Rim	88.39	52	eP	P	15 56 01.4	+0.8
	comp=Z,43nm,1.1s						
X16A	Lo Mia Camp, P	88.46	54	eP	P	15 56 01.4	+0.6
	comp=Z,26nm,1.1s						
PLID	Pearl Lake	88.52	43	eP	P	15 56 01.0	+0.1
	comp=Z,26nm,1.2s						
EPYK	Eagle Plains	88.55	19	eP	P	15 55 59.5	-0.8
	comp=Z,6.8nm,0.6s						
EPYK	Eagle Plains	88.55	19	P	P	15 56 02.4	+2.1
	baz=232						
PKCU	Pink Cliffs	88.68	51	eP	P	15 56 03.0	+1.1
	comp=Z,48nm,1.3s						
WUAZ	Wupatki	88.83	53	eP	P	15 56 03.5	+1.0
	comp=Z,36nm,1.2s						
WUAZ	Wupatki	88.83	53	P	P	15 56 03.8	+1.3
	baz=253						
TIXI	Tiksi	88.92	348	eP	P	15 56 01.2	-0.6
	comp=Z,9.6nm,1.4s						
TIXI	Tiksi	88.92	348	eP	P	15 56 02.4	+0.6
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NEW	Newport	88.92	40	eP	P	15 56 02.3	-0.1
	comp=Z,15nm,0.9s						
NEW	Newport	88.92	40	eP	P	15 56 02.3	-0.1
NEW				pmax	pmax		
	comp=Z,15nm,0.9s						
NEW	Newport	88.92	40	P	P	15 56 02.9	+0.4
	baz=249						
TCRU	Three Creeks R	88.93	50	eP	P	15 56 04.1	+1.1
	comp=Z,23nm,1.1s						
MTPU	Mount Pierson	88.96	51	eP	P	15 56 04.5	+1.3
	comp=Z,24nm,1.1s						
HLID	Hailey	89.08	45	eP	P	15 56 04.2	+0.7
	comp=Z,16nm,1.2s						
HLID	Hailey	89.08	45	P	P	15 56 04.3	+0.8
	baz=251						
MSU	Marysvale	89.11	50	eP	P	15 56 04.8	+1.0
DUG	Dugway, Tooele	89.15	48	eP	P	15 56 04.0	+0.2
	comp=Z,25nm,1.5s						
DUG	Dugway, Tooele	89.15	48	eP	P	15 56 04.0	+0.2
DUG				pmax	pmax		
	comp=Z,25nm,1.5s						
DUG	Dugway, Tooele	89.15	48	P	P	15 56 04.6	+0.7
	baz=252						
BGU	Big Grassy Mou	89.22	48	eP	P	15 56 04.4	+0.3
	comp=Z,9.4nm,1.1s						
319A	Douglas	89.35	58	eP	P	15 56 05.7	+0.8
	comp=Z,53nm,1.4s						
HVU	Hansel Valley	89.66	47	eP	P	15 56 06.6	+0.4
	comp=Z,17nm,1.2s						
HVU	Hansel Valley	89.66	47	eP	P	15 56 06.6	+0.4
HVU				pmax	pmax		
	comp=Z,17nm,1.2s						
X18A	Snowflake	89.67	55	eP	P	15 56 07.4	+0.9
	comp=Z,17nm,1.0s						
Q16A	Castle Valley	89.98	50	eP	P	15 56 08.4	+0.6
	comp=Z,40nm,1.6s						
W18A	Petrified Fore	90.00	54	eP	P	15 56 09.2	+1.1
	comp=Z,30nm,1.2s						
W18A	Petrified Fore	90.00	54	P	P	15 56 09.1	+1.1
	baz=254						
TMUT	Trail Mountain	90.06	50	eP	P	15 56 08.9	+0.6
	comp=Z,11nm,1.2s						
JLU	Jordanelle	90.26	48	eP	P	15 56 09.8	+0.7
	comp=Z,7.4nm,1.1s						
TCUT	Toone Canyon	90.44	48	eP	P	15 56 10.8	+0.9
	comp=Z,9.0nm,0.6s						
MSO	Missoula	90.46	42	P	P	15 56 09.6	-0.1
	baz=251						
SRU	San Rafael Swe	90.52	50	eP	P	15 56 10.6	+0.3
	comp=Z,12nm,1.4s						
SRU	San Rafael Swe	90.52	50	eP	P	15 56 10.6	+0.3
SRU				pmax	pmax		
	comp=Z,12nm,1.4s						
MCMT	McKenzie Canyo	90.55	44	eP	P	15 56 09.7	-0.7
SYO	Syowa Base	90.82	196	⇑eP	P	15 56 09.3	-1.5
121A	Cookes Peak, D	90.88	57	P	P	15 56 13.0	+1.0
	baz=255						
DLMT	Dillon	90.89	44	eP	P	15 56 11.8	0.0
	comp=Z,18nm,1.4s						
LRM	Limekiln Ridge	91.12	43	eP	P	15 56 13.4	+0.5
WALA	Waterton Lakes	91.19	40	eP	P	15 56 13.4	+0.4
	comp=Z,11nm,1.3s						
PV09	Paradox Valley	91.39	51	eP	P	15 56 14.7	+0.3
PV14	Lion Creek, Pa	91.44	51	eP	P	15 56 14.4	-0.1
	comp=Z,7.1nm,0.8s						
FXWY	Fox Creek	91.45	46	eP	P	15 56 14.7	+0.2
	comp=Z,5.8nm,1.4s						
PV23	Carpenter Ridg	91.47	51	eP	P	15 56 14.5	-0.3
	comp=Z,33nm,1.3s						
REDW	Red Top Meadow	91.49	46	eP	P	15 56 13.8	-0.9
	comp=Z,18nm,1.7s						
PV21	Cone Mtn., Par	91.53	51	eP	P	15 56 15.3	+0.3
	comp=Z,31nm,1.4s						
MVCO	Mesa Verde	91.53	52	P	P	15 56 15.2	+0.1
	baz=255						
PV04	Paradox Valley	91.53	51	eP	P	15 56 15.5	+0.6
	comp=Z,12nm,1.0s						
PV03	Paradox Valley	91.54	51	eP	P	15 56 12.8	-2.2
	comp=Z,7.4nm,1.3s						
IMW	Indian Meadow	91.58	45	eP	P	15 56 14.7	-0.4
	comp=Z,11nm,1.6s						
PV12	Saucer Basin,	91.59	51	eP	P	15 56 13.8	-1.5
	comp=Z,21nm,1.3s						
BOZ	Bozeman (W)	91.61	44	eP	P	15 56 14.9	-0.1
	comp=Z,11nm,1.4s						
BOZ	Bozeman (W)	91.61	44	eP	P	15 56 14.9	-0.1
BOZ				pmax	pmax		
	comp=Z,11nm,1.4s						
BOZ	Bozeman (W)	91.61	44	P	P	15 56 15.5	+0.5
	baz=253						
PV22	Blue Mesa, Par	91.66	51	eP	P	15 56 16.0	+0.4
	comp=Z,23nm,1.2s						
HRY	Holter Researc	91.80	42	eP	P	15 56 16.4	+0.5
LENM	Lemitar	91.95	56	eP	P	15 56 17.1	+0.1
BNM	Barren Site	92.22	56	eP	P	15 56 18.1	-0.2
BW06	Boulder Array	92.23	47	eP	P	15 56 18.1	0.0
	comp=Z,8.0nm,1.5s						
BW06	Boulder Array	92.23	47	P	P	15 56 18.1	0.0
	baz=254						
PD31	Pinedale Array	92.23	47	eP	P	15 56 17.6	-0.5
	comp=Z,0.8nm,0.8s						
PDAR	Pinedale Array	92.23	47	P	P	15 56 17.6	-0.5
	comp=Z,0.8nm,0.5s,baz=242,slow=3.2,SNR=9.6						
PDAR				PP	PP	16 00 03.1	-6.6
	comp=Z,0.2nm,0.4s,baz=224,slow=5.0,SNR=3.7						
O20A	White River Ci	92.49	49	eP	P	15 56 19.6	+0.3
	comp=Z,22nm,1.3s						
O20A	White River Ci	92.49	49	P	P	15 56 19.6	+0.3
	baz=255						
TASM	ASL Pad, Albuq	92.55	55	P	P	15 56 20.1	+0.4
	baz=256						
TASM	ASL Pad, Albuq	92.55	55	P	P	15 56 20.2	+0.5
	baz=256						
ANMO	Albuquerque	92.56	55	eP	P	15 56 19.9	+0.1
	comp=Z,9.2nm,1.3s						
ANMO	Albuquerque	92.56	55	d iP	P	15 56 20.0	+0.3
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ANMO	Albuquerque	92.56	55	P	P	15 56 20.2	+0.5
	baz=256						
MNTX	Cornudas Mount	92.65	58	eP	P	15 56 20.4	+0.4
	comp=Z,7.3nm,1.6s						
MNTX	Cornudas Mount	92.65	58	P	P	15 56 20.7	+0.7
	baz=256						
S22A	4UR Ranch, Cre	92.95	52	eP	P	15 56 22.1	+0.5
	comp=Z,6.6nm,1.4s						
S22A	4UR Ranch, Cre	92.95	52	P	P	15 56 22.4	+0.8
	baz=256						
RLMT	Red Lodge	93.07	44	P	P	15 56 22.7	+0.8
	baz=254						
SMCO	Snowmass	93.19	51	eP	P	15 56 21.5	-1.3
	comp=Z,6.3nm,1.1s						
WMQ	Urumqi	93.28	314	eP	P	15 56 23.2	+0.6
WMQ				pmax	pmax		
	comp=Z,22nm,1.1s						
EGMT	Eagleton	93.53	42	P	P	15 56 24.4	+0.7
	baz=254						
TX31	Lajitas Ar. Si	93.54	61	eP	P	15 56 23.3	-1.0
	comp=Z,8.3nm,1.5s						
TXAR	Lajitas Array	93.54	61	P	P	15 56 24.5	+0.3
	comp=Z,1.5nm,0.6s,baz=223,slow=5.1,SNR=7.0						
TXAR				PP	PP	16 00 18.1	-1.9
	comp=Z,0.3nm,0.4s,baz=257,slow=7.3,SNR=2.6						
SDCO	Great Sand Dun	93.97	52	P	P	15 56 26.8	+0.6
	baz=256						
ISCO	Idaho Springs	94.36	50	P	P	15 56 28.5	+0.5
	baz=257						
N23A	Red Feather La	94.37	49	eP	P	15 56 28.2	+0.2
	comp=Z,9.2nm,1.1s						
N23A	Red Feather La	94.37	49	P	P	15 56 28.7	+0.8
	baz=256						
Q24A	Divide	94.52	51	P	P	15 56 29.5	+0.8
	baz=257						
YKA	Yellowknife Ar	95.14	27	P	P	15 56 30.1	-0.4
	comp=Z,4.4nm,0.7s,baz=253,slow=4.6,SNR=38						
YKA				PP	PP	16 00 32.5	+1.4
	comp=Z,0.3nm,0.3s,baz=253,slow=7.3,SNR=3.7						
YKB5	Yellowknife Ar	95.14	27	eP	P	15 56 30.1	-0.4
YKW3	Yellowknife Ar	95.16	27	eP	P	15 56 29.8	-0.8
	comp=Z,9.4nm,1.0s						
SNAA	Sanae	95.20	182	P	P	15 56 30.1	-0.8
SNAA	Sanae	95.20	182	eP	P	15 56 29.9	-1.0
	comp=Z,5.8nm,1.2s						
SNAA	Sanae	95.20	182	eP	P	15 56 29.9	-1.0
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
VNA3	Neumayer Olymp	95.78	180	P	P	15 56 32.7	-0.7
VNA2	Neumayer--Watz	96.08	181	P	P	15 56 34.1	-0.7
	baz=180,slow=4.6						
AMTX	Amarillo	96.37	56	P	P	15 56 37.6	+0.7
	baz=258						
JCT	Junction City	97.06	60	P	Pdif	15 56 40.9	+0.8
	baz=259						
ZALV	Zalesovo Beam	97.50	324	P	Pdif	15 56 40.8	-0.5
	comp=Z,0.7nm,0.6s,baz=144,slow=5.5,SNR=3.6						
ZAA1	Zalesovo Array	97.50	324	ePdif	Pdif	15 56 40.8	-0.5
MK31	Makanchi Array	97.66	316	ePdif	Pdif	15 56 40.9	-1.4
	comp=Z,3.6nm,1.1s						
MK31	Makanchi Array	97.66	316	eP	Pdif	15 56 40.9	-1.4
MK31				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK32	Makanchi Array	97.66	316	ePdif	Pdif	15 56 42.2	-0.1
MKAR	Makanchi Array	97.66	316	P	Pdif	15 56 42.2	-0.1
	comp=Z,2.3nm,0.9s,baz=112,slow=5.4,SNR=12						
MKAR				S	SKSac	16 06 22.1	+0.1
	comp=Z,0.9nm,1.0s,baz=90,slow=8.6,SNR=4.4						
MKAR	Makanchi Array	97.66	316	i P	P	15 56 42.7	+0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MAKZ	Makanchi	97.88	316	ePdif	Pdif	15 56 40.9	-2.3
	comp=Z,2.7nm,1.0s						
MAKZ	Makanchi	97.88	316	eP	Pdif	15 56 40.9	-2.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH	Kashi	101.03	308	eP	Pdif	15 56 59.2	+1.6
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARA0	ARCESS Array S	119.31	346	ePKPdf	PKPdf	16 01 51.8	-0.5
ARCES	ARCESS Array B	119.31	346	PKP	PKPdf	16 01 51.8	-0.5
	comp=Z,3.3nm,0.5s,baz=78,slow=2.5,SNR=42						
FIA0	FINESS Array S	125.10	340	ePKPdf	PKiKP	16 02 03.8	-0.2
FIA0	FINESS Array S	125.10	340	ePKIKP	PKiKP	16 02 03.8	-0.2
FINES	FINESS Array B	125.10	340	PKP	PKiKP	16 02 03.8	-0.2
	comp=Z,1.7nm,0.6s,baz=353,slow=1.6,SNR=7.6						
KIV	Kislovodsk	125.40	315	ePKIKP	PKiKP	16 02 05.1	-0.1
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NRS	Narsarsuaq	125.79	20	ePKPdf	PKPdf	16 02 04.3	-0.6
NRS	Narsarsuaq	125.79	20	ePKIKP	PKPdf	16 02 04.3	-0.6
BOSA	Boshof	126.01	219	PKP	PKPdf	16 02 06.0	-0.5
	comp=Z,2.7nm,0.7s,baz=337,slow=2.4,SNR=4.6						
MATP	Matopo	129.23	229	PKP	PKPdf	16 02 13.2	+0.4
	comp=Z,1.8nm,0.5s,baz=197,slow=3.2,SNR=5.6						
NB2	NORSAR Subarra	129.69	347	PKPdf	SKPab	16 04 40.1	+0.9
	baz=31,slow=1.9						
NB200	NORSAR Array S	129.69	347	ePKPdf	PKPdf	16 02 12.6	+0.2
NOA	NORSAR Array B	129.69	347	PKP	PKPdf	16 02 12.5	+0.2
	comp=Z,0.9nm,0.8s,baz=29,slow=2.0,SNR=2.4						
NOA				SKPbc	SKPab	16 04 40.8	+1.5
	comp=Z,11nm,0.9s,baz=29,slow=2.8,SNR=17						
KMBO	Kilima Mbogo	130.67	257	SKPbc	SKPab	16 04 46.3	+1.2
	comp=Z,8.4nm,1.0s,baz=58,slow=19,SNR=12						
AKASG	Malin Array Be	130.69	328	SKPbc	SKPab	16 04 44.1	+0.4
	comp=Z,0.8nm,0.5s,baz=43,slow=4.7,SNR=8.6						
LSZ	Lusaka	132.50	235	PKP	PKPdf	16 02 18.2	-0.9
	comp=Z,1.5nm,0.4s,baz=121,slow=5.9,SNR=3.6						
BDFB	Brasilia	133.04	126	SKPbc	SKPab	16 04 53.9	-1.2
	comp=Z,2.9nm,0.5s,baz=54,slow=5.0,SNR=3.9						
BR101	Keskin Array S	133.18	313	ePKPdf	PKPdf	16 02 19.5	-0.3
BRTR	Keskin Array B	133.18	313	PKP	PKPdf	16 02 19.5	-0.3
	comp=Z,0.6nm,0.8s,baz=94,slow=6.2,SNR=2.8						
BRTR				SKPab	SKPab	16 04 55.1	0.0
	comp=Z,1.4nm,0.7s,baz=53,slow=3.6,SNR=6.7						
DPC	Dobruska-Polom	137.00	335	eSKP	SKPbc	16 05 06.5	+3.0
CLL	Collm	137.52	338	ePKIKP	PKPdf	16 02 27.0	-0.3
CLL	Collm	137.52	338	ePKPdf	PKPdf	16 02 27.0	-0.3
CLL				i SKPdf	SKPdf	16 05 06.3	+0.6
	comp=Z,8.0nm,1.1s						
PRU	Pruhonice	138.00	336	eSKP	SKPdf	16 05 08.5	+1.9
TREC	Trest	138.16	335	eSKP	SKPdf	16 05 09.1	+2.1
KHC	Kasperske Hory	139.06	336	eSKP	SKPbc	16 05 11.2	+1.8
GEC2	GERESS Array S	139.24	336	ePKPdf	PKiKP	16 02 32.3	-0.8
GEC2	GERESS Array S	139.24	336	ePKIKP	PKiKP	16 02 32.3	-0.8
GERES	GERESS Array B	139.24	336	PKP	PKiKP	16 02 32.3	-0.8
	comp=Z,0.4nm,0.5s,baz=106,slow=2.9,SNR=4.5						
GERES				SKPbc	SKiKP	16 05 11.7	-1.1
	comp=Z,2.6nm,0.8s,baz=46,slow=2.8,SNR=15						
DAVOX	Davos/Dischmat	142.42	337	PKhKP	PKPpre	16 02 33.8	
	comp=Z,1.8nm,0.3s,baz=293,slow=13,SNR=3.3						
DAVOX				SKPbc	SKiKP	16 05 20.0	+0.5
	comp=Z,7.5nm,0.9s,baz=49,slow=0.8,SNR=7.5						
ITM	Ithomi	142.54	315	ePKPdf	PKPdf	16 02 34.4	-2.4
TUE	Stuetta	142.88	337	ePKPdf	PKPdf	16 02 35.3	-2.1
SENIN	Lac Senin/Sane	143.71	339	ePKPbc	PKPbc	16 02 37.8	-0.2
BNI	Bardonecchia	145.06	339	ePKPdf	PKPbc	16 02 42.1	0.0
BNI	Bardonecchia	145.06	339	ePKP2	PKPbc	16 02 42.1	0.0
SSB	Saint Sauveur	145.58	341	ePKPdf	PKPbc	16 02 43.4	0.0
SSB	Saint Sauveur	145.58	341	ePKP2	PKPbc	16 02 43.4	0.0
KEST	Kesra	151.36	325	PKPbc	PKPbc	16 02 58.2	+0.1
	comp=Z,3.3nm,0.7s,baz=244,slow=20,SNR=3.8						
ESDC	Sonseca Array	153.01	349	PKPbc	PKiKP	16 03 01.7	0.0
	comp=Z,0.3nm,0.4s,baz=54,slow=2.8,SNR=4.2						
ESDC				PKPab	PKPab	16 03 16.7	+0.7
	comp=Z,1.4nm,0.8s,baz=21,slow=3.2,SNR=6.5						
TORD	Torodi Ar. Bea	168.23	271	PKP	PKPdf	16 03 09.5	-0.9
	comp=Z,2.0nm,1.1s,baz=354,slow=3.0,SNR=6.0						
TORD				PKPab	PKPab	16 04 22.5	-0.9
	comp=Z,5.4nm,0.9s,baz=55,slow=5.9,SNR=15						
TOA1	Torodi Ar. Sit	168.23	271	ePKPdf	PKPdf	16 03 09.5	-0.9
TOA1				ePKPab	PKPab	16 04 22.5	-1.0
KIC	Kosan Boka	171.23	220	eP	PKPab	16 04 36.3	-0.2
	comp=Z,35nm,1.2s						
LIC	Lamto	171.30	218	eP	PKPab	16 04 38.0	+1.2
	comp=Z,94nm,1.9s						
TIC	Toumodi	171.63	220	eP	PKPab	16 04 38.2	-0.1

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*JMA **09** 15:50:47.0±0.1, 24°.25N×121°.45E, $h0^{km}$, M3.3*
*TAP **09** 15:50:47.9, 24°.29N×121°.48E, $h7^{km}$, ML3.7, C*
*ISCJB **09** 15:50:48.3±0.2, 24°.29N±0°.01×121°.51E±0°.01, $h2^{km}\pm2^{km}$,*
Error ellipse: s-maj=2.1km s-min=1.5km az=35.0
ISC 09 15:50:48.3±0.8, **24°.28N**±0°.01×**121°.49E**±0°.02, **$h8^{km}$**$\pm5^{km}$,
n117, σ**$0^{s}62$**/168, **21C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.07	184	⇑eP	Pg	15 50 50.4	+0.1
	baz=181						
ETLH				S	Sg	15 50 51.6	-0.2
	baz=181						
NACB	Ninganchiao	0.14	136	⇑P	Pg	15 50 51.7	+0.3
	baz=137						
NACB				S	Sg	15 50 53.8	+0.4
	baz=137						
NNSB	Datong	0.18	328	⇑P	Pg	15 50 52.1	0.0
	baz=327						
NNSB				S	Sg	15 50 54.5	-0.2
	baz=327						
NNS	Nan Shan	0.19	327	⇓P	Pg	15 50 52.4	0.0
	baz=328						
NNS				S	Sg	15 50 55.0	-0.1
	baz=328						
TWD	Chiawan	0.22	153	P	Pg	15 50 53.2	+0.4
	baz=152						
TWD				eS	Sg	15 50 56.5	+0.8
	baz=152						
WHF	Hehuan Shan	0.24	237	⇑P	Pg	15 50 53.3	0.0
	baz=234						
WHF				S	Sg	15 50 56.5	-0.2
	baz=234						
ENA	Nanau	0.28	57	⇑iP	Pg	15 50 53.6	-0.2
	baz=60						
NANB	Nanao	0.28	58	⇑P	Pg	15 50 53.6	-0.3
	baz=60						
TDCB	Techi	0.30	266	eP	Pg	15 50 54.7	+0.4
	baz=254						
TDCB				eS	Sg	15 50 58.4	0.0
	baz=254						
NDT	Datong Townshi	0.33	4	⇑P	Pg	15 50 54.9	+0.1
	baz=5.0						
NDT				S	Sg	15 50 58.8	-0.4
	baz=5.0						
CHGB	Renai	0.36	233	⇑eP	Pg	15 50 55.6	+0.1
	baz=232						
CHGB				eS	Sg	15 51 00.6	+0.4
	baz=232						
YHNB	Yeheng	0.40	345	⇑P	Pg	15 50 56.7	+0.4
	baz=345						
YHNB				eS	Sg	15 51 01.1	-0.6
	baz=345						
NSK	Sanguang	0.41	344	⇑P	Pg	15 50 56.8	+0.4
	baz=344						
NSK				eS	Sg	15 51 01.8	-0.2
	baz=344						
ESL	Shilin	0.46	186	⇑eP	Pg	15 50 56.8	-0.6
	baz=172						
TWC	Suao	0.47	45	eP	Pg	15 50 57.2	-0.3
	baz=37						
TWC				eS	Sg	15 51 02.9	-0.7
	baz=37						
TWE	Neicheng	0.47	20	⇑eP	Pg	15 50 57.7	+0.1
	baz=32						
TWE				S	Sg	15 51 03.6	-0.1
	baz=32						
WHP	Taichung City	0.49	270	⇑eP	Pb	15 50 58.8	-0.5
	baz=269						
WHP				eS	Sg	15 51 04.9	+0.4
	baz=269						
ILA	Ilan	0.54	26	eP	Pg	15 50 58.7	-0.2
	baz=27						
ILA				eS	Sg	15 51 06.7	+0.7
	baz=27						
LIOB	Emei	0.56	311	⇑P	Pb	15 51 00.4	-0.1
	baz=310						
LIOB				eS	Sb	15 51 07.9	-0.8
	baz=310						
DPDB	Guoxing	0.57	245	⇑P	Pb	15 51 00.1	-0.4
	baz=244						
DPDB				S	Sg	15 51 06.8	0.0
	baz=244						
NSTT	Nanjuang	0.57	309	⇑P	Pb	15 51 00.2	-0.3
	baz=308						
NSTT				eS	Sg	15 51 07.3	+0.6
	baz=308						
EGFH	Guangfu	0.61	185	eP	Pg	15 50 59.6	-0.5
	baz=177						
VWDT	VWDT	0.61	211	eP	Pg	15 50 60.0	-0.1
	baz=216						
VWDT				eS	Sg	15 51 08.2	+0.1
	baz=216						
WLTB	Daxi	0.61	340	eP	Pb	15 51 01.4	+0.1
	baz=339						
WLTB				eS	Sb	15 51 09.1	-1.0
	baz=339						
EOS1	EOS1	0.65	65	eP	Pg	15 51 00.6	-0.2
	baz=66						
NTC	Toucheng	0.66	28	eP	Pg	15 51 00.6	-0.4
	baz=29						
TWQ1	Liyutan	0.66	276	⇑eP	Pb	15 51 02.3	+0.3
	baz=275						
TWQ1				eS	Sb	15 51 10.5	-0.9
	baz=275						
SMLT	Sun Moon Lake	0.66	234	eP	Pb	15 51 01.6	-0.6
	baz=233						
NSY	Sanyi	0.68	282	eP	Pb	15 51 02.9	+0.5
	baz=281						
TYC	Yuchr	0.69	237	⇑eP	Pb	15 51 01.8	-0.7
	baz=236						
TYC				eS	Sb	15 51 10.9	-1.2
	baz=236						
NMLH	Miaoli	0.69	292	⇑eP	Pb	15 51 03.1	+0.6
	baz=303						
SBCB	Hsinchu	0.69	318	eP	Pb	15 51 03.0	+0.5
	baz=318						
SSLB	Suanglung	0.69	225	⇑P	Pg	15 51 01.6	0.0
	baz=234						
SSLB				eS	Sg	15 51 10.8	+0.2
	baz=234						
TATO	Taipei	0.70	0	eP	Pg	15 51 01.8	+0.1
	baz=11						
TATO				S	Sg	15 51 10.8	0.0
	baz=11						
HSN	Hsinchu	0.70	318	eP	Pn	15 51 03.5	-1.1
	baz=322						
PTSB	Yuanli	0.73	284	eP	Pn	15 51 04.5	-0.5
	baz=283						
PTSB				eS	Sb	15 51 14.0	+0.4
	baz=283						
NCUH	Zhongli	0.74	338	eP	Pn	15 51 04.2	-0.9
	baz=339						
NCU	National Centr	0.74	338	eP	Pn	15 51 04.4	-0.8
	baz=340						
TCU	Taichung	0.75	260	eP	Pn	15 51 04.5	-0.7
	baz=259						
TIPB	Shuangxi	0.76	24	eP	Pg	15 51 02.6	-0.3
	baz=12						
TIPB				eS	Sg	15 51 12.2	-0.6
	baz=12						
WDJ	Dajia District	0.78	275	eP	Pn	15 51 05.3	-0.3
	baz=275						
EHY	Hungye	0.78	191	eP	Pg	15 51 03.2	-0.2
	baz=173						
HGSD	Ruisui	0.78	184	⇑eP	Pg	15 51 03.2	-0.2
	baz=190						
HGSD				eS	Sb	15 51 15.2	+0.3
	baz=190						
WHYT	Xinyi Township	0.82	225	eP	Pg	15 51 04.0	-0.1
	baz=225						
TWS1	Kuangyinshan	0.82	356	eP	Pb	15 51 05.3	+0.4
	baz=8.0						
WJS	Zhushan	0.83	237	eP	Pb	15 51 05.0	0.0
	baz=229						
WNT	Mingjian	0.83	242	eP	Pn	15 51 05.5	-0.8
	baz=235						
NWF	Wu-fen Shan	0.83	19	eP	Pg	15 51 04.8	+0.3
	baz=8.0						
WFSB	Wu-fen Shan	0.83	19	eP	Pg	15 51 04.6	+0.2
	baz=18						
WFSB				eS	Sg	15 51 15.1	-0.3
	baz=18						
TWB1	Santiao Chiao	0.86	32	eP	Pg	15 51 04.3	-0.6
	baz=33						
TWB1				eS	Sg	15 51 14.8	-1.3
	baz=33						
YM01	YM01	0.87	5	eP	Pb	15 51 05.8	+0.1
	baz=6.0						
WCHH	Zhanghua	0.87	257	eP	Pn	15 51 06.6	-0.3
	baz=257						
YM10	YM10	0.88	4	eP	Pb	15 51 05.7	-0.2
	baz=5.0						
NTST	Danshui	0.89	358	eP	Pb	15 51 06.0	0.0
	baz=11						

YM05	YM05	0.89	5	*e*P	Pg	15 51 05.6	+0.2
	baz=4.0						
YM05				*e*S	Sg	15 51 17.1	+0.2
	baz=4.0						
YULB	Yu-li	0.90	191	*e*P	Pb	15 51 05.8	-0.3
	baz=181						
YULB				*e*S	Sb	15 51 17.9	-0.4
	baz=181						
YM03	YM03	0.90	3	*e*P	Pb	15 51 06.3	0.0
	baz=16						
YM03				*e*S	Sb	15 51 18.7	+0.2
	baz=16						
YM08	YM08	0.91	6	*e*P	Pb	15 51 06.2	-0.3
	baz=7.0						
YUS	Yu-Shan	0.92	212	*e*P	Pg	15 51 05.5	-0.7
	baz=211						
TWF1	Yuli	0.94	191	*e*P	Pg	15 51 05.7	-0.6
	baz=181						
TWF1				*e*S	Sb	15 51 19.0	-0.4
	baz=181						
TWY	Chenhua	1.00	6	*e*P	Pn	15 51 08.8	+0.2
	baz=7.0						
WGK	Gukeng	1.03	235	*e*P	Pn	15 51 08.7	-0.4
	baz=236						
WGK				*e*S	Sn	15 51 24.6	+1.0
	baz=236						
WDLH	Douliu	1.05	236	*e*P	Pn	15 51 08.9	-0.4
	baz=237						
RLNB	Erlin	1.10	250	*e*P	Pn	15 51 10.3	+0.3
	baz=251						
RLNB				*e*S	Sn	15 51 26.4	+1.0
	baz=251						
ELDTW	Lidau	1.17	202	*e*P	Pg	15 51 10.0	-0.7
	baz=202						
ELDTW				*e*S	Sn	15 51 26.6	-0.6
	baz=202						
WTCT	Ta-ch'eng	1.18	250	*e*P	Pn	15 51 11.2	+0.1
	baz=250						
WTCT				*e*S	Sn	15 51 28.1	+0.8
	baz=250						
CHKT	Chengkung	1.18	185	*e*P	Pb	15 51 09.6	-1.3
	baz=184						
CHN2	Minshiung	1.19	232	*e*P	Pn	15 51 12.1	+0.9
	baz=233						
CHN2				*e*S	Sn	15 51 28.9	+1.4
	baz=233						
CHY	Chiayi	1.24	232	*e*P	Pg	15 51 12.0	-0.2
	baz=232						
TPUB	Ta-pu	1.25	219	*e*P	Pn	15 51 11.8	-0.3
	baz=221						
TPUB				*e*S	Sn	15 51 30.6	+1.5
	baz=221						
WTP	Ta-pu	1.30	218	P	Pg	15 51 13.0	-0.3
	baz=218						
WTP				*e*S	Sn	15 51 32.5	+2.1
	baz=218						
WSF	Szhu	1.32	241	*e*P	Pg	15 51 13.4	-0.3
	baz=242						
WSF				*e*S	Sg	15 51 32.1	+1.3
	baz=242						
JYNG	Yonagunijimaku	1.34	82	P	Pn	15 51 13.2	-0.1
JYNG				*e*S	Sn	15 51 31.5	+0.1
WLGB	Puzi	1.35	234	*e*P	Pg	15 51 13.9	-0.3
	baz=250						
TWK	Hsinying	1.36	223	*e*P	Pg	15 51 14.3	-0.2
	baz=222						
SNST	Tainan City	1.39	221	*e*P	Pg	15 51 15.1	+0.1
	baz=221						
CHN1	Nanshi	1.40	219	*e*P	Pg	15 51 15.0	-0.2
	baz=220						
YOJ	Yonaguni jima	1.40	82	*e*P	Pn	15 51 14.3	+0.1
	baz=70						
YOJ				*e*S	Sn	15 51 32.5	-0.4
	baz=70						
YOJ	Yonaguni jima	1.40	82	P	Pn	15 51 13.9	-0.3
YOJ				*e*S	Sn	15 51 32.9	0.0
PCYT	Pengchaiyu	1.45	21	*e*P	Pn	15 51 14.6	-0.3
	baz=21						
PCYT				*e*S	Sn	15 51 33.4	-0.6
	baz=21						
SGST	Jiashian	1.45	215	*e*P	Pg	15 51 15.8	-0.4
	baz=215						
CHN8	Yiju	1.49	232	*e*P	Pg	15 51 16.8	-0.2
	baz=251						
SLGT	Liugui	1.49	211	*e*P	Pg	15 51 17.0	0.0
	baz=212						
TWG	Pinlang	1.50	195	*e*P	Pb	15 51 15.8	-0.6
	baz=175						
TWGBT	Beinan	1.50	195	*e*P	Pb	15 51 16.2	-0.3
	baz=175						
CHN3	Shinhua	1.58	221	*e*P	Pg	15 51 18.9	+0.3
	baz=222						
SCLT	Jiali	1.61	227	*e*P	Pg	15 51 18.9	-0.4
	baz=229						
SSD	Sandimen	1.71	207	*e*P	Pg	15 51 20.6	-0.6
	baz=207						
ECL	Taimali	1.74	196	*e*P	Pb	15 51 19.9	-0.6
	baz=179						
TWM1	Shoushan	1.75	214	*e*P	Pg	15 51 22.5	+0.7
	baz=215						
SGLT	Jiouru	1.79	211	*e*P	Pg	15 51 23.4	+0.7
	baz=211						
MASBT	Mashibuluo	1.83	206	*e*P	Pg	15 51 22.8	-0.7
	baz=223						
PNG	Penghu	1.90	249	*e*P	Pb	15 51 22.1	-1.3
	baz=250						
PHUB	P'eng-hu	1.91	247	*e*P	Pn	15 51 21.6	+0.4
	baz=248						
PHUB				*e*S	Sb	15 51 46.4	-1.0
	baz=248						
WDGT	Dungji	1.96	239	*e*P	Pb	15 51 22.8	-1.4
	baz=240						
EAST	Anshuo	1.97	197	*e*P	Pb	15 51 24.7	+0.2
	baz=179						
SSPT	Xinbi	1.97	206	*e*P	Pg	15 51 25.2	-1.0
	baz=228						
PTTC	Pingtan	1.98	308	*e*P	Pn	15 51 22.1	0.0
	baz=311						
IRIF	Iriomote-Funau	2.05	88	P	Pn	15 51 23.3	+0.2
IRIF				*e*S	Sb	15 51 51.4	0.0
SCZT	Fangliau	2.06	203	*e*P	Pb	15 51 26.0	+0.1
	baz=217						
HATJ	Hateruma jima	2.13	95	*e*S	Sn	15 51 52.3	+1.5
VCHM	Qimei	2.16	241	*e*P	Pn	15 51 25.8	+1.1
	baz=242						
LAY	Lan-yu	2.23	178	*e*P	Pn	15 51 25.1	-0.5
	baz=163						
PTMZ	Houxiangcun	2.28	290	*e*P	Pn	15 51 25.9	-0.4
	baz=293						
JKRS	Kuro-shima	2.30	90	P	Pn	15 51 27.7	+1.1
JKRS				*e*S	Sn	15 51 56.7	+1.6
MATB	Ma-tsu	2.33	324	*e*P	Pn	15 51 27.0	0.0
	baz=325						
TWK1	Hengchun	2.41	195	*e*P	Pb	15 51 30.9	-1.0
	baz=178						
TWKBT	Hengchun	2.41	195	*e*P	Pb	15 51 31.0	-0.9
	baz=178						
JIJ	Ishigaki jima	2.42	87	P	Pn	15 51 28.7	+0.4
JIJ				*e*S	Sn	15 51 58.7	+0.6
JISG	Ishigakijimahi	2.59	83	P	Pn	15 51 31.0	+0.4
JISG				*e*S	Sn	15 52 03.2	+0.9
LYJJ	Jianjiangzhen	2.75	326	*e*P	Pn	15 51 33.2	+0.4
	baz=327						
KNMB	Chin-men Tao	2.83	274	*e*P	Pn	15 51 34.0	+0.1
	baz=277						
MHZQ	Yeshan	2.87	310	*e*P	Pn	15 51 35.1	+0.7
	baz=312						
XPSS	Dashiqiu	2.89	336	*e*P	Pn	15 51 34.1	-0.5
	baz=337						
JTJ	Tarama	2.95	82	P	Pn	15 51 37.1	+1.6
JTJ				*e*S	Sn	15 52 12.6	+1.5
AXDP	Jialang	3.26	282	*e*P	Pn	15 51 40.0	+0.3
	baz=286						
ZPLA	Ao Xicun	3.43	265	*e*P	Pn	15 51 42.2	+0.1
	baz=267						

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*ISK **09** 15:51:47.7, 37°.40N×26°.92E, h6^{km}, ML2.9/12*
*THE **09** 15:51:48.9, 37°.39N×26°.98E, h5^{km}±2^{km}, ML2.4/4, Error ellipse: s-maj=2.8km s-min=0.8km az=85.0*
*DDA **09** 15:51:49.8, 37°.39N×27°.07E, h7^{km}±5^{km}, ML2.7*
ISC 09 15:51:49.0±1.0, **37°.38N**±0°.02×**26°.96E**±0°.02, **h11**^{km}±10^{km}, **n30**, σ1^{s}.**25**/44, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.34	343	P	Pg	15 51 55.1	-0.8
SMG				S	Sg	15 52 01.2	+0.8
	682nm,0.4s						
GCAM	G?zelcaml?	0.38	34	PG	Pg	15 51 56.2	-0.4
GCAM				SG	Sg	15 52 01.8	+0.1
GCAM	G?zelcaml?	0.38	34	*i* P	Pb	15 51 57.2	-0.7
GCAM				*i* S	Sg	15 52 02.2	+0.5
BODT	Bodrum	0.42	139	PG	Pg	15 51 56.9	-0.4
BODT				SG	Sg	15 52 03.9	+0.9
BODT	Bodrum	0.42	139	P	Pg	15 51 57.0	-0.4
BODT				S	Sg	15 52 03.7	+0.7
BDRM	Kayabasi	0.50	129	*i* P	Pg	15 51 58.7	-0.1
BDRM				IAML_P			
	comp=Z,3µm,0.3s						
DGB	zmir	0.67	355	*i* P	Pg	15 52 01.8	-0.3
DGB				IAML_P			
	comp=Z,4µm,0.2s						
AYDN	Tasoluk	0.78	69	*i* P	Pg	15 52 03.5	-0.6
AYDN				*i* S	Sb	15 52 14.6	-0.8
DAT	Datca	0.82	143	PG	Pg	15 52 04.3	-0.5
DAT				SG	Sb	15 52 16.8	+0.3
DAT	Datca	0.82	143	*i* P	Pg	15 52 04.7	-0.1
DAT				*i* S	Sb	15 52 17.4	+0.9
AYDB	Zeytinkoy-Aydi	0.93	52	PG	Pg	15 52 06.1	-0.8
AYDB				SG	Sb	15 52 20.2	+0.5
BLCB	Balcova	1.00	4	PG	Pg	15 52 07.4	-1.0
AMGA	Amorgos Island	1.02	238	P	Pg	15 52 08.7	+0.1
AMGA				S	Sb	15 52 22.6	+0.5
	comp=Z,368nm,1.2s						
URLA	Izmir	1.02	344	PG	Pg	15 52 07.3	-1.4
URLA	Izmir	1.02	344	*i* P	Pb	15 52 09.1	+0.4
URLA				IAML_P			
	comp=Z,3µm,0.5s						
YER	Yerkesik	1.08	103	PN	Pg	15 52 09.4	-0.5
APE	Apeiranthos	1.19	255	PN	Pg	15 52 10.5	-1.3
APE	Apeiranthos	1.19	255	P	Pg	15 52 11.4	-0.4
APE				S	Sb	15 52 27.9	+0.9
	comp=Z,150nm,1.6s						
CHOS	Chios island	1.23	325	PN	Pg	15 52 10.9	-1.9
CHOS	Chios island	1.23	325	P	Pg	15 52 10.9	-1.9
CHOS				S	Sb	15 52 29.3	+0.9
	comp=Z,138nm,0.8s						
TURN	Turunc	1.41	111	PN	Pn	15 52 10.9	-3.7
TURN	Turunc	1.41	111	*i* P	Pn	15 52 11.1	-3.5
TURN				IAML_P			
	comp=Z,1µm,0.3s						
DALY	Dalyan (Mula)	1.47	112	PN	Pn	15 52 15.8	+0.4
DALY	Dalyan (Mula)	1.47	112	*i* P	Pg	15 52 16.9	-0.3
ARG	Arkhangelos	1.49	141	PN	Pn	15 52 16.1	+0.3
ZEDA	zmir-Bergama	1.58	3	*i* P	Pg	15 52 20.8	+1.4
ZEDA				*i* S	Sg	15 52 43.4	+3.4
ZEDA				IAML_P			
	comp=Z,312nm,0.1s						
MANT	Manisa	1.68	48	*i* P	Pg	15 52 21.9	+0.6
MANT				*i* S	Sg	15 52 43.6	+0.6
MANT				IAML_P			
	comp=Z,454nm,0.2s						
DKL	Dikili	1.69	358	PN	Pn	15 52 18.2	-0.3
KULA	Kula-Manisa	1.75	49	PN	Pn	15 52 19.6	+0.1
AKAS	Kas	2.41	118	PN	Pn	15 52 29.4	+0.8

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*IDC **09** 15:52:28.0±1.1, 32°.69N×78°.23E, h0^{km}, mb3.8/7, mb1 3.8/9, mb1mx3.5/60, mbtmp3.7/9, ML3.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.3/38, Error ellipse: s-maj=32.5km s-min=21.0km az=76.0*
*ISCJB **09** 15:52:32.0±0.5, 32°.89N±0°.06×78°.35E±0°.07, h33^{km}, mb3.7/8, MS3.1/1, Error ellipse: s-maj=9.4km s-min=7.5km az=155.1*
*NEIC **09** 15:52:34.1±2.6, 32°.85N×78°.33E, h37^{km}±24^{km}, mb4.0/2, Error ellipse: s-maj=28.6km s-min=11.0km az=144.0*
ISC 09 15:52:34.3±0.7, **32°.99N**±0°.07×**78°.39E**±0°.10, **h35**^{km}, **n27**, σ1^{s}.**54**/26, **mb3.7**/8, **Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHK	Bhakra	2.29	227	*e*P	Pn	15 53 09.8	+0.3
BHK				*e*S	Sn	15 53 38.6	+2.1
CHCP	Chirah Chowk	4.34	280	P	Pn	15 53 39.2	+1.4
NIL	Nilore	4.35	280	*e*Pn	Pn	15 53 38.5	+0.7
NDI	New Delhi	4.40	193	*e*P	Sn	15 54 32.0	+3.3
CEP	Cherat	5.48	281	P	Pn	15 53 53.0	-0.6
THW	Thamme Wali	5.59	270	P	Pn	15 53 54.5	-0.5
KBL	Kabul	7.93	284	*e*Pn	Pn	15 54 27.1	-0.2
GAR	Garm	8.87	315	*e*Pn	Pn	15 54 40.7	+0.6
KDJ	Kajisay	9.18	354	*e*Pn	Pn	15 54 46.1	+1.8
BTK	Batken	9.32	321	*e*Pn	Pn	15 54 46.4	+0.3
MK32	Makanchi Array	14.11	11	*e*Pn	Pn	15 55 51.5	-0.1
MKAR	Makanchi Array	14.11	11	Pn	Pn	15 55 51.5	-0.1
	0.1nm,0.3s,baz=196,slow=15,SNR=2.7						
KURBB	Kurchatov Arra	17.62	0	P	P	15 56 38.6	+1.0
	0.1nm,0.3s,baz=189,slow=11,SNR=4.5						
BVAR	Borovoye Array	20.84	346	P	Pn	15 57 14.8	-0.6
	1.3nm,0.4s,baz=148,slow=11,SNR=11						
ZAA0	Zalesovo Array	21.45	10	*e*P	P	15 57 21.6	+2.3
	3.3nm,1.2s						
ZALV	Zalesovo Beam	21.45	10	P	P	15 57 21.6	+2.3
	0.6nm,0.3s,baz=200,slow=13,SNR=3.8						
ZAA1	Zalesovo Array	21.45	10	*e*P	P	15 57 21.6	+2.2
SONA0	Songino Array	25.80	47	*e*P	P	15 58 03.1	+1.1
SONM	Songino Array	25.80	47	P	P	15 58 03.1	+1.1
	0.5nm,0.5s,baz=252,slow=12,SNR=3.9						
TLY	Talaya	26.20	37	LR	LR	16 09 29.3	
	comp=Z,56nm,18.9s,baz=2.0,slow=38						
RAYN	Ar Rayn	30.36	260	*e*P	P	15 58 41.3	-1.6
	9.4nm,1.5s						
TOA1	Torodi Ar. Sit	71.88	274	*e*P	P	16 03 52.4	-1.7
TORD	Torodi Ar. Bea	71.88	274	P	P	16 03 52.4	-1.7
	0.8nm,0.7s,baz=26,slow=6.9,SNR=4.7						
WR1	Warramunga Arr	74.99	126	*e*P	P	16 04 11.8	-0.5
WRA	Warramunga Arr	74.99	126	P	P	16 04 11.8	-0.5
	1.7nm,1.0s,baz=331,slow=5.0,SNR=2.6						
ASAR	Alice Springs	77.29	129	P	P	16 04 24.1	-1.3
	0.3nm,0.9s,baz=314,slow=5.6,SNR=5.9						
STKA	Stephens Creek	87.85	131	P	P	16 05 18.1	-2.0
	1.7nm,1.0s,baz=278,slow=4.0,SNR=3.1						

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*IDC **09** 16:15:35.4±0.4, 2°.97S×129°.87E, h0^{km}, mb4.7/23, mb1 4.9/30, mb1mx4.8/35, mbtmp4.8/30, ML4.9/3, MS4.2/17, Ms1 4.2/17, ms1mx3.9/45, Error ellipse: s-maj=15.1km s-min=9.8km az=74.0*
*ISCJB **09** 16:15:38.7±0.8, 2°.96S±0°.02×129°.88E±0°.02, h31^{km}±5^{km}, mb5.0/125, MS4.2/29, Error ellipse: s-maj=3.6km s-min=3.4km az=139.9*
*NEIC **09** 16:15:38.4±1.5, 2°.93S×129°.79E, h16^{km}±3^{km}, mb5.0/78, Error ellipse: s-maj=8.7km s-min=2.1km az=173.0*
*BJI **09** 16:15:39.7±0.0, 2°.90S×129°.80E, h20^{km}, mb4.9/56, mB5.0/40, Ms4.5/34, Ms7 4.2/32*
*MOS **09** 16:15:39.8±1.1, 2°.89S×129°.82E, h36^{km}, mb5.2/48, Error ellipse: s-maj=7.7km s-min=5.2km az=117.3*
*GCMT **09** 16:15:40.4±0.2, 2°.92S±0°.02×130°.03E±0°.02, h20^{km}±1^{km}, MW5.1/76, Moment Tensor Solution. s42,c48; s76,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.52±.21; $M_{\theta\theta}$0.23±.12; $M_{\phi\phi}$-2.76±.14; $M_{r\theta}$-2.03±.32; $M_{\theta\phi}$1.47±.08; $M_{\phi r}$3.28±.34; Best double couple: $M_0$4.86000×10^{16} NP1:ϕ_s329.00000°,δ72.00000°,λ83.00000°. NP2: ϕ_s171.00000°,δ20.00000°,λ111.00000°. Principal axes: T 4.4780, Plg63.0000°, Azm228.0000°; N 0.7560, Plg7.0000°, Azm331.0000°; P -5.2420, Plg26.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **09** 16:15:42.3±0.5, 3°S±2°×13°0E±°, h37^{km}±4^{km}, M5.0/44, mB5.5/39, mb5.0/44, MLv5.2/17, Mw(mB)5.0/39, Mwp5.2/1*
ISC 09 16:15:40.9±1.0, **2°.99S**±0°.03×**129°.89E**±0°.04, **h34**^{km}±3^{km}, **n382**, σ1^{s}.**66**/398, **mb5.0**/123, **MS4.2**/32, **11C-11D**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.02	250	P	Pn	16 15 58.7	-0.2
MSAI				S	Sb	16 16 15.7	+2.3
BNDI	Bandanaira	1.53	179	P	Pb	16 16 08.9	+0.2
AAI	Ambon	1.83	248	P	Pn	16 16 10.9	+0.9
AAI	Ambon	1.83	248	P	Pn	16 16 11.4	+1.4
FAKI	Fak Fak	2.36	88	*e*Pn	Pn	16 16 18.2	+0.9
FAKI	Fak Fak	2.36	88	P	Pn	16 16 18.4	+1.2
SIJI	Sorong	2.51	33	Pn	Pn	16 16 18.5	-0.9
	423nm,0.3s,baz=229,slow=22,SNR=749						
SIJI				Sn	Sn	16 16 48.4	-0.5
	536nm,0.3s,baz=37,slow=20,SNR=12						
SIJI				LR	LR	16 17 42.9	
	comp=Z,9µm,21.0s,baz=140,slow=51						
SWI	Sorong	2.52	33	P	Pn	16 16 18.7	-0.7
SWI	Sorong	2.52	33	P	Pn	16 16 18.4	-1.0
NLAI	Namlea	2.80	265	P	Pn	16 16 23.8	+0.5
LBMI	Labuha	3.34	314	P	Pn	16 16 29.3	-1.4
SANI	Sanana	4.01	283	P	Pn	16 16 37.3	-2.6
TNTI	Ternate	4.50	326	*e*Pn	Pn	16 16 45.6	-1.2
TNTI	Ternate	4.50	326	P	Pn	16 16 45.9	-0.9
SAUI	Saumlaki	5.16	164	*e*Pn	Pn	16 16 58.1	+2.4
SRPI	Serui, Papua	6.44	80	P	Pn	16 17 13.4	0.0
	550nm,0.5s,8µm4.8nm						
BAKI	Biak	6.46	74	P	Pn	16 17 15.3	+1.6
	742nm,0.8s,6µm2.4nm						
MNI	Manado	6.70	311	P	Pn	16 17 17.7	+0.8
MNI				pmax	pmax		
	comp=Z,344nm,0.6s						
LUWI	Luwuk	7.37	285	*e*Pn	Pn	16 17 24.0	-2.2
LUWI	Luwuk	7.37	285	P	Pn	16 17 24.4	-1.8
	comp=Z,551nm,0.6s,comp=Z,6µmcomp=Z,2.8nm						
BBSI	Bau Bau	7.71	251	P	Pn	16 17 34.1	+3.3
	comp=Z,56nm,0.8s,comp=Z,675nmcomp=Z,0.2nm						
SGSI	Sangihe	7.93	327	P	Pn	16 17 33.3	-0.6
	comp=Z,147nm,0.6s,comp=Z,1µmcomp=Z,0.5nm						
APSI	Ampana	8.49	284	P	Pn	16 17 40.2	-1.3
	comp=Z,744nm,0.8s,comp=Z,8µm						
SOEI	Soe	8.74	219	*e*P	Pn	16 17 50.6	+5.5
SOEI	Soe	8.74	219	P	Pn	16 17 49.7	+4.6
MMRI	Maumere	9.46	233	*e*Pn	Pn	16 17 54.4	-0.4
MMRI	Maumere	9.46	233	P	Pn	16 17 58.5	+3.7
BATI	Baumata	9.47	220	Pn	Pn	16 17 54.6	-0.4
	comp=Z,0.3nm,0.3s,baz=37,slow=15,SNR=2.0						
BATI				Sn	Sn	16 19 41.5	+1.2
	comp=Z,1.9nm,0.3s,baz=288,slow=19,SNR=1.4						
BATI				LR	LR	16 21 40.3	
	comp=Z,8µm,20.9s,baz=48,slow=38						
BATI	Baumata	9.47	220	P	Pn	16 17 58.9	+3.9
BNSI	Bone	9.86	262	P	Pn	16 18 03.8	+3.4
	comp=Z,100nm,0.6s,comp=Z,1µm						
MTN	Manton Dam	9.87	173	*e*Pn	Pn	16 18 00.7	+0.2
MTN	Manton Dam	9.87	173	P	Pn	16 18 00.7	+0.2
	baz=9.9,SNR=242						
BSSI	Bau Bau, Buton	9.88	251	P	Pn	16 18 02.9	+2.3
EDFI	Ende, Flores	9.96	235	P	Pn	16 18 05.3	+3.4
KDU	Kakadu	9.97	165	P	Pn	16 18 00.5	-1.4
	baz=10.0,SNR=34						
BKSI	Bulukumba	10.01	256	P	Pn	16 18 05.4	+3.0
	comp=Z,118nm,0.6s,comp=Z,1µm						
TTSI	Tana Toraja	10.06	269	P	Pn	16 18 04.5	+1.5
	comp=Z,94nm,0.6s,comp=Z,1µm						
SPSI	Sidrap Palu	10.15	264	P	Pn	16 18 06.1	+1.8
	comp=Z,116nm,0.5s,comp=Z,2µm						
GENI	Genyem	10.27	88	P	Pn	16 18 08.0	+2.0
KAPI	Kappang	10.31	258	Pn	Pn	16 18 07.6	+1.0
	comp=Z,2.6nm,0.3s,baz=132,slow=10.0,SNR=59						
KAPI				Sn	Sn	16 19 58.7	-2.3
	comp=Z,0.7nm,0.3s,baz=287,slow=20,SNR=1.2						
KAPI				LR	LR	16 23 05.4	
	comp=Z,3µm,19.4s,baz=299,slow=44						
KAPI	Kappang	10.31	258	*e*Pn	Pn	16 18 08.1	+1.5
KAPI	Kappang	10.31	258	*ce*P	Pn	16 18 09.6	+3.1
KAPI				pmax	pmax		
	comp=Z,71nm,0.6s						
KAPI	Kappang	10.31	258	P	Pn	16 18 08.5	+2.0
	SNR=9.5						
JAY	Jayapura	10.81	88	Pn	Pn	16 18 13.8	+0.3
	comp=Z,2.3nm,0.3s,baz=239,slow=5.7,SNR=27						
JAY				Sn	Sn	16 20 09.9	-3.5
	comp=Z,0.3nm,0.3s,baz=184,slow=15,SNR=1.6						
JAY	Jayapura	10.81	88	P	Pn	16 18 15.3	+1.8
	comp=Z,642nm,1.0s,comp=Z,6µm						
DAV	Davao City (W)	10.88	337	Pn	Pn	16 18 11.6	-2.7
	comp=Z,27nm,0.3s,baz=36,slow=19,SNR=1.5						
KCP	Kidapawan	11.02	334	⇓*e*P	Pn	16 18 16.9	+0.6
PALU	Palau	11.23	24	P	Pn	16 18 18.9	-0.3
	baz=11,SNR=4.8						
CTBH	Cotabato--PC H	11.60	331	⇑*i*P	Pn	16 18 23.9	-0.3
WSI	Waingapu	11.61	235	P	Pn	16 18 25.6	+1.2
	comp=Z,543nm,1.1s,comp=Z,7µm						
WBSI	Waikabubak, Su	12.35	237	P	Pn	16 18 38.4	+3.9
KNRA	Kununurra	12.66	185	P	Pn	16 18 38.2	-0.5
	baz=13,SNR=38						
SMKI	Samarinda	12.92	281	P	Pn	16 18 43.4	+1.1
BKB	Balikpapan	13.10	277	P	Pn	16 18 47.5	+2.8
	comp=Z,250nm,0.6s,comp=Z,2µm						
PLAI	Plampang	13.37	244	P	Pn	16 18 51.2	+2.8
	comp=Z,112nm,0.9s,comp=Z,3µm						
SRBI	Singaraja	15.46	250	P	Pn	16 19 18.1	+1.5
	comp=Z,65nm,0.9s,comp=Z,842nm						
RCP	Roxas	16.10	334	⇓*e*P	P	16 19 29.4	+1.5
KKM	Kota Kinabalu	16.34	303	*e*Pn	Pn	16 19 26.0	-2.0
	comp=Z,30nm,0.9s						
KMMI	Kalianget	16.36	255	P	P	16 19 29.9	-0.9
	comp=Z,80nm,0.8s,comp=Z,703nm						
JAGI	Jajag, Banyuwa	16.57	250	*e*P	Pn	16 19 30.3	-0.6
	comp=Z,75nm,0.7s						
JAGI	Jajag, Banyuwa	16.57	250	P	P	16 19 33.0	-0.1
	comp=Z,109nm,0.8s						
COEN	Coen	17.06	130	*e*Pn	Pn	16 19 37.2	+0.2
	comp=Z,110nm,0.8s						
COEN	Coen	17.06	130	P	Pn	16 19 37.1	+0.2
	baz=17,SNR=28						
WRAB	Tennant Creek	17.40	166	*e*Pn	Pn	16 19 38.1	-3.1
	comp=Z,110nm,1.0s						
WRAB	Tennant Creek	17.40	166	*e*P	Pn	16 19 38.1	-3.1
WRAB				pmax	pmax		
	comp=Z,110nm,1.0s						
WR1	Warramunga Arr	17.40	166	*e*P	Pn	16 19 38.3	-2.9
WR1				*e*		16 22 34.9	
WRA	Warramunga Arr	17.40	166	P	Pn	16 19 38.3	-2.9
	comp=Z,6.9nm,0.3s,baz=346,slow=14,SNR=100						
WRA				S	Sn	16 22 34.9	-19
	comp=Z,0.2nm,0.3s,baz=352,slow=18,SNR=2.0						
WB2	Warramunga Arr	17.41	166	*e*Pn	Pn	16 19 38.1	-3.2
	comp=Z,158nm,1.2s						
MANU	Manus Island	17.48	87	*e*P	P	16 19 43.9	+0.7
	comp=Z,77nm,1.0s						
GRJI	Gresik	17.77	257	P	P	16 19 49.1	+2.7
	comp=Z,153nm,0.6s,comp=Z,1µm						
PMG	Port Moresby	18.31	111	P	P	16 19 50.8	-1.5
	comp=Z,0.4nm,0.3s,baz=287,slow=17,SNR=2.1						
PMG				LR	LR	16 29 06.2	
	comp=Z,685nm,19.6s,baz=292,slow=44						
PMG	Port Moresby	18.31	111	*e*P	Pn	16 19 54.2	+1.8
	comp=Z,71nm,1.0s						
PMG	Port Moresby	18.31	111	*e*P	Pn	16 19 54.2	+1.8
PMG				pmax	pmax		
	comp=Z,71nm,1.0s						
SBUM	Sibu	18.47	287	*e*P	P	16 19 52.2	-1.8
	comp=Z,17nm,0.9s						
PWJI	Pagerwojo	18.68	254	P	P	16 19 56.6	+0.3
NGJI	Ngawi	18.86	256	P	Pn	16 20 01.6	+2.5
	comp=Z,153nm,1.1s,comp=Z,4µm						
TGY	Tagaytay City	19.16	333	P	P	16 20 01.6	0.0
	comp=Z,27nm,0.3s,baz=324,slow=13,SNR=3.2						
TGY				LR	LR	16 27 36.8	
	comp=Z,377nm,19.9s,baz=139,slow=38						
WOJI	Wonogiri, Jawa	19.48	255	P	Pn	16 20 07.4	+0.9
	comp=Z,141nm,1.3s						
QIS	Mount Isa	19.87	152	P	P	16 20 10.0	+0.7
	baz=20,SNR=84						
UGM	Wanagama	19.88	255	*e*P	P	16 20 08.1	-1.5
	comp=Z,128nm,0.7s						
KSM	Kuching	20.07	282	*e*Pn	P	16 20 12.0	+0.4
	comp=Z,52nm,0.6s						
MBWA	Marble Bar	20.59	208	P	P	16 20 15.3	-1.8
	SNR=5.8						
MTSU	Mount Surprise	20.65	138	P	Pn	16 20 19.4	-0.9
	baz=21,SNR=60						
PSA00	Pilbara Seismi	20.90	207	*e*P	P	16 20 18.6	-1.9
	comp=Z,57nm,0.7s						
AS31	Alice Springs	20.92	170	*e*P	P	16 20 21.0	+0.2
	comp=Z,97nm,0.6s						
AS31				*e*ScP	ScP	16 28 04.3	+1.9
ASAR	Alice Springs	20.92	170	P	P	16 20 21.4	+0.6
	comp=Z,270nm,0.7s,baz=348,slow=11,SNR=2568						
ASAR				S	S	16 24 04.3	-8.0
	comp=Z,2.8nm,0.6s,baz=352,slow=10,SNR=4.1						
ASAR				ScP	ScP	16 28 04.3	+1.8
	comp=Z,1.0nm,0.7s,baz=349,slow=3.8,SNR=3.3						
WRKA	Warakurna	21.98	184	P	P	16 20 32.0	-0.1
	baz=22,SNR=103						
GUMO	Guam	22.18	42	LR	LR	16 28 26.6	
	comp=Z,355nm,22.0s,baz=224,slow=35						
TPI	Tanjungpandan	22.21	270	P	P	16 20 37.5	+2.8
	comp=Z,71nm,1.4s,comp=Z,777nm						

CISI	**Cisompet, Garu**	22.44	257	eP	P	16 20 33.6	-3.6
	comp=Z,124nm,0.6s						
CISI	**Cisompet, Garu**	22.44	257	P	P	16 20 33.2	-4.0
LEM	**Lembang**	22.51	259	P	P	16 20 36.1	-2.0
	comp=Z,49nm,0.6s,baz=346,slow=20,SNR=5.3						
LEM				LR	LR	16 30 53.3	
	comp=Z,3µm,20.1s,baz=88,slow=41						
CTA	**Charters Tower**	23.32	138	P	P	16 20 46.6	+0.4
	comp=Z,57nm,1.0s,baz=312,slow=12,SNR=24						
CTAO	**Charters Tower**	23.32	138	eP	P	16 20 47.2	+1.0
	comp=Z,52nm,0.9s						
CTAO	**Charters Tower**	23.32	138	eP	P	16 20 47.2	+1.0
CTAO				pmax	pmax		
	comp=Z,52nm,0.9s						
PPBI	**Pangkal Pinang**	23.74	271	P	P	16 20 51.7	+1.4
	comp=Z,34nm,1.1s						
GIRL	**Giralia**	24.75	217	P	P	16 20 59.4	0.0
	baz=25,SNR=4.4						
MDSI	**Maura Dua**	25.70	266	P	P	16 21 08.1	-0.1
MEEK	**Meekatharra**	25.88	204	P	P	16 21 09.1	-0.7
	baz=26,SNR=15						
DLV	**T Lat**	25.94	305	eP	P	16 21 07.9	-2.6
	comp=Z,38nm,1.0s						
JMBI	**JAMBI**	26.26	272	P	P	16 21 16.1	+2.8
LHSI	**Lahat**	26.33	267	P	P	16 21 15.1	+1.2
	comp=Z,112nm,0.6s						
MYKOM	**Kota Tinggi**	26.46	280	eP	P	16 21 13.8	-1.3
	comp=Z,61nm,1.2s						
FORT	**Forrest**	27.70	183	eP	P	16 21 25.4	-0.6
	comp=Z,57nm,0.8s						
FORT	**Forrest**	27.70	183	P	P	16 21 25.3	-0.7
	baz=28,SNR=11						
KRJI	**Kerinci**	28.41	271	P	P	16 21 33.4	+0.7
BKNI	**Bangkinang**	29.02	276	P	P	16 21 45.8	+7.7
MORW	**Morawa**	29.09	206	P	P	16 21 37.3	-1.1
	baz=29,SNR=9.0						
KMBL	**Kambalda**	29.22	194	P	P	16 21 38.2	-1.4
	baz=29,SNR=5.9						
QIZ	**Qiongzhong**	29.45	319	P	P	16 21 43.0	+1.2
QIZ				S	S	16 26 35.4	+1.4
QIZ				LR	LR		
	comp=Z,270nm,17.1s						
QIZ				LR	LR		
	comp=Z,290nm,15.1s						
QIZ				LR	LR		
	comp=Z,250nm,19.6s						
PDSI	**Padang**	29.48	273	P	P	16 21 40.8	-1.4
RMQ	**Roma**	29.55	144	P	P	16 21 43.6	+0.9
	baz=30,SNR=25						
IPM	**Ipoh**	29.78	284	eP	P	16 21 44.6	-0.2
	comp=Z,23nm,0.6s						
EIDS	**Eidsvold**	30.18	139	P	P	16 21 46.5	-1.7
	baz=30,SNR=3.4						
BBOO	**Buckleboo**	30.23	170	eP	P	16 21 47.9	-0.6
	comp=Z,45nm,1.3s						
BBOO	**Buckleboo**	30.23	170	P	P	16 21 47.9	-0.6
	baz=30,SNR=5.1						
KULM	**Kulim**	30.34	286	eP	P	16 21 49.3	-0.5
	comp=Z,22nm,0.8s						
HNR	**Honiara**	30.54	103	LR	LR	16 35 28.1	
	comp=Z,379nm,21.9s,baz=296,slow=39						
STKA	**Stephens Creek**	30.78	160	P	P	16 21 53.9	+0.5
	comp=Z,19nm,0.4s,baz=339,slow=8.8,SNR=106						
STKA				LR	LR	16 35 33.4	
	comp=Z,441nm,20.2s,baz=328,slow=39						
STKA	**Stephens Creek**	30.78	160	eP	P	16 21 53.5	+0.2
	comp=Z,5.1nm,0.5s						
STKA	**Stephens Creek**	30.78	160	P	P	16 21 53.9	+0.5
	baz=31,SNR=87						
STKA	**Stephens Creek**	30.78	160	eP	P	16 21 53.6	+0.2
STKA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SISI	**Saibi**	30.82	272	P	P	16 21 52.8	-1.2
HTT	**Hallett**	31.44	165	P	P	16 21 59.7	+0.4
	baz=32,SNR=4.3						
PSI	**Prapat**	31.48	280	eP	P	16 21 58.0	-2.0
	comp=Z,23nm,0.7s						
PSI	**Prapat**	31.48	280	eP	P	16 21 58.0	-2.0
PSI				pmax	pmax		
	comp=Z,23nm,0.7s						
CHBT	**CHBT**	31.52	300	P	P	16 22 02.1	+2.0
	comp=Z,80nm,0.5s,comp=Z,893nm						
PANO	**Nakornpanom**	31.98	310	P	P	16 22 07.6	+3.5
	comp=Z,0.4nm,1.1s,comp=Z,238nm						
TRTT	**Trang**	31.99	290	P	P	16 22 12.1	+7.9
NWAO	**Narrogin (SRO)**	32.06	200	LR	LR	16 36 53.6	
	comp=Z,474nm,18.1s,baz=27,slow=40						
NWAO	**Narrogin (SRO)**	32.06	200	P	P	16 22 04.2	-0.4
	baz=32,SNR=8.8						
CMSA	**Cobar Meteorol**	32.07	154	P	P	16 22 05.5	+0.8
	baz=32,SNR=43						
SKNT	**Sakolnakorn**	32.37	309	P	P	16 22 12.6	+5.1
	comp=Z,18nm,1.3s						
GSI	**Gunungsitoli**	32.58	277	eP	P	16 22 07.6	-1.9
	comp=Z,112nm,1.6s						
GSI	**Gunungsitoli**	32.58	277	P	P	16 22 07.3	-2.2
KCSI	**Kotacane, Aceh**	32.74	281	P	P	16 22 10.4	-0.5
TPTI		33.28	280	P	P	16 22 17.9	+2.4
	comp=Z,11nm,1.0s						
CHAI	**Chaiyaphum**	33.37	305	P	P	16 22 16.3	0.0
	comp=Z,73µm,0.7s,comp=Z,585µm						
NONG	**Nongkai**	33.65	309	P	P	16 22 19.0	+0.3
	comp=Z,0.8nm,0.9s						
ARMA	**Armidale**	34.17	145	P	P	16 22 25.3	+2.1
	baz=34,SNR=4.6						
SLVN	**Son La**	35.09	315	eP	P	16 22 29.8	-1.5
	comp=Z,14nm,1.1s						
ARPS	**Mount Arapiles**	35.38	163	P	P	16 22 34.7	+1.2
	baz=36,SNR=14						
MGCD	**Mangrove Creek**	36.03	149	P	P	16 22 40.9	+1.8
	baz=36,SNR=5.7						
UMPA	**Umpang Tak**	36.12	303	P	P	16 22 48.0	+7.9
PHRA	**Phrae**	36.18	307	P	P	16 22 41.6	+1.1
	comp=Z,4.5nm,1.1s,comp=Z,838nm						
NJ2	**Nanjing**	36.39	344	eP	P	16 22 42.3	+0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	**Wuhan**	36.49	337	P	P	16 22 50.6	+7.6
WHN				S	S	16 28 23.4	+0.4
WHN				LR	LR		
	comp=Z,460nm,17.4s						
LAMP	**Lampang**	36.66	307	P	P	16 22 46.6	+1.9
	comp=Z,48µm,0.9s						
CAN	**Canberra**	36.73	153	eP	P	16 22 46.6	+1.5
	comp=Z,18nm,0.7s						
CAN	**Canberra**	36.73	153	eP	P	16 22 46.6	+1.5
CAN				pmax	pmax		
	comp=Z,19nm,0.7s						
GYA	**Guiyang**	36.89	324	⇑iP	P	16 22 47.9	+1.2
GYA				pP	pP	16 22 55.7	-1.0
GYA				PP	PnPn	16 24 13.8	+2.4
GYA				S	S	16 28 32.7	+3.2
GYA				SS	SnSn	16 30 59.6	-4.0
GYA				pmax	pmax		
	comp=Z,20nm,0.5s						
GYA				pmax	pmax		
	comp=Z,110nm,7.8s						
GYA				LR	LR		
	comp=Z,210nm,17.3s						
GYA				LR	LR		
	comp=Z,250nm,22.0s						
GYA				LR	LR		
	comp=Z,220nm,16.4s						
CM31	**Chiang Mai Arr**	37.18	306	eP	P	16 22 49.8	+0.7
CM31				ePcP	PcP	16 25 09.7	+0.8
CM31				eScP	ScP	16 28 56.5	+2.9
CMAR	**Chiang Mai Arr**	37.18	306	P	P	16 22 49.8	+0.7
	comp=Z,8.9nm,0.7s,baz=138,slow=8.0,SNR=65						
CMAR				PcP	PcP	16 25 09.7	+0.8
	comp=Z,1.8nm,0.8s,baz=164,slow=2.6,SNR=4.1						
CMAR				ScP	ScP	16 28 56.5	+2.9
	comp=Z,0.7nm,0.4s,baz=147,slow=2.7,SNR=5.3						
TOO	**Toolangi**	37.28	159	eP	P	16 22 51.5	+1.8
	comp=Z,22nm,0.9s						
TOO	**Toolangi**	37.28	159	P	P	16 22 51.7	+2.0
	baz=37,SNR=19						
TOO	**Toolangi**	37.28	159	eP	P	16 22 51.5	+1.8
TOO				pmax	pmax		
	comp=Z,23nm,0.9s						
CMMT	**Chiang Mai**	37.37	307	P	P	16 22 51.1	+0.4
	comp=Z,24nm,0.8s,comp=Z,290nm						
CHTO	**Chiang Mai**	37.37	307	eP	P	16 22 50.1	-0.6
	comp=Z,32nm,0.6s						
CHTO	**Chiang Mai**	37.37	307	eP	P	16 22 50.1	-0.6
CHTO				pmax	pmax		
	comp=Z,33nm,0.6s						
CHTO	**Chiang Mai**	37.37	307	P	P	16 22 51.5	+0.8
	SNR=12						
CHTO				P	P	16 22 51.5	+0.8
	SNR=12						
MILA	**Mila**	38.26	155	P	P	16 22 59.3	+1.3
	baz=38,SNR=3.8						
KMI	**Kunming**	38.40	318	P	P	16 23 04.0	+4.4
KMI				pP	sP	16 23 13.9	+0.1
KMI				S	S	16 28 53.6	+1.0
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
KMI				pmax	pmax		
	comp=Z,130nm,7.6s						
KMI				LR	LR		
	comp=Z,180nm,12.4s						
KMI				LR	LR		
	comp=Z,170nm,18.4s						
KMI				LR	LR		
	comp=Z,180nm,19.6s						
INU	**Inuyama**	38.72	9	eP	P	16 23 01.5	-0.3
	comp=Z,17nm,1.1s						
MAJO	**Matsushiro**	40.08	10	eP	P	16 23 11.8	-1.4
	comp=Z,13nm,0.8s						
MAJO	**Matsushiro**	40.08	10	eP	P	16 23 11.8	-1.4
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAT	**Matsushiro**	40.08	10	P	P	16 23 11.4	-1.8
MAT				S	S	16 29 05.8	-11
MJAR	**Matsushiro Arr**	40.08	10	P	P	16 23 11.5	-1.7
	comp=Z,7.6nm,0.8s,baz=193,slow=9.2,SNR=18						
MJAR				LR	LR	16 37 52.5	
	comp=Z,330nm,21.2s,baz=200,slow=33						
MJB9	**Matsu-Tunnel**	40.09	10	eP	P	16 23 11.8	-1.4
	comp=Z,14nm,0.8s						
DZM	**Mont Dzumac**	40.23	121	eLR	LR	16 34 21.5	
	comp=Z,636nm,23.9s						
KS15	**Wonju Array Si**	40.27	358	eP	P	16 23 14.7	0.0
	comp=Z,53nm,1.8s						
KS15				ePcP	PcP	16 25 19.1	+1.1
KS15				eScP	ScP	16 29 07.3	+2.4
KSRS	**Korea Array**	40.28	358	P	P	16 23 14.7	0.0
	comp=Z,2.4nm,0.8s,baz=172,slow=9.0,SNR=7.7						
KSRS				PcP	PcP	16 25 19.1	+1.1
	comp=Z,2.1nm,0.9s,baz=178,slow=2.3,SNR=3.8						
KSRS				ScP	ScP	16 29 07.3	+2.4
	comp=Z,1.6nm,1.0s,baz=174,slow=2.5,SNR=5.0						
KSRS				LR	LR	16 38 44.3	
	comp=Z,333nm,20.8s,baz=178,slow=34						
XAN	**Xi'an**	41.80	334	P	P	16 23 26.9	-0.5
XAN				pP	pP	16 23 34.1	-3.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CD2	**Chengdu**	41.91	325	eP	P	16 23 26.7	-1.7
CD2				S	S	16 29 42.8	-1.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,110nm,5.7s						
CD2				LR	LR		
	comp=Z,430nm,17.2s						
CD2				LR	LR		
	comp=Z,290nm,16.2s						
MOO	**Moorlands**	42.22	161	P	P	16 23 32.7	+2.0
	baz=42,SNR=3.2						
DL2	**Dalian**	42.38	350	eP	P	16 23 31.0	-1.0
DL2				S	S	16 29 50.6	-0.5
DL2				pmax	pmax		
	comp=Z,20nm,1.5s						
DL2				pmax	pmax		
	comp=Z,190nm,4.6s						
DL2				LR	LR		
	comp=Z,190nm,21.0s						
DL2				LR	LR		
	comp=Z,300nm,19.2s						
DL2				LR	LR		
	comp=Z,270nm,19.9s						
BJT	**Baijiatuau**	44.61	345	eP	P	16 23 49.5	-0.5
	comp=Z,12nm,0.8s						
BJT	**Baijiatuau**	44.61	345	eP	P	16 23 49.5	-0.5
BJT				pmax	pmax		
	comp=Z,12nm,0.8s						
BJI	**Beijing**	44.63	345	P	P	16 23 50.0	-0.1
BJI				S	S	16 30 26.6	+2.6
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJI				LR	LR		
	comp=Z,70nm,12.0s						
BJI				LR	LR		
	comp=Z,67nm,19.9s						
BJI				LR	LR		
	comp=Z,290nm,76.2s						
BJI	**Beijing**	44.63	345	P	P	16 23 49.5	-0.6
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
MSHR	**Mys Shultsa**	45.37	1	iP	P	16 23 55.8	-0.2
LZH	**Lanzhou**	45.86	330	⇑P	P	16 24 01.6	+1.4
LZH				pP	pP	16 24 06.5	-3.9
LZH				sP	sP	16 24 10.4	-4.2
LZH				S	S	16 30 44.0	+1.7
LZH				pmax	pmax		
	comp=Z,29nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=Z,320nm,15.6s						
LZH				LR	LR		
	comp=Z,250nm,15.2s						
LZH				LR	LR		
	comp=Z,370nm,17.0s						
SHL	**Shillong**	46.49	310	eP	P	16 24 03.8	-1.5
	comp=Z,21nm,0.9s						
SHL	**Shillong**	46.49	310	eP	P	16 24 03.8	-1.5
SHL				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC	**Hu-ho-hao-te**	46.73	341	P	P	16 24 09.2	+2.3
HHC				sP	sP	16 24 22.8	+1.5
HHC				S	S	16 30 56.0	+1.5
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,6.3s						
HHC				LR	LR		
	comp=Z,140nm,14.3s						
HHC				LR	LR		
	comp=Z,220nm,15.5s						
HHC				LR	LR		
	comp=Z,230nm,17.3s						
CN2	**Changchun**	46.75	356	eP	P	16 24 14.3	+7.5
USA0B	**Ussuriysk Arra**	47.01	2	eP	P	16 24 08.2	-0.6
	comp=Z,9.6nm,0.8s						
USA0B	**Ussuriysk Arra**	47.01	2	eP	P	16 24 08.2	-0.6
USA0B				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USRK	**Ussuriysk Ar.**	47.01	2	P	P	16 24 08.7	-0.2
	comp=Z,3.5nm,0.5s,baz=178,slow=8.2,SNR=16						
USRK				LR	LR	16 44 46.3	
	comp=Z,226nm,19.0s,baz=166,slow=37						
TEY	**Ternei**	48.19	6	⇓eP	P	16 24 23.7	+5.8
TEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YUK	**Yuzh-Kuril'sk**	48.96	15	eP	P	16 24 29.3	+5.4
YUK				eS	S	16 31 37.7	+12
YUK				MLR	MLR		
	comp=Z,176nm,17.0s						
LSA	**Lhasa**	49.29	314	P	P	16 24 27.7	+0.4
LSA				pmax	pmax		
	comp=Z,27nm,0.8s						
GTA	**Gaotai**	50.45	330	eP	P	16 24 34.7	-0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,6.2s						
GTA				LR	LR		
	comp=Z,130nm,15.8s						
GTA				LR	LR		
	comp=Z,120nm,16.5s						
GTA				LR	LR		
	comp=Z,190nm,17.2s						
YSS	**Yuzh-Sakhalins**	51.01	11	eP	P	16 24 39.6	+0.2
	comp=Z,16nm,0.7s						
YSS	**Yuzh-Sakhalins**	51.01	11	⇓eP	P	16 24 36.9	-2.5
YSS				e		16 24 49.4	
YSS				eS	S	16 31 49.6	-4.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				pmax	pmax		
	comp=Z,100nm,4.8s						
JIRN	**Jiri**	51.94	309	eP	P	16 24 46.7	-0.5
	comp=Z,28nm,0.6s						
KLR	**Kul'dur**	52.03	2	⇓iP	P	16 24 47.6	+0.5
KLR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
GUN	**Gumba**	52.30	309	eP	P	16 24 49.6	-0.3
	comp=Z,44nm,0.7s						
PKI	**Pulchoki**	52.51	308	eP	P	16 24 50.2	-1.2
	comp=Z,12nm,0.8s						
PKIN	**Phulchoki**	52.52	308	eP	P	16 24 50.3	-1.1
	comp=Z,8.3nm,0.5s						
DMN	**Daman**	52.76	308	eP	P	16 24 51.9	-1.3
	comp=Z,36nm,0.9s						
GKN	**Gorkha**	53.31	308	eP	P	16 24 56.7	-0.4
	comp=Z,31nm,0.7s						
GRNR	**Gornyy**	53.84	5	eP	P	16 25 02.2	+1.8
KOLN	**Koldanda**	54.02	308	eP	P	16 25 01.7	-0.7
	comp=Z,89nm,1.0s						
DANN	**Dangsing**	54.16	308	eP	P	16 25 02.9	-0.6
	comp=Z,48nm,0.6s						
ULN	**Ulaanbaatar**	54.45	341	eP	P	16 25 04.6	-0.5
	comp=Z,22nm,1.1s						
ULN	**Ulaanbaatar**	54.45	341	⇓iP	P	16 25 05.6	+0.5
ULN				pmax	pmax		
	comp=Z,20nm,1.1s						
ULN	**Ulaanbaatar**	54.45	341	P	P	16 25 06.0	+0.9
	SNR=11						
ULN				P	P	16 25 06.0	+0.9
	SNR=11						
RPZ	**Rata Peaks**	54.49	144	P	P	16 25 04.0	-1.4
	comp=Z,11nm,1.0s,baz=338,slow=8.2,SNR=1.4						
HYB	**Hyderabad**	54.53	294	iP	P	16 25 05.0	-1.1
SONA0	**Songino Array**	54.63	341	eP	P	16 25 06.7	+0.3
SONM	**Songino Array**	54.63	341	P	P	16 25 06.7	+0.3
	comp=Z,7.2nm,0.7s,baz=156,slow=7.0,SNR=16						
SONM				LR	LR	16 49 43.6	
	comp=Z,168nm,18.9s,baz=156,slow=38						
PYUN	**Piuthan**	54.65	308	eP	P	16 25 06.5	-0.5
	comp=Z,52nm,0.8s						
TYV	**Tymovskoe**	54.75	10	eP	P	16 25 08.6	+1.6
TYV				eS	S	16 32 52.7	+7.6
TYV				pmax	pmax		
	comp=Z,14nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,5.2s						
TYV				smax	smax		
	comp=E,7.0nm,1.5s						
TYV				smax	smax		
	comp=E,200nm,4.2s						
BKZ	**Black Stump Fm**	55.53	137	eP	P	16 25 14.3	+1.3
	comp=E,24nm,0.6s						
URZ	**Urewera**	55.54	136	P	P	16 25 12.2	-0.7
	comp=E,7.6nm,0.6s,baz=248,slow=4.7,SNR=8.1						
ZEA	**Zeya**	56.56	358	eP	P	16 25 20.0	0.0
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=N,300nm,16.0s						
ZAK	**Zakamensk**	57.87	340	eP	P	16 25 29.6	+0.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLY	**Talaya**	58.86	341	eP	P	16 25 39.8	+3.6
TLY				pmax	pmax		
	comp=Z,18nm,0.8s						
TLY				MLR	MLR		
	comp=Z,283nm,17.0s						
IRK	**Irkutsk**	59.14	342	eP	P	16 25 37.8	-0.3
IRK				pmax	pmax		
	comp=Z,638nm,3.6s						
MOY	**Mondy**	59.73	340	eP	P	16 25 44.3	+1.9
MOY				pmax	pmax		
	comp=Z,22nm,1.5s						
WMQ	**Urumqi**	60.01	326	eP	P	16 25 45.2	+0.8
WMQ				pP	pP	16 25 52.5	-2.4
WMQ				sP	sP	16 25 54.4	-4.6
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,51nm,4.5s						
WMQ				LR	LR		
	comp=Z,300nm,27.3s						
WMQ				LR	LR		
	comp=Z,210nm,23.5s						
WMQ				LR	LR		
	comp=Z,200nm,23.5s						
PETK	**Petropavlovsk-**	60.58	19	P	P	16 25 48.3	+0.3
	comp=Z,7.8nm,0.7s,baz=187,slow=4.6,SNR=13						
PETK				LR	LR	16 48 10.7	
	comp=Z,137nm,21.4s,baz=197,slow=32						
PEA1	**Petropavlovsk-**	60.58	19	eP	P	16 25 48.3	+0.3
PET	**Petropavlovsk**	60.82	19	eP	P	16 25 55.0	+5.4
PET				eS	S	16 34 05.8	+1.2
PET				eSS	SS	16 37 57.5	-6.6
PET				pmax	pmax		
	comp=Z,23nm,2.7s						
PET				pmax	pmax		
	comp=Z,100nm,10.1s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
BOD	**Bodaibo**	61.95	350	eP	P	16 25 58.2	+1.1
BOD				pmax	pmax		
	comp=Z,11nm,1.5s						
DGZ	**Jazzator, Alta**	63.96	331c	iP	P	16 26 10.9	0.0
NIL	**Nilore**	64.56	310	eP	P	16 26 12.3	-2.6
	comp=Z,17nm,1.2s						
NIL	**Nilore**	64.56	310	eP	P	16 26 12.4	-2.6
NIL				pmax	pmax		
	comp=Z,17nm,1.2s						
YAK	**Yakutsk**	64.84	360	eP	P	16 26 16.6	+0.4
	comp=Z,47nm,0.8s						
YAK	**Yakutsk**	64.84	360	eP	P	16 26 17.0	+0.9
PRZ	**Przheval'sk**	64.84	320	eP	P	16 26 17.4	+0.5
	comp=Z,28nm,1.4s						
PRZ	**Przheval'sk**	64.84	320	P	P	16 26 17.4	+0.5
PRZ				pmax	pmax		
	comp=Z,28nm,1.3s						
MK31	**Makanchi Array**	64.84	326	eP	P	16 26 16.2	-0.4
	comp=Z,14nm,1.1s						
MK31	**Makanchi Array**	64.84	326	eP	P	16 26 16.2	-0.4
MK31				pmax	pmax		
	comp=Z,14nm,1.1s						
MK32	**Makanchi Array**	64.84	326	eP	P	16 26 16.3	-0.3
MKAR	**Makanchi Array**	64.84	326	P	P	16 26 16.3	-0.3
	comp=Z,5.6nm,0.5s,baz=125,slow=7.6,SNR=66						
MKAR	**Makanchi Array**	64.84	326	iP	P	16 26 16.2	-0.4
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSH	**Kashi**	65.03	316	P	P	16 26 18.8	+0.7
KSH				pP	sP	16 26 32.2	-0.5
KSH				sP	pP	16 26 37.6	+9.0
KSH				PcP	PcP	16 26 51.2	+0.4
KSH				PP	PP	16 28 45.7	+4.2
KSH				S	S	16 34 54.7	-3.5
KSH				SS	SS	16 39 10.4	-0.4
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,94nm,4.9s						
KSH				LR	LR		
	comp=Z,420nm,10.5s						
KSH				LR	LR		
	comp=Z,280nm,11.3s						
KSH				LR	LR		
	comp=Z,80nm,11.7s						
MAKZ	**Makanchi**	65.03	326	eP	P	16 26 17.2	-0.5
	comp=Z,18nm,1.0s						
MAKZ	**Makanchi**	65.03	326	eP	P	16 26 17.3	-0.5
MAKZ				pmax	pmax		
	comp=Z,18nm,1.0s						
KDJ	**Kajisay**	65.45	319	eP	P	16 26 20.1	-0.7
	comp=Z,9.5nm,0.7s						
KDJ	**Kajisay**	65.45	319	eP	P	16 26 20.1	-0.7
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BOOM	**Boomskoye usch**	66.43	319	eP	P	16 26 26.8	-0.3
	comp=Z,15nm,1.3s						
BOOM	**Boomskoye usch**	66.43	319	eP	P	16 26 26.8	-0.3
BOOM				pmax	pmax		
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	67.44	319	eP	P	16 26 33.1	-0.4
	comp=Z,5.8nm,0.8s						
AAK	**Ala-Archa**	67.44	319	⇓iP	P	16 26 32.5	-1.0
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARSB	**Arslanbob**	67.87	317	eP	P	16 26 35.8	-0.5
	comp=Z,10nm,0.8s						

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SEY    Seymchan           67.91  11⇓iP      P        16 26 36.2 +0.4
ZAA0   Zalesovo Array     67.97 333 eP      P        16 26 35.2 -1.2
       comp=Z,42nm,1.0s
ZALV   Zalesovo Beam      67.97 333  P      P        16 26 35.9 -0.5
       comp=Z,21nm,0.8s,baz=110,slow=5.1,SNR=34
ZAA1   Zalesovo Array     67.97 333 eP      P        16 26 35.9 -0.5
KBL    Kabul              68.14 309 eP      P        16 26 36.9 -1.2
       comp=Z,9.9nm,0.9s
KBL    Kabul              68.14 309 eP      P        16 26 36.9 -1.2
KBL                                  pmax   pmax
       comp=Z,10.0nm,0.9s
GAR    Garm               68.80 314 eP      P        16 26 41.2 -0.9
       comp=Z,18nm,0.9s
GAR    Garm               68.80 314 eP      P        16 26 41.2 -0.9
GAR                                  pmax   pmax
       comp=Z,18nm,0.9s
KURK   Kurchatov          69.07 328 eP      P        16 26 42.8 -0.5
       comp=Z,51nm,0.9s
KURK   Kurchatov          69.07 328⇓iP      P        16 26 41.2 -2.1
KURK                                 pmax   pmax
       comp=Z,26nm,0.8s
KURK   Kurchatov          69.07 328  P      P        16 26 43.6 +0.3
       SNR=28
KURK                                 P      P        16 26 43.6 +0.3
       SNR=28
OTUK   Ortayu             71.36 323  P      P        16 26 56.7 -0.7
OTUK                                 pmax   pmax
       comp=Z,13nm,0.6s
ATKA   Atka Island        72.32  32 eP      P        16 27 03.2 +0.1
       comp=Z,26nm,0.8s
WSAR   Wadi Sarin         74.05 295  LR     LR       17 03 25.9
       comp=Z,87nm,19.6s,baz=137,slow=39
TIXI   Tiksi              74.50 360 eP      P        16 27 15.2 -0.4
       comp=Z,7.3nm,0.8s
TIXI   Tiksi              74.50 360⇓iP      P        16 27 15.9 +0.4
TIXI                                 pmax   pmax
       comp=Z,4.0nm,0.6s
BRVK   Borovoye           74.71 327 eP      P        16 27 16.3 -0.8
       comp=Z,16nm,0.8s
BRVK   Borovoye           74.71 327⇑iP      P        16 27 17.0 -0.1
BRVK                                 pmax   pmax
       comp=Z,17nm,0.8s
BRVK   Borovoye           74.71 327  P      P        16 27 17.5 +0.3
       SNR=13
BRVK                                 P      P        16 27 17.5 +0.3
       SNR=13
BILL   Bilibino           75.26  13⇑eP      P        16 27 21.9 +1.9
BILL                                e                16 27 37.5
BILL                                e                16 30 07.3
BILL                                 pmax   pmax
       comp=Z,1.0nm,0.9s
BILL                                 MLR    MLR
       comp=Z,240nm,19.0s
VNDA   Vanda              76.42 173  P      P        16 27 26.7 +0.3
       comp=Z,5.0nm,0.8s,baz=322,slow=6.8,SNR=25
VNDA   Vanda              76.42 173 eP      P        16 27 26.8 +0.3
       comp=Z,5.8nm,0.8s
VNDA   Vanda              76.42 173 eP      P        16 27 26.8 +0.3
VNDA                                 pmax   pmax
       comp=Z,6.0nm,0.8s
GEYT   Alibeck            77.56 310  P      P        16 27 34.0 +0.3
       comp=Z,4.1nm,0.7s,baz=163,slow=5.7,SNR=9.1
GYA0B  ALIBECK ARRAY      77.56 310 eP      P        16 27 33.1 -0.7
       comp=Z,6.8nm,0.8s
MAW    Mawson             78.63 201  P      P        16 27 39.1 +0.1
       comp=Z,3.9nm,0.5s,baz=97,slow=3.5,SNR=11
MAW    Mawson             78.63 201 eP      P        16 27 39.0 +0.1
       comp=Z,2.7nm,1.1s
AB31   Akbulak array      79.32 321 i P     P        16 27 42.7 -0.5
AB31                                 pmax   pmax
       comp=Z,13nm,0.6s
ABKAR  Akbulak array      79.32 321 eP      P        16 27 42.1 -1.1
       comp=Z,17nm,0.6s
PPT    Papeete            80.08 107  LR     LR       17 02 31.5
       comp=Z,54nm,19.4s,baz=273,slow=35
PPT2   Papeete2           80.08 107 eS      S        16 37 53.0 +2.3
       comp=Z,256nm,24.0s
PPT2   Papeete2           80.08 107 eLR     LR       16 52 50.0
       comp=Z,108nm,22.2s
TBI    Tubuai             80.24 113 eS      S        16 37 54.9 +2.9
       comp=Z,241nm,26.2s
TBI    Tubuai             80.24 113 eLR     LR       16 52 54.8
       comp=Z,188nm,28.0s
AKTO   Aktyubinsk         80.86 322  P      P        16 27 50.6 -0.8
AKTO                                 pmax   pmax
       comp=Z,20nm,0.8s
SVE    Sverdlovsk         81.30 329 eP      P        16 27 53.9 +0.3
SVE                                  pmax   pmax
       comp=Z,18nm,0.6s
ARU    Arti               82.27 328 eP      P        16 27 58.3 -0.5
       comp=Z,25nm,1.0s
ARU    Arti               82.27 328c iP     P        16 27 58.4 -0.3
ARU                                  S      S        16 38 12.4 +0.6
ARU                                  pmax   pmax
       comp=Z,26nm,1.0s
LKRN   Lenkeran, Azer     84.92 309  P      P        16 28 12.8 +0.1
SVW2   Sparrevohn         85.17  28 eP      P        16 28 15.3 +1.8
       comp=Z,8.6nm,1.0s
TTA    Tatalina           85.46  26 eP      P        16 28 15.7 +0.7
       comp=Z,7.7nm,0.8s
TTA    Tatalina           85.46  26 eP      P        16 28 15.7 +0.7
TTA                                  pmax   pmax
       comp=Z,8.0nm,0.8s
RAYN   Ar Rayn            86.04 294 eP      P        16 28 18.8 +0.1
       comp=Z,21nm,0.9s
RAYN   Ar Rayn            86.04 294 eP      P        16 28 18.8 +0.1
RAYN                                 pmax   pmax
       comp=Z,21nm,0.9s
RSO    Redoubt South      86.37  29 eP      P        16 28 18.8 -0.9
SEKA   Sheki              86.45 311  P      P        16 28 20.7 +0.3
MNGR   Mingechevir, A     86.48 311  P      P        16 28 20.7 +0.2
QSPA   South Pole Qui     86.96 180 eP      P        16 28 22.7 +0.2
       comp=Z,14nm,1.1s
GANJ   Ganja              87.05 311  P      P        16 28 24.3 +1.0
SYO    Syowa Base         87.34 201⇑eP      P        16 28 23.0 -1.0
SYO    Syowa Base         87.34 201⇓ePcP    PcP      16 28 25.4 -0.6
SYO    Syowa Base         87.34 201⇑epP     pP       16 28 32.9 -2.1
KNK    Knik Glacier       88.60  28 eP      P        16 28 31.1 +0.8
       comp=Z,44nm,0.3s
SML    Sawmill            88.72  28 eP      P        16 28 31.6 +0.8
       comp=Z,12nm,0.8s
SML    Sawmill            88.72  28 eP      P        16 28 31.6 +0.8
SML                                  pmax   pmax
       comp=Z,12nm,0.8s
RND    Reindeer           88.73  26 eP      P        16 28 31.5 +0.6
       comp=Z,8.9nm,0.9s
RND    Reindeer           88.73  26 eP      P        16 28 31.5 +0.6
RND                                  pmax   pmax
       comp=Z,9.0nm,0.9s
ZEI    Tsey               89.06 313 eP      P        16 28 32.0 -1.1
ZEI                                  pmax   pmax
       comp=Z,10.0nm,0.6s
GLI    Glacier Island     89.18  29 eP      P        16 28 33.5 +0.6
       comp=Z,17nm,1.1s
SCM    Sheep Creek Mo     89.20  28 eP      P        16 28 33.1 +0.1
       comp=Z,45nm,1.8s
SCM    Sheep Creek Mo     89.20  28 eP      P        16 28 33.2 +0.1
SCM                                  pmax   pmax
       comp=Z,45nm,1.8s
WRH    Wood River Hil     89.23  25 eP      P        16 28 33.7 +0.6
       comp=Z,7.0nm,1.1s
AKH    Akhalkalaki        89.25 311 eP      P        16 28 33.2 -0.7
       comp=Z,10nm,0.9s
AKH    Akhalkalaki        89.25 311  P      P        16 28 33.3 -0.7
AKH                                  pmax   pmax
       comp=Z,10.0nm,0.9s
DHY    Denali Highway     89.35  27 eP      P        16 28 33.9 +0.1
       comp=Z,6.1nm,0.8s
CCB    Clear Creek Bu     89.38  25 eP      P        16 28 34.0 +0.3
       comp=Z,6.3nm,1.0s
HDA    Harding Lake       89.71  26 eP      P        16 28 34.9 -0.4
       comp=Z,5.7nm,1.2s
ILAR   Eielson Array      89.79  25  P      P        16 28 34.5 -1.2
       comp=Z,1.2nm,0.8s,baz=255,slow=4.8,SNR=11
ILB    Eielson Array      89.79  25 eP      P        16 28 34.5 -1.2
       comp=Z,10nm,1.8s
KBZ    Khabaz             89.87 314  P      P        16 28 35.4 -1.1
       comp=Z,2.1nm,0.6s,baz=25,slow=3.4,SNR=6.8
PRGR   Permogore          89.87 332 eP      P        16 28 34.1 -2.0
PRGR                                 pmax   pmax
       comp=Z,6.0nm,0.5s
KIV    Kislovodsk         90.03 314 eP      P        16 28 36.9 -0.5
KIV                                  pmax   pmax
       comp=Z,16nm,1.0s
PAX    Paxson             90.20  27 eP      P        16 28 38.0 +0.2
       comp=Z,6.2nm,1.1s
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PAX    Paxson             90.20  27 eP      P        16 28 38.0 +0.2
PAX                                  pmax   pmax
       comp=Z,6.0nm,1.1s
EGAK   Eagle              92.23  25 eP      P        16 28 48.0 +0.9
       comp=Z,3.4nm,0.9s
KMBO   Kilima Mbogo       92.58 269  P      P        16 28 50.9 +0.8
       comp=Z,1.8nm,0.6s,baz=53,slow=6.2,SNR=5.5
KMBO   Kilima Mbogo       92.58 269 eP      P        16 28 50.9 +0.8
       comp=Z,7.6nm,1.2s
KMBO   Kilima Mbogo       92.58 269 eP      P        16 28 50.9 +0.8
KMBO                                 pmax   pmax
       comp=Z,8.0nm,1.2s
DAWY   Dawson             92.98  26 eP      P        16 28 50.4 -0.2
       comp=Z,6.6nm,1.1s
OBN    Obninsk            94.33 325⇑eP      P        16 28 57.9 +1.0
OBN                                 e                16 32 47.0
OBN                                 eS      S        16 40 07.9 +1.8
OBN                                 eSS     SS       16 46 31.9 +3.8
OBN                                  pmax   pmax
       comp=Z,5.0nm,0.8s
BR101  Keskin Array S     96.71 309 eP      P        16 29 07.3 -1.0
BRTR   Keskin Array B     96.71 309  P      P        16 29 07.3 -1.0
       comp=Z,0.7nm,0.7s,baz=100,slow=6.3,SNR=2.7
ARA0   ARCESS Array S     97.80 340 eP      P        16 29 10.4 -2.0
ARCES  ARCESS Array B     97.80 340  P      P        16 29 10.4 -2.0
       comp=Z,9.0nm,1.1s,baz=79,slow=6.3,SNR=9.5
AKASG  Malin Array Be     99.06 321  P      Pdif     16 29 16.6 -1.9
       comp=Z,0.2nm,0.3s,baz=62,slow=4.8,SNR=3.3
AKBB   Malin Array Si     99.06 321 eP      Pdif     16 29 16.6 -1.8
AKBB   Malin Array Si     99.06 321 eP      Pdif     16 29 16.6 -1.8
FIA0   FINESS Array S     99.20 332 eP      Pdif     16 29 17.0 -1.8
FIA0   FINESS Array S     99.20 332 eP      Pdif     16 29 17.0 -1.8
FINES  FINESS Array B     99.20 332  P      Pdif     16 29 17.0 -1.8
       comp=Z,1.3nm,0.8s,baz=46,slow=6.0,SNR=2.8
SNAA   Sanae              99.51 194  Pdiff  Pdif     16 29 21.0 +0.8
VNA2   Neumayer--Watz    101.09 193  Pdiff  Pdif     16 29 27.4 +0.3
       baz=118,slow=3.6
BOSA   Boshof            101.37 240  P      Pdif     16 29 28.1 -1.3
       comp=Z,2.7nm,0.7s,baz=120,slow=5.3,SNR=6.2
LANS   Liptovska Anna    105.53 320 eP      Pdif     16 29 48.3 +0.9
LANS   Liptovska Anna    105.53 320 ePDIF   Pdif     16 29 48.2 +0.9
CLL    Collm             108.89 324 ePKiKP  PKiKP    16 34 08.0 +1.2
CLL                                 ePS     PS       16 44 00.0 -0.3
CLL                                 eSS     SS       16 49 48.0 -1.8
CLL                                 e                16 52 00.0
CLL                                 eSSS    SSS      16 53 54.0
GEC2   GERESS Array S    109.27 321 ePKiKP  PKiKP    16 34 06.2 -1.5
GERES  GERESS Array B    109.27 321  PKiKP  PKiKP    16 34 06.2 -1.5
       comp=Z,0.4nm,0.5s,baz=57,slow=3.6,SNR=2.8
PD31   Pinedale Array    114.13  44 ePKiKP  PKPdf    16 34 15.9 -1.5
PDAR   Pinedale Array    114.13  44  PKP    PKPdf    16 34 15.9 -1.5
       comp=Z,0.5nm,0.5s,baz=117,slow=0.7,SNR=4.8
PDAR                                 PKKPab PKKPab   16 45 07.6 +2.6
       comp=Z,0.3nm,0.6s,baz=108,slow=4.8,SNR=4.1
RSSD   Black Hills       117.35  41 ePdif   Pdif     16 30 43.1 +2.8
RSSD   Black Hills       117.35  41 eP      Pdif     16 30 43.1 +2.8
ANMO   Albuquerque       118.96  51 i PKIKP PKiKP    16 34 28.6 +1.7
MNTX   Cornudas Mount    120.80  55 ePKPdf  PKiKP    16 34 31.0 +0.7
ECSD   EROS Data Cent    122.27  38 ePKPdf  PKiKP    16 34 32.9  0.0
TXAR   Lajitas Array     122.90  57  PKP    PKiKP    16 34 35.6 +1.0
       comp=Z,1.2nm,0.6s,baz=315,slow=0.8,SNR=3.8
ESDC   Sonseca Array     124.53 317  PKP    PKPdf    16 34 36.6 -0.6
       comp=Z,0.1nm,0.2s,baz=6.1,slow=3.4,SNR=2.9
JCT    Junction City     125.72  54 ePKPdf  PKiKP    16 34 40.7 +0.6
JCT    Junction City     125.72  54 ePKIKP  PKiKP    16 34 40.7 +0.6
TOA0   Torodi Ar. Sit    127.82 284 ePKPdf  PKPdf    16 34 44.2 +0.2
TORD   Torodi Ar. Bea    127.82 284  PKP    PKPdf    16 34 42.9 -1.1
       comp=Z,1.6nm,0.6s,baz=84,slow=1.5,SNR=12
TOA1   Torodi Ar. Sit    127.83 284 ePKPdf  PKPdf    16 34 42.9 -1.1
CCM    Cathedral Cave    128.72  42 ePKPdf  PKiKP    16 34 45.8  0.0
CCM    Cathedral Cave    128.72  42 ePKIKP  PKiKP    16 34 45.8  0.0
MIAR   Mount Ida         128.87  47 ePKPdf  PKiKP    16 34 46.6 +0.4
MIAR   Mount Ida         128.87  47  PKIKP  PKiKP    16 34 46.6 +0.4
D53A   Lac Vacive, Po    129.99  24 ePKPdf  PKPdf    16 34 47.7 +0.4
PLCA   Paso Flores       132.65 159  PKP    PKiKP    16 34 53.3 -0.5
       comp=Z,2.9nm,0.9s,baz=174,slow=17,SNR=2.2
LRAL   Lakeview Retre    134.35  45 ePKPdf  PKPdf    16 34 55.4 -0.5
DBIC   Dimbokro          134.77 276  PKhKP  PKPpre   16 34 46.6
       comp=Z,2.2nm,0.5s,baz=73,slow=4.8,SNR=5.7
TCA    Tanti             143.19 159 eP      PKPbc    16 35 09.4 +0.2
TCA                                  IAML            16 36 29.7
       comp=Z,6.5nm,1.7s
AGUA   GUANDACOL         143.22 153 eP      PKPdf    16 35 13.8 +1.3
AGUA                                 IAML            16 36 48.9
       comp=Z,5.7nm,0.8s
APLL   PUNTA DE LOS L143.29 156 eP      PKPab    16 35 08.1 -0.2
APLL                                 IAML            16 36 33.5
       comp=Z,7.9nm,0.8s
ACLC   CERRO LA CRUZ143.96 155 eP      PKPab    16 35 07.5 -3.6
VCA    Vinchina          143.99 152 eP      PKPdf    16 35 13.5 -0.4
VCA                                  IAML            16 36 48.5
       comp=Z,19nm,0.5s
JTS    Las Juntas de     144.67  76 ePKIKP  PKPdf    16 35 14.7 -0.5
CYA    Choya             145.30 155 eP      PKPbc    16 35 04.8  -11
CYA                                  IAML            16 36 19.7
       comp=Z,7.9nm,2.7s
GO02   Mina Guanaco      146.23 147 ePKPbc  PKPab    16 35 20.2 +0.4
AHML   Horco Molle       146.95 155 eP      PKPdf    16 35 09.9 -8.9
FSA    Cafayete          147.25 153 eP      PKPdf    16 35 14.3 -5.2
AZAP   Zapla             149.29 153 eP      PKPbc    16 35 25.5 -1.8
AZAP                                 IAML            16 37 32.3
       comp=Z,4.3nm,3.5s
HJA    Humahuaca         149.99 151 eP      PKPab    16 35 35.0 +0.2
HJA                                  IAML            16 37 14.4
       comp=Z,6.0nm,2.7s
CPUP   Villa Florida     150.03 167  PKPbc  PKPbc    16 35 29.1 +0.4
       comp=Z,9.2nm,0.6s,baz=148,slow=1.6,SNR=20
LPAZ   La Paz            153.85 138  PKPbc  PKiKP    16 35 39.0 +0.4
       comp=Z,2.1nm,0.6s,baz=265,slow=4.6,SNR=9.8
LPAZ   La Paz            153.85 138  PKIKP  PKiKP    16 35 39.0 +0.4
```

JMA ***09*** *16:18:03.3±0.2, 23°.17N×121°.59E, h1^{km}±2^{km}, M2.7*
ISCJB ***09*** *16:18:05.1±0.3, 23°.16N±0°.01×121°.50E±0°.02, h22^{km}±3^{km},*
Error ellipse: s-maj=3.1km s-min=2.1km az=24.8
TAP ***09*** *16:18:05.1, 23°.18N×121°.43E, h18^{km}, ML3.0, C*
ISC 09 16:18:05.1±0.9**, 23°.18N**±0°.02×**121°.44E**±0°.02**, h19**^{km}±2^{km}**,**
n71, σ0^{s}61/129**, Taiwan**

```
Code   Station Name        Δ°   AZ°    Phase ID         Time       Res
                                     Op      ISC        h  m  s    ISC
CHKT   Chengkung           0.10 222  P      Pg       16 18 10.4 +1.5
       baz=211
CHKT                                 S      Sg       16 18 13.8 +2.2
       baz=211
TWF1   Yuli                0.22 323 i P     Pg       16 18 11.1 +0.6
       baz=327
TWF1                                i S     Sg       16 18 15.0 +0.8
       baz=327
YULB   Yu-li               0.25 329 eP      Pb       16 18 11.4 +0.5
       baz=331
YULB                                eS      Sg       16 18 15.3 +0.3
       baz=331
HGSD   Ruisui              0.32 357 eP      Pb       16 18 12.3 +0.1
       baz=359
HGSD                                eS      Sb       16 18 17.8 +0.8
       baz=359
EHY    Hungye              0.35 342 i P     Pb       16 18 13.0 +0.2
       baz=344
EHY                                 i S     Sb       16 18 18.2 +0.3
       baz=344
ELDTW  Lidau               0.39 272 i P     Pg       16 18 13.2 -0.2
       baz=271
ELDTW                               i S     Sg       16 18 18.1 -0.8
       baz=271
TWGBT  Beinan              0.49 223 eP      Pb       16 18 15.2 +0.1
       baz=221
TWGBT                               eS      Sb       16 18 22.4 +0.6
       baz=221
TWG    Pinlang             0.49 224 i P     Pb       16 18 15.4 +0.2
       baz=221
TWG                                 i S     Sb       16 18 22.6 +0.7
       baz=221
EGFH   Guangfu             0.49 359 eP      Pb       16 18 15.2  0.0
EGFH                                eS      Sb       16 18 23.1 +1.1
TTN    Taitung             0.50 213  P      Pn       16 18 16.7 -0.6
       baz=210
TTN                                 eS      Sb       16 18 23.5 +1.3
       baz=210
YUS    Yu-Shan             0.55 305 i P     Pg       16 18 16.1 -0.2
       baz=304
YUS                                 i S     Sg       16 18 23.3 -0.6
       baz=304
ESL    Shilin              0.64 359 eP      Pb       16 18 16.8 -0.7
       baz=1.0
ESL                                 eS      Sb       16 18 26.1 +0.1
       baz=1.0
VWDT   VWDT                0.64 335 eP      Pb       16 18 17.3 -0.2
       baz=335
VWDT                                eS      Sg       16 18 26.2 -0.2
       baz=335
ALS    Alishan             0.67 300 i P     Pg       16 18 18.4 -0.1
       baz=300
ALS                                  S      Sg       16 18 27.5 -0.1
       baz=300
ECL    Taimali             0.73 218  P      Pb       16 18 18.3 -0.9
       baz=216
ECL                                  S      Sb       16 18 28.4 -0.4
       baz=216
WHYT   Xinyi Township      0.75 314 eP      Pg       16 18 19.8  0.0
       baz=314
WHYT                                 S      Sn       16 18 30.5 -1.1
       baz=314
SLGT   Liugui              0.75 256  P      Pg       16 18 20.1 +0.2
       baz=255
SLGT                                eS      Sg       16 18 29.7 -0.2
       baz=255
SSLB   Suanglung           0.76 324 eP      Pb       16 18 19.6 -0.1
       baz=324
SSLB                                eS      Sb       16 18 29.5 -0.1
       baz=324
TPUB   Ta-pu               0.76 280 eP      Pg       16 18 20.1 +0.1
       baz=279
TPUB                                eS      Sg       16 18 30.4 +0.3
       baz=279
WTP    Ta-pu               0.76 275  P      Pn       16 18 20.4 -0.6
       baz=275
WTP                                  S      Sg       16 18 30.7 +0.4
       baz=275
SGST   Jiashian            0.79 263  P      Pn       16 18 21.0 -0.4
       baz=262
SGST                                 S      Sn       16 18 32.1 -0.5
       baz=262
HWA    Hwalien             0.81  11  P      Pn       16 18 21.7 +0.1
       baz=12
HWA                                 eS      Sn       16 18 33.2 +0.1
       baz=12
CHN5   Tsauling            0.82 301 i P     Pn       16 18 21.3 -0.4
       baz=301
CHN5                                 S      Sn       16 18 33.2 -0.1
       baz=301
CHN1   Nanshi              0.84 271  P      Pn       16 18 21.8 -0.2
       baz=270
CHN1                                i S     Sn       16 18 34.0 +0.2
       baz=270
SSD    Sandimen            0.86 240  P      Pb       16 18 21.0 -0.4
       baz=239
SMLT   Sun Moon Lake       0.86 325  P      Pg       16 18 21.9 -0.1
       baz=325
SMLT                                eS      Sg       16 18 33.1 -0.3
       baz=325
SNST   Tainan City         0.87 273 eP      Pn       16 18 22.3  0.0
       baz=272
SNST                                eS      Sn       16 18 35.1 +0.6
       baz=272
TWK    Hsinying            0.88 276  P      Pn       16 18 22.3 -0.2
       baz=275
TWK                                  S      Sn       16 18 34.6 -0.2
       baz=275
TYC    Yuchr               0.90 324  P      Pn       16 18 22.9 +0.1
       baz=324
TYC                                 eS      Sn       16 18 34.9 -0.4
       baz=324
TWD    Chiawan             0.91   9  P      Pb       16 18 22.3 -0.1
       baz=10.0
TWD                                  S      Sn       16 18 35.9 +0.4
       baz=10.0
CHGB   Renai               0.91 345 eP      Pb       16 18 21.8 -0.7
       baz=345
CHGB                                eS      Sn       16 18 35.8 -0.1
       baz=345
WJS    Zhushan             0.92 315 eP      Pn       16 18 23.1 +0.1
       baz=315
WJS                                 eS      Sn       16 18 36.2 +0.5
       baz=315
MASBT  Mashibuluo          0.93 233 eP      Pb       16 18 22.4 -0.3
       baz=232
MASBT                               eS      Sn       16 18 35.7 -0.3
       baz=232
WGK    Gukeng              0.95 302  P      Pg       16 18 24.3 +0.6
       baz=302
WGK                                  S      Sn       16 18 37.4 +0.9
       baz=302
EAST   Anshuo              0.96 215  P      Pb       16 18 22.3 -0.9
       baz=213
EAST                                 S      Sn       16 18 36.6 -0.2
       baz=213
WDLH   Douliu              0.97 302 eP      Pg       16 18 24.4 +0.3
       baz=302
WDLH                                eS      Sn       16 18 37.7 +0.7
       baz=302
DPDB   Guoxing             0.97 331 eP      Pb       16 18 23.4  0.0
       baz=331
DPDB                                eS      Sg       16 18 36.6 -0.4
       baz=331
WHF    Hehuan Shan         0.98 351  P      Pb       16 18 23.2 -0.5
       baz=351
WHF                                  S      Sn       16 18 37.7 -0.1
       baz=351
WNT    Mingjian            0.98 315  P      Pg       16 18 24.6 +0.3
       baz=316
WNT                                 eS      Sn       16 18 37.5 +0.2
       baz=316
CHY    Chiayi              0.99 289 eP      Pb       16 18 23.6  0.0
       baz=289
CHY                                 eS      Sn       16 18 37.8 +0.4
       baz=289
NACB   Ninganchiao         1.00   8 eP      Pb       16 18 22.4 -1.5
       baz=8.0
NACB                                eS      Sg       16 18 37.5 -0.4
       baz=8.0
ETLH   Xiulin Townshi      1.03   2 eP      Pb       16 18 24.4 +0.1
       baz=2.0
ETLH                                eS      Sn       16 18 38.9 +0.3
       baz=2.0
SSPT   Xinbi               1.06 230 eP      Pg       16 18 25.9 +0.1
       baz=228
WLGB   Puzi                1.09 286 eP      Pg       16 18 26.0 -0.3
       baz=286
WLGB                                eS      Sg       16 18 40.6  0.0
       baz=286
SCZT   Fangliau            1.10 224 eP      Pn       16 18 25.9 +0.3
       baz=222
SCZT                                eS      Sg       16 18 41.0  0.0
       baz=222
TDCB   Techi               1.10 347 eP      Pn       16 18 26.1 +0.4
       baz=347
TDCB                                eS      Sb       16 18 39.8  0.0
       baz=347
LAY    Lan-yu              1.14 175  P      Pn       16 18 25.2 -0.8
       baz=173
LAY                                  S      Sn       16 18 41.3 +0.2
       baz=173
CHN8   Yiju                1.14 279 eP      Pg       16 18 26.6 -0.7
       baz=278
CHN8                                eS      Sg       16 18 41.9 -0.4
       baz=278
WHP    Taichung City       1.19 338 eP      Pg       16 18 28.4 +0.3
       baz=338
WSF    Szhu                1.21 293  P      Pg       16 18 27.8 -0.8
       baz=292
WSF                                  S      Sg       16 18 44.2 -0.2
       baz=292
RLNB   Erlin               1.22 306 eS      Sg       16 18 44.2 -0.6
       baz=306
NNSB   Datong              1.25 358 eP      Pn       16 18 27.0 -0.7
       baz=358
NNS    Nan Shan            1.26 357 eP      Pn       16 18 28.1 +0.3
       baz=358
NNS                                 eS      Sn       16 18 44.7 +0.4
       baz=358
ENA    Nanau               1.28  12 eP      Pn       16 18 28.1 +0.2
       baz=13
NANB   Nanao               1.28  13 eP      Pn       16 18 28.1 +0.1
       baz=13
TWQ1   Liyutan             1.32 332 eP      Pg       16 18 29.9 -0.7
       baz=332
TWQ1                                eS      Sb       16 18 46.4 +0.6
       baz=332
YHNB   Yeheng              1.49 358 eP      Pn       16 18 31.1 +0.1
       baz=358
NSK    Sanguang            1.50 357 eP      Pb       16 18 31.9 -0.5
       baz=357
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LIOB	Emei	1.51	345	eP	Pn	16 18 31.9	+0.7
	baz=345						
TWE	Neicheng	1.55	8	eP	Pb	16 18 33.2	-0.1
	baz=8.0						
TIPB	Shuangxi	1.82	11	eP	Pb	16 18 36.9	-1.0
	baz=11						
JYNG	Yonagunijimaku	1.87	47	P	Pn	16 18 36.6	+0.4
JYNG				eS	Sn	16 18 58.9	-0.4
YOJ	Yonaguni jima	1.93	48	P	Pn	16 18 37.3	+0.4
YOJ				S	Sn	16 19 00.1	-0.5
HATJ	Hateruma jima	2.34	68	eS	Sn	16 19 09.8	-1.0
IRIF	Iriomote-Funau	2.39	61	P	Pn	16 18 43.5	+0.2
IRIF				eS	Sn	16 19 12.0	-0.1
JKRS	Kuro-shima	2.58	65	P	Pn	16 18 46.7	+0.8
JKRS				eS	Sn	16 19 15.3	-1.5
JIJ	Ishigaki jima	2.74	64	P	Pn	16 18 48.5	+0.4
JIJ				eS	Sn	16 19 19.5	-1.3
JISG	Ishigakijimahi	2.98	61	P	Pn	16 18 51.4	0.0
JISG				eS	Sn	16 19 24.6	-2.0
JTJ	Tarama	3.32	63	P	Pn	16 18 56.6	+0.5
JTJ				S	Sn	16 19 35.1	0.0
JIRB	Irabujima	3.79	64	P	Pn	16 19 02.6	+0.1
JIRB				S	Sn	16 19 47.6	+1.0
JMJ2	Miyako jima3	3.88	66	P	Pn	16 19 04.6	+0.8
JMJ2				eS	Sn	16 19 47.9	-1.0

NEIC ***09*** *16:25:16.6±3.9, 31°.33S×179°.35W, h145^{km}±32^{km}, mb4.3/2, Error ellipse: s-maj=34.3km s-min=20.2km az=210.0*

IDC ***09*** *16:25:19.7±7.5, 31°.59S×179°.36W, h169^{km}±60^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.5/25, mbtmp4.2/4, Error ellipse: s-maj=60.6km s-min=31.6km az=34.0*

ISCJB ***09*** *16:25:22.3±0.5, 31°.65S±0°.05×179°.6W±0°.1, h200^{km}, mb4.2/5, Error ellipse: s-maj=14.6km s-min=5.3km az=15.4*

ISC 09 16:25:22.3±0.9**, 31°.67S**±0°.08×**179°.5W**±0°.1**, h200^{km}, n47,** σ**1^s.74**/46**, mb4.0**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.74	29	P	Pn	16 26 11.0	+2.1
GLKZ				S	Sn	16 26 44.2	-1.0
MXZ	Matakaoa Point	6.17	197	P	Pn	16 26 51.3	-0.3
MXZ				S	Sn	16 28 02.5	+0.1
WMGZ	Waiomatatini S	6.38	195	P	Pn	16 26 56.2	+1.7
WMGZ				S	Sn	16 28 07.3	-0.2
HAZ	Te Kaha	6.49	200	P	Pn	16 26 57.5	+1.8
HAZ				S	Sn	16 28 09.3	-0.6
PKGZ	Pakihiroa	6.53	197	P	Pn	16 26 57.3	+0.9
PKGZ				S	Sn	16 28 05.4	-5.6
PUZ	Puketiti	6.66	196	P	Pn	16 26 58.4	+0.3
PUZ				S	Sn	16 28 12.8	-1.3
WCZ	Waipu Caves	6.69	229	P	Pn	16 27 04.5	+6.1
RUGZ	Raukumara Rang	6.71	200	P	Pn	16 27 00.6	+1.8
TWGZ	Tauwhareparae	6.83	197	P	Pn	16 27 00.5	+0.3
CNGZ	Carnagh Statio	7.07	195	P	Pn	16 27 03.0	-0.2
MWZ	Matawai	7.10	200	P	Pn	16 27 03.3	-0.4
TKGZ	Te Karaka	7.11	197	P	Pn	16 27 03.3	-0.6
URZ	Urewera	7.16	202	P	Pn	16 27 04.3	-0.2
	0.8nm,0.3s,baz=271,slow=4.5,SNR=17						
URZ				S	Sn	16 28 22.8	-2.8
	2.1nm,0.3s,baz=222,slow=15,SNR=6.0						
URZ	Urewera	7.16	202	ePn	Pn	16 27 04.8	+0.3
URZ				S	Sn	16 28 22.8	-2.8
URZ	Urewera	7.16	202	P	Pn	16 27 04.4	0.0
RAGZ	Rawiri	7.28	200	P	Pn	16 27 05.5	-0.6
TOZ	Tahuroa Road	7.34	213	P	Pn	16 27 14.0	+7.2
RIGZ	Rimuhau	7.38	197	P	Pn	16 27 05.9	-1.5
MUGZ	Murupara	7.47	203	P	Pn	16 27 09.1	+0.6
SNGZ	Shannon Statio	7.57	199	P	Pn	16 27 10.2	+0.3
TLZ	Tolley Road	7.81	210	P	Pn	16 27 20.2	+7.2
BKZ	Black Stump Fm	8.18	203	ePn	Pn	16 27 18.2	+0.3
BKZ	Black Stump Fm	8.18	203	P	Pn	16 27 19.1	+1.3
HIZ	Hauiti	8.27	213	P	Pn	16 27 27.1	+8.2
WHVZ	Whangaehu Hut	8.61	207	P	Pn	16 27 28.4	+4.8
BHHZ	Black Hill Sta	8.62	204	P	Pn	16 27 26.1	+2.6
MOVZ	Moawhango	8.65	205	P	Pn	16 27 26.6	+2.6
PXZ	Pawanui	8.87	199	P	Pn	16 27 28.4	+1.8
BFZ	Birch Farm	9.64	200	ePn	Pn	16 27 37.6	+0.8
THZ	Tophouse	11.79	209	ePn	Pn	16 28 03.3	-1.2
KHZ	Kahutara	12.10	206	ePn	Pn	16 28 07.7	-0.5
OXZ	Oxford	13.45	208	ePn	Pn	16 28 24.4	-0.9
MQZ	McQueen's Vall	13.54	205	ePn	Pn	16 28 24.8	-1.5
LHI	Lord Howe Isla	18.30	265	eP	P	16 29 19.7	-1.7
	241nm,1.6s						
STKA	Stephens Creek	32.99	259	P	P	16 31 40.7	+2.2
	4.1nm,0.8s,baz=101,slow=11,SNR=5.1						
ASAR	Alice Springs	41.82	269	P	P	16 32 53.5	+0.9
	1.9nm,0.5s,baz=106,slow=7.4,SNR=12						
WR1	Warramunga Arr	42.92	274	eP	P	16 33 02.0	+0.5
WRA	Warramunga Arr	42.92	274	P	P	16 33 02.0	+0.5
	1.5nm,0.3s,baz=108,slow=8.1,SNR=8.4						
QSPA	South Pole Qui	58.45	180	eP	P	16 35 01.2	+4.2
	5.8nm,0.7s						
SNAA	Sanae	76.92	179	P	P	16 36 54.2	+2.1
VNA3	Neumayer Olymp	77.12	177	P	P	16 36 55.7	+2.5
VNA2	Neumayer--Watz	77.54	177	P	P	16 36 58.3	+2.8
	baz=173,slow=4.6						
YPP	Pitchstone Pla	98.07	43	eP	Pdif	16 38 34.0	-2.1
	13nm,1.8s						
FIA0	FINESS Array S	145.88	338	ePKPdf	PKiKP	16 44 37.4	-3.2
FINES	FINESS Array B	145.88	338	PKPbc	PKiKP	16 44 37.4	-3.2
	1.2nm,0.8s,baz=60,slow=3.7,SNR=5.3						
MMAI	Mount Meron Ar	150.60	282	PKPbc	PKiKP	16 44 51.1	-0.2
	0.9nm,0.4s,baz=72,slow=6.2,SNR=3.3						
TORD	Torodi Ar. Bea	161.54	184	PKPab	PKPab	16 45 46.7	+1.5
	0.3nm,0.4s,baz=171,slow=3.1,SNR=5.2						

DJA 09 16:26:53.8±1.0**, 3°S**±3°×**13°0E**±°**, h26^{km}**±13^{km}**, M3.5**/8**, MLv3.5**/8**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.12	240	P	Pn	16 27 13.1	-0.7
MSAI				S	Sb	16 27 28.6	0.0
BNDI	Bandanaira	1.72	180	P	Pn	16 27 22.1	0.0
BNDI				S	Sn	16 27 44.1	+0.9
AAI	Ambon	1.92	242	P	Pn	16 27 24.3	-0.6
FAKI	Fak Fak	2.35	93	P	Pn	16 27 31.6	+0.8
NLAI	Namlea	2.83	261	P	Pn	16 27 37.4	0.0
LBMI	Labuha	3.21	312	P	Pn	16 27 42.9	+0.3
SANI	Sanana	3.98	281	P	Pn	16 27 54.2	+1.1

GUC 09 16:34:08.0±0.6**, 33°.81S**×**71°.38W, h70^{km}**±6^{km}**, ML3.5, 6C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCDM	Rinconada Maip	0.58	56	⇓iP	Pn	16 34 22.2	+0.6
RCDM				i S	Sn	16 34 31.2	-0.4
ANTU	Antumapu	0.67	69	⇑iP	Pn	16 34 23.5	+0.9
ANTU				i S	Sn	16 34 33.8	+0.5
ANTU				IAML		16 34 39.5	
	comp=E,2μm,0.1s						
CLCH	Cerro Calan	0.82	60	⇑iP	Pn	16 34 24.6	+0.3
CLCH				i S	Sn	16 34 36.6	+0.1
CLCH				IAML		16 34 39.9	
	comp=E,2μm,0.2s						
PEL	Peldehue	0.89	41	⇑iP	Pn	16 34 25.4	+0.3
PEL				i S	Sn	16 34 38.5	+0.7
PEL				IAML		16 34 42.5	
	comp=N,2μm,0.3s						
LMEL	Las Melosas	0.98	92	⇑iP	Pn	16 34 26.9	+0.5
LMEL				i S	Sn	16 34 40.8	+0.7
LMEL				IAML		16 34 42.3	
	comp=N,3μm,0.1s						
FCH	Farellones	1.03	62	⇑iP	Pn	16 34 27.5	+0.3
FCH				i S	Sn	16 34 41.6	+0.1
FCH				IAML		16 34 44.1	
	comp=N,3μm,0.1s						
GO05	Huala	1.28	201	⇑iP	Pn	16 34 30.1	0.0
GO05				i S	Sn	16 34 47.1	+0.5
GO05				IAML		16 34 53.0	
	comp=N,1μm,0.2s						
CO02	Combarbal	2.62	7	⇓iP	Pn	16 34 48.4	+0.2

IDC ***09*** *16:54:26.7±2.2, 46°.15N×156°.43E, h0^{km}, mb3.8/2, mb1 3.8/4, mb1mx3.3/51, mbtmp3.8/4, ML3.0/2, Error ellipse: s-maj=63.2km s-min=28.1km az=105.0*

SKHL ***09*** *16:54:40.8±0.1, 47°.22N×154°.94E, h45^{km}±1^{km}, mb3.8/3*

ISC 09 16:54:36.4±3.2**, 46°.7N**±0°.3×**155°.5E**±0°.3**, h18^{km}, n7,** σ**2^s.63**/9**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	5.48	257	i P	Pn	16 55 58.7	+1.6
KUR				AMB	AMB	16 56 01.0	
	4.0nm,0.5s						
KUR				AMB	AMB	16 56 01.0	
	3.0nm,0.5s						
KUR				AMB	AMB	16 56 01.0	
	5.0nm,0.5s						
KUR				i S	Sn	16 56 57.0	-2.6
KUR				A	A	16 57 04.1	
	50nm,0.5s						
KUR				A	A	16 57 04.1	
	20nm,0.5s						
PETK	Petropavlovsk-	6.60	12	Pn	Pn	16 56 10.3	-2.1
	0.4nm,0.3s,baz=181,slow=12,SNR=10.0						
PETK				Sn	Sn	16 57 30.6	+3.5
	0.1nm,0.3s,baz=144,slow=12,SNR=2.5						
YUK	Yuzh-Kuril'sk	7.25	252	eP	Pn	16 56 25.5	+4.1
YUK				AMB	AMB	16 56 26.0	
	7.0nm,0.4s						
YUK				AMB	AMB	16 56 26.0	
	2.0nm,0.4s						
YUK				eS	Sn	16 57 42.6	-0.6
GRPR	Tuman	7.33	252	eP	Pn	16 56 26.0	+3.6
GRPR				AMB	AMB	16 56 26.0	
	3.0nm,0.4s						
GRPR				eS	Sn	16 57 45.0	-0.1
ASAJ	Asahikawa	9.40	259	Pn	Pn	16 56 51.1	+0.3
	0.2nm,0.3s,baz=73,slow=11,SNR=3.8						
FINES	FINESS Array B	64.78	336	P	P	17 05 11.9	-1.4
	3.4nm,1.1s,baz=46,slow=8.0,SNR=1.9						
ASAR	Alice Springs	72.68	201	P	P	17 05 54.6	-8.3
	0.4nm,0.9s,baz=14,slow=5.5,SNR=2.3						

BJI ***09*** *17:04:11.1±0.0, 3°.60S×100°.58E, h16^{km}, mb5.7/88, mB5.6/70, Ms5.8/88, Ms7 5.6/81*

NEIC ***09*** *17:04:15.4±1.6, 3°.36S×100°.46E, h18^{km}±2^{km}, mb5.6/174, MS5.4/609, MW5.6, Error ellipse: s-maj=10.0km s-min=7.6km az=53.0, Moment Tensor Solution. s50 Moment tensor: Scale 10^{17}Nm; M_{rr}1.63; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$-0.78; $M_{r\theta}$2.70; $M_{\theta\phi}$0.45; $M_{\phi r}$-1.58; Best double couple: $M_0$3.50000×10^{17} NP1:ϕ_s122.00000°, δ78.00000°, λ87.00000°. NP2:ϕ_s315.00000°, δ13.00000°, λ104.00000°. Principal axes: T 3.6500, Plg57.0000°, Azm28.0000°; N -0.4000, Plg3.0000°, Azm122.0000°; P -3.2500, Plg33.0000°, Azm214.0000°;*

ISCJB ***09*** *17:04:15.2±0.5, 3°.31S±0°.02×100°.46E±0°.02, h26^{km}±3^{km}, mb5.5/273, MS5.4/631 Error ellipse: s-maj=3.8km s-min=2.3km az=40.3*

MOS ***09*** *17:04:17.2±0.8, 3°.29S×100°.46E, h46^{km}, mb5.8/105, MS5.2/60, Error ellipse: s-maj=6.4km s-min=4.1km az=110.6*

DJA ***09*** *17:04:17.0±0.5, 3°S±2°×10°0E±°, h22^{km}±4^{km}, M5.4/83, mB5.8/59, mb5.4/83, MLv5.8/29, Mw(mB)5.3/59, Mwp5.6/12*

GCMT ***09*** *17:04:18.4±0.1, 3°.60S±0°.01×100°.05E±0°.01, h24^{km}, MW5.5/98, Moment Tensor Solution. s92, c162; s98, c182; Duration: 1^s.4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.29±.03; $M_{\theta\theta}$-0.73±.02; $M_{\phi\phi}$-0.56±.02; $M_{r\theta}$1.01±.03; $M_{\theta\phi}$0.65±.01; $M_{\phi r}$-0.87±.03; Best double couple: $M_0$1.85900×10^{17} NP1:ϕ_s131.00000°, δ68.00000°, λ90.00000°. NP2:ϕ_s312.00000°, δ22.00000°, λ91.00000°. Principal axes: T 1.8560, Plg67.0000°, Azm41.0000°; N 0.0050, Plg0.0000°, Azm131.0000°; P -1.8610, Plg23.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

IDC ***09*** *17:04:20.0±1.1, 3°.32S×100°.48E, h54^{km}±8^{km}, mb5.0/43, mb1 5.0/46, mb1mx4.9/49, mbtmp5.2/46, MS5.1/34, Ms1 5.1/34, ms1mx4.9/59 Error ellipse: s-maj=9.8km s-min=6.0km az=44.0*

ISC 09 17:04:16.8±0.4**, 3°.31S**±0°.03×**100°.42E**±0°.03**, h29^{km}**±2^{km}**, h29^{km}:pP-P, n1624,** σ**1^s.42**/1484**, mb5.5**/289**, MS5.4**/636**, 57C-10D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	Pulau Pagai	0.68	323	P	Pb	17 04 29.8	-0.4
KRJI	Kerinci	1.60	41	P	Pn	17 04 44.5	+1.3
SISI	Saibi	2.38	326	P	Pn	17 04 53.0	-0.8
PDSI	Padang	2.39	1	P	Pn	17 04 53.8	-0.2
SDSI	Sungai Dareh	2.57	23	P	Pn	17 04 58.1	+1.6
MNAI	Manna	2.74	112	ePn	Pn	17 04 59.2	+0.5
MNAI	Manna	2.74	112	P	Pn	17 04 59.9	+1.2
LHSI	Lahat	3.14	99	P	Pn	17 05 06.5	+2.2
RGRI	Rengat	3.51	33	P	Pn	17 05 11.7	+2.3
JMBI	JAMBI	3.63	63	P	Pn	17 05 12.9	+1.9
BKNI	Bangkinang	3.67	10	ePn	Pn	17 05 12.8	+1.3
BKNI	Bangkinang	3.67	10	P	Pn	17 05 13.0	+1.4
MDSI	Maura Dua	3.93	107	P	Pn	17 05 16.8	+1.7
LWLI	Liwa	4.00	115	P	Pn	17 05 17.7	+1.4
PMBI	Palembang	4.36	85	P	Pn	17 05 22.5	+1.4
KASI	Kota Agung	4.62	119	P	Pn	17 05 26.3	+1.7
KLI	Kotabumi	4.69	109	P	Pn	17 05 28.6	+3.0
KLI	Kotabumi	4.69	109	P	Pn	17 05 27.3	+1.7
DSRI	Dabo	5.02	56	P	Pn	17 05 32.3	+2.1
	615nm,0.6s,12μm16nm						
BLSI	Bandar Lampung	5.23	113	P	Pn	17 05 33.7	+0.7
	466nm,0.6s,7μm12μm2.6nm						
GSI	Gunungsitoli	5.40	328	ePn	Pn	17 05 34.0	-1.3
GSI	Gunungsitoli	5.40	328	P	Pn	17 05 33.7	-1.6
PPBI	Pangkal Pinang	5.83	79	P	Pn	17 05 44.0	+2.8
	127nm,1.0s,2μm15μm1.4nm						
TPRI	Tanjung Pinang	5.88	44	P	Pn	17 05 44.2	+2.3
	858nm,0.7s,9μm28μm4.6nm						
MYKOM	Kota Tinggi	6.12	34	ePn	Pn	17 05 46.4	+1.1
CGJI	Cibinong	6.19	122	P	Pn	17 05 45.7	-0.6
PSI	Prapat	6.26	346	P	Pn	17 05 47.3	0.0
	4.2nm,0.3s,baz=164,slow=14,SNR=17						
PSI				S	Sn	17 06 56.8	-1.1
	5.2nm,0.3s,baz=106,slow=17,SNR=2.3						
PSI				LR	LR	17 08 46.2	
	comp=Z,35μm,21.5s,baz=164,slow=43						
PSI	Prapat	6.26	346	ePn	Pn	17 05 45.0	-2.3
PSI	Prapat	6.26	346	eP	Pn	17 05 45.0	-2.3
SBJI	Serang	6.34	116	P	Pn	17 05 50.1	+1.8
SNSI	Sinabang, Aceh	7.00	324	P	Pn	17 05 59.2	+1.8
	632nm,0.9s,2.4nm						
TSI	Tuntungan	7.02	345	P	Pn	17 06 00.1	+2.5
	1μm,0.9s,11μm5.0nm						
TPI	Tanjungpandan	7.25	86	P	Pn	17 06 03.7	+2.9
	78nm,0.9s,1μm1.4nm						
KCSI	Kotacane, Aceh	7.29	339	P	Pn	17 06 03.5	+2.1
	337nm,1.2s,5μm10μm5.2nm						
TPTI		7.29	334	P	Pn	17 06 03.3	+2.0
	138nm,0.8s,3μm3.4nm						
IPM	Ipoh	7.77	4	ePn	Pn	17 06 10.0	+2.1
LEM	Lembang	7.97	116	P	Pn	17 06 11.9	+1.0
	13nm,0.3s,baz=172,slow=12,SNR=14						
LEM				S	Sn	17 07 40.3	0.0
	baz=7.2,slow=12,SNR=1.6						
LEM				LR	LR	17 09 53.1	
	comp=Z,12μm,20.9s,baz=258,slow=42						
JCJI	Jatiwangi	8.43	112	P	Pn	17 06 19.7	+2.6
	337nm,1.1s						
CISI	Cisompet, Garu	8.48	120	ePn	Pn	17 06 16.6	-1.2
CISI	Cisompet, Garu	8.48	120	P	Pn	17 06 16.6	-1.2
MLSI	Meulaboh, Aceh	8.53	332	P	Pn	17 06 19.2	+0.8
	407nm,0.9s,6μm						
KULM	Kulim	8.55	2	ePn	Pn	17 06 18.8	+0.1
XMIS	Christmas Isla	8.81	144	ePn	Pn	17 06 17.1	-5.2
LHMI	Lhok Sumawe	9.17	338	ePn	Pn	17 06 26.0	-1.1
SKLT	Songkhla	10.42	1	P	Pn	17 06 44.3	0.0
	84nm,1.4s,1μm						
KSM	Kuching	10.97	64	ePn	Pn	17 06 53.7	+1.8
UGM	Wanagama	11.04	115	ePn	Pn	17 06 52.9	0.0
TRTT	Trang	11.10	356	P	Pn	17 06 54.3	+0.7
	166nm,1.5s,2μm						
WOJI	Wonogiri, Jawa	11.38	114	P	Pn	17 06 56.2	-1.2
NGJI	Ngawi	11.71	111	P	Pn	17 07 03.3	+1.4
PWJI	Pagerwojo	12.25	113	P	Pn	17 07 08.8	-0.6
	78nm,0.8s						
GRJI	Gresik	12.53	107	P	Pn	17 07 15.0	+1.8
	123nm,1.1s,1μm						
SBUM	Sibu	13.11	64	ePn	Pn	17 07 24.8	+3.6
KMMI	Kalianget	13.99	106	P	Pn	17 07 34.2	+1.0
	114nm,1.2s,1μm						
JAGI	Jajag, Banyuwa	14.59	111	ePn	Pn	17 07 39.8	-1.5
JAGI	Jajag, Banyuwa	14.59	111	P	Pn	17 07 37.8	-3.5
	174nm,0.8s						
MTKI	Muara Teweh, K	14.66	81	P	Pn	17 07 43.5	+1.2
	325nm,1.2s,6μm						
SRBI	Singaraja	15.46	108	P	Pn	17 07 54.0	+1.1
	73nm,0.7s,1μm						
CHBT	CHBT	16.07	7	P	P	17 08 06.8	+2.9
PHET	Kaeng Krachan	16.14	357	P	P	17 08 04.9	+0.3
	73μm,0.8s,652μm						
BKB	Balikpapan	16.59	83	P	P	17 08 09.7	0.0
	453nm,1.2s,6μm12μm						
PBA	Port Blair	16.72	333	eP	P	17 08 10.5	-0.6
	530nm,1.3s						
PBA	Port Blair	16.72	333	eP	Pn	17 08 09.8	+0.8
DLV	T Lat	17.15	28	eP	P	17 08 15.4	-0.6
	138nm,1.2s						
SGKI	Sangatta, Kali	17.39	81	P	P	17 08 19.2	+0.6
DGPR	DIGLIPUR	17.99	336	eP	P	17 08 26.6	+1.4
DGPR				IAmb	IAmb	17 08 29.9	
	comp=Z,93nm,0.5s						
PLAI	Plampang	18.10	108	P	Pn	17 08 22.5	-3.8
KKM	Kota Kinabalu	18.31	60	eP	Pn	17 08 29.6	+0.7
	comp=Z,367nm,1.4s						
CHAI	Chaiyaphum	19.16	5	P	Pn	17 08 39.0	0.0
	comp=Z,164μm,1.1s						
SPSI	Sidrap Palu	19.32	93	P	P	17 08 40.0	+0.2
KAPI	Kappang	19.36	96	P	P	17 08 39.5	-0.7
	comp=Z,5.6nm,0.3s,baz=220,slow=4.4,SNR=58						
KAPI				S	S	17 12 16.7	-1.0
	comp=Z,0.9nm,0.3s,baz=22,slow=19,SNR=1.8						
KAPI	Kappang	19.36	96	eP	P	17 08 40.0	-0.2
KAPI	Kappang	19.36	96	eP	P	17 08 40.0	-0.2
KAPI	Kappang	19.36	96	P	Pn	17 08 41.2	-0.3
	SNR=50						
TTSI	Tana Toraja	19.37	90	P	Pn	17 08 42.3	+0.7
	comp=Z,173nm,1.2s,comp=Z,3μm						
UMPA	Umpang Tak	19.46	356	P	Pn	17 08 42.6	0.0
	comp=Z,146μm,0.9s,comp=Z,944μm						
BNSI	Bone	19.67	94	P	Pn	17 08 45.3	+0.1
	comp=Z,204nm,1.1s,comp=Z,4μm						
BKSI	Bulukumba	19.75	96	P	Pn	17 08 45.4	-0.7
	comp=Z,300nm,1.2s,comp=Z,4μm						
WBSI	Waikabubak, Su	19.86	109	P	Pn	17 08 47.4	-0.1
	comp=Z,213nm,0.8s,comp=Z,2μm						
SKNT	Sakolnakorn	20.46	10	P	P	17 08 51.0	-1.2
	comp=Z,243nm,1.1s,comp=Z,3μm						
WSI	Waingapu	20.73	109	P	P	17 08 54.9	-0.2
PANO	Nakornpanom	20.75	11	P	P	17 08 54.3	-1.0
	comp=Z,8.2nm,0.9s,comp=Z,116nm						
BATP	Bataraza	21.10	55	eP	P	17 09 00.1	+1.0
APSI	Ampana	21.35	84	P	P	17 09 04.6	+2.8
NONG	Nongkai	21.41	7	P	P	17 09 00.8	-1.6
	comp=Z,2.0nm,0.8s,comp=Z,77nm						
PHRA	Phrae	21.68	360	P	P	17 09 05.0	-0.3
	comp=Z,40nm,1.4s,comp=Z,2μm						
CM31	Chiang Mai Arr	21.68	356	eP	P	17 09 04.3	-1.0
	comp=Z,196nm,1.0s						
CM31	Chiang Mai Arr	21.68	356	P	P	17 09 05.2	-0.2
	SNR=71						
CMAR	Chiang Mai Arr	21.68	356	P	P	17 09 04.6	-0.8
	comp=Z,43nm,0.8s,baz=185,slow=9.0,SNR=129						
CMAR				LR	LR	17 19 11.8	
	comp=Z,8μm,19.3s,baz=186,slow=41						
LAMP	Lampang	21.71	358	P	P	17 09 08.0	+2.3
	comp=Z,357μm,0.9s						
EDFI	Ende, Flores	21.82	105	P	P	17 09 05.9	-1.2
	comp=Z,38nm,0.6s,comp=Z,1μm						
CMMT	Chiang Mai	22.04	356	P	P	17 09 08.3	-0.9
	comp=Z,63nm,1.1s,comp=Z,968nm						
CHTO	Chiang Mai	22.04	356	eP	P	17 09 08.0	-1.2
	comp=Z,139nm,1.1s						
CHTO				LR	LR		
	comp=Z,9μm,19.0s						
CHTO	Chiang Mai	22.04	356	eP	P	17 09 08.0	-1.2
CHTO				pmax	pmax		
	comp=Z,139nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,9μm,19.0s						
CHTO	Chiang Mai	22.04	356	P	P	17 09 08.7	-0.4
	SNR=44						
PALK	Pallekele	22.31	298	P	P	17 09 12.2	0.0
	comp=Z,19nm,1.1s,baz=116,slow=17,SNR=2.9						
PALK				LR	LR	17 16 48.0	
	comp=Z,6μm,20.4s,baz=113,slow=33						
PALK	Pallekele	22.31	298	eP	P	17 09 13.7	+1.5
	comp=Z,141nm,1.3s						
PALK				LR	LR		
	comp=Z,6μm,20.0s						
MMRI	Maumere	22.33	105	eP	P	17 09 09.7	-2.7
	comp=Z,238nm,1.6s						
MMRI				LR	LR		
	comp=Z,1μm,18.0s						
MMRI	Maumere	22.33	105	P	P	17 09 09.3	-3.1
LUWI	Luwuk	22.45	85	eP	P	17 09 14.0	+0.3
	comp=Z,292nm,0.9s						
LUWI				LR	LR		
	comp=Z,5μm,22.0s						
LUWI	Luwuk	22.45	85	P	P	17 09 15.2	+1.5
	comp=Z,306nm,1.1s,comp=Z,4μmcomp=Z,6μm						
PAYA	Payao	22.54	359	P	P	17 09 14.5	-0.1
	comp=Z,477μm,1.0s						
GIRL	Giralia	23.42	146	eP	P	17 09 23.5	-0.1
	comp=Z,1μm,1.9s						
GIRL				LR	LR		
	comp=Z,4μm,20.0s						
ENPP	El Nido	23.78	52	eP	P	17 09 27.5	+0.3
QIZ	Qiongzhong	24.06	22	eP	P	17 09 29.9	+0.2
	comp=Z,248nm,1.3s						
QIZ	Qiongzhong	24.06	22	P	P	17 09 30.5	+0.8
QIZ				pmax	pmax		
	comp=Z,120nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,1μm,5.1s						
QIZ				LR	LR		
	comp=Z,7μm,15.1s						
QIZ				LR	LR		
	comp=Z,7μm,13.1s						
QIZ				LR	LR		
	comp=Z,8μm,14.3s						
BATI	Baumata	24.06	108	P	P	17 09 28.2	-1.6
	comp=Z,55nm,0.5s,baz=318,slow=2.6,SNR=11						
BATI				S	S	17 13 40.2	-5.5
	comp=Z,66nm,0.7s,baz=286,slow=15,SNR=7.2						
BATI	Baumata	24.06	108	P	P	17 09 28.0	-1.8
SIMRM	Sittwe	24.45	343	eP	P	17 09 35.5	+2.3
	comp=Z,179nm,1.2s						
SIMRM				LR	LR		
	comp=Z,500nm,18.0s						
SOEI	Soe	24.53	106	eP	P	17 09 31.3	-2.9
	comp=Z,260nm,1.5s						
SOEI				LR	LR		
	comp=Z,7μm,21.0s						
SOEI	Soe	24.53	106	P	P	17 09 31.4	-2.9
SLVN	Son La	24.73	8	eP	P	17 09 36.0	+0.1
	comp=Z,119nm,1.1s						
SLVN				LR	LR		
	comp=Z,8μm,20.0s						
MNI	Manado	24.86	79	P	P	17 09 38.1	+1.0
MNI				pmax	pmax		
	comp=Z,385nm,1.0s						
BUSP	Coron	24.86	52	eP	P	17 09 37.7	+0.6
CUYO	Cuyo Island	24.87	55	eP	P	17 09 37.5	+0.4
PAGZ	Pagadian	25.45	64	eP	P	17 09 43.5	+1.1
SANI	Sanana	25.57	88	P	P	17 09 42.1	-1.4
MDRS	Chennai	25.81	309	eP	P	17 09 46.6	+1.0
MDRS				IAmb	IAmb	17 09 52.0	
	comp=Z,90nm,1.3s						
MBWA	Marble Bar	25.84	135	PFAKE		17 10 00.0	+14
MBWA				LR	LR		
	comp=Z,5μm,21.0s						
SJMP	San Jose	25.86	52	eP	P	17 09 46.6	+0.5
LUBP	Lubang	25.96	49	eP	P	17 09 45.1	-1.9
CTBH	Cotabato--PC H	25.98	66	⇓iP	P	17 09 48.2	+1.0
SGSI	Sangihe	26.04	75	P	P	17 09 47.9	+0.1
PSAD1	Pilbara Seismi	26.10	135	PFAKE		17 10 00.0	+12
PSAD1				LR	LR		
	comp=Z,8μm,21.0s						
PSAC1	Pilbara Seismi	26.14	135	PFAKE		17 10 00.0	+11
PSAC1				LR	LR		
	comp=Z,8μm,21.0s						
PSAB1	Pilbara Seismi	26.17	135	PFAKE		17 10 00.0	+11
PSAB1				LR	LR		
	comp=Z,8μm,21.0s						
PSAA2	Pilbara Seismi	26.18	135	PFAKE		17 10 00.0	+11

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PSAA2                                   LR      LR
       comp=Z,7µm,21.0s
PSAA1  Pilbara Seismi     26.18 135     PFAKE           17 10 00.0  +11
PSAA1                                   LR      LR
       comp=Z,8µm,21.0s
PSAB2  Pilbara Seismi     26.19 135     PFAKE           17 10 00.0  +11
PSAB2                                   LR      LR
       comp=Z,8µm,21.0s
PSA00  Pilbara Seismi     26.19 135   eP        P       17 09 49.7 +0.6
       comp=Z,134nm,1.7s
PSA00                                   LR      LR
       comp=Z,7µm,21.0s
PSAD3  Pilbara Seismi     26.19 136     PFAKE           17 10 00.0  +11
PSAD3                                   LR      LR
       comp=Z,8µm,20.0s
PSAA3  Pilbara Seismi     26.20 135     PFAKE           17 10 00.0  +11
PSAA3                                   LR      LR
       comp=Z,8µm,21.0s
PSAB3  Pilbara Seismi     26.21 135     PFAKE           17 10 00.0  +11
PSAB3                                   LR      LR
       comp=Z,8µm,21.0s
PSAC3  Pilbara Seismi     26.21 136     PFAKE           17 10 00.0  +11
PSAC3                                   LR      LR
       comp=Z,7µm,20.0s
PSAC2  Pilbara Seismi     26.22 135     PFAKE           17 10 00.0  +11
PSAC2                                   LR      LR
       comp=Z,7µm,20.0s
PSAD2  Pilbara Seismi     26.30 135     PFAKE           17 10 00.0  +10
PSAD2                                   LR      LR
       comp=Z,9µm,22.0s
PGP    Puerto Galera      26.35  50⥣eP      P       17 09 50.6  0.0
OTRP   Odiongan           26.52  54   eP        P       17 09 52.8 +0.7
NLAI   Namlea             26.64  91     P       P       17 09 55.3 +2.1
       comp=Z,46nm,0.7s,comp=Z,3µm
RCP    Roxas              26.67  56⥣eP      P       17 09 54.9 +1.4
KCP    Kidapawan          26.68  67⥣eP      P       17 09 53.9 +0.3
TGY    Tagaytay City      26.71  49     P       P       17 09 55.1 +1.3
       comp=Z,777nm,1.0s,baz=277,slow=3.1,SNR=29
TGY                                     LR      LR      17 23 04.0
       comp=Z,5µm,18.2s,baz=212,slow=42
DDMP   Don Marcelino,     26.93  70   eP        P       17 09 55.1 -0.8
DAV    Davao City (W)     27.15  68     P       P       17 09 58.1 +0.3
       comp=Z,106nm,0.4s,baz=200,slow=1.9,SNR=6.7
DAV    Davao City (W)     27.15  68   eP        P       17 09 59.5 +1.7
       comp=Z,468nm,1.4s
DAV    Davao City (W)     27.15  68⥣iP      P       17 09 57.9 +0.1
LBMI   Labuha             27.19  85     P       P       17 09 58.0 -0.2
BRDH   Bariadhala         27.22 342     P       P       17 09 58.8 +0.6
       comp=Z,105nm,0.3s,baz=111,slow=7.9,SNR=4.6
BRDH                                    LR      LR      17 24 31.3
       comp=Z,7µm,19.5s,baz=156,slow=44
TNTI   Ternate            27.24  82   eP        P       17 09 56.6 -2.0
       comp=Z,113nm,1.3s
TNTI   Ternate            27.24  82     P       P       17 09 57.1 -1.5
BWNR   Bhubaneshwar       27.50 329   eP        P       17 10 00.7 -0.1
BWNR                                    IAmb    IAmb    17 10 05.3
       comp=Z,99nm,0.8s
KAAM   Kaadhehdhoo        27.67 277   eP        P       17 10 01.1 -1.4
       comp=Z,611nm,1.7s
BELO   BELONIA            27.81 342   eP        P       17 10 05.3 +1.7
SMPP   San Manuel, Pa     27.85  45   eP        P       17 10 02.5 -1.5
H08S2  Diego Garcia H     28.12 260     T       T       17 39 21.3
       baz=82,slow=74,SNR=5985
H08S3  Diego Garcia H     28.13 260     T       T       17 39 21.2
       baz=82,slow=74
H08S1  Diego Carcia H     28.14 260     T       T       17 39 21.2
       baz=82,slow=74
BALP   Baler              28.23  47   eP        P       17 10 06.9 -0.5
KMI    Kunming            28.36   4   eP        P       17 10 09.5 +0.8
       comp=Z,108nm,1.0s
KMI                                     LR      LR
       comp=Z,7µm,20.0s
KMI    Kunming            28.36   4     P       P       17 10 10.2 +1.5
KMI                                     pP      pP      17 10 12.5 -4.8
KMI                                     sP      sP      17 10 14.4 -6.4
KMI                                     PP      PP      17 11 06.2 -6.9
KMI                                     S       S       17 14 57.1 +3.2
KMI                                     pmax    pmax
       comp=Z,110nm,1.2s
KMI                                     LR      LR
       comp=Z,7µm,15.8s
KMI                                     LR      LR
       comp=Z,5µm,12.5s
KMI                                     LR      LR
       comp=Z,8µm,14.0s
KMI    Kunming            28.36   4   eP        P       17 10 09.5 +0.8
KMI                                     pmax    pmax
       comp=Z,109nm,1.0s
KMI                                     MLR     MLR
       comp=Z,7µm,20.0s
HKPS   Hong Kong Po S     28.76  27   eP        P       17 10 13.3 +1.3
       comp=Z,150nm,1.3s
HKPS                                    LR      LR
       comp=Z,10µm,18.0s
ABRA   Dolores            28.89  43   eP        P       17 10 12.2 -1.0
MEEK   Meekatharra        29.01 145     P       P       17 10 16.0 +1.7
       baz=29,SNR=8.4
APYP   Conner             29.40  44   eP        P       17 10 16.6 -1.2
KOHI   KOHIMA             29.50 348   eP        P       17 10 18.0 -0.8
MORW   Morawa             29.61 151   eP        P       17 10 18.5 -1.0
       comp=Z,46nm,1.4s
MORW                                    LR      LR
       comp=Z,4µm,19.0s
HYB    Hyderabad          29.83 314   i P       P       17 10 22.0 +0.3
HYB                                   eS        S       17 15 20.0 +3.1
SHL    Shillong           29.88 344   eP        P       17 10 22.7 +0.5
       comp=Z,178nm,1.1s
SHL                                     LR      LR
       comp=Z,3µm,21.0s
SHL    Shillong           29.88 344   eP        P       17 10 22.7 +0.5
SHL                                     pmax    pmax
       comp=Z,178nm,1.1s
SHL                                     MLR     MLR
       comp=Z,3µm,21.0s
SHL    Shillong           29.88 344   eP        P       17 10 22.5 +0.4
SHL                                     IAmb    IAmb    17 10 24.5
       comp=Z,88nm,0.9s
GYA    Guiyang            30.21  11⥣iP      P       17 10 25.6 +0.6
GYA                                     PP      PnPn    17 11 20.2 -3.0
GYA                                     PcP     PcP     17 13 26.9 +1.2
GYA                                     S       S       17 15 23.6 +0.8
GYA                                     pmax    pmax
       comp=Z,70nm,1.1s
GYA                                     pmax    pmax
       comp=Z,380nm,6.6s
GYA                                     LR      LR
       comp=Z,7µm,16.1s
GYA                                     LR      LR
       comp=Z,8µm,15.1s
GYA                                     LR      LR
       comp=Z,10µm,15.4s
BOK    Bokaro             30.44 333   eP        P       17 10 27.9 +0.9
BOK                                     IAmb    IAmb    17 10 36.1
       comp=Z,193nm,1.0s
JORH   JORHAT             30.47 349   eP        P       17 10 27.7 +0.5
KNRA   Kununurra          30.48 116     P       P       17 10 27.0 -0.4
       baz=30,SNR=7.5
SWI    Sorong             30.91  86     P       P       17 10 32.6 +1.3
SWI                                     pmax    pmax
       comp=Z,76nm,1.4s
SWI    Sorong             30.91  86     P       P       17 10 32.6 +1.3
       comp=Z,77nm,1.4s,comp=Z,1µm
ZIRO   ZIRO               31.31 349   eP        P       17 10 35.2 +0.5
FAKI   Fak Fak            31.79  90   eP        P       17 10 36.4 -2.5
       comp=Z,68nm,1.2s
FAKI                                    LR      LR
       comp=Z,2µm,20.0s
MTN    Manton Dam         31.81 109   eP        P       17 10 37.2 -1.9
       comp=Z,108nm,1.4s
MTN                                     LR      LR
       comp=Z,3µm,21.0s
MTN    Manton Dam         31.81 109     P       P       17 10 37.9 -1.2
       baz=32,SNR=6.5
TAWA   Tawang             31.82 346   eP        P       17 10 39.8 +0.3
NGP    Nagpur             32.09 320   eP        P       17 10 41.8 +0.2
NGP                                     IAmb    IAmb    17 10 42.5
       comp=Z,642nm,3.4s
GOA    Goa                32.28 306     IAMs_20 IAMs_20 17 24 52.5
       comp=Z,7µm,15.2s
GTK    Tadong             32.52 340   eP        P       17 10 45.9 +0.5
KNMB   Chin-men Tao       32.68  31   eP        P       17 10 47.1 +0.5
       comp=Z,86nm,0.9s
KNMB                                    LR      LR
       comp=Z,6µm,19.0s
TWG    Pinlang            32.88  37   eP        P       17 10 49.0 +0.6
       comp=Z,488nm,1.6s
TWG                                     LR      LR
       comp=Z,9µm,21.0s
TPUB   Ta-pu              32.99  36   eP        P       17 10 49.5 +0.1
       comp=Z,76nm,0.9s
TPUB                                    LR      LR
       comp=Z,2µm,22.0s
JBP    Jabalpur           33.02 324⥣eP      P       17 10 50.5 +0.9
JBP                                   ex        x       17 16 07.3
KDU    Kakadu             33.04 108     P       P       17 10 48.5 -1.5
       baz=33,SNR=6.4
QZH    Quanzhou           33.17  31⥣iP      P       17 10 48.5 -2.4
QZH                                     PP      PnPn    17 12 01.2 -0.3
QZH                                     S       S       17 16 17.2 +8.3
QZH                                     pmax    pmax
       comp=Z,54nm,1.3s
QZH                                     pmax    pmax
       comp=Z,680nm,4.7s
QZH                                     LR      LR
       comp=Z,6µm,14.2s
QZH                                     LR      LR
       comp=Z,3µm,13.3s
QZH                                     LR      LR
       comp=Z,6µm,19.9s
NWAO   Narrogin (SRO)     33.40 154     P       P       17 10 52.6 -0.3
       comp=Z,10nm,1.0s,baz=291,slow=8.6,SNR=2.9
NWAO   Narrogin (SRO)     33.40 154   eP        P       17 10 51.4 -1.5
       comp=Z,59nm,1.1s
NWAO                                    LR      LR
       comp=Z,7µm,20.0s
YULB   Yu-li              33.45  36   eP        P       17 10 53.0 -0.4
       comp=Z,45nm,1.2s
YULB                                    LR      LR
       comp=Z,1µm,18.0s
SSLB   Suanglung          33.55  36   eP        P       17 10 54.9 +0.5
       comp=Z,49nm,1.2s
SSLB                                    LR      LR
       comp=Z,2µm,21.0s
JIRN   Jiri               33.71 337   eP        P       17 10 57.7 +1.6
       comp=Z,439nm,0.9s
H01W3  Cape Leeuwin H     33.90 160     T       T       17 46 32.6
       baz=336,slow=76,SNR=424
H01W2  Cape Leeuwin H     33.91 160     T       T       17 46 35.0
       baz=336,slow=76,SNR=401
H01W1  Cape Leeuwin H     33.91 160     T       T       17 46 37.3
       baz=336,slow=76,SNR=322
PKI    Pulchoki           33.95 336   eP        P       17 10 59.2 +1.1
       comp=Z,116nm,1.0s
PKIN   Phulchoki          33.96 336   eP        P       17 10 59.2 +1.1
       comp=Z,56nm,0.9s
POO    Poona              34.00 311   eP        P       17 11 00.8 +2.5
POO                                     IAmb    IAmb    17 11 17.9
       comp=Z,53nm,1.1s
LSA    Lhasa              34.01 345   eP        P       17 11 00.3 +1.6
       comp=Z,162nm,1.1s
LSA                                   eS        S       17 16 23.5 +0.9
LSA                                     LR      LR
       comp=Z,2µm,21.0s
LSA    Lhasa              34.01 345     P       P       17 11 00.5 +1.8
LSA                                     S       S       17 16 23.6 +0.9
LSA                                     pmax    pmax
       comp=Z,550nm,1.0s
LSA                                     LR      LR
       comp=Z,11µm,15.7s
LSA                                     LR      LR
       comp=Z,5µm,19.9s
LSA                                     LR      LR
       comp=Z,12µm,17.1s
LSA    Lhasa              34.01 345     P       P       17 11 00.2 +1.6
LSA    Lhasa              34.01 345   eP        P       17 11 00.3 +1.6
LSA                                   eS        S       17 16 23.5 +0.9
LSA                                     pmax    pmax
       comp=Z,162nm,1.1s
LSA                                     MLR     MLR
       comp=Z,2µm,21.0s
GUN    Gumba              34.06 337   eP        P       17 11 00.7 +1.7
       comp=Z,543nm,0.8s
DMN    Daman              34.10 335   eP        P       17 11 00.7 +1.4
       comp=Z,156nm,0.8s
CD2    Chengdu            34.18   5 ⥣P      P       17 10 59.6 -0.1
CD2                                     PP      PP      17 12 17.5  0.0
CD2                                     S       S       17 16 22.6 -1.9
CD2                                     pmax    pmax
       comp=Z,150nm,0.9s
CD2                                     pmax    pmax
       comp=Z,600nm,7.3s
CD2                                     LR      LR
       comp=Z,8µm,17.1s
CD2                                     LR      LR
       comp=Z,11µm,13.9s
CD2                                     LR      LR
       comp=Z,10µm,18.0s
KKN    Kakani             34.19 336   eP        P       17 11 01.4 +1.3
       comp=Z,238nm,0.9s
NACB   Ninganchiao        34.22  36   eP        P       17 11 01.0 +0.9
       comp=Z,65nm,1.0s
NACB                                    LR      LR
       comp=Z,3µm,21.0s
WRKA   Warakurna          34.44 131     P       P       17 11 03.3 +1.2
       baz=34,SNR=21
KMBL   Kambalda           34.46 146     P       P       17 11 04.0 +1.9
       baz=35,SNR=5.4
YHNB   Yeheng             34.48  35   eP        P       17 11 03.1 +0.8
       comp=Z,46nm,0.9s
YHNB                                    LR      LR
       comp=Z,2µm,21.0s
ENH    Enshi              34.50  14   eP        P       17 11 01.9 -0.7
       comp=Z,234nm,1.0s
ENH                                     LR      LR
       comp=Z,4µm,20.0s
BHPL   Bhopal             34.63 321   eP        P       17 11 04.7 +0.9
GKN    Gorkha             34.65 335   eP        P       17 11 05.4 +1.5
TATO   Taipei             34.78  35   eP        P       17 11 05.1 +0.2
       comp=Z,80nm,1.3s
TATO                                    LR      LR
       comp=Z,2µm,19.0s
KOLN   Koldanda           34.90 333   eP        P       17 11 07.7 +1.6
       comp=Z,405nm,1.0s
YOJ    Yonaguni jima      35.28  37   eP        P       17 11 09.1 -0.2
       comp=Z,38nm,0.7s
YOJ                                     LR      LR
       comp=Z,3µm,18.0s
YOJ    Yonaguni jima      35.28  37   eP        P       17 11 09.1 -0.2
YOJ                                     pmax    pmax
       comp=Z,38nm,0.7s
YOJ                                     MLR     MLR
       comp=Z,3µm,18.0s
DANN   Dangsing           35.33 334   eP        P       17 11 11.4 +1.5
       comp=Z,442nm,0.9s
PYUN   Piuthan            35.45 333   eP        P       17 11 12.4 +1.4
       comp=Z,662nm,1.2s
PALU   Palau              35.60  73     P       P       17 11 10.5 -1.7
       baz=36,SNR=8.4
WHN    Wuhan              36.20  21⥣iP      P       17 11 17.6 +0.6
WHN                                     S       S       17 16 57.5 +2.0
WHN                                     pmax    pmax
       comp=Z,190nm,1.0s
WHN                                     pmax    pmax
       comp=Z,1µm,4.4s
WHN                                     LR      LR
       comp=Z,27µm,15.5s
WHN                                     LR      LR
       comp=Z,6µm,11.2s
WHN                                     LR      LR
       comp=Z,33µm,14.8s
WC1    Warramunga Arr     36.97 119     PFAKE           17 11 40.0  +16
WC1                                     LR      LR
       comp=Z,4µm,21.0s
WRA    Warramunga Arr     36.98 119     P       P       17 11 23.9  0.0
       comp=Z,20nm,0.5s,baz=303,slow=8.7,SNR=68
WRA                                     S       S       17 17 05.6 -2.1
       comp=Z,13nm,0.8s,baz=288,slow=19,SNR=6.2
WRAB   Tennant Creek      36.99 119   eP        P       17 11 23.7 -0.3
       comp=Z,52nm,1.0s
WRAB                                  eS        S       17 17 06.3 -1.5
WRAB                                    LR      LR
       comp=Z,5µm,22.0s
WRAB   Tennant Creek      36.99 119c iP      P       17 11 23.1 -0.9
WB2    Warramunga Arr     36.99 119   eP        P       17 11 23.6 -0.4
       comp=Z,91nm,1.3s
WB2                                     LR      LR
       comp=Z,5µm,22.0s
WC3    Warramunga Arr     37.02 119     PFAKE           17 11 40.0  +16
WC3                                     LR      LR
       comp=Z,4µm,21.0s
FORT   Forrest            37.77 139   eP        P       17 11 31.1 +0.6
       comp=Z,293nm,1.9s
FORT                                    LR      LR
       comp=Z,6µm,22.0s
XAN    Xi'an              38.01  12   eP        P       17 11 32.1 -0.3
       comp=Z,344nm,0.9s
XAN                                     LR      LR
       comp=Z,6µm,19.0s
XAN    Xi'an              38.01  12     P       P       17 11 32.3 -0.1
XAN                                     S       S       17 17 19.8 -3.2
XAN                                     pmax    pmax
       comp=Z,58nm,0.7s
XAN                                     pmax    pmax
       comp=Z,1µm,6.4s
XAN                                     LR      LR
       comp=Z,5µm,14.1s
XAN                                     LR      LR
       comp=Z,8µm,15.2s
XAN                                     LR      LR
       comp=Z,10µm,13.0s
XAN    Xi'an              38.01  12   eP        P       17 11 32.1 -0.3
XAN                                     pmax    pmax
       comp=Z,344nm,0.9s
XAN                                     MLR     MLR
       comp=Z,6µm,19.0s
ASAR   Alice Springs      38.15 125     P       P       17 11 34.2 +0.4
       comp=Z,39nm,0.8s,baz=300,slow=7.8,SNR=205
ASAR                                    S       S       17 17 22.6 -2.9
       comp=Z,1.8nm,1.0s,baz=307,slow=13,SNR=3.9
ASAR                                    LR      LR      17 29 01.1
       comp=Z,4µm,21.7s,baz=299,slow=39
AS31   Alice Springs      38.15 125   eP        P       17 11 34.2 +0.4
       comp=Z,16nm,0.6s
AS31                                  eS        S       17 17 24.2 -1.4
NJ2    Nanjing            39.29  25⥣iP      P       17 11 44.2 +1.0
NJ2                                     pP      pP      17 11 46.5 -5.4
NJ2                                     PP      PnPn    17 13 18.6 +2.1
NJ2                                     S       S       17 17 52.7  +10
NJ2                                     sS      sS      17 17 57.8 +1.5
NJ2                                     pmax    pmax
       comp=Z,34nm,0.9s
NJ2                                     pmax    pmax
       comp=Z,760nm,9.5s
NJ2                                     LR      LR
       comp=Z,10µm,14.7s
NJ2                                     LR      LR
       comp=Z,5µm,13.7s
NJ2                                     LR      LR
       comp=Z,11µm,17.0s
LZH    Lanzhou            39.33   4 ⥣P      P       17 11 44.6 +1.0
LZH                                     pP      pP      17 11 49.2 -3.1
LZH                                     sP      sP      17 11 52.3 -3.6
LZH                                     S       S       17 17 44.1 +1.0
LZH                                     sS      pS      17 17 54.4 +1.6
LZH                                     pmax    pmax
       comp=Z,170nm,1.5s
LZH                                     pmax    pmax
       comp=Z,410nm,4.9s
LZH                                     LR      LR
       comp=Z,4µm,15.0s
LZH                                     LR      LR
       comp=Z,7µm,15.7s
LZH                                     LR      LR
       comp=Z,8µm,16.1s
SSE    Sheshan            39.53  29   eP        P       17 11 45.7 +0.5
       comp=Z,76nm,0.9s
SSE                                     LR      LR
       comp=Z,4µm,19.0s
SSE    Sheshan            39.53  29     P       P       17 11 46.8 +1.6
SSE                                     S       S       17 17 50.5 +4.6
SSE                                     pmax    pmax
       comp=Z,40nm,0.8s
SSE                                     LR      LR
       comp=Z,4µm,14.8s
SSE                                     LR      LR
       comp=Z,2µm,13.3s
DDI    Dehra Dun          39.69 329   eP        P       17 11 47.5 +0.8
DDI                                     IAmb    IAmb    17 11 56.2
       comp=Z,174nm,0.9s
GENI   Genyem             39.70  90     P       P       17 11 45.2 -1.7
       comp=Z,98nm,1.3s
JAY    Jayapura           40.24  90     P       P       17 11 50.0 -1.4
JAY                                     pmax    pmax
       comp=Z,19nm,1.3s
JAY    Jayapura           40.24  90     P       P       17 11 49.0 -2.4
JOW    Kunigami           40.28  40   eP        P       17 11 52.2 +0.7
       comp=Z,34nm,1.0s
JOW                                     LR      LR
       comp=Z,1µm,20.0s
SMLA   Simla              40.80 329   eP        P       17 11 55.8 +0.2
QIS    Mount Isa          41.83 117     P       P       17 12 04.3 -0.1
       baz=42,SNR=16
DHRM   DHARAMSHALA        42.13 329   eP        P       17 12 07.0 +0.1
DHRM                                    IAmb    IAmb    17 12 07.8
       comp=Z,331nm,1.9s
DHRM                                    IAMs_20 IAMs_20 17 31 04.5
       comp=Z,6µm,24.5s
TIA    Tai'an             42.31  20     P       P       17 12 08.0  0.0
TIA                                     pmax    pmax
       comp=Z,39nm,0.9s
TIY    Taiyuan            42.32  14   eP        P       17 12 09.4 +1.3
TIY                                     PP      PP      17 13 48.7 +2.1
TIY                                     S       S       17 18 28.4 +1.0
TIY                                     pmax    pmax
       comp=Z,120nm,0.7s
TIY                                     pmax    pmax
       comp=Z,780nm,3.6s
TIY                                     LR      LR
       comp=Z,7µm,14.4s
TIY                                     LR      LR
       comp=Z,4µm,13.0s
TIY                                     LR      LR
       comp=Z,7µm,14.5s
GTA    Gaotai             42.52 359     P       P       17 12 10.6 +0.8
GTA                                     pP      pP      17 12 15.0 -3.6
GTA                                     sP      sP      17 12 18.0 -4.1
GTA                                     S       S       17 18 27.7 -2.7
GTA                                     pmax    pmax
       comp=Z,75nm,1.2s
GTA                                     pmax    pmax
       comp=Z,750nm,6.9s
GTA                                     LR      LR
       comp=Z,4µm,15.1s
GTA                                     LR      LR
       comp=Z,6µm,16.5s
GTA                                     LR      LR
       comp=Z,5µm,15.1s
COEN   Coen               43.49 107   eP        P       17 12 17.4 -0.6
       comp=Z,89nm,1.6s
COEN                                    LR      LR
       comp=Z,4µm,20.0s
BBOO   Buckleboo          44.42 135   eP        P       17 12 26.0 +0.8
       comp=Z,93nm,1.7s
BBOO                                    LR      LR
       comp=Z,7µm,21.0s
BTO    Baotou             44.58  10     P       P       17 12 28.0 +1.6
NIL    Nilore             44.83 327   eP        P       17 12 28.5 +0.1
       comp=Z,81nm,0.8s
NIL                                     LR      LR
       comp=Z,999nm,22.0s
NIL    Nilore             44.83 327   eP        P       17 12 28.5 +0.1
NIL                                     pmax    pmax
       comp=Z,81nm,0.8s
NIL                                     MLR     MLR
       comp=Z,999nm,22.0s
MSEY   Mahe Island        44.84 267     PFAKE           17 12 40.0  +11
MSEY                                    LR      LR
       comp=Z,2µm,19.0s
MRIV   Mauritius Mete     45.09 245   eP        P       17 12 31.1 +0.5
       comp=Z,27nm,1.3s
HHC    Hu-ho-hao-te       45.12  12     P       P       17 12 32.7 +2.0
HHC                                     pP      pP      17 12 39.9 +0.4
HHC                                     S       S       17 19 10.6 +2.3
HHC                                     sS      sS      17 19 26.3 +3.6
HHC                                     pmax    pmax
       comp=Z,270nm,1.1s
HHC                                     pmax    pmax
       comp=Z,1µm,4.8s
HHC                                     LR      LR
       comp=Z,6µm,15.3s
HHC                                     LR      LR
       comp=Z,5µm,13.7s
HHC                                     LR      LR
       comp=Z,6µm,13.1s
MTSU   Mount Surprise     45.42 112     P       P       17 12 34.0 +0.7
       baz=45,SNR=36
BJT    Baijiatuau         45.48  17   eP        P       17 12 34.6 +1.2
       comp=Z,139nm,1.1s
BJT                                     LR      LR
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	comp=Z,10µm,18.0s						
BJT	**Baijiatuau**	**45.48**	**17**	*e*P	**P**	**17 12 34.6**	**+1.2**
BJT				pmax	pmax		
	comp=Z,139nm,1.1s						
BJT				MLR	MLR		
	comp=Z,10µm,18.0s						
JNU	**Nakatsue**	**46.30**	**36**	*e*P	**P**	**17 12 40.2**	**+0.2**
	comp=Z,374nm,1.1s						
DL2	**Dalian**	**46.35**	**23**	P	P	17 12 35.0	-5.3
DL2				sP	pP	17 12 49.8	+0.7
DL2				PP	**PP**	**17 14 25.1**	**-4.4**
DL2				S	**S**	**17 19 18.0**	**-7.8**
DL2				sS	pS	17 19 34.1	-1.8
DL2				pmax	pmax		
	comp=Z,80nm,1.2s						
DL2				pmax	pmax		
	comp=Z,820nm,4.2s						
DL2				LR	LR		
	comp=N,6µm,15.0s						
DL2				LR	LR		
	comp=E,3µm,14.7s						
DL2				LR	LR		
	comp=Z,9µm,15.2s						
HTT	**Hallett**	**46.78**	**134**	P	**P**	**17 12 44.8**	**+0.9**
	baz=47,SNR=8.6						
PMG	**Port Moresby**	**46.81**	**100**	*e*P	**P**	**17 12 44.2**	**-0.1**
	comp=Z,48nm,0.9s						
PMG				LR	LR		
	comp=Z,2µm,21.0s						
PMG	**Port Moresby**	**46.81**	**100**	*e*P	**P**	**17 12 44.2**	**-0.1**
PMG				pmax	pmax		
	comp=Z,49nm,0.9s						
PMG				MLR	MLR		
	comp=Z,2µm,21.0s						
TJN	**Taejon**	**46.82**	**30*c***	*i*P	**P**	**17 12 44.2**	**+0.2**
RER	**Riviere de l'E**	**46.90**	**244**	*e*P	**P**	**17 12 46.0**	**+1.0**
	comp=Z,60nm,1.0s						
GUMO	**Guam**	**47.19**	**68**	*e*P	**P**	**17 12 45.0**	**-2.2**
	comp=Z,245nm,1.3s						
GUMO	**Guam**	**47.19**	**68**	*e*P	**P**	**17 12 45.0**	**-2.2**
GUMO				pmax	pmax		
	comp=Z,245nm,1.3s						
CTAO	**Charters Tower**	**47.67**	**114**	*e*P	**P**	**17 12 51.5**	**+0.5**
	comp=Z,72nm,1.3s						
CTAO				LR	LR		
	comp=Z,2µm,20.0s						
CTAO	**Charters Tower**	**47.67**	**114**	*e*P	**P**	**17 12 51.5**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,72nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,2µm,20.0s						
KBL	**Kabul**	**47.84**	**325**	*e*P	**P**	**17 12 51.7**	**-0.6**
	comp=Z,31nm,1.0s						
KBL				LR	LR		
	comp=Z,2µm,21.0s						
KBL	**Kabul**	**47.84**	**325**	*e*P	**P**	**17 12 51.7**	**-0.6**
KBL				pmax	pmax		
	comp=Z,31nm,1.0s						
KBL				MLR	MLR		
	comp=Z,2µm,21.0s						
KS15	**Wonju Array Si**	**47.91**	**30**	*e*P	**P**	**17 12 53.1**	**+0.6**
	comp=Z,178nm,1.2s						
KSRS	**Korea Array**	**47.94**	**30**	P	**P**	**17 12 53.2**	**+0.5**
	comp=Z,127nm,1.1s,baz=221,slow=8.0,SNR=158						
KSRS				LR	LR	17 36 01.8	
	comp=Z,2µm,18.0s,baz=244,slow=40						
STKA	**Stephens Creek**	**47.97**	**131**	P	**P**	**17 12 54.3**	**+1.2**
	comp=Z,15nm,0.8s,baz=308,slow=8.8,SNR=24						
STKA				LR	LR	17 34 39.3	
	comp=Z,3µm,21.9s,baz=300,slow=38						
STKA	**Stephens Creek**	**47.97**	**131**	*e*P	**P**	**17 12 53.9**	**+0.8**
	comp=Z,8.3nm,0.8s						
STKA				LR	LR		
	comp=Z,800nm,21.0s						
STKA	**Stephens Creek**	**47.97**	**131**	P	**P**	**17 12 54.2**	**+1.1**
	baz=48,SNR=20						
STKA	**Stephens Creek**	**47.97**	**131**	*e*P	**P**	**17 12 53.9**	**+0.8**
STKA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
STKA				MLR	MLR		
	comp=Z,800nm,21.0s						
KSH	**Kashi**	**48.19**	**335**	P	**P**	**17 12 54.4**	**-0.4**
KSH				pP	pP	17 13 04.3	+0.6
KSH				sP	sP	17 13 08.5	+1.3
KSH				PcP	**PcP**	**17 14 21.4**	**-0.5**
KSH				PP	**PP**	**17 14 46.7**	**-0.7**
KSH				PcS	**PcS**	**17 18 12.6**	**-5.2**
KSH				S	**S**	**17 19 46.9**	**-5.5**
KSH				ScS	**ScS**	**17 22 39.1**	**-7.0**
KSH				pmax	pmax		
	comp=Z,76nm,1.1s						
KSH				pmax	pmax		
	comp=Z,640nm,4.4s						
KSH				LR	LR		
	comp=Z,770nm,14.9s						
KSH				LR	LR		
	comp=Z,5µm,22.1s						
KSH				LR	LR		
	comp=Z,2µm,21.2s						
WMQ	**Urumqi**	**48.30**	**348**	PFAKE		17 13 10.0	+15
WMQ				LR	LR		
	comp=Z,2µm,21.0s						
WMQ	**Urumqi**	**48.30**	**348**	*e*P	**P**	**17 12 58.0**	**+2.5**
WMQ				sP	pP	17 13 04.9	+0.5
WMQ				PP	**PP**	**17 14 47.1**	**-1.1**
WMQ				S	**S**	**17 19 55.6**	**+2.0**
WMQ				ScS	**ScS**	**17 22 47.6**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,130nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.3s						
WMQ				LR	LR		
	comp=Z,1µm,19.7s						
WMQ				LR	LR		
	comp=Z,1µm,22.7s						
WMQ				LR	LR		
	comp=Z,2µm,26.9s						
WSAR	**Wadi Sarin**	**48.53**	**305**	LR	LR	17 31 51.6	
	comp=Z,3µm,20.1s,baz=134,slow=34						
BIDO	**Bidbid**	**49.08**	**305**	P	P	17 13 12.0	+10
	SNR=6.1						
SNY	**Shenyang**	**49.62**	**23**	⇑P	**P**	**17 13 05.3**	**-0.2**
SNY				pP	**pP**	**17 13 14.6**	**+0.2**
SNY				PP	**PP**	**17 15 02.2**	**+2.0**
SNY				S	**S**	**17 20 11.5**	**-0.6**
SNY				pmax	pmax		
	comp=Z,66nm,1.2s						
SNY				pmax	pmax		
	comp=Z,630nm,9.6s						
SNY				LR	LR		
	comp=Z,4µm,15.7s						
SNY				LR	LR		
	comp=Z,4µm,16.1s						
SNY				LR	LR		
	comp=Z,8µm,13.5s						
PRZ	**Przheval'sk**	**49.76**	**339**	*e*P	**P**	**17 13 09.0**	**+2.1**
	comp=Z,317nm,1.2s						
PRZ				LR	LR		
	comp=Z,2µm,20.0s						
PRZ	**Przheval'sk**	**49.76**	**339**	*e*P	**P**	**17 13 09.0**	**+2.1**
PRZ				pmax	pmax		
	comp=Z,317nm,1.2s						
PRZ				MLR	MLR		
	comp=Z,2µm,20.0s						
KDJ	**Kajisay**	**49.91**	**337**	*e*P	**P**	**17 13 09.4**	**+1.4**
	comp=Z,229nm,1.0s						
KDJ				LR	LR		
	comp=Z,2µm,19.0s						
KDJ	**Kajisay**	**49.91**	**337**	*e*P	**P**	**17 13 09.4**	**+1.4**
KDJ				pmax	pmax		
	comp=Z,229nm,1.0s						
KDJ				MLR	MLR		
	comp=Z,2µm,19.0s						
PDGK	**Podgornoye**	**50.12**	**340**	P	**P**	**17 13 11.0**	**+1.5**
PDGK				pmax	pmax		
	comp=Z,224nm,1.1s						
UZB	**Uzynbulak**	**50.12**	**340*c***	*i*P	**P**	**17 13 10.9**	**+1.4**
UZB				*e*		17 15 07.1	
UZB				*i* S	**S**	**17 20 21.5**	**+2.1**
UZB				pmax	pmax		
	comp=Z,282nm,3.1s						
UZB				smax	smax		
	comp=E,73nm,2.0s						
UZB	**Uzynbulak**	**50.12**	**340⇑**	*i*P	**P**	**17 13 10.9**	**+1.4**
	comp=E,282nm,3.1s						
UZB				*e*PP	**PP**	**17 15 07.2**	**+2.2**
UZB				*i* S	**S**	**17 20 21.5**	**+2.1**
	comp=E,73nm,2.0s						
SATY	**Saty**	**50.26**	**339*c***	*i*P	**P**	**17 13 11.8**	**+1.2**
SATY				*i* S	**S**	**17 20 23.8**	**+2.5**
SATY				pmax	pmax		
	comp=Z,488nm,2.9s						
SATY				smax	smax		
	comp=E,269nm,2.6s						
SATY	**Saty**	**50.26**	**339⇑**	*i*P	**P**	**17 13 11.8**	**+1.2**
	comp=E,488nm,2.9s						
SATY				*i* S	**S**	**17 20 23.8**	**+2.5**
	comp=E,269nm,2.6s						
ULHL	**Ulahol**	**50.37**	**337**	P	**P**	**17 13 13.5**	**+2.0**
	SNR=15						
GAR	**Garm**	**50.43**	**330**	*e*P	**P**	**17 13 11.4**	**-0.5**
	comp=E,215nm,1.4s						
GAR				LR	LR		
	comp=Z,4µm,21.0s						
GAR	**Garm**	**50.43**	**330**	*e*P	**P**	**17 13 11.4**	**-0.5**
GAR				pmax	pmax		
	comp=Z,215nm,1.4s						
GAR				MLR	MLR		
	comp=Z,4µm,21.0s						
KPKS	**Kokpek**	**50.52**	**340*c***	*i*P	**P**	**17 13 13.5**	**+1.1**
KPKS				*e*		17 15 11.3	
KPKS				*i* S	**S**	**17 20 26.7**	**+1.9**
KPKS				pmax	pmax		
	comp=Z,343nm,3.1s						
KPKS				smax	smax		
	comp=E,125nm,2.3s						
KPKS	**Kokpek**	**50.52**	**340⇑**	*i*P	**P**	**17 13 13.6**	**+1.1**
	comp=E,343nm,3.1s						
KPKS				*e*PP	**PP**	**17 15 11.4**	**+2.9**
KPKS				*i* S	**S**	**17 20 26.7**	**+1.9**
	comp=E,125nm,2.3s						
KZA	**Kyzart**	**50.63**	**336**	P	**P**	**17 13 15.2**	**+1.4**
	SNR=42						
BOOM	**Boomskoye usch**	**50.70**	**337**	*e*P	**P**	**17 13 14.8**	**+0.9**
	comp=E,129nm,1.2s						
BOOM				LR	LR		
	comp=Z,3µm,20.0s						
BOOM	**Boomskoye usch**	**50.70**	**337**	*e*P	**P**	**17 13 14.9**	**+0.9**
BOOM				pmax	pmax		
	comp=Z,129nm,1.2s						
BOOM				MLR	MLR		
	comp=Z,3µm,20.0s						
CHGR	**Chuyangaron**	**50.77**	**328**	*e*P	**P**	**17 13 18.3**	**+3.8**
	comp=Z,245nm,1.2s						
CHGR				LR	LR		
	comp=Z,3µm,20.0s						
TNSS	**Tian-Shan**	**50.77**	**338**	*e*P	**P**	**17 13 15.8**	**+1.0**
TNSS	**Tian-Shan**	**50.77**	**338**	*e*P	**P**	**17 13 15.9**	**+1.0**
AAA	**Alma-Ata**	**50.94**	**338**	*e*P	**P**	**17 13 16.6**	**+1.0**
AAA				*e*S	**S**	**17 20 31.3**	**+0.8**
AAA	**Alma-Ata**	**50.94**	**338**	*e*P	**P**	**17 13 16.6**	**+1.0**
AAA				*e*S	**S**	**17 20 31.3**	**+0.8**
CMSA	**Cobar Meteorol**	**50.97**	**129**	P	**P**	**17 13 17.4**	**+1.4**
	baz=51,SNR=34						
ARSB	**Arslanbob**	**50.98**	**333**	*e*P	**P**	**17 13 16.9**	**+0.8**
	comp=Z,272nm,1.1s						
BTK	**Batken**	**50.99**	**331**	*e*P	**P**	**17 13 17.1**	**+1.0**
	comp=Z,128nm,1.1s						
BTK				LR	LR		
	comp=Z,3µm,22.0s						
BTK	**Batken**	**50.99**	**331**	*e*P	**P**	**17 13 17.1**	**+1.0**
BTK				pmax	pmax		
	comp=Z,128nm,1.1s						
BTK				MLR	MLR		
	comp=Z,3µm,22.0s						
MTBS	**Maitube**	**51.05**	**337**	*e*P	**P**	**17 13 17.2**	**+0.7**
MTBS	**Maitube**	**51.05**	**337**	*e*P	**P**	**17 13 17.3**	**+0.7**
UCH	**Uchtor**	**51.06**	**335**	P	**P**	**17 13 18.4**	**+1.4**
	SNR=52						
TKM2	**Tokmak 2**	**51.20**	**337**	P	**P**	**17 13 19.1**	**+1.3**
	SNR=148						
SONA0	**Songino Array**	**51.20**	**5**	*e*PcP	**PcP**	**17 14 33.7**	**+1.0**
SONM	**Songino Array**	**51.20**	**5**	P	**P**	**17 13 19.3**	**+1.7**
	comp=Z,172nm,0.8s,baz=189,slow=8.2,SNR=530						
SONM				PcP	**PcP**	**17 14 33.7**	**+1.0**
	comp=Z,28nm,1.0s,baz=193,slow=4.2,SNR=4.1						
KBK	**Karagaybulak**	**51.24**	**336**	P	**P**	**17 13 20.0**	**+2.0**
	SNR=38						
ALNE	**Al Ain**	**51.26**	**305**	*i* P	**P**	**17 13 19.9**	**+1.6**
	SNR=6.0						
UOSS	**Minazif**	**51.28**	**306**	*e*P	**P**	**17 13 19.6**	**+1.1**
	comp=Z,69nm,1.5s						
UOSS				LR	LR		
	comp=Z,1µm,18.0s						
UOSS	**Minazif**	**51.28**	**306**	P	**P**	**17 13 16.7**	**-1.7**
HATD	**Hatta, Dubai**	**51.29**	**306**	P	**P**	**17 13 17.6**	**-0.9**
ULN	**Ulaanbaatar**	**51.30**	**6**	*e*P	**P**	**17 13 19.7**	**+1.4**
	comp=Z,220nm,1.0s						
ULN				LR	LR		
	comp=Z,4µm,18.0s						
ULN	**Ulaanbaatar**	**51.30**	**6*c***	*i*P	**P**	**17 13 20.0**	**+1.7**
ULN				pmax	pmax		
	comp=Z,190nm,1.0s						
ULN	**Ulaanbaatar**	**51.30**	**6**	P	**P**	**17 13 19.9**	**+1.5**
	SNR=97						
AML	**Almayashu**	**51.33**	**335**	P	**P**	**17 13 20.4**	**+1.5**
	SNR=10						
AAK	**Ala-Archa**	**51.41**	**336**	P	**P**	**17 13 20.5**	**+1.2**
	comp=Z,18nm,0.9s,baz=140,slow=5.6,SNR=36						
AAK				LR	LR	17 37 57.2	
	comp=Z,3µm,19.6s,baz=144,slow=39						
AAK	**Ala-Archa**	**51.41**	**336**	*e*P	**P**	**17 13 20.5**	**+1.2**
	comp=Z,60nm,1.2s						
AAK				LR	LR		
	comp=Z,3µm,20.0s						
AAK	**Ala-Archa**	**51.41**	**336**	*i* P	**P**	**17 13 20.7**	**+1.5**
	SNR=18						
AAK	**Ala-Archa**	**51.41**	**336*c***	*i*P	**P**	**17 13 21.0**	**+1.7**
AAK				pmax	pmax		
	comp=Z,25nm,1.0s						
AAK	**Ala-Archa**	**51.41**	**336**	P	**P**	**17 13 21.0**	**+1.7**
	SNR=31						
AAK	**Ala-Archa**	**51.41**	**336**	P	**P**	**17 13 20.9**	**+1.7**
	SNR=16						
CHKK	**Chushkaly**	**51.46**	**338**	*e*P	**P**	**17 13 19.7**	**+0.2**
CHKK	**Chushkaly**	**51.46**	**338**	*e*P	**P**	**17 13 19.7**	**+0.2**
FRU1	**Bishkek**	**51.49**	**336**	*e*P	**P**	**17 13 21.6**	**+1.8**
	comp=Z,98nm,1.0s						
FRU1				LR	LR		
	comp=Z,3µm,20.0s						
FRU1	**Bishkek**	**51.49**	**336**	*e*P	**P**	**17 13 21.6**	**+1.8**
FRU1				pmax	pmax		
	comp=Z,98nm,1.0s						
FRU1				MLR	MLR		
	comp=Z,3µm,20.0s						
MSFE	**Esma-Masafi**	**51.51**	**306**	P	**P**	**17 13 17.0**	**-3.2**
INU	**Inuyama**	**51.53**	**38**	*e*P	**P**	**17 13 20.8**	**+0.7**
	comp=Z,33nm,1.1s						
INU				LR	LR		
	comp=Z,2µm,19.0s						
CHMS	**Chumysh**	**51.60**	**336**	P	**P**	**17 13 21.7**	**+1.1**
	SNR=35						
RMQ	**Roma**	**51.67**	**121**	P	**P**	**17 13 23.5**	**+2.2**
	baz=52,SNR=5.9						
FAQ	**Al Faqa, Dubai**	**51.69**	**305**	*i* P	**P**	**17 13 21.9**	**+0.4**
	SNR=6.0						
EKS2	**Erkin-Say**	**51.72**	**335**	P	**P**	**17 13 23.2**	**+1.6**
	SNR=140						
KUU	**Kurty**	**51.74**	**338*c***	*i*P	**P**	**17 13 22.1**	**+0.6**
KUU				*e*		17 15 22.5	
KUU				*i* S	**S**	**17 20 42.4**	**+0.9**
KUU				pmax	pmax		
	comp=Z,284nm,1.9s						
KUU				smax	smax		
	comp=E,588nm,4.6s						
KUU	**Kurty**	**51.74**	**338⇑**	*i*P	**P**	**17 13 22.1**	**+0.6**
	comp=E,284nm,1.9s						
KUU				*e*PP	**PP**	**17 15 22.6**	**+3.1**
KUU				*i* S	**S**	**17 20 42.5**	**+0.9**
	comp=E,588nm,4.6s						
NAZ	**Nazwa, Dubai**	**51.74**	**306**	P	P	17 13 29.5	+7.6
	SNR=5.5						
ASUD	**Al Ashush, Dub**	**51.85**	**305**	*i* P	**P**	**17 13 24.2**	**+1.5**
	SNR=6.0						
ASUD	**Al Ashush, Dub**	**51.85**	**305**	P	P	17 13 33.0	+10
	SNR=5.4						
USP	**Ospenovka**	**51.93**	**336**	P	**P**	**17 13 24.1**	**+1.1**
	SNR=64						
TDK	**Taldyqorghan**	**51.96**	**340**	*e*P	**P**	**17 13 23.9**	**+0.7**
TDK				*e*S	**S**	**17 20 42.9**	**-1.6**
TDK	**Taldyqorghan**	**51.96**	**340**	*e*P	**P**	**17 13 23.9**	**+0.7**
TDK				*e*S	**S**	**17 20 43.0**	**-1.6**
CN2	**Changchun**	**52.02**	**23**	⇑P	**P**	**17 13 23.6**	**0.0**
CN2				*e*S	**S**	**17 20 51.1**	**+5.8**
CN2				pmax	pmax		
	comp=E,20nm,0.9s						
CN2				pmax	pmax		
	comp=E,200nm,3.0s						
CN2				LR	LR		
	comp=E,3µm,15.0s						
CN2				LR	LR		
	comp=E,2µm,15.0s						
CN2				LR	LR		
	comp=E,5µm,15.0s						
SGDS	**Sogindy**	**52.03**	**336⇑**	*i*P	**P**	**17 13 24.5**	**+0.7**
	comp=E,197nm,3.1s						
SGDS				*i* S	**S**	**17 20 47.0**	**+1.4**
	comp=E,158nm,4.1s						
ZSN	**Zaisan**	**52.37**	**347*c***	*i*P	**P**	**17 13 27.9**	**+1.7**
ZSN				*e*S	**S**	**17 20 51.9**	**+1.9**
ZSN				pmax	pmax		
	comp=Z,73nm,1.8s						
ZSN	**Zaisan**	**52.37**	**347⇑**	*i*P	**P**	**17 13 27.9**	**+1.7**
	comp=Z,73nm,1.8s						
ZSN				*e*S	**S**	**17 20 51.9**	**+1.9**
MK31	**Makanchi Array**	**52.40**	**344**	*e*P	**P**	**17 13 27.0**	**+0.6**
	comp=Z,148nm,1.0s						
MK31	**Makanchi Array**	**52.40**	**344**	*e*P	**P**	**17 13 27.0**	**+0.6**
MK31				pmax	pmax		
	comp=Z,148nm,1.0s						
MKAR	**Makanchi Array**	**52.40**	**344**	P	**P**	**17 13 27.4**	**+0.9**
	comp=Z,138nm,0.8s,baz=152,slow=7.9,SNR=526						
MKAR				S	**S**	**17 20 51.0**	**+0.4**
	comp=Z,1.7nm,1.0s,baz=170,slow=12,SNR=3.0						
MKAR				LR	LR	17 40 36.1	
	comp=Z,1µm,19.4s,baz=157,slow=42						
MAKZ	**Makanchi**	**52.50**	**344**	*e*P	**P**	**17 13 27.7**	**+0.6**
	comp=Z,130nm,1.1s						
MAKZ				LR	LR		
	comp=Z,2µm,20.0s						
MAKZ	**Makanchi**	**52.50**	**344**	*e*P	**P**	**17 13 27.7**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,130nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,2µm,20.0s						
TAS	**Tashkent**	**52.71**	**331**	P	**P**	**17 13 30.7**	**+1.9**
TAS				pmax	pmax		
	comp=Z,106nm,1.0s						
JBG	**Jabagly**	**52.96**	**332*c***	*i*P	**P**	**17 13 31.8**	**+1.0**
JBG				*i* S	**S**	**17 21 00.6**	**+2.1**
JBG				pmax	pmax		
	comp=Z,78nm,1.4s						
IUG	**Iuzhnay**	**52.98**	**332*c***	*i*P	**P**	**17 13 31.2**	**+0.3**
IUG				*i* S	**S**	**17 20 58.5**	**-0.3**
IUG	**Iuzhnay**	**52.98**	**332⇑**	*i*P	**P**	**17 13 31.2**	**+0.3**
IUG				*i* S	**S**	**17 20 58.6**	**-0.3**
MAJO	**Matsushiro**	**53.03**	**38**	*e*P	**P**	**17 13 30.5**	**-0.8**
	comp=Z,87nm,1.2s						
MAJO				*e*PcP	**PcP**	**17 14 40.4**	**+0.8**
MAJO				LR	LR		
	comp=Z,2µm,20.0s						
MAJO	**Matsushiro**	**53.03**	**38*c***	*i*P	**P**	**17 13 30.8**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,61nm,1.2s						
MAT	**Matsushiro**	**53.03**	**38**	P	**P**	**17 13 30.4**	**-0.9**
MAT				S	**S**	**17 20 59.6**	**+0.1**
MJAR	**Matsushiro Arr**	**53.03**	**38**	P	**P**	**17 13 30.9**	**-0.5**
	comp=Z,48nm,1.0s,baz=220,slow=8.2,SNR=97						
MJAR				PcP	**PcP**	**17 14 40.6**	**+0.9**
	comp=Z,14nm,1.1s,baz=228,slow=4.9,SNR=2.8						
MJB9	**Matsu-Tunnel**	**53.03**	**38**	*e*P	**P**	**17 13 30.5**	**-0.8**
	comp=Z,93nm,1.2s						
MJB9				*e*PcP	**PcP**	**17 14 40.4**	**+0.8**
MJB9				LR	LR		
	comp=Z,2µm,20.0s						
EIDS	**Eidsvold**	**53.35**	**119**	*e*P	**P**	**17 13 34.0**	**+0.1**
	comp=Z,118nm,1.6s						
EIDS				LR	LR		
	comp=Z,3µm,21.0s						
EIDS	**Eidsvold**	**53.35**	**119**	P	**P**	**17 13 35.1**	**+1.3**
	baz=53,SNR=5.4						
TOO	**Toolangi**	**53.48**	**136**	*e*P	**P**	**17 13 36.4**	**+1.8**
	comp=Z,19nm,1.1s						
TOO				LR	LR		
	comp=Z,4µm,22.0s						
TOO	**Toolangi**	**53.48**	**136**	P	**P**	**17 13 37.6**	**+2.9**
	baz=54,SNR=5.0						
TOO	**Toolangi**	**53.48**	**136**	P	**P**	**17 13 36.4**	**+1.8**
MSHR	**Mys Shultsa**	**53.48**	**28*c***	*i*P	**P**	**17 13 35.2**	**+0.8**
KK31	**Karatay Array**	**53.51**	**333**	*e*P	**P**	**17 13 34.5**	**-0.2**
	comp=Z,40nm,1.2s						
KK31	**Karatay Array**	**53.51**	**333**	*e*P	**P**	**17 13 34.5**	**-0.2**
KK31				pmax	pmax		
	comp=Z,40nm,1.2s						
KKAR	**Karatay Array**	**53.51**	**333**	*e*P	**P**	**17 13 35.2**	**+0.6**
	comp=Z,40nm,1.2s						
KKAR	**Karatay Array**	**53.51**	**333**	*e*P	**P**	**17 13 35.2**	**+0.6**
KKAR				pmax	pmax		
	comp=Z,40nm,1.2s						
ZAK	**Zakamensk**	**53.54**	**2**	*e*P	**P**	**17 13 35.1**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,31nm,1.2s						
BRLS	**Borolday**	**53.76**	**332**	*e*S	**S**	**17 21 08.4**	**-0.8**
	comp=Z,78nm,5.0s						
DGZ	**Jazzator, Alta**	**53.99**	**350*c***	*i*P	**P**	**17 13 39.4**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,86nm,0.9s						
OPO	**Ambohidratompo**	**54.19**	**250**	P	**P**	**17 13 40.9**	**+0.6**
	comp=Z,14nm,1.1s,baz=55,slow=7.9,SNR=6.2						
ABPO	**Ambohimpanom**	**54.23**	**249**	*e*P	**P**	**17 13 41.7**	**+1.1**
	comp=Z,104nm,1.8s						
ABPO				LR	LR		
	comp=Z,2µm,19.0s						
ABPO	**Ambohimpanom**	**54.23**	**249**	*e*P	**P**	**17 13 41.7**	**+1.1**
ABPO				pmax	pmax		
	comp=Z,104nm,1.8s						
ABPO				MLR	MLR		
	comp=Z,2µm,19.0s						
VLA	**Vladivostok**	**54.24**	**28*c***	*i*P	**P**	**17 13 40.7**	**+0.8**
VLA				pmax	pmax		
	comp=Z,91nm,1.0s						
MDJ	**Mudanjiang**	**54.38**	**25**	*e*P	**P**	**17 13 41.2**	**+0.2**
	comp=Z,72nm,1.0s						
MDJ				LR	LR		
	comp=Z,5µm,18.0s						
MDJ	**Mudanjiang**	**54.38**	**25**	P	**P**	**17 13 41.7**	**+0.7**
MDJ				pP	pP	17 13 45.8	-4.2
MDJ				S	**S**	**17 21 25.1**	**+7.6**
MDJ				sS	sS	17 21 30.9	-1.1
MDJ				ScS	**ScS**	**17 23 26.7**	**-1.6**
MDJ				pmax	pmax		
	comp=Z,84nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,770nm,4.8s						
MDJ				LR	LR		
	comp=Z,6µm,15.3s						
MDJ				LR	LR		
	comp=Z,4µm,17.1s						
MDJ				LR	LR		
	comp=Z,8µm,15.7s						
MOY	**Mondy**	**54.77**	**0**	*e*P	**P**	**17 13 44.7**	**+0.9**
MOY				pmax	pmax		
	comp=Z,123nm,3.1s						
TLY	**Talaya**	**54.85**	**2**	P	**P**	**17 13 45.3**	**+1.0**
	comp=Z,19nm,0.8s,baz=200,slow=5.5,SNR=34						
TLY	**Talaya**	**54.85**	**2**	*e*P	**P**	**17 13 45.5**	**+1.2**
	comp=Z,68nm,1.1s						
TLY				LR	LR		
	comp=Z,3µm,18.0s						
TLY	**Talaya**	**54.85**	**2*c***	*i*P	**P**	**17 13 45.3**	**+1.0**
TLY				*e*S	**S**	**17 21 26.3**	**+2.7**
TLY				*e*PS	**PnS**	**17 21 36.7**	**+0.8**
TLY				pmax	pmax		
	comp=Z,209nm,1.4s						
TLY				MLR	MLR		
	comp=Z,9µm,14.0s						
TLY	**Talaya**	**54.85**	**2**	P	**P**	**17 13 46.5**	**+2.2**
	SNR=34						
HIA	**Hailar**	**54.99**	**15**	*e*P	**P**	**17 13 45.7**	**+0.4**
	comp=Z,83nm,1.1s						
HIA				LR	LR		
	comp=Z,5µm,19.0s						
HIA	**Hailar**	**54.99**	**15**	*e*P	**P**	**17 13 45.7**	**+0.4**
HIA				pmax	pmax		
	comp=Z,83nm,1.1s						
HIA				MLR	MLR		
	comp=Z,5µm,19.0s						
CAN	**Canberra**	**55.03**	**132**	*e*P	**P**	**17 13 47.8**	**+1.8**

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       comp=Z,51nm,1.0s
CAN                                   LR      LR
       comp=Z,5µm,21.0s
USA0B  Ussuriysk Arra     55.12  27   eP      P       17 13 47.1 +0.8
       comp=Z,267nm,1.0s
USA0B                                 LR      LR
       comp=Z,4µm,19.0s
USRK   Ussuriysk Ar.      55.12  27   P       P       17 13 47.0 +0.7
       comp=Z,178nm,0.8s,baz=222,slow=6.1,SNR=212
USRK                                  LR      LR      17 39 38.8
       comp=Z,4µm,18.8s,baz=215,slow=38
ARMA   Armidale           55.31 125   eP      P       17 13 49.8 +1.7
       comp=Z,61nm,1.2s
ARMA                                  LR      LR
       comp=Z,2µm,20.0s
ARMA   Armidale           55.31 125   P       P       17 13 49.9 +1.7
       baz=55,SNR=5.0
IRK    Irkutsk            55.45   3   eP      P       17 13 49.8 +1.2
IRK                                   e               17 21 36.6
IRK                                   pmax    pmax
       comp=Z,193nm,3.6s
CIT    Chita              56.25  10   eP      P       17 13 56.0 +1.7
CIT                                   e               17 14 07.8
CIT                                   e               17 14 18.2
CIT                                   pmax    pmax
       comp=Z,176nm,1.6s
GEYT   Alibeck            56.72 320   P       P       17 13 58.5 +0.6
       comp=Z,33nm,1.0s,baz=150,slow=6.7,SNR=53
GEYT                                  LR      LR      17 40 37.8
       comp=Z,2µm,21.5s,baz=160,slow=38
GYA0B  ALIBECK ARRAY      56.72 320   eP      P       17 13 58.5 +0.5
       comp=Z,61nm,1.0s
GYA0B                                 LR      LR
       comp=Z,2µm,22.0s
OTUK   Ortayu             56.90 338   P       P       17 13 59.5 +0.4
OTUK                                  pmax    pmax
       comp=Z,69nm,1.0s
KURBB  Kurchatov Arra     56.92 344   P       P       17 13 59.8 +0.7
       comp=Z,93nm,1.0s,baz=159,slow=6.6,SNR=289
KURBB                                 S       S       17 21 50.0 -1.1
       comp=Z,0.5nm,1.0s,baz=162,slow=7.4,SNR=3.5
KURK   Kurchatov          56.98 344   eP      P       17 13 59.9 +0.4
       comp=Z,237nm,1.1s
KURK                                  eS      S       17 21 53.3 +1.5
KURK                                  LR      LR
       comp=Z,3µm,20.0s
KURK   Kurchatov          56.98 344c  iP      P       17 14 00.5 +1.0
KURK                                  pmax    pmax
       comp=Z,171nm,0.9s
KURK   Kurchatov          56.98 344   P       P       17 14 00.6 +1.1
       SNR=102
TAU    Tasmania Unive     57.31 140   PFAKE           17 14 10.0 +8.0
TAU                                   LR      LR
       comp=Z,3µm,19.0s
TEY    Ternei             57.94  30⇓  iP      P       17 14 05.7 -0.7
TEY                                   pmax    pmax
       comp=E,10.0nm,1.2s
TEY                                   pmax    pmax
       comp=Z,40nm,1.2s
TEY                                   pmax    pmax
       comp=N,20nm,1.0s
BRZS   Berezniki          58.23 339c  iP      P       17 14 08.5 +0.2
BRZS                                  pmax    pmax
       comp=Z,154nm,2.8s
BRZS   Berezniki          58.23 339⇑  iP      P       17 14 08.6 +0.2
       comp=Z,154nm,2.8s
DAMY   Dhamar             58.28 289   PFAKE           17 14 20.0  +10
DAMY                                  LR      LR
       comp=Z,2µm,20.0s
ZAA0   Zalesovo Array     58.53 349   eP      P       17 14 10.7 +0.3
       comp=Z,220nm,0.9s
ZAA0                                  eS      S       17 22 12.7 +0.6
ZAA0                                  LR      LR
       comp=Z,1µm,19.0s
ZALV   Zalesovo Beam      58.53 349   P       P       17 14 10.9 +0.6
       comp=Z,224nm,0.9s,baz=172,slow=4.9,SNR=308
ZALV                                  S       S       17 22 11.2 -0.8
       comp=Z,0.4nm,0.3s,baz=146,slow=2.8,SNR=2.8
ZALV                                  LR      LR      17 42 07.9
       comp=Z,1µm,19.5s,baz=192,slow=39
PATS   Pohnpei            58.66  80   P       P       17 14 12.2 +0.2
       baz=58,SNR=3.5
KLR    Kul'dur            58.96  23c  iP      P       17 14 14.3 +0.9
KLR                                   pmax    pmax
       comp=Z,116nm,1.0s
ATD    Arta Tunnel        59.12 285   LR      LR      17 37 01.2
       comp=Z,1µm,18.3s,baz=98,slow=33
HNR    Honiara            59.41  99   eP      P       17 14 16.7 -0.5
       comp=Z,474nm,1.3s
HNR                                   LR      LR
       comp=Z,900nm,21.0s
HNR    Honiara            59.41  99   eP      P       17 14 16.7 -0.5
HNR                                   pmax    pmax
       comp=Z,474nm,1.3s
HNR                                   MLR     MLR
       comp=Z,900nm,21.0s
HNR    Honiara            59.41  99   eP      P       17 14 16.0 -1.2
ERM    Erimo              59.46  36   eP      P       17 14 16.9 -0.1
       comp=Z,35nm,1.0s
ERM                                   LR      LR
       comp=Z,1µm,21.0s
ERM    Erimo              59.46  36   eP      P       17 14 16.9 -0.1
ERM                                   pmax    pmax
       comp=Z,35nm,1.0s
ERM                                   MLR     MLR
       comp=Z,1µm,21.0s
RAYN   Ar Rayn            59.74 300   eP      P       17 14 20.0 +0.6
       comp=Z,45nm,1.3s
RAYN                                  LR      LR
       comp=Z,2µm,19.0s
RAYN   Ar Rayn            59.74 300   P       P       17 14 20.4 +1.0
RAYN   Ar Rayn            59.74 300   eP      P       17 14 20.0 +0.6
RAYN                                  pmax    pmax
       comp=Z,45nm,1.3s
RAYN                                  MLR     MLR
       comp=Z,2µm,19.0s
ZEA    Zeya               61.12  18   eP      P       17 14 29.2 +1.1
ZEA                                   eS      S       17 22 50.0 +4.6
ZEA                                   eSS     SS      17 26 42.0 -3.7
ZEA                                   pmax    pmax
       comp=N,71nm,1.0s
ZEA                                   pmax    pmax
       comp=E,47nm,1.0s
ZEA                                   pmax    pmax
       comp=Z,140nm,1.0s
ZEA                                   pmax    pmax
       comp=Z,400nm,7.0s
ZEA                                   smax    smax
       comp=N,900nm,8.0s
ZEA                                   MLR     MLR
       comp=E,3µm,14.0s
BVAR   Borovoye Array     61.55 340   P       P       17 14 31.3 +0.2
       comp=E,26nm,0.7s,baz=142,slow=7.5,SNR=106
BRVK   Borovoye           61.62 340   eP      P       17 14 31.2 -0.3
       comp=E,79nm,1.2s
BRVK                                  LR      LR
       comp=Z,1µm,20.0s
BRVK   Borovoye           61.62 340c  iP      P       17 14 31.7 +0.2
BRVK                                  pmax    pmax
       comp=Z,43nm,1.0s
BRVK   Borovoye           61.62 340   P       P       17 14 31.9 +0.4
       SNR=47
BOD    Bodaibo            61.91   8⇓  iP      P       17 14 34.3 +0.9
BOD                                   pmax    pmax
       comp=Z,132nm,1.3s
GRNR   Gornyy             62.06  25   eP      P       17 14 35.4 +0.8
GRNR                                  pmax    pmax
       comp=Z,49nm,1.0s
YUK    Yuzh-Kuril'sk      62.26  35c  iP      P       17 14 39.8 +3.8
YUK                                   e               17 15 17.9
YUK                                   e               17 16 48.8
YUK                                   i S     S       17 23 03.0 +2.8
YUK                                   SSS     SSS     17 29 49.3
YUK                                   pmax    pmax
       comp=Z,169nm,1.1s
YUK                                   pmax    pmax
       comp=N,19nm,0.6s
YUK                                   pmax    pmax
       comp=E,34nm,0.9s
YSS    Yuzh-Sakhalins     62.37  31   eP      P       17 14 37.1 +0.3
       comp=E,197nm,1.1s
YSS                                   LR      LR
       comp=Z,1µm,18.0s
YSS    Yuzh-Sakhalins     62.37  31⇑  eP      P       17 14 37.2 +0.5
YSS                                   e               17 15 14.3
YSS                                   e               17 16 57.4
YSS                                   ePPP    PPP     17 18 26.3
YSS                                   eS      S       17 23 00.6 -0.9
YSS                                   ePPS    PPS     17 23 19.0
YSS                                   pmax    pmax
       comp=Z,150nm,1.1s
YSS                                   pmax    pmax
       comp=N,40nm,1.2s
YSS                                   pmax    pmax
       comp=E,20nm,1.0s
YSS                                   pmax    pmax
       comp=N,700nm,3.3s
YSS                                   pmax    pmax
       comp=N,200nm,4.0s
YSS                                   pmax    pmax
       comp=E,200nm,2.5s
YSS                                   MLR     MLR
       comp=E,200nm,14.0s
FURI   Furi               62.73 282   PFAKE           17 14 50.0  +10
FURI                                  LR      LR
       comp=Z,2µm,19.0s
ABKAR  Akbulak array      62.99 331   eP      P       17 14 40.6 -0.2
       comp=Z,161nm,1.0s
KMBO   Kilima Mbogo       63.15 270   P       P       17 14 42.4 -0.5
       comp=Z,3.3nm,0.7s,baz=59,slow=12,SNR=6.6
KMBO                                  LR      LR      17 39 01.8
       comp=Z,943nm,19.6s,baz=83,slow=33
KMBO   Kilima Mbogo       63.15 270   eP      P       17 14 43.4 +0.5
KMBO                                  epP     P       17 14 43.8 +0.9
KMBO                                  LR      LR
       comp=Z,1µm,20.0s
KMBO   Kilima Mbogo       63.15 270   i P     P       17 14 43.6 +0.8
       SNR=6.0
KMBO   Kilima Mbogo       63.15 270   eP      P       17 14 43.4 +0.5
KMBO                                  MLR     MLR
       comp=Z,1µm,20.0s
KMBO   Kilima Mbogo       63.15 270   P       P       17 14 50.3 +7.4
       SNR=5.9
CASY   Casey              63.25 175   eP      P       17 14 44.0 +1.8
       comp=Z,50nm,1.4s
CASY                                  LR      LR
       comp=Z,3µm,20.0s
LKRN   Lenkeran, Azer     63.32 317   P       P       17 14 43.3 +0.1
KUR    Kuril'sk           64.12  35c  iP      P       17 14 48.7 +0.3
KUR                                   e               17 17 12.5
KUR                                   eS      S       17 23 24.2 +0.8
KUR                                   pmax    pmax
       comp=Z,230nm,1.2s
KUR                                   pmax    pmax
       comp=Z,700nm,5.2s
AKTO   Aktyubinsk         64.70 332   P       P       17 14 51.4 -0.7
       comp=Z,55nm,1.2s,baz=131,slow=7.0,SNR=54
AKTO                                  S       S       17 23 27.6 -2.9
       comp=Z,1.4nm,1.1s,baz=225,slow=19,SNR=6.3
AKTO                                  LR      LR      17 46 49.5
       comp=Z,855nm,19.8s,baz=139,slow=39
TYV    Tymovskoe          64.91  28   eP      P       17 14 54.8 +1.4
TYV                                   eS      S       17 23 36.8 +3.8
TYV                                   pmax    pmax
       comp=Z,48nm,1.5s
TYV                                   pmax    pmax
       comp=Z,600nm,6.9s
TYV                                   smax    smax
       comp=E,400nm,6.8s
TYV                                   MLR     MLR
       comp=E,4µm,15.0s
TYV                                   MLR     MLR
       comp=Z,6µm,15.0s
MNGR   Mingechevir, A     65.45 318   P       P       17 14 47.7 -9.4
SEKA   Sheki              65.59 318   P       P       17 14 58.2 +0.1
NKL    Nikolayevsk        65.61  25⇑  iP      P       17 14 58.6 +0.8
NKL                                   e               17 15 28.4
NKL                                   e               17 17 22.6
NKL                                   eS      S       17 23 35.8 -5.6
NKL                                   e               17 24 46.9
NKL                                   pmax    pmax
       comp=Z,9.0nm,0.9s
NKL                                   pmax    pmax
       comp=E,16nm,1.1s
NKL                                   pmax    pmax
       comp=N,42nm,1.0s
NKL                                   pmax    pmax
       comp=Z,86nm,5.3s
NKL                                   MLR     MLR
       comp=E,1µm,15.0s
NKL                                   MLR     MLR
       comp=Z,4µm,17.0s
NKL                                   MLR     MLR
       comp=N,2µm,15.0s
NAX    Nakhchivan         65.81 316   P       P       17 14 59.8 +0.2
GANJ   Ganja              65.91 318   P       P       17 15 00.6 +0.5
ZKTA   Zakatala           66.17 319   P       P       17 15 02.4 +0.6
MAK    Makhachkala        66.24 320   eP      P       17 15 00.4 -1.7
MAK                                   eS      S       17 23 49.3 -0.2
MAK                                   pmax    pmax
       comp=Z,112nm,1.2s
DZM    Mont Dzumac        66.56 113   eS      S       17 23 46.4 -8.0
       comp=Z,2µm,26.1s
DZM    Mont Dzumac        66.56 113   eLR     LR      17 35 00.9
       comp=Z,2µm,23.9s
DZM    Mont Dzumac        66.56 113   eP      P       17 15 04.6 -0.2
       comp=Z,137nm,1.9s
DZM                                   LR      LR
       comp=Z,2µm,19.0s
ONTNC  Ouen Toro          66.60 113   eP      P       17 15 05.2 +0.3
       comp=Z,66nm,1.1s
GNI    Garni              66.76 316   LR      LR      17 48 58.0
       comp=Z,191nm,18.5s,baz=101,slow=40
GNI    Garni              66.76 316   eP      P       17 15 06.2 +0.4
       comp=Z,78nm,1.1s
GNI                                   LR      LR
       comp=Z,500nm,19.0s
GNI    Garni              66.76 316   P       P       17 15 05.7  0.0
GNI    Garni              66.76 316   eP      P       17 15 06.2 +0.4
GNI                                   pmax    pmax
       comp=Z,78nm,1.1s
GNI                                   MLR     MLR
       comp=Z,500nm,19.0s
TBLG   Delisi             67.47 318   eP      P       17 15 11.1 +1.0
       comp=Z,170nm,1.2s
TBLG   Delisi             67.47 318   eP      P       17 15 11.1 +1.0
TBLG                                  pmax    pmax
       comp=Z,170nm,1.2s
SVE    Sverdlovsk         68.05 338⇓  iP      P       17 15 14.1 +0.7
SVE                                   e               17 17 41.3
SVE                                   ePPP    PPP     17 19 25.4
SVE                                   eS      S       17 24 07.7 -3.1
SVE                                   pmax    pmax
       comp=Z,180nm,1.3s
SVE                                   MLR     MLR
       comp=Z,2µm,21.0s
KARS   Kars               68.11 316   eP      P       17 15 15.2 +0.9
KARS   Kars               68.11 316   eP      P       17 15 15.2 +0.9
AKH    Akhalkalaki        68.16 317   eP      P       17 15 15.6 +0.9
       comp=Z,34nm,1.0s
AKH    Akhalkalaki        68.16 317   eP      P       17 15 15.6 +0.9
AKH                                   pmax    pmax
       comp=Z,34nm,1.0s
ZEI    Tsey               68.50 319   eP      P       17 15 17.0 +0.3
ZEI                                   eS      S       17 24 16.4 -0.7
ZEI                                   pmax    pmax
       comp=Z,47nm,1.0s
ARU    Arti               68.57 337   P       P       17 15 17.0 +0.3
       comp=Z,15nm,1.0s,baz=150,slow=4.5,SNR=51
ARU                                   S       S       17 24 13.9 -3.1
       comp=Z,0.3nm,0.3s,baz=240,slow=20,SNR=2.8
ARU    Arti               68.57 337   eP      P       17 15 16.0 -0.6
       comp=Z,146nm,1.2s
ARU                                   LR      LR
       comp=Z,2µm,21.0s
ARU    Arti               68.57 337c  iP      P       17 15 16.9 +0.3
ARU                                                   17 15 40.4
ARU                                   PPP     PPP     17 19 28.3
ARU                                   S       S       17 24 17.8 +0.7
ARU                                                   17 25 16.6
ARU                                   SS      SS      17 28 33.6 -8.1
ARU                                   pmax    pmax
       comp=Z,87nm,1.1s
ARU                                   MLR     MLR
       comp=Z,2µm,21.0s
YAK    Yakutsk            68.90  14   eP      P       17 15 17.9 -0.7
       comp=Z,228nm,1.0s
YAK                                   LR      LR
       comp=Z,3µm,18.0s
YAK    Yakutsk            68.90  14c  iP      P       17 15 18.3 -0.3
YAK                                   e               17 15 42.5
YAK                                   e               17 17 46.5
YAK                                   eS      S       17 24 21.0 +0.3
YAK                                   e*SS    SKiKP   17 25 03.0 -5.3
YAK                                   eSS     SS      17 28 47.3 +0.7
MAW    Mawson             69.12 194   P       P       17 15 20.2 +0.4
       comp=Z,5.2nm,0.9s,baz=20,slow=8.0,SNR=7.4
MAW                                   LR      LR      17 42 57.6
       comp=Z,1µm,18.2s,baz=35,slow=34
MAW    Mawson             69.12 194   eP      P       17 15 20.4 +0.5
       comp=Z,11nm,1.6s
MAW                                   LR      LR
       comp=Z,400nm,22.0s
MAW    Mawson             69.12 194   P       P       17 15 21.7 +1.8
       baz=69,SNR=6.1
KBZ    Khabaz             69.57 319   P       P       17 15 24.2 +1.1
       comp=Z,22nm,1.0s,baz=104,slow=4.4,SNR=42
KBZ                                   S       S       17 24 29.3  0.0
       comp=Z,0.5nm,0.4s,baz=220,slow=19,SNR=6.8
MBAR   Mbarara            69.68 271   P       P       17 15 25.3 +0.6
       comp=Z,1.4nm,0.2s,baz=73,slow=2.9,SNR=5.9
MBAR   Mbarara            69.68 271   eP      P       17 15 25.6 +0.9
       comp=Z,42nm,1.5s
MBAR                                  LR      LR
       comp=Z,1µm,18.0s
ASF    Jabal al Asfar     69.69 306   P       P       17 15 26.4 +2.2
KIV    Kislovodsk         69.81 319   eP      P       17 15 25.6 +0.9
       comp=Z,82nm,1.1s
KIV    Kislovodsk         69.81 319   i P     P       17 15 24.9 +0.2
       SNR=19
KIV    Kislovodsk         69.81 319   eP      P       17 15 25.5 +0.8
KIV                                   eS      S       17 24 33.0 +0.6
KIV                                   pmax    pmax
       comp=Z,259nm,4.2s
KIV                                   pmax    pmax
       comp=Z,194nm,1.0s
KIV                                   MLR     MLR
       comp=Z,1µm,17.0s
KIV    Kislovodsk         69.81 319   P       P       17 15 25.2 +0.5
       SNR=32
AQBJ   Aqaba              70.51 303   P       P       17 15 34.1 +4.9
EIL    Elat               70.58 303   LR      LR      17 45 23.4
       comp=Z,2µm,20.3s,baz=109,slow=35
HRFI   Mount Harif        70.61 303   P       P       17 15 31.3 +1.5
MMLI   Mount Malkishu     70.96 306   P       P       17 15 33.5 +1.5
KSDI   Kefar Szold        70.99 307   P       P       17 15 33.9 +1.8
MMAI   Mount Meron Ar     71.15 306   LR      LR      17 46 52.3
       comp=Z,2µm,20.2s,baz=125,slow=36
KZIT   Kziot              71.38 304   P       P       17 15 41.7 +7.3
SKR    Severo-Kuril’s     71.72  34   eP      P       17 15 33.7 -2.4
SKR                                   e               17 15 43.2
SKR                                   e               17 18 22.5
SKR                                   ePPP    PPP     17 19 53.9
SKR                                   eS      S       17 24 56.7 +2.6
SKR                                   pmax    pmax
       comp=Z,700nm,3.3s
SKR                                   pmax    pmax
       comp=Z,177nm,1.1s
SKR                                   MLR     MLR
       comp=Z,900nm,19.0s
SKR                                   MLR     MLR
       comp=Z,900nm,16.0s
MATP   Matopo             71.91 250   LR      LR      17 42 09.6
       comp=Z,1µm,21.3s,baz=84,slow=32
LSZ    Lusaka             72.00 255   eP      P       17 15 38.5 -0.1
       comp=Z,29nm,1.3s
LSZ                                   LR      LR
       comp=Z,2µm,18.0s
LSZ    Lusaka             72.00 255   eP      P       17 15 38.5 -0.1
LSZ                                   pmax    pmax
       comp=Z,29nm,1.3s
LSZ                                   MLR     MLR
       comp=Z,2µm,18.0s
MLZ    Mavora Lakes       72.07 137   eP      P       17 15 39.4 +1.0
       comp=Z,172nm,2.0s
WHZ    Wether Hill Ro     72.08 137   eP      P       17 15 38.6 +0.2
       comp=Z,109nm,1.8s
WKZ    Wanaka             72.57 136   eP      P       17 15 41.1 -0.3
       comp=Z,252nm,1.9s
TARA   Tarawa             72.62  88   eP      P       17 15 41.9 -0.4
       comp=Z,269nm,1.5s
FOZ    Fox Glacier        72.85 135   PFAKE           17 15 50.0 +7.0
FOZ                                   LR      LR
       comp=Z,3µm,22.0s
LBZ    Lake Benmore       73.28 135   eP      P       17 15 46.7 +1.1
       comp=Z,109nm,1.7s
LBZ                                   LR      LR
       comp=Z,3µm,20.0s
CSS    Mathiatis          73.35 308   eP      P       17 15 46.7 +0.5
       comp=Z,80nm,1.2s
CSS                                   LR      LR
       comp=Z,2µm,18.0s
CSS    Mathiatis          73.35 308   P       P       17 15 47.2 +1.0
       comp=Z,18nm,1.5s
ANN    Anapa              73.59 319   eP      P       17 15 49.6 +2.3
ANN                                   eS      SKiKP   17 25 15.7  0.0
ANN                                   pmax    pmax
       comp=Z,28nm,1.2s
KIRV   Kirov              73.73 335   P       P       17 15 48.7 +0.9
       comp=Z,65nm,1.0s,baz=134,slow=4.2,SNR=37
ODZ    Otahua Downs       73.74 136   eP      P       17 15 49.1 +0.9
       comp=Z,105nm,1.5s
RPZ    Rata Peaks         73.77 135   eP      P       17 15 50.2 +1.8
       comp=Z,144nm,1.7s
RPZ                                   LR      LR
       comp=Z,4µm,22.0s
PEA0B  Petropavlovsk-     73.77  32   eP      P       17 15 48.9 +0.7
       comp=Z,50nm,1.1s
PEA0B                                 LR      LR
       comp=Z,700nm,19.0s
PETK   Petropavlovsk-     73.77  32   P       P       17 15 48.6 +0.4
       comp=Z,21nm,0.9s,baz=203,slow=2.9,SNR=19
PETK                                  LR      LR      17 49 59.3
       comp=Z,576nm,19.7s,baz=251,slow=37
MA2    Magadan            74.05  24   P       P       17 15 50.0 +0.3
       comp=Z,42nm,1.0s,baz=219,slow=6.5,SNR=5.9
MA2    Magadan            74.05  24   eP      P       17 15 49.9 +0.2
       comp=Z,114nm,1.3s
MA2                                   LR      LR
       comp=Z,2µm,18.0s
MA2    Magadan            74.05  24   eP      P       17 15 49.9 +0.2
MA2                                   pmax    pmax
       comp=Z,114nm,1.3s
MA2                                   MLR     MLR
       comp=Z,2µm,18.0s
PET    Petropavlovsk      74.23  32   eP      P       17 15 51.0 +0.2
       comp=Z,96nm,1.1s
PET                                   LR      LR
       comp=Z,1µm,21.0s
PET    Petropavlovsk      74.23  32c  iP      P       17 15 51.1 +0.2
PET                                   i               17 18 39.0
PET                                   i S     S       17 25 24.0 +1.4
PET                                   pmax    pmax
       comp=Z,500nm,6.9s
PET                                   pmax    pmax
       comp=Z,92nm,1.1s
PET                                   pmax    pmax
       comp=Z,500nm,16.6s
PET                                   pmax    pmax
       comp=Z,400nm,17.1s
PET                                   MLR     MLR
       comp=Z,1µm,20.0s
OUZ    Omahuta            74.36 126   PFAKE           17 16 00.0 +7.9
OUZ                                   LR      LR
       comp=Z,4µm,21.0s
OXZ    Oxford             74.39 134   eP      P       17 15 53.1 +1.0
       comp=Z,118nm,1.7s
LTZ    Lake Taylor        74.47 133   PFAKE           17 16 00.0 +7.4
LTZ                                   LR      LR
       comp=Z,4µm,22.0s
BR131  Keskin Array S     74.51 313   eP      P       17 15 52.6 -0.4
       comp=Z,28nm,0.9s
BRTR   Keskin Array B     74.51 313   P       P       17 15 52.9 -0.1
       comp=Z,7.4nm,0.7s,baz=133,slow=5.6,SNR=11
BRTR                                  LR      LR      17 50 54.9
       comp=Z,779nm,20.8s,baz=115,slow=38
THZ    Tophouse           74.76 132   eP      P       17 15 54.8 +0.4
       comp=Z,196nm,1.8s
THZ                                   LR      LR
       comp=Z,2µm,22.0s
LBTB   Lobatse            74.85 245   eP      P       17 15 56.3 +1.0
       comp=Z,19nm,1.3s
LBTB   Lobatse            74.85 245   eP      P       17 15 56.3 +1.0
LBTB                                  pmax    pmax
       comp=Z,19nm,1.3s
LBTB   Lobatse            74.85 245   eS      P       17 15 56.6 +1.3
ILGA   Ilgaz              74.87 314   eP      P       17 15 55.9 +0.7
       comp=Z,90nm,1.2s
ILGA                                  LR      LR
       comp=Z,1µm,20.0s
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VORD	**Divnogorie**	**74.91**	**325**	*e*P	**P**	**17 15 54.0**	**-0.8**
VORD				*e**PP	**pP**	**17 16 02.3**	**-1.8**
VORD				pmax	pmax		
	comp=Z,70nm,1.2s						
VSR	**Storozhevoye**	**75.09**	**325**	*e*P	**P**	**17 15 55.4**	**-0.5**
VSR				*e**PP	**pP**	**17 16 02.7**	**-2.5**
VSR				pmax	pmax		
	comp=Z,100nm,1.3s						
ANTO	**Ankara**	**75.18**	**313**	*e*P	**P**	**17 15 57.0**	**+0.2**
	comp=Z,52nm,1.1s						
ANTO				LR	LR		
	comp=Z,1µm,21.0s						
ANTO	**Ankara**	**75.18**	**313**	*e*P	**P**	**17 15 57.0**	**+0.2**
ANTO				pmax	pmax		
	comp=Z,52nm,1.1s						
ANTO				MLR	MLR		
	comp=Z,1µm,21.0s						
BR231	**Keskin MP Arra**	**75.18**	**313**	*e*P	**P**	**17 15 56.9**	**0.0**
	comp=Z,68nm,1.2s						
BOSA	**Boshof**	**75.40**	**241**	P	**P**	**17 15 58.5**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=94,slow=4.5,SNR=9.6						
BOSA				LR	LR	17 44 46.1	
	comp=Z,811nm,18.2s,baz=89,slow=32						
BOSA	**Boshof**	**75.40**	**241**	*e*P	**P**	**17 15 58.5**	**+0.1**
	comp=Z,48nm,1.6s						
HIZ	**Hauiti**	**75.77**	**129**	PFAKE		17 16 10.0	+10
HIZ				LR	LR		
	comp=Z,2µm,20.0s						
LPSR	**Galich'ya Gora**	**75.81**	**326**	*e*P	**P**	**17 15 59.5**	**-0.5**
LPSR				*e**PP	**pP**	**17 16 07.3**	**-2.0**
LPSR				pmax	pmax		
	comp=Z,60nm,1.1s						
SIM	**Simferopol'**	**75.85**	**318**	*e*P	**P**	**17 15 56.4**	**-4.0**
SIM				*e*S	**S**	**17 25 39.0**	**-1.9**
SIM				pmax	pmax		
	comp=Z,110nm,10.4s						
SIM				pmax	pmax		
	comp=Z,34nm,0.9s						
SNZO	**South Karori**	**76.03**	**132**	PFAKE		17 16 10.0	+8.5
SNZO				LR	LR		
	comp=Z,3µm,20.0s						
ISP	**Isparta**	**76.31**	**310**	*e*P	**P**	**17 16 04.4**	**+1.1**
	comp=Z,80nm,1.8s						
ISP				LR	LR		
	comp=Z,800nm,19.0s						
ISP	**Isparta**	**76.31**	**310**	*e*P	**P**	**17 16 04.4**	**+1.1**
ISP				pmax	pmax		
	comp=Z,80nm,1.8s						
ISP				MLR	MLR		
	comp=Z,800nm,19.0s						
MDUB	**Mudurnu**	**76.52**	**313**	*e*P	**P**	**17 16 04.3**	**-0.2**
	comp=Z,353nm,1.0s						
MDUB				LR	LR		
	comp=Z,4µm,21.0s						
SEY	**Seymchan**	**76.68**	**22**	P	**P**	**17 16 05.5**	**+0.7**
	comp=Z,38nm,1.1s,baz=236,slow=3.9,SNR=24						
SYO	**Syowa Base**	**76.77**	**199⇓**	*e*P	**P**	**17 16 05.0**	**-0.1**
SYO	**Syowa Base**	**76.77**	**199⇓**	*e*pP	pP	17 16 11.2	-3.1
SYO	**Syowa Base**	**76.77**	**199⇑**	*e*PcP	**PcP**	**17 16 18.0**	**+1.7**
PRGR	**Permogore**	**77.03**	**336⇑**	*i*P	**P**	**17 16 07.4**	**+0.7**
PRGR				*i* *PP	**pP**	**17 16 15.0**	**-1.0**
PRGR				*e*		17 19 00.4	
PRGR				pmax	pmax		
	comp=Z,125nm,0.9s						
TIXI	**Tiksi**	**77.08**	**9**	P	**P**	**17 16 06.5**	**-0.3**
	comp=Z,52nm,1.0s,baz=188,slow=3.9,SNR=70						
TIXI				PP	**PP**	**17 18 57.0**	**-3.6**
	comp=Z,18nm,1.0s,baz=192,slow=8.0,SNR=3.4						
TIXI				S	**S**	**17 25 50.5**	**-2.9**
	comp=Z,0.6nm,0.3s,baz=331,slow=21,SNR=7.7						
TIXI				LR	LR	17 54 00.7	
	comp=Z,5µm,20.1s,baz=198,slow=39						
TIXI	**Tiksi**	**77.08**	**9**	*e*P	**P**	**17 16 06.5**	**-0.3**
	comp=Z,104nm,1.2s						
TIXI				LR	LR		
	comp=Z,4µm,20.0s						
TIXI	**Tiksi**	**77.08**	**9***c*	*i*P	**P**	**17 16 06.1**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,69nm,1.1s						
BFZ	**Birch Farm**	**77.10**	**131**	PFAKE		17 16 20.0	+12
BFZ				LR	LR		
	comp=Z,4µm,21.0s						
BKZ	**Black Stump Fm**	**77.12**	**129**	*e*P	**P**	**17 16 08.5**	**+0.6**
	comp=Z,68nm,1.0s						
BKZ				LR	LR		
	comp=Z,3µm,21.0s						
URZ	**Urewera**	**77.51**	**128**	PFAKE		17 16 20.0	+10
URZ				LR	LR		
	comp=Z,2µm,21.0s						
MOS	**Moscow**	**77.83**	**329**	*e*P	**P**	**17 16 10.1**	**-1.2**
MOS				*i*		17 16 18.5	
MOS				*e*		17 19 15.6	
MOS				*e*S	**S**	**17 25 59.0**	**-3.1**
MOS				pmax	pmax		
	comp=Z,300nm,1.5s						
MOS				pmax	pmax		
	comp=Z,140nm,1.2s						
MANT	**Manisa**	**77.98**	**310**	*e*P	**P**	**17 16 13.8**	**+1.0**
	comp=Z,85nm,1.0s						
MANT				LR	LR		
	comp=Z,2µm,19.0s						
OBN	**Obninsk**	**78.12**	**328**	P	**P**	**17 16 13.4**	**+0.5**
	comp=Z,4.9nm,0.4s,baz=154,slow=1.3,SNR=23						
OBN	**Obninsk**	**78.12**	**328**	*e*P	**P**	**17 16 13.8**	**+0.8**
	comp=Z,213nm,1.2s						
OBN				LR	LR		
	comp=Z,1µm,20.0s						
OBN	**Obninsk**	**78.12**	**328⇑**	*i*P	**P**	**17 16 13.4**	**+0.5**
OBN				*e*		17 16 21.7	
OBN				*e*		17 19 15.5	
OBN				*e*S	**S**	**17 25 58.1**	**-7.2**
OBN				*e*SS	**SS**	**17 31 05.1**	**-2.4**
OBN				pmax	pmax		
	comp=Z,81nm,1.1s						
MXZ	**Matakaoa Point**	**78.39**	**128**	PFAKE		17 16 30.0	+15
MXZ				LR	LR		
	comp=Z,2µm,20.0s						
KARP	**Karpathos**	**78.39**	**307**	*e*P	**P**	**17 16 16.2**	**+1.3**
	comp=Z,144nm,1.0s						
KARP				LR	LR		
	comp=Z,1µm,18.0s						
BALB	**Balikesir**	**78.77**	**311**	*e*P	**P**	**17 16 18.4**	**+1.6**
	comp=Z,145nm,1.0s						
BALB				LR	LR		
	comp=Z,3µm,21.0s						
SUR	**Sutherland**	**79.46**	**238**	*e*P	**P**	**17 16 22.5**	**+1.4**
	comp=Z,128nm,1.8s						
SUR				LR	LR		
	comp=Z,166µm,22.0s						
TIRR	**Tirgusor**	**79.59**	**316**	*e*P	**P**	**17 16 21.7**	**+0.5**
	comp=Z,116nm,1.0s						
TIRR				LR	LR		
	comp=Z,1µm,18.0s						
TIRR	**Tirgusor**	**79.59**	**316**	*e*P	**P**	**17 16 21.7**	**+0.5**
TIRR				pmax	pmax		
	comp=Z,116nm,1.0s						
TIRR				MLR	MLR		
	comp=Z,1µm,18.0s						
KIS	**Kishinev**	**79.99**	**319⇑**	*i*P	P	17 16 30.0	+6.6
	comp=Z,180nm,1.2s						
KIS				*e*S	**S**	**17 26 20.0**	**-5.5**
KIS	**Kishinev**	**79.99**	**319**	*e*PS		17 26 42.0	
KIS				*e*SS	SS	17 31 40.0	+4.1
KIS				LRM	MLR	17 55 00.0	
	comp=Z,400nm,19.0s						
KIS	**Kishinev**	**79.99**	**319⇑**	*i*P	P	17 16 30.0	+6.6
KIS				*e*		17 16 45.0	
KIS				*e*S	**S**	**17 26 20.0**	**-5.5**
KIS				*e*PS	PnS	17 26 42.0	-31
KIS				*e*SS	**SS**	**17 31 40.0**	**+4.1**
KIS				pmax	pmax		
	comp=Z,180nm,1.2s						
KIS				MLR	MLR		
	comp=Z,700nm,20.0s						
ALN	**Alexandroupoli**	**80.42**	**312**	*e*P	**P**	**17 16 26.5**	**+0.6**
	comp=Z,21nm,1.1s						
ALN				LR	LR		
	comp=Z,500nm,20.0s						
ALN	**Alexandroupoli**	**80.42**	**312**	*e*P	**P**	**17 16 26.5**	**+0.6**
ALN				pmax	pmax		
	comp=Z,21nm,1.1s						
ALN				MLR	MLR		
	comp=Z,500nm,20.0s						
AKASG	**Malin Array Be**	**80.77**	**322**	P	**P**	**17 16 27.4**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=87,slow=4.5,SNR=7.1						
AKASG	**Malin Array Be**	**80.77**	**322**	*i* P	**P**	**17 16 26.1**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKBB	**Malin Array Si**	**80.77**	**322**	*e*P	**P**	**17 16 27.0**	**-0.5**
	comp=Z,27nm,1.0s						
AKBB				LR	LR		
	comp=Z,1µm,22.0s						
AKBB	**Malin Array Si**	**80.77**	**322**	*e*P	**P**	**17 16 27.0**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,27nm,1.0s						
AKBB				MLR	MLR		
	comp=Z,1µm,22.0s						
VNDA	**Vanda**	**80.80**	**169**	P	**P**	**17 16 28.2**	**+1.0**
	comp=Z,2.2nm,1.0s,baz=310,slow=6.5,SNR=5.6						
VNDA				LR	LR	17 53 30.7	
	comp=Z,458nm,18.1s,baz=310,slow=36						
VNDA	**Vanda**	**80.80**	**169**	*e*P	**P**	**17 16 28.2**	**+1.0**
VNDA				*e*pP	**P**	**17 16 28.4**	**+1.3**
MLR	**Muntele Rosu**	**81.54**	**317**	*e*P	**P**	**17 16 32.3**	**+0.4**
	comp=Z,123nm,1.2s						
MLR				LR	LR		
	comp=Z,800nm,19.0s						
MLR	**Muntele Rosu**	**81.54**	**317**	*e*P	**P**	**17 16 32.3**	**+0.4**
MLR				pmax	pmax		
	comp=Z,123nm,1.2s						
MLR				MLR	MLR		
	comp=Z,800nm,19.0s						
SBA	**Scott Base**	**81.89**	**169**	*e*P	**P**	**17 16 34.1**	**+1.1**
	comp=Z,62nm,1.4s						
SBA	**Scott Base**	**81.89**	**169**	*e*P	**P**	**17 16 34.1**	**+1.1**
SBA				pmax	pmax		
	comp=Z,62nm,1.4s						
TSUM	**Tsumeb**	**82.16**	**251**	*e*P	**P**	**17 16 34.1**	**-1.6**
	comp=Z,16nm,1.4s						
TSUM				LR	LR		
	comp=Z,1µm,21.0s						
BUR08	**Bucovina Ar. S**	**82.53**	**319**	*e*P	**P**	**17 16 36.7**	**-0.3**
	comp=Z,44nm,1.1s						
WIN	**Windhoek**	**82.57**	**248**	PFAKE		17 16 50.0	+12
WIN				LR	LR		
	comp=Z,2µm,18.0s						
MICGM	**Minsk**	**82.64**	**326**	*e*P	**P**	**17 16 38.0**	**+0.7**
MICGM				*e*LR	LR	17 57 36.0	
MNK	**Minsk**	**82.64**	**326**	*e*P	**P**	**17 16 38.0**	**+0.7**
SMY	**Shemya**	**82.82**	**36**	*e*P	**P**	**17 16 37.9**	**-0.3**
	comp=Z,196nm,1.5s						
SMY	**Shemya**	**82.82**	**36**	*e*P	**P**	**17 16 37.9**	**-0.3**
SMY				pmax	pmax		
	comp=Z,196nm,1.5s						
VTS	**Vitosha**	**82.83**	**313**	*e*P	**P**	**17 16 39.4**	**+0.6**
	comp=Z,63nm,1.2s						
ITM	**Ithomi**	**82.85**	**308**	*e*P	**P**	**17 16 39.3**	**+0.5**
	comp=Z,88nm,1.3s						
AGG	**Agios Georgios**	**82.85**	**310**	*e*P	**P**	**17 16 40.4**	**+1.6**
	comp=Z,55nm,1.6s						
AGG				LR	LR		
	comp=Z,700nm,20.0s						
LIT	**Litokhoron**	**82.92**	**311**	*e*P	**P**	**17 16 38.7**	**-0.4**
	comp=Z,52nm,1.0s						
LIT				LR	LR		
	comp=Z,500nm,20.0s						
LIT	**Litokhoron**	**82.92**	**311**	*e*P	**P**	**17 16 38.7**	**-0.4**
LIT				pmax	pmax		
	comp=Z,52nm,1.0s						
LIT				MLR	MLR		
	comp=Z,500nm,20.0s						
PUL	**Pulkovo**	**82.97**	**331**	*e*P	**P**	**17 16 39.9**	**+1.0**
NACGM	**Naroch**	**83.36**	**326**	*e*	P	17 16 49.0	+8.0
NACGM				*e*LQ	LQ	17 46 26.0	
NACGM				*e*LR	LR	17 52 06.0	
LVV	**L'vov**	**83.78**	**321**	*e*P	**P**	**17 16 42.3**	**-1.0**
LVV				*e*		17 20 02.5	
LVV				*e*		17 21 48.9	
LVV				*e*S	**S**	**17 26 58.8**	**-5.6**
LVV				MLR	MLR		
	comp=E,100nm,21.0s						
LVV				MLR	MLR		
	comp=Z,200nm,21.0s						
LVV				MLR	MLR		
	comp=N,200nm,19.0s						
IIGN	**Ignalina**	**83.79**	**326**	*e*P	**P**	**17 16 44.3**	**+1.1**
IIGN				IAmb	IAmb	17 16 53.4	
	comp=Z,50nm,1.0s						
IZAR	**Zarasai**	**83.88**	**327**	*e*P	**P**	**17 16 43.9**	**+0.2**
ISAL	**Salakas**	**83.90**	**327**	*e*P	**P**	**17 16 44.7**	**+0.9**
ISAL				IAmb	IAmb	17 16 53.9	
	comp=Z,34nm,1.1s						
LVZ	**Lovozero**	**84.15**	**340**	*e*P	**P**	**17 16 45.0**	**+0.1**
	comp=Z,54nm,1.0s						
LVZ				LR	LR		
	comp=Z,2µm,20.0s						
BILL	**Bilibino**	**84.24**	**20**	*e*P	**P**	**17 16 44.9**	**-0.3**
	comp=Z,33nm,1.2s						
BILL				LR	LR		
	comp=Z,3µm,18.0s						
BILL	**Bilibino**	**84.24**	**20⇓**	*i*P	**P**	**17 16 45.7**	**+0.5**
BILL				*e*		17 20 02.4	
BILL				*e*S	**S**	**17 27 09.7**	**+1.3**
BILL				pmax	pmax		
	comp=Z,21nm,1.2s						
BILL				MLR	MLR		
	comp=Z,3µm,16.0s						
VSU	**Vasula**	**84.34**	**330**	*e*P	**P**	**17 16 45.6**	**-0.3**
VSU				IAmb	IAmb	17 16 54.9	
	comp=Z,170nm,1.0s						
APA	**Apatity**	**84.46**	**339⇓**	*i*P	**P**	**17 16 45.6**	**-0.7**
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,900nm,16.0s						
KWP	**Kalwaria Pacla**	**84.58**	**320**	*e*P	**P**	**17 16 48.5**	**+1.2**
KWP	**Kalwaria Pacla**	**84.58**	**320**	*e*P	**P**	**17 16 48.1**	**+0.8**
	comp=Z,321nm,0.6s						
KWP	**Kalwaria Pacla**	**84.58**	**320**	*e*P	**P**	**17 16 48.1**	**+0.8**
KWP				pmax	pmax		
	comp=Z,321nm,0.6s						
UZH	**Uzhgorod**	**84.65**	**319**	*e*P	**P**	**17 16 48.9**	**+1.2**
UZH				*e*		17 16 57.3	
UZH				*e*		17 17 12.3	
UZH				*e*S	**S**	**17 27 13.1**	**-0.1**
UZH				*e*PS	**PnS**	**17 28 01.3**	**-8.8**
UZH				*e*SS	**SS**	**17 32 47.1**	**+2.1**
KOLS	**Kolonicke sedl**	**84.72**	**320**	*e*P	**P**	**17 16 49.7**	**+1.6**
KOLS				*e*		17 16 58.0	
KOLS				pmax	pmax		
	comp=Z,64nm,1.0s						
KOLS	**Kolonicke sedl**	**84.72**	**320**	*e*P	**P**	**17 16 49.7**	**+1.6**
KOLS				*e*sP	**pP**	**17 16 58.0**	**+0.5**
TIR	**Tirane**	**85.09**	**312**	PFAKE		17 17 00.0	+10
TIR				LR	LR		
	comp=Z,700nm,19.0s						
SUW	**Suwalki**	**85.19**	**325**	*e*P	**P**	**17 16 50.7**	**+0.4**
SUW	**Suwalki**	**85.19**	**325**	*e*P	**P**	**17 16 50.7**	**+0.4**
	comp=Z,290nm,1.1s						
SUW				LR	LR		
	comp=Z,900nm,20.0s						
SUW	**Suwalki**	**85.19**	**325**	*e*P	**P**	**17 16 50.7**	**+0.4**
SUW				pmax	pmax		
	comp=Z,290nm,1.1s						
SUW				MLR	MLR		
	comp=Z,900nm,20.0s						
FIA1	**FINESS Array S**	**85.46**	**332**	*e*P	**P**	**17 16 52.4**	**+0.9**
	comp=Z,69nm,1.2s						
FINES	**FINESS Array B**	**85.46**	**332**	P	**P**	**17 16 52.0**	**+0.5**
	comp=Z,11nm,0.8s,baz=95,slow=6.7,SNR=20						
FINES				LR	LR	17 59 46.9	
	comp=Z,874nm,20.3s,baz=106,slow=39						
FINES	**FINESS Array B**	**85.46**	**332**	*i* P	**P**	**17 16 52.5**	**+1.0**
FINES				pmax	pmax		
	comp=Z,12nm,0.8s						
TTG	**Podgorica**	**85.70**	**313**	*e*P	**P**	**17 16 52.8**	**-0.3**
	comp=Z,32nm,1.0s						
TTG	**Podgorica**	**85.70**	**313**	*e*P	**P**	**17 16 52.8**	**-0.3**
TTG				pmax	pmax		
	comp=Z,32nm,1.0s						
SUF	**Sumiainen**	**85.77**	**334**	P	**P**	**17 16 54.5**	**+1.5**
SUF				pmax	pmax		
	comp=Z,44nm,1.5s						
NIE	**Niedzica**	**86.08**	**320**	*e*P	**P**	**17 16 56.2**	**+1.3**
NIE	**Niedzica**	**86.08**	**320**	*e*P	**P**	**17 16 56.2**	**+1.3**
PSZ	**Piszkesteto**	**86.10**	**318**	*e*P	**P**	**17 16 55.9**	**+0.8**
	comp=Z,35nm,1.2s						
PSZ	**Piszkesteto**	**86.10**	**318**	*e*P	**P**	**17 16 55.9**	**+0.8**
PSZ				pmax	pmax		
	comp=Z,35nm,1.2s						
PSZ	**Piszkesteto**	**86.10**	**318**	*e*P	**P**	**17 16 53.1**	**-2.0**
PSZ				*e*S	**S**	**17 27 29.1**	**+1.3**
BEL	**Belsk**	**86.19**	**322**	*e*P	P	17 17 04.3	+8.9
BEL	**Belsk**	**86.19**	**322**	*e*P	P	17 17 04.3	+9.0
OUL	**Oulu**	**86.51**	**336**	P	**P**	**17 16 58.5**	**+1.9**
OUL				pmax	pmax		
	comp=Z,62nm,1.3s						
OJC	**Ojcow**	**86.53**	**321**	*e*P	**P**	**17 16 58.1**	**+1.1**
OJC	**Ojcow**	**86.53**	**321**	*e*P	**P**	**17 16 58.0**	**+0.9**
	comp=Z,29nm,1.2s						
OJC	**Ojcow**	**86.53**	**321**	*e*P	**P**	**17 16 58.0**	**+0.9**
OJC				pmax	pmax		
	comp=Z,29nm,1.2s						
BUD	**Budapest**	**86.61**	**318⇓**	*e*P	**P**	**17 16 59.1**	**+1.6**
QSPA	**South Pole Qui**	**86.66**	**180**	*e*P	**P**	**17 16 58.5**	**+1.0**
	comp=Z,54nm,1.8s						
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
MORH	**Mrgy, Hungar**	**86.68**	**316⇑**	*e*P	**P**	**17 16 57.1**	**-0.8**
MORH				*e*S	**S**	**17 27 33.1**	**-0.2**
VYHS	**Vyhne**	**86.89**	**319**	*e*P	**P**	**17 17 00.1**	**+1.2**
VYHS				*e*		17 27 13.7	
VYHS				pmax	pmax		
	comp=Z,23nm,1.5s						
VYHS	**Vyhne**	**86.89**	**319**	*e*P	**P**	**17 17 00.1**	**+1.2**
VYHS				*e*sP	**pP**	**17 17 07.9**	**-0.4**
VYHS				*e*		17 27 13.7	
SGF	**Sodankyl**	**86.91**	**338**	P	**P**	**17 17 00.2**	**+1.7**
SGF				pmax	pmax		
	comp=Z,59nm,2.0s						
TIP	**Timpagrande**	**87.16**	**309**	*e*P	**P**	**17 17 01.1**	**+0.6**
	comp=Z,60nm,1.4s						
TIP				LR	LR		
	comp=Z,600nm,21.0s						
TIH	**Tihany**	**87.29**	**317**	*e*P	**P**	**17 17 03.0**	**+2.2**
TIH				*e*S	**S**	**17 27 36.1**	**-3.1**
BLY	**Banja Luka**	**87.51**	**315**	*e*P	**P**	**17 17 03.0**	**+1.1**
	comp=Z,54nm,1.2s						
BLY				LR	LR		
	comp=Z,500nm,20.0s						
OKC	**Ostrava-Krasne**	**87.53**	**320**	*e*P	**P**	**17 17 03.5**	**+1.6**
OKC				*e*S	**S**	**17 27 35.8**	**-5.5**
OKC				MLR	MLR		
	comp=Z,600nm,16.3s						
OKC	**Ostrava-Krasne**	**87.53**	**320**	*e*P	**P**	**17 17 03.5**	**+1.6**
OKC				*e*pP	**pP**	**17 17 11.4**	**+0.1**
OKC				*e*S	**S**	**17 27 35.8**	**-5.5**
OKC				AMS	AMS	18 09 10.0	
	comp=Z,600nm,16.3s						
JAVC	**Velka Javorina**	**87.70**	**319**	*e*P	**P**	**17 17 04.6**	**+1.7**
JAVC				*e*		17 17 12.2	
CEL	**Celeste**	**87.73**	**308**	*e*P	**P**	**17 17 05.4**	**+2.1**
	comp=Z,57nm,1.0s						
ARCES	**ARCESS Array B**	**87.84**	**340**	P	**P**	**17 17 04.2**	**+1.2**
	comp=Z,31nm,1.0s,baz=103,slow=3.9,SNR=24						
ARCES				LR	LR	18 00 46.3	
	comp=Z,2µm,20.5s,baz=102,slow=38						
ARE0	**ARCESS Array S**	**87.84**	**340**	*e*P	**P**	**17 17 04.2**	**+1.1**
	comp=Z,4.1nm,1.1s						
ARE0				LR	LR		
	comp=Z,100nm,20.0s						
MODS	**Modra-Piesok**	**87.90**	**319**	*e*P	**P**	**17 17 04.1**	**+0.3**
MODS				*e*		17 27 17.8	
MODS				pmax	pmax		
	comp=Z,69nm,1.4s						
MODS	**Modra-Piesok**	**87.90**	**319**	*e*P	**P**	**17 17 04.1**	**+0.3**
MODS				*e*sP	**pP**	**17 17 12.1**	**-1.1**
MODS				*e*		17 27 17.8	
MORC	**Moravsky Berou**	**87.91**	**320**	*e*P	**P**	**17 17 04.8**	**+1.0**
	comp=Z,36nm,1.2s						
MORC	**Moravsky Berou**	**87.91**	**320**	*e*P	**P**	**17 17 04.8**	**+1.0**
MORC				pmax	pmax		
	comp=Z,36nm,1.2s						
MORC	**Moravsky Berou**	**87.91**	**320**	*e*P	**P**	**17 17 04.8**	**+1.0**
MORC				*e*		17 17 12.6	
KIWB	**Kanaga Island**	**87.91**	**38**	*e*P	**P**	**17 17 03.8**	**+0.2**
ZST	**Bratislava**	**87.99**	**318**	*e*P	**P**	**17 17 04.4**	**+0.2**
ZST	**Bratislava**	**87.99**	**318**	*e*P	**P**	**17 17 04.4**	**+0.2**
ZST				*e*sP	**pP**	**17 17 11.7**	**-1.9**
BEHE	**Becsehely**	**88.00**	**317⇓**	*e*S	**S**	**17 27 48.1**	**+2.1**
ADK	**Adak**	**88.20**	**38**	*e*P	**P**	**17 17 04.8**	**-0.2**
	comp=Z,144nm,1.4s						
ADK				LR	LR		
	comp=Z,500nm,21.0s						
ADK	**Adak**	**88.20**	**38**	*e*P	**P**	**17 17 04.8**	**-0.2**
ADK				pmax	pmax		
	comp=Z,144nm,1.4s						
ADK				MLR	MLR		
	comp=Z,500nm,21.0s						
SOP	**Sopron**	**88.29**	**318**	*e*P	**P**	**17 17 06.0**	**+0.4**
KOGS	**Kog**	**88.36**	**317**	*i* P	**P**	**17 17 07.2**	**+1.3**
KOGS				*i* S	**S**	**17 27 50.4**	**+1.0**
VRAC	**Vranov**	**88.46**	**319**	*e*P	**P**	**17 17 07.8**	**+1.4**
VRAC				*e*		17 17 15.4	
GKP	**Gorka Klasztor**	**88.55**	**323**	*e*P	**P**	**17 17 08.2**	**+1.5**
GKP	**Gorka Klasztor**	**88.55**	**323**	*e*P	**P**	**17 17 08.2**	**+1.5**
KRUC	**Moravsky**	**88.56**	**319**	P	**P**	**17 17 09.0**	**+2.1**
KRUC				pmax	pmax		
	comp=Z,15nm,1.8s						
KRUC	**Moravsky**	**88.56**	**319**	*e*P	**P**	**17 17 07.6**	**+0.7**
KRUC				*e*		17 17 15.4	
WDD	**Wied Dalam**	**88.59**	**306**	PFAKE		17 17 20.0	+13
WDD				LR	LR		
	comp=Z,700nm,18.0s						
GCIS	**Gornji Cirnik**	**88.72**	**316**	*i* P	**P**	**17 17 09.0**	**+1.3**
GCIS				*i*		17 17 15.9	
GCIS				*i* S	**S**	**17 27 53.3**	**+0.4**
DPC	**Dobruska-Polom**	**88.76**	**320**	*e*P	**P**	**17 17 09.9**	**+2.1**
DPC				*e*S	**S**	**17 27 53.7**	**+0.6**
DPC				MLR	MLR		
	comp=Z,700nm,18.9s						
DPC	**Dobruska-Polom**	**88.76**	**320**	*e*P	**P**	**17 17 09.9**	**+2.1**
DPC				*e*x	x	17 17 17.7	
DPC				*e*S	**S**	**17 27 53.7**	**+0.6**
DPC				AMS	AMS	18 04 40.0	
	comp=Z,700nm,18.9s						
CONA	**Conrad Observa**	**88.79**	**318**	*e*P	**P**	**17 17 08.8**	**+0.8**
	comp=Z,7.3nm,1.3s						
KSP	**Ksiaz**	**88.83**	**321**	*e*P	**P**	**17 17 09.8**	**+1.7**
KSP	**Ksiaz**	**88.83**	**321**	*e*P	**P**	**17 17 09.8**	**+1.7**
OSTC	**Ostas**	**88.85**	**321**	*e*P	**P**	**17 17 09.8**	**+1.6**
OSTC				*e*x	x	17 17 17.9	
OSTC				*e*S	**S**	**17 27 52.7**	**-1.2**
OSTC				AMS	AMS	18 04 30.0	
	comp=Z,900nm,20.3s						
ARSA	**Arzberg**	**88.94**	**317**	*e*PcP	**PcP**	**17 17 10.5**	**+0.3**
	comp=Z,21nm,1.2s,SNR=7.1						
CHVC	**Chvalec**	**88.95**	**321**	*e*P	**P**	**17 17 10.0**	**+1.3**
CHVC				*e*x	x	17 17 18.0	
CHVC				AMS	AMS	18 06 30.0	
	comp=Z,800nm,17.6s						
UPC	**Upice**	**88.97**	**321**	*e*P	**P**	**17 17 10.2**	**+1.4**
UPC				MLR	MLR		
	comp=Z,800nm,17.3s						
UPC	**Upice**	**88.97**	**321**	*e*P	**P**	**17 17 10.2**	**+1.4**
UPC				*e*pP	**pP**	**17 17 18.1**	**-0.1**
UPC				*e*S	S	17 28 11.2	+16
UPC				AMS	AMS	18 04 40.0	
	comp=Z,800nm,17.3s						
TREC	**Trest**	**89.18**	**319**	*e*P	**P**	**17 17 11.6**	**+1.8**
TREC				*e*		17 17 23.5	
TREC				*e*S	**S**	**17 28 00.7**	**+3.6**
TREC				MLR	MLR		
	comp=Z,600nm,21.5s						
TREC	**Trest**	**89.18**	**319**	*e*P	**P**	**17 17 11.6**	**+1.8**
TREC				*e*pP	**pP**	**17 17 19.2**	**0.0**
TREC				*e*x	x	17 17 23.5	
TREC				*e*S	**S**	**17 28 00.7**	**+3.6**
TREC				AMS	AMS	18 09 40.0	
	comp=Z,600nm,21.5s						
SOKA	**Soboth**	**89.22**	**317**	*e*PcP	**P**	**17 17 12.0**	**+1.9**
	comp=Z,32nm,1.4s,SNR=9.6						
LJU	**Ljubljana**	**89.51**	**316**	*e*P	**P**	**17 17 12.8**	**+1.4**
LJU				*i*		17 17 19.5	
LJU				*i* S	**S**	**17 28 00.7**	**+0.5**
LJU				*e*		17 28 15.5	
OBKA	**Obir**	**89.53**	**316**	*e*PcP	**P**	**17 17 13.3**	**+1.7**
	comp=Z,32nm,1.4s						
GOPC	**GO Pecny, Ondr**	**89.69**	**320**	*e*P	**P**	**17 17 14.0**	**+1.8**
GOPC				*e*		17 17 25.3	
GOPC				*e*S	**S**	**17 27 55.7**	**-6.2**
GOPC				MLR	MLR		
	comp=Z,700nm,16.2s						
GOPC	**GO Pecny, Ondr**	**89.69**	**320**	*e*P	**P**	**17 17 14.0**	**+1.8**
GOPC				*e*pP	**pP**	**17 17 21.3**	**-0.3**
GOPC				*e*x	x	17 17 25.3	

GOPC				*e*S	**S**	**17 27 55.7**	**-6.2**
GOPC				AMS	AMS	18 07 10.0	
	comp=Z,700nm,16.2s						
ATKA	**Atka Island**	**89.76**	**38**	*e*P	**P**	**17 17 12.0**	**-0.3**
	comp=Z,100nm,1.3s						
ATKA				LR	LR		
	comp=Z,600nm,20.0s						
CLTB	**Caltabellotta**	**89.78**	**307**	*e*P	**P**	**17 17 14.2**	**+1.2**
	comp=Z,50nm,1.3s						
MOA	**Molln**	**89.85**	**318**	*e*PcP	**P**	**17 17 14.3**	**+1.3**
	comp=Z,20nm,1.8s						
PRU	**Pruhonice**	**89.86**	**320**	*e*P	**P**	**17 17 14.4**	**+1.5**
PRU				*e*S	**S**	**17 28 00.6**	**-2.7**
PRU				MLR	MLR		
	comp=Z,700nm,18.1s						
PRU	**Pruhonice**	**89.86**	**320**	*e*P	**P**	**17 17 14.4**	**+1.5**
PRU				*e*pP	**pP**	**17 17 21.9**	**-0.4**
PRU				*e*S	**S**	**17 28 00.6**	**-2.7**
PRU				AMS	AMS	18 05 20.0	
	comp=Z,700nm,18.1s						
PVCC	**Panska Ves**	**89.89**	**320**	*e*P	**P**	**17 17 15.5**	**+2.4**
PVCC				MLR	MLR		
	comp=Z,700nm,16.9s						
PVCC	**Panska Ves**	**89.89**	**320**	*e*P	**P**	**17 17 15.5**	**+2.4**
PVCC				*e*pP	**pP**	**17 17 22.6**	**+0.1**
PVCC				AMS	AMS	18 08 10.0	
	comp=Z,700nm,16.9s						
AQU	**L'Aquila**	**90.00**	**312**	*e*P	**P**	**17 17 15.3**	**+1.5**
	comp=Z,66nm,1.2s						
AQU				LR	LR		
	comp=Z,400nm,20.0s						
AQU	**L'Aquila**	**90.00**	**312**	*e*P	**P**	**17 17 15.4**	**+1.5**
AQU				pmax	pmax		
	comp=Z,66nm,1.2s						
AQU				MLR	MLR		
	comp=Z,400nm,20.0s						
TRI	**Trieste**	**90.01**	**316**	PFAKE		17 17 30.0	+16
TRI				LR	LR		
	comp=Z,600nm,22.0s						
MYKA	**Terra Mystica**	**90.17**	**317**	*e*PcP	**P**	**17 17 15.9**	**+1.4**
	comp=Z,34nm,1.6s						
GEC2	**GERESS Array S**	**90.31**	**319**	*e*P	**P**	**17 17 16.2**	**+1.0**
	comp=Z,51nm,1.3s						
GEC2				LR	LR		
	comp=Z,900nm,20.0s						
GERES	**GERESS Array B**	**90.31**	**319**	P	**P**	**17 17 16.0**	**+0.8**
	comp=Z,5.3nm,0.9s,baz=99,slow=4.2,SNR=35						
GERES				LR	LR	18 03 07.8	
	comp=Z,462nm,19.6s,baz=90,slow=39						
BRG	**Berggiesshubel**	**90.32**	**321**	*e*P	**P**	**17 17 16.2**	**+1.2**
	comp=Z,27nm,1.4s						
BRG				*i*		17 17 24.2	
	comp=Z,44nm,1.3s						
BRG	**Berggiesshubel**	**90.32**	**321**	S	**S**	**17 28 05.0**	**-2.5**
BRG				SS	**SS**	**17 34 02.0**	**-5.7**
	comp=N,355nm,25.4s						
	comp=E,558nm,16.6s						
	comp=Z,780nm,18.0s						
BRG	**Berggiesshubel**	**90.32**	**321**	*e*P	**P**	**17 17 16.2**	**+1.2**
BRG				S	**S**	**17 28 05.0**	**-2.5**
BRG				SS	**SS**	**17 34 02.0**	**-5.7**
BRG				pmax	pmax		
	comp=Z,27nm,1.4s						
BRG				MLR	MLR		
	comp=N,355nm,25.4s						
BRG				MLR	MLR		
	comp=E,558nm,16.6s						
BRG				MLR	MLR		
	comp=Z,780nm,18.0s						
KBA	**Koelnbreinsper**	**90.41**	**317**	*e*PcP	**P**	**17 17 16.9**	**+1.1**
	comp=Z,9.7nm,1.3s						
KBA	**Koelnbreinsper**	**90.41**	**317**	P	**P**	**17 17 17.8**	**+2.0**
KBA				pmax	pmax		
	comp=Z,11nm,1.3s						
KHC	**Kasperske Hory**	**90.41**	**319**	*e*P	**P**	**17 17 16.2**	**+0.6**
	comp=Z,13nm,1.6s						
KHC				LR	LR		
	comp=Z,300nm,21.0s						
KHC	**Kasperske Hory**	**90.41**	**319**	*e*P	**P**	**17 17 15.7**	**+0.1**
KHC				*e*		17 17 24.7	
KHC				*e*		17 17 35.5	
KHC				*e*S	**S**	**17 28 10.3**	**+1.7**
KHC				MLR	MLR		
	comp=Z,700nm,21.9s						
KHC	**Kasperske Hory**	**90.41**	**319**	*e*P	**P**	**17 17 15.7**	**+0.1**
KHC				*e*pP	**pP**	**17 17 24.7**	**-0.3**
KHC				*e*x	x	17 17 35.5	
KHC				*e*S	**S**	**17 28 10.3**	**+1.7**
KHC				AMS	AMS	18 04 30.0	
	comp=Z,700nm,21.9s						
CLL	**Collm**	**90.94**	**321**	*e*P	**P**	**17 17 18.2**	**+0.3**
	comp=Z,31nm,1.4s						
CLL				LR	LR		
	comp=Z,700nm,21.0s						
CLL	**Collm**	**90.94**	**321**	⇑*i*P	**P**	**17 17 18.7**	**+0.8**
CLL				*i*		17 17 30.5	
CLL				*e*S	**S**	**17 28 14.0**	**+0.8**
CLL				pmax	pmax		
	comp=Z,14nm,1.2s						
CLL				MLR	MLR		
	comp=Z,700nm,21.6s						
CLL	**Collm**	**90.94**	**321**	⇑*i*P	**P**	**17 17 18.7**	**+0.8**
	comp=Z,14nm,1.2s						
CLL				*i* sP	**pP**	**17 17 26.5**	**-0.8**
	comp=Z,24nm,1.2s						
CLL				*i*		17 17 30.5	
CLL				*e*PP	**PP**	**17 20 54.0**	**-0.2**
CLL				*e*PPP	PPP	17 23 00.0	
CLL				*e*(PPPP)		17 24 18.0	
CLL				*e*SKSac	**SKSac**	**17 27 53.0**	**+5.2**
CLL				*e*S	**S**	**17 28 14.0**	**+0.8**
CLL				*e*PS	**PS**	**17 29 24.0**	**-0.7**
CLL				*e*PPS	PPS	17 29 53.0	
CLL				*e*SS	**SS**	**17 34 06.0**	**-11**
CLL				*e*SSS	SSS	17 38 00.0	
CLL				*e*SSSS		17 41 00.0	
CLL				LmV		18 05 00.0	
	comp=Z,700nm,21.6s						
ABTA	**Abfaltersbach**	**90.95**	**317**	*e*P	**P**	**17 17 18.7**	**+0.5**
	comp=Z,12nm,1.2s						
RGN	**Rugen**	**90.99**	**324**	PFAKE		17 17 30.0	+12
RGN				LR	LR		
	comp=Z,900nm,20.0s						
SNAA	**Sanae**	**91.03**	**198**	*e*P	**P**	**17 17 19.9**	**+1.9**
	comp=Z,37nm,1.5s						
SNAA				LR	LR		
	comp=Z,1µm,19.0s						
SNAA	**Sanae**	**91.03**	**198**	*e*P	**P**	**17 17 19.9**	**+1.9**
SNAA				pmax	pmax		
	comp=Z,37nm,1.5s						
SNAA				MLR	MLR		
	comp=Z,1µm,19.0s						
HFS	**Hagfors**	**91.21**	**330**	P	**P**	**17 17 19.4**	**+0.4**
	comp=Z,14nm,1.0s,baz=315,slow=0.8,SNR=7.1						
NKC	**Novy Kostel**	**91.22**	**320**	*e*P	**P**	**17 17 21.5**	**+2.2**
NKC				*e*S	**S**	**17 28 16.8**	**+0.9**
NKC				MLR	MLR		
	comp=Z,600nm,17.1s						
NKC	**Novy Kostel**	**91.22**	**320**	*e*P	**P**	**17 17 21.5**	**+2.2**
NKC				*e*S	**S**	**17 28 16.8**	**+0.9**
NKC				AMS	AMS	18 05 50.0	
	comp=Z,600nm,17.1s						
WTTA	**Wattenberg**	**91.58**	**317**	*e*P	**P**	**17 17 21.6**	**+0.3**
	comp=Z,18nm,1.2s,SNR=5.2						
WATA	**Walderalm**	**91.63**	**317**	PcP	**P**	**17 17 22.0**	**+0.5**
	comp=Z,18nm,1.1s						
GRB1	**Grafenberg Arr**	**91.69**	**319**	P	**P**	**17 17 24.1**	**+2.6**
GRB1				pmax	pmax		
	comp=Z,47nm,1.2s						
MOX	**Moxa**	**91.78**	**320**	P	**P**	**17 17 24.1**	**+2.3**
MOX				pmax	pmax		
	comp=Z,14nm,1.9s						
SQTA	**Sankt Quirin**	**91.87**	**317**	*e*P	**P**	**17 17 22.9**	**+0.4**
	comp=Z,11nm,1.0s						
MOTA	**Moosalm**	**91.95**	**317**	*e*P	**P**	**17 17 23.3**	**+0.3**
	comp=Z,24nm,1.1s						
GRA1	**Grafenberg Arr**	**91.98**	**319**	PFAKE		17 17 30.0	+7.2
GRA1				LR	LR		
	comp=Z,700nm,18.0s						
SPA0	**Spitsbergen Ar**	**92.00**	**348**	*e*P	**P**	**17 17 23.4**	**+1.1**
	comp=Z,91nm,1.3s						
SPITS	**Spitsbergen Ar**	**92.00**	**348**	P	**P**	**17 17 21.6**	**-0.7**
	comp=Z,34nm,1.0s,baz=76,slow=6.1,SNR=5.6						
GAMB	**Gambell**	**92.01**	**26**	PFAKE		17 17 30.0	+7.5
GAMB				LR	LR		
	comp=Z,1µm,19.0s						
RETA	**Reutte**	**92.19**	**317**	*e*PcP	**P**	**17 17 24.8**	**+0.9**
	comp=Z,23nm,1.2s,SNR=6.9						
FETA	**Feichten**	**92.19**	**317**	*i* PcP	**P**	**17 17 25.4**	**+1.4**
	comp=Z,24nm,1.2s						
VLC	**Villacollemand**	**92.31**	**314**	PFAKE		17 17 40.0	+16
VLC				LR	LR		
	comp=Z,500nm,20.0s						
NB2	**NORSAR Subarra**	**92.49**	**331**	P	**P**	**17 17 25.4**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=93,slow=4.8						
NOA	**NORSAR Array B**	**92.49**	**331**	P	**P**	**17 17 25.5**	**+0.5**
	comp=Z,6.0nm,1.0s,baz=93,slow=4.7,SNR=6.7						
NOA				LR	LR	18 04 50.1	
	comp=Z,368nm,18.1s,baz=80,slow=39						
FUORN	**Ofenpass-Fuorn**	**92.49**	**316**	PFAKE		17 17 40.0	+14
FUORN				LR	LR		
	comp=Z,700nm,21.0s						
DAVA	**Damuels**	**92.78**	**317**	*e*PcP	**P**	**17 17 27.4**	**+0.7**
	comp=Z,19nm,1.3s,SNR=6.7						
KEST	**Kesra**	**92.79**	**305**	P	**P**	**17 17 28.3**	**+1.3**
	comp=Z,12nm,1.0s,baz=19,slow=1.1,SNR=10						
KEST	**Kesra**	**92.79**	**305**	*e*P	**P**	**17 17 28.1**	**+1.2**
	comp=Z,40nm,1.1s						
KEST				LR	LR		
	comp=Z,1µm,21.0s						
KBS	**Kingsbay**	**92.94**	**349**	PFAKE		17 17 40.0	+13
KBS				LR	LR		
	comp=Z,1µm,20.0s						
NIKH	**Nikolski High**	**93.06**	**37**	*e*P	**P**	**17 17 27.1**	**-0.6**
	comp=Z,71nm,1.0s						
NIKH				LR	LR		
	comp=Z,300nm,21.0s						
TUE	**Stuetta**	**93.12**	**316**	PFAKE		17 17 40.0	+12
TUE				LR	LR		
	comp=Z,600nm,21.0s						
STU	**Stuttgart**	**93.28**	**319**	PFAKE		17 17 40.0	+11
STU				LR	LR		
	comp=Z,700nm,20.0s						
TNS	**Taunus Mts**	**93.79**	**320**	P	**P**	**17 17 33.9**	**+2.7**
TNS				pmax	pmax		
	comp=Z,19nm,1.0s						
SENIN	**Lac Senin/Sane**	**94.53**	**316**	PFAKE		17 17 50.0	+15
SENIN				LR	LR		
	comp=Z,700nm,22.0s						
ECH	**Echery**	**94.63**	**318**	*e*P	**P**	**17 17 34.4**	**-0.7**
	comp=Z,7.2nm,1.1s						
ECH	**Echery**	**94.63**	**318**	*e*P	**P**	**17 17 34.4**	**-0.7**
ECH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ANM	**Nome**	**94.79**	**26**	PFAKE		17 17 50.0	+15
ANM				LR	LR		
	comp=Z,1µm,18.0s						
BNI	**Bardonecchia**	**94.97**	**315**	PFAKE		17 17 50.0	+13
BNI				LR	LR		
	comp=Z,500nm,21.0s						
WLF	**Walferdange**	**95.27**	**319**	PFAKE		17 17 50.0	+12
WLF				LR	LR		
	comp=Z,4µm,19.0s						
RDOG	**Red Dog Mine**	**95.56**	**22**	PFAKE		17 17 50.0	+11
RDOG				LR	LR		
	comp=Z,2µm,19.0s						
TAM	**Tamanrasset**	**95.78**	**292**	PFAKE		17 17 50.0	+8.9
TAM				LR	LR		
	comp=Z,800nm,19.0s						
FALS	**False Pass**	**96.25**	**35**	PFAKE		17 17 50.0	+7.8
FALS				LR	LR		
	comp=Z,600nm,20.0s						
UCC	**Uccle**	**96.39**	**321**	PFAKE		17 17 50.0	+7.0
UCC				LR	LR		
	comp=Z,800nm,22.0s						
SSB	**Saint Sauveur**	**96.48**	**315**	PFAKE		17 18 00.0	+16
SSB				LR	LR		
	comp=Z,400nm,20.0s						
SDPT	**Sand Point**	**97.90**	**35**	PFAKE		17 18 00.0	+10
SDPT				LR	LR		
	comp=Z,800nm,19.0s						
CLF	**Chambon-Foret**	**97.91**	**318**	PFAKE		17 18 00.0	+10
CLF				LR	LR		
	comp=Z,800nm,18.0s						
CHGN	**Chignik**	**98.94**	**34**	PFAKE		17 18 10.0	+16
CHGN				LR	LR		
	comp=Z,600nm,20.0s						
TTA	**Tatalina**	**99.10**	**27**	PFAKE		17 18 10.0	+15
TTA				LR	LR		
	comp=Z,1µm,19.0s						
TOC2	**Torodi Ar. Sit**	**99.21**	**283**	PFAKE		17 18 10.0	+14
TOC2				LR	LR		
	comp=Z,800nm,22.0s						
TOC3	**Torodi Ar. Sit**	**99.21**	**283**	PFAKE		17 18 10.0	+14
TOC3				LR	LR		
	comp=Z,600nm,19.0s						
TOB2	**Torodi Ar. Sit**	**99.22**	**283**	PFAKE		17 18 10.0	+13
TOB2				LR	LR		
	comp=Z,700nm,20.0s						
TOB3	**Torodi Ar. Sit**	**99.23**	**283**	PFAKE		17 18 10.0	+13
TOB3				LR	LR		
	comp=Z,600nm,20.0s						
TOC1	**Torodi Ar. Sit**	**99.23**	**283**	PFAKE		17 18 10.0	+13
TOC1				LR	LR		
	comp=Z,900nm,22.0s						
TOA2	**Torodi Ar. Sit**	**99.23**	**283**	PFAKE		17 18 10.0	+13
TOA2				LR	LR		
	comp=Z,900nm,20.0s						
TOC4	**Torodi Ar. Sit**	**99.23**	**283**	PFAKE		17 18 10.0	+13
TOC4				LR	LR		
	comp=Z,600nm,20.0s						
TOA0	**Torodi Ar. Sit**	**99.23**	**283**	PFAKE		17 18 10.0	+13
TOA0				LR	LR		
	comp=Z,600nm,20.0s						
TORD	**Torodi Ar. Bea**	**99.23**	**283**	P	**Pdif**	**17 17 57.1**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=116,slow=3.4,SNR=2.3						
TORD				LR	LR	17 58 37.2	
	comp=Z,574nm,21.9s,baz=5.0,slow=33						
TOA1	**Torodi Ar. Sit**	**99.24**	**283**	PFAKE		17 18 10.0	+13
TOA1				LR	LR		
	comp=Z,600nm,20.0s						
TOB4	**Torodi Ar. Sit**	**99.25**	**283**	PFAKE		17 18 10.0	+13
TOB4				LR	LR		
	comp=Z,600nm,20.0s						
TOB5	**Torodi Ar. Sit**	**99.25**	**283**	PFAKE		17 18 10.0	+13
TOB5				LR	LR		
	comp=Z,600nm,20.0s						
TOC7	**Torodi Ar. Sit**	**99.25**	**283**	PFAKE		17 18 10.0	+13
TOC7				LR	LR		
	comp=Z,600nm,20.0s						
TOC5	**Torodi Ar. Sit**	**99.25**	**283**	PFAKE		17 18 10.0	+13
TOC5				LR	LR		
	comp=Z,700nm,20.0s						
SVW2	**Sparrevohn**	**99.64**	**29**	PFAKE		17 18 10.0	+13
SVW2				LR	LR		
	comp=Z,1µm,20.0s						
DAG	**Danmarks Havn**	**99.65**	**348**	P	**Pdif**	**17 17 57.3**	**+0.2**
DAG				pmax	pmax		
	comp=Z,11nm,1.3s						
TOLK	**Toolik Lake Re**	**100.29**	**20**	PFAKE		17 18 10.0	+10
TOLK				LR	LR		
	comp=Z,2µm,19.0s						
TOLK	**Toolik Lake Re**	**100.29**	**20**	P	**Pdif**	**17 18 00.9**	**+0.8**
	baz=288						
EKA	**Eskdalemuir Ar**	**100.43**	**326**	P	**Pdif**	**17 18 00.3**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=72,slow=4.6,SNR=3.0						
EKA				PP	**PP**	**17 22 07.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=104,slow=7.0,SNR=3.9						
ESK	**Eskdalemuir**	**100.46**	**326**	PFAKE		17 18 10.0	+8.9
ESK				LR	LR		
	comp=Z,800nm,22.0s						
CAST	**Castle Rocks**	**100.74**	**26**	PFAKE		17 18 10.0	+7.7
CAST				LR	LR		
	comp=Z,900nm,22.0s						
PPLA	**Purkeypile**	**100.82**	**26**	PFAKE		17 18 10.0	+7.2
PPLA				LR	LR		
	comp=Z,1µm,20.0s						
MLY	**Manley**	**100.89**	**24**	*e*Pdif	**Pdif**	**17 18 03.2**	**+0.3**
MLY				LR	LR		
	comp=Z,900nm,19.0s						
BPAW	**Bear Paw Mtn.**	**101.03**	**25**	*e*Pdif	**Pdif**	**17 18 03.4**	**-0.1**
BPAW				LR	LR		
	comp=Z,900nm,19.0s						
KTH	**Kantishna Hill**	**101.21**	**26**	PFAKE		17 18 20.0	+16
KTH				LR	LR		
	comp=Z,800nm,20.0s						
OHAK	**Old Harbor**	**101.57**	**32**	PFAKE		17 18 20.0	+14
OHAK				LR	LR		
	comp=Z,2µm,18.0s						
BWN	**Browne**	**101.66**	**25**	PFAKE		17 18 20.0	+14
BWN				LR	LR		
	comp=Z,800nm,20.0s						
KDAK	**Kodiak Island**	**101.82**	**32**	PFAKE		17 18 20.0	+13
KDAK				LR	LR		
	comp=Z,1µm,21.0s						
HOM	**Homer**	**101.86**	**30**	PFAKE		17 18 20.0	+13
HOM				LR	LR		
	comp=Z,900nm,20.0s						
MCK	**McKinley**	**102.01**	**25**	PFAKE		17 18 20.0	+12
MCK				LR	LR		
	comp=Z,900nm,19.0s						
CNPM	**China Poot**	**102.10**	**30**	PFAKE		17 18 20.0	+12
CNPM				LR	LR		
	comp=Z,900nm,20.0s						
COLA	**College**	**102.11**	**24**	PFAKE		17 18 20.0	+12
COLA				LR	LR		
	comp=Z,900nm,19.0s						
WRH	**Wood River Hil**	**102.14**	**24**	PFAKE		17 18 20.0	+12
WRH				LR	LR		
	comp=Z,800nm,20.0s						
RND	**Reindeer**	**102.14**	**26**	PFAKE		17 18 20.0	+11
RND				LR	LR		
	comp=Z,1µm,21.0s						
CCB	**Clear Creek Bu**	**102.20**	**24**	PFAKE		17 18 20.0	+11
CCB				LR	LR		
	comp=Z,800nm,21.0s						
BRLK	**Bradley Lake**	**102.21**	**29**	PFAKE		17 18 20.0	+11
BRLK				LR	LR		
	comp=Z,1µm,19.0s						
ILAR	**Eielson Array**	**102.53**	**24**	P	**Pdif**	**17 18 09.2**	**-1.0**
	comp=Z,0.6nm,1.0s,baz=290,slow=5.8,SNR=5.1						
ILAR				PP	**PP**	**17 22 23.7**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=275,slow=7.1,SNR=5.0						
PMR	**Palmer**	**102.55**	**27**	PFAKE		17 18 20.0	+10
PMR				LR	LR		
	comp=Z,1µm,18.0s						
FYU	**Fort Yukon**	**102.55**	**22**	PFAKE		17 18 20.0	+10
FYU				LR	LR		
	comp=Z,1µm,19.0s						
HDA	**Harding Lake**	**102.63**	**24**	PFAKE		17 18 20.0	+9.4
HDA				LR	LR		
	comp=Z,1µm,20.0s						
DSB	**Dublin**	**102.67**	**324**	PFAKE		17 18 20.0	+9.0
DSB				LR	LR		
	comp=Z,700nm,21.0s						
PRP	**Porcupine Dome**	**102.81**	**23**	PFAKE		17 18 20.0	+8.4
PRP				LR	LR		
	comp=Z,2µm,20.0s						
SEW	**Seward**	**102.81**	**29**	PFAKE		17 18 20.0	+8.5
SEW				LR	LR		
	comp=Z,900nm,21.0s						
SML	**Sawmill**	**102.85**	**27**	PFAKE		17 18 20.0	+8.3
SML				LR	LR		
	comp=Z,800nm,20.0s						
DHY	**Denali Highway**	**102.88**	**26**	PFAKE		17 18 20.0	+8.0
DHY				LR	LR		
	comp=Z,800nm,21.0s						
ESLA	**Sonseca Array**	**103.17**	**310**	PFAKE		17 18 30.0	+16
ESLA				LR	LR		
	comp=Z,400nm,21.0s						
SCM	**Sheep Creek Mo**	**103.29**	**27**	PFAKE		17 18 30.0	+16
SCM				LR	LR		
	comp=Z,1µm,20.0s						
SCO	**Scoresbysund**	**103.52**	**343**	PFAKE		17 18 30.0	+16
SCO				LR	LR		
	comp=Z,1µm,22.0s						
RIDG	**Independent Ri**	**103.72**	**25**	PFAKE		17 18 30.0	+14
RIDG				LR	LR		
	comp=Z,800nm,20.0s						
PAX	**Paxson**	**103.73**	**25**	PFAKE		17 18 30.0	+14
PAX				LR	LR		
	comp=Z,900nm,19.0s						
SCRK	**Sand Creek**	**103.99**	**24**	PFAKE		17 18 30.0	+13
SCRK				LR	LR		
	comp=Z,800nm,20.0s						
DOT	**Dot Lake**	**104.08**	**25**	PFAKE		17 18 30.0	+13
DOT				LR	LR		
	comp=Z,600nm,18.0s						
EYAK	**Cordova Ski Ar**	**104.43**	**28**	PFAKE		17 18 30.0	+11
EYAK				LR	LR		
	comp=Z,1µm,19.0s						
MENT	**Mentasta**	**104.49**	**25**	PFAKE		17 18 30.0	+11
MENT				LR	LR		
	comp=Z,1µm,21.0s						
EGAK	**Eagle**	**104.80**	**23**	PFAKE		17 18 30.0	+10
EGAK				LR	LR		
	comp=Z,1µm,21.0s						
HMT	**Hamilton**	**105.20**	**28**	PFAKE		17 22 50.0	+14
HMT				LR	LR		
	comp=Z,1µm,19.0s						
EPYK	**Eagle Plains**	**105.72**	**21**	PFAKE		17 22 50.0	+13
EPYK				LR	LR		
	comp=Z,1µm,18.0s						
INK	**Inuvik**	**105.77**	**18**	PFAKE		17 22 50.0	+13
INK				LR	LR		
	comp=Z,1µm,20.0s						
MTE	**Manteigas**	**105.80**	**311**	PFAKE		17 22 50.0	+12
MTE				LR	LR		
	comp=Z,500nm,20.0s						
DAWY	**Dawson**	**105.80**	**23**	PFAKE		17 22 50.0	+13
DAWY				LR	LR		
	comp=Z,1µm,20.0s						
BALM	**Baldy**	**105.82**	**27**	PFAKE		17 22 50.0	+12
BALM				LR	LR		
	comp=Z,900nm,20.0s						
BORG	**Borgarnes**	**106.09**	**338**	PFAKE		17 22 50.0	+12
BORG				LR	LR		
	comp=Z,600nm,20.0s						
PVAQ	**Vaqueiros**	**106.39**	**308**	PFAKE		17 22 50.0	+11
PVAQ				LR	LR		
	comp=Z,600nm,18.0s						
TULEG	**Thule**	**106.60**	**357**	PFAKE		17 22 50.0	+12
TULEG				LR	LR		
	comp=Z,1µm,20.0s						
TBI	**Tubuai**	**107.04**	**115**	*e*Sdif	Sdif	17 30 26.8	-5.0
	comp=Z,386nm,26.5s						
TBI	**Tubuai**	**107.04**	**115**	*e*LR	LR	17 53 44.5	
	comp=Z,1µm,23.0s						
PCA	**Pinnacle**	**107.14**	**27**	PFAKE		17 22 50.0	+10
PCA				LR	LR		
	comp=Z,900nm,20.0s						
PFVI	**Vila Bisbo**	**107.31**	**308**	PFAKE		17 22 50.0	+9.1
PFVI				LR	LR		
	comp=Z,500nm,20.0s						
BCPM	**Bancas Point**	**107.48**	**27**	PFAKE		17 22 50.0	+9.5
BCPM				LR	LR		
	comp=Z,800nm,20.0s						
PPT2	**Papeete2**	**107.97**	**110**	*e*Sdif	Sdif	17 30 26.2	-14
	comp=Z,464nm,25.0s						
PPT2	**Papeete2**	**107.97**	**110**	*e*LR	LR	17 54 10.9	
	comp=Z,972nm,24.2s						
RES	**Resolute Bay**	**108.14**	**4**	PFAKE		17 22 50.0	+8.7
RES				LR	LR		
	comp=Z,1µm,21.0s						
WHY	**Whitehorse**	**109.26**	**25**	PFAKE		17 23 00.0	+16
WHY				LR	LR		
	comp=Z,700nm,19.0s						
SKAG	**Skagway**	**109.65**	**27**	PFAKE		17 23 00.0	+15
SKAG				LR	LR		
	comp=Z,1µm,21.0s						
BESE	**Bessie Mountai**	**110.30**	**27**	PFAKE		17 23 00.0	+14
BESE				LR	LR		
	comp=Z,1µm,21.0s						
JIS	**Juneau Island**	**110.66**	**27**	PFAKE		17 23 00.0	+14
JIS				LR	LR		
	comp=Z,1µm,19.0s						
ANGG	**Ammassalik, Gr**	**111.13**	**343**	PFAKE		17 23 00.0	+13
ANGG				LR	LR		
	comp=Z,900nm,20.0s						
ILULI	**Ilulissat**	**111.53**	**349**	PFAKE		17 23 00.0	+12
ILULI				LR	LR		
	comp=Z,1µm,20.0s						
DLBC	**Dease Lake**	**112.53**	**26**	PFAKE		17 23 00.0	+10
DLBC				LR	LR		
	comp=Z,900nm,19.0s						
WRAK	**Wrangell Islan**	**112.55**	**29**	PFAKE		17 23 00.0	+10
WRAK				LR	LR		
	comp=Z,800nm,20.0s						
SFJD	**Kangerlussuaq**	**113.34**	**348**	PFAKE		17 23 00.0	+8.7
SFJD				LR	LR		
	comp=Z,1µm,21.0s						
YKA	**Yellowknife Ar**	**115.50**	**17**	PKP	**PKPdf**	**17 22 55.7**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=314,slow=2.0,SNR=8.3						
YKA				PP	**PP**	**17 23 56.7**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=324,slow=6.4,SNR=6.8						
NRS	**Narsarsuaq**	**116.79**	**342**	PFAKE		17 23 10.0	+12
NRS				LR	LR		
	comp=Z,1µm,19.0s						

BBB	**Bella Bella**	**116.89**	**31**	PFAKE		17 23 10.0	+11
BBB				LR	LR		
	comp=Z,500nm,21.0s						
IVI	**Ivigtut**	**117.57**	**343**	PFAKE		17 23 10.0	+10
IVI				LR	LR		
	comp=Z,1µm,19.0s						
LLLB	**Lillooet**	**120.98**	**30**	PFAKE		17 23 20.0	+13
LLLB				LR	LR		
	comp=Z,800nm,18.0s						
PGC	**Sidney**	**121.35**	**33**	PFAKE		17 23 20.0	+13
PGC				LR	LR		
	comp=Z,700nm,19.0s						
A04D	**Lummi Island**	**121.71**	**32**	P	**PKiKP**	**17 23 08.8**	**+0.7**
	baz=307						
NLWA	**Neilton Lookou**	**121.85**	**34**	PFAKE		17 23 20.0	+11
NLWA				LR	LR		
	comp=Z,600nm,19.0s						
D03D	**Eldon**	**122.20**	**33**	P	**PKiKP**	**17 23 10.1**	**+0.9**
	baz=306						
B05A	**Bryant**	**122.31**	**32**	P	**PKiKP**	**17 23 09.9**	**+0.6**
	baz=307						
E03A	**Lebam**	**122.50**	**35**	PFAKE		17 23 20.0	+10
E03A				LR	LR		
	comp=Z,500nm,20.0s						
D04E	**Lakebay**	**122.58**	**34**	P	**PKiKP**	**17 23 10.5**	**+0.6**
	baz=306						
D05A	**Enumclaw**	**123.01**	**33**	PFAKE		17 23 20.0	+9.2
D05A				LR	LR		
	comp=Z,600nm,19.0s						
LON	**Longmire**	**123.37**	**34**	PFAKE		17 23 20.0	+8.4
LON				LR	LR		
	comp=Z,300nm,19.0s						
LTY	**Liberty**	**123.68**	**33**	*e*PKPdf	**PKiKP**	**17 23 12.2**	**0.0**
LTY				*e*PP	**PP**	**17 24 49.6**	**-4.3**
LTY				LR	LR		
	comp=Z,600nm,21.0s						
H04D	**Lebanon**	**124.13**	**36**	P	**PKiKP**	**17 23 14.0**	**+0.9**
	baz=304						
J01E	**Myrtle Point**	**124.16**	**38**	P	**PKiKP**	**17 23 14.3**	**+1.1**
	baz=302						
I03D	**Drain, OR**	**124.23**	**37**	P	**PKiKP**	**17 23 14.0**	**+0.7**
	baz=303						
H04A	**Detroit Lake**	**124.36**	**36**	PFAKE		17 23 30.0	+16
H04A				LR	LR		
	comp=Z,400nm,21.0s						
K02D	**Willamette Mer**	**124.58**	**39**	P	**PKiKP**	**17 23 15.1**	**+1.0**
	baz=302						
C09A	**Chrisman Ranch**	**124.59**	**31**	PFAKE		17 23 30.0	+16
C09A				LR	LR		
	comp=Z,600nm,20.0s						
I04A	**Tendick Farm,**	**124.74**	**37**	P	**PKiKP**	**17 23 14.5**	**+0.1**
	baz=304						
D08A	**Wollman Farm,**	**124.74**	**32**	*e*PKPdf	**PKiKP**	**17 23 14.7**	**+0.5**
D08A				*e*PP	**PP**	**17 24 56.7**	**-4.2**
D08A				LR	LR		
	comp=Z,500nm,20.0s						
HAWA	**Hanford**	**124.83**	**33**	*e*PKPdf	**PKiKP**	**17 23 14.8**	**+0.4**
HAWA				LR	LR		
	comp=Z,700nm,19.0s						
NEW	**Newport**	**124.87**	**30**	PKP	**PKPdf**	**17 23 13.9**	**-0.3**
	comp=Z,4.6nm,0.9s,baz=34,slow=3.6,SNR=5.8						
NEW	**Newport**	**124.87**	**30**	*e*PKPdf	**PKiKP**	**17 23 14.9**	**+0.4**
NEW				LR	LR		
	comp=Z,700nm,20.0s						
NEW	**Newport**	**124.87**	**30**	P	**PKiKP**	**17 23 14.8**	**+0.3**
	baz=312						
L02E	**Cave Junction**	**124.90**	**39**	P	**PKiKP**	**17 23 15.2**	**+0.5**
	baz=302						
F07A	**Phinny Hill Vi**	**124.92**	**33**	PFAKE		17 23 30.0	+15
F07A				LR	LR		
	comp=Z,600nm,20.0s						
G06A	**Carlson Farm,**	**124.93**	**34**	*e*PKPdf	**PKiKP**	**17 23 15.6**	**+0.9**
E08A	**Dider Farm, El**	**125.02**	**32**	*e*PKPdf	**PKiKP**	**17 23 15.8**	**+1.0**
E08A				LR	LR		
	comp=Z,600nm,21.0s						
I05D	**Terrebonne, OR**	**125.06**	**36**	P	**PKiKP**	**17 23 15.6**	**+0.6**
	baz=306						
HUMO	**Hull Mountain**	**125.06**	**38**	*e*PKPdf	**PKiKP**	**17 23 16.2**	**+1.2**
HUMO				LR	LR		
	comp=Z,500nm,22.0s						
J04D	**Umpqua Nationa**	**125.23**	**37**	P	**PKiKP**	**17 23 16.0**	**+0.4**
	baz=304						
E09A	**Wood Farm, Sta**	**125.50**	**32**	*e*PKPdf	**PKiKP**	**17 23 16.2**	**+0.5**
E09A				LR	LR		
	comp=Z,700nm,19.0s						
KHMM	**Horse Mountain**	**125.50**	**40**	*e*PKPdf	**PKiKP**	**17 23 16.8**	**+0.6**
FFC	**Flin Flon**	**125.61**	**16**	*e*PKPdf	**PKPdf**	**17 23 15.1**	**-0.2**
FFC				LR	LR		
	comp=Z,1µm,19.0s						
FFC	**Flin Flon**	**125.61**	**16**	*e*PKIKP	**PKPdf**	**17 23 15.1**	**-0.2**
FFC				MLR	MLR		
	comp=Z,1µm,19.0s						
PINE	**Pine Mountain**	**125.61**	**36**	*e*PKPdf	**PKiKP**	**17 23 17.5**	**+1.2**
PINE				LR	LR		
	comp=Z,600nm,20.0s						
L04D	**Klamath Falls**	**125.68**	**38**	P	**PKiKP**	**17 23 16.9**	**+0.5**
	baz=304						
YBH	**Yreka Blue Hor**	**125.69**	**39**	PFAKE		17 23 30.0	+14
YBH				LR	LR		
	comp=Z,500nm,20.0s						
J05D	**Fort Rock, OR**	**125.73**	**37**	P	**PKiKP**	**17 23 17.6**	**+1.1**
	baz=305						
M02C	**Callahan**	**125.78**	**39**	P	**PKiKP**	**17 23 17.6**	**+1.0**
	baz=302						
G08A	**Pilot Rock**	**125.83**	**34**	*e*PKPdf	**PKiKP**	**17 23 17.3**	**+0.7**
G08A				LR	LR		
	comp=Z,600nm,20.0s						
N02D	**Trinity Center**	**126.10**	**40**	P	**PKiKP**	**17 23 18.2**	**+1.0**
	baz=302						
KCPM	**Cahto Peak**	**126.20**	**42**	PFAKE		17 23 30.0	+12
KCPM				LR	LR		
	comp=Z,500nm,19.0s						
M04C	**Macdoel**	**126.21**	**39**	P	**PKiKP**	**17 23 18.1**	**+0.6**
	baz=304						
K05A	**Summer Lake**	**126.26**	**37**	*e*PKPdf	**PKiKP**	**17 23 18.4**	**+0.7**
I07A	**Izee**	**126.27**	**35**	*e*PKPdf	**PKiKP**	**17 23 18.5**	**+1.0**
F10A	**Beach Ranch, E**	**126.33**	**32**	*e*PKPdf	**PKiKP**	**17 23 18.2**	**+0.7**
F10A				LR	LR		
	comp=Z,600nm,21.0s						
WDC	**Whiskeytown Da**	**126.42**	**40**	PFAKE		17 23 30.0	+12
WDC				LR	LR		
	comp=Z,600nm,22.0s						
O02D	**Mt. Diablo Mer**	**126.47**	**41**	P	**PKiKP**	**17 23 18.7**	**+0.7**
	baz=302						
BMO	**Blue Mountains**	**127.02**	**33**	PFAKE		17 23 30.0	+11
BMO				LR	LR		
	comp=Z,600nm,22.0s						
O03E	**Paynes Creek**	**127.05**	**40**	P	**PKiKP**	**17 23 19.0**	**-0.1**
	baz=303						
MOD	**Modoc Plateau**	**127.09**	**38**	*e*PKPdf	**PKiKP**	**17 23 19.8**	**+0.5**
MOD				LR	LR		
	comp=Z,600nm,21.0s						
GDXM	**Geysers**	**127.18**	**42**	*e*PKPdf	**PKiKP**	**17 23 21.5**	**+2.0**
J08A	**Circle Bar Ran**	**127.30**	**35**	*e*PKPdf	**PKiKP**	**17 23 20.2**	**+0.6**
J08A				LR	LR		
	comp=Z,500nm,21.0s						
MSO	**Missoula**	**127.42**	**29**	*e*PKPdf	**PKPdf**	**17 23 18.8**	**-0.4**
MSO				LR	LR		
	comp=Z,1µm,19.0s						
MSO	**Missoula**	**127.42**	**29**	P	**PKPdf**	**17 23 19.4**	**+0.2**
	baz=315						
PLID	**Pearl Lake**	**127.56**	**32**	*e*PKPdf	**PKiKP**	**17 23 20.7**	**+0.5**
SCHQ	**Schefferville**	**127.61**	**351**	PKP	**PKPdf**	**17 23 18.8**	**-0.4**
	comp=Z,9.4nm,1.0s,baz=34,slow=5.2,SNR=5.3						
SCHQ	**Schefferville**	**127.61**	**351**	*e*PKPdf	**PKiKP**	**17 23 19.8**	**+0.1**
SCHQ				LR	LR		
	comp=Z,1µm,22.0s						
ORV	**Oroville**	**127.64**	**41**	PFAKE		17 23 30.0	+10
ORV				LR	LR		
	comp=Z,500nm,20.0s						
WVOR	**Wild Horse Val**	**127.77**	**36**	PFAKE		17 23 30.0	+9.4
WVOR				LR	LR		
	comp=Z,600nm,19.0s						
BEKR	**Beckworth**	**128.21**	**40**	PFAKE		17 23 30.0	+8.4
BEKR				LR	LR		
	comp=Z,600nm,19.0s						
AFDM	**Forest Hills D**	**128.31**	**41**	*e*PKPdf	**PKiKP**	**17 23 21.6**	**0.0**
AFDM				LR	LR		
	comp=Z,400nm,21.0s						
EGMT	**Eagleton**	**128.46**	**26**	PFAKE		17 23 30.0	+8.3
EGMT				LR	LR		
	comp=Z,700nm,20.0s						
EGMT	**Eagleton**	**128.46**	**26**	P	**PKiKP**	**17 23 21.6**	**-0.1**
	baz=320						
HRY	**Holter Researc**	**128.51**	**28**	*e*PKPdf	**PKiKP**	**17 23 22.2**	**+0.3**
RUBR	**Rubicon Trail**	**128.79**	**41**	PFAKE		17 23 30.0	+7.2
RUBR				LR	LR		
	comp=Z,400nm,19.0s						
PAHR	**Pah Rah Range**	**128.92**	**39**	*e*PKPdf	**PKiKP**	**17 23 23.6**	**+0.6**
PAHR				LR	LR		
	comp=Z,500nm,20.0s						
VCNR	**Virginia City**	**128.98**	**40**	PFAKE		17 23 30.0	+6.8
VCNR				LR	LR		
	comp=Z,500nm,19.0s						
DLMT	**Dillon**	**129.12**	**30**	PFAKE		17 23 30.0	+6.8
DLMT				LR	LR		
	comp=Z,600nm,20.0s						
PNTR	**Pine Nut**	**129.13**	**40**	*e*PKPdf	**PKiKP**	**17 23 23.6**	**0.0**
PNTR				LR	LR		
	comp=Z,600nm,20.0s						
CMB	**Columbia Colle**	**129.19**	**42**	*e*PKPdf	**PKiKP**	**17 23 23.4**	**0.0**
CMB				LR	LR		
	comp=Z,402nm,21.0s						
MCMT	**McKenzie Canyo**	**129.37**	**30**	*e*PKPdf	**PKPdf**	**17 23 23.5**	**+0.3**
YERR	**Yerington**	**129.42**	**40**	*e*PKPdf	**PKiKP**	**17 23 24.1**	**0.0**
YERR				LR	LR		
	comp=Z,600nm,20.0s						
BOZ	**Bozeman (W)**	**129.42**	**29**	*e*PKPdf	**PKiKP**	**17 23 24.0**	**+0.2**
BOZ				LR	LR		
	comp=Z,1µm,19.0s						
BOZ	**Bozeman (W)**	**129.42**	**29**	P	**PKiKP**	**17 23 23.9**	**+0.1**
	baz=317						
HLID	**Hailey**	**129.43**	**33**	*e*PKPdf	**PKiKP**	**17 23 23.7**	**-0.2**
HLID				LR	LR		
	comp=Z,600nm,19.0s						
HLID	**Hailey**	**129.43**	**33**	P	**PKiKP**	**17 23 24.2**	**+0.3**
	baz=312						
WAKR	**Walker**	**129.56**	**41**	*e*PKPdf	**PKiKP**	**17 23 25.2**	**+0.8**
WAKR				LR	LR		
	comp=Z,500nm,21.0s						
BMN	**Battle Mountai**	**129.83**	**37**	PFAKE		17 23 40.0	+15
BMN				LR	LR		
	comp=Z,500nm,19.0s						
QLMT	**Earthquake Lak**	**130.07**	**29**	*e*PKPdf	**PKPdf**	**17 23 24.8**	**+0.4**
RYN	**Ryan**	**130.08**	**40**	*e*PKPdf	**PKiKP**	**17 23 25.1**	**-0.3**
RYN				LR	LR		
	comp=Z,600nm,20.0s						
KVN	**Kaiserville**	**130.11**	**39**	*e*PKPdf	**PKiKP**	**17 23 25.8**	**+0.4**
KVN				LR	LR		
	comp=Z,500nm,18.0s						
GCMT	**Greycliff**	**130.20**	**27**	*e*PKPdf	**PKiKP**	**17 23 25.6**	**+0.2**
DGMT	**Dagmar**	**130.31**	**21**	PFAKE		17 23 40.0	+15
DGMT				LR	LR		
	comp=Z,800nm,18.0s						
DGMT	**Dagmar**	**130.31**	**21**	P	**PKiKP**	**17 23 25.3**	**-0.1**
	baz=327						
NVAR	**Mina Array Bea**	**130.34**	**40**	PKP	**PKPdf**	**17 23 25.4**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=273,slow=2.0,SNR=13						
NVAR				SKPab	**SKPab**	**17 26 44.5**	**-1.8**
	comp=Z,5.1nm,1.0s,baz=272,slow=4.6,SNR=7.5						
OMMB	**Old Mammoth Mi**	**130.34**	**41**	*e*PKPdf	**PKiKP**	**17 23 26.3**	**+0.1**
YHH	**Holmes Hill**	**130.39**	**29**	*e*PKPdf	**PKiKP**	**17 23 26.5**	**+0.5**
NV11	**Mina Array Sit**	**130.43**	**40**	*e*PKPdf	**PKiKP**	**17 23 26.0**	**0.0**
PAGB	**Antelope Grade**	**130.50**	**44**	*e*PKPdf	**PKiKP**	**17 23 27.0**	**+0.9**
DRLN	**Deer Lake**	**130.51**	**341**	PFAKE		17 23 40.0	+14
DRLN				LR	LR		
	comp=Z,900nm,21.0s						
LKWY	**Lake**	**130.77**	**29**	PFAKE		17 23 40.0	+13
LKWY				LR	LR		
	comp=Z,1µm,20.0s						
H17A	**Grant Village**	**130.81**	**29**	PFAKE		17 23 40.0	+13
H17A				LR	LR		
	comp=Z,1µm,20.0s						
ELK	**Elko**	**130.82**	**36**	*e*PKPdf	**PKPdf**	**17 23 26.4**	**+0.4**
ELK				LR	LR		
	comp=Z,600nm,18.0s						
RLMT	**Red Lodge**	**130.89**	**28**	PFAKE		17 23 40.0	+13
RLMT				LR	LR		
	comp=Z,800nm,19.0s						
RLMT	**Red Lodge**	**130.89**	**28**	P	**PKiKP**	**17 23 27.3**	**+0.4**
	baz=319						
SMMC	**Simmler**	**130.90**	**45**	P	**PKiKP**	**17 23 27.1**	**+0.1**
	baz=301						
FLWY	**Flagg Ranch**	**130.98**	**30**	PFAKE		17 23 40.0	+13
FLWY				LR	LR		
	comp=Z,500nm,20.0s						
LAO	**LASA Array**	**130.99**	**24**	*e*PKPdf	**PKiKP**	**17 23 27.4**	**+0.5**
LAO				LR	LR		
	comp=Z,900nm,19.0s						
LAO	**LASA Array**	**130.99**	**24**	P	**PKiKP**	**17 23 27.3**	**+0.4**
	baz=324						
IMW	**Indian Meadow**	**130.99**	**30**	PFAKE		17 23 40.0	+13
IMW				LR	LR		
	comp=Z,600nm,18.0s						
FXWY	**Fox Creek**	**131.14**	**30**	*e*PKPdf	**PKiKP**	**17 23 27.1**	**-0.3**
MOOW	**Moose Ponds**	**131.20**	**30**	*e*PKPdf	**PKiKP**	**17 23 27.5**	**-0.1**
MOOW				LR	LR		
	comp=Z,600nm,21.0s						
ULM	**Lac du Bonnet**	**131.24**	**14**	PKP	**PKiKP**	**17 23 26.9**	**-0.2**
	comp=Z,5.3nm,0.7s,baz=336,slow=4.0,SNR=6.3						
ULM	**Lac du Bonnet**	**131.24**	**14**	*e*PKPdf	**PKPdf**	**17 23 26.2**	**+0.1**
ULM				LR	LR		
	comp=Z,1µm,19.0s						
PKM	**Mcpherson Peak**	**131.24**	**45**	P	**PKiKP**	**17 23 28.3**	**+0.4**
	baz=301						
TPAW	**Teton Pass**	**131.28**	**30**	*e*PKPdf	**PKPdf**	**17 23 27.0**	**+0.1**
TPAW				LR	LR		
	comp=Z,600nm,20.0s						
SNOW	**Snow King Moun**	**131.40**	**30**	PFAKE		17 23 40.0	+12
SNOW				LR	LR		
	comp=Z,800nm,20.0s						
HVU	**Hansel Valley**	**131.53**	**33**	*e*PKPdf	**PKiKP**	**17 23 27.8**	**-0.3**
CWC	**Cottonwood Cre**	**131.61**	**42**	P	**PKiKP**	**17 23 28.6**	**+0.1**
	baz=304						
AHID	**Auburn Hatcher**	**131.73**	**31**	PFAKE		17 23 40.0	+11
AHID				LR	LR		
	comp=Z,800nm,19.0s						
ISA	**Isabella, Lake**	**131.76**	**43**	PFAKE		17 23 40.0	+11
ISA				LR	LR		
	comp=Z,600nm,20.0s						
ARVC	**Arvin**	**131.81**	**44**	P	**PKiKP**	**17 23 28.9**	**+0.2**
	baz=302						
BGU	**Big Grassy Mou**	**131.97**	**34**	*e*PKPdf	**PKiKP**	**17 23 28.9**	**-0.2**
DAC	**Darwin (Calif)**	**132.02**	**42**	*e*PKPdf	**PKiKP**	**17 23 29.3**	**-0.1**
R11A	**Troy Canyon, C**	**132.11**	**39**	*e*PKPdf	**PKiKP**	**17 23 29.6**	**+0.1**
R11A				LR	LR		
	comp=Z,500nm,20.0s						
R11A	**Troy Canyon, C**	**132.11**	**39**	P	**PKiKP**	**17 23 30.1**	**+0.6**
	baz=308						
MPMC	**Manual Prospec**	**132.22**	**42**	P	**PKiKP**	**17 23 30.1**	**+0.3**
	baz=304						
HWUT	**Hardware Ranch**	**132.30**	**32**	PFAKE		17 23 40.0	+10
HWUT				LR	LR		
	comp=Z,500nm,19.0s						
MDND	**Maddock**	**132.40**	**18**	PFAKE		17 23 40.0	+10
MDND				LR	LR		
	comp=Z,1µm,20.0s						
LRMC	**Laurel Mtn Rad**	**132.41**	**43**	P	**PKiKP**	**17 23 30.4**	**+0.3**
	baz=304						
BW06	**Boulder Array**	**132.51**	**30**	PFAKE		17 23 40.0	+10
BW06				LR	LR		
	comp=Z,800nm,18.0s						
BW06	**Boulder Array**	**132.51**	**30**	P	**PKPdf**	**17 23 29.7**	**+0.5**
	baz=317						
PDAR	**Pinedale Array**	**132.51**	**30**	PKhKP	PKPpre	17 23 23.9	
	comp=Z,0.4nm,0.7s,baz=29,slow=2.1,SNR=4.6						
PDAR				PP	**PP**	**17 25 51.1**	**-0.9**
	comp=Z,1.3nm,1.0s,baz=338,slow=1.6,SNR=5.3						
EDW2	**Edwards Air Fo**	**132.52**	**44**	P	**PKiKP**	**17 23 30.5**	**+0.3**
	baz=303						
TPNV	**Topopah Spring**	**132.52**	**40**	PFAKE		17 23 40.0	+10
TPNV				LR	LR		
	comp=Z,600nm,20.0s						
TPNV	**Topopah Spring**	**132.52**	**40**	P	**PKPdf**	**17 23 29.7**	**+0.5**
	baz=306						
DUG	**Dugway, Tooele**	**132.58**	**35**	*e*PKPdf	**PKiKP**	**17 23 30.2**	**-0.1**
DUG				LR	LR		
	comp=Z,600nm,20.0s						
DUG	**Dugway, Tooele**	**132.58**	**35**	P	**PKiKP**	**17 23 30.2**	**-0.1**
	baz=312						
TCUT	**Toone Canyon**	**132.73**	**33**	*e*PKPdf	**PKPdf**	**17 23 29.2**	**-0.4**
PSUT	**Pine Spring**	**133.05**	**37**	*e*PKPdf	**PKPdf**	**17 23 28.8**	**-1.4**
AGMN	**Agassiz Nation**	**133.05**	**15**	*e*PKPdf	**PKiKP**	**17 23 30.3**	**-0.5**
AGMN				LR	LR		
	comp=Z,700nm,21.0s						
AGMN	**Agassiz Nation**	**133.05**	**15**	P	**PKiKP**	**17 23 30.9**	**0.0**
	baz=338						
GSC	**Goldstone, Bar**	**133.10**	**43**	*e*PKPdf	**PKiKP**	**17 23 31.1**	**-0.4**
GSC	**Goldstone, Bar**	**133.10**	**43**	P	**PKiKP**	**17 23 31.4**	**-0.1**
	baz=304						
CHGQ	**Chibougamau**	**133.36**	**355**	P	**PKiKP**	**17 23 31.6**	**+0.1**
	baz=7.1						
SHPR	**Sheep Range**	**133.49**	**40**	PFAKE		17 23 40.0	+7.7
SHPR				LR	LR		
	comp=Z,500nm,18.0s						
TUQ	**Turquoise Moun**	**133.62**	**42**	P	**PKiKP**	**17 23 32.4**	**-0.2**
	baz=305						
MURC	**Murrieta**	**133.76**	**45**	P	**PKPdf**	**17 23 32.0**	**+0.5**
	baz=302						
CCUT	**Cedar City**	**133.98**	**38**	*e*PKPdf	**PKiKP**	**17 23 32.7**	**-0.6**
RSSD	**Black Hills**	**133.98**	**24**	*e*PKPpre	PKPpre	17 23 19.1	
RSSD				*e*PKPdf	**PKPdf**	**17 23 32.3**	**+0.5**
RSSD				LR	LR		
	comp=Z,600nm,20.0s						
RSSD	**Black Hills**	**133.98**	**24**	P	**PKPdf**	**17 23 31.8**	**0.0**
	baz=325						
K22A	**Casper**	**134.06**	**28**	PFAKE		17 23 40.0	+6.7
K22A				LR	LR		
	comp=Z,700nm,20.0s						
MSU	**Marysvale**	**134.06**	**36**	*e*PKPpre	PKPpre	17 23 18.0	
MSU				*e*PKPdf	**PKPdf**	**17 23 32.2**	**0.0**
MSU	**Marysvale**	**134.06**	**36**	*e*PKHKP	PKPpre	17 23 18.0	
MSU				*e*		17 23 32.2	
TMUT	**Trail Mountain**	**134.09**	**35**	*e*PKPdf	**PKiKP**	**17 23 33.8**	**+0.1**
GMRC	**Granite Mounta**	**134.17**	**43**	P	**PKiKP**	**17 23 33.3**	**-0.4**
	baz=305						
P17A	**Butcher Ranch,**	**134.24**	**34**	*e*PKPdf	**PKiKP**	**17 23 33.8**	**0.0**
PFO	**Pinyon Flats O**	**134.27**	**44**	*e*PKPdf	**PKiKP**	**17 23 34.4**	**+0.4**
PFO				LR	LR		
	comp=Z,500nm,18.0s						
PFO	**Pinyon Flats O**	**134.27**	**44**	*e*PKIKP	**PKiKP**	**17 23 34.4**	**+0.4**
PFO				MLR	MLR		
	comp=Z,500nm,18.0s						
PFO	**Pinyon Flats O**	**134.27**	**44**	P	**PKiKP**	**17 23 33.4**	**-0.6**
	baz=303						
LDFC	**Landfair**	**134.37**	**42**	PFAKE		17 23 40.0	+5.9
LDFC				LR	LR		
	comp=Z,700nm,21.0s						
EYMN	**Ely**	**134.37**	**11**	*e*PKPpre	PKPpre	17 23 16.9	
EYMN				*e*PKPdf	**PKiKP**	**17 23 33.9**	**+0.3**
EYMN				LR	LR		
	comp=Z,1µm,20.0s						
EYMN	**Ely**	**134.37**	**11**	P	**PKPdf**	**17 23 32.5**	**+0.3**
	baz=343						
MTPU	**Mount Pierson**	**134.37**	**37**	*e*PKPdf	**PKPdf**	**17 23 33.5**	**+0.5**
LSQQ	**Lebel-sur-Quev**	**134.37**	**358**	P	**PKPdf**	**17 23 32.7**	**+0.6**
	baz=3.6						
Q16A	**Castle Valley**	**134.37**	**35**	*e*PKPdf	**PKiKP**	**17 23 34.6**	**+0.5**
BELC	**Belle Mtn. Jos**	**134.38**	**44**	P	**PKiKP**	**17 23 33.7**	**-0.5**
	baz=304						
LCMT	**Little Creek M**	**134.39**	**38**	*e*PKPdf	**PKiKP**	**17 23 34.6**	**+0.5**
RWWY	**Rawlins**	**134.47**	**29**	*e*PKPdf	**PKPdf**	**17 23 33.4**	**+0.5**
RWWY				LR	LR		
	comp=Z,800nm,19.0s						
KNB	**Kanab**	**134.65**	**38**	*e*PKPdf	**PKiKP**	**17 23 36.0**	**+1.4**
PKCU	**Pink Cliffs**	**134.69**	**37**	*e*PKPdf	**PKiKP**	**17 23 35.3**	**+0.3**
MONP2	**Monument Peak**	**134.69**	**45**	P	**PKiKP**	**17 23 34.5**	**-0.4**
	baz=303						
C40A	**Isle Royale Na**	**134.81**	**9**	*e*PKPdf	**PKPdf**	**17 23 32.8**	**-0.1**
C40A				LR	LR		
	comp=Z,800nm,18.0s						
C40A	**Isle Royale Na**	**134.81**	**9**	P	**PKPdf**	**17 23 33.1**	**+0.1**
	baz=346						
BC3	**Big Chuckawall**	**134.95**	**44**	P	**PKiKP**	**17 23 34.7**	**-0.6**
	baz=304						
IKP	**In-Ko-Pah, Jac**	**135.04**	**45**	P	**PKiKP**	**17 23 35.4**	**-0.1**
	baz=303						
O20A	**White River Ci**	**135.11**	**31**	*e*PKPdf	**PKiKP**	**17 23 35.9**	**+0.4**
O20A				LR	LR		
	comp=Z,600nm,21.0s						
O20A	**White River Ci**	**135.11**	**31**	P	**PKiKP**	**17 23 34.9**	**-0.7**
	baz=317						
W13A	**Hualapai Mount**	**135.16**	**41**	*e*PKPdf	**PKiKP**	**17 23 35.5**	**-0.3**
W13A				LR	LR		
	comp=Z,700nm,21.0s						
GBN	**Guysborough**	**135.18**	**342**	PFAKE		17 23 50.0	+15
GBN				LR	LR		
	comp=Z,700nm,21.0s						
U15A	**North Rim**	**135.35**	**38**	*e*PKPdf	**PKPdf**	**17 23 33.5**	**-1.2**
U15A				LR	LR		
	comp=Z,600nm,19.0s						
RCBR	**Riachuelo**	**135.44**	**258**	PFAKE		17 23 50.0	+13
RCBR				LR	LR		
	comp=Z,800nm,20.0s						
Y12C	**Blythe**	**135.53**	**43**	P	**PKiKP**	**17 23 35.9**	**-0.4**
	baz=305						
E38A	**The Farm, Brul**	**135.64**	**12**	*e*PKPpre	PKPpre	17 23 21.7	
E38A				*e*PKPdf	**PKPdf**	**17 23 34.5**	**-0.1**
E38A	**The Farm, Brul**	**135.64**	**12**	P	**PKPdf**	**17 23 35.1**	**+0.5**
	baz=343						
N23A	**Red Feather La**	**135.69**	**29**	*e*PKPdf	**PKiKP**	**17 23 36.2**	**-0.6**
N23A				LR	LR		
	comp=Z,600nm,20.0s						
N23A	**Red Feather La**	**135.69**	**29**	P	**PKPdf**	**17 23 35.6**	**+0.4**
	baz=321						
LMN	**Caledonia Moun**	**135.71**	**345**	*e*PKPdf	**PKPdf**	**17 23 35.5**	**+0.7**
LMN				LR	LR		
	comp=Z,800nm,20.0s						
GLA	**Glamis**	**135.72**	**44**	PFAKE		17 23 50.0	+13
GLA				LR	LR		
	comp=Z,700nm,19.0s						
GLA	**Glamis**	**135.72**	**44**	P	**PKiKP**	**17 23 36.0**	**-0.7**
	baz=304						
D41A	**Chassel**	**135.73**	**9**	*e*PKPdf	**PKPdf**	**17 23 35.1**	**+0.4**
D41A				LR	LR		
	comp=Z,1µm,22.0s						
D41A	**Chassel**	**135.73**	**9**	P	**PKPdf**	**17 23 35.1**	**+0.4**
	baz=347						
PV21	**Cone Mtn., Par**	**135.85**	**34**	*e*PKPdf	**PKPdf**	**17 23 35.0**	**-0.5**
PV23	**Carpenter Ridg**	**135.91**	**34**	*e*PKPpre	PKPpre	17 23 18.9	
PV23				*e*PKPdf	**PKPdf**	**17 23 35.5**	**-0.2**
PV10	**Paradox Valley**	**135.95**	**34**	*e*PKPdf	**PKiKP**	**17 23 37.1**	**-0.3**
PV14	**Lion Creek, Pa**	**135.96**	**34**	*e*PKPdf	**PKPdf**	**17 23 36.4**	**+0.7**
PV22	**Blue Mesa, Par**	**135.98**	**33**	*e*PKPpre	PKPpre	17 23 20.8	
PV22				*e*PKPdf	**PKPdf**	**17 23 35.9**	**+0.2**
PV22				LR	LR		
	comp=Z,800nm,22.0s						
PV04	**Paradox Valley**	**136.01**	**34**	*e*PKPdf	**PKiKP**	**17 23 36.8**	**-0.6**
PV20	**West Nyswonger**	**136.01**	**34**	*e*PKPdf	**PKiKP**	**17 23 36.9**	**-0.5**
PV19	**Morning Glory**	**136.03**	**34**	*e*PKPdf	**PKPdf**	**17 23 35.9**	**0.0**
PV17	**East Wray Mesa**	**136.06**	**34**	*e*PKPdf	**PKiKP**	**17 23 37.0**	**-0.5**
PV16	**Nyswonger Mesa**	**136.06**	**34**	*e*PKPdf	**PKiKP**	**17 23 37.0**	**-0.5**
PV11	**David Mesa, Pa**	**136.10**	**34**	*e*PKPdf	**PKiKP**	**17 23 37.4**	**-0.2**
PV18	**Skein Mesa, Pa**	**136.12**	**34**	*e*PKPpre	PKPpre	17 23 23.5	
PV18				*e*PKPdf	**PKPdf**	**17 23 36.7**	**+0.7**
PV18				LR	LR		
	comp=Z,900nm,19.0s						
PV07	**Paradox Valley**	**136.12**	**33**	*e*PKPdf	**PKPdf**	**17 23 36.7**	**+0.7**
PV12	**Saucer Basin,**	**136.12**	**34**	*e*PKPpre	PKPpre	17 23 21.2	
PV12				*e*PKPdf	**PKiKP**	**17 23 37.1**	**-0.6**
PV12				LR	LR		
	comp=Z,600nm,19.0s						
PV05	**Paradox Valley**	**136.13**	**34**	*e*PKPdf	**PKPdf**	**17 23 36.8**	**+0.8**
PV03	**Paradox Valley**	**136.14**	**34**	*e*PKPdf	**PKiKP**	**17 23 37.5**	**-0.3**
PV03				LR	LR		
	comp=Z,700nm,22.0s						
F38A	**Pierce - Schro**	**136.19**	**12**	P	**PKiKP**	**17 23 36.9**	**-0.4**
	baz=342						
PV13	**Radium Mtn., P**	**136.23**	**34**	*e*PKPdf	**PKPdf**	**17 23 36.0**	**-0.2**
PV02	**Paradox Valley**	**136.24**	**34**	*e*PKPdf	**PKPdf**	**17 23 36.3**	**0.0**
D54A	**Lac Fusel, La**	**136.26**	**357**	P	**PKPdf**	**17 23 36.0**	**+0.3**
	baz=4.2						
D48A	**Paudash Townsh**	**136.27**	**2**	P	**PKPdf**	**17 23 35.8**	**+0.1**
	baz=357						
D47A	**Chapleau**	**136.32**	**3**	P	**PKPdf**	**17 23 36.2**	**+0.4**
	baz=355						
D53A	**Lac Vacive, Po**	**136.37**	**358**	*e*PKPdf	**PKPdf**	**17 23 36.0**	**+0.1**
D53A				LR	LR		
	comp=Z,1µm,19.0s						
D53A	**Lac Vacive, Po**	**136.37**	**358**	P	**PKPdf**	**17 23 36.1**	**+0.1**
	baz=2.7						
PV01	**Paradox Valley**	**136.38**	**34**	*e*PKPdf	**PKPdf**	**17 23 36.3**	**-0.2**
D46A	**Sault St. Mari**	**136.42**	**4**	P	**PKPdf**	**17 23 36.3**	**+0.3**
	baz=354						
F39A	**Loretta**	**136.43**	**11**	P	**PKPdf**	**17 23 36.4**	**+0.4**
	baz=343						
Y14A	**Wickenburg**	**136.44**	**42**	*e*PKPdf	**PKPdf**	**17 23 37.3**	**+0.8**
Y14A				LR	LR		
	comp=Z,600nm,20.0s						
D52A	**ZEK Kipawa Sen**	**136.50**	**359**	P	**PKPdf**	**17 23 36.3**	**+0.2**
	baz=1.6						
WUAZ	**Wupatki**	**136.51**	**39**	*e*PKPdf	**PKiKP**	**17 23 38.3**	**-0.2**
WUAZ				LR	LR		
	comp=Z,600nm,19.0s						
WUAZ	**Wupatki**	**136.51**	**39**	P	**PKiKP**	**17 23 38.3**	**-0.2**
	baz=310						
E44A	**Grand Marais A**	**136.51**	**6**	PFAKE		17 23 50.0	+12

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E44A                                 LR        LR
     comp=Z,1µm,21.0s
E44A Grand Marais A  136.51   6 P        PKiKP   17 23 37.7 -0.2
     baz=351
COWI Conover         136.57  10 ePKPdf   PKiKP   17 23 38.0 -0.1
COWI                            LR       LR
     comp=Z,900nm,20.0s
F40A Park Falls      136.58  11 P        PKPdf   17 23 36.5 +0.1
     baz=345
113A Mohawk Valley,  136.61  44 PFAKE            17 23 50.0  +11
113A                            LR       LR
     comp=Z,400nm,21.0s
E43A Lone Tree Farm  136.62   7 ePKPpre  PKPpre  17 23 22.5
E43A                            ePKPdf   PKPdf   17 23 36.8 +0.4
E43A                            LR       LR
     comp=Z,1µm,20.0s
E43A Lone Tree Farm  136.62   7 P        PKPdf   17 23 36.8 +0.4
     baz=349
SPMN Marine on St.   136.68  14 PFAKE            17 23 50.0  +12
SPMN                            LR       LR
     comp=Z,800nm,20.0s
ISCO Idaho Springs   136.69  30 ePKPdf   PKPdf   17 23 37.8 +0.7
ISCO                            LR       LR
     comp=Z,800nm,21.0s
ISCO Idaho Springs   136.69  30 P        PKPdf   17 23 36.7 -0.4
     baz=320
GGN  Saint George    136.89 347 PFAKE            17 23 50.0  +11
GGN                             LR       LR
     comp=Z,1µm,19.0s
E47A Iron Bridge     136.91   4 P        PKPdf   17 23 37.3 +0.4
     baz=355
E46A Sault Ste Mari  136.92   5 ePKPdf   PKPdf   17 23 36.9  0.0
E46A                            LR       LR
     comp=Z,440µm,18.0s
E46A Sault Ste Mari  136.92   5 P        PKPdf   17 23 37.6 +0.6
     baz=353
E51A G1948 Merrick   136.95 360 P        PKPdf   17 23 37.3 +0.3
     baz=0.1
G39A Holcombe        136.98  12 P        PKPdf   17 23 37.4 +0.3
     baz=343
E54A Lac Daplat, Po  137.00 358 P        PKPdf   17 23 37.1 +0.1
     baz=3.4
ECSD EROS Data Cent  137.01  18 ePKPpre  PKPpre  17 23 26.6
ECSD                            ePKPdf   PKPdf   17 23 37.2 -0.1
ECSD                            LR       LR
     comp=Z,1µm,20.0s
ECSD EROS Data Cent  137.01  18 P        PKPdf   17 23 37.5 +0.3
     baz=335
TRQ  Mont Tremblant  137.04 355 ePKPdf   PKPdf   17 23 38.0 +0.7
E50A Wahnapitae      137.05   1 P        PKPdf   17 23 37.2 +0.1
     baz=358
E53A Dumoine, Ponti  137.07 358 P        PKPdf   17 23 37.5 +0.3
     baz=2.8
MVCO Mesa Verde      137.08  35 ePKPdf   PKiKP   17 23 39.1 -0.6
MVCO                            LR       LR
     comp=Z,800nm,20.0s
MVCO Mesa Verde      137.08  35 P        PKPdf   17 23 37.3 -0.5
     baz=315
X16A Lo Mia Camp, P  137.16  40 ePKPdf   PKPdf   17 23 37.9 -0.2
X16A                            LR       LR
     comp=Z,800nm,18.0s
G40A Rib Lake        137.19  11 ePKPdf   PKiKP   17 23 38.8 -0.6
G40A                            LR       LR
     comp=Z,1µm,19.0s
G40A Rib Lake        137.19  11 P        PKPdf   17 23 37.8 +0.3
     baz=344
E52A Mattawa         137.19 359 P        PKPdf   17 23 37.8 +0.4
     baz=1.3
PKME Peaks-Kenny Pk  137.25 349 PFAKE            17 23 50.0  +11
PKME                            LR       LR
     comp=Z,900nm,20.0s
PKME Peaks-Kenny Pk  137.25 349 P        PKPdf   17 23 38.2 +0.6
     baz=15
EMMW East Machias    137.41 347 PFAKE            17 23 50.0  +10
EMMW                            LR       LR
     comp=Z,900nm,19.0s
OGNE Ogallala        137.43  25 PFAKE            17 23 50.0  +10
OGNE                            LR       LR
     comp=Z,1µm,21.0s
F45A CMU Biological  137.48   6 P        PKPdf   17 23 38.5 +0.5
     baz=351
F51A Arnstein        137.56   0 P        PKPdf   17 23 38.8 +0.7
     baz=359
Q24A Divide          137.57  30 PFAKE            17 23 50.0 +9.3
Q24A                            LR       LR
     comp=Z,800nm,19.0s
Q24A Divide          137.57  30 P        PKPdf   17 23 38.8  0.0
     baz=320
F48A Evansville      137.57   3 P        PKPdf   17 23 38.5 +0.4
     baz=356
S22A 4UR Ranch, Cre  137.61  33 ePKPpre  PKPpre  17 23 29.0
S22A                            ePKPdf   PKPdf   17 23 39.6 +0.8
S22A                            LR       LR
     comp=Z,600nm,19.0s
S22A 4UR Ranch, Cre  137.61  33 P        PKPdf   17 23 38.9  0.0
     baz=317
F52A Sundridge       137.69 360 P        PKPdf   17 23 38.6 +0.2
     baz=0.3
214A Organ Pipe Nat  137.74  44 P        PKiKP   17 23 40.1 -0.8
     baz=306
PEMO Pembroke        137.76 358 P        PKPdf   17 23 38.8 +0.3
     baz=3.4
W18A Petrified Fore  137.78  38 ePKPdf   PKiKP   17 23 41.2 +0.1
W18A                            LR       LR
     comp=Z,500nm,19.0s
W18A Petrified Fore  137.78  38 P        PKiKP   17 23 40.4 -0.8
     baz=312
WVL  Waterville      138.00 349 PFAKE            17 23 50.0 +9.0
WVL                             LR       LR
     comp=Z,800nm,21.0s
X18A Snowflake       138.03  39 PFAKE            17 23 50.0 +8.4
X18A                            LR       LR
     comp=Z,700nm,18.0s
G45A Suttons Bay     138.10   6 PFAKE            17 23 50.0 +8.8
G45A                            LR       LR
     comp=Z,1µm,21.0s
G47A Hillman         138.14   5 P        PKPdf   17 23 40.1 +0.9
     baz=354
G55A Calabogie       138.16 357 P        PKiKP   17 23 40.3 -1.0
     baz=4.2
FRNY Flat Rock       138.31 354 PFAKE            17 23 50.0 +8.4
FRNY                            LR       LR
     comp=Z,700nm,19.0s
SDCO Great Sand Dun  138.31  31 PFAKE            17 23 50.0 +7.7
SDCO                            LR       LR
     comp=Z,700nm,21.0s
SDCO Great Sand Dun  138.31  31 P        PKPdf   17 23 41.2 +1.0
     baz=319
G53A Haliburton      138.35 359 P        PKiKP   17 23 41.0 -0.7
     baz=1.4
H43A Windswept, Lux  138.38   9 PFAKE            17 23 50.0 +8.2
H43A                            LR       LR
     comp=Z,1µm,18.0s
H43A Windswept, Lux  138.38   9 P        PKiKP   17 23 41.4 -0.4
     baz=348
I41A Arkdale         138.42  11 PFAKE            17 23 50.0 +8.1
I41A                            LR       LR
     comp=Z,900nm,22.0s
GLMI Grayling        138.42   5 PFAKE            17 23 50.0 +8.1
GLMI                            LR       LR
     comp=Z,1µm,20.0s
BGNE Belgrade        138.57  21 PFAKE            17 23 50.0 +7.7
BGNE                            LR       LR
     comp=Z,1µm,20.0s
LONY Lake Ozonia     138.63 355 ePKPpre  PKPpre  17 23 29.9
LONY                            LR       LR
     comp=Z,1µm,20.0s
LONY Lake Ozonia     138.63 355 P        PKiKP   17 23 41.8 -0.5
     baz=7.5
H48A Harrisville     138.65   4 PFAKE            17 23 50.0 +7.7
H48A                            LR       LR
     comp=Z,1µm,18.0s
LBNH Lisbon          138.69 352 PFAKE            17 23 50.0 +7.6
LBNH                            LR       LR
     comp=Z,1µm,19.0s
LBNH Lisbon          138.69 352 P        PKiKP   17 23 41.4 -1.1
     baz=12
VT1  Waterbury       138.71 353 PFAKE            17 23 50.0 +7.5
VT1                             LR       LR
     comp=Z,900nm,20.0s
SADO Sadowa          138.71 360 PFAKE            17 23 50.0 +7.6
SADO                            LR       LR
     comp=Z,700nm,20.0s
KSCO Kaye Shedlock’  138.74  28 PFAKE            17 23 50.0 +7.1
KSCO                            LR       LR
     comp=Z,1µm,18.0s
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KSCO Kaye Shedlock’  138.74  28 P        PKPdf   17 23 41.4 +0.7
     baz=324
I42A Draeger Farm,   138.76  10 PFAKE            17 23 50.0 +7.4
I42A                            LR       LR
     comp=Z,1µm,22.0s
I42A Draeger Farm,   138.76  10 P        PKPdf   17 23 41.2 +0.8
     baz=346
H56A Elgin           138.79 356 P        PKiKP   17 23 42.2 -0.4
     baz=5.0
H55A Tweed           138.88 357 P        PKiKP   17 23 41.9 -0.8
     baz=3.6
TUC  Tucson          138.91  42 PFAKE            17 23 50.0 +6.7
TUC                             LR       LR
     comp=Z,800nm,21.0s
DELO Deloro Mine     138.93 358 ePKPdf   PKPdf   17 23 41.0 +0.3
DELO                            LR       LR
     comp=Z,1µm,21.0s
DELO Deloro Mine     138.93 358 P        PKiKP   17 23 42.0 -0.9
     baz=2.9
I45A Fountain        139.02   7 PFAKE            17 23 50.0 +6.9
I45A                            LR       LR
     comp=Z,1µm,18.0s
I47A Gladwin         139.23   5 PFAKE            17 23 50.0 +6.5
I47A                            LR       LR
     comp=Z,1µm,20.0s
I55A Frankford       139.23 358 P        PKiKP   17 23 42.9 -0.6
     baz=2.8
NCB  Newcomb         139.24 354 ePKPdf   PKPdf   17 23 41.3  0.0
NCB                             LR       LR
     comp=Z,900nm,19.0s
HNH  Hanover         139.26 352 PFAKE            17 23 50.0 +6.4
HNH                             LR       LR
     comp=Z,1µm,19.0s
T25A Trinidad        139.34  31 PFAKE            17 23 50.0 +5.7
T25A                            LR       LR
     comp=Z,700nm,18.0s
T25A Trinidad        139.34  31 P        PKiKP   17 23 43.2 -1.1
     baz=320
FFD  Franklin Falls  139.40 351 PFAKE            17 23 50.0 +6.1
FFD                             LR       LR
     comp=Z,1µm,19.0s
JFWS Jewell Farm     139.44  12 ePKPdf   PKPdf   17 23 41.1 -0.6
JFWS                            LR       LR
     comp=Z,1µm,22.0s
JFWS Jewell Farm     139.44  12 P        PKPdf   17 23 42.0 +0.3
     baz=344
I49A Point Hope      139.44   4 PFAKE            17 23 50.0 +6.0
I49A                            LR       LR
     comp=Z,1µm,18.0s
I49A Point Hope      139.44   4 P        PKPdf   17 23 41.9 +0.3
     baz=355
PECO Prince Edward   139.49 357 P        PKPdf   17 23 42.0 +0.3
     baz=3.9
WLVO Wesleyville     139.55 359 P        PKiKP   17 23 43.7 -0.4
     baz=1.8
J45A Montague        139.59   8 PFAKE            17 23 50.0 +5.7
J45A                            LR       LR
     comp=Z,1µm,18.0s
I51A Listowel        139.66   2 P        PKPdf   17 23 42.4 +0.4
     baz=358
TASM ASL Pad, Albuq  139.84  35 P        PKPdf   17 23 42.6 -0.3
     baz=316
TASM ASL Pad, Albuq  139.84  35 P        PKPdf   17 23 42.3 -0.7
     baz=316
ANMO Albuquerque     139.84  35 PKhKP    PKPpre  17 23 36.6
     comp=Z,3.6nm,1.0s,baz=336,slow=7.2,SNR=7.7
ANMO Albuquerque     139.84  35 ePKPpre  PKPpre  17 23 36.5
ANMO                            ePKPdf   PKPdf   17 23 43.6 +0.7
ANMO                            LR       LR
     comp=Z,800nm,20.0s
ANMO Albuquerque     139.84  35 i PKIKP  PKPdf   17 23 42.3 -0.6
ANMO Albuquerque     139.84  35 P        PKPdf   17 23 42.6 -0.3
     baz=316
J47A Sunmer          139.97   6 PFAKE            17 23 50.0 +4.9
J47A                            LR       LR
     comp=Z,1µm,19.0s
J47A Sunmer          139.97   6 P        PKPdf   17 23 42.7  0.0
     baz=352
J49A Marlette        140.00   4 P        PKPdf   17 23 42.5 -0.2
     baz=354
K43A Burlington      140.01  10 PFAKE            17 23 50.0 +4.8
K43A                            LR       LR
     comp=Z,1µm,21.0s
K43A Burlington      140.01  10 P        PKPdf   17 23 42.6 -0.1
     baz=346
J48A Bridge Port     140.01   5 PFAKE            17 23 50.0 +4.9
J48A                            LR       LR
     comp=Z,1µm,21.0s
L40A Anamosa         140.04  14 ePKPdf   PKPdf   17 23 40.7 -2.1
L40A                            LR       LR
     comp=Z,1µm,20.0s
CBKS Cedar Bluff     140.18  25 ePKPpre  PKPpre  17 23 35.6
CBKS                            ePKPdf   PKiKP   17 23 44.5 -1.2
CBKS                            LR       LR
     comp=Z,800nm,20.0s
CBKS Cedar Bluff     140.18  25 ePKHKP   PKPpre  17 23 35.6
CBKS                            e                17 23 44.5
CBKS                            MLR      MLR
     comp=Z,800nm,20.0s
J55A Hilton          140.19 358 PFAKE            17 24 00.0  +15
J55A                            LR       LR
     comp=Z,1µm,20.0s
Y22D IRIS PASSCAL I  140.19  37 PFAKE            17 24 00.0  +14
Y22D                            LR       LR
     comp=Z,700nm,19.0s
J54A Appleton        140.20 359 PFAKE            17 24 00.0  +14
J54A                            LR       LR
     comp=Z,900nm,19.0s
MEDO Medina          140.31 359 PFAKE            17 24 00.0  +14
MEDO                            LR       LR
     comp=Z,900nm,19.0s
HRV  Adam Dziewonsk  140.32 351 PFAKE            17 24 00.0  +14
HRV                             LR       LR
     comp=Z,1µm,19.0s
TRY  Troy            140.40 353 PFAKE            17 24 00.0  +14
TRY                             LR       LR
     comp=Z,900nm,20.0s
WES  Weston          140.40 350 PFAKE            17 24 00.0  +14
WES                             LR       LR
     comp=Z,900nm,18.0s
BCX  Boston College  140.43 350 PFAKE            17 24 00.0  +14
BCX                             LR       LR
     comp=Z,1µm,20.0s
L42A Oliver, Polo    140.43  12 ePKPpre  PKPpre  17 23 35.2
L42A                            ePKPdf   PKPdf   17 23 44.1 +0.6
L42A                            LR       LR
     comp=Z,1µm,22.0s
L42A Oliver, Polo    140.43  12 P        PKPdf   17 23 43.5  0.0
     baz=344
319A Douglas         140.49  42 ePKPpre  PKPpre  17 23 34.4
319A                            ePKPdf   PKPdf   17 23 44.2 +0.1
319A                            LR       LR
     comp=Z,500nm,20.0s
K47A Vermontville    140.52   6 P        PKPdf   17 23 43.5 -0.1
     baz=351
K50A Casco           140.62   4 PFAKE            17 24 00.0  +14
K50A                            LR       LR
     comp=Z,1µm,19.0s
QUA2 Belchertown     140.67 352 PFAKE            17 24 00.0  +13
QUA2                            LR       LR
     comp=Z,1µm,20.0s
121A Cookes Peak, D  140.71  39 P        PKPdf   17 23 44.4 -0.1
     baz=312
K55A Perry           140.73 358 P        PKPdf   17 23 44.2 +0.2
     baz=2.3
HSIG                 140.74  46 PFAKE            17 24 00.0  +13
HSIG                            LR       LR
     comp=Z,500nm,20.0s
BRYW Bryant College  140.90 350 PFAKE            17 24 00.0  +13
BRYW                            LR       LR
     comp=Z,1µm,18.0s
L46A Eue Claire      141.00   8 PFAKE            17 24 00.0  +13
L46A                            LR       LR
     comp=Z,800nm,21.0s
AAM  Ann Arbor       141.01   5 PFAKE            17 24 00.0  +13
AAM                             LR       LR
     comp=Z,1µm,18.0s
BINY Binghamton      141.15 356 ePKPpre  PKPpre  17 23 37.5
BINY                            ePKPdf   PKPdf   17 23 45.0 +0.2
BINY                            LR       LR
     comp=Z,900nm,22.0s
BINY Binghamton      141.15 356 P        PKPdf   17 23 44.9  0.0
     baz=5.7
KSU1 Kansas State U  141.15  21 PFAKE            17 24 00.0  +12
KSU1                            LR       LR
     comp=Z,900nm,21.0s
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L47A Sherwood        141.18   7 P        PKPdf   17 23 45.0 +0.2
     baz=351
L54A Sinclairville   141.25 360 P        PKPdf   17 23 45.2 +0.2
     baz=0.4
L55A Hinsdale        141.29 359 P        PKPdf   17 23 45.2 +0.1
     baz=1.8
L48A N Adams         141.29   6 P        PKPdf   17 23 45.4 +0.3
     baz=352
L50A Kingsville      141.33   4 P        PKPdf   17 23 45.1  0.0
     baz=355
M44A Midewin, Midew  141.34  10 PFAKE            17 24 00.0  +12
M44A                            LR       LR
     comp=Z,700nm,21.0s
M44A Midewin, Midew  141.34  10 P        PKPdf   17 23 45.0 -0.2
     baz=346
KSCT Kent School, K  141.37 353 PFAKE            17 24 00.0  +12
KSCT                            LR       LR
     comp=Z,1µm,18.0s
N41A Harden Midland  141.41  14 PFAKE            17 24 00.0  +12
N41A                            LR       LR
     comp=Z,1µm,20.0s
M46A Old House Fiel  141.59   8 PFAKE            17 24 00.0  +12
M46A                            LR       LR
     comp=Z,1µm,22.0s
YLE  Yale            141.70 352 PFAKE            17 24 00.0  +11
YLE                             LR       LR
     comp=Z,600nm,22.0s
M48A Edgerton        141.72   6 ePKPpre  PKPpre  17 23 40.1
M48A                            LR       LR
     comp=Z,900nm,21.0s
M48A Edgerton        141.72   6 P        PKPdf   17 23 45.8 -0.1
     baz=352
M59A Waymart         141.76 355 P        PKPdf   17 23 45.9 -0.1
     baz=6.6
KSPA Keystone Colle  141.77 355 ePKPpre  PKPpre  17 23 40.6
KSPA                            ePKPdf   PKPdf   17 23 46.7 +0.8
KSPA                            LR       LR
     comp=Z,700nm,19.0s
ALLY Alegheny Colle  141.83   1 PFAKE            17 24 00.0  +11
ALLY                            LR       LR
     comp=Z,800nm,19.0s
HDIL Hopedale        141.90  12 PFAKE            17 24 00.0  +11
HDIL                            LR       LR
     comp=Z,900nm,20.0s
M52A Chesterland     141.91   2 PFAKE            17 24 00.0  +11
M52A                            LR       LR
     comp=Z,1µm,20.0s
M52A Chesterland     141.91   2 P        PKPdf   17 23 46.5 +0.2
     baz=357
M50A Fremont         141.95   4 PFAKE            17 24 00.0  +11
M50A                            LR       LR
     comp=Z,1µm,19.0s
M54A Oil Creek Stat  141.97   0 ePKPpre  PKPpre  17 23 39.3
M54A                            ePKPdf   PKPdf   17 23 46.5 +0.2
M54A                            LR       LR
     comp=Z,700nm,19.0s
M54A Oil Creek Stat  141.97   0 P        PKPdf   17 23 46.1 -0.2
     baz=360
M56A Emporium        141.98 358 P        PKPdf   17 23 46.6 +0.2
     baz=2.2
EPT  El Paso         142.02  39 PFAKE            17 24 00.0  +10
EPT                             LR       LR
     comp=Z,500nm,18.0s
PAL  Palisades       142.13 353 PFAKE            17 24 00.0  +10
PAL                             LR       LR
     comp=Z,1µm,19.0s
ODNJ Ogdensburg      142.13 354 ePKPdf   PKPdf   17 23 46.0 -0.6
ODNJ                            LR       LR
     comp=Z,1µm,20.0s
N47A Urbana          142.20   8 P        PKPdf   17 23 47.1 +0.3
     baz=350
N48A Decatur         142.30   7 P        PKPdf   17 23 46.9  0.0
     baz=351
N49A Columbus Grove  142.33   6 ePKPdf   PKPdf   17 23 43.1 -3.9
N49A                            LR       LR
     comp=Z,1µm,22.0s
N59A State Game Lan  142.41 355 PFAKE            17 24 00.0  +10
N59A                            LR       LR
     comp=Z,900nm,18.0s
N51A Ashland         142.48   3 PFAKE            17 24 00.0  +10
N51A                            LR       LR
     comp=Z,1µm,19.0s
AMTX Amarillo        142.48  31 PFAKE            17 24 00.0 +9.4
AMTX                            LR       LR
     comp=Z,900nm,20.0s
SFIN Lafayette       142.48   9 ePKPdf   PKPdf   17 23 42.8 -4.4
SFIN                            LR       LR
     comp=Z,800nm,22.0s
N54A Moraine State   142.52   1 PFAKE            17 24 00.0  +10
N54A                            LR       LR
     comp=Z,800nm,20.0s
BRNJ Basking Ridge   142.53 354 PFAKE            17 24 00.0  +10
BRNJ                            LR       LR
     comp=Z,900nm,20.0s
U32A Winter Ranch,   142.54  26 ePKPdf   PKPdf   17 23 43.4 -4.1
U32A                            LR       LR
     comp=Z,1µm,18.0s
MSTX Muleshoe        142.62  33 PFAKE            17 24 00.0 +9.1
MSTX                            LR       LR
     comp=Z,800nm,20.0s
N53A Lisbon          142.66   2 PFAKE            17 24 00.0 +9.3
N53A                            LR       LR
     comp=Z,800nm,18.0s
N55A Marion Center   142.70 359 PFAKE            17 24 00.0 +9.2
N55A                            LR       LR
     comp=Z,800nm,20.0s
MNTX Cornudas Mount  142.77  38 ePKPdf   PKPdf   17 23 45.9 -2.2
MNTX                            LR       LR
     comp=Z,800nm,18.0s
SSPA Standing Stone  142.81 358 ePKPdf   PKPdf   17 23 44.9 -3.0
SSPA                            LR       LR
     comp=Z,900nm,18.0s
GDL2 Guadalupe Moun  143.03  36 ePKPdf   PKPdf   17 23 47.1 -1.5
O49A Covington       143.04   6 ePKPdf   PKPbc   17 23 45.0  0.0
O49A                            LR       LR
     comp=Z,1µm,22.0s
ACSO Alum Creek Sta  143.12   4 PFAKE            17 24 00.0 +8.4
ACSO                            LR       LR
     comp=Z,900nm,20.0s
PAGS Pennsylvania G  143.16 356 PFAKE            17 24 00.0 +8.3
PAGS                            LR       LR
     comp=Z,1µm,21.0s
P45A Graceland, Par  143.20  11 ePKPpre  PKPpre  17 23 44.2
P45A                            ePKPdf   PKPdf   17 23 49.1 +0.6
P45A                            LR       LR
     comp=Z,1µm,18.0s
O56A Blue Knob Stat  143.20 359 ePKPdf   PKPbc   17 23 45.0 -0.5
O56A                            LR       LR
     comp=Z,1µm,21.0s
O52A Adamsville      143.31   3 PFAKE            17 24 00.0 +8.0
O52A                            LR       LR
     comp=Z,900nm,20.0s
PSUB Penn St. - Bra  143.36 355 PFAKE            17 24 00.0 +7.9
PSUB                            LR       LR
     comp=Z,800nm,19.0s
MVL  Millersville    143.37 356 PFAKE            17 24 00.0 +7.9
MVL                             LR       LR
     comp=Z,518µm,21.0s
CPUP Villa Florida   143.50 215 PKP      PKPbc   17 23 47.8 +1.1
     comp=Z,1.1nm,0.4s,baz=122,slow=3.7,SNR=5.6
SLM  Saint Louis     143.52  14 PFAKE            17 24 00.0 +7.5
SLM                             LR       LR
     comp=Z,800nm,21.0s
BDFB Brasilia        143.53 238 PKP      PKPbc   17 23 48.3 +1.1
     comp=Z,1.7nm,0.4s,baz=166,slow=5.2,SNR=2.6
P48A Milroy          143.63   8 ePKPdf   PKPbc   17 23 46.7  0.0
P48A                            LR       LR
     comp=Z,1µm,21.0s
BLO  Bloomington     143.75   9 PFAKE            17 24 00.0 +7.0
BLO                             LR       LR
     comp=Z,1µm,21.0s
P52A Corning         143.77   3 P        PKPab   17 23 46.0 -0.4
     baz=356,SNR=7.4
CCM  Cathedral Cave  143.81  16 ePKPdf   PKPab   17 23 46.6  0.0
CCM                             LR       LR
     comp=Z,601nm,19.0s
CCM  Cathedral Cave  143.81  16 ePKIKP   PKPab   17 23 46.6  0.0
CCM                             MLR      MLR
     comp=Z,601nm,19.0s
CCM  Cathedral Cave  143.81  16 P        PKPab   17 23 46.6  0.0
     baz=340
MCWV Mont Chateau    143.82   0 PFAKE            17 24 00.0 +6.9
MCWV                            LR       LR
     comp=Z,500nm,22.0s
MCWV Mont Chateau    143.82   0 P        PKPbc   17 23 47.0 -0.2
     baz=360,SNR=5.9
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P51A	Williamsport	143.86	5	PFAKE		17 24 00.0	+6.8
P51A				LR	LR		
	comp=Z,800nm,20.0s						
P51A	Williamsport	143.86	5	P	PKPab	17 23 46.5	-0.3
	baz=354,SNR=6.9						
P54A	Burton	143.87	1	P	PKPbc	17 23 47.3	-0.1
	baz=358,SNR=16						
OLIL	Olney	143.90	11	*e*PKPdf	PKPab	17 23 47.1	+0.2
OLIL				LR	LR		
	comp=Z,900nm,21.0s						
P58A	Pank, Wackersv	143.93	357	P	PKPbc	17 23 47.3	-0.3
	baz=3.8						
P53A	Whipple	143.96	2	*e*PKPdf	PKPab	17 23 47.2	+0.1
P53A				LR	LR		
	comp=Z,900nm,21.0s						
P53A	Whipple	143.96	2	P	PKPab	17 23 47.2	+0.1
	baz=357,SNR=15						
P57A	Homestead Farm	143.97	358	P	PKPbc	17 23 47.5	-0.1
	baz=2.6,SNR=6.2						
P56A	Dayton Farm, R	143.97	359	P	PKPab	17 23 47.3	+0.2
	baz=1.2,SNR=6.4						
P55A	Reedsville	143.97	0	P	PKPab	17 23 47.5	+0.3
	baz=360,SNR=10						
SDMD	Soldier's Deli	143.98	356	PFAKE		17 24 00.0	+6.6
SDMD				LR	LR		
	comp=Z,500nm,21.0s						
Q47A	Bedord North L	144.00	9	P	PKPbc	17 23 47.8	0.0
	baz=348						
WMOK	Wichita Mounta	144.00	27	*e*PKPdf	**PKPab**	**17 23 47.6**	**+0.2**
WMOK				LR	LR		
	comp=Z,1µm,22.0s						
WMOK	Wichita Mounta	144.00	27	*e*PKIKP	**PKPab**	**17 23 47.6**	**+0.2**
WMOK				MLR	MLR		
	comp=Z,1µm,22.0s						
WMOK	Wichita Mounta	144.00	27	P	**PKPab**	**17 23 47.7**	**+0.2**
	baz=326,SNR=86						
Q48A	North Vernon	144.11	8	P	PKPbc	17 23 48.1	0.0
	baz=349						
Q49A	Aurora	144.15	7	P	PKPbc	17 23 48.2	0.0
	baz=351						
TUL1	Leonard	144.27	23	*e*PKPdf	PKPbc	17 23 49.0	+0.3
TUL1				LR	LR		
	comp=Z,1µm,18.0s						
TUL1	Leonard	144.27	23	P	PKPbc	17 23 48.9	+0.2
	baz=332						
Q51A	Peebles	144.29	5	*e*PKPdf	PKPbc	17 23 48.6	-0.1
Q51A				LR	LR		
	comp=Z,1µm,22.0s						
Q51A	Peebles	144.29	5	P	**PKPab**	**17 23 48.2**	**-0.1**
	baz=354,SNR=27						
R45A	Skylar, Fairfi	144.29	12	P	PKPbc	17 23 48.8	+0.1
	baz=345						
Q60A	Greensboro	144.32	355	P	PKPbc	17 23 48.7	0.0
	baz=6.3						
Q61A	Milford	144.39	354	P	PKPbc	17 23 49.0	0.0
	baz=7.2						
Q50A	Georgetown	144.41	6	P	**PKPab**	**17 23 48.7**	**-0.1**
	baz=352,SNR=13						
Q57A	Strasburg	144.43	358	P	PKPbc	17 23 49.1	0.0
	baz=1.9,SNR=41						
Q52A	Bidwell	144.43	4	P	**PKPab**	**17 23 48.7**	**-0.1**
	baz=355,SNR=19						
Q56A	Snyder Ridge,	144.44	359	P	**PKPab**	**17 23 49.0**	**0.0**
	baz=0.6,SNR=14						
Q54A	Coxs Mills	144.48	2	*e*PKPdf	**PKPab**	**17 23 48.9**	**-0.2**
Q54A				LR	LR		
	comp=Z,800nm,20.0s						
Q54A	Coxs Mills	144.48	2	P	**PKPab**	**17 23 49.1**	**0.0**
	baz=358,SNR=40						
Q55A	Buckhannon	144.48	1	P	PKPbc	17 23 49.3	-0.1
	baz=359,SNR=26						
Q58A	Fox Den Farm,	144.50	357	P	PKPbc	17 23 49.7	+0.4
	baz=3.2,SNR=13						
Q59A	Harwood	144.51	356	P	PKPbc	17 23 49.8	+0.4
	baz=5.0						
R46A	Gibon Southern	144.52	11	P	PKPbc	17 23 49.6	+0.2
	baz=346						
Q53A	Leroy	144.58	3	P	**PKPab**	**17 23 49.4**	**0.0**
	baz=357,SNR=34						
R47A	Wooly Knot Far	144.61	9	P	PKPbc	17 23 49.9	+0.2
	baz=348						
R48A	Northridge Ran	144.61	9	P	PKPbc	17 23 50.3	+0.5
	baz=349						
HHAR	Hobbs	144.62	20	*e*PKPdf	**PKPab**	**17 23 49.7**	**0.0**
HHAR				LR	LR		
	comp=Z,900nm,22.0s						
S44A	Carbondale	144.65	13	P	PKPbc	17 23 50.1	+0.2
	baz=343						
WCI	Wyandotte Cave	144.71	9	*e*PKPdf	**PKPab**	**17 23 50.0**	**0.0**
WCI				LR	LR		
	comp=Z,1µm,21.0s						
WCI	Wyandotte Cave	144.71	9	*e*PKIKP	PKPbc	17 23 50.0	-0.1
WCI				MLR	MLR		
	comp=Z,1µm,21.0s						
WCI	Wyandotte Cave	144.71	9	P	PKPbc	17 23 50.4	+0.4
	baz=348						
USIN	University of	144.73	11	*e*PKPdf	PKPbc	17 23 50.4	+0.3
USIN				LR	LR		
	comp=Z,800nm,20.0s						
R49A	Shelbyville	144.81	8	*e*PKPdf	**PKPab**	**17 23 50.1**	**-0.2**
R49A				LR	LR		
	comp=Z,800nm,18.0s						
R49A	Shelbyville	144.81	8	P	**PKPab**	**17 23 50.3**	**0.0**
	baz=350,SNR=43						
U40A	Yellville	144.91	19	P	PKPbc	17 23 50.9	+0.1
	baz=336						
R50A	Paris	144.93	7	*e*PKPbc	**PKPab**	**17 23 50.6**	**-0.1**
R50A				LR	LR		
	comp=Z,1µm,19.0s						
R50A	Paris	144.93	7	P	**PKPab**	**17 23 50.6**	**-0.1**
	baz=352,SNR=42						
R61A	Willards	144.93	354	P	**PKPab**	**17 23 50.7**	**0.0**
	baz=7.3						
R51A	Hillsboro	144.99	5	P	**PKPab**	**17 23 50.7**	**-0.2**
	baz=353,SNR=22						
S46A	Don Dixon Farm	144.99	11	P	**PKPab**	**17 23 50.9**	**0.0**
	baz=346						
R52A	Catlettsburg	145.03	4	P	**PKPbc**	**17 23 51.0**	**-0.1**
	baz=355,SNR=16						
R56A	Bull Pasture M	145.07	360	P	**PKPdf**	**17 23 51.7**	**-0.3**
	baz=0.2,SNR=52						
R53A	Hurricane	145.08	3	*e*PKPbc	**PKPbc**	**17 23 51.0**	**-0.3**
R53A				LR	LR		
	comp=Z,1µm,19.0s						
R53A	Hurricane	145.08	3	P	**PKPab**	**17 23 51.5**	**+0.2**
	baz=356,SNR=34						
R60A	Leonardtown, M	145.10	356	P	**PKPdf**	**17 23 51.9**	**0.0**
	baz=5.2						
R58A	Rapidan	145.15	358	P	**PKPab**	**17 23 51.7**	**+0.2**
	baz=2.7,SNR=55						
R57A	Stanardsville	145.17	359	P	**PKPdf**	**17 23 52.1**	**+0.1**
	baz=1.8,SNR=79						
R55A	Marlinton	145.19	1	*e*PKPbc	**PKPab**	**17 23 51.8**	**0.0**
R55A				LR	LR		
	comp=Z,1µm,20.0s						
R55A	Marlinton	145.19	1	P	**PKPab**	**17 23 51.8**	**0.0**
	baz=359,SNR=58						
R59A	King George, V	145.21	357	P	**PKPdf**	**17 23 52.3**	**+0.3**
	baz=4.2,SNR=11						
CBN	Corbin Frederi	145.22	357	PFAKE		17 24 00.0	+4.0
CBN				LR	LR		
	comp=Z,1µm,21.0s						
CBN	Corbin Frederi	145.22	357	P	**PKPdf**	**17 23 52.0**	**0.0**
	baz=3.8						
PBMO	Poplar Bluff	145.23	15	*e*PKPbc	**PKPbc**	**17 23 51.5**	**-0.3**
PBMO				LR	LR		
	comp=Z,1µm,19.0s						
S47A	Hartford	145.23	10	P	**PKPbc**	**17 23 51.8**	**0.0**
	baz=347,SNR=9.2						
R54A	Victor	145.27	2	P	**PKPbc**	**17 23 51.9**	**0.0**
	baz=358,SNR=30						
S49A	Springfield	145.30	8	P	**PKPbc**	**17 23 51.4**	**-0.5**
	baz=350,SNR=28						
ABTX	Abilene, Hawle	145.30	31	*e*PKPbc	**PKPdf**	**17 23 52.8**	**+0.3**
ABTX				LR	LR		
	comp=Z,900nm,20.0s						
ABTX	Abilene, Hawle	145.30	31	P	**PKPdf**	**17 23 53.0**	**+0.5**
	baz=323						
S48A	Wiedeman Farm,	145.31	9	P	**PKPab**	**17 23 52.2**	**0.0**
	baz=349,SNR=84						
T45A	Paducah	145.44	13	*e*PKPdf	**PKPab**	**17 23 53.1**	**+0.5**
T45A				LR	LR		
	comp=Z,1µm,20.0s						
T45A	Paducah	145.44	13	P	**PKPab**	**17 23 52.7**	**+0.1**
	baz=344						
TX31	Lajitas Ar. Si	145.47	39	*e*PKPdf	**PKPab**	**17 23 54.1**	**+1.0**
TXAR	Lajitas Array	145.47	39	PKPbc	**PKPab**	**17 23 54.3**	**+1.2**
	comp=Z,81nm,0.9s,baz=280,slow=2.2,SNR=230						
R58B	Mineral	145.48	358	*e*PKPdf	**PKPab**	**17 23 52.7**	**-0.1**
R58B				LR	LR		
	comp=Z,800nm,18.0s						
R58B	Mineral	145.48	358	P	**PKPab**	**17 23 52.8**	**+0.1**
	baz=2.9,SNR=40						
PARMO	Parma	145.51	15	PFAKE		17 24 00.0	+3.4
PARMO				LR	LR		
	comp=Z,800nm,21.0s						
S50A	Richmond	145.51	7	P	**PKPdf**	**17 23 52.5**	**-0.2**
	baz=351,SNR=54						
FCAR	Ozark Folk Cen	145.57	18	*e*PKPdf	**PKPdf**	**17 23 52.5**	**-0.2**
FCAR				LR	LR		
	comp=Z,700nm,21.0s						
T46A	Princeton	145.57	12	P	**PKPab**	**17 23 53.2**	**+0.1**
	baz=345,SNR=53						
X37A	Clayton	145.59	23	*e*PKPdf	**PKPbc**	**17 23 53.0**	**0.0**
X37A				LR	LR		
	comp=Z,900nm,19.0s						
S61A	Accomac	145.61	355	PFAKE		17 24 00.0	+3.2
S61A				LR	LR		
	comp=Z,900nm,18.0s						
S51A	Beattyville	145.64	6	*e*PKPdf	**PKPdf**	**17 23 52.4**	**-0.5**
S51A				LR	LR		
	comp=Z,1µm,21.0s						
S51A	Beattyville	145.64	6	P	**PKPbc**	**17 23 53.1**	**0.0**
	baz=353,SNR=48						
S54A	Dingess, Beckl	145.64	2	P	**PKPbc**	**17 23 53.1**	**0.0**
	baz=357,SNR=18						
S52A	Salyersville	145.65	5	P	**PKPbc**	**17 23 53.2**	**+0.1**
	baz=354,SNR=6.0						
W39A	Magazine	145.65	21	*e*PKPdf	**PKPdf**	**17 23 52.9**	**0.0**
W39A				LR	LR		
	comp=Z,900nm,20.0s						
W39A	Magazine	145.65	21	P	**PKPbc**	**17 23 53.3**	**+0.1**
	baz=334,SNR=32						
S59A	Mechanicsville	145.65	357	P	**PKPab**	**17 23 53.9**	**+0.5**
	baz=4.0,SNR=20						
GO04	Tololo Observa	145.66	194	*e*PKPdf	**PKPab**	**17 23 54.2**	**+0.3**
S60A	Water View	145.67	356	P	**PKPab**	**17 23 54.0**	**+0.6**
	baz=5.1						
S55A	Lewisburg	145.70	1	P	**PKPdf**	**17 23 53.1**	**+0.1**
	baz=358,SNR=21						
S57A	Dark Hollow, R	145.71	359	*e*PKPdf	**PKPab**	**17 23 53.5**	**-0.1**
S57A				LR	LR		
	comp=Z,900nm,21.0s						
S57A	Dark Hollow, R	145.71	359	P	**PKPab**	**17 23 53.7**	**+0.1**
	baz=1.0,SNR=57						
S53A	Williamson	145.72	4	P	**PKPab**	**17 23 53.9**	**+0.2**
	baz=355						
HPIG		145.73	44	*e*PKPdf	**PKPab**	**17 23 54.7**	**+0.4**
PVMO	Portageville	145.76	15	PFAKE		17 24 10.0	+13
PVMO				LR	LR		
	comp=Z,700nm,19.0s						
T47A	Sharon Grove	145.78	11	*e*PKPdf	**PKPbc**	**17 23 53.4**	**-0.1**
T47A				LR	LR		
	comp=Z,700nm,20.0s						
T47A	Sharon Grove	145.78	11	P	**PKPbc**	**17 23 53.4**	**-0.1**
	baz=346,SNR=34						
T48A	Bowling Green	145.79	10	P	**PKPbc**	**17 23 53.5**	**0.0**
	baz=348,SNR=86						
S56A	Natural Bridge	145.80	360	P	**PKPbc**	**17 23 53.5**	**-0.1**
	baz=360,SNR=18						
S58A	Poland Farm, P	145.84	358	*e*PKPdf	**PKPbc**	**17 23 53.7**	**0.0**
S58A				LR	LR		
	comp=Z,900nm,19.0s						
S58A	Poland Farm, P	145.84	358	P	**PKPab**	**17 23 54.2**	**+0.2**
	baz=2.6,SNR=25						
T49A	Edmonton	145.93	9	*e*PKPdf	**PKPdf**	**17 23 53.4**	**+0.1**
T49A				LR	LR		
	comp=Z,700nm,20.0s						
T49A	Edmonton	145.93	9	P	**PKPdf**	**17 23 53.4**	**+0.1**
	baz=349,SNR=18						
GLAT	Glass	146.00	14	*e*PKPdf	**PKPab**	**17 23 54.6**	**-0.1**
GLAT				LR	LR		
	comp=Z,1µm,20.0s						
UTMT	University of	146.03	13	*e*PKPdf	**PKPab**	**17 23 55.0**	**+0.1**
WHAR	Wooly Hollow	146.07	19	*e*PKPdf	**PKPbc**	**17 23 54.2**	**-0.3**
WHAR				LR	LR		
	comp=Z,700nm,21.0s						
GNAR	Gosnell	146.11	15	*e*PKPdf	**PKPbc**	**17 23 54.7**	**+0.1**
GNAR				LR	LR		
	comp=Z,900nm,20.0s						
T50A	Nancy	146.11	8	P	**PKPbc**	**17 23 54.1**	**-0.4**
	baz=350,SNR=20						
U46A	Springville	146.17	13	P	**PKPbc**	**17 23 54.8**	**+0.1**
	baz=344						
W41B	Gary Mavity, V	146.19	19	*e*PKPdf	**PKPdf**	**17 23 54.3**	**+0.4**
W41B				LR	LR		
	comp=Z,600nm,20.0s						
W41B	Gary Mavity, V	146.19	19	P	**PKPbc**	**17 23 54.8**	**0.0**
	baz=337,SNR=19						
T52A	Hallie	146.22	5	PFAKE		17 24 10.0	+12
T52A				LR	LR		
	comp=Z,1µm,20.0s						
T52A	Hallie	146.22	5	P	**PKPbc**	**17 23 55.2**	**+0.2**
	baz=354						
T60A	Surry	146.24	356	PFAKE		17 24 10.0	+12
T60A				LR	LR		
	comp=Z,700nm,20.0s						
T60A	Surry	146.24	356	P	**PKPbc**	**17 23 55.0**	**+0.1**
	baz=5.0						
BLA	Blacksburg	146.26	1	*e*PKPdf	**PKPbc**	**17 23 54.9**	**-0.1**
BLA				LR	LR		
	comp=Z,900nm,20.0s						
BLA	Blacksburg	146.26	1	P	**PKPdf**	**17 23 54.2**	**+0.3**
	baz=358,SNR=8.3						
T51A	Gray	146.27	6	P	**PKPbc**	**17 23 54.8**	**-0.3**
	baz=352,SNR=16						
U47A	Clarksville	146.28	11	P	**PKPbc**	**17 23 55.1**	**+0.1**
	baz=346,SNR=28						
MIAR	Mount Ida	146.31	21	*e*PKPdf	**PKPbc**	**17 23 55.0**	**-0.2**
MIAR				LR	LR		
	comp=Z,800nm,19.0s						
MIAR	Mount Ida	146.31	21	P	**PKPab**	**17 23 55.9**	**-0.1**
	baz=334,SNR=57						
HBAR	Harrisburg	146.32	16	*e*PKPdf	**PKPab**	**17 23 55.9**	**-0.1**
HBAR				LR	LR		
	comp=Z,900nm,19.0s						
HALT	Halls	146.33	14	*e*PKPdf	**PKPbc**	**17 23 55.2**	**0.0**
HALT				LR	LR		
	comp=Z,1µm,20.0s						
T55A	Pulaski	146.34	2	P	**PKPbc**	**17 23 55.0**	**-0.3**
	baz=358,SNR=13						
U48A	Cassie Pea, Po	146.35	10	P	**PKPbc**	**17 23 55.6**	**+0.3**
	baz=347,SNR=15						
T54A	Tazewell	146.37	3	P	**PKPbc**	**17 23 55.6**	**+0.2**
	baz=356,SNR=40						
T53A	Wise	146.38	4	P	**PKPbc**	**17 23 55.8**	**+0.4**
	baz=355,SNR=10						
T56A	Rocky Mt	146.45	1	P	**PKPbc**	**17 23 55.7**	**+0.1**
	baz=359,SNR=24						
T59A	Double "B" Far	146.45	357	*e*PKPdf	**PKPbc**	**17 23 55.3**	**-0.3**
T59A				LR	LR		
	comp=Z,1µm,22.0s						
T59A	Double "B" Far	146.45	357	P	**PKPab**	**17 23 56.0**	**-0.4**
	baz=3.6,SNR=12						
WVT	Waverly	146.47	12	*e*PKPdf	**PKPdf**	**17 23 54.9**	**+0.6**
WVT				LR	LR		
	comp=Z,700nm,19.0s						
WVT	Waverly	146.47	12	*e*PKP2	**PKPdf**	**17 23 54.9**	**+0.6**
WVT				MLR	MLR		
	comp=Z,700nm,19.0s						
WVT	Waverly	146.47	12	P	**PKPbc**	**17 23 56.0**	**+0.4**
	baz=345						
U49A	Red Boiling Sp	146.47	9	P	**PKPbc**	**17 23 55.5**	**-0.1**
	baz=349,SNR=17						
T57A	Hurt	146.48	360	*e*PKPdf	**PKPbc**	**17 23 55.3**	**-0.3**
T57A				LR	LR		
	comp=Z,1µm,21.0s						
T57A	Hurt	146.48	360	P	**PKPbc**	**17 23 56.0**	**+0.4**
	baz=0.5,SNR=23						
T58A	Grand View Acr	146.52	358	P	**PKPab**	**17 23 56.4**	**-0.3**
	baz=1.8,SNR=34						
UALR	University of	146.53	19	*e*PKPdf	**PKPbc**	**17 23 55.4**	**-0.5**
UALR				LR	LR		
	comp=Z,800nm,18.0s						
X40A	Basin Creek Fa	146.62	20	*e*PKPdf	**PKPbc**	**17 23 55.8**	**-0.3**
X40A				LR	LR		
	comp=Z,700nm,19.0s						
X40A	Basin Creek Fa	146.62	20	P	**PKPbc**	**17 23 56.5**	**+0.4**
	baz=335,SNR=25						
U50A	Jamestown	146.70	8	P	**PKPbc**	**17 23 56.5**	**+0.2**
	baz=350,SNR=56						
V46A	Holladay	146.72	13	P	**PKPbc**	**17 23 56.5**	**+0.1**
	baz=344,SNR=21						
TZTN	Tazewell	146.73	6	*e*PKPdf	**PKPdf**	**17 23 55.5**	**+0.7**
TZTN				LR	LR		
	comp=Z,1µm,20.0s						
TZTN	Tazewell	146.73	6	P	**PKPbc**	**17 23 56.6**	**+0.2**
	baz=353,SNR=53						
CLTN	Cedars of Leba	146.79	10	*e*PKPdf	**PKPbc**	**17 23 55.8**	**-0.8**
CLTN				LR	LR		
	comp=Z,700nm,20.0s						
V47A	Nunnelly	146.82	12	P	**PKPbc**	**17 23 56.7**	**0.0**
	baz=345,SNR=25						
U51A	La Follette	146.84	7	P	**PKPbc**	**17 23 56.8**	**+0.1**
	baz=352,SNR=18						
U54A	Nelsons Funny	146.89	3	*e*PKPdf	**PKPdf**	**17 23 55.6**	**+0.5**
U54A				LR	LR		
	comp=Z,900nm,20.0s						
U54A	Nelsons Funny	146.89	3	P	**PKPbc**	**17 23 56.9**	**0.0**
	baz=356,SNR=9.9						
WHTX	Lake Whitney,	146.89	29	*e*PKPdf	**PKPbc**	**17 23 56.4**	**-0.6**
WHTX				LR	LR		
	comp=Z,800nm,20.0s						
WHTX	Lake Whitney,	146.89	29	P	**PKPab**	**17 23 57.7**	**-0.6**
	baz=326						
U52A	Thorn Hill	146.90	6	P	**PKPbc**	**17 23 56.9**	**0.0**
	baz=353,SNR=50						
JCT	Junction City	146.90	33	*e*PKPdf	**PKPbc**	**17 23 56.2**	**-0.9**
JCT				*e*PKPbc	**PKPab**	**17 23 58.3**	**-0.2**
JCT				LR	LR		
	comp=Z,600nm,20.0s						
JCT	Junction City	146.90	33	*e*PKP2	**PKPbc**	**17 23 56.2**	**-0.9**
JCT				MLR	MLR		
	comp=Z,600nm,20.0s						
JCT	Junction City	146.90	33	P	**PKPab**	**17 23 58.3**	**-0.2**
	baz=321,SNR=97						
MET	Memphis--Engin	146.93	16	PFAKE		17 24 10.0	+10
MET				LR	LR		
	comp=Z,1µm,19.0s						
U60A	Pendleton	146.93	356	P	**PKPab**	**17 23 57.6**	**-0.7**
	baz=4.3						
U55A	TA2, Sparta	146.95	2	P	**PKPbc**	**17 23 57.5**	**+0.4**
	baz=357,SNR=42						
U53A	Fall Branch	147.00	4	P	**PKPbc**	**17 23 56.9**	**-0.3**
	baz=354,SNR=18						
U61A	Possum Corner	147.02	355	*e*PKPbc	**PKPbc**	**17 23 57.6**	**+0.4**
U61A				LR	LR		
	comp=Z,800nm,19.0s						
U61A	Possum Corner	147.02	355	P	**PKPab**	**17 23 58.0**	**-0.6**
	baz=5.7						
U57A	Blanch	147.04	360	P	**PKPbc**	**17 23 57.9**	**+0.7**
	baz=0.4,SNR=37						
V48A	Smith Brothers	147.05	11	*e*PKPbc	**PKPbc**	**17 23 56.9**	**-0.4**
V48A				LR	LR		
	comp=Z,900nm,20.0s						
V48A	Smith Brothers	147.05	11	P	**PKPbc**	**17 23 57.4**	**+0.1**
	baz=347,SNR=35						
U58A	Oxford	147.07	358	P	**PKPbc**	**17 23 57.9**	**+0.6**
	baz=1.8,SNR=30						
U59A	Littleton	147.08	357	PFAKE		17 24 10.0	+10
U59A				LR	LR		
	comp=Z,900nm,19.0s						
U59A	Littleton	147.08	357	P	**PKPbc**	**17 23 58.0**	**+0.6**
	baz=3.2						
U56A	King	147.12	1	P	**PKPbc**	**17 23 57.7**	**+0.2**
	baz=358,SNR=10.0						
V49A	McMinnville	147.18	10	P	**PKPbc**	**17 23 57.3**	**-0.4**
	baz=348,SNR=25						
X43A	Marvell	147.22	17	PFAKE		17 24 10.0	+10
X43A				LR	LR		
	comp=Z,800nm,20.0s						
X43A	Marvell	147.22	17	P	**PKPbc**	**17 23 58.4**	**+0.6**
	baz=339						
WLAR	White Oak Lake	147.25	21	*e*PKPbc	**PKPab**	**17 23 59.0**	**-0.6**
WLAR				LR	LR		
	comp=Z,800nm,19.0s						
W46A	Michie	147.30	13	P	**PKPbc**	**17 23 58.1**	**+0.1**
	baz=344						
W47A	Westpoint	147.37	12	P	**PKPbc**	**17 23 58.2**	**0.0**
	baz=345,SNR=40						
V51A	Loudon	147.37	7	*e*PKPdf	**PKPdf**	**17 23 56.2**	**+0.4**
V51A				*e*PKPbc	**PKPbc**	**17 23 58.3**	**+0.1**
V51A				LR	LR		
	comp=Z,1µm,19.0s						
V51A	Loudon	147.37	7	P	**PKPbc**	**17 23 58.4**	**+0.1**
	baz=351,SNR=8.9						
V50A	Pikevile	147.40	8	P	**PKPbc**	**17 23 58.1**	**-0.2**
	baz=350,SNR=31						
V52A	Sevierville	147.42	6	*e*PKPdf	**PKPdf**	**17 23 56.2**	**+0.3**
V52A				*e*PKPbc	**PKPbc**	**17 23 58.8**	**+0.4**
V52A				LR	LR		
	comp=Z,900nm,19.0s						
V52A	Sevierville	147.42	6	P	**PKPbc**	**17 23 58.6**	**+0.2**
	baz=352,SNR=18						
CCAR	Cane Creek	147.50	19	*e*PKPbc	**PKPab**	**17 23 59.7**	**-0.9**
CCAR				LR	LR		
	comp=Z,700nm,21.0s						
PLAL	Pickwick Lake	147.52	13	*e*PKPdf	**PKPdf**	**17 23 55.1**	**-1.0**
PLAL				*e*PKPbc	**PKPbc**	**17 23 58.6**	**0.0**
PLAL				LR	LR		
	comp=Z,1µm,21.0s						
V61A	Roper	147.56	355	*e*PKPbc	**PKPab**	**17 23 59.8**	**-0.9**
V61A				LR	LR		
	comp=Z,900nm,20.0s						
V61A	Roper	147.56	355	P	**PKPbc**	**17 23 59.3**	**+0.6**
	baz=5.5						
V57A	Coltrane Farms	147.59	0	P	**PKPbc**	**17 23 58.9**	**+0.1**
	baz=360,SNR=19						
V55A	Taylorsville	147.59	2	P	**PKPbc**	**17 23 59.1**	**+0.3**
	baz=357,SNR=6.5						
W48A	Pulaski	147.61	11	P	**PKPbc**	**17 23 58.7**	**-0.2**
	baz=346,SNR=23						
V54A	Nebo	147.62	4	P	**PKPbc**	**17 23 59.2**	**+0.2**
	baz=356,SNR=26						
V60A	Jim Taylor Roa	147.64	356	*e*PKPdf	**PKPdf**	**17 23 57.1**	**+0.9**
V60A				*e*PKPbc	**PKPbc**	**17 23 59.7**	**+0.8**
V60A				LR	LR		
	comp=Z,900nm,19.0s						
V60A	Jim Taylor Roa	147.64	356	P	**PKPbc**	**17 23 59.2**	**+0.3**
	baz=4.2						
OXF	Oxford	147.64	15	*e*PKPdf	**PKPdf**	**17 23 56.2**	**0.0**
OXF				*e*PKPbc	**PKPbc**	**17 23 59.2**	**+0.3**
OXF				LR	LR		
	comp=Z,1µm,22.0s						
OXF	Oxford	147.64	15	*e*PKIKP	**PKPdf**	**17 23 56.3**	**0.0**
OXF				*e*		17 23 59.3	
OXF				MLR	MLR		
	comp=Z,1µm,22.0s						
V56A	Mocksville	147.65	1	*e*PKPdf	**PKPdf**	**17 23 56.7**	**+0.4**
V56A				*e*PKPbc	**PKPbc**	**17 23 59.3**	**+0.3**
V56A				LR	LR		
	comp=Z,900nm,20.0s						
V56A	Mocksville	147.65	1	P	**PKPbc**	**17 23 59.5**	**+0.5**
	baz=358,SNR=12						
V53A	Saluda	147.67	5	*e*PKPdf	**PKPdf**	**17 23 57.1**	**+0.7**
V53A				*e*PKPbc	**PKPbc**	**17 23 59.2**	**+0.1**
V53A				LR	LR		
	comp=Z,2µm,20.0s						
V53A	Saluda	147.67	5	P	**PKPbc**	**17 23 59.5**	**+0.4**
	baz=354,SNR=45						
V58A	Windy Hill, Pi	147.68	359	P	**PKPbc**	**17 23 59.7**	**+0.7**
	baz=0.8,SNR=22						
V59A	Middlesex	147.69	358	P	**PKiKP**	**17 24 00.1**	**-1.0**
	baz=2.4						
CPCT	Cooper Cave	147.70	8	*e*PKPdf	**PKPdf**	**17 23 56.5**	**+0.1**
CPCT				*e*PKPbc	**PKPbc**	**17 23 59.4**	**+0.2**
CPCT				LR	LR		
	comp=Z,800nm,20.0s						
SWET	Sewanee	147.72	10	*e*PKPdf	**PKPdf**	**17 23 56.5**	**+0.1**
SWET				*e*PKPbc	**PKPbc**	**17 23 59.4**	**+0.2**
SWET				LR	LR		
	comp=Z,1µm,20.0s						
V62A	Hyde County Ai	147.74	354	PFAKE		17 24 10.0	+8.5
V62A				LR	LR		
	comp=Z,1µm,22.0s						
V62A	Hyde County Ai	147.74	354	P	**PKiKP**	**17 24 00.6**	**-0.6**
	baz=6.7						
Z41A	Richland Creek	147.75	21	*e*PKPbc	**PKPbc**	**17 23 59.7**	**+0.4**
Z41A				LR	LR		
	comp=Z,800nm,19.0s						
Z41A	Richland Creek	147.75	21	P	**PKPbc**	**17 24 00.1**	**+0.8**
	baz=335						
W49A	Belvidere	147.75	10	P	**PKPbc**	**17 23 59.3**	**0.0**
	baz=347,SNR=34						
X46A	Booneville	147.81	14	P	**PKPbc**	**17 23 59.5**	**+0.1**
	baz=343,SNR=9.9						
435B	Jarrell	147.82	30	*e*PKPdf	**PKPdf**	**17 23 56.7**	**0.0**
435B				*e*PKPbc	**PKPbc**	**17 24 00.5**	**+0.9**
435B				LR	LR		
	comp=Z,1µm,21.0s						

435B	**Jarrell**	**147.82**	**30**	P	**PKiKP**	**17 24 00.6**	**-0.9**
	baz=325,SNR=7.3						
W50A	**Signal Mountai**	**147.83**	**9**	*e*PKPdf	**PKPdf**	**17 23 56.7**	**+0.1**
W50A				*e*PKPbc	**PKPbc**	**17 23 59.6**	**0.0**
W50A				LR	LR		
	comp=Z,1μm,18.0s						
W50A	**Signal Mountai**	**147.83**	**9**	P	**PKPbc**	**17 23 59.6**	**0.0**
	baz=349,SNR=11						
BBSR	**BB Station**	**147.90**	**336**	*e*PKPdf	**PKPdf**	**17 23 56.9**	**+0.1**
BBSR				*e*PKPbc	**PKiKP**	**17 24 00.7**	**-1.0**
BBSR				LR	LR		
	comp=Z,600nm,21.0s						
W51A	**Cleveland**	**147.95**	**8**	P	**PKPbc**	**17 24 00.1**	**+0.3**
	baz=350,SNR=25						
GO03	**Copiap**	**147.98**	**196**	*e*PKPbc	**PKPbc**	**17 23 59.6**	**-0.6**
X47A	**Russelville**	**148.01**	**13**	P	**PKPbc**	**17 23 59.5**	**-0.5**
	baz=344,SNR=20						
W52A	**Murphy**	**148.12**	**7**	*e*PKPbc	**PKPbc**	**17 24 00.5**	**+0.1**
W52A				LR	LR		
	comp=Z,900nm,21.0s						
W52A	**Murphy**	**148.12**	**7**	P	**PKPbc**	**17 24 00.6**	**+0.3**
	baz=352,SNR=15						
W53A	**Cullowhee**	**148.13**	**6**	P	**PKPbc**	**17 24 00.7**	**+0.2**
	baz=353,SNR=55						
CNNC	**Cliffs of the**	**148.19**	**357**	*e*PKPdf	**PKPdf**	**17 23 58.5**	**+1.4**
CNNC				LR	LR		
	comp=Z,800nm,21.0s						
CNNC	**Cliffs of the**	**148.19**	**357**	P	**PKPbc**	**17 24 00.4**	**-0.1**
	baz=3.1						
W61A	**Ground Anchor**	**148.21**	**356**	P	**PKPbc**	**17 24 00.7**	**+0.3**
	baz=4.8						
X48A	**Hartselle**	**148.25**	**12**	*e*PKPdf	**PKPdf**	**17 23 56.7**	**-0.6**
X48A				*e*PKPbc	**PKPbc**	**17 24 00.5**	**-0.1**
X48A				LR	LR		
	comp=Z,1μm,20.0s						
X48A	**Hartselle**	**148.25**	**12**	P	**PKPbc**	**17 24 00.3**	**-0.3**
	baz=346,SNR=19						
W59A	**Clinton**	**148.29**	**358**	P	**PKiKP**	**17 24 01.7**	**-0.7**
	baz=2.1						
KMSC	**Kings Mountain**	**148.29**	**3**	*e*PKPdf	**PKPdf**	**17 23 57.8**	**+0.4**
KMSC				*e*PKPbc	**PKPbc**	**17 24 00.9**	**+0.2**
KMSC				LR	LR		
	comp=Z,1μm,21.0s						
KMSC	**Kings Mountain**	**148.29**	**3**	P	**PKPbc**	**17 24 00.8**	**+0.2**
	baz=357,SNR=20						
W54A	**Cherokee Point**	**148.29**	**4**	P	**PKPbc**	**17 24 01.0**	**+0.2**
	baz=355,SNR=19						
W57A	**Gilead**	**148.32**	**1**	*e*PKPdf	**PKPdf**	**17 23 57.4**	**0.0**
W57A				*e*PKPbc	**PKPbc**	**17 24 00.9**	**+0.2**
W57A				LR	LR		
	comp=Z,1μm,21.0s						
W57A	**Gilead**	**148.32**	**1**	P	**PKPbc**	**17 24 00.9**	**+0.2**
	baz=359,SNR=14						
W56A	**Indian Trail**	**148.32**	**2**	P	**PKPbc**	**17 24 01.0**	**+0.2**
	baz=358,SNR=12						
BG3	**Lake Jocassee**	**148.33**	**5**	*e*PKPdf	**PKPdf**	**17 23 58.5**	**+1.0**
BG3				*e*PKPbc	**PKPbc**	**17 24 01.4**	**+0.5**
BG3				LR	LR		
	comp=Z,1μm,20.0s						
X49A	**Woodville**	**148.33**	**11**	P	**PKPbc**	**17 24 00.8**	**0.0**
	baz=347,SNR=20						
NATX	**Nacogdoches**	**148.35**	**25**	*e*PKPbc	**PKiKP**	**17 24 01.9**	**-0.7**
NATX				LR	LR		
	comp=Z,1μm,18.0s						
NATX	**Nacogdoches**	**148.35**	**25**	P	**PKPbc**	**17 24 01.5**	**+0.6**
	baz=330						
W60A	**Pink Hill**	**148.37**	**357**	P	**PKPbc**	**17 24 01.3**	**+0.4**
	baz=3.5						
W58A	**Raeford**	**148.45**	**359**	P	**PKPbc**	**17 24 01.4**	**+0.3**
	baz=0.6,SNR=14						
X50B	**Fort Payne**	**148.50**	**10**	P	**PKPbc**	**17 24 01.1**	**-0.3**
	baz=348,SNR=11						
X51A	**Calhoun**	**148.52**	**8**	*e*PKPdf	**PKPdf**	**17 23 58.7**	**+0.9**
X51A				*e*PKPbc	**PKPbc**	**17 24 01.8**	**+0.5**
X51A				LR	LR		
	comp=Z,1μm,20.0s						
X51A	**Calhoun**	**148.52**	**8**	P	**PKPbc**	**17 24 01.3**	**-0.1**
	baz=350,SNR=14						
PAULI	**Pauline**	**148.58**	**4**	*e*PKPdf	**PKPdf**	**17 23 58.6**	**+0.8**
PAULI				*e*PKPbc	**PKPbc**	**17 24 01.5**	**0.0**
PAULI				LR	LR		
	comp=Z,1μm,21.0s						
X52A	**Dahlonega**	**148.61**	**7**	P	**PKPbc**	**17 24 02.2**	**+0.6**
	baz=352,SNR=19						
Y48A	**Jasper**	**148.75**	**12**	P	**PKPbc**	**17 24 01.5**	**-0.5**
	baz=345,SNR=5.7						
X53A	**Estanollee**	**148.78**	**6**	P	**PKPbc**	**17 24 02.3**	**+0.3**
	baz=353,SNR=20						
833A	**Chaparral WMA,**	**148.78**	**35**	*e*PKPdf	**PKPdf**	**17 23 59.5**	**+1.1**
833A				*e*PKPbc	**PKiKP**	**17 24 03.7**	**+0.1**
833A				LR	LR		
	comp=Z,800nm,19.0s						
833A	**Chaparral WMA,**	**148.78**	**35**	P	**PKiKP**	**17 24 03.2**	**-0.4**
	baz=319						
BIRD	**Birdtown, Kers**	**148.82**	**1**	*e*PKPdf	**PKPdf**	**17 23 58.2**	**0.0**
BIRD				*e*PKPbc	**PKPbc**	**17 24 02.3**	**+0.2**
BIRD				LR	LR		
	comp=Z,1μm,21.0s						
X54A	**Belton**	**148.82**	**4**	P	**PKPbc**	**17 24 02.6**	**+0.5**
	baz=355,SNR=21						
X60A	**Albert Glenn T**	**148.86**	**357**	P	**PKPbc**	**17 24 02.5**	**+0.3**
	baz=3.0						
X59A	**McDuffie Farm,**	**148.89**	**358**	P	**PKPbc**	**17 24 02.5**	**+0.3**
	baz=1.8						
X58A	**Rowland**	**148.92**	**360**	PFAKE		17 24 10.0	+3.8
X58A				LR	LR		
	comp=Z,900nm,19.0s						
X58A	**Rowland**	**148.92**	**360**	P	**PKPbc**	**17 24 02.7**	**+0.3**
	baz=0.4						
X55A	**Gracelyn & Ava**	**148.94**	**3**	P	**PKPbc**	**17 24 02.3**	**-0.1**
	baz=356,SNR=15						
X56A	**White Oak**	**148.95**	**2**	P	**PKPbc**	**17 24 02.5**	**+0.1**
	baz=357,SNR=13						
Y49A	**Blount Mountai**	**148.95**	**11**	*e*PKPdf	**PKPdf**	**17 23 58.3**	**-0.2**
Y49A				*e*PKPbc	**PKPbc**	**17 24 02.5**	**0.0**
Y49A				LR	LR		
	comp=Z,900nm,20.0s						
Y49A	**Blount Mountai**	**148.95**	**11**	P	**PKPbc**	**17 24 02.5**	**0.0**
	baz=347,SNR=21						
X57A	**Johnson Farm,**	**149.00**	**1**	P	**PKPbc**	**17 24 02.9**	**+0.4**
	baz=359						
Y50A	**Piedmont**	**149.04**	**10**	P	**PKPbc**	**17 24 02.9**	**+0.2**
	baz=348,SNR=12						
HODGE	**Hodges**	**149.14**	**4**	*e*PKPdf	**PKPdf**	**17 23 59.8**	**+1.1**
HODGE				*e*PKPbc	**PKPbc**	**17 24 03.5**	**+0.6**
HODGE				LR	LR		
	comp=Z,900nm,18.0s						
Y51A	**Rockmart**	**149.14**	**9**	P	**PKPbc**	**17 24 03.1**	**+0.1**
	baz=349,SNR=7.5						
JSC	**Jenkinsville**	**149.15**	**3**	*e*PKPdf	**PKPdf**	**17 23 59.3**	**+0.5**
JSC				*e*PKPbc	**PKPbc**	**17 24 03.4**	**+0.4**
JSC				LR	LR		
	comp=Z,1μm,20.0s						
JSC	**Jenkinsville**	**149.15**	**3**	*e*PKIKP	**PKPdf**	**17 23 59.3**	**+0.5**
JSC				*e*		17 24 03.4	
JSC				MLR	MLR		
	comp=Z,1μm,20.0s						
Y52A	**Lilburn**	**149.32**	**7**	*e*PKPdf	**PKPdf**	**17 23 58.3**	**-0.7**
Y52A				*e*PKPbc	**PKiKP**	**17 24 04.0**	**-0.5**
Y52A				LR	LR		
	comp=Z,700nm,19.0s						
Y52A	**Lilburn**	**149.32**	**7**	P	**PKiKP**	**17 24 04.1**	**-0.5**
	baz=351,SNR=11						
HKT	**Hockley**	**149.36**	**28**	*e*PKPdf	**PKPdf**	**17 23 59.5**	**+0.3**
HKT				*e*PKPbc	**PKiKP**	**17 24 05.2**	**+0.5**
HKT				LR	LR		
	comp=Z,899nm,18.0s						
HKT	**Hockley**	**149.36**	**28**	*e*PKHKP	**PKPdf**	**17 23 59.5**	**+0.3**
HKT				*e*		17 24 05.2	
HKT				MLR	MLR		
	comp=Z,899nm,18.0s						
Y53A	**Monroe**	**149.39**	**7**	P	**PKiKP**	**17 24 04.1**	**-0.6**
	baz=352,SNR=6.4						
Y60A	**Bolivia**	**149.44**	**358**	*e*PKPbc	**PKiKP**	**17 24 04.2**	**-0.5**
Y60A				LR	LR		
	comp=Z,1μm,18.0s						
Y60A	**Bolivia**	**149.44**	**358**	P	**PKPbc**	**17 24 04.1**	**+0.4**
	baz=2.6						
Y57A	**Sumter**	**149.44**	**1**	PFAKE		17 24 10.0	+1.6
Y57A				LR	LR		
	comp=Z,1μm,21.0s						
Y57A	**Sumter**	**149.44**	**1**	P	**PKPbc**	**17 24 04.2**	**+0.5**
	baz=358						
Y55A	**Saluda**	**149.46**	**4**	P	**PKPbc**	**17 24 03.7**	**0.0**
	baz=356,SNR=12						
VBMS	**Vicksburg**	**149.47**	**18**	*e*PKPbc	**PKiKP**	**17 24 04.8**	**-0.1**
VBMS				LR	LR		
	comp=Z,900nm,20.0s						
VBMS	**Vicksburg**	**149.47**	**18**	P	**PKiKP**	**17 24 04.6**	**-0.3**
	baz=338						
Y54A	**Tignall**	**149.47**	**5**	P	**PKPbc**	**17 24 04.1**	**+0.4**
	baz=354,SNR=9.9						
Y59A	**Loris**	**149.47**	**359**	P	**PKiKP**	**17 24 04.6**	**-0.3**
	baz=1.3						
Y58A	**Scranton**	**149.56**	**0**	*e*PKPdf	**PKPdf**	**17 23 59.1**	**-0.3**
Y58A				*e*PKPbc	**PKiKP**	**17 24 04.6**	**-0.4**
Y58A				LR	LR		
	comp=Z,800nm,20.0s						
Y58A	**Scranton**	**149.56**	**0**	P	**PKiKP**	**17 24 04.6**	**-0.4**
	baz=360						
Z49A	**Columbiana**	**149.57**	**12**	P	**PKPbc**	**17 24 04.3**	**+0.3**
	baz=346,SNR=25						
LRAL	**Lakeview Retre**	**149.63**	**12**	*e*PKPdf	**PKPdf**	**17 23 59.8**	**+0.2**
LRAL				*e*PKPbc	**PKPbc**	**17 24 04.3**	**+0.1**
LRAL				LR	LR		
	comp=Z,1μm,22.0s						
LRAL	**Lakeview Retre**	**149.63**	**12**	P	**PKPbc**	**17 24 04.4**	**+0.2**
	baz=345,SNR=6.0						
Z50A	**Ashland**	**149.63**	**11**	*e*PKPdf	**PKPdf**	**17 23 59.6**	**0.0**
Z50A				*e*PKPbc	**PKPbc**	**17 24 04.1**	**-0.1**
Z50A				LR	LR		
	comp=Z,1μm,22.0s						
Z50A	**Ashland**	**149.63**	**11**	P	**PKPbc**	**17 24 04.4**	**+0.2**
	baz=347,SNR=15						
Y56A	**Pelion**	**149.63**	**3**	P	**PKPbc**	**17 24 04.5**	**+0.3**
	baz=356						
147A	**Livingston**	**149.68**	**15**	*e*PKPdf	**PKPdf**	**17 23 59.6**	**-0.1**
147A				*e*PKPbc	**PKiKP**	**17 24 05.2**	**-0.1**
147A				LR	LR		
	comp=Z,1μm,18.0s						
147A	**Livingston**	**149.68**	**15**	P	**PKPbc**	**17 24 04.7**	**+0.4**
	baz=343,SNR=9.8						
Z51A	**Franklin**	**149.70**	**9**	P	**PKPbc**	**17 24 04.6**	**+0.2**
	baz=349						
GOGA	**Godfrey**	**149.84**	**6**	*e*PKPdf	**PKPdf**	**17 24 00.7**	**+0.8**
GOGA				*e*PKPbc	**PKiKP**	**17 24 05.3**	**-0.4**
GOGA				LR	LR		
	comp=Z,1μm,20.0s						
GOGA	**Godfrey**	**149.84**	**6**	*e*PKHKP	**PKPdf**	**17 24 00.7**	**+0.8**
GOGA				*e*		17 24 05.3	
GOGA				MLR	MLR		
	comp=Z,1μm,20.0s						
GOGA	**Godfrey**	**149.84**	**6**	P	**PKPbc**	**17 24 04.9**	**+0.2**
	baz=352,SNR=17						
148A	**Greensboro**	**149.87**	**14**	P	**PKPbc**	**17 24 05.1**	**+0.3**
	baz=344,SNR=7.9						
Z52A	**Williamson**	**149.94**	**8**	P	**PKiKP**	**17 24 05.5**	**-0.3**
	baz=350,SNR=16						
Z53A	**Monticello**	**149.96**	**7**	P	**PKiKP**	**17 24 05.6**	**-0.3**
	baz=352,SNR=12						
Z54A	**Sparta**	**150.08**	**5**	P	**PKiKP**	**17 24 05.9**	**-0.3**
	baz=353,SNR=18						
GO02	**Mina Guanaco**	**150.08**	**198**	*e*PKPbc	**PKiKP**	**17 24 06.7**	**-0.1**
149A	**Jones**	**150.09**	**12**	P	**PKPbc**	**17 24 05.7**	**+0.4**
	baz=345						
Z56A	**Williston**	**150.10**	**3**	PFAKE		17 24 10.0	-1.0
Z56A				LR	LR		
	comp=Z,1μm,20.0s						
Z56A	**Williston**	**150.10**	**3**	P	**PKPbc**	**17 24 05.6**	**+0.3**
	baz=356						
Z58A	**St. Stephen**	**150.13**	**0**	P	**PKiKP**	**17 24 06.0**	**-0.3**
	baz=360						
Z55A	**Blythe**	**150.15**	**4**	P	**PKiKP**	**17 24 06.1**	**-0.2**
	baz=355						
Z57A	**Bowman**	**150.15**	**2**	P	**PKiKP**	**17 24 05.9**	**-0.4**
	baz=358						
Z59A	**Georgetown, SC**	**150.23**	**359**	P	**PKPbc**	**17 24 05.9**	**+0.3**
	baz=0.5						
150A	**Eclectic**	**150.24**	**11**	P	**PKPbc**	**17 24 05.8**	**+0.1**
	baz=347,SNR=14						
152A	**Waverly Hall**	**150.40**	**9**	*e*PKPdf	**PKPdf**	**17 24 01.1**	**+0.3**
152A				*e*PKPbc	**PKiKP**	**17 24 06.8**	**0.0**
152A				LR	LR		
	comp=Z,2μm,21.0s						
152A	**Waverly Hall**	**150.40**	**9**	P	**PKiKP**	**17 24 06.9**	**0.0**
	baz=350,SNR=14						
151A	**Opelika**	**150.44**	**10**	P	**PKiKP**	**17 24 06.7**	**-0.2**
	baz=348,SNR=9.9						
CSU	**Charleston Sou**	**150.48**	**1**	*e*PKPbc	**PKiKP**	**17 24 06.8**	**-0.1**
ZAIG	**Zacatecas**	**150.51**	**47**	*e*PKPdf	**PKPdf**	**17 23 59.5**	**-2.1**
ZAIG				*e*PKPbc	**PKiKP**	**17 24 08.3**	**+0.6**
153A	**Fort Valley**	**150.55**	**7**	P	**PKiKP**	**17 24 06.8**	**-0.3**
	baz=351						
249A	**Camden**	**150.62**	**13**	P	**PKiKP**	**17 24 07.4**	**+0.1**
	baz=344,SNR=7.5						
154A	**Montrose**	**150.67**	**6**	*e*PKPbc	**PKiKP**	**17 24 07.3**	**-0.1**
154A				LR	LR		
	comp=Z,1μm,20.0s						
154A	**Montrose**	**150.67**	**6**	P	**PKiKP**	**17 24 07.6**	**+0.2**
	baz=353,SNR=5.8						
155A	**Kite**	**150.72**	**5**	P	**PKiKP**	**17 24 07.8**	**+0.3**
	baz=354						
158A	**Hollywood**	**150.72**	**1**	P	**PKiKP**	**17 24 07.2**	**-0.2**
	baz=359						
156A	**Sylvania**	**150.76**	**3**	P	**PKiKP**	**17 24 08.0**	**+0.4**
	baz=356						
157A	**Early Branch**	**150.76**	**2**	P	**PKiKP**	**17 24 07.9**	**+0.3**
	baz=357						
250A	**Grady**	**150.80**	**12**	*e*PKPdf	**PKPdf**	**17 24 02.2**	**+0.7**
250A				*e*PKPbc	**PKiKP**	**17 24 07.8**	**+0.1**
250A				LR	LR		
	comp=Z,1μm,21.0s						
250A	**Grady**	**150.80**	**12**	P	**PKiKP**	**17 24 07.5**	**-0.1**
	baz=346,SNR=10						
251A	**Midway**	**150.85**	**10**	P	**PKiKP**	**17 24 08.2**	**+0.5**
	baz=348,SNR=20						
252A	**Lumpkin**	**151.06**	**9**	P	**PKiKP**	**17 24 08.6**	**+0.4**
	baz=349,SNR=13						
253A	**Americus**	**151.09**	**8**	*e*PKPdf	**PKPdf**	**17 24 02.3**	**+0.5**
253A				*e*PKPbc	**PKiKP**	**17 24 08.5**	**+0.2**
253A				LR	LR		
	comp=Z,1μm,22.0s						
253A	**Americus**	**151.09**	**8**	P	**PKiKP**	**17 24 08.5**	**+0.2**
	baz=350,SNR=9.1						
349A	**Repton**	**151.20**	**14**	P	**PKiKP**	**17 24 09.3**	**+0.8**
	baz=344,SNR=5.2						
LNIG	**Linares**	**151.24**	**40**	*e*PKPdf	**PKPdf**	**17 24 01.9**	**-0.5**
LNIG				*e*PKPbc	**PKiKP**	**17 24 08.6**	**-0.2**
LNIG				LR	LR		
	comp=Z,600nm,20.0s						
254A	**Abbeville**	**151.31**	**7**	P	**PKiKP**	**17 24 09.1**	**+0.4**
	baz=352						
350A	**Dozier**	**151.33**	**12**	P	**PKiKP**	**17 24 09.2**	**+0.4**
	baz=346						
256A	**Glennville**	**151.40**	**4**	P	**PKiKP**	**17 24 09.3**	**+0.4**
	baz=355						
255A	**Hazlehurst**	**151.41**	**5**	*e*PKPbc	**PKiKP**	**17 24 09.4**	**+0.4**
255A				LR	LR		
	comp=Z,800nm,18.0s						
255A	**Hazlehurst**	**151.41**	**5**	P	**PKiKP**	**17 24 09.3**	**+0.4**
	baz=354						
BRAL	**Brewton**	**151.41**	**13**	*e*PKPbc	**PKiKP**	**17 24 09.6**	**+0.7**
BRAL				*e*PKPab	**PKPab**	**17 24 17.1**	**+0.6**
BRAL				LR	LR		
	comp=Z,900nm,19.0s						
BRAL	**Brewton**	**151.41**	**13**	P	**PKiKP**	**17 24 09.8**	**+0.8**
	baz=344						
257A	**Skidaway Islan**	**151.46**	**3**	PFAKE		17 24 10.0	+1.0
257A				LR	LR		
	comp=Z,800nm,20.0s						
257A	**Skidaway Islan**	**151.46**	**3**	P	**PKiKP**	**17 24 09.3**	**+0.3**
	baz=357						
352A	**Blakely**	**151.53**	**10**	*e*PKPbc	**PKiKP**	**17 24 09.6**	**+0.4**
352A				*e*PKPab	**PKPab**	**17 24 17.4**	**+0.4**
352A				LR	LR		
	comp=Z,1μm,22.0s						
352A	**Blakely**	**151.53**	**10**	P	**PKiKP**	**17 24 09.6**	**+0.4**
	baz=349						
449A	**Pace**	**151.76**	**14**	P	**PKiKP**	**17 24 10.1**	**+0.4**
	baz=344						
TIGA	**Tifton**	**151.77**	**7**	*e*PKPbc	**PKiKP**	**17 24 09.9**	**+0.2**
TIGA				LR	LR		
	comp=Z,1μm,21.0s						
TIGA	**Tifton**	**151.77**	**7**	P	**PKiKP**	**17 24 10.3**	**+0.6**
	baz=352						
353A	**Camilla**	**151.78**	**8**	P	**PKiKP**	**17 24 10.4**	**+0.7**
	baz=350						
450A	**Crestview**	**151.87**	**13**	P	**PKiKP**	**17 24 10.9**	**+1.0**
	baz=345						
355A	**Pearson**	**151.95**	**6**	P	**PKiKP**	**17 24 10.6**	**+0.5**
	baz=353						
357A	**Townsend**	**151.98**	**3**	P	**PKiKP**	**17 24 10.3**	**+0.2**
	baz=356						
356A	**Blackshear**	**152.03**	**5**	P	**PKiKP**	**17 24 10.9**	**+0.7**
	baz=354						
452A	**Marianna**	**152.11**	**10**	P	**PKiKP**	**17 24 11.3**	**+0.9**
	baz=348						
LVC	**Limon Verde**	**152.21**	**202**	*e*PKPab	**PKPab**	**17 24 19.6**	**-0.9**
451A	**Vernon**	**152.23**	**11**	*e*PKPdf	**PKPdf**	**17 24 03.9**	**+0.3**
451A				*e*PKPbc	**PKiKP**	**17 24 11.6**	**+0.9**
451A				*e*PKPab	**PKPab**	**17 24 18.9**	**-1.0**
451A				LR	LR		
	comp=Z,900nm,21.0s						
451A	**Vernon**	**152.23**	**11**	P	**PKiKP**	**17 24 11.4**	**+0.9**
	baz=347						
453A	**Whigham**	**152.24**	**9**	*e*PKPbc	**PKiKP**	**17 24 11.6**	**+0.9**
453A				LR	LR		
	comp=Z,900nm,19.0s						
453A	**Whigham**	**152.24**	**9**	P	**PKiKP**	**17 24 11.5**	**+0.9**
	baz=350						
454A	**Quitman**	**152.48**	**8**	P	**PKiKP**	**17 24 11.8**	**+0.7**
	baz=351						
455A	**Stateville**	**152.53**	**6**	P	**PKiKP**	**17 24 12.1**	**+0.9**
	baz=352						
456A	**Hilliard**	**152.64**	**5**	PFAKE		17 24 20.0	-1.7
456A				LR	LR		
	comp=Z,1μm,19.0s						
456A	**Hilliard**	**152.64**	**5**	P	**PKiKP**	**17 24 12.5**	**+1.0**
	baz=355						
457A	**Yulee**	**152.78**	**4**	P	**PKiKP**	**17 24 12.6**	**+0.8**
	baz=356						
552A	**Lynn Haven**	**152.78**	**11**	P	**PKiKP**	**17 24 12.6**	**+0.8**
	baz=347						
553A	**Crawfordville**	**152.88**	**9**	P	**PKiKP**	**17 24 12.4**	**+0.4**
	baz=349						
554A	**Perry**	**153.09**	**8**	P	**PKiKP**	**17 24 12.8**	**+0.4**
	baz=351						
555A	**McAlpin**	**153.15**	**7**	*e*PKPbc	**PKiKP**	**17 24 13.2**	**+0.7**
555A				LR	LR		
	comp=Z,800nm,19.0s						
555A	**McAlpin**	**153.15**	**7**	P	**PKiKP**	**17 24 13.3**	**+0.7**
	baz=352						
556A	**Lake Butler**	**153.32**	**5**	P	**PKiKP**	**17 24 13.9**	**+0.9**
	baz=354						
557A	**Orange Park**	**153.37**	**4**	P	**PKiKP**	**17 24 13.7**	**+0.7**
	baz=355						
655A	**Horseshoe Beac**	**153.71**	**7**	P	**PKiKP**	**17 24 13.9**	**+0.1**
	baz=352						
657A	**Interlachen**	**153.78**	**5**	P	**PKiKP**	**17 24 14.4**	**+0.5**
	baz=355						
656A	**Willston**	**153.94**	**6**	PFAKE		17 24 20.0	+5.8
656A				LR	LR		
	comp=Z,1μm,19.0s						
656A	**Willston**	**153.94**	**6**	P	**PKiKP**	**17 24 14.9**	**+0.7**
	baz=353						
658A	**Bunnell**	**153.99**	**3**	PFAKE		17 24 20.0	+5.7
658A				LR	LR		
	comp=Z,1μm,19.0s						
658A	**Bunnell**	**153.99**	**3**	P	**PKiKP**	**17 24 14.4**	**+0.1**
	baz=356						
757A	**Oxford**	**154.40**	**5**	P	**PKiKP**	**17 24 15.3**	**+0.1**
	baz=354						
758A	**Lake Helen**	**154.45**	**3**	P	**PKiKP**	**17 24 15.5**	**+0.2**
	baz=356						
GO01	**Chusmiza**	**154.98**	**204**	*e*PKPdf	**PKPdf**	**17 24 07.5**	**-1.0**
GO01				*e*PKPab	**PKPab**	**17 24 33.1**	**+0.6**
857A	**Zephyrhills**	**155.06**	**6**	P	PKPdf	17 24 16.2	+8.5
	baz=354						
858A	**St. Cloud**	**155.18**	**4**	P	PKPdf	17 24 16.6	+8.7
	baz=356						
DWPF	**Disney Wildern**	**155.28**	**4**	PFAKE		17 24 20.0	+12
DWPF				LR	LR		
	comp=Z,800nm,22.0s						
957A	**Wimauma**	**155.65**	**6**	PFAKE		17 24 20.0	+11
957A				LR	LR		
	comp=Z,800nm,20.0s						
060A	**Indiantown**	**156.40**	**2**	PFAKE		17 24 20.0	+10
060A				LR	LR		
	comp=Z,1μm,20.0s						
059A	**Moore Haven**	**156.43**	**3**	PFAKE		17 24 20.0	+10
059A				LR	LR		
	comp=Z,900nm,20.0s						
LPAZ	**La Paz**	**157.47**	**210**	PKP	**PKPdf**	**17 24 12.9**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=24,slow=1.3,SNR=3.1						
LPAZ	**La Paz**	**157.47**	**210**	*e*PKPdf	**PKPdf**	**17 24 11.2**	**-0.8**
LPAZ	**La Paz**	**157.47**	**210**	*e*PKIKP	**PKPdf**	**17 24 11.2**	**-0.8**
061Z	**Ochoppi**	**157.54**	**3**	PFAKE		17 24 20.0	+9.0
061Z				LR	LR		
	comp=Z,600nm,20.0s						
SMRT	**St. Maarten**	**158.18**	**313**	PFAKE		17 24 20.0	+7.9
SMRT				LR	LR		
	comp=Z,800nm,20.0s						
SKI	**Saint Kitts**	**158.38**	**311**	PFAKE		17 24 20.0	+7.7
SKI				LR	LR		
	comp=Z,800nm,20.0s						
SABA	**Saba**	**158.58**	**313**	PFAKE		17 24 20.0	+7.5
SABA				LR	LR		
	comp=Z,800nm,21.0s						
PTGA	**Pitinga**	**159.99**	**259**	*e*PKPdf	**PKPdf**	**17 24 15.2**	**+0.9**
PTGA				*e*PKPab	**PKPab**	**17 24 54.3**	**+0.3**

THR ***09*** *17:05:10.8, 28°.13N×56°.15E, h18^{km}, ML4.2*

DSN ***09*** *17:05:11.8±1.0, 28°.18N×55°.77E, h10^{km}, ML4.3/9, Error ellipse: s-maj=28.7km s-min=8.3km az=74.0*

TEH ***09*** *17:05:12.8, 28°.16N×56°.00E, h20^{km}, ML4.2*

NEIC ***09*** *17:05:12.1±0.0, 28°.17N×55°.99E, h10^{km}, mb4.0/13, MN4.2(TEH), After TEH.*

IDC ***09*** *17:05:13.3±2.1, 27°.99N×55°.91E, h46^{km}±28^{km}, mb3.8/14, mb1 3.8/18, mb1mx3.6/68, mbtmp4.0/18, ML3.5/4, Error ellipse: s-maj=16.8km s-min=15.8km az=19.0*

OMAN ***09*** *17:05:14.8±3.6, 27°.97N×55°.36E, h10^{km}, ml4.2/9, Error ellipse: s-maj=78.4km s-min=38.7km az=78.0*

ISC 09 17:05:11.7±1.2, **28°.14N**±0°.03×**55°.95E**±0°.04, **h23**^{km}±10^{km}, **n126**, σ**2^{s}.14**/132, **mb4.1**/26, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.76**	**165**	*e*Pg	**Pn**	**17 05 27.9**	**+0.7**
GENO				*e*Sg	**Sn**	**17 05 39.2**	**+1.2**
GENO				IAMB	IAmb	17 05 40.9	
	comp=E,0.0nm,0.4s						
BNDS	**Bandar-Abbas**	**0.76**	**165**	*e*Pg	**Pb**	**17 05 24.9**	**-1.4**
BNDS	**Bandar-Abbas**	**0.76**	**165**	*e*Pg	**Pb**	**17 05 24.9**	**-1.4**
NIAN	**Nian**	**0.97**	**126**	*e*Pg	**Pb**	**17 05 30.8**	**+1.0**
NIAN				*e*Sg	**Sn**	**17 05 45.5**	**+2.5**
NIAN				IAMB	IAmb	17 05 50.0	
	comp=Z,0.0nm,0.4s						
NGRK	**Negar Kerman**	**1.65**	**24**	*e*Pn	**Pb**	**17 05 41.0**	**-0.6**
NGRK				IAMB	IAmb	17 05 42.4	
	comp=Z,0.0nm,0.2s						
KRBR	**Kerman**	**1.97**	**21**	*e*Pn	**Pn**	**17 05 44.9**	**+0.9**
KRBR	**Kerman**	**1.97**	**21**	*e*AML	AML	17 06 18.2	
	comp=E,2μm,0.6s						
KRBR	**Kerman**	**1.97**	**21**	*e*Pn	**Pn**	**17 05 44.9**	**+0.9**
KRBR				*e*Sg	**Sb**	**17 06 11.7**	**+0.4**
TVBK	**TV Kerman**	**1.98**	**21**	*e*Pn	**Pb**	**17 05 46.5**	**-0.6**
TVBK				IAMB	IAmb	17 06 18.6	
	comp=Z,0.0nm,0.4s						
SHME	**Shamm**	**2.09**	**175**	*e*P	**Pb**	**17 05 47.9**	**-1.0**
	SNR=28						
SHME				S	**Sb**	**17 06 15.6**	**+1.2**
SHME	**Shamm**	**2.09**	**175**	*e*Pn	**Pb**	**17 05 47.7**	**-1.1**
JHRM	**Jahrom**	**2.12**	**281**	*e*Pn	**Pb**	**17 05 49.2**	**-0.3**
CHMN	**Cheshme madani**	**2.21**	**39**	*e*Pn	**Pb**	**17 05 50.3**	**-0.9**
CHMN				IAMB	IAmb	17 06 21.8	
	comp=Z,0.0nm,1.0s						
BANOM	**Banah**	**2.23**	**172**	*e*P	**Pn**	**17 05 49.7**	**+2.5**
	SNR=23						
BANOM	**Banah**	**2.23**	**172**	P	**Pn**	**17 05 49.7**	**+2.5**
	SNR=25						
BANOM				S	**Sb**	**17 06 19.0**	**+0.7**
KHGB	**Koh Gabri**	**2.28**	**12**	*e*Pn	**Pb**	**17 05 51.5**	**-0.7**
KHGB				IAMB	IAmb	17 06 31.9	
	comp=Z,0.0nm,0.4s						
LMD1	**Lamerd**	**2.59**	**253**	*e*Pn	**Pb**	**17 05 56.6**	**-0.9**
GHIR	**Ghir-Karzin**	**2.62**	**274**	*e*Pn	**Pb**	**17 05 56.9**	**-1.1**
GHIR	**Ghir-Karzin**	**2.62**	**274**	*e*Pn	**Pb**	**17 05 56.9**	**-1.1**
MSFE	**Esma-Masafi**	**2.77**	**176**	*e*P	**Pn**	**17 05 57.6**	**+2.8**
	SNR=14						
MSFE	**Esma-Masafi**	**2.77**	**176**	*e*Pn	**Pn**	**17 05 57.6**	**+2.8**
MDH	**Madha**	**2.84**	**174**	*e*P	**Pn**	**17 05 58.4**	**+2.7**
	SNR=7.3						
MDH	**Madha**	**2.84**	**174**	P	**Pb**	**17 05 59.2**	**-2.5**
	SNR=7.4						
MDH	**Madha**	**2.84**	**174**	*e*Pn	**Pn**	**17 05 57.9**	**+2.2**
IPAR	**Pars**	**3.06**	**304**	*e*Pn	**Pn**	**17 06 02.8**	**+3.9**

NAZ	Nazwa, Dubai	3.15	185	*i* P	Pn	17 06 00.7	+0.9
	SNR=7.1						
NAZ	Nazwa, Dubai	3.15	185	P	Pn	17 06 03.7	+3.9
NAZ	Nazwa, Dubai	3.15	185	*e*Pn	Pn	17 06 03.4	+3.6
UOSS	Minazif	3.19	176	*e*Pn	Pn	17 06 02.8	+2.4
UOSS				*e*Sn	Sn	17 06 38.5	+0.8
UOSS	Minazif	3.19	176	*i* P	Pn	17 06 02.6	+2.3
	SNR=21						
UOSS	Minazif	3.19	176	P	Pn	17 06 03.2	+2.8
UOSS	Minazif	3.19	176	*e*Pn	Pn	17 06 02.7	+2.3
HATD	Hatta, Dubai	3.30	177	*i* P	Pn	17 06 04.6	+2.6
	SNR=6.9						
HATD	Hatta, Dubai	3.30	177	P	Pn	17 06 05.3	+3.3
	SNR=6.9						
HATD				S	Sn	17 06 44.1	+3.6
HATD	Hatta, Dubai	3.30	177	*e*Pn	Pn	17 06 04.2	+2.2
SHI	Shiraz	3.37	297	*e*Pn	Pn	17 06 05.1	+2.1
SHI				IAMB	IAmb	17 07 18.5	
	comp=Z,3µm,0.6s						
FAQ	Al Faqa, Dubai	3.39	186	*i* P	Pn	17 06 05.4	+2.2
	SNR=21						
FAQ	Al Faqa, Dubai	3.39	186	P	Pn	17 06 06.2	+2.9
	SNR=21						
FAQ	Al Faqa, Dubai	3.39	186	*e*Pn	Pn	17 06 06.0	+2.8
ASHO	Ashiyiah	3.44	178	*i* P	Pn	17 06 06.7	+2.8
	SNR=108						
ASHO				*i* P	Pb	17 06 06.8	-5.1
	SNR=22						
ASHO	Ashiyiah	3.44	178	P	Pn	17 06 06.7	+2.8
	SNR=108						
ASHO				S	Sn	17 06 49.0	+5.0
ASHO	Ashiyiah	3.44	178	*e*Pn	Pn	17 06 06.4	+2.5
IMEH	Mehriz	3.44	341	*e*Pn	Pn	17 06 07.3	+3.1
IMEH	Mehriz	3.44	341	IAMB	IAmb	17 06 08.1	
	comp=Z,3µm,0.4s						
IMEH				*e*Pn	Pn	17 06 07.3	+3.1
IBAF	Bafgh	3.46	355	*e*Pn	Pn	17 06 06.9	+2.6
IBAF	Bafgh	3.46	355	*e*Pn	Pn	17 06 06.9	+2.6
IBAF				IAMB	IAmb	17 07 06.3	
	comp=Z,3µm,0.6s						
ASUD	Al Ashush, Dub	3.54	189	*i* P	Pn	17 06 08.0	+2.8
	SNR=33						
ASUD	Al Ashush, Dub	3.54	189	P	Pn	17 06 08.6	+3.4
	SNR=33						
ASUD	Al Ashush, Dub	3.54	189	*e*Pn	Pn	17 06 08.7	+3.4
IKAZ	Kazeroun	3.96	295	*e*Pn	Pn	17 06 14.7	+3.4
IKAZ	Kazeroun	3.96	295	*e*Pn	Pn	17 06 14.7	+3.4
IKAZ				IAMB	IAmb	17 07 02.4	
	comp=Z,4µm,0.3s						
ALNE	Al Ain	4.07	183	*e*Pn	Pn	17 06 15.5	+3.0
ISAD	Sadrabad	4.25	333	*e*Pn	Pn	17 06 19.1	+3.9
ISAD				IAMB	IAmb	17 06 31.3	
	comp=Z,3µm,0.7s						
YZKH	Yazd	4.40	345	*e*Pn	Pn	17 06 19.8	+2.6
YZKH	Yazd	4.40	345	*e*Pn	Pn	17 06 19.8	+2.6
HOQ	Hoqain	4.70	165	*e*Pn	Pn	17 06 22.3	+1.1
IRAM	Ramesheh	4.79	321	*e*Pn	Pn	17 06 25.4	+2.7
ARQ	Araqi	4.81	174	P	Pn	17 06 26.8	+4.0
BIDO	Bidbid	5.00	156	P	Pn	17 06 25.2	-0.1
	SNR=6.2						
BIDO	Bidbid	5.00	156	*e*Pn	Pn	17 06 25.7	+0.4
IGAR	Gharneh	5.43	322	*e*Pn	Pn	17 06 34.0	+2.5
WSAR	Wadi Sarin	5.44	153	P	Pn	17 06 32.1	+0.7
	comp=Z,7.4nm,0.3s,baz=336,slow=6.3,SNR=59						
WSAR				S	Sn	17 07 30.1	-3.3
	comp=Z,10nm,0.3s,baz=200,slow=18,SNR=14						
WSAR	Wadi Sarin	5.44	153	P	Pn	17 06 32.6	+1.1
	SNR=6.1						
BSY	Bisya	5.49	168	P	Pn	17 06 34.8	+2.7
TKDS	Koohdasht(Taba	5.55	10	*e*Pn	Pn	17 06 35.7	+2.7
IZEF	Zefreh	5.68	328	*e*Pn	Pn	17 06 36.8	+1.9
IZEF				IAMB	IAmb	17 07 04.7	
	comp=Z,448nm,0.5s						
ZNGN	Zangian	5.93	313	*e*Pn	Pn	17 06 41.0	+2.5
ROKH	ROKH	5.97	316	*e*Pn	Pn	17 06 41.5	+2.6
JHBN	Jahan bin	6.13	313	*e*Pn	Pn	17 06 43.6	+2.5
IPIR	Pirpir	6.29	317	*e*Pn	Pn	17 06 45.9	+2.5
IKLH	Kolahrood	6.39	325	*e*Pn	Pn	17 06 46.6	+1.9
KRSH	Karshahi	6.67	332	*e*Pn	Pn	17 06 51.4	+2.9
KHMZ	Khomeyn	7.59	319	*e*AML	AML	17 08 31.1	
	comp=E,32nm,0.6s						
ISHM	Shahmirzad	7.97	344	*e*Pn	Pn	17 07 09.6	+3.2
IDMV	Damavand	8.13	337	*e*Pn	Pn	17 07 11.1	+2.5
IDMV	Damavand	8.13	337	*e*Pn	Pn	17 07 11.1	+2.5
IGLO	Ghaloghah	8.53	348	*e*Pn	Pn	17 07 17.7	+3.7
IPRN	Peran	8.64	340	*e*Pn	Pn	17 07 18.8	+3.4
IRAZ	Razeghan	8.87	326	*e*Pn	Pn	17 07 20.0	+1.3
GEYT	Alibeck	9.93	10	P	Pn	17 07 35.5	+2.4
	comp=E,0.1nm,0.3s,baz=97,slow=9.3,SNR=3.5						
GYA0B	ALIBECK ARRAY	9.93	10	*e*Pn	Pn	17 07 32.7	-0.3
RAYN	Ar Rayn	10.47	246	*e*Pn	Pn	17 07 38.1	-2.3
RAYN				*e*		17 09 28.8	
ASF	Jabal al Asfar	16.96	288	P	Pn	17 09 05.8	-1.8
	comp=E,0.6nm,0.3s,baz=65,slow=11,SNR=3.5						
ASF				S	Sn	17 12 00.0	-15
	comp=E,0.2nm,0.3s,baz=54,slow=19,SNR=2.0						
KBZ	Khabaz	18.77	329	P	Pn	17 09 29.8	+0.1
	comp=E,0.1nm,0.3s,baz=170,slow=12,SNR=2.1						
KK31	Karatay Array	19.01	34	*e*P	P	17 09 30.5	-1.3
	comp=E,2.7nm,0.8s						
KKAR	Karatay Array	19.01	34	*e*P	P	17 09 29.7	-2.2
	comp=E,2.7nm,0.8s						
ARSB	Arslanbob	19.16	42	*e*P	Pn	17 09 33.9	-0.7
	comp=E,5.4nm,1.1s						
AAK	Ala-Archa	20.86	41	P	Pn	17 09 54.1	-0.6
	comp=E,1.3nm,0.5s,baz=195,slow=19,SNR=3.2						
AAK	Ala-Archa	20.86	41	*e*P	P	17 09 52.9	+0.7
	comp=E,8.6nm,1.5s						
ABKAR	Akbulak array	21.31	7	*e*P	P	17 09 57.5	+0.8
	comp=E,3.3nm,0.8s						
BR101	Keskin Array S	21.76	308	*e*P	P	17 10 03.0	+1.1
BR131	Keskin Array S	21.76	308	*e*P	P	17 10 03.0	+1.1
	comp=E,5.9nm,0.6s						
BRTR	Keskin Array B	21.76	308	P	P	17 10 03.0	+1.1
	comp=E,5.3nm,0.6s,baz=131,slow=13,SNR=31						
AKTO	Aktyubinsk	22.32	3	P	P	17 10 08.6	+1.0
	comp=E,5.1nm,0.7s,baz=182,slow=12,SNR=17						
BRVK	Borovoye	27.07	19	*e*P	P	17 10 52.2	-0.1
	comp=E,4.6nm,1.4s						
BVAR	Borovoye Array	27.07	19	P	P	17 10 52.5	+0.2
	comp=E,1.6nm,0.8s,baz=206,slow=6.4,SNR=10						
MAKZ	Makanchi	27.62	41	*e*P	P	17 10 57.0	-0.4
	comp=E,3.0nm,1.0s						
MK31	Makanchi Array	27.79	41	*e*P	P	17 10 59.0	0.0
	comp=E,2.2nm,1.4s						
MK32	Makanchi Array	27.79	41	*e*P	P	17 10 59.1	+0.1
MKAR	Makanchi Array	27.79	41	P	P	17 10 59.1	+0.1
	comp=E,0.2nm,0.4s,baz=220,slow=9.9,SNR=5.3						
KURBB	Kurchatov Arra	28.23	31	P	P	17 11 02.7	0.0
	comp=E,0.3nm,0.4s,baz=232,slow=8.5,SNR=5.5						
AKASG	Malin Array Be	30.27	325	P	P	17 11 20.1	-0.7
	comp=E,1.8nm,0.5s,baz=132,slow=8.5,SNR=12						
AKBB	Malin Array Si	30.27	325	*e*P	P	17 11 20.4	-0.4
	comp=E,4.1nm,0.7s						
ZAA0	Zalesovo Array	33.33	31	*e*P	P	17 11 47.3	-0.3
	comp=E,2.9nm,0.9s						
ZALV	Zalesovo Beam	33.33	31	P	P	17 11 47.4	-0.3
	comp=E,2.6nm,0.5s,baz=244,slow=9.7,SNR=9.9						
ZAA1	Zalesovo Array	33.33	31	*e*P	P	17 11 47.4	-0.3
MOA	Molln	37.72	313	*e*P	P	17 12 25.0	-0.6
	comp=E,1.3nm,0.4s						
GERES	GERESS Array B	38.37	314	P	P	17 12 30.1	-1.0
	comp=E,0.6nm,0.7s,baz=120,slow=5.9,SNR=4.5						
FIA0	FINESS Array S	38.80	338	*e*P	P	17 12 34.4	+0.1
FIA1	FINESS Array S	38.80	338	*e*P	P	17 12 34.3	-0.1
	comp=E,10nm,1.1s						
FINES	FINESS Array B	38.80	338	P	P	17 12 34.4	+0.1
	comp=E,2.7nm,0.5s,baz=145,slow=9.6,SNR=24						
SQTA	Sankt Quirin	39.57	311	*e*P	P	17 12 40.4	-0.8
MOTA	Moosalm	39.67	311	*e*P	P	17 12 41.0	-1.1
	comp=E,0.7nm,0.2s						
FETA	Feichten	39.85	311	*e*P	P	17 12 42.9	-0.7
	comp=E,2.3nm,0.7s						
DAVA	Damuels	40.47	311	*e*P	P	17 12 47.8	-0.9
	comp=E,4.3nm,0.6s						
SONA0	Songino Array	43.48	49	*e*P	P	17 13 13.6	+0.3
SONM	Songino Array	43.48	49	P	P	17 13 13.6	+0.3
	comp=E,10nm,1.3s,baz=286,slow=10,SNR=3.0						
NB2	NORSAR Subarra	44.35	331	P	P	17 13 18.7	-1.2
	comp=Z,1.6nm,0.6s,baz=116,slow=7.9						
NB200	NORSAR Array S	44.35	331	*e*P	P	17 13 17.8	-2.1
NOA	NORSAR Array B	44.35	331	P	P	17 13 17.8	-2.1
	comp=Z,0.9nm,0.5s,baz=118,slow=7.6,SNR=3.5						
ARA0	ARCESS Array S	45.02	345	*e*P	P	17 13 25.1	0.0
ARCES	ARCESS Array B	45.02	345	P	P	17 13 25.1	0.0
	comp=Z,1.0nm,0.7s,baz=125,slow=8.9,SNR=5.0						
HHC	Hu-ho-hao-te	46.84	59	P	P	17 13 44.5	+4.5
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,6.5s						
TOA0	Torodi Ar. Sit	52.51	265	*e*P	P	17 14 22.7	-0.7
	comp=Z,2.5nm,0.8s						
TOA1	Torodi Ar. Sit	52.51	265	*e*P	P	17 14 22.6	-0.9
TORD	Torodi Ar. Bea	52.51	265	P	P	17 14 22.6	-0.9
	comp=Z,2.0nm,0.7s,baz=50,slow=7.9,SNR=12						

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*BEO **09** 17:06:36.0±1.3, 41°.99N×26°.78E, h64^{km}±4^{km}, ML2.3/4*
*ISCJB **09** 17:06:37.9±0.3, 42°.22N±0°.03×26°.27E±0°.03, h10^{km}, Error ellipse: s-maj=4.2km s-min=3.5km az=13.5*
*SOF **09** 17:06:37.9, 42°.19N×26°.27E, h5^{km}*
*ISK **09** 17:06:37.0, 42°.21N×26°.26E, h5^{km}, ML3.3/11*
ISC 09 17:06:37.4±0.8**, 42°.17N**±0°.02×**26°.30E**±0°.03**, h10**^{km}**, n45, σ1^{s}.19**/50**, 6C-5D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	Yambol	0.37	35	PG	Pg	17 06 44.8	+0.1
JMB				SG	Sg	17 06 49.9	+0.3
JMB	Yambol	0.37	35	*e*Pg	Pn	17 06 49.4	+0.6
JMB	Yambol	0.37	35	*i* P	Pg	17 06 44.9	+0.2
EDRB	Edirne	0.46	134	PG	Pb	17 06 47.5	-0.1
EDRB				SG	Sb	17 06 54.4	-0.1
DIM	Dimitrovgrad	0.58	259	*i* P	Pg	17 06 48.9	+0.2
KDZ	Kurdzhali	0.84	232	PG	Pn	17 06 54.8	-0.5
KDZ				SG	Sn	17 07 07.5	-0.1
KDZ	Kurdzhali	0.84	232	*i* P	Pn	17 06 55.1	-0.2
PHSR	Pinarhisar	1.06	120	PN	Pn	17 06 59.0	+0.7
RDO	Rodhopi	1.17	209	PN	Pn	17 06 59.9	+0.1
PLD	Plovdiv	1.19	268	*e*Pg	Pg	17 07 05.0	+4.8
PLD	Plovdiv	1.19	268	*i* P	Pb	17 06 59.6	-0.4
RZN	Rozhen	1.27	248	*i* P	Pg	17 07 02.2	+0.3
ALN	Alexandroupoli	1.28	189	PN	Pg	17 07 02.6	+0.6
PRD	Provadia	1.31	38	*i* P	Pn	17 07 02.1	+0.3
RAZG	Razgrad	1.41	6	⇑*i*P	Pb	17 07 04.1	+0.3
ENEZ	Enez	1.43	184	PN	Pg	17 07 04.8	-0.1
RKY	Sarkoy-Tekirda	1.62	156	PN	Pb	17 07 07.7	+0.3
PLVB	Pleven	1.73	315	⇑*i*P	Pg	17 07 10.7	0.0
LPK	Lapseki	1.83	169	PN	Pb	17 07 10.7	-0.2
MRMT	Marmara Adasi	1.84	148	PN	Pb	17 07 10.9	-0.3
CTKS	Kestanelik-??a	1.90	119	PN	Pb	17 07 11.6	-0.5
MPEP	Malo Peshtene	2.23	303	P	Pn	17 07 15.3	+0.9
KLYT	Kilyos	2.25	113	PN	Pb	17 07 16.7	-1.4
VTS	Vitosha	2.31	282	*e*Pn	Pn	17 07 17.0	+1.2
VTS				*e*Sn	Sn	17 07 44.6	+0.3
VTS	Vitosha	2.31	282	⇑*i*P	Pn	17 07 15.1	-0.6
VTS	Vitosha	2.31	282	*i* P	Pn	17 07 16.9	+1.2
EZN	Ezine	2.34	179	PN	Pb	17 07 18.3	-1.3
EZN	Ezine	2.34	179	⇑*i*P	Pg	17 07 21.6	-0.6
KAVV	Kandilli-Istan	2.35	117	PN	Pn	17 07 17.9	+1.9
OUR	Ouranopolis	2.53	224	PN	Pn	17 07 20.1	+1.6
TLB	Topalu	2.73	27	⇑*i*P	Pb	17 07 27.1	+0.8
ZAPS	Zavoj	2.92	294	*e*Pn	Pn	17 07 24.6	+0.7
ISR	Istrita	2.96	3	S	Sg	17 08 13.8	+1.4
BLKB	Belogradchik	3.03	300	S	Sg	17 08 12.5	-2.3
MLR	Muntele Rosu	3.33	356	⇓*i*P	Pb	17 07 36.7	0.0
BARS	Barje	3.38	283	*e*Pn	Pn	17 07 31.6	+1.4
BARS				*e*Sn	Sn	17 08 09.4	-0.9
VOIR		3.39	345	⇓*i*P	Pb	17 07 36.6	-1.0
ARR	Arges	3.42	340	⇓*i*P	Pb	17 07 35.7	-2.4
DOPR	Dopca	3.86	351	⇓*i*P	Pb	17 07 43.4	-2.1
HERR	Herculane	3.92	315	⇓*i*P	Pn	17 07 37.6	0.0
SELS	Selova	3.96	287	*e*Pn	Pn	17 07 39.3	+1.1
KUBS	Kucevo	4.05	305	*e*Pn	Pn	17 07 40.1	+0.6
MDVR	Moldovita	4.24	310	⇑*i*P	Pn	17 07 42.4	+0.3
IVAS	Ivanjica	4.73	289	*e*Pn	Pn	17 07 48.2	-0.7
MILM	Milestii Mici	5.08	20	S	Sg	17 09 19.1	-1.3

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*ISK **09** 17:06:47.4, 42°.19N×26°.26E, h16^{km}, ML3.3/2*
ISC 09 17:06:48.9±0.8**, 42°.15N**±0°.03×**26°.30E**±0°.03**, h10**^{km}**, n35, σ1^{s}.94**/38**, 3C-3D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	Yambol	0.38	34	PG	Pg	17 06 55.8	-0.6
JMB				SG	Sg	17 07 01.5	0.0
JMB	Yambol	0.38	34	*e*Sg	Sg	17 07 01.2	-0.3
EDRB	Edirne	0.45	132	PG	Pg	17 06 57.9	+0.2
EDRB				SG	Sb	17 07 05.3	-0.4
KDZ	Kurdzhali	0.82	233	PG	Pb	17 07 05.6	+0.3
KDZ				SG	Sb	17 07 17.8	+1.4
PHSR	Pinarhisar	1.05	119	PN	Pg	17 07 08.7	-0.4
PLD	Plovdiv	1.19	268	*e*Sg	Sb	17 07 25.8	-1.0
RAZG	Razgrad	1.42	6	S	Sg	17 07 35.9	+1.2
CTYL	Yalikoy Yolu	1.64	114	S	Sg	17 07 42.3	+0.8
PLVB	Pleven	1.75	316	S	Sg	17 07 45.5	+0.5
SGRR	Singureni	2.08	354	S	Sg	17 07 55.3	-0.6
COPA	Copaceanca	2.13	339	S	Sg	17 07 56.7	-0.7
ICOR	Ion Corvin	2.25	29	⇑*i*P	Pn	17 07 27.6	+1.4
ICOR	Ion Corvin	2.25	29	S	Sg	17 08 00.6	-0.7
VLAD	Vladila	2.31	324	⇓*i*P	Pg	17 07 32.6	-0.5
VLAD	Vladila	2.31	324	S	Sg	17 08 01.6	-1.4
VTS	Vitosha	2.31	283	S	Sn	17 07 56.2	+0.4
EZN	Ezine	2.32	179	S	Sb	17 07 59.0	-0.5
MANR	Mangalia	2.37	45	⇓*i*P	Pn	17 07 28.1	+0.4
MANR	Mangalia	2.37	45	S	Sg	17 08 03.0	-1.9
HUMR	Humele	2.56	338	S	Sg	17 08 16.2	+5.0
EFOR	EFORIE	2.58	41	S	Sg	17 08 10.2	-1.5
TLB	Topalu	2.75	27	S	Sg	17 08 16.4	-0.7
TIRR	Tirgusor	2.78	33	⇑*i*P	Pn	17 07 33.0	-0.4
TIRR	Tirgusor	2.78	33	S	Sb	17 08 14.5	+1.9
YLV	Yalova	2.81	123	S	Sg	17 08 21.7	+2.7
CFR	Carcaliu	3.31	23	⇑*i*P	Pn	17 07 38.4	-2.3
CFR	Carcaliu	3.31	23	S	Sn	17 08 18.4	-1.6
MLR	Muntele Rosu	3.35	356	S	Sg	17 08 36.2	-0.2
VOIR		3.41	345	S	Sg	17 08 37.7	-0.6
BISRR	Bisoca	3.41	5	⇓*i*P	Pn	17 07 38.6	-3.6
BISRR	Bisoca	3.41	5	S	Sg	17 08 39.1	+0.7
ARR	Arges	3.43	340	S	Sg	17 08 36.7	-2.4
PLOR	Plostina	3.71	4	S	Sg	17 08 53.0	+5.1
DOPR	Dopca	3.87	351	S	Sb	17 08 48.4	+4.2
HERR	Herculane	3.92	315	S	Sb	17 08 48.0	+2.3

JMA 09 17:11:58.6, 24°.66N×123°.43E, h13^{km}±2^{km}**, M1.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.42	140	P	Pg	17 12 07.0	0.0
IRIF				S	Sg	17 12 13.0	+0.3
YOJ	Yonaguni jima	0.43	243	P	Pg	17 12 07.0	-0.1
YOJ				S	Sg	17 12 12.9	0.0
JYNG	Yonagunijimaku	0.49	245	P	Pg	17 12 08.2	0.0
JYNG				S	Sg	17 12 14.8	+0.1
JKRS	Kuro-shima	0.68	128	P	Pg	17 12 11.7	0.0
JKRS				S	Sg	17 12 20.8	+0.2
HATJ	Hateruma jima	0.69	150	P	Pg	17 12 11.9	-0.2
HATJ				S	Sg	17 12 20.7	-0.5
JIJ	Ishigaki jima	0.71	114	P	Pg	17 12 12.1	-0.4
JIJ				S	Sg	17 12 22.0	+0.1
JISG	Ishigakijimahi	0.81	95	P	Pg	17 12 14.1	-0.1
JISG				S	Sb	17 12 25.2	0.0
JTJ	Tarama	1.16	91	P	Pb	17 12 19.9	-0.6
JTJ				S	Sb	17 12 35.1	-0.3

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*IDC **09** 17:11:54.7±3.1, 42°.00N×25°.72E, h0^{km}, mb3.2/1, mb1 3.5/5, mb1mx3.3/62, mbtmp3.4/5, ML2.8/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/31, Error ellipse: s-maj=49.9km s-min=12.4km az=61.0*
*DDA **09** 17:11:59.7, 42°.22N×26°.35E, h7^{km}±5^{km}, ML3.9*
*ISK **09** 17:12:00.3, 42°.22N×26°.33E, h5^{km}, ML4.0/27*
*SOF **09** 17:12:00.4, 42°.22N×26°.26E, h10^{km}*
*NEIC **09** 17:12:01.9±1.3, 42°.21N×26°.31E, h16^{km}±11^{km}, MW4.1, ML3.8(THE), ML3.9(ISK), ML4.2(BUC), Error ellipse: s-maj=8.5km s-min=5.5km az=89.0, Moment Tensor Solution. s11 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.25; M$_{\theta\theta}$0.98; M$_{\phi\phi}$-2.22; M$_{r\theta}$0.33; M$_{\theta\phi}$-0.05; M$_{\phi r}$0.49; Best double couple: M$_0$2.00000×10^{15} NP1:ϕ_s27.00000°, δ60.00000°, λ126.00000°. NP2:ϕ_s151.00000°, δ46.00000°, λ45.00000°. Principal axes: T 1.5100, Plg58.0000°, Azm349.0000°; N 0.7900, Plg31.0000°, Azm186.0000°; P -2.2900, Plg8.0000°, Azm92.0000°;*
NEIC Felt at Granitovo.
*BEO **09** 17:12:01.4±0.6, 42°.29N×26°.22E, h5^{km}, ML3.4/10*
*THE **09** 17:12:02.0, 42°.16N×26°.32E, h8^{km}±4^{km}, ML3.9/9, Error ellipse: s-maj=6.4km s-min=0.9km az=47.0*
ISC 09 17:12:00.6±1.0**, 42°.19N**±0°.01×**26°.27E**±0°.02**, h8**^{km}±8^{km}**, n208, σ1^{s}.26**/236**, 28C-20D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	Yambol	0.36	41	PG	Pg	17 12 07.2	-0.4
JMB				SG	Sg	17 12 12.2	-0.2
JMB	Yambol	0.36	41	*e*Pg	Pg	17 12 07.2	-0.4
JMB				*e*Sg	Sg	17 12 12.5	+0.1
JMB	Yambol	0.36	41	*i* Pg	Pg	17 12 07.2	-0.4
EDRB	Edirne	0.50	134	PG	Pg	17 12 10.4	+0.2
EDRB				SG	Sg	17 12 17.4	+0.7
EDRB	Edirne	0.50	134	P	Pg	17 12 10.2	0.0
EDRB				S	Sg	17 12 17.0	+0.3
DIM	Dimitrovgrad	0.56	255	*i* Pg	Pg	17 12 11.5	+0.1
KIRK	Kırklareli	0.74	123	*i* P	Pg	17 12 12.9	-2.0
KIRK				*i* S	Sg	17 12 25.1	+0.5
ELND	Elena	0.79	339	⇓*i*P	Pg	17 12 14.4	-1.3
ELND	Elena	0.79	339	S	Sg	17 12 26.3	+0.3
KDZ	Kurdzhali	0.83	230	PG	Pn	17 12 19.3	+0.7
KDZ	Kurdzhali	0.83	230	*i* P	Pb	17 12 17.7	+0.4
PHSR	Pinarhisar	1.09	121	PG	Pg	17 12 20.8	-0.8
PHSR	Pinarhisar	1.09	121	⇓*i*P	Pg	17 12 20.9	-0.7
PHSR	Pinarhisar	1.09	121	S	Sg	17 12 35.5	-0.3
PLD	Plovdiv	1.17	266	*e*Pg	Pg	17 12 21.5	-1.4
PLD				*e*Sg	Sg	17 12 36.8	-1.2
PLD	Plovdiv	1.17	266	*i* P	Pg	17 12 21.5	-1.4
RDO	Rodhopi	1.18	208	PN	Pn	17 12 23.8	+0.5
RDO	Rodhopi	1.18	208	P	Pb	17 12 23.5	+0.4
RDO				S	Sb	17 12 39.6	+1.0
	5µm,0.4s						
PVL	Pavlikeni	1.23	326	P	Pn	17 12 25.0	+1.0
RZN	Rozhen	1.26	247	P	Pg	17 12 24.5	-0.3
ALN	Alexandroupoli	1.31	187	PN	Pn	17 12 25.6	+0.6
ALN	Alexandroupoli	1.31	187	*e*Pn	Pn	17 12 25.3	+0.3
ALN	Alexandroupoli	1.31	187	P	Pn	17 12 25.3	+0.3
ALN				S	Sn	17 12 43.2	+0.6
	2µm,0.8s						
RAZG	Razgrad	1.38	7	⇑*i*P	Pb	17 12 26.9	+0.3
RAZG	Razgrad	1.38	7	S	Sn	17 12 45.8	+1.2
KESN	Edirne-Kesan	1.40	167	*i* P	Pn	17 12 26.8	+0.1
KESN				*i* S	Sn	17 12 46.5	+1.0
ENEZ	Enez	1.46	183	PN	Pb	17 12 28.3	+0.4
ZIMR		1.60	336	⇑*i*P	Pg	17 12 31.3	0.0
ZIMR		1.60	336	S	Sg	17 12 54.1	+2.0
RKY	Sarkoy-Tekirda	1.65	155	PN	Pn	17 12 30.6	+0.7
SART	Tekirdag	1.65	155	*i* P	Pg	17 12 32.0	-0.2
SART				*i* S	Sg	17 12 54.9	+1.1
SART				IAML_P			
	comp=Z,26µm,0.3s						
CTYL	Yalikoy Yolu	1.68	115	PN	Pn	17 12 30.8	+0.7
CTYL	Yalikoy Yolu	1.68	115	⇑*i*P	Pb	17 12 31.6	0.0
CTYL	Yalikoy Yolu	1.68	115	S	Sb	17 12 53.0	+0.2
PLVB	Pleven	1.70	315	⇑*i*P	Pb	17 12 32.2	+0.2
PLVB	Pleven	1.70	315	S	Sg	17 12 55.5	+0.3
KAVA	Kavala	1.78	228	P	Pn	17 12 32.4	+0.9
KAVA				S	Sb	17 12 56.0	+0.3
	comp=Z,3µm,0.8s						
GELI	Tayfur-Gelibol	1.80	175	PN	Pn	17 12 32.4	+0.6
SMTH	Samothraki Isl	1.81	198	P	Pn	17 12 33.3	+1.3
SMTH				S	Sb	17 12 56.9	+0.2
	comp=Z,2µm,0.6s						
LPK	Lapseki	1.86	168	PN	Pn	17 12 33.6	+1.0
MRMT	Marmara Adasi	1.88	147	PN	Pn	17 12 33.6	+0.6
ELBA	Catalca	1.93	122	*i* P	Pn	17 12 34.3	+0.6
ELBA				IAML_P			
	comp=Z,14µm,0.2s						
CTKS	Kestanelik-??a	1.93	119	PN	Pn	17 12 34.5	+0.9
THAS	Thassos island	1.97	217	P	Pn	17 12 35.5	+1.4
THAS				S	Sb	17 13 01.8	+0.6
	comp=Z,1µm,0.5s						
NVR	Nevrokopi	1.99	246	P	Pn	17 12 34.8	+0.4
NVR				S	Sn	17 13 01.2	+1.7
	comp=Z,925nm,0.7s						
MMB	Musomiste	1.99	253	P	Pn	17 12 35.0	+0.5
SGRR	Singureni	2.04	354	⇓*i*P	Pb	17 12 37.9	+0.1
SGRR	Singureni	2.04	354	S	Sg	17 13 05.9	-0.2
COPA	Copaceanca	2.08	339	⇑*i*P	Pb	17 12 37.8	-0.8
COPA	Copaceanca	2.08	339	S	Sb	17 13 05.4	+0.8
RASA	Rasa	2.12	17	⇑*i*P	Pb	17 12 39.4	+0.2
RASA	Rasa	2.12	17	S	Sg	17 13 08.5	-0.2
BGKT	Bogazkoy	2.13	117	PN	Pn	17 12 37.2	+0.8
MPEP	Malo Peshtene	2.19	303	P	Pn	17 12 37.9	+0.7
EDC	Edincik	2.20	146	PN	Pn	17 12 38.5	+1.1
ICOR	Ion Corvin	2.23	30	⇑*i*P	Pb	17 12 41.1	+0.1
ICOR	Ion Corvin	2.23	30	S	Sb	17 13 10.2	+1.5
INCR	INCERC-Sediu C	2.25	358	S	Sg	17 13 11.5	-1.2
VLAD	Vladila	2.26	324	⇑*i*P	Pn	17 12 39.1	+0.9
VLAD	Vladila	2.26	324	S	Sb	17 13 10.0	+0.3
SRS	Serrai	2.27	243	P	Pn	17 12 38.6	+0.2
SRS				S	Sb	17 13 09.1	-1.0
	comp=Z,2µm,0.8s						
KLYT	Kilyos	2.28	113	PN	Pn	17 12 39.1	+0.7
KLYT	Kilyos	2.28	113	⇑*i*P	Pn	17 12 40.2	+1.8
KLYT	Kilyos	2.28	113	S	Sn	17 13 08.4	+1.7
VTS	Vitosha	2.28	282	*e*Pn	Pn	17 12 39.1	+0.5
VTS	Vitosha	2.28	282	*e*Pn	Pn	17 12 39.6	+1.0
VTS				*e*Sn	Sn	17 13 07.3	+0.3
VTS	Vitosha	2.28	282	⇑*i*P	Pn	17 12 39.6	+1.0
VTS	Vitosha	2.28	282	S	Sn	17 13 07.6	+0.6
LEHL	Lehliu	2.31	10	⇑*i*P	Pb	17 12 42.0	-0.5
LEHL	Lehliu	2.31	10	S	Sg	17 13 13.6	-1.3
TSMN	Mangalia Port-	2.34	46	S	Sb	17 13 13.2	+1.1
MANR	Mangalia	2.35	46	⇑*i*P	Pb	17 12 42.4	-0.7
MANR	Mangalia	2.35	46	S	Sb	17 13 13.1	+0.8
BOZC	Bozcaada	2.36	184	PN	Pn	17 12 41.2	+1.7
BOZC	Bozcaada	2.36	184	*i* P	Pb	17 12 42.3	-0.9
EZN	Ezine	2.37	179	PN	Pn	17 12 41.5	+1.9
EZN	Ezine	2.37	179	P	Pn	17 12 40.4	+0.8
EZN	Ezine	2.37	179	⇓*i*P	Pn	17 12 38.7	-0.9
EZN	Ezine	2.37	179	S	Sn	17 13 07.8	-1.0
ISK	Istanbul-Kandi	2.38	117	PN	Pn	17 12 40.6	+0.8
ISK	Istanbul-Kandi	2.38	117	P	Pn	17 12 39.8	0.0
KAVV	Kandilli-Istan	2.38	117	PN	Pn	17 12 40.3	+0.5
GONE	Gonen-Balikesi	2.40	153	PN	Pn	17 12 41.2	+1.1
LIA	Limnos Island	2.44	200	P	Pn	17 12 41.5	+0.9
LIA				S	Sn	17 13 11.3	+0.8
	comp=Z,1µm,1.3s						
BAYC	CANAKKALE_Bayr	2.46	175	*i* P	Pn	17 12 41.6	+0.6
BAYC				IAML_P			
	comp=Z,3µm,0.4s						
SULR		2.48	360	⇓*i*P	Pn	17 12 42.1	+0.9
SULR		2.48	360	S	Sg	17 13 18.7	-1.6
KCTX	Karacabey (Bur	2.49	140	PN	Pn	17 12 42.5	+1.1
CVDA	Cernavoda	2.50	31	⇑*i*P	Pg	17 12 47.6	-0.8
CVDA	Cernavoda	2.50	31	S	Sb	17 13 16.8	+0.3
HUMR	Humele	2.51	339	⇑*i*P	Pb	17 12 46.0	+0.1
HUMR	Humele	2.51	339	S	Sg	17 13 20.5	-0.8
BUY	Buyukada	2.53	121	PN	Pn	17 12 42.9	+1.1
BUY	Buyukada	2.53	121	*i* P	Pn	17 12 42.0	+0.2
BUY				*i* S	Sg	17 13 22.2	+0.5
BUY				IAML_P			
	comp=Z,2µm,0.2s						
OUR	Ouranopolis	2.53	224	PN	Pn	17 12 44.3	+2.4
OUR	Ouranopolis	2.53	224	P	Pn	17 12 42.1	+0.2
OUR				S	Sn	17 13 14.5	+1.6
	comp=Z,1µm,0.4s						
MFTR	Murfatlar	2.53	38	⇑*i*P	Pn	17 12 43.0	+1.1
MFTR	Murfatlar	2.53	38	S	Sb	17 13 18.0	+0.5
AMRR	Amara	2.54	18	⇓*i*P	Pn	17 12 44.0	+2.0
AMRR	Amara	2.54	18	S	Sb	17 13 18.0	+0.4
ARMT	Armutlu	2.54	129	PN	Pn	17 12 43.2	+1.1
EFOR	EFORIE	2.56	42	⇑*i*P	Pn	17 12 43.0	+0.7
EFOR	EFORIE	2.56	42	S	Sb	17 13 19.5	+1.2
TSCT	Constanta Port	2.63	41	S	Sb	17 13 21.9	+1.6
BALY	Balya	2.66	157	*i* P	Pn	17 12 45.2	+1.5
BALY				*i* S	Sg	17 13 25.4	-0.6
BALY				IAML_P			
	comp=Z,4µm,0.2s						
TLB	Topalu	2.72	28	⇑*i*P	Pn	17 12 45.6	+1.1
TLB	Topalu	2.72	28	S	Sb	17 13 21.8	-1.0
SILT	Sile	2.74	111	PN	Pn	17 12 45.8	+1.1
SILT	Sile	2.74	111	⇓*i*P	Pn	17 12 45.7	+1.1
SILT	Sile	2.74	111	S	Sb	17 13 21.6	-1.7
TIRR	Tirgusor	2.75	34	*e*Pn	Pn	17 12 45.5	+0.5

TIRR	Tirgusor	2.75	34	⇑iP	Pn	17 12 45.4	+0.5
TIRR	Tirgusor	2.75	34	S	Sb	17 13 24.0	+0.2
HARR	Harsova	2.77	25	⇑iP	Pn	17 12 47.4	+2.2
CRAR	CRAIOVA	2.79	321	⇓iP	Pg	17 12 57.5	+3.5
BAIL	Bailesti	2.81	311	S	Sn	17 13 20.5	+0.7
GEMT	Gemlik	2.82	128	PN	Pn	17 12 46.9	+1.1
BALB	Balikesir	2.83	154	PN	Pn	17 12 47.7	+1.7
BALB	Balikesir	2.83	154	ePn	Pn	17 12 46.6	+0.6
YLV	Yalova	2.85	124	PN	Pn	17 12 47.4	+1.1
YLV	Yalova	2.85	124	⇑iP	Pn	17 12 47.4	+1.1
YLV	Yalova	2.85	124	S	Sn	17 13 20.6	-0.2
ZAPS	Zavoj	2.88	293	ePn	Pn	17 12 47.2	+0.4
ZAPS				eSn	Sn	17 13 21.0	-0.7
VAY	Valandovo	2.90	254	i Pn	Pn	17 12 47.6	+0.7
HRT	Hereke	2.90	117	PN	Pn	17 12 48.4	+1.4
AYVA	Ayvalik	2.90	173	i P	Pn	17 12 48.7	+1.8
AYVA				IAML_P			
	comp=Z,449nm,0.1s						
ISR	Istrita	2.93	4	⇓iP	Pn	17 12 48.3	+0.9
ISR	Istrita	2.93	4	S	Sb	17 13 28.3	-0.7
BLKB	Belogradchik	3.00	300	S	Sn	17 13 24.2	-0.3
STEP	BALIKESIR_Sava	3.02	158	i P	Pn	17 12 48.6	-0.1
STEP				IAML_P			
	comp=Z,1µm,0.4s						
STIP	Stip	3.08	262	i Pn	Pn	17 12 46.8	-2.7
DURS	Dursunbey	3.08	146	i P	Pn	17 12 51.7	+2.2
DURS				IAML_P			
	comp=Z,2µm,0.2s						
KAND	Kocaeli-Kandir	3.14	109	i P	Pn	17 12 52.7	+2.4
KAND				IAML_P			
	comp=Z,127nm,0.1s						
GRG	Griva	3.15	248	P	Pn	17 12 51.1	+0.6
ADVT	Abdulvahap	3.15	123	PN	Pn	17 12 51.6	+1.2
GRER		3.23	9	⇓iP	Pb	17 12 58.1	+0.1
CFR	Carcaliu	3.28	24	⇓iP	Pn	17 12 54.1	+2.0
ZEDA	zmir-Bergama	3.28	169	i P	Pn	17 12 54.6	+2.4
ZEDA				IAML_P			
	comp=Z,965nm,0.2s						
MLR	Muntele Rosu	3.30	356	Pn	Pn	17 12 49.5	-3.1
	comp=Z,0.7nm,0.3s,baz=198,slow=6.4,SNR=5.4						
MLR				Pg	Pb	17 12 59.9	+0.5
	comp=Z,5.8nm,0.3s,baz=238,slow=5.2,SNR=17						
MLR				Lg	Lg	17 13 44.1	
	comp=Z,7.1nm,0.3s,baz=169,slow=5.4,SNR=4.5						
MLR				LR	LR	17 14 33.2	
	comp=Z,474nm,18.1s,baz=121,slow=45						
MLR	Muntele Rosu	3.30	356	ePn	Pn	17 12 52.6	-0.1
MLR	Muntele Rosu	3.30	356	⇑iP	Pn	17 12 55.7	+3.1
SRE	Strehaia	3.32	319	⇑iP	Pn	17 12 53.8	+1.0
BARS	Barje	3.35	282	ePn	Pn	17 12 53.5	+0.4
BARS	Barje	3.35	282	ePn	Pn	17 12 55.9	+2.8
BARS				eSn	Sn	17 13 33.2	+0.1
BARS				eSn	Sb	17 13 38.0	-3.0
VOIR		3.36	345	⇓iP	Pn	17 12 53.9	+0.5
BISRR	Bisoca	3.37	5	⇓iP	Pn	17 12 55.2	+1.7
ZAGS	Zajecar	3.37	300	ePn	Pn	17 12 53.8	+0.4
ZAGS				eSn	Sn	17 13 33.0	-0.6
ARR	Arges	3.38	340	⇑iP	Pn	17 12 53.4	-0.3
GEYV	SAKARYA_Geyve	3.48	118	i P	Pn	17 12 58.4	+3.4
GEYV				i S	Sg	17 13 52.6	+0.2
GEYV				IAML_P			
	comp=Z,737nm,0.2s						
AKHS	Akhisar	3.52	160	i P	Pn	17 12 56.9	+1.5
TLCR		3.52	31	⇓iP	Pn	17 12 56.8	+1.4
LIT	Litokhoron	3.54	235	ePn	Pn	17 12 56.4	+0.6
PETR	Petresti	3.60	11	⇓iP	Pg	17 13 09.6	+0.2
BOVS	Bovan	3.65	295	ePn	Pn	17 12 58.3	+1.1
BOVS				eSn	Sn	17 13 38.5	-1.9
PLOR	Plostina	3.67	4	⇑iP	Pn	17 12 59.7	+2.2
VRI	Vrincioaia	3.69	5	⇓iP	Pn	17 12 59.7	+1.9
LOT	Lotru	3.72	332	⇓iP	Pn	17 12 59.4	+1.0
DOPR	Dopca	3.83	351	⇑iP	Pn	17 13 00.8	+1.1
HERR	Herculane	3.88	315	⇓iP	Pn	17 12 59.6	-0.8
OZUR		3.92	355	⇓iP	Pn	17 13 02.3	+1.3
SELS	Selova	3.93	287	ePn	Pn	17 13 01.1	0.0
KUBS	Kucevo	4.02	305	ePn	Pn	17 13 01.7	-0.6
GZR	Gura Zlata	4.07	323	⇑iP	Pn	17 13 03.0	-0.2
MANT	Manisa	4.09	154	ePn	Pn	17 13 04.8	+1.2
MDUB	Mudurnu	4.09	113	ePn	Pn	17 13 02.6	-0.8
KULA	Kula-Manisa	4.11	153	P	Pn	17 13 04.9	+1.3
MDVR	Moldovita	4.20	310	⇑iP	Pn	17 13 05.1	+0.2
SVIS	Svilajnac	4.23	301	ePn	Pn	17 13 04.5	-0.7
OHR	Ohrid	4.24	257	i Pn	Pg	17 13 23.6	+2.0
TESR	Tescani	4.33	4	⇓iP	Pn	17 13 07.5	+0.9
AGG	Agios Georgios	4.36	225	ePn	Pn	17 13 08.1	+1.0
GRUS	Gruza	4.41	294	ePn	Pn	17 13 08.1	+0.4
GRUS				eSn	Sn	17 13 58.2	-0.9
IVAS	Ivanjica	4.70	289	ePn	Pn	17 13 11.6	-0.1
IVAS				eSn	Sn	17 14 05.5	-0.9
TRUS	Trudelj	4.74	297	ePn	Pn	17 13 12.3	+0.1
TIR	Tirane	4.86	262	ePn	Pn	17 13 14.9	+1.0
CJR	Cluj-Napoca	4.91	338	⇑iP	Pn	17 13 16.5	+1.9
DIVS	Divibare	4.97	295	ePn	Pn	17 13 15.4	-0.1
DIVS	Divibare	4.97	295	ePn	Pn	17 13 15.4	-0.1
KIS	Kishinev	5.14	20	eP	Pb	17 13 32.0	+1.4
KIS	Kishinev	5.14	20	LRM	MLR	17 15 24.0	
	comp=Z,300nm,16.0s						
PDG	Podgorica	5.20	275	ePn	Pn	17 13 22.2	+3.6
TTG	Podgorica	5.20	275	ePn	Pn	17 13 20.7	+2.1
RUDO	Rudo	5.26	288	ePn	Pn	17 13 24.2	+4.8
DRME	Dracevica, Mon	5.26	272	ePn	Pn	17 13 22.8	+3.4
BBLS	Lazići	5.30	291	ePn	Pn	17 13 20.5	+0.5
BBLS	Lazići	5.30	291	ePn	Pn	17 13 18.5	-1.5
ISP	Isparta	5.45	142	ePn	Pn	17 13 23.1	+0.9
ANTO	Ankara	5.46	113	ePn	Pn	17 13 21.6	-0.6
BR231	Keskin MP Arra	5.46	113	ePn	Pn	17 13 21.8	-0.4
BUR08	Bucovina Ar. S	5.50	352	ePn	Pn	17 13 23.5	+0.7
UPM	Unac-Piva	5.52	283	ePn	Pn	17 13 24.6	+1.5
FRGS	Fruska Gora	5.54	305	ePn	Pn	17 13 23.1	-0.2
FRGS	Fruska Gora	5.54	305	ePn	Pn	17 13 23.0	-0.2
HAPS	Han Pijesak,BI	5.68	292	ePn	Pn	17 13 24.5	-0.7
ILGA	Ilgaz	5.70	99	ePn	Pn	17 13 25.9	+0.2
BRY	Bratogost	5.75	280	ePn	Pn	17 13 29.4	+3.1
TREB	Trebinje	5.88	278	ePn	Pn	17 13 30.6	+2.7
ITM	Ithomi	6.02	215	ePn	Pn	17 13 32.2	+2.3
BR131	Keskin Array S	6.10	111	ePn	Pn	17 13 31.2	+0.1
BRTR	Keskin Array B	6.10	111	Pn	Pn	17 13 31.3	+0.2
	comp=Z,0.7nm,0.3s,baz=289,slow=12,SNR=14						
BRTR				Sn	Sn	17 14 39.8	-1.4
	comp=Z,0.1nm,0.3s,baz=312,slow=15,SNR=2.7						
BRTR				Lg	Lg	17 15 11.5	
	baz=325,slow=48,SNR=2.9						
KARP	Karpathos	6.67	174	ePn	Pn	17 13 39.3	+0.4
BLY	Banja Luka	7.08	294	ePn	Pn	17 13 43.3	-1.1
KOLS	Kolonicke sedl	7.30	339	ePG	Pg	17 14 24.6	+4.4
AKASG	Malin Array Be	8.75	12	Pn	Pn	17 14 05.9	-1.4
	comp=Z,0.4nm,0.3s,baz=202,slow=13,SNR=2.3						
CSS	Mathiatis	9.09	140	ePn	Pn	17 14 12.2	+0.1
FINES	FINESS Array B	19.28	360	P	P	17 16 22.6	-2.7
	comp=Z,0.1nm,0.3s,baz=171,slow=11,SNR=3.1						
NB2	NORSAR Subarra	20.96	339	P	P	17 16 41.7	-2.0
	comp=Z,3.1nm,0.9s,baz=147,slow=11						
NOA	NORSAR Array B	20.96	339	P	P	17 16 41.0	-2.7
	comp=Z,1.4nm,0.8s,baz=147,slow=9.8,SNR=5.0						

TAP 09 17:12:04.7, 24°.58N×121°.64E, h75^{km}±1^{km}, ML1.7, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWE	Neicheng	0.14	12	P	Pn	17 12 16.0	+0.3
	baz=17						
TWE				eS	Sn	17 12 23.9	+0.2
	baz=17						
ENA	Nanau	0.18	148	eS	Sn	17 12 24.5	+0.5
	baz=146						
NANB	Nanao	0.19	146	eP	Pn	17 12 14.5	-1.3
	baz=146						
NANB				S	Sn	17 12 24.4	+0.4
	baz=146						
YHNB	Yeheng	0.25	290	P	Pn	17 12 16.2	0.0
	baz=290						
YHNB				S	Sn	17 12 24.8	0.0
	baz=290						
NSK	Sanguang	0.27	290	eS	Sn	17 12 25.1	+0.2
	baz=290						
NNSB	Datong	0.28	236	P	Pn	17 12 16.5	+0.1
	baz=236						
NNSB				S	Sn	17 12 25.4	+0.3
	baz=236						
NNS	Nan Shan	0.28	239	P	Pn	17 12 16.5	0.0
	baz=237						
NNS				eS	Sn	17 12 25.6	+0.5
	baz=237						
ETLH	Xiulin Townshi	0.40	201	eS	Sn	17 12 25.4	-1.1
	baz=200						
NACB	Ninganchiao	0.41	185	eS	Sn	17 12 27.4	+1.0
	baz=185						
TIPB	Shuangxi	0.42	24	eP	Pn	17 12 16.9	-0.5
	baz=24						
TIPB				i S	Sn	17 12 27.3	+0.6
	baz=24						
YM01	YM01	0.56	354	eS	Sn	17 12 29.9	+1.0
	baz=353						
LIOB	Emei	0.57	276	eS	Sn	17 12 29.6	+0.6
	baz=276						
CHGB	Renai	0.67	219	P	Pn	17 12 20.6	+0.7
	baz=218						
CHGB				eS	Sn	17 12 33.4	+2.2
	baz=218						

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*BJI **09** 17:14:14.2±0.0, 3°.93S×100°.49E, h14^{km}, mb5.0/57, mB5.2/35, Ms5.4/24, Ms7 5.1/24*

*NEIC **09** 17:14:19.2±1.9, 3°.40S×100°.34E, h8^{km}±2^{km}, mb5.1/103, Error ellipse: s-maj=11.3km s-min=7.7km az=222.0*

*DJA **09** 17:14:21.6±0.5, 3°S±3°×10°0E±°, h24^{km}±5^{km}, M5.1/30, mB5.8/3, mb5.0/30, MLv5.1/25, Mw(mB)5.3/3*

*IDC **09** 17:14:22.7±2.2, 3°.36S×100°.42E, h30^{km}±14^{km}, mb4.6/39, mb1 4.6/42, mb1mx4.5/57, mbtmp4.8/42, ML4.4/3, Error ellipse: s-maj=14.0km s-min=8.3km az=40.0*

*ISCJB **09** 17:14:22.2±0.6, 3°.33S±0°.03×100°.42E±0°.03, h39^{km}±4^{km}, mb5.0/160, Error ellipse: s-maj=6.6km s-min=3.1km az=135.8*

*MOS **09** 17:14:23.1±0.7, 3°.25S×100°.47E, h46^{km}, mb5.3/53, Error ellipse: s-maj=11.6km s-min=5.9km az=106.0*

ISC 09 17:14:21.3±0.6, 3°.35S±0°.05×100°.38E±0°.04, h21^{km}±5^{km}, n641, σ1^{s}01/642, mb5.0/164, 12C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.69	327	P	Pb	17 14 35.3	+0.6
KRJI	Kerinci	1.65	41	P	Pb	17 14 51.0	-0.1
SISI	Saibi	2.38	327	P	Pn	17 14 58.9	-0.4
PDSI	Padang	2.42	2	P	Pn	17 14 59.2	-0.6
SDSI	Sungai Dareh	2.62	24	P	Pn	17 15 03.9	+1.5
MNAI	Manna	2.76	111	ePn	Pn	17 15 05.5	+1.1
MNAI	Manna	2.76	111	P	Pn	17 15 06.1	+1.7
LHSI	Lahat	3.17	99	P	Pn	17 15 12.5	+2.4
RGRI	Rengat	3.56	33	P	Pn	17 15 16.9	+1.5
JMBI	JAMBI	3.68	63	P	Pn	17 15 19.2	+2.2
BKNI	Bangkinang	3.71	10	ePn	Pn	17 15 18.7	+1.2
BKNI	Bangkinang	3.71	10	P	Pn	17 15 18.9	+1.4
MDSI	Maura Dua	3.96	107	P	Pn	17 15 23.3	+2.4
LWLI	Liwa	4.03	114	P	Pn	17 15 24.7	+2.7
PMBI	Palembang	4.41	85	P	Pn	17 15 27.2	+0.1
KASI	Kota Agung	4.64	118	P	Pn	17 15 31.3	+1.0
KLI	Kotabumi	4.71	109	P	Pn	17 15 32.5	+1.2
DSRI	Dabo	5.07	56	P	Pn	17 15 38.3	+2.1
	778nm,0.9s,3.0nm						
BLSI	Bandar Lampung	5.25	113	P	Pn	17 15 41.5	+2.8
	173nm,0.5s,1.0nm						
GSI	Gunungsitoli	5.40	329	ePn	Pn	17 15 39.4	-1.4
GSI	Gunungsitoli	5.40	329	P	Pn	17 15 40.1	-0.7
TPRI	Tanjung Pinang	5.93	44	P	Pn	17 15 50.3	+2.3
	264nm,0.8s,1.0nm						
MYKOM	Kota Tinggi	6.17	34	ePn	Pn	17 15 52.4	+1.1
CGJI	Cibinong	6.21	122	P	Pn	17 15 51.7	-0.1
PSI	Prapat	6.28	347	Pn	Pn	17 15 50.8	-2.1
	1.7nm,0.3s,baz=162,slow=13,SNR=3.1						
PSI	Prapat	6.28	347	ePn	Pn	17 15 52.7	-0.2
PSI	Prapat	6.28	347	eP	Pn	17 15 52.7	-0.2
TPI	Tanjungpandan	7.29	86	P	Pn	17 16 07.8	+1.1
TPTI		7.30	334	P	Pn	17 16 07.5	+0.6
KCSI	Kotacane, Aceh	7.30	339	P	Pn	17 16 06.4	-0.5
IPM	Ipoh	7.80	5	ePn	Pn	17 16 15.9	+2.1
LEM	Lembang	7.99	116	Pn	Pn	17 16 16.8	+0.3
	13nm,0.3s,baz=19,slow=19,SNR=13						
LEM				Sn	Sn	17 17 47.0	+0.5
	2.2nm,0.3s,baz=192,slow=20,SNR=1.8						
LEM	Lembang	7.99	116	P	Pn	17 16 18.8	+2.3
CISI	Cisompet, Garu	8.50	120	ePn	Pn	17 16 22.8	-0.6
CISI				eSn	Sn	17 17 51.6	-7.2
CISI	Cisompet, Garu	8.50	120	P	Pn	17 16 23.2	-0.2
MLSI	Meulaboh, Aceh	8.54	332	P	Pn	17 16 23.4	-0.5
KULM	Kulim	8.58	2	ePn	Pn	17 16 24.6	+0.1
XMIS	Christmas Isla	8.81	144	ePn	Pn	17 16 24.6	-3.0
LHMI	Lhok Sumawe	9.18	338	ePn	Pn	17 16 30.9	-1.8
KSM	Kuching	11.02	64	ePn	Pn	17 16 59.9	+2.0
UGM	Wanagama	11.06	115	ePn	Pn	17 16 58.8	+0.3
SBUM	Sibu	13.16	64	ePn	Pn	17 17 28.4	+1.2
JAGI	Jajag, Banyuwa	14.61	111	ePn	Pn	17 17 46.3	-0.8
CHBT	CHBT	16.11	7	P	P	17 18 19.4	+9.5
PBA	Port Blair	16.73	333	eP	P	17 18 17.4	+0.7
	174nm,1.0s						
DLV	T Lat	17.20	28	ePn	Pn	17 18 20.7	0.0
	21nm,0.9s						
PLAI	Plampang	18.13	108	P	Pn	17 18 30.9	-1.2
KKM	Kota Kinabalu	18.36	59	eP	P	17 18 35.2	+0.2
	57nm,1.0s						
CHAI	Chaiyaphum	19.19	5	P	Pn	17 18 45.9	+1.0
	28µm,0.5s						
SPSI	Sidrap Palu	19.36	92	P	P	17 18 46.4	+0.6
KAPI	Kappang	19.39	96	P	P	17 18 46.6	+0.5
	2.0nm,0.3s,baz=252,slow=9.2,SNR=17						
KAPI	Kappang	19.39	96	eP	P	17 18 46.9	+0.7
	117nm,1.1s						
KAPI	Kappang	19.39	96	eP	P	17 18 46.9	+0.7
KAPI				pmax	pmax		
	comp=Z,117nm,1.1s						
TTSI	Tana Toraja	19.41	90	P	Pn	17 18 49.9	+2.3
	comp=Z,31nm,1.0s						
BNSI	Bone	19.71	94	P	Pn	17 18 50.8	-0.4
BKSI	Bulukumba	19.78	96	P	Pn	17 18 51.7	-0.4
	comp=Z,94nm,1.0s						
SKNT	Sakolnakorn	20.50	10	P	P	17 18 57.7	-0.5
PANO	Nakornpanom	20.79	11	P	P	17 19 01.3	0.0
	comp=Z,1.3nm,0.8s						
APSI	Ampana	21.39	84	P	P	17 19 09.6	+1.7
NONG	Nongkai	21.45	7	P	P	17 19 06.8	-1.6
	comp=Z,0.8nm,1.3s						
PHRA	Phrae	21.71	360	P	P	17 19 13.2	+2.0
	comp=Z,6.1nm,1.3s						
CM31	Chiang Mai Arr	21.71	356	eP	P	17 19 10.3	-1.0
	comp=Z,34nm,0.9s						
CMAR	Chiang Mai Arr	21.71	356	P	P	17 19 09.8	-1.5
	comp=Z,8.5nm,0.8s,baz=186,slow=9.7,SNR=30						
CMAR				PcP	PcP	17 23 13.4	+1.3
	comp=Z,1.9nm,0.9s,baz=213,slow=4.1,SNR=4.9						
CMAR	Chiang Mai Arr	21.71	356	i P	P	17 19 09.6	-1.7
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LAMP	Lampang	21.74	358	P	P	17 19 15.1	+3.5
	comp=Z,82µm,0.7s						
CMMT	Chiang Mai	22.07	356	P	P	17 19 17.3	+2.2
	comp=Z,9.6nm,1.3s						
CHTO	Chiang Mai	22.07	356	eP	P	17 19 14.2	-0.9
	comp=Z,45nm,1.5s						
CHTO	Chiang Mai	22.07	356	eP	P	17 19 14.2	-0.9
CHTO				pmax	pmax		
	comp=Z,45nm,1.5s						
MMRI	Maumere	22.36	105	eP	P	17 19 14.7	-3.6
	comp=Z,37nm,1.0s						
LUWI	Luwuk	22.49	85	eP	P	17 19 19.9	+0.1
	comp=Z,72nm,0.9s						
LUWI	Luwuk	22.49	85	P	P	17 19 33.2	+13
PAYA	Payao	22.57	359	P	P	17 19 22.5	+2.0
	comp=Z,92µm,0.9s,comp=Z,899µm						
BATI	Baumata	24.09	108	P	P	17 19 33.8	-2.0
	comp=Z,26nm,0.4s,baz=5.0,slow=3.1,SNR=9.8						
QIZ	Qiongzhong	24.11	22	eP	P	17 19 36.3	+0.5
	comp=Z,39nm,1.3s						
SOEI	Soe	24.56	106	eP	P	17 19 39.6	-0.6
	comp=Z,58nm,1.1s						
SLVN	Son La	24.77	8	eP	P	17 19 42.4	+0.5
	comp=Z,19nm,0.9s						
SANI	Sanana	25.61	88	P	P	17 19 48.7	-0.9
PSA00	Pilbara Seismi	26.19	135	eP	P	17 19 54.2	-0.6
	comp=Z,26nm,1.4s						
TGY	Tagaytay City	26.76	49	P	P	17 20 00.6	+0.5
	comp=Z,199nm,0.4s,baz=144,slow=11,SNR=5.6						
DAV	Davao City (W)	27.20	68	eP	P	17 20 02.8	-1.1
	comp=Z,154nm,0.4s						
LBMI	Labuha	27.23	85	P	P	17 20 05.0	+0.7
TNTI	Ternate	27.28	82	eP	P	17 20 03.0	-1.7
	comp=Z,15nm,1.0s						
H08S2	Diego Garcia H	28.08	260	T	T	17 49 25.0	
	baz=82,slow=74,SNR=666						
H08S3	Diego Garcia H	28.09	260	T	T	17 49 27.0	
	baz=82,slow=74,SNR=765						
H08S1	Diego Carcia H	28.10	260	T	T	17 49 27.9	
	baz=82,slow=74,SNR=718						
KMI	Kunming	28.39	5	eP	P	17 20 14.9	+0.3
	comp=Z,15nm,0.6s						
KMI	Kunming	28.39	5	P	P	17 20 21.0	+6.3
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
KMI				LR	LR		
	comp=Z,2µm,18.6s						
KMI				LR	LR		
	comp=Z,940nm,17.2s						
KMI				LR	LR		
	comp=Z,2µm,16.6s						
KMI	Kunming	28.39	5	eP	P	17 20 15.0	+0.3
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
SHL	Shillong	29.90	344	eP	P	17 20 28.6	+0.6
	comp=Z,35nm,0.5s						
SHL	Shillong	29.90	344	eP	P	17 20 28.6	+0.6
SHL				pmax	pmax		
	comp=Z,35nm,0.5s						
GYA	Guiyang	30.25	11	P	P	17 20 31.4	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KNRA	Kununurra	30.50	116	P	P	17 20 32.7	-0.6
	baz=31,SNR=4.5						
SIJI	Sorong	30.96	86	P	P	17 20 35.7	-1.8
	comp=Z,11nm,0.7s,baz=255,slow=6.4,SNR=5.8						
FAKI	Fak Fak	31.82	90	eP	P	17 20 44.8	-0.3
	comp=Z,62nm,1.2s						
TPUB	Ta-pu	33.04	36	eP	P	17 20 56.5	+0.9
	comp=Z,22nm,1.0s						
KDU	Kakadu	33.07	108	P	P	17 20 54.2	-1.6
	baz=33,SNR=4.2						
NWAO	Narrogin (SRO)	33.39	154	eP	P	17 21 00.7	+2.2
	comp=Z,158nm,1.8s						
NWAO				ePcP	PcP	17 23 42.2	+2.3
NWAO	Narrogin (SRO)	33.39	154	eP	P	17 21 00.7	+2.2
NWAO				e		17 23 42.2	
NWAO				pmax	pmax		
	comp=Z,158nm,1.8s						
YULB	Yu-li	33.50	36	eP	P	17 20 59.9	+0.3
	comp=Z,48nm,2.0s						
SSLB	Suanglung	33.60	36	eP	P	17 21 00.6	+0.2
	comp=Z,12nm,1.0s						
JIRN	Jiri	33.73	337	eP	P	17 21 03.5	+1.6
	comp=Z,72nm,0.8s						
H01W3	Cape Leeuwin H	33.88	159	T	T	17 56 39.6	
	baz=336,slow=76,SNR=52						
H01W2	Cape Leeuwin H	33.89	159	T	T	17 56 40.6	
	baz=336,slow=76,SNR=74						
H01W1	Cape Leeuwin H	33.90	159	T	T	17 56 42.2	
	baz=336,slow=76,SNR=65						
PKI	Pulchoki	33.96	336	eP	P	17 21 05.2	+1.3
	comp=Z,33nm,1.1s						
PKIN	Phulchoki	33.97	336	eP	P	17 21 05.3	+1.4
	comp=Z,14nm,0.7s						
LSA	Lhasa	34.03	346	eP	P	17 21 05.8	+1.3
	comp=Z,22nm,0.8s						
LSA	Lhasa	34.03	346	eP	P	17 21 05.9	+1.3
LSA				pmax	pmax		
	comp=Z,22nm,0.8s						
GUN	Gumba	34.07	337	eP	P	17 21 06.3	+1.4
	comp=Z,68nm,0.5s						
DMN	Daman	34.12	335	eP	P	17 21 06.7	+1.5
KKN	Kakani	34.20	336	eP	P	17 21 07.3	+1.4
	comp=Z,36nm,0.7s						
CD2	Chengdu	34.22	5	eP	P	17 21 06.0	+0.3
NACB	Ninganchiao	34.27	36	eP	P	17 21 03.5	-2.8
	comp=Z,18nm,0.8s						
WRKA	Warakurna	34.45	131	P	P	17 21 09.2	+1.3
	baz=35,SNR=6.0						
YHNB	Yeheng	34.52	35	eP	P	17 21 09.3	+0.8
	comp=Z,20nm,1.1s						
ENH	Enshi	34.55	14	eP	P	17 21 07.8	-0.8
	comp=Z,43nm,1.0s						
GKN	Gorkha	34.66	335	eP	P	17 21 11.0	+1.2
	comp=Z,28nm,0.5s						
KOLN	Koldanda	34.91	333	eP	P	17 21 13.3	+1.3
	comp=Z,97nm,1.1s						
YOJ	Yonaguni jima	35.33	37	eP	P	17 21 16.0	+0.6
	comp=Z,20nm,0.9s						
YOJ	Yonaguni jima	35.33	37	eP	P	17 21 16.0	+0.6
YOJ				pmax	pmax		
	comp=Z,20nm,0.9s						
PYUN	Piuthan	35.47	333	eP	P	17 21 17.8	+1.0
	comp=Z,94nm,1.1s						
WHN	Wuhan	36.25	21	⇓iP	P	17 21 24.0	+0.9
WHN				pmax	pmax		
	comp=Z,30nm,0.7s						
WRA	Warramunga Arr	37.00	119	P	P	17 21 29.8	0.0
	comp=Z,13nm,0.4s,baz=293,slow=10,SNR=75						
WRA				S	S	17 27 13.0	-1.5
	comp=Z,6.0nm,0.9s,baz=299,slow=16,SNR=5.4						
WRAB	Tennant Creek	37.00	119	i P	P	17 21 31.0	+1.1
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WB2	Warramunga Arr	37.01	119	eP	P	17 21 29.9	0.0
	comp=Z,18nm,1.0s						
FORT	Forrest	37.78	139	eP	P	17 21 37.1	+0.9
	comp=Z,42nm,1.1s						
XAN	Xi'an	38.05	12	eP	P	17 21 38.1	-0.4
	comp=Z,61nm,0.7s						
XAN	Xi'an	38.05	12	P	P	17 21 38.2	-0.3
XAN				pP	pP	17 21 45.2	+0.4
XAN				pmax	pmax		
	comp=Z,78nm,0.7s						
XAN				pmax	pmax		
	comp=Z,140nm,4.7s						
XAN	Xi'an	38.05	12	eP	P	17 21 38.1	-0.4
XAN				pmax	pmax		
	comp=Z,61nm,0.7s						
AS31	Alice Springs	38.17	125	eP	P	17 21 40.1	+0.4
	comp=Z,9.7nm,0.4s						
AS31				eS	S	17 27 34.1	+1.9
ASAR	Alice Springs	38.17	125	P	P	17 21 40.4	+0.7
	comp=Z,15nm,0.4s,baz=301,slow=7.1,SNR=87						
ASAR				S	S	17 27 30.0	-2.2
	comp=Z,0.8nm,0.6s,baz=300,slow=15,SNR=3.3						
NJ2	Nanjing	39.34	25	eP	P	17 21 50.8	+1.5
NJ2				sP	pP	17 21 54.7	-1.0
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s						
NJ2				LR	LR		
	comp=Z,4µm,14.2s						
NJ2				LR	LR		
	comp=Z,2µm,11.4s						
LZH	Lanzhou	39.36	4	⇑P	P	17 21 50.2	+0.6
LZH				pP	pP	17 21 56.6	+0.6
LZH				sP	sP	17 22 00.1	+1.5
LZH				pmax	pmax		
	comp=Z,33nm,1.3s						
LZH				pmax	pmax		
	comp=Z,380nm,4.3s						
LZH				LR	LR		
	comp=Z,560nm,14.9s						
LZH				LR	LR		
	comp=Z,570nm,14.3s						
LZH				LR	LR		
	comp=Z,620nm,15.5s						
GENI	Genyem	39.74	90	P	P	17 21 54.1	+1.2
JOW	Kunigami	40.33	40	eP	P	17 21 58.1	+0.4
	comp=Z,33nm,1.4s						
QIS	Mount Isa	41.84	117	P	P	17 22 10.7	+0.4
	baz=42,SNR=10.0						
GTA	Gaotai	42.55	359	eP	P	17 22 16.5	+0.7
GTA				pP	pP	17 22 21.4	-0.8
GTA				sP	sP	17 22 23.9	-0.9
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,250nm,6.2s						
GTA				LR	LR		
	comp=Z,680nm,18.5s						
GTA				LR	LR		
	comp=Z,500nm,15.5s						
GTA				LR	LR		
	comp=Z,820nm,14.4s						
COEN	Coen	43.52	107	eP	P	17 22 23.1	-0.9
	comp=Z,64nm,1.4s						

BBOO	**Buckleboo**	**44.42**	**135**	*e*P	**P**	**17 22 31.4**	**+0.4**
	comp=Z,71nm,1.8s						
NIL	**Nilore**	**44.83**	**327**	*e*P	**P**	**17 22 34.1**	**-0.1**
	comp=Z,22nm,0.6s						
NIL	**Nilore**	**44.83**	**327**	*e*P	**P**	**17 22 34.1**	**-0.1**
NIL				pmax	pmax		
	comp=Z,22nm,0.6s						
HHC	**Hu-ho-hao-te**	**45.16**	**12**	P	**P**	**17 22 38.3**	**+1.6**
HHC				pmax	pmax		
	comp=Z,51nm,1.0s						
HHC				pmax	pmax		
	comp=Z,380nm,6.3s						
MTSU	**Mount Surprise**	**45.45**	**112**	P	**P**	**17 22 39.9**	**+0.5**
	baz=46,SNR=16						
BJT	**Baijiatuau**	**45.52**	**17**	*e*P	**P**	**17 22 40.2**	**+0.8**
	comp=Z,52nm,1.4s						
BJT	**Baijiatuau**	**45.52**	**17**	*e*P	**P**	**17 22 40.3**	**+0.8**
BJT				pmax	pmax		
	comp=Z,52nm,1.4s						
JNU	**Nakatsue**	**46.34**	**36**	P	**P**	**17 22 45.7**	**-0.5**
	comp=Z,57nm,1.0s,baz=166,slow=3.1,SNR=21						
JNU	**Nakatsue**	**46.34**	**36**	*e*P	**P**	**17 22 45.8**	**-0.4**
	comp=Z,78nm,1.1s						
PMG	**Port Moresby**	**46.84**	**100**	*e*P	**P**	**17 22 49.5**	**-0.8**
	comp=Z,37nm,0.9s						
PMG	**Port Moresby**	**46.84**	**100**	*e*P	**P**	**17 22 49.6**	**-0.8**
PMG				pmax	pmax		
	comp=Z,37nm,0.9s						
GUMO	**Guam**	**47.24**	**68**	*e*P	**P**	**17 22 50.3**	**-3.1**
	comp=Z,556nm,1.9s						
GUMO	**Guam**	**47.24**	**68**	*e*P	**P**	**17 22 50.3**	**-3.1**
GUMO				pmax	pmax		
	comp=Z,556nm,1.9s						
CTA	**Charters Tower**	**47.69**	**114**	P	**P**	**17 22 57.1**	**+0.1**
	comp=Z,7.8nm,0.7s,baz=296,slow=11,SNR=8.0						
CTAO	**Charters Tower**	**47.69**	**114**	*e*P	**P**	**17 22 57.4**	**+0.5**
	comp=Z,72nm,1.7s						
CTAO	**Charters Tower**	**47.69**	**114**	*e*P	**P**	**17 22 57.4**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,72nm,1.7s						
KS15	**Wonju Array Si**	**47.96**	**30**	*e*P	**P**	**17 22 58.7**	**+0.1**
	comp=Z,51nm,1.4s						
STKA	**Stephens Creek**	**47.98**	**131**	P	**P**	**17 22 59.7**	**+0.8**
	comp=Z,6.4nm,0.7s,baz=312,slow=6.5,SNR=14						
STKA	**Stephens Creek**	**47.98**	**131**	*e*P	**P**	**17 22 59.9**	**+0.9**
	comp=Z,5.3nm,1.2s						
STKA	**Stephens Creek**	**47.98**	**131**	P	**P**	**17 23 00.1**	**+1.2**
	baz=48,SNR=11						
STKA	**Stephens Creek**	**47.98**	**131**	*e*P	**P**	**17 22 59.9**	**+0.9**
STKA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KSRS	**Korea Array**	**47.99**	**30**	P	**P**	**17 22 58.9**	**+0.1**
	comp=Z,26nm,1.1s,baz=222,slow=8.3,SNR=50						
KSH	**Kashi**	**48.20**	**335**	P	**P**	**17 23 00.0**	**-0.7**
KSH				sP	pP	17 23 06.9	-0.3
KSH				PcP	**PcP**	**17 24 27.1**	**-0.7**
KSH				PP	**PP**	**17 24 49.9**	**-3.3**
KSH				S	**S**	**17 29 55.8**	**-3.3**
KSH				ScS	**ScS**	**17 32 48.7**	**-4.2**
KSH				SS	**SS**	**17 33 20.7**	**-8.0**
KSH				pmax	pmax		
	comp=Z,17nm,1.2s						
KSH				pmax	pmax		
	comp=Z,260nm,6.5s						
KSH				LR	LR		
	comp=Z,1µm,14.7s						
KSH				LR	LR		
	comp=Z,890nm,15.5s						
KSH				LR	LR		
	comp=Z,890nm,13.4s						
WMQ	**Urumqi**	**48.32**	**348**	*e*P	**P**	**17 23 02.9**	**+1.5**
	comp=Z,37nm,0.7s						
WMQ	**Urumqi**	**48.32**	**348**	*e*P	**P**	**17 23 03.0**	**+1.6**
WMQ				pP	pP	17 23 07.5	-0.4
WMQ				pmax	pmax		
	comp=Z,25nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,750nm,5.5s						
WMQ				LR	LR		
	comp=Z,1µm,18.9s						
WMQ				LR	LR		
	comp=Z,1µm,24.7s						
WMQ				LR	LR		
	comp=Z,2µm,26.1s						
WMQ	**Urumqi**	**48.32**	**348**	*e*P	**P**	**17 23 02.9**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,37nm,0.7s						
PRZ	**Przheval'sk**	**49.77**	**339**	*e*P	**P**	**17 23 14.1**	**+1.3**
	comp=Z,84nm,1.5s						
PRZ	**Przheval'sk**	**49.77**	**339**	*e*P	**P**	**17 23 14.1**	**+1.3**
PRZ				pmax	pmax		
	comp=Z,84nm,1.5s						
KDJ	**Kajisay**	**49.92**	**337**	*e*P	**P**	**17 23 15.1**	**+1.2**
	comp=Z,37nm,1.0s						
KDJ	**Kajisay**	**49.92**	**337**	*e*P	**P**	**17 23 15.1**	**+1.2**
KDJ				pmax	pmax		
	comp=Z,37nm,1.0s						
GAR	**Garm**	**50.44**	**330**	*e*P	**P**	**17 23 17.2**	**-0.6**
	comp=Z,51nm,1.5s						
GAR	**Garm**	**50.44**	**330**	*e*P	**P**	**17 23 17.2**	**-0.6**
GAR				pmax	pmax		
	comp=Z,51nm,1.5s						
BOOM	**Boomskoye usch**	**50.71**	**337**	*e*P	**P**	**17 23 20.4**	**+0.6**
	comp=Z,15nm,0.8s						
BOOM	**Boomskoye usch**	**50.71**	**337**	*e*P	**P**	**17 23 20.4**	**+0.6**
BOOM				pmax	pmax		
	comp=Z,15nm,0.8s						
CMSA	**Cobar Meteorol**	**50.98**	**129**	P	**P**	**17 23 23.4**	**+1.5**
	baz=51,SNR=24						
ARSB	**Arslanbob**	**50.99**	**334**	*e*P	**P**	**17 23 22.6**	**+0.7**
	comp=Z,48nm,1.1s						
BTK	**Batken**	**51.00**	**331**	*e*P	**P**	**17 23 22.6**	**+0.7**
	comp=Z,23nm,1.1s						
BTK	**Batken**	**51.00**	**331**	*e*P	**P**	**17 23 22.6**	**+0.7**
BTK				pmax	pmax		
	comp=Z,23nm,1.1s						
UCH	**Uchtor**	**51.07**	**335**	P	**P**	**17 23 24.1**	**+1.3**
	SNR=6.3						
TKM2	**Tokmak 2**	**51.21**	**337**	P	**P**	**17 23 24.7**	**+1.1**
	SNR=25						
SONA0	**Songino Array**	**51.24**	**5**	*e*PcP	**PcP**	**17 24 39.3**	**+0.6**
SONM	**Songino Array**	**51.24**	**5**	P	**P**	**17 23 25.1**	**+1.4**
	comp=Z,38nm,0.7s,baz=189,slow=9.3,SNR=153						
SONM				PcP	**PcP**	**17 24 39.3**	**+0.6**
	comp=Z,7.9nm,0.8s,baz=190,slow=4.2,SNR=4.7						
KBK	**Karagaybulak**	**51.25**	**336**	P	**P**	**17 23 25.5**	**+1.6**
	SNR=8.2						
ULN	**Ulaanbaatar**	**51.33**	**6**	*e*P	**P**	**17 23 25.3**	**+1.0**
	comp=Z,49nm,1.1s						
ULN	**Ulaanbaatar**	**51.33**	**6**	*ce*P	**P**	**17 23 25.5**	**+1.1**
ULN				pmax	pmax		
	comp=Z,54nm,1.3s						
AAK	**Ala-Archa**	**51.42**	**336**	P	**P**	**17 23 26.3**	**+1.1**
	comp=Z,2.8nm,0.6s,baz=176,slow=5.5,SNR=5.8						
AAK	**Ala-Archa**	**51.42**	**336**	*e*P	**P**	**17 23 26.6**	**+1.4**
	comp=Z,11nm,1.2s						
AAK	**Ala-Archa**	**51.42**	**336**	*ce*P	**P**	**17 23 25.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
FRU1	**Bishkek**	**51.51**	**336**	*e*P	**P**	**17 23 26.4**	**+0.7**
	comp=Z,15nm,0.6s						
FRU1	**Bishkek**	**51.51**	**336**	*e*P	**P**	**17 23 26.4**	**+0.7**
FRU1				pmax	pmax		
	comp=Z,15nm,0.6s						
EKS2	**Erkin-Say**	**51.74**	**335**	P	**P**	**17 23 29.0**	**+1.6**
	SNR=18						
USP	**Ospenovka**	**51.94**	**336**	P	**P**	**17 23 29.8**	**+1.0**
	SNR=13						
CN2	**Changchun**	**52.06**	**23**	⇑P	**P**	**17 23 29.4**	**-0.3**
CN2				*e*S	**S**	**17 30 55.7**	**+3.2**
CN2				pmax	pmax		
	comp=Z,60nm,0.8s						
CN2				LR	LR		
	comp=Z,2µm,13.0s						
CN2				LR	LR		
	comp=Z,710nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
MK31	**Makanchi Array**	**52.42**	**344**	*e*P	**P**	**17 23 32.8**	**+0.5**
	comp=Z,28nm,0.8s						
MK31	**Makanchi Array**	**52.42**	**344**	*e*P	**P**	**17 23 32.8**	**+0.5**
MK31				pmax	pmax		
	comp=Z,28nm,0.8s						
MKAR	**Makanchi Array**	**52.42**	**344**	P	**P**	**17 23 33.1**	**+0.8**
	comp=Z,33nm,0.7s,baz=147,slow=8.2,SNR=185						
MAKZ	**Makanchi**	**52.52**	**344**	*e*P	**P**	**17 23 33.2**	**+0.2**
	comp=Z,18nm,0.9s						
MAKZ	**Makanchi**	**52.52**	**344**	*e*P	**P**	**17 23 33.2**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,18nm,0.9s						
MAJO	**Matsushiro**	**53.08**	**38**	*e*P	**P**	**17 23 36.8**	**-0.6**
	comp=Z,17nm,1.3s						
MAJO				*e*PcP	**PcP**	**17 24 46.8**	**+1.0**
MAJO	**Matsushiro**	**53.08**	**38**	*i* P	**P**	**17 23 36.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,14nm,1.2s						
MAT	**Matsushiro**	**53.08**	**38**	P	**P**	**17 23 35.9**	**-1.5**
MJAR	**Matsushiro Arr**	**53.08**	**38**	P	**P**	**17 23 36.6**	**-0.8**
	comp=Z,9.7nm,1.0s,baz=220,slow=8.5,SNR=21						
MJAR				PcP	**PcP**	**17 24 46.8**	**+1.0**
	comp=Z,2.5nm,0.9s,baz=214,slow=4.1,SNR=3.0						
MJB9	**Matsu-Tunnel**	**53.08**	**38**	*e*P	**P**	**17 23 37.1**	**-0.3**
	comp=Z,18nm,1.3s						
EIDS	**Eidsvold**	**53.36**	**119**	*e*P	**P**	**17 23 40.6**	**+0.9**
	comp=Z,41nm,1.4s						
TOO	**Toolangi**	**53.49**	**136**	*e*P	**P**	**17 23 40.3**	**-0.1**
	comp=Z,26nm,1.5s						
TOO	**Toolangi**	**53.49**	**136**	P	**P**	**17 23 40.3**	**-0.1**
TOO				pmax	pmax		
	comp=Z,26nm,1.5s						
KK31	**Karatay Array**	**53.52**	**333**	*e*P	**P**	**17 23 40.1**	**-0.4**
	comp=Z,4.2nm,0.8s						
KK31	**Karatay Array**	**53.52**	**333**	*e*P	**P**	**17 23 40.1**	**-0.4**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	**53.52**	**333**	*e*P	**P**	**17 23 40.0**	**-0.5**
	comp=Z,4.2nm,0.8s						
KKAR	**Karatay Array**	**53.52**	**333**	*e*P	**P**	**17 23 40.0**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAK	**Zakamensk**	**53.58**	**2**	*e*P	**P**	**17 23 44.1**	**+3.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DGZ	**Jazzator, Alta**	**54.01**	**350**	*c i*P	**P**	**17 23 45.1**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,17nm,0.7s						
OPO	**Ambohidratompo**	**54.15**	**250**	P	**P**	**17 23 45.6**	**-0.2**
	comp=Z,8.3nm,1.0s,baz=108,slow=9.6,SNR=3.3						
MDJ	**Mudanjiang**	**54.43**	**25**	*e*P	**P**	**17 23 47.3**	**+0.2**
	comp=Z,13nm,0.8s						
MDJ	**Mudanjiang**	**54.43**	**25**	P	**P**	**17 23 47.2**	**+0.1**
MDJ				pP	pP	17 23 51.2	-2.4
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.4s						
MDJ				LR	LR		
	comp=Z,6µm,13.9s						
MDJ				LR	LR		
	comp=Z,4µm,15.3s						
MDJ				LR	LR		
	comp=Z,8µm,16.1s						
MOY	**Mondy**	**54.81**	**0**	*e*P	**P**	**17 23 50.6**	**+0.7**
TLY	**Talaya**	**54.89**	**2**	P	**P**	**17 23 50.9**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=198,slow=7.4,SNR=16						
TLY	**Talaya**	**54.89**	**2**	*e*P	**P**	**17 23 51.2**	**+0.9**
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**54.89**	**2**	*i* P	**P**	**17 23 51.3**	**+0.9**
CAN	**Canberra**	**55.04**	**132**	*e*P	**P**	**17 23 52.4**	**+0.6**
	comp=Z,20nm,1.2s						
CAN	**Canberra**	**55.04**	**132**	*e*P	**P**	**17 23 52.4**	**+0.6**
CAN				pmax	pmax		
	comp=Z,20nm,1.2s						
USA0B	**Ussuriysk Arra**	**55.16**	**27**	*e*P	**P**	**17 23 52.5**	**+0.1**
	comp=Z,50nm,0.8s						
USRK	**Ussuriysk Ar.**	**55.16**	**27**	P	**P**	**17 23 52.8**	**+0.4**
	comp=Z,49nm,0.8s,baz=223,slow=5.7,SNR=87						
ARMA	**Armidale**	**55.32**	**125**	*e*P	**P**	**17 23 54.6**	**+0.6**
	comp=Z,73nm,1.8s						
GEYT	**Alibeck**	**56.72**	**320**	P	**P**	**17 24 04.2**	**+0.5**
	comp=Z,6.7nm,0.9s,baz=151,slow=9.5,SNR=13						
GYA0B	**ALIBECK ARRAY**	**56.72**	**320**	*e*P	**P**	**17 24 04.2**	**+0.4**
	comp=Z,9.1nm,0.8s						
KURBB	**Kurchatov Arra**	**56.94**	**344**	P	**P**	**17 24 05.5**	**+0.5**
	comp=Z,19nm,0.9s,baz=162,slow=6.7,SNR=71						
KURK	**Kurchatov**	**57.00**	**344**	*e*P	**P**	**17 24 05.7**	**+0.3**
	comp=Z,35nm,0.9s						
KURK	**Kurchatov**	**57.00**	**344**	*ce*P	**P**	**17 24 05.9**	**+0.5**
KURK				pmax	pmax		
	comp=Z,44nm,1.0s						
ZAA0	**Zalesovo Array**	**58.55**	**349**	*e*P	**P**	**17 24 16.5**	**+0.2**
	comp=Z,48nm,1.0s						
ZALV	**Zalesovo Beam**	**58.55**	**349**	P	**P**	**17 24 16.6**	**+0.4**
	comp=Z,38nm,0.9s,baz=177,slow=4.9,SNR=68						
KLR	**Kul'dur**	**59.00**	**23**	P	**P**	**17 24 19.9**	**+0.3**
	comp=Z,18nm,0.9s,baz=225,slow=5.4,SNR=32						
KLR	**Kul'dur**	**59.00**	**23**	*c i*P	**P**	**17 24 19.8**	**+0.3**
KLR				pmax	pmax		
	comp=Z,30nm,1.0s						
HNR	**Honiara**	**59.45**	**99**	*e*P	**P**	**17 24 23.6**	**+0.3**
	comp=Z,122nm,0.6s						
ERM	**Erimo**	**59.51**	**36**	*e*P	**P**	**17 24 22.7**	**-0.5**
	comp=Z,156nm,2.0s						
ERM	**Erimo**	**59.51**	**36**	*e*P	**P**	**17 24 22.7**	**-0.5**
ERM				pmax	pmax		
	comp=Z,156nm,2.0s						
RAYN	**Ar Rayn**	**59.72**	**300**	*e*P	**P**	**17 24 24.4**	**-0.7**
	comp=Z,4.6nm,0.9s						
RAYN	**Ar Rayn**	**59.72**	**300**	*e*P	**P**	**17 24 24.4**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ASAJ	**Asahikawa**	**60.51**	**34**	P	**P**	**17 24 30.1**	**+0.1**
	comp=Z,7.7nm,0.7s,baz=249,slow=8.0,SNR=23						
ZEA	**Zeya**	**61.16**	**18**	*e*P	**P**	**17 24 34.8**	**+0.6**
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
BVAR	**Borovoye Array**	**61.57**	**340**	P	**P**	**17 24 36.8**	**-0.2**
	comp=Z,8.0nm,0.6s,baz=143,slow=8.9,SNR=30						
BRVK	**Borovoye**	**61.63**	**340**	*e*P	**P**	**17 24 36.9**	**-0.5**
	comp=Z,15nm,1.1s						
BRVK	**Borovoye**	**61.63**	**340**	*ce*P	**P**	**17 24 37.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BOD	**Bodaibo**	**61.95**	**8**	*e*P	**P**	**17 24 39.7**	**+0.2**
BOD				pmax	pmax		
	comp=Z,21nm,1.1s						
GRNR	**Gornyy**	**62.11**	**25**	*e*P	**P**	**17 24 41.2**	**+0.5**
YSS	**Yuzh-Sakhalins**	**62.42**	**31**	*e*P	**P**	**17 24 42.3**	**-0.5**
	comp=Z,39nm,1.0s						
YSS	**Yuzh-Sakhalins**	**62.42**	**31**	⇑*e*P	**P**	**17 24 42.4**	**-0.5**
YSS				*e*		17 24 50.3	
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.9s						
YSS				pmax	pmax		
	comp=E,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,700nm,14.0s						
ABKAR	**Akbulak array**	**63.00**	**332**	*e*P	**P**	**17 24 46.3**	**-0.3**
	comp=Z,26nm,0.8s						
KMBO	**Kilima Mbogo**	**63.11**	**270**	P	**P**	**17 24 48.6**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=139,slow=2.9,SNR=3.8						
AKTO	**Aktyubinsk**	**64.71**	**332**	P	**P**	**17 24 57.4**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=127,slow=7.2,SNR=8.0						
TBLG	**Delisi**	**67.46**	**318**	*e*P	**P**	**17 25 16.5**	**+0.7**
	comp=Z,76nm,1.8s						
TBLG	**Delisi**	**67.46**	**318**	*e*P	**P**	**17 25 16.5**	**+0.7**
TBLG				pmax	pmax		
	comp=Z,76nm,1.8s						
SVE	**Sverdlovsk**	**68.06**	**338**	⇓*e*P	**P**	**17 25 19.8**	**+0.5**
SVE				pmax	pmax		
	comp=Z,26nm,1.0s						
ZEI	**Tsey**	**68.49**	**319**	*e*P	**P**	**17 25 23.1**	**+0.6**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARU	**Arti**	**68.58**	**337**	P	**P**	**17 25 22.5**	**0.0**
	comp=Z,1.9nm,0.6s,baz=158,slow=6.5,SNR=7.9						
ARU	**Arti**	**68.58**	**337**	*e*P	**P**	**17 25 22.1**	**-0.5**
	comp=Z,29nm,1.3s						
ARU	**Arti**	**68.58**	**337**	*c i*P	**P**	**17 25 22.3**	**-0.2**
ARU				S	**S**	**17 34 24.3**	**+0.5**
ARU				pmax	pmax		
	comp=Z,21nm,1.5s						
YAK	**Yakutsk**	**68.94**	**14**	*e*P	**P**	**17 25 23.4**	**-1.2**
	comp=Z,40nm,0.8s						
YAK	**Yakutsk**	**68.94**	**14**	*e*P	**P**	**17 25 23.2**	**-1.4**
MAW	**Mawson**	**69.08**	**194**	P	**P**	**17 25 26.0**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=29,slow=8.8,SNR=3.3						
NEY	**Neytrino**	**69.47**	**319**	*i* P	**P**	**17 25 29.1**	**+0.5**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBZ	**Khabaz**	**69.57**	**319**	P	**P**	**17 25 29.5**	**+0.6**
	comp=Z,6.5nm,0.9s,baz=114,slow=5.1,SNR=12						
MBAR	**Mbarara**	**69.64**	**271**	*e*P	**P**	**17 25 31.2**	**+1.1**
	comp=Z,11nm,1.4s						
MBAR	**Mbarara**	**69.64**	**271**	P	**P**	**17 25 31.3**	**+1.1**
MBAR				pmax	pmax		
	comp=Z,110nm,1.4s						
KIV	**Kislovodsk**	**69.81**	**319**	*e*P	**P**	**17 25 30.6**	**+0.1**
	comp=Z,57nm,1.9s						
KIV	**Kislovodsk**	**69.81**	**319**	*e*P	**P**	**17 25 31.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
CSS	**Mathiatis**	**73.34**	**308**	*e*P	**P**	**17 25 53.5**	**+1.5**
	comp=Z,18nm,1.1s						
KIRV	**Kirov**	**73.74**	**335**	P	**P**	**17 25 53.7**	**0.0**
	comp=Z,6.1nm,0.5s,baz=259,slow=21,SNR=4.3						
ODZ	**Otahua Downs**	**73.75**	**136**	*e*P	**P**	**17 25 53.9**	**-0.2**
	comp=Z,145nm,1.8s						
RPZ	**Rata Peaks**	**73.77**	**135**	*e*P	**P**	**17 25 54.2**	**-0.1**
	comp=Z,122nm,1.7s						
PEA0B	**Petropavlovsk-**	**73.82**	**32**	*e*P	**P**	**17 25 54.2**	**-0.1**
	comp=Z,48nm,1.5s						
PETK	**Petropavlovsk-**	**73.82**	**32**	P	**P**	**17 25 54.1**	**-0.2**
	comp=Z,7.0nm,1.0s,baz=176,slow=2.9,SNR=6.5						
MA2	**Magadan**	**74.10**	**24**	P	**P**	**17 25 55.8**	**0.0**
	comp=Z,18nm,1.0s,baz=183,slow=18,SNR=3.4						
MA2	**Magadan**	**74.10**	**24**	*e*P	**P**	**17 25 55.0**	**-0.8**
	comp=Z,83nm,1.4s						
MA2	**Magadan**	**74.10**	**24**	*i* P	**P**	**17 25 55.5**	**-0.3**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PET	**Petropavlovsk**	**74.28**	**32**	*e*P	**P**	**17 25 56.5**	**-0.5**
	comp=Z,23nm,1.1s						
PET	**Petropavlovsk**	**74.28**	**32**	*e*P	**P**	**17 25 56.5**	**-0.5**
PET				pmax	pmax		
	comp=Z,23nm,1.1s						
BR131	**Keskin Array S**	**74.51**	**313**	*e*P	**P**	**17 25 58.0**	**-0.8**
	comp=Z,7.1nm,0.8s						
BRTR	**Keskin Array B**	**74.51**	**313**	P	**P**	**17 25 58.4**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=138,slow=7.7,SNR=24						
VORD	**Divnogorie**	**74.91**	**325**	*e*P	**P**	**17 25 59.9**	**-0.8**
VORD				*e**SP	**pP**	**17 26 07.6**	**+0.1**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**75.09**	**325**	*e*P	**P**	**17 26 01.1**	**-0.6**
VSR				*e**SP	**pP**	**17 26 08.4**	**-0.1**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
LPSR	**Galich'ya Gora**	**75.82**	**326**	*e*P	**P**	**17 26 07.4**	**+1.5**
LPSR				*e**SP	**pP**	**17 26 13.2**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SEY	**Seymchan**	**76.73**	**22**	P	**P**	**17 26 10.7**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=202,slow=7.5,SNR=5.7						
SEY	**Seymchan**	**76.73**	**22**	*i* P	**P**	**17 26 10.4**	**-0.4**
PRGR	**Permogore**	**77.05**	**336**	*e*P	**P**	**17 26 12.3**	**-0.3**
PRGR				*e*		17 26 19.7	
PRGR				pmax	pmax		
	comp=Z,26nm,0.7s						
BFZ	**Birch Farm**	**77.11**	**131**	*e*P	**P**	**17 26 13.8**	**+0.2**
	comp=Z,249nm,1.9s						
TIXI	**Tiksi**	**77.12**	**9**	P	**P**	**17 26 12.2**	**-0.7**
	comp=Z,9.0nm,0.8s,baz=148,slow=5.0,SNR=19						
TIXI	**Tiksi**	**77.12**	**9**	*e*P	**P**	**17 26 11.9**	**-1.0**
	comp=Z,19nm,1.2s						
TIXI	**Tiksi**	**77.12**	**9**	*ce*P	**P**	**17 26 11.7**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,18nm,1.2s						
BKZ	**Black Stump Fm**	**77.13**	**129**	*e*P	**P**	**17 26 14.5**	**+0.7**
	comp=Z,108nm,1.8s						
OBN	**Obninsk**	**78.13**	**328**	P	**P**	**17 26 18.1**	**-0.7**
	comp=Z,2.6nm,0.4s,baz=151,slow=19,SNR=4.0						
OBN	**Obninsk**	**78.13**	**328**	*e*P	**P**	**17 26 18.4**	**-0.4**
	comp=Z,20nm,0.7s						
OBN	**Obninsk**	**78.13**	**328**	⇓*i*P	**P**	**17 26 19.8**	**+1.0**
OBN				*e*		17 26 26.3	
OBN				*e*		17 29 15.0	
OBN				*e*S	**SKSac**	**17 36 36.5**	**+4.6**
OBN				pmax	pmax		
	comp=Z,27nm,1.7s						
OBN				MLR	MLR		
	comp=Z,570nm,17.0s						
AKASG	**Malin Array Be**	**80.78**	**322**	P	**P**	**17 26 32.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=89,slow=5.0,SNR=6.5						
AKBB	**Malin Array Si**	**80.78**	**322**	*e*P	**P**	**17 26 32.8**	**-0.5**
	comp=Z,17nm,1.6s						
AKBB	**Malin Array Si**	**80.78**	**322**	*e*P	**P**	**17 26 32.8**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,17nm,1.6s						
MLR	**Muntele Rosu**	**81.53**	**317**	*e*P	**P**	**17 26 38.5**	**+0.8**
	comp=Z,20nm,1.3s						
MLR	**Muntele Rosu**	**81.53**	**317**	*e*P	**P**	**17 26 38.5**	**+0.8**
MLR				pmax	pmax		
	comp=Z,20nm,1.3s						
BUR08	**Bucovina Ar. S**	**82.53**	**319**	*e*P	**P**	**17 26 43.2**	**+0.3**
	comp=Z,6.0nm,0.8s						
VTS	**Vitosha**	**82.83**	**314**	*e*P	**P**	**17 26 44.0**	**-0.5**
	comp=Z,7.6nm,1.0s						
VTS	**Vitosha**	**82.83**	**314**	*e*P	**P**	**17 26 44.1**	**-0.5**
VTS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ITM	**Ithomi**	**82.84**	**308**	*e*P	**P**	**17 26 44.2**	**-0.4**
	comp=Z,24nm,1.2s						
LIT	**Litokhoron**	**82.91**	**311**	*e*P	**P**	**17 26 44.1**	**-0.8**
	comp=Z,8.8nm,0.8s						
LIT	**Litokhoron**	**82.91**	**311**	*e*P	**P**	**17 26 44.1**	**-0.8**
LIT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BILL	**Bilibino**	**84.28**	**20**	⇑*e*P	**P**	**17 26 50.9**	**-0.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1µm,18.0s						
APA	**Apatity**	**84.47**	**339**	⇓*i*P	**P**	**17 26 54.7**	**+2.4**
APA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KOLS	**Kolonicke sedl**	**84.72**	**320**	*e*P	**P**	**17 26 55.9**	**+2.0**
KOLS	**Kolonicke sedl**	**84.72**	**320**	*e*P	**P**	**17 26 55.8**	**+1.9**
KOLS				*e*		17 27 02.8	
SUW	**Suwalki**	**85.20**	**325**	*e*P	**P**	**17 26 56.0**	**-0.2**
	comp=Z,32nm,0.8s						
SUW	**Suwalki**	**85.20**	**325**	*e*P	**P**	**17 26 56.0**	**-0.2**
SUW				pmax	pmax		
	comp=Z,32nm,0.8s						
FINES	**FINESS Array B**	**85.47**	**332**	P	**P**	**17 26 58.0**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=118,slow=7.2,SNR=12						
FINES	**FINESS Array B**	**85.47**	**332**	*i* P	**P**	**17 26 58.2**	**+0.8**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TTG	**Podgorica**	**85.70**	**313**	*e*P	**P**	**17 26 58.9**	**0.0**
	comp=Z,6.6nm,0.9s						
TTG	**Podgorica**	**85.70**	**313**	*e*P	**P**	**17 26 58.9**	**0.0**
TTG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PSZ	**Piszkesteto**	**86.09**	**318**	*e*P	**P**	**17 27 01.5**	**+0.6**
	comp=Z,6.3nm,1.0s						
PSZ	**Piszkesteto**	**86.09**	**318**	*e*P	**P**	**17 27 01.5**	**+0.6**
PSZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
QSPA	**South Pole Qui**	**86.62**	**180**	*e*P	**P**	**17 27 03.6**	**+0.4**
	comp=Z,30nm,1.8s						
ARCES	**ARCESS Array B**	**87.86**	**340**	P	**P**	**17 27 09.1**	**+0.1**
	comp=Z,8.2nm,1.0s,baz=93,slow=5.0,SNR=8.0						
MORC	**Moravsky Berou**	**87.91**	**320**	*e*P	**P**	**17 27 10.1**	**+0.5**
	comp=Z,11nm,1.6s						
MORC	**Moravsky Berou**	**87.91**	**320**	*e*P	**P**	**17 27 10.1**	**+0.5**
MORC				pmax	pmax		
	comp=Z,11nm,1.6s						
ARSA	**Arzberg**	**88.94**	**317**	*e*PcP	**P**	**17 27 15.9**	**+1.3**
	comp=Z,4.1nm,1.0s						
SOKA	**Soboth**	**89.22**	**317**	*e*PcP	**P**	**17 27 17.5**	**+1.5**
	comp=Z,3.2nm,0.8s						
MYKA	**Terra Mystica**	**90.17**	**317**	*e*P	**P**	**17 27 20.1**	**-0.3**
	comp=Z,2.6nm,0.9s						
GEC2	**GERESS Array S**	**90.31**	**319**	*e*P	**P**	**17 27 21.3**	**+0.3**
	comp=Z,5.1nm,1.0s						
GEC2	**GERESS Array S**	**90.31**	**319**	*e*P	**P**	**17 27 21.3**	**+0.3**
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GERES	**GERESS Array B**	**90.31**	**319**	P	**P**	**17 27 21.5**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=101,slow=4.2,SNR=8.7						
CLL	**Collm**	**90.94**	**321**	⇓*i*P	**P**	**17 27 24.7**	**+0.9**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CLL	**Collm**	**90.94**	**321**	⇓*i*P	**P**	**17 27 24.7**	**+0.9**
	comp=Z,9.0nm,1.4s						
CLL				*e*		17 27 33.0	
ABTA	**Abfaltersbach**	**90.95**	**317**	*e*PcP	**P**	**17 27 24.2**	**+0.1**

	comp=Z,5.1nm,1.3s						
HFS	Hagfors	91.22	330	P	P	17 27 23.7	-1.2
	comp=Z,3.2nm,0.9s,baz=64,slow=6.6,SNR=3.1						
WTTA	Wattenberg	91.58	317	ePcP	PcP	17 27 27.6	-0.4
	comp=Z,8.5nm,1.2s						
WATA	Walderalm	91.62	317	eP	P	17 27 32.1	+4.9
	comp=Z,3.7nm,0.6s						
SQTA	Sankt Quirin	91.87	317	pP	P	17 27 30.3	+2.0
	comp=Z,2.4nm,0.6s						
MOTA	Moosalm	91.94	317	eP	P	17 27 27.8	-1.0
	comp=Z,1.5nm,0.5s						
RETA	Reutte	92.18	317	ePcP	PcP	17 27 30.0	-0.5
	comp=Z,4.7nm,0.8s						
FETA	Feichten	92.19	317	P	P	17 27 28.2	-1.7
	comp=Z,3.0nm,0.8s						
NB2	NORSAR Subarra	92.50	331	P	P	17 27 31.0	+0.2
	comp=Z,6.7nm,1.1s,baz=94,slow=4.6						
NOA	NORSAR Array B	92.50	331	P	P	17 27 30.7	-0.1
	comp=Z,1.9nm,0.9s,baz=91,slow=4.5,SNR=3.6						
DAVA	Damuels	92.77	317	eP	P	17 27 29.3	-3.3
	comp=Z,2.7nm,0.6s						
YKA	Yellowknife Ar	115.54	17	PKP	PKiKP	17 33 00.3	-1.3
	comp=Z,0.2nm,0.3s,baz=333,slow=1.7,SNR=3.9						
B05A	Bryant	122.35	32	P	PKiKP	17 33 15.3	0.0
	baz=307						
I04A	Tendick Farm,	124.78	37	P	PKPdf	17 33 19.5	-0.6
	baz=304						
NEW	Newport	124.91	30	PKP	PKPdf	17 33 19.5	-0.6
	comp=Z,1.0nm,0.4s,baz=348,slow=6.2,SNR=4.2						
NEW	Newport	124.91	30	P	PKiKP	17 33 20.5	0.0
	baz=312						
L04D	Klamath Falls	125.73	38	P	PKPdf	17 33 22.0	0.0
	baz=304						
J05D	Fort Rock, OR	125.78	37	P	PKiKP	17 33 22.2	-0.2
	baz=305						
M02C	Callahan	125.83	39	P	PKiKP	17 33 23.1	+0.5
	baz=303						
N02D	Trinity Center	126.15	40	P	PKiKP	17 33 23.0	-0.2
	baz=302						
M04C	Macdoel	126.26	39	P	PKiKP	17 33 23.4	-0.1
	baz=304						
O02D	Mt. Diablo Mer	126.52	41	P	PKiKP	17 33 24.2	+0.3
	baz=302						
O03E	Paynes Creek	127.10	40	P	PKiKP	17 33 25.0	-0.1
	baz=303						
MSO	Missoula	127.47	29	P	PKiKP	17 33 25.5	-0.2
	baz=315						
EGMT	Eagleton	128.50	26	P	PKiKP	17 33 27.8	+0.1
	baz=320						
BOZ	Bozeman (W)	129.47	29	P	PKiKP	17 33 29.7	-0.1
	baz=317						
NV01	Mina Array Sit	130.39	40	ePKPdf	PKPdf	17 33 29.6	-1.6
NVAR	Mina Array Bea	130.39	40	PKP	PKPdf	17 33 29.6	-1.6
	comp=Z,1.0nm,0.7s,baz=264,slow=1.8,SNR=8.2						
NVAR				SKPbc	SKPbc	17 36 53.2	-0.2
	comp=Z,1.0nm,0.8s,baz=293,slow=4.7,SNR=5.3						
ULM	Lac du Bonnet	131.28	14	PKP	PKPdf	17 33 32.2	+0.1
	comp=Z,3.0nm,0.7s,baz=352,slow=7.5,SNR=3.6						
R11A	Troy Canyon, C	132.16	39	ePKPdf	PKiKP	17 33 36.3	+0.8
PDAR	Pinedale Array	132.55	30	PKP	PKPdf	17 33 34.3	-0.8
	comp=Z,0.2nm,0.4s,baz=28,slow=4.1,SNR=3.8						
RSSD	Black Hills	134.02	24	P	PKiKP	17 33 38.6	-0.5
	baz=325						
EYMN	Ely	134.41	11	P	PKiKP	17 33 39.1	-0.4
	baz=343						
C40A	Isle Royale Na	134.85	9	P	PKiKP	17 33 40.0	-0.4
	baz=347						
IKP	In-Ko-Pah, Jac	135.09	45	P	PKiKP	17 33 41.3	-0.2
	baz=303						
O20A	White River Ci	135.16	31	P	PKiKP	17 33 41.1	-0.4
	baz=317						
PDMCI	Parker Dam,Lak	135.51	42	P	PKiKP	17 33 41.6	-0.5
	baz=306						
D54A	Lac Fusel, La	136.29	357	P	PKiKP	17 33 43.1	-0.2
	baz=4.3						
D48A	Paudash Townsh	136.30	2	P	PKiKP	17 33 42.8	-0.6
	baz=357						
D53A	Lac Vacive, Po	136.41	358	P	PKiKP	17 33 43.2	-0.3
	baz=2.8						
D46A	Sault St. Mari	136.46	4	P	PKiKP	17 33 43.7	0.0
	baz=354						
F39A	Loretta	136.47	11	P	PKiKP	17 33 43.9	+0.1
	baz=344						
D52A	ZEK Kipawa Sen	136.53	359	P	PKiKP	17 33 43.1	-0.7
	baz=1.8						
F40A	Park Falls	136.62	11	P	PKiKP	17 33 43.8	-0.2
	baz=345						
E46A	Sault Ste Mari	136.96	5	P	PKiKP	17 33 44.2	-0.5
	baz=353						
E48A	Lockeyer	136.98	3	P	PKPdf	17 33 43.7	+0.8
	baz=356						
E51A	G1948 Merrick	136.98	360	P	PKPdf	17 33 43.7	+0.8
	baz=0.2						
G39A	Holcombe	137.02	12	P	PKiKP	17 33 45.1	+0.3
	baz=343						
ECSD	EROS Data Cent	137.06	18	P	PKiKP	17 33 45.1	+0.1
	baz=335						
E52A	Mattawa	137.22	359	P	PKiKP	17 33 45.1	-0.2
	baz=1.5						
G40A	Rib Lake	137.23	11	P	PKiKP	17 33 45.2	-0.1
	baz=344						
ALGO	Algonquin Park	137.54	358	P	PKiKP	17 33 45.8	-0.1
	baz=2.4						
PEMO	Pembroke	137.79	358	P	PKiKP	17 33 46.4	-0.1
	baz=3.6						
BANO	Bancroft	138.47	358	P	PKiKP	17 33 47.6	-0.3
	baz=2.6						
H56A	Elgin	138.82	356	P	PKiKP	17 33 48.2	-0.3
	baz=5.1						
BASO	Ashfield	139.46	2	P	PKiKP	17 33 49.7	-0.2
	baz=357						
I51A	Listowel	139.69	2	P	PKiKP	17 33 50.0	-0.4
	baz=358						
TASM	ASL Pad, Albuq	139.89	35	P	PKiKP	17 33 50.6	-0.8
	baz=316						
TASM	ASL Pad, Albuq	139.89	35	P	PKiKP	17 33 50.7	-0.7
	baz=316						
ANMO	Albuquerque	139.89	35	P	PKiKP	17 33 50.6	-0.8
	baz=316						
MNTX	Cornudas Mount	142.82	38	ePKPdf	PKPdf	17 33 52.0	-2.0
CPUP	Villa Florida	143.46	215	PKP	PKPbc	17 33 53.2	+0.8
	comp=Z,0.7nm,0.4s,baz=50,slow=9.6,SNR=3.3						
CCM	Cathedral Cave	143.85	16	ePKPdf	PKPab	17 33 52.2	-0.4
CCM	Cathedral Cave	143.85	16	ePKIKP	PKPab	17 33 52.2	-0.4
CCM	Cathedral Cave	143.85	16	P	PKPbc	17 33 53.0	-0.3
	baz=340						
P54A	Burton	143.90	1	P	PKPbc	17 33 53.0	-0.4
	baz=359						
P53A	Whipple	143.99	2	ePKPdf	PKPab	17 33 53.0	-0.1
P53A	Whipple	143.99	2	P	PKPab	17 33 53.2	+0.1
	baz=357						
P55A	Reedsville	144.00	0	P	PKPab	17 33 53.3	+0.1
	baz=360						
WMOK	Wichita Mounta	144.05	27	P	PKPab	17 33 53.3	-0.2
	baz=326,SNR=22						
Q48A	North Vernon	144.15	8	P	PKPab	17 33 53.6	-0.1
	baz=350						
Q49A	Aurora	144.18	7	P	PKPab	17 33 53.7	-0.1
	baz=351						
TUL1	Leonard	144.31	23	ePKPdf	PKPbc	17 33 54.6	-0.1
TUL1	Leonard	144.31	23	P	PKPab	17 33 54.2	-0.2
	baz=332						
Q51A	Peebles	144.32	5	ePKPdf	PKPab	17 33 54.1	-0.3
Q51A	Peebles	144.32	5	P	PKPab	17 33 54.1	-0.3
	baz=354,SNR=7.4						
R45A	Skylar, Fairfi	144.33	12	P	PKPab	17 33 54.2	-0.2
	baz=345						
Q50A	Georgetown	144.45	6	P	PKPab	17 33 54.5	-0.3
	baz=353						
Q57A	Strasburg	144.46	358	P	PKPbc	17 33 55.0	-0.1
	baz=2.1,SNR=9.8						
Q52A	Bidwell	144.47	4	P	PKPab	17 33 54.6	-0.3
	baz=356,SNR=5.4						
Q56A	Snyder Ridge,	144.47	359	P	PKPbc	17 33 55.4	+0.2
	baz=0.8						
Q54A	Coxs Mills	144.51	2	ePKPdf	PKPab	17 33 54.7	-0.3
Q54A	Coxs Mills	144.51	2	P	PKPab	17 33 55.0	-0.1
	baz=358,SNR=9.1						
Q55A	Buckhannon	144.51	1	P	PKPbc	17 33 55.3	-0.1
	baz=359,SNR=11						
Q58A	Fox Den Farm,	144.53	357	P	PKPbc	17 33 55.3	-0.1
	baz=3.4						
R46A	Gibon Southern	144.56	11	P	PKPab	17 33 55.1	-0.2
	baz=346						
Q53A	Leroy	144.61	3	P	PKPab	17 33 55.4	0.0
	baz=357,SNR=9.9						
R47A	Wooly Knot Far	144.65	9	P	PKPab	17 33 55.6	0.0
	baz=348,SNR=5.8						
R48A	Northridge Ran	144.65	9	P	PKPbc	17 33 55.8	+0.1
	baz=349						
HHAR	Hobbs	144.66	20	ePKPdf	PKPab	17 33 55.1	-0.6
S44A	Carbondale	144.69	13	P	PKPab	17 33 55.6	-0.1
	baz=343						
WCI	Wyandotte Cave	144.75	9	ePKPdf	PKPab	17 33 55.8	-0.1
WCI	Wyandotte Cave	144.75	9	ePKIKP	PKPab	17 33 55.8	-0.1
WCI	Wyandotte Cave	144.75	9	P	PKPab	17 33 55.9	-0.1
	baz=348						
R49A	Shelbyville	144.85	8	ePKPdf	PKPab	17 33 56.1	-0.2
R49A	Shelbyville	144.85	8	P	PKPab	17 33 55.9	-0.4
	baz=350,SNR=15						
U40A	Yellville	144.96	19	P	PKPab	17 33 56.5	-0.3
	baz=337,SNR=27						
R50A	Paris	144.96	6	ePKPbc	PKPab	17 33 56.2	-0.5
R50A	Paris	144.96	6	P	PKPab	17 33 56.3	-0.5
	baz=352,SNR=10						
R51A	Hillsboro	145.02	5	P	PKPbc	17 33 56.5	-0.5
	baz=353,SNR=8.4						
S46A	Don Dixon Farm	145.03	11	P	PKPbc	17 33 56.5	-0.4
	baz=346						
R52A	Catlettsburg	145.06	4	P	PKPbc	17 33 56.8	-0.3
	baz=355,SNR=6.8						
R56A	Bull Pasture M	145.10	360	P	PKPab	17 33 57.3	-0.1
	baz=0.4,SNR=11						
R53A	Hurricane	145.12	3	ePKPbc	PKPbc	17 33 57.0	-0.2
R53A	Hurricane	145.12	3	P	PKPab	17 33 57.3	0.0
	baz=356,SNR=16						
R58A	Rapidan	145.18	358	P	PKPab	17 33 57.5	0.0
	baz=2.9,SNR=13						
R57A	Stanardsville	145.20	358	P	PKPdf	17 33 57.9	-0.1
	baz=2.0,SNR=18						
R55A	Marlinton	145.23	1	ePKPbc	PKPbc	17 33 57.4	-0.3
R55A	Marlinton	145.23	1	P	PKPbc	17 33 57.5	-0.2
	baz=359,SNR=14						
R59A	King George, V	145.24	357	P	PKPab	17 33 57.6	-0.1
	baz=4.4						
CBN	Corbin Frederi	145.25	357	P	PKPbc	17 33 57.5	-0.1
	baz=4.0						
S47A	Hartford	145.27	10	P	PKPbc	17 33 57.2	-0.5
	baz=347						
PBMO	Poplar Bluff	145.27	15	ePKPbc	PKPbc	17 33 57.2	-0.6
R54A	Victor	145.31	2	P	PKPbc	17 33 57.4	-0.5
	baz=358,SNR=7.4						
S49A	Springfield	145.33	8	P	PKPbc	17 33 57.5	-0.5
	baz=350,SNR=6.2						
S48A	Wiedeman Farm,	145.35	9	P	PKPbc	17 33 57.9	-0.1
	baz=349,SNR=24						
ABTX	Abilene, Hawle	145.35	31	ePKPbc	PKPdf	17 33 58.4	-0.1
ABTX	Abilene, Hawle	145.35	31	P	PKPbc	17 33 57.8	-0.4
	baz=323						
R58B	Mineral	145.51	358	ePKPdf	PKPbc	17 33 58.5	0.0
R58B	Mineral	145.51	358	P	PKPbc	17 33 58.5	0.0
	baz=3.1,SNR=10.0						
TX31	Lajitas Ar. Si	145.52	39	ePKPdf	PKPab	17 33 59.8	+0.6
TXAR	Lajitas Array	145.52	39	PKPbc	PKPab	17 33 59.4	+0.2
	comp=Z,19nm,0.6s,baz=290,slow=1.8,SNR=74						
S50A	Richmond	145.55	7	P	PKPdf	17 33 58.1	-0.5
	baz=352,SNR=13						
FCAR	Ozark Folk Cen	145.62	18	ePKPdf	PKPdf	17 33 58.3	-0.4
T46A	Princeton	145.62	12	P	PKPab	17 33 58.9	-0.2
	baz=345,SNR=15						
X37A	Clayton	145.64	23	ePKPdf	PKPab	17 33 59.3	0.0
S61A	Accomac	145.64	354	P	PKPdf	17 33 58.0	-0.7
	baz=7.0						
S54A	Dingess, Beckl	145.68	2	P	PKPdf	17 33 58.6	-0.2
	baz=357						
S51A	Beattyville	145.68	6	ePKPdf	PKPdf	17 33 58.7	-0.1
S51A	Beattyville	145.68	6	P	PKPbc	17 33 58.9	-0.2
	baz=353,SNR=24						
S59A	Mechanicsville	145.68	357	P	PKPbc	17 33 59.1	+0.1
	baz=4.2						
S52A	Salyersville	145.68	5	P	PKPdf	17 33 58.9	0.0
	baz=354						
W39A	Magazine	145.69	21	ePKPdf	PKPdf	17 33 58.9	0.0
W39A	Magazine	145.69	21	P	PKPbc	17 33 59.2	0.0
	baz=334,SNR=6.0						
S55A	Lewisburg	145.73	1	P	PKPdf	17 33 59.0	0.0
	baz=358,SNR=5.1						
S57A	Dark Hollow, R	145.74	359	ePKPdf	PKPbc	17 33 59.1	-0.1
S57A	Dark Hollow, R	145.74	359	P	PKPab	17 33 59.4	-0.2
	baz=1.2,SNR=13						
S53A	Williamson	145.75	4	P	PKPbc	17 33 59.1	-0.2
	baz=356						
HPIG		145.78	44	ePKPdf	PKPbc	17 33 60.0	0.0
T47A	Sharon Grove	145.82	11	ePKPdf	PKPdf	17 33 58.8	-0.2
T47A	Sharon Grove	145.82	11	P	PKPbc	17 33 59.3	-0.2
	baz=347,SNR=9.1						
T48A	Bowling Green	145.83	10	P	PKPbc	17 33 59.5	0.0
	baz=348,SNR=19						
S56A	Natural Bridge	145.83	360	P	PKPbc	17 33 59.6	+0.1
	baz=0.2						
S58A	Poland Farm, P	145.87	358	ePKPdf	PKPbc	17 33 59.4	-0.3
S58A	Poland Farm, P	145.87	358	P	PKPbc	17 33 59.6	0.0
	baz=2.9,SNR=5.9						
T49A	Edmonton	145.97	8	ePKPdf	PKPdf	17 33 59.0	-0.4
T49A	Edmonton	145.97	8	P	PKPdf	17 33 59.6	+0.2
	baz=350,SNR=5.2						
WHAR	Wooly Hollow	146.11	19	ePKPdf	PKPdf	17 33 59.7	+0.1
T50A	Nancy	146.15	8	P	PKPdf	17 33 59.6	0.0
	baz=351						
W41B	Gary Mavity, V	146.23	19	ePKPdf	PKPbc	17 34 00.3	-0.5
W41B	Gary Mavity, V	146.23	19	P	PKPdf	17 34 00.2	+0.4
	baz=337						
T52A	Hallie	146.26	5	ePKPdf	PKPbc	17 34 00.6	-0.4
T52A	Hallie	146.26	5	P	PKPbc	17 34 00.8	-0.1
	baz=354						
BLA	Blacksburg	146.29	1	ePKPdf	PKPbc	17 34 00.6	-0.4
BLA	Blacksburg	146.29	1	ePKP2	PKPbc	17 34 00.6	-0.4
BLA	Blacksburg	146.29	1	P	PKPbc	17 34 00.6	-0.4
	baz=359						
T51A	Gray	146.31	6	P	PKPbc	17 34 00.8	-0.2
	baz=352,SNR=8.6						
U47A	Clarksville	146.31	11	P	PKPbc	17 34 01.0	0.0
	baz=346,SNR=5.6						
MIAR	Mount Ida	146.35	21	ePKPdf	PKPbc	17 34 01.0	-0.2
MIAR	Mount Ida	146.35	21	ePKP2	PKPbc	17 34 01.0	-0.2
MIAR	Mount Ida	146.35	21	P	PKPbc	17 34 01.4	+0.2
	baz=334,SNR=20						
T55A	Pulaski	146.38	2	P	PKPbc	17 34 01.0	-0.3
	baz=358,SNR=6.2						
U48A	Cassie Pea, Po	146.39	10	P	PKPbc	17 34 01.1	-0.2
	baz=348,SNR=7.1						
T54A	Tazewell	146.40	3	P	PKPbc	17 34 01.2	-0.2
	baz=356,SNR=15						
T53A	Wise	146.42	4	P	PKPbc	17 34 01.4	-0.1
	baz=355,SNR=7.2						
T56A	Rocky Mt	146.48	1	P	PKPbc	17 34 01.4	-0.1
	baz=359,SNR=10						
T59A	Double "B" Far	146.48	357	ePKPdf	PKPbc	17 34 00.9	-0.6
T59A	Double "B" Far	146.48	357	P	PKPbc	17 34 01.7	+0.1
	baz=3.8						
WVT	Waverly	146.51	12	ePKPdf	PKPbc	17 34 01.1	-0.5
WVT	Waverly	146.51	12	ePKP2	PKPbc	17 34 01.1	-0.5
WVT	Waverly	146.51	12	P	PKPbc	17 34 01.6	-0.1
	baz=345						
T57A	Hurt	146.51	359	ePKPdf	PKPbc	17 34 01.2	-0.4
T57A	Hurt	146.51	359	P	PKPbc	17 34 01.5	-0.1
	baz=0.7,SNR=7.9						
U49A	Red Boiling Sp	146.51	9	P	PKPbc	17 34 01.1	-0.5
	baz=349						
T58A	Grand View Acr	146.55	358	P	PKPbc	17 34 02.0	+0.2
	baz=2.0,SNR=11						
UALR	University of	146.57	19	ePKPdf	PKPbc	17 34 01.1	-0.8
X40A	Basin Creek Fa	146.67	20	ePKPdf	PKPbc	17 34 01.4	-0.8
X40A	Basin Creek Fa	146.67	20	P	PKPbc	17 34 02.2	0.0
	baz=336,SNR=6.4						
U50A	Jamestown	146.74	8	P	PKPbc	17 34 02.1	-0.2
	baz=351,SNR=21						
V46A	Holladay	146.76	13	P	PKPbc	17 34 02.2	-0.2
	baz=344,SNR=9.0						
TZTN	Tazewell	146.77	6	ePKPdf	PKPbc	17 34 01.9	-0.4
TZTN	Tazewell	146.77	6	P	PKPbc	17 34 02.2	-0.2
	baz=353,SNR=16						
CLTN	Cedars of Leba	146.83	10	ePKPdf	PKPbc	17 34 01.8	-0.8
V47A	Nunnelly	146.86	12	P	PKPbc	17 34 02.4	-0.3
	baz=346,SNR=12						
U51A	La Follette	146.88	7	P	PKPbc	17 34 02.1	-0.7
	baz=352						
U54A	Nelsons Funny	146.93	3	ePKPdf	PKPbc	17 34 02.4	-0.6
U54A	Nelsons Funny	146.93	3	P	PKPbc	17 34 02.4	-0.6
	baz=356						
U52A	Thorn Hill	146.93	6	P	PKPbc	17 34 02.6	-0.3
	baz=353,SNR=12						
JCT	Junction City	146.95	33	ePKPdf	PKPdf	17 34 02.1	+0.8
JCT	Junction City	146.95	33	ePKP2	PKPdf	17 34 02.1	+0.8
JCT	Junction City	146.95	33	P	PKPbc	17 34 02.4	-0.7
	baz=321						
U60A	Pendleton	146.96	356	P	PKPbc	17 34 03.0	+0.1
	baz=4.6						
U55A	TA2, Sparta	146.98	2	P	PKPbc	17 34 03.1	0.0
	baz=358,SNR=10						
U53A	Fall Branch	147.03	4	P	PKPbc	17 34 02.8	-0.4
	baz=355						
U57A	Blanch	147.07	360	P	PKPbc	17 34 03.3	+0.1
	baz=0.6,SNR=9.0						
V48A	Smith Brothers	147.09	11	ePKPdf	PKPbc	17 34 02.2	-1.1
V48A	Smith Brothers	147.09	11	P	PKPbc	17 34 02.9	-0.4
	baz=347,SNR=6.9						
U58A	Oxford	147.10	358	P	PKPbc	17 34 03.6	+0.3
	baz=2.0,SNR=9.2						
U56A	King	147.15	1	P	PKPbc	17 34 03.6	+0.1
	baz=359						
V49A	McMinnville	147.22	9	P	PKPbc	17 34 03.2	-0.5
	baz=348,SNR=8.7						
WLAR	White Oak Lake	147.29	21	ePKPdf	PKPbc	17 34 03.2	-0.7
W47A	Westpoint	147.40	12	P	PKPbc	17 34 04.1	-0.1
	baz=345,SNR=16						
V50A	Pikevile	147.44	8	P	PKPbc	17 34 04.1	-0.2
	baz=350,SNR=8.0						
V52A	Sevierville	147.46	6	ePKPdf	PKPdf	17 34 02.7	+0.8
V52A	Sevierville	147.46	6	P	PKPbc	17 34 04.3	-0.1
	baz=353,SNR=7.0						
V57A	Coltrane Farms	147.62	0	P	PKPbc	17 34 04.6	-0.2
	baz=360,SNR=6.2						
W48A	Pulaski	147.65	11	P	PKPbc	17 34 04.5	-0.3
	baz=346,SNR=11						
V54A	Nebo	147.66	4	P	PKPbc	17 34 04.7	-0.2
	baz=356,SNR=7.3						
V60A	Jim Taylor Roa	147.67	356	P	PKPbc	17 34 05.2	+0.3
	baz=4.5						
OXF	Oxford	147.68	15	P	PKPbc	17 34 05.2	+0.3
	baz=342						
V56A	Mocksville	147.69	1	ePKPdf	PKPdf	17 34 03.4	+1.1
V56A				ePKPbc	PKPbc	17 34 05.0	0.0
V56A	Mocksville	147.69	1	P	PKPbc	17 34 05.1	+0.2
	baz=358						
V53A	Saluda	147.70	5	ePKPbc	PKPbc	17 34 04.6	-0.5
V53A	Saluda	147.70	5	P	PKPbc	17 34 05.0	-0.1
	baz=354,SNR=15						
V58A	Windy Hill, Pi	147.71	359	P	PKPbc	17 34 05.2	+0.1
	baz=1.0						
V59A	Middlesex	147.72	358	P	PKPbc	17 34 05.1	0.0
	baz=2.6						
CPCT	Cooper Cave	147.74	8	ePKPbc	PKPbc	17 34 05.1	-0.1
SWET	Sewanee	147.75	10	ePKPbc	PKPbc	17 34 04.7	-0.5
W49A	Belvidere	147.79	10	P	PKPbc	17 34 05.0	-0.2
	baz=348,SNR=18						
X46A	Booneville	147.85	14	P	PKPbc	17 34 04.6	-0.8
	baz=343						
W50A	Signal Mountai	147.87	9	ePKPdf	PKPdf	17 34 02.4	-0.2
W50A				ePKPbc	PKPbc	17 34 05.3	-0.2
W50A	Signal Mountai	147.87	9	P	PKPbc	17 34 05.4	-0.2
	baz=349						
W51A	Cleveland	147.99	8	P	PKPbc	17 34 05.7	-0.1
	baz=350,SNR=9.2						
X47A	Russelville	148.05	13	P	PKPbc	17 34 05.2	-0.8
	baz=344,SNR=7.6						
W52A	Murphy	148.16	7	ePKPbc	PKPbc	17 34 06.2	-0.2
W52A	Murphy	148.16	7	P	PKPbc	17 34 06.1	-0.2
	baz=352,SNR=6.0						
W53A	Cullowhee	148.16	6	P	PKPbc	17 34 06.4	0.0
	baz=353,SNR=11						
W61A	Ground Anchor	148.23	356	P	PKPbc	17 34 06.8	+0.4
	baz=5.0						
X48A	Hartselle	148.29	12	ePKPbc	PKPbc	17 34 06.0	-0.6
X48A	Hartselle	148.29	12	P	PKPbc	17 34 06.2	-0.4
	baz=346,SNR=8.2						
KMSC	Kings Mountain	148.32	3	ePKPbc	PKPbc	17 34 06.4	-0.3
KMSC	Kings Mountain	148.32	3	P	PKPbc	17 34 06.4	-0.3
	baz=357,SNR=7.5						
W54A	Cherokee Point	148.33	4	P	PKPbc	17 34 06.5	-0.2
	baz=355						
W57A	Gilead	148.35	1	ePKPbc	PKPbc	17 34 06.6	-0.1
W57A	Gilead	148.35	1	P	PKPbc	17 34 06.9	+0.2
	baz=359						
W56A	Indian Trail	148.36	2	P	PKPbc	17 34 06.6	-0.2
	baz=358						
BG3	Lake Jocassee	148.36	5	ePKPbc	PKPbc	17 34 06.6	-0.2
X49A	Woodville	148.37	11	P	PKPbc	17 34 06.7	-0.1
	baz=347,SNR=5.7						
X50B	Fort Payne	148.54	10	P	PKPbc	17 34 06.7	-0.6
	baz=348						
X51A	Calhoun	148.56	8	ePKPbc	PKPbc	17 34 07.5	+0.2
X51A	Calhoun	148.56	8	P	PKPbc	17 34 07.1	-0.2
	baz=350						
PAULI	Pauline	148.62	3	ePKPbc	PKPbc	17 34 07.5	0.0
X52A	Dahlonega	148.65	7	P	PKPbc	17 34 07.7	+0.1
	baz=352,SNR=7.9						
Y48A	Jasper	148.78	12	P	PKPbc	17 34 07.2	-0.7
	baz=345						
X53A	Estanollee	148.81	6	P	PKPbc	17 34 08.2	+0.2
	baz=353,SNR=7.1						
833A	Chaparral WMA,	148.83	35	P	PKiKP	17 34 09.0	-0.7
	baz=319						
BIRD	Birdtown, Kers	148.85	1	ePKPbc	PKPbc	17 34 07.8	-0.2
X54A	Belton	148.85	4	P	PKPbc	17 34 08.2	+0.1
	baz=355,SNR=7.4						
X58A	Rowland	148.95	360	P	PKPbc	17 34 08.4	+0.1
	baz=0.6						
X55A	Gracelyn & Ava	148.98	3	P	PKPbc	17 34 08.5	+0.1
	baz=356						
X56A	White Oak	148.98	2	P	PKPbc	17 34 08.5	+0.1
	baz=357						
Y49A	Blount Mountai	148.99	11	ePKPbc	PKPbc	17 34 08.2	-0.2
Y49A	Blount Mountai	148.99	11	P	PKPbc	17 34 08.3	-0.2
	baz=347,SNR=15						
Y50A	Piedmont	149.08	10	P	PKPbc	17 34 08.4	-0.3
	baz=348						
HODGE	Hodges	149.17	4	ePKPbc	PKPbc	17 34 08.9	0.0
Y51A	Rockmart	149.18	9	P	PKPbc	17 34 08.5	-0.5
	baz=349						
Y52A	Lilburn	149.36	7	ePKPbc	PKPbc	17 34 09.2	-0.2
Y52A	Lilburn	149.36	7	P	PKPbc	17 34 09.8	+0.4
	baz=351						
HKT	Hockley	149.41	28	ePKPbc	PKiKP	17 34 10.3	-0.3
HKT	Hockley	149.41	28	ePKP2	PKiKP	17 34 10.3	-0.3
Y53A	Monroe	149.42	6	P	PKPbc	17 34 09.9	+0.3
	baz=352						
Y55A	Saluda	149.49	4	P	PKPbc	17 34 09.9	+0.2
	baz=356						
Y54A	Tignall	149.50	5	P	PKPbc	17 34 09.8	+0.1
	baz=354,SNR=6.0						
Y58A	Scranton	149.60	0	P	PKPbc	17 34 09.9	0.0
	baz=360						
Z49A	Columbiana	149.61	12	P	PKPbc	17 34 09.8	-0.2
	baz=346,SNR=7.2						
LRAL	Lakeview Retre	149.67	12	ePKPbc	PKPbc	17 34 10.1	-0.1
LRAL	Lakeview Retre	149.67	12	P	PKPbc	17 34 09.7	-0.5
	baz=345						
Z50A	Ashland	149.67	10	ePKPbc	PKPbc	17 34 09.8	-0.4
Z50A	Ashland	149.67	10	P	PKPbc	17 34 10.1	-0.1
	baz=348,SNR=6.0						
147A	Livingston	149.72	15	ePKPbc	PKPbc	17 34 10.3	0.0
147A	Livingston	149.72	15	P	PKPbc	17 34 10.4	+0.2
	baz=343						
Z51A	Franklin	149.74	9	P	PKPbc	17 34 10.5	+0.1
	baz=349						
GOGA	Godfrey	149.87	6	ePKPbc	PKPbc	17 34 10.7	+0.1
GOGA	Godfrey	149.87	6	ePKP2	PKPbc	17 34 10.7	+0.1
GOGA	Godfrey	149.87	6	P	PKPbc	17 34 10.9	+0.3
	baz=352						
148A	Greensboro	149.91	13	P	PKPbc	17 34 10.8	0.0
	baz=344						
Z52A	Williamson	149.97	8	P	PKiKP	17 34 11.3	-0.5
	baz=350,SNR=7.1						
Z53A	Monticello	149.99	7	P	PKPbc	17 34 11.1	+0.2
	baz=352,SNR=5.6						
Z54A	Sparta	150.11	5	P	PKiKP	17 34 11.7	-0.4
	baz=354,SNR=6.8						
149A	Jones	150.13	12	P	PKPbc	17 34 11.3	0.0
	baz=346						
Z58A	St. Stephen	150.16	0	P	PKiKP	17 34 11.8	-0.4
	baz=360						
Z57A	Bowman	150.19	2	P	PKPbc	17 34 11.6	+0.2
	baz=358						
Z59A	Georgetown, SC	150.26	359	P	PKPbc	17 34 11.9	+0.3
	baz=0.8						
150A	Eclectic	150.28	11	P	PKPbc	17 34 11.7	+0.1
	baz=347,SNR=7.3						
152A	Waverly Hall	150.44	9	ePKPbc	PKPbc	17 34 12.3	+0.2
152A	Waverly Hall	150.44	9	P	PKPbc	17 34 12.3	+0.2
	baz=350,SNR=7.1						

151A	**Opelika**	**150.48**	**10**	P	**PKiKP**	**17 34 12.6**	**-0.4**
	baz=348						
249A	**Camden**	**150.66**	**13**	P	**PKiKP**	**17 34 12.9**	**-0.3**
	baz=345						
155A	**Kite**	**150.75**	**5**	P	**PKiKP**	**17 34 13.4**	**0.0**
	baz=354,SNR=6.1						
156A	**Sylvania**	**150.79**	**3**	P	**PKiKP**	**17 34 13.4**	**-0.1**
	baz=356						
157A	**Early Branch**	**150.79**	**2**	P	**PKiKP**	**17 34 13.3**	**-0.2**
	baz=357						
250A	**Grady**	**150.84**	**12**	P	**PKiKP**	**17 34 13.8**	**+0.1**
	baz=346						
251A	**Midway**	**150.89**	**10**	P	**PKiKP**	**17 34 13.7**	**0.0**
	baz=348,SNR=5.3						
252A	**Lumpkin**	**151.10**	**9**	P	**PKiKP**	**17 34 14.1**	**-0.1**
	baz=350,SNR=5.3						
253A	**Americus**	**151.12**	**8**	*e*PKPbc	**PKiKP**	**17 34 13.9**	**-0.4**
253A	**Americus**	**151.12**	**8**	P	**PKiKP**	**17 34 14.1**	**-0.1**
	baz=351						
349A	**Repton**	**151.24**	**14**	P	**PKiKP**	**17 34 15.0**	**+0.5**
	baz=344						
LNIG	**Linares**	**151.29**	**40**	*e*PKPbc	**PKPbc**	**17 34 13.8**	**-0.5**
254A	**Abbeville**	**151.34**	**7**	P	**PKiKP**	**17 34 14.6**	**-0.1**
	baz=352						
350A	**Dozier**	**151.37**	**12**	P	**PKiKP**	**17 34 14.8**	**+0.1**
	baz=346						
256A	**Glennville**	**151.44**	**4**	P	**PKiKP**	**17 34 15.1**	**+0.2**
	baz=355						
255A	**Hazlehurst**	**151.44**	**5**	P	**PKiKP**	**17 34 14.9**	**+0.1**
	baz=354						
BRAL	**Brewton**	**151.45**	**13**	P	**PKiKP**	**17 34 15.4**	**+0.5**
	baz=344						
352A	**Blakely**	**151.57**	**10**	*e*PKPbc	**PKiKP**	**17 34 15.2**	**+0.1**
352A	**Blakely**	**151.57**	**10**	P	**PKiKP**	**17 34 15.5**	**+0.3**
	baz=349						
TIGA	**Tifton**	**151.81**	**7**	P	**PKiKP**	**17 34 15.6**	**0.0**
	baz=352						
353A	**Camilla**	**151.81**	**8**	P	**PKiKP**	**17 34 15.6**	**0.0**
	baz=350						
355A	**Pearson**	**151.99**	**6**	P	**PKiKP**	**17 34 16.0**	**0.0**
	baz=353						
356A	**Blackshear**	**152.07**	**5**	P	**PKPbc**	**17 34 15.9**	**+0.1**
	baz=355						
452A	**Marianna**	**152.14**	**10**	P	**PKiKP**	**17 34 16.7**	**+0.3**
	baz=348						
451A	**Vernon**	**152.26**	**11**	P	**PKiKP**	**17 34 17.1**	**+0.5**
	baz=347						
453A	**Whigham**	**152.28**	**9**	P	**PKiKP**	**17 34 16.8**	**+0.1**
	baz=350						
454A	**Quitman**	**152.52**	**7**	P	**PKPbc**	**17 34 16.2**	**-0.6**
	baz=351						
455A	**Stateville**	**152.56**	**6**	P	**PKPbc**	**17 34 16.7**	**-0.2**
	baz=353						
555A	**McAlpin**	**153.18**	**6**	P	**PKiKP**	**17 34 18.4**	**-0.2**
	baz=353						

ROM 09 17:14:24.6±0.1, 43°.446N±0°.005×13°.122E±0°.009, h9$^{\text{km}}$, ML1.4/8, Error ellipse: s-maj=0.9km s-min=0.3km az=53.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CING	**Cingoli**	**0.09**	**143**	*e*P	Pg	17 14 27.3	+0.4
CING				S	Sg	17 14 29.0	+0.4
CING				AML	AML		
	comp=E,456µm,1.0s						
CING				AML	AML		
	comp=N,548µm,0.1s						
CING				AML	AML		
	comp=N,548µm,0.1s						
CING				AML	AML		
	comp=E,456µm,1.0s						
EL6	**Elcito**	**0.12**	**187**	*e*P	Pg	17 14 27.8	+0.4
EL6				S	Sg	17 14 30.2	+0.8
ARVD	**Arcevia**	**0.14**	**292**	*e*P	Pg	17 14 28.2	+0.5
ARVD				S	Sg	17 14 30.8	+0.9
ARVD				AML	AML		
	comp=E,212µm,0.5s						
ARVD				AML	AML		
	comp=N,159µm,0.1s						
ARVD				AML	AML		
	comp=E,212µm,0.5s						
ARVD				AML	AML		
	comp=N,160µm,0.1s						
ARVD				AML	AML		
	comp=N,160µm,0.1s						
ARVD				AML	AML		
	comp=E,212µm,0.5s						
COR1	**Corinaldo**	**0.21**	**335**	*e*P	Pg	17 14 30.2	+1.4
SNTG	**Esanatoglia**	**0.23**	**215**	*i* P	Pg	17 14 30.2	+0.9
SNTG				S	Sg	17 14 33.8	+1.3
SSFR	**Montelago di S**	**0.25**	**268**	*e*P	Pg	17 14 30.2	+0.6
SSFR				S	Sg	17 14 34.2	+1.2
SSFR				AML	AML		
	comp=E,323µm,0.2s						
SSFR				AML	AML		
	comp=N,388µm,1.1s						
SSFR				AML	AML		
	comp=E,260µm,0.2s						
SSFR				AML	AML		
	comp=N,325µm,0.2s						
SSFR				AML	AML		
	comp=E,323µm,0.1s						
SSFR				AML	AML		
	comp=N,388µm,1.1s						
SSFR				AML	AML		
	comp=E,260µm,0.2s						
SSFR				AML	AML		
	comp=N,325µm,0.2s						
SSFR				AML	AML		
	comp=E,323µm,0.1s						
SSFR				AML	AML		
	comp=E,260µm,0.2s						
SSFR				AML	AML		
	comp=N,388µm,1.1s						
SSFR				AML	AML		
	comp=N,325µm,0.2s						
FRON	**Frontone**	**0.30**	**284**	*e*P	Pg	17 14 31.1	+0.6
FRON				S	Sb	17 14 36.4	-0.8
FRON				AML	AML		
	comp=E,110µm,0.8s						
FRON				AML	AML		
	comp=N,166µm,0.6s						
FRON				AML	AML		
	comp=E,110µm,0.8s						
FRON				AML	AML		
	comp=N,166µm,0.6s						
FRON				AML	AML		
	comp=N,166µm,0.6s						
FRON				AML	AML		
	comp=E,110µm,0.8s						
MPAG	**Monte Paganucc**	**0.32**	**305**	P	Pg	17 14 31.4	+0.4
MPAG				S	Sb	17 14 36.7	-1.2
MPAG				AML	AML		
	comp=E,60µm,0.5s						
MPAG				AML	AML		
	comp=N,52µm,0.6s						
MPAG				AML	AML		
	comp=E,60µm,0.5s						
MPAG				AML	AML		
	comp=N,52µm,0.6s						
MPAG				AML	AML		
	comp=E,60µm,0.5s						
MPAG				AML	AML		
	comp=N,52µm,0.6s						
CSP1	**Cessapalombo**	**0.36**	**170**	P	Pg	17 14 32.2	+0.5
CSP1				S	Sb	17 14 38.2	-0.8
ATFO	**Monte Foce - G**	**0.41**	**259**	*e*P	Pb	17 14 33.4	-0.7
ATFO				S	Sb	17 14 40.1	-0.4
ATFO				AML	AML		
	comp=E,69µm,0.2s						
ATFO				AML	AML		
	comp=N,87µm,0.5s						
ATFO				AML	AML		
	comp=E,69µm,0.2s						
ATFO				AML	AML		
	comp=N,87µm,0.5s						
ATFO				AML	AML		
	comp=N,87µm,0.5s						
ATFO				AML	AML		
	comp=E,69µm,0.2s						
FDMO	**Fiordimonte**	**0.41**	**184**	*e*P	Pg	17 14 32.7	0.0
FDMO				S	Sb	17 14 40.1	-0.3
FDMO				AML	AML		
	comp=E,48µm,0.8s						
FDMO				AML	AML		
	comp=N,38µm,0.2s						
FDMO				AML	AML		
	comp=E,48µm,0.8s						
FDMO				AML	AML		
	comp=N,38µm,0.2s						
FDMO				AML	AML		
	comp=E,48µm,0.8s						
FDMO				AML	AML		
	comp=N,38µm,0.2s						
ATVO	**AVT- Monte Val**	**0.53**	**263**	*e*P	Pg	17 14 35.3	+0.5
ATVO				S	Sb	17 14 43.5	-0.2
ATVO				AML	AML		
	comp=E,26µm,0.9s						
ATVO				AML	AML		
	comp=N,23µm,1.1s						
ATVO				AML	AML		
	comp=E,26µm,0.9s						
ATVO				AML	AML		
	comp=N,23µm,1.1s						
ATVO				AML	AML		
	comp=N,23µm,1.1s						
ATVO				AML	AML		
	comp=E,26µm,0.9s						

PRE 09 17:14:50.3±1.3, 26°.43S×27°.51E, h2$^{\text{km}}$, ML1.2, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	**Parys**	**0.51**	**195**	*e*P	Pg	17 15 00.8	+0.6
PRYS				*e*S	Sg	17 15 06.6	-0.2
PRYS				AML	AML	17 15 08.6	
	comp=Z,7.2nm,0.2s						
SWZ	**Schweizer**	**2.09**	**248**	*e*P	Pb	17 15 27.7	-1.2
SWZ				*e*S	Sn	17 15 53.8	+0.7
SWZ				AML	AML	17 16 07.1	
	comp=Z,4.9nm,0.5s						
LBTB	**Lobatse**	**2.23**	**309**	*e*P	Pn	17 15 28.3	0.0
LBTB				AML	AML	17 15 59.7	
	comp=Z,2.8nm,0.5s						

ROM 09 17:22:10.4±0.1, 38°.464N±0°.006×15°.933E±0°.008, h11$^{\text{km}}$, Md1.3/4, Error ellipse: s-maj=0.7km s-min=0.6km az=76.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOPP	**Joppolo**	**0.15**	**346**	P	Pg	17 22 14.4	+0.6
JOPP				S	Sg	17 22 17.0	+0.7
JOPP				AML	AML		
	comp=E,4770µm,0.4s						
JOPP				AML	AML		
	comp=N,6610µm,0.2s						
JOPP				END			
CEL	**Celeste**	**0.21**	**189**	P	Pb	17 22 15.7	-0.5
CEL				S	Sg	17 22 19.1	+1.3
MSCL	**Scilla**	**0.26**	**206**	P	Pg	17 22 16.4	+0.7
MSCL				S	Sg	17 22 19.9	+0.6
MSCL				AML	AML		
	comp=E,3290µm,0.3s						
MSCL				AML	AML		
	comp=N,3230µm,1.2s						
MSCL				END			
MSRU	**Castanea**	**0.39**	**239**	P	Pg	17 22 18.7	+0.6
MSRU				S	Sg	17 22 24.1	+0.8
MSRU				AML	AML		
	comp=E,2315µm,1.0s						
MSRU				AML	AML		
	comp=N,1890µm,1.2s						
PLAC	**Placanica**	**0.40**	**92**	P	Pg	17 22 18.5	+0.2
PLAC				S	Sb	17 22 24.9	-0.8
PLAC				AML	AML		
	comp=E,1128µm,0.3s						
PLAC				AML	AML		
	comp=N,1140µm,1.6s						
PLAC				AML	AML		
	comp=E,1171µm,1.6s						
PLAC				AML	AML		
	comp=N,1212µm,0.3s						
SOI	**Samo**	**0.40**	**166**	P	Pg	17 22 18.7	+0.3
SOI				S	Sb	17 22 24.8	-1.0
SOI				AML	AML		
	comp=E,737µm,0.3s						
SOI				AML	AML		
	comp=N,701µm,0.6s						
SOI				END			
MPNC	**Port Mandanici**	**0.56**	**235**	P	Pb	17 22 22.0	-0.2
MPNC				S	Sb	17 22 29.7	-0.5
MPNC				AML	AML		
	comp=E,2680µm,0.3s						
MPNC				AML	AML		
	comp=N,3715µm,0.3s						
MPNC				END			

ROM 09 17:22:57.9±0.1, 38°.470N±0°.003×15°.939E±0°.003, h11$^{\text{km}}$, ML2.6/18, Error ellipse: s-maj=0.4km s-min=0.1km az=134.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOPP	**Joppolo**	**0.14**	**343**	P	Pb	17 23 02.0	-0.6
JOPP				S	Sg	17 23 04.5	+0.9
CEL	**Celeste**	**0.21**	**190**	P	Pg	17 23 03.0	+0.7
CEL				S	Sg	17 23 06.4	+0.9
CEL				AML	AML		
	comp=E,1046µm,0.5s						
CEL				AML	AML		
	comp=N,2180µm,0.6s						
CEL				AML	AML		
	comp=E,1350µm,0.5s						
CEL				AML	AML		
	comp=N,2690µm,0.6s						
CEL				AML	AML		
	comp=E,1048µm,0.5s						
CEL				AML	AML		
	comp=N,2180µm,0.6s						
CEL				AML	AML		
	comp=E,1350µm,0.5s						
CEL				AML	AML		
	comp=N,2690µm,0.6s						
CEL				AML	AML		
	comp=E,1048µm,0.5s						
CEL				AML	AML		
	comp=N,2180µm,0.6s						
CEL				AML	AML		
	comp=E,1350µm,0.5s						
CEL				AML	AML		
	comp=N,2690µm,0.6s						
CEL				AML	AML		
	comp=N,2180µm,0.6s						
CEL				AML	AML		
	comp=N,2690µm,0.6s						
CEL				AML	AML		
	comp=E,1350µm,0.5s						
CEL				AML	AML		
	comp=E,1048µm,0.5s						
CEL				AML	AML		
	comp=N,2180µm,0.6s						
CEL				AML	AML		
	comp=N,2690µm,0.6s						
CEL				AML	AML		
	comp=E,1350µm,0.5s						
CEL				AML	AML		
	comp=E,1048µm,0.5s						
MSCL	**Scilla**	**0.27**	**206**	P	Pg	17 23 03.9	+0.6
MSCL				S	Sb	17 23 08.2	-1.0
MSCL				AML	AML		
	comp=E,3290µm,0.3s						
MSCL				AML	AML		
	comp=N,3230µm,1.2s						
MSCL				AML	AML		
	comp=E,3290µm,0.3s						
MSCL				AML	AML		
	comp=N,3230µm,1.2s						
MSCL				AML	AML		
	comp=E,3290µm,0.3s						
MSCL				AML	AML		
	comp=N,3230µm,1.2s						
MSCL				AML	AML		
	comp=E,3290µm,0.3s						
MSCL				AML	AML		
	comp=N,3230µm,1.2s						
MSCL				AML	AML		
	comp=E,3290µm,0.3s						
MSCL				AML	AML		
	comp=N,3230µm,1.2s						
GMB	**Gambarie**	**0.31**	**196**	P	Pg	17 23 04.7	+0.5
GMB				S	Sg	17 23 09.4	+0.9
GMB				AML	AML		
	comp=E,7080µm,0.2s						
GMB				AML	AML		
	comp=N,10860µm,0.2s						
GMB				AML	AML		
	comp=E,7080µm,0.2s						
GMB				AML	AML		
	comp=N,10860µm,0.2s						
GMB				AML	AML		
	comp=N,10860µm,0.2s						
GMB				AML	AML		
	comp=E,7080µm,0.2s						
GMB				AML	AML		
	comp=N,10860µm,0.2s						
GMB				AML	AML		
	comp=E,7080µm,0.2s						
PLAC	**Placanica**	**0.39**	**93**	P	Pg	17 23 06.1	+0.4
PLAC				S	Sb	17 23 12.4	-0.5
PLAC				AML	AML		
	comp=E,1125µm,0.3s						
PLAC				AML	AML		
	comp=N,1138µm,1.6s						
PLAC				AML	AML		
	comp=E,1171µm,1.6s						
PLAC				AML	AML		
	comp=N,1212µm,0.3s						
PLAC				AML	AML		
	comp=E,1128µm,0.3s						
PLAC				AML	AML		
	comp=N,1140µm,1.6s						
PLAC				AML	AML		
	comp=E,1171µm,1.6s						
PLAC				AML	AML		
	comp=N,1212µm,0.3s						
PLAC				AML	AML		
	comp=N,1212µm,0.3s						
PLAC				AML	AML		
	comp=E,1125µm,0.3s						
PLAC				AML	AML		
	comp=N,1138µm,1.6s						
PLAC				AML	AML		
	comp=E,1171µm,1.6s						
PLAC				AML	AML		
	comp=N,1212µm,0.3s						
PLAC				AML	AML		
	comp=E,1128µm,0.3s						
PLAC				AML	AML		
	comp=N,1137µm,1.6s						
PLAC				AML	AML		
	comp=E,1171µm,1.6s						
SOI	**Samo**	**0.41**	**167**	P	Pg	17 23 06.2	+0.3
SOI				S	Sg	17 23 11.9	+0.6
SOI				AML	AML		
	comp=E,737µm,0.3s						
SOI				AML	AML		
	comp=N,700µm,0.6s						
SOI				AML	AML		
	comp=E,738µm,0.3s						
SOI				AML	AML		
	comp=N,700µm,0.6s						
SOI				AML	AML		
	comp=E,737µm,0.3s						
SOI				AML	AML		
	comp=N,701µm,0.6s						
SOI				AML	AML		
	comp=E,738µm,0.3s						
SOI				AML	AML		
	comp=N,700µm,0.6s						
SOI				AML	AML		
	comp=E,737µm,0.3s						
SOI				AML	AML		
	comp=N,701µm,0.6s						
ATN	**Antennamare**	**0.48**	**230**	P	Pg	17 23 07.8	+0.5
ATN				S	Sg	17 23 14.2	+0.4
ATN				AML	AML		
	comp=E,1835µm,0.8s						
ATN				AML	AML		
	comp=N,2290µm,0.3s						
ATN				AML	AML		
	comp=E,1835µm,0.8s						
ATN				AML	AML		
	comp=N,2290µm,0.3s						
ATN				AML	AML		
	comp=E,1835µm,0.8s						
ATN				AML	AML		
	comp=N,2290µm,0.3s						
ATN				AML	AML		
	comp=N,2290µm,0.3s						
ATN				AML	AML		
	comp=E,1835µm,0.8s						
ATN				AML	AML		
	comp=N,2290µm,0.3s						
ATN				AML	AML		
	comp=E,1835µm,0.8s						
MTTG	**Motta San Giov**	**0.51**	**203**	P	Pg	17 23 07.8	+0.1
MTTG				S	Sb	17 23 15.3	-0.8
MTTG				AML	AML		
	comp=E,470µm,0.5s						
MTTG				AML	AML		
	comp=N,969µm,0.8s						
MTTG				AML	AML		
	comp=E,470µm,0.5s						
MTTG				AML	AML		
	comp=N,969µm,0.8s						
MTTG				AML	AML		
	comp=E,470µm,0.5s						
MTTG				AML	AML		
	comp=N,969µm,0.8s						
MTTG				AML	AML		
	comp=E,470µm,0.5s						
MTTG				AML	AML		
	comp=N,969µm,0.8s						
MTTG				AML	AML		
	comp=E,470µm,0.5s						
MTTG				AML	AML		
	comp=N,969µm,0.8s						
GRI	**Girifalco**	**0.52**	**47**	P	Pg	17 23 08.0	+0.1
GRI				S	Sg	17 23 15.4	+0.6
GRI				AML	AML		
	comp=E,683µm,1.0s						
GRI				AML	AML		
	comp=N,551µm,0.9s						
GRI				AML	AML		
	comp=E,684µm,1.0s						
GRI				AML	AML		
	comp=N,552µm,0.9s						
GRI				AML	AML		
	comp=N,551µm,0.9s						
GRI				AML	AML		
	comp=E,683µm,1.0s						
GRI				AML	AML		
	comp=N,552µm,0.9s						
GRI				AML	AML		
	comp=E,684µm,1.0s						
MPNC	**Port Mandanici**	**0.56**	**235**	P	Pg	17 23 08.7	-0.2
MPNC				S	Sg	17 23 16.9	+0.6
MPNC				AML	AML		
	comp=E,2680µm,0.3s						
MPNC				AML	AML		
	comp=N,3715µm,0.3s						
MPNC				AML	AML		
	comp=E,2680µm,0.3s						
MPNC				AML	AML		
	comp=N,3715µm,0.3s						
MPNC				AML	AML		
	comp=N,3715µm,0.3s						
MPNC				AML	AML		
	comp=E,2680µm,0.3s						
MPNC				AML	AML		
	comp=N,3715µm,0.3s						
MPNC				AML	AML		
	comp=E,2680µm,0.3s						
MILZ	**Milazzo**	**0.59**	**251**	P	Pg	17 23 09.4	+0.1
MILZ				S	Sg	17 23 17.6	+0.5
MILZ				AML	AML		
	comp=E,1460µm,0.3s						
MILZ				AML	AML		
	comp=N,2960µm,0.4s						
MILZ				AML	AML		
	comp=E,1460µm,0.3s						
MILZ				AML	AML		
	comp=N,2960µm,0.4s						
MILZ				AML	AML		
	comp=E,1460µm,0.3s						

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MILZ                                AML      AML
        comp=N,2960µm,0.4s
MILZ                                AML      AML
        comp=N,1460µm,0.3s
MILZ                                AML      AML
        comp=N,2960µm,0.4s
IST3  Stromboli F       0.65 301    P        Pg        17 23 10.6 +0.2
IST3                                AML      AML
        comp=E,1745µm,1.1s
IST3                                AML      AML
        comp=N,2475µm,1.2s
IST3                                AML      AML
        comp=E,1745µm,1.1s
IST3                                AML      AML
        comp=N,2475µm,1.2s
IST3                                AML      AML
        comp=E,1745µm,1.1s
IST3                                AML      AML
        comp=N,2475µm,1.2s
IST3                                AML      AML
        comp=N,2475µm,1.2s
IST3                                AML      AML
        comp=E,1745µm,1.1s
IST3                                AML      AML
        comp=N,2475µm,1.2s
IST3                                AML      AML
        comp=E,1745µm,1.1s
AIO   Antillo           0.75 228    P        Pg        17 23 11.8 -0.5
AIO                                 AML      AML
        comp=E,542µm,0.3s
AIO                                 AML      AML
        comp=N,404µm,0.3s
AIO                                 AML      AML
        comp=E,542µm,0.3s
AIO                                 AML      AML
        comp=N,404µm,0.3s
AIO                                 AML      AML
        comp=E,542µm,0.3s
AIO                                 AML      AML
        comp=N,404µm,0.3s
AIO                                 AML      AML
        comp=N,404µm,0.3s
AIO                                 AML      AML
        comp=E,542µm,0.3s
AIO                                 AML      AML
        comp=N,404µm,0.3s
AIO                                 AML      AML
        comp=E,542µm,0.3s
VPL   Vulcano Piano     0.76 263    P        Pg        17 23 12.2 -0.2
VPL                                 S        Sb        17 23 23.5 +0.2
VPL                                 AML      AML
        comp=E,1830µm,0.5s
VPL                                 AML      AML
        comp=N,2210µm,0.3s
VPL                                 AML      AML
        comp=E,1830µm,0.5s
VPL                                 AML      AML
        comp=N,2210µm,0.3s
VPL                                 AML      AML
        comp=E,1830µm,0.5s
VPL                                 AML      AML
        comp=N,2210µm,0.3s
VPL                                 AML      AML
        comp=E,1830µm,0.5s
VPL                                 AML      AML
        comp=N,2210µm,0.3s
NOV   Novara            0.77 235    P        Pg        17 23 12.4 -0.3
NOV                                 S        Sg        17 23 23.3 +0.5
NOV                                 AML      AML
        comp=E,649µm,0.7s
NOV                                 AML      AML
        comp=N,619µm,0.6s
NOV                                 AML      AML
        comp=E,649µm,0.7s
NOV                                 AML      AML
        comp=N,619µm,0.6s
NOV                                 AML      AML
        comp=N,619µm,0.6s
NOV                                 AML      AML
        comp=E,649µm,0.7s
NOV                                 AML      AML
        comp=N,619µm,0.6s
NOV                                 AML      AML
        comp=E,649µm,0.7s
LLI   Lipari            0.78 268    P        Pg        17 23 12.7 -0.2
LLI                                 AML      AML
        comp=E,2035µm,0.8s
LLI                                 AML      AML
        comp=N,4190µm,0.6s
LLI                                 AML      AML
        comp=E,2035µm,0.8s
LLI                                 AML      AML
        comp=N,4190µm,0.6s
LLI                                 AML      AML
        comp=E,2035µm,0.8s
LLI                                 AML      AML
        comp=N,4190µm,0.6s
LLI                                 AML      AML
        comp=N,4190µm,0.6s
LLI                                 AML      AML
        comp=E,2035µm,0.8s
LLI                                 AML      AML
        comp=N,4190µm,0.6s
LLI                                 AML      AML
        comp=E,2035µm,0.8s
CAR1  CAROLEI           0.81  15    P        Pg        17 23 13.0 -0.5
CAR1                                AML      AML
        comp=E,852µm,0.3s
CAR1                                AML      AML
        comp=N,1010µm,0.4s
CAR1                                AML      AML
        comp=E,850µm,0.4s
CAR1                                AML      AML
        comp=N,1045µm,0.4s
CAR1                                AML      AML
        comp=E,852µm,0.3s
CAR1                                AML      AML
        comp=N,1009µm,0.4s
CAR1                                AML      AML
        comp=E,850µm,0.4s
CAR1                                AML      AML
        comp=N,1045µm,0.4s
CAR1                                AML      AML
        comp=N,1045µm,0.4s
CAR1                                AML      AML
        comp=N,1010µm,0.4s
CAR1                                AML      AML
        comp=E,850µm,0.4s
CAR1                                AML      AML
        comp=E,852µm,0.3s
CAR1                                AML      AML
        comp=N,1045µm,0.4s
CAR1                                AML      AML
        comp=N,1009µm,0.4s
CAR1                                AML      AML
        comp=E,850µm,0.4s
CAR1                                AML      AML
        comp=E,852µm,0.3s
SERS  Sersale           0.81  46    P        Pg        17 23 13.1 -0.5
SERS                                AML      AML
        comp=E,192µm,0.5s
SERS                                AML      AML
        comp=N,164µm,0.6s
SERS                                AML      AML
        comp=E,188µm,0.6s
SERS                                AML      AML
        comp=N,205µm,0.5s
SERS                                AML      AML
        comp=E,188µm,0.6s
SERS                                AML      AML
        comp=N,205µm,0.5s
SERS                                AML      AML
        comp=N,164µm,0.6s
SERS                                AML      AML
        comp=N,205µm,0.5s
SERS                                AML      AML
        comp=E,192µm,0.5s
SERS                                AML      AML
        comp=E,188µm,0.6s
SERS                                AML      AML
        comp=N,205µm,0.5s
SERS                                AML      AML
        comp=E,188µm,0.6s
MUCR  Ucria             0.94 243    P        Pg        17 23 15.2 -0.8
MUCR                                AML      AML
        comp=E,212µm,0.4s
MUCR                                AML      AML
        comp=N,352µm,0.3s
```

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MUCR                                AML      AML
        comp=E,212µm,0.4s
MUCR                                AML      AML
        comp=N,352µm,0.3s
MUCR                                AML      AML
        comp=N,352µm,0.3s
MUCR                                AML      AML
        comp=E,212µm,0.4s
MUCR                                AML      AML
        comp=N,352µm,0.3s
MUCR                                AML      AML
        comp=E,212µm,0.4s
TIP   Timpagrande       0.95  42    P        Pg        17 23 16.1 -0.1
TIP                                 AML      AML
        comp=E,123µm,0.5s
TIP                                 AML      AML
        comp=N,98µm,1.5s
TIP                                 AML      AML
        comp=E,124µm,1.6s
TIP                                 AML      AML
        comp=N,106µm,1.5s
TIP                                 AML      AML
        comp=E,123µm,0.5s
TIP                                 AML      AML
        comp=N,98µm,1.5s
TIP                                 AML      AML
        comp=E,124µm,1.6s
TIP                                 AML      AML
        comp=N,106µm,1.5s
TIP                                 AML      AML
        comp=N,98µm,1.5s
TIP                                 AML      AML
        comp=E,124µm,1.6s
TIP                                 AML      AML
        comp=E,123µm,0.5s
TIP                                 AML      AML
        comp=N,106µm,1.5s
TIP                                 AML      AML
        comp=E,124µm,1.6s
TIP                                 AML      AML
        comp=N,106µm,1.5s
TIP                                 AML      AML
        comp=N,98µm,1.5s
TIP                                 AML      AML
        comp=E,123µm,0.5s
MCPD  Capo d'Orlando    1.01 250    P        Pg        17 23 15.8 -1.5
MCPD                                AML      AML
        comp=E,129µm,0.7s
MCPD                                AML      AML
        comp=N,173µm,0.7s
MCPD                                AML      AML
        comp=N,173µm,0.7s
MCPD                                AML      AML
        comp=E,129µm,0.7s
CELI  Celico            1.03  25    P        Pg        17 23 16.8 -0.9
CELI                                AML      AML
        comp=E,266µm,1.1s
CELI                                AML      AML
        comp=N,306µm,0.8s
CELI                                AML      AML
        comp=E,266µm,1.1s
CELI                                AML      AML
        comp=N,306µm,0.8s
CELI                                AML      AML
        comp=E,266µm,1.1s
CELI                                AML      AML
        comp=N,306µm,0.8s
CELI                                AML      AML
        comp=E,266µm,1.1s
CELI                                AML      AML
        comp=N,306µm,0.8s
CET2  Cetraro           1.06   1    AML      AML
        comp=N,590µm,0.4s
CET2                                AML      AML
        comp=E,577µm,0.8s
CET2                                AML      AML
        comp=E,577µm,0.8s
CET2                                AML      AML
        comp=N,590µm,0.4s
CET2                                AML      AML
        comp=E,577µm,0.8s
CET2                                AML      AML
        comp=N,590µm,0.4s
CET2                                AML      AML
        comp=E,577µm,0.8s
CET2                                AML      AML
        comp=N,590µm,0.4s
MNO   Monte Soro        1.12 242    P        Pb        17 23 18.6 -0.6
MSFR  San Fratello      1.15 248    AML      AML
        comp=N,66µm,1.1s
MSFR                                AML      AML
        comp=E,66µm,0.6s
MSFR                                AML      AML
        comp=E,66µm,0.6s
MSFR                                AML      AML
        comp=N,66µm,1.1s
MSFR                                AML      AML
        comp=N,66µm,1.1s
MSFR                                AML      AML
        comp=E,66µm,0.6s
MSFR                                AML      AML
        comp=N,66µm,1.1s
MSFR                                AML      AML
        comp=E,66µm,0.6s
T0702 Acquaformosa (    1.25   5    P        Pn        17 23 19.6 -1.8
HCRL  Carlentini        1.39 211    P        Pn        17 23 23.1  0.0
CUC   Castrocucco       1.52 356    AML      AML
        comp=E,106µm,0.7s
CUC                                 AML      AML
        comp=E,100µm,0.7s
CUC                                 AML      AML
        comp=N,80µm,0.6s
CUC                                 AML      AML
        comp=N,91µm,0.6s
CUC                                 AML      AML
        comp=E,100µm,0.7s
CUC                                 AML      AML
        comp=N,80µm,0.6s
CUC                                 AML      AML
        comp=E,106µm,0.7s
CUC                                 AML      AML
        comp=N,91µm,0.6s
CUC                                 AML      AML
        comp=N,91µm,0.6s
CUC                                 AML      AML
        comp=N,80µm,0.6s
CUC                                 AML      AML
        comp=E,106µm,0.7s
CUC                                 AML      AML
        comp=E,100µm,0.7s
CUC                                 AML      AML
        comp=N,91µm,0.6s
CUC                                 AML      AML
        comp=N,80µm,0.6s
CUC                                 AML      AML
        comp=E,106µm,0.7s
CUC                                 AML      AML
        comp=E,100µm,0.7s
HAVL  Avola             1.64 203    P        Pn        17 23 26.4 -0.3
HAVL                                AML      AML
        comp=E,97µm,0.9s
HAVL                                AML      AML
        comp=N,112µm,0.3s
HAVL                                AML      AML
        comp=E,97µm,0.9s
HAVL                                AML      AML
        comp=N,112µm,0.3s
SIRI  Monte Sirino -    1.71 358    AML      AML
        comp=N,66µm,0.6s
SIRI                                AML      AML
        comp=E,75µm,0.4s
SIRI                                AML      AML
        comp=N,66µm,0.6s
SIRI                                AML      AML
        comp=E,75µm,0.4s
SIRI                                AML      AML
        comp=N,66µm,0.6s
SIRI                                AML      AML
        comp=E,75µm,0.4s
SIRI                                AML      AML
        comp=N,66µm,0.6s
SIRI                                AML      AML
        comp=E,75µm,0.4s
RAFF  Raffo Rosso       1.76 226    P        Pn        17 23 28.8 +0.5
RAFF                                AML      AML
        comp=E,54µm,0.4s
RAFF                                AML      AML
        comp=N,66µm,0.4s
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RAFF                                AML      AML
        comp=E,54µm,0.4s
RAFF                                AML      AML
        comp=N,66µm,0.4s
```

BJI ***09*** *17:22:52.7±0.0, 4°.02S×100°.47E, h17km, mb4.7/44, mB5.2/19, Ms4.9/9, Ms7 4.6/8*
ISCJB ***09*** *17:22:58.6±0.3, 3°.43S±0°.03×100°.28E±0°.03, h29km, mb4.7/83, Error ellipse: s-maj=5.8km s-min=3.3km az=135.8*
NEIC ***09*** *17:22:58.3±2.0, 3°.46S×100°.25E, h15km±3km, mb4.8/54, Error ellipse: s-maj=12.9km s-min=8.4km az=51.0*
DJA ***09*** *17:23:00.6±0.7, 3°S±2°×10°0E±°, h37km±8km, M4.6/22, mb4.5/12, mB5.0/1, MLv4.7/22, Mw(mB)4.4/1*
MOS ***09*** *17:23:00.5±0.9, 3°.33S×100°.45E, h38km, mb5.0/37, Error ellipse: s-maj=13.7km s-min=6.3km az=104.6*
IDC ***09*** *17:23:02.5±2.6, 3°.32S×100°.36E, h39km±20km, mb4.2/20, mb1 4.3/23, mb1mx4.0/61, mbtmp4.4/23, ML3.9/3, Error ellipse: s-maj=25.2km s-min=10.2km az=42.0*
ISC 09 17:22:60.0±0.4**, 3°.52S**±0°.05×**100°.25E**±0°.05**, h29**km**, n350,** σ1s**19**/352**, mb4.8**/83**, 6C-8D, Southern Sumatera**

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Code  Station Name       Δ°  AZ°   Phase ID          Time        Res
                                   Op       ISC      h  m  s     ISC
PPSI  Pulau Pagai       0.79 342   P        Pn       17 23 13.8 -1.4
KRJI  Kerinci           1.86  40   P        Pn       17 23 29.4 -0.7
SISI  Saibi             2.47 332   P        Pn       17 23 37.3 -1.0
SISI                               S        Sn       17 24 04.7 -2.9
PDSI  Padang            2.60   5   P        Pn       17 23 38.2 -2.0
PDSI                               S        Sn       17 24 08.0 -2.8
MNAI  Manna             2.82 107   ePn      Pn       17 23 44.5 +1.3
MNAI  Manna             2.82 107   P        Pn       17 23 44.5 +1.3
SDSI  Sungai Dareh      2.83  25   P        Pn       17 23 42.3 -0.9
LHSI  Lahat             3.28  95   P        Pn       17 23 51.3 +1.9
RGRI  Rengat            3.77  33   P        Pn       17 23 55.8 -0.5
JMBI  JAMBI             3.87  61   P        Pn       17 23 57.2 -0.4
BKNI  Bangkinang        3.90  12   ePn      Pn       17 23 57.2 -0.8
BKNI  Bangkinang        3.90  12   P        Pn       17 23 56.9 -1.1
MDSI  Maura Dua         4.03 104   P        Pn       17 24 01.8 +2.0
LWLI  Liwa              4.08 112   P        Pb       17 24 06.8 -4.4
KASI  Kota Agung        4.67 115   P        Pn       17 24 09.4 +0.7
KLI   Kotabumi          4.78 106   P        Pb       17 24 27.4 +4.3
DSRI  Dabo              5.27  55   P        Pn       17 24 16.3 -0.6
BLSI  Bandar Lampung    5.30 110   P        Pn       17 24 20.8 +3.5
        83nm,0.5s,0.5nm
GSI   Gunungsitoli      5.49 331   ePn      Pn       17 24 19.0 -0.9
GSI   Gunungsitoli      5.49 331   P        Pn       17 24 17.8 -2.1
PPBI  Pangkal Pinang    6.03  77   P        Pn       17 24 27.5 +0.2
TPRI  Tanjung Pinang    6.14  44   P        Pn       17 24 28.2 -0.6
CGJI  Cibinong          6.23 120   P        Pn       17 24 30.3 +0.3
MYKOM Kota Tinggi       6.38  34   ePn      Pn       17 24 31.0 -1.2
PSI   Prapat            6.42 348   Pn       Pn       17 24 29.1 -3.7
        0.6nm,0.3s,baz=192,slow=14,SNR=2.6
PSI   Prapat            6.42 348   ePn      Pn       17 24 30.3 -2.5
PSI   Prapat            6.42 348   eP       Pn       17 24 30.3 -2.5
KCSI  Kotacane, Aceh    7.42 340   P        Pn       17 24 44.6 -1.9
IPM   Ipoh              7.98   6   ePn      Pn       17 24 54.1  0.0
LEM   Lembang           8.04 114   Pn       Pn       17 24 57.0 +2.0
        4.3nm,0.3s,baz=3.5,slow=19,SNR=4.0
CISI  Cisompet, Garu    8.53 118   ePn      Pn       17 25 01.5 -0.2
CISI                               eSn      Sn       17 26 32.7 -4.3
CISI  Cisompet, Garu    8.53 118   P        Pn       17 25 01.0 -0.7
XMIS  Christmas Isla    8.75 143   ePn      Pn       17 25 05.3 +0.7
KULM  Kulim             8.76   3   ePn      Pn       17 25 03.0 -1.9
LHMI  Lhok Sumawe       9.30 339   ePn      Pn       17 25 12.4 +0.3
UGM   Wanagama         11.11 114   ePn      Pn       17 25 36.5 -0.6
SBUM  Sibu             13.35  64   ePn      Pn       17 26 09.1 +1.4
DLV   T  Lat           17.41  28   ePn      Pn       17 27 00.2 -0.9
        14nm,1.0s
SRAK  Srakaew          17.51   6   P        P        17 27 09.3 +6.2
KKM   Kota Kinabalu    18.56  59   eP       P        17 27 13.7 -1.1
        15nm,0.9s
SPSI  Sidrap Palu      19.48  92   P        Pn       17 27 28.3 +2.1
KAPI  Kappang          19.50  95   P        Pn       17 27 25.7 -0.7
        0.9nm,0.3s,baz=272,slow=10,SNR=6.5
KAPI  Kappang          19.50  95   eP       P        17 27 25.2 +0.2
        46nm,1.2s
KAPI  Kappang          19.50  95   eP       P        17 27 25.2 +0.2
KAPI                               pmax     pmax
        comp=Z,46nm,1.2s
BNSI  Bone             19.82  93   P        Pn       17 27 33.4 +3.1
BKSI  Bulukumba        19.89  96   P        Pn       17 27 32.0 +0.9
SKNT  Sakolnakorn      20.69  10   P        P        17 27 36.6 -1.4
        comp=Z,13nm,0.9s
PANO  Nakornpanom      20.98  12   P        P        17 27 41.9 +0.8
        comp=Z,0.6nm,1.0s
CM31  Chiang Mai Arr   21.88 357   eP       P        17 27 49.3 -1.4
        comp=Z,12nm,0.9s
CMAR  Chiang Mai Arr   21.88 357   P        P        17 27 48.5 -2.2
        comp=Z,6.3nm,0.9s,baz=186,slow=10,SNR=18
CMAR                               PcP      PcP      17 31 52.1 +2.3
        comp=Z,0.9nm,0.8s,baz=217,slow=3.5,SNR=4.4
CMAR  Chiang Mai Arr   21.88 357   i P      P        17 27 49.9 -0.8
CMAR                               pmax     pmax
        comp=Z,6.0nm,0.8s
CMMT  Chiang Mai       22.23 357   P        P        17 27 56.2 +1.7
        comp=Z,5.4nm,0.9s
CHTO  Chiang Mai       22.23 357   eP       P        17 27 55.1 +0.6
        comp=Z,9.3nm,1.0s
CHTO  Chiang Mai       22.23 357   eP       P        17 27 55.1 +0.6
CHTO                               pmax     pmax
        comp=Z,9.0nm,1.0s
PAYA  Payao            22.74 359   P        P        17 28 01.2 +1.2
        comp=Z,38µm,1.0s
SOEI  Soe              24.63 106   eP       P        17 28 15.8 -2.6
        comp=Z,50nm,1.2s
SLVN  Son La           24.96   8   eP       P        17 28 19.8 -1.4
        comp=Z,5.7nm,0.8s
MNI   Manado           25.06  79   P        P        17 28 23.8 +1.6
MNI                                pmax     pmax
        comp=Z,64nm,1.0s
H08S2 Diego Garcia H   27.92 260   T        T        17 58 00.0
        baz=82,slow=74,SNR=254
H08S3 Diego Garcia H   27.93 260   T        T        17 58 00.8
        baz=82,slow=74,SNR=283
H08S1 Diego Carcia H   27.94 260   T        T        17 58 04.7
        baz=82,slow=74,SNR=302
KMI   Kunming          28.57   5   P        P        17 28 56.8 +2.9
KMI                                pmax     pmax
        comp=Z,8.0nm,1.1s
KMI                                LR       LR
        comp=Z,240nm,12.8s
KMI                                LR       LR
        comp=Z,1µm,15.7s
KMI                                LR       LR
        comp=Z,1µm,13.4s
SHL   Shillong         30.03 345   eP       P        17 29 07.6 +0.8
        comp=Z,10nm,0.7s
SHL   Shillong         30.03 345   eP       P        17 29 07.6 +0.8
SHL                                pmax     pmax
        comp=Z,11nm,0.7s
MTN   Manton Dam       31.90 109   eP       P        17 29 23.8 +0.5
        comp=Z,57nm,1.8s
FAKI  Fak Fak          31.95  90   eP       P        17 29 23.7  0.0
H01W3 Cape Leeuwin H   33.76 159   T        T        18 05 23.6
        baz=336,slow=76,SNR=28
H01W2 Cape Leeuwin H   33.78 159   T        T        18 05 24.6
        baz=336,slow=76,SNR=29
H01W1 Cape Leeuwin H   33.78 159   T        T        18 05 24.8
        baz=336,slow=76,SNR=26
LSA   Lhasa            34.16 346   eP       P        17 29 44.4 +1.0
        comp=Z,12nm,1.0s
LSA   Lhasa            34.16 346   eP       P        17 29 44.4 +1.0
LSA                                pmax     pmax
        comp=Z,12nm,1.0s
CD2   Chengdu          34.40   5   eP       P        17 29 45.0 +0.1
ENH   Enshi            34.74  14   eP       P        17 29 46.3 -1.6
        comp=Z,12nm,0.9s
YOJ   Yonaguni jima    35.55  37   eP       P        17 29 55.1 +0.3
        comp=Z,20nm,1.0s
YOJ   Yonaguni jima    35.55  37   eP       P        17 29 55.1 +0.3
YOJ                                pmax     pmax
        comp=Z,21nm,1.0s
WHN   Wuhan            36.45  21   P        P        17 30 06.5 +4.0
WRA   Warramunga Arr   37.02 119   P        P        17 30 08.1 +0.5
        comp=Z,3.1nm,0.5s,baz=301,slow=8.4,SNR=22
WRA                                S        S        17 35 52.5 +0.8
        comp=Z,1.7nm,0.9s,baz=285,slow=19,SNR=2.7
WB2   Warramunga Arr   37.03 119   eP       P        17 30 08.3 +0.7
        comp=Z,17nm,1.5s
ASAR  Alice Springs    38.17 125   P        P        17 30 18.9 +1.6
        comp=Z,5.7nm,0.5s,baz=298,slow=8.0,SNR=37
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ASAR				S	S	17 36 09.5	+0.4
	comp=Z,0.4nm,0.9s,baz=294,slow=14,SNR=3.0						
AS31	**Alice Springs**	38.17	125	*e*P	P	17 30 18.9	+1.6
	comp=Z,3.0nm,0.6s						
XAN	**Xi'an**	38.24	12	*e*P	P	17 30 16.5	-1.1
	comp=Z,22nm,0.6s						
XAN	**Xi'an**	38.24	12	P	P	17 30 16.6	-1.1
XAN				pP	pP	17 30 22.9	-3.1
XAN				pmax	pmax		
	comp=Z,24nm,0.7s						
XAN	**Xi'an**	38.24	12	*e*P	P	17 30 16.5	-1.1
XAN				pmax	pmax		
	comp=Z,22nm,0.6s						
LZH	**Lanzhou**	39.54	5	*e*P	P	17 30 28.9	+0.2
LZH				pP	pP	17 30 37.5	+0.4
LZH				sP	sP	17 30 42.6	+2.0
LZH				PP	PnPn	17 32 06.8	+3.9
LZH				pmax	pmax		
	comp=Z,14nm,1.4s						
LZH				pmax	pmax		
	comp=Z,79nm,4.9s						
NJ2	**Nanjing**	39.55	25	*e*P	P	17 30 29.4	+0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	**Gaotai**	42.72	359	*e*P	P	17 30 54.9	+0.2
GTA				pP	pP	17 30 59.1	-4.2
GTA				sP	sP	17 31 02.3	-4.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MRIV	**Mauritius Mete**	44.85	245	*e*P	P	17 31 11.3	-0.8
	comp=Z,30nm,1.4s						
NIL	**Nilore**	44.91	328	*e*P	P	17 31 11.9	-0.5
	comp=Z,27nm,1.5s						
NIL	**Nilore**	44.91	328	*e*P	P	17 31 11.9	-0.5
NIL				pmax	pmax		
	comp=Z,27nm,1.5s						
HHC	**Hu-ho-hao-te**	45.35	12	P	P	17 31 17.2	+1.4
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,520nm,6.2s						
BJT	**Baijiatuau**	45.73	17	*e*P	P	17 31 17.9	-0.8
	comp=Z,8.4nm,0.9s						
BJT	**Baijiatuau**	45.73	17	*e*P	P	17 31 17.9	-0.8
BJT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JNU	**Nakatsue**	46.56	36	*e*P	P	17 31 24.3	-1.1
	comp=Z,23nm,1.0s						
GUMO	**Guam**	47.42	68	*e*P	P	17 31 29.0	-3.3
	comp=Z,241nm,1.7s						
GUMO	**Guam**	47.42	68	*e*P	P	17 31 29.0	-3.3
GUMO				pmax	pmax		
	comp=Z,241nm,1.7s						
CTAO	**Charters Tower**	47.74	114	*e*P	P	17 31 34.9	+0.1
	comp=Z,31nm,1.5s						
CTAO	**Charters Tower**	47.74	114	*e*P	P	17 31 34.9	+0.1
CTAO				pmax	pmax		
	comp=Z,31nm,1.5s						
STKA	**Stephens Creek**	47.96	131	P	P	17 31 38.5	+2.1
	comp=Z,6.1nm,0.9s,baz=299,slow=8.9,SNR=7.6						
STKA	**Stephens Creek**	47.96	131	*e*P	P	17 31 38.5	+2.1
	comp=Z,7.4nm,1.8s						
STKA	**Stephens Creek**	47.96	131	*e*P	P	17 31 38.5	+2.1
STKA				pmax	pmax		
	comp=Z,7.0nm,1.8s						
KSRS	**Korea Array**	48.20	30	P	P	17 31 37.7	-0.3
	comp=Z,9.2nm,1.1s,baz=218,slow=8.3,SNR=21						
KSH	**Kashi**	48.31	335	*e*P	P	17 31 39.1	+0.1
KSH				pP	pP	17 31 45.0	-2.4
KSH				PcP	PcP	17 33 05.5	-0.1
KSH				PP	PP	17 33 29.8	-1.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,190nm,11.0s						
WMQ	**Urumqi**	48.46	348	*e*P	P	17 31 41.2	+1.2
	comp=Z,24nm,1.1s						
WMQ	**Urumqi**	48.46	348	*e*P	P	17 31 41.3	+1.2
WMQ				LR	LR		
	comp=Z,460nm,14.5s						
WMQ				LR	LR		
	comp=Z,370nm,15.5s						
WMQ	**Urumqi**	48.46	348	*e*P	P	17 31 41.2	+1.2
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
PRZ	**Przheval'sk**	49.89	339	*e*P	P	17 31 52.8	+1.7
	comp=Z,46nm,1.8s						
PRZ	**Przheval'sk**	49.89	339	*e*P	P	17 31 52.8	+1.7
PRZ				pmax	pmax		
	comp=Z,46nm,1.8s						
KDJ	**Kajisay**	50.04	338	*e*P	P	17 31 53.5	+1.2
	comp=Z,13nm,0.9s						
KDJ	**Kajisay**	50.04	338	*e*P	P	17 31 53.5	+1.2
KDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
PDGK	**Podgornoye**	50.26	340	P	P	17 31 55.3	+1.5
PDGK				pmax	pmax		
	comp=Z,16nm,0.9s						
GAR	**Garm**	50.52	330	*e*P	P	17 31 56.2	+0.3
	comp=Z,11nm,0.9s						
GAR	**Garm**	50.52	330	*e*P	P	17 31 56.2	+0.3
GAR				pmax	pmax		
	comp=Z,11nm,0.9s						
BOOM	**Boomskoye usch**	50.82	337	*e*P	P	17 31 59.1	+1.0
	comp=Z,7.4nm,0.9s						
BOOM	**Boomskoye usch**	50.82	337	*e*P	P	17 31 59.2	+1.0
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHGR	**Chuyangaron**	50.86	329	*e*P	P	17 32 00.1	+1.6
	comp=Z,17nm,1.0s						
ARSB	**Arslanbob**	51.09	334	*e*P	P	17 32 01.1	+0.9
	comp=Z,21nm,1.1s						
BTK	**Batken**	51.09	331	*e*P	P	17 31 59.2	-0.9
	comp=Z,12nm,1.3s						
BTK	**Batken**	51.09	331	*e*P	P	17 31 59.2	-0.9
BTK				pmax	pmax		
	comp=Z,12nm,1.3s						
SONM	**Songino Array**	51.42	5	P	P	17 32 03.3	+0.8
	comp=Z,15nm,0.8s,baz=189,slow=8.7,SNR=71						
ULN	**Ulaanbaatar**	51.52	6	*e*P	P	17 32 03.6	+0.4
	comp=Z,22nm,1.2s						
ULN	**Ulaanbaatar**	51.52	6	*c* *i*P	P	17 32 04.0	+0.7
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
AAK	**Ala-Archa**	51.52	336	*e*P	P	17 32 03.9	+0.5
	comp=Z,3.3nm,1.0s						
AAK	**Ala-Archa**	51.52	336	⇓*i*P	P	17 32 05.3	+1.9
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CN2	**Changchun**	52.27	23	⇑P	P	17 32 07.8	-1.0
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
MK31	**Makanchi Array**	52.55	345	*e*P	P	17 32 11.1	+0.3
	comp=Z,10nm,0.8s						
MK31	**Makanchi Array**	52.55	345	*e*P	P	17 32 11.1	+0.3
MK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK32	**Makanchi Array**	52.55	345	*e*PcP	PcP	17 33 21.0	+0.1
MKAR	**Makanchi Array**	52.55	345	P	P	17 32 11.6	+0.7
	comp=Z,12nm,0.7s,baz=147,slow=8.0,SNR=113						
MKAR				PcP	PcP	17 33 21.0	+0.1
	comp=Z,1.4nm,0.8s,baz=134,slow=6.2,SNR=1.5						
MAKZ	**Makanchi**	52.65	344	*e*P	P	17 32 11.8	+0.3
	comp=Z,10nm,1.2s						
MAKZ	**Makanchi**	52.65	344	*e*P	P	17 32 11.8	+0.3
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MAJO	**Matsushiro**	53.30	38	*e*P	P	17 32 15.4	-1.1
MAJO	**Matsushiro**	53.30	38	*e*P	P	17 32 15.4	-1.1
MJAR	**Matsushiro Arr**	53.30	38	P	P	17 32 15.4	-1.2
	comp=Z,3.7nm,0.9s,baz=214,slow=8.2,SNR=8.2						
EIDS	**Eidsvold**	53.39	119	*e*P	P	17 32 16.5	-0.9
	comp=Z,29nm,1.5s						
TOO	**Toolangi**	53.45	135	*e*P	P	17 32 16.0	-1.7
	comp=Z,10.0nm,1.3s						
TOO	**Toolangi**	53.45	135	*e*P	P	17 32 16.0	-1.7
TOO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
DGZ	**Jazzator, Alta**	54.16	350	*d* *i*P	P	17 32 24.1	+1.4
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDJ	**Mudanjiang**	54.64	25	P	P	17 32 24.9	-1.2
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,97nm,3.0s						
TLY	**Talaya**	55.07	3	*e*P	P	17 32 29.6	+0.4
	comp=Z,15nm,1.6s						
TLY	**Talaya**	55.07	3	*e*P	P	17 32 30.4	+1.3
TLY				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USA0B	**Ussuriysk Arra**	55.38	27	*e*P	P	17 32 30.9	-0.6
	comp=Z,20nm,0.8s						
USA0B	**Ussuriysk Arra**	55.38	27	*e*P	P	17 32 30.9	-0.6
USA0B				pmax	pmax		
	comp=Z,20nm,0.8s						
USRK	**Ussuriysk Ar.**	55.38	27	P	P	17 32 31.3	-0.1
	comp=Z,17nm,0.8s,baz=224,slow=6.2,SNR=34						
GEYT	**Alibeck**	56.77	321	P	P	17 32 42.3	+0.6
	comp=Z,2.4nm,0.8s,baz=140,slow=7.2,SNR=6.8						
GYA0B	**ALIBECK ARRAY**	56.77	321	*e*P	P	17 32 41.9	+0.2
	comp=Z,5.6nm,1.0s						
OTUK	**Ortayu**	57.03	338	P	P	17 32 43.9	+0.6
OTUK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	57.13	344	*e*P	P	17 32 43.8	0.0
	comp=Z,13nm,0.8s						
KURK	**Kurchatov**	57.13	344	⇓*i*P	P	17 32 44.9	+1.1
KURK				pmax	pmax		
	comp=Z,13nm,0.9s						
ZAA0	**Zalesovo Array**	58.70	349	*e*P	P	17 32 54.5	-0.3
	comp=Z,17nm,0.9s						
ZALV	**Zalesovo Beam**	58.70	349	P	P	17 32 55.1	+0.3
	comp=Z,14nm,0.9s,baz=163,slow=5.7,SNR=45						
ZALV	**Zalesovo Beam**	58.70	349	*i* P	P	17 32 55.0	+0.3
ZALV				pmax	pmax		
	comp=Z,15nm,0.9s						
KLR	**Kul'dur**	59.21	23	⇓*i*P	P	17 32 58.6	+0.1
KLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZEA	**Zeya**	61.36	18	*e*P	P	17 33 13.2	+0.1
ZEA				pmax	pmax		
	comp=Z,15nm,0.8s						
BRVK	**Borovoye**	61.75	340	*e*P	P	17 33 14.7	-1.1
	comp=Z,7.8nm,1.3s						
BRVK	**Borovoye**	61.75	340	⇓*i*P	P	17 33 16.2	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YSS	**Yuzh-Sakhalins**	62.63	31	*e*P	P	17 33 21.0	-0.8
	comp=Z,15nm,1.1s						
YSS	**Yuzh-Sakhalins**	62.63	31	⇓*e*P	P	17 33 21.0	-0.8
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ABKAR	**Akbulak array**	63.09	332	*e*P	P	17 33 24.8	0.0
	comp=Z,8.4nm,0.8s						
AKTO	**Aktyubinsk**	64.81	332	P	P	17 33 35.7	-0.4
	comp=Z,1.1nm,0.5s,baz=110,slow=19,SNR=4.6						
TBLG	**Delisi**	67.51	318	*e*P	P	17 33 53.8	+0.2
	comp=Z,7.8nm,0.9s						
TBLG	**Delisi**	67.51	318	*e*P	P	17 33 53.8	+0.2
TBLG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZEI	**Tsey**	68.54	319	*e*P	P	17 34 01.1	+0.8
ARU	**Arti**	68.69	337	P	P	17 34 00.4	-0.3
	comp=Z,1.0nm,0.7s,baz=350,slow=1.9,SNR=4.3						
ARU	**Arti**	68.69	337	*e*P	P	17 34 00.6	-0.1
	comp=Z,5.2nm,0.9s						
ARU	**Arti**	68.69	337	*d* *i*P	P	17 34 01.2	+0.5
ARU				S	S	17 43 05.8	+4.0
ARU				SS	SS	17 47 27.3	+0.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YAK	**Yakutsk**	69.14	14	*e*P	P	17 34 02.1	-1.2
	comp=Z,15nm,0.8s						
YAK	**Yakutsk**	69.14	14	*c* *i*P	P	17 34 02.4	-0.9
KBZ	**Khabaz**	69.62	319	P	P	17 34 06.2	-0.5
	comp=Z,3.0nm,0.8s,baz=102,slow=15,SNR=5.4						
SHA1	**Shidzhatmaz**	69.78	319	P	P	17 34 09.3	+1.3
KIV	**Kislovodsk**	69.85	320	*e*P	P	17 34 09.2	+0.9
	comp=Z,5.7nm,1.1s						
KIV	**Kislovodsk**	69.85	320	*e*P	P	17 34 09.8	+1.5
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
BR131	**Keskin Array S**	74.53	313	*e*P	P	17 34 36.3	-0.1
	comp=Z,3.0nm,0.8s						
BR131	**Keskin Array S**	74.53	313	*e*P	P	17 34 36.3	-0.1
BR131				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	74.53	313	P	P	17 34 37.0	+0.6
	comp=Z,2.1nm,0.8s,baz=125,slow=6.5,SNR=13						
SYO	**Syowa Base**	76.52	199	⇑*e*X	P	17 34 46.0	-1.0
SEY	**Seymchan**	76.93	22	P	P	17 34 49.5	+0.1
	comp=Z,1.2nm,0.6s,baz=307,slow=20,SNR=2.7						
TIXI	**Tiksi**	77.31	9	P	P	17 34 50.5	-0.9
	comp=Z,4.3nm,1.0s,baz=144,slow=3.7,SNR=9.5						
TIXI	**Tiksi**	77.31	9	*e*P	P	17 34 50.7	-0.7
	comp=Z,5.1nm,1.0s						
TIXI	**Tiksi**	77.31	9	⇓*i*P	P	17 34 51.0	-0.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN	**Obninsk**	78.21	328	⇑*e*P	P	17 34 57.7	+1.0
OBN				*e*		17 35 05.9	
OBN				*e*		17 37 56.2	
OBN				*e*S	SKSac	17 45 06.0	-3.0
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,261nm,16.0s						
MLR	**Muntele Rosu**	81.57	317	P	P	17 35 16.3	+0.9
	comp=Z,1.6nm,0.7s,baz=154,slow=3.8,SNR=3.2						
BUR08	**Bucovina Ar. S**	82.58	319	*e*P	P	17 35 21.6	+1.0
	comp=Z,4.7nm,1.3s						
VTS	**Vitosha**	82.86	314	*e*P	P	17 35 22.1	-0.1
	comp=Z,15nm,1.9s						
VTS	**Vitosha**	82.86	314	*e*P	P	17 35 22.1	-0.1
VTS				pmax	pmax		
	comp=Z,15nm,1.9s						
BILL	**Bilibino**	84.49	20	⇑*e*P	P	17 35 29.1	-0.7
BILL				*e*		17 35 36.6	
BILL				*e*		17 38 45.8	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,398nm,17.0s						
KOLS	**Kolonicke sedl**	84.77	320	*e*P	P	17 35 34.4	+2.8
KOLS	**Kolonicke sedl**	84.77	320	*e*P	P	17 35 34.4	+2.8
FINES	**FINESS Array B**	85.57	332	P	P	17 35 35.2	-0.1
	comp=Z,0.9nm,0.6s,baz=150,slow=8.8,SNR=5.1						
FINES	**FINESS Array B**	85.57	332	*i* P	P	17 35 37.2	+1.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	90.35	319	P	P	17 35 59.8	+1.1
	comp=Z,0.4nm,0.7s,baz=81,slow=6.2,SNR=3.9						
MNTX	**Cornudas Mount**	143.03	38	P	PKPdf	17 42 30.8	-1.0
	baz=314						
CPUP	**Villa Florida**	143.24	215	PKP	PKiKP	17 42 34.7	-0.8
	comp=Z,2.4nm,0.8s,baz=177,slow=11,SNR=3.2						
O54A	**Avella**	143.50	1	P	PKPdf	17 42 31.2	-1.2
	baz=359						
WMOK	**Wichita Mounta**	144.26	27	*e*PKPdf	PKPbc	17 42 32.4	+0.3
WMOK	**Wichita Mounta**	144.26	27	*e*PKIKP	PKPbc	17 42 32.4	+0.3
WMOK	**Wichita Mounta**	144.26	27	P	PKPbc	17 42 32.4	+0.3
	baz=326						
Q51A	**Peebles**	144.51	5	*e*PKPdf	PKPab	17 42 32.4	-0.1
Q51A	**Peebles**	144.51	5	P	PKPbc	17 42 33.1	+0.4
	baz=354						
Q57A	**Strasburg**	144.63	358	P	PKPbc	17 42 33.5	+0.4
	baz=2.3						
Q52A	**Bidwell**	144.65	3	P	PKPdf	17 42 33.9	-0.5
	baz=356						
Q54A	**Coxs Mills**	144.69	1	*e*PKPdf	PKPab	17 42 33.1	0.0
Q54A	**Coxs Mills**	144.69	1	P	PKPbc	17 42 33.5	+0.3
	baz=358						
Q55A	**Buckhannon**	144.69	0	P	PKPbc	17 42 33.7	+0.4
	baz=359,SNR=5.4						
Q53A	**Leroy**	144.79	2	P	PKPab	17 42 33.4	0.0
	baz=357,SNR=5.3						
R47A	**Wooly Knot Far**	144.84	9	P	PKPbc	17 42 33.8	+0.1
	baz=348						
HHAR	**Hobbs**	144.87	20	*e*PKPdf	PKPbc	17 42 34.0	0.0
WCI	**Wyandotte Cave**	144.94	9	*e*PKPdf	PKPab	17 42 33.7	-0.3
WCI	**Wyandotte Cave**	144.94	9	*e*PKIKP	PKPab	17 42 33.7	-0.3
WCI	**Wyandotte Cave**	144.94	9	P	PKPbc	17 42 34.3	+0.3
	baz=349						
R49A	**Shelbyville**	145.04	7	*e*PKPbc	PKPab	17 42 34.5	+0.1
R49A	**Shelbyville**	145.04	7	P	PKPab	17 42 34.5	+0.1
	baz=351,SNR=5.7						
R50A	**Paris**	145.15	6	*e*PKPbc	PKPbc	17 42 34.1	-0.6
R50A	**Paris**	145.15	6	P	PKPbc	17 42 34.7	-0.1
	baz=352						
U40A	**Yellville**	145.16	19	P	PKPbc	17 42 34.8	-0.1
	baz=337,SNR=8.2						
R51A	**Hillsboro**	145.21	5	P	PKPbc	17 42 34.8	-0.1
	baz=353						
S46A	**Don Dixon Farm**	145.22	11	P	PKPab	17 42 35.0	-0.1
	baz=346						
R52A	**Catlettsburg**	145.25	4	P	PKPbc	17 42 35.1	0.0
	baz=355						
R56A	**Bull Pasture M**	145.28	360	P	PKPdf	17 42 35.5	-0.1
	baz=0.6						
R53A	**Hurricane**	145.29	3	*e*PKPbc	PKPdf	17 42 35.5	-0.1
R53A	**Hurricane**	145.29	3	P	PKPdf	17 42 35.8	+0.3
	baz=356,SNR=5.8						
R58A	**Rapidan**	145.35	358	P	PKPdf	17 42 36.0	+0.4
	baz=3.0,SNR=7.0						
R57A	**Stanardsville**	145.37	358	P	PKPdf	17 42 36.3	+0.6
	baz=2.1,SNR=8.2						
R55A	**Marlinton**	145.40	1	*e*PKPbc	PKPbc	17 42 35.3	-0.4
R55A	**Marlinton**	145.40	1	P	PKPab	17 42 36.0	+0.2
	baz=359						
PBMO	**Poplar Bluff**	145.47	15	*e*PKPbc	PKPbc	17 42 35.6	-0.2
R54A	**Victor**	145.48	2	P	PKPdf	17 42 35.9	0.0
	baz=358						
S49A	**Springfield**	145.52	8	P	PKPbc	17 42 35.9	0.0
	baz=350						
S48A	**Wiedeman Farm,**	145.54	9	P	PKPab	17 42 36.4	+0.2
	baz=349,SNR=12						
R58B	**Mineral**	145.68	357	*e*PKPdf	PKPab	17 42 37.0	+0.3
R58B	**Mineral**	145.68	357	P	PKPab	17 42 36.8	+0.1
	baz=3.3						
TX31	**Lajitas Ar. Si**	145.73	39	*e*PKPdf	PKPab	17 42 38.3	+0.9
TXAR	**Lajitas Array**	145.73	39	PKPbc	PKPab	17 42 38.6	+1.2
	comp=Z,8.1nm,0.6s,baz=299,slow=1.8,SNR=41						
S50A	**Richmond**	145.74	7	P	PKPbc	17 42 36.6	0.0
	baz=352						
T46A	**Princeton**	145.81	12	P	PKPab	17 42 37.2	-0.1
	baz=346,SNR=5.1						
FCAR	**Ozark Folk Cen**	145.82	18	*e*PKPdf	PKPab	17 42 37.2	-0.1
X37A	**Clayton**	145.84	23	*e*PKPdf	PKPab	17 42 38.1	+0.6
S59A	**Mechanicsville**	145.85	357	P	PKPab	17 42 37.9	+0.5
	baz=4.3						
S54A	**Dingess, Beckl**	145.85	2	P	PKPbc	17 42 37.2	+0.1
	baz=357						
S51A	**Beattyville**	145.86	5	*e*PKPdf	PKPab	17 42 37.3	-0.1
S51A	**Beattyville**	145.86	5	P	PKPbc	17 42 37.2	+0.1
	baz=353,SNR=12						
S52A	**Salyersville**	145.87	5	P	PKPab	17 42 37.3	-0.2
	baz=354						
W39A	**Magazine**	145.90	21	*e*PKPdf	PKPbc	17 42 37.1	-0.1
W39A	**Magazine**	145.90	21	P	PKPab	17 42 37.7	0.0
	baz=335						
S55A	**Lewisburg**	145.90	1	P	PKPbc	17 42 37.4	+0.2
	baz=359						
S57A	**Dark Hollow, R**	145.91	359	*e*PKPdf	PKPab	17 42 37.7	0.0
S57A	**Dark Hollow, R**	145.91	359	P	PKPab	17 42 37.8	+0.2
	baz=1.4,SNR=6.2						
T47A	**Sharon Grove**	146.01	11	*e*PKPdf	PKPab	17 42 37.9	-0.2
T47A	**Sharon Grove**	146.01	11	P	PKPab	17 42 37.9	-0.2
	baz=347						
T48A	**Bowling Green**	146.02	10	P	PKPab	17 42 38.0	-0.1
	baz=348,SNR=9.5						
S58A	**Poland Farm, P**	146.03	358	*e*PKPdf	PKPab	17 42 38.2	+0.1
S58A	**Poland Farm, P**	146.03	358	P	PKPab	17 42 38.0	0.0
	baz=3.0						
T49A	**Edmonton**	146.16	8	P	PKPab	17 42 38.4	-0.2
	baz=350						
WHAR	**Wooly Hollow**	146.32	19	*e*PKPdf	PKPab	17 42 39.2	-0.1
BLA	**Blacksburg**	146.47	1	P	PKPbc	17 42 38.9	0.0
	baz=359						
T51A	**Gray**	146.49	6	P	PKPbc	17 42 39.2	+0.2
	baz=352						
U47A	**Clarksville**	146.51	11	P	PKPbc	17 42 39.4	+0.4
	baz=346						
T55A	**Pulaski**	146.55	2	P	PKPab	17 42 39.8	-0.3
	baz=358						
MIAR	**Mount Ida**	146.56	21	*e*PKPdf	PKPab	17 42 39.7	-0.5
MIAR	**Mount Ida**	146.56	21	P	PKPab	17 42 39.9	-0.3
	baz=334						
U48A	**Cassie Pea, Po**	146.58	10	P	PKPbc	17 42 39.6	+0.3
	baz=348						
T54A	**Tazewell**	146.58	3	P	PKPbc	17 42 39.7	+0.3
	baz=357,SNR=6.7						
T53A	**Wise**	146.60	4	P	PKPab	17 42 39.9	-0.5
	baz=355						
T59A	**Double "B" Far**	146.65	357	P	PKPab	17 42 40.0	-0.5
	baz=4.0						
T56A	**Rocky Mt**	146.65	0	P	PKPab	17 42 40.0	-0.5
	baz=360						
T57A	**Hurt**	146.68	359	*e*PKPdf	PKPbc	17 42 39.0	-0.5
T57A	**Hurt**	146.68	359	P	PKPab	17 42 40.0	-0.6
	baz=0.9						
U49A	**Red Boiling Sp**	146.70	9	P	PKPbc	17 42 40.0	+0.5
	baz=349						
WVT	**Waverly**	146.70	12	*e*PKPdf	PKPbc	17 42 39.7	+0.1
WVT	**Waverly**	146.70	12	*e*PKP2	PKPbc	17 42 39.7	+0.1
WVT	**Waverly**	146.70	12	P	PKPbc	17 42 40.1	+0.5
	baz=345						
T58A	**Grand View Acr**	146.72	358	P	PKPab	17 42 40.4	-0.3
	baz=2.2						
X40A	**Basin Creek Fa**	146.87	20	P	PKPbc	17 42 40.6	+0.5
	baz=336						
U50A	**Jamestown**	146.93	8	P	PKPbc	17 42 40.5	+0.2
	baz=351,SNR=7.5						
TZTN	**Tazewell**	146.95	6	*e*PKPdf	PKPbc	17 42 39.8	-0.5
TZTN	**Tazewell**	146.95	6	P	PKPbc	17 42 40.8	+0.4
	baz=353,SNR=6.0						
V46A	**Holladay**	146.96	13	P	PKPbc	17 42 40.7	+0.3
	baz=345						
CLTN	**Cedars of Leba**	147.02	10	*e*PKPdf	PKPbc	17 42 40.8	+0.3
V47A	**Nunnelly**	147.06	12	P	PKPbc	17 42 41.2	+0.6
	baz=346						
U51A	**La Follette**	147.07	6	P	PKPab	17 42 41.4	-0.7
	baz=352						
U54A	**Nelsons Funny**	147.10	3	P	PKPbc	17 42 41.6	+0.7
	baz=356						
U52A	**Thorn Hill**	147.12	5	P	PKPab	17 42 41.7	-0.7
	baz=353						
U55A	**TA2, Sparta**	147.16	2	P	PKPbc	17 42 41.4	+0.4
	baz=358						
JCT	**Junction City**	147.16	33	*e*PKPdf	PKPbc	17 42 41.6	+0.4
JCT	**Junction City**	147.16	33	*e*PKP2	PKPbc	17 42 41.6	+0.4
JCT	**Junction City**	147.16	33	P	PKPbc	17 42 41.7	+0.6
	baz=321						
U53A	**Fall Branch**	147.21	4	P	PKPab	17 42 42.1	-0.6
	baz=355						
U57A	**Blanch**	147.25	359	P	PKPab	17 42 42.0	-0.8
	baz=0.8						
U58A	**Oxford**	147.27	358	P	PKPab	17 42 42.0	-0.9
	baz=2.2						
V48A	**Smith Brothers**	147.28	11	*e*PKPbc	PKPbc	17 42 41.5	+0.2
V48A	**Smith Brothers**	147.28	11	P	PKPab	17 42 42.3	-0.7
	baz=347						
V49A	**McMinnville**	147.41	9	P	PKPbc	17 42 41.6	0.0
	baz=349						
V51A	**Loudon**	147.59	7	P	PKPbc	17 42 42.2	+0.1
	baz=352						
W47A	**Westpoint**	147.60	12	P	PKPbc	17 42 42.4	+0.2
	baz=345						
V50A	**Pikevile**	147.63	8	P	PKPbc	17 42 42.3	+0.1
	baz=350						
V52A	**Sevierville**	147.64	6	*e*PKPbc	PKPbc	17 42 42.2	0.0
V52A	**Sevierville**	147.64	6	P	PKPbc	17 42 42.6	+0.4
	baz=353						
V57A	**Coltrane Farms**	147.79	0	P	PKPbc	17 42 43.1	+0.5
	baz=360						
V54A	**Nebo**	147.84	3	P	PKPbc	17 42 43.4	+0.6
	baz=356						
W48A	**Pulaski**	147.84	11	P	PKPbc	17 42 43.4	+0.6
	baz=346						
V56A	**Mocksville**	147.86	1	P	PKPbc	17 42 43.3	+0.5
	baz=359						
V58A	**Windy Hill, Pi**	147.88	359	P	PKPbc	17 42 43.6	+0.8
	baz=1.2						
V53A	**Saluda**	147.88	5	*e*PKPdf	PKPdf	17 42 40.5	+0.4
V53A				*e*PKPbc	PKPbc	17 42 43.3	+0.4
V53A	**Saluda**	147.88	5	P	PKPbc	17 42 43.4	+0.4
	baz=354						
V59A	**Middlesex**	147.88	358	P	PKiKP	17 42 44.0	-0.8
	baz=2.8						
CPCT	**Cooper Cave**	147.92	7	*e*PKPdf	PKPdf	17 42 39.8	-0.2
CPCT				*e*PKPbc	PKPbc	17 42 43.6	+0.6
SWET	**Sewanee**	147.94	10	*e*PKPbc	PKPbc	17 42 42.9	-0.3
W49A	**Belvidere**	147.98	10	P	PKPbc	17 42 43.5	+0.3
	baz=348						
W50A	**Signal Mountai**	148.06	9	P	PKiKP	17 42 44.4	-0.9
	baz=350						
W51A	**Cleveland**	148.18	8	P	PKPbc	17 42 44.4	+0.7
	baz=350						
X47A	**Russelville**	148.25	13	P	PKPbc	17 42 44.6	+0.7

	baz=345						
W52A	Murphy	148.35	7	P	PKPbc	17 42 44.6	+0.4
	baz=352						
W53A	Cullowhee	148.35	5	P	PKPbc	17 42 44.8	+0.5
	baz=354						
X48A	Hartselle	148.48	12	*e*PKPdf	PKPdf	17 42 40.2	-0.8
X48A				*e*PKPbc	PKPbc	17 42 44.6	0.0
X48A	Hartselle	148.48	12	P	PKPbc	17 42 44.8	+0.3
	baz=346						
KMSC	Kings Mountain	148.50	2	*e*PKPdf	PKPdf	17 42 40.2	-0.8
KMSC				*e*PKPbc	PKPbc	17 42 45.0	+0.4
KMSC	Kings Mountain	148.50	2	P	PKPbc	17 42 45.0	+0.4
	baz=357						
W54A	Cherokee Point	148.51	4	P	PKPbc	17 42 44.9	+0.3
	baz=355						
W57A	Gilead	148.52	0	P	PKPbc	17 42 45.1	+0.5
	baz=360						
W56A	Indian Trail	148.53	1	P	PKPbc	17 42 45.2	+0.6
	baz=358						
BG3	Lake Jocassee	148.54	5	*e*PKPdf	PKPdf	17 42 38.3	-2.8
BG3				*e*PKPbc	PKiKP	17 42 45.5	-0.8
X49A	Woodville	148.56	10	P	PKPbc	17 42 45.2	+0.5
	baz=347						
X50B	Fort Payne	148.73	9	P	PKPbc	17 42 45.8	+0.6
	baz=349						
X51A	Calhoun	148.75	8	*e*PKPbc	PKiKP	17 42 46.0	-0.7
X51A	Calhoun	148.75	8	P	PKiKP	17 42 46.0	-0.7
	baz=350						
X52A	Dahlonega	148.83	7	P	PKiKP	17 42 46.2	-0.7
	baz=352						
Y48A	Jasper	148.98	12	P	PKPbc	17 42 46.2	+0.4
	baz=346						
X53A	Estanollee	149.00	6	P	PKPbc	17 42 46.4	+0.5
	baz=353						
X54A	Belton	149.03	4	P	PKiKP	17 42 46.7	-0.5
	baz=355						
X55A	Gracelyn & Ava	149.16	3	P	PKiKP	17 42 46.9	-0.6
	baz=356						
X56A	White Oak	149.16	2	P	PKPbc	17 42 46.7	+0.5
	baz=358						
Y49A	Blount Mountai	149.18	11	*e*PKPbc	PKPbc	17 42 46.5	+0.2
Y49A	Blount Mountai	149.18	11	P	PKPbc	17 42 46.8	+0.5
	baz=347						
Y50A	Piedmont	149.27	10	P	PKPbc	17 42 47.0	+0.4
	baz=348						
Y51A	Rockmart	149.37	9	P	PKPbc	17 42 47.0	+0.2
	baz=350						
Y52A	Lilburn	149.54	7	P	PKiKP	17 42 48.0	-0.3
	baz=352						
Y53A	Monroe	149.61	6	P	PKiKP	17 42 48.0	-0.4
	baz=352						
Y55A	Saluda	149.67	3	P	PKiKP	17 42 48.1	-0.5
	baz=356						
Z49A	Columbiana	149.80	11	P	PKPbc	17 42 48.2	+0.3
	baz=346						
Z50A	Ashland	149.86	10	*e*PKPbc	PKPbc	17 42 48.0	0.0
Z50A	Ashland	149.86	10	P	PKiKP	17 42 48.5	-0.5
	baz=348						
GOGA	Godfrey	150.06	6	P	PKiKP	17 42 49.2	-0.1
	baz=353						
Z52A	Williamson	150.16	8	P	PKiKP	17 42 49.7	0.0
	baz=351						
Z53A	Monticello	150.18	6	P	PKiKP	17 42 49.7	0.0
	baz=352						
Z54A	Sparta	150.30	5	P	PKiKP	17 42 49.9	0.0
	baz=354						
150A	Eclectic	150.47	11	P	PKiKP	17 42 50.5	+0.2
	baz=347						
152A	Waverly Hall	150.63	9	*e*PKPbc	PKiKP	17 42 50.6	0.0
152A	Waverly Hall	150.63	9	P	PKiKP	17 42 50.8	+0.2
	baz=350						
251A	Midway	151.08	10	P	PKiKP	17 42 52.0	+0.5
	baz=348						
252A	Lumpkin	151.29	9	P	PKiKP	17 42 52.5	+0.6
	baz=350						
254A	Abbeville	151.53	6	P	PKiKP	17 42 52.8	+0.3
	baz=353						

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*IDC **09** 17:33:02.5±1.3, 3°.50S×100°.20E, h0^{km}, mb4.0/11, mb1 4.1/11, mb1mx3.7/62, mbtmp4.0/11, Error ellipse: s-maj=46.1km s-min=18.0km az=52.0*

*NEIC **09** 17:33:03.8±1.8, 3°.51S×100°.15E, h8^{km}±4^{km}, mb4.1/7, Error ellipse: s-maj=17.3km s-min=9.7km az=45.0*

*ISCJB **09** 17:33:05.8±0.6, 3°.42S±0°.06×100°.24E±0°.06, h33^{km}, mb4.1/17, Error ellipse: s-maj=11.1km s-min=5.6km az=44.3*

*DJA **09** 17:33:07.3±0.8, 3°S±5°×10°0E±°, h33^{km}±10^{km}, M4.1/12, MLv4.1/12*

ISC 09 17:33:08.3±0.8**, 3°.38S**±0°.09×**100°.27E**±0°.09**, h35^{km}, n47, σ0^s.96**/41**, mb4.1**/17**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.66	337	P	Pn	17 33 20.2	-1.0
KRJI	Kerinci	1.75	43	P	Pn	17 33 35.4	-0.8
SISI	Saibi	2.35	330	P	Pn	17 33 43.6	-0.8
PDSI	Padang	2.46	5	P	Pn	17 33 44.8	-1.1
SDSI	Sungai Dareh	2.69	26	P	Pn	17 33 48.5	-0.6
MNAI	Manna	2.85	110	*e*Pn	Pn	17 33 50.7	-0.7
MNAI	Manna	2.85	110	P	Pn	17 33 51.4	0.0
LHSI	Lahat	3.28	98	P	Pn	17 33 57.6	+0.4
RGRI	Rengat	3.65	35	P	Pn	17 34 00.7	-1.6
BKNI	Bangkinang	3.76	12	*e*Pn	Pn	17 34 03.8	0.0
BKNI	Bangkinang	3.76	12	P	Pn	17 34 02.4	-1.4
MDSI	Maura Dua	4.05	106	P	Pn	17 34 08.3	+0.5
LWLI	Liwa	4.12	113	P	Pn	17 34 09.0	+0.2
GSI	Gunungsitoli	5.37	330	*e*Pn	Pn	17 34 24.3	-1.7
MYKOM	Kota Tinggi	6.26	35	*e*Pn	Pn	17 34 38.5	+0.4
CISI	Cisompet, Garu	8.58	119	*e*Pn	Pn	17 35 08.4	-1.7
KKM	Kota Kinabalu	18.47	60	*e*P	Pn	17 37 21.7	-0.1
	5.5nm,0.9s						
CM31	Chiang Mai Arr	21.74	357	*e*P	P	17 37 58.2	+1.5
	3.6nm,0.8s						
CMAR	Chiang Mai Arr	21.74	357	P	P	17 37 56.8	0.0
	1.8nm,1.0s,baz=198,slow=29,SNR=6.7						
H08S2	Diego Garcia H	27.96	260	T	T	18 08 10.1	
	baz=82,slow=74,SNR=215						
H08S3	Diego Garcia H	27.97	260	T	T	18 08 10.6	
	baz=82,slow=74,SNR=240						
H08S1	Diego Carcia H	27.98	260	T	T	18 08 12.2	
	baz=82,slow=74,SNR=265						
H01W3	Cape Leeuwin H	33.89	159	T	T	18 15 24.3	
	baz=336,slow=76,SNR=31						
H01W2	Cape Leeuwin H	33.91	159	T	T	18 15 27.5	
	baz=336,slow=76,SNR=36						
H01W1	Cape Leeuwin H	33.91	159	T	T	18 15 26.4	
	baz=336,slow=76,SNR=22						
WRA	Warramunga Arr	37.08	119	P	P	17 40 13.6	-1.9
	0.7nm,0.3s,baz=296,slow=9.4,SNR=3.7						
WR1	Warramunga Arr	37.08	119	*e*P	P	17 40 13.6	-1.9
ASAR	Alice Springs	38.24	125	P	P	17 40 25.4	0.0
	1.2nm,0.4s,baz=299,slow=7.9,SNR=10						
SONA0	Songino Array	51.28	5	*e*P	P	17 42 10.0	+1.2
SONM	Songino Array	51.28	5	P	P	17 42 10.0	+1.2
	2.4nm,0.6s,baz=188,slow=8.9,SNR=15						
MK31	Makanchi Array	52.42	344	*e*P	P	17 42 18.5	+1.2
	1.7nm,0.7s						
MK32	Makanchi Array	52.42	344	*e*P	P	17 42 18.1	+0.9
MKAR	Makanchi Array	52.42	344	P	P	17 42 18.1	+0.9
	2.7nm,0.6s,baz=147,slow=8.2,SNR=30						
MAKZ	Makanchi	52.52	344	*e*P	P	17 42 19.3	+1.3
	1.0nm,0.8s						
USRK	Ussuriysk Ar.	55.24	27	P	P	17 42 37.9	0.0
	2.8nm,0.7s,baz=229,slow=4.3,SNR=6.6						
KURBB	Kurchatov Arra	56.94	344	P	P	17 42 50.5	+0.6
	1.4nm,0.9s,baz=164,slow=6.8,SNR=10						
KURK	Kurchatov	56.99	344	*e*P	P	17 42 50.9	+0.6
	3.0nm,0.9s						
ZAA0	Zalesovo Array	58.56	349	*e*P	P	17 43 01.8	+0.6
	6.0nm,1.4s						
ZALV	Zalesovo Beam	58.56	349	P	P	17 43 01.1	-0.2
	1.4nm,0.6s,baz=169,slow=3.0,SNR=8.0						
ZAA1	Zalesovo Array	58.57	349	*e*P	P	17 43 01.1	-0.2
KLR	Kul'dur	59.08	24	P	P	17 43 04.8	-0.2
	0.7nm,0.4s,baz=232,slow=4.9,SNR=3.7						
BVAR	Borovoye Array	61.56	340	P	P	17 43 21.6	-0.2
	0.5nm,0.4s,baz=145,slow=9.2,SNR=6.1						
ABKAR	Akbulak array	62.97	332	*e*P	P	17 43 31.4	+0.1
	2.2nm,0.8s						
BR101	Keskin Array S	74.44	313	*e*P	P	17 44 42.7	-0.6
BRTR	Keskin Array B	74.44	313	P	P	17 44 42.7	-0.6
	0.5nm,0.6s,baz=102,slow=6.1,SNR=3.2						
TX31	Lajitas Ar. Si	145.61	39	*e*PKPdf	PKPab	17 52 44.6	+0.3
TXAR	Lajitas Array	145.61	39	PKPbc	PKPab	17 52 45.1	+0.8
	1.2nm,0.5s,baz=325,slow=1.5,SNR=6.7						

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*IDC **09** 17:41:17.9±0.9, 26°.72N×143°.83E, h0^{km}, mb3.8/9, mb1 4.0/11, mb1mx3.8/38, mbtmp3.8/11, ML2.6/2, Error ellipse: s-maj=26.6km s-min=19.6km az=75.0*

*JMA **09** 17:41:20.0±0.2, 27°.13N×143°.93E, h90^{km}, M3.8*

ISC 09 17:41:23.4±1.0**, 27°.12N**±0°.08×**143°.9E**±0°.1**, h35^{km}, n17, σ2^s.78**/18**, mb3.8**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.48	269	P	Pn	17 41 46.6	-1.0
CBIJ				*e*S	Sn	17 42 07.2	+1.5
JHH2	Haha-jima-NKT2	1.57	252	P	Pn	17 41 47.9	-0.9
JHU	Hanno	9.54	337	*e*S	Sn	17 45 20.6	-3.5
JHO	Hitachi	9.86	344	*e*S	Sn	17 45 29.0	-3.2
JAG	Ashikaga	10.00	339	*e*S	Sn	17 45 34.4	-1.1
JFK	Kawauchi	10.52	347	*e*S	Sn	17 45 42.0	-6.4
MJAR	Matsushiro Arr	10.54	334	Pn	Pn	17 43 52.6	+0.6
	0.1nm,0.3s,baz=163,slow=11,SNR=5.8						
USRK	Ussuriysk Ar.	19.54	334	P	Pn	17 45 51.7	+2.4
	0.1nm,0.3s,baz=144,slow=10,SNR=3.8						
SONM	Songino Array	35.73	315	P	P	17 48 20.7	+1.9
	0.5nm,0.6s,baz=122,slow=5.4,SNR=4.0						
CMAR	Chiang Mai Arr	42.10	268	P	P	17 49 12.1	-0.3
	0.5nm,0.7s,baz=72,slow=6.4,SNR=5.0						
WRA	Warramunga Arr	47.68	192	P	P	17 49 53.6	-3.0
	2.5nm,0.5s,baz=6.5,slow=7.0,SNR=18						
ASAR	Alice Springs	51.40	192	P	P	17 50 20.7	-4.3
	0.4nm,0.7s,baz=12,slow=6.4,SNR=8.3						
MKAR	Makanchi Array	51.60	310	P	P	17 50 27.9	+1.6
	1.0nm,0.6s,baz=88,slow=9.1,SNR=13						
KURBB	Kurchatov Arra	54.08	314	P	P	17 50 46.0	+1.5
	0.8nm,0.4s,baz=90,slow=7.9,SNR=22						
KBZ	Khabaz	79.07	314	P	P	17 53 25.4	+1.3
	1.4nm,0.6s,baz=133,slow=3.2,SNR=4.0						
NVAR	Mina Array Bea	79.34	52	P	P	17 53 28.0	+2.0
	0.3nm,0.3s,baz=280,slow=5.4,SNR=7.9						
PDAR	Pinedale Array	83.15	45	P	P	17 53 47.3	+1.1
	0.2nm,0.3s,baz=305,slow=5.4,SNR=3.4						

IDC 09 17:46:07.9±1.9**, 1°.77N**×**126°.41E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.4**/35**, mbtmp3.7**/4**, Error ellipse: s-maj=209.2km s-min=20.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.94	161	P	P	17 51 12.6	-1.3
	1.6nm,0.5s,baz=338,slow=9.8,SNR=11						
ASAR	Alice Springs	26.32	164	P	P	17 51 45.6	+0.1
	0.6nm,0.3s,baz=346,slow=12,SNR=14						
MKAR	Makanchi Array	58.98	326	P	P	17 56 09.7	+0.4
	0.3nm,0.3s,baz=118,slow=7.5,SNR=9.1						
KURBB	Kurchatov Arra	63.21	328	P	P	17 56 38.1	+0.2
	0.3nm,0.5s,baz=106,slow=5.5,SNR=8.2						

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*IDC **09** 18:01:17.9±18.0, 26°.48S×177°.76W, h243^{km}±159^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/28, mbtmp4.0/4, Error ellipse: s-maj=72.9km s-min=25.1km az=60.0*

ISC 09 18:01:06.9±1.0**, 26°.3S**±0°.2×**177°.5W**±0°.3**, h150^{km}, n14, σ1^s.08**/14**, mb3.8**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.91	262	P	P	18 08 59.0	0.0
	1.1nm,0.5s,baz=93,slow=7.0,SNR=41						
WRA	Warramunga Arr	44.53	268	P	P	18 09 04.0	+0.1
	2.0nm,0.8s,baz=100,slow=7.6,SNR=9.2						
VNDA	Vanda	52.20	186	P	P	18 10 02.5	+0.8
	0.4nm,0.5s,baz=6.5,slow=6.8,SNR=5.1						
MAW	Mawson	76.29	200	P	P	18 12 37.5	-1.1
	1.8nm,0.5s,baz=147,slow=5.4,SNR=9.9						
KURBB	Kurchatov Arra	118.53	315	PKP	PKPdf	18 19 35.9	-0.6
	0.4nm,0.9s,baz=93,slow=2.3,SNR=3.9						
BVAR	Borovoye Array	123.72	318	PKP	PKPdf	18 19 46.1	-0.3
	0.4nm,0.4s,baz=108,slow=4.8,SNR=3.5						
ARCES	ARCESS Array B	134.68	349	PKP	PKPdf	18 20 05.6	-1.2
	4.9nm,1.1s,baz=330,slow=5.3,SNR=3.7						
NB2	NORSAR Subarra	144.77	353	PKP	PKPab	18 20 24.7	0.0
	comp=Z,4.0nm,0.7s,baz=7.3,slow=3.8						
NOA	NORSAR Array B	144.77	353	PKP	PKPab	18 20 24.6	0.0
	comp=Z,1.4nm,0.7s,baz=16,slow=2.7,SNR=4.8						
HFS	Hagfors	145.31	350	PKPbc	PKPdf	18 20 26.1	-0.2
	comp=Z,1.6nm,0.6s,baz=50,slow=2.3,SNR=10.0						
AKASG	Malin Array Be	148.20	327	PKPbc	PKPdf	18 20 34.2	+2.8
	comp=Z,0.5nm,0.4s,baz=40,slow=3.1,SNR=4.7						
EKA	Eskdalemuir Ar	150.70	7	PKPbc	PKPbc	18 20 40.4	-0.4
	comp=Z,0.2nm,0.4s,baz=19,slow=2.8,SNR=2.9						
MMAI	Mount Meron Ar	150.70	291	PKPbc	PKPbc	18 20 42.5	+0.8
	comp=Z,0.4nm,0.3s,baz=57,slow=5.3,SNR=4.3						
BRTR	Keskin Array B	150.81	305	PKPbc	PKPbc	18 20 41.5	-0.4
	comp=Z,0.4nm,0.7s,baz=40,slow=5.5,SNR=3.7						

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*IDC **09** 18:03:04.6±0.3, 29°.61S×111°.94W, h0^{km}, mb4.7/22, mb1 4.8/23, mb1mx4.8/27, mbtmp4.7/23, ML4.1/1, Error ellipse: s-maj=15.3km s-min=13.0km az=129.0*

*MOS **09** 18:03:04.8±0.9, 29°.52S×111°.73W, h10^{km}, mb5.3/56, Error ellipse: s-maj=11.8km s-min=6.2km az=84.1*

*NEIC **09** 18:03:05.9±1.3, 29°.67S×111°.76W, h11^{km}±2^{km}, mb5.3/435, Error ellipse: s-maj=12.3km s-min=5.6km az=132.0*

*ISCJB **09** 18:03:09.3±1.5, 29°.62S±0°.03×111°.71W±0°.04, h47^{km}±13^{km}, mb5.2/420, Error ellipse: s-maj=5.2km s-min=4.6km az=159.3*

*GCMT **09** 18:03:12.9±0.3, 29°.63S±0°.01×111°.85W±0°.02, h18^{km}±1^{km}, MW5.2/83, Moment Tensor Solution. s41,c45; s83,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.97±.30; $M_{\theta\theta}$-6.39±.21; $M_{\phi\phi}$2.42±.20; $M_{r\theta}$-4.36±.50; $M_{\theta\phi}$-0.94±.12; $M_{\phi r}$-1.88±.55; Best double couple: $M_0$7.17500×10^{16} NP1:ϕ_s247.00000°, δ68.00000°, λ71.00000°. NP2: ϕ_s110.00000°, δ29.00000°, λ129.00000°. Principal axes: T 6.1460, Plg62.0000°, Azm127.0000°; N 2.0580, Plg18.0000°, Azm254.0000°; P -8.2040, Plg21.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 18:03:06.3±0.5**, 29°.67S**±0°.06×**111°.76W**±0°.06**, h13^{km}**±2^{km}**, h13^{km}:pP-P, n1204, σ0^s.79**/1224**, mb5.2**/419**, 10C-8D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.31	41	Pn	Pn	18 03 59.1	+1.3
	18nm,0.3s,baz=218,slow=10.0,SNR=3.8						
RPN				Sn	Sb	18 04 45.4	+0.3
	5.9nm,0.3s,baz=260,slow=18,SNR=2.3						
RPN	Rapa Nui	3.31	41	*e*Pn	Pn	18 03 57.3	-0.5
RPN				*e*Sg	Sb	18 04 45.0	-0.1
RPN	Rapa Nui	3.31	41	*e*P	Pn	18 03 57.3	-0.5
RKT	Rikitea	21.77	282	*e*T	T	18 29 52.3	
	6.2nm,0.3s						
TAOE	Nuku Hiva Isla	33.70	302	*e*LR	LR	18 18 47.6	
	comp=Z,496nm,22.5s						
TBI	Tubuai	34.22	272	*e*LQ	LQ	18 17 24.8	
	622nm,26.2s						
TBI				*e*LR	LR	18 18 46.9	
	comp=Z,387nm,24.8s,baz=116						
TBI	Tubuai	34.22	272	*e*T	T	18 45 27.0	
	5.0nm,0.3s						
PEL	Peldehue	35.07	106	*e*P	P	18 10 00.5	+1.3
	64nm,1.2s						
PEL	Peldehue	35.07	106	*e*P	P	18 10 00.5	+1.3
PEL				pmax	pmax		
	comp=Z,64nm,1.2s						
PLCA	Paso Flores	35.15	120	P	P	18 10 01.8	+1.9
	comp=Z,9.8nm,0.9s,baz=290,slow=8.7,SNR=12						
PLCA	Paso Flores	35.15	120	*e*P	P	18 10 01.7	+1.9
	comp=Z,63nm,1.6s						
PLCA	Paso Flores	35.15	120	*e*P	P	18 10 01.7	+1.9
PLCA				pmax	pmax		
	comp=Z,63nm,1.6s						
PLCA	Paso Flores	35.15	120	*e*P	P	18 09 58.5	-1.3
GO04	Tololo Observa	35.37	101	*e*P	P	18 10 02.3	+0.3
	comp=Z,62nm,1.2s						
LCO	Las Campanas	35.66	99	*e*P	P	18 10 05.3	+0.7
	comp=Z,43nm,1.3s						
LCO	Las Campanas	35.66	99	*e*P	P	18 10 05.3	+0.7
LCO				pmax	pmax		
	comp=Z,43nm,1.3s						
LCO	Las Campanas	35.66	99	*e*P	P	18 10 02.8	-1.8
GO09	Cerro Castillo	36.34	138	*e*P	P	18 10 11.8	+2.0
	comp=Z,116nm,1.1s						
GO03	Copiap	36.37	97	*e*P	P	18 10 12.2	+1.7
	comp=Z,106nm,1.8s						
PPT2	Papeete2	36.52	281	*e*LQ	LQ	18 18 20.9	
	comp=Z,504nm,26.8s						
NNA	Nana	36.87	69	*e*P	P	18 10 15.7	+0.9
	comp=Z,74nm,1.4s						
NNA	Nana	36.87	69	*ce*P	P	18 10 17.7	+2.9
ACAN	Cantantal	38.10	106	*i* P	P	18 10 26.2	+1.1
ATAH	Atahualpa	38.54	61	P	P	18 10 32.4	+3.0
	comp=Z,12nm,0.9s,baz=249,slow=8.6,SNR=10						
ACLC	CERRO LA CRUZ	38.79	101	*i* P	P	18 10 32.5	+1.4
APLL	PUNTA DE LOS L	38.97	103	*i* P	P	18 10 33.6	+1.2
PB01	IPOC Station P	38.98	87	*e*P	P	18 10 33.7	+1.1
	comp=Z,27nm,1.1s						
MRA	San Martin	39.31	106	*i* P	P	18 10 35.9	+0.6
MRA				*i* P	P	18 10 36.1	+0.8
PB11	IPOC Station P	39.31	85	*e*P	P	18 10 36.5	+1.0
	comp=Z,35nm,1.3s						
MNMC	Minye Minye	39.61	84	*e*P	P	18 10 39.2	+1.0
	comp=Z,36nm,1.1s						
GO01	Chusmiza	39.75	85	*e*P	P	18 10 40.7	+1.2
	comp=Z,70nm,1.8s						
USHA	Ushuaia	39.83	142	P	P	18 10 41.0	+1.9
	comp=Z,16nm,1.0s,baz=279,slow=5.3,SNR=4.2						
TCA	Tanti	40.43	105	*i* P	P	18 10 45.3	+0.7
TRQA	Tornquist	41.76	115	*e*P	P	18 10 56.6	+1.2
	comp=Z,22nm,0.9s						
TRQA	Tornquist	41.76	115	*e*P	P	18 10 56.6	+1.2
TRQA				pmax	pmax		
	comp=Z,22nm,0.9s						
TRQA	Tornquist	41.76	115	*e*P	P	18 10 54.6	-0.8
LPAZ	La Paz	42.07	81	P	P	18 11 00.6	+1.8
	comp=Z,14nm,1.1s,baz=258,slow=5.6,SNR=31						
LPAZ				PcP	PcP	18 12 54.8	+1.1
	comp=Z,3.3nm,0.8s,baz=331,slow=2.5,SNR=3.8						
LPAZ	La Paz	42.07	81	*e*P	P	18 10 59.9	+1.1
LPAZ				*e*pP	pP	18 11 00.3	-1.6
LPAZ				*e*PP	PP	18 12 53.9	+18
LPAZ				*e*PcP	PcP	18 12 54.1	+0.4
LPAZ	La Paz	42.07	81	*e*P	P	18 10 59.9	+1.1
LPAZ				*e**PP	pP	18 11 00.3	-1.6
LPAZ				*e*		18 12 53.9	
LPAZ	La Paz	42.07	81	*e*P	P	18 10 58.9	0.0
RAR	Rarotonga	43.92	270	*e*P	P	18 11 15.5	+2.5
	comp=Z,38nm,1.2s						
RAR	Rarotonga	43.92	270	*e*P	P	18 11 15.5	+2.5
RAR				pmax	pmax		
	comp=Z,38nm,1.2s						
EFI	East Falkland	45.07	135	*e*P	P	18 11 22.4	+0.5
	comp=Z,164nm,1.3s						
EFI	East Falkland	45.07	135	*i* P	P	18 11 22.4	+0.5
EFI				pmax	pmax		
	comp=Z,171nm,1.3s						
BBAC	Balboa, Cauca	45.61	52	*e*P	P	18 11 26.6	-0.2
PTLC	Puerto Leguiza	46.05	57	*e*P	P	18 11 29.1	-1.0
SOTA	Rioblanco	46.14	53	*e*P	P	18 11 31.6	+0.3
POPC	Popayan, Colom	46.38	52	*e*P	P	18 11 32.5	-0.4
FLOC	Florencia	46.41	54	*e*P	P	18 11 34.7	+1.7
MARP	Paez Belalcaza	47.09	53	*e*P	P	18 11 41.8	+3.2
JTS	Las Juntas de	47.38	37	*e*P	P	18 11 42.5	+2.0
	comp=Z,39nm,1.2s						
JTS	Las Juntas de	47.38	37	*e*P	P	18 11 42.5	+2.0
JTS				pmax	pmax		
	comp=Z,39nm,1.2s						
YOTC	Yotoco, Valle	47.65	51	*e*P	P	18 11 40.1	-2.6
CPUP	Villa Florida	47.81	100	P	P	18 11 43.8	+0.1
	comp=Z,5.0nm,1.0s,baz=277,slow=7.4,SNR=6.3						
CPUP	Villa Florida	47.81	100	*e*P	P	18 11 42.5	-1.2
MACC	Macarena, Meta	48.09	56	*e*P	P	18 11 46.0	-0.1
ORTC	Ortega, Tolima	48.35	53	*e*P	P	18 11 47.7	-0.4
PRAC	Prado	48.46	53	*e*P	P	18 11 47.7	-1.2
TLIG	Tlapa	48.65	17	*e*P	P	18 11 52.5	+2.2
	comp=Z,61nm,1.1s						
APG	El Apazote	48.93	28	P	P	18 11 55.0	+2.4
	comp=Z,4.9nm,0.5s,baz=209,slow=10,SNR=3.9						
RREF	El Recreo	48.99	52	*e*P	P	18 11 54.4	+0.7
GUY2C	Guyana, Caldas	49.22	51	*e*P	P	18 11 56.1	+0.9
ESPN	Las Esperanzas	49.33	36	*e*P	P	18 11 57.3	+1.9
	comp=Z,44nm,1.1s						
PLTB	Pedras Altas	49.52	108	*e*P	P	18 11 56.2	-0.7
VILC	Villavicencio,	49.58	54	*e*P	P	18 11 57.8	+0.2
ROSC	El Rosal	49.66	53	P	P	18 12 00.4	+2.0
	comp=Z,3.7nm,0.3s,baz=191,slow=2.4,SNR=13						
ROSC	El Rosal	49.66	53	*e*P	P	18 12 00.3	+1.9
	comp=Z,102nm,1.9s						
ROSC	El Rosal	49.66	53	*e*P	P	18 12 01.1	+2.7
NORC	Norcasia	49.80	51	*e*P	P	18 11 59.5	+0.3
HELC	Santa Helena	49.81	50	*e*P	P	18 12 00.8	+1.2
CHIC	Chingaza	49.91	53	*e*P	P	18 12 02.0	+1.5
DBBC	Dabeiba	49.97	49	*e*P	P	18 12 02.0	+1.5
CPSB	Cacapava Do Su	49.99	106	*e*P	P	18 12 00.0	-0.5
PTBC	PUERTO BERRIO,	50.79	51	*e*P	P	18 12 06.2	-0.4
AQDB	Aquidauana	51.18	93	*e*P	P	18 12 08.4	-1.1
ZARC	Zaragoza, Cauc	51.22	50	*e*P	P	18 12 10.4	+0.6
RUSC	La Rusia	51.26	53	*e*P	P	18 12 10.4	-0.3
LVIG	Laguna Verde	51.28	19	*e*P	P	18 12 11.8	+1.7
	comp=Z,36nm,1.1s						
YOPC	Yopal, Colombi	51.34	54	*e*P	P	18 12 11.3	+0.4
BRRC	Barranca, Sant	51.70	51	*e*P	P	18 12 14.6	+1.2
CNLB	Canela	52.45	106	*e*P	P	18 12 17.5	-1.5
PAMC	Pamplona, Colo	52.56	52	*e*P	P	18 12 18.8	-1.6
SMLC	San Martn de	52.70	49	*e*P	P	18 12 21.4	+0.5
OCAC	Ocana	52.79	51	*e*P	P	18 12 23.1	+1.3
SJCC	San Jacinto, C	52.80	47	*e*P	P	18 12 20.5	-1.1
PTGB	Pitanga	52.83	100	*e*P	P	18 12 21.1	-0.8
ZAIG	Zacatecas	52.88	11	*e*P	P	18 12 23.4	+1.1
	comp=Z,26nm,1.6s						
TRCB	Terra Rica	52.99	97	*e*P	P	18 12 23.1	0.0
XMAS	Kiritimati	53.83	298	*e*P	P	18 12 29.7	+0.5
	comp=Z,344nm,1.8s						
CODC	Agustn Codazz	53.96	49	*e*P	P	18 12 30.4	+0.4
ELOV	Elorza	54.57	55	*e*P	P	18 12 34.4	-0.2
VIRV	Villa del Rosa	55.06	50	*e*P	P	18 12 38.2	+0.1
SDV	Santo Domingo	55.09	52	*e*P	P	18 12 37.7	-0.9
	comp=Z,17nm,1.0s						
SDV	Santo Domingo	55.09	52	*e*P	P	18 12 37.5	-1.0
CLDB	Colider	55.19	82	*e*P	P	18 12 38.1	-1.0
FRTB	Fartura	55.45	99	*e*P	P	18 12 39.2	-1.8
LNIG	Linares	55.52	14	*e*P	P	18 12 41.8	+0.6
	comp=Z,22nm,1.1s						
HPIG		56.58	7	*e*P	P	18 12 49.5	+0.4
	comp=Z,15nm,1.0s						
SRIG	Santa Rosalia	56.66	359	*e*P	P	18 12 50.9	+1.6
	comp=Z,165nm,1.9s						
PTGA	Pitinga	57.01	70	*e*P	P	18 12 50.1	-2.0
	comp=Z,42nm,1.5s						
PTGA	Pitinga	57.01	70	*e*P	P	18 12 50.9	-1.2
URZ	Urewera	58.32	241	P	P	18 13 01.2	+0.2
	comp=Z,24nm,1.0s,baz=138,slow=2.2,SNR=3.5						
URZ	Urewera	58.32	241	*e*P	P	18 13 01.8	+0.7
	comp=Z,97nm,1.5s						
HSIG		58.36	1	*e*P	P	18 13 01.3	+0.1
	comp=Z,18nm,1.1s						
BFZ	Birch Farm	58.38	238	*e*P	P	18 13 02.6	+1.1
	comp=Z,120nm,1.1s						
BKZ	Black Stump Fm	58.56	240	*e*P	P	18 13 04.3	+1.4
	comp=Z,104nm,1.4s						
833A	Chaparral WMA,	58.86	13	*e*P	P	18 13 05.9	+1.1
	comp=Z,43nm,0.9s						
833A	Chaparral WMA,	58.86	13	P	P	18 13 05.4	+0.6
	baz=192						
TX31	Lajitas Ar. Si	59.17	8	*e*P	P	18 13 05.7	-1.3
	comp=Z,28nm,1.6s						
TXAR	Lajitas Array	59.17	8	P	P	18 13 08.0	+0.9
	comp=Z,2.4nm,0.9s,baz=188,slow=7.6,SNR=10.0						
SNZO	South Karori	59.36	237	*e*P	P	18 13 08.7	+0.5
	comp=Z,160nm,1.1s						
SBA	Scott Base	59.43	194	*e*P	P	18 13 09.5	+1.3
	comp=Z,47nm,1.3s						
SBA	Scott Base	59.43	194	*e*P	P	18 13 09.5	+1.3
SBA				pmax	pmax		
	comp=Z,47nm,1.3s						
BDFB	Brasilia	59.81	92	P	P	18 13 12.6	+0.8
	comp=Z,2.3nm,0.6s,baz=238,slow=7.8,SNR=4.8						
BDFB	Brasilia	59.81	92	*e*P	P	18 13 11.3	-0.5
	comp=Z,35nm,1.5s						
BDFB	Brasilia	59.81	92	*e*P	P	18 13 11.3	-0.5
BDFB				pmax	pmax		
	comp=Z,35nm,1.5s						
ESAR	Angra dos Reis	59.95	101	*e*P	P	18 13 11.9	-0.7
PMNB	Patos De Minas	59.97	95	*e*P	P	18 13 12.5	-0.4
VNDA	Vanda	60.49	194	P	P	18 13 16.7	+1.2

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      comp=Z,8.4nm,1.0s,baz=97,slow=6.1,SNR=21
VNDA                              PcP     PcP       18 14 00.9 +0.9
      comp=Z,5.0nm,1.0s,baz=80,slow=4.1,SNR=3.7
VNDA  Vanda             60.49 194 eP      P         18 13 16.4 +0.9
VNDA                              epP     pP        18 13 16.9 -1.7
VNDA                              ePcP    PcP       18 14 00.6 +0.6
VNDA  Vanda             60.49 194 eP      P         18 13 16.4 +0.9
VNDA                              e*PP    pP        18 13 16.9 -1.7
VNDA                              e                 18 14 00.6
QSPA  South Pole Qui    60.52 180 eP      P         18 13 16.2 +0.2
      comp=Z,106nm,1.5s
THZ   Tophouse          60.56 236 eP      P         18 13 17.3 +0.7
      comp=Z,61nm,1.0s
319A  Douglas           60.75   2 eP      P         18 13 18.6 +0.7
      comp=Z,32nm,1.1s
LTZ   Lake Taylor       60.75 235 eP      P         18 13 18.5 +0.6
      comp=Z,49nm,1.1s
OXZ   Oxford            60.78 234 eP      P         18 13 18.3 +0.3
      comp=Z,77nm,1.4s
JCT   Junction City     60.88  12 eP      P         18 13 18.8 +0.1
      comp=Z,66nm,1.3s
JCT   Junction City     60.88  12 eP      P         18 13 18.8 +0.1
JCT                                pmax   pmax
      comp=Z,66nm,1.3s
JCT   Junction City     60.88  12  P      P         18 13 18.9 +0.1
      baz=192,SNR=14
LGNH  Logne             60.98  43 eP      P         18 13 19.9 +0.3
      comp=Z,201nm,1.3s
HKT   Hockley           61.20  16 eP      P         18 13 21.6 +0.9
      comp=Z,46nm,1.4s
HKT   Hockley           61.20  16 eP      P         18 13 21.6 +0.9
HKT                                pmax   pmax
      comp=Z,46nm,1.4s
214A  Organ Pipe Nat    61.29 359  P      P         18 13 21.9 +0.4
      baz=179
MNTX  Cornudas Mount    61.33   6 eP      P         18 13 21.1 -0.5
      comp=Z,17nm,1.1s
MNTX  Cornudas Mount    61.33   6  P      P         18 13 21.3 -0.3
      baz=186,SNR=17
RPZ   Rata Peaks        61.38 234  P      P         18 13 23.0 +0.9
      comp=Z,22nm,1.0s,baz=102,slow=2.3,SNR=3.7
RPZ   Rata Peaks        61.38 234 eP      P         18 13 22.6 +0.5
      comp=Z,80nm,1.3s
062Z  Marathon          61.59  32  P      P         18 13 23.3 -0.2
      baz=210
435B  Jarrell           61.61  14 eP      P         18 13 24.2 +0.7
      comp=Z,120nm,1.5s
435B  Jarrell           61.61  14  P      P         18 13 23.9 +0.3
      baz=194
TUC   Tucson            61.64   1 eP      P         18 13 23.4 -0.4
      comp=Z,15nm,1.3s
TUC   Tucson            61.64   1 eP      P         18 13 23.4 -0.4
TUC                                pmax   pmax
      comp=Z,15nm,1.3s
TUC   Tucson            61.64   1  P      P         18 13 24.4 +0.5
      baz=181
LBZ   Lake Benmore      61.81 233 eP      P         18 13 24.9 -0.1
      comp=Z,95nm,1.7s
OUZ   Omahuta           61.88 244 eP      P         18 13 26.3 +0.7
      comp=Z,76nm,1.1s
GDL2  Guadalupe Moun    61.92   7 eP      P         18 13 25.9 +0.1
121A  Cookes Peak, D    61.97   4  P      P         18 13 26.8 +0.6
      baz=184
IKP   In-Ko-Pah, Jac    62.11 356  P      P         18 13 27.9 +0.9
      baz=176
113A  Mohawk Valley,    62.12 358 eP      P         18 13 27.3 +0.4
      comp=Z,19nm,1.3s
SDDR  Presa de Saban    62.14  44 eP      P         18 13 26.5 -0.9
      comp=Z,24nm,1.2s
BAR   Barrett           62.18 355 eP      P         18 13 28.1 +0.7
      comp=Z,27nm,1.3s
MONP2 Monument Peak     62.37 356  P      P         18 13 29.4 +0.5
      baz=175
SWSC  Sam W. Stewart    62.39 356  P      P         18 13 29.3 +0.5
      baz=176
109C  Camp Elliot, M    62.42 355  P      P         18 13 29.5 +0.5
      baz=175
GLA   Glamis            62.44 357 eP      P         18 13 29.0 -0.2
      comp=Z,13nm,1.0s
GLA   Glamis            62.44 357 eP      P         18 13 29.0 -0.2
GLA                                pmax   pmax
      comp=Z,13nm,1.0s
GLA   Glamis            62.44 357  P      P         18 13 29.7 +0.6
      baz=177
WKZ   Wanaka            62.50 232 eP      P         18 13 29.8 +0.2
      comp=Z,198nm,1.7s
SCI2  San Clemente I    62.63 354  P      P         18 13 31.8 +1.4
      baz=173
WHTX  Lake Whitney,     62.80  14 eP      P         18 13 31.6 +0.1
      comp=Z,45nm,1.1s
WHTX  Lake Whitney,     62.80  14  P      P         18 13 31.7 +0.1
      baz=194
059Z  Ave Maria         62.81  31  P      P         18 13 31.4 -0.3
      baz=210
ABTX  Abilene, Hawle    63.01  11 eP      P         18 13 33.2 +0.3
      comp=Z,42nm,1.3s
ABTX  Abilene, Hawle    63.01  11  P      P         18 13 32.7 -0.2
      baz=192
CIS   Catalina Islan    63.04 354  P      P         18 13 33.6 +0.5
      baz=174
BC3   Big Chuckawall    63.07 357  P      P         18 13 34.3 +0.8
      baz=176
PFO   Pinyon Flats O    63.09 356 eP      P         18 13 34.3 +0.7
      comp=Z,29nm,1.6s
PFO   Pinyon Flats O    63.09 356 eP      P         18 13 34.3 +0.7
PFO                                pmax   pmax
      comp=Z,29nm,1.6s
PFO   Pinyon Flats O    63.09 356  P      P         18 13 34.3 +0.7
      baz=175
Y12C  Blythe            63.13 357 eP      P         18 13 34.4 +0.8
      comp=Z,17nm,1.0s
Y12C  Blythe            63.13 357  P      P         18 13 34.5 +0.9
      baz=177
NATX  Nacogdoches       63.21  16 eP      P         18 13 34.6 +0.4
      comp=Z,74nm,1.3s
NATX  Nacogdoches       63.21  16  P      P         18 13 34.8 +0.5
      baz=197
SMTB  Santa Maria do    63.25  85 eP      P         18 13 35.7 +0.7
Y14A  Wickenburg        63.27 359 eP      P         18 13 35.0 +0.3
      comp=Z,38nm,1.6s
BELC  Belle Mtn. Jos    63.45 356  P      P         18 13 37.3 +1.4
      baz=176
059A  Moore Haven       63.49  31  P      P         18 13 36.6 +0.4
      baz=210
IRM   Iron Mountain     63.56 357  P      P         18 13 37.3 +0.7
      baz=177
Y22D  IRIS PASSCAL I    63.56   4 eP      P         18 13 38.0 +1.3
      comp=Z,167nm,1.6s
957A  Wimauma           63.62  29 eP      P         18 13 38.2 +1.2
      comp=Z,34nm,0.7s
957A  Wimauma           63.62  29  P      P         18 13 37.7 +0.6
      baz=208
LENM  Lemitar           63.65   4 eP      P         18 13 37.3  0.0
BNM   Barren Site       63.66   5 eP      P         18 13 36.8 -0.7
PDMCI Parker Dam,Lak    63.66 358  P      P         18 13 38.2 +1.0
      baz=178
X16A  Lo Mia Camp, P    63.74   0 eP      P         18 13 37.5 -0.5
      comp=Z,23nm,1.6s
PASC  Pasadena Art C    63.78 354 eP      P         18 13 38.1 +0.1
      comp=Z,52nm,1.7s
BFSC  Mount Baldy Ra    63.80 355  P      P         18 13 39.3 +1.0
      baz=174
MWC   Mount Wilson      63.82 354 eP      P         18 13 38.1 -0.4
      comp=Z,30nm,1.6s
MWC   Mount Wilson      63.82 354 eP      P         18 13 38.1 -0.4
MWC                                pmax   pmax
      comp=Z,30nm,1.6s
MSTX  Muleshoe          63.86   8 eP      P         18 13 38.1 -0.5
      comp=Z,54nm,1.0s
MSTX  Muleshoe          63.86   8  P      P         18 13 38.3 -0.3
      baz=189
LAZ   Ladron            63.87   4 eP      P         18 13 38.7 -0.1
X18A  Snowflake         63.87   2 eP      P         18 13 38.2 -0.6
      comp=Z,24nm,1.1s
GMRC  Granite Mounta    64.21 356  P      P         18 13 42.1 +1.2
      baz=176
HEC   Hector,Ludlow     64.29 356  P      P         18 13 41.7 +0.2
      baz=176
DWPF  Disney Wildern    64.35  30  P      P         18 13 42.2 +0.4
      baz=209
AIN   Ainahou           64.43 314 eP      P         18 13 43.6 +0.8
      comp=Z,595nm,1.8s
SJMB  Sao Joao De Ma    64.45  98 eP      P         18 13 42.5 -0.3
W13A  Hualapai Mount    64.45 358 eP      P         18 13 43.6 +1.0
      comp=Z,25nm,1.8s
TASM  ASL Pad, Albuq    64.46   5  P      P         18 13 43.0 +0.3
      baz=185
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TASM  ASL Pad, Albuq    64.46   5  P      P         18 13 43.0 +0.3
      baz=185
ANMO  Albuquerque       64.46   5 eP      P         18 13 41.1 -1.6
      comp=Z,17nm,1.5s
ANMO  Albuquerque       64.46   5ceP      P         18 13 42.3 -0.4
ANMO                               pmax   pmax
      comp=Z,20nm,2.5s
ANMO  Albuquerque       64.46   5  P      P         18 13 42.8 +0.1
      baz=185
W18A  Petrified Fore    64.47   2 eP      P         18 13 42.6  0.0
      comp=Z,17nm,1.1s
W18A  Petrified Fore    64.47   2  P      P         18 13 42.7  0.0
      baz=182
EDW2  Edwards Air Fo    64.47 354  P      P         18 13 43.5 +0.9
      baz=174
MLH   Mauna Loa         64.47 314 eP      P         18 13 43.9 +0.8
      comp=Z,324nm,1.9s
MLH   Mauna Loa         64.47 314 eP      P         18 13 43.9 +0.8
MLH                                pmax   pmax
      comp=Z,324nm,1.9s
449A  Pace              64.47  23  P      P         18 13 42.7 +0.1
      baz=204
LDFC  Landfair          64.47 357 eP      P         18 13 43.9 +1.2
      comp=Z,48nm,1.3s
PKM   Mcpherson Peak    64.66 353  P      P         18 13 44.5 +0.5
      baz=172
BSFB  Barra de Sao F    64.69  98 eP      P         18 13 44.6 +0.2
GSC   Goldstone, Bar    64.80 355 eP      P         18 13 45.2 +0.5
      comp=Z,18nm,1.0s
GSC   Goldstone, Bar    64.80 355 eP      P         18 13 45.2 +0.5
GSC                                pmax   pmax
      comp=Z,18nm,1.0s
GSC   Goldstone, Bar    64.80 355  P      P         18 13 45.6 +0.9
      baz=175
655A  Horseshoe Beac    64.82  27  P      P         18 13 45.5 +0.6
      baz=207
WUAZ  Wupatki           64.84   0 eP      P         18 13 46.3 +1.2
      comp=Z,60nm,1.9s
WUAZ  Wupatki           64.84   0  P      P         18 13 45.8 +0.7
      baz=180
TUQ   Turquoise Moun    64.87 356  P      P         18 13 45.9 +0.6
      baz=176
RIB01 Linhares ES       64.88  99 eP      P         18 13 45.8 +0.1
AMTX  Amarillo          64.90   9 eP      P         18 13 46.0 +0.6
      comp=Z,51nm,1.4s
AMTX  Amarillo          64.90   9  P      P         18 13 45.4  0.0
      baz=190
553A  Crawfordville     64.97  26  P      P         18 13 46.3 +0.5
      baz=206
656A  Willston          64.99  28  P      P         18 13 46.1 +0.1
      baz=208
349A  Repton            65.02  23  P      P         18 13 46.4 +0.2
      baz=203
LRMC  Laurel Mtn Rad    65.04 355  P      P         18 13 46.6 +0.3
      baz=174
554A  Perry             65.16  27  P      P         18 13 47.3 +0.3
      baz=207
WMOK  Wichita Mounta    65.22  12 eP      P         18 13 47.3 -0.1
      comp=Z,3.7nm,0.9s
WMOK  Wichita Mounta    65.22  12 eP      P         18 13 47.3 -0.1
WMOK                               pmax   pmax
      comp=Z,4.0nm,0.9s
WMOK  Wichita Mounta    65.22  12  P      P         18 13 48.4 +0.9
      baz=192
452A  Marianna          65.28  25  P      P         18 13 48.1 +0.3
      baz=205
ISA   Isabella, Lake    65.29 354 eP      P         18 13 48.1 +0.2
      comp=Z,39nm,1.5s
ISA   Isabella, Lake    65.29 354 eP      P         18 13 48.1 +0.2
ISA                                pmax   pmax
      comp=Z,39nm,1.5s
ISA   Isabella, Lake    65.29 354  P      P         18 13 48.2 +0.3
      baz=174,SNR=5.1
350A  Dozier            65.38  24  P      P         18 13 48.6 +0.1
      baz=204
WLAR  White Oak Lake    65.43  17 eP      P         18 13 48.3 -0.4
      comp=Z,43nm,1.2s
657A  Interlachen       65.46  29  P      P         18 13 48.7 -0.2
      baz=208
555A  McAlpin           65.48  27  P      P         18 13 49.3 +0.1
      baz=207
PAGB  Antelope Grade    65.54 352 eP      P         18 13 49.5  0.0
      comp=Z,32nm,1.3s
MPMC  Manual Prospec    65.60 355  P      P         18 13 50.7 +0.7
      baz=175,SNR=17
556A  Lake Butler       65.60  28  P      P         18 13 50.3 +0.3
      baz=208
453A  Whigham           65.61  26  P      P         18 13 50.0 +0.1
      baz=206
249A  Camden            65.61  23  P      P         18 13 50.4 +0.5
      baz=203
454A  Quitman           65.75  26  P      P         18 13 51.1 +0.3
      baz=207
U15A  North Rim         65.75 360 eP      P         18 13 50.6 -0.5
      comp=Z,23nm,1.3s
X37A  Clayton           65.75  15 eP      P         18 13 51.2 +0.4
      comp=Z,19nm,1.0s
DAC   Darwin (Calif)    65.82 355 eP      P         18 13 53.1 +1.6
      comp=Z,22nm,1.4s
147A  Livingston        65.88  22 eP      P         18 13 52.5 +0.9
      comp=Z,55nm,1.0s
147A  Livingston        65.88  22  P      P         18 13 52.0 +0.4
      baz=202
SHPR  Sheep Range       65.90 357 eP      P         18 13 52.8 +0.8
      comp=Z,27nm,1.3s
250A  Grady             65.91  24 eP      P         18 13 52.5 +0.6
      comp=Z,65nm,1.3s
250A  Grady             65.91  24  P      P         18 13 52.1 +0.2
      baz=204
352A  Blakely           65.94  25 eP      P         18 13 52.8 +0.7
      comp=Z,112nm,1.6s
352A  Blakely           65.94  25  P      P         18 13 52.2 +0.1
      baz=205
FURC  Furnace Creek,    65.96 355  P      P         18 13 53.2 +1.1
      baz=175
VNA3  Neumayer Olymp    65.98 160  P      P         18 13 52.0 -0.1
CCAR  Cane Creek        66.00  18 eP      P         18 13 53.1 +0.7
      comp=Z,86nm,1.3s
CWC   Cottonwood Cre    66.02 354  P      P         18 13 53.5 +0.7
      baz=174
148A  Greensboro        66.08  22  P      P         18 13 53.1 +0.2
      baz=203
353A  Camilla           66.09  26  P      P         18 13 53.3 +0.3
      baz=206
MIAR  Mount Ida         66.13  16 eP      P         18 13 52.0 -1.3
      comp=Z,16nm,1.0s
MIAR  Mount Ida         66.13  16 eP      P         18 13 52.0 -1.3
MIAR                               pmax   pmax
      comp=Z,16nm,1.0s
MIAR  Mount Ida         66.13  16  P      P         18 13 53.1 -0.2
      baz=197,SNR=7.4
X40A  Basin Creek Fa    66.26  17 eP      P         18 13 54.5 +0.3
      comp=Z,25nm,1.4s
X40A  Basin Creek Fa    66.26  17  P      P         18 13 54.0 -0.1
      baz=198
149A  Jones             66.30  23  P      P         18 13 54.3 -0.1
      baz=204
251A  Midway            66.32  24  P      P         18 13 54.2 -0.4
      baz=205
KNB   Kanab             66.34 359 eP      P         18 13 55.1 +0.3
      comp=Z,25nm,1.4s
KNB   Kanab             66.34 359 eP      P         18 13 55.1 +0.3
KNB                                pmax   pmax
      comp=Z,25nm,1.4s
LCMT  Little Creek M    66.34 359 eP      P         18 13 54.1 -0.6
      comp=Z,15nm,1.5s
456A  Hilliard          66.39  28  P      P         18 13 55.0  0.0
      baz=208
TPNV  Topopah Spring    66.40 356 eP      P         18 13 55.7 +0.5
      comp=Z,45nm,1.8s
TPNV  Topopah Spring    66.40 356  P      P         18 13 55.1 -0.1
      baz=176,SNR=9.5
TIGA  Tifton            66.41  26 eP      P         18 13 55.3 +0.2
      comp=Z,34nm,1.1s
SKI   Saint Kitts       66.46  52 eP      P         18 13 55.1 -0.6
      comp=Z,205nm,1.2s
SKI   Saint Kitts       66.46  52 eP      P         18 13 55.1 -0.6
SKI                                pmax   pmax
      comp=Z,205nm,1.2s
457A  Yulee             66.49  28  P      P         18 13 55.4 -0.2
      baz=208
GRAC  Grapevine Rang    66.52 355  P      P         18 13 56.1 +0.3
      baz=175
150A  Eclectic          66.57  24  P      P         18 13 56.0 -0.1
      baz=204,SNR=6.4
MVCO  Mesa Verde        66.59   3 eP      P         18 13 56.6 +0.1
      comp=Z,59nm,1.4s
MVCO  Mesa Verde        66.59   3  P      P         18 13 56.3 -0.1
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      baz=183,SNR=7.6
355A  Pearson           66.61  27  P      P         18 13 55.3 -1.1
      baz=207
LRAL  Lakeview Retre    66.63  23 eP      P         18 13 56.1 -0.4
      comp=Z,20nm,1.0s
LRAL  Lakeview Retre    66.63  23  P      P         18 13 56.5  0.0
      baz=203
VNA1  Neumayer--Stat    66.64 159  P      P         18 13 56.3 +0.2
UALR  University of     66.66  17 eP      P         18 13 55.4 -1.3
      comp=Z,14nm,0.8s
SAO   San Andreas Ge    66.70 352 eP      P         18 13 57.4 +0.5
      comp=Z,33nm,1.5s
SAO   San Andreas Ge    66.70 352 eP      P         18 13 57.4 +0.5
SAO                                pmax   pmax
      comp=Z,33nm,1.5s
W39A  Magazine          66.70  16 eP      P         18 13 56.8 -0.2
      comp=Z,15nm,0.9s
W39A  Magazine          66.70  16  P      P         18 13 56.7 -0.2
      baz=197
151A  Opelika           66.74  24  P      P         18 13 57.1 -0.1
      baz=205
253A  Americus          66.76  25 eP      P         18 13 58.0 +0.7
      comp=Z,179nm,1.9s
253A  Americus          66.76  25  P      P         18 13 57.2 -0.2
      baz=206
PKCU  Pink Cliffs       66.76 360 eP      P         18 13 58.1 +0.5
      comp=Z,66nm,1.4s
U32A  Winter Ranch,     66.78  11 eP      P         18 13 58.2 +0.8
      comp=Z,39nm,1.0s
VNA2  Neumayer--Watz    66.79 160  P      P         18 13 57.3 +0.1
      baz=252,slow=4.8
T25A  Trinidad          66.81   6 eP      P         18 13 57.7 -0.2
      comp=Z,38nm,1.5s
T25A  Trinidad          66.81   6  P      P         18 13 58.2 +0.3
      baz=187,SNR=6.6
X43A  Marvell           66.81  19 eP      P         18 13 59.0 +1.4
      comp=Z,41nm,0.8s
X43A  Marvell           66.81  19  P      P         18 13 58.5 +0.9
      baz=200
356A  Blackshear        66.88  27  P      P         18 13 57.7 -0.4
      baz=208
CCUT  Cedar City        66.88 359 eP      P         18 13 59.2 +0.9
      comp=Z,28nm,1.4s
SZCU  Shurtz Canyon     66.92 359 eP      P         18 13 58.8 +0.2
      comp=Z,35nm,1.5s
Z49A  Columbiana        66.93  23  P      P         18 13 58.1 -0.3
      baz=204,SNR=10
TUL1  Leonard           66.94  14 eP      P         18 13 57.5 -0.8
      comp=Z,39nm,1.0s
TUL1  Leonard           66.94  14  P      P         18 13 57.8 -0.6
      baz=195
254A  Abbeville         66.97  26  P      P         18 13 58.0 -0.7
      baz=207,SNR=6.4
W41B  Gary Mavity, V    67.06  17 eP      P         18 13 59.4 +0.2
      comp=Z,159nm,1.4s
W41B  Gary Mavity, V    67.06  17  P      P         18 13 59.1 -0.1
      baz=198
152A  Waverly Hall      67.09  25 eP      P         18 13 59.0 -0.5
      comp=Z,46nm,1.4s
152A  Waverly Hall      67.09  25  P      P         18 13 59.3 -0.1
      baz=205,SNR=10
Z50A  Ashland           67.19  23 eP      P         18 14 00.6 +0.5
      comp=Z,28nm,1.4s
Z50A  Ashland           67.19  23  P      P         18 13 59.8 -0.2
      baz=204
S22A  4UR Ranch, Cre    67.22   4 eP      P         18 14 00.8 +0.3
      comp=Z,20nm,1.3s
S22A  4UR Ranch, Cre    67.22   4  P      P         18 14 00.8 +0.3
      baz=185,SNR=11
OXF   Oxford            67.23  20 eP      P         18 14 00.0 -0.3
      comp=Z,36nm,1.0s
OXF   Oxford            67.23  20 eP      P         18 14 00.0 -0.3
OXF                                pmax   pmax
      comp=Z,36nm,1.0s
255A  Hazlehurst        67.27  27 eP      P         18 14 00.7 +0.1
      comp=Z,44nm,1.4s
255A  Hazlehurst        67.27  27  P      P         18 14 00.2 -0.4
      baz=207
OMMB  Old Mammoth Mi    67.27 354 eP      P         18 14 00.4 -0.4
      comp=Z,12nm,1.4s
MDPB  Devils Postpil    67.30 354 eP      P         18 14 00.9 -0.1
      comp=Z,8.5nm,1.4s
SDCO  Great Sand Dun    67.31   5 eP      P         18 14 00.9 -0.2
      comp=Z,23nm,1.4s
SDCO  Great Sand Dun    67.31   5  P      P         18 14 01.4 +0.2
      baz=186,SNR=25
MTPU  Mount Pierson     67.36 360 eP      P         18 14 01.7 +0.2
      comp=Z,41nm,1.9s
Y48A  Jasper            67.37  22  P      P         18 14 00.5 -0.7
      baz=203
153A  Fort Valley       67.40  25  P      P         18 14 01.0 -0.4
      baz=206
PV05  Paradox Valley    67.44   2 eP      P         18 14 01.4 -0.4
      comp=Z,33nm,1.5s
HON   Honolulu          67.47 313 eP      P         18 14 02.6 +0.5
      comp=Z,138nm,0.9s
HON   Honolulu          67.47 313 eP      P         18 14 02.6 +0.5
HON                                pmax   pmax
      comp=Z,138nm,0.9s
Z51A  Franklin          67.51  24  P      P         18 14 01.5 -0.6
      baz=205
PV01  Paradox Valley    67.51   3 eP      P         18 14 02.3  0.0
      comp=Z,17nm,1.3s
PV13  Radium Mtn., P    67.53   3 eP      P         18 14 03.0 +0.6
      comp=Z,43nm,1.8s
256A  Glennville        67.55  27  P      P         18 14 02.5 +0.2
      baz=208
Y49A  Blount Mountai    67.57  23 eP      P         18 14 01.9 -0.6
      comp=Z,14nm,0.9s
Y49A  Blount Mountai    67.57  23  P      P         18 14 02.4 -0.1
      baz=204
PV02  Paradox Valley    67.58   3 eP      P         18 14 02.4 -0.3
      comp=Z,25nm,1.3s
PV18  Skein Mesa, Pa    67.61   2 eP      P         18 14 02.8 -0.1
      comp=Z,29nm,1.6s
PV03  Paradox Valley    67.62   2 eP      P         18 14 02.4 -0.5
      comp=Z,32nm,1.6s
154A  Montrose          67.64  26 eP      P         18 14 03.0 +0.2
      comp=Z,105nm,1.4s
154A  Montrose          67.64  26  P      P         18 14 03.1 +0.2
      baz=207
PV17  East Wray Mesa    67.64   2 eP      P         18 14 02.4 -0.7
      comp=Z,28nm,1.3s
Z52A  Williamson        67.66  25  P      P         18 14 03.2 +0.1
      baz=206
PV11  David Mesa, Pa    67.67   2 eP      P         18 14 03.1 -0.1
      comp=Z,24nm,1.3s
PV19  Morning Glory     67.67   2 eP      P         18 14 02.6 -0.7
      comp=Z,24nm,1.3s
PV16  Nyswonger Mesa    67.68   2 eP      P         18 14 02.5 -0.8
      comp=Z,25nm,1.3s
PV12  Saucer Basin,     67.69   3 eP      P         18 14 02.7 -0.7
      comp=Z,26nm,1.2s
HHAR  Hobbs             67.70  15 eP      P         18 14 03.0 -0.3
      comp=Z,29nm,1.0s
PV20  West Nyswonger    67.70   2 eP      P         18 14 03.1 -0.4
      comp=Z,28nm,1.5s
X47A  Russelville       67.71  21  P      P         18 14 02.6 -0.7
      baz=202
PV14  Lion Creek, Pa    67.73   2 eP      P         18 14 03.9 +0.2
      comp=Z,37nm,1.2s
PV10  Paradox Valley    67.74   2 eP      P         18 14 03.3 -0.5
      comp=Z,85nm,1.9s
R11A  Troy Canyon, C    67.76 357 eP      P         18 14 04.1 +0.3
      comp=Z,18nm,1.4s
R11A  Troy Canyon, C    67.76 357  P      P         18 14 04.6 +0.8
      baz=176,SNR=9.3
PV04  Paradox Valley    67.76   2 eP      P         18 14 03.1 -0.7
      comp=Z,32nm,1.1s
FCAR  Ozark Folk Cen    67.77  17 eP      P         18 14 03.3 -0.4
      comp=Z,18nm,1.2s
SNAA  Sanae             67.80 161  P      P         18 14 03.5 -0.1
SNAA  Sanae             67.80 161 eP      P         18 14 03.2 -0.5
      comp=Z,73nm,1.1s
SNAA  Sanae             67.80 161c iP     P         18 14 03.1 -0.5
PV07  Paradox Valley    67.81   3 eP      P         18 14 03.8 -0.4
      comp=Z,10nm,1.0s
PV23  Carpenter Ridg    67.81   2 eP      P         18 14 03.9 -0.3
      comp=Z,46nm,1.3s
MSU   Marysvale         67.83 360 eP      P         18 14 05.0 +0.8
MSU   Marysvale         67.83 360 eP      P         18 14 05.1 +0.8
CMB   Columbia Colle    67.83 353 eP      P         18 14 03.8 -0.3
      comp=Z,22nm,1.6s
CMB   Columbia Colle    67.83 353 eP      P         18 14 03.8 -0.3
CMB                                pmax   pmax
      comp=Z,22nm,1.6s
PV09  Paradox Valley    67.86   2 eP      P         18 14 04.8 +0.3
PSUT  Pine Spring       67.87 358 eP      P         18 14 04.8 +0.3
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	comp=Z,22nm,1.5s						
155A	Kite	67.89	26	P	P	18 14 04.0	-0.5
	baz=207						
257A	Skidaway Islan	67.89	28	eP	P	18 14 05.3	+0.8
	comp=Z,85nm,1.0s						
PV22	Blue Mesa, Par	67.90	3	eP	P	18 14 03.9	-0.8
	comp=Z,13nm,0.9s						
X48A	Hartselle	67.91	22	eP	P	18 14 04.7	+0.1
	comp=Z,15nm,1.0s						
X48A	Hartselle	67.91	22	P	P	18 14 04.1	-0.5
	baz=203						
PV21	Cone Mtn., Par	67.92	2	eP	P	18 14 04.7	-0.2
	comp=Z,29nm,1.2s						
TCRU	Three Creeks R	67.92	359	eP	P	18 14 04.0	-0.9
	comp=Z,18nm,1.1s						
NV11	Mina Array Sit	68.01	355	eP	P	18 14 05.6	+0.3
	comp=Z,2.9nm,1.4s						
NVAR	Mina Array Bea	68.02	354	P	P	18 14 06.7	+1.2
	comp=Z,9.6nm,1.0s,baz=185,slow=5.7,SNR=40						
U40A	Yellville	68.03	16	P	P	18 14 05.0	-0.3
	baz=198						
Z53A	Monticello	68.06	25	P	P	18 14 05.1	-0.5
	baz=206						
PLAL	Pickwick Lake	68.07	21	eP	P	18 14 05.2	-0.4
	comp=Z,20nm,1.1s						
Y51A	Rockmart	68.07	24	P	P	18 14 05.2	-0.5
	baz=205,SNR=7.5						
W46A	Michie	68.12	21	P	P	18 14 05.9	0.0
	baz=202						
WAKR	Walker	68.19	354	eP	P	18 14 07.4	+0.8
	comp=Z,38nm,1.9s						
X49A	Woodville	68.20	22	P	P	18 14 06.0	-0.4
	baz=204						
GOGA	Godfrey	68.21	25	eP	P	18 14 06.3	-0.2
	comp=Z,35nm,1.4s						
GOGA	Godfrey	68.21	25	eP	P	18 14 06.3	-0.2
GOGA				pmax	pmax		
	comp=Z,35nm,1.4s						
GOGA	Godfrey	68.21	25	P	P	18 14 06.0	-0.5
	baz=206,SNR=5.9						
Q16A	Castle Valley	68.23	0	eP	P	18 14 07.1	+0.3
	comp=Z,33nm,1.3s						
RYN	Ryan	68.23	354	eP	P	18 14 06.4	-0.4
	comp=Z,16nm,1.2s						
Z54A	Sparta	68.29	26	P	P	18 14 06.5	-0.5
	baz=207,SNR=8.8						
156A	Sylvania	68.30	27	P	P	18 14 07.2	+0.2
	baz=208						
X50B	Fort Payne	68.38	23	P	P	18 14 07.0	-0.6
	baz=204						
Y52A	Lilburn	68.40	25	eP	P	18 14 07.2	-0.5
	comp=Z,47nm,1.4s						
Y52A	Lilburn	68.40	25	P	P	18 14 07.4	-0.2
	baz=206,SNR=7.0						
GNAR	Gosnell	68.41	19	eP	P	18 14 07.7	0.0
	comp=Z,117nm,0.5s						
SRU	San Rafael Swe	68.43	1	eP	P	18 14 08.1	+0.1
	comp=Z,22nm,1.0s						
SRU	San Rafael Swe	68.43	1	eP	P	18 14 08.1	+0.1
SRU				pmax	pmax		
	comp=Z,22nm,1.0s						
W47A	Westpoint	68.47	21	P	P	18 14 07.2	-0.8
	baz=202						
157A	Early Branch	68.52	28	P	P	18 14 07.7	-0.7
	baz=208						
Q24A	Divide	68.55	6	eP	P	18 14 08.5	-0.4
	comp=Z,25nm,1.6s						
Q24A	Divide	68.55	6	P	P	18 14 08.8	-0.1
	baz=186						
HALT	Halls	68.55	19	eP	P	18 14 09.3	+0.7
	comp=Z,68nm,0.5s						
Y53A	Monroe	68.57	25	P	P	18 14 08.3	-0.5
	baz=206						
W48A	Pulaski	68.58	22	P	P	18 14 08.7	-0.1
	baz=203,SNR=12						
TMUT	Trail Mountain	68.61	0	eP	P	18 14 09.2	-0.1
	comp=Z,26nm,1.4s						
KVN	Kaiserville	68.62	355	eP	P	18 14 09.0	-0.2
	comp=Z,39nm,1.4s						
KVN	Kaiserville	68.62	355	eP	P	18 14 09.0	-0.2
KVN				pmax	pmax		
	comp=Z,39nm,1.4s						
SMCO	Snowmass	68.63	4	eP	P	18 14 09.3	-0.2
	comp=Z,12nm,0.9s						
YERR	Yerington	68.65	354	eP	P	18 14 09.3	-0.1
	comp=Z,12nm,0.9s						
X51A	Calhoun	68.75	24	eP	P	18 14 09.7	-0.2
	comp=Z,33nm,1.3s						
X51A	Calhoun	68.75	24	P	P	18 14 09.4	-0.4
	baz=205						
W49A	Belvidere	68.78	22	P	P	18 14 09.7	-0.3
	baz=204						
P17A	Butcher Ranch,	68.79	1	eP	P	18 14 10.4	+0.2
	comp=Z,45nm,1.4s						
PNTR	Pine Nut	68.79	353	eP	P	18 14 09.4	-0.8
	comp=Z,14nm,1.0s						
AFDM	Forest Hills D	68.80	352	eP	P	18 14 10.3	+0.2
	comp=Z,25nm,1.5s						
V46A	Holladay	68.81	20	P	P	18 14 09.2	-1.0
	baz=202						
KSCO	Kaye Shedlock'	68.85	8	eP	P	18 14 10.8	+0.3
	comp=Z,45nm,1.0s						
KSCO	Kaye Shedlock'	68.85	8	P	P	18 14 10.6	0.0
	baz=188						
158A	Hollywood	68.90	28	P	P	18 14 10.8	0.0
	baz=209						
GLAT	Glass	68.90	19	eP	P	18 14 11.2	+0.5
	comp=Z,76nm,0.5s						
Y54A	Tignall	68.91	26	P	P	18 14 10.7	-0.1
	baz=207						
SWET	Sewanee	68.97	22	eP	P	18 14 10.2	-1.1
	comp=Z,42nm,1.3s						
VCNR	Virginia City	69.00	353	eP	P	18 14 12.4	+0.8
	comp=Z,5.7nm,0.7s						
V47A	Nunnelly	69.02	21	P	P	18 14 10.7	-0.8
	baz=202						
CBKS	Cedar Bluff	69.04	10	eP	P	18 14 11.9	+0.2
	comp=Z,72nm,1.6s						
CBKS	Cedar Bluff	69.04	10	eP	P	18 14 11.9	+0.2
CBKS				pmax	pmax		
	comp=Z,72nm,1.6s						
CBKS	Cedar Bluff	69.04	10	P	P	18 14 11.3	-0.4
	baz=191						
PBMO	Poplar Bluff	69.06	18	eP	P	18 14 12.0	+0.3
	comp=Z,30nm,1.0s						
UTMT	University of	69.09	20	eP	P	18 14 12.7	+0.8
	comp=Z,165nm,1.3s						
HOPS	Hopland Field	69.12	351	eP	P	18 14 13.1	+1.1
	comp=Z,55nm,1.5s						
X52A	Dahlonega	69.12	24	P	P	18 14 12.2	0.0
	baz=206,SNR=9.6						
V48A	Smith Brothers	69.16	22	eP	P	18 14 11.9	-0.5
	comp=Z,23nm,1.0s						
V48A	Smith Brothers	69.16	22	P	P	18 14 11.7	-0.7
	baz=203						
W50A	Signal Mountai	69.17	23	eP	P	18 14 12.1	-0.4
	comp=Z,28nm,1.3s						
W50A	Signal Mountai	69.17	23	P	P	18 14 12.0	-0.4
	baz=204						
Z57A	Bowman	69.18	28	P	P	18 14 12.3	-0.3
	baz=209						
WVT	Waverly	69.21	21	eP	P	18 14 12.2	-0.4
	comp=Z,13nm,0.9s						
WVT	Waverly	69.21	21	eP	P	18 14 12.2	-0.4
WVT				pmax	pmax		
	comp=Z,13nm,0.9s						
WVT	Waverly	69.21	21	P	P	18 14 11.7	-0.9
	baz=202						
X53A	Estanollee	69.25	25	P	P	18 14 12.4	-0.6
	baz=206						
NLU	North Lily Min	69.27	360	eP	P	18 14 12.8	-0.4
	comp=Z,22nm,1.2s						
Y55A	Saluda	69.29	26	P	P	18 14 13.2	0.0
	baz=208,SNR=6.3						
U46A	Springville	69.31	20	P	P	18 14 12.2	-1.1
	baz=202						
W51A	Cleveland	69.32	23	P	P	18 14 13.1	-0.3
	baz=205,SNR=7.8						
MPU	Maple Canyon	69.33	0	eP	P	18 14 13.3	-0.2
	comp=Z,26nm,1.4s						
ISCO	Idaho Springs	69.35	5	eP	P	18 14 14.3	+0.4
	comp=Z,43nm,1.8s						
ISCO	Idaho Springs	69.35	5	eP	P	18 14 14.3	+0.4
ISCO				pmax	pmax		
	comp=Z,43nm,1.8s						
ISCO	Idaho Springs	69.35	5	P	P	18 14 13.5	-0.3
	baz=186,SNR=9.8						
PAHR	Pah Rah Range	69.38	354	eP	P	18 14 14.4	+0.5
	comp=Z,21nm,1.5s						
HODGE	Hodges	69.40	26	eP	P	18 14 13.8	-0.1
	comp=Z,18nm,1.1s						
ORV	Oroville	69.46	352	eP	P	18 14 14.3	+0.1
	comp=Z,21nm,1.5s						
ORV	Oroville	69.46	352	eP	P	18 14 14.3	+0.1
ORV				pmax	pmax		
	comp=Z,21nm,1.5s						
V49A	McMinnville	69.48	22	P	P	18 14 13.2	-1.2
	baz=204,SNR=7.6						
DUG	Dugway, Tooele	69.51	359	eP	P	18 14 14.9	+0.2
	comp=Z,17nm,1.3s						
DUG	Dugway, Tooele	69.51	359	eP	P	18 14 14.9	+0.2
DUG				pmax	pmax		
	comp=Z,17nm,1.3s						
DUG	Dugway, Tooele	69.51	359	P	P	18 14 14.9	+0.2
	baz=179,SNR=5.8						
O20A	White River Ci	69.52	3	eP	P	18 14 15.1	+0.3
	comp=Z,55nm,1.8s						
O20A	White River Ci	69.52	3	P	P	18 14 14.8	+0.1
	baz=183						
W52A	Murphy	69.55	24	eP	P	18 14 14.5	-0.4
	comp=Z,18nm,0.8s						
W52A	Murphy	69.55	24	P	P	18 14 15.1	+0.2
	baz=206						
Z58A	St. Stephen	69.58	28	P	P	18 14 14.9	-0.1
	baz=209						
X54A	Belton	69.63	26	P	P	18 14 14.7	-0.6
	baz=207						
BEKR	Beckworth	69.64	353	eP	P	18 14 15.8	+0.3
	comp=Z,31nm,1.7s						
CLTN	Cedars of Leba	69.64	22	eP	P	18 14 15.6	+0.2
	comp=Z,9.2nm,1.2s						
U47A	Clarksville	69.66	21	P	P	18 14 14.5	-0.9
	baz=202						
CPCT	Cooper Cave	69.67	23	eP	P	18 14 15.0	-0.5
	comp=Z,33nm,1.3s						
V50A	Pikevile	69.67	23	P	P	18 14 15.1	-0.4
	baz=204,SNR=14						
BG3	Lake Jocassee	69.82	25	eP	P	18 14 17.4	+0.9
	comp=Z,40nm,1.5s						
JSC	Jenkinsville	69.82	27	eP	P	18 14 16.9	+0.4
	comp=Z,41nm,1.4s						
JSC	Jenkinsville	69.82	27	eP	P	18 14 16.9	+0.4
JSC				pmax	pmax		
	comp=Z,41nm,1.4s						
X55A	Gracelyn & Ava	69.85	26	P	P	18 14 16.3	-0.4
	baz=208						
KSU1	Kansas State U	69.86	13	P	P	18 14 16.5	-0.1
	baz=194						
KCPM	Cahto Peak	69.87	350	eP	P	18 14 17.0	+0.1
	comp=Z,40nm,1.5s						
W53A	Cullowhee	69.89	25	P	P	18 14 16.8	-0.3
	baz=206						
JLU	Jordanelle	69.91	0	eP	P	18 14 17.2	0.0
	comp=Z,38nm,1.2s						
BMN	Battle Mountai	69.92	356	eP	P	18 14 17.8	+0.6
	comp=Z,39nm,1.4s						
Y57A	Sumter	69.94	27	eP	P	18 14 18.2	+1.0
	comp=Z,65nm,0.3s						
U48A	Cassie Pea, Po	69.96	21	P	P	18 14 16.5	-0.8
	baz=203						
T46A	Princeton	70.03	20	P	P	18 14 17.2	-0.6
	baz=202						
V51A	Loudon	70.04	23	eP	P	18 14 18.1	+0.2
	comp=Z,28nm,1.3s						
V51A	Loudon	70.04	23	P	P	18 14 17.4	-0.4
	baz=205						
CCM	Cathedral Cave	70.05	17	eP	P	18 14 17.5	-0.3
	comp=Z,19nm,0.9s						
CCM	Cathedral Cave	70.05	17	eP	P	18 14 17.5	-0.3
CCM				pmax	pmax		
	comp=Z,19nm,0.9s						
CCM	Cathedral Cave	70.05	17	P	P	18 14 17.3	-0.5
	baz=199						
PAULI	Pauline	70.09	26	eP	P	18 14 18.1	-0.1
	comp=Z,45nm,1.3s						
X56A	White Oak	70.10	27	P	P	18 14 18.0	-0.1
	baz=208						
ELK	Elko	70.13	357	eP	P	18 14 18.8	+0.3
	comp=Z,21nm,1.6s						
ELK	Elko	70.13	357	eP	P	18 14 18.8	+0.3
ELK				pmax	pmax		
	comp=Z,21nm,1.6s						
Y58A	Scranton	70.13	28	eP	P	18 14 17.9	-0.4
	comp=Z,66nm,1.2s						
Y58A	Scranton	70.13	28	P	P	18 14 18.0	-0.4
	baz=209						
W54A	Cherokee Point	70.18	25	P	P	18 14 17.8	-0.9
	baz=207						
U49A	Red Boiling Sp	70.21	22	P	P	18 14 17.5	-1.3
	baz=204						
T47A	Sharon Grove	70.22	21	eP	P	18 14 18.3	-0.6
	comp=Z,40nm,1.0s						
T47A	Sharon Grove	70.22	21	P	P	18 14 18.3	-0.6
	baz=203,SNR=11						
O03E	Paynes Creek	70.23	352	P	P	18 14 18.6	-0.4
	baz=171						
O02D	Mt. Diablo Mer	70.24	351	P	P	18 14 19.0	-0.1
	baz=170						
S44A	Carbondale	70.24	19	P	P	18 14 18.4	-0.6
	baz=201						
BGU	Big Grassy Mou	70.24	359	eP	P	18 14 19.5	+0.4
	comp=Z,36nm,1.6s						
V52A	Sevierville	70.34	24	eP	P	18 14 19.1	-0.6
	comp=Z,33nm,1.6s						
V52A	Sevierville	70.34	24	P	P	18 14 18.8	-0.9
	baz=206						
N23A	Red Feather La	70.41	5	eP	P	18 14 20.4	+0.1
	comp=Z,26nm,1.2s						
N23A	Red Feather La	70.41	5	P	P	18 14 20.7	+0.4
	baz=185,SNR=9.0						
KMRM	Mail Ridge	70.41	350	eP	P	18 14 19.9	-0.2
	comp=Z,72nm,1.7s						
TCUT	Toone Canyon	70.43	0	eP	P	18 14 20.4	0.0
	comp=Z,64nm,1.5s						
U50A	Jamestown	70.43	23	P	P	18 14 19.3	-0.9
	baz=205						
BIRD	Birdtown, Kers	70.46	27	eP	P	18 14 21.0	+0.6
	comp=Z,34nm,1.2s						
V53A	Saluda	70.47	25	eP	P	18 14 20.1	-0.4
	comp=Z,56nm,1.4s						
V53A	Saluda	70.47	25	P	P	18 14 20.6	+0.1
	baz=206,SNR=13						
KMSC	Kings Mountain	70.55	26	eP	P	18 14 20.6	-0.3
	comp=Z,31nm,1.3s						
KMSC	Kings Mountain	70.55	26	P	P	18 14 20.4	-0.6
	baz=208						
T48A	Bowling Green	70.56	21	P	P	18 14 20.3	-0.6
	baz=203,SNR=16						
WDC	Whiskeytown Da	70.60	351	eP	P	18 14 20.5	-0.6
	comp=Z,21nm,1.2s						
WDC	Whiskeytown Da	70.60	351	eP	P	18 14 20.5	-0.6
WDC				pmax	pmax		
	comp=Z,21nm,1.2s						
SPUT	South Promonto	70.62	359	eP	P	18 14 21.4	0.0
	comp=Z,21nm,1.3s						
U51A	La Follette	70.68	23	P	P	18 14 21.3	-0.4
	baz=205						
S46A	Don Dixon Farm	70.68	20	P	P	18 14 21.0	-0.6
	baz=202						
T49A	Edmonton	70.83	22	eP	P	18 14 22.3	-0.3
	comp=Z,24nm,1.3s						
X58A	Rowland	70.83	28	eP	P	18 14 23.3	+0.6
	comp=Z,19nm,0.7s						
X58A	Rowland	70.83	28	P	P	18 14 21.8	-0.8
	baz=210						
OGNE	Ogallala	70.83	8	eP	P	18 14 23.2	+0.6
	comp=Z,62nm,1.3s						
OGNE	Ogallala	70.83	8	P	P	18 14 22.7	+0.1
	baz=189						
W56A	Indian Trail	70.84	27	P	P	18 14 22.1	-0.6
	baz=208						
S47A	Hartford	70.85	21	P	P	18 14 22.0	-0.7
	baz=203,SNR=9.9						
PHWY	Pilot Hill	70.85	5	eP	P	18 14 23.0	-0.1
	comp=Z,13nm,0.8s						
SLM	Saint Louis	70.86	18	eP	P	18 14 23.3	+0.6
	comp=Z,31nm,1.1s						
SLM	Saint Louis	70.86	18	eP	P	18 14 23.3	+0.6
SLM				pmax	pmax		
	comp=Z,31nm,1.1s						
V54A	Nebo	70.88	25	P	P	18 14 22.2	-0.8
	baz=207						
HWUT	Hardware Ranch	70.92	0	eP	P	18 14 22.9	-0.3
	comp=Z,2.6nm,0.8s						
U52A	Thorn Hill	70.92	24	P	P	18 14 22.6	-0.6
	baz=206,SNR=8.3						
USIN	University of	70.95	20	eP	P	18 14 23.2	-0.1
	comp=Z,39nm,0.8s						
T50A	Nancy	70.98	23	P	P	18 14 22.5	-1.1
	baz=204						
TZTN	Tazewell	70.99	24	eP	P	18 14 23.8	+0.2
	comp=Z,35nm,1.1s						
TZTN	Tazewell	70.99	24	P	P	18 14 23.3	-0.3
	baz=206,SNR=7.9						
N02D	Trinity Center	71.01	351	P	P	18 14 24.1	+0.4
	baz=170,SNR=6.5						
JCC	Jacoby Creek,	71.04	350	eP	P	18 14 23.9	+0.1
	comp=Z,197nm,1.8s						
KHMM	Horse Mountain	71.06	350	eP	P	18 14 24.5	+0.4
	comp=Z,31nm,1.1s						
R45A	Skylar, Fairfi	71.08	19	P	P	18 14 23.4	-0.6
	baz=201						
W57A	Gilead	71.09	27	eP	P	18 14 24.0	-0.2
	comp=Z,27nm,1.3s						
W57A	Gilead	71.09	27	P	P	18 14 23.6	-0.6
	baz=209						
HVU	Hansel Valley	71.09	359	eP	P	18 14 23.8	-0.5
	comp=Z,18nm,1.7s						
HVU	Hansel Valley	71.09	359	eP	P	18 14 23.8	-0.5
HVU				pmax	pmax		
	comp=Z,18nm,1.7s						
RWWY	Rawlins	71.12	4	eP	P	18 14 24.3	-0.3
	comp=Z,23nm,1.3s						
S48A	Wiedeman Farm,	71.16	21	P	P	18 14 23.6	-1.0
	baz=203,SNR=7.4						
U53A	Fall Branch	71.17	25	P	P	18 14 24.2	-0.6
	baz=206,SNR=6.0						
V55A	Taylorsville	71.22	26	P	P	18 14 25.1	+0.1
	baz=208						
R46A	Gibon Southern	71.23	20	P	P	18 14 24.4	-0.5
	baz=202						
T51A	Gray	71.23	23	P	P	18 14 24.7	-0.4
	baz=205						
X60A	Albert Glenn T	71.41	29	P	P	18 14 25.4	-0.7
	baz=211						
M02C	Callahan	71.44	351	P	P	18 14 26.7	+0.4
	baz=170						
V56A	Mocksville	71.46	26	eP	P	18 14 26.2	-0.3
	comp=Z,24nm,1.2s						
V56A	Mocksville	71.46	26	P	P	18 14 26.1	-0.3
	baz=208						
S49A	Springfield	71.53	22	P	P	18 14 25.7	-1.2
	baz=204						
OLIL	Olney	71.54	19	eP	P	18 14 26.2	-0.6
	comp=Z,36nm,1.1s						
U54A	Nelsons Funny	71.59	25	eP	P	18 14 28.1	+0.8
	comp=Z,21nm,1.1s						
U54A	Nelsons Funny	71.59	25	P	P	18 14 26.1	-1.2
	baz=207						
R47A	Wooly Knot Far	71.60	21	P	P	18 14 26.5	-0.8
	baz=203						
WCI	Wyandotte Cave	71.61	21	eP	P	18 14 27.3	0.0
	comp=Z,27nm,1.4s						
WCI	Wyandotte Cave	71.61	21	eP	P	18 14 27.3	0.0
WCI				pmax	pmax		
	comp=Z,27nm,1.4s						
WCI	Wyandotte Cave	71.61	21	P	P	18 14 26.3	-1.0
	baz=203						
MOD	Modoc Plateau	71.65	353	eP	P	18 14 27.8	+0.1
	comp=Z,44nm,1.5s						
Q45A	Warren Harvey,	71.67	19	P	P	18 14 27.4	-0.3
	baz=202						
T52A	Hallie	71.69	24	eP	P	18 14 27.0	-0.9
	comp=Z,28nm,1.2s						
T52A	Hallie	71.69	24	P	P	18 14 27.5	-0.3
	baz=206						
M04C	Macdoel	71.70	352	P	P	18 14 27.9	0.0
	baz=171,SNR=6.6						
S50A	Richmond	71.72	23	P	P	18 14 27.5	-0.5
	baz=205						
T53A	Wise	71.74	24	P	P	18 14 27.7	-0.5
	baz=206						
YBH	Yreka Blue Hor	71.76	351	eP	P	18 14 29.5	+1.3
	comp=Z,9.1nm,1.3s						
YBH	Yreka Blue Hor	71.76	351	eP	P	18 14 29.5	+1.3
YBH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
V57A	Coltrane Farms	71.81	27	P	P	18 14 28.3	-0.3
	baz=209						
BGNE	Belgrade	71.83	11	eP	P	18 14 29.7	+1.1
	comp=Z,36nm,0.6s						
BGNE	Belgrade	71.83	11	P	P	18 14 28.4	-0.2
	baz=192						
U55A	TA2, Sparta	71.86	26	P	P	18 14 28.5	-0.4
	baz=208						
R48A	Northridge Ran	71.90	21	P	P	18 14 28.1	-0.9
	baz=204						
S51A	Beattyville	71.96	23	eP	P	18 14 29.1	-0.3
	comp=Z,18nm,0.9s						
S51A	Beattyville	71.96	23	P	P	18 14 29.1	-0.3
	baz=206						
U56A	King	71.98	26	P	P	18 14 28.5	-1.1
	baz=208						
P43A	Skaggs, Pawnee	71.99	18	P	P	18 14 28.1	-1.4
	baz=200						
V58A	Windy Hill, Pi	72.00	27	P	P	18 14 28.6	-1.1
	baz=210						
WVOR	Wild Horse Val	72.02	355	eP	P	18 14 29.8	-0.1
	comp=Z,34nm,1.4s						
WVOR	Wild Horse Val	72.02	355	eP	P	18 14 29.8	-0.1
WVOR				pmax	pmax		
	comp=Z,34nm,1.4s						
R49A	Shelbyville	72.03	22	eP	P	18 14 29.0	-0.8
	comp=Z,29nm,1.0s						
R49A	Shelbyville	72.03	22	P	P	18 14 28.8	-1.0
	baz=204						
AHID	Auburn Hatcher	72.08	1	eP	P	18 14 29.3	-1.0
	comp=Z,10nm,0.9s						
BW06	Boulder Array	72.10	2	eP	P	18 14 29.6	-0.9
	comp=Z,27nm,1.4s						
BW06	Boulder Array	72.10	2	P	P	18 14 29.4	-1.1
	baz=182,SNR=14						
PDAR	Pinedale Array	72.10	2	P	P	18 14 29.6	-0.9
	comp=Z,5.9nm,1.1s,baz=198,slow=4.2,SNR=14						
K22A	Casper	72.12	4	eP	P	18 14 30.2	-0.3
	comp=Z,77nm,1.4s						
K22A	Casper	72.12	4	P	P	18 14 30.3	-0.3
	baz=185,SNR=15						
T54A	Tazewell	72.16	25	P	P	18 14 29.6	-1.1
	baz=207						
L04D	Klamath Falls	72.19	352	P	P	18 14 30.4	-0.5
	baz=170						
R50A	Paris	72.29	22	eP	P	18 14 29.8	-1.6
	comp=Z,22nm,1.2s						
R50A	Paris	72.29	22	P	P	18 14 30.4	-1.0
	baz=205						
V59A	Middlesex	72.33	28	P	P	18 14 31.6	0.0
	baz=210						
W61A	Ground Anchor	72.34	29	P	P	18 14 30.9	-0.9
	baz=211						
P45A	Graceland, Par	72.38	19	eP	P	18 14 31.2	-0.7
	comp=Z,26nm,1.0s						
P45A	Graceland, Par	72.38	19	P	P	18 14 31.1	-0.7
	baz=202						
BLO	Bloomington	72.41	20	eP	P	18 14 32.0	-0.1
	comp=Z,34nm,1.3s						
BLO	Bloomington	72.41	20	eP	P	18 14 32.0	-0.1
BLO				pmax	pmax		
	comp=Z,35nm,1.3s						
Q48A	North Vernon	72.43	21	P	P	18 14 31.3	-0.9
	baz=204						
U57A	Blanch	72.46	27	P	P	18 14 32.1	-0.4
	baz=209						
NBMO	Morrinhos-CE	72.49	84	eP	P	18 14 33.5	+0.3
T55A	Pulaski	72.50	26	P	P	18 14 32.5	-0.3
	baz=208						
S53A	Williamson	72.51	24	P	P	18 14 32.5	-0.2
	baz=207						
K04D	Chiloquin, OR	72.52	352	P	P	18 14 32.5	-0.3
	baz=171						
K05A	Summer Lake	72.52	353	eP	P	18 14 33.7	+0.8
	comp=Z,29nm,1.1s						
R51A	Hillsboro	72.56	23	P	P	18 14 32.4	-0.6
	baz=205						
DZM	Mont Dzumac	72.59	254	eLR	LR	18 36 34.5	
	comp=Z,293nm,25.9s						
DZM	Mont Dzumac	72.59	254	P	P	18 14 34.0	+0.2
	comp=Z,12nm,0.9s,baz=86,slow=17,SNR=3.5						
DZM	Mont Dzumac	72.59	254	eP	P	18 14 34.0	+0.2
	comp=Z,26nm,1.2s						
P46A	Rosedale	72.62	20	P	P	18 14 32.8	-0.5
	baz=202						
N40A	Mertquake, Sal	72.64	16	P	P	18 14 32.4	-1.0
	baz=198						

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N41A Harden Midland    72.65  17 eP    P      18 14 33.9 +0.5
     comp=Z,69nm,1.8s
N41A Harden Midland    72.65  17  P    P      18 14 32.8 -0.7
     baz=199
HUMO Hull Mountain     72.65 351 eP    P      18 14 34.5 +1.0
     comp=Z,15nm,1.1s
T56A Rocky Mt          72.71  26  P    P      18 14 33.0 -0.9
     baz=208
BLA  Blacksburg        72.72  26 eP    P      18 14 33.9 -0.2
     comp=Z,38nm,1.1s
BLA  Blacksburg        72.72  26 eP    P      18 14 33.9 -0.2
BLA                              pmax  pmax
     comp=Z,38nm,1.1s
BLA  Blacksburg        72.72  26  P    P      18 14 33.7 -0.4
     baz=208
V60A Jim Taylor Roa    72.73  29 eP    P      18 14 33.5 -0.5
     comp=Z,52nm,1.2s
V60A Jim Taylor Roa    72.73  29  P    P      18 14 33.2 -0.8
     baz=211
U58A Oxford            72.74  28  P    P      18 14 33.5 -0.6
     baz=210
O44A Mansfield         72.75  18  P    P      18 14 33.3 -0.8
     baz=201
Q49A Aurora            72.76  22  P    P      18 14 33.3 -0.9
     baz=204
P47A Martinsville      72.78  20  P    P      18 14 33.1 -1.1
     baz=203
SNOW Snow King Moun    72.78   1 eP    P      18 14 34.0 -0.5
     comp=Z,14nm,1.0s
TPAW Teton Pass        72.80   1 eP    P      18 14 33.9 -0.8
     comp=Z,15nm,1.0s
K02D Willamette Mer    72.83 351  P    P      18 14 33.1 -1.5
     baz=169
HDIL Hopedale          72.91  18 eP    P      18 14 35.2 +0.2
     comp=Z,59nm,1.4s
HDIL Hopedale          72.91  18  P    P      18 14 34.2 -0.8
     baz=200
HLID Hailey            72.91 358 eP    P      18 14 35.2  0.0
     comp=Z,26nm,1.1s
HLID Hailey            72.91 358  P    P      18 14 35.1 -0.1
     baz=178,SNR=32
S54A Dingess, Beckl    72.91  25  P    P      18 14 34.5 -0.7
     baz=207
R52A Catlettsburg      72.91  24  P    P      18 14 34.4 -0.7
     baz=206
Q50A Georgetown        72.92  22  P    P      18 14 34.3 -0.8
     baz=205
J08A Circle Bar Ran    72.93 355 eP    P      18 14 35.7 +0.5
     comp=Z,45nm,1.5s
LOHW Long Hollow       72.93   1 eP    P      18 14 34.5 -0.9
     comp=Z,25nm,1.4s
FXWY Fox Creek         72.95   1 eP    P      18 14 34.6 -0.9
     comp=Z,24nm,1.4s
T57A Hurt              72.99  27 eP    P      18 14 35.3 -0.3
     comp=Z,19nm,1.1s
T57A Hurt              72.99  27  P    P      18 14 35.5  0.0
     baz=209
P48A Milroy            73.01  21 eP    P      18 14 35.1 -0.5
     comp=Z,9.9nm,0.8s
P48A Milroy            73.01  21  P    P      18 14 34.3 -1.4
     baz=204
U59A Littleton         73.01  28 eP    P      18 14 34.9 -0.8
     comp=Z,17nm,0.6s
U59A Littleton         73.01  28  P    P      18 14 35.6 -0.1
     baz=210
O45A Potomac           73.05  19  P    P      18 14 34.9 -1.0
     baz=202
MOOW Moose Ponds       73.06   1 eP    P      18 14 35.4 -0.7
     comp=Z,9.7nm,1.1s
KEBM Edson Butte       73.10 350 eP    P      18 14 37.0 +0.8
     comp=Z,209nm,1.8s
J05D Fort Rock, OR     73.11 353  P    P      18 14 36.6 +0.2
     baz=171
R53A Hurricane         73.15  24 eP    P      18 14 37.0 +0.4
     comp=Z,15nm,0.9s
R53A Hurricane         73.15  24  P    P      18 14 35.9 -0.6
     baz=207
J04D Umpqua Nationa    73.17 352  P    P      18 14 36.5 -0.3
     baz=171
S55A Lewisburg         73.19  25  P    P      18 14 36.8  0.0
     baz=208
IMW  Indian Meadow     73.21   1 eP    P      18 14 36.3 -0.8
     comp=Z,16nm,1.0s
T58A Grand View Acr    73.22  27  P    P      18 14 36.4 -0.6
     baz=210
SCIA State Center      73.24  14 eP    P      18 14 37.1 +0.1
     comp=Z,30nm,1.1s
SCIA State Center      73.24  14  P    P      18 14 36.1 -0.9
     baz=197
Q51A Peebles           73.29  23 eP    P      18 14 36.7 -0.7
     comp=Z,26nm,1.0s
Q51A Peebles           73.29  23  P    P      18 14 36.5 -0.8
     baz=206
N43A Stutzman Famil    73.30  18  P    P      18 14 36.7 -0.6
     baz=200
P49A Miami Univ. Ec    73.30  22  P    P      18 14 36.0 -1.4
     baz=204
J01E Myrtle Point      73.33 351  P    P      18 14 36.7 -0.7
     baz=169
SFIN Lafayette         73.35  19 eP    P      18 14 36.9 -0.7
     comp=Z,27nm,1.3s
SFIN Lafayette         73.35  19  P    P      18 14 36.7 -1.0
     baz=202
M41A Milan             73.36  17  P    P      18 14 37.1 -0.6
     baz=199
R54A Victor            73.37  25  P    P      18 14 37.5 -0.3
     baz=208
U60A Pendleton         73.38  29  P    P      18 14 36.9 -0.9
     baz=211
FLWY Flagg Ranch       73.40   1 eP    P      18 14 38.1  0.0
     comp=Z,24nm,1.0s
N44A Piper City        73.44  19  P    P      18 14 37.2 -0.9
     baz=201
S56A Natural Bridge    73.46  26  P    P      18 14 37.3 -1.1
     baz=209
O47A Sheridan          73.49  20  P    P      18 14 37.1 -1.3
     baz=203
U61A Possum Corner     73.56  29 eP    P      18 14 39.2 +0.3
     comp=Z,134nm,1.4s
U61A Possum Corner     73.56  29  P    P      18 14 38.0 -1.0
     baz=212
PINE Pine Mountain     73.58 353 eP    P      18 14 39.6 +0.4
     comp=Z,20nm,1.0s
YPP  Pitchstone Pla    73.58   1 eP    P      18 14 38.6 -0.7
     comp=Z,6.7nm,1.1s
Q52A Bidwell           73.61  24  P    P      18 14 38.7 -0.5
     baz=206
T59A Double "B" Far    73.64  28 eP    P      18 14 40.1 +0.7
     comp=Z,12nm,1.0s
T59A Double "B" Far    73.64  28  P    P      18 14 38.6 -0.8
     baz=211
P50A Jamestown         73.67  22  P    P      18 14 38.8 -0.7
     baz=205
N45A Kentland          73.67  19  P    P      18 14 39.0 -0.5
     baz=202
H17A Grant Village     73.71   1 eP    P      18 14 40.8 +0.8
     comp=Z,16nm,1.5s
I07A Izee              73.73 354 eP    P      18 14 40.7 +0.8
     comp=Z,20nm,1.1s
I04A Tendick Farm,     73.75 352  P    P      18 14 40.3 +0.3
     baz=170
YFT  Old Faithful      73.76   1 eP    P      18 14 40.8 +0.5
     comp=Z,6.1nm,0.7s
S57A Dark Hollow, R    73.77  27 eP    P      18 14 39.8 -0.4
     comp=Z,8.1nm,0.9s
S57A Dark Hollow, R    73.77  27  P    P      18 14 40.0 -0.1
     baz=209
RSSD Black Hills       73.77   6 eP    P      18 14 39.9 -0.4
     comp=Z,29nm,1.3s
RSSD Black Hills       73.77   6 eP    P      18 14 39.9 -0.4
RSSD                             pmax  pmax
     comp=Z,29nm,1.3s
RSSD Black Hills       73.77   6  P    P      18 14 39.5 -0.7
     baz=187
Q53A Leroy             73.77  24  P    P      18 14 40.4 +0.3
     baz=207
R55A Marlinton         73.78  25 eP    P      18 14 40.2 -0.1
     comp=Z,43nm,1.9s
R55A Marlinton         73.78  25  P    P      18 14 40.1 -0.2
     baz=208
P51A Williamsport      73.80  23 eP    P      18 14 39.8 -0.5
     comp=Z,42nm,1.4s
P51A Williamsport      73.80  23  P    P      18 14 39.2 -1.0
     baz=206
M43A Waltham Townsh    73.82  18  P    P      18 14 39.6 -0.8
     baz=200
O48A Farmland          73.82  21  P    P      18 14 39.2 -1.2
     baz=204
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L40A Anamosa           73.84  16 eP    P      18 14 39.6 -0.9
     comp=Z,42nm,1.0s
L40A Anamosa           73.84  16  P    P      18 14 40.4 -0.1
     baz=198,SNR=12
N46A Monticello        73.93  19  P    P      18 14 40.2 -0.9
     baz=202
YMR  Madison River     73.98   1 eP    P      18 14 41.5  0.0
     comp=Z,79nm,1.7s
S58A Poland Farm, P    73.99  27 eP    P      18 14 41.2 -0.2
     comp=Z,11nm,0.8s
S58A Poland Farm, P    73.99  27  P    P      18 14 40.9 -0.6
     baz=210
O49A Covington         74.02  22 eP    P      18 14 40.1 -1.4
     comp=Z,8.8nm,0.8s
O49A Covington         74.02  22  P    P      18 14 40.7 -0.9
     baz=205
M44A Midewin, Midew    74.02  18 eP    P      18 14 41.1 -0.4
     comp=Z,22nm,1.1s
M44A Midewin, Midew    74.02  18  P    P      18 14 41.4 -0.1
     baz=201
YNR  Norris Junctio    74.03   1 eP    P      18 14 41.1 -0.7
     comp=Z,17nm,1.3s
YHB  Horse Butte       74.06   0 eP    P      18 14 40.3 -1.7
     comp=Z,21nm,1.4s
YHH  Holmes Hill       74.10   1 eP    P      18 14 42.2 -0.1
     comp=Z,29nm,1.3s
T60A Surry             74.12  28 eP    P      18 14 42.7 +0.4
     comp=Z,86nm,1.3s
T60A Surry             74.12  28  P    P      18 14 41.9 -0.4
     baz=211
Q54A Coxs Mills        74.13  25 eP    P      18 14 42.9 +0.6
     comp=Z,63nm,1.8s
Q54A Coxs Mills        74.13  25  P    P      18 14 42.3  0.0
     baz=208
QLMT Earthquake Lak    74.14   0 eP    P      18 14 41.9 -0.6
MCMT McKenzie Canyo    74.14 359 eP    P      18 14 42.5  0.0
R56A Bull Pasture M    74.16  26  P    P      18 14 42.3 -0.2
     baz=209
I05D Terrebonne, OR    74.17 353  P    P      18 14 42.4  0.0
     baz=171
L42A Oliver, Polo      74.17  17 eP    P      18 14 41.5 -0.9
     comp=Z,15nm,0.9s
L42A Oliver, Polo      74.17  17  P    P      18 14 42.6 +0.2
     baz=200
O50A Cable             74.21  22  P    P      18 14 42.1 -0.6
     baz=205
M45A Boilermakers S    74.24  19  P    P      18 14 42.3 -0.5
     baz=202
P52A Corning           74.25  23  P    P      18 14 42.6 -0.4
     baz=206
BMO  Blue Mountains    74.33 356 eP    P      18 14 43.7 +0.3
     comp=Z,25nm,1.4s
BMO  Blue Mountains    74.33 356 eP    P      18 14 43.7 +0.3
BMO                              pmax  pmax
     comp=Z,25nm,1.4s
ECSD EROS Data Cent    74.35  11 eP    P      18 14 43.0 -0.5
     comp=Z,25nm,1.3s
ECSD EROS Data Cent    74.35  11  P    P      18 14 42.9 -0.5
     baz=194,SNR=10
R58B Mineral           74.37  27 eP    P      18 14 43.4 -0.2
     comp=Z,10nm,0.9s
R58B Mineral           74.37  27  P    P      18 14 43.1 -0.6
     baz=210
P53A Whipple           74.38  24 eP    P      18 14 44.0 +0.3
     comp=Z,106nm,1.8s
P53A Whipple           74.38  24  P    P      18 14 43.6 -0.1
     baz=207
R57A Stanardsville     74.40  27  P    P      18 14 43.7 -0.1
     baz=210
N48A Decatur           74.41  21  P    P      18 14 43.3 -0.5
     baz=204
Q55A Buckhannon        74.42  25  P    P      18 14 42.8 -1.2
     baz=208
S59A Mechanicsville    74.43  28  P    P      18 14 43.2 -0.8
     baz=211
RLMT Red Lodge         74.46   2 eP    P      18 14 43.8 -0.6
     comp=Z,13nm,1.1s
RLMT Red Lodge         74.46   2  P    P      18 14 44.2 -0.2
     baz=182,SNR=6.4
PLID Pearl Lake        74.50 357 eP    P      18 14 44.5  0.0
     comp=Z,20nm,1.2s
ACSO Alum Creek Sta    74.50  22 eP    P      18 14 43.8 -0.6
     comp=Z,17nm,1.3s
H04D Lebanon           74.51 352  P    P      18 14 44.1 -0.3
     baz=170
M46A Old House Fiel    74.52  20 eP    P      18 14 43.9 -0.6
     comp=Z,32nm,1.3s
O51A Pataskala         74.55  23  P    P      18 14 44.2 -0.5
     baz=206
H04A Detroit Lake      74.60 352 eP    P      18 14 44.9 -0.1
     comp=Z,38nm,1.6s
R58A Rapidan           74.61  27  P    P      18 14 44.5 -0.6
     baz=210
COR  Corvallis         74.64 351 eP    P      18 14 46.0 +1.0
     comp=Z,212nm,1.8s
DLMT Dillon            74.67 359 eP    P      18 14 46.1 +0.6
     comp=Z,26nm,1.5s
SUSD Miller            74.67   9  P    P      18 14 45.1 -0.2
     baz=192
M47A Cromwell          74.69  20  P    P      18 14 45.1 -0.3
     baz=203
N49A Columbus Grove    74.73  21 eP    P      18 14 44.8 -0.9
     comp=Z,18nm,1.1s
N49A Columbus Grove    74.73  21  P    P      18 14 45.2 -0.5
     baz=205
O52A Adamsville        74.78  23 eP    P      18 14 46.0 -0.1
     comp=Z,55nm,1.0s
O52A Adamsville        74.78  23  P    P      18 14 45.6 -0.4
     baz=207
L44A Lake County Fo    74.79  18  P    P      18 14 45.0 -1.0
     baz=201
Q56A Snyder Ridge,     74.79  26  P    P      18 14 45.4 -0.7
     baz=209
P54A Burton            74.81  25  P    P      18 14 45.7 -0.5
     baz=208
RCBR Riachuelo         74.85  88 PKiKP PKiKP  18 20 34.2 -4.4
     comp=Z,53nm,0.6s,baz=205,slow=0.1,SNR=4.4
RCBR Riachuelo         74.85  88 eP    P      18 14 46.7 -0.4
     comp=Z,37nm,1.1s
RCBR Riachuelo         74.85  88 eP    P      18 14 47.5 +0.3
R59A King George, V    74.88  28  P    P      18 14 45.8 -0.8
     baz=211
JFWS Jewell Farm       74.88  16 eP    P      18 14 45.5 -1.0
     comp=Z,14nm,1.3s
JFWS Jewell Farm       74.88  16 eP    P      18 14 45.6 -1.0
JFWS                             pmax  pmax
     comp=Z,14nm,1.3s
JFWS Jewell Farm       74.88  16  P    P      18 14 45.5 -1.0
     baz=199
G08A Pilot Rock        74.89 355 eP    P      18 14 46.8 +0.1
     comp=Z,32nm,1.3s
BOZ  Bozeman (W)       74.90   0 eP    P      18 14 47.0 +0.2
     comp=Z,28nm,1.5s
BOZ  Bozeman (W)       74.90   0 eP    P      18 14 47.0 +0.2
BOZ                              pmax  pmax
     comp=Z,28nm,1.5s
BOZ  Bozeman (W)       74.90   0  P    P      18 14 46.5 -0.2
     baz=180,SNR=11
N50A Nevada            74.93  22  P    P      18 14 46.1 -0.8
     baz=206
P55A Reedsville        74.96  25  P    P      18 14 46.5 -0.6
     baz=208
G06A Carlson Farm,     74.98 354 eP    P      18 14 47.6 +0.5
     comp=Z,43nm,1.5s
S61A Accomac           75.03  29  P    P      18 14 46.7 -0.7
     baz=212
G05D Wamic, OR         75.06 353  P    P      18 14 47.6  0.0
     baz=171
M48A Edgerton          75.08  21 eP    P      18 14 47.2 -0.4
     comp=Z,33nm,1.4s
M48A Edgerton          75.08  21  P    P      18 14 47.3 -0.4
     baz=204
Q57A Strasburg         75.08  26  P    P      18 14 47.9 +0.1
     baz=210
MCWV Mont Chateau      75.09  25 eP    P      18 14 47.7 -0.1
     comp=Z,35nm,1.7s
MCWV Mont Chateau      75.09  25  P    P      18 14 47.6 -0.2
     baz=208
L46A Eue Claire        75.09  19 eP    P      18 14 47.6 -0.2
     comp=Z,42nm,0.4s
O53A New Philadelph    75.12  24  P    P      18 14 47.8 -0.2
     baz=207
GCMT Greycliff         75.12   2 eP    P      18 14 49.0 +0.9
LRM  Limekiln Ridge    75.13 359 eP    P      18 14 49.2 +1.0
R60A Leonardtown, M    75.15  28  P    P      18 14 47.4 -0.7
     baz=211
K43A Burlington        75.17  18 eP    P      18 14 47.6 -0.5
     comp=Z,18nm,0.9s
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K43A Burlington        75.17  18  P    P      18 14 47.7 -0.5
     baz=201
G03D McMinnville, O    75.25 352  P    P      18 14 48.9 +0.3
     baz=170
Q58A Fox Den Farm,     75.29  27  P    P      18 14 48.8 -0.1
     baz=210
M49A Liberty Center    75.30  21  P    P      18 14 48.9 -0.1
     baz=205
N51A Ashland           75.32  23 eP    P      18 14 48.6 -0.5
     comp=Z,46nm,1.1s
N51A Ashland           75.32  23  P    P      18 14 49.0 -0.1
     baz=206
P56A Dayton Farm, R    75.33  26  P    P      18 14 49.1 -0.1
     baz=209
O54A Avella            75.36  24  P    P      18 14 49.2 -0.2
     baz=208
L47A Sherwood          75.38  20  P    P      18 14 48.9 -0.5
     baz=204
F10A Beach Ranch, E    75.44 356 eP    P      18 14 49.2 -0.6
     comp=Z,15nm,1.1s
M50A Fremont           75.53  22 eP    P      18 14 50.7 +0.4
     comp=Z,29nm,0.8s
M50A Fremont           75.53  22  P    P      18 14 49.8 -0.6
     baz=206
F07A Phinny Hill Vi    75.57 354 eP    P      18 14 50.7 +0.3
     comp=Z,47nm,1.6s
L48A N Adams           75.58  21  P    P      18 14 49.8 -0.8
     baz=204
P57A Homestead Farm    75.63  26  P    P      18 14 50.4 -0.4
     baz=210
F05D White Salmon      75.71 353  P    P      18 14 51.1 -0.2
     baz=171
N53A Lisbon            75.75  24 eP    P      18 14 51.8 +0.2
     comp=Z,83nm,1.5s
N53A Lisbon            75.75  24  P    P      18 14 50.9 -0.6
     baz=207
M51A Elyria            75.75  23  P    P      18 14 50.9 -0.7
     baz=206
O55A Ligonier          75.77  25  P    P      18 14 51.2 -0.6
     baz=209
K46A Dorr              75.86  19  P    P      18 14 51.3 -0.8
     baz=203
P58A Pank, Wackersv    75.91  27  P    P      18 14 51.8 -0.7
     baz=210
L49A Milan             75.94  21  P    P      18 14 52.5 -0.1
     baz=205
PLIO Pelee Island,     75.98  22  P    P      18 14 52.4 -0.4
     baz=206
HRY  Holter Researc    76.02 360 eP    P      18 14 53.7 +0.6
SDMD Soldier's Deli    76.02  27 eP    P      18 14 53.1 -0.1
     comp=Z,8.8nm,1.1s
HAWA Hanford           76.03 354 eP    P      18 14 53.3 +0.3
     comp=Z,23nm,1.4s
E09A Wood Farm, Sta    76.04 355 eP    P      18 14 53.1 +0.1
     comp=Z,7.1nm,0.9s
I41A Arkdale           76.05  16 eP    P      18 14 53.1 -0.1
     comp=Z,30nm,1.3s
I41A Arkdale           76.05  16  P    P      18 14 52.9 -0.3
     baz=200
K47A Vermontville      76.08  20  P    P      18 14 52.5 -0.9
     baz=204
Q60A Greensboro        76.08  28  P    P      18 14 53.2 -0.2
     baz=212
F04D Rainier, OR       76.08 352  P    P      18 14 53.2 -0.1
     baz=170
E08A Dider Farm, El    76.09 355 eP    P      18 14 54.0 +0.6
     comp=Z,21nm,1.2s
O56A Blue Knob Stat    76.10  26 eP    P      18 14 53.8 +0.1
     comp=Z,24nm,1.3s
O56A Blue Knob Stat    76.10  26  P    P      18 14 53.1 -0.5
     baz=209
I42A Draeger Farm,     76.13  17 eP    P      18 14 54.0 +0.3
     comp=Z,42nm,1.5s
I42A Draeger Farm,     76.13  17  P    P      18 14 53.4 -0.2
     baz=200
AAM  Ann Arbor         76.15  21 eP    P      18 14 53.6 -0.1
     comp=Z,22nm,0.9s
AAM  Ann Arbor         76.15  21 eP    P      18 14 53.7 -0.1
AAM                              pmax  pmax
     comp=Z,23nm,0.9s
BBSR BB Station        76.15  40 eP    P      18 14 54.4 +0.4
     comp=Z,106nm,1.5s
LAO  LASA Array        76.16   4 eP    P      18 14 53.4 -0.4
     comp=Z,22nm,1.0s
LAO  LASA Array        76.16   4  P    P      18 14 53.8 -0.1
     baz=185
MSO  Missoula          76.16 358 eP    P      18 14 53.7 -0.2
     comp=Z,31nm,1.5s
MSO  Missoula          76.16 358  P    P      18 14 53.9  0.0
     baz=178
N54A Moraine State     76.18  24 eP    P      18 14 54.3 +0.2
     comp=Z,22nm,1.0s
N54A Moraine State     76.18  24  P    P      18 14 54.0 -0.1
     baz=208
L50A Kingsville        76.19  22  P    P      18 14 53.5 -0.5
     baz=206
Q61A Milford           76.19  29  P    P      18 14 53.7 -0.4
     baz=212
M52A Chesterland       76.22  23 eP    P      18 14 55.1 +0.9
     comp=Z,102nm,1.8s
M52A Chesterland       76.22  23  P    P      18 14 53.7 -0.5
     baz=207
P59A Jarrettsville     76.36  27  P    P      18 14 55.0  0.0
     baz=211
M53A WI Miller and     76.36  24  P    P      18 14 55.2 +0.2
     baz=207
N55A Marion Center     76.39  25 eP    P      18 14 55.4 +0.2
     comp=Z,22nm,1.1s
N55A Marion Center     76.39  25  P    P      18 14 55.9 +0.7
     baz=209
O57A Amberson          76.40  26  P    P      18 14 55.3  0.0
     baz=210
K48A Perry             76.46  21  P    P      18 14 55.6  0.0
     baz=204
E04D Cinebar           76.49 352  P    P      18 14 56.0 +0.3
     baz=170
SPMN Marine on St.     76.50  14 eP    P      18 14 55.4 -0.4
     comp=Z,32nm,1.5s
SPMN Marine on St.     76.50  14  P    P      18 14 55.7 -0.1
     baz=197
J46A Howard City       76.51  19  P    P      18 14 55.9 +0.1
     baz=203
LON  Longmire          76.60 353 eP    P      18 14 55.8 -0.6
     comp=Z,8.2nm,1.1s
LON  Longmire          76.60 353 eP    P      18 14 55.8 -0.6
LON                              pmax  pmax
     comp=Z,8.0nm,1.1s
O58A Lewisberry        76.60  27  P    P      18 14 56.0 -0.5
     baz=211
D08A Wollman Farm,     76.64 355 eP    P      18 14 56.9 +0.5
     comp=Z,21nm,1.5s
J47A Sunmer            76.65  20 eP    P      18 14 56.3 -0.3
     comp=Z,36nm,1.3s
J47A Sunmer            76.65  20  P    P      18 14 56.7 +0.1
     baz=204
K49A Clarkson          76.65  21  P    P      18 14 56.1 -0.6
     baz=205
SSPA Standing Stone    76.67  26 eP    P      18 14 56.6 -0.2
     comp=Z,42nm,1.6s
SSPA Standing Stone    76.67  26  P    P      18 14 56.5 -0.3
     baz=210
ALLY Alegheny Colle    76.73  24 eP    P      18 14 57.5 +0.4
     comp=Z,112nm,1.9s
N56A West Decatur      76.76  25  P    P      18 14 57.6 +0.2
     baz=209
PAGS Pennsylvania G    76.77  27 eP    P      18 14 57.3  0.0
     comp=Z,21nm,1.0s
M54A Oil Creek Stat    76.78  24 eP    P      18 14 57.2 -0.2
     comp=Z,13nm,1.0s
M54A Oil Creek Stat    76.78  24  P    P      18 14 57.8 +0.4
     baz=208
P60A Greenville        76.85  28  P    P      18 14 57.6 -0.2
     baz=212
N57A Milroy            76.90  26  P    P      18 14 57.7 -0.4
     baz=210
K50A Casco             76.91  22 eP    P      18 14 57.7 -0.4
     comp=Z,35nm,1.0s
K50A Casco             76.91  22  P    P      18 14 57.8 -0.4
     baz=206
G39A Holcombe          76.91  15  P    P      18 14 58.0 -0.1
     baz=198,SNR=8.4
L53A Girard            76.96  24  P    P      18 14 58.1 -0.4
     baz=208
H43A Windswept, Lux    76.96  17 eP    P      18 14 58.1 -0.2
     comp=Z,24nm,1.1s
H43A Windswept, Lux    76.96  17  P    P      18 14 57.9 -0.5
     baz=201
I45A Fountain          76.97  19  P    P      18 14 57.3 -1.2
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	baz=203						
LTY	Liberty	76.99	354	*e*P	P	18 14 58.2	-0.3
	comp=Z,26nm,1.7s						
J48A	Bridge Port	77.01	21	*e*P	P	18 14 59.1	+0.4
	comp=Z,30nm,1.0s						
J48A	Bridge Port	77.01	21	P	P	18 14 59.3	+0.6
	baz=205						
F37A	Hinrichs Farm,	77.02	14	P	P	18 14 57.9	-0.8
	baz=197						
PSUB	Penn St. - Bra	77.02	28	*e*P	P	18 14 59.4	+0.6
	comp=Z,36nm,1.4s						
D05A	Enumclaw	77.05	353	*e*P	P	18 14 58.7	-0.1
	comp=Z,84nm,1.7s						
O59A	Robesonia	77.05	27	P	P	18 14 58.3	-0.7
	baz=211						
M55A	Ridgway	77.07	25	P	P	18 14 58.6	-0.4
	baz=209						
I46A	Reed City	77.11	19	P	P	18 14 59.4	+0.2
	baz=203						
G40A	Rib Lake	77.12	15	*e*P	P	18 14 59.1	-0.1
	comp=Z,61nm,1.5s						
G40A	Rib Lake	77.12	15	P	P	18 14 59.2	0.0
	baz=199,SNR=14						
D04E	Lakebay	77.13	352	P	P	18 14 58.9	-0.3
	baz=170						
K51A	Iona Station	77.22	22	P	P	18 14 59.2	-0.7
	baz=207						
J49A	Marlette	77.27	21	P	P	18 14 59.3	-0.8
	baz=205						
M56A	Emporium	77.30	25	P	P	18 15 00.2	-0.1
	baz=210						
C09A	Chrisman Ranch	77.33	356	*e*P	P	18 15 00.7	+0.3
	comp=Z,63nm,1.6s						
EGMT	Eagleton	77.35	1	*e*P	P	18 15 00.4	-0.1
	comp=Z,41nm,1.3s						
EGMT	Eagleton	77.35	1	P	P	18 15 00.5	-0.1
	baz=182,SNR=9.8						
O60A	Telford	77.37	28	P	P	18 14 59.6	-1.1
	baz=212						
F38A	Pierce - Schro	77.40	14	P	P	18 15 00.7	-0.1
	baz=198,SNR=11						
I47A	Gladwin	77.45	20	*e*P	P	18 15 00.9	-0.3
	comp=Z,122nm,1.9s						
I47A	Gladwin	77.45	20	P	P	18 15 01.4	+0.3
	baz=204						
D03D	Eldon	77.52	352	P	P	18 15 01.7	+0.3
	baz=170						
L54A	Sinclairville	77.54	24	P	P	18 15 01.6	-0.1
	baz=208						
F39A	Loretta	77.56	15	P	P	18 15 01.7	0.0
	baz=198,SNR=17						
H45A	Beulah	77.57	18	P	P	18 15 01.8	+0.1
	baz=203						
NEW	Newport	77.72	356	*e*P	P	18 15 03.0	+0.4
	comp=Z,50nm,1.4s						
NEW	Newport	77.72	356	*e*P	P	18 15 03.0	+0.4
NEW				pmax	pmax		
	comp=Z,50nm,1.4s						
NEW	Newport	77.72	356	P	P	18 15 02.6	0.0
	baz=175,SNR=14						
H46A	Fife Lake	77.73	19	P	P	18 15 02.5	-0.2
	baz=203						
N59A	State Game Lan	77.73	27	*e*P	P	18 15 04.0	+1.1
	comp=Z,50nm,1.9s						
N59A	State Game Lan	77.73	27	P	P	18 15 03.0	+0.2
	baz=212						
F40A	Park Falls	77.75	15	P	P	18 15 02.9	+0.1
	baz=199,SNR=13						
L55A	Hinsdale	77.81	25	P	P	18 15 03.3	+0.1
	baz=209						
I48A	Sherman Twp	77.85	20	P	P	18 15 03.4	+0.1
	baz=205						
I49A	Point Hope	77.89	21	P	P	18 15 03.4	-0.2
	baz=205						
MDND	Maddock	77.93	8	*e*P	P	18 15 03.8	+0.1
	comp=Z,46nm,1.3s						
MDND	Maddock	77.93	8	P	P	18 15 03.3	-0.4
	baz=191						
N60A	Cedar Hill Far	77.96	28	P	P	18 15 03.1	-0.9
	baz=212						
BRNJ	Basking Ridge	78.02	28	*e*P	P	18 15 04.3	0.0
	comp=Z,38nm,1.4s						
J52A	Paris	78.03	23	P	P	18 15 03.8	-0.6
	baz=207						
G45A	Suttons Bay	78.06	19	*e*P	P	18 15 04.5	0.0
	comp=Z,58nm,1.2s						
G45A	Suttons Bay	78.06	19	P	P	18 15 03.9	-0.6
	baz=203						
H47A	Mio	78.07	20	P	P	18 15 04.6	0.0
	baz=204						
DGMT	Dagmar	78.07	5	*e*P	P	18 15 04.6	0.0
	comp=Z,41nm,1.0s						
DGMT	Dagmar	78.07	5	P	P	18 15 04.5	0.0
	baz=187,SNR=8.7						
E38A	The Farm, Brul	78.08	14	*e*P	P	18 15 04.7	+0.1
	comp=Z,28nm,1.4s						
E38A	The Farm, Brul	78.08	14	P	P	18 15 04.4	-0.2
	baz=198						
K54A	Basiliko Farm,	78.09	24	P	P	18 15 04.7	-0.1
	baz=209						
TYNO	Tyneside	78.11	23	P	P	18 15 04.5	-0.2
	baz=208						
B05A	Bryant	78.13	353	P	P	18 15 04.9	+0.1
	baz=171						
COWI	Conover	78.15	16	*e*P	P	18 15 04.6	-0.4
	comp=Z,91nm,2.0s						
KSPA	Keystone Colle	78.28	27	*e*P	P	18 15 05.0	-0.8
	comp=Z,11nm,1.0s						
BASO	Ashfield	78.32	22	P	P	18 15 06.2	+0.2
	baz=206						
I51A	Listowel	78.34	22	P	P	18 15 06.2	+0.1
	baz=207						
WALA	Waterton Lakes	78.39	359	*e*P	P	18 15 06.9	+0.5
	comp=Z,24nm,1.4s						
M59A	Waymart	78.40	27	P	P	18 15 06.2	-0.3
	baz=212						
K55A	Perry	78.42	25	P	P	18 15 06.4	-0.2
	baz=209						
H48A	Harrisville	78.42	20	*e*P	P	18 15 06.7	+0.2
	comp=Z,48nm,1.3s						
H48A	Harrisville	78.42	20	P	P	18 15 06.6	0.0
	baz=205						
STCO	Saint Catharin	78.45	24	P	P	18 15 06.5	-0.1
	baz=208						
MMNY	Mt. Morris Dam	78.48	25	*e*P	P	18 15 06.8	-0.1
	comp=Z,96nm,1.7s						
ACTO	Acton	78.49	23	P	P	18 15 07.1	+0.2
	baz=208						
G46A	Petoskey	78.54	19	P	P	18 15 07.5	+0.4
	baz=204						
PAL	Palisades	78.56	28	P	P	18 15 06.9	-0.5
	baz=213						
BWLO	Walkerton	78.59	22	P	P	18 15 07.5	+0.1
	baz=207						
A04D	Lummi Island	78.64	353	P	P	18 15 07.5	-0.1
	baz=170						
PGC	Sidney	78.66	352	*e*P	P	18 15 07.8	+0.2
	comp=Z,38nm,1.3s						
MEDO	Medina	78.66	24	*e*P	P	18 15 07.9	0.0
	comp=Z,20nm,1.2s						
MEDO	Medina	78.66	24	P	P	18 15 07.2	-0.6
	baz=209						
F45A	CMU Biological	78.69	18	P	P	18 15 07.6	-0.4
	baz=203						
J54A	Appleton	78.69	24	*e*P	P	18 15 06.8	-1.2
	comp=Z,9.0nm,0.7s						
J54A	Appleton	78.69	24	P	P	18 15 06.9	-1.0
	baz=209						
G47A	Hillman	78.70	20	P	P	18 15 07.1	-0.9
	baz=204,SNR=11						
BINY	Binghamton	78.74	26	*e*P	P	18 15 08.5	+0.1
	comp=Z,34nm,1.4s						
BINY	Binghamton	78.74	26	P	P	18 15 08.9	+0.5
	baz=211						
I53A	Kortright Cn E	78.84	23	P	P	18 15 08.5	-0.4
	baz=208						
M61A	Granite Spring	78.88	28	P	P	18 15 09.7	+0.6
	baz=213						
AGMN	Agassiz Nation	78.91	11	*e*P	P	18 15 09.1	0.0
	comp=Z,86nm,1.9s						
AGMN	Agassiz Nation	78.91	11	P	P	18 15 08.9	-0.2
	baz=194						
E43A	Lone Tree Farm	78.94	17	*e*P	P	18 15 09.4	+0.1
	comp=Z,49nm,1.4s						
E43A	Lone Tree Farm	78.94	17	P	P	18 15 09.2	-0.1
	baz=202						
J55A	Hilton	78.98	25	*e*P	P	18 15 09.9	+0.3
	comp=Z,35nm,1.4s						
J55A	Hilton	78.98	25	P	P	18 15 08.9	-0.7
	baz=210						
BMRO	Meriville Lake	78.99	22	P	P	18 15 09.3	-0.3
	baz=207						
CASY	Casey	79.06	196	*e*P	P	18 15 09.6	-0.3
	comp=Z,60nm,1.6s						
PKRO	Pickering	79.14	23	P	P	18 15 10.5	0.0
	baz=208						
D41A	Chassel	79.19	16	*e*P	P	18 15 10.7	0.0
	comp=Z,120nm,1.9s						
D41A	Chassel	79.19	16	P	P	18 15 10.6	0.0
	baz=200						
DRCO	St. Marys Ceme	79.20	24	P	P	18 15 10.7	0.0
	baz=209						
YLE	Yale	79.22	29	*e*P	P	18 15 10.7	-0.3
	comp=Z,40nm,1.0s						
KSCT	Kent School, K	79.34	28	*e*P	P	18 15 11.1	-0.5
	comp=Z,18nm,1.1s						
WLVO	Wesleyville	79.34	24	P	P	18 15 11.4	-0.1
	baz=209						
EYMN	Ely	79.37	14	*e*P	P	18 15 11.1	-0.6
	comp=Z,12nm,0.9s						
EYMN	Ely	79.37	14	P	P	18 15 11.2	-0.5
	baz=198,SNR=11						
SYO	Syowa Base	79.39	170⇑	*e*P	P	18 15 09.4	-2.2
SYO	Syowa Base	79.39	170⇓	*i*pP	P	18 15 13.0	+1.4
E44A	Grand Marais A	79.44	18	*e*P	P	18 15 12.7	+0.6
	comp=Z,30nm,0.8s						
E44A	Grand Marais A	79.44	18	P	P	18 15 11.7	-0.4
	baz=203						
TOBO	Tobermory, Bru	79.45	21	P	P	18 15 12.4	+0.3
	baz=206						
H52A	Wyevale	79.47	23	P	P	18 15 12.1	-0.1
	baz=208						
E46A	Sault Ste Mari	79.65	19	P	P	18 15 13.5	+0.3
	baz=204,SNR=14						
F48A	Evansville	79.66	20	P	P	18 15 13.2	-0.1
	baz=205						
F49A	Sandfield	79.77	21	P	P	18 15 13.6	-0.3
	baz=206						
SADO	Sadowa	79.83	23	*e*P	P	18 15 14.0	-0.2
	comp=Z,20nm,1.1s						
C40A	Isle Royale Na	79.85	15	*e*P	P	18 15 14.0	-0.3
	comp=Z,16nm,0.9s						
C40A	Isle Royale Na	79.85	15	P	P	18 15 13.8	-0.4
	baz=200,SNR=13						
I55A	Frankford	79.85	24	P	P	18 15 14.4	+0.1
	baz=210						
PECO	Prince Edward	79.86	25	*e*P	P	18 15 14.7	+0.3
	comp=Z,28nm,1.2s						
PECO	Prince Edward	79.86	25	P	P	18 15 14.2	-0.2
	baz=210						
KLBO	Killbear Provi	79.99	22	P	P	18 15 14.8	-0.2
	baz=208						
E47A	Iron Bridge	80.03	20	P	P	18 15 15.5	+0.3
	baz=205,SNR=8.0						
DELO	Deloro Mine	80.14	24	*e*P	P	18 15 15.7	-0.2
	comp=Z,43nm,1.5s						
DELO	Deloro Mine	80.14	24	P	P	18 15 15.5	-0.4
	baz=210,SNR=5.9						
D46A	Sault St. Mari	80.21	19	P	P	18 15 16.3	0.0
	baz=204						
CAN	Canberra	80.27	235	*e*P	P	18 15 17.4	+0.3
	comp=Z,39nm,1.2s						
CAN	Canberra	80.27	235	*e*P	P	18 15 17.4	+0.3
CAN				pmax	pmax		
	comp=Z,39nm,1.2s						
G53A	Haliburton	80.31	23	P	P	18 15 16.4	-0.4
	baz=209						
H55A	Tweed	80.32	24	P	P	18 15 17.8	+1.0
	baz=210,SNR=40						
BUKO	Buck Lake	80.33	22	P	P	18 15 17.0	+0.1
	baz=208						
E48A	Lockeyer	80.38	20	P	P	18 15 17.5	+0.3
	baz=206,SNR=11						
M65A	Busby, Falmout	80.41	30	P	P	18 15 17.3	-0.1
	baz=215						
LLLB	Lillooet	80.42	353	*e*P	P	18 15 16.9	-0.5
	comp=Z,32nm,1.4s						
BANO	Bancroft	80.47	24	P	P	18 15 17.5	-0.2
	baz=209						
F51A	Arnstein	80.59	22	P	P	18 15 18.2	-0.1
	baz=208,SNR=7.9						
D47A	Chapleau	80.62	19	P	P	18 15 18.2	-0.2
	baz=205,SNR=12						
ACCN	Adirondack Com	80.65	27	*e*P	P	18 15 18.9	+0.1
	comp=Z,33nm,1.5s						
F52A	Sundridge	80.67	22	P	P	18 15 18.6	-0.2
	baz=208						
H56A	Elgin	80.69	25	P	P	18 15 19.1	+0.3
	baz=211						
E50A	Wahnapitae	80.77	21	P	P	18 15 19.1	-0.1
	baz=207,SNR=7.6						
PLVO	Plevna	80.78	24	*e*P	P	18 15 18.3	-1.0
	comp=Z,24nm,0.7s						
PLVO	Plevna	80.78	24	P	P	18 15 19.0	-0.3
	baz=210,SNR=16						
HRV	Adam Dziewonsk	80.79	29	P	P	18 15 18.4	-1.0
	baz=215						
ULM	Lac du Bonnet	80.80	10	P	P	18 15 18.6	-0.8
	comp=Z,6.1nm,0.6s,baz=247,slow=4.1,SNR=7.4						
ULM	Lac du Bonnet	80.80	10	*e*P	P	18 15 18.5	-0.8
	comp=Z,19nm,1.3s						
ULM	Lac du Bonnet	80.80	10	*e*P	P	18 15 18.5	-0.8
ULM				pmax	pmax		
	comp=Z,19nm,1.3s						
NCB	Newcomb	80.93	26	*e*P	P	18 15 20.7	+0.6
	comp=Z,36nm,1.4s						
G55A	Calabogie	81.09	24	P	P	18 15 20.6	-0.4
	baz=210						
D48A	Paudash Townsh	81.11	20	P	P	18 15 20.9	-0.1
	baz=206,SNR=8.0						
ALGO	Algonquin Park	81.24	23	P	P	18 15 21.8	+0.1
	baz=209						
E51A	G1948 Merrick	81.27	22	P	P	18 15 22.0	+0.1
	baz=208						
PEMO	Pembroke	81.27	24	P	P	18 15 22.0	+0.1
	baz=210						
E52A	Mattawa	81.32	23	P	P	18 15 22.0	-0.2
	baz=209						
D49A	Beulah Townshi	81.34	20	P	P	18 15 22.4	+0.1
	baz=206,SNR=7.5						
LONY	Lake Ozonia	81.34	26	*e*P	P	18 15 21.5	-0.8
	comp=Z,19nm,1.1s						
LONY	Lake Ozonia	81.34	26	P	P	18 15 22.2	-0.2
	baz=212,SNR=5.6						
TOO	Toolangi	81.59	232	*e*P	P	18 15 24.2	+0.1
	comp=Z,137nm,1.8s						
TOO	Toolangi	81.59	232	*e*P	P	18 15 24.2	+0.1
TOO				pmax	pmax		
	comp=Z,137nm,1.8s						
ORIO	Orleans, Innes	81.70	25	P	P	18 15 23.8	-0.4
	baz=211						
F55A	Otter Lake	81.73	24	P	P	18 15 23.9	-0.4
	baz=211						
E53A	Dumoine, Ponti	81.74	23	P	P	18 15 24.3	-0.1
	baz=210						
FRNY	Flat Rock	81.90	26	*e*P	P	18 15 25.6	+0.3
	comp=Z,38nm,1.6s						
E54A	Lac Daplat, Po	81.95	23	P	P	18 15 25.5	0.0
	baz=210						
D52A	ZEK Kipawa Sen	82.01	22	P	P	18 15 26.0	+0.2
	baz=209,SNR=6.6						
LBNH	Lisbon	82.06	28	P	P	18 15 26.2	0.0
	baz=214						
D53A	Lac Vacive, Po	82.34	23	*e*P	P	18 15 27.3	-0.2
	comp=Z,41nm,1.8s						
D53A	Lac Vacive, Po	82.34	23	P	P	18 15 27.4	-0.1
	baz=209,SNR=7.0						
TRQ	Mont Tremblant	82.71	25	*e*P	P	18 15 29.3	-0.3
D54A	Lac Fusel, La	82.75	23	P	P	18 15 29.3	-0.4
	baz=210						
MOQ	Mont Orford	82.82	27	*e*P	P	18 15 30.4	+0.2
MAW	Mawson	82.95	178	P	P	18 15 31.0	+0.5
	comp=Z,13nm,0.8s,baz=202,slow=6.9,SNR=24						
MAW	Mawson	82.95	178	*e*P	P	18 15 30.8	+0.2
	comp=Z,5.0nm,1.0s						
MAW	Mawson	82.95	178	*e*P	P	18 15 30.8	+0.2
MAW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VLDQ	Val d'Or	83.32	22	*e*P	P	18 15 32.5	0.0
	comp=Z,30nm,1.5s						
LSQQ	Lebel-sur-Quev	84.30	22	P	P	18 15 37.0	-0.5
	baz=210						
FFC	Flin Flon	84.47	6	*e*P	P	18 15 38.0	-0.3
	comp=Z,49nm,1.6s						
FFC	Flin Flon	84.47	6*c*	*e*P	P	18 15 38.3	0.0
MATQ	Matagami	84.69	21	P	P	18 15 39.6	0.0
	baz=209						
CHGQ	Chibougamau	85.90	23	P	P	18 15 45.1	-0.5
	baz=212						
STKA	Stephens Creek	87.33	235	P	P	18 15 53.2	-0.1
	comp=Z,4.8nm,1.2s,baz=136,slow=9.5,SNR=5.3						
STKA	Stephens Creek	87.33	235	*e*P	P	18 15 52.7	-0.6
	comp=Z,10nm,1.7s						
STKA	Stephens Creek	87.33	235	*e*P	P	18 15 52.7	-0.6
STKA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
DLBC	Dease Lake	89.09	351	*e*P	P	18 16 00.7	-0.2
	comp=Z,20nm,1.3s						
YKA	Yellowknife Ar	91.86	359	P	P	18 16 13.1	-0.4
	comp=Z,1.1nm,0.8s,baz=175,slow=4.3,SNR=10						
YKA				PKKP	PKKPdf	18 33 31.2	-0.8
	comp=Z,0.2nm,0.3s,baz=342,slow=3.9,SNR=4.5						
YKW3	Yellowknife Ar	91.93	359	*e*P	P	18 16 13.1	-0.7
	comp=Z,13nm,1.5s						
SCHQ	Schefferville	92.58	24	P	P	18 16 17.6	+0.5
	comp=Z,4.9nm,0.6s,baz=234,slow=12,SNR=3.6						
KNK	Knik Glacier	95.51	343	*e*P	P	18 16 29.5	-1.0
	comp=Z,58nm,1.8s						
MENT	Mentasta	95.75	346	*e*P	P	18 16 30.2	-1.3
	comp=Z,8.4nm,1.2s						
PAX	Paxson	96.16	345	*e*P	P	18 16 32.3	-1.1
	comp=Z,19nm,1.7s						
PAX	Paxson	96.16	345	*e*P	P	18 16 32.3	-1.1
PAX				pmax	pmax		
	comp=Z,19nm,1.7s						
DHY	Denali Highway	96.68	345	*e*P	P	18 16 35.5	-0.4
	comp=Z,12nm,1.7s						
RIDG	Independent Ri	96.70	346	*e*P	P	18 16 34.6	-1.2
	comp=Z,15nm,1.1s						
RND	Reindeer	97.31	344	*e*P	P	18 16 38.5	-0.1
	comp=Z,35nm,1.8s						
AS31	Alice Springs	97.61	237	*e*P	P	18 16 40.1	-0.9
	comp=Z,4.5nm,1.6s						
ASAR	Alice Springs	97.61	237	P	P	18 16 40.3	-0.7
	comp=Z,0.7nm,0.8s,baz=119,slow=4.5,SNR=6.5						
MCK	McKinley	97.61	344	*e*P	P	18 16 38.1	-1.8
	comp=Z,14nm,1.2s						
MCK	McKinley	97.61	344	*e*P	P	18 16 38.1	-1.8
MCK				pmax	pmax		
	comp=Z,14nm,1.2s						
EPYK	Eagle Plains	97.62	350	P	Pdif	18 16 40.3	+0.3
	baz=158						
PPLA	Purkeypile	97.72	343	*e*P	P	18 16 40.1	-0.5
	comp=Z,23nm,1.6s						
KTH	Kantishna Hill	97.94	343	*e*P	P	18 16 40.9	-0.5
	comp=Z,24nm,1.1s						
ILAR	Eielson Array	98.04	346	P	P	18 16 41.5	-0.3
	comp=Z,0.5nm,0.8s,baz=187,slow=4.9,SNR=5.1						
ILB	Eielson Array	98.04	346	*e*P	P	18 16 41.0	-0.8
	comp=Z,1.7nm,0.9s						
WRH	Wood River Hil	98.05	345	*e*P	P	18 16 40.6	-1.2
	comp=Z,18nm,1.5s						
BWN	Browne	98.11	344	*e*P	P	18 16 38.1	-4.0
	comp=Z,24nm,0.8s						
BPAW	Bear Paw Mtn.	98.41	344	*e*P	P	18 16 42.5	-1.0
	comp=Z,40nm,1.9s						
FYU	Fort Yukon	99.26	347	*e*P	Pdif	18 16 45.2	-2.0
	comp=Z,30nm,1.5s						
H01W1	Cape Leeuwin H	102.56	217	T	T	20 11 45.3	
	baz=138,slow=76,SNR=7.6						
H01W2	Cape Leeuwin H	102.56	217	T	T	20 11 47.4	
	baz=138,slow=76,SNR=6.5						
H01W3	Cape Leeuwin H	102.57	217	T	T	20 11 44.9	
	baz=138,slow=76,SNR=6.4						
BILL	Bilibino	114.24	336⇓	*e*PKIKP	PKPdf	18 21 40.4	-4.3
BILL				*e*		18 22 36.9	
BILL				*e*SS	SS	18 38 42.5	+11
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,137nm,18.0s						
TOA1	Torodi Ar. Sit	116.66	90	*e*PKPdf	PKiKP	18 21 53.1	+2.1
TORD	Torodi Ar. Bea	116.66	90	PKP	PKiKP	18 21 53.1	+2.1
	comp=Z,1.2nm,1.0s,baz=242,slow=3.1,SNR=3.9						
ESDC	Sonseca Array	121.22	59	PKP	PKiKP	18 21 59.2	0.0
	comp=Z,0.4nm,0.4s,baz=261,slow=2.4,SNR=7.2						
EKA	Eskdalemuir Ar	124.24	41	PKP	PKiKP	18 22 07.4	+2.9
	comp=Z,1.2nm,0.8s,baz=283,slow=1.2,SNR=5.2						
TIXI	Tiksi	127.03	340	PKP	PKPdf	18 22 08.9	-0.3
	comp=Z,2.5nm,0.9s,baz=74,slow=3.6,SNR=4.9						
TIXI	Tiksi	127.03	340*c*	*i*PKIKP	PKPdf	18 22 08.5	-0.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KLR	Kul'dur	128.78	311	*i* PKIKP	PKPdf	18 22 13.2	0.0
YAK	Yakutsk	129.08	328	*e*PKPdf	PKPdf	18 22 11.6	-1.7
YAK	Yakutsk	129.08	328	*e*PKIKP	PKPdf	18 22 09.9	-3.4
NOA	NORSAR Array B	131.35	33	PKP	PKiKP	18 22 18.5	-0.2
	comp=Z,1.8nm,1.1s,baz=297,slow=2.1,SNR=2.8						
DAVA	Damuels	132.18	51	*i* PKiKP	PKiKP	18 22 20.6	-0.3
	comp=Z,12nm,1.6s						
FETA	Feichten	132.76	52	*i* PKiKP	PKPdf	18 22 21.1	+0.1
	comp=Z,13nm,1.3s,SNR=6.1						
RETA	Reutte	132.78	51	*i* PKiKP	PKPdf	18 22 21.0	0.0
	comp=Z,6.7nm,1.5s						
MOTA	Moosalm	133.01	51	*i* PKiKP	PKPdf	18 22 21.7	+0.2
	comp=Z,9.9nm,1.0s						
SQTA	Sankt Quirin	133.09	52	*i* PKiKP	PKPdf	18 22 21.7	+0.1
	comp=Z,21nm,1.3s,SNR=7.3						
WATA	Walderalm	133.34	51	*i* pPKPdf	PKiKP	18 22 23.8	+0.5
	comp=Z,2.1nm,0.6s						
WTTA	Wattenberg	133.38	51	*i* PKiKP	PKPdf	18 22 22.6	+0.4
	comp=Z,23nm,1.6s,SNR=6.3						
ABTA	Abfaltersbach	133.99	52	*i* PKiKP	PKPdf	18 22 23.0	-0.3
	comp=Z,11nm,1.9s						
CLL	Collm	134.01	46⇓	*i*PKIKP	PKPdf	18 22 23.2	+0.2
CLL				pmax	pmax		
	comp=Z,45nm,2.2s						
CLL	Collm	134.01	46⇓	*i*PKPdf	PKPdf	18 22 23.2	+0.2
	comp=Z,45nm,2.2s						
CLL				*i*		18 22 37.5	
CLL				Lm	MLR	19 24 00.0	
	comp=Z,100nm,21.1s						
KBA	Koelnbreinsper	134.55	52	*i* PKPdf	PKPdf	18 22 22.0	-2.4
	comp=Z,3.7nm,1.0s						
KHC	Kasperske Hory	134.58	49	*e*PKIKP	PKPdf	18 22 23.9	-0.3
KHC				*e*		18 22 29.8	
KHC	Kasperske Hory	134.58	49	*e*PKP	PKPdf	18 22 23.9	-0.3
KHC				*e*pPKP	sPKPdf	18 22 29.8	+1.2
BRG	Berggiesshubel	134.65	46	*e*PKP	PKPdf	18 22 24.5	+0.3
	comp=Z,8.2nm,1.2s						
BRG	Berggiesshubel	134.65	46	*e*PKIKP	PKPdf	18 22 24.5	+0.3
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GEC2	GERESS Array S	134.69	49	*e*PKPdf	PKPdf	18 22 24.0	-0.5
GEC2	GERESS Array S	134.69	49	*e*PKIKP	PKPdf	18 22 24.0	-0.5
GERES	GERESS Array B	134.69	49	PKP	PKPdf	18 22 24.4	-0.1
	comp=Z,1.6nm,0.9s,baz=276,slow=1.2,SNR=10						
MYKA	Terra Mystica	134.77	52	*i* PKPdf	PKPdf	18 22 23.1	-1.6
	comp=Z,4.2nm,1.0s						
MOA	Molln	135.13	51	*i* PKPdf	PKPdf	18 22 24.7	-0.6
	comp=Z,4.0nm,1.5s						
OBKA	Obir	135.40	52	*i* PKPdf	PKPdf	18 22 24.1	-1.8
	comp=Z,6.4nm,1.2s						
SOKA	Soboth	135.72	52	*i* PKPdf	PKPdf	18 22 24.9	-1.6
	comp=Z,5.6nm,0.9s						
TREC	Trest	135.81	48	*e*PKIKP	PKPdf	18 22 26.5	0.0
TREC				*e*		18 22 30.6	
TREC	Trest	135.81	48	*e*PKP	PKPdf	18 22 26.5	0.0
TREC				*e*pPKP	pPKPdf	18 22 30.6	+0.7
ARSA	Arzberg	136.02	51	*i* PKiKP	PKPdf	18 22 27.1	+0.1
	comp=Z,6.0nm,1.1s						
OSTC	Ostas	136.12	47	*e*PKP	PKiKP	18 22 27.9	-0.8
CONA	Conrad Observa	136.20	50	*i* PKPdf	PKPdf	18 22 26.9	-0.5
	comp=Z,6.7nm,1.5s						
DPC	Dobruska-Polom	136.22	47	*e*PKIKP	PKPdf	18 22 26.7	-0.5
DPC	Dobruska-Polom	136.22	47	*e*PKP	PKPdf	18 22 26.7	-0.5
KRUC	Moravsky	136.43	49	*e*PKP	PKPdf	18 22 26.9	-0.7
VRAC	Vranov	136.53	48	*e*PKP	PKPdf	18 22 27.3	-0.5
NJ2	Nanjing	136.81	286	*e*PKP	PKPdf	18 22 28.9	+0.1
MORC	Moravsky Berou	137.08	47	*e*PKP	PKPdf	18 22 28.0	-0.9
MODS	Modra-Piesok	137.09	50	*e*PKIKP	PKPdf	18 22 28.4	-0.5
MODS	Modra-Piesok	137.09	50	*e*PKP	PKPdf	18 22 28.3	-0.6
JAVC	Velka Javorina	137.29	49	*e*PKP	PKPdf	18 22 30.0	+0.7
BOD	Bodaibo	137.81	325	*e*PKIKP	PKPdf	18 22 29.1	-0.8
FIA0	FINESS Array S	137.89	29	*e*PKPdf	PKPdf	18 22 28.8	-1.1
FIA0	FINESS Array S	137.89	29	*e*PKIKP	PKPdf	18 22 28.8	-1.1
FINES	FINESS Array B	137.89	29	PKP	PKPdf	18 22 28.8	-1.1
	comp=Z,1.9nm,0.9s,baz=289,slow=4.3,SNR=3.2						
VYHS	Vyhne	138.11	49	*e*PKIKP	PKPdf	18 22 31.4	+0.6
VYHS	Vyhne	138.11	49	*e*PKP	PKPdf	18 22 31.3	+0.5
GSI	Gunungsitoli	140.33	230	*e*PKPdf	PKPdf	18 22 34.2	-1.7
BUR08	Bucovina Ar. S	142.46	49	*e*PKPdf	PKPdf	18 22 35.2	-3.6

IDI	**Anoyia**	**143.22**	**70**	PKhKP	PKPpre	18 22 37.0	
	comp=Z,12nm,0.8s,baz=324,slow=2.8,SNR=4.7						
MLR	**Muntele Rosu**	**143.40**	**53**	PKhKP	PKPpre	18 22 37.6	
	comp=Z,16nm,1.0s,baz=50,slow=2.8,SNR=15						
MLR	**Muntele Rosu**	**143.40**	**53**	*e*PKPdf	PKPab	18 22 37.0	+0.3
MLR	**Muntele Rosu**	**143.40**	**53**	*e*PKIKP	PKPab	18 22 37.0	+0.3
ALN	**Alexandroupoli**	**144.09**	**60**	*e*PKPdf	PKPbc	18 22 40.0	+0.2
AKASG	**Malin Array Be**	**144.10**	**43**	PKP	**PKPab**	**18 22 39.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=281,slow=3.8,SNR=36						
AKBB	**Malin Array Si**	**144.10**	**43**	*e*PKPdf	**PKPab**	**18 22 37.9**	**-1.1**
AKBB	**Malin Array Si**	**144.10**	**43**	*e*PKIKP	**PKPab**	**18 22 37.9**	**-1.1**
BTO	**Baotou**	**144.43**	**299**	PKP	PKPbc	18 22 41.4	+0.4
PRGR	**Permogore**	**144.72**	**19**	⇓*i*PKIKP	PKPbc	18 22 41.2	+0.2
PRGR				*e*		18 26 01.8	
PRGR				pmax	pmax		
	comp=Z,65nm,1.0s						
KIS	**Kishinev**	**145.00**	**49**	⇓*i*P	PKPbc	18 22 42.0	-0.4
	comp=Z,420nm,2.0s						
KIS	**Kishinev**	**145.00**	**49**	⇓*i*PKIKP	PKPbc	18 22 42.0	-0.4
KIS				pmax	pmax		
	comp=Z,420nm,2.0s						
KARP	**Karpathos**	**145.08**	**69**	*e*PKPbc	**PKPbc**	**18 22 43.0**	**-0.2**
ULN	**Ulaanbaatar**	**145.16**	**312**	*e*PKPbc	**PKPbc**	**18 22 42.5**	**-0.7**
ULN	**Ulaanbaatar**	**145.16**	**312**	*c* *i*PKIKP	**PKPbc**	**18 22 42.6**	**-0.6**
ULN				pmax	pmax		
	comp=Z,111nm,1.7s						
IRK	**Irkutsk**	**145.20**	**321**	*e*PKIKP	**PKPbc**	**18 22 42.5**	**-0.4**
IRK				pmax	pmax		
	comp=Z,145nm,2.0s						
TIRR	**Tirgusor**	**145.32**	**54**	*e*PKPbc	**PKPbc**	**18 22 43.3**	**-0.2**
TIRR	**Tirgusor**	**145.32**	**54**	*e*PKIKP	**PKPbc**	**18 22 43.3**	**-0.2**
XAN	**Xi'an**	**145.33**	**288**	*e*PKPbc	**PKPbc**	**18 22 43.6**	**-0.4**
BALB	**Balikesir**	**145.59**	**62**	*e*PKPdf	**PKPdf**	**18 22 44.2**	**-0.2**
SONM	**Songino Array**	**145.59**	**313**	PKPbc	**PKPdf**	**18 22 43.9**	**-0.4**
	comp=Z,12nm,0.9s,baz=94,slow=2.0,SNR=44						
TLY	**Talaya**	**145.80**	**320**	PKPbc	**PKPab**	**18 22 45.2**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=310,slow=0.7,SNR=20						
TLY	**Talaya**	**145.80**	**320**	*e*PKPdf	**PKPbc**	**18 22 45.1**	**+0.2**
TLY	**Talaya**	**145.80**	**320**	*c* *i*PKP2	**PKPab**	**18 22 45.2**	**-0.1**
TLY				pmax	pmax		
	comp=Z,219nm,1.6s						
OBN	**Obninsk**	**145.96**	**33**	⇓*i*PKP2	**PKPbc**	**18 22 45.4**	**+0.2**
OBN				*e*		18 26 09.6	
OBN				pmax	pmax		
	comp=Z,116nm,1.7s						
GYA	**Guiyang**	**146.05**	**274**	⇑*i*PKPbc	**PKPbc**	**18 22 46.4**	**-0.2**
GYA				PP	**PP**	**18 26 14.1**	**+5.3**
GYA				PKS	**PKSdf**	**18 26 23.4**	**+2.1**
MOS	**Moscow**	**146.07**	**31**	*e*PKP2	**PKPdf**	**18 22 44.8**	**+0.2**
MOS				pmax	pmax		
	comp=Z,62nm,1.2s						
CHAI	**Chaiyaphum**	**146.15**	**254**	P	**PKPab**	**18 22 48.4**	**+0.8**
	comp=Z,17μm,1.3s,comp=Z,315μm						
ZAK	**Zakamensk**	**146.56**	**318**	*e*PKP2	**PKPdf**	**18 22 46.0**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,33nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SLVN	**Son La**	**146.86**	**264**	*e*PKPbc	**PKPbc**	**18 22 49.6**	**+0.6**
MOY	**Mondy**	**147.26**	**321**	*e*PKP2	**PKPbc**	**18 22 49.8**	**+0.5**
MOY				pmax	pmax		
	comp=Z,63nm,1.6s						
ISP	**Isparta**	**147.77**	**65**	*e*PKPbc	**PKPbc**	**18 22 50.6**	**-0.6**
KIRV	**Kirov**	**148.31**	**19**	PKPbc	**PKPbc**	**18 22 51.6**	**0.0**
	comp=Z,15nm,0.8s,baz=215,slow=2.4,SNR=14						
LPSR	**Galich'ya Gora**	**148.55**	**35**	*e*PKP2	**PKPbc**	**18 22 51.7**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,80nm,1.0s						
KMI	**Kunming**	**149.11**	**270**	*e*PKPdf	**PKPdf**	**18 22 51.2**	**+0.3**
KMI				*e*PKPbc	**PKiKP**	**18 22 56.1**	**-0.3**
KMI	**Kunming**	**149.11**	**270**	PKPbc	**PKPbc**	**18 22 54.7**	**-0.4**
KMI				LR	LR		
	comp=Z,110nm,4.4s						
KMI				LR	LR		
	comp=Z,53nm,4.4s						
ANTO	**Ankara**	**149.33**	**61**	*e*PKPdf	**PKPdf**	**18 22 50.2**	**-0.4**
ANTO				*e*PKPbc	**PKPbc**	**18 22 55.0**	**0.0**
ANTO	**Ankara**	**149.33**	**61**	*e*PKIKP	**PKPdf**	**18 22 50.3**	**-0.4**
ANTO				*e*		18 22 55.0	
CD2	**Chengdu**	**149.38**	**281**	PKPbc	**PKPdf**	**18 22 50.0**	**-1.0**
VSR	**Storozhevoye**	**149.46**	**37**	*e*PKP2	**PKPbc**	**18 22 53.5**	**-1.4**
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						
LZH	**Lanzhou**	**149.54**	**292**	*e*PKPbc	**PKPdf**	**18 22 45.6**	**-5.7**
LZH				pPKP	PKiKP	18 22 57.0	+0.1
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
VORD	**Divnogorie**	**149.66**	**37**	*e*PKP2	**PKPbc**	**18 22 54.1**	**-1.2**
VORD				pmax	pmax		
	comp=Z,30nm,1.1s						
ILGA	**Ilgaz**	**149.82**	**59**	*e*PKPbc	**PKPbc**	**18 22 56.1**	**-0.3**
CM31	**Chiang Mai Arr**	**149.92**	**255**	*e*PKPbc	**PKPbc**	**18 22 56.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**149.92**	**255**	PKP	**PKPdf**	**18 22 52.0**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=271,slow=0.4,SNR=7.5						
CMAR				PKPbc	**PKPbc**	**18 22 57.0**	**0.0**
	comp=Z,16nm,0.9s,baz=172,slow=1.1,SNR=64						
BR131	**Keskin Array S**	**149.99**	**61**	*e*PKPdf	**PKPdf**	**18 22 51.3**	**-0.5**
BR131				*e*PKPbc	**sPKPdf**	**18 22 56.2**	**0.0**
BRTR	**Keskin Array B**	**149.99**	**61**	PKP	**PKPdf**	**18 22 50.8**	**-1.1**
	comp=Z,7.4nm,0.9s,baz=260,slow=2.6,SNR=9.3						
BRTR				PKPbc	**sPKPdf**	**18 22 56.6**	**+0.4**
	comp=Z,7.9nm,0.9s,baz=222,slow=1.9,SNR=34						
BRTR				PKPab	**PKPab**	**18 23 03.0**	**+0.4**
	comp=Z,7.9nm,1.0s,baz=180,slow=2.2,SNR=12						
CMMT	**Chiang Mai**	**150.08**	**256**	P	**PKPbc**	**18 22 57.3**	**-0.1**
	comp=Z,25nm,1.7s,comp=Z,375nm						
CHTO	**Chiang Mai**	**150.08**	**256**	*e*PKPdf	**PKPdf**	**18 22 52.2**	**-0.1**
CHTO				*e*PKPbc	**sPKPdf**	**18 22 57.0**	**+0.2**
CHTO	**Chiang Mai**	**150.08**	**256**	*e*PKIKP	**PKPdf**	**18 22 52.3**	**-0.1**
CHTO				*e*		18 22 57.0	
CSS	**Mathiatis**	**150.12**	**71**	*e*PKPbc	**PKPbc**	**18 22 56.7**	**-0.4**
EIL	**Elat**	**151.13**	**82**	PKP	**PKPdf**	**18 22 54.8**	**+1.0**
	comp=Z,7.9nm,0.9s,baz=19,slow=12,SNR=4.6						
EIL				PKPbc	**PKiKP**	**18 22 59.9**	**-0.2**
	comp=Z,14nm,0.9s,baz=331,slow=3.6,SNR=4.5						
MMAI	**Mount Meron Ar**	**151.81**	**75**	PKP	**PKPdf**	**18 22 54.8**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=81,slow=4.5,SNR=5.9						
MMAI				PKPbc	**PKPbc**	**18 23 00.9**	**-0.2**
	comp=Z,9.0nm,1.0s,baz=274,slow=5.6,SNR=10						
SVE	**Sverdlovsk**	**152.32**	**9**	*e*PKIKP	**PKPdf**	**18 22 54.5**	**-0.1**
SVE				pmax	pmax		
	comp=Z,19nm,1.4s						
GTA	**Gaotai**	**152.35**	**299**	*e*PKPbc	**PKPdf**	**18 22 54.8**	**-0.7**
ARU	**Arti**	**152.38**	**12**	PKP	**PKPdf**	**18 22 54.9**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=12,slow=0.3,SNR=9.9						
ARU				PKPbc	**PKPbc**	**18 23 00.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=283,slow=1.3,SNR=9.9						
ARU	**Arti**	**152.38**	**12**	*e*PKPdf	**PKPdf**	**18 22 54.4**	**-0.3**
ARU				*e*PKPbc	**PKPbc**	**18 23 01.4**	**-0.1**
ARU	**Arti**	**152.38**	**12**	*i* PKIKP	**PKPdf**	**18 22 54.8**	**+0.1**
ZAA0	**Zalesovo Array**	**152.91**	**338**	*e*PKPdf	**PKPdf**	**18 22 54.4**	**-1.2**
ZALV	**Zalesovo Beam**	**152.91**	**338**	PKP	**PKPdf**	**18 22 54.8**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=70,slow=2.2,SNR=15						
ZALV				PKPbc	**sPKPdf**	**18 23 01.4**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=14,slow=3.7,SNR=11						
ASF	**Jabal al Asfar**	**153.04**	**77**	PKP	**PKPdf**	**18 22 56.4**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=113,slow=0.7,SNR=10						
ASF				PKPbc	**PKPbc**	**18 23 03.4**	**-0.5**
	comp=Z,5.5nm,0.9s,baz=202,slow=5.6,SNR=8.2						
GOF	**Gofitskoye**	**154.90**	**45**	⇑*e*PKIKP	**PKPdf**	**18 22 58.5**	**-0.2**
KIV	**Kislovodsk**	**155.19**	**48**	*e*PKIKP	**PKPdf**	**18 22 59.1**	**-0.2**
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KBZ	**Khabaz**	**155.42**	**48**	PKP	**PKPdf**	**18 23 00.1**	**+0.7**
	comp=Z,5.0nm,0.9s,baz=283,slow=1.9,SNR=12						
BRVK	**Borovoye**	**156.58**	**357**	*e*PKPdf	**PKPdf**	**18 23 00.4**	**-0.3**
BRVK				*e*PKPab	**PKPab**	**18 23 28.9**	**-0.7**
BRVK	**Borovoye**	**156.58**	**357**	*e*PKIKP	**PKPdf**	**18 23 00.4**	**-0.3**
BVAR	**Borovoye Array**	**156.61**	**357**	PKP	**PKPdf**	**18 23 00.7**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=238,slow=2.8,SNR=6.0						
BVAR				PKPab	**PKPab**	**18 23 29.1**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=10,slow=1.7,SNR=8.3						
KURK	**Kurchatov**	**157.57**	**343**	*e*PKPdf	**PKPdf**	**18 23 00.9**	**-1.1**
KURK				*e*PKPab	**PKPab**	**18 23 33.1**	**-0.8**
KURK	**Kurchatov**	**157.57**	**343**	*e*PKIKP	**PKPdf**	**18 23 00.9**	**-1.1**
RAYN	**Ar Rayn**	**158.78**	**101**	*e*PKPdf	**PKPdf**	**18 23 03.1**	**-1.4**
RAYN				*e*PKPab	**PKPab**	**18 23 41.0**	**+0.8**
RAYN	**Ar Rayn**	**158.78**	**101**	*e*PKIKP	**PKPdf**	**18 23 03.1**	**-1.4**
WMQ	**Urumqi**	**159.03**	**318**	*e*PKP	**PKPdf**	**18 23 02.9**	**-1.2**
WMQ				LR	LR		
	comp=Z,220nm,29.2s						
WMQ				LR	LR		
	comp=Z,350nm,29.0s						
ABKAR	**Akbulak array**	**159.44**	**16**	*e*PKPdf	**PKPdf**	**18 23 03.8**	**-0.5**
ABKAR				*e*PKPab	**PKPab**	**18 23 42.2**	**+0.1**
MK31	**Makanchi Array**	**159.70**	**331**	*e*PKPdf	**PKPdf**	**18 23 03.3**	**-1.5**
MK31				*e*PKPab	**PKPab**	**18 23 42.5**	**-0.9**
MK31	**Makanchi Array**	**159.70**	**331**	*e*PKIKP	**PKPdf**	**18 23 03.3**	**-1.5**
MK31				*e*		18 23 42.5	
MKAR	**Makanchi Array**	**159.70**	**331**	PKP	**PKPdf**	**18 23 03.7**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=52,slow=2.0,SNR=9.2						
MKAR				PKPab	**PKPab**	**18 23 42.8**	**-0.6**
	comp=Z,3.7nm,1.2s,baz=34,slow=5.1,SNR=7.1						
MAKZ	**Makanchi**	**159.82**	**332**	*e*PKPdf	**PKPdf**	**18 23 03.3**	**-1.6**
MAKZ				*e*PKPab	**PKPab**	**18 23 42.6**	**-1.3**
MAKZ	**Makanchi**	**159.82**	**332**	*e*PKIKP	**PKPdf**	**18 23 03.3**	**-1.6**
MAKZ				*e*		18 23 42.6	
LSA	**Lhasa**	**160.10**	**276**	*e*PKPdf	**PKPdf**	**18 23 05.8**	**-0.4**
LSA	**Lhasa**	**160.10**	**276**	*e*PKIKP	**PKPdf**	**18 23 05.9**	**-0.4**
AAK	**Ala-Archa**	**166.11**	**340**	PKP	**PKPdf**	**18 23 10.0**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=109,slow=5.9,SNR=3.5						
AAK				PKPab	**PKPab**	**18 24 11.4**	**-0.3**
	comp=Z,1.0nm,0.2s,baz=149,slow=1.5,SNR=5.2						
GEYT	**Alibeck**	**168.22**	**43**	PKP	**PKPdf**	**18 23 12.1**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=104,slow=0.6,SNR=9.9						
GYA0B	**ALIBECK ARRAY**	**168.22**	**43**	*e*PKPdf	**PKPdf**	**18 23 12.4**	**-0.4**
KSH	**Kashi**	**168.29**	**329**	*e*PKP	**PKPdf**	**18 23 08.5**	**-4.4**
BTK	**Batken**	**169.42**	**349**	*e*PKPdf	**PKPdf**	**18 23 12.8**	**-0.8**
BTK				*e*PKPab	**PKPab**	**18 24 25.4**	**-0.9**
BTK	**Batken**	**169.42**	**349**	*e*PKIKP	**PKPdf**	**18 23 12.8**	**-0.8**
BTK				*e*		18 24 25.4	
GAR	**Garm**	**170.53**	**350**	*e*PKPdf	**PKPdf**	**18 23 13.4**	**-0.9**
GAR				*e*PKPab	**PKPab**	**18 24 29.7**	**-1.6**
GAR	**Garm**	**170.53**	**350**	*e*PKIKP	**PKPdf**	**18 23 13.4**	**-0.9**
GAR				*e*		18 24 29.7	

ISC 09 18:08:49.6±1.0, 50°.24N±0°.05×18°.89E±0°.04, h0km, n7, σ0s.52/14, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.09**	**53**	*e*Pg	**Pg**	**18 08 51.4**	**+0.2**
CHZP				*e*Sg	**Sg**	**18 08 52.4**	**+0.1**
OJC	**Ojcow**	**0.59**	**92**	*e*Pg	**Pg**	**18 09 00.3**	**-0.4**
OJC				*e*Sg	**Sg**	**18 09 07.9**	**-0.5**
MORC	**Moravsky Berou**	**0.98**	**242**	*e*PG	**Pb**	**18 09 09.7**	**+0.2**
MORC				*e*SG	**Sb**	**18 09 23.1**	**+0.1**
LANS	**Liptovska Anna**	**1.15**	**161**	*e*PG	**Pb**	**18 09 12.6**	**+0.2**
LANS				*e*SG	**Sg**	**18 09 26.5**	**-0.1**
NIE	**Niedzica**	**1.23**	**131**	*e*Pg	**Pg**	**18 09 13.3**	**+0.2**
NIE				*e*Sg	**Sb**	**18 09 30.6**	**+0.5**
VYHS	**Vyhne**	**1.75**	**181**	*e*PN	**Pn**	**18 09 21.8**	**+0.7**
VYHS				*e*SN	**Sn**	**18 09 42.9**	**-1.2**
VRAC	**Vranov**	**1.75**	**239**	*e*PN	**Pn**	**18 09 20.9**	**-0.3**
VRAC				*e*SG	**Sb**	**18 09 45.6**	**+0.4**

ROM 09 18:10:01.1±0.1, 38°.460N±0°.005×15°.943E±0°.008, h10km, ML2.1/9, Error ellipse: s-maj=0.7km s-min=0.4km az=306.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOPP	**Joppolo**	**0.15**	**343**	*i* P	Pg	18 10 05.1	+0.6
JOPP				S	Sg	18 10 07.7	+0.8
JOPP				AML	AML		
	comp=E,928μm,0.4s						
JOPP				AML	AML		
	comp=N,818μm,0.2s						
JOPP				AML	AML		
	comp=E,928μm,0.4s						
JOPP				AML	AML		
	comp=N,818μm,0.2s						
JOPP				AML	AML		
	comp=N,818μm,0.2s						
JOPP				AML	AML		
	comp=E,928μm,0.4s						
JOPP				AML	AML		
	comp=N,818μm,0.2s						
JOPP				AML	AML		
	comp=E,928μm,0.4s						
CEL	**Celeste**	**0.20**	**191**	*i* P	Pg	18 10 06.2	+0.8
CEL				S	Sg	18 10 09.7	+1.4
CEL				AML	AML		
	comp=E,193μm,1.0s						
CEL				AML	AML		
	comp=N,150μm,1.0s						
CEL				AML	AML		
	comp=E,248μm,0.4s						
CEL				AML	AML		
	comp=N,204μm,1.0s						
CEL				AML	AML		
	comp=E,193μm,1.0s						
CEL				AML	AML		
	comp=N,150μm,1.0s						
CEL				AML	AML		
	comp=E,248μm,0.4s						
CEL				AML	AML		
	comp=N,204μm,1.0s						
CEL				AML	AML		
	comp=N,204μm,1.0s						
CEL				AML	AML		
	comp=N,150μm,1.0s						
CEL				AML	AML		
	comp=E,248μm,0.4s						
CEL				AML	AML		
	comp=E,193μm,1.0s						
CEL				AML	AML		
	comp=N,204μm,1.0s						
CEL				AML	AML		
	comp=N,150μm,1.0s						
CEL				AML	AML		
	comp=E,248μm,0.4s						
CEL				AML	AML		
	comp=E,193μm,1.0s						
MSCL	**Scilla**	**0.26**	**208**	*i* P	Pb	18 10 07.2	-0.7
MSCL				S	Sb	18 10 11.2	-1.3
MSCL				AML	AML		
	comp=E,856μm,0.3s						
MSCL				AML	AML		
	comp=N,642μm,0.1s						
MSCL				AML	AML		
	comp=E,856μm,0.3s						
MSCL				AML	AML		
	comp=N,642μm,0.1s						
MSCL				AML	AML		
	comp=N,642μm,0.1s						
MSCL				AML	AML		
	comp=E,856μm,0.3s						
MSCL				AML	AML		
	comp=N,642μm,0.1s						
MSCL				AML	AML		
	comp=E,856μm,0.3s						
GMB	**Gambarie**	**0.30**	**197**	*e*P	Pg	18 10 07.9	+0.6
GMB				S	Sg	18 10 12.6	+1.2
GMB				AML	AML		
	comp=E,1630μm,0.2s						
GMB				AML	AML		
	comp=N,2170μm,0.2s						
GMB				AML	AML		
	comp=E,1630μm,0.2s						
GMB				AML	AML		
	comp=N,2170μm,0.2s						
GMB				AML	AML		
	comp=N,2170μm,0.2s						
GMB				AML	AML		
	comp=E,1630μm,0.2s						
GMB				AML	AML		
	comp=N,2170μm,0.2s						
GMB				AML	AML		
	comp=E,1630μm,0.2s						
PLAC	**Placanica**	**0.39**	**91**	*e*P	Pg	18 10 09.2	+0.4
PLAC				S	Sb	18 10 15.6	-0.6
MSRU	**Castanea**	**0.39**	**240**	P	Pg	18 10 09.4	+0.5
MSRU				S	Sb	18 10 16.3	0.0
MSRU				AML	AML		
	comp=E,384μm,0.9s						
MSRU				AML	AML		
	comp=N,433μm,0.2s						
MSRU				AML	AML		
	comp=E,384μm,0.9s						
MSRU				AML	AML		
	comp=N,433μm,0.2s						
MSRU				AML	AML		
	comp=N,433μm,0.2s						
MSRU				AML	AML		
	comp=E,384μm,0.9s						
MSRU				AML	AML		
	comp=N,433μm,0.2s						
MSRU				AML	AML		
	comp=E,384μm,0.9s						
SOI	**Samo**	**0.40**	**167**	*e*P	Pg	18 10 09.4	+0.5
SOI				S	Sb	18 10 15.4	-1.0
SOI				AML	AML		
	comp=E,99μm,0.5s						
SOI				AML	AML		
	comp=N,102μm,0.9s						
GRI	**Girifalco**	**0.52**	**46**	*e*P	Pg	18 10 11.1	-0.1
GRI				S	Sg	18 10 18.6	+0.5
MPNC	**Port Mandanici**	**0.56**	**236**	*e*P	Pg	18 10 12.1	+0.1
MPNC				S	Sb	18 10 20.3	-0.8
MPNC				AML	AML		
	comp=E,461μm,1.6s						
MPNC				AML	AML		
	comp=N,382μm,0.8s						
MPNC				AML	AML		
	comp=E,461μm,1.6s						
MPNC				AML	AML		
	comp=N,382μm,0.8s						
MPNC				AML	AML		
	comp=E,461μm,1.6s						
MPNC				AML	AML		
	comp=N,382μm,0.8s						
MILZ	**Milazzo**	**0.59**	**252**	*e*P	Pg	18 10 12.7	+0.1
MILZ				S	Sg	18 10 20.9	+0.6
MILZ				AML	AML		
	comp=E,282μm,1.3s						
MILZ				AML	AML		
	comp=N,430μm,1.0s						
MILZ				AML	AML		
	comp=E,282μm,1.3s						
MILZ				AML	AML		
	comp=N,430μm,1.0s						
MILZ				AML	AML		
	comp=N,430μm,1.0s						
MILZ				AML	AML		
	comp=E,282μm,1.3s						
MILZ				AML	AML		
	comp=N,430μm,1.0s						
MILZ				AML	AML		
	comp=E,282μm,1.3s						
AIO	**Antillo**	**0.74**	**229**	*e*P	Pb	18 10 15.9	-0.3
AIO				S	Sb	18 10 26.7	+0.3
AIO				AML	AML		
	comp=E,84μm,0.3s						
AIO				AML	AML		
	comp=N,158μm,0.2s						
AIO				AML	AML		
	comp=N,158μm,0.2s						
AIO				AML	AML		
	comp=E,84μm,0.3s						
AIO				AML	AML		
	comp=N,158μm,0.2s						
AIO				AML	AML		
	comp=E,84μm,0.3s						
SERS	**Sersale**	**0.82**	**45**	*e*P	Pb	18 10 17.6	+0.1
SERS				S	Sb	18 10 28.7	0.0
MUCR	**Ucria**	**0.94**	**244**	AML	AML		
	comp=E,254μm,0.4s						
MUCR				AML	AML		
	comp=E,254μm,0.4s						
MUCR				AML	AML		
	comp=N,586μm,0.4s						
MUCR				AML	AML		
	comp=N,586μm,0.4s						
MUCR				AML	AML		
	comp=E,254μm,0.4s						
MUCR				AML	AML		
	comp=N,586μm,0.4s						

ROM 09 18:10:58.1±0.3, 38°.53N±0°.02×14°.83E±0°.02, h7km±1km, ML1.9/10, Error ellipse: s-maj=2.3km s-min=0.6km az=30.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLI	**Lipari**	**0.13**	**131**	P	Pg	18 11 01.5	+0.7
LLI				S	Sg	18 11 04.2	+1.5
LLI				AML	AML		
	comp=E,2145μm,0.7s						
LLI				AML	AML		
	comp=N,4270μm,0.5s						
LLI				AML	AML		
	comp=E,2145μm,0.7s						
LLI				AML	AML		
	comp=N,4270μm,0.5s						
LLI				AML	AML		
	comp=E,2145μm,0.7s						
LLI				AML	AML		
	comp=N,4270μm,0.5s						
LLI				AML	AML		
	comp=E,2145μm,0.7s						
LLI				AML	AML		
	comp=N,4270μm,0.5s						
VPL	**Vulcano Piano**	**0.19**	**141**	P	Pg	18 11 02.5	+0.5
VPL				S	Sg	18 11 05.7	+1.0
VPL				AML	AML		
	comp=E,996μm,0.3s						
VPL				AML	AML		
	comp=N,964μm,0.5s						
IFIL	**Filicudi I Eol**	**0.21**	**280**	P	Pg	18 11 03.2	+0.9
IFIL				AML	AML		
	comp=E,3955μm,0.7s						
IFIL				AML	AML		
	comp=N,1180μm,0.5s						
IACL	**Alicudi**	**0.37**	**271**	P	Pb	18 11 06.9	-0.1
IACL				S	Sb	18 11 12.7	-0.2
MILZ	**Milazzo**	**0.41**	**129**	P	Pg	18 11 06.8	+0.7
MILZ				AML	AML		
	comp=E,212μm,0.5s						
MILZ				AML	AML		
	comp=N,80μm,0.6s						
MILZ				AML	AML		
	comp=E,212μm,0.5s						
MILZ				AML	AML		
	comp=N,80μm,0.6s						
MILZ				AML	AML		
	comp=E,212μm,0.5s						
MILZ				AML	AML		
	comp=N,80μm,0.6s						
MILZ				AML	AML		
	comp=E,212μm,0.5s						
MILZ				AML	AML		
	comp=N,80μm,0.6s						
MCPD	**Capo d'Orlando**	**0.41**	**191**	P	Pg	18 11 06.2	0.0
MCPD				S	Sb	18 11 13.8	-0.4
MCPD				AML	AML		
	comp=E,222μm,1.0s						
MCPD				AML	AML		
	comp=N,510μm,0.4s						
MCPD				AML	AML		
	comp=E,222μm,1.0s						
MCPD				AML	AML		
	comp=N,510μm,0.4s						
MCPD				AML	AML		
	comp=E,222μm,1.0s						
MCPD				AML	AML		
	comp=N,510μm,0.4s						
MCPD				AML	AML		
	comp=E,222μm,1.0s						
MCPD				AML	AML		
	comp=N,510μm,0.4s						
MUCR	**Ucria**	**0.49**	**176**	P	Pg	18 11 07.5	-0.1
MUCR				S	Sb	18 11 16.8	+0.5
MUCR				AML	AML		
	comp=E,254μm,0.4s						
MUCR				AML	AML		
	comp=N,586μm,0.4s						
MUCR				AML	AML		
	comp=E,254μm,0.4s						
MUCR				AML	AML		
	comp=N,586μm,0.4s						
MUCR				AML	AML		
	comp=N,586μm,0.4s						
MUCR				AML	AML		
	comp=E,254μm,0.4s						
MUCR				AML	AML		
	comp=N,586μm,0.4s						
MUCR				AML	AML		

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      comp=E,254µm,0.4s
MSFR  San Fratello      0.53 201   P        Pg      18 11 08.6 +0.3
MSFR                               AML      AML
      comp=E,54µm,0.7s
MSFR                               AML      AML
      comp=N,68µm,0.7s
MSFR                               AML      AML
      comp=E,54µm,0.7s
MSFR                               AML      AML
      comp=N,68µm,0.7s
MSFR                               AML      AML
      comp=E,54µm,0.7s
MSFR                               AML      AML
      comp=N,68µm,0.7s
NOV   Novara            0.56 154   P        Pg      18 11 08.8  0.0
NOV                                S        Sb      18 11 18.1 -0.2
NOV                                AML      AML
      comp=E,216µm,1.3s
NOV                                AML      AML
      comp=N,156µm,0.4s
NOV                                AML      AML
      comp=E,216µm,1.3s
NOV                                AML      AML
      comp=N,156µm,0.4s
NOV                                AML      AML
      comp=E,216µm,1.3s
NOV                                AML      AML
      comp=N,156µm,0.4s
NOV                                AML      AML
      comp=E,216µm,1.3s
NOV                                AML      AML
      comp=N,156µm,0.4s
MPNC  Port Mandanici    0.56 133   P        Pg      18 11 09.2 +0.2
MPNC                               S        Sb      18 11 18.5  0.0
MPNC                               AML      AML
      comp=E,118µm,0.8s
MPNC                               AML      AML
      comp=N,154µm,0.8s
MPNC                               AML      AML
      comp=N,154µm,0.8s
MPNC                               AML      AML
      comp=E,118µm,0.8s
MPNC                               AML      AML
      comp=N,154µm,0.8s
MPNC                               AML      AML
      comp=E,118µm,0.8s
MSRU  Castanea          0.60 116   P        Pb      18 11 10.4 -0.5
AIO   Antillo           0.64 150   P        Pg      18 11 10.6 +0.2
AIO                                S        Sb      18 11 21.4 +0.6
AIO                                AML      AML
      comp=E,84µm,0.3s
AIO                                AML      AML
      comp=N,158µm,0.2s
AIO                                AML      AML
      comp=E,84µm,0.3s
AIO                                AML      AML
      comp=N,158µm,0.2s
AIO                                AML      AML
      comp=N,158µm,0.2s
AIO                                AML      AML
      comp=E,84µm,0.3s
AIO                                AML      AML
      comp=N,158µm,0.2s
AIO                                AML      AML
      comp=E,84µm,0.3s
GALF  Gagliano Caste    0.84 194   AML      AML
      comp=E,71µm,0.5s
GALF                               AML      AML
      comp=E,71µm,0.5s
GALF                               AML      AML
      comp=N,78µm,0.5s
GALF                               AML      AML
      comp=N,78µm,0.5s
GALF                               AML      AML
      comp=E,71µm,0.5s
GALF                               AML      AML
      comp=N,78µm,0.5s
MEU   Monte Lauro       1.43 177   AML      AML
      comp=E,43µm,0.6s
MEU                                AML      AML
      comp=E,43µm,0.6s
MEU                                AML      AML
      comp=N,54µm,0.4s
MEU                                AML      AML
      comp=N,54µm,0.4s
MEU                                AML      AML
      comp=E,43µm,0.6s
MEU                                AML      AML
      comp=N,54µm,0.4s
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*DDA **09** 18:11:37.2, 42°.22N×26°.11E, h9km±6km, ML3.9*
*ISK **09** 18:11:38.9, 42°.23N×26°.34E, h5km, ML3.8/22*
*SOF **09** 18:11:38.4, 42°.18N×26°.28E, h8km, MD3.7*
*IDC **09** 18:11:38.1±0.8, 42°.22N×26°.23E, h0km, mb3.4/6, mb1 3.5/11, mb1mx3.3/55, mbtmp3.4/11, ML3.3/4, Error ellipse: s-maj=13.4km s-min=10.7km az=40.0*
*THE **09** 18:11:39.6, 42°.14N×26°.26E, h0km±1km, ML3.8/9, Error ellipse: s-maj=2.0km s-min=0.8km az=19.0*
*BEO **09** 18:11:39.9±0.4, 42°.33N×26°.20E, h5km, ML3.4/11*
ISC 09 18:11:38.9±1.0**, 42°.21N**±0°.01×**26°.24E**±0°.02**, h7**km±8km**, n209, σ1**s**33**/241**, mb3.4**/5**, 42C-11D, Bulgaria**

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Code  Station Name       Δ°  AZ°    Phase ID           Time      Res
                                   Op       ISC       h  m  s    ISC
JMB   Yambol            0.36  45   PG       Pg      18 11 45.7 -0.3
JMB                                SG       Sg      18 11 50.5 -0.2
JMB   Yambol            0.36  45  ePg       Pg      18 11 45.6 -0.4
JMB                               eSg       Sg      18 11 50.6 -0.2
JMB   Yambol            0.36  45  i P       Pg      18 11 45.6 -0.4
EDRB  Edirne            0.53 134   PG       Pg      18 11 48.7 -0.2
EDRB                               SG       Sg      18 11 56.0 +0.1
EDRB  Edirne            0.53 134   P        Pg      18 11 48.8 -0.2
EDRB                               S        Sg      18 11 55.6 -0.3
DIM   Dimitrovgrad      0.55 253  i P       Pg      18 11 49.7 +0.3
ELND  Elena             0.77 340⇑iP       Pg      18 11 53.3 -0.3
ELND  Elena             0.77 340   S        Sg      18 12 04.0 +0.4
KIRK  Kırklareli        0.77 123  i P       Pg      18 11 53.1 -0.6
KIRK                              i S       Sg      18 12 03.1 -0.6
KIRK                               IAML_P
      comp=Z,18µm,0.2s
KDZ   Kurdzhali         0.83 228   PG       Pn      18 11 57.5 +0.6
KDZ   Kurdzhali         0.83 228  i P       Pb      18 11 55.5 -0.1
PHSR  Pinarhisar        1.12 121   PG       Pg      18 11 59.3 -1.1
PHSR                               SG       Sg      18 12 14.9 -0.1
PHSR  Pinarhisar        1.12 121⇓iP       Pg      18 11 59.8 -0.6
PHSR  Pinarhisar        1.12 121   S        Sb      18 12 15.4 +0.1
PLD   Plovdiv           1.14 265  ePg       Pg      18 11 59.6 -1.2
PLD                               eSg       Sg      18 12 15.0 -0.7
PLD   Plovdiv           1.14 265  i P       Pg      18 11 59.4 -1.4
RDO   Rodhopi           1.19 206   PN       Pn      18 12 03.0 +1.2
RDO   Rodhopi           1.19 206   P        Pb      18 12 01.5 -0.1
RDO                                S        Sg      18 12 17.3 +0.3
      comp=Z,6µm,0.4s
PVL   Pavlikeni         1.21 327  i P       Pn      18 12 02.4 +0.3
PRD   Provadia          1.31  41  i P       Pn      18 12 02.7 -0.8
ALN   Alexandroupoli    1.32 186   PN       Pb      18 12 04.1 +0.2
ALN   Alexandroupoli    1.32 186   P        Pn      18 12 03.6  0.0
ALN                                S        Sn      18 12 21.6 +0.2
      comp=Z,3µm,0.9s
RAZG  Razgrad           1.37   8⇓iP       Pg      18 12 04.9 -0.3
RAZG  Razgrad           1.37   8   S        Sg      18 12 23.3 +0.4
KESN  Edirne-Kesan      1.42 166  i P       Pb      18 12 06.0 +0.1
KESN                              i S       Sg      18 12 25.9 +1.3
ENEZ  Enez              1.47 182   PN       Pg      18 12 07.2 +0.1
CRLT  Corlu             1.56 133   PN       Pn      18 12 07.3 +0.4
TKR   Tekirdag          1.56 141   PN       Pb      18 12 07.6 -0.4
PGB   Panagyurishte     1.57 283  i P       Pn      18 12 07.8 +0.6
ZIMR                    1.58 336⇓iP       Pg      18 12 09.2  0.0
ZIMR                    1.58 336   S        Sg      18 12 30.4 +0.7
PLVB  Pleven            1.67 315⇑iP       Pg      18 12 10.6 -0.3
PLVB  Pleven            1.67 315   S        Sg      18 12 33.8 +1.2
RKY   Sarkoy-Tekirda    1.68 155   PN       Pb      18 12 09.5 -0.6
SART  Tekirdag          1.68 155  i P       Pg      18 12 10.8 -0.2
SART                              i S       Sg      18 12 33.0 +0.3
SART                               IAML_P
      comp=Z,36µm,0.5s
CTYL  Yalikoy Yolu      1.70 115   PN       Pn      18 12 09.3 +0.4
CTYL  Yalikoy Yolu      1.70 115⇑iP       Pb      18 12 09.8 -0.6
CTYL  Yalikoy Yolu      1.70 115   S        Sg      18 12 32.7 -0.8
KAVA  Kavala            1.77 227   P        Pn      18 12 09.8 -0.1
KAVA                               S        Sb      18 12 34.9 +0.9
      comp=Z,3µm,0.6s
SMTH  Samothraki Isl    1.82 197   P        Pn      18 12 10.4 -0.1
SMTH                               S        Sb      18 12 35.5 +0.2
      comp=Z,2µm,0.5s
GELI  Tayfur-Gelibol    1.82 174   PN       Pn      18 12 11.5 +1.0
LPK   Lapseki           1.88 168   PN       Pn      18 12 12.4 +1.1
MRMT  Marmara Adasi     1.90 147   PN       Pn      18 12 12.4 +0.6
ELBA  Catalca           1.96 122  i P       Pn      18 12 13.0 +0.6
ELBA                               IAML_P
      comp=Z,6µm,0.1s
CTKS  Kestanelik-??a    1.96 119   PN       Pn      18 12 13.0 +0.6
THAS  Thassos island    1.97 216   P        Pn      18 12 12.3 -0.2
THAS                               S        Sn      18 12 38.3 +0.9
      comp=Z,2µm,0.4s
MMB   Musomiste         1.97 253  i P       Pn      18 12 13.1 +0.4
NVR   Nevrokopi         1.97 245   P        Pn      18 12 13.2 +0.5
NVR                                S        Sb      18 12 40.1 +0.3
      comp=Z,832nm,0.4s
SGRR  Singureni         2.02 355⇓iP       Pg      18 12 16.7 -0.9
SGRR  Singureni         2.02 355   S        Sb      18 12 42.0 +0.8
PSN   Preselentsi       2.05  44  i P       Pn      18 12 12.9 -0.8
COPA  Copaceanca        2.06 339⇓iP       Pb      18 12 16.2 -0.4
COPA  Copaceanca        2.06 339   S        Sg      18 12 45.0 -0.1
RASA  Rasa              2.11  18⇑iP       Pb      18 12 16.9 -0.5
BUC1  Bucharest         2.14 356⇓iP       Pn      18 12 15.9 +0.9
BUC1  Bucharest         2.14 356   S        Sg      18 12 46.5 -1.2
BGKT  Bogazkoy          2.16 118   PN       Pn      18 12 15.9 +0.7
MPEP  Malo Peshtene     2.17 303   P        Pn      18 12 15.8 +0.5
ICOR  Ion Corvin        2.22  30⇑iP       Pb      18 12 18.5 -0.8
ICOR  Ion Corvin        2.22  30   S        Sg      18 12 49.6 -0.7
EDC   Edincik           2.23 146   PN       Pn      18 12 17.5 +1.3
VLAD  Vladila           2.23 324⇑iP       Pb      18 12 19.3 -0.2
VLAD  Vladila           2.23 324   S        Sb      18 12 47.8 +0.4
VTS   Vitosha           2.26 281  ePn       Pn      18 12 17.6 +0.9
VTS                               eSn       Sn      18 12 45.1 +0.2
VTS   Vitosha           2.26 281⇑iP       Pn      18 12 17.0 +0.3
VTS   Vitosha           2.26 281   S        Sn      18 12 45.8 +0.9
VTS   Vitosha           2.26 281  i P       Pn      18 12 17.1 +0.3
SRS   Serrai            2.26 242  ePn       Pn      18 12 16.9 +0.3
SRS                               eSn       Sb      18 12 47.8 -0.3
SRS   Serrai            2.26 242   P        Pn      18 12 16.7 +0.1
SRS                                S        Sb      18 12 46.8 -1.3
      comp=Z,1µm,0.6s
LEHL  Lehliu            2.30  10⇑iP       Pb      18 12 20.7  0.0
LEHL  Lehliu            2.30  10   S        Sg      18 12 51.6 -1.2
KLYT  Kilyos            2.31 114   PN       Pn      18 12 17.8 +0.6
KLYT  Kilyos            2.31 114⇑iP       Pn      18 12 18.3 +1.1
KLYT  Kilyos            2.31 114   S        Sb      18 12 50.0 +0.6
TSMN  Mangalia Port-    2.35  47⇑iP       Pb      18 12 21.5  0.0
TSMN  Mangalia Port-    2.35  47   S        Sg      18 12 53.2 -1.2
MANR  Mangalia          2.36  46⇑iP       Pn      18 12 19.0 +1.1
MANR  Mangalia          2.36  46   S        Sb      18 12 50.6 -0.2
BOZC  Bozcaada          2.37 183   PN       Pn      18 12 19.8 +1.7
BOZC  Bozcaada          2.37 183  i P       Pn      18 12 19.5 +1.4
KKB   Krupnik           2.37 263  i P       Pn      18 12 18.8 +0.6
EZN   Ezine             2.38 178   PN       Pn      18 12 19.9 +1.6
EZN   Ezine             2.38 178   P        Pn      18 12 19.4 +1.1
EZN                                S        Sn      18 12 47.7  0.0
EZN   Ezine             2.38 178⇑iP       Pn      18 12 18.0 -0.3
ISK   Istanbul-Kandi    2.41 117   PN       Pn      18 12 19.2 +0.6
ISK   Istanbul-Kandi    2.41 117   P        Pn      18 12 18.6  0.0
KAVV  Kandilli-Istan    2.41 117   PN       Pn      18 12 19.4 +0.8
GONE  Gonen-Balikesi    2.42 153   PN       Pn      18 12 20.1 +1.3
LIA   Limnos Island     2.44 199   P        Pn      18 12 18.9 -0.2
LIA                                S        Sn      18 12 49.4 +0.2
      comp=Z,1µm,0.5s
SULR                    2.47   0⇑iP       Pb      18 12 23.3 -0.2
SULR                    2.47   0   S        Sb      18 12 55.1 +1.1
BAYC  CANAKKALE_Bayr    2.48 174  i P       Pn      18 12 20.3 +0.7
BAYC                               IAML_P
      comp=Z,3µm,0.4s
HUMR  Humele            2.49 339⇓iP       Pb      18 12 22.6 -1.3
HUMR  Humele            2.49 339   S        Sg      18 12 59.7 +0.8
CVDA  Cernavoda         2.50  31⇑iP       Pb      18 12 23.5 -0.5
CVDA  Cernavoda         2.50  31   S        Sb      18 12 54.2 -0.7
KCTX  Karacabey (Bur    2.52 140   PN       Pn      18 12 21.0 +0.9
AMRR  Amara             2.53  18⇑iP       Pb      18 12 23.6 -0.9
AMRR  Amara             2.53  18   S        Sb      18 12 57.4 +1.6
MFTR  Murfatlar         2.54  38⇑iP       Pb      18 12 24.7 +0.1
BUY   Buyukada          2.55 121   PN       Pn      18 12 21.6 +1.0
EFOR  EFORIE            2.56  42⇑iP       Pb      18 12 24.9 -0.2
EFOR  EFORIE            2.56  42   S        Sb      18 12 58.4 +1.6
ARMT  Armutlu           2.57 129   PN       Pn      18 12 21.8 +0.9
SOH   Sokhos            2.57 238   P        Pn      18 12 21.2 +0.3
TSCT  Constanta Port    2.63  41⇑iP       Pb      18 12 26.5 +0.2
TSCT  Constanta Port    2.63  41   S        Sb      18 13 00.8 +2.0
BALY  Balya             2.68 157  i P       Pn      18 12 23.1 +0.7
BALY                               IAML_P
      comp=Z,4µm,0.2s
TLB   Topalu            2.71  28⇑iP       Pn      18 12 24.9 +2.1
TLB   Topalu            2.71  28   S        Sg      18 13 03.6 -2.5
TIRR  Tirgusor          2.75  35⇑iP       Pb      18 12 27.3 -1.0
SILT  Sile              2.76 111   PN       Pn      18 12 24.3 +0.8
SILT  Sile              2.76 111⇓iP       Pn      18 12 25.5 +2.0
HARR  Harsova           2.77  26⇓iP       Pb      18 12 26.1 -2.5
PLG   Polygyros         2.79 230   P        Pn      18 12 23.9  0.0
PLG                                S        Sn      18 12 58.5 +0.7
      comp=Z,945nm,0.5s
SECR                    2.83 358⇓iP       Pb      18 12 28.3 -1.3
GEMT  Gemlik            2.84 128   PN       Pn      18 12 25.6 +1.0
BALB  Balikesir         2.85 154   PN       Pn      18 12 25.7 +1.0
ZAPS  Zavoj             2.86 293  ePn       Pn      18 12 26.2 +1.3
ZAPS                              eSn       Sn      18 12 59.5  0.0
YLV   Yalova            2.88 124   PN       Pn      18 12 26.1 +1.0
VAY   Valandovo         2.88 253  i Pn      Pn      18 12 26.0 +0.9
ISR   Istrita           2.92   4⇑iP       Pb      18 12 28.7 -2.5
SIGR  SIGRI             3.01 186   P        Pn      18 12 27.7 +0.8
STIP  Stip              3.06 262  i Pn      Pn      18 12 25.4 -2.2
DURS  Dursunbey         3.11 146  i P       Pn      18 12 30.2 +1.9
MTUR  Matau             3.13 345⇑iP       Pn      18 12 29.7 +1.0
ADVT  Abdulvahap        3.18 123   PN       Pn      18 12 29.8 +0.6
GRER                    3.21   9⇑iP       Pn      18 12 30.7 +1.0
CFR   Carcaliu          3.27  24⇑iP       Pn      18 12 32.8 +2.3
MLR   Muntele Rosu      3.29 356⇑iP       Pn      18 12 32.5 +1.7
SRE   Strehaia          3.30 319⇑iP       Pn      18 12 31.1 +0.2
BARS  Barje             3.32 282  ePn       Pn      18 12 31.8 +0.6
BARS  Barje             3.32 282  ePn       Pn      18 12 33.7 +2.5
BARS                              eSn       Sn      18 13 11.5 +0.6
VOIR                    3.34 346⇑iP       Pn      18 12 33.4 +1.9
ZAGS  Zajecar           3.34 300  ePn       Pn      18 12 31.4 -0.1
BISRR Bisoca            3.35   6⇑iP       Pn      18 12 34.5 +2.8
ARR   Arges             3.36 340⇑iP       Pn      18 12 33.7 +1.9
TLCR                    3.51  31⇑iP       Pn      18 12 35.3 +1.5
PETR  Petresti          3.58  11⇑iP       Pn      18 12 36.4 +1.6
BOVS  Bovan             3.62 295  ePn       Pn      18 12 36.2 +0.9
PLOR  Plostina          3.65   5⇑iP       Pn      18 12 38.0 +2.2
XOR   Xorichti          3.66 220   P        Pn      18 12 35.6 -0.3
VRI   Vrincioaia        3.67   5⇑iP       Pn      18 12 38.2 +2.2
DOPR  Dopca             3.81 351⇑iP       Pn      18 12 38.9 +1.0
HERR  Herculane         3.85 315⇑iP       Pn      18 12 38.2 -0.3
URLA  Izmir             3.85 176  i P       Pn      18 12 39.7 +1.1
OZUR                    3.90 355⇑iP       Pn      18 12 40.8 +1.7
SELS  Selova            3.90 287  ePn       Pn      18 12 39.3 +0.1
BTAS  Taskesti          3.94 113  i P       Pn      18 12 42.0 +2.3
BTAS                               IAML_P
      comp=Z,1µm,0.4s
SRCK  Saricakaya, Es    3.96 122  i P       Pn      18 12 42.0 +2.0
SRCK                               IAML_P
      comp=Z,701nm,0.3s
GDZ   Gediz             3.98 141  i P       Pn      18 12 42.0 +1.7
GDZ                                IAML_P
      comp=Z,2µm,0.3s
KUBS  Kucevo            3.99 305  ePn       Pn      18 12 39.8 -0.6
KUBS                              eSn       Sn      18 13 25.4 -2.0
GZR   Gura Zlata        4.05 323⇑iP       Pn      18 12 41.1 -0.1
USAK  Uak-Merkez        4.09 148  i Pn      Pn      18 12 43.1 +1.3
USAK                               IAML_P
      comp=Z,2µm,0.3s
YIGI  Dzce              4.10 106  i P       Pn      18 12 44.7 +2.8
YIGI                               IAML_P
      comp=Z,523nm,0.4s
MANT  Manisa            4.12 154  i P       Pn      18 12 43.9 +1.5
MANT                              i S       Sg      18 13 50.1 -0.9
MANT                               IAML_P
      comp=Z,979nm,0.3s
MDVR  Moldovita         4.17 310⇑iP       Pn      18 12 43.1 +0.1
DGB   zmir              4.18 173  i P       Pn      18 12 44.0 +1.0
DGB                                IAML_P
      comp=Z,978nm,0.4s
SVIS  Svilajnac         4.20 301  ePn       Pn      18 12 43.1 -0.2
TESR  Tescani           4.31   4⇑iP       Pn      18 12 46.3 +1.5
GRUS  Gruza             4.38 294  ePn       Pn      18 12 46.4 +0.7
GRUS                              eSn       Sn      18 13 36.1 -0.8
DEV   Deva              4.39 328⇑iP       Pn      18 12 47.1 +1.3
KIBS  BOLU              4.59 111  i P       Pn      18 12 50.2 +1.4
KIBS                               IAML_P
      comp=Z,370nm,0.3s
BCAM  Yenicaga          4.59 106  i P       Pn      18 12 50.0 +1.2
IVAS  Ivanjica          4.67 289  ePn       Pn      18 12 49.4 -0.4
TRUS  Trudelj           4.71 297  ePn       Pn      18 12 50.4 +0.1
TRUS                              eSn       Sn      18 13 43.2 -1.9
BIZ   Bicaz             4.73 359⇓iP       Pn      18 12 52.0 +1.5
SJES  Sjenica           4.73 285  ePn       Pn      18 12 51.3 +0.6
ANX   Ano Chora         4.89 224   P        Pn      18 12 53.3 +0.5
DIVS  Divibare          4.94 295  ePn       Pn      18 12 53.8 +0.2
DIVS                              eSn       Sn      18 13 48.1 -2.8
DIVS  Divibare          4.94 295  ePn       Pn      18 12 53.7 +0.2
KIS   Kishinev          5.13  20  eP        Sb      18 14 17.0 +6.4
PDG   Podgorica         5.18 275  ePn       Pn      18 12 56.2 -0.5
IGT   Igoumenitsa       5.21 241  ePn       Pn      18 12 59.9 +2.7
SIRR  Siria             5.22 323⇑iP       Pn      18 12 57.9 +0.6
DRME  Dracevica, Mon    5.24 272  ePn       Pn      18 13 00.0 +2.5
BBLS  Lazi&#263;i       5.27 291  ePn       Pn      18 12 58.6 +0.5
BBLS                              eSn       Sn      18 13 55.5 -3.6
BBLS  Lazi&#263;i       5.27 291  ePn       Pn      18 12 58.3 +0.2
BURAR Bucovina Array    5.45 353⇑iP       Pn      18 13 02.4 +1.8
UPM   Unac-Piva         5.49 283  ePn       Pn      18 13 02.2 +1.0
FRGS  Fruska Gora       5.51 304  ePn       Pn      18 13 01.2 -0.1
FRGS  Fruska Gora       5.51 304  ePn       Pn      18 13 00.4 -0.9
HAPS  Han Pijesak,Bl    5.65 292  ePn       Pn      18 13 02.5 -0.8
BRY   Bratogost         5.73 280  ePn       Pn      18 13 05.9 +1.5
HCY   Herceg Novi       5.74 275  ePn       Pn      18 13 05.9 +1.4
TREB  Trebinje          5.86 278  ePn       Pn      18 13 07.9 +1.9
DBRK  Dubrovnik         6.00 277  ePn       Pn      18 13 10.0 +2.0
BRTR  Keskin Array B    6.13 111   Pn       Pn      18 13 10.3 +0.4
      comp=Z,0.7nm,0.3s,baz=284,slow=13,SNR=20
BRTR                               Sn       Sn      18 14 14.2 -6.1
      baz=259,slow=22,SNR=2.3
BRTR                               Lg       Lg      18 14 54.0
      baz=293,slow=26,SNR=2.2
STON  Ston              6.34 279  ePn       Pn      18 13 14.7 +2.1
STON                               Sn       Sn      18 14 24.1 -1.1
MAKA  Makarska          6.87 282  ePn       Pn      18 13 22.1 +2.3
BLY   Banja Luka        7.06 294  ePn       Pn      18 13 20.7 -1.8
KOLS  Kolonicke sedl    7.28 339  ePN       Pn      18 13 30.5 +5.0
KOLS                              ePG       Pg      18 14 04.4 +6.3
KIJV  Kijevo            7.42 287  ePn       Pn      18 13 29.8 +2.4
MORI  Morici            7.89 286  ePn       Pn      18 13 36.6 +2.7
MORI                               Sn       Sn      18 15 03.0 -0.4
ZIRJ  Zirje             7.91 284  ePn       Pn      18 13 35.6 +1.5
ZIRJ                               Sn       Sn      18 15 01.7 -2.0
VYHS  Vyhne             8.16 323  ePN       Pn      18 13 41.3 +3.7
PTJ   Puntijarka        8.27 300   ePn              18 13 38.9
DUGI  Dugi Otok         8.37 286  ePn       Pn      18 13 41.2 +0.7
AKASG Malin Array Be    8.74  13   Pn       Pn      18 13 45.8 +0.3
      comp=Z,0.8nm,0.3s,baz=196,slow=12,SNR=3.5
AKASG                              Sn       Sn      18 15 19.9 -4.3
      comp=Z,1.1nm,0.3s,baz=200,slow=21,SNR=2.7
AKASG                              Lg       Lg      18 16 13.4
      comp=Z,0.7nm,0.3s,baz=187,slow=28,SNR=3.4
GERES GERESS Array B   11.01 311   Pn       Pn      18 14 16.5 -0.1
      comp=Z,0.2nm,0.3s,baz=130,slow=13,SNR=2.3
DAVOX Davos/Dischmat   12.54 297   Pn       Pn      18 14 39.7 +2.0
      baz=130,slow=16
FINES FINESS Array B   19.26 360   P        P       18 16 02.3 -1.4
      comp=Z,0.1nm,0.3s,baz=178,slow=9.7,SNR=3.5
NB2   NORSAR Subarra   20.94 339   P        P       18 16 21.0 -0.9
      comp=Z,1.1nm,0.7s,baz=147,slow=11
NOA   NORSAR Array B   20.94 339   P        P       18 16 21.4 -0.5
      comp=Z,0.2nm,0.5s,baz=146,slow=8.6,SNR=2.9
ESDC  Sonseca Array    22.90 274   P        P       18 16 43.4 +0.3
      comp=Z,0.1nm,0.3s,baz=80,slow=9.5,SNR=3.1
EKA   Eskdalemuir Ar   23.19 315   P        P       18 16 46.2 +0.3
      comp=Z,0.3nm,0.5s,baz=111,slow=13,SNR=4.1
TORD  Torodi Ar. Bea   35.94 224   P        P       18 18 40.5 +0.6
      comp=Z,1.2nm,0.5s,baz=30,slow=9.4,SNR=10
MKAR  Makanchi Array   39.52  64   P        P       18 19 10.7 +0.7
      comp=Z,0.5nm,0.5s,baz=294,slow=6.6,SNR=5.8
ZALV  Zalesovo Beam    39.75  52   P        P       18 19 12.5 +0.7
      comp=Z,0.7nm,0.6s,baz=290,slow=8.4,SNR=3.6
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*NIED **09** 18:16:00, 26°.90N×144°.00E, h5km, Mw4.4 Best double couple: $M_0$4.59000×10^{15} NP1:ϕ_s344.00000°, δ38.00000°, λ-59.00000°. NP2:ϕ_s126.00000°, δ58.00000°, λ-112.00000°.*
*BJI **09** 18:16:26.7±0.0, 26°.41N×144°.10E, h32km, mb4.6/35, mB4.9/21, Ms4.4/9, Ms7 4.1/6*
*IDC **09** 18:16:26.3±0.5, 26°.81N×144°.10E, h0km, mb4.2/20, mb1 4.3/25, mb1mx4.2/55, mbtmp4.2/25, ML3.4/5, MS3.5/7, Ms1 3.5/7, ms1mx3.1/39, Error ellipse: s-maj=19.1km s-min=12.1km az=76.0*
*MOS **09** 18:16:26.1±1.0, 26°.73N×143°.96E, h10km, mb4.9/30, Error ellipse: s-maj=10.3km s-min=6.2km az=119.1*
*JMA **09** 18:16:28.2±0.1, 26°.91N×144°.03E, h69km, M4.0*
*ISCJB **09** 18:16:29.7±0.2, 26°.76N±0°.04×143°.89E±0°.04, h33km, mb4.6/87, MS3.8/9, Error ellipse: s-maj=5.4km s-min=5.1km az=167.2*
*NEIC **09** 18:16:31.8±1.5, 26°.76N×143°.89E, h36km±7km, mb4.7/61, Error ellipse: s-maj=16.4km s-min=11.7km az=75.0*
ISC 09 18:16:32.0±0.4**, 26°.88N**±0°.05×**143°.90E**±0°.06**, h35**km**, n173,** σ1**s**79**/181**, mb4.7**/87**, MS3.6**/9**, 7C-2D, Bonin Islands region**

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Code  Station Name       Δ°  AZ°    Phase ID           Time      Res
                                   Op       ISC       h  m  s    ISC
CBIJ  Chichi jima       1.54 278   P        Pn      18 16 55.8 -1.2
CBIJ                              eS        Sn      18 17 16.3 +0.5
JHH2  Haha-jima-NKT2    1.56 261   P        Pn      18 16 56.0 -1.2
JHJ2  Mitsune           7.14 331  ePn       Pn      18 18 13.5 -0.5
JHJ   Hachijo jima 2    7.17 331   Pn       Pn      18 18 12.9 -1.4
      2.5nm,0.3s,baz=343,slow=6.3,SNR=2.8
JHJ                                Sn       Sn      18 19 26.8 -7.7
      2.8nm,0.3s,baz=138,slow=22,SNR=2.9
BSO1  Boso 1            8.14 343  eS        Sn      18 19 53.8 -3.9
JHU   Hanno             9.77 337  eS        Sn      18 20 32.7 -5.8
JRY   Ryogami san      10.05 336   P        Pn      18 18 51.4 -2.5
JRY                               eS        Sn      18 20 41.5 -4.0
MJAR  Matsushiro Arr   10.78 335   Pn       Pn      18 19 01.7 -2.1
      0.3nm,0.3s,baz=165,slow=12,SNR=14
MJAR                               Sn       Sn      18 21 00.0 -3.1
      0.1nm,0.3s,baz=130,slow=19,SNR=3.1
MAJO  Matsushiro       10.78 335  ePn       Pn      18 19 01.8 -2.1
MAJO                              eSn       Sn      18 21 00.0 -3.2
MAJO  Matsushiro       10.78 335  i P       Pn      18 19 02.4 -1.4
MAT   Matsushiro       10.78 335   P        Pn      18 19 02.0 -1.8
MAT                                S        Sn      18 21 01.7 -1.5
MJB9  Matsu-Tunnel     10.78 335  ePn       Pn      18 19 01.4 -2.5
JFT   Otama            11.02 345   P        Pn      18 19 04.2 -3.0
JMM   Marumori         11.26 347  eS        Sn      18 21 04.5  -10
JNU   Nakatsue         12.88 302   LR       LR      18 24 05.6
      comp=Z,108nm,19.1s,baz=356,slow=35
KSRS  Korea Array      17.12 312   P        P       18 20 29.6 -0.3
      0.1nm,0.3s,baz=118,slow=11,SNR=12
KSRS                               LR       LR      18 27 19.9
      comp=Z,95nm,18.3s,baz=356,slow=38
ASAJ  Asahikawa        17.23 357   P        Pn      18 20 30.4 +0.6
      0.7nm,0.3s,baz=202,slow=2.2,SNR=6.2
ASAJ                               LR       LR      18 28 59.0
      comp=Z,162nm,18.9s,baz=205,slow=44
YOJ   Yonaguni jima    18.98 267  eP        P       18 20 49.6 -0.9
      49nm,1.2s
YOJ   Yonaguni jima    18.98 267  eP        P       18 20 49.6 -0.9
YOJ                                pmax     pmax
      comp=Z,49nm,1.2s
USA0B Ussuriysk Arra   19.77 334  eP        Pn      18 21 00.3 -0.4
      comp=Z,36nm,2.0s
USRK  Ussuriysk Ar.    19.77 334   P        P       18 20 59.6 +0.6
      comp=Z,0.1nm,0.3s,baz=115,slow=9.7,SNR=4.5
YSS   Yuzh-Sakhalins   20.05 358  eP        P       18 21 03.1 +1.1
      comp=Z,22nm,1.2s
YSS   Yuzh-Sakhalins   20.05 358⇓eP       P       18 21 01.9 -0.1
YSS                               e                 18 21 09.7
YSS                                pmax     pmax
      comp=Z,10.0nm,1.2s
YSS                                MLR      MLR
      comp=Z,100nm,16.0s
YHNB  Yeheng           20.40 269  eP        P       18 21 05.7 -0.4
      comp=Z,45nm,1.5s
YULB  Yu-li            20.75 265  eP        P       18 21 08.6 -1.2
      comp=Z,23nm,1.4s
SSLB  Suanglung        20.96 267  eP        P       18 21 11.7 -0.4
      comp=Z,46nm,1.6s
TWG   Pinlang          21.09 264  eP        P       18 21 13.2 -0.3
      comp=Z,65nm,1.1s
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MDJ	Mudanjiang	21.11	331	eP	P	18 21 12.8	-0.6
	comp=Z,15nm,1.1s						
MDJ	Mudanjiang	21.11	331	P	P	18 21 14.1	+0.6
MDJ				S	S	18 25 01.0	-5.4
MDJ				pmax	pmax		
	comp=Z,12nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.1s						
MDJ				LR	LR		
	comp=Z,230nm,11.1s						
MDJ				LR	LR		
	comp=Z,320nm,14.1s						
MDJ				LR	LR		
	comp=Z,230nm,8.1s						
NJ2	Nanjing	22.38	289	eP	P	18 21 27.4	+0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
H11S3	WAKE ISLAND Hy	22.60	107	T	T	18 44 38.5	
	baz=294,slow=74,SNR=7.8						
H11S1	WAKE ISLAND Hy	22.60	107	T	T	18 44 37.6	
	baz=294,slow=74,SNR=5.5						
H11S2	WAKE ISLAND Hy	22.61	107	T	T	18 44 37.6	
	baz=294,slow=74,SNR=5.5						
KLR	Kul'dur	24.21	340	P	P	18 21 46.1	+0.8
	comp=Z,1.1nm,0.4s,baz=120,slow=10,SNR=5.2						
KLR	Kul'dur	24.21	340	⇑iP	P	18 21 46.1	+0.8
KLR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GRNR	Gornyy	24.53	349	eP	P	18 21 49.4	+1.3
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
TGY	Tagaytay City	24.93	244	LR	LR	18 30 12.2	
	comp=Z,168nm,19.3s,baz=50,slow=33						
WHN	Wuhan	26.13	285	⇑iP	P	18 22 03.7	+0.8
WHN				pmax	pmax		
	comp=Z,46nm,1.0s						
DAV	Davao City (W)	26.29	225	LR	LR	18 31 01.5	
	comp=Z,161nm,19.8s,baz=46,slow=33						
PETK	Petropavlovsk-	28.15	18	LR	LR	18 31 54.3	
	comp=Z,103nm,21.6s,baz=354,slow=33						
HHC	Hu-ho-hao-te	30.06	306	eP	P	18 22 42.1	+4.1
HHC	Hu-ho-hao-te	30.06	306	P	P	18 22 39.5	+1.5
HHC				pP	sP	18 22 51.7	+2.1
HHC				S	S	18 27 33.2	-0.9
HHC				sS	sS	18 27 59.0	+11
HHC				SS	ScP	18 29 21.7	+2.8
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,92nm,5.4s						
HHC				LR	LR		
	comp=Z,200nm,12.4s						
HHC				LR	LR		
	comp=Z,190nm,12.2s						
HHC				LR	LR		
	comp=Z,240nm,13.5s						
ENH	Enshi	30.34	285	eP	P	18 22 39.1	-1.4
	comp=Z,70nm,1.5s						
XAN	Xi'an	30.87	292	P	P	18 22 44.2	-1.0
XAN				pP	sP	18 22 56.4	-0.4
XAN				pmax	pmax		
	comp=Z,87nm,1.5s						
AAI	Ambon	33.97	209	P	P	18 23 10.0	-2.3
AAI				pmax	pmax		
	comp=Z,66nm,1.1s						
LUWI	Luwuk	34.42	220	eP	P	18 23 13.5	-2.8
	comp=Z,44nm,1.0s						
LZH	Lanzhou	35.16	295	eP	P	18 23 25.5	+2.7
LZH				pP	sP	18 23 33.5	-0.9
LZH				sP	pwP	18 23 38.2	-1.0
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,5.4s						
LZH				LR	LR		
	comp=Z,240nm,14.6s						
LZH				LR	LR		
	comp=Z,250nm,14.6s						
LZH				LR	LR		
	comp=Z,280nm,15.0s						
SONA0	Songino Array	35.93	316	eP	P	18 23 30.7	+1.6
SONM	Songino Array	35.93	316	P	P	18 23 30.7	+1.6
	comp=Z,2.1nm,0.8s,baz=124,slow=8.7,SNR=2.9						
YAK	Yakutsk	36.41	349	i P	P	18 23 34.0	+1.2
YAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMI	Kunming	36.92	277	P	P	18 23 36.6	-1.4
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SBUM	Sibu	38.88	237	eP	P	18 23 54.4	+0.1
	comp=Z,3.5nm,1.2s						
HNR	Honiara	39.31	154	P	P	18 23 56.1	-1.8
	comp=Z,46nm,0.7s,baz=339,slow=17,SNR=6.5						
HNR	Honiara	39.31	154	eP	P	18 23 55.1	-2.8
	comp=Z,50nm,0.8s						
HNR	Honiara	39.31	154	eP	P	18 23 55.1	-2.8
HNR				pmax	pmax		
	comp=Z,50nm,0.8s						
SOEI	Soe	41.10	210	eP	P	18 24 11.5	-1.3
	comp=Z,54nm,1.3s						
MTN	Manton Dam	41.39	199	eP	P	18 24 13.4	-1.6
	comp=Z,20nm,1.0s						
CHTO	Chiang Mai	42.02	269	eP	P	18 24 20.2	-0.1
	comp=Z,9.9nm,1.2s						
CHTO	Chiang Mai	42.02	269	eP	P	18 24 20.2	-0.1
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CMAR	Chiang Mai Arr	42.14	268	P	P	18 24 22.3	+1.0
	comp=Z,1.1nm,0.9s,baz=61,slow=9.4,SNR=2.9						
CMAR				LR	LR	18 41 25.2	
	comp=Z,62nm,18.9s,baz=8.0,slow=35						
TIXI	Tiksi	45.59	353	P	P	18 24 48.6	+0.4
	comp=Z,1.7nm,0.7s,baz=139,slow=6.4,SNR=4.1						
TIXI	Tiksi	45.59	353	eP	P	18 24 49.3	+1.1
	comp=Z,3.5nm,1.1s						
TIXI	Tiksi	45.59	353	⇓iP	P	18 24 49.5	+1.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
IPM	Ipoh	46.57	249	eP	P	18 24 53.7	-3.0
	comp=Z,11nm,1.0s						
CTA	Charters Tower	46.75	177	P	P	18 24 56.4	-1.6
	comp=Z,7.3nm,1.0s,baz=18,slow=16,SNR=2.9						
WRAB	Tennant Creek	47.45	192	eP	P	18 25 00.8	-2.6
	comp=Z,28nm,0.9s						
WRAB	Tennant Creek	47.45	192	⇑iP	P	18 25 02.5	-0.9
WRAB				pmax	pmax		
	comp=Z,26nm,1.0s						
WB2	Warramunga Arr	47.46	192	eP	P	18 25 02.5	-1.0
	comp=Z,28nm,0.9s						
WRA	Warramunga Arr	47.46	192	P	P	18 25 02.5	-1.0
	comp=Z,22nm,0.9s,baz=9.2,slow=7.4,SNR=32						
WC3	Warramunga Arr	47.47	192	eP	P	18 25 02.3	-1.3
	comp=Z,32nm,1.0s						
WMQ	Urumqi	47.94	306	eP	P	18 25 08.9	+1.8
WMQ				sP	pwP	18 25 22.1	-1.2
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.9s						
WMQ				LR	LR		
	comp=Z,280nm,29.9s						
WMQ				LR	LR		
	comp=Z,480nm,29.2s						
DGZ	Jazzator, Alta	48.52	314	c iP	P	18 25 13.4	+1.8
DGZ				pmax	pmax		
	comp=Z,11nm,1.2s						
ZAA0	Zalesovo Array	50.65	319	eP	P	18 25 28.3	+0.7
	comp=Z,6.6nm,1.2s						
ZALV	Zalesovo Beam	50.65	319	P	P	18 25 28.4	+0.8
	comp=Z,1.5nm,0.6s,baz=102,slow=6.2,SNR=5.7						
ZALV				PcP	PcP	18 26 45.4	+0.7
	comp=Z,1.5nm,0.8s,baz=108,slow=4.7,SNR=3.1						
AS31	Alice Springs	51.17	192	eP	P	18 25 30.2	-1.6
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	51.17	192	P	P	18 25 30.4	-1.4
	comp=Z,2.1nm,0.9s,baz=9.7,slow=7.1,SNR=16						
ASAR				PcP	PcP	18 26 46.8	-0.2
	comp=Z,1.4nm,0.9s,baz=8.7,slow=2.3,SNR=5.5						
GSI	Gunungsitoli	51.18	248	eP	P	18 25 29.4	-2.8
	comp=Z,22nm,1.1s						
MK31	Makanchi Array	51.79	310	eP	P	18 25 36.4	+0.1
	comp=Z,8.1nm,1.1s						
MK31	Makanchi Array	51.79	310	eP	P	18 25 36.4	+0.1
MK31				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MKAR	Makanchi Array	51.79	310	P	P	18 25 37.3	+1.0
	comp=Z,4.2nm,0.8s,baz=90,slow=9.4,SNR=20						
MKAR				PcP	PcP	18 26 49.7	+0.6
	comp=Z,0.6nm,0.8s,baz=58,slow=3.6,SNR=2.1						
MKAR	Makanchi Array	51.79	310	i P	P	18 25 37.2	+0.9
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	Makanchi	52.00	310	eP	P	18 25 38.4	+0.5
	comp=Z,18nm,1.4s						
MAKZ	Makanchi	52.00	310	eP	P	18 25 38.4	+0.5
MAKZ				pmax	pmax		
	comp=Z,18nm,1.4s						
PDGK	Podgornoye	53.91	305	P	P	18 25 52.2	0.0
PDGK				pmax	pmax		
	comp=Z,14nm,1.1s						
KURK	Kurchatov	54.22	315	eP	P	18 25 54.6	+0.5
	comp=Z,12nm,1.3s						
KURK	Kurchatov	54.22	315	i P	P	18 25 56.6	+2.5
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PRZ	Przheval'sk	54.78	305	eP	P	18 26 00.4	+1.8
	comp=Z,47nm,1.4s						
PRZ	Przheval'sk	54.78	305	eP	P	18 26 00.4	+1.8
PRZ				pmax	pmax		
	comp=Z,47nm,1.4s						
KDJ	Kajisay	55.72	304	eP	P	18 26 06.6	+1.2
	comp=Z,6.9nm,1.0s						
KDJ	Kajisay	55.72	304	eP	P	18 26 06.6	+1.2
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SCM	Sheep Creek Mo	56.68	32	eP	P	18 26 12.1	+0.4
	comp=Z,22nm,1.6s						
SCM	Sheep Creek Mo	56.68	32	eP	P	18 26 12.1	+0.4
SCM				pmax	pmax		
	comp=Z,22nm,1.6s						
KSH	Kashi	57.00	301	P	P	18 26 18.6	+4.2
KSH				pP	sP	18 26 28.7	+2.1
KSH				sP	pwP	18 26 32.0	+1.2
KSH				PcP	PcP	18 27 13.6	+4.3
KSH				PP	PP	18 28 28.5	+7.4
KSH				pmax	pmax		
	comp=Z,13nm,1.2s						
KSH				pmax	pmax		
	comp=Z,160nm,6.2s						
KSH				LR	LR		
	comp=Z,130nm,9.9s						
KSH				LR	LR		
	comp=Z,160nm,7.4s						
ILAR	Eielson Array	57.17	28	P	P	18 26 13.6	-1.4
	comp=Z,1.9nm,1.1s,baz=256,slow=6.0,SNR=14						
ILB	Eielson Array	57.17	28	eP	P	18 26 15.2	+0.1
	comp=Z,12nm,1.5s						
FRU1	Bishkek	57.51	305	eP	P	18 26 18.4	+0.5
	comp=Z,12nm,1.1s						
FRU1	Bishkek	57.51	305	eP	P	18 26 18.4	+0.5
FRU1				pmax	pmax		
	comp=Z,12nm,1.1s						
AAK	Ala-Archa	57.63	305	P	P	18 26 20.6	+1.7
	comp=Z,1.3nm,0.4s,baz=109,slow=3.6,SNR=6.8						
AAK	Ala-Archa	57.63	305	eP	P	18 26 19.8	+0.9
	comp=Z,8.0nm,1.1s						
AAK	Ala-Archa	57.63	305	eP	P	18 26 19.8	+0.9
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DOT	Dot Lake	58.31	30	eP	P	18 26 24.1	+1.0
	comp=Z,3.6nm,1.1s						
OTUK	Ortayu	58.44	312	P	P	18 26 24.8	+0.5
OTUK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
STKA	Stephens Creek	58.47	182	P	P	18 26 24.0	-0.5
	comp=Z,3.2nm,0.9s,baz=329,slow=12,SNR=3.9						
STKA	Stephens Creek	58.47	182	eP	P	18 26 23.6	-0.9
	comp=Z,1.9nm,1.1s						
STKA	Stephens Creek	58.47	182	eP	P	18 26 23.6	-0.9
STKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRVK	Borovoye	59.29	318	eP	P	18 26 30.6	+0.5
	comp=Z,8.9nm,1.2s						
BRVK	Borovoye	59.29	318	i P	P	18 26 31.0	+0.9
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NIL	Nilore	60.33	295	eP	P	18 26 38.7	+1.1
	comp=Z,19nm,1.2s						
NIL	Nilore	60.33	295	eP	P	18 26 38.7	+1.1
NIL				pmax	pmax		
	comp=Z,19nm,1.2s						
DAWY	Dawson	60.38	29	eP	P	18 26 39.4	+1.9
	comp=Z,4.6nm,1.1s						
KK31	Karatay Array	60.45	306	eP	P	18 26 39.1	+0.9
	comp=Z,14nm,1.1s						
KK31	Karatay Array	60.45	306	eP	P	18 26 39.1	+0.9
KK31				pmax	pmax		
	comp=Z,14nm,1.1s						
KKAR	Karatay Array	60.45	306	eP	P	18 26 38.8	+0.6
	comp=Z,14nm,1.1s						
KKAR	Karatay Array	60.45	306	eP	P	18 26 38.8	+0.6
KKAR				pmax	pmax		
	comp=Z,14nm,1.1s						
BTK	Batken	60.80	303	eP	P	18 26 41.5	+0.7
	comp=Z,7.2nm,1.1s						
BTK	Batken	60.80	303	eP	P	18 26 41.5	+0.7
BTK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GAR	Garm	61.41	302	eP	P	18 26 45.7	+0.8
	comp=Z,35nm,1.3s						
GAR	Garm	61.41	302	eP	P	18 26 45.7	+0.8
GAR				pmax	pmax		
	comp=Z,35nm,1.3s						
EPYK	Eagle Plains	61.45	27	eP	P	18 26 45.4	+0.7
	comp=Z,29nm,1.8s						
PALK	Pallekele	62.86	264	ceP	P	18 26 57.2	+2.3
KBL	Kabul	63.48	297	eP	P	18 26 59.4	+0.4
	comp=Z,12nm,1.1s						
KBL	Kabul	63.48	297	eP	P	18 26 59.4	+0.4
KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
SVE	Sverdlovsk	64.32	323	eP	P	18 27 04.6	+0.8
SVE				pmax	pmax		
	comp=Z,12nm,1.4s						
ARU	Arti	65.52	323	eP	P	18 27 11.9	+0.3
	comp=Z,11nm,1.1s						
ARU	Arti	65.52	323	c iP	P	18 27 12.3	+0.6
ARU				S	S	18 36 00.1	+6.0
ARU				SS	SS	18 40 05.4	-2.2
ARU				pmax	pmax		
	comp=Z,12nm,1.1s						
ABKAR	Akbulak array	66.33	315	eP	P	18 27 16.7	-0.3
	comp=Z,6.3nm,1.1s						
YKA	Yellowknife Ar	71.60	29	P	P	18 27 49.0	-0.4
	comp=Z,1.4nm,0.8s,baz=299,slow=6.2,SNR=7.4						
YKB5	Yellowknife Ar	71.60	29	eP	P	18 27 49.0	-0.4
PINE	Pine Mountain	75.41	48	eP	P	18 28 12.7	+0.2
	comp=Z,9.5nm,1.0s						
NEW	Newport	76.03	43	eP	P	18 28 16.2	+0.4
	comp=Z,3.5nm,0.9s						
NEW	Newport	76.03	43	eP	P	18 28 16.2	+0.4
NEW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
E09A	Wood Farm, Sta	76.12	45	eP	P	18 28 15.7	-0.6
	comp=Z,17nm,1.5s						
J08A	Circle Bar Ran	77.22	48	eP	P	18 28 23.1	+0.4
	comp=Z,8.2nm,1.3s						
BMO	Blue Mountains	77.35	46	eP	P	18 28 23.2	-0.2
	comp=Z,18nm,1.8s						
BMO	Blue Mountains	77.35	46	eP	P	18 28 23.2	-0.2
BMO				pmax	pmax		
	comp=Z,18nm,1.8s						
WALA	Waterton Lakes	77.60	41	eP	P	18 28 25.1	+0.4
	comp=Z,6.6nm,0.9s						
CMB	Columbia Colle	78.13	53	eP	P	18 28 27.7	-0.1
	comp=Z,5.7nm,0.9s						
CMB	Columbia Colle	78.13	53	eP	P	18 28 27.7	-0.1
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FIA0	FINESS Array S	78.81	334	eP	P	18 28 32.0	+1.1
FIA0	FINESS Array S	78.81	334	eP	P	18 28 32.0	+1.1
FINES	FINESS Array B	78.81	334	P	P	18 28 32.0	+1.1
	comp=Z,2.7nm,1.1s,baz=66,slow=4.6,SNR=5.6						
FINES	FINESS Array B	78.81	334	i P	P	18 28 32.7	+1.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KBZ	Khabaz	79.27	314	P	P	18 28 35.0	+1.2
	comp=Z,5.8nm,0.8s,baz=74,slow=3.6,SNR=12						
KBZ	Khabaz	79.27	314	P	P	18 28 35.0	+1.2
KIV	Kislovodsk	79.30	314	eP	P	18 28 35.4	+1.2
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KVN	Kaiserville	79.32	52	eP	P	18 28 34.9	+0.4
	comp=Z,5.2nm,1.0s						
KVN	Kaiserville	79.32	52	eP	P	18 28 34.9	+0.4
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SHA1	Shidzhatmaz	79.42	314	eP	P	18 28 36.7	+1.7
NVAR	Mina Array Bea	79.44	52	P	P	18 28 34.1	-1.1
	comp=Z,3.1nm,0.7s,baz=264,slow=6.9,SNR=6.4						
NEY	Neytrino	79.60	313	eP	P	18 28 37.7	+1.8
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ELK	Elko	80.53	49	eP	P	18 28 41.1	+0.1
	comp=Z,5.8nm,1.3s						
ELK	Elko	80.53	49	eP	P	18 28 41.2	+0.1
ELK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FFC	Flin Flon	81.11	32	ceP	P	18 28 46.5	+2.9
R11A	Troy Canyon, C	81.39	51	eP	P	18 28 45.2	-0.5
	comp=Z,5.2nm,1.1s						
TPNV	Topopah Spring	81.56	53	eP	P	18 28 46.1	-0.4
	comp=Z,3.0nm,0.8s						
TPNV	Topopah Spring	81.56	53	eP	P	18 28 46.1	-0.4
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSUT	Pine Spring	82.51	51	eP	P	18 28 50.8	-0.8
	comp=Z,3.9nm,1.0s						
PDAR	Pinedale Array	83.28	45	P	P	18 28 56.0	+0.4
	comp=Z,0.7nm,0.7s,baz=296,slow=2.9,SNR=2.9						
AKASG	Malin Array Be	83.68	324	P	P	18 28 56.0	-1.0
	comp=Z,0.6nm,0.5s,baz=45,slow=6.0,SNR=5.2						
KNB	Kanab	83.95	52	eP	P	18 28 59.2	+0.3
	comp=Z,8.7nm,1.2s						
KNB	Kanab	83.95	52	eP	P	18 28 59.3	+0.3
KNB				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NB200	NORSAR Array S	84.36	339	eP	P	18 28 59.9	-0.5
NOA	NORSAR Array B	84.36	339	P	P	18 28 59.9	-0.5
	comp=Z,2.0nm,1.0s,baz=39,slow=4.9,SNR=2.4						
ULM	Lac du Bonnet	86.78	34	P	P	18 29 12.0	-0.6
	comp=Z,1.7nm,0.3s,baz=320,slow=2.8,SNR=2.7						
BR131	Keskin Array S	87.26	314	eP	P	18 29 14.7	-0.6
	comp=Z,2.6nm,1.0s						
BRTR	Keskin Array B	87.26	314	P	P	18 29 15.4	+0.1
	comp=Z,1.5nm,0.9s,baz=86,slow=4.0,SNR=7.4						
VYHS	Vyhne	90.31	327	eP	P	18 29 29.1	-0.3
VYHS	Vyhne	90.31	327	eP	P	18 29 29.1	-0.3
CLL	Collm	90.97	332	eP	P	18 29 32.0	-0.3
CLL	Collm	90.97	332	eP	P	18 29 32.0	-0.3
MNTX	Cornudas Mount	91.96	53	eP	P	18 29 38.6	+1.2
	comp=Z,2.1nm,0.9s						
PTGA	Pitinga	145.33	45	ePKPdf	PKPbc	18 36 06.0	-0.8
LPAZ	La Paz	148.49	77	PKPbc	PKPbc	18 36 16.3	-0.2
	comp=Z,9.2nm,1.0s,baz=345,slow=3.0,SNR=16						

ISCJB ***09*** *18:18:32.8±0.5, 26°.75N±0°.06×143°.77E±0°.09, h10km, mb4.2/25, Error ellipse: s-maj=11.2km s-min=8.4km az=177.3*

IDC ***09*** *18:18:32.8±0.7, 26°.70N×143°.79E, h0km, mb3.9/15, mb1 4.1/18, mb1mx4.0/51, mbtmp3.9/18, ML3.0/3, Error ellipse: s-maj=20.7km s-min=16.3km az=82.0*

NEIC ***09*** *18:18:38.6±1.7, 26°.78N×143°.74E, h35km±6km, mb4.5/12, Error ellipse: s-maj=14.8km s-min=12.6km az=124.0*

ISC 09 18:18:35.2±0.7**, 26°.88N**±0°.08×**143°.7E**±0°.1**, h10km, n43, σ1§27**/46**, mb4.0**/25**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	10.71	335	Pn	Pn	18 21 08.3	-0.4
	0.1nm,0.3s,baz=165,slow=11,SNR=4.6						
MJAR				Sn	Sn	18 23 05.7	-3.0
	0.1nm,0.3s,baz=148,slow=9.9,SNR=3.7						
MAJO	Matsushiro	10.71	335	ePn	Pn	18 21 08.3	-0.4
MAJO				e		18 21 08.7	
MAJO				eSn	Sn	18 23 05.7	-3.0
MJB9	Matsu-Tunnel	10.71	335	ePn	Pn	18 21 09.5	+0.7
KSRS	Korea Array	17.01	312	P	Pn	18 22 35.8	+2.6
	0.1nm,0.3s,baz=121,slow=10,SNR=4.2						
YOJ	Yonaguni jima	18.82	267	eP	P	18 22 55.4	+0.2
	20nm,0.9s						
USRK	Ussuriysk Ar.	19.70	334	P	P	18 23 06.9	+2.3
	0.2nm,0.3s,baz=157,slow=15,SNR=4.1						
YHNB	Yeheng	20.24	269	eP	P	18 23 11.6	+0.8
	14nm,0.7s						
KLR	Kul'dur	24.16	341	P	P	18 23 53.5	+2.1
	0.7nm,0.3s,baz=170,slow=11,SNR=2.7						
SONA0	Songino Array	35.82	316	eP	P	18 25 35.9	+0.9
SONM	Songino Array	35.82	316	P	P	18 25 35.9	+0.9
	1.3nm,0.6s,baz=114,slow=7.7,SNR=4.5						
CHTO	Chiang Mai	41.87	269	eP	P	18 26 26.6	+0.7
	3.6nm,1.1s						
CMAR	Chiang Mai Arr	41.99	268	P	P	18 26 25.7	-1.1
	0.9nm,0.6s,baz=57,slow=6.7,SNR=5.1						
TIXI	Tiksi	45.57	353	P	P	18 26 54.3	-0.6
	1.0nm,0.7s,baz=135,slow=6.2,SNR=3.1						
KULM	Kulim	46.30	250	eP	P	18 27 02.1	+0.6
	15nm,1.3s						
WB2	Warramunga Arr	47.43	192	eP	P	18 27 07.8	-2.3
	15nm,0.9s						
WR1	Warramunga Arr	47.43	192	eP	P	18 27 08.3	-1.8
WRA	Warramunga Arr	47.43	192	P	P	18 27 08.3	-1.8
	7.3nm,0.5s,baz=6.8,slow=7.9,SNR=14						
PSI	Prapat	49.09	249	eP	P	18 27 22.6	-0.7
	11nm,1.1s						
ZAA1	Zalesovo Array	50.55	319	eP	P	18 27 34.1	+0.4
ZALV	Zalesovo Beam	50.55	319	P	P	18 27 34.1	+0.4
	0.7nm,0.4s,baz=91,slow=6.2,SNR=3.2						
AS31	Alice Springs	51.14	192	eP	P	18 27 36.4	-2.0
	1.9nm,1.3s						
ASAR	Alice Springs	51.14	192	P	P	18 27 36.1	-2.4
	0.9nm,0.6s,baz=15,slow=6.4,SNR=7.9						
ASAR				PcP	PcP	18 28 53.0	-1.0
	0.8nm,0.9s,baz=27,slow=2.3,SNR=3.8						
MK31	Makanchi Array	51.67	310	eP	P	18 27 42.6	+0.3
	4.3nm,0.9s						
MK32	Makanchi Array	51.67	310	eP	P	18 27 43.0	+0.7
MK32				ePcP	PcP	18 28 55.7	-0.1
MKAR	Makanchi Array	51.67	310	P	P	18 27 43.0	+0.7
	3.0nm,0.6s,baz=90,slow=8.5,SNR=10						
MKAR				PcP	PcP	18 28 55.7	-0.1
	1.1nm,0.9s,baz=123,slow=3.8,SNR=2.7						
MAKZ	Makanchi	51.88	310	eP	P	18 27 44.6	+0.7
	3.9nm,0.8s						
ILAR	Eielson Array	57.24	28	P	P	18 28 22.4	-0.1
	0.4nm,0.7s,baz=262,slow=6.1,SNR=3.2						
ILB	Eielson Array	57.24	28	eP	P	18 28 23.7	+1.2
	6.4nm,1.6s						
GAR	Garm	61.27	302	eP	P	18 28 51.1	+0.1
	9.9nm,0.7s						
ABKAR	Akbulak array	66.22	315	eP	P	18 29 23.0	-0.3
	2.2nm,0.6s						
YKA	Yellowknife Ar	71.67	29	P	P	18 29 57.2	+0.3
	0.2nm,0.3s,baz=293,slow=6.5,SNR=3.0						
YKB5	Yellowknife Ar	71.67	29	eP	P	18 29 57.2	+0.3
FIA0	FINESS Array S	78.74	334	eP	P	18 30 38.3	+0.7
FINES	FINESS Array B	78.74	334	P	P	18 30 38.3	+0.7
	0.8nm,0.5s,baz=64,slow=3.2,SNR=3.1						
KBZ	Khabaz	79.15	314	P	P	18 30 40.7	+0.5
	4.4nm,0.7s,baz=81,slow=5.8,SNR=7.4						
NV01	Mina Array Sit	79.57	52	eP	P	18 30 42.5	-0.5
NVAR	Mina Array Bea	79.57	52	P	P	18 30 42.5	-0.5
	0.9nm,0.4s,baz=280,slow=4.8,SNR=4.4						
PDAR	Pinedale Array	83.39	45	P	P	18 31 02.9	-0.3
	0.4nm,0.7s,baz=269,slow=4.3,SNR=3.7						
AKASG	Malin Array Be	83.59	324	P	P	18 31 02.2	-1.5
	0.2nm,0.3s,baz=52,slow=6.0,SNR=2.9						
BR101	Keskin Array S	87.15	314	eP	P	18 31 21.0	-0.9
BRTR	Keskin Array B	87.15	314	P	P	18 31 21.0	-0.9
	0.9nm,0.9s,baz=53,slow=3.3,SNR=3.4						
LPAZ	La Paz	148.64	77	PKPbc	PKPdf	18 38 22.6	+2.2
	2.7nm,0.8s,baz=330,slow=2.4,SNR=5.2						
LPAZ	La Paz	148.64	77	ePKPbc	PKPdf	18 38 22.3	+1.9

ROM 09 18:20:46.3±0.1**, 44°.188N**±0°.010×**10°.221E**±0°.009**, h10km, ML0.9**/4**, Error ellipse: s-maj=1.1km s-min=0.7km az=186.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	Equi	0.05	246	P	Pg	18 20 48.7	+0.4
EQUI				S	Sg	18 20 49.8	0.0
EQUI	Equi	0.05	246	P	Pg	18 20 48.7	+0.4
EQUI				S	Sg	18 20 49.9	+0.1
EQUI				AML	AML		
	comp=E,57µm,1.1s						

EQUI				AML	AML		
	comp=N,54µm,0.9s						
EQUI				AML	AML		
	comp=E,57µm,1.1s						
EQUI				AML	AML		
	comp=N,54µm,0.9s						
VLC	Villacollemand	0.12	104	*i* P	Pg	18 20 49.5	+0.3
VLC				S	Sg	18 20 52.2	+0.9
VLC				AML	AML		
	comp=E,50µm,0.1s						
VLC				AML	AML		
	comp=N,55µm,0.2s						
VLC				AML	AML		
	comp=N,55µm,0.2s						
VLC				AML	AML		
	comp=E,50µm,0.1s						
T0911	Castelpoggio (	0.13	234	*e*P	Pg	18 20 50.2	+0.9
T0911				S	Sg	18 20 52.4	+0.9
CARD	Cardoso	0.25	131	P	Pg	18 20 52.5	+1.2
CARD				S	Sg	18 20 55.9	+1.2
CARD				AML	AML		
	comp=E,65µm,1.5s						
CARD				AML	AML		
	comp=N,76µm,1.5s						
CARD				AML	AML		
	comp=E,65µm,1.5s						
CARD				AML	AML		
	comp=N,76µm,1.5s						
PLMA	Palmaria, Port	0.30	243	*e*P	Pb	18 20 53.8	0.0
PLMA				S	Sg	18 20 57.4	+1.1
GRAM	Graiana	0.32	340	P	Pg	18 20 53.4	+0.7
GRAM				S	Sg	18 20 58.3	+1.2
GRAM	Graiana	0.32	340	*e*P	Pg	18 20 53.5	+0.7
GRAM				S	Sg	18 20 58.3	+1.2
GRAM				AML	AML		
	comp=E,61µm,0.2s						
GRAM				AML	AML		
	comp=N,88µm,0.4s						
GRAM				AML	AML		
	comp=N,88µm,0.4s						
GRAM				AML	AML		
	comp=E,61µm,0.2s						

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*MOS **09** 18:22:30.6±0.8, 31°.78S×178°.64W, h44^{km}, mb5.3/17, Error ellipse: s-maj=12.8km s-min=11.0km az=63.6*

*BJI **09** 18:22:30.3±0.0, 31°.80S×178°.70W, h37^{km}, mb5.3/13, mB5.6/10, Ms5.2/5, Ms7 4.9/2*

*IDC **09** 18:22:30.7±4.4, 31°.79S×178°.56W, h37^{km}±35^{km}, mb4.6/19, mb1 4.6/22, mb1mx4.5/34, mbtmp4.8/22, ML3.8/3, MS3.9/12, Ms1 4.0/12, ms1mx3.8/22, Error ellipse: s-maj=17.9km s-min=14.7km az=57.0*

*ISCJB **09** 18:22:30.3±0.2, 31°.96S±0°.02×178°.65W±0°.04, h45^{km}, mb5.0/71, MS4.0/12, Error ellipse: s-maj=5.4km s-min=2.2km az=22.6*

*NEIC **09** 18:22:32.5±2.4, 31°.81S×178°.71W, h52^{km}±4^{km}, mb5.1/63, Error ellipse: s-maj=13.4km s-min=8.5km az=110.0*

*GCMT **09** 18:22:33.5±0.4, 31°.66S±0°.03×178°.33W±0°.03, h62^{km}±2^{km}, MW5.0/56, Moment Tensor Solution. s37,c46; s56,c67; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.17±.23; $M_{\theta\theta}$0.76±.20; $M_{\phi\phi}$-3.93±.15; $M_{r\theta}$0.73±.15; $M_{\theta\phi}$-2.49±.20; $M_{\phi r}$0.75±.14; Best double couple: $M_0$4.24800×10^{16} NP1:ϕ_s36.00000°, δ53.00000°, λ107.00000°. NP2: ϕ_s189.00000°, δ40.00000°, λ69.00000°. Principal axes: T 3.3760, Plg75.0000°, Azm358.0000°; N 1.7460, Plg14.0000°, Azm205.0000°; P -5.1210, Plg7.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 18:22:31.3±0.3**, 31°.88S**±0°.04×**178°.46W**±0°.06**, h45**^{km}**, n429,** σ1^s**87**/412**, mb5.1**/69**, MS4.2**/13**, 4C-2D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.66	10	P	Pn	18 23 11.0	-0.6
GLKZ				S	Sn	18 23 38.4	-4.2
RAO	Raoul Island	2.67	10	*e*Pn	Pn	18 23 11.2	-0.5
RAO				*e*		18 23 11.6	
RAO	Raoul Island	2.67	10	*e*P	Pn	18 23 11.2	-0.5
RIZ	Raoul Island	2.67	10	P	Pn	18 23 11.4	-0.4
RIZ				S	Sn	18 23 40.7	-2.3
MXZ	Matakaoa Point	6.26	204	*e*Pn	Pn	18 24 00.1	-0.9
MXZ				*e*Sn	Sn	18 25 14.2	+3.0
MXZ	Matakaoa Point	6.26	204	P	Pn	18 23 59.7	-1.3
MXZ				S	Sn	18 25 10.8	-0.4
WMGZ	Waiomatatini S	6.45	203	P	Pn	18 24 03.2	-0.5
WMGZ				S	Sn	18 25 15.8	-0.2
WMGZ	Waiomatatini S	6.45	203	P	Sn	18 25 21.5	+5.5
HAZ	Te Kaha	6.62	207	P	Pn	18 24 05.6	-0.4
HAZ				S	Sn	18 25 18.4	-1.8
PKGZ	Pakihiroa	6.63	204	P	Pn	18 24 04.6	-1.6
PKGZ				S	Sn	18 25 20.5	0.0
PKGZ	Pakihiroa	6.63	204	P	Sn	18 25 23.4	+3.0
GRZ	Great Barrier	6.66	228	P	Pn	18 24 10.2	+3.6
PUZ	Puketiti	6.73	203	P	Pn	18 24 06.0	-1.6
KUZ	Kuaotunu	6.83	223	P	Pn	18 24 13.4	+4.6
RUGZ	Raukumara Rang	6.84	207	P	Pn	18 24 07.7	-1.5
TWGZ	Tauwhareparae	6.92	204	P	Pn	18 24 08.6	-1.6
TWGZ				S	Sn	18 25 27.0	-0.6
WHRZ	Whale Island	7.04	211	P	Pn	18 24 15.8	+4.0
CNGZ	Carnagh Statio	7.13	202	P	Pn	18 24 11.5	-1.4
TKGZ	Te Karaka	7.20	204	P	Pn	18 24 12.8	-1.2
WIAZ	Waiheke Island	7.21	225	P	Pn	18 24 17.9	+3.8
WCZ	Waipu Caves	7.22	234	P	Pn	18 24 18.7	+4.5
OPRZ	Ohinepanea	7.22	213	P	Pn	18 24 15.7	+1.5
MWZ	Matawai	7.22	206	P	Pn	18 24 12.0	-2.3
TGRZ	Tauranga	7.27	215	P	Pn	18 24 16.7	+1.8
MARZ	Manawahe	7.28	212	P	Pn	18 24 17.3	+2.3
URZ	Urewera	7.32	208	Pn	Pn	18 24 14.2	-1.4
	11nm,0.3s,baz=271,slow=5.1,SNR=60						
URZ				Sn	Sn	18 25 36.0	-1.4
	22nm,0.3s,baz=273,slow=4.2,SNR=5.1						
URZ				LR	LR	18 26 51.3	
	comp=Z,591nm,21.2s,baz=55,slow=35						
URZ	Urewera	7.32	208	*e*Pn	Pn	18 24 13.4	-2.2
URZ				*e*Sn	Sn	18 25 37.7	+0.3
URZ	Urewera	7.32	208	P	Pn	18 24 13.7	-1.9
EDRZ	Edgecumbe	7.35	211	P	Pn	18 24 17.7	+1.6
MKAZ	Moumakai	7.40	224	P	Pn	18 24 20.4	+3.7
OUZ	Omahuta	7.42	241	*e*Pn	Pn	18 24 19.2	+2.3
OUZ				*e*Sn	Sn	18 25 35.9	-3.8
OUZ	Omahuta	7.42	241	P	Pn	18 24 21.6	+4.7
LIRZ	Lichensteins R	7.43	213	P	Pn	18 24 19.2	+2.2
RIGZ	Rimuhau	7.47	203	P	Pn	18 24 16.2	-1.5
RIGZ				S	Sn	18 25 33.2	-7.9
MKRZ	Makatiti	7.50	212	P	Pn	18 24 20.8	+2.7
KARZ	Kaharoa	7.51	214	P	Pn	18 24 20.7	+2.6
OMRZ	Omania	7.51	213	P	Pn	18 24 20.3	+2.0
KMRZ	Kaimai	7.52	216	P	Pn	18 24 21.0	+2.7
TARZ	Mount Tarawera	7.56	212	P	Pn	18 24 21.0	+2.0
PRGZ	Paritu Road	7.63	202	P	Pn	18 24 19.3	-0.6
RRRZ	Republican Roa	7.64	211	P	Pn	18 24 20.4	+0.4
HLRZ	Highlands Stat	7.64	212	P	Pn	18 24 20.3	+0.2
MUGZ	Murupara	7.65	209	P	Pn	18 24 18.0	-2.0
TOZ	Tahuroa Road	7.66	219	P	Pn	18 24 22.9	+2.7
RTZ	Ruatahuna	7.68	208	P	Pn	18 24 18.1	-2.5
SNGZ	Shannon Statio	7.69	205	P	Pn	18 24 18.9	-1.8
HSRZ	Hossack Road	7.74	213	P	Pn	18 24 23.3	+1.9
KNZ	Kokohu	7.79	203	P	Pn	18 24 20.1	-1.9
PRRZ	Plateau Road	7.83	211	P	Pn	18 24 24.0	+1.4
MHGZ	Mahia Peninsul	7.83	201	P	Pn	18 24 20.3	-2.4
GRRZ	Galatos Road	7.83	213	P	Pn	18 24 24.8	+2.1
RAHZ	Arahi	7.90	206	P	Pn	18 24 24.6	+1.1
ALRZ	Allen Road	7.90	211	P	Pn	18 24 22.8	-0.8
MTHZ	Maungataniwha	7.94	208	P	Pn	18 24 22.8	-1.3
WPRZ	Whakapapatarin	7.95	212	P	Pn	18 24 25.2	+1.0
WHHZ	Waihua	7.99	205	P	Pn	18 24 23.1	-1.7
KUTZ	Kaahu Road	8.08	214	P	Pn	18 24 28.6	+2.6
TLZ	Tolley Road	8.09	216	P	Pn	18 24 28.2	+2.0
MRHZ	Matea Rd	8.10	210	P	Pn	18 24 26.2	-0.1
WHTZ	Whakaora	8.16	212	P	Pn	18 24 29.2	+2.1
NMHZ	Naumai	8.16	207	P	Pn	18 24 25.5	-1.7
ARHZ	Aropaoanui	8.24	205	P	Pn	18 24 26.7	-1.4
ARHZ				S	Sn	18 25 57.1	-2.8
WATZ	Wairara	8.30	213	P	Pn	18 24 30.4	+1.4
BKZ	Black Stump Fm	8.35	208	*e*Pn	Pn	18 24 26.9	-2.8
BKZ	Black Stump Fm	8.35	208	P	Pn	18 24 27.1	-2.6
RATZ	Rangitukua	8.41	212	P	Pn	18 24 32.1	+1.6
RITZ	Rihia Road	8.46	212	P	Pn	18 24 32.2	+0.9
MCHZ	McNeill Hill	8.51	206	P	Pn	18 24 30.8	-1.0
KATZ	Kakaramea	8.53	212	P	Pn	18 24 33.6	+1.3
CKHZ	Cape Kidnapper	8.56	204	P	Pn	18 24 32.5	0.0
HIZ	Hauiti	8.58	218	*e*Pn	Pn	18 24 35.7	+2.8
HIZ	Hauiti	8.58	218	P	Pn	18 24 36.3	+3.5
KWHZ	Kaweka Forest	8.60	208	P	Pn	18 24 31.1	-2.0
KRVZ	Karewarewa	8.65	212	P	Pn	18 24 34.8	+0.8
WTVZ	West Tongariro	8.69	212	P	Pn	18 24 35.0	+0.5
OTVZ	Oturere	8.70	212	P	Pn	18 24 34.0	-0.6
TWVZ	Taurewa	8.72	213	P	Pn	18 24 35.7	+0.8
NGZ	Ngauruhoe	8.73	212	P	Pn	18 24 35.4	+0.2
KAHZ	Kahuranaki	8.75	204	P	Pn	18 24 32.8	-2.5
TUVZ	Tukino	8.79	211	P	Pn	18 24 36.3	+0.5
BHHZ	Black Hill Sta	8.80	209	P	Pn	18 24 35.3	-0.6
KRHZ	Kereru	8.80	207	P	Pn	18 24 33.2	-2.8
FWVZ	Far West T-bar	8.82	212	P	Pn	18 24 36.0	-0.4
WHVZ	Whangaehu Hut	8.83	212	P	Pn	18 24 36.4	-0.1
MOVZ	Moawhango	8.86	210	P	Pn	18 24 35.8	-1.0
PKVZ	Pokaka	8.94	213	P	Pn	18 24 38.5	+0.6
MTVZ	Mangateitei	8.96	212	P	Pn	18 24 38.4	+0.2
PXZ	Pawanui	8.97	204	P	Pn	18 24 36.1	-2.0
VRZ	Vera Road	9.09	216	P	Pn	18 24 41.5	+1.6
PRHZ	Porangahau	9.26	204	P	Pn	18 24 38.7	-3.4
DVHZ	Dannevirke	9.45	206	P	Pn	18 24 42.3	-2.5
WAZ	Wanganui	9.48	212	P	Pn	18 24 45.6	+0.4
ANWZ	Angora Road	9.48	204	P	Pn	18 24 43.1	-2.1
LREZ	Lake Rotokare	9.53	216	P	Pn	18 24 48.1	+2.2
PKE	Pukeiti	9.54	218	P	Pn	18 24 50.3	+4.3
KHEZ	Kahui Hut	9.60	218	P	Pn	18 24 58.4	+12
NBEZ	Newall Road No	9.65	218	P	Pn	18 24 59.3	+12
POWZ	Post Office Ro	9.68	207	P	Pn	18 24 47.7	-0.3
PRWZ	Pori Road	9.75	206	P	Pn	18 24 47.0	-1.8
BFZ	Birch Farm	9.76	204	*e*Pn	Pn	18 24 44.5	-4.5
BFZ	Birch Farm	9.76	204	P	Pn	18 24 44.7	-4.3
TIWZ	Tintock	9.97	206	P	Pn	18 24 50.3	-1.7
MRZ	Mangatainoka R	9.99	207	P	Pn	18 24 47.0	-5.1
HOWZ	Holdsworth Sta	10.22	207	P	Pn	18 24 51.3	-4.0
TMWZ	Te Maipa	10.26	205	P	Pn	18 24 51.4	-4.5
OGWZ	Otaki Gorge	10.28	208	P	Pn	18 24 52.7	-3.5
MTW	Mount Morrison	10.45	206	P	Pn	18 24 53.8	-4.6
CAW	Cannon Point	10.57	208	P	Pn	18 24 54.2	-6.0
TRWZ	Traveller	10.59	205	P	Pn	18 24 58.7	-1.7
PAWZ	Paruwai Farm	10.67	206	P	Pn	18 24 58.0	-3.5
MSWZ	Moikau Station	10.77	206	P	Pn	18 25 00.9	-1.9
DUWZ	D'Urville Isla	10.81	212	P	Pn	18 25 02.1	-1.3
SNZO	South Karori	10.89	208	*e*Pn	Pn	18 24 58.9	-5.5
TCW	Tory Channel	10.98	210	P	Pn	18 25 04.1	-1.6
TUWZ	Tuamarina	11.30	210	P	Pn	18 25 05.7	-4.5
NNZ	Nelson	11.39	213	P	Pn	18 25 07.5	-3.8
QRZ	Quartz Range	11.50	217	P	Pn	18 25 10.7	-2.1
BSWZ	Blackbirch Sta	11.57	210	P	Pn	18 25 09.8	-3.9
CTZ	Chatham Island	11.92	174	P	Pn	18 25 16.9	-1.6
CTZ				S	Sn	18 27 19.1	-11
THZ	Tophouse	12.04	213	*e*Pn	Pn	18 25 14.8	-5.4
KHZ	Kahutara	12.29	209	*e*Pn	Pn	18 25 17.9	-5.6
KHZ	Kahutara	12.29	209	P	Pn	18 25 18.8	-4.8
GVZ	Greta Valley S	12.95	209	P	Pn	18 25 29.4	-3.2
LTZ	Lake Taylor	13.13	211	*e*Pn	Pn	18 25 28.8	-6.4
INZ	Inchbonnie	13.46	214	P	Pn	18 25 37.8	-1.8
CRLZ	Canterbury Las	13.62	209	*e*Pn	Pn	18 25 36.0	-5.8
OXZ	Oxford	13.67	211	*e*Pn	Pn	18 25 34.9	-7.5
MQZ	McQueen's Vall	13.72	208	*e*Pn	Pn	18 25 35.5	-7.6
WVZ	Waitaha Valley	14.07	214	P	Pn	18 25 46.4	-1.4
RPZ	Rata Peaks	14.41	212	Pn	Pn	18 25 47.1	-5.4
	1.7nm,0.3s,baz=120,slow=1.2,SNR=7.6						
RPZ				Sn	Sn	18 28 16.7	-14
	4.4nm,0.3s,baz=136,slow=22,SNR=10						
RPZ	Rata Peaks	14.41	212	*e*Pn	Pn	18 25 45.6	-6.9
FOZ	Fox Glacier	14.86	215	*e*Pn	Pn	18 25 53.8	-4.5
FOZ	Fox Glacier	14.86	215	P	P	18 26 03.4	+0.1
NIUE	Niue	14.89	33	*e*Pn	Pn	18 25 53.8	-5.1
LBZ	Lake Benmore	15.33	212	*e*Pn	Pn	18 25 59.5	-5.0
	42nm,1.3s						
ODZ	Otahua Downs	15.64	210	*e*Pn	Pn	18 26 01.7	-6.9
	142nm,1.7s						
MARNC	Mare, Loyalty	15.89	307	*e*Pn	Pn	18 26 11.1	-0.8
	718nm,1.9s						
WKZ	Wanaka	16.20	214	*e*Pn	Pn	18 26 10.0	-5.7
	52nm,1.2s						
DZM	Mont Dzumac	16.61	302	*e*LR	LR	18 30 21.8	
	comp=Z,3µm,25.4s						
DZM	Mont Dzumac	16.61	302	Pn	Pn	18 26 17.7	-3.4
	0.1nm,0.3s,baz=127,slow=20,SNR=2.9						
DZM				LR	LR	18 31 38.3	
	comp=Z,1µm,18.4s,baz=178,slow=33						
DZM	Mont Dzumac	16.61	302	*e*Pn	Pn	18 26 19.4	-1.7
	40nm,1.2s						
MLZ	Mavora Lakes	17.03	214	*e*Pn	Pn	18 26 20.4	-5.7
	62nm,1.4s						
MLZ	Mavora Lakes	17.03	214	P	P	18 26 30.2	+2.8
WHZ	Wether Hill Ro	17.50	213	*e*Pn	Pn	18 26 26.8	-5.1
	118nm,1.8s						
DCZ	Deep Cove	17.57	215	*e*Pn	Pn	18 26 30.1	-2.6
	134nm,2.0s						
RAR	Rarotonga	19.78	62	P	P	18 26 58.1	+0.4
	0.9nm,0.3s,baz=59,slow=18,SNR=2.3						
RAR				LR	LR	18 32 51.6	
	comp=Z,317nm,21.1s,baz=251,slow=31						
RAR	Rarotonga	19.78	62	*e*P	Pn	18 27 00.9	+1.3
	34nm,0.9s						
RAR	Rarotonga	19.78	62	*e*P	Pn	18 27 00.9	+1.3
RAR				pmax	pmax		
	comp=Z,34nm,0.9s						
ARMA	Armidale	25.60	265	*e*P	P	18 27 56.5	0.0
	comp=Z,40nm,1.4s						
ARMA	Armidale	25.60	265	P	P	18 27 55.8	-0.7
	baz=26,SNR=5.0						
MGCD	Mangrove Creek	25.64	259	P	P	18 27 59.8	+3.0
	baz=26,SNR=11						
CNB	Canberra Magne	26.95	254	P	P	18 28 11.0	+2.3
	baz=27,SNR=23						
TBI	Tubuai	27.00	79	*e*LQ	LQ	18 33 32.5	
	comp=Z,355nm,27.0s						
TBI				*e*LR	LR	18 34 57.9	
	comp=Z,1µm,26.8s,baz=240						
TBI	Tubuai	27.00	79	*e*T	T	18 55 40.2	
	comp=Z,139nm,0.4s						
MILA	Mila	27.11	250	P	P	18 28 11.6	+1.5
	baz=27,SNR=7.0						
CAN	Canberra	27.25	254	*e*P	P	18 28 11.7	+0.4
	comp=Z,36nm,1.5s						
CAN	Canberra	27.25	254	*e*P	P	18 28 11.7	+0.4
CAN				pmax	pmax		
	comp=Z,36nm,1.5s						
EIDS	Eidsvold	27.45	276	*e*P	P	18 28 14.2	+1.1
	comp=Z,55nm,1.6s						
EIDS	Eidsvold	27.45	276	P	P	18 28 15.3	+2.1
	baz=28,SNR=5.9						
RMQ	Roma	29.05	272	P	P	18 28 29.7	+2.3
	baz=29,SNR=6.4						
TAU	Tasmania Unive	29.14	238	*e*P	P	18 28 28.6	+0.6
	comp=Z,170nm,2.0s						
TAU	Tasmania Unive	29.14	238	*e*P	P	18 28 28.6	+0.6
TAU				pmax	pmax		
	comp=Z,170nm,2.0s						
PAE	Paea	29.69	68	*e*T	T	18 59 07.9	
	comp=Z,39nm,0.3s						
PPT2	Papeete2	29.73	68	*e*LQ	LQ	18 34 48.8	
	comp=Z,314nm,24.0s						
PPT2				*e*LR	LR	18 36 05.2	
	comp=Z,943nm,29.0s,baz=225						
PPT2	Papeete2	29.73	68	*e*T	T	18 59 11.3	
	comp=Z,38nm,0.3s						
PPT	Papeete	29.75	68	LR	LR	18 40 18.2	
	comp=Z,193nm,18.3s,baz=237,slow=36						
TVO	Taravao	29.88	69	*e*T	T	18 59 22.6	
	comp=Z,4.9nm,0.3s						
TIAR	Tiarei	29.93	68	*e*T	T	18 59 25.1	
	comp=Z,6.0nm,0.3s						
HNR	Honiara	30.00	313	P	P	18 28 35.1	-0.7
	comp=Z,50nm,0.4s,baz=335,slow=5.6,SNR=4.5						
HNR	Honiara	30.00	313	P	P	18 28 34.3	-1.5
HNR				pmax	pmax		
	comp=Z,111nm,0.8s						
TOO	Toolangi	30.04	249	*e*P	P	18 28 37.3	+1.2
	comp=Z,5.8nm,0.6s						
TOO	Toolangi	30.04	249	P	P	18 28 36.8	+0.8
	baz=30,SNR=15						
TOO	Toolangi	30.04	249	*e*P	P	18 28 37.3	+1.2
TOO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMSA	Cobar Meteorol	30.41	261	P	P	18 28 41.0	+1.6
	baz=30,SNR=21						
MEH	Mehetia	30.78	70	*e*T	T	19 00 27.8	
	comp=Z,49nm,0.3s						
PMOR	Pomariorio Ree	32.54	66	*e*T	T	19 02 43.3	
	comp=Z,18nm,0.3s						
VAH	Vaihoa	32.61	67	*e*T	T	19 02 48.3	
	comp=Z,142nm,0.3s						
ARPS	Mount Arapiles	32.98	250	P	P	18 29 03.3	+1.4
	baz=33,SNR=17						
CTA	Charters Tower	33.68	282	P	P	18 29 08.7	+0.6
	comp=Z,20nm,0.5s,baz=101,slow=10,SNR=48						
CTA	Charters Tower	33.68	282	P	P	18 29 09.6	+1.5
CTA				pmax	pmax		
	comp=Z,79nm,1.2s						
CTAO	Charters Tower	33.68	282	*e*P	P	18 29 09.2	+1.0
	comp=Z,104nm,1.4s						
CTAO	Charters Tower	33.68	282	*e*P	P	18 29 09.2	+1.0
CTAO				pmax	pmax		
	comp=Z,105nm,1.4s						
STKA	Stephens Creek	33.78	259	P	P	18 29 09.9	+1.0
	comp=Z,8.8nm,0.5s,baz=104,slow=12,SNR=23						
STKA				LR	LR	18 41 26.6	
	comp=Z,422nm,19.6s,baz=61,slow=34						
STKA	Stephens Creek	33.78	259	*e*P	P	18 29 10.1	+1.2
	comp=Z,4.1nm,1.1s						
STKA	Stephens Creek	33.78	259	P	P	18 29 08.9	0.0
	baz=34,SNR=20						
STKA	Stephens Creek	33.78	259	*e*P	P	18 29 07.4	-1.6
HTT	Hallett	35.73	256	P	P	18 29 26.7	+0.9
	baz=36,SNR=44						
MTSU	Mount Surprise	36.22	283	P	P	18 29 31.5	+1.4
	baz=36,SNR=58						
BBOO	Buckleboo	38.21	256	*e*P	P	18 29 46.4	-0.4
	comp=Z,33nm,0.4s						
BBOO	Buckleboo	38.21	256	P	P	18 29 46.7	0.0
	baz=38,SNR=76						
PMG	Port Moresby	38.91	297	P	P	18 29 52.9	+0.1
	comp=Z,17nm,0.9s,baz=56,slow=3.8,SNR=8.6						
PMG				LR	LR	18 42 20.6	
	comp=Z,260nm,21.9s,baz=114,slow=31						
PMG	Port Moresby	38.91	297	*e*P	P	18 29 53.2	+0.4
	comp=Z,71nm,1.4s						
PMG	Port Moresby	38.91	297	*e*P	P	18 29 53.2	+0.4
PMG				pmax	pmax		
	comp=Z,71nm,1.4s						
RABL	Rabaul	38.97	309	*e*P	P	18 29 52.3	-0.9
	comp=Z,77nm,0.6s						
QIS	Mount Isa	39.05	276	P	P	18 29 54.8	+0.8
	baz=39,SNR=6.6						
COEN	Coen	39.32	288	*e*P	P	18 29 57.3	+1.0
	comp=Z,34nm,0.8s						
COEN	Coen	39.32	288	P	P	18 29 57.4	+1.1
	baz=39,SNR=36						
TAOE	Nuku Hiva Isla	42.27	66	*e*LR	LR	18 41 36.5	
	comp=Z,472nm,31.3s						
AS31	Alice Springs	42.66	269	*e*P	P	18 30 23.4	-0.3
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	42.66	269	P	P	18 30 23.5	-0.2
	comp=Z,31nm,0.6s,baz=106,slow=7.3,SNR=427						
ASAR				PKiKP	PKiKP	18 39 18.2	-1.3
	comp=Z,0.3nm,0.6s,baz=116,slow=1.6,SNR=7.1						
WB2	Warramunga Arr	43.77	274	*e*P	P	18 30 32.3	-0.4
	comp=Z,87nm,0.5s						
WRAB	Tennant Creek	43.77	274	*e*P	P	18 30 32.4	-0.4
	comp=Z,60nm,0.6s						
WRAB	Tennant Creek	43.77	274*c*	*i*P	P	18 30 32.0	-0.7
WRAB				pmax	pmax		
	comp=Z,48nm,1.0s						
WRA	Warramunga Arr	43.78	274	P	P	18 30 32.8	0.0
	comp=Z,55nm,0.4s,baz=113,slow=8.3,SNR=415						
FORT	Forrest	45.30	257	*e*P	P	18 30 44.0	-0.8
	comp=Z,74nm,1.1s						
FORT	Forrest	45.30	257	P	P	18 30 44.4	-0.4
	baz=45,SNR=10						
SBA	Scott Base	46.53	184	*e*P	P	18 30 57.4	+3.6
	comp=Z,67nm,1.8s						
VNDA	Vanda	46.58	186	P	P	18 30 55.2	+1.0
	comp=Z,0.5nm,0.5s,baz=3.5,slow=8.8,SNR=8.6						
VNDA				LR	LR	18 48 00.6	
	comp=Z,102nm,18.5s,baz=356,slow=33						
VNDA	Vanda	46.58	186	*e*P	P	18 30 57.2	+3.0
	comp=Z,15nm,1.5s						
VNDA	Vanda	46.58	186	*e*P	P	18 30 57.3	+3.0
VNDA				pmax	pmax		
	comp=Z,15nm,1.5s						
WRKA	Warakurna	46.92	264	P	P	18 30 56.2	-1.4
	baz=47,SNR=28						
JAY	Jayapura	48.24	299	P	P	18 31 06.7	-1.3
	comp=Z,4.1nm,0.5s,baz=234,slow=5.3,SNR=9.6						
KDU	Kakadu	48.80	282	P	P	18 31 11.4	-0.8
	baz=49,SNR=34						
JOHN	Johnston Islan	49.09	11	*e*P	P	18 31 16.2	+1.9
	comp=Z,162nm,1.0s						
MTN	Manton Dam	49.84	280	*e*P	P	18 31 19.6	-0.6
	comp=Z,50nm,0.6s						
MTN	Manton Dam	49.84	280	P	P	18 31 19.7	-0.5
	baz=50,SNR=18						
KNRA	Kununurra	50.44	276	P	P	18 31 24.5	-0.2
	baz=50,SNR=8.2						
NWAO	Narrogin (SRO)	53.52	250	P	P	18 31 45.5	-2.0
	comp=Z,15nm,1.1s,baz=102,slow=7.5,SNR=4.3						
NWAO	Narrogin (SRO)	53.52	250	*e*P	P	18 31 45.4	-2.0
	comp=Z,46nm,1.3s						
NWAO	Narrogin (SRO)	53.52	250	*e*P	P	18 31 45.4	-2.0
NWAO				pmax	pmax		
	comp=Z,46nm,1.3s						
CASY	Casey	53.65	208	*e*P	P	18 31 48.2	+0.4
	comp=Z,12nm,0.6s						
MEEK	Meekatharra	54.48	258	P	P	18 31 52.9	-1.7
	baz=55,SNR=7.8						
FAKI	Fak Fak	54.50	292	*e*P	P	18 31 53.5	-1.3
	comp=Z,53nm,1.2s						
MUN	Mundaring	54.63	251	P	P	18 31 54.5	-1.1
	baz=55,SNR=4.1						
PSA00	Pilbara Seismi	55.41	264	*e*P	P	18 31 59.3	-2.1
	comp=Z,11nm,0.8s						
HMH	Humu'ula Sheep	55.73	26	*e*P	P	18 32 05.2	+1.3
	comp=Z,151nm,1.2s						
MORW	Morawa	55.74	255	*e*P	P	18 32 02.0	-1.6
	comp=Z,20nm,1.1s						
MORW	Morawa	55.74	255	P	P	18 32 02.2	-1.4
	baz=56,SNR=4.3						
MHA	Mahukona	56.11	26	*e*P	P	18 32 07.8	+1.7
MHA	Mahukona	56.11	26	*e*P	P	18 32 07.8	+1.7
SIJI	Sorong	56.52	293	P	P	18 32 08.3	-1.1
	comp=Z,10nm,0.8s,baz=104,slow=5.4,SNR=4.8						
KHLH	Kahului Airpor	56.57	25	*e*P	P	18 32 08.5	-0.9
	comp=Z,122nm,0.9s						
BATI	Baumata	57.46	279	P	P	18 32 15.8	-0.2
	comp=Z,16nm,0.7s,baz=195,slow=5.6,SNR=3.2						
QSPA	South Pole Qui	58.23	180	*e*P	P	18 32 23.4	+2.5
	comp=Z,40nm,0.7s						
RPN	Rapa Nui	59.43	105	LR	LR	18 52 07.8	
	comp=Z,244nm,20.5s,baz=244,slow=30						
MMRI	Maumere	59.48	279	*e*P	P	18 32 29.6	-0.4
	comp=Z,32nm,1.0s						
GIRL	Giralia	59.70	261	*e*P	P	18 32 31.2	-0.3
	comp=Z,584nm,1.6s						
MAW	Mawson	70.78	201	P	P	18 33 43.0	+0.5
	comp=Z,9.7nm,1.0s,baz=148,slow=2.4,SNR=14						
MAW	Mawson	70.78	201	*e*P	P	18 33 42.6	+0.1
	comp=Z,2.5nm,1.0s						
MAW	Mawson	70.78	201	P	P	18 33 43.2	+0.7
	baz=71,SNR=8.5						
MAW	Mawson	70.78	201	*e*P	P	18 33 42.6	+0.1
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SBUM	Sibu	73.87	283	*e*P	P	18 34 00.2	-1.6
	comp=Z,7.3nm,1.2s						
SYO	Syowa Base	75.58	193⇑	*e*P	P	18 34 09.0	-1.8
SYO	Syowa Base	75.58	193⇓	*e*X	P	18 34 17.8	+7.0
SNAA	Sanae	76.69	179	PKPdf	P	18 34 18.3	+1.1
SNAA	Sanae	76.69	179	*e*P	P	18 34 17.9	+0.8
	comp=Z,22nm,1.1s						
SNAA	Sanae	76.69	179	*e*P	P	18 34 18.3	+1.1
VNA3	Neumayer Olymp	76.85	176	PKPdf	P	18 34 19.2	+1.1
VNA2	Neumayer--Watz	77.28	177	PKPdf	P	18 34 22.2	+1.7
	baz=173,slow=5.0						
VNA1	Neumayer--Stat	77.52	177	PKPdf	P	18 34 23.5	+1.8
MJAR	Matsushiro Arr	79.24	326	P	P	18 34 30.5	-1.2
	comp=Z,4.2nm,1.0s,baz=173,slow=6.0,SNR=7.0						
MJAR				LR	LR	19 05 40.8	
	comp=Z,30nm,20.3s,baz=325,slow=33						
MAJO	Matsushiro	79.24	326	*e*P	P	18 34 30.5	-1.2
MAJO	Matsushiro	79.24	326	*e*P	P	18 34 30.5	-1.2
MAT	Matsushiro	79.24	326	P	P	18 34 30.5	-1.2
JNU	Nakatsue	80.41	319	*e*P	P	18 34 37.2	-0.9
	comp=Z,11nm,0.9s						

EFI	East Falkland	81.76	147	eP	P	18 34 45.4	+0.3
	comp=Z,279nm,1.9s						
EFI	East Falkland	81.76	147	eP	P	18 34 45.4	+0.3
EFI				pmax	pmax		
	comp=Z,279nm,1.9s						
PLCA	Paso Flores	81.79	133	P	P	18 34 48.3	+2.7
	comp=Z,6.0nm,1.2s,baz=236,slow=2.6,SNR=7.1						
PLCA	Paso Flores	81.79	133	eP	P	18 34 48.1	+2.5
	comp=Z,35nm,1.7s						
PLCA	Paso Flores	81.79	133	eP	P	18 34 48.1	+2.5
PLCA				pmax	pmax		
	comp=Z,35nm,1.7s						
ADK	Adak	83.42	1	eP	P	18 34 53.0	-0.4
	comp=Z,51nm,1.5s						
ADK	Adak	83.42	1	eP	P	18 34 53.0	-0.4
ADK				pmax	pmax		
	comp=Z,51nm,1.5s						
ASAJ	Asahikawa	83.57	333	P	P	18 34 54.5	+0.1
	comp=Z,2.8nm,0.5s,baz=46,slow=2.2,SNR=11						
GSTR	Great Sitkin T	83.65	1	eP	P	18 34 54.2	-0.4
NIKH	Nikolski High	84.91	6	eP	P	18 35 00.8	-0.1
	comp=Z,52nm,1.1s						
KULM	Kulim	85.07	279	eP	P	18 35 00.9	-1.8
	comp=Z,29nm,1.6s						
KSRS	Korea Array	85.22	320	P	P	18 35 03.4	+0.5
	comp=Z,2.7nm,0.9s,baz=139,slow=5.6,SNR=7.3						
KSRS				LR	LR	19 09 57.7	
	comp=Z,40nm,19.4s,baz=130,slow=34						
GSI	Gunungsitoli	85.55	274	eP	P	18 35 04.6	-0.6
	comp=Z,73nm,1.9s						
YSS	Yuzh-Sakhalins	85.91	335	eP	P	18 35 06.3	+0.3
	comp=Z,24nm,1.4s						
YSS	Yuzh-Sakhalins	85.91	335⇑	eP	P	18 35 06.1	+0.1
NJ2	Nanjing	86.91	311	eP	P	18 35 13.1	+1.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MONP2	Monument Peak	87.05	48	P	P	18 35 12.2	-0.1
	baz=229						
PETK	Petropavlovsk-	87.15	346	P	P	18 35 11.6	-0.4
	comp=Z,4.3nm,0.7s,baz=118,slow=8.0,SNR=8.5						
PEA1	Petropavlovsk-	87.15	346	eP	P	18 35 11.6	-0.5
BFSC	Mount Baldy Ra	87.17	46	P	P	18 35 14.9	+2.2
	baz=228						
EDW2	Edwards Air Fo	87.39	46	P	P	18 35 14.6	+0.9
	baz=228						
ISA	Isabella, Lake	87.63	45	P	P	18 35 17.0	+2.1
	baz=228						
BELC	Belle Mtn. Jos	88.04	47	P	P	18 35 18.1	+1.2
	baz=229						
CMB	Columbia Colle	88.13	42	eP	P	18 35 18.3	+1.1
	comp=Z,4.5nm,0.9s						
CMB	Columbia Colle	88.13	42	eP	P	18 35 18.3	+1.1
CMB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BC3	Big Chuckawall	88.16	48	P	P	18 35 19.5	+2.0
	baz=229						
GLA	Glamis	88.17	49	eP	P	18 35 19.8	+2.3
	comp=Z,7.7nm,1.0s						
GLA	Glamis	88.17	49	P	P	18 35 20.2	+2.8
	baz=230						
USRK	Ussuriysk Ar.	88.18	327	P	P	18 35 17.0	-0.1
	comp=Z,1.5nm,0.5s,baz=148,slow=4.1,SNR=13						
O02D	Mt. Diablo Mer	88.30	39	P	P	18 35 20.3	+2.3
	baz=225						
CWC	Cottonwood Cre	88.39	45	P	P	18 35 20.1	+1.5
	baz=228						
GSC	Goldstone, Bar	88.40	46	eP	P	18 35 19.3	+0.8
	comp=Z,12nm,1.4s						
GSC	Goldstone, Bar	88.40	46	eP	P	18 35 19.3	+0.8
GSC				pmax	pmax		
	comp=Z,12nm,1.4s						
GSC	Goldstone, Bar	88.40	46	P	P	18 35 19.8	+1.3
	baz=229						
AFDM	Forest Hills D	88.43	41	eP	P	18 35 19.4	+0.9
	comp=Z,3.6nm,0.9s						
MPMC	Manual Prospec	88.48	45	P	P	18 35 20.4	+1.3
	baz=228						
OMMB	Old Mammoth Mi	88.64	43	eP	P	18 35 21.5	+1.6
	comp=Z,13nm,1.7s						
IRM	Iron Mountain	88.68	48	P	P	18 35 22.1	+2.2
	baz=230						
GMRC	Granite Mounta	88.77	47	P	P	18 35 22.2	+1.8
	baz=229						
O03E	Paynes Creek	88.91	40	P	P	18 35 22.4	+1.6
	baz=225						
WAKR	Walker	88.99	42	eP	P	18 35 22.4	+0.9
	comp=Z,8.7nm,1.2s						
GRAC	Grapevine Rang	89.18	45	P	P	18 35 24.1	+2.0
	baz=228						
L02E	Cave Junction	89.28	37	P	P	18 35 24.8	+2.4
	baz=224						
PNTR	Pine Nut	89.30	42	eP	P	18 35 23.8	+0.9
	comp=Z,12nm,1.2s						
NVAR	Mina Array Bea	89.59	43	P	P	18 35 26.1	+1.8
	comp=Z,2.9nm,1.0s,baz=220,slow=7.9,SNR=16						
NV11	Mina Array Sit	89.68	43	eP	P	18 35 25.9	+1.3
	comp=Z,0.4nm,1.2s						
TPNV	Topopah Spring	89.82	45	eP	P	18 35 26.4	+1.1
	comp=Z,6.4nm,1.3s						
TPNV	Topopah Spring	89.82	45	eP	P	18 35 26.4	+1.1
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TPNV	Topopah Spring	89.82	45	P	P	18 35 26.5	+1.1
	baz=229						
PAHR	Pah Rah Range	89.84	41	eP	P	18 35 26.1	+0.8
	comp=Z,12nm,1.6s						
L04D	Klamath Falls	90.00	38	P	P	18 35 27.8	+1.8
	baz=225						
KVN	Kaiserville	90.13	43	eP	P	18 35 27.4	+0.7
	comp=Z,5.2nm,1.2s						
KVN	Kaiserville	90.13	43	eP	P	18 35 27.4	+0.7
KVN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TUC	Tucson	90.34	52	P	P	18 35 30.4	+2.6
	baz=232						
R11A	Troy Canyon, C	91.14	44	P	P	18 35 33.0	+1.6
	baz=229						
J05D	Fort Rock, OR	91.31	38	P	P	18 35 33.8	+1.8
	baz=226						
H04D	Lebanon	91.41	36	P	P	18 35 33.8	+1.6
	baz=225						
KLR	Kul'dur	92.11	330	P	P	18 35 34.6	-0.8
	comp=Z,1.4nm,0.7s,baz=336,slow=10.0,SNR=3.0						
KLR	Kul'dur	92.11	330	i P	P	18 35 36.6	+1.2
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
I07A	Izee	92.77	38	eP	P	18 35 40.0	+1.3
	comp=Z,3.6nm,1.0s						
CMAR	Chiang Mai Arr	93.52	289	LR	LR	19 20 47.7	
	comp=Z,22nm,19.4s,baz=115,slow=37						
KMI	Kunming	94.14	297	P	P	18 35 46.5	+0.9
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HLID	Hailey	95.18	41	P	P	18 35 51.9	+1.9
	baz=230						
CD2	Chengdu	96.54	302	eP	P	18 35 57.0	+0.7
HHC	Hu-ho-hao-te	96.98	314	P	P	18 36 00.9	+2.8
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,8.6s						
LPAZ	La Paz	97.89	115	eP	Pdif	18 36 07.2	+3.6
	comp=Z,12nm,1.0s						
LPAZ	La Paz	97.89	115	eP	Pdif	18 36 07.2	+3.7
LPAZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH	Lanzhou	99.29	307	eP	Pdif	18 36 11.0	+2.4
LZH				pP	pP	18 36 20.3	-0.9
LZH				sP	sP	18 36 25.8	0.0
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
CPUP	Villa Florida	99.37	129	LR	LR	19 13 22.1	
	comp=Z,166nm,21.2s,baz=334,slow=31						
ILAR	Eielson Array	99.46	13	P	Pdif	18 36 08.2	-0.3
	comp=Z,0.7nm,0.9s,baz=224,slow=7.7,SNR=4.3						
BILL	Bilibino	100.27	354⇓	iP	Pdif	18 36 12.4	+0.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YAK	Yakutsk	102.47	338	i P	Pdif	18 36 22.7	+0.8
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	106.95	26	PKKPbc	PKKPbc	18 52 08.7	-2.0
	comp=Z,0.5nm,0.5s,baz=43,slow=3.0,SNR=4.5						
WMQ	Urumqi	113.83	308	ePKP	PKiKP	18 41 05.3	+0.4
WMQ				LR	LR		
	comp=Z,250nm,19.7s						
WMQ				LR	LR		
	comp=Z,240nm,27.5s						
BOSA	Boshof	115.74	203	PKP	PKiKP	18 41 09.4	+0.1
	comp=Z,0.8nm,0.4s,baz=153,slow=2.5,SNR=6.6						
DGZ	Jazzator, Alta	116.06	314	i PKIKP	PKPdf	18 41 07.3	-1.8
MKAR	Makanchi Array	118.42	310	PKP	PKPdf	18 41 12.3	-1.3
	comp=Z,0.9nm,0.6s,baz=99,slow=0.7,SNR=10						
MKAR				PKKPab	PKKPab	18 51 41.6	+9.3
	comp=Z,0.2nm,0.4s,baz=261,slow=3.7,SNR=5.4						
ZALV	Zalesovo Beam	118.87	318	PKP	PKPdf	18 41 12.4	-1.8
	comp=Z,0.7nm,0.4s,baz=85,slow=1.8,SNR=3.8						
KSH	Kashi	120.64	300	ePKP	PKPdf	18 41 18.3	0.0
KSH				PKS	PKSdf	18 44 53.1	-1.9
KURK	Kurchatov	121.78	313	ePKPdf	PKPdf	18 41 18.2	-1.6
KURK	Kurchatov	121.78	313	i PKIKP	PKiKP	18 41 21.9	+1.9
BTK	Batken	124.61	299	ePKPdf	PKPdf	18 41 24.9	-0.9
BTK	Batken	124.61	299	ePKIKP	PKPdf	18 41 24.9	-0.9
GAR	Garm	124.71	298	ePKPdf	PKPdf	18 41 25.6	-0.5
GAR	Garm	124.71	298	ePKIKP	PKPdf	18 41 25.6	-0.5
KK31	Karatay Array	125.55	303	ePKPdf	PKPdf	18 41 26.7	-0.7
KK31	Karatay Array	125.55	303	ePKIKP	PKPdf	18 41 26.7	-0.7
KKAR	Karatay Array	125.55	303	ePKPdf	PKPdf	18 41 26.7	-0.7
KKAR	Karatay Array	125.55	303	ePKIKP	PKPdf	18 41 26.7	-0.7
LSZ	Lusaka	126.59	213	ePKPdf	PKPdf	18 41 30.3	-0.1
LSZ	Lusaka	126.59	213	ePKIKP	PKPdf	18 41 30.3	-0.1
BRVK	Borovoye	127.25	315	i PKIKP	PKPdf	18 41 29.9	-0.4
LMN	Caledonia Moun	127.92	54	ePKPdf	PKPdf	18 41 31.5	-0.3
GEYT	Alibeck	133.81	294	PKP	PKPdf	18 41 42.9	-0.4
	comp=Z,0.7nm,0.3s,baz=119,slow=5.4,SNR=2.7						
ARU	Arti	133.97	320	ePKPdf	PKPdf	18 41 41.9	-1.1
ARU	Arti	133.97	320	i PKIKP	PKPdf	18 41 42.1	-0.8
PRGR	Permogore	138.91	330	ePKIKP	PKPdf	18 41 51.0	-0.9
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HAMF	Hammerfest	139.31	349	ePKPdf	PKPdf	18 41 52.4	-0.1
ARA0	ARCESS Array S	139.95	347	ePKPpre	PKPpre	18 41 46.8	
ARA0				ePKPdf	PKPdf	18 41 53.5	-0.2
ARCES	ARCESS Array B	139.95	347	PKhKP	PKPpre	18 41 46.8	
	comp=Z,1.3nm,0.5s,baz=33,slow=2.3,SNR=17						
ARCES				PKP	PKPdf	18 41 53.5	-0.2
	comp=Z,1.8nm,0.5s,baz=49,slow=1.6,SNR=12						
ARE0	ARCESS Array S	139.95	347	ePKPdf	PKPdf	18 41 53.3	-0.3
KTK1	Kautokeino	140.82	348	ePKPdf	PKPdf	18 41 55.8	+0.5
TRO	Tromso	140.95	350	ePKPdf	PKPdf	18 41 56.3	+0.9
STEI	Steigen	143.03	351	ePdif	Pdif	18 39 22.0	-0.1
KONS	Konsvik	144.66	352	ePKPbc	PKPab	18 42 00.5	-0.3
MOR8	Moi Rana	144.81	351	ePKPbc	PKPab	18 42 00.3	-1.2
ZEI	Tsey	144.93	300	i PKIKP	PKPdf	18 42 05.6	+2.0
NCK	Nalchik	145.10	302	i PKIKP	PKPab	18 42 03.4	+0.2
AKH	Akhalkalaki	145.31	298	ePKPbc	PKPbc	18 42 03.6	-0.5
AKH	Akhalkalaki	145.31	298	ePKIKP	PKPbc	18 42 03.6	-0.5
MOS	Moscow	145.32	324	ePKP2	PKPbc	18 42 02.0	-1.4
MOS				pmax	pmax		
	comp=Z,29nm,0.8s						
KBZ	Khabaz	145.58	302	PKPbc	PKPdf	18 42 04.4	+0.1
	comp=Z,5.8nm,0.9s,baz=168,slow=3.5,SNR=9.1						
KIV	Kislovodsk	145.71	302	i PKIKP	PKPdf	18 42 04.7	0.0
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
SHA1	Shidzhatmaz	145.76	302	i PKP2	PKPdf	18 42 05.2	+0.2
NEY	Neytrino	145.76	301	i PKP2	PKPab	18 42 07.2	+1.3
LPSR	Galich'ya Gora	145.98	319	ePKP2	PKPdf	18 42 04.4	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
OBN	Obninsk	146.15	324⇑	ePKIKP	PKPdf	18 42 04.5	-0.4
OBN				e		18 45 32.8	
OBN				e		18 49 10.3	
OBN				eSS	SS	19 05 02.8	+42
OBN				pmax	pmax		
	comp=Z,30nm,1.1s						
VSR	Storozhevoye	146.35	316	ePKIKP	PKPdf	18 42 05.2	-0.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
FIA1	FINESS Array S	146.39	339	ePKPdf	PKPdf	18 42 05.3	+0.2
FINES	FINESS Array B	146.39	339	PKPbc	PKPdf	18 42 05.2	+0.1
	comp=Z,16nm,0.4s,baz=47,slow=4.1,SNR=230						
NSS	Namsos	146.69	352	ePKPdf	PKPdf	18 42 06.3	+0.7
TBLU	Trondheim	148.13	353	ePKPdf	PKPdf	18 42 07.4	-0.6
VSU	Vasula	148.41	335	eP	PKPbc	18 42 11.0	-1.1
VSU				IAmb	IAmb	18 42 12.0	
	comp=Z,67nm,0.5s						
MOL	Molde	149.06	355	ePKPbc	PKPbc	18 42 13.2	-0.5
DOMB	Dombas	149.44	353	ePKPdf	PKPdf	18 42 09.7	-0.5
AKN	Aaknes	149.49	355	ePKPbc	PKPbc	18 42 15.3	+0.5
NC303	NORSAR Array S	149.95	351	ePKPbc	PKPbc	18 42 15.0	-0.9
NC303	NORSAR Array S	149.95	351	ePKPbc	PKPbc	18 42 15.4	-0.6
NB2	NORSAR Subarra	150.15	351	PKP	PKPbc	18 42 15.6	-0.9
	comp=Z,2.9nm,0.5s,baz=15,slow=2.5						
NOA	NORSAR Array B	150.15	351	PKPbc	PKPbc	18 42 15.9	-0.6
	comp=Z,3.2nm,0.5s,baz=14,slow=4.1,SNR=29						
NBO00	NORSAR Array S	150.22	351	ePKPbc	PKPbc	18 42 16.4	-0.2
IZAR	Zarasai	150.52	331	eP	PKPbc	18 42 17.4	-0.1
IZAR				IAmb	IAmb	18 42 18.5	
	comp=Z,8.2nm,0.8s						
HYA	Hoyanger	150.55	355	ePKPdf	PKPdf	18 42 12.2	+0.3
MICGM	Minsk	150.65	328	e	PKPbc	18 42 16.0	-1.8
MNK	Minsk	150.65	328	ePKIKP	PKPbc	18 42 16.0	-1.8
ISAL	Salakas	150.69	331	eP	PKPbc	18 42 16.8	-1.1
ISAL				IAmb	IAmb	18 42 18.0	
	comp=Z,6.5nm,0.7s						
IIGN	Ignalina	150.80	331	eP	PKPbc	18 42 18.1	-0.1
IIGN				IAmb	IAmb	18 42 19.3	
	comp=Z,9.7nm,0.6s						
SKAR	Skarslia	150.85	353	ePKPbc	PKPbc	18 42 18.4	+0.2
ASK	Askoy	151.29	356	ePKPbc	PKiKP	18 42 19.7	+0.1
KONO	Kongsberg	151.71	351	ePKPbc	PKPbc	18 42 19.9	-0.2
ODD1	Odda	151.76	355	ePKPbc	PKPbc	18 42 20.2	-0.1
AKASG	Malin Array Be	152.22	321	PKPbc	PKPbc	18 42 20.5	-1.0
	comp=Z,1.7nm,0.5s,baz=57,slow=2.5,SNR=18						
AKBB	Malin Array Si	152.22	321	ePKPbc	PKPbc	18 42 20.3	-1.2
AKBB	Malin Array Si	152.22	321	ePKIKP	PKPbc	18 42 20.3	-1.2
BLS5	Blasjo	152.26	355	ePKPbc	PKPbc	18 42 21.5	+0.1
KMY	Karmoy	152.56	356	ePKPbc	PKPbc	18 42 22.2	+0.2
ILGA	Ilgaz	152.68	299	ePKPbc	PKPbc	18 42 22.3	-0.9
BR131	Keskin Array S	152.92	296	ePKPbc	PKPbc	18 42 21.9	-1.8
BRTR	Keskin Array B	152.92	296	PKPbc	PKPbc	18 42 22.9	-0.8
	comp=Z,3.2nm,0.5s,baz=144,slow=3.7,SNR=26						
SUW	Suwalki	153.00	331	ePKPbc	PKPbc	18 42 21.8	-1.4
SUW	Suwalki	153.00	331	ePKIKP	PKPbc	18 42 21.8	-1.4
SNART	Snartemo	153.26	353	ePKPbc	PKiKP	18 42 23.9	+0.2
ANTO	Ankara	153.55	296	ePKPbc	PKPbc	18 42 23.3	-1.7
ANTO	Ankara	153.55	296	ePKIKP	PKPbc	18 42 23.3	-1.7
LIC	Lamto	153.74	165	eP	PKiKP	18 42 26.4	+0.2
	comp=Z,55nm,0.9s						
KIC	Kosan Boka	153.94	166	eP	PKPbc	18 42 23.7	-2.8
	comp=Z,10nm,0.5s						
TIC	Toumodi	154.15	165	eP	PKPbc	18 42 25.2	-1.8
DBIC	Dimbokro	154.21	165	PKPab	PKPab	18 42 42.2	+1.5
	comp=Z,3.1nm,0.5s,baz=148,slow=4.3,SNR=3.7						
DBIC	Dimbokro	154.21	165	ePKPbc	PKiKP	18 42 28.0	+0.9
DBIC	Dimbokro	154.21	165	ePKIKP	PKiKP	18 42 28.0	+0.9
CLL	Collm	158.83	340	ePKP2	PKPab	18 43 00.0	+0.3
CLL	Collm	158.83	340	ePKPab	PKPab	18 43 00.0	+0.3
VYHS	Vyhne	158.87	327	ePKP2	PKPab	18 42 58.8	-1.2
VYHS	Vyhne	158.87	327	ePKP	PKPab	18 42 58.8	-1.2
BRG	Berggiesshubel	158.92	338	ePKP	PKPab	18 42 59.4	-0.7
	comp=Z,6.1nm,1.5s						
BRG	Berggiesshubel	158.92	338	ePKP2	PKPab	18 42 59.4	-0.7
BRG				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KHC	Kasperske Hory	160.53	336	ePKP2	PKPab	18 43 12.0	+4.7
KHC	Kasperske Hory	160.53	336	ePKPAB	PKPab	18 43 12.0	+4.7
GERES	GERESS Array B	160.73	335	PKPab	PKPab	18 43 06.7	-1.5
	comp=Z,0.4nm,0.7s,baz=356,slow=1.7,SNR=5.0						
TORD	Torodi Ar. Bea	161.35	180	PKP	PKPdf	18 42 28.0	+0.4
	comp=Z,2.1nm,1.0s,baz=350,slow=1.1,SNR=5.7						
TORD				PKPab	PKPab	18 43 10.5	-1.0
	comp=Z,5.7nm,0.8s,baz=194,slow=1.4,SNR=7.1						
TOA1	Torodi Ar. Sit	161.35	180	ePKPdf	PKPdf	18 42 28.0	+0.4
TOA1				ePKPab	PKPab	18 43 10.5	-1.1
ESDC	Sonseca Array	171.04	28	PKP	PKPdf	18 42 35.3	+0.7
	comp=Z,0.1nm,0.3s,baz=344,slow=3.5,SNR=9.1						
ESDC				PKPab	PKPab	18 43 53.5	-0.3
	comp=Z,0.2nm,0.4s,baz=328,slow=4.4,SNR=4.5						
KEST	Kesra	172.45	303	PKP	PKPdf	18 42 36.2	+0.8
	comp=Z,1.4nm,0.5s,baz=49,slow=2.0,SNR=4.7						
KEST	Kesra	172.45	303	ePKPdf	PKPdf	18 42 35.4	0.0

TEH ***09*** *18:32:32.7, 34.°11N×47.°28E, h8km, ML3.4*
ISN ***09*** *18:32:32.3±104.0, 34.°12N×47.°29E, h15km±999km, ML3.3*
THR ***09*** *18:32:36.1, 34.°30N×47.°31E, h18km, ML3.3*

ISC 09 18:32:33.4±1.2**, 34.°13N**±0.°04×**47.°27E**±0.°03**, h5**km±11km**,**
n34, σ1.§28/37**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKOM	Komasi	0.21	76	ePg	Pg	18 32 37.5	0.0
IKOM				eSg	Sg	18 32 40.8	+0.5
KCHF	Cheshme Sefid,	0.24	309	ePg	Pg	18 32 38.4	+0.3
IVIS	Veis	0.53	319	ePg	Pg	18 32 43.3	-0.3
IVIS				IAMB	IAmb	18 32 57.1	
	comp=Z,13µm,0.3s						
IBZA	Bozab	0.60	55	ePg	Pg	18 32 43.9	-1.1
IGHG	Ghaleghazi	0.61	290	ePg	Pg	18 32 45.7	+0.5
IGHG				IAMB	IAmb	18 33 14.8	
	comp=Z,16µm,0.6s						
IKFM	Kafar-mosalman	0.77	141	ePg	Pg	18 32 47.3	-0.9
IKFM				eSg	Sg	18 32 58.7	+0.5
IKFM				IAMB	IAmb	18 33 01.9	
	comp=Z,0.0nm,0.7s						
ILIN	Lien	0.83	343	IAMB	IAmb	18 33 05.6	
	comp=Z,4µm,0.3s						
IDOB	Doab	0.83	114	ePg	Pg	18 32 48.2	-1.1
IDHR	Dehrash	0.93	308	ePg	Pg	18 32 51.5	+0.3
SNGE	Sanandaj	0.97	4	ePn	Pg	18 32 51.3	-0.6
SNGE	Sanandaj	0.97	4	Pg	Pg	18 32 51.3	-0.6
IKMR	Kamar-syah	1.11	123	ePg	Pg	18 32 52.7	-1.9
IKMR				eSg	Sg	18 33 09.8	+0.8
IKMR				IAMB	IAmb	18 33 16.1	
	comp=Z,0.0nm,0.4s						
HAGD	Aghdareh	1.70	65	IAMB	IAmb	18 33 34.9	
	comp=Z,0.0nm,1.0s						
HAGD				ePn	Pn	18 33 04.0	+0.1
KHMZ	Khomeyn	2.27	99	ePn	Pb	18 33 15.0	0.0
KHMZ	Khomeyn	2.27	99	AML	AML	18 33 54.4	
	comp=E,160nm,0.5s						
KHMZ				AML	AML	18 33 54.7	
	comp=N,113nm,0.6s						
KHMZ	Khomeyn	2.27	99	Pn	Pb	18 33 15.0	0.0
KHMZ				Sg	Sg	18 33 48.0	+1.5
ASAO	Ashtian	2.32	79	ePn	Pb	18 33 14.9	-1.0
ASAO	Ashtian	2.32	79	AML	AML	18 33 50.1	
	comp=E,113nm,0.5s						
ASAO	Ashtian	2.32	79	Pn	Pb	18 33 14.9	-1.0
ASAO				Sg	Sg	18 33 47.3	-0.7
SHGR	Shooshtar-Gavs	2.39	147	AML	AML	18 33 55.5	
	comp=N,140nm,0.4s						
SHGR				AML	AML	18 34 02.5	
	comp=E,199nm,0.4s						
QABG	Abgarm-Qazvin	2.47	50	ePn	Pb	18 33 17.0	-1.5
IRAZ	Razeghan	2.54	59	ePn	Pb	18 33 17.9	-1.6
IRAZ				IAMB	IAmb	18 34 06.5	
	comp=Z,2µm,0.8s						
BHD	Baghdad	2.55	251	ePn	Pn	18 33 15.0	-0.4
	baz=70						
BHD				eSn	Sn	18 33 47.0	+0.1
IGZV	Ghazvin	3.31	46	ePn	Pn	18 33 28.0	+2.0
IGZV				IAMB	IAmb	18 34 32.1	
	comp=Z,834nm,0.8s						
GHVR	GHOM	3.35	83	ePn	Pn	18 33 28.3	+1.8
GHVR	GHOM	3.35	83	Pn	Pn	18 33 28.4	+1.8
IPIR	Pirpir	3.36	114	ePn	Pn	18 33 27.9	+1.1
IPIR				IAMB	IAmb	18 34 35.3	
	comp=Z,1µm,0.6s						
QALM	Alamut, Qazvin	3.60	49	ePn	Pn	18 33 32.0	+1.9
IKLH	Kolahrood	3.68	101	ePn	Pn	18 33 33.2	+1.9
IKLH				IAMB	IAmb	18 34 37.9	
	comp=Z,766nm,0.8s						
IVRN	Varamin	3.78	75	ePn	Pn	18 33 34.3	+1.9
KRSH	Karshahi	4.05	91	ePn	Pn	18 33 37.6	+1.4
MSL	Mosul	4.09	305	ePn	Pn	18 33 36.0	-0.6
	baz=122						
MSL				AML	AML	18 33 37.4	
	comp=Z,144nm,0.4s						
MSL				eSn	Sn	18 34 24.0	-0.8
IDMV	Damavand	4.18	68	ePn	Pn	18 33 39.4	+1.3
IDMV				IAMB	IAmb	18 33 58.4	
	comp=Z,392nm,0.6s						
IZEF	Zefreh	4.40	105	ePn	Pn	18 33 44.0	+2.8
IZEF				IAMB	IAmb	18 35 00.1	
	comp=Z,374nm,0.7s						

GEN ***09*** *18:41:07.2, 44.°20N×10.°13E, h3km, Ml1.0*

ROM 09 18:41:06.6±0.1**, 44.°187N**±0.°006×**10.°122E**±0.°006**,**
h9km**, ML1.6/**5**, Error ellipse: s-maj=0.7km s-min=0.5km**
az=189.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	Equi	0.03	133	P	Pg	18 41 08.5	+0.2
EQUI				S	Sg	18 41 09.4	-0.1
EQUI	Equi	0.03	133	P	Pg	18 41 08.4	+0.2
EQUI				S	Sg	18 41 09.4	0.0
EQUI				AML	AML		
	comp=E,714µm,0.3s						
EQUI				AML	AML		
	comp=N,870µm,0.2s						
EQUI				AML	AML		
	comp=E,715µm,0.3s						
EQUI				AML	AML		
	comp=N,870µm,0.2s						
EQUI				AML	AML		
	comp=E,715µm,0.3s						
EQUI				AML	AML		
	comp=N,870µm,0.2s						
T0912	Minucciano (LU	0.07	106	P	Pg	18 41 09.0	+0.3
T0912				S	Sg	18 41 10.5	+0.3
T0912				AML	AML		
	comp=E,1185µm,0.2s						
T0912				AML	AML		
	comp=N,2235µm,0.2s						
T0912				AML	AML		
	comp=E,1136µm,0.1s						
T0912				AML	AML		
	comp=N,2240µm,0.2s						
T0912				AML	AML		
	comp=E,1186µm,0.1s						
T0912				AML	AML		
	comp=N,2235µm,0.2s						
T0912				AML	AML		
	comp=E,1136µm,0.1s						
T0912				AML	AML		
	comp=N,2240µm,0.2s						
T0912				AML	AML		
	comp=N,2235µm,0.2s						
T0912				AML	AML		
	comp=N,2240µm,0.2s						
T0912				AML	AML		
	comp=E,1186µm,0.1s						
T0912				AML	AML		
	comp=E,1136µm,0.1s						
T0911	Castelpoggio (	0.08	205	eP	Pg	18 41 09.5	+0.7
T0911				S	Sg	18 41 11.3	+0.9
VLC	Villacollemand	0.19	98	P	Pg	18 41 11.2	+0.6
VLC				S	Sg	18 41 14.5	+1.2
VLC				AML	AML		
	comp=E,56µm,0.1s						
VLC				AML	AML		
	comp=N,100µm,0.4s						
VLC				AML	AML		
	comp=E,56µm,0.1s						
VLC				AML	AML		
	comp=N,100µm,0.4s						
VLC				AML	AML		
	comp=N,100µm,0.4s						
VLC				AML	AML		
	comp=E,56µm,0.1s						
PLMA	Palmaria, Port	0.24	235	eP	Pg	18 41 12.4	+1.0
PLMA				S	Sg	18 41 16.1	+1.4
CARD	Cardoso	0.31	122	P	Pg	18 41 13.5	+0.8
CARD				S	Sg	18 41 18.0	+1.3
CARD	Cardoso	0.31	122	eP	Pb	18 41 13.6	-0.7
CARD				S	Sb	18 41 18.2	-1.2
GRAM	Graiana	0.31	353	P	Pg	18 41 13.4	+0.6
GRAM				S	Sg	18 41 17.9	+1.1
GRAM	Graiana	0.31	353	P	Pg	18 41 13.4	+0.7
GRAM				S	Sg	18 41 18.1	+1.3
GRAM				AML	AML		
	comp=E,228µm,1.0s						
GRAM				AML	AML		
	comp=N,355µm,0.2s						
GRAM				AML	AML		
	comp=E,228µm,1.0s						
GRAM				AML	AML		
	comp=N,354µm,0.2s						
GRAM				AML	AML		

	comp=N,354μm,0.2s						
GRAM				AML	AML		
	comp=E,228μm,1.0s						
ERBM	Eremo	0.31	42	eP	Pb	18 41 13.8	-0.6
ERBM				S	Sb	18 41 19.5	-0.2
ERBM				AML	AML		
	comp=E,68μm,1.3s						
ERBM				AML	AML		
	comp=N,61μm,1.1s						
ERBM				AML	AML		
	comp=E,68μm,1.3s						
ERBM				AML	AML		
	comp=N,61μm,1.1s						
ERBM				AML	AML		
	comp=E,68μm,1.3s						
ERBM				AML	AML		
	comp=N,61μm,1.1s						
MAIM	Mastiano	0.38	136	P	Pb	18 41 14.9	-0.7
MAIM				S	Sb	18 41 20.4	-1.1
MAIM	Mastiano	0.38	136	eP	Pb	18 41 15.0	-0.6
MAIM				S	Sb	18 41 20.7	-0.9
MSSA	Maissana	0.45	287	eP	Pb	18 41 16.6	-0.3
MSSA				S	Sg	18 41 22.5	+1.0
POPM	Popiglio	0.48	107	P	Pg	18 41 16.4	+0.4
POPM				S	Sb	18 41 24.0	-0.4
POPM	Popiglio	0.48	107	P	Pg	18 41 16.5	+0.6
POPM				S	Sb	18 41 24.1	-0.4
POPM				AML	AML		
	comp=E,51μm,0.3s						
POPM				AML	AML		
	comp=N,52μm,1.4s						
POPM				AML	AML		
	comp=N,52μm,1.4s						
POPM				AML	AML		
	comp=E,51μm,0.3s						
FROS	Frosini	1.23	142	S	Sb	18 41 44.0	-2.1

IDC ***09*** *18:48:36.3±0.5, 29°.52S×111°.94W, h0^{km}, mb4.4/17, mb1 4.5/18, mb1mx4.5/24, mbtmp4.3/18, ML3.0/1, MS4.3/15, Ms1 4.3/15, ms1mx4.0/26, Error ellipse: s-maj=17.4km s-min=16.4km az=37.0*

ISCJB ***09*** *18:48:37.3±0.3, 29°.53S±0°.05×111°.75W±0°.05, h16^{km}, mb5.0/316, MS4.4/20, Error ellipse: s-maj=7.9km s-min=5.7km az=37.5*

MOS ***09*** *18:48:37.4±0.9, 29°.33S×111°.78W, h10^{km}, mb5.2/46, Error ellipse: s-maj=20.3km s-min=7.5km az=85.7*

NEIC ***09*** *18:48:38.8±1.1, 29°.51S×111°.74W, h13^{km}±2^{km}, mb5.2/328, Error ellipse: s-maj=18.8km s-min=12.2km az=126.0*

GCMT ***09*** *18:48:43.8±0.3, 29°.78S±0°.02×111°.92W±0°.03, h24^{km}±1^{km}, MW5.0/64, Moment Tensor Solution. s18,c18; s64,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.38±.35; $M_{\theta\theta}$-5.25±.23; $M_{\phi\phi}$2.87±.23; $M_{r\theta}$-0.54±.25; $M_{\theta\phi}$-0.91±.15; $M_{\phi r}$-0.71±.40; Best double couple: $M_0$4.40200×10^{16} NP1:ϕ_s225.00000°,δ70.00000°,λ28.00000°. NP2: ϕ_s124.00000°,δ63.00000°,λ158.00000°. Principal axes: T 3.4030, Plg34.0000°, Azm86.0000°; N 1.9970, Plg56.0000°, Azm257.0000°; P -5.4000, Plg5.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 18:48:38.8±0.3**, 29°.53S**±0°.07×**111°.83W**±0°.08**, h16**^{km}**, n995, σ0ˢ.76**/981**, mb5.2**/315**, MS4.5**/20**, 7C-3D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.25	43	Pn	Pn	18 49 29.2	0.0
	1.6nm,0.3s,baz=203,slow=7.7,SNR=2.3						
RPN				Sn	Sb	18 50 12.0	-3.4
	3.7nm,0.3s,baz=52,slow=19,SNR=2.1						
RKT	Rikitea	21.68	282	eT	T	19 15 28.9	
	5.8nm,0.3s						
TBI	Tubuai	34.14	271	eLQ	LQ	19 03 07.0	
	315nm,26.2s						
TBI				eLR	LR	19 04 18.6	
	comp=Z,252nm,25.8s						
TBI	Tubuai	34.14	271	eT	T	19 31 07.5	
	4.8nm,0.3s						
PLCA	Paso Flores	35.27	120	P	P	18 55 33.6	+0.7
	4.2nm,1.1s,baz=298,slow=9.6,SNR=3.8						
PLCA				LR	LR	19 05 48.2	
	comp=Z,240nm,20.8s,baz=4.5,slow=29						
PLCA	Paso Flores	35.27	120	eP	P	18 55 34.2	+1.3
	27nm,1.5s						
PLCA	Paso Flores	35.27	120	eP	P	18 55 34.2	+1.3
PLCA				pmax	pmax		
	comp=Z,27nm,1.5s						
PPT2	Papeete2	36.42	280	eLQ	LQ	19 04 13.7	
	comp=Z,216nm,24.5s						
CFA	Coronel Fontan	37.41	104	P	P	18 55 51.3	+0.1
	comp=Z,5.9nm,0.9s,baz=262,slow=9.0,SNR=7.6						
LVC	Limon Verde	39.00	90	P	P	18 56 06.6	+1.6
	comp=Z,2.5nm,0.5s,baz=263,slow=7.9,SNR=3.9						
PB11	IPOC Station P	39.37	86	eP	P	18 56 07.9	0.0
	comp=Z,24nm,1.2s						
MNMC	Minye Minye	39.67	85	eP	P	18 56 11.2	+0.7
	comp=Z,18nm,1.2s						
TRQA	Tornquist	41.88	115	eP	P	18 56 28.9	+0.6
	comp=Z,63nm,1.8s						
TRQA	Tornquist	41.88	115	eP	P	18 56 28.9	+0.6
TRQA				pmax	pmax		
	comp=Z,63nm,1.8s						
LPAZ	La Paz	42.12	82	P	P	18 56 32.4	+1.2
	comp=Z,12nm,1.1s,baz=250,slow=3.3,SNR=20						
LPAZ				PcP	PcP	18 58 26.6	+0.8
	comp=Z,1.3nm,0.6s,baz=244,slow=3.7,SNR=3.6						
LPAZ	La Paz	42.12	82	eP	P	18 56 32.2	+1.0
	comp=Z,29nm,1.5s						
LPAZ	La Paz	42.12	82	eP	P	18 56 32.2	+1.0
LPAZ				pmax	pmax		
	comp=Z,29nm,1.5s						
POPC	Popayan, Colom	46.35	53	eP	P	18 57 04.4	-0.2
MARP	Paez Belalcaza	47.06	53	eP	P	18 57 11.4	+1.1
JTS	Las Juntas de	47.31	37	i P	P	18 57 12.6	+0.7
JTS				pmax	pmax		
	comp=Z,28nm,1.3s						
YOTC	Yotoco, Valle	47.61	52	eP	P	18 57 05.7	-8.7
CPUP	Villa Florida	47.90	100	P	P	18 57 16.1	-0.3
	comp=Z,3.2nm,1.0s,baz=315,slow=8.6,SNR=3.2						
MACC	Macarena, Meta	48.07	56	eP	P	18 57 18.8	+1.0
ORTC	Ortega, Tolima	48.32	53	eP	P	18 57 20.3	+0.5
TLIG	Tlapa	48.53	17	eP	P	18 57 23.0	+1.6
	comp=Z,68nm,1.4s						
RREF	El Recreo	48.96	52	eP	P	18 57 27.3	+1.9
ROSC	El Rosal	49.62	53	P	P	18 57 31.5	+1.3
	comp=Z,5.0nm,0.4s,baz=104,slow=18,SNR=9.5						
ROSC	El Rosal	49.62	53	eP	P	18 57 30.9	+0.7
	comp=Z,38nm,1.4s						
NORC	Norcasia	49.77	52	eP	P	18 57 30.9	+0.1
CHIC	Chingaza	49.89	54	eP	P	18 57 34.9	+2.7
PTBC	PUERTO BERRIO,	50.75	51	eP	P	18 57 39.4	+1.1
ZARC	Zaragoza, Cauc	51.18	50	eP	P	18 57 42.9	+1.4
BARC	Barichara	51.66	52	eP	P	18 57 45.9	+0.5
BRRC	Barranca, Sant	51.67	51	eP	P	18 57 45.9	+0.7
SMLC	San Martn de	52.66	50	eP	P	18 57 52.3	-0.3
ZAIG	Zacatecas	52.75	11	eP	P	18 57 55.0	+1.7
	comp=Z,16nm,1.6s						
VIRV	Villa del Rosa	55.02	50	eP	P	18 58 09.6	-0.2
SDV	Santo Domingo	55.06	53	eP	P	18 58 09.5	-0.8
	comp=Z,29nm,1.4s						
LNIG	Linares	55.40	14	eP	P	18 58 12.6	+0.3
	comp=Z,23nm,1.2s						
URIC	Uribia, Colomb	56.17	49	eP	P	18 58 29.6	+12
HPIG		56.45	7	eP	P	18 58 21.4	+1.4
	comp=Z,17nm,1.3s						
PTGA	Pitinga	57.02	70	eP	P	18 58 23.4	-0.8
	comp=Z,31nm,1.8s						
HSIG		58.22	1	eP	P	18 58 32.5	+0.2
	comp=Z,8.1nm,0.8s						
833A	Chaparral WMA,	58.74	13	eP	P	18 58 35.6	-0.3
	comp=Z,34nm,1.1s						
833A	Chaparral WMA,	58.74	13	P	P	18 58 37.3	+1.4
	baz=192						
TX31	Lajitas Ar. Si	59.05	8	eP	P	18 58 38.8	+0.7
	comp=Z,18nm,1.6s						
TXAR	Lajitas Array	59.05	8	P	P	18 58 37.5	-0.7
	comp=Z,0.9nm,0.6s,baz=181,slow=10.0,SNR=5.9						
TXAR				LR	LR	19 20 16.1	
	comp=Z,160nm,18.9s,baz=0.0,slow=32						
BDFB	Brasilia	59.88	92	P	P	18 58 44.5	+0.2
	comp=Z,1.3nm,0.3s,baz=214,slow=7.3,SNR=2.9						
VNDA	Vanda	60.61	194	P	P	18 58 49.0	+0.7
	comp=Z,0.9nm,0.9s,baz=84,slow=7.3,SNR=2.9						
VNDA				LR	LR	19 19 03.9	
	comp=Z,342nm,20.5s,baz=115,slow=30						
VNDA	Vanda	60.61	194	eP	P	18 58 52.5	+4.3
	comp=Z,5.8nm,1.1s						
319A	Douglas	60.61	3	eP	P	18 58 50.1	+1.2
	comp=Z,72nm,0.5s						
QSPA	South Pole Qui	60.66	180	eP	P	18 58 49.0	0.0
	comp=Z,16nm,1.3s						
JCT	Junction City	60.76	12	eP	P	18 58 50.5	+0.7
	comp=Z,39nm,1.1s						
JCT	Junction City	60.76	12	eP	P	18 58 50.5	+0.7
JCT				pmax	pmax		
	comp=Z,39nm,1.1s						
JCT	Junction City	60.76	12	P	P	18 58 51.0	+1.1
	baz=192,SNR=9.3						
HKT	Hockley	61.08	16	eP	P	18 58 53.2	+1.4
	comp=Z,38nm,1.4s						
HKT	Hockley	61.08	16	eP	P	18 58 53.2	+1.4
HKT				pmax	pmax		
	comp=Z,38nm,1.4s						
214A	Organ Pipe Nat	61.15	359	P	P	18 58 53.8	+1.4
	baz=179						
MNTX	Cornudas Mount	61.20	6	eP	P	18 58 52.9	+0.2
	comp=Z,23nm,1.6s						
MNTX	Cornudas Mount	61.20	6	P	P	18 58 53.5	+0.7
	baz=186,SNR=11						
435B	Jarrell	61.49	14	eP	P	18 58 55.5	+0.8
	comp=Z,44nm,1.1s						
435B	Jarrell	61.49	14	P	P	18 58 56.0	+1.3
	baz=194						
TUC	Tucson	61.50	1	eP	P	18 58 55.6	+0.7
	comp=Z,6.9nm,0.8s						
TUC	Tucson	61.50	1	eP	P	18 58 55.6	+0.7
TUC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TUC	Tucson	61.50	1	P	P	18 58 56.2	+1.3
	baz=181						
GDL2	Guadalupe Moun	61.80	7	eP	P	18 58 57.3	+0.4
121A	Cookes Peak, D	61.84	4	P	P	18 58 58.6	+1.4
	baz=184						
IKP	In-Ko-Pah, Jac	61.97	356	P	P	18 58 59.6	+1.6
	baz=176						
113A	Mohawk Valley,	61.98	358	eP	P	18 58 58.4	+0.4
	comp=Z,18nm,1.4s						
BAR	Barrett	62.04	355	eP	P	18 58 56.6	-1.8
	comp=Z,10nm,0.8s						
SDDR	Presa de Saban	62.08	44	eP	P	18 58 56.8	-2.3
	comp=Z,38nm,1.4s						
MONP2	Monument Peak	62.23	356	P	P	18 59 01.6	+1.7
	baz=175						
SWSC	Sam W. Stewart	62.24	356	P	P	18 59 01.2	+1.5
	baz=176						
GLA	Glamis	62.30	357	eP	P	18 59 01.2	+1.0
	comp=Z,9.8nm,0.8s						
GLA	Glamis	62.30	357	eP	P	18 59 01.2	+1.0
GLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GLA	Glamis	62.30	357	P	P	18 59 01.5	+1.3
	baz=177						
WHTX	Lake Whitney,	62.69	14	eP	P	18 59 03.4	+0.7
	comp=Z,61nm,1.5s						
WHTX	Lake Whitney,	62.69	14	P	P	18 59 03.3	+0.6
	baz=194						
ABTX	Abilene, Hawle	62.88	12	eP	P	18 59 04.6	+0.6
	comp=Z,29nm,1.2s						
ABTX	Abilene, Hawle	62.88	12	P	P	18 59 04.6	+0.6
	baz=192						
BC3	Big Chuckawall	62.93	357	P	P	18 59 06.1	+1.6
	baz=176,SNR=6.5						
PFO	Pinyon Flats O	62.95	356	eP	P	18 59 05.4	+0.8
	comp=Z,31nm,1.9s						
PFO	Pinyon Flats O	62.95	356	eP	P	18 59 05.4	+0.8
PFO				pmax	pmax		
	comp=Z,31nm,1.9s						
PFO	Pinyon Flats O	62.95	356	P	P	18 59 06.0	+1.4
	baz=175						
Y12C	Blythe	62.98	357	eP	P	18 59 05.7	+1.0
	comp=Z,32nm,1.7s						
Y12C	Blythe	62.98	357	P	P	18 59 06.4	+1.7
	baz=177						
NATX	Nacogdoches	63.10	16	eP	P	18 59 05.8	+0.3
	comp=Z,26nm,0.5s						
NATX	Nacogdoches	63.10	16	P	P	18 59 06.5	+1.1
	baz=197						
Y14A	Wickenburg	63.13	359	eP	P	18 59 06.4	+0.6
	comp=Z,7.2nm,1.1s						
060Z	West Palm Beac	63.18	31	P	P	18 59 06.9	+0.8
	baz=210						
BELC	Belle Mtn. Jos	63.30	356	P	P	18 59 08.4	+1.5
	baz=176,SNR=6.3						
IRM	Iron Mountain	63.42	357	P	P	18 59 09.2	+1.6
	baz=177						
LENM	Lemitar	63.51	5	eP	P	18 59 09.2	+0.8
BNM	Barren Site	63.52	5	eP	P	18 59 08.6	0.0
X16A	Lo Mia Camp, P	63.60	0	eP	P	18 59 09.9	+0.9
	comp=Z,12nm,1.6s						
BBRC	Big Bear Solar	63.63	355	P	P	18 59 10.6	+1.4
	baz=175						
BFSC	Mount Baldy Ra	63.66	355	P	P	18 59 10.5	+1.2
	baz=174						
MSTX	Muleshoe	63.73	8	eP	P	18 59 09.7	0.0
	comp=Z,30nm,1.0s						
MSTX	Muleshoe	63.73	8	P	P	18 59 10.4	+0.6
	baz=189						
X18A	Snowflake	63.73	2	eP	P	18 59 10.5	+0.6
	comp=Z,58nm,1.8s						
LAZ	Ladron	63.74	4	eP	P	18 59 10.5	+0.6
060A	Indiantown	63.81	31	P	P	18 59 11.1	+0.8
	baz=210						
GMRC	Granite Mounta	64.07	356	P	P	18 59 13.7	+1.7
	baz=176						
HEC	Hector,Ludlow	64.15	356	P	P	18 59 13.9	+1.5
	baz=176						
DWPF	Disney Wildern	64.26	30	P	P	18 59 14.0	+0.8
	baz=209						
W13A	Hualapai Mount	64.31	358	eP	P	18 59 14.7	+1.0
	comp=Z,4.5nm,1.0s						
EDW2	Edwards Air Fo	64.32	354	P	P	18 59 13.9	+0.4
	baz=174						
TASM	ASL Pad, Albuq	64.33	5	P	P	18 59 14.4	+0.6
	baz=185						
TASM	ASL Pad, Albuq	64.33	5	P	P	18 59 14.3	+0.6
	baz=185						
ANMO	Albuquerque	64.33	5	LR	LR	19 22 12.2	
	comp=Z,191nm,19.8s,baz=197,slow=31						
ANMO	Albuquerque	64.33	5	eP	P	18 59 13.4	-0.3
	comp=Z,3.9nm,0.9s						
ANMO	Albuquerque	64.33	5c	iP	P	18 59 13.5	-0.3
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	64.33	5	P	P	18 59 14.4	+0.6
	baz=185						
W18A	Petrified Fore	64.33	2	eP	P	18 59 14.6	+0.9
	comp=Z,26nm,1.6s						
W18A	Petrified Fore	64.33	2	P	P	18 59 14.7	+0.9
	baz=182						
LDFC	Landfair	64.33	357	eP	P	18 59 15.5	+1.8
	comp=Z,27nm,0.4s						
858A	St. Cloud	64.38	30	P	P	18 59 14.7	+0.7
	baz=209						
AOPR	Arecibo Observ	64.46	48	eP	P	18 59 15.9	+1.2
	comp=Z,78nm,1.4s						
PKM	Mcpherson Peak	64.51	353	P	P	18 59 16.1	+1.2
	baz=172						
GSC	Goldstone, Bar	64.65	356	eP	P	18 59 16.3	+0.6
	comp=Z,16nm,1.3s						
GSC	Goldstone, Bar	64.65	356	eP	P	18 59 16.3	+0.6
GSC				pmax	pmax		
	comp=Z,16nm,1.3s						
GSC	Goldstone, Bar	64.65	356	P	P	18 59 17.3	+1.5
	baz=175						
WUAZ	Wupatki	64.70	0	eP	P	18 59 16.9	+0.7
	comp=Z,20nm,1.5s						
WUAZ	Wupatki	64.70	0	P	P	18 59 17.1	+1.0
	baz=180						
757A	Oxford	64.72	29	P	P	18 59 16.4	+0.2
	baz=208						
TUQ	Turquoise Moun	64.73	356	P	P	18 59 17.5	+1.2
	baz=176						
AMTX	Amarillo	64.78	9	eP	P	18 59 16.8	+0.2
	comp=Z,45nm,1.6s						
AMTX	Amarillo	64.78	9	P	P	18 59 17.2	+0.6
	baz=190						
553A	Crawfordville	64.87	26	P	P	18 59 18.1	+1.0
	baz=206						
LRMC	Laurel Mtn Rad	64.89	355	P	P	18 59 18.9	+1.5
	baz=174						
349A	Repton	64.92	23	P	P	18 59 18.8	+1.3
	baz=204						
554A	Perry	65.07	27	P	P	18 59 19.2	+0.7
	baz=207						
WMOK	Wichita Mounta	65.09	12	eP	P	18 59 18.0	-0.6
	comp=Z,17nm,1.9s						
WMOK	Wichita Mounta	65.09	12	eP	P	18 59 18.0	-0.6
WMOK				pmax	pmax		
	comp=Z,17nm,1.9s						
758A	Lake Helen	65.11	29	P	P	18 59 19.2	+0.5
	baz=209						
ISA	Isabella, Lake	65.14	354	eP	P	18 59 19.8	+0.9
	comp=Z,34nm,1.8s						
ISA	Isabella, Lake	65.14	354	eP	P	18 59 19.8	+0.9
ISA				pmax	pmax		
	comp=Z,34nm,1.8s						
ISA	Isabella, Lake	65.14	354	P	P	18 59 20.2	+1.3
	baz=174						
452A	Marianna	65.18	25	P	P	18 59 20.2	+1.1
	baz=205						
SHOC	Shoshone, Teco	65.21	356	P	P	18 59 20.6	+1.3
	baz=176						
350A	Dozier	65.28	24	P	P	18 59 20.7	+0.9
	baz=204						
WLAR	White Oak Lake	65.32	17	eP	P	18 59 21.0	+1.1
	comp=Z,28nm,0.4s						
657A	Interlachen	65.37	29	P	P	18 59 20.8	+0.5
	baz=208						
555A	McAlpin	65.39	27	P	P	18 59 21.1	+0.6
	baz=207						
MPMC	Manual Prospec	65.45	355	P	P	18 59 22.4	+1.3
	baz=174,SNR=9.7						
556A	Lake Butler	65.51	28	P	P	18 59 21.9	+0.6
	baz=208						
249A	Camden	65.51	23	P	P	18 59 22.4	+1.1
	baz=203						
U15A	North Rim	65.61	360	eP	P	18 59 23.2	+1.1
	comp=Z,23nm,1.5s						
X37A	Clayton	65.64	15	eP	P	18 59 22.0	0.0
	comp=Z,38nm,1.6s						
STVI	Saint Thomas	65.65	50	eP	P	18 59 21.7	-0.7
	comp=Z,94nm,1.5s						
454A	Quitman	65.65	27	P	P	18 59 23.2	+1.0
	baz=207						
DAC	Darwin (Calif)	65.68	355	eP	P	18 59 23.7	+1.2
	comp=Z,23nm,1.6s						
DAC	Darwin (Calif)	65.68	355	eP	P	18 59 23.7	+1.2
DAC				pmax	pmax		
	comp=Z,23nm,1.6s						
SHPR	Sheep Range	65.76	357	eP	P	18 59 24.4	+1.4
	comp=Z,18nm,1.3s						
147A	Livingston	65.77	22	eP	P	18 59 23.5	+0.6
	comp=Z,71nm,1.4s						
147A	Livingston	65.77	22	P	P	18 59 23.7	+0.7
	baz=202						
557A	Orange Park	65.80	28	P	P	18 59 23.9	+0.8
	baz=208						
250A	Grady	65.81	24	eP	P	18 59 22.9	-0.3
	comp=Z,148nm,1.8s						
250A	Grady	65.81	24	P	P	18 59 23.8	+0.6
	baz=204						
FURC	Furnace Creek,	65.81	356	P	P	18 59 24.4	+1.4
	baz=175						
352A	Blakely	65.84	25	eP	P	18 59 22.4	-1.0
	comp=Z,44nm,1.3s						
352A	Blakely	65.84	25	P	P	18 59 24.0	+0.6
	baz=205						
CWC	Cottonwood Cre	65.88	354	P	P	18 59 25.0	+1.2
	baz=174						
CCAR	Cane Creek	65.89	18	eP	P	18 59 24.3	+0.6
	comp=Z,219nm,2.0s						
455A	Stateville	65.91	27	P	P	18 59 24.6	+0.7
	baz=207						
148A	Greensboro	65.98	22	P	P	18 59 25.1	+0.8
	baz=203						
353A	Camilla	65.99	26	P	P	18 59 25.1	+0.7
	baz=206						
MIAR	Mount Ida	66.02	16	eP	P	18 59 24.8	+0.3
	comp=Z,39nm,1.7s						
MIAR	Mount Ida	66.02	16	eP	P	18 59 24.8	+0.3
MIAR				pmax	pmax		
	comp=Z,39nm,1.7s						
MIAR	Mount Ida	66.02	16	P	P	18 59 24.8	+0.3
	baz=197,SNR=5.6						
VNA3	Neumayer Olymp	66.14	160	P	P	18 59 23.9	-1.0
X40A	Basin Creek Fa	66.15	17	eP	P	18 59 25.8	+0.5
	comp=Z,13nm,1.4s						
X40A	Basin Creek Fa	66.15	17	P	P	18 59 25.6	+0.3
	baz=198						
149A	Jones	66.19	23	P	P	18 59 26.0	+0.3
	baz=204						
KNB	Kanab	66.20	359	eP	P	18 59 26.5	+0.7
	comp=Z,20nm,1.5s						
KNB	Kanab	66.20	359	eP	P	18 59 26.5	+0.7
KNB				pmax	pmax		
	comp=Z,20nm,1.5s						
LCMT	Little Creek M	66.20	359	eP	P	18 59 25.6	-0.2
	comp=Z,4.9nm,0.8s						
251A	Midway	66.22	24	P	P	18 59 26.4	+0.5
	baz=205						
TPNV	Topopah Spring	66.25	356	eP	P	18 59 27.3	+1.1
	comp=Z,5.8nm,1.0s						
TPNV	Topopah Spring	66.25	356	eP	P	18 59 27.3	+1.1
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TPNV	Topopah Spring	66.25	356	P	P	18 59 27.8	+1.7
	baz=176,SNR=6.1						
TIGA	Tifton	66.31	26	P	P	18 59 26.9	+0.4
	baz=207						
GRAC	Grapevine Rang	66.38	355	P	P	18 59 28.1	+1.3
	baz=175						
252A	Lumpkin	66.38	25	P	P	18 59 27.5	+0.6
	baz=206						
MVCO	Mesa Verde	66.46	3	eP	P	18 59 28.3	+0.7
	comp=Z,46nm,1.4s						
MVCO	Mesa Verde	66.46	3	P	P	18 59 28.3	+0.7
	baz=183,SNR=8.8						
150A	Eclectic	66.47	24	P	P	18 59 27.6	+0.2
	baz=204						
TIN	Tinemaha, Big	66.50	354	P	P	18 59 29.3	+1.6
	baz=174						
355A	Pearson	66.51	27	P	P	18 59 28.0	+0.3
	baz=207						
LRAL	Lakeview Retre	66.52	23	eP	P	18 59 28.1	+0.4
	comp=Z,28nm,1.4s						
LRAL	Lakeview Retre	66.52	23	P	P	18 59 28.5	+0.7
	baz=203,SNR=6.1						
UALR	University of	66.55	17	eP	P	18 59 27.4	-0.5
	comp=Z,51nm,1.8s						
W39A	Magazine	66.59	16	eP	P	18 59 28.4	+0.2
	comp=Z,36nm,1.6s						
W39A	Magazine	66.59	16	P	P	18 59 28.6	+0.5
	baz=197						
PKCU	Pink Cliffs	66.62	360	eP	P	18 59 26.1	-2.6
	comp=Z,56nm,1.6s						
151A	Opelika	66.64	24	P	P	18 59 28.7	+0.2
	baz=205						
U32A	Winter Ranch,	66.66	11	eP	P	18 59 29.2	+0.6
	comp=Z,51nm,1.3s						
253A	Americus	66.66	25	eP	P	18 59 28.6	0.0
	comp=Z,26nm,0.5s						
253A	Americus	66.66	25	P	P	18 59 28.8	+0.1
	baz=206						
T25A	Trinidad	66.68	6	eP	P	18 59 29.7	+0.7
	comp=Z,30nm,1.6s						
T25A	Trinidad	66.68	6	P	P	18 59 29.7	+0.7
	baz=187,SNR=6.1						
X43A	Marvell	66.70	19	P	P	18 59 29.8	+0.9
	baz=200						
CCUT	Cedar City	66.74	359	eP	P	18 59 30.6	+1.3
	comp=Z,21nm,1.4s						
SZCU	Shurtz Canyon	66.78	359	eP	P	18 59 30.6	+1.0
	comp=Z,28nm,1.7s						
356A	Blackshear	66.78	27	P	P	18 59 29.8	+0.3
	baz=208						
VNA1	Neumayer--Stat	66.79	159	P	P	18 59 26.8	-2.3
TUL1	Leonard	66.82	14	eP	P	18 59 29.5	-0.1
	comp=Z,43nm,1.3s						
TUL1	Leonard	66.82	14	P	P	18 59 29.6	+0.1
	baz=195						
Z49A	Columbiana	66.83	23	P	P	18 59 30.4	+0.7
	baz=204,SNR=13						
254A	Abbeville	66.88	26	P	P	18 59 30.5	+0.4
	baz=207						
VNA2	Neumayer--Watz	66.95	160	P	P	18 59 28.9	-1.2
	baz=258,slow=5.7						
W41B	Gary Mavity, V	66.95	17	eP	P	18 59 31.0	+0.6
	comp=Z,49nm,1.4s						

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W41B Gary Mavity, V   66.95  17  P     P      18 59 31.5 +1.0
     baz=198,SNR=16
152A Waverly Hall     66.99  25 eP     P      18 59 31.1 +0.4
     comp=Z,44nm,1.5s
152A Waverly Hall     66.99  25  P     P      18 59 31.2 +0.5
     baz=205,SNR=5.9
WHAR Wooly Hollow     67.05  17 eP     P      18 59 31.5 +0.4
     comp=Z,57nm,1.6s
S22A 4UR Ranch, Cre   67.08   4 eP     P      18 59 32.4 +0.8
     comp=Z,19nm,0.7s
S22A 4UR Ranch, Cre   67.08   4  P     P      18 59 32.6 +1.0
     baz=185,SNR=9.1
Z50A Ashland          67.09  23 eP     P      18 59 31.5 +0.1
     comp=Z,21nm,1.5s
Z50A Ashland          67.09  23  P     P      18 59 31.5 +0.1
     baz=204
OXF  Oxford           67.12  20 eP     P      18 59 31.2 -0.3
     comp=Z,21nm,1.1s
OXF  Oxford           67.12  20 eP     P      18 59 31.2 -0.3
OXF                              pmax  pmax
     comp=Z,21nm,1.1s
OMMB Old Mammoth Mi   67.12 354 eP     P      18 59 32.8 +0.8
     comp=Z,7.4nm,1.4s
255A Hazlehurst       67.18  27  P     P      18 59 32.4 +0.5
     baz=207
SDCO Great Sand Dun   67.18   5 eP     P      18 59 32.4 +0.2
     comp=Z,12nm,0.8s
SDCO Great Sand Dun   67.18   5  P     P      18 59 33.0 +0.7
     baz=186,SNR=17
MTPU Mount Pierson    67.22 360 eP     P      18 59 33.1 +0.6
     comp=Z,3.5nm,0.9s
Y48A Jasper           67.27  22  P     P      18 59 32.8 +0.3
     baz=203
153A Fort Valley      67.30  25  P     P      18 59 33.1 +0.4
     baz=206
PV01 Paradox Valley   67.38   3 eP     P      18 59 34.0 +0.6
     comp=Z,22nm,1.5s
PV13 Radium Mtn., P   67.39   3 eP     P      18 59 33.7 +0.2
     comp=Z,5.0nm,0.6s
Z51A Franklin         67.41  24  P     P      18 59 33.5 +0.1
     baz=205
X46A Booneville       67.41  21  P     P      18 59 33.7 +0.3
     baz=202
PV02 Paradox Valley   67.44   3 eP     P      18 59 33.9  0.0
     comp=Z,15nm,0.5s
256A Glennville       67.46  27  P     P      18 59 34.5 +0.7
     baz=208
Y49A Blount Mountai   67.47  23 eP     P      18 59 33.8  0.0
     comp=Z,15nm,1.3s
Y49A Blount Mountai   67.47  23  P     P      18 59 34.0 +0.2
     baz=204
PV18 Skein Mesa, Pa   67.47   2 eP     P      18 59 34.4 +0.4
     comp=Z,7.7nm,0.6s
PV03 Paradox Valley   67.48   3 eP     P      18 59 34.7 +0.7
     comp=Z,21nm,1.3s
PV17 East Wray Mesa   67.51   2 eP     P      18 59 34.3 +0.1
     comp=Z,24nm,1.6s
PV11 David Mesa, Pa   67.53   3 eP     P      18 59 34.5 +0.1
     comp=Z,20nm,0.6s
PV19 Morning Glory    67.54   2 eP     P      18 59 34.9 +0.5
     comp=Z,13nm,1.1s
PV16 Nyswonger Mesa   67.54   2 eP     P      18 59 34.8 +0.3
     comp=Z,10nm,0.5s
154A Montrose         67.54  26 eP     P      18 59 34.5 +0.3
     comp=Z,82nm,1.3s
154A Montrose         67.54  26  P     P      18 59 34.8 +0.6
     baz=207
PV12 Saucer Basin,    67.55   3 eP     P      18 59 34.0 -0.5
     comp=Z,34nm,1.5s
Z52A Williamson       67.57  25  P     P      18 59 35.0 +0.5
     baz=206,SNR=7.8
PV20 West Nyswonger   67.57   2 eP     P      18 59 33.3 -1.3
     comp=Z,14nm,1.2s
HHAR Hobbs            67.59  16 eP     P      18 59 34.8 +0.3
     comp=Z,43nm,1.5s
PV14 Lion Creek, Pa   67.60   2 eP     P      18 59 34.6 -0.2
     comp=Z,22nm,1.1s
PV10 Paradox Valley   67.60   2 eP     P      18 59 34.3 -0.5
     comp=Z,27nm,1.4s
X47A Russelville      67.61  21  P     P      18 59 34.9 +0.2
     baz=202
R11A Troy Canyon, C   67.61 357 eP     P      18 59 35.2 +0.4
     comp=Z,14nm,1.5s
R11A Troy Canyon, C   67.61 357  P     P      18 59 36.5 +1.7
     baz=176,SNR=8.5
PV04 Paradox Valley   67.62   2 eP     P      18 59 35.3 +0.4
     comp=Z,30nm,1.2s
PV23 Carpenter Ridg   67.68   2 eP     P      18 59 34.8 -0.5
     comp=Z,15nm,0.7s
PV07 Paradox Valley   67.68   3 eP     P      18 59 35.6 +0.4
     comp=Z,7.1nm,0.7s
CMB  Columbia Colle   67.68 353 eP     P      18 59 35.8 +0.7
     comp=Z,12nm,1.5s
MSU  Marysvale        67.69 360 eP     P      18 59 35.3 -0.1
MSU  Marysvale        67.69 360  P     P      18 59 35.3 -0.1
PV09 Paradox Valley   67.72   2 eP     P      18 59 36.2 +0.6
PSUT Pine Spring      67.73 358 eP     P      18 59 36.0 +0.3
Y50A Piedmont         67.73  23  P     P      18 59 36.1 +0.7
     baz=204
HBAR Harrisburg       67.74  19 eP     P      18 59 35.7 +0.2
     comp=Z,39nm,0.7s
PV22 Blue Mesa, Par   67.77   3 eP     P      18 59 35.8  0.0
     comp=Z,12nm,0.8s
TCRU Three Creeks R   67.78 359 eP     P      18 59 36.9 +0.9
     comp=Z,14nm,1.2s
PV21 Cone Mtn., Par   67.79   2 eP     P      18 59 36.7 +0.7
     comp=Z,32nm,1.4s
155A Kite             67.80  27  P     P      18 59 36.6 +0.8
     baz=207
257A Skidaway Islan   67.80  28  P     P      18 59 37.0 +1.1
     baz=209
X48A Hartselle        67.81  22 eP     P      18 59 35.6 -0.2
     comp=Z,33nm,1.7s
X48A Hartselle        67.81  22  P     P      18 59 36.1 +0.2
     baz=203
NV11 Mina Array Sit   67.86 355 eP     P      18 59 37.0 +0.7
     comp=Z,1.6nm,1.2s
NVAR Mina Array Bea   67.87 355  P     P      18 59 38.1 +1.6
     comp=Z,7.9nm,1.0s,baz=178,slow=8.1,SNR=42
NVAR                             LR    LR     19 23 19.7
     comp=Z,283nm,18.1s,baz=146,slow=31
U40A Yellville        67.92  16  P     P      18 59 36.8 +0.3
     baz=198,SNR=7.5
SNAA Sanae            67.95 161  P     P      18 59 35.4 -1.2
SNAA Sanae            67.95 161 eP     P      18 59 34.7 -1.9
     comp=Z,14nm,1.1s
SNAA Sanae            67.95 161 eP     P      18 59 34.7 -1.9
SNAA                             pmax  pmax
     comp=Z,15nm,1.1s
Z53A Monticello       67.96  25  P     P      18 59 37.3 +0.5
     baz=206
PLAL Pickwick Lake    67.97  21 eP     P      18 59 36.5 -0.3
     comp=Z,16nm,1.3s
Y51A Rockmart         67.97  24  P     P      18 59 37.0  0.0
     baz=205,SNR=7.2
W46A Michie           68.01  21  P     P      18 59 37.0 -0.1
     baz=202
WAKR Walker           68.05 354 eP     P      18 59 38.1 +0.5
     comp=Z,23nm,1.8s
RYN  Ryan             68.09 354 eP     P      18 59 39.3 +1.5
     comp=Z,9.8nm,1.2s
Q16A Castle Valley    68.09   1 eP     P      18 59 38.3 +0.4
     comp=Z,35nm,1.5s
X49A Woodville        68.10  23  P     P      18 59 38.2 +0.5
     baz=204
GOGA Godfrey          68.11  25 eP     P      18 59 38.1 +0.2
     comp=Z,13nm,0.7s
GOGA Godfrey          68.11  25 eP     P      18 59 38.1 +0.2
GOGA                             pmax  pmax
     comp=Z,13nm,0.7s
GOGA Godfrey          68.11  25  P     P      18 59 38.0 +0.1
     baz=206,SNR=5.8
Z54A Sparta           68.19  26  P     P      18 59 38.3 -0.1
     baz=207,SNR=6.1
156A Sylvania         68.21  27  P     P      18 59 38.7 +0.3
     baz=208
X50B Fort Payne       68.28  23  P     P      18 59 39.0 +0.1
     baz=204
SRU  San Rafael Swe   68.29   1 eP     P      18 59 39.8 +0.7
     comp=Z,16nm,1.0s
SRU  San Rafael Swe   68.29   1 eP     P      18 59 39.8 +0.7
SRU                              pmax  pmax
     comp=Z,16nm,1.0s
Y52A Lilburn          68.30  25 eP     P      18 59 39.3 +0.2
Y52A Lilburn          68.30  25  P     P      18 59 39.5 +0.5
     baz=206
GNAR Gosnell          68.30  19 eP     P      18 59 39.8 +0.8
     comp=Z,62nm,0.5s
W47A Westpoint        68.36  21  P     P      18 59 39.3  0.0
     baz=202
Q24A Divide           68.42   6 eP     P      18 59 40.9 +0.8
     comp=Z,22nm,1.0s
Q24A Divide           68.42   6  P     P      18 59 40.5 +0.4
     baz=186
Z55A Blythe           68.45  27  P     P      18 59 40.2 +0.2
     baz=208
Y53A Monroe           68.47  25  P     P      18 59 40.5 +0.5
     baz=206
TMUT Trail Mountain   68.47   1 eP     P      18 59 40.9 +0.5
     comp=Z,22nm,1.5s
W48A Pulaski          68.47  22  P     P      18 59 40.2 +0.1
     baz=203,SNR=8.3
KVN  Kaiserville      68.47 355 eP     P      18 59 41.5 +1.3
     comp=Z,20nm,1.2s
KVN  Kaiserville      68.47 355 eP     P      18 59 41.5 +1.3
KVN                              pmax  pmax
     comp=Z,20nm,1.2s
SMCO Snowmass         68.50   4 eP     P      18 59 41.0 +0.4
     comp=Z,22nm,0.5s
YERR Yerington        68.51 354 eP     P      18 59 41.6 +1.2
     comp=Z,6.9nm,1.0s
PNTR Pine Nut         68.64 354 eP     P      18 59 42.1 +0.7
     comp=Z,7.7nm,0.9s
X51A Calhoun          68.65  24 eP     P      18 59 41.6 +0.4
     comp=Z,49nm,1.3s
X51A Calhoun          68.65  24  P     P      18 59 41.3 +0.1
     baz=205
AFDM Forest Hills D   68.65 352 eP     P      18 59 42.2 +1.1
     comp=Z,7.1nm,1.1s
P17A Butcher Ranch,   68.65   1 eP     P      18 59 41.5 +0.1
     comp=Z,29nm,1.3s
W49A Belvidere        68.67  22  P     P      18 59 41.4 +0.1
     baz=204
V46A Holladay         68.71  21  P     P      18 59 41.0 -0.5
     baz=202,SNR=5.4
KSCO Kaye Shedlock’   68.72   8 eP     P      18 59 42.4 +0.7
     comp=Z,77nm,1.5s
KSCO Kaye Shedlock’   68.72   8  P     P      18 59 42.9 +1.2
     baz=188
158A Hollywood        68.81  28  P     P      18 59 42.7 +0.5
     baz=209
Y54A Tignall          68.81  26  P     P      18 59 42.4 +0.2
     baz=207,SNR=7.8
SWET Sewanee          68.87  23 eP     P      18 59 42.1 -0.5
     comp=Z,30nm,1.3s
CBKS Cedar Bluff      68.92  10 eP     P      18 59 43.2 +0.4
     comp=Z,55nm,1.6s
CBKS Cedar Bluff      68.92  10 eP     P      18 59 43.2 +0.4
CBKS                             pmax  pmax
     comp=Z,55nm,1.6s
CBKS Cedar Bluff      68.92  10  P     P      18 59 43.3 +0.4
     baz=191
V47A Nunnelly         68.92  21  P     P      18 59 42.7 -0.1
     baz=202
PBMO Poplar Bluff     68.95  18 eP     P      18 59 42.8 -0.1
     comp=Z,22nm,1.0s
UTMT University of    68.99  20 eP     P      18 59 44.2 +1.0
     comp=Z,130nm,0.4s
X52A Dahlonega        69.03  24  P     P      18 59 43.9 +0.3
     baz=206,SNR=7.5
V48A Smith Brothers   69.06  22 eP     P      18 59 43.2 -0.5
     comp=Z,36nm,1.5s
V48A Smith Brothers   69.06  22  P     P      18 59 43.5 -0.2
     baz=203
W50A Signal Mountai   69.07  23 eP     P      18 59 43.8  0.0
     comp=Z,37nm,1.6s
W50A Signal Mountai   69.07  23  P     P      18 59 43.8  0.0
     baz=204
Z57A Bowman           69.09  28  P     P      18 59 44.5 +0.5
     baz=209
WVT  Waverly          69.10  21 eP     P      18 59 43.6 -0.3
     comp=Z,33nm,1.7s
WVT  Waverly          69.10  21 eP     P      18 59 43.6 -0.3
WVT                              pmax  pmax
     comp=Z,33nm,1.7s
WVT  Waverly          69.10  21  P     P      18 59 43.9 -0.1
     baz=202
X53A Estanollee       69.15  25  P     P      18 59 44.6 +0.3
     baz=206
MPU  Maple Canyon     69.19   0 eP     P      18 59 45.1 +0.5
     comp=Z,18nm,1.4s
Y55A Saluda           69.19  26  P     P      18 59 45.0 +0.4
     baz=208,SNR=5.1
U46A Springville      69.21  20  P     P      18 59 44.8 +0.2
     baz=202
ISCO Idaho Springs    69.21   5 eP     P      18 59 45.1 +0.1
     comp=Z,12nm,0.6s
ISCO Idaho Springs    69.21   5 eP     P      18 59 45.1 +0.1
ISCO                             pmax  pmax
     comp=Z,12nm,0.6s
ISCO Idaho Springs    69.21   5  P     P      18 59 45.8 +0.8
     baz=186,SNR=5.8
W51A Cleveland        69.22  24  P     P      18 59 45.0 +0.2
     baz=205,SNR=6.2
PAHR Pah Rah Range    69.23 354 eP     P      18 59 46.3 +1.4
     comp=Z,13nm,1.6s
Y56A Pelion           69.28  27  P     P      18 59 45.5 +0.4
     baz=208
HODGE Hodges          69.30  26 eP     P      18 59 45.5 +0.3
     comp=Z,30nm,1.4s
ORV  Oroville         69.31 352 eP     P      18 59 46.5 +1.3
     comp=Z,6.5nm,1.1s
DUG  Dugway, Tooele   69.37 359 eP     P      18 59 45.5 -0.3
     comp=Z,24nm,1.7s
DUG  Dugway, Tooele   69.37 359 eP     P      18 59 45.5 -0.3
DUG                              pmax  pmax
     comp=Z,25nm,1.7s
DUG  Dugway, Tooele   69.37 359  P     P      18 59 46.6 +0.9
     baz=179,SNR=5.9
V49A McMinnville      69.38  22  P     P      18 59 45.4 -0.3
     baz=204,SNR=6.4
O20A White River Ci   69.39   3 eP     P      18 59 46.3 +0.4
     comp=Z,16nm,0.6s
O20A White River Ci   69.39   3  P     P      18 59 46.8 +0.9
     baz=183
W52A Murphy           69.45  24 eP     P      18 59 45.8 -0.4
     comp=Z,43nm,1.5s
W52A Murphy           69.45  24  P     P      18 59 46.8 +0.6
     baz=206
Z58A St. Stephen      69.48  28  P     P      18 59 47.2 +0.9
     baz=209
X54A Belton           69.54  26  P     P      18 59 47.5 +0.8
     baz=207
CLTN Cedars of Leba   69.54  22 eP     P      18 59 46.3 -0.3
     comp=Z,15nm,1.6s
U47A Clarksville      69.56  21  P     P      18 59 47.1 +0.3
     baz=203
CPCT Cooper Cave      69.56  24 eP     P      18 59 46.8 -0.1
     comp=Z,34nm,1.5s
V50A Pikevile         69.56  23  P     P      18 59 47.0 +0.1
     baz=205,SNR=9.3
Z59A Georgetown, SC   69.63  29  P     P      18 59 48.0 +0.7
     baz=210
BG3  Lake Jocassee    69.72  25 eP     P      18 59 48.6 +0.7
     comp=Z,33nm,1.5s
JSC  Jenkinsville     69.73  27 eP     P      18 59 48.2 +0.3
     comp=Z,24nm,1.3s
JSC  Jenkinsville     69.73  27 eP     P      18 59 48.2 +0.3
JSC                              pmax  pmax
     comp=Z,24nm,1.3s
KSU1 Kansas State U   69.73  13  P     P      18 59 48.7 +0.9
     baz=194
X55A Gracelyn & Ava   69.75  26  P     P      18 59 48.9 +0.9
     baz=208
JLU  Jordanelle       69.77   0 eP     P      18 59 49.1 +0.8
     comp=Z,42nm,1.5s
BMN  Battle Mountai   69.78 356 eP     P      18 59 49.6 +1.4
     comp=Z,30nm,1.4s
W53A Cullowhee        69.80  25  P     P      18 59 48.8 +0.4
     baz=206
Y57A Sumter           69.84  27  P     P      18 59 49.4 +0.8
     baz=209
U48A Cassie Pea, Po   69.86  22  P     P      18 59 48.5 -0.1
     baz=203
T46A Princeton        69.92  20  P     P      18 59 49.2 +0.2
     baz=202
CCM  Cathedral Cave   69.93  17 eP     P      18 59 48.9 -0.1
     comp=Z,44nm,1.7s
CCM  Cathedral Cave   69.93  17 eP     P      18 59 48.9 -0.1
CCM                              pmax  pmax
     comp=Z,44nm,1.7s
CCM  Cathedral Cave   69.93  17  P     P      18 59 48.9 -0.1
     baz=199
V51A Loudon           69.94  24 eP     P      18 59 49.0 -0.2
     comp=Z,11nm,0.8s
V51A Loudon           69.94  24  P     P      18 59 49.2  0.0
     baz=205
ELK  Elko             69.99 357  LR    LR     19 24 35.2
     comp=Z,272nm,19.5s,baz=168,slow=31
ELK  Elko             69.99 357 eP     P      18 59 50.9 +1.3
     comp=Z,15nm,1.7s
ELK  Elko             69.99 357 eP     P      18 59 50.9 +1.3
ELK                              pmax  pmax
     comp=Z,15nm,1.7s
PAULI Pauline         69.99  26 eP     P      18 59 49.9 +0.4
     comp=Z,64nm,1.7s
X56A White Oak        70.00  27  P     P      18 59 50.6 +1.0
     baz=208
Y58A Scranton         70.04  28  P     P      18 59 50.7 +1.0
     baz=209
O03E Paynes Creek     70.08 352  P     P      18 59 50.5 +0.5
     baz=171
W54A Cherokee Point   70.08  26  P     P      18 59 51.1 +1.0
     baz=207
O02D Mt. Diablo Mer   70.09 351  P     P      18 59 51.6 +1.5
     baz=170
U49A Red Boiling Sp   70.10  22  P     P      18 59 50.4 +0.2
     baz=204
BGU  Big Grassy Mou   70.10 359 eP     P      18 59 50.6 +0.4
     comp=Z,23nm,1.6s
T47A Sharon Grove     70.11  21 eP     P      18 59 49.9 -0.3
     comp=Z,36nm,1.2s
T47A Sharon Grove     70.11  21  P     P      18 59 50.2  0.0
     baz=203,SNR=7.5
S44A Carbondale       70.13  19  P     P      18 59 50.5 +0.2
     baz=201,SNR=5.3
V52A Sevierville      70.24  24 eP     P      18 59 50.9 -0.1
     comp=Z,9.1nm,0.8s
V52A Sevierville      70.24  24  P     P      18 59 51.1 +0.1
     baz=206
N23A Red Feather La   70.28   5 eP     P      18 59 52.4 +0.9
     comp=Z,21nm,0.6s
N23A Red Feather La   70.28   5  P     P      18 59 52.4 +0.9
     baz=185,SNR=9.1
TCUT Toone Canyon     70.29   0 eP     P      18 59 51.8 +0.3
     comp=Z,32nm,1.4s
U50A Jamestown        70.33  23  P     P      18 59 51.6 +0.1
     baz=205
X57A Johnson Farm,    70.35  27  P     P      18 59 52.5 +0.8
     baz=209
BIRD Birdtown, Kers   70.36  27 eP     P      18 59 52.2 +0.4
     comp=Z,26nm,1.3s
V53A Saluda           70.37  25 eP     P      18 59 52.1 +0.3
     comp=Z,36nm,1.3s
V53A Saluda           70.37  25  P     P      18 59 52.2 +0.3
     baz=206,SNR=12
Y59A Loris            70.44  29  P     P      18 59 53.1 +0.9
     baz=210
T48A Bowling Green    70.45  21  P     P      18 59 52.2 -0.1
     baz=203,SNR=8.9
WDC  Whiskeytown Da   70.45 351 eP     P      18 59 52.9 +0.7
     comp=Z,20nm,1.3s
WDC  Whiskeytown Da   70.45 351 eP     P      18 59 52.9 +0.7
WDC                              pmax  pmax
     comp=Z,21nm,1.3s
KMSC Kings Mountain   70.46  26 eP     P      18 59 52.8 +0.4
     comp=Z,12nm,0.6s
KMSC Kings Mountain   70.46  26  P     P      18 59 53.0 +0.6
     baz=208
SPUT South Promonto   70.48 360 eP     P      18 59 52.3 -0.3
     comp=Z,31nm,1.7s
S46A Don Dixon Farm   70.57  20  P     P      18 59 53.1 +0.1
     baz=202
U51A La Follette      70.58  24  P     P      18 59 53.3 +0.2
     baz=205
OGNE Ogallala         70.70   8 eP     P      18 59 53.8  0.0
     comp=Z,70nm,1.5s
OGNE Ogallala         70.70   8  P     P      18 59 54.4 +0.5
     baz=189
T49A Edmonton         70.72  22  P     P      18 59 53.7 -0.3
     baz=204,SNR=6.3
Y60A Bolivia          70.73  29  P     P      18 59 54.4 +0.4
     baz=211
X58A Rowland          70.74  28  P     P      18 59 54.5 +0.5
     baz=210
S47A Hartford         70.74  21  P     P      18 59 54.1 +0.1
     baz=203,SNR=6.1
W56A Indian Trail     70.74  27  P     P      18 59 54.3 +0.2
     baz=208
WNC  Wilmington       70.77  29 eP     P      19 00 22.1  +28
V54A Nebo             70.79  25  P     P      18 59 54.6 +0.3
     baz=207,SNR=11
U52A Thorn Hill       70.82  24  P     P      18 59 54.8 +0.3
     baz=206
USIN University of    70.84  20 eP     P      18 59 54.6  0.0
     comp=Z,30nm,0.9s
N02D Trinity Center   70.86 351  P     P      18 59 56.3 +1.5
     baz=170
T50A Nancy            70.88  23  P     P      18 59 54.8 -0.1
     baz=205
TZTN Tazewell         70.89  24  P     P      18 59 55.4 +0.5
     baz=206,SNR=7.9
HVU  Hansel Valley    70.95 359 eP     P      18 59 55.7 +0.3
     comp=Z,21nm,2.0s
HVU  Hansel Valley    70.95 359 eP     P      18 59 55.7 +0.3
HVU                              pmax  pmax
     comp=Z,21nm,2.0s
R45A Skylar, Fairfi   70.97  19  P     P      18 59 55.8 +0.5
     baz=202
RWWY Rawlins          70.99   4 eP     P      18 59 55.7  0.0
     comp=Z,10nm,0.9s
W57A Gilead           70.99  27 eP     P      18 59 55.9 +0.3
     comp=Z,37nm,1.5s
W57A Gilead           70.99  27  P     P      18 59 55.8 +0.2
     baz=209
X59A McDuffie Farm,   71.06  29  P     P      18 59 56.7 +0.7
     baz=210
S48A Wiedeman Farm,   71.06  21  P     P      18 59 55.8 -0.2
     baz=204
U53A Fall Branch      71.08  25  P     P      18 59 56.0 -0.1
     baz=207,SNR=6.6
R46A Gibon Southern   71.12  20  P     P      18 59 56.0 -0.2
     baz=202
V55A Taylorsville     71.13  26  P     P      18 59 56.6 +0.2
     baz=208
T51A Gray             71.13  23  P     P      18 59 56.8 +0.4
     baz=205
W58A Raeford          71.19  28  P     P      18 59 57.2 +0.4
     baz=210
M02C Callahan         71.29 351  P     P      18 59 58.2 +0.8
     baz=170
X60A Albert Glenn T   71.32  29  P     P      18 59 57.8 +0.2
     baz=211
V56A Mocksville       71.37  26 eP     P      18 59 57.9  0.0
     comp=Z,23nm,1.4s
V56A Mocksville       71.37  26  P     P      18 59 57.7 -0.1
     baz=208
S49A Springfield      71.42  22  P     P      18 59 57.5 -0.6
     baz=204
OLIL Olney            71.43  19 eP     P      18 59 58.2  0.0
     comp=Z,13nm,0.6s
U54A Nelsons Funny    71.49  25 eP     P      18 59 59.1 +0.4
     comp=Z,81nm,1.1s
U54A Nelsons Funny    71.49  25  P     P      18 59 58.4 -0.3
     baz=207
R47A Wooly Knot Far   71.50  21  P     P      18 59 57.7 -0.8
     baz=203
MOD  Modoc Plateau    71.50 353 eP     P      18 59 59.5 +0.7
     comp=Z,23nm,1.4s
WCI  Wyandotte Cave   71.51  21 eP     P      18 59 58.4 -0.3
     comp=Z,23nm,1.5s
WCI  Wyandotte Cave   71.51  21 eP     P      18 59 58.4 -0.3
WCI                              pmax  pmax
     comp=Z,23nm,1.5s
WCI  Wyandotte Cave   71.51  21  P     P      18 59 58.1 -0.6
     baz=203
M04C Macdoel          71.55 352  P     P      18 59 59.7 +0.7
     baz=171
Q45A Warren Harvey,   71.56  19  P     P      18 59 59.0 +0.1
     baz=202
T52A Hallie           71.59  24 eP     P      18 59 58.7 -0.5
     comp=Z,44nm,1.4s
T52A Hallie           71.59  24  P     P      18 59 59.2 -0.1
     baz=206
YBH  Yreka Blue Hor   71.61 351  LR    LR     19 24 27.9
     comp=Z,392nm,19.8s,baz=160,slow=30
S50A Richmond         71.62  23  P     P      18 59 59.2 -0.1
     baz=205
T53A Wise             71.64  24  P     P      18 59 59.3 -0.3
     baz=206
BGNE Belgrade         71.70  11 eP     P      19 00 00.2 +0.4
     comp=Z,37nm,1.0s
BGNE Belgrade         71.70  11  P     P      19 00 00.3 +0.4
     baz=192
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V57A	Coltrane Farms baz=209	71.72	27	P	P	18 59 60.0	0.0
U55A	TA2, Sparta baz=208	71.77	26	P	P	19 00 00.3	-0.1
R48A	Northridge Ran baz=204	71.80	21	P	P	18 59 59.7	-0.6
W60A	Pink Hill baz=211	71.84	29	P	P	19 00 01.1	+0.4
S51A	Beattyville comp=Z,50nm,1.8s	71.86	23	*e*P	P	19 00 00.6	-0.2
S51A	Beattyville baz=206	71.86	23	P	P	19 00 01.0	+0.3
WVOR	Wild Horse Val comp=Z,21nm,1.4s	71.88	355	*e*P	P	19 00 01.8	+0.9
WVOR	Wild Horse Val	71.88	355	*e*P	P	19 00 01.8	+0.9
WVOR comp=Z,21nm,1.4s				pmax	pmax		
P43A	Skaggs, Pawnee baz=200	71.88	18	P	P	19 00 00.9	+0.1
U56A	King baz=208	71.88	26	P	P	19 00 01.5	+0.5
V58A	Windy Hill, Pi baz=210	71.90	28	P	P	19 00 01.1	0.0
Q46A	CEJHS Indians, baz=202	71.92	20	P	P	19 00 01.3	+0.2
R49A	Shelbyville baz=204	71.92	22	P	P	19 00 00.7	-0.4
CNNC	Cliffs of the baz=211	71.93	29	P	P	19 00 01.2	0.0
AHID	Auburn Hatcher comp=Z,40nm,1.8s	71.94	1	*e*P	P	19 00 01.2	-0.2
BW06	Boulder Array comp=Z,14nm,1.3s	71.97	2	*e*P	P	19 00 01.2	-0.4
BW06	Boulder Array baz=182,SNR=9.4	71.97	2	P	P	19 00 01.4	-0.2
PDAR	Pinedale Array comp=Z,4.0nm,0.9s,baz=183,slow=6.0,SNR=24	71.97	2	P	P	19 00 01.5	-0.1
K22A	Casper comp=Z,42nm,1.3s	71.99	4	*e*P	P	19 00 01.8	+0.1
K22A	Casper baz=185,SNR=8.3	71.99	4	P	P	19 00 02.1	+0.5
L04D	Klamath Falls baz=170	72.04	352	P	P	19 00 02.7	+0.8
T54A	Tazewell baz=207	72.06	25	P	P	19 00 02.0	-0.1
S52A	Salyersville baz=206	72.07	24	P	P	19 00 02.8	+0.7
Q47A	Bedord North L baz=203	72.11	21	P	P	19 00 02.1	-0.1
L02E	Cave Junction baz=169	72.15	351	P	P	19 00 03.5	+1.1
R50A	Paris baz=205	72.19	22	P	P	19 00 02.5	-0.3
V59A	Middlesex baz=210	72.23	28	P	P	19 00 03.2	+0.1
W61A	Ground Anchor baz=211	72.26	29	P	P	19 00 03.0	-0.2
P45A	Graceland, Par comp=Z,15nm,0.9s	72.27	19	*e*P	P	19 00 03.1	-0.1
P45A	Graceland, Par baz=202	72.27	19	P	P	19 00 03.0	-0.1
BLO	Bloomington comp=Z,14nm,0.5s	72.30	20	*e*P	P	19 00 03.8	+0.4
BLO	Bloomington	72.30	20	*e*P	P	19 00 03.8	+0.4
BLO comp=Z,14nm,0.5s				pmax	pmax		
Q48A	North Vernon baz=204	72.33	21	P	P	19 00 03.2	-0.3
U57A	Blanch baz=209	72.37	27	P	P	19 00 04.1	+0.3
K04D	Chiloquin, OR baz=171	72.37	352	P	P	19 00 03.6	-0.3
K05A	Summer Lake comp=Z,21nm,1.1s	72.38	353	*e*P	P	19 00 05.4	+1.4
T55A	Pulaski baz=208	72.41	26	P	P	19 00 04.3	+0.1
S53A	Williamson baz=207	72.41	24	P	P	19 00 04.3	+0.1
R51A	Hillsboro baz=206	72.46	23	P	P	19 00 04.3	-0.1
HUMO	Hull Mountain comp=Z,18nm,1.3s	72.50	351	*e*P	P	19 00 05.8	+1.2
P46A	Rosedale baz=202	72.51	20	P	P	19 00 04.4	-0.2
N40A	Mertquake, Sal baz=198	72.53	16	P	P	19 00 04.6	-0.1
N41A	Harden Midland comp=Z,39nm,1.6s	72.54	17	*e*P	P	19 00 05.2	+0.5
N41A	Harden Midland baz=199	72.54	17	P	P	19 00 04.9	+0.2
REDW	Red Top Meadow comp=Z,19nm,1.4s	72.54	1	*e*P	P	19 00 05.1	+0.1
T56A	Rocky Mt baz=209	72.62	26	P	P	19 00 05.7	+0.4
BLA	Blacksburg comp=Z,40nm,1.4s	72.63	26	*e*P	P	19 00 05.5	0.0
BLA	Blacksburg	72.63	26	*e*P	P	19 00 05.5	0.0
BLA comp=Z,40nm,1.4s				pmax	pmax		
BLA	Blacksburg baz=208	72.63	26	P	P	19 00 05.8	+0.4
SNOW	Snow King Moun comp=Z,54nm,1.8s	72.64	1	*e*P	P	19 00 05.8	+0.2
V60A	Jim Taylor Roa comp=Z,16nm,0.6s	72.64	29	*e*P	P	19 00 05.7	+0.2
V60A	Jim Taylor Roa baz=211	72.64	29	P	P	19 00 05.8	+0.3
O44A	Mansfield baz=201	72.64	19	P	P	19 00 05.3	-0.1
U58A	Oxford baz=210	72.65	28	P	P	19 00 05.5	0.0
Q49A	Aurora baz=204	72.66	22	P	P	19 00 04.9	-0.7
TPAW	Teton Pass comp=Z,46nm,1.6s	72.66	1	*e*P	P	19 00 05.7	-0.1
P47A	Martinsville baz=203	72.67	20	P	P	19 00 04.9	-0.7
K02D	Willamette Mer baz=169	72.69	351	P	P	19 00 05.4	-0.3
HLID	Hailey comp=Z,21nm,1.1s	72.77	358	*e*P	P	19 00 07.2	+0.8
HLID	Hailey baz=178,SNR=19	72.77	358	P	P	19 00 07.4	+1.1
J08A	Circle Bar Ran comp=Z,27nm,1.5s	72.78	355	*e*P	P	19 00 07.8	+1.5
LOHW	Long Hollow comp=Z,24nm,1.5s	72.79	1	*e*P	P	19 00 06.6	+0.1
HDIL	Hopedale	72.80	18	*e*P	P	19 00 06.5	+0.2
HDIL	Hopedale baz=200	72.80	18	P	P	19 00 06.3	0.0
FXWY	Fox Creek comp=Z,21nm,1.4s	72.81	1	*e*P	P	19 00 06.8	+0.2
Q50A	Georgetown baz=205	72.81	22	P	P	19 00 05.8	-0.6
R52A	Catlettsburg baz=206	72.81	24	P	P	19 00 06.5	0.0
S54A	Dingess, Beckl baz=207	72.81	25	P	P	19 00 06.7	+0.2
T57A	Hurt comp=Z,18nm,1.5s	72.89	27	*e*P	P	19 00 06.9	-0.1
T57A	Hurt baz=209	72.89	27	P	P	19 00 06.8	-0.2
P48A	Milroy baz=204	72.91	21	P	P	19 00 06.3	-0.6
MOOW	Moose Ponds comp=Z,32nm,1.9s	72.92	1	*e*P	P	19 00 06.7	-0.6
U59A	Littleton comp=Z,38nm,1.6s	72.92	28	*e*P	P	19 00 07.3	+0.2
U59A	Littleton baz=210	72.92	28	P	P	19 00 07.3	+0.2
O45A	Potomac baz=202	72.94	19	P	P	19 00 07.2	0.0
J05D	Fort Rock, OR baz=171,SNR=6.0	72.97	353	P	P	19 00 08.6	+1.2
J04D	Umpqua Nationa baz=171	73.02	352	P	P	19 00 08.5	+0.7
R53A	Hurricane comp=Z,60nm,2.0s	73.05	24	*e*P	P	19 00 08.6	+0.7
R53A	Hurricane baz=207	73.05	24	P	P	19 00 08.2	+0.3
IMW	Indian Meadow comp=Z,34nm,1.6s	73.07	1	*e*P	P	19 00 08.1	-0.1
S55A	Lewisburg baz=208	73.09	26	P	P	19 00 08.9	+0.7
SCIA	State Center comp=Z,29nm,1.3s	73.13	14	*e*P	P	19 00 08.4	+0.1
SCIA	State Center baz=197	73.13	14	P	P	19 00 08.6	+0.4
T58A	Grand View Acr baz=210	73.13	27	P	P	19 00 08.4	0.0
N43A	Stutzman Famil baz=200	73.19	18	P	P	19 00 08.8	+0.2
Q51A	Peebles comp=Z,28nm,1.3s	73.19	23	*e*P	P	19 00 08.6	-0.1
Q51A	Peebles baz=206	73.19	23	P	P	19 00 08.7	0.0
P49A	Miami Univ. Ec baz=204	73.20	22	P	P	19 00 08.0	-0.7
M41A	Milan baz=199	73.24	17	P	P	19 00 09.2	+0.3
SFIN	Lafayette comp=Z,28nm,1.4s	73.24	20	*e*P	P	19 00 08.9	0.0
SFIN	Lafayette baz=202	73.24	20	P	P	19 00 08.9	0.0
FLWY	Flagg Ranch comp=Z,14nm,0.8s	73.26	1	*e*P	P	19 00 09.8	+0.5
R54A	Victor baz=208	73.27	25	P	P	19 00 09.8	+0.6
U60A	Pendleton baz=211	73.29	29	P	P	19 00 09.5	+0.2
N44A	Piper City baz=201	73.33	19	P	P	19 00 09.7	+0.2
S56A	Natural Bridge baz=209	73.36	26	P	P	19 00 10.0	+0.2
O47A	Sheridan baz=203	73.39	20	P	P	19 00 09.3	-0.5
PINE	Pine Mountain comp=Z,22nm,1.2s	73.44	353	*e*P	P	19 00 11.4	+1.1
YPP	Pitchstone Pla comp=Z,3.7nm,1.1s	73.44	1	*e*P	P	19 00 10.5	0.0
U61A	Possum Corner baz=212	73.47	29	P	P	19 00 10.5	+0.2
Q52A	Bidwell baz=206	73.50	24	P	P	19 00 10.9	+0.3
T59A	Double "B" Far baz=211	73.55	28	P	P	19 00 11.0	+0.2
N45A	Kentland baz=202	73.56	19	P	P	19 00 11.1	+0.3
P50A	Jamestown baz=205	73.56	22	P	P	19 00 10.9	0.0
I07A	Izee comp=Z,22nm,1.3s	73.59	354	*e*P	P	19 00 12.7	+1.6
I03D	Drain, OR baz=170	73.63	351	P	P	19 00 10.6	-0.5
RSSD	Black Hills comp=Z,27nm,1.4s	73.64	6	*e*P	P	19 00 11.8	+0.3
RSSD	Black Hills	73.64	6	*e*P	P	19 00 11.8	+0.3
RSSD comp=Z,27nm,1.4s				pmax	pmax		
RSSD	Black Hills baz=187	73.64	6	P	P	19 00 11.7	+0.2
S57A	Dark Hollow, R baz=209	73.67	27	P	P	19 00 11.7	+0.2
Q53A	Leroy baz=207	73.67	24	P	P	19 00 12.1	+0.6
R55A	Marlinton comp=Z,6.3nm,1.0s	73.68	26	*e*P	P	19 00 10.8	-0.9
R55A	Marlinton baz=208	73.68	26	P	P	19 00 12.1	+0.4
P51A	Williamsport comp=Z,34nm,1.5s	73.70	23	*e*P	P	19 00 11.4	-0.2
P51A	Williamsport baz=206	73.70	23	P	P	19 00 11.8	+0.2
M43A	Waltham Townsh baz=200	73.71	18	P	P	19 00 11.5	-0.2
O48A	Farmland baz=204	73.72	21	P	P	19 00 11.3	-0.4
L40A	Anamosa comp=Z,57nm,1.4s	73.73	16	*e*P	P	19 00 12.3	+0.5
L40A	Anamosa baz=198,SNR=8.1	73.73	16	P	P	19 00 12.3	+0.5
N46A	Monticello baz=202	73.83	20	P	P	19 00 12.5	+0.1
YMR	Madison River comp=Z,20nm,0.3s	73.84	1	*e*P	P	19 00 13.5	+0.8
S58A	Poland Farm, P comp=Z,12nm,1.3s	73.90	27	*e*P	P	19 00 12.3	-0.6
S58A	Poland Farm, P baz=210	73.90	27	P	P	19 00 12.9	0.0
M44A	Midewin, Midew comp=Z,38nm,1.6s	73.91	18	*e*P	P	19 00 13.2	+0.3
M44A	Midewin, Midew baz=201	73.91	18	P	P	19 00 12.9	0.0
O49A	Covington comp=Z,6.6nm,0.9s	73.91	22	*e*P	P	19 00 12.0	-0.9
O49A	Covington baz=205	73.91	22	P	P	19 00 12.3	-0.6
YHB	Horse Butte comp=Z,41nm,1.7s	73.92	0	*e*P	P	19 00 13.8	+0.6
YHH	Holmes Hill comp=Z,17nm,1.3s	73.96	1	*e*P	P	19 00 14.2	+0.7
QLMT	Earthquake Lak	74.00	0	*e*P	P	19 00 14.5	+0.9
MCMT	McKenzie Canyo	74.00	359	*e*P	P	19 00 14.4	+0.8
I05D	Terrebonne, OR baz=171	74.02	353	P	P	19 00 14.7	+1.2
Q54A	Coxs Mills comp=Z,17nm,1.3s	74.03	25	*e*P	P	19 00 14.2	+0.5
Q54A	Coxs Mills baz=208	74.03	25	P	P	19 00 14.0	+0.4
T60A	Surry baz=211	74.03	29	P	P	19 00 13.8	+0.2
L42A	Oliver, Polo comp=Z,29nm,1.5s	74.06	17	*e*P	P	19 00 13.0	-0.7
L42A	Oliver, Polo baz=200	74.06	17	P	P	19 00 13.4	-0.2
R56A	Bull Pasture M baz=209,SNR=6.1	74.06	26	P	P	19 00 15.0	+1.1
O50A	Cable baz=205	74.11	22	P	P	19 00 13.8	-0.3
N47A	Urbana baz=203	74.12	20	P	P	19 00 13.6	-0.5
M45A	Boilermakers S baz=202	74.13	19	P	P	19 00 14.5	+0.4
P52A	Corning baz=206	74.15	23	P	P	19 00 14.4	0.0
BMO	Blue Mountains comp=Z,20nm,1.6s	74.19	356	*e*P	P	19 00 15.1	+0.6
BMO	Blue Mountains	74.19	356	*e*P	P	19 00 15.1	+0.6
BMO comp=Z,20nm,1.6s				pmax	pmax		
ECSD	EROS Data Cent comp=Z,35nm,1.8s	74.22	11	*e*P	P	19 00 14.9	+0.2
ECSD	EROS Data Cent baz=194,SNR=5.4	74.22	11	P	P	19 00 14.8	+0.2
R58B	Mineral comp=Z,15nm,1.5s	74.27	27	*e*P	P	19 00 14.6	-0.5
R58B	Mineral baz=210	74.27	27	P	P	19 00 15.3	+0.2
P53A	Whipple comp=Z,48nm,1.6s	74.28	24	*e*P	P	19 00 15.6	+0.5
P53A	Whipple baz=207	74.28	24	P	P	19 00 16.5	+1.4
N48A	Decatur baz=204	74.31	21	P	P	19 00 15.0	-0.2
R57A	Stanardsville baz=210	74.31	27	P	P	19 00 15.4	+0.2
Q55A	Buckhannon baz=208	74.32	25	P	P	19 00 15.8	+0.4
RLMT	Red Lodge comp=Z,34nm,1.8s	74.33	2	*e*P	P	19 00 15.4	-0.1
RLMT	Red Lodge baz=182	74.33	2	P	P	19 00 16.1	+0.6
S59A	Mechanicsville baz=211	74.34	28	P	P	19 00 15.1	-0.3
PLID	Pearl Lake comp=Z,19nm,1.4s	74.35	357	*e*P	P	19 00 15.7	0.0
ACSO	Alum Creek Sta comp=Z,7.5nm,0.9s	74.40	23	*e*P	P	19 00 15.6	-0.1
ACSO	Alum Creek Sta baz=206	74.40	23	P	P	19 00 16.2	+0.5
M46A	Old House Fiel comp=Z,70nm,0.1s	74.41	20	*e*P	P	19 00 15.3	-0.4
M46A	Old House Fiel baz=203	74.41	20	P	P	19 00 16.1	+0.3
O51A	Pataskala baz=206	74.45	23	P	P	19 00 16.0	0.0
R58A	Rapidan baz=210	74.51	27	P	P	19 00 16.5	+0.1
DLMT	Dillon comp=Z,20nm,1.6s	74.53	359	*e*P	P	19 00 17.1	+0.5
SUSD	Miller baz=192	74.55	10	P	P	19 00 16.8	+0.3
S60A	Water View baz=211	74.55	28	P	P	19 00 16.5	-0.2
M47A	Cromwell baz=203	74.58	20	P	P	19 00 16.7	-0.1
N49A	Columbus Grove comp=Z,38nm,1.9s	74.63	21	*e*P	P	19 00 16.8	-0.2
N49A	Columbus Grove baz=205	74.63	21	P	P	19 00 17.2	+0.2
L44A	Lake County Fo baz=201	74.68	18	P	P	19 00 17.7	+0.4
CBN	Corbin Frederi baz=211	74.68	28	P	P	19 00 17.8	+0.4
O52A	Adamsville comp=Z,78nm,1.5s	74.68	23	*e*P	P	19 00 17.7	+0.3
O52A	Adamsville baz=207,SNR=5.8	74.68	23	P	P	19 00 18.0	+0.6
Q56A	Snyder Ridge, baz=209	74.70	26	P	P	19 00 18.2	+0.7
P54A	Burton baz=208,SNR=5.3	74.71	25	P	P	19 00 18.2	+0.6
G08A	Pilot Rock comp=Z,25nm,1.4s	74.74	355	*e*P	P	19 00 18.8	+1.0
BOZ	Bozeman (W) comp=Z,17nm,1.5s	74.77	0	*e*P	P	19 00 18.0	+0.1
BOZ	Bozeman (W)	74.77	0	*e*P	P	19 00 18.0	+0.1
BOZ comp=Z,17nm,1.5s				pmax	pmax		
BOZ	Bozeman (W) baz=180,SNR=9.6	74.77	0	P	P	19 00 18.5	+0.5
JFWS	Jewell Farm comp=Z,37nm,1.8s	74.77	16	*e*P	P	19 00 17.1	-0.6
JFWS	Jewell Farm	74.77	16	*e*P	P	19 00 17.2	-0.6
JFWS comp=Z,37nm,1.8s				pmax	pmax		
JFWS	Jewell Farm baz=199	74.77	16	P	P	19 00 17.9	+0.1
R59A	King George, V baz=211	74.78	28	P	P	19 00 18.4	+0.4
N50A	Nevada baz=206	74.83	22	P	P	19 00 18.5	+0.3
G06A	Carlson Farm, comp=Z,19nm,1.4s	74.83	354	*e*P	P	19 00 19.1	+0.8
P55A	Reedsville baz=208	74.87	25	P	P	19 00 18.8	+0.3
G05D	Wamic, OR baz=171	74.91	353	P	P	19 00 20.6	+2.0
S61A	Accomac baz=212	74.94	29	P	P	19 00 19.9	+1.0
M48A	Edgerton comp=Z,24nm,1.3s	74.97	21	*e*P	P	19 00 19.2	+0.2
M48A	Edgerton baz=204	74.97	21	P	P	19 00 19.2	+0.2
L46A	Eue Claire baz=203	74.98	19	P	P	19 00 19.5	+0.4
GCMT	Greycliff	74.98	2	*e*P	P	19 00 18.7	-0.5
MCWV	Mont Chateau comp=Z,13nm,0.4s	74.99	25	*e*P	P	19 00 19.4	+0.3
MCWV	Mont Chateau baz=208	74.99	25	P	P	19 00 19.8	+0.6
Q57A	Strasburg baz=210	74.99	26	P	P	19 00 19.8	+0.6
O53A	New Philadelph baz=207	75.02	24	P	P	19 00 20.2	+0.9
K43A	Burlington comp=Z,72nm,1.9s	75.06	18	*e*P	P	19 00 19.6	+0.1
K43A	Burlington baz=201	75.06	18	P	P	19 00 19.9	+0.4
R60A	Leonardtown, M baz=211	75.06	28	P	P	19 00 20.3	+0.7
Q58A	Fox Den Farm, baz=210	75.19	27	P	P	19 00 20.9	+0.6
M49A	Liberty Center baz=205	75.19	21	P	P	19 00 20.8	+0.5
N51A	Ashland comp=Z,63nm,1.5s	75.22	23	*e*P	P	19 00 20.6	+0.2
N51A	Ashland baz=206	75.22	23	P	P	19 00 20.9	+0.5
P56A	Dayton Farm, R baz=209	75.23	26	P	P	19 00 21.6	+1.0
O54A	Avella baz=208	75.26	24	P	P	19 00 21.5	+0.8
L47A	Sherwood baz=204	75.27	20	P	P	19 00 21.0	+0.3
F10A	Beach Ranch, E comp=Z,8.7nm,1.0s	75.30	356	*e*P	P	19 00 21.2	+0.2
N52A	McGinn’s Farm, baz=207	75.36	23	P	P	19 00 21.7	+0.5
M50A	Fremont comp=Z,31nm,1.3s	75.43	22	*e*P	P	19 00 21.1	-0.6
M50A	Fremont baz=206	75.43	22	P	P	19 00 22.1	+0.4
L48A	N Adams baz=204	75.48	21	P	P	19 00 22.1	+0.2
P57A	Homestead Farm baz=210	75.53	26	P	P	19 00 23.0	+0.7
Q59A	Harwood baz=211	75.54	28	P	P	19 00 22.8	+0.4
F05D	White Salmon baz=171	75.56	353	P	P	19 00 23.8	+1.4
N53A	Lisbon comp=Z,63nm,1.8s	75.64	24	*e*P	P	19 00 23.9	+1.0
N53A	Lisbon baz=207	75.64	24	P	P	19 00 23.9	+1.0
M51A	Elyria baz=206	75.65	23	P	P	19 00 23.2	+0.3
O55A	Ligonier baz=209	75.67	25	P	P	19 00 23.4	+0.3
K46A	Dorr baz=203	75.75	20	P	P	19 00 23.4	0.0
P58A	Pank, Wackersv baz=210	75.81	27	P	P	19 00 24.6	+0.7
L49A	Milan baz=205	75.83	21	P	P	19 00 24.5	+0.5
HRY	Holter Researc	75.88	0	*e*P	P	19 00 25.2	+1.0
HAWA	Hanford comp=Z,17nm,1.4s	75.88	355	*e*P	P	19 00 25.6	+1.5
E09A	Wood Farm, Sta comp=Z,4.7nm,1.0s	75.90	356	*e*P	P	19 00 24.7	+0.5
SDMD	Soldier’s Deli comp=Z,28nm,1.8s	75.93	27	*e*P	P	19 00 25.0	+0.4
F04D	Rainier, OR baz=170	75.93	352	P	P	19 00 25.7	+1.3
I41A	Arkdale comp=Z,35nm,1.5s	75.94	16	*e*P	P	19 00 24.3	-0.2
I41A	Arkdale baz=200	75.94	16	P	P	19 00 25.4	+0.9
E08A	Dider Farm, El comp=Z,33nm,1.6s	75.94	355	*e*P	P	19 00 25.1	+0.7
K47A	Vermontville baz=204	75.97	20	P	P	19 00 25.2	+0.5
Q60A	Greensboro baz=212	75.99	28	P	P	19 00 24.5	-0.4
O56A	Blue Knob Stat comp=Z,31nm,1.5s	76.00	26	*e*P	P	19 00 25.8	+0.7
O56A	Blue Knob Stat baz=209	76.00	26	P	P	19 00 25.7	+0.7
I42A	Draeger Farm, comp=Z,32nm,1.6s	76.02	17	*e*P	P	19 00 24.1	-0.9
I42A	Draeger Farm, baz=200	76.02	17	P	P	19 00 25.5	+0.5
MSO	Missoula comp=Z,12nm,1.2s	76.02	359	*e*P	P	19 00 25.8	+0.7
MSO	Missoula baz=178	76.02	359	P	P	19 00 25.9	+0.8
LAO	LASA Array comp=Z,62nm,1.6s	76.03	4	*e*P	P	19 00 25.8	+0.7
LAO	LASA Array baz=185	76.03	4	P	P	19 00 25.8	+0.7
AAM	Ann Arbor baz=205	76.04	21	P	P	19 00 25.7	+0.6
L50A	Kingsville baz=206	76.08	22	P	P	19 00 25.6	+0.2
N54A	Moraine State comp=Z,87nm,2.0s	76.08	24	*e*P	P	19 00 26.3	+0.8
N54A	Moraine State baz=208	76.08	24	P	P	19 00 26.2	+0.8
BBSR	BB Station comp=Z,48nm,1.3s	76.09	40	*e*P	P	19 00 26.6	+0.9
Q61A	Milford baz=212	76.10	29	P	P	19 00 25.8	+0.3
M52A	Chesterland comp=Z,17nm,1.1s	76.12	23	*e*P	P	19 00 26.1	+0.4
M52A	Chesterland baz=207	76.12	23	P	P	19 00 25.8	+0.2
M53A	WI Miller and baz=208	76.26	24	P	P	19 00 27.1	+0.7
P59A	Jarrettsville baz=211	76.26	27	P	P	19 00 27.0	+0.5
J45A	Montague baz=202	76.27	19	P	P	19 00 26.9	+0.5
N55A	Marion Center comp=Z,48nm,1.8s	76.29	25	*e*P	P	19 00 27.6	+0.9

N55A	Marion Center baz=209	76.29	25	P	P	19 00 27.4	+0.8
O57A	Amberson baz=210	76.31	26	P	P	19 00 27.4	+0.6
E04D	Cinebar baz=170	76.35	352	P	P	19 00 27.4	+0.6
K48A	Perry baz=204	76.36	21	P	P	19 00 27.8	+0.9
SPMN	Marine on St. comp=Z,14nm,1.1s	76.39	14	*e*P	P	19 00 27.6	+0.5
SPMN	Marine on St. baz=197	76.39	14	P	P	19 00 27.6	+0.5
J46A	Howard City baz=203	76.40	19	P	P	19 00 27.8	+0.7
LON	Longmire comp=Z,4.1nm,0.9s	76.45	353	*e*P	P	19 00 27.6	+0.2
LON	Longmire	76.45	353	*e*P	P	19 00 27.7	+0.2
LON	comp=Z,4.0nm,0.9s			pmax	pmax		
E03A	Lebam comp=Z,51nm,1.4s	76.45	352	*e*P	P	19 00 27.8	+0.5
D08A	Wollman Farm, comp=Z,21nm,1.6s	76.49	355	*e*P	P	19 00 28.3	+0.6
O58A	Lewisberry baz=211	76.51	27	P	P	19 00 28.3	+0.4
J47A	Sunmer comp=Z,42nm,1.4s	76.54	20	*e*P	P	19 00 28.8	+0.8
J47A	Sunmer baz=204	76.54	20	P	P	19 00 28.5	+0.6
K49A	Clarkson baz=205	76.54	21	P	P	19 00 28.6	+0.6
SSPA	Standing Stone comp=Z,39nm,1.9s	76.58	26	*e*P	P	19 00 28.1	-0.1
SSPA	Standing Stone baz=210	76.58	26	P	P	19 00 28.4	+0.2
ALLY	Alegheny Colle comp=Z,82nm,1.9s	76.63	24	*e*P	P	19 00 29.0	+0.4
N56A	West Decatur baz=210	76.67	25	P	P	19 00 29.1	+0.3
PAGS	Pennsylvania G comp=Z,26nm,1.4s	76.68	27	*e*P	P	19 00 29.1	+0.3
M54A	Oil Creek Stat comp=Z,13nm,1.1s	76.68	24	*e*P	P	19 00 29.0	+0.1
M54A	Oil Creek Stat baz=208	76.68	24	P	P	19 00 29.3	+0.5
G39A	Holcombe baz=198	76.80	15	P	P	19 00 29.8	+0.4
K50A	Casco comp=Z,37nm,1.2s	76.80	22	*e*P	P	19 00 28.7	-0.7
K50A	Casco baz=206	76.80	22	P	P	19 00 29.5	0.0
N57A	Milroy baz=210	76.81	26	P	P	19 00 29.5	0.0
H43A	Windswept, Lux comp=Z,40nm,1.4s	76.85	17	*e*P	P	19 00 29.6	-0.1
H43A	Windswept, Lux baz=201	76.85	17	P	P	19 00 29.8	+0.1
L53A	Girard baz=208	76.86	24	P	P	19 00 29.9	0.0
I45A	Fountain comp=Z,92nm,0.3s	76.86	19	*e*P	P	19 00 29.5	-0.2
I45A	Fountain baz=203	76.86	19	P	P	19 00 30.0	+0.3
F37A	Hinrichs Farm, baz=197	76.90	14	P	P	19 00 30.7	+0.8
D05A	Enumclaw comp=Z,33nm,1.5s	76.91	353	*e*P	P	19 00 30.2	+0.3
J48A	Bridge Port comp=Z,12nm,0.9s	76.91	21	*e*P	P	19 00 30.7	+0.7
J48A	Bridge Port baz=205	76.91	21	P	P	19 00 32.3	+2.3
M55A	Ridgway baz=209	76.97	25	P	P	19 00 30.9	+0.4
P61A	Hammonton baz=212	76.99	29	P	P	19 00 31.4	+0.8
G40A	Rib Lake comp=Z,52nm,1.7s	77.00	15	*e*P	P	19 00 30.6	+0.1
G40A	Rib Lake baz=199,SNR=8.2	77.00	15	P	P	19 00 31.2	+0.7
I46A	Reed City baz=203	77.00	19	P	P	19 00 30.6	+0.1
K51A	Iona Station baz=207	77.12	22	P	P	19 00 31.8	+0.6
J49A	Marlette baz=205	77.16	21	P	P	19 00 31.7	+0.3
C09A	Chrisman Ranch comp=Z,37nm,1.5s	77.19	356	*e*P	P	19 00 32.3	+0.8
M56A	Emporium baz=210	77.20	25	P	P	19 00 32.4	+0.6
EGMT	Eagleton comp=Z,47nm,1.5s	77.22	1	*e*P	P	19 00 32.8	+1.0
EGMT	Eagleton baz=182,SNR=8.0	77.22	1	P	P	19 00 32.8	+1.0
O60A	Telford baz=212	77.28	28	P	P	19 00 32.0	-0.1
F38A	Pierce - Schro baz=198,SNR=7.2	77.28	14	P	P	19 00 32.8	+0.7
NLWA	Neilton Lookou comp=Z,35nm,1.4s	77.33	352	*e*P	P	19 00 33.1	+0.8
I47A	Gladwin comp=Z,18nm,0.5s	77.34	20	*e*P	P	19 00 33.0	+0.6
I47A	Gladwin baz=204	77.34	20	P	P	19 00 33.5	+1.0
D03D	Eldon baz=170,SNR=6.1	77.37	352	P	P	19 00 33.8	+1.3
K52A	Tillsonburg baz=207	77.44	23	P	P	19 00 33.5	+0.5
L54A	Sinclairville baz=208	77.44	24	P	P	19 00 33.4	+0.3
F39A	Loretta baz=198,SNR=10	77.45	15	P	P	19 00 33.5	+0.5
H45A	Beulah baz=203	77.46	19	P	P	19 00 34.0	+0.9
C06D	Leavenworth baz=172	77.52	354	P	P	19 00 34.3	+0.9
LUPA	Lehigh Univers comp=Z,3.4nm,1.8s	77.53	28	*e*P	P	19 00 34.0	+0.4
NEW	Newport comp=Z,294nm,21.1s,baz=156,slow=31	77.58	356	LR	LR	19 28 56.3	
NEW	Newport comp=Z,23nm,1.2s	77.58	356	*e*P	P	19 00 34.6	+0.9
NEW	Newport	77.58	356	*e*P	P	19 00 34.6	+0.9
NEW	comp=Z,23nm,1.2s			pmax	pmax		
NEW	Newport baz=175,SNR=10	77.58	356	P	P	19 00 34.7	+0.9
H46A	Fife Lake baz=203	77.62	19	P	P	19 00 34.4	+0.4
F40A	Park Falls baz=199,SNR=8.9	77.63	15	P	P	19 00 34.6	+0.6
N59A	State Game Lan comp=Z,13nm,0.6s	77.64	27	*e*P	P	19 00 34.1	-0.2
N59A	State Game Lan baz=212	77.64	27	P	P	19 00 35.0	+0.7
L55A	Hinsdale baz=209	77.71	25	P	P	19 00 35.6	+1.0
I48A	Sherman Twp baz=205	77.74	20	P	P	19 00 35.6	+0.9
I49A	Point Hope baz=206	77.78	21	P	P	19 00 35.3	+0.4
MDND	Maddock comp=Z,20nm,0.5s	77.80	8	*e*P	P	19 00 36.1	+1.2
MDND	Maddock baz=191	77.80	8	P	P	19 00 35.3	+0.3
N60A	Cedar Hill Far baz=212	77.87	28	P	P	19 00 35.5	+0.1
J52A	Paris baz=208	77.92	23	P	P	19 00 35.9	+0.2
DGMT	Dagmar comp=Z,57nm,1.4s	77.94	5	*e*P	P	19 00 36.8	+1.0
DGMT	Dagmar baz=187,SNR=5.2	77.94	5	P	P	19 00 36.6	+0.9
G45A	Suttons Bay comp=Z,50nm,1.4s	77.95	19	*e*P	P	19 00 37.4	+1.6
G45A	Suttons Bay baz=203	77.95	19	P	P	19 00 36.3	+0.4
F42A	Maple Grove Fa baz=201	77.96	17	P	P	19 00 36.0	+0.1
H47A	Mio baz=204	77.96	20	P	P	19 00 36.1	+0.1
E38A	The Farm, Brul comp=Z,30nm,1.6s	77.97	14	*e*P	P	19 00 36.0	+0.1
E38A	The Farm, Brul baz=198	77.97	14	P	P	19 00 36.2	+0.3
B05A	Bryant baz=171	77.98	353	P	P	19 00 36.5	+0.6
K54A	Basiliko Farm, baz=209	77.99	24	P	P	19 00 36.1	0.0
TYNO	Tyneside baz=208	78.00	23	P	P	19 00 36.4	+0.3
COWI	Conover comp=Z,48nm,0.1s	78.03	16	*e*P	P	19 00 36.8	+0.5
GLMI	Grayling baz=204	78.05	19	P	P	19 00 36.9	+0.5
BASO	Ashfield baz=206	78.22	22	P	P	19 00 38.1	+0.7
I51A	Listowel baz=207	78.24	22	P	P	19 00 38.1	+0.6
WALA	Waterton Lakes comp=Z,6.5nm,0.9s	78.25	359	*e*P	P	19 00 38.3	+0.8
M59A	Waymart baz=212	78.31	27	P	P	19 00 38.4	+0.4
H48A	Harrisville baz=205	78.32	20	P	P	19 00 38.5	+0.6
K55A	Perry baz=210	78.32	25	P	P	19 00 38.5	+0.5
STCO	Saint Catharin baz=209	78.35	24	P	P	19 00 37.8	-0.2
MMNY	Mt. Morris Dam comp=Z,43nm,1.6s	78.39	25	*e*P	P	19 00 38.6	+0.4
ACTO	Acton baz=208	78.39	23	P	P	19 00 38.3	0.0
G46A	Petoskey baz=204	78.43	19	P	P	19 00 39.2	+0.7
PAL	Palisades baz=213	78.47	28	P	P	19 00 40.4	+1.6
BWLO	Walkerton baz=207	78.48	22	P	P	19 00 39.4	+0.6
A04D	Lummi Island baz=170	78.50	353	P	P	19 00 39.8	+1.1
BRCO	Bruce Peninsul baz=207	78.50	22	P	P	19 00 39.4	+0.6
MEDO	Medina baz=209	78.56	24	P	P	19 00 39.8	+0.5
F45A	CMU Biological baz=203	78.58	18	P	P	19 00 40.4	+1.2
G47A	Hillman baz=204,SNR=7.6	78.59	20	P	P	19 00 40.5	+1.1
J54A	Appleton baz=209	78.59	24	P	P	19 00 39.6	+0.2
BINY	Binghamton comp=Z,17nm,1.3s	78.65	26	*e*P	P	19 00 40.6	+0.8
BINY	Binghamton baz=211	78.65	26	P	P	19 00 40.4	+0.6
I53A	Kortright Cn E baz=208	78.74	23	P	P	19 00 40.7	+0.5
AGMN	Agassiz Nation comp=Z,44nm,1.8s	78.78	11	*e*P	P	19 00 40.8	+0.5
AGMN	Agassiz Nation baz=194	78.78	11	P	P	19 00 41.0	+0.7
E43A	Lone Tree Farm comp=Z,48nm,1.6s	78.82	17	*e*P	P	19 00 41.1	+0.5
E43A	Lone Tree Farm baz=202,SNR=6.1	78.82	17	P	P	19 00 41.4	+0.8
J55A	Hilton comp=Z,13nm,1.1s	78.88	25	*e*P	P	19 00 41.4	+0.4
J55A	Hilton baz=210	78.88	25	P	P	19 00 41.4	+0.4
BMRO	Meriville Lake baz=207	78.88	22	P	P	19 00 41.6	+0.6
PKRO	Pickering baz=209	79.05	23	P	P	19 00 42.5	+0.7
D41A	Chassel comp=Z,47nm,1.6s	79.07	16	*e*P	P	19 00 42.7	+0.7
D41A	Chassel baz=200	79.07	16	P	P	19 00 42.5	+0.6
DRCO	St. Marys Ceme baz=209	79.10	24	P	P	19 00 42.8	+0.6
WLVO	Wesleyville baz=209	79.25	24	P	P	19 00 43.6	+0.6
EYMN	Ely comp=Z,34nm,1.7s	79.25	14	*e*P	P	19 00 43.3	+0.3
EYMN	Ely baz=198,SNR=6.3	79.25	14	P	P	19 00 43.1	+0.1
TOBO	Tobermory, Bru baz=206	79.35	21	P	P	19 00 44.0	+0.5
H52A	Wyevale baz=208	79.36	23	P	P	19 00 44.1	+0.5
SYO	Syowa Base	79.54	170⇓	*e*X	P	19 00 39.3	-5.1
E46A	Sault Ste Mari comp=Z,43nm,1.5s	79.55	19	*e*P	P	19 00 45.1	+0.5
E46A	Sault Ste Mari baz=204	79.55	19	P	P	19 00 45.5	+0.9
F48A	Evansville baz=206	79.55	20	P	P	19 00 45.3	+0.7
F49A	Sandfield baz=206	79.67	21	P	P	19 00 45.7	+0.4
SADO	Sadowa comp=Z,103nm,18.3s,baz=201,slow=34	79.73	23	LR	LR	19 33 40.1	
SADO	Sadowa comp=Z,15nm,1.3s	79.73	23	*e*P	P	19 00 46.0	+0.4
C40A	Isle Royale Na comp=Z,26nm,1.6s	79.74	15	*e*P	P	19 00 46.2	+0.6
C40A	Isle Royale Na baz=200	79.74	15	P	P	19 00 45.7	+0.2
I55A	Frankford baz=210	79.75	24	P	P	19 00 46.3	+0.6
PECO	Prince Edward baz=210	79.76	25	P	P	19 00 45.9	+0.1
KLBO	Killbear Provi baz=208	79.89	22	P	P	19 00 46.6	+0.1
E47A	Iron Bridge baz=205	79.92	20	P	P	19 00 47.3	+0.7
DELO	Deloro Mine baz=210	80.04	24	P	P	19 00 48.0	+0.7
D46A	Sault St. Mari baz=204,SNR=5.6	80.10	19	P	P	19 00 48.3	+0.7
G53A	Haliburton baz=209	80.21	23	P	P	19 00 48.9	+0.7
H55A	Tweed baz=210	80.22	24	P	P	19 00 48.5	+0.3
BUKO	Buck Lake baz=208	80.23	23	P	P	19 00 49.0	+0.7
E48A	Lockeyer baz=206,SNR=5.4	80.28	20	P	P	19 00 49.0	+0.4
LLLB	Lillooet comp=Z,23nm,1.6s	80.28	354	*e*P	P	19 00 48.9	+0.4
M65A	Busby, Falmout baz=215	80.32	30	P	P	19 00 49.3	+0.4
BANO	Bancroft baz=209	80.36	24	P	P	19 00 49.3	+0.3
F51A	Arnstein baz=208,SNR=6.1	80.49	22	P	P	19 00 50.2	+0.5
D47A	Chapleau baz=205,SNR=8.9	80.52	19	P	P	19 00 50.7	+0.8
F52A	Sundridge baz=208	80.57	22	P	P	19 00 50.8	+0.6
H56A	Elgin baz=211	80.59	25	P	P	19 00 50.7	+0.5
E50A	Wahnapitae baz=207,SNR=5.3	80.67	21	P	P	19 00 51.2	+0.6
ULM	Lac du Bonnet comp=Z,4.8nm,0.7s,baz=216,slow=4.2,SNR=7.2	80.67	10	P	P	19 00 50.4	-0.1
ULM	comp=Z,133nm,19.9s,baz=202,slow=33			LR	LR	19 32 25.5	
ULM	Lac du Bonnet comp=Z,62nm,1.9s	80.67	10	*e*P	P	19 00 50.5	-0.1
ULM	Lac du Bonnet	80.67	10	*e*P	P	19 00 50.5	-0.1
ULM	comp=Z,62nm,1.9s			pmax	pmax		
PLVO	Plevna comp=Z,37nm,1.9s	80.68	24	*e*P	P	19 00 51.2	+0.4
PLVO	Plevna baz=210	80.68	24	P	P	19 00 51.1	+0.4
HRV	Adam Dziewonsk baz=215	80.70	29	P	P	19 00 51.4	+0.5
NCB	Newcomb comp=Z,23nm,1.5s	80.83	27	*e*P	P	19 00 52.1	+0.5
G55A	Calabogie baz=210	81.00	24	P	P	19 00 52.6	+0.2
D48A	Paudash Townsh baz=206,SNR=6.1	81.01	20	P	P	19 00 53.1	+0.6
ALGO	Algonquin Park baz=209	81.14	23	P	P	19 00 53.4	+0.3
E51A	G1948 Merrick baz=208	81.16	22	P	P	19 00 53.7	+0.4
PEMO	Pembroke baz=210	81.17	24	P	P	19 00 54.0	+0.6
E52A	Mattawa baz=209	81.22	23	P	P	19 00 54.0	+0.4
D49A	Beulah Townshi baz=206,SNR=6.2	81.23	20	P	P	19 00 54.5	+0.9
LONY	Lake Ozonia comp=Z,75nm,2.0s	81.24	26	*e*P	P	19 00 54.1	+0.4
LONY	Lake Ozonia baz=212,SNR=5.3	81.24	26	P	P	19 00 54.3	+0.5
F55A	Otter Lake baz=211	81.63	24	P	P	19 00 56.3	+0.5
E53A	Dumoine, Ponti baz=210	81.64	23	P	P	19 00 56.4	+0.6
FRNY	Flat Rock comp=Z,24nm,1.7s	81.81	26	*e*P	P	19 00 57.3	+0.5
E54A	Lac Daplat, Po baz=210	81.85	23	P	P	19 00 57.2	+0.3
D52A	ZEK Kipawa Sen baz=209	81.91	22	P	P	19 00 58.0	+0.8
LBNH	Lisbon baz=214	81.97	28	P	P	19 00 58.4	+0.8
D53A	Lac Vacive, Po comp=Z,27nm,2.0s	82.23	23	*e*P	P	19 00 59.0	+0.1
D53A	Lac Vacive, Po baz=209	82.23	23	P	P	19 00 59.5	+0.6
BBB	Bella Bella comp=Z,127nm,20.8s,baz=198,slow=30	82.60	350	LR	LR	19 30 08.6	
TRQ	Mont Tremblant	82.61	25	*e*P	P	19 01 01.1	+0.1
D54A	Lac Fusel, La baz=210	82.65	23	P	P	19 01 01.3	+0.2
MOQ	Mont Orford	82.73	27	*e*P	P	19 01 02.4	+0.7
MAW	Mawson comp=Z,2.2nm,0.8s,baz=176,slow=7.5,SNR=5.5	83.09	178	P	P	19 01 02.9	-0.4
MAW	comp=Z,202nm,18.2s,baz=212,slow=34			LR	LR	19 36 24.9	
MAW	Mawson comp=Z,1.1nm,0.8s	83.09	178	*e*P	P	19 01 03.0	-0.3
MAW	Mawson	83.09	178	*e*P	P	19 01 03.0	-0.3
MAW	comp=Z,1.0nm,0.8s			pmax	pmax		
WVL	Waterville comp=Z,16nm,1.4s	83.18	29	*e*P	P	19 01 03.7	-0.1
VLDQ	Val d'Or comp=Z,34nm,1.9s	83.22	22	*e*P	P	19 01 04.0	0.0
PKME	Peaks-Kenny Pk baz=216	83.89	29	P	P	19 01 08.3	+0.8
LSQQ	Lebel-sur-Quev baz=210	84.19	22	P	P	19 01 09.4	+0.4
H02S1	DAWSON INLET T SNR=12	84.32	348	T	T	20 33 56.9	
FFC	Flin Flon comp=Z,21nm,1.3s	84.33	6	*e*P	P	19 01 08.9	-0.6
FFC	Flin Flon	84.33	6*c*	*e*P	P	19 01 10.5	+0.9
FFC	comp=Z,68nm,2.5s			pmax	pmax		
MATQ	Matagami baz=209	84.59	21	P	P	19 01 11.4	+0.4
CHGQ	Chibougamau baz=212	85.80	23	P	P	19 01 17.1	0.0
DLBC	Dease Lake comp=Z,178nm,22.0s,baz=101,slow=31	88.94	351	LR	LR	19 34 02.4	
DLBC	Dease Lake comp=Z,25nm,1.7s	88.94	351	*e*P	P	19 01 32.8	+0.7
YKA	Yellowknife Ar comp=Z,1.4nm,0.8s,baz=172,slow=4.6,SNR=11	91.72	359	P	P	19 01 44.1	-0.7
YKA	comp=Z,23nm,18.3s,baz=172,slow=33			LR	LR	19 38 42.3	
YKW3	Yellowknife Ar	91.79	359	*e*P	P	19 01 44.9	-0.2
SCHQ	Schefferville comp=Z,1.6nm,0.3s,baz=212,slow=4.8,SNR=4.1	92.48	24	P	P	19 01 48.1	-0.5
PMG	Port Moresby	94.85	256	*i* P	P	19 01 51.9	-8.6
RIDG	Independent Ri comp=Z,13nm,1.2s	96.55	346	*e*P	P	19 02 06.9	-0.2
RND	Reindeer comp=Z,7.6nm,1.3s	97.16	344	*e*P	P	19 02 08.3	-1.6
RND	Reindeer	97.16	344	*e*P	P	19 02 08.3	-1.6
RND	comp=Z,8.0nm,1.3s			pmax	pmax		
EPYK	Eagle Plains baz=158	97.47	350	P	Pdif	19 02 11.8	+0.5
ASAR	Alice Springs comp=Z,0.4nm,0.7s,baz=126,slow=6.0,SNR=4.8	97.62	237	P	P	19 02 12.7	-0.4
ILAR	Eielson Array comp=Z,0.3nm,0.8s,baz=185,slow=7.0,SNR=4.3	97.89	346	P	Pdif	19 02 13.4	+0.4
ILAR	comp=Z,147nm,20.2s,baz=124,slow=30			LR	LR	19 37 33.5	
WRH	Wood River Hil comp=Z,9.5nm,1.4s	97.89	345	*e*P	P	19 02 12.7	-0.4
CCB	Clear Creek Bu comp=Z,6.6nm,1.3s	97.98	345	*e*P	P	19 02 12.8	-0.6
POKR	Poker Plat Res baz=149	98.30	346	P	P	19 02 15.2	+0.3
H01W1	Cape Leeuwin H baz=138,slow=76,SNR=5.0	102.62	217	T	T	20 57 16.0	
H01W2	Cape Leeuwin H baz=138,slow=76,SNR=4.9	102.63	217	T	T	20 57 18.1	
H01W3	Cape Leeuwin H baz=138,slow=76,SNR=5.1	102.64	217	T	T	20 57 15.6	
BILL	Bilibino	114.08	336⇑	*e*PKIKP	PKPdf	19 07 13.5	-2.8
BILL	comp=Z,1.0nm,1.1s			pmax	pmax		
BILL	comp=Z,95nm,17.0s			MLR	MLR		
ESDC	Sonseca Array comp=Z,0.1nm,0.3s,baz=277,slow=1.9,SNR=4.4	121.21	59	PKP	PKPdf	19 07 30.6	-0.4
TIXI	Tiksi	126.88	340	*e*PKIKP	PKPdf	19 07 39.5	-1.3
TIXI	comp=Z,2.0nm,1.1s			pmax	pmax		
KLR	Kul'dur	128.64	311	*i* PKIKP	PKPdf	19 07 40.5	-4.3
YAK	Yakutsk	128.93	328	*i* PKIKP	PKPdf	19 07 42.9	-2.1
CLL	Collm	133.96	46⇓	*i*PKIKP	PKPdf	19 07 55.3	+0.5
CLL	comp=Z,26nm,2.2s			pmax	pmax		
CLL	Collm comp=Z,26nm,2.2s	133.96	46⇓	*i*PKPdf	PKPdf	19 07 55.3	+0.5
KHC	Kasperske Hory	134.54	49	*e*PKIKP	PKPdf	19 07 55.9	-0.2
KHC	Kasperske Hory	134.54	49	*e*PKP	PKPdf	19 07 55.9	-0.2
GERES	GERESS Array B comp=Z,0.8nm,0.9s,baz=345,slow=2.1,SNR=6.1	134.65	49	PKP	PKPdf	19 07 56.4	0.0
TREC	Trest	135.77	48	*e*PKIKP	PKPdf	19 07 58.9	+0.6
TREC	Trest	135.77	48	*e*PKP	PKPdf	19 07 58.9	+0.6
DPC	Dobruska-Polom	136.17	47	*e*PKIKP	PKPdf	19 08 00.0	+0.9
DPC	Dobruska-Polom	136.17	47	*e*PKP	PKPdf	19 08 00.0	+0.9
DPC				*e*x	x	19 08 13.4	
NJ2	Nanjing	136.70	287	*e*PKP	PKPdf	19 07 59.2	-1.4
MODS	Modra-Piesok	137.05	49	*e*PKIKP	PKPdf	19 08 01.5	+0.8
MODS	Modra-Piesok	137.05	49	*e*PKP	PKPdf	19 08 01.5	+0.8
FINES	FINESS Array B comp=Z,2.5nm,0.8s,baz=203,slow=1.1,SNR=4.4	137.80	29	PKP	PKPdf	19 08 02.0	+0.3
VYHS	Vyhne	138.07	49	*e*PKIKP	PKPdf	19 08 03.4	+0.8
VYHS	Vyhne	138.07	49	*e*PKP	PKPdf	19 08 03.4	+0.8
WHN	Wuhan	140.22	283	PKP	PKiKP	19 08 10.5	+0.9
KWP	Kalwaria Pacla	140.35	47	*e*PKPdf	PKPdf	19 08 07.9	+1.2
KWP	Kalwaria Pacla	140.35	47	*e*PKIKP	PKPdf	19 08 07.9	+1.2
HHC	Hu-ho-hao-te	143.12	300	*e*PKP	PKPdf	19 08 13.9	+1.8
MLR	Muntele Rosu	143.37	52	*e*PKPpre	PKPpre	19 08 08.5	
MLR	Muntele Rosu	143.37	52	*e*PKHKP	PKPpre	19 08 08.5	
AKASG	Malin Array Be comp=Z,1.3nm,0.7s,baz=284,slow=3.6,SNR=22	144.04	43	PKP	PKPab	19 08 10.8	+0.1
PRGR	Permogore	144.61	18	*e*PKIKP	PKPdf	19 08 13.6	-0.3
PRGR	comp=Z,60nm,1.5s			pmax	pmax		
KIS	Kishinev	144.96	49	*e*PKIKP	PKPdf	19 08 15.0	0.0
ULN	Ulaanbaatar	145.01	313	*e*PKPbc	PKPbc	19 08 14.6	-0.1
ULN	Ulaanbaatar	145.01	313*c*	*i*PKIKP	PKPbc	19 08 14.7	+0.1
ULN	comp=Z,84nm,2.5s			pmax	pmax		
IRK	Irkutsk	145.05	321	*e*PKIKP	PKPbc	19 08 14.3	-0.1
IRK	comp=Z,69nm,2.2s			pmax	pmax		
KARP	Karpathos	145.10	69	*e*PKPbc	PKPbc	19 08 13.1	-2.0
XAN	Xi'an	145.23	288	*e*PKPbc	PKPbc	19 08 15.9	+0.3
XAN	Xi'an	145.23	288	PKPbc	PKPbc	19 08 15.9	+0.3
XAN	Xi'an	145.23	288	*e*PKIKP	PKPbc	19 08 15.9	+0.3
TIRR	Tirgusor	145.29	54	*e*PKPbc	PKPbc	19 08 15.0	-0.4
TIRR	Tirgusor	145.29	54	*e*PKIKP	PKPbc	19 08 15.0	-0.4
SONM	Songino Array comp=Z,4.0nm,0.7s,baz=101,slow=1.5,SNR=31	145.45	313	PKPbc	PKPdf	19 08 15.9	0.0
BALB	Balikesir	145.58	62	*e*PKPdf	PKPdf	19 08 15.9	-0.3
TLY	Talaya	145.65	320	*e*PKPdf	PKPbc	19 08 16.9	+0.5
TLY	Talaya	145.65	320*c*	*i*PKIKP	PKPab	19 08 17.1	+0.4
TLY	comp=Z,86nm,1.4s			pmax	pmax		
OBN	Obninsk	145.87	32⇑	*i*PKP2	PKPab	19 08 17.5	+0.2
OBN				*e*		19 11 34.6	
OBN	comp=Z,60nm,1.7s			pmax	pmax		
OBN	comp=Z,55nm,17.0s			MLR	MLR		
GYA	Guiyang	145.97	274⇑	*i*PKPbc	PKPbc	19 08 18.8	+0.5
GYA	comp=Z,80nm,6.8s			AMB	AMB		
MOS	Moscow	145.98	31	*i* PKP2	PKPdf	19 08 16.5	+0.1
MOS	comp=Z,38nm,1.2s			pmax	pmax		

ZAK	**Zakamensk**	**146.42**	**318**	*e*PKP2	**PKPdf**	**19 08 18.0**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,13nm,1.6s						
SLVN	**Son La**	**146.81**	**264**	*e*PKPdf	**PKPbc**	**19 08 20.5**	**-0.3**
MOY	**Mondy**	**147.11**	**322**	*e*PKP2	**PKPbc**	**19 08 21.7**	**+0.9**
MOY				pmax	pmax		
	comp=Z,29nm,1.9s						
LPSR	**Galich'ya Gora**	**148.47**	**35**	*e*PKP2	**PKPbc**	**19 08 23.7**	**-0.5**
LPSR				pmax	pmax		
	comp=Z,50nm,1.1s						
CD2	**Chengdu**	**149.29**	**282**	PKPbc	**PKPdf**	**19 08 22.0**	**-0.8**
ANTO	**Ankara**	**149.32**	**61**	*e*PKPdf	**PKPbc**	**19 08 25.6**	**-1.3**
ANTO	**Ankara**	**149.32**	**61**	*e*PKIKP	**PKPbc**	**19 08 25.6**	**-1.3**
VSR	**Storozhevoye**	**149.39**	**37**	*e*PKP2	**PKPbc**	**19 08 25.6**	**-1.0**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
LZH	**Lanzhou**	**149.43**	**292**	*e*PKPbc	**PKPdf**	**19 08 18.2**	**-4.8**
LZH				pPKP	pPKPdf	19 08 28.2	+0.7
LZH				sPKP		19 08 34.0	
LZH				LR	LR		
	comp=Z,160nm,18.1s						
LZH				LR	LR		
	comp=Z,150nm,18.2s						
LZH				LR	LR		
	comp=Z,180nm,20.1s						
ILGA	**Ilgaz**	**149.81**	**58**	*e*PKPbc	**PKPbc**	**19 08 27.9**	**-0.4**
CM31	**Chiang Mai Arr**	**149.89**	**256**	*e*PKPbc	**PKPbc**	**19 08 29.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**149.89**	**256**	PKPbc	**PKPbc**	**19 08 29.1**	**+0.2**
	comp=Z,7.7nm,1.0s,baz=119,slow=1.1,SNR=36						
BR131	**Keskin Array S**	**149.98**	**61**	*e*pPKPdf	pPKPdf	19 08 27.8	-0.5
BRTR	**Keskin Array B**	**149.98**	**61**	PKPbc	**PKPbc**	**19 08 28.4**	**-0.3**
	comp=Z,5.3nm,1.0s,baz=234,slow=3.2,SNR=20						
BRTR				PKPab	**PKPab**	**19 08 34.7**	**+0.3**
	comp=Z,7.4nm,1.0s,baz=222,slow=3.3,SNR=15						
CHTO	**Chiang Mai**	**150.05**	**256**	*e*PKPbc	**PKPbc**	**19 08 29.2**	**0.0**
CHTO	**Chiang Mai**	**150.05**	**256**	PKIKP	**PKPbc**	**19 08 29.5**	**+0.3**
CSS	**Mathiatis**	**150.14**	**70**	*e*PKPbc	**PKPbc**	**19 08 28.7**	**-0.3**
ARU	**Arti**	**152.26**	**11**	*e*PKPdf	**PKPdf**	**19 08 26.2**	**-0.3**
ARU	**Arti**	**152.26**	**11**	*i* PKIKP	**PKPbc**	**19 08 32.0**	**-1.2**
ARU						19 12 14.8	
ARU				SS	SS	19 31 40.9	-1.4
ZAA0	**Zalesovo Array**	**152.75**	**338**	*e*PKPdf	**PKPdf**	**19 08 26.5**	**-0.8**
ZAA0				*e*PKPbc	**sPKPdf**	**19 08 33.9**	**+0.6**
ZAA0				*e*PKPab	**PKPab**	**19 08 45.0**	**-0.2**
ZALV	**Zalesovo Beam**	**152.75**	**338**	PKP	**PKPdf**	**19 08 25.7**	**-1.6**
	comp=Z,1.5nm,0.8s,baz=102,slow=6.8,SNR=7.8						
ZALV				PKPbc	**sPKPdf**	**19 08 33.8**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=64,slow=3.4,SNR=6.8						
ZALV				PKPab	**PKPab**	**19 08 45.0**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=35,slow=5.4,SNR=8.6						
KIV	**Kislovodsk**	**155.14**	**48**	*e*PKIKP	**PKPdf**	**19 08 28.7**	**-2.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	**Khabaz**	**155.38**	**48**	PKP	**PKPdf**	**19 08 32.1**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=283,slow=2.4,SNR=7.7						
KURK	**Kurchatov**	**157.42**	**343**	*e*PKPdf	**PKPdf**	**19 08 32.9**	**-0.9**
KURK				*e*PKPab	**PKPab**	**19 09 04.6**	**-0.6**
KURK	**Kurchatov**	**157.42**	**343**	*e*PKIKP	**PKPdf**	**19 08 32.9**	**-0.9**
WMQ	**Urumqi**	**158.88**	**318**	*e*PKP	**PKPdf**	**19 08 35.9**	**0.0**
WMQ				LR	LR		
	comp=Z,230nm,29.0s						
WMQ				LR	LR		
	comp=Z,180nm,26.1s						
WMQ				LR	LR		
	comp=Z,230nm,26.1s						
ABKAR	**Akbulak array**	**159.32**	**15**	*e*PKPdf	**PKPdf**	**19 08 36.2**	**+0.1**
ABKAR				*e*PKPab	**PKPab**	**19 09 13.9**	**+0.4**
MK31	**Makanchi Array**	**159.55**	**331**	*e*PKPdf	**PKPdf**	**19 08 35.3**	**-1.2**
MK31				*e*PKPab	**PKPab**	**19 09 14.0**	**-0.6**
MK31	**Makanchi Array**	**159.55**	**331**	*e*PKIKP	**PKPdf**	**19 08 35.3**	**-1.2**
MK31				*e*		19 09 14.0	
MKAR	**Makanchi Array**	**159.55**	**331**	PKP	**PKPdf**	**19 08 35.1**	**-1.4**
	comp=Z,0.8nm,0.9s,baz=29,slow=2.8,SNR=5.8						
MKAR				PKPab	**PKPab**	**19 09 13.3**	**-1.3**
	comp=Z,2.1nm,1.1s,baz=35,slow=4.4,SNR=7.5						
MAKZ	**Makanchi**	**159.67**	**332**	*e*PKPdf	**PKPdf**	**19 08 36.6**	**-0.1**
MAKZ				*e*PKPab	**PKPab**	**19 09 15.0**	**-0.2**
MAKZ	**Makanchi**	**159.67**	**332**	*e*PKIKP	**PKPdf**	**19 08 36.6**	**-0.1**
MAKZ				*e*		19 09 15.0	

MEX 09 18:53:09.5±0.4, 16°.63N×98°.63W, h15^{km}±6^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**0.93**	**3**	*i* P	Pb	18 53 24.1	-3.4
TLIG				*e*S	Sb	18 53 35.8	-3.9
MEIG	**Mezcala**	**1.60**	**324**	*e*P	Pn	18 53 34.5	-2.9
MEIG				*i* S	Sn	18 53 52.8	-5.1
CAIG	**El Cayaco**	**1.63**	**285**	*e*P	Pn	18 53 34.1	-3.5
CAIG				*i* S	Sn	18 53 53.4	-4.9

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*IDC **09** 19:17:58.5±2.8, 13°.26S×167°.34E, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.8/37, mbtmp4.1/4, Error ellipse: s-maj=100.5km s-min=39.0km az=129.0*

*ISCJB **09** 19:18:02.1±1.3, 13°.8S±0°.2×167°.4E±0°.2, h33^{km}, mb4.5/11, Error ellipse: s-maj=34.8km s-min=16.4km az=27.3*

*NEIC **09** 19:18:11.0±1.2, 13°.67S×167°.45E, h107^{km}±11^{km}, mb4.6/8, Error ellipse: s-maj=30.0km s-min=19.5km az=139.0*

ISC 09 19:18:02.9±1.4, 13°.8S±0°.2×167°.6E±0°.3, h35^{km}, n16, σ1^{s}.05/16, mb4.3/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KWAJ	**Kwajalein Atol**	**22.42**	**360**	*e*P	**P**	**19 22 59.6**	**+0.9**
	119nm,0.8s						
STKA	**Stephens Creek**	**29.88**	**229**	P	**P**	**19 24 09.2**	**+1.9**
	3.7nm,0.5s,baz=48,slow=9.9,SNR=12						
STKA	**Stephens Creek**	**29.88**	**229**	*e*P	**P**	**19 24 09.2**	**+1.9**
	1.9nm,1.3s						
WB2	**Warramunga Arr**	**32.39**	**254**	*e*P	**P**	**19 24 29.2**	**-0.4**
	7.6nm,1.3s						
WR1	**Warramunga Arr**	**32.40**	**254**	*e*P	**P**	**19 24 29.7**	**0.0**
WRA	**Warramunga Arr**	**32.40**	**254**	P	**P**	**19 24 29.7**	**0.0**
	1.2nm,1.0s,baz=81,slow=8.7,SNR=3.4						
AS31	**Alice Springs**	**33.34**	**248**	*e*P	**P**	**19 24 37.3**	**-0.6**
	0.9nm,0.4s						
ASAR	**Alice Springs**	**33.34**	**248**	P	**P**	**19 24 37.2**	**-0.7**
	1.3nm,0.5s,baz=75,slow=9.4,SNR=20						
BBOO	**Buckleboo**	**34.44**	**231**	*e*P	**P**	**19 24 48.2**	**+0.9**
	39nm,1.6s						
FORT	**Forrest**	**40.08**	**238**	*e*P	**P**	**19 25 35.4**	**+0.2**
	26nm,1.0s						
NWAO	**Narrogin (SRO)**	**49.54**	**238**	*e*P	**P**	**19 26 49.0**	**-1.6**
	58nm,1.4s						
QSPA	**South Pole Qui**	**76.25**	**180**	*e*P	**P**	**19 29 47.9**	**+0.1**
	5.0nm,1.4s						
MK32	**Makanchi Array**	**96.75**	**316**	*e*P	**P**	**19 31 30.1**	**+0.1**
MKAR	**Makanchi Array**	**96.75**	**316**	P	**P**	**19 31 30.1**	**+0.2**
	0.2nm,0.4s,baz=106,slow=4.7,SNR=3.4						
ARA0	**ARCESS Array S**	**119.41**	**346**	*e*PKPdf	**PKPdf**	**19 36 47.1**	**-1.1**
ARCES	**ARCESS Array B**	**119.41**	**346**	PKP	**PKPdf**	**19 36 47.1**	**-1.1**
	1.0nm,0.6s,baz=29,slow=2.8,SNR=5.0						

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*ROM **09** 19:41:20.1±0.3, 39°.47N±0°.01×14°.66E±0°.03, h395^{km}±2^{km}, ML3.1/25, Error ellipse: s-maj=2.4km s-min=1.1km az=113.0*

*ISCJB **09** 19:41:23.2±0.4, 39°.54N±0°.06×14°.59E±0°.09, h381^{km}±5^{km}, mb3.0/4, Error ellipse: s-maj=12.2km s-min=7.9km az=35.8*

*IDC **09** 19:41:27.1±1.1, 39°.73N×14°.25E, h414^{km}±24^{km}, mb2.8/5, mb1 2.7/14, mb1mx2.6/51, mbtmp3.4/14, Error ellipse: s-maj=20.1km s-min=16.6km az=31.0*

ISC 09 19:41:23.9±0.7, 39°.56N±0°.08×14°.73E±0°.07, h373^{km}±8^{km}, n62, σ1^{s}.12/70, mb3.2/4, Tyrrhenian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BULG	**Bulgheria - Ca**	**0.72**	**44**	P	**Pn**	**19 42 12.5**	**+1.2**
BULG				AML	AML		
	comp=E,62µm,0.4s						
BULG				AML	AML		
	comp=N,98µm,0.6s						
BULG				AML	AML		
	comp=E,62µm,0.4s						
BULG				AML	AML		
	comp=N,98µm,0.6s						
BULG				AML	AML		
	comp=E,62µm,0.4s						
BULG				AML	AML		
	comp=N,98µm,0.6s						
BULG				AML	AML		
	comp=E,62µm,0.4s						
BULG				AML	AML		
	comp=N,98µm,0.6s						
BULG				AML	AML		
	comp=E,62µm,0.4s						
BULG				AML	AML		
	comp=N,98µm,0.6s						
MGR	**Morigerati**	**0.86**	**47**	P	**Pn**	**19 42 12.7**	**+1.1**
CMPR	**Campora**	**0.88**	**30**	P	**Pn**	**19 42 12.6**	**+0.8**
CUC	**Castrocucco**	**0.94**	**62**	P	**Pn**	**19 42 12.9**	**+1.0**
CUC				AML	AML		
	comp=E,20µm,0.4s						
CUC				AML	AML		
	comp=N,14µm,1.1s						
CUC				AML	AML		
	comp=E,21µm,0.8s						
CUC				AML	AML		
	comp=N,14µm,1.1s						
CUC				AML	AML		
	comp=N,14µm,1.1s						
CUC				AML	AML		
	comp=E,21µm,0.8s						
CUC				AML	AML		
	comp=N,14µm,1.1s						
CUC				AML	AML		
	comp=E,21µm,0.8s						
CET2	**Cetraro**	**0.95**	**92**	*i* P	**Pn**	**19 42 12.9**	**+0.9**
CET2				S	**S**	**19 42 52.0**	**+1.3**
CET2				AML	AML		
	comp=E,51µm,0.4s						
CET2				AML	AML		
	comp=N,75µm,0.2s						
CET2				AML	AML		
	comp=E,72µm,0.5s						
CET2				AML	AML		
	comp=N,116µm,0.5s						
CET2				AML	AML		
	comp=N,116µm,0.5s						
CET2				AML	AML		
	comp=E,72µm,0.5s						
CET2				AML	AML		
	comp=N,116µm,0.5s						
CET2				AML	AML		
	comp=E,72µm,0.5s						
IFIL	**Filicudi I Eol**	**1.00**	**187**	P	**Pn**	**19 42 12.4**	**+0.1**
IFIL				AML	AML		
	comp=E,192µm,1.2s						
IFIL				AML	AML		
	comp=N,75µm,0.7s						
IFIL				AML	AML		
	comp=E,192µm,1.2s						
IFIL				AML	AML		
	comp=N,75µm,0.7s						
IFIL				AML	AML		
	comp=N,75µm,0.7s						
IFIL				AML	AML		
	comp=E,192µm,1.2s						
IFIL				AML	AML		
	comp=N,75µm,0.7s						
IFIL				AML	AML		
	comp=E,192µm,1.2s						
CDRU	**Civita di Ruta**	**1.03**	**25**	P	**Pn**	**19 42 13.4**	**+1.1**
T0721	**Laino Castello**	**1.03**	**68**	P	Pn	19 42 21.6	+9.3
T0702	**Acquaformosa (**	**1.06**	**81**	P	**Pn**	**19 42 13.2**	**+0.8**
IACL	**Alicudi**	**1.07**	**196**	P	**Pn**	**19 42 12.4**	**-0.1**
SIRI	**Monte Sirino -**	**1.07**	**54**	P	**Pn**	**19 42 13.4**	**+0.9**
SLCN	**Sala Consilina**	**1.08**	**40**	P	**Pn**	**19 42 13.7**	**+1.2**
MCEL	**Monticello**	**1.12**	**47**	P	**Pn**	**19 42 14.2**	**+1.6**
CAR1	**CAROLEI**	**1.19**	**105**	P	**Pn**	**19 42 13.4**	**+0.5**
CAR1				S	**S**	**19 42 52.0**	**-0.4**
CAR1				AML	AML		
	comp=E,44µm,0.2s						
CAR1				AML	AML		
	comp=N,35µm,1.0s						
CAR1				AML	AML		
	comp=E,90µm,1.0s						
CAR1				AML	AML		
	comp=N,44µm,0.5s						
CAR1				AML	AML		
	comp=E,90µm,1.0s						
CAR1				AML	AML		
	comp=N,44µm,0.5s						
CAR1				AML	AML		
	comp=E,90µm,1.0s						
CAR1				AML	AML		
	comp=N,44µm,0.5s						
VPL	**Vulcano Piano**	**1.20**	**170**	P	**Pn**	**19 42 13.7**	**+0.6**
VPL				AML	AML		
	comp=E,410µm,1.0s						
VPL				AML	AML		
	comp=N,430µm,0.9s						
VPL				AML	AML		
	comp=E,410µm,1.0s						
VPL				AML	AML		
	comp=N,430µm,0.9s						
VPL				AML	AML		
	comp=E,410µm,1.0s						
VPL				AML	AML		
	comp=N,430µm,0.9s						
VPL				AML	AML		
	comp=E,410µm,1.0s						
VPL				AML	AML		
	comp=N,430µm,0.9s						
MCRV	**Calabrutti - M**	**1.27**	**15**	P	**Pn**	**19 42 14.2**	**+0.9**
SALB	**San Lorenzo Be**	**1.28**	**75**	*e*P	**Pn**	**19 42 14.8**	**+1.4**
SALB				AML	AML		
	comp=E,32µm,0.5s						
SALB				AML	AML		
	comp=N,21µm,1.5s						
SALB				AML	AML		
	comp=E,33µm,0.3s						
SALB				AML	AML		
	comp=N,27µm,1.0s						
SALB				AML	AML		
	comp=N,27µm,1.0s						
SALB				AML	AML		
	comp=E,33µm,0.3s						
SALB				AML	AML		
	comp=N,27µm,1.0s						
SALB				AML	AML		
	comp=E,33µm,0.3s						
JOPP	**Joppolo**	**1.31**	**136**	P	**Pn**	**19 42 13.9**	**+0.4**
JOPP				S	**S**	**19 42 53.1**	**-0.4**
MRLC	**Muro Lucano**	**1.33**	**26**	P	**Pn**	**19 42 14.6**	**+1.1**
MILZ	**Milazzo**	**1.34**	**163**	P	**Pn**	**19 42 13.8**	**+0.1**
MILZ				AML	AML		
	comp=E,87µm,0.3s						
MILZ				AML	AML		
	comp=N,72µm,0.5s						
MILZ				AML	AML		
	comp=E,87µm,0.3s						
MILZ				AML	AML		
	comp=N,72µm,0.5s						
MILZ				AML	AML		
	comp=N,72µm,0.5s						
MILZ				AML	AML		
	comp=E,87µm,0.3s						
MILZ				AML	AML		
	comp=N,72µm,0.5s						
MILZ				AML	AML		
	comp=E,87µm,0.3s						
MSRU	**Castanea**	**1.43**	**155**	*i* P	**Pn**	**19 42 14.0**	**-0.2**
MSRU				S	**S**	**19 42 54.8**	**+0.3**
MSRU				AML	AML		
	comp=E,105µm,1.4s						
MSRU				AML	AML		
	comp=N,108µm,0.3s						
MSRU				AML	AML		
	comp=E,105µm,1.4s						
MSRU				AML	AML		
	comp=N,108µm,0.3s						
MSRU				AML	AML		
	comp=E,105µm,1.4s						
MSRU				AML	AML		
	comp=N,108µm,0.3s						
MSRU				AML	AML		
	comp=E,105µm,1.4s						
MSRU				AML	AML		
	comp=N,108µm,0.3s						
MCPD	**Capo d'Orlando**	**1.44**	**180**	P	**Pn**	**19 42 14.3**	**+0.2**
MCPD				AML	AML		
	comp=E,47µm,0.5s						
MCPD				AML	AML		
	comp=N,66µm,0.4s						
MCPD				AML	AML		
	comp=E,47µm,0.5s						
MCPD				AML	AML		
	comp=N,66µm,0.4s						
MCPD				AML	AML		
	comp=N,66µm,0.4s						
MCPD				AML	AML		
	comp=E,47µm,0.5s						
MCPD				AML	AML		
	comp=N,66µm,0.4s						
MCPD				AML	AML		
	comp=E,47µm,0.5s						
MPNC	**Port Mandanici**	**1.49**	**161**	P	**Pn**	**19 42 14.9**	**+0.4**
GRI	**Girifalco**	**1.50**	**119**	P	**Pn**	**19 42 15.4**	**+0.9**
MUCR	**Ucria**	**1.52**	**176**	*i* P	**Pn**	**19 42 14.6**	**-0.1**
MUCR				AML	AML		
	comp=E,33µm,0.5s						
MUCR				AML	AML		
	comp=N,45µm,0.6s						
MUCR				AML	AML		
	comp=E,33µm,0.5s						
MUCR				AML	AML		
	comp=N,45µm,0.6s						
MUCR				AML	AML		
	comp=N,45µm,0.6s						
MUCR				AML	AML		
	comp=E,33µm,0.5s						
MUCR				AML	AML		
	comp=N,45µm,0.6s						
MUCR				AML	AML		
	comp=E,33µm,0.5s						
MSFR	**San Fratello**	**1.53**	**184**	P	**Pn**	**19 42 14.7**	**-0.1**
MSFR				AML	AML		
	comp=E,16µm,1.6s						
MSFR				AML	AML		
	comp=N,20µm,1.3s						
MSFR				AML	AML		
	comp=E,16µm,1.6s						
MSFR				AML	AML		
	comp=N,20µm,1.3s						
MSFR				AML	AML		
	comp=E,16µm,1.6s						
MSFR				AML	AML		
	comp=N,20µm,1.3s						
MSFR				AML	AML		
	comp=E,16µm,1.6s						
MSFR				AML	AML		
	comp=N,20µm,1.3s						
MSCL	**Scilla**	**1.56**	**148**	P	**Pn**	**19 42 14.9**	**0.0**
MSCL				S	**S**	**19 42 55.8**	**-0.1**
MSCL				AML	AML		
	comp=E,121µm,1.1s						
MSCL				AML	AML		
	comp=N,142µm,0.4s						
MSCL				AML	AML		
	comp=E,126µm,1.0s						
MSCL				AML	AML		
	comp=N,142µm,0.4s						
MSCL				AML	AML		
	comp=E,126µm,1.0s						
MSCL				AML	AML		
	comp=N,142µm,0.4s						
MSCL				AML	AML		
	comp=E,126µm,1.0s						
MSCL				AML	AML		
	comp=N,142µm,0.4s						
NOV	**Novara**	**1.56**	**168**	P	**Pn**	**19 42 15.4**	**+0.5**
NOV				AML	AML		
	comp=E,72µm,1.0s						
NOV				AML	AML		
	comp=N,68µm,1.2s						
NOV				AML	AML		
	comp=E,72µm,1.0s						
NOV				AML	AML		
	comp=N,68µm,1.2s						
NOV				AML	AML		
	comp=E,72µm,1.0s						
NOV				AML	AML		
	comp=N,68µm,1.2s						
NOV				AML	AML		
	comp=E,72µm,1.0s						
NOV				AML	AML		
	comp=N,68µm,1.2s						
SERS	**Sersale**	**1.61**	**108**	P	**Pn**	**19 42 16.1**	**+1.0**
SERS				S	**S**	**19 42 56.1**	**-0.3**
SERS				AML	AML		
	comp=E,28µm,0.7s						
SERS				AML	AML		
	comp=N,31µm,0.5s						
SERS				AML	AML		
	comp=E,28µm,0.7s						
SERS				AML	AML		
	comp=N,36µm,0.5s						
SERS				AML	AML		
	comp=N,36µm,0.5s						
SERS				AML	AML		
	comp=E,28µm,0.7s						
SERS				AML	AML		
	comp=N,36µm,0.5s						
SERS				AML	AML		
	comp=E,28µm,0.7s						
PIPA	**Pietrapaola**	**1.61**	**92**	P	**Pn**	**19 42 16.6**	**+1.6**
PIPA				AML	AML		
	comp=E,61µm,0.3s						
PIPA				AML	AML		
	comp=N,58µm,0.4s						
PIPA				AML	AML		
	comp=E,82µm,0.3s						
PIPA				AML	AML		
	comp=N,65µm,0.3s						
PIPA				AML	AML		
	comp=E,82µm,0.3s						
PIPA				AML	AML		
	comp=N,65µm,0.3s						
PIPA				AML	AML		
	comp=E,82µm,0.3s						
PIPA				AML	AML		
	comp=N,65µm,0.3s						
TIP	**Timpagrande**	**1.62**	**103**	P	**Pn**	**19 42 16.4**	**+1.3**
TIP				S	**S**	**19 42 55.9**	**-0.4**
TIP				AML	AML		
	comp=E,25µm,1.1s						
TIP				AML	AML		
	comp=N,19µm,0.6s						
TIP				AML	AML		
	comp=E,33µm,0.7s						
TIP				AML	AML		
	comp=N,25µm,1.6s						
TIP				AML	AML		
	comp=E,33µm,0.7s						
TIP				AML	AML		
	comp=N,25µm,1.6s						
TIP				AML	AML		
	comp=E,33µm,0.7s						
TIP				AML	AML		
	comp=N,25µm,1.6s						
GMB	**Gambarie**	**1.63**	**148**	P	**Pn**	**19 42 15.9**	**+0.6**
AIO	**Antillo**	**1.64**	**166**	P	**Pn**	**19 42 15.8**	**+0.4**
AIO				AML	AML		
	comp=E,58µm,0.2s						
AIO				AML	AML		
	comp=N,81µm,0.4s						
AIO				AML	AML		
	comp=E,58µm,0.2s						
AIO				AML	AML		
	comp=N,81µm,0.4s						
AIO				AML	AML		
	comp=E,58µm,0.2s						
AIO				AML	AML		
	comp=N,81µm,0.4s						
AIO				AML	AML		
	comp=E,58µm,0.2s						
AIO				AML	AML		
	comp=N,81µm,0.4s						
MTTG	**Motta San Giov**	**1.73**	**154**	P	**Pn**	**19 42 16.2**	**+0.4**
PLAC	**Placanica**	**1.73**	**129**	P	**Pn**	**19 42 16.2**	**+0.4**
PLAC				S	**S**	**19 42 57.1**	**-0.4**
PLAC				AML	AML		
	comp=E,53µm,0.8s						
PLAC				AML	AML		
	comp=N,39µm,0.7s						
PLAC				AML	AML		
	comp=E,53µm,1.5s						
PLAC				AML	AML		
	comp=N,56µm,0.8s						
PLAC				AML	AML		
	comp=N,56µm,0.8s						
PLAC				AML	AML		
	comp=E,53µm,1.5s						

PLAC				AML	AML		
	comp=N,56μm,0.8s						
PLAC				AML	AML		
	comp=E,53μm,1.5s						
SOLUN	Solunto	1.74	213	P	Pn	19 42 15.1	-0.7
MPG	Monte Pellegri	1.76	218	P	Pn	19 42 15.8	-0.2
PETRA	Petralia Sopra	1.79	196	P	Pn	19 42 16.3	0.0
PETRA				AML	AML		
	comp=E,88μm,0.7s						
PETRA				AML	AML		
	comp=N,106μm,1.6s						
PETRA				AML	AML		
	comp=E,88μm,0.7s						
PETRA				AML	AML		
	comp=N,106μm,1.6s						
PETRA				AML	AML		
	comp=N,106μm,1.6s						
PETRA				AML	AML		
	comp=E,88μm,0.7s						
PETRA				AML	AML		
	comp=N,106μm,1.6s						
PETRA				AML	AML		
	comp=E,88μm,0.7s						
SOI	Samo	1.81	145	P	Pn	19 42 16.4	+0.1
SOI				AML	AML		
	comp=E,40μm,0.5s						
SOI				AML	AML		
	comp=N,54μm,0.7s						
GALF	Gagliano Caste	1.85	184	P	Pn	19 42 17.6	+1.0
GALF				AML	AML		
	comp=E,29μm,0.6s						
GALF				AML	AML		
	comp=N,34μm,0.7s						
GALF				AML	AML		
	comp=E,29μm,0.6s						
GALF				AML	AML		
	comp=N,34μm,0.7s						
GALF				AML	AML		
	comp=E,29μm,0.6s						
GALF				AML	AML		
	comp=N,34μm,0.7s						
GALF				AML	AML		
	comp=E,29μm,0.6s						
GALF				AML	AML		
	comp=N,34μm,0.7s						
ESML	S. M. di Licod	1.94	177	P	Pn	19 42 17.8	+0.7
ALJA	Alia	1.96	203	P	Pn	19 42 17.4	+0.1
ALJA				S	S	19 43 00.0	-0.2
ALJA				AML	AML		
	comp=E,80μm,0.3s						
ALJA				AML	AML		
	comp=N,138μm,0.5s						
ALJA				AML	AML		
	comp=E,111μm,0.5s						
ALJA				AML	AML		
	comp=N,138μm,0.5s						
ALJA				AML	AML		
	comp=N,138μm,0.5s						
ALJA				AML	AML		
	comp=E,111μm,0.5s						
ALJA				AML	AML		
	comp=N,138μm,0.5s						
ALJA				AML	AML		
	comp=E,111μm,0.5s						
CORL	Corleone	2.00	214	P	Pn	19 42 17.1	-0.5
CORL				AML	AML		
	comp=E,57μm,1.0s						
CORL				AML	AML		
	comp=N,76μm,1.0s						
CORL				AML	AML		
	comp=E,57μm,1.0s						
CORL				AML	AML		
	comp=N,76μm,1.0s						
CORL				AML	AML		
	comp=N,76μm,1.0s						
CORL				AML	AML		
	comp=E,57μm,1.0s						
CORL				AML	AML		
	comp=N,76μm,1.0s						
CORL				AML	AML		
	comp=E,57μm,1.0s						
RAFF	Raffo Rosso	2.35	187	P	Pn	19 42 19.7	-0.3
RAFF				S	S	19 43 05.0	0.0
RAFF				AML	AML		
	comp=E,56μm,0.2s						
RAFF				AML	AML		
	comp=N,79μm,0.2s						
RAFF				AML	AML		
	comp=E,56μm,0.2s						
RAFF				AML	AML		
	comp=N,79μm,0.2s						
RAFF				AML	AML		
	comp=E,56μm,0.2s						
RAFF				AML	AML		
	comp=N,79μm,0.2s						
HVZN	Vizzini	2.38	180	P	Pn	19 42 20.5	+0.3
HBSP	Bosco Santo Pi	2.44	185	P	Pn	19 42 20.1	-0.5
MEU	Monte Lauro	2.46	176	P	Pn	19 42 20.2	-0.7
CLTA	Licata	2.47	194	P	Pn	19 42 20.7	-0.1
CLTA				AML	AML		
	comp=E,179μm,0.7s						
CLTA				AML	AML		
	comp=N,266μm,0.7s						
CLTA				AML	AML		
	comp=N,266μm,0.7s						
CLTA				AML	AML		
	comp=E,179μm,0.7s						
CLTA				AML	AML		
	comp=N,266μm,0.7s						
CLTA				AML	AML		
	comp=E,179μm,0.7s						
KEST	Kesra	5.73	230	P	Pn	19 42 54.2	+1.4
	comp=E,0.2nm,0.3s,baz=53,slow=5.1,SNR=3.1						
KEST				S	S	19 44 09.8	+5.0
	comp=E,0.1nm,0.3s,baz=43,slow=19,SNR=2.1						
DAVOX	Davos/Dischmat	8.04	335	P	Pn	19 43 18.3	-0.6
	comp=E,0.4nm,0.3s,baz=152,slow=15,SNR=3.8						
GERES	GERESS Array B	9.31	356	P	P	19 43 36.7	+2.1
	comp=E,0.2nm,0.3s,baz=180,slow=9.4,SNR=3.0						
MLR	Muntele Rosu	10.18	51	P	P	19 43 48.9	+4.6
	comp=E,0.6nm,0.3s,baz=179,slow=3.9,SNR=13						
ESDC	Sonseca Array	14.41	276	P	P	19 44 29.9	-1.2
	comp=E,0.2nm,0.3s,baz=73,slow=11,SNR=5.7						
BRTR	Keskin Array B	14.57	83	P	Pn	19 44 38.1	+2.8
	comp=E,0.1nm,0.3s,baz=265,slow=8.3,SNR=5.3						
AKASG	Malin Array Be	15.09	38	P	Pn	19 44 40.2	-0.7
	comp=E,0.9nm,0.3s,baz=234,slow=9.1,SNR=4.9						
MMAI	Mount Meron Ar	17.88	105	P	Pn	19 45 13.5	+0.5
	comp=E,0.4nm,0.3s,baz=297,slow=14,SNR=2.9						
EKA	Eskdalemuir Ar	19.79	329	P	P	19 45 24.4	-3.5
	baz=138,slow=11,SNR=5.7						
HFS	Hagfors	20.61	359	P	P	19 45 34.0	-1.4
	comp=E,0.9nm,0.4s,baz=184,slow=12,SNR=10.0						
NOA	NORSAR Array B	21.61	355	P	P	19 45 43.8	-0.8
	comp=E,1.0nm,0.9s,baz=170,slow=9.9,SNR=2.6						
FINES	FINESS Array B	23.00	14	P	P	19 45 57.1	+0.1
	comp=E,0.9nm,0.7s,baz=210,slow=11,SNR=5.2						
ARCES	ARCESS Array B	30.58	7	P	P	19 47 03.4	-0.8
	comp=E,0.9nm,0.7s,baz=200,slow=10,SNR=3.4						
MKAR	Makanchi Array	48.42	58	P	P	19 49 31.7	+1.9
	comp=E,0.2nm,0.5s,baz=294,slow=7.3,SNR=5.7						

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*IDC **09** 19:56:34.7±0.6, 3°.48S×131°.41E, h0^{km}, mb4.3/13, mb1 4.4/16, mb1mx4.2/30, mbtmp4.3/16, ML4.0/3, MS3.4/8, Ms1 3.4/8, ms1mx3.1/28, Error ellipse: s-maj=25.8km s-min=12.4km az=79.0*

*ISCJB **09** 19:56:35.9±0.2, 3°.56S±0°.03×131°.33E±0°.04, h24^{km}, mb4.6/61, MS3.6/6, Error ellipse: s-maj=5.3km s-min=4.3km az=166.3*

*DJA **09** 19:56:38.6±0.5, 4°S±3°×13°1E±°, h17^{km}±6^{km}, M4.3/11, mB4.9/6, mb4.5/11, MLv4.3/10, Mw(mB)4.2/6*

*NEIC **09** 19:56:39.2±2.1, 3°.58S×131°.31E, h38^{km}±6^{km}, mb4.6/50, Error ellipse: s-maj=8.4km s-min=7.9km az=107.0*

ISC 09 19:56:37.4±0.3**, 3°.63S**±0°.04×**131°.39E**±0°.04**, h24**^{km}**, n108, σ2ˢ.05**/112**, mb4.6**/61**, MS3.5**/6**, 1C, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.11	51	*e*Pn	Pb	19 56 58.4	+0.5
FAKI	Fak Fak	1.11	51	P	Pb	19 56 58.3	+0.3
FAKI				S	Sb	19 57 14.7	+2.7
BNDI	Bandanaira	1.73	239	P	Pb	19 57 08.7	+0.2
BNDI				Sg	Sb	19 57 35.0	+5.2
MSAI	Masohi	2.47	276	P	Pn	19 57 17.3	+1.0
SIJI	Sorong	2.74	357	Pn	Pn	19 57 18.1	-1.9
	9.8nm,0.3s,baz=38,slow=21,SNR=100						
SIJI				Sn	Sn	19 57 49.2	-3.1
	48nm,0.3s,baz=172,slow=16,SNR=15						
SIJI				LR	LR	19 58 34.5	
	comp=Z,433nm,18.5s,baz=56,slow=46						
AAI	Ambon	3.19	269	P	Pn	19 57 27.1	+1.0
NLAI	Namlea	4.30	275	P	Pn	19 57 43.0	+1.6
SAUI	Saumlaki	4.33	181	*e*Pn	Pn	19 57 42.2	+0.4
LBMI	Labuha	4.89	307	P	Pn	19 57 48.2	-1.3
SRPI	Serui, Papua	5.15	70	P	Pb	19 58 05.6	-1.3
BAKI	Biak	5.30	63	P	Pn	19 57 57.3	+2.2
SANI	Sanana	5.62	286	P	Pn	19 57 56.7	-2.8
TNTI	Ternate	5.94	317	*e*Pn	Pn	19 58 03.4	-0.6
LUWI	Luwuk	8.98	286	*e*Pn	Pn	19 58 44.8	-1.0
LUWI				*e*Sn	Sn	20 00 20.8	-5.5
LUWI	Luwuk	8.98	286	P	Pn	19 58 57.4	+12
MTN	Manton Dam	9.16	182	*e*Pn	Pn	19 58 48.9	+0.6
MTN				*e*Sn	Sn	20 00 27.4	-3.2
SOEI	Soe	9.33	229	*e*Pn	Pn	19 58 51.8	+1.1
SOEI	Soe	9.33	229	P	Pn	19 58 53.5	+2.8
BATI	Baumata	10.08	229	Pn	Pn	19 59 04.0	+3.1
	5.9nm,0.3s,baz=339,slow=1.3,SNR=14						
BATI				LR	LR	20 04 05.5	
	comp=Z,279nm,18.2s,baz=82,slow=44						
BATI	Baumata	10.08	229	P	Pn	19 59 03.9	+3.1
APSI	Ampana	10.10	285	P	Pn	19 59 00.7	-0.4
MMRI	Maumere	10.37	241	*e*Pn	Pn	19 59 07.3	+2.5
KAPI	Kappang	11.69	263	Pn	Pn	19 59 24.8	+2.0
	0.6nm,0.3s,baz=204,slow=13,SNR=3.4						
KAPI				LR	LR	20 03 35.6	
	comp=Z,80nm,20.8s,baz=299,slow=36						
KAPI	Kappang	11.69	263	*e*Pn	Pn	19 59 23.8	+1.0
COEN	Coen	15.51	132	*e*Pn	Pn	20 00 15.3	+0.4
	37nm,1.3s						
WR1	Warramunga Arr	16.47	170	*e*Pn	Pn	20 00 23.5	-3.6
WRA	Warramunga Arr	16.47	170	Pn	Pn	20 00 23.5	-3.6
	0.6nm,0.3s,baz=344,slow=14,SNR=14						
WRA				Sn	Sn	20 03 21.6	-7.8
	0.6nm,0.3s,baz=357,slow=24,SNR=6.5						
WB2	Warramunga Arr	16.47	170	*e*Pn	Pn	20 00 22.9	-4.2
	15nm,0.8s						
JAGI	Jajag, Banyuwa	17.80	254	*e*P	P	20 00 43.8	-0.6
	206nm,2.0s						
KKM	Kota Kinabalu	17.94	302	*e*Pn	Pn	20 00 43.6	-2.0
	53nm,1.2s						
AS31	Alice Springs	20.07	173	*e*P	Pn	20 01 11.0	-0.2
	7.0nm,0.4s						
ASAR	Alice Springs	20.07	173	P	Pn	20 01 11.2	0.0
	8.6nm,0.5s,baz=354,slow=12,SNR=137						
ASAR				S	S	20 04 46.3	-7.6
	1.5nm,0.8s,baz=355,slow=29,SNR=5.2						
SBUM	Sibu	20.09	287	*e*P	P	20 01 09.4	-0.1
	11nm,1.3s						
PSA00	Pilbara Seismi	21.07	211	*e*P	P	20 01 19.5	-0.6
	12nm,0.5s						
KSM	Kuching	21.67	283	*e*P	P	20 01 26.6	0.0
	62nm,1.5s						
GUMO	Guam	21.71	38	LR	LR	20 09 29.7	
	comp=Z,50nm,20.0s,baz=200,slow=36						
CTA	Charters Tower	21.86	140	P	P	20 01 31.0	+2.4
	5.9nm,0.6s,baz=311,slow=12,SNR=9.5						
CTAO	Charters Tower	21.86	140	*e*P	P	20 01 29.5	+0.9
	35nm,1.4s						
CISI	Cisompet, Garu	23.78	260	*e*P	P	20 01 47.9	-0.7
	83nm,1.5s						
LEM	Lembang	23.88	261	LR	LR	20 12 50.6	
	comp=Z,127nm,18.7s,baz=146,slow=41						
GIRL	Giralia	25.17	220	*e*P	P	20 02 00.5	-0.7
	138nm,1.3s						
FORT	Forrest	27.19	186	*e*P	P	20 02 19.9	+0.5
	151nm,1.9s						
MORW	Morawa	29.20	208	*e*P	P	20 02 36.7	-0.7
	62nm,1.8s						
STKA	Stephens Creek	29.70	162	P	P	20 02 43.6	+2.0
	3.4nm,0.7s,baz=338,slow=8.9,SNR=7.9						
STKA				LR	LR	20 16 13.1	
	comp=Z,124nm,19.5s,baz=28,slow=40						
STKA	Stephens Creek	29.70	162	*e*P	P	20 02 44.0	+2.3
	3.4nm,1.5s						
YHNB	Yeheng	29.76	341	*e*P	P	20 02 40.0	-2.4
	12nm,1.1s						
KRJI	Kerinci	29.93	272	P	P	20 02 46.0	+1.9
	40nm,1.1s						
PDSI	Padang	31.02	274	P	P	20 02 53.6	0.0
	11nm,1.4s						
IPM	Ipoh	31.39	285	*e*P	P	20 02 56.7	-0.2
	14nm,1.3s						
KULM	Kulim	31.96	286	*e*P	P	20 03 01.8	0.0
	28nm,1.6s						
NWAO	Narrogin (SRO)	32.02	203	P	P	20 03 02.9	+0.7
	10nm,1.0s,baz=39,slow=7.7,SNR=6.2						
NWAO	Narrogin (SRO)	32.02	203	*e*P	P	20 03 02.3	+0.2
	76nm,1.5s						
GSI	Gunungsitoli	34.15	278	*e*P	P	20 03 20.2	-0.8
	22nm,1.2s						
CAN	Canberra	35.51	155	*e*P	P	20 03 35.0	+2.5
	69nm,2.0s						
TOO	Toolangi	36.17	161	*e*P	P	20 03 41.4	+3.2
	8.2nm,0.9s						
NJ2	Nanjing	37.43	342	*e*P	P	20 03 51.4	+2.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WHN	Wuhan	37.68	336	P	P	20 03 52.7	+1.7
PHRA	Phrae	37.76	307	P	P	20 03 54.4	+2.6
	comp=Z,1.2nm,1.0s						
CM31	Chiang Mai Arr	38.77	306	*e*P	P	20 03 59.8	-0.6
	comp=Z,7.1nm,1.0s						
CMAR	Chiang Mai Arr	38.77	306	P	P	20 04 00.7	+0.2
	comp=Z,2.7nm,0.9s,baz=134,slow=7.0,SNR=15						
CMMT	Chiang Mai	38.95	306	P	P	20 04 02.3	+0.4
	comp=Z,3.9nm,1.0s						
CHTO	Chiang Mai	38.95	306	*e*P	P	20 04 01.7	-0.3
	comp=Z,7.3nm,1.0s						
PINNC	Pines Island,	39.69	122	*e*P	P	20 04 08.8	+0.8
	comp=Z,97nm,1.2s						
KMI	Kunming	39.88	317	P	P	20 04 09.8	0.0
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSRS	Korea Array	41.00	356	LR	LR	20 21 54.9	
	comp=Z,33nm,18.9s,baz=226,slow=37						
XAN	Xi'an	43.04	332	*e*P	P	20 04 33.9	-1.6
	comp=Z,11nm,1.3s						
BJT	Baijiatuau	45.63	344	*e*P	P	20 04 55.0	-1.0
	comp=Z,6.4nm,0.8s						
LZH	Lanzhou	47.16	329	*e*P	P	20 05 11.5	+3.2
LZH				pP	sP	20 05 21.2	+2.9
LZH				sP	pP	20 05 26.2	+11
LZH				PP	PP	20 07 04.8	+5.3
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,78nm,4.9s						
USA0B	Ussuriysk Arra	47.61	1	*e*P	P	20 05 11.1	-0.3
	comp=Z,18nm,1.6s						
USRK	Ussuriysk Ar.	47.61	1	P	P	20 05 11.7	+0.2
	comp=Z,1.3nm,0.7s,baz=149,slow=8.6,SNR=4.7						
HHC	Hu-ho-hao-te	47.83	340	P	P	20 05 16.7	+3.3
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,93nm,6.7s						
SHL	Shillong	48.05	309	*e*P	P	20 05 14.0	-1.4
	comp=Z,11nm,1.0s						
LSA	Lhasa	50.81	314	*e*P	P	20 05 37.0	+0.2
	comp=Z,3.6nm,0.8s						
GTA	Gaotai	51.76	329	*e*P	P	20 05 43.1	-0.2
GTA				pP	pP	20 05 48.0	-2.5
GTA				sP	sP	20 05 51.5	-1.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BKZ	Black Stump Fm	54.05	137	*e*P	P	20 06 01.5	+1.4
	comp=Z,47nm,1.5s						
SONA0	Songino Array	55.73	340	*e*P	P	20 06 12.6	+0.3
SONA0				*e*PcP	PcP	20 07 12.2	+0.8
SONM	Songino Array	55.73	340	P	P	20 06 12.6	+0.3
	comp=Z,2.6nm,1.1s,baz=166,slow=6.1,SNR=11						
SONM				PcP	PcP	20 07 12.2	+0.8
	comp=Z,0.4nm,0.5s,baz=132,slow=2.1,SNR=2.3						
MIDW	Midway	58.54	54	*e*P	P	20 06 30.9	-1.4
	comp=Z,50nm,0.9s						
WMQ	Urumqi	61.38	325	*e*P	P	20 06 50.9	-0.8
WMQ				pP	sP	20 07 04.7	+3.0
WMQ				sP	pP	20 07 09.2	+10
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,70nm,3.7s						
WMQ				LR	LR		
	comp=N,540nm,25.5s						
WMQ				LR	LR		
	comp=E,340nm,28.9s						
WMQ				LR	LR		
	comp=Z,230nm,21.9s						
MK31	Makanchi Array	66.21	325	*e*P	P	20 07 23.3	-0.1
	comp=Z,2.9nm,1.0s						
MKAR	Makanchi Array	66.21	325	P	P	20 07 23.6	+0.1
	comp=Z,2.9nm,0.7s,baz=118,slow=8.0,SNR=30						
MAKZ	Makanchi	66.40	325	*e*P	P	20 07 23.8	-0.8
	comp=Z,3.8nm,0.9s						
KDJ	Kajisay	66.91	319	*e*P	P	20 07 28.2	+0.1
	comp=Z,3.8nm,0.6s						
AAK	Ala-Archa	68.91	319	*e*P	P	20 07 40.8	+0.1
	comp=Z,12nm,1.9s						
ZAA0	Zalesovo Array	69.21	333	*e*P	P	20 07 41.3	-0.8
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	69.21	333	P	P	20 07 41.8	-0.3
	comp=Z,2.3nm,0.5s,baz=121,slow=7.8,SNR=10.0						
ARSB	Arslanbob	69.36	317	*e*P	P	20 07 43.9	+0.3
	comp=Z,12nm,1.3s						
KBL	Kabul	69.70	309	*e*P	P	20 07 44.3	-1.6
	comp=Z,3.4nm,0.6s						
GAR	Garm	70.32	314	*e*P	P	20 07 49.3	-0.2
	comp=Z,9.4nm,1.1s						
BTK	Batken	70.36	315	*e*P	P	20 07 49.0	-0.7
	comp=Z,4.6nm,1.1s						
KURK	Kurchatov	70.41	328	*e*P	P	20 07 49.2	-0.3
	comp=Z,8.7nm,0.8s						
KK31	Karatay Array	71.76	318	*e*P	P	20 07 57.8	-0.2
	comp=Z,3.7nm,1.1s						
KKAR	Karatay Array	71.76	318	*e*P	P	20 07 57.9	-0.1
	comp=Z,3.7nm,1.1s						
TIXI	Tiksi	75.15	359	*e*P	P	20 08 16.4	-0.9
	comp=Z,14nm,1.8s						
VNDA	Vanda	75.61	173	P	P	20 08 22.0	+2.0
	comp=Z,0.9nm,0.5s,baz=318,slow=5.6,SNR=8.9						
VNDA	Vanda	75.61	173	*e*P	P	20 08 21.0	+1.0
	comp=Z,6.7nm,1.5s						
BRVK	Borovoye	76.06	327	*e*P	P	20 08 22.7	-0.2
	comp=Z,6.3nm,0.9s						
UOSS	Minazif	78.15	296	*e*P	P	20 08 34.5	-0.8
MAW	Mawson	78.58	201	P	P	20 08 38.7	+2.0
	comp=Z,2.1nm,0.6s,baz=80,slow=5.3,SNR=8.2						
MAW	Mawson	78.58	201	*e*P	P	20 08 35.6	-1.1
	comp=Z,2.9nm,1.6s						
GEYT	Alibeck	79.12	310	P	P	20 08 41.2	+0.7
	comp=Z,2.5nm,0.7s,baz=104,slow=4.7,SNR=5.8						
GYA0B	ALIBECK ARRAY	79.12	310	*e*P	P	20 08 39.5	-0.9
	comp=Z,4.3nm,1.0s						
ABKAR	Akbulak array	80.76	321	*e*P	P	20 08 48.6	-0.4
	comp=Z,1.0nm,0.7s						
SYO	Syowa Base	87.29	201⇑	*e*P	P	20 09 22.0	+0.2
RAYN	Ar Rayn	87.66	294	*e*P	P	20 09 24.7	0.0
	comp=Z,4.4nm,0.9s						
ILAR	Eielson Array	89.72	25	P	P	20 09 33.8	+0.4
	comp=Z,0.3nm,0.4s,baz=260,slow=4.4,SNR=3.3						
ILAR				LR	LR	20 43 21.7	
	comp=Z,24nm,20.9s,baz=262,slow=31						
TORD	Torodi Ar. Bea	129.43	284	PKP	PKiKP	20 15 46.0	+0.1
	comp=Z,0.9nm,0.6s,baz=119,slow=2.2,SNR=5.8						
TOA1	Torodi Ar. Sit	129.43	284	*e*PKPdf	PKiKP	20 15 46.0	+0.1

JMA 09 20:39:40.6±0.3**, 40°.58N**×**145°.76E, h66**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	2.43	307	P	Pn	20 40 18.6	+0.7
JEM				*e*S	Sn	20 40 44.8	-1.8
JTHR	Tokachihiroo	2.52	314	P	Pn	20 40 20.3	+1.1
JTHR				*e*S	Sn	20 40 48.4	-0.3
JKHN	Kushirohamanak	2.54	350	P	Pn	20 40 21.0	+1.5
JKHN				*e*S	Sn	20 40 50.7	+1.4
JCH	Churui	2.71	319	P	Pn	20 40 22.8	+1.0
JCH				*e*S	Sn	20 40 52.8	-0.7
NEM2	Nemuro 2	2.78	360	P	Pn	20 40 23.7	+1.0
NEM2				*e*S	Sn	20 40 55.4	+0.2
JNBK	Urakawa-nobuka	2.83	308	P	Pn	20 40 25.0	+1.6
JNBK				*e*S	Sn	20 40 57.2	+0.9
JAR	Ashorobuto	3.09	332	P	Pn	20 40 27.7	+0.7
JAR				*e*S	Sn	20 41 02.4	-0.4
JANG	Nango	3.24	268	P	Pn	20 40 27.3	-1.8
JANG				*e*S	Sn	20 41 00.9	-5.6
JRA	Rausu	3.39	352	P	Pn	20 40 32.3	+1.3
JRA				*e*S	Sn	20 41 10.1	+0.1
JFR	Furan	3.50	319	P	Pn	20 40 33.9	+1.3
JFR				*e*S	Sn	20 41 11.8	-1.0
JOM	Ohasama	3.60	254	P	Pn	20 40 32.5	-1.5
JOT	Ohata	3.66	284	P	Pn	20 40 34.5	-0.2
JOT				*e*S	Sn	20 41 13.7	-2.8
JTKR	Abashiri--Toko	3.66	339	P	Pn	20 40 36.7	+2.0
JTKR				*e*S	Sn	20 41 17.3	+0.8
JKB	Kayabe	3.80	292	P	Pn	20 40 36.8	+0.2
JKB				*e*S	Sn	20 41 17.3	-2.7
JMK	Ichinoseki	3.86	247	P	Pn	20 40 35.6	-1.8
JEW	Eniwo	3.94	306	*e*S	Sn	20 41 24.0	+0.6
JYK	Kaneyama	4.48	250	P	Pn	20 40 44.8	-1.2
JYK				*e*S	Sn	20 41 32.5	-4.3
JOSM	Okushiri--Mats	4.96	290	P	Pn	20 40 52.5	0.0

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*IDC **09** 20:51:36.1±0.8, 37°.38N×72°.01E, h0^{km}, mb3.9/18, mb1 4.1/25, mb1mx4.0/42, mbtmp4.0/25, ML3.8/7, MS3.4/17, Ms1 3.4/17, ms1mx3.3/41, Error ellipse: s-maj=16.6km s-min=11.6km az=2.0*

*NNC **09** 20:51:39.1±2.7, 37°.51N×71°.69E, h7^{km}±18^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=18.1km s-min=11.5km az=154.0*

*MOS **09** 20:51:40.7±1.4, 37°.63N×71°.89E, h26^{km}, mb4.5/15, Error ellipse: s-maj=7.6km s-min=4.9km az=87.8*

*ISCJB **09** 20:51:40.0±0.2, 37°.41N±0°.02×71°.98E±0°.03, h35^{km}, mb4.1/54, MS3.4/16, Error ellipse: s-maj=3.8km s-min=3.3km az=148.6*

*BJI **09** 20:51:42.6±0.0, 37°.68N×72°.11E, h48^{km}, mb4.3/14, mB4.6/11, ML4.4/3, Ms3.9/8, Ms7 3.7/7*

*NEIC **09** 20:51:45.3±3.0, 37°.56N×71°.91E, h72^{km}±4^{km}, mb4.3/26, Error ellipse: s-maj=10.2km s-min=8.4km az=82.0*

ISC 09 20:51:41.5±0.4**, 37°.48N**±0°.04×**71°.97E**±0°.04**, h35**^{km}**, n180, σ2ˢ.44**/188**, mb4.1**/53**, MS3.4**/16**, 19C-10D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.00	320	*e*Pn	Pn	20 52 13.6	+0.7
GAR	Garm	2.00	320	*e*PN	Pn	20 52 13.6	+0.7
BTK	Batken	2.73	341	*e*Pn	Pn	20 52 25.7	+2.8
BTK	Batken	2.73	341	*e*PN	Pn	20 52 25.7	+2.8
KSH	Kashi	3.74	56	P	Pn	20 52 35.3	-1.5
KSH				S	Sn	20 53 11.9	-7.8
KSH				smax	smax		
	comp=N,2μm,0.7s						
KSH				smax	smax		
	comp=E,970nm,0.5s						
KBL	Kabul	3.77	220	*e*Pn	Pn	20 52 41.6	+4.2
KBL	Kabul	3.77	220	*e*PN	Pn	20 52 41.6	+4.2
ARSB	Arslanbob	3.92	11	*e*Pn	Pn	20 52 42.0	+2.6
NIL	Nilore	3.96	164	*e*Pn	Pn	20 52 44.0	+4.2
NIL	Nilore	3.96	164	*e*PN	Pn	20 52 44.0	+4.2
AML	Almayashu	4.83	15	P	Pn	20 52 41.7	-10
	SNR=7.9						
UCH	Uchtor	5.13	22	P	Pn	20 52 59.1	+2.9
	SNR=27						
KZA	Kyzart	5.24	28	P	Pn	20 53 00.5	+2.7
	SNR=40						
EKS2	Erkin-Say	5.36	14	P	Pn	20 53 03.1	+4.0
	SNR=17						
AAK	Ala-Archa	5.50	20	Pn	Pn	20 53 04.3	+3.2
	2.9nm,0.3s,baz=203,slow=9.4,SNR=25						
AAK				Sn	Sn	20 54 04.9	+1.8
	2.6nm,0.3s,baz=325,slow=18,SNR=7.9						
AAK	Ala-Archa	5.50	20	⇓Pn	Pn	20 53 03.8	+2.7
	28nm,0.5s						
AAK				⇓Sn	Sn	20 54 06.5	+3.3
	115nm,1.0s						
AAK	Ala-Archa	5.50	20	c*e*PN	Pn	20 53 04.5	+3.4
AAK				pmax	pmax		
	comp=Z,22nm,0.7s						
AAK	Ala-Archa	5.50	20	P	Pn	20 53 04.5	+3.4

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           SNR=13
KBK   Karagaybulak       5.65  23  P      Pn     20 53 06.7 +3.6
           SNR=7.9
FRU1  Bishkek            5.70  20 ePn     Pn     20 53 04.7 +1.0
FRU1  Bishkek            5.70  20 ePN     Pn     20 53 04.7 +1.0
KK31  Karatay Array      5.73 349 ePn     Pn     20 53 05.7 +1.6
KK31  Karatay Array      5.73 349 ⇑Pn     Pn     20 53 05.8 +1.8
           comp=Z,28nm,0.5s,baz=176,slow=16,SNR=167
KK31                              ⇑Sn     Sn     20 54 11.4 +2.9
           comp=Z,32nm,0.5s
KK31                              ⇑Lg     Lg     20 54 37.5
           comp=Z,208nm,0.8s,baz=169,slow=27
KKAR  Karatay Array      5.73 349 ePn     Pn     20 53 05.5 +1.5
ULHL  Ulahol             5.78  33  P      Pn     20 53 08.0 +3.0
           SNR=12
BOOM  Boomskoye usch     5.86  30 ePn     Pn     20 53 08.9 +2.9
BOOM  Boomskoye usch     5.86  30 ePN     Pn     20 53 08.9 +2.9
CHMS  Chumysh            5.91  20  P      Pn     20 53 09.7 +3.1
           SNR=26
USP   Ospenovka          6.09  18  P      Pn     20 53 12.2 +3.1
           SNR=7.6
TKM2  Tokmak 2           6.10  26 ⇑Pn     Pn     20 53 12.3 +2.9
           comp=Z,16nm,0.5s
TKM2                              ⇑Lg     Lg     20 54 51.0
           comp=Z,76nm,0.8s
TKM2  Tokmak 2           6.10  26  P      Pn     20 53 12.4 +3.0
           SNR=26
KDJ   Kajisay            6.13  39 ePn     Pn     20 53 12.5 +2.7
KDJ   Kajisay            6.13  39 ePN     Pn     20 53 12.5 +2.7
DHRM  DHARAMSHALA        6.32 144 eP      Pn     20 53 13.8 +1.4
DHRM                              eS      Sn     20 54 23.8 +0.5
DHRM                               IAML          20 54 28.1
           comp=N,462nm,0.4s
DHRM                               IAML          20 54 29.2
           comp=E,748nm,0.6s
KNDC  Almaty             6.88  32 ⇑Pn     Pn     20 53 23.6 +3.6
           comp=E,22nm,0.7s
KNDC                              ⇑Lg     Lg     20 55 21.4
           comp=E,278nm,1.3s
PRZ   Przheval'sk        7.02  43 ePn     Pn     20 53 25.1 +3.1
PRZ   Przheval'sk        7.02  43 ePN     Pn     20 53 25.1 +3.1
BHK   Bhakra             7.08 147 ex      Pn     20 53 26.0 +3.4
BHK                               ex      Sn     20 54 46.0 +4.2
SMLA  Simla              7.66 144 eP      Pn     20 53 30.9 +0.4
SMLA                              eS      Sn     20 54 54.7 -1.3
SMLA                               IAML          20 54 58.4
           comp=N,253nm,0.7s
SMLA                               IAML          20 55 00.8
           comp=E,356nm,0.0s
PDGK  Podgornoye         8.18  42 ⇓Pn     Pn     20 53 39.8 +1.9
           comp=E,28nm,1.1s
PDGK                              ⇑Lg     Lg     20 56 04.3
           comp=E,81nm,1.4s
PDGK  Podgornoye         8.18  42  P      Pn     20 53 39.8 +1.9
PDGK                               pmax   pmax
           comp=Z,28nm,1.1s
DDI   Dehra Dun          8.75 143 eP      Pn     20 53 47.1 +1.5
DDI                               eS      Sn     20 55 20.9 -2.0
DDI                                IAML          20 55 56.3
           comp=N,92nm,0.4s
DDI                                IAML          20 55 59.6
           comp=E,108nm,0.6s
OTUK  Ortayu            10.76   1 ⇓Pn     Pn     20 54 12.7 -0.4
           comp=E,6.9nm,0.9s
OTUK                              ⇓Lg     Lg     20 57 16.8
           comp=E,120nm,1.5s
OTUK  Ortayu            10.76   1  P      Pn     20 54 12.7 -0.4
OTUK                               pmax   pmax
           comp=Z,7.0nm,0.9s
GEYT  Alibeck           10.99 277  Pn     Pn     20 54 14.2 -2.1
           comp=Z,3.3nm,0.3s,baz=108,slow=11,SNR=23
GEYT                               Sn     Sn     20 56 12.6 -5.3
           comp=Z,7.5nm,0.3s,baz=106,slow=16,SNR=9.5
GEYT                               LR     LR     20 59 55.2
           comp=Z,454nm,18.1s,baz=110,slow=45
GYA0B ALIBECK ARRAY     10.99 277 ePn     Pn     20 54 14.3 -1.9
GYA0B ALIBECK ARRAY     10.99 277 ⇓P      Pn     20 54 14.8 -1.4
GYA0B                             ⇓S      Sn     20 56 12.0 -5.9
MAKZ  Makanchi          11.91  35 ePn     Pn     20 54 30.0 +1.3
MAKZ  Makanchi          11.91  35 ⇑P      Pn     20 54 29.4 +0.7
           comp=Z,28nm,1.4s
MAKZ  Makanchi          11.91  35 eP      Pn     20 54 30.0 +1.3
MK31  Makanchi Array    12.04  36 ePn     Pn     20 54 31.6 +1.0
MK31  Makanchi Array    12.04  36 ⇑P      Pn     20 54 31.3 +0.8
           comp=Z,13nm,1.2s,baz=192,slow=6.3,SNR=27
MK31  Makanchi Array    12.04  36 eP      Pn     20 54 31.6 +1.0
MK32  Makanchi Array    12.04  36 ePn     Pn     20 54 32.3 +1.7
MKAR  Makanchi Array    12.04  36  Pn     Pn     20 54 32.3 +1.7
           comp=Z,0.3nm,0.3s,baz=225,slow=11,SNR=20
MKAR                               Lg     Lg     20 57 53.0
           comp=Z,0.1nm,0.3s,baz=235,slow=22,SNR=2.4
MKAR                               LR     LR     20 58 30.1
           comp=Z,77nm,21.8s,baz=224,slow=34
PYUN  Piuthan           13.16 132 eP      Pn     20 54 43.0 -3.1
           comp=Z,35nm,0.4s
DANN  Dangsing          13.44 129 eP      Pn     20 54 46.7 -3.3
           comp=Z,45nm,0.4s
WMQ   Urumqi            13.50  57 eP      P      20 54 57.1 -2.2
WMQ                                pmax   pmax
           comp=Z,32nm,0.7s
WMQ                                pmax   pmax
           comp=Z,110nm,6.1s
WMQ                                smax   smax
           comp=N,15nm,0.7s
WMQ                                smax   smax
           comp=E,15nm,0.9s
KOLN  Koldanda          13.76 131 eP      Pn     20 54 50.7 -3.6
           comp=E,14nm,0.4s
KURBB Kurchatov Arra    13.95  18  Pn     Pn     20 54 55.1 -1.4
           comp=E,0.1nm,0.3s,baz=212,slow=12,SNR=16
KURBB                              Lg     Lg     20 58 50.4
           baz=211,slow=33,SNR=4.2
KURBB Kurchatov Arra    13.95  18 ⇑P      Pn     20 54 55.0 -1.5
           comp=E,7.0nm,0.7s
KURK  Kurchatov         14.06  18 ePn     Pn     20 54 56.0 -2.0
KURK  Kurchatov         14.06  18 ⇓P      Pn     20 54 56.8 -1.2
           comp=E,8.8nm,1.1s
KURK  Kurchatov         14.06  18ceP      Pn     20 54 57.4 -0.6
KURK                               pmax   pmax
           comp=Z,5.0nm,1.3s
GKN   Gorkha            14.23 128 eP      Pn     20 54 56.8 -3.9
           comp=Z,30nm,0.3s
AB31  Akbulak array     14.64 327 ⇑P      Pn     20 55 03.4 -2.6
           comp=Z,4.2nm,0.5s,baz=135,slow=11,SNR=143
AB31                              ⇓S      Sn     20 57 45.1 -1.8
           comp=Z,9.6nm,0.7s,baz=145,slow=23,SNR=5.5
AB31  Akbulak array     14.64 327  P      Pn     20 55 03.4 -2.6
AB31                               S      Sn     20 57 45.5 -1.4
AB31                               pmax   pmax
           comp=Z,4.0nm,0.5s
AB31                               smax   smax
           comp=N,10.0nm,0.7s
ABKAR Akbulak array     14.64 327 ePn     Pn     20 55 03.3 -2.7
KKN   Kakani            14.79 127 eP      Pn     20 55 03.4 -4.9
           comp=N,27nm,0.5s
DMN   Daman             14.80 128 eP      Pn     20 55 03.9 -4.6
           comp=N,17nm,0.4s
BHPL  Bhopal            14.95 160 eP      P      20 55 14.8 -0.6
PKIN  Phulchoki         15.01 127 eP      Pn     20 55 06.4 -4.9
           comp=N,16nm,0.5s
PKI   Pulchoki          15.02 127 eP      Pn     20 55 06.7 -4.8
           comp=N,23nm,0.4s
JIRN  Jiri              15.46 125 eP      Pn     20 55 11.8 -5.5
           comp=N,42nm,0.4s
BVAR  Borovoye Array    15.58 356  Pn     Pn     20 55 15.5 -2.9
           comp=N,0.7nm,0.3s,baz=163,slow=11,SNR=12
BRVK  Borovoye          15.62 356 ePn     Pn     20 55 18.4 -0.5
           comp=N,26nm,1.3s
BRVK  Borovoye          15.62 356ceP      Pn     20 55 19.1 +0.2
BRVK                               pmax   pmax
           comp=Z,22nm,1.3s
AKTO  Aktyubinsk        16.35 327  Pn     Pn     20 55 25.6 -2.7
           comp=Z,0.3nm,0.3s,baz=134,slow=15,SNR=12
AKTO                               Sn     Sn     20 58 19.0  -10
           comp=Z,0.2nm,0.3s,baz=55,slow=18,SNR=2.3
AKTO  Aktyubinsk        16.35 327 ⇓P      Pn     20 55 25.8 -2.4
           comp=Z,23nm,0.9s
AKTO                              ⇑S      Sn     20 58 28.2 -0.3
           comp=Z,8.4nm,0.8s
GTK   Tadong            17.29 121 eP      Pn     20 55 40.6 +0.2
LSA   Lhasa             17.74 110 eP      P      20 55 48.5 +1.6
           comp=Z,4.7nm,0.8s
LSA   Lhasa             17.74 110 eP      P      20 55 48.5 +1.6
LSA                                pmax   pmax
           comp=Z,5.0nm,0.8s
BOK   Bokaro            18.12 135 eP      Pn     20 55 49.9 -0.5
WSAR  Wadi Sarin        18.25 223  P      Pn     20 55 53.4 +1.4
           comp=Z,0.3nm,0.3s,baz=59,slow=5.9,SNR=3.7
UOSS  Minazif           18.35 232 eP      P      20 55 53.2 +0.1
           comp=Z,46nm,1.2s
ZAA0  Zalesovo Array    18.70  24 eP      P      20 55 55.8 -0.9
           comp=Z,10nm,0.6s
ZALV  Zalesovo Beam     18.70  24  P      P      20 55 55.8 -0.9
           comp=Z,1.8nm,0.3s,baz=218,slow=11,SNR=38
ZALV                               Lg     Lg     21 01 23.8
           comp=Z,0.1nm,0.3s,baz=225,slow=22,SNR=2.3
ZALV                               LR     LR     21 03 44.9
           comp=Z,29nm,19.7s,baz=252,slow=39
TAWA  Tawang            19.42 115 eP      P      20 56 03.0 -2.2
MAK   Makhachkala       19.44 294 eP      P      20 56 05.5 +0.7
MAK                               eS      S      20 59 42.2 -0.4
MAK                                pmax   pmax
           comp=Z,37nm,1.3s
MAK                                MLR    MLR
           comp=Z,98nm,15.0s
SHL   Shillong          20.67 119 ex      P      20 56 12.4 -6.1
HYB   Hyderabad         20.81 162 i P     P      20 56 17.0 -3.0
ARU   Arti              20.98 339  P      P      20 56 21.6 +0.2
           comp=Z,1.2nm,0.5s,baz=118,slow=2.5,SNR=7.8
ARU   Arti              20.98 339 eP      P      20 56 20.9 -0.5
           comp=Z,7.7nm,0.9s
ARU   Arti              20.98 339c iP     P      20 56 21.7 +0.2
ARU                                              20 56 37.7
ARU                                S      S      21 00 14.7 +1.6
ARU                                SS     SnSn   21 00 37.3 +2.2
ARU                                pmax   pmax
           comp=Z,9.0nm,1.0s
GNI   Garni             21.36 286  P      P      20 56 29.0 +3.2
           comp=Z,18nm,0.7s,baz=219,slow=6.2,SNR=7.7
GNI   Garni             21.36 286 eP      P      20 56 28.6 +2.8
           comp=Z,22nm,0.7s
GNI   Garni             21.36 286ceP      P      20 56 30.1 +4.2
GNI                                pmax   pmax
           comp=Z,156nm,1.3s
TBLG  Delisi            21.37 290 eP      P      20 56 27.7 +1.9
           comp=Z,9.2nm,0.9s
TBLG  Delisi            21.37 290 eP      P      20 56 27.7 +1.9
TBLG                               pmax   pmax
           comp=Z,9.0nm,0.9s
GTA   Gaotai            21.86  76 eP      P      20 56 31.4 +0.2
GTA                                pmax   pmax
           comp=Z,4.0nm,1.3s
GTA                                pmax   pmax
           comp=Z,120nm,4.5s
GTA                                LR     LR
           comp=Z,180nm,14.8s
GTA                                LR     LR
           comp=Z,170nm,14.1s
GTA                                LR     LR
           comp=Z,250nm,11.7s
ZEI   Tsey              22.05 293 eP      P      20 56 36.4 +3.0
ZEI                                pmax   pmax
           comp=Z,7.0nm,0.4s
KOHI  KOHIMA            22.14 116 eP      P      20 56 34.6 +0.2
AKH   Akhalkalaki       22.30 289 eP      P      20 56 38.4 +2.5
           comp=Z,14nm,0.8s
AKH   Akhalkalaki       22.30 289 eP      P      20 56 38.4 +2.5
AKH                                pmax   pmax
           comp=Z,14nm,0.8s
KBZ   Khabaz            22.87 295  P      P      20 56 41.3 -0.4
           comp=Z,3.5nm,0.7s,baz=122,slow=8.4,SNR=4.2
KBZ                                LR     LR     21 07 11.3
           comp=Z,79nm,18.1s,baz=97,slow=41
KVAR  Kislovodsk Arr    23.04 296  P      P      20 56 43.7  0.0
           comp=Z,0.9nm,0.3s,baz=124,slow=11,SNR=4.2
KVAR                               S      S      21 00 57.0 +5.0
           comp=Z,5.7nm,0.8s,baz=218,slow=17,SNR=3.5
KIV   Kislovodsk        23.04 296 eP      P      20 56 43.9 +0.2
           comp=Z,6.9nm,0.7s
KIV   Kislovodsk        23.04 296 eP      P      20 56 42.8 -0.9
KIV                                pmax   pmax
           comp=Z,15nm,1.0s
KIV                                MLR    MLR
           comp=Z,94nm,14.0s
DAGI  Agillar           23.49 288 i P     P      20 56 51.8 +3.7
DAGI                               IAML_P
           comp=Z,1.8nm,0.4s
DBAD  Bademkaya         23.65 288 i P     P      20 56 53.2 +3.4
DBAD                               IAML_P
           comp=Z,78nm,0.1s
MOY   Mondy             24.86  46 eP      P      20 57 02.2 +1.4
MOY                                pmax   pmax
           comp=Z,13nm,2.1s
KIRV  Kirov             25.71 332  P      P      20 57 09.2 +1.1
           comp=Z,11nm,0.7s,baz=288,slow=3.4,SNR=6.0
ZAK   Zakamensk         25.76  50 eP      P      20 57 09.3 +0.4
ZAK                                pmax   pmax
           comp=Z,7.0nm,1.0s
TLY   Talaya            26.40  47 eP      P      20 57 16.7 +2.1
           comp=Z,3.9nm,0.7s
TLY   Talaya            26.40  47 eP      P      20 57 16.7 +2.1
TLY                                pmax   pmax
           comp=Z,4.0nm,0.7s
RAYN  Ar Rayn           26.61 246 eP      P      20 57 17.0 +0.3
           comp=Z,13nm,1.4s
RAYN  Ar Rayn           26.61 246 eP      P      20 57 17.0 +0.3
RAYN                               pmax   pmax
           comp=Z,13nm,1.4s
VSR   Storozhevoye      26.92 311 eP      P      20 57 30.1  +11
VSR                                pmax   pmax
           comp=Z,5.0nm,0.6s
SONA0 Songino Array     27.14  57 eP      P      20 57 22.0 +0.5
SONM  Songino Array     27.14  57  P      P      20 57 22.0 +0.6
           comp=Z,1.1nm,0.8s,baz=266,slow=9.2,SNR=8.8
SONM                               LR     LR     21 08 14.5
           comp=Z,102nm,18.4s,baz=261,slow=37
SONM  Songino Array     27.14  57  P      P      20 57 22.0 +0.6
LPSR  Galich'ya Gora    27.51 314 eP      P      20 57 31.6 +7.1
LPSR                               pmax   pmax
           comp=Z,6.0nm,0.8s
BRTR  Keskin Array B    29.89 286  P      P      20 57 47.1 +1.1
           comp=Z,0.7nm,0.8s,baz=93,slow=7.9,SNR=4.0
BRTR                               LR     LR     21 12 50.4
           comp=Z,43nm,19.7s,baz=80,slow=43
CMAR  Chiang Mai Arr    30.27 121  P      P      20 57 51.3 +1.9
           comp=Z,0.8nm,0.6s,baz=317,slow=7.4,SNR=6.1
CMAR                               LR     LR     21 11 05.0
           comp=Z,40nm,18.1s,baz=295,slow=39
AKASG Malin Array Be    32.95 307  P      P      20 58 13.6 +1.0
           comp=Z,1.2nm,0.5s,baz=81,slow=6.8,SNR=9.0
AKASG                              LR     LR     21 14 09.6
           comp=Z,54nm,20.1s,baz=180,slow=41
AKBB  Malin Array Si    32.95 307 eP      P      20 58 13.2 +0.6
           comp=Z,3.4nm,0.6s
AKBB  Malin Array Si    32.95 307 eP      P      20 58 13.2 +0.6
AKBB                               pmax   pmax
           comp=Z,3.0nm,0.6s
MLR   Muntele Rosu      34.99 298 eP      P      20 58 32.5 +1.9
           comp=Z,4.7nm,0.9s
MLR   Muntele Rosu      34.99 298 eP      P      20 58 32.5 +1.9
MLR                                pmax   pmax
           comp=Z,5.0nm,0.9s
BUR08 Bucovina Ar. S    35.43 302 eP      P      20 58 33.8 -0.5
           comp=Z,2.0nm,0.8s
WHN   Wuhan             35.57  88  P      P      20 58 41.6 +6.1
FIA1  FINESS Array S    37.11 325 eP      P      20 58 47.1 -1.2
           comp=Z,7.6nm,0.9s
FIA0  FINESS Array S    37.12 325 eP      P      20 58 49.1 +0.8
FIA0  FINESS Array S    37.12 325 eP      P      20 58 49.1 +0.8
FINES FINESS Array B    37.12 325  P      P      20 58 49.1 +0.8
           comp=Z,2.1nm,0.7s,baz=123,slow=7.0,SNR=7.4
FINES                              LR     LR     21 14 57.7
           comp=Z,50nm,20.5s,baz=79,slow=38
OJC   Ojcow             38.94 306 eP      P      20 59 04.1 +0.2
           comp=Z,4.6nm,0.8s
OJC   Ojcow             38.94 306 eP      P      20 59 04.1 +0.2
OJC                                pmax   pmax
           comp=Z,5.0nm,0.8s
ARCES ARCESS Array B    40.54 337  P      P      20 59 17.5 +0.6
           comp=Z,4.3nm,0.9s,baz=107,slow=8.1,SNR=9.8
ARCES                              LR     LR     21 17 19.0
           comp=Z,96nm,19.0s,baz=310,slow=38
ARE0  ARCESS Array S    40.54 337 eP      P      20 59 17.1 +0.1
           comp=Z,0.5nm,1.0s
CONA  Conrad Observa    41.69 303 eP      P      20 59 27.2 +0.4
           comp=Z,4.1nm,1.0s
SOKA  Soboth            42.42 301 eP      P      20 59 34.2 +1.4
           comp=Z,2.9nm,0.8s
MOA   Molln             42.77 303 eP      P      20 59 34.3 -1.1
           comp=Z,3.6nm,1.2s
GERES GERESS Array B    43.01 305  P      P      20 59 38.2 +0.7
           comp=Z,0.3nm,0.6s,baz=98,slow=5.1,SNR=4.4
GERES                              LR     LR     21 18 27.1
           comp=Z,42nm,18.2s,baz=112,slow=37
GSI   Gunungsitoli      43.04 141 eP      P      20 59 39.8 +1.9
           comp=Z,11nm,0.8s
KHC   Kasperske Hory    43.05 305 eP      P      20 59 38.7 +0.9
           comp=Z,0.7nm,0.8s
KHC   Kasperske Hory    43.05 305 eP      P      20 59 39.0 +1.2
KHC   Kasperske Hory    43.05 305 eP      P      20 59 39.0 +1.2
CLL   Collm             43.19 308 eP      P      20 59 39.0 +0.2
CLL                                LmV           21 18 00.0
           comp=Z,100nm,21.0s
MYKA  Terra Mystica     43.37 301 eP      P      20 59 43.0 +2.6
           comp=Z,3.4nm,1.0s
KBA   Koelnbreinsper    43.50 302 eP      P      20 59 41.9 +0.3
           comp=Z,1.6nm,0.8s
KSRS  Korea Array       43.83  72  LR     LR     21 19 33.5
           comp=Z,41nm,20.3s,baz=254,slow=38
KLR   Kul'dur           43.94  55  LR     LR     21 19 25.5
           comp=Z,52nm,21.4s,baz=269,slow=38
NC303 NORSAR Array S    44.01 323 eP      P      20 59 45.4 +0.2
           comp=Z,22nm,1.0s
NB201 NORSAR Array S    44.03 322 eP      P      20 59 45.9 +0.4
           comp=Z,118nm,1.6s
NB2   NORSAR Subarra    44.07 322  P      P      20 59 45.9 +0.1
           comp=Z,2.0nm,0.7s,baz=93,slow=7.9
NOA   NORSAR Array B    44.07 322  P      P      20 59 46.2 +0.4
           comp=Z,2.4nm,1.0s,baz=96,slow=7.9,SNR=4.6
NOA                                LR     LR     21 20 22.3
           comp=Z,40nm,19.3s,baz=90,slow=39
ABTA  Abfaltersbach     44.12 302 eP      P      20 59 48.7 +2.3
           comp=Z,0.9nm,0.6s
NBO00 NORSAR Array S    44.28 322 eP      P      20 59 47.1 -0.4
           comp=Z,45nm,1.4s
NC204 NORSAR Array S    44.31 323 eP      P      20 59 47.9 +0.2
           comp=Z,55nm,1.6s
TIXI  Tiksi             44.57  22  LR     LR     21 19 10.4
           comp=Z,50nm,19.9s,baz=210,slow=37
TIXI  Tiksi             44.57  22 eP      P      20 59 49.6  0.0
           comp=Z,3.3nm,0.7s
TIXI  Tiksi             44.57  22ceP      P      20 59 50.9 +1.3
TIXI                               pmax   pmax
           comp=Z,4.0nm,0.8s
MOTA  Moosalm           44.96 303 eP      P      20 59 53.4 +0.2
           comp=Z,2.1nm,0.7s
FUORN Ofenpass-Fuorn    45.66 302 eP      P      20 59 58.3 -0.7
           comp=Z,5.5nm,1.3s
DAVA  Damuels           45.79 303 eP      P      20 59 59.5 -0.3
           comp=Z,6.5nm,0.9s
SENIN Lac Senin/Sane    47.72 302 eP      P      21 00 16.0 +1.0
           comp=Z,2.2nm,0.8s
MAJO  Matsushiro        51.87  70 eP      P      21 00 45.1 -1.4
MAJO  Matsushiro        51.87  70 eP      P      21 00 45.1 -1.4
MJAR  Matsushiro Arr    51.88  70  P      P      21 00 45.1 -1.4
           comp=Z,1.6nm,0.7s,baz=287,slow=9.1,SNR=3.7
ESDC  Sonseca Array     57.69 298  P      P      21 01 29.6 +0.9
           comp=Z,0.8nm,0.5s,baz=59,slow=7.4,SNR=11
PETK  Petropavlovsk-    58.72  45  LR     LR     21 28 15.9
           comp=Z,55nm,18.6s,baz=1.6,slow=37
TOA1  Torodi Ar. Sit    66.52 269 eP      P      21 02 27.2 -0.8
TORD  Torodi Ar. Bea    66.52 269  P      P      21 02 27.2 -0.8
           comp=Z,0.8nm,0.6s,baz=47,slow=6.0,SNR=12
ILAR  Eielson Array     73.62  16  P      P      21 03 10.0 -0.9
           comp=Z,0.5nm,0.7s,baz=337,slow=3.9,SNR=5.1
YKA   Yellowknife Ar    80.23   3  P      P      21 03 48.4 +0.4
           comp=Z,0.7nm,0.4s,baz=3.2,slow=5.6,SNR=3.1
YKB5  Yellowknife Ar    80.23   3 eP      P      21 03 48.4 +0.4
WRA   Warramunga Arr    81.86 123  P      P      21 03 56.9 -0.4
           comp=Z,1.5nm,0.8s,baz=306,slow=5.4,SNR=4.8
WR1   Warramunga Arr    81.86 123 eP      P      21 03 56.9 -0.4
ASAR  Alice Springs     84.18 126  P      P      21 04 10.9 +1.6
           comp=Z,0.2nm,0.5s,baz=310,slow=4.9,SNR=3.4
SADO  Sadowa            94.06 340  LR     LR     21 47 41.9
           comp=Z,47nm,18.7s,baz=36,slow=36
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*ISCJB **09** 20:51:44.6±0.3, 18°90S±0°02×69°00W±0°02, h100^{km}±2^{km}, mb5.3/434, Error ellipse: s-maj=4.2km s-min=2.7km az=135.9*

*VAO **09** 20:51:44.3±0.2, 19°04S×69°35W, h123^{km}, mb5.5*

*MOS **09** 20:51:45.8±1.3, 18°95S×69°04W, h106^{km}, mb5.3/45, Error ellipse: s-maj=11.3km s-min=4.9km az=108.0*

*SJA **09** 20:51:45.2±0.5, 19°10S×69°41W, h131^{km}±3^{km}, ML4.4, MW4.2*

*NEIC **09** 20:51:47.1±1.7, 19°05S×69°03W, h112^{km}±3^{km}, mb5.3/457, MW5.1, ML5.0(ARE), ML5.0(GUC), Error ellipse: s-maj=11.0km s-min=9.1km az=99.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.97; M$_{\theta\theta}$-1.26; M$_{\phi\phi}$6.23; M$_{r\theta}$1.14; M$_{\theta\phi}$1.85; M$_{\phi r}$-0.99; Best double couple: M$_0$6.20000×10^{16} NP1:ϕ_s212.00000°, δ45.00000°, λ-62.00000°. NP2:ϕ_s355.00000°, δ52.00000°, λ-115.00000°. Principal axes: T 6.7000, Plg4.0000°, Azm103.0000°; N -1.2300, Plg19.0000°, Azm11.0000°; P -5.4800, Plg70.0000°, Azm203.0000°;*

NEIC Felt [IV] at Arica, Camina, Huara and Poconchile; [III] at Alto Hospicio, Codpa, Iquique, Pozo Almonte and Putre; [II] at Pica. Also felt [II] at Moquegua and Tacna, Peru.

*IDC **09** 20:51:47.7±0.4, 19°09S×69°02W, h114^{km}±3^{km}, mb4.7/20, mb1 4.8/24, mb1mx4.8/27, mbtmp5.1/24, MS3.7/6, Ms1 3.6/6, ms1mx3.3/23 Error ellipse: s-maj=13.1km s-min=7.6km az=83.0*

*GUC **09** 20:51:47.1±0.7, 19°15S×69°30W, h116^{km}±3^{km}, ML5.0*

*BJI **09** 20:51:48.1±0.0, 19°00S×69°10W, h110^{km}, mB5.3/14*

*GCMT **09** 20:51:51.1±0.3, 19°21S±0°02×69°39W±0°02, h132^{km}±2^{km}, MW5.0/92, Moment Tensor Solution. s40,c43; s92,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.05±.13; M$_{\theta\theta}$-0.45±.16; M$_{\phi\phi}$3.50±.20; M$_{r\theta}$1.35±.09; M$_{\theta\phi}$1.26±.17; M$_{\phi r}$-2.92±.13; Best double couple: M$_0$4.77500×10^{16} NP1:ϕ_s350.00000°, δ68.00000°, λ-115.00000°. NP2: ϕ_s221.00000°, δ33.00000°, λ-44.00000°. Principal axes: T 4.7130, Plg19.0000°, Azm99.0000°; N 0.1270, Plg23.0000°, Azm0.0000°; P -4.8370, Plg59.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 20:51:47.1±0.3**, 19°08S**±0°03×**69°12W**±0°04**, h114**^{km}±2^{km}**, h114**^{km}**:pP-P, n1289,** σ**1**^{s}**07**/1544**, mb5.3**/433**, 17C-12D, Northern Chile**

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Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                  Op      ISC    h  m  s    ISC
MNMC  Minye Minye        0.45 264 ePn     Pn     20 52 04.3 -0.1
MNMC  Minye Minye        0.45 264⇑iP      Pn     20 52 04.3 -0.1
MNMC                              i S     Sn     20 52 17.1 -0.3
MNMC                               IAML          20 52 21.0
           comp=N,149µm,0.5s
MNMCX Minye Minye        0.45 264 eP      Pn     20 52 04.0 -0.4
MNMCX                             eS      Sn     20 52 17.8 +0.3
GO01  Chusmiza           0.59 187 ePn     Pn     20 52 05.9 +0.3
GO01  Chusmiza           0.59 187⇓iP      Pn     20 52 06.1 +0.5
GO01                              i S     Sn     20 52 20.3 +0.8
GO01                               IAML          20 52 21.5
           comp=E,67µm,0.1s
PB16  IPOC Station P     0.83 334⇓iP      Pn     20 52 08.9 +1.2
PB16                              i S     Sn     20 52 24.7 +1.7
PB11  IPOC Station P     0.84 217 ePn     Pn     20 52 06.9 -0.3
PB11                              eSn     Sn     20 52 21.2 -1.3
PB11  IPOC Station P     0.84 217 eP      Pn     20 52 06.3 -0.9
PB11                              eS      Sn     20 52 22.2 -0.3
PB11  IPOC Station P     0.84 217⇑iP      Pn     20 52 07.0 -0.3
PB11                              i S     Sn     20 52 21.4 -1.1
PB11                               IAML          20 52 23.3
           comp=N,41µm,0.2s
PB08  IPOC Station P     1.05 182 eP      Pn     20 52 09.5 -0.1
PB08  IPOC Station P     1.05 182⇓iP      Pn     20 52 10.3 +0.7
PB08                              i S     Sn     20 52 27.5 +0.9
PB08                               IAML          20 52 28.9
           comp=E,19µm,0.2s
PSGC  Pisagua            1.07 241⇑iP      Pn     20 52 08.5 -1.0
PSGC                              i S     Sn     20 52 24.1 -2.3
PSGC                               IAML          20 52 26.3
           comp=E,23µm,0.9s
PSGCX Pisagua            1.07 241 eP      Pn     20 52 07.4 -2.1
PB12  IPOC Station P     1.23 292⇑iP      Pn     20 52 10.5 -0.7
PB12                              i S     Sn     20 52 27.9 -1.5
PB12                               IAML          20 52 29.2
           comp=E,48µm,0.5s
PB01  IPOC Station P     1.98 190 ePn     Pn     20 52 19.9 -0.2
PB01  IPOC Station P     1.98 190⇓iP      Pn     20 52 20.0 -0.2
PB01                               IAML          20 52 46.5
           comp=N,12µm,0.2s
PB02  IPOC Station P     2.34 198⇑iP      Pn     20 52 24.1 -0.6
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PB02				eS	Sn	20 52 51.7	-1.9
PB02				IAML		20 53 01.5	
	comp=E,9µm,0.2s						
PB09	IPOC Station P	2.70	182	⇓iP	Pn	20 52 29.8	+0.3
PB09				i S	Sn	20 53 02.2	+0.1
PB09				IAML		20 53 07.7	
	comp=N,4µm,0.5s						
PB07	IPOC Station P	2.73	195	⇓iP	Pn	20 52 29.7	-0.1
PB07				IAML		20 53 07.9	
	comp=N,9µm,0.9s						
LPAZ	La Paz	2.94	19	P	Pn	20 52 36.3	+3.4
	comp=N,122nm,0.3s,baz=203,slow=3.7,SNR=2234						
LPAZ	La Paz	2.94	19	ePn	Pn	20 52 36.2	+3.2
LPAZ	La Paz	2.94	19	eP	Pn	20 52 36.2	+3.2
LPAZ	La Paz	2.94	19	⇓iP	Pn	20 52 36.3	+3.4
LPAZ	La Paz	2.94	19	eP	Pn	20 52 36.4	+3.4
LPAZ				eS	Sn	20 52 51.2	-17
PB03	IPOC Station P	3.01	191	eP	Pn	20 52 32.4	-1.1
PB03	IPOC Station P	3.01	191	eP	Pn	20 52 32.6	-0.9
PB03				IAML		20 53 07.2	
	comp=E,3µm,0.5s						
PB04	IPOC Station P	3.37	196	ePn	Pn	20 52 37.7	-0.6
PB04				e		20 53 06.1	
PB04	IPOC Station P	3.37	196	eP	Pn	20 52 37.6	-0.8
PB04				IAML		20 53 36.3	
	comp=N,4µm,0.7s						
LVC	Limon Verde	3.52	177	P	Pn	20 52 41.1	+0.7
	comp=N,57nm,0.3s,baz=30,slow=7.6,SNR=156						
LVC				S	Sn	20 53 21.2	-0.4
	comp=N,330nm,0.3s,baz=138,slow=23,SNR=26						
LVC				LR	LR	20 54 18.4	
	comp=N,732nm,18.5s,baz=307,slow=43						
LVC	Limon Verde	3.52	177	ePn	Pn	20 52 40.8	+0.5
LVC				eSn	Sn	20 53 11.6	-10
LVC	Limon Verde	3.52	177	eP	Pn	20 52 41.0	+0.6
LVC				eS	Sn	20 53 12.3	-9.3
PB06	IPOC Station P	3.63	187	⇓iP	Pn	20 52 40.8	-1.0
PB05	IPOC Station P	3.88	195	⇓iP	Pn	20 52 43.7	-1.3
PB15	IPOC Station P	4.12	184	⇓iP	Pn	20 52 47.8	-0.5
YJA	Yavi	4.57	133	eP	Pn	20 52 57.1	+2.5
YJA				IAML		20 52 58.6	
	comp=Z,197nm,0.6s						
PB10	IPOC Station P	4.61	197	ePn	Pn	20 52 52.4	-2.2
HJA	Humahuaca	5.37	140	eP	Pn	20 53 07.9	+2.6
HJA				IAML		20 53 09.4	
	comp=Z,229nm,0.4s						
GO02	Mina Guanaco	6.07	184	ePn	Pn	20 53 12.9	-1.8
AZAP	Zapla	6.36	144	eP	Pn	20 53 20.0	+1.5
FSA	Cafayete	7.57	158	eP	Pn	20 53 35.4	+0.5
SIV	San Ignacio	8.27	69	P	Pn	20 53 43.6	-0.8
	comp=Z,38nm,0.3s,baz=260,slow=13,SNR=782						
SIV				S	Sn	20 55 13.1	-3.1
	baz=342,slow=19,SNR=1.8						
SIV				LR	LR	20 57 30.5	
	comp=Z,664nm,18.4s,baz=262,slow=42						
AHML	Horco Molle	8.42	156	eP	Pn	20 53 46.4	+0.1
GO03	Copiap	8.53	187	ePn	Pn	20 53 43.7	-4.1
LCO	Las Campanas	9.99	188	ePn	Pn	20 54 02.5	-5.2
LCO				eSn	Sn	20 55 48.9	-9.1
LCO	Las Campanas	9.99	188	ceP	Pn	20 54 11.8	+4.1
LCO	Las Campanas	9.99	188	eP	Pn	20 54 02.1	-5.6
LCO				eS	Sn	20 55 46.1	-12
NNA	Nana	10.25	312	P	Pn	20 54 08.3	-2.8
	comp=Z,4.4nm,0.3s,baz=164,slow=11,SNR=7.9						
NNA				S	Sn	20 55 54.8	-9.4
	comp=Z,8.8nm,0.3s,baz=210,slow=20,SNR=4.3						
NNA	Nana	10.25	312	ePn	Pn	20 54 08.5	-2.6
NNA	Nana	10.25	312	eP	Pn	20 54 08.5	-2.6
GO04	Tololo Observa	11.15	188	ePn	Pn	20 54 17.9	-5.4
CFA	Coronel Fontan	12.49	177	P	Pn	20 54 37.4	-3.6
	comp=Z,1.9nm,0.3s,baz=337,slow=13,SNR=12						
CFA				S	Sn	20 56 46.9	-12
	comp=Z,1.6nm,0.3s,baz=235,slow=16,SNR=3.7						
AQDB	Aquidauana	12.71	98	eP	Pn	20 54 42.0	-1.8
CPUP	Villa Florida	13.05	126	P	Pn	20 54 46.3	-1.9
	comp=Z,2.6nm,0.3s,baz=304,slow=12,SNR=47						
CPUP				LR	LR	21 00 52.7	
	comp=Z,249nm,18.2s,baz=309,slow=42						
CPUP	Villa Florida	13.05	126	eP	Pn	20 54 46.7	-1.5
CPUP				eS	S	20 57 24.4	-4.7
PEL	Peldehue	14.07	185	ePn	Pn	20 55 00.7	-0.7
PEL	Peldehue	14.07	185	eP	Pn	20 55 00.7	-0.7
ATAH	Atahualpa	14.91	322	P	Pn	20 55 13.0	+0.5
	comp=Z,0.7nm,0.3s,baz=24,slow=6.9,SNR=5.7						
TRCB	Terra Rica	15.84	106	eP	Pn	20 55 22.8	-1.0
TRCB				eS	S	20 58 26.3	+1.0
GO05	Huala	16.06	188	ePn	Pn	20 55 25.6	-0.8
	comp=Z,59nm,1.1s						
PTGB	Pitanga	16.79	113	eP	P	20 55 35.7	0.0
PTGB				eS	Sn	20 58 43.0	+0.7
CPSB	Cacapava Do Su	18.14	131	eP	P	20 55 50.7	+0.2
CPSB				eS	Sn	20 59 15.1	+0.5
FRTB	Fartura	18.72	107	eP	Pn	20 55 58.0	-0.6
FRTB				eS	Sn	20 59 32.6	+4.0
PLTB	Pedras Altas	18.84	135	eP	P	20 55 58.0	-0.1
PLTB				eS	S	20 59 26.5	+0.1
BB19B	Bebedouro	19.45	99	eP	P	20 56 04.8	-0.1
BB19B				eS	S	20 59 36.3	-2.3
CNLB	Canela	19.51	125	eP	P	20 56 05.5	+0.1
CNLB				eS	S	20 59 36.9	-2.9
TRQA	Tornquist	19.91	163	eP	P	20 56 09.8	+0.2
	comp=Z,92nm,0.8s						
TRQA	Tornquist	19.91	163	eP	P	20 56 09.8	+0.2
TRQA				pmax	pmax		
	comp=Z,92nm,0.8s						
PTGA	Pitinga	20.33	27	P	P	20 56 13.1	-1.2
	comp=Z,74nm,0.3s,baz=205,slow=9.6,SNR=222						
PTGA				S	S	20 59 48.1	-8.0
	comp=Z,9.9nm,0.6s,baz=241,slow=23,SNR=4.1						
PTGA	Pitinga	20.33	27	eP	P	20 56 12.9	-1.4
	comp=Z,68nm,0.6s						
PTGA	Pitinga	20.33	27	eP	P	20 56 13.2	-1.1
PTGA				eS	S	20 59 48.8	-7.3
BDFB	Brasilia	20.43	84	P	P	20 56 15.5	-0.1
	comp=Z,132nm,0.5s,baz=259,slow=9.9,SNR=66						
BDFB				LR	LR	21 04 39.0	
	comp=Z,174nm,21.7s,baz=257,slow=38						
BDFB	Brasilia	20.43	84	eP	P	20 56 15.4	-0.1
	comp=Z,138nm,0.6s						
RCLB	Rio Claro- Sao	20.46	103	eP	P	20 56 15.3	-0.5
RCLB				eS	S	20 59 56.7	-2.1
SPB	Sao Paulo	20.69	106	eP	P	20 56 17.2	-1.0
	comp=Z,81nm,1.0s						
SPB	Sao Paulo	20.69	106	eP	P	20 56 17.6	-0.6
SPB				eS	S	20 59 59.9	-3.2
PEXB	Peixe	21.21	74	eP	P	20 56 23.2	-0.7
PEXB				eS	S	21 00 10.3	-3.0
PMNB	Patos De Minas	21.48	92	eP	P	20 56 26.0	-0.8
PMNB				eS	S	21 00 15.9	-2.8
FLOC	Florencia	21.52	342	eP	P	20 56 29.5	+2.4
MACC	Macarena, Meta	21.60	347	eP	P	20 56 28.4	+0.4
PLCA	Paso Flores	21.61	183	P	P	20 56 28.2	+0.2
	comp=Z,158nm,1.0s,baz=25,slow=12,SNR=88						
PLCA	Paso Flores	21.61	183	eP	P	20 56 28.0	0.0
	comp=Z,219nm,1.0s						
PLCA	Paso Flores	21.61	183	eP	P	20 56 28.0	0.0
PLCA				pmax	pmax		
	comp=Z,219nm,1.0s						
PLCA	Paso Flores	21.61	183	eP	P	20 56 28.3	+0.2
PLCA				eS	S	21 00 14.6	-6.1
CRUC	La Cruz	21.92	339	eP	P	20 56 33.2	+1.5
SOTA	Rioblanco	22.33	340	eP	P	20 56 35.8	-0.4
BBAC	Balboa, Cauca	22.44	338	eP	P	20 56 39.6	+2.6
POPC	Popayan, Colom	22.73	340	eP	P	20 56 39.9	-0.1
MARP	Paez Belalcaza	22.80	342	eP	P	20 56 40.6	0.0
BSCB	Bom Sucesso	22.95	99	eP	P	20 56 40.8	-1.0
BSCB				eS	S	21 00 42.9	-0.6
SMTB	Santa Maria do	23.21	67	eP	P	20 56 43.6	-0.6
SMTB				eS	S	21 00 48.0	+0.5
PRAC	Prado	23.35	345	eP	P	20 56 45.0	-0.6
ORTC	Ortega, Tolima	23.63	345	eP	P	20 56 46.5	-1.5
GRGC	Isla de Gorgon	23.68	337	eP	P	20 56 49.6	+1.1
CHIC	Chingaza	24.00	349	eP	P	20 56 51.3	-0.4
YOTC	Yotoco, Valle	24.00	342	eP	P	20 56 51.2	-0.3
VAS01	Vassouras-RJ	24.23	102	eP	P	20 56 54.1	+0.7
VAS01				eS	S	21 01 02.7	-1.2
ROSC	El Rosal	24.32	347	P	P	20 56 56.3	+1.7
	comp=Z,13nm,0.5s,baz=41,slow=19,SNR=4.0						
ROSC	El Rosal	24.32	347	eP	P	20 56 56.0	+1.4
	comp=Z,10nm,0.8s						
YOPC	Yopal, Colombi	24.50	352	eP	P	20 56 56.3	+0.3
RREF	El Recreo	24.61	345	eP	P	20 56 57.7	+0.1
GUY2C	Guyana, Caldas	24.92	345	eP	P	20 57 00.3	+0.1
RUSC	La Rusia	25.12	351	eP	P	20 57 02.3	+0.2
NORC	Norcasia	25.14	346	eP	P	20 57 00.6	-1.2
DUB01	Friburgo-RJ	25.21	101	eP	P	20 57 03.5	+1.1
TAMC	Tame, Arauca	25.49	354	eP	P	20 57 04.3	-0.7
CAM01	Campos-RJ	25.86	101	eP	P	20 57 06.9	-1.3
HELC	Santa Helena	25.89	345	eP	P	20 57 08.0	-0.9
PTBC	PUERTO BERRIO,	26.00	348	eP	P	20 57 07.1	-2.4
SJMB	Sao Joao De Ma	26.43	94	eP	P	20 57 13.1	-0.3
SJMB				eS	S	21 01 39.9	+1.1
PAMC	Pamplona, Colo	26.49	352	eP	P	20 57 14.1	-0.3
BSFB	Barra de Sao F	26.73	94	eP	P	20 57 15.5	-0.6
BSFB				eS	S	21 01 42.5	-1.1
ALF01	Guarapari-ES	26.74	98	eP	P	20 57 16.9	+0.8
ALF01				eS	S	21 01 41.3	-2.3
ZARC	Zaragoza, Cauc	27.00	347	eP	P	20 57 16.8	-1.7
RIB01	Linhares ES	27.12	95	eP	P	20 57 19.8	+0.2
RIB01				eS	S	21 01 47.1	-2.5
PAYG	Puerto Ayora	27.66	309	eP	P	20 57 25.1	+0.6
	comp=Z,99nm,1.4s						
SDV	Santo Domingo	27.83	357	P	P	20 57 24.9	-1.1
	comp=Z,15nm,0.5s,baz=195,slow=6.7,SNR=10						
SDV	Santo Domingo	27.83	357	eP	P	20 57 25.0	-1.1
	comp=Z,20nm,0.8s						
SDV	Santo Domingo	27.83	357	eP	P	20 57 25.5	-0.6
SDV				eS	S	21 01 57.9	-3.3
SMLC	San Martn de	28.13	350	eP	P	20 57 26.0	-2.5
MDP	Montagnes des	29.00	36	P	P	20 57 35.7	-0.6
	comp=Z,14nm,0.6s,baz=214,slow=8.9,SNR=17						
CODC	Agustn Codazz	29.15	351	eP	P	20 57 33.8	-3.8
ARGC	Ariguani, Magd	29.20	350	eP	P	20 57 37.1	-0.9
PCRV	Puerto La Cruz	29.41	9	P	P	20 57 39.7	-0.2
	comp=Z,11nm,0.5s,baz=299,slow=0.5,SNR=7.5						
BCIP	Isla Barro Col	29.99	338	eP	P	20 57 46.2	+1.3
	comp=Z,115nm,1.4s						
BCIP	Isla Barro Col	29.99	338	eP	P	20 57 46.3	+1.3
BCIP				pmax	pmax		
	comp=Z,115nm,1.4s						
GO09	Cerro Castillo	32.22	184	eP	P	20 58 05.2	+0.9
	comp=Z,44nm,1.3s						
SVB	Belmont	33.07	14	eP	P	20 58 12.2	+0.1
	comp=Z,177nm,1.3s						
JTS	Las Juntas de	33.10	331	eP	P	20 58 11.6	-0.8
	comp=Z,23nm,0.9s						
JTS	Las Juntas de	33.10	331	ceP	P	20 58 15.5	+3.2
BBGH	Gun Hill	33.38	17	eP	P	20 58 14.7	-0.1
	comp=Z,1µm,1.4s						
EFI	East Falkland	33.67	168	eP	P	20 58 17.7	+0.9
	comp=Z,61nm,0.8s						
EFI	East Falkland	33.67	168	ceP	P	20 58 18.4	+1.5
EFI				pmax	pmax		
	comp=Z,181nm,2.5s						
GO10	Punta Arenas	34.04	182	eP	P	20 58 19.2	-0.9
	comp=Z,361nm,1.8s						
ESPN	Las Esperanzas	34.49	333	eP	P	20 58 25.9	+1.6
	comp=Z,126nm,0.4s						
FDF	Fort de France	34.51	14	eP	P	20 58 23.7	-0.8
	comp=Z,297nm,1.5s						
FDF	Fort de France	34.51	14	eP	P	20 58 23.7	-0.8
FDF				pmax	pmax		
	comp=Z,297nm,1.5s						
ACON	Acoyapa	34.67	332	eP	P	20 58 27.4	+1.4
	comp=Z,28nm,1.0s						
RCBR	Riachuelo	34.93	72	eP	P	20 58 28.5	+0.2
	comp=Z,91nm,0.7s						
RCBR	Riachuelo	34.93	72	eP	P	20 58 28.5	+0.2
RCBR				pmax	pmax		
	comp=Z,91nm,0.7s						
RCBR	Riachuelo	34.93	72	eP	P	20 58 28.2	0.0
RCBR				eS	S	21 03 47.8	-3.8
USHA	Ushuaia	35.69	179	P	P	20 58 33.9	-0.3
	comp=Z,22nm,0.8s,baz=348,slow=8.4,SNR=12						
ESTN	Estel	36.22	331	eP	P	20 58 40.2	+1.0
	comp=Z,54nm,1.2s						
CSGN	Cosiguina Volc	36.67	329	eP	P	20 58 43.5	+0.5
	comp=Z,40nm,0.7s						
OBIP	Obispado Ponce	36.98	4	eP	P	20 58 45.4	-0.1
SJG	San Juan	37.08	5	eP	P	20 58 45.5	-0.8
	comp=Z,35nm,1.0s						
SJG				eS	S	21 04 19.8	-4.3
SJG	San Juan	37.08	5	eP	P	20 58 45.5	-0.8
SJG				eS	S	21 04 19.8	-4.3
SJG				pmax	pmax		
	comp=Z,35nm,1.0s						
MPR	Mayaguez	37.11	3	eP	P	20 58 44.7	-2.0
	comp=Z,71nm,1.1s						
MTP	Monte Pirata	37.11	6	eP	P	20 58 44.5	-2.2
	comp=Z,323nm,0.8s						
ANWB	Willy Bob	37.23	12	eP	P	20 58 47.2	-0.4
	comp=Z,95nm,0.8s						
CBYP	Canovanas	37.26	5	eP	P	20 58 46.3	-1.7
	comp=Z,36nm,0.9s						
AOPR	Arecibo Observ	37.27	4	eP	P	20 58 46.2	-1.8
	comp=Z,28nm,0.6s						
CUPR	Culebra, Puert	37.35	6	eP	P	20 58 46.6	-2.0
PCDR	Punta Cana, DR	37.37	1	eP	P	20 58 47.7	-1.1
SMRT	St. Maarten	37.38	10	eP	P	20 58 46.5	-2.4
	comp=Z,125nm,1.0s						
EMPR	Esperanza - Ma	37.41	4	eP	P	20 58 47.7	-1.5
STVI	Saint Thomas	37.42	7	eP	P	20 58 47.8	-1.5
	comp=Z,34nm,0.9s						
LGNH	Logne	37.52	355	eP	P	20 58 49.9	-0.1
SDDR	Presa de Saban	37.89	357	eP	P	20 58 51.8	-1.4
	comp=Z,82nm,1.8s						
MTDJ	Mount Denham	37.99	347	eP	P	20 58 54.5	+0.3
	comp=Z,174nm,1.9s						
CBCY	The Bluff, Cay	39.97	344	eP	P	20 59 07.9	-2.6
	comp=Z,119nm,1.2s						
CCIG	Comitan	41.80	326	eP	P	20 59 25.9	0.0
	comp=Z,46nm,1.3s						
TEIG	Tepich	43.34	333	eP	P	20 59 38.3	+0.3
	comp=Z,49nm,0.9s						
062Z	Marathon	45.07	345	P	P	20 59 52.4	+0.7
	baz=164						
PMSA	Palmer Station	45.79	177	eP	P	20 59 56.2	-0.7
	comp=Z,65nm,1.0s						
PMSA	Palmer Station	45.79	177	eP	P	20 59 54.9	-2.0
061Z	Ochoppi	46.12	345	eP	P	21 00 00.3	+0.3
	comp=Z,200nm,1.1s						
061Z	Ochoppi	46.12	345	P	P	21 00 00.7	+0.7
	baz=164						
TLIG	Tlapa	46.51	320	eP	P	21 00 05.0	+1.6
	comp=Z,31nm,0.8s						
060Z	West Palm Beac	46.56	346	P	P	21 00 04.0	+0.6
	baz=165						
059Z	Ave Maria	46.71	345	P	P	21 00 05.1	+0.5
	baz=164						
060A	Indiantown	47.12	346	P	P	21 00 08.3	+0.5
	baz=165						
059A	Moore Haven	47.24	345	eP	P	21 00 09.1	+0.5
	comp=Z,134nm,0.8s						
059A	Moore Haven	47.24	345	P	P	21 00 09.2	+0.5
	baz=164,SNR=8.5						
058A	Arcadia	47.49	345	P	P	21 00 11.1	+0.5
	baz=164,SNR=7.2						
959A	Okeechobee	47.71	346	P	P	21 00 12.9	+0.6
	baz=165						
958A	Wauchula	47.98	345	P	P	21 00 15.0	+0.6
	baz=164						
957A	Wimauma	48.18	344	eP	P	21 00 15.4	-0.5
	comp=Z,135nm,0.8s						
957A	Wimauma	48.18	344	P	P	21 00 16.5	+0.5
	baz=163						
859A	Kempfer Cattle	48.23	346	P	P	21 00 16.9	+0.6
	baz=165,SNR=5.5						
DWPF	Disney Wildern	48.40	345	eP	P	21 00 17.6	-0.1
	comp=Z,111nm,0.7s						
DWPF	Disney Wildern	48.40	345	P	P	21 00 18.0	+0.3
	baz=164						
858A	St. Cloud	48.48	346	P	P	21 00 18.7	+0.5
	baz=164						
857A	Zephyrhills	48.75	345	P	P	21 00 20.6	+0.3
	baz=163						
758A	Lake Helen	49.17	346	P	P	21 00 24.2	+0.7
	baz=165,SNR=6.0						
757A	Oxford	49.35	345	P	P	21 00 25.6	+0.7
	baz=164,SNR=9.6						
658A	Bunnell	49.62	346	eP	P	21 00 26.4	-0.5
	comp=Z,44nm,0.8s						
656A	Willston	49.88	345	eP	P	21 00 29.2	+0.3
	comp=Z,167nm,0.6s						
656A	Willston	49.88	345	P	P	21 00 29.6	+0.7
	baz=163,SNR=19						
657A	Interlachen	49.92	345	P	P	21 00 29.8	+0.6
	baz=164,SNR=5.2						
655A	Horseshoe Beac	50.20	344	P	P	21 00 31.8	+0.5
	baz=162,SNR=10.0						
557A	Orange Park	50.30	346	P	P	21 00 32.7	+0.7
	baz=164,SNR=5.6						
556A	Lake Butler	50.45	345	P	P	21 00 33.7	+0.6
	baz=164,SNR=16						
555A	McAlpin	50.70	344	eP	P	21 00 35.4	+0.3
	comp=Z,152nm,0.6s						
555A	McAlpin	50.70	344	P	P	21 00 35.6	+0.6
	baz=163,SNR=15						
457A	Yulee	50.84	346	P	P	21 00 36.7	+0.6
	baz=165						
554A	Perry	50.85	344	P	P	21 00 36.9	+0.7
	baz=162,SNR=14						
456A	Hilliard	51.05	346	eP	P	21 00 37.9	+0.2
	comp=Z,197nm,0.7s						
456A				epP	pP	21 01 07.5	+1.4
456A	Hilliard	51.05	346	P	P	21 00 38.7	+1.1
	baz=164,SNR=7.6						
553A	Crawfordville	51.16	343	P	P	21 00 39.8	+1.4
	baz=161,SNR=21						
455A	Stateville	51.31	345	P	P	21 00 40.2	+0.6
	baz=163,SNR=8.6						
BBSR	BB Station	51.34	5	eP	P	21 00 39.0	-0.7
	comp=Z,13nm,0.9s						
552A	Lynn Haven	51.35	342	P	P	21 00 40.7	+0.8
	baz=160						
454A	Quitman	51.44	344	P	P	21 00 41.3	+0.7
	baz=162,SNR=22						
357A	Townsend	51.60	346	P	P	21 00 42.2	+0.4
	baz=165						
356A	Blackshear	51.65	346	P	P	21 00 42.6	+0.5
	baz=164						
453A	Whigham	51.76	343	eP	P	21 00 43.5	+0.6
	comp=Z,242nm,0.8s						
453A	Whigham	51.76	343	P	P	21 00 43.6	+0.7
	baz=162,SNR=23						
355A	Pearson	51.84	345	P	P	21 00 44.2	+0.6
	baz=163,SNR=5.7						
451A	Vernon	51.94	342	eP	P	21 00 44.2	-0.1
	comp=Z,314nm,1.5s						
451A	Vernon	51.94	342	P	P	21 00 44.9	+0.6
	baz=160						
452A	Marianna	51.99	342	P	P	21 00 45.1	+0.4
	baz=161,SNR=9.7						
257A	Skidaway Islan	52.03	347	eP	P	21 00 43.8	-1.1
	comp=Z,57nm,0.8s						
257A	Skidaway Islan	52.03	347	P	P	21 00 45.5	+0.6
	baz=166						
TIGA	Tifton	52.12	344	eP	P	21 00 45.8	+0.2
	comp=Z,94nm,0.8s						
TIGA	Tifton	52.12	344	P	P	21 00 46.0	+0.4
	baz=162						
353A	Camilla	52.19	344	P	P	21 00 46.7	+0.5
	baz=162,SNR=32						
256A	Glennville	52.23	346	P	P	21 00 47.0	+0.6
	baz=165,SNR=8.9						
255A	Hazlehurst	52.31	346	eP	P	21 00 47.1	+0.1
	comp=Z,98nm,1.0s						
255A	Hazlehurst	52.31	346	P	P	21 00 47.5	+0.5
	baz=164						
450A	Crestview	52.37	341	P	P	21 00 48.1	+0.7
	baz=159						
351A	Pinckard	52.51	342	P	P	21 00 49.2	+0.7
	baz=160						
352A	Blakely	52.51	343	eP	P	21 00 48.7	+0.2
	comp=Z,136nm,0.8s						
352A	Blakely	52.51	343	P	P	21 00 48.9	+0.4
	baz=161,SNR=17						
449A	Pace	52.52	340	P	P	21 00 49.0	+0.4
	baz=158						
254A	Abbeville	52.52	345	P	P	21 00 48.9	+0.3
	baz=163,SNR=32						
158A	Hollywood	52.60	348	P	P	21 00 49.7	+0.6
	baz=167						
157A	Early Branch	52.71	347	P	P	21 00 50.5	+0.5
	baz=166						
LNIG	Linares	52.76	325	eP	P	21 00 50.2	-0.3
	comp=Z,43nm,1.0s						
LNIG				ePcP	PcP	21 01 59.2	+0.6
RGRS	Roger Stewart	52.77	348	eP	P	21 00 50.8	+0.4
	comp=Z,2µm,0.4s						
156A	Sylvania	52.79	347	P	P	21 00 51.1	+0.6
	baz=165						
CSU	Charleston Sou	52.82	348	eP	P	21 00 51.3	+0.5
253A	Americus	52.85	344	eP	P	21 00 51.0	+0.1
	comp=Z,221nm,1.3s						
253A	Americus	52.85	344	P	P	21 00 51.1	+0.1
	baz=162,SNR=8.1						
BRAL	Brewton	52.85	341	eP	P	21 00 51.0	0.0
	comp=Z,98nm,0.8s						
BRAL				epP	pP	21 01 18.9	-0.5
BRAL	Brewton	52.85	341	P	P	21 00 51.4	+0.4
	baz=159						
350A	Dozier	52.86	341	P	P	21 00 51.3	+0.2
	baz=159						
ZAIG	Zacatecas	52.89	320	eP	P	21 00 52.9	+1.0
	comp=Z,36nm,0.9s						
ZAIG				epP	pP	21 01 20.8	+0.7
Z59A	Georgetown, SC	52.93	349	P	P	21 00 51.9	+0.4
	baz=168						
252A	Lumpkin	52.95	343	P	P	21 00 51.7	-0.1
	baz=161,SNR=13						
155A	Kite	52.97	346	P	P	21 00 52.3	+0.4
	baz=164,SNR=23						
349A	Repton	53.06	341	P	P	21 00 53.1	+0.5
	baz=158,SNR=12						
Z58A	St. Stephen	53.11	349	P	P	21 00 53.2	+0.3
	baz=167,SNR=5.7						
154A	Montrose	53.12	345	eP	P	21 00 52.9	0.0
	comp=Z,163nm,0.8s						
154A				epP	pP	21 01 21.9	+0.5
154A	Montrose	53.12	345	P	P	21 00 53.4	+0.4
	baz=163,SNR=8.4						
251A	Midway	53.22	343	P	P	21 00 53.6	-0.2
	baz=161,SNR=20						
Z57A	Bowman	53.25	348	P	P	21 00 54.3	+0.4
	baz=166,SNR=12						
153A	Fort Valley	53.33	345	P	P	21 00 54.3	-0.2
	baz=162,SNR=5.3						
250A	Grady	53.36	342	eP	P	21 00 54.1	-0.7
	comp=Z,60nm,0.8s						
250A				epP	pP	21 01 22.3	-1.1
250A	Grady	53.36	342	P	P	21 00 54.7	-0.1
	baz=160,SNR=5.6						
Z56A	Williston	53.41	347	eP	P	21 00 54.8	-0.3
	comp=Z,209nm,0.4s						
Z56A	Williston	53.41	347	P	P	21 00 55.4	+0.3
	baz=166						
Z55A	Blythe	53.48	346	P	P	21 00 55.8	+0.3
	baz=165						
Y60A	Bolivia	53.50	351	eP	P	21 00 56.0	+0.3
	comp=Z,86nm,0.8s						
Y60A	Bolivia	53.50	351	P	P	21 00 55.6	0.0
	baz=169						
152A	Waverly Hall	53.58	344	eP	P	21 00 55.9	-0.5
	comp=Z,45nm,0.8s						
152A				epP	pP	21 01 23.8	-1.1
152A	Waverly Hall	53.58	344	P	P	21 00 56.2	-0.2
	baz=162,SNR=23						
Y59A	Loris	53.59	350	P	P	21 00 56.2	-0.1
	baz=168						
151A	Opelika	53.61	343	P	P	21 00 56.2	-0.4
	baz=161,SNR=9.2						
249A	Camden	53.62	341	P	P	21 00 56.7	+0.1
	baz=159,SNR=9.3						
Y58A	Scranton	53.64	349	eP	P	21 00 56.5	-0.3
	comp=Z,74nm,0.6s						
Y58A	Scranton	53.64	349	P	P	21 00 56.8	0.0
	baz=168						
Z54A	Sparta	53.65	346	P	P	21 00 56.7	-0.1
	baz=164,SNR=27						
Y56A	Pelion	53.85	347	P	P	21 00 58.3	+0.1
	baz=166						
Z53A	Monticello	53.87	345	P	P	21 00 58.1	-0.4
	baz=163,SNR=11						
150A	Eclectic	53.88	342	P	P	21 00 58.2	-0.3
	baz=160,SNR=24						
Y57A	Sumter	53.88	348	eP	P	21 00 58.8	+0.3
	comp=Z,220nm,0.3s						
Y57A	Sumter	53.88	348	P	P	21 00 58.8	+0.3
	baz=167						
GOGA	Godfrey	53.97	345	eP	P	21 00 58.6	-0.5
	comp=Z,33nm,1.1s						
GOGA	Godfrey	53.97	345	eP	P	21 00 58.6	-0.5
GOGA				pmax	pmax		
	comp=Z,33nm,1.1s						
GOGA	Godfrey	53.97	345	P	P	21 00 58.9	-0.2
	baz=163,SNR=14						
Z52A	Williamson	53.99	344	P	P	21 00 59.1	-0.3

	baz=162,SNR=16						
X60A	**Albert Glenn T**	54.02	351	P	P	21 00 59.3	-0.2
	baz=170						
149A	**Jones**	54.10	342	P	P	21 00 59.6	-0.5
	baz=159,SNR=8.0						
Y55A	**Saluda**	54.10	347	P	P	21 01 00.5	+0.3
	baz=165,SNR=35						
X59A	**McDuffie Farm,**	54.11	350	P	P	21 01 00.9	+0.7
	baz=169						
Y54A	**Tignall**	54.21	346	P	P	21 01 00.9	0.0
	baz=164,SNR=27						
X58A	**Rowland**	54.22	350	*e*P	P	21 01 00.6	-0.3
	comp=Z,32nm,0.6s						
X58A	**Rowland**	54.22	350	P	P	21 01 00.9	0.0
	baz=168						
X57A	**Johnson Farm,**	54.26	349	P	P	21 01 01.5	+0.2
	baz=167						
JSC	**Jenkinsville**	54.31	348	*e*P	P	21 01 01.6	0.0
	comp=Z,46nm,0.9s						
JSC				*e*pP	pP	21 01 29.8	-0.5
JSC	**Jenkinsville**	54.31	348	*e*P	P	21 01 01.6	0.0
JSC				e*PP	pP	21 01 29.8	-0.5
JSC				pmax	pmax		
	comp=Z,46nm,0.9s						
Z51A	**Franklin**	54.31	343	P	P	21 01 01.7	0.0
	baz=161						
148A	**Greensboro**	54.38	341	P	P	21 01 01.9	-0.2
	baz=158,SNR=5.1						
Y53A	**Monroe**	54.42	345	P	P	21 01 02.2	-0.2
	baz=163,SNR=11						
W60A	**Pink Hill**	54.45	351	P	P	21 01 02.5	-0.1
	baz=170						
Z50A	**Ashland**	54.46	343	*e*P	P	21 01 02.2	-0.6
	comp=Z,66nm,0.7s						
Z50A				*e*pP	pP	21 01 30.4	-1.0
Z50A				*e*sP	sP	21 01 42.8	-1.8
Z50A	**Ashland**	54.46	343	P	P	21 01 02.5	-0.2
	baz=160,SNR=52						
X56A	**White Oak**	54.47	348	P	P	21 01 03.1	+0.3
	baz=166,SNR=15						
HODGE	**Hodges**	54.47	347	*e*P	P	21 01 02.7	-0.1
	comp=Z,29nm,0.8s						
HODGE				*e*pP	pP	21 01 32.3	+0.9
HODGE				*e*PcP	PcP	21 02 05.6	+0.7
W61A	**Ground Anchor**	54.48	352	P	P	21 01 02.7	-0.1
	baz=171						
BIRD	**Birdtown, Kers**	54.51	349	*e*P	P	21 01 03.0	0.0
	comp=Z,87nm,0.8s						
BIRD				*e*pP	pP	21 01 31.7	0.0
Y52A	**Lilburn**	54.54	345	*e*P	P	21 01 02.5	-0.8
	comp=Z,40nm,1.1s						
Y52A				*e*PcP	PcP	21 02 05.6	+0.3
Y52A	**Lilburn**	54.54	345	P	P	21 01 03.1	-0.2
	baz=162,SNR=8.2						
LRAL	**Lakeview Retre**	54.57	342	*e*P	P	21 01 02.7	-0.8
	comp=Z,18nm,0.6s						
LRAL	**Lakeview Retre**	54.57	342	P	P	21 01 03.0	-0.5
	baz=159,SNR=14						
X55A	**Gracelyn & Ava**	54.57	347	P	P	21 01 03.9	+0.4
	baz=165,SNR=39						
Z49A	**Columbiana**	54.58	342	P	P	21 01 03.2	-0.4
	baz=160,SNR=33						
147A	**Livingston**	54.63	340	*e*P	P	21 01 03.2	-0.7
147A				*e*pP	pP	21 01 31.1	-1.5
147A	**Livingston**	54.63	340	P	P	21 01 03.6	-0.4
	baz=158						
W58A	**Raeford**	54.66	350	P	P	21 01 04.5	+0.4
	baz=168						
CNNC	**Cliffs of the**	54.66	351	P	P	21 01 04.0	-0.1
	baz=170						
W59A	**Clinton**	54.67	351	P	P	21 01 04.3	+0.1
	baz=169						
X54A	**Belton**	54.80	347	P	P	21 01 05.5	+0.3
	baz=165,SNR=28						
Y51A	**Rockmart**	54.83	344	P	P	21 01 05.1	-0.4
	baz=161,SNR=32						
W57A	**Gilead**	54.91	349	*e*P	P	21 01 05.8	-0.2
	comp=Z,48nm,0.9s						
W57A	**Gilead**	54.91	349	P	P	21 01 05.9	0.0
	baz=167,SNR=15						
PAULI	**Pauline**	54.95	347	*e*P	P	21 01 06.5	+0.3
	comp=Z,57nm,0.7s						
PAULI				*e*pP	pP	21 01 33.0	-2.0
X53A	**Estanollee**	54.97	346	P	P	21 01 06.4	0.0
	baz=164,SNR=9.3						
VBMS	**Vicksburg**	54.97	338	*e*P	P	21 01 05.6	-0.9
	comp=Z,100nm,0.3s						
VBMS	**Vicksburg**	54.97	338	P	P	21 01 06.5	+0.1
	baz=155						
W56A	**Indian Trail**	55.01	349	P	P	21 01 06.8	+0.1
	baz=167,SNR=26						
Y50A	**Piedmont**	55.01	343	P	P	21 01 06.3	-0.4
	baz=161,SNR=11						
HKT	**Hockley**	55.12	332	*e*P	P	21 01 08.2	+0.7
	comp=Z,34nm,1.1s						
HKT				*e*pP	pP	21 01 35.6	-0.4
HKT	**Hockley**	55.12	332	*e*P	P	21 01 08.2	+0.7
HKT				e*PP	pP	21 01 35.6	-0.4
HKT				pmax	pmax		
	comp=Z,34nm,1.1s						
KMSC	**Kings Mountain**	55.16	348	*e*P	P	21 01 07.7	0.0
	comp=Z,69nm,0.6s						
KMSC				*e*pP	pP	21 01 36.2	-0.4
KMSC	**Kings Mountain**	55.16	348	P	P	21 01 08.2	+0.4
	baz=166,SNR=31						
Y49A	**Blount Mountai**	55.16	342	*e*P	P	21 01 07.0	-0.8
	comp=Z,31nm,1.0s						
Y49A				*e*pP	pP	21 01 35.1	-1.5
Y49A	**Blount Mountai**	55.16	342	P	P	21 01 07.4	-0.5
	baz=160,SNR=18						
X52A	**Dahlonega**	55.21	345	P	P	21 01 07.8	-0.3
	baz=163,SNR=11						
V59A	**Middlesex**	55.23	351	P	P	21 01 08.1	-0.1
	baz=169,SNR=14						
W54A	**Cherokee Point**	55.28	347	P	P	21 01 09.2	+0.6
	baz=165,SNR=34						
BG3	**Lake Jocassee**	55.35	346	*e*P	P	21 01 09.4	+0.2
	comp=Z,19nm,0.8s						
BG3				*e*pP	pP	21 01 38.1	+0.2
V58A	**Windy Hill, Pi**	55.39	350	P	P	21 01 09.4	0.0
	baz=168						
X51A	**Calhoun**	55.41	344	*e*P	P	21 01 09.1	-0.5
	comp=Z,71nm,1.1s						
X51A				*e*pP	pP	21 01 36.8	-1.5
X51A	**Calhoun**	55.41	344	P	P	21 01 09.3	-0.3
	baz=162,SNR=19						
Y48A	**Jasper**	55.44	342	P	P	21 01 09.0	-0.8
	baz=159,SNR=7.5						
833A	**Chaparral WMA,**	55.48	327	*e*P	P	21 01 10.6	+0.4
	comp=Z,105nm,1.0s						
833A				*e*pP	pP	21 01 39.1	+0.3
833A	**Chaparral WMA,**	55.48	327	P	P	21 01 11.0	+0.8
	baz=145,SNR=13						
X50B	**Fort Payne**	55.52	343	P	P	21 01 09.8	-0.6
	baz=161						
W53A	**Cullowhee**	55.58	346	P	P	21 01 11.1	+0.2
	baz=164,SNR=51						
V57A	**Coltrane Farms**	55.59	350	P	P	21 01 10.7	-0.1
	baz=168,SNR=13						
V56A	**Mocksville**	55.65	349	*e*P	P	21 01 11.5	+0.2
	comp=Z,87nm,0.8s						
V56A				*e*pP	pP	21 01 40.0	+0.1
V56A	**Mocksville**	55.65	349	P	P	21 01 11.8	+0.6
	baz=167,SNR=42						
W52A	**Murphy**	55.68	345	*e*P	P	21 01 11.2	-0.3
	comp=Z,38nm,1.0s						
W52A				*e*pP	pP	21 01 39.4	-0.9
W52A	**Murphy**	55.68	345	P	P	21 01 11.5	0.0
	baz=163,SNR=9.3						
U59A	**Littleton**	55.74	352	*e*P	P	21 01 11.4	-0.4
	comp=Z,24nm,0.9s						
U59A				*e*pP	pP	21 01 39.6	-1.0
U59A	**Littleton**	55.74	352	P	P	21 01 11.7	-0.1
	baz=170,SNR=7.5						
X49A	**Woodville**	55.76	343	P	P	21 01 11.6	-0.4
	baz=160						
U60A	**Pendleton**	55.77	352	P	P	21 01 11.9	-0.2
	baz=171						
V55A	**Taylorsville**	55.82	348	P	P	21 01 13.1	+0.6
	baz=166,SNR=16						
U58A	**Oxford**	55.89	351	P	P	21 01 12.8	-0.1
	baz=169,SNR=8.0						
V54A	**Nebo**	55.90	347	P	P	21 01 13.5	+0.4
	baz=165,SNR=39						
X48A	**Hartselle**	55.90	342	*e*P	P	21 01 12.3	-0.8
	comp=Z,73nm,1.2s						
X48A				*e*pP	pP	21 01 40.5	-1.4
X48A	**Hartselle**	55.90	342	P	P	21 01 12.7	-0.3
	baz=159,SNR=23						
W51A	**Cleveland**	55.95	345	P	P	21 01 13.3	-0.1
	baz=162,SNR=39						
V53A	**Saluda**	55.98	347	*e*P	P	21 01 13.3	-0.3
	comp=Z,30nm,0.7s						
V53A	**Saluda**	55.98	347	P	P	21 01 13.7	+0.1
	baz=164,SNR=20						
U57A	**Blanch**	56.05	350	P	P	21 01 14.1	0.0
	baz=168,SNR=14						
W50A	**Signal Mountai**	56.13	344	*e*P	P	21 01 14.3	-0.4
W50A				*e*pP	pP	21 01 42.0	-1.5
W50A	**Signal Mountai**	56.13	344	P	P	21 01 14.6	-0.1
	baz=161,SNR=21						
U56A	**King**	56.15	349	P	P	21 01 15.5	+0.7
	baz=167,SNR=8.3						
CPCT	**Cooper Cave**	56.17	345	*e*P	P	21 01 14.4	-0.5
	comp=Z,53nm,1.1s						
CPCT				*e*pP	pP	21 01 43.0	-0.8
NATX	**Nacogdoches**	56.17	334	*e*P	P	21 01 15.7	+0.7
	comp=Z,82nm,0.7s						
NATX	**Nacogdoches**	56.17	334	P	P	21 01 16.2	+1.2
	baz=151						
X47A	**Russelville**	56.20	341	P	P	21 01 14.5	-0.7
	baz=158,SNR=10						
W49A	**Belvidere**	56.31	343	P	P	21 01 15.5	-0.5
	baz=160,SNR=11						
SWET	**Sewanee**	56.31	343	*e*P	P	21 01 15.3	-0.7
	comp=Z,58nm,0.7s						
SWET				*e*pP	pP	21 01 43.8	-1.1
T59A	**Double "B" Far**	56.32	352	*e*P	P	21 01 15.7	-0.3
	comp=Z,45nm,0.8s						
T59A				*e*pP	pP	21 01 43.3	-1.4
T59A	**Double "B" Far**	56.32	352	P	P	21 01 15.8	-0.2
	baz=170,SNR=20						
V52A	**Sevierville**	56.32	346	*e*P	P	21 01 15.6	-0.4
	comp=Z,74nm,0.8s						
V52A				*e*pP	pP	21 01 44.2	-0.7
V52A	**Sevierville**	56.32	346	P	P	21 01 15.8	-0.2
	baz=163,SNR=31						
T60A	**Surry**	56.38	353	P	P	21 01 16.2	-0.2
	baz=171						
U55A	**TA2, Sparta**	56.42	348	P	P	21 01 17.2	+0.4
	baz=166,SNR=22						
T58A	**Grand View Acr**	56.43	351	P	P	21 01 16.6	-0.1
	baz=169,SNR=17						
V51A	**Loudon**	56.46	345	*e*P	P	21 01 16.6	-0.3
	comp=Z,32nm,0.8s						
V51A	**Loudon**	56.46	345	P	P	21 01 16.7	-0.3
	baz=163,SNR=6.8						
X46A	**Booneville**	56.46	341	P	P	21 01 16.2	-0.9
	baz=158						
W48A	**Pulaski**	56.51	343	P	P	21 01 17.0	-0.4
	baz=160,SNR=24						
V50A	**Pikevile**	56.52	344	P	P	21 01 17.3	-0.2
	baz=162,SNR=70						
U54A	**Nelsons Funny**	56.59	348	*e*P	P	21 01 18.6	+0.6
	comp=Z,94nm,0.9s						
U54A				*e*pP	pP	21 01 46.4	-0.6
U54A	**Nelsons Funny**	56.59	348	P	P	21 01 18.4	+0.4
	baz=166,SNR=8.6						
T57A	**Hurt**	56.59	350	*e*P	P	21 01 17.6	-0.3
	comp=Z,68nm,1.3s						
T57A				*e*pP	pP	21 01 45.7	-1.0
T57A	**Hurt**	56.59	350	P	P	21 01 18.0	+0.1
	baz=168,SNR=20						
U53A	**Fall Branch**	56.59	347	P	P	21 01 17.7	-0.3
	baz=165,SNR=6.4						
435B	**Jarrell**	56.63	331	*e*P	P	21 01 18.9	+0.6
	comp=Z,55nm,0.6s						
435B				*e*PcP	PcP	21 02 14.8	+1.5
435B	**Jarrell**	56.63	331	P	P	21 01 19.1	+0.7
	baz=147,SNR=5.4						
OXF	**Oxford**	56.69	340	*e*P	P	21 01 17.6	-1.0
	comp=Z,52nm,0.7s						
OXF				*e*PcP	PcP	21 02 13.3	-0.2
OXF	**Oxford**	56.69	340	*e*P	P	21 01 17.6	-1.0
OXF				*e*		21 02 13.3	
OXF				pmax	pmax		
	comp=Z,52nm,0.7s						
PLAL	**Pickwick Lake**	56.70	341	*e*P	P	21 01 18.0	-0.7
	comp=Z,40nm,1.0s						
PLAL				*e*pP	pP	21 01 46.7	-0.9
Z41A	**Richland Creek**	56.75	336	*e*P	P	21 01 19.4	+0.3
	comp=Z,34nm,0.6s						
Z41A	**Richland Creek**	56.75	336	P	P	21 01 19.6	+0.5
	baz=153						
T56A	**Rocky Mt**	56.75	350	P	P	21 01 19.8	+0.8
	baz=168,SNR=16						
U52A	**Thorn Hill**	56.80	346	P	P	21 01 19.1	-0.4
	baz=164,SNR=6.6						
W47A	**Westpoint**	56.81	342	P	P	21 01 18.8	-0.7
	baz=159,SNR=13						
V49A	**McMinnville**	56.82	344	P	P	21 01 19.0	-0.6
	baz=161,SNR=41						
U51A	**La Follette**	56.93	346	P	P	21 01 20.0	-0.4
	baz=163,SNR=12						
W46A	**Michie**	56.93	341	P	P	21 01 19.4	-1.0
	baz=158						
CCAR	**Cane Creek**	56.95	338	*e*P	P	21 01 20.7	+0.1
	comp=Z,46nm,0.7s						
T55A	**Pulaski**	56.97	349	P	P	21 01 21.6	+0.9
	baz=167,SNR=22						
TZTN	**Tazewell**	56.98	346	*e*P	P	21 01 18.8	-1.9
TZTN				*e*pP	pP	21 01 46.2	-3.4
TZTN	**Tazewell**	56.98	346	P	P	21 01 20.5	-0.2
	baz=164						
BLA	**Blacksburg**	56.99	349	*e*P	P	21 01 21.2	+0.4
	comp=Z,26nm,0.8s						
BLA	**Blacksburg**	56.99	349	*e*P	P	21 01 21.2	+0.4
BLA				pmax	pmax		
	comp=Z,26nm,0.8s						
BLA	**Blacksburg**	56.99	349	P	P	21 01 21.5	+0.6
	baz=167,SNR=8.6						
S58A	**Poland Farm, P**	57.02	352	*e*P	P	21 01 20.6	-0.3
	comp=Z,23nm,1.3s						
S58A	**Poland Farm, P**	57.02	352	P	P	21 01 20.6	-0.3
	baz=170						
V48A	**Smith Brothers**	57.05	343	*e*P	P	21 01 20.2	-1.0
	comp=Z,56nm,0.8s						
V48A				*e*pP	pP	21 01 49.3	-0.8
V48A				*e*sP	sP	21 02 02.0	-1.2
V48A	**Smith Brothers**	57.05	343	P	P	21 01 20.9	-0.3
	baz=160,SNR=23						
S59A	**Mechanicsville**	57.06	352	P	P	21 01 21.3	+0.1
	baz=171						
T54A	**Tazewell**	57.06	348	P	P	21 01 21.4	+0.1
	baz=166,SNR=5.7						
U50A	**Jamestown**	57.16	345	P	P	21 01 21.6	-0.4
	baz=162,SNR=25						
T53A	**Wise**	57.18	347	P	P	21 01 22.3	+0.2
	baz=165,SNR=5.6						
X43A	**Marvell**	57.18	339	*e*P	P	21 01 22.6	+0.5
	comp=Z,74nm,0.9s						
X43A	**Marvell**	57.18	339	P	P	21 01 22.1	0.0
	baz=155						
CLTN	**Cedars of Leba**	57.24	343	*e*P	P	21 01 21.7	-0.8
	comp=Z,36nm,0.8s						
CLTN				*e*pP	pP	21 01 50.5	-1.0
CLTN				*e*sP	sP	21 02 03.5	-1.0
WLAR	**White Oak Lake**	57.25	336	*e*P	P	21 01 23.5	+0.9
	comp=Z,111nm,1.1s						
WLAR				*e*pP	pP	21 01 51.7	+0.2
S57A	**Dark Hollow, R**	57.29	351	*e*P	P	21 01 22.9	+0.1
	comp=Z,44nm,1.2s						
S57A				*e*pP	pP	21 01 50.3	-1.4
S57A				*e*sP	sP	21 02 04.1	-0.7
S57A	**Dark Hollow, R**	57.29	351	P	P	21 01 23.1	+0.3
	baz=169,SNR=13						
S56A	**Natural Bridge**	57.30	350	P	P	21 01 23.3	+0.3
	baz=168						
V47A	**Nunnelly**	57.33	342	P	P	21 01 22.3	-0.9
	baz=159,SNR=11						
R58B	**Mineral**	57.34	352	*e*P	P	21 01 22.8	-0.3
	comp=Z,20nm,0.8s						
R58B	**Mineral**	57.34	352	P	P	21 01 23.2	+0.1
	baz=170,SNR=14						
T52A	**Hallie**	57.40	347	*e*P	P	21 01 23.3	-0.3
	comp=Z,46nm,0.8s						
T52A	**Hallie**	57.40	347	P	P	21 01 23.4	-0.3
	baz=164						
JCT	**Junction City**	57.44	328	*e*P	P	21 01 24.2	+0.1
	comp=Z,30nm,0.8s						
JCT				*e*pP	pP	21 01 51.8	-1.1
JCT	**Junction City**	57.44	328	*e*P	P	21 01 24.2	+0.1
JCT				e*PP	pP	21 01 51.8	-1.1
JCT				pmax	pmax		
	comp=Z,30nm,0.8s						
JCT	**Junction City**	57.44	328	P	P	21 01 24.3	+0.2
	baz=145,SNR=15						
R59A	**King George, V**	57.47	353	P	P	21 01 24.3	+0.2
	baz=171,SNR=5.8						
R60A	**Leonardtown, M**	57.47	353	P	P	21 01 24.1	+0.1
	baz=172						
T51A	**Gray**	57.48	346	P	P	21 01 24.1	-0.1
	baz=163,SNR=6.2						
V46A	**Holladay**	57.48	342	P	P	21 01 22.7	-1.5
	baz=159,SNR=10.0						
U49A	**Red Boiling Sp**	57.49	344	P	P	21 01 23.7	-0.6
	baz=161,SNR=23						
CBN	**Corbin Frederi**	57.51	352	*e*P	P	21 01 24.3	0.0
	comp=Z,23nm,0.6s						
CBN	**Corbin Frederi**	57.51	352	P	P	21 01 24.3	0.0
	baz=171						
S55A	**Lewisburg**	57.56	349	P	P	21 01 25.5	+0.7
	baz=167,SNR=39						
WHTX	**Lake Whitney,**	57.59	331	*e*P	P	21 01 25.6	+0.6
	comp=Z,88nm,0.6s						
WHTX	**Lake Whitney,**	57.59	331	P	P	21 01 25.7	+0.6
	baz=148,SNR=21						
R58A	**Rapidan**	57.68	352	P	P	21 01 25.7	+0.2
	baz=170,SNR=10						
U48A	**Cassie Pea, Po**	57.69	343	P	P	21 01 25.4	-0.3
	baz=160,SNR=24						
WVT	**Waverly**	57.70	342	*e*P	P	21 01 24.7	-1.0
	comp=Z,54nm,0.7s						
WVT				*e*pP	pP	21 01 53.4	-1.3
WVT	**Waverly**	57.70	342	*e*P	P	21 01 24.7	-1.0
WVT				e*PP	pP	21 01 53.4	-1.3
WVT				pmax	pmax		
	comp=Z,54nm,0.7s						
WVT	**Waverly**	57.70	342	P	P	21 01 24.9	-0.8
	baz=159						
S54A	**Dingess, Beckl**	57.73	349	P	P	21 01 26.3	+0.3
	baz=166,SNR=11						
T50A	**Nancy**	57.74	345	P	P	21 01 25.5	-0.5
	baz=162,SNR=22						
R57A	**Stanardsville**	57.75	351	P	P	21 01 26.5	+0.4
	baz=169,SNR=14						
S53A	**Williamson**	57.77	348	P	P	21 01 26.3	0.0
	baz=165,SNR=5.0						
U47A	**Clarksville**	57.83	343	P	P	21 01 25.9	-0.8
	baz=160,SNR=29						
X40A	**Basin Creek Fa**	57.85	337	*e*P	P	21 01 25.9	-1.0
X40A				*e*pP	pP	21 01 55.9	+0.1
HPIG		57.87	321	*e*P	P	21 01 27.4	0.0
	comp=Z,32nm,1.1s						
HPIG				*e*pP	pP	21 01 56.0	-0.3
UALR	**University of**	57.93	337	*e*P	P	21 01 27.2	-0.2
	comp=Z,59nm,1.5s						
UALR				*e*pP	pP	21 01 56.5	+0.1
S52A	**Salyersville**	57.97	347	P	P	21 01 27.4	-0.2
	baz=164						
R55A	**Marlinton**	57.99	350	*e*P	P	21 01 28.2	+0.4
	comp=Z,27nm,0.9s						
R55A				*e*pP	pP	21 01 58.2	+1.5
R55A	**Marlinton**	57.99	350	P	P	21 01 28.6	+0.8
	baz=168,SNR=8.8						
T49A	**Edmonton**	57.99	345	*e*P	P	21 01 27.2	-0.5
	comp=Z,99nm,0.8s						
T49A				*e*pP	pP	21 01 55.3	-1.5
T49A	**Edmonton**	57.99	345	P	P	21 01 27.4	-0.3
	baz=162,SNR=43						
R56A	**Bull Pasture M**	57.99	350	P	P	21 01 28.1	+0.2
	baz=168,SNR=11						
U46A	**Springville**	58.01	342	P	P	21 01 27.3	-0.6
	baz=159,SNR=6.9						
R54A	**Victor**	58.04	349	P	P	21 01 28.5	+0.4
	baz=167,SNR=20						
S51A	**Beattyville**	58.04	346	P	P	21 01 27.9	-0.2
	baz=164						
HBAR	**Harrisburg**	58.05	339	*e*P	P	21 01 28.1	-0.1
	comp=Z,34nm,0.7s						
Q59A	**Harwood**	58.07	353	P	P	21 01 28.2	-0.1
	baz=172						
Q60A	**Greensboro**	58.12	354	P	P	21 01 28.8	+0.2
	baz=172						
MIAR	**Mount Ida**	58.19	336	*e*P	P	21 01 28.6	-0.6
	comp=Z,68nm,1.4s						
MIAR				*e*pP	pP	21 01 58.0	-0.2
MIAR	**Mount Ida**	58.19	336	*e*P	P	21 01 28.6	-0.6
MIAR				e*PP	pP	21 01 58.0	-0.2
MIAR				pmax	pmax		
	comp=Z,68nm,1.4s						
MIAR	**Mount Ida**	58.19	336	P	P	21 01 29.4	+0.2
	baz=153,SNR=20						
UTMT	**University of**	58.20	341	*e*P	P	21 01 28.7	-0.6
	comp=Z,91nm,0.4s						
GNAR	**Gosnell**	58.22	340	*e*P	P	21 01 28.9	-0.5
	comp=Z,141nm,0.3s						
T48A	**Bowling Green**	58.22	344	P	P	21 01 28.7	-0.6
	baz=161,SNR=22						
W41B	**Gary Mavity, V**	58.26	338	*e*P	P	21 01 29.0	-0.6
	comp=Z,14nm,0.6s						
W41B				*e*pP	pP	21 01 58.2	-0.5
W41B	**Gary Mavity, V**	58.26	338	P	P	21 01 29.4	-0.3
	baz=154,SNR=12						
S50A	**Richmond**	58.26	346	P	P	21 01 28.6	-1.0
	baz=163,SNR=7.8						
GLAT	**Glass**	58.26	341	*e*P	P	21 01 28.9	-0.7
	comp=Z,92nm,0.5s						
Q58A	**Fox Den Farm,**	58.27	352	P	P	21 01 29.9	+0.2
	baz=170,SNR=13						
T47A	**Sharon Grove**	58.29	343	*e*P	P	21 01 29.2	-0.6
	comp=Z,100nm,0.8s						
T47A				*e*pP	pP	21 01 57.3	-1.6
T47A				*e*sP	sP	21 02 10.4	-1.6
T47A	**Sharon Grove**	58.29	343	P	P	21 01 29.3	-0.6
	baz=160,SNR=37						
R53A	**Hurricane**	58.37	348	*e*P	P	21 01 28.9	-1.5
	comp=Z,71nm,1.1s						
R53A				*e*pP	pP	21 01 59.4	+0.1
R53A	**Hurricane**	58.37	348	P	P	21 01 30.5	+0.1
	baz=166						
WHAR	**Wooly Hollow**	58.37	338	*e*P	P	21 01 30.0	-0.5
	comp=Z,15nm,0.9s						
WHAR				*e*pP	pP	21 01 59.0	-0.5
Q57A	**Strasburg**	58.46	352	P	P	21 01 31.7	+0.7
	baz=170,SNR=18						
R52A	**Catlettsburg**	58.51	348	P	P	21 01 31.1	-0.3
	baz=165						
TXAR	**Lajitas Array**	58.55	325	P	P	21 01 32.4	+0.5
	comp=Z,7.9nm,0.8s,baz=141,slow=8.1,SNR=47						
TXAR				pP	pP	21 01 59.6	-1.2
	comp=Z,3.3nm,0.9s,baz=133,slow=7.3,SNR=3.4						
TX31	**Lajitas Ar. Si**	58.55	325	*e*P	P	21 01 32.1	+0.1
	comp=Z,11nm,0.9s						
T46A	**Princeton**	58.56	342	P	P	21 01 31.3	-0.4
	baz=159,SNR=29						
S49A	**Springfield**	58.57	345	P	P	21 01 31.0	-0.8
	baz=162,SNR=16						
Q56A	**Snyder Ridge,**	58.58	351	P	P	21 01 32.7	+0.9
	baz=169,SNR=22						
SDMD	**Soldier's Deli**	58.63	353	*e*P	P	21 01 32.3	+0.1
	comp=Z,7.7nm,0.8s						
S48A	**Wiedeman Farm,**	58.65	344	P	P	21 01 31.4	-0.9
	baz=161,SNR=36						
R51A	**Hillsboro**	58.67	347	P	P	21 01 32.3	-0.2
	baz=164						
Q55A	**Buckhannon**	58.68	350	P	P	21 01 33.6	+1.0
	baz=168,SNR=16						
T45A	**Paducah**	58.76	342	*e*P	P	21 01 32.4	-0.7
	comp=Z,141nm,0.6s						
T45A				*e*pP	pP	21 02 01.6	-0.5
T45A	**Paducah**	58.76	342	P	P	21 01 32.7	-0.5
	baz=158						
P58A	**Pank, Wackersv**	58.76	353	P	P	21 01 33.1	0.0
	baz=171,SNR=5.1						
PARMO	**Parma**	58.77	341	*e*P	P	21 01 33.0	-0.2
	comp=Z,113nm,0.7s						
P59A	**Jarrettsville**	58.78	353	P	P	21 01 33.6	+0.4
	baz=172,SNR=7.7						
Q54A	**Coxs Mills**	58.79	349	*e*P	P	21 01 33.3	0.0
	comp=Z,44nm,0.8s						
Q54A				*e*pP	pP	21 02 01.9	-0.4
Q54A	**Coxs Mills**	58.79	349	P	P	21 01 33.4	+0.2
	baz=167,SNR=19						
Q53A	**Leroy**	58.80	349	P	P	21 01 33.5	+0.2
	baz=166,SNR=24						
S47A	**Hartford**	58.80	344	P	P	21 01 32.5	-0.9
	baz=160,SNR=17						
R50A	**Paris**	58.82	346	*e*P	P	21 01 33.0	-0.5
	comp=Z,39nm,0.8s						
R50A				*e*pP	pP	21 02 01.6	-1.0

R50A	Paris	58.82	346	P	P	21 01 33.2	-0.3
	baz=163,SNR=11						
W39A	Magazine	58.84	336	eP	P	21 01 33.9	+0.2
	comp=Z,36nm,1.0s						
W39A				epP	pP	21 02 02.7	-0.1
W39A				ePcP	PcP	21 02 21.3	-0.7
W39A	Magazine	58.84	336	P	P	21 01 34.2	+0.5
	baz=152,SNR=17						
P57A	Homestead Farm	58.85	352	P	P	21 01 34.3	+0.6
	baz=170,SNR=9.3						
FCAR	Ozark Folk Cen	58.85	338	eP	P	21 01 33.2	-0.6
	comp=Z,20nm,0.9s						
FCAR				epP	pP	21 02 02.6	-0.2
P60A	Greenville	58.90	354	P	P	21 01 33.7	-0.3
	baz=173,SNR=5.8						
X37A	Clayton	58.93	335	eP	P	21 01 34.8	+0.5
	comp=Z,79nm,0.9s						
P56A	Dayton Farm, R	58.98	351	P	P	21 01 35.4	+0.8
	baz=169,SNR=9.5						
PSUB	Penn St. - Bra	59.00	354	eP	P	21 01 34.8	+0.1
	comp=Z,15nm,0.8s						
R49A	Shelbyville	59.03	345	eP	P	21 01 34.0	-0.9
	comp=Z,28nm,0.8s						
R49A	Shelbyville	59.03	345	P	P	21 01 34.1	-0.8
	baz=162,SNR=9.3						
Q52A	Bidwell	59.04	348	P	P	21 01 34.8	-0.2
	baz=165,SNR=8.9						
O61A	Allentown	59.09	355	P	P	21 01 35.3	0.0
	baz=174						
PBMO	Poplar Bluff	59.09	340	eP	P	21 01 34.7	-0.7
	comp=Z,62nm,0.5s						
PBMO				epP	pP	21 02 03.0	-1.4
S46A	Don Dixon Farm	59.12	343	P	P	21 01 34.8	-0.7
	baz=159,SNR=9.0						
ABTX	Abilene, Hawle	59.13	330	eP	P	21 01 35.6	-0.2
	comp=Z,56nm,0.8s						
ABTX				epP	pP	21 02 04.3	-0.3
ABTX	Abilene, Hawle	59.13	330	P	P	21 01 36.1	+0.3
	baz=146,SNR=11						
P55A	Reedsville	59.14	350	P	P	21 01 36.5	+0.8
	baz=168,SNR=12						
WCI	Wyandotte Cave	59.25	344	eP	P	21 01 35.5	-0.9
	comp=Z,55nm,0.9s						
WCI				epP	pP	21 02 04.1	-1.4
WCI	Wyandotte Cave	59.25	344	eP	P	21 01 35.5	-0.9
WCI				e*PP	pP	21 02 04.1	-1.4
WCI				pmax	pmax		
	comp=Z,55nm,0.9s						
WCI	Wyandotte Cave	59.25	344	P	P	21 01 35.8	-0.7
	baz=161						
Q50A	Georgetown	59.28	347	P	P	21 01 36.3	-0.4
	baz=164,SNR=16						
MCWV	Mont Chateau	59.29	350	eP	P	21 01 37.1	+0.4
	comp=Z,25nm,0.8s						
MCWV				epP	pP	21 02 05.4	-0.3
MCWV	Mont Chateau	59.29	350	P	P	21 01 37.3	+0.6
	baz=168,SNR=15						
R48A	Northridge Ran	59.30	345	P	P	21 01 36.2	-0.6
	baz=162,SNR=5.5						
Q51A	Peebles	59.32	347	eP	P	21 01 36.4	-0.5
	comp=Z,34nm,0.8s						
Q51A	Peebles	59.32	347	P	P	21 01 36.6	-0.3
	baz=164						
P54A	Burton	59.34	350	P	P	21 01 37.4	+0.3
	baz=167,SNR=28						
O58A	Lewisberry	59.34	353	P	P	21 01 37.0	0.0
	baz=171						
USIN	University of	59.36	343	eP	P	21 01 36.5	-0.7
	comp=Z,62nm,1.1s						
R47A	Wooly Knot Far	59.37	344	P	P	21 01 36.4	-0.9
	baz=161,SNR=11						
P53A	Whipple	59.38	349	eP	P	21 01 37.5	+0.2
	comp=Z,95nm,0.6s						
P53A				epP	pP	21 02 06.5	+0.1
P53A	Whipple	59.38	349	P	P	21 01 37.7	+0.3
	baz=166,SNR=27						
O60A	Telford	59.38	354	P	P	21 01 37.3	0.0
	baz=173,SNR=5.5						
PAGS	Pennsylvania G	59.43	353	eP	P	21 01 37.4	-0.3
	comp=Z,7.6nm,0.6s						
PAGS				epP	pP	21 02 05.1	-1.6
O57A	Amberson	59.52	352	P	P	21 01 38.9	+0.6
	baz=171,SNR=7.8						
U40A	Yellville	59.53	338	P	P	21 01 38.1	-0.3
	baz=154,SNR=26						
R46A	Gibon Southern	59.55	343	P	P	21 01 37.4	-1.1
	baz=160						
S44A	Carbondale	59.57	342	P	P	21 01 38.3	-0.4
	baz=158,SNR=16						
Q49A	Aurora	59.64	346	P	P	21 01 38.3	-0.9
	baz=163,SNR=9.9						
LUPA	Lehigh Univers	59.66	354	eP	P	21 01 39.3	+0.1
	comp=Z,1.0nm,0.8s						
P52A	Corning	59.66	348	P	P	21 01 38.8	-0.5
	baz=166,SNR=26						
BRNJ	Basking Ridge	59.67	355	eP	P	21 01 39.4	+0.1
	comp=Z,20nm,0.8s						
O56A	Blue Knob Stat	59.70	352	eP	P	21 01 40.0	+0.5
	comp=Z,27nm,0.9s						
O56A				epP	pP	21 02 08.9	+0.3
O56A	Blue Knob Stat	59.70	352	P	P	21 01 39.9	+0.3
	baz=170,SNR=16						
P51A	Williamsport	59.70	348	eP	P	21 01 38.6	-0.9
	comp=Z,41nm,0.7s						
P51A	Williamsport	59.70	348	P	P	21 01 39.1	-0.4
	baz=165						
O55A	Ligonier	59.74	351	P	P	21 01 40.4	+0.6
	baz=169,SNR=19						
Q48A	North Vernon	59.77	345	P	P	21 01 39.3	-0.7
	baz=162,SNR=15						
R45A	Skylar, Fairfi	59.84	343	P	P	21 01 39.9	-0.6
	baz=159,SNR=14						
HHAR	Hobbs	59.86	337	eP	P	21 01 40.1	-0.6
	comp=Z,26nm,1.0s						
HHAR				epP	pP	21 02 09.4	-0.5
O54A	Avella	59.88	350	P	P	21 01 41.0	+0.2
	baz=168,SNR=12						
N60A	Cedar Hill Far	59.90	355	P	P	21 01 40.7	-0.2
	baz=173						
PAL	Palisades	59.94	356	eP	P	21 01 40.7	-0.4
	comp=Z,19nm,0.8s						
PAL	Palisades	59.94	356	eP	P	21 01 40.7	-0.4
PAL				pmax	pmax		
	comp=Z,19nm,0.8s						
PAL	Palisades	59.94	356	P	P	21 01 40.9	-0.2
	baz=175						
Q47A	Bedord North L	59.95	344	P	P	21 01 40.4	-0.8
	baz=161,SNR=10						
SSPA	Standing Stone	59.97	352	eP	P	21 01 41.1	-0.3
SSPA				epP	pP	21 02 09.9	-0.5
SSPA	Standing Stone	59.97	352	P	P	21 01 41.6	+0.2
	baz=170						
P50A	Jamestown	59.97	347	P	P	21 01 41.0	-0.5
	baz=164,SNR=15						
N59A	State Game Lan	60.01	354	eP	P	21 01 41.7	+0.1
	comp=Z,8.5nm,0.8s						
N59A				epP	pP	21 02 09.7	-1.1
N59A	State Game Lan	60.01	354	P	P	21 01 41.8	+0.1
	baz=173,SNR=5.2						
N57A	Milroy	60.04	353	P	P	21 01 42.0	+0.2
	baz=171,SNR=14						
O52A	Adamsville	60.07	349	eP	P	21 01 41.6	-0.5
	comp=Z,56nm,0.6s						
O52A				epP	pP	21 02 10.7	-0.5
O52A	Adamsville	60.07	349	P	P	21 01 42.0	-0.1
	baz=166,SNR=20						
ODNJ	Ogdensburg	60.07	355	eP	P	21 01 42.2	+0.1
	comp=Z,8.2nm,0.8s						
O53A	New Philadelph	60.09	349	P	P	21 01 42.4	+0.2
	baz=167,SNR=16						
P49A	Miami Univ. Ec	60.10	346	P	P	21 01 41.6	-0.7
	baz=163,SNR=18						
YLE	Yale	60.19	357	eP	P	21 01 42.8	0.0
YLE				epP	pP	21 02 11.8	-0.1
BLO	Bloomington	60.19	344	eP	P	21 01 42.2	-0.7
	comp=Z,68nm,1.0s						
BLO				epP	pP	21 02 11.0	-1.1
BLO	Bloomington	60.19	344	eP	P	21 01 42.2	-0.7
BLO				e*PP	pP	21 02 11.0	-1.1
BLO				pmax	pmax		
	comp=Z,68nm,1.0s						
P48A	Milroy	60.20	345	eP	P	21 01 41.5	-1.4
	comp=Z,34nm,0.6s						
P48A	Milroy	60.20	345	P	P	21 01 41.9	-1.0
	baz=162,SNR=13						
OLIL	Olney	60.20	343	eP	P	21 01 42.1	-0.9
	comp=Z,38nm,1.1s						
TUL1	Leonard	60.24	335	eP	P	21 01 42.6	-0.7
	comp=Z,63nm,1.0s						
TUL1				epP	pP	21 02 12.0	-0.5
TUL1	Leonard	60.24	335	P	P	21 01 43.5	+0.2
	baz=151,SNR=10						
O51A	Pataskala	60.25	348	P	P	21 01 43.1	-0.2
	baz=165,SNR=18						
N55A	Marion Center	60.26	351	eP	P	21 01 43.6	+0.2
	comp=Z,62nm,0.8s						
N55A				epP	pP	21 02 12.4	-0.1
N55A	Marion Center	60.26	351	P	P	21 01 44.0	+0.7
	baz=169,SNR=41						
N56A	West Decatur	60.30	352	P	P	21 01 44.0	+0.4
	baz=170,SNR=7.1						
Q45A	Warren Harvey,	60.37	343	P	P	21 01 43.0	-1.1
	baz=159,SNR=9.4						
ACSO	Alum Creek Sta	60.41	348	eP	P	21 01 44.0	-0.4
	comp=Z,94nm,1.0s						
ACSO				epP	pP	21 02 12.7	-0.7
ACSO	Alum Creek Sta	60.41	348	P	P	21 01 44.2	-0.2
	baz=165,SNR=21						
P47A	Martinsville	60.43	345	P	P	21 01 43.7	-0.8
	baz=161,SNR=15						
O50A	Cable	60.45	347	P	P	21 01 44.2	-0.5
	baz=164,SNR=13						
WMOK	Wichita Mounta	60.50	332	eP	P	21 01 44.5	-0.6
WMOK				ePcP	PcP	21 02 28.8	+0.1
WMOK	Wichita Mounta	60.50	332	P	P	21 01 44.7	-0.5
	baz=148,SNR=25						
CCM	Cathedral Cave	60.52	340	eP	P	21 01 44.4	-0.8
	comp=Z,32nm,1.0s						
CCM				epP	pP	21 02 14.3	0.0
CCM				ePcP	PcP	21 02 28.1	-0.6
CCM	Cathedral Cave	60.52	340	eP	P	21 01 44.4	-0.8
CCM				e*PP	pP	21 02 14.3	0.0
CCM				e		21 02 28.1	
CCM				pmax	pmax		
	comp=Z,32nm,1.0s						
CCM	Cathedral Cave	60.52	340	P	P	21 01 44.9	-0.2
	baz=156						
N53A	Lisbon	60.57	350	eP	P	21 01 45.5	+0.1
	comp=Z,54nm,0.6s						
N53A				epP	pP	21 02 14.0	-0.6
N53A	Lisbon	60.57	350	P	P	21 01 45.9	+0.4
	baz=167,SNR=20						
N54A	Moraine State	60.58	351	eP	P	21 01 45.9	+0.3
	comp=Z,36nm,0.7s						
N54A				epP	pP	21 02 14.3	-0.4
N54A	Moraine State	60.58	351	P	P	21 01 46.1	+0.5
	baz=168,SNR=18						
M59A	Waymart	60.60	355	P	P	21 01 45.9	+0.3
	baz=173,SNR=6.5						
KSCT	Kent School, K	60.63	356	eP	P	21 01 45.3	-0.5
	comp=Z,23nm,1.2s						
KSPA	Keystone Colle	60.64	354	eP	P	21 01 45.3	-0.7
	comp=Z,9.7nm,0.7s						
O49A	Covington	60.65	347	eP	P	21 01 45.1	-0.9
	comp=Z,52nm,0.9s						
O49A	Covington	60.65	347	P	P	21 01 45.4	-0.6
	baz=163,SNR=15						
N52A	McGinn's Farm,	60.72	349	P	P	21 01 46.3	-0.2
	baz=166,SNR=12						
BRYW	Bryant College	60.73	358	eP	P	21 01 46.5	0.0
	comp=Z,87nm,0.8s						
BRYW				epP	pP	21 02 15.4	-0.3
SLM	Saint Louis	60.73	341	eP	P	21 01 46.2	-0.4
	comp=Z,21nm,0.8s						
SLM	Saint Louis	60.73	341	eP	P	21 01 46.2	-0.4
SLM				pmax	pmax		
	comp=Z,21nm,0.8s						
P46A	Rosedale	60.79	344	P	P	21 01 46.0	-1.0
	baz=160,SNR=7.3						
M56A	Emporium	60.84	352	P	P	21 01 47.5	+0.2
	baz=170,SNR=20						
P45A	Graceland, Par	60.85	344	eP	P	21 01 46.0	-1.4
	comp=Z,83nm,0.9s						
P45A	Graceland, Par	60.85	344	P	P	21 01 46.2	-1.1
	baz=160,SNR=18						
O48A	Farmland	60.90	346	P	P	21 01 47.0	-0.7
	baz=163,SNR=17						
M55A	Ridgway	60.90	352	P	P	21 01 48.1	+0.4
	baz=170,SNR=16						
CLNB	Carlsbad	60.95	326	eP	P	21 01 49.3	+1.0
N51A	Ashland	60.95	349	eP	P	21 01 47.5	-0.5
	comp=Z,59nm,0.6s						
N51A				epP	pP	21 02 17.2	0.0
N51A	Ashland	60.95	349	P	P	21 01 47.7	-0.3
	baz=166,SNR=16						
N50A	Nevada	60.96	348	P	P	21 01 47.5	-0.6
	baz=165,SNR=9.1						
M54A	Oil Creek Stat	61.07	351	eP	P	21 01 48.9	0.0
	comp=Z,52nm,1.0s						
M54A				epP	pP	21 02 17.7	-0.3
M54A	Oil Creek Stat	61.07	351	P	P	21 01 49.1	+0.2
	baz=168,SNR=24						
O47A	Sheridan	61.12	345	P	P	21 01 48.3	-0.9
	baz=162,SNR=22						
QUA2	Belchertown	61.12	357	eP	P	21 01 49.2	0.0
	comp=Z,14nm,0.8s						
GDL2	Guadalupe Moun	61.15	326	eP	P	21 01 50.4	+0.7
GDL2				epP	pP	21 02 19.3	+0.5
M53A	WI Miller and	61.16	350	P	P	21 01 49.7	+0.2
	baz=167,SNR=26						
WES	Weston	61.19	358	eP	P	21 01 49.8	+0.2
	comp=Z,22nm,1.1s						
WES	Weston	61.19	358	eP	P	21 01 49.8	+0.2
WES				pmax	pmax		
	comp=Z,22nm,1.1s						
ALLY	Alegheny Colle	61.28	351	eP	P	21 01 50.3	+0.1
	comp=Z,95nm,0.8s						
ALLY				epP	pP	21 02 19.7	+0.3
BINY	Binghamton	61.30	354	eP	P	21 01 50.4	0.0
	comp=Z,25nm,0.8s						
BINY				epP	pP	21 02 19.2	-0.4
BINY	Binghamton	61.30	354	P	P	21 01 50.8	+0.4
	baz=172,SNR=8.9						
MNTX	Cornudas Mount	61.31	325	eP	P	21 01 49.7	-1.0
	comp=Z,24nm,0.9s						
MNTX				epP	pP	21 02 18.7	-1.0
MNTX	Cornudas Mount	61.31	325	P	P	21 01 50.5	-0.2
	baz=140						
M51A	Elyria	61.32	349	P	P	21 01 50.4	-0.1
	baz=166,SNR=9.6						
N49A	Columbus Grove	61.32	347	eP	P	21 01 50.0	-0.4
	comp=Z,156nm,0.8s						
N49A				epP	pP	21 02 19.3	-0.5
N49A	Columbus Grove	61.32	347	P	P	21 01 50.2	-0.3
	baz=164,SNR=63						
HRV	Adam Dziewonsk	61.32	358	eP	P	21 01 50.6	+0.1
	comp=Z,44nm,0.9s						
HRV				epP	pP	21 02 19.1	-0.6
HRV	Adam Dziewonsk	61.32	358	eP	P	21 01 50.6	+0.1
HRV				e*PP	pP	21 02 19.1	-0.6
HRV				pmax	pmax		
	comp=Z,44nm,0.9s						
HRV	Adam Dziewonsk	61.32	358	P	P	21 01 50.9	+0.4
	baz=177						
M52A	Chesterland	61.37	350	eP	P	21 01 50.0	-0.9
	comp=Z,58nm,0.8s						
M52A				epP	pP	21 02 20.2	+0.1
M52A	Chesterland	61.37	350	P	P	21 01 50.9	+0.1
	baz=167,SNR=8.8						
N48A	Decatur	61.44	346	P	P	21 01 50.6	-0.7
	baz=163,SNR=23						
P43A	Skaggs, Pawnee	61.45	342	P	P	21 01 50.8	-0.6
	baz=158,SNR=29						
SFIN	Lafayette	61.48	344	eP	P	21 01 50.4	-1.2
	comp=Z,81nm,0.6s						
SFIN				epP	pP	21 02 18.9	-1.9
SFIN	Lafayette	61.48	344	P	P	21 01 50.5	-1.1
	baz=161,SNR=32						
O45A	Potomac	61.52	344	P	P	21 01 50.8	-1.1
	baz=160,SNR=35						
M50A	Fremont	61.55	348	eP	P	21 01 51.3	-0.7
	comp=Z,64nm,0.8s						
M50A				epP	pP	21 02 19.9	-1.3
M50A	Fremont	61.55	348	P	P	21 01 51.8	-0.2
	baz=165,SNR=6.7						
L55A	Hinsdale	61.56	352	P	P	21 01 52.4	+0.3
	baz=170,SNR=10						
L53A	Girard	61.60	351	P	P	21 01 52.6	+0.3
	baz=168,SNR=25						
N47A	Urbana	61.61	346	P	P	21 01 51.6	-0.9
	baz=162,SNR=21						
O44A	Mansfield	61.63	343	P	P	21 01 51.3	-1.3
	baz=159,SNR=6.4						
TRY	Troy	61.65	356	eP	P	21 01 53.2	+0.6
	comp=Z,36nm,0.8s						
TRY				epP	pP	21 02 21.7	-0.2
L54A	Sinclairville	61.73	351	P	P	21 01 53.8	+0.6
	baz=169,SNR=30						
MSTX	Muleshoe	61.74	328	eP	P	21 01 53.8	+0.1
	comp=Z,75nm,0.9s						
MSTX				epP	pP	21 02 22.5	-0.1
MSTX	Muleshoe	61.74	328	P	P	21 01 53.7	0.0
	baz=144						
M49A	Liberty Center	61.80	347	P	P	21 01 53.5	-0.3
	baz=164,SNR=35						
PLIO	Pelee Island,	61.80	349	P	P	21 01 53.5	-0.3
	baz=165,SNR=21						
N46A	Monticello	61.88	345	P	P	21 01 53.3	-0.9
	baz=161,SNR=15						
AMTX	Amarillo	61.95	330	eP	P	21 01 54.3	-0.7
AMTX				epP	pP	21 02 23.3	-1.0
AMTX	Amarillo	61.95	330	P	P	21 01 54.5	-0.4
	baz=145						
M48A	Edgerton	61.97	347	eP	P	21 01 54.3	-0.6
	comp=Z,39nm,0.7s						
M48A				epP	pP	21 02 22.9	-1.3
M48A	Edgerton	61.97	347	P	P	21 01 54.5	-0.4
	baz=163						
U32A	Winter Ranch,	61.98	333	eP	P	21 01 55.6	+0.5
	comp=Z,54nm,0.6s						
K54A	Basiliko Farm,	62.01	352	P	P	21 01 55.4	+0.2
	baz=170,SNR=5.5						
N45A	Kentland	62.03	344	P	P	21 01 53.9	-1.3
	baz=160,SNR=12						
MMNY	Mt. Morris Dam	62.04	353	eP	P	21 01 55.3	+0.1
	comp=Z,31nm,0.5s						
MMNY				epP	pP	21 02 22.6	-2.0
K55A	Perry	62.05	353	P	P	21 01 55.4	-0.1
	baz=170,SNR=7.8						
M47A	Cromwell	62.05	346	P	P	21 01 55.0	-0.5
	baz=162,SNR=12						
L50A	Kingsville	62.12	348	P	P	21 01 55.2	-0.7
	baz=165,SNR=5.1						
N44A	Piper City	62.14	344	P	P	21 01 54.8	-1.2
	baz=160,SNR=22						
HDIL	Hopedale	62.23	343	eP	P	21 01 55.7	-0.9
	comp=Z,90nm,0.6s						
HDIL	Hopedale	62.23	343	P	P	21 01 55.7	-0.9
	baz=158						
M46A	Old House Fiel	62.27	345	eP	P	21 01 55.9	-0.9
	comp=Z,54nm,1.0s						
M46A				epP	pP	21 02 24.9	-1.3
M46A	Old House Fiel	62.27	345	P	P	21 01 55.9	-0.9
	baz=162,SNR=5.8						
FFD	Franklin Falls	62.28	358	eP	P	21 01 57.2	+0.3
	comp=Z,28nm,0.3s						
ACCN	Adirondack Com	62.30	356	eP	P	21 01 57.2	+0.2
	comp=Z,15nm,1.1s						
ACCN				epP	pP	21 02 26.3	0.0
L48A	N Adams	62.35	347	P	P	21 01 56.7	-0.7
	baz=164,SNR=37						
L49A	Milan	62.37	348	P	P	21 01 57.3	-0.2
	baz=164,SNR=10						
VNA3	Neumayer Olymp	62.42	162	P	P	21 01 58.8	+1.2
M45A	Boilermakers S	62.47	345	P	P	21 01 57.1	-1.1
	baz=161						
K52A	Tillsonburg	62.47	350	P	P	21 01 58.1	-0.1
	baz=168						
MEDO	Medina	62.53	352	eP	P	21 01 58.6	+0.1
	comp=Z,13nm,0.7s						
MEDO	Medina	62.53	352	P	P	21 01 58.6	+0.1
	baz=170						
AAM	Ann Arbor	62.53	348	eP	P	21 01 58.0	-0.6
	comp=Z,33nm,0.6s						
AAM	Ann Arbor	62.53	348	eP	P	21 01 58.0	-0.6
AAM				pmax	pmax		
	comp=Z,33nm,0.6s						
AAM	Ann Arbor	62.53	348	P	P	21 01 58.4	-0.2
	baz=164						
HNH	Hanover	62.55	357	eP	P	21 01 58.8	+0.2
	comp=Z,11nm,0.8s						
HNH				epP	pP	21 02 28.1	+0.1
L47A	Sherwood	62.55	347	P	P	21 01 58.0	-0.7
	baz=163,SNR=20						
K51A	Iona Station	62.55	350	P	P	21 01 58.4	-0.3
	baz=167						
J55A	Hilton	62.55	353	eP	P	21 01 57.8	-0.8
	comp=Z,18nm,0.6s						
J55A				epP	pP	21 02 27.6	-0.3
J55A	Hilton	62.55	353	P	P	21 01 58.6	-0.1
	baz=171,SNR=5.9						
N43A	Stutzman Famil	62.55	343	P	P	21 01 58.1	-0.6
	baz=158,SNR=28						
HSIG		62.59	319	eP	P	21 01 59.4	+0.2
	comp=Z,58nm,1.7s						
VNA1	Neumayer--Stat	62.62	161	P	P	21 02 00.5	+1.6
TYNO	Tyneside	62.65	351	P	P	21 01 59.4	0.0
	baz=168,SNR=11						
J54A	Appleton	62.66	352	eP	P	21 01 59.2	-0.2
	comp=Z,19nm,0.8s						
J54A	Appleton	62.66	352	P	P	21 01 59.5	+0.1
	baz=170						
STCO	Saint Catharin	62.67	352	P	P	21 01 59.8	+0.3
	baz=169						
M44A	Midewin, Midew	62.67	344	eP	P	21 01 58.0	-1.5
	comp=Z,27nm,0.7s						
M44A	Midewin, Midew	62.67	344	P	P	21 01 58.2	-1.3
	baz=160,SNR=5.2						
K50A	Casco	62.79	349	eP	P	21 01 59.8	-0.6
	comp=Z,173nm,0.6s						
K50A				epP	pP	21 02 28.8	-0.9
K50A	Casco	62.79	349	P	P	21 01 60.0	-0.3
	baz=166,SNR=14						
N41A	Harden Midland	62.83	342	eP	P	21 01 59.2	-1.3
	comp=Z,59nm,0.8s						
N41A				epP	pP	21 02 28.6	-1.3
N41A	Harden Midland	62.83	342	P	P	21 01 59.7	-0.8
	baz=157,SNR=8.1						
L46A	Eue Claire	62.83	346	eP	P	21 01 59.6	-1.0
	comp=Z,75nm,0.7s						
L46A				epP	pP	21 02 28.5	-1.5
L46A	Eue Claire	62.83	346	P	P	21 01 59.8	-0.8
	baz=162						
J52A	Paris	62.89	351	P	P	21 02 01.0	+0.1
	baz=168,SNR=34						
M43A	Waltham Townsh	62.96	343	P	P	21 02 00.6	-0.9
	baz=159,SNR=23						
K49A	Clarkson	62.96	348	P	P	21 02 00.8	-0.7
	baz=165						
VNA2	Neumayer--Watz	62.99	161	P	P	21 02 02.4	+1.1
	baz=298,slow=6.2						
LBNH	Lisbon	63.06	358	eP	P	21 02 02.7	+0.6
	comp=Z,21nm,0.8s						
LBNH				epP	pP	21 02 31.4	-0.1
LBNH	Lisbon	63.06	358	eP	P	21 02 02.7	+0.6
LBNH				e*PP	pP	21 02 31.4	-0.1
LBNH				pmax	pmax		
	comp=Z,21nm,0.8s						
LBNH	Lisbon	63.06	358	P	P	21 02 02.9	+0.8
	baz=177,SNR=9.5						
TORO	Toronto--Lesli	63.09	352	P	P	21 02 02.4	+0.2
	baz=169						
K48A	Perry	63.11	348	P	P	21 02 01.8	-0.6
	baz=164,SNR=37						
PECO	Prince Edward	63.12	354	eP	P	21 02 02.1	-0.3
	comp=Z,16nm,0.8s						
PECO				epP	pP	21 02 31.9	+0.2
PECO	Prince Edward	63.12	354	P	P	21 02 02.4	0.0
	baz=172,SNR=7.0						
K47A	Vermontville	63.16	347	P	P	21 02 02.0	-0.7
	baz=163						
ACTO	Acton	63.19	351	P	P	21 02 02.8	-0.1
	baz=168,SNR=6.1						
VT1	Waterbury	63.19	357	eP	P	21 02 02.9	0.0
	comp=Z,62nm,0.1s						
N40A	Mertquake, Sal	63.21	341	P	P	21 02 02.5	-0.6
	baz=156,SNR=9.3						
DRWO	Darlington Wes	63.26	352	P	P	21 02 03.7	+0.3
	baz=170						
DRCO	St. Marys Ceme	63.26	352	P	P	21 02 03.8	+0.4
	baz=170						
121A	Cookes Peak, D	63.27	324	P	P	21 02 05.3	+1.4
	baz=139						
319A	Douglas	63.27	322	eP	P	21 02 05.4	+1.5
	comp=Z,44nm,0.8s						
WLVO	Wesleyville	63.27	353	P	P	21 02 03.4	0.0
	baz=170,SNR=8.2						
I53A	Kortright Cn E	63.33	352	P	P	21 02 04.0	+0.2
	baz=169						
WVL	Waterville	63.34	360	eP	P	21 02 04.5	+0.6
	comp=Z,14nm,0.8s						

WVL				epP	pP	21 02 33.2	0.0
KSU1	**Kansas State U**	63.34	336	P	P	21 02 03.9	-0.2
	baz=151,SNR=11						
M41A	**Milan**	63.35	342	P	P	21 02 03.2	-0.8
	baz=157,SNR=8.0						
K46A	**Dorr**	63.35	346	P	P	21 02 03.0	-1.0
	baz=162,SNR=8.1						
L44A	**Lake County Fo**	63.38	344	P	P	21 02 03.1	-1.1
	baz=160						
PKRO	**Pickering**	63.40	352	P	P	21 02 04.3	+0.1
	baz=169						
J49A	**Marlette**	63.45	349	P	P	21 02 03.9	-0.8
	baz=165,SNR=18						
I55A	**Frankford**	63.47	353	P	P	21 02 04.8	+0.1
	baz=171,SNR=21						
EMMW	**East Machias**	63.50	1	eP	P	21 02 04.8	-0.1
EMMW				epP	pP	21 02 34.4	+0.1
J48A	**Bridge Port**	63.52	348	eP	P	21 02 04.4	-0.7
	comp=Z,116nm,0.7s						
J48A				epP	pP	21 02 33.3	-1.2
J48A	**Bridge Port**	63.52	348	P	P	21 02 04.6	-0.5
	baz=164,SNR=33						
I51A	**Listowel**	63.52	350	P	P	21 02 05.1	-0.1
	baz=167,SNR=44						
LONY	**Lake Ozonia**	63.59	356	eP	P	21 02 05.3	-0.2
	comp=Z,21nm,0.8s						
LONY				epP	pP	21 02 34.6	-0.4
LONY	**Lake Ozonia**	63.59	356	P	P	21 02 05.9	+0.3
	baz=174,SNR=17						
HAL	**Halifax**	63.61	4	eP	P	21 02 05.8	+0.2
HAL				epP	pP	21 02 35.2	+0.2
HAL	**Halifax**	63.61	4	eP	P	21 02 05.8	+0.2
HAL				e*PP	pP	21 02 35.2	+0.2
I52A	**Shelburne**	63.65	351	P	P	21 02 06.3	+0.3
	baz=168						
J47A	**Sunmer**	63.67	347	eP	P	21 02 05.2	-0.9
	comp=Z,138nm,0.9s						
J47A	**Sunmer**	63.67	347	P	P	21 02 05.5	-0.6
	baz=163,SNR=5.9						
L42A	**Oliver, Polo**	63.68	343	eP	P	21 02 05.0	-1.2
	comp=Z,32nm,0.6s						
L42A				epP	pP	21 02 34.4	-1.2
L42A	**Oliver, Polo**	63.68	343	P	P	21 02 05.4	-0.8
	baz=158,SNR=9.3						
H56A	**Elgin**	63.70	354	P	P	21 02 06.4	+0.2
	baz=172,SNR=14						
FRNY	**Flat Rock**	63.74	356	eP	P	21 02 06.6	+0.1
	comp=Z,17nm,0.7s						
FRNY				epP	pP	21 02 36.0	+0.1
H55A	**Tweed**	63.75	354	P	P	21 02 06.6	0.0
	baz=171,SNR=12						
DELO	**Deloro Mine**	63.77	353	eP	P	21 02 06.4	-0.3
	comp=Z,22nm,0.6s						
DELO				epP	pP	21 02 35.7	-0.4
DELO	**Deloro Mine**	63.77	353	P	P	21 02 06.8	+0.1
	baz=171,SNR=19						
BASO	**Ashfield**	63.83	350	P	P	21 02 07.1	0.0
	baz=167,SNR=37						
BWLO	**Walkerton**	63.85	350	P	P	21 02 07.3	+0.1
	baz=167,SNR=46						
BNM	**Barren Site**	63.86	326	eP	P	21 02 08.3	+0.4
BNM				epP	pP	21 02 37.7	+0.6
GGN	**Saint George**	63.92	2	eP	P	21 02 07.7	+0.1
GGN				epP	pP	21 02 37.6	+0.5
J46A	**Howard City**	63.95	347	P	P	21 02 07.3	-0.6
	baz=162						
I49A	**Point Hope**	63.96	349	eP	P	21 02 07.4	-0.6
	comp=Z,119nm,0.8s						
I49A	**Point Hope**	63.96	349	P	P	21 02 07.5	-0.4
	baz=166,SNR=28						
K43A	**Burlington**	63.98	344	eP	P	21 02 07.2	-1.0
	comp=Z,88nm,0.6s						
K43A				epP	pP	21 02 36.4	-1.2
K43A	**Burlington**	63.98	344	P	P	21 02 07.6	-0.6
	baz=160,SNR=18						
LPM	**Los Pinos Moun**	63.98	326	eP	P	21 02 08.8	+0.2
BRCO	**Bruce Peninsul**	64.02	350	P	P	21 02 08.5	+0.2
	baz=167,SNR=9.3						
PKME	**Peaks-Kenny Pk**	64.04	360	eP	P	21 02 08.6	+0.1
	comp=Z,18nm,0.7s						
PKME				epP	pP	21 02 37.4	-0.4
PKME	**Peaks-Kenny Pk**	64.04	360	P	P	21 02 08.9	+0.4
	baz=180,SNR=8.6						
LENM	**Lemitar**	64.05	326	eP	P	21 02 09.7	+0.7
LENM				epP	pP	21 02 39.0	+0.7
MOQ	**Mont Orford**	64.15	358	eP	P	21 02 09.3	+0.1
MOQ				epP	pP	21 02 39.4	+0.7
H52A	**Wyevale**	64.17	351	P	P	21 02 09.4	+0.1
	baz=169,SNR=5.3						
L40A	**Anamosa**	64.18	342	eP	P	21 02 08.7	-0.7
	comp=Z,36nm,0.8s						
L40A				epP	pP	21 02 38.3	-0.7
L40A	**Anamosa**	64.18	342	P	P	21 02 08.9	-0.6
	baz=157,SNR=7.9						
SADO	**Sadowa**	64.20	352	eP	P	21 02 08.9	-0.6
	comp=Z,23nm,0.6s						
SADO				epP	pP	21 02 38.1	-0.8
J45A	**Montague**	64.20	346	eP	P	21 02 08.3	-1.3
	comp=Z,91nm,0.8s						
J45A	**Montague**	64.20	346	P	P	21 02 08.7	-0.9
	baz=162						
PLVO	**Plevna**	64.22	354	eP	P	21 02 09.7	0.0
	comp=Z,18nm,0.7s						
PLVO				epP	pP	21 02 38.7	-0.4
PLVO	**Plevna**	64.22	354	P	P	21 02 09.9	+0.3
	baz=172,SNR=15						
BANO	**Bancroft**	64.30	353	P	P	21 02 10.2	0.0
	baz=171,SNR=9.5						
BMRO	**Meriville Lake**	64.32	350	P	P	21 02 10.3	0.0
	baz=167,SNR=40						
CBKS	**Cedar Bluff**	64.34	334	eP	P	21 02 11.2	+0.6
	comp=Z,78nm,0.8s						
CBKS				epP	pP	21 02 40.2	+0.2
CBKS	**Cedar Bluff**	64.34	334	eP	P	21 02 11.3	+0.6
CBKS				e*PP	pP	21 02 40.3	+0.2
CBKS				pmax	pmax		
	comp=Z,78nm,0.8s						
CBKS	**Cedar Bluff**	64.34	334	P	P	21 02 11.4	+0.8
	baz=148,SNR=22						
I47A	**Gladwin**	64.36	348	eP	P	21 02 10.0	-0.6
	comp=Z,100nm,0.6s						
I47A				epP	pP	21 02 39.1	-0.9
I47A	**Gladwin**	64.36	348	P	P	21 02 10.1	-0.6
	baz=164						
I48A	**Sherman Twp**	64.36	348	P	P	21 02 10.2	-0.4
	baz=165,SNR=37						
ANMO	**Albuquerque**	64.38	326	eP	P	21 02 11.7	+0.5
	comp=Z,13nm,0.8s						
ANMO				epP	pP	21 02 40.4	0.0
ANMO	**Albuquerque**	64.38	326	ceP	P	21 02 12.3	+1.1
ANMO				pmax	pmax		
	comp=Z,33nm,1.7s						
ANMO	**Albuquerque**	64.38	326	P	P	21 02 12.1	+0.9
	baz=140						
TASM	**ASL Pad, Albuq**	64.38	326	P	P	21 02 12.0	+0.8
	baz=140,SNR=21						
TASM	**ASL Pad, Albuq**	64.38	326	P	P	21 02 12.0	+0.8
	baz=140,SNR=20						
G55A	**Calabogie**	64.40	354	P	P	21 02 10.9	+0.1
	baz=172,SNR=9.8						
I46A	**Reed City**	64.47	347	P	P	21 02 10.5	-0.8
	baz=163,SNR=13						
G53A	**Haliburton**	64.48	353	P	P	21 02 11.6	+0.2
	baz=170,SNR=26						
ORIO	**Orleans, Innes**	64.49	355	P	P	21 02 11.6	+0.2
	baz=173,SNR=6.1						
GBN	**Guysborough**	64.55	6	eP	P	21 02 11.6	-0.2
GBN				epP	pP	21 02 41.7	+0.4
SNAA	**Sanae**	64.62	161	P	P	21 02 13.3	+1.2
SNAA	**Sanae**	64.62	161	eP	P	21 02 12.8	+0.7
	comp=Z,42nm,1.0s						
SNAA	**Sanae**	64.62	161	i P	P	21 02 13.4	+1.3
SCIA	**State Center**	64.65	340	eP	P	21 02 11.7	-0.9
	comp=Z,69nm,0.8s						
SCIA	**State Center**	64.65	340	P	P	21 02 12.4	-0.2
	baz=155,SNR=6.3						
JFWS	**Jewell Farm**	64.68	343	eP	P	21 02 12.2	-0.6
	comp=Z,62nm,0.6s						
JFWS				epP	pP	21 02 41.7	-0.6
JFWS	**Jewell Farm**	64.68	343	eP	P	21 02 12.2	-0.6
JFWS				e*PP	pP	21 02 41.7	-0.6
JFWS				pmax	pmax		
	comp=Z,62nm,0.6s						
JFWS	**Jewell Farm**	64.68	343	P	P	21 02 12.4	-0.3
	baz=158,SNR=24						
I45A	**Fountain**	64.74	346	eP	P	21 02 12.6	-0.4
	comp=Z,74nm,1.2s						
I45A	**Fountain**	64.74	346	P	P	21 02 12.0	-1.1
	baz=162						
LMN	**Caledonia Moun**	64.74	3	eP	P	21 02 12.6	-0.5
LMN				epP	pP	21 02 42.4	-0.1
H48A	**Harrisville**	64.78	349	eP	P	21 02 12.2	-1.1
	comp=Z,108nm,0.6s						
H48A				epP	pP	21 02 42.0	-0.8
H48A	**Harrisville**	64.78	349	P	P	21 02 12.9	-0.4
	baz=165,SNR=15						
TUC	**Tucson**	64.82	322	eP	P	21 02 14.5	+0.5
	comp=Z,32nm,1.4s						
TUC	**Tucson**	64.82	322	eP	P	21 02 14.5	+0.5
TUC				pmax	pmax		
	comp=Z,32nm,1.4s						
TUC	**Tucson**	64.82	322	P	P	21 02 15.2	+1.2
	baz=136						
H47A	**Mio**	64.85	348	P	P	21 02 13.4	-0.4
	baz=164,SNR=11						
PEMO	**Pembroke**	64.87	354	P	P	21 02 13.9	+0.1
	baz=171,SNR=14						
BUKO	**Buck Lake**	64.89	352	P	P	21 02 14.2	+0.1
	baz=169,SNR=38						
KLBO	**Killbear Provi**	64.92	351	P	P	21 02 14.0	-0.2
	baz=168,SNR=36						
F55A	**Otter Lake**	64.94	354	P	P	21 02 14.3	0.0
	baz=172						
TOBO	**Tobermory, Bru**	64.99	350	P	P	21 02 14.3	-0.4
	baz=167,SNR=30						
H46A	**Fife Lake**	65.00	347	P	P	21 02 14.1	-0.6
	baz=163,SNR=18						
T25A	**Trinidad**	65.07	329	eP	P	21 02 16.1	+0.5
	comp=Z,21nm,0.9s						
T25A				epP	pP	21 02 43.8	-1.4
T25A	**Trinidad**	65.07	329	P	P	21 02 16.6	+1.0
	baz=143,SNR=15						
GLMI	**Grayling**	65.15	348	eP	P	21 02 15.4	-0.3
	comp=Z,148nm,1.0s						
GLMI	**Grayling**	65.15	348	P	P	21 02 15.4	-0.3
	baz=164,SNR=5.7						
TRQ	**Mont Tremblant**	65.18	356	eP	P	21 02 15.9	-0.1
TRQ				epP	pP	21 02 44.9	-0.6
F52A	**Sundridge**	65.23	352	P	P	21 02 16.2	0.0
	baz=169,SNR=18						
ALGO	**Algonquin Park**	65.23	353	P	P	21 02 16.1	-0.1
	baz=171,SNR=28						
I42A	**Draeger Farm,**	65.24	344	eP	P	21 02 15.9	-0.4
	comp=Z,54nm,0.6s						
I42A				epP	pP	21 02 44.6	-1.3
I42A	**Draeger Farm,**	65.24	344	P	P	21 02 16.2	-0.1
	baz=159,SNR=18						
H45A	**Beulah**	65.25	347	P	P	21 02 15.6	-0.8
	baz=162						
G47A	**Hillman**	65.34	349	P	P	21 02 16.6	-0.3
	baz=165,SNR=16						
F51A	**Arnstein**	65.44	352	P	P	21 02 17.3	-0.2
	baz=169,SNR=15						
H43A	**Windswept, Lux**	65.50	345	eP	P	21 02 17.4	-0.6
	comp=Z,76nm,0.6s						
H43A				epP	pP	21 02 46.7	-0.9
H43A	**Windswept, Lux**	65.50	345	P	P	21 02 17.7	-0.3
	baz=160,SNR=15						
G45A	**Suttons Bay**	65.57	347	eP	P	21 02 17.3	-1.1
	comp=Z,56nm,0.6s						
G45A	**Suttons Bay**	65.57	347	P	P	21 02 17.9	-0.5
	baz=163,SNR=7.1						
F49A	**Sandfield**	65.59	350	P	P	21 02 18.0	-0.6
	baz=166,SNR=37						
E53A	**Dumoine, Ponti**	65.61	354	P	P	21 02 18.7	+0.1
	baz=171,SNR=23						
E54A	**Lac Daplat, Po**	65.61	354	P	P	21 02 18.7	+0.1
	baz=172,SNR=31						
E52A	**Mattawa**	65.63	353	P	P	21 02 18.4	-0.3
	baz=170,SNR=13						
I41A	**Arkdale**	65.64	344	eP	P	21 02 18.6	-0.3
	comp=Z,50nm,1.0s						
I41A				epP	pP	21 02 47.8	-0.8
I41A	**Arkdale**	65.64	344	P	P	21 02 18.5	-0.4
	baz=158						
G46A	**Petoskey**	65.67	348	P	P	21 02 18.5	-0.5
	baz=164,SNR=20						
F48A	**Evansville**	65.75	350	P	P	21 02 19.1	-0.4
	baz=166,SNR=23						
KSCO	**Kaye Shedlock'**	65.75	332	eP	P	21 02 20.5	+0.6
	comp=Z,58nm,0.8s						
KSCO				epP	pP	21 02 49.5	0.0
KSCO	**Kaye Shedlock'**	65.75	332	P	P	21 02 20.9	+1.0
	baz=145,SNR=11						
214A	**Organ Pipe Nat**	65.79	320	P	P	21 02 21.8	+1.6
	baz=134,SNR=13						
BGNE	**Belgrade**	65.93	336	eP	P	21 02 21.1	+0.2
	comp=Z,256nm,0.8s						
BGNE	**Belgrade**	65.93	336	P	P	21 02 21.2	+0.4
	baz=150,SNR=7.0						
X18A	**Snowflake**	65.95	324	eP	P	21 02 22.5	+1.1
	comp=Z,32nm,1.4s						
X18A				epP	PcP	21 02 51.6	+0.3
E51A	**G1948 Merrick**	65.98	352	P	P	21 02 21.1	+0.1
	baz=169,SNR=20						
E50A	**Wahnapitae**	66.04	351	P	P	21 02 21.0	-0.3
	baz=168,SNR=14						
SDCO	**Great Sand Dun**	66.08	329	eP	P	21 02 22.8	+0.6
	comp=Z,40nm,0.9s						
SDCO				epP	PcP	21 02 51.4	-0.5
SDCO	**Great Sand Dun**	66.08	329	P	P	21 02 23.4	+1.2
	baz=142,SNR=101						
BATG	**Bathurst New B**	66.11	2	eP	P	21 02 21.9	+0.1
BATG				epP	pP	21 02 51.9	+0.5
F45A	**CMU Biological**	66.16	348	P	P	21 02 21.7	-0.5
	baz=163,SNR=26						
LATQ	**La Tuque**	66.24	357	P	P	21 02 23.1	+0.5
	baz=176						
W18A	**Petrified Fore**	66.27	324	eP	P	21 02 23.6	+0.3
	comp=Z,63nm,1.4s						
W18A	**Petrified Fore**	66.27	324	P	P	21 02 24.7	+1.3
	baz=138						
D54A	**Lac Fusel, La**	66.27	354	P	P	21 02 22.4	-0.5
	baz=172,SNR=24						
D52A	**ZEK Kipawa Sen**	66.28	353	P	P	21 02 23.3	+0.3
	baz=170,SNR=25						
D53A	**Lac Vacive, Po**	66.31	354	eP	P	21 02 23.2	+0.1
	comp=Z,38nm,0.6s						
D53A				epP	PcP	21 02 51.8	-0.4
D53A	**Lac Vacive, Po**	66.31	354	P	P	21 02 23.3	+0.3
	baz=171,SNR=50						
E48A	**Lockeyer**	66.31	350	P	P	21 02 23.0	-0.1
	baz=166,SNR=44						
E47A	**Iron Bridge**	66.47	349	P	P	21 02 23.6	-0.5
	baz=165,SNR=32						
E46A	**Sault Ste Mari**	66.57	349	eP	P	21 02 24.2	-0.6
	comp=Z,57nm,0.7s						
E46A				epP	PcP	21 02 53.1	-0.1
E46A	**Sault Ste Mari**	66.57	349	P	P	21 02 24.1	-0.7
	baz=164,SNR=31						
X16A	**Lo Mia Camp, P**	66.72	323	eP	P	21 02 26.9	+0.7
X16A				epP	PcP	21 02 54.6	+0.1
S22A	**4UR Ranch, Cre**	66.73	328	eP	P	21 02 27.2	+0.8
	comp=Z,16nm,0.9s						
S22A	**4UR Ranch, Cre**	66.73	328	P	P	21 02 27.4	+1.0
	baz=141,SNR=31						
F42A	**Maple Grove Fa**	66.80	346	P	P	21 02 26.0	-0.3
	baz=160						
G40A	**Rib Lake**	66.86	344	eP	P	21 02 26.4	-0.3
	comp=Z,16nm,0.6s						
G40A				epP	pP	21 02 55.5	-0.9
G40A	**Rib Lake**	66.86	344	P	P	21 02 26.4	-0.3
	baz=158,SNR=20						
Q24A	**Divide**	66.87	330	eP	P	21 02 26.5	-0.8
	comp=Z,40nm,0.8s						
Q24A				epP	PcP	21 02 56.0	+0.9
Q24A	**Divide**	66.87	330	P	P	21 02 28.2	+0.9
	baz=143,SNR=21						
113A	**Mohawk Valley,**	66.93	320	eP	P	21 02 28.3	+0.9
	comp=Z,9.8nm,0.9s						
D48A	**Paudash Townsh**	66.93	351	P	P	21 02 26.6	-0.4
	baz=167,SNR=37						
D49A	**Beulah Townshi**	66.96	351	P	P	21 02 27.2	-0.1
	baz=167,SNR=21						
D47A	**Chapleau**	67.03	350	P	P	21 02 27.0	-0.7
	baz=166,SNR=23						
D46A	**Sault St. Mari**	67.03	349	P	P	21 02 27.0	-0.7
	baz=165,SNR=15						
OGNE	**Ogallala**	67.09	333	eP	P	21 02 28.9	+0.6
	comp=Z,37nm,0.6s						
OGNE				epP	PcP	21 02 56.7	+1.0
OGNE	**Ogallala**	67.09	333	P	P	21 02 29.1	+0.8
	baz=146,SNR=5.2						
E43A	**Lone Tree Farm**	67.13	347	eP	P	21 02 27.8	-0.5
	comp=Z,31nm,0.7s						
E43A				epP	PcP	21 02 56.2	+0.7
E43A	**Lone Tree Farm**	67.13	347	P	P	21 02 27.8	-0.5
	baz=162,SNR=16						
G39A	**Holcombe**	67.13	343	P	P	21 02 28.1	-0.2
	baz=157						
E44A	**Grand Marais A**	67.13	348	P	P	21 02 28.3	-0.1
	baz=163						
MVCO	**Mesa Verde**	67.17	327	eP	P	21 02 29.8	+0.6
	comp=Z,27nm,1.0s						
MVCO	**Mesa Verde**	67.17	327	P	P	21 02 30.3	+1.1
	baz=139,SNR=15						
Y14A	**Wickenburg**	67.29	321	eP	P	21 02 31.1	+1.4
	comp=Z,11nm,0.8s						
VLDQ	**Val d'Or**	67.30	354	eP	P	21 02 29.3	0.0
	comp=Z,33nm,0.9s						
VLDQ				epP	pP	21 02 59.2	+0.1
COWI	**Conover**	67.36	345	eP	P	21 02 29.4	-0.4
	comp=Z,14nm,0.8s						
COWI				epP	pP	21 02 58.8	-0.8
ECSD	**EROS Data Cent**	67.40	339	eP	P	21 02 29.9	-0.3
	comp=Z,61nm,1.4s						
ECSD	**EROS Data Cent**	67.40	339	P	P	21 02 30.2	0.0
	baz=152,SNR=17						
F40A	**Park Falls**	67.44	344	P	P	21 02 30.5	+0.2
	baz=158						
WUAZ	**Wupatki**	67.47	324	eP	P	21 02 32.4	+1.4
	comp=Z,31nm,1.0s						
WUAZ				epP	PcP	21 02 58.9	+1.4
WUAZ	**Wupatki**	67.47	324	P	P	21 02 32.7	+1.8
	baz=136,SNR=14						
SPMN	**Marine on St.**	67.53	342	eP	P	21 02 30.1	-0.8
	comp=Z,34nm,0.7s						
SPMN				epP	PcP	21 02 58.0	+0.7
SPMN	**Marine on St.**	67.53	342	P	P	21 02 30.6	-0.3
	baz=156,SNR=12						
F39A	**Loretta**	67.64	344	P	P	21 02 31.3	-0.3
	baz=158,SNR=30						
ISCO	**Idaho Springs**	67.76	330	eP	P	21 02 33.4	+0.6
	comp=Z,29nm,0.9s						
ISCO	**Idaho Springs**	67.76	330	P	P	21 02 33.8	+0.9
	baz=143,SNR=18						
GLA	**Glamis**	67.77	320	eP	P	21 02 33.3	+0.6
	comp=Z,10nm,0.9s						
GLA	**Glamis**	67.77	320	eP	P	21 02 33.3	+0.6
GLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GLA	**Glamis**	67.77	320	P	P	21 02 34.0	+1.3
	baz=133						
PV01	**Paradox Valley**	67.91	327	eP	P	21 02 34.8	+1.1
	comp=Z,31nm,1.1s						
PV01				epP	pP	21 03 02.3	-1.3
SMCO	**Snowmass**	67.92	329	eP	P	21 02 35.0	+1.0
	comp=Z,29nm,0.8s						
LIC	**Lamto**	67.93	75	eP	P	21 02 33.3	-0.8
	comp=Z,126nm,1.3s						
F37A	**Hinrichs Farm,**	67.94	342	P	P	21 02 33.2	-0.3
	baz=156						
F38A	**Pierce - Schro**	67.94	343	P	P	21 02 33.4	-0.1
	baz=157,SNR=20						
PV02	**Paradox Valley**	68.05	327	eP	P	21 02 34.7	+0.1
	comp=Z,27nm,1.2s						
PV13	**Radium Mtn., P**	68.06	327	eP	P	21 02 34.8	+0.1
	comp=Z,42nm,1.4s						
Y12C	**Blythe**	68.06	320	eP	P	21 02 35.2	+0.7
	comp=Z,15nm,0.8s						
Y12C	**Blythe**	68.06	320	P	P	21 02 36.5	+2.0
	baz=134						
TIC	**Toumodi**	68.10	74	eP	P	21 02 35.5	+0.3
D41A	**Chassel**	68.13	346	eP	P	21 02 34.5	-0.1
	comp=Z,52nm,0.8s						
D41A				epP	pP	21 03 03.9	-0.5
D41A	**Chassel**	68.13	346	P	P	21 02 34.9	+0.3
	baz=160,SNR=12						
PV05	**Paradox Valley**	68.14	327	eP	P	21 02 35.3	+0.2
	comp=Z,37nm,1.4s						
PV03	**Paradox Valley**	68.14	327	eP	P	21 02 36.1	+1.0
	comp=Z,10nm,0.9s						
PV12	**Saucer Basin,**	68.17	327	eP	P	21 02 36.5	+1.2
	comp=Z,16nm,1.0s						
PV18	**Skein Mesa, Pa**	68.17	327	eP	P	21 02 35.6	+0.3
	comp=Z,44nm,1.7s						
PV07	**Paradox Valley**	68.18	327	eP	P	21 02 36.6	+1.2
	comp=Z,19nm,1.2s						
PV11	**David Mesa, Pa**	68.19	327	eP	P	21 02 35.9	+0.4
	comp=Z,42nm,1.5s						
LSQQ	**Lebel-sur-Quev**	68.19	354	P	P	21 02 35.2	+0.2
	baz=172						
PDMCI	**Parker Dam,Lak**	68.22	321	P	P	21 02 37.1	+1.7
	baz=134						
PV17	**East Wray Mesa**	68.22	327	eP	P	21 02 36.1	+0.4
	comp=Z,60nm,1.8s						
PV16	**Nyswonger Mesa**	68.22	327	eP	P	21 02 36.1	+0.4
	comp=Z,12nm,0.8s						
KIC	**Kosan Boka**	68.24	75	eP	P	21 02 35.6	-0.5
	comp=Z,85nm,0.8s						
DBIC	**Dimbokro**	68.26	74	P	P	21 02 35.9	-0.2
	comp=Z,44nm,0.7s,baz=223,slow=6.0,SNR=35						
DBIC				LR	LR	21 31 32.7	
	comp=Z,103nm,19.8s,baz=220,slow=35						
DBIC	**Dimbokro**	68.26	74	eP	P	21 02 35.9	-0.2
	comp=Z,54nm,0.8s						
PV20	**West Nyswonger**	68.27	327	eP	P	21 02 36.6	+0.7
	comp=Z,11nm,1.0s						
IKP	**In-Ko-Pah, Jac**	68.30	318	P	P	21 02 38.3	+2.2
	baz=132						
PV14	**Lion Creek, Pa**	68.32	327	eP	P	21 02 37.1	+0.8
	comp=Z,23nm,1.3s						
PV22	**Blue Mesa, Par**	68.33	327	eP	P	21 02 37.3	+1.0
	comp=Z,38nm,1.4s						
PV10	**Paradox Valley**	68.33	327	eP	P	21 02 36.0	-0.5
	comp=Z,16nm,1.0s						
PV23	**Carpenter Ridg**	68.38	327	eP	P	21 02 37.0	+0.3
	comp=Z,15nm,0.9s						
PV21	**Cone Mtn., Par**	68.44	327	eP	P	21 02 38.2	+1.2
	comp=Z,42nm,1.5s						
E38A	**The Farm, Brul**	68.45	344	eP	P	21 02 36.1	-0.5
	comp=Z,78nm,0.3s						
E38A	**The Farm, Brul**	68.45	344	P	P	21 02 36.6	-0.1
	baz=157						
PV09	**Paradox Valley**	68.47	327	eP	P	21 02 37.5	+0.2
BC3	**Big Chuckawall**	68.57	320	P	P	21 02 39.3	+1.6
	baz=133,SNR=13						
W13A	**Hualapai Mount**	68.62	322	eP	P	21 02 39.4	+1.2
	comp=Z,50nm,1.8s						
U15A	**North Rim**	68.64	324	eP	P	21 02 39.8	+1.4
	comp=Z,38nm,1.1s						
U15A				epP	pP	21 03 09.4	+1.3
MONP2	**Monument Peak**	68.66	318	P	P	21 02 40.1	+1.6
	baz=132,SNR=5.2						
BAR	**Barrett**	68.67	318	eP	P	21 02 39.5	+1.1
	comp=Z,17nm,0.9s						
IRM	**Iron Mountain**	68.72	320	P	P	21 02 40.3	+1.6
	baz=133,SNR=13						
N23A	**Red Feather La**	68.78	331	eP	P	21 02 39.6	+0.5
	comp=Z,36nm,0.9s						
N23A	**Red Feather La**	68.78	331	P	P	21 02 40.1	+1.0
	baz=143,SNR=10						
DRLN	**Deer Lake**	68.81	8	eP	P	21 02 38.1	-0.7
DRLN				epP	pP	21 03 07.9	-0.6
CHGQ	**Chibougamau**	68.84	356	P	P	21 02 38.9	-0.1
	baz=175,SNR=8.0						
SUSD	**Miller**	68.85	338	P	P	21 02 39.2	0.0
	baz=150						
PHWY	**Pilot Hill**	68.88	331	eP	P	21 02 40.1	+0.3
	comp=Z,96nm,1.7s						
PHWY				epP	pP	21 03 09.8	+0.2
MATQ	**Matagami**	68.95	354	P	P	21 02 39.2	-0.4
	baz=171,SNR=10						
C40A	**Isle Royale Na**	69.07	346	eP	P	21 02 39.9	-0.5
	comp=Z,25nm,0.9s						
C40A				epP	pP	21 03 10.3	+0.1
C40A	**Isle Royale Na**	69.07	346	P	P	21 02 40.0	-0.4
	baz=160						
BELC	**Belle Mtn. Jos**	69.13	320	P	P	21 02 43.0	+1.7
	baz=132,SNR=8.6						
PFO	**Pinyon Flats O**	69.16	319	eP	P	21 02 42.6	+1.1
	comp=Z,16nm,1.0s						
PFO	**Pinyon Flats O**	69.16	319	eP	P	21 02 42.6	+1.1
PFO				pmax	pmax		
	comp=Z,16nm,1.0s						
PFO	**Pinyon Flats O**	69.16	319	P	P	21 02 43.2	+1.8
	baz=132,SNR=7.1						
LDFC	**Landfair**	69.33	321	eP	P	21 02 44.4	+2.0
	comp=Z,26nm,0.9s						
PKCU	**Pink Cliffs**	69.39	324	eP	P	21 02 44.5	+1.5
	comp=Z,62nm,1.8s						

GMRC	Granite Mounta	69.46	320	P	P	21 02 45.2	+1.9
	baz=133,SNR=16						
LCMT	Little Creek M	69.60	324	*e*P	P	21 02 45.3	+1.2
	comp=Z,22nm,1.1s						
SRU	San Rafael Swe	69.65	327	*e*P	P	21 02 45.1	+0.6
	comp=Z,28nm,0.9s						
SRU	San Rafael Swe	69.65	327	*e*P	P	21 02 45.1	+0.6
SRU				pmax	pmax		
	comp=Z,28nm,0.9s						
EYMN	Ely	69.67	344	*e*P	P	21 02 43.5	-0.6
	comp=Z,27nm,0.6s						
EYMN	Ely	69.67	344	P	P	21 02 43.6	-0.6
	baz=157,SNR=24						
MTPU	Mount Pierson	69.75	325	*e*P	P	21 02 46.4	+1.1
	comp=Z,71nm,1.9s						
Q16A	Castle Valley	69.85	326	*e*P	P	21 02 46.8	+1.1
	comp=Z,18nm,0.8s						
BBRC	Big Bear Solar	69.88	319	P	P	21 02 48.3	+2.3
	baz=132						
HEC	Hector,Ludlow	69.90	320	P	P	21 02 47.7	+1.8
	baz=132						
SZCU	Shurtz Canyon	69.92	324	*e*P	P	21 02 47.7	+1.5
	comp=Z,66nm,1.8s						
RWWY	Rawlins	69.99	331	*e*P	P	21 02 47.5	+1.0
	comp=Z,24nm,0.9s						
P17A	Butcher Ranch,	70.03	327	*e*P	P	21 02 47.8	+1.1
	comp=Z,50nm,1.0s						
P17A				*e*pP	pP	21 03 16.1	-0.4
CCUT	Cedar City	70.05	324	*e*P	P	21 02 48.8	+1.8
	comp=Z,35nm,0.9s						
TUQ	Turquoise Moun	70.06	321	P	P	21 02 48.6	+1.7
	baz=133						
MSU	Marysvale	70.09	325	*e*P	P	21 02 48.9	+1.7
MSU				*e*PcP	PcP	21 03 09.4	+0.9
MSU				*e*pP	pP	21 03 16.9	-0.1
MSU	Marysvale	70.09	325	*e*P	P	21 02 48.9	+1.7
MSU				*e*		21 03 09.4	
MSU				*e**PP	pP	21 03 16.9	-0.1
TMUT	Trail Mountain	70.15	326	*e*P	P	21 02 48.2	+0.6
	comp=Z,11nm,0.7s						
TCRU	Three Creeks R	70.30	325	*e*P	P	21 02 50.3	+1.8
	comp=Z,26nm,0.9s						
BFSC	Mount Baldy Ra	70.32	319	P	P	21 02 50.2	+1.6
	baz=131						
SHPR	Sheep Range	70.34	322	*e*P	P	21 02 49.9	+1.2
	comp=Z,18nm,1.0s						
K22A	Casper	70.43	332	*e*P	P	21 02 49.3	+0.1
	comp=Z,75nm,0.8s						
K22A	Casper	70.43	332	P	P	21 02 50.2	+1.1
	baz=142,SNR=9.4						
GSC	Goldstone, Bar	70.50	320	*e*P	P	21 02 50.7	+1.1
	comp=Z,41nm,1.5s						
GSC	Goldstone, Bar	70.50	320	P	P	21 02 51.4	+1.8
	baz=132,SNR=7.2						
RSSD	Black Hills	70.55	334	*e*P	P	21 02 50.6	+0.8
	comp=Z,34nm,0.8s						
RSSD	Black Hills	70.55	334	*e*P	P	21 02 50.6	+0.8
RSSD				pmax	pmax		
	comp=Z,34nm,0.8s						
RSSD	Black Hills	70.55	334	P	P	21 02 50.8	+1.0
	baz=145						
MWC	Mount Wilson	70.56	319	*e*P	P	21 02 51.8	+1.7
	comp=Z,48nm,1.5s						
MWC	Mount Wilson	70.56	319	*e*P	P	21 02 51.8	+1.7
MWC				pmax	pmax		
	comp=Z,48nm,1.5s						
PASC	Pasadena Art C	70.61	318	*e*P	P	21 02 51.7	+1.5
	comp=Z,35nm,1.3s						
DECC	Green Verdugo	70.75	318	P	P	21 02 53.0	+2.0
	baz=131						
MPU	Maple Canyon	70.90	327	*e*P	P	21 02 53.4	+1.3
	comp=Z,30nm,1.0s						
MPU				*e*pP	pP	21 03 22.4	+0.4
EDW2	Edwards Air Fo	70.95	319	P	P	21 02 53.7	+1.4
	baz=131,SNR=6.9						
PSUT	Pine Spring	71.02	324	*e*P	P	21 02 54.2	+1.4
	comp=Z,23nm,0.8s						
PSUT				*e*pP	pP	21 03 23.4	+0.6
NLU	North Lily Min	71.08	326	*e*P	P	21 02 54.1	+0.9
	comp=Z,18nm,0.9s						
QSPA	South Pole Qui	71.10	180	*e*P	P	21 02 54.0	+1.1
	comp=Z,34nm,0.9s						
BLG	Laguna Peak, P	71.12	318	P	P	21 02 55.1	+1.8
	baz=130						
LRMC	Laurel Mtn Rad	71.15	320	P	P	21 02 55.5	+1.8
	baz=132						
AGMN	Agassiz Nation	71.21	341	*e*P	P	21 02 53.0	-0.4
	comp=Z,31nm,0.8s						
AGMN	Agassiz Nation	71.21	341	P	P	21 02 53.5	0.0
	baz=153,SNR=22						
JLU	Jordanelle	71.23	327	*e*P	P	21 02 55.1	+1.0
	comp=Z,32nm,0.9s						
JLU				*e*pP	pP	21 03 24.9	+0.9
TPNV	Topopah Spring	71.28	322	*e*P	P	21 02 55.7	+1.3
	comp=Z,48nm,1.3s						
TPNV	Topopah Spring	71.28	322	*e*P	P	21 02 55.7	+1.3
TPNV				pmax	pmax		
	comp=Z,48nm,1.3s						
TPNV	Topopah Spring	71.28	322	P	P	21 02 56.7	+2.3
	baz=133						
FURC	Furnace Creek,	71.31	321	P	P	21 02 56.4	+2.0
	baz=132,SNR=10						
MPMC	Manual Prospec	71.42	320	P	P	21 02 56.6	+1.4
	baz=132,SNR=11						
TCUT	Toone Canyon	71.60	328	*e*P	P	21 02 57.4	+1.1
	comp=Z,22nm,0.7s						
DAC	Darwin (Calif)	71.63	320	*e*P	P	21 02 58.8	+2.2
	comp=Z,16nm,1.0s						
ARVC	Arvin	71.63	319	P	P	21 02 58.2	+1.9
	baz=131						
DUG	Dugway, Tooele	71.65	326	*e*P	P	21 02 57.7	+1.2
	comp=Z,34nm,1.0s						
DUG				*e*pP	pP	21 03 27.3	+0.9
DUG	Dugway, Tooele	71.65	326	*e*P	P	21 02 57.7	+1.2
DUG				*e**PP	pP	21 03 27.3	+0.9
DUG				pmax	pmax		
	comp=Z,34nm,1.0s						
DUG	Dugway, Tooele	71.65	326	P	P	21 02 58.1	+1.6
	baz=136,SNR=18						
SBC	Santa Barbara	71.74	318	P	P	21 02 58.4	+1.4
	baz=130						
ISA	Isabella, Lake	71.76	319	*e*P	P	21 02 58.5	+1.3
	comp=Z,23nm,0.9s						
ISA	Isabella, Lake	71.76	319	*e*P	P	21 02 58.5	+1.3
ISA				pmax	pmax		
	comp=Z,23nm,0.9s						
ISA	Isabella, Lake	71.76	319	P	P	21 02 59.0	+1.9
	baz=131,SNR=11						
R11A	Troy Canyon, C	71.86	323	*e*P	P	21 02 59.4	+1.6
	comp=Z,55nm,1.7s						
R11A				*e*pP	pP	21 03 28.6	+0.9
R11A	Troy Canyon, C	71.86	323	P	P	21 02 59.7	+1.9
	baz=134,SNR=35						
BW06	Boulder Array	71.93	330	*e*P	P	21 02 58.4	+0.2
	comp=Z,8.9nm,0.8s						
BW06				*e*pP	pP	21 03 28.4	+0.2
BW06	Boulder Array	71.93	330	P	P	21 02 58.8	+0.5
	baz=140,SNR=9.4						
PDAR	Pinedale Array	71.93	330	P	P	21 02 58.7	+0.5
	comp=Z,11nm,0.9s,baz=126,slow=7.7,SNR=38						
PDAR				pP	pP	21 03 27.1	-1.1
	comp=Z,3.7nm,0.8s,baz=123,slow=7.3,SNR=2.5						
GRAC	Grapevine Rang	71.97	321	P	P	21 03 00.2	+1.9
	baz=132						
MDND	Maddock	72.01	339	*e*P	P	21 02 57.9	-0.4
	comp=Z,188nm,1.0s						
MDND	Maddock	72.01	339	P	P	21 02 59.0	+0.7
	baz=150,SNR=9.5						
CWC	Cottonwood Cre	72.03	320	P	P	21 03 00.5	+1.6
	baz=131						
HWUT	Hardware Ranch	72.04	328	*e*P	P	21 02 59.4	+0.5
	comp=Z,16nm,0.8s						
PKM	Mcpherson Peak	72.09	318	P	P	21 03 01.2	+1.9
	baz=130,SNR=8.0						
VES	Vestal, Richgr	72.25	319	P	P	21 03 01.8	+1.8
	baz=130						
SPUT	South Promonto	72.27	327	*e*P	P	21 03 01.0	+0.8
	comp=Z,33nm,1.0s						
BGU	Big Grassy Mou	72.29	327	*e*P	P	21 03 01.1	+0.8
	comp=Z,22nm,1.0s						
SMMC	Simmler	72.48	318	P	P	21 03 03.7	+2.2
	baz=130						
TIN	Tinemaha, Big	72.52	321	P	P	21 03 03.8	+2.1
	baz=132						
AHID	Auburn Hatcher	72.67	329	*e*P	P	21 03 03.0	+0.4
	comp=Z,34nm,0.8s						
HVU	Hansel Valley	72.78	327	*e*P	P	21 03 03.8	+0.6
	comp=Z,47nm,1.3s						
PAGB	Antelope Grade	72.90	318	*e*P	P	21 03 04.9	+1.0
	comp=Z,22nm,1.0s						
ULM	Lac du Bonnet	72.96	342	P	P	21 03 03.7	-0.2
	comp=Z,33nm,0.6s,baz=152,slow=5.6,SNR=40						
ULM				pP	pP	21 03 33.0	-1.1
	comp=Z,10.0nm,0.8s,baz=147,slow=7.4,SNR=2.3						
ULM				LR	LR	21 39 45.1	
	comp=Z,26nm,18.3s,baz=182,slow=39						
ULM	Lac du Bonnet	72.96	342	*e*P	P	21 03 03.2	-0.6
	comp=Z,37nm,0.6s						
ULM				*e*pP	pP	21 03 33.6	-0.5
SNOW	Snow King Moun	73.03	330	*e*P	P	21 03 05.8	+1.0
	comp=Z,25nm,0.9s						
LOHW	Long Hollow	73.07	330	*e*P	P	21 03 05.6	+0.6
	comp=Z,17nm,0.9s						
TPAW	Teton Pass	73.14	330	*e*P	P	21 03 06.4	+1.0
	comp=Z,22nm,0.8s						
MOOW	Moose Ponds	73.24	330	*e*P	P	21 03 06.6	+0.6
	comp=Z,11nm,0.8s						
MLAC	Mammoth, Mammo	73.27	321	P	P	21 03 07.9	+1.7
	baz=131						
FXWY	Fox Creek	73.29	330	*e*P	P	21 03 06.9	+0.6
	comp=Z,17nm,0.8s						
ELK	Elko	73.33	325	*e*P	P	21 03 07.6	+1.0
	comp=Z,15nm,1.0s						
ELK				*e*pP	pP	21 03 37.2	+0.5
ELK	Elko	73.33	325	*e*P	P	21 03 07.6	+1.0
ELK				*e**PP	pP	21 03 37.2	+0.5
ELK				pmax	pmax		
	comp=Z,15nm,1.0s						
OMMB	Old Mammoth Mi	73.35	321	*e*P	P	21 03 08.1	+1.2
	comp=Z,28nm,1.0s						
NV11	Mina Array Sit	73.39	322	*e*P	P	21 03 08.4	+1.5
	comp=Z,1.1nm,1.1s						
MDPB	Devils Postpil	73.41	321	*e*P	P	21 03 08.1	+1.0
	comp=Z,16nm,0.9s						
IMW	Indian Meadow	73.44	330	*e*P	P	21 03 08.3	+1.1
	comp=Z,77nm,1.4s						
IMW				*e*pP	pP	21 03 38.3	+1.0
FLWY	Flagg Ranch	73.47	330	*e*P	P	21 03 08.1	+0.8
	comp=Z,75nm,0.8s						
NVAR	Mina Array Bea	73.48	322	P	P	21 03 09.1	+1.6
	comp=Z,10.0nm,0.9s,baz=148,slow=6.6,SNR=45						
NVAR				pP	pP	21 03 38.4	+1.0
	comp=Z,3.4nm,0.8s,baz=155,slow=6.7,SNR=4.3						
LAO	LASA Array	73.53	334	*e*P	P	21 03 08.5	+1.1
	comp=Z,90nm,1.4s						
LAO	LASA Array	73.53	334	P	P	21 03 08.4	+1.1
	baz=144						
RLMT	Red Lodge	73.60	332	*e*P	P	21 03 09.1	+1.1
	comp=Z,37nm,0.7s						
RLMT	Red Lodge	73.60	332	P	P	21 03 09.3	+1.2
	baz=140,SNR=27						
SCHQ	Schefferville	73.64	1	P	P	21 03 07.9	+0.1
	comp=Z,12nm,0.6s,baz=200,slow=5.5,SNR=8.8						
SCHQ	Schefferville	73.64	1	*e*P	P	21 03 07.6	-0.2
SCHQ				*e*pP	pP	21 03 37.5	-0.3
H17A	Grant Village	73.65	330	*e*P	P	21 03 10.2	+1.8
	comp=Z,23nm,0.6s						
H17A	Grant Village	73.65	330	P	P	21 03 10.7	+2.3
	baz=139						
YPP	Pitchstone Pla	73.66	330	*e*P	P	21 03 10.2	+1.6
	comp=Z,29nm,1.6s						
LKWY	Lake	73.69	331	*e*P	P	21 03 10.2	+1.6
	comp=Z,42nm,0.8s						
LKWY	Lake	73.69	331	*e*P	P	21 03 10.2	+1.6
LKWY				pmax	pmax		
	comp=Z,42nm,0.8s						
RYN	Ryan	73.74	322	*e*P	P	21 03 10.4	+1.5
	comp=Z,17nm,1.0s						
KVN	Kaiserville	73.77	322	*e*P	P	21 03 10.2	+1.0
	comp=Z,24nm,0.9s						
KVN	Kaiserville	73.77	322	*e*P	P	21 03 10.2	+1.0
KVN				pmax	pmax		
	comp=Z,24nm,0.9s						
YFT	Old Faithful	73.81	330	*e*P	P	21 03 11.9	+2.5
	comp=Z,22nm,0.7s						
YNR	Norris Junctio	73.94	331	*e*P	P	21 03 11.5	+1.4
	comp=Z,28nm,0.7s						
YMR	Madison River	74.03	330	*e*P	P	21 03 12.8	+2.2
	comp=Z,82nm,1.2s						
YHH	Holmes Hill	74.07	330	*e*P	P	21 03 12.4	+1.5
	comp=Z,46nm,0.7s						
DGMT	Dagmar	74.19	337	*e*P	P	21 03 11.9	+0.8
	comp=Z,70nm,1.0s						
DGMT	Dagmar	74.19	337	P	P	21 03 12.4	+1.3
	baz=146						
WAKR	Walker	74.20	321	*e*P	P	21 03 13.8	+2.1
	comp=Z,30nm,1.4s						
YHB	Horse Butte	74.20	330	*e*P	P	21 03 12.7	+1.1
	comp=Z,55nm,0.7s						
BMN	Battle Mountai	74.21	324	*e*P	P	21 03 12.7	+1.1
	comp=Z,4.5nm,0.8s						
BMN	Battle Mountai	74.21	324	*e*P	P	21 03 12.7	+1.1
BMN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GCMT	Greycliff	74.30	332	*e*P	P	21 03 12.6	+0.6
QLMT	Earthquake Lak	74.38	330	*e*P	P	21 03 14.3	+1.8
YERR	Yerington	74.39	322	*e*P	P	21 03 14.7	+1.9
	comp=Z,36nm,1.3s						
CMB	Columbia Colle	74.46	320	*e*P	P	21 03 13.8	+0.8
	comp=Z,4.6nm,0.8s						
CMB	Columbia Colle	74.46	320	*e*P	P	21 03 13.8	+0.8
CMB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PNTR	Pine Nut	74.67	322	*e*P	P	21 03 16.1	+1.7
	comp=Z,18nm,0.8s						
VCNR	Virginia City	74.84	322	*e*P	P	21 03 17.5	+2.1
	comp=Z,29nm,1.3s						
HLID	Hailey	74.90	328	*e*P	P	21 03 16.7	+1.1
	comp=Z,36nm,0.8s						
HLID	Hailey	74.90	328	P	P	21 03 17.5	+1.9
	baz=136,SNR=72						
PAHR	Pah Rah Range	74.95	322	*e*P	P	21 03 17.6	+1.7
	comp=Z,48nm,0.8s						
BOZ	Bozeman (W)	75.04	331	*e*P	P	21 03 17.2	+0.9
	comp=Z,24nm,1.0s						
BOZ	Bozeman (W)	75.04	331	*e*P	P	21 03 17.2	+0.9
BOZ				pmax	pmax		
	comp=Z,24nm,1.0s						
BOZ	Bozeman (W)	75.04	331	P	P	21 03 17.4	+1.1
	baz=139,SNR=30						
MCMT	McKenzie Canyo	75.05	329	*e*P	P	21 03 17.8	+1.3
DLMT	Dillon	75.32	330	*e*P	P	21 03 19.1	+1.2
	comp=Z,75nm,1.5s						
AFDM	Forest Hills D	75.40	321	*e*P	P	21 03 19.8	+1.4
	comp=Z,14nm,1.0s						
LRM	Limekiln Ridge	75.59	330	*e*P	P	21 03 21.0	+1.4
BEKR	Beckworth	75.63	322	*e*P	P	21 03 21.2	+1.4
	comp=Z,21nm,1.2s						
HRY	Holter Researc	75.97	331	*e*P	P	21 03 22.8	+1.2
EGMT	Eagleton	76.06	333	*e*P	P	21 03 22.4	+0.5
	comp=Z,42nm,0.8s						
EGMT	Eagleton	76.06	333	P	P	21 03 22.6	+0.6
	baz=141,SNR=20						
ORV	Oroville	76.10	321	*e*P	P	21 03 23.9	+1.6
	comp=Z,40nm,1.1s						
ORV	Oroville	76.10	321	*e*P	P	21 03 23.9	+1.6
ORV				pmax	pmax		
	comp=Z,40nm,1.1s						
WVOR	Wild Horse Val	76.34	325	*e*P	P	21 03 24.4	+0.6
	comp=Z,8.9nm,1.3s						
WVOR	Wild Horse Val	76.34	325	*e*P	P	21 03 24.4	+0.6
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TOA0	Torodi Ar. Sit	76.75	71	*e*P	P	21 03 25.7	-0.7
	comp=Z,73nm,0.6s						
TORD	Torodi Ar. Bea	76.75	71	P	P	21 03 26.0	-0.4
	comp=Z,45nm,0.7s,baz=268,slow=4.4,SNR=92						
TORD				S	S	21 12 53.1	-12
	comp=Z,1.1nm,1.0s,baz=230,slow=11,SNR=3.9						
O03E	Paynes Creek	76.75	321	P	P	21 03 26.3	+0.3
	baz=129,SNR=6.5						
PLID	Pearl Lake	76.79	328	*e*P	P	21 03 27.4	+1.1
	comp=Z,50nm,0.8s						
PLID				*e*pP	pP	21 03 57.5	+0.9
J08A	Circle Bar Ran	76.88	325	*e*P	P	21 03 28.0	+1.2
	comp=Z,9.8nm,0.8s						
MOD	Modoc Plateau	76.92	323	*e*P	P	21 03 28.2	+1.2
	comp=Z,63nm,1.6s						
MSO	Missoula	77.03	330	*e*P	P	21 03 28.9	+1.4
	comp=Z,24nm,1.1s						
MSO	Missoula	77.03	330	P	P	21 03 29.1	+1.5
	baz=137,SNR=15						
OUK	Oukaimeden	77.17	50	P	P	21 03 34.0	+5.1
O02D	Mt. Diablo Mer	77.26	321	P	P	21 03 29.5	+0.6
	baz=129						
BMO	Blue Mountains	77.29	327	*e*P	P	21 03 29.7	+0.7
	comp=Z,37nm,0.8s						
BMO				*e*pP	pP	21 04 01.0	+1.7
WDC	Whiskeytown Da	77.37	321	*e*P	P	21 03 29.0	-0.4
	comp=Z,7.1nm,0.9s						
WDC	Whiskeytown Da	77.37	321	*e*P	P	21 03 29.0	-0.4
WDC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
N02D	Trinity Center	77.71	321	P	P	21 03 31.8	+0.4
	baz=129						
M04C	Macdoel	77.72	322	P	P	21 03 32.8	+1.3
	baz=130,SNR=6.4						
K05A	Summer Lake	77.79	324	*e*P	P	21 03 33.3	+1.4
	comp=Z,29nm,0.9s						
OUZM	OUZ	77.82	51	P	P	21 03 37.0	+4.7
KMRM	Mail Ridge	77.84	320	*e*P	P	21 03 34.4	+2.3
	comp=Z,44nm,1.2s						
I07A	Izee	77.92	325	*e*P	P	21 03 33.8	+1.2
	comp=Z,20nm,0.9s						
F10A	Beach Ranch, E	78.02	328	*e*P	P	21 03 34.6	+1.6
	comp=Z,19nm,0.8s						
M02C	Callahan	78.06	322	P	P	21 03 34.1	+0.7
	baz=129						
YBH	Yreka Blue Hor	78.19	322	*e*P	P	21 03 34.1	0.0
	comp=Z,9.1nm,1.1s						
YBH	Yreka Blue Hor	78.19	322	*e*P	P	21 03 34.1	0.0
YBH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
K04D	Chiloquin, OR	78.21	323	P	P	21 03 35.6	+1.4
	baz=130						
KHMM	Horse Mountain	78.26	321	*e*P	P	21 03 34.5	-0.1
	comp=Z,30nm,1.3s						
L04D	Klamath Falls	78.26	323	P	P	21 03 35.2	+0.7
	baz=129						
J05D	Fort Rock, OR	78.34	324	P	P	21 03 36.5	+1.6
	baz=130,SNR=6.5						
G08A	Pilot Rock	78.44	327	*e*P	P	21 03 36.6	+1.2
	comp=Z,12nm,0.8s						
G08A				*e*pP	pP	21 04 07.3	+1.5
PINE	Pine Mountain	78.51	324	*e*P	P	21 03 37.4	+1.5
	comp=Z,24nm,0.9s						
PINE				*e*pP	pP	21 04 08.2	+1.9
WALA	Waterton Lakes	78.65	332	*e*P	P	21 03 37.2	+0.7
	comp=Z,32nm,0.9s						
WALA				*e*pP	pP	21 04 07.3	+0.3
FFC	Flin Flon	78.69	341	*e*P	P	21 03 36.4	0.0
	comp=Z,13nm,1.0s						
FFC	Flin Flon	78.69	341	*ce*P	P	21 03 36.8	+0.5
FFC				pmax	pmax		
	comp=Z,54nm,1.7s						
J04D	Umpqua Nationa	78.80	323	P	P	21 03 38.9	+1.3
	baz=130						
SYO	Syowa Base	78.83	160	⇑*i*P	P	21 03 36.6	-0.4
SYO	Syowa Base	78.83	160	⇓*i*PcP	PcP	21 03 42.0	-3.4
SYO	Syowa Base	78.83	160	⇈*e*pP	pP	21 04 03.0	-4.5
E09A	Wood Farm, Sta	78.86	328	*e*P	P	21 03 38.5	+1.0
	comp=Z,27nm,1.0s						
L02E	Cave Junction	78.97	322	P	P	21 03 39.9	+1.7
	baz=128						
I05D	Terrebonne, OR	79.08	325	P	P	21 03 40.6	+1.8
	baz=130,SNR=11						
VNDA	Vanda	79.18	190	*e*P	P	21 03 40.4	+1.5
	comp=Z,13nm,0.9s						
VNDA	Vanda	79.18	190	*e*P	P	21 03 40.4	+1.5
VNDA				pmax	pmax		
	comp=Z,13nm,0.9s						
G06A	Carlson Farm,	79.29	326	*e*P	P	21 03 41.7	+1.8
	comp=Z,20nm,1.0s						
E08A	Dider Farm, El	79.30	327	*e*P	P	21 03 40.4	+0.5
	comp=Z,15nm,1.1s						
I04A	Tendick Farm,	79.32	324	P	P	21 03 41.2	+1.0
	baz=130						
K02D	Willamette Mer	79.34	322	P	P	21 03 42.4	+2.0
	baz=128						
F07A	Phinny Hill Vi	79.35	327	*e*P	P	21 03 42.7	+2.5
	comp=Z,62nm,1.5s						
HAWA	Hanford	79.48	327	*e*P	P	21 03 42.3	+1.4
	comp=Z,32nm,0.9s						
NEW	Newport	79.57	330	*e*P	P	21 03 41.8	+0.4
	comp=Z,10nm,0.8s						
NEW	Newport	79.57	330	*e*P	P	21 03 41.8	+0.4
NEW				pmax	pmax		
	comp=Z,11nm,0.8s						
NEW	Newport	79.57	330	P	P	21 03 41.9	+0.6
	baz=134,SNR=9.3						
D08A	Wollman Farm,	79.62	328	*e*P	P	21 03 42.5	+0.9
	comp=Z,31nm,1.3s						
G05D	Wamic, OR	79.66	325	P	P	21 03 44.0	+2.1
	baz=131,SNR=7.3						
H04A	Detroit Lake	79.77	325	*e*P	P	21 03 43.5	+0.9
	comp=Z,16nm,0.8s						
I03D	Drain, OR	79.79	323	P	P	21 03 43.9	+1.3
	baz=129						
C09A	Chrisman Ranch	79.80	329	*e*P	P	21 03 44.0	+1.4
	comp=Z,56nm,0.8s						
MORF	Marmelete	79.89	45	*e*P	P	21 03 45.6	+2.2
	comp=Z,58nm,1.4s						
ARF	Arif	79.97	52	P	P	21 03 49.0	+5.0
PTEO	Sao Teotonio	79.97	45	*e*P	P	21 03 47.1	+3.4
	comp=Z,76nm,1.4s						
SUR	Sutherland	79.97	121	*e*P	P	21 03 45.7	+1.5
	comp=Z,110nm,1.8s						
F05D	White Salmon	80.15	326	P	P	21 03 46.2	+1.7
	baz=130						
CZD	Col de Zad	80.16	50	P	P	21 03 50.0	+4.8
FCC	Fort Churchill	80.24	347	*e*P	P	21 03 45.3	+0.7
	comp=Z,24nm,0.7s						
FCC	Fort Churchill	80.24	347	*e*P	P	21 03 45.3	+0.7
FCC				pmax	pmax		
	comp=Z,24nm,0.7s						
COR	Corvallis	80.32	324	*e*P	P	21 03 47.7	+2.3
	comp=Z,50nm,0.9s						
COR	Corvallis	80.32	324	*e*P	P	21 03 47.7	+2.3
COR				pmax	pmax		
	comp=Z,50nm,0.9s						
PBDV	Barranco-do-Ve	80.34	45	*e*P	P	21 03 47.6	+1.9
	comp=Z,47nm,1.6s						
PNCL	Nicolau / Gran	80.41	44	*e*P	P	21 03 47.6	+1.5
	comp=Z,18nm,1.5s						
PCVE	Castro Verde	80.48	45	*e*P	P	21 03 48.0	+1.6
	comp=Z,28nm,2.1s						
LCRM	LCR	80.62	50	P	P	21 03 53.0	+5.5
LTY	Liberty	80.64	327	*e*P	P	21 03 48.1	+0.9
	comp=Z,46nm,1.1s						
G03D	McMinnville, O	80.69	325	P	P	21 03 48.5	+1.1
	baz=129						
PBEJ	Beja	80.81	45	*e*P	P	21 03 50.6	+2.4
	comp=Z,18nm,2.0s						
LON	Longmire	80.89	326	*e*P	P	21 03 49.2	+0.7
	comp=Z,11nm,0.9s						
LON	Longmire	80.89	326	*e*P	P	21 03 49.2	+0.7
LON				pmax	pmax		
	comp=Z,11nm,0.9s						
TSUM	Tsumeb	80.93	107	*e*P	P	21 03 50.5	+0.9
	comp=Z,15nm,1.1s						
ALMR	Almeirim	80.96	43	*e*P	P	21 03 48.7	-0.2
ALMR				AMb	AMB	21 03 55.5	
	comp=Z,44nm,1.2s						
ALMR	Almeirim	80.96	43	*e*P	P	21 03 48.7	-0.2
CHEFC	Chefchaouen	81.00	48	P	P	21 03 55.0	+5.6
PMTG	Montargil	81.14	44	*e*P	P	21 03 51.3	+1.4
	comp=Z,29nm,1.6s						
E04D	Cinebar	81.17	326	P	P	21 03 50.9	+1.0
	baz=130						
D05A	Enumclaw	81.27	327	*e*P	P	21 03 51.6	+1.2
	comp=Z,65nm,0.9s						
COI	Coimbra	81.64	42	*e*P	P	21 03 52.4	-0.1
	comp=Z,41nm,1.4s						
COI	Coimbra	81.64	42	*e*P	P	21 03 52.4	-0.1
COI				pmax	pmax		
	comp=Z,41nm,1.4s						
D04E	Lakebay	81.68	326	P	P	21 03 53.9	+1.4
	baz=130						
E03A	Lebam	81.69	325	*e*P	P	21 03 54.1	+1.5
	comp=Z,38nm,1.0s						
IVI	Ivigtut	81.76	10	*e*P	P	21 03 53.3	+0.7
	comp=Z,30nm,0.9s						
PMRV	Marv??o	81.88	44	*e*P	P	21 03 54.7	+0.9
	comp=Z,11nm,1.4s						
B05A	Bryant	82.02	327	P	P	21 03 54.8	+0.5
	baz=130,SNR=15						
PCBR	Castelo Branco	82.04	43	*e*P	P	21 03 55.4	+0.7
	comp=Z,15nm,1.7s						
D03D	Eldon	82.07	326	P	P	21 03 56.0	+1.4
	baz=129,SNR=6.5						
MTE	Manteigas	82.30	43	*e*P	P	21 03 54.8	-1.3

	comp=Z,18nm,2.1s						
NLWA	Neilton Lookou	82.39	326	eP	P	21 03 57.3	+1.0
	comp=Z,31nm,1.1s						
A04D	Lummi Island	82.63	327	P	P	21 03 58.8	+1.3
	baz=130						
PVRL	Vila Real	82.67	42	eP	P	21 03 59.0	+1.0
	comp=Z,19nm,1.8s						
POLO	Lamas de Olo	82.67	42	eP	P	21 03 58.9	+0.8
	comp=Z,10nm,1.4s						
PGAV	Gavieira, Arco	82.70	41	eP	P	21 03 59.2	+1.0
	comp=Z,33nm,1.9s						
PCAB	Cabril	82.71	41	eP	P	21 03 57.7	-0.5
	comp=Z,34nm,1.9s						
PGC	Sidney	82.96	327	eP	P	21 04 00.3	+1.1
	comp=Z,38nm,0.9s						
MVO	Moncorvo	83.05	42	eP	P	21 04 01.1	+1.2
	comp=Z,23nm,1.6s						
LLLB	Lillooet	83.44	329	eP	P	21 04 01.9	+0.2
	comp=Z,30nm,1.1s						
PBRG	Braganca	83.57	42	eP	P	21 04 03.6	+1.0
	comp=Z,32nm,1.3s						
TAM	Tamanrasset	83.92	64	eP	P	21 04 06.5	+1.6
TAM				epP	pP	21 04 36.6	+0.8
PAB	San Pablo	83.94	45	eP	P	21 04 04.8	+0.2
PAB				epP	pP	21 04 35.6	+0.2
PAB	San Pablo	83.94	45	eP	P	21 04 04.8	+0.2
PAB				e*PP	pP	21 04 35.6	+0.2
ESDC	Sonseca Array	84.26	45	P	P	21 04 07.3	+1.2
	comp=Z,4.1nm,0.6s,baz=247,slow=5.2,SNR=21						
ESLA	Sonseca Array	84.26	45	eP	P	21 04 06.8	+0.6
ESLA				epP	pP	21 04 38.8	+1.8
BOSA	Boshof	84.76	118	P	P	21 04 09.3	+0.1
	comp=Z,6.3nm,1.0s,baz=245,slow=3.7,SNR=10						
BOSA	Boshof	84.76	118	eP	P	21 04 08.9	-0.2
	comp=Z,24nm,1.4s						
LBTB	Lobatse	86.21	115	eP	P	21 04 16.6	+0.2
	comp=Z,50nm,2.0s						
LBTB	Lobatse	86.21	115	eP	P	21 04 16.6	+0.2
LBTB				pmax	pmax		
	comp=Z,50nm,2.0s						
MAW	Mawson	86.69	163	P	P	21 04 18.8	+1.1
	comp=Z,11nm,0.9s,baz=236,slow=8.7,SNR=15						
MAW	Mawson	86.69	163	eP	P	21 04 18.6	+0.9
	comp=Z,3.7nm,1.0s						
YKA	Yellowknife Ar	88.85	341	P	P	21 04 28.4	+0.6
	comp=Z,53nm,0.8s,baz=134,slow=4.8,SNR=214						
YKA				pP	pP	21 04 59.4	+0.4
	comp=Z,16nm,0.9s,baz=134,slow=4.9,SNR=4.0						
DSB	Dublin	89.97	32	eP	P	21 04 32.9	-0.4
	comp=Z,7.4nm,1.0s						
DLBC	Dease Lake	91.98	333	eP	P	21 04 43.9	+1.2
	comp=Z,23nm,0.9s						
KEST	Kesra	92.01	53	P	P	21 04 44.5	+1.2
	comp=Z,3.4nm,1.0s,baz=151,slow=13,SNR=2.1						
CASY	Casey	94.90	180	eP	P	21 04 57.4	+1.4
	comp=Z,18nm,1.0s						
GERES	GERESS Array B	99.55	42	P	Pdif	21 05 17.4	0.0
	comp=Z,0.2nm,0.4s,baz=198,slow=6.2,SNR=2.3						
ILAR	Eielson Array	101.99	335	P	Pdif	21 05 28.3	+0.7
	comp=Z,0.3nm,0.6s,baz=152,slow=4.1,SNR=3.8						
ILAR				PP	PP	21 09 32.4	-8.2
	comp=Z,1.3nm,0.7s,baz=104,slow=7.3,SNR=8.8						
VYHS	Vyhne	102.72	43	eP	Pdif	21 05 32.6	+1.3
VYHS	Vyhne	102.72	43	ePDIF	Pdif	21 05 32.6	+1.3
KOLS	Kolonicke sedl	105.04	43	eP	Pdif	21 05 42.7	+1.1
KOLS	Kolonicke sedl	105.04	43	ePDIF	Pdif	21 05 42.7	+1.1
ARCES	ARCESS Array B	109.33	22	PKKPbc	PKKPbc	21 21 09.9	-2.0
	comp=Z,3.5nm,1.1s,baz=69,slow=3.0,SNR=3.2						
AKASG	Malin Array Be	109.76	42	PP	PP	21 10 42.7	+4.5
	comp=Z,0.3nm,0.3s,baz=256,slow=8.4,SNR=5.4						
BRTR	Keskin Array B	111.59	54	PKiKP	PKiKP	21 10 07.2	-1.2
	comp=Z,0.8nm,0.8s,baz=222,slow=1.7,SNR=4.5						
BRTR				PKKPab	PKKPab	21 21 12.7	+1.3
	comp=Z,1.3nm,0.8s,baz=86,slow=5.1,SNR=8.2						
OBN	Obninsk	114.39	37⇑	ePKIKP	PKPdf	21 10 12.9	-0.2
OBN				e		21 10 55.2	
OBN				e		21 11 13.7	
OBN				ePPP	PPP	21 13 36.5	
OBN				eSS	SS	21 26 46.4	-8.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PRGR	Permogore	118.33	30	ePKIKP	PKPdf	21 10 16.1	-4.4
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KIV	Kislovodsk	118.59	50	ePKIKP	PKPdf	21 10 21.7	0.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	Khabaz	118.74	50	PKP	PKiKP	21 10 22.2	+0.3
	comp=Z,3.7nm,0.8s,baz=186,slow=2.0,SNR=9.4						
BILL	Bilibino	120.21	339⇑	ePKIKP	PKiKP	21 10 24.7	+0.6
BILL				e		21 11 02.5	
BILL				e		21 11 48.3	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	Stephens Creek	121.39	211	PKP	PKPdf	21 10 26.1	-1.4
	comp=Z,4.6nm,0.9s,baz=119,slow=3.8,SNR=7.0						
ARU	Arti	126.26	33	ePKPdf	PKiKP	21 10 36.5	+0.1
ARU	Arti	126.26	33	i PKIKP	PKPdf	21 10 36.1	+0.2
ARU						21 12 30.9	
ARU						21 17 37.2	
TIXI	Tiksi	126.38	353	ePKPdf	PKPdf	21 10 35.5	-0.2
TIXI	Tiksi	126.38	353	ePKIKP	PKPdf	21 10 35.8	+0.1
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ABKAR	Akbulak array	129.50	41	ePKPdf	PKiKP	21 10 43.5	+0.4
ABKAR				epPKPdf	pPKPdf	21 11 14.9	+0.1
PETK	Petropavlovsk-	130.50	325	PKP	PKiKP	21 10 45.4	+0.4
	comp=Z,5.8nm,0.7s,baz=91,slow=5.4,SNR=11						
GEYT	Alibeck	130.65	56	PKP	PKiKP	21 10 45.8	0.0
	comp=Z,2.4nm,0.9s,baz=297,slow=6.5,SNR=5.0						
GEYT				SKPbc	SKPab	21 13 59.3	+0.7
	comp=Z,1.4nm,0.6s,baz=291,slow=9.4,SNR=3.9						
ASAR	Alice Springs	131.94	209	PKhKP	PKPpre	21 10 29.6	
	comp=Z,0.6nm,0.6s,baz=140,slow=2.7,SNR=8.5						
ASAR				PKP	PKPdf	21 10 46.9	-1.0
	comp=Z,7.3nm,1.0s,baz=128,slow=1.6,SNR=26						
ASAR				pPKP	pPKPdf	21 11 18.1	-2.2
	comp=Z,1.5nm,0.9s,baz=126,slow=2.2,SNR=2.0						
ASAR				PP	PP	21 13 09.1	+0.4
	comp=Z,1.5nm,1.0s,baz=132,slow=7.2,SNR=5.8						
ASAR				SKPbc	SKPbc	21 14 03.9	+0.3
	comp=Z,1.4nm,0.9s,baz=139,slow=3.8,SNR=4.5						
AS31	Alice Springs	131.94	209	ePKPpre	PKPpre	21 10 30.2	
AS31				ePKPdf	PKPdf	21 10 47.1	-0.8
BRVK	Borovoye	133.83	33c	i PKIKP	PKiKP	21 10 52.5	+0.8
BRVK				pmax	pmax		
	comp=Z,13nm,1.7s						
BVAR	Borovoye Array	133.90	33	SKPbc	SKPbc	21 14 10.2	+0.9
	comp=Z,1.2nm,0.8s,baz=264,slow=1.5,SNR=4.7						
WB2	Warramunga Arr	134.90	212	ePKPdf	PKPdf	21 10 54.2	+0.7
WRA	Warramunga Arr	134.91	212	PKhKP	PKPpre	21 10 41.0	
	comp=Z,1.6nm,0.8s,baz=187,slow=1.3,SNR=2.8						
WRA				PKP	PKPdf	21 10 52.5	-1.0
	comp=Z,8.8nm,0.9s,baz=182,slow=1.4,SNR=15						
WRA				pPKP	pPKPdf	21 11 26.1	+0.2
	comp=Z,3.8nm,0.7s,baz=197,slow=1.9,SNR=3.3						
WRA				SKPbc	SKPbc	21 14 13.6	-0.1
	comp=Z,3.4nm,0.9s,baz=145,slow=3.1,SNR=5.1						
WRAB	Tennant Creek	134.91	212c	i PKIKP	PKiKP	21 10 54.7	-0.3
WRAB				pmax	pmax		
	comp=Z,34nm,2.5s						
CHGR	Chuyangaron	139.01	53	ePKPdf	PKPdf	21 10 59.5	-1.1
KURK	Kurchatov	139.40	31	ePKPdf	PKPdf	21 11 01.9	+1.1
KURK	Kurchatov	139.40	31c	i PKIKP	PKiKP	21 11 02.3	-0.8
KURK				pmax	pmax		
	comp=Z,34nm,1.0s						
KURBB	Kurchatov Arra	139.41	32	PKhKP	PKPpre	21 10 55.7	
	comp=Z,0.2nm,0.5s,baz=285,slow=3.1,SNR=4.1						
KURBB				PKP	PKPdf	21 11 01.7	+0.9
	comp=Z,3.3nm,0.9s,baz=300,slow=2.6,SNR=22						
KURBB				pPKP	pPKPdf	21 11 31.4	-2.0
	comp=Z,1.1nm,0.9s,baz=307,slow=3.0,SNR=2.0						
KURBB				SKPbc	SKPbc	21 14 26.2	+0.4
	comp=Z,0.7nm,0.7s,baz=303,slow=2.7,SNR=4.9						
KURBB				SKKPbc	SKKPbc	21 22 56.8	-7.5
	comp=Z,0.5nm,0.9s,baz=148,slow=5.5,SNR=4.3						
ZAA0	Zalesovo Array	139.85	24	ePKPdf	PKPdf	21 11 02.4	+0.9
ZAA0				epPKPdf	pPKPdf	21 11 34.7	+0.6
ZALV	Zalesovo Beam	139.85	24	PKhKP	PKPpre	21 10 57.0	
	comp=Z,17nm,0.8s,baz=312,slow=1.8,SNR=7.1						
ZALV				PKP	PKPdf	21 11 02.6	+1.1
	comp=Z,17nm,0.8s,baz=293,slow=2.9,SNR=49						
ZALV				pPKP	pPKPdf	21 11 34.1	0.0
	comp=Z,9.6nm,0.7s,baz=303,slow=2.7,SNR=4.9						
ZALV				SKPbc	SKiKP	21 14 28.4	-1.3
	comp=Z,4.3nm,0.8s,baz=317,slow=4.3,SNR=6.1						
AAK	Ala-Archa	141.37	45	PKP	PKPdf	21 11 04.9	+0.1
	comp=Z,2.1nm,0.6s,baz=298,slow=3.5,SNR=6.0						
AAK	Ala-Archa	141.37	45	ePKPdf	PKPdf	21 11 05.3	+0.4
AAK	Ala-Archa	141.37	45	i PKIKP	PKiKP	21 11 06.7	-0.9
KDJ	Kajisay	143.37	44	ePKPdf	PKPdf	21 11 09.2	+0.8
NIL	Nilore	143.52	59	ePKPdf	PKPdf	21 11 09.8	+1.0
MAKZ	Makanchi	143.60	34	ePKPdf	PKPbc	21 11 07.2	+1.0
KSH	Kashi	143.70	48	ePKP	PKPbc	21 11 06.9	+0.1
KSH				PP	PP	21 14 23.0	+0.3
KSH				PKS	PKSdf	21 14 41.1	-3.7
KSH				AMB	AMB		
	comp=Z,170nm,5.5s						
KSH				LR	LR		
	comp=Z,110nm,6.2s						
KSH				LR	LR		
	comp=Z,84nm,6.6s						
MK31	Makanchi Array	143.77	34	ePKPpre	PKPpre	21 11 04.2	
MK31				ePKPdf	PKPdf	21 11 08.7	-0.1
MK31	Makanchi Array	143.77	34	ePKHKP	PKPpre	21 11 04.2	
MK31				e		21 11 08.7	
MKAR	Makanchi Array	143.77	34	PKhKP	PKPpre	21 11 06.5	
	comp=Z,4.6nm,0.7s,baz=311,slow=2.7,SNR=45						
MKAR				PKP	PKPdf	21 11 09.1	+0.3
	comp=Z,4.6nm,0.7s,baz=312,slow=2.5,SNR=46						
MKAR				SKPbc	SKiKP	21 14 38.8	+0.8
	comp=Z,1.5nm,0.8s,baz=309,slow=2.6,SNR=4.2						
MKAR				SKKPbc	SKKPab	21 22 28.9	-16
	comp=Z,1.0nm,0.9s,baz=131,slow=6.6,SNR=5.7						
PRZ	Przheval'sk	143.98	42	ePKPdf	PKPdf	21 11 11.3	+1.8
PRZ	Przheval'sk	143.98	42	ePKIKP	PKPdf	21 11 11.3	+1.8
DGZ	Jazzator, Alta	144.15	26	i PKIKP	PKPdf	21 11 09.0	-0.5
KLR	Kul'dur	145.56	336	i PKP2	PKPdf	21 11 11.7	0.0
TEY	Ternei	146.43	326⇓	i PKP2	PKPab	21 11 15.5	-0.4
TEY				pmax	pmax		
	comp=Z,30nm,1.6s						
TEY				pmax	pmax		
	comp=E,40nm,0.6s						
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
IRK	Irkutsk	146.50	7	ePKP2	PKPbc	21 11 14.8	-0.1
IRK				pmax	pmax		
	comp=Z,79nm,2.1s						
MOY	Mondy	146.56	11	ePKP2	PKPab	21 11 16.3	-0.1
MOY				pmax	pmax		
	comp=Z,25nm,1.1s						
GUMO	Guam	146.96	266	ePKPbc	PKPbc	21 11 17.6	+0.4
GUMO	Guam	146.96	266	ePKP2	PKPbc	21 11 17.6	+0.4
TLY	Talaya	146.97	8	i PKIKP	PKPdf	21 11 14.0	-0.1
ZAK	Zakamensk	148.19	9	ePKIKP	PKPdf	21 11 17.7	+1.4
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
SOEI	Soe	148.45	206	ePKPbc	PKiKP	21 11 22.4	-0.6
WMQ	Urumqi	148.59	33	ePKPbc	PKPdf	21 11 17.2	+0.1
WMQ				LR	LR		
	comp=Z,96nm,28.8s						
WMQ				LR	LR		
	comp=Z,430nm,28.8s						
WMQ				LR	LR		
	comp=Z,100nm,23.1s						
HIA	Hailar	149.05	349	ePKPbc	PKiKP	21 11 22.6	-0.4
HIA	Hailar	149.05	349	i PKIKP	PKPdf	21 11 18.5	+0.9
HYB	Hyderabad	149.28	88	i PKP	PKPdf	21 11 20.0	+1.1
HYB				e		21 11 58.0	
USA0B	Ussuriysk Arra	149.35	329	ePKPbc	PKiKP	21 11 23.6	-0.2
USRK	Ussuriysk Ar.	149.35	329	PKPbc	PKiKP	21 11 23.5	-0.2
	comp=Z,39nm,0.8s,baz=248,slow=1.0,SNR=14						
USRK				pPKPbc	pPKPbc	21 11 55.6	+0.7
	comp=Z,8.2nm,0.7s,baz=52,slow=3.0,SNR=3.0						
FAKI	Fak Fak	149.67	226	ePKPbc	PKPbc	21 11 24.8	+0.4
MDJ	Mudanjiang	150.13	333	ePKPdf	PKPdf	21 11 20.4	+1.0
MDJ				ePKPbc	PKPbc	21 11 24.8	+0.2
MDJ	Mudanjiang	150.13	333	PKPbc	PKPdf	21 11 20.4	+1.0
MDJ				LR	LR		
	comp=Z,180nm,3.8s						
MDJ				LR	LR		
	comp=Z,110nm,3.8s						
MDJ				LR	LR		
	comp=Z,86nm,4.1s						
MMRI	Maumere	150.27	203	ePKPbc	PKiKP	21 11 26.2	-0.3
MJAR	Matsushiro Arr	150.37	312	PKPbc	PKiKP	21 11 26.3	+0.1
	comp=Z,29nm,0.7s,baz=101,slow=1.3,SNR=69						
MJAR				pPKPbc	pPKPbc	21 11 58.4	+0.8
	comp=Z,6.0nm,0.7s,baz=109,slow=0.5,SNR=2.4						
MAJO	Matsushiro	150.37	312	ePKPdf	PKPdf	21 11 20.6	+0.5
MAJO				ePKPbc	PKiKP	21 11 25.9	-0.2
MAJO	Matsushiro	150.37	312	ePKIKP	PKPdf	21 11 20.6	+0.5
MAT	Matsushiro	150.37	312	PKP	PKiKP	21 11 26.1	-0.1
MJB9	Matsu-Tunnel	150.37	312	ePKPbc	PKiKP	21 11 26.2	0.0
SONM	Songino Array	151.09	6	PKP	PKPdf	21 11 22.6	+1.6
	comp=Z,5.9nm,0.8s,baz=323,slow=1.0,SNR=28						
SONM				PKPbc	PKiKP	21 11 28.0	+0.6
	comp=Z,34nm,0.7s,baz=323,slow=1.6,SNR=90						
SONM				pPKPbc	pPKPbc	21 12 00.6	+1.4
	comp=Z,13nm,0.8s,baz=318,slow=1.6,SNR=4.7						
ULN	Ulaanbaatar	151.12	5	ePKPdf	PKPdf	21 11 22.2	+1.1
ULN				ePKPbc	PKiKP	21 11 28.3	+0.8
ULN				ePKPab	PKPab	21 11 36.5	+1.5
ULN	Ulaanbaatar	151.12	5	ePKIKP	PKPdf	21 11 22.2	+1.1
KAPI	Kappang	154.51	201	ePKPdf	PKPdf	21 11 26.8	-0.1
KAPI				ePKPab	PKPab	21 11 51.0	+1.1
KAPI	Kappang	154.51	201	ePKIKP	PKPdf	21 11 26.8	-0.1
KAPI				e		21 11 51.0	
KSRS	Korea Array	156.40	324	PKP	PKPdf	21 11 30.1	+1.4
	comp=Z,1.6nm,0.8s,baz=351,slow=1.1,SNR=7.6						
KSRS				PKPab	PKPab	21 11 57.0	-0.4
	comp=Z,5.2nm,0.9s,baz=59,slow=4.1,SNR=11						
GTA	Gaotai	157.60	23	ePKP	PKPdf	21 11 31.4	+1.1
HHC	Hu-ho-hao-te	158.30	359	ePKP	PKPdf	21 11 31.2	+0.1
LSA	Lhasa	159.19	56	ePKPdf	PKPdf	21 11 33.7	+0.7
LSA	Lhasa	159.19	56	ePKIKP	PKPdf	21 11 33.7	+0.7
LZH	Lanzhou	161.96	19	ePKP	PKPdf	21 11 37.4	+2.0
LZH				pPKP	pPKPdf	21 12 02.6	-5.4
TIA	Tai'an	162.07	343	PKP	PKPdf	21 11 36.4	+1.1
NJ2	Nanjing	165.22	332	ePKP	PKPdf	21 11 38.5	+0.2
CD2	Chengdu	166.58	27	PKP	PKPdf	21 11 38.0	-1.5
WHN	Wuhan	168.16	345	PKP	PKPdf	21 11 41.9	+1.3
CM31	Chiang Mai Arr	168.68	91	ePKPdf	PKPdf	21 11 41.8	+0.5
CM31				ePKPab	PKPab	21 12 51.5	-0.5
CMAR	Chiang Mai Arr	168.68	91	PKP	PKPdf	21 11 41.8	+0.5
	comp=Z,1.8nm,0.9s,baz=294,slow=2.4,SNR=12						
CMAR				PKPab	PKPab	21 12 51.9	-0.2
	comp=Z,0.5nm,0.7s,baz=260,slow=6.5,SNR=4.8						
ENH	Enshi	168.79	6	ePKPdf	PKPdf	21 11 41.4	+0.4
ENH				ePKPab	PKPab	21 12 51.4	-0.4
SSLB	Suanglung	169.51	298	ePKPdf	PKPdf	21 11 42.4	+0.7

IDC 09 21:07:12.7±16.0**, 1°.87N**×**96°.01E, h0**^{km}**, mb3.8**/3**, mb1 3.8**/4**, mb1mx3.4**/40**, mbtmp3.7**/4**, ML3.7**/1**, Error ellipse: s-maj=390.4km s-min=122.5km az=129.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.73	10	Pn	Pn	21 11 08.7	0.0
	0.1nm,0.3s,baz=199,slow=12,SNR=7.8						
H08S2	Diego Garcia H	25.29	248	T	T	21 39 14.1	
	baz=67,slow=75,SNR=27						
H08S3	Diego Garcia H	25.29	248	T	T	21 39 13.0	
	baz=67,slow=75,SNR=64						
H08S1	Diego Carcia H	25.31	248	T	T	21 39 15.8	
	baz=67,slow=75,SNR=51						
H01W3	Cape Leeuwin H	40.32	157	T	T	21 57 47.9	
	baz=334,slow=76,SNR=11						
H01W2	Cape Leeuwin H	40.34	157	T	T	21 57 48.6	
	baz=334,slow=76,SNR=11						
H01W1	Cape Leeuwin H	40.34	157	T	T	21 57 51.7	
	baz=334,slow=76,SNR=9.9						
MKAR	Makanchi Array	46.31	347	P	P	21 15 40.3	0.0
	1.1nm,0.7s,baz=157,slow=6.6,SNR=4.9						
KURBB	Kurchatov Arra	50.78	346	P	P	21 16 14.5	-0.1
	0.3nm,0.6s,baz=167,slow=6.9,SNR=3.0						
ZALV	Zalesovo Beam	52.72	352	P	P	21 16 28.9	-0.2
	1.8nm,0.5s,baz=178,slow=7.5,SNR=5.8						

IDC 09 21:10:21.6±8.8**, 31°.15S**×**179°.28E, h0**^{km}**, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.6**/29**, mbtmp3.8**/2**, Error ellipse: s-maj=373.2km s-min=60.1km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	40.75	269	P	P	21 18 03.6	-1.0
	0.4nm,0.4s,baz=114,slow=8.1,SNR=11						
WRA	Warramunga Arr	41.81	274	P	P	21 18 14.1	+0.8
	1.9nm,0.7s,baz=110,slow=8.3,SNR=2.5						
FINES	FINESS Array B	145.00	338	PKPbc	PKPbc	21 29 58.8	-0.7
	0.4nm,0.4s,baz=35,slow=5.1,SNR=5.3						

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*ISCJB **09** 21:36:31.0±0.5, 9°.57S±0°.08×122°.56E±0°.07, h100^{km}, mb3.8/5, Error ellipse: s-maj=13.8km s-min=6.2km az=39.7*
*IDC **09** 21:36:31.7±0.8, 8°.82S×123°.91E, h73^{km}±7^{km}, mb3.6/4, mb1 3.8/7, mb1mx3.4/36, mbtmp3.9/7, MS2.8/1, Ms1 2.8/1, ms1mx2.3/23, Error ellipse: s-maj=31.5km s-min=8.0km az=88.0*
*DJA **09** 21:36:32.6±0.6, 10°S±3°×12°3E±°, h26^{km}±8^{km}, M4.1/12, mb4.3/2, mB6.9/1, MLv4.1/12, Mw(mB)6.7/1*
ISC 09 21:36:31.6±0.7**, 9°.53S**±0°.07×**122°.58E**±0°.06**, h100**^{km}**, n20, σ2ˢ.26**/24**, mb3.9**/5**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	0.95	339	P	Pn	21 36 49.3	-2.3
MMRI				S	Sn	21 37 02.5	-4.1
EDFI	Ende, Flores	1.18	311	P	Pn	21 36 52.7	-1.5
EDFI				S	Sn	21 37 07.9	-3.2
BATI	Baumata	1.26	122	P	Pn	21 36 54.3	-0.7
	39nm,0.3s,baz=354,slow=1.7,SNR=33						
BATI				S	Sn	21 37 13.7	+1.0
	191nm,0.3s,baz=307,slow=20,SNR=16						
BATI	Baumata	1.26	122	P	Pn	21 36 55.0	0.0
SOEI	Soe	1.68	98	P	Pn	21 37 00.3	+0.1
WSI	Waingapu	2.26	266	P	Pn	21 37 21.8	+14
WBSI	Waikabubak, Su	3.15	268	P	Pn	21 37 19.3	-0.1
BSSI	Bau Bau, Buton	3.96	328	P	Pn	21 37 32.0	+1.7
BBSI	Bau Bau	4.02	360	P	Pn	21 37 32.2	+1.1
PLAI	Plampang	4.80	278	P	Pn	21 37 43.5	+1.9
BKSI	Bulukumba	4.84	330	P	Pn	21 37 42.6	+0.3
KAPI	Kappang	5.30	328	P	Pn	21 37 51.6	+3.2
	2.7nm,0.3s,baz=145,slow=7.3,SNR=13						
WRA	Warramunga Arr	15.36	134	P	Pn	21 39 58.5	-4.5
	1.0nm,0.3s,baz=322,slow=14,SNR=30						
WRA				S	Sn	21 42 38.8	-14
	1.6nm,0.3s,baz=309,slow=23,SNR=8.5						
DAV	Davao City (W)	16.76	10	LR	LR	21 48 15.4	
	comp=Z,29nm,18.4s,baz=168,slow=44						
ASAR	Alice Springs	17.74	144	P	P	21 40 31.6	-0.2
	0.4nm,0.3s,baz=323,slow=13,SNR=38						
ASAR				S	Sn	21 43 37.0	-13
	0.8nm,0.3s,baz=319,slow=20,SNR=11						
STKA	Stephens Creek	28.37	144	P	P	21 42 17.4	+0.9
	1.5nm,0.4s,baz=315,slow=10.0,SNR=4.8						
USRK	Ussuriysk Ar.	54.16	8	P	P	21 45 48.0	+1.5
	1.0nm,0.4s,baz=193,slow=5.2,SNR=5.2						
SONM	Songino Array	58.89	347	P	P	21 46 21.8	+1.6
	0.4nm,0.4s,baz=160,slow=8.9,SNR=3.5						
SONM				pP	pP	21 46 40.7	-3.1
	1.5nm,0.8s,baz=161,slow=8.7,SNR=5.0						
MKAR	Makanchi Array	66.59	331	P	P	21 47 13.0	+1.8
	0.4nm,0.5s,baz=145,slow=7.3,SNR=16						
MKAR				pP	pP	21 47 33.4	-1.9
	0.9nm,0.6s,baz=136,slow=7.9,SNR=5.9						
ZALV	Zalesovo Beam	70.84	337	P	P	21 47 40.8	+3.4
	0.6nm,0.4s,baz=119,slow=3.2,SNR=3.2						
ZALV				pP	PcP	21 47 57.8	+0.3
	1.3nm,0.6s,baz=132,slow=6.5,SNR=3.5						

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*ISCJB **09** 21:46:31.5±0.6, 33°.92N±0°.09×136°.7E±0°.1, h350^{km}, mb2.9/3, Error ellipse: s-maj=13.2km s-min=11.4km az=29.7*
*JMA **09** 21:46:31.0±0.1, 33°.97N×136°.79E, h362^{km}, M2.9*
*IDC **09** 21:46:32.1±1.3, 33°.98N×136°.84E, h366^{km}±27^{km}, mb2.8/3, mb1 2.9/7, mb1mx2.8/40, mbtmp3.6/7, Error ellipse: s-maj=58.0km s-min=18.7km az=68.0*
ISC 09 21:46:31.6±1.0**, 33°.94N**±0°.10×**136°.78E**±0°.09**, h350**^{km}**, n18, σ1ˢ.37**/21**, mb2.8**/3**, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.29	135	P	Pn	21 47 16.7	+1.5
JIE	Ise	0.45	352	P	Pn	21 47 16.6	+0.9
JKN2	Miekihoku	0.52	306	P	Pn	21 47 16.7	+0.9
TK02	Tokai 2	0.81	89	P	Pn	21 47 17.8	+1.4
JWY	Kouya	1.02	286	P	Pn	21 47 18.5	+1.0
JYTA	Yamagatataniai	1.65	359	P	Pn	21 47 21.4	+0.9
JWT	Wachi	1.76	320	P	Pn	21 47 22.1	+0.9
JWT				S	S	21 48 01.0	-0.1
JOD2	Odawara 2	2.32	55	P	Pn	21 47 26.5	+1.3
JHJ	Hachijo jima 2	2.64	107	P	Pn	21 47 29.9	+2.0
	4.5nm,0.3s,baz=53,slow=20,SNR=3.2						
JRY	Ryogami san	2.71	39	P	Pn	21 47 29.2	+0.8
JRY				eS	S	21 48 15.4	+1.4
MJAR	Matsushiro Arr	2.85	24	P	Pn	21 47 29.8	+0.3
	0.3nm,0.3s,baz=194,slow=10.0,SNR=18						
MJAR				S	S	21 48 19.0	+2.8
	0.0nm,0.3s,baz=192,slow=12,SNR=4.1						
JAG	Ashikaga	3.31	41	P	Pn	21 47 32.7	-1.0
BSO1	Boso 1	3.55	77	P	Pn	21 47 33.6	-1.8
USRK	Ussuriysk Ar.	10.90	341	P	Pn	21 48 59.7	-0.4
	0.6nm,0.3s,baz=164,slow=10,SNR=14						
ASAJ	Asahikawa	11.12	22	P	Pn	21 49 01.9	-0.9
	0.8nm,0.3s,baz=228,slow=13,SNR=5.2						
MKAR	Makanchi Array	42.64	304	P	P	21 53 53.9	-0.9
	0.3nm,0.5s,baz=88,slow=9.3,SNR=5.5						
WRA	Warramunga Arr	53.63	183	P	P	21 55 16.5	-1.7
	0.5nm,0.3s,baz=356,slow=6.5,SNR=2.1						
ASAR	Alice Springs	57.35	183	P	P	21 55 44.5	+0.1
	0.2nm,0.6s,baz=352,slow=5.0,SNR=1.6						

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*IDC **09** 22:02:18.0±1.4, 16°.47N×40°.87E, h0^{km}, mb3.7/7, mb1 3.7/8, mb1mx3.5/40, mbtmp3.7/8, ML3.1/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/36, Error ellipse: s-maj=31.5km s-min=26.1km az=157.0*
*SGS **09** 22:02:22, 16°.92N×40°.54E, h27^{km}, Ml3.2*
ISC 09 22:02:20.0±0.9**, 16°.85N**±0°.07×**40°.71E**±0°.09**, h8**^{km}**, n20, σ2ˢ.78**/19**, mb3.7**/7**, MS3.2**/4**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRBS	Ad Darb	1.80	57	P	Pn	22 02 52.0	+0.6
QNF02	Al Qunfudhah	2.32	19	P	Pn	22 02 56.5	-2.0
QNF02				S	Sn	22 03 22.8	-4.4
QNF01	Al Qunfudhah	2.58	12	P	Pn	22 03 00.1	-2.1
ENMS	ENMS	2.83	38	P	Pn	22 03 04.9	-0.9
ENMS				S	Sn	22 03 36.7	-3.5
DJNS	Zahran al Janu	2.84	72	P	Pn	22 03 05.8	-0.1
QNFDS	Al Qunfudhah	2.94	4	P	Pn	22 03 04.5	-2.6
BAHS	BAHS	3.21	15	P	Pn	22 03 09.9	-1.2
LTHS	Al Lith	3.42	355	P	Pn	22 03 11.1	-2.6
TATS	Tathlith	3.75	44	P	Pn	22 03 17.7	-0.7
ATD	Arta Tunnel	5.68	158	Pn	Pn	22 03 38.1	-6.8
	0.6nm,0.3s,baz=108,slow=19,SNR=2.0						
ATD				Sn	Sn	22 04 44.2	-6.2
	1.6nm,0.3s,baz=311,slow=20,SNR=1.1						
GNI	Garni	23.48	8	LR	LR	22 16 40.8	
	comp=Z,40nm,19.1s,baz=184,slow=36						
BRTR	Keskin Array B	23.61	346	P	P	22 07 36.4	+4.8
	0.6nm,0.9s,baz=166,slow=13,SNR=4.1						
GEYT	Alibeck	25.98	33	LR	LR	22 18 48.5	
	comp=Z,48nm,21.5s,baz=145,slow=38						
TORD	Torodi Ar. Bea	37.82	270	P	P	22 09 38.0	+0.5
	1.4nm,0.9s,baz=90,slow=8.9,SNR=6.9						
GERES	GERESS Array B	38.75	331	P	P	22 09 46.3	+1.4
	0.7nm,0.8s,baz=154,slow=5.0,SNR=4.8						
KURBB	Kurchatov Arra	45.26	33	P	P	22 10 39.1	+1.2
	0.7nm,0.2s,baz=236,slow=8.2,SNR=4.3						
MKAR	Makanchi Array	45.45	40	P	P	22 10 39.2	-0.4
	0.3nm,0.5s,baz=232,slow=8.9,SNR=1.9						
BOSA	Boshof	47.61	198	LR	LR	22 31 25.7	
	comp=Z,81nm,18.8s,baz=9.0,slow=37						
ZALV	Zalesovo Beam	50.30	32	P	P	22 11 16.7	-0.3
	1.7nm,0.9s,baz=258,slow=6.8,SNR=5.1						
ZALV				LR	LR	22 35 12.9	
	comp=Z,33nm,18.8s,baz=250,slow=39						
SONM	Songino Array	61.41	44	P	P	22 12 38.6	+1.6
	0.4nm,0.3s,baz=254,slow=6.1,SNR=5.0						

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*GRAL **09** 22:27:18.1±0.2, 34°.27N×36°.54E, h3^{km}±2^{km}, MD3.1*
*NSSC **09** 22:27:18.6±0.5, 34°.27N×36°.49E, h9^{km}±3^{km}, ML2.0*
ISC 09 22:27:16.7±3.5**, 34°.3N**±0°.1×**36°.5E**±0°.1**, h10**^{km}±16^{km}**, n8,**

σ0ˢ.40/15, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	**Hawqa**	0.46	265	eP	Pb	22 27 26.9	0.0
HWQ				eS	Sb	22 27 33.4	-0.4
QASN	**Qassioun**	0.81	193	eP	Pb	22 27 33.2	+0.3
QASN				eS	Sb	22 27 43.5	-0.4
QASN				AML	AML	22 27 46.6	
	comp=N,96nm,0.3s						
QASN				AML	AML	22 27 55.1	
	comp=E,225nm,0.6s						
BHL	**Bhannes**	0.81	239	eP	Pb	22 27 32.9	-0.1
BHL				eS	Sg	22 27 43.8	+0.8
TOTH	**TOTAH**	0.96	183	eP	Pn	22 27 36.5	+0.2
TOTH				eS	Sb	22 27 48.1	-0.1
TOTH				AML	AML	22 27 55.4	
	comp=E,23nm,0.8s						
TOTH				AML	AML	22 28 02.8	
	comp=N,36nm,0.5s						
DQRL	**Deir Qamar**	0.98	232	eP	Pg	22 27 35.8	+0.1
DQRL				eS	Sg	22 27 48.8	+0.3
RCY	**Rachaya**	0.99	214	eP	Pg	22 27 35.5	-0.3
BRBR	**Barbar**	1.02	207	eP	Pb	22 27 36.5	+0.1
BRBR				eS	Sb	22 27 50.2	+0.2
BRBR				AML	AML	22 27 55.1	
	comp=E,30nm,0.5s						
BRBR				AML	AML	22 27 55.9	
	comp=N,59nm,0.5s						
SHBL	**Chebaa**	1.16	213	eP	Pg	22 27 38.4	-0.5
SHBL				eS	Sg	22 27 53.5	-0.5

ISCJB ***09*** *22:28:06.4±1.0, 23°.70S±0°.05×68°.00W±0°.05, h151km±13km, Error ellipse: s-maj=8.0km s-min=7.1km az=168.0*
SJA ***09*** *22:28:06.0±0.6, 23°.83S×67°.94W, h128km±34km, ML2.7, MW3.0*
GUC ***09*** *22:28:07.9±0.6, 23°.63S×68°.21W, h160km±5km, ML3.8*
ISC 09 22:28:05.4±2.2**, 23°.74S**±0°.06×**67°.99W**±0°.05**, h162km**±23km**, n16, σ0ˢ.87**/29**, 6C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	1.41	323	eP	Pn	22 28 36.1	+0.7
LVC				eS	Sn	22 28 57.9	-0.6
PB15	**IPOC Station P**	1.46	291	⇑iP	Pn	22 28 36.5	+0.7
PB15				i S	Sn	22 28 58.4	-0.7
PB06	**IPOC Station P**	1.79	305	⇑iP	Pn	22 28 40.0	+0.9
PB06				i S	Sn	22 29 04.5	-0.5
PB06				IAML		22 29 06.5	
	comp=E,2μm,0.1s						
GO02	**Mina Guanaco**	2.04	226	⇑iP	Pn	22 28 42.7	+0.7
GO02				eS	Sn	22 29 10.9	+0.7
GO02				IAML		22 29 13.1	
	comp=N,610nm,0.1s						
PB05	**IPOC Station P**	2.22	293	eP	Pn	22 28 44.8	+0.9
PB05				eS	Sn	22 29 13.3	-0.4
PB05	**IPOC Station P**	2.22	293	⇓iP	Pn	22 28 44.6	+0.6
PB05				i S	Sn	22 29 12.3	-1.4
PB05				IAML		22 29 16.7	
	comp=E,303nm,0.2s						
PB09	**IPOC Station P**	2.25	329	⇓iP	Pn	22 28 45.9	+1.4
PB09				i S	Sn	22 29 14.0	-0.5
PB09				IAML		22 29 16.8	
	comp=N,256nm,0.7s						
PB03	**IPOC Station P**	2.34	316	⇓iP	Pn	22 28 46.3	+0.8
PB03				i S	Sn	22 29 15.5	-0.8
PB03				IAML		22 29 17.7	
	comp=E,672nm,0.3s						
PB10	**IPOC Station P**	2.37	275	⇑iP	Pn	22 28 46.5	+0.9
PB10				i S	Sn	22 29 15.1	-1.4
PB10				IAML		22 29 18.1	
	comp=E,289nm,0.4s						
PB14	**IPOC Station P**	2.38	248	eP	Pn	22 28 45.7	-0.3
HJA	**Humahuaca**	2.42	78	eP	Pn	22 28 47.1	+0.4
PB04	**IPOC Station P**	2.44	305	⇑iP	Pn	22 28 47.2	+0.6
PB04				i S	Sn	22 29 17.4	-0.9
PB04				IAML		22 29 18.2	
	comp=N,640nm,0.5s						
PB07	**IPOC Station P**	2.66	318	⇓iP	Pn	22 28 50.2	+0.9
PB07				i S	Sn	22 29 22.1	-1.2
PB07				IAML		22 29 23.8	
	comp=E,472nm,0.2s						
AZAP	**Zapla**	2.71	101	eP	Pn	22 28 49.8	-0.2
AZAP				IAML		22 30 43.0	
	comp=Z,37nm,0.3s						
YJA	**Yavi**	2.76	56	eP	Pn	22 28 51.6	+0.8
YJA				IAML		22 28 52.0	
	comp=Z,14nm,0.3s						
YJA				eS	Sn	22 29 25.3	-0.5
PB01	**IPOC Station P**	3.02	332	⇑eP	Pn	22 28 54.1	+0.5
PB01				eS	Sn	22 29 30.1	-1.0
PB01				IAML		22 29 33.2	
	comp=E,213nm,0.5s						

ISCJB ***09*** *22:29:49.1±0.4, 28°.81N±0°.04×139°.70E±0°.09, h424km, mb3.6/14, Error ellipse: s-maj=10.6km s-min=5.1km az=169.8*
IDC ***09*** *22:29:49.2±1.2, 28°.78N×139°.73E, h414km±12km, mb3.4/14, mb1 3.5/18, mb1mx3.3/36, mbtmp4.1/18, Error ellipse: s-maj=28.7km s-min=11.9km az=77.0*
JMA ***09*** *22:29:49.3±0.1, 28°.87N×140°.10E, h444km, M3.9*
ISC 09 22:29:50.1±0.6**, 28°.88N**±0°.07×**139°.8E**±0°.1**, h424km, n34, σ1ˢ.58**/48**, mb3.6**/14**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	2.77	129	P	P	22 30 53.0	-0.4
CBIJ				S	S	22 31 42.9	-1.8
JHH2	**Haha-jima-NKT2**	3.08	136	P	P	22 30 55.6	-0.2
JHH2				S	S	22 31 48.1	-1.0
JHJ	**Hachijo jima 2**	4.23	360	P	P	22 31 06.4	+0.9
	28nm,0.3s,baz=82,slow=19,SNR=19						
JHJ				S	S	22 32 05.0	-2.1
	11nm,0.3s,baz=270,slow=20,SNR=3.4						
BSO1	**Boso 1**	5.84	10	P	P	22 31 23.1	+2.1
BSO1				S	S	22 32 36.3	+0.7
BSO3	**Boso 3**	5.94	6	P	P	22 31 23.7	+1.5
BSO3				eS	S	22 32 37.9	0.0
JIE	**Ise**	6.09	335	P	P	22 31 27.5	+3.3
BSO4	**Boso 4**	6.11	4	P	P	22 31 25.6	+1.4
BSO4				eS	S	22 32 41.7	+0.2
JNY	**Yasuok**	6.66	346	P	P	22 31 32.3	+1.5
JAO	**Obara**	6.72	342	P	P	22 31 33.5	+2.2
JEG	**Eigenji**	6.87	336	P	P	22 31 36.1	+3.1
JHU	**Hanno**	6.96	357	P	P	22 31 34.1	+0.1
JHU				eS	S	22 32 57.8	-0.8
JRY	**Ryogami san**	7.16	354	P	P	22 31 37.0	+0.9
JAG	**Ashikaga**	7.53	358	P	P	22 31 39.8	-0.3
JAG				S	S	22 33 06.4	-3.5
JHO	**Hitachi**	7.74	5	P	P	22 31 43.4	+1.0
MJAR	**Matsushiro Arr**	7.75	351	P	P	22 31 43.0	+0.4
	0.5nm,0.3s,baz=174,slow=11,SNR=17						
MJAR				S	S	22 33 10.2	-4.4
	0.0nm,0.3s,baz=155,slow=14,SNR=2.6						
MAT	**Matsushiro**	7.76	351	P	P	22 31 42.0	-0.6
MAT				eS	S	22 33 10.4	-4.2
JNU	**Nakatsue**	8.73	301	P	P	22 31 53.0	-0.4
	0.5nm,0.3s,baz=99,slow=13,SNR=4.2						
USRK	**Ussuriysk Ar.**	16.51	340	P	P	22 33 19.6	+1.9
	0.8nm,0.3s,baz=172,slow=12,SNR=14						
KLR	**Kul'dur**	21.23	345	P	P	22 34 05.2	+1.2
	1.0nm,0.5s,baz=194,slow=4.0,SNR=5.1						
SONM	**Songino Array**	31.96	316	P	P	22 35 39.8	+0.7
	1.6nm,0.6s,baz=132,slow=8.5,SNR=11						
ZALV	**Zalesovo Beam**	46.75	318	P	P	22 37 38.9	-0.1
	0.8nm,0.3s,baz=104,slow=7.8,SNR=4.9						
ZALV				PcP	PcP	22 39 04.2	0.0
	1.0nm,0.4s,baz=116,slow=3.6,SNR=4.5						
MKAR	**Makanchi Array**	47.71	308	P	P	22 37 46.4	-0.1
	1.6nm,0.5s,baz=90,slow=8.9,SNR=24						
MKAR				PcP	pP	22 39 08.0	-0.4
	0.7nm,0.5s,baz=77,slow=8.5,SNR=6.4						
MKAR				ScP	ScP	22 42 20.8	-0.2
	0.1nm,0.5s,baz=78,slow=6.7,SNR=3.6						
WRA	**Warramunga Arr**	48.82	187	P	P	22 37 54.0	-1.1
	0.8nm,0.2s,baz=358,slow=8.4,SNR=13						
WRA				PcP	PcP	22 39 11.8	-0.4
	0.5nm,0.5s,baz=360,slow=5.3,SNR=2.5						
ASAR	**Alice Springs**	52.55	187	P	P	22 38 21.6	-0.9
	0.4nm,0.4s,baz=2.3,slow=6.1,SNR=9.4						
GEYT	**Alibeck**	66.76	302	P	P	22 39 58.4	+0.4
	2.1nm,0.6s,baz=90,slow=4.4,SNR=4.9						
ARCES	**ARCESS Array B**	71.16	340	P	P	22 40 25.3	+1.3
	1.8nm,0.6s,baz=79,slow=8.8,SNR=8.6						
KBZ	**Khabaz**	75.24	312	P	P	22 40 48.3	+0.3
	6.0nm,0.8s,baz=78,slow=3.3,SNR=16						
FINES	**FINESS Array B**	75.41	333	P	P	22 40 49.1	+0.5
	2.1nm,0.4s,baz=69,slow=4.7,SNR=35						
AKASG	**Malin Array Be**	79.92	323	P	P	22 41 13.1	-0.3
	1.0nm,0.4s,baz=51,slow=5.6,SNR=7.4						
NOA	**NORSAR Array B**	81.16	337	P	P	22 41 19.9	+0.2
	0.2nm,0.4s,baz=54,slow=6.6,SNR=4.7						
BRTR	**Keskin Array B**	83.24	312	P	P	22 41 31.4	+0.4
	1.4nm,0.7s,baz=120,slow=4.2,SNR=7.7						
GERES	**GERESS Array B**	88.88	328	P	P	22 41 56.4	-1.5
	0.4nm,0.5s,baz=27,slow=4.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	121.81	310	PKP	PKiKP	22 47 55.2	-0.5
	0.4nm,0.5s,baz=169,slow=1.3,SNR=7.9						
LPAZ	**La Paz**	151.42	70	PKPbc	PKiKP	22 48 57.2	+0.7
	0.7nm,0.7s,baz=3.3,slow=3.1,SNR=3.5						

ISCJB ***09*** *22:30:03.0±0.7, 24°.30S±0°.06×67°.04W±0°.09, h169km, mb3.5/1, Error ellipse: s-maj=11.9km s-min=7.5km az=162.4*
IDC ***09*** *22:30:04.5±1.5, 24°.33S×66°.94W, h162km±18km, mb3.5/1, mb1 3.5/8, mb1mx3.3/26, mbtmp3.9/8, Error ellipse: s-maj=26.2km s-min=20.5km az=92.0*
ISC 09 22:30:03.7±0.8**, 24°.33S**±0°.06×**67°.1W**±0°.1**, h169km, n9, σ1ˢ.93**/12**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	2.41	315	P	Pn	22 30 46.7	+1.5
	9.3nm,0.3s,baz=131,slow=4.2,SNR=3.8						
LVC				S	Sn	22 31 15.6	-1.7
	8.4nm,0.3s,baz=134,slow=6.1,SNR=5.0						
CFA	**Coronel Fontan**	7.32	188	P	Pn	22 31 48.5	+0.4
	0.8nm,0.3s,baz=291,slow=8.6,SNR=1.6						
CFA				S	Sn	22 33 07.1	-3.2
	0.9nm,0.3s,baz=274,slow=19,SNR=2.6						
LPAZ	**La Paz**	8.07	353	P	Pn	22 31 59.3	+0.7
	2.4nm,0.3s,baz=154,slow=7.0,SNR=40						
LPAZ				S	Sn	22 33 25.8	-3.4
	0.1nm,0.3s,baz=341,slow=17,SNR=2.1						
CPUP	**Villa Florida**	9.02	105	P	Pn	22 32 10.7	+0.1
	0.1nm,0.3s,baz=286,slow=9.2,SNR=4.9						
SIV	**San Ignacio**	10.02	35	P	Pn	22 32 22.9	-0.9
	0.3nm,0.3s,baz=221,slow=16,SNR=5.3						
PLCA	**Paso Flores**	16.61	189	P	P	22 33 47.8	+1.3
	0.2nm,0.3s,baz=340,slow=15,SNR=1.7						
BDFB	**Brasilia**	19.86	68	P	P	22 34 22.8	+0.7
	0.9nm,0.3s,baz=258,slow=8.3,SNR=7.7						
TORD	**Torodi Ar. Bea**	76.74	69	P	P	22 41 37.4	+0.5
	0.6nm,0.5s,baz=242,slow=6.8,SNR=9.5						
MKAR	**Makanchi Array**	146.81	40	PKPbc	PKPbc	22 49 27.4	+1.5
	0.3nm,0.7s,baz=309,slow=3.2,SNR=3.9						

UCR 09 22:45:38.6±1.8**, 9°.26N**×**83°.08W, h2km**±6km**, MW3.6, 6C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK0	**Durika**	0.16	272	⇑eP	Pg	22 45 42.2	+0.4
DRK0				eS	Sg	22 45 45.2	+1.3
EDBA	**Buenos Aires**	0.21	244	⇑iP	Pg	22 45 44.3	+1.6
EDBA				eS	Sg	22 45 47.4	+2.0
EDPN	**Palmar Norte**	0.47	232	⇑iP	Pb	22 45 49.3	-0.3
EDPN				eS	Sb	22 45 56.4	-0.6
EDLM	**Las Mercedes**	0.50	273	⇑eP	Pg	22 45 48.5	+0.3
BRU2	**Volcan**	0.60	140	⇑iP	Pg	22 45 50.6	+0.4
BRU2				eS	Sb	22 46 00.2	-0.7
EDDO	**Dominical**	0.77	270	eP	Pg	22 45 53.6	+0.2
CVTR	**Volcan Turrial**	1.01	319	eP	Pg	22 45 58.1	+0.2
LCR2	**La Lucha 2**	1.03	298	⇑eP	Pg	22 45 57.7	-0.7
ARE1	**Arenal 1**	2.01	307	eP	Pn	22 46 14.5	+1.0
CEDE	**Laguna Cedeo**	2.01	308	eP	Pb	22 46 15.1	-0.8
JTS	**Las Juntas de**	2.11	299	eP	Pn	22 46 15.0	+0.1

ISCJB ***09*** *23:10:37.2±1.1, 48°.4N±0°.2×153°.0E±0°.3, h150km, mb3.4/5, Error ellipse: s-maj=34.5km s-min=12.7km az=136.5*
IDC ***09*** *23:10:39.9±2.5, 48°.44N×152°.96E, h165km±24km, mb3.1/5, mb1 3.2/7, mb1mx3.0/37, mbtmp3.6/7, Error ellipse: s-maj=31.3km s-min=17.4km az=133.0*
ISC 09 23:10:38.7±1.2**, 48°.4N**±0°.2×**153°.0E**±0°.2**, h150km, n13, σ0ˢ.99**/7**, mb3.4**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	5.57	31	P	Pn	23 12 00.8	+1.2
	0.3nm,0.3s,baz=199,slow=11,SNR=5.1						
PETK				S	Sn	23 13 15.3	+13
	0.4nm,0.3s,baz=142,slow=16,SNR=3.1						
ASAJ	**Asahikawa**	8.38	243	P	Pn	23 12 37.9	+0.8
	0.8nm,0.3s,baz=76,slow=17,SNR=8.1						
KSRS	**Korea Array**	21.27	248	P	P	23 15 13.7	+0.6
	1.5nm,0.6s,baz=43,slow=9.8,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	30.75	154	T	T	23 48 41.2	
	baz=342,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	30.77	154	T	T	23 48 45.0	
	baz=342,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	30.77	154	T	T	23 49 01.0	
	baz=342,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	31.85	155	T	T	23 50 10.9	
	baz=344,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	31.86	155	T	T	23 50 00.0	
	baz=344,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy**	31.87	155	T	T	23 49 45.9	
	baz=344,slow=76,SNR=25						
ILAR	**Eielson Array**	35.31	40	P	P	23 17 18.4	-0.5
	0.2nm,0.3s,baz=260,slow=8.1,SNR=4.2						
MKAR	**Makanchi Array**	46.11	296	P	P	23 18 46.9	-0.7
	0.2nm,0.4s,baz=70,slow=8.3,SNR=3.2						
FINES	**FINESS Array B**	62.49	334	P	P	23 20 45.0	-0.7
	0.9nm,0.6s,baz=30,slow=16,SNR=4.2						
ASAR	**Alice Springs**	73.77	198	P	P	23 21 55.9	-0.4
	0.5nm,0.7s,baz=22,slow=5.2,SNR=3.7						

IDC ***09*** *23:24:38.5±0.5, 27°.14S×176°.31W, h0km, mb4.4/18, mb1 4.5/19, mb1mx4.4/36, mbtmp4.4/19, ML3.8/1, MS3.9/10, Ms1 3.9/10, ms1mx3.7/25, Error ellipse: s-maj=20.6km s-min=17.0km az=130.0*
ISCJB ***09*** *23:24:43.0±0.3, 27°.21S±0°.06×176°.36W±0°.07, h35km, mb4.7/48, MS3.9/10, Error ellipse: s-maj=10.4km s-min=7.6km az=135.2*
MOS ***09*** *23:24:43.6±0.8, 27°.12S×176°.35W, h37km, mb4.8/16, Error ellipse: s-maj=21.4km s-min=13.5km az=65.4*
NEIC ***09*** *23:24:46.3±1.4, 27°.17S×176°.46W, h53km±5km, mb4.8/39, Error ellipse: s-maj=21.7km s-min=14.8km az=110.0*
BJI ***09*** *23:24:47.1±0.0, 26°.96S×176°.16W, h63km, mb5.2/17, mB5.4/4, Ms7 4.5/1*
ISC 09 23:24:44.2±0.4**, 27°.21S**±0°.07×**176°.4W**±0°.1**, h35km, n130, σ1ˢ.20**/129**, mb4.7**/48**, MS3.8**/10**, 3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	2.46	214	ePn	Pn	23 25 23.2	+1.5
RAO	**Raoul Island**	2.46	214	eP	Pn	23 25 23.3	+1.5
URZ	**Urewera**	12.31	205	Pn	Pn	23 27 36.2	-0.7
	0.5nm,0.3s,baz=255,slow=7.6,SNR=2.4						
URZ				Sn	Sn	23 29 48.0	-4.8
	2.7nm,0.3s,baz=41,slow=23,SNR=8.9						
RAR	**Rarotonga**	16.26	72	LR	LR	23 33 35.4	
	comp=Z,294nm,20.5s,baz=233,slow=33						
DZM	**Mont Dzumac**	16.44	284	eLR	LR	23 32 31.7	
	comp=Z,1μm,25.6s						
DZM	**Mont Dzumac**	16.44	284	Pn	P	23 28 34.3	-0.4
	0.2nm,0.3s,baz=123,slow=17,SNR=2.3						
DZM				LR	LR	23 33 46.9	
	comp=Z,947nm,18.6s,baz=90,slow=33						
DZM	**Mont Dzumac**	16.44	284	eP	P	23 28 34.3	-0.4
	127nm,1.8s						
RPZ	**Rata Peaks**	19.36	208	LR	LR	23 37 15.1	
	comp=Z,638nm,18.8s,baz=26,slow=39						
TBI	**Tubuai**	24.61	87	eLQ	LQ	23 34 35.5	
	442nm,27.5s						
TBI				eLR	LR	23 35 48.2	
	comp=Z,365nm,30.5s,baz=256						
PPT2	**Papeete2**	26.50	74	eLQ	LQ	23 35 34.5	
	470nm,22.8s						
PPT2				eLR	LR	23 36 43.2	
	comp=Z,327nm,25.0s,baz=259						
PPT	**Papeete**	26.51	74	LR	LR	23 38 57.1	
	comp=Z,221nm,18.2s,baz=205,slow=32						
CTA	**Charters Tower**	34.87	274	P	P	23 31 34.0	+1.6
	8.8nm,0.5s,baz=99,slow=11,SNR=16						
STKA	**Stephens Creek**	36.70	252	P	P	23 31 48.0	0.0
	2.3nm,0.7s,baz=98,slow=11,SNR=3.4						
STKA				LR	LR	23 46 12.5	
	comp=Z,466nm,18.1s,baz=56,slow=35						
STKA	**Stephens Creek**	36.70	252	eP	P	23 31 48.0	0.0
	4.7nm,1.5s						
STKA	**Stephens Creek**	36.70	252	eP	P	23 31 49.0	+1.0
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AS31	**Alice Springs**	44.82	263	eP	P	23 32 54.0	-1.0
	comp=Z,5.0nm,1.6s						
ASAR	**Alice Springs**	44.82	263	P	P	23 32 54.0	-1.0
	comp=Z,1.2nm,0.5s,baz=91,slow=6.7,SNR=17						
ASAR				LR	LR	23 50 55.7	
	comp=Z,229nm,18.2s,baz=106,slow=35						
WRAB	**Tennant Creek**	45.52	268	i P	P	23 33 00.8	+0.2
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
WR1	**Warramunga Arr**	45.52	268	eP	P	23 32 59.2	-1.5
WRA	**Warramunga Arr**	45.52	268	P	P	23 32 59.2	-1.5
	comp=Z,4.8nm,1.0s,baz=104,slow=9.0,SNR=8.3						
VNDA	**Vanda**	51.41	186	P	P	23 33 46.1	+1.0
	comp=Z,2.3nm,1.2s,baz=38,slow=3.5,SNR=3.7						
VNDA				LR	LR	23 51 47.2	
	comp=Z,104nm,20.8s,baz=53,slow=32						
VNDA	**Vanda**	51.41	186	eP	P	23 33 47.6	+2.5
	comp=Z,20nm,1.8s						
VNDA	**Vanda**	51.41	186	eP	P	23 33 47.6	+2.5
VNDA				pmax	pmax		
	comp=Z,20nm,1.8s						
CASY	**Casey**	58.63	207	eP	P	23 34 38.4	+1.1
	comp=Z,11nm,0.6s						
QSPA	**South Pole Qui**	62.89	180	eP	P	23 35 07.6	+1.0
	comp=Z,14nm,1.0s						
MAW	**Mawson**	75.79	200	P	P	23 36 27.0	+0.9
	comp=Z,3.0nm,0.8s,baz=126,slow=8.5,SNR=4.3						
MAW	**Mawson**	75.79	200	eP	P	23 36 27.0	+0.9
	comp=Z,6.0nm,1.6s						
MAW	**Mawson**	75.79	200	eP	P	23 36 27.0	+0.9
MAW				pmax	pmax		
	comp=Z,6.0nm,1.6s						
MJA0	**Matsu Arr-Jizo**	76.46	324	eP	P	23 36 30.2	-0.1
MJA0				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MJAR	**Matsushiro Arr**	76.48	324	P	P	23 36 29.4	-1.0
	comp=Z,7.6nm,1.0s,baz=166,slow=6.6,SNR=12						
MJAR				LR	LR	00 04 33.8	
	comp=Z,31nm,22.0s,baz=180,slow=31						
MAJO	**Matsushiro**	76.48	324	eP	P	23 36 30.8	+0.4
	comp=Z,15nm,1.1s						
MAJO	**Matsushiro**	76.48	324	eP	P	23 36 30.8	+0.4
MAJO				pmax	pmax		
	comp=Z,15nm,1.1s						
MAT	**Matsushiro**	76.48	324	P	P	23 36 29.9	-0.5
MJB9	**Matsu-Tunnel**	76.48	324	eP	P	23 36 30.8	+0.3
	comp=Z,10nm,0.9s						
JNU	**Nakatsue**	78.17	317	P	P	23 36 40.2	+0.2
	comp=Z,13nm,1.0s,baz=105,slow=2.0,SNR=4.8						
JNU	**Nakatsue**	78.17	317	eP	P	23 36 40.3	+0.3
	comp=Z,19nm,1.1s						
SYO	**Syowa Base**	80.53	192	⇑eP	P	23 36 51.6	-0.7
SYO	**Syowa Base**	80.53	192	⇑ePcP	PcP	23 36 57.6	-1.6
SNAA	**Sanae**	81.29	178	P	P	23 36 56.8	+0.3
SNAA	**Sanae**	81.29	178	P	P	23 36 56.3	-0.2
	comp=Z,3.7nm,1.1s,baz=199,slow=5.4,SNR=6.1						
SNAA	**Sanae**	81.29	178	eP	P	23 36 56.5	0.0
	comp=Z,10nm,1.3s						
LPIG	**La Paz**	81.63	58	LR	LR	00 04 56.5	
	comp=Z,75nm,19.1s,baz=208,slow=30						
VNA2	**Neumayer--Watz**	81.83	176	P	P	23 36 60.0	+0.7
	baz=201,slow=2.7						
KSRS	**Korea Array**	82.88	319	P	P	23 37 04.5	-0.6
	comp=Z,1.7nm,0.7s,baz=138,slow=5.5,SNR=8.0						
KSRS				LR	LR	00 12 42.5	
	comp=Z,20nm,18.3s,baz=145,slow=35						
KSRS	**Korea Array**	82.88	319	eP	P	23 37 06.4	+1.3
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KS15	**Wonju Array Si**	82.90	318	eP	P	23 37 04.5	-0.7
	comp=Z,58nm,1.6s						
ISA	**Isabella, Lake**	83.02	44	eP	P	23 37 05.7	-0.3
	comp=Z,18nm,1.6s						
ISA	**Isabella, Lake**	83.02	44	eP	P	23 37 05.7	-0.3
ISA				pmax	pmax		
	comp=Z,18nm,1.6s						
PETK	**Petropavlovsk-**	83.11	345	P	P	23 37 06.3	+0.4
	comp=Z,1.8nm,0.6s,baz=122,slow=8.5,SNR=3.3						
PEA1	**Petropavlovsk-**	83.11	345	eP	P	23 37 06.3	+0.4
CMB	**Columbia Colle**	83.43	41	eP	P	23 37 08.1	+0.1
	comp=Z,7.6nm,1.4s						
CMB	**Columbia Colle**	83.43	41	eP	P	23 37 08.1	+0.1
CMB				pmax	pmax		
	comp=Z,8.0nm,1.4s						
AFDM	**Forest Hills D**	83.70	40	eP	P	23 37 09.5	+0.2
	comp=Z,3.3nm,1.0s						
ORV	**Oroville**	83.81	39	eP	P	23 37 10.2	+0.4
	comp=Z,3.9nm,0.8s						
ORV	**Oroville**	83.81	39	eP	P	23 37 10.3	+0.4
ORV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WAKR	**Walker**	84.30	41	eP	P	23 37 13.1	+0.4
	comp=Z,23nm,1.8s						
YBH	**Yreka Blue Hor**	84.64	37	P	P	23 37 14.2	+0.1
	comp=Z,3.7nm,1.0s,baz=172,slow=8.1,SNR=4.0						
RYN	**Ryan**	84.92	42	eP	P	23 37 15.6	-0.2
	comp=Z,8.9nm,1.4s						
NVAR	**Mina Array Bea**	84.92	42	P	P	23 37 14.9	-0.9
	comp=Z,2.4nm,1.0s,baz=225,slow=7.6,SNR=10						
NV11	**Mina Array Sit**	85.01	42	eP	P	23 37 16.1	-0.1
	comp=Z,0.5nm,1.4s						
NJ2	**Nanjing**	85.29	310	eP	P	23 37 19.1	+1.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	**Ussuriysk Ar.**	85.32	326	P	P	23 37 18.8	+1.4
	comp=Z,2.3nm,0.8s,baz=169,slow=5.0,SNR=7.2						
KVN	**Kaiserville**	85.44	42	eP	P	23 37 18.8	+0.4
	comp=Z,4.6nm,1.2s						
KVN	**Kaiserville**	85.44	42	eP	P	23 37 18.8	+0.4
KVN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SHPR	**Sheep Range**	85.62	45	eP	P	23 37 19.4	+0.1
	comp=Z,6.6nm,1.4s						
TUC	**Tucson**	85.99	51	eP	P	23 37 21.6	+0.4
	comp=Z,8.8nm,1.4s						
TUC	**Tucson**	85.99	51	eP	P	23 37 21.6	+0.4
TUC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WHN	**Wuhan**	87.60	306	⇑P	P	23 37 30.8	+1.9
TIA	**Tai'an**	88.88	312	P	P	23 37 36.0	+1.2
TIA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	**Kul'dur**	89.03	329	i P	P	23 37 35.6	+0.4
KLR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
G08A	**Pilot Rock**	89.05	36	eP	P	23 37 35.4	-0.1
	comp=Z,5.7nm,1.1s						
TXAR	**Lajitas Array**	89.45	56	P	P	23 37 38.1	+0.3
	comp=Z,1.6nm,1.0s,baz=224,slow=3.5,SNR=4.1						
ANMO	**Albuquerque**	90.46	50	P	P	23 37 42.4	-0.1
	comp=Z,1.2nm,0.7s,baz=189,slow=7.2,SNR=5.1						
ANMO	**Albuquerque**	90.46	50	eP	P	23 37 42.4	-0.1
	comp=Z,2.6nm,1.0s						
ANMO	**Albuquerque**	90.46	50	i P	P	23 37 41.9	-0.6
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PLID	**Pearl Lake**	90.52	38	eP	P	23 37 42.4	-0.2
	comp=Z,14nm,1.5s						
RC01	**Rabbit Creek A**	90.61	13	eP	P	23 37 42.3	0.0
	comp=Z,33nm,1.6s						
TCUT	**Toone Canyon**	90.75	43	eP	P	23 37 44.1	+0.3
	comp=Z,31nm,1.7s						
SLVN	**Son La**	90.94	293	eP	P	23 37 45.3	+0.4
	comp=Z,16nm,1.5s						
ENH	**Enshi**	91.01	304	eP	P	23 37 45.8	+0.8
	comp=Z,45nm,1.3s						
KMI	**Kunming**	93.68	296	P	P	23 37 59.5	+1.8
KMI				pmax	pmax		
	comp=Z,12nm,1.4s						
CMAR	**Chiang Mai Arr**	93.72	289	P	P	23 37 59.6	+1.9
	comp=Z,0.6nm,0.4s,baz=154,slow=2.7,SNR=8.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	Eielson Array	94.51	12	P	P	23 37 59.4	-0.8
	comp=Z,1.1nm,0.8s,baz=210,slow=4.2,SNR=7.6						
HHC	Hu-ho-hao-te	95.07	314	P	P	23 38 06.2	+2.7
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,64nm,5.7s						
CD2	Chengdu	95.62	302	*e*P	P	23 38 07.0	+0.8
BILL	Bilibino	95.83	354	*i* P	P	23 38 05.0	-1.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LZH	Lanzhou	97.98	306	*e*P	Pdif	23 38 18.0	+1.0
LZH				pP	pwP	23 38 35.1	+3.4
LZH				sP	sP	23 38 42.3	+12
LZH				PP	PP	23 42 14.1	-2.3
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ	Urumqi	112.36	309	*e*PKP	PKiKP	23 43 16.4	0.0
WMQ				LR	LR		
	comp=Z,140nm,22.3s						
MK32	Makanchi Array	116.79	311	*e*PKPdf	PKPdf	23 43 23.3	-1.5
MKAR	Makanchi Array	116.79	311	PKP	PKPdf	23 43 23.3	-1.4
	comp=Z,0.5nm,0.6s,baz=11,slow=1.2,SNR=4.8						
SUR	Sutherland	118.53	197	PKP	PKPdf	23 43 27.9	-1.0
	comp=Z,8.6nm,0.9s,baz=185,slow=6.7,SNR=3.7						
KURK	Kurchatov	119.85	315	*e*PKPdf	PKPdf	23 43 29.5	-0.9
KURK	Kurchatov	119.85	315	*e*PKIKP	PKPdf	23 43 29.5	-0.9
KURBB	Kurchatov Arra	119.89	315	PKP	PKPdf	23 43 28.9	-1.6
	comp=Z,1.2nm,1.0s,baz=88,slow=1.8,SNR=7.0						
BVAR	Borovoye Array	125.08	317	PKP	PKPdf	23 43 39.9	-0.5
	comp=Z,1.4nm,0.9s,baz=176,slow=7.9,SNR=6.3						
ARU	Arti	131.49	323	*i* PKIKP	PKPdf	23 43 52.5	0.0
ARU						23 46 11.2	
FINES	FINESS Array B	142.59	342	PKhKP	PKPpre	23 44 07.9	
	comp=Z,1.2nm,0.7s,baz=35,slow=5.1,SNR=5.4						
FINES	FINESS Array B	142.59	342	*e*PKIKP	PKPdf	23 44 10.3	-2.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	Obninsk	143.29	328	*i* PKIKP	PKPdf	23 44 14.2	0.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	144.40	308	PKP	PKPbc	23 44 15.6	+0.5
	comp=Z,1.2nm,0.6s,baz=19,slow=1.8,SNR=2.9						
AKH	Akhalkalaki	144.48	304	*e*PKPdf	PKPdf	23 44 16.5	-0.6
AKH	Akhalkalaki	144.48	304	*e*PKIKP	PKPdf	23 44 16.5	-0.6
KIV	Kislovodsk	144.49	308	*i* PKIKP	PKPdf	23 44 16.5	-0.4
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
NC303	NORSAR Array S	145.59	353	*e*PKPdf	PKPdf	23 44 17.9	-0.2
NC405	NORSAR Array S	145.66	353	*e*PKPdf	PKPbc	23 44 18.6	+0.1
NB2	NORSAR Subarra	145.78	353	PKP	PKPdf	23 44 18.6	+0.1
	comp=Z,1.3nm,0.7s,baz=10,slow=3.7						
NOA	NORSAR Array B	145.78	353	PKPbc	PKPdf	23 44 18.5	+0.1
	comp=Z,9.0nm,1.1s,baz=9.9,slow=2.4,SNR=7.0						
AKASG	Malin Array Be	149.51	327	PKPbc	PKPbc	23 44 28.9	-0.5
	comp=Z,2.9nm,0.7s,baz=41,slow=3.0,SNR=18						
AKBB	Malin Array Si	149.51	327	*e*PKPbc	PKPbc	23 44 28.5	-0.9
AKBB	Malin Array Si	149.51	327	*e*PKP2	PKPbc	23 44 28.5	-0.9
BR101	Keskin Array S	152.16	304	*e*PKPbc	PKPbc	23 44 35.1	-1.2
BRTR	Keskin Array B	152.16	304	PKPbc	PKPbc	23 44 35.1	-1.2
	comp=Z,3.4nm,1.2s,baz=99,slow=8.1,SNR=7.6						
BRTR	Keskin Array B	152.16	304	*i* PKIKP	PKPab	23 44 42.5	-3.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KOLS	Kolonicke sedl	153.94	331	*e*PKIKP	PKiKP	23 44 40.7	+0.9
KOLS				*e*		23 44 52.9	
KOLS	Kolonicke sedl	153.94	331	*e*PKP	PKiKP	23 44 40.7	+0.9
KOLS				*e*		23 44 52.9	
CLL	Collm	154.90	346	*e*PKIKP	PKPdf	23 44 32.0	-0.9
CLL				*e*		23 44 41.0	
CLL				*e*		23 44 55.0	
CLL	Collm	154.90	346	*e*PKPdf	PKPdf	23 44 32.0	-0.9
CLL				*e*PKPbc	PKPbc	23 44 41.0	-0.6
CLL				*e*PKPab	sPKPbc	23 44 55.0	-0.1
CLL				*e*PP	PP	23 48 28.0	-4.3
DPC	Dobruska-Polom	154.93	341	*e*PKP2	PKPab	23 44 57.9	+0.7
DPC	Dobruska-Polom	154.93	341	*e*PKPAB	PKPab	23 44 57.9	+0.7
VYHS	Vyhne	155.68	335	*e*PKP2	PKPab	23 45 00.5	+0.1
VYHS	Vyhne	155.68	335	*e*PKP	PKPab	23 45 00.5	+0.1
MODS	Modra-Piesok	156.35	337	*e*PKIKP	PKPdf	23 44 37.9	+2.9
MODS	Modra-Piesok	156.35	337	*e*PKP	PKPdf	23 44 37.9	+2.9
KHC	Kasperske Hory	156.79	343	*e*PKPdf	PKPdf	23 44 36.2	+0.6
KHC				*e*PKPab	PKPab	23 45 05.4	+0.2
KHC	Kasperske Hory	156.79	343	*e*PKIKP	PKPdf	23 44 36.2	+0.6
GERES	GERESS Array B	157.03	343	PKPab	PKPab	23 45 06.2	-0.1
	comp=Z,0.1nm,0.3s,baz=58,slow=3.7,SNR=4.0						
FUORN	Ofenpass-Fuorn	159.92	347	*e*PKPdf	PKPdf	23 44 40.0	+0.3
FUORN				*e*PKPab	PKPab	23 45 19.2	+0.1
TORD	Torodi Ar. Bea	165.90	172	PKP	PKPdf	23 44 44.5	-1.6
	comp=Z,1.5nm,1.1s,baz=197,slow=2.9,SNR=4.9						
TORD				PKPab	PKPab	23 45 46.2	+0.6
	comp=Z,2.4nm,1.0s,baz=196,slow=2.6,SNR=8.1						
TOA1	Torodi Ar. Sit	165.90	172	*e*PKPdf	PKPdf	23 44 44.5	-1.6
TOA1				*e*PKPab	PKPab	23 45 46.2	+0.6
ESDC	Sonseca Array	166.05	25	PKPab	PKPab	23 45 44.9	-1.0
	comp=Z,0.2nm,0.6s,baz=338,slow=3.8,SNR=5.0						

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*ISCJB **09** 23:28:39.7±0.5, 39°.11N±0°.02×29°.08E±0°.02, h6^{km}±4^{km}, Error ellipse: s-maj=3.3km s-min=3.0km az=0.8*

*DDA **09** 23:28:39.2, 39°.13N×29°.09E, h7^{km}±4^{km}, ML3.5*

*ISK **09** 23:28:39.4, 39°.10N×29°.10E, h9^{km}, ML3.2/54*

ISC 09 23:28:39.9±1.0, **39°.11N**±0°.02×**29°.10E**±0°.02, **h11**^{km}±9^{km}, **n75, σ0^{s}.77**/85, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEDZ	Gediz	0.25	105	PG	Pg	23 28 45.2	+0.1
GEDZ				SG	Sg	23 28 49.3	+0.7
GDZ	Gediz	0.30	94	*i* P	Pb	23 28 46.5	-0.8
GDZ				IAML_P			
	comp=Z,27µm,0.1s						
USAK	Uak-Merkez	0.40	189	*i* P	Pb	23 28 48.7	-0.3
USAK				*i* S	Sb	23 28 54.1	-1.0
KULA	Kula-Manisa	0.69	210	PG	Pg	23 28 53.0	-0.2
KULA				SG	Sg	23 29 02.2	0.0
DURS	Dursunbey	0.69	315	*i* P	Pg	23 28 52.9	-0.3
DURS				IAML_P			
	comp=Z,7µm,0.1s						
MANT	Manisa	0.75	215	*i* P	Pb	23 28 54.9	-0.1
MANT				*i* S	Sg	23 29 03.9	-0.3
KHAL	Karahalli	0.80	157	*i* P	Pb	23 28 55.6	-0.3
KHAL				*i* S	Sb	23 29 06.6	-0.1
KHL	Karahalli	0.85	157	PG	Pb	23 28 56.2	-0.5
KHL				SG	Sb	23 29 08.3	+0.1
ORLT	Orhaneli	0.95	350	PG	Pg	23 28 57.4	-0.8
AFYO	Afyonkarahisar	0.99	109	*i* P	Pn	23 29 00.6	+0.8
AFYO				IAML_P			
	comp=Z,8µm,0.2s						
GOMA	Golmarmara-Man	1.01	247	PG	Pb	23 28 59.1	-0.2
AKHS	Akhisar	1.03	257	*i* P	Pb	23 28 59.6	-0.1
AKHS				IAML_P			
	comp=Z,8µm,0.2s						
AKS	Akhisar	1.03	257	PG	Pb	23 28 59.6	-0.1
BALB	Balikesir	1.08	300	PN	Pn	23 29 00.9	-0.1
STEP	BALIKESIR_Sava	1.11	284	*i* P	Pn	23 29 01.6	+0.2
STEP				IAML_P			
	comp=Z,4µm,0.2s						
AUKIR	Kırka- Seyitga	1.12	81	*i* P	Pn	23 29 02.5	+0.8
IZI	Iznik	1.26	13	PN	Pg	23 29 04.2	+0.1
SHUT	Suhut-Afyon	1.26	116	PN	Pg	23 29 03.8	-0.3
MDNY	Mudanya-Bursa	1.27	353	PN	Pn	23 29 03.2	-0.3
KCTX	Karacabey (Bur	1.29	334	PN	Pg	23 29 04.4	-0.3
BORA	Eskisehir	1.30	53	PN	Pn	23 29 03.9	-0.2
BORA	Eskisehir	1.30	53	*i* P	Pb	23 29 04.0	-0.3
BORA				*i* S	Sn	23 29 22.1	+0.6
BALY	Balya	1.31	299	*i* P	Pb	23 29 04.0	-0.5
BALY				*i* S	Sn	23 29 21.7	+0.1
BALY				IAML_P			
	comp=Z,1µm,0.2s						
GEMT	Gemlik	1.32	3	PN	Pb	23 29 04.5	-0.3
ADVT	Abdulvahap	1.41	20	PN	Pb	23 29 05.9	-0.3
ESKT	Eskisehir	1.42	73	PN	Pg	23 29 06.9	-0.2
GONE	Gonen-Balikesi	1.44	311	PN	Pb	23 29 06.4	-0.3
ARMT	Armutlu	1.47	353	PN	Pb	23 29 06.9	-0.3
YLV	Yalova	1.47	8	PN	Pg	23 29 07.3	-0.8
BOLV	Bolvadin	1.50	105	*i* P	Pn	23 29 07.1	+0.3
BOLV				*i* S	Sg	23 29 28.9	+0.9
BOLV				IAML_P			
	comp=Z,2µm,0.1s						
AYDB	Zeytinkoy-Aydi	1.50	220	PN	Pn	23 29 06.4	-0.4
SRCK	Saricakaya, Es	1.50	51	PN	Pn	23 29 06.8	0.0
SRCK	Saricakaya, Es	1.50	51	*i* P	Pn	23 29 06.7	0.0
CIFT	Cifteler, Eski	1.54	80	PN	Pn	23 29 07.1	-0.3
CIFT	Cifteler, Eski	1.54	80	*i* P	Pn	23 29 07.3	-0.1
CIFT				IAML_P			
	comp=Z,2µm,0.1s						
EDC	Edincik	1.56	323	PN	Pb	23 29 08.1	-0.7
GEYV	SAKARYA_Geyve	1.65	33	*i* P	Pg	23 29 11.1	-0.5
GEYV				*i* S	Sg	23 29 34.5	+1.4
ISP	Isparta	1.70	139	PN	Pn	23 29 09.5	-0.1
DKL	Dikili	1.71	269	PN	Pb	23 29 10.1	-1.2
GULT	Gulveren	1.71	39	PN	Pn	23 29 10.1	+0.4
BUY	Buyukada	1.74	0	PN	Pb	23 29 10.9	-0.9
BUY	Buyukada	1.74	0	*i* P	Pb	23 29 12.0	+0.2
BUY				IAML_P			
	comp=Z,3µm,0.2s						
BLCB	Balcova	1.77	246	PN	Pn	23 29 10.9	+0.5
HRT	Hereke	1.77	14	PN	Pn	23 29 10.9	+0.5
SPNC	Sapanca-Adapaz	1.83	30	PN	Pn	23 29 12.0	+0.8
SAUV	Serdivan-Sakar	1.88	30	PN	Pb	23 29 12.9	-1.3
MRMT	Marmara Adasi	1.89	323	PN	Pn	23 29 11.9	-0.2
SVRH	Sivrihisar-ESK	1.91	79	PN	Pn	23 29 12.4	-0.1
AUSIV	SIVRIHISAR	1.92	79	PN	Pn	23 29 12.6	0.0
KAVV	Kandilli-Istan	1.95	359	PN	Pn	23 29 13.8	+0.9
ISK	Istanbul-Kandi	1.95	359	PN	Pb	23 29 14.4	-1.1
AUMIH	MIHALICIK	1.99	67	PN	Pn	23 29 14.6	+0.9
GCAM	G?zelcaml?	2.03	227	PN	Pn	23 29 14.7	+0.7
YER	Yerkesik	2.08	198	PN	Pn	23 29 14.8	+0.1
SILT	Sile	2.08	11	PN	Pb	23 29 16.1	-1.6
BGKT	Bogazkoy	2.08	353	PN	Pn	23 29 15.7	+1.0
URLA	Izmir	2.10	250	PN	Pn	23 29 15.9	+0.9
MDUB	Mudurnu	2.11	49	PN	Pn	23 29 16.1	+0.9
KLYT	Kilyos	2.14	359	PN	Pn	23 29 16.7	+1.2
RKY	Sarkoy-Tekirda	2.16	317	PN	Pn	23 29 17.0	+1.1
CTKS	Kestanelik-??a	2.17	348	PN	Pb	23 29 17.3	-1.9
KIZT	Kizilcal	2.18	95	PN	Pn	23 29 16.1	-0.1
EZN	Ezine	2.26	289	PN	Pn	23 29 18.4	+1.2
DIDI	Didim-Aydin	2.27	221	PN	Pn	23 29 18.3	+1.0
TURN	Turunc	2.27	190	PN	Pb	23 29 19.2	-1.6
CRLT	Corlu	2.27	333	PN	Pn	23 29 18.8	+1.5
KORT	Korkueli	2.33	155	PN	Pn	23 29 18.8	+0.6
GELI	Tayfur-Gelibol	2.40	303	PN	Pn	23 29 20.6	+1.5
CTYL	Yalikoy Yolu	2.44	346	PN	Pn	23 29 20.9	+1.2
ELL	Elmali	2.44	165	PN	Pn	23 29 20.8	+1.0
BOZC	Bozcaada	2.47	288	PN	Pn	23 29 21.3	+1.2
FETY	Fethiye	2.47	180	PN	Pn	23 29 20.8	+0.7
BODT	Bodrum	2.48	215	PN	Pn	23 29 21.1	+0.8
LADK	Ladik-KONYA	2.71	109	PN	Pn	23 29 24.4	+0.9
KONT	Konya--Tatoy	2.81	113	PN	Pn	23 29 25.5	+0.7

ROM 09 23:42:21.0±0.1, **38°.456N**±0°.006×**15°.933E**±0°.005, **h10**^{km}, **ML1.3**/2, **Error ellipse: s-maj=0.7km s-min=0.3km az=355.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOPP	Joppolo	0.15	346	P	Pg	23 42 25.1	+0.7
JOPP				S	Sg	23 42 27.7	+0.8
JOPP				AML	AML		
	comp=E,127µm,0.7s						
JOPP				AML	AML		
	comp=N,179µm,0.2s						
JOPP				AML	AML		
	comp=E,127µm,0.7s						
JOPP				AML	AML		
	comp=N,179µm,0.2s						
MSCL	Scilla	0.25	207	*i* P	Pb	23 42 27.1	-0.6
MSCL				S	Sb	23 42 31.0	-1.2
MSCL				AML	AML		
	comp=E,108µm,0.8s						
MSCL				AML	AML		
	comp=N,89µm,0.8s						
MSCL				AML	AML		
	comp=E,108µm,0.8s						
MSCL				AML	AML		
	comp=N,89µm,0.8s						
MSRU	Castanea	0.39	240	*e*P	Pb	23 42 29.3	-0.6
MSRU				S	Sb	23 42 35.1	-0.8
SOI	Samo	0.40	166	*e*P	Pg	23 42 29.3	+0.6
SOI				S	Sb	23 42 35.4	-0.9
PLAC	Placanica	0.40	91	*e*P	Pg	23 42 29.4	+0.6
PLAC				S	Sb	23 42 35.5	-0.8
MPNC	Port Mandanici	0.55	236	*e*P	Pg	23 42 32.1	+0.4
MPNC				S	Sb	23 42 40.4	-0.4
MILZ	Milazzo	0.58	252	*i* P	Pg	23 42 32.3	0.0
MILZ				S	Sb	23 42 40.9	-0.7

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*ISCJB **09** 23:58:14.6±0.3, 54°.22S±0°.05×7°.3E±0°.1, h10^{km}, mb4.7/26, MS4.2/19, Error ellipse: s-maj=11.8km s-min=7.0km az=8.5*

*BJI **09** 23:58:14.7±0.0, 54°.30S×7°.30E, h10^{km}, Ms4.9/2, Ms7 4.6/1*

*IDC **09** 23:58:14.3±0.5, 54°.17S×7°.45E, h0^{km}, mb4.6/16, mb1 4.7/17, mb1mx4.6/20, mbtmp4.6/17, ML4.6/1, MS4.1/15, Ms1 4.0/15, ms1mx4.0/17, Error ellipse: s-maj=17.4km s-min=15.5km az=88.0*

*NEIC **09** 23:58:16.1±1.9, 54°.28S×7°.35E, h10^{km}±2^{km}, mb4.7/18, Error ellipse: s-maj=17.4km s-min=10.8km az=49.0*

*GCMT **09** 23:58:19.1±0.3, 54°.14S±0°.02×7°.56E±0°.06, h12^{km}, MW5.0/81, Moment Tensor Solution. s17,c18; s81,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.20±.12; M$_{\theta\theta}$2.90±.11; M$_{\phi\phi}$0.30±.11; M$_{r\theta}$2.61±.41; M$_{\theta\phi}$-0.58±.10; M$_{\phi r}$1.71±.61; Best double couple: M$_0$4.33400×10^{16} NP1:φ$_s$255.00000°, δ68.00000°, λ-109.00000°. NP2: φ$_s$118.00000°, δ29.00000°, λ-51.00000°. Principal axes: T 3.8650, Plg20.0000°, Azm359.0000°; N 0.9390, Plg18.0000°, Azm262.0000°; P -4.8030, Plg62.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 23:58:16.2±0.4, **54°.23S**±0°.07×**7°.4E**±0°.1, **h10**^{km}, **n91, σ1^{s}.01**/75, **mb4.8**/26, **MS4.2**/20, **1C-1D, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.89	197	P	Pn	00 02 25.4	+0.7
VNA1				S	Sn	00 05 24.4	-19
VNA2	Neumayer--Watz	17.98	196	P	P	00 02 27.0	+0.6
VNA2				S	Sn	00 05 30.1	-16
SNAA	Sanae	18.06	190	P	P	00 02 29.0	+1.6
SNAA				S	Sn	00 05 31.5	-17
SNAA	Sanae	18.06	190	P	Pn	00 02 26.4	-0.5
	2.1nm,0.3s,baz=13,slow=11,SNR=179						
SNAA				S	Sn	00 05 32.8	-15
	0.0nm,0.3s,baz=120,slow=20,SNR=2.8						
SNAA	Sanae	18.06	190	*e*P	Pn	00 02 26.7	-0.2
	128nm,0.9s						
VNA3	Neumayer Olymp	18.64	197	P	P	00 02 34.0	+0.4
VNA3				S	Sn	00 05 45.5	-17
SYO	Syowa Base	20.92	147⇑	*e*P	P	00 02 57.2	-1.3
SYO	Syowa Base	20.92	147⇓	*i*sP	Pn	00 03 00.1	-0.9
SUR	Sutherland	23.85	29	P	P	00 03 29.4	-0.3
	16nm,1.0s,baz=199,slow=11,SNR=5.9						
SUR				LR	LR	00 10 11.6	
	comp=Z,926nm,21.6s,baz=192,slow=30						
SUR	Sutherland	23.85	29	*e*P	P	00 03 31.2	+1.5
	86nm,1.4s						
BOSA	Boshof	28.73	34	P	P	00 04 12.3	-1.4
	4.5nm,1.0s,baz=198,slow=6.4,SNR=8.6						
BOSA				LR	LR	00 13 27.4	
	comp=Z,742nm,20.9s,baz=196,slow=32						
MAW	Mawson	28.94	139	P	P	00 04 15.5	+0.4
	2.3nm,0.7s,baz=274,slow=16,SNR=4.4						
MAW				LR	LR	00 13 58.4	
	comp=Z,222nm,19.7s,baz=274,slow=33						
MAW	Mawson	28.94	139	*e*P	P	00 04 15.5	+0.4
	6.9nm,1.5s						
LBTB	Lobatse	32.18	32	*e*P	P	00 04 45.0	+0.8
	18nm,1.2s						
TSUM	Tsumeb	35.83	17	*e*P	P	00 05 16.9	+1.0
	9.3nm,1.0s						
QSPA	South Pole Qui	36.01	180	*e*P	P	00 05 17.8	+0.7
	112nm,1.8s						
USHA	Ushuaia	41.96	237	P	P	00 06 07.0	+0.2
	15nm,1.1s,baz=350,slow=1.2,SNR=3.5						
LSZ	Lusaka	42.13	31	*e*P	P	00 06 09.8	+1.1
	8.1nm,1.0s						
CASY	Casey	46.67	147	*e*P	P	00 06 44.5	+0.2
	25nm,1.3s						
VNDA	Vanda	47.56	173	P	P	00 06 52.4	+1.3
	8.1nm,0.8s,baz=218,slow=6.2,SNR=29						
VNDA				LR	LR	00 26 27.5	
	comp=Z,493nm,18.1s,baz=190,slow=36						
VNDA	Vanda	47.56	173	*e*P	P	00 06 51.8	+0.7
	54nm,1.6s						
H10S2	ASCENSION HYDR	48.47	330	T	T	00 59 16.4	
	baz=162,slow=75,SNR=14						
H10S3	ASCENSION HYDR	48.48	330	T	T	00 59 13.8	
	baz=162,slow=75,SNR=9.8						
H10S1	ASCENSION HYDR	48.48	330	T	T	00 59 14.0	
	baz=162,slow=75,SNR=13						
PLCA	Paso Flores	51.71	251	P	P	00 07 22.9	-0.5
	3.1nm,0.8s,baz=123,slow=8.9,SNR=4.7						
PLCA				LR	LR	00 26 00.6	
	comp=Z,136nm,21.3s,baz=169,slow=32						
PLCA	Paso Flores	51.71	251	*e*P	P	00 07 22.9	-0.5
	18nm,1.6s						
CPUP	Villa Florida	54.38	274	P	P	00 07 43.0	0.0
	12nm,0.8s,baz=137,slow=6.4,SNR=23						
CPUP				LR	LR	00 27 40.9	
	comp=Z,63nm,19.4s,baz=156,slow=32						
BDFB	Brasilia	57.43	290	P	P	00 08 05.4	+0.2
	4.7nm,0.7s,baz=142,slow=6.4,SNR=7.6						
BDFB				LR	LR	00 28 16.0	
	comp=Z,91nm,18.5s,baz=131,slow=31						
KMBO	Kilima Mbogo	58.35	36	LR	LR	00 31 16.5	
	comp=Z,416nm,20.3s,baz=180,slow=34						
DBIC	Dimbokro	61.54	346	P	P	00 08 32.3	-0.9
	7.0nm,0.8s,baz=146,slow=7.1,SNR=8.9						
DBIC				LR	LR	00 28 54.2	
	comp=Z,100nm,21.2s,baz=138,slow=30						
DBIC	Dimbokro	61.54	346	*e*P	P	00 08 32.3	-0.9
	10nm,0.9s						
TOA0	Torodi Ar. Sit	67.28	354	*e*P	P	00 09 09.8	-1.0
	27nm,1.4s						
TORD	Torodi Ar. Bea	67.28	354	P	P	00 09 09.7	-1.2
	7.7nm,1.0s,baz=191,slow=5.3,SNR=29						
TORD				LR	LR	00 32 54.2	
	comp=Z,185nm,21.3s,baz=260,slow=31						
TOA1	Torodi Ar. Sit	67.29	354	*e*P	P	00 09 09.7	-1.2
LPAZ	La Paz	68.48	272	P	P	00 09 19.8	+0.6
	8.2nm,0.8s,baz=126,slow=4.6,SNR=42						
LPAZ				LR	LR	00 35 53.3	
	comp=Z,86nm,21.6s,baz=114,slow=33						
LPAZ	La Paz	68.48	272	*e*P	P	00 09 19.5	+0.2
	22nm,1.2s						
H01W2	Cape Leeuwin H	71.23	124	T	T	01 28 00.4	
	baz=216,slow=75,SNR=19						
H01W3	Cape Leeuwin H	71.24	124	T	T	01 28 02.4	
	baz=216,slow=75,SNR=20						
H01W1	Cape Leeuwin H	71.25	124	T	T	01 28 01.7	
	baz=216,slow=75,SNR=30						
PTGA	Pitinga	76.32	288	*e*P	P	00 10 05.3	0.0
	19nm,1.3s						
TAM	Tamanrasset	76.72	358	*e*P	P	00 10 08.3	+0.8
	6.1nm,1.2s						
STKA	Stephens Creek	85.59	142	P	P	00 10 54.4	-0.3
	10nm,0.8s,baz=185,slow=3.6,SNR=18						
STKA	Stephens Creek	85.59	142	*e*P	P	00 10 54.1	-0.5
	2.0nm,0.8s						
WSAR	Wadi Sarin	88.84	46	LR	LR	00 44 21.7	
	comp=Z,118nm,21.4s,baz=218,slow=31						
ROSC	El Rosal	89.04	280	LR	LR	00 47 12.1	
	comp=Z,61nm,21.4s,baz=166,slow=33						
KEST	Kesra	89.61	2	P	P	00 11 15.5	+1.9
	5.6nm,0.9s,baz=295,slow=3.9,SNR=5.1						
KEST	Kesra	89.61	2	*e*P	P	00 11 14.9	+1.3
	12nm,1.1s						
ASAR	Alice Springs	89.85	133	P	P	00 11 14.6	-0.7
	6.0nm,0.9s,baz=204,slow=4.8,SNR=30						
AS31	Alice Springs	89.86	133	*e*P	P	00 11 14.4	-0.8
	1.6nm,0.8s						
WR1	Warramunga Arr	93.31	131	*e*P	P	00 11 30.5	-0.8
WRA	Warramunga Arr	93.31	131	P	P	00 11 30.5	-0.8
	0.8nm,0.7s,baz=190,slow=3.7,SNR=2.9						
ESDC	Sonseca Array	94.04	351	P	P	00 11 34.8	+0.8
	0.8nm,0.7s,baz=172,slow=4.5,SNR=6.8						
ESDC				LR	LR	00 51 36.1	
	comp=Z,34nm,19.6s,baz=150,slow=34						
BRTR	Keskin Array B	96.27	20	P	P	00 11 45.2	+0.9
	0.9nm,0.9s,baz=222,slow=1.7,SNR=4.8						
BRTR				LR	LR	00 56 32.7	
	comp=Z,86nm,19.8s,baz=188,slow=36						
BR101	Keskin Array S	96.27	20	*e*P	P	00 11 45.2	+0.9
TBI	Tubuai	100.20	202	*e*LR	LR	00 44 36.7	
	comp=Z,237nm,37.8s						
DZM	Mont Dzumac	101.91	160	*e*LR	LR	00 45 24.6	
	comp=Z,245nm,22.6s						
CLL	Collm	105.27	4	*e*(PP)		00 16 53.0	
CLL				*e*PS	PS	00 25 59.0	-1.3
CLL				*e*SS	SS	00 31 45.0	+3.3
CLL				LmV		01 03 00.0	
	comp=Z,100nm,19.3s						
PPT2	Papeete2	105.79	203	*e*LR	LR	00 47 08.2	
	comp=Z,230nm,23.8s						
FIA0	FINESS Array S	116.28	10	*e*PKPdf	PKPdf	00 16 57.5	-0.8
FINES	FINESS Array B	116.28	10	PKP	PKPdf	00 16 57.5	-0.8
	comp=Z,2.2nm,0.8s,baz=242,slow=4.4,SNR=3.7						
CD2	Chengdu	118.03	75	PKP	PKiKP	00 17 03.5	+0.7
MK31	Makanchi Array	118.90	49	*e*PKPdf	PKPdf	00 17 03.0	-0.9
MKAR	Makanchi Array	118.90	49	PKP	PKPdf	00 17 03.1	-0.8
	comp=Z,2.7nm,0.8s,baz=260,slow=3.6,SNR=21						
WMQ	Urumqi	119.16	55	*e*PKP	PKiKP	00 17 06.6	+2.0
WMQ				LR	LR		
	comp=Z,170nm,29.3s						
LZH	Lanzhou	121.90	71	*e*PKP	PKPdf	00 17 05.9	-4.3
LZH				LR	LR		
	comp=Z,130nm,18.1s						
LZH				LR	LR		
	comp=Z,130nm,18.3s						
LZH				LR	LR		
	comp=Z,150nm,20.0s						
ARA0	ARCESS Array S	124.16	8	*e*PKPdf	PKPdf	00 17 12.8	-0.4
ARCES	ARCESS Array B	124.16	8	PKP	PKPdf	00 17 12.8	-0.4
	comp=Z,7.0nm,0.7s,baz=184,slow=3.4,SNR=18						
ZALV	Zalesovo Beam	125.28	45	PKP	PKPdf	00 17 14.5	-1.3
	comp=Z,2.8nm,0.9s,baz=270,slow=3.0,SNR=8.0						
ZAA1	Zalesovo Array	125.28	45	*e*PKPdf	PKPdf	00 17 14.5	-1.3
TXAR	Lajitas Array	125.34	272	PKP	PKPdf	00 17 14.7	-2.2
	comp=Z,0.6nm,0.6s,baz=128,slow=3.7,SNR=5.0						
SONA0	Songino Array	131.32	62	*e*PKPdf	PKPdf	00 17 27.4	-0.4
SONM	Songino Array	131.32	62	PKP	PKPdf	00 17 27.4	-0.4
	comp=Z,1.4nm,0.7s,baz=231,slow=3.3,SNR=9.4						
PD31	Pinedale Array	138.02	281	*e*PKPdf	PKPdf	00 17 39.8	-0.9
PDAR	Pinedale Array	138.02	281	PKP	PKPdf	00 17 39.8	-0.9
	comp=Z,0.5nm,0.7s,baz=116,slow=3.4,SNR=5.6						
FXWY	Fox Creek	139.41	281	*e*PKPdf	PKPdf	00 17 43.0	-0.1
ELK	Elko	140.05	275	*e*PKPdf	PKPdf	00 17 45.4	+1.0
NVAR	Mina Array Bea	140.35	269	PKP	PKPdf	00 17 45.4	+0.4
	comp=Z,0.3nm,0.4s,baz=141,slow=4.5,SNR=5.9						
WALA	Waterton Lakes	144.12	286	*e*PKPdf	PKPbc	00 17 49.4	+0.1
RES	Resolute Bay	144.44	333	*e*PKPdf	PKPbc	00 17 49.9	+0.5
G08A	Pilot Rock	144.97	278	*e*PKPdf	PKPdf	00 17 53.1	+0.2
PINE	Pine Mountain	145.26	274	*e*PKPbc	PKPdf	00 17 53.7	+0.2
G06A	Carlson Farm,	145.91	276	*e*PKPdf	PKPbc	00 17 55.3	+0.2
D08A	Wollman Farm,	145.92	280	*e*PKPbc	PKPab	00 17 55.3	-0.2
YKA	Yellowknife Ar	149.46	309	PKPbc	PKPbc	00 18 03.2	-0.9
	comp=Z,7.9nm,0.8s,baz=99,slow=2.8,SNR=31						
YKB5	Yellowknife Ar	149.46	309	*e*PKPbc	PKPbc	00 18 03.2	-0.9
DAWY	Dawson	160.55	314	*e*PKPab	PKPab	00 18 56.5	+0.1
ILAR	Eielson Array	163.34	319	PKPab	PKPab	00 19 09.0	+0.5
	comp=Z,6.9nm,0.9s,baz=50,slow=3.8,SNR=31						
HDA	Harding Lake	163.53	318	*e*PKPab	PKPab	00 19 09.3	0.0
CCB	Clear Creek Bu	163.75	320	*e*PKPab	PKPab	00 19 10.8	+0.5
DHY	Denali Highway	164.25	314	*e*PKPab	PKPab	00 19 13.1	+0.3
BPAW	Bear Paw Mtn.	165.22	321	*e*PKPab	PKPab	00 19 16.3	-0.5

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*NNC **10** 00:15:40.7±3.2, 45°.09N×80°.07E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=29.9km s-min=20.3km az=103.0*

SOME 10 00:15:38.8, 42°.12N×81°.33E, h0^{km}**, 2C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.51	332	P	Pb	00 16 09.7	+1.8
	1.5nm,0.3s						
KTMS				S	Sn	00 16 32.0	+4.2
	2.6nm,0.2s						
KTMS	Ketmen	1.51	332	*e*P	Pn	00 16 07.2	-0.1
	0.7nm,0.3s						
KTMS				*e*S	Sn	00 16 27.8	0.0
	1.1nm,0.3s						
PDGK	Podgornoye	1.82	312	P	Pb	00 16 13.3	+0.2
	0.6nm,0.4s						
PDGK				S	Sg	00 16 37.8	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.4nm,0.2s						
PDGK	**Podgornoye** 1.8nm,1.1s	**1.82**	**312**	⇑P	Pg	00 16 13.9	+0.2
PDGK	0.9nm,0.3s			⇑S	Sg	00 16 38.2	+0.9
UZB	**Uzynbulak** 2.4nm,0.5s	**1.99**	**302**	Pg	Pg	00 16 16.9	-0.1
UZB	2.5nm,0.2s			Lg	Lg	00 16 43.9	
UZB	**Uzynbulak** 2.0nm,0.4s	**1.99**	**302**	*e*P	Pg	00 16 16.7	-0.3
UZB	1.9nm,0.3s			*e*S	Sg	00 16 43.9	+1.1
SATY	**Saty** 1.7nm,0.1s	**2.36**	**295**	Pg	Pb	00 16 22.9	+0.7
SATY	4.4nm,0.1s			Lg	Lg	00 16 54.4	
SATY	**Saty** 2.9nm,0.2s	**2.36**	**295**	*e*P	Pb	00 16 22.2	0.0
SATY	2.2nm,0.2s			*e*S	Sg	00 16 54.5	-0.1
KPKS	**Kokpek** 2.8nm,0.3s	**2.37**	**306**	*e*P	Pb	00 16 22.4	0.0
KPKS	7.8nm,0.3s			*e*S	Sb	00 16 53.3	+1.0
DJR	**Jarkent** 0.8nm,0.2s	**2.48**	**334**	*e*P	Pb	00 16 25.2	+0.9
DJR	1.1nm,0.5s			*e*S	Sg	00 16 58.3	-0.3
MNBS	**Baschi** 5.4nm,0.1s	**2.91**	**313**	Lg	Lg	00 17 08.2	
MNBS	**Baschi** 0.4nm,0.1s	**2.91**	**313**	*e*P	Pb	00 16 31.2	-0.4
MNBS	5.5nm,0.3s			*e*S	Sb	00 17 08.7	+1.0

MAN 10 00:18:36.4, 9°.91N×123°.20E, h1^{km}, mb4.2, ML3.0, MS2.7, 1C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.56**	**176**	⇓*i*P	Pn	00 18 51.4	-0.3
SNPH				*i* S	Sn	00 19 01.1	-0.5
LLP	**Lapu-Lapu**	**0.86**	**62**	⇑*e*P	Pg	00 18 52.5	-0.4
LLP				*e*S	Sg	00 19 03.3	-0.8
GUIM	**Jordan**	**0.93**	**320**	*e*P	Pg	00 18 52.9	-1.4
GUIM				*e*S	Sg	00 19 06.8	+0.4
MSLP	**Maasin**	**1.65**	**82**	*e*P	Pn	00 19 06.6	0.0
MSLP				*e*S	Sg	00 19 30.2	+0.6
RCP	**Roxas**	**1.70**	**345**	⇓*e*P	Pn	00 19 07.6	+0.4

UCR 10 00:19:09.1±2.1, 8°.48N×83°.09W, h0^{km}±5^{km}, MW3.7, 1C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTJ1	**Puerto Jimnez**	**0.22**	**285**	⇑*e*P	Pg	00 19 14.4	+1.1
PTJ1				*e*S	Sg	00 19 19.4	+3.3
EDSV	**San Vito**	**0.36**	**19**	⇓*e*P	Pb	00 19 18.0	-0.5
EDSV				*e*S	Sb	00 19 25.1	+0.4
BRU2	**Volcan**	**0.50**	**52**	⇓*i*P	Pb	00 19 20.1	-0.9
BRU2				*e*S	Sb	00 19 28.2	-0.7
EDPN	**Palmar Norte**	**0.60**	**323**	*e*P	Pg	00 19 21.2	+0.5
EDPN				*e*S	Sb	00 19 30.4	-1.1
DRK0	**Durika**	**0.79**	**349**	⇓*e*P	Pg	00 19 24.5	+0.1
DRK0				*e*S	Sb	00 19 36.1	-1.2
EDLM	**Las Mercedes**	**0.94**	**328**	⇓*e*P	Pg	00 19 26.9	-0.1
EDLM				*e*S	Sb	00 19 40.9	-0.4
LCR2	**La Lucha 2**	**1.54**	**324**	*e*P	Pn	00 19 38.0	-0.1
LCR2				*e*S	Sn	00 19 59.5	+0.5
CVTR	**Volcan Turrial**	**1.67**	**337**	*e*P	Pn	00 19 39.8	-0.1
CVTR				*e*S	Sn	00 20 02.1	-0.2
ARE1	**Arenal 1**	**2.54**	**321**	*e*P	Pb	00 19 54.1	-1.5
CEDE	**Laguna Cedeo**	**2.55**	**322**	*e*P	Pb	00 19 55.4	-0.5
CEDE				*e*S	Sb	00 20 28.6	+0.8
JTS	**Las Juntas de**	**2.57**	**315**	*e*P	Pn	00 19 53.1	+1.0
MESS	**Mesas**	**3.06**	**317**	*e*P	Pn	00 20 01.6	+2.8

IDC 10 00:25:30.5±6.5**, 5°.55S×11°.81W, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/33**, mbtmp3.5**/4**, MS3.5**/1**, Ms1 3.4**/1**, ms1mx2.8**/21**, Error ellipse: s-maj=193.8km s-min=107.9km az=144.0, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR** baz=52,slow=74,SNR=447	**3.49**	**230**	T	T	00 30 17.6	
H10N1	**ASCENSION HYDR** baz=52,slow=74,SNR=420	**3.50**	**229**	T	T	00 30 19.2	
H10N3	**ASCENSION HYDR** baz=52,slow=74,SNR=303	**3.51**	**230**	T	T	00 30 17.5	
H10S1	**ASCENSION HYDR** baz=43,slow=75,SNR=85	**4.39**	**220**	T	T	00 31 25.2	
H10S2	**ASCENSION HYDR** baz=43,slow=75,SNR=89	**4.40**	**220**	T	T	00 31 26.1	
H10S3	**ASCENSION HYDR** baz=43,slow=75,SNR=58	**4.41**	**220**	T	T	00 31 23.3	
TORD	**Torodi Ar. Bea** 1.0nm,0.6s,baz=217,slow=10,SNR=14	**22.91**	**36**	P	P	00 30 36.4	+0.1
BDFB	**Brasilia** comp=Z,61nm,18.6s,baz=164,slow=33	**36.91**	**251**	LR	LR	00 45 35.9	
GERES	**GERESS Array B** 0.2nm,0.4s,baz=200,slow=8.3,SNR=2.9	**58.58**	**19**	P	P	00 35 28.7	-0.5
BRTR	**Keskin Array B** 0.3nm,0.7s,baz=198,slow=4.1,SNR=2.4	**61.48**	**39**	P	P	00 35 49.0	-0.4
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=228,slow=6.4,SNR=4.9	**66.22**	**27**	P	P	00 36 20.9	+0.8

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*NIED **10** 00:33:00, 24°.00N×122°.60E, h26^{km}, Mw3.9 Best double couple: $M_0$9.34000×10^{14} NP1:ϕ_s293.00000°, δ19.00000°, λ140.00000°. NP2:ϕ_s62.00000°, δ78.00000°, λ75.00000°.*

*ISCJB **10** 00:33:07.0±0.3, 23°.88N±0°.02×122°.68E±0°.01, h20^{km}±2^{km}, mb3.7/13, MS3.4/4, Error ellipse: s-maj=2.8km s-min=2.0km az=158.6*

*TAP **10** 00:33:07.6, 23°.94N×122°.69E, h28^{km}, ML4.1, D*

*JMA **10** 00:33:07.9±0.1, 23°.96N×122°.64E, h29^{km}, M3.6*

*IDC **10** 00:33:10.6±5.9, 24°.27N×123°.01E, h57^{km}±57^{km}, mb3.5/13, mb1 3.6/14, mb1mx3.4/45, mbtmp3.8/14, ML3.4/1, MS3.2/6, Ms1 3.3/6, ms1mx2.9/37, Error ellipse: s-maj=45.4km s-min=16.2km az=67.0*

ISC 10 00:33:05.7±1.0**, 23°.94N**±0°.02×**122°.70E**±0°.02**, h19^{km}**±3^{km}**, n131, σ1^{s}14**/205**, mb3.8**/13**, MS3.3**/4**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.55**	**24**	P	**Pn**	**00 33 19.1**	**+0.4**
JYNG				S	**Sn**	**00 33 26.1**	**-1.3**
YOJ	**Yonaguni jima** baz=33	**0.59**	**29**	⇓P	**Pn**	**00 33 19.8**	**+0.6**
YOJ	baz=33			S	**Sn**	**00 33 27.2**	**-1.0**
YOJ	**Yonaguni jima**	**0.59**	**29**	P	**Pn**	**00 33 19.7**	**+0.6**
YOJ				S	**Sn**	**00 33 27.4**	**-0.9**
EOS1	**EOS1** baz=319	**0.80**	**319**	P	**Pn**	**00 33 22.9**	**+0.9**
EOS1	baz=319			*e*S	**Sn**	**00 33 35.5**	**+2.2**
NANB	**Nanao** baz=299	**0.99**	**299**	P	**Pg**	**00 33 25.6**	**+0.5**
NANB	baz=299			*e*S	**Sn**	**00 33 39.3**	**+1.1**
ENA	**Nanau** baz=299	**1.00**	**299**	P	**Pg**	**00 33 25.7**	**+0.5**
ENA	baz=299			S	**Sn**	**00 33 39.8**	**+1.4**
HWA	**Hwalien** baz=258	**1.00**	**272**	*e*S	**Sb**	**00 33 38.3**	**+0.9**
HATJ	**Hateruma jima**	**1.02**	**83**	P	**Pg**	**00 33 27.1**	**+1.6**
HATJ				*e*S	**Sn**	**00 33 41.3**	**+2.5**
IRIF	**Iriomote-Funau**	**1.02**	**67**	P	**Pg**	**00 33 26.9**	**+1.4**
IRIF				S	**Sn**	**00 33 41.6**	**+2.8**
TWD	**Chiawan** baz=278	**1.02**	**278**	P	**Pb**	**00 33 25.2**	**+0.4**
TWD	baz=278			*e*S	**Sb**	**00 33 37.7**	**-0.1**
TWC	**Suao** baz=311	**1.02**	**311**	P	**Pg**	**00 33 25.8**	**+0.2**
TWC	baz=311			*e*S	**Sn**	**00 33 38.9**	**0.0**
NACB	**Ninganchiao** baz=268	**1.04**	**283**	P	**Pn**	**00 33 25.7**	**+0.4**
NACB	baz=268			*e*S	**Sb**	**00 33 37.8**	**-0.6**
EGS	baz=336	**1.14**	**322**	P	**Pg**	**00 33 28.1**	**+0.3**
EGS	baz=336			*e*S	**Sg**	**00 33 43.8**	**+1.0**
ETLH	**Xiulin Townshi** baz=271	**1.14**	**284**	P	**Pb**	**00 33 27.4**	**+0.4**
ETLH	baz=271			S	**Sb**	**00 33 41.1**	**-0.4**
ESL	**Shilin** baz=251	**1.17**	**264**	*e*P	**Pn**	**00 33 26.9**	**-0.2**
ESL	baz=251			*e*S	**Sb**	**00 33 41.1**	**-1.0**
ILA	**Ilan** baz=313	**1.19**	**314**	*e*P	**Pg**	**00 33 29.5**	**+0.6**
ILA	baz=313			*e*S	**Sg**	**00 33 46.0**	**+1.4**
EGFH	**Guangfu** baz=244	**1.20**	**257**	*e*P	**Pn**	**00 33 28.2**	**+0.7**
EGFH	baz=244			*e*S	**Sb**	**00 33 42.3**	**-0.6**
NTC	**Toucheng** baz=319	**1.21**	**319**	*e*P	**Pg**	**00 33 29.4**	**+0.4**
NTC	baz=319			*e*S	**Sg**	**00 33 45.9**	**+1.0**
TWE	**Neicheng** baz=310	**1.22**	**310**	P	**Pg**	**00 33 29.3**	**-0.1**
TWE	baz=310			*e*S	**Sg**	**00 33 45.8**	**+0.5**
JKRS	**Kuro-shima**	**1.23**	**76**	P	**Pg**	**00 33 30.4**	**+0.8**
JKRS				S	**Sg**	**00 33 47.2**	**+1.5**
TWB1	**Santiao Chiao** baz=329	**1.24**	**329**	*e*P	**Pg**	**00 33 29.5**	**-0.3**
TWB1	baz=329			*e*S	**Sg**	**00 33 45.6**	**-0.5**
HGSD	**Ruisui** baz=249	**1.25**	**249**	*e*P	**Pn**	**00 33 28.4**	**+0.1**
HGSD	baz=249			*e*S	**Sn**	**00 33 42.7**	**-1.9**
NDT	**Datong Townshi** baz=288	**1.27**	**301**	*e*P	**Pb**	**00 33 29.8**	**+0.7**
NDT	baz=288			*e*S	**Sg**	**00 33 46.8**	**-0.1**
NNSB	**Datong** baz=279	**1.30**	**292**	P	**Pb**	**00 33 30.1**	**+0.5**
NNSB	baz=279			*e*S	**Sn**	**00 33 45.6**	**-0.3**
TIPB	**Shuangxi** baz=337	**1.30**	**322**	*e*P	**Pg**	**00 33 30.1**	**-0.7**
TIPB	baz=337			*e*S	**Sg**	**00 33 47.5**	**-0.3**
NNS	**Nan Shan** baz=280	**1.31**	**292**	*e*P	**Pb**	**00 33 30.2**	**+0.4**
NNS	baz=280			*e*S	**Sb**	**00 33 46.9**	**+0.6**
WHF	**Hehuan Shan** baz=278	**1.33**	**279**	*e*P	**Pn**	**00 33 30.2**	**+0.6**
WHF	baz=278			*e*S	**Sn**	**00 33 47.0**	**-0.1**
EHY	**Hungye** baz=251	**1.34**	**251**	*e*P	**Pn**	**00 33 30.0**	**+0.6**
EHY	baz=251			*e*S	**Sn**	**00 33 45.8**	**-0.9**
JIJ	**Ishigaki jima**	**1.38**	**72**	P	**Pg**	**00 33 31.8**	**-0.6**
JIJ				S	**Sg**	**00 33 49.5**	**-1.0**
YULB	**Yu-li** baz=235	**1.40**	**247**	*e*P	**Pn**	**00 33 31.0**	**+0.7**
YULB	baz=235			*e*S	**Sn**	**00 33 47.3**	**-0.9**
CHGB	**Renai** baz=274	**1.40**	**275**	P	**Pn**	**00 33 31.4**	**+0.9**
CHGB	baz=274			*e*S	**Sn**	**00 33 48.5**	**-0.1**
NWF	**Wu-fen Shan** baz=323	**1.40**	**323**	*e*P	**Pb**	**00 33 31.7**	**+0.3**
NWF	baz=323			*e*S	**Sg**	**00 33 50.7**	**-0.4**
WFSB	**Wu-fen Shan** baz=323	**1.40**	**323**	*e*P	**Pb**	**00 33 31.8**	**+0.5**
WFSB	baz=323			*e*S	**Sg**	**00 33 50.3**	**-0.8**
YHNB	**Yeheng** baz=301	**1.41**	**301**	P	**Pb**	**00 33 32.0**	**+0.5**
YHNB	baz=301			*e*S	**Sb**	**00 33 49.8**	**+0.7**
TWF1	**Yuli** baz=245	**1.42**	**246**	P	**Pn**	**00 33 31.1**	**+0.6**
TWF1	baz=245			*e*S	**Sn**	**00 33 48.4**	**-0.3**
NSK	**Sanguang** baz=301	**1.43**	**301**	P	**Pb**	**00 33 32.2**	**+0.4**
NSK	baz=301			*e*S	**Sb**	**00 33 50.1**	**+0.5**
VWDT	**VWDT** baz=262	**1.44**	**263**	*e*P	**Pn**	**00 33 31.9**	**+1.0**
VWDT	baz=262			*e*S	**Sn**	**00 33 48.3**	**-0.9**
TDCB	**Techi** baz=271	**1.44**	**283**	P	**Pb**	**00 33 32.3**	**+0.2**
TDCB	baz=271			*e*S	**Sn**	**00 33 49.0**	**-0.6**
CHKT	**Chengkung** baz=223	**1.48**	**236**	*e*P	**Pn**	**00 33 31.2**	**-0.2**
CHKT	baz=223			*e*S	**Sn**	**00 33 48.2**	**-2.2**
TATO	**Taipei** baz=330	**1.51**	**313**	*e*P	**Pg**	**00 33 34.0**	**-0.8**
TATO	baz=330			*e*S	**Sb**	**00 33 53.1**	**+1.1**
TAP	**Taipei** baz=315	**1.54**	**315**	*e*S	**Sg**	**00 33 54.9**	**-0.7**
YM01	**YM01** baz=319	**1.58**	**320**	*e*P	**Pg**	**00 33 35.2**	**-1.0**
YM10	**YM10** baz=319	**1.59**	**320**	*e*P	**Pb**	**00 33 34.8**	**+0.1**
YM05	**YM05** baz=320	**1.59**	**320**	*e*P	**Pb**	**00 33 34.3**	**-0.4**
YM08	**YM08** baz=321	**1.60**	**321**	*e*P	**Pb**	**00 33 35.2**	**+0.5**
JISG	**Ishigakijimahi**	**1.60**	**66**	P	**Pb**	**00 33 34.9**	**+0.1**
JISG				*e*S	**Sg**	**00 33 55.9**	**-1.6**
SSLB	**Suanglung** baz=264	**1.61**	**265**	*e*P	**Pn**	**00 33 34.1**	**+1.0**
SSLB	baz=264			*e*S	**Sn**	**00 33 52.6**	**-0.8**
YM03	**YM03** baz=319	**1.62**	**320**	*e*P	**Pb**	**00 33 35.6**	**+0.5**
DPDB	**Guoxing** baz=273	**1.62**	**274**	*e*P	**Pb**	**00 33 35.0**	**-0.1**
DPDB	baz=273			*e*S	**Sn**	**00 33 54.6**	**+0.7**
WHP	**Taichung City** baz=272	**1.64**	**282**	*e*P	**Pb**	**00 33 36.3**	**+0.9**
TWS1	**Kuangyinshan** baz=315	**1.64**	**315**	*e*P	**Pg**	**00 33 36.6**	**-0.7**
SMLT	**Sun Moon Lake** baz=268	**1.65**	**268**	*e*P	**Pn**	**00 33 35.2**	**+1.4**
SMLT	baz=268			*e*S	**Sn**	**00 33 54.9**	**+0.3**
TWY	**Chenhua** baz=323	**1.66**	**323**	*e*P	**Pb**	**00 33 36.5**	**+0.7**
YUS	**Yu-Shan** baz=254	**1.67**	**255**	*e*P	**Pn**	**00 33 35.5**	**+1.1**
YUS	baz=254			*e*S	**Sn**	**00 33 54.1**	**-1.4**
NTST	**Danshui** baz=317	**1.67**	**317**	*e*P	**Pb**	**00 33 35.8**	**0.0**
LIOB	**Emei** baz=294	**1.69**	**295**	*e*P	**Pb**	**00 33 36.6**	**+0.4**
LIOB	baz=294			*e*S	**Sn**	**00 33 56.5**	**+1.0**
NSTT	**Nanjuang** baz=294	**1.69**	**294**	*e*P	**Pb**	**00 33 36.8**	**+0.4**
WHYT	**Xinyi Township** baz=262	**1.71**	**262**	*e*P	**Pb**	**00 33 37.0**	**+0.4**
ELDTW	**Lidau** baz=244	**1.72**	**244**	*e*P	**Pn**	**00 33 34.8**	**0.0**
ELDTW	baz=244			*e*S	**Sn**	**00 33 54.0**	**-2.3**
NCUH	**Zhongli** baz=306	**1.72**	**307**	*e*S	**Sb**	**00 33 59.4**	**+1.5**
PCYT	**Pengchaiyu** baz=341	**1.77**	**341**	*e*P	**Pb**	**00 33 36.8**	**-0.9**
ALS	**Alishan** baz=256	**1.79**	**256**	*e*P	**Pn**	**00 33 37.3**	**+1.4**
ALS	baz=256			*e*S	**Sn**	**00 33 58.6**	**+0.3**
WJS	**Zhushan** baz=266	**1.81**	**267**	*e*P	**Pb**	**00 33 39.8**	**+1.5**
WJS	baz=266			*e*S	**Sb**	**00 34 01.8**	**+1.2**
NSY	**Sanyi** baz=285	**1.83**	**285**	*e*P	**Pb**	**00 33 39.2**	**+0.5**
NMLH	**Miaoli** baz=289	**1.84**	**289**	*e*P	**Pb**	**00 33 38.9**	**+0.1**
WNT	**Mingjian** baz=267	**1.85**	**268**	*e*P	**Pb**	**00 33 39.6**	**+0.7**
WNT	baz=267			*e*S	**Sb**	**00 34 01.7**	**0.0**
TTN	**Taitung** baz=230	**1.85**	**231**	*e*S	**Sn**	**00 33 58.6**	**-0.9**
TCU	**Taichung** baz=276	**1.86**	**277**	*e*P	**Pb**	**00 33 39.4**	**+0.2**
TCU	baz=276			*e*S	**Sb**	**00 34 02.5**	**+0.4**
TWGBT	**Beinan** baz=223	**1.86**	**233**	*e*P	**Pn**	**00 33 37.1**	**+0.4**
TWGBT	baz=223			*e*S	**Sn**	**00 33 58.0**	**-1.7**
TWG	**Pinlang** baz=223	**1.87**	**234**	*e*P	**Pn**	**00 33 37.2**	**+0.5**
TWG	baz=223			*e*S	**Sn**	**00 33 58.0**	**-1.8**
CHN5	**Tsauling** baz=260	**1.88**	**260**	*e*P	**Pb**	**00 33 39.6**	**0.0**
CHN5	baz=260			*e*S	**Sn**	**00 34 02.4**	**+2.0**
PTSB	**Yuanli** baz=286	**1.89**	**286**	*e*P	**Pb**	**00 33 39.6**	**0.0**
WDJ	**Dajia District** baz=282	**1.92**	**283**	*e*P	**Pb**	**00 33 39.7**	**-0.5**
STYT	**Tauyuan** baz=237	**1.94**	**247**	*e*P	**Pb**	**00 33 40.1**	**-0.5**
JTJ	**Tarama**	**1.95**	**69**	P	**Pb**	**00 33 40.1**	**-0.7**
JTJ				*e*S	**Sb**	**00 34 04.5**	**-0.3**
WCHH	**Zhanghua** baz=273	**1.96**	**274**	*e*P	**Pb**	**00 33 41.3**	**+0.4**
WCHH	baz=273			*e*S	**Sb**	**00 34 06.2**	**+1.2**
WGK	**Gukeng** baz=262	**1.98**	**263**	*e*S	**Sb**	**00 34 05.5**	**+0.1**
WDLH	**Douliu** baz=262	**2.00**	**263**	*e*P	**Pb**	**00 33 41.8**	**+0.3**
WDLH	baz=262			*e*S	**Sb**	**00 34 05.9**	**0.0**
TPUB	**Ta-pu** baz=243	**2.00**	**252**	*e*P	**Pb**	**00 33 41.2**	**-0.4**
TPUB	baz=243			*e*S	**Sn**	**00 34 04.8**	**+1.5**
WTP	**Ta-pu** baz=241	**2.04**	**250**	*e*P	**Pb**	**00 33 41.8**	**-0.4**
WTP	baz=241			*e*S	**Sn**	**00 34 06.3**	**+2.3**
ECL	**Taimali** baz=242	**2.09**	**231**	*e*P	**Pn**	**00 33 39.9**	**+0.1**
ECL	baz=242			*e*S	**Sn**	**00 34 03.2**	**-2.1**
SLGT	**Liugui** baz=235	**2.11**	**244**	*e*P	**Pn**	**00 33 42.3**	**+2.2**
SLGT	baz=235			*e*S	**Sn**	**00 34 07.1**	**+1.3**
SGST	**Jiashian** baz=236	**2.12**	**247**	*e*P	**Pb**	**00 33 43.6**	**-0.1**
SGST	baz=236			*e*S	**Sn**	**00 34 08.5**	**+2.3**
CHN1	**Nanshi** baz=249	**2.13**	**250**	*e*P	**Pb**	**00 33 43.3**	**-0.5**
CHN1	baz=249			*e*S	**Sn**	**00 34 09.1**	**+2.7**
CHY	**Chiayi** baz=257	**2.13**	**258**	*e*S	**Sn**	**00 34 08.8**	**+2.5**
TWK	**Hsinying** baz=251	**2.14**	**252**	P	**Pb**	**00 33 43.2**	**-0.7**
TWK	baz=251			S	**Sn**	**00 34 09.2**	**+2.6**
RLNB	**Erlin** baz=268	**2.14**	**269**	*e*S	**Sb**	**00 34 09.3**	**-0.8**
SNST	**Tainan City** baz=250	**2.15**	**251**	*e*P	**Pb**	**00 33 43.6**	**-0.4**
SNST	baz=250			*e*S	**Sn**	**00 34 09.5**	**+2.8**
LAY	**Lan-yu** baz=209	**2.17**	**209**	P	**Pn**	**00 33 40.5**	**-0.4**
WTCT	**Ta-ch'eng** baz=267	**2.21**	**268**	*e*S	**Sb**	**00 34 11.4**	**-0.9**
SSD	**Sandimen** baz=231	**2.24**	**238**	*e*P	**Pn**	**00 33 43.0**	**+1.1**
WSF	**Szhu** baz=262	**2.29**	**263**	*e*S	**Sb**	**00 34 13.3**	**-1.1**
TAW	**Tawu** baz=236	**2.29**	**227**	*e*P	**Pn**	**00 33 43.5**	**+1.0**
TAW	baz=236			*e*S	**Sn**	**00 34 08.3**	**-1.9**
EAST	**Anshuo** baz=238	**2.31**	**228**	P	**Pn**	**00 33 43.4**	**+0.6**
CHN3	**Shinhua** baz=248	**2.31**	**249**	*e*S	**Sb**	**00 34 15.2**	**+0.2**
MASBT	**Mashibuluo** baz=229	**2.32**	**236**	*e*P	**Pn**	**00 33 44.1**	**+1.2**
CHN8	**Yiju** baz=255	**2.36**	**256**	*e*S	**Sn**	**00 34 14.7**	**+2.8**
TWM1	**Shoushan** baz=242	**2.37**	**242**	*e*P	**Pb**	**00 33 47.9**	**0.0**
SSPT	**Xinbi** baz=226	**2.44**	**234**	*e*P	**Pn**	**00 33 47.0**	**+2.4**
SSPT	baz=226			*e*S	**Sn**	**00 34 14.7**	**+0.8**
SCZT	**Fangliau** baz=223	**2.47**	**231**	*e*P	**Pn**	**00 33 46.4**	**+1.4**
SCZT	baz=223			*e*S	**Sn**	**00 34 14.8**	**+0.1**
SNJT	**Kaohsiung City** baz=240	**2.48**	**242**	*e*S	**Sb**	**00 34 19.6**	**-0.1**
TSEB	**Hengchuen, Pin** baz=228	**2.62**	**220**	*e*P	**Pn**	**00 33 49.4**	**+2.3**
TSEB	baz=228			*e*S	**Sn**	**00 34 19.9**	**+1.3**
HEN	**Hengchun** baz=224	**2.64**	**224**	*e*P	**Pn**	**00 33 49.6**	**+2.2**
TWKBT	**Hengchun** baz=220	**2.65**	**221**	*e*P	**Pn**	**00 33 48.8**	**+1.3**
TWKBT	baz=220			*e*S	**Sn**	**00 34 18.7**	**-0.4**
TWK1	**Hengchun** baz=220	**2.65**	**222**	*e*P	**Pn**	**00 33 49.0**	**+1.5**
TWK1	baz=220			*e*S	**Sn**	**00 34 18.4**	**-0.7**
PHUB	**P'eng-hu** baz=276	**2.90**	**262**	*e*P	**Pn**	**00 33 53.0**	**+2.1**
PHUB	baz=276			*e*S	**Sn**	**00 34 26.1**	**+0.9**
PNG	**Penghu** baz=261	**2.91**	**263**	*e*P	**Pn**	**00 33 52.9**	**+1.8**
PNG	baz=261			*e*S	**Sn**	**00 34 26.4**	**+0.9**
VCHM	**Qimei** baz=255	**3.09**	**257**	*e*P	**Pn**	**00 33 55.3**	**+1.7**
VCHM	baz=255			*e*S	**Sn**	**00 34 30.0**	**+0.1**
PTMZ	**Houxiangcun** baz=288	**3.44**	**289**	*e*P	**Pn**	**00 33 59.4**	**+1.0**
PTMZ	baz=288			*e*S	**Sn**	**00 34 37.0**	**-1.6**
LYJJ	**Jianjiangzhen** baz=325	**3.72**	**315**	*e*P	**Pn**	**00 34 02.9**	**+0.7**
XPSS	**Dashiqiu** baz=323	**3.74**	**323**	*e*P	**Pn**	**00 34 03.8**	**+1.3**
MHZQ	**Yeshan** baz=303	**3.96**	**304**	*e*P	**Pn**	**00 34 06.9**	**+1.3**
KNMB	**Chin-men Tao** baz=276	**3.97**	**278**	*e*P	**Pn**	**00 34 06.8**	**+1.1**
KNMB	baz=276			*e*S	**Sn**	**00 34 51.5**	**-0.2**
ZPLA	**Ao Xicun** baz=268	**4.53**	**271**	*e*P	**Pn**	**00 34 14.6**	**+1.3**
ZPLA	baz=268			*e*S	**Sn**	**00 35 04.0**	**-1.5**
JNU	**Nakatsue** comp=Z,54nm,20.0s,baz=162,slow=39	**11.63**	**36**	LR	LR	00 40 31.3	
KSRS	**Korea Array** 0.2nm,0.3s,baz=199,slow=11,SNR=3.0	**14.19**	**17**	P	**Pn**	**00 36 24.2**	**-1.6**
KSRS	comp=Z,64nm,18.1s,baz=174,slow=40			LR	LR	00 42 17.1	
USRK	**Ussuriysk Ar.** 1.4nm,0.7s,baz=208,slow=15,SNR=4.6	**21.59**	**18**	P	**P**	**00 37 51.5**	**-2.9**

SONM	Songino Array	27.14	336	P	P	00 38 46.1	-1.8
	1.0nm,0.9s,baz=159,slow=12,SNR=4.4						
SONM				LR	LR	00 50 10.8	
	comp=Z,68nm,20.1s,baz=88,slow=38						
MKAR	Makanchi Array	39.48	316	P	P	00 40 34.4	-0.6
	0.6nm,0.5s,baz=102,slow=12,SNR=6.4						
MA2	Magadan	40.69	22	LR	LR	00 58 27.8	
	comp=Z,32nm,19.0s,baz=257,slow=38						
ZALV	Zalesovo Beam	41.20	327	P	P	00 40 48.6	-0.5
	0.7nm,0.5s,baz=130,slow=8.6,SNR=3.8						
KURBB	Kurchatov Arra	43.19	320	P	P	00 41 04.8	-0.5
	0.4nm,0.5s,baz=109,slow=9.9,SNR=6.2						
WRA	Warramunga Arr	45.07	164	P	P	00 41 22.3	+1.6
	1.0nm,0.5s,baz=342,slow=11,SNR=4.9						
ASAR	Alice Springs	48.56	166	P	P	00 41 50.5	+2.5
	0.6nm,0.5s,baz=354,slow=14,SNR=8.0						
BVAR	Borovoye Array	48.74	321	P	P	00 41 49.4	+0.3
	0.4nm,0.5s,baz=114,slow=6.6,SNR=3.3						
BVAR				PcP	PcP	00 43 13.9	-0.1
	0.7nm,0.5s,baz=139,slow=3.1,SNR=5.8						
GEYT	Alibeck	56.11	301	P	P	00 42 45.9	+1.7
	2.3nm,0.8s,baz=59,slow=7.1,SNR=4.3						
KIRV	Kirov	61.21	325	LR	LR	01 12 21.9	
	comp=Z,61nm,18.8s,baz=201,slow=38						
ARCES	ARCESS Array B	70.28	338	P	P	00 44 16.3	-1.2
	1.7nm,0.9s,baz=59,slow=9.7,SNR=3.0						
FINES	FINESS Array B	72.35	330	P	P	00 44 29.8	-0.4
	0.5nm,0.4s,baz=40,slow=3.2,SNR=6.6						
BRTR	Keskin Array B	74.43	307	P	P	00 44 42.9	-0.1
	0.4nm,0.5s,baz=78,slow=2.5,SNR=4.5						
NOA	NORSAR Array B	79.08	333	P	P	00 45 07.4	-1.4
	0.6nm,0.6s,baz=55,slow=5.5,SNR=3.1						
NOA				LR	LR	01 23 47.6	
	comp=Z,18nm,19.4s,baz=235,slow=38						

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*ISCJB **10** 01:06:39.9±0.4, 51°.45N±0°.02×16°.07E±0°.02, h0^{km}, Error ellipse: s-maj=3.4km s-min=2.0km az=16.3*

*IDC **10** 01:06:41.7±0.8, 51°.50N×15°.91E, h0^{km}, mb1 3.4/7, mb1mx3.2/41, mbtmp3.3/7, ML2.9/7, Error ellipse: s-maj=14.3km s-min=8.2km az=104.0*

*BGR **10** 01:06:41.6±0.5, 51°.53N×16°.15E, h1^{km}, ML3.3/7, Error ellipse: s-maj=6.7km s-min=3.3km az=19.0*

*LDG **10** 01:06:44.7±0.2, 51°.29N×15°.93E, h1^{km}, Ml3.2/7, Error ellipse: s-maj=5.6km s-min=3.6km az=11.0, Suspected Mining induced.*

ISC 10 01:06:39.7±0.7**, 51°.55N**±0°.04×**16°.04E**±0°.02**, h0^{km}, n72, σ2^{s}.26**/143**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	167	ePg	Pg	01 06 54.7	+1.1
KSP				e		01 06 57.3	
KSP				eSg	Sg	01 07 04.6	+1.7
KSP				e		01 07 06.9	
KSP	Ksiaz	0.73	167	ePg	Pg	01 06 54.8	+1.3
CHVC	Chvalec	0.96	180	ePG	Pb	01 06 59.7	+0.4
CHVC				eSG	Sg	01 07 12.1	+1.5
	comp=Z,106nm,0.6s						
OSTC	Ostas	1.00	174	ePG	Pg	01 07 00.1	+1.3
OSTC				eSG	Sg	01 07 12.3	+0.5
	comp=Z,104nm,0.8s						
UPC	Upice	1.04	181	ePG	Pg	01 07 00.9	+1.2
UPC				eSG	Sg	01 07 14.4	+1.2
	comp=Z,104nm,0.4s						
DPC	Dobruska-Polom	1.22	172	ePg	Pg	01 07 03.6	+0.7
DPC				eSg	Sg	01 07 19.3	+0.7
DPC	Dobruska-Polom	1.22	172	ePG	Pg	01 07 03.6	+0.7
DPC				eSG	Sg	01 07 19.0	+0.3
	comp=Z,64nm,0.8s						
PVCC	Panska Ves	1.38	223	ePG	Pb	01 07 07.5	+1.1
PVCC				eSG	Sn	01 07 26.8	+1.6
	comp=Z,163nm,0.5s						
BRG	Berggiesshubel	1.49	244	PN	Pn	01 07 08.2	+0.6
BRG				PG	Pg	01 07 10.2	+2.1
BRG				SG	Sn	01 07 30.6	+2.9
	163nm,0.7s						
BRG	Berggiesshubel	1.49	244	PG	Pg	01 07 12.0	+3.9
BRG				SG	Sn	01 07 32.5	+4.8
	259nm,0.5s						
BRG	Berggiesshubel	1.49	244	ePn	Pb	01 07 09.0	+0.8
BRG				ePg	Pg	01 07 09.9	+1.8
BRG				eSg	Sn	01 07 30.8	+3.1
FBE	Freiberg	1.81	251	ePg	Pg	01 07 15.8	+1.6
FBE				eSg	Sg	01 07 40.5	+2.9
GOPC	GO Pecny, Ondr	1.82	206	ePG	Pb	01 07 15.1	+1.2
GOPC				eSG	Sg	01 07 39.4	+1.2
	comp=Z,48nm,0.8s						
PRU	Pruhonice	1.83	212	ePG	Pb	01 07 15.1	+1.1
PRU				eSG	Sg	01 07 40.1	+1.6
	comp=Z,45nm,0.4s						
CLL	Collm	1.92	264	ePn	Pn	01 07 14.0	+0.4
CLL				ePg	Pg	01 07 17.0	+0.6
CLL				e		01 07 20.0	
CLL				eSg	Sg	01 07 44.0	+2.7
	comp=Z,42nm,0.4s						
CLL	Collm	1.92	264	ePn	Pn	01 07 14.5	+0.9
CLL				ePg	Pg	01 07 17.1	+0.6
MORC	Moravsky Berou	2.02	151	ePN	Pn	01 07 14.8	-0.2
MORC				eSG	Sn	01 07 40.7	-0.2
MORC	Moravsky Berou	2.02	151	ePn	Pn	01 07 15.0	0.0
MORC				ePg	Pb	01 07 17.6	+0.4
MORC				eSg	Sb	01 07 44.1	+1.3
OKC	Ostrava-Krasne	2.17	141	ePG	Pb	01 07 20.5	+0.6
OKC				eSG	Sb	01 07 48.4	+1.0
	comp=Z,40nm,0.4s						
CHZP	Chorzow	2.25	123	ePg	Pg	01 07 23.6	+0.8
CHZP				eSg	Sg	01 07 52.9	+0.9
VRAC	Vranov	2.27	171	Pn	Pn	01 07 19.6	+1.1
	comp=Z,2.6nm,0.3s,baz=348,slow=17,SNR=18						
VRAC				Lg	Lg	01 07 52.0	
	comp=Z,5.6nm,0.3s,baz=255,slow=19,SNR=7.7						
VRAC	Vranov	2.27	171	ePN	Pn	01 07 19.2	+0.7
VRAC				eSG	Sb	01 07 50.9	+0.7
TREC	Trest	2.29	189	ePN	Pn	01 07 19.9	+1.2
TREC				ePG	Pb	01 07 23.0	+1.2
TREC				eSG	Sg	01 07 53.9	+0.8
	comp=Z,56nm,1.0s						
KRUC	Moravsky	2.50	175	ePN	Pn	01 07 22.7	+1.1
KRUC				eSG	Sb	01 07 58.9	+2.1
TANN	Tannenbergstha	2.53	245	ePn	Pn	01 07 23.6	+1.5
TANN				ePg	Pg	01 07 30.5	+2.3
TANN				eSg	Sg	01 08 03.8	+2.8
NKC	Novy Kostel	2.63	241	ePN	Pn	01 07 25.7	+2.3
NKC				ePG	Pg	01 07 30.6	+0.5
NKC				eSG	Sg	01 08 07.1	+2.9
	comp=Z,182nm,0.9s						
OJC	Ojcow	2.73	118	ePn	Pn	01 07 24.5	-0.1
OJC				ePg	Pg	01 07 32.6	+0.7
OJC				eSg	Sg	01 08 08.1	+0.9
JAVC	Velka Javorina	2.89	158	ePN	Pn	01 07 27.2	+0.2
JAVC				eSG	Sb	01 08 08.8	+0.8
KHC	Kasperske Hory	2.89	214	ePN	Pn	01 07 28.9	+1.9
KHC				ePG	Pb	01 07 34.4	+2.3
KHC				eSG	Sg	01 08 14.6	+2.1
	comp=Z,25nm,0.6s						
MOX	Moxa	2.94	254	eSg	Sg	01 08 17.6	+3.6
GERES	GERESS Array B	3.10	210	Pn	Pn	01 07 30.6	+0.7
	comp=Z,1.9nm,0.3s,baz=29,slow=12,SNR=36						
GERES				Lg	Lg	01 08 19.0	
	comp=Z,4.6nm,0.3s,baz=32,slow=24,SNR=9.8						
LANS	Liptovska Anna	3.25	136	ePN	Pn	01 07 34.7	+2.7
LANS				ePG	Pg	01 07 42.9	+0.9
LANS				eSG	Sg	01 08 25.0	+0.9
MODS	Modra-Piesok	3.28	165	ePN	Pn	01 07 33.8	+1.5
MODS				ePG	Pg	01 07 41.6	-0.9
MODS				eSG	Sb	01 08 23.0	+3.9
MODS				eLG	Lg	01 08 32.5	
ZST	Bratislava	3.43	168	ePG	Pb	01 07 42.9	+1.7
ZST				eSG	Sg	01 08 28.6	-1.1
NIE	Niedzica	3.46	126	eP	Pg	01 07 45.0	-0.9
NIE				eS	Sg	01 08 30.3	-0.3
CLZ	Clausthal	3.54	277	ePn	Pn	01 07 37.7	+1.8
CLZ				ePg	Pg	01 07 50.5	+3.0
VYHS	Vyhne	3.55	148	ePN	Pn	01 07 36.1	+0.1
VYHS				ePG	Pg	01 07 48.8	+1.1
VYHS				eSG	Sg	01 08 35.4	+1.7
GRF	Grafenberg Arr	3.59	241	ePn	Pn	01 07 38.6	+2.0
GRF				ePg	Pg	01 07 51.7	+3.3
GRF				eSg	Sg	01 08 36.7	+1.7
CONA	Conrad Observa	3.63	182	i Pn	Pn	01 07 38.6	+1.5
	comp=Z,1.0nm,0.2s						
CONA				Sg	Sg	01 08 36.7	+0.5
	comp=Z,16nm,0.4s						
MOA	Molln	3.88	198	ePn	Pn	01 07 41.9	+1.3
	comp=Z,3.9nm,0.3s,SNR=19						
MOA				Sg	Sg	01 08 41.9	-2.3
	comp=Z,2.9nm,0.3s						
ARSA	Arzberg	4.32	185	i Pn	Pn	01 07 48.2	+1.7
	comp=Z,0.4nm,0.2s						
ARSA				Sg	Sg	01 08 57.7	-0.6
	comp=Z,21nm,0.6s						
KOLS	Kolonicke sedl	4.78	121	ePN	Pn	01 07 53.0	+0.1
KOLS				eSG	Sg	01 09 11.3	-1.8
KBA	Koelnbreinsper	4.81	203	i Pn	Pn	01 07 55.3	+1.8
	comp=Z,4.9nm,0.5s,SNR=7.4						
KBA				Sg	Sg	01 09 14.6	+0.4
	comp=Z,8.2nm,0.5s						
SOKA	Soboth	4.92	188	ePn	Pn	01 07 57.1	+2.2
	comp=Z,0.6nm,0.4s						
SOKA				eSg	Sg	01 09 16.1	-1.6
	comp=Z,1.4nm,0.5s						
WATA	Walderalm	5.13	216	ePn	Pn	01 07 59.3	+1.5
	comp=Z,1.1nm,0.2s,SNR=4.2						
WATA				Sg	Sg	01 09 25.2	+0.9
	comp=Z,0.6nm,0.2s						
OBKA	Obir	5.14	192	ePn	Pn	01 08 00.2	+2.3
	comp=Z,1.1nm,0.3s						
OBKA				Sg	Sg	01 09 24.3	-0.4
	comp=Z,6.1nm,0.5s						
WTTA	Wattenberg	5.17	216	i Pn	Pn	01 07 58.3	0.0
	comp=Z,0.2nm,0.1s						
WTTA				Sg	Sg	01 09 24.0	-1.5
	comp=Z,1.6nm,0.2s						
MYKA	Terra Mystica	5.17	199	ePn	Pb	01 08 12.5	+1.5
	comp=Z,2.6nm,0.3s						
MYKA				Sg	Sg	01 09 25.5	-0.3
	comp=Z,8.9nm,0.8s						
MOTA	Moosalm	5.30	219	ePn	Pn	01 08 01.2	+1.0
	comp=Z,0.5nm,0.3s						
MOTA				Sg	Sg	01 09 28.1	-1.8
	comp=Z,2.1nm,0.4s						
RETA	Reutte	5.33	222	ePn	Pn	01 08 00.8	+0.3
	comp=Z,0.6nm,0.2s						
RETA				Sg	Sg	01 09 32.1	+1.4
	comp=Z,1.9nm,0.4s						
ABTA	Abfaltersbach	5.34	207	ePn	Pn	01 08 02.3	+1.7
	comp=Z,1.0nm,0.4s						
ABTA				Sg	Sg	01 09 30.4	-0.6
	comp=Z,2.4nm,0.4s						
SQTA	Sankt Quirin	5.36	218	i Pn	Pn	01 08 03.8	+2.8
	comp=Z,1.5nm,0.2s						
SQTA				Sg	Sg	01 09 32.9	+1.1
	comp=Z,4.3nm,0.5s						
FETA	Feichten	5.71	220	ePn	Pn	01 08 07.4	+1.5
	comp=Z,0.5nm,0.4s						
FETA				Sg	Sg	01 09 44.4	+1.3
	comp=Z,1.7nm,0.4s						
DAVA	Damuels	5.86	226	ePn	Pn	01 08 08.7	+0.7
	comp=Z,0.3nm,0.2s						
DAVA				Sg	Sg	01 09 48.9	+0.9
	comp=Z,6.6nm,0.5s						
DAVOX	Davos/Dischmat	6.25	223	Pn	Pn	01 08 13.4	0.0
	comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=2.0						
DAVOX				Lg	Lg	01 09 59.9	
	comp=Z,0.2nm,0.3s,baz=294,slow=20,SNR=2.6						
CDF	Champ du Feu	6.47	244	ePn	Pn	01 08 16.5	+0.3
CDF				eSg	Sg	01 10 03.0	-4.3
	comp=Z,7.7nm,0.7s						
HINF	Hinteralfeld	7.04	242	ePn	Pn	01 08 24.0	+0.1
HINF	Hinteralfeld	7.04	242	ePg	Pg	01 08 51.4	-3.0
HINF				eSn	Sn	01 09 38.3	-6.3
HINF				eSg	Sg	01 10 19.1	-6.4
	comp=Z,4.3nm,0.5s						
HAU	Haudompre	7.21	244	ePn	Pn	01 08 26.4	+0.1
HAU	Haudompre	7.21	244	ePg	Pg	01 08 54.7	-3.0
HAU				eSn	Sn	01 09 42.2	-6.6
HAU				eSg	Sg	01 10 24.9	-6.2
	comp=Z,4.0nm,0.6s						
PAGF	Fort de Pagny	7.29	250	ePg	Pg	01 08 55.3	-3.9
PAGF				eSg	Sg	01 10 28.7	-4.9
	comp=Z,30nm,1.2s						
MEZF	Maizieres J'vi	7.71	251	ePn	Pn	01 08 33.4	+0.3
MEZF				eSn	Sn	01 09 54.5	-6.6
	comp=Z,2.1nm,0.3s						
MEZF				eSg	Sg	01 10 41.3	-5.8
	comp=Z,2.0nm,0.3s						
SFTF	Sexfontaines	7.86	249	ePn	Pn	01 08 35.6	+0.4
SFTF	Sexfontaines	7.86	249	ePg	Pg	01 09 05.5	-4.6
SFTF				eSn	Sn	01 09 58.3	-6.5
SFTF				eSg	Sg	01 10 45.8	-6.1
	comp=Z,2.8nm,0.5s						
AKASG	Malin Array Be	8.34	91	Pn	Pn	01 08 41.7	0.0
	comp=Z,1.2nm,0.3s,baz=280,slow=12,SNR=3.1						
HFS	Hagfors	8.70	352	Pn	Pn	01 08 46.3	-0.4
	comp=Z,0.1nm,0.3s,baz=175,slow=17,SNR=2.5						
SBF	Sospel	9.63	220	ePn	Pn	01 08 58.7	-0.8
FRF	La Foret Royal	10.20	222	ePn	Pn	01 09 06.7	-0.6
LMR	La Mourre	10.45	222	ePn	Pn	01 09 09.6	-1.0
FINES	FINESS Array B	11.34	25	Pn	Pn	01 09 20.8	-2.0
	comp=Z,0.1nm,0.3s,baz=210,slow=12,SNR=6.4						
EKA	Eskdalemuir Ar	12.05	296	Pn	Pn	01 09 28.2	-4.3
	baz=99,slow=14,SNR=2.7						
ARCES	ARCESS Array B	18.59	10	Pn	P	01 10 57.4	-0.6
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=2.8						

NNC 10 01:44:33.8±21.0**, 39°.03N×72°.11E, h0^{km}, mb3.8, mpv3.4, 1C, Error ellipse: s-maj=170.2km s-min=109.3km az=163.0, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	3.49	334	Pg	Pb	01 45 33.2	-3.3
	1.9nm,0.2s						
IUG				Lg	Lg	01 46 26.7	
	5.2nm,0.2s						
MRKS	Merke	3.80	12	Pg	Pb	01 45 39.9	-2.0
	7.1nm,0.3s						
MRKS				Lg	Lg	01 46 38.4	
	4.6nm,0.2s						
KK31	Karatay Array	4.24	344	P	Pb	01 45 45.5	-3.8
	1.6nm,0.4s,baz=158,slow=11,SNR=10						
KK31				⇑S	Sg	01 46 46.7	-3.3
	1.3nm,0.3s,baz=164,slow=23						

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*IDC **10** 01:44:33.4±1.0, 14°.01N×56°.82E, h0^{km}, mb3.9/12, mb1 4.0/13, mb1mx3.7/53, mbtmp3.9/13, ML3.2/1, MS3.0/6, Ms1 3.0/6, ms1mx2.7/50, Error ellipse: s-maj=26.4km s-min=20.9km az=38.0*

*ISCJB **10** 01:44:34.0±0.6, 14°.03N±0°.09×56°.76E±0°.08, h15^{km}, mb4.1/22, MS2.9/5, Error ellipse: s-maj=14.3km s-min=10.5km az=34.3*

*NEIC **10** 01:44:35.3±2.0, 14°.05N×56°.82E, h10^{km}±2^{km}, mb4.3/11, Error ellipse: s-maj=19.3km s-min=10.0km az=55.0*

ISC 10 01:44:35.4±0.8**, 14°.0N**±0°.1×**56°.8E**±0°.1**, h15^{km}, n41, σ1^{s}.20**/32**, mb4.1**/22**, MS2.9**/5**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	9.35	11	Pn	Pn	01 46 49.2	-0.4
	0.2nm,0.3s,baz=198,slow=9.6,SNR=2.9						
WSAR				LR	LR	01 50 16.7	
	comp=Z,192nm,18.4s,baz=208,slow=37						
UOSS	Minazif	10.89	357	ePn	Pn	01 47 08.4	-2.4
RAYN	Ar Rayn	14.26	313	ePn	Pn	01 47 56.9	0.0
GEYT	Alibeck	23.86	3	P	P	01 49 48.0	-0.2
	1.2nm,0.7s,baz=198,slow=14,SNR=3.4						
GEYT				LR	LR	02 00 29.2	
	comp=Z,21nm,18.7s,baz=10.0,slow=40						
PALK	Pallekele	24.43	103	LR	LR	01 57 34.0	
	comp=Z,39nm,20.0s,baz=299,slow=32						
H08N2	Diego Garcia H	24.64	144	T	T	02 15 17.4	
	baz=326,slow=76,SNR=42						
H08N3	Diego Garcia H	24.66	144	T	T	02 15 23.3	
	baz=326,slow=76,SNR=36						
H08N1	Diego Carcia H	24.67	144	T	T	02 15 20.8	
	baz=326,slow=76,SNR=33						
ASF	Jabal al Asfar	25.64	318	P	P	01 50 06.5	+1.9
	1.9nm,0.7s,baz=33,slow=7.7,SNR=4.4						
KBZ	Khabaz	31.92	341	P	P	01 51 01.8	+1.5
	2.6nm,0.9s,baz=160,slow=9.4,SNR=5.2						
ALN	Alexandroupoli	37.88	321	eP	P	01 51 50.6	-1.2
	12nm,1.2s						
ITM	Ithomi	38.65	313	eP	P	01 51 57.4	-1.0
	15nm,1.2s						
MK32	Makanchi Array	39.05	28	eP	P	01 52 03.2	+1.6
MKAR	Makanchi Array	39.05	28	P	P	01 52 03.2	+1.6
	0.4nm,0.6s,baz=199,slow=7.2,SNR=4.7						
VTS	Vitosha	40.59	321	eP	P	01 52 15.4	+0.8
	6.6nm,1.2s						
CMAR	Chiang Mai Arr	40.66	78	LR	LR	02 09 15.9	
	comp=Z,5.7nm,19.6s,baz=165,slow=36						
MLR	Muntele Rosu	40.78	326	eP	P	01 52 17.0	+0.9
	4.6nm,1.0s						
AKASG	Malin Array Be	42.87	334	P	P	01 52 33.3	+0.3
	1.0nm,0.5s,baz=130,slow=7.7,SNR=4.1						
AKBB	Malin Array Si	42.87	334	eP	P	01 52 33.3	+0.3
	2.9nm,0.8s						
TTG	Podgorica	42.98	319	eP	P	01 52 34.8	+0.8
	3.7nm,0.7s						
BLY	Banja Luka	45.44	320	eP	P	01 52 53.6	-0.1
	5.5nm,0.7s						
ZALV	Zalesovo Beam	45.54	23	P	P	01 52 54.7	+0.3
	0.8nm,0.3s,baz=251,slow=4.0,SNR=2.3						
ZAA1	Zalesovo Array	45.55	23	eP	P	01 52 54.7	+0.3
TAM	Tamanrasset	49.21	288	eP	P	01 53 21.2	-2.4
	2.1nm,0.9s						
GEC2	GERESS Array S	49.54	324	eP	P	01 53 25.0	-0.7
	1.7nm,1.1s						
GERES	GERESS Array B	49.54	324	P	P	01 53 25.0	-0.7
	0.3nm,0.6s,baz=116,slow=6.1,SNR=3.7						
FIA0	FINESS Array S	52.27	342	eP	P	01 53 45.2	-0.6
FINES	FINESS Array B	52.27	342	P	P	01 53 45.2	-0.6
	1.8nm,0.7s,baz=141,slow=8.9,SNR=13						
TORD	Torodi Ar. Bea	53.45	276	P	P	01 53 57.2	+1.9
	0.9nm,0.7s,baz=69,slow=5.3,SNR=9.6						
TOA1	Torodi Ar. Sit	53.45	276	eP	P	01 53 57.2	+1.9
MDT	Midelt	58.59	300	LR	LR	02 20 21.0	
	comp=Z,37nm,18.1s,baz=111,slow=37						
ESDC	Sonseca Array	58.73	308	P	P	01 54 32.3	-0.5
	0.8nm,0.6s,baz=82,slow=6.6,SNR=11						
KSRS	Korea Array	66.72	55	LR	LR	02 26 44.3	
	comp=Z,10nm,18.4s,baz=115,slow=38						
H01W3	Cape Leeuwin H	72.93	134	T	T	03 15 35.5	
	baz=302,slow=75,SNR=12						
H01W2	Cape Leeuwin H	72.94	134	T	T	03 15 37.1	
	baz=302,slow=75,SNR=11						
H01W1	Cape Leeuwin H	72.95	134	T	T	03 15 36.8	
	baz=302,slow=75,SNR=10						
NWAO	Narrogin (SRO)	74.19	130	eP	P	01 56 09.9	-1.8
	121nm,0.5s						
NWAO				ePcP	PcP	01 56 27.5	+0.8
WR1	Warramunga Arr	83.39	112	eP	P	01 57 02.4	-0.3
WRA	Warramunga Arr	83.39	112	P	P	01 57 02.4	-0.3
	1.6nm,0.7s,baz=303,slow=4.6,SNR=3.7						
ASAR	Alice Springs	84.13	116	P	P	01 57 07.1	+0.7
	0.8nm,0.7s,baz=291,slow=4.9,SNR=7.9						
AS31	Alice Springs	84.13	116	eP	P	01 57 07.1	+0.7
	1.5nm,1.1s						

ISC 10 02:00:33.6±1.8**, 51°.46N**±0°.08×**16°.35E**±0°.05**, h0^{km}, n17, σ1^{s}.26**/35**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.62	183	ePg	Pg	02 00 46.2	+0.7
KSP				eSg	Sb	02 00 55.3	-1.3
CHVC	Chvalec	0.90	192	ePG	Pg	02 00 51.1	+0.4
CHVC				eSG	Sb	02 01 04.0	-0.5
	comp=Z,11nm,0.7s						
OSTC	Ostas	0.91	185	ePG	Pg	02 00 51.7	+0.7
OSTC				eSG	Sb	02 01 03.9	-1.1
	comp=Z,12nm,0.7s						
UPC	Upice	0.98	193	ePG	Pg	02 00 52.3	-0.1
UPC				eSG	Sb	02 01 06.1	-0.8
	comp=Z,15nm,0.6s						
DPC	Dobruska-Polom	1.12	181	ePG	Pg	02 00 55.1	+0.2
DPC				eSG	Sn	02 01 11.0	-1.6
	comp=Z,6.3nm,0.5s						
PVCC	Panska Ves	1.46	231	ePG	Pn	02 00 59.6	-1.6
PVCC				eSG	Sg	02 01 19.1	-1.4
	comp=Z,25nm,0.5s						
GOPC	GO Pecny, Ondr	1.84	213	ePG	Pn	02 01 06.4	-0.1
GOPC				eSG	Sn	02 01 31.4	+0.9
	comp=Z,3.8nm,0.2s						
MORC	Moravsky Berou	1.85	155	ePN	Pn	02 01 06.2	-0.4
MORC				eSG	Sg	02 01 32.4	-0.7
PRU	Pruhonice	1.87	219	ePG	Pn	02 01 06.9	+0.1
PRU				eSG	Sb	02 01 32.5	0.0
	comp=Z,6.1nm,0.7s						
OKC	Ostrava-Krasne	1.99	144	ePG	Pg	02 01 11.7	0.0
OKC				eSG	Sg	02 01 40.2	+2.7
	comp=Z,6.1nm,0.5s						
CLL	Collm	2.10	267	ePg	Pn	02 01 09.0	-1.0
CLL				eSg	Sn	02 01 35.0	-1.8
	comp=Z,5.0nm,0.4s						
VRAC	Vranov	2.17	176	ePN	Pn	02 01 11.4	+0.5
VRAC				eSG	Sg	02 01 44.3	+1.2
TREC	Trest	2.24	195	ePN	Pn	02 01 12.1	+0.2
TREC				ePG	Pb	02 01 15.1	+0.2
TREC				eSG	Sg	02 01 45.4	-0.1
	comp=Z,5.0nm,0.6s						
KRUC	Moravsky	2.41	179	ePN	Pn	02 01 14.1	-0.1
KRUC				eSG	Sg	02 01 51.5	+0.7
JAVC	Velka Javorina	2.74	161	ePN	Pn	02 01 19.0	+0.1
JAVC				eSG	Sg	02 02 01.0	-0.7
NKC	Novy Kostel	2.76	245	ePG	Pn	02 01 22.7	+3.6
NKC				eSG	Sb	02 02 00.0	+1.8
	comp=Z,9.3nm,0.3s						
KHC	Kasperske Hory	2.93	218	ePG	Pb	02 01 25.9	-0.8
KHC				eSG	Sb	02 02 05.5	+2.3
	comp=Z,2.4nm,0.4s						

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*ATH **10** 02:16:51.6, 42°.07N×25°.37E, h22^{km}±8^{km}, ML2.7/4, Error ellipse: s-maj=15.4km s-min=2.1km az=55.0*

*SOF **10** 02:17:03.6, 41°.96N×23°.26E, h2^{km}, MD2.6*

*SKO **10** 02:17:03.2, 41°.93N×23°.22E, h25^{km}, M2.0, ML2.3*

*BEO **10** 02:17:04.8±0.3, 41°.91N×23°.11E, h5^{km}±4^{km}, ML2.3/6*

ISC 10 02:17:03.8±1.0**, 41°.87N**±0°.02×**23°.13E**±0°.03**, h20^{km}**±3^{km}**, n36, σ1^{s}.63**/47**, 3C, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.03	258	⇑iPg	Pg	02 17 07.0	-0.3
KKB				i Sg	Sg	02 17 09.1	-0.5
KKB	Krupnik	0.03	258	i P	Pg	02 17 06.9	-0.3
MMB	Musomiste	0.53	122	⇑iPg	Pb	02 17 14.7	+0.2
MMB				i Sg	Sb	02 17 22.4	+0.7
MMB	Musomiste	0.53	122	i P	Pb	02 17 14.6	+0.2
VAY	Valandovo	0.69	217	i Pg	Pn	02 17 19.2	+0.8
VAY				i Sg	Sn	02 17 29.9	+1.2
VAY				eLg	Lg	02 17 30.1	
	comp=N,54nm,0.3s						
VAY				eLg	Lg	02 17 30.2	
	comp=E,86nm,0.3s						
STIP	Stip	0.72	256	i Pg	Pb	02 17 15.7	-2.1
STIP				i Sg	Sb	02 17 23.1	-4.1
STIP				eLg	Lg	02 17 23.4	
	comp=N,63nm,0.2s						
STIP				eLg	Lg	02 17 23.6	
	comp=E,43nm,0.2s						
VTS	Vitosha	0.75	6	P	Pb	02 17 14.8	-3.5
VTS	Vitosha	0.75	6	⇑iPg	Pb	02 17 16.8	-1.5
VTS				i Sg	Sb	02 17 25.4	-2.7
VTS	Vitosha	0.75	6	i P	Pb	02 17 16.6	-1.7
NVR	Nevrokopi	0.76	133	P	Pb	02 17 18.0	-0.4
NVR	Nevrokopi	0.76	133	P	Pb	02 17 17.5	-0.9
NVR				AML	AML	02 17 29.2	
	comp=N,544µm,0.2s						
NVR				AML	AML	02 17 31.5	
	comp=E,453µm,0.1s						
SRS	Serrai	0.83	155	ePg	Pg	02 17 20.5	+0.4
SRS				eSg	Sg	02 17 32.2	+1.0
SRS	Serrai	0.83	155	P	Pg	02 17 20.5	+0.4
SRS	Serrai	0.83	155	i Pg	Pg	02 17 20.4	+0.4
SRS	Serrai	0.83	155	P	Pg	02 17 20.5	+0.4
SRS				AML	AML	02 17 36.5	
	comp=N,414µm,0.2s						
SRS				AML	AML	02 17 37.4	
	comp=E,387µm,0.3s						
PGB	Panagyurishte	1.03	49	i P	Pb	02 17 21.0	-2.0
SOH	Sokhos	1.06	171	P	Pg	02 17 25.0	+0.5
SOH	Sokhos	1.06	171	i Pg	Pg	02 17 25.0	+0.5
SOH	Sokhos	1.06	171	P	Pg	02 17 25.1	+0.6
SOH				AML	AML	02 17 42.4	
	comp=N,948µm,0.3s						
SOH				AML	AML	02 17 43.0	
	comp=E,303µm,0.2s						
PLD	Plovdiv	1.20	78	ePg	Pg	02 17 27.6	+0.6
PLD				eSg	Sg	02 17 43.1	+0.4

BARS	Barje	1.35	315	*e*Pg	Pb	02 17 29.2	+0.7
BARS	Barje	1.35	315	*e*Pn	Sn	02 17 44.0	-1.0
BARS				*e*Sg	Sb	02 17 46.9	+1.5
ZAPS	Zavoj	1.45	346	*e*Pn	Pb	02 17 30.9	+0.8
PLG	Polygyros	1.52	171	P	Pb	02 17 32.0	+0.7
PLG	Polygyros	1.52	171	P	Pn	02 17 29.9	0.0
MPEP	Malo Peshtene	1.55	17	P	Pn	02 17 31.6	+1.3
OUR	Ouranopolis	1.67	157	P	Pn	02 17 28.0	-3.9
SELS	Selova	2.00	313	*e*Pn	Pb	02 17 39.7	+0.1
SELS				*e*Sg	Sg	02 18 07.5	-0.8
ZAGS	Zajecar	2.05	342	*e*Pn	Pn	02 17 38.5	+1.4
BOVS	Bovan	2.05	330	*e*Pg	Pb	02 17 39.7	-0.6
BOVS				*e*Sg	Sb	02 18 07.7	+2.3
GRUS	Gruza	2.68	319	*e*Pn	Pn	02 17 48.0	+2.1
GRUS				*e*Sg	Sg	02 18 29.4	-0.6
SJES	Sjenica	2.71	302	*e*Pn	Pb	02 17 49.9	-1.8
KUBS	Kucevo	2.75	338	*e*Pn	Pn	02 17 46.6	-0.2
IVAS	Ivanjica	2.77	309	*e*Pn	Pn	02 17 50.5	+3.3
TRUS	Trudelj	3.08	321	*e*Pn	Pn	02 17 53.9	+2.6
DIVS	Divibare	3.20	315	*e*Pn	Pn	02 17 54.2	+1.2

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*NEIC **10** 02:23:33.2±1.8, 12°.09S×166°.53E, h45^{km}±3^{km}, mb4.7/16, Error ellipse: s-maj=14.0km s-min=12.0km az=50.0*

*ISCJB **10** 02:23:37.1±0.5, 12°.20S±0°.05×166°.25E±0°.08, h83^{km}, mb4.4/22, Error ellipse: s-maj=11.3km s-min=7.4km az=171.4*

*IDC **10** 02:23:37.2±3.5, 12°.13S×166°.46E, h68^{km}±30^{km}, mb3.9/10, mb1 4.2/12, mb1mx3.9/39, mbtmp4.3/12, ML4.6/2, MS3.6/12, Ms1 3.6/12, ms1mx3.4/26, Error ellipse: s-maj=24.7km s-min=18.7km az=93.0*

ISC 10 02:23:37.5±0.5**, 12°.13S**±0°.06×**166°.44E**±0°.08**, h83^{km}, n50, σ1^{s}.86**/46**, mb4.4**/22**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.92	292	P	Pn	02 25 15.8	-0.6
	69nm,0.3s,baz=166,slow=3.7,SNR=6.4						
HNR				LR	LR	02 28 10.7	
	comp=Z,603nm,21.7s,baz=150,slow=39						
HNR	Honiara	6.92	292	*e*Pn	Pn	02 25 13.1	-3.2
HNR				*e*Sn	Sn	02 26 29.8	-3.8
DZM	Mont Dzumac	9.89	180	*e*Pn	Pn	02 25 59.2	+2.3
	5.8nm,0.2s						
DZM				*e*Sn	Sn	02 27 46.8	+0.5
	4.1nm,0.3s						
DZM				*e*LR	LR	02 28 16.8	
	comp=Z,593nm,23.6s						
DZM	Mont Dzumac	9.89	180	P	Pn	02 25 57.6	+0.6
	0.8nm,0.3s,baz=145,slow=19,SNR=6.2						
DZM				LR	LR	02 29 29.3	
	comp=Z,472nm,20.7s,baz=24,slow=36						
DZM	Mont Dzumac	9.89	180	*e*Pn	Pn	02 25 53.8	-3.1
PINNC	Pines Island,	10.47	175	*e*Pn	Pn	02 26 00.7	-4.1
TARA	Tarawa	14.86	26	*e*Pn	Pn	02 27 00.3	-3.0
EIDS	Eidsvold	19.59	226	*e*P	P	02 27 58.5	-0.7
	19nm,0.9s						
ARMA	Armidale	22.80	215	*e*P	P	02 28 31.0	-2.5
	10nm,0.8s						
BKZ	Black Stump Fm	28.37	163	*e*P	P	02 29 22.9	-1.0
STKA	Stephens Creek	30.15	225	P	P	02 29 40.6	+0.9
	10nm,0.7s,baz=52,slow=9.0,SNR=24						
STKA				LR	LR	02 40 46.2	
	comp=Z,165nm,20.1s,baz=30,slow=34						
STKA	Stephens Creek	30.15	225	*e*P	P	02 29 39.4	-0.3
	2.2nm,0.8s						
KHZ	Kahutara	30.80	170	*e*P	P	02 29 42.5	-2.9
	95nm,1.4s						
WB2	Warramunga Arr	31.76	252	*e*P	P	02 29 53.2	-0.9
	13nm,1.3s						
WR1	Warramunga Arr	31.77	252	*e*P	P	02 29 55.0	+0.8
WRA	Warramunga Arr	31.77	252	P	P	02 29 55.0	+0.8
	2.6nm,0.7s,baz=81,slow=7.7,SNR=8.3						
AS31	Alice Springs	32.93	245	*e*P	P	02 30 04.6	+0.2
	2.1nm,0.7s						
ASAR	Alice Springs	32.94	245	P	P	02 30 05.1	+0.7
	5.1nm,0.7s,baz=70,slow=9.5,SNR=62						
ASAR				LR	LR	02 42 09.6	
	comp=Z,111nm,20.5s,baz=78,slow=34						
SIJI	Sorong	36.63	285	LR	LR	02 46 46.6	
	comp=Z,85nm,20.4s,baz=184,slow=38						
BATI	Baumata	41.98	268	LR	LR	02 47 54.9	
	comp=Z,120nm,18.1s,baz=124,slow=35						
PPT2	Papeete2	42.79	103	*e*LR	LR	02 43 50.4	
	comp=Z,248nm,28.0s						
TBI	Tubuai	43.30	111	*e*LR	LR	02 44 20.6	
	comp=Z,226nm,28.5s						
KAPI	Kappang	46.65	275	LR	LR	02 54 11.4	
	comp=Z,22nm,19.2s,baz=118,slow=39						
HUH	Hualalai	48.78	50	*e*P	P	02 32 12.4	-2.4
	167nm,1.3s						
NWAO	Narrogin (SRO)	49.44	237	LR	LR	02 55 58.1	
	comp=Z,119nm,18.2s,baz=88,slow=39						
TPUB	Ta-pu	57.00	308	*e*P	P	02 33 16.2	+1.2
	15nm,0.8s						
YHNB	Yeheng	57.19	310	*e*P	P	02 33 18.7	+2.3
	12nm,0.7s						
LEM	Lembang	58.17	269	LR	LR	03 01 18.5	
	comp=Z,49nm,18.3s,baz=134,slow=39						
KSRS	Korea Array	61.15	326	P	P	02 33 43.9	+0.6
	0.7nm,0.5s,baz=142,slow=7.3,SNR=3.5						
KS15	Wonju Array Si	61.16	326	*e*P	P	02 33 44.0	+0.5
	14nm,1.3s						
USRK	Ussuriysk Ar.	64.21	333	P	P	02 34 05.0	+1.5
	1.0nm,0.6s,baz=133,slow=6.1,SNR=2.5						
PETK	Petropavlovsk-	65.40	354	LR	LR	02 57 16.3	
	comp=Z,17nm,21.1s,baz=175,slow=31						
VNDA	Vanda	65.43	181	P	P	02 34 12.5	+1.5
	2.1nm,0.9s,baz=359,slow=7.5,SNR=6.7						
VNDA	Vanda	65.43	181	*e*P	P	02 34 11.0	-0.1
	4.9nm,1.1s						
CM31	Chiang Mai Arr	73.17	294	*e*P	P	02 34 58.5	-1.3
	11nm,1.0s						
CMAR	Chiang Mai Arr	73.17	294	P	P	02 35 03.0	+3.2
	4.6nm,0.8s,baz=126,slow=4.7,SNR=16						
QSPA	South Pole Qui	77.88	180	*e*P	P	02 35 27.6	+1.4
	11nm,1.3s						
SONA0	Songino Array	79.94	324	*e*P	P	02 35 39.6	+1.9
SONM	Songino Array	79.94	324	P	P	02 35 39.6	+1.9
	0.6nm,0.5s,baz=144,slow=6.5,SNR=3.2						
ILAR	Eielson Array	84.32	18	P	P	02 36 00.5	+0.5
	1.3nm,0.7s,baz=235,slow=6.2,SNR=11						
ILAR				LR	LR	03 07 03.1	
	comp=Z,21nm,21.3s,baz=170,slow=31						
ILB	Eielson Array	84.32	18	*e*P	P	02 36 00.5	+0.5
	4.9nm,1.4s						
NV01	Mina Array Sit	86.20	50	*e*P	P	02 36 12.7	+2.4
NVAR	Mina Array Bea	86.20	50	P	P	02 36 12.7	+2.4
	0.1nm,0.3s,baz=232,slow=10,SNR=2.4						
NVAR				LR	LR	03 08 47.7	
	comp=Z,79nm,18.5s,baz=262,slow=31						
HVU	Hansel Valley	91.23	48	*e*P	P	02 36 33.6	-0.3
	2.4nm,1.2s						
MK31	Makanchi Array	94.77	317	*e*P	P	02 36 50.7	+0.8
	2.5nm,0.8s						
ARA0	ARCESS Array S	117.55	346	*e*PKPdf	PKPdf	02 42 12.2	-1.1
ARCES	ARCESS Array B	117.55	346	PKP	PKPdf	02 42 12.2	-1.1
	3.6nm,1.0s,baz=48,slow=1.8,SNR=3.8						
KEST	Kesra	148.68	322	PKPbc	PKPbc	02 43 15.7	-0.1
	2.6nm,0.8s,baz=44,slow=0.2,SNR=3.5						
TORD	Torodi Ar. Bea	165.08	276	PKP	PKPdf	02 43 34.2	+1.1
	1.3nm,1.1s,baz=347,slow=6.1,SNR=4.2						
TORD				PKPab	PKPab	02 44 32.1	+1.7
	1.1nm,0.8s,baz=52,slow=5.1,SNR=5.8						
TOA1	Torodi Ar. Sit	165.08	276	*e*PKPdf	PKPdf	02 43 34.2	+1.1
TOA1				*e*PKPab	PKPab	02 44 32.1	+1.7

JMA 10 02:28:28.7, 38°.73N×141°.97E, h56^{km}±1^{km}, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKMT	Kesennumamotoy	0.40	282	P	Pn	02 28 39.3	+0.1
JKMT				S	Sn	02 28 46.8	-0.1
OFUJ	Ofunato	0.42	326	P	Pn	02 28 39.7	+0.2
OFUJ				S	Sn	02 28 47.4	+0.1
JIO	Ouri	0.56	241	P	Pn	02 28 40.9	-0.1
JIO				S	Sn	02 28 49.6	-0.3
JIKH	Ishinomakikobu	0.58	224	P	Pn	02 28 41.2	0.0
JIKH				S	Sn	02 28 50.0	-0.3
JMK	Ichinoseki	0.63	291	P	Pn	02 28 42.0	+0.2
JMK				S	Sn	02 28 51.5	+0.2
JOM	Ohasama	0.91	325	P	Pn	02 28 45.6	+0.2
JOM				S	Sn	02 28 57.9	+0.2
JOU	Okura	1.09	251	P	Pn	02 28 47.8	0.0
JOU				*e*S	Sn	02 29 02.0	+0.1
JRG	Rokugo	1.23	303	P	Pn	02 28 49.8	+0.1
JRG				*e*S	Sn	02 29 05.7	+0.3
JMM	Marumori	1.27	227	P	Pn	02 28 49.8	-0.3
JMM				S	Sn	02 29 05.6	-0.5
JYK	Kaneyama	1.27	279	P	Pn	02 28 50.4	+0.2
JYK				*e*S	Sn	02 29 06.5	+0.2
JYS	Shirataka	1.58	252	P	Pn	02 28 54.9	+0.5
JYS				*e*S	Sn	02 29 14.6	+0.9
JFK	Kawauchi	1.61	213	P	Pn	02 28 54.7	-0.2
JFK				S	Sn	02 29 14.1	-0.5
MAT	Matsushiro	3.70	235	P	Pn	02 29 26.5	+3.1
MAT				S	Sn	02 30 05.4	-0.3

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*ISCJB **10** 02:29:56.8±0.3, 38°.17N±0°.04×135°.38E±0°.05, h366^{km}, mb3.5/17, Error ellipse: s-maj=6.5km s-min=4.4km az=41.1*

*IDC **10** 02:29:57.8±0.9, 38°.11N×135°.25E, h365^{km}±10^{km}, mb3.3/17, mb1 3.4/23, mb1mx3.3/52, mbtmp4.0/23, Error ellipse: s-maj=13.3km s-min=10.8km az=69.0*

*JMA **10** 02:29:57.4±0.2, 38°.07N×135°.54E, h378^{km}±3^{km}, M3.4*

ISC 10 02:29:57.3±0.5**, 38°.16N**±0°.06×**135°.50E**±0°.06**, h366^{km}, n50, σ1^{s}.29**/57**, mb3.6**/17**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHG	Hegura jima	1.16	105	P	Pn	02 30 46.9	+1.5
JJH	Hakui	1.60	140	P	Pn	02 30 48.8	+1.2
JSZ	Suzu	1.64	115	P	Pn	02 30 49.0	+1.2
JKG	Kaga	1.99	160	P	Pn	02 30 50.7	+0.7
JSD	Sado	2.18	92	P	Pn	02 30 52.5	+1.2
MAT	Matsushiro	2.69	126	P	Pn	02 30 55.9	+0.6
MAT				S	S	02 31 40.3	-1.7
MAT	Matsushiro	2.69	126	P	Pn	02 30 55.9	+0.6
MJAR	Matsushiro Arr	2.69	126	P	Pn	02 30 56.5	+1.1
	1.5nm,0.3s,baz=307,slow=7.7,SNR=60						
JWT	Wachi	2.87	182	P	Pn	02 30 57.2	+0.4
JWT				*e*S	S	02 31 43.5	-1.2
JAW	Awa shima	2.96	83	P	Pn	02 30 58.8	+1.3
JRY	Ryogami san	3.46	127	P	Pn	02 31 02.8	+0.7
JRY				S	S	02 31 53.3	-1.0
JHS	Saijyo	3.69	212	P	Pn	02 31 05.1	+0.8
JIE	Ise	3.88	165	P	Pn	02 31 07.0	+0.9
JIE				*e*S	S	02 32 01.4	-0.3
JOD2	Odawara 2	4.08	134	P	Pn	02 31 08.4	+0.3
JOD2				*e*S	S	02 32 05.5	+0.2
JMK	Ichinoseki	4.55	78	P	Pn	02 31 14.1	+1.3
BSO1	Boso 1	5.63	127	P	Pn	02 31 23.4	-0.6
BSO1				*e*S	S	02 32 31.0	-3.5
JKB	Kayabe	5.65	47	P	Pn	02 31 26.2	+1.6
KSRS	Korea Array	6.04	266	P	Pn	02 31 29.1	+0.1
	0.9nm,0.3s,baz=86,slow=12,SNR=21						
JHJ	Hachijo jima 2	6.12	144	S	S	02 32 45.2	-0.1
	22nm,0.3s,baz=88,slow=23,SNR=7.0						
JNU	Nakatsue	6.27	218	P	Pn	02 31 31.6	-0.2
	0.8nm,0.3s,baz=78,slow=7.5,SNR=6.7						
USRK	Ussuriysk Ar.	6.59	337	P	P	02 31 36.9	+0.6
	2.7nm,0.3s,baz=163,slow=11,SNR=45						
ASAJ	Asahikawa	8.01	40	P	Pn	02 31 52.2	+0.7
	6.1nm,0.3s,baz=240,slow=6.6,SNR=15						
ASAJ				S	S	02 33 19.9	-5.1
	3.1nm,0.3s,baz=302,slow=31,SNR=24						
KLR	Kul'dur	11.40	347	P	P	02 32 31.4	+0.1
	0.4nm,0.3s,baz=171,slow=13,SNR=5.3						
SONM	Songino Array	23.26	304	P	P	02 34 33.7	0.0
	2.1nm,0.7s,baz=106,slow=9.2,SNR=7.5						
CMAR	Chiang Mai Arr	37.37	249	P	P	02 36 34.6	-1.9
	1.3nm,0.5s,baz=55,slow=7.2,SNR=5.1						
MKAR	Makanchi Array	39.52	300	P	P	02 36 51.4	-2.5
	3.2nm,0.7s,baz=97,slow=6.2,SNR=23						
KURBB	Kurchatov Arra	41.58	306	P	P	02 37 09.5	-1.0
	0.9nm,0.4s,baz=84,slow=8.1,SNR=10						
JIRN	Jiri	42.27	271	*e*P	P	02 37 17.1	+0.4
	10nm,0.2s						
RAMN	Ramite	42.27	270	*e*P	P	02 37 15.9	-0.7
GUN	Gumba	42.40	271	*e*P	P	02 37 17.8	+0.1
	26nm,0.4s						
PKI	Pulchoki	42.92	271	*e*P	P	02 37 21.4	-0.5
	4.4nm,0.4s						
KKN	Kakani	42.93	271	*e*P	P	02 37 22.2	+0.4
	20nm,0.5s						
PKIN	Phulchoki	42.93	271	*e*P	P	02 37 21.5	-0.4
	4.5nm,0.4s						
GKN	Gorkha	43.34	272	*e*P	P	02 37 25.0	0.0
	18nm,0.4s						
DANN	Dangsing	43.87	273	*e*P	P	02 37 29.6	+0.3
	32nm,0.4s						
KOLN	Koldanda	44.26	272	*e*P	P	02 37 31.9	-0.4
	9.8nm,0.5s						
PYUN	Piuthan	44.59	273	*e*P	P	02 37 34.6	-0.3
	14nm,0.5s						
BVAR	Borovoye Array	46.31	311	P	P	02 37 46.7	-0.9
	0.4nm,0.4s,baz=78,slow=9.0,SNR=4.3						
ILAR	Eielson Array	51.07	33	P	P	02 38 24.4	+1.1
	0.2nm,0.5s,baz=268,slow=7.0,SNR=3.8						
ARU	Arti	52.37	317	P	P	02 38 32.8	0.0
	2.0nm,0.2s,baz=107,slow=8.2,SNR=5.2						
AKTO	Aktyubinsk	54.39	310	P	P	02 38 47.5	+0.1
	1.9nm,0.6s,baz=88,slow=9.5,SNR=8.6						
WRA	Warramunga Arr	57.80	181	P	P	02 39 11.6	0.0
	2.9nm,0.4s,baz=3.2,slow=8.1,SNR=26						
ARCES	ARCESS Array B	61.24	338	P	P	02 39 34.3	0.0
	1.5nm,0.7s,baz=56,slow=8.0,SNR=4.2						
ASAR	Alice Springs	61.51	182	P	P	02 39 36.8	+0.1
	0.7nm,0.6s,baz=351,slow=4.2,SNR=7.0						
FINES	FINESS Array B	65.57	330	P	P	02 40 03.1	+0.8
	1.0nm,0.4s,baz=66,slow=6.4,SNR=13						
STKA	Stephens Creek	69.91	174	P	P	02 40 30.5	+1.0
	2.1nm,0.8s,baz=322,slow=8.1,SNR=3.5						
AKASG	Malin Array Be	70.47	320	P	P	02 40 32.8	0.0
	0.5nm,0.4s,baz=46,slow=6.4,SNR=3.4						
BRTR	Keskin Array B	74.53	308	P	P	02 40 57.5	+0.5
	0.4nm,0.7s,baz=94,slow=2.2,SNR=4.1						
NVAR	Mina Array Bea	77.99	50	P	P	02 41 18.8	+2.5
	0.5nm,0.6s,baz=300,slow=5.7,SNR=3.9						
PDAR	Pinedale Array	80.13	43	P	P	02 41 29.8	+2.1
	0.2nm,0.4s,baz=354,slow=1.5,SNR=4.5						

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*ISCJB **10** 02:52:40.2±0.2, 15°.82S±0°.06×173°.86W±0°.06, h10^{km}, mb4.5/99, MS3.3/4, Error ellipse: s-maj=9.7km s-min=6.0km az=44.2*

*IDC **10** 02:52:40.3±0.6, 15°.66S×173°.83W, h0^{km}, mb4.5/12, mb1 4.8/13, mb1mx4.5/28, mbtmp4.5/13, ML3.8/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/18, Error ellipse: s-maj=28.7km s-min=16.6km az=139.0*

*NEIC **10** 02:52:41.8±1.4, 15°.77S×173°.86W, h10^{km}, mb4.6/91, Error ellipse: s-maj=15.6km s-min=3.4km az=117.0*

ISC 10 02:52:41.8±0.4**, 15°.75S**±0°.05×**173°.80W**±0°.07**, h10^{km}, n162, σ1^{s}.12**/157**, mb4.6**/99**, MS3.4**/4**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.68	47	*e*Pn	Pn	02 53 27.4	+2.3
AFI				*e*Sn	Sn	02 53 55.3	-2.4
NIUE	Niue	4.96	132	*e*Pn	Pn	02 53 59.2	+2.7
NIUE				*e*Sn	Sn	02 54 50.3	-3.7
KNTN	Kanton	13.05	9	*e*Pn	Pn	02 55 51.3	+3.9
KNTN				*e*Sn	Sn	02 58 07.8	-5.0
RAR	Rarotonga	14.37	114	Pn	Pn	02 56 06.4	+1.0
	4.0nm,0.3s,baz=280,slow=8.5,SNR=8.6						
RAR				LR	LR	03 00 40.1	
	comp=Z,52nm,19.3s,baz=290,slow=33						
RAR	Rarotonga	14.37	114	*e*Pn	Pn	02 56 07.4	+1.9
DZM	Mont Dzumac	19.71	248	*e*LR	LR	03 02 03.7	
	comp=Z,280nm,32.1s						
PPT	Papeete	23.28	98	LR	LR	03 05 14.7	
	comp=Z,31nm,18.5s,baz=210,slow=32						
PPT2	Papeete2	23.28	98	*e*LR	LR	03 03 12.6	
	comp=Z,266nm,30.0s						
TBI	Tubuai	24.13	112	*e*LR	LR	03 03 42.6	
	comp=Z,263nm,30.5s						
HNR	Honiara	26.36	281	LR	LR	03 06 14.1	
	comp=Z,78nm,19.7s,baz=130,slow=31						
THZ	Tophouse	28.35	201	*e*P	P	02 58 33.8	-2.2
	22nm,1.1s						
MQZ	McQueen's Vall	30.16	200	*e*P	P	02 58 50.7	-1.3
	23nm,1.0s						
FOZ	Fox Glacier	31.02	203	*e*P	P	02 59 00.3	+0.7
	26nm,1.1s						
WKZ	Wanaka	32.42	203	*e*P	P	02 59 11.5	-0.5
	15nm,1.0s						
TAOE	Nuku Hiva Isla	33.55	82	*e*P	P	02 59 22.6	+0.3
	48nm,1.0s						
EIDS	Eidsvold	34.16	248	*e*P	P	02 59 27.9	+0.5
	9.7nm,1.1s						
H11S2	WAKE ISLAND Hy	39.06	330	T	T	03 41 19.1	
	baz=146,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	39.08	330	T	T	03 41 11.9	
	baz=146,slow=75,SNR=8.5						
H11S1	WAKE ISLAND Hy	39.08	330	T	T	03 41 14.9	
	baz=146,slow=75,SNR=7.9						
STKA	Stephens Creek	43.53	240	P	P	03 00 45.3	-0.6
	3.9nm,0.7s,baz=88,slow=12,SNR=8.4						
STKA	Stephens Creek	43.53	240	*e*P	P	03 00 45.3	-0.6
	0.8nm,0.7s						
WR1	Warramunga Arr	49.39	257	*e*P	P	03 01 32.0	-0.1
WRA	Warramunga Arr	49.39	257	P	P	03 01 32.0	-0.1
	3.6nm,0.7s,baz=86,slow=7.7,SNR=11						
AS31	Alice Springs	49.63	252	*e*P	P	03 01 34.4	+0.4
	3.9nm,0.5s						
ASAR	Alice Springs	49.64	252	P	P	03 01 33.3	-0.7
	15nm,0.7s,baz=87,slow=8.0,SNR=141						
VNDA	Vanda	62.99	186	P	P	03 03 09.8	+1.4
	2.3nm,0.9s,baz=8.7,slow=7.0,SNR=9.8						
KMRM	Mail Ridge	72.57	38	*e*P	P	03 04 09.2	-0.2
	24nm,0.8s						
PETK	Petropavlovsk-	72.84	342	P	P	03 04 11.7	+1.1
	4.2nm,0.9s,baz=81,slow=8.9,SNR=3.7						
PEA1	Petropavlovsk-	72.85	342	*e*P	P	03 04 11.7	+1.1
ISA	Isabella, Lake	73.17	44	*e*P	P	03 04 13.9	+0.9
	5.7nm,1.0s						
CMB	Columbia Colle	73.28	41	*e*P	P	03 04 13.9	+0.3
	6.6nm,0.9s						
AFDM	Forest Hills D	73.45	40	*e*P	P	03 04 15.1	+0.5
	6.4nm,0.9s						
WDC	Whiskeytown Da	73.49	38	*e*P	P	03 04 14.4	-0.3
	6.2nm,1.0s						
MDPB	Devils Postpil	73.89	42	*e*P	P	03 04 16.5	-0.9
	4.7nm,1.0s						
OMMB	Old Mammoth Mi	73.93	42	*e*P	P	03 04 18.9	+1.2
	2.7nm,1.0s						
GSC	Goldstone, Bar	74.11	45	*e*P	P	03 04 19.0	+0.4
	5.9nm,1.0s						
YBH	Yreka Blue Hor	74.11	37	*e*P	P	03 04 18.1	-0.4
	11nm,0.9s						
WAKR	Walker	74.16	42	*e*P	P	03 04 18.5	-0.4
	4.7nm,0.8s						
QSPA	South Pole Qui	74.30	180	*e*P	P	03 04 18.4	-0.9
	3.5nm,0.8s						
BEKR	Beckworth	74.38	40	*e*P	P	03 04 20.8	+0.6
	6.9nm,0.9s						
PNTR	Pine Nut	74.40	41	*e*P	P	03 04 21.2	+0.8
	12nm,0.8s						
VCNR	Virginia City	74.49	41	*e*P	P	03 04 21.6	+0.8
	7.2nm,0.8s						
YERR	Yerington	74.56	41	*e*P	P	03 04 21.8	+0.5
	8.6nm,0.7s						
NV01	Mina Array Sit	74.84	42	*e*P	P	03 04 22.9	0.0
NVAR	Mina Array Bea	74.84	42	P	P	03 04 22.9	0.0
	4.9nm,0.8s,baz=228,slow=9.5,SNR=24						
NV11	Mina Array Sit	74.94	42	*e*P	P	03 04 23.8	+0.3
	0.7nm,1.0s						
LDFC	Landfair	75.16	46	*e*P	P	03 04 25.4	+0.7
	6.8nm,0.9s						
KVN	Kaiserville	75.33	42	*e*P	P	03 04 26.2	+0.5
	5.5nm,0.9s						
TPNV	Topopah Spring	75.38	44	*e*P	P	03 04 26.0	0.0
	1.9nm,0.8s						
MOD	Modoc Plateau	75.63	38	*e*P	P	03 04 28.0	+0.6
	8.8nm,0.8s						
SHPR	Sheep Range	75.88	45	*e*P	P	03 04 29.7	+0.8
	1.6nm,0.8s						
W13A	Hualapai Mount	76.03	47	*e*P	P	03 04 30.6	+0.7
	2.8nm,1.0s						
Y14A	Wickenburg	76.07	48	*e*P	P	03 04 30.4	+0.5
	2.7nm,0.8s						
PINE	Pine Mountain	76.41	36	*e*P	P	03 04 32.7	+1.0
	11nm,0.8s						
R11A	Troy Canyon, C	76.58	43	*e*P	P	03 04 33.1	+0.3
	0.9nm,1.0s						
TUC	Tucson	76.91	51	*e*P	P	03 04 34.4	-0.4
	4.9nm,0.8s						
WVOR	Wild Horse Val	76.94	39	*e*P	P	03 04 35.3	+0.5
	7.8nm,1.0s						
X16A	Lo Mia Camp, P	77.44	49	*e*P	P	03 04 38.2	+0.4
	3.7nm,0.9s						
LCMT	Little Creek M	77.45	46	*e*P	P	03 04 39.0	+1.2
	1.9nm,0.9s						
J08A	Circle Bar Ran	77.58	38	*e*P	P	03 04 38.8	+0.5
	5.4nm,0.9s						
CCUT	Cedar City	77.65	45	*e*P	P	03 04 40.0	+1.0
	1.5nm,0.8s						
KNB	Kanab	77.75	46	*e*P	P	03 04 36.6	-2.8
	5.1nm,1.1s						
U15A	North Rim	77.82	46	*e*P	P	03 04 40.8	+0.8
	4.7nm,1.0s						
SZCU	Shurtz Canyon	77.86	45	*e*P	P	03 04 41.5	+1.4
	1.9nm,0.8s						
WUAZ	Wupatki	78.02	48	*e*P	P	03 04 41.9	+0.9
	3.3nm,1.0s						
ELK	Elko	78.10	41	*e*P	P	03 04 41.4	0.0
	3.2nm,0.9s						
PKCU	Pink Cliffs	78.31	46	*e*P	P	03 04 44.4	+1.6
	5.2nm,0.8s						
HPIG		78.54	58	*e*P	P	03 04 44.1	0.0
	4.7nm,0.8s						
MTPU	Mount Pierson	78.70	45	*e*P	P	03 04 46.3	+1.4
	3.0nm,1.0s						
MSU	Marysvale	78.94	45	*e*P	P	03 04 47.3	+1.2
BMO	Blue Mountains	79.13	37	*e*P	P	03 04 44.8	-2.1
	5.4nm,0.3s						
DUG	Dugway, Tooele	79.38	43	*e*P	P	03 04 48.5	+0.2
TTA	Tatalina	79.65	8	*e*P	P	03 04 50.5	+1.3
	8.3nm,1.2s						
F10A	Beach Ranch, E	79.83	36	*e*P	P	03 04 50.3	-0.3
	4.5nm,0.8s						
TMUT	Trail Mountain	79.99	44	*e*P	P	03 04 52.9	+1.1
	3.7nm,0.7s						
NJ2	Nanjing	80.06	307	*e*P	P	03 04 53.1	+1.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
HLID	Hailey	80.14	39	*e*P	P	03 04 52.3	-0.1
	comp=Z,5.5nm,0.9s						
SPUT	South Promonto	80.19	42	*e*P	P	03 04 53.0	+0.3
	comp=Z,2.7nm,1.1s						
HVU	Hansel Valley	80.22	42	*e*P	P	03 04 53.1	+0.3
	comp=Z,3.9nm,1.1s						
MNTX	Cornudas Mount	80.74	53	*e*P	P	03 04 55.9	+0.2
	comp=Z,6.3nm,1.0s						
TCUT	Toone Canyon	80.77	43	*e*P	P	03 04 56.4	+0.5
	comp=Z,6.5nm,0.9s						
PV14	Lion Creek, Pa	81.04	46	*e*P	P	03 04 57.8	+0.4
	comp=Z,4.3nm,0.8s						
PV20	West Nyswonger	81.06	46	*e*P	P	03 04 58.4	+0.9
	comp=Z,4.4nm,0.7s						
PV13	Radium Mtn., P	81.08	46	*e*P	P	03 04 58.5	+0.8
	comp=Z,2.6nm,1.0s						
PV03	Paradox Valley	81.10	46	*e*P	P	03 04 58.6	+0.8
	comp=Z,3.7nm,1.1s						
PV11	David Mesa, Pa	81.11	46	*e*P	P	03 04 58.9	+1.1
	comp=Z,5.8nm,0.9s						
TX31	Lajitas Ar. Si	81.12	56	*e*P	P	03 04 58.2	+0.3
	comp=Z,5.3nm,1.0s						
TXAR	Lajitas Array	81.13	56	P	P	03 04 58.2	+0.3
	comp=Z,6.9nm,1.0s,baz=216,slow=6.2,SNR=22						
PV04	Paradox Valley	81.13	46	*e*P	P	03 04 58.5	+0.7
	comp=Z,4.0nm,0.9s						
PV21	Cone Mtn., Par	81.16	46	*e*P	P	03 04 58.8	+0.7
	comp=Z,3.1nm,0.7s						
PV12	Saucer Basin,	81.17	46	*e*P	P	03 04 59.0	+0.9
	comp=Z,3.1nm,0.8s						
RND	Reindeer	81.25	11	*e*P	P	03 04 58.2	+0.4
	comp=Z,8.3nm,1.0s						
ANMO	Albuquerque	81.32	50	*e*P	P	03 04 57.9	-1.0
	comp=Z,2.7nm,0.8s						
MCK	McKinley	81.53	11	*e*P	P	03 04 59.5	+0.2
	comp=Z,14nm,1.0s						
MCMT	McKenzie Canyo	81.77	39	*e*P	P	03 05 01.6	+0.4
MSO	Missoula	82.19	37	*e*P	P	03 05 02.1	-1.0
	comp=Z,1.7nm,0.9s						
RIDG	Independent Ri	82.34	13	*e*P	P	03 05 01.9	-1.6
	comp=Z,5.7nm,0.6s						
WRH	Wood River Hil	82.36	11	*e*P	P	03 05 03.5	-0.1
	comp=Z,9.3nm,0.9s						
HDA	Harding Lake	82.52	11	*e*P	P	03 05 04.2	-0.2
	comp=Z,5.5nm,0.7s						
CCB	Clear Creek Bu	82.58	11	*e*P	P	03 05 04.0	-0.6
	comp=Z,6.1nm,0.8s						

QLMT	Earthquake Lak	82.63	39	eP	P	03 05 06.5	+0.9
BW06	Boulder Array	82.78	42	eP	P	03 05 06.2	-0.4
	comp=Z,4.1nm,0.9s						
PDAR	Pinedale Array	82.78	42	P	P	03 05 06.1	-0.4
	comp=Z,4.1nm,1.0s,baz=215,slow=3.2,SNR=24						
ILAR	Eielson Array	82.86	11	P	P	03 05 05.5	-0.6
	comp=Z,1.3nm,0.5s,baz=219,slow=6.8,SNR=14						
ILB	Eielson Array	82.86	11	eP	P	03 05 05.5	-0.6
	comp=Z,2.1nm,0.8s						
BOZ	Bozeman (W)	82.90	39	eP	P	03 05 06.9	-0.1
	comp=Z,4.2nm,1.0s						
LNIG	Linares	82.92	62	eP	P	03 05 05.4	-1.9
	comp=Z,6.0nm,0.9s						
YHH	Holmes Hill	82.97	40	eP	P	03 05 08.3	+0.8
	comp=Z,2.1nm,0.8s						
SDCO	Great Sand Dun	83.23	48	eP	P	03 05 09.1	0.0
	comp=Z,1.7nm,0.8s						
HRY	Holter Researc	83.36	38	eP	P	03 05 09.2	-0.1
MSTX	Muleshoe	83.68	52	eP	P	03 05 10.9	-0.3
	comp=Z,14nm,0.9s						
DAWY	Dawson	83.85	14	eP	P	03 05 11.3	0.0
	comp=Z,5.7nm,1.0s						
EGAK	Eagle	84.05	13	eP	P	03 05 12.1	-0.1
	comp=Z,4.8nm,1.0s						
RLMT	Red Lodge	84.11	40	eP	P	03 05 13.3	0.0
	comp=Z,2.4nm,0.9s						
AMTX	Amarillo	84.87	52	eP	P	03 05 16.9	-0.2
	comp=Z,6.8nm,0.8s						
ABTX	Abilene, Hawle	85.58	55	eP	P	03 05 20.3	-0.5
	comp=Z,23nm,0.8s						
MAW	Mawson	87.34	199	P	P	03 05 29.1	+0.4
	comp=Z,3.0nm,0.8s,baz=128,slow=7.3,SNR=4.6						
HHC	Hu-ho-hao-te	88.98	313	P	P	03 05 37.4	+0.3
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,99nm,6.5s						
YKA	Yellowknife Ar	90.57	24	P	P	03 05 43.3	-0.5
	comp=Z,1.4nm,1.0s,baz=242,slow=3.7,SNR=6.1						
YKB5	Yellowknife Ar	90.57	24	eP	P	03 05 43.4	-0.5
SYO	Syowa Base	92.18	191⇑	eP	P	03 05 49.0	-2.4
CMAR	Chiang Mai Arr	92.36	288	P	P	03 05 54.4	+1.2
	comp=Z,1.0nm,0.3s,baz=98,slow=2.5,SNR=6.6						
LZH	Lanzhou	93.12	306	eP	P	03 05 54.6	-1.9
LZH				pP	sP	03 06 12.7	+12
LZH				sP	pP	03 06 20.7	+21
LZH				PP	PP	03 09 38.5	-1.5
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
LZH				pmax	pmax		
	comp=Z,91nm,4.3s						
352A	Blakely	97.12	59	eP	P	03 06 13.1	-1.7
	comp=Z,21nm,0.6s						
KSH	Kashi	115.37	307	ePKP	PKiKP	03 11 25.6	+1.3
KSH				PKS	PKSdf	03 15 02.1	+1.0
CLL	Collm	144.11	353	ePKPdf	PKPab	03 12 14.0	-1.3
	comp=Z,3.0nm,0.6s						
OSTC	Ostas	144.35	349	ePKP	PKPbc	03 12 16.9	+0.3
DPC	Dobruska-Polom	144.53	349	ePKP	PKPab	03 12 16.6	-0.3
MORC	Moravsky Berou	144.83	347	ePKPdf	PKPab	03 12 18.0	-0.1
MORC	Moravsky Berou	144.83	347	ePKP	PKPab	03 12 17.4	-0.7
LANS	Liptovska Anna	144.97	345	ePKP	PKPdf	03 12 19.2	-0.2
KMBO	Kilima Mbogo	145.04	244	PKPbc	PKPbc	03 12 20.2	+0.1
	comp=Z,1.1nm,0.6s,baz=85,slow=9.9,SNR=3.7						
PRU	Pruhonice	145.18	351	ePKP	PKPbc	03 12 18.9	-0.3
JAVC	Velka Javorina	145.66	347	ePKP	PKPab	03 12 21.9	+0.7
VYHS	Vyhne	145.73	345	ePKP	PKPdf	03 12 20.7	0.0
KRUC	Moravsky	145.74	348	ePKP	PKPdf	03 12 20.7	0.0
MLR	Muntele Rosu	146.02	335	ePKPdf	PKPdf	03 12 21.7	+0.2
KHC	Kasperske Hory	146.16	351	ePKPdf	PKPdf	03 12 21.4	0.0
KHC	Kasperske Hory	146.16	351	ePKP	PKPdf	03 12 21.2	-0.2
BR101	Keskin Array S	146.18	320	ePKPbc	PKPbc	03 12 22.8	-0.1
BR131	Keskin Array S	146.18	320	ePKPdf	PKPbc	03 12 22.9	0.0
BRTR	Keskin Array B	146.18	320	PKPbc	PKPbc	03 12 22.8	-0.1
	comp=Z,5.7nm,1.0s,baz=116,slow=2.3,SNR=18						
GEC2	GERESS Array S	146.42	351	ePKPdf	PKPdf	03 12 22.1	+0.1
GERES	GERESS Array B	146.42	351	PKPbc	PKPdf	03 12 22.1	+0.1
	comp=Z,0.9nm,0.6s,baz=45,slow=4.0,SNR=8.7						
CONA	Conrad Observa	146.93	348	pPKPdf	PKPdf	03 12 24.6	+1.7
	comp=Z,2.5nm,0.7s						
MOA	Molln	147.30	350	PKPdf	PKPdf	03 12 21.8	-1.6
	comp=Z,1.3nm,0.5s						
CLF	Chambon-Foret	147.65	5	ePKPbc	PKPbc	03 12 26.8	+0.3
RETA	Reutte	148.13	354	ePKPab	PKPbc	03 12 28.8	+0.8
	comp=Z,3.8nm,0.9s						
WATA	Walderalm	148.19	353	pPKPdf	PKPdf	03 12 26.5	+1.5
	comp=Z,2.3nm,0.5s						
KBA	Koelnbreinsper	148.20	351	eP	PKPbc	03 12 27.8	-0.5
	comp=Z,1.8nm,0.6s						
MOTA	Moosalm	148.23	354	eP	PKPbc	03 12 27.3	-1.2
	comp=Z,2.6nm,0.6s						
WTTA	Wattenberg	148.25	353	i P	PKPbc	03 12 27.7	-0.8
	comp=Z,4.8nm,0.5s						
SOKA	Soboth	148.29	348	epPKPdf	PKPdf	03 12 27.1	+1.9
	comp=Z,5.5nm,1.1s						
SQTA	Sankt Quirin	148.34	353	ePKPdf	PKPdf	03 12 24.1	-1.1
	comp=Z,1.3nm,0.5s						
DAVA	Damuels	148.40	355	eP	PKPbc	03 12 27.9	-1.0
	comp=Z,5.7nm,1.2s						
MYKA	Terra Mystica	148.59	350	ePKPbc	PKPbc	03 12 27.7	-1.6
	comp=Z,3.1nm,0.8s						
FETA	Feichten	148.59	354	epPKPdf	PKPdf	03 12 25.9	+0.2
	comp=Z,2.6nm,0.9s						
ABTA	Abfaltersbach	148.65	352	ePKPdf	PKPdf	03 12 25.3	-0.4
	comp=Z,2.2nm,0.6s						
FUORN	Ofenpass-Fuorn	149.03	355	ePKPbc	PKPbc	03 12 30.6	0.0
SSB	Saint Sauveur	150.53	2	ePKPbc	PKPbc	03 12 34.1	+0.1
BNI	Bardonecchia	150.78	359	ePKPbc	PKPbc	03 12 34.1	-0.7
ESDC	Sonseca Array	154.56	18	PKPbc	PKPbc	03 12 41.2	-2.0
	comp=Z,0.6nm,0.8s,baz=20,slow=0.7,SNR=5.3						

IGQ 10 03:12:35.9±0.5**, 3°S**±3°×**7°8W**±°**, h10km, MLv3.6, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	Cochancay	1.38	293	P	Pn	03 13 00.3	-1.0
PAT1	Patacocha	1.57	343	P	Pn	03 13 02.3	-2.1
BPAT	Tungurahua Vol	1.57	343	P	Pn	03 13 02.5	-1.8
BPAT				S	Sn	03 13 23.9	-1.1
ARRY	Arrayan	1.58	343	P	Pn	03 13 01.9	-2.5
BMAS	Trigal station	1.59	342	P	Pn	03 13 02.2	-2.2
RETU	Refugio	1.63	344	P	Pn	03 13 03.8	-1.4
BULB	Ulba Tungurahu	1.63	345	P	Pn	03 13 03.3	-1.8
BRUN	Tungurahua Vol	1.65	345	P	Pn	03 13 04.5	-0.7
POND	Pondoa	1.66	344	P	Pn	03 13 04.7	-0.7
MILO	Milagro-Astudi	1.73	295	P	Pb	03 13 07.9	0.0
MILO				S	Sg	03 13 33.6	+1.8
PIS1	Pisayambo	1.99	348	P	Pn	03 13 09.8	-0.3
PISA	Pisayambo	1.99	348	P	Pn	03 13 09.4	-0.7
ARDO	Archidona, Ten	2.02	5	P	Pn	03 13 09.2	-1.0
ARDO				S	Sn	03 13 36.1	+0.5
ZUMB	Zumba	2.16	212	P	Pn	03 13 11.4	-0.8
ZUMB				S	Sn	03 13 40.3	+1.1
BMOR	Cotopaxi Volca	2.32	348	P	Pn	03 13 15.1	+0.3
BTAM	Cotopaxi Volca	2.37	350	P	Pn	03 13 15.5	+0.1
MCRA	Macar, Loja	2.38	236	P	Pn	03 13 11.7	-3.3
MCRA	Macar, Loja	2.38	236	P	Pn	03 13 11.3	-3.7
MCRA				S	Sn	03 13 44.4	0.0
BREF	Cotopaxi Volca	2.38	349	P	Pn	03 13 15.8	+0.1
MORR	Playas El Morr	2.38	279	P	Pn	03 13 16.5	+1.4
BNAS	Cotopaxi Volca	2.39	348	P	Pn	03 13 15.5	-0.1
BVC2	Cotopaxi Volca	2.39	350	P	Pn	03 13 15.4	-0.2
VC1	Cotopaxi 1	2.40	350	P	Pn	03 13 16.4	+0.6
ANTM	Antisana-La Mi	2.48	355	P	Pn	03 13 16.7	-0.3
ANTM				S	Sn	03 13 49.2	+1.6
PITA	Cotopaxi Volc	2.49	350	P	Pn	03 13 17.4	+0.5
ANTS	Antisana-Sarah	2.51	356	P	Pn	03 13 17.1	-0.4
ANTG	Antisana-Guama	2.52	354	P	Pn	03 13 17.3	-0.1
ANTI	Antisana	2.56	356	P	Pn	03 13 17.9	-0.2

WEL 10 03:31:17.2±1.3**, 36°S**±6°×**17°9E**±1°2**, h33km, M3.9**/23**, ML4.2**/21**, MLv3.9**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=79.7, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.04	198	P	Pn	03 31 50.8	+1.6
MXZ				S	Sn	03 32 14.8	+1.3
WMGZ	Waiomatatini S	2.26	194	P	Pn	03 31 54.3	+2.0
WMGZ				S	Sn	03 32 20.6	+1.6
HAZ	Te Kaha	2.38	206	P	Pn	03 31 55.1	+1.3
HAZ				S	Sn	03 32 23.9	+2.1
PKGZ	Pakihiroa	2.41	200	P	Pn	03 31 55.5	+1.2
PUZ	Puketiti	2.54	195	P	Pn	03 31 57.0	+0.9
PUZ				S	Sn	03 32 24.9	-0.9
RUGZ	Raukumara Rang	2.60	206	P	Pn	03 31 57.8	+0.7
TWGZ	Tauwhareparae	2.71	199	P	Pn	03 31 59.4	+1.1
TWGZ				S	Sn	03 32 31.6	+1.6
CNGZ	Carnagh Statio	2.95	194	P	Pn	03 32 02.3	+0.7
KUZ	Kuaotunu	2.95	247	P	Pn	03 32 01.4	-0.3
MWZ	Matawai	2.99	204	P	Pn	03 32 02.5	+0.3
TKGZ	Te Karaka	2.99	199	P	Pn	03 32 02.3	+0.1
OPRZ	Ohinepanea	3.02	222	P	Pn	03 32 03.7	+1.1
GRZ	Great Barrier	3.02	257	P	Pn	03 32 02.3	-0.4
MARZ	Manawahe	3.06	219	P	Pn	03 32 04.1	+0.9
URZ	Urewera	3.08	211	P	Pn	03 32 02.9	-0.6
RAGZ	Rawiri	3.17	205	P	Pn	03 32 04.8	0.0
RIGZ	Rimuhau	3.26	199	P	Pn	03 32 05.3	-0.7
RIGZ				S	Sn	03 32 42.3	-1.4
MUGZ	Murupara	3.41	212	P	Pn	03 32 07.6	-0.4
RTZ	Ruatahuna	3.44	209	P	Pn	03 32 07.5	-0.9
SNGZ	Shannon Statio	3.46	203	P	Pn	03 32 07.7	-0.9
MKAZ	Moumakai	3.50	244	P	Pn	03 32 10.2	+0.9
TOZ	Tahuroa Road	3.58	233	P	Pn	03 32 11.3	+1.0
KNZ	Kokohu	3.58	198	P	Pn	03 32 08.5	-1.9
MTHZ	Maungataniwha	3.70	208	P	Pn	03 32 11.2	-0.8
ARHZ	Aropaoanui	4.00	204	P	Pn	03 32 14.5	-1.7
BKZ	Black Stump Fm	4.10	210	P	Pn	03 32 15.6	-2.0
MCHZ	McNeill Hill	4.27	206	P	Pn	03 32 17.2	-2.6
HIZ	Hauiti	4.46	228	P	Pn	03 32 23.6	+1.2
BHHZ	Black Hill Sta	4.55	211	P	Pn	03 32 21.3	-2.5
KRHZ	Kereru	4.56	207	P	Pn	03 32 20.4	-3.5
FWVZ	Far West T-bar	4.60	217	P	Pn	03 32 23.5	-1.0
MOVZ	Moawhango	4.62	214	P	Pn	03 32 22.4	-2.4
PRHZ	Porangahau	5.03	202	P	Pn	03 32 26.4	-3.9

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*ISCJB **10** 03:39:04.0±1.7, 13°.5N±0°.1×89°.93W±0°.08, h63km±17km, Error ellipse: s-maj=23.9km s-min=10.2km az=17.8*

*SNET **10** 03:39:04.6±0.8, 13°.57N×89°.94W, h53km±6km, MD2.9*

*GCG **10** 03:39:05.9±0.6, 14°.94N×89°.75W, h17km±11km, MD3.6*

ISC 10 03:39:04.4±2.9**, 13°.5N**±0°.2×**89°.91W**±0°.07**, h61**km±20km**, n8, σ0s.42**/14**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.44	40	eP	Pn	03 39 15.9	-0.2
SBLS				eS	Sn	03 39 24.7	+0.1
RTR	El Retiro	0.47	33	eP	Pn	03 39 16.3	0.0
SNJE	San Jose	0.47	39	eP	Pn	03 39 16.3	-0.1
SNJE				eS	Sn	03 39 24.9	-0.2
LFU	La Fuente	0.81	72	eP	Pn	03 39 20.3	+0.1
MTO3	Montecristo	1.04	31	eP	Pn	03 39 22.7	-0.5
MTO3				eS	Sn	03 39 37.8	+0.7
PCG	Pacaya	1.11	323	eP	Pn	03 39 24.6	+0.3
PCG				eS	Sn	03 39 39.0	+0.1
FUG	Fuego 3	1.30	316	eP	Pn	03 39 26.6	-0.1
FUG				eS	Sn	03 39 43.7	+0.3
STG3	Santiaguito 3,	2.01	307	eP	Pn	03 39 36.4	+0.2
STG3				eS	Sn	03 39 59.6	-0.8

IDC 10 03:59:35.0±1.8**, 16°.17N**×**119°.98E, h0km, mb3.7**/4**, mb1 4.0**/4**, mb1mx3.5**/44**, mbtmp3.7**/4**, Error ellipse: s-maj=80.7km s-min=23.0km az=53.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	20.21	280	P	P	04 04 11.0	-0.6
	1.1nm,0.3s,baz=82,slow=8.3,SNR=4.8						
WRA	Warramunga Arr	38.56	158	P	P	04 06 59.2	-0.4
	1.0nm,0.4s,baz=349,slow=11,SNR=6.6						
ASAR	Alice Springs	41.86	161	P	P	04 07 27.3	+0.2
	1.1nm,0.7s,baz=343,slow=7.1,SNR=8.6						
MKAR	Makanchi Array	43.65	323	P	P	04 07 41.5	+0.1
	0.2nm,0.6s,baz=132,slow=8.7,SNR=3.5						

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*ISCJB **10** 04:00:21.3±1.2, 4°.8S±0°.1×145°.6E±0°.1, h35km, mb3.9/3, Error ellipse: s-maj=24.3km s-min=7.7km az=139.2*

*IDC **10** 04:00:25.5±2.8, 5°.06S×145°.16E, h66km±26km, mb3.6/3, mb1 4.0/6, mb1mx3.5/35, mbtmp4.0/6, Error ellipse: s-maj=31.5km s-min=17.8km az=53.0*

ISC 10 04:00:23.4±1.1**, 4°.9S**±0°.1×**145°.4E**±0°.1**, h35km, n9, σ3s.18**/10**, mb3.9**/3**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.79	159	P	Pn	04 01 35.3	+2.2
	4.4nm,0.3s,baz=39,slow=5.0,SNR=5.3						
PMG				S	Sn	04 02 29.0	+1.6
	4.1nm,0.3s,baz=126,slow=20,SNR=5.8						
JAY	Jayapura	5.27	297	P	Pn	04 01 40.8	+1.0
	1.5nm,0.3s,baz=172,slow=8.9,SNR=4.9						
JAY				S	Sn	04 02 42.9	+3.5
	0.8nm,0.3s,baz=162,slow=20,SNR=2.0						
WRA	Warramunga Arr	18.42	215	P	P	04 04 32.0	-3.9
	0.5nm,0.3s,baz=40,slow=11,SNR=22						
ASAR	Alice Springs	21.70	210	P	P	04 05 07.6	-4.0
	4.4nm,1.1s,baz=40,slow=9.5,SNR=23						
CMAR	Chiang Mai Arr	51.35	298	P	P	04 09 22.3	-2.6
	0.8nm,0.3s,baz=120,slow=5.3,SNR=4.3						
ILAR	Eielson Array	85.11	23	P	P	04 12 54.0	-1.6
	0.2nm,0.2s,baz=264,slow=4.5,SNR=3.3						
TORD	Torodi Ar. Bea	143.29	285	PKhKP	PKPpre	04 19 48.2	
	0.9nm,1.1s,baz=72,slow=3.8,SNR=3.8						
SIV	San Ignacio	146.56	129	PKPbc	PKPdf	04 20 01.5	+0.7
	0.8nm,0.5s,baz=269,slow=5.7,SNR=8.7						
DBIC	Dimbokro	150.37	275	PKPbc	PKPdf	04 20 10.1	+3.0
	1.6nm,0.6s,baz=153,slow=2.3,SNR=3.7						

DJA 10 04:26:41.2±0.6**, 4°S**±3°×**10°0E**±°**, h54**km±11km**, M3.6**/7**, MLv3.6**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.94	346	P	Pn	04 26 58.3	+0.1
PPSI				S	Sn	04 27 11.3	+0.6
KRJI	Kerinci	2.00	38	P	Pn	04 27 13.6	+0.9
KRJI				S	Sn	04 27 37.7	+1.0
SISI	Saibi	2.60	334	P	Pn	04 27 21.2	+0.4
PDSI	Padang	2.76	5	P	Pn	04 27 22.8	-0.2
PDSI				S	Sn	04 27 56.1	+0.9
MNAI	Manna	2.80	104	P	Pn	04 27 23.1	-0.5
MNAI				S	Sn	04 27 57.7	+1.5
SDSI	Sungai Dareh	2.98	24	P	Pn	04 27 26.5	+0.5
SDSI				S	Sn	04 28 01.7	+1.1
LHSI	Lahat	3.29	93	P	Pn	04 27 29.6	-0.7

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*ISCJB **10** 04:31:12.3±0.3, 31°.96S±0°.03×179°.52E±0°.07, h350km, mb4.3/37, Error ellipse: s-maj=7.8km s-min=3.4km az=9.2*

*IDC **10** 04:31:12.5±2.0, 32°.11S×179°.92E, h354km±19km, mb4.0/9, mb1 4.2/12, mb1mx3.7/45, mbtmp4.7/12, Error ellipse: s-maj=20.8km s-min=17.4km az=10.0*

*NEIC **10** 04:31:14.0±2.3, 32°.10S×179°.66E, h369km±6km, mb4.3/30, Error ellipse: s-maj=18.2km s-min=13.8km az=107.0*

*WEL **10** 04:31:14.6±1.1, 32°S±7°×17°9W±1°5, h232km±21km, M5.0/18, mB5.1/6, MLv5.3/18, Mw(mB)4.4/6, Error ellipse: s-maj=0.0km s-min=0.0km az=107.8*

ISC 10 04:31:12.5±0.4**, 32°.01S**±0°.04×**179°.76E**±0°.07**, h350km, n177, σ1s.87**/181**, mb4.3**/35**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.39	37	P	Pn	04 32 12.2	-3.3
GLKZ				S	S	04 32 48.1	-18
RIZ	Raoul Island	3.40	37	P	Pn	04 32 11.8	-3.8
MXZ	Matakaoa Point	5.67	192	ePn	Pn	04 32 40.8	+1.4
MXZ				eS	S	04 33 50.7	+0.8
MXZ	Matakaoa Point	5.67	192	P	Pn	04 32 42.3	+2.9
KUZ	Kuaotunu	5.78	214	P	Pn	04 32 45.3	+4.5
WMGZ	Waiomatatini S	5.90	190	P	Pn	04 32 42.6	+0.5
HAZ	Te Kaha	5.96	195	P	Pn	04 32 43.6	+0.9
HAZ	Te Kaha	5.96	195	P	Pn	04 32 42.2	-0.5
HAZ				S	S	04 33 54.7	-1.2
WCZ	Waipu Caves	5.96	227	P	Pn	04 32 47.1	+4.3
PKGZ	Pakihiroa	6.03	193	P	Pn	04 32 44.4	+0.8
OUZ	Omahuta	6.05	236	ePn	Pn	04 32 46.5	+2.6
OUZ	Omahuta	6.05	236	P	Pn	04 32 47.2	+3.4
WIAZ	Waiheke Island	6.11	217	P	Pn	04 32 49.2	+4.7
PUZ	Puketiti	6.17	191	P	Pn	04 32 44.4	-0.8
PUZ	Puketiti	6.17	191	P	Pn	04 32 43.8	-1.5
PUZ				S	S	04 33 56.2	-4.2
RUGZ	Raukumara Rang	6.18	195	P	Pn	04 32 45.7	+0.2
RUGZ	Raukumara Rang	6.18	195	P	Pn	04 32 45.8	+0.4
TWGZ	Tauwhareparae	6.32	193	P	Pn	04 32 47.1	+0.1
TWGZ	Tauwhareparae	6.32	193	P	Pn	04 32 46.7	-0.3
MKAZ	Moumakai	6.34	215	P	Pn	04 32 51.1	+4.0
OPRZ	Ohinepanea	6.39	203	P	Pn	04 32 52.1	+4.5
OPRZ	Ohinepanea	6.39	203	P	Pn	04 32 48.6	+0.9
MARZ	Manawahe	6.48	202	P	Pn	04 32 53.2	+4.5
MWZ	Matawai	6.57	196	P	Pn	04 32 49.1	-0.7
MWZ	Matawai	6.57	196	P	Pn	04 32 48.5	-1.3
MWZ				S	S	04 34 02.5	-6.3
CNGZ	Carnagh Statio	6.58	191	P	Pn	04 32 50.2	+0.3
URZ	Urewera	6.60	198	P	Pn	04 32 48.7	-1.4
	6.1nm,0.3s,baz=260,slow=3.9,SNR=77						
URZ				S	S	04 34 07.0	-2.4
	38nm,0.3s,baz=59,slow=22,SNR=15						
URZ	Urewera	6.60	198	ePn	Pn	04 32 51.1	+1.0
URZ				eS	S	04 34 09.7	+0.3
URZ	Urewera	6.60	198	P	Pn	04 32 49.0	-1.1
URZ	Urewera	6.60	198	P	Pn	04 32 48.5	-1.6
TKGZ	Te Karaka	6.60	193	P	Pn	04 32 51.0	+0.9
TKGZ	Te Karaka	6.60	193	P	Pn	04 32 48.1	-2.0
TOZ	Tahuroa Road	6.69	210	P	Pn	04 32 56.3	+5.1
RAGZ	Rawiri	6.75	196	P	Pn	04 32 51.0	-1.0
RAGZ	Rawiri	6.75	196	P	Pn	04 32 50.6	-1.3
TARZ	Mount Tarawera	6.76	202	P	Pn	04 32 57.9	+5.9
RIGZ	Rimuhau	6.88	193	P	Pn	04 32 54.3	+0.9
RIGZ	Rimuhau	6.88	193	P	Pn	04 32 51.3	-2.0
MUGZ	Murupara	6.90	200	P	Pn	04 32 54.7	+1.1
HSRZ	Hossack Road	6.91	204	P	Pn	04 33 00.0	+6.3
HRRZ	Handcock Road	6.97	203	P	Pn	04 32 58.7	+4.2
RTZ	Ruatahuna	6.97	198	P	Pn	04 32 54.0	-0.5
GRRZ	Galatos Road	6.99	204	P	Pn	04 32 59.4	+4.7
SNGZ	Shannon Statio	7.04	196	P	Pn	04 32 54.6	-0.6
SNGZ	Shannon Statio	7.04	196	P	Pn	04 32 51.6	-3.7
PRGZ	Paritu Road	7.07	192	P	Pn	04 32 59.1	+3.6
PRGZ	Paritu Road	7.07	192	P	Pn	04 32 57.7	+2.2
ALRZ	Allen Road	7.11	202	P	Pn	04 32 59.2	+3.1
WPRZ	Whakapapatarin	7.13	203	P	Pn	04 33 00.4	+4.1
TLZ	Tolley Road	7.19	208	P	Pn	04 33 02.9	+5.9
KNZ	Kokohu	7.20	193	P	Pn	04 33 00.4	+3.3
RAHZ	Arahi	7.23	197	P	Pn	04 32 59.5	+2.1
MTHZ	Maungataniwha	7.23	198	P	Pn	04 32 59.2	+1.7
MTHZ	Maungataniwha	7.23	198	P	Pn	04 32 57.3	-0.2
MHGZ	Mahia Peninsul	7.29	191	P	Pn	04 33 01.7	+3.6
MRHZ	Matea Rd	7.33	201	P	Pn	04 33 00.6	+1.9
WHHZ	Waihua	7.34	196	P	Pn	04 33 01.9	+3.0
WATZ	Wairara	7.45	205	P	Pn	04 33 05.2	+5.2
HATZ	Hinemaiaia	7.49	203	P	Pn	04 33 02.8	+2.2
RATZ	Rangitukua	7.57	204	P	Pn	04 33 05.2	+3.6
ARHZ	Aropaoanui	7.58	196	P	Pn	04 33 03.9	+2.3
BKZ	Black Stump Fm	7.62	200	ePn	Pn	04 33 02.5	+0.4
BKZ				eS	S	04 34 30.3	-1.0
BKZ	Black Stump Fm	7.62	200	P	Pn	04 33 02.2	+0.1
HIZ	Hauiti	7.62	210	ePn	Pn	04 33 06.5	+4.4
MCHZ	McNeill Hill	7.82	198	P	Pn	04 33 06.4	+2.0
KWHZ	Kaweka Forest	7.88	199	P	Pn	04 33 06.4	+1.2
CKHZ	Cape Kidnapper	7.94	195	P	Pn	04 33 08.5	+2.7
TUVZ	Tukino	7.97	204	P	Pn	04 33 08.5	+2.1
KAHZ	Kahuranaki	8.11	196	P	P	04 33 09.9	-0.9
PXZ	Pawanui	8.34	196	P	P	04 33 11.3	-2.0
WPHZ	Waipukurau	8.47	198	P	P	04 33 13.9	-1.0
WAZ	Wanganui	8.64	205	P	P	04 33 18.5	+1.8
ANWZ	Angora Road	8.84	197	P	P	04 33 18.0	-0.9
PRWZ	Pori Road	9.06	199	P	P	04 33 21.8	+0.5
BFZ	Birch Farm	9.11	197	eP	Pn	04 33 19.5	-0.2
BFZ				eS	S	04 35 01.0	-2.7
SNZO	South Karori	10.13	202	eP	Pn	04 33 31.3	-0.5
SNZO				eS	S	04 35 22.4	-3.7
THZ	Tophouse	11.17	207	eP	Pn	04 33 43.0	-1.4
THZ				eS	S	04 35 44.7	-4.5
KHZ	Kahutara	11.51	204	eP	Pn	04 33 47.0	-1.2
KHZ				eS	S	04 35 50.8	-5.8
LTZ	Lake Taylor	12.28	207	eP	P	04 33 55.3	-1.8
OXZ	Oxford	12.84	206	eP	P	04 34 02.4	-0.8
OXZ				eS	S	04 36 19.6	-5.0
MQZ	McQueen’s Vall	12.95	204	eP	P	04 34 03.3	-1.1
RPZ	Rata Peaks	13.55	208	P	Pn	04 34 11.7	-0.7
	1.7nm,0.3s,baz=130,slow=2.0,SNR=6.7						
RPZ				S	S	04 36 33.8	-5.3
	4.7nm,0.3s,baz=99,slow=23,SNR=12						
RPZ	Rata Peaks	13.55	208	eP	P	04 34 10.5	-0.6
RPZ				eS	S	04 36 34.4	-4.6
FOZ	Fox Glacier	13.92	211	eP	P	04 34 14.0	-1.1
LBZ	Lake Benmore	14.45	209	eP	P	04 34 20.6	-0.4
ODZ	Otahua Downs	14.82	206	eP	Pn	04 34 26.1	-1.1
WKZ	Wanaka	15.30	210	eP	P	04 34 30.0	-0.3
WKZ				eS	S	04 37 10.2	-4.0
DZM	Mont Dzumac	15.43	307	P	P	04 34 34.1	+2.1
	1.0nm,0.3s,baz=107,slow=18,SNR=12						
DZM	Mont Dzumac	15.43	307	eP	P	04 34 34.1	+2.1
	28nm,0.8s						
KNTN	Kanton	30.17	17	eP	P	04 36 50.6	-1.0
	75nm,1.3s						
CTA	Charters Tower	32.23	283	P	P	04 37 11.2	+1.7
	20nm,0.8s,baz=113,slow=11,SNR=21						
CTAO	Charters Tower	32.23	283	eP	P	04 37 10.5	+0.9
	27nm,0.8s						
STKA	Stephens Creek	32.27	260	P	P	04 37 11.8	+2.0
	9.9nm,0.8s,baz=89,slow=8.7,SNR=14						
STKA	Stephens Creek	32.27	260	eP	P	04 37 11.7	+2.0
	2.6nm,0.9s						
BBOO	Buckleboo	36.70	257	eP	P	04 37 46.3	-1.1
	37nm,1.4s						
COEN	Coen	37.93	290	eP	P	04 37 59.4	+1.6
	15nm,0.9s						
AS31	Alice Springs	41.14	270	eP	P	04 38 24.3	+0.3
	3.7nm,0.6s						
AS31				eScP	ScP	04 43 29.7	-2.0
ASAR	Alice Springs	41.14	270	P	P	04 38 24.4	+0.4
	9.2nm,0.7s,baz=106,slow=7.7,SNR=103						
ASAR				ScP	ScP	04 43 29.7	-2.0
	0.5nm,0.9s,baz=114,slow=4.1,SNR=3.4						
WC3	Warramunga Arr	42.24	275	eP	P	04 38 33.0	+0.1
	17nm,0.6s						
WB2	Warramunga Arr	42.27	275	eP	P	04 38 33.5	+0.5
	15nm,0.6s						
WRAB	Tennant Creek	42.27	275	eP	P	04 38 32.4	-0.8
	36nm,1.3s						
WR1	Warramunga Arr	42.28	275	eP	P	04 38 33.4	+0.2
WRA	Warramunga Arr	42.28	275	P	P	04 38 33.3	+0.2
	11nm,0.4s,baz=107,slow=8.8,SNR=97						
MTN	Manton Dam	48.38	282	eP	P	04 39 20.3	-0.3
	53nm,1.4s						
PSAB3	Pilbara Seismi	53.88	265	eP	P	04 39 59.8	-1.3
	15nm,1.3s						
PSAA3	Pilbara Seismi	53.88	265	eP	P	04 40 00.3	-0.7
	33nm,1.5s						
PSAB2	Pilbara Seismi	53.89	265	eP	P	04 39 59.0	-2.1
	17nm,1.4s						
PSAC3	Pilbara Seismi	53.89	265	eP	P	04 39 59.3	-1.9
	8.2nm,0.8s						
PSA00	Pilbara Seismi	53.89	265	eP	P	04 39 59.7	-1.4
	13nm,1.1s						
PSAB1	Pilbara Seismi	53.92	265	eP	P	04 40 00.4	-0.9
	23nm,1.4s						
PSAD3	Pilbara Seismi	53.92	265	eP	P	04 40 00.8	-0.5
	14nm,1.3s						
PSAD1	Pilbara Seismi	53.96	266	eP	P	04 40 00.5	-1.1
	18nm,1.3s						
QSPA	South Pole Qui	58.10	180	eP	P	04 40 31.5	+1.3
	10nm,0.9s						
SNAA	Sanae	76.59	179	P	P	04 42 24.8	0.0
SNAA	Sanae	76.59	179	eP	P	04 42 25.5	+0.7
	4.9nm,1.0s						
VNA3	Neumayer Olymp	76.82	177	P	P	04 42 27.0	+1.0
VNA2	Neumayer--Watz	77.23	178	P	P	04 42 29.7	+1.5
VNA1	Neumayer--Stat	77.47	177	P	P	04 42 30.8	+1.3
KSRS	Korea Array	84.36	321	P	P	04 43 05.4	-0.5
	0.9nm,0.6s,baz=126,slow=6.2,SNR=4.4						
KS15	Wonju Array Si	84.37	321	eP	P	04 43 05.4	-0.6
	36nm,1.4s						
PETK	Petropavlovsk-	86.91	347	P	P	04 43 17.9	-0.1
	5.8nm,0.9s,baz=136,slow=6.2,SNR=4.9						
PEA1	Petropavlovsk-	86.92	347	eP	P	04 43 17.9	-0.2
CMB	Columbia Colle	89.24	43	eP	P	04 43 30.4	+1.0
	2.2nm,0.8s						
GLA	Glamis	89.40	50	eP	P	04 43 32.5	+2.2
	10nm,0.8s						
CHGN	Chignik	89.91	12	eP	P	04 43 32.1	+0.2
	65nm,1.4s						

```
NV01  Mina Array Sit     90.72  44 eP      P       04 43 37.0 +0.5
NVAR  Mina Array Bea     90.72  44  P      P       04 43 37.0 +0.5
      1.2nm,0.7s,baz=224,slow=7.6,SNR=9.0
TPNV  Topopah Spring     90.99  46 eP      P       04 43 39.0 +1.3
      1.9nm,0.7s
TUC   Tucson             91.61  52 eP      P       04 43 42.7 +2.1
      2.2nm,0.8s
MOD   Modoc Plateau      91.91  40 eP      P       04 43 42.6 +0.8
      9.9nm,1.5s
U15A  North Rim          93.13  48 eP      P       04 43 49.4 +1.6
      1.6nm,0.8s
HHC   Hu-ho-hao-te       95.99 315  P      P       04 44 04.3 +3.9
HHC                                 pmax   pmax
      comp=Z,9.0nm,0.6s
HHC                                 pmax   pmax
      comp=Z,90nm,6.6s
LZH   Lanzhou            98.15 307 eP      P       04 44 12.5 +2.1
LZH                                 pP     pP      04 45 26.3 -5.4
LZH                                 sP     sP      04 46 11.3 +3.9
LZH                                 PP     PP      04 48 12.7 -2.7
LZH                                 pmax   pmax
      comp=Z,12nm,1.3s
LZH                                 pmax   pmax
      comp=Z,81nm,4.3s
PDAR  Pinedale Array     98.62  45  P      Pdif    04 44 11.8 -0.6
      comp=Z,0.2nm,0.5s,baz=168,slow=2.9,SNR=3.9
ILAR  Eielson Array      99.93  14  P      Pdif    04 44 18.0 +0.7
      comp=Z,0.3nm,0.2s,baz=205,slow=4.0,SNR=4.5
ILAR                                PKiKP  PKiKP   04 48 41.7 -1.5
      comp=Z,0.5nm,0.8s,baz=222,slow=2.4,SNR=2.2
ILB   Eielson Array      99.93  14 ePKiKP  PKiKP   04 48 41.7 -1.5
YKA   Yellowknife Ar    107.73  26  PKiKP  PKiKP   04 48 56.7 -0.8
      comp=Z,0.5nm,0.7s,baz=244,slow=1.5,SNR=5.7
YKB5  Yellowknife Ar    107.73  26 ePKiKP  PKiKP   04 48 56.7 -0.8
WMQ   Urumqi            112.71 308 eP      PKiKP   04 49 08.0 +0.3
WMQ                                 LR     LR
      comp=N,1µm,29.2s
WMQ                                 LR     LR
      comp=E,680nm,29.0s
WMQ                                 LR     LR
      comp=Z,90nm,22.7s
MK32  Makanchi Array    117.33 310 ePKPdf  PKPdf   04 49 15.1 -1.4
MKAR  Makanchi Array    117.33 310  PKP    PKPdf   04 49 15.1 -1.4
      comp=Z,0.7nm,0.6s,baz=232,slow=0.6,SNR=6.2
ZALV  Zalesovo Beam     117.95 318  PKP    PKPdf   04 49 15.3 -2.0
      comp=Z,0.8nm,0.5s,baz=153,slow=2.6,SNR=3.7
ZAA1  Zalesovo Array    117.95 318 ePKPdf  PKPdf   04 49 15.3 -2.0
ARA0  ARCESS Array S    139.72 346 ePKPpre PKPpre  04 49 51.0
ARCES ARCESS Array B    139.72 346  PKhKP  PKPpre  04 49 51.0
      comp=Z,1.5nm,0.8s,baz=64,slow=2.1,SNR=5.0
KTK1  Kautokeino        140.61 347 ePKPdf  PKPdf   04 49 59.5 -0.2
TRO   Tromso            140.81 350 ePKPdf  PKPdf   04 49 59.8 -0.2
KBZ   Khabaz            144.36 302  PKP    PKPbc   04 50 05.5 -1.0
      comp=Z,3.0nm,0.8s,baz=168,slow=7.8,SNR=7.0
KONS  Konsvik           144.56 351 ePKPbc  PKPbc   04 50 05.9 -0.5
MOR8  Moi Rana          144.68 350 ePKPbc  PKPbc   04 50 05.1 -1.7
BORG  Borgarnes         144.74  16  PKP    PKPab   04 50 07.4 +0.2
      comp=Z,8.8nm,0.5s,baz=37,slow=4.1,SNR=10
FIA1  FINESS Array S    145.94 338 ePKPbc  PKPdf   04 50 10.0 +0.8
FIA0  FINESS Array S    145.94 338 ePKPbc  PKPdf   04 50 09.4 +0.2
FINES FINESS Array B    145.94 338  PKPbc  PKPdf   04 50 09.4 +0.2
      comp=Z,15nm,0.6s,baz=46,slow=4.0,SNR=97
NSS   Namsos            146.58 350 ePKPdf  PKPdf   04 50 10.8 +0.6
MOL   Molde             149.02 353 ePKPbc  PKPbc   04 50 18.6 -0.2
DOMB  Dombas            149.36 351 ePKPdf  PKPdf   04 50 13.9 -1.0
AKN   Aaknes            149.46 353 ePKPbc  PKPbc   04 50 19.1 -0.8
NB2   NORSAR Subarra150.00 349      PKP    PKPbc   04 50 20.4 -0.9
      comp=Z,4.3nm,0.7s,baz=20,slow=2.7
NB200 NORSAR Array S 150.00 349 ePKPbc  PKPbc   04 50 20.7 -0.6
NOA   NORSAR Array B 150.00 349  PKPbc  PKPbc   04 50 20.7 -0.6
      comp=Z,6.0nm,0.7s,baz=16,slow=4.2,SNR=21
NC602 NORSAR Array S 150.23 348 ePKPbc  PKPbc   04 50 21.0 -0.8
SUE   Sulen             150.76 355 ePKPbc  PKPbc   04 50 22.7 -0.2
SKAR  Skarslia          150.77 351 ePKPbc  PKPbc   04 50 22.8 -0.3
ASK   Askoy             151.29 354 ePKPbc  PKPbc   04 50 24.2  0.0
AKASG Malin Array Be    151.34 319  PKPbc  PKPbc   04 50 23.9 -0.8
      comp=Z,4.7nm,0.7s,baz=46,slow=2.5,SNR=9.9
AKBB  Malin Array Si    151.34 319 ePKPdf  PKPdf   04 50 18.2 -0.1
AKBB                               ePKPbc  PKPbc   04 50 24.0 -0.6
KONO  Kongsberg         151.58 349 ePKPbc  PKPbc   04 50 24.6 -0.3
BR101 Keskin Array S    151.61 295 ePKPbc  PKPbc   04 50 24.9 -1.0
BR131 Keskin Array S    151.61 295 ePKPbc  PKPbc   04 50 24.9 -1.0
BRTR  Keskin Array B    151.61 295  PKPbc  PKPbc   04 50 24.9 -1.0
      comp=Z,2.1nm,0.5s,baz=140,slow=3.5,SNR=14
ODD1  Odda              151.72 353 ePKPbc  PKPbc   04 50 25.3  0.0
BLS5  Blasjo            152.22 353 ePKPdf  PKPdf   04 50 19.2 -0.1
KMY   Karmoy            152.54 354 ePKPbc  PKPbc   04 50 27.1 +0.1
TORD  Torodi Ar. Bea    161.14 186  PKP    PKPdf   04 50 32.0  0.0
      comp=Z,1.2nm,0.9s,baz=161,slow=2.8,SNR=5.2
TORD                                PKPab  PKPab   04 51 17.4 +0.1
      comp=Z,1.2nm,0.8s,baz=175,slow=3.5,SNR=13
TOA1  Torodi Ar. Sit    161.15 186 ePKPdf  PKPdf   04 50 32.0  0.0
TOA1                               ePKPab  PKPab   04 51 17.4 +0.1
ESDC  Sonseca Array     171.78  20  PKP    PKPdf   04 50 40.0 +0.5
      comp=Z,0.2nm,0.4s,baz=349,slow=2.6,SNR=4.7
ESDC                                PKPab  PKPab   04 52 03.2 -0.6
      comp=Z,0.1nm,0.3s,baz=316,slow=4.3,SNR=5.1
```

IDC 10 04:36:11.0±5.6**,26.°60N**×**143.°18E,h0**^{km}**,mb3.8**/3**,**
mb1 4.0/4**,mb1mx3.6**/46**,mbtmp3.7**/4**,ML2.7**/1**,MS2.5**/1**,**
Ms1 2.7/1**,ms1mx2.1**/39**,Error ellipse: s-maj=224.6km**
s-min=26.7km az=75.0,Bonin Islands region

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
MJAR  Matsushiro Arr     10.77 338  Pn     Pn      04 38 44.8 -1.8
      0.1nm,0.3s,baz=162,slow=11,SNR=7.0
CMAR  Chiang Mai Arr     41.49 268  LR     LR      05 01 06.2
      comp=Z,5.8nm,18.3s,baz=195,slow=36
WRA   Warramunga Arr     47.06 191  P      P       04 44 44.6  0.0
      3.3nm,0.8s,baz=6.1,slow=7.4,SNR=8.1
ASAR  Alice Springs      50.77 191  P      P       04 45 12.4 -0.7
      0.4nm,0.6s,baz=19,slow=6.0,SNR=4.6
MKAR  Makanchi Array     51.47 310  P      P       04 45 18.9 +0.6
      0.5nm,0.6s,baz=91,slow=8.6,SNR=4.6
```

ISCJB ***10*** *04:37:31.1±0.6,29.°57S±0.°08×111.°6W±0.°2,h10*^{km}*,*
mb4.3/17,MS3.8/3,Error ellipse: s-maj=22.0km
s-min=11.9km az=175.8
IDC ***10*** *04:37:31.4±1.0,29.°28S×111.°97W,h0*^{km}*,mb3.9/6,*
mb1 4.2/6,mb1mx3.9/35,mbtmp3.9/6,MS3.6/4,Ms1 3.6/4,
ms1mx3.1/28,Error ellipse: s-maj=36.0km s-min=29.2km
az=29.0
NEIC ***10*** *04:37:33.2±1.7,29.°60S×111.°53W,h10*^{km}*±2*^{km}*,mb4.5/13,*
Error ellipse: s-maj=26.1km s-min=11.6km az=108.0
ISC 10 04:37:32.7±0.7**,29.°6S**±0.°1×**111.°7W**±0.°2**,h10**^{km}**,n33,**
σ**1**^{s}**57**/29**,mb4.4**/17**,MS3.7**/3**,Easter Island region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
RPN   Rapa Nui            3.19  41  LR     LR      04 39 26.6
      comp=Z,198nm,18.4s,baz=244,slow=36
PB11  IPOC Station P     39.23  85 eP      P       04 44 59.3 -2.3
      20nm,1.2s
USHA  Ushuaia            39.85 142  LR     LR      04 58 21.1
      comp=Z,301nm,19.1s,baz=189,slow=31
TRQA  Tornquist          41.73 115 eP      P       04 45 19.9 -2.0
      0.3nm,1.4s
LPAZ  La Paz             41.98  81  P      P       04 45 27.6 +2.7
      4.1nm,1.2s,baz=217,slow=7.9,SNR=4.5
LPAZ  La Paz             41.98  81 eP      P       04 45 24.6 -0.4
      5.7nm,1.4s
EFI   East Falkland      45.08 135 eP      P       04 45 49.9 +1.1
      94nm,1.4s
SIV   San Ignacio        48.22  85  P      P       04 46 16.1 +2.2
      2.8nm,0.8s,baz=252,slow=8.1,SNR=18
ESPN  Las Esperanzas     49.21  36 eP      P       04 46 21.0 -0.3
      41nm,1.3s
ZAIG  Zacatecas          52.78  11 eP      P       04 46 50.2 +1.8
      1.2nm,0.7s
MYIG  Mrida              54.51  25 eP      P       04 47 00.7 -0.1
      111nm,1.1s
PTGA  Pitinga            56.91  70 eP      P       04 47 17.9 -0.4
      3.4nm,1.0s
TXAR  Lajitas Array      59.08   8  LR     LR      05 08 09.9
      comp=Z,42nm,18.2s,baz=0.0,slow=31
VNDA  Vanda              60.59 194  LR     LR      05 07 33.4
      comp=Z,62nm,21.9s,baz=126,slow=30
QSPA  South Pole Qui     60.60 180 eP      P       04 47 43.8 +0.4
      5.9nm,1.2s
MSTX  Muleshoe           63.76   8 eP      P       04 48 07.2 +2.3
      5.5nm,1.0s
VNA3  Neumayer Olymp     66.04 160  P      P       04 48 19.9 +0.7
VNA1  Neumayer--Stat     66.69 159  P      P       04 48 22.4 -0.9
VNA2  Neumayer--Watz     66.85 160  P      P       04 48 25.1 +0.7
      baz=258,slow=5.0
SNAA  Sanae              67.86 161  P      P       04 48 30.7 -0.1
SNAA  Sanae              67.86 161 eP      P       04 48 30.8  0.0
      5.0nm,1.0s
NV01  Mina Array Sit     67.94 354 eP      P       04 48 28.7 -3.1
NVAR  Mina Array Bea     67.94 354  P      P       04 48 28.7 -3.1
      0.2nm,0.5s,baz=186,slow=8.1,SNR=2.2
PDAR  Pinedale Array     72.02   2  P      P       04 48 56.2 -0.6
      0.4nm,0.6s,baz=212,slow=5.3,SNR=4.0
HLID  Hailey             72.83 358 eP      P       04 49 03.9 +2.3
      5.2nm,1.4s
MAW   Mawson             83.03 178  P      P       04 49 58.5 +0.7
      1.7nm,0.7s,baz=222,slow=7.3,SNR=3.9
ILAR  Eielson Array      97.97 346  P      P       04 51 06.6 -1.8
      0.2nm,0.8s,baz=175,slow=4.5,SNR=3.5
SONA0 Songino Array     145.59 313 ePKPdf  PKPab   04 57 11.5 -0.1
SONM  Songino Array     145.59 313  PKPbc  PKPab   04 57 11.5 -0.1
      0.5nm,0.5s,baz=56,slow=4.5,SNR=5.5
BR101 Keskin Array S    149.88  61 ePKPbc  PKPbc   04 57 22.3 -1.0
BRTR  Keskin Array B    149.88  61  PKPbc  PKPbc   04 57 22.3 -1.0
      0.9nm,0.9s,baz=224,slow=5.2,SNR=4.9
CM31  Chiang Mai Arr    150.01 255 ePKPbc  PKiKP   04 57 24.8 -0.2
CMAR  Chiang Mai Arr    150.01 255  PKPbc  PKiKP   04 57 24.8 -0.2
      1.4nm,0.6s,baz=205,slow=0.4,SNR=6.3
```

DJA 10 04:43:59.0±0.3**,1.°N**±4.°×**12.°5E**±.°**,h49**^{km}±12^{km}**,M4.0**/13**,**
mb4.8/1**,mB5.4**/1**,MLv3.6**/13**,Mw(mB)4.9**/1**,Northern**
Molucca Sea

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
TNTI  Ternate             2.11  86  P      Pn      04 44 31.3 -0.6
LBMI  Labuha              2.57 119  P      Pn      04 44 38.4 +0.2
LBMI                                S      Sn      04 45 08.8 +0.5
SANI  Sanana              2.76 165  P      Pn      04 44 41.0 +0.2
LUWI  Luwuk               2.99 236  P      Pn      04 44 43.9 -0.1
LUWI                                S      Sn      04 45 19.5 +0.9
SGSI  Sangihe             3.05   5  P      Pn      04 44 44.8 +0.1
APSI  Ampana              3.92 247  P      Pn      04 44 57.7 +1.0
NLAI  Namlea              4.26 154  P      Pn      04 45 00.9 -0.5
```

UCR 10 04:46:02.7±2.5**,9.°09N**×**84.°09W,h0**^{km}±4^{km}**,MW3.8,**
1C-4D,Costa Rica

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
EDDO  Dominical           0.27  54⇓iP      Pb      04 46 10.4 -0.1
EDDO                               eS      Sb      04 46 15.5 -0.1
EDLM  Las Mercedes        0.52  69⇓iP      Pb      04 46 14.3 -0.5
EDLM                               eS      Sb      04 46 22.2 -0.8
EDPN  Palmar Norte        0.63 102 eP      Pb      04 46 16.0 -0.6
EDPN                               eS      Sb      04 46 25.9 -0.2
LCR2  La Lucha 2          0.65   7⇓eP      Pg      04 46 16.1 +0.9
LCR2                               eS      Sb      04 46 25.6 -1.2
EDBA  Buenos Aires        0.80  85 eP      Pg      04 46 18.2  0.0
EDBA                               eS      Sg      04 46 29.5 +1.0
SJS   Escuela Geolog      0.84   2 eP      Pb      04 46 20.9 +0.7
SJS                                eS      Sb      04 46 32.5 +0.3
DRK0  Durika              0.85  78 eP      Pg      04 46 19.4 +0.5
DRK0                               eS      Sb      04 46 31.5 -0.9
HDC   Heredia             0.90 358⇓eP      Pb      04 46 21.0 -0.4
HDC                                eS      Sb      04 46 33.0 -1.0
PTJ1  Puerto Jimnez       0.95 126 eP      Pb      04 46 21.8 -0.3
PTJ1                               eS      Sb      04 46 36.0 +0.7
CVTR  Volcan Turrial      0.98  19 eP      Pg      04 46 21.8 +0.4
SRA1  San Ramn            1.06 338 eP      Pg      04 46 23.0  0.0
SRA1                               eS      Sg      04 46 37.6 +0.8
EDSV  San Vito            1.13 104 eP      Pg      04 46 24.7 +0.2
EDSV                               eS      Sn      04 46 42.8 +0.5
BRU2  Volcan              1.41 102 eP      Pg      04 46 27.2 -2.5
BRU2                               eS      Sg      04 46 47.9 -0.2
JTS   Las Juntas de       1.47 324⇑eP      Pn      04 46 28.4 -2.1
ARE1  Arenal 1            1.50 335 eP      Pn      04 46 30.5 -0.4
ARE1                               eS      Sn      04 46 52.0 +0.9
CEDE  Laguna Cedeo        1.51 336 eP      Pn      04 46 30.9 -0.3
CEDE                               eS      Sn      04 46 52.1 +0.4
CUI   Cuipilapa           1.88 326 eP      Pn      04 46 36.3 +0.1
CUI                                eS      Sb      04 47 02.3 +0.1
MESS  Mesas               1.97 326 eP      Pn      04 46 38.2 +0.8
MESS                               eS      Sb      04 47 04.3 -0.3
BUEV  Buena Vista         2.14 323 eP      Pn      04 46 38.1 -1.7
GB1A  Borinquen Arri      2.15 323 eP      Pn      04 46 40.6 +0.7
```

ARE ***10*** *04:49:44.0±0.0,16.°79S×71.°53W,h45*^{km}
IDC ***10*** *04:49:49.8±1.3,17.°07S×71.°29W,h0*^{km}*,mb4.1/3,*
mb1 4.0/9,mb1mx3.8/37,mbtmp4.0/9,ML3.6/6,MS2.1/1,
Ms1 2.2/1,ms1mx2.1/25,Error ellipse: s-maj=24.3km
s-min=18.8km az=15.0
NEIC ***10*** *04:49:52.3±3.0,17.°09S×71.°58W,h33*^{km}*±8*^{km}*,mb4.4/3,*
ML4.1(ARE),Error ellipse: s-maj=16.8km s-min=5.2km
az=129.0
NEIC Felt [III] at Arequipa and Mollendo.
ISC 10 04:49:54.5±0.7**,17.°12S**±0.°04×**71.°51W**±0.°07**,h40**^{km}**,n40,**
σ**2**^{s}**32**/64**,mb4.2**/4**,Near coast of Peru**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
PB12  IPOC Station P      1.87 143 eP      Pn      04 50 23.1 -1.0
PB12                               eS      Sn      04 50 52.4 +5.8
MNMC  Minye Minye         2.71 138 ePn     Pn      04 50 35.3 -0.6
MNMC                               eSn     Sn      04 51 08.4 +0.9
MNMCX Minye Minye         2.71 138 eP      Pn      04 50 36.7 +0.9
PSGCX Pisagua             2.80 152 eP      Pn      04 50 35.7 -1.2
PSGCX                              eS      Sn      04 51 14.2 +4.7
PB11  IPOC Station P      3.17 146 ePn     Pn      04 50 41.1 -1.0
PB11                               eSn     Sn      04 51 22.8 +4.1
PB11  IPOC Station P      3.17 146 eP      Pn      04 50 41.1 -1.0
PB11                               eS      Sn      04 51 25.8 +7.1
LPAZ  La Paz              3.34  76  Pn     Pn      04 50 42.1 -2.8
      1.7nm,0.3s,baz=298,slow=5.7,SNR=44
LPAZ                                Lg     Lg      04 51 30.3
      baz=316,slow=20,SNR=0.9
LPAZ                                LR     LR      04 51 35.3
      comp=Z,30nm,20.2s,baz=220,slow=34
LPAZ  La Paz              3.34  76 ePn     Pn      04 50 42.6 -2.2
LPAZ                               eSn     Sn      04 51 24.6 +0.9
LPAZ  La Paz              3.34  76 eP      Pn      04 50 44.4 -0.4
GO01  Chusmiza            3.36 139 ePn     Pn      04 50 44.8 -0.2
GO01                               eSn     Sn      04 51 23.4 -0.5
PB08  IPOC Station P      3.75 144 eP      Pn      04 50 49.6 -0.7
PB08                               eS      Sn      04 51 36.6 +3.2
PB01  IPOC Station P      4.35 154 ePn     Pn      04 50 56.3 -1.9
PB01                               eSn     Sn      04 51 49.1 +1.3
PB01  IPOC Station P      4.35 154 eP      Pn      04 50 56.8 -1.5
PB01                               eS      Sn      04 51 48.7 +0.9
PB02  IPOC Station P      4.45 160 eP      Pn      04 50 58.3 -1.3
PB02                               eS      Sn      04 51 50.7 +0.4
PB07  IPOC Station P      4.84 162 eP      Pn      04 51 04.2 -0.8
PB07                               eS      Sn      04 52 01.5 +1.6
PB09  IPOC Station P      5.12 156 eP      Pn      04 51 08.1 -0.9
PB09                               eS      Sn      04 52 10.5 +3.5
PB03  IPOC Station P      5.18 162 eP      Pn      04 51 08.6 -1.1
PB03                               eS      Sn      04 52 10.8 +2.4
PB04  IPOC Station P      5.35 166 ePn     Pn      04 51 09.9 -2.1
PB04                               eSn     Sn      04 52 14.2 +1.7
PB04  IPOC Station P      5.35 166 eP      Pn      04 51 10.1 -1.9
PB04                               eS      Sn      04 52 14.1 +1.7
PB05  IPOC Station P      5.84 168 eP      Pn      04 51 15.8 -2.9
PB05                               eS      Sn      04 52 24.4 -0.1
PB06  IPOC Station P      5.85 162 eP      Pn      04 51 16.6 -2.4
LVC   Limon Verde         5.99 156  Pn     Pn      04 51 19.8 -1.2
      3.9nm,0.3s,baz=344,slow=8.7,SNR=7.9
LVC                                 Sn     Sn      04 52 30.0 +1.5
      5.2nm,0.3s,baz=160,slow=19,SNR=12
LVC   Limon Verde         5.99 156 ePn     Pn      04 51 19.6 -1.4
LVC                                eSn     Sn      04 52 29.3 +0.8
LVC   Limon Verde         5.99 156 eP      Pn      04 51 19.6 -1.4
LVC                                eS      Sn      04 52 31.3 +2.8
PB15  IPOC Station P      6.36 163 eP      Pn      04 51 23.2 -2.7
PB15                               eS      Sn      04 52 39.3 +1.9
PB10  IPOC Station P      6.43 172 ePn     Pn      04 51 23.9 -2.7
PB10                               eSn     Sn      04 52 37.3 -1.6
PB10  IPOC Station P      6.43 172 eP      Pn      04 51 24.0 -2.7
PB10                               eS      Sn      04 52 40.0 +1.2
NNA   Nana                7.25 314  Pn     Pn      04 51 38.4 +0.3
      1.4nm,0.3s,baz=129,slow=14,SNR=2.9
NNA                                 Sn     Sn      04 53 03.2 +3.9
      1.3nm,0.3s,baz=113,slow=18,SNR=2.9
GO02  Mina Guanaco        8.21 168 ePn     Pn      04 51 49.2 -2.1
GO02                               eSn     Sn      04 53 25.1 +2.1
SIV   San Ignacio        10.07  85  Pn     Pn      04 52 11.1 -5.6
      0.7nm,0.3s,baz=272,slow=12,SNR=14
CFA   Coronel Fontan     14.73 169  Pn     Pn      04 53 19.1 -1.2
      0.2nm,0.3s,baz=348,slow=14,SNR=3.6
GO05  Huala              17.82 181 ePn     Pn      04 53 55.7 -3.9
      59nm,1.4s
PTGA  Pitinga            19.86  36  P      P       04 54 20.3 -2.0
      0.3nm,0.3s,baz=216,slow=13,SNR=4.8
DBIC  Dimbokro           69.96  76  P      P       05 01 01.8 -0.6
      3.9nm,1.1s,baz=260,slow=6.1,SNR=3.9
DBIC  Dimbokro           69.96  76 eP      P       05 01 01.2 -1.2
      14nm,1.4s
TOA1  Torodi Ar. Sit     78.29  72 eP      P       05 01 51.1 +0.2
TOA0  Torodi Ar. Sit     78.29  72 eP      P       05 01 48.4 -2.6
      3.7nm,1.0s
TORD  Torodi Ar. Bea     78.29  72  P      P       05 01 51.1 +0.2
      1.4nm,0.9s,baz=248,slow=5.2,SNR=9.5
YKA   Yellowknife Ar     86.26 341  P      P       05 02 34.2 +2.6
      0.6nm,0.7s,baz=134,slow=5.2,SNR=5.1
YKB5  Yellowknife Ar     86.26 341 eP      P       05 02 34.2 +2.6
```

ISCJB ***10*** *04:53:55.6±0.4,24.°85N±0.°02×122.°08E±0.°02,h95*^{km}*±3*^{km}*,*
Error ellipse: s-maj=4.2km s-min=2.7km az=165.5
JMA ***10*** *04:53:55.4±0.1,24.°76N×122.°07E,h99*^{km}*±2*^{km}*,M2.7*
TAP ***10*** *04:53:56.1,24.°87N×122.°05E,h93*^{km}*,ML3.7,B*
ISC 10 04:53:55.4±1.4**,24.°86N**±0.°04×**122.°08E**±0.°03**,h98**^{km}±6^{km}**,**
n83,σ**0**^{s}**80**/147**,Taiwan region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
TWB1  Santiao Chiao       0.17 332  P      Pn      04 54 09.2  0.0
      baz=341
TWB1                                S      Sn      04 54 19.4 -0.1
      baz=341
NTC   Toucheng            0.22 269  P      Pn      04 54 09.4  0.0
      baz=266
NTC                                eS      Sn      04 54 19.0 -0.9
      baz=266
TIPB  Shuangxi            0.25 296 i P     Pn      04 54 09.9 +0.3
      baz=297
TIPB                                S      Sn      04 54 19.9 -0.3
      baz=297
EOS1  EOS1                0.31 171  P      Pn      04 54 10.2 +0.5
      baz=167
EOS1                                S      Sn      04 54 21.1 +0.7
      baz=167
TWC   Suao                0.32 220  P      Pn      04 54 10.0 +0.2
      baz=213
TWC                                eS      Sn      04 54 19.6 -1.1
      baz=213
NWF   Wu-fen Shan         0.34 308  P      Pn      04 54 10.5 +0.4
      baz=309
NWF                                 S      Sn      04 54 20.4 -0.6
      baz=309
WFSB  Wu-fen Shan         0.34 308  P      Pn      04 54 10.2 +0.2
      baz=309
WFSB                               eS      Sn      04 54 19.9 -1.0
      baz=309
TWE   Neicheng            0.40 250  P      Pn      04 54 10.6 +0.3
      baz=245
TWE                                eS      Sn      04 54 20.4 -0.9
      baz=245
TWA   Mucha               0.46 285  P      Pn      04 54 10.9 +0.2
      baz=284
TWA                                eS      Sn      04 54 21.6 -0.6
      baz=284
ENTT  Nioudou             0.51 245 i P     Pn      04 54 11.7 +0.6
      baz=242
NANB  Nanao               0.52 215 i P     Pn      04 54 11.6 +0.5
      baz=211
NANB                                S      Sn      04 54 23.1 +0.2
      baz=211
ENA   Nanau               0.53 215  P      Pn      04 54 11.6 +0.4
      baz=211
ENA                                 S      Sn      04 54 23.2 +0.2
      baz=211
YM01  YM01                0.54 302  P      Pn      04 54 11.6 +0.3
      baz=302
YM01                                S      Sn      04 54 22.9 -0.3
      baz=302
TATO  Taipei              0.55 282 eP      Pn      04 54 11.7 +0.4
      baz=281
TATO                               eS      Sn      04 54 22.1 -1.1
      baz=281
YM08  YM08                0.55 307  P      Pn      04 54 11.6 +0.2
      baz=307
YM08                                S      Sn      04 54 22.6 -0.7
      baz=307
YM10  YM10                0.55 302 eP      Pn      04 54 11.5 +0.1
      baz=302
YM05  YM05                0.55 303 i P     Pn      04 54 11.7 +0.2
      baz=303
NDT   Datong Townshi      0.57 244 i P     Pn      04 54 12.3 +0.7
      baz=241
TWY   Chenhua             0.60 314  P      Pn      04 54 12.2 +0.5
      baz=315
TWY                                eS      Sn      04 54 23.9 -0.1
      baz=315
NTST  Danshui             0.64 298  P      Pn      04 54 12.6 +0.5
      baz=298
TWS1  Kuangyinshan        0.64 292  P      Pn      04 54 12.7 +0.6
      baz=292
TWS1                               eS      Sn      04 54 24.5 -0.1
      baz=292
YHNB  Yeheng              0.66 254 i P     Pn      04 54 12.8 +0.4
      baz=252
YHNB                                S      Sn      04 54 25.1  0.0
      baz=252
NSK   Sanguang            0.68 255  P      Pn      04 54 12.9 +0.4
      baz=252
NSK                                eS      Sn      04 54 24.8 -0.6
      baz=252
WLTB  Daxi                0.75 270 i P     Pn      04 54 13.9 +0.8
      baz=268
NNSB  Datong              0.76 236  P      Pn      04 54 14.0 +0.7
      baz=234
NNSB                               eS      Sn      04 54 26.9 +0.1
      baz=234
NNS   Nan Shan            0.76 237  P      Pn      04 54 14.0 +0.6
      baz=234
NNS                                eS      Sn      04 54 26.8  0.0
      baz=234
PCYT  Pengchaiyu          0.77 360  P      Pn      04 54 14.0 +0.7
      baz=2.0
NACB  Ninganchiao         0.81 213 eP      Pn      04 54 13.4 -0.3
      baz=210
NACB                                S      Sn      04 54 26.7 -0.7
      baz=210
NCU   National Centr      0.81 278  P      Pn      04 54 14.4 +0.7
      baz=277
NCU                                eS      Sn      04 54 28.4 +0.9
      baz=277
NCUH  Zhongli             0.82 278  P      Pn      04 54 14.5 +0.8
      baz=277
NCUH                               eS      Sn      04 54 27.6 +0.1
      baz=277
ETLH  Xiulin Townshi      0.84 220 eP      Pn      04 54 14.5 +0.4
      baz=218
ETLH                                S      Sn      04 54 27.9 -0.3
      baz=218
JYNG  Yonagunijimaku      0.89 117  P      Pn      04 54 14.5  0.0
JYNG                                S      Sn      04 54 28.4 -0.4
TWD   Chiawan             0.89 209 eP      Pn      04 54 14.3 -0.2
      baz=207
TWD                                eS      Sn      04 54 27.8 -1.1
      baz=207
YOJ   Yonaguni jima       0.94 115  P      Pn      04 54 15.0  0.0
      baz=114
YOJ   Yonaguni jima       0.94 115  P      Pn      04 54 15.0  0.0
YOJ                                 S      Sn      04 54 29.4 -0.3
LIOB  Emei                0.99 258  P      Pn      04 54 15.9 +0.4
      baz=256
LIOB                               eS      Sn      04 54 30.8 +0.1
      baz=256
SBCB  Hsinchu             0.99 266  P      Pn      04 54 16.3 +0.8
      baz=265
SBCB                               eS      Sn      04 54 31.0 +0.3
      baz=265
NSTT  Nanjuang            1.00 257  P      Pn      04 54 16.1 +0.4
      baz=255
NSTT                               eS      Sn      04 54 31.0 +0.1
      baz=255
```

TWT	**Tachien**	**1.02**	**234**	P	**Pn**	**04 54 17.5**	**+1.4**
	baz=232						
TWT				*e*S	**Sn**	**04 54 32.1**	**+0.6**
	baz=232						
WHF	**Hehuan Shan**	**1.02**	**226**	P	**Pn**	**04 54 16.8**	**+0.4**
	baz=224						
WHF				*e*S	**Sn**	**04 54 31.7**	**-0.4**
	baz=224						
TDCB	**Techi**	**1.03**	**234**	P	**Pn**	**04 54 16.4**	**+0.2**
	baz=232						
TDCB				*e*S	**Sn**	**04 54 32.0**	**+0.2**
	baz=232						
CHGB	**Renai**	**1.14**	**226**	P	**Pn**	**04 54 17.9**	**+0.4**
	baz=224						
CHGB				*e*S	**Sn**	**04 54 34.5**	**+0.4**
	baz=224						
WHP	**Taichung City**	**1.18**	**241**	P	**Pn**	**04 54 18.8**	**+1.0**
	baz=239						
WHP				*e*S	**Sn**	**04 54 34.7**	**+0.1**
	baz=239						
ESL	**Shilin**	**1.19**	**210**	P	**Pn**	**04 54 19.0**	**+1.1**
	baz=207						
ESL				*e*S	**Sn**	**04 54 32.7**	**-2.1**
	baz=207						
NMLH	**Miaoli**	**1.21**	**255**	P	**Pn**	**04 54 18.6**	**+0.5**
	baz=253						
NMLH				*e*S	**Sn**	**04 54 35.5**	**+0.4**
	baz=253						
NSY	**Sanyi**	**1.27**	**250**	P	**Pn**	**04 54 19.6**	**+0.7**
	baz=248						
NSY				*e*S	**Sn**	**04 54 36.7**	**+0.2**
	baz=248						
TWQ1	**Liyutan**	**1.29**	**247**	*e*P	**Pn**	**04 54 19.7**	**+0.7**
	baz=245						
EGFH	**Guangfu**	**1.32**	**207**	*e*P	**Pn**	**04 54 19.7**	**+0.3**
	baz=205						
EGFH				*e*S	**Sn**	**04 54 36.1**	**-1.5**
	baz=205						
DPDB	**Guoxing**	**1.33**	**232**	*e*P	**Pn**	**04 54 20.1**	**+0.6**
	baz=230						
DPDB				*e*S	**Sn**	**04 54 39.4**	**+1.6**
	baz=230						
VWDT	**VWDT**	**1.39**	**218**	P	**Pn**	**04 54 21.0**	**+0.8**
	baz=216						
VWDT				S	**Sn**	**04 54 39.4**	**+0.4**
	baz=216						
WDJ	**Dajia District**	**1.40**	**249**	*e*P	**Pn**	**04 54 20.9**	**+0.5**
	baz=248						
WDJ				*e*S	**Sn**	**04 54 39.7**	**+0.5**
	baz=248						
SMLT	**Sun Moon Lake**	**1.45**	**228**	P	**Pn**	**04 54 21.8**	**+0.8**
	baz=226						
SMLT				*e*S	**Sn**	**04 54 40.4**	**0.0**
	baz=226						
TYC	**Yuchr**	**1.46**	**230**	P	**Pn**	**04 54 21.8**	**+0.7**
	baz=228						
TYC				*e*S	**Sn**	**04 54 40.6**	**+0.1**
	baz=228						
SSLB	**Suanglung**	**1.48**	**224**	P	**Pn**	**04 54 22.2**	**+0.9**
	baz=222						
SSLB				*e*S	**Sn**	**04 54 41.0**	**0.0**
	baz=222						
HGSD	**Ruisui**	**1.48**	**204**	P	**Pn**	**04 54 22.0**	**+0.6**
	baz=202						
HGSD				*e*S	**Sn**	**04 54 41.2**	**+0.2**
	baz=202						
EHY	**Hungye**	**1.51**	**207**	*e*P	**Pn**	**04 54 20.7**	**-1.0**
	baz=205						
WCHH	**Zhanghua**	**1.58**	**241**	*e*P	**Pn**	**04 54 22.9**	**+0.3**
	baz=239						
WCHH				*e*S	**Sn**	**04 54 43.7**	**+0.5**
	baz=239						
IRIF	**Iriomote-Funau**	**1.59**	**109**	P	**Pn**	**04 54 23.0**	**+0.3**
IRIF				*e*S	**Sn**	**04 54 43.2**	**-0.2**
WJS	**Zhushan**	**1.60**	**230**	P	**Pn**	**04 54 23.7**	**+0.8**
	baz=229						
WJS				*e*S	**Sn**	**04 54 44.1**	**+0.4**
	baz=229						
WHYT	**Xinyi Township**	**1.61**	**224**	P	**Pn**	**04 54 24.2**	**+1.3**
	baz=223						
WHYT				*e*S	**Sn**	**04 54 44.7**	**+0.9**
	baz=223						
YULB	**Yu-li**	**1.62**	**206**	*e*P	**Pn**	**04 54 22.3**	**-0.8**
	baz=205						
YUS	**Yu-Shan**	**1.71**	**217**	P	**Pn**	**04 54 25.3**	**+0.7**
	baz=216						
YUS				*e*S	**Sn**	**04 54 46.8**	**+0.1**
	baz=216						
HATJ	**Hateruma jima**	**1.77**	**117**	P	**Pn**	**04 54 25.3**	**+0.4**
HATJ				*e*S	**Sn**	**04 54 47.3**	**0.0**
ALS	**Alishan**	**1.77**	**221**	P	**Pn**	**04 54 26.4**	**+1.1**
	baz=219						
ALS				*e*S	**Sn**	**04 54 49.6**	**+1.6**
	baz=219						
JKRS	**Kuro-shima**	**1.87**	**109**	P	**Pn**	**04 54 26.5**	**+0.4**
JKRS				*e*S	**Sn**	**04 54 49.5**	**-0.1**
CHKT	**Chengkung**	**1.87**	**200**	*e*P	**Pn**	**04 54 28.2**	**+2.0**
	baz=199						
CHKT				*e*S	**Sn**	**04 54 47.0**	**-2.7**
	baz=199						
ELDTW	**Lidau**	**1.92**	**210**	*e*P	**Pn**	**04 54 27.5**	**+0.5**
	baz=209						
JIJ	**Ishigaki jima**	**1.94**	**104**	P	**Pn**	**04 54 27.0**	**-0.2**
JIJ				S	**Sn**	**04 54 50.7**	**-0.7**
TPUB	**Ta-pu**	**2.04**	**221**	P	**Pn**	**04 54 29.6**	**+1.2**
	baz=219						
JISG	**Ishigakijimahi**	**2.05**	**97**	P	**Pn**	**04 54 29.1**	**+0.6**
JISG				*e*S	**Sn**	**04 54 54.0**	**+0.2**
WTP	**Ta-pu**	**2.09**	**220**	*e*P	**Pn**	**04 54 29.8**	**+0.7**
	baz=218						
TWK	**Hsinying**	**2.15**	**223**	P	**Pn**	**04 54 31.5**	**+1.6**
	baz=221						
TWK				*e*S	**Sn**	**04 54 56.4**	**+0.1**
	baz=221						
CHN1	**Nanshi**	**2.19**	**221**	*e*P	**Pn**	**04 54 30.5**	**+0.2**
	baz=219						
CHN1				*e*S	**Sn**	**04 54 57.1**	**0.0**
	baz=219						
TWGBT	**Beinan**	**2.23**	**204**	*e*P	**Pn**	**04 54 29.4**	**-1.5**
	baz=203						
SLGT	**Liugui**	**2.27**	**215**	P	**Pn**	**04 54 32.5**	**+1.0**
	baz=214						
SLGT				S	**Sn**	**04 55 00.2**	**+1.1**
	baz=214						
JTJ	**Tarama**	**2.40**	**95**	P	**Pn**	**04 54 33.9**	**+0.8**
JTJ				*e*S	**Sn**	**04 55 02.7**	**+0.7**
MASBT	**Mashibuluo**	**2.60**	**211**	*e*P	**Pn**	**04 54 36.8**	**+1.0**
	baz=210						
PNG	**Penghu**	**2.64**	**241**	*e*S	**Sn**	**04 55 05.9**	**-1.7**
	baz=240						
PHUB	**P'eng-hu**	**2.65**	**240**	*e*P	**Pn**	**04 54 35.4**	**-1.0**
	baz=239						
PHUB				*e*S	**Sn**	**04 55 04.9**	**-3.1**
	baz=239						
LYJJ	**Jianjiangzhen**	**2.68**	**309**	*e*P	**Pn**	**04 54 36.5**	**-0.3**
	baz=309						
PTMZ	**Houxiangcun**	**2.69**	**274**	*e*P	**Pn**	**04 54 36.9**	**0.0**
	baz=273						
WDGT	**Dungji**	**2.72**	**235**	*e*P	**Pn**	**04 54 36.9**	**-0.4**
	baz=233						
WDGT				*e*S	**Sn**	**04 55 08.3**	**-1.3**
	baz=233						
VCHM	**Qimei**	**2.92**	**236**	*e*P	**Pn**	**04 54 39.7**	**-0.4**
	baz=235						
VCHM				*e*S	**Sn**	**04 55 12.8**	**-1.7**
	baz=235						

IDC ***10*** *05:02:39.9±1.8, 20°.28S×168°.99E, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.9/32, mbtmp4.0/6, ML3.4/1, Error ellipse: s-maj=87.1km s-min=24.7km az=148.0*

ISCJB ***10*** *05:02:43.0±1.5, 20°.4S±0°.3×168°.9E±0°.3, h31^{km}, mb4.0/5, Error ellipse: s-maj=58.6km s-min=10.8km az=138.1*

ISC 10 05:02:44.3±1.3**, 20°.4S**±0°.4×**168°.9E**±0°.3**, h31^{km}, n19, σ1^s.02**/20**, mb4.0**/5**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.84**	**234**	Pn	**Pn**	**05 03 28.4**	**+0.7**
	4.8nm,0.3s,baz=86,slow=10,SNR=50						
DZM				Sn	**Sn**	**05 03 59.4**	**-1.5**
	23nm,0.3s,baz=316,slow=23,SNR=9.7						
WRA	**Warramunga Arr**	**32.43**	**265**	P	**P**	**05 09 11.3**	**-0.6**
	0.7nm,0.5s,baz=86,slow=7.4,SNR=3.9						
ASAR	**Alice Springs**	**32.57**	**258**	P	**P**	**05 09 14.3**	**+1.2**
	2.7nm,0.7s,baz=86,slow=9.1,SNR=29						
SONM	**Songino Array**	**87.97**	**323**	P	**P**	**05 15 32.1**	**+0.8**
	0.3nm,0.4s,baz=126,slow=6.5,SNR=5.3						
NVAR	**Mina Array Bea**	**89.80**	**49**	P	**P**	**05 15 40.5**	**+0.2**
	1.0nm,0.8s,baz=226,slow=5.6,SNR=4.6						
ILAR	**Eielson Array**	**91.43**	**17**	P	**P**	**05 15 45.1**	**-1.8**
	0.3nm,0.7s,baz=225,slow=6.2,SNR=3.7						
ARCES	**ARCESS Array B**	**126.11**	**345**	PKP	**PKPdf**	**05 21 42.9**	**-0.1**
	0.9nm,0.4s,baz=41,slow=1.7,SNR=13						
FINES	**FINESS Array B**	**131.54**	**337**	PKP	**PKPdf**	**05 21 53.5**	**+0.1**
	2.1nm,0.9s,baz=90,slow=1.4,SNR=3.7						
CONA	**Conrad Observa**	**144.97**	**328**	*i* PKPab	**PKPdf**	**05 22 19.8**	**+1.3**
	5.3nm,0.8s						
GERES	**GERESS Array B**	**145.37**	**331**	PKPbc	**PKPdf**	**05 22 20.2**	**+0.9**
	0.8nm,0.6s,baz=37,slow=3.8,SNR=4.6						
MOA	**Molln**	**145.81**	**329**	*i* PKPdf	**PKPdf**	**05 22 17.9**	**-2.0**
	4.2nm,1.1s						
SOKA	**Soboth**	**146.23**	**327**	*i* PKPbc	**PKPbc**	**05 22 21.7**	**-0.1**
	4.3nm,1.3s						
KBA	**Koelnbreinsper**	**146.80**	**329**	*i* PKPdf	**PKPdf**	**05 22 21.7**	**-0.1**
	0.8nm,0.3s						
ABTA	**Abfaltersbach**	**147.43**	**329**	*i* PKPbc	**PKPbc**	**05 22 24.5**	**-0.7**
	2.2nm,0.6s						
WTTA	**Wattenberg**	**147.47**	**331**	*i* PKiKP	**PKiKP**	**05 22 28.5**	**+0.9**
	1.9nm,0.4s						
MOTA	**Moosalm**	**147.65**	**331**	*i* PKPbc	**PKiKP**	**05 22 27.5**	**-0.5**
	1.8nm,0.5s						
SQTA	**Sankt Quirin**	**147.69**	**331**	*i* PKPbc	**PKPbc**	**05 22 26.8**	**+0.8**
	3.7nm,0.6s						
FETA	**Feichten**	**148.06**	**331**	*i* PKPbc	**PKPbc**	**05 22 27.4**	**+0.4**
	2.3nm,0.5s						
DAVA	**Damuels**	**148.24**	**332**	*i* PKiKP	**PKiKP**	**05 22 29.8**	**+0.6**
	4.2nm,0.6s						

MEX 10 05:05:48.5±0.6**, 14°.27N**×**92°.24W, h58^{km}**±20^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.63**	**357**	*i* P	Pn	05 06 00.3	-1.6
THIG				*i* S	Sn	05 06 09.7	-1.8
PCIG		**1.71**	**326**	*e*P	Pn	05 06 15.0	-1.0
PCIG				*e*S	Sn	05 06 34.8	-2.1
CCIG	**Comitan**	**2.00**	**3**	*i* P	Pn	05 06 18.5	-1.7
CCIG				*i* S	Sn	05 06 42.1	-2.1
TGIG		**2.63**	**341**	*i* P	Pn	05 06 26.9	-1.8
TGIG				*i* S	Sn	05 06 57.9	-1.6

ISCJB ***10*** *05:12:53.7±0.3, 7°.75S±0°.09×115°.34E±0°.04, h301^{km}±4^{km}, mb3.8/10, Error ellipse: s-maj=14.0km s-min=5.5km az=12.6*

DJA ***10*** *05:12:55.6±0.4, 8°S±4°×11°5E±°, h280^{km}±4^{km}, M4.1/19, mb4.1/7, mB4.8/5, MLv4.1/19, Mw(mB)4.1/5*

IDC ***10*** *05:12:56.8±1.9, 7°.54S×115°.33E, h309^{km}±19^{km}, mb3.5/10, mb1 3.7/11, mb1mx3.4/35, mbtmp4.2/11, Error ellipse: s-maj=26.4km s-min=10.4km az=52.0*

ISC 10 05:12:54.5±0.6**, 7°.76S**±0°.09×**115°.37E**±0°.05**, h291^{km}**±6^{km}**, n45, σ1^s.38**/52**, mb3.9**/10**, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	**Singaraja**	**0.36**	**205**	P	**Pn**	**05 13 32.5**	**+0.6**
SRBI				S	**S**	**05 14 00.1**	**-1.4**
DNP	**Denpasar**	**0.93**	**190**	P	**Pn**	**05 13 33.3**	**-0.4**
DNP				S	**S**	**05 14 04.0**	**-0.7**
JAGI	**Jajag, Banyuwa**	**1.40**	**239**	P	**Pn**	**05 13 35.6**	**-0.6**
JAGI				S	**S**	**05 14 06.1**	**-3.2**
KMMI	**Kalianget**	**1.56**	**297**	P	**Pn**	**05 13 38.3**	**+1.1**
KMMI				S	**S**	**05 14 12.5**	**+1.3**
GMJI	**Gumukmas**	**1.98**	**255**	P	**Pn**	**05 13 40.2**	**-0.1**
PLAI	**Plampang**	**2.61**	**114**	P	**Pn**	**05 13 45.9**	**0.0**
PLAI				S	**S**	**05 14 25.9**	**-0.9**
GRJI	**Gresik**	**2.99**	**286**	P	**Pn**	**05 13 49.9**	**+0.3**
GRJI				S	**S**	**05 14 32.7**	**-0.8**
PWJI	**Pagerwojo**	**3.54**	**265**	P	**Pn**	**05 13 55.2**	**-0.1**
PWJI				S	**S**	**05 14 44.0**	**+0.1**
WBSI	**Waikabubak, Su**	**4.39**	**116**	P	**Pn**	**05 14 04.6**	**-0.2**
WOJI	**Wonogiri, Jawa**	**4.41**	**269**	P	**Pn**	**05 14 04.8**	**-0.1**
UGM	**Wanagama**	**4.80**	**268**	P	**Pn**	**05 14 09.7**	**+0.2**
SMRI	**Semarang**	**4.94**	**278**	P	**Pn**	**05 14 11.4**	**+0.3**
SMRI				S	**S**	**05 15 14.0**	**+1.5**
BKSI	**Bulukumba**	**5.30**	**63**	P	**Pn**	**05 14 17.6**	**+2.2**
BSSI	**Bau Bau, Buton**	**5.33**	**73**	P	**Pn**	**05 14 17.6**	**+1.9**
BASI	**Baing, Sumba**	**5.70**	**116**	P	**Pn**	**05 14 20.5**	**+0.5**
SPSI	**Sidrap Palu**	**5.77**	**50**	P	**Pn**	**05 14 22.1**	**+1.2**
PBKI	**Pangkalan Bun**	**6.22**	**324**	P	Pn	05 14 29.9	+3.5
EDFI	**Ende, Flores**	**6.33**	**99**	P	**Pn**	**05 14 27.9**	**+0.1**
	28nm,0.7s,1μm						
TTSI	**Tana Toraja**	**6.44**	**44**	P	Pn	05 14 32.7	+3.7
MMRI	**Maumere**	**6.85**	**98**	P	**Pn**	**05 14 34.7**	**+0.7**
LHSI	**Lahat**	**12.41**	**288**	P	**P**	**05 15 46.2**	**+2.6**
SDSI	**Sungai Dareh**	**15.46**	**295**	P	**Pn**	**05 16 18.1**	**-0.7**
PSI	**Prapat**	**19.47**	**302**	P	**P**	**05 17 00.3**	**-0.4**
	1.8nm,0.3s,baz=128,slow=9.9,SNR=7.7						
KCSI	**Kotacane, Aceh**	**20.83**	**302**	P	**P**	**05 17 14.5**	**-0.1**
WRA	**Warramunga Arr**	**22.01**	**125**	P	**P**	**05 17 27.9**	**+2.4**
	4.5nm,0.4s,baz=287,slow=12,SNR=51						
WRA				ScP	**ScP**	**05 24 21.0**	**-1.2**
	1.3nm,0.8s,baz=325,slow=1.3,SNR=3.2						
MLSI	**Meulaboh, Aceh**	**22.38**	**302**	P	**P**	**05 17 31.9**	**+3.1**
ASAR	**Alice Springs**	**23.80**	**134**	P	**P**	**05 17 44.0**	**+2.3**
	2.3nm,0.5s,baz=308,slow=8.7,SNR=27						
ASAR				ScP	**ScP**	**05 24 27.0**	**+0.1**
	0.5nm,0.7s,baz=323,slow=2.6,SNR=5.7						
CMAR	**Chiang Mai Arr**	**30.68**	**328**	P	**P**	**05 18 42.9**	**+0.1**
	0.7nm,0.3s,baz=153,slow=7.7,SNR=5.7						
STKA	**Stephens Creek**	**34.23**	**138**	P	**P**	**05 19 16.0**	**+2.6**
	4.8nm,0.5s,baz=316,slow=8.6,SNR=13						
JIRN	**Jiri**	**45.13**	**322**	*e*P	**P**	**05 20 42.5**	**-0.7**
	54nm,0.4s						
GUN	**Gumba**	**45.50**	**322**	*e*P	**P**	**05 20 45.3**	**-0.7**
	29nm,0.6s						
PKI	**Pulchoki**	**45.54**	**322**	*e*P	**P**	**05 20 45.0**	**-1.3**
	11nm,0.5s						
PKIN	**Phulchoki**	**45.55**	**322**	*e*P	**P**	**05 20 45.0**	**-1.4**
	9.4nm,0.5s						
DMN	**Daman**	**45.75**	**321**	*e*P	**P**	**05 20 46.9**	**-1.0**
GKN	**Gorkha**	**46.33**	**321**	*e*P	**P**	**05 20 51.2**	**-1.0**
	17nm,0.3s						
KOLN	**Koldanda**	**46.81**	**320**	*e*P	**P**	**05 20 54.7**	**-1.3**
	18nm,0.7s						
DANN	**Dangsing**	**47.12**	**321**	*e*P	**P**	**05 20 57.4**	**-1.1**
PYUN	**Piuthan**	**47.43**	**320**	*e*P	**P**	**05 20 59.6**	**-1.2**
	21nm,0.8s						
MJAR	**Matsushiro Arr**	**49.00**	**24**	P	**P**	**05 21 10.9**	**-1.5**
	0.8nm,0.4s,baz=210,slow=9.3,SNR=5.0						
USRK	**Ussuriysk Ar.**	**53.85**	**15**	P	**P**	**05 21 47.4**	**-0.5**
	4.2nm,0.6s,baz=198,slow=7.4,SNR=9.7						
SONM	**Songino Array**	**55.91**	**353**	P	**P**	**05 22 02.5**	**-0.3**
	2.4nm,0.5s,baz=172,slow=7.8,SNR=8.5						
MKAR	**Makanchi Array**	**61.76**	**335**	P	**P**	**05 22 41.4**	**-1.2**
	0.7nm,0.5s,baz=146,slow=6.8,SNR=8.4						
ZALV	**Zalesovo Beam**	**66.65**	**341**	P	**P**	**05 23 11.8**	**-2.2**
	0.6nm,0.3s,baz=166,slow=6.3,SNR=4.8						
BRTR	**Keskin Array B**	**88.59**	**310**	P	**P**	**05 25 13.2**	**-1.9**
	0.2nm,0.3s,baz=112,slow=6.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**114.70**	**281**	PKP	PKPdf	05 31 00.8	-0.6
	0.4nm,0.6s,baz=109,slow=1.5,SNR=5.9						

NIED ***10*** *05:22:00, 39°.60N×141°.60E, h83^{km}, Mw5.0 Best double couple: $M_0$3.08000×10^{16} NP1:ϕ_s34.00000°, δ39.00000°, λ120.00000°. NP2:ϕ_s178.00000°, δ57.00000°, λ69.00000°.*

BJI ***10*** *05:22:10.7±0.0, 39°.47N×141°.69E, h78^{km}, mb5.1/74, mB4.8/44, Ms4.2/64, Ms7 4.0/50*

ISCJB ***10*** *05:22:14.3±0.2, 39°.68N±0°.02×141°.52E±0°.02, h85^{km}±1^{km}, mb5.0/184, Error ellipse: s-maj=3.3km s-min=2.2km az=154.3*

IDC ***10*** *05:22:14.8±0.3, 39°.60N×141°.50E, h81^{km}±2^{km}, mb4.7/30, mb1 4.8/36, mb1mx4.8/45, mbtmp5.0/36, MS3.6/26, Ms1 3.6/26, ms1mx3.5/41, Error ellipse: s-maj=9.7km s-min=8.7km az=100.0*

MOS ***10*** *05:22:14.4±0.9, 39°.76N×141°.51E, h85^{km}, mb5.1/79, Error ellipse: s-maj=6.4km s-min=3.9km az=106.9*

NEIC ***10*** *05:22:14.8±2.4, 39°.64N×141°.71E, h82^{km}±4^{km}, mb5.3/338, Error ellipse: s-maj=12.6km s-min=6.4km az=118.0*

NEIC Felt at Misawa. Recorded [4 JMA] in Iwate.

GCMT ***10*** *05:22:15.8±0.3, 39°.81N±0°.02×141°.48E±0°.02, h81^{km}±3^{km}, MW4.9/84, Moment Tensor Solution. s32,c36; s84,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.83±.12; $M_{\theta\theta}$0.89±.11; $M_{\phi\phi}$-2.72±.10; $M_{r\theta}$0.97±.07; $M_{\theta\phi}$-0.85±.10; $M_{\phi r}$-1.66±.07; Best double couple: $M_0$3.18200×10^{16} NP1:ϕ_s164.00000°, δ68.00000°, λ57.00000°. NP2: ϕ_s44.00000°, δ39.00000°, λ143.00000°. Principal axes: T 3.0380, Plg55.0000°, Azm32.0000°; N 0.2910, Plg30.0000°, Azm178.0000°; P -3.3260, Plg16.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

JMA ***10*** *05:22:15.1, 39°.63N×141°.59E, h81^{km}±1^{km}, M4.9 Broadband fault plane solution: P waves. NP1: ϕ_s161.00000°, δ70.00000°, λ61.00000°. NP2:ϕ_s39.00000°, δ35.00000°, λ144.00000°. Principal axes: T Plg55.0000°, Azm34.0000°; N Plg27.0000°, Azm171.0000°; P Plg20.0000°, Azm272.0000°;*

JMA Felt IV J1.

ISC 10 05:22:14.6±0.3**, 39°.65N**±0°.03×**141°.60E**±0°.03**, h80^{km}**±1^{km}**, h80^{km}:pP-P, n1023, σ1^s.29**/1104**, mb5.1**/215**, 51C-39D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.19**	**113**	⇑P	**Pn**	**05 22 27.1**	**+0.9**
MIYJ				S	**Sn**	**05 22 35.8**	**+0.9**
JOM	**Ohasama**	**0.30**	**233**	⇑P	**Pn**	**05 22 27.1**	**+0.3**
JOM				S	**Sn**	**05 22 36.1**	**+0.3**
JTH	**Tanohata**	**0.35**	**35**	⇑P	**Pn**	**05 22 27.9**	**+0.8**
JTH				S	**Sn**	**05 22 37.2**	**+0.8**
JANG	**Nango**	**0.72**	**355**	⇓P	**Pn**	**05 22 30.9**	**+0.4**
JANG				S	**Sn**	**05 22 42.5**	**+0.2**
JMK	**Ichinoseki**	**0.76**	**203**	⇑P	**Pn**	**05 22 31.0**	**+0.2**
JMK				*e*S	**Sn**	**05 22 43.1**	**+0.3**
JRG	**Rokugo**	**0.79**	**251**	⇑P	**Pn**	**05 22 31.7**	**+0.6**
JRG				*e*S	**Sn**	**05 22 44.9**	**+1.4**
JAH	**Hinai**	**0.91**	**306**	⇓P	**Pn**	**05 22 33.4**	**+0.9**
JAH				*e*S	**Sn**	**05 22 47.7**	**+1.7**
JTM	**Tenmabayashi**	**1.21**	**340**	⇓P	**Pn**	**05 22 36.9**	**+0.8**
JTM				*e*S	**Sn**	**05 22 53.5**	**+1.3**
JYK	**Kaneyama**	**1.21**	**233**	⇑P	**Pn**	**05 22 36.7**	**+0.6**
JYK				*e*S	**Sn**	**05 22 53.4**	**+1.1**
JIO	**Ouri**	**1.21**	**189**	⇑P	**Pn**	**05 22 36.3**	**+0.1**
JIO				S	**Sn**	**05 22 52.0**	**-0.3**
JOU	**Okura**	**1.48**	**210**	⇑P	**Pn**	**05 22 40.4**	**+0.8**
JOU				S	**Sn**	**05 22 59.5**	**+1.1**
JIW	**Iwasaki**	**1.54**	**308**	⇓P	**Pn**	**05 22 41.6**	**+1.2**
JIW				S	**Sn**	**05 23 02.0**	**+2.1**
ERM	**Erimo**	**2.64**	**26**	*e*Pn	**Pn**	**05 22 55.2**	**+0.2**
ERM				*e*Sn	**Sn**	**05 23 26.3**	**+0.2**
ERM	**Erimo**	**2.64**	**26**	*d i*P	**Pn**	**05 22 55.4**	**+0.4**
MJB9	**Matsu-Tunnel**	**4.10**	**222**	*e*Pn	**Pn**	**05 23 16.8**	**+2.0**
MAJO	**Matsushiro**	**4.10**	**222**	*e*Pn	**Pn**	**05 23 16.8**	**+2.0**
MAJO				*e*Sn	**Sn**	**05 24 00.0**	**-1.5**
MAJO	**Matsushiro**	**4.10**	**222**	*d i*P	**Pn**	**05 23 16.6**	**+1.8**
MAJO				pmax	pmax		
	comp=Z,230nm,0.8s						
MAT	**Matsushiro**	**4.10**	**222**	P	**Pn**	**05 23 16.7**	**+1.9**
MAT				S	**Sn**	**05 24 03.0**	**+1.5**
MJAR	**Matsushiro Arr**	**4.10**	**222**	P	**Pn**	**05 23 16.3**	**+1.5**
	comp=Z,6.3nm,0.3s,baz=32,slow=12,SNR=297						
MJAR				S	**Sn**	**05 23 60.0**	**-1.5**
	comp=Z,5.7nm,0.3s,baz=267,slow=23,SNR=4.6						
MJAR				LR	LR	05 24 41.3	
	comp=Z,1μm,19.0s,baz=40,slow=37						
ASAJ	**Asahikawa**	**4.52**	**9**	P	**Pn**	**05 23 20.5**	**0.0**
	comp=Z,54nm,0.3s,baz=206,slow=12,SNR=95						
ASAJ				S	**Sn**	**05 24 10.2**	**-1.6**
	comp=Z,28nm,0.3s,baz=252,slow=20,SNR=4.6						
GRPR	**Tuman**	**5.34**	**34**	*c i*P	**Pn**	**05 23 30.8**	**-0.9**
GRPR				*i* S	**Sn**	**05 24 26.8**	**-5.0**
GRPR				pmax	pmax		
	comp=N,258nm,0.3s						
GRPR				pmax	pmax		
	comp=E,212nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,943nm,0.3s						
GRPR				smax	smax		
	comp=N,5μm,0.2s						
GRPR				smax	smax		
	comp=E,10μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.41**	**35**	*c i*P	**Pn**	**05 23 35.4**	**+2.7**
YUK				*i* S	**Sn**	**05 24 32.7**	**-0.9**
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,103nm,0.1s						
YUK				pmax	pmax		
	comp=N,94nm,0.2s						
YUK				smax	smax		
	comp=N,8μm,0.4s						
YUK				smax	smax		
	comp=E,11μm,0.6s						
YUK				MLR	MLR		
	comp=Z,461nm,9.0s						
INU	**Inuyama**	**5.63**	**222**	*e*Pn	**Pn**	**05 23 38.4**	**+2.7**
TEY	**Ternei**	**6.53**	**327**	⇓*e*P	**Pn**	**05 23 48.9**	**+1.0**
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
TEY				pmax	pmax		
	comp=E,20nm,1.0s						
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
JHJ	**Hachijo jima 2**	**6.68**	**193**	P	**Pn**	**05 23 48.1**	**-1.9**
	comp=N,97nm,0.3s,baz=65,slow=1.5,SNR=27						
JHJ				S	**Sn**	**05 24 59.6**	**-5.1**
	comp=N,197nm,0.3s,baz=49,slow=19,SNR=7.2						
JHJ				LR	LR	05 25 41.4	
	comp=N,229nm,21.7s,baz=94,slow=31						
JHJ2	**Mitsune**	**6.68**	**193**	*e*Pn	**Pn**	**05 23 48.5**	**-1.5**
JHJ2				*e*Sn	**Sn**	**05 25 00.7**	**-4.0**
KUR	**Kuril'sk**	**7.25**	**38**	*e*P	**Pn**	**05 23 57.5**	**-0.2**
KUR				*e*S	**Sn**	**05 25 15.2**	**-3.2**
KUR				pmax	pmax		
	comp=Z,600nm,1.2s						
KUR				pmax	pmax		
	comp=Z,299nm,0.7s						
KUR				pmax	pmax		
	comp=N,138nm,0.3s						
KUR				pmax	pmax		
	comp=E,92nm,0.3s						
KUR				smax	smax		
	comp=E,955nm,0.3s						
KUR				smax	smax		
	comp=N,710nm,0.4s						
KUR				smax	smax		
	comp=N,2μm,2.2s						
KUR				smax	smax		
	comp=E,3μm,2.2s						
YSS	**Yuzh-Sakhalins**	**7.35**	**6**	*e*Pn	**Pn**	**05 23 59.2**	**+0.1**
YSS	**Yuzh-Sakhalins**	**7.35**	**6**	⇑*i*P	**Pn**	**05 23 59.1**	**+0.1**
YSS				*e*S	**Sn**	**05 25 17.0**	**-3.8**
YSS				pmax	pmax		
	comp=Z,110nm,0.9s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,11.0s						
VLA	**Vladivostok**	**8.08**	**299**	*d i*P	**Pn**	**05 24 11.4**	**+2.3**
VLA				pmax	pmax		
	comp=Z,295nm,0.9s						
MSHR	**Mys Shultsa**	**8.41**	**294**	*d i*P	**Pn**	**05 24 14.7**	**+1.2**
USA0B	**Ussuriysk Arra**	**8.48**	**306**	*e*Pn	**Pn**	**05 24 16.1**	**+1.6**
USRK	**Ussuriysk Ar.**	**8.48**	**306**	P	**Pn**	**05 24 16.1**	**+1.6**
	comp=Z,4.5nm,0.3s,baz=116,slow=12,SNR=141						
USRK				LR	LR	05 27 24.2	
	comp=Z,661nm,20.3s,baz=106,slow=37						
MDJ	**Mudanjiang**	**10.20**	**303**	P	**Pn**	**05 24 39.7**	**+1.7**
MDJ				S	**Sn**	**05 26 31.1**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,180nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,610nm,3.4s						
MDJ				LR	LR		
	comp=Z,610nm,14.2s						
MDJ				LR	LR		
	comp=Z,620nm,15.7s						
MDJ				LR	LR		
	comp=Z,1μm,19.9s						
JNU	**Nakatsue**	**10.82**	**236**	P	**Pn**	**05 24 46.9**	**+0.4**
	comp=Z,2.4nm,0.3s,baz=103,slow=0.8,SNR=26						
KSRS	**Korea Array**	**10.93**	**263**	P	**Pn**	**05 24 49.2**	**+1.3**
	comp=Z,1.7nm,0.3s,baz=77,slow=13,SNR=119						
KSRS				S	**Sn**	**05 26 54.4**	**+6.0**
	comp=Z,2.9nm,0.3s,baz=70,slow=24,SNR=7.7						
KSRS				LR	LR	05 27 44.4	

	comp=Z,87nm,20.4s,baz=98,slow=30					
KS15	Wonju Array Si	10.97 263	ePn	Pn	05 24 51.4	+3.0
TJN	Taejon	11.69 258	d iP	Pn	05 25 00.0	+1.7
GRNR	Gornyy	11.70 344	eP	Pn	05 24 58.5	+0.2
GRNR			pmax	pmax		
	comp=Z,21nm,1.0s					
KLR	Kul'dur	11.87 327	P	Pn	05 25 01.3	+0.6
	comp=Z,0.5nm,0.3s,baz=132,slow=13,SNR=13					
KLR			LR	LR	05 29 26.5	
	comp=Z,417nm,21.4s,baz=144,slow=36					
KLR	Kul'dur	11.87 327	⇓iP	Pn	05 25 01.7	+1.0
KLR			pmax	pmax		
	comp=Z,6.0nm,1.4s					
CN2	Changchun	12.76 294	eP	Pn	05 25 13.5	+0.8
CN2			epP	P	05 25 24.6	+3.9
CN2			eS	Sn	05 27 34.7	+2.0
CN2			pmax	pmax		
	comp=Z,20nm,1.0s					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=Z,300nm,11.0s					
CN2			LR	LR		
	comp=Z,300nm,11.0s					
NKL	Nikolayevsk	13.52 358	eP	Pn	05 25 20.0	-2.7
NKL			pmax	pmax		
	comp=E,2.0nm,0.3s					
NKL			pmax	pmax		
	comp=N,12nm,0.9s					
NKL			pmax	pmax		
	comp=Z,18nm,1.2s					
NKL			MLR	MLR		
	comp=N,178nm,13.0s					
NKL			MLR	MLR		
	comp=Z,260nm,15.0s					
SNY	Shenyang	13.84 285	⇑P	Pn	05 25 27.4	+0.4
SNY			pP	P	05 25 36.0	+3.3
SNY			S	Sn	05 28 03.2	+4.2
SNY			pmax	pmax		
	comp=Z,24nm,0.9s					
SNY			pmax	pmax		
	comp=Z,330nm,11.8s					
SNY			LR	LR		
	comp=Z,510nm,19.2s					
SNY			LR	LR		
	comp=Z,210nm,11.4s					
DL2	Dalian	15.49 274	⇓iP	Pn	05 25 47.8	-0.4
DL2			pP	P	05 25 57.8	+6.8
DL2			S	Sn	05 28 44.5	+5.5
DL2			pmax	pmax		
	comp=Z,46nm,1.0s					
DL2			pmax	pmax		
	comp=Z,180nm,4.5s					
DL2			LR	LR		
	comp=Z,250nm,11.1s					
DL2			LR	LR		
	comp=Z,280nm,14.6s					
DL2			LR	LR		
	comp=Z,310nm,12.3s					
ZEA	Zeya	17.14 330	eP	Pn	05 26 06.0	-2.7
ZEA			eS	Sn	05 29 05.0	-14
ZEA			pmax	pmax		
	comp=N,53nm,1.0s					
ZEA			pmax	pmax		
	comp=Z,58nm,1.0s					
ZEA			smax	smax		
	comp=E,300nm,12.0s					
ZEA			MLR	MLR		
	comp=Z,500nm,14.0s					
ZEA			MLR	MLR		
	comp=N,400nm,12.0s					
PETK	Petropavlovsk-	17.39 34	P	Pn	05 26 09.1	-2.7
	comp=N,0.8nm,0.3s,baz=218,slow=8.0,SNR=9.9					
PETK			LR	LR	05 33 03.5	
	comp=N,91nm,18.6s,baz=218,slow=37					
PEA1	Petropavlovsk-	17.40 34	eP	Pn	05 26 09.1	-2.7
PET	Petropavlovsk	17.76 36	c iP	Pn	05 26 16.9	+0.7
PET			eS	Sn	05 29 30.7	-2.8
PET			pmax	pmax		
	comp=Z,22nm,1.1s					
PET			pmax	pmax		
	comp=Z,300nm,4.5s					
PET			pmax	pmax		
	comp=Z,100nm,9.5s					
PET			MLR	MLR		
	comp=Z,200nm,14.0s					
PET			MLR	MLR		
	comp=Z,200nm,12.0s					
HIA	Hailar	18.27 309	eP	P	05 26 19.9	-1.8
	comp=Z,43nm,1.1s					
HIA	Hailar	18.27 309	eP	P	05 26 19.9	-1.8
HIA			pmax	pmax		
	comp=Z,43nm,1.1s					
BJI	Beijing	19.51 279	⇓iP	P	05 26 33.0	-2.3
BJI			pP	pP	05 26 47.4	-3.9
BJI			S	S	05 30 04.2	-7.2
BJI			pmax	pmax		
	comp=Z,25nm,0.9s					
BJI			LR	LR		
	comp=Z,83nm,8.1s					
BJI			LR	LR		
	comp=Z,100nm,13.7s					
TIA	Tai'an	19.59 268	P	P	05 26 35.2	-1.0
TIA			S	S	05 30 05.8	-7.4
TIA			SS	Sn	05 30 41.6	+24
TIA			pmax	pmax		
	comp=Z,81nm,0.9s					
TIA			pmax	pmax		
	comp=Z,270nm,4.3s					
TIA			LR	LR		
	comp=Z,190nm,9.4s					
TIA			LR	LR		
	comp=Z,280nm,9.6s					
TIA			LR	LR		
	comp=Z,240nm,9.5s					
NJ2	Nanjing	19.90 255	⇑P	P	05 26 38.1	-1.5
NJ2			pP	pP	05 26 51.8	-3.8
NJ2			sP	sP	05 27 01.2	-4.5
NJ2			S	S	05 30 18.3	-1.0
NJ2			pmax	pmax		
	comp=Z,75nm,0.7s					
MA2	Magadan	20.77 13	P	P	05 26 49.1	+0.4
	comp=Z,99nm,0.8s,baz=199,slow=9.7,SNR=29					
MA2	Magadan	20.77 13	eP	P	05 26 48.2	-0.6
	comp=Z,129nm,0.9s					
MA2	Magadan	20.77 13	⇓iP	P	05 26 48.8	0.0
MA2			pmax	pmax		
	comp=Z,110nm,0.9s					
YOJ	Yonaguni jima	21.79 231	eP	P	05 26 58.5	-1.4
	comp=Z,26nm,0.6s					
YOJ	Yonaguni jima	21.79 231	eP	P	05 26 58.5	-1.4
YOJ			pmax	pmax		
	comp=Z,26nm,0.6s					
YHNB	Yeheng	22.64 235	eP	P	05 27 05.3	-3.9
	comp=Z,34nm,0.9s					
TIY	Taiyuan	22.81 274	eP	P	05 27 11.2	+0.4
TIY			S	S	05 31 03.5	-10
TIY			LR	LR		
	comp=Z,370nm,15.8s					
TIY			LR	LR		
	comp=Z,120nm,9.2s					
TIY			LR	LR		
	comp=Z,180nm,12.9s					
NACB	Ninganchiao	22.87 234	eP	P	05 27 06.4	-4.9
	comp=Z,23nm,0.9s					
HHC	Hu-ho-hao-te	22.91 283	P	P	05 27 12.9	+1.1
HHC			PP	PnPn	05 27 45.5	+5.6
HHC			S	S	05 31 12.7	-2.8
HHC			pmax	pmax		
	comp=Z,12nm,0.5s					
HHC			pmax	pmax		
	comp=Z,82nm,7.2s					
HHC			LR	LR		
	comp=Z,160nm,10.3s					
HHC			LR	LR		
	comp=Z,260nm,18.1s					
HHC			LR	LR		
	comp=Z,320nm,15.7s					
CIT	Chita	22.96 312	eP	P	05 27 08.0	-4.2
CIT			e		05 27 30.1	
CIT			e		05 27 38.0	
CIT			e		05 27 49.4	
CIT			e		05 27 56.8	
CIT			pmax	pmax		
	comp=Z,149nm,1.1s					
YAK	Yakutsk	23.56 346	eP	P	05 27 16.1	-1.4
YAK			e*PP	pP	05 27 37.8	+2.9
YAK			eS	S	05 31 22.7	-2.6
YAK			pmax	pmax		
	comp=Z,33nm,0.8s					
YAK			pmax	pmax		
	comp=N,16nm,1.0s					
YAK			pmax	pmax		
	comp=E,7.0nm,0.8s					
YAK			smax	smax		
	comp=N,276nm,1.5s					
YAK			smax	smax		
	comp=E,238nm,1.4s					
YAK			MLR	MLR		
	comp=Z,176nm,16.0s					
YAK			MLR	MLR		
	comp=N,107nm,14.0s					
WHN	Wuhan	24.00 256	⇑P	P	05 27 20.3	-1.5
WHN			S	S	05 31 21.2	-12
WHN			LR	LR		
	comp=N,340nm,8.4s					
WHN			LR	LR		
	comp=N,370nm,12.2s					
WHN			LR	LR		
	comp=N,420nm,13.2s					
TPUB	Ta-pu	24.11 234	eP	P	05 27 19.9	-2.9
	comp=N,113nm,0.8s					
TWG	Pinlang	24.19 232	eP	P	05 27 22.3	-1.3
	comp=N,168nm,0.7s					
SEY	Seymchan	24.20 12	P	P	05 27 24.4	+1.1
	comp=N,130nm,0.9s,baz=194,slow=7.3,SNR=82					
QZH	Quanzhou	24.26 240	P	P	05 27 23.8	-0.4
QZH			S	S	05 31 36.1	-1.2
QZH			pmax	pmax		
	comp=N,29nm,0.8s					
QZH			pmax	pmax		
	comp=N,240nm,2.9s					
BOD	Bodaibo	25.44 325	eP	P	05 27 33.9	-0.7
BOD			pmax	pmax		
	comp=Z,46nm,0.8s					
ULN	Ulaanbaatar	26.09 300	eP	P	05 27 39.6	-1.3
	comp=Z,11nm,0.6s					
ULN	Ulaanbaatar	26.09 300	d iP	P	05 27 39.5	-1.3
ULN			pmax	pmax		
	comp=Z,9.0nm,0.8s					
ULN	Ulaanbaatar	26.09 300	P	P	05 27 42.1	+1.2
	SNR=11					
ULN			P	P	05 27 42.1	+1.2
	SNR=11					
SONA0	Songino Array	26.53 300	eP	P	05 27 43.6	-1.2
SONA0			ePcP	PcP	05 31 06.9	-0.5
SONM	Songino Array	26.53 300	P	P	05 27 43.6	-1.2
	comp=Z,9.5nm,0.6s,baz=95,slow=9.3,SNR=39					
SONM			PcP	PcP	05 31 06.9	-0.5
	comp=Z,1.3nm,0.7s,baz=80,slow=1.6,SNR=2.6					
SONM			ScP	ScP	05 34 39.0	-1.1
	comp=Z,1.2nm,0.7s,baz=116,slow=3.4,SNR=6.1					
SONM			LR	LR	05 38 45.9	
	comp=Z,271nm,18.6s,baz=91,slow=37					
XAN	Xi'an	26.65 268	P	P	05 27 43.5	-2.3
XAN			pmax	pmax		
	comp=Z,59nm,4.0s					
XAN			LR	LR		
	comp=Z,170nm,10.8s					
XAN			LR	LR		
	comp=Z,370nm,14.1s					
TLY	Talaya	28.79 307	P	P	05 28 04.8	+0.1
	comp=Z,8.5nm,0.7s,baz=123,slow=6.7,SNR=8.2					
TLY	Talaya	28.79 307	eP	P	05 28 04.8	+0.1
TLY			eS	S	05 32 49.2	+0.7
TLY			pmax	pmax		
	comp=Z,67nm,0.9s					
TLY			MLR	MLR		
	comp=Z,730nm,16.0s					
TLY	Talaya	28.79 307	P	P	05 28 05.3	+0.5
	SNR=14					
ZAK	Zakamensk	28.83 305	eP	P	05 28 04.5	-0.7
ZAK			pmax	pmax		
	comp=Z,14nm,1.3s					
H11N2	WAKE ISLAND Hy	29.45 125	T	T	05 58 50.8	
	baz=318,slow=76					
H11N1	WAKE ISLAND Hy	29.46 125	T	T	05 58 47.9	
	baz=318,slow=76,SNR=7760					
H11N3	WAKE ISLAND Hy	29.46 125	T	T	05 58 50.4	
	baz=318,slow=76					
LZH	Lanzhou	29.87 275	⇑P	P	05 28 14.2	-0.4
LZH			pP	pP	05 28 32.4	-0.9
LZH			sP	sP	05 28 44.4	+1.8
LZH			S	S	05 33 06.3	+0.2
LZH			sS	sS	05 33 38.5	+0.2
LZH			pmax	pmax		
	comp=Z,35nm,1.3s					
LZH			pmax	pmax		
	comp=Z,140nm,4.9s					
LZH			LR	LR		
	comp=Z,490nm,14.6s					
LZH			LR	LR		
	comp=Z,390nm,14.6s					
LZH			LR	LR		
	comp=Z,600nm,16.1s					
H11S1	WAKE ISLAND Hy	30.24 127	T	T	05 59 51.6	
	baz=319,slow=76,SNR=1646					
H11S3	WAKE ISLAND Hy	30.24 127	T	T	05 59 55.5	
	baz=319,slow=76,SNR=287					
H11S2	WAKE ISLAND Hy	30.25 127	T	T	05 59 56.9	
	baz=319,slow=76,SNR=201					
MOY	Mondy	30.42 307	eP	P	05 28 19.0	-0.3
MOY			pmax	pmax		
	comp=Z,25nm,1.8s					
BILL	Bilibino	31.48 17	⇑iP	P	05 28 28.2	-0.1
BILL			i		05 28 57.1	
BILL			e		05 29 36.0	
BILL			eS	S	05 33 27.8	-2.5
BILL			eSS	SnSn	05 35 24.8	+2.2
BILL			pmax	pmax		
	comp=Z,34nm,1.0s					
GYA	Guiyang	31.89 256	⇓iP	P	05 28 31.3	-1.2
GYA			pP	pP	05 28 51.0	-0.2
GYA			PP	PnPn	05 29 41.6	+1.5
GYA			S	S	05 33 36.2	-1.5
GYA			sS	sS	05 34 05.2	-4.8
GYA			SS	SnSn	05 35 34.5	+0.9
GYA			pmax	pmax		
	comp=Z,90nm,0.9s					
GYA			pmax	pmax		
	comp=Z,80nm,6.1s					
GYA			LR	LR		
	comp=Z,160nm,18.3s					
GYA			LR	LR		
	comp=Z,200nm,18.3s					
GYA			LR	LR		
	comp=Z,240nm,18.8s					
CD2	Chengdu	31.91 266	P	P	05 28 31.2	-1.3
CD2			S	S	05 33 37.0	-0.8
CD2			pmax	pmax		
	comp=Z,30nm,0.6s					
CD2			pmax	pmax		
	comp=Z,130nm,6.5s					
CD2			LR	LR		
	comp=Z,200nm,11.8s					
CD2			LR	LR		
	comp=Z,240nm,10.3s					
GTA	Gaotai	32.02 283	eP	P	05 28 32.0	-1.5
GTA			pP	pP	05 28 49.1	-3.2
GTA			sP	sP	05 28 57.4	-4.3
GTA			S	S	05 33 40.0	+0.5
GTA			pmax	pmax		
	comp=Z,6.0nm,0.8s					
GTA			pmax	pmax		
	comp=Z,44nm,6.2s					
GTA			LR	LR		
	comp=Z,270nm,20.3s					
GTA			LR	LR		
	comp=Z,230nm,16.1s					
GTA			LR	LR		
	comp=Z,390nm,21.0s					
ATKA	Atka Island	32.70 53	eP	P	05 28 38.7	-0.3
	comp=Z,80nm,0.9s					
TIXI	Tiksi	32.71 353	P	P	05 28 38.2	-0.8
	comp=Z,14nm,0.6s,baz=140,slow=5.7,SNR=26					
TIXI	Tiksi	32.71 353	eP	P	05 28 38.1	-0.8
	comp=Z,17nm,0.6s					
TIXI	Tiksi	32.71 353	i P	P	05 28 38.6	-0.4
TIXI			pmax	pmax		
	comp=Z,14nm,0.9s					
QIZ	Qiongzhong	34.21 242	P	P	05 28 54.2	+1.7
QIZ			S	S	05 34 17.4	+4.0
QIZ			LR	LR		
	comp=Z,120nm,10.8s					
QIZ			LR	LR		
	comp=Z,140nm,12.3s					
QIZ			LR	LR		
	comp=Z,130nm,15.7s					
KMI	Kunming	35.58 258	P	P	05 29 04.4	-0.2
KMI			pP	pP	05 29 23.7	+0.2
KMI			sP	sP	05 29 34.9	+2.1
KMI			PP	PP	05 30 29.2	+2.5
KMI			S	S	05 34 34.2	-0.7
KMI			sS	ScP	05 35 10.9	+0.3
KMI			SS	SnSn	05 36 59.8	-3.2
KMI			pmax	pmax		
	comp=Z,41nm,0.8s					
KMI			pmax	pmax		
	comp=Z,140nm,3.3s					
KMI			LR	LR		
	comp=Z,160nm,11.1s					
KMI			LR	LR		
	comp=Z,150nm,11.3s					
KMI			LR	LR		
	comp=Z,160nm,18.0s					
SLVN	Son La	36.92 252	eP	P	05 29 15.9	0.0
	comp=Z,23nm,0.9s					
DGZ	Jazzator, Alta	39.03 303	d iP	P	05 29 34.1	+0.7
DGZ			pmax	pmax		
	comp=Z,58nm,0.8s					
PANO	Nakornpanom	39.12 246	P	P	05 29 36.3	+2.0
	comp=Z,0.3nm,1.3s					
NONG	Nongkai	39.55 248	P	P	05 29 38.3	+0.4
	comp=Z,1.0nm,0.7s,comp=Z,26nm					
SKNT	Sakolnakorn	39.68 246	P	P	05 29 39.8	+0.9
	comp=Z,34nm,1.1s					
WMQ	Urumqi	39.85 294	eP	P	05 29 40.9	+0.7
WMQ			pP	pP	05 29 58.3	-1.1
WMQ			sP	sP	05 30 11.3	+2.7
WMQ			pmax	pmax		
	comp=Z,28nm,1.7s					
WMQ			pmax	pmax		
	comp=Z,83nm,3.8s					
WMQ			LR	LR		
	comp=Z,630nm,29.0s					
WMQ			LR	LR		
	comp=Z,770nm,28.8s					
WMQ			LR	LR		
	comp=Z,230nm,28.9s					
DLV	T Lat	40.22 236	eP	P	05 29 44.6	+0.9
	comp=Z,17nm,0.9s					
ZAA1	Zalesovo Array	40.30 310	ePcP	PcP	05 31 45.5	-0.3
ZALV	Zalesovo Beam	40.30 310	P	P	05 29 43.5	-0.1
	comp=Z,37nm,0.6s,baz=89,slow=8.3,SNR=102					
ZALV			PcP	PcP	05 31 45.5	-0.3
	comp=Z,3.9nm,0.4s,baz=106,slow=3.9,SNR=3.7					
ZALV			ScP	ScP	05 35 26.1	-1.7
	comp=Z,5.4nm,0.9s,baz=95,slow=3.3,SNR=8.2					
ZALV			LR	LR	05 47 03.7	
	comp=Z,189nm,18.5s,baz=70,slow=37					
ZALV	Zalesovo Beam	40.30 310	i P	P	05 29 43.7	0.0
ZALV			pmax	pmax		
	comp=Z,37nm,0.6s					
TNTI	Ternate	40.82 202	P	pP	05 30 07.6	0.0
PAYA	Payao	41.11 253	P	P	05 29 52.3	+1.5
	comp=Z,41µm,0.6s					
ZIRO	ZIRO	41.13 268	eP	P	05 29 51.8	+0.7
JORH	JORHAT	41.21 267	eP	P	05 29 51.7	+0.1
MOKO	MOKOCHONG	41.23 266	eP	P	05 29 52.2	+0.4
PHRA	Phrae	41.39 252	P	P	05 29 53.7	+0.7
	comp=Z,6.5nm,1.2s,comp=Z,506nm					
LAMP	Lampang	41.81 252	P	P	05 29 59.4	+2.9
	comp=Z,58µm,0.9s					
CHAI	Chaiyaphum	41.81 247	P	P	05 29 56.5	0.0
	comp=Z,38µm,1.1s					
JAY	Jayapura	41.97 181	LR	LR	05 47 03.0	
	comp=Z,40nm,19.0s,baz=330,slow=36					
JAY	Jayapura	41.97 181	P	sP	05 30 30.7	+4.4
LBMI	Labuha	42.12 201	P	pP	05 30 22.2	+3.8
CMMT	Chiang Mai	42.13 253	P	P	05 29 59.7	+0.6
	comp=Z,24nm,0.8s					
CHTO	Chiang Mai	42.13 253	eP	P	05 29 59.5	+0.4
	comp=Z,29nm,0.6s					
CHTO	Chiang Mai	42.13 253	eP	P	05 29 59.5	+0.4
CHTO			pmax	pmax		
	comp=Z,29nm,0.6s					
CHTO	Chiang Mai	42.13 253	P	P	05 30 00.0	+0.9
	SNR=7.6					
CHTO			P	P	05 30 00.0	+0.9
	SNR=7.6					
LSA	Lhasa	42.18 272	P	P	05 30 00.8	+0.8
LSA			pmax	pmax		
	comp=Z,120nm,0.9s					
CMAR	Chiang Mai Arr	42.36 253	P	P	05 30 01.2	+0.2
	comp=Z,12nm,0.7s,baz=48,slow=7.2,SNR=21					
CMAR			ScP	ScP	05 35 36.5	0.0
	comp=Z,1.2nm,0.4s,baz=39,slow=4.6,SNR=4.6					
CMAR			LR	LR	05 47 59.7	
	comp=Z,28nm,19.9s,baz=56,slow=37					
CMAR	Chiang Mai Arr	42.36 253	i P	P	05 30 01.5	+0.5
CMAR			pmax	pmax		
	comp=Z,11nm,0.6s					
TEZP	TEZPUR	42.40 267	eP	P	05 30 00.4	-0.8
TEZP			IAmb	IAmb	05 30 01.4	
	comp=Z,122nm,1.4s					
IMP	Imphal	42.44 264	eP	P	05 30 00.6	-1.1
IMP			IAmb	IAmb	05 30 01.4	
	comp=Z,16nm,0.5s					
TAWA	Tawang	42.63 269	eP	P	05 30 03.8	+0.2
MK31	Makanchi Array	42.90 300	i P	P	05 30 04.7	-0.4
MK31			pmax	pmax		
	comp=Z,41nm,0.9s					
MK32	Makanchi Array	42.90 300	epP	pP	05 30 23.8	-0.8
MKAR	Makanchi Array	42.90 300	P	P	05 30 04.7	-0.3
	comp=Z,35nm,0.9s,baz=86,slow=9.7,SNR=107					
MKAR			pP	pP	05 30 23.8	-0.8
	comp=Z,10nm,0.8s,baz=88,slow=9.4,SNR=4.0					
MKAR			ScP	ScP	05 35 36.5	-1.8
	comp=Z,2.2nm,0.9s,baz=76,slow=5.1,SNR=6.1					
MKAR			LR	LR	05 48 45.7	
	comp=Z,130nm,21.3s,baz=75,slow=37					
MKAR	Makanchi Array	42.90 300	i P	P	05 30 05.0	-0.1
MKAR			pmax	pmax		
	comp=Z,35nm,0.9s					
MAKZ	Makanchi	43.11 300	eP	P	05 30 06.6	-0.1
	comp=Z,39nm,0.8s					
MAKZ	Makanchi	43.11 300	P	P	05 30 06.9	+0.2
MAKZ			pmax	pmax		
	comp=Z,49nm,1.1s					
TTA	Tatalina	43.21 36	eP	P	05 30 06.9	-0.5
	comp=Z,20nm,1.0s					
SILR	SILCHAR	43.35 265	eP	P	05 30 09.2	+0.3
SILR			IAmb	IAmb	05 30 10.5	
	comp=Z,185nm,1.1s					
GUWA	GUWAHATI	43.47 268	eP	P	05 30 09.0	-0.9
GUWA			IAmb	IAmb	05 30 11.1	
	comp=Z,66nm,1.1s					
SHL	Shillong	43.64 267	eP	P	05 30 11.5	0.0
	comp=Z,72nm,1.3s					
SHL	Shillong	43.64 267	eP	P	05 30 11.5	0.0
SHL			pmax	pmax		
	comp=Z,72nm,1.3s					
SHL	Shillong	43.64 267	eP	P	05 30 10.6	-0.8
SHL			IAmb	IAmb	05 30 11.4	
	comp=Z,19nm,0.9s					
CHBT	CHBT	43.73 243	P	P	05 30 21.7	+10
UMPA	Umpang Tak	43.86 250	P	P	05 30 16.6	+3.5
	comp=Z,57µm,1.0s					
SANI	Sanana	43.90 203	P	pP	05 30 31.7	-1.1
LUWI	Luwuk	44.02 208	P	pP	05 30 33.7	0.0
APSI	Ampana	44.31 209	P	pP	05 30 34.8	-1.2
MSAI	Masohi	44.35 198	P	pP	05 30 41.7	+5.3
SAIH	SAIHA	44.45 262	eP	P	05 30 17.2	-0.7
SAIH			IAmb	IAmb	05 30 18.1	
	comp=Z,137nm,0.9s					
KURK	Kurchatov	44.47 306	eP	P	05 30 17.8	+0.2
	comp=Z,72nm,0.6s					
KURK	Kurchatov	44.47 306	d iP	P	05 30 17.2	-0.4
KURK			pmax	pmax		
	comp=Z,56nm,0.9s					
KURK	Kurchatov	44.47 306	P	P	05 30 17.1	-0.4
	SNR=27					
KURK			P	P	05 30 17.1	-0.4
	SNR=27					
KURBB	Kurchatov Arra	44.55 306	P	P	05 30 17.7	-0.4
	comp=Z,53nm,0.6s,baz=80,slow=8.6,SNR=141					
KURBB			PcP	PcP	05 31 59.8	-0.1
	comp=Z,6.4nm,0.9s,baz=81,slow=4.1,SNR=2.9					

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OHAK  Old Harbor        44.76  44 eP     P      05 30 20.8 +1.1
      comp=Z,65nm,0.8s
TURI  Tura              44.85 268 eP     P      05 30 20.1 -0.8
AAI   Ambon             44.86 199 P      pP     05 30 43.6 +3.1
DHUB  DHUBRI            44.86 269 eP     P      05 30 20.6 -0.4
KDAK  Kodiak Island     45.08  44 eP     P      05 30 23.1 +0.8
      comp=Z,102nm,0.9s
KDAK  Kodiak Island     45.08  44 eP     P      05 30 23.1 +0.8
KDAK                              pmax   pmax
      comp=Z,103nm,0.9s
BNDI  Bandanaira        45.26 197 P      sP     05 30 49.4 -3.4
GTK   Tadong            45.29 271 eP     P      05 30 24.8 +0.3
PHET  Kaeng Krachan     45.51 246 P      P      05 30 27.2 +1.0
      comp=Z,77µm,0.8s,comp=Z,922µm
SGKI  Sangatta, Kali    45.62 215 P      pP     05 30 42.1 -4.4
SMKI  Samarinda         45.72 215 P      pP     05 30 44.3 -3.0
PDGK  Podgornoye        45.72 296 P      P      05 30 26.8 -1.0
PDGK                              pmax   pmax
      comp=Z,69nm,0.9s
BRLK  Bradley Lake      45.77  41 eP     P      05 30 29.0 +1.3
      comp=Z,46nm,0.8s
TOLK  Toolik Lake Re    46.09  28 P      P      05 30 31.7 +1.5
      baz=268
SEW   Seward            46.45  40 eP     P      05 30 33.0  0.0
      comp=Z,56nm,1.0s
PRZ   Przheval'sk       46.75 295 eP     P      05 30 37.2 +1.3
      comp=Z,112nm,1.3s
PRZ   Przheval'sk       46.75 295 eP     P      05 30 37.2 +1.3
PRZ                               pmax   pmax
      comp=Z,112nm,1.3s
KNK   Knik Glacier      46.80  38 eP     P      05 30 36.8 +1.0
      comp=Z,46nm,1.0s
TCOL  CIGO, UAF Yank    46.80  34 P      P      05 30 37.2 +1.5
      baz=273
COLA  College           46.80  34c iP    P      05 30 37.2 +1.5
COLA                              pmax   pmax
      comp=Z,31nm,1.1s
POKR  Poker Plat Res    46.97  33 P      P      05 30 38.9 +1.9
      baz=273
TTSI  Tana Toraja       46.97 210 P      pP     05 30 55.5 -1.7
JIRN  Jiri              46.98 273 eP     P      05 30 38.2 +0.1
      comp=Z,37nm,0.3s
GUN   Gumba             47.09 273 eP     P      05 30 38.9 -0.1
      comp=Z,100nm,0.5s
DHY   Denali Highway    47.14  36 eP     P      05 30 40.0 +1.4
      comp=Z,41nm,0.8s
MTKI  Muara Teweh, K    47.22 218 P      pP     05 30 52.6 -6.6
HDA   Harding Lake      47.22  34 P      P      05 30 39.5 +0.5
      baz=274
ILAR  Eielson Array     47.22  34 P      P      05 30 39.7 +0.7
      comp=Z,33nm,0.7s,baz=267,slow=6.3,SNR=319
ILAR                              LR     LR     05 52 49.0
      comp=Z,35nm,19.0s,baz=276,slow=39
GLI   Glacier Island    47.52  39 eP     P      05 30 41.5 +0.2
KKN   Kakani            47.62 274 eP     P      05 30 42.7 -0.1
      comp=Z,79nm,0.6s
PKI   Pulchoki          47.62 273 eP     P      05 30 42.7 -0.3
      comp=Z,44nm,0.7s
PKIN  Phulchoki         47.63 273 eP     P      05 30 42.6 -0.4
      comp=Z,36nm,0.6s
PRP   Porcupine Dome    47.74  33 eP     P      05 30 44.2 +1.0
      comp=Z,52nm,0.8s
SPSI  Sidrap Palu       47.83 210 P      pP     05 31 02.5 -1.4
DMN   Daman             47.84 273 eP     P      05 30 44.5 -0.1
      comp=Z,33nm,0.6s
GKN   Gorkha            48.01 274 eP     P      05 30 45.5 -0.3
      comp=Z,60nm,0.5s
PAX   Paxson            48.02  36 eP     P      05 30 46.8 +1.5
      comp=Z,15nm,0.8s
PAX   Paxson            48.02  36 eP     P      05 30 46.8 +1.5
PAX                               pmax   pmax
      comp=Z,15nm,0.8s
STKI  Sintang           48.05 222 P      pP     05 30 57.8 -7.8
BNSI  Bone              48.10 209 P      pP     05 31 06.0  0.0
ULHL  Ulahol            48.34 295 P      P      05 30 49.6 +1.4
      SNR=13
SAUI  Saumlaki          48.34 194 P      sP     05 31 15.8 -1.2
DANN  Dangsing          48.51 275 eP     P      05 30 50.1 +0.3
      comp=Z,387nm,0.6s
TKM2  Tokmak 2          48.55 296 i P    P      05 30 50.4 +0.5
TKM2                              pmax   pmax
      comp=Z,42nm,0.8s
TKM2  Tokmak 2          48.55 296 P      P      05 30 50.4 +0.5
      SNR=53
MENT  Mentasta          48.82  36 eP     P      05 30 52.3 +0.9
      comp=Z,50nm,0.9s
KOLN  Koldanda          48.92 275 eP     P      05 30 52.8 -0.1
      comp=Z,75nm,0.7s
BKSI  Bulukumba         48.94 209 P      pP     05 31 12.1 -0.5
BVAR  Borovoye Array    48.95 311 P      P      05 30 52.0 -0.5
      comp=Z,9.7nm,0.6s,baz=75,slow=8.1,SNR=34
BVAR                              pP     pP     05 31 12.7 +0.5
      comp=Z,6.7nm,0.4s,baz=72,slow=9.3,SNR=6.3
BVAR                              PcP    PcP    05 32 15.7 +0.2
      comp=Z,5.7nm,0.5s,baz=62,slow=3.4,SNR=4.7
HMT   Hamilton          48.98  39 eP     P      05 30 54.0 +1.4
      comp=Z,46nm,1.0s
BRVK  Borovoye          49.00 311 eP     P      05 30 51.0 -1.9
      comp=Z,16nm,0.8s
BRVK  Borovoye          49.00 311 eP     P      05 30 53.9 +1.0
BRVK                              pmax   pmax
      comp=Z,8.0nm,0.8s
BRVK  Borovoye          49.00 311 P      P      05 30 53.3 +0.4
      SNR=7.5
BRVK                              P      P      05 30 53.3 +0.4
      SNR=7.5
OTUK  Ortayu            49.05 304 P      P      05 30 52.5 -0.8
OTUK                              pmax   pmax
      comp=Z,45nm,1.5s
KZA   Kyzart            49.09 296 P      P      05 30 55.3 +1.1
      SNR=14
KBK   Karagaybulak      49.09 296 P      P      05 30 54.5 +0.5
      SNR=19
USP   Ospenovka         49.19 297 P      P      05 30 54.6  0.0
      SNR=8.2
BOK   Bokaro            49.20 269 eP     P      05 30 53.4 -1.4
BOK                               IAmb   IAmb   05 30 56.0
      comp=Z,14nm,0.9s
PYUN  Piuthan           49.23 275 eP     P      05 30 55.3 +0.1
      comp=Z,203nm,0.8s
AAK   Ala-Archa         49.41 296 eP     P      05 30 56.8 +0.4
      comp=Z,11nm,0.8s
AAK   Ala-Archa         49.41 296 eP     P      05 30 56.4  0.0
AAK                               pmax   pmax
      comp=Z,10.0nm,1.1s
AAK   Ala-Archa         49.41 296 P      P      05 30 56.8 +0.4
      SNR=8.8
AAK   Ala-Archa         49.41 296 P      P      05 30 56.8 +0.4
      SNR=6.3
KSH   Kashi             49.51 292 P      P      05 31 01.4 +4.2
KSH                               pP     pP     05 31 21.3 +4.4
KSH                               sP     sP     05 31 30.7 +4.7
KSH                               PcP    PcP    05 32 21.8 +3.8
KSH                               PP     PP     05 32 59.9 +8.1
KSH                               S      S      05 38 02.7 +3.8
KSH                               SS     SS     05 41 32.4 +1.0
KSH                               pmax   pmax
      comp=Z,13nm,0.8s
KSH                               pmax   pmax
      comp=Z,68nm,5.6s
KSH                               LR     LR
      comp=Z,78nm,7.7s
KSH                               LR     LR
      comp=Z,130nm,8.3s
KSH                               LR     LR
      comp=Z,77nm,14.9s
BSSI  Bau Bau, Buton    49.56 208 P      pP     05 31 17.3 -0.1
EKS2  Erkin-Say         49.90 297 P      P      05 31 00.5 +0.4
      SNR=9.2
DGPR  DIGLIPUR          50.16 252 eP     P      05 31 02.5 +0.3
DGPR                              IAmb   IAmb   05 31 04.3
      comp=Z,88nm,0.7s
EPYK  Eagle Plains      51.20  31 P      P      05 31 11.2 +1.9
      baz=281
BWNR  Bhubaneshwar      51.20 265 eP     P      05 31 09.4 -0.5
MMRI  Maumere           51.29 205 P      pP     05 31 30.1 -0.3
EDFI  Ende, Flores      51.57 205 P      pP     05 31 32.2 -0.5
DDI   Dehra Dun         51.92 280 eP     P      05 31 15.8 +0.5
KK31  Karatay Array     51.97 298 i P    P      05 31 15.2 -0.3
KK31                              pmax   pmax
      comp=Z,16nm,0.9s
INK   Inuvik            52.00  28 P      P      05 31 16.6 +1.4
      comp=Z,41nm,0.9s,baz=271,slow=7.0,SNR=21
INK                               pP     pP     05 31 37.3 +2.3
      comp=Z,13nm,0.8s,baz=282,slow=5.4,SNR=2.8
SMLA  Simla             52.22 282 eP     P      05 31 17.4  0.0
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BATI  Baumata           52.33 203 P      pP     05 31 40.2 +2.0
DSRI  Dabo              52.33 230 P      P      05 31 28.4  +10
DHRM  DHARAMSHALA       52.34 284 eP     P      05 31 18.2 -0.4
TPI   Tanjungpandan     52.46 225 P      P      05 31 30.7  +11
      comp=Z,16nm,0.9s
PPBI  Pangkal Pinang    52.80 227 P      P      05 31 31.4  +10
TSI   Tuntungan         53.00 239 P      P      05 31 28.6 +5.3
KMMI  Kalianget         53.03 215 P      P      05 31 37.7  +14
PLAI  Plampang          53.05 210 P      pP     05 31 40.7 -2.9
MTN   Manton Dam        53.12 193 eP     P      05 31 25.2 +1.1
      comp=Z,77nm,1.3s
WBSI  Waikabubak, Su    53.20 208 P      pP     05 31 42.7 -2.1
PSI   Prapat            53.29 238 eP     P      05 31 25.3 -0.2
      comp=Z,13nm,0.9s
PSI   Prapat            53.29 238 eP     P      05 31 25.3 -0.2
PSI                               pmax   pmax
      comp=Z,13nm,0.9s
SVE   Sverdlovsk        53.30 317⇑eP     P      05 31 27.8 +2.8
SVE                               pmax   pmax
      comp=Z,43nm,1.0s
KCSI  Kotacane, Aceh    53.51 239 P      P      05 31 35.2 +8.2
SKAG  Skagway           53.56  39 eP     P      05 31 26.9  0.0
      comp=Z,36nm,1.2s
GRJI  Gresik            53.59 217 P      pP     05 31 43.0 -4.5
DNP   Denpasar          53.95 213 P      pP     05 31 47.2 -2.9
NIL   Nilore            53.97 287 eP     P      05 31 31.1 +0.8
      comp=Z,49nm,0.6s
NIL   Nilore            53.97 287 eP     P      05 31 31.1 +0.8
NIL                               pmax   pmax
      comp=Z,49nm,0.6s
TPTI                    54.09 240 P      P      05 31 37.7 +6.4
GMJI  Gumukmas          54.35 215 P      pP     05 31 50.7 -2.4
MNSI  Mandailing Nat    54.39 235 P      P      05 31 41.7 +8.3
NGJI  Ngawi             54.46 218 P      pP     05 31 48.7 -5.3
ARU   Arti              54.52 317 eP     P      05 31 34.0 +0.2
      comp=Z,31nm,0.8s
ARU   Arti              54.52 317d iP    P      05 31 33.8  0.0
ARU                               *PP    pP     05 31 54.1 +0.1
ARU                                             05 32 36.6
ARU                                             05 33 33.9
ARU                               S      S      05 39 05.6 -1.0
ARU                               SS     SKiKP  05 42 41.9 +7.0
ARU                               pmax   pmax
      comp=Z,42nm,1.2s
SDSI  Sungai Dareh      54.58 232 P      P      05 31 35.2 +0.4
SMRI  Semarang          54.67 219 P      pP     05 31 51.7 -3.8
PWJI  Pagerwojo         54.87 217 P      pP     05 31 55.4 -1.6
WOJI  Wonogiri, Jawa    55.12 218 P      pP     05 31 53.7 -5.1
PDSI  Padang            55.16 233 P      P      05 31 48.0 +9.0
GSI   Gunungsitoli      55.29 238 eP     P      05 31 40.6 +0.6
      comp=Z,78nm,1.3s
GSI   Gunungsitoli      55.29 238 P      P      05 31 49.0 +9.0
UGM   Wanagama          55.38 218 P      pP     05 31 57.5 -3.2
KRJI  Kerinci           55.47 231 P      P      05 31 52.0  +11
LHSI  Lahat             55.65 228 P      P      05 31 53.5  +11
KLI   Kotabumi          55.74 226 P      pP     05 31 55.8 -7.4
MDSI  Maura Dua         55.81 227 P      pP     05 31 55.8 -7.9
PBSI  Pulau Batu        55.87 236 P      P      05 31 52.5 +8.4
LEM   Lembang           55.90 222 LR     LR     05 58 07.2
      comp=Z,18nm,18.8s,baz=149,slow=39
LEM   Lembang           55.90 222 P      pP     05 31 56.8 -7.8
NGP   Nagpur            55.93 270 ex     P      05 31 38.3 -6.2
BHPL  Bhopal            56.03 273 ex     P      05 31 44.3 -0.9
BHPL                              IAmb   IAmb   05 31 45.0
      comp=Z,33nm,1.5s
SISI  Saibi             56.33 234 P      P      05 31 56.5 +9.1
AB31  Akbulak array     56.39 309 P      P      05 31 47.6 +0.2
AB31                              pmax   pmax
      comp=Z,7.0nm,0.5s
KBL   Kabul             56.65 289 eP     P      05 31 49.6 -0.1
      comp=Z,21nm,0.8s
KBL   Kabul             56.65 289 eP     P      05 31 49.6 -0.1
KBL                               pmax   pmax
      comp=Z,21nm,0.8s
KBS   Kingsbay          58.11 350 eP     P      05 31 59.2 +0.1
KBS                               pmax   pmax
      comp=Z,125nm,1.1s
PRGR  Permogore         58.66 326 eP     P      05 32 02.5 -0.6
PRGR                              e*PP   pP     05 32 23.6 +0.1
PRGR                              e*SP   sP     05 32 31.6 -0.8
PRGR                              pmax   pmax
      comp=Z,22nm,0.9s
WRAB  Tennant Creek     59.66 188 i P    P      05 32 10.2 -0.3
WRAB                              pmax   pmax
      comp=Z,18nm,0.9s
WB2   Warramunga Arr    59.67 188 eP     P      05 32 10.1 -0.4
      comp=Z,41nm,0.8s
WR1   Warramunga Arr    59.67 188 eP     P      05 32 09.6 -0.9
WR1                               epP    pP     05 32 30.0 -1.0
WRA   Warramunga Arr    59.67 188 P      P      05 32 09.6 -0.9
      comp=Z,19nm,0.8s,baz=3.0,slow=7.0,SNR=38
WRA                               pP     pP     05 32 30.0 -1.0
      comp=Z,40nm,0.9s,baz=359,slow=7.1,SNR=16
APA   Apatity           60.37 335⇓iP     P      05 32 14.0 -0.8
APA                               pmax   pmax
      comp=Z,7.0nm,0.8s
HAMF  Hammerfest        61.40 340 eP     P      05 32 21.7  0.0
YKA   Yellowknife Ar    61.48  31 P      P      05 32 22.6 +0.2
      comp=Z,8.8nm,0.8s,baz=303,slow=6.5,SNR=25
YKA                               pP     pP     05 32 44.2 +1.4
      comp=Z,3.1nm,0.7s,baz=298,slow=6.7,SNR=4.0
ARCES ARCESS Array B    61.60 339 P      P      05 32 23.5 +0.3
      comp=Z,3.8nm,0.6s,baz=52,slow=7.9,SNR=15
ARCES                             pP     pP     05 32 43.6 -0.1
      comp=Z,6.7nm,1.0s,baz=62,slow=6.2,SNR=2.4
ARCES                             LR     LR     06 04 12.0
      comp=Z,50nm,18.9s,baz=48,slow=41
ARE0  ARCESS Array S    61.60 339 eP     P      05 32 20.3 -2.8
KTK1  Kautokeino        62.56 339 eP     P      05 32 29.6  0.0
GEYT  Alibeck           62.72 298 P      P      05 32 32.2 +1.1
      comp=Z,6.5nm,0.7s,baz=27,slow=0.7,SNR=9.2
GEYT                              pP     pP     05 32 52.3 +0.6
      comp=Z,3.6nm,0.6s,baz=60,slow=3.5,SNR=2.3
GEYT                              LR     LR     06 00 57.7
      comp=Z,51nm,21.4s,baz=45,slow=37
DAG   Danmarks Havn     63.18 355⇑iP     P      05 32 33.4 -0.1
DAG                               pmax   pmax
      comp=Z,1.0nm,0.6s
DAG   Danmarks Havn     63.18 355⇑iP     P      05 32 33.4 -0.1
      comp=Z,2.1nm,0.6s
TRO   Tromso            63.29 341 eP     P      05 32 34.6 +0.2
AS31  Alice Springs     63.40 188 eP     P      05 32 35.4 -0.2
AS31                              epP    pP     05 32 55.5 -0.8
ASAR  Alice Springs     63.40 188 P      P      05 32 35.0 -0.6
      comp=Z,15nm,0.8s,baz=11,slow=6.6,SNR=85
ASAR                              pP     pP     05 32 55.5 -0.8
      comp=Z,21nm,0.9s,baz=12,slow=7.0,SNR=14
A04D  Lummi Island      64.82  47 P      P      05 32 46.0 +1.3
      baz=302
NLWA  Neilton Lookou    64.86  48 eP     P      05 32 46.2 +1.2
      comp=Z,69nm,1.1s
D03D  Eldon             65.23  48 P      P      05 32 49.6 +2.2
      baz=302,SNR=14
MOS   Moscow            65.25 323 eP     P      05 32 46.3 -1.0
MOS                               e*PP   pP     05 33 06.8 -1.2
MOS                               e*SP   sP     05 33 15.4 -1.5
MOS                               eS     S      05 41 21.3 -3.0
MOS                               e             05 41 41.2
MOS                               e             05 42 31.9
MOS                               pmax   pmax
      comp=Z,41nm,0.7s
B05A  Bryant            65.41  47 P      P      05 32 50.0 +1.5
      baz=302,SNR=7.2
D04E  Lakebay           65.60  48 P      P      05 32 52.3 +2.5
      baz=302,SNR=5.9
DZM   Mont Dzumac       65.64 155 eLR    LR     05 52 19.4
      comp=Z,127nm,25.6s
F04D  Rainier, OR       66.06  49 P      P      05 32 54.7 +2.0
      baz=303
E04D  Cinebar           66.06  49 P      P      05 32 54.9 +2.1
      baz=303,SNR=17
OBN   Obninsk           66.10 323 i P    P      05 32 52.4 -0.4
OBN                               i             05 33 21.1
OBN                               i             05 35 19.9
OBN                               i S    S      05 41 26.6 -8.0
OBN                               pmax   pmax
      comp=Z,10.0nm,0.7s
OBN                               MLR    MLR
      comp=Z,69nm,14.0s
C06D  Leavenworth       66.27  47 P      P      05 32 55.5 +1.4
      baz=303
G03D  McMinnville, O    66.38  50 P      P      05 32 56.8 +2.0
      baz=303
LPSR  Galich'ya Gora    66.40 320 eP     P      05 32 55.0 +0.2
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LPSR                              e*SP   PcP    05 33 23.5 -0.5
LPSR                              pmax   pmax
      comp=Z,10.0nm,0.7s
FINES FINESS Array B    66.57 332 P      P      05 32 55.4 -0.4
      comp=Z,24nm,0.6s,baz=46,slow=8.2,SNR=71
FINES                             pP     pP     05 33 15.3 -1.3
      comp=Z,14nm,0.8s,baz=36,slow=5.2,SNR=5.5
FINES                             LR     LR     06 04 06.6
      comp=Z,73nm,19.2s,baz=52,slow=38
I02D  Swisshome         66.63  51 P      P      05 32 58.3 +1.9
      baz=303
COR   Corvallis         66.70  51 eP     P      05 32 58.5 +1.7
      comp=Z,78nm,0.9s
COR   Corvallis         66.70  51 eP     P      05 32 58.5 +1.7
COR                               pmax   pmax
      comp=Z,78nm,0.9s
MOR8  Moi Rana          66.97 339 eP     P      05 32 56.9 -1.3
F05D  White Salmon      67.07  49 P      P      05 33 01.1 +1.9
      baz=304
H04D  Lebanon           67.07  51 P      P      05 33 01.3 +2.1
      baz=304,SNR=5.3
VSR   Storozhevoye      67.07 318 eP     P      05 32 59.0 -0.1
VSR                               e*SP   PcP    05 33 27.3 +0.5
VSR                               pmax   pmax
      comp=Z,9.0nm,0.5s
J01E  Myrtle Point      67.10  52 P      P      05 33 01.6 +2.2
      baz=303
I03D  Drain, OR         67.16  52 P      P      05 33 02.0 +2.2
      baz=304,SNR=12
DBC   Dubki             67.36 308⇑iP     P      05 33 00.8 -0.4
DBC                               i S    pP     05 33 22.1 +0.1
DBC                               pmax   pmax
      comp=Z,26nm,0.6s
KRNR  Karanay           67.42 307 eP     P      05 33 01.0 -0.6
KRNR                              eS     pP     05 33 23.0 +0.6
G05D  Wamic, OR         67.51  49 P      P      05 33 03.7 +1.7
      baz=304,SNR=5.9
K02D  Willamette Mer    67.52  53 P      P      05 33 03.9 +1.7
      baz=304,SNR=5.8
GNBR  Gunib             67.62 307 P      P      05 33 04.5 +1.7
GNBR                              eS     sP     05 33 30.3 -2.3
I04A  Tendick Farm,     67.67  51 P      P      05 33 04.7 +1.6
      baz=304,SNR=5.2
L02E  Cave Junction     67.85  53 P      P      05 33 06.1 +1.9
      baz=304
I05D  Terrebonne, OR    68.00  50 P      P      05 33 06.7 +1.5
      baz=304,SNR=10
SUMG  Summit            68.07   0⇑iP     P      05 33 06.5 +0.9
SUMG                              i             05 33 29.0
SUMG                              pmax   pmax
      comp=Z,100nm,1.0s
SUMG  Summit            68.07   0⇑iP     P      05 33 06.5 +0.9
      comp=Z,101nm,1.0s
SUMG                              i             05 33 29.0
J04D  Umpqua Nationa    68.16  51 P      P      05 33 08.2 +1.8
      baz=304,SNR=15
NEW   Newport           68.16  45 P      P      05 33 07.3 +1.1
      baz=305,SNR=48
L04D  Klamath Falls     68.62  52 P      P      05 33 10.9 +1.7
      baz=304,SNR=22
J05D  Fort Rock, OR     68.66  51 P      P      05 33 11.3 +1.9
      baz=305,SNR=24
K04D  Chiloquin, OR     68.72  52 P      P      05 33 11.7 +1.9
      baz=305
M02C  Callahan          68.75  53 P      P      05 33 12.1 +2.2
      baz=304,SNR=12
N02D  Trinity Center    69.08  54 P      P      05 33 13.9 +1.9
      baz=305,SNR=12
M04C  Macdoel           69.15  53 P      P      05 33 14.4 +1.9
      baz=305,SNR=21
KCPM  Cahto Peak        69.26  55 eP     P      05 33 14.0 +0.8
      comp=Z,34nm,0.8s
ZEI   Tsey              69.26 309 eP     P      05 33 14.0 +0.7
ZEI                               pmax   pmax
      comp=Z,13nm,0.7s
KIV   Kislovodsk        69.31 310 eP     P      05 33 15.7 +2.3
KIV                               epP    PcP    05 33 35.6 -0.9
KIV   Kislovodsk        69.31 310 eP     P      05 33 15.5 +2.1
KIV                               pmax   pmax
      comp=Z,99nm,1.0s
KIV                               MLR    MLR
      comp=Z,46nm,17.0s
KIV   Kislovodsk        69.31 310 P      P      05 33 15.1 +1.7
      SNR=11
KIV                               P      P      05 33 15.1 +1.7
      SNR=11
KBZ   Khabaz            69.32 310 P      P      05 33 14.2 +0.9
      comp=Z,9.7nm,0.9s,baz=61,slow=2.7,SNR=13
KBZ                               pP     pP     05 33 34.9 +0.7
      comp=Z,22nm,0.9s,baz=50,slow=6.7,SNR=13
KBZ                               LR     LR     06 06 36.6
      comp=Z,62nm,19.0s,baz=48,slow=38
SHA1  Shidzhatmaz       69.46 310 i P    P      05 33 16.2 +1.7
O02D  Mt. Diablo Mer    69.48  55 P      P      05 33 16.4 +2.0
      baz=305,SNR=16
SCO   Scoresbysund      69.53 354 i P    P      05 33 13.3 -0.8
SCO                               pmax   pmax
      comp=Z,18nm,1.2s
SCO   Scoresbysund      69.53 354 i P    P      05 33 13.3 -0.8
      comp=Z,18nm,1.2s
O03E  Paynes Creek      70.03  54 P      P      05 33 18.9 +1.1
      baz=305,SNR=28
IZAR  Zarasai           70.29 327 eP     P      05 33 19.2 +0.2
IZAR                              IAmb   IAmb   05 33 20.6
      comp=Z,12nm,0.7s
MICGM Minsk             70.42 325 e      pP     05 33 35.0 -5.8
MNK   Minsk             70.42 325 eP     pP     05 33 35.0 -5.8
ISAL  Salakas           70.46 327 eP     P      05 33 20.2 +0.2
ISAL                              IAmb   IAmb   05 33 21.9
      comp=Z,17nm,0.9s
IIGN  Ignalina          70.56 327 eP     P      05 33 20.9 +0.2
IIGN                              IAmb   IAmb   05 33 25.4
      comp=Z,17nm,0.7s
WVOR  Wild Horse Val    70.71  51 eP     P      05 33 20.6 -1.3
      comp=Z,38nm,1.3s
WVOR  Wild Horse Val    70.71  51 eP     P      05 33 20.7 -1.3
WVOR                              pmax   pmax
      comp=Z,38nm,1.3s
MSO   Missoula          70.75  45 P      P      05 33 22.9 +0.8
      baz=308,SNR=39
STKA  Stephens Creek    71.17 180 P      P      05 33 24.8 +0.3
      comp=Z,2.4nm,0.7s,baz=337,slow=6.5,SNR=5.6
STKA                              pP     pP     05 33 45.2 -0.3
      comp=Z,6.1nm,0.7s,baz=338,slow=8.2,SNR=5.9
SOC   Sochi             71.27 311 eP     P      05 33 23.9 -1.3
SOC                               e*PP   pP     05 33 45.5 -0.7
SOC                               e             05 36 09.5
SOC                               ePPP   PPP    05 37 51.3
SOC                               eS     S      05 42 38.4 +2.1
SOC                               e*SS   SKSac  05 43 16.7 -4.2
SOC                               eSS    SS     05 47 18.6 +7.7
SOC                               pmax   pmax
      comp=Z,13nm,0.5s
SOC                               MLR    MLR
      comp=Z,171nm,15.0s
BCA   Borcka            71.42 309⇑iP     P      05 33 28.4 +2.2
FFC   Flin Flon         71.43  33 eP     P      05 33 26.4 +0.4
      comp=Z,26nm,1.1s
FFC   Flin Flon         71.43  33 i P    P      05 33 26.6 +0.6
DOMB  Dombas            71.66 339 eP     P      05 33 28.9 +1.6
NB2   NORSAR Subarra    71.83 337 P      P      05 33 28.2 -0.1
      comp=Z,14nm,0.6s,baz=36,slow=6.2
NB2   NORSAR Subarra    71.83 337 P      P      05 33 25.2 -3.1
NB2   NORSAR Subarra    71.83 337 P      P      05 33 28.2 -0.1
      baz=36,slow=6.2
NOA   NORSAR Array B    71.83 337 P      P      05 33 28.0 -0.3
      comp=Z,15nm,0.7s,baz=39,slow=6.0,SNR=44
NOA                               pP     pP     05 33 49.4  0.0
      comp=Z,1.0nm,0.4s,baz=50,slow=5.3,SNR=3.2
NOA                               LR     LR     06 09 02.8
      comp=Z,48nm,20.7s,baz=40,slow=39
NC602 NORSAR Array S    71.97 337 eP     P      05 33 29.4 +0.3
NORES NORESS Array B    71.97 337 P      P      05 33 29.0 -0.1
NORES                             pmax   pmax
      comp=Z,2.0nm,0.3s
AKN   Aaknes            72.12 339 eP     P      05 33 30.4 +0.4
EGMT  Eagleton          72.22  42 P      P      05 33 31.9 +1.0
      baz=310,SNR=29
AKASG Malin Array Be    72.32 322 P      P      05 33 31.1 -0.3
      comp=Z,3.3nm,0.3s,baz=45,slow=6.5,SNR=30
AKASG                             pP     pP     05 33 51.7 -0.8
      comp=Z,5.2nm,0.4s,baz=44,slow=6.4,SNR=8.2
AKASG                             LR     LR     06 05 38.4
      comp=Z,52nm,21.5s,baz=215,slow=36
HLID  Hailey            72.50  48 P      P      05 33 34.2 +1.4
      baz=308,SNR=39
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BOZ	Bozeman (W)	72.77	45	P	P	05 33 35.6	+1.3
	baz=309,SNR=78						
OSL	Oslo	72.86	337	eP	P	05 33 34.4	+0.1
SKAR	Skarslia	72.98	338	eP	P	05 33 35.8	+0.6
HYA	Hoyanger	73.18	339	eP	P	05 33 36.1	-0.1
SFJD	Kangerlussuaq	73.27	5	eP	P	05 33 37.2	+0.6
	comp=Z,28nm,0.9s						
SFJD	Kangerlussuaq	73.27	5	eP	P	05 33 37.2	+0.6
SFJD				pmax	pmax		
	comp=Z,28nm,0.9s						
SFJD	Kangerlussuaq	73.27	5	⇑iP	P	05 33 36.7	0.0
	comp=Z,26nm,0.9s						
NVAR	Mina Array Bea	73.32	54	P	P	05 33 39.4	+1.6
	comp=Z,18nm,0.8s,baz=287,slow=6.0,SNR=98						
NVAR				LR	LR	05 59 31.1	
	comp=Z,15nm,21.6s,baz=294,slow=30						
MLAC	Mammoth, Mammo	73.47	55	P	P	05 33 40.6	+1.9
	baz=308,SNR=12						
VOG	Valley Oaks Go	73.92	56	P	P	05 33 41.9	+0.9
	baz=308						
ASK	Askoy	74.02	339	eP	P	05 33 41.3	+0.2
ODD1	Odda	74.09	338	eP	P	05 33 42.2	+0.5
H17A	Grant Village	74.12	45	P	P	05 33 45.5	+3.1
	baz=310,SNR=58						
SMMC	Simmler	74.13	57	P	P	05 33 44.2	+1.8
	baz=308						
TIN	Tinemaha, Big	74.20	55	P	P	05 33 44.3	+1.5
	baz=308,SNR=6.2						
RLMT	Red Lodge	74.35	44	P	P	05 33 44.9	+1.2
	baz=311,SNR=30						
VES	Vestal, Richgr	74.40	56	P	P	05 33 44.4	+0.6
	baz=308,SNR=20						
PKM	Mcpherson Peak	74.51	58	P	P	05 33 46.1	+1.4
	baz=308,SNR=8.5						
BLS5	Blasjo	74.55	338	eP	P	05 33 44.7	+0.4
HORU	Horodok	74.66	322	P	P	05 33 45.7	+0.6
CWC	Cottonwood Cre	74.67	55	P	P	05 33 46.9	+1.2
	baz=308						
GRAC	Grapevine Rang	74.78	55	P	P	05 33 47.8	+1.7
	baz=308,SNR=20						
ISA	Isabella, Lake	74.90	56	P	P	05 33 47.1	+0.3
	baz=308,SNR=12						
LAO	LASA Array	74.91	41	P	P	05 33 47.8	+1.1
	baz=312,SNR=9.9						
ARVC	Arvin	75.00	57	P	P	05 33 48.2	+0.8
	baz=308,SNR=6.4						
R11A	Troy Canyon, C	75.05	53	P	P	05 33 49.2	+1.4
	baz=309,SNR=71						
DIKM	Dikmen	75.05	312	⇑iP	P	05 33 49.2	+1.7
SNART	Snartemo	75.22	337	eP	P	05 33 48.9	+0.8
MPMC	Manual Prospec	75.28	55	P	P	05 33 50.4	+1.2
	baz=308,SNR=32						
LVV	L'vov	75.36	324	eP	P	05 33 49.8	+0.7
FURC	Furnace Creek,	75.43	55	P	P	05 33 51.3	+1.5
	baz=309,SNR=46						
BLG	Laguna Peak, P	75.47	58	P	P	05 33 50.9	+0.8
	baz=308						
TPNV	Topopah Spring	75.51	54	P	P	05 33 51.9	+1.5
	baz=309,SNR=85						
LRMC	Laurel Mtn Rad	75.52	56	P	P	05 33 51.4	+0.9
	baz=308,SNR=7.7						
DUG	Dugway, Tooele	75.54	50	P	P	05 33 52.1	+1.5
	baz=310,SNR=42						
BZK	Bozkurt	75.56	313	⇓iP	P	05 33 51.1	+0.7
EDW2	Edwards Air Fo	75.69	57	P	P	05 33 52.7	+1.3
	baz=308,SNR=22						
BW06	Boulder Array	75.74	46	P	P	05 33 52.6	+0.8
	baz=311,SNR=42						
PDAR	Pinedale Array	75.74	46	P	P	05 33 52.5	+0.8
	comp=Z,14nm,0.8s,baz=277,slow=2.1,SNR=147						
PDAR				pP	pP	05 34 14.8	+2.0
	comp=Z,5.7nm,0.7s,baz=274,slow=1.6,SNR=5.6						
DECC	Green Verdugo	75.86	57	P	P	05 33 53.5	+1.2
	baz=308						
KWP	Kalwaria Pacla	76.09	324	eP	P	05 33 54.2	+0.9
KWP	Kalwaria Pacla	76.09	324	eP	P	05 33 54.2	+0.9
SHOC	Shoshone, Teco	76.15	55	P	P	05 33 55.2	+1.2
	baz=309,SNR=12						
GSC	Goldstone, Bar	76.19	56	P	P	05 33 55.5	+1.2
	baz=309,SNR=22						
BFSC	Mount Baldy Ra	76.31	57	P	P	05 33 55.9	+0.9
	baz=309,SNR=8.4						
RRX	Edison Barstow	76.33	56	P	P	05 33 56.5	+1.5
	baz=309						
BURAR	Bucovina Array	76.35	321	⇓iP	P	05 33 55.8	+0.8
BURAR	Bucovina Array	76.35	321	P	P	05 33 55.7	+0.8
BIZ	Bicaz	76.40	320	⇓iP	P	05 33 56.1	+1.0
SCI2	San Clemente I	76.51	58	P	P	05 33 57.2	+1.2
	baz=309						
CFR	Carcaliu	76.59	318	⇑iP	P	05 33 57.0	+0.8
TUQ	Turquoise Moun	76.67	55	P	P	05 33 58.4	+1.4
	baz=309,SNR=21						
HEC	Hector,Ludlow	76.79	56	P	P	05 33 59.0	+1.3
	baz=309,SNR=14						
KOLS	Kolonicke sedl	76.79	324	eP	P	05 33 58.2	+0.9
KOLS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KOLS	Kolonicke sedl	76.79	324	eP	P	05 33 58.2	+0.9
VRI	Vrincioaia	76.83	319	⇑iP	P	05 33 58.8	+1.2
PLOR	Plostina	76.88	319	⇓iP	P	05 33 58.9	+1.0
TIRR	Tirgusor	76.94	317	⇑iP	P	05 33 58.4	+0.2
OJC	Ojcow	76.95	326	eP	P	05 33 58.7	+0.5
OJC	Ojcow	76.95	326	eP	P	05 33 58.7	+0.5
UZH	Uzhgorod	77.00	324	eP	P	05 33 58.9	+0.4
UZH				e		05 34 18.8	
UZH				e		05 34 26.0	
MURC	Murrieta	77.01	57	P	P	05 33 59.5	+0.7
	baz=309						
TLB	Topalu	77.05	318	⇓iP	P	05 33 59.9	+1.1
TRSU	Trosnyk	77.08	323	P	P	05 33 59.2	+0.3
OZUR		77.14	320	⇓iP	P	05 34 00.9	+1.5
BRTR	Keskin Array B	77.23	311	P	P	05 34 00.3	+0.2
	comp=Z,1.6nm,0.6s,baz=73,slow=4.3,SNR=9.1						
BRTR				pP	pP	05 34 21.2	-0.1
	comp=Z,3.9nm,0.5s,baz=75,slow=3.4,SNR=6.4						
BRTR				LR	LR	06 13 14.1	
	comp=Z,27nm,18.3s,baz=68,slow=40						
ULM	Lac du Bonnet	77.24	34	P	P	05 33 59.7	-0.1
	comp=Z,16nm,0.9s,baz=308,slow=7.7,SNR=16						
ULM				LR	LR	06 10 48.3	
	comp=Z,24nm,18.3s,baz=321,slow=38						
GMRC	Granite Mounta	77.25	55	P	P	05 34 01.5	+1.2
	baz=310,SNR=31						
NIE	Niedzica	77.33	325	eP	P	05 34 01.2	+0.9
NIE	Niedzica	77.33	325	eP	P	05 34 01.2	+0.9
MDND	Maddock	77.33	37	P	P	05 34 00.9	+0.5
	baz=316						
Q16A	Castle Valley	77.34	50	eP	P	05 34 02.0	+1.2
	comp=Z,44nm,1.4s						
DOPR	Dopca	77.43	320	⇓iP	P	05 34 02.6	+1.6
PFO	Pinyon Flats O	77.47	57	eP	P	05 34 02.9	+1.4
	comp=Z,19nm,1.0s						
PFO	Pinyon Flats O	77.47	57	P	P	05 34 02.2	+0.7
	baz=309,SNR=9.3						
K22A	Casper	77.48	45	P	P	05 34 02.2	+0.8
	baz=313,SNR=20						
MLR	Muntele Rosu	77.49	319	eP	P	05 34 02.2	+0.8
	comp=Z,56nm,1.7s						
MLR	Muntele Rosu	77.49	319	⇓iP	P	05 34 03.2	+1.8
MLR	Muntele Rosu	77.49	319	eP	P	05 34 02.2	+0.8
MLR				pmax	pmax		
	comp=Z,56nm,1.7s						
109C	Camp Elliot, M	77.51	58	P	P	05 34 02.5	+0.9
	baz=309						
BELC	Belle Mtn. Jos	77.53	56	P	P	05 34 02.5	+0.6
	baz=310,SNR=17						
SRU	San Rafael Swe	77.59	49	eP	P	05 34 03.8	+1.6
	comp=Z,43nm,1.1s						
RSSD	Black Hills	77.79	42	eP	P	05 34 03.8	+0.5
	comp=Z,21nm,1.0s						
RSSD	Black Hills	77.79	42	eP	P	05 34 03.8	+0.5
RSSD				pmax	pmax		
	comp=Z,21nm,1.0s						
RSSD	Black Hills	77.79	42	P	P	05 34 03.5	+0.2
	baz=314						
LANS	Liptovska Anna	77.89	325	eP	P	05 34 05.3	+1.8
LANS	Liptovska Anna	77.89	325	eP	P	05 34 05.3	+1.8
NEE2	Needles Airpor	77.92	55	P	P	05 34 04.7	+0.8
	baz=310						
MONP2	Monument Peak	77.95	57	P	P	05 34 05.2	+0.8
	baz=310,SNR=5.4						
KSP	Ksiaz	77.96	328	eP	P	05 34 04.3	+0.6
KSP	Ksiaz	77.96	328	eP	P	05 34 04.3	+0.6
IRM	Iron Mountain	77.97	56	P	P	05 34 05.5	+1.3
	baz=310,SNR=25						
VOIR		77.97	320	⇓iP	P	05 34 05.2	+1.1
BC3	Big Chuckawall	78.09	56	P	P	05 34 06.0	+1.1
	baz=310,SNR=23						
OSTC	Ostas	78.21	328	eP	P	05 34 06.5	+1.3
OSTC				ex	x	05 34 27.2	
O20A	White River Ci	78.22	47	P	P	05 34 06.5	+0.8
	baz=312,SNR=21						
MORC	Moravsky Berou	78.25	327	⇓iP	P	05 34 06.6	+1.1
MORC	Moravsky Berou	78.25	327	P	P	05 34 06.1	+0.6
MORC	Moravsky Berou	78.25	327	eP	P	05 34 05.9	+0.4
MORC				epP	pP	05 34 27.2	+0.4
CHVC	Chvalec	78.25	328	eP	P	05 34 06.1	+0.7
IKP	In-Ko-Pah, Jac	78.31	57	P	P	05 34 07.4	+1.2
	baz=310,SNR=7.7						
DPC	Dobruska-Polom	78.32	328	eP	P	05 34 06.7	+0.8
DPC				e		05 34 28.1	
DPC				e		05 34 36.9	
DPC	Dobruska-Polom	78.32	328	eP	P	05 34 06.7	+0.8
DPC				epP	pP	05 34 28.1	+0.9
DPC				esP	sP	05 34 36.9	+0.9
SWSC	Sam W. Stewart	78.32	57	P	P	05 34 07.0	+0.9
	baz=310						
UPC	Upice	78.33	328	eP	P	05 34 06.4	+0.6
UPC				e		05 34 27.6	
UPC	Upice	78.33	328	eP	P	05 34 06.4	+0.6
UPC				epP	pP	05 34 27.6	+0.4
PDMCI	Parker Dam,Lak	78.52	55	P	P	05 34 08.4	+1.3
	baz=310,SNR=14						
LOT	Lotru	78.60	321	⇓iP	P	05 34 08.1	+0.6
PSZ	Piszkesteto	78.62	324	⇑iP	P	05 34 08.5	+0.9
PSZ	Piszkesteto	78.62	324	eP	P	05 34 06.1	-1.5
Y12C	Blythe	78.63	56	eP	P	05 34 06.9	-0.8
	comp=Z,36nm,0.8s						
Y12C				epP	pP	05 34 32.7	+3.7
Y12C	Blythe	78.63	56	P	P	05 34 09.2	+1.4
	baz=310,SNR=10						
VYHS	Vyhne	78.66	325	eP	P	05 34 08.4	+0.7
VYHS				e		05 34 29.9	
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VYHS	Vyhne	78.66	325	eP	P	05 34 08.4	+0.7
VYHS				epP	pP	05 34 29.9	+0.8
AGMN	Agassiz Nation	78.71	35	P	P	05 34 07.5	-0.4
	baz=318,SNR=8.8						
BRG	Berggiesshubel	78.88	329	i P	P	05 34 09.0	+0.2
	comp=Z,15nm,0.9s						
BRG				epP	pP	05 34 30.3	+0.1
	comp=Z,7.1nm,0.8s						
BRG				esP	sP	05 34 39.4	+0.4
	comp=Z,15nm,1.2s						
BRG				ePP	PP	05 37 02.4	-5.2
	comp=Z,2.8nm,0.7s						
BRG	Berggiesshubel	78.88	329	i P	P	05 34 09.0	+0.2
BRG				e*PP	pP	05 34 30.3	+0.1
BRG				e*SP	sP	05 34 39.4	+0.4
BRG				pmax	pmax		
	comp=Z,15nm,0.9s						
BRG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRG				pmax	pmax		
	comp=N,15nm,1.2s						
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GLA	Glamis	78.88	56	P	P	05 34 10.5	+1.3
	baz=310,SNR=14						
JAVC	Velka Javorina	78.89	326	eP	P	05 34 10.5	+1.5
JAVC				epP	pP	05 34 31.8	+1.4
PVCC	Panska Ves	78.90	329	eP	P	05 34 09.8	+0.9
PVCC				e		05 34 13.1	
PVCC	Panska Ves	78.90	329	eP	P	05 34 09.8	+0.9
PVCC				ex	x	05 34 13.1	
CLL	Collm	78.90	330	epP	pP	05 34 30.8	+0.5
CLL	Collm	78.90	330	eP	P	05 34 08.0	-0.9
CLL				i		05 34 12.2	
CLL				i *PP	pP	05 34 30.1	-0.3
CLL				pmax	pmax		
	comp=Z,28nm,0.9s						
CLL	Collm	78.90	330	eP	P	05 34 08.0	-0.9
	comp=Z,28nm,0.9s						
CLL				i		05 34 12.2	
	comp=Z,20nm,0.8s						
CLL				i pP	pP	05 34 30.1	-0.3
CLL				esP	sP	05 34 39.0	-0.2
CLL				ePPP	PPP	05 38 54.0	
CLL				eS	S	05 44 00.0	-0.7
CLL				ePS	PnS	05 44 48.0	-4.5
CLL				ePPS	PPS	05 45 24.0	
CLL				e		05 53 24.0	
CLL				LmV		06 12 00.0	
	comp=Z,100nm,18.4s						
N23A	Red Feather La	78.99	46	P	P	05 34 11.5	+1.4
	baz=313,SNR=22						
VRAC	Vranov	79.01	327	⇓iP	P	05 34 11.1	+1.5
VRAC	Vranov	79.01	327	eP	P	05 34 10.1	+0.5
VRAC				epP	pP	05 34 31.5	+0.5
SIRR	Siria	79.02	322	⇑iP	P	05 34 10.9	+1.2
RRR	Rubha Reidh	79.08	343	eP	P	05 34 10.2	+0.4
GZR	Gura Zlata	79.12	321	⇓iP	P	05 34 10.8	+0.4
RRH	Rhenigidale	79.22	343	⇑eP	P	05 34 10.9	+0.4
KRUC	Moravsky	79.28	327	eP	P	05 34 11.6	+0.5
KRUC				epP	pP	05 34 32.8	+0.3
GOPC	GO Pecny, Ondr	79.29	328	eP	P	05 34 11.6	+0.5
GOPC	GO Pecny, Ondr	79.29	328	eP	P	05 34 11.6	+0.5
KAC	Achnashellach	79.29	343	⇑eP	P	05 34 11.4	+0.4
ELND	Elena	79.33	318	⇓iP	P	05 34 11.6	+0.2
PRU	Pruhonice	79.33	328	eP	P	05 34 11.9	+0.6
PRU				e		05 34 33.3	
PRU	Pruhonice	79.33	328	eP	P	05 34 11.9	+0.6
PRU				epP	pP	05 34 33.3	+0.6
BUD	Budapest	79.33	324	eP	P	05 34 12.1	+0.7
MODS	Modra-Piesok	79.43	326	eP	P	05 34 11.9	0.0
MODS				e		05 34 33.4	
MODS				pmax	pmax		
	comp=Z,17nm,1.2s						
MODS	Modra-Piesok	79.43	326	eP	P	05 34 11.9	0.0
MODS				e		05 34 33.4	
WUAZ	Wupatki	79.45	53	P	P	05 34 14.0	+1.6
	baz=311,SNR=32						
TREC	Trest	79.48	327	eP	P	05 34 12.7	+0.5
TREC				e		05 34 34.3	
TREC	Trest	79.48	327	eP	P	05 34 12.7	+0.5
TREC				epP	pP	05 34 34.3	+0.7
BZS	Buzias	79.52	322	⇓iP	P	05 34 12.8	+0.4
KPL	Plockton	79.52	343	⇑eP	P	05 34 12.8	+0.7
KPL				IAmb	IAmb	05 34 13.6	
	comp=Z,38nm,0.8s						
EDU	Dundee	79.59	341	eP	P	05 34 12.7	+0.1
HERR	Herculane	79.67	321	⇑iP	P	05 34 13.5	+0.3
RAYN	Ar Rayn	79.81	292	eP	P	05 34 16.4	+2.0
RAYN				epP	pP	05 34 37.7	+1.9
RAYN	Ar Rayn	79.81	292	eP	P	05 34 16.4	+2.0
RAYN				e*PP	pP	05 34 37.7	+1.9
ISCO	Idaho Springs	79.93	46	P	P	05 34 16.5	+1.4
	baz=314,SNR=18						
NKC	Novy Kostel	79.97	330	eP	P	05 34 15.1	+0.3
NKC				e		05 34 36.9	
NKC	Novy Kostel	79.97	330	eP	P	05 34 15.1	+0.3
NKC				epP	pP	05 34 36.9	+0.6
MVCO	Mesa Verde	80.04	50	P	P	05 34 17.1	+1.3
	baz=313,SNR=22						
ESY	Stoneypath	80.05	340	⇑eP	P	05 34 15.2	+0.1
MDVR	Moldovita	80.08	321	⇓iP	P	05 34 15.9	+0.3
SUSD	Miller	80.12	39	P	P	05 34 15.5	-0.2
	baz=317						
EAB	Aberfoyle	80.25	341	eP	P	05 34 16.4	+0.2
CONA	Conrad Observa	80.38	326	i P	P	05 34 18.0	+0.8
	comp=Z,15nm,1.0s,SNR=7.6						
CONA				i pP	pP	05 34 39.7	+1.1
	comp=Z,22nm,1.1s						
KHC	Kasperske Hory	80.39	328	eP	P	05 34 17.6	+0.5
KHC				e		05 34 39.3	
KHC				e		05 34 47.4	
KHC	Kasperske Hory	80.39	328	eP	P	05 34 17.6	+0.5
KHC				epP	pP	05 34 39.3	+0.7
KHC				esP	sP	05 34 47.4	+0.1
MORH	Mrgy, Hungar	80.46	324	eP	P	05 34 16.1	-1.4
GEC2	GERESS Array S	80.57	328	epP	pP	05 34 40.4	+0.8
GERES	GERESS Array B	80.57	328	P	P	05 34 18.1	-0.1
	comp=Z,4.1nm,0.7s,baz=34,slow=5.0,SNR=26						
GERES				pP	pP	05 34 39.9	+0.3
	comp=Z,3.0nm,0.7s,baz=40,slow=3.2,SNR=4.4						
GERES				LR	LR	06 12 59.6	
	comp=Z,91nm,18.9s,baz=38,slow=38						
PGBU	Glenifferbraes	80.62	341	⇑eP	P	05 34 18.6	+0.4
PGBU				IAmb	IAmb	05 34 19.5	
	comp=Z,34nm,0.9s						
S22A	4UR Ranch, Cre	80.65	48	P	P	05 34 20.7	+1.7
	baz=313,SNR=25						
W18A	Petrified Fore	80.71	52	P	P	05 34 20.6	+1.4
	baz=312						
Q24A	Divide	80.77	47	P	P	05 34 20.3	+0.6
	baz=314						
EYMN	Ely	80.86	33	P	P	05 34 19.6	-0.1
	baz=321,SNR=7.3						
214A	Organ Pipe Nat	80.89	56	P	P	05 34 21.2	+1.1
	baz=311,SNR=10						
VTS	Vitosha	80.91	319	epP	pP	05 34 42.1	+0.5
	comp=Z,27nm,0.9s						
VTS	Vitosha	80.91	319	⇑iP	P	05 34 21.2	+1.1
ARSA	Arzberg	81.05	326	i P	P	05 34 21.1	+0.5
	comp=Z,7.6nm,1.1s						
ARSA				i pP	pP	05 34 42.6	+0.5
	comp=Z,9.8nm,1.0s						
OGNE	Ogallala	81.07	43	P	P	05 34 21.5	+0.6
	baz=316,SNR=5.1						
MOA	Molln	81.12	327	i P	P	05 34 21.5	+0.5
	comp=Z,3.5nm,0.6s						
MOA				i pP	pP	05 34 43.6	+1.1
	comp=Z,10nm,1.1s						
SDCO	Great Sand Dun	81.42	48	P	P	05 34 24.4	+1.3
	baz=314,SNR=20						
GAL1	Galloway	81.53	341	eP	P	05 34 23.3	+0.3
GAL1				IAmb	IAmb	05 34 23.3	
	comp=Z,27nm,1.3s						
CLGH	Cloghs, Cushen	81.68	342	⇑eP	P	05 34 23.7	0.0
CLGH				IAmb	IAmb	05 34 25.0	
	comp=Z,45nm,1.2s						
PERS	Pernice	81.70	326	i P	P	05 34 24.4	+0.2
PERS				epP	pP	05 34 45.5	-0.1
PERS				i		05 34 53.9	
SOKA	Soboth	81.71	326	i P	P	05 34 24.6	+0.4
	comp=Z,28nm,1.2s,SNR=17						
SOKA				i pP	pP	05 34 46.4	+0.7
	comp=Z,30nm,1.1s						
ECSD	EROS Data Cent	81.78	39	P	P	05 34 24.6	+0.1
	baz=318,SNR=21						
C40A	Isle Royale Na	81.86	32	P	P	05 34 24.4	-0.4
	baz=323						
E38A	The Farm, Brul	81.89	34	P	P	05 34 24.7	-0.3
	baz=321,SNR=8.8						
TUC	Tucson	81.94	55	eP	P	05 34 26.9	+1.2
	comp=Z,24nm,1.3s						
TUC	Tucson	81.94	55	eP	P	05 34 26.9	+1.2
TUC				pmax	pmax		
	comp=Z,24nm,1.3s						
TUC	Tucson	81.94	55	P	P	05 34 26.7	+1.0
	baz=312						
MEM	Membach	82.04	333	⇑P	P	05 34 25.6	-0.2
	comp=Z,14nm,0.9s						
OBKA	Obir	82.05	326	i P	P	05 34 26.4	+0.3
	comp=Z,11nm,0.8s						
LBWR	Ladybower, Pea	82.05	339	⇑eP	P	05 34 26.2	+0.4
LBWR				IAmb	IAmb	05 34 27.0	
	comp=Z,50nm,0.7s						
F37A	Hinrichs Farm,	82.10	35	P	P	05 34 25.9	-0.3
	baz=321						
KBA	Koelnbreinsper	82.11	327	i PcP	P	05 34 27.8	+1.3
	comp=Z,23nm,1.0s,SNR=15						
KBA				i pP	pP	05 34 48.6	+0.7
	comp=Z,21nm,1.0s						
KBA	Koelnbreinsper	82.11	327	P	P	05 34 27.7	+1.3
KSCO	Kaye Shedlock'	82.13	45	P	P	05 34 27.0	+0.3
	baz=316						
LEGS	Legarje	82.15	325	i P	P	05 34 26.0	-0.5
LEGS				epP	pP	05 34 47.0	-1.0
F38A	Pierce - Schro	82.25	34	P	P	05 34 27.1	+0.1
	baz=321,SNR=21						
MYKA	Terra Mystica	82.34	327	i P	P	05 34 27.2	-0.3
	comp=Z,8.6nm,0.7s,SNR=6.5						
MYKA				i pP	pP	05 34 49.1	+0.1
	comp=Z,18nm,1.0s						
GMM	Mts of Mourne	82.41	341	⇑eP	P	05 34 27.6	+0.1
SPMN	Marine on St.	82.41	35	P	P	05 34 27.4	-0.4
	baz=321						
BCLA	Clavier	82.44	334	⇑P	P	05 34 27.5	-0.4
BCLA				⇑pP	pP	05 34 49.7	+0.3
T25A	Trinidad	82.46	47	P	P	05 34 29.4	+0.9
	baz=315,SNR=11						
WATA	Walderalm	82.63	328	i P	P	05 34 29.3	+0.2
	comp=Z,7.2nm,0.6s						
WTTA	Wattenberg	82.67	328	i P	P	05 34 29.5	+0.1
	comp=Z,13nm,0.8s,SNR=5.6						
WTTA				i pP	pP	05 34 51.8	+0.8
	comp=Z,20nm,1.1s						
F39A	Loretta	82.70	34	P	P	05 34 29.1	-0.2
	baz=322,SNR=5.0						
SNF	Seneffe	82.72	334	⇑P	P	05 34 29.2	0.0
SNF				⇓pP	pP	05 34 51.6	+0.7
ABTA	Abfaltersbach	82.72	327	i P	P	05 34 29.3	-0.2
	comp=Z,12nm,1.1s						
ABTA				i pP	pP	05 34 50.9	-0.2
	comp=Z,19nm,1.2s						
JAVS	Javornik	82.74	326	i P	P	05 34 28.4	-1.3
JAVS				i pP	pP	05 34 49.9	-1.2
BGNE	Belgrade	82.75	41	P	P	05 34 29.7	0.0
	baz=318,SNR=7.1						
WME	Myndd Eilian	82.75	340	eP	P	05 34 29.8	+0.4
D41A	Chassel	82.78	32	P	P	05 34 29.4	-0.3
	baz=323						
WLF	Walferdange	82.78	333	⇑P	P	05 34 30.3	+0.7
SCHQ	Schefferville	82.78	16	P	P	05 34 29.7	+0.1
	comp=Z,11nm,0.7s,baz=353,slow=5.5,SNR=5.9						
SCHQ				LR	LR	06 14 55.3	
	comp=Z,12nm,18.0s,baz=353,slow=38						
TASM	ASL Pad, Albuq	82.80	50	P	P	05 34 31.8	+1.5
	baz=314,SNR=38						
TASM	ASL Pad, Albuq	82.80	50	P	P	05 34 31.9	+1.6
	baz=314,SNR=22						
ANMO	Albuquerque	82.80	50	eP	P	05 34 31.7	+1.4
	comp=Z,23nm,1.0s						
ANMO	Albuquerque	82.80	50	eP	P	05 34 31.7	+1.4
ANMO				pmax	pmax		
	comp=Z,20nm,1.0s						
ANMO	Albuquerque	82.80	50	P	P	05 34 31.6	+1.4
	baz=314						
MOTA	Moosalm	82.82	329	i P	P	05 34 30.2	+0.1
	comp=Z,22nm,0.9s,SNR=8.9						
MOTA				i pP	pP	05 34 52.7	+1.1
	comp=Z,27nm,1.1s						
RETA	Reutte	82.84	329	i PcP	P	05 34 30.4	+0.3
	comp=Z,19nm,0.8s,SNR=14						
RETA				i pP	pP	05 34 52.8	+1.1
	comp=Z,34nm,1.1s						
SQTA	Sankt Quirin	82.87	328	i PcP	P	05 34 30.9	+0.5
	comp=Z,11nm,0.7s						
SQTA				i pP	pP	05 34 52.3	+0.4
	comp=Z,20nm,1.0s						
GIVF	Givet	82.88	334	eP	P	05 34 29.1	-1.0
GIVF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FOEL	Foel Wylfa	82.91	339	⇑eP	P	05 34 30.7	+0.4
FOEL				IAmb	IAmb	05 34 31.6	
	comp=Z,34nm,0.7s						
YLL	Llanberis	82.95	340	eP	P	05 34 31.0	+0.6
DOU	Dourbes	82.96	334	⇑P	P	05 34 30.4	-0.2
DOU				⇑pP	pP	05 34 51.8	-0.4
PDG	Podgorica	83.02	321	⇓iP	P	05 34 31.5	+0.5
TTG	Podgorica	83.02	321	epP	pP	05 34 52.6	0.0
	comp=Z,50nm,1.0s						
F40A	Park Falls	83.04	34	P	P	05 34 30.6	-0.5
	baz=322						
LLW	Llanuwychllyn	83.08	340	⇑eP	P	05 34 31.4	+0.3
G39A	Holcombe	83.08	34	P	P	05 34 30.6	-0.7
	baz=322						
BFO	Black Forest	83.09	331	eP	P	05 34 30.9	-0.4
BFO				epP	pP	05 34 52.2	-0.7
BFO	Black Forest	83.09	331	eP	P	05 34 31.0	-0.4
BFO				e*PP	pP	05 34 52.2	-0.7
Y22D	IRIS PASSCAL I	83.12	51	P	P	05 34 33.2	+1.3
	baz=314						
BAIF	Baives	83.12	334	eP	P	05 34 30.5	-0.9
BAIF				pmax	pmax		
	comp=Z,54nm,1.9s						
HLM1	Long Mynd	83.16	339	eP	P	05 34 31.8	+0.2
HLM1				IAmb	IAmb	05 34 33.0	
	comp=Z,7.1nm,1.0s						
FETA	Feichten	83.23	329	i PcP	P	05 34 32.3	0.0
	comp=Z,17nm,1.0s,SNR=9.0						
FETA				i pP	pP	05 34 54.3	+0.4
	comp=Z,15nm,0.9s						

DAVA	**Damuels**	83.35	329	*i* PcP	P	05 34 33.5	+0.6
	comp=Z,22nm,0.9s,SNR=9.5						
DAVA				*i* pP	pP	05 34 55.3	+0.9
	comp=Z,36nm,1.4s						
CDF	**Champ du Feu**	83.42	331	*e*P	P	05 34 32.4	-0.7
CDF				pmax	pmax		
	comp=Z,14nm,0.9s						
G40A	**Rib Lake**	83.52	34	P	P	05 34 33.4	-0.2
	baz=322,SNR=8.7						
STRD	**Stroud**	83.62	338	*e*P	P	05 34 34.2	+0.3
STRD				IAmb	IAmb	05 34 35.0	
	comp=Z,54nm,0.8s						
121A	**Cookes Peak, D**	83.65	53	P	P	05 34 36.4	+1.7
	baz=313,SNR=38						
MCH1	**Michaelchurch**	83.66	339	*e*P	P	05 34 34.6	+0.6
MCH1				IAmb	IAmb	05 34 35.1	
	comp=Z,21nm,0.7s						
MONM	**Monmouth**	83.74	339	*e*P	P	05 34 35.1	+0.6
MONM				IAmb	IAmb	05 34 36.4	
	comp=Z,13nm,0.7s						
DAVOX	**Davos/Dischmat**	83.76	329	LR	LR	06 14 25.0	
	comp=Z,49nm,18.9s,baz=70,slow=37						
CBKS	**Cedar Bluff**	83.83	44	P	P	05 34 35.2	-0.2
	baz=317,SNR=6.8						
E43A	**Lone Tree Farm**	83.97	31	P	P	05 34 35.5	-0.3
	baz=324,SNR=7.2						
F42A	**Maple Grove Fa**	84.00	32	P	P	05 34 35.5	-0.5
	baz=324						
HINF	**Hinteralfeld**	84.08	331	*e*P	P	05 34 37.2	+0.8
HINF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
URZ	**Urewera**	84.10	153	pP	pP	05 34 57.4	-0.5
	comp=Z,13nm,0.7s,baz=310,slow=6.1,SNR=3.7						
HAU	**Haudompre**	84.10	332	*e*P	P	05 34 35.5	-1.0
HAU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RSBS	**Rosebush, Pemb**	84.17	340	*e*P	P	05 34 36.5	-0.2
RSBS				IAmb	IAmb	05 34 37.3	
	comp=Z,5.6nm,0.9s						
E44A	**Grand Marais A**	84.20	31	P	P	05 34 37.1	+0.1
	baz=325						
TUE	**Stuetta**	84.23	329	*e*P	P	05 34 36.9	-0.5
TUE				*e*pP	pP	05 34 59.8	+0.7
MATQ	**Matagami**	84.49	24	P	P	05 34 38.0	-0.4
	baz=331,SNR=8.3						
I41A	**Arkdale**	84.62	35	P	P	05 34 38.7	-0.4
	baz=323						
D46A	**Sault St. Mari**	84.70	29	P	P	05 34 39.0	-0.5
	baz=326,SNR=24						
SCIA	**State Center**	84.79	38	P	P	05 34 40.4	+0.4
	baz=321						
D47A	**Chapleau**	84.92	29	P	P	05 34 40.1	-0.5
	baz=327,SNR=18						
HTL	**Hartland**	84.97	339	*e*P	P	05 34 41.4	+0.7
E46A	**Sault Ste Mari**	85.04	30	P	P	05 34 40.8	-0.4
	baz=326,SNR=10.0						
PMOR	**Pomariorio Ree**	85.10	114	*e*T	T	07 08 08.2	
	comp=Z,102nm,0.2s						
F45A	**CMU Biological**	85.13	31	P	P	05 34 41.5	-0.1
	baz=325						
I42A	**Draeger Farm,**	85.17	34	*e*P	P	05 34 40.8	-1.1
	comp=Z,24nm,0.8s						
I42A	**Draeger Farm,**	85.17	34	P	P	05 34 41.8	-0.1
	baz=323,SNR=5.5						
H43A	**Windswept, Lux**	85.19	33	P	P	05 34 42.4	+0.4
	baz=324						
KSU1	**Kansas State U**	85.25	42	P	P	05 34 42.2	-0.2
	baz=319,SNR=6.8						
D48A	**Paudash Townsh**	85.29	28	P	P	05 34 41.7	-0.8
	baz=328,SNR=9.6						
LSQQ	**Lebel-sur-Quev**	85.31	24	P	P	05 34 42.2	-0.3
	baz=331						
E47A	**Iron Bridge**	85.36	29	P	P	05 34 42.3	-0.4
	baz=327,SNR=13						
CHGQ	**Chibougamau**	85.36	22	P	P	05 34 42.0	-0.7
	baz=333,SNR=16						
JFWS	**Jewell Farm**	85.36	35	P	P	05 34 42.5	-0.4
	baz=322,SNR=5.3						
CABF	**La Chapelle**	85.37	331	*e*P	P	05 34 42.1	-0.9
CABF				pmax	pmax		
	comp=Z,19nm,1.3s						
D49A	**Beulah Townshi**	85.37	28	P	P	05 34 42.3	-0.6
	baz=328,SNR=10						
L40A	**Anamosa**	85.60	37	P	P	05 34 43.8	-0.3
	baz=322,SNR=9.1						
G45A	**Suttons Bay**	85.60	31	P	P	05 34 43.9	-0.1
	baz=325						
AMTX	**Amarillo**	85.61	47	P	P	05 34 45.1	+0.6
	baz=316						
LOR	**Lormes**	85.62	333	*e*P	P	05 34 43.3	-0.8
LOR				pmax	pmax		
	comp=Z,33nm,1.0s						
MSTX	**Muleshoe**	85.64	49	P	P	05 34 44.8	+0.2
	baz=316,SNR=17						
G46A	**Petoskey**	85.69	31	P	P	05 34 44.7	+0.2
	baz=326						
PPT2	**Papeete2**	85.69	117	*e*LR	LR	06 01 48.7	
	comp=Z,217nm,27.0s						
PPT2	**Papeete2**	85.69	117	*e*T	T	07 09 00.2	
	comp=Z,46nm,0.3s						
MNTX	**Cornudas Mount**	85.70	52	P	P	05 34 45.7	+0.9
	baz=315,SNR=20						
PAE	**Paea**	85.74	117	*e*T	T	07 09 04.2	
	comp=Z,6.4nm,0.3s						
E48A	**Lockeyer**	85.75	29	P	P	05 34 44.2	-0.5
	baz=328,SNR=8.1						
FLN	**La Foliniere**	85.78	336	*e*P	P	05 34 43.9	-0.9
FLN				pmax	pmax		
	comp=Z,25nm,1.1s						
H45A	**Beulah**	85.79	32	P	P	05 34 45.1	+0.1
	baz=325						
LDF	**La Druitiere**	85.82	336	*e*P	P	05 34 44.0	-1.0
LDF				pmax	pmax		
	comp=Z,15nm,1.0s						
TIAR	**Tiarei**	85.83	117	*e*T	T	07 09 05.5	
	comp=Z,13nm,0.3s						
SSF	**Saint Saulge**	85.93	333	*e*P	P	05 34 44.9	-0.7
SSF				pmax	pmax		
	comp=Z,20nm,1.0s						
LPL	**La Plagne**	86.04	330	*e*P	P	05 34 45.8	-0.7
LPL				pmax	pmax		
	comp=Z,19nm,0.9s						
TVO	**Taravao**	86.05	117	*e*T	T	07 09 11.1	
	comp=Z,3.7nm,0.3s						
LPG	**La Plagne**	86.05	330	*e*P	P	05 34 45.9	-0.7
LPG				pmax	pmax		
	comp=Z,17nm,0.8s						
F48A	**Evansville**	86.13	29	P	P	05 34 46.3	-0.3
	baz=327,SNR=5.8						
SMF	**Signal de Mont**	86.16	332	*e*P	P	05 34 46.1	-0.7
SMF				pmax	pmax		
	comp=Z,24nm,1.2s						
I45A	**Fountain**	86.19	32	P	P	05 34 47.2	+0.2
	baz=325						
GLMI	**Grayling**	86.19	31	P	P	05 34 47.5	+0.5
	baz=326,SNR=5.2						
H46A	**Fife Lake**	86.20	31	P	P	05 34 47.2	+0.2
	baz=326,SNR=7.4						
G47A	**Hillman**	86.20	30	P	P	05 34 47.1	+0.1
	baz=327,SNR=5.7						
AVF	**Avril sur Loir**	86.21	333	*e*P	P	05 34 46.4	-0.6
AVF				pmax	pmax		
	comp=Z,35nm,0.8s						
D51A	**Lot 18 Range I**	86.23	27	P	P	05 34 46.4	-0.7
	baz=330						
GRR	**Gorron**	86.23	336	*e*P	P	05 34 46.5	-0.6
GRR				pmax	pmax		
	comp=Z,27nm,1.0s						
E50A	**Wahnapitae**	86.32	28	P	P	05 34 47.2	-0.3
	baz=329,SNR=6.9						
L42A	**Oliver, Polo**	86.35	36	P	P	05 34 47.2	-0.5
	baz=323,SNR=5.0						
N40A	**Mertquake, Sal**	86.35	37	P	P	05 34 48.1	+0.3
	baz=322,SNR=5.2						
K43A	**Burlington**	86.38	34	P	P	05 34 47.6	-0.3
	baz=324						
F49A	**Sandfield**	86.40	29	P	P	05 34 47.6	-0.4
	baz=328,SNR=7.3						
M41A	**Milan**	86.45	37	P	P	05 34 48.2	0.0
	baz=322,SNR=9.6						
BNI	**Bardonecchia**	86.45	330	*e*P	P	05 34 48.3	-0.1
	comp=Z,8.0nm,0.9s						
BNI	**Bardonecchia**	86.45	330	*e*P	P	05 34 48.3	-0.1
BNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
H47A	**Mio**	86.55	31	P	P	05 34 49.1	+0.4
	baz=326,SNR=5.0						
I46A	**Reed City**	86.59	32	P	P	05 34 49.3	+0.3
	baz=326						
BGF	**Bois d'Agland**	86.59	333	*e*P	P	05 34 48.2	-0.7
BGF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
D52A	**ZEK Kipawa Sen**	86.66	26	P	P	05 34 48.7	-0.5
	baz=330,SNR=9.7						
E51A	**G1948 Merrick**	86.67	27	P	P	05 34 48.7	-0.6
	baz=329,SNR=10						
TAOE	**Nuku Hiva Isla**	86.67	104	*e*LR	LR	06 02 22.2	
	comp=Z,231nm,28.3s						
TAOE	**Nuku Hiva Isla**	86.67	104	*e*T	T	07 10 20.0	
	comp=Z,48nm,0.2s						
MBDF	**Montbardon**	86.69	330	*e*P	P	05 34 48.0	-1.6
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
H48A	**Harrisville**	86.81	30	P	P	05 34 50.0	0.0
	baz=327						
D53A	**Lac Vacive, Po**	86.81	26	*e*P	P	05 34 49.0	-0.9
	comp=Z,19nm,0.8s						
D53A				*e*pP	pP	05 35 12.7	+1.1
D53A	**Lac Vacive, Po**	86.81	26	P	P	05 34 49.6	-0.3
	baz=331,SNR=14						
N41A	**Harden Midland**	86.83	37	P	P	05 34 50.2	0.0
	baz=322						
ORIF	**Oris-en-Rattie**	86.87	330	*e*P	P	05 34 53.8	+3.4
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
I47A	**Gladwin**	86.91	31	P	P	05 34 50.8	+0.3
	baz=326						
MEH	**Mehetia**	86.93	116	*e*T	T	07 10 33.3	
	comp=Z,410nm,0.3s						
L44A	**Lake County Fo**	86.99	34	P	P	05 34 50.9	0.0
	baz=324						
J46A	**Howard City**	87.00	32	P	P	05 34 51.4	+0.5
	baz=325						
ROSF	**Rostrenen**	87.02	337	*e*P	P	05 34 50.6	-0.3
ROSF				pmax	pmax		
	comp=Z,54nm,1.2s						
F51A	**Arnstein**	87.04	28	P	P	05 34 50.6	-0.5
	baz=329,SNR=8.9						
TCF	**Toulx Ste Croi**	87.05	333	*e*P	P	05 34 50.7	-0.4
TCF				pmax	pmax		
	comp=Z,16nm,1.1s						
TOBO	**Tobermory, Bru**	87.05	29	P	P	05 34 51.0	-0.1
	baz=328						
SSB	**Saint Sauveur**	87.07	331	*e*P	P	05 34 50.3	-1.0
SSB				*e*pP	pP	05 35 13.2	+0.1
SSB	**Saint Sauveur**	87.07	331	*e*P	P	05 34 50.3	-1.0
SSB				*e**PP	pP	05 35 13.2	+0.1
I48A	**Sherman Twp**	87.09	31	P	P	05 34 51.4	+0.1
	baz=327						
D54A	**Lac Fusel, La**	87.09	25	P	P	05 34 50.8	-0.5
	baz=331,SNR=13						
M43A	**Waltham Townsh**	87.12	36	P	P	05 34 51.6	0.0
	baz=323,SNR=14						
SBF	**Sospel**	87.14	329	*e*P	P	05 34 51.0	-0.7
SBF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
E52A	**Mattawa**	87.17	27	P	P	05 34 51.1	-0.6
	baz=330,SNR=5.8						
WMOK	**Wichita Mounta**	87.35	46	P	P	05 34 53.0	+0.2
	baz=318,SNR=17						
F52A	**Sundridge**	87.36	27	P	P	05 34 52.5	-0.2
	baz=330,SNR=9.1						
VIVF	**Saint-Julien-l**	87.38	331	*e*P	P	05 34 53.1	+0.3
VIVF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KLBO	**Killbear Provi**	87.42	28	P	P	05 34 52.8	-0.1
	baz=329						
N43A	**Stutzman Famil**	87.42	36	P	P	05 34 53.1	+0.1
	baz=323,SNR=9.4						
J47A	**Sunmer**	87.43	32	*e*P	P	05 34 53.8	+0.8
	comp=Z,34nm,0.9s						
J47A	**Sunmer**	87.43	32	P	P	05 34 53.6	+0.6
	baz=326,SNR=7.0						
E53A	**Dumoine, Ponti**	87.43	26	P	P	05 34 52.4	-0.6
	baz=331,SNR=9.3						
K46A	**Dorr**	87.48	33	P	P	05 34 53.3	0.0
	baz=325						
E54A	**Lac Daplat, Po**	87.55	26	P	P	05 34 53.1	-0.4
	baz=331,SNR=13						
M44A	**Midewin, Midew**	87.57	35	P	P	05 34 53.7	0.0
	baz=324,SNR=6.6						
MFF	**Saint Martin d**	87.57	335	*e*P	P	05 34 53.4	-0.2
MFF				pmax	pmax		
	comp=Z,29nm,1.0s						
I49A	**Point Hope**	87.64	30	P	P	05 34 54.4	+0.5
	baz=327						
BUKO	**Buck Lake**	87.64	28	P	P	05 34 53.7	-0.3
	baz=330,SNR=5.1						
ALGO	**Algonquin Park**	87.67	26	P	P	05 34 53.5	-0.6
	baz=330,SNR=8.0						
HDIL	**Hopedale**	87.67	36	P	P	05 34 54.4	+0.2
	baz=323,SNR=7.6						
BMRO	**Meriville Lake**	87.70	29	P	P	05 34 54.6	+0.3
	baz=328,SNR=6.3						
J48A	**Bridge Port**	87.80	31	P	P	05 34 55.5	+0.8
	baz=327						
L46A	**Eue Claire**	87.82	34	P	P	05 34 55.0	+0.1
	baz=325						
K47A	**Vermontville**	87.82	32	P	P	05 34 54.9	0.0
	baz=326						
BRCO	**Bruce Peninsul**	87.92	29	P	P	05 34 55.4	+0.1
	baz=328						
LMR	**La Mourre**	87.96	329	*e*P	P	05 34 53.9	-1.6
LMR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
J49A	**Marlette**	88.00	31	P	P	05 34 56.2	+0.5
	baz=327						
N44A	**Piper City**	88.01	35	P	P	05 34 55.9	+0.1
	baz=324						
BASO	**Ashfield**	88.03	30	P	P	05 34 56.6	+0.8
	baz=328						
K48A	**Perry**	88.08	32	P	P	05 34 56.7	+0.7
	baz=326,SNR=6.3						
TUL1	**Leonard**	88.09	43	P	P	05 34 56.8	+0.5
	baz=320,SNR=6.3						
LATQ	**La Tuque**	88.09	23	P	P	05 34 56.2	+0.1
	baz=334						
BWLO	**Walkerton**	88.14	29	P	P	05 34 56.7	+0.4
	baz=328,SNR=6.2						
H52A	**Wyevale**	88.15	28	P	P	05 34 56.2	-0.2
	baz=329,SNR=6.4						
PEMO	**Pembroke**	88.19	26	P	P	05 34 56.0	-0.5
	baz=331,SNR=9.5						
G53A	**Haliburton**	88.19	27	P	P	05 34 56.4	-0.2
	baz=330,SNR=8.6						
N45A	**Kentland**	88.24	35	P	P	05 34 57.3	+0.4
	baz=324,SNR=5.5						
CAF	**Calviac**	88.28	333	*e*P	P	05 34 58.0	+1.0
CAF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
P43A	**Skaggs, Pawnee**	88.30	37	P	P	05 34 57.3	+0.1
	baz=323,SNR=7.0						
L47A	**Sherwood**	88.31	33	P	P	05 34 57.4	+0.2
	baz=326,SNR=5.5						
F55A	**Otter Lake**	88.35	25	P	P	05 34 56.7	-0.6
	baz=332						
K49A	**Clarkson**	88.36	31	P	P	05 34 58.0	+0.6
	baz=327						
O44A	**Mansfield**	88.37	36	P	P	05 34 57.7	+0.1
	baz=324						
TXAR	**Lajitas Array**	88.41	53	P	P	05 34 58.7	+0.7
	comp=Z,10nm,0.9s,baz=293,slow=3.3,SNR=85						
TXAR				pP	pP	05 35 21.1	+1.4
	comp=Z,1.3nm,0.5s,baz=316,slow=2.5,SNR=2.7						
ABTX	**Abilene, Hawle**	88.42	48	P	P	05 34 58.6	+0.7
	baz=318,SNR=9.6						
I51A	**Listowel**	88.45	29	P	P	05 34 58.4	+0.5
	baz=328,SNR=5.3						
BANO	**Bancroft**	88.53	27	P	P	05 34 58.3	+0.1
	baz=331,SNR=14						
N46A	**Monticello**	88.54	35	P	P	05 34 58.2	-0.1
	baz=325						
O45A	**Potomac**	88.63	35	P	P	05 34 59.1	+0.4
	baz=324,SNR=6.6						
M47A	**Cromwell**	88.64	34	P	P	05 34 59.0	+0.2
	baz=326						
L48A	**N Adams**	88.66	32	P	P	05 34 59.2	+0.4
	baz=326,SNR=12						
AAM	**Ann Arbor**	88.68	32	P	P	05 34 59.1	+0.1
	baz=327						
K50A	**Casco**	88.70	31	P	P	05 34 59.2	+0.2
	baz=327						
LFF	**La Frestale**	88.73	333	*e*P	P	05 34 58.9	-0.2
LFF				pmax	pmax		
	comp=Z,12nm,0.7s						
CCM	**Cathedral Cave**	88.74	39	*e*P	P	05 34 59.7	+0.4
	comp=Z,39nm,0.8s						
CCM	**Cathedral Cave**	88.74	39	*e*P	P	05 34 59.7	+0.4
CCM				pmax	pmax		
	comp=Z,39nm,0.8s						
CCM	**Cathedral Cave**	88.74	39	P	P	05 34 59.3	0.0
	baz=322						
G55A	**Calabogie**	88.74	26	P	P	05 34 58.9	-0.2
	baz=331,SNR=5.5						
HHAR	**Hobbs**	88.77	42	*e*P	P	05 34 59.1	-0.4
	comp=Z,14nm,0.9s						
L49A	**Milan**	88.80	32	P	P	05 35 00.2	+0.7
	baz=327						
PLVO	**Plevna**	88.80	26	P	P	05 34 59.3	-0.2
	baz=331,SNR=11						
SFIN	**Lafayette**	88.81	35	P	P	05 34 59.8	+0.3
	baz=325,SNR=8.7						
ORIO	**Orleans, Innes**	88.97	25	P	P	05 34 59.8	-0.3
	baz=332,SNR=11						
I53A	**Kortright Cn E**	88.97	28	P	P	05 35 00.6	+0.3
	baz=329						
ACTO	**Acton**	88.98	29	P	P	05 35 00.6	+0.3
	baz=329						
N47A	**Urbana**	89.01	34	P	P	05 35 00.5	0.0
	baz=326,SNR=14						
PKRO	**Pickering**	89.03	28	P	P	05 35 00.9	+0.3
	baz=330						
DELO	**Deloro Mine**	89.07	27	P	P	05 35 00.6	-0.1
	baz=331,SNR=12						
J52A	**Paris**	89.14	29	P	P	05 35 01.3	+0.2
	baz=329						
K51A	**Iona Station**	89.18	30	P	P	05 35 02.1	+0.8
	baz=328						
H55A	**Tweed**	89.19	27	P	P	05 35 01.2	-0.1
	baz=331,SNR=14						
P45A	**Graceland, Par**	89.21	36	P	P	05 35 01.7	+0.3
	baz=324,SNR=6.3						
DRWO	**Darlington Wes**	89.24	28	P	P	05 35 01.6	+0.1
	baz=330						
L50A	**Kingsville**	89.24	31	P	P	05 35 01.9	+0.3
	baz=327						
M49A	**Liberty Center**	89.24	32	P	P	05 35 01.7	+0.1
	baz=327						
U40A	**Yellville**	89.27	41	P	P	05 35 01.9	+0.1
	baz=321,SNR=44						
N48A	**Decatur**	89.31	33	P	P	05 35 02.1	+0.1
	baz=326,SNR=8.2						
I55A	**Frankford**	89.31	27	P	P	05 35 01.7	-0.2
	baz=331,SNR=6.0						
WLVO	**Wesleyville**	89.31	28	P	P	05 35 02.1	+0.3
	baz=330,SNR=5.2						
O47A	**Sheridan**	89.33	35	P	P	05 35 01.9	-0.1
	baz=325,SNR=5.7						
P46A	**Rosedale**	89.38	36	P	P	05 35 02.6	+0.4
	baz=324,SNR=8.6						
K52A	**Tillsonburg**	89.44	30	P	P	05 35 02.9	+0.4
	baz=329						
H56A	**Elgin**	89.47	26	P	P	05 35 02.8	+0.2
	baz=332,SNR=5.2						
TYNO	**Tyneside**	89.49	29	P	P	05 35 03.0	+0.3
	baz=329						
Q45A	**Warren Harvey,**	89.53	37	P	P	05 35 03.4	+0.4
	baz=324,SNR=10.0						
MTLF	**Montolieu**	89.59	332	*e*P	P	05 35 02.8	-0.4
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
N49A	**Columbus Grove**	89.61	33	P	P	05 35 03.7	+0.4
	baz=326,SNR=5.6						
STCO	**Saint Catharin**	89.65	29	P	P	05 35 03.4	0.0
	baz=330						
M50A	**Fremont**	89.68	32	P	P	05 35 03.5	-0.1
	baz=327						
W39A	**Magazine**	89.69	42	P	P	05 35 03.8	0.0
	baz=321,SNR=5.6						
TBI	**Tubuai**	89.74	121	*e*LR	LR	06 03 10.6	
	comp=Z,106nm,32.8s						
TBI	**Tubuai**	89.74	121	*e*T	T	07 13 54.9	
	comp=Z,120nm,0.3s						
O48A	**Farmland**	89.75	34	P	P	05 35 04.1	+0.1
	baz=326,SNR=6.5						
J54A	**Appleton**	89.79	28	P	P	05 35 04.3	+0.2
	baz=330						
PECO	**Prince Edward**	89.80	27	P	P	05 35 04.2	+0.1
	baz=331						
P47A	**Martinsville**	89.90	35	P	P	05 35 05.0	+0.2
	baz=325,SNR=5.8						
JCT	**Junction City**	89.90	49	P	P	05 35 05.4	+0.4
	baz=317,SNR=17						
MEDO	**Medina**	89.95	28	P	P	05 35 05.1	+0.2
	baz=330						
R45A	**Skylar, Fairfi**	89.96	37	P	P	05 35 05.4	+0.4
	baz=324,SNR=5.6						
S44A	**Carbondale**	89.98	38	P	P	05 35 05.6	+0.5
	baz=323,SNR=18						
LONY	**Lake Ozonia**	90.01	25	P	P	05 35 05.0	-0.2
	baz=333						
M51A	**Elyria**	90.09	31	P	P	05 35 05.5	0.0
	baz=328						
J55A	**Hilton**	90.09	28	P	P	05 35 05.7	+0.2
	baz=331,SNR=6.7						
WHTX	**Lake Whitney,**	90.13	47	P	P	05 35 06.3	+0.4
	baz=319,SNR=5.4						
O49A	**Covington**	90.16	33	P	P	05 35 06.2	+0.3
	baz=326,SNR=6.4						
N50A	**Nevada**	90.17	32	P	P	05 35 06.0	+0.1
	baz=327						
M52A	**Chesterland**	90.25	31	P	P	05 35 06.9	+0.6
	baz=328						
Q47A	**Bedord North L**	90.28	35	P	P	05 35 06.9	+0.4
	baz=325,SNR=14						
P48A	**Milroy**	90.29	34	P	P	05 35 06.3	-0.2
	baz=326						
MIAR	**Mount Ida**	90.30	43	P	P	05 35 07.3	+0.6
	baz=321,SNR=29						
L53A	**Girard**	90.32	30	P	P	05 35 07.2	+0.6
	baz=329,SNR=10						
K54A	**Basiliko Farm,**	90.35	29	P	P	05 35 07.1	+0.3
	baz=330,SNR=12						
N51A	**Ashland**	90.36	32	P	P	05 35 06.8	0.0
	baz=328						
R46A	**Gibon Southern**	90.38	37	P	P	05 35 07.2	+0.2
	baz=324						
L54A	**Sinclairville**	90.44	29	P	P	05 35 07.7	+0.5
	baz=330,SNR=9.4						
K55A	**Perry**	90.47	28	P	P	05 35 07.6	+0.3
	baz=330,SNR=9.9						
W41B	**Gary Mavity, V**	90.50	41	P	P	05 35 07.6	0.0
	baz=322,SNR=12						
O50A	**Cable**	90.50	33	P	P	05 35 07.7	+0.2
	baz=327,SNR=12						
EPF	**Esparros**	90.54	333	*e*P	P	05 35 06.6	-1.1
EPF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
P49A	**Miami Univ. Ec**	90.54	34	P	P	05 35 07.9	+0.2
	baz=326,SNR=7.0						
Q48A	**North Vernon**	90.60	35	P	P	05 35 08.2	+0.2
	baz=325,SNR=5.3						
M53A	**WI Miller and**	90.60	30	P	P	05 35 08.3	+0.4
	baz=329,SNR=5.5						
ACSO	**Alum Creek Sta**	90.69	33	P	P	05 35 08.8	+0.4
	baz=327,SNR=5.4						
S46A	**Don Dixon Farm**	90.71	37	P	P	05 35 08.7	+0.2
	baz=324						
X40A	**Basin Creek Fa**	90.73	42	P	P	05 35 09.1	+0.4
	baz=321,SNR=7.8						
N52A	**McGinn's Farm,**	90.73	31	P	P	05 35 08.4	-0.2
	baz=328						
R47A	**Wooly Knot Far**	90.76	36	P	P	05 35 09.0	+0.3
	baz=325,SNR=7.4						
L55A	**Hinsdale**	90.81	29	P	P	05 35 09.2	+0.2
	baz=330,SNR=5.9						
P50A	**Jamestown**	90.87	33	P	P	05 35 09.4	+0.2
	baz=327,SNR=7.0						
Q49A	**Aurora**	90.90	34	P	P	05 35 09.8	+0.4
	baz=326						
WCI	**Wyandotte Cave**	90.92	36	*e*P	P	05 35 10.0	+0.5
	comp=Z,16nm,0.9s						
WCI	**Wyandotte Cave**	90.92	36	*e*P	P	05 35 10.0	+0.5
WCI				pmax	pmax		
	comp=Z,16nm,0.9s						
WCI	**Wyandotte Cave**	90.92	36	P	P	05 35 09.9	+0.5
	baz=325						
O51A	**Pataskala**	90.92	32	P	P	05 35 09.6	+0.2
	baz=327						
M54A	**Oil Creek Stat**	90.93	30	P	P	05 35 09.9	+0.4
	baz=329,SNR=11						
435B	**Jarrell**	90.96	48	P	P	05 35 10.3	+0.5
	baz=318						

R48A	Northridge Ran baz=325	90.97	35	P	P	05 35 10.0	+0.3
ETSF	Etsaut	90.97	333	eP	P	05 35 10.4	+0.7
ETSF	 comp=Z,4.0nm,0.8s			pmax	pmax		
PKME	Peaks-Kenny Pk baz=337	91.03	21	P	P	05 35 10.3	+0.5
N53A	Lisbon baz=329,SNR=6.4	91.08	31	P	P	05 35 10.7	+0.5
T46A	Princeton baz=324,SNR=9.1	91.15	37	P	P	05 35 11.2	+0.7
S47A	Hartford baz=325	91.17	36	P	P	05 35 10.9	+0.2
LBNH	Lisbon baz=335	91.19	23	P	P	05 35 11.3	+0.7
O52A	Adamsville baz=328	91.26	32	P	P	05 35 11.1	+0.1
N54A	Moraine State baz=329,SNR=6.4	91.28	30	P	P	05 35 11.4	+0.3
P51A	Williamsport baz=327	91.29	33	P	P	05 35 11.1	0.0
M55A	Ridgway baz=330,SNR=12	91.31	29	P	P	05 35 11.8	+0.6
R49A	Shelbyville baz=326	91.37	35	P	P	05 35 11.9	+0.3
O53A	New Philadelph baz=328	91.40	31	P	P	05 35 12.0	+0.3
Q50A	Georgetown baz=327	91.43	34	P	P	05 35 11.8	0.0
S48A	Wiedeman Farm, baz=325,SNR=6.7	91.49	36	P	P	05 35 12.5	+0.3
M56A	Emporium baz=330,SNR=9.3	91.51	29	P	P	05 35 12.5	+0.3
P52A	Corning baz=328	91.55	32	P	P	05 35 12.1	-0.3
Q51A	Peebles baz=327,SNR=5.6	91.55	33	P	P	05 35 12.8	+0.4
T47A	Sharon Grove baz=325,SNR=7.7	91.56	37	P	P	05 35 12.9	+0.5
BINY	Binghamton baz=332	91.68	27	P	P	05 35 13.2	+0.2
Z41A	Richland Creek baz=321	91.70	43	P	P	05 35 13.4	+0.3
X43A	Marvell baz=322	91.70	41	P	P	05 35 13.7	+0.5
833A	Chaparral WMA, baz=318	91.72	50	P	P	05 35 14.2	+0.8
S49A	Springfield baz=326,SNR=7.5	91.73	35	P	P	05 35 13.5	+0.2
R50A	Paris baz=326	91.75	34	P	P	05 35 13.1	-0.3
T48A	Bowling Green baz=325	91.79	36	P	P	05 35 13.7	+0.2
O54A	Avella baz=329	91.79	31	P	P	05 35 14.0	+0.5
N55A	Marion Center baz=330,SNR=6.8	91.82	30	P	P	05 35 13.9	+0.3
WVT	Waverly comp=Z,7.7nm,0.8s	91.92	38	eP	P	05 35 14.7	+0.6
WVT	Waverly	91.92	38	eP	P	05 35 14.7	+0.6
WVT	 comp=Z,8.0nm,0.8s			pmax	pmax		
WVT	Waverly baz=324	91.92	38	P	P	05 35 14.3	+0.2
U47A	Clarksville baz=324	91.92	37	P	P	05 35 14.5	+0.3
N56A	West Decatur baz=330	91.96	29	P	P	05 35 14.6	+0.3
P53A	Whipple baz=328	91.98	32	P	P	05 35 14.4	+0.1
V46A	Holladay baz=324,SNR=5.8	92.04	38	P	P	05 35 14.7	0.0
R51A	Hillsboro baz=327	92.06	34	P	P	05 35 14.9	+0.2
Q52A	Bidwell baz=328	92.06	33	P	P	05 35 14.8	+0.1
T49A	Edmonton baz=326,SNR=7.9	92.19	36	P	P	05 35 15.7	+0.3
U48A	Cassie Pea, Po baz=325	92.21	37	P	P	05 35 15.7	+0.2
S50A	Richmond baz=326,SNR=6.2	92.22	35	P	P	05 35 15.7	+0.2
P54A	Burton baz=329	92.25	31	P	P	05 35 16.1	+0.4
V47A	Nunnelly baz=324,SNR=9.9	92.31	38	P	P	05 35 16.1	+0.2
SSPA	Standing Stone baz=331	92.36	29	P	P	05 35 16.5	+0.4
N57A	Milroy baz=331	92.38	29	P	P	05 35 16.6	+0.4
O56A	Blue Knob Stat baz=330	92.42	30	P	P	05 35 16.7	+0.2
R52A	Catlettsburg baz=327	92.43	33	P	P	05 35 16.7	+0.3
OXF	Oxford baz=323,SNR=7.0	92.45	40	P	P	05 35 16.7	+0.1
MCWV	Mont Chateau baz=329	92.45	31	P	P	05 35 16.8	+0.3
M59A	Waymart baz=332	92.45	27	P	P	05 35 16.6	+0.1
Q53A	Leroy baz=328	92.45	32	P	P	05 35 16.7	+0.2
W46A	Michie baz=324	92.45	39	P	P	05 35 16.4	-0.2
U49A	Red Boiling Sp baz=325,SNR=8.6	92.56	36	P	P	05 35 17.2	+0.1
T50A	Nancy baz=326,SNR=6.0	92.57	35	P	P	05 35 17.2	+0.1
P55A	Reedsville baz=329	92.59	31	P	P	05 35 17.6	+0.3
S51A	Beattyville baz=327	92.60	34	P	P	05 35 17.5	+0.2
Q54A	Coxs Mills baz=329	92.63	32	P	P	05 35 17.9	+0.5
V48A	Smith Brothers baz=325,SNR=6.7	92.71	38	P	P	05 35 17.7	-0.1
R53A	Hurricane baz=328	92.72	33	P	P	05 35 18.0	+0.2
W47A	Westpoint baz=324	92.74	38	P	P	05 35 17.9	0.0
X46A	Booneville baz=324	92.82	39	P	P	05 35 18.3	0.0
O57A	Amberson baz=331	92.82	29	P	P	05 35 18.7	+0.5
HRV	Adam Dziewonsk baz=335	92.87	24	P	P	05 35 18.9	+0.5
N59A	State Game Lan baz=332	92.88	27	P	P	05 35 19.0	+0.4
Q55A	Buckhannon baz=329	92.92	31	P	P	05 35 18.7	-0.1
P56A	Dayton Farm, R baz=330	92.98	30	P	P	05 35 19.2	+0.3
T51A	Gray baz=327	93.01	35	P	P	05 35 19.2	0.0
KEST	Kesra comp=Z,2.8nm,0.7s,baz=267,slow=8.9,SNR=3.7	93.03	323	pP	pP	05 35 40.8	-0.5
U50A	Jamestown baz=326,SNR=5.4	93.07	36	P	P	05 35 19.4	0.0
V49A	McMinnville baz=325	93.11	37	P	P	05 35 19.6	-0.1
W48A	Pulaski baz=325,SNR=12	93.14	38	P	P	05 35 19.9	+0.1
N60A	Cedar Hill Far baz=332	93.16	27	P	P	05 35 19.6	-0.2
O58A	Lewisberry baz=331	93.16	29	P	P	05 35 19.7	-0.1
S53A	Williamson baz=328	93.20	33	P	P	05 35 19.9	-0.1
X47A	Russelville baz=324	93.20	39	P	P	05 35 19.8	-0.3
M61A	Granite Spring baz=333	93.23	26	P	P	05 35 20.2	+0.1
R54A	Victor baz=328	93.25	32	P	P	05 35 20.5	+0.2
O59A	Robesonia baz=332	93.27	28	P	P	05 35 20.1	-0.2
P57A	Homestead Farm baz=330	93.31	30	P	P	05 35 20.0	-0.5
T52A	Hallie baz=327	93.31	34	P	P	05 35 20.5	-0.1
S54A	Dingess, Beckl baz=328	93.44	33	P	P	05 35 21.3	+0.1
PAL	Palisades baz=333	93.45	26	P	P	05 35 21.1	0.0
U51A	La Follette baz=326	93.47	35	P	P	05 35 21.3	0.0
W49A	Belvidere baz=325	93.48	38	P	P	05 35 21.2	-0.2
R55A	Marlinton baz=329	93.52	32	P	P	05 35 21.6	0.0
TZTN	Tazewell baz=327	93.54	35	P	P	05 35 21.8	+0.1
O60A	Telford baz=332	93.54	27	P	P	05 35 21.2	-0.3
Q57A	Strasburg baz=330	93.55	30	P	P	05 35 21.6	0.0
V50A	Pikevile baz=326	93.56	36	P	P	05 35 21.4	-0.3
P58A	Pank, Wackersv baz=331	93.58	29	P	P	05 35 21.7	0.0
X48A	Hartselle baz=325,SNR=5.7	93.65	38	P	P	05 35 21.6	-0.6
R56A	Bull Pasture M baz=330	93.70	31	P	P	05 35 22.4	0.0
U52A	Thorn Hill baz=327,SNR=6.5	93.74	35	P	P	05 35 22.7	+0.1
V51A	Loudon baz=326	93.80	36	P	P	05 35 23.0	+0.2
S55A	Lewisburg baz=329	93.80	32	P	P	05 35 22.9	+0.1
W50A	Signal Mountai baz=326	93.85	37	P	P	05 35 23.0	-0.1
Q58A	Fox Den Farm, baz=331	93.91	30	P	P	05 35 23.4	+0.1
X49A	Woodville baz=325	93.94	38	P	P	05 35 23.4	-0.1
T54A	Tazewell baz=328	93.96	33	P	P	05 35 23.9	+0.3
Y48A	Jasper baz=324	94.03	39	P	P	05 35 23.3	-0.6
O61A	Allentown baz=333	94.04	27	P	P	05 35 23.6	-0.2
V52A	Sevierville baz=327	94.10	35	P	P	05 35 24.2	0.0
U53A	Fall Branch baz=327	94.11	34	P	P	05 35 24.5	+0.2
W51A	Cleveland baz=326,SNR=5.1	94.14	36	P	P	05 35 24.3	-0.1
R57A	Stanardsville baz=330	94.14	31	P	P	05 35 24.6	+0.2
T55A	Pulaski baz=329	94.24	33	P	P	05 35 25.0	+0.1
X50B	Fort Payne baz=325	94.30	37	P	P	05 35 24.7	-0.5
U54A	Nelsons Funny baz=328	94.31	34	P	P	05 35 24.8	-0.4
BLA	Blacksburg baz=329	94.31	32	P	P	05 35 25.3	+0.1
R58A	Rapidan baz=330	94.34	30	P	P	05 35 25.0	-0.2
Y49A	Blount Mountai comp=Z,8.8nm,0.8s	94.44	38	eP	P	05 35 25.1	-0.7
Y49A	Blount Mountai baz=325,SNR=5.3	94.44	38	P	P	05 35 25.5	-0.3
S57A	Dark Hollow, R baz=330	94.44	31	P	P	05 35 25.5	-0.2
147A	Livingston baz=324	94.48	40	P	P	05 35 26.0	0.0
Q60A	Greensboro baz=332	94.55	28	P	P	05 35 26.2	0.0
W52A	Murphy baz=326	94.58	36	P	P	05 35 26.3	-0.1
X51A	Calhoun baz=326	94.59	37	P	P	05 35 26.1	-0.3
V53A	Saluda baz=327	94.59	35	P	P	05 35 26.4	-0.2
T56A	Rocky Mt baz=329	94.63	32	P	P	05 35 26.3	-0.4
U55A	TA2, Sparta baz=328	94.65	33	P	P	05 35 27.0	+0.1
R58B	Mineral baz=330	94.69	30	P	P	05 35 26.9	+0.1
Y50A	Piedmont baz=325	94.73	38	P	P	05 35 26.9	-0.2
LRAL	Lakeview Retre baz=324	94.82	39	P	P	05 35 27.5	-0.1
Q61A	Milford baz=332	94.84	28	P	P	05 35 27.5	0.0
148A	Greensboro baz=324	94.86	40	P	P	05 35 27.7	0.0
W53A	Cullowhee baz=327	94.86	35	P	P	05 35 27.7	-0.1
V54A	Nebo baz=328	94.88	34	P	P	05 35 27.6	-0.3
Z49A	Columbiana baz=325,SNR=5.4	94.92	39	P	P	05 35 27.6	-0.4
S58A	Poland Farm, P baz=330	94.92	31	P	P	05 35 27.9	0.0
T57A	Hurt baz=330	94.97	32	P	P	05 35 28.0	-0.1
X52A	Dahlonega baz=326	95.00	36	P	P	05 35 28.2	-0.1
ESDC	Sonseca Array comp=Z,1.2nm,0.6s,baz=25,slow=4.0,SNR=9.6	95.01	334	P	P	05 35 27.9	-0.5
ESDC	 comp=Z,2.3nm,0.7s,baz=13,slow=4.5,SNR=5.6			pP	pP	05 35 49.8	-0.5
ESDC	 comp=Z,37nm,19.6s,baz=280,slow=38			LR	LR	06 23 08.1	
Y51A	Rockmart baz=326,SNR=6.2	95.04	37	P	P	05 35 28.3	-0.3
U56A	King baz=329	95.06	33	P	P	05 35 28.4	-0.3
V55A	Taylorsville baz=328	95.14	34	P	P	05 35 28.7	-0.2
Z50A	Ashland baz=325,SNR=25	95.16	38	P	P	05 35 28.8	-0.3
149A	Jones baz=325,SNR=7.5	95.28	39	P	P	05 35 29.7	0.0
X53A	Estanollee baz=327,SNR=5.7	95.35	36	P	P	05 35 30.3	+0.3
W54A	Cherokee Point baz=328	95.36	35	P	P	05 35 29.9	-0.1
U57A	Blanch baz=330	95.43	32	P	P	05 35 30.1	-0.1
Z51A	Franklin baz=326	95.47	38	P	P	05 35 30.2	-0.3
V56A	Mocksville baz=329	95.48	33	P	P	05 35 29.9	-0.6
Y52A	Lilburn baz=326	95.54	37	P	P	05 35 30.8	0.0
249A	Camden baz=324	95.62	40	P	P	05 35 31.4	+0.2
150A	Eclectic baz=325	95.64	39	P	P	05 35 31.0	-0.3
T59A	Double "B" Far baz=331	95.67	31	P	P	05 35 30.9	-0.5
KMSC	Kings Mountain baz=328	95.69	34	P	P	05 35 30.8	-0.7
V57A	Coltrane Farms baz=329	95.71	33	P	P	05 35 31.0	-0.6
X54A	Belton baz=327	95.73	35	P	P	05 35 31.1	-0.6
Y53A	Monroe baz=327,SNR=5.2	95.76	36	P	P	05 35 31.6	-0.2
Z52A	Williamson baz=326	95.93	37	P	P	05 35 32.3	-0.3
250A	Grady baz=325	96.04	39	P	P	05 35 33.0	-0.1
151A	Opelika baz=326	96.05	38	P	P	05 35 32.8	-0.3
X55A	Gracelyn & Ava baz=328	96.12	35	P	P	05 35 33.2	-0.2
Y54A	Tignall baz=327,SNR=10	96.17	36	P	P	05 35 33.9	+0.3
GOGA	Godfrey baz=327	96.19	37	P	P	05 35 33.6	-0.1
152A	Waverly Hall baz=326	96.22	38	P	P	05 35 34.1	+0.2
Z53A	Monticello baz=327	96.25	37	P	P	05 35 33.8	-0.2
W57A	Gilead baz=329	96.25	33	P	P	05 35 33.5	-0.5
U60A	Pendleton baz=331	96.26	31	P	P	05 35 34.1	+0.1
251A	Midway baz=325	96.36	39	P	P	05 35 34.5	-0.1
X56A	White Oak baz=328	96.37	34	P	P	05 35 34.1	-0.5
Y55A	Saluda baz=328	96.47	35	P	P	05 35 35.1	+0.1
Z54A	Sparta baz=327	96.62	36	P	P	05 35 35.6	-0.1
155A	Kite baz=327	97.31	36	P	P	05 35 38.8	0.0
254A	Abbeville baz=327	97.49	37	P	P	05 35 38.8	-0.8
353A	Camilla baz=326	97.55	38	P	Pdif	05 35 40.1	+0.2
X60A	Albert Glenn T baz=330	97.58	32	P	Pdif	05 35 40.4	+0.3
255A	Hazlehurst baz=327	97.88	37	P	Pdif	05 35 41.6	+0.1
RKT	Rikitea comp=Z,2.2nm,0.3s	99.60	112	eT	T	07 26 40.1	
TOA1	Torodi Ar. Sit	115.57	316	ePKPdf	PKiKP	05 40 46.9	-1.0
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.7s,baz=46,slow=1.1,SNR=3.1	115.57	316	PKP	PKiKP	05 40 46.9	-1.0
TORD	 comp=Z,0.7nm,0.6s,baz=7.4,slow=3.4,SNR=4.5			pPKP	pPKiKP	05 41 09.3	-1.3
VNDA	Vanda comp=Z,0.5nm,0.9s,baz=316,slow=5.4,SNR=2.9	117.57	175	PKP	PKPdf	05 40 49.0	-0.8
VNDA	 comp=Z,1.0nm,0.8s,baz=333,slow=5.5,SNR=4.1			pPKP	pPKPdf	05 41 11.8	-0.6
MAW	Mawson comp=Z,2.2nm,0.8s,baz=270,slow=2.0,SNR=4.5	121.95	206	PKP	PKPdf	05 40 57.8	-0.6
MAW	 comp=Z,2.6nm,0.6s,baz=45,slow=1.4,SNR=3.7			pPKP	pPKPdf	05 41 20.5	-0.6
DBIC	Dimbokro comp=Z,2.0nm,0.4s,baz=28,slow=2.9,SNR=3.2	124.46	318	pPKP	pPKPdf	05 41 27.1	-0.6
BOSA	Boshof comp=Z,3.1nm,0.9s,baz=51,slow=1.1,SNR=3.5	127.16	261	pPKP	pPKPdf	05 41 32.5	-0.1
QSPA	South Pole Qui	129.39	180	ePKPdf	PKPdf	05 41 12.3	-0.5
SYO	Syowa Base	130.60	208⇓	epPKiKP	pPKiKP	05 41 41.6	+3.1
VNA2	Neumayer--Watz	144.86	197	Pdiff	PKPab	05 41 39.9	-0.5
VNA3	Neumayer Olymp	145.12	196	Pdiff	PKPbc	05 41 40.6	-0.7
LPAZ	La Paz comp=Z,14nm,0.6s,baz=336,slow=3.4,SNR=89	145.19	57	PKPbc	PKPbc	05 41 43.6	-0.1
LPAZ	 comp=Z,12nm,0.8s,baz=355,slow=1.8,SNR=5.0			pPKPbc	pPKPdf	05 42 06.5	-0.2
LPAZ	La Paz	145.19	57	ePKPbc	PKPbc	05 41 43.5	-0.1
LPAZ				ePKPab	PKPbc	05 41 43.7	-0.1
VNA1	Neumayer--Stat	145.26	197	Pdiff	PKPab	05 41 41.9	+0.1
LCO	Las Campanas	151.43	78	ePKPbc	PKiKP	05 42 00.3	+0.3
LCO	Las Campanas	151.43	78	ePKIKP	PKiKP	05 42 00.3	+0.3
GO04	Tololo Observa	151.93	80	ePKPbc	PKPbc	05 42 00.1	-0.5
BDFB	Brasilia comp=Z,2.3nm,0.8s,baz=29,slow=27,SNR=3.5	154.64	22	PKPbc	PKiKP	05 42 07.0	+0.2
BDFB	 comp=Z,10nm,1.0s,baz=304,slow=3.6,SNR=8.1			pPKP	PKPab	05 42 21.8	+0.1
PLCA	Paso Flores comp=Z,1.9nm,0.9s,baz=37,slow=5.1,SNR=2.9	155.49	103	PKP	PKPdf	05 42 01.3	+2.6
CPUP	Villa Florida comp=Z,3.2nm,0.8s,baz=338,slow=6.9,SNR=6.8	159.35	56	PKPab	PKPab	05 42 41.6	0.0

IDC 10 05:33:03.5±10.0, 22°.89S×179°.89E, h620km±121km, mb3.1/5, mb1 3.4/5, mb1mx3.1/22, mbtmp4.0/5, Error ellipse: s-maj=63.1km s-min=37.8km az=115.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 0.9nm,0.3s,baz=45,slow=5.7,SNR=4.1	35.01	247	P	P	05 39 05.9	-0.4
ASAR	Alice Springs 2.4nm,0.8s,baz=100,slow=7.5,SNR=16	42.10	260	P	P	05 40 03.9	+0.4
WRA	Warramunga Arr 2.4nm,0.6s,baz=95,slow=8.6,SNR=29	42.38	265	P	P	05 40 05.3	-0.3
TXAR	Lajitas Array 0.4nm,0.4s,baz=216,slow=6.0,SNR=5.0	89.99	58	P	P	05 44 59.5	+0.9
ILAR	Eielson Array 0.3nm,0.7s,baz=206,slow=6.0,SNR=3.7	91.08	14	P	P	05 45 01.4	-1.3
AKASG	Malin Array Be 0.7nm,0.5s,baz=46,slow=3.6,SNR=4.3	144.06	328	PKP	PKPab	05 51 29.9	+0.3
TORD	Torodi Ar. Bea 0.3nm,0.7s,baz=193,slow=4.4,SNR=2.2	170.16	190	PKPab	PKPab	05 53 21.4	-0.8

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*IDC **10** 05:50:46.7±2.2, 6°.72S×129°.61E, h155km±20km, mb3.7/5, mb1 4.0/8, mb1mx3.6/37, mbtmp4.4/8, Error ellipse: s-maj=30.2km s-min=14.7km az=72.0*

*ISCJB **10** 05:50:47.3±0.4, 6°.82S±0°.04×129°.81E±0°.05, h200km, mb3.8/5, Error ellipse: s-maj=7.5km s-min=5.4km az=163.8*

*DJA **10** 05:50:47.3±0.3, 7°S±3°×13°0E±°, h214km±6km, M4.5/17, mb4.5/13, mB5.0/7, MLv4.7/17, Mw(mB)4.3/7*

ISC 10 05:50:47.9±0.7, 6°.89S±0°.05×129°.81E±0°.07, h200km, n28, σ2ˢ.72/35, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.83	126	P	Pn	05 51 24.8	+0.1
SAUI				S	Sn	05 51 53.6	+0.2
BNDI	Bandanaira	2.35	2	P	Pn	05 51 29.1	-1.1
BNDI				S	Sn	05 52 03.2	0.0
AAI	Ambon	3.56	333	P	Pn	05 51 42.9	-1.4
AAI				S	Sn	05 52 28.8	+0.2
MSAI	Masohi	3.63	346	P	Pn	05 51 44.4	-0.7
NLAI	Namlea	4.52	323	P	Pn	05 51 56.1	-0.1
FAKI	Fak Fak	4.63	32	P	Pn	05 51 54.6	-3.0
SANI	Sanana	6.13	321	P	Pn	05 52 15.6	-1.3
SIJI	Sorong 8.7nm,0.3s,baz=206,slow=22,SNR=37	6.15	14	P	Pn	05 52 14.7	-2.5
SIJI	 12nm,0.3s,baz=252,slow=23,SNR=14			S	Sn	05 53 20.8	-7.2
SWI	Sorong	6.16	14	P	Pn	05 52 15.2	-2.0
SOEI	Soe 69nm,0.6s	6.18	242	P	Pn	05 52 17.3	-0.3
LBMI	Labuha	6.62	340	P	Pn	05 52 22.4	-0.9
BATI	Baumata 22nm,0.3s,baz=92,slow=6.2,SNR=4.3	6.92	241	P	Pn	05 52 24.2	-2.9
BATI	 39nm,0.3s,baz=47,slow=23,SNR=7.5			S	Sn	05 53 41.3	-4.5
BATI	Baumata	6.92	241	P	Pn	05 52 27.5	+0.4
BBSI	Bau Bau	7.33	281	P	Pn	05 52 31.8	-0.7
MMRI	Maumere	7.70	256	P	Pn	05 52 37.7	+0.4
EDFI	Ende, Flores 8.7nm,0.7s	8.25	257	P	Pn	05 52 44.8	+0.2
LUWI	Luwuk	9.11	309	P	Pn	05 52 54.2	-1.4
BSSI	Bau Bau, Buton	9.29	274	P	Pn	05 52 57.6	-0.4
WRA	Warramunga Arr 1.4nm,0.3s,baz=340,slow=13,SNR=42	13.70	162	P	Pn	05 53 53.6	-0.6
WRA	 3.8nm,0.3s,baz=331,slow=22,SNR=10			S	S	05 56 18.9	-8.0
ASAR	Alice Springs 3.0nm,0.3s,baz=343,slow=9.0,SNR=193	17.14	167	P	Pn	05 54 38.9	+2.9
ASAR	 1.1nm,0.3s,baz=356,slow=24,SNR=6.3			S	S	05 57 43.1	+0.4
STKA	Stephens Creek 3.0nm,0.4s,baz=328,slow=11,SNR=11	27.19	158	P	P	05 56 17.4	+4.4
CMAR	Chiang Mai Arr 0.7nm,0.3s,baz=134,slow=7.5,SNR=5.3	39.52	310	P	P	05 58 00.7	+1.2
SONM	Songino Array 0.5nm,0.5s,baz=158,slow=7.3,SNR=3.0	58.28	342	P	P	06 00 22.7	+1.0
MKAR	Makanchi Array 1.6nm,0.4s,baz=117,slow=8.1,SNR=20	68.03	327	P	P	06 01 28.1	+2.4
ZALV	Zalesovo Beam 1.5nm,0.6s,baz=126,slow=6.2,SNR=5.3	71.40	334	P	P	06 01 48.2	+2.2
TORD	Torodi Ar. Bea 0.3nm,0.6s,baz=132,slow=2.1,SNR=2.4	128.60	281	PKP	PKiKP	06 09 35.4	+2.6
CPUP	Villa Florida 0.9nm,0.6s,baz=207,slow=2.3,SNR=2.9	146.26	168	PKPbc	PKiKP	06 10 10.3	+1.8
LPAZ	La Paz 0.4nm,0.4s,baz=58,slow=4.7,SNR=5.9	150.92	143	PKPbc	PKPab	06 10 23.1	-3.4

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*MDD **10** 05:52:48.1±2.2, 36°.17N×8°.08W, h40km, mb3.5/3, Error ellipse: s-maj=20.2km s-min=12.4km az=163.0, PRXIMO*

*INMG **10** 05:52:48.4±1.4, 36°.26N×8°.11W, h16km±9km, ML1.2, Error ellipse: s-maj=24.3km s-min=8.2km az=106.0*

ISC 10 05:52:46.1±3.4, 36°.2N±0°.2×8°.04W±0°.08, h23km±16km, n16, σ0ˢ.74/27, 1C-2D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	1.04	5	eP	Pn	05 53 06.4	+1.1
PBDV				eS	Sn	05 53 19.3	+0.2
PBDV	 2.0nm,0.5s			A	A	05 53 20.8	
PBDV	Barranco-do-Ve	1.04	5	P	Pn	05 53 06.4	+1.1
PBDV	 2.0nm,0.5s			S	Sn	05 53 19.3	+0.2
PFVI	Vila Bisbo	1.12	326	⇓eP	Pn	05 53 06.5	+0.1
PFVI				eS	Sb	05 53 21.3	+0.3
PFVI	 2.4nm,0.1s			A	A	05 53 27.3	
PFVI	Vila Bisbo 1.3nm,0.1s,SNR=18	1.12	326	⇓P	Pn	05 53 06.5	+0.1
PFVI	 10nm,1.0s,SNR=6.4			S	Sb	05 53 20.9	-0.1
MORF	Marmelete	1.21	336	eP	Pn	05 53 08.0	+0.4

MORF	Marmelete	1.21	336	P	Pn	05 53 08.0	+0.4
EGRO	El Granado	1.40	18	P	Pb	05 53 11.2	-0.3
	1.1nm,0.3s,SNR=7.9						
EGRO				S	Sn	05 53 27.9	0.0
	1.1nm,0.5s,SNR=7.9						
PCVE	Castro Verde	1.43	360	*e*P	Pb	05 53 11.7	-0.3
PCVE				*e*S	Sn	05 53 27.9	-0.7
PCVE				A	A	05 53 29.4	
	1.4nm,0.2s						
PCVE	Castro Verde	1.43	360	P	Pb	05 53 11.7	-0.3
PCVE				S	Sn	05 53 27.9	-0.7
	1.4nm,0.2s						
EMIN	Mina Concepcio	1.91	35	S	Sn	05 53 40.4	-0.1
	4.5nm,0.9s,SNR=7.9						
PNCL	Nicolau / Gran	1.94	349⇑	*e*Pn	Pn	05 53 18.2	+0.5
PNCL				*e*Sn	Sn	05 53 41.2	-0.2
PNCL				A	A	05 53 44.0	
	1.1nm,0.1s						
PNCL	Nicolau / Gran	1.94	349	P	Pn	05 53 18.2	+0.5
PNCL				S	Sn	05 53 41.2	-0.2
	1.1nm,0.1s						
ECAB	El Cabril	2.81	47	S	Sn	05 54 01.1	-1.6
	6.4nm,1.3s,SNR=7.9						
PMTG	Montargil	2.86	357	*e*Pn	Pn	05 53 31.0	+0.7
PMTG				*e*Sn	Sn	05 54 02.9	-1.2
PMTG				A	A	05 54 03.5	
	1.6nm,0.1s						
PMTG	Montargil	2.86	357	P	Pn	05 53 31.0	+0.7
PMTG				S	Sn	05 54 02.9	-1.2
	1.6nm,0.1s						
PMAFR	Mafra	2.92	341	P	Pn	05 53 32.3	+1.2
	2.7nm,0.8s,SNR=7.9						

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*SOF **10** 05:58:05.6, 41°.97N×23°.27E, h2^{km}, MD2.6*
*SKO **10** 05:58:05.4, 41°.93N×23°.19E, h15^{km}, M2.0, ML2.4*
*BEO **10** 05:58:06.5±0.3, 41°.93N×23°.15E, h6^{km}±4^{km}, ML2.3/7*
*ATH **10** 05:58:07.0, 41°.88N×23°.24E, h7^{km}±1^{km}, ML2.7/9, Error ellipse: s-maj=2.3km s-min=1.0km az=198.0*
*THE **10** 05:58:08.2, 41°.82N×23°.26E, h6^{km}±1^{km}, ML2.4/5, Error ellipse: s-maj=1.9km s-min=1.1km az=147.0*

ISC 10 05:58:05.9±0.8**, 41°.94N**±0°.02×**23°.15E**±0°.02**, h13**^{km}±6^{km}**,**
n55, σ1^{s}.12/85**, 7C-5D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	Krupnik	0.09	217⇑	*i*Pg	Pg	05 58 09.0	+0.1
KKB				*i* Sg	Sg	05 58 11.0	+0.2
KKB	Krupnik	0.09	217	*i* P	Pg	05 58 08.9	+0.1
MMB	Musomiste	0.55	129⇑	*i*Pg	Pg	05 58 16.7	-0.1
MMB				*i* Sg	Sb	05 58 24.4	-0.9
MMB	Musomiste	0.55	129	*i* P	Pg	05 58 16.6	-0.2
VTS	Vitosha	0.69	5	*e*Pg	Pg	05 58 18.4	-0.9
VTS				*e*Sg	Sg	05 58 27.3	-1.1
VTS	Vitosha	0.69	5⇑	*i*P	Pg	05 58 18.6	-0.7
VTS				S	Sg	05 58 27.2	-1.1
VTS	Vitosha	0.69	5⇑	*i*Pg	Pg	05 58 18.6	-0.7
VTS				*i* Sg	Sg	05 58 27.4	-1.0
VTS	Vitosha	0.69	5	*i* P	Pg	05 58 18.5	-0.9
VAY	Valandovo	0.75	216	*i* Pg	Pg	05 58 20.9	+0.3
VAY				*i* Sg	Sb	05 58 31.9	+0.8
VAY				*e*Lg	Lg	05 58 32.2	
	comp=E,100nm,0.4s						
VAY				*e*Lg	Lg	05 58 32.2	
	comp=N,105nm,0.6s						
STIP	Stip	0.76	252	*i* Pg	Pg	05 58 17.0	-3.7
STIP				*i* Sg	Sg	05 58 25.4	-5.4
STIP				*e*Lg	Lg	05 58 29.2	
	comp=N,80nm,0.2s						
STIP				*e*Lg	Lg	05 58 29.2	
	comp=E,84nm,0.2s						
NVR	Nevrokopi	0.79	138	P	Pg	05 58 20.4	-0.9
NVR				S	Sg	05 58 30.2	-1.4
	comp=E,318nm,0.2s						
NVR	Nevrokopi	0.79	138	P	Pg	05 58 20.3	-0.9
NVR				S	Sg	05 58 30.3	-1.4
NVR				AML	AML	05 58 30.6	
	comp=E,592µm,0.3s						
NVR				AML	AML	05 58 31.3	
	comp=N,673µm,0.2s						
SRS	Serrai	0.88	158	*e*Pg	Pg	05 58 22.3	-0.7
SRS				*e*Sg	Sg	05 58 34.3	-0.2
SRS	Serrai	0.88	158	P	Pg	05 58 22.4	-0.5
SRS				S	Sg	05 58 33.3	-1.2
	comp=N,272nm,0.3s						
SRS	Serrai	0.88	158	*i* Pg	Pg	05 58 22.5	-0.5
SRS				*i* Sg	Sb	05 58 34.8	+0.1
SRS	Serrai	0.88	158	P	Pg	05 58 22.4	-0.5
SRS				S	Sg	05 58 34.4	-0.2
SRS				AML	AML	05 58 38.3	
	comp=N,527µm,0.3s						
SRS				AML	AML	05 58 39.4	
	comp=E,558µm,0.3s						
PGB	Panagyurishte	0.97	50	*i* P	Pg	05 58 22.8	-1.9
SOH	Sokhos	1.12	172	P	Pb	05 58 26.8	-0.4
SOH				S	Sg	05 58 42.0	-0.2
	comp=E,452nm,0.5s						
SOH	Sokhos	1.12	172	*i* Pg	Pb	05 58 27.1	-0.1
SOH	Sokhos	1.12	172	P	Pb	05 58 26.9	-0.4
SOH				S	Sg	05 58 42.2	0.0
SOH				AML	AML	05 58 43.5	
	comp=E,414µm,0.7s						
SOH				AML	AML	05 58 44.4	
	comp=N,1365µm,0.4s						
PLD	Plovdiv	1.17	81	*e*Pg	Pn	05 58 28.5	+0.5
PLD				*e*Sg	Sn	05 58 43.6	-0.2
RZN	Rozhen	1.19	101	*i* P	Pb	05 58 28.0	-0.5
THE	Thessaloniki	1.31	186	P	Pb	05 58 30.8	+0.4
THE				S	Sg	05 58 48.5	+0.4
	comp=N,162nm,0.4s						
THE	Thessaloniki	1.31	186	P	Pn	05 58 30.6	+0.7
THE				S	Sn	05 58 48.0	+0.8
THE				AML	AML	05 58 50.1	
	comp=E,357µm,0.3s						
THE				AML	AML	05 58 51.8	
	comp=N,265µm,0.4s						
BARS	Barje	1.33	312	*e*Pg	Pn	05 58 31.0	+0.8
BARS	Barje	1.33	312	*e*Pn	Sb	05 58 46.0	-1.6
BARS				*e*Sg	Sn	05 58 49.2	+1.5
KAVA	Kavala	1.39	132	P	Pb	05 58 31.6	-0.1
KAVA				S	Sb	05 58 49.2	-0.1
	comp=N,278nm,0.4s						
KAVA	Kavala	1.39	132	P	Pn	05 58 31.5	+0.5
KAVA				S	Sn	05 58 49.7	+0.6
KAVA				AML	AML	05 58 50.9	
	comp=E,573µm,0.5s						
KAVA				AML	AML	05 58 52.2	
	comp=N,518µm,0.5s						
ZAPS	Zavoj	1.39	344	*e*Pg	Pb	05 58 32.3	+0.5
ZAPS				*e*Sg	Sb	05 58 50.3	+0.8
MPEP	Malo Peshtene	1.48	17	P	Pn	05 58 33.1	+0.7
PLG	Polygyros	1.57	172	P	Pn	05 58 34.3	+0.6
PLG				S	Sg	05 58 57.2	+0.5
PLG				AML	AML	05 58 58.6	
	comp=E,217µm,0.7s						
PLG				AML	AML	05 58 59.1	
	comp=N,343µm,0.3s						
OUR	Ouranopolis	1.72	158	P	Pg	05 58 38.3	-0.6
OUR				S	Sg	05 59 00.7	-0.5
OUR				AML	AML	05 59 01.4	
	comp=E,648µm,0.4s						
OUR				AML	AML	05 59 02.1	
	comp=N,1315µm,0.5s						
THAS	Thassos island	1.78	138	P	Pn	05 58 36.2	-0.1
THAS	Thassos island	1.78	138	P	Pb	05 58 38.4	+0.1
THAS				S	Sg	05 59 02.5	-0.6
THAS				AML	AML	05 59 03.8	
	comp=E,355µm,0.3s						
THAS				AML	AML	05 59 04.1	
	comp=N,260µm,0.4s						
PLVB	Pleven	1.81	36⇑	*i*P	Pg	05 58 40.1	-0.6
PLVB	Pleven	1.81	36	S	Sg	05 59 03.9	-0.3
RDO	Rodhopi	1.96	113	P	Pb	05 58 40.6	-0.8
RDO	Rodhopi	1.96	113	P	Pb	05 58 41.3	-0.1
RDO				S	Sg	05 59 07.8	-1.0
RDO				AML	AML	05 59 08.9	
	comp=N,211µm,0.3s						
RDO				AML	AML	05 59 12.0	
	comp=E,191µm,0.3s						
SELS	Selova	1.98	311	*e*Pg	Pb	05 58 42.1	+0.3
SELS				*e*Sg	Sb	05 59 08.3	+2.0
ZAGS	Zajecar	2.00	340	*e*Pg	Pb	05 58 42.3	+0.2
BOVS	Bovan	2.01	328	*e*Pg	Pb	05 58 42.8	+0.5
BOVS				*e*Sg	Sg	05 59 09.9	-0.5
ELND	Elena	2.25	63⇑	*i*P	Pb	05 58 47.4	+1.0
VLAD	Vladila	2.26	24⇓	*i*P	Pb	05 58 45.1	-1.4
VLAD	Vladila	2.26	24	S	Sn	05 59 12.0	+1.4
SMTH	Samothraki Isl	2.31	128	P	Pb	05 58 47.6	0.0
SMTH				S	Sb	05 59 16.2	+0.1
ALN	Alexandroupoli	2.41	115	P	Pb	05 58 48.8	-0.3
ALN				S	Sb	05 59 17.7	-1.1
GRUS	Gruza	2.65	318	*e*Pn	Pn	05 58 50.2	+1.8
KUBS	Kucevo	2.70	337	*e*Pn	Pn	05 58 49.1	0.0
SRE	Strehaia	2.73	1⇑	*i*P	Pn	05 58 50.4	+1.0
HERR	Herculane	2.99	350⇓	*i*P	Pn	05 58 52.7	-0.4
MDVR	Moldovita	3.03	340⇓	*i*P	Pn	05 58 54.1	+0.4
TRUS	Trudelj	3.05	320	*e*Pg	Pb	05 59 01.2	+1.2
DIVS	Divibare	3.17	314	*e*Pn	Pn	05 58 56.3	+0.7
VOIR		3.76	21⇓	*i*P	Pn	05 59 05.3	+1.6
MLR	Muntele Rosu	4.09	29⇓	*i*P	Pn	05 59 10.9	+2.6

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*ISCJB **10** 05:59:02.7±0.4, 18°.65S±0°.07×172°.81W±0°.07, h19^{km}, mb4.4/17, MS3.9/17, Error ellipse: s-maj=11.4km s-min=8.8km az=138.1*
*IDC **10** 05:59:02.0±1.1, 18°.67S×172°.83W, h0^{km}, mb4.1/8, mb1 4.5/9, mb1mx4.2/30, mbtmp4.2/9, ML3.5/1, MS3.8/16, Ms1 3.8/16, ms1mx3.7/25, Error ellipse: s-maj=41.9km s-min=22.3km az=160.0*
*NEIC **10** 05:59:06.5±3.0, 18°.70S×172°.76W, h37^{km}±3^{km}, mb4.6/8, Error ellipse: s-maj=16.9km s-min=14.2km az=56.0*

ISC 10 05:59:04.9±0.5**, 18°.64S**±0°.08×**172°.77W**±0°.09**, h19**^{km}**, n58,**
σ1^{s}.99/41**, mb4.5**/17**, MS3.9**/17**, 1C, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	2.73	100	*e*Pn	Pn	05 59 45.7	-1.9
AFI	Afiamalu	4.80	12	*e*Pn	Pn	06 00 14.7	-1.7
RAR	Rarotonga	12.49	104	Pn	Pn	06 02 00.7	-0.9
	2.7nm,0.3s,baz=237,slow=8.1,SNR=9.1						
RAR				Sn	Sn	06 04 10.2	-10
	0.6nm,0.3s,baz=0.0,slow=20,SNR=1.8						
RAR				LR	LR	06 06 20.0	
	comp=Z,449nm,18.8s,baz=280,slow=35						
RAR	Rarotonga	12.49	104	*e*Pn	Pn	06 02 02.7	+1.0
DZM	Mont Dzumac	19.78	257	*e*LR	LR	06 07 54.0	
	comp=Z,590nm,27.6s						
DZM	Mont Dzumac	19.78	257	LR	LR	06 10 09.5	
	comp=Z,188nm,21.0s,baz=14,slow=34						
URZ	Urewera	21.45	202	P	P	06 03 56.4	+4.4
	7.4nm,0.5s,baz=323,slow=1.3,SNR=7.7						
URZ				S	S	06 07 44.4	-4.8
	3.5nm,0.5s,baz=266,slow=19,SNR=2.9						
URZ				ScP	ScP	06 11 39.6	+8.5
	9.8nm,0.9s,baz=167,slow=10.0,SNR=3.2						
PAE	Paea	22.06	91	*e*T	T	06 26 31.6	
	5.3nm,0.3s						
PPT2	Papeete2	22.07	91	*e*LR	LR	06 09 08.8	
	comp=Z,882nm,26.8s,baz=261						
PPT2	Papeete2	22.07	91	*e*T	T	06 26 33.7	
	5.0nm,0.3s						
PPT	Papeete	22.07	91	LR	LR	06 11 02.3	
	comp=Z,393nm,18.0s,baz=275,slow=33						
TBI	Tubuai	22.25	106	*e*LQ	LQ	06 08 22.7	
	496nm,24.5s						
TBI				*e*LR	LR	06 09 03.0	
	comp=Z,669nm,30.8s						
TVO	Taravao	22.35	92	*e*T	T	06 26 50.0	
	1.9nm,0.3s						
OXZ	Oxford	27.75	204	*e*pP	pP	06 05 01.7	+5.7
HNR	Honiara	27.97	285	LR	LR	06 14 09.2	
	comp=Z,197nm,18.2s,baz=123,slow=32						
RPZ	Rata Peaks	28.46	205	P	P	06 05 09.3	+11
	14nm,0.7s,baz=322,slow=4.3,SNR=6.5						
FOZ	Fox Glacier	28.83	207	*e*P	P	06 05 02.8	+0.8
	32nm,1.0s						
LBZ	Lake Benmore	29.37	205	*e*P	P	06 05 07.1	+0.3
	18nm,1.2s						
TAOE	Nuku Hiva Isla	33.09	77	*e*LR	LR	06 14 06.0	
	comp=Z,311nm,25.9s						
HPAH	Hawaii Prepara	41.92	24	*e*P	P	06 06 55.9	+1.3
	59nm,1.0s						
STKA	Stephens Creek	43.03	243	LR	LR	06 24 14.4	
	comp=Z,222nm,18.2s,baz=35,slow=35						
AS31	Alice Springs	49.75	254	*e*P	P	06 07 55.4	-1.2
	1.6nm,0.8s						
ASAR	Alice Springs	49.76	254	P	P	06 07 55.5	-1.0
	7.0nm,1.0s,baz=91,slow=7.9,SNR=25						
ASAR				LR	LR	06 28 43.4	
	comp=Z,121nm,18.1s,baz=94,slow=36						
WB2	Warramunga Arr	49.76	259	*e*P	P	06 07 55.1	-1.5
	4.8nm,0.7s						
WR1	Warramunga Arr	49.77	259	*e*P	P	06 07 55.1	-1.6
WRA	Warramunga Arr	49.77	259	P	P	06 07 55.1	-1.6
	2.4nm,0.5s,baz=90,slow=8.3,SNR=18						
VNDA	Vanda	60.23	186	LR	LR	06 34 27.1	
	comp=Z,32nm,18.1s,baz=344,slow=35						
MJAR	Matsushiro Arr	71.80	320	P	P	06 10 25.4	-0.9
	2.5nm,0.9s,baz=160,slow=5.3,SNR=4.8						
MJAR				LR	LR	06 38 01.1	
	comp=Z,54nm,21.1s,baz=110,slow=33						
MAJO	Matsushiro	71.80	320	*e*P	P	06 10 25.4	-0.9
GSC	Goldstone, Bar	75.44	44	*e*sP	sP	06 11 01.0	+7.8
PETK	Petropavlovsk-	75.88	342	P	P	06 10 49.5	-0.4
	3.4nm,0.8s,baz=163,slow=5.6,SNR=4.4						
PEA1	Petropavlovsk-	75.89	342	*e*P	P	06 10 49.5	-0.4
NV01	Mina Array Sit	76.34	41	*e*P	P	06 10 52.9	-0.2
NVAR	Mina Array Bea	76.34	41	P	P	06 10 52.9	-0.2
	0.3nm,0.5s,baz=224,slow=7.6,SNR=2.3						
NVAR				LR	LR	06 38 53.7	
	comp=Z,68nm,19.9s,baz=257,slow=31						
KSRS	Korea Array	78.89	316	P	P	06 11 08.7	+1.7
	1.8nm,0.8s,baz=136,slow=7.9,SNR=7.8						
KSRS				LR	LR	06 43 15.0	
	comp=Z,29nm,18.6s,baz=138,slow=34						
USRK	Ussuriysk Ar.	80.33	323	LR	LR	06 42 23.1	
	comp=Z,60nm,19.1s,baz=173,slow=32						
TXAR	Lajitas Array	81.92	55	LR	LR	06 42 12.4	
	comp=Z,20nm,18.8s,baz=0.0,slow=32						
PDAR	Pinedale Array	84.28	41	P	P	06 11 36.4	+0.6
	0.6nm,0.8s,baz=212,slow=3.2,SNR=3.0						
WRH	Wood River Hil	85.01	10	*e*P	P	06 11 37.2	-1.5
	8.1nm,1.0s						
CCB	Clear Creek Bu	85.22	11	*e*P	P	06 11 40.5	+0.9
	5.5nm,1.1s						
ILAR	Eielson Array	85.50	11	P	P	06 11 41.2	+0.2
	0.9nm,0.8s,baz=216,slow=3.6,SNR=11						
ILAR				LR	LR	06 45 15.7	
	comp=Z,54nm,19.2s,baz=188,slow=32						
ILB	Eielson Array	85.50	11	*e*P	P	06 11 41.2	+0.2
	4.8nm,1.1s						
CMAR	Chiang Mai Arr	94.19	288	LR	LR	06 53 19.0	
	comp=Z,28nm,19.4s,baz=175,slow=35						
ULM	Lac du Bonnet	96.06	39	LR	LR	06 52 02.7	
	comp=Z,80nm,18.4s,baz=281,slow=33						
LPAZ	La Paz	98.14	110	LR	LR	06 47 06.0	
	comp=Z,59nm,21.7s,baz=276,slow=29						
AKASG	Malin Array Be	143.54	336	PKP	PKiKP	06 18 40.0	-1.7
	0.3nm,0.4s,baz=43,slow=1.7,SNR=4.4						
KMBO	Kilima Mbogo	144.55	240	PKP	PKPdf	06 18 43.1	+1.6
	6.2nm,1.0s,baz=55,slow=3.2,SNR=8.4						
CLL	Collm	147.09	353⇑	*i*PKPbc	PKPab	06 18 48.0	0.0
	comp=Z,20nm,1.3s						
CLL				*i* pPKPdf	sPKPab	06 18 53.4	-0.2
	comp=Z,32nm,1.7s						
BRG	Berggiesshubel	147.40	352	*e*PKP	PKPbc	06 18 47.8	+0.5
	comp=Z,6.4nm,1.1s						
MORC	Moravsky Berou	147.85	347	*e*PKP	PKiKP	06 18 50.4	-0.2
VRAC	Vranov	148.49	348	*e*PKP	PKiKP	06 18 52.3	+0.4
JAVC	Velka Javorina	148.69	347	*e*PKP	PKPab	06 18 53.9	-0.7
KRUC	Moravsky	148.76	348	*e*PKP	PKiKP	06 18 52.8	+0.3
BR101	Keskin Array S	149.00	318	*e*PKPbc	PKiKP	06 18 53.5	+0.1
BRTR	Keskin Array B	149.00	318	PKPbc	PKiKP	06 18 53.5	+0.1
	comp=Z,3.1nm,1.0s,baz=106,slow=1.8,SNR=13						
MLR	Muntele Rosu	149.04	334	*e*PKPab	PKiKP	06 18 54.1	+0.8
GERES	GERESS Array B	149.42	352	PKPbc	PKiKP	06 18 54.3	+0.4
	comp=Z,1.6nm,0.8s,baz=29,slow=3.0,SNR=14						
DAVOX	Davos/Dischmat	151.85	356	PKPbc	PKPbc	06 18 57.5	-1.3
	comp=Z,2.0nm,0.4s,baz=241,slow=12,SNR=3.5						

MAN 10 06:11:30.7, 12°.36N×125°.92E, h38^{km}**, mb4.2, ML3.0,**
MS2.6, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	Palo	1.51	218⇑	*e*P	Pn	06 11 55.1	0.0
PLP				*i* S	Sn	06 12 14.6	+1.1
RCP	Roxas	3.21	256⇓	*e*P	Pn	06 12 19.4	+0.9

IDC 10 06:20:57.2±6.5**, 16°.57S×73°.52W, h115**^{km}±49^{km}**, mb4.0**/2**,**
mb1 3.8/3**, mb1mx3.3**/19**, mbtmp4.3**/3**, MS2.9**/2**, Ms1 3.0**/2**,**
ms1mx2.8/18**, Error ellipse: s-maj=114.6km**
s-min=51.5km az=162.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	5.18	88	P	Pn	06 22 13.1	0.0
	2.9nm,0.3s,baz=274,slow=11,SNR=108						
LPAZ				S	Sn	06 23 22.9	+11
	baz=15,slow=20,SNR=2.4						
LPAZ				LR	LR	06 24 42.3	
	comp=Z,86nm,21.4s,baz=272,slow=44						
CPUP	Villa Florida	17.91	126	LR	LR	06 32 46.1	
	comp=Z,63nm,19.6s,baz=297,slow=40						
DBIC	Dimbokro	71.70	77	P	P	06 32 07.2	-0.2
	1.3nm,0.4s,baz=241,slow=6.4,SNR=4.8						
TORD	Torodi Ar. Bea	79.96	73	P	P	06 32 54.5	+0.2
	1.6nm,0.5s,baz=264,slow=5.1,SNR=29						
ASAR	Alice Springs	131.86	215	PKP	PKPdf	06 39 57.5	-0.4
	0.4nm,0.9s,baz=130,slow=1.4,SNR=3.7						
WRA	Warramunga Arr	134.55	218	PKP	PKPdf	06 40 02.5	-0.4
	1.4nm,1.0s,baz=193,slow=2.6,SNR=3.8						
ZALV	Zalesovo Beam	139.07	19	PKP	PKPdf	06 40 10.7	+0.5
	0.4nm,0.4s,baz=277,slow=2.5,SNR=3.3						
SONM	Songino Array	148.83	0	PKPbc	PKPbc	06 40 30.9	-0.7
	1.3nm,0.7s,baz=336,slow=3.2,SNR=4.8						

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*DDA **10** 06:21:19.7, 40°.15N×37°.16E, h7^{km}±3^{km}, ML2.6*
*ISK **10** 06:21:19.1, 40°.14N×37°.15E, h5^{km}, ML2.7/3*

ISC 10 06:21:20.0±1.1**, 40°.16N**±0°.06×**37°.11E**±0°.03**, h17**^{km}±11^{km}**,**
n13, σ1^{s}.18/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVSK	Karacayir	0.26	200	PG	Pg	06 21 25.4	-0.4
SVSK				SG	Sg	06 21 29.9	+0.2
SCER	sogukcermik	0.30	178	*i* P	Pg	06 21 26.6	0.0
SCER				*i* S	Sg	06 21 31.1	+0.1
SCER				IAML_P			
	comp=Z,4µm,0.1s						
TOKT	Tokat	0.46	290	PG	Pb	06 21 29.8	0.0
TOKT				SG	Sb	06 21 37.6	+1.2
CUZAR	Zara_SIVAS	0.57	118	*i* P	Pg	06 21 31.0	-0.4
CUZAR				*i* S	Sb	06 21 40.0	+0.3
SUSE	Susehri	0.83	87	*i* P	Pb	06 21 36.0	-0.2
SUSE				IAML_P			
	comp=Z,1µm,0.2s						
CUKAN	kangal_SIVAS	0.89	162	*i* P	Pg	06 21 36.2	-1.1
CUKAN				*i* S	Sg	06 21 49.2	+0.2
CUSAR	Sarkisla-SIVAS	1.00	222	*i* P	Pg	06 21 35.6	-3.8
CUSAR				*i* S	Sg	06 21 52.4	-0.2
ORDU	Ordu-Boztepe	1.00	34	*i* P	Pn	06 21 39.3	-0.1
ORDU				*i* S	Sb	06 21 51.8	-0.1
KEMA	Kemaliye	1.39	130	*i* P	Pg	06 21 46.7	0.0
KEMA				*i* S	Sg	06 22 05.9	+1.1
HEKM	Malatya_Hekimh	1.44	153	*i* P	Pg	06 21 48.0	+0.2
HEKM				*i* S	Sg	06 22 08.5	+2.0
HEKM				IAML_P			
	comp=Z,226nm,0.1s						
YOZ	Yozgat	1.48	250	PN	Pg	06 21 48.7	+0.3
YOZ				SN	Sg	06 22 09.4	+1.7
KELT	Kelkit	1.64	90	*i* P	Pb	06 21 49.6	-0.3
KELT				*i* S	Sg	06 22 12.1	-0.9
SIRC	Yozgat	1.73	242	*i* P	Pg	06 21 52.6	-0.6
SIRC				*i* S	Sg	06 22 17.0	+1.4

ISC 10 06:22:29.3±1.2**, 49°.18N**±0°.05×**18°.88E**±0°.04**, h8**^{km}±15^{km}**,**
n5, σ0^{s}.51/10**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANS	Liptovska Anna	0.39	94	*e*PG	Pg	06 22 36.4	-0.5
LANS				*e*SG	Sg	06 22 42.9	+0.9
KOLL	Kolacno	0.68	208	*e*PG	Pb	06 22 43.4	0.0
KOLL				*e*SG	Sb	06 22 53.1	+0.2
VYHS	Vyhne	0.69	182	*e*PG	Pg	06 22 42.2	-0.3
VYHS				*e*SG	Sg	06 22 51.8	+0.3
JAVC	Velka Javorina	0.86	248	*e*PG	Pg	06 22 46.0	+0.2
JAVC				*e*SG	Sg	06 22 56.5	-0.4
MORC	Moravsky Berou	1.06	305	*e*PG	Pn	06 22 50.3	-0.1
MORC				*e*SG	Sg	06 23 03.5	+0.2

MEX 10 06:36:22.2±0.3**, 18°.11N×101°.97W, h44**^{km}±3^{km}**, MD3.5,**
Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.69	136	*e*P	Pn	06 36 34.0	-1.7
ZIIG				*e*S	Sn	06 36 43.1	-2.2
ARIG	Puente Sto Nin	1.55	83	*e*P	Pn	06 36 45.8	-1.6
ARIG				*e*S	Sn	06 37 04.0	-2.3

IDC 10 07:15:16.9±2.6**, 5°.11S×126°.78E, h0**^{km}**, mb3.2**/1**,**
mb1 3.7/3**, mb1mx3.5**/23**, mbtmp3.5**/3**, ML3.8**/2**, Error**
ellipse: s-maj=344.1km s-min=31.2km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.48	154	Pn	Pn	07 19 10.6	+0.9
	0.5nm,0.3s,baz=332,slow=12,SNR=4.1						
WRA				Sn	Sn	07 22 03.8	-10
ASAR	Alice Springs	19.69	160	P	P	07 19 47.6	-0.4
	0.2nm,0.3s,baz=343,slow=12,SNR=7.5						
MKAR	Makanchi Array	64.91	328	P	P	07 25 58.3	0.0
	0.1nm,0.5s,baz=123,slow=5.3,SNR=1.5						

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*ISCJB **10** 08:12:41.3±1.0, 24°.5S±0°.1×179°.5E±0°.2, h531^{km}, mb3.5/5, Error ellipse: s-maj=22.3km s-min=14.6km az=12.1*
*IDC **10** 08:12:41.4±8.3, 24°.64S×179°.67E, h528^{km}±103^{km}, mb3.0/5, mb1 3.3/6, mb1mx3.0/20, mbtmp4.0/6, Error ellipse: s-maj=78.8km s-min=26.6km az=0.0*

ISC 10 08:12:41.9±1.1**, 24°.7S**±0°.1×**179°.6E**±0°.2**, h531**^{km}**, n7,**
σ0^{s}.89/7**, mb3.8**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	13.69	188	P	P	08 15 36.8	-0.9
	1.6nm,0.3s,baz=348,slow=14,SNR=11						
URZ				S	S	08 18 03.4	+0.8
	0.5nm,0.3s,baz=151,slow=20,SNR=2.4						
STKA	Stephens Creek	34.12	249	P	P	08 18 43.0	+0.5
	0.8nm,0.3s,baz=88,slow=11,SNR=7.2						
ASAR	Alice Springs	41.58	262	P	P	08 19 43.6	+0.1
	0.3nm,0.4s,baz=94,slow=7.0,SNR=12						
WRA	Warramunga Arr	42.03	267	P	P	08 19 46.5	-0.5
	1.1nm,0.4s,baz=99,slow=8.1,SNR=2.4						
NVAR	Mina Array Bea	85.56	44	P	P	08 24 23.6	-0.6
	0.2nm,0.7s,baz=218,slow=8.0,SNR=1.8						
TXAR	Lajitas Array	91.14	58	P	P	08 24 51.2	+0.9
	0.8nm,0.5s,baz=212,slow=5.3,SNR=4.5						
HFS	Hagfors	143.26	348	PKP	PKPab	08 31 12.2	-0.8
	1.5nm,0.4s,baz=25,slow=4.8,SNR=10						

IDC 10 08:13:40.9±4.2**, 28°.47N×137°.93E, h0**^{km}**, mb3.6**/3**,**
mb1 3.9/3**, mb1mx3.4**/49**, mbtmp3.6**/3**, MS3.1**/1**, Ms1 3.1**/1**,**
ms1mx2.2/23**, Error ellipse: s-maj=356.4km**
s-min=32.5km az=106.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	46.68	309	LR	LR	08 41 36.8	
	comp=Z,19nm,18.1s,baz=202,slow=36						
WRA	Warramunga Arr	48.26	185	P	P	08 22 24.4	+0.6
	1.6nm,0.3s,baz=1.8,slow=7.9,SNR=5.2						
ASAR	Alice Springs	51.98	185	P	P	08 22 51.0	-1.0
	0.7nm,1.1s,baz=6.6,slow=5.4,SNR=2.0						
ILAR	Eielson Array	58.33	29	P	P	08 23 37.4	-0.1
	0.2nm,0.7s,baz=275,slow=5.3,SNR=2.1						

UCR 10 08:19:48.3±2.1**, 10°.40N×86°.29W, h0**^{km}±17^{km}**, MW3.8,**
3C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	Buena Vista	0.95	65	⇓eP	Pg	08 20 06.6	0.0
BUEV				eS	Sg	08 20 19.9	+0.9
GB1A	Borinquen Arri	0.97	65	eP	Pb	08 20 07.8	-0.2
GB1A				eS	Sb	08 20 22.0	+0.6
MESS	Mesas	1.13	72	⇑eP	Pg	08 20 09.6	-0.3
MESS				eS	Sg	08 20 24.7	0.0
CUI	Cuipilapa	1.14	77	⇑iP	Pg	08 20 10.0	-0.1
CUI				eS	Sb	08 20 25.7	-0.5
JTS	Las Juntas de	1.32	95	eP	Pg	08 20 12.0	-1.6
JTS				eS	Sg	08 20 30.2	-0.5
ARE1	Arenal 1	1.55	88	i P	Pn	08 20 16.5	-0.7
CEDE	Laguna Cedeo	1.56	87	eP	Pn	08 20 17.3	-0.1
CEDE				eS	Sg	08 20 39.6	+1.1
SRA1	San Ramn	1.81	100	eP	Pn	08 20 20.5	-0.4
ACON	Acoyapa	1.90	35	⇑iP	Pn	08 20 21.3	-0.7
HDC	Heredia	2.18	100	eP	Pb	08 20 29.2	+0.5
LCR2	La Lucha 2	2.34	106	eP	Pb	08 20 30.2	-1.4
DRK0	Durika	3.21	110	eP	Pb	08 20 43.7	-2.5

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*IDC **10** 08:30:44.8±0.9, 26°.86N×144°.61E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.7/31, mbtmp3.7/10, ML3.3/2, Error ellipse: s-maj=27.8km s-min=20.0km az=76.0*

*ISCJB **10** 08:30:48.1±0.8, 26°.8N±0°.1×144°.6E±0°.2, h33^{km}, mb3.6/8, Error ellipse: s-maj=24.8km s-min=16.1km az=162.6*

ISC 10 08:30:50.2±0.9**, 26°.9N**±0°.1×**144°.6E**±0°.2**, h35^{km}, n11, σ1^s.15**/11**, mb3.5**/8**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	11.00	332	Pn	Pn	08 33 22.8	-2.2
	0.1nm,0.3s,baz=161,slow=11,SNR=8.0						
KSRS	Korea Array	17.54	311	P	Pn	08 34 51.9	0.0
	0.2nm,0.3s,baz=116,slow=11,SNR=4.1						
KLR	Kul'dur	24.37	339	P	P	08 36 05.8	+1.0
	1.3nm,0.8s,baz=158,slow=8.0,SNR=4.0						
SONM	Songino Array	36.31	315	P	P	08 37 51.1	+0.5
	0.4nm,0.6s,baz=120,slow=8.9,SNR=4.1						
WRA	Warramunga Arr	47.64	193	P	P	08 39 22.6	-0.4
	1.7nm,0.6s,baz=13,slow=8.0,SNR=15						
ASAR	Alice Springs	51.35	193	P	P	08 39 50.1	-1.2
	0.3nm,0.7s,baz=8.9,slow=6.6,SNR=4.4						
MKAR	Makanchi Array	52.22	310	P	P	08 39 57.9	+0.2
	1.0nm,0.6s,baz=91,slow=8.5,SNR=11						
ILAR	Eielson Array	56.84	28	P	P	08 40 30.9	0.0
	0.3nm,0.7s,baz=253,slow=6.2,SNR=2.8						
NVAR	Mina Array Bea	78.94	53	P	P	08 42 51.1	+0.5
	0.2nm,0.7s,baz=290,slow=5.4,SNR=2.8						
KBZ	Khabaz	79.66	314	P	P	08 42 55.6	+1.4
	1.9nm,0.8s,baz=130,slow=5.1,SNR=4.2						
LPAZ	La Paz	147.90	77	PKPbc	PKPbc	08 50 32.4	-0.7
	0.3nm,0.7s,baz=289,slow=2.0,SNR=1.6						

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*ISCJB **10** 08:43:13.8±0.3, 45°.46N±0°.01×15°.89E±0°.03, h1^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.2km az=155.1*

*LJU **10** 08:43:14.0, 45°.44N×15°.85E, h0^{km}, ML2.4*

*SAR **10** 08:43:15.2±0.2, 45°.47N×15°.89E, h3^{km}, ML2.6/1*

*VIE **10** 08:43:15.2±0.5, 45°.46N×15°.78E, h11^{km}±2^{km}, mb2.2/7, ml2.8/8, Error ellipse: s-maj=3.1km s-min=2.4km az=138.0*

ISC 10 08:43:14.9±1.0**, 45°.46N**±0°.02×**15°.86E**±0°.02**, h8^{km}**±8^{km}**, n50, σ0^s.99**/91**, 3C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZLJ	Ozalj	0.32	300	i Pg	Pg	08 43 21.3	+0.1
OZLJ				Sg	Sg	08 43 25.6	+0.2
BOJS	Bojanci	0.43	276	⇑iPg	Pg	08 43 23.1	-0.2
BOJS				eSg	Sg	08 43 29.2	+0.3
	comp=Z,74nm,0.1s						
GCIS	Gornji Cirnik	0.44	338	⇓iPg	Pg	08 43 23.0	-0.5
GCIS				i Sg	Sg	08 43 29.8	+0.5
	comp=Z,88nm,0.2s						
PTJ	Puntijarka	0.46	9	iPg		08 43 23.5	
PTJ				Sg	Sg	08 43 30.7	+0.9
CRES	Cresnjev	0.47	322	⇑iPg	Pg	08 43 23.7	-0.2
CRES				eSg	Sg	08 43 30.0	0.0
	comp=Z,250nm,0.2s						
CRES	Cresnjev	0.47	322	i Pg	Pg	08 43 23.6	-0.3
CRES				eSg	Sg	08 43 30.2	+0.2
GOLS	Golise	0.58	343	i Pg	Pg	08 43 26.0	-0.1
GOLS				eSg	Sg	08 43 34.5	+0.8
	comp=Z,125nm,0.2s						
CESS	Cesta pri Krsk	0.59	332	i Pg	Pg	08 43 26.4	+0.2
LEGS	Legarje	0.62	322	⇑iPg	Pg	08 43 26.6	-0.3
LEGS				eSg	Sg	08 43 34.7	-0.3
GBRS	Gornja Briga	0.74	276	i Pg	Pg	08 43 28.9	-0.3
KALN	Kalnik	0.79	31	ePg	Pb	08 43 31.1	+0.2
KALN				Sg	Sg	08 43 41.4	+1.0
VISS	Visnje	0.80	296	i Pg	Pg	08 43 29.9	-0.3
VISS				i Sg	Sg	08 43 40.5	-0.1
	comp=Z,104nm,0.2s						
PDKS	Podkum	0.85	315	i Pg	Pg	08 43 31.3	0.0
PDKS				i Sg	Sb	08 43 43.7	+0.1
	comp=Z,103nm,0.2s						
UDBI	Udbina	0.93	184	i Pg	Pg	08 43 31.7	-1.1
UDBI				Sg	Sg	08 43 43.9	-1.0
RIY	Rijeka	0.98	263	iPg		08 43 33.2	
RIY				Sg	Sg	08 43 45.5	-0.9
RIY	Rijeka	0.98	263	ePg	Pg	08 43 33.3	-0.4
RIY				eSg	Sb	08 43 46.8	-0.3
VNDS	Vrh nad Dolski	1.04	309	ePg	Pg	08 43 34.5	-0.3
VNDS				eSg	Sb	08 43 49.2	+0.4
	comp=Z,79nm,0.3s						
CEY	Cerknica	1.05	286	ePg	Pg	08 43 34.3	-0.7
CEY				eSg	Sb	08 43 49.3	+0.3
GBAS	Gorenja Brezov	1.10	296	i Pg	Pg	08 43 35.5	-0.6
GBAS				eSg	Sb	08 43 51.0	+0.3
	comp=Z,91nm,0.3s						
LJU	Ljubljana	1.10	303	ePg	Pb	08 43 36.2	0.0
LJU	Ljubljana	1.10	303	ePg	Pg	08 43 35.3	-0.7
LJU				eSg	Sb	08 43 50.8	+0.1
NVLJ	Novalja	1.14	219	ePg	Pg	08 43 35.8	-0.9
NVLJ				Sg	Sn	08 43 52.6	-0.1
BLY	Banja Luka	1.17	127	ePg	Pg	08 43 35.6	-1.8
BLY				eSg	Sg	08 43 52.1	-0.5
PERS	Pernice	1.29	336	i Pg	Pn	08 43 39.0	-0.2
PERS				eSg	Sg	08 43 56.5	+0.2
	comp=Z,219nm,0.3s						
SOKA	Soboth	1.35	335	ePn	Pn	08 43 39.8	-0.3
	comp=Z,20nm,0.3s,SNR=28						
SOKA				eSg	Sn	08 43 58.8	+0.6
	comp=Z,73nm,0.4s						
MGRS	Mrkonjic Grad	1.35	140	ePg	Pn	08 43 39.4	-0.6
MGRS				eSg	Sb	08 43 57.7	-0.2
OBKA	Obir	1.39	319	ePg	Pb	08 43 41.4	+0.2
	comp=Z,38nm,0.2s,SNR=48						
OBKA				Sg	Sn	08 44 00.6	+1.3
	comp=Z,100nm,0.4s						
KIJV	Kijevo	1.50	165	ePn	Pn	08 43 42.3	+0.2
KIJV				Sn	Sb	08 44 02.1	0.0
DUGI	Dugi Otok	1.57	202	ePn	Pn	08 43 43.4	+0.3
DUGI				Sn	Sg	08 44 05.5	+0.1
MORI	Morici	1.59	184	ePn	Pb	08 43 44.0	-0.5
MORI				Sn	Sg	08 44 06.8	+0.6
ARSA	Arzberg	1.81	353	ePn	Pn	08 43 46.1	-0.2
	comp=Z,1.2nm,0.2s						
ARSA				Sn	Sn	08 44 09.4	0.0
	comp=Z,5.6nm,0.3s						
ZIRJ	Zirje	1.81	185	i Pn	Pb	08 43 47.7	-0.5
ZIRJ				Sn	Sb	08 44 11.3	+0.3
MYKA	Terra Mystica	1.94	308	ePg	Pb	08 43 51.2	+0.7
	comp=Z,4.7nm,0.2s						
MYKA				Sg	Sg	08 44 18.2	+0.9
	comp=Z,9.5nm,0.3s						
HVAR	Hvar	2.32	169	ePn	Pn	08 43 54.8	+1.5
HVAR				Sn	Sn	08 44 23.8	+1.9
MAKA	Makarska	2.32	159	ePn	Pn	08 43 54.7	+1.4
MAKA				Sn	Sb	08 44 24.6	-1.1
KBA	Koelnbreinsper	2.38	314	Pn	Pn	08 43 53.5	-0.8
	comp=Z,1.9nm,0.3s						
KBA				Sg	Sg	08 44 32.0	+0.6
	comp=Z,14nm,0.4s						
CONA	Conrad Observa	2.47	360	ePn	Pn	08 43 55.5	0.0
	SNR=5.6						
HAPS	Han Pijesak,Bl	2.59	121	ePn	Pn	08 43 58.3	+1.2
HAPS				eSn	Sn	08 44 30.3	+1.5
MOA	Molln	2.63	336	ePn	Pn	08 43 57.1	-0.5
	comp=Z,4.3nm,0.2s,SNR=7.3						
MOA				Sn	Sn	08 44 29.2	-0.5
	comp=Z,7.1nm,0.3s,SNR=5.5						
ABTA	Abfaltersbach	2.66	300	Pn	Pn	08 43 57.2	-0.9
	comp=Z,0.7nm,0.2s						
ABTA				Sg	Sg	08 44 41.4	+1.0
	comp=Z,2.0nm,0.2s						
TEKS	Tekeris	2.75	108	eSn	Sn	08 44 34.1	+1.4
FRGS	Fruska Gora	2.80	95	eSn	Sn	08 44 34.5	+0.6
STON	Ston	2.90	152	ePn	Pn	08 44 02.5	+1.2
STON				eSn	Sn	08 44 37.7	+1.4
BBLS	Lazići	2.99	121	eSn	Sn	08 44 39.2	+0.7
MODS	Modra-Piesok	3.07	18	ePN	Pn	08 44 05.0	+1.3
MODS				eSN	Sn	08 44 36.0	-4.6
DIVS	Divibare	3.24	113	ePn	Pn	08 44 06.6	+0.6
DIVS				eSn	Sn	08 44 45.1	+0.3
TREB	Trebinje	3.27	146	eSn	Sn	08 44 46.8	+1.3
KRUC	Moravsky	3.62	6	ePN	Pn	08 44 10.8	-0.4
KRUC				eSN	Sn	08 44 51.1	-3.0
KRUC				eSG	Sg	08 45 13.1	+1.9
VYHS	Vyhne	3.66	33	ePN	Pn	08 44 11.7	0.0
VYHS				eSN	Sn	08 44 52.6	-2.3
DRME	Dracevica, Mon	4.06	143	ePn	Pn	08 44 18.1	+0.9
DRME				eSn	Sn	08 45 04.7	-0.1

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*EAF **10** 08:47:42.5±1.3, 20°.00S×31°.91E, h10^{km}, MD3.5*

*BUL **10** 08:47:43.1±1.4, 19°.97S×31°.96E, h10^{km}, MD3.6*

ISC 10 08:47:43.8±4.5**, 20°.1S**±0°.1×**31°.8E**±0°.2**, h10^{km}, n9, σ0^s.83**/18**, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	2.78	216	i P	Pn	08 48 27.8	-0.6
MSNA				i S	Sn	08 49 02.8	+0.7
MSNA	Messina	2.78	216	i P	Pn	08 48 27.8	-0.6
MSNA				i S	Sn	08 49 02.8	+0.7
MSNA	Messina	2.78	216	i P	Pn	08 48 27.8	-0.6
MSNA				i S	Sn	08 49 02.8	+0.7
BLWY	Bulawayo	2.98	268	i P	Pn	08 48 32.0	+0.8
BLWY				i S	Sn	08 49 05.8	-1.3
BLWY	Bulawayo	2.98	268	i P	Pn	08 48 32.0	+0.8
BLWY				i S	Sn	08 49 05.8	-1.3
BLWY	Bulawayo	2.98	268	i P	Pn	08 48 32.0	+0.8
BLWY				i S	Sn	08 49 05.8	-1.3
MATP	Matopo	3.10	263	i P	Pn	08 48 33.1	+0.2
MATP				i S	Sn	08 49 10.4	+0.4
MATP	Matopo	3.10	263	i P	Pn	08 48 33.1	+0.2
MATP				i S	Sn	08 49 10.4	+0.4
MATP	Matopo	3.10	263	i P	Pn	08 48 33.1	+0.2
MATP				i S	Sn	08 49 10.4	+0.4

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*ISK **10** 08:48:17.8, 37°.29N×28°.22E, h5^{km}, ML2.5/5*

*DDA **10** 08:48:18.9, 37°.26N×28°.27E, h7^{km}±5^{km}, ML2.3*

*ISCJB **10** 08:48:19.4±0.7, 37°.25N±0°.05×28°.23E±0°.08, h7^{km}±10^{km}, Error ellipse: s-maj=12.6km s-min=5.9km az=145.4*

ISC 10 08:48:18.4±1.7**, 37°.31N**±0°.05×**28°.28E**±0°.04**, h1^{km}**±19^{km}**, n12, σ0^s.53**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.18	179	PG	Pg	08 48 21.7	-0.1
YER				SG	Sg	08 48 24.9	+0.8
AYDN	Tasoluk	0.47	318	i P	Pb	08 48 29.2	-0.4
AYDN				i S	Sb	08 48 36.8	-0.3
AYDN				IAML_P			
	comp=Z,2μm,0.3s						
TURN	Turunc	0.51	149	i P	Pg	08 48 27.7	-0.4
TURN				IAML_P			
	comp=Z,1μm,0.4s						
DALY	Dalyan (Mula)	0.58	149	PG	Pb	08 48 30.5	-0.8
DALY	Dalyan (Mula)	0.58	149	i P	Pb	08 48 30.8	-0.5
BDRM	Kayabasi	0.71	250	i P	Pb	08 48 33.3	-0.3
BDRM				IAML_P			
	comp=Z,600nm,0.1s						
DAT	Datca	0.81	224	PG	Pg	08 48 33.8	-0.1
DAT	Datca	0.81	224	i P	Pn	08 48 37.5	+0.5
BODT	Bodrum	0.81	252	PG	Pg	08 48 33.7	-0.3
ARG	Arkhangelos	1.10	186	PG	Pg	08 48 39.3	-0.2
MANT	Manisa	1.20	11	i P	Pn	08 48 43.1	+0.6
AKAS	Kas	1.51	135	PN	Pg	08 48 47.7	+0.3

IDC 10 09:12:59.1±1.2**, 2°.39N**×**126°.07E, h0^{km}, mb3.6**/7**, mb1 3.8**/7**, mb1mx3.5**/42**, mbtmp3.6**/7**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.2**/37**, Error ellipse: s-maj=181.1km s-min=17.2km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	21.66	58	LR	LR	09 25 21.0	
	comp=Z,19nm,18.8s,baz=32,slow=34						
WRA	Warramunga Arr	23.63	160	P	P	09 18 11.9	-0.3
	1.2nm,0.5s,baz=338,slow=12,SNR=21						
ASAR	Alice Springs	27.00	164	P	P	09 18 43.3	+0.3
	0.2nm,0.3s,baz=344,slow=7.6,SNR=6.8						
STKA	Stephens Creek	37.13	158	P	P	09 20 11.3	-0.4
	2.0nm,0.6s,baz=334,slow=8.6,SNR=6.3						
H11S3	WAKE ISLAND Hy	42.88	65	T	T	10 05 21.7	
	baz=252,slow=75						
H11S2	WAKE ISLAND Hy	42.89	65	T	T	10 05 21.9	
	baz=252,slow=75						
H11S1	WAKE ISLAND Hy	42.89	65	T	T	10 05 26.1	
	baz=252,slow=75						
H11N1	WAKE ISLAND Hy	43.43	64	T	T	10 05 53.7	
	baz=255,slow=75						
H11N2	WAKE ISLAND Hy	43.44	64	T	T	10 05 51.5	
	baz=255,slow=75						
H11N3	WAKE ISLAND Hy	43.45	64	T	T	10 05 52.2	
	baz=255,slow=75						
SONM	Songino Array	48.36	342	P	P	09 21 42.9	+0.1
	0.3nm,0.6s,baz=168,slow=7.1,SNR=2.8						
MKAR	Makanchi Array	58.28	326	P	P	09 22 55.3	-0.4
	0.3nm,0.5s,baz=131,slow=9.5,SNR=3.7						
KURBB	Kurchatov Arra	62.51	328	P	P	09 23 24.6	0.0
	0.3nm,0.4s,baz=123,slow=5.4,SNR=2.7						
VNDA	Vanda	82.19	173	P	P	09 25 21.9	+0.3
	0.5nm,0.8s,baz=323,slow=5.1,SNR=4.8						

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*NNC **10** 09:19:26.9±5.3, 53°.46N×87°.80E, h17^{km}±49^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=42.5km s-min=16.0km az=88.0, Suspected Mining explosion.*

IDC 10 09:19:25.3±2.8**, 53°.55N**×**87°.71E, h0^{km}, mb1 3.1**/2**, mb1mx2.9**/46**, mbtmp3.1**/2**, ML2.8**/2**, 6C-2D, Error ellipse: s-maj=23.3km s-min=14.2km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.76	284	i		09 30 35.5	
	baz=100,slow=311,SNR=1.7						
ZAA0	Zalesovo Array	1.76	284	⇓P	Pn	09 19 57.1	+0.1
	0.5nm,0.3s,baz=103,slow=14						
ZAA0				⇑S	Sb	09 20 21.3	+0.2
	1.3nm,0.3s,baz=104,slow=25						
ZALV	Zalesovo Beam	1.76	284	Pg	Pn	09 19 57.4	+0.3
	4.0nm,0.3s,baz=98,slow=14,SNR=18						
ZALV				Lg	Lg	09 20 20.9	
	6.9nm,0.3s,baz=99,slow=25,SNR=16						
ZALV				Rg	Rg	09 20 29.4	
	4.0nm,0.4s,baz=93,slow=25,SNR=4.0						
KURBB	Kurchatov Arra	6.38	246	Pn	Pn	09 21 01.3	+0.9
	0.1nm,0.3s,baz=61,slow=14,SNR=7.3						
KURBB				Sn	Sn	09 22 14.3	+0.5
	0.1nm,0.3s,baz=64,slow=2.2,SNR=1.3						
KURBB				Lg	Lg	09 22 44.2	
	0.1nm,0.3s,baz=58,slow=28,SNR=8.1						
KURBB	Kurchatov Arra	6.38	246	⇑Pn	Pn	09 21 01.4	+1.0
	0.8nm,0.4s						
KURBB				⇑Sn	Sn	09 22 10.6	-3.2
	2.3nm,0.5s						
KURBB				⇓Lg	Lg	09 22 43.7	
	7.3nm,0.8s						
MK31	Makanchi Array	7.61	209	⇑Pn	Pn	09 21 17.7	+0.3
	0.6nm,0.8s,baz=29,slow=14,SNR=12						
MK31				⇑Sn	Sn	09 22 43.5	-0.8
	0.9nm,0.7s,baz=31,slow=20						
MK31				⇑Lg	Lg	09 23 23.8	
	1.6nm,0.7s						
MKAR	Makanchi Array	7.61	209	Pn	Pn	09 21 18.4	+1.0
	0.2nm,0.3s,baz=31,slow=14,SNR=9.4						
MKAR				Sn	Sn	09 22 44.1	-0.1
	0.2nm,0.3s,baz=29,slow=26,SNR=7.1						
MKAR				Lg	Lg	09 23 22.8	
	0.1nm,0.3s,baz=22,slow=34,SNR=3.4						

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*IDC **10** 09:29:10.4±0.4, 28°.94S×175°.71W, h0^{km}, mb4.8/18, mb1 5.0/19, mb1mx4.9/23, mbtmp4.8/19, ML4.9/1, MS4.3/20, Ms1 4.3/20, ms1mx4.2/26, Error ellipse: s-maj=17.1km s-min=15.2km az=163.0*

*BJI **10** 09:29:10.5±0.0, 28°.54S×175°.26W, h10^{km}, mb5.3/27, mB5.6/22, Ms5.0/12, Ms7 4.7/6*

*NEIC **10** 09:29:11.0±1.2, 29°.04S×175°.81W, h10^{km}±1^{km}, mb5.3/196, Error ellipse: s-maj=14.8km s-min=7.4km az=121.0*

*ISCJB **10** 09:29:11.2±2.1, 29°.09S±0°.05×175°.60W±0°.04, h15^{km}±15^{km}, mb5.2/221, MS4.5/26, Error ellipse: s-maj=8.6km s-min=5.2km az=170.8*

*MOS **10** 09:29:14.1±1.1, 28°.87S×175°.62W, h29^{km}, mb5.4/39, Error ellipse: s-maj=10.8km s-min=9.3km az=57.7*

*GCMT **10** 09:29:16.0±0.1, 28°.77S±0°.01×175°.34W±0°.01, h12^{km}, MW5.2/108, Moment Tensor Solution. s76,c129; s108,c181; Duration: 1^s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.78±.02; $M_{\theta\theta}$-0.03±.01; $M_{\phi\phi}$0.81±.01; $M_{r\theta}$0.10±.03; $M_{\theta\phi}$0.22±.01; $M_{\phi r}$0.04±.03; Best double couple: $M_0$0.83200×10^{17} NP1:ϕ_s201.00000°, δ48.00000°, λ-81.00000°. NP2:ϕ_s7.00000°, δ43.00000°, λ-100.00000°. Principal axes: T 0.8700, Plg2.0000°, Azm284.0000°; N -0.0760, Plg7.0000°, Azm15.0000°; P -0.7940, Plg83.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:29:12.1±0.5**, 29°.14S**±0°.05×**175°.67W**±0°.05**, h14^{km}**±2^{km}**, h14^{km}:pP-P, n678, σ1^s.30**/711**, mb5.2**/221**, MS4.5**/29**, 15C-12D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.97	266	ePn	Pg	09 29 49.1	-0.8
RAO	Raoul Island	1.97	266	eP	Pg	09 29 49.1	-0.8
GLKZ	Green Lake	1.97	266	P	Pg	09 29 48.6	-1.3
GLKZ				S	Sn	09 30 08.7	-0.9
RIZ	Raoul Island	1.98	266	P	Pg	09 29 49.0	-1.0
RIZ				S	Sn	09 30 07.1	-2.7
MXZ	Matakaoa Point	9.79	209	P	Pn	09 31 33.9	+1.4
PKGZ	Pakihiroa	10.17	209	P	Pn	09 31 38.1	+0.4
HAZ	Te Kaha	10.19	211	P	Pn	09 31 38.6	+0.8
PUZ	Puketiti	10.25	208	P	Pn	09 31 39.8	+1.0
GRZ	Great Barrier	10.30	224	P	Pn	09 31 44.7	+5.3
RUGZ	Raukumara Rang	10.40	210	P	Pn	09 31 41.7	+0.8
TWGZ	Tauwhareparae	10.45	209	P	Pn	09 31 42.9	+1.4
TKGZ	Te Karaka	10.73	208	P	Pn	09 31 45.1	-0.1
MWZ	Matawai	10.78	210	P	Pn	09 31 46.0	+0.1
WCZ	Waipu Caves	10.81	229	P	Pn	09 31 52.5	+6.0
OPRZ	Ohinepanea	10.84	215	P	Pn	09 31 48.8	+2.0
URZ	Urewera	10.90	212	Pn	Pn	09 31 46.7	-0.9
	1.0nm,0.3s,baz=275,slow=5.0,SNR=11						
URZ				Sn	Sn	09 33 48.4	-1.0
	12nm,0.3s,baz=138,slow=20,SNR=14						
URZ				LR	LR	09 38 11.6	
	comp=Z,1μm,18.4s,baz=31,slow=49						
URZ	Urewera	10.90	212	ePn	Pn	09 31 47.3	-0.3
URZ	Urewera	10.90	212	P	Pn	09 31 48.2	+0.6
OUZ	Omahuta	10.93	234	P	Pn	09 31 54.7	+6.7
PRGZ	Paritu Road	11.13	207	P	Pn	09 31 52.0	+1.2
NIUE	Niue	11.30	29	eP	Pn	09 31 41.8	-11
TOZ	Tahuroa Road	11.30	218	P	Pn	09 31 58.0	+4.9
MTW	Mount Morrison	13.99	209	P	P	09 32 34.5	-3.3
TRWZ	Traveller	14.11	208	P	Pn	09 32 35.0	+3.5
CAW	Cannon Point	14.13	210	P	Pn	09 32 34.8	+3.0
CAW				S	Sn	09 35 01.7	-6.8
PAWZ	Paruwai Farm	14.21	208	P	Pn	09 32 32.7	-0.2
PAWZ				S	Sn	09 35 04.5	-5.8
MSWZ	Moikau Station	14.31	209	P	Pn	09 32 37.4	+3.1
DUWZ	D'Urville Isla	14.42	213	P	Pn	09 32 38.0	+2.3
PLWZ	Palliser	14.44	208	P	Pn	09 32 36.7	+0.7
TCW	Tory Channel	14.57	212	P	Pn	09 32 36.0	-1.8
TUWZ	Tuamarina	14.90	212	P	Pn	09 32 37.7	-4.5
THZ	Tophouse	15.64	213	ePn	Pn	09 32 52.4	+0.3
	23nm,0.7s						
THZ				eSn	Sn	09 35 42.4	-2.9
KHZ	Kahutara	15.86	210	ePn	Pn	09 32 54.3	-0.6
	153nm,1.1s						
RAR	Rarotonga	16.40	65	Pn	Pn	09 32 52.1	-10
	2.9nm,0.3s,baz=252,slow=12,SNR=18						
RAR				Sn	Sn	09 35 35.7	-28
	4.5nm,0.3s,baz=56,slow=13,SNR=5.1						
RAR				LR	LR	09 39 02.3	
	comp=Z,952nm,18.9s,baz=252,slow=36						
RAR	Rarotonga	16.40	65	ePn	Pn	09 32 53.1	-8.7
	88nm,1.0s						
MARNC	Mare, Loyalty	16.58	294	ePn	Pn	09 33 02.1	-2.2
	440nm,1.1s						
OXZ	Oxford	17.26	212	ePn	Pn	09 33 12.0	-0.6
	57nm,0.5s						
DZM	Mont Dzumac	17.59	289	eP	P	09 33 23.0	+5.0
	134nm,1.3s						
DZM				eLQ	LQ	09 36 41.6	
	3μm,32.8s						
DZM				eLR	LR	09 37 28.5	
	comp=Z,4μm,29.8s						
DZM	Mont Dzumac	17.59	289	P	P	09 33 18.8	+0.9
	0.9nm,0.3s,baz=100,slow=20,SNR=7.3						
DZM				LR	LR	09 39 15.7	
	comp=Z,2μm,18.3s,baz=150,slow=35						
DZM	Mont Dzumac	17.59	289	ePn	Pn	09 33 14.4	-2.6
	55nm,1.1s						
RPZ	Rata Peaks	18.02	213	P	P	09 33 23.6	+1.1
	3.5nm,0.3s,baz=11,slow=2.7,SNR=12						
RPZ				S	Sn	09 36 33.9	-8.8
	2.1nm,0.3s,baz=352,slow=17,SNR=2.7						
RPZ				LR	LR	09 42 23.1	
	comp=Z,536nm,18.9s,baz=32,slow=44						
RPZ	Rata Peaks	18.02	213	eP	P	09 33 23.7	+1.3
	21nm,0.7s						
ODZ	Otahua Downs	19.23	211	eP	Pn	09 33 39.6	+2.9
	28nm,0.8s						
TBI	Tubuai	24.18	82	eS	S	09 38 38.2	-7.7
	688nm,25.5s						
TBI				eLQ	LQ	09 38 58.5	
	3μm,28.2s						
TBI				eLR	LR	09 39 52.2	
	comp=Z,2μm,32.5s						
TBI	Tubuai	24.18	82	eT	T	09 57 40.4	
	30nm,0.4s						
PAE	Paea	26.46	70	eT	T	10 00 18.8	
	19nm,0.4s						
PPT2	Papeete2	26.50	70	eP	P	09 34 49.7	+0.4
	109nm,1.2s						
PPT2				eLQ	LQ	09 39 52.6	
	3μm,24.5s						
PPT2				eLR	LR	09 40 48.0	
	comp=Z,2μm,30.2s						
PPT2	Papeete2	26.50	70	eT	T	10 00 22.4	
	13nm,0.4s						
PPT	Papeete	26.51	70	P	P	09 34 50.3	+1.0
	75nm,1.0s,baz=229,slow=20,SNR=3.7						
PPT				LR	LR	09 44 03.9	
	comp=Z,647nm,18.0s,baz=244,slow=34						
TVO	Taravao	26.68	71	eP	P	09 34 51.3	+0.5
	30nm,1.3s						
TVO	Taravao	26.68	71	eT	T	10 00 35.5	
	1.3nm,0.3s						
TIAR	Tiarei	26.71	70	eP	P	09 34 51.6	+0.5
	53nm,1.2s						
VAH	Vaihoa	29.32	68	eT	T	10 03 51.2	
	20nm,0.2s						
CTA	Charters Tower	35.64	276	P	P	09 36 10.0	+0.2
	5.7nm,0.6s,baz=115,slow=13,SNR=6.2						
STKA	Stephens Creek	36.75	255	P	P	09 36 20.1	+0.9
	1.8nm,0.4s,baz=100,slow=12,SNR=6.5						
STKA				LR	LR	09 50 35.2	
	comp=Z,617nm,18.3s,baz=90,slow=35						
STKA	Stephens Creek	36.75	255	eP	P	09 36 19.2	0.0
	4.2nm,1.2s						
RKT	Rikitea	36.89	90	eT	T	10 14 05.7	
	3.6nm,0.4s						
AS31	Alice Springs	45.22	265	eP	P	09 37 27.7	-1.4
	2.1nm,0.8s						
ASAR	Alice Springs	45.22	265	P	P	09 37 29.1	-0.1
	2.5nm,0.5s,baz=99,slow=6.5,SNR=51						
ASAR				PcP	PcP	09 39 09.6	+0.5
	2.2nm,0.6s,baz=108,slow=4.0,SNR=4.3						
ASAR				LR	LR	09 56 02.3	
	comp=Z,1μm,18.9s,baz=102,slow=36						
WB2	Warramunga Arr	46.09	270	eP	P	09 37 34.2	-1.8
	27nm,1.1s						
WRAB	Tennant Creek	46.10	270	eP	P	09 37 34.9	-1.2

	16nm,1.0s						
WRAB	Tennant Creek	46.10	270	⇑eP	P	09 37 35.7	-0.3
WRAB				pmax	pmax		
	comp=Z,13nm,1.5s						
WR1	Warramunga Arr	46.10	270	eP	P	09 37 35.7	-0.4
WRA	Warramunga Arr	46.10	270	P	P	09 37 35.7	-0.4
	comp=Z,6.5nm,0.7s,baz=103,slow=8.2,SNR=46						
WRA				PcP	PcP	09 39 12.1	-0.2
	comp=Z,10nm,1.1s,baz=134,slow=3.6,SNR=5.4						
SBA	Scott Base	49.45	185	eP	P	09 38 03.0	+1.8
	comp=Z,37nm,1.4s						
GENI	Genyem	49.56	294	P	P	09 38 07.6	+4.7
VNDA	Vanda	49.56	186	P	P	09 38 07.8	+5.7
	comp=Z,3.0nm,1.2s,baz=353,slow=8.5,SNR=5.7						
VNDA				LR	LR	09 54 38.3	
	comp=Z,150nm,20.8s,baz=2.0,slow=31						
VNDA	Vanda	49.56	186	eP	P	09 38 02.3	+0.2
VNDA				epP	pP	09 38 02.4	-2.1
VNDA	Vanda	49.56	186	P	P	09 38 05.3	+3.2
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BNDI	Bandanaira	56.95	285	P	P	09 39 01.2	+3.9
GUMO	Guam	57.07	313	LR	LR	10 01 56.9	
	comp=Z,76nm,18.8s,baz=141,slow=35						
CASY	Casey	57.20	208	eP	P	09 38 58.8	+0.5
	comp=Z,18nm,0.7s						
SIJI	Sorong	57.80	289	LR	LR	10 03 02.7	
	comp=Z,224nm,18.6s,baz=123,slow=35						
SWI	Sorong	57.80	289	P	P	09 39 06.3	+3.0
	comp=Z,35nm,0.7s						
MSAI	Masohi	58.40	285	P	P	09 39 12.0	+4.5
AAI	Ambon	58.84	284	P	P	09 39 15.7	+5.1
SOEI	Soe	59.21	276	P	P	09 39 16.5	+3.2
BATI	Baumata	59.53	275	LR	LR	10 05 17.2	
	comp=Z,1µm,18.6s,baz=142,slow=36						
BATI	Baumata	59.53	275	P	P	09 39 19.1	+3.7
NLAI	Namlea	60.00	284	P	P	09 39 22.7	+4.1
SANI	Sanana	61.57	285	P	P	09 39 34.1	+4.8
EDFI	Ende, Flores	61.92	276	P	P	09 39 37.0	+5.2
	comp=Z,13nm,1.5s						
WSI	Waingapu	62.71	274	P	P	09 39 53.3	+16
KCP	Kidapawan	67.33	292	⇑iP	P	09 40 09.2	+2.2
DNP	Denpasar	67.61	272	P	P	09 40 12.1	+3.3
PWJI	Pagerwojo	70.90	271	P	P	09 40 31.1	+1.9
WOJI	Wonogiri, Jawa	71.75	271	P	P	09 40 37.2	+2.8
MAW	Mawson	74.19	200	P	P	09 40 49.6	+1.8
	comp=Z,15nm,1.1s,baz=111,slow=6.1,SNR=13						
MAW				LR	LR	10 15 10.1	
	comp=Z,143nm,19.1s,baz=119,slow=37						
MAW	Mawson	74.19	200	eP	P	09 40 47.5	-0.4
	comp=Z,10nm,1.4s						
SBUM	Sibu	75.65	281	eP	P	09 40 55.9	-1.4
	comp=Z,18nm,1.4s						
KSM	Kuching	76.80	279	eP	P	09 41 02.4	-1.4
	comp=Z,17nm,0.9s						
CGJI	Cibinong	76.90	270	P	P	09 41 09.8	+5.4
	comp=Z,60nm,1.1s,comp=Z,2µm						
TPI	Tanjungpandan	77.03	274	P	P	09 41 07.5	+2.4
	comp=Z,26nm,1.3s,comp=Z,399nm						
MJAR	Matsushiro Arr	78.40	324	P	P	09 41 11.1	-1.0
	comp=Z,8.3nm,1.0s,baz=167,slow=5.4,SNR=10						
MAJO	Matsushiro	78.40	324	eP	P	09 41 11.1	-1.0
MAJO	Matsushiro	78.40	324	⇑iP	P	09 41 12.1	-0.1
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAT	Matsushiro	78.40	324	P	P	09 41 11.3	-0.9
MAT				S	S	09 51 04.6	-2.9
SYO	Syowa Base	78.79	192	⇑iP	P	09 41 15.5	+1.6
SYO	Syowa Base	78.79	192	⇓ipP	pP	09 41 17.1	+0.6
LWLI	Liwa	79.09	270	P	P	09 41 19.5	+2.8
MDSI	Maura Dua	79.23	271	P	P	09 41 18.0	+0.7
	comp=Z,24nm,1.0s,comp=Z,2µm						
SNAA	Sanae	79.34	178	P	P	09 41 19.6	+2.6
SNAA	Sanae	79.34	178	P	P	09 41 19.2	+2.1
	comp=Z,15nm,1.1s,baz=201,slow=10,SNR=36						
SNAA	Sanae	79.34	178	eP	P	09 41 17.5	+0.5
	comp=Z,28nm,1.2s						
VNA3	Neumayer Olymp	79.41	175	P	P	09 41 19.7	+2.3
YOJ	Yonaguni jima	79.45	306	eP	P	09 41 17.1	-1.1
	comp=Z,139nm,1.4s						
YOJ	Yonaguni jima	79.45	306	eP	P	09 41 17.1	-1.1
YOJ				pmax	pmax		
	comp=Z,139nm,1.4s						
VNA2	Neumayer--Watz	79.87	176	P	P	09 41 22.6	+2.8
JNU	Nakatsue	80.00	317	eP	P	09 41 20.0	-1.1
	comp=Z,55nm,1.3s						
VNA1	Neumayer--Stat	80.09	176	P	P	09 41 23.8	+2.8
ERM	Erimo	80.35	330	ceP	P	09 41 24.2	+1.6
ERM				pmax	pmax		
	comp=Z,39nm,1.2s						
YUK	Yuzh-Kuril'sk	80.88	333	eP	P	09 41 22.4	-3.0
YUK				eS	S	09 51 30.5	-2.9
YUK				eSS	SS	09 56 45.9	-2.2
YUK				MLR	MLR		
	comp=Z,132nm,15.0s						
ATKA	Atka Island	81.00	1	eP	P	09 41 24.7	-1.2
	comp=Z,92nm,1.4s						
KUR	Kuril'sk	81.12	335	d iP	P	09 41 27.0	+0.3
KUR				S	S	09 51 42.2	+6.4
KUR				pmax	pmax		
	comp=Z,112nm,1.3s						
KUR				MLR	MLR		
	comp=Z,200nm,16.0s						
PLCA	Paso Flores	81.87	132	P	P	09 41 32.8	+1.6
	comp=Z,8.0nm,1.1s,baz=254,slow=8.9,SNR=7.0						
PLCA				LR	LR	10 11 20.9	
	comp=Z,254nm,18.1s,baz=268,slow=31						
PLCA	Paso Flores	81.87	132	eP	P	09 41 31.6	+0.4
	comp=Z,29nm,1.4s						
NIKH	Nikolski High	81.98	4	eP	P	09 41 29.7	-1.4
	comp=Z,72nm,1.0s						
SCZ2	Santa Cruz Isl	82.15	44	P	P	09 41 32.7	+0.2
	baz=227						
CIS	Catalina Islan	82.50	45	P	P	09 41 34.1	-0.2
	baz=228						
MYKOM	Kota Tinggi	82.56	276	eP	P	09 41 34.1	-0.9
	comp=Z,67nm,1.5s						
BLG	Laguna Peak, P	82.58	44	P	P	09 41 34.6	-0.1
	baz=228						
PKM	Mcpherson Peak	82.65	43	P	P	09 41 35.7	+0.4
	baz=227						
SRIG	Santa Rosalia	82.70	53	eP	P	09 41 35.4	-0.1
	comp=Z,50nm,1.1s						
EFI	East Falkland	82.73	146	⇑eP	P	09 41 37.1	+1.8
EFI				pmax	pmax		
	comp=Z,54nm,1.2s						
KRJI	Kerinci	82.76	272	P	P	09 41 38.6	+2.3
SMMC	Simmler	82.84	43	P	P	09 41 36.4	+0.3
	baz=227						
QZH	Quanzhou	82.93	303	⇓iP	P	09 41 37.1	+0.4
QZH				S	S	09 51 56.5	+1.2
QZH				pmax	pmax		
	comp=Z,350nm,6.0s						
UNV	Unalaska Valle	83.02	5	eP	P	09 41 35.3	-1.1
	comp=Z,24nm,1.1s						
DECC	Green Verdugo	83.12	45	P	P	09 41 37.3	-0.2
	baz=228						
OSI	Osito Audit: C	83.13	44	P	P	09 41 37.7	+0.1
	baz=228						
MWC	Mount Wilson	83.27	45	eP	P	09 41 38.1	-0.4
	comp=Z,19nm,1.2s						
MWC	Mount Wilson	83.27	45	eP	P	09 41 38.1	-0.4
MWC				pmax	pmax		
	comp=Z,19nm,1.2s						
SDSI	Sungai Dareh	83.34	273	P	P	09 41 39.7	+0.5
MURC	Murrieta	83.40	46	P	P	09 41 38.9	-0.1
	baz=229,SNR=6.9						
ARVC	Arvin	83.41	44	P	P	09 41 39.0	0.0
	baz=228						
MONP2	Monument Peak	83.42	47	P	P	09 41 39.1	-0.3
	baz=229,SNR=8.3						
IKP	In-Ko-Pah, Jac	83.46	47	P	P	09 41 39.6	+0.2
	baz=229						
BFSC	Mount Baldy Ra	83.53	45	P	P	09 41 39.4	-0.4
	baz=228,SNR=7.2						
GDXM	Geysers	83.67	39	eP	P	09 41 40.0	-0.3
	comp=Z,23nm,1.4s						
DLV	T Lat	83.70	287	eP	P	09 41 38.9	-2.2
	comp=Z,44nm,1.2s						
PPSI	Pulau Pagai	83.70	270	P	P	09 41 44.6	+3.6
VES	Vestal, Richgr	83.74	43	P	P	09 41 40.3	-0.3
	baz=227,SNR=5.1						
EDW2	Edwards Air Fo	83.75	44	P	P	09 41 40.8	0.0
	baz=228,SNR=8.4						
SWSC	Sam W. Stewart	83.85	47	P	P	09 41 41.3	0.0
	baz=230						
PFO	Pinyon Flats O	83.87	46	eP	P	09 41 41.2	-0.3
	comp=Z,19nm,1.1s						
PFO	Pinyon Flats O	83.87	46	P	P	09 41 41.7	+0.2
	baz=229,SNR=8.1						
VOG	Valley Oaks Go	83.89	43	P	P	09 41 41.4	+0.1
	baz=227						
ISA	Isabella, Lake	83.98	43	eP	P	09 41 40.0	-2.0
	comp=Z,42nm,1.4s						
ISA	Isabella, Lake	83.98	43	eP	P	09 41 40.0	-2.0
ISA				pmax	pmax		
	comp=Z,42nm,1.4s						
ISA	Isabella, Lake	83.98	43	P	P	09 41 42.2	+0.2
	baz=228,SNR=8.4						
BBRC	Big Bear Solar	84.00	45	P	P	09 41 42.4	+0.1
	baz=229						
KMRM	Mail Ridge	84.19	37	eP	P	09 41 41.1	-1.9
	comp=Z,42nm,1.4s						
PDSI	Padang	84.20	272	P	P	09 41 45.5	+1.9
	comp=Z,16nm,1.1s						
TJN	Taejon	84.33	317	⇑eP	P	09 41 44.1	+0.5
LRMC	Laurel Mtn Rad	84.34	44	P	P	09 41 44.0	+0.1
	baz=228,SNR=7.1						
RRX	Edison Barstow	84.36	45	P	P	09 41 44.0	+0.1
	baz=229						
BELC	Belle Mtn. Jos	84.41	46	P	P	09 41 44.6	+0.2
	baz=229,SNR=15						
CMB	Columbia Colle	84.48	41	eP	P	09 41 43.4	-1.0
	comp=Z,18nm,1.3s						
CMB	Columbia Colle	84.48	41	eP	P	09 41 43.4	-1.0
CMB				pmax	pmax		
	comp=Z,18nm,1.3s						
YSS	Yuzh-Sakhalins	84.53	333	eP	P	09 41 42.1	-2.2
	comp=Z,61nm,1.1s						
YSS	Yuzh-Sakhalins	84.53	333	⇓eP	P	09 41 45.4	+1.1
YSS				eS	S	09 52 08.1	-2.3
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				pmax	pmax		
	comp=Z,300nm,6.2s						
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
BC3	Big Chuckawall	84.53	47	P	P	09 41 45.3	+0.4
	baz=230,SNR=16						
GLA	Glamis	84.55	47	eP	P	09 41 44.5	-0.4
	comp=Z,26nm,1.1s						
GLA	Glamis	84.55	47	eP	P	09 41 44.5	-0.4
GLA				pmax	pmax		
	comp=Z,27nm,1.1s						
GLA	Glamis	84.55	47	P	P	09 41 45.4	+0.5
	baz=230						
HSIG		84.64	53	eP	P	09 41 44.9	-0.5
	comp=Z,36nm,1.2s						
O02D	Mt. Diablo Mer	84.65	38	P	P	09 41 46.0	+0.7
	baz=224,SNR=19						
KHMM	Horse Mountain	84.65	37	eP	P	09 41 44.8	-0.6
	comp=Z,28nm,1.2s						
KSRS	Korea Array	84.73	318	P	P	09 41 46.8	+1.2
	comp=Z,4.7nm,1.0s,baz=139,slow=5.3,SNR=13						
KSRS				LR	LR	10 17 28.0	
	comp=Z,39nm,18.5s,baz=116,slow=34						
HEC	Hector,Ludlow	84.74	45	P	P	09 41 46.0	+0.1
	baz=229,SNR=12						
CWC	Cottonwood Cre	84.74	43	P	P	09 41 46.1	+0.1
	baz=228						
KS15	Wonju Array Si	84.74	318	eP	P	09 41 43.6	-2.1
	comp=Z,10nm,1.0s						
GSC	Goldstone, Bar	84.76	45	eP	P	09 41 45.8	-0.1
	comp=Z,26nm,1.3s						
GSC	Goldstone, Bar	84.76	45	P	P	09 41 46.2	+0.2
	baz=229,SNR=12						
AFDM	Forest Hills D	84.78	40	eP	P	09 41 45.5	-0.4
	comp=Z,17nm,1.3s						
PET	Petropavlovsk	84.82	345	c iP	P	09 41 47.6	+1.9
PET				eS	S	09 52 12.7	-0.4
PET				pmax	pmax		
	comp=Z,100nm,6.2s						
MPMC	Manual Prospec	84.84	44	P	P	09 41 46.7	+0.2
	baz=228,SNR=17						
ORV	Oroville	84.91	39	eP	P	09 41 45.7	-0.8
	comp=Z,12nm,1.1s						
ORV	Oroville	84.91	39	eP	P	09 41 45.7	-0.8
ORV				pmax	pmax		
	comp=Z,12nm,1.1s						
DAC	Darwin (Calif)	84.92	44	eP	P	09 41 48.8	+1.9
	comp=Z,9.7nm,1.2s						
DAC	Darwin (Calif)	84.92	44	P	P	09 41 49.5	+2.6
DAC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDPB	Devils Postpil	84.95	42	eP	P	09 41 46.9	-0.2
	comp=Z,8.6nm,1.1s						
OMMB	Old Mammoth Mi	84.99	42	eP	P	09 41 46.7	-0.6
	comp=Z,10nm,1.3s						
IRM	Iron Mountain	85.05	46	P	P	09 41 48.0	+0.6
	baz=230,SNR=27						
113A	Mohawk Valley,	85.05	48	eP	P	09 41 46.3	-1.0
	comp=Z,39nm,1.4s						
TIN	Tinemaha, Big	85.06	43	P	P	09 41 47.8	+0.3
	baz=228						
WDC	Whiskeytown Da	85.07	38	eP	P	09 41 46.1	-1.2
	comp=Z,48nm,1.4s						
WDC	Whiskeytown Da	85.07	38	eP	P	09 41 46.1	-1.2
WDC				pmax	pmax		
	comp=Z,48nm,1.4s						
MLAC	Mammoth, Mammo	85.10	42	P	P	09 41 47.9	+0.1
	baz=227						
PEA0B	Petropavlovsk-	85.12	344	eP	P	09 41 45.0	-2.2
	comp=Z,90nm,1.2s						
PETK	Petropavlovsk-	85.12	344	P	P	09 41 47.1	-0.1
	comp=Z,29nm,0.9s,baz=124,slow=7.0,SNR=23						
PETK				LR	LR	10 16 43.0	
	comp=Z,94nm,18.8s,baz=148,slow=34						
PEA1	Petropavlovsk-	85.13	344	eP	P	09 41 47.1	-0.1
GMRC	Granite Mounta	85.13	46	P	P	09 41 48.3	+0.4
	baz=230,SNR=6.0						
SDPT	Sand Point	85.15	9	eP	P	09 41 45.8	-1.4
	comp=Z,68nm,1.3s						
214A	Organ Pipe Nat	85.17	49	P	P	09 41 48.4	+0.4
	baz=231						
Y12C	Blythe	85.19	47	P	P	09 41 48.3	+0.3
	baz=230						
N02D	Trinity Center	85.26	37	P	P	09 41 48.8	+0.5
	baz=224,SNR=14						
O03E	Paynes Creek	85.27	38	P	P	09 41 48.1	-0.3
	baz=225,SNR=8.7						
WAKR	Walker	85.34	41	eP	P	09 41 48.8	-0.2
	comp=Z,33nm,1.4s						
TUQ	Turquoise Moun	85.39	45	P	P	09 41 49.4	+0.2
	baz=229,SNR=7.1						
SHOC	Shoshone, Teco	85.48	45	P	P	09 41 49.6	+0.1
	baz=229,SNR=8.5						
M02C	Callahan	85.48	37	P	P	09 41 50.1	+0.6
	baz=224,SNR=10.0						
FURC	Furnace Creek,	85.49	44	P	P	09 41 49.6	+0.1
	baz=229,SNR=8.8						
GRAC	Grapevine Rang	85.54	43	P	P	09 41 50.2	+0.4
	baz=228,SNR=12						
L02E	Cave Junction	85.64	36	P	P	09 41 50.7	+0.6
	baz=224						
PNTR	Pine Nut	85.65	40	eP	P	09 41 49.8	-0.7
	comp=Z,30nm,1.1s						
LDFC	Landfair	85.67	46	eP	P	09 41 49.7	-0.8
	comp=Z,46nm,1.0s						
BEKR	Beckworth	85.76	39	eP	P	09 41 50.4	-0.6
	comp=Z,16nm,1.3s						
VCNR	Virginia City	85.76	40	eP	P	09 41 50.4	-0.6
	comp=Z,20nm,1.2s						
PDMCI	Parker Dam,Lak	85.78	47	P	P	09 41 51.3	+0.3
	baz=230,SNR=7.8						
YERR	Yerington	85.78	41	eP	P	09 41 50.5	-0.6
	comp=Z,18nm,1.1s						
YBH	Yreka Blue Hor	85.80	37	eP	P	09 41 49.9	-1.1
	comp=Z,27nm,1.4s						
YBH	Yreka Blue Hor	85.80	37	eP	P	09 41 49.9	-1.1
YBH				pmax	pmax		
	comp=Z,27nm,1.4s						
NV01	Mina Array Sit	85.94	42	eP	P	09 41 51.9	-0.1
NVAR	Mina Array Bea	85.94	42	P	P	09 41 51.9	-0.1
	comp=Z,10nm,0.9s,baz=221,slow=8.2,SNR=56						
NVAR				LR	LR	10 16 38.7	
	comp=Z,526nm,18.1s,baz=242,slow=33						
RYN	Ryan	85.95	41	eP	P	09 41 51.0	-0.9
	comp=Z,15nm,1.2s						
K02D	Willamette Mer	86.00	36	P	P	09 41 52.0	0.0
	baz=224						
NV11	Mina Array Sit	86.03	42	eP	P	09 41 51.7	-0.6
	comp=Z,1.4nm,1.2s						
TPNV	Topopah Spring	86.18	44	eP	P	09 41 53.0	-0.1
	comp=Z,15nm,1.1s						
TPNV	Topopah Spring	86.18	44	eP	P	09 41 53.0	-0.1
TPNV				pmax	pmax		
	comp=Z,15nm,1.1s						
TPNV	Topopah Spring	86.18	44	P	P	09 41 53.4	+0.3
	baz=229,SNR=13						
PAHR	Pah Rah Range	86.19	40	eP	P	09 41 52.6	-0.5
	comp=Z,18nm,1.1s						
J01E	Myrtle Point	86.20	35	P	P	09 41 53.4	+0.6
	baz=224						
Y14A	Wickenburg	86.28	48	eP	P	09 41 53.3	-0.3
	comp=Z,30nm,1.0s						
M04C	Macdoel	86.30	37	P	P	09 41 53.5	0.0
	baz=225						
HUMO	Hull Mountain	86.30	36	eP	P	09 41 54.0	+0.6
	comp=Z,54nm,1.5s						
QIZ	Qiongzhong	86.31	294	P	P	09 41 53.6	-0.3
QIZ				S	S	09 52 32.7	+3.4
QIZ				pmax	pmax		
	comp=Z,130nm,5.2s						
QIZ				LR	LR		
	comp=Z,120nm,20.6s						
QIZ				LR	LR		
	comp=Z,87nm,14.7s						
IPM	Ipoh	86.33	277	eP	P	09 41 52.4	-1.8
	comp=Z,38nm,1.3s						
L04D	Klamath Falls	86.36	37	P	P	09 41 53.7	-0.1
	baz=225						
W13A	Hualapai Mount	86.45	46	eP	P	09 41 54.4	-0.2
	comp=Z,18nm,1.1s						
KVN	Kaiserville	86.48	41	eP	P	09 41 53.6	-1.0
	comp=Z,15nm,1.1s						
KVN	Kaiserville	86.48	41	eP	P	09 41 53.6	-1.0
KVN				pmax	pmax		
	comp=Z,15nm,1.1s						
MSHR	Mys Shultsa	86.52	324	⇑eP	P	09 41 55.3	+0.9
SHPR	Sheep Range	86.56	45	eP	P	09 41 54.6	-0.4
	comp=Z,26nm,1.4s						
TUC	Tucson	86.75	50	eP	P	09 41 56.1	+0.2
	comp=Z,42nm,1.1s						
TUC	Tucson	86.75	50	eP	P	09 41 56.1	+0.2
TUC				pmax	pmax		
	comp=Z,42nm,1.1s						
TUC	Tucson	86.75	50	P	P	09 41 56.9	+1.0
	baz=232						
I03D	Drain, OR	86.88	35	P	P	09 41 56.4	+0.3
	baz=224						
I02D	Swisshome	86.93	35	P	P	09 41 56.5	+0.2
	baz=224						
K04D	Chiloquin, OR	86.94	37	P	P	09 41 56.4	-0.2
	baz=225						
NJ2	Nanjing	86.99	309	eP	P	09 41 58.0	+1.0
NJ2				pP	PcP	09 42 01.5	+2.4
NJ2				pmax	pmax		
	comp=Z,25nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,290nm,5.7s						
KULM	Kulim	87.05	278	eP	P	09 41 57.4	-0.3
	comp=Z,59nm,1.4s						
J04D	Umpqua Nationa	87.19	36	P	P	09 41 57.6	-0.3
	baz=225						
MOD	Modoc Plateau	87.20	38	eP	P	09 41 57.5	-0.5
	comp=Z,9.4nm,1.1s						
HPIG		87.20	57	eP	P	09 41 57.5	-0.9
	comp=Z,13nm,1.1s						
319A	Douglas	87.20	52	eP	P	09 41 57.7	-0.5
	comp=Z,28nm,1.0s						
ZAIG	Zacatecas	87.23	62	eP	P	09 41 58.5	-0.3
	comp=Z,20nm,1.4s						
USA0B	Ussuriysk Arra	87.26	325	eP	P	09 41 56.9	-1.0
	comp=Z,28nm,1.2s						
USRK	Ussuriysk Ar.	87.26	325	P	P	09 41 58.9	+1.0
	comp=Z,15nm,1.1s,baz=139,slow=3.3,SNR=27						
USRK				LR	LR	10 16 04.8	
	comp=Z,134nm,20.5s,baz=135,slow=32						
PSI	Prapat	87.34	275	eP	P	09 41 57.1	-2.2
	comp=Z,41nm,1.1s						
PSI	Prapat	87.34	275	eP	P	09 41 57.1	-2.2
PSI				pmax	pmax		
	comp=Z,41nm,1.1s						
I04A	Tendick Farm,	87.42	36	P	P	09 41 58.6	-0.3
	baz=225						
K05A	Summer Lake	87.46	37	eP	P	09 41 59.0	-0.3
	comp=Z,46nm,1.5s						
R11A	Troy Canyon, C	87.49	43	eP	P	09 41 58.8	-0.7
	comp=Z,8.5nm,1.4s						
R11A	Troy Canyon, C	87.49	43	P	P	09 41 59.2	-0.3
	baz=229						
X16A	Lo Mia Camp, P	87.60	48	eP	P	09 42 00.5	+0.4
	comp=Z,22nm,1.0s						
J05D	Fort Rock, OR	87.67	36	P	P	09 42 00.1	-0.1
	baz=226						
H04D	Lebanon	87.78	35	P	P	09 42 00.4	-0.1
	baz=224						
GSI	Gunungsitoli	87.79	273	P	P	09 42 04.4	+3.1
	comp=Z,116nm,1.2s						
BMN	Battle Mountai	87.91	41	eP	P	09 42 00.3	-1.1
	comp=Z,19nm,1.3s						
BMN	Battle Mountai	87.91	41	eP	P	09 42 00.3	-1.1
BMN				pmax	pmax		
	comp=Z,19nm,1.3s						
G03D	McMinnville, O	88.02	34	P	P	09 42 01.8	+0.3
	baz=224						
LCMT	Little Creek M	88.06	45	eP	P	09 42 02.1	-0.1
	comp=Z,12nm,1.1s						
H04A	Detroit Lake	88.17	35	eP	P	09 42 02.2	-0.2
	comp=Z,34nm,1.4s						
PINE	Pine Mountain	88.18	36	eP	P	09 42 02.5	-0.1
	comp=Z,33nm,1.4s						
U15A	North Rim	88.29	46	eP	P	09 42 03.8	+0.3
	comp=Z,19nm,1.0s						
WUAZ	Wupatki	88.31	47	eP	P	09 42 04.0	+0.5
	comp=Z,26nm,1.2s						
WUAZ	Wupatki	88.31	47	P	P	09 42 04.2	+0.7
	baz=232						
KNB	Kanab	88.33	45	eP	P	09 42 03.7	+0.2
	comp=Z,19nm,1.1s						
KNB	Kanab	88.33	45	eP	P	09 42 03.7	+0.2
KNB				pmax	pmax		
	comp=Z,19nm,1.1s						
CCUT	Cedar City	88.33	45	eP	P	09 42 03.4	-0.2
	comp=Z,11nm,1.1s						
I05D	Terrebonne, OR	88.36	36	P	P	09 42 03.2	-0.1
	baz=225						
SZCU	Shurtz Canyon	88.53	45	eP	P	09 42 04.5	0.0
	comp=Z,17nm,1.3s						
X18A	Snowflake	88.64	49	eP	P	09 42 05.5	+0.4
	comp=Z,21nm,1.2s						
PSUT	Pine Spring	88.65	44	eP	P	09 42 04.6	-0.4
	comp=Z,11nm,1.3s						
KCSI	Kotacane, Aceh	88.69	275	P	P	09 42 07.9	+2.3
MDJ	Mudanjiang	88.76	324	P	P	09 42 06.7	+1.6
MDJ				pP	sP	09 42 08.3	-0.4
MDJ				sP	pwP	09 42 12.9	-3.0
MDJ				S	S	09 52 52.6	+0.9
MDJ				pmax	pmax		
	comp=Z,17nm,0.9s						
MDJ				LR	LR		
	comp=Z,150nm,19.9s						
MDJ				LR	LR		
	comp=Z,120nm,31.3s						
F04D	Rainier, OR	88.77	34	P	P	09 42 05.2	+0.1
	baz=224						
E03A	Lebam	88.83	33	eP	P	09 42 05.4	0.0
	comp=Z,68nm,1.3s						
PKCU	Pink Cliffs	88.91	45	eP	P	09 42 06.3	-0.2
	comp=Z,42nm,1.3s						
121A	Cookes Peak, D	88.91	52	P	P	09 42 07.2	+0.8
	baz=234						
I07A	Izee	89.13	37	eP	P	09 42 06.8	-0.2
	comp=Z,11nm,1.3s						
W18A	Petrified Fore	89.14	48	eP	P	09 42 06.2	-1.1
	comp=Z,27nm,1.0s						
W18A	Petrified Fore	89.14	48	P	P	09 42 08.0	+0.6
	baz=233						
J08A	Circle Bar Ran	89.18	38	eP	P	09 42 05.4	-1.9
	comp=Z,7.9nm,1.1s						
WHN	Wuhan	89.23	306	P	P	09 42 01.7	-6.0
ELK	Elko	89.25	41	eP	P	09 42 07.5	-0.3
	comp=Z,5.9nm,1.1s						
ELK	Elko	89.25	41	eP	P	09 42 07.6	-0.3
ELK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NLWA	Neilton Lookou	89.30	32	eP	P	09 42 08.0	+0.4
	comp=Z,45nm,1.3s						
E04D	Cinebar	89.32	33	P	P	09 42 08.2	+0.6
	baz=224						
G06A	Carlson Farm,	89.34	35	eP	P	09 42 07.8	-0.1

	comp=Z,27nm,1.3s						
MTPU	Mount Pierson	89.36	45	*e*P	P	09 42 09.1	+0.5
	comp=Z,21nm,1.2s						
F05D	White Salmon	89.38	35	P	P	09 42 08.0	-0.1
	baz=225						
MSU	Marysvale	89.66	45	*e*P	P	09 42 08.9	-0.9
MSU	Marysvale	89.66	45	*e*P	P	09 42 08.9	-0.9
D04E	Lakebay	89.67	33	P	P	09 42 10.5	+1.2
	baz=224						
D03D	Eldon	89.77	33	P	P	09 42 10.4	+0.6
	baz=224,SNR=6.8						
LON	Longmire	89.82	34	*e*P	P	09 42 09.2	-0.9
	comp=Z,16nm,1.4s						
LON	Longmire	89.82	34	*e*P	P	09 42 09.2	-0.9
LON				pmax	pmax		
	comp=Z,16nm,1.4s						
TX31	Lajitas Ar. Si	90.00	56	*e*P	P	09 42 11.9	+0.4
	comp=Z,48nm,1.4s						
TXAR	Lajitas Array	90.00	56	P	P	09 42 11.5	0.0
	comp=Z,14nm,1.1s,baz=216,slow=6.2,SNR=75						
TXAR				LR	LR	10 16 56.8	
	comp=Z,224nm,18.3s,baz=0.0,slow=32						
D05A	Enumclaw	90.05	33	*e*P	P	09 42 11.5	+0.4
	comp=Z,108nm,1.3s						
MNTX	Cornudas Mount	90.10	53	*e*P	P	09 42 11.8	+0.1
	comp=Z,21nm,1.3s						
MNTX	Cornudas Mount	90.10	53	P	P	09 42 11.9	+0.1
	baz=236,SNR=22						
GRNR	Gornyy	90.11	332	*e*P	P	09 42 12.5	+1.2
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
F07A	Phinny Hill Vi	90.16	35	*e*P	P	09 42 11.0	-0.6
	comp=Z,29nm,1.3s						
G08A	Pilot Rock	90.24	36	*e*P	P	09 42 11.8	-0.4
	comp=Z,39nm,1.3s						
DUG	Dugway, Tooele	90.32	43	P	P	09 42 12.4	-0.4
	baz=231						
CN2	Changchun	90.39	322	*e*P	P	09 42 13.7	+0.9
CN2				*e*sP	pwP	09 42 20.7	-2.9
CN2				*e*S	S	09 53 05.6	-1.3
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
Y22D	IRIS PASSCAL I	90.40	51	P	P	09 42 13.9	+0.7
	baz=235						
LENM	Lemitar	90.41	51	*e*P	P	09 42 13.9	+0.5
LAZ	Ladron	90.44	50	*e*P	P	09 42 13.4	-0.1
Q16A	Castle Valley	90.53	45	*e*P	P	09 42 14.2	+0.4
	comp=Z,8.1nm,1.4s						
CNPM	China Poot	90.62	12	*e*P	P	09 42 13.2	-0.3
	comp=Z,66nm,1.3s						
TIA	Tai'an	90.62	312	P	P	09 42 15.7	+1.6
TIA				pmax	pmax		
	comp=Z,20nm,1.0s						
BNM	Barren Site	90.64	51	*e*P	P	09 42 14.5	0.0
BGU	Big Grassy Mou	90.66	42	*e*P	P	09 42 14.0	-0.3
	comp=Z,7.6nm,1.4s						
HAWA	Hanford	90.70	35	*e*P	P	09 42 14.1	-0.1
	comp=Z,47nm,1.3s						
LTY	Liberty	90.73	34	*e*P	P	09 42 14.1	-0.3
	comp=Z,33nm,1.3s						
TMUT	Trail Mountain	90.74	44	*e*P	P	09 42 15.3	+0.4
	comp=Z,12nm,1.1s						
B05A	Bryant	90.76	33	P	P	09 42 14.7	+0.4
	baz=225,SNR=9.2						
LNIG	Linares	90.76	62	*e*P	P	09 42 14.4	-0.6
	comp=Z,25nm,1.2s						
A04D	Lummi Island	90.80	32	P	P	09 42 15.2	+0.7
	baz=224						
BMO	Blue Mountains	90.81	37	*e*P	P	09 42 14.5	-0.3
	comp=Z,17nm,1.4s						
BMO	Blue Mountains	90.81	37	*e*P	P	09 42 14.5	-0.3
BMO				pmax	pmax		
	comp=Z,17nm,1.4s						
BRLK	Bradley Lake	90.91	12	*e*P	P	09 42 14.7	-0.1
	comp=Z,41nm,1.1s						
MPU	Maple Canyon	90.92	44	*e*P	P	09 42 15.8	+0.2
	comp=Z,4.9nm,1.1s						
KLR	Kul'dur	90.99	329	*d i*P	P	09 42 16.0	+0.6
KLR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
E08A	Dider Farm, El	91.01	35	*e*P	P	09 42 15.3	-0.3
	comp=Z,32nm,1.4s						
SRU	San Rafael Swe	91.05	45	*e*P	P	09 42 16.0	-0.2
	comp=Z,18nm,1.2s						
SRU	San Rafael Swe	91.05	45	*e*P	P	09 42 16.0	-0.2
SRU				pmax	pmax		
	comp=Z,18nm,1.2s						
C06D	Leavenworth	91.09	33	P	P	09 42 16.0	0.0
	baz=226						
GDL2	Guadalupe Moun	91.10	53	*e*P	P	09 42 16.8	+0.3
P17A	Butcher Ranch,	91.13	45	*e*P	P	09 42 16.6	+0.1
	comp=Z,20nm,1.4s						
MVCO	Mesa Verde	91.19	47	*e*P	P	09 42 15.8	-1.2
	comp=Z,9.2nm,1.3s						
MVCO	Mesa Verde	91.19	47	P	P	09 42 16.9	-0.1
	baz=234						
TASM	ASL Pad, Albuq	91.21	50	P	P	09 42 17.3	+0.2
	baz=235,SNR=22						
TASM	ASL Pad, Albuq	91.21	50	P	P	09 42 17.3	+0.2
	baz=235,SNR=21						
ANMO	Albuquerque	91.21	50	*e*P	P	09 42 17.2	+0.2
	comp=Z,18nm,1.1s						
ANMO	Albuquerque	91.21	50	*d i*P	P	09 42 17.0	-0.1
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO	Albuquerque	91.21	50	P	P	09 42 17.3	+0.2
	baz=235						
SPUT	South Promonto	91.24	42	*e*P	P	09 42 17.0	0.0
	comp=Z,21nm,1.4s						
PV05	Paradox Valley	91.32	46	*e*P	P	09 42 17.4	-0.1
	comp=Z,18nm,1.1s						
HVU	Hansel Valley	91.34	42	*e*P	P	09 42 17.3	-0.2
	comp=Z,10nm,1.1s						
HVU	Hansel Valley	91.34	42	*e*P	P	09 42 17.3	-0.2
HVU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
JLU	Jordanelle	91.39	43	*e*P	P	09 42 16.7	-1.2
	comp=Z,8.4nm,1.5s						
D08A	Wollman Farm,	91.46	35	*e*P	P	09 42 17.5	-0.1
	comp=Z,55nm,1.2s						
E09A	Wood Farm, Sta	91.48	36	*e*P	P	09 42 17.2	-0.6
	comp=Z,42nm,1.2s						
SEW	Seward	91.49	13	*e*P	P	09 42 16.5	-0.9
	comp=Z,40nm,1.5s						
PV17	East Wray Mesa	91.52	46	*e*P	P	09 42 17.7	-0.8
	comp=Z,12nm,1.0s						
PV19	Morning Glory	91.53	46	*e*P	P	09 42 17.7	-0.8
	comp=Z,18nm,1.3s						
HLID	Hailey	91.54	40	*e*P	P	09 42 17.7	-0.7
	comp=Z,13nm,1.3s						
HLID	Hailey	91.54	40	P	P	09 42 18.5	+0.1
	baz=230						
PV18	Skein Mesa, Pa	91.54	46	*e*P	P	09 42 18.5	-0.1
	comp=Z,8.2nm,1.0s						
PV14	Lion Creek, Pa	91.54	46	*e*P	P	09 42 18.2	-0.4
	comp=Z,18nm,1.3s						
PV13	Radium Mtn., P	91.54	46	*e*P	P	09 42 17.9	-0.7
	comp=Z,13nm,1.3s						
PV09	Paradox Valley	91.55	46	*e*P	P	09 42 18.6	0.0
PV20	West Nyswonger	91.56	46	*e*P	P	09 42 19.0	+0.4
	comp=Z,11nm,1.1s						
PV16	Nyswonger Mesa	91.57	46	*e*P	P	09 42 18.2	-0.5
	comp=Z,15nm,1.4s						
PV03	Paradox Valley	91.58	46	*e*P	P	09 42 18.3	-0.5
	comp=Z,10.0nm,1.2s						
PV11	David Mesa, Pa	91.59	46	*e*P	P	09 42 18.4	-0.3
	comp=Z,25nm,1.5s						
PV23	Carpenter Ridg	91.59	46	*e*P	P	09 42 19.1	+0.3
	comp=Z,10nm,1.1s						
F10A	Beach Ranch, E	91.59	36	*e*P	P	09 42 17.9	-0.5
	comp=Z,31nm,1.1s						
PV02	Paradox Valley	91.62	46	*e*P	P	09 42 18.6	-0.4
	comp=Z,8.2nm,1.0s						
PV04	Paradox Valley	91.63	46	*e*P	P	09 42 18.2	-0.7
	comp=Z,11nm,1.1s						
PV12	Saucer Basin,	91.65	46	*e*P	P	09 42 18.6	-0.5
	comp=Z,14nm,1.1s						
PLID	Pearl Lake	91.66	38	*e*P	P	09 42 18.5	-0.4
	comp=Z,32nm,1.3s						
PV21	Cone Mtn., Par	91.68	46	*e*P	P	09 42 19.3	0.0
	comp=Z,9.6nm,1.0s						
PV01	Paradox Valley	91.69	47	*e*P	P	09 42 18.8	-0.5
	comp=Z,8.7nm,1.0s						
TCUT	Toone Canyon	91.73	43	*e*P	P	09 42 19.2	-0.2
	comp=Z,22nm,1.4s						
PV22	Blue Mesa, Par	91.78	46	*e*P	P	09 42 18.6	-1.0
	comp=Z,9.5nm,1.3s						
PV07	Paradox Valley	91.82	46	*e*P	P	09 42 19.1	-0.7
	comp=Z,9.4nm,1.1s						
C09A	Chrisman Ranch	92.29	35	*e*P	P	09 42 20.7	-0.8
	comp=Z,32nm,1.3s						
RC01	Rabbit Creek A	92.35	12	*e*P	P	09 42 20.6	-0.8
	comp=Z,45nm,1.3s						
S22A	4UR Ranch, Cre	92.58	48	*e*P	P	09 42 22.7	-0.7
	comp=Z,11nm,1.2s						
S22A	4UR Ranch, Cre	92.58	48	P	P	09 42 23.7	+0.2
	baz=235,SNR=16						
833A	Chaparral WMA,	92.61	59	P	P	09 42 23.4	-0.1
	baz=238						
EYAK	Cordova Ski Ar	92.66	14	*e*P	P	09 42 20.8	-2.0
	comp=Z,14nm,1.0s						
WRAK	Wrangell Islan	92.81	22	*e*P	P	09 42 24.5	+0.9
	comp=Z,36nm,1.3s						
KNK	Knik Glacier	92.89	13	*e*P	P	09 42 23.8	-0.2
	comp=Z,26nm,1.2s						
PMR	Palmer	92.93	12	*e*P	P	09 42 23.1	-0.9
	comp=Z,19nm,1.2s						
PMR	Palmer	92.93	12	*e*P	P	09 42 23.2	-0.9
PMR				pmax	pmax		
	comp=Z,19nm,1.2s						
O20A	White River Ci	93.07	45	*e*P	P	09 42 24.6	-1.0
	comp=Z,6.0nm,1.0s						
O20A	White River Ci	93.07	45	P	P	09 42 25.3	-0.3
	baz=234						
TTA	Tatalina	93.08	9	*e*P	P	09 42 25.1	+0.2
	comp=Z,14nm,1.2s						
NEW	Newport	93.17	35	*e*P	P	09 42 24.8	-0.8
	comp=Z,11nm,1.3s						
NEW	Newport	93.17	35	*e*P	P	09 42 24.8	-0.8
NEW				pmax	pmax		
	comp=Z,11nm,1.3s						
NEW	Newport	93.17	35	P	P	09 42 25.0	-0.7
	baz=228,SNR=5.4						
MSTX	Muleshoe	93.19	53	*e*P	P	09 42 25.5	-0.7
	comp=Z,21nm,1.0s						
MSTX	Muleshoe	93.19	53	P	P	09 42 25.5	-0.7
	baz=237						
MCMT	McKenzie Canyo	93.21	39	*e*P	P	09 42 26.0	-0.2
SMCO	Snowmass	93.31	46	*e*P	P	09 42 26.6	-0.3
	comp=Z,10nm,1.2s						
SDCO	Great Sand Dun	93.44	48	*e*P	P	09 42 27.1	-0.3
	comp=Z,6.3nm,1.1s						
SDCO	Great Sand Dun	93.44	48	P	P	09 42 26.9	-0.5
	baz=236,SNR=12						
JCT	Junction City	93.44	57	P	P	09 42 26.6	-0.7
	baz=238						
TPAW	Teton Pass	93.45	41	*e*P	P	09 42 27.0	-0.4
	comp=Z,15nm,1.3s						
BJI	Beijing	93.47	314	*e*P	P	09 42 28.5	+1.4
BJI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FXWY	Fox Creek	93.50	41	*e*P	P	09 42 27.3	-0.2
	comp=Z,12nm,1.3s						
SNOW	Snow King Moun	93.55	41	*e*P	P	09 42 28.0	+0.2
	comp=Z,17nm,1.1s						
DLMT	Dillon	93.68	39	*e*P	P	09 42 28.1	0.0
	comp=Z,20nm,1.3s						
IMW	Indian Meadow	93.71	41	*e*P	P	09 42 28.4	-0.1
	comp=Z,12nm,1.2s						
LOHW	Long Hollow	93.73	41	*e*P	P	09 42 27.9	-0.7
	comp=Z,9.9nm,1.3s						
MOOW	Moose Ponds	93.73	41	*e*P	P	09 42 28.0	-0.6
	comp=Z,5.0nm,1.3s						
T25A	Trinidad	93.82	49	*e*P	P	09 42 28.8	-0.4
	comp=Z,9.3nm,1.1s						
T25A	Trinidad	93.82	49	P	P	09 42 28.6	-0.5
	baz=236						
BW06	Boulder Array	93.83	42	*e*P	P	09 42 27.8	-1.3
	comp=Z,5.5nm,1.4s						
BW06	Boulder Array	93.83	42	P	P	09 42 28.2	-0.9
	baz=233,SNR=5.3						
PD31	Pinedale Array	93.83	42	*e*PP	PP	09 46 12.2	-2.9
PDAR	Pinedale Array	93.83	42	P	P	09 42 28.2	-0.9
	comp=Z,1.8nm,0.9s,baz=204,slow=3.3,SNR=14						
PDAR				PP	PP	09 46 12.2	-2.9
	comp=Z,0.5nm,1.0s,baz=232,slow=7.3,SNR=4.2						
BALM	Baldy	93.86	16	*e*P	P	09 42 27.6	-1.0
	comp=Z,13nm,1.0s						
BALM	Baldy	93.86	16	*e*P	P	09 42 27.6	-1.0
BALM				pmax	pmax		
	comp=Z,13nm,1.0s						
MSO	Missoula	93.88	37	*e*P	P	09 42 28.2	-0.8
	comp=Z,8.4nm,1.3s						
MSO	Missoula	93.88	37	P	P	09 42 27.9	-1.1
	baz=231,SNR=6.2						
FLWY	Flagg Ranch	93.96	41	*e*P	P	09 42 29.4	-0.1
	comp=Z,17nm,1.0s						
QLMT	Earthquake Lak	94.00	40	*e*P	P	09 42 30.3	+0.5
YPP	Pitchstone Pla	94.02	41	*e*P	P	09 42 30.0	+0.1
	comp=Z,10.0nm,1.4s						
YHB	Horse Butte	94.09	40	*e*P	P	09 42 30.3	+0.1
	comp=Z,9.6nm,1.1s						
YMR	Madison River	94.17	40	*e*P	P	09 42 30.6	0.0
	comp=Z,22nm,1.2s						
H17A	Grant Village	94.22	41	*e*P	P	09 42 31.4	+0.6
	comp=Z,9.6nm,1.1s						
H17A	Grant Village	94.22	41	P	P	09 42 31.8	+0.9
	baz=233,SNR=6.6						
YHH	Holmes Hill	94.30	40	*e*P	P	09 42 31.9	+0.7
	comp=Z,19nm,1.3s						
Q24A	Divide	94.35	47	P	P	09 42 31.4	-0.2
	baz=236						
BOZ	Bozeman (W)	94.36	39	*e*P	P	09 42 31.1	-0.2
	comp=Z,20nm,1.1s						
BOZ	Bozeman (W)	94.36	39	*e*P	P	09 42 31.1	-0.2
BOZ				pmax	pmax		
	comp=Z,20nm,1.1s						
BOZ	Bozeman (W)	94.36	39	P	P	09 42 31.3	-0.1
	baz=232,SNR=18						
KTH	Kantishna Hill	94.44	11	*e*P	P	09 42 29.6	-1.5
	comp=Z,20nm,1.4s						
AMTX	Amarillo	94.44	52	*e*P	P	09 42 31.1	-0.8
	comp=Z,21nm,1.4s						
AMTX	Amarillo	94.44	52	P	P	09 42 31.0	-0.8
	baz=238						
ISCO	Idaho Springs	94.53	47	P	P	09 42 32.1	-0.4
	baz=236						
RWWY	Rawlins	94.61	44	*e*P	P	09 42 32.1	-0.6
	comp=Z,11nm,1.1s						
RND	Reindeer	94.66	12	*e*P	P	09 42 31.2	-0.8
	comp=Z,20nm,1.1s						
RND	Reindeer	94.66	12	*e*P	P	09 42 31.3	-0.8
RND				pmax	pmax		
	comp=Z,20nm,1.1s						
ABTX	Abilene, Hawle	94.68	55	*e*P	P	09 42 32.7	-0.3
	comp=Z,12nm,1.1s						
ABTX	Abilene, Hawle	94.68	55	P	P	09 42 32.3	-0.7
	baz=238						
CMAR	Chiang Mai Arr	94.92	288	P	P	09 42 35.6	+1.3
	comp=Z,1.3nm,0.3s,baz=149,slow=2.4,SNR=7.1						
HRY	Holter Researc	94.94	38	*e*P	P	09 42 33.2	-0.6
N23A	Red Feather La	94.94	46	P	P	09 42 33.8	-0.4
	baz=236						
MCK	McKinley	94.94	12	*e*P	P	09 42 32.6	-0.8
	comp=Z,15nm,1.1s						
MCK	McKinley	94.94	12	*e*P	P	09 42 32.6	-0.8
MCK				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI	Kunming	95.08	296	P	P	09 42 36.4	+1.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,140nm,5.5s						
SEY	Seymchan	95.23	346⇑	*e*P	P	09 42 34.8	+0.2
RLMT	Red Lodge	95.40	41	*e*P	P	09 42 36.2	0.0
	comp=Z,7.0nm,1.2s						
RLMT	Red Lodge	95.40	41	P	P	09 42 36.1	-0.1
	baz=234						
GCMT	Greycliff	95.57	40	*e*P	P	09 42 36.7	-0.1
K22A	Casper	95.58	44	*e*P	P	09 42 36.4	-0.6
	comp=Z,9.1nm,1.0s						
K22A	Casper	95.58	44	P	P	09 42 36.6	-0.4
	baz=235						
WRH	Wood River Hil	95.77	12	*e*P	P	09 42 36.2	-0.9
	comp=Z,16nm,1.0s						
HDA	Harding Lake	95.92	12	*e*P	P	09 42 36.9	-0.9
	comp=Z,11nm,1.0s						
HDA	Harding Lake	95.92	12	P	P	09 42 37.0	-0.9
	baz=205						
WHTX	Lake Whitney,	95.94	57	P	P	09 42 37.8	-0.9
	baz=240						
CCB	Clear Creek Bu	95.98	12	*e*P	P	09 42 37.2	-0.8
	comp=Z,10nm,1.1s						
TCOL	CIGO, UAF Yank	96.18	12	P	P	09 42 38.2	-0.7
	baz=204						
COLA	College	96.18	12	*e*P	P	09 42 38.2	-0.7
	comp=Z,10nm,0.9s						
COLA	College	96.18	12	*d i*P	P	09 42 37.9	-1.0
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ILAR	Eielson Array	96.26	12	P	P	09 42 38.3	-1.0
	comp=Z,3.3nm,0.9s,baz=217,slow=5.3,SNR=28						
ILAR				PP	PP	09 46 29.6	-3.6
	comp=Z,1.9nm,1.1s,baz=219,slow=6.9,SNR=4.5						
ILB	Eielson Array	96.26	12	*e*P	P	09 42 38.3	-1.0
	comp=Z,4.6nm,0.9s						
LPAZ	La Paz	96.78	113	P	P	09 42 45.6	+1.9
	comp=Z,1.6nm,0.9s,baz=190,slow=2.8,SNR=5.5						
LPAZ				LR	LR	10 19 09.8	
	comp=Z,52nm,19.8s,baz=243,slow=31						
CD2	Chengdu	97.15	301	*e*P	P	09 42 44.0	-0.3
BILL	Bilibino	97.81	353⇑	*e*P	Pdif	09 42 46.5	+0.2
BILL				pmax	pmax		
	comp=Z,17nm,1.8s						
CBKS	Cedar Bluff	97.83	50	P	P	09 42 46.4	-0.8
	baz=239						
RSSD	Black Hills	97.90	44	*e*P	P	09 42 46.6	-0.9
	comp=Z,15nm,1.0s						
RSSD	Black Hills	97.90	44	*e*P	P	09 42 46.6	-0.9
RSSD				pmax	pmax		
	comp=Z,15nm,1.0s						
RSSD	Black Hills	97.90	44	P	P	09 42 47.1	-0.5
	baz=237						
LAO	LASA Array	98.04	41	*e*P	P	09 42 47.1	-0.8
	comp=Z,11nm,1.2s						
LAO	LASA Array	98.04	41	P	P	09 42 47.6	-0.3
	baz=236						
CPUP	Villa Florida	99.15	127	LR	LR	10 21 48.5	
	comp=Z,145nm,19.4s,baz=226,slow=32						
TOLK	Toolik Lake Re	99.38	9	P	Pdif	09 42 51.9	-1.5
	baz=203						
LZH	Lanzhou	99.61	306	*e*P	Pdif	09 42 52.9	-2.4
LZH				pP	sP	09 42 59.2	+0.3
LZH				sP	pwP	09 43 02.0	-4.2
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=Z,370nm,18.0s						
LZH				LR	LR		
	comp=Z,290nm,18.1s						
LZH				LR	LR		
	comp=Z,440nm,19.1s						
EPYK	Eagle Plains	99.73	15	P	Pdif	09 42 53.9	-1.1
	baz=214						
SONA0	Songino Array	103.58	317	*e*Pdif	Pdif	09 43 11.7	-1.0
SONM	Songino Array	103.58	317	Pdiff	Pdif	09 43 11.7	-1.0
	comp=Z,0.2nm,0.4s,baz=116,slow=3.4,SNR=2.3						
SONM				PP	PP	09 47 28.8	-0.5
	comp=Z,0.2nm,0.5s,baz=134,slow=8.5,SNR=4.0						
WCI	Wyandotte Cave	106.92	55	P	PKiKP	09 47 37.3	0.0
	baz=246						
G40A	Rib Lake	107.11	47	P	PKiKP	09 47 37.4	-0.2
	baz=246						
WMQ	Urumqi	114.04	308	*e*PKP	PKiKP	09 47 51.3	+0.6
WMQ				LR	LR		
	comp=Z,2µm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,29.0s						
WMQ				LR	LR		
	comp=Z,210nm,29.0s						
D53A	Lac Vacive, Po	115.88	49	*e*PKPdf	PKPdf	09 47 52.9	-1.2
E54A	Lac Daplat, Po	116.05	50	P	PKPdf	09 47 54.3	-0.1
	baz=254						
SUR	Sutherland	116.85	196	PKP	PKiKP	09 47 57.7	+0.8
	comp=Z,3.0nm,0.9s,baz=132,slow=17,SNR=2.3						
M61A	Granite Spring	117.03	56	P	PKiKP	09 47 56.6	+0.1
	baz=254						
ZALV	Zalesovo Beam	118.44	318	PKP	PKPdf	09 47 58.3	-0.5
	comp=Z,0.7nm,0.3s,baz=186,slow=1.5,SNR=6.2						
ZAA1	Zalesovo Array	118.44	318	*e*PKPdf	PKPdf	09 47 58.3	-0.5
MK31	Makanchi Array	118.51	310	*e*PKPdf	PKPdf	09 47 58.9	-0.3
MK31	Makanchi Array	118.51	310	*e*PKIKP	PKPdf	09 47 58.9	-0.3
MK32	Makanchi Array	118.51	310	*e*PKPdf	PKPdf	09 47 58.9	-0.3
MK32				*e*PKKPbc	PKKPab	09 58 17.2	0.0
MKAR	Makanchi Array	118.51	310	PKP	PKPdf	09 47 58.9	-0.3
	comp=Z,4.4nm,1.1s,baz=66,slow=2.9,SNR=18						
MKAR				PKKPbc	PKKPab	09 58 17.2	0.0
	comp=Z,0.3nm,0.7s,baz=328,slow=4.3,SNR=3.8						
MAKZ	Makanchi	118.73	310	*e*PKPdf	PKPdf	09 47 59.3	-0.3
MAKZ	Makanchi	118.73	310	*e*PKIKP	PKPdf	09 47 59.3	-0.3
PKME	Peaks-Kenny Pk	121.14	52	P	PKPdf	09 48 04.1	-0.1
	baz=259						
KSH	Kashi	121.34	301	*e*PKP	PKiKP	09 48 06.4	+1.3
KSH				PP	PP	09 49 42.5	+6.0
KSH				PKS	PKSdf	09 51 42.7	+1.0
KSH				AMB	AMB		
	comp=Z,70nm,6.2s						
KSH				LR	LR		
	comp=Z,220nm,10.2s						
KSH				LR	LR		
	comp=Z,160nm,8.8s						
KURK	Kurchatov	121.64	314	*e*PKPdf	PKiKP	09 48 05.3	+0.1
KURK	Kurchatov	121.64	314	*d i*PKIKP	PKPdf	09 48 04.5	-0.5
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
BOOM	Boomskoye usch	122.02	304	*e*PKPdf	PKPdf	09 48 06.0	-0.3
BOOM	Boomskoye usch	122.02	304	*e*PKIKP	PKPdf	09 48 06.0	-0.3
AAK	Ala-Archa	123.09	304⇑	*i*PKIKP	PKiKP	09 48 09.1	+0.6
AAK				pmax	pmax		
	comp=Z,13nm,2.5s						
BTK	Batken	125.34	300	*e*PKPdf	PKPdf	09 48 12.7	+0.1
GAR	Garm	125.52	299	*e*PKPdf	PKPdf	09 48 12.1	-1.0
GAR	Garm	125.52	299	*e*PKIKP	PKPdf	09 48 12.1	-1.0
KBL	Kabul	125.58	293	*e*PKPdf	PKiKP	09 48 14.5	+0.7
KK31	Karatay Array	126.06	304	*e*PKPdf	PKiKP	09 48 14.5	+0.3
KK31	Karatay Array	126.06	304	*e*PKIKP	PKiKP	09 48 14.5	+0.3
KKAR	Karatay Array	126.06	304	*e*PKPdf	PKiKP	09 48 14.0	-0.2
KKAR	Karatay Array	126.06	304	*e*PKIKP	PKiKP	09 48 14.0	-0.2
BRVK	Borovoye	126.97	316	*e*PKPdf	PKPdf	09 48 14.9	-0.2
BRVK	Borovoye	126.97	316	*d i*PKIKP	PKPdf	09 48 15.2	0.0
ARU	Arti	133.38	322	*e*PKPdf	PKPdf	09 48 27.1	-0.1
ARU	Arti	133.38	322	*i* PKIKP	PKiKP	09 48 28.1	-0.4
ARU						09 50 53.9	
ARU				MLR	MLR		
	comp=Z,132nm,21.0s						
GEYT	Alibeck	134.85	296	PKP	PKPdf	09 48 30.9	+0.3
	comp=Z,1.6nm,0.6s,baz=210,slow=8.6,SNR=4.9						
KMBO	Kilima Mbogo	136.45	232	PKhKP	PKPpre	09 48 27.7	
	comp=Z,4.9nm,0.2s,baz=126,slow=17,SNR=4.9						
KMBO	Kilima Mbogo	136.45	232	*e*PKPdf	PKPdf	09 48 31.8	-2.8
KMBO	Kilima Mbogo	136.45	232	*e*PKIKP	PKPdf	09 48 31.8	-2.8
HAMF	Hammerfest	137.05	351	*e*PKPdf	PKPdf	09 48 33.6	-0.1
PRGR	Permogore	137.69	332	*e*PKHKP	PKPpre	09 48 27.0	
PRGR				pmax	pmax		
	comp=Z,15nm,1.3s						
ARA0	ARCESS Array S	137.76	349	*e*PKPdf	PKPdf	09 48 35.6	+0.6
ARCES	ARCESS Array B	137.76	349	PKP	PKPdf	09 48 35.6	+0.6
	comp=Z,10nm,1.1s,baz=74,slow=1.3,SNR=6.6						
ARE0	ARCESS Array S	137.76	349	*e*PKPdf	PKPdf	09 48 34.7	-0.3
H10S3	ASCENSION HYDR	137.93	151	T	T	12 24 21.0	
	baz=205,slow=74,SNR=13						
H10S2	ASCENSION HYDR	137.94	151	T	T	12 24 19.5	
	baz=205,slow=74,SNR=16						
H10S1	ASCENSION HYDR	137.95	151	T	T	12 24 20.6	
	baz=205,slow=74,SNR=22						
TRO	Tromso	138.60	352	*e*PKPdf	PKPdf	09 48 35.5	-1.0
H10N3	ASCENSION HYDR	139.00	151	T	T	12 25 47.1	
	baz=204,slow=75,SNR=16						
H10N1	ASCENSION HYDR	139.00	151	T	T	12 25 48.3	
	baz=204,slow=75,SNR=21						
H10N2	ASCENSION HYDR	139.02	151	T	T	12 25 46.8	
	baz=204,slow=75,SNR=16						
RAYN	Ar Rayn	142.82	271	*e*PKPdf	PKPdf	09 48 43.1	-2.5
RAYN	Ar Rayn	142.82	271	*e*PKIKP	PKPdf	09 48 43.1	-2.5
NSS	Namsos	144.26	354	*e*PKPdf	PKPdf	09 48 46.4	-0.4
MOS	Moscow	144.40	328	*i* PKIKP	PKPab	09 48 44.6	-0.9
MOS				pmax	pmax		
	comp=Z,47nm,1.1s						
FIA1	FINESS Array S	144.61	342	*e*PKPdf	PKPab	09 48 45.4	-0.7
FIA0	FINESS Array S	144.61	342	*e*PKPdf	PKPab	09 48 45.8	-0.3

FIA0	FINESS Array S	144.61	342	ePKIKP	PKPab	09 48 45.8	-0.3
FINES	FINESS Array B	144.61	342	PKP	PKPab	09 48 45.8	-0.3
	comp=Z,13nm,0.7s,baz=46,slow=5.5,SNR=31						
PUL	Pulkovo	144.66	337	eP	PKPab	09 48 45.5	-0.8
TBLG	Delisi	145.07	302	ePKPdf	PKPdf	09 48 49.5	+0.5
TBLG	Delisi	145.07	302	ePKIKP	PKPdf	09 48 49.5	+0.5
OBN	Obninsk	145.25	327	ePKPbc	PKPdf	09 48 48.7	-0.1
OBN	Obninsk	145.25	327	d iPKIKP	PKPbc	09 48 48.4	-0.1
OBN				e		09 48 59.1	
OBN				i		09 52 04.6	
OBN				pmax	pmax		
	comp=Z,101nm,1.1s						
OBN				MLR	MLR		
	comp=Z,71nm,18.0s						
GNI	Garni	145.25	299	d iPKIKP	PKPdf	09 48 50.4	+0.8
LPSR	Galich'ya Gora	145.40	322	ePKIKP	PKPdf	09 48 49.0	-0.2
LPSR				pmax	pmax		
	comp=Z,90nm,1.1s						
ZEI	Tsey	145.52	304	i PKP2	PKPdf	09 48 48.8	-1.2
ZEI				pmax	pmax		
	comp=Z,62nm,1.3s						
NCK	Nalchik	145.60	305	⇑ ePKIKP	PKPab	09 48 51.5	+1.1
GOF	Gofitskoye	145.65	308	⇑ ePKIKP	PKPab	09 48 51.2	+0.7
GOF				pmax	pmax		
	comp=Z,101nm,1.2s						
VSR	Storozhevoye	145.92	320	ePKP2	PKPdf	09 48 50.1	0.0
VSR				pmax	pmax		
	comp=Z,120nm,1.2s						
VORD	Divnogorie	145.96	320	ePKP2	PKPdf	09 48 50.4	+0.2
VORD				pmax	pmax		
	comp=Z,50nm,1.0s						
AKH	Akhalkalaki	146.04	302	ePKPdf	PKPab	09 48 52.7	+0.3
KBZ	Khabaz	146.05	306	PKPbc	PKPab	09 48 52.1	+0.1
	comp=Z,10nm,1.0s,baz=97,slow=6.0,SNR=18						
KIV	Kislovodsk	146.15	306	i PKP2	PKPab	09 48 52.4	-0.2
KIV				pmax	pmax		
	comp=Z,83nm,1.1s						
MOL	Molde	146.50	357	ePKPbc	PKPbc	09 48 51.5	-0.7
VSU	Vasula	146.85	339	d iPKP2	PKPbc	09 48 53.1	-0.2
AKN	Aaknes	146.91	358	ePKPbc	PKPbc	09 48 52.6	-0.8
DOMB	Dombas	146.94	356	ePKPbc	PKPbc	09 48 52.6	-0.9
NC303	NORSAR Array S	147.57	354	ePKPbc	PKPbc	09 48 55.1	-0.1
NC204	NORSAR Array S	147.57	354	ePKPbc	PKPbc	09 48 55.1	-0.2
NC405	NORSAR Array S	147.65	353	ePKPbc	PKPbc	09 48 55.3	-0.2
NB201	NORSAR Array S	147.75	354	ePKPbc	PKPbc	09 48 55.9	+0.1
NB2	NORSAR Subarra	147.77	354	PKP	PKPbc	09 48 55.2	-0.6
	comp=Z,3.8nm,0.7s,baz=6.9,slow=2.9						
NB200	NORSAR Array S	147.77	354	ePKPbc	PKPbc	09 48 55.5	-0.3
NOA	NORSAR Array B	147.77	354	PKPbc	PKPbc	09 48 55.5	-0.3
	comp=Z,16nm,1.0s,baz=15,slow=4.6,SNR=16						
NBO00	NORSAR Array S	147.81	354	ePKPbc	PKPbc	09 48 56.0	0.0
HYA	Hoyanger	147.95	358	ePKPdf	PKPdf	09 48 52.4	-0.7
HYA				ePKPab	sPKPbc	09 48 58.1	-1.7
NAO01	NORSAR Array S	147.99	354	ePKPbc	PKPbc	09 48 55.8	-0.6
NC602	NORSAR Array S	148.03	353	ePKPbc	PKPbc	09 48 56.5	0.0
NC602	NORSAR Array S	148.03	353	ePKPbc	PKPbc	09 48 55.6	-0.9
SUE	Sulen	148.08	360	ePKPdf	PKPdf	09 48 53.0	-0.4
SKAR	Skarslia	148.34	356	epPKPdf	PKPbc	09 48 56.8	-0.6
ASK	Askoy	148.65	359	epPKPdf	PKPbc	09 48 57.0	-1.0
BER	Bergen	148.75	359	epPKPdf	PKPbc	09 48 57.3	-1.0
IZAR	Zarasai	149.14	336	eP	PKiKP	09 49 00.0	-0.7
IZAR				IAmb	IAmb	09 49 01.2	
	comp=Z,25nm,1.1s						
ODD1	Odda	149.19	358	ePKPbc	PKPbc	09 48 58.9	-0.6
KONO	Kongsberg	149.28	355	ePKPbc	PKPbc	09 48 59.6	-0.1
KONO	Kongsberg	149.28	355	c ePKP2	PKPbc	09 48 58.6	-1.1
KONO	Kongsberg	149.28	355	ePKPbc	PKPbc	09 48 59.5	-0.3
ISAL	Salakas	149.32	336	eP	PKPbc	09 49 00.4	+0.4
ISAL				IAmb	IAmb	09 49 05.4	
	comp=Z,22nm,1.1s						
MICGM	Minsk	149.46	333	e	PKPbc	09 49 00.0	-0.3
MNK	Minsk	149.46	333	ePKP2	PKPbc	09 49 00.0	-0.3
IIGN	Ignalina	149.46	335	eP	PKPbc	09 49 00.7	+0.4
IIGN				IAmb	IAmb	09 49 05.8	
	comp=Z,26nm,1.0s						
ANN	Anapa	149.53	310	i PKHKP	PKPpre	09 49 00.1	
ANN				pmax	pmax		
	comp=Z,44nm,1.3s						
BLS5	Blasjo	149.69	358	epPKPbc	pPKPbc	09 49 03.9	+0.4
KMY	Karmoy	149.92	359	ePKPbc	PKPbc	09 49 01.0	-0.3
HOMB	Homborsund	150.73	355	ePKPbc	PKPbc	09 49 02.1	-1.2
SNART	Snartemo	150.74	357	epPKPdf	pPKPdf	09 49 00.2	-0.3
ROSA	Rosais	151.46	62	ePKPbc	PKiKP	09 49 07.0	+0.9
AKASG	Malin Array Be	151.46	326	PKPbc	PKPbc	09 49 05.2	0.0
	comp=Z,23nm,0.9s,baz=43,slow=2.7,SNR=8.0						
AKASG				PKPab	PKPab	09 49 12.7	-0.8
	comp=Z,5.4nm,0.6s,baz=43,slow=2.6,SNR=7.4						
AKBB	Malin Array Si	151.46	326	ePKPdf	PKPdf	09 48 59.0	-0.1
AKBB				ePKPbc	PKiKP	09 49 05.7	0.0
AKBB				ePKPab	PKPab	09 49 13.5	0.0
AKBB	Malin Array Si	151.46	326	ePKIKP	PKPdf	09 48 59.0	-0.1
AKBB				e		09 49 05.7	
AKBB				e		09 49 13.5	
SUW	Suwalki	151.60	336	ePKP	PKiKP	09 49 05.6	-0.2
SUW	Suwalki	151.60	336	ePKPbc	PKiKP	09 49 06.0	+0.1
SUW				ePKPab	PKPab	09 49 14.3	+0.3
SUW	Suwalki	151.60	336	ePKIKP	PKiKP	09 49 05.6	-0.2
SIM	Simferopol'	151.67	312	ePKIKP	PKiKP	09 49 07.0	+0.7
SIM				e		09 49 21.5	
SIM				pmax	pmax		
	comp=Z,12nm,1.2s						
ILGA	Ilgaz	153.31	304	ePKPdf	PKPdf	09 48 59.3	-3.2
ILGA				e		09 49 11.6	
BR101	Keskin Array S	153.73	301	ePKPdf	PKPdf	09 49 02.5	-0.6
BR101				ePKPbc	PKPbc	09 49 10.0	-0.9
BR101				ePKPab	PKPab	09 49 23.6	-0.2
BR131	Keskin Array S	153.73	301	ePKPdf	PKPdf	09 49 02.1	-1.0
BR131				ePKPbc	PKiKP	09 49 10.9	0.0
BRTR	Keskin Array B	153.73	301	PKP	PKPdf	09 49 02.5	-0.6
	comp=Z,0.3nm,0.3s,baz=299,slow=2.5,SNR=3.6						
BRTR				PKPbc	PKPbc	09 49 10.0	-0.9
	comp=Z,6.3nm,1.1s,baz=68,slow=5.7,SNR=14						
BRTR				PKPab	PKPab	09 49 23.6	-0.2
	comp=Z,6.7nm,1.1s,baz=109,slow=3.0,SNR=9.6						
KWP	Kalwaria Pacla	155.21	331	ePKPdf	PKPdf	09 49 03.7	-0.9
KWP				ePKPbc	pPKPbc	09 49 14.8	-1.4
KWP				ePKPab	PKPab	09 49 28.9	-0.6
KWP	Kalwaria Pacla	155.21	331	ePKIKP	PKPdf	09 49 03.7	-0.9
KWP				e		09 49 14.8	
KWP				e		09 49 28.9	
BUR08	Bucovina Ar. S	155.46	325	ePKPdf	PKPdf	09 49 04.6	-0.5
BUR08				ePKPab	PKPab	09 49 29.9	-0.8
OJC	Ojcow	155.91	335	ePKP	PKPdf	09 49 05.9	+0.4
OJC	Ojcow	155.91	335	ePKIKP	PKPdf	09 49 05.9	+0.4
DBIC	Dimbokro	156.03	157	PKPab	PKPab	09 49 34.7	+0.9
	comp=Z,4.2nm,0.8s,baz=280,slow=4.2,SNR=3.9						
NIE	Niedzica	156.37	333	ePKP	PKPdf	09 49 07.1	+0.9
NIE	Niedzica	156.37	333	ePKIKP	PKPdf	09 49 07.1	+0.9
KSP	Ksiaz	156.52	341	ePKP	PKPdf	09 49 07.0	+0.7
KSP	Ksiaz	156.52	341	ePKIKP	PKPdf	09 49 07.0	+0.7
OSTC	Ostas	156.80	341	ePKPAB	PKPab	09 49 35.9	-0.3
OKC	Ostrava-Krasne	156.81	337	ePKP2	PKPab	09 49 37.0	+0.7
OKC	Ostrava-Krasne	156.81	337	ePKPAB	PKPab	09 49 37.0	+0.7
CHVC	Chvalec	156.82	341	ePKPAB	PKPab	09 49 36.7	+0.4
UPC	Upice	156.90	341	ePKP2	PKPab	09 49 37.2	+0.5
UPC	Upice	156.90	341	ePKPAB	PKPab	09 49 37.2	+0.5
CLL	Collm	156.92	346	ePKPdf	PKPdf	09 49 07.0	+0.2
CLL				ePKPab	PKPab	09 49 36.2	-0.4
CLL	Collm	156.92	346	ePKIKP	PKPdf	09 49 07.0	+0.2
CLL				e		09 49 18.0	
CLL				pmax	pmax		
	comp=Z,15nm,1.8s						
CLL	Collm	156.92	346	ePKPdf	PKPdf	09 49 07.0	+0.2
	comp=Z,15nm,1.8s						
CLL				ePKPdiff	sPKPdf	09 49 18.0	+7.7
CLL				i PKPab	PKPab	09 49 35.9	-0.8
	comp=Z,25nm,1.2s						
CLL				i pPKPab	sPKPab	09 49 39.6	-0.6
CLL				e		09 49 57.0	
DPC	Dobruska-Polom	156.95	340	ePKP2	PKPab	09 49 37.7	+0.8
DPC	Dobruska-Polom	156.95	340	ePKPAB	PKPab	09 49 37.7	+0.8
MORC	Moravsky Berou	157.07	338	ePKPdf	PKPdf	09 49 06.5	-0.6
MORC				ePKPab	PKPab	09 49 37.2	-0.2
MORC	Moravsky Berou	157.07	338	ePKP	PKPdf	09 49 07.5	+0.4
MORC				e		09 49 37.7	
BRG	Berggiesshubel	157.11	344	ePKP	PKPdf	09 49 07.5	+0.5
	comp=Z,22nm,1.8s						
BRG	Berggiesshubel	157.11	344	ePKP	PKPab	09 49 37.4	-0.2
	comp=Z,20nm,1.3s						
BRG	Berggiesshubel	157.11	344	ePKIKP	PKPdf	09 49 07.5	+0.5
BRG				pmax	pmax		
	comp=Z,22nm,1.8s						
PVCC	Panska Ves	157.28	343	ePKP2	PKPab	09 49 38.6	+0.3
PVCC	Panska Ves	157.28	343	ePKPAB	PKPab	09 49 38.6	+0.3
VYHS	Vyhne	157.68	334	ePKP2	PKPab	09 49 40.6	+0.5
VYHS	Vyhne	157.68	334	ePKP	PKPab	09 49 40.6	+0.5
PSZ	Piszkesteto	157.72	332	ePKPdf	PKPdf	09 49 06.2	-1.8
PSZ				ePKPab	PKPab	09 49 40.4	0.0
PSZ	Piszkesteto	157.72	332	ePKIKP	PKPdf	09 49 06.2	-1.8
PRU	Pruhonice	157.78	342	ePKP2	PKPab	09 49 40.4	0.0
PRU	Pruhonice	157.78	342	ePKPAB	PKPab	09 49 40.4	0.0
GOPC	GO Pecny, Ondr	157.78	342	ePKP2	PKPab	09 49 40.3	-0.2
GOPC	GO Pecny, Ondr	157.78	342	ePKPAB	PKPab	09 49 40.3	-0.2
VRAC	Vranov	157.78	338	ePKP	PKPdf	09 49 08.1	+0.2
VRAC				e		09 49 41.0	
JAVC	Velka Javorina	157.81	336	ePKP	PKPdf	09 49 09.4	+1.4
JAVC				e		09 49 42.0	
NKC	Novy Kostel	158.05	346	ePKP2	PKPab	09 49 41.4	-0.2
NKC	Novy Kostel	158.05	346	ePKPAB	PKPab	09 49 41.4	-0.2
KRUC	Moravsky	158.06	338	ePKP	PKPdf	09 49 08.0	-0.3
KRUC				e		09 49 41.8	
TREC	Trest	158.14	340	ePKP2	PKPab	09 49 42.5	+0.4
TREC	Trest	158.14	340	ePKPAB	PKPab	09 49 42.5	+0.4
MODS	Modra-Piesok	158.36	336	ePKP2	PKPab	09 49 43.0	0.0
MODS	Modra-Piesok	158.36	336	ePKP	PKPab	09 49 43.0	0.0
KHC	Kasperske Hory	158.82	343	ePKPdf	PKPdf	09 49 08.1	-1.1
KHC				ePKPab	PKPab	09 49 45.0	0.0
KHC	Kasperske Hory	158.82	343	ePKIKP	PKPdf	09 49 08.1	-1.1
KHC				e		09 49 45.0	
GEC2	GERESS Array S	159.05	342	ePKPdf	PKPdf	09 49 08.4	-1.2
GEC2				ePKPab	PKPab	09 49 45.7	-0.3
GEC2	GERESS Array S	159.05	342	ePKIKP	PKPdf	09 49 08.4	-1.2
GEC2				e		09 49 45.7	
GERES	GERESS Array B	159.05	342	PKP	PKPdf	09 49 09.3	-0.2
	comp=Z,0.3nm,0.3s,baz=325,slow=2.1,SNR=5.8						
GERES				PKPab	PKPab	09 49 45.8	-0.3
	comp=Z,1.3nm,0.2s,baz=40,slow=4.4,SNR=9.6						
CONA	Conrad Observa	159.23	338	i PKPdf	PKPdf	09 49 09.4	-0.5
	comp=Z,2.7nm,1.1s						
CONA				i pPKPab	pPKPab	09 49 47.8	-1.8
	comp=Z,23nm,1.3s,SNR=7.3						
VTS	Vitosha	159.68	316	ePKPab	PKPab	09 49 48.5	-0.7
MOA	Molln	159.79	340	i pPKPab	PKPab	09 49 50.0	+0.7
	comp=Z,19nm,1.4s,SNR=7.8						
ARSA	Arzberg	159.93	337	i pPKPab	PKPab	09 49 50.4	+0.5
	comp=Z,9.1nm,1.3s						
SOKA	Soboth	160.59	337	i PKPab	PKPab	09 49 52.9	0.0
	comp=Z,21nm,1.2s,SNR=9.0						
GROS	Grobnik	160.62	336	i PKPdf	PKPdf	09 49 10.9	-0.6
GROS				ePKPab	PKPab	09 49 52.9	-0.1
KBA	Koelnbreinsper	160.76	341	i PKPdf	PKPdf	09 49 11.8	+0.1
	comp=Z,2.9nm,1.1s						
KBA				i pPKPab	pPKPab	09 49 54.6	-1.8
	comp=Z,10.0nm,1.0s,SNR=8.1						
OBKA	Obir	160.90	338	i PKPab	PKPab	09 49 54.3	+0.1
	comp=Z,8.6nm,1.0s						
WATA	Walderalm	160.98	345	i pPKPab	pPKPab	09 49 56.1	-1.1
	comp=Z,6.5nm,0.8s						
RETA	Reutte	161.01	347	ePKPdf	PKPdf	09 49 08.9	-2.9
	comp=Z,1.0nm,0.4s						
RETA				i PKPab	PKPab	09 49 54.9	+0.3
	comp=Z,10nm,1.0s						
WTTA	Wattenberg	161.03	345	i PKPdf	PKPdf	09 49 11.5	-0.5
	comp=Z,2.1nm,0.5s						
WTTA				i PKPab	PKPab	09 49 54.9	0.0
	comp=Z,19nm,1.5s						
CLF	Chambon-Foret	161.07	4	ePKPab	PKPab	09 49 54.6	-0.1
MOTA	Moosalm	161.07	346	i pPKPdf	pPKPdf	09 49 13.1	-1.6
	comp=Z,1.3nm,0.4s						
MOTA				i PKPab	PKPab	09 49 54.8	-0.2
	comp=Z,7.1nm,0.9s						
MYKA	Terra Mystica	161.08	340	ePKPdf	PKPdf	09 49 11.5	-0.5
	comp=Z,3.3nm,1.0s						
MYKA				i PKPab	PKPab	09 49 54.3	-0.7
	comp=Z,17nm,1.2s,SNR=5.9						
SQTA	Sankt Quirin	161.17	345	i pPKPdf	PKPdf	09 49 12.6	+0.6
	comp=Z,7.7nm,1.1s						
SQTA				i pPKPab	PKPab	09 49 55.9	+0.5
	comp=Z,2.9nm,0.6s						
ABTA	Abfaltersbach	161.29	342	i PKPdf	PKPdf	09 49 11.0	-1.1
ABTA				i PKPab	PKPab	09 49 56.0	+0.1
	comp=Z,15nm,1.2s						
LJU	Ljubljana	161.32	337	ePKPdf	PKPdf	09 49 12.0	-0.1
LJU				i PKPab	PKPab	09 49 55.8	-0.2
DAVA	Damuels	161.37	348	i pPKPdf	PKPdf	09 49 14.9	+2.6
	comp=Z,4.5nm,0.9s						
DAVA				i PKPab	PKPab	09 49 56.5	+0.1
	comp=Z,7.7nm,1.3s						
FETA	Feichten	161.46	346	i pPKPdf	PKPdf	09 49 13.4	+1.0
	comp=Z,11nm,1.6s						
FETA				i PKPab	PKPab	09 49 55.6	-1.1
	comp=Z,7.3nm,1.2s						
FUORN	Ofenpass-Fuorn	161.94	347	ePKPdf	PKPdf	09 49 12.5	-0.5
FUORN				ePKPab	PKPab	09 49 59.0	+0.1
TUE	Stuetta	162.25	349	ePKPdf	PKPdf	09 49 13.3	0.0
TUE				ePKPab	PKPab	09 50 00.2	-0.1
SENIN	Lac Senin/Sane	162.65	353	ePKPdf	PKPdf	09 49 13.7	-0.1
SENIN				ePKPab	PKPab	09 50 01.7	-0.3
TOA0	Torodi Ar. Sit	163.90	171	ePKPdf	PKPdf	09 49 16.3	+0.8
TOA0				ePKPab	PKPab	09 50 09.9	+2.0
TORD	Torodi Ar. Bea	163.90	171	PKP	PKPdf	09 49 16.2	+0.6
	comp=Z,4.7nm,1.1s,baz=177,slow=2.7,SNR=12						
TORD				PKPab	pPKPab	09 50 08.9	-1.7
	comp=Z,13nm,0.9s,baz=233,slow=0.7,SNR=24						
TOA1	Torodi Ar. Sit	163.91	171	ePKPdf	PKPdf	09 49 16.2	+0.6
TOA1				ePKPab	PKPab	09 50 08.9	+1.0
BNI	Bardonecchia	164.00	354	ePKPdf	PKPdf	09 49 14.2	-0.8
BNI				ePKPab	PKPab	09 50 07.6	-0.3
BNI	Bardonecchia	164.00	354	ePKIKP	PKPdf	09 49 14.2	-0.8
BNI				e		09 50 07.6	
MVO	Moncorvo	164.84	35	ePKPdf	PKPdf	09 49 16.6	+0.9
MTE	Manteigas	165.13	38	ePKPdf	PKPdf	09 49 17.9	+1.9
PCBR	Castelo Branco	165.56	39	ePKPdf	PKPdf	09 49 18.4	+2.1
TIP	Timpagrande	165.66	318	ePKPdf	PKPdf	09 49 15.4	-1.1
TIP				ePKPab	PKPab	09 50 13.1	-2.2
PMRV	Marv??o	165.90	40	ePKPdf	PKPdf	09 49 18.5	+1.9
PMRV	Marv??o	165.90	40	ePKPab	PKPab	09 50 15.1	-1.2
PAB	San Pablo	167.39	32	ePKPdf	PKPdf	09 49 17.5	-0.3
PAB				ePKPab	PKPab	09 50 21.8	-1.2
PAB	San Pablo	167.39	32	ePKIKP	PKPdf	09 49 17.5	-0.3
PAB				e		09 50 21.8	
ESDC	Sonseca Array	167.46	31	PKP	PKPdf	09 49 18.5	+0.7
	comp=Z,0.2nm,0.3s,baz=242,slow=3.2,SNR=11						
ESDC				PKPab	PKPab	09 50 22.2	-1.0
	comp=Z,0.2nm,0.3s,baz=315,slow=3.7,SNR=4.3						
ESLA	Sonseca Array	167.46	31	ePKPdf	PKPdf	09 49 17.6	-0.2
ESLA				ePKPab	PKPab	09 50 22.6	-0.7
KEST	Kesra	172.18	328	PKP	PKPdf	09 49 22.1	+1.4
	comp=Z,1.8nm,0.8s,baz=24,slow=12,SNR=2.7						
KEST				PKPab	PKPab	09 50 43.6	-0.7
	comp=Z,3.5nm,0.9s,baz=45,slow=16,SNR=3.0						

ISN ***10*** *09:44:30.3±1.2, 37°.03N×42°.53E, h0*^{km}*±6*^{km}*, ML3.3*
ISK ***10*** *09:44:33.7, 37°.09N×42°.40E, h2*^{km}*, ML3.4/9*
DDA ***10*** *09:44:34.8, 37°.14N×42°.43E, h7*^{km}*±4*^{km}*, ML3.4*
ISC 10 09:44:33.1±1.2**, 37°.03N**±0°.03×**42°.44E**±0°.02**, h19**^{km}±3^{km}**,**
n23, σ1^{s}**.18**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRN	Sırnak	0.46	357	i P	Pg	09 44 40.4	-2.2
SIRN				i S	Sg	09 44 47.3	-1.7
MSL	Mosul	0.83	140	ePg	Pb	09 44 47.0	-1.9
	baz=323						
MSL				AML	AML	09 44 55.1	
	comp=Z,2μm,0.2s						
MSL				eSg	Sb	09 44 59.0	-0.7
CUKT	Cukurca	0.95	77	PG	Pg	09 44 52.9	+1.2
CUKT				SG	Sn	09 45 07.7	+2.9
SRTM	Siirt_Merkez	1.04	337	i P	Pb	09 44 52.3	-0.3
SRTM				i S	Sn	09 45 06.6	-0.4
BTMN	Batman	1.27	313	i P	Pg	09 44 58.8	+1.2
BTMN				i S	Sg	09 45 15.9	+1.7
MARD	Mardin	1.36	282	i P	Pg	09 45 00.0	+0.7
MARD				i S	Sg	09 45 19.6	+2.5
AKDM	Akdamar-Van	1.36	18	PN	Pg	09 44 59.6	+0.2
GEVA	Gevas	1.37	21	i P	Pg	09 44 59.6	+0.1
GEVA				i S	Sg	09 45 16.4	-1.0
GEVA				IAML_P			
	comp=Z,3μm,0.2s						
SVAN	Silvan-Diyarba	1.49	319	PN	Pg	09 45 01.6	-0.3
SVAN	Silvan-Diyarba	1.49	319	i P	Pg	09 45 01.9	+0.1
SVAN				i S	Sg	09 45 21.6	+0.3
SVAN				IAML_P			
	comp=Z,1μm,0.2s						
YOVA	Hakkari_Yksek	1.57	69	i P	Pg	09 45 03.5	+0.1
YOVA				i S	Sg	09 45 24.7	+0.7
BASK	Baskale_VAN	1.60	50	i P	Pg	09 45 04.9	+0.9
BASK				IAML_P			
	comp=Z,3μm,0.3s						
MAZI	Mazidag	1.65	286	PN	Pg	09 45 04.0	-0.9
MAZI				SN	Sg	09 45 25.5	-0.9
TVAN	Van	1.68	27	i P	Pg	09 45 05.4	0.0
TVAN				i S	Sg	09 45 27.3	0.0
VANB	Van	1.73	25	PN	Pb	09 45 04.2	-0.2
MUSM	Mu-Merkez	1.84	337	i P	Pb	09 45 05.1	-1.2
MUSM				i S	Sb	09 45 29.3	+0.3
DYBB	Diyarbakir	2.05	297	PN	Pb	09 45 09.5	-0.3
HANI	Diyarbakir_Han	2.13	311	i P	Pg	09 45 14.2	+0.2
HANI				i S	Sb	09 45 37.5	+0.4
BNGL	BINGOL	2.17	332	i P	Pb	09 45 12.0	+0.1
BNGL				i S	Sb	09 45 39.3	+0.7
BNGB	Bingl	2.40	325	PN	Pb	09 45 14.3	-1.5
AGRB	Hanur-Agry	2.57	9	PN	Pb	09 45 17.1	-1.7
SVRC	Sivrice-ELAZID	2.83	299	PN	Pb	09 45 21.6	-1.5
BHD	Baghdad	4.08	157	ePn	Pn	09 45 35.0	+0.5
BHD				eSn	Sn	09 46 21.0	-0.7

NIED ***10*** *09:54:00, 27°.10N×143°.80E, h5*^{km}*, Mw3.9 Best double couple: M*$_0$*7.11000×10*^{14} *NP1:φ*$_s$*6.00000°, δ40.00000°, λ-32.00000°. NP2:φ*$_s$*122.00000°, δ70.00000°, λ-125.00000°.*
IDC ***10*** *09:54:29.2±0.6, 26°.96N×143°.93E, h0*^{km}*, mb3.9/16, mb1 4.1/19, mb1mx4.0/54, mbtmp4.0/19, ML3.5/3, Error ellipse: s-maj=23.1km s-min=13.8km az=75.0*
NEIC ***10*** *09:54:30.5±2.1, 26°.95N×143°.78E, h10*^{km}*±2*^{km}*, mb4.2/16, Error ellipse: s-maj=14.1km s-min=6.1km az=158.0*
ISCJB ***10*** *09:54:32.1±0.4, 27°.11N±0°.04×143°.81E±0°.05, h33*^{km}*, mb4.3/27, Error ellipse: s-maj=6.6km s-min=5.3km az=172.2*
JMA ***10*** *09:54:32.5±0.1, 27°.11N×143°.80E, h59*^{km}*, M4.5*
ISC 10 09:54:34.2±0.6**, 27°.01N**±0°.07×**143°.79E**±0°.08**, h35**^{km}**, n61,**
σ1^{s}**.18**/59**, mb4.1**/27**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.43	274	P	Pn	09 54 56.9	-0.7
CBIJ				eS	Sn	09 55 14.6	-0.6
JHH2	Haha-jima-NKT2	1.49	256	P	Pn	09 54 57.9	-0.5
JHH2				S	Sn	09 55 17.3	+0.6
BSO1	Boso 1	7.99	343	P	Pn	09 56 25.1	-2.1
JOD2	Odawara 2	9.15	335	P	Pn	09 56 43.3	-0.5
JYN	Shimob	9.57	333	P	Pn	09 56 49.8	+0.3
JHU	Hanno	9.61	338	P	Pn	09 56 48.9	-1.1
JRY	Ryogami san	9.89	336	P	Pn	09 56 53.0	-0.9
JRY				S	Sn	09 58 42.2	-1.5
JAG	Ashikaga	10.08	340	P	Pn	09 56 54.7	-1.7
JFK	Kawauchi	10.61	347	P	Pn	09 57 00.2	-3.5
MJAR	Matsushiro Arr	10.62	335	Pn	Pn	09 57 02.9	-0.9
	0.9nm,0.3s,baz=164,slow=12,SNR=43						
MAJO	Matsushiro	10.62	335	ePn	Pn	09 57 03.6	-0.2
MAT	Matsushiro	10.62	335	P	Pn	09 57 03.0	-0.8
MAT				eS	Sn	09 59 02.1	+0.6
MJB9	Matsu-Tunnel	10.62	335	ePn	Pn	09 57 03.6	-0.3
JMK	Ichinoseki	12.10	350	P	Pn	09 57 21.0	-3.0
KSRS	Korea Array	16.96	312	P	P	09 58 30.6	+0.3
	0.2nm,0.3s,baz=117,slow=11,SNR=10						
KS15	Wonju Array Si	16.98	312	ePn	Pn	09 58 26.9	-2.0
	18nm,1.4s						
USRK	Ussuriysk Ar.	19.61	334	P	Pn	09 59 01.1	+0.2
	0.5nm,0.3s,baz=144,slow=9.7,SNR=9.2						
SSLB	Suanglung	20.87	266	eP	P	09 59 12.4	-0.9
	8.2nm,0.8s						
H11N2	WAKE ISLAND Hy	22.40	104	T	T	10 22 29.7	
	baz=294						
H11N1	WAKE ISLAND Hy	22.40	104	T	T	10 22 28.8	
	baz=294						
H11N3	WAKE ISLAND Hy	22.41	104	T	T	10 22 28.9	
	baz=294						
H11S3	WAKE ISLAND Hy	22.73	107	T	T	10 22 56.3	
	baz=295						
H11S1	WAKE ISLAND Hy	22.73	107	T	T	10 23 23.9	
	baz=295						
H11S2	WAKE ISLAND Hy	22.75	107	T	T	10 23 11.1	
	baz=295						
KLR	Kul'dur	24.06	340	P	P	09 59 47.6	+1.6
	4.0nm,0.7s,baz=149,slow=8.3,SNR=16						
MANU	Manus Island	29.09	173	eP	P	10 00 32.0	+0.4
	527nm,0.1s						
ULN	Ulaanbaatar	35.37	316	eP	P	10 01 25.2	-1.4
	2.2nm,0.6s						
SONA0	Songino Array	35.77	316	eP	P	10 01 31.9	+2.0
SONM	Songino Array	35.77	316	P	P	10 01 31.9	+2.0
	0.6nm,0.4s,baz=117,slow=8.8,SNR=6.3						
PMG	Port Moresby	36.35	174	P	P	10 01 34.1	-0.9
	16nm,1.0s,baz=331,slow=20,SNR=1.7						
SEY	Seymchan	36.36	7	P	P	10 01 35.9	+1.3
	1.6nm,0.6s,baz=173,slow=17,SNR=2.7						
WR1	Warramunga Arr	47.57	192	eP	P	10 03 06.2	-0.3
WRA	Warramunga Arr	47.57	192	P	P	10 03 06.2	-0.3
	2.3nm,0.7s,baz=7.4,slow=7.9,SNR=15						
ZAA1	Zalesovo Array	50.49	319	eP	P	10 03 29.6	+1.1
ZALV	Zalesovo Beam	50.49	319	P	P	10 03 29.6	+1.1
	0.5nm,0.3s,baz=90,slow=7.2,SNR=2.9						
AS31	Alice Springs	51.28	192	eP	P	10 03 33.7	-1.2
	1.9nm,1.3s						
ASAR	Alice Springs	51.28	192	P	P	10 03 34.8	-0.1
	0.4nm,0.7s,baz=12,slow=7.3,SNR=6.6						
MK31	Makanchi Array	51.63	310	eP	P	10 03 36.1	-1.2
	1.2nm,0.8s						
MK32	Makanchi Array	51.63	310	eP	P	10 03 38.3	+1.0
MKAR	Makanchi Array	51.63	310	P	P	10 03 38.3	+1.0
	1.0nm,0.5s,baz=92,slow=8.2,SNR=10						
MAKZ	Makanchi	51.84	310	eP	P	10 03 38.8	-0.1
	4.1nm,1.3s						
ILAR	Eielson Array	57.10	29	P	P	10 04 16.8	+0.1
	0.9nm,1.1s,baz=274,slow=5.2,SNR=5.8						
ILB	Eielson Array	57.10	29	eP	P	10 04 16.0	-0.8
	1.7nm,1.1s						
STKA	Stephens Creek	58.60	182	P	P	10 04 28.3	+0.8
	1.3nm,0.8s,baz=344,slow=7.4,SNR=2.8						
STKA	Stephens Creek	58.60	182	eP	P	10 04 27.2	-0.3
	0.8nm,1.3s						
BVAR	Borovoye Array	59.07	318	P	P	10 04 31.7	+1.0
	1.0nm,0.5s,baz=91,slow=7.2,SNR=3.4						
KK31	Karatay Array	60.29	306	eP	P	10 04 39.4	+0.1
	5.0nm,0.8s						
KKAR	Karatay Array	60.29	306	eP	P	10 04 39.3	0.0
	5.0nm,0.8s						
ARU	Arti	65.36	322	P	P	10 05 13.4	+0.6
	0.8nm,0.3s,baz=309,slow=1.2,SNR=5.0						
ARU	Arti	65.36	322	eP	P	10 05 13.9	+1.2
	5.2nm,0.9s						
ABKAR	Akbulak array	66.17	315	eP	P	10 05 17.0	-1.1
	1.2nm,0.8s						
AKTO	Aktyubinsk	67.08	316	P	P	10 05 24.2	+0.3
	0.9nm,0.6s,baz=94,slow=13,SNR=4.7						
C09A	Chrisman Ranch	75.49	44	eP	P	10 06 15.6	+0.8
	14nm,0.4s						
TBLG	Delisi	78.78	311	eP	P	10 06 34.4	+0.9
	31nm,0.8s						
KBZ	Khabaz	79.10	314	P	P	10 06 36.7	+1.6
	1.0nm,0.4s,baz=54,slow=15,SNR=4.0						
NV01	Mina Array Sit	79.44	52	eP	P	10 06 37.8	+0.4
NVAR	Mina Array Bea	79.44	52	P	P	10 06 37.7	+0.4
	0.2nm,0.6s,baz=278,slow=6.3,SNR=2.2						
PDAR	Pinedale Array	83.26	45	P	P	10 06 57.6	0.0
	0.1nm,0.3s,baz=287,slow=6.5,SNR=3.9						
PV22	Blue Mesa, Par	85.94	49	eP	P	10 07 09.8	-1.4
	2.9nm,1.0s						
LPAZ	La Paz	148.56	77	PKPbc	PKPbc	10 14 18.4	-0.4
	0.6nm,0.8s,baz=323,slow=5.1,SNR=2.1						
LPAZ	La Paz	148.56	77	ePKPdf	PKPdf	10 14 13.7	-1.5

MEX 10 09:57:17.5±0.6**, 19°.10N**×**104°.14W, h30**^{km}±11^{km}**, MD3.8,**
Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZ5V		0.63	53	i P	Pb	09 57 28.0	-2.2
EZ5V				eS	Sb	09 57 37.1	-1.8
CJM	Chamela	0.94	295	i P	Pn	09 57 32.4	-2.4
CJM				eS	Sn	09 57 44.3	-3.0
MMIG	Aquila	1.10	137	eP	Pn	09 57 34.5	-2.4
MMIG				eS	Sn	09 57 48.9	-2.3
ANIG	Ahuacatlan	1.98	350	eP	Pn	09 57 47.3	-1.8

ANIG				*i* S	Sn	09 58 10.6	-2.4
ZIIG	**Zihuatanejo**	**2.94**	**120**	*i* P	Pn	09 58 00.4	-1.8
ZIIG				*i* S	Sn	09 58 33.5	-3.1
ARIG	**Puente Sto Nin**	**3.68**	**102**	*i* P	Pn	09 58 11.0	-1.5
ARIG				*i* S	Sn	09 58 52.9	-2.1

*ISCJB **10** 10:03:22.5±0.8,21°.72S±0°.03×68°.45W±0°.07, h139km±11km,Error ellipse: s-maj=10.3km s-min=5.2km az=171.2*

*SJA **10** 10:03:22.0±0.5,21°.83S×68°.41W,h139km±5km,ML2.4, MW3.0*

*GUC **10** 10:03:22.7±0.6,21°.69S×68°.57W,h144km±4km,ML3.7*

ISC 10 10:03:22.8±1.7,**21°.72S**±0°.04×**68°.44W**±0°.06, **h138**km±14km,**n22,**σ**0s.55**/39,**3C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.75**	**264**	*e*P	**Pn**	**10 03 44.5**	**0.0**
PB09				*e*S	**Sn**	**10 04 01.6**	**+0.6**
PB09	**IPOC Station P**	**0.75**	**264**	*e*P	**Pn**	**10 03 44.9**	**+0.3**
PB09				*e*S	**Sn**	**10 04 01.7**	**+0.6**
LVC	**Limon Verde**	**0.98**	**206**	*e*P	**Pn**	**10 03 45.9**	**-0.9**
LVC				*e*S	**Sn**	**10 04 03.6**	**-1.3**
PB01	**IPOC Station P**	**1.19**	**305**	*e*P	**Pn**	**10 03 47.1**	**-1.2**
PB01	**IPOC Station P**	**1.19**	**305**	*e*P	**Pn**	**10 03 48.4**	**+0.1**
PB01				*e*S	**Sn**	**10 04 07.5**	**-0.2**
PB01				IAML		10 04 08.7	
	comp=N,1µm,0.2s						
PB03	**IPOC Station P**	**1.26**	**255**	*e*P	**Pn**	**10 03 49.3**	**+0.2**
PB03	**IPOC Station P**	**1.26**	**255**	*e*P	**Pn**	**10 03 49.3**	**+0.2**
PB03				*e*S	**Sn**	**10 04 08.9**	**-0.3**
PB03				IAML		10 04 10.5	
	comp=E,1µm,0.5s						
PB07	**IPOC Station P**	**1.34**	**270**	*e*P	**Pn**	**10 03 50.4**	**+0.5**
PB07	**IPOC Station P**	**1.34**	**270**	*e*P	**Pn**	**10 03 50.0**	**+0.1**
PB07				*e*S	**Sn**	**10 04 10.3**	**-0.3**
PB07				IAML		10 04 11.2	
	comp=N,999nm,0.4s						
PB02	**IPOC Station P**	**1.41**	**286**	*e*P	**Pn**	**10 03 50.7**	**0.0**
PB02				*e*S	**Sn**	**10 04 11.4**	**-0.5**
PB02				IAML		10 04 12.7	
	comp=E,1µm,0.3s						
PB06	**IPOC Station P**	**1.43**	**227**	*e*P	**Pn**	**10 03 51.2**	**+0.3**
PB06				*e*S	**Sn**	**10 04 12.8**	**+0.4**
PB06				IAML		10 04 14.4	
	comp=N,1µm,0.2s						
PB04	**IPOC Station P**	**1.70**	**249**	*e*P	**Pn**	**10 03 53.9**	**+0.1**
PB04				*e*S	**Sn**	**10 04 17.5**	**-0.1**
PB04				IAML		10 04 19.2	
	comp=N,794nm,0.2s						
PB08	**IPOC Station P**	**1.71**	**337**	*e*P	**Pn**	**10 03 54.9**	**+0.7**
PB08				*i* Sg	**Sn**	**10 04 18.8**	**+0.6**
PB08				*e*S	**Sn**	**10 04 18.9**	**+0.7**
PB08				IAML		10 04 20.9	
	comp=N,955nm,0.3s						
PB15	**IPOC Station P**	**1.76**	**213**	*e*P	**Pn**	**10 03 55.3**	**+0.7**
PB15				*e*S	**Sn**	**10 04 20.1**	**+1.1**
PB05	**IPOC Station P**	**1.98**	**235**	*e*P	**Pn**	**10 03 57.4**	**+0.3**
PB05				*e*S	**Sn**	**10 04 23.0**	**-0.4**
PB05				IAML		10 04 26.1	
	comp=E,388nm,0.3s						
GO01	**Chusmiza**	**2.16**	**341**	⇑*i*P	**Pn**	**10 04 00.1**	**+0.5**
GO01				*e*S	**Sn**	**10 04 28.1**	**+0.2**
PB11	**IPOC Station P**	**2.26**	**330**	*e*P	**Pn**	**10 04 00.2**	**-0.3**
PB11				*e*S	**Sn**	**10 04 29.4**	**-0.1**
PSGC	**Pisagua**	**2.64**	**323**	⇑*i*P	**Pn**	**10 04 04.2**	**-1.0**
PSGC				*e*S	**Sn**	**10 04 37.2**	**-0.6**
PSGC				IAML		10 04 38.9	
	comp=N,271nm,0.4s						
YJA	**Yavi**	**2.75**	**100**	*e*P	**Pn**	**10 04 07.0**	**+0.1**
YJA				IAML		10 04 44.4	
	comp=Z,7.0nm,0.5s						
MNMC	**Minye Minye**	**2.80**	**337**	⇑*i*P	**Pn**	**10 04 07.4**	**0.0**
MNMC				*e*S	**Sn**	**10 04 42.0**	**+0.2**
HJA	**Humahuaca**	**3.17**	**118**	*e*P	**Pn**	**10 04 12.4**	**+0.1**
HJA				IAML		10 04 14.1	
	comp=Z,13nm,0.5s						
AZAP	**Zapla**	**3.98**	**129**	*e*P	**Pn**	**10 04 22.2**	**-0.5**

*IDC **10** 10:09:59.8±2.3,6°.28N×126°.51E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.6/30,mbtmp3.8/5,Error ellipse: s-maj=251.8km s-min=18.9km az=66.0*

*MAN **10** 10:10:09.8,6°.38N×126°.20E,h19km,mb4.6,ML3.5,MS3.4*

ISC 10 10:10:04.2±2.0,**6°.20N**±0°.06×**126°.43E**±0°.08,**h26**km±13km, **n16,**σ**1s.83**/21,**mb3.9**/5,**2C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.72**	**263**	*e*P	**Pn**	**10 10 20.2**	**+1.4**
DDMP				*e*S	**Sb**	**10 10 28.4**	**+0.8**
MATI	**Mati**	**0.77**	**347**	*e*P	**Pn**	**10 10 20.1**	**+0.8**
MATI				*e*S	**Sb**	**10 10 29.5**	**+0.5**
DAV	**Davao City (W)**	**1.21**	**316**	Sn	**Sb**	**10 10 42.9**	**+1.1**
	100nm,0.3s,baz=290,slow=23,SNR=6.6						
DMPH	**Davao City--Mi**	**1.27**	**314**	⇑*e*P	**Sb**	**10 10 38.2**	**-5.3**
DMPH				*e*S	**Sn**	**10 10 46.7**	**+4.1**
GSPH	**General Santos**	**1.48**	**266**	⇑*i*P	**Pb**	**10 10 31.4**	**+0.3**
GSPH				*i* S	**Sn**	**10 10 47.1**	**-0.7**
KCP	**Kidapawan**	**1.56**	**301**	⇓*e*P	**Pb**	**10 10 32.2**	**-0.2**
KCP				*i* S	**Sn**	**10 10 49.4**	**-0.4**
SKMP	**Bagumbayan, Su**	**1.90**	**280**	*e*P	**Pn**	**10 10 35.9**	**+0.9**
SKMP				*e*S	**Sn**	**10 10 57.4**	**-0.7**
BUKP	**Musuan**	**2.16**	**321**	*e*P	**Pb**	**10 10 42.4**	**-0.2**
BUKP				*e*S	**Sn**	**10 11 05.8**	**+1.4**
WRA	**Warramunga Arr**	**27.11**	**164**	P	**P**	**10 15 46.2**	**+0.9**
	1.3nm,0.8s,baz=345,slow=12,SNR=9.3						
ASAR	**Alice Springs**	**30.56**	**166**	P	**P**	**10 16 15.5**	**-0.4**
	0.5nm,0.5s,baz=345,slow=7.0,SNR=17						
ASAR				PcP	**PcP**	**10 19 13.5**	**-1.0**
	0.6nm,1.1s,baz=354,slow=3.2,SNR=4.1						
H11N1	**WAKE ISLAND Hy**	**41.53**	**67**	T	T	11 02 30.4	
	baz=254						
H11N2	**WAKE ISLAND Hy**	**41.54**	**67**	T	T	11 02 30.4	
	baz=254						
H11N3	**WAKE ISLAND Hy**	**41.55**	**67**	T	T	11 02 30.4	
	baz=254						
MKAR	**Makanchi Array**	**55.38**	**324**	P	**P**	**10 19 36.0**	**-0.2**
	0.8nm,0.6s,baz=131,slow=7.9,SNR=9.7						
KURBB	**Kurchatov Arra**	**59.52**	**327**	P	**P**	**10 20 04.8**	**-0.4**
	1.3nm,0.7s,baz=126,slow=5.8,SNR=12						
BVAR	**Borovoye Array**	**65.11**	**326**	P	**P**	**10 20 41.9**	**-0.8**
	1.0nm,0.6s,baz=112,slow=11,SNR=3.7						

*NSSC **10** 10:32:09.2±1.5,35°.43N×36°.98E,h185km±150km,ML2.2*

JSO 10 10:32:10.1±0.5,**31°N**±3°×**3°6E**±°,**h16**km±4km,**M2.9**/13, **Mjma3.0**/13,**ML2.4**/7,**MLv3.1**/13,**Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWQJ	**Swaqa**	**0.21**	**341**	P	Pb	10 32 19.8	+4.1
JDRJ	**Daraweish**	**0.51**	**233**	P	Pg	10 32 18.2	-2.2
WALJ	**Wala**	**0.59**	**332**	P	Pg	10 32 20.9	-0.9
LISJ	**El Lisan**	**0.60**	**290**	P	Pg	10 32 21.0	-0.9
HSNJ	**Maan**	**0.87**	**207**	P	Pb	10 32 26.5	-0.5
HSUJ	**Al Zarqa**	**1.06**	**2**	P	Pb	10 32 29.0	-1.2
AMAZ	**Amatzia**	**1.16**	**295**	P	Pn	10 32 31.5	-0.2
ASF	**Jabal al Asfar**	**1.30**	**30**	P	Pn	10 32 33.3	-0.4
HRFI	**Mount Harif**	**1.38**	**224**	P	Pb	10 32 35.4	-0.2
KZIT	**Kziot**	**1.50**	**265**	P	Pn	10 32 36.6	+0.2
AQBJ	**Aqaba**	**1.61**	**216**	P	Pb	10 32 39.3	-0.2
SHMJ	**Saham**	**1.71**	**349**	P	Pn	10 32 39.7	+0.4
TOTH	**TOTAH**	**2.33**	**6**	*e*P	Pn	10 32 48.5	+0.7
TOTH				*e*S	Sn	10 33 17.4	+1.2
TOTH				AML	AML	10 33 25.2	
	comp=E,19nm,0.3s						
TOTH				AML	AML	10 33 28.1	
	comp=N,14nm,0.3s						
BRBR	**Barbar**	**2.37**	**356**	*e*P	Pn	10 32 49.1	+0.5
BRBR				*e*S	Sn	10 33 19.0	+1.6
BRBR				AML	AML	10 33 30.3	
	comp=E,15nm,0.3s						
BRBR				AML	AML	10 33 47.9	
	comp=N,14nm,0.5s						
QASN	**Qassioun**	**2.49**	**3**	*e*P	Pn	10 32 48.6	-1.5
QASN				*e*S	Sn	10 33 14.0	-6.1
QASN				AML	AML	10 33 22.0	
	comp=N,51nm,0.3s						
QASN				AML	AML	10 33 29.5	
	comp=E,53nm,0.4s						

*ISCJB **10** 10:38:14.3±1.6,14°.4N±0°.1×92°.55W±0°.08,h62km,Error ellipse: s-maj=19.0km s-min=6.0km az=31.9*

*MEX **10** 10:38:15.3±0.5,14°.42N×92°.42W,h80km±9km,MD3.8*

*GCG **10** 10:38:16.2±0.3,14°.35N×92°.39W,h39km,MD3.8*

ISC 10 10:38:15.7±2.3,**14°.5N**±0°.2×**92°.5W**±0°.1,**h62**km,**n7,** σ**0s.50**/12,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.50**	**23**	*i* P	**Pn**	**10 38 27.6**	**-0.2**
THIG				*i* S	**Sn**	**10 38 37.9**	**+1.2**
STG3	**Santiaguito 3,**	**0.91**	**73**	*e*P	**Pn**	**10 38 32.6**	**-0.2**
PCIG		**1.45**	**330**	*e*P	**Pn**	**10 38 39.7**	**0.0**
PCIG				*e*S	**Sn**	**10 38 57.6**	**-0.1**
FUG	**Fuego 3**	**1.58**	**90**	*e*P	**Pn**	**10 38 41.2**	**-0.4**
PCG	**Pacaya**	**1.81**	**92**	*e*P	**Pn**	**10 38 44.8**	**0.0**
PCG				*e*S	**Sn**	**10 39 07.0**	**+0.2**
TGIG		**2.40**	**345**	*i* P	**Pn**	**10 38 52.2**	**-0.6**
TGIG				*i* S	**Sn**	**10 39 20.9**	**-0.2**
CMIG	**Matias Romero**	**3.51**	**319**	*i* P	**Pn**	**10 39 08.1**	**+0.3**
CMIG				*i* S	**Sn**	**10 39 48.2**	**0.0**

*DDA **10** 11:05:10.1,37°.87N×27°.22E,h7km±4km,ML2.9*

*ISK **10** 11:05:10.5,37°.88N×27°.21E,h8km,ML2.8/15*

*ATH **10** 11:05:11.5,37°.84N×27°.16E,h15km±4km,ML2.7/3,Error ellipse: s-maj=6.3km s-min=1.3km az=243.0*

*THE **10** 11:05:12.9,37°.80N×27°.13E,h2km±3km,ML2.5/4,Error ellipse: s-maj=3.7km s-min=1.0km az=172.0*

ISC 10 11:05:11.3±0.8,**37°.87N**±0°.02×**27°.21E**±0°.02,**h15**km±6km, **n39,**σ**0s.98**/59,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.17**	**174**	PG	**Pg**	**11 05 14.8**	**-0.6**
GCAM				SG	**Sg**	**11 05 17.6**	**-0.5**
GCAM	**G?zelcaml?**	**0.17**	**174**	*i* P	**Pg**	**11 05 15.7**	**+0.3**
GCAM				*i* S	**Sg**	**11 05 18.5**	**+0.4**
GMLD	**Gumuldur**	**0.31**	**312**	PG	**Pg**	**11 05 17.1**	**-0.7**
GMLD				SG	**Sg**	**11 05 21.7**	**-0.5**
SMG	**Samos**	**0.34**	**242**	P	**Pg**	**11 05 17.5**	**-0.7**
SMG				S	**Sg**	**11 05 22.5**	**-0.4**
	1µm,0.2s						
SMG	**Samos**	**0.34**	**242**	P	**Pg**	**11 05 17.5**	**-0.7**
SMG				S	**Sg**	**11 05 22.5**	**-0.4**
SMG				AML	AML	11 05 23.8	
	comp=N,2710µm,0.2s						
SMG				AML	AML	11 05 24.1	
	comp=E,2809µm,0.2s						
BLCB	**Balcova**	**0.54**	**346**	PG	**Pg**	**11 05 21.2**	**-0.6**
AYDN	**Tasoluk**	**0.57**	**111**	*i* P	**Pg**	**11 05 22.4**	**-0.1**
AYDN				*i* S	**Sg**	**11 05 30.0**	**-0.1**
AYDN				IAML_P			
	comp=Z,8µm,0.1s						
URLA	**Izmir**	**0.69**	**316**	PG	**Pg**	**11 05 23.9**	**-0.9**
URLA				SG	**Sg**	**11 05 33.9**	**-0.1**
URLA	**Izmir**	**0.69**	**316**	*i* P	**Pg**	**11 05 24.6**	**-0.2**
URLA				*i* S	**Sg**	**11 05 34.1**	**+0.2**
URLA				IAML_P			
	comp=Z,6µm,0.1s						
BODT	**Bodrum**	**0.81**	**174**	PG	**Pg**	**11 05 26.8**	**-0.2**
BODT				SG	**Sb**	**11 05 38.7**	**+0.9**
BDRM	**Kayabasi**	**0.82**	**167**	*i* P	**Pg**	**11 05 26.5**	**-0.8**
BDRM				*i* S	**Sg**	**11 05 37.8**	**-0.2**
BDRM				IAML_P			
	comp=Z,5µm,0.2s						
KRBN	**Karaburun**	**0.89**	**325**	PG	**Pg**	**11 05 28.1**	**-0.5**
KRBN				SG	**Sg**	**11 05 40.3**	**0.0**
CHOS	**Chios island**	**1.05**	**300**	P	**Pg**	**11 05 30.5**	**-1.0**
CHOS	**Chios island**	**1.05**	**300**	P	**Pg**	**11 05 30.6**	**-1.0**
CHOS				S	**Sg**	**11 05 45.3**	**0.0**
CHOS				AML	AML	11 05 47.4	
	comp=E,930µm,0.3s						
CHOS				AML	AML	11 05 48.5	
	comp=N,622µm,0.2s						
ZEDA	**zmir-Bergama**	**1.10**	**355**	*i* P	**Pg**	**11 05 31.0**	**-1.6**
ZEDA				*i* S	**Sg**	**11 05 47.0**	**0.0**
YER	**Yerkesik**	**1.12**	**130**	PN	**Pg**	**11 05 32.3**	**-0.6**
DAT	**Datca**	**1.17**	**165**	PN	**Pg**	**11 05 33.8**	**-0.1**
DAT	**Datca**	**1.17**	**165**	*i* P	**Pg**	**11 05 32.5**	**-1.5**
DKL	**Dikili**	**1.23**	**349**	PN	**Pb**	**11 05 34.1**	**-0.1**
KULA	**Kula-Manisa**	**1.31**	**60**	PN	**Pn**	**11 05 35.8**	**+0.6**
AMGA	**Amorgos Island**	**1.47**	**226**	P	**Pb**	**11 05 38.9**	**+0.6**
TURN	**Turunc**	**1.49**	**131**	PN	**Pn**	**11 05 36.7**	**-0.8**
TURN	**Turunc**	**1.49**	**131**	*i* P	**Pn**	**11 05 35.1**	**-2.4**
TURN				*i* S	**Sn**	**11 05 52.8**	**-3.8**
TURN				IAML_P			
	comp=Z,869nm,0.1s						
DALY	**Dalyan (Mula)**	**1.56**	**132**	PN	**Pn**	**11 05 39.3**	**+0.9**
DALY	**Dalyan (Mula)**	**1.56**	**132**	*i* P	**Pb**	**11 05 40.2**	**+0.5**
DALY				*i* S	**Sg**	**11 06 03.0**	**+1.6**
APE	**Apeiranthos**	**1.56**	**240**	PN	**Pn**	**11 05 39.4**	**+0.9**
APE	**Apeiranthos**	**1.56**	**240**	P	**Pn**	**11 05 39.4**	**+0.9**
APE	**Apeiranthos**	**1.56**	**240**	P	**Pb**	**11 05 40.1**	**+0.3**
PRK	**Paraskevi**	**1.56**	**332**	P	**Pg**	**11 05 41.0**	**-0.3**
PRK				S	**Sg**	**11 06 02.1**	**+0.5**
	comp=Z,368nm,0.7s						
PRK	**Paraskevi**	**1.56**	**332**	P	**Pg**	**11 05 41.4**	**+0.1**
PRK				S	**Sg**	**11 06 02.7**	**+1.1**
PRK				AML	AML	11 06 05.2	
	comp=N,652µm,0.9s						
PRK				AML	AML	11 06 05.6	
	comp=E,792µm,0.4s						
USAK	**Uak-Merkez**	**1.66**	**59**	*i* P	**Pb**	**11 05 41.8**	**+0.3**
USAK				*i* S	**Sn**	**11 06 01.3**	**+0.4**
USAK				IAML_P			
	comp=Z,267nm,0.2s						
SIGR	**SIGRI**	**1.71**	**322**	P	**Pb**	**11 05 43.0**	**+0.6**
SIGR				S	**Sg**	**11 06 05.7**	**-0.7**
	comp=Z,80nm,0.7s						
SIGR	**SIGRI**	**1.71**	**322**	P	**Pb**	**11 05 43.1**	**+0.6**
SIGR				S	**Sg**	**11 06 05.9**	**-0.5**
ARG	**Arkhangelos**	**1.80**	**156**	PN	**Pn**	**11 05 42.6**	**+0.8**
ARG	**Arkhangelos**	**1.80**	**156**	P	**Pn**	**11 05 43.2**	**+1.4**
ARG	**Arkhangelos**	**1.80**	**156**	P	**Pn**	**11 05 43.9**	**+2.0**
KHAL	**Karahalli**	**1.87**	**74**	*i* P	**Pb**	**11 05 45.8**	**+0.6**
KHAL				IAML_P			
	comp=Z,132nm,0.3s						
DURS	**Dursunbey**	**1.99**	**29**	*i* P	**Pb**	**11 05 47.3**	**-0.1**
EZN	**Ezine**	**2.08**	**341**	PN	**Pn**	**11 05 47.2**	**+1.6**

IDC 10 11:09:23.5±1.6,**16°.60S**×**178°.24W,h0**km,**mb3.9**/6, **mb1 4.3**/6,**mb1mx3.9**/27,**mbtmp3.9**/6,**Error ellipse: s-maj=109.2km s-min=22.1km az=149.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.41**	**240**	P	P	11 16 55.1	-0.3
	1.0nm,0.4s,baz=76,slow=8.9,SNR=7.2						
WRA	**Warramunga Arr**	**45.04**	**258**	P	P	11 17 41.8	+0.3
	0.8nm,0.5s,baz=86,slow=8.3,SNR=7.9						
ASAR	**Alice Springs**	**45.31**	**253**	P	P	11 17 43.3	-0.4
	4.3nm,0.5s,baz=88,slow=8.6,SNR=79						
ILAR	**Eielson Array**	**84.58**	**13**	P	P	11 21 58.2	-0.1
	0.2nm,0.4s,baz=215,slow=5.1,SNR=5.9						
TXAR	**Lajitas Array**	**85.16**	**58**	P	P	11 22 02.5	+0.3
	0.9nm,0.5s,baz=217,slow=6.1,SNR=4.8						
PDAR	**Pinedale Array**	**86.29**	**43**	P	P	11 22 07.5	-0.2
	0.2nm,0.5s,baz=247,slow=6.3,SNR=2.3						

*ISCJB **10** 11:12:25.1±0.9,44°.44N±0°.05×74°.40E±0°.06,h0km,Error ellipse: s-maj=7.5km s-min=5.5km az=156.0*

*SOME **10** 11:12:25.7,44°.30N×74°.40E*

*NNC **10** 11:12:26.2±0.5,44°.39N×74°.40E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=3.8km s-min=2.5km az=158.0, Suspected Mining explosion.*

*KNET **10** 11:12:26.6±0.5,44°.29N×74°.37E,h7km±3km,ml2.3,Error ellipse: s-maj=4.6km s-min=2.9km az=99.0*

ISC 10 11:12:27.4±1.3,**44°.30N**±0°.05×**74°.42E**±0°.04,**h0**km,**n30,** σ**0s.87**/38,**12C-7D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGDS	**Sogindy**	**0.87**	**170**	P	**Pg**	**11 12 44.3**	**+0.3**
	14nm,0.1s						
SGDS				S	**Sb**	**11 12 57.9**	**+0.4**
	18nm,0.2s						
USP	**Ospenovka**	**1.04**	**177**	⇑P	**Pg**	**11 12 46.5**	**-0.8**
	14nm,0.1s,SNR=27						
USP				⇑S	**Sb**	**11 13 01.8**	**-0.7**
	25nm,0.3s						
CHMS	**Chumysh**	**1.33**	**169**	⇓P	**Pg**	**11 12 51.8**	**-1.0**
	12nm,0.2s,SNR=24						
CHMS				⇑S	**Sb**	**11 13 11.0**	**+0.2**
	17nm,0.1s						
KUU	**Kurty**	**1.45**	**106**	P	**Pn**	**11 12 53.7**	**-1.2**
	18nm,0.1s						
KUU				S	**Sb**	**11 13 13.9**	**-0.3**
	97nm,0.4s						
TKM2	**Tokmak 2**	**1.63**	**148**	⇓P	**Pn**	**11 12 57.0**	**-0.5**
	3.0nm,0.3s						
TKM2				⇑S	**Sg**	**11 13 20.3**	**+0.7**
	6.4nm,0.2s						
TKM2	**Tokmak 2**	**1.63**	**148**	⇓P	**Pn**	**11 12 57.0**	**-0.5**
	13nm,0.2s,SNR=16						
AAK	**Ala-Archa**	**1.67**	**178**	⇑P	**Pn**	**11 12 57.4**	**-0.6**
	7.1nm,0.3s						
AAK				⇓S	**Sg**	**11 13 21.8**	**+0.9**
	25nm,0.5s						
AAK	**Ala-Archa**	**1.67**	**178**	⇑P	**Pn**	**11 12 57.9**	**-0.2**
	12nm,0.2s,SNR=12						
KST	**Kastek**	**1.69**	**138**	P	**Pn**	**11 12 58.1**	**-0.2**
	15nm,0.2s						
KST				S	**Sg**	**11 13 22.4**	**+0.7**
	14nm,0.3s						
KBK	**Karagaybulak**	**1.69**	**167**	⇓P	**Pb**	**11 12 59.0**	**-0.5**
	18nm,0.1s,SNR=11						
KBK				⇑S	**Sg**	**11 13 24.1**	**+2.3**
	60nm,0.3s						
EKS2	**Erkin-Say**	**1.71**	**196**	⇑P	**Pn**	**11 12 58.6**	**0.0**
	24nm,0.2s,SNR=13						
EKS2				⇓S	**Sg**	**11 13 22.8**	**+0.5**
	17nm,0.1s						
KTBS	**Karatobe**	**1.74**	**109**	P	**Pn**	**11 12 58.6**	**-0.3**
	28nm,0.2s						
KTBS				S	**Sg**	**11 13 24.0**	**+0.7**
	44nm,0.2s						
MRKS	**Merke**	**1.78**	**209**	P	**Pn**	**11 12 59.0**	**-0.6**
	9.3nm,0.2s						
MRKS				S	**Sb**	**11 13 24.0**	**0.0**
	25nm,0.1s						
MTBS	**Maitube**	**1.87**	**128**	Pg	**Pn**	**11 13 01.6**	**+0.8**
	16nm,0.2s						
MTBS				Lg	Lg	11 13 28.3	
	32nm,0.2s						
CHKK	**Chushkaly**	**1.91**	**103**	Pg	**Pn**	**11 13 01.1**	**-0.1**
	10nm,0.2s						
CHKK				Lg	Lg	11 13 28.1	
	60nm,0.2s						
IZV	**Izvestkoviy**	**2.04**	**128**	Pg	**Pn**	**11 13 04.0**	**+0.9**
	12nm,0.2s						
IZV				Lg	Lg	11 13 32.6	
	18nm,0.2s						
UCH	**Uchtor**	**2.08**	**178**	⇑P	**Pn**	**11 13 05.1**	**+1.2**
	4.8nm,0.2s,SNR=16						
MDOK	**Medeo**	**2.22**	**120**	Pg	**Pn**	**11 13 06.8**	**+1.1**
	5.8nm,0.2s						
MDOK				Lg	Lg	11 13 37.3	
	7.2nm,0.3s						
KOTS	**Kotyrbulak**	**2.23**	**118**	Pg	**Pb**	**11 13 07.2**	**-1.4**
	7.2nm,0.2s						
KOTS				Lg	Lg	11 13 38.6	
	14nm,0.4s						
TNSS	**Tian-Shan**	**2.23**	**124**	Lg	Lg	11 13 37.8	
	13nm,0.4s						
KZA	**Kyzart**	**2.31**	**164**	⇑P	**Pb**	**11 13 08.8**	**-1.3**
	8.0nm,0.2s,SNR=8.0						
ARXS	**Arharly**	**2.45**	**91**	Pg	**Pn**	**11 13 09.6**	**+0.9**
	4.2nm,0.3s						
ARXS				Lg	Lg	11 13 42.0	
	44nm,0.3s						
ULHL	**Ulahol**	**2.45**	**146**	⇑P	**Pn**	**11 13 10.3**	**+1.4**
	3.5nm,0.2s,SNR=9.4						
MNBS	**Baschi**	**2.88**	**93**	Lg	Lg	11 13 56.5	
	47nm,0.4s						
KK31	**Karatay Array**	**3.08**	**248**	Pn	**Pn**	**11 13 16.5**	**-0.7**
	0.6nm,0.4s,baz=70,slow=13,SNR=9.5						
KK31				⇓Pg	**Pb**	**11 13 23.8**	**+0.8**
	1.2nm,0.5s,baz=65,slow=14,SNR=16						
KK31				⇑Lg	Lg	11 13 58.9	
	1.9nm,0.3s,baz=59,slow=28						
SATY	**Saty**	**3.15**	**112**	Pg	**Pb**	**11 13 23.5**	**-0.9**
	9.1nm,0.2s						
SATY				Lg	Lg	11 14 05.9	
	6.6nm,0.2s						
UZB	**Uzynbulak**	**3.53**	**108**	Lg	Lg	11 14 17.8	
	1.7nm,0.2s						
KAPS	**Kapalarasan**	**3.65**	**73**	Pg	**Pb**	**11 13 32.6**	**-0.2**
	5.2nm,0.4s						
PDGK	**Podgornoye**	**3.80**	**103**	Pg	**Pb**	**11 13 35.9**	**+0.5**
	1.6nm,0.5s						
PDGK				Lg	Lg	11 14 27.2	
	1.7nm,0.6s						
DJR	**Jarkent**	**3.86**	**88**	Lg	Lg	11 14 24.7	
	2.7nm,0.5s						

*KOLA **10** 11:22:30.1,69°.33N×30°.66E,M1.9,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

BER 10 11:22:28.7±1.9,**69°.50N**×**31°.29E,h0**km,**ML0.6, Suspected explosion,Norway-Murmansk border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**2.00**	**161**	P	Pn	11 23 03.5	-0.2
APA0				S	Sn	11 23 28.4	-1.0
ARE0	**ARCESS Array S**	**2.04**	**274**	*e*P	Pn	11 23 02.3	-1.9
ARE0				*e*S	Sn	11 23 26.6	-3.6
ARE0				IAML		11 23 29.4	
	comp=Z,0.3nm,0.1s						
APA	**Apatity**	**2.09**	**157**	P	Pn	11 23 05.2	+0.3
APA				S	Sn	11 23 31.2	-0.4
KTK1	**Kautokeino**	**2.91**	**264**	*e*P	Pn	11 23 14.9	-1.3
KTK1				*e*S	Sn	11 23 49.8	-2.0
KTK1				IAML		11 23 51.5	
	comp=Z,1.8nm,0.1s						
HEF	**Hetta**	**2.96**	**252**	*e*P	Pn	11 23 14.3	-2.6
HEF				*e*S	Sn	11 23 49.1	-4.1
KIF	**Kilpisjarvi**	**3.77**	**267**	*e*P	Pn	11 23 26.0	-1.9
KIF				*e*S	Sn	11 24 07.3	-5.5

HEL 10 11:22:33.1±0.5,**62°.90N**×**29°.31E,h0**km,**ML1.5, Explosion,Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUF	**Sumiainen**	**1.46**	**264**	PN	Pn	11 23 00.5	-0.2
SUF				MSG		11 23 17.2	
	comp=Z,3.1nm,0.2s						
SUF				SN	Sg	11 23 19.3	-0.7
FIA0	**FINESS Array S**	**2.11**	**227**	PG	Pb	11 23 11.0	-1.1
	baz=41						
FIA0				SG	Sn	11 23 37.0	+0.6
KEF	**Keuruu**	**2.19**	**252**	PG	Pb	11 23 12.7	-0.8
KEF				SG	Sb	11 23 40.4	-0.7
OUF	**Merijarvi**	**2.52**	**308**	PG	Pb	11 23 19.2	+0.1
OUF				MSG		11 23 47.5	
	comp=Z,1.5nm,0.2s						
OUF				SG	Sb	11 23 51.7	+1.1
ARBE	**Arbavere**	**3.83**	**206**	PB	Pb	11 23 39.4	-2.1
TOF	**Tornio**	**3.85**	**328**	PN	Pn	11 23 32.9	-0.6
SGF	**Sodankyl**	**4.71**	**347**	PN	Pn	11 23 44.2	-1.0

KRSC 10 11:59:01.7±0.6,**59°.75N**×**163°.98E,h44**km±16km,**ML3.5, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OSSR	**Ossora**	**0.69**	**223**	*e*P	Pn	11 59 14.6	-0.5
OSSR				*e*S	Sn	11 59 26.5	+1.8
TILK	**Tilichiki**	**1.29**	**56**	*e*P	Pn	11 59 23.8	+0.6
TILK				*e*S	Sn	11 59 41.8	+2.6
PALN	**Palana**	**2.16**	**254**	*e*P	Pn	11 59 36.8	+1.7
PALN				*e*S	Sn	12 00 04.5	+3.9
KMSK	**Kamenskaya**	**2.93**	**21**	*e*P	Pn	11 59 48.6	+3.0
KMSK				*e*S	Sn	12 00 24.5	+5.0
BKI	**Bering**	**4.69**	**166**	*e*P	Pn	12 00 14.4	+4.6

*IDC **10** 12:02:54.8±1.1,27°.55S×176°.12W,h0^{km},mb4.2/8, mb1 4.4/9,mb1mx4.1/28,mbtmp4.2/9,ML3.2/1,MS3.4/5, Ms1 3.4/5,ms1mx3.1/22,Error ellipse: s-maj=35.1km s-min=24.0km az=137.0*

*ISCJB **10** 12:02:58.0±1.1,27°.6S±0°.1×176°.1W±0°.2,h33^{km},mb4.2/8, MS3.2/6,Error ellipse: s-maj=29.9km s-min=10.8km az=22.6*

ISC 10 12:02:59.5±0.9,27°.6S±0°.1×176°.1W±0°.2,h33^{km},n21, σ1^{s}.40/14,mb4.1/8,MS3.2/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	12.08	207	Pn	Pn	12 05 47.0	-2.3
	0.1nm,0.3s,baz=40,slow=12,SNR=2.4						
URZ				Sn	Sn	12 08 05.0	+2.1
	1.9nm,0.3s,baz=153,slow=20,SNR=12						
DZM	Mont Dzumac	16.81	285	LR	LR	12 12 13.8	
	comp=Z,163nm,18.5s,baz=218,slow=33						
TBI	Tubuai	24.35	86	eLR	LR	12 13 34.1	
	comp=Z,72nm,31.8s						
PAE	Paea	26.30	74	eT	T	12 35 33.7	
	2.0nm,0.3s						
PPT2	Papeete2	26.34	73	eLR	LR	12 14 46.1	
	comp=Z,33nm,20.8s						
PPT2	Papeete2	26.34	73	eT	T	12 35 37.9	
	1.9nm,0.4s						
PPT	Papeete	26.35	73	LR	LR	12 17 52.3	
	comp=Z,46nm,18.8s,baz=214,slow=34						
HNR	Honiara	28.96	304	LR	LR	12 18 48.3	
	comp=Z,77nm,20.4s,baz=141,slow=33						
CTA	Charters Tower	35.18	274	P	P	12 09 51.8	+1.2
	3.2nm,0.3s,baz=98,slow=11,SNR=6.7						
STKA	Stephens Creek	36.86	253	LR	LR	12 23 54.8	
	comp=Z,54nm,18.8s,baz=24,slow=34						
ASAR	Alice Springs	45.05	263	P	P	12 11 11.4	-1.0
	1.3nm,0.8s,baz=98,slow=7.1,SNR=15						
WRA	Warramunga Arr	45.79	268	P	P	12 11 16.8	-1.6
	3.0nm,1.0s,baz=102,slow=8.1,SNR=11						
MJAR	Matsushiro Arr	76.96	324	P	P	12 14 48.1	-0.6
	3.3nm,0.9s,baz=154,slow=5.8,SNR=7.9						
KSRS	Korea Array	83.36	318	P	P	12 15 24.2	+1.1
	0.9nm,0.6s,baz=123,slow=5.0,SNR=3.8						
NVAR	Mina Array Bea	85.02	42	P	P	12 15 31.8	-0.1
	0.5nm,0.9s,baz=224,slow=8.1,SNR=3.6						
NVAR				LR	LR	12 49 47.3	
	comp=Z,26nm,18.5s,baz=206,slow=33						
CMAR	Chiang Mai Arr	94.11	289	P	P	12 16 16.4	+1.3
	0.9nm,0.3s,baz=129,slow=3.6,SNR=3.4						
ILAR	Eielson Array	94.83	12	P	P	12 16 17.0	-0.3
	0.5nm,0.8s,baz=218,slow=5.7,SNR=4.7						
NB2	NORSAR Subarra	146.20	354	PKPdf	PKPbc	12 22 36.2	+0.3
	comp=Z,0.9nm,0.7s,baz=33,slow=1.8						
NOA	NORSAR Array B	146.20	354	PKPbc	PKPab	12 22 36.5	-0.1
	comp=Z,1.3nm,0.7s,baz=40,slow=1.6,SNR=4.5						
AKASG	Malin Array Be	149.99	327	PKPbc	PKPbc	12 22 45.4	-0.9
	comp=Z,2.1nm,0.7s,baz=39,slow=3.4,SNR=6.8						
TORD	Torodi Ar. Bea	165.47	171	PKPab	PKPab	12 24 01.1	+1.7
	comp=Z,1.4nm,1.0s,baz=222,slow=2.0,SNR=4.5						

IDC 10 12:15:10.7±9.3,6°.46S×154°.62E,h0^{km},mb3.4/3, mb1 3.6/3,mb1mx3.4/26,mbtmp3.4/3,Error ellipse: s-maj=288.2km s-min=38.7km az=111.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.82	234	P	P	12 20 26.4	+0.8
	1.0nm,0.7s,baz=61,slow=11,SNR=7.2						
ASAR	Alice Springs	26.25	227	P	P	12 20 47.2	-0.6
	0.3nm,0.8s,baz=60,slow=9.6,SNR=3.4						
MKAR	Makanchi Array	82.76	319	P	P	12 27 36.6	-0.1
	0.3nm,0.7s,baz=114,slow=5.4,SNR=2.7						

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*ISK **10** 12:25:34.2,37°.11N×42°.42E,h5^{km},ML3.4/7*

*ISCJB **10** 12:25:35.4±0.6,37°.06N±0°.04×42°.54E±0°.05,h10^{km},Error ellipse: s-maj=7.6km s-min=4.1km az=43.0*

*ISN **10** 12:25:36.8±0.3,36°.94N×42°.59E,h0^{km},ML3.3*

*DDA **10** 12:25:38.4,37°.30N×42°.33E,h14^{km}±2^{km},ML3.2*

ISC 10 12:25:34.4±1.0,37°.08N±0°.04×42°.53E±0°.04,h10^{km},n16, σ0^{s}.76/26,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL	Mosul	0.82	145	ePg	Pn	12 25 51.7	-0.4
	baz=322						
MSL				AML	AML	12 25 56.0	
	comp=Z,2µm,0.8s						
MSL				eSg	Sb	12 26 02.2	+0.2
SRTM	Siirt_Merkez	1.03	332	i P	Pn	12 25 54.6	-0.5
SRTM				IAML_P			
	comp=Z,3µm,0.2s						
BTMN	Batman	1.29	309	i P	Pg	12 25 59.4	+0.2
BTMN				i S	Sb	12 26 15.0	-0.4
BTMN				IAML_P			
	comp=Z,2µm,0.1s						
AKDM	Akdamar-Van	1.30	16	PN	Pg	12 26 00.1	+0.7
MARD	Mardin	1.41	280	i P	Pg	12 26 01.7	+0.1
MARD				i S	Sg	12 26 20.3	+0.4
SVAN	Silvan-Diyarba	1.50	316	PN	Pb	12 26 02.0	-0.5
SVAN	Silvan-Diyarba	1.50	316	i P	Pb	12 26 02.5	+0.1
SVAN				i S	Sg	12 26 22.2	-0.6
SVAN				IAML_P			
	comp=Z,3µm,0.2s						
VANB	Van	1.66	24	PN	Pb	12 26 05.1	-0.1
MAZI	Mazidag	1.70	284	PN	Pb	12 26 04.8	-1.1
MAZI				SN	Sb	12 26 27.5	+0.1
MUSM	Mu-Merkez	1.83	334	i P	Pb	12 26 07.7	-0.4
MUSM				i S	Sb	12 26 30.3	-0.7
MUSM				IAML_P			
	comp=Z,2µm,0.2s						
DYBB	Diyarbakir	2.09	295	PN	Pb	12 26 10.8	-1.7
DYBB				SN	Sb	12 26 37.3	-1.2
DIYA	Diyarbakir	2.09	295	i P	Pb	12 26 12.7	+0.2
DIYA				i S	Sb	12 26 38.9	+0.4
DIYA				IAML_P			
	comp=Z,180nm,0.1s						
HANI	Diyarbakir_Han	2.15	309	i P	Pb	12 26 13.6	+0.1
HANI				i S	Sb	12 26 39.6	-0.7
HANI				IAML_P			
	comp=Z,447nm,0.1s						
BNGL	BINGOL	2.16	330	i P	Pb	12 26 13.1	-0.7
BNGL				i S	Sb	12 26 40.5	-0.2
SVRC	Sivrice-ELAZID	2.86	298	PN	Pn	12 26 21.8	+1.5
URFA	Urfa	2.98	278	PN	Pn	12 26 23.2	+1.4

UCR 10 12:28:54.0±2.6,10°.39N×86°.25W,h0^{km}±11^{km},MW4.2, 5C-2D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	Buena Vista	0.92	64	⇓eP	Pg	12 29 12.2	+0.5
BUEV				eS	Sg	12 29 24.0	+0.4
GB1A	Borinquen Arri	0.94	63	⇓eP	Pg	12 29 11.8	-0.2
GB1A				eS	Sg	12 29 24.4	+0.2
MESS	Mesas	1.09	71	⇑iP	Pg	12 29 14.8	-0.2
MESS				eS	Sg	12 29 29.8	+0.7
CUI	Cuipilapa	1.10	76	⇑iP	Pg	12 29 14.8	-0.2
JTS	Las Juntas de	1.28	94	eP	Pg	12 29 17.0	-1.5
JTS				eS	Sg	12 29 34.5	-0.6
ARE1	Arenal 1	1.50	87	⇑eP	Pn	12 29 21.9	-0.4
CEDE	Laguna Cedeo	1.52	86	⇑eP	Pn	12 29 21.2	-1.3
CEDE				eS	Sn	12 29 44.7	+1.6
SRA1	San Ramn	1.77	100	eP	Pn	12 29 24.8	-1.2
SRA1				eS	Sn	12 29 49.5	+0.3
ACON	Acoyapa	1.89	34	⇑eP	Pn	12 29 26.6	-0.9
ACON				eS	Sb	12 29 53.8	+0.3
HDC	Heredia	2.13	100	eP	Pb	12 29 33.8	+0.1
HDC				eS	Sg	12 30 01.9	-0.8
CNGN	Cerro Negro	2.14	348	eP	Pn	12 29 31.5	+0.4
LCR2	La Lucha 2	2.30	106	eP	Pn	12 29 33.8	+0.4
LCR2				eS	Sg	12 30 07.8	-0.2
CVTR	Volcan Turrial	2.48	98	eP	Pb	12 29 37.9	-1.7
MATN	Matagalpa	2.54	7	eP	Pn	12 29 36.7	+0.1
ESPN	Las Esperanzas	2.62	47	eP	Pn	12 29 36.1	-1.5
CSGN	Cosiguina Volc	2.87	334	eP	Pb	12 29 44.5	-1.7
RCON	San Juan de Ri	3.08	2	eP	Pn	12 29 44.9	+0.9

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*ISK **10** 12:30:05.7,37°.86N×39°.67E,h5^{km},ML2.3/4*

*DDA **10** 12:30:06.7,37°.93N×39°.67E,h7^{km}±3^{km},ML2.7*

ISC 10 12:30:06.4±1.2,37°.90N±0°.04×39°.67E±0°.03,h8^{km}±11^{km}, n10,σ0^{s}.78/17,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIYA	Diyarbakir	0.36	85	i P	Pb	12 30 14.3	-0.7
DYBB	Diyarbakir	0.38	81	PG	Pg	12 30 13.9	+0.2
DYBB				SG	Sg	12 30 19.5	+0.8
SVRC	Sivrice-ELAZID	0.56	329	PG	Pg	12 30 17.5	+0.2
SVRC				SG	Sb	12 30 26.3	-0.6
MAZI	Mazidag	0.75	125	PG	Pg	12 30 20.3	-0.6
HANI	Diyarbakir_Han	0.77	48	i P	Pg	12 30 21.4	+0.1
HANI				IAML_P			
	comp=Z,504nm,0.2s						
ELZG	Elazig	0.81	318	i P	Pb	12 30 22.5	-0.3
ELZG				i S	Sb	12 30 33.8	-0.2
ELZG				IAML_P			
	comp=Z,855nm,0.1s						
URFA	Urfa	0.81	236	PG	Pg	12 30 21.5	-0.5
URFA				SG	Sg	12 30 32.9	+0.3
SANL	SANLIURFA_Merk	0.90	217	i P	Pn	12 30 25.5	+0.1
SANL				i S	Sn	12 30 38.2	-0.5
SANL				IAML_P			
	comp=Z,1µm,0.2s						
ATAB	Bozova	1.17	249	i P	Pg	12 30 27.8	-1.1
ATAB				i S	Sn	12 30 46.3	+0.9
SURC	SANLIURFA_SURC	1.32	220	i P	Pg	12 30 32.8	+1.1
SURC				i S	Sn	12 30 50.4	+1.4

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*NIC **10** 12:41:10.0±0.4,35°.12N×34°.61E,h25^{km},ML3.0*

*ISCJB **10** 12:41:12.4±0.7,34°.78N±0°.04×34°.38E±0°.05,h30^{km}±7^{km}, Error ellipse: s-maj=8.5km s-min=4.1km az=140.2*

*ISK **10** 12:41:12.2,34°.75N×34°.26E,h28^{km},ML2.9/10*

*NSSC **10** 12:41:15.1±1.0,32°.36N×34°.54E,h10^{km}±999^{km},ML2.2*

ISC 10 12:41:12.3±1.3,34°.75N±0°.04×34°.34E±0°.04,h27^{km}±14^{km}, n21,σ1^{s}.04/31,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVOU	Mavrovouni	0.64	295	P	Pb	12 41 23.4	-1.5
	baz=82						
MVOU				S	Sn	12 41 34.7	-0.1
AKIN	Akıncılar- Kıb	0.77	291	PG	Pb	12 41 26.5	-0.6
EREN	Erenkoy	0.79	350	PG	Pb	12 41 27.7	+0.2
CSS	Mathiatis	0.86	285	PG	Pn	12 41 28.1	-0.5
CSS	Mathiatis	0.86	285	P	Pn	12 41 28.0	-0.5
	baz=81						
CSS				S	Sn	12 41 41.6	+1.4
SZAC	Souni	1.20	271	P	Pn	12 41 33.4	+0.1
	baz=75						
SZAC				S	Sb	12 41 51.1	+1.6
HWQ	Hawqa	1.41	109	eP	Pn	12 41 36.6	+0.4
AKKU	Akkuyu-Mersin	1.55	336	PN	Pn	12 41 37.9	-0.2
AKKU				SN	Sn	12 41 57.2	-0.1
IKL	Isikli	1.58	340	PN	Pn	12 41 38.3	-0.2
IKL				SN	Sn	12 41 57.8	-0.3
TEKE	Tekeli-Mersin	1.71	325	PN	Pn	12 41 40.1	-0.3
TEKE				SN	Sn	12 42 00.6	-0.8
KIZK	Mersin	1.74	355	PN	Pn	12 41 41.1	+0.4
RCY	Rachaya	1.76	135	eP	Pn	12 41 41.0	-0.2
KEBE	Keben-Mersin	1.77	343	PN	Pn	12 41 41.8	+0.6
TEVE	Tevekalti-Mers	1.84	337	PN	Pn	12 41 42.4	+0.3
BERE	Bereket-Mersin	1.84	331	PN	Pn	12 41 42.0	-0.2
BRBR	Barbar	1.89	134	eP	Pn	12 41 43.0	0.0
BRBR				eS	Sn	12 42 04.4	-1.6
BRBR				AML	AML	12 42 09.7	
	comp=N,24nm,0.7s						
BRBR				AML	AML	12 42 14.7	
	comp=E,17nm,0.8s						
QASN	Qassioun	2.01	126	eP	Pb	12 41 47.6	-0.6
QASN				eS	Sn	12 42 10.1	+1.3
QASN				AML	AML	12 42 14.2	
	comp=E,105nm,0.5s						
QASN				AML	AML	12 42 15.1	
	comp=N,68nm,0.8s						
MERS	Mersin	2.12	4	PN	Pn	12 41 46.6	+0.6
GAZI	Gazipasa	2.22	313	PN	Pn	12 41 47.8	+0.5
TOTH	TOTAH	2.22	128	eP	Pn	12 41 48.4	+1.0
TOTH				eS	Sn	12 42 10.6	-3.3
TOTH				AML	AML	12 42 17.8	
	comp=E,46nm,0.3s						
TOTH				AML	AML	12 42 21.0	
	comp=N,32nm,0.4s						
MMLI	Mount Malkishu	2.48	158	PN	Pn	12 41 51.9	+1.0
MMLI				SN	Sn	12 42 21.6	+1.4

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*ISK **10** 12:51:22.4,37°.14N×27°.90E,h16^{km}±2^{km},ML2.0/5, Suspected Mining explosion.*

*ISCJB **10** 12:51:23.4±0.6,37°.13N±0°.05×27°.91E±0°.04,h0^{km},Error ellipse: s-maj=6.9km s-min=4.3km az=171.0*

*DDA **10** 12:51:25.3,37°.34N×27°.54E,h7^{km}±6^{km},ML2.5*

ISC 10 12:51:20.5±1.0,37°.12N±0°.05×27°.92E±0°.04,h0^{km},n8, σ0^{s}.65/12,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.29	86	PG	Pb	12 51 29.2	+0.5
YER				SG	Sb	12 51 34.5	+0.4
BDRM	Kayabasi	0.38	263	i P	Pb	12 51 30.8	+0.6
BDRM				i S	Sb	12 51 37.3	+0.7
BDRM				IAML_P			
	comp=Z,3µm,0.1s						
DAT	Datca	0.47	215	PG	Pb	12 51 32.5	+0.7
DAT	Datca	0.47	215	i P	Pn	12 51 33.6	-1.0
DAT				IAML_P			
	comp=Z,376nm,0.2s						
BODT	Bodrum	0.49	264	PG	Pb	12 51 32.4	+0.4
BODT				SG	Sb	12 51 39.7	0.0
AYDN	Tasoluk	0.55	357	i P	Pb	12 51 33.6	+0.6
AYDN				i S	Sb	12 51 41.2	-0.2
AYDN				IAML_P			
	comp=Z,3µm,0.2s						
TURN	Turunc	0.60	114	PG	Pg	12 51 32.0	0.0
DALY	Dalyan (Mula)	0.66	117	PG	Pn	12 51 36.4	-0.7

IDC 10 13:06:45.4±6.3,18°.22S×177°.76W,h444^{km}±71^{km}, mb3.2/9,mb1 3.5/9,mb1mx3.3/27,mbtmp4.0/9,Error ellipse: s-maj=25.9km s-min=22.2km az=31.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	20.46	192	P	P	13 10 49.9	-1.2
	3.6nm,0.3s,baz=270,slow=2.5,SNR=13						
STKA	Stephens Creek	39.02	242	P	P	13 13 33.1	+0.8
	2.9nm,0.8s,baz=70,slow=8.8,SNR=6.0						
ASAR	Alice Springs	45.30	254	P	P	13 14 22.2	-0.1
	9.0nm,0.5s,baz=88,slow=9.2,SNR=229						
VNDA	Vanda	60.19	185	P	P	13 16 09.1	+0.7
	0.3nm,0.6s,baz=1.4,slow=6.1,SNR=4.8						
MJAR	Matsushiro Arr	68.53	323	P	P	13 17 02.3	0.0
	2.0nm,0.6s,baz=158,slow=5.0,SNR=9.2						
NVAR	Mina Array Bea	79.22	44	P	P	13 18 04.8	+1.2
	0.4nm,0.6s,baz=226,slow=8.5,SNR=5.4						
TXAR	Lajitas Array	85.64	57	P	P	13 18 37.8	+1.5
	0.4nm,0.4s,baz=219,slow=5.7,SNR=6.2						
ILAR	Eielson Array	86.05	13	P	P	13 18 35.8	-1.6
	0.5nm,0.4s,baz=220,slow=5.0,SNR=8.3						
PDAR	Pinedale Array	87.15	43	P	P	13 18 42.7	-0.7
	0.2nm,0.5s,baz=193,slow=3.6,SNR=3.1						
ARCES	ARCESS Array B	126.73	350	PKP	PKPdf	13 24 55.0	-1.7
	2.9nm,0.8s,baz=353,slow=4.9,SNR=3.7						
BRTR	Keskin Array B	145.44	315	PKPbc	PKPdf	13 25 32.0	-0.2
	1.0nm,0.7s,baz=132,slow=3.5,SNR=4.3						
GERES	GERESS Array B	148.07	346	PKPbc	PKPbc	13 25 39.3	-0.7
	1.5nm,0.5s,baz=37,slow=5.5,SNR=4.0						

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*ISCJB **10** 13:19:09.1±1.4,61°.03N±0°.04×28°.8E±0°.1,h0^{km},Error ellipse: s-maj=10.1km s-min=5.5km az=12.1*

*MOS **10** 13:19:10.0,61°.02N×28°.95E,M1.8,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*HEL **10** 13:19:11.4±0.5,61°.02N×28°.93E,h0^{km},ML2.1,Explosion*

*IDC **10** 13:19:13.1±1.8,60°.88N×28°.77E,h0^{km},mb1 3.1/3, mb1mx2.9/38,mbtmp3.1/3,ML2.5/3,Error ellipse: s-maj=16.5km s-min=11.9km az=171.0*

ISC 10 13:19:13.5±2.0,61°.01N±0°.05×28°.6E±0°.1,h0^{km},n11, σ0^{s}.75/17,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	FINESS Array S	1.28	291	PG	Pg	13 19 37.0	-1.0
FINES	FINESS Array B	1.28	291	Pg	Pg	13 19 37.3	-0.7
	2.7nm,0.3s,baz=113,slow=15,SNR=42						
FINES				Lg	Lg	13 19 57.5	
	3.3nm,0.3s,baz=115,slow=31,SNR=19						
FINES				Rg	Rg	13 20 04.5	
	13nm,0.8s,baz=39,slow=38,SNR=34						
PVF	Pernaja	1.41	252	PG	Pg	13 19 39.6	-0.8
	baz=63						
PVF				MSG		13 19 58.6	
	comp=Z,16nm,0.2s						
PVF				SG	Sn	13 20 00.7	+1.1
ARBE	Arbavere	2.04	220	PB	Pn	13 19 49.0	+0.1
ARBE				SG	Sg	13 20 18.9	+0.1
SUF	Sumiainen	2.06	327	PG	Pn	13 19 50.2	+0.8
	baz=140						
SUF				MSG		13 20 15.4	
	comp=Z,11nm,0.2s						
SUF				SG	Sg	13 20 20.1	+0.3
KEF	Keuruu	2.12	305	PG	Pn	13 19 51.2	+1.1
KEF				SG	Sg	13 20 22.4	+1.0
MEF	Metsahovi	2.20	251	PN	Pn	13 19 51.0	-0.3
MEF				SB	Sb	13 20 21.9	0.0
OUF	Merijarvi	3.81	334	PG	Pb	13 20 21.5	0.0
	baz=139						
HFS	Hagfors	7.38	270	Pn	Pn	13 21 01.5	-0.9
	comp=Z,0.1nm,0.3s,baz=74,slow=16,SNR=5.4						
HFS				Sn	Sn	13 22 26.7	0.0
	comp=Z,0.1nm,0.3s,baz=86,slow=25,SNR=2.9						
NOA	NORSAR Array B	8.42	278	Pn	Pn	13 21 16.4	-0.3
	comp=Z,0.0nm,0.3s,baz=94,slow=8.9,SNR=2.2						
ARCES	ARCESS Array B	8.66	353	Pn	Pn	13 21 19.2	-0.6
	comp=Z,0.4nm,0.3s,baz=169,slow=13,SNR=12						

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*ISCJB **10** 13:20:44.5±0.3,51°.58N±0°.02×16°.06E±0°.02,h0^{km},Error ellipse: s-maj=2.6km s-min=2.1km az=16.1*

*VIE **10** 13:20:47.6±0.8,51°.49N×16°.00E,h0^{km},mb2.7/7,ml3.2/7, Error ellipse: s-maj=7.5km s-min=4.0km az=36.0, Suspected Mining induced.*

*BGR **10** 13:20:48.1±0.5,51°.54N×16°.03E,h1^{km},ML3.5/12,Error ellipse: s-maj=4.4km s-min=2.2km az=23.0*

*IDC **10** 13:20:48.2±0.6,51°.53N×15°.95E,h0^{km},mb1 3.5/7, mb1mx3.3/43,mbtmp3.4/7,ML2.9/6,Error ellipse: s-maj=10.0km s-min=6.5km az=100.0*

ISC 10 13:20:45.9±0.7,51°.63N±0°.03×16°.08E±0°.02,h0^{km},n55, σ1^{s}.03/109,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.80	170	i Pg	Pg	13 21 01.6	+0.6
KSP				eSg	Sg	13 21 11.4	0.0
KSP	Ksiaz	0.80	170	ePg	Pg	13 21 01.7	+0.6
KSP				eSg	Sg	13 21 11.6	+0.2
CHVC	Chvalec	1.04	181	ePG	Pg	13 21 06.2	+0.4
CHVC				eSG	Sg	13 21 19.0	-0.2
	comp=Z,229nm,0.4s						
OSTC	Ostas	1.08	175	ePG	Pb	13 21 07.1	-0.2
OSTC				eSG	Sg	13 21 20.2	-0.2
	comp=Z,295nm,0.4s						
UPC	Upice	1.12	182	ePG	Pg	13 21 07.3	0.0
UPC				eSG	Sg	13 21 21.4	-0.5
	comp=Z,262nm,0.5s						
DPC	Dobruska-Polom	1.29	173	ePg	Pg	13 21 10.5	0.0
DPC				eSg	Sg	13 21 26.4	-0.8
DPC	Dobruska-Polom	1.29	173	ePG	Pg	13 21 10.5	0.0
DPC				eSG	Sg	13 21 26.1	-1.1
	comp=Z,250nm,0.5s						
PVCC	Panska Ves	1.46	222	ePG	Pn	13 21 13.3	-0.1
PVCC				eSG	Sb	13 21 33.0	+0.1
	comp=Z,393nm,0.5s						
BRG	Berggiesshubel	1.54	242	PN	Pn	13 21 13.8	-0.8
BRG				PG	Pb	13 21 15.4	+0.1
BRG				SG	Sg	13 21 35.3	-0.1
	639nm,0.5s						
BRG	Berggiesshubel	1.54	242	ePn	Pn	13 21 14.0	-0.6
BRG				ePg	Pb	13 21 15.0	-0.3
BRG				eSg	Sg	13 21 35.0	-0.4
KRLC	Kraliky	1.62	164	ePG	Pn	13 21 15.8	+0.1
KRLC				eSG	Sb	13 21 37.4	-0.1
	comp=Z,62nm,0.6s						
FBE	Freiberg	1.85	249	eSg	Sb	13 21 44.8	+0.5
GOPC	GO Pecny, Ondr	1.90	206	ePG	Pb	13 21 21.5	+0.1
GOPC				eSG	Sb	13 21 45.3	-0.4
	comp=Z,106nm,0.6s						
PRU	Pruhonice	1.91	211	ePG	Pb	13 21 20.9	-0.6
PRU				eSG	Sb	13 21 45.5	-0.4
	comp=Z,113nm,0.4s						
CLL	Collm	1.95	262	ePn	Pn	13 21 20.0	-0.2
CLL				ePg	Pb	13 21 23.0	+0.7
CLL				i		13 21 26.7	
CLL				eSg	Sg	13 21 49.0	+0.5
	comp=Z,71nm,0.7s						
CLL	Collm	1.95	262	ePn	Pn	13 21 19.9	-0.2
CLL				eSg	Sb	13 21 48.0	+0.9
RAC	Raciborz	2.04	138	ePg	Pb	13 21 23.7	-0.2
RAC				eSg	Sg	13 21 51.4	-0.1
MORC	Moravsky Berou	2.07	153	ePN	Pn	13 21 22.2	+0.3
MORC				eSG	Sn	13 21 49.2	+0.7
MORC	Moravsky Berou	2.07	153	ePn	Pn	13 21 22.2	+0.3
MORC				eSg	Sg	13 21 51.7	-0.7
OKC	Ostrava-Krasne	2.22	143	eSg	Sg	13 21 56.3	-0.9
OKC	Ostrava-Krasne	2.22	143	ePG	Pb	13 21 27.7	+0.8
OKC				eSG	Sg	13 21 56.7	-0.5
	comp=Z,126nm,0.6s						
VRAC	Vranov	2.34	172	Pn	Pn	13 21 26.9	+1.3
	comp=Z,1.9nm,0.3s,baz=342,slow=12,SNR=28						
VRAC				Lg	Lg	13 21 58.9	
	comp=Z,21nm,0.3s,baz=76,slow=20,SNR=15						
VRAC	Vranov	2.34	172	ePN	Pn	13 21 26.2	+0.6
VRAC				eSG	Sb	13 21 58.6	+0.1
TREC	Trest	2.37	189	ePN	Pn	13 21 26.9	+1.0
TREC				ePG	Pb	13 21 30.0	+0.7
TREC				eSG	Sg	13 22 00.5	-1.3
	comp=Z,78nm,0.4s						
KRUC	Moravsky	2.58	175	ePN	Pn	13 21 29.7	+0.9
KRUC				eSG	Sb	13 22 05.8	+0.7
TANN	Tannenbergstha	2.59	243	ePn	Pn	13 21 29.1	+0.1
TANN				ePg	Pg	13 21 35.8	+0.4
TANN				eSg	Sg	13 22 07.9	-1.0
NKC	Novy Kostel	2.69	240	ePN	Pn	13 21 31.2	+0.8
NKC				ePG	Pb	13 21 35.6	+0.7
NKC				eSG	Sg	13 22 12.5	+0.3
	comp=Z,168nm,0.4s						
OJC	Ojcow	2.74	119	ePn	Pn	13 21 31.3	+0.2
OJC				ePg	Pg	13 21 39.1	+0.8
OJC				eSn	Sn	13 22 03.7	-1.2
OJC				eSg	Sg	13 22 15.0	+1.1
JAVC	Velka Javorina	2.95	159	ePN	Pn	13 21 34.4	+0.4
JAVC				eSG	Sb	13 22 16.3	+0.3
KHC	Kasperske Hory	2.97	214	ePN	Pn	13 21 34.8	+0.6
KHC				ePG	Pb	13 21 40.5	+0.9
KHC				eSG	Sg	13 22 20.1	-1.1
	comp=Z,46nm,0.5s						
MOX	Moxa	2.98	252	ePn	Pn	13 21 34.3	-0.1
MOX				ePg	Pg	13 21 42.5	-0.4
MOX				eSg	Sg	13 22 20.6	-0.9
MANZ	Manzenberg	3.01	238	ePn	Pn	13 21 35.3	+0.6
MANZ				eSg	Sg	13 22 21.5	-1.0
ROTZ	Rotzenmuhle	3.09	234	ePn	Pn	13 21 36.0	+0.1
GEC2	GERESS Array S	3.18	210	ePn	Pn	13 21 37.6	+0.5
GEC2				eSg	Sg	13 22 25.1	-2.8
GERES	GERESS Array B	3.18	210	Pn	Pn	13 21 37.6	+0.5
	comp=Z,2.9nm,0.3s,baz=32,slow=13,SNR=36						
GERES				Pg	Pb	13 21 44.0	+0.8
	comp=Z,7.1nm,0.3s,baz=29,slow=18,SNR=40						
GERES				Lg	Lg	13 22 22.9	
	comp=Z,9.0nm,0.3s,baz=29,slow=29,SNR=9.6						
MODS	Modra-Piesok	3.35	166	ePG	Pg	13 21 48.3	-1.7
MODS				eSG	Sg	13 22 34.3	+1.0
MODS				eLG	Lg	13 22 36.9	
NIE	Niedzica	3.48	128	eP	Pg	13 21 53.1	+0.5
NIE				eS	Sg	13 22 38.3	+0.6
ZST	Bratislava	3.50	169	ePN	Pn	13 21 41.2	-0.3
ZST				eSG	Sg	13 22 37.2	-1.0
CLZ	Clausthal	3.56	276	ePn	Pn	13 21 43.3	+1.0
VYHS	Vyhne	3.60	149	ePN	Pn	13 21 43.2	+0.3
VYHS				ePG	Pg	13 21 55.4	+0.5
VYHS				eSG	Sg	13 22 41.2	-0.4

GRF	Grafenberg Arr	3.65	240	ePn	Pn	13 21 44.2	+0.6
GRF				eSg	Sg	13 22 42.3	-0.8
CONA	Conrad Observa	3.71	182	ePn	Pn	13 21 45.2	+0.8
	comp=Z,1.5nm,0.5s						
CONA				Sg	Sg	13 22 44.4	-0.5
	comp=Z,65nm,0.6s						
MOA	Molln	3.96	198	ePn	Pn	13 21 48.4	+0.5
	comp=Z,5.8nm,0.4s						
MOA				Sg	Sg	13 22 51.5	-1.6
	comp=Z,26nm,0.4s						
STHS	Stebnicka Huta	3.97	122	ePG	Pg	13 22 01.9	0.0
STHS				eSG	Sg	13 22 52.9	-0.4
KECS	Kecovo	4.24	136	eSG	Sg	13 22 58.5	-3.4
ARSA	Arzberg	4.40	185	ePn	Pn	13 21 56.3	+2.4
	comp=Z,1.0nm,0.2s						
ARSA				Sg	Sg	13 23 05.8	-1.2
	comp=Z,12nm,0.4s						
KBA	Koelnbreinsper	4.89	203	ePn	Pn	13 22 01.6	+0.8
	comp=Z,6.1nm,0.4s						
KBA				Sg	Sg	13 23 25.8	+2.9
	comp=Z,10.0nm,0.5s						
WTTA	Wattenberg	5.24	215	ePn	Pn	13 22 07.2	+1.6
	comp=Z,0.9nm,0.2s						
WTTA				Sg	Sg	13 23 35.9	+1.8
	comp=Z,12nm,0.5s						
DAVOX	Davos/Dischmat	6.33	222	Lg	Lg	13 24 06.3	
	comp=Z,1.0nm,0.3s,baz=152,slow=12,SNR=3.7						
AKASG	Malin Array Be	8.32	91	Pn	Pn	13 22 48.2	+0.7
	comp=Z,3.3nm,0.3s,baz=280,slow=12,SNR=12						
AKASG				Sn	Sn	13 24 18.4	-3.8
	comp=Z,1.3nm,0.3s,baz=277,slow=23,SNR=4.0						
AKASG				Lg	Lg	13 25 12.1	
	comp=Z,0.5nm,0.3s,baz=276,slow=28,SNR=3.3						
HFS	Hagfors	8.63	352	Pn	Pn	13 22 52.2	+0.3
	comp=Z,0.2nm,0.3s,baz=165,slow=12,SNR=6.9						
HFS				Sn	Sn	13 24 28.3	-1.5
	comp=Z,0.2nm,0.3s,baz=194,slow=30,SNR=3.2						
NOA	NORSAR Array B	9.81	346	Pn	Pn	13 23 09.1	+1.0
	comp=Z,0.0nm,0.3s,baz=149,slow=12,SNR=2.5						
FINES	FINESS Array B	11.26	25	Pn	Pn	13 23 27.6	-0.2
	comp=Z,0.2nm,0.3s,baz=218,slow=11,SNR=6.2						
FINES				Sn	Sn	13 25 37.6	+3.3
	comp=Z,0.3nm,0.3s,baz=214,slow=21,SNR=4.1						
EKA	Eskdalemuir Ar	12.04	295	Pn	Pn	13 23 32.9	-5.7
	baz=100,slow=12,SNR=5.1						
ARCES	ARCESS Array B	18.51	10	Pn	P	13 25 01.6	-1.7
	comp=Z,0.1nm,0.3s,baz=194,slow=15,SNR=3.1						

JMA 10 13:23:13.7±0.1, 40°.90N×141°.76E, h106^{km}±1^{km}, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	Aomorirokkasho	0.32	290	P	Pn	13 23 29.3	+0.3
JARK				S	Sn	13 23 40.7	+0.2
JAHD	Aomorihigashid	0.48	319	P	Pn	13 23 30.3	+0.3
JAHD				S	Sn	13 23 42.8	+0.6
JTM	Tenmabayashi	0.54	258	P	Pn	13 23 30.2	-0.1
JTM				S	Sn	13 23 42.9	+0.1
JANG	Nango	0.56	200	P	Pn	13 23 30.5	-0.1
JANG				S	Sn	13 23 42.8	-0.4
JOT	Ohata	0.72	312	P	Pn	13 23 31.7	-0.1
JOT				S	Sn	13 23 45.7	+0.2
JAH	Hinai	1.11	231	P	Pn	13 23 36.2	+0.4
JAH				S	Sn	13 23 52.7	+0.3
JKB	Kayabe	1.13	331	P	Pn	13 23 36.0	+0.1
JKB				S	Sn	13 23 52.7	0.0
JSR	Shiriuchi	1.19	302	P	Pn	13 23 36.6	0.0
JSR				S	Sn	13 23 53.5	-0.5
JIW	Iwasaki	1.37	258	P	Pn	13 23 39.2	+0.5
JIW				eS	Sn	13 23 58.7	+1.1
JOMM	Oshimamatsumae	1.46	296	P	Pn	13 23 39.9	+0.1
JOM	Ohasama	1.47	194	P	Pn	13 23 39.9	0.0
JOM				S	Sn	13 23 59.5	-0.3
JEM	Erimo	1.53	43	P	Pn	13 23 41.0	+0.4
JEM				S	Sn	13 24 01.0	-0.1
JNBK	Urakawa-nobuka	1.57	28	P	Pn	13 23 41.5	+0.4
JNBK				S	Sn	13 24 03.8	+1.9
JEW	Eniwo	1.95	353	P	Pn	13 23 46.2	+0.3
JEW				S	Sn	13 24 09.9	-0.5
JMK	Ichinoseki	1.99	192	P	Pn	13 23 46.2	-0.2
JMK				S	Sn	13 24 10.6	-0.7
JOSM	Okushiri--Mats	2.08	305	P	Pn	13 23 47.0	-0.5
JOSM				eS	Sn	13 24 12.9	-0.5
JCH	Churui	2.09	34	P	Pn	13 23 48.0	+0.4
JCH				S	Sn	13 24 13.2	-0.4

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*IDC **10** 14:02:24.9±1.4, 12°.95N×59°.68W, h0^{km}, mb3.9/6, mb1 4.4/9, mb1mx3.9/46, mbtmp4.1/9, ML4.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/33, Error ellipse: s-maj=39.4km s-min=25.2km az=66.0*

*ISCJB **10** 14:02:32.7±0.5, 12°.91N±0°.03×60°.02W±0°.04, h71^{km}±4^{km}, mb4.2/11, Error ellipse: s-maj=7.3km s-min=4.3km az=8.3*

*TRN **10** 14:02:32.5, 12°.89N×60°.02W, h49^{km}, MD4.0*

*NEIC **10** 14:02:32.5±0.0, 12°.89N×60°.04W, h31^{km}, mb4.4/6, MD4.0(TRN), After TRN.*

ISC 10 14:02:32.3±0.9, **12°.86N**±0°.03×**59°.96W**±0°.05, **h57**^{km}±9^{km}, **n77**, σ**1^{s}.33**/96, **mb4.2**/11, **1C, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBGH	Gun Hill	0.48	54	ePn	Pn	14 02 45.1	+1.3
BBGH	Gun Hill	0.48	54⇑	eP	Pn	14 02 45.3	+1.5
BBSP	Saint Philip	0.54	64	eP	Pn	14 02 46.5	+2.0
MCLT	Moule a Chique	1.27	311	eP	Pn	14 02 54.2	+0.2
MCLT				eS	Sn	14 03 10.0	-0.1
MCLT	Moule a Chique	1.27	311	eP	Pn	14 02 54.2	+0.2
MCLT				eS	Sn	14 03 10.0	-0.1
SVB	Belmont	1.32	288	ePn	Pn	14 02 54.5	-0.1
SVB				eS	Sn	14 03 11.3	0.0
SVB	Belmont	1.32	288	eP	Pn	14 02 54.5	-0.1
SVB				eS	Sn	14 03 11.3	0.0
SLPA	Patience	1.36	317	ePn	Pn	14 02 56.5	+1.5
SLPA				eSg	Sn	14 03 13.3	+1.2
SLPA	Patience	1.36	317	eP	Pn	14 02 56.5	+1.5
SLPA				eS	Sn	14 03 13.3	+1.2
SLDE	Delcer	1.42	311	eP	Pn	14 02 57.2	+1.3
SLDE				eS	Sn	14 03 13.9	+0.3
SLB	Belfond	1.43	312	eP	Pn	14 02 57.7	+1.7
SLB	Belfond	1.43	312	eP	Pn	14 02 57.7	+1.7
SLW	Petit Monier	1.49	320	eP	Pn	14 02 58.2	+1.3
SLW				eS	Sn	14 03 16.3	+0.9
SLW	Petit Monier	1.49	320	eP	Pn	14 02 58.2	+1.3
SLW				eS	Sn	14 03 16.3	+0.9
SLBI	Saint Lucia, B	1.52	319	eP	Pn	14 02 57.2	0.0
SLBI				eS	Sn	14 03 15.4	-0.6
TOSP	Speyside	1.66	200	eP	Pn	14 03 00.4	+1.4
TOSP	Speyside	1.66	200	eP	Pn	14 03 00.4	+1.4
GRSS	Sisters	1.71	251	eP	Pn	14 03 01.1	+1.3
GRSS				eS	Sn	14 03 21.5	+0.9
GRHS	Sauteurs	1.76	249	eP	Pn	14 03 01.7	+1.2
GRHS				eS	Sn	14 03 22.6	+0.7
H05S1	Guadeloupe/Mar	1.77	331	Pn	Pn	14 03 00.5	-0.1
H05S1				Sn	Sn	14 03 20.1	-2.1
	SNR=5335						
MPOM	Morne Pois Mar	1.80	331	eP	Pn	14 03 01.2	+0.2
GRGR	Grenville	1.81	246	ePn	Pn	14 03 01.2	0.0
GRGR	Grenville	1.81	246	eP	Pn	14 03 01.8	+0.6
TRMF	Trois Ilets	1.97	328	eP	Pn	14 03 04.0	+0.6
ILAM	Ilet Lapin Mar	2.10	335	eP	Pn	14 03 05.6	+0.5
FDF	Fort de France	2.19	328	ePn	Pn	14 03 07.1	+0.7
FDF	Fort de France	2.19	328	eP	Pn	14 03 07.2	+0.8
GBMF	Grand Be	2.25	329	eP	Pn	14 03 08.0	+0.7
BAMF	Morne Balai	2.26	329	eP	Pn	14 03 08.1	+0.7
CXM	Morne La Croix	2.27	329	eP	Pn	14 03 07.7	+0.2
PCM	Pelee Case Pet	2.29	328	eP	Pn	14 03 09.0	+1.2
TRN	Trinidad (W)	2.62	213	eP	Pn	14 03 14.4	+2.2
TRN				eS	Sn	14 03 43.2	+0.4
DBCT	Belle View Cho	2.75	331	eP	Pn	14 03 14.8	+0.7
DBCT				eS	Sn	14 03 45.2	-0.9
DLPL	La Plaine	2.75	333	eP	Pn	14 03 14.8	+0.7
DLPL				eS	Sn	14 03 46.4	+0.1
DLPL	La Plaine	2.75	333	eP	Pn	14 03 14.8	+0.7
DLPL				eS	Sn	14 03 46.4	+0.1
MDN	Morne-Daniel	2.81	330	eSn	Sn	14 03 48.6	+1.1
MDN	Morne-Daniel	2.81	330	eS	Sn	14 03 48.6	+1.1
MAGL	Barre de l'ile	3.33	337	eP	Pn	14 03 22.4	+0.4
TDBA	Terre de Bas,	3.38	331	eP	Pn	14 03 24.6	+1.9
CBE	Ff, Capester	3.56	334	eP	Pn	14 03 26.5	+1.3
H05N1	Guadeloupe/Mar	3.59	343	Pn	Pn	14 03 24.9	-0.7
	SNR=295						
H05N1				Sn	Sn	14 04 04.7	-2.1
ABD	La Joyeuse, An	3.88	338	eP	Pn	14 03 30.3	+0.7
ANWB	Willy Bob	5.09	340	ePn	Pn	14 03 45.4	-0.7
SKI	Saint Kitts	5.19	329	ePn	Pn	14 03 49.0	+1.5
SKI				eS	Sn	14 04 45.4	-0.8
SKI	Saint Kitts	5.19	329	eP	Pn	14 03 49.4	+1.9
PCRV	Puerto La Cruz	5.31	240	Pn	Pn	14 03 50.5	+1.4
	6.6nm,0.3s,baz=72,slow=3.0,SNR=17						
PCRV				Sn	Sn	14 04 49.2	+0.2
	7.9nm,0.3s,baz=302,slow=20,SNR=9.8						
CDVI	St. Croix	6.72	317	ePn	Pn	14 04 08.4	0.0
STVI	Saint Thomas	7.28	319	ePn	Pn	14 04 16.1	+0.1
CUPR	Culebra, Puert	7.46	317	ePn	Pn	14 04 20.3	+1.8
MTP	Monte Pirata	7.49	315	ePn	Pn	14 04 20.2	+1.2
HUMP	Col San Antoni	7.73	313	ePn	Pn	14 04 23.4	+1.1
CBYP	Canovanas	7.82	314	ePn	Pn	14 04 25.2	+1.6
SJG	San Juan	7.93	312	Pn	Pn	14 04 25.4	+0.4
	13nm,0.3s,baz=124,slow=15,SNR=12						
SJG				Sn	Sn	14 05 48.0	-5.2
	2.1nm,0.3s,baz=308,slow=19,SNR=2.9						
SJG	San Juan	7.93	312	ePn	Pn	14 04 25.9	+0.9
OBIP	Obispado Ponce	8.22	310	ePn	Pn	14 04 30.7	+1.7
AOPR	Arecibo Observ	8.52	311	ePn	Pn	14 04 34.5	+1.4
MPR	Mayaguez	8.73	308	ePn	Pn	14 04 36.8	+0.8
AGP	Aguadilla	8.85	309	ePn	Pn	14 04 40.1	+2.5
MDP	Montagnes des	10.57	136	Pn	Pn	14 04 56.5	-4.6
	2.0nm,0.3s,baz=322,slow=18,SNR=11						
SDV	Santo Domingo	11.20	250	ePn	Pn	14 05 09.1	-0.9
PTGA	Pitinga	13.51	180	Pn	Pn	14 05 37.8	-3.4
	13nm,0.3s,baz=12,slow=17,SNR=46						
PTGA				Sn	Sn	14 07 57.7	-12
	3.1nm,0.3s,baz=359,slow=16,SNR=7.9						
PTGA	Pitinga	13.51	180	ePn	Pn	14 05 37.6	-3.6
ROSC	El Rosal	16.27	242	LR	LR	14 14 25.4	
	comp=Z,28nm,20.0s,baz=89,slow=44						
SWET	Sewanee	32.34	318	eP	P	14 08 56.1	-0.3
	30nm,1.7s						
W39A	Magazine	37.77	312	eP	P	14 09 42.2	-0.8
	7.5nm,1.1s						
TXAR	Lajitas Array	43.67	299	P	P	14 10 31.5	-0.4
	0.7nm,0.5s,baz=114,slow=7.9,SNR=4.1						
MNTX	Cornudas Mount	45.65	302	eP	P	14 10 47.8	+0.3
	3.3nm,0.6s						
ULM	Lac du Bonnet	47.42	329	P	P	14 11 00.7	-0.3
	3.6nm,0.4s,baz=135,slow=7.0,SNR=5.5						
BW06	Boulder Array	52.04	315	eP	P	14 11 36.9	+0.3
	3.3nm,1.2s						
PDAR	Pinedale Array	52.04	315	P	P	14 11 37.4	+0.7
	1.0nm,0.4s,baz=115,slow=9.1,SNR=13						
BGU	Big Grassy Mou	53.96	311	eP	P	14 11 51.6	+0.9
	2.2nm,0.6s						
NV01	Mina Array Sit	57.39	307	eP	P	14 12 16.9	+1.5
NVAR	Mina Array Bea	57.39	307	P	P	14 12 16.9	+1.5
	0.5nm,0.6s,baz=90,slow=7.2,SNR=5.0						
YKA	Yellowknife Ar	62.75	335	P	P	14 12 52.5	+1.2
	1.0nm,0.7s,baz=103,slow=7.4,SNR=3.9						
YKB5	Yellowknife Ar	62.75	335	eP	P	14 12 52.5	+1.2
ILAR	Eielson Array	77.16	334	P	P	14 14 21.1	+1.3
	0.3nm,0.6s,baz=106,slow=5.0,SNR=6.9						
ILB	Eielson Array	77.16	334	eP	P	14 14 20.7	+1.0
	9.1nm,1.8s						

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*ISCJB **10** 14:14:08.9±1.5, 20°.0S±0°.5×179°.0W±0°.3, h665^{km}, mb3.5/7, Error ellipse: s-maj=66.7km s-min=19.4km az=154.7*

*IDC **10** 14:14:09.3±5.6, 20°.04S×178°.81W, h657^{km}±67^{km}, mb3.0/7, mb1 3.4/7, mb1mx3.0/22, mbtmp4.0/7, Error ellipse: s-maj=55.7km s-min=24.6km az=149.0*

ISC 10 14:14:09.9±1.5, **20°.0S**±0°.4×**178°.9W**±0°.3, **h665**^{km}, **n9**, σ**1^{s}.16**/10, **mb3.5**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.84	256	P	P	14 21 20.9	+0.2
	0.8nm,0.7s,baz=96,slow=8.2,SNR=9.4						
ASAR				PcP	PcP	14 22 51.7	+0.2
	0.3nm,0.4s,baz=94,slow=3.8,SNR=5.2						
WRA	Warramunga Arr	43.86	262	P	P	14 21 21.0	+0.2
	0.6nm,0.3s,baz=95,slow=8.1,SNR=8.5						
PETK	Petropavlovsk-	75.61	346	P	P	14 24 49.4	+0.6
	4.7nm,1.0s,baz=116,slow=6.6,SNR=3.5						
NVAR	Mina Array Bea	81.24	44	P	P	14 25 18.6	-0.7
	0.6nm,0.8s,baz=229,slow=8.9,SNR=5.1						
TXAR	Lajitas Array	87.48	58	P	P	14 25 50.9	+1.3
	0.7nm,0.4s,baz=161,slow=8.0,SNR=5.6						
ILAR	Eielson Array	88.03	13	P	P	14 25 51.0	-0.3
	0.5nm,0.4s,baz=217,slow=5.3,SNR=7.3						
PDAR	Pinedale Array	89.17	44	P	P	14 25 57.0	-0.3
	0.5nm,0.6s,baz=207,slow=1.7,SNR=5.0						
AKASG	Malin Array Be	142.20	331	PKP	PKPdf	14 32 25.9	-2.5
	1.3nm,0.4s,baz=43,slow=4.4,SNR=7.0						
BRTR	Keskin Array B	145.92	312	PKPbc	PKPbc	14 32 38.0	+0.4
	0.5nm,0.5s,baz=104,slow=2.0,SNR=3.0						

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*IDC **10** 14:25:38.1±0.7, 30°.32S×177°.39W, h0^{km}, mb5.1/15, mb1 5.1/17, mb1mx5.0/35, mbtmp5.0/17, ML4.4/2, MS5.0/12, Ms1 5.0/12, ms1mx4.6/33, Error ellipse: s-maj=27.6km s-min=17.8km az=125.0*

*BJI **10** 14:25:38.6±0.0, 30°.04S×177°.44W, h10^{km}, mb5.3/40, mB5.7/36, Ms5.2/33, Ms7 5.0/30*

*MOS **10** 14:25:39.9±0.8, 30°.15S×177°.42W, h16^{km}, mb5.6/33, Error ellipse: s-maj=12.0km s-min=9.4km az=78.9*

*NEIC **10** 14:25:39.8±1.4, 30°.15S×177°.47W, h10^{km}±2^{km}, mb5.3/142, Error ellipse: s-maj=15.4km s-min=9.4km az=90.0*

*ISCJB **10** 14:25:41.6±0.1, 30°.47S±0°.02×177°.55W±0°.04, h33^{km}, mb5.3/152, MS5.0/26, Error ellipse: s-maj=5.0km s-min=2.3km az=31.6*

*GCMT **10** 14:25:45.8±0.2, 30°.15S±0°.01×177°.19W±0°.01, h28^{km}, MW5.5/98, Moment Tensor Solution. s90,c153; s98,c171; Duration: 1^{s}.3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.65±.04; $M_{\theta\theta}$-0.21±.03; $M_{\phi\phi}$-1.44±.03; $M_{r\theta}$0.37±.06; $M_{\theta\phi}$-0.45±.02; $M_{\phi r}$1.21±.05; Best double couple: $M_0$2.05400×10^{17} NP1:ϕ_s17.00000°, δ64.00000°, λ89.00000°. NP2:ϕ_s199.00000°, δ26.00000°, λ91.00000°. Principal axes: T 2.0860, Plg71.0000°, Azm286.0000°; N -0.0600, Plg0.0000°, Azm18.0000°; P -2.0230, Plg19.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:25:42.9±0.3, **30°.30S**±0°.04×**177°.29W**±0°.05, **h33**^{km}, **n709**, σ**1^{s}.82**/695, **mb5.4**/149, **MS5.0**/27, **37C-23D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.17	332	P	Pn	14 26 00.9	-2.0
GLKZ				S	Sn	14 26 14.1	-3.6
RAO	Raoul Island	1.17	332	ePn	Pn	14 26 00.0	-3.0
RAO	Raoul Island	1.17	332	eP	Pn	14 26 00.0	-3.0
RIZ	Raoul Island	1.18	332	P	Pn	14 26 00.9	-2.3
RIZ				S	Sn	14 26 14.7	-3.4
MXZ	Matakaoa Point	8.12	206	ePn	Pn	14 27 36.0	-2.4
MXZ	Matakaoa Point	8.12	206	P	Pn	14 27 36.8	-1.6
MXZ	Matakaoa Point	8.12	206	P	Pn	14 27 34.4	-4.1
WMGZ	Waiomatatini S	8.31	204	P	Pn	14 27 39.3	-1.7
WMGZ	Waiomatatini S	8.31	204	P	Pn	14 27 36.9	-4.1
WMGZ				S	Sn	14 29 12.1	-1.5
HAZ	Te Kaha	8.49	207	P	Pn	14 27 41.4	-2.1
HAZ	Te Kaha	8.49	207	P	Pn	14 27 39.8	-3.7
GRZ	Great Barrier	8.49	224	P	Pn	14 27 47.6	+4.0
PKGZ	Pakihiroa	8.49	206	P	Pn	14 27 41.4	-2.2
PKGZ	Pakihiroa	8.49	206	P	Pn	14 27 40.0	-3.6
PUZ	Puketiti	8.59	204	P	Pn	14 27 41.1	-3.8
PUZ	Puketiti	8.59	204	P	Pn	14 27 40.4	-4.5
KUZ	Kuaotunu	8.68	220	P	Pn	14 27 45.0	-1.1
RUGZ	Raukumara Rang	8.71	207	P	Pn	14 27 44.3	-2.4
RUGZ	Raukumara Rang	8.71	207	P	Pn	14 27 43.0	-3.7
TWGZ	Tauwhareparae	8.78	205	P	Pn	14 27 44.9	-2.7
TWGZ	Tauwhareparae	8.78	205	P	Pn	14 27 43.6	-4.0
CNGZ	Carnagh Statio	8.97	203	P	Pn	14 27 46.5	-3.7
CNGZ	Carnagh Statio	8.97	203	P	Pn	14 27 46.0	-4.2
WCZ	Waipu Caves	8.99	229	P	Pn	14 27 57.9	+7.5
WIAZ	Waiheke Island	9.05	222	P	Pn	14 27 59.0	+7.8
TKGZ	Te Karaka	9.06	205	P	Pn	14 27 48.1	-3.3
TKGZ	Te Karaka	9.06	205	P	Pn	14 27 47.7	-3.6
MWZ	Matawai	9.09	207	P	Pn	14 27 49.2	-2.6
MWZ	Matawai	9.09	207	P	Pn	14 27 49.0	-2.8
OPRZ	Ohinepanea	9.09	212	P	Pn	14 27 52.5	+0.7
OPRZ	Ohinepanea	9.09	212	P	Pn	14 27 49.9	-1.9
OPRZ				S	Sn	14 29 34.9	+1.9
OUZ	Omahuta	9.11	235	eP	Pn	14 27 57.9	+5.9
OUZ	Omahuta	9.11	235	P	Pn	14 27 57.7	+5.7
MARZ	Manawahe	9.15	211	P	Pn	14 27 50.6	-2.1
MBAZ	Motutapu North	9.17	223	P	Pn	14 27 58.3	+5.4
URZ	Urewera	9.19	209	Pn	Pn	14 27 49.1	-4.0
	1.2nm,0.3s,baz=260,slow=4.6,SNR=18						
URZ				Sn	Sn	14 29 32.5	-2.9
	16nm,0.3s,baz=59,slow=20,SNR=8.7						
URZ	Urewera	9.19	209	ePn	Pn	14 27 49.3	-3.8
URZ	Urewera	9.19	209	P	Pn	14 27 49.7	-3.4
URZ	Urewera	9.19	209	P	Pn	14 27 49.5	-3.7
MKAZ	Moumakai	9.25	221	P	Pn	14 27 57.1	+3.2
RAGZ	Rawiri	9.27	207	P	Pn	14 27 52.3	-2.0
RAGZ	Rawiri	9.27	207	P	Pn	14 27 49.8	-4.5
RIGZ	Rimuhau	9.33	205	P	Pn	14 27 52.0	-3.0
PRGZ	Paritu Road	9.48	203	P	Pn	14 27 54.3	-2.8
PRGZ	Paritu Road	9.48	203	P	Pn	14 27 52.0	-5.2
MUGZ	Murupara	9.52	209	P	Pn	14 27 53.6	-4.1
TOZ	Tahuroa Road	9.52	217	P	Pn	14 28 02.8	+5.1
TOZ	Tahuroa Road	9.52	217	P	Pn	14 27 58.9	+1.2
RTZ	Ruatahuna	9.55	208	P	Pn	14 27 55.9	-2.2
RTZ	Ruatahuna	9.55	208	P	Pn	14 27 54.3	-3.8
SNGZ	Shannon Statio	9.55	206	P	Pn	14 27 57.3	-0.9
SNGZ	Shannon Statio	9.55	206	P	Pn	14 27 53.5	-4.6
KNZ	Kokohu	9.64	204	P	Pn	14 27 54.2	-5.1
MHGZ	Mahia Peninsul	9.68	203	P	Pn	14 27 56.7	-3.1
MHGZ	Mahia Peninsul	9.68	203	P	Pn	14 27 54.9	-4.9
RAHZ	Arahi	9.77	207	P	Pn	14 27 59.9	-1.2
RAHZ	Arahi	9.77	207	P	Pn	14 27 58.4	-2.7
MTHZ	Maungataniwha	9.81	208	P	Pn	14 27 58.3	-3.3
TLZ	Tolley Road	9.96	215	P	Pn	14 28 05.5	+1.7
MRHZ	Matea Rd	9.97	210	P	Pn	14 27 59.8	-4.1
NMHZ	Naumai	10.03	207	P	Pn	14 28 04.8	+0.1
BKZ	Black Stump Fm	10.22	208	ePn	Pn	14 28 02.5	-4.8
BKZ	Black Stump Fm	10.22	208	P	Pn	14 28 04.0	-3.3
BKZ	Black Stump Fm	10.22	208	P	Pn	14 28 01.7	-5.5
HIZ	Hauiti	10.45	216	ePn	Pn	14 28 10.7	+0.3
HIZ	Hauiti	10.45	216	P	Pn	14 28 14.4	+4.1
HIZ	Hauiti	10.45	216	P	Pn	14 28 10.9	+0.5
OTVZ	Oturere	10.57	211	P	Pn	14 28 09.6	-2.6
BHHZ	Black Hill Sta	10.67	209	P	Pn	14 28 14.1	+0.7
ANWZ	Angora Road	11.34	205	P	Pn	14 28 21.2	-1.4
MRZ	Mangatainoka R	11.86	207	P	Pn	14 28 23.1	-6.5
HOWZ	Holdsworth Sta	12.08	207	P	Pn	14 28 25.7	-7.1
MTW	Mount Morrison	12.31	206	P	Pn	14 28 29.6	-6.2
TRWZ	Traveller	12.45	205	P	Pn	14 28 34.4	-3.4
PAWZ	Paruwai Farm	12.53	206	P	Pn	14 28 27.6	-11
MSWZ	Moikau Station	12.63	207	P	Pn	14 28 33.7	-6.5
DUWZ	D'Urville Isla	12.68	212	P	Pn	14 28 41.4	+0.4
SNZO	South Karori	12.76	208	ePn	Pn	14 28 40.7	-1.2
PLWZ	Palliser	12.76	206	P	Pn	14 28 37.7	-4.3
BHW	Baring Head	12.77	208	P	Pn	14 28 39.8	-2.3
NIUE	Niue	13.02	33	ePn	Pn	14 28 38.2	-7.3
NIUE	Niue	13.02	33	P	Pn	14 28 38.7	-6.9
	baz=13,SNR=5.7						
TUWZ	Tuamarina	13.18	210	P	Pn	14 28 42.5	-5.2
CTZ	Chatham Island	13.43	178	P	Pn	14 28 45.3	-5.7
BSWZ	Blackbirch Sta	13.44	210	P	Pn	14 28 55.3	+4.0
BSWZ	Blackbirch Sta	13.44	210	P	Pn	14 28 42.4	-8.9
THZ	Tophouse	13.91	212	ePn	Pn	14 28 54.2	-3.5
THZ	Tophouse	13.91	212	P	Pn	14 28 54.4	-3.4
KHZ	Kahutara	14.16	209	ePn	Pn	14 28 54.9	-6.2
KHZ	Kahutara	14.16	209	P	Pn	14 28 58.0	-3.1
DSZ	Denniston Nort	14.42	215	P	P	14 29 10.2	-1.0
GVZ	Greta Valley S	14.83	209	P	Pn	14 29 07.4	-2.7
LTZ	Lake Taylor	15.01	211	ePn	Pn	14 29 07.6	-4.9
	236nm,1.9s						
LTZ	Lake Taylor	15.01	211	P	Pn	14 29 10.3	-2.2
AMCZ	Amberley	15.16	209	P	Pn	14 29 14.5	0.0
INZ	Inchbonnie	15.34	213	P	Pn	14 29 16.6	-0.3
OKCZ	Okains Bay	15.44	207	P	Pn	14 29 13.6	-4.7
CRLZ	Canterbury Las	15.50	208	ePn	Pn	14 29 11.6	-7.4
	61nm,0.6s						
CRLZ	Canterbury Las	15.50	208	P	Pn	14 29 17.9	-1.0
OXZ	Oxford	15.54	210	ePn	Pn	14 29 12.2	-7.4
	127nm,0.5s						
OXZ	Oxford	15.54	210	P	Pn	14 29 14.4	-5.2
MQZ	McQueen's Vall	15.59	208	ePn	Pn	14 29 12.1	-8.0
	184nm,1.8s						
MQZ	McQueen's Vall	15.59	208	P	Pn	14 29 16.8	-3.4
AKCZ	Akaroa Harbour	15.63	207	P	P	14 29 27.0	+2.6
WVZ	Waitaha Valley	15.94	214	P	Pn	14 29 21.8	-2.9
RPZ	Rata Peaks	16.29	211	Pn	Pn	14 29 28.1	-1.0
	5.4nm,0.3s,baz=45,slow=3.7,SNR=18						
RPZ				Sn	Sn	14 32 14.1	-15
	3.4nm,0.3s,baz=50,slow=20,SNR=6.6						
RPZ	Rata Peaks	16.29	211	ePn	Pn	14 29 24.1	-5.0
	59nm,0.7s						
RPZ	Rata Peaks	16.29	211	P	Pn	14 29 28.4	-0.7
ONTNC	Ouen Toro	16.59	295	eP	Pn	14 29 32.9	-0.2
	360nm,1.3s						
DZM	Mont Dzumac	16.73	295	eP	P	14 29 39.6	+2.7
	670nm,1.6s						
DZM				eLR	LR	14 33 33.5	
	comp=Z,12μm,23.7s						
DZM	Mont Dzumac	16.73	295	Pn	P	14 29 38.0	+1.1
	0.8nm,0.3s,baz=123,slow=11,SNR=21						
DZM				LR	LR	14 34 47.7	
	comp=Z,9μm,19.6s,baz=130,slow=33						
DZM	Mont Dzumac	16.73	295	eP	P	14 29 37.4	+0.5
	488nm,1.5s						
FOZ	Fox Glacier	16.73	214	ePn	Pn	14 29 28.2	-6.5
	95nm,1.4s						
LBZ	Lake Benmore	17.20	212	eP	Pn	14 29 35.2	-5.4
	49nm,1.2s						
ODZ	Otahua Downs	17.52	209	ePn	Pn	14 29 40.3	-4.2
	63nm,0.9s						
WKZ	Wanaka	18.08	213	eP	Pn	14 29 45.5	-5.9
	178nm,1.9s						
RAR	Rarotonga	18.17	64	P	Pn	14 29 48.9	-3.8
	3.2nm,0.3s,baz=295,slow=9.2,SNR=12						
RAR				S	Sn	14 32 54.3	-20
	1.8nm,0.3s,baz=61,slow=19,SNR=4.3						
RAR				LR	LR	14 35 07.2	
	comp=Z,2μm,20.8s,baz=272,slow=31						
RAR	Rarotonga	18.17	64	eP	Pn	14 29 48.8	-3.8
	386nm,1.8s						
RAR	Rarotonga	18.17	64	P	P	14 29 55.2	+2.5
MLZ	Mavora Lakes	18.91	213	eP	P	14 29 56.7	-4.0
	28nm,0.7s						
WHZ	Wether Hill Ro	19.38	212	eP	P	14 30 02.0	-3.8
	24nm,0.7s						
LHI	Lord Howe Isla	20.32	261	ePn	P	14 30 16.9	+0.7
	267nm,1.0s						
LHI	Lord Howe Isla	20.32	261	P	Pn	14 30 18.4	0.0
	baz=21,SNR=6.6						
TBI	Tubuai	25.74	81	eS	S	14 35 36.5	-0.9
	1μm,29.8s						
TBI				eLQ	LQ	14 36 13.0	
	4μm,26.2s						
TBI				eLR	LR	14 37 37.9	
	comp=Z,6μm,27.5s,baz=246						
TBI	Tubuai	25.74	81	eT	T	14 57 34.3	
	52nm,0.4s						
ARMA	Armidale	26.78	262	eP	P	14 31 18.9	-1.1
	186nm,1.9s						
ARMA	Armidale	26.78	262	P	P	14 31 21.9	+1.9
	baz=28,SNR=14						
MGCD	Mangrove Creek	26.97	256	P	P	14 31 23.8	+2.2
	baz=28,SNR=7.5						
PAE	Paea	28.19	70	eT	T	15 00 37.7	
	17nm,0.3s						
PPT2	Papeete2	28.23	70	eS	S	14 36 15.3	-1.6
	633nm,25.0s						
PPT2				eLQ	LQ	14 37 07.8	
	4μm,25.0s						
PPT2				eLR	LR	14 38 42.6	
	comp=Z,6μm,26.5s,baz=234						
PPT2	Papeete2	28.23	70	eT	T	15 00 41.6	
	13nm,0.3s						
PPT	Papeete	28.24	70	LR	LR	14 39 48.2	
	comp=Z,2μm,21.5s,baz=246,slow=30						
EIDS	Eidsvold	28.34	272	eP	P	14 31 33.5	-0.4
	50nm,1.3s						
EIDS	Eidsvold	28.34	272	P	P	14 31 35.8	+1.9
	baz=29,SNR=4.3						
CNB	Canberra Magne	28.39	251	P	P	14 31 37.3	+3.0
	baz=29,SNR=6.6						
TVO	Taravao	28.39	70	eT	T	15 00 53.5	
	3.0nm,0.3s						
MILA	Mila	28.62	247	P	P	14 31 38.7	+2.3
	baz=29,SNR=8.6						

CAN	Canberra	28.69	251	*e*P	P	14 31 38.4	+1.4
	47nm,1.0s						
CAN	Canberra	28.69	251	*e*P	P	14 31 38.4	+1.4
CAN				pmax	pmax		
	comp=Z,47nm,1.0s						
YNG	Young	29.19	253	P	P	14 31 44.3	+2.9
	baz=30,SNR=5.7						
MEH	Mehetia	29.31	72	*e*T	T	15 02 02.4	
	comp=Z,17nm,0.3s						
HNR	Honiara	29.70	310	LR	LR	14 42 35.2	
	comp=Z,2µm,18.3s,baz=214,slow=34						
RMQ	Roma	30.04	269	P	P	14 31 51.6	+2.6
	baz=31,SNR=21						
PMOR	Pomariorio Ree	30.99	67	*e*T	T	15 04 08.4	
	comp=Z,5.9nm,0.4s						
VAH	Vaihoa	31.07	68	*e*T	T	15 04 15.1	
	comp=Z,48nm,0.3s						
TOO	Toolangi	31.57	247	*e*P	P	14 32 02.5	+0.1
	comp=Z,138nm,1.5s						
TOO	Toolangi	31.57	247	P	P	14 32 04.6	+2.2
	baz=32,SNR=18						
TOO	Toolangi	31.57	247	*e*P	P	14 32 02.5	+0.1
TOO				pmax	pmax		
	comp=Z,139nm,1.5s						
CMSA	Cobar Meteorol	31.69	258	P	P	14 32 05.2	+1.7
	baz=32,SNR=13						
CTA	Charters Tower	34.39	279	LR	LR	14 45 14.5	
	comp=Z,5µm,18.4s,baz=130,slow=34						
CTA	Charters Tower	34.39	279	P	P	14 32 28.4	+1.2
CTA				pmax	pmax		
	comp=Z,111nm,0.9s						
CTAO	Charters Tower	34.39	279	*e*P	P	14 32 26.9	-0.3
	comp=Z,125nm,1.1s						
CTAO	Charters Tower	34.39	279	*e*P	P	14 32 26.9	-0.3
CTAO				pmax	pmax		
	comp=Z,125nm,1.1s						
ARPS	Mount Arapiles	34.48	248	P	P	14 32 29.5	+1.8
	baz=35,SNR=10						
STKA	Stephens Creek	35.10	257	P	P	14 32 34.0	+0.8
	comp=Z,22nm,0.5s,baz=102,slow=11,SNR=110						
STKA				LR	LR	14 45 58.8	
	comp=Z,4µm,18.2s,baz=98,slow=35						
STKA	Stephens Creek	35.10	257	*e*P	P	14 32 33.6	+0.4
	comp=Z,34nm,1.4s						
STKA	Stephens Creek	35.10	257	P	P	14 32 34.3	+1.1
	baz=36,SNR=19						
STKA	Stephens Creek	35.10	257	*e*P	P	14 32 33.6	+0.4
STKA				pmax	pmax		
	comp=Z,34nm,1.4s						
MTSU	Mount Surprise	36.88	280	P	P	14 32 50.7	+2.1
	baz=38,SNR=11						
HTT	Hallett	37.12	254	P	P	14 32 51.6	+1.1
	baz=38,SNR=47						
RKT	Rikitea	38.30	90	*e*LR	LR	14 43 21.5	
	comp=Z,4µm,28.8s						
PMG	Port Moresby	39.12	295	LR	LR	14 46 18.3	
	comp=Z,2µm,21.2s,baz=135,slow=32						
BBOO	Buckleboo	39.59	254	*e*P	P	14 33 11.0	-0.2
	comp=Z,58nm,0.9s						
BBOO	Buckleboo	39.59	254	P	P	14 33 11.4	+0.1
	baz=40,SNR=9.4						
COEN	Coen	39.83	285	*e*P	P	14 33 13.6	+0.2
	comp=Z,84nm,1.4s						
COEN	Coen	39.83	285	P	P	14 33 14.8	+1.3
	baz=41,SNR=4.8						
QIS	Mount Isa	39.92	274	P	P	14 33 15.4	+1.3
	baz=41,SNR=8.4						
MANU	Manus Island	43.71	303	*e*P	P	14 33 43.8	-1.4
	comp=Z,97nm,1.4s						
AS31	Alice Springs	43.73	267	*e*P	P	14 33 44.2	-1.0
	comp=Z,8.8nm,0.6s						
AS31				*e*PcP	PcP	14 35 31.6	-0.3
AS31				*e*ScP	ScP	14 39 23.4	+2.3
ASAR	Alice Springs	43.73	267	P	P	14 33 44.2	-1.0
	comp=Z,12nm,0.4s,baz=104,slow=7.4,SNR=93						
ASAR				PcP	PcP	14 35 31.6	-0.3
	comp=Z,5.5nm,0.6s,baz=121,slow=3.9,SNR=4.4						
ASAR				ScP	ScP	14 39 23.4	+2.3
	comp=Z,1.3nm,0.8s,baz=109,slow=4.4,SNR=4.2						
WB2	Warramunga Arr	44.70	272	*e*P	P	14 33 51.5	-1.6
	comp=Z,59nm,0.8s						
WRAB	Tennant Creek	44.70	272	*e*P	P	14 33 51.8	-1.3
	comp=Z,266nm,1.7s						
WRAB	Tennant Creek	44.70	272	*c i*P	P	14 33 52.3	-0.8
WRAB				pmax	pmax		
	comp=Z,29nm,0.9s						
WR1	Warramunga Arr	44.70	272	*e*P	P	14 33 52.3	-0.8
WR1				*e*ScP	ScP	14 39 29.6	+4.6
WRA	Warramunga Arr	44.70	272	P	P	14 33 52.3	-0.8
	comp=Z,26nm,0.4s,baz=104,slow=7.5,SNR=131						
WRA				ScP	ScP	14 39 29.6	+4.6
	comp=Z,1.9nm,0.8s,baz=126,slow=4.3,SNR=2.7						
FORT	Forrest	46.66	255	*e*P	P	14 34 06.9	-1.5
	comp=Z,41nm,0.8s						
FORT	Forrest	46.66	255	P	P	14 34 07.1	-1.4
	baz=47,SNR=17						
WRKA	Warakurna	48.10	262	P	P	14 34 18.5	-1.3
	baz=49,SNR=48						
SBA	Scott Base	48.19	184	*e*P	P	14 34 23.6	+4.0
	comp=Z,56nm,1.2s						
SBA	Scott Base	48.19	184	*e*P	P	14 34 23.6	+4.0
SBA				pmax	pmax		
	comp=Z,56nm,1.2s						
VNDA	Vanda	48.26	186	*e*P	P	14 34 23.6	+3.4
	comp=Z,31nm,1.5s						
VNDA	Vanda	48.26	186	*e*P	P	14 34 23.6	+3.4
VNDA				pmax	pmax		
	comp=Z,31nm,1.5s						
JAY	Jayapura	48.40	297	LR	LR	14 52 11.0	
	comp=Z,1µm,21.8s,baz=172,slow=33						
KDU	Kakadu	49.50	279	P	P	14 34 29.7	-0.9
	baz=50,SNR=3.4						
MTN	Manton Dam	50.57	278	*e*P	P	14 34 37.4	-1.3
	comp=Z,176nm,1.9s						
MTN	Manton Dam	50.57	278	P	P	14 34 37.8	-0.9
	baz=51,SNR=3.4						
KNRA	Kununurra	51.31	274	P	P	14 34 44.3	+0.1
	baz=52,SNR=5.3						
KMBL	Kambalda	51.64	252	P	P	14 34 45.6	-0.9
	baz=52,SNR=8.9						
NWAO	Narrogin (SRO)	55.01	249	LR	LR	14 57 36.9	
	comp=Z,1µm,19.3s,baz=96,slow=35						
CASY	Casey	55.52	208	*e*P	P	14 35 15.2	+0.8
	comp=Z,65nm,0.8s						
MEEK	Meekatharra	55.80	257	P	P	14 35 15.8	-1.4
	baz=57,SNR=5.0						
MUN	Mundaring	56.11	250	P	P	14 35 18.0	-1.2
	baz=57,SNR=3.2						
PSA00	Pilbara Seismi	56.59	263	*e*P	P	14 35 20.9	-1.9
	comp=Z,114nm,1.8s						
GUMO	Guam	56.84	315	LR	LR	14 56 47.3	
	comp=Z,901nm,19.3s,baz=134,slow=33						
SIJI	Sorong	56.87	291	LR	LR	14 58 16.9	
	comp=Z,831nm,21.4s,baz=132,slow=34						
MORW	Morawa	57.15	253	*e*P	P	14 35 25.0	-1.7
	comp=Z,136nm,1.9s						
MORW	Morawa	57.15	253	P	P	14 35 25.4	-1.3
	baz=58,SNR=7.5						
BATI	Baumata	58.24	277	LR	LR	14 58 51.6	
	comp=Z,3µm,21.9s,baz=152,slow=34						
QSPA	South Pole Qui	59.81	180	*e*P	P	14 35 47.4	+2.6
	comp=Z,88nm,0.9s						
SANI	Sanana	60.52	286	P	P	14 35 49.0	-1.2
EDFI	Ende, Flores	60.65	277	P	P	14 35 50.0	-1.2
TNTI	Ternate	60.98	290	*e*P	P	14 35 50.6	-2.7
	comp=Z,34nm,1.0s						
LUWI	Luwuk	63.75	285	*e*P	P	14 36 09.6	-2.3
	comp=Z,42nm,0.8s						
PLAI	Plampang	63.98	275	P	P	14 36 11.7	-1.7
KCP	Kidapawan	66.49	294	⇑*i*P	P	14 36 27.4	-2.3
MAW	Mawson	72.62	200	P	P	14 37 06.6	0.0
	comp=Z,12nm,0.7s,baz=132,slow=8.2,SNR=28						
MAW	Mawson	72.62	200	*e*P	P	14 37 08.4	+1.8
	comp=Z,27nm,1.6s						
MAW	Mawson	72.62	200	*e*P	P	14 37 08.4	+1.8
MAW				pmax	pmax		
	comp=Z,27nm,1.6s						
KKM	Kota Kinabalu	73.11	288	*e*P	P	14 37 09.2	-1.3
	comp=Z,165nm,1.8s						
SBUM	Sibu	74.50	282	*e*P	P	14 37 17.8	-0.8
	comp=Z,34nm,1.6s						
KSM	Kuching	75.60	280	*e*P	P	14 37 22.8	-2.1
	comp=Z,48nm,1.4s						
SYO	Syowa Base	77.35	193	⇓*e*P	P	14 37 33.4	-0.5
SYO	Syowa Base	77.35	193	⇑*e*pP	P	14 37 37.0	+3.1
SYO	Syowa Base	77.35	193	⇑*i*sP	sP	14 37 40.4	-5.7
INU	Inuyama	78.18	323	*e*P	P	14 37 37.4	-1.6

	comp=Z,22nm,1.0s						
SNAA	Sanae	78.24	178	P	P	14 37 40.6	+1.6
SNAA	Sanae	78.24	178	*e*P	P	14 37 40.4	+1.4
	comp=Z,18nm,0.9s						
SNAA	Sanae	78.24	178	⇓*e*P	P	14 37 40.6	+1.6
VNA3	Neumayer Olymp	78.37	176	P	P	14 37 40.8	+1.2
MJAR	Matsushiro Arr	78.51	325	P	P	14 37 39.9	-0.9
	comp=Z,9.4nm,0.9s,baz=163,slow=5.2,SNR=14						
MAJO	Matsushiro	78.51	325	*e*P	P	14 37 40.2	-0.5
	comp=Z,86nm,1.7s						
MAJO	Matsushiro	78.51	325	*e*P	P	14 37 40.3	-0.5
MAJO				pmax	pmax		
	comp=Z,86nm,1.7s						
MAT	Matsushiro	78.51	325	P	P	14 37 39.9	-0.8
MAT				S	S	14 47 35.8	+1.1
MJB9	Matsu-Tunnel	78.51	325	*e*P	P	14 37 40.2	-0.5
	comp=Z,88nm,1.7s						
VNA2	Neumayer--Watz	78.81	177	P	P	14 37 43.9	+1.9
VNA1	Neumayer--Stat	79.03	176	P	P	14 37 45.2	+2.0
JNU	Nakatsue	79.89	318	*e*P	P	14 37 47.6	-0.8
	comp=Z,65nm,1.6s						
TPUB	Ta-pu	79.92	304	*e*P	P	14 37 46.5	-2.3
	comp=Z,18nm,0.8s						
SSLB	Suanglung	80.00	305	*e*P	P	14 37 46.0	-3.2
	comp=Z,8.3nm,0.8s						
ERM	Erimo	80.66	331	*e*P	P	14 37 53.2	+1.0
	comp=Z,60nm,1.2s						
ERM	Erimo	80.66	331	*ce*P	P	14 37 54.2	+2.0
ERM				pmax	pmax		
	comp=Z,43nm,1.2s						
KUR	Kuril'sk	81.58	336	*c i*P	P	14 37 57.6	+0.6
KUR				*i* PPP	PPP	14 42 51.4	
KUR				*e*S	S	14 48 11.7	+5.1
KUR				pmax	pmax		
	comp=Z,138nm,1.6s						
KUR				pmax	pmax		
	comp=Z,500nm,5.1s						
KUR				MLR	MLR		
	comp=N,500nm,17.0s						
KUR				MLR	MLR		
	comp=Z,600nm,17.0s						
ADK	Adak	81.83	0	*e*P	P	14 37 58.3	+0.1
	comp=Z,276nm,1.7s						
ADK	Adak	81.83	0	*e*P	P	14 37 58.3	+0.1
ADK				pmax	pmax		
	comp=Z,276nm,1.7s						
ATKA	Atka Island	82.19	2	*e*P	P	14 38 00.4	+0.4
	comp=Z,322nm,1.8s						
QZH	Quanzhou	82.40	305	⇑*i*P	P	14 38 01.3	-0.6
QZH				S	S	14 48 18.6	+2.7
QZH				pmax	pmax		
	comp=Z,290nm,10.2s						
ASAJ	Asahikawa	82.63	332	P	P	14 38 03.2	+0.6
	comp=Z,60nm,1.2s,baz=224,slow=13,SNR=16						
DLV	T Lat	82.71	288	*e*P	P	14 38 01.7	-2.3
	comp=Z,28nm,0.8s						
SMY	Shemya	83.01	355	*e*P	P	14 38 04.2	-0.1
	comp=Z,214nm,1.3s						
SMY	Shemya	83.01	355	*e*P	P	14 38 04.2	-0.1
SMY				pmax	pmax		
	comp=Z,214nm,1.3s						
NIKH	Nikolski High	83.24	5	*e*P	P	14 38 05.5	-0.1
	comp=Z,60nm,0.7s						
TJN	Taejon	84.23	318	*d i*P	P	14 38 09.8	-1.2
UNV	Unalaska Valle	84.31	6	*e*P	P	14 38 10.7	-0.3
	comp=Z,50nm,1.6s						
KSRS	Korea Array	84.67	319	P	P	14 38 13.9	+0.8
	comp=Z,45nm,1.5s,baz=137,slow=5.4,SNR=11						
PAGB	Antelope Grade	84.78	43	*e*P	P	14 38 13.7	-0.2
	comp=Z,102nm,1.9s						
YSS	Yuzh-Sakhalins	84.92	334	*e*P	P	14 38 14.5	+0.3
	comp=Z,118nm,1.0s						
YSS	Yuzh-Sakhalins	84.92	334	*e*P	P	14 38 14.9	+0.7
YSS				*e**SP	pP	14 38 23.2	-0.1
YSS				*e*S	S	14 48 45.2	+4.8
YSS				*e*PS	PnS	14 49 42.9	+4.1
YSS				pmax	pmax		
	comp=Z,400nm,2.0s						
YSS				pmax	pmax		
	comp=N,30nm,0.8s						
YSS				pmax	pmax		
	comp=E,40nm,0.8s						
YSS				pmax	pmax		
	comp=Z,110nm,0.8s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
IPM	Ipoh	85.08	278	*e*P	P	14 38 14.0	-1.9
	comp=N,11nm,0.7s						
MURC	Murrieta	85.22	47	P	P	14 38 17.6	+1.4
	baz=229						
MONP2	Monument Peak	85.24	48	P	P	14 38 17.6	+1.1
	baz=229						
IKP	In-Ko-Pah, Jac	85.28	48	P	P	14 38 18.5	+1.9
	baz=230						
BFSC	Mount Baldy Ra	85.35	46	P	P	14 38 19.6	+2.7
	baz=229						
QIZ	Qiongzhong	85.50	295	P	P	14 38 15.4	-2.5
QIZ				S	S	14 48 48.8	+1.4
QIZ				SS	SS	14 54 21.5	-2.3
QIZ				pmax	pmax		
	comp=N,260nm,11.4s						
QIZ				LR	LR		
	comp=N,480nm,13.7s						
QIZ				LR	LR		
	comp=N,950nm,16.7s						
QIZ				LR	LR		
	comp=N,550nm,32.4s						
EDW2	Edwards Air Fo	85.57	45	P	P	14 38 19.6	+1.7
	baz=228						
PET	Petropavlovsk	85.58	346	*e*P	P	14 38 17.2	-0.1
	comp=N,73nm,1.4s						
PET	Petropavlovsk	85.58	346	*e*P	P	14 38 17.2	-0.1
PET				pmax	pmax		
	comp=Z,73nm,1.4s						
SWSC	Sam W. Stewart	85.67	48	P	P	14 38 21.2	+2.8
	baz=230						
PFO	Pinyon Flats O	85.69	47	*e*P	P	14 38 19.6	+1.0
	comp=Z,8.2nm,1.0s						
PFO	Pinyon Flats O	85.69	47	*e*P	P	14 38 19.6	+1.0
PFO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PFO	Pinyon Flats O	85.69	47	P	P	14 38 21.0	+2.4
	baz=229						
ISA	Isabella, Lake	85.80	44	*e*P	P	14 38 20.4	+1.4
	comp=Z,80nm,1.7s						
ISA	Isabella, Lake	85.80	44	*e*P	P	14 38 20.5	+1.4
ISA				pmax	pmax		
	comp=Z,80nm,1.7s						
ISA	Isabella, Lake	85.80	44	P	P	14 38 21.3	+2.2
	baz=228						
PEA0B	Petropavlovsk-	85.87	345	*e*P	P	14 38 19.2	+0.3
	comp=Z,196nm,1.4s						
PETK	Petropavlovsk-	85.87	345	P	P	14 38 19.6	+0.8
	comp=Z,30nm,0.8s,baz=110,slow=6.7,SNR=36						
PEA1	Petropavlovsk-	85.87	345	*e*P	P	14 38 19.6	+0.7
TEY	Ternei	85.92	329	⇓*e*P	P	14 38 19.0	-0.2
TEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LRMC	Laurel Mtn Rad	86.15	45	P	P	14 38 23.0	+2.2
	baz=228						
BELC	Belle Mtn. Jos	86.23	47	P	P	14 38 23.5	+2.2
	baz=230						
CMB	Columbia Colle	86.28	42	*e*P	P	14 38 20.6	-0.7
	comp=Z,21nm,1.1s						
CMB	Columbia Colle	86.28	42	*e*P	P	14 38 20.6	-0.7
CMB				pmax	pmax		
	comp=Z,21nm,1.1s						
BC3	Big Chuckawall	86.35	47	P	P	14 38 24.4	+2.5
	baz=230						
GLA	Glamis	86.37	48	P	P	14 38 24.6	+2.7
	baz=230						
O02D	Mt. Diablo Mer	86.43	39	P	P	14 38 23.9	+1.8
	baz=225						
GSI	Gunungsitoli	86.44	274	*e*P	P	14 38 22.3	-0.4
	comp=Z,46nm,1.0s						
SDPT	Sand Point	86.51	10	*e*P	P	14 38 22.1	+0.2
	comp=Z,45nm,1.0s						
CWC	Cottonwood Cre	86.55	44	P	P	14 38 24.3	+1.4
	baz=228						
HEC	Hector,Ludlow	86.56	46	P	P	14 38 24.4	+1.6
	baz=229						
AFDM	Forest Hills D	86.57	41	*e*P	P	14 38 22.5	-0.2
	comp=Z,18nm,1.3s						
GSC	Goldstone, Bar	86.57	45	*e*P	P	14 38 24.0	+1.1
	comp=Z,22nm,1.3s						
GSC	Goldstone, Bar	86.57	45	P	P	14 38 25.4	+2.5
	baz=229						

MSHR	Mys Shultsa	86.63	325	⇓*e*P	P	14 38 23.7	+0.9
NJ2	Nanjing	86.64	310	⇑P	P	14 38 23.5	+0.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
NJ2				LR	LR		
	comp=Z,270nm,18.5s						
NJ2				LR	LR		
	comp=Z,290nm,17.1s						
NJ2				LR	LR		
	comp=Z,510nm,19.0s						
MPMC	Manual Prospec	86.65	45	P	P	14 38 25.8	+2.4
	baz=229						
ORV	Oroville	86.70	40	*e*P	P	14 38 23.7	+0.4
	comp=Z,31nm,1.6s						
ORV	Oroville	86.70	40	*e*P	P	14 38 23.7	+0.4
ORV				pmax	pmax		
	comp=Z,31nm,1.6s						
MDPB	Devils Postpil	86.76	43	*e*P	P	14 38 24.5	+0.5
	comp=Z,48nm,1.9s						
OMMB	Old Mammoth Mi	86.79	43	*e*P	P	14 38 24.8	+0.6
	comp=Z,46nm,1.9s						
WDC	Whiskeytown Da	86.85	39	*e*P	P	14 38 25.1	+1.1
	comp=Z,28nm,1.3s						
WDC	Whiskeytown Da	86.85	39	*e*P	P	14 38 25.1	+1.1
WDC				pmax	pmax		
	comp=Z,28nm,1.3s						
IRM	Iron Mountain	86.87	47	P	P	14 38 26.9	+2.6
	baz=230						
MLAC	Mammoth, Mammo	86.90	43	P	P	14 38 26.8	+2.2
	baz=228						
GMRC	Granite Mounta	86.95	46	P	P	14 38 25.5	+0.7
	baz=230						
214A	Organ Pipe Nat	87.00	50	P	P	14 38 27.3	+2.3
	baz=232						
Y12C	Blythe	87.01	48	P	P	14 38 27.9	+2.9
	baz=230						
N02D	Trinity Center	87.04	38	P	P	14 38 26.6	+1.5
	baz=225						
O03E	Paynes Creek	87.05	39	P	P	14 38 26.5	+1.4
	baz=226						
WAKR	Walker	87.14	42	*e*P	P	14 38 26.4	+0.7
	comp=Z,65nm,1.7s						
TUQ	Turquoise Moun	87.21	46	P	P	14 38 28.3	+2.3
	baz=230						
M02C	Callahan	87.26	38	P	P	14 38 27.9	+1.8
	baz=225						
SHOC	Shoshone, Teco	87.29	45	P	P	14 38 28.4	+2.1
	baz=229						
FURC	Furnace Creek,	87.30	45	P	P	14 38 28.5	+2.2
	baz=229						
GRAC	Grapevine Rang	87.35	44	P	P	14 38 29.1	+2.5
	baz=229						
USA0B	Ussuriysk Arra	87.41	326	*e*P	P	14 38 26.6	0.0
	comp=Z,95nm,1.6s						
USRK	Ussuriysk Ar.	87.41	326	P	P	14 38 27.5	+0.9
	comp=Z,14nm,0.9s,baz=128,slow=3.1,SNR=33						
PNTR	Pine Nut	87.45	41	*e*P	P	14 38 27.4	+0.2
	comp=Z,77nm,1.8s						
BEKR	Beckworth	87.55	40	*e*P	P	14 38 27.8	+0.2
	comp=Z,32nm,1.6s						
YBH	Yreka Blue Hor	87.57	38	*e*P	P	14 38 28.5	+0.9
	comp=Z,19nm,1.3s						
YBH	Yreka Blue Hor	87.57	38	*e*P	P	14 38 28.5	+0.9
YBH				pmax	pmax		
	comp=Z,19nm,1.3s						
YERR	Yerington	87.58	41	*e*P	P	14 38 27.8	-0.1
	comp=Z,30nm,1.5s						
PDMCI	Parker Dam,Lak	87.60	48	P	P	14 38 30.0	+2.3
	baz=231						
CHGN	Chignik	87.74	10	*e*P	P	14 38 27.4	-0.4
	comp=Z,23nm,0.8s						
NV01	Mina Array Sit	87.75	42	*e*P	P	14 38 30.7	+2.0
NVAR	Mina Array Bea	87.75	42	P	P	14 38 30.7	+2.0
	comp=Z,2.8nm,0.9s,baz=224,slow=7.9,SNR=20						
RYN	Ryan	87.75	42	*e*P	P	14 38 30.0	+1.3
	comp=Z,28nm,1.5s						
NV11	Mina Array Sit	87.84	42	*e*P	P	14 38 30.0	+1.0
	comp=Z,2.8nm,1.8s						
J01E	Myrtle Point	87.96	36	P	P	14 38 32.3	+3.1
	baz=224						
PAHR	Pah Rah Range	87.99	41	*e*P	P	14 38 30.8	+1.1
	comp=Z,24nm,1.5s						
TPNV	Topopah Spring	87.99	45	*e*P	P	14 38 30.9	+1.1
	comp=Z,74nm,1.9s						
TPNV	Topopah Spring	87.99	45	*e*P	P	14 38 30.9	+1.1
TPNV				pmax	pmax		
	comp=Z,74nm,1.9s						
TPNV	Topopah Spring	87.99	45	P	P	14 38 32.2	+2.4
	baz=229						
HUMO	Hull Mountain	88.07	37	*e*P	P	14 38 31.0	+1.1
	comp=Z,76nm,1.8s						
M04C	Macdoel	88.07	38	P	P	14 38 32.6	+2.5
	baz=226						
Y14A	Wickenburg	88.11	49	*e*P	P	14 38 31.6	+1.3
	comp=Z,13nm,0.9s						
L04D	Klamath Falls	88.13	37	P	P	14 38 32.0	+1.7
	baz=225						
W13A	Hualapai Mount	88.27	47	*e*P	P	14 38 32.2	+0.9
	comp=Z,12nm,1.2s						
KVN	Kaiserville	88.28	42	*e*P	P	14 38 32.0	+0.9
	comp=Z,14nm,1.3s						
KVN	Kaiserville	88.28	42	*e*P	P	14 38 32.0	+0.9
KVN				pmax	pmax		
	comp=Z,14nm,1.3s						
SHPR	Sheep Range	88.37	45	*e*P	P	14 38 32.8	+1.2
	comp=Z,50nm,1.9s						
TUC	Tucson	88.57	51	*e*P	P	14 38 34.0	+1.4
	comp=Z,16nm,1.1s						
TUC	Tucson	88.57	51	*e*P	P	14 38 34.0	+1.4
TUC				pmax	pmax		
	comp=Z,16nm,1.1s						
TUC	Tucson	88.57	51	P	P	14 38 34.9	+2.3
	baz=233						
I03D	Drain, OR	88.64	36	P	P	14 38 35.8	+3.3
	baz=224						
PANO	Nakornpanom	88.65	291	P	P	14 38 36.8	+3.7
MDJ	Mudanjiang	88.89	325	*e*P	P	14 38 33.8	+0.2
	comp=Z,85nm,1.8s						
MDJ	Mudanjiang	88.89	325	P	P	14 38 34.4	+0.8
MDJ				pP	pP	14 38 39.3	-3.4
MDJ				sP	sP	14 38 40.6	-5.3
MDJ				PP	PP	14 41 58.5	-5.2
MDJ				S	S	14 49 23.4	+4.5
MDJ				SS	SS	14 55 15.2	+2.6
MDJ				pmax	pmax		
	comp=Z,27nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,430nm,4.2s						
MDJ				LR	LR		
	comp=Z,370nm,25.6s						
MDJ				LR	LR		
	comp=Z,370nm,22.8s						
MDJ				LR	LR		
	comp=Z,770nm,21.4s						
J04D	Umpqua Nationa	88.95	37	P	P	14 38 36.4	+2.2
	baz=225						
MOD	Modoc Plateau	88.98	39	*e*P	P	14 38 34.8	+0.4
	comp=Z,20nm,1.4s						
I04A	Tendick Farm,	89.19	36	P	P	14 38 36.8	+1.7
	baz=225						
K05A	Summer Lake	89.23	38	*e*P	P	14 38 35.6	+0.1
	comp=Z,56nm,1.6s						
DL2	Dalian	89.29	317	⇑P	P	14 38 35.1	-0.5
DL2				SKS	SKSac	14 48 57.6	-5.5
DL2				S	S	14 49 23.4	+0.5
DL2				pmax	pmax		
	comp=Z,26nm,1.4s						
DL2				pmax	pmax		
	comp=Z,290nm,3.9s						
DL2				LR	LR		
	comp=Z,340nm,15.4s						
DL2				LR	LR		
	comp=Z,290nm,15.0s						
DL2				LR	LR		
	comp=Z,420nm,24.7s						
R11A	Troy Canyon, C	89.30	44	*e*P	P	14 38 36.2	+0.2
	comp=Z,14nm,1.8s						
R11A	Troy Canyon, C	89.30	44	P	P	14 38 37.5	+1.5
	baz=230						
X16A	Lo Mia Camp, P	89.42	49	*e*P	P	14 38 37.1	+0.5
	comp=Z,11nm,0.8s						
J05D	Fort Rock, OR	89.44	37	P	P	14 38 38.4	+2.0
	baz=226						
OHAK	Old Harbor	89.51	13	*e*P	P	14 38 37.0	+0.8
	comp=Z,132nm,2.0s						
H04D	Lebanon	89.54	36	P	P	14 38 38.7	+2.1
	baz=225						

BMN	**Battle Mountai**	89.70	41	*e*P	P	14 38 37.9	+0.1
	comp=Z,65nm,2.0s						
BMN	**Battle Mountai**	89.70	41	*e*P	P	14 38 37.9	+0.1
BMN				pmax	pmax		
	comp=Z,65nm,2.0s						
G03D	**McMinnville, O**	89.77	35	P	P	14 38 41.0	+3.3
	baz=224						
LCMT	**Little Creek M**	89.88	46	*e*P	P	14 38 38.9	+0.3
	comp=Z,40nm,2.0s						
H04A	**Detroit Lake**	89.93	36	*e*P	P	14 38 38.5	-0.1
	comp=Z,23nm,1.0s						
PINE	**Pine Mountain**	89.95	37	*e*P	P	14 38 39.3	+0.4
	comp=Z,71nm,1.6s						
I05D	**Terrebonne, OR**	90.12	36	P	P	14 38 41.7	+2.2
	baz=226						
WUAZ	**Wupatki**	90.14	48	*e*P	P	14 38 40.3	+0.4
	comp=Z,18nm,1.2s						
WUAZ	**Wupatki**	90.14	48	P	P	14 38 41.5	+1.6
	baz=232						
CHAI	**Chaiyaphum**	90.14	288	P	P	14 38 40.9	+0.7
CCUT	**Cedar City**	90.14	46	*e*P	P	14 38 41.5	+1.5
	comp=Z,44nm,1.9s						
KNB	**Kanab**	90.14	46	*e*P	P	14 38 41.5	+1.5
	comp=Z,66nm,1.7s						
WVOR	**Wild Horse Val**	90.25	39	*e*P	P	14 38 40.3	+0.1
	comp=Z,43nm,1.7s						
WVOR	**Wild Horse Val**	90.25	39	*e*P	P	14 38 40.3	+0.1
WVOR				pmax	pmax		
	comp=Z,43nm,1.7s						
NONG	**Nongkai**	90.32	291	P	P	14 38 42.0	+1.0
SZCU	**Shurtz Canyon**	90.34	46	*e*P	P	14 38 42.0	+1.1
	comp=Z,39nm,1.8s						
TIA	**Tai'an**	90.35	313	P	P	14 38 40.9	+0.2
TIA				pmax	pmax		
	comp=Z,19nm,1.4s						
TIA				pmax	pmax		
	comp=Z,200nm,4.0s						
TIA				LR	LR		
	comp=Z,430nm,15.3s						
TIA				LR	LR		
	comp=Z,270nm,11.0s						
TIA				LR	LR		
	comp=Z,300nm,15.6s						
CN2	**Changchun**	90.43	322	*e*P	P	14 38 41.3	+0.5
CN2				*e*sP	pP	14 38 48.0	-2.0
CN2				*e*S	S	14 49 33.7	+0.5
CN2				pmax	pmax		
	comp=Z,50nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,19.0s						
PSUT	**Pine Spring**	90.46	45	*e*P	P	14 38 42.4	+0.9
	comp=Z,18nm,1.6s						
X18A	**Snowflake**	90.47	50	*e*P	P	14 38 42.0	+0.5
	comp=Z,12nm,1.0s						
GRNR	**Gornyy**	90.47	333	*e*P	P	14 38 42.8	+1.9
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
121A	**Cookes Peak, D**	90.74	52	P	P	14 38 44.6	+1.7
	baz=234						
G05D	**Wamic, OR**	90.76	36	P	P	14 38 44.6	+2.1
	baz=226						
I07A	**Izee**	90.90	38	*e*P	P	14 38 43.4	+0.2
	comp=Z,17nm,1.3s						
J08A	**Circle Bar Ran**	90.96	39	*e*P	P	14 38 44.0	+0.5
	comp=Z,33nm,1.5s						
W18A	**Petrified Fore**	90.96	49	P	P	14 38 45.7	+1.9
	baz=233						
ELK	**Elko**	91.05	42	*e*P	P	14 38 45.0	+0.8
	comp=Z,15nm,1.5s						
E04D	**Cinebar**	91.06	34	P	P	14 38 46.0	+2.2
	baz=225						
G06A	**Carlson Farm,**	91.11	36	*e*P	P	14 38 44.9	+0.9
	comp=Z,110nm,1.8s						
MTPU	**Mount Pierson**	91.18	46	*e*P	P	14 38 45.1	+0.1
	comp=Z,37nm,1.7s						
KLR	**Kul'dur**	91.25	329	P	P	14 38 44.9	+0.4
	comp=Z,10nm,0.7s,baz=141,slow=5.5,SNR=28						
KLR	**Kul'dur**	91.25	329	*c* *i*P	P	14 38 44.8	+0.3
KLR				pmax	pmax		
	comp=Z,28nm,1.3s						
D04E	**Lakebay**	91.41	34	P	P	14 38 47.3	+2.0
	baz=225						
SLVN	**Son La**	91.43	294	*e*P	P	14 38 45.5	-0.6
	comp=Z,26nm,1.7s						
MSU	**Marysvale**	91.47	45	*e*P	P	14 38 47.6	+1.5
D03D	**Eldon**	91.51	33	P	P	14 38 47.7	+2.0
	baz=225						
LON	**Longmire**	91.57	35	*e*P	P	14 38 46.7	+0.5
	comp=Z,7.4nm,1.0s						
LON	**Longmire**	91.57	35	*e*P	P	14 38 46.7	+0.5
LON				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNTX	**Cornudas Mount**	91.92	54	*e*P	P	14 38 48.2	+0.1
	comp=Z,65nm,0.9s						
MNTX	**Cornudas Mount**	91.92	54	P	P	14 38 50.2	+2.0
	baz=235						
G08A	**Pilot Rock**	92.01	37	*e*P	P	14 38 48.5	+0.2
	comp=Z,21nm,1.1s						
ENH	**Enshi**	92.05	304	*e*P	P	14 38 48.0	-0.8
	comp=Z,60nm,1.3s						
CNPM	**China Poot**	92.05	13	*e*P	P	14 38 48.0	0.0
	comp=Z,28nm,1.1s						
LAZ	**Ladron**	92.26	51	*e*P	P	14 38 49.9	0.0
HAWA	**Hanford**	92.46	36	*e*P	P	14 38 50.5	+0.3
	comp=Z,33nm,1.4s						
BGU	**Big Grassy Mou**	92.46	43	*e*P	P	14 38 50.0	-0.6
	comp=Z,18nm,1.8s						
B05A	**Bryant**	92.50	33	P	P	14 38 52.7	+2.4
	baz=225						
TMUT	**Trail Mountain**	92.55	45	*e*P	P	14 38 52.1	+0.8
	comp=Z,9.1nm,1.1s						
BMO	**Blue Mountains**	92.58	38	*e*P	P	14 38 51.8	+0.9
	comp=Z,17nm,1.5s						
BMO	**Blue Mountains**	92.58	38	*e*P	P	14 38 51.8	+0.9
BMO				pmax	pmax		
	comp=Z,17nm,1.5s						
SRU	**San Rafael Swe**	92.86	46	*e*P	P	14 38 52.9	+0.4
	comp=Z,9.5nm,1.1s						
SRU	**San Rafael Swe**	92.86	46	*e*P	P	14 38 52.9	+0.4
SRU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TASM	**ASL Pad, Albuq**	93.03	51	P	P	14 38 55.8	+2.4
	baz=235						
ANMO	**Albuquerque**	93.03	51	⇑*e*P	P	14 38 52.4	-1.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HVU	**Hansel Valley**	93.14	43	*e*P	P	14 38 54.2	+0.5
	comp=Z,32nm,1.6s						
HVU	**Hansel Valley**	93.14	43	*e*P	P	14 38 54.2	+0.5
HVU				pmax	pmax		
	comp=Z,32nm,1.6s						
D08A	**Wollman Farm,**	93.22	36	*e*P	P	14 38 54.9	+1.2
	comp=Z,12nm,1.0s						
E09A	**Wood Farm, Sta**	93.25	36	*e*P	P	14 38 55.2	+1.4
	comp=Z,14nm,1.1s						
BJI	**Beijing**	93.28	315	*e*P	P	14 38 54.9	+0.8
BJI				sS	sS	14 50 06.7	-7.3
BJI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BJI				pmax	pmax		
	comp=Z,84nm,9.0s						
BJI				LR	LR		
	comp=Z,170nm,21.4s						
BJI				LR	LR		
	comp=Z,230nm,21.5s						
BJI				LR	LR		
	comp=Z,270nm,25.3s						
HLID	**Hailey**	93.33	40	*e*P	P	14 38 55.2	+0.7
	comp=Z,5.8nm,0.9s						
HLID	**Hailey**	93.33	40	P	P	14 38 56.5	+2.0
	baz=231						
F10A	**Beach Ranch, E**	93.37	37	*e*P	P	14 38 54.8	+0.3
	comp=Z,10nm,0.8s						
PLID	**Pearl Lake**	93.44	38	*e*P	P	14 38 55.9	+0.8
	comp=Z,16nm,1.1s						
RC01	**Rabbit Creek A**	93.79	13	*e*P	P	14 38 56.6	+0.6
	comp=Z,28nm,1.6s						
CM31	**Chiang Mai Arr**	93.94	289	*e*P	P	14 38 58.5	+0.7
	comp=Z,7.7nm,1.0s						
CMAR	**Chiang Mai Arr**	93.94	289	P	P	14 38 58.5	+0.7
	comp=Z,1.0nm,0.7s,baz=153,slow=1.0,SNR=5.5						
KMI	**Kunming**	94.32	296	P	P	14 39 00.4	+0.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,88nm,4.4s						
KMI				LR	LR		
	comp=Z,350nm,20.4s						
KMI				LR	LR		
	comp=Z,360nm,20.7s						
KMI				LR	LR		
	comp=Z,480nm,24.1s						
S22A	**4UR Ranch, Cre**	94.40	49	*e*P	P	14 39 00.2	+0.4
	comp=Z,8.8nm,1.5s						
S22A	**4UR Ranch, Cre**	94.40	49	P	P	14 39 01.7	+1.9
	baz=235						
SCM	**Sheep Creek Mo**	94.95	14	*e*P	P	14 39 02.1	+0.7
	comp=Z,34nm,1.4s						
SCM	**Sheep Creek Mo**	94.95	14	*e*P	P	14 39 02.1	+0.7
SCM				pmax	pmax		
	comp=Z,34nm,1.4s						
MCMT	**McKenzie Canyo**	95.00	40	*e*P	P	14 39 02.9	+0.7
SDCO	**Great Sand Dun**	95.26	49	P	P	14 39 05.5	+1.7
	baz=236						
FXWY	**Fox Creek**	95.30	42	*e*P	P	14 39 04.5	+0.9
	comp=Z,16nm,1.7s						
IMW	**Indian Meadow**	95.51	42	*e*P	P	14 39 05.1	+0.4
	comp=Z,10nm,1.4s						
MOOW	**Moose Ponds**	95.53	42	*e*P	P	14 39 04.5	-0.2
	comp=Z,17nm,1.9s						
BW06	**Boulder Array**	95.64	43	P	P	14 39 07.0	+1.8
	baz=234						
PD31	**Pinedale Array**	95.64	43	*e*P	P	14 39 06.3	+1.1
	comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	95.64	43	P	P	14 39 06.3	+1.1
	comp=Z,0.4nm,0.6s,baz=224,slow=4.1,SNR=4.5						
PDAR				PKKPbc	PKKPbc	14 55 56.8	+0.1
	comp=Z,0.6nm,0.7s,baz=99,slow=4.7,SNR=5.7						
FLWY	**Flagg Ranch**	95.76	42	*e*P	P	14 39 04.0	-1.7
	comp=Z,14nm,1.3s						
SEY	**Seymchan**	96.02	347	P	P	14 39 05.8	-0.3
	comp=Z,13nm,1.2s,baz=115,slow=6.0,SNR=7.1						
SEY	**Seymchan**	96.02	347	⇓*e*P	P	14 39 06.6	+0.5
RND	**Reindeer**	96.08	12	*e*P	P	14 39 05.6	-0.9
	comp=Z,8.4nm,0.9s						
RND	**Reindeer**	96.08	12	*e*P	P	14 39 05.6	-0.9
RND				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YHH	**Holmes Hill**	96.10	41	*e*P	P	14 39 06.6	-0.8
	comp=Z,17nm,1.7s						
BOZ	**Bozeman (W)**	96.15	40	P	P	14 39 08.5	+1.1
	baz=233						
ZEA	**Zeya**	96.45	330	*e*P	P	14 39 08.6	+0.3
ZEA				pmax	pmax		
	comp=Z,28nm,1.4s						
CD2	**Chengdu**	96.55	302	*e*P	P	14 39 09.5	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	96.60	314	P	P	14 39 10.4	+0.9
HHC				PP	PP	14 43 08.0	+3.4
HHC				S	S	14 50 28.4	+0.1
HHC				pmax	pmax		
	comp=Z,21nm,0.5s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
HHC				LR	LR		
	comp=Z,280nm,19.3s						
HHC				LR	LR		
	comp=Z,380nm,18.9s						
HHC				LR	LR		
	comp=Z,470nm,20.0s						
WRH	**Wood River Hil**	97.19	12	*e*P	Pdif	14 39 10.9	-0.6
	comp=Z,11nm,1.2s						
HDA	**Harding Lake**	97.35	13	*e*P	P	14 39 10.7	-1.5
HDA	**Harding Lake**	97.35	13	P	Pdif	14 39 12.3	+0.1
	baz=206						
CCB	**Clear Creek Bu**	97.40	12	*e*P	Pdif	14 39 12.0	-0.5
	comp=Z,4.4nm,0.8s						
COLA	**College**	97.60	12	⇑*e*P	Pdif	14 39 13.6	+0.3
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR	**Eielson Array**	97.69	13	P	Pdif	14 39 13.8	0.0
	comp=Z,0.8nm,0.7s,baz=217,slow=5.5,SNR=13						
ILB	**Eielson Array**	97.69	13	*e*P	Pdif	14 39 13.8	0.0
	comp=Z,3.4nm,0.9s						
POKR	**Poker Plat Res**	97.90	12	P	Pdif	14 39 16.9	+2.3
	baz=206						
BILL	**Bilibino**	98.80	354	⇑*e*P	Pdif	14 39 19.8	+1.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LZH	**Lanzhou**	99.15	306	*e*P	Pdif	14 39 20.1	-1.1
LZH				pP	pP	14 39 25.1	-5.2
LZH				sP	sP	14 39 27.7	-5.8
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
LZH				LR	LR		
	comp=Z,350nm,18.4s						
LZH				LR	LR		
	comp=Z,550nm,17.4s						
LZH				LR	LR		
	comp=Z,700nm,19.5s						
YAK	**Yakutsk**	101.39	337	⇑*e*P	Pdif	14 39 30.3	+0.1
WMQ	**Urumqi**	113.64	308	*e*PKP	PKiKP	14 44 18.2	+0.4
WMQ				LR	LR		
	comp=Z,410nm,25.9s						
WMQ				LR	LR		
	comp=Z,630nm,28.1s						
WMQ				LR	LR		
	comp=Z,650nm,28.1s						
BOSA	**Boshof**	117.59	202	PKP	PKiKP	14 44 26.9	+0.8
	comp=Z,2.4nm,0.8s,baz=172,slow=5.5,SNR=3.5						
MK31	**Makanchi Array**	118.17	310	*e*PKPdf	PKiKP	14 44 25.9	-0.5
MK32	**Makanchi Array**	118.17	310	*e*PKPdf	PKPdf	14 44 25.8	-0.5
MKAR	**Makanchi Array**	118.17	310	PKP	PKPdf	14 44 25.8	-0.5
	comp=Z,1.3nm,0.5s,baz=216,slow=1.2,SNR=16						
ZAA0	**Zalesovo Array**	118.36	318	*e*PKPdf	PKPdf	14 44 25.8	-0.6
ZALV	**Zalesovo Beam**	118.36	318	PKP	PKPdf	14 44 25.6	-0.8
	comp=Z,2.1nm,0.7s,baz=166,slow=2.9,SNR=8.1						
ZAA1	**Zalesovo Array**	118.36	318	*e*PKPdf	PKPdf	14 44 25.6	-0.8
MAKZ	**Makanchi**	118.39	310	*e*PKPdf	PKPdf	14 44 25.8	-0.9
MAKZ	**Makanchi**	118.39	310	*e*PKIKP	PKPdf	14 44 25.8	-0.9
KSH	**Kashi**	120.71	300	*e*PKP	PKiKP	14 44 33.1	+1.4
KSH				PP	PP	14 46 05.9	+5.6
KSH				PKS		14 48 08.0	
KSH				SKS	SKSdf	14 51 44.1	+2.9
KSH				SKKS	SKKSac	14 52 57.7	+0.6
KSH				SS	SS	15 02 35.3	+6.3
KSH				AMB	AMB		
	comp=Z,130nm,6.2s						
KSH				LR	LR		
	comp=Z,110nm,6.4s						
KSH				LR	LR		
	comp=Z,89nm,6.4s						
KSH				LR	LR		
	comp=Z,310nm,18.9s						
NIL	**Nilore**	121.14	293	*e*PKPdf	PKPdf	14 44 31.8	-0.7
KURK	**Kurchatov**	121.42	314	*e*PKPdf	PKPdf	14 44 31.8	-0.6
KURK	**Kurchatov**	121.42	314	*c* *i*PKIKP	PKPdf	14 44 31.7	-0.6
KURBB	**Kurchatov Arra**	121.46	314	PKP	PKiKP	14 44 32.1	-0.5
	comp=Z,4.4nm,0.6s,baz=104,slow=1.9,SNR=48						
KURBB				PKKPbc	PKKPbc	14 54 33.5	-0.1
	comp=Z,3.2nm,1.0s,baz=293,slow=6.2,SNR=4.0						
AAK	**Ala-Archa**	122.56	304	PKP	PKPdf	14 44 34.6	-0.5
	comp=Z,2.9nm,0.7s,baz=88,slow=1.8,SNR=9.5						
AAK	**Ala-Archa**	122.56	304	*d* *i*PKIKP	PKiKP	14 44 35.3	0.0
ARSB	**Arslanbob**	123.37	302	*e*PKPdf	PKiKP	14 44 36.7	-0.2
BTK	**Batken**	124.70	300	*e*PKPdf	PKiKP	14 44 39.1	-0.4
BTK	**Batken**	124.70	300	*e*PKIKP	PKiKP	14 44 39.1	-0.4
KBL	**Kabul**	124.74	293	*e*PKPdf	PKiKP	14 44 39.5	-0.4
KBL	**Kabul**	124.74	293	*e*PKIKP	PKiKP	14 44 39.5	-0.4
GAR	**Garm**	124.84	299	*e*PKPdf	PKiKP	14 44 39.9	0.0
GAR	**Garm**	124.84	299	*e*PKIKP	PKiKP	14 44 39.9	0.0
KK31	**Karatay Array**	125.53	304	*e*PKPdf	PKiKP	14 44 40.7	-0.2
KK31	**Karatay Array**	125.53	304	*e*PKIKP	PKiKP	14 44 40.7	-0.2
KKAR	**Karatay Array**	125.53	304	*e*PKPdf	PKiKP	14 44 40.6	-0.3
KKAR	**Karatay Array**	125.53	304	*e*PKIKP	PKiKP	14 44 40.6	-0.3
BVAR	**Borovoye Array**	126.76	316	PKP	PKiKP	14 44 42.7	-0.4
	comp=Z,4.8nm,0.6s,baz=142,slow=1.3,SNR=34						
BRVK	**Borovoye**	126.82	316	*e*PKPdf	PKiKP	14 44 43.1	-0.1
BRVK	**Borovoye**	126.82	316	*c* *i*PKIKP	PKPdf	14 44 42.0	-0.7
ARU	**Arti**	133.40	321	*e*PKPdf	PKiKP	14 44 55.8	-0.5
ARU	**Arti**	133.40	321	*i* PKIKP	PKiKP	14 44 56.4	+0.1
ARU						14 47 23.3	
ARU				SS	SS	15 05 00.0	-5.6
GEYT	**Alibeck**	134.07	295	PKP	PKiKP	14 44 58.4	+0.1
	comp=Z,5.4nm,0.8s,baz=248,slow=2.7,SNR=14						
GEYT				SKPbc	SKPab	14 48 26.8	+0.1
	comp=Z,4.1nm,0.8s,baz=343,slow=1.5,SNR=11						
GYA0B	**ALIBECK ARRAY**	134.07	295	*e*PKPdf	PKPdf	14 44 56.4	-0.6
KMBO	**Kilima Mbogo**	134.63	233	PKP	PKiKP	14 45 00.8	+0.3
	comp=Z,1.9nm,0.6s,baz=135,slow=0.1,SNR=5.1						
KMBO				SKPbc	SKPbc	14 48 26.0	-0.7
	comp=Z,1.8nm,0.2s,baz=247,slow=24,SNR=8.3						
PRGR	**Permogore**	138.03	331	*e*PKIKP	PKPdf	14 45 02.6	-0.9
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
APA	**Apatity**	138.50	343	⇓*i*PKHKP	PKPpre	14 44 49.9	
APA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARA0	**ARCESS Array S**	138.62	348	*e*PKPdf	PKiKP	14 45 05.8	-0.8
ARCES	**ARCESS Array B**	138.62	348	PKP	PKiKP	14 45 05.8	-0.8
	comp=Z,3.0nm,0.6s,baz=76,slow=1.4,SNR=8.0						
ARE0	**ARCESS Array S**	138.62	348	*e*PKPdf	PKPdf	14 45 04.5	0.0
TRO	**Tromso**	139.54	351	*e*PKPdf	PKPdf	14 45 06.7	+0.6
RAYN	**Ar Rayn**	141.42	270	*e*PKPdf	PKPdf	14 45 11.0	0.0
RAYN	**Ar Rayn**	141.42	270	*e*PKIKP	PKPdf	14 45 11.0	0.0
TBLG	**Delisi**	144.46	300	*e*P	PKPbc	14 45 14.5	+0.1
TBLG	**Delisi**	144.46	300	*e*PKPdf	PKPdf	14 45 14.9	-0.9
TBLG	**Delisi**	144.46	300	*e*PKIKP	PKPdf	14 45 14.9	-0.9
GNI	**Garni**	144.56	298	*e*P	PKPdf	14 45 15.7	-0.5
GNI	**Garni**	144.56	298	*e*PKPdf	PKPdf	14 45 15.3	-0.9
GNI	**Garni**	144.56	298	*c* *i*PKIKP	PKPdf	14 45 15.2	-0.9
MOS	**Moscow**	144.59	326	*i* PKHKP	PKPpre	14 45 12.2	
MOS				pmax	pmax		
	comp=Z,138nm,1.3s						
TASB	**TASBURUN-IGDIR**	144.96	297	*e*P	PKPdf	14 45 16.3	-0.4
ZEI	**Tsey**	144.97	302	*e*PKIKP	PKPab	14 45 14.0	-2.2
ZEI				pmax	pmax		
	comp=Z,60nm,0.9s						
NCK	**Nalchik**	145.09	304	⇓*e*PKIKP	PKPdf	14 45 16.9	+0.1
GOF	**Gofitskoye**	145.22	306	⇑*e*PKIKP	PKPdf	14 45 17.5	+0.6
GOF				pmax	pmax		
	comp=Z,216nm,1.1s						
CLDR	**Caldiran**	145.24	296	*e*P	PKPdf	14 45 18.1	+0.6
FIA1	**FINESS Array S**	145.25	340	*e*PKPbc	PKPbc	14 45 15.4	-0.8
FIA0	**FINESS Array S**	145.25	340	*e*PKPbc	PKPdf	14 45 16.0	-0.4
FIA0	**FINESS Array S**	145.25	340	*e*PKIKP	PKPdf	14 45 16.0	-0.4
FINES	**FINESS Array B**	145.25	340	PKPbc	PKPdf	14 45 16.0	-0.4
	comp=Z,38nm,0.6s,baz=61,slow=2.9,SNR=159						
NSS	**Namsos**	145.25	353	*e*P	PKPdf	14 45 16.0	-0.3
ONI	**Oni**	145.32	302	*e*P	PKPab	14 45 18.7	+1.4
AKH	**Akhalkalaki**	145.42	300	*e*P	PKPab	14 45 18.1	+0.2
AKH	**Akhalkalaki**	145.42	300	*e*PKPbc	PKPab	14 45 17.3	-0.6
AKH	**Akhalkalaki**	145.42	300	⇓*i*P	PKPab	14 45 18.9	+1.0
AKH	**Akhalkalaki**	145.42	300	*e*PKIKP	PKPab	14 45 17.3	-0.6
LPSR	**Galich'ya Gora**	145.42	321	*e*PKIKP	PKPbc	14 45 16.3	-0.7
LPSR				pmax	pmax		
	comp=Z,170nm,1.7s						
OBN	**Obninsk**	145.43	326	*e*PKPbc	PKPab	14 45 16.7	-0.4
OBN	**Obninsk**	145.43	326	*c* *i*PKIKP	PKPdf	14 45 16.4	-0.5
OBN				*i*		14 45 23.1	
OBN				pmax	pmax		
	comp=Z,145nm,1.1s						
CUKT	**Cukurca**	145.51	293	*e*P	PKPab	14 45 17.9	-0.4
KBZ	**Khabaz**	145.56	304	PKPbc	PKPab	14 45 17.9	-0.1
	comp=Z,18nm,0.8s,baz=108,slow=1.9,SNR=47						
VANB	**Van**	145.67	295	*e*P	PKPdf	14 45 17.7	-0.4
KIV	**Kislovodsk**	145.67	305	*e*PKPdf	PKPab	14 45 18.1	-0.5
KIV	**Kislovodsk**	145.67	305	⇑*i*P	PKPab	14 45 19.0	+0.4
KIV	**Kislovodsk**	145.67	305	*i* PKIKP	PKPbc	14 45 17.8	-0.4
KIV				pmax	pmax		
	comp=Z,112nm,1.1s						
NEY	**Neytrino**	145.76	303	*d* *i*PKIKP	PKPab	14 45 19.6	+0.5
VSR	**Storozhevoye**	145.87	318	*e*PKP2	PKPbc	14 45 18.0	-0.5
VSR				pmax	pmax		
	comp=Z,180nm,1.5s						
VORD	**Divnogorie**	145.89	318	*e*PKP2	PKPdf	14 45 17.7	-0.1
VORD				pmax	pmax		
	comp=Z,70nm,1.1s						
AGRB	**Hanur-Agry**	145.94	297	*e*P	PKPab	14 45 20.4	+0.5
AKDM	**Akdamar-Van**	146.00	295	*e*P	PKPab	14 45 20.3	+0.2
MLAZ	**Malazgirt-MUS**	146.30	296	*e*P	PKPab	14 45 21.2	-0.1
TBLU	**Trondheim**	146.68	354	*e*PKPdf	PKPdf	14 45 18.8	0.0
BATM	**Batumi**	146.74	301	*e*P	PKPbc	14 45 21.4	0.0
BATM	**Batumi**	146.74	301	⇓*i*P	PKPab	14 45 22.2	-0.5
KOPR	**Koprukoy-ERZUR**	146.79	298	*e*P	PKPab	14 45 22.2	-0.9
BCA	**Borcka**	146.81	300	*e*P	PKPab	14 45 21.9	-1.1
BCA	**Borcka**	146.81	300	⇑*i*P	PKPbc	14 45 21.8	+0.2
VSU	**Vasula**	147.38	337	*e*P	PKPbc	14 45 21.8	-0.8
VSU				IAmb	IAmb	14 45 24.7	
	comp=Z,208nm,1.0s						
VSU	**Vasula**	147.38	337	*c* *i*PKP2	PKPbc	14 45 22.1	-0.5
SVAN	**Silvan-Diyarba**	147.41	294	*e*P	PKPab	14 45 24.2	-1.2
MOL	**Molde**	147.56	356	*e*PKPbc	PKPbc	14 45 23.1	+0.2
BNGB	**Bingl**	147.77	296	*e*P	PKPbc	14 45 24.9	+0.4
SOC	**Sochi**	147.85	305	*c* *i*PKP2	PKPbc	14 45 23.3	-1.1
SOC				*e*		14 48 53.8	
SOC				*e*PPP	PPP	14 52 07.4	
SOC				pmax	pmax		
	comp=Z,45nm,1.1s						
SOC				pmax	pmax		
	comp=Z,36nm,0.7s						
DOMB	**Dombas**	147.97	354	*e*PKPbc	PKPbc	14 45 24.1	-0.1
AKN	**Aaknes**	147.99	356	*e*PKPbc	PKPbc	14 45 24.4	+0.2
MAZI	**Mazidag**	148.02	293	*e*P	PKiKP	14 45 25.9	-1.1
BAYT	**Aydıntepe-Bayb**	148.05	299	*e*P	PKiKP	14 45 26.9	-0.2
DYBB	**Diyarbakir**	148.25	294	*e*P	PKiKP	14 45 26.5	-0.9
KTUT	**Trabzon**	148.26	300	*e*P	PKPbc	14 45 25.7	+0.1
KTUT	**Trabzon**	148.26	300	⇑*i*P	PKiKP	14 45 26.9	-0.3
ERZN	**Erzincan**	148.46	297	*e*P	PKiKP	14 45 28.1	+0.2
NC303	**NORSAR Array S**	148.54	352	*e*PKPbc	PKPbc	14 45 25.6	0.0
NC204	**NORSAR Array S**	148.56	353	*e*PKPbc	PKPbc	14 45 25.6	-0.2
NC405	**NORSAR Array S**	148.60	352	*e*PKPbc	PKiKP	14 45 26.6	-0.7
NB201	**NORSAR Array S**	148.72	352	*e*PKPbc	PKPbc	14 45 26.0	-0.1
NB2	**NORSAR Subarra**	148.74	352	PKP	PKPbc	14 45 26.0	-0.2
	comp=Z,152nm,1.7s,baz=25,slow=3.0						
NB2	**NORSAR Subarra**	148.74	352	PKP	PKPbc	14 45 26.0	-0.2
	baz=25,slow=3.0						
NB200	**NORSAR Array S**	148.74	352	*e*PKPbc	PKPbc	14 45 26.0	-0.2
NOA	**NORSAR Array B**	148.74	352	PKPbc	PKPbc	14 45 26.0	-0.2
	comp=Z,6.4nm,0.5s,baz=14,slow=4.3,SNR=33						
NBO00	**NORSAR Array S**	148.80	352	*e*PKPbc	PKPbc	14 45 26.3	-0.1
SVRC	**Sivrice-ELAZID**	148.88	295	*e*P	PKiKP	14 45 28.1	-0.7
NAO01	**NORSAR Array S**	148.97	352	*e*PKPbc	PKPbc	14 45 26.6	-0.1
NC602	**NORSAR Array S**	148.99	352	*e*PKPbc	PKPbc	14 45 26.5	-0.3
NC602	**NORSAR Array S**	148.99	352	*e*PKPbc	PKPbc	14 45 26.7	-0.1
ANN	**Anapa**	149.16	308	*i* PKP2	PKPbc	14 45 27.6	-0.1
ANN				*e*		14 52 27.2	
ANN				pmax	pmax		
	comp=Z,134nm,1.7s						
SUE	**Sulen**	149.20	358	*e*PKPbc	PKiKP	14 45 27.5	-1.0
URFA	**Urfa**	149.32	293	*e*P	PKiKP	14 45 29.6	0.0
SKAR	**Skarslia**	149.38	355	*e*PKPbc	PKiKP	14 45 28.1	-0.9
IZAR	**Zarasai**	149.58	334	*e*P	PKPbc	14 45 28.1	-0.3
IZAR				IAmb	IAmb	14 45 34.9	
	comp=Z,39nm,1.2s						
ISAL	**Salakas**	149.76	333	*e*P	PKPbc	14 45 26.5	-2.4
ISAL				IAmb	IAmb	14 45 36.8	
	comp=Z,28nm,1.2s						
ASK	**Askoy**	149.76	358	*e*PKPbc	PKiKP	14 45 29.1	-0.6
MICGM	**Minsk**	149.80	330	*e*	PKiKP	14 45 29.0	-0.9
MNK	**Minsk**	149.80	330	*e*PKP2	PKiKP	14 45 29.0	-0.9
BER	**Bergen**	149.86	357	*e*PKPbc	PKiKP	14 45 29.4	-0.5
IIGN	**Ignalina**	149.88	333	*e*P	PKiKP	14 45 29.6	-0.4
IIGN				IAmb	IAmb	14 45 31.4	
	comp=Z,11nm,0.6s						
ODD1	**Odda**	150.26	356	*e*PKPbc	PKiKP	14 45 30.5	-0.3
KONO	**Kongsberg**	150.28	353	*e*PKPbc	PKiKP	14 45 30.1	-0.6
KONO	**Kongsberg**	150.28	353	⇑*e*PKIKP	PKPdf	14 45 25.6	+0.8
KONO	**Kongsberg**	150.28	353	*e*PKPbc	PKiKP	14 45 30.1	-0.6
DARE	**Darende-Malaty**	150.29	296	*e*P	PKiKP	14 45 32.2	+0.6
SVSK	**Karacayir**	150.50	298	*e*P	PKiKP	14 45 32.7	+0.9
GAZ	**Gaziantep**	150.61	293	*e*P	PKiKP	14 45 32.8	+0.5
BLS5	**Blasjo**	150.76	356	*e*PKPbc	PKiKP	14 45 31.9	+0.1
TOKT	**Tokat**	150.78	299	*e*P	PKiKP	14 45 32.4	-0.1
KMRS	**Kahramanmaras**	150.84	293	*e*P	PKiKP	14 45 33.1	+0.4
KVT	**Kavak**	151.02	301	*e*P	PKiKP	14 45 33.7	+0.7
KMY	**Karmoy**	151.03	357	*e*PKPdf	PKPdf	14 45 26.1	+0.1
SIM	**Simferopol'**	151.35	309	*c* *e*PKIKP	PKiKP	14 45 33.4	-0.1
SIM				*e*		14 45 41.0	
SIM				pmax	pmax		
	comp=Z,32nm,1.1s						
BNN	**Bunyan**	151.53	296	*e*P	PKiKP	14 45 34.5	+0.3
AKASG	**Malin Array Be**	151.58	323	PKPbc	PKPbc	14 45 33.5	+0.2
	comp=Z,11nm,0.6s,baz=45,slow=2.7,SNR=48						
AKASG				PKPab	PKPab	14 45 41.2	-0.8

	comp=Z,12nm,0.4s,baz=45,slow=3.3,SNR=22						
AKBB	Malin Array Si	151.58	323	ePKPbc	PKPbc	14 45 32.8	-0.5
AKBB				ePKPab	PKPab	14 45 41.2	-0.8
AKBB	Malin Array Si	151.58	323	ePKIKP	PKPbc	14 45 32.8	-0.5
AKBB				e		14 45 41.2	
HOMB	Homborsund	151.75	354	ePKPbc	PKiKP	14 45 33.4	-0.4
RCY	Rachaya	151.76	285	eP	PKiKP	14 45 35.9	+1.0
SEVA	Sevastopol	151.79	309	⇑iP	PKiKP	14 45 34.6	+0.2
CEYT	Ceyhan	151.79	293	eP	PKiKP	14 45 35.2	+0.6
SNART	Snartemo	151.79	355	ePKPbc	PKiKP	14 45 34.3	+0.4
YURE	YUREGIR	151.90	292	eP	PKiKP	14 45 36.0	+1.1
BHL	Bhannes	151.93	286	eP	PKiKP	14 45 35.3	+0.1
DQRL	Deir Qamar	151.99	286	eP	PKiKP	14 45 36.4	+1.1
SUW	Suwalki	152.06	334	ePKP	PKiKP	14 45 34.1	-0.5
SUW	Suwalki	152.06	334	ePKIKP	PKiKP	14 45 34.1	-0.5
CORM	Corum	152.25	300	eP	PKiKP	14 45 36.3	+0.6
KARA	Karaisali	152.32	293	eP	PKiKP	14 45 35.5	-0.3
ILGA	Ilgaz	152.75	302	ePKPbc	PKPbc	14 45 36.2	-0.4
MERS	Mersin	152.78	292	eP	PKiKP	14 45 36.9	+0.1
BR101	Keskin Array S	153.09	299	ePKPbc	PKiKP	14 45 37.5	0.0
BR101				ePKPab	PKPab	14 45 48.7	-0.2
BR131	Keskin Array S	153.09	299	ePKPbc	PKPbc	14 45 36.4	-0.9
BRTR	Keskin Array B	153.09	299	PKPbc	PKiKP	14 45 37.5	0.0
	comp=Z,14nm,1.0s,baz=89,slow=1.2,SNR=32						
BRTR				PKPab	PKPab	14 45 48.7	-0.2
	comp=Z,4.5nm,0.5s,baz=120,slow=3.1,SNR=10						
YAYX	Yaylak	153.09	297	eP	PKiKP	14 45 37.5	+0.1
KIZK	Mersin	153.11	292	eP	PKiKP	14 45 37.6	+0.2
EREN	Erenkoy	153.14	290	eP	PKiKP	14 45 38.1	+0.6
SILI	Silifke-Mersin	153.30	291	eP	PKiKP	14 45 38.3	+0.5
KEBE	Keben-Mersin	153.46	292	eP	PKiKP	14 45 38.3	+0.1
IKL	Isikli	153.50	291	eP	PKiKP	14 45 38.3	+0.1
ANTO	Ankara	153.70	299	ePKPbc	PKiKP	14 45 38.9	+0.3
ANTO	Ankara	153.70	299	⇓iP	PKiKP	14 45 40.6	+2.0
ANTO	Ankara	153.70	299	PKIKP	PKiKP	14 45 38.9	+0.3
KIS	Kishinev	153.83	317	ePKP	PKPbc	14 45 37.0	-1.4
KIS				LRM	MLR	16 00 22.0	
	comp=Z,400nm,20.0s						
KIS	Kishinev	153.83	317	ePKIKP	PKPbc	14 45 37.0	-1.4
KIS				e		14 45 45.0	
CSS	Mathiatis	153.85	288	ePKPbc	PKiKP	14 45 38.8	-0.2
LVV	L'vov	154.73	327	ePKP2	PKPab	14 45 55.3	0.0
MDUB	Mudurnu	154.75	301	ePKPab	PKPab	14 45 55.4	-0.5
CFR	Carcaliu	155.13	314	⇑iP	PKPdf	14 45 42.4	+10
TIRR	Tirgusor	155.29	312	ePKPbc	PKPdf	14 45 42.4	+10
TIRR				ePKPab	PKPab	14 45 57.3	-0.5
TIRR	Tirgusor	155.29	312	PKP2	PKPab	14 45 57.3	-0.5
TESR	Tescani	155.36	318	⇑iP	PKPab	14 45 56.0	-2.1
BIZ	Bicaz	155.44	319	⇑iP	PKPab	14 45 52.3	-6.1
KWP	Kalwaria Pacla	155.48	328	ePKP	PKPab	14 45 58.8	+0.3
KWP	Kalwaria Pacla	155.48	328	ePKPab	PKPab	14 45 57.6	-0.9
KWP	Kalwaria Pacla	155.48	328	ePKP2	PKPab	14 45 58.8	+0.3
BURAR	Bucovina Array	155.53	321	⇓iP	PKPab	14 45 48.4	-11
VRI	Vrincioaia	155.66	316	⇓iP	PKPab	14 45 57.0	-2.4
OJC	Ojcow	156.31	332	ePKP	PKPdf	14 45 33.4	-0.4
OJC	Ojcow	156.31	332	ePKIKP	PKPdf	14 45 33.4	-0.4
UZH	Uzhgorod	156.37	326	ePKIKP	PKPdf	14 45 47.1	+13
UZH				i		14 46 01.3	
KSP	Ksiaz	157.10	338	ePKP	PKPab	14 46 02.7	-2.7
KSP	Ksiaz	157.10	338	ePKP2	PKPab	14 46 02.7	-2.7
OSTC	Ostas	157.37	337	ePKPAB	PKPab	14 46 05.9	-0.7
CHVC	Chvalec	157.39	337	ePKPAB	PKPab	14 46 05.4	-1.3
UPC	Upice	157.48	337	ePKP2	PKPab	14 46 07.7	+0.7
UPC	Upice	157.48	337	ePKPAB	PKPab	14 46 07.7	+0.7
DPC	Dobruska-Polom	157.51	337	⇑ePKP	PKPdf	14 45 46.7	+11
DPC				ePKPAB	PKPab	14 46 05.6	-1.6
MORC	Moravsky Berou	157.55	334	ePKPab	PKPab	14 46 07.1	-0.3
MORC	Moravsky Berou	157.55	334	PKP2	PKPab	14 46 07.1	-0.3
MORC	Moravsky Berou	157.55	334	ePDIFF	PKPdf	14 45 36.2	+0.7
MORC				e		14 46 07.1	
KRLC	Kraliky	157.58	336	ePKP2	PKPab	14 46 06.6	-0.9
KRLC	Kraliky	157.58	336	ePKPAB	PKPab	14 46 06.6	-0.9
KRLC				ex	x	14 46 20.6	
CLL	Collm	157.65	343	ePKPab	PKPab	14 46 07.7	0.0
CLL	Collm	157.65	343	⇓ePKIKP	PKPdf	14 45 36.0	+0.5
CLL				i		14 46 07.5	
CLL				pmax	pmax		
	comp=Z,66nm,1.4s						
CLL	Collm	157.65	343	ePKPdf	PKPdf	14 45 36.0	+0.5
CLL				⇓iPKPab	PKPab	14 46 07.5	-0.2
	comp=Z,66nm,1.4s						
CLL				i		14 46 20.0	
CLL				ePP	PP	14 49 46.0	-0.6
CLL				e		14 50 05.0	
BRG	Berggiesshubel	157.79	341	ePKP	PKPdf	14 45 37.2	+1.5
	comp=Z,12nm,1.6s						
BRG	Berggiesshubel	157.79	341	i PKP	PKPab	14 46 08.4	+0.1
	comp=Z,53nm,1.3s						
BRG				PP	PP	14 49 43.0	-4.4
BRG				SKKS		14 56 21.0	
BRG	Berggiesshubel	157.79	341	ePKIKP	PKPdf	14 45 37.2	+1.5
BRG				i		14 46 08.4	
BRG						14 49 43.0	
BRG				pmax	pmax		
	comp=Z,12nm,1.6s						
BRG				pmax	pmax		
	comp=Z,53nm,1.3s						
PVCC	Panska Ves	157.92	340	ePKP2	PKPab	14 46 10.0	+1.1
PVCC	Panska Ves	157.92	340	ePKPAB	PKPab	14 46 10.0	+1.1
PSZ	Piszkesteto	158.00	328	ePKPdf	PKPdf	14 45 36.2	+0.1
PSZ				ePKPab	PKPab	14 46 09.1	-0.4
PSZ	Piszkesteto	158.00	328	⇑iP	PKPab	14 46 08.9	-0.6
PSZ	Piszkesteto	158.00	328	ePKIKP	PKPdf	14 45 36.2	+0.1
PSZ				e		14 46 09.1	
PSZ	Piszkesteto	158.00	328	⇓eP	PKPab	14 46 09.1	-0.4
VYHS	Vyhne	158.04	330	ePKP2	PKPab	14 46 09.8	+0.2
VYHS	Vyhne	158.04	330	ePKP	PKPab	14 46 09.8	+0.2
WTSB	Winterswijk	158.14	353	eP	PKPab	14 46 08.8	-1.0
PLVB	Pleven	158.21	313	⇑iP	PKPab	14 46 10.8	+0.3
JAVC	Velka Javorina	158.24	333	ePDIFF	PKPdf	14 45 38.2	+1.8
JAVC				e		14 46 11.4	
VRAC	Vranov	158.28	335	⇓iP	PKPab	14 46 10.4	-0.2
VRAC	Vranov	158.28	335	ePDIFF	PKPdf	14 45 34.9	-1.4
VRAC				e		14 46 10.5	
GOPC	GO Pecny, Ondr	158.39	338	ePKP2	PKPab	14 46 11.5	+0.5
GOPC	GO Pecny, Ondr	158.39	338	ePKPAB	PKPab	14 46 11.5	+0.5
GOPC				ex	x	14 46 24.2	
PRU	Pruhonice	158.40	339	⇑ePKP	PKPab	14 46 00.1	-11
PRU				ePKPAB	pPKPab	14 46 11.1	-8.9
PRU				ex	x	14 46 21.8	
PRU				ex	x	14 46 35.0	
KRUC	Moravsky	158.56	335	ePDIFF	PKPdf	14 45 37.2	+0.5
KRUC				e		14 46 11.9	
TREC	Trest	158.69	337	ePKP2	PKPab	14 46 12.9	+0.6
TREC	Trest	158.69	337	ePKPAB	PKPab	14 46 12.9	+0.6
AMBH	Ambrzfalva	158.71	324	eP	PKPab	14 46 13.0	+0.6
NKC	Novy Kostel	158.78	343	⇑ePKP	PKPab	14 45 55.0	-18
NKC				ePKPAB	pPKPab	14 46 13.3	-8.4
MODS	Modra-Piesok	158.78	332	ePKP2	PKPab	14 46 03.0	-10
MODS	Modra-Piesok	158.78	332	e	PKPab	14 46 03.0	-10
CSKK	Cskako	159.16	329	eP	PKPab	14 46 14.0	-0.4
MDVR	Moldovita	159.19	319	⇓iP	PKPab	14 46 14.8	+0.1
KHC	Kasperske Hory	159.45	339	ePKPdf	PKPdf	14 45 38.2	+0.4
KHC				ePKPab	PKPab	14 46 16.2	+0.5
KHC	Kasperske Hory	159.45	339	ePKIKP	PKPdf	14 45 38.2	+0.4
KHC				e		14 46 16.2	
KHC	Kasperske Hory	159.45	339	ePKPDF	PKPdf	14 45 37.0	-0.8
KHC				⇑ePKP	sPKPdf	14 45 56.1	+5.8
KHC				ePKPAB	PKPab	14 46 15.0	-0.7
KHC				ex	x	14 46 29.3	
VTS	Vitosha	159.47	312	ePKPab	PKPab	14 46 16.2	0.0
VTS	Vitosha	159.47	312	⇑iP	PKPab	14 46 17.3	+1.1
SOP	Sopron	159.62	332	⇓eP	PKPab	14 46 13.0	-3.4
SOP	Sopron	159.62	332	⇓eP	PKPab	14 46 16.1	-0.3
GEC2	GERESS Array S	159.67	339	ePKPab	PKPab	14 46 15.7	-1.0
GERES	GERESS Array B	159.67	339	PKPab	PKPab	14 46 18.0	+1.3
	comp=Z,3.2nm,0.4s,baz=48,slow=2.9,SNR=4.8						
TIH	Tihany	159.67	329	eP	PKPab	14 46 05.1	-12
CONA	Conrad Observa	159.70	334	epPKPab	PKPab	14 46 17.0	+0.1
	comp=Z,28nm,1.2s,SNR=6.0						
MORH	Mrgy, Hungar	159.83	326	⇓eP	PKPab	14 46 16.1	-1.3
MOA	Molln	160.35	336	epPKPab	PKPab	14 46 20.1	+0.6
	comp=Z,23nm,1.3s,SNR=9.1						
ARSA	Arzberg	160.39	333	epPKPab	PKPab	14 46 20.4	+0.6
	comp=Z,22nm,2.0s						
BEHE	Becsehely	160.49	330	eP	PKPab	14 46 14.1	-6.2
SOKA	Soboth	161.05	333	epPKPab	PKPab	14 46 22.8	+0.1
	comp=Z,23nm,1.5s,SNR=8.6						
KBA	Koelnbreinsper	161.33	337	epPKPab	PKPab	14 46 24.6	+0.5
	comp=Z,5.0nm,0.7s						
BFO	Black Forest	161.48	348	ePKPdf	PKPdf	14 45 38.3	-1.7
BFO				ePKPab	PKPab	14 46 24.7	+0.2
BFO	Black Forest	161.48	348	ePKIKP	PKPdf	14 45 38.3	-1.7
BFO				e		14 46 24.7	
MYKA	Terra Mystica	161.61	336	ePKPab	PKPab	14 46 24.8	-0.4
	comp=Z,12nm,0.8s						
WATA	Walderalm	161.66	341	epPKPab	PKPab	14 46 25.8	+0.3
	comp=Z,36nm,1.1s						
WTTA	Wattenberg	161.71	340	epPKPab	PKPab	14 46 26.0	+0.3
	comp=Z,54nm,1.6s,SNR=5.8						
RETA	Reutte	161.74	342	epPKPab	PKPab	14 46 26.2	+0.4
	comp=Z,37nm,1.2s,SNR=6.7						
MOTA	Moosalm	161.78	341	epPKPab	PKPab	14 46 26.5	+0.5
	comp=Z,47nm,1.2s,SNR=6.6						
SQTA	Sankt Quirin	161.87	341	epPKPab	PKPab	14 46 26.9	+0.6
	comp=Z,44nm,1.7s,SNR=6.3						
ABTA	Abfaltersbach	161.90	338	ePKPab	PKPab	14 46 25.6	-0.8
	comp=Z,29nm,1.3s						
DAVA	Damuels	162.15	344	epPKPab	PKPab	14 46 27.7	+0.1
	comp=Z,27nm,1.4s						
FETA	Feichten	162.18	342	ePKPab	PKPab	14 46 27.4	-0.4
	comp=Z,36nm,1.4s						
FUORN	Ofenpass-Fuorn	162.67	342	ePKPdf	PKPdf	14 45 42.4	+0.8
FUORN				ePKPab	PKPab	14 46 30.7	+0.6
TUE	Stuetta	163.04	344	ePKPab	PKPab	14 46 32.1	+0.5
SENIN	Lac Senin/Sane	163.56	349	ePKPab	PKPab	14 46 34.1	+0.2
SSB	Saint Sauveur	164.97	355	ePKPdf	PKPdf	14 45 43.9	+0.4
SSB	Saint Sauveur	164.97	355	ePKIKP	PKPdf	14 45 43.9	+0.4

ISCJB **10** *14:30:04.7±2.9, 30°.2S±0°.1×177°.0W±0°.4, h24^{km}, mb4.2/5, Error ellipse: s-maj=50.1km s-min=19.7km az=173.3*

NEIC **10** *14:30:05.3±1.6, 30°.03S×177°.03W, h10^{km}, mb4.0/3, Error ellipse: s-maj=30.2km s-min=18.2km az=92.0*

IDC **10** *14:30:06.7±4.1, 29°.17S×177°.65W, h0^{km}, mb4.3/3, mb1 4.5/3, mb1mx3.9/35, mbtmp4.3/3, Error ellipse: s-maj=215.4km s-min=46.9km az=157.0*

ISC 10 14:30:07.4±1.7**, 30°.0S**±0°.1×**177°.1W**±0°.2**, h24^{km}, n12,** σ**0^{s}71**/12**, mb4.2**/5**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.05	316	ePn	Pb	14 30 26.9	+0.1
OUZ	Omahuta	9.43	234	ePn	Pn	14 32 22.4	+0.6
STKA	Stephens Creek	35.34	256	P	P	14 37 01.2	+0.2
	2.4nm,0.4s,baz=84,slow=10,SNR=3.8						
STKA	Stephens Creek	35.34	256	eP	P	14 37 01.5	+0.4
	2.1nm,1.2s						
AS31	Alice Springs	43.93	266	eP	P	14 38 11.7	-1.0
	1.1nm,0.8s						
ASAR	Alice Springs	43.93	266	P	P	14 38 11.4	-1.3
	1.0nm,0.4s,baz=106,slow=7.3,SNR=4.1						
WR1	Warramunga Arr	44.88	271	eP	P	14 38 19.8	-0.5
WRA	Warramunga Arr	44.88	271	P	P	14 38 19.8	-0.5
	3.3nm,0.6s,baz=106,slow=8.9,SNR=6.2						
CASY	Casey	55.86	208	eP	P	14 39 42.1	-0.5
	6.4nm,0.8s						
FIA0	FINESS Array S	145.04	341	ePKPbc	PKPdf	14 49 42.5	+0.5
FINES	FINESS Array B	145.04	341	PKP	PKPdf	14 49 42.5	+0.5
	5.6nm,0.9s,baz=48,slow=2.1,SNR=4.4						
AKASG	Malin Array Be	151.46	324	PKPbc	PKiKP	14 49 59.7	+0.3
	0.4nm,0.3s,baz=47,slow=2.7,SNR=3.3						

ISCJB **10** *14:32:10.1±0.3, 19°.12S±0°.02×69°.24W±0°.02, h93^{km}±3^{km}, mb5.6/483, Error ellipse: s-maj=4.0km s-min=2.4km az=40.2*

MOS **10** *14:32:11.0±0.9, 19°.23S×69°.31W, h103^{km}, mb5.6/70, Error ellipse: s-maj=8.8km s-min=4.7km az=103.6*

NEIC **10** *14:32:12.9±1.8, 19°.30S×69°.25W, h110^{km}, mb5.7/478, MW5.6, ML5.5(ARE), MW5.5(GUC), Error ellipse: s-maj=13.2km s-min=9.0km az=279.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.66; $M_{\theta\theta}$0.35; $M_{\phi\phi}$0.30; $M_{r\theta}$-0.54; $M_{\theta\phi}$0.40; $M_{\phi r}$-2.83; Best double couple: $M_0$3.00000×10^{17} NP1:ϕ_s12.00000°, δ84.00000°, λ-97.00000°. NP2:ϕ_s246.00000°, δ9.00000°, λ-37.00000°. Principal axes: T 2.8700, Plg39.0000°, Azm109.0000°; N 0.1900, Plg7.0000°, Azm13.0000°; P -3.0500, Plg50.0000°, Azm274.0000°;*

NEIC Felt [V] at Camina, Huara, La Tirana and Pozo Almonte; [IV] at Alto Hospicio, Arica, Cerro Colorado, Cuya, Iquique, Mamina, Pica, Pisagua and Poconchile; [III] at Codpa, Collahuasi, Quebrada Blanca, Quillagua and Tocopilla. Also felt [III] at Tacna and [II] at Arequipa and Moquegua, Peru. Broadband depth 110 km.

VAO **10** *14:32:12.5±0.2, 19°.38S×69°.20W, h113^{km}, mb6.0*

GUC **10** *14:32:12.6±0.7, 19°.37S×69°.52W, h113^{km}±3^{km}, ML5.7, MW5.5*

SJA **10** *14:32:13.8±0.6, 19°.77S×69°.57W, h97^{km}±8^{km}, ML4.6, MW3.9*

IDC **10** *14:32:14.6±0.3, 19°.23S×69°.25W, h116^{km}±2^{km}, mb5.2/30, mb1 5.2/32, mb1mx5.2/35, mbtmp5.5/32, MS4.6/8, Ms1 4.6/8, ms1mx4.2/19, Error ellipse: s-maj=10.0km s-min=8.0km az=81.0*

BJI **10** *14:32:14.3±0.0, 19°.20S×69°.10W, h112^{km}, mB5.3/33*

GCMT **10** *14:32:15.9±0.1, 19°.39S±0°.01×69°.68W±0°.01, h131^{km}±1^{km}, MW5.6/122, Moment Tensor Solution. s111,c175; s122,c269; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.07±.05; $M_{\theta\theta}$-0.14±.05; $M_{\phi\phi}$1.22±.06; $M_{r\theta}$0.60±.03; $M_{\theta\phi}$0.01±.05; $M_{\phi r}$-3.08±.04; Best double couple: $M_0$3.34100×10^{17} NP1:ϕ_s350.00000°, δ80.00000°, λ-94.00000°. NP2:ϕ_s194.00000°, δ11.00000°, λ-66.00000°. Principal axes: T 3.3920, Plg35.0000°, Azm83.0000°; N -0.0980, Plg4.0000°, Azm350.0000°; P -3.2890, Plg55.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:32:13.0±0.2**, 19°.34S**±0°.03×**69°.30W**±0°.03**, h112^{km}**±2^{km}**, h112^{km}:pP-P, n1600,** σ**1^{s}22**/1739**, mb5.6**/484**, 23C-19D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	0.34	163	ePn	Pn	14 32 30.7	+0.9
GO01	Chusmiza	0.34	163	⇓iP	Pn	14 32 30.5	+0.7
GO01				i S	Sn	14 32 44.2	+1.9
GO01				IAML		14 32 46.0	
	comp=N,232µm,0.4s						
MNMC	Minye Minye	0.35	307	ePn	Pn	14 32 29.6	0.0
MNMC	Minye Minye	0.35	307	⇑iP	Pn	14 32 29.6	0.0
MNMCX	Minye Minye	0.35	307	eS	Sn	14 32 44.4	+2.4
PB11	IPOC Station P	0.54	219	ePn	Pn	14 32 30.2	-0.2
PB11	IPOC Station P	0.54	219	eP	Pn	14 32 28.4	-2.0
PB11	IPOC Station P	0.54	219	⇑iP	Pn	14 32 30.0	-0.5
PB11				i S	Sn	14 32 43.0	-0.6
PB08	IPOC Station P	0.81	170	⇓iP	Pn	14 32 33.7	+0.8
PB08				i S	Sn	14 32 49.5	+1.6
PB08				IAML		14 32 51.3	
	comp=N,186µm,0.5s						
PSGC	Pisagua	0.82	252	⇑iP	Pn	14 32 31.2	-1.5
PSGC				i S	Sn	14 32 44.9	-2.6
PSGC				IAML		14 32 45.9	
	comp=N,246µm,0.4s						
PSGCX	Pisagua	0.82	252	eP	Pn	14 32 30.2	-2.5
PSGCX				eS	Sn	14 32 43.0	-4.5
PB16	IPOC Station P	1.02	349	⇓iP	Pn	14 32 36.3	+1.1
PB16				i S	Sn	14 32 53.2	+1.4
PB16				IAML		14 32 56.0	
	comp=E,181µm,0.5s						
PB12	IPOC Station P	1.21	306	⇑iP	Pn	14 32 35.3	-1.4
PB12				i S	Sn	14 32 52.1	-2.5
PB12				IAML		14 32 54.6	
	comp=N,180µm,0.6s						
PB01	IPOC Station P	1.70	186	ePn	Pn	14 32 42.7	+0.3
PB01	IPOC Station P	1.70	186	eP	Pn	14 32 43.2	+0.8
PB01				eS	Sn	14 33 04.4	-0.5
PB01	IPOC Station P	1.70	186	⇑iP	Pn	14 32 42.3	-0.1
PB01				i S	Sn	14 33 04.3	-0.6
PB01				IAML		14 33 05.5	
	comp=E,104µm,0.4s						
PB02	IPOC Station P	2.05	196	⇑iP	Pn	14 32 46.0	-0.7
PB02				i S	Sn	14 33 09.2	-3.4
PB02				IAML		14 33 16.4	
	comp=E,96µm,0.5s						
PB07	IPOC Station P	2.44	193	⇑iP	Pn	14 32 51.0	-0.8
PB07				IAML		14 33 33.2	
	comp=E,50µm,0.7s						
PB09	IPOC Station P	2.44	179	⇑iP	Pn	14 32 52.5	+0.6
PB09				i S	Sn	14 33 18.0	-3.7
PB09				IAML		14 33 55.8	
	comp=E,29µm,0.6s						
PB03	IPOC Station P	2.73	189	⇑iP	Pn	14 32 55.0	-0.6
PB03				IAML		14 33 52.3	
	comp=E,32µm,0.8s						
PB04	IPOC Station P	3.08	195	ePn	Pn	14 32 59.8	-0.5
PB04	IPOC Station P	3.08	195	⇑iP	Pn	14 32 59.0	-1.3
I08BO	LAS PENAS INFR	3.21	15	P	Pn	14 33 08.2	+5.8
	baz=209,slow=19,SNR=4.7						
I08BO				i		14 49 10.0	
	baz=208,slow=325,SNR=0.6						
LPAZ	La Paz	3.23	20	P	Pn	14 33 05.6	+2.8
	comp=E,74nm,0.3s,baz=254,slow=3.1,SNR=2087						
LPAZ				S	Sn	14 33 41.7	+0.6
	comp=E,89nm,0.3s,baz=198,slow=24,SNR=7.8						
LPAZ	La Paz	3.23	20	ePn	Pn	14 33 05.8	+3.0
LPAZ				eSn	Sn	14 33 41.7	+0.6
LPAZ	La Paz	3.23	20	⇓iP	Pn	14 33 06.0	+3.3
LPAZ	La Paz	3.23	20	eP	Pn	14 33 06.1	+3.3
LVC	Limon Verde	3.27	174	P	Pn	14 33 04.7	+1.7
	comp=E,164nm,0.3s,baz=6.0,slow=9.1,SNR=1024						
LVC	Limon Verde	3.27	174	ePn	Pn	14 33 04.3	+1.4
LVC	Limon Verde	3.27	174	eP	Pn	14 33 04.4	+1.4
LVC	Limon Verde	3.27	174	eP	Pn	14 33 03.9	+1.0
LVC	Limon Verde	3.27	174	eP	Pn	14 33 04.0	+1.0
LVC				eS	Sn	14 33 32.8	-8.7
PB06	IPOC Station P	3.36	184	⇑iP	Pn	14 33 03.4	-0.6
PB05	IPOC Station P	3.59	193	⇑iP	Pn	14 33 05.4	-1.7
PB10	IPOC Station P	4.31	195	ePn	Pn	14 33 14.0	-2.6
PB10	IPOC Station P	4.31	195	⇑iP	Pn	14 33 13.8	-2.8
YJA	Yavi	4.53	129	eP	Pn	14 33 22.2	+2.3
YJA				IAML		14 34 15.3	
	comp=Z,375nm,0.9s						
HJA	Humahuaca	5.29	137	eP	Pn	14 33 30.9	+0.8
HJA				IAML		14 33 34.9	
	comp=Z,556nm,0.7s						
GO02	Mina Guanaco	5.80	183	ePn	Pn	14 33 35.4	-1.5
AZAP	Zapla	6.25	142	eP	Pn	14 33 43.0	0.0
FSA	Cafayete	7.40	156	eP	Pn	14 33 57.2	-1.3
GO03	Copiap	8.26	186	ePn	Pn	14 34 05.9	-4.2
SIV	San Ignacio	8.52	68	P	Pn	14 34 12.9	-0.7
	comp=Z,100nm,0.3s,baz=267,slow=10,SNR=839						
SIV	San Ignacio	8.52	68	ePn	Pn	14 34 12.9	-0.7
LCO	Las Campanas	9.71	187	ePn	Pn	14 34 24.2	-5.6
LCO	Las Campanas	9.71	187	P	Pn	14 34 25.9	-4.0
LCO				pmax	pmax		
	comp=Z,143nm,0.8s						
LCO	Las Campanas	9.71	187	eP	Pn	14 34 24.9	-5.0
LCO				eS	Sn	14 36 13.7	-3.6
NNA	Nana	10.30	314	P	Pn	14 34 34.7	-3.1
	comp=Z,10nm,0.3s,baz=148,slow=12,SNR=35						
NNA				S	Sn	14 36 29.4	-2.0
	comp=Z,43nm,0.3s,baz=218,slow=19,SNR=4.4						
NNA	Nana	10.30	314	ePn	Pn	14 34 33.9	-4.0
NNA	Nana	10.30	314	i P	Pn	14 34 34.9	-2.9
GO04	Tololo Observa	10.87	187	ePn	Pn	14 34 40.5	-5.0
CFA	Coronel Fontan	12.25	176	P	Pn	14 35 00.1	-3.6
	comp=Z,6.1nm,0.3s,baz=350,slow=13,SNR=37						
CFA				S	Sn	14 37 08.9	-10
	comp=Z,7.8nm,0.3s,baz=0.6,slow=23,SNR=6.0						
CFA				LR	LR	14 41 14.9	
	comp=Z,768nm,19.1s,baz=349,slow=44						
AQDB	Aquidauana	12.84	97	eP	Pn	14 35 10.1	-1.5
AQDB				eS	Sn	14 37 29.6	-3.4
CPUP	Villa Florida	13.04	124	P	Pn	14 35 12.7	-1.4
	comp=Z,4.3nm,0.3s,baz=299,slow=11,SNR=75						
CPUP	Villa Florida	13.04	124	eP	Pn	14 35 12.8	-1.2
CPUP				eS	S	14 37 58.7	+3.8
PEL	Peldehue	13.80	185	ePn	Pn	14 35 24.0	+0.1
PEL	Peldehue	13.80	185	eP	Pn	14 35 24.0	+0.1
ATAH	Atahualpa	15.01	323	P	P	14 35 43.5	+1.0
	comp=Z,1.7nm,0.3s,baz=168,slow=7.8,SNR=20						
C2SB	Chapadao do Su	15.58	91	eP	Pn	14 35 47.0	+0.5
GO05	Huala	15.78	188	ePn	Pn	14 35 47.2	-1.7
	comp=Z,168nm,1.0s						
TRCB	Terra Rica	15.93	105	eP	Pn	14 35 50.5	-0.4
PTGB	Pitanga	16.85	112	eP	P	14 36 02.6	+0.1
ITRB	Iturama	17.86	94	eP	Pn	14 36 14.8	+0.3
CPSB	Cacapava Do Su	18.10	131	eP	P	14 36 15.7	-0.5
CPSB				eS	S	14 39 35.4	-2.6
PLTB	Pedras Altas	18.77	134	eP	P	14 36 22.8	-0.7
PLTB				eS	S	14 39 48.9	-2.5
FRTB	Fartura	18.81	106	eP	Pn	14 36 25.7	-0.1
FRTB				eS	S	14 39 46.3	-5.9
CNLB	Canela	19.50	124	eP	P	14 36 30.5	-0.9
CNLB				eS	S	14 40 04.3	-1.5
BB19B	Bebedouro	19.57	99	eP	P	14 36 32.6	+0.3
BB19B				eS	S	14 40 05.9	-1.5
TRQA	Tornquist	19.71	163	eP	P	14 36 33.7	+0.1
	comp=Z,402nm,0.9s						
TRQA	Tornquist	19.71	163	eP	P	14 36 33.7	+0.1
TRQA				pmax	pmax		
	comp=Z,402nm,0.9s						
PTLC	Puerto Leguiza	20.13	344	eP	P	14 36 34.5	-3.9
RCLB	Rio Claro- Sao	20.57	102	eP	P	14 36 41.9	-1.2
RCLB				eS	S	14 40 23.7	-3.4
BDFB	Brasilia	20.63	83	P	P	14 36 43.9	+0.1
	comp=Z,144nm,0.6s,baz=257,slow=12,SNR=66						
BDFB	Brasilia	20.63	83	eP	P	14 36 43.0	-0.9
	comp=Z,221nm,0.9s						
BDFB				eP	Pn	14 36 43.9	-3.2
BDFB	Brasilia	20.63	83	P	P	14 36 43.9	+0.1
PTGA	Pitinga	20.64	27	P	P	14 36 42.7	-1.1
	comp=Z,456nm,0.9s,baz=206,slow=12,SNR=164						
PTGA	Pitinga	20.64	27	eP	P	14 36 42.1	-1.7
	comp=Z,434nm,0.8s						
PTGA	Pitinga	20.64	27	eP	P	14 36 42.2	-1.5
PTGA				eS	S	14 40 21.9	-6.5
SPB	Sao Paulo	20.78	106	eP	P	14 36 43.3	-1.9
	comp=Z,706nm,1.3s						
SPB	Sao Paulo	20.78	106	eP	P	14 36 44.6	-0.7
SPB				eS	S	14 40 17.5	-14
PLCA	Paso Flores	21.35	183	P	P	14 36 51.9	+0.6
	comp=Z,191nm,0.9s,baz=24,slow=12,SNR=86						
PLCA				PcP	PcP	14 40 51.5	+0.5
	comp=Z,5.4nm,0.7s,baz=27,slow=4.3,SNR=3.4						
PLCA	Paso Flores	21.35	183	eP	P	14 36 51.5	+0.2
	comp=Z,340nm,0.9s						
PLCA	Paso Flores	21.35	183	P	P	14 36 51.9	+0.6
PLCA						14 40 51.5	
PEXB	Peixe	21.44	73	eP	P	14 36 51.7	-0.7
PEXB				eS	S	14 40 48.4	+4.3
PMNB	Patos De Minas	21.64	92	eP	P	14 36 53.7	-0.9
PMNB				eS	S	14 40 43.0	-4.9
FLOC	Florencia	21.71	343	eP	P	14 36 53.3	-1.9
CRUC	La Cruz	22.10	339	eP	P	14 37 00.8	+1.2
PARB	Paraibuna	22.40	104	eP	P	14 37 01.2	-1.3
PARB				eS	S	14 40 35.9	-25
SOTA	Rioblanco	22.52	341	eP	P	14 37 04.5	+0.4
BBAC	Balboa, Cauca	22.62	339	eP	P	14 37 06.2	+1.3
PCON	Cinco Dias	22.64	341	eP	P	14 37 07.4	+1.9
BETC	Betania	22.70	344	eP	P	14 37 04.4	-1.2
POPC	Popayan, Colom	22.92	341	eP	P	14 37 08.7	+0.8
MARP	Paez Belalcaza	23.00	343	eP	P	14 37 07.1	-1.6
BSCB	Bom Sucesso	23.08	98	eP	P	14 37 05.7	-3.5
BSCB				eS	S	14 41 08.6	-3.2
SMTB	Santa Maria do	23.46	67	eP	P	14 37 12.7	-0.1
SMTB				eS	S	14 41 18.1	+0.2
PRAC	Prado	23.56	346	eP	P	14 37 11.4	-2.2
VILC	Villavicencio,	23.70	349	eP	P	14 37 14.8	-0.2
ORTC	Ortega, Tolima	23.83	345	eP	P	14 37 14.9	-1.2
GRGC	Isla de Gorgon	23.86	338	eP	P	14 37 18.2	+2.0
YOTC	Yotoco, Valle	24.19	343	eP	P	14 37 19.4	+0.1
CHIC	Chingaza	24.22	349	eP	P	14 37 20.8	+0.9
AGZ	La Independenc	24.32	352	eP	P	14 37 20.5	+0.1
MALC	Bahia Malaga	24.52	340	eP	P	14 37 23.4	+1.2
ROSC	El Rosal	24.53	348	P	P	14 37 22.8	0.0
	comp=Z,10.0nm,0.4s,baz=194,slow=8.7,SNR=6.0						
ROSC				LR	LR	14 47 51.0	
	comp=Z,964nm,18.1s,baz=203,slow=38						
ROSC	El Rosal	24.53	348	eP	P	14 37 21.8	-0.9
	comp=Z,34nm,0.7s						
ROSC	El Rosal	24.53	348	eP	P	14 37 24.2	+1.5
YOPC	Yopal, Colombi	24.73	353	eP	P	14 37 24.6	+0.4
RREF	El Recreo	24.82	346	eP	P	14 37 26.3	+0.7
PLMC	San Jos del P	25.06	343	eP	P	14 37 27.3	+0.1
GUY2C	Guyana, Caldas	25.13	346	eP	P	14 37 29.0	+0.7
DUB01	Friburgo-RJ	25.32	101	eP	P	14 37 28.8	-0.7
DUB01				eS	S	14 41 47.3	-0.4
NORC	Norcasia	25.35	347	eP	P	14 37 29.1	-0.7
RUSC	La Rusia	25.35	351	eP	P	14 37 30.2	0.0
TAMC	Tame, Arauca	25.73	354	eP	P	14 37 32.8	-0.4

BARC	Barichara	26.05	351	eP	P	14 37 36.3	-0.1
HELC	Santa Helena	26.10	346	eP	P	14 37 35.4	-1.6
ELOV	Elorza	26.18	360	eP	P	14 37 38.0	+0.8
SJMB	Sao Joao De Ma	26.58	93	eP	P	14 37 40.1	-0.7
SJMB				eS	S	14 42 12.3	+4.9
SOLC	Bahia Solano	26.63	342	eP	P	14 37 44.0	+2.7
PAMC	Pamplona, Colo	26.72	352	eP	P	14 37 42.4	-0.2
ALF01	Guarapari-ES	26.87	98	eP	P	14 37 44.5	+1.0
ALF01				eS	S	14 42 25.1	+13
DBBC	Dabeiba	27.06	345	eP	P	14 37 45.4	+0.1
CAPV	Capacho	27.20	353	eP	P	14 37 47.0	+0.4
ZARC	Zaragoza, Cauc	27.22	348	eP	P	14 37 45.0	-1.6
RIB01	Linhares ES	27.27	95	eP	P	14 37 47.3	+0.2
RIB01				eS	S	14 41 55.4	-23
OCAC	Ocana	27.69	351	eP	P	14 37 47.4	-3.5
PAYG	Puerto Ayora	27.70	310	eP	P	14 37 52.1	+1.2
	comp=Z,138nm,0.7s						
PAYG	Puerto Ayora	27.70	310	eP	P	14 37 51.8	+0.9
SDV	Santo Domingo	28.08	357	P	P	14 37 54.2	-0.3
	comp=Z,26nm,0.5s,baz=195,slow=6.7,SNR=18						
SDV	Santo Domingo	28.08	357	eP	P	14 37 53.9	-0.6
	comp=Z,79nm,0.8s						
SDV	Santo Domingo	28.08	357	eP	P	14 37 53.6	-0.8
SDV	Santo Domingo	28.08	357	eP	P	14 37 54.2	-0.3
SDV				eS	S	14 42 27.9	-3.5
SMLC	San Martn de	28.36	350	eP	P	14 37 53.4	-3.3
MDP	Montagnes des	29.31	36	P	P	14 38 04.6	-0.5
	comp=Z,81nm,0.9s,baz=215,slow=9.2,SNR=14						
CODC	Agustn Codazz	29.38	352	eP	P	14 38 03.7	-2.0
ARGC	Ariguani, Magd	29.42	350	eP	P	14 38 05.8	-0.3
SJCC	San Jacinto, C	29.63	348	eP	P	14 38 07.2	-0.8
PCRV	Puerto La Cruz	29.69	9	P	P	14 38 09.1	+0.6
	comp=Z,58nm,1.0s,baz=238,slow=2.4,SNR=12						
PCRV	Puerto La Cruz	29.69	9	eP	P	14 38 09.1	+0.6
DABV	Dabajuro	30.10	357	eP	P	14 38 10.6	-1.6
BCIP	Isla Barro Col	30.17	339	eP	P	14 38 12.5	-0.2
	comp=Z,70nm,0.9s						
BCIP	Isla Barro Col	30.17	339	eP	P	14 38 12.5	-0.2
BCIP				pmax	pmax		
	comp=Z,70nm,0.9s						
BCIP	Isla Barro Col	30.17	339	eP	P	14 38 14.1	+1.4
GRGR	Grenville	32.17	14	eP	P	14 38 29.7	-0.6
	comp=Z,533nm,0.8s						
LCR2	La Lucha 2	32.33	332	eP	P	14 38 33.3	+1.3
CVTR	Volcan Turrial	32.47	333	eP	P	14 38 36.3	+2.8
JTS	Las Juntas de	33.24	331	P	P	14 38 41.2	+1.5
	comp=Z,50nm,0.9s,baz=209,slow=3.6,SNR=25						
JTS	Las Juntas de	33.24	331	eP	P	14 38 40.1	+0.4
	comp=Z,58nm,0.9s						
JTS	Las Juntas de	33.24	331⇓	eP	P	14 38 41.3	+1.5
JTS				pmax	pmax		
	comp=Z,60nm,0.9s						
JTS	Las Juntas de	33.24	331	eP	P	14 38 41.9	+2.2
ARE1	Arenal 1	33.29	332	eP	P	14 38 43.1	+3.0
EFI	East Falkland	33.46	167	eP	P	14 38 41.4	+0.2
EFI				epP	pP	14 39 07.6	+0.6
EFI	East Falkland	33.46	167⇓	eP	P	14 38 42.1	+1.0
EFI				pmax	pmax		
	comp=Z,45nm,1.0s						
CUI	Cuipilapa	33.66	331	eP	P	14 38 45.1	+1.7
MESS	Mesas	33.75	331	eP	P	14 38 46.3	+2.2
GO10	Punta Arenas	33.77	182	eP	P	14 38 45.4	+1.4
	comp=Z,179nm,1.2s						
BUEV	Buena Vista	33.90	331	eP	P	14 38 47.4	+1.9
ESPN	Las Esperanzas	34.65	334	eP	P	14 38 52.8	+1.0
	comp=Z,38nm,0.8s						
FDF	Fort de France	34.80	14	eP	P	14 38 51.5	-1.7
	comp=Z,210nm,0.7s						
FDF	Fort de France	34.80	14	eP	P	14 38 51.5	-1.7
FDF				pmax	pmax		
	comp=Z,210nm,0.7s						
ACON	Acoyapa	34.82	332	eP	P	14 38 53.2	-0.2
	comp=Z,76nm,1.1s						
ACON	Acoyapa	34.82	332	eP	P	14 38 53.2	-0.2
RCBR	Riachuelo	35.16	72	P	P	14 38 57.3	+0.8
	comp=Z,205nm,0.7s,baz=235,slow=10,SNR=33						
RCBR	Riachuelo	35.16	72	eP	P	14 38 56.2	-0.3
	comp=Z,221nm,0.8s						
RCBR	Riachuelo	35.16	72	P	P	14 38 57.3	+0.8
RCBR	Riachuelo	35.16	72	eP	P	14 38 56.1	-0.4
RCBR				eS	S	14 44 16.2	-5.5
USHA	Ushuaia	35.44	179	P	P	14 39 00.2	+2.0
	comp=Z,21nm,0.6s,baz=348,slow=8.7,SNR=25						
MATN	Matagalpa	36.01	332	eP	P	14 39 04.7	+1.1
ESTN	Estel	36.36	331	eP	P	14 39 06.2	-0.4
	comp=Z,54nm,0.9s						
RCON	San Juan de Ri	36.60	332	eP	P	14 39 08.9	+0.2
SKI	Saint Kitts	37.01	10	eP	P	14 39 10.9	-1.1
	comp=Z,183nm,0.9s						
SKI	Saint Kitts	37.01	10	eP	P	14 39 10.9	-1.1
SKI				pmax	pmax		
	comp=Z,183nm,0.9s						
OBIP	Obispado Ponce	37.25	4	eP	P	14 39 13.1	-0.9
	comp=Z,94nm,0.7s						
SJG	San Juan	37.35	5	P	P	14 39 13.4	-1.4
	comp=Z,94nm,0.8s,baz=347,slow=0.9,SNR=17						
SJG	San Juan	37.35	5	eP	P	14 39 13.1	-1.7
	comp=Z,99nm,0.8s						
SJG	San Juan	37.35	5	P	P	14 39 13.4	-1.4
MPR	Mayaguez	37.38	3	eP	P	14 39 13.8	-1.2
	comp=Z,126nm,1.0s						
MTP	Monte Pirata	37.39	6	eP	P	14 39 13.1	-2.0
	comp=Z,112nm,1.2s						
RPN	Rapa Nui	37.47	250	P	P	14 39 16.7	+0.8
	comp=Z,95nm,0.9s,baz=63,slow=2.3,SNR=3.2						
RPN				LR	LR	14 51 53.4	
	comp=Z,1µm,18.8s,baz=144,slow=31						
RPN	Rapa Nui	37.47	250	eP	P	14 39 16.7	+0.8
	comp=Z,752nm,1.8s						
RPN	Rapa Nui	37.47	250	P	P	14 39 16.7	+0.8
ANWB	Willy Bob	37.51	12	eP	P	14 39 12.5	-3.7
	comp=Z,152nm,0.8s						
CBYP	Canovanas	37.53	5	eP	P	14 39 14.0	-2.5
	comp=Z,139nm,1.0s						
AOPR	Arecibo Observ	37.54	4	eP	P	14 39 14.1	-2.4
	comp=Z,86nm,0.6s						
TGUH	Tegucigalpa,Un	37.61	331	eP	P	14 39 17.7	+0.5
	comp=Z,120nm,0.9s						
CUPR	Culebra, Puert	37.62	6	eP	P	14 39 15.3	-1.8
	comp=Z,111nm,1.2s						
SMRT	St. Maarten	37.66	10	eP	P	14 39 15.1	-2.4
	comp=Z,306nm,1.3s						
SDDR	Presa de Saban	38.14	357	eP	P	14 39 20.6	-0.9
	comp=Z,40nm,0.8s						
APG	El Apazote	39.98	327	P	P	14 39 38.4	+1.2
	comp=Z,153nm,0.8s,baz=139,slow=5.8,SNR=46						
APG	El Apazote	39.98	327	eP	P	14 39 38.4	+1.2
CCIG	Comitan	41.92	326	eP	P	14 39 52.7	-0.3
	comp=Z,102nm,1.0s						
HOPE	Hope Point	42.94	152	eP	P	14 40 02.2	+1.6
	comp=Z,114nm,1.0s						
TEIG	Tepich	43.50	334	eP	P	14 40 05.2	-0.2
	comp=Z,128nm,0.8s						
CMIG	Matias Romero	44.08	324	P	P	14 40 10.7	+0.5
	comp=Z,90nm,0.8s,baz=124,slow=5.3,SNR=72						
CMIG	Matias Romero	44.08	324	eP	P	14 40 10.7	+0.5
061Z	Ochoppi	46.33	345	P	P	14 40 28.1	+0.3
	baz=165						
TLIG	Tlapa	46.60	320	eP	P	14 40 30.4	+0.2
	comp=Z,146nm,1.0s						
060Z	West Palm Beac	46.77	346	P	P	14 40 31.7	+0.5
	baz=165						
LVIG	Laguna Verde	47.05	324	eP	P	14 40 33.3	-0.2
	comp=Z,62nm,0.9s						
059A	Moore Haven	47.45	346	eP	P	14 40 35.9	-0.5
	comp=Z,152nm,0.8s						
059A				epP	pP	14 41 03.7	-0.1
059A	Moore Haven	47.45	346	P	P	14 40 36.7	+0.3
	baz=165,SNR=5.5						
058A	Arcadia	47.69	345	P	P	14 40 38.4	+0.1
	baz=164						
959A	Okeechobee	47.92	346	P	P	14 40 40.6	+0.5
	baz=165						
958A	Wauchula	48.18	345	P	P	14 40 42.4	+0.3
	baz=164						
957A	Wimauma	48.38	345	P	P	14 40 43.7	0.0
	baz=164						
859A	Kempfer Cattle	48.44	346	P	P	14 40 44.4	+0.3
	baz=165						
DWPF	Disney Wildern	48.61	346	eP	P	14 40 45.5	+0.1
DWPF				epP	pP	14 41 12.7	-0.2
DWPF	Disney Wildern	48.61	346	P	P	14 40 45.6	+0.2
	baz=165						
858A	St. Cloud	48.69	346	P	P	14 40 46.2	+0.1
	baz=165						
857A	Zephyrhills	48.95	345	P	P	14 40 48.0	0.0
	baz=164						
758A	Lake Helen	49.38	346	P	P	14 40 51.9	+0.7
	baz=165,SNR=7.6						
757A	Oxford	49.56	345	P	P	14 40 53.1	+0.5
	baz=164,SNR=5.3						
658A	Bunnell	49.83	346	eP	P	14 40 54.6	-0.1
658A				epP	pP	14 41 21.3	-1.0
658A	Bunnell	49.83	346	P	P	14 40 55.1	+0.4
	baz=165						
656A	Willston	50.08	345	eP	P	14 40 56.6	0.0
	comp=Z,158nm,0.9s						
656A				epP	pP	14 41 23.4	-0.8
656A	Willston	50.08	345	P	P	14 40 56.8	+0.2
	baz=164,SNR=14						
657A	Interlachen	50.13	346	P	P	14 40 57.3	+0.3
	baz=164,SNR=12						
655A	Horseshoe Beac	50.40	344	P	P	14 40 58.8	-0.2
	baz=163						
557A	Orange Park	50.51	346	P	P	14 41 00.1	+0.3
	baz=165,SNR=5.1						
556A	Lake Butler	50.66	345	P	P	14 41 01.0	+0.2
	baz=164,SNR=8.5						
555A	McAlpin	50.91	345	eP	P	14 41 02.9	+0.1
555A				epP	pP	14 41 29.8	-0.5
555A	McAlpin	50.91	345	P	P	14 41 02.7	0.0
	baz=163,SNR=8.8						
457A	Yulee	51.05	346	P	P	14 41 04.1	+0.3
	baz=165						
554A	Perry	51.05	344	P	P	14 41 03.9	0.0
	baz=162,SNR=8.1						
456A	Hilliard	51.26	346	eP	P	14 41 05.3	-0.1
	comp=Z,214nm,0.8s						
456A	Hilliard	51.26	346	P	P	14 41 05.9	+0.5
	baz=164,SNR=5.5						
553A	Crawfordville	51.35	343	P	P	14 41 06.7	+0.6
	baz=162,SNR=14						
455A	Stateville	51.52	345	P	P	14 41 07.3	0.0
	baz=163,SNR=6.8						
552A	Lynn Haven	51.54	342	P	P	14 41 07.5	0.0
	baz=161						
BBSR	BB Station	51.61	5	eP	P	14 41 06.7	-1.3
	comp=Z,104nm,0.7s						
454A	Quitman	51.64	344	P	P	14 41 08.4	+0.1
	baz=163,SNR=14						
357A	Townsend	51.81	347	P	P	14 41 09.8	+0.3
	baz=165,SNR=5.1						
356A	Blackshear	51.86	346	P	P	14 41 09.9	0.0
	baz=164						
453A	Whigham	51.95	344	eP	P	14 41 10.7	+0.1
453A				epP	pP	14 41 37.6	-0.7
453A	Whigham	51.95	344	P	P	14 41 10.8	+0.2
	baz=162,SNR=13						
355A	Pearson	52.05	345	P	P	14 41 11.2	-0.1
	baz=164,SNR=6.1						
451A	Vernon	52.13	342	epP	pP	14 41 38.6	-1.0
451A	Vernon	52.13	342	P	P	14 41 11.7	-0.2
	baz=160						
452A	Marianna	52.19	343	P	P	14 41 12.1	-0.2
	baz=161,SNR=11						
257A	Skidaway Islan	52.25	347	P	P	14 41 13.0	+0.2
	baz=166						
TIGA	Tifton	52.32	345	P	P	14 41 13.3	0.0
	baz=163						
353A	Camilla	52.40	344	P	P	14 41 13.5	-0.3
	baz=162,SNR=22						
256A	Glennville	52.44	346	P	P	14 41 14.1	0.0
	baz=165						
TRIS	Tristan da Cun	52.48	122	eP	P	14 41 14.2	-0.3
	comp=Z,446nm,0.4s						
255A	Hazlehurst	52.52	346	eP	P	14 41 13.3	-1.4
255A				epP	pP	14 41 41.4	-1.0
255A	Hazlehurst	52.52	346	P	P	14 41 14.8	+0.1
	baz=164,SNR=6.4						
450A	Crestview	52.55	341	P	P	14 41 14.8	-0.2
	baz=159						
351A	Pinckard	52.71	342	P	P	14 41 15.6	-0.5
	baz=161						
449A	Pace	52.71	341	P	P	14 41 15.8	-0.3
	baz=159						
352A	Blakely	52.71	343	eP	P	14 41 15.3	-0.8
352A				epP	pP	14 41 42.1	-1.8
352A	Blakely	52.71	343	P	P	14 41 15.9	-0.3
	baz=161,SNR=21						
254A	Abbeville	52.73	345	P	P	14 41 16.1	-0.2
	baz=163,SNR=18						
158A	Hollywood	52.82	348	P	P	14 41 17.3	+0.4
	baz=167						
LNIG	Linares	52.88	325	eP	P	14 41 16.5	-1.0
LNIG				epP	pP	14 41 43.6	-1.4
157A	Early Branch	52.92	348	P	P	14 41 17.8	+0.2
	baz=166						
ZAIG	Zacatecas	52.98	321	eP	P	14 41 19.3	+0.6
	comp=Z,147nm,0.8s						
ZAIG				epP	pP	14 41 46.1	+0.1
RGRS	Roger Stewart	52.99	349	eP	P	14 41 18.4	+0.3
	comp=Z,1µm,0.6s						
156A	Sylvania	53.00	347	P	P	14 41 18.4	+0.1
	baz=166,SNR=6.3						
BRAL	Brewton	53.04	341	eP	P	14 41 18.3	-0.2
BRAL				epP	pP	14 41 44.7	-1.5
BRAL	Brewton	53.04	341	P	P	14 41 18.4	-0.2
	baz=159,SNR=11						
253A	Americus	53.05	344	eP	P	14 41 18.0	-0.6
253A				epP	pP	14 41 44.4	-2.1
253A	Americus	53.05	344	P	P	14 41 18.3	-0.4
	baz=162						
350A	Dozier	53.05	342	P	P	14 41 18.6	-0.1
	baz=160,SNR=7.4						
252A	Lumpkin	53.15	344	P	P	14 41 19.0	-0.4
	baz=162,SNR=6.5						
Z59A	Georgetown, SC	53.15	350	P	P	14 41 19.6	+0.2
	baz=168						
155A	Kite	53.18	346	P	P	14 41 19.6	0.0
	baz=164,SNR=14						
349A	Repton	53.25	341	P	P	14 41 19.5	-0.6
	baz=159,SNR=18						
154A	Montrose	53.32	345	eP	P	14 41 20.1	-0.6
154A				epP	pP	14 41 46.5	-1.9
154A	Montrose	53.32	345	P	P	14 41 20.2	-0.4
	baz=164,SNR=10						
Z58A	St. Stephen	53.33	349	P	P	14 41 21.0	+0.3
	baz=168,SNR=5.7						
251A	Midway	53.42	343	P	P	14 41 20.8	-0.6
	baz=161,SNR=19						
Z57A	Bowman	53.46	348	P	P	14 41 21.5	-0.1
	baz=167,SNR=26						
153A	Fort Valley	53.53	345	P	P	14 41 21.6	-0.6
	baz=163						
250A	Grady	53.56	342	eP	P	14 41 21.8	-0.6
250A				epP	pP	14 41 47.9	-2.3
250A	Grady	53.56	342	P	P	14 41 21.4	-1.0
	baz=160,SNR=11						
Z56A	Williston	53.62	347	P	P	14 41 22.7	-0.1
	baz=166						
Z55A	Blythe	53.69	347	P	P	14 41 23.2	-0.1
	baz=165						
Y60A	Bolivia	53.73	351	eP	P	14 41 22.7	-0.8
	comp=Z,135nm,0.9s						
152A	Waverly Hall	53.78	344	eP	P	14 41 23.0	-1.0
152A				epP	pP	14 41 50.0	-1.9
152A	Waverly Hall	53.78	344	P	P	14 41 23.2	-0.8
	baz=162,SNR=20						
151A	Opelika	53.81	343	P	P	14 41 23.3	-0.8
	baz=161,SNR=8.8						
249A	Camden	53.81	341	P	P	14 41 23.7	-0.5
	baz=159,SNR=23						
Y59A	Loris	53.81	350	P	P	14 41 24.3	+0.1
	baz=169						
Z54A	Sparta	53.86	346	P	P	14 41 23.9	-0.7
	baz=164,SNR=16						
Y58A	Scranton	53.86	349	eP	P	14 41 24.2	-0.3
Y58A				epP	pP	14 41 52.3	-0.2
Y58A	Scranton	53.86	349	P	P	14 41 24.8	+0.2
	baz=168						
Y56A	Pelion	54.06	348	P	P	14 41 25.8	-0.2
	baz=166						
Z53A	Monticello	54.07	345	P	P	14 41 25.3	-0.8
	baz=163,SNR=9.9						
150A	Eclectic	54.08	343	P	P	14 41 25.4	-0.7
	baz=160,SNR=16						
Y57A	Sumter	54.10	349	eP	P	14 41 26.1	-0.1
	comp=Z,97nm,0.7s						
Y57A	Sumter	54.10	349	P	P	14 41 26.3	0.0
	baz=167						
GOGA	Godfrey	54.17	345	eP	P	14 41 26.1	-0.8
GOGA				epP	pP	14 41 52.8	-1.9
GOGA	Godfrey	54.17	345	eP	P	14 41 26.1	-0.8
GOGA				e*PP	pP	14 41 52.8	-1.9
GOGA	Godfrey	54.17	345	P	P	14 41 26.0	-0.8
	baz=163,SNR=12						
Z52A	Williamson	54.20	344	P	P	14 41 26.3	-0.7
	baz=162,SNR=16						
KVTX	Kingsville	54.22	328	eP	P	14 41 27.1	-0.1
	comp=Z,235nm,0.8s						
X60A	Albert Glenn T	54.25	351	P	P	14 41 28.2	+0.9
	baz=170						
149A	Jones	54.29	342	P	P	14 41 26.7	-1.0
	baz=160,SNR=7.9						
Y55A	Saluda	54.32	347	P	P	14 41 27.8	0.0
	baz=165,SNR=25						
ASCN	Ascension	54.38	86	eP	P	14 41 28.5	-0.2
	comp=Z,718nm,0.8s						
Y54A	Tignall	54.42	346	P	P	14 41 28.1	-0.5
	baz=164,SNR=18						
X58A	Rowland	54.44	350	eP	P	14 41 28.6	-0.1
	comp=Z,66nm,0.9s						
X58A	Rowland	54.44	350	P	P	14 41 28.8	0.0
	baz=168						
X57A	Johnson Farm,	54.48	349	P	P	14 41 29.0	-0.1
	baz=167						
Z51A	Franklin	54.51	344	P	P	14 41 28.8	-0.5
	baz=162						
JSC	Jenkinsville	54.53	348	eP	P	14 41 29.1	-0.3
	comp=Z,55nm,0.9s						
JSC	Jenkinsville	54.53	348	eP	P	14 41 29.1	-0.3
JSC				pmax	pmax		
	comp=Z,55nm,0.9s						
148A	Greensboro	54.57	341	P	P	14 41 28.8	-0.9
	baz=159,SNR=5.9						
Y53A	Monroe	54.62	345	P	P	14 41 29.6	-0.5
	baz=163,SNR=7.6						
Z50A	Ashland	54.66	343	eP	P	14 41 29.3	-1.1
	comp=Z,121nm,0.8s						
Z50A				epP	pP	14 41 56.0	-2.4
Z50A	Ashland	54.66	343	P	P	14 41 29.4	-0.9
	baz=161,SNR=53						
W60A	Pink Hill	54.68	352	P	P	14 41 30.6	+0.2
	baz=170						
HODGE	Hodges	54.69	347	eP	P	14 41 30.3	-0.2
	comp=Z,168nm,1.5s						
X56A	White Oak	54.69	348	P	P	14 41 30.5	0.0
	baz=166,SNR=22						
W61A	Ground Anchor	54.71	352	P	P	14 41 31.2	+0.6
	baz=171						
BIRD	Birdtown, Kers	54.73	349	eP	P	14 41 30.5	-0.3
	comp=Z,116nm,0.9s						
Y52A	Lilburn	54.75	345	eP	P	14 41 30.4	-0.7
	comp=Z,58nm,0.9s						
Y52A	Lilburn	54.75	345	P	P	14 41 30.3	-0.7
	baz=163,SNR=9.2						
LRAL	Lakeview Retre	54.76	342	eP	P	14 41 30.1	-0.9
	comp=Z,54nm,0.8s						
LRAL	Lakeview Retre	54.76	342	P	P	14 41 30.1	-0.9
	baz=159,SNR=13						
Z49A	Columbiana	54.77	342	P	P	14 41 30.2	-1.0
	baz=160,SNR=28						
X55A	Gracelyn & Ava	54.78	348	P	P	14 41 31.0	-0.3
	baz=166,SNR=21						
147A	Livingston	54.81	340	eP	P	14 41 30.4	-1.0
	comp=Z,77nm,1.3s						
147A	Livingston	54.81	340	P	P	14 41 30.5	-1.0
	baz=158						
W58A	Raeford	54.88	350	P	P	14 41 32.1	+0.2
	baz=168,SNR=13						
W59A	Clinton	54.90	351	P	P	14 41 32.6	+0.6
	baz=169						
V62A	Hyde County Ai	54.97	353	P	P	14 41 33.2	+0.7
	baz=172						
X54A	Belton	55.02	347	P	P	14 41 32.9	0.0
	baz=165,SNR=13						
Y51A	Rockmart	55.04	344	P	P	14 41 32.2	-0.9
	baz=162,SNR=28						
W57A	Gilead	55.14	349	eP	P	14 41 33.5	-0.3
	comp=Z,78nm,0.8s						
W57A	Gilead	55.14	349	P	P	14 41 33.4	-0.3
	baz=168,SNR=26						
VBMS	Vicksburg	55.15	338	eP	P	14 41 33.4	-0.5
	comp=Z,181nm,1.5s						
VBMS	Vicksburg	55.15	338	P	P	14 41 32.8	-1.1
	baz=155						
PAULI	Pauline	55.16	347	eP	P	14 41 33.4	-0.6
PAULI				epP	pP	14 42 01.2	-0.6
X53A	Estanollee	55.18	346	P	P	14 41 33.5	-0.5
	baz=164,SNR=8.1						
Y50A	Piedmont	55.21	343	P	P	14 41 33.4	-0.9
	baz=161,SNR=19						
W56A	Indian Trail	55.23	349	P	P	14 41 34.1	-0.3
	baz=167,SNR=30						
V61A	Roper	55.26	353	P	P	14 41 34.8	+0.2
	baz=172						
HKT	Hockley	55.27	332	eP	P	14 41 35.0	+0.2
	comp=Z,107nm,1.0s						
HKT	Hockley	55.27	332	eP	P	14 41 35.0	+0.2
HKT				pmax	pmax		
	comp=Z,107nm,1.0s						
Y49A	Blount Mountai	55.36	343	eP	P	14 41 34.4	-1.0
	comp=Z,51nm,0.8s						
Y49A				epP	pP	14 42 02.0	-1.5
Y49A	Blount Mountai	55.36	343	P	P	14 41 34.2	-1.2
	baz=160,SNR=19						
KMSC	Kings Mountain	55.38	348	eP	P	14 41 35.6	+0.1
	comp=Z,94nm,1.0s						
KMSC	Kings Mountain	55.38	348	P	P	14 41 35.2	-0.3
	baz=166,SNR=19						
X52A	Dahlonega	55.41	345	P	P	14 41 35.0	-0.8
	baz=163,SNR=11						
V59A	Middlesex	55.46	351	P	P	14 41 35.8	-0.2
	baz=170,SNR=6.7						
W54A	Cherokee Point	55.49	347	P	P	14 41 36.3	0.0
	baz=165,SNR=18						
BG3	Lake Jocassee	55.57	346	eP	P	14 41 36.9	0.0
BG3				epP	pP	14 42 03.3	-1.5
833A	Chaparral WMA,	55.61	328	eP	P	14 41 37.1	-0.1
	comp=Z,227nm,0.8s						
833A				epP	pP	14 42 04.3	-0.6
833A	Chaparral WMA,	55.61	328	P	P	14 41 37.1	-0.1
	baz=145,SNR=38						
X51A	Calhoun	55.62	344	eP	P	14 41 36.7	-0.5
X51A				epP	pP	14 42 03.8	-1.4
X51A	Calhoun	55.62	344	P	P	14 41 36.2	-1.0
	baz=162,SNR=17						
V58A	Windy Hill, Pi	55.62	350	P	P	14 41 36.9	-0.3
	baz=169,SNR=7.2						
Y48A	Jasper	55.63	342	P	P	14 41 36.1	-1.3
	baz=160,SNR=8.2						
X50B	Fort Payne	55.72	344	P	P	14 41 36.8	-1.2
	baz=161,SNR=20						
W53A	Cullowhee	55.79	346	P	P	14 41 38.0	-0.6
	baz=164,SNR=28						
V57A	Coltrane Farms	55.82	350	P	P	14 41 38.2	-0.4
	baz=168,SNR=13						
V56A	Mocksville	55.87	349	eP	P	14 41 38.8	-0.2
V56A				epP	pP	14 42 05.6	-1.6
V56A	Mocksville	55.87	349	P	P	14 41 38.8	-0.2
	baz=167,SNR=46						
W52A	Murphy	55.89	346	eP	P	14 41 38.9	-0.3
W52A				epP	pP	14 42 05.5	-1.7
W52A	Murphy	55.89	346	P	P	14 41 38.5	-0.7
	baz=163,SNR=13						
X49A	Woodville	55.95	343	P	P	14 41 38.4	-1.2
	baz=160,SNR=5.1						
U59A	Littleton	55.97	352	eP	P	14 41 38.5	-1.2
	comp=Z,27nm,0.8s						
U60A	Pendleton	56.01	352	P	P	14 41 41.1	+1.2
	baz=171						
V55A	Taylorsville	56.04	348	P	P	14 41 39.9	-0.3
	baz=166,SNR=12						
X48A	Hartselle	56.10	342	eP	P	14 41 39.7	-0.9
	comp=Z,94nm,0.9s						
X48A	Hartselle	56.10	342	P	P	14 41 39.5	-1.1
	baz=160,SNR=28						
V54A	Nebo	56.11	348	P	P	14 41 40.5	-0.3
	baz=166,SNR=28						
U58A	Oxford	56.12	351	P	P	14 41 40.4	-0.3
	baz=169						
W51A	Cleveland	56.16	345	P	P	14 41 40.3	-0.7
	baz=162,SNR=27						
V53A	Saluda	56.19	347	eP	P	14 41 41.0	-0.4
	comp=Z,66nm,0.8s						
V53A	Saluda	56.19	347	P	P	14 41 40.9	-0.4
	baz=165,SNR=14						
U57A	Blanch	56.28	350	P	P	14 41 41.5	-0.3
	baz=169,SNR=11						

NATX	Nacogdoches	56.33	334	eP	P	14 41 43.0	+0.6
	comp=Z,241nm,0.9s						
NATX	Nacogdoches	56.33	334	P	P	14 41 42.8	+0.5
	baz=151,SNR=10.0						
W50A	Signal Mountai	56.33	344	eP	P	14 41 41.5	-0.9
W50A				epP	pP	14 42 08.5	-2.0
W50A	Signal Mountai	56.33	344	P	P	14 41 41.4	-0.9
	baz=162,SNR=21						
U56A	King	56.37	349	P	P	14 41 42.5	-0.1
	baz=167,SNR=15						
CPCT	Cooper Cave	56.37	345	eP	P	14 41 42.0	-0.5
CPCT				epP	pP	14 42 09.1	-1.6
X47A	Russelville	56.40	342	P	P	14 41 41.4	-1.3
	baz=159,SNR=15						
SACV	Santiago Islan	56.43	56	eP	P	14 41 42.8	-0.6
	comp=Z,193nm,0.8s						
W49A	Belvidere	56.51	343	P	P	14 41 42.5	-1.1
	baz=161,SNR=13						
SWET	Sewanee	56.51	344	eP	P	14 41 42.7	-0.9
	comp=Z,83nm,0.9s						
V52A	Sevierville	56.53	346	eP	P	14 41 43.0	-0.7
V52A				epP	pP	14 42 09.6	-2.2
V52A	Sevierville	56.53	346	P	P	14 41 43.0	-0.7
	baz=164,SNR=25						
T59A	Double "B" Far	56.55	352	eP	P	14 41 43.9	+0.1
	comp=Z,76nm,0.9s						
T59A	Double "B" Far	56.55	352	P	P	14 41 44.1	+0.4
	baz=171,SNR=13						
U55A	TA2, Sparta	56.64	349	P	P	14 41 44.3	-0.3
	baz=167,SNR=24						
X46A	Booneville	56.65	341	P	P	14 41 43.3	-1.3
	baz=158,SNR=13						
T58A	Grand View Acr	56.66	351	P	P	14 41 44.4	-0.1
	baz=170,SNR=13						
V51A	Loudon	56.67	345	eP	P	14 41 44.1	-0.5
V51A				epP	pP	14 42 11.4	-1.4
V51A	Loudon	56.67	345	P	P	14 41 43.9	-0.8
	baz=163,SNR=6.8						
W48A	Pulaski	56.71	343	P	P	14 41 43.8	-1.1
	baz=160,SNR=38						
V50A	Pikevile	56.73	345	P	P	14 41 44.1	-0.9
	baz=162,SNR=52						
435B	Jarrell	56.77	331	eP	P	14 41 45.6	+0.1
	comp=Z,131nm,0.8s						
435B	Jarrell	56.77	331	P	P	14 41 45.5	0.0
	baz=148,SNR=11						
U54A	Nelsons Funny	56.81	348	eP	P	14 41 45.8	0.0
	comp=Z,149nm,1.0s						
U54A	Nelsons Funny	56.81	348	P	P	14 41 45.4	-0.3
	baz=166,SNR=20						
U53A	Fall Branch	56.81	347	P	P	14 41 45.2	-0.5
	baz=165,SNR=14						
T57A	Hurt	56.82	350	eP	P	14 41 45.8	0.0
	comp=Z,79nm,0.9s						
T57A	Hurt	56.82	350	P	P	14 41 45.7	0.0
	baz=169,SNR=13						
OXF	Oxford	56.87	340	eP	P	14 41 45.2	-0.9
	comp=Z,248nm,0.9s						
OXF				epP	pP	14 42 12.2	-1.9
OXF	Oxford	56.87	340	eP	P	14 41 45.2	-0.9
OXF				e*PP	pP	14 42 12.2	-1.9
OXF				pmax	pmax		
	comp=Z,248nm,0.9s						
OXF	Oxford	56.87	340	P	P	14 41 44.8	-1.3
	baz=157,SNR=17						
PLAL	Pickwick Lake	56.89	342	eP	P	14 41 45.1	-1.2
	comp=Z,107nm,0.9s						
PLAL				epP	pP	14 42 12.0	-2.5
Z41A	Richland Creek	56.92	336	eP	P	14 41 45.6	-0.8
	comp=Z,194nm,1.0s						
Z41A	Richland Creek	56.92	336	P	P	14 41 46.0	-0.5
	baz=153						
T56A	Rocky Mt	56.97	350	P	P	14 41 47.2	+0.4
	baz=168,SNR=14						
W47A	Westpoint	57.00	342	P	P	14 41 45.8	-1.3
	baz=159,SNR=28						
U52A	Thorn Hill	57.01	346	P	P	14 41 46.2	-0.9
	baz=164,SNR=10						
V49A	McMinnville	57.02	344	P	P	14 41 46.0	-1.2
	baz=161,SNR=37						
W46A	Michie	57.12	341	P	P	14 41 46.3	-1.6
	baz=158						
CCAR	Cane Creek	57.13	338	eP	P	14 41 48.0	+0.1
	comp=Z,163nm,0.8s						
U51A	La Follette	57.14	346	P	P	14 41 47.4	-0.7
	baz=163,SNR=13						
T55A	Pulaski	57.19	349	P	P	14 41 48.7	+0.3
	baz=167,SNR=39						
TZTN	Tazewell	57.19	346	eP	P	14 41 46.5	-1.8
	comp=Z,113nm,1.3s						
TZTN	Tazewell	57.19	346	P	P	14 41 47.7	-0.6
	baz=164,SNR=11						
BLA	Blacksburg	57.22	349	eP	P	14 41 48.5	-0.1
	comp=Z,244nm,1.6s						
BLA	Blacksburg	57.22	349	eP	P	14 41 48.5	-0.1
BLA				pmax	pmax		
	comp=Z,244nm,1.6s						
BLA	Blacksburg	57.22	349	P	P	14 41 48.9	+0.3
	baz=168						
V48A	Smith Brothers	57.24	343	eP	P	14 41 47.9	-0.8
	comp=Z,105nm,0.8s						
V48A	Smith Brothers	57.24	343	P	P	14 41 47.8	-1.0
	baz=160,SNR=46						
S58A	Poland Farm, P	57.24	352	eP	P	14 41 48.8	+0.1
	comp=Z,33nm,1.0s						
S58A	Poland Farm, P	57.24	352	P	P	14 41 49.5	+0.8
	baz=170						
T54A	Tazewell	57.28	348	P	P	14 41 48.9	-0.2
	baz=166,SNR=19						
X43A	Marvell	57.36	339	eP	P	14 41 49.4	-0.1
	comp=Z,250nm,0.8s						
X43A	Marvell	57.36	339	P	P	14 41 49.1	-0.5
	baz=156,SNR=6.3						
U50A	Jamestown	57.37	345	P	P	14 41 49.0	-0.6
	baz=162,SNR=24						
T53A	Wise	57.40	347	P	P	14 41 49.2	-0.6
	baz=165,SNR=15						
WLAR	White Oak Lake	57.42	336	eP	P	14 41 50.1	+0.2
	comp=Z,403nm,0.8s						
CLTN	Cedars of Leba	57.44	344	eP	P	14 41 49.0	-1.1
	comp=Z,54nm,0.9s						
S57A	Dark Hollow, R	57.52	351	eP	P	14 41 51.0	+0.3
	comp=Z,70nm,0.9s						
S57A	Dark Hollow, R	57.52	351	P	P	14 41 50.9	+0.3
	baz=169,SNR=10						
V47A	Nunnelly	57.52	342	P	P	14 41 49.3	-1.4
	baz=160,SNR=16						
S56A	Natural Bridge	57.53	350	P	P	14 41 50.5	-0.2
	baz=168						
R58B	Mineral	57.57	352	eP	P	14 41 51.1	+0.2
	comp=Z,52nm,0.9s						
JCT	Junction City	57.58	329	eP	P	14 41 50.7	-0.5
	comp=Z,111nm,0.9s						
JCT	Junction City	57.58	329	eP	P	14 41 50.7	-0.5
JCT				pmax	pmax		
	comp=Z,111nm,0.9s						
JCT	Junction City	57.58	329	P	P	14 41 51.0	-0.2
	baz=146,SNR=35						
T52A	Hallie	57.61	347	eP	P	14 41 50.4	-0.9
	comp=Z,92nm,0.9s						
T52A	Hallie	57.61	347	P	P	14 41 50.5	-0.8
	baz=165,SNR=9.7						
V46A	Holladay	57.67	342	P	P	14 41 49.8	-1.9
	baz=159,SNR=25						
T51A	Gray	57.68	346	P	P	14 41 51.2	-0.7
	baz=164,SNR=10						
U49A	Red Boiling Sp	57.70	344	P	P	14 41 50.8	-1.1
	baz=162,SNR=21						
R59A	King George, V	57.70	353	P	P	14 41 52.9	+1.1
	baz=171						
WHTX	Lake Whitney,	57.74	332	eP	P	14 41 52.0	-0.3
	comp=Z,208nm,0.8s						
WHTX	Lake Whitney,	57.74	332	P	P	14 41 52.1	-0.1
	baz=148,SNR=32						
S55A	Lewisburg	57.78	350	P	P	14 41 52.9	+0.4
	baz=168,SNR=46						
U48A	Cassie Pea, Po	57.89	344	P	P	14 41 52.5	-0.8
	baz=161,SNR=30						
WVT	Waverly	57.89	342	eP	P	14 41 51.6	-1.7
	comp=Z,149nm,0.8s						
WVT				epP	pP	14 42 19.1	-2.4
WVT	Waverly	57.89	342	eP	P	14 41 51.6	-1.7
WVT				e*PP	pP	14 42 19.1	-2.4
WVT				pmax	pmax		
	comp=Z,149nm,0.8s						
WVT	Waverly	57.89	342	P	P	14 41 52.1	-1.1
	baz=159						
R58A	Rapidan	57.91	352	P	P	14 41 53.7	+0.3
	baz=170,SNR=10						
T50A	Nancy	57.94	345	P	P	14 41 52.7	-1.0
	baz=163,SNR=12						
S54A	Dingess, Beckl	57.95	349	P	P	14 41 53.3	-0.4
	baz=167,SNR=14						
HPIG		57.96	321	eP	P	14 41 53.7	-0.5
	comp=Z,115nm,1.0s						
R57A	Stanardsville	57.98	351	P	P	14 41 54.3	+0.4
	baz=170,SNR=12						
S53A	Williamson	57.99	348	P	P	14 41 53.5	-0.5
	baz=166						
X40A	Basin Creek Fa	58.03	337	eP	P	14 41 53.2	-1.0
	comp=Z,21nm,1.0s						
X40A	Basin Creek Fa	58.03	337	P	P	14 41 53.3	-0.9
	baz=154,SNR=7.0						
U47A	Clarksville	58.03	343	P	P	14 41 53.1	-1.1
	baz=160,SNR=38						
UALR	University of	58.11	338	eP	P	14 41 54.0	-0.8
	comp=Z,90nm,1.1s						
S52A	Salyersville	58.18	347	P	P	14 41 54.5	-0.7
	baz=165						
Q61A	Milford	58.19	354	P	P	14 41 56.0	+0.8
	baz=173						
T49A	Edmonton	58.19	345	eP	P	14 41 54.4	-1.0
T49A				epP	pP	14 42 21.8	-1.8
T49A	Edmonton	58.19	345	P	P	14 41 54.4	-1.0
	baz=162,SNR=39						
U46A	Springville	58.20	342	P	P	14 41 54.3	-1.1
	baz=159						
R55A	Marlinton	58.21	350	eP	P	14 41 55.9	+0.4
	comp=Z,234nm,1.5s						
R55A	Marlinton	58.21	350	P	P	14 41 55.8	+0.3
	baz=168,SNR=20						
R56A	Bull Pasture M	58.22	351	P	P	14 41 56.4	+0.7
	baz=169,SNR=12						
S51A	Beattyville	58.25	347	eP	P	14 41 54.8	-1.0
	comp=Z,62nm,0.9s						
S51A	Beattyville	58.25	347	P	P	14 41 54.8	-1.0
	baz=164,SNR=6.2						
R54A	Victor	58.26	349	P	P	14 41 55.6	-0.2
	baz=167,SNR=21						
MIAR	Mount Ida	58.35	337	eP	P	14 41 55.8	-0.7
	comp=Z,110nm,0.9s						
MIAR	Mount Ida	58.35	337	eP	P	14 41 55.8	-0.7
MIAR				pmax	pmax		
	comp=Z,109nm,0.9s						
MIAR	Mount Ida	58.35	337	P	P	14 41 55.9	-0.6
	baz=153,SNR=59						
UTMT	University of	58.39	341	eP	P	14 41 56.2	-0.5
	comp=Z,276nm,1.0s						
GNAR	Gosnell	58.40	340	eP	P	14 41 56.2	-0.5
	comp=Z,201nm,1.0s						
T48A	Bowling Green	58.42	344	P	P	14 41 55.7	-1.2
	baz=161,SNR=22						
W41B	Gary Mavity, V	58.43	338	eP	P	14 41 56.3	-0.7
	comp=Z,97nm,1.4s						
W41B	Gary Mavity, V	58.43	338	P	P	14 41 56.1	-0.9
	baz=154,SNR=28						
GLAT	Glass	58.45	341	eP	P	14 41 56.3	-0.8
	comp=Z,315nm,1.1s						
S50A	Richmond	58.47	346	P	P	14 41 56.6	-0.7
	baz=163,SNR=17						
T47A	Sharon Grove	58.49	343	eP	P	14 41 56.3	-1.1
	comp=Z,171nm,0.8s						
T47A	Sharon Grove	58.49	343	P	P	14 41 56.4	-1.0
	baz=160,SNR=44						
Q58A	Fox Den Farm,	58.51	352	P	P	14 41 57.5	+0.1
	baz=171,SNR=7.5						
WHAR	Wooly Hollow	58.55	338	eP	P	14 41 56.9	-1.0
	comp=Z,61nm,0.9s						
R53A	Hurricane	58.58	348	eP	P	14 41 57.0	-1.0
R53A				epP	pP	14 42 24.9	-1.4
R53A	Hurricane	58.58	348	P	P	14 41 57.7	-0.4
	baz=166,SNR=6.6						
TXAR	Lajitas Array	58.66	325	P	P	14 41 58.9	0.0
	comp=Z,23nm,0.8s,baz=141,slow=8.1,SNR=57						
TXAR				pP	pP	14 42 26.3	-0.6
	comp=Z,39nm,0.9s,baz=138,slow=8.2,SNR=13						
TXAR	Lajitas Array	58.66	325	P	P	14 41 58.9	0.0
TXAR				*PP	pP	14 42 26.3	-0.6
TX31	Lajitas Ar. Si	58.66	325	eP	P	14 41 58.3	-0.6
	comp=Z,45nm,0.8s						
Q57A	Strasburg	58.69	352	P	P	14 41 59.2	+0.4
	baz=170,SNR=23						
PVMO	Portageville	58.71	341	eP	P	14 41 58.5	-0.5
	comp=Z,957nm,1.1s						
R52A	Catlettsburg	58.73	348	P	P	14 41 58.3	-0.7
	baz=165						
T46A	Princeton	58.76	343	P	P	14 41 58.1	-1.2
	baz=159,SNR=47						
S49A	Springfield	58.78	345	P	P	14 41 58.1	-1.3
	baz=162,SNR=14						
Q56A	Snyder Ridge,	58.81	351	P	P	14 42 00.1	+0.5
	baz=169,SNR=25						
S48A	Wiedeman Farm,	58.85	344	P	P	14 41 58.2	-1.7
	baz=162,SNR=32						
SDMD	Soldier's Deli	58.87	353	eP	P	14 41 59.8	-0.2
	comp=Z,24nm,1.0s						
R51A	Hillsboro	58.88	347	P	P	14 41 59.5	-0.6
	baz=164,SNR=7.8						
Q55A	Buckhannon	58.90	350	P	P	14 42 00.8	+0.5
	baz=168,SNR=25						
P61A	Hammonton	58.93	355	P	P	14 42 01.0	+0.6
	baz=174						
T45A	Paducah	58.95	342	eP	P	14 41 59.8	-0.8
	comp=Z,351nm,0.8s						
T45A	Paducah	58.95	342	P	P	14 41 59.7	-0.8
	baz=159,SNR=5.1						
P58A	Pank, Wackersv	59.00	353	P	P	14 42 01.9	+1.1
	baz=171						
S47A	Hartford	59.00	344	P	P	14 41 59.4	-1.5
	baz=161,SNR=17						
W39A	Magazine	59.01	337	eP	P	14 42 00.9	-0.1
	comp=Z,127nm,0.8s						
W39A	Magazine	59.01	337	P	P	14 42 00.8	-0.2
	baz=153,SNR=84						
Q54A	Coxs Mills	59.02	350	eP	P	14 42 00.8	-0.3
	comp=Z,132nm,1.1s						
Q54A	Coxs Mills	59.02	350	P	P	14 42 00.7	-0.3
	baz=167,SNR=23						
Q53A	Leroy	59.02	349	P	P	14 42 00.7	-0.3
	baz=166,SNR=32						
P59A	Jarrettsville	59.02	354	P	P	14 42 01.9	+0.9
	baz=172,SNR=5.6						
R50A	Paris	59.03	346	eP	P	14 42 00.3	-0.8
R50A				epP	pP	14 42 27.0	-2.4
R50A	Paris	59.03	346	P	P	14 42 00.4	-0.7
	baz=163,SNR=10						
FCAR	Ozark Folk Cen	59.03	338	eP	P	14 41 59.9	-1.3
	comp=Z,68nm,0.8s						
P57A	Homestead Farm	59.08	352	P	P	14 42 02.1	+0.7
	baz=170,SNR=8.0						
X37A	Clayton	59.09	335	eP	P	14 42 01.4	-0.2
	comp=Z,184nm,0.8s						
P60A	Greenville	59.14	354	P	P	14 42 02.5	+0.6
	baz=173						
P56A	Dayton Farm, R	59.21	351	P	P	14 42 03.2	+0.9
	baz=170,SNR=7.8						
R49A	Shelbyville	59.23	345	eP	P	14 42 01.4	-1.2
R49A				epP	pP	14 42 28.2	-2.6
R49A	Shelbyville	59.23	345	P	P	14 42 01.4	-1.2
	baz=162,SNR=7.4						
PSUB	Penn St. - Bra	59.24	354	eP	P	14 42 02.2	-0.3
PSUB				epP	pP	14 42 29.8	-1.1
Q52A	Bidwell	59.26	348	P	P	14 42 02.2	-0.4
	baz=166,SNR=11						
ABTX	Abilene, Hawle	59.27	330	eP	P	14 42 02.5	-0.4
ABTX				epP	pP	14 42 29.2	-1.6
ABTX	Abilene, Hawle	59.27	330	P	P	14 42 02.6	-0.3
	baz=146,SNR=32						
PBMO	Poplar Bluff	59.28	340	eP	P	14 42 01.6	-1.3
	comp=Z,144nm,0.7s						
S46A	Don Dixon Farm	59.31	343	P	P	14 42 01.7	-1.3
	baz=160,SNR=8.9						
O61A	Allentown	59.33	355	P	P	14 42 04.1	+1.0
	baz=174						
P55A	Reedsville	59.36	351	P	P	14 42 03.8	+0.4
	baz=168,SNR=15						
MVL	Millersville	59.40	354	eP	P	14 42 03.5	0.0
	comp=Z,64nm,0.9s						
WCI	Wyandotte Cave	59.45	344	eP	P	14 42 02.5	-1.5
WCI				epP	pP	14 42 29.8	-2.6
WCI	Wyandotte Cave	59.45	344	eP	P	14 42 02.5	-1.5
WCI				e*PP	pP	14 42 29.8	-2.6
WCI	Wyandotte Cave	59.45	344	P	P	14 42 02.9	-1.1
	baz=161						
Q50A	Georgetown	59.49	347	P	P	14 42 03.5	-0.8
	baz=164,SNR=9.6						
R48A	Northridge Ran	59.51	345	P	P	14 42 03.6	-0.8
	baz=162						
MCWV	Mont Chateau	59.51	351	eP	P	14 42 04.4	0.0
	comp=Z,55nm,0.8s						
MCWV	Mont Chateau	59.51	351	P	P	14 42 04.8	+0.3
	baz=168,SNR=12						
Q51A	Peebles	59.53	347	eP	P	14 42 03.5	-1.1
Q51A				epP	pP	14 42 29.7	-3.2
Q51A	Peebles	59.53	347	P	P	14 42 03.7	-0.9
	baz=165,SNR=6.4						
P54A	Burton	59.56	350	P	P	14 42 05.0	+0.2
	baz=168,SNR=27						
USIN	University of	59.56	343	eP	P	14 42 03.4	-1.3
	comp=Z,87nm,0.9s						
R47A	Wooly Knot Far	59.57	344	P	P	14 42 03.5	-1.3
	baz=161,SNR=11						
O58A	Lewisberry	59.58	353	P	P	14 42 06.0	+1.2
	baz=172						
P53A	Whipple	59.60	349	eP	P	14 42 04.2	-0.9
	comp=Z,232nm,1.1s						
P53A	Whipple	59.60	349	P	P	14 42 04.9	-0.1
	baz=167,SNR=26						
O60A	Telford	59.62	355	P	P	14 42 06.4	+1.2
	baz=173						
PAGS	Pennsylvania G	59.66	353	eP	P	14 42 05.0	-0.4
	comp=Z,44nm,1.0s						
U40A	Yellville	59.71	338	P	P	14 42 04.9	-1.0
	baz=154,SNR=79						
O57A	Amberson	59.75	353	P	P	14 42 05.8	-0.3
	baz=171						
R46A	Gibon Southern	59.75	343	P	P	14 42 04.8	-1.3
	baz=160						
S44A	Carbondale	59.76	342	P	P	14 42 05.2	-1.0
	baz=158,SNR=50						
Q49A	Aurora	59.85	346	P	P	14 42 05.9	-0.9
	baz=163,SNR=7.6						
P52A	Corning	59.88	349	P	P	14 42 06.2	-0.7
	baz=166,SNR=12						
LUPA	Lehigh Univers	59.90	355	eP	P	14 42 07.0	0.0
	comp=Z,4.2nm,0.9s						
P51A	Williamsport	59.91	348	eP	P	14 42 06.4	-0.7
	comp=Z,120nm,1.2s						
P51A	Williamsport	59.91	348	P	P	14 42 06.3	-0.9
	baz=165,SNR=5.3						
BRNJ	Basking Ridge	59.91	355	eP	P	14 42 07.1	0.0
	comp=Z,73nm,0.8s						
O56A	Blue Knob Stat	59.93	352	eP	P	14 42 06.2	-1.2
	comp=Z,91nm,0.9s						
O56A	Blue Knob Stat	59.93	352	P	P	14 42 07.9	+0.6
	baz=170,SNR=10						
Q48A	North Vernon	59.98	345	P	P	14 42 06.7	-0.9
	baz=162,SNR=12						
CPNY	Central Park	59.98	356	eP	P	14 42 07.3	-0.2
	comp=Z,66nm,1.0s						
HHAR	Hobbs	60.03	337	eP	P	14 42 07.3	-0.8
	comp=Z,123nm,1.1s						
R45A	Skylar, Fairfi	60.04	343	P	P	14 42 06.7	-1.3
	baz=159,SNR=28						
O54A	Avella	60.11	350	P	P	14 42 08.3	-0.2
	baz=168,SNR=17						
N60A	Cedar Hill Far	60.14	355	P	P	14 42 09.3	+0.6
	baz=174						
Q47A	Bedord North L	60.15	345	P	P	14 42 07.8	-1.0
	baz=161,SNR=9.1						
P50A	Jamestown	60.19	347	P	P	14 42 08.2	-0.8
	baz=164,SNR=9.3						
SSPA	Standing Stone	60.20	352	eP	P	14 42 09.1	0.0
	comp=Z,67nm,0.9s						
SSPA	Standing Stone	60.20	352	P	P	14 42 09.5	+0.4
	baz=171						
N57A	Milroy	60.28	353	P	P	14 42 10.3	+0.7
	baz=171,SNR=8.2						
O52A	Adamsville	60.29	349	eP	P	14 42 08.7	-1.0
	comp=Z,175nm,1.4s						
O52A	Adamsville	60.29	349	P	P	14 42 09.3	-0.5
	baz=166,SNR=9.4						
O53A	New Philadelph	60.31	350	P	P	14 42 09.8	-0.1
	baz=167,SNR=12						
P49A	Miami Univ. Ec	60.31	346	P	P	14 42 08.7	-1.2
	baz=163,SNR=9.5						
BLO	Bloomington	60.40	345	eP	P	14 42 09.3	-1.1
	comp=Z,89nm,0.9s						
BLO	Bloomington	60.40	345	eP	P	14 42 09.4	-1.1
BLO				pmax	pmax		
	comp=Z,89nm,0.9s						
OLIL	Olney	60.40	343	eP	P	14 42 09.3	-1.2
	comp=Z,41nm,0.8s						
P48A	Milroy	60.41	346	eP	P	14 42 09.1	-1.5
P48A				epP	pP	14 42 36.0	-3.0
P48A	Milroy	60.41	346	P	P	14 42 09.0	-1.5
	baz=162,SNR=7.9						
TUL1	Leonard	60.41	335	eP	P	14 42 10.3	-0.4
	comp=Z,179nm,1.0s						
TUL1	Leonard	60.41	335	P	P	14 42 10.3	-0.4
	baz=151,SNR=22						
O51A	Pataskala	60.47	348	P	P	14 42 10.2	-0.7
	baz=166,SNR=8.2						
Q46A	CEJHS Indians,	60.47	344	P	P	14 42 10.3	-0.7
	baz=160						
M61A	Granite Spring	60.48	356	P	P	14 42 11.9	+0.9
	baz=175						
N55A	Marion Center	60.49	352	eP	P	14 42 10.9	-0.2
	comp=Z,233nm,0.9s						
N55A	Marion Center	60.49	352	P	P	14 42 11.4	+0.3
	baz=170,SNR=36						
N56A	West Decatur	60.53	352	P	P	14 42 11.5	+0.1
	baz=170						
Q45A	Warren Harvey,	60.56	343	P	P	14 42 10.3	-1.3
	baz=160,SNR=24						
ACSO	Alum Creek Sta	60.62	348	eP	P	14 42 11.3	-0.7
	comp=Z,190nm,1.1s						
ACSO	Alum Creek Sta	60.62	348	P	P	14 42 11.2	-0.7
	baz=165,SNR=19						
P47A	Martinsville	60.63	345	P	P	14 42 10.9	-1.2
	baz=162,SNR=9.7						
WMOK	Wichita Mounta	60.65	332	eP	P	14 42 11.0	-1.3
	comp=Z,34nm,0.7s						
WMOK	Wichita Mounta	60.65	332	eP	P	14 42 11.0	-1.3
WMOK				pmax	pmax		
	comp=Z,35nm,0.7s						
WMOK	Wichita Mounta	60.65	332	P	P	14 42 11.2	-1.1
	baz=148,SNR=34						
O50A	Cable	60.67	347	P	P	14 42 11.3	-1.1
	baz=164,SNR=12						
CCM	Cathedral Cave	60.70	340	eP	P	14 42 11.5	-1.1
	comp=Z,118nm,1.0s						
CCM	Cathedral Cave	60.70	340	eP	P	14 42 11.5	-1.1
CCM				pmax	pmax		
	comp=Z,118nm,1.0s						
CCM	Cathedral Cave	60.70	340	P	P	14 42 11.6	-1.0
	baz=156						
N53A	Lisbon	60.79	350	eP	P	14 42 12.7	-0.4
	comp=Z,138nm,1.0s						
N53A	Lisbon	60.79	350	P	P	14 42 13.0	-0.1
	baz=168,SNR=12						
N54A	Moraine State	60.81	351	eP	P	14 42 13.4	+0.1
	comp=Z,231nm,1.3s						
N54A	Moraine State	60.81	351	P	P	14 42 13.5	+0.2
	baz=168,SNR=18						
M59A	Waymart	60.84	355	P	P	14 42 13.4	0.0
	baz=173,SNR=6.3						
O49A	Covington	60.86	347	eP	P	14 42 12.4	-1.2
O49A				epP	pP	14 42 40.1	-1.9
O49A	Covington	60.86	347	P	P	14 42 12.4	-1.2
	baz=164,SNR=11						
RKT	Rikitea	60.88	254	eP	P	14 42 15.9	+1.7
	comp=Z,131nm,1.2s						
RKT	Rikitea	60.88	254	eLR	LR	15 00 04.8	
	comp=Z,6µm,28.0s						
RKT	Rikitea	60.88	254	eT	T	15 46 52.2	
	comp=Z,3.2nm,0.2s						
KSPA	Keystone Colle	60.88	354	eP	P	14 42 12.9	-0.8
	comp=Z,62nm,1.0s						
SLM	Saint Louis	60.92	341	eP	P	14 42 13.1	-0.9
	comp=Z,113nm,1.1s						
SLM	Saint Louis	60.92	341	eP	P	14 42 13.1	-0.9
SLM				pmax	pmax		
	comp=Z,113nm,1.1s						
N52A	McGinn's Farm,	60.94	349	P	P	14 42 13.4	-0.8
	baz=167,SNR=11						
BRYW	Bryant College	60.98	358	eP	P	14 42 14.1	-0.3
	comp=Z,256nm,1.0s						
P46A	Rosedale	60.99	344	P	P	14 42 13.2	-1.3
	baz=161						
P45A	Graceland, Par	61.05	344	eP	P	14 42 13.4	-1.5
	comp=Z,151nm,0.8s						

P45A	Graceland, Par	61.05	344	P	P	14 42 13.3	-1.6
	baz=160,SNR=28						
M56A	Emporium	61.07	352	P	P	14 42 15.1	+0.1
	baz=170,SNR=15						
O48A	Farmland	61.10	346	P	P	14 42 13.9	-1.3
	baz=163,SNR=16						
M55A	Ridgway	61.13	352	P	P	14 42 15.5	0.0
	baz=170,SNR=16						
N51A	Ashland	61.17	349	eP	P	14 42 15.2	-0.5
N51A				epP	pP	14 42 42.2	-2.1
N51A	Ashland	61.17	349	P	P	14 42 14.9	-0.8
	baz=166,SNR=7.3						
N50A	Nevada	61.17	348	P	P	14 42 14.8	-0.9
	baz=165,SNR=8.8						
GDL2	Guadalupe Moun	61.27	326	eP	P	14 42 16.7	-0.1
M54A	Oil Creek Stat	61.30	351	eP	P	14 42 16.4	-0.2
	comp=Z,376nm,1.6s						
M54A	Oil Creek Stat	61.30	351	P	P	14 42 16.6	0.0
	baz=169,SNR=23						
O47A	Sheridan	61.32	345	P	P	14 42 15.3	-1.4
	baz=162,SNR=27						
M53A	WI Miller and	61.38	350	P	P	14 42 16.9	-0.2
	baz=168,SNR=19						
MNTX	Cornudas Mount	61.42	325	eP	P	14 42 16.5	-1.2
	comp=Z,94nm,1.0s						
MNTX	Cornudas Mount	61.42	325	P	P	14 42 16.6	-1.0
	baz=141,SNR=124						
ALLY	Alegheny Colle	61.51	351	eP	P	14 42 17.7	-0.2
	comp=Z,209nm,1.0s						
N49A	Columbus Grove	61.53	347	eP	P	14 42 16.9	-1.1
	comp=Z,190nm,0.8s						
N49A	Columbus Grove	61.53	347	P	P	14 42 17.0	-1.1
	baz=164,SNR=37						
M51A	Elyria	61.54	349	P	P	14 42 17.8	-0.3
	baz=166						
BINY	Binghamton	61.54	354	eP	P	14 42 18.3	+0.1
	comp=Z,152nm,0.9s						
BINY	Binghamton	61.54	354	P	P	14 42 18.4	+0.1
	baz=173,SNR=9.3						
HRV	Adam Dziewonsk	61.57	358	eP	P	14 42 18.0	-0.3
	comp=Z,69nm,0.8s						
HRV	Adam Dziewonsk	61.57	358	eP	P	14 42 18.0	-0.3
HRV				pmax	pmax		
	comp=Z,69nm,0.8s						
HRV	Adam Dziewonsk	61.57	358	P	P	14 42 19.6	+1.3
	baz=178						
M52A	Chesterland	61.59	350	eP	P	14 42 17.5	-1.0
M52A				epP	pP	14 42 44.4	-2.8
M52A	Chesterland	61.59	350	P	P	14 42 18.1	-0.4
	baz=167,SNR=9.4						
P43A	Skaggs, Pawnee	61.64	342	P	P	14 42 17.5	-1.4
	baz=158,SNR=33						
N48A	Decatur	61.65	346	P	P	14 42 17.6	-1.3
	baz=163,SNR=16						
CPRX	Cap Rock	61.67	327	eP	P	14 42 18.4	-1.0
SFIN	Lafayette	61.68	345	eP	P	14 42 16.7	-2.4
	comp=Z,106nm,0.8s						
SFIN	Lafayette	61.68	345	P	P	14 42 17.3	-1.8
	baz=161,SNR=32						
O45A	Potomac	61.72	344	P	P	14 42 17.7	-1.7
	baz=160,SNR=41						
M50A	Fremont	61.77	348	eP	P	14 42 19.1	-0.6
	comp=Z,136nm,1.1s						
M50A	Fremont	61.77	348	P	P	14 42 18.8	-0.8
	baz=165						
L55A	Hinsdale	61.79	352	P	P	14 42 20.3	+0.4
	baz=170,SNR=11						
N47A	Urbana	61.82	346	P	P	14 42 18.7	-1.4
	baz=162,SNR=21						
L53A	Girard	61.82	351	P	P	14 42 19.8	-0.2
	baz=168,SNR=15						
O44A	Mansfield	61.83	343	P	P	14 42 18.1	-2.0
	baz=159,SNR=9.8						
MSTX	Muleshoe	61.87	329	eP	P	14 42 19.9	-0.8
	comp=Z,254nm,0.9s						
MSTX	Muleshoe	61.87	329	P	P	14 42 19.9	-0.8
	baz=144,SNR=74						
TRY	Troy	61.89	356	eP	P	14 42 21.0	+0.5
	comp=Z,114nm,1.0s						
ERPA	Erie	61.94	351	eP	P	14 42 20.9	0.0
	comp=Z,226nm,0.8s						
ERPA	Erie	61.94	351	P	P	14 42 20.7	-0.2
	baz=168,SNR=16						
L54A	Sinclairville	61.96	352	P	P	14 42 21.1	+0.1
	baz=169,SNR=14						
M49A	Liberty Center	62.02	348	P	P	14 42 20.3	-1.1
	baz=164,SNR=20						
PLIO	Pelee Island,	62.02	349	P	P	14 42 20.4	-1.0
	baz=166,SNR=7.1						
N46A	Monticello	62.08	345	P	P	14 42 20.5	-1.3
	baz=161,SNR=13						
AMTX	Amarillo	62.09	330	eP	P	14 42 21.1	-1.0
	comp=Z,54nm,0.8s						
AMTX	Amarillo	62.09	330	P	P	14 42 21.4	-0.7
	baz=145						
M48A	Edgerton	62.18	347	eP	P	14 42 21.7	-0.8
	comp=Z,112nm,1.1s						
M48A	Edgerton	62.18	347	P	P	14 42 21.4	-1.0
	baz=164,SNR=5.2						
VNA3	Neumayer Olymp	62.23	162	P	P	14 42 17.2	-5.3
N45A	Kentland	62.23	344	P	P	14 42 21.0	-1.7
	baz=160,SNR=14						
K54A	Basiliko Farm,	62.25	352	P	P	14 42 23.1	+0.2
	baz=170,SNR=8.5						
M47A	Cromwell	62.26	346	P	P	14 42 21.5	-1.5
	baz=163,SNR=6.6						
MMNY	Mt. Morris Dam	62.27	353	eP	P	14 42 22.9	-0.1
	comp=Z,96nm,0.8s						
K55A	Perry	62.29	353	P	P	14 42 22.9	-0.2
	baz=171,SNR=8.8						
SRIG	Santa Rosalia	62.31	317	eP	P	14 42 23.3	-0.3
	comp=Z,95nm,1.0s						
N44A	Piper City	62.34	344	P	P	14 42 21.6	-1.9
	baz=160,SNR=31						
L50A	Kingsville	62.34	349	P	P	14 42 22.7	-0.8
	baz=166						
HDIL	Hopedale	62.43	343	eP	P	14 42 22.8	-1.3
	comp=Z,148nm,0.8s						
HDIL	Hopedale	62.43	343	P	P	14 42 22.8	-1.3
	baz=159,SNR=5.2						
VNA1	Neumayer--Stat	62.43	161	P	P	14 42 26.1	+2.3
M46A	Old House Fiel	62.48	346	eP	P	14 42 23.1	-1.3
	comp=Z,330nm,1.9s						
M46A	Old House Fiel	62.48	346	P	P	14 42 23.2	-1.2
	baz=162,SNR=6.1						
L48A	N Adams	62.56	347	P	P	14 42 23.7	-1.3
	baz=164,SNR=11						
L49A	Milan	62.59	348	P	P	14 42 24.4	-0.7
	baz=165						
HSIG		62.67	319	eP	P	14 42 26.1	+0.1
	comp=Z,310nm,1.8s						
M45A	Boilermakers S	62.67	345	P	P	14 42 24.3	-1.4
	baz=161						
K52A	Tillsonburg	62.70	351	P	P	14 42 25.5	-0.4
	baz=168						
AAM	Ann Arbor	62.75	348	eP	P	14 42 25.6	-0.6
	comp=Z,75nm,1.0s						
AAM	Ann Arbor	62.75	348	eP	P	14 42 25.6	-0.6
AAM				pmax	pmax		
	comp=Z,75nm,1.0s						
AAM	Ann Arbor	62.75	348	P	P	14 42 25.3	-0.9
	baz=165						
N43A	Stutzman Famil	62.75	343	P	P	14 42 24.7	-1.5
	baz=159,SNR=52						
L47A	Sherwood	62.76	347	P	P	14 42 25.1	-1.2
	baz=163,SNR=21						
K51A	Iona Station	62.77	350	P	P	14 42 25.7	-0.6
	baz=167,SNR=5.3						
J55A	Hilton	62.79	353	eP	P	14 42 26.2	-0.2
	comp=Z,87nm,1.0s						
J55A	Hilton	62.79	353	P	P	14 42 26.2	-0.2
	baz=171						
HNH	Hanover	62.80	358	eP	P	14 42 27.2	+0.7
	comp=Z,86nm,1.2s						
M44A	Midewin, Midew	62.87	344	eP	P	14 42 25.1	-1.9
	comp=Z,42nm,0.8s						
M44A				epP	pP	14 42 53.0	-2.5
M44A	Midewin, Midew	62.87	344	P	P	14 42 25.4	-1.6
	baz=160,SNR=5.8						
TYNO	Tyneside	62.88	351	P	P	14 42 26.8	-0.3
	baz=169,SNR=6.9						
J54A	Appleton	62.89	352	eP	P	14 42 26.7	-0.4
	comp=Z,99nm,1.1s						
J54A	Appleton	62.89	352	P	P	14 42 27.0	-0.1
	baz=170						
STCO	Saint Catharin	62.90	352	P	P	14 42 26.9	-0.3
	baz=170						
K50A	Casco	63.02	349	eP	P	14 42 26.9	-1.1
	comp=Z,186nm,0.8s						
K50A	Casco	63.02	349	P	P	14 42 27.1	-0.8
	baz=166,SNR=5.1						
N41A	Harden Midland	63.02	342	eP	P	14 42 26.8	-1.2
	comp=Z,181nm,0.9s						
N41A				epP	pP	14 42 53.9	-2.7
N41A	Harden Midland	63.02	342	P	P	14 42 26.6	-1.4
	baz=157,SNR=23						
L46A	Eue Claire	63.04	346	eP	P	14 42 26.7	-1.5
	comp=Z,89nm,0.8s						
L46A	Eue Claire	63.04	346	P	P	14 42 26.9	-1.2
	baz=162						
J52A	Paris	63.11	351	P	P	14 42 28.2	-0.4
	baz=168,SNR=31						
M43A	Waltham Townsh	63.16	344	P	P	14 42 27.5	-1.5
	baz=159,SNR=26						
NCB	Newcomb	63.16	356	eP	P	14 42 28.8	-0.2
	comp=Z,72nm,1.4s						
K49A	Clarkson	63.18	348	P	P	14 42 28.1	-0.9
	baz=165						
LBNH	Lisbon	63.31	358	P	P	14 42 31.2	+1.3
	baz=177,SNR=6.6						
K48A	Perry	63.33	348	P	P	14 42 29.1	-0.9
	baz=164,SNR=17						
PECO	Prince Edward	63.36	354	eP	P	14 42 30.2	+0.1
	comp=Z,140nm,1.2s						
PECO	Prince Edward	63.36	354	P	P	14 42 30.1	-0.1
	baz=172						
319A	Douglas	63.37	322	eP	P	14 42 31.1	+0.4
	comp=Z,172nm,0.8s						
121A	Cookes Peak, D	63.38	324	P	P	14 42 31.6	+0.8
	baz=139,SNR=50						
K47A	Vermontville	63.38	347	P	P	14 42 29.3	-1.0
	baz=163						
N40A	Mertquake, Sal	63.40	341	P	P	14 42 29.3	-1.3
	baz=156,SNR=34						
ACTO	Acton	63.41	351	P	P	14 42 30.9	+0.3
	baz=169,SNR=5.8						
DRCO	St. Marys Ceme	63.49	352	P	P	14 42 31.4	+0.3
	baz=170,SNR=6.5						
WLVO	Wesleyville	63.50	353	P	P	14 42 31.7	+0.6
	baz=170,SNR=5.3						
KSU1	Kansas State U	63.51	336	P	P	14 42 30.4	-1.0
	baz=151,SNR=16						
M41A	Milan	63.54	342	P	P	14 42 30.2	-1.3
	baz=158,SNR=5.1						
I53A	Kortright Cn E	63.56	352	P	P	14 42 31.3	-0.2
	baz=169						
K46A	Dorr	63.56	346	P	P	14 42 30.0	-1.5
	baz=163						
L44A	Lake County Fo	63.58	345	P	P	14 42 30.4	-1.4
	baz=160						
WVL	Waterville	63.59	360	eP	P	14 42 31.9	+0.2
	comp=Z,109nm,1.3s						
PKRO	Pickering	63.63	352	P	P	14 42 31.9	-0.1
	baz=170						
J49A	Marlette	63.67	349	P	P	14 42 31.2	-1.1
	baz=165,SNR=5.2						
I55A	Frankford	63.71	353	P	P	14 42 32.4	-0.1
	baz=171,SNR=12						
J48A	Bridge Port	63.74	348	eP	P	14 42 31.2	-1.5
	comp=Z,146nm,0.9s						
J48A	Bridge Port	63.74	348	P	P	14 42 31.6	-1.1
	baz=165,SNR=9.7						
I51A	Listowel	63.75	351	P	P	14 42 32.2	-0.6
	baz=168,SNR=18						
EMMW	East Machias	63.76	1	eP	P	14 42 32.8	0.0
	comp=Z,93nm,1.1s						
LONY	Lake Ozonia	63.83	356	eP	P	14 42 33.5	+0.2
	comp=Z,70nm,1.0s						
LONY	Lake Ozonia	63.83	356	P	P	14 42 33.6	+0.2
	baz=174,SNR=8.9						
L42A	Oliver, Polo	63.88	343	eP	P	14 42 32.7	-1.0
	comp=Z,59nm,0.8s						
L42A	Oliver, Polo	63.88	343	P	P	14 42 32.2	-1.5
	baz=158,SNR=9.9						
HAL	Halifax	63.88	5	eP	P	14 42 33.5	-0.1
	comp=Z,98nm,0.9s						
HAL	Halifax	63.88	5	eP	P	14 42 33.5	-0.1
HAL				pmax	pmax		
	comp=Z,98nm,0.9s						
I52A	Shelburne	63.88	351	P	P	14 42 33.2	-0.5
	baz=168,SNR=12						
J47A	Sunmer	63.88	347	eP	P	14 42 32.9	-0.8
J47A				epP	pP	14 43 00.8	-1.4
J47A	Sunmer	63.88	347	P	P	14 42 32.5	-1.2
	baz=164,SNR=7.1						
H56A	Elgin	63.94	354	P	P	14 42 33.6	-0.4
	baz=173						
BNM	Barren Site	63.98	326	eP	P	14 42 34.0	-0.8
FRNY	Flat Rock	63.98	357	eP	P	14 42 33.6	-0.7
	comp=Z,137nm,1.4s						
H55A	Tweed	63.99	354	P	P	14 42 34.4	+0.1
	baz=172,SNR=6.1						
DELO	Deloro Mine	64.00	353	eP	P	14 42 34.0	-0.5
DELO				epP	pP	14 43 02.1	-1.1
DELO	Deloro Mine	64.00	353	P	P	14 42 34.1	-0.3
	baz=171,SNR=8.6						
BASO	Ashfield	64.05	350	P	P	14 42 34.4	-0.4
	baz=167,SNR=6.2						
BWLO	Walkerton	64.07	351	P	P	14 42 34.4	-0.5
	baz=168,SNR=18						
Y22D	IRIS PASSCAL I	64.07	326	P	P	14 42 35.9	+0.6
	baz=140						
LPM	Los Pinos Moun	64.10	326	eP	P	14 42 35.9	+0.4
LPM				epP	pP	14 43 03.5	-0.3
J46A	Howard City	64.16	347	P	P	14 42 33.9	-1.6
	baz=163						
LENM	Lemitar	64.17	326	eP	P	14 42 36.3	+0.3
I49A	Point Hope	64.18	349	eP	P	14 42 34.8	-0.8
I49A				epP	pP	14 43 02.3	-2.1
I49A	Point Hope	64.18	349	P	P	14 42 34.7	-0.9
	baz=166						
K43A	Burlington	64.18	345	eP	P	14 42 34.7	-1.0
	comp=Z,172nm,1.0s						
K43A	Burlington	64.18	345	P	P	14 42 34.3	-1.3
	baz=160,SNR=12						
GGN	Saint George	64.19	2	eP	P	14 42 35.9	+0.3
GGN				epP	pP	14 43 04.9	+0.5
BRCO	Bruce Peninsul	64.24	350	P	P	14 42 35.9	-0.1
	baz=167,SNR=5.4						
PKME	Peaks-Kenny Pk	64.29	0	eP	P	14 42 36.5	+0.2
	comp=Z,109nm,1.0s						
PKME	Peaks-Kenny Pk	64.29	0	P	P	14 42 36.6	+0.3
	baz=180,SNR=12						
L40A	Anamosa	64.37	342	eP	P	14 42 35.9	-1.0
	comp=Z,123nm,0.9s						
L40A	Anamosa	64.37	342	P	P	14 42 35.6	-1.3
	baz=157,SNR=24						
MOQ	Mont Orford	64.40	358	eP	P	14 42 36.6	-0.4
H52A	Wyevale	64.40	352	P	P	14 42 36.6	-0.4
	baz=169,SNR=7.9						
SADO	Sadowa	64.43	352	eP	P	14 42 36.2	-1.0
	comp=Z,108nm,0.9s						
SNAA	Sanae	64.43	161	P	P	14 42 38.7	+1.7
SNAA	Sanae	64.43	161	eP	P	14 42 37.9	+0.8
	comp=Z,51nm,0.8s						
SNAA	Sanae	64.43	161	d iP	P	14 42 38.4	+1.4
SNAA				pmax	pmax		
	comp=Z,519nm,0.8s						
LAZ	Ladron	64.44	326	eP	P	14 42 37.8	0.0
PLVO	Plevna	64.46	354	eP	P	14 42 36.5	-0.9
	comp=Z,57nm,0.9s						
PLVO	Plevna	64.46	354	P	P	14 42 37.3	-0.1
	baz=172,SNR=6.0						
CBKS	Cedar Bluff	64.50	334	eP	P	14 42 37.2	-0.6
	comp=Z,177nm,0.9s						
CBKS	Cedar Bluff	64.50	334	eP	P	14 42 37.3	-0.6
CBKS				pmax	pmax		
	comp=Z,177nm,0.9s						
CBKS	Cedar Bluff	64.50	334	P	P	14 42 37.7	-0.1
	baz=148,SNR=29						
ANMO	Albuquerque	64.50	327	P	P	14 42 38.2	0.0
	comp=Z,26nm,0.8s,baz=132,slow=7.0,SNR=73						
ANMO				pP	pP	14 43 07.0	+0.5
	comp=Z,35nm,0.9s,baz=175,slow=8.9,SNR=9.6						
ANMO	Albuquerque	64.50	327	eP	P	14 42 38.1	0.0
	comp=Z,40nm,0.8s						
ANMO	Albuquerque	64.50	327	d iP	P	14 42 38.4	+0.3
ANMO				i *PP	pP	14 43 04.9	-1.6
ANMO				pmax	pmax		
	comp=Z,99nm,2.2s						
ANMO	Albuquerque	64.50	327	P	P	14 42 38.5	+0.3
	baz=141						
TASM	ASL Pad, Albuq	64.50	327	P	P	14 42 38.4	+0.3
	baz=141,SNR=37						
TASM	ASL Pad, Albuq	64.50	327	P	P	14 42 38.5	+0.3
	baz=141,SNR=38						
BANO	Bancroft	64.53	353	P	P	14 42 38.3	+0.4
	baz=171						
BMRO	Meriville Lake	64.55	351	P	P	14 42 37.5	-0.5
	baz=168,SNR=6.8						
I47A	Gladwin	64.57	348	eP	P	14 42 37.3	-0.9
	comp=Z,126nm,1.1s						
I47A	Gladwin	64.57	348	P	P	14 42 37.2	-0.9
	baz=164						
I48A	Sherman Twp	64.58	349	P	P	14 42 37.3	-0.9
	baz=165,SNR=9.9						
G55A	Calabogie	64.64	354	P	P	14 42 38.6	+0.1
	baz=172,SNR=8.7						
I46A	Reed City	64.69	347	P	P	14 42 37.4	-1.5
	baz=163,SNR=7.6						
G53A	Haliburton	64.71	353	P	P	14 42 38.8	-0.3
	baz=170,SNR=12						
ORIO	Orleans, Innes	64.73	355	P	P	14 42 39.2	+0.1
	baz=174						
GBN	Guysborough	64.83	6	eP	P	14 42 39.2	-0.6
	comp=Z,42nm,0.9s						
SCIA	State Center	64.83	340	eP	P	14 42 39.2	-0.7
	comp=Z,213nm,0.8s						
SCIA	State Center	64.83	340	P	P	14 42 38.8	-1.1
	baz=155,SNR=10						
JFWS	Jewell Farm	64.88	343	eP	P	14 42 39.7	-0.5
	comp=Z,91nm,0.8s						
JFWS	Jewell Farm	64.88	343	eP	P	14 42 39.7	-0.5
JFWS				pmax	pmax		
	comp=Z,91nm,0.8s						
JFWS	Jewell Farm	64.88	343	P	P	14 42 39.3	-0.9
	baz=158,SNR=19						
TUC	Tucson	64.92	322	eP	P	14 42 41.1	+0.3
	comp=Z,205nm,1.9s						
TUC	Tucson	64.92	322	eP	P	14 42 41.1	+0.3
TUC				pmax	pmax		
	comp=Z,205nm,1.9s						
TUC	Tucson	64.92	322	P	P	14 42 41.2	+0.3
	baz=136						
H48A	Harrisville	65.01	349	eP	P	14 42 39.8	-1.1
H48A				epP	pP	14 43 08.2	-1.6
H48A	Harrisville	65.01	349	P	P	14 42 40.1	-0.9
	baz=165						
LMN	Caledonia Moun	65.01	3	eP	P	14 42 40.7	-0.2
	comp=Z,100nm,0.8s						
H47A	Mio	65.07	348	P	P	14 42 40.2	-1.2
	baz=164						
PEMO	Pembroke	65.11	354	P	P	14 42 41.5	-0.1
	baz=172,SNR=7.3						
BUKO	Buck Lake	65.12	352	P	P	14 42 41.4	-0.3
	baz=170,SNR=15						
KLBO	Killbear Provi	65.15	352	P	P	14 42 41.2	-0.6
	baz=169,SNR=11						
T25A	Trinidad	65.21	330	eP	P	14 42 42.5	-0.2
	comp=Z,48nm,0.8s						
T25A	Trinidad	65.21	330	P	P	14 42 42.9	+0.2
	baz=143,SNR=44						
H46A	Fife Lake	65.21	348	P	P	14 42 41.1	-1.2
	baz=163,SNR=6.6						
TRQ	Mont Tremblant	65.43	356	eP	P	14 42 43.6	-0.1
I42A	Draeger Farm,	65.44	345	eP	P	14 42 43.3	-0.5
	comp=Z,87nm,0.9s						
I42A	Draeger Farm,	65.44	345	P	P	14 42 43.0	-0.8
	baz=160,SNR=9.9						
F52A	Sundridge	65.46	352	P	P	14 42 43.6	-0.2
	baz=170,SNR=7.0						
H45A	Beulah	65.47	347	P	P	14 42 42.8	-1.2
	baz=163						
ALGO	Algonquin Park	65.47	353	P	P	14 42 43.6	-0.3
	baz=171,SNR=14						
F51A	Arnstein	65.67	352	P	P	14 42 44.5	-0.7
	baz=169,SNR=7.4						
H43A	Windswept, Lux	65.71	346	eP	P	14 42 44.6	-0.9
H43A				epP	pP	14 43 12.3	-1.9
H43A	Windswept, Lux	65.71	346	P	P	14 42 44.6	-0.9
	baz=161,SNR=5.3						
G45A	Suttons Bay	65.78	347	P	P	14 42 44.8	-1.1
	baz=163						
F49A	Sandfield	65.82	350	P	P	14 42 44.9	-1.2
	baz=167						
I41A	Arkdale	65.84	344	eP	P	14 42 44.6	-1.7
	comp=Z,85nm,1.0s						
I41A	Arkdale	65.84	344	P	P	14 42 45.4	-1.0
	baz=159						
E54A	Lac Daplat, Po	65.85	354	P	P	14 42 46.0	-0.3
	baz=172,SNR=18						
E52A	Mattawa	65.86	353	P	P	14 42 46.7	+0.2
	baz=170						
214A	Organ Pipe Nat	65.88	320	P	P	14 42 47.9	+1.0
	baz=135,SNR=54						
G46A	Petoskey	65.89	348	P	P	14 42 45.8	-0.8
	baz=164						
KSCO	Kaye Shedlock’	65.90	332	eP	P	14 42 46.7	-0.4
	comp=Z,145nm,1.0s						
KSCO	Kaye Shedlock’	65.90	332	P	P	14 42 47.0	0.0
	baz=145,SNR=10						
F48A	Evansville	65.98	350	P	P	14 42 46.3	-0.9
	baz=166						
X18A	Snowflake	66.06	324	eP	P	14 42 48.4	+0.1
	comp=Z,54nm,1.0s						
BGNE	Belgrade	66.10	337	eP	P	14 42 48.0	-0.1
	comp=Z,599nm,0.9s						
BGNE	Belgrade	66.10	337	P	P	14 42 47.8	-0.3
	baz=150,SNR=30						
E51A	G1948 Merrick	66.21	352	P	P	14 42 48.3	-0.4
	baz=169,SNR=12						
SDCO	Great Sand Dun	66.21	329	eP	P	14 42 49.2	0.0
	comp=Z,96nm,0.9s						
SDCO	Great Sand Dun	66.21	329	P	P	14 42 49.3	0.0
	baz=142,SNR=175						
E50A	Wahnapitae	66.27	351	P	P	14 42 48.3	-0.7
	baz=168						
BATG	Bathurst New B	66.37	2	eP	P	14 42 49.7	0.0
	comp=Z,83nm,0.9s						
F45A	CMU Biological	66.37	348	P	P	14 42 48.8	-0.9
	baz=163						
W18A	Petrified Fore	66.38	325	eP	P	14 42 50.6	+0.3
	comp=Z,90nm,0.9s						
W18A	Petrified Fore	66.38	325	P	P	14 42 50.8	+0.5
	baz=138,SNR=29						
D54A	Lac Fusel, La	66.51	355	P	P	14 42 50.0	-0.6
	baz=172,SNR=17						
D52A	ZEK Kipawa Sen	66.52	353	P	P	14 42 50.6	-0.1
	baz=171,SNR=10						
E48A	Lockeyer	66.54	350	P	P	14 42 50.4	-0.4
	baz=167,SNR=5.8						
D53A	Lac Vacive, Po	66.54	354	eP	P	14 42 50.7	0.0
	comp=Z,518nm,1.9s						
D53A	Lac Vacive, Po	66.54	354	P	P	14 42 50.5	-0.2
	baz=171,SNR=22						
E47A	Iron Bridge	66.70	350	P	P	14 42 50.7	-1.1
	baz=166,SNR=5.5						
E46A	Sault Ste Mari	66.79	349	eP	P	14 42 51.2	-1.1
	comp=Z,86nm,0.7s						
E46A	Sault Ste Mari	66.79	349	P	P	14 42 51.4	-1.0
	baz=165,SNR=5.4						
X16A	Lo Mia Camp, P	66.82	323	eP	P	14 42 53.5	+0.4
	comp=Z,93nm,1.4s						
S22A	4UR Ranch, Cre	66.86	328	eP	P	14 42 53.6	+0.2
	comp=Z,34nm,0.9s						
S22A	4UR Ranch, Cre	66.86	328	P	P	14 42 53.6	+0.2
	baz=141,SNR=29						
F42A	Maple Grove Fa	67.01	346	P	P	14 42 53.0	-0.8
	baz=161						
Q24A	Divide	67.01	330	eP	P	14 42 54.6	+0.3
	comp=Z,85nm,0.9s						
Q24A	Divide	67.01	330	P	P	14 42 54.7	+0.4
	baz=143,SNR=24						
113A	Mohawk Valley,	67.02	320	eP	P	14 42 54.8	+0.7
	comp=Z,48nm,0.9s						
G40A	Rib Lake	67.06	344	eP	P	14 42 53.4	-0.7
	comp=Z,23nm,0.7s						
G40A	Rib Lake	67.06	344	P	P	14 42 53.0	-1.1
	baz=159,SNR=8.2						
D48A	Paudash Townsh	67.16	351	P	P	14 42 54.0	-0.7
	baz=167,SNR=9.2						
D49A	Beulah Townshi	67.19	351	P	P	14 42 54.4	-0.5
	baz=168,SNR=7.5						
OGNE	Ogallala	67.25	334	eP	P	14 42 55.2	-0.3
	comp=Z,94nm,1.0s						
OGNE	Ogallala	67.25	334	P	P	14 42 55.6	+0.1
	baz=146,SNR=9.3						
D47A	Chapleau	67.25	350	P	P	14 42 54.4	-0.8
	baz=166						
D46A	Sault St. Mari	67.25	349	P	P	14 42 54.0	-1.3
	baz=165						
MVCO	Mesa Verde	67.30	327	eP	P	14 42 56.2	+0.1
	comp=Z,316nm,1.9s						

MVCO	Mesa Verde	67.30	327	P	P	14 42 56.5	+0.4
	baz=140,SNR=39						
G39A	Holcombe	67.33	343	P	P	14 42 54.6	-1.2
	baz=158,SNR=24						
E43A	Lone Tree Farm	67.34	347	eP	P	14 42 55.6	-0.2
E43A				epP	PcP	14 43 23.2	+0.5
E43A	Lone Tree Farm	67.34	347	P	P	14 42 55.7	-0.2
	baz=162						
Y14A	Wickenburg	67.39	322	eP	P	14 42 57.0	+0.5
	comp=Z,50nm,0.8s						
VLDQ	Val d'Or	67.54	354	eP	P	14 42 57.6	+0.6
	comp=Z,125nm,1.0s						
COWI	Conover	67.57	345	eP	P	14 42 57.0	-0.4
	comp=Z,58nm,1.0s						
WUAZ	Wupatki	67.58	324	eP	P	14 42 58.3	+0.4
	comp=Z,104nm,0.9s						
WUAZ	Wupatki	67.58	324	P	P	14 42 58.8	+1.0
	baz=137,SNR=48						
ECSD	EROS Data Cent	67.58	339	eP	P	14 42 56.7	-0.7
	comp=Z,49nm,0.9s						
ECSD	EROS Data Cent	67.58	339	P	P	14 42 56.5	-0.9
	baz=152,SNR=39						
F40A	Park Falls	67.64	344	P	P	14 42 57.1	-0.7
	baz=159,SNR=45						
SPMN	Marine on St.	67.73	342	eP	P	14 42 57.6	-0.7
	comp=Z,74nm,0.8s						
SPMN	Marine on St.	67.73	342	P	P	14 42 57.4	-0.9
	baz=156,SNR=13						
F39A	Loretta	67.84	344	P	P	14 42 58.3	-0.8
	baz=158,SNR=16						
GLA	Glamis	67.86	320	eP	P	14 43 00.3	+0.8
	comp=Z,48nm,0.9s						
GLA	Glamis	67.86	320	P	P	14 43 00.3	+0.8
GLA	Glamis	67.86	320	P	P	14 43 00.3	+0.8
	baz=133,SNR=14						
ISCO	Idaho Springs	67.90	331	eP	P	14 42 60.0	+0.1
	comp=Z,56nm,1.0s						
ISCO	Idaho Springs	67.90	331	eP	P	14 43 00.0	+0.1
ISCO				pmax	pmax		
	comp=Z,56nm,1.0s						
ISCO	Idaho Springs	67.90	331	P	P	14 43 00.1	+0.2
	baz=143,SNR=38						
PV01	Paradox Valley	68.04	327	eP	P	14 43 00.9	+0.2
	comp=Z,59nm,0.9s						
SMCO	Snowmass	68.05	329	eP	P	14 43 01.4	+0.4
	comp=Z,43nm,0.8s						
F37A	Hinrichs Farm,	68.13	343	P	P	14 43 01.2	+0.4
	baz=156,SNR=6.1						
F38A	Pierce - Schro	68.14	343	P	P	14 43 00.2	-0.7
	baz=157,SNR=20						
Y12C	Blythe	68.16	320	eP	P	14 43 02.4	+1.1
	comp=Z,73nm,0.8s						
Y12C	Blythe	68.16	320	P	P	14 43 02.3	+1.1
	baz=134,SNR=17						
LIC	Lamto	68.16	75	eP	P	14 43 01.0	-0.7
	comp=Z,229nm,0.7s						
PV02	Paradox Valley	68.18	327	eP	P	14 43 02.2	+0.6
	comp=Z,36nm,1.0s						
PV13	Radium Mtn., P	68.18	327	eP	P	14 43 02.1	+0.4
	comp=Z,43nm,0.9s						
PV05	Paradox Valley	68.27	327	eP	P	14 43 02.4	+0.3
	comp=Z,60nm,1.1s						
PV03	Paradox Valley	68.27	327	eP	P	14 43 02.5	+0.3
	comp=Z,28nm,0.9s						
PV12	Saucer Basin,	68.30	327	eP	P	14 43 03.0	+0.6
	comp=Z,52nm,1.1s						
PV18	Skein Mesa, Pa	68.30	327	eP	P	14 43 02.5	+0.2
	comp=Z,30nm,1.0s						
PV07	Paradox Valley	68.31	328	eP	P	14 43 02.4	0.0
	comp=Z,120nm,1.8s						
PDMCI	Parker Dam,Lak	68.31	321	P	P	14 43 02.8	+0.6
	baz=134,SNR=20						
PV11	David Mesa, Pa	68.32	327	eP	P	14 43 02.5	+0.1
	comp=Z,35nm,1.0s						
TIC	Toumodi	68.33	74	eP	P	14 43 02.4	-0.4
D41A	Chassel	68.34	346	eP	P	14 43 01.9	-0.2
	comp=Z,118nm,0.8s						
D41A	Chassel	68.34	346	P	P	14 43 01.4	-0.7
	baz=160,SNR=5.8						
PV17	East Wray Mesa	68.35	327	eP	P	14 43 02.9	+0.2
	comp=Z,26nm,0.9s						
PV16	Nyswonger Mesa	68.35	327	eP	P	14 43 02.2	-0.4
	comp=Z,54nm,1.4s						
IKP	In-Ko-Pah, Jac	68.38	319	P	P	14 43 04.0	+1.2
	baz=132,SNR=25						
PV19	Morning Glory	68.38	327	eP	P	14 43 03.0	+0.1
	comp=Z,26nm,1.1s						
SWSC	Sam W. Stewart	68.39	319	P	P	14 43 03.8	+1.1
	baz=133,SNR=8.0						
PV20	West Nyswonger	68.40	327	eP	P	14 43 03.2	+0.3
	comp=Z,45nm,1.2s						
PV04	Paradox Valley	68.41	327	eP	P	14 43 02.9	-0.1
	comp=Z,23nm,0.9s						
LSQQ	Lebel-sur-Quev	68.43	355	P	P	14 43 02.4	-0.2
	baz=172						
PV14	Lion Creek, Pa	68.45	327	eP	P	14 43 03.5	+0.2
	comp=Z,62nm,1.4s						
PV22	Blue Mesa, Par	68.45	328	eP	P	14 43 03.6	+0.4
	comp=Z,92nm,1.4s						
PV10	Paradox Valley	68.46	327	eP	P	14 43 03.4	0.0
	comp=Z,39nm,0.9s						
KIC	Kosan Boka	68.47	75	eP	P	14 43 03.1	-0.6
	comp=Z,299nm,0.5s						
DBIC	Dimbokro	68.49	74	P	P	14 43 03.8	0.0
	comp=Z,145nm,0.6s,baz=226,slow=6.4,SNR=241						
DBIC				LR	LR	15 13 15.9	
	comp=Z,775nm,18.4s,baz=232,slow=36						
DBIC	Dimbokro	68.49	74	eP	P	14 43 03.2	-0.6
	comp=Z,137nm,0.8s						
DBIC	Dimbokro	68.49	74	P	P	14 43 03.8	0.0
PV23	Carpenter Ridg	68.50	327	eP	P	14 43 03.8	+0.1
	comp=Z,24nm,0.8s						
PV21	Cone Mtn., Par	68.57	327	eP	P	14 43 04.5	+0.4
	comp=Z,89nm,1.6s						
PV09	Paradox Valley	68.60	327	eP	P	14 43 04.8	+0.5
E38A	The Farm, Brul	68.65	344	eP	P	14 43 03.4	-0.7
	comp=Z,63nm,1.1s						
E38A	The Farm, Brul	68.65	344	P	P	14 43 03.1	-0.9
	baz=157,SNR=12						
BC3	Big Chuckawall	68.66	320	P	P	14 43 05.4	+0.9
	baz=133,SNR=69						
W13A	Hualapai Mount	68.72	322	eP	P	14 43 05.0	0.0
	comp=Z,41nm,0.8s						
MONP2	Monument Peak	68.74	319	P	P	14 43 06.3	+1.1
	baz=132,SNR=46						
BAR	Barrett	68.75	318	eP	P	14 43 05.8	+0.7
	comp=Z,119nm,0.9s						
U15A	North Rim	68.75	324	eP	P	14 43 05.6	+0.3
	comp=Z,102nm,1.0s						
IRM	Iron Mountain	68.81	320	P	P	14 43 06.5	+1.1
	baz=134,SNR=63						
N23A	Red Feather La	68.92	331	eP	P	14 43 06.4	+0.2
	comp=Z,66nm,1.0s						
N23A	Red Feather La	68.92	331	P	P	14 43 06.4	+0.2
	baz=143,SNR=43						
SUSD	Miller	69.02	338	P	P	14 43 06.0	-0.5
	baz=150						
PHWY	Pilot Hill	69.03	332	eP	P	14 43 06.7	-0.2
	comp=Z,143nm,1.6s						
CHGQ	Chibougamau	69.09	356	P	P	14 43 06.6	-0.1
	baz=175,SNR=8.8						
DRLN	Deer Lake	69.09	8	eP	P	14 43 06.5	-0.2
	comp=Z,63nm,0.9s						
TAOE	Nuku Hiva Isla	69.11	268	eT	T	15 57 12.8	
	comp=Z,52nm,0.2s						
109C	Camp Elliot, M	69.16	318	P	P	14 43 08.2	+0.7
	baz=132						
CPE	Camp Elliot	69.16	318	eP	P	14 43 07.9	+0.3
	comp=Z,106nm,1.4s						
MATQ	Matagami	69.19	354	P	P	14 43 07.0	-0.3
	baz=172,SNR=17						
BELC	Belle Mtn. Jos	69.22	320	P	P	14 43 09.2	+1.2
	baz=133,SNR=44						
PFO	Pinyon Flats O	69.24	319	eP	P	14 43 09.0	+0.8
	comp=Z,101nm,1.0s						
PFO	Pinyon Flats O	69.24	319	eP	P	14 43 09.0	+0.8
PFO				pmax	pmax		
	comp=Z,101nm,1.0s						
PFO	Pinyon Flats O	69.24	319	P	P	14 43 09.2	+1.0
	baz=132,SNR=58						
C40A	Isle Royale Na	69.28	346	eP	P	14 43 08.5	+0.6
	comp=Z,91nm,0.9s						
C40A	Isle Royale Na	69.28	346	P	P	14 43 07.6	-0.3
	baz=160,SNR=5.9						
ROSA	Rosais	69.40	33	eP	P	14 43 09.3	+0.4
	comp=Z,73nm,1.0s						
O20A	White River Ci	69.41	329	eP	P	14 43 09.6	+0.4
	comp=Z,61nm,1.0s						
O20A	White River Ci	69.41	329	P	P	14 43 09.6	+0.4
	baz=141,SNR=16						
LDFC	Landfair	69.42	321	eP	P	14 43 10.9	+1.7
	comp=Z,139nm,1.0s						
KNB	Kanab	69.47	324	eP	P	14 43 10.8	+1.2
	comp=Z,208nm,1.0s						
KNB	Kanab	69.47	324	eP	P	14 43 10.8	+1.2
KNB				pmax	pmax		
	comp=Z,208nm,1.0s						
PKCU	Pink Cliffs	69.50	325	eP	P	14 43 10.9	+1.0
	comp=Z,57nm,1.1s						
GMRC	Granite Mounta	69.55	321	P	P	14 43 11.2	+1.2
	baz=133,SNR=99						
MACI	Morro de la Ar	69.59	49	eP	P	14 43 10.4	-0.1
	comp=Z,253nm,1.0s						
MURC	Murrieta	69.69	319	P	P	14 43 11.7	+0.9
	baz=132,SNR=8.8						
LCMT	Little Creek M	69.70	324	eP	P	14 43 11.5	+0.5
	comp=Z,69nm,1.0s						
SRU	San Rafael Swe	69.78	327	eP	P	14 43 11.6	+0.2
	comp=Z,66nm,0.8s						
SRU	San Rafael Swe	69.78	327	eP	P	14 43 11.6	+0.2
SRU				pmax	pmax		
	comp=Z,66nm,0.8s						
MTPU	Mount Pierson	69.86	325	eP	P	14 43 12.8	+0.6
	comp=Z,36nm,0.9s						
EYMN	Ely	69.88	344	eP	P	14 43 10.8	-0.8
	comp=Z,45nm,0.9s						
EYMN	Ely	69.88	344	P	P	14 43 10.6	-1.0
	baz=158,SNR=16						
BBRC	Big Bear Solar	69.96	319	P	P	14 43 14.0	+1.3
	baz=132						
Q16A	Castle Valley	69.97	326	eP	P	14 43 13.4	+0.7
	comp=Z,49nm,0.8s						
HEC	Hector,Ludlow	69.99	320	P	P	14 43 14.0	+1.4
	baz=133,SNR=49						
SZCU	Shurtz Canyon	70.03	324	eP	P	14 43 14.1	+1.0
	comp=Z,149nm,1.8s						
RWWY	Rawlins	70.13	331	eP	P	14 43 13.8	+0.2
	comp=Z,258nm,1.9s						
SCI2	San Clemente I	70.14	317	P	P	14 43 14.7	+1.2
	baz=131,SNR=9.2						
CMLA	Cha da Macela	70.15	36	iP	P	14 43 15.5	+2.0
TUQ	Turquoise Moun	70.15	321	P	P	14 43 14.7	+1.0
	baz=133,SNR=13						
CCUT	Cedar City	70.16	324	eP	P	14 43 15.3	+1.5
	comp=Z,127nm,0.9s						
P17A	Butcher Ranch,	70.16	327	eP	P	14 43 14.3	+0.6
	comp=Z,88nm,0.9s						
MSU	Marysvale	70.20	325	eP	P	14 43 15.0	+0.9
MSU	Marysvale	70.20	325	eP	P	14 43 15.0	+0.9
TMUT	Trail Mountain	70.27	327	eP	P	14 43 15.3	+0.7
	comp=Z,29nm,0.7s						
CIS	Catalina Islan	70.33	318	P	P	14 43 15.8	+1.1
	baz=131,SNR=9.2						
BFSC	Mount Baldy Ra	70.40	319	P	P	14 43 16.2	+0.9
	baz=132,SNR=29						
RRX	Edison Barstow	70.42	320	P	P	14 43 16.3	+1.0
	baz=132						
TCRU	Three Creeks R	70.42	325	eP	P	14 43 16.4	+1.0
	comp=Z,66nm,0.9s						
SHPR	Sheep Range	70.44	322	eP	P	14 43 16.4	+0.9
	comp=Z,74nm,1.0s						
FMP	Fort Macarthur	70.45	318	P	P	14 43 16.6	+1.2
	baz=131,SNR=5.2						
K22A	Casper	70.58	332	eP	P	14 43 16.4	+0.2
	comp=Z,53nm,0.8s						
K22A	Casper	70.58	332	P	P	14 43 16.6	+0.4
	baz=143,SNR=30						
GSC	Goldstone, Bar	70.59	320	eP	P	14 43 17.3	+0.9
	comp=Z,197nm,1.5s						
GSC	Goldstone, Bar	70.59	320	eP	P	14 43 17.3	+0.9
GSC				pmax	pmax		
	comp=Z,197nm,1.5s						
GSC	Goldstone, Bar	70.59	320	P	P	14 43 17.7	+1.3
	baz=132,SNR=38						
MWC	Mount Wilson	70.64	319	eP	P	14 43 17.7	+0.9
	comp=Z,134nm,1.1s						
SHOC	Shoshone, Teco	70.68	321	P	P	14 43 17.8	+1.0
	baz=133,SNR=5.8						
PASC	Pasadena Art C	70.69	319	eP	P	14 43 17.7	+0.9
	comp=Z,130nm,1.1s						
RSSD	Black Hills	70.70	334	eP	P	14 43 17.5	+0.5
	comp=Z,77nm,0.8s						
RSSD	Black Hills	70.70	334	eP	P	14 43 17.5	+0.5
RSSD				pmax	pmax		
	comp=Z,77nm,0.8s						
RSSD	Black Hills	70.70	334	P	P	14 43 17.3	+0.3
	baz=145						
DECC	Green Verdugo	70.83	319	P	P	14 43 18.9	+1.2
	baz=131,SNR=8.7						
QSPA	South Pole Qui	70.84	180	eP	P	14 43 18.6	+1.1
	comp=Z,86nm,1.0s						
SNCC	San Nicolas Is	70.94	317	eP	P	14 43 19.5	+1.1
	comp=Z,123nm,0.9s						
MPU	Maple Canyon	71.02	327	eP	P	14 43 19.8	+0.8
	comp=Z,64nm,1.0s						
EDW2	Edwards Air Fo	71.03	319	P	P	14 43 19.7	+0.7
	baz=132,SNR=55						
PSUT	Pine Spring	71.13	324	eP	P	14 43 20.6	+1.0
	comp=Z,94nm,0.9s						
BLG	Laguna Peak, P	71.20	318	P	P	14 43 20.8	+0.9
	baz=130,SNR=12						
NLU	North Lily Min	71.20	327	eP	P	14 43 21.0	+0.8
	comp=Z,45nm,1.0s						
LRMC	Laurel Mtn Rad	71.24	320	P	P	14 43 21.3	+1.0
	baz=132,SNR=29						
OSI	Osito Audit: C	71.31	319	eP	P	14 43 21.4	+0.8
	comp=Z,89nm,0.9s						
OSI	Osito Audit: C	71.31	319	P	P	14 43 21.6	+1.0
	baz=131						
JLU	Jordanelle	71.36	327	eP	P	14 43 21.9	+0.8
	comp=Z,53nm,0.8s						
TPNV	Topopah Spring	71.38	322	eP	P	14 43 22.4	+1.3
	comp=Z,154nm,1.2s						
TPNV	Topopah Spring	71.38	322	eP	P	14 43 22.4	+1.3
TPNV				pmax	pmax		
	comp=Z,154nm,1.2s						
TPNV	Topopah Spring	71.38	322	P	P	14 43 22.5	+1.3
	baz=133,SNR=123						
AGMN	Agassiz Nation	71.40	342	eP	P	14 43 20.2	-0.6
	comp=Z,80nm,0.8s						
AGMN	Agassiz Nation	71.40	342	P	P	14 43 20.1	-0.7
	baz=154,SNR=48						
FURC	Furnace Creek,	71.41	321	P	P	14 43 22.2	+1.1
	baz=133,SNR=77						
SCZ2	Santa Cruz Isl	71.49	318	P	P	14 43 22.6	+0.9
	baz=130,SNR=14						
MPMC	Manual Prospec	71.51	320	P	P	14 43 22.7	+0.6
	baz=132,SNR=47						
ARVC	Arvin	71.71	319	P	P	14 43 24.4	+1.4
	baz=131						
DAC	Darwin (Calif)	71.72	321	eP	P	14 43 25.7	+2.5
	comp=Z,77nm,0.9s						
DAC	Darwin (Calif)	71.72	321	P	P	14 43 25.7	+2.5
TCUT	Toone Canyon	71.72	328	eP	P	14 43 23.7	+0.4
	comp=Z,59nm,0.7s						
DUG	Dugway, Tooele	71.77	326	eP	P	14 43 23.7	+0.3
	comp=Z,94nm,1.1s						
DUG	Dugway, Tooele	71.77	326	eP	P	14 43 23.7	+0.3
DUG				pmax	pmax		
	comp=Z,94nm,1.1s						
DUG	Dugway, Tooele	71.77	326	P	P	14 43 24.4	+1.0
	baz=137,SNR=43						
SBC	Santa Barbara	71.82	318	P	P	14 43 24.3	+0.7
	baz=130						
ISA	Isabella, Lake	71.84	320	eP	P	14 43 24.8	+1.0
	comp=Z,124nm,0.9s						
ISA	Isabella, Lake	71.84	320	eP	P	14 43 24.8	+1.0
ISA				pmax	pmax		
	comp=Z,124nm,0.9s						
ISA	Isabella, Lake	71.84	320	P	P	14 43 24.9	+1.0
	baz=131,SNR=70						
PMOZ	Porto Moniz, M	71.90	44	eP	P	14 43 24.8	+0.5
	comp=Z,145nm,1.0s						
PMOZ	Porto Moniz, M	71.90	44	eP	P	14 43 24.4	+0.2
R11A	Troy Canyon, C	71.96	323	eP	P	14 43 25.6	+0.9
	comp=Z,65nm,1.1s						
R11A	Troy Canyon, C	71.96	323	P	P	14 43 25.8	+1.2
	baz=134,SNR=87						
PMAR	Madeira	72.02	45	eP	P	14 43 26.0	+0.9
	comp=Z,164nm,1.5s						
GRAC	Grapevine Rang	72.06	321	P	P	14 43 26.3	+1.2
	baz=132,SNR=14						
BW06	Boulder Array	72.07	330	eP	P	14 43 25.1	-0.1
	comp=Z,19nm,0.8s						
BW06	Boulder Array	72.07	330	P	P	14 43 25.1	-0.1
	baz=140,SNR=34						
PD31	Pinedale Array	72.07	330	eP	P	14 43 25.2	0.0
PD31				epP	pP	14 43 54.1	-0.2
PDAR	Pinedale Array	72.07	330	P	P	14 43 25.2	0.0
	comp=Z,14nm,0.8s,baz=133,slow=6.7,SNR=47						
PDAR				pP	pP	14 43 54.1	-0.2
	comp=Z,7.5nm,0.7s,baz=126,slow=7.7,SNR=3.9						
CWC	Cottonwood Cre	72.12	320	P	P	14 43 26.6	+1.0
	baz=132						
HWUT	Hardware Ranch	72.17	328	eP	P	14 43 26.1	+0.3
	comp=Z,36nm,0.8s						
PKM	Mcpherson Peak	72.17	318	P	P	14 43 27.1	+1.1
	baz=130,SNR=45						
MDND	Maddock	72.19	339	eP	P	14 43 25.7	+0.1
	comp=Z,480nm,0.8s						
MDND	Maddock	72.19	339	P	P	14 43 25.8	+0.2
	baz=150,SNR=39						
VES	Vestal, Richgr	72.34	319	P	P	14 43 28.1	+1.4
	baz=131,SNR=9.5						
SPUT	South Promonto	72.39	327	eP	P	14 43 27.5	+0.3
	comp=Z,116nm,1.3s						
BGU	Big Grassy Mou	72.41	327	eP	P	14 43 27.4	+0.2
	comp=Z,68nm,1.1s						
SMMC	Simmler	72.56	318	P	P	14 43 29.5	+1.4
	baz=130,SNR=38						
PMPS	Porto Santo	72.61	45	eP	P	14 43 30.1	+1.7
	comp=Z,128nm,1.2s						
TIN	Tinemaha, Big	72.62	321	P	P	14 43 29.8	+1.3
	baz=132,SNR=12						
PMPST	Porto Santo, M	72.62	45	eP	P	14 43 29.3	+0.8
	comp=Z,164nm,1.3s						
PMPST				epP	pP	14 43 59.1	+1.0
VOG	Valley Oaks Go	72.83	320	P	P	14 43 29.6	0.0
	baz=131						
HVU	Hansel Valley	72.90	327	eP	P	14 43 30.4	+0.3
	comp=Z,90nm,1.3s						
PAGB	Antelope Grade	72.99	319	eP	P	14 43 31.6	+1.0
	comp=Z,135nm,1.1s						
ULM	Lac du Bonnet	73.16	343	P	P	14 43 30.9	-0.3
	comp=Z,68nm,0.7s,baz=154,slow=5.9,SNR=93						
ULM	Lac du Bonnet	73.16	343	eP	P	14 43 30.4	-0.8
	comp=Z,77nm,0.7s						
ULM	Lac du Bonnet	73.16	343	P	P	14 43 30.9	-0.3
SNOW	Snow King Moun	73.16	330	eP	P	14 43 32.4	+0.6
	comp=Z,49nm,0.8s						
TPAW	Teton Pass	73.28	330	eP	P	14 43 32.5	+0.1
	comp=Z,42nm,0.8s						
MLAC	Mammoth, Mammo	73.36	321	P	P	14 43 34.0	+1.0
	baz=132,SNR=5.6						
MOOW	Moose Ponds	73.38	330	eP	P	14 43 33.1	+0.1
	comp=Z,19nm,0.8s						
FXWY	Fox Creek	73.43	330	eP	P	14 43 33.3	0.0
	comp=Z,37nm,0.9s						
OMMB	Old Mammoth Mi	73.45	321	eP	P	14 43 34.4	+0.8
	comp=Z,113nm,0.9s						
ELK	Elko	73.45	325	eP	P	14 43 33.9	+0.4
	comp=Z,48nm,1.0s						
ELK	Elko	73.45	325	eP	P	14 43 33.9	+0.4
ELK				pmax	pmax		
	comp=Z,48nm,1.0s						
NV11	Mina Array Sit	73.49	322	eP	P	14 43 34.5	+0.8
	comp=Z,3.7nm,0.9s						
MDPB	Devils Postpil	73.51	321	eP	P	14 43 34.8	+0.9
	comp=Z,72nm,0.9s						
NV01	Mina Array Sit	73.58	322	eP	P	14 43 35.2	+0.9
NV01				epP	pP	14 44 04.9	+1.7
NVAR	Mina Array Bea	73.58	322	P	P	14 43 35.2	+0.9
	comp=Z,48nm,0.8s,baz=144,slow=5.6,SNR=166						
NVAR				pP	pP	14 44 04.9	+1.7
	comp=Z,21nm,0.8s,baz=158,slow=6.6,SNR=6.0						
IMW	Indian Meadow	73.58	330	eP	P	14 43 34.6	+0.4
	comp=Z,95nm,1.2s						
FLWY	Flagg Ranch	73.61	330	eP	P	14 43 35.0	+0.7
	comp=Z,142nm,0.8s						
LAO	LASA Array	73.69	334	eP	P	14 43 34.6	+0.1
	comp=Z,107nm,1.1s						
LAO	LASA Array	73.69	334	P	P	14 43 35.0	+0.5
	baz=144,SNR=22						
RLMT	Red Lodge	73.75	332	eP	P	14 43 35.5	+0.4
	comp=Z,61nm,0.8s						
RLMT	Red Lodge	73.75	332	P	P	14 43 35.7	+0.6
	baz=141,SNR=39						
H17A	Grant Village	73.79	330	eP	P	14 43 37.0	+1.6
	comp=Z,31nm,0.7s						
H17A	Grant Village	73.79	330	P	P	14 43 36.8	+1.4
	baz=140,SNR=23						
YPP	Pitchstone Pla	73.80	330	eP	P	14 43 36.4	+0.9
	comp=Z,47nm,1.5s						
LKWY	Lake	73.84	331	eP	P	14 43 36.2	+0.5
	comp=Z,94nm,0.8s						
LKWY	Lake	73.84	331	eP	P	14 43 36.2	+0.5
LKWY				pmax	pmax		
	comp=Z,95nm,0.8s						
RYN	Ryan	73.84	322	eP	P	14 43 36.3	+0.6
	comp=Z,66nm,1.0s						
TBI	Tubuai	73.86	251	eP	P	14 43 38.7	+2.7
	comp=Z,190nm,1.1s						
TBI	Tubuai	73.86	251	eLR	LR	15 06 02.5	
	comp=Z,2µm,35.0s						
KVN	Kaiserville	73.88	322	eP	P	14 43 36.2	+0.3
	comp=Z,101nm,0.9s						
KVN	Kaiserville	73.88	322	eP	P	14 43 36.2	+0.3
KVN				pmax	pmax		
	comp=Z,101nm,0.9s						
SCHQ	Schefferville	73.90	1	P	P	14 43 36.0	+0.5
	comp=Z,19nm,0.7s,baz=198,slow=5.2,SNR=12						
SCHQ				pP	pP	14 44 05.5	+0.5
	comp=Z,26nm,0.7s,baz=205,slow=5.9,SNR=4.7						
SCHQ	Schefferville	73.90	1	eP	P	14 43 35.0	-0.5
SCHQ				epP	pP	14 44 05.5	+0.5
YFT	Old Faithful	73.95	330	eP	P	14 43 36.2	-0.1
	comp=Z,56nm,1.1s						
MEH	Mehetia	74.00	256	eP	P	14 43 39.2	+2.2
	comp=Z,49nm,1.2s						
MEH				epP	pP	14 44 05.9	+0.3
	comp=Z,24nm,1.1s						
YNR	Norris Junctio	74.08	331	eP	P	14 43 38.2	+1.1
	comp=Z,48nm,0.8s						
YMR	Madison River	74.18	330	eP	P	14 43 38.5	+0.9
	comp=Z,115nm,1.1s						
YHH	Holmes Hill	74.21	331	eP	P	14 43 38.8	+0.9
	comp=Z,94nm,0.9s						
WAKR	Walker	74.29	321	eP	P	14 43 39.7	+1.3
	comp=Z,60nm,1.1s						
VAH	Vaihoa	74.31	259	eP	P	14 43 41.3	+2.5
	comp=Z,258nm,1.1s						
VAH				epP	pP	14 44 07.7	+0.3
	comp=Z,190nm,1.1s						
BMN	Battle Mountai	74.31	324	eP	P	14 43 38.0	-0.4
	comp=Z,15nm,1.0s						
BMN	Battle Mountai	74.31	324	eP	P	14 43 38.0	-0.4
BMN				pmax	pmax		
	comp=Z,15nm,1.0s						
YHB	Horse Butte	74.35	330	eP	P	14 43 38.5	-0.1
	comp=Z,106nm,0.8s						
SAO	San Andreas Ge	74.39	319	eP	P	14 43 39.2	+0.4
	comp=Z,30nm,0.8s						
SAO	San Andreas Ge	74.39	319	eP	P	14 43 39.2	+0.4
SAO				pmax	pmax		
	comp=Z,30nm,0.8s						
GCMT	Greycliff	74.44	332	eP	P	14 43 39.2	+0.2
YERR	Yerington	74.49	322	eP	P	14 43 40.6	+1.0
	comp=Z,114nm,1.2s						
QLMT	Earthquake Lak	74.52	330	eP	P	14 43 40.8	+1.2
CMB	Columbia Colle	74.55	320	eP	P	14 43 40.2	+0.5
	comp=Z,23nm,0.9s						
CMB	Columbia Colle	74.55	320	eP	P	14 43 40.2	+0.5
CMB				pmax	pmax		
	comp=Z,23nm,0.9s						
PMOR	Pomariorio Ree	74.62	259	eP	P	14 43 43.2	+2.6
	comp=Z,306nm,1.0s						
PMOR				epP	pP	14 44 09.5	+0.3
	comp=Z,133nm,1.0s						
PNTR	Pine Nut	74.77	322	eP	P	14 43 42.3	+1.1
	comp=Z,89nm,0.8s						
SFNM	Sidi Ifni	74.78	51	P	P	14 43 44.0	+2.9
VCNR	Virginia City	74.94	322	eP	P	14 43 43.1	+1.0
	comp=Z,137nm,1.5s						
HLID	Hailey	75.03	328	eP	P	14 43 43.5	+1.0
	comp=Z,86nm,0.9s						
HLID	Hailey	75.03	328	P	P	14 43 43.6	+1.0
	baz=136,SNR=142						
PAHR	Pah Rah Range	75.05	322	eP	P	14 43 43.8	+1.1
	comp=Z,207nm,0.8s						
TVO	Taravao	75.11	256	eP	P	14 43 46.0	+2.5
	comp=Z,58nm,1.2s						
TVO	Taravao	75.11	256	eT	T	16 04 39.0	
	comp=Z,0.8nm,0.3s						

BOZ	Bozeman (W)	75.19	331	*e*P	P	14 43 43.5	+0.2
	comp=Z,46nm,1.0s						
BOZ	Bozeman (W)	75.19	331	*e*P	P	14 43 43.5	+0.2
BOZ				pmax	pmax		
	comp=Z,46nm,1.0s						
BOZ	Bozeman (W)	75.19	331	P	P	14 43 43.6	+0.2
	baz=139,SNR=63						
MCMT	McKenzie Canyo	75.19	330	*e*P	P	14 43 44.2	+0.7
TIAR	Tiarei	75.26	256	*e*T	T	16 04 49.2	
	comp=Z,3.2nm,0.2s						
PAE	Paea	75.45	256	*e*P	P	14 43 47.7	+2.4
	comp=Z,23nm,1.0s						
PAE				*e*pP	pP	14 44 14.4	+0.3
	comp=Z,15nm,1.1s						
DLMT	Dillon	75.46	330	*e*P	P	14 43 45.1	+0.2
	comp=Z,92nm,1.4s						
PPT2	Papeete2	75.46	256	*e*P	P	14 43 48.1	+2.6
	comp=Z,145nm,1.3s						
PPT2				*e*pP	pP	14 44 14.5	+0.2
	comp=Z,105nm,1.4s						
PPT2	Papeete2	75.46	256	*e*LR	LR	15 06 45.6	
	comp=Z,1µm,25.2s						
PPT	Papeete	75.47	256	P	P	14 43 47.2	+1.8
	comp=Z,105nm,1.1s,baz=91,slow=11,SNR=5.6						
PPT	Papeete	75.47	256	*e*P	P	14 43 47.2	+1.8
PPT	Papeete	75.47	256	P	P	14 43 47.2	+1.8
AFDM	Forest Hills D	75.49	321	*e*P	P	14 43 45.7	+0.6
	comp=Z,55nm,0.9s						
CGR	Cap Guir	75.69	50	P	P	14 43 49.0	+2.6
BEKR	Beckworth	75.72	322	*e*P	P	14 43 46.5	-0.1
	comp=Z,65nm,1.1s						
HRY	Holter Researc	76.12	331	*e*P	P	14 43 49.7	+1.1
MCCM	Marconi Confer	76.14	319	*e*P	P	14 43 49.9	+1.2
	comp=Z,82nm,0.8s						
ORV	Oroville	76.19	321	*e*P	P	14 43 49.3	+0.3
	comp=Z,131nm,1.0s						
ORV	Oroville	76.19	321	*e*P	P	14 43 49.3	+0.3
ORV				pmax	pmax		
	comp=Z,131nm,1.0s						
EGMT	Eagleton	76.21	333	*e*P	P	14 43 49.0	0.0
	comp=Z,106nm,1.0s						
EGMT	Eagleton	76.21	333	P	P	14 43 49.1	+0.1
	baz=141,SNR=53						
EAH	EAH	76.45	49	P	P	14 43 53.0	+2.3
WVOR	Wild Horse Val	76.46	325	*e*P	P	14 43 50.6	0.0
	comp=Z,16nm,0.9s						
WVOR	Wild Horse Val	76.46	325	*e*P	P	14 43 50.6	0.0
WVOR				pmax	pmax		
	comp=Z,16nm,0.9s						
GDXM	Geysers	76.50	320	*e*P	P	14 43 51.8	+0.9
	comp=Z,33nm,1.1s						
TTIG	Tnine Tigouga,	76.69	51	P	P	14 43 55.0	+2.8
O03E	Paynes Creek	76.85	321	P	P	14 43 52.4	-0.4
	baz=130,SNR=20						
PLID	Pearl Lake	76.92	328	*e*P	P	14 43 53.8	+0.6
	comp=Z,102nm,0.9s						
TOA1	Torodi Ar. Sit	76.99	71	*e*P	P	14 43 54.0	-0.1
TOA1				*e*pP	pP	14 44 24.4	+0.6
TOA1				*e*PKKPdf	PKKPbc	15 03 01.1	-0.2
TOA0	Torodi Ar. Sit	76.99	71	*e*P	P	14 43 53.1	-0.9
	comp=Z,182nm,0.6s						
TORD	Torodi Ar. Bea	76.99	71	P	P	14 43 54.0	-0.1
	comp=Z,100nm,0.7s,baz=301,slow=7.1,SNR=216						
TORD				pP	pP	14 44 24.4	+0.6
	comp=Z,125nm,0.9s,baz=267,slow=5.0,SNR=6.2						
TORD				PKKPbc	PKKPbc	15 03 01.1	-0.2
	comp=Z,0.3nm,0.6s,baz=25,slow=3.8,SNR=3.6						
TORD				LR	LR	15 17 15.9	
	comp=Z,914nm,18.1s,baz=295,slow=35						
J08A	Circle Bar Ran	77.00	325	*e*P	P	14 43 54.1	+0.5
	comp=Z,23nm,0.8s						
MOD	Modoc Plateau	77.03	323	*e*P	P	14 43 54.5	+0.7
	comp=Z,140nm,1.5s						
MSO	Missoula	77.18	330	*e*P	P	14 43 55.5	+0.9
	comp=Z,41nm,1.0s						
MSO	Missoula	77.18	330	P	P	14 43 55.4	+0.9
	baz=137,SNR=21						
O02D	Mt. Diablo Mer	77.36	321	P	P	14 43 55.8	+0.1
	baz=129,SNR=10						
BMO	Blue Mountains	77.41	327	*e*P	P	14 43 56.2	+0.3
	comp=Z,84nm,0.9s						
OUK	Oukaimeden	77.46	50	P	P	14 43 59.0	+2.2
WDC	Whiskeytown Da	77.46	321	*e*P	P	14 43 55.4	-0.7
	comp=Z,28nm,0.7s						
WDC	Whiskeytown Da	77.46	321	*e*P	P	14 43 55.4	-0.7
WDC				pmax	pmax		
	comp=Z,28nm,0.7s						
KCPM	Cahto Peak	77.53	320	*e*P	P	14 43 57.8	+1.1
	comp=Z,57nm,0.9s						
N02D	Trinity Center	77.81	322	P	P	14 43 57.7	-0.5
	baz=129,SNR=16						
M04C	Macdoel	77.82	323	P	P	14 43 58.6	+0.4
	baz=130,SNR=25						
SBA	Scott Base	77.87	190	*e*P	P	14 44 00.3	+2.4
	comp=Z,59nm,1.1s						
SBA	Scott Base	77.87	190	P	P	14 44 00.3	+2.4
K05A	Summer Lake	77.90	324	*e*P	P	14 43 59.4	+0.6
	comp=Z,90nm,1.0s						
KMRM	Mail Ridge	77.94	320	*e*P	P	14 44 00.1	+1.2
	comp=Z,108nm,1.0s						
I07A	Izee	78.03	326	*e*P	P	14 44 00.3	+0.9
	comp=Z,72nm,1.2s						
OUZM	OUZ	78.11	51	P	P	14 44 02.0	+1.9
F10A	Beach Ranch, E	78.15	328	*e*P	P	14 44 00.7	+0.8
	comp=Z,42nm,0.9s						
M02C	Callahan	78.16	322	P	P	14 44 00.0	0.0
	baz=129,SNR=12						
YBH	Yreka Blue Hor	78.29	322	*e*P	P	14 44 00.3	-0.5
	comp=Z,28nm,1.0s						
YBH	Yreka Blue Hor	78.29	322	*e*P	P	14 44 00.3	-0.5
YBH				pmax	pmax		
	comp=Z,28nm,1.0s						
K04D	Chiloquin, OR	78.31	323	P	P	14 44 01.4	+0.5
	baz=130						
KHMM	Horse Mountain	78.35	321	*e*P	P	14 44 02.2	+1.0
	comp=Z,60nm,1.0s						
L04D	Klamath Falls	78.36	323	P	P	14 44 01.3	0.0
	baz=130,SNR=11						
J05D	Fort Rock, OR	78.45	324	P	P	14 44 02.5	+0.8
	baz=131,SNR=20						
JCC	Jacoby Creek,	78.50	321	*e*P	P	14 44 03.1	+1.4
	comp=Z,135nm,1.3s						
G08A	Pilot Rock	78.56	327	*e*P	P	14 44 03.1	+0.9
	comp=Z,48nm,1.3s						
PINE	Pine Mountain	78.62	325	*e*P	P	14 44 03.9	+1.2
	comp=Z,102nm,1.2s						
SYO	Syowa Base	78.64	160⇑	*e*P	P	14 44 02.4	+0.2
SYO	Syowa Base	78.64	160⇑	*i*PcP	PcP	14 44 09.2	-1.6
WALA	Waterton Lakes	78.80	332	*e*P	P	14 44 03.7	+0.2
	comp=Z,75nm,0.9s						
KRMB	Red Mountain	78.86	321	*e*P	P	14 44 05.2	+1.3
	comp=Z,56nm,0.9s						
FFC	Flin Flon	78.88	341	*e*P	P	14 44 03.4	-0.2
	comp=Z,346nm,0.9s						
FFC	Flin Flon	78.88	341	*i* P	P	14 44 03.5	-0.1
VNDA	Vanda	78.90	190	P	P	14 44 05.8	+2.3
	comp=Z,19nm,0.8s,baz=130,slow=5.3,SNR=87						
VNDA				PKKPbc	PKKPbc	15 02 59.6	+1.3
	comp=Z,1.6nm,0.8s,baz=167,slow=6.7,SNR=4.6						
VNDA	Vanda	78.90	190	*e*P	P	14 44 05.8	+2.3
	comp=Z,28nm,0.9s						
VNDA				*e*PKKPdf	PKKPbc	15 02 59.6	+1.3
VNDA	Vanda	78.90	190	P	P	14 44 05.8	+2.3
J04D	Umpqua Nationa	78.91	324	P	P	14 44 04.8	+0.5
	baz=130,SNR=11						
HUMO	Hull Mountain	78.98	323	*e*P	P	14 44 04.4	-0.1
	comp=Z,13nm,0.8s						
E09A	Wood Farm, Sta	78.99	328	*e*P	P	14 44 04.9	+0.5
	comp=Z,60nm,1.2s						
L02E	Cave Junction	79.08	322	P	P	14 44 05.7	+0.7
	baz=129,SNR=11						
I05D	Terrebonne, OR	79.19	325	P	P	14 44 06.5	+0.9
	baz=131,SNR=19						
G06A	Carlson Farm,	79.41	326	*e*P	P	14 44 07.5	+0.8
	comp=Z,52nm,1.1s						
E08A	Dider Farm, El	79.43	328	*e*P	P	14 44 07.2	+0.4
	comp=Z,15nm,0.8s						
I04A	Tendick Farm,	79.43	324	P	P	14 44 07.0	0.0
	baz=130,SNR=11						
K02D	Willamette Mer	79.45	322	P	P	14 44 07.6	+0.5
	baz=129,SNR=17						
F07A	Phinny Hill Vi	79.47	327	*e*P	P	14 44 08.4	+1.4
	comp=Z,99nm,1.4s						
ZHG	ZHG	79.51	49	P	P	14 44 08.4	+0.7
HAWA	Hanford	79.61	327	*e*P	P	14 44 08.7	+1.0
	comp=Z,73nm,1.0s						
WIN	Windhoek	79.61	110	*e*P	P	14 44 08.8	+0.2
	comp=Z,37nm,0.9s						
WIN	Windhoek	79.61	110	P	P	14 44 07.7	-0.9
NEW	Newport	79.71	330	*e*P	P	14 44 07.7	-0.6
	comp=Z,19nm,0.9s						
NEW	Newport	79.71	330	*e*P	P	14 44 07.7	-0.6
NEW				pmax	pmax		
	comp=Z,19nm,0.9s						
NEW	Newport	79.71	330	P	P	14 44 08.2	-0.1
	baz=135						
D08A	Wollman Farm,	79.75	328	*e*P	P	14 44 09.3	+0.8
	comp=Z,81nm,1.4s						
G05D	Wamic, OR	79.77	326	P	P	14 44 10.0	+1.3
	baz=131,SNR=16						
H04A	Detroit Lake	79.88	325	*e*P	P	14 44 09.7	+0.4
	comp=Z,46nm,0.9s						
J01E	Myrtle Point	79.89	323	P	P	14 44 10.3	+1.0
	baz=129,SNR=5.2						
I03D	Drain, OR	79.89	323	P	P	14 44 10.0	+0.7
	baz=129,SNR=9.6						
C09A	Chrisman Ranch	79.94	329	*e*P	P	14 44 10.3	+0.8
	comp=Z,101nm,0.9s						
KEBM	Edson Butte	79.94	322	*e*P	P	14 44 10.9	+1.2
	comp=Z,140nm,1.1s						
PFVI	Vila Bisbo	79.98	45	*e*P	P	14 44 10.5	+0.5
	comp=Z,101nm,1.0s						
PFVI				*e*pP	pP	14 44 41.9	+1.8
PFVI	Vila Bisbo	79.98	45	*e*P	P	14 44 10.4	+0.5
	comp=Z,78nm,0.9s						
PFVI	Vila Bisbo	79.98	45	P	P	14 44 11.4	+1.5
SUR	Sutherland	79.98	121	*e*P	P	14 44 11.8	+1.2
	comp=Z,54nm,0.9s						
H04D	Lebanon	80.08	324	P	P	14 44 11.1	+0.8
	baz=130						
MORF	Marmelete	80.19	45	*e*P	P	14 44 12.9	+1.7
MORF				AMb	AMB	14 44 14.9	
	comp=Z,133nm,1.1s						
MORF				*e*S	S	14 54 08.6	+1.4
MORF	Marmelete	80.19	45	*e*P	P	14 44 12.9	+1.7
	comp=Z,128nm,1.1s						
MORF				*e*pP	pP	14 44 40.3	-1.0
MORF	Marmelete	80.19	45	*e*P	P	14 44 12.8	+1.7
MORF				*e*S	S	14 54 08.6	+1.4
ARF	Arif	80.26	52	P	P	14 44 14.0	+2.2
F05D	White Salmon	80.27	326	P	P	14 44 12.5	+1.2
	baz=131						
PTEO	Sao Teotonio	80.28	45	*e*P	P	14 44 13.2	+1.7
	comp=Z,173nm,1.4s						
PTEO				*e*pP	pP	14 44 42.9	+1.2
COR	Corvallis	80.43	324	*e*P	P	14 44 13.3	+1.1
	comp=Z,107nm,0.9s						
COR	Corvallis	80.43	324	*e*P	P	14 44 13.3	+1.1
COR				pmax	pmax		
	comp=Z,107nm,0.9s						
I02D	Swisshome	80.43	323	P	P	14 44 14.1	+1.9
	baz=129,SNR=6.7						
CZD	Col de Zad	80.45	50	P	P	14 44 15.0	+2.0
FCC	Fort Churchill	80.46	347	*e*P	P	14 44 12.1	+0.1
FCC				*e*pP	pP	14 44 40.3	-1.5
PBDV	Barranco-do-Ve	80.64	45	*e*P	P	14 44 14.8	+1.3
	comp=Z,109nm,1.2s						
PBDV				*e*pP	pP	14 44 41.5	-2.2
LIS	Lisbon	80.64	43	*e*P	P	14 44 15.2	+1.7
LIS				AMb	AMB	14 44 16.5	
	comp=Z,105nm,0.8s						
LIS	Lisbon	80.64	43	*e*P	P	14 44 15.1	+1.7
MDT	Midelt	80.66	50	P	P	14 44 15.0	+1.2
PMAFR	Mafra	80.69	43	*e*P	P	14 44 13.2	-0.6
	comp=Z,103nm,1.3s						
PNCL	Nicolau / Gran	80.72	44	*e*P	P	14 44 14.9	+1.0
	comp=Z,55nm,0.9s						
PNCL				*e*pP	pP	14 44 45.1	+1.1
LTY	Liberty	80.77	327	*e*P	P	14 44 14.6	+0.5
	comp=Z,79nm,1.0s						
PCVE	Castro Verde	80.78	45	*e*P	P	14 44 15.5	+1.3
	comp=Z,69nm,0.8s						
PCVE				*e*pP	pP	14 44 42.3	-2.1
SICH	Sidi Chahed	80.80	49	P	P	14 44 17.0	+2.5
G03D	McMinnville, O	80.81	325	P	P	14 44 15.5	+1.3
	baz=129						
RSA	Sarsar	80.84	48	P	P	14 44 17.0	+2.3
PVAQ	Vaqueiros	80.87	45	*e*P	P	14 44 15.4	+0.6
	comp=Z,36nm,0.9s						
LCRM	LCR	80.91	50	P	P	14 44 17.0	+1.8
TSUM	Tsumeb	81.02	107	*e*P	P	14 44 16.6	+0.4
	comp=Z,90nm,0.9s						
LON	Longmire	81.02	326	*e*P	P	14 44 15.7	+0.3
	comp=Z,26nm,0.9s						
LON	Longmire	81.02	326	*e*P	P	14 44 15.7	+0.3
LON				pmax	pmax		
	comp=Z,26nm,0.9s						
PBEJ	Beja	81.11	45	*e*P	P	14 44 18.1	+2.1
	comp=Z,59nm,0.8s						
PBEJ				*e*pP	pP	14 44 49.1	+2.9
F04D	Rainier, OR	81.22	325	P	P	14 44 17.5	+1.2
	baz=130						
ALMR	Almeirim	81.26	43	*e*P	P	14 44 18.7	+2.0
ALMR				AMb	AMB	14 44 20.0	
	comp=Z,152nm,0.8s						
ALMR				*e*S	S	14 54 19.6	+1.5
ALMR	Almeirim	81.26	43	*e*P	P	14 44 18.4	+1.7
	comp=Z,141nm,1.0s						
ALMR	Almeirim	81.26	43	*e*P	P	14 44 18.7	+2.0
ALMR				*e*S	S	14 54 19.6	+1.5
E04D	Cinebar	81.29	326	P	P	14 44 17.6	+0.9
	baz=130,SNR=6.3						
CHEFC	Chefchaouen	81.29	48	P	P	14 44 19.1	+2.0
D05A	Enumclaw	81.40	327	*e*P	P	14 44 18.0	+0.7
	comp=Z,125nm,0.8s						
PMTG	Montargil	81.44	44	*e*P	P	14 44 18.3	+0.6
	comp=Z,79nm,1.3s						
PMTG				*e*pP	pP	14 44 49.3	+1.4
SMIR	Smir Dam	81.56	48	P	P	14 44 20.0	+1.6
PTOM	Tomar	81.62	43	*e*P	P	14 44 19.9	+1.3
	comp=Z,116nm,1.1s						
PTOM				*e*pP	pP	14 44 50.2	+1.3
D04E	Lakebay	81.80	326	P	P	14 44 20.7	+1.3
	baz=130						
E03A	Lebam	81.81	326	*e*P	P	14 44 20.0	+0.6
	comp=Z,150nm,1.3s						
COI	Coimbra	81.94	43	*e*P	P	14 44 22.2	+1.9
	comp=Z,122nm,1.6s						
COI	Coimbra	81.94	43	*e*P	P	14 44 20.5	+0.2
	comp=Z,78nm,1.0s						
COI	Coimbra	81.94	43	*e*P	P	14 44 20.5	+0.2
COI				pmax	pmax		
	comp=Z,78nm,1.0s						
AKLM	AKL	82.04	49	P	P	14 44 22.1	+1.0
IVI	Ivigtut	82.05	10	*e*P	P	14 44 21.1	+0.8
	comp=Z,71nm,0.9s						
B05A	Bryant	82.15	328	P	P	14 44 21.0	-0.2
	baz=131,SNR=25						
PMRV	Marv??o	82.18	44	*e*P	P	14 44 21.7	+0.1
	comp=Z,35nm,1.2s						
PMRV				*e*pP	pP	14 44 51.9	0.0
D03D	Eldon	82.19	327	P	P	14 44 21.7	+0.3
	baz=130,SNR=13						
PCBR	Castelo Branco	82.34	43	*e*P	P	14 44 23.2	+0.8
	comp=Z,41nm,1.3s						
PCBR				*e*pP	pP	14 44 53.6	+0.9
NRS	Narsarsuaq	82.49	11	*e*P	P	14 44 23.1	+0.5
	comp=Z,63nm,1.1s						
NRS	Narsarsuaq	82.49	11	*e*P	P	14 44 23.1	+0.5
NRS				pmax	pmax		
	comp=Z,63nm,1.1s						
NLWA	Neilton Lookou	82.51	326	*e*P	P	14 44 23.2	0.0
	comp=Z,52nm,1.0s						
PVIS	Viseu	82.56	42	*e*P	P	14 44 24.6	+1.0
	comp=Z,82nm,1.3s						
MTE	Manteigas	82.61	43	*e*P	P	14 44 23.9	0.0
	comp=Z,100nm,1.2s						
MTE				*e*pP	pP	14 44 55.2	+1.0
MTE	Manteigas	82.61	43	*e*P	P	14 44 23.8	0.0
	comp=Z,60nm,1.0s						
A04D	Lummi Island	82.76	328	P	P	14 44 25.6	+1.3
	baz=130						
HORN	Hornachuelos	82.76	46	P	P	14 44 25.4	+0.7
FIGM	Figuig	82.80	52	P	P	14 44 26.0	+0.8
JBK	JBK	82.89	50	P	P	14 44 27.0	+1.3
PVRL	Vila Real	82.97	42	*e*P	P	14 44 27.1	+1.4
	comp=Z,74nm,1.2s						
PVRL				*e*pP	pP	14 44 57.3	+1.3
POLO	Lamas de Olo	82.98	42	*e*P	P	14 44 26.7	+0.9
	comp=Z,28nm,1.1s						
POLO				*e*pP	pP	14 44 57.0	+0.9
PGAV	Gavieira, Arco	83.01	41	*e*P	P	14 44 26.1	+0.1
	comp=Z,52nm,1.1s						
PGAV				*e*pP	pP	14 44 57.4	+1.1
PCAB	Cabril	83.02	41	*e*P	P	14 44 26.5	+0.6
	comp=Z,93nm,0.9s						
PCAB				*e*pP	pP	14 44 57.4	+1.2
PGC	Sidney	83.09	327	*e*P	P	14 44 27.0	+1.0
	comp=Z,95nm,0.9s						
TAF	Taforalt	83.23	50	P	P	14 44 29.1	+1.8
MVO	Moncorvo	83.35	42	*e*P	P	14 44 28.2	+0.5
	comp=Z,104nm,1.0s						
MVO				*e*pP	pP	14 44 58.4	+0.4
LLLB	Lillooet	83.58	329	*e*P	P	14 44 28.9	+0.3
	comp=Z,55nm,1.0s						
PBRG	Braganca	83.88	42	*e*P	P	14 44 30.6	+0.3
	comp=Z,94nm,1.3s						
PBRG				*e*pP	pP	14 45 02.0	+1.3
TAM	Tamanrasset	84.19	64	*e*P	P	14 44 31.7	-0.8
	comp=Z,77nm,1.2s						
TAM	Tamanrasset	84.19	64	*e*P	P	14 44 31.7	-0.8
TAM				pmax	pmax		
	comp=Z,77nm,1.2s						
PAB	San Pablo	84.24	45	*e*P	P	14 44 32.7	+0.4
	comp=Z,70nm,0.8s						
PAB	San Pablo	84.24	45	*e*P	P	14 44 32.7	+0.4
PAB				pmax	pmax		
	comp=Z,70nm,0.8s						
ESDC	Sonseca Array	84.56	45	P	P	14 44 34.9	+1.0
	comp=Z,23nm,1.0s,baz=243,slow=5.6,SNR=81						
ESDC				pP	pP	14 45 06.2	+1.9
	comp=Z,33nm,0.8s,baz=252,slow=5.3,SNR=6.9						
ESDC				LR	LR	15 19 43.3	
	comp=Z,145nm,21.1s,baz=230,slow=34						
ESDC	Sonseca Array	84.56	45	*e*P	P	14 44 34.9	+1.0
ESDC				*e*pP	pP	14 45 06.2	+1.9
ESLA	Sonseca Array	84.56	45	*e*P	P	14 44 34.4	+0.5
	comp=Z,49nm,0.8s						
SESP	Santiago Espad	84.75	47	P	P	14 44 34.9	-0.1
BOSA	Boshof	84.78	118	P	P	14 44 36.3	+0.8
	comp=Z,36nm,0.8s,baz=256,slow=4.2,SNR=38						
BOSA				LR	LR	15 19 23.4	
	comp=Z,374nm,19.8s,baz=202,slow=33						
BOSA	Boshof	84.78	118	*e*P	P	14 44 35.7	+0.2
	comp=Z,66nm,1.1s						
BOSA	Boshof	84.78	118	P	P	14 44 36.3	+0.8
GUD	Guadarrama	84.93	44	P	P	14 44 36.3	+0.5
LBTB	Lobatse	86.25	115	*e*P	P	14 44 42.1	-0.7
	comp=Z,42nm,0.8s						
LBTB	Lobatse	86.25	115	*e*P	P	14 44 42.1	-0.7
LBTB				pmax	pmax		
	comp=Z,42nm,0.8s						
MAW	Mawson	86.49	163	P	P	14 44 44.4	+1.5
	comp=Z,7.7nm,0.7s,baz=209,slow=7.4,SNR=21						
MAW	Mawson	86.49	163	*e*P	P	14 44 44.3	+1.4
	comp=Z,4.4nm,0.9s						
MAW	Mawson	86.49	163	P	P	14 44 44.4	+1.5
SFJD	Kangerlussuaq	87.20	7	*e*P	P	14 44 46.4	+0.3
	comp=Z,99nm,1.6s						
SFJD	Kangerlussuaq	87.20	7	*i* P	P	14 44 47.1	+1.0
SFJD				*i*		14 45 16.6	
SFJD	Kangerlussuaq	87.20	7	*i* P	P	14 44 47.1	+1.0
SFJD				*i*		14 45 16.6	
BBB	Bella Bella	87.61	328	*e*P	P	14 44 49.0	+0.6
	comp=Z,43nm,0.9s						
XMAS	Kiritimati	88.92	273	*e*P	P	14 44 56.6	+1.1
	comp=Z,169nm,1.0s						
EPF	Esparros	89.02	43	*e*P	P	14 44 55.8	+0.4
EPF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
YKA	Yellowknife Ar	89.04	341	P	P	14 44 55.0	+0.1
	comp=Z,156nm,0.7s,baz=135,slow=4.7,SNR=407						
YKA				pP	pP	14 45 26.9	+1.8
	comp=Z,34nm,0.7s,baz=135,slow=4.7,SNR=4.2						
YKA	Yellowknife Ar	89.04	341	P	P	14 44 55.0	+0.1
YKA				*PP	pP	14 45 26.9	+1.8
YKB5	Yellowknife Ar	89.04	341	*e*P	P	14 44 55.0	+0.1
YKB5				*e*pP	pP	14 45 26.9	+1.8
YKW3	Yellowknife Ar	89.09	341	*e*P	P	14 44 55.2	0.0
	comp=Z,188nm,0.8s						
QUIF	Quistinic	89.23	38	*e*P	P	14 44 55.8	-0.4
QUIF				pmax	pmax		
	comp=Z,14nm,0.8s						
ROSF	Rostrenen	89.38	38	*e*P	P	14 44 57.6	+0.7
ROSF				pmax	pmax		
	comp=Z,30nm,1.0s						
LFF	La Frestale	90.16	42	*e*P	P	14 45 00.7	+0.1
LFF				pmax	pmax		
	comp=Z,31nm,0.7s						
DSB	Dublin	90.28	32	*e*P	P	14 45 00.3	-0.6
	comp=Z,24nm,0.9s						
MTLF	Montolieu	90.39	44	*e*P	P	14 45 01.6	-0.1
MTLF				pmax	pmax		
	comp=Z,12nm,1.0s						
MFF	Saint Martin d	90.39	40	*e*P	P	14 45 01.6	0.0
MFF				pmax	pmax		
	comp=Z,13nm,0.8s						
GRR	Gorron	90.81	38	*e*P	P	14 45 03.0	-0.5
GRR				pmax	pmax		
	comp=Z,18nm,0.9s						
RJF	Les Rejaudoux	90.82	42	*e*P	P	14 45 03.6	-0.1
RJF				pmax	pmax		
	comp=Z,22nm,1.0s						
CAF	Calviac	91.00	42	*e*P	P	14 45 04.6	0.0
CAF				pmax	pmax		
	comp=Z,17nm,1.0s						
FLN	La Foliniere	91.21	38	*e*P	P	14 45 05.1	-0.3
FLN				pmax	pmax		
	comp=Z,15nm,1.0s						
LDF	La Druitiere	91.34	38	*e*P	P	14 45 05.6	-0.4
LDF				pmax	pmax		
	comp=Z,210nm,1.0s						
TCF	Toulx Ste Croi	91.69	41	*e*P	P	14 45 08.5	+0.7
TCF				pmax	pmax		
	comp=Z,11nm,1.1s						
WRAK	Wrangell Islan	92.06	330	*e*P	P	14 45 09.5	+0.4
	comp=Z,34nm,1.0s						
DLBC	Dease Lake	92.13	333	*e*P	P	14 45 09.9	+0.4
	comp=Z,51nm,0.9s						
BGF	Bois d'Agland	92.21	41	*e*P	P	14 45 09.3	-0.8
BGF				pmax	pmax		
	comp=Z,25nm,1.1s						
KEST	Kesra	92.30	53	P	P	14 45 11.8	+0.8
	comp=Z,11nm,0.8s,baz=286,slow=6.1,SNR=13						
KEST				SKKPbc	SKKPbc	15 05 55.4	-1.1
	comp=Z,5.5nm,0.8s,baz=340,slow=2.8,SNR=3.6						
KEST				LR	LR	15 27 36.6	
	comp=Z,298nm,20.1s,baz=215,slow=36						
KEST	Kesra	92.30	53	*e*P	P	14 45 11.3	+0.4
	comp=Z,34nm,0.8s						
AVF	Avril sur Loir	92.62	41	*e*P	P	14 45 10.9	-1.1
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VIVF	Saint-Julien-l	92.64	43	*e*P	P	14 45 12.4	+0.2
VIVF				pmax	pmax		
	comp=Z,11nm,1.3s						
SSB	Saint Sauveur	92.73	43	*e*P	P	14 45 11.2	-1.4
	comp=Z,14nm,0.8s						
SSB	Saint Sauveur	92.73	43	*e*P	P	14 45 11.2	-1.4
SSB				pmax	pmax		
	comp=Z,14nm,0.8s						
SSF	Saint Saulge	92.83	41	*e*P	P	14 45 12.3	-0.7
SSF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SMF	Signal de Mont	92.86	41	*e*P	P	14 45 12.9	-0.2
SMF				pmax	pmax		
	comp=Z,22nm,0.9s						
ESK	Eskdalemuir	92.95	32	*e*P	P	14 45 12.8	-0.4
	comp=Z,21nm,1.1s						
ESK	Eskdalemuir	92.95	32	*i* P	P	14 45 14.4	+1.1
LOR	Lormes	93.14	41	*e*P	P	14 45 13.6	-0.8
LOR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ORIF	Oris-en-Rattie	93.44	43	*e*P	P	14 45 16.6	+0.6
ORIF				pmax	pmax		
	comp=Z,11nm,0.8s						
MBDF	Montbardon	93.95	44	*e*P	P	14 45 19.0	+0.6
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.2s						
JIS	Juneau Island	93.97	331	*e*P	P	14 45 18.8	+0.9
	comp=Z,18nm,1.2s						
SUMG	Summit	94.00	9	*e*P	P	14 45 18.6	+0.4
	comp=Z,39nm,0.9s						
SUMG	Summit	94.00	9	*e*P	P	14 45 18.6	+0.4
SUMG				pmax	pmax		
	comp=Z,39nm,0.9s						
BNI	Bardonecchia	94.02	44	*e*P	P	14 45 17.6	-1.1
	comp=Z,43nm,1.6s						
BNI	Bardonecchia	94.02	44	*e*P	P	14 45 17.6	-1.1

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BNI                                      pmax      pmax
       comp=Z,43nm,1.6s
SBF    Sospel             94.05  45  eP        P         14 45 18.9 +0.2
SBF                                   pmax     pmax
       comp=Z,13nm,1.0s
LPL    La Plagne          94.24  43  eP        P         14 45 20.4 +0.6
LPL                                   pmax     pmax
       comp=Z,18nm,1.2s
LPG    La Plagne          94.24  43  eP        P         14 45 20.6 +0.7
LPG                                   pmax     pmax
       comp=Z,15nm,1.2s
BESE   Bessie Mountai     94.34 331  eP        P         14 45 20.0 +0.3
       comp=Z,27nm,1.0s
CASY   Casey              94.64 180  eP        P         14 45 22.5 +1.5
       comp=Z,34nm,0.9s
CASY                                 epP       pP        14 45 50.5 -0.6
DOU    Dourbes            94.77  38 ⇑P         P         14 45 20.9 -0.9
       comp=Z,16nm,1.3s
GIVF   Givet              94.91  38  eP        P         14 45 22.1 -0.3
GIVF                                  pmax     pmax
       comp=Z,17nm,1.0s
HAU    Haudompre          94.98  41  eP        P         14 45 22.3 -0.5
HAU                                   pmax     pmax
       comp=Z,5.0nm,0.6s
WLF    Walferdange        95.52  39 ⇑P         P         14 45 25.8 +0.6
       comp=Z,48nm,1.2s
ECH    Echery             95.56  41  eP        P         14 45 24.4 -1.1
       comp=Z,29nm,1.0s
ECH    Echery             95.56  41  eP        P         14 45 24.4 -1.1
ECH                                   pmax     pmax
       comp=Z,29nm,1.0s
CDF    Champ du Feu       95.71  41  eP        P         14 45 27.0 +0.8
CDF                                   pmax     pmax
       comp=Z,9.0nm,1.0s
TUE    Stuetta            96.28  43  eP        P         14 45 27.1 -2.0
       comp=Z,85nm,1.5s
BFO    Black Forest       96.33  41  i P       P         14 45 29.3 +0.3
RPZ    Rata Peaks         96.43 219   P        P         14 45 32.6 +2.9
       comp=Z,17nm,0.8s,baz=58,slow=2.6,SNR=6.6
HYT    Haines Junctio     96.62 333  eP        P         14 45 30.3 +0.2
       comp=Z,10nm,1.5s
DAVA   Damuels            96.92  42  ePcP      P         14 45 32.9 +1.0
       comp=Z,4.7nm,0.9s
DAVA                                  PP       PP        14 49 26.1 -2.8
       comp=Z,14nm,1.3s
FETA   Feichten           97.37  43  ePcP      P         14 45 35.2 +1.3
       comp=Z,5.5nm,1.0s
FETA                                 ePP       PP        14 49 28.5 -3.9
       comp=Z,6.2nm,1.0s
RETA   Reutte             97.55  42  ePcP      P         14 45 35.1 +0.5
       comp=Z,7.6nm,1.2s
RETA                                 ePP       PP        14 49 30.2 -3.5
       comp=Z,5.4nm,1.4s
MOTA   Moosalm            97.72  43  ePcP      P         14 45 36.0 +0.5
       comp=Z,2.2nm,0.8s
MOTA                                 ePP       PP        14 49 31.8 -3.3
       comp=Z,7.8nm,1.1s
SQTA   Sankt Quirin       97.75  43  ePcP      P         14 45 35.9 +0.4
       comp=Z,13nm,1.0s
WATA   Walderalm          98.02  43  ePcP      P         14 45 37.5 +0.7
       comp=Z,1.5nm,0.4s
WTTA   Wattenberg         98.03  43  ePcP      P         14 45 36.8 -0.1
       comp=Z,8.6nm,0.8s,SNR=7.1
ABTA   Abfaltersbach      98.43  43  ePdiff    Pdif      14 45 39.5 +0.9
       comp=Z,13nm,1.3s
INK    Inuvik             98.80 340   P        Pdif      14 45 40.1 +0.6
       comp=Z,8.3nm,0.7s,baz=87,slow=5.3,SNR=7.6
INK    Inuvik             98.80 340  eP        P         14 45 38.6 -0.9
       comp=Z,11nm,0.8s
INK    Inuvik             98.80 340   P        Pdif      14 45 40.1 +0.6
DAWY   Dawson             98.88 335  eP        P         14 45 39.3 -0.8
       comp=Z,5.8nm,0.9s
EPYK   Eagle Plains       98.92 338   P        P         14 45 40.2  0.0
       baz=118
MYKA   Terra Mystica      99.13  44  ePdiff    Pdif      14 45 40.2 -1.4
       comp=Z,6.5nm,1.1s
MYKA                                  PP       PP        14 49 43.3 -2.4
       comp=Z,17nm,1.2s
LJU    Ljubljana          99.53  45  ePdiff    Pdif      14 45 40.1 -3.3
LJU                                  e                   14 46 24.1
LJU                                  ePP       PP        14 49 46.1 -2.6
LJU                                  i SKSac   SKSac     14 56 13.3 +1.9
LJU                                  eSdiff    ScS       14 57 04.4 -2.1
LJU                                  e                   14 58 34.7
OBKA   Obir               99.68  44  ePdiff    Pdif      14 45 44.5 +0.3
       comp=Z,1.9nm,0.5s
BOJS   Bojanci            99.85  45  ePdiff    Pdif      14 45 40.3 -4.5
BOJS                                 i SKSac   SKSac     14 56 15.3 +2.3
GEC2   GERESS Array S     99.86  42  ePKKPdf   PKKPdf    15 02 04.3 -6.6
GERES  GERESS Array B     99.86  42   P        Pdif      14 45 45.1 +0.2
       comp=Z,0.4nm,0.3s,baz=278,slow=3.9,SNR=4.2
GERES                                 PKKPbc   PKKPbc    15 02 04.3 -2.0
       comp=Z,0.7nm,0.4s,baz=116,slow=2.3,SNR=5.0
GERES  GERESS Array B     99.86  42   P        Pdif      14 45 45.1 +0.2
EGAK   Eagle              99.88 336  ePdif     Pdif      14 45 44.5 +0.1
       comp=Z,5.5nm,0.9s
SOKA   Soboth            100.05  44  ePdiff    Pdif      14 45 45.9 +0.1
       comp=Z,5.3nm,1.5s
CLL    Collm             100.19  39  eP        Pdif      14 45 47.0 +0.8
CLL                                  eSP       SP        14 58 46.0 +4.8
CLL    Collm             100.19  39  ePdif     Pdif      14 45 47.0 +0.8
CLL                                  e                   14 45 52.0
CLL                                  e                   14 45 57.0
CLL                                  i PP      PP        14 49 52.0 -1.6
CLL                                  e                   14 50 04.0
CLL                                  eSP       SP        14 58 46.0 +4.8
GCIS   Gornji Cirnik     100.21  45  i Pdiff   Pdif      14 45 40.0 -6.4
GCIS                                 i                   14 46 24.3
GCIS                                 i PP      PP        14 49 52.1 -1.7
ARSA   Arzberg           100.54  44   PP       PP        14 49 54.8 -1.6
       comp=Z,6.1nm,1.3s
CONA   Conrad Observa    100.96  43   Pdiff    Pdif      14 45 49.5 -0.3
       comp=Z,2.7nm,1.0s
CONA                                  PP       PP        14 49 58.0 -1.6
       comp=Z,11nm,1.7s
SML    Sawmill           101.80 332  ePdif     Pdif      14 45 52.3 -0.8
SML    Sawmill           101.80 332  eP        Pdif      14 45 52.3 -0.8
HDA    Harding Lake      102.05 334   P        Pdif      14 45 53.4 -0.8
       baz=109
ILAR   Eielson Array     102.15 335   P        Pdif      14 45 54.7 +0.1
       comp=Z,0.5nm,0.7s,baz=136,slow=1.4,SNR=6.2
ILAR                                  PP       PP        14 49 59.9 -8.1
       comp=Z,1.6nm,0.8s,baz=103,slow=6.9,SNR=7.4
ILAR   Eielson Array     102.15 335   P        Pdif      14 45 54.7 +0.1
ILB    Eielson Array     102.15 335  ePdif     Pdif      14 45 54.7 +0.1
NB2    NORSAR Subarra    102.23  29   PKP      PKKPbc    15 01 57.9 -1.8
       comp=Z,2.0nm,0.8s,baz=24,slow=4.1
NB200  NORSAR Array S    102.23  29  ePKKPdf   PKKPdf    15 01 57.9 -8.8
NOA    NORSAR Array B    102.23  29   PKKPbc   PKKPbc    15 01 57.9 -1.8
       comp=Z,1.2nm,0.6s,baz=50,slow=1.2,SNR=4.8
CCB    Clear Creek Bu    102.48 334  ePdif     Pdif      14 45 55.4 -0.7
POKR   Poker Plat Res    102.48 335   P        Pdif      14 45 55.5 -0.6
       baz=109
RND    Reindeer          102.53 333  ePdif     Pdif      14 45 56.1 -0.3
RND    Reindeer          102.53 333  eP        Pdif      14 45 56.1 -0.3
WRH    Wood River Hil    102.54 334  ePdif     Pdif      14 45 55.8 -0.6
COLA   College           102.57 335⇓eP         Pdif      14 45 56.4  0.0
BPAW   Bear Paw Mtn.     103.64 333  ePdif     Pdif      14 46 01.0 -0.3
MLY    Manley            103.79 334  ePdif     Pdif      14 46 01.4 -0.5
OPO    Ambohidratompo    107.17 117   PKKPbc   PKKPbc    15 01 43.9 +0.6
       comp=Z,3.1nm,0.7s,baz=108,slow=13,SNR=3.4
OPO                                   PKKPab   PKKPab    15 01 58.8 -1.1
       comp=Z,3.4nm,0.8s,baz=135,slow=12,SNR=3.5
OPO    Ambohidratompo    107.17 117  ePKKPbc   PKKPbc    15 01 43.9 +0.6
OPO                                  ePKKPab   PKKPab    15 01 58.8 -1.1
FIA0   FINESS Array S    109.34  30  ePKKPbc   PKKPbc    15 01 36.3 -1.4
FINES  FINESS Array B    109.34  30   PKKPbc   PKKPbc    15 01 36.3 -1.4
       comp=Z,2.9nm,0.6s,baz=98,slow=5.1,SNR=16
ARA0   ARCESS Array S    109.64  22  ePKKPbc   PKKPbc    15 01 35.1 -1.9
ARA0                                 ePKKPab   PKKPab    15 01 46.5 +1.5
ARCES  ARCESS Array B    109.64  22   PKKPbc   PKKPbc    15 01 35.1 -1.9
       comp=Z,4.1nm,0.6s,baz=97,slow=4.0,SNR=15
ARCES                                 PKKPab   PKKPab    15 01 46.5 +1.5
       comp=Z,5.2nm,0.7s,baz=77,slow=5.5,SNR=8.8
AKASG  Malin Array Be    110.07  42   PP       PP        14 51 03.1 -3.5
       comp=Z,1.9nm,0.7s,baz=267,slow=3.5,SNR=4.8
AKASG                                 PKKPbc   PKKPbc    15 01 33.9 -1.2
       comp=Z,1.9nm,0.6s,baz=66,slow=4.2,SNR=7.2
AKBB   Malin Array Si    110.07  42  ePKKPbc   PKKPbc    15 01 33.9 -1.2
DZM    Mont Dzumac       111.72 236  eLR       LR        15 23 35.0
       comp=Z,764nm,32.0s
BR101  Keskin Array S    111.88  54  ePP       PP        14 51 20.2 +0.1
BR101                                ePKKPab   PKKPab    15 01 37.8 +1.5
BRTR   Keskin Array B    111.88  54   PP       PP        14 51 20.2 +0.1
       comp=Z,7.7nm,0.9s,baz=257,slow=4.4,SNR=7.4
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BRTR                                  PKKPab   PKKPab    15 01 37.8 +1.5
       comp=Z,3.9nm,0.8s,baz=105,slow=4.3,SNR=17
MMAI   Mount Meron Ar    112.33  61   PKKPab   PKKPab    15 01 37.8 +3.3
       comp=Z,12nm,1.0s,baz=46,slow=7.1,SNR=5.8
APA    Apatity           112.56  24⇑iPKIKP     PKiKP     14 50 31.4 -4.1
APA                                  i                   14 50 58.2
APA                                   pmax     pmax
       comp=Z,3.0nm,0.7s
ASF    Jabal al Asfar    113.44  63   PKKPab   PKKPab    15 01 32.1 +2.4
       comp=Z,1.4nm,0.4s,baz=32,slow=5.0,SNR=5.1
ASF    Jabal al Asfar    113.44  63  ePKKPab   PKKPab    15 01 32.1 +2.4
KIV    Kislovodsk        118.88  50  i PKIKP   PKiKP     14 50 49.3 +0.8
KIV                                  e                   14 52 07.6
KIV                                  e                   14 57 35.0
KIV                                  ePS       PS        15 01 59.8 +1.7
KIV                                   pmax     pmax
       comp=Z,13nm,1.0s
KBZ    Khabaz            119.04  50   PKP      PKiKP     14 50 49.6 +0.9
       comp=Z,3.6nm,0.7s,baz=343,slow=3.3,SNR=4.6
KBZ                                   PKKPab   PKKPab    15 01 05.7 +1.2
       comp=Z,0.7nm,0.3s,baz=160,slow=7.0,SNR=4.3
KBZ    Khabaz            119.04  50  ePKPdf    PKiKP     14 50 49.6 +0.9
KBZ                                  ePKKPab   PKKPab    15 01 05.7 +1.2
KBZ    Khabaz            119.04  50   PKIKP    PKiKP     14 50 49.6 +0.9
BILL   Bilibino          120.39 339⇓iPKIKP     PKiKP     14 50 51.5 +0.9
HNR    Honiara           123.68 244   PKP      PKiKP     14 50 59.3 +0.6
       comp=Z,134nm,0.8s,baz=289,slow=7.7,SNR=4.2
HNR    Honiara           123.68 244   PKIKP    PKiKP     14 50 59.3 +0.6
ARU    Arti              126.56  33  ePKPdf    PKiKP     14 51 03.7 +0.5
ARU    Arti              126.56  33⇓iPKIKP     PKiKP     14 51 04.3 +1.1
ARU                                   pmax     pmax
       comp=Z,6.0nm,0.7s
TIXI   Tiksi             126.62 353   PKP      PKiKP     14 51 02.7 -0.1
       comp=Z,5.8nm,0.8s,baz=13,slow=2.2,SNR=18
TIXI                                  pPKP     pPKPdf    14 51 33.3 -0.8
       comp=Z,7.4nm,0.9s,baz=21,slow=3.5,SNR=5.8
TIXI   Tiksi             126.62 353  ePKPdf    PKPdf     14 51 02.4  0.0
TIXI   Tiksi             126.62 353d iPKIKP    PKPdf     14 51 02.5 +0.1
TIXI                                  pmax     pmax
       comp=Z,6.0nm,0.7s
H11S2  WAKE ISLAND Hy1   27.22 279    T        T         17 10 30.7
       baz=101,slow=74
H11S1  WAKE ISLAND Hy1   27.22 279    T        T         17 10 36.8
       baz=101,slow=74
H11S3  WAKE ISLAND Hy1   27.23 279    T        T         17 10 34.2
       baz=101,slow=74
H11N3  WAKE ISLAND Hy1   27.24 280    T        T         17 10 39.0
       baz=100,slow=75
H11N2  WAKE ISLAND Hy1   27.25 280    T        T         17 10 40.7
       baz=100,slow=75
H11N1  WAKE ISLAND Hy1   27.26 280    T        T         17 10 39.1
       baz=100,slow=75
FORT   Forrest           127.45 199  ePKPdf    PKPdf     14 51 05.3  0.0
NWAO   Narrogin (SRO)    127.65 187   PKP      PKiKP     14 51 06.3 +0.1
       comp=Z,13nm,0.7s,baz=183,slow=5.2,SNR=8.4
NWAO                                  pPKP     pPKPdf    14 51 36.5 -0.7
       comp=Z,15nm,0.7s,baz=148,slow=3.5,SNR=4.7
NWAO   Narrogin (SRO)    127.65 187  ePKPdf    PKiKP     14 51 06.3 +0.1
NWAO                                 epPKPdf   pPKPdf    14 51 36.5 -0.7
NWAO   Narrogin (SRO)    127.65 187   PKIKP    PKiKP     14 51 06.3 +0.1
NWAO                                                     14 51 36.5
SEY    Seymchan          127.98 337d iPKIKP    PKiKP     14 51 06.6 +0.8
AB31   Akbulak array     129.80  41  i PKIKP   PKiKP     14 51 10.2 +0.3
AB31                                  pmax     pmax
       comp=Z,6.0nm,0.8s
ABKAR  Akbulak array     129.80  41  ePKPdf    PKiKP     14 51 09.9  0.0
PET    Petropavlovsk     130.12 324  ePKPdf    PKPdf     14 51 09.9 +0.3
PET    Petropavlovsk     130.12 324  ePKIKP    PKPdf     14 51 09.9 +0.3
PEA1   Petropavlovsk-    130.61 324  ePKPdf    PKiKP     14 51 11.7 +0.2
PEA1                                 epPKPdf   pPKPdf    14 51 43.0 +0.8
PEA1                                 eSKPbc    SKPab     14 54 25.7 +1.4
PEA0B  Petropavlovsk-    130.61 324  ePKPdf    PKiKP     14 51 11.6 +0.2
PETK   Petropavlovsk-    130.61 324   PKP      PKiKP     14 51 11.7 +0.3
       comp=Z,18nm,0.8s,baz=93,slow=6.0,SNR=21
PETK                                  pPKP     pPKPdf    14 51 43.0 +0.8
       comp=Z,16nm,0.7s,baz=85,slow=4.3,SNR=7.8
PETK                                  SKPbc    SKPab     14 54 25.7 +1.4
       comp=Z,8.0nm,0.8s,baz=99,slow=7.5,SNR=5.2
PETK   Petropavlovsk-    130.61 324   PKIKP    PKiKP     14 51 11.7 +0.3
PETK                                                     14 51 43.0
MA2    Magadan           130.63 334⇓iPKIKP     PKiKP     14 51 12.0 +0.8
GEYT   Alibeck           130.94  56   PP       PP        14 53 29.3 -0.3
       comp=Z,5.7nm,1.0s,baz=252,slow=8.9,SNR=5.2
ASAR   Alice Springs     131.63 209   PKhKP    PKPpre    14 50 54.8
       comp=Z,1.3nm,0.6s,baz=131,slow=2.6,SNR=27
ASAR                                  PKP      PKPdf     14 51 13.7 +0.2
       comp=Z,12nm,0.6s,baz=134,slow=1.7,SNR=47
ASAR                                  pPKP     pPKPdf    14 51 44.4 -0.5
       comp=Z,15nm,0.9s,baz=144,slow=2.3,SNR=7.3
ASAR                                  SKPbc    SKPbc     14 54 28.9 -0.1
       comp=Z,12nm,1.0s,baz=135,slow=4.5,SNR=4.7
ASAR   Alice Springs     131.63 209   PKIKP    PKPdf     14 51 13.7 +0.2
ASAR                                                     14 51 44.4
AS31   Alice Springs     131.63 209  ePKPdf    PKPdf     14 51 13.7 +0.1
AS31                                 eSKPbc    SKPbc     14 54 28.9 -0.1
COEN   Coen              133.98 226  ePKPdf    PKPdf     14 51 17.8 -0.3
BRVK   Borovoye          134.14  33  ePKPdf    PKiKP     14 51 18.5  0.0
BRVK   Borovoye          134.14  33c iPKIKP    PKiKP     14 51 18.6  0.0
BVAR   Borovoye Array    134.21  33   PKP      PKiKP     14 51 19.1 +0.4
       comp=Z,3.6nm,0.7s,baz=259,slow=3.0,SNR=19
BVAR                                  pPKP     pPKPdf    14 51 50.6 +1.5
       comp=Z,5.5nm,0.6s,baz=264,slow=3.0,SNR=7.7
BVAR   Borovoye Array    134.21  33   PKIKP    PKiKP     14 51 19.1 +0.4
BVAR                                                     14 51 50.6
WR1    Warramunga Arr    134.60 212  ePKPdf    PKPdf     14 51 19.6 +0.5
WRA    Warramunga Arr    134.60 212   PKP      PKPdf     14 51 19.7 +0.5
       comp=Z,26nm,0.7s,baz=193,slow=2.0,SNR=32
WRA    Warramunga Arr    134.60 212   PKIKP    PKPdf     14 51 19.7 +0.5
WRAB   Tennant Creek     134.60 212d iPKIKP    PKPdf     14 51 19.6 +0.5
WRAB                                  pmax     pmax
       comp=Z,43nm,1.3s
YAK    Yakutsk           135.34 347  ePKPdf    PKiKP     14 51 20.1 -0.6
YAK    Yakutsk           135.34 347  ePKIKP    PKPdf     14 51 18.3 -0.8
YAK                                  e                   14 53 55.2
YAK                                   pmax     pmax
       comp=Z,15nm,0.8s
YAK                                   pmax     pmax
       comp=E,16nm,1.9s
YAK                                   pmax     pmax
       comp=Z,17nm,1.4s
YAK                                   pmax     pmax
       comp=N,15nm,1.5s
PSA00  Pilbara Seismi    138.36 193  ePKPdf    PKPdf     14 51 26.0  0.0
KK31   Karatay Array     138.81  46  i PKIKP   PKiKP     14 51 27.5 -0.9
KURK   Kurchatov         139.71  31  ePKPdf    PKPdf     14 51 28.6 +1.1
KURK   Kurchatov         139.71  31c iPKIKP    PKiKP     14 51 28.9 -1.0
KURK                                  pmax     pmax
       comp=Z,8.0nm,1.3s
KURBB  Kurchatov Arra    139.72  32   PKhKP    PKPpre    14 51 20.3
       comp=Z,2.3nm,0.7s,baz=303,slow=3.0,SNR=19
KURBB                                 PKP      PKPdf     14 51 28.6 +1.0
       comp=Z,3.9nm,0.7s,baz=302,slow=2.7,SNR=19
ZAA1   Zalesovo Array    140.15  24  ePKPpre   PKPpre    14 51 24.2
ZAA1                                 ePKPdf    PKiKP     14 51 29.7 -1.1
ZAA1                                 epPKPdf   pPKPdf    14 52 01.2 +1.2
ZAA1                                 eSKPbc    SKiKP     14 54 56.0 -0.7
ZAA0   Zalesovo Array    140.15  24  ePKPpre   PKPpre    14 51 21.9
ZALV   Zalesovo Beam     140.15  24   PKhKP    PKPpre    14 51 24.2
       comp=Z,5.9nm,0.6s,baz=315,slow=2.6,SNR=18
ZALV                                  PKP      PKiKP     14 51 29.7 -1.1
       comp=Z,25nm,0.7s,baz=310,slow=2.3,SNR=27
ZALV                                  pPKP     pPKPdf    14 52 01.2 +1.2
       comp=Z,24nm,0.6s,baz=312,slow=1.8,SNR=5.6
ZALV                                  SKP                14 54 56.0
       comp=Z,8.8nm,0.8s,baz=316,slow=4.1,SNR=4.0
ZALV   Zalesovo Beam     140.15  24   PKIKP    PKiKP     14 51 29.7 -1.1
ZALV                                                     14 52 01.2
AAK    Ala-Archa         141.67  45   PKhKP    PKPpre    14 51 27.9
       comp=Z,2.6nm,0.5s,baz=202,slow=4.1,SNR=6.9
AAK    Ala-Archa         141.67  45   PKIKP    PKPdf     14 51 27.7 -3.9
AAK                                   pmax     pmax
       comp=Z,6.0nm,0.8s
YUK    Yuzh-Kuril'sk     141.70 318  ePKIKP    PKPdf     14 51 29.5 -1.8
YUK                                  e                   14 54 35.1
YUK                                  e                   14 58 30.2
YUK                                  eSSS      SSS       15 18 16.7
MNCY   Minicoy           141.89 102   IAMs_20  IAMs_20   15 33 28.0
       comp=Z,5µm,10.0s
YSS    Yuzh-Sakhalins    142.00 324  ePKPpre   PKPdf     14 51 28.3 -3.5
YSS    Yuzh-Sakhalins    142.00 324  ePKIKP    PKPdf     14 51 27.2 -4.6
MTN    Manton Dam        142.21 214  ePKPpre   PKPpre    14 51 28.9
TKM2   Tokmak 2          142.27  44   PKIKP    PKPdf     14 51 28.2 -4.5
TKM2                                  pmax     pmax
       comp=Z,7.0nm,0.9s
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GRNR   Gornyy            142.61 333  ePKIKP    PKPdf     14 51 30.0 -2.8
GRNR                                  pmax     pmax
       comp=Z,11nm,0.6s
ZEA    Zeya              143.37 344  ePKIKP    PKPbc     14 51 32.2 +0.7
ZEA                                   pmax     pmax
       comp=Z,28nm,1.2s
JAY    Jayapura          143.38 237   PKP      PKPbc     14 51 33.8 +1.0
       comp=Z,63nm,1.0s,baz=172,slow=4.4,SNR=13
JAY    Jayapura          143.38 237   PKIKP    PKPbc     14 51 33.8 +1.1
KDJ    Kajisay           143.67  44  ePKPdf    PKPdf     14 51 34.3 -0.9
ASAJ   Asahikawa         143.69 320   PKP      PKPbc     14 51 33.1 +0.4
       comp=Z,17nm,0.7s,baz=35,slow=3.0,SNR=11
ASAJ                                  SKPbc    SKiKP     14 55 05.0 +0.7
       comp=Z,20nm,1.1s,baz=296,slow=12,SNR=5.1
ASAJ   Asahikawa         143.69 320  ePKPdf    PKPbc     14 51 33.1 +0.5
ASAJ                                 eSKPbc    SKiKP     14 55 05.0 +0.7
ASAJ   Asahikawa         143.69 320   PKIKP    PKPbc     14 51 33.1 +0.4
GENI   Genyem            143.75 236   P        PKPbc     14 51 34.8 +1.0
NIL    Nilore            143.79  59  ePKPdf    PKPbc     14 51 34.2 +0.9
MAKZ   Makanchi          143.91  34  ePKPdf    PKPbc     14 51 33.3  0.0
MAKZ   Makanchi          143.91  34  ePKIKP    PKPbc     14 51 33.3  0.0
KSH    Kashi             143.99  49  ePKP      PKPdf     14 51 35.5 -0.3
KSH                                   pPKP     pPKPdf    14 52 02.0 -5.5
KSH                                   PP       PP        14 54 51.8 +1.1
KSH                                   PKS      PKSdf     14 55 09.5 -2.0
KSH                                   SKS      SKSdf     14 58 33.7 -1.5
KSH                                   SKKS     SKKSac    15 01 32.5 -0.4
KSH                                   SS       SS        15 13 27.1 +0.9
KSH                                   AMB      AMB
       comp=Z,240nm,7.8s
KSH                                   LR       LR
       comp=Z,120nm,11.7s
KSH                                   LR       LR
       comp=Z,140nm,7.4s
KSH                                   LR       LR
       comp=Z,160nm,11.7s
MK31   Makanchi Array    144.08  34  ePKPdf    PKPbc     14 51 34.0 +0.2
MK31   Makanchi Array    144.08  34  i PKIKP   PKPab     14 51 33.6 +0.3
MK31                                  pmax     pmax
       comp=Z,9.0nm,0.7s
MK32   Makanchi Array    144.08  34  ePKPdf    PKPbc     14 51 34.0 +0.1
MK32                                 epPKPdf   pPKPdf    14 52 06.4 -1.0
MKAR   Makanchi Array    144.08  34   PKP      PKPbc     14 51 34.0 +0.1
       comp=Z,8.1nm,0.7s,baz=325,slow=4.4,SNR=72
MKAR                                  pPKP     pPKPdf    14 52 06.4 -1.0
       comp=Z,17nm,0.6s,baz=310,slow=2.9,SNR=7.7
MKAR   Makanchi Array    144.08  34   PKIKP    PKPbc     14 51 34.0 +0.2
MKAR                                                     14 52 06.4
PRZ    Przheval'sk       144.29  43  ePKPdf    PKPdf     14 51 36.6 +0.3
ERM    Erimo             144.42 317  ePKPdf    PKPdf     14 51 36.6 +0.4
ERM    Erimo             144.42 317d iPKIKP    PKPdf     14 51 36.4 +0.2
DGZ    Jazzator, Alta    144.45  26d iPKIKP    PKPdf     14 51 36.0 -0.3
PDGK   Podgornoye        144.53  41   PKIKP    PKPbc     14 51 35.5  0.0
PDGK                                  pmax     pmax
       comp=Z,109nm,1.3s
POO    Poona             145.18  85  eP        PKPbc     14 51 38.0 -0.1
TRD    Trivandrum        145.59 104   IAMs_20  IAMs_20   15 33 07.9
       comp=Z,2µm,16.1s
TRD                                   IAMs_20  IAMs_20   15 35 33.5
       comp=Z,2µm,7.2s
KLR    Kul'dur           145.72 335   PKPbc    PKPab     14 51 39.4 +0.1
       comp=Z,29nm,0.6s,baz=55,slow=2.8,SNR=104
KLR                                   pPKPbc   pPKPab    14 52 10.5 +0.5
       comp=Z,28nm,0.9s,baz=28,slow=3.2,SNR=5.8
KLR    Kul'dur           145.72 335  ePKPab    PKPab     14 51 39.4 +0.1
KLR                                  epPKPdf   pPKPab    14 52 10.5 +0.5
KLR    Kul'dur           145.72 335d iPKP2     PKPbc     14 51 38.8  0.0
TEY    Ternei            146.55 326⇓ePKP2      PKPab     14 51 42.2 -0.4
TEY                                   pmax     pmax
       comp=Z,140nm,0.9s
TEY                                   pmax     pmax
       comp=N,30nm,0.8s
TEY                                   pmax     pmax
       comp=E,40nm,0.8s
SARN   Sarigan           146.57 271  ePKPdf    PKPdf     14 51 41.2 +0.6
DHRM   DHARAMSHALA       146.62  60  eP        PKPdf     14 51 40.1 -0.5
DHRM                                  IAmb     IAmb      14 51 44.2
       comp=Z,132nm,0.6s
DHRM                                  IAMs_20  IAMs_20   15 34 55.0
       comp=Z,297nm,7.7s
GUMO   Guam              146.78 265   PKPbc    PKPdf     14 51 41.5 +0.5
       comp=Z,488nm,0.7s,baz=165,slow=7.2,SNR=38
GUMO   Guam              146.78 265  ePKPdf    PKPdf     14 51 41.8 +0.8
GUMO   Guam              146.78 265  ePKP2     PKPdf     14 51 41.8 +0.8
MOY    Mondy             146.85  11  ePKP2     PKPab     14 51 43.7  0.0
MOY                                   pmax     pmax
       comp=Z,40nm,1.6s
BHK    Bhakra            146.91  62  eP        PKPdf     14 51 41.8 +0.9
TLY    Talaya            147.25   8   PKPbc    PKPab     14 51 45.2  0.0
       comp=Z,12nm,0.6s,baz=180,slow=6.3,SNR=21
TLY    Talaya            147.25   8c iPKP2     PKiKP     14 51 45.8 +0.3
TLY                                   pmax     pmax
       comp=Z,72nm,0.7s
SMLA   Simla             147.60  62  eP        PKPdf     14 51 41.6 -0.3
BATI   Baumata           147.98 205   PKPbc    PKiKP     14 51 48.1  0.0
       comp=Z,134nm,0.9s,baz=254,slow=4.0,SNR=13
BATI   Baumata           147.98 205  ePKPbc    PKiKP     14 51 48.1  0.0
SOEI   Soe               148.14 206  ePKPbc    PKiKP     14 51 48.5 -0.1
ZAK    Zakamensk         148.47   9  ePKIKP    PKPdf     14 51 44.7 +1.8
ZAK                                   pmax     pmax
       comp=Z,22nm,1.0s
DDI    Dehra Dun         148.53  63  eP        PKPdf     14 51 43.1 -0.5
DDI                                   IAMs_20  IAMs_20   15 32 20.8
       comp=Z,348nm,11.9s
BHPL   Bhopal            148.79  77  eP        PKPdf     14 51 42.9 -1.3
BHPL                                  IAmb     IAmb      14 51 53.9
       comp=Z,36nm,0.8s
WMQ    Urumqi            148.90  33  ePKPbc    PKPdf     14 51 43.6 -0.2
WMQ                                   LR       LR
       comp=Z,400nm,28.1s
WMQ                                   LR       LR
       comp=Z,610nm,28.1s
WMQ                                   LR       LR
       comp=Z,660nm,25.3s
HIA    Hailar            149.27 348  ePKPbc    PKPbc     14 51 48.6 +0.1
FAKI   Fak Fak           149.37 226  ePKPbc    PKiKP     14 51 50.6 -0.4
HYB    Hyderabad         149.46  88  i PKP     PKiKP     14 51 51.0  0.0
HYB                                  epPKP     pPKPbc    14 52 23.0 +1.6
HYB                                  esPKP               14 52 38.0
HYB                                  e                   14 52 44.0
USA0B  Ussuriysk Arra    149.49 329  ePKPbc    PKiKP     14 51 50.0 -0.3
USRK   Ussuriysk Ar.     149.49 329   PKPbc    PKiKP     14 51 49.8 -0.5
       comp=Z,75nm,0.7s,baz=15,slow=1.0,SNR=151
USRK                                  pPKPbc   pPKPbc    14 52 21.8 +1.2
       comp=Z,98nm,0.8s,baz=311,slow=0.6,SNR=12
USRK   Ussuriysk Ar.     149.49 329   PKP2     PKiKP     14 51 49.8 -0.5
MMRI   Maumere           149.96 203  ePKPbc    PKPbc     14 51 51.5 +0.2
NGP    Nagpur            150.28  81  eP        PKPdf     14 51 46.0 -0.6
MDJ    Mudanjiang        150.28 332   PKPbc    PKPbc     14 51 51.2 +0.1
MJAR   Matsushiro Arr    150.42 311   PKPbc    PKiKP     14 51 52.4 -0.1
       comp=Z,92nm,0.7s,baz=104,slow=1.2,SNR=87
MJAR                                  pPKPbc   pPKPbc    14 52 23.4 +0.3
       comp=Z,60nm,0.8s,baz=102,slow=0.6,SNR=7.2
MJAR   Matsushiro Arr    150.42 311   PKIKP    PKiKP     14 51 52.4 -0.1
MJAR                                                     14 52 23.4
MAJO   Matsushiro        150.42 311  ePKPbc    PKiKP     14 51 52.4 -0.1
MAJO                                 e                   14 52 23.4
MAT    Matsushiro        150.42 311   PKP      PKPbc     14 51 52.1 +0.3
MJB9   Matsu-Tunnel      150.42 311  ePKPbc    PKiKP     14 51 52.3 -0.2
JHJ2   Mitsune           150.62 304  ePKPbc    PKPbc     14 51 52.4 +0.1
JHJ    Hachijo jima 2    150.64 304   PKPbc    PKPbc     14 51 52.7 +0.3
       comp=Z,379nm,0.8s,baz=184,slow=5.9,SNR=12
SONA0  Songino Array     151.36   6  ePKPdf    PKPdf     14 51 49.3 +1.7
SONA0                                ePKPbc    PKiKP     14 51 55.1 +0.9
SONA0                                e                   14 52 26.3
SONM   Songino Array     151.36   6   PKP      PKPdf     14 51 49.3 +1.7
       comp=Z,4.3nm,0.8s,baz=325,slow=0.7,SNR=24
SONM                                  PKPbc    PKiKP     14 51 55.1 +0.9
       comp=Z,40nm,0.8s,baz=314,slow=1.3,SNR=82
SONM                                  pPKPbc   pPKPbc    14 52 26.3 +1.0
       comp=Z,78nm,1.0s,baz=338,slow=2.0,SNR=9.4
ULN    Ulaanbaatar       151.39   5  ePKPdf    PKPdf     14 51 47.4 -0.3
ULN                                  ePKPbc    PKiKP     14 51 54.7 +0.4
ULN    Ulaanbaatar       151.39   5⇑ePKIKP     PKPdf     14 51 49.0 +1.3
SIJI   Sorong            151.52 227   PKP      PKPdf     14 51 50.1 +1.3
       comp=Z,10nm,0.7s,baz=122,slow=4.7,SNR=8.0
SIJI                                  PKPbc    PKiKP     14 51 56.0 +0.6
       comp=Z,155nm,0.7s,baz=52,slow=2.0,SNR=70
SIJI                                  pPKPbc   pPKPbc    14 52 26.3 +0.3
       comp=Z,116nm,0.7s,baz=18,slow=4.6,SNR=9.1
INU    Inuyama           151.83 310  ePKPbc    PKiKP     14 51 55.4 +0.1
CN2    Changchun         152.65 336  ePKPbc    PKPdf     14 51 50.0 +0.5
CN2                                  ePP       PP        14 55 44.7 +4.7
CN2                                  eSS       SS        15 15 06.4 +5.1
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CN2				AMB	AMB		
	comp=Z,300nm,8.0s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,22.0s						
PWJI	Pagerwojo	152.79	182	PKP	PKiKP	14 51 58.8	+0.8
CISI	Cisompet, Garu	153.12	174	ePKPbc	PKPbc	14 51 58.6	0.0
PYUN	Piuthan	153.22	66	eP	PKPbc	14 51 55.3	-3.3
KOLN	Koldanda	153.82	66	eP	PKPbc	14 51 57.4	-2.6
KAPI	Kappang	154.21	201	PKPbc	PKiKP	14 52 01.8	+0.9
	comp=Z,31nm,1.1s,baz=102,slow=8.4,SNR=5.9						
KAPI				PKPab	PKPab	14 52 16.8	+2.0
	comp=Z,173nm,0.8s,baz=175,slow=4.0,SNR=34						
KAPI	Kappang	154.21	201	ePKPbc	PKiKP	14 52 01.9	+1.0
KAPI				ePKPab	PKPab	14 52 16.6	+1.7
GKN	Gorkha	154.66	65	eP	PKPbc	14 52 00.9	-0.8
DMN	Daman	155.16	66	eP	PKPdf	14 52 03.9	+10
KKN	Kakani	155.27	65	eP	PKPdf	14 52 03.7	+10
PKIN	Phulchoki	155.42	66	eP	PKPdf	14 52 04.0	+10
PKI	Pulchoki	155.43	66	eP	PKPdf	14 52 04.5	+10
GUN	Gumba	155.75	65	eP	PKPdf	14 52 06.0	+11
JIRN	Jiri	156.08	65	eP	PKPdf	14 52 07.0	+12
KSRS	Korea Array	156.51	324	PKP	PKPdf	14 51 56.5	+1.5
	comp=Z,4.2nm,0.8s,baz=69,slow=1.9,SNR=20						
KSRS				PKPab	PKPab	14 52 25.0	+0.8
	comp=Z,15nm,0.9s,baz=59,slow=4.0,SNR=17						
KSRS	Korea Array	156.51	324	PKIKP	PKPdf	14 51 56.5	+1.5
KSRS						14 52 25.0	
LUWI	Luwuk	156.53	212	ePKPdf	PKPdf	14 51 55.4	-0.4
KS15	Wonju Array Si	156.54	324	ePKPdf	PKPdf	14 51 56.5	+1.4
KS15				ePKPab	PKPab	14 52 24.6	+0.2
JNU	Nakatsue	157.34	311	PKPab	PKPab	14 52 27.8	-0.3
	comp=Z,16nm,0.8s,baz=36,slow=5.9,SNR=7.7						
JNU	Nakatsue	157.34	311	ePKPab	PKPab	14 52 27.1	-1.0
GTA	Gaotai	157.90	23	ePKP	PKPdf	14 51 58.3	+1.4
GTA				pPKP	pPKPdf	14 52 28.4	-0.2
GTA				sPKP		14 52 39.6	
GTA				LR	LR		
	comp=Z,220nm,18.9s						
GTA				LR	LR		
	comp=Z,250nm,16.5s						
GTA				LR	LR		
	comp=Z,580nm,16.8s						
DL2	Dalian	158.33	336	PKP	PKPdf	14 51 58.5	+1.3
DL2				PKPab	PKPab	14 52 31.5	-0.4
DL2				ePP	PP	14 56 11.4	-0.1
DL2				eSS	SS	15 16 01.6	-0.8
DL2				AMB	AMB		
	comp=Z,460nm,9.9s						
HHC	Hu-ho-hao-te	158.55	358	PKP	PKPdf	14 51 57.6	0.0
BTO	Baotou	158.80	1	eP	PKPab	14 52 30.0	-4.0
BJI	Beijing	158.84	348	i PKP	PKPdf	14 51 59.4	+1.6
BJI				pPKP	pPKPdf	14 52 29.8	+0.2
BJI				PP	PP	14 56 16.8	+2.8
BJI				AMB	AMB		
	comp=Z,66nm,7.8s						
BJI				LR	LR		
	comp=Z,260nm,23.0s						
BJI				LR	LR		
	comp=Z,230nm,21.4s						
BJI				LR	LR		
	comp=Z,390nm,22.6s						
CMBY	CAMPBELL BAY	159.61	125	IAMs_20	IAMs_20	15 35 42.2	
	comp=Z,1µm,5.4s						
TURI	Tura	160.20	68	eP	PKPdf	14 52 00.1	+0.2
SHL	Shillong	161.55	67	eP	PKPdf	14 52 00.4	-1.1
BELO	BELONIA	161.65	74	IAMs_20	IAMs_20	15 35 23.1	
	comp=Z,13µm,3.6s						
TEZP	TEZPUR	162.01	63	eP	PKPdf	14 52 02.0	+0.3
KSM	Kuching	162.24	179	ePKPab	PKPab	14 52 50.3	+0.8
LZH	Lanzhou	162.26	18	⇑PKP	PKPdf	14 52 06.2	+4.3
LZH				SS	SS	15 16 41.3	-2.6
LZH				AMB	AMB		
	comp=Z,230nm,6.5s						
LZH				LR	LR		
	comp=Z,390nm,19.1s						
LZH				LR	LR		
	comp=Z,390nm,19.2s						
LZH				LR	LR		
	comp=Z,270nm,20.3s						
TIA	Tai'an	162.27	343	PKP	PKPdf	14 52 03.2	+1.5
ZIRO	ZIRO	162.54	59	eP	PKPdf	14 52 02.1	-0.3
SBUM	Sibu	163.15	185	ePKPdf	PKPdf	14 52 04.1	+0.9
KOHI	KOHIMA	163.42	64	eP	PKPdf	14 52 02.5	-0.8
MOKO	MOKOCHONG	163.55	62	eP	PKPdf	14 52 02.3	-1.1
NJ2	Nanjing	165.37	332	ePKP	PKPdf	14 52 04.8	+0.1
KKM	Kota Kinabalu	165.73	203	ePKPdf	PKPdf	14 52 06.7	+1.1
CD2	Chengdu	166.88	27	PKP	PKPdf	14 52 04.6	-1.4
CD2				AMB	AMB		
	comp=Z,340nm,6.5s						
CD2				LR	LR		
	comp=Z,490nm,16.7s						
CD2				LR	LR		
	comp=Z,560nm,19.1s						
CD2				LR	LR		
	comp=Z,710nm,19.6s						
WHN	Wuhan	168.37	344	PKP	PKPdf	14 52 08.7	+1.8
CM31	Chiang Mai Arr	168.84	93	ePKPdf	PKPdf	14 52 08.7	+1.1
CM31				ePKPab	PKPab	14 53 19.8	+0.8
CMAR	Chiang Mai Arr	168.84	93	PKP	PKPdf	14 52 08.7	+1.1
	comp=Z,0.9nm,0.5s,baz=305,slow=1.6,SNR=6.2						
CMAR				pPKP	pPKPdf	14 52 40.5	+1.2
	comp=Z,4.8nm,0.9s,baz=272,slow=1.9,SNR=6.4						
CMAR				PKPab	PKPab	14 53 19.8	+0.8
	comp=Z,9.6nm,0.9s,baz=256,slow=6.4,SNR=18						
CMAR	Chiang Mai Arr	168.84	93	PKIKP	PKPdf	14 52 08.7	+1.1
CMAR						14 52 40.5	
CMAR						14 53 19.8	
CHTO	Chiang Mai	168.87	91	ePKPab	PKPab	14 53 18.7	-0.4
CHTO	Chiang Mai	168.87	91	ePKP2	PKPab	14 53 18.7	-0.4
CMMT	Chiang Mai	168.88	91	P	pPKPdf	14 52 40.8	+1.5
	comp=Z,5.6nm,1.3s						
SSLB	Suanglung	169.48	297	ePKPdf	PKPdf	14 52 08.3	+0.4
LAMP	Lampang	169.49	93	P	PKPab	14 53 23.7	+1.9
	comp=Z,43µm,0.8s						
PHRA	Phrae	170.06	93	P	pPKPdf	14 52 41.8	+1.8
	comp=Z,2.3nm,1.3s						
PHRA	Phrae	170.06	93	P	PKPab	14 53 25.6	+1.3
UTTA	Uttaradit	170.25	98	P	pPKPdf	14 52 42.1	+2.0
	comp=Z,22µm,1.3s						
KMI	Kunming	170.65	51	PKP	PKPdf	14 52 08.3	-0.5
KMI				sPKP		14 52 51.7	
KMI				PP	PP	14 57 17.7	+0.4
KMI				SKKS		15 03 54.7	
KMI				SS	SS	15 18 02.6	-8.4
KMI				AMB	AMB		
	comp=Z,230nm,6.7s						
KMI				LR	LR		
	comp=Z,200nm,18.0s						
KMI				LR	LR		
	comp=Z,150nm,14.7s						
KMI				LR	LR		
	comp=Z,190nm,17.5s						
GYA	Guiyang	172.00	27	ePKP	PKPdf	14 52 08.0	-1.3
GYA				PKPab	PKPab	14 53 29.5	-3.1
GYA				PKS		14 55 40.4	
GYA				SKKS		15 03 54.6	
GYA				AMB	AMB		
	comp=Z,100nm,9.8s						
GYA				LR	LR		
	comp=Z,350nm,18.6s						
GYA				LR	LR		
	comp=Z,210nm,19.0s						
GYA				LR	LR		
	comp=Z,510nm,18.1s						
NONG	Nongkai	172.73	99	P	pPKPdf	14 52 42.8	+1.4
	comp=Z,140nmcomp=Z,0.3nm,1.4s						
SKNT	Sakolnakorn	173.19	109	P	PKPab	14 53 39.8	+1.6
	comp=Z,29nm,1.2s						
PANO	Nakornpanom	173.82	110	P	pPKPdf	14 52 43.6	+1.8
	comp=Z,153nmcomp=Z,0.3nm,1.2s						

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*MOS **10** 14:40:17.3±1.0, 49°.08N×150°.81E, h337^{km}, mb4.7/2, Error ellipse: s-maj=19.7km s-min=5.1km az=56.4*

*SKHL **10** 14:40:17.2±0.6, 48°.99N×150°.97E, h338^{km}±10^{km}, mb4.6/6, msh5.2/2*

*IDC **10** 14:40:18.3±1.7, 49°.18N×150°.62E, h333^{km}±19^{km}, mb3.2/8, mb1 3.5/11, mb1mx3.1/55, mbtmp4.1/11, Error ellipse: s-maj=24.3km s-min=13.6km az=150.0*

*KRSC **10** 14:40:20.4±1.9, 48°.71N×152°.45E, h381^{km}±21^{km}, ML4.1*

ISC 10 14:40:16.6±0.5**, 49°.10N**±0°.06×**150°.90E**±0°.06**, h308^{km}, n118,** σ**2^{s}52**/132**, mb3.5**/7**, 3D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.73	63	eP	Pn	14 41 22.9	+2.7
SKR				eS	S	14 42 12.6	+1.4
SKR	Severo-Kuril's	3.73	63	ePN	Pn	14 41 23.2	+3.0
SKR				pmax	pmax		
	comp=Z,259nm,0.6s						
SKR	Severo-Kuril's	3.73	63	eP	Pn	14 41 22.8	+2.6
SKR				AMB	AMB	14 41 23.8	
	comp=Z,150nm,0.6s						
SKR				eS	S	14 42 14.3	+3.1
KUR	Kuril'sk	4.38	209d	iPN	Pn	14 41 28.4	+0.9
KUR				eS	S	14 42 31.3	+7.0
KUR				pmax	pmax		
	comp=N,14nm,0.4s						
KUR				pmax	pmax		
	comp=Z,42nm,0.4s						
KUR				pmax	pmax		
	comp=E,4.0nm,0.3s						
KUR				smax	smax		
	comp=N,47nm,0.5s						
KUR				smax	smax		
	comp=E,19nm,0.5s						
KUR	Kuril'sk	4.38	209	i P	Pn	14 41 28.4	+0.9
KUR				AMB	AMB	14 41 29.0	
	comp=E,10.0nm,0.4s						
KUR				AMB	AMB	14 41 29.0	
	comp=E,4.0nm,0.4s						
KUR				AMB	AMB	14 41 29.0	
	comp=E,50nm,0.4s						
KUR				i S	S	14 42 24.9	+0.6
KUR				A	A	14 42 32.5	
	comp=E,60nm,0.5s						
KUR				A	A	14 42 32.5	
	comp=E,20nm,0.5s						
PAU	Pauzhetka	4.47	56	eP	Pn	14 41 31.0	+2.7
PAU	Pauzhetka	4.47	56	PN	Pn	14 41 31.0	+2.7
PAU	Pauzhetka	4.47	56	eP	Pn	14 41 30.1	+1.8
KDTR	Khodutka, Kamc	5.33	57	eP	Pn	14 41 39.8	+1.7
KDTR				eS	S	14 42 41.4	-2.3
KDTR	Khodutka, Kamc	5.33	57	PN	Pn	14 41 39.8	+1.7
KDTR				S	S	14 42 41.4	-2.3
APC	Apacha	5.50	44	eP	Pn	14 41 43.1	+3.0
APC	Apacha	5.50	44	PN	Pn	14 41 43.1	+3.0
ASAK	Asacha	5.53	51	eP	Pn	14 41 43.6	+3.1
ASAK	Asacha	5.53	51	PN	Pn	14 41 43.6	+3.1
MTVR	Mutnovka	5.73	51	eP	Pn	14 41 47.0	+4.1
MTVR	Mutnovka	5.73	51	PN	Pn	14 41 47.0	+4.1
UGL	Uglegorsk	5.80	273	PN	Pn	14 41 54.7	+11
YSS	Yuzh-Sakhalins	5.87	252	ePN	Pn	14 41 46.6	+2.1
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	Yuzh-Sakhalins	5.87	252	eP	Pn	14 41 46.6	+2.1
YSS				AMB	AMB	14 41 47.7	
	comp=Z,20nm,0.8s						
PETK	Petropavlovsk-	5.87	44	P	Pn	14 41 47.4	+2.9
	comp=Z,1.6nm,0.3s,baz=221,slow=8.0,SNR=36						
RUS	Russkaya	5.87	52	eP	Pn	14 41 47.1	+2.7
RUS				eS	S	14 42 54.7	-0.6
RUS	Russkaya	5.87	52	PN	Pn	14 41 47.1	+2.7
RUS				S	S	14 42 54.7	-0.6
RUS	Russkaya	5.87	52	eP	Pn	14 41 47.1	+2.7
KRMR	Karymshinskiy	5.90	48	eP	Pn	14 41 48.5	+3.7
KRMR	Karymshinskiy	5.90	48	PN	Pn	14 41 48.5	+3.7
YUK	Yuzh-Kuril'sk	6.14	216	i PN	Pn	14 41 51.3	+3.5
YUK				i S	S	14 43 04.2	+2.9
YUK				pmax	pmax		
	comp=N,23nm,0.2s						
YUK				pmax	pmax		
	comp=E,36nm,0.2s						
YUK				pmax	pmax		
	comp=Z,171nm,0.2s						
YUK				smax	smax		
	comp=N,56nm,0.1s						
YUK				smax	smax		
	comp=E,89nm,0.4s						
YUK	Yuzh-Kuril'sk	6.14	216	i P	Pn	14 41 51.3	+3.5
YUK				AMB	AMB	14 41 52.9	
	comp=E,40nm,0.2s						
YUK				AMB	AMB	14 41 52.9	
	comp=E,20nm,0.2s						
YUK				i S	S	14 43 04.2	+2.9
YUK				A	A	14 43 07.0	
	comp=E,60nm,0.4s						
YUK				A	A	14 43 07.0	
	comp=E,90nm,0.4s						
GRPR	Tuman	6.21	217	⇓iPN	Pn	14 41 48.8	+0.2
GRPR				i S	S	14 43 00.2	-2.7
GRPR				pmax	pmax		
	comp=Z,54nm,0.2s						
GRPR	Tuman	6.21	217	i P	Pn	14 41 48.0	-0.6
GRPR				AMB	AMB	14 41 50.0	
	comp=Z,50nm,0.3s						
GRPR				i S	S	14 43 00.0	-2.9
PET	Petropavlovsk	6.27	48	PN	Pn	14 41 51.9	+2.7
PET				S	S	14 43 03.9	0.0
PET	Petropavlovsk	6.27	48	eP	Pn	14 41 51.9	+2.7
PET				eS	S	14 43 06.0	+2.1
DALK	Dalny	6.33	49	eP	Pn	14 41 52.3	+2.5
DALK				eS	S	14 43 03.8	-1.3
DALK	Dalny	6.33	49	PN	Pn	14 41 52.3	+2.5
DALK				S	S	14 43 03.8	-1.3
GNL	Ganaly	6.37	41	eP	Pn	14 41 53.0	+2.5
GNL	Ganaly	6.37	41	PN	Pn	14 41 53.0	+2.5
KOK	Koryaka	6.42	46	eP	Pn	14 41 55.3	+4.2
KOK	Koryaka	6.42	46	PN	Pn	14 41 55.3	+4.2
KOK	Koryaka	6.42	46	eP	Pn	14 41 55.3	+4.2
AVH	Avacha	6.46	47	eP	Pn	14 41 54.8	+3.3
AVH	Avacha	6.46	47	PN	Pn	14 41 54.8	+3.3
UGLR	Uglovaya	6.46	47	eP	Pn	14 41 54.7	+3.1
KRX	Arik	6.47	46	eP	Pn	14 41 54.3	+2.6
KRX	Arik	6.47	46	PN	Pn	14 41 54.3	+2.6
KRER	Koryakskii	6.49	47	eP	Pn	14 41 55.0	+3.0
KRER	Koryakskii	6.49	47	PN	Pn	14 41 55.0	+3.0
SMAR	Somma	6.49	47	eP	Pn	14 41 55.5	+3.5
SMAR	Somma	6.49	47	PN	Pn	14 41 55.5	+3.5
JRA	Rausu	6.52	220	P	Pn	14 41 51.7	-0.6
SDLR	Sedlovina	6.54	47	eP	Pn	14 41 55.1	+2.6
SDLR	Sedlovina	6.54	47	PN	Pn	14 41 55.1	+2.6
OKH	Okha	6.69	315	eP	Pn	14 41 57.3	+3.1
NLC	Nalytchevo	6.70	49	eP	Pn	14 41 55.7	+1.4
NLC				eS	S	14 43 09.2	-4.1
NLC	Nalytchevo	6.70	49	PN	Pn	14 41 55.7	+1.4
NLC				S	S	14 43 09.2	-4.1
NEM2	Nemuro 2	6.75	214	P	Pn	14 41 51.4	-3.7
NEM2				eS	S	14 43 04.9	-10
JNK	Nakash	6.97	220	P	Pn	14 41 56.0	-1.8
SPN	Mys Shipunski	7.00	52	eP	Pn	14 41 58.7	+0.7
SPN				eS	S	14 43 14.1	-5.9
SPN	Mys Shipunski	7.00	52	PN	Pn	14 41 58.7	+0.7
JSE	Soyaes	7.03	237	P	Pn	14 42 00.0	+1.6
JTKR	Abashiri--Toko	7.04	226	P	Pn	14 41 58.4	-0.1
JWK2	Keihoku	7.20	242	P	Pn	14 42 03.3	+2.8
JMP	Maruseppu	7.27	228	P	Pn	14 42 02.0	+0.6
JKA	Kamikawa-asahi	7.58	232	eP	Pn	14 42 06.6	+1.5
ASAJ	Asahikawa	7.58	232	P	Pn	14 42 06.5	+1.4
	comp=Z,4.7nm,0.3s,baz=72,slow=11,SNR=39						
ASAJ	Asahikawa	7.58	232	P	Pn	14 42 06.4	+1.3
JAR	Ashorobuto	7.62	223	P	Pn	14 42 04.0	-1.6
JKK2	Kamakawa 2	7.67	230	P	Pn	14 42 06.7	+0.4
JOB	Onbets	7.91	221	P	Pn	14 42 06.3	-2.8
JOB				eS	S	14 43 31.7	-8.7
JFR	Furan	8.27	227	P	Pn	14 42 12.7	-0.9
ESO	Esso	8.33	32	eP	P	14 42 19.3	+0.5
ESO	Esso	8.33	32	PN	P	14 42 19.3	+0.5
JCH	Churui	8.34	222	P	Pn	14 42 10.9	-3.5
JCH				eS	S	14 43 40.2	-10
TUMR	Tumrok	8.40	39	eP	P	14 42 19.5	-0.2
TUMR	Tumrok	8.40	39	PN	P	14 42 18.4	-1.3
TUMD	Tumrok D	8.45	40	eP	Pn	14 42 18.4	+2.8
MKZ	Mys Kozlova	8.65	47	eP	Pn	14 42 17.9	0.0
MKZ				eS	S	14 43 49.6	-7.0
MKZ	Mys Kozlova	8.65	47	PN	Pn	14 42 17.9	0.0
JBT2	Biratori 2	8.67	226	P	Pn	14 42 16.4	-2.0
SRDR	Sredinnyy	8.99	33	eP	P	14 42 26.5	0.0
SRDR	Sredinnyy	8.99	33	PN	P	14 42 26.5	0.0
CIRR	Tsirk	9.23	37	eP	P	14 42 29.2	-0.1
JNB	Noboribetsu	9.55	230	P	Pn	14 42 27.5	-1.7
JNB				eS	S	14 44 09.9	-7.5
SRKR	Sorokina	9.78	35	eP	P	14 42 35.5	+0.2
SRKR	Sorokina	9.78	35	PN	P	14 42 35.5	+0.2
JSH	Shimam	9.94	234	P	Pn	14 42 32.9	-1.0
JKB	Kayabe	9.99	228	P	Pn	14 42 30.8	-3.7
JKB				eS	S	14 44 15.0	-12
KBG	Krutoberegovo	10.13	40	eP	Pn	14 42 37.6	+1.6
KBG	Krutoberegovo	10.13	40	PN	Pn	14 42 37.6	+1.6
KBTR	Krutoberegovo	10.15	41	eP	Pn	14 42 37.2	+1.0
KBTR	Krutoberegovo	10.15	41	PN	Pn	14 42 37.2	+1.0
JYM2	Yakumo 2	10.15	230	P	Pn	14 42 33.9	-2.5
TEY	Ternei	10.56	253	⇓iPN	P	14 42 43.2	-0.8
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
TEY				pmax	pmax		
	comp=Z,40nm,0.6s						
TEY	Ternei	10.56	253	eP	P	14 42 43.2	-0.8
TEY				AMB	AMB	14 42 43.7	
	comp=Z,30nm,0.8s						
TEY				AMB	AMB	14 42 43.7	
	comp=Z,10.0nm,0.8s						
JSR	Shiriuchi	10.56	228	P	Pn	14 42 38.1	-3.4
JOSM	Okushiri--Mats	10.63	233	P	Pn	14 42 40.7	-1.7
JTM	Tenmabayashi	10.83	224	P	Pn	14 42 39.9	-4.9
JTM				eS	S	14 44 30.9	-15
JANG	Nango	10.97	221	P	Pn	14 42 41.4	-5.1
JANG				eS	S	14 44 34.6	-15
BKI	Bering	11.09	51	eP	Pn	14 42 48.6	+1.0
BKI	Bering	11.09	51	PN	Pn	14 42 48.6	+1.0
JTH	Tanohata	11.19	218	P	Pn	14 42 44.5	-4.7
EKMR	Ekimchan	11.96	296	eP	P	14 43 01.0	+1.5
EKMR				AMB	AMB	14 43 02.8	
	comp=Z,5.0nm,0.6s						
OFUJ	Ofunato	12.00	217	P	Pn	14 42 55.3	-3.7
OFUJ				eS	S	14 45 00.3	-12
JRG	Rokugo	12.16	221	P	Pn	14 42 57.0	-3.9
KLR	Kul'dur	12.54	278	P	P	14 43 07.5	+1.5
	comp=Z,0.9nm,0.3s,baz=86,slow=10,SNR=19						
USRK	Ussuriysk Ar.	13.87	256	P	Pn	14 43 22.1	+0.8
	comp=Z,0.4nm,0.3s,baz=60,slow=13,SNR=7.5						
BMKR	Bomnak	14.70	301	eP	Pn	14 43 32.8	+1.9
MAT	Matsushiro	15.60	221	P	P	14 43 38.1	-1.6
MJAR	Matsushiro Arr	15.60	221	P	Pn	14 43 40.3	-1.3
	comp=Z,0.6nm,0.3s,baz=19,slow=11,SNR=72						
KSRS	Korea Array	20.29	244	P	P	14 44 28.9	-0.9
	comp=Z,1.7nm,0.7s,baz=43,slow=10,SNR=9.1						
JNU	Nakatsue	21.86	231	P	P	14 44 43.1	-1.6
	comp=Z,3.1nm,0.4s,baz=9.4,slow=6.9,SNR=6.8						
SONM	Songino Array	29.22	285	P	P	14 45 47.8	-2.6
	comp=Z,0.5nm,0.4s,baz=90,slow=7.6,SNR=2.7						
ZALV	Zalesovo Beam	40.05	303	P	P	14 47 20.4	-1.8
	comp=Z,0.4nm,0.4s,baz=89,slow=9.1,SNR=2.1						
KURK	Kurchatov	44.85	301	P	P	14 47 59.8	-0.8
KURK	Kurchatov	44.85	301	eP	P	14 47 59.8	-0.8
KURBB	Kurchatov Arra	44.94	301	P	P	14 47 59.8	-1.5
	comp=Z,0.5nm,0.6s,baz=65,slow=8.0,SNR=3.3						
FINES	FINESS Array B	61.27	333	P	P	14 49 57.3	-2.0
	comp=Z,2.6nm,0.5s,baz=46,slow=6.0,SNR=3.5						
NVAR	Mina Array Bea	62.66	62	P	P	14 50 09.0	-0.1
	comp=Z,0.8nm,0.7s,baz=283,slow=6.3,SNR=3.6						
TXAR	Lajitas Array	77.61	60	P	P	14 51 39.5	+0.3
	comp=Z,0.9nm,0.5s,baz=305,slow=4.0,SNR=4.3						
PLCA	Paso Flores	149.80	90	PKPbc	PKPbc	14 59 28.7	-1.1
	comp=Z,2.1nm,0.7s,baz=263,slow=2.5,SNR=3.9						

BER 10 14:42:45.2±1.5**, 59°.69N**×**8°.20E, h0^{km}, ML1.0, Suspected explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLS5	Blasjo	0.93	254	eP	Pg	14 43 01.3	-1.7
BLS5				eS	Sg	14 43 13.8	-1.2
BLS5				IAML		14 43 18.6	
	comp=Z,2.2nm,0.2s						
SKAR	Skarslia	1.00	3	eP	Pg	14 43 02.7	-1.6
SKAR				eS	Sg	14 43 16.5	-0.7
SKAR				IAML		14 43 20.9	
	comp=Z,1.4nm,0.2s						
SNART	Snartemo	1.45	201	eP	Pn	14 43 10.3	-2.3
SNART				eS	Sg	14 43 29.2	-2.5
SNART				IAML		14 43 31.2	
	comp=Z,3.0nm,0.2s						
NAO01	NORSAR Array S	1.77	48	eP	Pn	14 43 15.7	-1.4
NAO01				eSg	Sn	14 43 39.6	-0.6
NAO01				IAML		14 43 41.3	
	comp=Z,2.7nm,0.2s						
NBO00	NORSAR Array S	1.86	42	eP	Pn	14 43 17.1	-1.2
NBO00				eSg	Sn	14 43 42.3	-0.2
NBO00				IAML		14 43 43.7	
	comp=Z,1.7nm,0.2s						
NC602	NORSAR Array S	1.97	56	eP	Pn	14 43 18.9	-0.8
NC602				eSg	Sn	14 43 45.8	+0.6
NC602				IAML		14 43 48.1	
	comp=Z,28nm,0.2s						
NC204	NORSAR Array S	2.04	37	eP	Pn	14 43 19.6	-1.2
NC204				IAML		14 43 51.4	
	comp=Z,1.2nm,0.2s						
NB201	NORSAR Array S	2.06	47	eP	Pn	14 43 19.8	-1.2
NB201				eSg	Sb	14 43 48.6	-0.8
NB201				IAML		14 43 50.0	
	comp=Z,3.1nm,0.3s						

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*IDC **10** 14:44:00.5±0.5, 30°.20S×177°.49W, h0^{km}, mb5.0/21, mb1 5.1/21, mb1mx5.0/34, mbtmp5.0/21, MS5.0/17, Ms1 5.1/17, ms1mx4.9/21, Error ellipse: s-maj=17.2km s-min=16.3km az=140.0*

*BJI **10** 14:44:00.7±0.0, 30°.16S×177°.56W, h11^{km}, mb5.4/33, mB5.8/33, Ms5.4/32, Ms7 5.1/30*

*NEIC **10** 14:44:01.8±1.4, 30°.24S×177°.54W, h10^{km}±2^{km}, mb5.5/150, MS5.4/326, MW5.6, Error ellipse: s-maj=13.6km s-min=8.7km az=64.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^{17}Nm; M_{rr}2.04; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-2.30; $M_{r\theta}$1.15; $M_{\theta\phi}$-0.73; $M_{\phi r}$2.12; Best double couple: $M_0$3.30000×10^{17} NP1:ϕ_s181.00000°, δ23.00000°, λ67.00000°. NP2:ϕ_s26.00000°, δ69.00000°, λ99.00000°. Principal axes: T 3.1400, Plg65.0000°, Azm312.0000°; N 0.3600, Plg9.0000°, Azm202.0000°; P -3.5000, Plg23.0000°, Azm108.0000°;*

*ISCJB **10** 14:44:03.6±0.1, 30°.50S±0°.02×177°.65W±0°.04, h33^{km}, mb5.4/161, MS5.4/350 Error ellipse: s-maj=5.0km s-min=2.1km az=30.2*

*MOS **10** 14:44:05.2±1.3, 30°.14S×177°.34W, h33^{km}, mb5.7/38, MS5.4/23, Error ellipse: s-maj=16.7km s-min=11.6km az=95.5*

*GCMT **10** 14:44:06.8±0.1, 30°.18S±0°.01×177°.14W±0°.01, h28^{km}, MW5.6/113, Moment Tensor Solution. s99,c175; s113,c270; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.99±.06; $M_{\theta\theta}$-0.49±.04; $M_{\phi\phi}$-2.50±.04; $M_{r\theta}$0.62±.09; $M_{\theta\phi}$-0.81±.03; $M_{\phi r}$2.06±.08; Best double couple: $M_0$3.60000×10^{17} NP1:ϕ_s18.00000°, δ63.00000°, λ89.00000°. NP2:ϕ_s201.00000°, δ27.00000°, λ93.00000°. Principal axes: T 3.7040, Plg72.0000°, Azm285.0000°; N -0.2070, Plg1.0000°, Azm18.0000°; P -3.4970, Plg18.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:44:05.0±0.2**, 30°.29S**±0°.04×**177°.38W**±0°.05**, h33^{km}, n969,** σ**1^{s}86**/737**, mb5.5**/161**, MS5.4**/357**, 27C-17D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.13	335	P	Pn	14 44 22.2	-2.2
GLKZ				S	Sn	14 44 36.2	-2.6
RAO	Raoul Island	1.14	336	ePg	Pn	14 44 22.0	-2.6
RAO	Raoul Island	1.14	336	P	Pn	14 44 21.5	-3.1
RIZ	Raoul Island	1.15	335	P	Pn	14 44 22.0	-2.8
MXZ	Matakaoa Point	8.09	205	ePn	Pn	14 45 58.0	-2.1
MXZ	Matakaoa Point	8.09	205	P	Pn	14 45 58.0	-2.1
MXZ				S	Sn	14 47 28.2	-2.1
WMGZ	Waiomatatini S	8.28	204	P	Pn	14 46 01.0	-1.7
GRZ	Great Barrier	8.44	223	P	Pn	14 46 10.0	+5.1
HAZ	Te Kaha	8.46	207	P	Pn	14 46 02.1	-3.1
PKGZ	Pakihiroa	8.46	205	P	Pn	14 46 02.1	-3.2
PKGZ				S	Sn	14 47 36.5	-3.1
PUZ	Puketiti	8.56	204	P	Pn	14 46 02.8	-3.8

KUZ	Kuaotunu	8.63	220	P	Pn	14 46 10.4	+2.8
RUGZ	Raukumara Rang	8.68	207	P	Pn	14 46 05.9	-2.4
TWGZ	Tauwhareparae	8.75	205	P	Pn	14 46 05.6	-3.6
MYRZ	Mayor Island	8.76	216	P	Pn	14 46 16.1	+6.8
WCZ	Waipu Caves	8.93	229	P	Pn	14 46 16.8	+5.1
CNGZ	Carnagh Statio	8.95	203	P	Pn	14 46 08.8	-3.1
WIAZ	Waiheke Island	9.00	222	P	Pn	14 46 19.9	+7.3
TKGZ	Te Karaka	9.03	205	P	Pn	14 46 08.9	-4.2
OUZ	Omahuta	9.05	235	eP	Pn	14 46 19.4	+6.1
OUZ	Omahuta	9.05	235	P	Pn	14 46 19.5	+6.2
OPRZ	Ohinepanea	9.06	212	P	Pn	14 46 11.4	-2.0
MWZ	Matawai	9.06	206	P	Pn	14 46 10.2	-3.2
MARZ	Manawahe	9.12	211	P	Pn	14 46 14.9	+0.7
URZ	Urewera	9.16	208	Pn	Pn	14 46 10.9	-3.9
	1.8nm,0.3s,baz=280,slow=4.8,SNR=30						
URZ				Sn	Sn	14 47 55.1	-1.6
	27nm,0.3s,baz=205,slow=21,SNR=10.0						
URZ	Urewera	9.16	208	P	Pn	14 46 11.4	-3.4
RAGZ	Rawiri	9.24	206	P	Pn	14 46 13.0	-3.1
RIGZ	Rimuhau	9.30	204	P	Pn	14 46 13.9	-2.9
RIGZ				S	Sn	14 47 57.1	-3.2
PRGZ	Paritu Road	9.45	203	P	Pn	14 46 15.0	-3.8
TOZ	Tahuroa Road	9.48	217	P	Pn	14 46 21.5	+2.3
MUGZ	Murupara	9.49	209	P	Pn	14 46 16.1	-3.2
RTZ	Ruatahuna	9.52	208	P	Pn	14 46 16.7	-3.0
SNGZ	Shannon Statio	9.52	206	P	Pn	14 46 16.7	-3.1
KNZ	Kokohu	9.61	204	P	Pn	14 46 17.8	-3.2
MHGZ	Mahia Peninsul	9.65	202	P	Pn	14 46 17.1	-4.4
RAHZ	Arahi	9.73	206	P	Pn	14 46 19.9	-2.8
MTHZ	Maungataniwha	9.78	208	P	Pn	14 46 19.9	-3.4
TLZ	Tolley Road	9.93	214	P	Pn	14 46 26.9	+1.6
MRHZ	Matea Rd	9.93	209	P	Pn	14 46 24.5	-1.0
NMHZ	Naumai	10.00	207	P	Pn	14 46 24.0	-2.4
ARHZ	Aropaoanui	10.07	206	P	Pn	14 46 25.1	-2.2
HATZ	Hinemaiaia	10.12	210	P	Pn	14 46 24.4	-3.6
BKZ	Black Stump Fm	10.18	208	ePn	Pn	14 46 24.1	-4.8
BKZ	Black Stump Fm	10.18	208	P	Pn	14 46 24.2	-4.7
HIZ	Hauiti	10.41	216	ePn	Pn	14 46 33.4	+1.6
HIZ	Hauiti	10.41	216	P	Pn	14 46 35.8	+3.9
BHHZ	Black Hill Sta	10.63	209	P	Pn	14 46 33.7	-1.4
MOVZ	Moawhango	10.70	210	P	Pn	14 46 34.6	-1.3
VRZ	Vera Road	10.93	214	P	Pn	14 46 42.2	+3.2
BFZ	Birch Farm	11.59	205	ePn	Pn	14 46 41.8	-6.3
BFZ	Birch Farm	11.59	205	P	Pn	14 46 41.8	-6.3
MRZ	Mangatainoka R	11.82	207	P	Pn	14 46 47.8	-3.5
HOWZ	Holdsworth Sta	12.05	207	P	Pn	14 46 52.3	-2.2
MTW	Mount Morrison	12.28	206	P	Pn	14 46 51.6	-5.9
CAW	Cannon Point	12.41	208	P	Pn	14 46 53.3	-6.0
SNZO	South Karori	12.73	208	ePn	Pn	14 47 00.7	-2.8
TUWZ	Tuamarina	13.14	210	P	Pn	14 47 06.1	-3.2
NNZ	Nelson	13.22	212	P	Pn	14 47 05.5	-4.8
QRZ	Quartz Range	13.33	215	P	Pn	14 47 07.8	-4.0
BSWZ	Blackbirch Sta	13.41	209	P	Pn	14 47 11.4	-1.5
CTZ	Chatham Island	13.43	178	P	Pn	14 47 10.2	-3.1
CTZ				S	Sn	14 49 27.1	-14
THZ	Tophouse	13.87	212	ePn	Pn	14 47 16.2	-3.1
THZ	Tophouse	13.87	212	P	Pn	14 47 17.2	-2.2
KHZ	Kahutara	14.13	209	ePn	Pn	14 47 14.7	-8.0
KHZ	Kahutara	14.13	209	P	Pn	14 47 18.3	-4.4
DSZ	Denniston Nort	14.38	214	P	Pn	14 47 25.7	-0.5
LTZ	Lake Taylor	14.97	211	ePn	Pn	14 47 29.3	-4.8
LTZ	Lake Taylor	14.97	211	P	Pn	14 47 30.6	-3.6
AMCZ	Amberley	15.12	209	P	Pn	14 47 35.3	-0.8
OKCZ	Okains Bay	15.41	207	P	Pn	14 47 33.5	-6.4
CRLZ	Canterbury Las	15.46	208	ePn	Pn	14 47 36.0	-4.5
	69nm,0.6s						
OXZ	Oxford	15.51	210	ePn	Pn	14 47 36.5	-4.7
	161nm,0.5s						
MQZ	McQueen's Vall	15.56	208	ePn	Pn	14 47 35.9	-5.9
	48nm,0.8s						
MARNC	Mare, Loyalty	15.78	300	ePn	Pn	14 47 43.5	-1.2
	2µm,1.8s						
RPZ	Rata Peaks	16.25	211	Pn	Pn	14 47 47.3	-3.4
	8.6nm,0.3s,baz=14,slow=1.4,SNR=17						
RPZ				Sn	Sn	14 50 34.4	-16
	2.4nm,0.3s,baz=348,slow=22,SNR=5.7						
RPZ	Rata Peaks	16.25	211	ePn	Pn	14 47 46.9	-3.9
	70nm,0.6s						
ONTNC	Ouen Toro	16.52	295	eP	Pn	14 47 51.5	-2.8
	190nm,1.0s						
DZM	Mont Dzumac	16.65	296	eP	P	14 47 59.2	+1.0
	384nm,1.1s						
DZM				eLR	LR	14 51 55.8	
	comp=Z,22µm,25.1s						
DZM	Mont Dzumac	16.65	296	Pn	P	14 48 00.6	+2.5
	3.0nm,0.3s,baz=119,slow=10,SNR=27						
DZM				LR	LR	14 53 19.6	
	comp=Z,17µm,18.2s,baz=140,slow=34						
DZM	Mont Dzumac	16.65	296	eP	P	14 47 59.4	+1.2
	149nm,0.9s						
FOZ	Fox Glacier	16.69	214	ePn	Pn	14 47 51.7	-4.6
	40nm,0.6s						
LBZ	Lake Benmore	17.17	212	ePn	Pn	14 47 58.8	-3.4
	56nm,1.2s						
ODZ	Otahua Downs	17.48	209	ePn	Pn	14 48 02.5	-3.7
	67nm,0.7s						
WKZ	Wanaka	18.04	213	eP	Pn	14 48 08.1	-4.9
	179nm,1.7s						
RAR	Rarotonga	18.24	64	P	P	14 48 10.7	-4.8
	3.8nm,0.3s,baz=244,slow=5.2,SNR=7.0						
RAR				S	Sn	14 51 18.4	-20
	2.9nm,0.3s,baz=146,slow=11,SNR=1.9						
RAR				LR	LR	14 53 28.0	
	comp=Z,5µm,20.1s,baz=249,slow=31						
RAR	Rarotonga	18.24	64	eP	P	14 48 10.7	-4.8
	306nm,1.4s						
RAR	Rarotonga	18.24	64	eP	P	14 48 10.7	-4.8
RAR				pmax	pmax		
	comp=Z,305nm,1.4s						
MLZ	Mavora Lakes	18.87	213	eP	P	14 48 19.2	-3.1
	comp=Z,42nm,0.7s						
WHZ	Wether Hill Ro	19.34	212	eP	P	14 48 24.5	-3.0
	comp=Z,51nm,1.0s						
DCZ	Deep Cove	19.40	214	eP	P	14 48 24.6	-3.5
	comp=Z,25nm,0.9s						
LHI	Lord Howe Isla	20.25	261	eP	P	14 48 35.9	-1.6
	comp=Z,248nm,0.9s						
LHI				LR	LR		
	comp=Z,8µm,18.0s						
TBI	Tubuai	25.82	81	eS	S	14 53 55.2	-5.5
	comp=Z,2µm,30.0s						
TBI				eLQ	LQ	14 54 33.6	
	comp=Z,7µm,26.2s						
TBI				eLR	LR	14 55 50.1	
	comp=Z,11µm,28.0s,baz=246						
TBI	Tubuai	25.82	81	eT	T	15 15 58.1	
	comp=Z,44nm,0.3s						
ARMA	Armidale	26.70	262	eP	P	14 49 39.5	-1.9
	comp=Z,57nm,1.1s						
ARMA				LR	LR		
	comp=Z,7µm,21.0s						
PAE	Paea	28.26	70	eT	T	15 19 09.0	
	comp=Z,12nm,0.3s						
EIDS	Eidsvold	28.26	272	eP	P	14 49 54.8	-0.5
	comp=Z,32nm,0.8s						
EIDS				LR	LR		
	comp=Z,10µm,18.0s						
PPT2	Papeete2	28.30	70	eS	S	14 54 38.0	-2.1
	comp=Z,957nm,26.2s						
PPT2				eLQ	LQ	14 55 41.8	
	comp=Z,5µm,23.8s						
PPT2				eLR	LR	14 57 01.3	
	comp=Z,10µm,26.5s,baz=233						
PPT2	Papeete2	28.30	70	eT	T	15 19 11.8	
	comp=Z,11nm,0.3s						
PPT	Papeete	28.31	70	LR	LR	14 58 09.2	
	comp=Z,3µm,21.4s,baz=244,slow=30						
TVO	Taravao	28.46	70	eT	T	15 19 23.7	
	comp=Z,2.1nm,0.3s						
CAN	Canberra	28.61	251	PFAKE		14 50 10.0	+12
CAN				LR	LR		
	comp=Z,5µm,22.0s						
CAN	Canberra	28.61	251	P	P	14 50 01.5	+3.1
CAN				pmax	pmax		
	comp=Z,57nm,1.1s						
MEH	Mehetia	29.39	72	eT	T	15 20 32.8	
	comp=Z,26nm,0.4s						
HNR	Honiara	29.64	310	LR	LR	14 59 55.9	
	comp=Z,3µm,20.3s,baz=138,slow=32						
HNR	Honiara	29.64	310	PFAKE		14 50 20.0	+12
HNR				LR	LR		
	comp=Z,4µm,20.0s						
TAU	Tasmania Unive	30.78	236	PFAKE		14 50 30.0	+13
TAU				LR	LR		
	comp=Z,6µm,20.0s						
PMOR	Pomariorio Ree	31.06	67	eT	T	15 22 40.1	
	comp=Z,5.1nm,0.4s						
VAH	Vaihoa	31.14	68	eT	T	15 22 46.7	
	comp=Z,51nm,0.3s						
TOO	Toolangi	31.50	247	eP	P	14 50 22.4	-1.5
	comp=Z,36nm,1.0s						
TOO				LR	LR		
	comp=Z,6µm,19.0s						
TOO	Toolangi	31.50	247	eP	P	14 50 22.4	-1.5
TOO				pmax	pmax		
	comp=Z,36nm,1.0s						
TOO				MLR	MLR		
	comp=Z,6µm,19.0s						
TARA	Tarawa	32.80	342	PFAKE		14 50 50.0	+15
TARA				LR	LR		
	comp=Z,5µm,18.0s						
CTA	Charters Tower	34.31	279	P	P	14 50 49.2	+0.6
	comp=Z,31nm,0.6s,baz=99,slow=10,SNR=31						
CTAO	Charters Tower	34.31	279	eP	P	14 50 48.9	+0.3
	comp=Z,66nm,0.8s						
CTAO				LR	LR		
	comp=Z,12µm,18.0s						
CTAO	Charters Tower	34.31	279	eP	P	14 50 48.9	+0.3
CTAO				pmax	pmax		
	comp=Z,66nm,0.8s						
CTAO				MLR	MLR		
	comp=Z,12µm,18.0s						
STKA	Stephens Creek	35.02	257	P	P	14 50 53.8	-0.8
	comp=Z,52nm,0.7s,baz=101,slow=12,SNR=55						
STKA				LR	LR	15 04 12.6	
	comp=Z,7µm,18.4s,baz=92,slow=35						
STKA	Stephens Creek	35.02	257	ePKPdf	P	14 50 53.4	-1.2
STKA	Stephens Creek	35.02	257	PFAKE		14 51 10.0	+15
STKA				LR	LR		
	comp=Z,2µm,18.0s						
STKA	Stephens Creek	35.02	257	PKIKP	P	14 50 53.8	-0.8
STKA	Stephens Creek	35.02	257	eP	P	14 50 53.4	-1.2
XMAS	Kiritimati	37.36	34	PFAKE		14 51 30.0	+15
XMAS				LR	LR		
	comp=Z,3µm,20.0s						
RKT	Rikitea	38.38	90	eLR	LR	15 01 41.0	
	comp=Z,6µm,28.0s						
RKT	Rikitea	38.38	90	eT	T	15 31 33.6	
	comp=Z,2.5nm,0.4s						
RABL	Rabaul	38.73	306	PFAKE		14 51 40.0	+14
RABL				LR	LR		
	comp=Z,4µm,22.0s						
PMG	Port Moresby	39.04	295	PFAKE		14 51 40.0	+11
PMG				LR	LR		
	comp=Z,4µm,22.0s						
BBOO	Buckleboo	39.51	254	eP	P	14 51 31.8	-0.9
	comp=Z,66nm,0.9s						
BBOO				LR	LR		
	comp=Z,6µm,18.0s						
COEN	Coen	39.76	285	eP	P	14 51 35.4	+0.5
	comp=Z,138nm,1.8s						
COEN				LR	LR		
	comp=Z,6µm,19.0s						
TAOE	Nuku Hiva Isla	40.77	66	eS	S	14 57 51.0	-1.2
	comp=Z,1µm,24.6s						
TAOE				eLR	LR	15 02 47.0	
	comp=Z,6µm,26.2s,baz=239						
KWAJ	Kwajalein Atol	41.46	337	PFAKE		14 52 00.0	+11
KWAJ				LR	LR		
	comp=Z,3µm,18.0s						
MANU	Manus Island	43.64	303	PFAKE		14 52 20.0	+13
MANU				LR	LR		
	comp=Z,3µm,21.0s						
AS31	Alice Springs	43.65	267	eP	P	14 52 06.0	-0.8
	comp=Z,9.7nm,0.9s						
AS31				ePcP	PcP	14 53 53.6	-0.2
AS31				eScP	ScP	14 57 45.3	+2.4
AS31				LR	LR		
	comp=Z,200nm,18.0s						
ASAR	Alice Springs	43.65	267	P	P	14 52 06.0	-0.8
	comp=Z,24nm,0.7s,baz=104,slow=7.2,SNR=31						
ASAR				PcP	PcP	14 53 53.6	-0.1
	comp=Z,8.6nm,0.8s,baz=123,slow=3.8,SNR=4.4						
ASAR				ScP	ScP	14 57 45.3	+2.4
	comp=Z,1.8nm,0.7s,baz=109,slow=4.6,SNR=5.1						
ASAR				LR	LR	15 10 04.0	
	comp=Z,10µm,18.1s,baz=117,slow=36						
PATS	Pohnpei	43.66	324	PFAKE		14 52 20.0	+13
PATS				LR	LR		
	comp=Z,3µm,19.0s						
WC3	Warramunga Arr	44.59	272	PFAKE		14 52 30.0	+16
WC3				LR	LR		
	comp=Z,6µm,18.0s						
WC2	Warramunga Arr	44.61	272	PFAKE		14 52 30.0	+16
WC2				LR	LR		
	comp=Z,8µm,18.0s						
WB2	Warramunga Arr	44.62	272	PFAKE		14 52 30.0	+15
WB2				LR	LR		
	comp=Z,8µm,18.0s						
WRAB	Tennant Creek	44.62	272	eP	P	14 52 12.3	-2.2
	comp=Z,83nm,0.9s						
WRAB				eS	S	14 58 48.7	+0.1
WRAB				LR	LR		
	comp=Z,6µm,18.0s						
WRAB	Tennant Creek	44.62	272	eP	P	14 52 12.4	-2.2
WRAB				eS	S	14 58 48.7	+0.1
WRAB				pmax	pmax		
	comp=Z,83nm,0.9s						
WRAB				MLR	MLR		
	comp=Z,6µm,18.0s						
WR1	Warramunga Arr	44.63	272	eP	P	14 52 14.5	-0.1
WRA	Warramunga Arr	44.63	272	P	P	14 52 14.5	-0.1
	comp=Z,28nm,0.5s,baz=104,slow=8.7,SNR=63						
WC1	Warramunga Arr	44.63	272	PFAKE		14 52 30.0	+15
WC1				LR	LR		
	comp=Z,4µm,18.0s						
FORT	Forrest	46.59	255	PFAKE		14 52 40.0	+10
FORT				LR	LR		
	comp=Z,6µm,18.0s						
SBA	Scott Base	48.19	184	eP	P	14 52 44.6	+2.9
	comp=Z,178nm,1.7s						
SBA	Scott Base	48.19	184	eP	P	14 52 44.6	+2.9
SBA				pmax	pmax		
	comp=Z,177nm,1.7s						
VNDA	Vanda	48.26	186	P	P	14 52 44.3	+2.0
	comp=Z,2.8nm,0.7s,baz=18,slow=6.4,SNR=14						
VNDA				LR	LR	15 09 45.8	
	comp=Z,717nm,20.6s,baz=38,slow=32						
VNDA	Vanda	48.26	186	eP	P	14 52 44.8	+2.5
	comp=Z,27nm,1.3s						
VNDA	Vanda	48.26	186	eP	P	14 52 44.8	+2.5
VNDA				pmax	pmax		
	comp=Z,27nm,1.3s						
MTN	Manton Dam	50.49	278	PFAKE		14 53 10.0	+10
MTN				LR	LR		
	comp=Z,8µm,19.0s						
WAKE	Wake Island	51.63	341	PFAKE		14 53 20.0	+12
WAKE				LR	LR		
	comp=Z,4µm,19.0s						
SAUI	Saumlaki	52.80	284	PFAKE		14 53 30.0	+13
SAUI				LR	LR		
	comp=Z,5µm,20.0s						
KHLU	Kahalu`u	53.74	25	PFAKE		14 53 40.0	+16
KHLU				LR	LR		
	comp=Z,2µm,20.0s						
POHA	Pohakuloa	54.02	26	PFAKE		14 53 40.0	+14
POHA				LR	LR		
	comp=Z,2µm,20.0s						
FAKI	Fak Fak	54.80	290	PFAKE		14 53 40.0	+7.9
FAKI				LR	LR		
	comp=Z,2µm,20.0s						
NWAO	Narrogin (SRO)	54.94	249	P	P	14 53 31.5	-1.4
	comp=Z,5.3nm,0.7s,baz=114,slow=10.0,SNR=3.2						
CASY	Casey	55.48	208	eP	P	14 53 36.1	-0.1
	comp=Z,79nm,1.0s						
PSAD2	Pilbara Seismi	56.39	263	PFAKE		14 53 50.0	+6.5
PSAD2				LR	LR		
	comp=Z,6µm,18.0s						
PSAC2	Pilbara Seismi	56.47	263	PFAKE		14 54 00.0	+16
PSAC2				LR	LR		
	comp=Z,9µm,18.0s						
PSAB3	Pilbara Seismi	56.49	263	PFAKE		14 54 00.0	+16
PSAB3				LR	LR		
	comp=Z,4µm,19.0s						
PSAA3	Pilbara Seismi	56.50	263	PFAKE		14 54 00.0	+16
PSAA3				LR	LR		
	comp=Z,7µm,18.0s						
PSAB2	Pilbara Seismi	56.50	263	PFAKE		14 54 00.0	+16
PSAB2				LR	LR		
	comp=Z,8µm,18.0s						
PSAC3	Pilbara Seismi	56.51	263	PFAKE		14 54 00.0	+16
PSAC3				LR	LR		
	comp=Z,5µm,18.0s						
PSA00	Pilbara Seismi	56.51	263	PFAKE		14 54 00.0	+16
PSA00				LR	LR		
	comp=Z,5µm,18.0s						
PSAA2	Pilbara Seismi	56.51	263	PFAKE		14 54 00.0	+16
PSAA2				LR	LR		
	comp=Z,4µm,18.0s						
PSAA1	Pilbara Seismi	56.52	263	PFAKE		14 54 00.0	+16
PSAA1				LR	LR		
	comp=Z,9µm,18.0s						
PSAB1	Pilbara Seismi	56.53	263	PFAKE		14 54 00.0	+16
PSAB1				LR	LR		
	comp=Z,8µm,18.0s						
PSAD3	Pilbara Seismi	56.54	263	PFAKE		14 54 00.0	+16
PSAD3				LR	LR		
	comp=Z,4µm,18.0s						
PSAC1	Pilbara Seismi	56.56	263	PFAKE		14 54 00.0	+15
PSAC1				LR	LR		
	comp=Z,5µm,18.0s						
PSAD1	Pilbara Seismi	56.57	263	PFAKE		14 54 00.0	+15
PSAD1				LR	LR		
	comp=Z,8µm,18.0s						
MBWA	Marble Bar	56.77	263	PFAKE		14 54 00.0	+14
MBWA				LR	LR		
	comp=Z,8µm,18.0s						
GUMO	Guam	56.78	315	PFAKE		14 54 00.0	+14
GUMO				LR	LR		
	comp=Z,2µm,20.0s						
SIJI	Sorong	56.79	291	P	P	14 53 46.0	-0.3
	comp=Z,62nm,1.0s,baz=126,slow=7.7,SNR=6.0						
MORW	Morawa	57.07	253	eP	P	14 53 46.7	-1.5
	comp=Z,50nm,1.3s						
SOEI	Soe	57.87	278	PFAKE		14 54 10.0	+16
SOEI				LR	LR		
	comp=Z,9µm,18.0s						
MIDW	Midway	58.18	0	PFAKE		14 54 10.0	+14
MIDW				LR	LR		
	comp=Z,2µm,21.0s						
QSPA	South Pole Qui	59.82	180	eP	P	14 54 09.6	+2.7
	comp=Z,97nm,0.9s						
QSPA				LR	LR		
	comp=Z,4µm,19.0s						
MMRI	Maumere	60.16	278	PFAKE		14 54 20.0	+10
MMRI				LR	LR		
	comp=Z,2µm,20.0s						
GIRL	Giralia	60.89	259	PFAKE		14 54 30.0	+15
GIRL				LR	LR		
	comp=Z,6µm,18.0s						
TNTI	Ternate	60.91	290	eP	P	14 54 13.8	-1.1
	comp=Z,155nm,1.9s						
TNTI				LR	LR		
	comp=Z,500nm,22.0s						
LUWI	Luwuk	63.67	285	eP	P	14 54 33.2	-0.3
	comp=Z,94nm,1.2s						
LUWI	Luwuk	63.67	285	P	P	14 54 33.4	-0.1
PLAI	Plampang	63.90	275	P	P	14 54 34.2	-0.8
JAGI	Jajag, Banyuwa	67.20	273	PFAKE		14 55 10.0	+14
JAGI				LR	LR		
	comp=Z,2µm,20.0s						
CTBH	Cotabato--PC H	67.21	294⇓	iP	P	14 54 55.6	-0.7
MAW	Mawson	72.60	200	P	P	14 55 29.9	+1.3
	comp=Z,14nm,0.9s,baz=107,slow=7.1,SNR=22						
MAW	Mawson	72.60	200	eP	P	14 55 29.1	+0.6
	comp=Z,44nm,1.8s						
MAW	Mawson	72.60	200	eP	P	14 55 29.2	+0.6
MAW				pmax	pmax		
	comp=Z,44nm,1.8s						
KKM	Kota Kinabalu	73.03	288	eP	P	14 55 31.0	-1.2
	comp=Z,29nm,0.7s						
CISI	Cisompet, Garu	73.12	271	PFAKE		14 55 40.0	+7.3
CISI				LR	LR		
	comp=Z,3µm,20.0s						
SBUM	Sibu	74.42	282	eP	P	14 55 38.7	-1.5
	comp=Z,14nm,1.3s						
CGJI	Cibinong	75.42	271	P	P	14 55 44.1	-1.9
KSM	Kuching	75.53	280	eP	P	14 55 45.6	-1.0
	comp=Z,66nm,1.6s						
SYO	Syowa Base	77.34	193⇓	eP	P	14 55 55.4	-0.5
SYO	Syowa Base	77.34	193⇑	epP	P	14 55 59.0	+3.1
INU	Inuyama	78.13	323	eP	P	14 56 00.5	-0.2
	comp=Z,23nm,0.9s						
INU				LR	LR		
	comp=Z,1µm,20.0s						
SNAA	Sanae	78.25	178	P	P	14 56 03.0	+1.9
SNAA	Sanae	78.25	178	eP	P	14 56 02.9	+1.8
	comp=Z,20nm,0.8s						
SNAA	Sanae	78.25	178⇑	eP	P	14 56 04.1	+3.0
VNA3	Neumayer Olymp	78.38	176	P	P	14 56 02.4	+0.7
MJAR	Matsushiro Arr	78.46	325	P	P	14 56 01.6	-1.0
	comp=Z,20nm,1.1s,baz=162,slow=4.9,SNR=10						
MJAR				LR	LR	15 31 52.0	
	comp=Z,308nm,18.1s,baz=125,slow=37						
MAJO	Matsushiro	78.46	325	eP	P	14 56 04.2	+1.7
	comp=Z,20nm,0.9s						
MAJO				LR	LR		
	comp=Z,800nm,20.0s						
MAJO	Matsushiro	78.46	325	eP	P	14 56 04.2	+1.7
MAJO				pmax	pmax		
	comp=Z,20nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,800nm,20.0s						
MAT	Matsushiro	78.46	325	P	P	14 56 01.8	-0.8
MAT				S	S	15 05 48.4	-7.9
MJB9	Matsu-Tunnel	78.46	325	eP	P	14 56 02.6	+0.1
	comp=Z,20nm,0.9s						
MJB9				LR	LR		
	comp=Z,900nm,19.0s						
VNA2	Neumayer--Watz	78.82	177	P	P	14 56 05.2	+1.1
VNA1	Neumayer--Stat	79.05	176	P	P	14 56 07.7	+2.4
TWG	Pinlang	79.24	304	PFAKE		14 56 20.0	+13
TWG				LR	LR		
	comp=Z,3µm,20.0s						
YULB	Yu-li	79.44	305	PFAKE		14 56 20.0	+12
YULB				LR	LR		
	comp=Z,700nm,21.0s						
JNU	Nakatsue	79.83	318	P	P	14 56 09.8	-0.4
	comp=Z,7.3nm,0.7s,baz=55,slow=1.2,SNR=5.3						
JNU	Nakatsue	79.83	318	eP	P	14 56 09.8	-0.4
	comp=Z,52nm,1.4s						
TPUB	Ta-pu	79.86	304	eP	P	14 56 08.2	-2.4
	comp=Z,22nm,0.8s						
SSLB	Suanglung	79.93	305	eP	P	14 56 08.4	-2.5
	comp=Z,12nm,0.7s						
SSLB				LR	LR		
	comp=Z,700nm,19.0s						
YHNB	Yeheng	80.20	306	PFAKE		14 56 20.0	+7.6
YHNB				LR	LR		
	comp=Z,1µm,20.0s						
ERM	Erimo	80.62	331	PFAKE		14 56 30.0	+16
ERM				LR	LR		
	comp=Z,2µm,20.0s						
ERM	Erimo	80.62	331⇑	eP	P	14 56 18.9	+4.8
ERM				pmax	pmax		
	comp=Z,54nm,1.3s						
MYKOM	Kota Tinggi	81.21	277	eP	P	14 56 16.2	-1.8
	comp=Z,22nm,1.1s						
YUK	Yuzh-Kuril'sk	81.25	334	eP	P	14 56 19.9	+2.5
YUK				e		14 59 26.6	
YUK				ePPP	PPP	15 01 22.5	
YUK				S	S	15 06 21.2	-4.1
YUK				eSS	SS	15 11 39.5	-2.5
YUK				eSSS	SSS	15 15 07.8	
YUK				pmax	pmax		
	comp=Z,106nm,1.3s						
YUK				pmax	pmax		
	comp=Z,150nm,1.3s						
KUR	Kuril'sk	81.55	336⇓	eP	P	14 56 26.5	+7.6
KIWB	Kanaga Island	81.79	0	eP	P	14 56 20.2	+0.1
ADK	Adak	81.82	0	PFAKE		14 56 30.0	+10
ADK				LR	LR		
	comp=Z,900nm,20.0s						
ATKA	Atka Island	82.19	2	eP	P	14 56 22.6	+0.4
	comp=Z,67nm,0.9s						
PLCA	Paso Flores	82.19	133	P	P	14 56 25.0	+2.1
	comp=Z,11nm,1.0s,baz=260,slow=6.4,SNR=14						
PLCA				LR	LR	15 24 15.7	
	comp=Z,1µm,21.6s,baz=276,slow=29						
PLCA	Paso Flores	82.19	133	eP	P	14 56 25.7	+2.8
	comp=Z,57nm,1.4s						
PLCA	Paso Flores	82.19	133	eP	P	14 56 25.7	+2.8
PLCA				pmax	pmax		
	comp=Z,57nm,1.4s						
QZH	Quanzhou	82.33	305⇑	iP	P	14 56 23.2	-0.4
QZH				eS	S	15 06 36.4	-0.9
QZH				sS	SKKSac	15 06 46.8	+1.2

QZH				pmax	pmax		
	comp=Z,360nm,7.5s						
QZH				LR	LR		
	comp=Z,240nm,18.0s						
QZH				LR	LR		
	comp=Z,420nm,22.3s						
QZH				LR	LR		
	comp=Z,510nm,18.5s						
ASAJ	Asahikawa	82.59	332	P	P	14 56 25.6	+1.1
	comp=Z,33nm,0.9s,baz=227,slow=7.5,SNR=13						
DLV	T Lat	82.63	288	*e*P	P	14 56 25.5	-0.2
	comp=Z,28nm,0.8s						
SMY	Shemya	83.00	355	PFAKE		14 56 40.0	+14
SMY				LR	LR		
	comp=Z,2µm,20.0s						
NIKH	Nikolski High	83.24	5	*e*P	P	14 56 27.3	-0.3
	comp=Z,76nm,1.0s						
TJN	Taejon	84.18	318	*i* P	P	14 56 37.6	+4.8
UNV	Unalaska Valle	84.32	6	*e*P	P	14 56 33.0	-0.1
	comp=Z,22nm,0.9s						
UNV				LR	LR		
	comp=Z,600nm,19.0s						
GO05	Huala	84.41	127	PFAKE		14 56 50.0	+16
GO05				LR	LR		
	comp=Z,1µm,20.0s						
SSE	Sheshan	84.44	311	PFAKE		14 56 50.0	+16
SSE				LR	LR		
	comp=Z,700nm,22.0s						
SSE	Sheshan	84.44	311	P	P	14 56 36.6	+2.3
PKM	Mcpherson Peak	84.52	44	P	P	14 56 36.0	+1.1
	baz=227						
KSRS	Korea Array	84.61	319	P	P	14 56 36.3	+1.3
	comp=Z,4.8nm,0.9s,baz=140,slow=5.8,SNR=8.3						
KSRS				LR	LR	15 31 51.5	
	comp=Z,487nm,19.2s,baz=125,slow=34						
KS15	Wonju Array Si	84.62	319	*e*P	P	14 56 36.3	+1.2
	comp=Z,79nm,1.9s						
AKUT	Akutan	84.67	7	*e*P	P	14 56 34.6	-0.3
	comp=Z,111nm,1.9s						
PAGB	Antelope Grade	84.83	43	*e*P	P	14 56 37.6	+1.4
PAGB				LR	LR		
	comp=Z,1µm,18.0s						
SAO	San Andreas Ge	84.84	42	PFAKE		14 56 50.0	+14
SAO				LR	LR		
	comp=Z,3µm,18.0s						
YSS	Yuzh-Sakhalins	84.88	334	*e*P	P	14 56 36.8	+0.7
	comp=Z,125nm,0.8s						
YSS				LR	LR		
	comp=Z,2µm,20.0s						
YSS	Yuzh-Sakhalins	84.88	334	*e*P	P	14 56 37.8	+1.7
YSS				*e*		14 56 55.6	
YSS				pmax	pmax		
	comp=Z,150nm,0.9s						
YSS				MLR	MLR		
	comp=E,300nm,14.0s						
MCCM	Marconi Confer	84.99	40	PFAKE		14 56 50.0	+13
MCCM				LR	LR		
	comp=Z,2µm,18.0s						
BAR	Barrett	85.00	48	PFAKE		14 56 50.0	+13
BAR				LR	LR		
	comp=Z,1µm,18.0s						
IPM	Ipoh	85.00	278	*e*P	P	14 56 36.4	-1.2
	comp=Z,33nm,1.3s						
PASC	Pasadena Art C	85.03	46	PFAKE		14 56 50.0	+13
PASC				LR	LR		
	comp=Z,2µm,18.0s						
MWC	Mount Wilson	85.14	46	*e*P	P	14 56 39.1	+1.1
	comp=Z,40nm,1.4s						
MWC				LR	LR		
	comp=Z,2µm,18.0s						
MURC	Murrieta	85.27	47	P	P	14 56 40.6	+2.1
	baz=229						
MONP2	Monument Peak	85.30	48	P	P	14 56 41.3	+2.4
	baz=229						
IKP	In-Ko-Pah, Jac	85.34	48	P	P	14 56 40.9	+2.0
	baz=230						
BFSC	Mount Baldy Ra	85.40	46	P	P	14 56 40.7	+1.4
	baz=228						
QIZ	Qiongzhong	85.43	295	P	P	14 56 39.6	0.0
QIZ				S	S	15 07 13.3	+4.5
QIZ				pmax	pmax		
	comp=Z,370nm,10.4s						
QIZ				LR	LR		
	comp=Z,290nm,18.2s						
QIZ				LR	LR		
	comp=Z,300nm,20.0s						
QIZ				LR	LR		
	comp=Z,550nm,33.0s						
GDXM	Geysers	85.51	40	*e*P	P	14 56 40.8	+1.2
	comp=Z,54nm,1.7s						
GDXM				LR	LR		
	comp=Z,3µm,19.0s						
PET	Petropavlovsk	85.56	346	*e*P	P	14 56 38.9	-0.5
	comp=Z,22nm,0.9s						
PET				LR	LR		
	comp=Z,1µm,20.0s						
PET	Petropavlovsk	85.56	346	*e*P	P	14 56 39.7	+0.4
PET				pmax	pmax		
	comp=Z,31nm,0.8s						
VES	Vestal, Richgr	85.60	44	P	P	14 56 42.2	+2.2
	baz=228						
EDW2	Edwards Air Fo	85.62	45	P	P	14 56 42.3	+2.1
	baz=228						
FALS	False Pass	85.65	8	PFAKE		14 56 50.0	+10
FALS				LR	LR		
	comp=Z,900nm,21.0s						
SWSC	Sam W. Stewart	85.73	48	P	P	14 56 44.8	+4.0
	baz=230						
KULM	Kulim	85.73	279	*e*P	P	14 56 40.5	-0.8
	comp=Z,50nm,1.6s						
PFO	Pinyon Flats O	85.74	47	P	P	14 56 42.8	+1.8
	baz=229						
PEA0B	Petropavlovsk-	85.84	345	*e*P	P	14 56 40.8	0.0
	comp=Z,75nm,0.9s						
PETK	Petropavlovsk-	85.84	345	P	P	14 56 40.9	+0.1
	comp=Z,40nm,0.8s,baz=122,slow=6.6,SNR=36						
PETK				LR	LR	15 29 21.0	
	comp=Z,626nm,22.0s,baz=161,slow=32						
ISA	Isabella, Lake	85.85	44	*e*P	P	14 56 42.5	+1.1
	comp=Z,97nm,1.4s						
ISA				LR	LR		
	comp=Z,2µm,18.0s						
ISA	Isabella, Lake	85.85	44	*e*P	P	14 56 42.5	+1.1
ISA				pmax	pmax		
	comp=Z,97nm,1.4s						
ISA				MLR	MLR		
	comp=Z,2µm,18.0s						
ISA	Isabella, Lake	85.85	44	P	P	14 56 43.6	+2.2
	baz=228						
PEA1	Petropavlovsk-	85.85	345	*e*P	P	14 56 40.9	+0.1
TEY	Ternei	85.87	329⇑	*e*P	P	14 56 41.5	+0.4
TEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PSI	Prapat	85.95	276	PFAKE		14 56 50.0	+7.5
PSI				LR	LR		
	comp=Z,2µm,18.0s						
KMRM	Mail Ridge	86.01	38	*e*P	P	14 56 43.6	+1.5
	comp=Z,67nm,1.3s						
LRMC	Laurel Mtn Rad	86.21	45	P	P	14 56 45.4	+2.1
	baz=228						
JCC	Jacoby Creek,	86.27	38	PFAKE		14 56 50.0	+6.8
JCC				LR	LR		
	comp=Z,2µm,19.0s						
BELC	Belle Mtn. Jos	86.28	47	P	P	14 56 46.0	+2.3
	baz=230						
PEL	Peldehue	86.30	126	*e*P	P	14 56 44.6	+0.8
	comp=Z,72nm,1.1s						
PEL	Peldehue	86.30	126	*e*P	P	14 56 44.6	+0.8
PEL				pmax	pmax		
	comp=Z,73nm,1.1s						
CMB	Columbia Colle	86.33	42	*e*P	P	14 56 44.1	+0.4
	comp=Z,86nm,1.9s						
CMB				LR	LR		
	comp=Z,2µm,18.0s						
CMB	Columbia Colle	86.33	42	*e*P	P	14 56 44.1	+0.4
CMB				pmax	pmax		
	comp=Z,86nm,1.9s						
CMB				MLR	MLR		
	comp=Z,2µm,18.0s						
GSI	Gunungsitoli	86.37	274	*e*P	P	14 56 43.4	-1.0
	comp=Z,252nm,1.8s						
BC3	Big Chuckawall	86.41	48	P	P	14 56 46.6	+2.4
	baz=230						
GLA	Glamis	86.42	48	*e*P	P	14 56 45.7	+1.5
	comp=Z,42nm,1.2s						
GLA				LR	LR		
	comp=Z,1µm,18.0s						
GLA	Glamis	86.42	48	*e*P	P	14 56 45.7	+1.5
GLA				pmax	pmax		
	comp=Z,42nm,1.2s						
GLA				MLR	MLR		
	comp=Z,1µm,18.0s						
GLA	Glamis	86.42	48	P	P	14 56 46.5	+2.3
	baz=230						
KHMM	Horse Mountain	86.47	38	PFAKE		14 57 00.0	+16
KHMM				LR	LR		
	comp=Z,2µm,18.0s						
O02D	Mt. Diablo Mer	86.48	39	P	P	14 56 47.0	+2.6
	baz=225						
SDPT	Sand Point	86.52	10	*e*P	P	14 56 44.2	+0.2
	comp=Z,42nm,0.9s						
HSIG		86.52	54	*e*P	P	14 56 44.1	-0.6
	comp=Z,104nm,1.9s						
NJ2	Nanjing	86.58	310	*e*P	P	14 56 45.1	+0.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,590nm,6.2s						
NJ2				LR	LR		
	comp=Z,400nm,20.4s						
NJ2				LR	LR		
	comp=Z,600nm,19.9s						
NJ2				LR	LR		
	comp=Z,940nm,17.1s						
CWC	Cottonwood Cre	86.60	44	P	P	14 56 46.9	+1.7
	baz=228						
HEC	Hector,Ludlow	86.61	46	P	P	14 56 47.3	+2.2
	baz=229						
AFDM	Forest Hills D	86.62	41	*e*P	P	14 56 46.1	+1.0
	comp=Z,31nm,1.3s						
AFDM				LR	LR		
	comp=Z,2µm,18.0s						
GSC	Goldstone, Bar	86.63	46	PFAKE		14 57 00.0	+15
GSC				LR	LR		
	comp=Z,2µm,18.0s						
GSC	Goldstone, Bar	86.63	46	P	P	14 56 47.1	+1.9
	baz=229						
MPMC	Manual Prospec	86.71	45	P	P	14 56 47.4	+1.6
	baz=229						
ORV	Oroville	86.75	40	PFAKE		14 57 00.0	+14
ORV				LR	LR		
	comp=Z,2µm,18.0s						
MDPB	Devils Postpil	86.81	43	*e*P	P	14 56 47.0	+0.7
	comp=Z,31nm,1.3s						
MDPB				LR	LR		
	comp=Z,2µm,19.0s						
KRMB	Red Mountain	86.84	37	PFAKE		14 57 00.0	+14
KRMB				LR	LR		
	comp=Z,1µm,19.0s						
OMMB	Old Mammoth Mi	86.84	43	*e*P	P	14 56 47.5	+1.0
	comp=Z,65nm,1.8s						
OMMB				LR	LR		
	comp=Z,2µm,18.0s						
WDC	Whiskeytown Da	86.89	39	*e*P	P	14 56 47.1	+0.8
	comp=Z,64nm,1.4s						
WDC				LR	LR		
	comp=Z,2µm,19.0s						
WDC	Whiskeytown Da	86.89	39	*e*P	P	14 56 47.1	+0.8
WDC				pmax	pmax		
	comp=Z,64nm,1.4s						
WDC				MLR	MLR		
	comp=Z,2µm,19.0s						
IRM	Iron Mountain	86.93	47	P	P	14 56 49.4	+2.7
	baz=230						
GMRC	Granite Mounta	87.00	47	P	P	14 56 49.0	+1.8
	baz=230						
214A	Organ Pipe Nat	87.06	50	P	P	14 56 50.4	+3.0
	baz=231						
Y12C	Blythe	87.06	48	P	P	14 56 50.3	+3.0
	baz=230						
N02D	Trinity Center	87.08	38	P	P	14 56 49.3	+2.0
	baz=225						
O03E	Paynes Creek	87.10	39	P	P	14 56 48.4	+1.0
	baz=226						
RUBR	Rubicon Trail	87.15	41	PFAKE		14 57 00.0	+12
RUBR				LR	LR		
	comp=Z,2µm,18.0s						
WAKR	Walker	87.19	42	*e*P	P	14 56 48.7	+0.6
	comp=Z,79nm,1.3s						
WAKR				LR	LR		
	comp=Z,2µm,18.0s						
TUQ	Turquoise Moun	87.26	46	P	P	14 56 50.0	+1.7
	baz=230						
M02C	Callahan	87.30	38	P	P	14 56 49.1	+0.7
	baz=225						
SPIA	Saint Paul Isl	87.33	4	PFAKE		14 57 00.0	+12
SPIA				LR	LR		
	comp=Z,2µm,21.0s						
SHOC	Shoshone, Teco	87.34	45	P	P	14 56 50.6	+2.0
	baz=229						
FURC	Furnace Creek,	87.36	45	P	P	14 56 50.5	+1.9
	baz=229						
USA0B	Ussuriysk Arra	87.37	326	*e*P	P	14 56 48.5	+0.1
USA0B				LR	LR		
	comp=Z,700nm,20.0s						
USRK	Ussuriysk Ar.	87.37	326	P	P	14 56 49.6	+1.1
	comp=Z,18nm,0.9s,baz=142,slow=3.5,SNR=15						
USRK				LR	LR	15 31 12.8	
	comp=Z,609nm,21.0s,baz=133,slow=32						
GRAC	Grapevine Rang	87.40	44	P	P	14 56 51.4	+2.5
	baz=229						
PNTR	Pine Nut	87.50	41	*e*P	P	14 56 50.2	+0.7
	comp=Z,32nm,1.0s						
PNTR				LR	LR		
	comp=Z,2µm,18.0s						
LDFC	Landfair	87.54	47	PFAKE		14 57 00.0	+10
LDFC				LR	LR		
	comp=Z,1µm,18.0s						
BEKR	Beckworth	87.60	40	*e*P	P	14 56 50.4	+0.4
	comp=Z,30nm,1.3s						
BEKR				LR	LR		
	comp=Z,2µm,18.0s						
VCNR	Virginia City	87.61	41	PFAKE		14 57 00.0	+10
VCNR				LR	LR		
	comp=Z,3µm,18.0s						
YBH	Yreka Blue Hor	87.62	38	*e*P	P	14 56 50.8	+0.9
	comp=Z,19nm,1.2s						
YBH				LR	LR		
	comp=Z,1µm,19.0s						
YBH	Yreka Blue Hor	87.62	38	*e*P	P	14 56 50.8	+0.9
YBH				pmax	pmax		
	comp=Z,19nm,1.2s						
YBH				MLR	MLR		
	comp=Z,1µm,19.0s						
YERR	Yerington	87.63	41	*e*P	P	14 56 51.0	+0.9
	comp=Z,68nm,1.6s						
YERR				LR	LR		
	comp=Z,2µm,18.0s						
NEE2	Needles Airpor	87.65	47	P	P	14 56 52.7	+2.6
	baz=230						
PDMCI	Parker Dam,Lak	87.66	48	P	P	14 56 51.9	+1.8
	baz=231						
CHGN	Chignik	87.75	10	PFAKE		14 57 00.0	+10
CHGN				LR	LR		
	comp=Z,800nm,20.0s						
NV01	Mina Array Sit	87.80	42	*e*P	P	14 56 52.0	+1.0
NVAR	Mina Array Bea	87.80	42	P	P	14 56 52.0	+1.0
	comp=Z,6.0nm,0.9s,baz=223,slow=7.5,SNR=22						
NVAR				LR	LR	15 32 43.7	
	comp=Z,2µm,18.0s,baz=234,slow=33						
RYN	Ryan	87.80	42	*e*P	P	14 56 51.9	+0.9
	comp=Z,111nm,1.9s						
RYN				LR	LR		
	comp=Z,2µm,19.0s						
K02D	Willamette Mer	87.81	36	P	P	14 56 51.5	+0.7
	baz=224						
NV11	Mina Array Sit	87.89	42	PFAKE		14 57 00.0	+8.7
NV11				LR	LR		
	comp=Z,100nm,18.0s						
J01E	Myrtle Point	88.00	36	P	P	14 56 52.5	+1.0
	baz=224						
PAHR	Pah Rah Range	88.04	41	*e*P	P	14 56 52.9	+0.9
	comp=Z,59nm,1.7s						
PAHR				LR	LR		
	comp=Z,3µm,18.0s						
TPNV	Topopah Spring	88.04	45	*e*P	P	14 56 53.0	+0.9
	comp=Z,70nm,1.4s						
TPNV				LR	LR		
	comp=Z,2µm,18.0s						
TPNV	Topopah Spring	88.04	45	*e*P	P	14 56 53.1	+0.9
TPNV				pmax	pmax		
	comp=Z,70nm,1.4s						
TPNV				MLR	MLR		
	comp=Z,2µm,18.0s						
TPNV	Topopah Spring	88.04	45	P	P	14 56 54.0	+1.9
	baz=229						
HUMO	Hull Mountain	88.11	37	PFAKE		14 57 00.0	+7.9
HUMO				LR	LR		
	comp=Z,1µm,19.0s						
M04C	Macdoel	88.12	38	P	P	14 56 54.4	+2.1
	baz=226						
CHBT	CHBT	88.15	286	P	P	14 57 02.3	+9.4
Y14A	Wickenburg	88.16	49	*e*P	P	14 56 53.9	+1.3
	comp=Z,30nm,1.2s						
Y14A				LR	LR		
	comp=Z,2µm,18.0s						
L04D	Klamath Falls	88.18	38	P	P	14 56 54.6	+2.0
	baz=225						
W13A	Hualapai Mount	88.33	47	*e*P	P	14 56 52.9	-0.7
	comp=Z,38nm,1.4s						
KVN	Kaiserville	88.33	42	*e*P	P	14 56 54.0	+0.5
	comp=Z,91nm,1.9s						
KVN	Kaiserville	88.33	42	*e*P	P	14 56 54.0	+0.5
KVN				pmax	pmax		
	comp=Z,91nm,1.9s						
SHPR	Sheep Range	88.42	45	*e*P	P	14 56 54.5	+0.6
	comp=Z,69nm,1.6s						
SHPR				LR	LR		
	comp=Z,1µm,18.0s						
PANO	Nakornpanom	88.58	291	P	P	14 56 59.3	+4.4
TUC	Tucson	88.63	51	*e*P	P	14 56 56.3	+1.4
	comp=Z,69nm,1.6s						
TUC				LR	LR		
	comp=Z,1µm,18.0s						
TUC	Tucson	88.63	51	*e*P	P	14 56 56.3	+1.4
TUC				pmax	pmax		
	comp=Z,69nm,1.6s						
TUC				MLR	MLR		
	comp=Z,1µm,18.0s						
TUC	Tucson	88.63	51	P	P	14 56 57.7	+2.8
	baz=233						
SII	Sitkinak Islan	88.73	13	PFAKE		14 57 10.0	+15
SII				LR	LR		
	comp=Z,2µm,20.0s						
MDJ	Mudanjiang	88.84	325	PFAKE		14 57 10.0	+15
MDJ				LR	LR		
	comp=Z,1µm,22.0s						
MDJ	Mudanjiang	88.84	325	P	P	14 56 56.8	+1.3
MDJ				pP	pP	14 57 01.7	-3.0
MDJ				sP	sP	14 57 03.1	-4.8
MDJ				S	S	15 07 43.0	+2.5
MDJ				SS	SS	15 13 37.4	+3.4
MDJ				pmax	pmax		
	comp=Z,25nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,620nm,9.8s						
MDJ				LR	LR		
	comp=Z,630nm,22.8s						
MDJ				LR	LR		
	comp=Z,410nm,22.8s						
MDJ				LR	LR		
	comp=Z,1µm,22.8s						
J04D	Umpqua Nationa	89.00	37	P	P	14 56 58.2	+1.6
	baz=225						
SKNT	Sakolnakorn	89.00	290	P	P	14 56 58.2	+1.3
MOD	Modoc Plateau	89.03	39	PFAKE		14 57 10.0	+13
MOD				LR	LR		
	comp=Z,2µm,19.0s						
HPIG		89.08	58	PFAKE		14 57 10.0	+13
HPIG				LR	LR		
	comp=Z,2µm,18.0s						
319A	Douglas	89.09	53	*e*P	P	14 56 57.8	+0.6
	comp=Z,78nm,1.7s						
319A				LR	LR		
	comp=Z,2µm,19.0s						
I04A	Tendick Farm,	89.23	36	P	P	14 56 59.0	+1.6
	baz=225						
DL2	Dalian	89.23	317	P	P	14 56 58.2	+0.8
DL2				SKS	SKSac	15 07 27.6	+2.8
DL2				S	S	15 07 46.8	+2.4
DL2				pmax	pmax		
	comp=Z,33nm,1.2s						
DL2				pmax	pmax		
	comp=Z,470nm,8.5s						
DL2				LR	LR		
	comp=Z,390nm,16.8s						
DL2				LR	LR		
	comp=Z,550nm,17.3s						
DL2				LR	LR		
	comp=Z,610nm,18.5s						
K05A	Summer Lake	89.28	38	*e*P	P	14 56 58.1	+0.2
	comp=Z,50nm,1.4s						
K05A				LR	LR		
	comp=Z,2µm,19.0s						
COR	Corvallis	89.34	35	PFAKE		14 57 10.0	+12
COR				LR	LR		
	comp=Z,2µm,19.0s						
R11A	Troy Canyon, C	89.35	44	*e*P	P	14 56 56.1	-2.2
	comp=Z,35nm,1.9s						
R11A				LR	LR		
	comp=Z,1µm,18.0s						
R11A	Troy Canyon, C	89.35	44	P	P	14 57 00.3	+2.0
	baz=230						
X16A	Lo Mia Camp, P	89.48	49	*e*P	P	14 56 59.8	+0.9
	comp=Z,43nm,1.3s						
J05D	Fort Rock, OR	89.48	37	P	P	14 57 00.1	+1.4
	baz=226						
OHAK	Old Harbor	89.52	13	PFAKE		14 57 10.0	+12
OHAK				LR	LR		
	comp=Z,1µm,18.0s						
H04D	Lebanon	89.58	36	P	P	14 57 00.8	+1.9
	baz=225						
BMN	Battle Mountai	89.75	41	*e*P	P	14 57 00.7	+0.6
	comp=Z,49nm,1.4s						
BMN				LR	LR		
	comp=Z,2µm,18.0s						
BMN	Battle Mountai	89.75	41	*e*P	P	14 57 00.7	+0.6
BMN				pmax	pmax		
	comp=Z,49nm,1.4s						
BMN				MLR	MLR		
	comp=Z,2µm,18.0s						
LCMT	Little Creek M	89.93	46	*e*P	P	14 57 01.5	+0.5
	comp=Z,65nm,1.6s						
H04A	Detroit Lake	89.97	36	*e*P	P	14 57 01.6	+0.7
	comp=Z,54nm,1.4s						
H04A				LR	LR		
	comp=Z,2µm,19.0s						
PINE	Pine Mountain	89.99	37	*e*P	P	14 57 01.8	+0.6
	comp=Z,72nm,1.4s						
PINE				LR	LR		
	comp=Z,1µm,20.0s						
CHAI	Chaiyaphum	90.07	288	P	P	14 57 02.9	+1.0
I05D	Terrebonne, OR	90.16	37	P	P	14 57 03.1	+1.3
	baz=226						
U15A	North Rim	90.17	47	*e*P	P	14 57 03.4	+1.1
	comp=Z,95nm,1.5s						
U15A				LR	LR		
	comp=Z,700nm,22.0s						
KDAK	Kodiak Island	90.18	13	PFAKE		14 57 10.0	+8.6
KDAK				LR	LR		
	comp=Z,1µm,20.0s						
WUAZ	Wupatki	90.19	48	*e*P	P	14 57 03.2	+0.9
	comp=Z,73nm,1.4s						
WUAZ				LR	LR		
	comp=Z,1µm,18.0s						
WUAZ	Wupatki	90.19	48	P	P	14 57 05.2	+2.9
	baz=232						
CCUT	Cedar City	90.20	46	*e*P	P	14 57 02.9	+0.5
	comp=Z,77nm,1.8s						
KNB	Kanab	90.20	46	*e*P	P	14 57 03.5	+1.2
	comp=Z,44nm,1.1s						
KNB	Kanab	90.20	46	*e*P	P	14 57 03.5	+1.2
KNB				pmax	pmax		
	comp=Z,44nm,1.1s						
NONG	Nongkai	90.25	291	P	P	14 57 04.3	+1.6
TIA	Tai'an	90.29	313	P	P	14 57 03.6	+1.1
TIA				pmax	pmax		
	comp=Z,23nm,0.9s						
WVOR	Wild Horse Val	90.30	39	*e*P	P	14 57 03.7	+1.2
	comp=Z,22nm,1.1s						
WVOR				LR	LR		
	comp=Z,2µm,19.0s						
WVOR	Wild Horse Val	90.30	39	*e*P	P	14 57 03.7	+1.2
WVOR				pmax	pmax		
	comp=Z,22nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,2µm,19.0s						
CN2	Changchun	90.38	323	*e*P	P	14 57 11.0	+8.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SZCU	Shurtz Canyon	90.39	46	*e*P	P	14 57 04.5	+1.3

	comp=Z,97nm,1.8s						
GRNR	**Gornyy**	**90.43**	**333**	*e*P	**P**	**14 57 04.5**	**+1.7**
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
PHET	**Kaeng Krachan**	**90.48**	**285**	P	P	14 57 11.2	+7.3
PSUT	**Pine Spring**	**90.51**	**45**	*e*P	**P**	**14 57 05.0**	**+1.2**
	comp=Z,32nm,1.5s						
X18A	**Snowflake**	**90.52**	**50**	*e*P	**P**	**14 57 05.0**	**+1.2**
	comp=Z,36nm,1.2s						
X18A				LR	LR		
	comp=Z,1µm,18.0s						
NKL	**Nikolayevsk**	**90.75**	**336**	⇑*i*P	**P**	**14 57 05.0**	**+0.9**
NKL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,18nm,1.4s						
NKL				pmax	pmax		
	comp=N,66nm,1.0s						
PKCU	**Pink Cliffs**	**90.78**	**46**	*e*P	**P**	**14 57 05.9**	**+0.8**
	comp=N,132nm,1.7s						
121A	**Cookes Peak, D**	**90.80**	**52**	P	**P**	**14 57 07.1**	**+1.9**
	baz=234						
G05D	**Wamic, OR**	**90.81**	**36**	P	**P**	**14 57 06.9**	**+2.2**
I07A	**Izee**	**90.94**	**38**	*e*P	**P**	**14 57 06.1**	**+0.6**
	comp=N,35nm,1.4s						
J08A	**Circle Bar Ran**	**91.00**	**39**	*e*P	**P**	**14 57 05.9**	**+0.1**
	comp=N,34nm,1.3s						
J08A				LR	LR		
	comp=Z,2µm,18.0s						
NLWA	**Neilton Lookou**	**91.08**	**33**	PFAKE		14 57 20.0	+14
NLWA				LR	LR		
	comp=Z,1µm,20.0s						
ELK	**Elko**	**91.10**	**42**	*e*P	**P**	**14 57 06.9**	**+0.4**
	comp=Z,24nm,1.5s						
ELK				LR	LR		
	comp=Z,2µm,18.0s						
ELK	**Elko**	**91.10**	**42**	*e*P	**P**	**14 57 06.9**	**+0.4**
ELK				pmax	pmax		
	comp=Z,24nm,1.5s						
ELK				MLR	MLR		
	comp=Z,2µm,18.0s						
E04D	**Cinebar**	**91.11**	**34**	P	**P**	**14 57 08.3**	**+2.3**
	baz=225						
G06A	**Carlson Farm,**	**91.15**	**36**	*e*P	**P**	**14 57 07.0**	**+0.7**
	comp=Z,48nm,1.3s						
G06A				LR	LR		
	comp=Z,900nm,19.0s						
KLR	**Kul'dur**	**91.21**	**329**	P	**P**	**14 57 07.1**	**+0.6**
	comp=Z,13nm,0.7s,baz=135,slow=3.5,SNR=17						
MTPU	**Mount Pierson**	**91.23**	**46**	*e*P	**P**	**14 57 08.1**	**+0.8**
	comp=Z,94nm,1.8s						
SLVN	**Son La**	**91.36**	**294**	*e*P	**P**	**14 57 06.2**	**-1.7**
	comp=Z,11nm,1.0s						
D04E	**Lakebay**	**91.45**	**34**	P	**P**	**14 57 10.1**	**+2.6**
	baz=225						
MSU	**Marysvale**	**91.53**	**45**	*e*P	**P**	**14 57 09.4**	**+0.9**
MSU	**Marysvale**	**91.53**	**45**	*e*P	**P**	**14 57 09.4**	**+0.9**
D03D	**Eldon**	**91.55**	**33**	P	**P**	**14 57 10.3**	**+2.3**
	baz=225						
LON	**Longmire**	**91.61**	**35**	PFAKE		14 57 20.0	+12
LON				LR	LR		
	comp=Z,800nm,20.0s						
D05A	**Enumclaw**	**91.83**	**34**	PFAKE		14 57 20.0	+11
D05A				LR	LR		
	comp=Z,900nm,22.0s						
DIB	**Dawson Inlet,**	**91.86**	**25**	PFAKE		14 57 20.0	+11
DIB				LR	LR		
	comp=Z,900nm,20.0s						
TXAR	**Lajitas Array**	**91.88**	**57**	P	**P**	**14 57 10.2**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=197,slow=2.8,SNR=2.5						
TXAR				LR	LR	15 33 59.3	
	comp=Z,887nm,18.0s,baz=0.0,slow=33						
F07A	**Phinny Hill Vi**	**91.96**	**36**	PFAKE		14 57 20.0	+10
F07A				LR	LR		
	comp=Z,1µm,19.0s						
ENH	**Enshi**	**91.98**	**304**	*e*P	**P**	**14 57 08.7**	**-1.9**
	comp=Z,125nm,1.8s						
MNTX	**Cornudas Mount**	**91.98**	**54**	*e*P	**P**	**14 57 10.2**	**-0.3**
	comp=Z,35nm,1.9s						
MNTX				LR	LR		
	comp=Z,800nm,19.0s						
MNTX	**Cornudas Mount**	**91.98**	**54**	P	**P**	**14 57 12.3**	**+1.8**
	baz=235						
G08A	**Pilot Rock**	**92.05**	**37**	*e*P	**P**	**14 57 10.7**	**+0.1**
	comp=Z,38nm,1.3s						
G08A				LR	LR		
	comp=Z,1µm,19.0s						
CNPM	**China Poot**	**92.07**	**13**	PFAKE		14 57 20.0	+10
CNPM				LR	LR		
	comp=Z,1µm,19.0s						
HOM	**Homer**	**92.11**	**13**	PFAKE		14 57 20.0	+10
HOM				LR	LR		
	comp=Z,1µm,20.0s						
DUG	**Dugway, Tooele**	**92.18**	**44**	PFAKE		14 57 20.0	+8.6
DUG				LR	LR		
	comp=Z,2µm,18.0s						
Y22D	**IRIS PASSCAL I**	**92.28**	**52**	PFAKE		14 57 20.0	+8.0
Y22D				LR	LR		
	comp=Z,2µm,18.0s						
LENM	**Lemitar**	**92.30**	**51**	*e*P	**P**	**14 57 13.3**	**+1.2**
LAZ	**Ladron**	**92.32**	**51**	*e*P	**P**	**14 57 13.7**	**+1.5**
BRLK	**Bradley Lake**	**92.36**	**13**	PFAKE		14 57 20.0	+8.5
BRLK				LR	LR		
	comp=Z,2µm,21.0s						
Q16A	**Castle Valley**	**92.40**	**46**	*e*P	**P**	**14 57 13.6**	**+1.1**
	comp=Z,22nm,1.5s						
HAWA	**Hanford**	**92.50**	**36**	*e*P	**P**	**14 57 13.9**	**+1.4**
	comp=Z,36nm,1.3s						
HAWA				LR	LR		
	comp=Z,2µm,19.0s						
BNM	**Barren Site**	**92.52**	**52**	*e*P	**P**	**14 57 14.3**	**+1.1**
LTY	**Liberty**	**92.53**	**35**	PFAKE		14 57 20.0	+7.3
LTY				LR	LR		
	comp=Z,1µm,21.0s						
TMUT	**Trail Mountain**	**92.61**	**45**	*e*P	**P**	**14 57 14.7**	**+1.1**
	comp=Z,20nm,1.1s						
LNIG	**Linares**	**92.62**	**63**	PFAKE		14 57 30.0	+16
LNIG				LR	LR		
	comp=Z,1µm,18.0s						
BMO	**Blue Mountains**	**92.63**	**38**	*e*P	**P**	**14 57 13.3**	**0.0**
	comp=Z,38nm,1.8s						
BMO				LR	LR		
	comp=Z,1µm,19.0s						
BMO	**Blue Mountains**	**92.63**	**38**	*e*P	**P**	**14 57 13.3**	**0.0**
BMO				pmax	pmax		
	comp=Z,38nm,1.8s						
BMO				MLR	MLR		
	comp=Z,1µm,19.0s						
BBB	**Bella Bella**	**92.75**	**28**	PFAKE		14 57 30.0	+17
BBB				LR	LR		
	comp=Z,1µm,19.0s						
E08A	**Dider Farm, El**	**92.81**	**36**	PFAKE		14 57 30.0	+16
E08A				LR	LR		
	comp=Z,2µm,19.0s						
PHRA	**Phrae**	**92.84**	**290**	P	**P**	**14 57 17.5**	**+2.8**
SRU	**San Rafael Swe**	**92.91**	**46**	*e*P	**P**	**14 57 15.9**	**+1.1**
	comp=Z,37nm,1.5s						
SRU	**San Rafael Swe**	**92.91**	**46**	*e*P	**P**	**14 57 15.9**	**+1.1**
SRU				pmax	pmax		
	comp=Z,37nm,1.5s						
SEW	**Seward**	**92.95**	**14**	PFAKE		14 57 30.0	+16
SEW				LR	LR		
	comp=Z,1µm,21.0s						
P17A	**Butcher Ranch,**	**93.00**	**45**	*e*P	**P**	**14 57 15.0**	**-0.2**
	comp=Z,24nm,1.4s						
MVCO	**Mesa Verde**	**93.06**	**48**	P	**P**	**14 57 17.7**	**+2.1**
	baz=234						
TASM	**ASL Pad, Albuq**	**93.09**	**51**	P	**P**	**14 57 17.7**	**+1.9**
	baz=235						
ANMO	**Albuquerque**	**93.09**	**51**	*e*P	**P**	**14 57 16.9**	**+1.1**
	comp=Z,27nm,1.5s						
ANMO				LR	LR		
	comp=Z,2µm,18.0s						
ANMO	**Albuquerque**	**93.09**	**51**	*e*P	**P**	**14 57 16.9**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,27nm,1.5s						
ANMO				MLR	MLR		
	comp=Z,2µm,18.0s						
PV05	**Paradox Valley**	**93.19**	**47**	*e*P	**P**	**14 57 16.6**	**+0.4**
	comp=Z,34nm,1.6s						
HVU	**Hansel Valley**	**93.19**	**43**	*e*P	**P**	**14 57 17.2**	**+1.2**
	comp=Z,28nm,1.1s						
HVU	**Hansel Valley**	**93.19**	**43**	*e*P	**P**	**14 57 17.2**	**+1.2**
HVU				pmax	pmax		
	comp=Z,28nm,1.1s						
BJI	**Beijing**	**93.22**	**315**	*e*P	**P**	**14 57 16.4**	**+0.5**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JLU	**Jordanelle**	**93.25**	**44**	*e*P	**P**	**14 57 16.1**	**-0.3**
	comp=Z,32nm,1.8s						
D08A	**Wollman Farm,**	**93.26**	**36**	*e*P	**P**	**14 57 16.7**	**+0.7**
	comp=Z,51nm,1.6s						
D08A				LR	LR		
	comp=Z,2µm,19.0s						
E09A	**Wood Farm, Sta**	**93.29**	**36**	*e*P	**P**	**14 57 16.5**	**+0.3**
	comp=Z,25nm,1.3s						
E09A				LR	LR		
	comp=Z,1µm,18.0s						
HLID	**Hailey**	**93.38**	**40**	*e*P	**P**	**14 57 17.3**	**+0.4**
	comp=Z,9.9nm,1.0s						
HLID	**Hailey**	**93.38**	**40**	P	**P**	**14 57 18.0**	**+1.1**
	baz=231						
F10A	**Beach Ranch, E**	**93.41**	**37**	*e*P	**P**	**14 57 17.0**	**+0.2**
	comp=Z,16nm,1.0s						
F10A				LR	LR		
	comp=Z,1µm,20.0s						
PV14	**Lion Creek, Pa**	**93.41**	**47**	*e*P	**P**	**14 57 17.4**	**+0.2**
	comp=Z,11nm,1.1s						
PV14				LR	LR		
	comp=Z,900nm,19.0s						
CRAG	**Craig**	**93.43**	**23**	PFAKE		14 57 30.0	+14
CRAG				LR	LR		
	comp=Z,1µm,19.0s						
PV16	**Nyswonger Mesa**	**93.44**	**47**	PFAKE		14 57 30.0	+13
PV16				LR	LR		
	comp=Z,900nm,19.0s						
PV11	**David Mesa, Pa**	**93.47**	**47**	PFAKE		14 57 30.0	+13
PV11				LR	LR		
	comp=Z,1µm,20.0s						
PLID	**Pearl Lake**	**93.48**	**39**	*e*P	**P**	**14 57 17.9**	**+0.6**
	comp=Z,19nm,1.0s						
PLID				LR	LR		
	comp=Z,4µm,21.0s						
PV02	**Paradox Valley**	**93.50**	**47**	*e*P	**P**	**14 57 18.8**	**+1.2**
	comp=Z,7.7nm,0.9s						
LVC	**Limon Verde**	**93.52**	**119**	PFAKE		14 57 30.0	+12
LVC				LR	LR		
	comp=Z,700nm,18.0s						
PV12	**Saucer Basin,**	**93.52**	**47**	*e*P	**P**	**14 57 18.6**	**+0.9**
	comp=Z,34nm,1.5s						
PV21	**Cone Mtn., Par**	**93.56**	**47**	*e*P	**P**	**14 57 18.9**	**+1.0**
	comp=Z,38nm,1.7s						
PV01	**Paradox Valley**	**93.56**	**47**	*e*P	**P**	**14 57 18.7**	**+0.8**
	comp=Z,6.6nm,0.9s						
TCUT	**Toone Canyon**	**93.59**	**44**	*e*P	**P**	**14 57 18.7**	**+0.7**
	comp=Z,59nm,1.4s						
PV22	**Blue Mesa, Par**	**93.66**	**47**	*e*P	**P**	**14 57 18.5**	**+0.2**
	comp=Z,27nm,1.7s						
PV22				LR	LR		
	comp=Z,700nm,20.0s						
HWUT	**Hardware Ranch**	**93.80**	**43**	PFAKE		14 57 30.0	+11
HWUT				LR	LR		
	comp=Z,1µm,18.0s						
RC01	**Rabbit Creek A**	**93.80**	**13**	*e*P	**P**	**14 57 18.5**	**+0.4**
	comp=Z,36nm,0.5s						
RC01				LR	LR		
	comp=Z,800nm,21.0s						
CM31	**Chiang Mai Arr**	**93.87**	**289**	*e*P	**P**	**14 57 20.5**	**+1.0**
	comp=Z,15nm,1.1s						
CMAR	**Chiang Mai Arr**	**93.87**	**289**	P	**P**	**14 57 20.5**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=151,slow=3.7,SNR=6.8						
CMAR				LR	LR	15 41 55.4	
	comp=Z,307nm,19.1s,baz=250,slow=37						
CMMT	**Chiang Mai**	**94.05**	**289**	P	P	14 57 36.4	+16
C09A	**Chrisman Ranch**	**94.09**	**35**	PFAKE		14 57 30.0	+10
C09A				LR	LR		
	comp=Z,1µm,19.0s						
EYAK	**Cordova Ski Ar**	**94.15**	**15**	PFAKE		14 57 30.0	+10
EYAK				LR	LR		
	comp=Z,2µm,20.0s						
KMI	**Kunming**	**94.25**	**297**	P	**P**	**14 57 21.4**	**0.0**
KMI				pP	PcP	14 57 24.1	+2.3
KMI				sP	pP	14 57 27.1	-3.4
KMI				PP	**PP**	**15 01 10.8**	**+2.0**
KMI				SKS	**SKSac**	**15 07 57.0**	**+2.6**
KMI				S	**S**	**15 08 29.0**	**-1.9**
KMI				sS	pS	15 08 40.7	-2.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,230nm,5.8s						
KMI				LR	LR		
	comp=Z,390nm,19.5s						
KMI				LR	LR		
	comp=Z,380nm,21.4s						
KMI				LR	LR		
	comp=Z,750nm,21.3s						
HMT	**Hamilton**	**94.30**	**16**	PFAKE		14 57 30.0	+10
HMT				LR	LR		
	comp=Z,2µm,19.0s						
KNK	**Knik Glacier**	**94.35**	**13**	PFAKE		14 57 30.0	+9.3
KNK				LR	LR		
	comp=Z,1µm,22.0s						
PMR	**Palmer**	**94.38**	**13**	PFAKE		14 57 30.0	+9.3
PMR				LR	LR		
	comp=Z,800nm,20.0s						
WRAK	**Wrangell Islan**	**94.45**	**23**	PFAKE		14 57 30.0	+8.8
WRAK				LR	LR		
	comp=Z,800nm,20.0s						
S22A	**4UR Ranch, Cre**	**94.45**	**49**	PFAKE		14 57 30.0	+7.9
S22A				LR	LR		
	comp=Z,1µm,20.0s						
S22A	**4UR Ranch, Cre**	**94.45**	**49**	P	**P**	**14 57 23.9**	**+1.8**
	baz=235						
833A	**Chaparral WMA,**	**94.48**	**60**	PFAKE		14 57 30.0	+7.9
833A				LR	LR		
	comp=Z,1µm,18.0s						
SML	**Sawmill**	**94.74**	**13**	PFAKE		14 57 30.0	+7.5
SML				LR	LR		
	comp=Z,900nm,19.0s						
O20A	**White River Ci**	**94.94**	**46**	P	**P**	**14 57 25.6**	**+1.5**
	baz=234						
MNMC	**Minye Minye**	**94.95**	**115**	*e*P	**P**	**14 57 25.7**	**+0.8**
	comp=Z,41nm,1.4s						
SCM	**Sheep Creek Mo**	**94.96**	**14**	PFAKE		14 57 40.0	+16
SCM				LR	LR		
	comp=Z,1µm,20.0s						
NEW	**Newport**	**94.97**	**36**	PFAKE		14 57 40.0	+16
NEW				LR	LR		
	comp=Z,1µm,20.0s						
ANM	**Nome**	**95.01**	**5**	PFAKE		14 57 30.0	+6.4
ANM				LR	LR		
	comp=Z,1µm,20.0s						
PPLA	**Purkeypile**	**95.03**	**11**	PFAKE		14 57 40.0	+16
PPLA				LR	LR		
	comp=Z,1µm,20.0s						
MCMT	**McKenzie Canyo**	**95.05**	**40**	*e*P	**P**	**14 57 25.4**	**+0.9**
MSTX	**Muleshoe**	**95.07**	**54**	PFAKE		14 57 40.0	+15
MSTX				LR	LR		
	comp=Z,1µm,18.0s						
PCA	**Pinnacle**	**95.09**	**18**	PFAKE		14 57 40.0	+16
PCA				LR	LR		
	comp=Z,1µm,19.0s						
BCPM	**Bancas Point**	**95.14**	**18**	PFAKE		14 57 40.0	+16
BCPM				LR	LR		
	comp=Z,1µm,19.0s						
KVTX	**Kingsville**	**95.21**	**61**	PFAKE		14 57 40.0	+15
KVTX				LR	LR		
	comp=Z,1µm,18.0s						
JIS	**Juneau Island**	**95.27**	**21**	PFAKE		14 57 40.0	+15
JIS				LR	LR		
	comp=Z,800nm,18.0s						
TPAW	**Teton Pass**	**95.31**	**42**	*e*P	**P**	**14 57 26.0**	**+0.2**
	comp=Z,26nm,1.6s						
TPAW				LR	LR		
	comp=Z,1µm,18.0s						
JCT	**Junction City**	**95.32**	**58**	PFAKE		14 57 40.0	+14
JCT				LR	LR		
	comp=Z,2µm,18.0s						
SDCO	**Great Sand Dun**	**95.32**	**49**	P	**P**	**14 57 25.4**	**-0.7**
	baz=236						
FXWY	**Fox Creek**	**95.35**	**42**	*e*P	**P**	**14 57 26.1**	**+0.1**
	comp=Z,11nm,1.3s						
BALM	**Baldy**	**95.38**	**16**	PFAKE		14 57 40.0	+15
BALM				LR	LR		
	comp=Z,2µm,19.0s						
DLMT	**Dillon**	**95.52**	**40**	*e*P	**P**	**14 57 26.3**	**-0.3**
	comp=Z,10nm,1.1s						
DLMT				LR	LR		
	comp=Z,1µm,21.0s						
CAST	**Castle Rocks**	**95.53**	**11**	PFAKE		14 57 40.0	+14
CAST				LR	LR		
	comp=Z,1µm,20.0s						
IMW	**Indian Meadow**	**95.56**	**42**	*e*P	**P**	**14 57 27.3**	**+0.3**
	comp=Z,14nm,1.3s						
IMW				LR	LR		
	comp=Z,1µm,18.0s						
MOOW	**Moose Ponds**	**95.58**	**42**	*e*P	**P**	**14 57 27.1**	**+0.1**
	comp=Z,13nm,1.4s						
MOOW				LR	LR		
	comp=Z,1µm,18.0s						
BW06	**Boulder Array**	**95.69**	**43**	*e*P	**P**	**14 57 27.9**	**+0.4**
	comp=Z,6.7nm,1.3s						
BW06				LR	LR		
	comp=Z,2µm,18.0s						
BW06	**Boulder Array**	**95.69**	**43**	P	**P**	**14 57 28.2**	**+0.6**
	baz=234						
PD31	**Pinedale Array**	**95.69**	**43**	*e*P	**P**	**14 57 27.7**	**+0.1**
	comp=Z,1.1nm,0.8s						
PD31				*e*PKKPdf	**PKKPbc**	**15 14 19.2**	**+0.5**
PDAR	**Pinedale Array**	**95.69**	**43**	P	**P**	**14 57 27.7**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=176,slow=4.5,SNR=4.6						
PDAR				PKKPbc	**PKKPbc**	**15 14 19.2**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=100,slow=5.2,SNR=7.1						
T25A	**Trinidad**	**95.70**	**50**	P	**P**	**14 57 29.2**	**+1.4**
	baz=236						
MSO	**Missoula**	**95.70**	**38**	PFAKE		14 57 40.0	+13
MSO				LR	LR		
	comp=Z,2µm,19.0s						
QLMT	**Earthquake Lak**	**95.84**	**41**	*e*P	**P**	**14 57 29.3**	**+1.1**
KTH	**Kantishna Hill**	**95.86**	**12**	PFAKE		14 57 40.0	+12
KTH				LR	LR		
	comp=Z,2µm,20.0s						
SKAG	**Skagway**	**95.94**	**20**	PFAKE		14 57 40.0	+12
SKAG				LR	LR		
	comp=Z,800nm,20.0s						
DHY	**Denali Highway**	**96.08**	**13**	PFAKE		14 57 40.0	+11
DHY				LR	LR		
	comp=Z,800nm,20.0s						
RND	**Reindeer**	**96.09**	**12**	PFAKE		14 57 40.0	+11
RND				LR	LR		
	comp=Z,1µm,21.0s						
YHH	**Holmes Hill**	**96.15**	**41**	*e*P	**P**	**14 57 29.6**	**-0.1**
	comp=Z,13nm,1.2s						
BOZ	**Bozeman (W)**	**96.20**	**40**	*e*P	**P**	**14 57 30.4**	**+0.7**
	comp=Z,14nm,1.3s						
BOZ	**Bozeman (W)**	**96.20**	**40**	*e*P	**P**	**14 57 30.4**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,14nm,1.3s						
BOZ	**Bozeman (W)**	**96.20**	**40**	P	**P**	**14 57 31.1**	**+1.4**
	baz=232						
AMTX	**Amarillo**	**96.32**	**53**	PFAKE		14 57 40.0	+10
AMTX				LR	LR		
	comp=Z,1µm,19.0s						
BPAW	**Bear Paw Mtn.**	**96.35**	**11**	PFAKE		14 57 40.0	+10
BPAW				LR	LR		
	comp=Z,1µm,18.0s						
PAX	**Paxson**	**96.37**	**14**	PFAKE		14 57 40.0	+10
PAX				LR	LR		
	comp=Z,1µm,21.0s						
MCK	**McKinley**	**96.38**	**12**	PFAKE		14 57 40.0	+10
MCK				LR	LR		
	comp=Z,1µm,20.0s						
ISCO	**Idaho Springs**	**96.40**	**47**	PFAKE		14 57 40.0	+9.0
ISCO				LR	LR		
	comp=Z,900nm,20.0s						
ZEA	**Zeya**	**96.41**	**331**	*e*P	**P**	**14 57 30.2**	**0.0**
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
HYT	**Haines Junctio**	**96.45**	**18**	PFAKE		14 57 40.0	+10
HYT				LR	LR		
	comp=Z,1µm,19.0s						
RWWY	**Rawlins**	**96.48**	**45**	*e*P	**P**	**14 57 30.9**	**-0.3**
	comp=Z,16nm,1.3s						
CD2	**Chengdu**	**96.48**	**302**	*e*P	**P**	**14 57 30.5**	**-0.7**
HHC	**Hu-ho-hao-te**	**96.54**	**314**	P	P	14 57 37.4	+6.1
HHC				PP	PP	15 01 35.3	+9.1
HHC	**Hu-ho-hao-te**	**96.54**	**314**	S	S	15 08 37.9	-12
HHC	**Hu-ho-hao-te**	**96.54**	**314**	SS	SS	15 15 17.8	-7.1
HHC				pmax	pmax		
	comp=Z,19nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,6.7s						
HHC				LR	LR		
	comp=N,530nm,19.6s						
HHC				LR	LR		
	comp=E,410nm,17.6s						
HHC				LR	LR		
	comp=Z,550nm,16.7s						
HHC	**Hu-ho-hao-te**	**96.54**	**314**	P	**P**	**14 57 31.6**	**+0.3**
HHC				PP	**PP**	**15 01 28.6**	**+2.4**
HHC				S	**S**	**15 08 48.8**	**-1.0**
HHC				SS	**SS**	**15 15 26.8**	**+1.9**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
HHC				LR	LR		
	comp=Z,500nm,17.9s						
HHC				LR	LR		
	comp=Z,410nm,17.7s						
HHC				LR	LR		
	comp=Z,580nm,17.6s						
BWN	**Browne**	**96.68**	**12**	PFAKE		14 57 40.0	+8.8
BWN				LR	LR		
	comp=Z,2µm,20.0s						
MENT	**Mentasta**	**96.72**	**15**	PFAKE		14 57 40.0	+8.5
MENT				LR	LR		
	comp=Z,1µm,21.0s						
N23A	**Red Feather La**	**96.81**	**46**	PFAKE		14 57 40.0	+7.3
N23A				LR	LR		
	comp=Z,700nm,18.0s						
N23A	**Red Feather La**	**96.81**	**46**	P	**P**	**14 57 34.5**	**+1.7**
	baz=236						
TGUH	**Tegucigalpa,Un**	**97.05**	**78**	PFAKE		14 57 50.0	+16
TGUH				LR	LR		
	comp=Z,1µm,20.0s						
WHY	**Whitehorse**	**97.05**	**20**	PFAKE		14 57 40.0	+6.8
WHY				LR	LR		
	comp=Z,900nm,19.0s						
435B	**Jarrell**	**97.11**	**59**	PFAKE		14 57 50.0	+16
435B				LR	LR		
	comp=Z,1µm,19.0s						
WRH	**Wood River Hil**	**97.20**	**12**	PFAKE		14 57 50.0	+16
WRH				LR	LR		
	comp=Z,800nm,20.0s						
RLMT	**Red Lodge**	**97.25**	**41**	PFAKE		14 57 50.0	+15
RLMT				LR	LR		
	comp=Z,1µm,18.0s						
MLY	**Manley**	**97.25**	**11**	PFAKE		14 57 50.0	+16
MLY				LR	LR		
	comp=Z,900nm,18.0s						
DOT	**Dot Lake**	**97.27**	**14**	PFAKE		14 57 50.0	+16
DOT				LR	LR		
	comp=Z,1µm,21.0s						
HDA	**Harding Lake**	**97.36**	**13**	*e*P	**P**	**14 57 34.0**	**-0.3**
	comp=Z,13nm,0.5s						
HDA	**Harding Lake**	**97.36**	**13**	P	**P**	**14 57 34.4**	**+0.1**
	baz=206						
K22A	**Casper**	**97.44**	**45**	PFAKE		14 57 50.0	+14
K22A				LR	LR		
	comp=Z,1µm,20.0s						
K22A	**Casper**	**97.44**	**45**	P	**P**	**14 57 34.7**	**-0.8**
	baz=236						
SCRK	**Sand Creek**	**97.58**	**14**	PFAKE		14 57 50.0	+15
SCRK				LR	LR		
	comp=Z,1µm,19.0s						
TCOL	**CIGO, UAF Yank**	**97.61**	**12**	P	Pdif	14 57 35.9	+0.5
	baz=206						
COLA	**College**	**97.61**	**12**	PFAKE		14 57 50.0	+15
COLA				LR	LR		
	comp=Z,1µm,20.0s						
MDM	**Murphy Dome**	**97.62**	**12**	PFAKE		14 57 50.0	+14
MDM				LR	LR		
	comp=Z,600nm,20.0s						
LPAZ	**La Paz**	**97.70**	**114**	LR	LR	15 32 48.8	
	comp=Z,368nm,21.3s,baz=217,slow=30						
LPAZ	**La Paz**	**97.70**	**114**	*e*P	**P**	**14 57 37.8**	**0.0**
	comp=Z,5.9nm,1.1s						
LPAZ	**La Paz**	**97.70**	**114**	*e*P	**P**	**14 57 37.8**	**0.0**
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ILAR	**Eielson Array**	**97.70**	**13**	P	**P**	**14 57 35.4**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=223,slow=5.2,SNR=7.8						
ILAR				LR	LR	15 35 56.6	
	comp=Z,500nm,20.7s,baz=202,slow=32						
ILB	**Eielson Array**	**97.70**	**13**	*e*P	**P**	**14 57 35.4**	**-0.5**
	comp=Z,3.7nm,0.8s						

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WHTX  Lake Whitney,      97.82  58   PFAKE               14 57 50.0 +13
WHTX                                 LR        LR
      comp=Z,2µm,18.0s
POKR  Poker Plat Res     97.91  12   P         Pdif      14 57 37.8 +1.0
      baz=206
WMOK  Wichita Mounta     98.27  55   PFAKE               14 57 50.0 +11
WMOK                                 LR        LR
      comp=Z,900nm,21.0s
MYIG  Mrida              98.35  71   PFAKE               14 57 50.0 +10
MYIG                                 LR        LR
      comp=Z,900nm,20.0s
PRP   Porcupine Dome     98.63  13   PFAKE               14 57 50.0 +10
PRP                                  LR        LR
      comp=Z,600nm,20.0s
ESPN  Las Esperanzas     98.67  81   PFAKE               14 57 50.0 +8.6
ESPN                                 LR        LR
      comp=Z,500nm,18.0s
EGMT  Eagleton           98.68  39   PFAKE               14 57 50.0 +9.2
EGMT                                 LR        LR
      comp=Z,2µm,19.0s
DAWY  Dawson             98.69  16   PFAKE               14 57 50.0 +10
DAWY                                 LR        LR
      comp=Z,1µm,19.0s
BILL  Bilibino           98.79 354⇓eP        Pdif      14 57 54.6 +14
BILL                                 pmax      pmax
      comp=Z,5.0nm,1.0s
EGAK  Eagle              98.89  15   PFAKE               14 57 50.0 +8.9
EGAK                                 LR        LR
      comp=Z,1µm,19.0s
LZH   Lanzhou            99.09 306 ⇑P        Pdif      14 57 42.1 -0.9
LZH                                  pP        pP        14 57 49.1 -3.1
LZH                                  sP        sP        14 57 51.8 -3.6
LZH                                  PP        PP        15 01 41.7 -4.2
LZH                                  pmax      pmax
      comp=Z,19nm,1.3s
LZH                                  pmax      pmax
      comp=Z,150nm,4.3s
LZH                                  LR        LR
      comp=Z,350nm,18.4s
LZH                                  LR        LR
      comp=Z,550nm,17.4s
LZH                                  LR        LR
      comp=Z,700nm,19.5s
COLD  Coldfoot           99.37  10   PFAKE               14 57 50.0 +6.8
COLD                                 LR        LR
      comp=Z,1µm,22.0s
FYU   Fort Yukon         99.62  12   PFAKE               14 58 00.0 +16
FYU                                  LR        LR
      comp=Z,800nm,21.0s
CPUP  Villa Florida      99.63 128   PKKPbc    PKKPbc    15 14 05.9 -0.4
      comp=Z,1.4nm,0.7s,baz=332,slow=1.4,SNR=3.4
CBKS  Cedar Bluff        99.71  51   PFAKE               14 58 00.0 +14
CBKS                                 LR        LR
      comp=Z,2µm,18.0s
NATX  Nacogdoches        99.76  59   PFAKE               14 58 00.0 +14
NATX                                 LR        LR
      comp=Z,900nm,18.0s
RSSD  Black Hills        99.77  44   PFAKE               14 58 00.0 +14
RSSD                                 LR        LR
      comp=Z,2µm,18.0s
RSSD  Black Hills        99.77  44   P         Pdif      14 57 46.6 +0.8
      baz=237
LAO   LASA Array         99.89  41   PFAKE               14 58 00.0 +14
LAO                                  LR        LR
      comp=Z,1µm,18.0s
X37A  Clayton           100.63  56   PFAKE               14 58 00.0 +10
X37A                                 LR        LR
      comp=Z,3µm,18.0s
EPYK  Eagle Plains      101.23  16   PFAKE               14 58 00.0 +8.4
EPYK                                 LR        LR
      comp=Z,1µm,19.0s
WLAR  White Oak Lake    101.83  58   PFAKE               14 58 10.0 +15
WLAR                                 LR        LR
      comp=Z,2µm,18.0s
Z41A  Richland Creek    101.86  58   PFAKE               14 58 10.0 +15
Z41A                                 LR        LR
      comp=Z,700nm,19.0s
BGNE  Belgrade          102.07  49   PFAKE               14 58 10.0 +14
BGNE                                 LR        LR
      comp=Z,800nm,21.0s
CCAR  Cane Creek        102.93  58   PFAKE               14 58 10.0 +10
CCAR                                 LR        LR
      comp=Z,2µm,19.0s
W41B  Gary Mavity, V    103.16  57   PFAKE               14 58 10.0 +9.1
W41B                                 LR        LR
      comp=Z,1µm,19.0s
WHAR  Wooly Hollow      103.19  57   PFAKE               14 58 10.0 +9.0
WHAR                                 LR        LR
      comp=Z,2µm,18.0s
SONA0 Songino Array     103.42 318  ePdif      Pdif      14 58 04.8 +2.9
SONA0                               ePKKPbc    PKKPbc    15 13 58.8 +2.2
SONM  Songino Array     103.42 318   Pdiff     Pdif      14 58 04.8 +2.9
      comp=Z,0.7nm,0.6s,baz=122,slow=5.2,SNR=2.4
SONM                                 PKKPbc    PKKPbc    15 13 58.8 +2.2
      comp=Z,0.5nm,0.5s,baz=261,slow=3.7,SNR=4.6
INK   Inuvik            103.53  15   PFAKE               14 58 10.0 +8.3
INK                                  LR        LR
      comp=Z,1µm,19.0s
ROSC  El Rosal          103.70  92   PFAKE               14 58 20.0 +16
ROSC                                 LR        LR
      comp=Z,600nm,21.0s
ECSD  EROS Data Cent    104.19  48   PFAKE               14 58 20.0 +15
ECSD                                 LR        LR
      comp=Z,800nm,19.0s
MDND  Maddock           104.34  43   PFAKE               14 58 20.0 +14
MDND                                 LR        LR
      comp=Z,900nm,19.0s
HBAR  Harrisburg        104.49  57   PFAKE               14 58 20.0 +13
HBAR                                 LR        LR
      comp=Z,1µm,18.0s
OXF   Oxford            104.94  59   PFAKE               15 02 40.0 +16
OXF                                  LR        LR
      comp=Z,1µm,18.0s
147A  Livingston        104.97  61   PFAKE               15 02 40.0 +16
147A                                 LR        LR
      comp=Z,800nm,22.0s
GNAR  Gosnell           105.14  57   PFAKE               15 02 40.0 +16
GNAR                                 LR        LR
      comp=Z,1µm,18.0s
YKW3  Yellowknife Ar    105.15  25   PFAKE               15 02 40.0 +17
YKW3                                 LR        LR
      comp=Z,1µm,19.0s
CCM   Cathedral Cave    105.19  55   PFAKE               15 02 40.0 +16
CCM                                  LR        LR
      comp=Z,1µm,18.0s
BRAL  Brewton           105.23  63   PFAKE               15 02 40.0 +16
BRAL                                 LR        LR
      comp=Z,400nm,20.0s
SCIA  State Center      105.56  50   PFAKE               15 02 40.0 +15
SCIA                                 LR        LR
      comp=Z,1µm,18.0s
HALT  Halls             105.61  57   PFAKE               15 02 40.0 +15
HALT                                 LR        LR
      comp=Z,900nm,19.0s
GLAT  Glass             105.80  57   PFAKE               15 02 40.0 +15
GLAT                                 LR        LR
      comp=Z,1µm,19.0s
SLM   Saint Louis       106.16  55   PFAKE               15 02 40.0 +14
SLM                                  LR        LR
      comp=Z,1µm,20.0s
FFC   Flin Flon         106.40  36   PFAKE               15 02 40.0 +14
FFC                                  LR        LR
      comp=Z,900nm,19.0s
TLY   Talaya            106.84 320   PFAKE               15 02 40.0 +13
TLY                                  LR        LR
      comp=Z,600nm,20.0s
453A  Whigham           107.21  64   PFAKE               15 02 40.0 +12
453A                                 LR        LR
      comp=Z,500nm,22.0s
MTDJ  Mount Denham      107.25  79   PFAKE               15 02 40.0 +11
MTDJ                                 LR        LR
      comp=Z,1µm,21.0s
SPMN  Marine on St.     107.30  47   PFAKE               15 02 40.0 +12
SPMN                                 LR        LR
      comp=Z,700nm,18.0s
253A  Americus          107.87  63   PFAKE               15 02 40.0 +11
253A                                 LR        LR
      comp=Z,400nm,21.0s
555A  McAlpin           107.96  65   PFAKE               15 02 40.0 +11
555A                                 LR        LR
      comp=Z,500nm,20.0s
656A  Willston          107.98  66   PFAKE               15 02 40.0 +11
656A                                 LR        LR
      comp=Z,400nm,20.0s
TIGA  Tifton            108.02  64   PFAKE               15 02 40.0 +10
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TIGA                                 LR        LR
      comp=Z,400nm,18.0s
W50A  Signal Mountai    108.28  60   PFAKE               15 02 40.0 +10
W50A                                 LR        LR
      comp=Z,1µm,18.0s
TIXI  Tiksi             108.30 344   Pdiff     Pdif      14 58 25.3 +2.4
      comp=Z,0.5nm,0.3s,baz=149,slow=5.3,SNR=2.7
Y52A  Lilburn           108.67  61   PFAKE               15 02 40.0 +9.3
Y52A                                 LR        LR
      comp=Z,700nm,22.0s
E38A  The Farm, Brul    108.67  47   PFAKE               15 02 40.0 +10
E38A                                 LR        LR
      comp=Z,2µm,18.0s
SDV   Santo Domingo     108.86  91   PFAKE               15 02 40.0 +8.2
SDV                                  LR        LR
      comp=Z,700nm,21.0s
T49A  Edmonton          108.89  58   PFAKE               15 02 40.0 +9.0
T49A                                 LR        LR
      comp=Z,800nm,20.0s
GOGA  Godfrey           108.93  62   PFAKE               15 02 40.0 +8.9
GOGA                                 LR        LR
      comp=Z,600nm,21.0s
G40A  Rib Lake          108.98  48   PFAKE               15 02 40.0 +9.1
G40A                                 LR        LR
      comp=Z,700nm,20.0s
658A  Bunnell           109.01  67   PFAKE               15 02 40.0 +8.6
658A                                 LR        LR
      comp=Z,500nm,22.0s
EYMN  Ely               109.26  45   PFAKE               15 02 40.0 +8.7
EYMN                                 LR        LR
      comp=Z,1µm,18.0s
W52A  Murphy            109.27  60   PFAKE               15 02 40.0 +8.2
W52A                                 LR        LR
      comp=Z,900nm,21.0s
P48A  Milroy            109.91  55   PFAKE               15 02 50.0 +17
P48A                                 LR        LR
      comp=Z,2µm,18.0s
BG3   Lake Jocassee     109.97  61   PFAKE               15 02 50.0 +17
BG3                                  LR        LR
      comp=Z,600nm,22.0s
COWI  Conover           110.00  48   PFAKE               15 02 50.0 +17
COWI                                 LR        LR
      comp=Z,700nm,20.0s
H43A  Windswept, Lux    110.25  50   PFAKE               15 02 50.0 +17
H43A                                 LR        LR
      comp=Z,1µm,18.0s
Z56A  Williston         110.50  63   PFAKE               15 02 50.0 +16
Z56A                                 LR        LR
      comp=Z,600nm,21.0s
S51A  Beattyville       110.52  58   PFAKE               15 02 50.0 +16
S51A                                 LR        LR
      comp=Z,800nm,20.0s
C40A  Isle Royale Na    110.69  46   PFAKE               15 02 50.0 +16
C40A                                 LR        LR
      comp=Z,800nm,19.0s
D41A  Chassel           110.73  47   PFAKE               15 02 50.0 +16
D41A                                 LR        LR
      comp=Z,2µm,18.0s
PAULI Pauline           110.75  61   PFAKE               15 02 50.0 +15
PAULI                                LR        LR
      comp=Z,500nm,20.0s
KMSC  Kings Mountain    111.24  61   PFAKE               15 02 50.0 +15
KMSC                                 LR        LR
      comp=Z,800nm,21.0s
E43A  Lone Tree Farm    111.48  48   PFAKE               15 02 50.0 +14
E43A                                 LR        LR
      comp=Z,700nm,18.0s
J47A  Sunmer            111.77  52   PFAKE               15 02 50.0 +14
J47A                                 LR        LR
      comp=Z,900nm,19.0s
G45A  Suttons Bay       111.86  50   PFAKE               15 02 50.0 +14
G45A                                 LR        LR
      comp=Z,700nm,19.0s
Y58A  Scranton          112.04  63   PFAKE               15 02 50.0 +13
Y58A                                 LR        LR
      comp=Z,500nm,18.0s
FCC   Fort Churchill    112.07  34   PFAKE               15 02 50.0 +14
FCC                                  LR        LR
      comp=Z,1µm,22.0s
J48A  Bridge Port       112.49  52   PFAKE               15 02 50.0 +12
J48A                                 LR        LR
      comp=Z,900nm,19.0s
E46A  Sault Ste Mari    113.22  49   PFAKE               15 02 50.0 +11
E46A                                 LR        LR
      comp=Z,1µm,19.0s
R55A  Marlinton         113.31  58   PFAKE               15 02 50.0 +11
R55A                                 LR        LR
      comp=Z,600nm,18.0s
I49A  Point Hope        113.37  52   PFAKE               15 02 50.0 +11
I49A                                 LR        LR
      comp=Z,1µm,19.0s
WMQ   Urumqi            113.58 308  ePKP       PKiKP     15 02 40.3 +0.6
WMQ                                  LR        LR
      comp=Z,180nm,18.9s
WMQ                                  LR        LR
      comp=Z,250nm,20.5s
WMQ                                  LR        LR
      comp=Z,650nm,25.3s
RES   Resolute Bay      116.98  17   PFAKE               15 03 00.0 +15
RES                                  LR        LR
      comp=Z,1µm,19.0s
BOSA  Boshof            117.57 202   PKP       PKiKP     15 02 48.6 +0.5
      comp=Z,2.5nm,0.6s,baz=23,slow=2.6,SNR=3.1
MK31  Makanchi Array    118.11 310  ePKPdf     PKPdf     15 02 47.3 -1.0
MK31  Makanchi Array    118.11 310  ePKIKP     PKPdf     15 02 47.3 -1.0
MK32  Makanchi Array    118.11 310  ePKPdf     PKPdf     15 02 47.3 -1.0
MK32                                ePKKPab    PKKPab    15 13 10.7 +1.8
MKAR  Makanchi Array    118.11 310   PKP       PKPdf     15 02 47.3 -1.0
      comp=Z,1.3nm,0.4s,baz=226,slow=1.5,SNR=14
MKAR                                 PKKPbc    PKKPab    15 13 10.7 +1.8
      comp=Z,0.5nm,0.7s,baz=274,slow=4.0,SNR=4.8
ZALV  Zalesovo Beam     118.31 318   PKP       PKPdf     15 02 47.7 -0.7
      comp=Z,2.3nm,0.6s,baz=149,slow=0.9,SNR=6.9
ZAA1  Zalesovo Array    118.31 318  ePKPdf     PKPdf     15 02 47.7 -0.7
MAKZ  Makanchi          118.32 310  ePKPdf     PKPdf     15 02 47.6 -1.1
MAKZ  Makanchi          118.32 310  ePKIKP     PKPdf     15 02 47.6 -1.1
SKI   Saint Kitts       119.54  86   PFAKE               15 03 00.0 +8.0
SKI                                  LR        LR
      comp=Z,600nm,20.0s
SMRT  St. Maarten       119.56  85   PFAKE               15 03 00.0 +8.0
SMRT                                 LR        LR
      comp=Z,600nm,18.0s
KSH   Kashi             120.64 301  ePKP       PKiKP     15 02 54.7 +1.0
KSH                                  PP        PP        15 04 27.2 +5.3
KSH                                  PKS       PKSdf     15 06 31.1 +0.8
KSH                                  SKS       SKSdf     15 10 05.7 +2.5
KSH                                  SKKS      SKKSac    15 11 20.1 +1.4
KSH                                  AMB       AMB
      comp=Z,160nm,6.6s
KSH                                  LR        LR
      comp=Z,240nm,15.9s
KSH                                  LR        LR
      comp=Z,170nm,9.3s
KSH                                  LR        LR
      comp=Z,93nm,12.3s
KURK  Kurchatov         121.36 314  ePKPdf     PKPdf     15 02 53.3 -1.1
KURK                                 LR        LR
      comp=Z,500nm,19.0s
KURK  Kurchatov         121.36 314  ePKIKP     PKPdf     15 02 53.3 -1.1
KURK                                 MLR       MLR
      comp=Z,500nm,19.0s
BOOM  Boomskoye usch    121.42 304   PFAKE               15 03 10.0 +15
BOOM                                 LR        LR
      comp=Z,600nm,20.0s
AAK   Ala-Archa         122.50 304  ePKPdf     PKiKP     15 02 57.3 +0.1
AAK   Ala-Archa         122.50 304  ePKIKP     PKiKP     15 02 57.3 +0.1
BBSR  BB Station        123.35  69   PFAKE               15 03 10.0 +11
BBSR                                 LR        LR
      comp=Z,500nm,22.0s
MATP  Matopo            123.76 210   PKP       PKPdf     15 02 59.6 -0.6
      comp=Z,4.0nm,0.8s,baz=156,slow=4.2,SNR=4.9
BTK   Batken            124.63 300  ePKPdf     PKPdf     15 03 01.3 +0.2
BTK   Batken            124.63 300  ePKIKP     PKPdf     15 03 01.3 +0.2
KBL   Kabul             124.67 293  ePKPdf     PKPdf     15 03 01.6 +0.1
KBL                                  LR        LR
      comp=Z,500nm,20.0s
GAR   Garm              124.77 299  ePKPdf     PKPdf     15 03 01.4 -0.1
GAR   Garm              124.77 299  ePKIKP     PKPdf     15 03 01.4 -0.1
KK31  Karatay Array     125.46 304  ePKPdf     PKPdf     15 03 02.4 -0.1
KK31  Karatay Array     125.46 304  ePKIKP     PKPdf     15 03 02.4 -0.1
KKAR  Karatay Array     125.46 304  ePKPdf     PKPdf     15 03 02.4 -0.1
KKAR  Karatay Array     125.46 304  ePKIKP     PKPdf     15 03 02.4 -0.1
BRVK  Borovoye          126.77 316  ePKPdf     PKPdf     15 03 03.8 -0.9
BRVK                                 LR        LR
      comp=Z,800nm,22.0s
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BRVK  Borovoye          126.77 316  ePKIKP     PKPdf     15 03 03.8 -0.9
BRVK                                 MLR       MLR
      comp=Z,800nm,22.0s
RCBR  Riachuelo         128.51 128   PFAKE               15 03 20.0 +10
RCBR                                 LR        LR
      comp=Z,17µm,19.0s
UOSS  Minazif           132.58 277   PFAKE               15 03 30.0 +12
UOSS                                 LR        LR
      comp=Z,700nm,22.0s
ARU   Arti              133.34 321  ePKPdf     PKPdf     15 03 17.2 +0.1
ARU                                  LR        LR
      comp=Z,699nm,21.0s
ARU   Arti              133.34 321  i PKIKP    PKiKP     15 03 25.1 +6.8
ARU                                                      15 05 50.6
GEYT  Alibeck           134.00 295   PKP       PKiKP     15 03 20.4 +0.2
      comp=Z,7.5nm,0.9s,baz=11,slow=1.5,SNR=8.7
GEYT                                 SKPbc     SKPab     15 06 49.5 +1.1
      comp=Z,3.5nm,0.7s,baz=270,slow=1.5,SNR=7.8
GYA0B ALIBECK ARRAY     134.00 295  ePKPdf     PKPdf     15 03 18.9 -0.1
KMBO  Kilima Mbogo      134.57 233   PFAKE               15 03 30.0 +7.6
KMBO                                 LR        LR
      comp=Z,700nm,18.0s
NRS   Narsarsuaq        136.00  31  ePKPdf     PKiKP     15 03 23.0 -0.5
NRS                                  LR        LR
      comp=Z,1µm,18.0s
NRS   Narsarsuaq        136.00  31  ePKIKP     PKiKP     15 03 23.0 -0.5
NRS                                  MLR       MLR
      comp=Z,1µm,18.0s
ANGG  Ammassalik, Gr    136.94  23   PFAKE               15 03 40.0 +15
ANGG                                 LR        LR
      comp=Z,700nm,20.0s
PRGR  Permogore         137.99 331  ePKIKP     PKPdf     15 03 24.2 -1.3
PRGR                                 pmax      pmax
      comp=Z,16nm,0.9s
APA   Apatity           138.47 343⇓iPKHKP      PKPpre    15 03 16.8
APA                                  pmax      pmax
      comp=Z,3.0nm,0.9s
ARA0  ARCESS Array S    138.59 348  ePKPpre    PKPpre    15 03 17.9
ARA0                                ePKPdf     PKPdf     15 03 26.6 +0.1
ARCES ARCESS Array B    138.59 348   PKhKP     PKPpre    15 03 17.9
      comp=Z,3.4nm,0.7s,baz=89,slow=3.0,SNR=7.4
ARCES                                PKP       PKPdf     15 03 26.6 +0.1
      comp=Z,7.0nm,0.8s,baz=59,slow=1.6,SNR=6.2
ARE0  ARCESS Array S    138.59 348  ePKPdf     PKPdf     15 03 26.7 +0.2
MBAR  Mbarara           139.25 226   PFAKE               15 03 40.0 +8.1
MBAR                                 LR        LR
      comp=Z,1µm,18.0s
KTK1  Kautokeino        139.45 349  ePKPdf     PKPdf     15 03 28.6 +0.6
RAYN  Ar Rayn           141.34 271  ePKPdf     PKPdf     15 03 32.6 -0.2
RAYN  Ar Rayn           141.34 271  ePKIKP     PKPdf     15 03 32.7 -0.2
STEI  Steigen           141.59 352  epPKPdf    PKiKP     15 03 35.9 +1.2
TBLG  Delisi            144.39 300  eP         PKPdf     15 03 37.5 -0.2
TBLG  Delisi            144.39 300  ePKPdf     PKPbc     15 03 36.2  0.0
TBLG  Delisi            144.39 300  ePKIKP     PKPbc     15 03 36.2  0.0
GNI   Garni             144.49 298  eP         PKPdf     15 03 38.3 +0.2
GNI   Garni             144.49 298  ePKPdf     PKPdf     15 03 37.7 -0.4
MOS   Moscow            144.54 326  i PKHKP    PKPpre    15 03 35.0
MOS                                  pmax      pmax
      comp=Z,89nm,0.8s
TASB  TASBURUN-IGDIR144.89 297      eP         PKPdf     15 03 38.9 +0.2
YOVA  Hakkari_Yksek     144.89 293  i P        PKPdf     15 03 39.2 +0.2
YOVA                                 IAML_P
      comp=Z,137nm,0.1s
ZEI   Tsey              144.90 302  i PKHKP    PKPpre    15 03 36.4
ZEI                                  pmax      pmax
      comp=Z,60nm,0.9s
GOF   Gofitskoye        145.16 306⇑iPKIKP      PKPdf     15 03 39.0 +0.1
GOF                                  pmax      pmax
      comp=Z,105nm,0.8s
CLDR  Caldiran          145.17 296  eP         PKPdf     15 03 39.8 +0.4
CLDR  Caldiran          145.17 296  i P        PKPdf     15 03 40.1 +0.6
CLDR                                 IAML_P
      comp=Z,8µm,0.8s
FIA1  FINESS Array S    145.22 340  ePKPbc     PKPbc     15 03 37.3 -0.8
FIA0  FINESS Array S    145.22 340  ePKPbc     PKPbc     15 03 37.5 -0.7
FIA0  FINESS Array S    145.22 340  ePKP2      PKPbc     15 03 37.5 -0.7
FINES FINESS Array B    145.22 340   PKPbc     PKPbc     15 03 37.5 -0.7
      comp=Z,67nm,0.7s,baz=62,slow=4.5,SNR=116
NSS   Namsos            145.24 353  ePKPbc     PKPbc     15 03 37.9 -0.3
ONI   Oni               145.25 302  eP         PKPdf     15 03 40.5 +1.3
AKH   Akhalkalaki       145.35 300  eP         PKPab     15 03 40.4 +0.7
AKH   Akhalkalaki       145.35 300  ePKPbc     PKPab     15 03 39.9 +0.2
AKH   Akhalkalaki       145.35 300   PKIKP     PKPab     15 03 39.9 +0.2
HAKT  HAKKARI           145.36 293  i P        PKPab     15 03 40.2 +0.3
HAKT                                 IAML_P
      comp=Z,4µm,0.7s
LPSR  Galich'ya Gora    145.37 321  ePKP2      PKPbc     15 03 38.5 -0.4
LPSR                                 pmax      pmax
      comp=Z,90nm,0.9s
OBN   Obninsk           145.38 326  ePKPbc     PKPab     15 03 39.2 +0.2
OBN   Obninsk           145.38 326c iPKP2      PKPbc     15 03 38.4 -0.5
OBN                                  pmax      pmax
      comp=Z,120nm,1.0s
CUKT  Cukurca           145.43 293  eP         PKPab     15 03 40.4 +0.3
VMUR  Van-Muradiye      145.44 296  i P        PKPab     15 03 41.4 +1.2
VMUR                                 IAML_P
      comp=Z,65nm,0.2s
KBZ   Khabaz            145.49 304   PKPbc     PKPdf     15 03 39.5  0.0
      comp=Z,42nm,1.0s,baz=118,slow=2.0,SNR=37
VANB  Van               145.60 295  eP         PKPab     15 03 40.8 +0.2
KIV   Kislovodsk        145.61 305  ePKPdf     PKPbc     15 03 40.3 +0.2
KIV   Kislovodsk        145.61 305  i PKIKP    PKPdf     15 03 39.8  0.0
KIV                                  pmax      pmax
      comp=Z,196nm,1.1s
NEY   Neytrino          145.69 303  i PKP2     PKPab     15 03 41.7 +0.8
KARS  Kars              145.73 299  eP         PKPab     15 03 41.6 +0.5
KARS  Kars              145.73 299  ePKPdf     PKPab     15 03 41.2 +0.1
KARS  Kars              145.73 299  ePKP2      PKPab     15 03 41.2 +0.1
VSR   Storozhevoye      145.81 318  ePKIKP     PKPdf     15 03 39.8  0.0
VSR                                  pmax      pmax
      comp=Z,120nm,0.9s
VORD  Divnogorie        145.84 318  ePKIKP     PKPdf     15 03 39.9 +0.1
VORD                                 pmax      pmax
      comp=Z,60nm,0.8s
AGRB  Hanur-Agry        145.87 297  eP         PKPab     15 03 42.1 +0.4
AKDM  Akdamar-Van       145.92 295  eP         PKPab     15 03 42.9 +1.0
EATA  Eleskirt          146.24 297  i P        PKPab     15 03 43.8 +0.6
EATA                                 IAML_P
      comp=Z,27nm,0.3s
SIRN  Sırnak            146.38 293  i P        PKPab     15 03 43.7 +0.1
SIRN                                 IAML_P
      comp=Z,3µm,0.8s
DAGI  Agillar           146.57 300  i P        PKPab     15 03 44.6 +0.3
DAGI                                 IAML_P
      comp=Z,56nm,0.2s
TBLU  Trondheim         146.66 354  ePKPbc     PKPbc     15 03 42.0 -0.5
BATM  Batumi            146.67 301  eP         PKPbc     15 03 43.2 -0.1
BATM  Batumi            146.67 301⇑iP          PKPdf     15 03 40.0 -1.6
KOPR  Koprukoy-ERZUR146.72 298      eP         PKPbc     15 03 44.0 +0.3
DBAD  Bademkaya         146.74 300  i P        PKPab     15 03 44.9  0.0
DBAD                                 IAML_P
      comp=Z,717nm,0.7s
BCA   Borcka            146.75 300  eP         PKPbc     15 03 44.0 +0.5
BCA   Borcka            146.75 300⇓iP          PKPdf     15 03 42.2 +0.4
SRTM  Siirt_Merkez      146.77 294  i P        PKPab     15 03 44.6 -0.5
SRTM                                 IAML_P
      comp=Z,3µm,0.8s
MUSM  Mu-Merkez         147.06 295  i P        PKPab     15 03 46.5 +0.2
MUSM                                 IAML_P
      comp=Z,695nm,0.7s
VRTB  Varto-Mus         147.08 296  eP         PKPab     15 03 46.4  0.0
BNGL  BINGOL            147.33 296  i P        PKPab     15 03 46.9 -0.5
SVAN  Silvan-Diyarba    147.33 294  eP         PKPab     15 03 46.5 -0.7
SVAN  Silvan-Diyarba    147.33 294  i P        PKPab     15 03 46.9 -0.3
SVAN                                 IAML_P
      comp=Z,144nm,0.1s
VSU   Vasula            147.34 337  eP         PKPdf     15 03 42.2  0.0
VSU                                  IAmb      IAmb      15 03 54.2
      comp=Z,342nm,0.8s
MOL   Molde             147.55 356  ePKPbc     PKPbc     15 03 45.3 +0.3
BNGB  Bingl             147.69 296  eP         PKPbc     15 03 47.2 +0.8
BGOL  Bingol            147.70 296  i P        PKiKP     15 03 47.8 -0.6
BGOL                                 IAML_P
      comp=Z,107nm,0.2s
YEDI  Yedisu-Bingol     147.77 297  eP         PKPbc     15 03 47.6 +1.0
SOC   Sochi             147.79 305c iPKP2      PKPbc     15 03 46.3  0.0
SOC                                 e                    15 07 15.5
SOC                                 eSS        SS        15 26 16.9 +0.2
SOC                                  pmax      pmax
      comp=Z,66nm,0.9s
SOC                                  pmax      pmax
      comp=Z,67nm,0.9s
HANI  Diyarbakir_Han    147.95 295  i P        PKPbc     15 03 47.3 +0.3
HANI                                 IAML_P
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	comp=Z,627nm,0.5s						
MAZI	Mazidag	147.95	293	*e*P	PKPbc	15 03 47.9	+0.8
DOMB	Dombas	147.96	354	*e*PKPbc	PKPbc	15 03 46.0	-0.2
AKN	Aaknes	147.98	356	*e*PKPbc	PKPbc	15 03 46.1	-0.1
BAYT	Aydıntepe-Bayb	147.98	299	*e*P	PKiKP	15 03 48.4	-0.6
DIYA	Diyarbakir	148.19	294	*i* P	PKiKP	15 03 48.8	-0.6
DIYA				IAML_P			
	comp=Z,3µm,0.5s						
KTUT	Trabzon	148.19	300	*e*P	PKPbc	15 03 47.9	+0.4
KTUT	Trabzon	148.19	300	⇑*i*P	PKiKP	15 03 48.5	-0.7
ERZN	Erzincan	148.39	297	*e*P	PKiKP	15 03 49.2	-0.6
NC303	NORSAR Array S	148.52	352	*e*PKPbc	PKPbc	15 03 47.5	-0.2
NC204	NORSAR Array S	148.54	352	*e*PKPbc	PKPbc	15 03 47.5	-0.3
NC405	NORSAR Array S	148.59	352	*e*PKPbc	PKPbc	15 03 47.9	+0.1
KELT	Kelkit	148.68	298	*i* P	PKiKP	15 03 50.3	-0.2
KELT				IAML_P			
	comp=Z,2µm,0.8s						
NB201	NORSAR Array S	148.70	352	*e*PKPbc	PKPbc	15 03 48.0	-0.2
NB2	NORSAR Subarra	148.72	352	PKP	PKPbc	15 03 47.7	-0.5
	comp=Z,400nm,3.3s,baz=13,slow=2.8						
NB2	NORSAR Subarra	148.72	352	PKP	PKPbc	15 03 47.7	-0.5
	baz=13,slow=2.8						
NB200	NORSAR Array S	148.72	352	*e*PKPbc	PKPbc	15 03 47.7	-0.5
NOA	NORSAR Array B	148.72	352	PKPbc	PKPbc	15 03 47.7	-0.5
	comp=Z,13nm,0.7s,baz=15,slow=4.4,SNR=30						
NBO00	NORSAR Array S	148.78	352	*e*PKPbc	PKPbc	15 03 48.4	+0.1
SVRC	Sivrice-ELAZID	148.81	295	*e*P	PKiKP	15 03 50.8	0.0
NAO01	NORSAR Array S	148.95	352	*e*PKPbc	PKiKP	15 03 49.6	-0.5
NC602	NORSAR Array S	148.98	351	*e*PKPbc	PKPbc	15 03 48.1	-0.7
NC602	NORSAR Array S	148.98	351	*e*pPKPdf	PKPbc	15 03 48.5	-0.4
HYA	Hoyanger	149.03	357	*e*pPKPbc	PKPab	15 03 52.4	-0.8
ANN	Anapa	149.09	308	*e*PKIKP	PKPbc	15 03 49.0	-0.6
ANN				*i*		15 03 53.6	
ANN				pmax	pmax		
	comp=Z,131nm,1.2s						
SUE	Sulen	149.20	358	*e*PKPdf	PKPdf	15 03 46.0	+0.9
URFA	Urfa	149.24	293	*e*P	PKiKP	15 03 51.5	-0.1
KEMA	Kemaliye	149.37	297	*i* P	PKiKP	15 03 52.4	+0.6
KEMA				IAML_P			
	comp=Z,2µm,0.7s						
SKAR	Skarslia	149.37	355	*e*PKPbc	PKPbc	15 03 50.2	+0.3
IZAR	Zarasai	149.54	333	*e*P	PKiKP	15 03 51.5	+0.1
IZAR				IAmb	IAmb	15 04 00.1	
	comp=Z,61nm,1.1s						
ISAL	Salakas	149.72	333	*e*P	PKiKP	15 03 51.5	-0.3
ISAL				IAmb	IAmb	15 04 04.1	
	comp=Z,49nm,1.2s						
ASK	Askoy	149.76	357	*e*PKPdf	PKPdf	15 03 46.0	0.0
MICGM	Minsk	149.76	330	*e*P	PKPbc	15 03 50.0	-0.9
MICGM				*e*P	PKPbc	15 03 50.0	-0.9
MICGM				*e*LR	LR	16 05 48.0	
MNK	Minsk	149.76	330	*e*PKHKP	PKPbc	15 03 50.0	-0.9
NACGM	Naroch	149.94	332	*e*	PKPab	15 03 57.0	-0.1
NACGM				*e*LR	LR	16 02 44.0	
DARE	Darende-Malaty	150.22	296	*e*P	PKiKP	15 03 53.7	+0.1
ODD1	Odda	150.25	356	*e*PKPbc	PKPbc	15 03 52.4	+0.3
KONO	Kongsberg	150.26	353	*e*PKPbc	PKPbc	15 03 51.4	-0.6
KONO	Kongsberg	150.26	353	*e*PKIKP	PKPbc	15 03 51.4	-0.6
KONO	Kongsberg	150.26	353	*e*PKPbc	PKPbc	15 03 51.8	-0.3
SVSK	Karacayir	150.43	298	*e*P	PKiKP	15 03 54.4	+0.6
GAZ	Gaziantep	150.54	293	*e*P	PKiKP	15 03 54.0	-0.2
ASF	Jabal al Asfar	150.70	283	PKPbc	PKPbc	15 03 54.3	+0.2
	comp=Z,27nm,0.8s,baz=81,slow=2.6,SNR=38						
TOKT	Tokat	150.72	299	*e*P	PKPbc	15 03 54.2	+0.4
KMRS	Kahramanmaras	150.76	293	*e*P	PKPbc	15 03 54.2	+0.2
KVT	Kavak	150.95	301	*e*P	PKPbc	15 03 54.6	+0.3
KMY	Karmoy	151.03	357	*e*PKPbc	PKiKP	15 03 54.5	+0.1
SIM	Simferopol'	151.29	309	*e*PKIKP	PKiKP	15 03 56.0	+0.6
SIM				pmax	pmax		
	comp=Z,20nm,0.9s						
BIGH	Upper Bighouse	151.45	7	*e*P	PKPbc	15 03 54.6	-0.2
BIGH				IAMs_20	IAMs_20	16 11 55.4	
	comp=Z,662nm,19.3s						
BNN	Bunyan	151.46	296	*e*P	PKPbc	15 03 55.9	+0.2
AKASG	Malin Array Be	151.53	323	PKPbc	PKPbc	15 03 55.0	-0.3
	comp=Z,18nm,0.8s,baz=47,slow=3.0,SNR=11						
AKASG	Malin Array Be	151.53	323	PKIKP	PKPbc	15 03 55.0	-0.3
AKBB	Malin Array Si	151.53	323	*e*PKPbc	PKPbc	15 03 54.8	-0.5
AKBB	Malin Array Si	151.53	323	*e*PKIKP	PKPbc	15 03 54.8	-0.5
RCY	Rachaya	151.68	285	*e*P	PKiKP	15 03 57.2	+0.4
CEYT	Ceyhan	151.72	293	*e*P	PKiKP	15 03 56.8	+0.2
HOMB	Homborsund	151.73	353	*e*PKPbc	PKPbc	15 03 55.0	-0.4
YOZ	Yozgat	151.75	298	*e*P	PKPbc	15 03 56.1	-0.3
SNART	Snartemo	151.78	355	*e*pPKPdf	PKPbc	15 03 52.7	-2.8
SNART				*e*PKPbc	PKiKP	15 03 55.8	-0.1
YURE	YUREGIR	151.82	292	*e*P	PKiKP	15 03 57.5	+0.7
BHL	Bhannes	151.85	286	*e*P	PKiKP	15 03 57.2	+0.2
DQRL	Deir Qamar	151.91	286	*e*P	PKiKP	15 03 57.8	+0.6
SUW	Suwalki	152.02	334	*e*PKP	PKPbc	15 03 56.2	-0.1
SUW	Suwalki	152.02	334	*e*PKPbc	PKiKP	15 03 56.8	+0.2
SUW	Suwalki	152.02	334	*e*PKIKP	PKPbc	15 03 56.2	-0.1
MMAI	Mount Meron Ar	152.02	284	PKPbc	PKiKP	15 03 58.3	+0.8
	comp=Z,15nm,0.4s,baz=77,slow=4.4,SNR=45						
EIL	Elat	152.03	277	PKPbc	PKiKP	15 03 57.8	+0.3
	comp=Z,46nm,0.8s,baz=307,slow=2.1,SNR=31						
KRTS	Karatas	152.04	292	*e*P	PKiKP	15 03 57.5	+0.3
CORM	Corum	152.18	300	*e*P	PKiKP	15 03 57.8	+0.2
KAC	Achnashellach	152.25	9	*e*P	PKPbc	15 03 56.5	-0.3
KARA	Karaisali	152.25	293	*e*P	PKiKP	15 03 58.0	+0.3
KPL	Plockton	152.35	10	*e*P	PKPbc	15 03 56.6	-0.3
KPL				IAMs_20	IAMs_20	16 12 41.2	
	comp=Z,508nm,21.2s						
ILGA	Ilgaz	152.68	302	*e*PKPbc	PKiKP	15 03 59.6	+0.8
ILGA				LR	LR		
	comp=Z,600nm,21.0s						
MERS	Mersin	152.71	292	*e*P	PKiKP	15 03 59.5	+0.8
BR101	Keskin Array S	153.02	299	*e*PKPbc	PKPbc	15 03 58.6	-0.6
BR131	Keskin Array S	153.02	299	*e*PKPbc	PKPbc	15 03 59.1	-0.1
BRTR	Keskin Array B	153.02	299	PKPbc	PKPbc	15 03 58.6	-0.6
	comp=Z,12nm,0.9s,baz=128,slow=2.7,SNR=29						
YAYX	Yaylak	153.02	297	*e*P	PKiKP	15 03 59.7	+0.3
KIZK	Mersin	153.04	292	*e*P	PKPbc	15 03 59.0	-0.1
EREN	Erenkoy	153.07	290	*e*P	PKiKP	15 04 02.7	+3.3
SERE	Sereflikochisa	153.21	297	*e*P	PKPbc	15 03 59.3	-0.3
SILI	Silifke-Mersin	153.22	291	*e*P	PKiKP	15 04 00.2	+0.5
SULT	Sultanhani-AKS	153.36	296	*e*P	PKPbc	15 03 58.3	-1.6
KEBE	Keben-Mersin	153.39	292	*e*P	PKiKP	15 04 00.9	+0.8
IKL	Isikli	153.42	291	*e*P	PKiKP	15 04 00.3	+0.2
AKKU	Akkuyu-Mersin	153.54	291	*e*P	PKiKP	15 04 06.6	+6.2
TEVE	Tevekalti-Mers	153.60	292	*e*P	PKiKP	15 04 00.8	+0.2
ANTO	Ankara	153.63	299	*e*PKPbc	PKPbc	15 04 00.5	0.0
ANTO	Ankara	153.63	299	PKIKP	PKPbc	15 04 00.5	0.0
BR231	Keskin MP Arra	153.65	299	*e*PKPbc	PKiKP	15 04 02.0	+1.3
EAB	Aberfoyle	153.65	9	*e*P	PKPbc	15 03 59.0	-0.8
CSS	Mathiatis	153.77	288	*e*PKPbc	PKPbc	15 04 00.5	-0.4
MILM	Milestii Mici	153.82	317	⇑*i*P	PKiKP	15 04 05.8	+5.2
RGN	Rugen	154.56	345	PFAKE		15 04 00.0	-1.8
RGN				LR	LR		
	comp=Z,800nm,21.0s						
ESK	Eskdalemuir	154.64	8	PFAKE		15 04 00.0	-2.0
ESK				LR	LR		
	comp=Z,700nm,20.0s						
TLCR		154.65	313	⇑*i*P	PKPab	15 04 10.9	-6.3
MDUB	Mudurnu	154.68	301	*e*PKPbc	PKPbc	15 04 02.6	-0.1
LVV	L'vov	154.68	326	*e*PKIKP	PKiKP	15 04 08.7	+6.4
LIC	Lamto	155.00	162	*e*P	PKPdf	15 03 55.2	-0.1
	comp=Z,81nm,1.4s						
KIC	Kosan Boka	155.21	162	*e*P	PKPdf	15 03 57.2	+1.6
	comp=Z,38nm,1.0s						
TIRR	Tirgusor	155.23	312	*e*PKPab	PKPab	15 04 20.2	+0.6
TIRR				LR	LR		
	comp=Z,3µm,20.0s						
TIRR	Tirgusor	155.23	312	⇑*i*P	PKPab	15 04 15.7	-4.0
TIRR	Tirgusor	155.23	312	⇑PKP2	PKPab	15 04 15.7	-4.0
BIZ	Bicaz	155.38	319	⇑*i*P	PKPab	15 04 13.1	-7.2
TIC	Toumodi	155.41	162	*e*P	PKPdf	15 03 57.0	+1.2
KWP	Kalwaria Pacla	155.43	328	*e*PKP	PKPab	15 04 20.4	0.0
KWP	Kalwaria Pacla	155.43	328	*e*PKP2	PKPab	15 04 20.4	0.0
BUR08	Bucovina Ar. S	155.47	321	*e*PKPbc	PKPdf	15 04 05.8	+11
BUR08				*e*PKPab	PKPab	15 04 21.9	+1.1
DBIC	Dimbokro	155.47	162	PKP	PKPdf	15 03 56.8	+0.9
	comp=Z,4.4nm,0.8s,baz=199,slow=4.9,SNR=4.3						
IOMK	Kirk Michael	155.49	10	IAMs_20	IAMs_20	16 15 54.2	
	comp=Z,1µm,18.9s						
VRI	Vrincioaia	155.60	316	⇓*i*P	PKPab	15 04 15.5	-5.8
VRI	Vrincioaia	155.60	316	⇓PKP2	PKPab	15 04 15.5	-5.8
PLOR	Plostina	155.65	316	⇑*i*P	PKPab	15 04 18.1	-3.4
PLOR	Plostina	155.65	316	⇑PKP2	PKPab	15 04 18.1	-3.4
ISP	Isparta	155.75	296	PFAKE		15 04 10.0	-12
ISP				LR	LR		
	comp=Z,900nm,20.0s						
KOLS	Kolonicke sedl	156.12	327	*e*	PKPab	15 04 11.0	-12
KOLS	Kolonicke sedl	156.12	327	*e*PKP	PKPab	15 04 29.7	+6.3
DSB	Dublin	156.14	13	PFAKE		15 04 10.0	-13
DSB				LR	LR		
	comp=Z,800nm,20.0s						
HPK	Haverah Park	156.15	6	IAMs_20	IAMs_20	16 12 32.8	
	comp=Z,665nm,19.9s						
DOPR	Dopca	156.33	318	⇑*i*P	PKPab	15 04 20.8	-3.6
LBWR	Ladybower, Pea	156.69	7	IAMs_20	IAMs_20	16 11 37.0	
	comp=Z,735nm,18.0s						
VOIR		156.82	317	⇓*i*P	PKPab	15 04 21.9	-4.7
VOIR		156.82	317	⇓PKP2	PKPab	15 04 21.9	-4.7
FOEL	Foel Wylfa	157.02	9	IAMs_20	IAMs_20	16 12 07.5	
	comp=Z,712nm,19.7s						
KSP	Ksiaz	157.06	337	*e*PKP	PKPab	15 04 24.5	-2.8
KSP	Ksiaz	157.06	337	*e*PKP2	PKPab	15 04 24.5	-2.8
MANT	Manisa	157.14	298	PFAKE		15 04 10.0	+12
MANT				LR	LR		
	comp=Z,2µm,20.0s						
OKC	Ostrava-Krasne	157.23	333	AMS	AMS	16 11 40.0	
	comp=Z,700nm,23.2s						
OSTC	Ostas	157.33	337	*e*PKPAB	PKPab	15 04 29.2	+0.7
OSTC				AMS	AMS	16 15 50.0	
	comp=Z,800nm,23.6s						
BALB	Balikesir	157.35	301	PFAKE		15 04 10.0	+12
BALB				LR	LR		
	comp=Z,2µm,20.0s						
CHVC	Chvalec	157.36	337	*e*PKPAB	PKPab	15 04 29.6	+1.0
CHVC				AMS	AMS	16 15 50.0	
	comp=Z,800nm,20.4s						
UPC	Upice	157.44	337	*e*PKP2	PKPab	15 04 29.9	+0.9
UPC				MLR	MLR		
	comp=Z,800nm,19.9s						
UPC	Upice	157.44	337	*e*PKPAB	PKPab	15 04 29.9	+0.9
UPC				AMS	AMS	16 16 00.0	
	comp=Z,800nm,19.9s						
DPC	Dobruska-Polom	157.47	337	*e*PKP2	PKPab	15 04 30.0	+0.8
DPC				MLR	MLR		
	comp=Z,600nm,22.1s						
DPC	Dobruska-Polom	157.47	337	*e*PKPAB	PKPab	15 04 30.0	+0.8
DPC				AMS	AMS	16 15 20.0	
	comp=Z,600nm,22.1s						
MORC	Moravsky Berou	157.51	334	*e*PKP	PKPab	15 04 30.0	+0.7
KRLC	Kraliky	157.54	336	*e*PKP2	PKPab	15 04 30.1	+0.6
KRLC				*e*		16 03 59.1	
KRLC	Kraliky	157.54	336	*e*PKPAB	PKPab	15 04 30.1	+0.6
CLL	Collm	157.62	343	*e*PKPab	PKPab	15 04 30.9	+1.2
CLL	Collm	157.62	343	⇓*e*PKIKP	PKPdf	15 03 58.0	+0.5
CLL				*i*		15 04 29.4	
CLL				pmax	pmax		
	comp=Z,52nm,1.8s						
CLL	Collm	157.62	343	*e*PKPdf	PKPdf	15 03 58.0	+0.5
CLL				*e*PKPdiff	sPKPdf	15 04 09.0	-1.1
CLL				⇓*i*PKPab	PKPab	15 04 29.4	-0.3
	comp=Z,52nm,1.8s						
CLL				⇓*i*sPKPab	pPKPab	15 04 36.6	-2.2
	comp=Z,31nm,1.2s						
CLL				*e*		15 04 41.0	
CLL				*e*		15 04 47.0	
	comp=Z,26nm,1.0s						
CLL				*e*PP	PP	15 08 12.0	+3.4
CLL				LmV		16 30 00.0	
	comp=Z,500nm,19.3s						
BRG	Berggiesshubel	157.76	341	*e*PKP	PKPdf	15 04 00.4	+2.7
	comp=Z,7.1nm,1.4s						
BRG	Berggiesshubel	157.76	341	*i* PKP	PKPab	15 04 30.5	+0.2
	comp=Z,30nm,1.4s						
BRG				PP	PP	15 08 04.0	-5.4
BRG				SS	PP	15 08 04.0	-5.4
	comp=N,607nm,20.8s						
	comp=E,564nm,22.8s						
	comp=Z,738nm,23.1s						
BRG	Berggiesshubel	157.76	341	*e*PKIKP	PKPdf	15 04 00.4	+2.7
BRG				*i*		15 04 30.5	
BRG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BRG				pmax	pmax		
	comp=Z,31nm,1.4s						
BRG				MLR	MLR		
	comp=N,607nm,20.8s						
BRG				MLR	MLR		
	comp=E,564nm,22.8s						
BRG				MLR	MLR		
	comp=Z,738nm,23.1s						
PVCC	Panska Ves	157.88	339	*e*PKP2	PKPab	15 04 31.8	+0.9
PVCC				MLR	MLR		
	comp=Z,900nm,22.0s						
PVCC	Panska Ves	157.88	339	*e*PKPAB	PKPab	15 04 31.8	+0.9
PVCC				AMS	AMS	16 13 20.0	
	comp=Z,900nm,22.0s						
PSZ	Piszkesteto	157.96	328	*e*PKPab	PKPab	15 04 31.8	+0.3
PSZ	Piszkesteto	157.96	328	⇑*i*P	PKPab	15 04 30.0	-1.4
PSZ	Piszkesteto	157.96	328	⇑PKP2	PKPab	15 04 30.0	-1.4
PSZ	Piszkesteto	157.96	328	⇑*e*P	PKPab	15 04 31.1	-0.3
PSZ				*e*S	PKPab	15 04 31.1	-0.3
VYHS	Vyhne	158.00	330	*e*PKP2	PKPab	15 04 32.4	+0.9
VYHS	Vyhne	158.00	330	*e*PKP	PKPab	15 04 32.4	+0.9
PLVB	Pleven	158.15	313	⇓*i*P	PKPab	15 04 31.8	-0.5
VRAC	Vranov	158.25	335	⇑*i*P	PKPab	15 04 32.6	+0.1
VRAC	Vranov	158.25	335	⇑PKP2	PKPab	15 04 32.6	+0.1
VRAC	Vranov	158.25	335	*e*PKP	PKPab	15 04 33.3	+0.8
ALN	Alexandroupoli	158.27	306	PFAKE		15 04 10.0	+11
ALN				LR	LR		
	comp=Z,500nm,19.0s						
GOPC	GO Pecny, Ondr	158.35	338	*e*PKP2	PKPab	15 04 31.9	-1.1
GOPC				MLR	MLR		
	comp=Z,600nm,17.6s						
GOPC	GO Pecny, Ondr	158.35	338	*e*PKPAB	PKPab	15 04 31.9	-1.1
GOPC				AMS	AMS	16 11 10.0	
	comp=Z,600nm,17.6s						
PRU	Pruhonice	158.37	339	*e*PKP2	PKPab	15 04 34.1	+1.1
PRU				MLR	MLR		
	comp=Z,800nm,19.5s						
PRU	Pruhonice	158.37	339	*e*PKPAB	PKPab	15 04 34.1	+1.1
PRU				AMS	AMS	16 19 10.0	
	comp=Z,800nm,19.5s						
KRUC	Moravsky	158.52	335	*e*PKP	PKPab	15 04 34.4	+0.7
TREC	Trest	158.66	336	*e*PKP2	PKPab	15 04 35.0	+0.7
TREC				MLR	MLR		
	comp=Z,700nm,20.0s						
TREC	Trest	158.66	336	*e*PKPAB	PKPab	15 04 35.0	+0.7
TREC				AMS	AMS	16 14 30.0	
	comp=Z,700nm,20.0s						
AMBH	Ambrzfalva	158.66	324	*e*P	PKPab	15 04 34.1	-0.3
BUD	Budapest	158.68	328	⇓*e*P	PKPab	15 04 34.1	-0.3
MODS	Modra-Piesok	158.74	332	*e*PKP2	PKPab	15 04 34.6	-0.1
MODS	Modra-Piesok	158.74	332	*e*PKP	PKPab	15 04 34.6	-0.1
NKC	Novy Kostel	158.75	342	*e*PKP2	PKPab	15 04 35.2	+0.6
NKC				MLR	MLR		
	comp=Z,700nm,21.4s						
NKC	Novy Kostel	158.75	342	*e*PKPAB	PKPab	15 04 35.2	+0.6
NKC				AMS	AMS	16 12 10.0	
	comp=Z,700nm,21.4s						
MDVR	Moldovita	159.13	319	⇑*i*P	PKPab	15 04 34.9	-1.7
VTS	Vitosha	159.41	312	*e*PKPab	PKPab	15 04 39.0	+0.9
VTS	Vitosha	159.41	312	⇓*i*P	PKPab	15 04 38.1	+0.1
VTS	Vitosha	159.41	312	⇓PKP2	PKPab	15 04 38.1	+0.1
KHC	Kasperske Hory	159.42	339	*e*PKPab	PKPab	15 04 38.3	+0.7
KHC	Kasperske Hory	159.42	339	*e*PKP2	PKPab	15 04 38.1	+0.5
KHC				MLR	MLR		
	comp=Z,700nm,20.7s						
KHC	Kasperske Hory	159.42	339	*e*PKPAB	PKPab	15 04 38.1	+0.5
KHC				AMS	AMS	16 13 40.0	
	comp=Z,700nm,20.7s						
UCC	Uccle	159.47	357	PFAKE		15 04 10.0	+10
UCC				LR	LR		
	comp=Z,800nm,20.0s						
GRA1	Grafenberg Arr	159.56	344	*e*PKPab	PKPab	15 04 38.6	+0.5
GRF	Grafenberg Arr	159.56	344	*e*PKP2	PKPab	15 04 38.6	+0.5
GRFO	Grafenberg	159.56	344	PFAKE		15 04 10.0	+10
GRFO				LR	LR		
	comp=Z,400nm,20.0s						
SOP	Sopron	159.59	332	*e*P	PKPdf	15 03 58.1	-1.9
TIH	Tihany	159.63	329	*e*P	PKPab	15 04 28.0	-11
GEC2	GERESS Array S	159.63	339	*e*PKPab	PKPab	15 04 39.1	+0.4
GEC2	GERESS Array S	159.63	339	*e*PKP2	PKPab	15 04 39.1	+0.4
GERES	GERESS Array B	159.63	339	PKPab	PKPab	15 04 39.0	+0.4
	comp=Z,4.1nm,0.8s,baz=36,slow=5.0,SNR=13						
CONA	Conrad Observa	159.66	334	*e*pPKPab	PKPab	15 04 39.3	+0.5
	comp=Z,20nm,1.1s,SNR=6.0						
MORH	Mrgy, Hungar	159.78	326	*e*P	PKPab	15 04 35.1	-4.2
MOA	Molln	160.31	336	*e*PKPab	PKPab	15 04 41.8	+0.2
	comp=Z,19nm,1.2s,SNR=8.4						
ARSA	Arzberg	160.35	333	*e*PKPab	PKPab	15 04 42.0	+0.3
	comp=Z,4.5nm,1.0s						
BEHE	Becsehely	160.45	330	*e*P	PKPab	15 04 37.1	-5.1
SOKA	Soboth	161.01	333	*e*PKPab	PKPab	15 04 44.6	-0.1
	comp=Z,9.6nm,1.2s,SNR=6.4						
LIT	Litokhoron	161.07	306	*e*PKPab	PKPab	15 04 44.4	-0.8
LIT	Litokhoron	161.07	306	*e*PKP2	PKPab	15 04 44.4	-0.8
KBA	Koelnbreinsper	161.29	337	PKPab	PKPab	15 04 46.3	+0.2
	comp=Z,5.2nm,0.6s						
OBKA	Obir	161.34	333	*e*PKPab	PKPab	15 04 45.9	-0.3
	comp=Z,6.7nm,1.0s						
BFO	Black Forest	161.46	348	*e*PKPab	PKPab	15 04 47.4	+0.9
BFO	Black Forest	161.46	348	*e*PKP2	PKPab	15 04 47.4	+0.9
MYKA	Terra Mystica	161.57	335	*e*PKPab	PKPab	15 04 46.7	-0.5
	comp=Z,10nm,0.7s,SNR=6.5						
WATA	Walderalm	161.63	340	*e*pPKPab	PKPab	15 04 48.2	+0.8
	comp=Z,41nm,1.4s						
WTTA	Wattenberg	161.67	340	*e*pPKPab	PKPab	15 04 48.4	+0.7
	comp=Z,27nm,0.9s						
RETA	Reutte	161.72	342	*e*pPKPab	PKPab	15 04 48.2	+0.5
	comp=Z,18nm,1.0s,SNR=7.9						
LJU	Ljubljana	161.73	333	*i* PKPdf	PKPdf	15 04 01.8	-0.6
LJU				*i*		15 04 17.2	
LJU				*i* PKPab	PKPab	15 04 47.4	-0.4
LJU				*i* PP	PP	15 08 30.1	-1.0
MOTA	Moosalm	161.75	341	*e*pPKPab	PKPab	15 04 48.9	+0.9
	comp=Z,26nm,1.2s,SNR=7.4						
SQTA	Sankt Quirin	161.84	341	*e*pPKPab	PKPab	15 04 48.9	+0.6
	comp=Z,28nm,1.1s,SNR=5.9						
ABTA	Abfaltersbach	161.86	338	*e*PKPab	PKPab	15 04 48.2	-0.2
	comp=Z,17nm,0.9s,SNR=5.3						
CADS	Cadrg	161.88	335	*i* PKPdf	PKPdf	15 04 01.0	-1.6
CADS				*i* PKPab	PKPab	15 04 47.4	-1.0
PDG	Podgorica	161.97	317	⇑*i*P	PKPab	15 04 47.6	-1.4
TTG	Podgorica	161.97	317	*e*PKPab	PKPab	15 04 48.8	-0.1
TTG	Podgorica	161.97	317	*e*PKP2	PKPab	15 04 48.8	-0.1
DAVA	Damuels	162.12	344	*e*PKPab	PKPab	15 04 50.0	+0.4
	comp=Z,3.5nm,0.6s						
FETA	Feichten	162.15	342	*e*PKPab	PKPab	15 04 49.9	+0.2
	comp=Z,14nm,1.3s						
FUORN	Ofenpass-Fuorn	162.65	342	*e*PKPab	PKPab	15 04 52.9	+0.9
TORD	Torodi Ar. Bea	162.92	177	PKP	PKPdf	15 04 04.8	+0.4
	comp=Z,3.4nm,1.1s,baz=163,slow=1.5,SNR=7.4						
TORD				PKPab	PKPab	15 04 54.6	+1.0
	comp=Z,2.7nm,0.8s,baz=168,slow=2.1,SNR=5.2						
TOA1	Torodi Ar. Sit	162.92	177	*e*PKPdf	PKPdf	15 04 04.8	+0.3
TOA1				*e*PKPab	PKPab	15 04 54.6	+1.0
TUE	Stuetta	163.02	344	*e*PKPab	PKPab	15 04 54.3	+0.7
SENIN	Lac Senin/Sane	163.54	348	*e*PKPab	PKPab	15 04 56.4	+0.5
BNI	Bardonecchia	164.92	349	*e*PKPab	PKPab	15 05 02.5	+0.6
BNI	Bardonecchia	164.92	349	*e*PKP2	PKPab	15 05 02.5	+0.6
TIP	Timpagrande	165.39	311	*e*PKPab	PKPab	15 05 04.5	+0.3
ESDC	Sonseca Array	169.20	28	PKP	PKPdf	15 04 10.1	+1.3
	comp=Z,0.1nm,0.3s,baz=5.7,slow=1.3,SNR=3.8						
ESDC				PKPab	PKPab	15 05 21.9	+1.0
	comp=Z,0.9nm,0.4s,baz=311,slow=6.0,SNR=7.4						

DDA 10 15:01:42.4, 37°.42N×42°.48E, h7^{km}±5^{km}, ML2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	Sırnak	0.09	326	*i* P	Pg	15 01 45.8	+1.2
SIRN				IAML_P			
	comp=Z,10µm,0.1s						
SRTM	Siirt_Merkez	0.72	323	*i* P	Pn	15 01 58.8	-0.3
SRTM				*i* S	Sb	15 02 08.6	+1.0
SRTM				IAML_P			
	comp=Z,914nm,0.2s						
HAKT	HAKKARI	0.99	82	*i* P	Pg	15 02 00.2	-1.2
HAKT				*i* S	Sn	15 02 16.8	-0.5
HAKT				IAML_P			
	comp=Z,1µm,0.1s						
BLIS	Bitlis-Merkez	1.03	344	*i* P	Pn	15 02 03.5	0.0
BLIS				IAML_P			
	comp=Z,2µm,0.2s						
BTMN	Batman	1.07	297	*i* P	Pg	15 02 02.7	-0.2
BTMN				*i* S	Sb	15 02 18.0	+0.6
BTMN				IAML_P			
	comp=Z,699nm,0.2s						
MUSM	Mu-Merkez	1.51	330	*i* P	Pb	15 02 10.5	-0.3
MUSM				*i* S	Sn	15 02 29.4	-0.6
MUSM				IAML_P			
	comp=Z,496nm,0.2s						

PRU 10 15:03:22.2±0.0, 49°.83N×18°.56E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.27	272	*e*PG	Pg	15 03 28.0	+0.7
OKC				*e*SG	Sg	15 03 31.4	+0.6
	comp=Z,16nm,0.6s						
MORC	Moravsky Berou	0.66	266	*e*PG	Pg	15 03 35.3	+0.4
MORC				*e*SG	Sg	15 03 43.2	-0.2
JAVC	Velka Javorina	1.13	211	*e*PG	Pg	15 03 43.6	-0.3
KRLC	Kraliky	1.18	283	*e*SG	Sg	15 03 59.1	-0.8
	comp=Z,1.7nm,0.6s						
VRAC	Vranov	1.38	249	*e*PG	Pg	15 03 48.1	-0.6
DPC	Dobruska-Polom	1.53	291	*e*PG	Pn	15 03 50.8	-0.1
DPC				*e*SG	Sg	15 04 11.4	0.0
KRUC	Moravsky	1.61	242	*e*PG	Pn	15 03 51.5	-0.3
OSTC	Ostas	1.67	297	*e*PG	Pn	15 03 52.6	-0.2
OSTC				*e*SG	Sb	15 04 15.6	+0.1
CHVC	Chvalec	1.78	296	*e*PG	Pn	15 03 54.8	+0.6
CHVC				*e*SG	Sb	15 04 18.1	-0.5

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*IDC **10** 15:35:18.3±0.6, 27°.95N×142°.88E, h0^{km}, mb4.0/13, mb1 4.3/19, mb1mx4.1/55, mbtmp4.2/19, ML3.8/6, MS3.8/1, Ms1 3.8/1, ms1mx3.1/37, Error ellipse: s-maj=24.2km s-min=13.6km az=75.0*

*MOS **10** 15:35:19.7±1.2, 27°.94N×142°.87E, h22^{km}, mb4.6/13, Error ellipse: s-maj=12.8km s-min=5.4km az=111.9*

*ISCJB **10** 15:35:19.9±0.4, 28°.02N±0°.03×142°.90E±0°.06, h22^{km}, mb4.4/39, Error ellipse: s-maj=8.2km s-min=4.5km az=5.0*

*BJI **10** 15:35:21.4±0.0, 27°.97N×142°.80E, h32^{km}, mb4.5/35, mB4.8/18, Ms4.3/6, Ms7 4.1/6*

*NEIC **10** 15:35:22.2±2.3, 27°.98N×142°.90E, h27^{km}±15^{km}, mb4.5/19, Error ellipse: s-maj=9.5km s-min=6.8km az=102.0*

*JMA **10** 15:35:25.8±0.1, 28°.04N×142°.43E, h68^{km}, M4.9*

ISC 10 15:35:21.8±0.6, 28°.09N±0°.05×142°.91E±0°.08, h22^{km}, n108, σ1^{s}76/114, mb4.4/39, 8C-4D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.18	213	P	Pb	15 35 43.9	+0.4
CBIJ				S	Sb	15 35 57.4	-1.0
JHH2	Haha-jima-NKT2	1.59	204	P	Pb	15 35 49.9	-0.6
JHJ2	Mitsune	5.67	333	*e*Pn	Pn	15 36 45.9	+1.2
JHJ	Hachijo jima 2	5.69	333	Pn	Pn	15 36 46.0	+1.0
	24nm,0.3s,baz=83,slow=22,SNR=7.0						
JHJ				Sn	Sn	15 37 47.3	-2.3
	39nm,0.3s,baz=240,slow=22,SNR=4.1						
BSO1	Boso 1	6.75	346	P	Pn	15 37 01.3	+2.3
BSO3	Boso 3	7.00	344	P	Pn	15 37 05.3	+2.6
JOD2	Odawara 2	7.85	336	P	Pn	15 37 17.1	+2.3
JHU	Hanno	8.33	339	P	Pn	15 37 22.5	+1.3
JYT	Yasato	8.43	345	P	Pn	15 37 24.8	+2.2
JRY	Ryogami san	8.60	338	P	Pn	15 37 27.0	+2.0
INU	Inuyama	8.80	327	*e*Pn	Pn	15 37 30.3	+2.6
JAG	Ashikaga	8.81	342	P	Pn	15 37 29.1	+1.3
MJAR	Matsushiro Arr	9.31	336	Pn	Pn	15 37 35.9	+1.1
	2.4nm,0.3s,baz=168,slow=12,SNR=165						
MJAR				Sn	Sn	15 39 16.1	-2.8
	0.4nm,0.3s,baz=161,slow=19,SNR=6.7						
MAJO	Matsushiro	9.32	336	*e*Pn	Pn	15 37 36.3	+1.5
MAJO				*e*Sn	Sn	15 39 16.1	-2.8
MAJO	Matsushiro	9.32	336	*e*P	Pn	15 37 36.3	+1.5
MAJO				*e*		15 39 16.1	
MAT	Matsushiro	9.32	336	P	Pn	15 37 36.2	+1.4
MAT				S	Sn	15 39 18.2	-0.7
MJB9	Matsu-Tunnel	9.32	336	*e*Pn	Pn	15 37 36.3	+1.5
JNU	Nakatsue	11.51	299	Pn	Pn	15 38 05.5	+0.6
	0.1nm,0.3s,baz=225,slow=5.7,SNR=2.8						
ERM	Erimo	13.89	1	*e*Pn	Pn	15 38 36.9	-0.4
ERM	Erimo	13.89	1	*i* P	Pn	15 38 37.6	+0.3
TJN	Taejon	15.52	306	*i* P	Pn	15 39 01.2	+2.0
KSRS	Korea Array	15.67	310	Pn	Pn	15 39 01.6	+0.4
	0.9nm,0.3s,baz=119,slow=10,SNR=31						
KS15	Wonju Array Si	15.69	310	*e*Pn	P	15 39 04.9	-0.5
	12nm,0.9s						
KSAR	Wonju Array Be	15.69	310	Pn	Pn	15 39 01.6	+0.2
KSAR	Wonju Array Be	15.69	310	P	Pn	15 39 01.6	+0.2

ASAJ	**Asahikawa**	**15.99**	**359**	Pn	**Pn**	**15 39 07.1**	**+1.7**
	0.9nm,0.3s,baz=205,slow=11,SNR=15						
ASAJ				Sn	**Sn**	**15 41 51.8**	**-10**
	0.5nm,0.3s,baz=338,slow=19,SNR=5.5						
YUK	**Yuzh-Kuril'sk**	**16.09**	**8**	*e*P	**P**	**15 39 09.3**	**-0.4**
YUK				*e*S	**Sn**	**15 41 58.1**	**-6.1**
VLA	**Vladivostok**	**17.44**	**332**	*c i*P	**P**	**15 39 27.1**	**+2.4**
KUR	**Kuril'sk**	**17.56**	**12**	⇓*e*P	**P**	**15 39 27.1**	**+1.1**
TEY	**Ternei**	**17.64**	**345**	⇑*e*P	**P**	**15 39 28.1**	**+1.2**
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
YOJ	**Yonaguni jima**	**18.20**	**263**	*e*Pn	**P**	**15 39 33.5**	**+0.2**
	comp=N,46nm,1.4s						
YOJ	**Yonaguni jima**	**18.20**	**263**	*e*P	**P**	**15 39 33.5**	**+0.2**
YOJ				pmax	pmax		
	comp=Z,46nm,1.4s						
USA0B	**Ussuriysk Arra**	**18.31**	**334**	*e*P	**Pn**	**15 39 33.5**	**-0.7**
	comp=Z,23nm,1.0s						
USA0B	**Ussuriysk Arra**	**18.31**	**334**	*e*P	**Pn**	**15 39 33.5**	**-0.7**
USA0B				pmax	pmax		
	comp=Z,23nm,1.0s						
USRK	**Ussuriysk Ar.**	**18.31**	**334**	P	**Pn**	**15 39 33.8**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=149,slow=12,SNR=54						
USRK				LR	LR	15 47 08.8	
	comp=Z,250nm,18.3s,baz=159,slow=39						
YSS	**Yuzh-Sakhalins**	**18.83**	**360**	*e*P	**Pn**	**15 39 43.2**	**+2.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YHNB	**Yeheng**	**19.59**	**265**	*e*P	**P**	**15 39 48.5**	**-0.1**
	comp=Z,68nm,2.0s						
MDJ	**Mudanjiang**	**19.63**	**331**	*e*P	**Pn**	**15 39 49.7**	**-0.5**
	comp=Z,37nm,0.8s						
MDJ	**Mudanjiang**	**19.63**	**331**	P	**Pn**	**15 39 49.8**	**-0.5**
MDJ				pmax	pmax		
	comp=Z,54nm,2.1s						
CN2	**Changchun**	**21.04**	**323**	*e*P	**P**	**15 40 05.7**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	**Nanjing**	**21.17**	**287**	*e*P	**P**	**15 40 06.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KLR	**Kul'dur**	**22.79**	**341**	P	**P**	**15 40 24.9**	**+2.1**
	comp=Z,6.0nm,0.5s,baz=159,slow=7.8,SNR=19						
KLR	**Kul'dur**	**22.79**	**341**	⇑*e*P	**P**	**15 40 24.0**	**+1.2**
KLR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GRNR	**Gornyy**	**23.18**	**350**	*e*P	P	15 40 36.0	+9.2
TIA	**Tai'an**	**23.23**	**297**	P	**P**	**15 40 25.8**	**-1.7**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI	**Beijing**	**25.05**	**305**	*e*P	**P**	**15 40 44.2**	**-0.2**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HIA	**Hailar**	**27.62**	**326**	*d i*P	**P**	**15 41 10.9**	**+3.3**
HIA				pmax	pmax		
	comp=Z,64nm,0.6s						
ZEA	**Zeya**	**28.09**	**340**	*e*P	P	15 41 18.8	+7.1
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC	**Hu-ho-hao-te**	**28.64**	**305**	P	**P**	**15 41 19.1**	**+2.2**
HHC				pmax	pmax		
	comp=Z,28nm,0.6s						
HHC				pmax	pmax		
	comp=Z,88nm,6.5s						
LZH	**Lanzhou**	**33.86**	**294**	*e*P	**P**	**15 42 04.8**	**+1.8**
LZH				pP	pwP	15 42 12.6	-0.9
LZH				sP	sP	15 42 19.3	+8.6
LZH				PP	**PnPn**	**15 43 15.9**	**+0.1**
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,71nm,4.3s						
LZH				LR	LR		
	comp=Z,240nm,15.9s						
LZH				LR	LR		
	comp=Z,240nm,16.8s						
LZH				LR	LR		
	comp=Z,220nm,15.7s						
ULN	**Ulaanbaatar**	**34.05**	**315**	*e*P	**P**	**15 42 04.7**	**+0.2**
	comp=Z,5.1nm,1.2s						
ULN	**Ulaanbaatar**	**34.05**	**315**	*c i*P	**P**	**15 42 04.9**	**+0.4**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CD2	**Chengdu**	**34.07**	**284**	*e*P	**P**	**15 42 04.5**	**-0.3**
SONA0	**Songino Array**	**34.45**	**315**	*e*P	**P**	**15 42 07.6**	**-0.4**
SONM	**Songino Array**	**34.45**	**315**	P	**P**	**15 42 07.6**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=124,slow=8.0,SNR=6.6						
GTA	**Gaotai**	**37.25**	**299**	*e*P	**P**	**15 42 30.6**	**-1.4**
GTA				pP	pP	15 42 38.0	+0.4
GTA				sP	pwP	15 42 41.4	-1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,6.5s						
GTA				LR	LR		
	comp=Z,130nm,20.3s						
GTA				LR	LR		
	comp=Z,200nm,19.2s						
GTA				LR	LR		
	comp=Z,390nm,17.9s						
TLY	**Talaya**	**37.59**	**320**	*e*P	**P**	**15 42 35.7**	**+1.1**
	comp=Z,3.0nm,0.9s						
TLY	**Talaya**	**37.59**	**320**	*ce*P	**P**	**15 42 36.5**	**+1.9**
TLY				pmax	pmax		
	comp=Z,18nm,1.7s						
WMQ	**Urumqi**	**46.52**	**305**	*e*P	**P**	**15 43 51.0**	**+3.3**
WMQ				pmax	pmax		
	comp=Z,86nm,3.7s						
WMQ				LR	LR		
	comp=Z,140nm,22.3s						
WMQ				LR	LR		
	comp=Z,180nm,20.5s						
WMQ				LR	LR		
	comp=Z,180nm,20.5s						
DGZ	**Jazzator, Alta**	**47.05**	**313**	*c i*P	**P**	**15 43 52.6**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRAB	**Tennant Creek**	**48.45**	**191**	*ce*P	**P**	**15 44 01.4**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,14nm,0.6s						
WB2	**Warramunga Arr**	**48.46**	**191**	*e*P	**P**	**15 44 01.6**	**-1.3**
	comp=Z,27nm,0.6s						
WR1	**Warramunga Arr**	**48.47**	**191**	*e*P	**P**	**15 44 01.7**	**-1.1**
WRA	**Warramunga Arr**	**48.47**	**191**	P	**P**	**15 44 01.7**	**-1.1**
	comp=Z,20nm,0.5s,baz=9.2,slow=8.3,SNR=152						
ZALV	**Zalesovo Beam**	**49.16**	**318**	P	**P**	**15 44 08.6**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=94,slow=7.1,SNR=8.6						
MK32	**Makanchi Array**	**50.34**	**309**	*e*P	**P**	**15 44 16.6**	**-0.4**
MKAR	**Makanchi Array**	**50.34**	**309**	P	**P**	**15 44 16.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=88,slow=9.8,SNR=12						
MKAR	**Makanchi Array**	**50.34**	**309**	*i* P	**P**	**15 44 17.0**	**0.0**
GSI	**Gunungsitoli**	**50.84**	**246**	*e*P	**P**	**15 44 19.7**	**-1.4**
	comp=Z,14nm,0.8s						
AS31	**Alice Springs**	**52.18**	**190**	*e*P	**P**	**15 44 29.1**	**-1.9**
	comp=Z,1.6nm,1.1s						
ASAR	**Alice Springs**	**52.18**	**190**	P	**P**	**15 44 29.6**	**-1.4**
	comp=Z,1.4nm,0.4s,baz=9.1,slow=6.6,SNR=76						
PDGK	**Podgornoye**	**52.50**	**305**	P	**P**	**15 44 32.1**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**52.75**	**314**	*e*P	**P**	**15 44 34.8**	**-0.2**
	comp=Z,4.7nm,0.8s						
KURK	**Kurchatov**	**52.75**	**314**	⇓*e*P	**P**	**15 44 34.7**	**-0.2**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KSH	**Kashi**	**55.62**	**300**	P	**P**	**15 44 57.4**	**+1.2**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ILAR	**Eielson Array**	**56.53**	**29**	P	**P**	**15 45 02.9**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=262,slow=6.3,SNR=4.7						
ILB	**Eielson Array**	**56.53**	**29**	*e*P	**P**	**15 45 02.9**	**+0.7**
	comp=Z,7.4nm,1.6s						
OTUK	**Ortayu**	**56.98**	**311**	P	**P**	**15 45 06.7**	**+1.0**
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	**Borovoye**	**57.81**	**317**	*e*P	**P**	**15 45 11.7**	**+0.3**
	comp=Z,2.6nm,0.8s						
BRVK	**Borovoye**	**57.81**	**317**	⇓*e*P	**P**	**15 45 12.2**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	**Karatay Array**	**59.03**	**305**	*e*P	**P**	**15 45 19.9**	**-0.2**
	comp=Z,3.6nm,0.4s						
KK31	**Karatay Array**	**59.03**	**305**	*e*P	**P**	**15 45 19.9**	**-0.2**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KKAR	**Karatay Array**	**59.03**	**305**	*e*P	**P**	**15 45 19.9**	**-0.2**
	comp=Z,3.6nm,0.4s						
KKAR	**Karatay Array**	**59.03**	**305**	*e*P	**P**	**15 45 19.9**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
STKA	**Stephens Creek**	**59.65**	**181**	P	**P**	**15 45 23.1**	**-1.2**
	comp=Z,4.1nm,0.7s,baz=1.6,slow=7.5,SNR=8.9						
STKA	**Stephens Creek**	**59.65**	**181**	*e*P	**P**	**15 45 23.1**	**-1.2**
	comp=Z,9.9nm,2.0s						
STKA	**Stephens Creek**	**59.65**	**181**	*e*P	**P**	**15 45 23.1**	**-1.2**
STKA				pmax	pmax		
	comp=Z,10.0nm,2.0s						
ARU	**Arti**	**64.03**	**322**	*e*P	**P**	**15 45 53.6**	**0.0**
	comp=Z,5.6nm,1.0s						
ARU	**Arti**	**64.03**	**322**	⇑*e*P	**P**	**15 45 54.7**	**+1.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ABKAR	**Akbulak array**	**64.86**	**314**	*e*P	**P**	**15 45 59.1**	**-0.1**
	comp=Z,3.2nm,0.5s						
AKTO	**Aktyubinsk**	**65.77**	**316**	P	**P**	**15 46 05.4**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=90,slow=10						
YKA	**Yellowknife Ar**	**70.96**	**29**	P	**P**	**15 46 37.7**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=291,slow=5.8,SNR=3.2						
YKB5	**Yellowknife Ar**	**70.96**	**29**	*e*P	**P**	**15 46 37.7**	**+0.4**
FIA0	**FINESS Array S**	**77.34**	**334**	*e*P	**P**	**15 47 16.5**	**+2.0**
FIA0	**FINESS Array S**	**77.34**	**334**	*e*P	**P**	**15 47 16.5**	**+2.0**
FINES	**FINESS Array B**	**77.34**	**334**	P	**P**	**15 47 16.5**	**+2.0**
	comp=Z,1.2nm,0.8s,baz=90,slow=5.7,SNR=4.6						
FINES	**FINESS Array B**	**77.34**	**334**	*i* P	**P**	**15 47 17.2**	**+2.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ	**Khabaz**	**77.80**	**313**	P	**P**	**15 47 18.1**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=261,slow=4.3,SNR=6.2						
NV01	**Mina Array Sit**	**79.40**	**52**	*e*P	**P**	**15 47 27.4**	**+0.7**
NVAR	**Mina Array Bea**	**79.40**	**52**	P	**P**	**15 47 27.4**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=283,slow=6.6,SNR=4.7						
RAYN	**Ar Rayn**	**85.33**	**294**	*e*P	**P**	**15 47 57.0**	**-0.7**
	comp=Z,5.6nm,0.9s						
RAYN	**Ar Rayn**	**85.33**	**294**	*e*P	**P**	**15 47 57.0**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BR101	**Keskin Array S**	**85.79**	**313**	*e*P	**P**	**15 47 59.3**	**-0.5**
BRTR	**Keskin Array B**	**85.79**	**313**	P	**P**	**15 47 59.3**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=72,slow=4.7,SNR=2.4						
TOA1	**Torodi Ar. Sit**	**124.40**	**312**	*e*PKPdf	**PKPdf**	**15 54 18.6**	**-1.3**
TORD	**Torodi Ar. Bea**	**124.40**	**312**	PKP	**PKPdf**	**15 54 18.6**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=22,slow=1.6,SNR=3.1						
BOSA	**Boshof**	**125.71**	**254**	PKP	**PKiKP**	**15 54 24.3**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=12,slow=5.3,SNR=6.2						
PLCA	**Paso Flores**	**149.84**	**124**	PKPbc	**PKPbc**	**15 55 09.6**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=153,slow=2.2,SNR=4.2						

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*IDC **10** 15:46:48.1±1.5, 1°.18N×124°.78E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/36, mbtmp3.4/4, MS3.9/1, Ms1 4.1/1, ms1mx3.2/14, Error ellipse: s-maj=194.1km s-min=20.9km az=64.0*

*ISCJB **10** 15:46:55.0±0.6, 1°.55N±0°.05×125°.99E±0°.07, h54^{km}, mb3.4/5, MS3.8/1, Error ellipse: s-maj=11.0km s-min=6.6km az=152.3*

*NEIC **10** 15:46:56.6±1.5, 1°.70N×126°.15E, h82^{km}±14^{km}, mb4.1/2, Error ellipse: s-maj=19.3km s-min=14.3km az=218.0*

*DJA **10** 15:46:56.6±0.4, 2°N±3°×12°6E±°, h67^{km}±13^{km}, M3.9/9, mb4.1/2, MLv3.9/9*

ISC 10 15:46:55.4±0.9**, 1°.66N**±0°.06×**126°.14E**±0°.07**, h54**^{km}**, n17, σ2**^{s}**15**/18**, mb3.5**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.51**	**126**	*e*Pn	**Pn**	**15 47 21.8**	**+1.7**
TNTI	**Ternate**	**1.51**	**126**	P	**Pn**	**15 47 21.9**	**+1.8**
TNTI				S	**Sn**	**15 47 40.9**	**+2.3**
SGSI	**Sangihe**	**2.11**	**343**	P	**Pn**	**15 47 30.2**	**+1.9**
SGSI				S	**Sn**	**15 47 55.3**	**+1.9**
LBMI	**Labuha**	**2.65**	**149**	P	**Pn**	**15 47 37.9**	**+2.2**
SANI	**Sanana**	**3.68**	**182**	P	**Pn**	**15 47 49.8**	**-0.1**
LUWI	**Luwuk**	**4.30**	**232**	*e*Pn	**Pn**	**15 48 02.0**	**+3.6**
LUWI	**Luwuk**	**4.30**	**232**	P	**Pn**	**15 48 01.9**	**+3.5**
APSI	**Ampana**	**5.17**	**240**	P	**Pn**	**15 48 11.5**	**+1.3**
JAGI	**Jajag, Banyuwa**	**15.62**	**230**	*e*Pn	**Pn**	**15 50 30.2**	**-2.0**
	57nm,0.9s						
WR1	**Warramunga Arr**	**22.92**	**160**	*e*P	**P**	**15 51 54.2**	**-0.8**
WRA	**Warramunga Arr**	**22.92**	**160**	P	**P**	**15 51 54.2**	**-0.9**
	1.1nm,0.4s,baz=334,slow=11,SNR=12						
AS31	**Alice Springs**	**26.28**	**164**	*e*P	**P**	**15 52 25.4**	**-0.5**
	1.6nm,1.2s						
ASAR	**Alice Springs**	**26.28**	**164**	P	**P**	**15 52 25.8**	**-0.2**
	0.2nm,0.4s,baz=345,slow=9.1,SNR=9.7						
CMAR	**Chiang Mai Arr**	**31.47**	**304**	LR	LR	16 06 35.3	
	comp=Z,191nm,19.2s,baz=134,slow=39						
MK32	**Makanchi Array**	**58.93**	**326**	*e*P	**P**	**15 56 47.5**	**-1.6**
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**15 56 47.5**	**-1.6**
	0.2nm,0.3s,baz=128,slow=6.8,SNR=6.8						
KURBB	**Kurchatov Arra**	**63.17**	**328**	P	**P**	**15 57 15.0**	**-2.8**
	0.2nm,0.6s,baz=129,slow=6.0,SNR=3.4						

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*IDC **10** 15:57:18.5±2.2, 1°.97S×99°.46E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.7/34, mbtmp3.9/9, ML3.2/1, Error ellipse: s-maj=81.6km s-min=16.9km az=61.0*

*NEIC **10** 15:57:19.8±1.0, 1°.99S×99°.39E, h10^{km}±3^{km}, mb4.1/6, Error ellipse: s-maj=21.8km s-min=9.2km az=54.0*

NEIC Felt [IV] on Pulau Siberut and [III] on Pulau Sipura.

*ISCJB **10** 15:57:20.5±0.6, 1°.96S±0°.05×99°.28E±0°.07, h30^{km}, mb4.0/10, Error ellipse: s-maj=11.2km s-min=4.8km az=146.4*

*DJA **10** 15:57:21.5±0.7, 2°S±4°×9°9E±°, h27^{km}±8^{km}, M4.1/12, MLv4.1/12*

ISC 10 15:57:22.5±0.8**, 1°.93S**±0°.06×**99°.37E**±0°.07**, h30**^{km}**, n43, σ1**^{s}**01**/40**, mb4.0**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.66**	**335**	P	**Pn**	**15 57 36.3**	**+0.5**
SISI				S	**Sn**	**15 57 45.3**	**+0.1**
PPSI	**Pulau Pagai**	**1.04**	**142**	P	**Pn**	**15 57 40.9**	**-0.2**
PPSI				S	**Sb**	**15 57 55.2**	**-0.1**
PDSI	**Padang**	**1.49**	**47**	P	**Pn**	**15 57 47.1**	**-0.1**
PDSI				S	**Pn**	**15 57 47.3**	**+0.1**
KRJI	**Kerinci**	**2.10**	**94**	P	**Pn**	**15 57 56.8**	**+1.2**
KRJI				S	**Sb**	**15 58 23.9**	**-1.6**
SDSI	**Sungai Dareh**	**2.28**	**64**	P	**Pn**	**15 57 59.5**	**+1.4**
MNSI	**Mandailing Nat**	**2.72**	**4**	P	**Pn**	**15 58 04.2**	**+0.1**
BKNI	**Bangkinang**	**2.79**	**37**	*e*Pn	**Pn**	**15 58 02.9**	**-2.2**
BKNI	**Bangkinang**	**2.79**	**37**	P	**Pn**	**15 58 06.2**	**+1.0**
SBSI	**Sibolga**	**3.49**	**352**	P	**Pn**	**15 58 12.1**	**-2.7**
GSI	**Gunungsitoli**	**3.68**	**331**	*e*Pn	**Pn**	**15 58 17.7**	**+0.4**
GSI	**Gunungsitoli**	**3.68**	**331**	P	**Pn**	**15 58 17.2**	**-0.2**
MNAI	**Manna**	**4.32**	**124**	*e*Pn	**Pn**	**15 58 26.2**	**+0.1**
MNAI	**Manna**	**4.32**	**124**	P	**Pn**	**15 58 26.0**	**-0.1**
PSI	**Prapat**	**4.72**	**355**	Pn	**Pn**	**15 58 30.2**	**-1.6**
	1.1nm,0.3s,baz=183,slow=18,SNR=3.7						
PSI	**Prapat**	**4.72**	**355**	*e*Pn	**Pn**	**15 58 30.5**	**-1.3**
MYKOM	**Kota Tinggi**	**5.81**	**50**	*e*Pn	**Pn**	**15 58 47.0**	**+0.4**
IPM	**Ipoh**	**6.58**	**15**	*e*Pn	**Pn**	**15 58 57.9**	**+0.7**
KULM	**Kulim**	**7.29**	**10**	*e*Pn	**Pn**	**15 59 07.3**	**+0.3**
CISI	**Cisompet, Garu**	**10.10**	**124**	*e*Pn	**Pn**	**15 59 42.9**	**-2.7**
CM31	**Chiang Mai Arr**	**20.27**	**359**	*e*P	**P**	**16 01 56.0**	**+0.4**
	7.6nm,1.3s						
CMAR	**Chiang Mai Arr**	**20.27**	**359**	P	Pn	16 01 56.8	-1.0
	0.6nm,0.5s,baz=187,slow=9.1,SNR=5.7						
H08S2	**Diego Garcia H**	**27.37**	**257**	T	T	16 31 30.4	
	baz=79,slow=75,SNR=348						
H08S3	**Diego Garcia H**	**27.37**	**257**	T	T	16 31 30.9	
	baz=79,slow=75,SNR=336						
H08S1	**Diego Carcia H**	**27.39**	**257**	T	T	16 31 31.8	
	baz=79,slow=75,SNR=112						
H01W3	**Cape Leeuwin H**	**35.55**	**159**	T	T	16 42 02.3	
	baz=335,slow=76,SNR=44						
H01W2	**Cape Leeuwin H**	**35.56**	**159**	T	T	16 42 09.3	
	baz=335,slow=76,SNR=46						
H01W1	**Cape Leeuwin H**	**35.57**	**159**	T	T	16 42 12.8	
	baz=335,slow=76,SNR=43						
WR1	**Warramunga Arr**	**38.57**	**120**	*e*P	**P**	**16 04 42.2**	**-0.7**
WRA	**Warramunga Arr**	**38.57**	**120**	P	**P**	**16 04 42.2**	**-0.7**
	3.0nm,0.8s,baz=296,slow=11,SNR=9.1						
AS31	**Alice Springs**	**39.80**	**126**	*e*P	**P**	**16 04 52.6**	**-0.7**
	3.3nm,1.5s						
ASAR	**Alice Springs**	**39.80**	**126**	P	**P**	**16 04 52.9**	**-0.3**
	0.8nm,0.7s,baz=296,slow=7.4,SNR=11						
STKA	**Stephens Creek**	**49.66**	**131**	P	**P**	**16 06 12.0**	**+0.3**
	1.9nm,0.7s,baz=303,slow=7.7,SNR=4.2						
STKA	**Stephens Creek**	**49.66**	**131**	*e*P	**P**	**16 06 11.9**	**+0.1**
	9.7nm,2.0s						
SONA0	**Songino Array**	**49.94**	**6**	*e*P	**P**	**16 06 14.5**	**+0.8**
SONM	**Songino Array**	**49.94**	**6**	P	**P**	**16 06 14.5**	**+0.8**
	1.1nm,0.8s,baz=192,slow=9.6,SNR=7.6						
MK31	**Makanchi Array**	**50.80**	**345**	*e*P	**P**	**16 06 20.6**	**+0.5**
	0.9nm,0.8s						
MK32	**Makanchi Array**	**50.80**	**345**	*e*P	**P**	**16 06 21.0**	**+0.9**
MKAR	**Makanchi Array**	**50.80**	**345**	P	**P**	**16 06 21.0**	**+0.9**
	1.0nm,0.7s,baz=155,slow=8.0,SNR=13						
USRK	**Ussuriysk Ar.**	**54.39**	**28**	P	**P**	**16 06 46.9**	**+0.2**
	1.8nm,0.8s,baz=223,slow=2.8,SNR=7.5						
ZAA0	**Zalesovo Array**	**56.99**	**350**	*e*P	**P**	**16 07 05.5**	**+0.4**
	3.5nm,1.0s						
ZALV	**Zalesovo Beam**	**56.99**	**350**	P	**P**	**16 07 05.7**	**+0.6**
	1.8nm,0.5s,baz=181,slow=7.2,SNR=13						
ZAA1	**Zalesovo Array**	**56.99**	**350**	*e*P	**P**	**16 07 05.7**	**+0.6**
TXAR	**Lajitas Array**	**145.02**	**37**	PKPbc	**PKPdf**	**16 16 58.0**	**+0.2**
	2.0nm,0.6s,baz=229,slow=1.2,SNR=6.1						

JMA 10 16:00:06.3, 35°.31N×135°.29E, h12^{km}±1^{km}, M2.8, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.10**	**107**	P	Pg	16 00 09.1	0.0
JWT				S	Sg	16 00 10.9	-0.2
JKY	**Yasaka**	**0.35**	**335**	P	Pg	16 00 13.4	0.0
JKY				S	Sg	16 00 18.2	0.0
JKS	**Kasai**	**0.49**	**228**	P	Pg	16 00 15.8	-0.1
JKS				S	Sg	16 00 22.2	-0.2
JKSM	**Kasumi**	**0.58**	**299**	P	Pg	16 00 17.4	-0.3
JKSM				S	Sg	16 00 25.2	-0.2
JHE	**Heguri**	**0.73**	**154**	P	Pg	16 00 20.1	-0.4
JHE				S	Sg	16 00 29.7	-0.3
JAJ2	**Tsuna**	**0.95**	**201**	P	Pg	16 00 24.0	-0.6
JAJ2				S	Sg	16 00 36.4	-0.6
JAD	**Aida**	**0.99**	**248**	P	Pb	16 00 24.5	-0.9
JAD				S	Sg	16 00 37.3	-1.0
MAT	**Matsushiro**	**2.67**	**62**	P	Pg	16 00 56.5	-0.9
MAT				S	Sg	16 01 31.0	-1.0

MAN 10 16:06:20.7, 13°.08N×121°.22E, h26^{km}, mb3.8, ML2.6, MS2.1, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.49**	**328**	⇑*i*P	Pb	16 06 30.6	-0.3
PGP				*i* S	Sb	16 06 36.1	-1.7
SJMP	**San Jose**	**0.62**	**189**	*e*P	Pn	16 06 34.4	+0.5
SJMP				*e*S	Sn	16 06 44.1	+1.1
LUBP	**Lubang**	**1.15**	**305**	*e*P	Pn	16 06 40.9	-0.2
LUBP				*e*S	Sb	16 06 56.8	+0.4

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*ISCJB **10** 16:23:16.8±0.7, 39°.81N±0°.04×35°.14E±0°.05, h0^{km}, Error ellipse: s-maj=6.1km s-min=4.8km az=32.7*

*DDA **10** 16:23:16.6, 39°.78N×35°.15E, h7^{km}±1^{km}, ML2.7*

*ISK **10** 16:23:16.6, 39°.81N×35°.18E, h8^{km}, ML2.0/5, Suspected Mining explosion.*

ISC 10 16:23:16.2±1.0**, 39°.84N**±0°.05×**35°.12E**±0°.04**, h0**^{km}**, n10, σ0**^{s}**46**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.25**	**142**	PG	**Pg**	**16 23 20.8**	**-0.2**
YOZ				SG	**Sg**	**16 23 24.8**	**+0.6**
COAL	**Corum-Alaca**	**0.43**	**346**	*i* P	**Pb**	**16 23 26.7**	**0.0**
COAL				IAML_P			
	comp=Z,842nm,0.2s						
SIRC	**Yozgat**	**0.50**	**177**	*i* P	**Pg**	**16 23 26.1**	**+0.3**
SIRC				*i* S	**Sg**	**16 23 32.8**	**+0.5**
SIRC				IAML_P			
	comp=Z,2μm,0.1s						
CORM	**Corum**	**0.51**	**312**	PG	**Pb**	**16 23 28.1**	**+0.1**
CDAG	**Cicekdag**	**0.61**	**250**	*i* P	**Pb**	**16 23 29.0**	**-0.9**
CDAG				*i* S	**Sb**	**16 23 38.6**	**-0.5**
DELI	**KIRIKKALE**	**0.94**	**280**	*i* P	**Pb**	**16 23 35.7**	**+0.4**
DELI				IAML_P			
	comp=Z,587nm,0.1s						
KIRS	**Kırehir-Merke**	**1.17**	**233**	*i* P	**Pb**	**16 23 39.0**	**-0.3**
KIRS				*i* S	**Sg**	**16 23 53.9**	**+0.2**
KIRS				IAML_P			
	comp=Z,299nm,0.1s						
YAYX	**Yaylak**	**1.35**	**229**	PN	**Pb**	**16 23 42.5**	**0.0**
YAYX				SN	**Sn**	**16 24 01.8**	**+0.6**
SVSK	**Karacayir**	**1.45**	**86**	PN	**Pn**	**16 23 43.2**	**-0.4**
SERE	**Sereflikochisa**	**1.50**	**234**	PN	**Pg**	**16 23 44.9**	**0.0**

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*ISCJB **10** 16:24:13.2±1.7, 33°.77N±0°.06×35°.6E±0°.1, h21^{km}±14^{km}, Error ellipse: s-maj=16.3km s-min=8.3km az=158.7*

*GRAL **10** 16:24:14.3±0.3, 33°.79N×35°.78E, h2^{km}±17^{km}, MD2.7*

*NSSC **10** 16:24:14.7±1.0, 33°.56N×35°.64E, h33^{km}±13^{km}, ML1.6*

ISC 10 16:24:13.1±1.1**, 33°.80N**±0°.05×**35°.69E**±0°.07**, h18**^{km}±4^{km}**, n8, σ0**^{s}**82**/13**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.11**	**345**	*e*P	**Pg**	**16 24 17.1**	**0.0**
DQRL	**Deir Qamar**	**0.13**	**228**	*e*P	**Pg**	**16 24 17.9**	**+0.6**
DQRL				*e*S	**Sg**	**16 24 20.4**	**+0.3**
RCY	**Rachaya**	**0.32**	**158**	*e*P	**Pg**	**16 24 19.7**	**-0.4**
RCY				*e*S	**Sg**	**16 24 23.6**	**-1.3**
BRBR	**Barbar**	**0.44**	**150**	*e*P	**Pb**	**16 24 22.9**	**+0.4**
BRBR				*e*S	**Sg**	**16 24 27.8**	**-0.6**
BRBR				AML	AML	16 24 31.1	
	comp=N,57nm,0.6s						
BRBR				AML	AML	16 24 32.8	
	comp=E,24nm,0.5s						
SHBL	**Chebaa**	**0.45**	**174**	*e*P	**Pg**	**16 24 22.1**	**-0.2**
HWQ	**Hawqa**	**0.53**	**24**	*e*P	**Pb**	**16 24 23.5**	**-0.4**
QASN	**Qassioun**	**0.56**	**118**	*e*P	**Pn**	**16 24 26.0**	**-0.2**
QASN				*e*S	**Sg**	**16 24 33.5**	**+1.7**
QASN				AML	AML	16 24 35.6	
	comp=N,101nm,0.4s						
QASN				AML	AML	16 24 35.6	
	comp=E,120nm,0.5s						
TOTH	**TOTAH**	**0.75**	**125**	*e*P	**Pg**	**16 24 28.0**	**+0.1**
TOTH				*e*S	**Sb**	**16 24 37.9**	**+0.2**
TOTH				AML	AML	16 24 45.8	
	comp=N,20nm,0.6s						
TOTH				AML	AML	16 24 46.8	
	comp=E,12nm,0.5s						

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*MAN **10** 16:28:59.2, 5°.67N×125°.84E, h105^{km}, mb4.6, ML3.5, MS3.4*

*ISCJB **10** 16:29:00.4±0.4, 5°.86N±0°.04×125°.87E±0°.07, h119^{km}±5^{km}, mb4.0/7, Error ellipse: s-maj=11.2km s-min=5.9km az=174.8*

*DJA **10** 16:29:00.5±0.6, 6°N±5°×12°6E±°, h137^{km}±8^{km}, M4.3/8, mB4.7/5, mb4.4/7, MLv4.5/8, Mw(mB)3.9/5*

*IDC **10** 16:29:01.6±0.8, 5°.83N×125°.67E, h116^{km}±7^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.5/36, mbtmp4.2/9, Error ellipse: s-maj=36.4km s-min=11.6km az=83.0*

ISC 10 16:29:01.3±0.8**, 5°.85N**±0°.04×**125°.92E**±0°.07**, h107**^{km}±6^{km}**, n28, σ2**^{s}**15**/40**, mb4.0**/7**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.33**	**320**	*e*P	**Pn**	**16 29 16.8**	**0.0**
DDMP				*e*S	**Sn**	**16 29 27.5**	**-1.0**
GSPH	**General Santos**	**0.99**	**284**	⇑*i*P	**Pn**	**16 29 22.3**	**-0.1**
GSPH				*i* S	**Sn**	**16 29 36.9**	**-1.3**
MATI	**Mati**	**1.14**	**17**	*e*P	**Pn**	**16 29 24.0**	**+0.2**
MATI				*e*S	**Sn**	**16 29 40.6**	**-0.1**
DAV	**Davao City (W)**	**1.26**	**344**	P	**Pn**	**16 29 25.6**	**+0.5**
	56nm,0.3s,baz=237,slow=5.8,SNR=16						
DAV				S	**Sn**	**16 29 44.2**	**+1.1**
	146nm,0.3s,baz=95,slow=14,SNR=14						
DMPH	**Davao City--Mi**	**1.29**	**341**	⇓*e*P	Pn	16 29 21.6	-3.9
DMPH				*e*S	**Sn**	**16 29 45.7**	**+1.9**
KCP	**Kidapawan**	**1.42**	**324**	⇓*i*P	**Pn**	**16 29 28.0**	**+1.0**
KCP				*i* S	**Sn**	**16 29 47.6**	**+1.1**
SKMP	**Bagumbayan, Su**	**1.52**	**296**	*e*P	**Pn**	**16 29 28.3**	**+0.1**
SKMP				*e*S	**Sn**	**16 29 48.2**	**-0.5**

CTBH	Cotabato--PC H	2.15	309	⇑*i*P	Pn	16 29 35.5	-0.6
BUKP	Musuan	2.19	337	*e*P	Pn	16 29 36.7	+0.1
BUKP				*e*S	Sn	16 30 04.4	+0.7
SGSI	Sangihe	2.19	190	P	Pn	16 29 38.5	+1.9
SGSI				S	Sn	16 30 07.2	+3.6
CGP	Cagayan de Oro	2.86	335	⇓*e*P	Pn	16 29 46.3	+1.0
CGP				*e*S	Sn	16 30 24.6	+5.3
BUTP	Butuan	3.11	355	*e*P	Pn	16 29 49.6	+0.9
BUTP				*e*S	Sn	16 30 30.3	+5.0
PAGZ	Pagadian	3.21	308	*e*P	Pn	16 29 48.9	-1.1
PAGZ				*e*S	Sn	16 30 33.5	+5.9
TNTI	Ternate	5.25	164	P	Pn	16 30 18.8	+1.3
LBMI	Labuha	6.64	166	P	Pn	16 30 37.2	+0.8
LUWI	Luwuk	7.54	205	P	Pn	16 30 52.8	+4.3
SANI	Sanana	7.85	180	P	Pn	16 30 50.9	-1.9
	49nm,1.1s,2µm0.4nm						
APSI	Ampana	7.96	213	P	Pn	16 30 59.7	+5.4
KAPI	Kappang	12.43	210	P	Pn	16 31 54.5	0.0
	0.5nm,0.3s,baz=36,slow=19,SNR=2.2						
BATI	Baumata	16.11	188	P	Pn	16 32 42.7	+1.0
	11nm,0.3s,baz=55,slow=2.8,SNR=17						
BATI	Baumata	16.11	188	P	Pn	16 32 40.9	-0.8
WRA	Warramunga Arr	26.94	162	P	P	16 34 31.9	-0.9
	0.9nm,0.4s,baz=342,slow=13,SNR=14						
ASAR	Alice Springs	30.36	165	P	P	16 35 02.6	-0.5
	1.2nm,0.4s,baz=347,slow=7.6,SNR=53						
ASAR				PcP	PcP	16 37 58.6	-2.3
	0.4nm,0.3s,baz=345,slow=2.5,SNR=7.0						
ASAR				ScP	ScP	16 41 31.1	-2.7
	0.3nm,0.9s,baz=340,slow=2.9,SNR=3.3						
USRK	Ussuriysk Ar.	38.56	7	P	P	16 36 14.2	+0.6
	2.3nm,0.5s,baz=183,slow=7.6,SNR=11						
STKA	Stephens Creek	40.39	159	P	P	16 36 29.2	+0.3
	4.3nm,0.6s,baz=332,slow=9.4,SNR=15						
PETK	Petropavlovsk-	53.79	23	P	P	16 38 13.4	+0.6
	3.5nm,0.7s,baz=205,slow=6.4,SNR=6.2						
MKAR	Makanchi Array	55.37	325	P	P	16 38 22.2	-2.1
	0.2nm,0.3s,baz=119,slow=6.7,SNR=5.5						
ZALV	Zalesovo Beam	58.34	333	P	P	16 38 43.6	-1.5
	0.4nm,0.4s,baz=121,slow=10,SNR=2.3						

MEX 10 17:03:05.1±0.5**, 16.°14N**×**97.°63W, h16**^{km}±8^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.26	43	*e*P	Pn	17 03 25.1	-3.1
VHO				*e*S	Sb	17 03 40.2	-4.5
HUIG	Huatulco	1.51	104	*e*P	Pn	17 03 28.6	-2.8
HUIG				*i* S	Sn	17 03 45.3	-5.4
TLIG	Tlapa	1.68	328	*e*P	Pn	17 03 30.1	-3.7
TLIG				*i* S	Sn	17 03 49.9	-5.2

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*BJI **10** 17:16:45.1±0.0, 5.°04S×148.°96E, h13^{km}, mb4.9/61, mB5.1/57, Ms5.2/67, Ms7 5.0/65*

*NEIC **10** 17:16:46.7±1.9, 4.°96S×148.°87E, h12^{km}±3^{km}, mb5.2/104, MW5.4, Error ellipse: s-maj=9.3km s-min=6.6km az=126.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M_{rr}0.32; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-0.96; $M_{r\theta}$0.06; $M_{\theta\phi}$1.34; $M_{\phi r}$0.36; Best double couple: $M_0$1.60000×10^{17} NP1: ϕ_s15.00000°, δ87.00000°, λ166.00000°. NP2: ϕ_s105.00000°, δ76.00000°, λ3.00000°. Principal axes: T 1.4500, Plg12.0000°, Azm329.0000°; N 0.3100, Plg76.0000°, Azm184.0000°; P -1.7600, Plg8.0000°, Azm61.0000°;*

*MOS **10** 17:16:46.5±1.1, 5.°00S×148.°79E, h16^{km}, mb5.3/40, MS4.7/6 Error ellipse: s-maj=13.1km s-min=6.9km az=91.4*

*DJA **10** 17:16:48.5±1.4, 5°S±4°×14°9E±°, h26^{km}±12^{km}, M5.2/25, mB5.6/13, mb5.2/25, MLv5.5/3, Mw(mB)5.1/13*

*ISCJB **10** 17:16:49.1±0.1, 5.°02S±0.°02×148.°87E±0.°03, h33^{km}, mb5.1/146, MS4.9/67, Error ellipse: s-maj=4.3km s-min=3.2km az=20.5*

*IDC **10** 17:16:49.4±4.0, 5.°05S×149.°00E, h28^{km}±27^{km}, mb4.5/19, mb1 4.6/22, mb1mx4.6/26, mbtmp4.6/22, ML3.0/3, MS4.7/31, Ms1 4.7/31, ms1mx4.7/35, Error ellipse: s-maj=15.5km s-min=10.1km az=102.0*

*GCMT **10** 17:16:51.7±0.1, 4.°97S±0.°01×148.°92E±0.°01, h12^{km}, MW5.4/121, Moment Tensor Solution. s94,c166; s121,c237; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.41±.02; $M_{\theta\theta}$0.81±.02; $M_{\phi\phi}$-0.39±.02; $M_{r\theta}$-0.12±.05; $M_{\theta\phi}$1.56±.02; $M_{\phi r}$0.42±.05; Best double couple: $M_0$1.74700×10^{17} NP1: ϕ_s192.00000°, δ79.00000°, λ-164.00000°. NP2: ϕ_s99.00000°, δ74.00000°, λ-11.00000°. Principal axes: T 1.8840, Plg4.0000°, Azm325.0000°; N -0.2720, Plg71.0000°, Azm225.0000°; P -1.6110, Plg19.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 17:16:50.8±0.3**, 5.°16S**±0.°03×**149.°06E**±0.°05**, h35**^{km}**, n367,** σ**2.^{s}04**/369**, mb5.1**/146**, MS5.0**/69**, 11C-6D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.24	73	*e*Pn	Pn	17 17 36.8	-2.4
MANU	Manus Island	3.52	331	*e*Pn	Pn	17 17 35.4	-7.7
PMG	Port Moresby	4.62	204	Pn	Pn	17 17 59.8	+1.6
	14nm,0.3s,baz=42,slow=5.4,SNR=41						
PMG				Sn	Sn	17 18 55.0	+4.4
	79nm,0.3s,baz=74,slow=20,SNR=20						
PMG				LR	LR	17 19 36.1	
	comp=Z,5µm,21.6s,baz=212,slow=35						
PMG	Port Moresby	4.62	204	*e*Pn	Pn	17 17 57.1	-1.1
PMG				*e*Sn	Sn	17 18 55.0	+4.4
PMG	Port Moresby	4.62	204	⇑*e*P	Pn	17 18 00.1	+1.9
JAY	Jayapura	8.74	287	Pn	Pn	17 18 52.7	-2.0
	0.9nm,0.3s,baz=45,slow=1.4,SNR=12						
JAY	Jayapura	8.74	287	P	Pn	17 18 52.8	-2.0
	783nm,1.2s,8µm						
GENI	Genyem	9.23	286	P	Pn	17 18 59.0	-2.4
COEN	Coen	10.49	213	*e*Pn	Pn	17 19 17.9	-0.8
COEN	Coen	10.49	213	P	Pn	17 19 19.5	+0.7
	baz=11,SNR=6.5						
HNR	Honiara	11.61	112	LR	LR	17 23 34.7	
	comp=Z,8µm,20.0s,baz=276,slow=35						
SRPI	Serui, Papua	13.20	284	P	Pn	17 19 51.1	-4.8
MTSU	Mount Surprise	13.70	199	P	Pn	17 20 06.3	+3.6
	baz=14,SNR=9.8						
CTA	Charters Tower	15.09	190	Pn	Pn	17 20 21.1	-0.4
	0.1nm,0.3s,baz=68,slow=17,SNR=2.3						
CTA				LR	LR	17 25 47.9	
	comp=Z,4µm,20.7s,baz=12,slow=36						
CTAO	Charters Tower	15.09	190	*e*Pn	P	17 20 24.4	-2.0
	156nm,1.8s						
CTAO	Charters Tower	15.09	190	*e*P	P	17 20 24.4	-2.0
CTAO				pmax	pmax		
	comp=Z,156nm,1.8s						
FAKI	Fak Fak	16.91	277	P	P	17 20 49.0	+2.4
QIS	Mount Isa	17.85	210	P	P	17 20 57.5	+0.5
	baz=18,SNR=12						
KDU	Kakadu	18.00	244	P	Pn	17 20 57.7	-0.6
	baz=18,SNR=24						
GUMO	Guam	19.08	347	LR	LR	17 27 25.2	
	comp=Z,2µm,18.5s,baz=170,slow=34						
PALU	Palau	19.13	310	P	P	17 21 08.9	-2.2
	baz=19,SNR=18						
MTN	Manton Dam	19.27	245	*e*P	P	17 21 09.3	-3.3
	comp=Z,63nm,0.8s						
MTN	Manton Dam	19.27	245	P	P	17 21 11.7	-0.9
	baz=19,SNR=11						
MSAI	Masohi	20.15	274	P	P	17 21 21.8	-0.4
EIDS	Eidsvold	20.19	175	*e*Pn	Pn	17 21 25.1	+0.4
	comp=Z,119nm,1.0s						
EIDS	Eidsvold	20.19	175	P	Pn	17 21 25.6	+1.0
	baz=20,SNR=22						
WRAB	Tennant Creek	20.51	223	*e*P	P	17 21 24.1	-1.9
	comp=Z,135nm,0.8s						
WRAB	Tennant Creek	20.51	223	*de*P	P	17 21 25.0	-1.1
WRAB				pmax	pmax		
	comp=Z,84nm,0.8s						
WB2	Warramunga Arr	20.51	223	*e*P	P	17 21 24.7	-1.4
	comp=Z,132nm,0.7s						
WR1	Warramunga Arr	20.52	223	*e*P	P	17 21 25.6	-0.6
WR1				*e*S	S	17 25 15.2	+1.1
WRA	Warramunga Arr	20.52	223	P	P	17 21 25.6	-0.6
	comp=Z,68nm,0.7s,baz=53,slow=10,SNR=98						
WRA				S	S	17 25 15.2	+1.1
AAI	Ambon	20.85	273	P	Pn	17 21 32.8	+0.4
RMQ	Roma	21.21	181	P	P	17 21 36.8	+3.2
	baz=22,SNR=23						
NLAI	Namlea	21.98	274	P	P	17 21 43.4	+1.5
LBMI	Labuha	21.98	281	P	P	17 21 39.9	-2.1
TNTI	Ternate	22.45	285	*e*P	P	17 21 42.5	-4.5
	comp=Z,249nm,1.5s						
TNTI	Ternate	22.45	285	P	P	17 21 43.7	-3.3
KNRA	Kununurra	22.50	241	P	P	17 21 46.7	-0.8
	baz=23,SNR=19						
SANI	Sanana	23.23	277	P	P	17 21 53.7	-1.4
AS17	Alice Springs	23.44	217	P	P	17 21 57.0	-0.1
	baz=24						
AS31	Alice Springs	23.49	217	*e*P	P	17 21 57.1	-0.5
	comp=Z,26nm,0.6s						
AS31				*e*S	S	17 26 11.5	+2.4
ASAR	Alice Springs	23.49	217	P	P	17 21 57.3	-0.3
	comp=Z,50nm,0.6s,baz=50,slow=8.7,SNR=258						
ASAR				S	S	17 26 11.5	+2.4
	comp=Z,1.7nm,0.7s,baz=34,slow=23,SNR=3.4						
ASAR				LR	LR	17 32 37.7	
	comp=Z,4µm,18.5s,baz=52,slow=40						
DZM	Mont Dzumac	23.79	137	*e*P	P	17 21 59.9	-0.6
	comp=Z,2µm,3.4s						
DZM				*e*S	S	17 26 03.0	-11
	comp=Z,2µm,24.9s						
DZM				*e*LR	LR	17 27 45.1	
	comp=Z,15µm,23.3s						
DZM	Mont Dzumac	23.79	137	P	P	17 22 00.9	+0.4
	comp=Z,59nm,1.0s,baz=351,slow=11,SNR=15						
DZM	Mont Dzumac	23.79	137	*e*P	P	17 22 01.8	+1.3
	comp=Z,114nm,1.0s						
SOEI	Soe	24.99	258	P	P	17 22 19.9	+8.2
SGSI	Sangihe	25.09	290	P	P	17 22 09.3	-3.1
ARMA	Armidale	25.24	175	*e*P	P	17 22 14.8	+1.1
	comp=Z,76nm,1.1s						
ARMA	Armidale	25.24	175	P	P	17 22 15.7	+1.9
	baz=26,SNR=21						
BATI	Baumata	25.65	257	P	P	17 22 15.8	-1.7
	comp=Z,35nm,0.9s,baz=100,slow=10,SNR=3.3						
BATI				LR	LR	17 34 15.7	
	comp=Z,5µm,21.6s,baz=98,slow=41						
BATI	Baumata	25.65	257	P	P	17 22 18.3	+0.8
DAV	Davao City (W)	26.39	297	LR	LR	17 33 06.3	
	comp=Z,1µm,18.1s,baz=104,slow=37						
CMSA	Cobar Meteorol	26.43	186	P	P	17 22 25.4	+1.1
	baz=27,SNR=21						
LUWI	Luwuk	26.56	278	*e*P	P	17 22 22.9	-2.8
	comp=Z,344nm,1.3s						
LUWI	Luwuk	26.56	278	P	P	17 22 27.2	+1.5
KCP	Kidapawan	26.80	297	⇓*i*P	P	17 22 33.3	+5.3
EDFI	Ende, Flores	27.39	261	P	P	17 22 32.3	-1.1
STKA	Stephens Creek	27.48	194	P	P	17 22 33.5	-0.4
	comp=Z,7.5nm,0.8s,baz=15,slow=12,SNR=9.2						
STKA				LR	LR	17 34 02.4	
	comp=Z,3µm,19.0s,baz=14,slow=38						
STKA	Stephens Creek	27.48	194	*e*P	P	17 22 34.9	+1.1
	comp=Z,16nm,1.3s						
STKA	Stephens Creek	27.48	194	P	P	17 22 34.7	+0.8
	baz=28,SNR=11						
STKA	Stephens Creek	27.48	194	*e*P	P	17 22 34.9	+1.1
STKA				pmax	pmax		
	comp=Z,16nm,1.3s						
CTBH	Cotabato--PC H	27.64	296	⇑*i*P	P	17 22 35.6	+0.1
APSI	Ampana	27.68	278	P	P	17 22 38.7	+2.8
WRKA	Warakurna	28.06	223	P	P	17 22 38.5	-0.7
	baz=28,SNR=20						
WSI	Waingapu	28.86	259	P	P	17 22 48.5	+2.2
KAPI	Kappang	29.19	269	LR	LR	17 36 54.8	
	comp=Z,1µm,21.7s,baz=298,slow=41						
H11S3	WAKE ISLAND Hy	29.23	36	T	T	17 52 47.1	
	baz=220,slow=74,SNR=31						
H11S2	WAKE ISLAND Hy	29.24	36	T	T	17 52 46.1	
	baz=220,slow=74,SNR=7.4						
H11S1	WAKE ISLAND Hy	29.25	36	T	T	17 52 47.5	
	baz=220,slow=74,SNR=7.6						
HTT	Hallett	29.67	197	P	P	17 22 53.8	+0.5
	baz=30,SNR=4.7						
CNB	Canberra Magne	30.01	179	P	P	17 22 58.3	+1.9
	baz=30,SNR=6.8						
CAN	Canberra	30.02	180	*e*P	P	17 22 58.1	+1.7
	comp=Z,63nm,1.7s						
CAN	Canberra	30.02	180	*e*P	P	17 22 58.1	+1.7
CAN				pmax	pmax		
	comp=Z,63nm,1.7s						
H11N1	WAKE ISLAND Hy	30.31	35	T	T	17 54 16.0	
	baz=218						
H11N3	WAKE ISLAND Hy	30.32	35	T	T	17 54 16.0	
	baz=218						
H11N2	WAKE ISLAND Hy	30.33	35	T	T	17 54 16.6	
	baz=218						
MILA	Mila	31.75	180	P	P	17 23 13.2	+1.5
	baz=32,SNR=4.4						
ARPS	Mount Arapiles	32.15	191	P	P	17 23 16.6	+1.5
	baz=32,SNR=8.9						
FORT	Forrest	32.24	215	*e*P	P	17 23 16.1	+0.1
	comp=Z,58nm,0.8s						
FORT	Forrest	32.24	215	P	P	17 23 15.7	-0.3
	baz=32,SNR=15						
TOO	Toolangi	32.43	185	*e*P	P	17 23 18.6	+1.0
	comp=Z,34nm,0.8s						
TOO	Toolangi	32.43	185	P	P	17 23 18.8	+1.2
	baz=33,SNR=37						
TOO	Toolangi	32.43	185	*e*P	P	17 23 18.6	+1.0
TOO				pmax	pmax		
	comp=Z,34nm,0.8s						
PSA00	Pilbara Seismi	32.67	237	*e*P	P	17 23 18.7	-1.2
	comp=Z,35nm,0.9s						
TGY	Tagaytay City	33.83	305	LR	LR	17 34 49.1	
	comp=Z,1µm,21.7s,baz=121,slow=32						
MEEK	Meekatharra	36.06	230	P	P	17 23 48.1	-1.1
	baz=36,SNR=17						
KMBL	Kambalda	36.47	221	P	P	17 23 52.8	+0.2
	baz=37,SNR=12						
MOO	Moorlands	37.16	182	P	P	17 24 00.7	+2.3
	baz=38,SNR=4.5						
SBUM	Sibu	37.57	281	*e*P	P	17 23 59.9	-2.3
	comp=Z,38nm,2.0s						
JHJ	Hachijo jima 2	39.07	348	LR	LR	17 39 51.8	
	comp=Z,1µm,18.2s,baz=106,slow=36						
YULB	Yu-li	39.24	317	*e*P	P	17 24 13.0	-3.1
	comp=Z,64nm,1.8s						
MORW	Morawa	39.26	229	*e*P	P	17 24 15.4	-0.9
	comp=Z,96nm,1.4s						
MORW	Morawa	39.26	229	P	P	17 24 16.3	+0.1
	baz=40,SNR=8.6						
BLDU	Ballidu	39.59	226	P	P	17 24 19.8	+0.9
	baz=40,SNR=6.8						
TPUB	Ta-pu	39.63	317	*e*P	P	17 24 15.6	-3.7
	comp=Z,18nm,1.0s						
SSLB	Suanglung	39.73	318	*e*P	P	17 24 15.8	-4.4
	comp=Z,10nm,0.9s						
YHNB	Yeheng	40.06	319	*e*P	P	17 24 17.7	-5.3
	comp=Z,74nm,1.2s						
MUN	Mundaring	40.70	225	P	P	17 24 29.1	+0.9
	baz=41,SNR=6.3						
URZ	Urewera	41.67	146	P	P	17 24 36.3	+0.3
	comp=Z,4.6nm,0.7s,baz=299,slow=10,SNR=3.7						
URZ				LR	LR	17 39 21.4	
	comp=Z,4µm,21.7s,baz=329,slow=32						
JNU	Nakatsue	41.79	337	LR	LR	17 40 11.8	
	comp=Z,1µm,20.3s,baz=148,slow=34						
JNU	Nakatsue	41.79	337	*e*P	P	17 24 32.1	-5.0
	comp=Z,54nm,1.2s						
QZH	Quanzhou	42.11	317	*e*P	P	17 24 40.6	+0.9
QZH				S	S	17 30 54.7	-2.5
QZH				LR	LR		
	comp=Z,750nm,15.6s						
QZH				LR	LR		
	comp=Z,1µm,17.5s						
QZH				LR	LR		
	comp=Z,2µm,18.9s						
MJAR	Matsushiro Arr	42.71	347	P	P	17 24 41.2	-3.3
	comp=Z,0.6nm,0.6s,baz=182,slow=10,SNR=3.2						
MJAR				LR	LR	17 40 23.5	
	comp=Z,364nm,18.9s,baz=165,slow=33						
MAJO	Matsushiro	42.71	347	*e*P	P	17 24 41.2	-3.3
MAJO	Matsushiro	42.71	347	⇑*e*P	P	17 24 44.5	0.0
MAJO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RPZ	Rata Peaks	43.02	157	LR	LR	17 41 07.2	
	comp=Z,4µm,20.6s,baz=332,slow=34						
QIZ	Qiongzhong	45.48	303	P	P	17 25 03.4	-3.6
QIZ				pP	pP	17 25 07.6	-9.3
QIZ				S	S	17 31 47.5	+0.8
QIZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
QIZ				LR	LR		
	comp=Z,640nm,20.1s						
QIZ				LR	LR		
	comp=Z,920nm,24.5s						
QIZ				LR	LR		
	comp=Z,2µm,25.0s						
KSRS	Korea Array	46.74	337	P	P	17 25 14.8	-1.9
	comp=Z,2.6nm,0.8s,baz=151,slow=8.7,SNR=8.7						
KSRS				LR	LR	17 43 10.9	
	comp=Z,1µm,20.8s,baz=156,slow=34						
KS15	Wonju Array Si	46.75	337	*e*P	P	17 25 14.8	-1.9
	comp=Z,95nm,1.9s						
NJ2	Nanjing	46.86	324	*e*P	P	17 25 15.7	-1.9
NJ2				S	S	17 32 08.6	+2.6
NJ2				sS	sS	17 32 14.2	-8.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,340nm,5.7s						
NJ2				LR	LR		
	comp=Z,1µm,18.0s						
NJ2				LR	LR		
	comp=Z,1µm,21.3s						
NJ2				LR	LR		
	comp=Z,2µm,19.9s						
WHN	Wuhan	48.60	319	P	P	17 25 36.6	+5.4
WHN				S	S	17 32 32.2	+1.3
WHN				LR	LR		
	comp=N,2µm,14.0s						
WHN				LR	LR		
	comp=E,5µm,19.1s						
WHN				LR	LR		
	comp=Z,6µm,19.7s						
YUK	Yuzh-Kuril'sk	49.05	357	*e*P	P	17 25 32.1	-2.2
YUK				*e*		17 27 20.1	
YUK				*e*PPP	PPP	17 28 17.1	
YUK				*e*S	S	17 32 36.5	-0.2
YUK				*e*SS	SS	17 36 06.7	-1.6
YUK				*e*SSS	SSS	17 37 25.3	
YUK				pmax	pmax		
	comp=Z,91nm,1.1s						
YUK				pmax	pmax		
	comp=E,56nm,1.2s						
YUK				pmax	pmax		
	comp=N,47nm,1.0s						
YUK				pmax	pmax		
	comp=Z,106nm,1.3s						
YUK				MLR	MLR		
	comp=Z,560nm,18.0s						
YUK				MLR	MLR		
	comp=N,518nm,21.0s						
YUK				MLR	MLR		
	comp=E,250nm,15.0s						
SKNT	Sakolnakorn	49.67	297	P	P	17 25 39.8	+0.2
	comp=E,36nm,1.3s						
KUR	Kuril'sk	50.18	359	P	P	17 25 42.4	-0.5
KUR				S	S	17 32 57.5	+5.1
KUR				*e*SS	SS	17 36 23.0	-3.3
KUR				pmax	pmax		
	comp=Z,181nm,1.3s						
KUR				pmax	pmax		
	comp=Z,400nm,4.0s						
KUR				MLR	MLR		
	comp=Z,400nm,12.0s						
DL2	Dalian	50.66	332	P	P	17 25 45.3	-1.4
DL2				S	S	17 32 59.6	+0.2
DL2				SS	SS	17 36 32.3	-2.0
DL2				pmax	pmax		
	comp=Z,38nm,1.1s						
DL2				pmax	pmax		
	comp=Z,300nm,4.6s						
DL2				LR	LR		
	comp=Z,1µm,21.5s						
DL2				LR	LR		
	comp=Z,930nm,17.5s						
DL2				LR	LR		
	comp=Z,2µm,20.1s						
PSI	Prapat	50.70	278	*e*P	P	17 25 44.9	-2.7
	comp=Z,33nm,1.5s						
PSI	Prapat	50.70	278	*e*P	P	17 25 44.9	-2.7
PSI				pmax	pmax		
	comp=Z,33nm,1.5s						
NONG	Nongkai	50.82	298	P	P	17 25 47.0	-1.3
	comp=Z,0.6nm,1.1s						
TRTT	Trang	50.91	284	P	P	17 25 53.1	+4.1
	comp=Z,44nm,1.4s						
CHAI	Chaiyaphum	51.06	295	P	P	17 25 54.6	+4.4
	comp=Z,21µm,1.2s						
USA0B	Ussuriysk Arra	51.48	344	*e*P	P	17 25 50.3	-2.4
	comp=Z,51nm,1.6s						
USRK	Ussuriysk Ar.	51.48	344	P	P	17 25 52.1	-0.7
	comp=Z,4.3nm,0.7s,baz=178,slow=8.8,SNR=12						
USRK				LR	LR	17 45 12.8	
	comp=Z,1µm,21.1s,baz=146,slow=33						
SLVN	Son La	51.50	302	*e*P	P	17 25 51.2	-2.2
	comp=Z,38nm,1.4s						
GYA	Guiyang	51.70	310	*e*P	P	17 25 59.2	+4.3
GYA				PP	PP	17 27 57.1	+4.3
GYA				S	S	17 33 24.3	+10
GYA	Guiyang	51.70	310	SS	SS	17 37 01.3	+10
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,120nm,6.6s						
GYA				LR	LR		
	comp=N,690nm,20.5s						
GYA				LR	LR		
	comp=E,970nm,21.7s						
GYA				LR	LR		
	comp=Z,1µm,22.5s						
GSI	Gunungsitoli	51.82	276	*e*P	P	17 25 51.8	-4.1
	comp=Z,67nm,1.6s						
RAR	Rarotonga	52.06	113	LR	LR	17 47 24.1	
	comp=Z,391nm,18.5s,baz=265,slow=35						
YSS	Yuzh-Sakhalins	52.19	355	*e*P	P	17 25 57.1	-0.8
YSS				*e*S	S	17 33 21.8	+1.7
SNY	Shenyang	52.22	336	⇑P	P	17 25 58.6	+0.3
SNY				S	S	17 33 22.5	+1.8
SNY				pmax	pmax		
	comp=Z,12nm,0.5s						
SNY				pmax	pmax		
	comp=Z,360nm,4.3s						
SNY				LR	LR		
	comp=Z,690nm,20.8s						
SNY				LR	LR		
	comp=Z,750nm,18.8s						
SNY				LR	LR		
	comp=Z,2µm,27.5s						
PKDT	Phuket	52.23	284	P	P	17 26 03.3	+4.4
	comp=Z,82nm,1.1s						
PHET	Kaeng Krachan	52.28	291	P	P	17 26 05.9	+6.7
	comp=Z,21µm,0.9s,comp=Z,562µm						
MDJ	Mudanjiang	52.54	343	P	P	17 26 00.6	-0.1
MDJ				pP	pP	17 26 04.8	-5.9
MDJ				sP	pwP	17 26 06.1	-6.6
MDJ				S	S	17 33 28.7	+3.6
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDJ				LR	LR		
	comp=Z,800nm,18.5s						
MDJ				LR	LR		
	comp=Z,600nm,17.1s						
MDJ				LR	LR		
	comp=Z,1µm,19.9s						
UTTA	Uttaradit	52.99	297	P	P	17 26 04.9	+0.4
	comp=Z,42µm,1.3s,comp=Z,405µm						
CN2	Changchun	53.19	339	*e*P	P	17 26 06.4	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PHRA	Phrae	53.55	297	P	P	17 26 10.2	+1.6
	comp=Z,4.9nm,1.3s						
UMPA	Umpang Tak	54.00	294	P	P	17 26 14.4	+2.5
	comp=Z,36µm,1.0s						
LAMP	Lampang	54.09	297	P	P	17 26 19.6	+7.1
KMI	Kunming	54.13	306	P	P	17 26 12.2	-0.8
KMI				pP	pP	17 26 14.8	-8.3
KMI				sP	pwP	17 26 19.3	-5.9
KMI				PP	PP	17 28 16.0	+1.0
KMI				S	S	17 33 43.1	-4.8
KMI				sS	pS	17 33 56.2	-3.6
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
KMI				pmax	pmax		
	comp=Z,170nm,4.4s						
KMI				LR	LR		
	comp=Z,690nm,21.0s						

KMI				LR	LR		
	comp=Z,800nm,22.6s						
KMI				LR	LR		
	comp=Z,1µm,28.9s						
BJI	**Beijing**	**54.20**	**329**⇑	*i*P	**P**	**17 26 12.3**	**-0.6**
BJI				S	**S**	**17 33 50.4**	**+2.6**
BJI				LR	LR		
	comp=Z,330nm,24.9s						
BJI				LR	LR		
	comp=Z,300nm,21.4s						
BJI				LR	LR		
	comp=Z,820nm,32.4s						
XAN	**Xi'an**	**54.37**	**319**	P	**P**	**17 26 12.0**	**-2.4**
XAN				pP	pP	17 26 21.7	-2.7
XAN				S	**S**	**17 33 49.5**	**-0.9**
XAN				SS	**SS**	**17 37 32.5**	**-0.7**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,110nm,3.7s						
XAN				LR	LR		
	comp=Z,750nm,20.2s						
XAN				LR	LR		
	comp=Z,610nm,15.8s						
XAN				LR	LR		
	comp=Z,1µm,16.0s						
CM31	**Chiang Mai Arr**	**54.68**	**297**	*e*P	**P**	**17 26 15.9**	**-0.9**
	comp=Z,49nm,1.3s						
CM31	**Chiang Mai Arr**	**54.68**	**297**	P	P	17 26 22.4	+5.6
	SNR=7.9						
CMAR	**Chiang Mai Arr**	**54.68**	**297**	P	**P**	**17 26 15.9**	**-0.9**
	comp=Z,4.9nm,1.0s,baz=116,slow=5.4,SNR=14						
CMAR				LR	LR	17 48 43.5	
	comp=Z,275nm,21.3s,baz=126,slow=35						
CMMT	**Chiang Mai**	**54.80**	**297**	P	**P**	**17 26 19.0**	**+1.3**
	comp=Z,13nm,1.3s,comp=Z,214nm						
CHTO	**Chiang Mai**	**54.80**	**297**	*e*P	**P**	**17 26 14.9**	**-2.8**
	comp=Z,42nm,1.3s						
CHTO	**Chiang Mai**	**54.80**	**297**	*e*P	**P**	**17 26 14.9**	**-2.8**
CHTO				pmax	pmax		
	comp=Z,42nm,1.3s						
CHTO	**Chiang Mai**	**54.80**	**297**	P	**P**	**17 26 16.7**	**-1.1**
	SNR=9.3						
CD2	**Chengdu**	**56.18**	**313**	P	**P**	**17 26 25.6**	**-1.9**
CD2				sP	pP	17 26 34.4	-3.2
CD2				S	**S**	**17 34 16.2**	**+1.4**
CD2				SS	**SS**	**17 37 53.3**	**-8.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,310nm,6.5s						
CD2				LR	LR		
	comp=Z,1µm,22.6s						
CD2				LR	LR		
	comp=Z,2µm,22.6s						
CD2				LR	LR		
	comp=Z,2µm,23.0s						
KLR	**Kul'dur**	**56.23**	**346***c*	*i*P	**P**	**17 26 27.3**	**-0.1**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GRNR	**Gornyy**	**56.76**	**350**	*e*P	**P**	**17 26 31.0**	**-0.2**
HHC	**Hu-ho-hao-te**	**57.23**	**327**	P	**P**	**17 26 35.1**	**+0.3**
HHC				PP	**PP**	**17 28 43.3**	**+1.1**
HHC				S	**S**	**17 34 27.2**	**-1.2**
HHC				SS	**SS**	**17 38 18.7**	**+0.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=Z,1µm,18.6s						
HHC				LR	LR		
	comp=Z,810nm,15.7s						
HHC				LR	LR		
	comp=Z,2µm,17.7s						
BTO	**Baotou**	**57.92**	**326**	*e*P	**P**	**17 26 39.8**	**+0.1**
PEA0B	**Petropavlovsk-**	**58.51**	**6**	*e*P	**P**	**17 26 42.9**	**-0.5**
	comp=Z,56nm,1.3s						
PETK	**Petropavlovsk-**	**58.51**	**6**	P	**P**	**17 26 42.6**	**-0.8**
	comp=Z,9.7nm,0.8s,baz=173,slow=6.4,SNR=7.5						
PETK				LR	LR	17 48 48.6	
	comp=Z,574nm,21.6s,baz=181,slow=33						
PEA1	**Petropavlovsk-**	**58.51**	**6**	*e*P	**P**	**17 26 42.6**	**-0.8**
NKL	**Nikolayevsk**	**58.52**	**354**	*e*P	**P**	**17 26 42.6**	**-0.8**
NKL				*e*		17 27 33.1	
NKL				*e*		17 28 50.9	
NKL				*e*S	**S**	**17 34 40.9**	**-3.6**
NKL				*e*		17 36 30.3	
NKL				pmax	pmax		
	comp=E,7.0nm,1.4s						
NKL				pmax	pmax		
	comp=Z,24nm,1.4s						
NKL				pmax	pmax		
	comp=N,33nm,1.7s						
NKL				pmax	pmax		
	comp=Z,68nm,1.7s						
NKL				MLR	MLR		
	comp=N,225nm,17.0s						
NKL				MLR	MLR		
	comp=Z,440nm,20.0s						
NKL				MLR	MLR		
	comp=E,297nm,16.0s						
PET	**Petropavlovsk**	**58.53**	**7**	*e*P	**P**	**17 26 46.2**	**+2.7**
PET				*e*S	**S**	**17 34 46.2**	**+1.5**
PET				MLR	MLR		
	comp=Z,600nm,19.0s						
LZH	**Lanzhou**	**58.94**	**318** ⇓	P	**P**	**17 26 47.0**	**0.0**
LZH				pP	pP	17 26 56.8	-0.3
LZH				PP	**PP**	**17 29 02.1**	**+4.5**
LZH				S	**S**	**17 34 51.1**	**+0.1**
LZH				sS	pS	17 34 57.5	-5.7
LZH				SS	**SS**	**17 38 47.0**	**+1.7**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=Z,500nm,17.4s						
LZH				LR	LR		
	comp=Z,690nm,17.0s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
PPT	**Papeete**	**61.18**	**107**	LR	LR	17 49 44.6	
	comp=Z,344nm,20.8s,baz=270,slow=32						
PPT2	**Papeete2**	**61.18**	**107**	*e*S	**S**	**17 35 19.7**	**-0.6**
	comp=Z,594nm,29.2s						
PPT2				*e*LQ	LQ	17 42 22.8	
	comp=Z,1µm,25.0s						
PPT2				*e*LR	LR	17 45 04.6	
	comp=Z,632nm,23.2s						
ZEA	**Zeya**	**61.48**	**345**	*e*P	**P**	**17 27 04.6**	**+0.8**
ZEA				*e*S	**S**	**17 35 26.0**	**+3.4**
ZEA				pmax	pmax		
	comp=Z,80nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,300nm,4.0s						
ZEA				smax	smax		
	comp=E,500nm,10.0s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
TBI	**Tubuai**	**61.82**	**114**	*e*S	**S**	**17 35 25.3**	**-2.8**
	comp=Z,606nm,32.5s						
TBI				*e*LQ	LQ	17 42 48.4	
	comp=Z,2µm,33.5s						
TBI				*e*LR	LR	17 45 24.9	
	comp=Z,3µm,35.5s,baz=282						
SHL	**Shillong**	**63.30**	**302**	*e*P	**P**	**17 27 14.4**	**-2.3**
	comp=Z,170nm,1.3s						
SHL	**Shillong**	**63.30**	**302**	*e*P	**P**	**17 27 14.4**	**-2.3**
SHL				pmax	pmax		
	comp=Z,170nm,1.3s						
SHL	**Shillong**	**63.30**	**302**	*e*P	**P**	**17 27 14.0**	**-2.8**
GTA	**Gaotai**	**63.43**	**319**	*e*P	**P**	**17 27 16.3**	**-1.0**
GTA				pP	pP	17 27 20.6	-6.9
GTA				sP	pwP	17 27 23.5	-6.3
GTA				S	**S**	**17 35 53.9**	**+5.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,5.8s						
GTA				LR	LR		
	comp=Z,270nm,16.1s						
GTA				LR	LR		
	comp=Z,370nm,19.6s						
GTA				LR	LR		
	comp=Z,690nm,19.2s						
ULN	**Ulaanbaatar**	**64.38**	**330**	*e*P	**P**	**17 27 20.8**	**-2.6**
	comp=Z,37nm,1.4s						
ULN	**Ulaanbaatar**	**64.38**	**330***c*	*i*P	**P**	**17 27 22.7**	**-0.7**
ULN				pmax	pmax		
	comp=Z,21nm,2.5s						
ULN	**Ulaanbaatar**	**64.38**	**330**	P	**P**	**17 27 23.7**	**+0.3**
	SNR=20						
ULN				P	**P**	**17 27 23.7**	**+0.3**
	SNR=20						
CIT	**Chita**	**64.48**	**337**	*e*P	P	17 27 35.0	+11
CIT				*e*		17 27 46.2	
CIT				*e*		17 28 01.1	
SONA0	**Songino Array**	**64.69**	**330**	*e*P	**P**	**17 27 24.3**	**-1.1**
SONM	**Songino Array**	**64.69**	**330**	P	**P**	**17 27 24.3**	**-1.1**
	comp=Z,4.4nm,0.8s,baz=148,slow=4.2,SNR=25						
SONM				LR	LR	17 55 59.7	
	comp=Z,763nm,19.4s,baz=129,slow=36						
LSA	**Lhasa**	**65.39**	**306**	P	**P**	**17 27 30.2**	**-0.6**
CASY	**Casey**	**66.61**	**196**	*e*P	**P**	**17 27 36.0**	**-1.3**
	comp=Z,14nm,1.1s						
ZAK	**Zakamensk**	**67.91**	**330**	*e*P	**P**	**17 27 44.5**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,22nm,1.1s						
SEY	**Seymchan**	**67.95**	**2**⇓	*e*P	**P**	**17 27 45.9**	**+0.1**
TLY	**Talaya**	**68.56**	**332**	*e*P	**P**	**17 27 46.7**	**-3.2**
	comp=Z,17nm,1.2s						
TLY	**Talaya**	**68.56**	**332**	*e*P	**P**	**17 27 49.8**	**-0.1**
TLY				*e*S	**S**	**17 36 54.9**	**+5.0**
TLY				pmax	pmax		
	comp=Z,22nm,1.4s						
TLY				MLR	MLR		
	comp=Z,1µm,16.0s						
TLY	**Talaya**	**68.56**	**332**	P	**P**	**17 27 50.2**	**+0.3**
	SNR=11						
TLY				P	**P**	**17 27 50.2**	**+0.3**
	SNR=11						
IRK	**Irkutsk**	**68.64**	**332**	*e*P	P	17 27 44.9	-5.5
IRK				pmax	pmax		
	comp=Z,27nm,2.5s						
YAK	**Yakutsk**	**68.64**	**350**	*e*P	**P**	**17 27 48.0**	**-2.1**
	comp=Z,60nm,1.6s						
YAK	**Yakutsk**	**68.64**	**350**	*e*P	**P**	**17 27 51.3**	**+1.2**
YAK				*e**PP	**PcP**	**17 28 17.4**	**+2.6**
YAK				*e*S	**S**	**17 36 54.6**	**+4.3**
YAK				*e**SS	**ScS**	**17 37 48.3**	**+1.1**
YAK				*e*SS	**SS**	**17 41 19.7**	**+4.4**
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,49nm,3.5s						
YAK				pmax	pmax		
	comp=N,52nm,3.2s						
YAK				pmax	pmax		
	comp=E,30nm,3.1s						
YAK				smax	smax		
	comp=N,102nm,3.8s						
YAK				smax	smax		
	comp=E,51nm,4.2s						
JIRN	**Jiri**	**68.80**	**302**	*e*P	**P**	**17 27 54.5**	**+2.2**
BOD	**Bodaibo**	**68.84**	**341**	*e*P	**P**	**17 27 52.0**	**+0.5**
BOD				pmax	pmax		
	comp=Z,14nm,1.0s						
GUN	**Gumba**	**69.14**	**302**	*e*P	**P**	**17 27 56.7**	**+2.3**
	comp=Z,226nm,1.2s						
PKI	**Pulchoki**	**69.43**	**302**	*e*P	**P**	**17 27 57.9**	**+1.7**
	comp=Z,114nm,1.2s						
PKIN	**Phulchoki**	**69.44**	**302**	*e*P	**P**	**17 27 57.7**	**+1.5**
	comp=Z,67nm,1.2s						
KKN	**Kakani**	**69.60**	**302**	*e*P	**P**	**17 27 59.1**	**+2.0**
	comp=Z,95nm,1.0s						
DMN	**Daman**	**69.70**	**302**	*e*P	**P**	**17 27 59.9**	**+2.1**
	comp=Z,192nm,1.1s						
MOY	**Mondy**	**69.84**	**330**	*e*P	**P**	**17 27 57.7**	**-0.2**
MOY				pmax	pmax		
	comp=Z,51nm,1.5s						
GKN	**Gorkha**	**70.21**	**302**	*e*P	**P**	**17 28 02.6**	**+1.8**
TAOE	**Nuku Hiva Isla**	**70.28**	**98**	*e*LR	LR	17 49 24.0	
	comp=Z,700nm,26.8s						
KOLN	**Koldanda**	**71.02**	**302**	*e*P	**P**	**17 28 06.8**	**+1.0**
	comp=Z,132nm,1.0s						
PYUN	**Piuthan**	**71.63**	**302**	*e*P	**P**	**17 28 10.3**	**+0.8**
	comp=Z,147nm,1.0s						
VNDA	**Vanda**	**72.64**	**177**	P	**P**	**17 28 15.2**	**+0.9**
	comp=Z,3.7nm,0.8s,baz=328,slow=5.4,SNR=15						
VNDA				LR	LR	17 56 27.7	
	comp=Z,810nm,20.2s,baz=347,slow=33						
VNDA	**Vanda**	**72.64**	**177**	*e*P	**P**	**17 28 14.5**	**+0.2**
	comp=Z,10nm,1.1s						
VNDA	**Vanda**	**72.64**	**177**	*e*P	**P**	**17 28 14.5**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HYB	**Hyderabad**	**73.09**	**290**	*i* P	**P**	**17 28 21.5**	**+3.3**
WMQ	**Urumqi**	**73.51**	**319**	*e*P	**P**	**17 28 20.5**	**+0.4**
WMQ				LR	LR		
	comp=Z,560nm,19.9s						
WMQ				LR	LR		
	comp=Z,300nm,17.7s						
WMQ				LR	LR		
	comp=Z,670nm,22.1s						
BILL	**Bilibino**	**74.03**	**7**	*e*P	**P**	**17 28 21.3**	**-1.3**
	comp=Z,28nm,1.1s						
BILL	**Bilibino**	**74.03**	**7***c*	*i*P	**P**	**17 28 24.3**	**+1.7**
BILL				pmax	pmax		
	comp=Z,23nm,1.2s						
RKT	**Rikitea**	**75.10**	**112**	*e*LR	LR	17 51 28.2	
	comp=Z,2µm,30.2s						
DGZ	**Jazzator, Alta**	**76.15**	**324***d*	*e*P	**P**	**17 28 34.7**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OHAK	**Old Harbor**	**77.59**	**28**	*e*P	**P**	**17 28 43.1**	**0.0**
	comp=Z,21nm,1.0s						
TIXI	**Tiksi**	**77.80**	**354**	*e*P	**P**	**17 28 43.5**	**-0.4**
	comp=Z,6.9nm,1.1s						
TIXI	**Tiksi**	**77.80**	**354**⇑	*e*P	**P**	**17 28 44.2**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MK31	**Makanchi Array**	**78.17**	**320**	*e*P	**P**	**17 28 44.9**	**-1.7**
	comp=Z,14nm,1.3s						
MK31	**Makanchi Array**	**78.17**	**320**	*e*P	**P**	**17 28 44.9**	**-1.7**
MK31				pmax	pmax		
	comp=Z,14nm,1.3s						
MK32	**Makanchi Array**	**78.17**	**320**	*e*P	**P**	**17 28 45.8**	**-0.9**
MKAR	**Makanchi Array**	**78.17**	**320**	P	**P**	**17 28 45.8**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=99,slow=6.3,SNR=10						
MKAR				LR	LR	18 02 47.5	
	comp=Z,718nm,18.9s,baz=92,slow=35						
MAKZ	**Makanchi**	**78.37**	**320**	*e*P	**P**	**17 28 45.4**	**-2.4**
	comp=Z,39nm,1.6s						
MAKZ	**Makanchi**	**78.37**	**320**	*e*P	**P**	**17 28 45.4**	**-2.4**
MAKZ				pmax	pmax		
	comp=Z,39nm,1.6s						
SVW2	**Sparrevohn**	**78.64**	**24**	*e*P	**P**	**17 28 49.2**	**+0.3**
	comp=Z,24nm,1.1s						
PRZ	**Przheval'sk**	**79.40**	**315**	*e*P	**P**	**17 28 50.5**	**-3.2**
	comp=Z,115nm,1.5s						
PRZ	**Przheval'sk**	**79.40**	**315**	*e*P	**P**	**17 28 50.5**	**-3.2**
PRZ				pmax	pmax		
	comp=Z,115nm,1.5s						
ZAA0	**Zalesovo Array**	**79.41**	**327**	*e*P	**P**	**17 28 50.4**	**-2.8**
	comp=Z,12nm,1.0s						
ZALV	**Zalesovo Beam**	**79.41**	**327**	P	**P**	**17 28 51.5**	**-1.7**
	comp=Z,2.8nm,0.7s,baz=107,slow=5.4,SNR=9.2						
ZALV				LR	LR	18 03 47.6	
	comp=Z,878nm,19.7s,baz=73,slow=36						
ZAA1	**Zalesovo Array**	**79.41**	**327**	*e*P	**P**	**17 28 51.5**	**-1.8**
TTA	**Tatalina**	**79.49**	**22**	*e*P	**P**	**17 28 53.1**	**-0.5**
	comp=Z,17nm,1.2s						
TTA	**Tatalina**	**79.49**	**22**	*e*P	**P**	**17 28 53.1**	**-0.5**
TTA				pmax	pmax		
	comp=Z,17nm,1.2s						
CNPM	**China Poot**	**79.68**	**27**	*e*P	**P**	**17 28 54.2**	**-0.4**
	comp=Z,85nm,1.0s						
BRLK	**Bradley Lake**	**79.95**	**26**	*e*P	**P**	**17 28 53.6**	**-2.5**
	comp=Z,39nm,1.4s						
KDJ	**Kajisay**	**80.17**	**314**	*e*P	**P**	**17 28 57.3**	**-0.6**
	comp=Z,28nm,1.0s						
KDJ	**Kajisay**	**80.17**	**314**	P	**P**	**17 28 57.3**	**-0.6**
KDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
KSH	**Kashi**	**80.35**	**311**	*e*P	**P**	**17 28 59.1**	**+0.2**
KSH				pP	PcP	17 29 04.9	-1.0
KSH				sP	pP	17 29 06.8	-2.4
KSH				PP	**PP**	**17 32 04.8**	**+2.7**
KSH				S	**S**	**17 39 02.4**	**-0.2**
KSH				SKS	**SKSac**	**17 39 10.4**	**-4.0**
KSH				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH				pmax	pmax		
	comp=Z,250nm,4.8s						
KSH				LR	LR		
	comp=Z,830nm,20.0s						
KSH				LR	LR		
	comp=Z,550nm,16.5s						
KSH				LR	LR		
	comp=Z,770nm,24.9s						
SEW	**Seward**	**80.74**	**26**	*e*P	**P**	**17 28 57.6**	**-2.7**
	comp=Z,43nm,1.2s						
PPLA	**Purkeypile**	**80.95**	**23**	*e*P	**P**	**17 28 58.6**	**-3.0**
	comp=Z,39nm,1.7s						
RC01	**Rabbit Creek A**	**81.08**	**26**	*e*P	**P**	**17 29 00.8**	**-1.3**
	comp=Z,40nm,1.3s						
NIL	**Nilore**	**81.11**	**305**	*e*P	P	17 28 56.9	-6.0
	comp=Z,44nm,1.1s						
NIL	**Nilore**	**81.11**	**305**	*e*P	P	17 28 56.9	-6.0
NIL				pmax	pmax		
	comp=Z,44nm,1.1s						
CAST	**Castle Rocks**	**81.26**	**23**	*e*P	**P**	**17 29 01.3**	**-1.7**
	comp=Z,22nm,1.1s						
KURK	**Kurchatov**	**81.77**	**323**	*e*P	**P**	**17 29 04.0**	**-2.0**
	comp=Z,26nm,1.3s						
KURK	**Kurchatov**	**81.77**	**323***d*	*e*P	**P**	**17 29 05.0**	**-1.0**
KURK				pmax	pmax		
	comp=Z,12nm,1.7s						
KURK	**Kurchatov**	**81.77**	**323**	P	**P**	**17 29 05.5**	**-0.5**
	SNR=8.9						
KURK				P	**P**	**17 29 05.5**	**-0.5**
	SNR=8.9						
KNK	**Knik Glacier**	**81.78**	**26**	*e*P	**P**	**17 29 04.8**	**-1.1**
	comp=Z,43nm,1.4s						
KTH	**Kantishna Hill**	**81.78**	**23**	*e*P	**P**	**17 29 04.9**	**-0.9**
	comp=Z,25nm,1.2s						
SML	**Sawmill**	**82.01**	**25**	*e*P	**P**	**17 29 06.7**	**-0.4**
	comp=Z,42nm,1.1s						
SML	**Sawmill**	**82.01**	**25**	P	**P**	**17 29 06.7**	**-0.4**
SML				pmax	pmax		
	comp=Z,41nm,1.1s						
BPAW	**Bear Paw Mtn.**	**82.02**	**23**	*e*P	**P**	**17 29 06.2**	**-0.9**
	comp=Z,15nm,1.3s						
AAK	**Ala-Archa**	**82.22**	**314**	*e*P	**P**	**17 29 06.6**	**-2.2**
	comp=Z,11nm,0.9s						
AAK	**Ala-Archa**	**82.22**	**314**⇑	*e*P	**P**	**17 29 09.5**	**+0.7**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
AAK	**Ala-Archa**	**82.22**	**314**	P	**P**	**17 29 10.8**	**+2.1**
	SNR=7.0						
AAK				P	**P**	**17 29 10.8**	**+2.1**
	SNR=7.0						
SCM	**Sheep Creek Mo**	**82.45**	**25**	*e*P	**P**	**17 29 09.0**	**-0.4**
	comp=Z,34nm,1.1s						
RND	**Reindeer**	**82.53**	**24**	*e*P	**P**	**17 29 08.2**	**-1.6**
	comp=Z,24nm,1.2s						
RND	**Reindeer**	**82.53**	**24**	*e*P	**P**	**17 29 08.2**	**-1.6**
RND				pmax	pmax		
	comp=Z,24nm,1.2s						
MLY	**Manley**	**82.58**	**22**	*e*P	**P**	**17 29 07.7**	**-2.3**
	comp=Z,16nm,1.2s						
EYAK	**Cordova Ski Ar**	**82.60**	**27**	*e*P	**P**	**17 29 07.8**	**-2.3**
	comp=Z,29nm,1.3s						
MCK	**McKinley**	**82.64**	**23**	*e*P	**P**	**17 29 09.6**	**-0.7**
	comp=Z,32nm,1.1s						
MCK	**McKinley**	**82.64**	**23**	*e*P	**P**	**17 29 09.6**	**-0.7**
MCK				pmax	pmax		
	comp=Z,32nm,1.1s						
DHY	**Denali Highway**	**82.97**	**24**	*e*P	**P**	**17 29 12.2**	**0.0**
	comp=Z,16nm,1.0s						
ARSB	**Arslanbob**	**83.00**	**313**	*e*P	**P**	**17 29 11.3**	**-1.6**
	comp=Z,81nm,1.5s						
HMT	**Hamilton**	**83.19**	**27**	*e*P	**P**	**17 29 12.3**	**-0.9**
	comp=Z,26nm,1.0s						
CCB	**Clear Creek Bu**	**83.50**	**23**	*e*P	**P**	**17 29 12.6**	**-2.1**
	comp=Z,26nm,1.4s						
PAX	**Paxson**	**83.72**	**25**	*e*P	**P**	**17 29 15.3**	**-0.6**
	comp=Z,8.9nm,1.0s						
PAX	**Paxson**	**83.72**	**25**	*e*P	**P**	**17 29 15.3**	**-0.6**
PAX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HDA	**Harding Lake**	**83.73**	**23**	*e*P	**P**	**17 29 13.5**	**-2.4**
	comp=Z,20nm,1.6s						
MAW	**Mawson**	**83.81**	**203**	P	**P**	**17 29 15.8**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=76,slow=7.2,SNR=6.2						
MAW				LR	LR	18 04 19.3	
	comp=Z,919nm,21.4s,baz=74,slow=34						
MAW	**Mawson**	**83.81**	**203**	*e*P	**P**	**17 29 16.5**	**+0.3**
	comp=Z,3.5nm,1.4s						
MAW	**Mawson**	**83.81**	**203**	*e*P	**P**	**17 29 16.5**	**+0.3**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.4s						
COLD	**Coldfoot**	**83.84**	**20**	*e*P	**P**	**17 29 16.0**	**-0.4**
	comp=Z,12nm,1.4s						
POKR	**Poker Plat Res**	**83.86**	**22**	P	**P**	**17 29 15.6**	**-1.0**
	baz=244						
ILAR	**Eielson Array**	**83.91**	**23**	P	**P**	**17 29 14.2**	**-2.7**
	comp=Z,7.3nm,1.2s,baz=254,slow=4.8,SNR=25						
ILAR				LR	LR	18 03 07.4	
	comp=Z,392nm,20.9s,baz=250,slow=33						
ILB	**Eielson Array**	**83.91**	**23**	*e*P	**P**	**17 29 14.9**	**-1.9**
	comp=Z,8.9nm,1.0s						
RIDG	**Independent Ri**	**84.29**	**24**	*e*P	**P**	**17 29 16.1**	**-2.7**
	comp=Z,42nm,1.4s						
BALM	**Baldy**	**84.33**	**27**	*e*P	**P**	**17 29 16.8**	**-2.3**
	comp=Z,17nm,1.0s						
BALM	**Baldy**	**84.33**	**27**	*e*P	**P**	**17 29 16.8**	**-2.3**
BALM				pmax	pmax		
	comp=Z,17nm,1.0s						
BTK	**Batken**	**84.34**	**311**	*e*P	**P**	**17 29 17.1**	**-2.5**
	comp=Z,25nm,1.3s						
MENT	**Mentasta**	**84.44**	**25**	*e*P	**P**	**17 29 18.8**	**-0.8**
	comp=Z,7.7nm,0.8s						
DOT	**Dot Lake**	**84.57**	**24**	*e*P	**P**	**17 29 19.3**	**-0.9**
SCRK	**Sand Creek**	**84.73**	**24**	*e*P	**P**	**17 29 19.7**	**-1.4**
	comp=Z,27nm,1.6s						
QSPA	**South Pole Qui**	**84.80**	**180**	*e*P	**P**	**17 29 21.1**	**-0.4**
	comp=Z,23nm,1.1s						
KK31	**Karatay Array**	**85.18**	**314**	*e*P	**P**	**17 29 21.9**	**-1.7**
	comp=Z,67nm,1.5s						
KK31	**Karatay Array**	**85.18**	**314**	*e*P	**P**	**17 29 22.0**	**-1.7**
KK31				pmax	pmax		
	comp=Z,67nm,1.5s						
KKAR	**Karatay Array**	**85.18**	**314**	*e*P	**P**	**17 29 21.8**	**-1.9**
	comp=Z,67nm,1.5s						
KKAR	**Karatay Array**	**85.18**	**314**	*e*P	**P**	**17 29 21.8**	**-1.9**
KKAR				pmax	pmax		
	comp=Z,67nm,1.5s						
EGAK	**Eagle**	**86.17**	**24**	*e*P	**P**	**17 29 28.0**	**-0.2**
	comp=Z,17nm,1.0s						
HYT	**Haines Junctio**	**86.49**	**28**	*e*P	**P**	**17 29 29.9**	**0.0**
	comp=Z,37nm,1.0s						
DAWY	**Dawson**	**86.65**	**25**	*e*P	**P**	**17 29 30.8**	**+0.2**
	comp=Z,35nm,1.3s						
SKAG	**Skagway**	**87.16**	**30**	*e*P	**P**	**17 29 31.3**	**-1.7**
	comp=Z,29nm,1.2s						
BESE	**Bessie Mountai**	**87.17**	**31**	*e*P	**P**	**17 29 34.4**	**+1.1**
	comp=Z,26nm,1.1s						
BRVK	**Borovoye**	**87.37**	**324**	*e*P	**P**	**17 29 33.8**	**-0.4**
	comp=Z,8.2nm,1.0s						
BRVK	**Borovoye**	**87.37**	**324**⇑	*e*P	**P**	**17 29 34.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**87.37**	**324**	P	**P**	**17 29 34.6**	**+0.4**
	SNR=6.9						
BRVK				P	**P**	**17 29 34.6**	**+0.4**
	SNR=6.9						
WHY	**Whitehorse**	**87.68**	**29**	*e*P	**P**	**17 29 36.0**	**+0.3**
	comp=Z,16nm,1.0s						
EPYK	**Eagle Plains**	**88.43**	**23**	*e*P	**P**	**17 29 39.0**	**-0.1**
	comp=Z,34nm,1.3s						
EPYK	**Eagle Plains**	**88.43**	**23**	P	**P**	**17 29 39.0**	**-0.1**
	baz=254						
INK	**Inuvik**	**90.13**	**21**	*e*P	**P**	**17 29 47.1**	**+0.2**
	comp=Z,16nm,1.3s						
INK	**Inuvik**	**90.13**	**21**	*e*P	**P**	**17 29 47.1**	**+0.2**
INK				pmax	pmax		
	comp=Z,16nm,1.3s						
J01E	**Myrtle Point**	**91.31**	**47**	P	**P**	**17 29 55.4**	**+2.4**
	baz=264						
K02D	**Willamette Mer**	**91.46**	**47**	P	**P**	**17 29 56.1**	**+2.2**
	baz=265						

O02D	Mt. Diablo Mer	91.88	50	P	P	17 29 58.0	+2.2
	baz=265						
M02C	Callahan	91.94	49	P	P	17 29 57.2	+1.2
	baz=265						
N02D	Trinity Center	92.02	49	P	P	17 29 57.0	+0.5
	baz=265						
YBH	Yreka Blue Hor	92.08	48	*e*P	P	17 29 57.0	+0.4
	comp=Z,13nm,1.3s						
YBH	Yreka Blue Hor	92.08	48	*e*P	P	17 29 57.1	+0.4
YBH				pmax	pmax		
	comp=Z,13nm,1.3s						
WDC	Whiskeytown Da	92.11	50	*e*P	P	17 29 57.6	+0.9
	comp=Z,17nm,1.5s						
WDC	Whiskeytown Da	92.11	50	*e*P	P	17 29 57.6	+0.9
WDC				pmax	pmax		
	comp=Z,17nm,1.5s						
D03D	Eldon	92.32	43	P	P	17 29 59.7	+2.2
	baz=265						
L04D	Klamath Falls	92.42	48	P	P	17 29 59.4	+1.1
	baz=266						
O03E	Paynes Creek	92.64	50	P	P	17 29 59.7	+0.3
	baz=266						
M04C	Macdoel	92.73	48	P	P	17 29 59.6	-0.2
	baz=266						
AFDM	Forest Hills D	93.18	51	*e*P	P	17 30 01.0	-0.8
	comp=Z,7.9nm,1.2s						
J05D	Fort Rock, OR	93.29	47	P	P	17 30 03.4	+1.0
	baz=266						
SVE	Sverdlovsk	93.41	327	*e*P	P	17 30 00.7	-1.7
SVE				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SVE				MLR	MLR		
	comp=Z,2µm,21.0s						
BEKR	Beckworth	93.72	50	*e*P	P	17 30 04.7	+0.2
	comp=Z,6.9nm,0.7s						
PKM	Mcpherson Peak	93.84	55	P	P	17 30 05.2	+0.1
	baz=267						
GEYT	Alibeck	93.87	308	P	P	17 30 05.4	+0.4
	comp=Z,2.2nm,0.8s,baz=131,slow=4.1,SNR=12						
GEYT				LR	LR	18 14 07.6	
	comp=Z,834nm,20.4s,baz=70,slow=37						
GYA0B	ALIBECK ARRAY	93.87	308	*e*P	P	17 30 03.2	-1.8
	comp=Z,30nm,1.6s						
MOD	Modoc Plateau	93.89	48	*e*P	P	17 30 04.7	-0.4
	comp=Z,14nm,1.3s						
PAHR	Pah Rah Range	94.46	51	*e*P	P	17 30 07.4	-0.4
	comp=Z,7.8nm,1.3s						
ARU	Arti	94.53	326	P	P	17 30 09.0	+1.5
ARU						17 33 57.1	
ARU				S	SKSac	17 40 44.1	+4.0
ARU				SP	SP	17 42 39.6	+6.9
ARU				MLR	MLR		
	comp=Z,1µm,22.0s						
ISA	Isabella, Lake	94.98	55	P	P	17 30 10.0	-0.2
	baz=268						
NV01	Mina Array Sit	95.24	52	*e*P	P	17 30 11.8	+0.3
NVAR	Mina Array Bea	95.24	52	P	P	17 30 11.8	+0.3
	comp=Z,3.5nm,1.2s,baz=258,slow=5.9,SNR=10						
NVAR				LR	LR	18 10 35.5	
	comp=Z,442nm,18.0s,baz=270,slow=34						
CWC	Cottonwood Cre	95.33	54	P	P	17 30 11.4	-0.5
	baz=268						
EDW2	Edwards Air Fo	95.34	56	P	P	17 30 12.5	+0.6
	baz=268						
NV11	Mina Array Sit	95.36	52	*e*P	P	17 30 10.9	-1.1
	comp=Z,1.0nm,1.6s						
KVN	Kaiserville	95.42	51	*e*P	P	17 30 12.8	+0.5
	comp=Z,8.7nm,1.6s						
KVN	Kaiserville	95.42	51	*e*P	P	17 30 12.8	+0.5
KVN				pmax	pmax		
	comp=Z,9.0nm,1.6s						
BFSC	Mount Baldy Ra	95.58	56	P	P	17 30 14.2	+1.2
	baz=268						
LRMC	Laurel Mtn Rad	95.62	55	P	P	17 30 14.3	+1.2
	baz=268						
DAC	Darwin (Calif)	95.72	54	*e*P	P	17 30 14.2	+0.5
DAC	Darwin (Calif)	95.72	54	*e*P	P	17 30 14.2	+0.5
MPMC	Manual Prospec	95.80	54	P	P	17 30 13.5	-0.5
	baz=268						
GRAC	Grapevine Rang	95.93	53	P	P	17 30 15.9	+1.5
	baz=268						
BMO	Blue Mountains	96.19	46	*e*P	P	17 30 15.2	-0.2
	comp=Z,10nm,1.6s						
BMO	Blue Mountains	96.19	46	*e*P	P	17 30 15.3	-0.2
BMO				pmax	pmax		
	comp=Z,11nm,1.6s						
FURC	Furnace Creek,	96.31	54	P	P	17 30 16.8	+0.7
	baz=268						
NEW	Newport	96.36	42	P	P	17 30 17.9	+1.7
	baz=270						
TPFO	Pinon Flats	96.56	57	P	P	17 30 18.0	+0.5
	baz=268						
MONP2	Monument Peak	96.57	58	P	P	17 30 19.3	+1.7
	baz=268						
TPNV	Topopah Spring	96.82	54	*e*P	P	17 30 19.2	+0.5
	comp=Z,8.9nm,1.5s						
TPNV	Topopah Spring	96.82	54	*e*P	P	17 30 19.2	+0.5
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TPNV	Topopah Spring	96.82	54	P	P	17 30 19.7	+1.1
	baz=269						
BELC	Belle Mtn. Jos	96.95	56	P	P	17 30 21.4	+2.1
	baz=269						
TUQ	Turquoise Moun	97.05	55	P	Pdif	17 30 20.6	+0.8
	baz=269						
GMRC	Granite Mounta	97.25	56	P	Pdif	17 30 21.9	+1.2
	baz=269						
R11A	Troy Canyon, C	97.37	52	P	Pdif	17 30 23.0	+1.8
	baz=270						
YKA	Yellowknife Ar	97.48	28	P	P	17 30 20.4	-0.3
	comp=Z,4.3nm,0.9s,baz=274,slow=4.7,SNR=13						
YKA				LR	LR	18 08 44.0	
	comp=Z,49nm,21.9s,baz=281,slow=32						
YKB5	Yellowknife Ar	97.48	28	*e*P	P	17 30 20.4	-0.3
HLID	Hailey	98.26	47	P	Pdif	17 30 25.8	+0.7
	baz=271						
OPO	Ambohidratompo	99.56	250	LR	LR	18 10 52.6	
	comp=Z,72nm,19.9s,baz=228,slow=33						
SNAA	Sanae	101.14	189	P	Pdif	17 30 32.7	-4.5
VNA3	Neumayer Olymp	102.46	187	P	Pdif	17 30 43.8	+0.8
VNA2	Neumayer--Watz	102.47	188	P	Pdif	17 30 43.8	+0.8
	baz=148,slow=2.6						
OKC	Ostrava-Krasne	119.36	326	AMS	AMS	18 25 30.0	
	comp=Z,900nm,23.9s						
OSTC	Ostas	120.05	327	AMS	AMS	18 27 40.0	
	comp=Z,900nm,20.4s						
DPC	Dobruska-Polom	120.10	327	*e*SS	SS	17 53 27.5	+0.5
DPC				AMS	AMS	18 27 50.0	
	comp=Z,700nm,18.4s						
CHVC	Chvalec	120.12	327	AMS	AMS	18 28 00.0	
	comp=Z,800nm,18.5s						
UPC	Upice	120.19	327	AMS	AMS	18 28 10.0	
	comp=Z,900nm,21.3s						
PVCC	Panska Ves	120.94	328	AMS	AMS	18 28 40.0	
	comp=Z,600nm,18.6s						
TREC	Trest	121.13	326	AMS	AMS	18 26 50.0	
	comp=Z,1µm,23.8s						
GOPC	GO Pecny, Ondr	121.17	327	AMS	AMS	18 29 20.0	
	comp=Z,800nm,23.0s						
PRU	Pruhonice	121.26	327	*e*SS	SS	17 53 47.4	+5.7
PRU				AMS	AMS	18 28 50.0	
	comp=Z,800nm,21.0s						
CLL	Collm	121.31	329	*e*PS	PS	17 46 56.0	-8.1
CLL				*e*PPS	PPS	17 48 24.0	
CLL				*e*SS	SS	17 53 42.0	-0.1
CLL				*e*SSS	SSS	17 58 12.0	
CLL				*e*		17 59 24.0	
CLL				*e*SSSS		18 01 42.0	
CLL				Lm	MLR	18 29 00.0	
	comp=N,700nm,21.1s						
CLL				Lm	MLR	18 29 00.0	
	comp=E,600nm,20.8s						
CLL				Lm	MLR	18 29 00.0	
	comp=Z,1µm,21.5s						
NKC	Novy Kostel	122.23	329	AMS	AMS	18 27 50.0	
	comp=Z,800nm,23.4s						
KHC	Kasperske Hory	122.26	327	*e*SS	SS	17 53 54.9	+0.3
KHC				AMS	AMS	18 29 30.0	
	comp=Z,700nm,21.5s						
GERES	GERESS Array B	122.36	327	PKP	PKPdf	17 35 41.5	-1.0
	comp=Z,0.1nm,0.3s,baz=64,slow=2.3,SNR=2.5						
LPAZ	La Paz	137.49	121	PKP	PKPdf	17 36 11.2	-1.6
	comp=Z,4.4nm,1.2s,baz=220,slow=7.9,SNR=2.2						
SIV	San Ignacio	143.52	126	PKP	PKPbc	17 36 20.5	+0.3
	comp=Z,1.2nm,0.8s,baz=242,slow=9.9,SNR=5.0						
TOA0	Torodi Ar. Sit	146.85	286	*e*PKPbc	PKPbc	17 36 29.8	-0.7
TORD	Torodi Ar. Bea	146.85	286	PKPbc	PKPdf	17 36 29.0	+0.4
	comp=Z,12nm,1.0s,baz=31,slow=4.3,SNR=30						
TOA1	Torodi Ar. Sit	146.85	286	*e*PKPbc	PKPdf	17 36 29.0	+0.4
PTGA	Pitinga	150.43	101	PKPbc	PKPbc	17 36 38.7	-1.1
	comp=Z,6.7nm,0.8s,baz=266,slow=3.8,SNR=10						
PTGA	Pitinga	150.43	101	*e*PKPbc	PKPbc	17 36 38.3	-1.5
BDFB	Brasilia	153.30	141	PKPbc	PKiKP	17 36 47.3	+0.8
	comp=Z,2.6nm,0.8s,baz=218,slow=18,SNR=2.7						
DBIC	Dimbokro	154.01	275	PKPbc	PKiKP	17 36 48.4	+0.5
	comp=Z,3.0nm,1.0s,baz=160,slow=6.5,SNR=2.0						
DBIC				PKPab	PKPab	17 37 01.1	-0.2
	comp=Z,1.6nm,0.7s,baz=185,slow=4.7,SNR=2.3						

IDC 10 17:30:25.6±2.5, 30°.44S×177°.53W, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.7/39, mbtmp3.9/4, ML3.3/1, Error ellipse: s-maj=63.0km s-min=35.2km az=119.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.97	208	Pn	Pn	17 32 37.4	+1.1
	0.3nm,0.3s,baz=74,slow=19,SNR=3.7						
URZ				Sn	Sn	17 34 18.0	0.0
	0.6nm,0.3s,baz=122,slow=19,SNR=5.2						
STKA	Stephens Creek	34.86	257	P	P	17 37 17.3	-1.3
	1.5nm,1.0s,baz=94,slow=15,SNR=1.8						
ASAR	Alice Springs	43.51	267	P	P	17 38 32.0	+0.9
	0.3nm,0.3s,baz=105,slow=7.3,SNR=7.9						
ASAR				PcP	PcP	17 40 17.4	-1.7
	0.3nm,0.6s,baz=116,slow=4.2,SNR=2.8						
WRA	Warramunga Arr	44.50	272	P	P	17 38 39.4	+0.4
	2.5nm,0.8s,baz=105,slow=9.6,SNR=12						
FINES	FINESS Array B	145.32	340	PKPbc	PKPbc	17 50 04.2	-0.1
	2.1nm,0.6s,baz=45,slow=4.1,SNR=7.6						

IDC 10 17:31:12.5±3.5, 5°.37S×149°.99E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/34, mbtmp3.7/6, ML0.9/1, Error ellipse: s-maj=101.4km s-min=22.7km az=105.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.90	215	Pn	Pn	17 32 27.2	-0.3
	0.3nm,0.3s,baz=74,slow=18,SNR=3.0						
PMG				Sn	Sn	17 33 26.0	+1.1
	0.9nm,0.3s,baz=126,slow=8.7,SNR=2.4						
WRA	Warramunga Arr	21.02	225	P	P	17 35 56.5	-1.5
	5.3nm,0.8s,baz=52,slow=11,SNR=6.3						
ASAR	Alice Springs	23.90	219	P	P	17 36 28.4	+0.2
	2.3nm,0.7s,baz=53,slow=8.1,SNR=11						
CMAR	Chiang Mai Arr	55.60	297	P	P	17 40 51.9	+1.4
	0.4nm,0.8s,baz=96,slow=6.4,SNR=3.2						
SONM	Songino Array	65.34	329	P	P	17 41 55.7	-1.1
	0.2nm,0.4s,baz=119,slow=8.4,SNR=3.8						
MKAR	Makanchi Array	78.93	320	P	P	17 43 16.9	-1.2
	0.4nm,0.7s,baz=117,slow=5.7,SNR=2.8						
TORD	Torodi Ar. Bea	147.80	286	PKPbc	PKiKP	17 51 01.9	-0.6
	0.8nm,0.7s,baz=68,slow=4.1,SNR=5.5						

AZER ***10*** *17:32:24.2±0.1, 39°.23N×45°.12E, h10^{km}±2^{km}, ml3.4/24, Error ellipse: s-maj=2.3km s-min=1.1km az=19.0*
NSSP ***10*** *17:32:24.7, 38°.20N×45°.12E, h10^{km}, Ms3.3*
TEH ***10*** *17:32:25.5, 39°.21N×45°.16E, h5^{km}, ML3.2*
DDA ***10*** *17:32:26.9, 39°.22N×45°.00E, h5^{km}±3^{km}, ML3.2*
ISK ***10*** *17:32:26.9, 39°.28N×44°.95E, h5^{km}, ML3.7/4*

ISC 10 17:32:25.7±1.1, 39°.22N±0°.02×45°.13E±0°.01, h4^{km}±10^{km}, n100, σ1^{s}.31/137, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAX	Nakhchivan	0.28	100	*e*Pg	Pg	17 32 31.3	+0.1
NAX	Nakhchivan	0.28	100	P	Pg	17 32 31.4	+0.1
	SNR=152						
NAX				S	Sg	17 32 36.4	+1.4
SBZ	Shahbuz	0.37	62	*e*Pg	Pg	17 32 33.3	+0.4
SBZ	Shahbuz	0.37	62	P	Pg	17 32 33.3	+0.4
	SNR=75						
SBZ				S	Sg	17 32 39.5	+1.7
HYR	Heyderabad	0.54	336	*e*Pg	Pg	17 32 36.2	+0.1
HYR	Heyderabad	0.54	336	P	Pg	17 32 36.2	+0.1
	SNR=107						
HYR				S	Sb	17 32 44.5	-1.5
IMRD	Marand	0.68	139	*e*Pg	Pg	17 32 37.7	-1.0
IMRD				IAMB	IAmb	17 32 56.4	
	comp=Z,30µm,0.6s						
ORD	Ordubad	0.73	114	*e*Pg	Pg	17 32 39.3	-0.5
ORD	Ordubad	0.73	114	P	Pg	17 32 39.3	-0.5
	SNR=44						
ORD				S	Sg	17 32 50.2	+0.9
CLDR	Caldiran	0.95	265	PG	Pg	17 32 43.2	-0.7
CLDR	Caldiran	0.95	265	*i* P	Pg	17 32 43.1	-0.8
CLDR				*i* S	Sg	17 32 55.5	-0.7
CLDR				IAML_P			
	comp=Z,16µm,0.4s						
CLDR	Caldiran	0.95	265	*e*Pg	Pg	17 32 43.7	-0.2
GNI	Garni	0.97	342	PG	Pb	17 32 44.7	-0.5
ISHB	Shabestar	1.01	158	*e*Pg	Pg	17 32 44.0	-1.1
ISHB				*e*Sg	Sb	17 32 58.6	-1.1
ISHB				IAMB	IAmb	17 33 01.7	
	comp=Z,19µm,0.4s						
TASB	TASBURUN-IGDIR	1.03	318	PG	Pg	17 32 45.2	-0.2
TASB				SG	Sg	17 32 58.9	+0.2
TASB	TASBURUN-IGDIR	1.03	318	*e*Pg	Pg	17 32 44.4	-1.0
IGDI	IGDIR	1.04	309	*i* P	Pg	17 32 39.1	-6.6
IGDI				*i* S	Sg	17 32 52.4	-6.8
IGDI				IAML_P			
	comp=Z,1µm,0.2s						
DYDN	Diyadin	1.16	286	*i* P	Pn	17 32 48.5	-0.5
DYDN				*i* S	Sn	17 33 06.6	+1.2
DYDN				IAML_P			
	comp=Z,4µm,0.2s						
DYDN	Diyadin	1.16	286	*e*Pg	Pg	17 32 47.7	-0.3
VMUR	Van-Muradiye	1.24	260	*i* P	Pg	17 32 48.7	-0.7
VMUR				*i* S	Sn	17 33 06.1	-1.1
VMUR				IAML_P			
	comp=Z,1µm,0.2s						
VMUR	Van-Muradiye	1.24	260	*e*Pn	Pg	17 32 48.3	-1.1
ITBZ	Tabriz	1.27	141	*e*Pg	Pg	17 32 48.4	-1.6
ITBZ				IAMB	IAmb	17 32 53.1	
	comp=Z,3µm,0.2s						
ITBZ				*e*Sg	Sg	17 33 04.5	-1.9
BASK	Baskale_VAN	1.47	217	*i* P	Pg	17 32 54.5	+0.6
BASK	Baskale_VAN	1.47	217	*e*Pn	Pg	17 32 53.7	-0.1
VANB	Van	1.50	246	PN	Pg	17 32 55.1	+0.7
VANB	Van	1.50	246	*e*Pn	Pg	17 32 55.3	+0.8
TVAN	Van	1.52	243	*i* P	Pg	17 32 55.3	+0.5
TVAN				*i* S	Sg	17 33 21.1	+6.6
TVAN				IAML_P			
	comp=Z,4µm,0.6s						
TVAN	Van	1.52	243	*e*Pn	Pg	17 32 55.1	+0.3
GDB	GEDABAY	1.57	17	*e*Pn	Pn	17 32 54.7	+0.2
GDB	GEDABAY	1.57	17	Pn	Pn	17 32 54.4	0.0
	SNR=13						
GDB				Sn	Sg	17 33 16.3	+0.2
IAZR	Azarshahr	1.68	156	*e*Pn	Pn	17 32 55.6	-0.5
IAZR				IAMB	IAmb	17 33 27.0	
	comp=Z,8µm,0.7s						
GANJ	Ganja	1.69	32	*e*Pn	Pb	17 32 56.7	-0.6
GANJ	Ganja	1.69	32	Pn	Pn	17 32 56.5	+0.5
	SNR=131						
GANJ				Sn	Sg	17 33 20.4	+0.4
AGRB	Hanur-Agry	1.70	283	PN	Pb	17 32 57.2	-0.4
AGRB	Hanur-Agry	1.70	283	*e*Pn	Pb	17 32 57.1	-0.5
IHRS	Heris	1.74	121	*e*Pn	Pn	17 32 56.9	0.0
IHRS				IAMB	IAmb	17 33 24.3	
	comp=Z,2µm,0.5s						
YOVA	Hakkari_Yksek	1.76	202	*i* P	Pg	17 32 59.3	-0.3
YOVA				IAML_P			
	comp=Z,2µm,0.5s						
YOVA	Hakkari_Yksek	1.76	202	*e*Pn	Pb	17 32 58.6	-0.1
DIGO	Kars	1.80	312	*i* P	Pg	17 33 00.3	0.0
DIGO				IAML_P			
	comp=Z,3µm,0.4s						
DIGO	Kars	1.80	312	*e*Pn	Pg	17 32 59.6	-0.7
TUTA	Tutak	1.81	276	*i* P	Pb	17 32 59.4	-0.1
TUTA				IAML_P			
	comp=Z,3µm,0.3s						
TUTA	Tutak	1.81	276	*e*Pn	Pb	17 32 59.2	-0.3
QZX	Qazax, Azerbai	1.84	6	*e*Pn	Pb	17 32 59.5	-0.4
QZX	Qazax, Azerbai	1.84	6	Pn	Pb	17 32 59.5	-0.4
	SNR=69						
QZX				Sn	Sg	17 33 25.6	+0.8
GEVA	Gevas	1.86	241	*i* P	Pg	17 33 00.3	-1.0
GEVA				*i* S	Sg	17 33 28.6	+3.2
GEVA				IAML_P			
	comp=Z,3µm,0.6s						
GEVA	Gevas	1.86	241	*e*Pn	Pb	17 33 00.1	-0.2
EAK	Akyaka	1.87	322	*i* P	Pg	17 33 01.8	+0.2
EAK				*i* S	Sg	17 33 25.7	-0.2
EAK				IAML_P			
	comp=Z,3µm,0.3s						
EAK	Akyaka	1.87	322	*e*Pn	Pb	17 33 00.8	+0.2
BRDA	Brd	1.89	56	*e*Pn	Pb	17 32 59.9	-0.8
BRDA	Brd	1.89	56	Pn	Pb	17 32 59.9	-0.8
BRDA				Sn	Sg	17 33 26.7	+0.3
AKDM	Akdamar-Van	1.91	243	PN	Pb	17 33 00.7	-0.4
AKDM	Akdamar-Van	1.91	243	*e*Pn	Pb	17 33 00.9	-0.2
ADCV	BITLIS_Adilcev	1.92	258	*i* P	Pg	17 33 01.6	-0.9
ADCV				IAML_P			
	comp=Z,1µm,0.5s						
ADCV	BITLIS_Adilcev	1.92	258	*e*Pn	Pb	17 33 01.3	-0.1
HAKT	HAKKARI	2.01	214	*i* P	Pg	17 33 03.4	-0.7
HAKT				IAML_P			
	comp=Z,3µm,0.5s						
HAKT	HAKKARI	2.01	214	*e*Pn	Pb	17 33 02.7	-0.2
MLAZ	Malazgirt-MUS	2.01	268	*e*Pn	Pb	17 33 01.3	-1.6
IBST	Bostanabad	2.05	137	*e*Pn	Pn	17 33 01.6	+0.4
IBST				IAMB	IAmb	17 33 32.4	
	comp=Z,2µm,0.8s						
KARS	Kars	2.11	312	*e*Pn	Pn	17 33 02.7	+0.8
EATA	Eleskirt	2.14	288	*i* P	Pg	17 33 05.9	-0.9
EATA				IAML_P			
	comp=Z,955nm,0.3s						
EATA	Eleskirt	2.14	288	*e*Pn	Pb	17 33 04.9	-0.3
MNGR	Mingechevir, A	2.15	43	*e*Pn	Pb	17 33 03.9	-1.3
MNGR	Mingechevir, A	2.15	43	Pn	Pb	17 33 03.9	-1.3
	SNR=6.2						
MNGR				Sn	Sg	17 33 33.9	-1.0
ZRD	Zardab	2.23	61	Pg	Pb	17 33 05.5	-1.0
ZRD				Sn	Sb	17 33 34.7	+0.2
KZRT	Kazreti	2.23	346	P	Pb	17 33 07.4	+0.8
KZRT				S	Sb	17 33 35.9	+1.3
CUKT	Cukurca	2.31	212	PN	Pb	17 33 07.8	-0.2
CUKT	Cukurca	2.31	212	*i* P	Pg	17 33 09.8	-0.1
CUKT				IAML_P			
	comp=Z,2µm,0.5s						
CUKT	Cukurca	2.31	212	*e*Pn	Pg	17 33 08.9	-1.1
DDFL	Dedoflistskaro	2.34	18	P	Pn	17 33 06.0	+1.0
DDFL	Dedoflistskaro	2.34	18	*i* P	Pn	17 33 05.2	+0.1
DDFL				*i* S	Sb	17 33 38.0	+0.2
DDFL	Dedoflistskaro	2.34	18	*e*Pn	Pn	17 33 06.0	+1.0
ISRB	Sarab	2.43	124	IAMB	IAmb	17 33 17.9	
	comp=Z,826nm,0.3s						
ISRB				*e*Pn	Pb	17 33 08.9	-1.2
BTNK	Botanikuri	2.47	354	P	Pb	17 33 10.6	0.0
BTNK				S	Sg	17 33 44.3	-0.8
BTNK	Botanikuri	2.47	354	*i* P	Pb	17 33 10.6	0.0
AKH	Akhalkalaki	2.52	331	P	Pb	17 33 12.0	+0.4
AKH				S	Sg	17 33 45.2	-1.4
TBLG	Delisi	2.52	353	PN	Pb	17 33 09.8	-1.7
TBLG	Delisi	2.52	353	P	Pb	17 33 11.2	-0.3
TBLG				S	Sg	17 33 45.8	-1.0
TBLG	Delisi	2.52	353	*i* P	Pb	17 33 11.6	+0.1
TBLG				IAML_P			
	comp=Z,2µm,0.3s						
SENK	Senkaya-Erzuru	2.52	303	PN	Pn	17 33 08.4	+0.8
GLBA	Clilabad	2.53	89	Pn	Pn	17 33 09.2	+1.7
	SNR=10						
GLBA				Sn	Sb	17 33 43.1	0.0
SEKA	Sheki	2.54	38	Pg	Pb	17 33 11.4	-0.3
	SNR=9.7						
SEKA				Sg	Sg	17 33 48.2	+1.1
LRK	Lerik	2.57	102	Pg	Pb	17 33 11.1	-1.3
	SNR=16						
LRK				Sg	Sg	17 33 47.8	-0.3
KOPR	Koprukoy-ERZUR	2.65	288	PN	Pn	17 33 09.7	+0.4
ZKTA	Zakatala	2.67	25	Pg	Pb	17 33 13.3	-0.7
	SNR=20						
ZKTA				Sg	Sg	17 33 50.6	-0.7
QBL	Gabala	2.69	49	Pg	Pb	17 33 13.8	-0.7
QBL				Sg	Sg	17 33 52.0	-0.2
LGD	Lagodekhi	2.74	18	P	Pb	17 33 15.2	0.0
LGD				S	Sg	17 33 53.7	0.0
SRTM	Siirt_Merkez	2.80	245	*i* P	Pb	17 33 13.5	-2.8
MUSM	Mu-Merkez	2.87	261	*i* P	Pb	17 33 18.3	+0.8
LKRN	Lenkeran, Azer	2.89	99	Pg	Pb	17 33 16.6	-1.2
LKRN				Sg	Sb	17 33 54.9	+1.6
ASTR	Astara	2.93	102	Pg	Pb	17 33 17.2	-1.3
ASTR				Sg	Sb	17 33 56.6	+2.0
XNQ	Khinaliq	3.01	49	Pn	Pn	17 33 15.7	+1.3
XNQ				Sg	Sg	17 34 00.8	-1.8
PQL	Pirkuli	3.08	58	Pg	Pb	17 33 19.9	-1.2
PQL				Sn	Sb	17 33 56.7	-2.5
DAGI	Agillar	3.08	308	*i* P	Pg	17 33 24.0	-0.8
BNGL	BINGOL	3.11	266	*e*P	Pg	17 33 24.0	-1.3
GBS	Qobustan	3.21	65	Pg	Pb	17 33 22.3	-1.0
BTMN	Batman	3.31	247	*i* P	Pb	17 33 25.6	+0.6
BTMN				IAML_P			
	comp=Z,202nm,0.5s						
QSAR	Qusar	3.31	45	Pg	Pb	17 33 23.8	-1.2
QSAR				Sg	Sb	17 34 08.3	+2.8
QUBA	Quba, Azerbaij	3.34	49	Pg	Pb	17 33 24.6	-0.8
QUBA				Sg	Sb	17 34 09.5	+3.2
ATGJ	Altiaghaj	3.35	60	Pg	Pb	17 33 23.8	-1.8
SIZA	Siyzn	3.43	56	Pg	Pb	17 33 26.7	-0.3
SIZA				Sg	Sb	17 34 10.9	+1.9

MEX 10 17:33:09.2±0.5, 15°.88N×98°.76W, h15^{km}±10^{km}, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.69	6	*e*P	Pn	17 33 35.0	-3.3
CAIG	El Cayaco	1.86	309	*i* P	Pn	17 33 37.8	-2.8
CAIG				*i* S	Sn	17 33 58.7	-5.1
VHO	Vista Hermosa	2.28	58	*e*P	Pn	17 33 43.8	-2.7
VHO				*e*S	Sn	17 34 10.1	-4.3
HUIG	Huatulco	2.55	92	*i* P	Pn	17 33 47.3	-2.8
HUIG				*i* S	Sn	17 34 16.5	-4.4
CMIG	Matias Romero	3.91	71	*e*P	Pn	17 34 06.2	-2.5
CMIG				*e*S	Sn	17 34 50.5	-3.9

MEX 10 17:37:18.6±0.7, 15°.83N×98°.81W, h16^{km}±13^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.73	8	*e*P	Pn	17 37 45.1	-3.2
TLIG				*e*S	Sn	17 38 05.5	-4.6
CAIG	El Cayaco	1.85	311	*i* P	Pn	17 37 46.8	-2.9
CAIG				*i* S	Sn	17 38 07.5	-5.3
VHO	Vista Hermosa	2.34	58	*e*P	Pn	17 37 53.9	-2.7
VHO				*i* S	Sn	17 38 20.5	-4.8
HUIG	Huatulco	2.60	91	*i* P	Pn	17 37 57.5	-2.5
HUIG				*i* S	Sn	17 38 27.1	-4.3
CMIG	Matias Romero	3.96	71	*e*P	Pn	17 38 15.9	-2.9
CMIG				*i* S	Sn	17 39 01.9	-3.2

JMA 10 17:37:30.3±0.1, 33°.84N×134°.58E, h12^{km}±1^{km}, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAI	Aioi	0.12	246	P	Pg	17 37 33.5	+0.1
JAI				S	Sg	17 37 35.7	+0.1

ISCJB ***10*** *17:37:32.3±0.4, 33°.82N±0°.06×137°.22E±0°.06, h368^{km}±3^{km}, mb3.4/11, Error ellipse: s-maj=9.6km s-min=7.5km az=154.2*
JMA ***10*** *17:37:32.8±0.3, 33°.82N×137°.17E, h368^{km}±3^{km}, M2.8*
IDC ***10*** *17:37:32.8±0.9, 33°.83N×137°.33E, h360^{km}±9^{km}, mb3.1/11, mb1 3.2/18, mb1mx3.1/44, mbtmp3.9/18, Error ellipse: s-maj=20.1km s-min=13.5km az=81.0*

ISC 10 17:37:32.6±0.7, 33°.75N±0°.07×137°.21E±0°.05, h362^{km}±6^{km}, n43, σ1^{s}.30/54, mb3.4/11, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.15	263	P	Pn	17 38 18.9	+1.6
TTO3	TONANKAI O.B.S	0.19	55	P	Pn	17 38 19.2	+1.7

TTO1	TONANKAI O.B.S	0.38	250	P	Pn	17 38 19.0	+1.4
TTO4	TONANKAI O.B.S	0.38	47	P	Pn	17 38 19.1	+1.6
TK02	Tokai 2	0.50	67	P	Pn	17 38 19.1	+1.3
TTO5	TONANKAI O.B.S	0.65	40	P	Pn	17 38 19.9	+1.7
JIE	Ise	0.76	327	P	Pn	17 38 19.8	+1.1
JTNC	Tanabenakahech	1.33	273	P	Pn	17 38 21.9	+0.8
JTNC				S	S	17 38 59.3	-0.7
JWY	Kouya	1.42	290	P	Pn	17 38 22.4	+0.8
JWY				eS	S	17 39 00.2	-0.7
JYTA	Yamagatataniai	1.88	348	P	Pn	17 38 24.9	+0.8
JYTA				eS	S	17 39 05.0	-0.5
JWT	Wachi	2.13	316	P	Pn	17 38 26.5	+0.7
JWT				eS	S	17 39 08.3	-0.4
JOD2	Odawara 2	2.16	45	P	Pn	17 38 27.2	+1.1
JHJ	Hachijo jima 2	2.25	106	P	Pn	17 38 27.7	+1.0
	19nm,0.3s,baz=89,slow=23,SNR=7.7						
JHJ				S	S	17 39 05.7	-4.6
	3.3nm,0.3s,baz=210,slow=20,SNR=2.1						
JHJ2	Mitsune	2.27	106	P	Pn	17 38 28.5	+1.6
JAI	Aioi	2.30	272	P	Pn	17 38 27.6	+0.5
JKG	Kaga	2.62	344	P	Pn	17 38 30.0	+0.5
JRY	Ryogami san	2.65	31	P	Pn	17 38 31.0	+1.1
JRY				eS	S	17 39 17.0	+1.0
JMN	Monobe	2.77	270	P	Pn	17 38 31.6	+0.7
MJAR	Matsushiro Arr	2.90	16	P	Pn	17 38 32.4	+0.5
	0.4nm,0.3s,baz=201,slow=9.2,SNR=39						
MJAR				S	S	17 39 17.4	-2.3
	0.2nm,0.3s,baz=201,slow=16,SNR=6.9						
MAT	Matsushiro	2.90	16	P	Pn	17 38 31.9	0.0
MAT				S	S	17 39 18.9	-0.9
MAT	Matsushiro	2.90	16	P	Pn	17 38 32.4	+0.5
MAT				eS	S	17 39 19.2	-0.6
JAG	Ashikaga	3.24	34	P	Pn	17 38 34.4	-0.5
BSO1	Boso 1	3.25	73	P	Pn	17 38 33.6	-0.8
BSO1				S	S	17 39 23.4	-1.0
JHS	Saijyo	3.60	291	P	Pn	17 38 39.1	+0.7
JSZ	Suzu	3.69	2	P	Pn	17 38 39.5	+0.4
JTO	Tosashimizu	3.79	258	P	Pn	17 38 40.8	+0.5
JNU	Nakatsue	5.33	265	P	Pn	17 38 57.0	+0.6
	0.2nm,0.3s,baz=169,slow=9.3,SNR=5.2						
JNU				S	S	17 40 00.1	-4.1
	baz=24,slow=18,SNR=1.3						
KSRS	Korea Array	8.41	299	P	P	17 39 32.8	-1.0
	1.0nm,0.3s,baz=111,slow=12,SNR=35						
ASAJ	Asahikawa	11.16	20	P	Pn	17 40 03.1	-1.1
	1.4nm,0.3s,baz=224,slow=14,SNR=21						
USRK	Ussuriysk Ar.	11.19	340	P	Pn	17 40 04.4	0.0
	0.5nm,0.3s,baz=150,slow=10,SNR=12						
KLR	Kul'dur	15.99	347	P	P	17 40 56.6	-0.5
	0.2nm,0.3s,baz=188,slow=13,SNR=3.8						
SONM	Songino Array	27.03	311	P	P	17 42 44.1	+1.2
	3.4nm,0.7s,baz=111,slow=8.0,SNR=20						
CMAR	Chiang Mai Arr	37.35	256	P	P	17 44 12.7	+0.7
	0.6nm,0.6s,baz=54,slow=8.0,SNR=5.5						
ZALV	Zalesovo Beam	41.70	315	P	P	17 44 47.7	+0.7
	0.5nm,0.3s,baz=92,slow=6.6,SNR=2.8						
MKAR	Makanchi Array	43.04	305	P	P	17 44 58.6	+0.7
	0.7nm,0.4s,baz=90,slow=9.6,SNR=14						
WRA	Warramunga Arr	53.47	183	P	P	17 46 17.2	+0.3
	1.6nm,0.8s,baz=359,slow=6.6,SNR=4.0						
ASAR	Alice Springs	57.19	184	P	P	17 46 44.1	+1.0
	0.5nm,0.9s,baz=5.7,slow=6.6,SNR=4.2						
FINES	FINESS Array B	70.08	332	P	P	17 48 06.4	+0.4
	1.5nm,0.4s,baz=58,slow=5.8,SNR=23						
AKASG	Malin Array Be	74.74	321	P	P	17 48 32.8	-0.7
	0.5nm,0.3s,baz=50,slow=5.7,SNR=3.4						
NB2	NORSAR Subarra	75.83	336	P	P	17 48 39.9	+0.4
	comp=Z,0.7nm,0.7s,baz=44,slow=5.6						
NOA	NORSAR Array B	75.83	336	P	P	17 48 39.2	-0.3
	comp=Z,1.0nm,0.8s,baz=44,slow=5.8,SNR=3.6						
BRTR	Keskin Array B	78.39	310	P	P	17 48 55.2	+1.1
	comp=Z,0.5nm,0.8s,baz=80,slow=7.9,SNR=3.6						
GERES	GERESS Array B	83.61	326	P	P	17 49 20.0	-1.2
	comp=Z,0.2nm,0.3s,baz=347,slow=3.4,SNR=3.4						

IDC 10 17:40:07.2±2.6**, 30°.28S**×**177°.20W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.7**/25**, mbtmp3.7**/4**, ML3.1**/1**, MS4.4**/2**, Ms1 4.5**/2**, ms1mx3.5**/37**, Error ellipse: s-maj=69.1km s-min=43.7km az=128.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	9.25	209	Pn	Pn	17 42 20.3	-1.5
	0.2nm,0.3s,baz=345,slow=11,SNR=2.0						
URZ				Sn	Sn	17 44 01.2	-5.4
	0.3nm,0.3s,baz=22,slow=9.5,SNR=3.5						
STKA	Stephens Creek	35.18	257	P	P	17 47 03.5	+0.5
	1.6nm,0.7s,baz=117,slow=6.8,SNR=2.9						
ASAR	Alice Springs	43.81	266	P	P	17 48 14.7	-0.5
	0.2nm,0.5s,baz=107,slow=7.3,SNR=6.9						
ASAR				PcP	PcP	17 50 01.9	+0.1
	0.2nm,0.8s,baz=119,slow=3.3,SNR=3.5						
WRA	Warramunga Arr	44.78	272	P	P	17 48 23.1	+0.1
	1.9nm,0.9s,baz=105,slow=8.6,SNR=7.3						
BATI	Baumata	58.32	277	LR	LR	18 14 13.5	
	comp=Z,327nm,19.9s,baz=164,slow=35						
LPAZ	La Paz	97.56	114	LR	LR	18 26 39.3	
	comp=Z,219nm,21.4s,baz=220,slow=29						
FINES	FINESS Array B	145.26	341	PKPbc	PKPbc	17 59 44.7	-1.1
	1.5nm,0.8s,baz=50,slow=2.2,SNR=5.3						

IDC 10 17:54:59.3±7.2**, 6°.00S**×**149°.82E, h119**^{km}±48^{km}**, mb3.2**/2**, mb1 3.4**/3**, mb1mx3.0**/35**, mbtmp3.7**/3**, Error ellipse: s-maj=116.0km s-min=51.9km az=118.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.29	218	P	Pn	17 56 02.4	-0.4
	1.3nm,0.3s,baz=345,slow=12,SNR=4.5						
PMG				S	Sn	17 56 53.3	+1.2
	1.4nm,0.3s,baz=321,slow=17,SNR=2.5						
WRA	Warramunga Arr	20.46	226	P	P	17 59 26.2	-1.5
	2.2nm,0.5s,baz=53,slow=10,SNR=15						
ASAR	Alice Springs	23.31	219	P	P	17 59 57.6	+0.7
	0.9nm,0.7s,baz=52,slow=8.7,SNR=20						
TORD	Torodi Ar. Bea	147.81	285	PKPbc	PKPbc	18 14 30.8	-0.6
	0.2nm,0.8s,baz=108,slow=4.7,SNR=3.0						

KRNET ***10*** *17:57:31.8±0.1, 43°.03N×78°.31E, h15^{km}, mb2.7*
SOME ***10*** *17:57:31.8, 43°.02N×78°.30E, h5^{km}*
NNC ***10*** *17:57:31.9±1.0, 43°.06N×78°.34E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=15.4km s-min=3.3km az=174.0*
ISCJB ***10*** *17:57:32.8±0.4, 43°.05N±0°.03×78°.34E±0°.02, h10^{km}, Error ellipse: s-maj=4.2km s-min=2.3km az=161.1*
ISC 10 17:57:31.7±0.8**, 43°.01N**±0°.03×**78°.30E**±0°.02**, h10**^{km}**, n43, σ0**^{s}**.60**/80**, 38C-20D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	0.09	58	⇑iP	Pg	17 57 34.0	-0.4
	688nm,0.1s						
SATY				⇓iS	Sg	17 57 35.1	-1.1
	3µm,0.1s						
KURS	Kuram	0.49	349	⇓iP	Pg	17 57 41.0	-0.2
	baz=48						
KURS				⇓iS	Sg	17 57 47.5	-0.2
	baz=48						
KURS	Kuram	0.49	349	⇓iP	Pg	17 57 41.0	-0.2
	5.3nm,0.1s						
KURS				⇓iS	Sg	17 57 47.5	-0.2
	11nm,0.3s						
KPKS	Kokpek	0.54	32	⇑iP	Pg	17 57 42.0	-0.2
	baz=33						
KPKS				⇑iS	Sg	17 57 48.9	-0.3
	baz=33						
KPKS	Kokpek	0.54	32	⇑iP	Pg	17 57 42.0	-0.2
	16nm,0.1s						
KPKS				⇑iS	Sg	17 57 48.9	-0.3
	32nm,0.3s						
UZB	Uzynbulak	0.55	75	⇑iP	Pg	17 57 42.2	-0.2
	baz=77						
UZB				⇑eS	Sg	17 57 49.5	-0.1
	baz=77						
UZB	Uzynbulak	0.55	75	⇑iP	Pg	17 57 42.2	-0.2
	8.0nm,0.1s						
UZB				⇑eS	Sg	17 57 49.6	-0.1
	28nm,0.2s						
KOTS	Kotyrbulak	0.90	285	S	Sb	17 58 02.0	+0.4
	6.0nm,0.3s						
KOTS	Kotyrbulak	0.90	285	⇑iP	Pg	17 57 49.1	+0.1
	baz=84						
KOTS				⇑iS	Sb	17 58 02.0	+0.4
	baz=84						
KOTS	Kotyrbulak	0.90	285	⇑iP	Pg	17 57 49.1	+0.1
	4.1nm,0.2s						
KOTS				⇑iS	Sb	17 58 02.0	+0.4
	12nm,0.3s						
PDGK	Podgornoye	0.93	70	⇑P	Pg	17 57 48.9	-0.7
	0.7nm,0.3s						
PDGK				⇑S	Sg	17 58 00.9	-0.8
	5.1nm,0.5s						
PDGK	Podgornoye	0.93	70	⇑iP	Pg	17 57 48.9	-0.7
	baz=70						
PDGK				⇑iS	Sg	17 58 01.2	-0.5
	baz=70						
MDOK	Medeo	0.93	280	Lg	Lg	17 58 01.8	
	8.4nm,0.2s						
MDOK	Medeo	0.93	280	⇓iP	Pg	17 57 49.4	-0.2
	baz=79						
MDOK				⇑iS	Sg	17 58 01.9	+0.2
	baz=79						
MDOK	Medeo	0.93	280	⇓iP	Pg	17 57 49.4	-0.2
	4.1nm,0.3s						
MDOK				⇑iS	Sg	17 58 01.9	+0.2
	9.9nm,0.4s						
TNSS	Tian-Shan	0.99	272	S	Sb	17 58 04.5	0.0
	10.0nm,0.2s						
TNSS	Tian-Shan	0.99	272	⇓iP	Pg	17 57 50.9	0.0
	baz=71						
TNSS				⇓eS	Sb	17 58 04.5	0.0
	baz=71						
TNSS	Tian-Shan	0.99	272	⇓iP	Pg	17 57 50.9	0.0
	5.9nm,0.1s						
TNSS				eS	Sb	17 58 04.5	0.0
	10.0nm,0.2s						
MNBS	Baschi	1.07	4	eP	Pb	17 57 52.1	-0.3
	4.0nm,0.1s						
MNBS				⇓iS	Sb	17 58 06.6	0.0
	9.0nm,0.2s						
KDJ	Kajisay	1.21	224	⇑iP	Pn	17 57 54.9	+0.1
	baz=23						
KDJ				⇑iS	Sn	17 58 11.9	+0.5
	baz=23						
IZV	Izvestkoviy	1.24	272	⇓iP	Pn	17 57 55.1	-0.2
	baz=71						
IZV				⇑iS	Sn	17 58 12.0	-0.1
	baz=71						
IZV	Izvestkoviy	1.24	272	⇓iP	Pn	17 57 55.0	-0.2
	4.0nm,0.5s						
IZV				⇑iS	Sn	17 58 11.9	-0.1
	10nm,0.5s						
CHKK	Chushkaly	1.27	312	⇑iP	Pg	17 57 55.8	-0.4
	baz=12						
CHKK				⇑eS	Sn	17 58 12.8	0.0
	baz=12						
CHKK	Chushkaly	1.27	312	⇑iP	Pg	17 57 55.8	-0.4
	1.8nm,0.1s						
CHKK				⇑eS	Sn	17 58 12.8	0.0
	15nm,0.2s						
KTBS	Karatobe	1.37	301	P	Pb	17 57 57.3	-0.2
	2.4nm,0.1s						
KTBS				S	Sg	17 58 15.6	-0.3
	26nm,0.3s						
KTBS	Karatobe	1.37	301	⇑eP	Pb	17 57 57.4	-0.2
	11nm,0.3s						
KTBS				eS	Sg	17 58 15.5	-0.4
	26nm,0.3s						
KTMS	Ketmen	1.56	73	eP	Pb	17 58 01.1	+0.3
	baz=73						
KTMS				eS	Sg	17 58 21.9	-0.1
	baz=73						
KTMS	Ketmen	1.56	73	eP	Pb	17 58 01.1	+0.3
	1.5nm,0.2s						
KTMS				eS	Sg	17 58 21.8	-0.2
	6.3nm,0.3s						
KUU	Kurty	1.68	302	P	Pb	17 58 02.7	0.0
	2.4nm,0.2s						
KUU				S	Sg	17 58 25.2	-0.5
	15nm,0.3s						
KUU	Kurty	1.68	302	eP	Pb	17 58 02.7	0.0
	baz=2.0						
KUU				eS	Sg	17 58 25.2	-0.5
	baz=2.0						
KUU	Kurty	1.68	302	eP	Pb	17 58 02.7	0.0
	2.4nm,0.2s						
KUU				eS	Sg	17 58 25.2	-0.5
	15nm,0.3s						
ULHL	Ulahol	1.70	244	⇑iP	Pb	17 58 03.5	+0.3
	baz=44						
ULHL				⇑iS	Sg	17 58 26.7	+0.3
	baz=44						
DJR	Jarkent	1.71	39	P	Pb	17 58 03.3	0.0
	3.4nm,0.3s						
DJR				S	Sg	17 58 26.2	-0.4
	4.6nm,0.3s						
DJR	Jarkent	1.71	39	eP	Pb	17 58 03.3	0.0
	3.4nm,0.3s						
DJR				eS	Sg	17 58 26.2	-0.4
	4.6nm,0.3s						
KST	Kastek	1.71	272	⇓iP	Pb	17 58 03.2	-0.2
	baz=71						
KST				⇓eS	Sb	17 58 25.7	+0.7
	baz=71						
BOOM	Boomskoye usch	1.81	254	⇑iP	Pb	17 58 05.1	0.0
	baz=54						
BOOM				⇑iS	Sg	17 58 29.8	-0.2
	baz=54						
TKM2	Tokmak 2	1.99	268	⇓P	Pb	17 58 08.4	+0.3
	2.5nm,0.5s						
TKM2				⇓S	Sg	17 58 35.8	+0.2
	2.6nm,0.3s						
TKM2	Tokmak 2	1.99	268	⇑iP	Pb	17 58 07.8	-0.3
	baz=68						
TKM2				⇑iS	Sg	17 58 35.1	-0.5
	baz=68						
KAPS	Kapalarasan	2.40	18	Lg	Lg	17 58 46.3	
	11nm,0.5s						
KAPS	Kapalarasan	2.40	18	⇓iP	Pb	17 58 14.9	-0.1
	2.3nm,0.3s						
KAPS				eS	Sb	17 58 46.3	+1.6
	11nm,0.5s						
KZA	Kyzart	2.44	249	⇑iP	Pb	17 58 14.9	-1.0
	baz=48						
KZA				⇑iS	Sb	17 58 46.7	+0.5
	baz=48						
CHMS	Chumysh	2.60	271	⇑eP	Pb	17 58 16.4	-2.1
	baz=71						
CHMS				⇑iS	Sb	17 58 49.8	-0.7
	baz=71						
UCH	Uchtor	2.90	256	⇓iP	Pn	17 58 20.9	+2.5
	baz=55						
UCH				⇓iS	Sb	17 58 57.4	-2.1
	baz=55						

TAP 10 18:00:39.5, 24°.52N×121°.85E, h12^{km}, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao	0.09	358	eP	Pg	18 00 42.8	+0.6
	baz=4.0						
TWC				eS	Sg	18 00 45.1	+0.9
	baz=4.0						
NANB	Nanao	0.13	226	P	Pb	18 00 43.5	-0.5
	baz=225						
NANB				S	Sg	18 00 46.1	+1.1
	baz=225						
ENA	Nanau	0.14	228	eP	Pb	18 00 43.5	-0.6
	baz=225						
ENA				eS	Sg	18 00 46.2	+1.0
	baz=225						
EOS1	EOS1	0.25	83	eP	Pb	18 00 45.7	-0.4
	baz=83						
EOS1				eS	Sb	18 00 50.3	-0.1
	baz=83						
TWE	Neicheng	0.26	320	eP	Pg	18 00 45.4	+0.4
	baz=322						
TWE				eS	Sb	18 00 50.1	-0.6
	baz=322						
ILA	Ilan	0.26	339	eP	Pb	18 00 45.7	-0.6
	baz=340						
ILA				eS	Sb	18 00 50.4	-0.3
	baz=340						
ENTT	Nioudou	0.29	295	eP	Pb	18 00 46.2	-0.5
	baz=294						
ENTT				eS	Sb	18 00 51.0	-0.5
	baz=294						
NNSB	Datong	0.44	258	eP	Pg	18 00 47.5	-0.7
	baz=258						
NNSB				eS	Sg	18 00 53.4	-0.7
	baz=258						
TIPB	Shuangxi	0.45	357	eP	Pb	18 00 49.4	-0.1
	baz=357						
TIPB				eS	Sb	18 00 56.7	+0.5
	baz=357						
ETLH	Xiulin Townshi	0.46	227	eP	Pg	18 00 48.9	+0.3
	baz=227						
ETLH				eS	Sb	18 00 56.4	-0.1
	baz=227						
YHNB	Yeheng	0.46	289	eP	Pb	18 00 49.3	-0.3
	baz=289						
YHNB				eS	Sb	18 00 56.3	-0.1
	baz=289						
NSK	Sanguang	0.48	289	eP	Pb	18 00 49.5	-0.4
	baz=289						
NSK				eS	Sb	18 00 57.2	+0.2
	baz=289						
TATO	Taipei	0.56	324	eP	Pg	18 00 50.8	+0.3
	baz=324						
TATO				eS	Sb	18 00 59.2	-0.2
	baz=324						

JMA 10 18:00:43.9±0.1**, 24°.29N**×**123°.44E, h54**^{km}±1^{km}**, M1.4, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.27	80	P	Pn	18 00 53.1	0.0
IRIF				S	Sn	18 01 00.1	+0.3
HATJ	Hateruma jima	0.41	125	P	Pn	18 00 54.4	0.0
HATJ				S	Sn	18 01 02.1	+0.2
YOJ	Yonaguni jima	0.43	294	P	Pn	18 00 54.8	+0.2
YOJ				S	Sn	18 01 02.5	+0.2
JYNG	Yonagunijimaku	0.48	290	P	Pn	18 00 55.2	0.0
JYNG				S	Sn	18 01 03.2	-0.1
JKRS	Kuro-shima	0.52	96	P	Pn	18 00 56.0	+0.3
JKRS				eS	Sn	18 01 05.1	+1.0
JIJ	Ishigaki jima	0.65	83	P	Pn	18 00 57.1	0.0
JIJ				S	Sn	18 01 06.8	0.0
JISG	Ishigakijimahi	0.85	69	P	Pn	18 00 59.9	+0.2
JISG				S	Sn	18 01 11.9	+0.6
JTJ	Tarama	1.20	73	P	Pn	18 01 05.1	+0.7
JTJ				S	Sn	18 01 20.3	+0.6

PRE ***10*** *18:00:49.7±0.6, 21°.38S×28°.46E, h5^{km}, ML3.0*
ISCJB ***10*** *18:00:52.9±0.6, 21°.64S±0°.03×28°.34E±0°.06, h10^{km}, Error ellipse: s-maj=8.7km s-min=4.2km az=11.9*
EAF ***10*** *18:00:55.5±1.4, 21°.61S×28°.43E, h14^{km}±10^{km}, MD3.8*
BUL ***10*** *18:00:56.3±1.1, 21°.60S×28°.42E, h9^{km}±7^{km}, MD3.9*
ISC 10 18:00:52.8±0.8**, 21°.61S**±0°.03×**28°.38E**±0°.06**, h10**^{km}**, n25, σ1**^{s}**.99**/47**, 4C-10D, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATP	Matopo	1.18	5	i P	Pg	18 01 16.8	+1.3
MATP				i S	Sn	18 01 32.0	+0.3
MATP	Matopo	1.18	5	⇓iP	Pg	18 01 16.8	+1.3
MATP				i S	Sn	18 01 32.0	+0.3
MATP	Matopo	1.18	5	⇓iP	Pg	18 01 16.8	+1.3
MATP				i S	Sn	18 01 32.0	+0.3
BLWY	Bulawayo	1.48	8	i P	Pg	18 01 21.3	+0.2
BLWY				i S	Sn	18 01 38.6	-0.4
BLWY	Bulawayo	1.48	8	⇑iP	Pg	18 01 21.3	+0.2
BLWY				i S	Sn	18 01 38.6	-0.4
BLWY	Bulawayo	1.48	8	⇑iP	Pg	18 01 21.3	+0.2
BLWY				i S	Sn	18 01 38.6	-0.4
MSNA	Messina	1.69	116	i P	Pb	18 01 23.8	-0.2
MSNA				i S	Sn	18 01 44.3	+0.1
MSNA	Messina	1.69	116	eP	Pn	18 01 22.0	-0.4
MSNA				eS	Sb	18 01 45.3	-0.1
MSNA				AML	AML	18 01 50.5	
	comp=Z,272nm,0.1s						
MSNA	Messina	1.69	116	⇑iP	Pb	18 01 23.8	-0.2
MSNA				i S	Sn	18 01 44.3	+0.1
MSNA	Messina	1.69	116	⇑iP	Pb	18 01 23.8	-0.2
MSNA				i S	Sn	18 01 44.3	+0.1
LBTB	Lobatse	4.25	217	i P	Pn	18 01 59.9	+2.2
LBTB				i S	Sn	18 02 47.2	-0.3
LBTB	Lobatse	4.25	217	eP	Pn	18 01 59.1	+1.4
LBTB				eS	Sn	18 02 49.0	+1.6
LBTB				AML	AML	18 03 09.5	
	comp=Z,57nm,0.5s						
LBTB	Lobatse	4.25	217	⇓iP	Pn	18 01 59.9	+2.2
LBTB				i S	Sn	18 02 47.2	-0.3
LBTB	Lobatse	4.25	217	⇓iP	Pn	18 01 59.9	+2.2
LBTB				i S	Sn	18 02 47.2	-0.3
PRYS	Parys	5.38	190	eP	Pn	18 02 14.9	+1.7
PRYS				eS	Sn	18 03 17.4	+2.1
PRYS				AML	AML	18 03 45.2	
	comp=Z,15nm,0.7s						
LSZ	Lusaka	6.30	358	i P	Pn	18 02 27.0	+1.1
LSZ				i S	Sn	18 03 35.1	-2.9
LSZ	Lusaka	6.30	358	⇓iP	Pn	18 02 27.0	+1.1
LSZ				i S	Sn	18 03 35.1	-2.9
LSZ	Lusaka	6.30	358	⇓iP	Pn	18 02 27.0	+1.1
LSZ				i S	Sn	18 03 35.1	-2.9
BOSA	Boshof	7.53	201	i P	Pn	18 02 44.0	+1.2
BOSA				i S	Sn	18 04 02.6	-5.7
BOSA	Boshof	7.53	201	eP	Pn	18 02 44.7	+1.9
BOSA				eS	Sn	18 04 08.4	+0.1
BOSA				AML	AML	18 04 50.0	
	comp=Z,18nm,0.5s						
BOSA	Boshof	7.53	201	⇓iP	Pn	18 02 44.0	+1.2
BOSA				i S	Sn	18 04 02.6	-5.7
BOSA	Boshof	7.53	201	⇓iP	Pn	18 02 44.0	+1.2
BOSA				i S	Sn	18 04 02.6	-5.7
TSUM	Tsumeb	10.40	281	i P	Pn	18 03 21.2	-1.1
TSUM	Tsumeb	10.40	281	⇓iP	Pn	18 03 20.8	-1.4
TSUM	Tsumeb	10.40	281	⇓iP	Pn	18 03 20.8	-1.4

IDC 10 18:01:26.1±3.6**, 5°.29S**×**148°.87E, h0**^{km}**, mb3.3**/2**, mb1 3.7**/3**, mb1mx3.3**/31**, mbtmp3.5**/3**, ML0.9**/1**, Error ellipse: s-maj=120.8km s-min=35.3km az=105.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.43	202	Pn	Pn	18 02 36.0	+1.5
	0.4nm,0.3s,baz=30,slow=20,SNR=2.1						
PMG				Sn	Sn	18 03 29.2	+2.4
	0.7nm,0.3s,baz=345,slow=16,SNR=1.9						
WRA	Warramunga Arr	20.30	223	P	P	18 06 03.4	-0.3
	1.6nm,0.7s,baz=49,slow=11,SNR=4.3						
ASAR	Alice Springs	23.27	217	P	P	18 06 34.5	-1.0
	0.6nm,0.6s,baz=52,slow=8.6,SNR=7.3						
TORD	Torodi Ar. Bea	146.71	286	PKPbc	PKPbc	18 21 10.6	-0.4
	0.2nm,0.7s,baz=116,slow=3.4,SNR=2.8						

SOME ***10*** *18:06:17.9, 43°.43N×82°.62E, h5^{km}*
NNC ***10*** *18:06:21.6±2.2, 43°.46N×82°.46E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=19.0km s-min=8.3km az=142.0*
ISC 10 18:06:22.3±1.7**, 43°.51N**±0°.07×**82°.48E**±0°.07**, h10**^{km}**, n34, σ2**^{s}**.25**/52**, 6C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.55	268	S	Sg	18 07 11.9	-0.2
	98nm,0.3s						
KTMS	Ketmen	1.55	268	eP	Pn	18 06 49.3	-0.8
	41nm,0.2s						
KTMS				eS	Sg	18 07 11.9	-0.2
	98nm,0.3s						
DJR	Jarkent	2.11	294	Pg	Pb	18 06 59.5	-1.2
	4.9nm,0.3s						
DJR				Lg	Lg	18 07 29.8	
	44nm,0.2s						
DJR	Jarkent	2.11	294	eP	Pb	18 06 59.5	-1.2
	4.9nm,0.3s						
DJR				eS	Sg	18 07 29.8	-0.3
	44nm,0.2s						
PDGK	Podgornoye	2.19	266	Pg	Pn	18 06 59.2	+0.4
	4.6nm,0.2s						
PDGK				Lg	Lg	18 07 29.8	
	42nm,0.4s						
PDGK	Podgornoye	2.19	266	⇓Pn	Pn	18 06 59.0	+0.2
	2.3nm,0.3s						
PDGK				⇑Sn	Sg	18 07 30.2	-2.3
	56nm,0.5s						
UZB	Uzynbulak	2.55	263	Pg	Pb	18 07 06.1	-2.1
	2.8nm,0.2s						

UZB				Lg	Lg	18 07 40.4	
	24nm,0.4s						
UZB	**Uzynbulak**	**2.55**	**263**	*e*P	**Pb**	**18 07 06.1**	**-2.1**
	2.8nm,0.2s						
UZB				*e*S	**Sb**	**18 07 40.4**	**+0.7**
	30nm,0.4s						
KPKS	**Kokpek**	**2.76**	**270**	*e*P	**Pb**	**18 07 10.1**	**-1.7**
	7.4nm,0.2s						
KPKS				*e*S	**Sg**	**18 07 48.1**	**-2.9**
	78nm,0.4s						
KAPS	**Kapalarasan**	**2.86**	**310**	Pg	**Pb**	**18 07 13.1**	**-0.3**
	1.3nm,0.3s						
KAPS				Lg	Lg	18 07 52.6	
	14nm,0.5s						
KAPS	**Kapalarasan**	**2.86**	**310**	*e*P	**Pb**	**18 07 13.1**	**-0.3**
	1.3nm,0.3s						
KAPS				*e*S	**Sg**	**18 07 52.6**	**-1.5**
	14nm,0.5s						
MNBS	**Baschi**	**3.01**	**282**	Pg	**Pb**	**18 07 13.9**	**-2.1**
	1.6nm,0.1s						
MNBS				Lg	Lg	18 07 54.4	
	20nm,0.3s						
MNBS	**Baschi**	**3.01**	**282**	*e*P	**Pb**	**18 07 13.9**	**-2.1**
	1.6nm,0.1s						
MNBS				*e*S	**Sb**	**18 07 54.4**	**+1.5**
	20nm,0.3s						
SATY	**Saty**	**3.01**	**263**	Pg	**Pb**	**18 07 14.9**	**-1.1**
	5.4nm,0.2s						
SATY				Lg	Lg	18 07 55.6	
	34nm,0.2s						
SATY	**Saty**	**3.01**	**263**	*e*P	**Pb**	**18 07 14.9**	**-1.1**
	5.4nm,0.2s						
SATY				*e*S	**Sg**	**18 07 55.6**	**-3.3**
	34nm,0.2s						
KURS	**Kuram**	**3.14**	**271**	Pg	**Pb**	**18 07 17.4**	**-0.7**
	4.6nm,0.6s						
KURS				Lg	Lg	18 07 60.0	
	8.0nm,0.6s						
KURS	**Kuram**	**3.14**	**271**	*e*P	**Pb**	**18 07 17.4**	**-0.7**
	4.6nm,0.6s						
KURS				*e*S	**Sg**	**18 07 60.0**	**-3.1**
	8.0nm,0.6s						
MK31	**Makanchi Array**	**3.29**	**358**	⇑Pn	**Pb**	**18 07 18.0**	**-2.7**
	2.1nm,0.5s,baz=170,slow=15,SNR=22						
MK31				⇓Lg	Lg	18 08 03.9	
	16nm,0.8s,baz=176,slow=28						
MAKZ	**Makanchi**	**3.32**	**354**	⇑Pn	**Pb**	**18 07 19.3**	**-1.9**
	1.1nm,0.5s						
MAKZ				⇑Sn	**Sn**	**18 07 55.1**	**+1.2**
	0.7nm,0.4s						
MAKZ				⇑Lg	Lg	18 08 13.0	
	2.9nm,0.8s						
KOTS	**Kotyrbulak**	**3.92**	**268**	Pg	**Pb**	**18 07 31.6**	**0.0**
	2.9nm,0.5s						
KOTS				Lg	Lg	18 08 24.2	
	23nm,0.5s						
KOTS	**Kotyrbulak**	**3.92**	**268**	*e*P	**Pb**	**18 07 31.6**	**0.0**
	2.9nm,0.5s						
KOTS				*e*S	**Sg**	**18 08 24.2**	**-4.0**
	23nm,0.5s						
MDOK	**Medeo**	**3.98**	**267**	Pg	**Pb**	**18 07 32.6**	**+0.1**
	2.9nm,0.3s						
MDOK				Lg	Lg	18 08 25.9	
	7.1nm,0.6s						
MDOK	**Medeo**	**3.98**	**267**	*e*P	**Pb**	**18 07 32.6**	**+0.1**
	2.9nm,0.3s						
MDOK				*e*S	**Sg**	**18 08 25.9**	**-4.1**
	7.1nm,0.6s						
TNSS	**Tian-Shan**	**4.07**	**265**	Pg	**Pb**	**18 07 34.7**	**+0.4**
	1.6nm,0.3s						
TNSS				Lg	Lg	18 08 30.3	
	7.4nm,0.4s						
TNSS	**Tian-Shan**	**4.07**	**265**	*e*P	**Pb**	**18 07 34.7**	**+0.4**
	1.6nm,0.3s						
TNSS				*e*S	**Sg**	**18 08 30.3**	**-2.7**
	7.4nm,0.4s						
KTBS	**Karatobe**	**4.22**	**275**	Pg	**Pb**	**18 07 37.3**	**+0.8**
	1.0nm,0.4s						
KTBS				Lg	Lg	18 08 33.3	
	9.5nm,0.5s						
KTBS	**Karatobe**	**4.22**	**275**	*e*P	**Pb**	**18 07 37.3**	**+0.8**
	1.0nm,0.4s						
KTBS				*e*S	**Sg**	**18 08 33.3**	**-4.4**
	9.5nm,0.5s						
ZSN	**Zaisan**	**4.29**	**22**	*e*P	**Pb**	**18 07 36.7**	**-1.0**
	0.9nm,0.4s						
ZSN				*e*S	**Sb**	**18 08 32.5**	**+3.1**
	1.7nm,0.4s						
IZV	**Izvestkoviy**	**4.31**	**266**	Pg	**Pb**	**18 07 38.9**	**+0.6**
	2.8nm,0.6s						
IZV				Lg	Lg	18 08 37.1	
	9.9nm,0.4s						
IZV	**Izvestkoviy**	**4.31**	**266**	*e*P	**Pb**	**18 07 38.9**	**+0.6**
	2.8nm,0.6s						
IZV				*e*S	**Sg**	**18 08 37.1**	**-3.6**
	9.9nm,0.4s						
KUU	**Kurty**	**4.47**	**277**	Pg	**Pb**	**18 07 42.5**	**+1.7**
KUU				Lg	Lg	18 08 42.9	
KUU	**Kurty**	**4.47**	**277**	*e*P	**Pb**	**18 07 42.5**	**+1.7**
KUU				*e*S	**Sg**	**18 08 43.0**	**-2.8**
TKM2	**Tokmak 2**	**5.07**	**266**	⇓P	**Sn**	**18 08 42.0**	**+4.8**
	0.1nm,0.1s						
TKM2				⇑S	**Sg**	**18 09 00.3**	**-4.6**
	1.1nm,0.1s						
KK31	**Karatay Array**	**8.74**	**271**	P	Pg	18 09 15.1	+5.6
	0.2nm,0.4s,baz=161,slow=13,SNR=6.8						
KK31				⇓S	**Sn**	**18 10 12.1**	**+4.8**
	1.3nm,0.3s,baz=170,slow=22						

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*ISCJB **10** 18:06:51.4±0.3, 6°.88S±0°.04×128°.63E±0°.05, h300^{km}, mb4.1/33, Error ellipse: s-maj=6.5km s-min=4.9km az=168.5*

*NEIC **10** 18:06:51.4±1.7, 6°.79S×128°.64E, h283^{km}±10^{km}, mb4.4/19, Error ellipse: s-maj=15.2km s-min=9.1km az=139.0*

*DJA **10** 18:06:51.9±0.5, 7°S±3°×12°9E±°, h280^{km}±9^{km}, M4.7/10, mB4.9/3, mb4.6/7, MLv4.7/10, Mw(mB)4.2/3*

*IDC **10** 18:06:52.5±1.7, 6°.86S×128°.55E, h289^{km}±19^{km}, mb3.5/13, mb1 3.6/14, mb1mx3.5/30, mbtmp4.2/14, Error ellipse: s-maj=17.1km s-min=9.5km az=70.0*

ISC 10 18:06:52.8±0.4, **6°.89S**±0°.05×**128°.68E**±0°.06, **h300**^{km}, **n63**, σ**1^{s}.57**/68, **mb4.2**/33, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.81**	**113**	P	**Pn**	**18 07 45.7**	**-1.1**
SAUI				S	**S**	**18 08 23.9**	**-5.9**
AAI	**Ambon**	**3.21**	**351**	P	**Pn**	**18 07 49.0**	**-1.8**
NLAI	**Namlea**	**3.95**	**336**	P	**Pn**	**18 07 58.0**	**-0.5**
SOEI	**Soe**	**5.22**	**237**	*e*Pn	**Pn**	**18 08 11.3**	**-1.7**
SOEI	**Soe**	**5.22**	**237**	P	**Pn**	**18 08 11.8**	**-1.2**
FAKI	**Fak Fak**	**5.31**	**42**	*e*Pn	**Pn**	**18 08 11.3**	**-2.7**
FAKI	**Fak Fak**	**5.31**	**42**	P	**Pn**	**18 08 10.8**	**-3.2**
SANI	**Sanana**	**5.50**	**331**	P	**Pn**	**18 08 14.9**	**-1.4**
BATI	**Baumata**	**5.96**	**236**	P	**Pn**	**18 08 20.6**	**-1.1**
	56nm,0.3s,baz=107,slow=2.0,SNR=102						
BATI				S	**S**	**18 09 29.1**	**-4.2**
	42nm,0.3s,baz=311,slow=17,SNR=19						
BATI	**Baumata**	**5.96**	**236**	P	**Pn**	**18 08 20.3**	**-1.4**
LBMI	**Labuha**	**6.32**	**349**	P	**Pn**	**18 08 24.8**	**-1.2**
	56nm,0.8s						
MTN	**Manton Dam**	**6.39**	**158**	*e*Pn	**Pn**	**18 08 26.0**	**-0.8**
MMRI	**Maumere**	**6.62**	**254**	*e*Pn	**Pn**	**18 08 27.7**	**-1.9**
EDFI	**Ende, Flores**	**7.17**	**255**	P	**Pn**	**18 08 34.6**	**-1.8**
SGSI	**Sangihe**	**10.96**	**343**	P	**P**	**18 09 25.9**	**+0.6**
JAY	**Jayapura**	**12.74**	**71**	P	**P**	**18 09 46.8**	**+1.7**
	1.3nm,0.3s,baz=223,slow=8.2,SNR=9.9						
WRAB	**Tennant Creek**	**14.09**	**158**	*e*P	**Pn**	**18 09 60.0**	**-0.5**
WRA	**Warramunga Arr**	**14.09**	**158**	P	**Pn**	**18 09 60.0**	**-0.6**
	7.0nm,0.3s,baz=336,slow=13,SNR=122						
WRA				S	**S**	**18 12 37.0**	**+1.7**
	1.1nm,0.3s,baz=323,slow=23,SNR=6.1						
WB2	**Warramunga Arr**	**14.10**	**158**	*e*P	**P**	**18 09 59.6**	**-0.4**
COEN	**Coen**	**15.88**	**117**	*e*P	**Pn**	**18 10 21.1**	**-0.6**
	36nm,0.7s						
PSA00	**Pilbara Seismi**	**16.91**	**209**	*e*P	**P**	**18 10 30.3**	**-0.5**
	75nm,1.9s						
AS31	**Alice Springs**	**17.42**	**164**	*e*P	**Pn**	**18 10 37.9**	**-1.7**
	29nm,0.6s						
ASAR	**Alice Springs**	**17.42**	**164**	P	**Pn**	**18 10 38.2**	**-1.4**
	8.5nm,0.3s,baz=344,slow=11,SNR=1370						
ASAR				S	**S**	**18 13 43.6**	**+1.7**
	0.2nm,0.3s,baz=349,slow=21,SNR=13						
CTA	**Charters Tower**	**21.51**	**129**	P	**P**	**18 11 20.9**	**+2.4**
	3.3nm,0.6s,baz=302,slow=15,SNR=5.0						
TGY	**Tagaytay City**	**22.22**	**340**	P	**P**	**18 11 25.5**	**+0.5**
	132nm,0.3s,baz=134,slow=15,SNR=3.2						
STKA	**Stephens Creek**	**27.63**	**156**	P	**P**	**18 12 14.8**	**+1.4**
	1.4nm,0.4s,baz=329,slow=11,SNR=7.8						
CAN	**Canberra**	**33.90**	**149**	*e*P	**P**	**18 13 11.2**	**+3.1**
	12nm,0.8s						
CMAR	**Chiang Mai Arr**	**38.66**	**311**	P	**P**	**18 13 48.9**	**+0.5**
	0.6nm,0.6s,baz=140,slow=6.6,SNR=6.8						
MAJO	**Matsushiro**	**44.11**	**11**	*e*P	**P**	**18 14 31.2**	**-0.9**
	12nm,0.8s						
MAT	**Matsushiro**	**44.11**	**11**	P	**P**	**18 14 30.4**	**-1.7**
MJAR	**Matsushiro Arr**	**44.11**	**11**	P	**P**	**18 14 30.9**	**-1.3**
	7.3nm,0.7s,baz=194,slow=10,SNR=21						
KSRS	**Korea Array**	**44.12**	**359**	P	**P**	**18 14 32.8**	**+0.7**
	1.6nm,0.6s,baz=177,slow=9.2,SNR=8.3						
MJB9	**Matsu-Tunnel**	**44.12**	**11**	*e*P	**P**	**18 14 31.2**	**-1.0**
	12nm,0.8s						
XAN	**Xi'an**	**44.80**	**337**	P	**P**	**18 14 36.7**	**-0.9**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**50.94**	**3**	P	**P**	**18 15 24.6**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=197,slow=8.3,SNR=12						
LSA	**Lhasa**	**51.22**	**317**	*e*P	**P**	**18 15 26.7**	**-0.4**
	comp=Z,5.8nm,0.6s						
GTA	**Gaotai**	**53.25**	**332**	*e*P	**P**	**18 15 41.7**	**+0.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GUN	**Gumba**	**53.90**	**312**	*e*P	**P**	**18 15 46.5**	**0.0**
	comp=Z,23nm,0.6s						
PKI	**Pulchoki**	**54.06**	**311**	*e*P	**P**	**18 15 47.6**	**-0.1**
KKN	**Kakani**	**54.28**	**311**	*e*P	**P**	**18 15 49.4**	**+0.3**
KOLN	**Koldanda**	**55.53**	**310**	*e*P	**P**	**18 15 58.5**	**+0.6**
PYUN	**Piuthan**	**56.16**	**310**	*e*P	**P**	**18 16 03.0**	**+0.6**
	comp=Z,33nm,0.9s						
SONM	**Songino Array**	**57.93**	**342**	P	**P**	**18 16 15.1**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=163,slow=5.8,SNR=7.9						
PETK	**Petropavlovsk-**	**64.63**	**19**	P	**P**	**18 16 59.9**	**+1.3**
	comp=Z,7.2nm,0.7s,baz=176,slow=3.4,SNR=9.7						
NIL	**Nilore**	**66.16**	**311**	*e*P	**P**	**18 17 06.9**	**-2.0**
	comp=Z,32nm,1.9s						
KSH	**Kashi**	**67.06**	**318**	P	**P**	**18 17 16.4**	**+1.9**
KSH				*e*PcP	**PcP**	**18 17 43.2**	**+2.9**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,61nm,4.5s						
KSH				LR	LR		
	comp=N,83nm,9.9s						
KSH				LR	LR		
	comp=E,80nm,6.3s						
MK31	**Makanchi Array**	**67.42**	**327**	*e*P	**P**	**18 17 17.1**	**+0.6**
	comp=E,4.1nm,0.8s						
MKAR	**Makanchi Array**	**67.42**	**327**	P	**P**	**18 17 17.1**	**+0.6**
	comp=E,4.2nm,0.6s,baz=126,slow=7.9,SNR=54						
MAKZ	**Makanchi**	**67.60**	**327**	*e*P	**P**	**18 17 18.1**	**+0.5**
	comp=E,3.9nm,0.7s						
YAK	**Yakutsk**	**68.72**	**1**	*e*P	**P**	**18 17 23.1**	**-0.9**
	comp=E,13nm,0.7s						
ARSB	**Arslanbob**	**69.94**	**319**	*e*P	**P**	**18 17 31.2**	**-1.0**
	comp=E,5.0nm,0.8s						
GAR	**Garm**	**70.66**	**315**	*e*P	**P**	**18 17 36.5**	**-0.1**
	comp=E,10nm,0.8s						
ZAA0	**Zalesovo Array**	**70.91**	**334**	*e*P	**P**	**18 17 37.1**	**-0.5**
	comp=E,2.9nm,0.8s						
ZALV	**Zalesovo Beam**	**70.91**	**334**	P	**P**	**18 17 37.6**	**0.0**
	comp=E,3.1nm,0.8s,baz=128,slow=5.5,SNR=11						
KURK	**Kurchatov**	**71.75**	**329**	*e*P	**P**	**18 17 42.5**	**-0.2**
	comp=E,5.2nm,1.0s						
KK31	**Karatay Array**	**72.40**	**319**	*e*P	**P**	**18 17 46.6**	**-0.1**
	comp=E,4.4nm,1.3s						
KKAR	**Karatay Array**	**72.40**	**319**	*e*P	**P**	**18 17 46.6**	**-0.1**
	comp=E,4.4nm,1.3s						
VNDA	**Vanda**	**72.72**	**173**	P	**P**	**18 17 49.5**	**+1.5**
	comp=E,0.3nm,0.5s,baz=324,slow=8.2,SNR=2.8						
MAW	**Mawson**	**74.58**	**201**	P	**P**	**18 17 58.7**	**-0.1**
	comp=E,1.4nm,1.1s,baz=45,slow=5.7,SNR=2.8						
ABKAR	**Akbulak array**	**81.61**	**322**	*e*P	**P**	**18 18 37.7**	**+0.1**
	comp=E,1.9nm,0.8s						
RND	**Reindeer**	**92.74**	**27**	*e*P	**P**	**18 19 30.4**	**-0.6**
	comp=E,6.6nm,0.8s						
ILAR	**Eielson Array**	**93.80**	**25**	P	**P**	**18 19 34.9**	**-0.9**
	comp=E,0.6nm,0.8s,baz=265,slow=4.5,SNR=5.1						
PDAR	**Pinedale Array**	**117.74**	**45**	PKP	**PKiKP**	**18 25 05.3**	**+1.2**
	comp=E,0.3nm,0.7s,baz=222,slow=1.2,SNR=3.9						

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*ISCJB **10** 18:07:14.6±0.6, 39°.12N±0°.03×29°.01E±0°.04, h3^{km}±7^{km}, Error ellipse: s-maj=5.8km s-min=5.0km az=5.7*

*ISK **10** 18:07:14.1, 39°.12N×29°.04E, h5^{km}, ML2.1/5*

*DDA **10** 18:07:14.8, 39°.13N×29°.04E, h7^{km}±1^{km}, ML2.7*

ISC 10 18:07:14.7±1.1, **39°.13N**±0°.03×**29°.05E**±0°.04, **h11**^{km}±13^{km}, **n12**, σ**0^{s}.43**/18, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.34**	**96**	*i* P	**Pb**	**18 07 22.3**	**-0.6**
GDZ				*i* S	**Sb**	**18 07 27.5**	**-0.9**
TVSB	**Tavsanli**	**0.46**	**45**	PG	**Pg**	**18 07 23.8**	**+0.1**
TVSB				SG	**Sg**	**18 07 29.9**	**+0.1**
DURS	**Dursunbey**	**0.65**	**317**	*i* P	**Pb**	**18 07 28.4**	**+0.2**
DURS				*i* S	**Sg**	**18 07 35.4**	**-0.6**
DURS				IAML_P			
	comp=Z,744nm,0.1s						
KULA	**Kula-Manisa**	**0.68**	**206**	PG	**Pg**	**18 07 27.9**	**0.0**
KULA				SG	**Sg**	**18 07 36.7**	**-0.2**
MANT	**Manisa**	**0.74**	**211**	*i* P	**Pg**	**18 07 29.1**	**0.0**
KHAL	**Karahalli**	**0.83**	**155**	*i* P	**Pb**	**18 07 32.0**	**+0.7**
KHAL				*i* S	**Sg**	**18 07 41.5**	**-0.1**
ULDT	**Uludag**	**1.02**	**4**	*i* P	**Pb**	**18 07 34.4**	**-0.1**
ULDT				IAML_P			
	comp=Z,1µm,0.1s						
KCTX	**Karacabey (Bur**	**1.26**	**335**	PN	**Pn**	**18 07 38.2**	**-0.1**
BORA	**Eskisehir**	**1.32**	**55**	PN	**Pn**	**18 07 39.7**	**+0.5**
ARMT	**Armutlu**	**1.45**	**354**	PN	**Pb**	**18 07 41.9**	**+0.2**
YLV	**Yalova**	**1.46**	**10**	PN	**Pb**	**18 07 42.2**	**+0.2**
YLV				SN	**Sg**	**18 08 02.1**	**+0.3**
SRCK	**Saricakaya, Es**	**1.52**	**53**	PN	**Pb**	**18 07 43.4**	**+0.4**

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*ISCJB **10** 18:15:45.0±0.3, 24°.69N±0°.02×122°.55E±0°.01, h118^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=2.1km az=163.9*

*JMA **10** 18:15:45.3±0.1, 24°.65N×122°.53E, h116^{km}±2^{km}, M3.1*

*TAP **10** 18:15:45.2, 24°.71N×122°.58E, h118^{km}, ML3.8, B*

ISC 10 18:15:45.0±1.2, **24°.70N**±0°.03×**122°.56E**±0°.02, **h120**^{km}±5^{km}, **n127**, σ**0^{s}.84**/249, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.42**	**249**	P	**Pn**	**18 16 02.7**	**+0.2**
	baz=248						
EOS1				S	**Sn**	**18 16 16.1**	**+0.4**
	baz=248						
JYNG	**Yonagunijimaku**	**0.43**	**126**	P	**Pn**	**18 16 02.6**	**0.0**
JYNG				S	**Sn**	**18 16 15.4**	**-0.4**
YOJ	**Yonaguni jima**	**0.47**	**121**	P	**Pn**	**18 16 02.6**	**-0.2**
	baz=121						
YOJ				*e*S	**Sn**	**18 16 16.3**	**0.0**
	baz=121						
YOJ	**Yonaguni jima**	**0.47**	**121**	P	**Pn**	**18 16 02.8**	**0.0**
YOJ				S	**Sn**	**18 16 15.7**	**-0.5**
EGS		**0.59**	**284**	*e*P	**Pn**	**18 16 03.9**	**+0.4**
	baz=283						
EGS				*e*S	**Sn**	**18 16 17.5**	**-0.1**
	baz=283						
TWB1	**Santiao Chiao**	**0.60**	**300**	*e*P	**Pn**	**18 16 04.0**	**+0.4**
	baz=299						
TWB1				*e*S	**Sn**	**18 16 17.6**	**-0.1**
	baz=299						
TWC	**Suao**	**0.66**	**262**	*e*P	**Pn**	**18 16 03.9**	**-0.1**
	baz=261						
TWC				*e*S	**Sn**	**18 16 17.6**	**-0.8**
	baz=261						
NTC	**Toucheng**	**0.68**	**283**	*e*P	**Pn**	**18 16 04.3**	**+0.1**
	baz=282						
NTC				*e*S	**Sn**	**18 16 18.4**	**-0.4**
	baz=282						
TIPB	**Shuangxi**	**0.72**	**292**	*e*P	**Pn**	**18 16 04.8**	**+0.3**
	baz=291						
TIPB				*e*S	**Sn**	**18 16 18.6**	**-0.7**
	baz=291						
ILA	**Ilan**	**0.74**	**275**	*e*P	**Pn**	**18 16 04.9**	**+0.2**
	baz=274						
ILA				*e*S	**Sn**	**18 16 20.0**	**+0.4**
	baz=274						
NANB	**Nanao**	**0.79**	**250**	*e*P	**Pn**	**18 16 05.4**	**+0.3**
	baz=249						
NANB				*e*S	**Sn**	**18 16 20.4**	**+0.1**
	baz=249						
ENA	**Nanau**	**0.80**	**250**	*e*P	**Pn**	**18 16 05.5**	**+0.3**
	baz=249						
ENA				*e*S	**Sn**	**18 16 20.6**	**+0.2**
	baz=249						
NWF	**Wu-fen Shan**	**0.80**	**297**	*e*P	**Pn**	**18 16 05.6**	**+0.3**
	baz=296						
NWF				*e*S	**Sn**	**18 16 20.5**	**-0.1**
	baz=296						
WFSB	**Wu-fen Shan**	**0.80**	**297**	*e*P	**Pn**	**18 16 04.8**	**-0.4**
	baz=296						
WFSB				*e*S	**Sn**	**18 16 20.2**	**-0.2**
	baz=296						
TWE	**Neicheng**	**0.81**	**271**	P	**Pn**	**18 16 05.6**	**+0.3**
	baz=270						
TWE				*e*S	**Sn**	**18 16 19.8**	**-0.8**
	baz=270						
ENTT	**Nioudou**	**0.91**	**266**	*i* P	**Pn**	**18 16 07.0**	**+0.8**
	baz=265						
ENTT				*e*S	**Sn**	**18 16 22.6**	**+0.4**
	baz=265						
NDT	**Datong Townshi**	**0.96**	**264**	*i* P	**Pn**	**18 16 07.5**	**+0.8**
	baz=263						
NDT				*e*S	**Sn**	**18 16 23.5**	**+0.4**
	baz=263						
YM01	**YM01**	**1.00**	**296**	*e*P	**Pn**	**18 16 07.4**	**+0.3**
	baz=295						
YM01				*e*S	**Sn**	**18 16 23.2**	**-0.6**
	baz=295						
YM08	**YM08**	**1.01**	**299**	*e*P	**Pn**	**18 16 07.4**	**+0.3**
	baz=298						
YM08				*e*S	**Sn**	**18 16 22.7**	**-1.1**
	baz=298						
TATO	**Taipei**	**1.01**	**286**	*e*P	**Pn**	**18 16 07.0**	**-0.1**
	baz=285						
TATO				*e*S	**Sn**	**18 16 22.4**	**-1.5**
	baz=285						
YM05	**YM05**	**1.01**	**297**	*e*P	**Pn**	**18 16 07.5**	**+0.2**
	baz=296						
YM05				*e*S	**Sn**	**18 16 23.5**	**-0.6**
	baz=296						
YM10	**YM10**	**1.01**	**296**	*e*P	**Pn**	**18 16 07.6**	**+0.4**
	baz=295						
YM10				*e*S	**Sn**	**18 16 23.5**	**-0.6**
	baz=295						
TAP	**Taipei**	**1.02**	**289**	*e*P	**Pn**	**18 16 07.4**	**+0.2**
	baz=288						
TAP				*e*S	**Sn**	**18 16 23.0**	**-1.0**
	baz=288						
PCYT	**Pengchaiyu**	**1.02**	**334**	*e*P	**Pn**	**18 16 07.6**	**+0.4**
	baz=333						
PCYT				*e*S	**Sn**	**18 16 24.4**	**+0.2**
	baz=333						
NACB	**Ninganchiao**	**1.03**	**239**	P	**Pn**	**18 16 07.1**	**-0.2**
	baz=239						
NACB				*e*S	**Sn**	**18 16 23.4**	**-0.8**
	baz=239						
YM03	**YM03**	**1.04**	**297**	*e*P	**Pn**	**18 16 07.8**	**+0.3**
	baz=296						
YM03				*e*S	**Sn**	**18 16 24.5**	**-0.1**
	baz=296						
TWY	**Chenhua**	**1.04**	**303**	*e*P	**Pn**	**18 16 07.8**	**+0.3**
	baz=302						
TWY				*e*S	**Sn**	**18 16 24.6**	**+0.2**
	baz=302						
ANP	**Anpu**	**1.06**	**297**	*e*P	**Pn**	**18 16 08.2**	**+0.5**
	baz=296						
ANP				*e*S	**Sn**	**18 16 24.9**	**0.0**
	baz=296						
TWD	**Chiawan**	**1.08**	**235**	P	**Pn**	**18 16 07.8**	**0.0**
	baz=234						
TWD				*e*S	**Sn**	**18 16 24.2**	**-0.8**
	baz=234						
YHNB	**Yeheng**	**1.08**	**268**	*i* P	**Pn**	**18 16 08.5**	**+0.6**
	baz=268						
YHNB				*e*S	**Sn**	**18 16 25.1**	**-0.2**
	baz=268						
NSK	**Sanguang**	**1.10**	**269**	*e*P	**Pn**	**18 16 08.5**	**+0.5**
	baz=268						
NSK				*e*S	**Sn**	**18 16 24.9**	**-0.6**
	baz=268						
ETLH	**Xiulin Townshi**	**1.10**	**244**	P	**Pn**	**18 16 08.2**	**0.0**
	baz=243						
ETLH				*e*S	**Sn**	**18 16 25.4**	**-0.3**
	baz=243						
NNSB	**Datong**	**1.11**	**256**	P	**Pn**	**18 16 08.6**	**+0.3**
	baz=255						
NNSB				*e*S	**Sn**	**18 16 25.9**	**0.0**
	baz=255						
NTST	**Danshui**	**1.11**	**295**	*e*P	**Pn**	**18 16 08.4**	**+0.3**
	baz=293						
NTST				*e*S	**Sn**	**18 16 25.8**	**+0.1**
	baz=293						
TWS1	**Kuangyinshan**	**1.11**	**291**	P	**Pn**	**18 16 08.8**	**+0.7**
	baz=290						
TWS1				*e*S	**Sn**	**18 16 25.2**	**-0.5**
	baz=290						
NNS	**Nan Shan**	**1.11**	**257**	P	**Pn**	**18 16 08.6**	**+0.3**
	baz=256						
NNS				*e*S	**Sn**	**18 16 25.6**	**-0.4**
	baz=256						
IRIF	**Iriomote-Funau**	**1.12**	**109**	P	**Pn**	**18 16 08.5**	**+0.2**
IRIF				S	**Sn**	**18 16 25.6**	**-0.3**
HWA	**Hwalien**	**1.14**	**231**	*e*P	**Pn**	**18 16 08.7**	**+0.3**
	baz=230						
HWA				*e*S	**Sn**	**18 16 26.3**	**+0.1**
	baz=230						
NCU	**National Centr**	**1.28**	**282**	*e*P	**Pn**	**18 16 10.6**	**+0.7**
	baz=281						
NCU				*e*S	**Sn**	**18 16 29.3**	**+0.4**
	baz=281						
NCUH	**Zhongli**	**1.28**	**282**	*e*P	**Pn**	**18 16 10.5**	**+0.5**
	baz=281						
NCUH				*e*S	**Sn**	**18 16 29.2**	**+0.3**
	baz=281						
HATJ	**Hateruma jima**	**1.30**	**119**	*e*S	**Sn**	**18 16 29.8**	**+0.5**
WHF	**Hehuan Shan**	**1.31**	**245**	*e*P	**Pn**	**18 16 11.0**	**+0.2**
	baz=244						
WHF				*e*S	**Sn**	**18 16 29.7**	**-0.5**
	baz=244						
TDCB	**Techi**	**1.36**	**251**	*i* P	**Pn**	**18 16 11.9**	**+1.0**
	baz=250						
TDCB				*e*S	**Sn**	**18 16 30.8**	**+0.1**
	baz=250						
ESL	**Shilin**	**1.36**	**230**	P	**Pn**	**18 16 10.9**	**0.0**
	baz=229						
ESL				*e*S	**Sn**	**18 16 29.1**	**-1.4**
	baz=229						
JKRS	**Kuro-shima**	**1.40**	**109**	P	**Pn**	**18 16 12.0**	**+0.8**
JKRS				S	**Sn**	**18 16 31.3**	**+0.1**
LIOB	**Emei**	**1.41**	**268**	*e*P	**Pn**	**18 16 12.3**	**+0.9**
	baz=267						
LIOB				*e*S	**Sn**	**18 16 31.4**	**-0.1**
	baz=267						
CHGB	**Renai**	**1.42**	**243**	P	**Pn**	**18 16 12.8**	**+1.0**
	baz=243						
CHGB				*e*S	**Sn**	**18 16 31.9**	**-0.2**
	baz=243						
NSTT	**Nanjuang**	**1.42**	**267**	P	**Pn**	**18 16 12.3**	**+0.7**
	baz=266						
NSTT				*e*S	**Sn**	**18 16 32.1**	**+0.4**
	baz=266						
SBCB	**Hsinchu**	**1.44**	**274**	*e*P	**Pn**	**18 16 12.0**	**+0.3**
	baz=273						
SBCB				*e*S	**Sn**	**18 16 32.6**	**+0.6**
	baz=273						
HSN	**Hsinchu**	**1.45**	**274**	*e*P	**Pn**	**18 16 11.9**	**0.0**
	baz=274						
HSN				*e*S	**Sn**	**18 16 31.9**	**-0.4**
	baz=274						
EGFH	**Guangfu**	**1.46**	**225**	P	**Pn**	**18 16 12.2**	**+0.2**
	baz=225						
EGFH				*e*S	**Sn**	**18 16 31.4**	**-1.1**
	baz=225						
JIJ	**Ishigaki jima**	**1.48**	**103**	P	**Pn**	**18 16 12.6**	**+0.4**
JIJ				S	**Sn**	**18 16 31.7**	**-1.1**
WHP	**Taichung City**	**1.53**	**254**	*e*P	**Pn**	**18 16 14.0**	**+1.1**
	baz=253						
WHP				*e*S	**Sn**	**18 16 34.2**	**+0.1**
	baz=253						
HGSD	**Ruisui**	**1.59**	**221**	*e*P	**Pn**	**18 16 13.8**	**+0.3**
	baz=221						
HGSD				S	**Sn**	**18 16 35.4**	**+0.1**
	baz=221						
JISG	**Ishigakijimahi**	**1.59**	**94**	P	**Pn**	**18 16 14.0**	**+0.5**
JISG				S	**Sn**	**18 16 34.5**	**-0.8**
VWDT	**VWDT**	**1.61**	**234**	P	**Pn**	**18 16 14.8**	**+1.1**

	baz=234						
VWDT				*e*S	Sn	18 16 35.5	0.0
	baz=234						
NMLH	**Miaoli**	**1.62**	**264**	*e*P	**Pn**	**18 16 15.1**	**+1.2**
	baz=264						
NMLH				*e*S	**Sn**	**18 16 35.6**	**-0.2**
	baz=264						
DPDB	**Guoxing**	**1.64**	**246**	*e*P	**Pn**	**18 16 15.4**	**+1.3**
	baz=245						
DPDB				*e*S	**Sn**	**18 16 36.5**	**+0.2**
	baz=245						
EHY	**Hungye**	**1.65**	**224**	*e*P	**Pn**	**18 16 14.3**	**+0.1**
	baz=223						
EHY				*e*S	**Sn**	**18 16 34.6**	**-1.8**
	baz=223						
NSY	**Sanyi**	**1.67**	**260**	*e*P	**Pn**	**18 16 14.5**	**+0.1**
	baz=259						
NSY				S	**Sn**	**18 16 37.6**	**+0.8**
	baz=259						
TWQ1	**Liyutan**	**1.67**	**258**	*e*P	**Pn**	**18 16 15.0**	**+0.6**
	baz=257						
TWQ1				*e*S	**Sn**	**18 16 37.2**	**+0.4**
	baz=257						
PTSB	**Yuanli**	**1.71**	**262**	*e*P	**Pn**	**18 16 16.1**	**+1.1**
	baz=261						
PTSB				*e*S	**Sn**	**18 16 37.5**	**-0.3**
	baz=261						
SMLT	**Sun Moon Lake**	**1.72**	**242**	P	**Pn**	**18 16 16.7**	**+1.5**
	baz=241						
SMLT				*e*S	**Sn**	**18 16 39.8**	**+1.6**
	baz=241						
SSLB	**Suanglung**	**1.73**	**238**	P	**Pn**	**18 16 16.7**	**+1.5**
	baz=238						
SSLB				*e*S	**Sn**	**18 16 38.3**	**+0.1**
	baz=238						
YULB	**Yu-li**	**1.75**	**222**	*e*P	**Pn**	**18 16 15.5**	**+0.1**
	baz=221						
YULB				*e*S	**Sn**	**18 16 37.6**	**-1.0**
	baz=221						
TWF1	**Yuli**	**1.77**	**221**	*e*P	**Pn**	**18 16 15.7**	**-0.1**
	baz=220						
TWF1				S	**Sn**	**18 16 38.5**	**-0.7**
	baz=220						
WDJ	**Dajia District**	**1.79**	**259**	*e*P	**Pn**	**18 16 16.9**	**+1.1**
	baz=258						
WDJ				*e*S	**Sn**	**18 16 39.4**	**0.0**
	baz=258						
WHYT	**Xinyi Township**	**1.86**	**238**	P	**Pn**	**18 16 18.1**	**+1.4**
	baz=237						
WHYT				*e*S	**Sn**	**18 16 41.4**	**+0.4**
	baz=237						
WJS	**Zhushan**	**1.89**	**243**	*e*P	**Pn**	**18 16 17.9**	**+0.8**
	baz=242						
WJS				*e*S	**Sn**	**18 16 42.1**	**+0.4**
	baz=242						
WNT	**Mingjian**	**1.90**	**245**	*e*P	**Pn**	**18 16 18.6**	**+1.4**
	baz=244						
WNT				*e*S	**Sn**	**18 16 42.1**	**+0.2**
	baz=244						
YUS	**Yu-Shan**	**1.91**	**231**	*e*P	**Pn**	**18 16 19.0**	**+1.2**
	baz=230						
YUS				*e*S	**Sn**	**18 16 42.2**	**-0.6**
	baz=230						
WCHH	**Zhanghua**	**1.93**	**252**	*e*P	**Pn**	**18 16 18.7**	**+1.1**
	baz=251						
WCHH				*e*S	**Sn**	**18 16 43.8**	**+1.3**
	baz=251						
CHKT	**Chengkung**	**1.94**	**215**	*e*P	**Pn**	**18 16 17.6**	**-0.1**
	baz=214						
CHKT				*e*S	**Sn**	**18 16 41.4**	**-1.3**
	baz=214						
JTJ	**Tarama**	**1.95**	**91**	P	**Pn**	**18 16 18.7**	**+0.9**
JTJ				*e*S	**Sn**	**18 16 43.8**	**+0.9**
CHN5	**Tsauling**	**2.04**	**238**	*e*P	**Pn**	**18 16 20.4**	**+1.3**
	baz=237						
CHN5				*e*S	**Sn**	**18 16 45.3**	**+0.1**
	baz=237						
ELDTW	**Lidau**	**2.07**	**223**	*e*P	**Pn**	**18 16 19.4**	**-0.1**
	baz=223						
ELDTW				*e*S	**Sn**	**18 16 45.6**	**-0.2**
	baz=223						
WGK	**Gukeng**	**2.09**	**241**	*e*P	**Pn**	**18 16 21.1**	**+1.5**
	baz=240						
WGK				*e*S	**Sn**	**18 16 47.6**	**+1.5**
	baz=240						
WDLH	**Douliu**	**2.11**	**242**	*e*P	**Pn**	**18 16 20.7**	**+0.9**
	baz=241						
WDLH				*e*S	**Sn**	**18 16 46.5**	**+0.1**
	baz=241						
RLNB	**Erlin**	**2.17**	**249**	*e*P	**Pn**	**18 16 21.1**	**+0.6**
	baz=248						
RLNB				*e*S	**Sn**	**18 16 47.9**	**+0.2**
	baz=248						
CHN2	**Minshiung**	**2.24**	**239**	*e*P	**Pn**	**18 16 22.3**	**+0.9**
	baz=238						
CHN2				*e*S	**Sn**	**18 16 49.4**	**+0.1**
	baz=238						
TPUB	**Ta-pu**	**2.25**	**232**	P	**Pn**	**18 16 23.0**	**+1.3**
	baz=231						
TPUB				*e*S	**Sn**	**18 16 50.1**	**+0.3**
	baz=231						
STYT	**Tauyuan**	**2.25**	**227**	*e*P	**Pn**	**18 16 22.2**	**+0.4**
	baz=227						
STYT				*e*S	**Sn**	**18 16 50.1**	**+0.2**
	baz=227						
CHY	**Chiayi**	**2.29**	**239**	*e*P	**Pn**	**18 16 22.8**	**+0.6**
	baz=238						
CHY				*e*S	**Sn**	**18 16 49.9**	**-0.8**
	baz=238						
WTP	**Ta-pu**	**2.30**	**231**	*e*P	**Pn**	**18 16 23.1**	**+0.7**
	baz=230						
WTP				*e*S	**Sn**	**18 16 50.6**	**-0.3**
	baz=230						
TWGBT	**Beinan**	**2.32**	**216**	*e*P	**Pn**	**18 16 23.1**	**+0.6**
	baz=216						
TWGBT				*e*S	**Sn**	**18 16 50.8**	**-0.5**
	baz=216						
TWG	**Pinlang**	**2.32**	**216**	*e*P	**Pn**	**18 16 22.7**	**+0.2**
	baz=216						
TWG				S	**Sn**	**18 16 51.5**	**+0.2**
	baz=216						
TTN	**Taitung**	**2.33**	**214**	*e*P	**Pn**	**18 16 23.6**	**+0.9**
	baz=213						
TTN				*e*S	**Sn**	**18 16 51.3**	**-0.3**
	baz=213						
JIRB	**Irabujima**	**2.38**	**86**	S	**Sn**	**18 16 52.1**	**-0.4**
TWK	**Hsinying**	**2.38**	**233**	*e*P	**Pn**	**18 16 24.5**	**+1.2**
	baz=232						
TWK				*e*S	**Sn**	**18 16 52.1**	**-0.5**
	baz=232						
WSF	**Szhu**	**2.39**	**244**	*e*P	**Pn**	**18 16 23.9**	**+0.6**
	baz=243						
WSF				*e*S	**Sn**	**18 16 53.4**	**+0.6**
	baz=243						
CHN1	**Nanshi**	**2.40**	**231**	*e*P	**Pn**	**18 16 25.0**	**+1.4**
	baz=231						
CHN1				*e*S	**Sn**	**18 16 54.0**	**+0.9**
	baz=231						
SNST	**Tainan City**	**2.40**	**232**	*e*P	**Pn**	**18 16 25.4**	**+1.8**
	baz=232						
SNST				*e*S	**Sn**	**18 16 53.2**	**+0.1**
	baz=232						
SGST	**Jiashian**	**2.43**	**229**	*e*P	**Pn**	**18 16 25.8**	**+1.9**
	baz=228						
SGST				*e*S	**Sn**	**18 16 53.9**	**+0.2**
	baz=228						
SLGT	**Liugui**	**2.44**	**226**	*e*P	**Pn**	**18 16 25.7**	**+1.5**
	baz=226						
SLGT				*e*S	**Sn**	**18 16 55.1**	**+1.0**
	baz=226						
JIKM	**Ikemajima**	**2.45**	**84**	*e*S	**Sn**	**18 16 54.1**	**-0.1**
JMJ	**Miyako jima 2**	**2.48**	**87**	*e*P	**Pn**	**18 16 24.5**	**0.0**
	baz=87						
JMJ				*e*S	**Sn**	**18 16 54.0**	**-1.0**
	baz=87						
JMJ2	**Miyako jima3**	**2.52**	**89**	P	**Pn**	**18 16 26.5**	**+1.5**
JMJ2				*e*S	**Sn**	**18 16 56.3**	**+0.6**
CHN8	**Yiju**	**2.54**	**238**	*e*P	**Pn**	**18 16 25.8**	**+0.5**
	baz=237						
CHN8				*e*S	**Sn**	**18 16 56.1**	**-0.2**
	baz=237						
ECL	**Taimali**	**2.56**	**215**	*e*P	**Pn**	**18 16 25.8**	**+0.1**
	baz=215						
ECL				*e*S	**Sn**	**18 16 55.3**	**-1.6**
	baz=215						
JOGS	**Gusukube**	**2.59**	**88**	S	**Sn**	**18 16 58.3**	**+1.0**
SSD	**Sandimen**	**2.63**	**223**	*e*P	**Pn**	**18 16 27.8**	**+1.2**
	baz=222						
SSD				*e*S	**Sn**	**18 16 58.0**	**-0.5**
	baz=222						
PTTC	**Pingtan**	**2.65**	**288**	*e*P	**Pn**	**18 16 26.4**	**-0.3**
	baz=287						
PTTC				*e*S	**Sn**	**18 16 57.3**	**-1.6**
	baz=287						
TWM1	**Shoushan**	**2.71**	**227**	*e*P	**Pn**	**18 16 28.5**	**+0.9**
	baz=226						
TWM1				*e*S	**Sn**	**18 16 59.0**	**-1.3**
	baz=226						
MASBT	**Mashibuluo**	**2.73**	**221**	*e*P	**Pn**	**18 16 29.2**	**+1.3**
	baz=220						
MASBT				*e*S	**Sn**	**18 17 00.8**	**0.0**
	baz=220						
SGLT	**Jiouru**	**2.74**	**224**	*e*P	**Pn**	**18 16 28.7**	**+0.8**
	baz=223						
SGLT				*e*S	**Sn**	**18 17 00.7**	**-0.1**
	baz=223						
MATB	**Ma-tsu**	**2.77**	**302**	*e*P	**Pn**	**18 16 29.1**	**+0.8**
	baz=301						
MATB				*e*S	**Sn**	**18 17 01.9**	**+0.3**
	baz=301						
EAST	**Anshuo**	**2.80**	**215**	*e*P	**Pn**	**18 16 30.6**	**+1.9**
	baz=214						
EAST				*e*S	**Sn**	**18 17 01.5**	**-0.8**
	baz=214						
LAY	**Lan-yu**	**2.81**	**200**	*e*P	**Pn**	**18 16 28.3**	**-0.6**
	baz=199						
LAY				*e*S	**Sn**	**18 17 00.7**	**-1.9**
	baz=199						
SSPT	**Xinbi**	**2.87**	**220**	*e*P	**Pn**	**18 16 30.9**	**+1.3**
	baz=219						
SSPT				*e*S	**Sn**	**18 17 03.5**	**-0.5**
	baz=219						
SCZT	**Fangliau**	**2.93**	**218**	*e*P	**Pn**	**18 16 30.9**	**+0.5**
	baz=217						
SCZT				*e*S	**Sn**	**18 17 05.3**	**0.0**
	baz=217						
PNG	**Penghu**	**2.97**	**248**	*e*P	**Pn**	**18 16 30.6**	**-0.3**
	baz=247						
PNG				*e*S	**Sn**	**18 17 05.5**	**-0.9**
	baz=247						
PHUB	**P'eng-hu**	**2.98**	**247**	*e*P	**Pn**	**18 16 30.4**	**-0.6**
	baz=246						
PHUB				*e*S	**Sn**	**18 17 04.5**	**-2.0**
	baz=246						
WDGT	**Dungji**	**3.02**	**242**	*e*P	**Pn**	**18 16 31.9**	**+0.4**
	baz=241						
WDGT				*e*S	**Sn**	**18 17 06.9**	**-0.5**
	baz=241						
XPSS	**Dashiqiu**	**3.08**	**317**	*e*P	**Pn**	**18 16 33.1**	**+0.8**
	baz=315						
XPSS				*e*S	**Sn**	**18 17 07.9**	**-0.9**
	baz=315						
LYJJ	**Jianjiangzhen**	**3.13**	**307**	*e*P	**Pn**	**18 16 34.0**	**+1.0**
	baz=305						
LYJJ				*e*S	**Sn**	**18 17 08.6**	**-1.3**
	baz=305						
PTMZ	**Houxiangcun**	**3.15**	**277**	*e*P	**Pn**	**18 16 32.6**	**-0.6**
	baz=276						
PTMZ				*e*S	**Sn**	**18 17 09.3**	**-1.0**
	baz=276						
HEN	**Hengchun**	**3.17**	**212**	*e*P	**Pn**	**18 16 34.4**	**+0.9**
	baz=212						
HEN				*e*S	**Sn**	**18 17 10.0**	**-0.9**
	baz=212						
TSEB	**Hengchuen, Pin**	**3.18**	**209**	*e*P	**Pn**	**18 16 35.1**	**+1.4**
	baz=209						
TSEB				*e*S	**Sn**	**18 17 11.3**	**0.0**
	baz=209						
TWKBT	**Hengchun**	**3.19**	**211**	*e*P	**Pn**	**18 16 35.2**	**+1.4**
	baz=210						
TWKBT				*e*S	**Sn**	**18 17 09.5**	**-2.0**
	baz=210						
TWK1	**Hengchun**	**3.19**	**211**	*e*P	**Pn**	**18 16 34.9**	**+1.1**
	baz=210						
TWK1				*e*S	**Sn**	**18 17 10.3**	**-1.1**
	baz=210						
VCHM	**Qimei**	**3.23**	**243**	*e*P	**Pn**	**18 16 33.5**	**-0.8**
	baz=242						
VCHM				*e*S	**Sn**	**18 17 10.7**	**-1.7**
	baz=242						
MHZQ	**Yeshan**	**3.48**	**294**	*e*P	**Pn**	**18 16 38.2**	**+0.5**
	baz=293						
MHZQ				*e*S	**Sn**	**18 17 18.4**	**0.0**
	baz=293						
KNMB	**Chin-men Tao**	**3.81**	**267**	*e*P	**Pn**	**18 16 41.8**	**-0.2**
	baz=266						
KNMB				*e*S	**Sn**	**18 17 24.0**	**-2.1**
	baz=266						
AXDP	**Jialang**	**4.18**	**274**	*e*P	**Pn**	**18 16 47.5**	**+0.6**
	baz=272						
AXDP				*e*S	**Sn**	**18 17 34.1**	**-0.9**
	baz=272						
ZPLA	**Ao Xicun**	**4.46**	**261**	*e*P	**Pn**	**18 16 50.6**	**-0.1**
	baz=260						
ZPLA				*e*S	**Sn**	**18 17 39.4**	**-2.3**
	baz=260						
ZZJH	**Jiuhuzhen**	**4.50**	**268**	*e*P	**Pn**	**18 16 52.5**	**+1.4**
	baz=266						
JOW	**Kunigami**	**5.57**	**66**	*e*P	**Pn**	**18 17 04.7**	**-0.9**
	baz=67						
JOW				*e*S	**Sn**	**18 18 04.8**	**-3.6**
	baz=67						

BJI ***10*** *18:17:58.6±0.0, 37°.98N×142°.23E, h46^{km}, mb4.7/45, mB4.8/29, Ms4.0/10, Ms7 3.7/9*

NIED ***10*** *18:18:00, 38°.30N×141°.90E, h50^{km}, Mw4.4 Best double couple: $M_0$4.94000×10^{15} NP1:ϕ_s225.00000°, δ17.00000°, λ134.00000°. NP2:ϕ_s359.00000°, δ78.00000°, λ78.00000°.*

MOS ***10*** *18:18:02.0±1.0, 38°.34N×141°.89E, h47^{km}, mb4.8/52, Error ellipse: s-maj=7.2km s-min=4.9km az=103.3*

ISCJB ***10*** *18:18:02.1±0.4, 38°.31N±0°.02×141°.93E±0°.03, h51^{km}±2^{km}, mb4.6/127, MS3.8/5, Error ellipse: s-maj=5.2km s-min=3.2km az=36.1*

NEIC ***10*** *18:18:03.4±1.8, 38°.32N×141°.90E, h48^{km}±6^{km}, mb4.6/84, Error ellipse: s-maj=13.1km s-min=8.2km az=119.0*

NEIC Recorded [3 JMA] in Miyagi.

JMA ***10*** *18:18:03.7±0.1, 38°.32N×141°.85E, h47^{km}±1^{km}, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s347.00000°, δ59.00000°, λ79.00000°. NP2: ϕ_s188.00000°, δ33.00000°, λ108.00000°. Principal axes: T Plg74.0000°, Azm227.0000°; N Plg10.0000°, Azm353.0000°; P Plg13.0000°, Azm85.0000°;*

JMA Felt III J1.

IDC ***10*** *18:18:05.1±1.8, 38°.29N×141°.80E, h60^{km}±16^{km}, mb4.0/25, mb1 4.2/32, mb1mx4.2/45, mbtmp4.3/32, MS3.6/6, Ms1 3.7/6, ms1mx3.2/32 Error ellipse: s-maj=13.8km s-min=11.0km az=109.0*

ISC 10 18:18:02.8±0.8**, 38°.30N**±0°.04×**141°.99E**±0°.05**, h46**^{km}±6^{km}**, n279, $\sigma 1^{s}31$**/292**, mb4.6**/136**, MS3.9**/5**, 12C-21D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.41**	**272**	⇓P	**Pn**	**18 18 12.6**	**-0.1**
JIKH				S	**Sn**	**18 18 18.7**	**-1.0**
JIO	**Ouri**	**0.52**	**288**	⇓P	**Pn**	**18 18 13.8**	**-0.3**
JIO				S	**Sn**	**18 18 20.8**	**-1.4**
JKMT	**Kesennumamotoy**	**0.65**	**322**	⇓P	**Pn**	**18 18 15.8**	**0.0**
JKMT				S	**Sn**	**18 18 24.1**	**-1.0**
OFUJ	**Ofunato**	**0.82**	**343**	⇑P	**Pn**	**18 18 18.2**	**+0.2**
OFUJ				S	**Sn**	**18 18 28.5**	**-0.6**
JMK	**Ichinoseki**	**0.89**	**318**	⇓P	**Pn**	**18 18 19.0**	**+0.1**
JMK				S	**Sn**	**18 18 29.6**	**-1.1**
JMM	**Marumori**	**1.03**	**246**	⇓P	**Pn**	**18 18 20.2**	**-0.7**
JMM				S	**Sn**	**18 18 31.5**	**-2.7**
JOU	**Okura**	**1.04**	**274**	⇓P	**Pn**	**18 18 20.7**	**-0.3**
JOU				S	**Sn**	**18 18 33.4**	**-1.1**
JFK	**Kawauchi**	**1.28**	**224**	⇓P	**Pn**	**18 18 23.9**	**-0.4**
JFK				*e*S	**Sn**	**18 18 38.9**	**-1.4**
JOM	**Ohasama**	**1.29**	**335**	⇑P	**Pn**	**18 18 24.9**	**+0.4**
JOM				*e*S	**Sn**	**18 18 40.5**	**-0.1**
JYK	**Kaneyama**	**1.42**	**296**	⇓P	**Pn**	**18 18 26.0**	**-0.1**
JYS	**Shirataka**	**1.51**	**268**	⇓P	**Pn**	**18 18 27.3**	**-0.2**
JYS				*e*S	**Sn**	**18 18 45.0**	**-1.0**
JFT	**Otama**	**1.52**	**240**	⇓P	**Pn**	**18 18 27.5**	**0.0**
JFT				*e*S	**Sn**	**18 18 44.6**	**-1.5**
JRG	**Rokugo**	**1.52**	**317**	⇓P	**Pn**	**18 18 27.8**	**+0.2**
MJAR	**Matsushiro Arr**	**3.48**	**241**	P	**Pn**	**18 18 55.4**	**+0.9**
	6.3nm,0.3s,baz=342,slow=5.4,SNR=116						
MJAR				S	**Sn**	**18 19 39.3**	**+4.9**
	3.1nm,0.3s,baz=341,slow=21,SNR=4.5						
MJAR				LR	LR	18 20 29.9	
	comp=Z,1μm,19.7s,baz=50,slow=44						
MAJO	**Matsushiro**	**3.48**	**241**	*e*Pn	**Pn**	**18 18 55.7**	**+1.2**
MAJO				*e*Sn	**Sn**	**18 19 39.3**	**+4.9**
MAJO	**Matsushiro**	**3.48**	**241**	*d i*P	**Pn**	**18 18 55.8**	**+1.3**
MAT	**Matsushiro**	**3.48**	**241**	P	**Pn**	**18 18 55.8**	**+1.3**
MAT				S	**Sn**	**18 19 35.6**	**+1.2**
MJB9	**Matsu-Tunnel**	**3.48**	**241**	*e*Pn	**Pn**	**18 18 55.5**	**+1.0**
ERM	**Erimo**	**3.82**	**13**	*e*Pn	**Pn**	**18 18 59.7**	**+0.6**
ERM	**Erimo**	**3.82**	**13**	*c i*P	**Pn**	**18 18 59.4**	**+0.3**
INU	**Inuyama**	**4.95**	**235**	*e*Pn	**Pn**	**18 19 16.3**	**+1.6**
JHJ2	**Mitsune**	**5.47**	**199**	*e*Pn	**Pn**	**18 19 21.8**	**+0.1**
JHJ	**Hachijo jima 2**	**5.47**	**200**	P	**Pn**	**18 19 21.9**	**+0.1**
	92nm,0.3s,baz=317,slow=22,SNR=27						
JHJ				S	**Sn**	**18 20 20.9**	**-2.5**
	78nm,0.3s,baz=224,slow=22,SNR=7.0						
ASAJ	**Asahikawa**	**5.83**	**4**	P	**Pn**	**18 19 27.6**	**+0.8**
	5.0nm,0.3s,baz=213,slow=12,SNR=62						
ASAJ				S	**Sn**	**18 20 32.1**	**-0.2**
	2.9nm,0.3s,baz=255,slow=19,SNR=3.8						
GRPR	**Tuman**	**6.37**	**25**	⇑*i*P	**Pn**	**18 19 33.8**	**-0.2**
GRPR				*i* S	**Sn**	**18 20 40.9**	**-4.5**
GRPR				pmax	pmax		
	comp=N,88nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,193nm,0.2s						
GRPR				smax	smax		
	comp=N,217nm,0.4s						
GRPR				smax	smax		
	comp=E,452nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**6.43**	**26**	*d i*P	**Pn**	**18 19 38.0**	**+3.1**
YUK				*i* S	**Sn**	**18 20 49.0**	**+2.0**
YUK				pmax	pmax		
	comp=N,67nm,0.5s						
YUK				pmax	pmax		
	comp=Z,257nm,0.5s						
YUK				pmax	pmax		
	comp=E,105nm,0.3s						
YUK				smax	smax		
	comp=E,257nm,0.6s						
YUK				smax	smax		
	comp=N,510nm,0.4s						
TEY	**Ternei**	**7.84**	**331**	⇓*i*P	Pn	18 19 59.8	+5.5
TEY				pmax	pmax		
	comp=N,130nm,0.8s						
TEY				pmax	pmax		
	comp=E,80nm,0.8s						
TEY				pmax	pmax		
	comp=Z,120nm,0.8s						
KUR	**Kuril'sk**	**8.21**	**30**	*e*P	**Pn**	**18 19 59.3**	**+0.1**
KUR				*i* S	**Sn**	**18 21 27.3**	**-3.2**
KUR				pmax	pmax		
	comp=N,16nm,0.3s						
KUR				pmax	pmax		
	comp=E,15nm,0.3s						
KUR				pmax	pmax		
	comp=Z,68nm,0.3s						
KUR				smax	smax		
	comp=N,53nm,0.8s						
KUR				smax	smax		
	comp=E,98nm,0.7s						
YSS	**Yuzh-Sakhalins**	**8.67**	**4**	*e*Pn	**Pn**	**18 20 06.9**	**+1.4**
YSS	**Yuzh-Sakhalins**	**8.67**	**4**	*e*P	**Pn**	**18 20 07.6**	**+2.0**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
YSS				MLR	MLR		
	comp=N,200nm,14.5s						
VLA	**Vladivostok**	**9.05**	**305**	⇓*e*P	**Pn**	**18 20 12.2**	**+1.4**
MSHR	**Mys Shultsa**	**9.30**	**301**	⇓*e*P	**Pn**	**18 20 14.2**	**0.0**
USA0B	**Ussuriysk Arra**	**9.56**	**311**	*e*Pn	**Pn**	**18 20 18.6**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.56**	**311**	P	**Pn**	**18 20 18.6**	**+0.8**
	comp=N,2.1nm,0.3s,baz=124,slow=13,SNR=18						
JNU	**Nakatsue**	**10.40**	**244**	P	**Pn**	**18 20 30.3**	**+0.9**
	comp=N,1.0nm,0.3s,baz=70,slow=6.7,SNR=17						
JNU				LR	LR	18 25 00.5	
	comp=N,405nm,18.2s,baz=4.5,slow=40						
JNU	**Nakatsue**	**10.40**	**244**	*e*Pn	**Pn**	**18 20 30.0**	**+0.6**
KSRS	**Korea Array**	**11.15**	**270**	P	**Pn**	**18 20 41.9**	**+2.4**
	comp=N,0.6nm,0.3s,baz=81,slow=14,SNR=7.0						
KS15	**Wonju Array Si**	**11.18**	**270**	*e*Pn	**Pn**	**18 20 40.2**	**+0.2**
MDJ	**Mudanjiang**	**11.23**	**308**	*e*Pn	**Pn**	**18 20 40.2**	**-0.4**
KLR	**Kul'dur**	**13.18**	**329**	⇓*e*P	**Pn**	**18 21 06.0**	**-1.2**
CN2	**Changchun**	**13.63**	**299**	*e*P	**Pn**	**18 21 16.6**	**+3.2**
CN2				pmax	pmax		
	comp=N,10.0nm,0.6s						
DL2	**Dalian**	**15.93**	**279**	P	**Pn**	**18 21 45.0**	**+1.3**
DL2				*e*S	**Sn**	**18 24 41.1**	**+1.9**
DL2				pmax	pmax		
	comp=N,50nm,1.2s						
DL2				LR	LR		
	comp=N,160nm,14.8s						
DL2				LR	LR		
	comp=N,180nm,12.0s						
DL2				LR	LR		
	comp=N,230nm,15.7s						
PETK	**Petropavlovsk-**	**18.37**	**31**	P	**Pn**	**18 22 15.5**	**+1.6**
	comp=N,0.1nm,0.3s,baz=234,slow=8.8,SNR=3.5						
PETK				LR	LR	18 28 53.6	
	comp=N,81nm,22.0s,baz=218,slow=35						
PEA1	**Petropavlovsk-**	**18.38**	**31**	*e*P	**Pn**	**18 22 15.5**	**+1.5**
ZEA	**Zeya**	**18.46**	**332**	*e*P	**P**	**18 22 13.2**	**-1.4**
ZEA				pmax	pmax		
	comp=Z,19nm,0.6s						
TIA	**Tai'an**	**19.89**	**272**	P	**P**	**18 22 30.0**	**-0.3**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	**Magadan**	**22.03**	**12**	P	**P**	**18 22 55.2**	**+2.1**
	comp=Z,7.1nm,0.7s,baz=139,slow=11,SNR=4.6						
MA2				LR	LR	18 32 13.7	
	comp=Z,78nm,19.0s,baz=172,slow=38						
SSLB	**Suanglung**	**23.03**	**237**	*e*P	**P**	**18 22 59.1**	**-4.9**
	comp=Z,11nm,0.8s						
YULB	**Yu-li**	**23.08**	**236**	*e*P	**P**	**18 22 59.2**	**-5.4**
	comp=Z,10nm,0.9s						
TPUB	**Ta-pu**	**23.58**	**237**	*e*P	**P**	**18 23 06.4**	**-3.1**
	comp=Z,14nm,0.9s						
TWG	**Pinlang**	**23.63**	**235**	*e*P	**P**	**18 23 07.7**	**-2.1**
	comp=Z,114nm,0.9s						
WHN	**Wuhan**	**24.01**	**260**	⇓P	**P**	**18 23 12.4**	**-0.9**
WHN				pmax	pmax		
	comp=Z,34nm,0.7s						
YAK	**Yakutsk**	**24.95**	**346**	*e*P	**P**	**18 23 20.6**	**-0.9**
	comp=Z,13nm,0.8s						
YAK	**Yakutsk**	**24.95**	**346**	*e*P	**P**	**18 23 20.8**	**-0.7**
YAK				*e**PP	**pP**	**18 23 32.2**	**-1.2**
YAK				*e*S	**S**	**18 27 36.2**	**-5.4**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=N,21nm,1.5s						
YAK				smax	smax		
	comp=E,14nm,1.3s						
SEY	**Seymchan**	**25.47**	**11**	P	**P**	**18 23 28.6**	**+2.4**
	comp=E,3.6nm,0.8s,baz=230,slow=8.4,SNR=5.2						
SEY	**Seymchan**	**25.47**	**11**	⇑*e*P	**P**	**18 23 25.7**	**-0.5**
BOD	**Bodaibo**	**26.72**	**326**	*e*P	**P**	**18 23 37.0**	**-0.6**
BOD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**26.94**	**271**	P	**P**	**18 23 39.0**	**-1.0**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ULN	**Ulaanbaatar**	**27.05**	**302**	*e*P	**P**	**18 23 39.4**	**-1.5**
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.05**	**302**	⇑*e*P	**P**	**18 23 41.7**	**+0.8**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SONA0	**Songino Array**	**27.48**	**302**	*e*P	**P**	**18 23 44.9**	**+0.2**
SONM	**Songino Array**	**27.48**	**302**	P	**P**	**18 23 44.9**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=109,slow=9.3,SNR=16						
ENH	**Enshi**	**27.91**	**263**	*e*P	**P**	**18 23 47.2**	**-1.4**
	comp=Z,43nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.43**	**124**	T	T	18 54 07.6	
	baz=316,slow=76,SNR=2996						
H11N1	**WAKE ISLAND Hy**	**28.44**	**124**	T	T	18 54 08.0	
	baz=316,slow=76,SNR=3612						
H11N3	**WAKE ISLAND Hy**	**28.45**	**124**	T	T	18 54 09.1	
	baz=316,slow=76,SNR=3267						
H11S1	**WAKE ISLAND Hy**	**29.19**	**126**	T	T	18 55 00.5	
	baz=318,slow=76,SNR=1695						

H11S3	WAKE ISLAND Hy	29.20	126	T	T	18 55 02.6	
	baz=318,slow=76,SNR=1919						
H11S2	WAKE ISLAND Hy	29.21	126	T	T	18 55 08.3	
	baz=318,slow=76,SNR=1565						
ZAK	Zakamensk	29.86	306	eP	P	18 24 05.1	-0.8
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TLY	Talaya	29.87	309	P	P	18 24 05.6	-0.2
	comp=Z,1.8nm,0.7s,baz=60,slow=4.7,SNR=5.2						
TLY	Talaya	29.87	309	eP	P	18 24 05.2	-0.5
	comp=Z,5.7nm,0.8s						
TLY	Talaya	29.87	309	eP	P	18 24 05.7	-0.1
TLY				pmax	pmax		
	comp=Z,18nm,0.9s						
TLY				MLR	MLR		
	comp=Z,314nm,18.0s						
GTA	Gaotai	32.65	285	eP	P	18 24 30.5	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,120nm,5.5s						
GTA				LR	LR		
	comp=Z,92nm,17.2s						
GTA				LR	LR		
	comp=Z,160nm,15.8s						
GTA				LR	LR		
	comp=Z,210nm,17.2s						
TIXI	Tiksi	34.09	353	P	P	18 24 42.7	+0.2
	comp=Z,0.8nm,0.5s,baz=145,slow=3.6,SNR=3.8						
TIXI	Tiksi	34.09	353	eP	P	18 24 41.1	-1.5
	comp=Z,2.2nm,0.9s						
TIXI	Tiksi	34.09	353⇑	eP	P	18 24 42.4	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NONG	Nongkai	39.35	250	P	P	18 25 30.3	+2.4
	comp=Z,0.2nm,1.0s						
DGZ	Jazzator, Alta	40.03	305c	iP	P	18 25 34.2	+0.8
DGZ				pmax	pmax		
	comp=Z,15nm,0.8s						
PHRA	Phrae	41.27	253	P	P	18 25 52.9	+9.2
	comp=Z,1.5nm,0.9s						
ZAA0	Zalesovo Array	41.41	311	eP	P	18 25 44.1	-0.4
	comp=Z,7.7nm,0.8s						
ZAA1	Zalesovo Array	41.41	311	eP	P	18 25 44.5	0.0
ZAA1				ePcP	PcP	18 27 42.2	+0.4
ZALV	Zalesovo Beam	41.41	311	P	P	18 25 44.4	0.0
	comp=Z,5.8nm,0.5s,baz=87,slow=7.4,SNR=27						
ZALV				PcP	PcP	18 27 42.2	+0.5
	comp=Z,1.3nm,0.4s,baz=93,slow=2.0,SNR=4.1						
UTTA	Uttaradit	41.48	252	P	P	18 25 47.5	+2.0
	comp=Z,10µm,1.0s						
CMMT	Chiang Mai	42.05	255	P	P	18 25 59.3	+9.2
	comp=Z,3.9nm,0.8s						
CHTO	Chiang Mai	42.05	255	eP	P	18 25 50.0	-0.1
	comp=Z,7.2nm,1.0s						
CHTO	Chiang Mai	42.05	255	eP	P	18 25 50.0	-0.1
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	Chiang Mai Arr	42.26	254	P	P	18 25 51.8	0.0
	comp=Z,1.4nm,0.7s,baz=43,slow=7.3,SNR=12						
CMAR				PcP	PcP	18 27 45.6	+0.5
	comp=Z,0.7nm,0.6s,baz=53,slow=1.1,SNR=5.5						
CMAR				LR	LR	18 44 32.9	
	comp=Z,42nm,20.5s,baz=174,slow=38						
LSA	Lhasa	42.56	274	eP	P	18 25 54.7	0.0
	comp=Z,7.3nm,1.0s						
LSA	Lhasa	42.56	274	P	P	18 25 55.7	+1.0
LSA				pmax	pmax		
	comp=Z,15nm,0.8s						
LSA	Lhasa	42.56	274	eP	P	18 25 54.7	0.0
LSA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MK31	Makanchi Array	43.84	301	eP	P	18 26 04.1	-0.3
	comp=Z,7.4nm,0.8s						
MK31	Makanchi Array	43.84	301	eP	P	18 26 04.1	-0.3
MK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK32	Makanchi Array	43.84	301	eP	P	18 26 04.1	-0.3
MKAR	Makanchi Array	43.84	301	P	P	18 26 04.1	-0.3
	comp=Z,6.9nm,0.7s,baz=86,slow=9.6,SNR=71						
MKAR	Makanchi Array	43.84	301	i P	P	18 26 04.3	-0.1
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SHL	Shillong	43.88	268	eP	P	18 26 04.8	-0.3
	comp=Z,9.9nm,0.8s						
SHL	Shillong	43.88	268	eP	P	18 26 04.8	-0.3
SHL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAKZ	Makanchi	44.05	301	eP	P	18 26 05.8	-0.2
	comp=Z,6.4nm,0.8s						
MAKZ	Makanchi	44.05	301	eP	P	18 26 05.8	-0.2
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	45.52	307	eP	P	18 26 17.4	-0.2
	comp=Z,26nm,0.8s						
KURK	Kurchatov	45.52	307c	iP	P	18 26 17.2	-0.4
KURK				pmax	pmax		
	comp=Z,29nm,0.8s						
KURBB	Kurchatov Arra	45.59	307	P	P	18 26 18.0	-0.2
	comp=Z,20nm,0.8s,baz=82,slow=8.2,SNR=182						
PDGK	Podgornoye	46.59	297	P	P	18 26 26.3	-0.1
PDGK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
JIRN	Jiri	47.37	274	eP	P	18 26 33.2	+0.4
	comp=Z,26nm,0.5s						
GUN	Gumba	47.49	275	eP	P	18 26 34.2	+0.4
SML	Sawmill	47.71	37	eP	P	18 26 36.8	+2.1
	comp=Z,5.9nm,0.8s						
SML	Sawmill	47.71	37	eP	P	18 26 36.8	+2.1
SML				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKN	Kakani	48.02	275	eP	P	18 26 38.0	+0.3
	comp=Z,47nm,0.8s						
PKI	Pulchoki	48.02	275	eP	P	18 26 37.7	-0.2
	comp=Z,19nm,0.7s						
PKIN	Phulchoki	48.03	275	eP	P	18 26 37.7	-0.1
HDA	Harding Lake	48.18	33	eP	P	18 26 38.0	-0.2
	comp=Z,14nm,1.8s						
SCM	Sheep Creek Mo	48.18	37	eP	P	18 26 38.7	+0.3
	comp=Z,14nm,1.3s						
SCM	Sheep Creek Mo	48.18	37	eP	P	18 26 38.7	+0.3
SCM				pmax	pmax		
	comp=Z,14nm,1.3s						
ILAR	Eielson Array	48.19	33	P	P	18 26 39.9	+1.6
	comp=Z,1.7nm,0.7s,baz=270,slow=6.4,SNR=24						
ILB	Eielson Array	48.19	33	eP	P	18 26 39.8	+1.6
	comp=Z,2.3nm,0.7s						
DMN	Daman	48.24	275	eP	P	18 26 39.5	0.0
GKN	Gorkha	48.42	276	eP	P	18 26 41.0	+0.2
	comp=Z,80nm,1.0s						
DANN	Dangsing	48.95	276	eP	P	18 26 45.5	+0.5
	comp=Z,124nm,0.7s						
BOOM	Boomskoye usch	49.33	297	eP	P	18 26 47.0	-0.6
	comp=Z,22nm,0.9s						
BOOM	Boomskoye usch	49.33	297	eP	P	18 26 47.0	-0.6
BOOM				pmax	pmax		
	comp=Z,22nm,0.9s						
KOLN	Koldanda	49.34	276	eP	P	18 26 48.0	+0.1
DOT	Dot Lake	49.51	34	eP	P	18 26 48.9	+0.5
	comp=Z,3.2nm,0.9s						
PYUN	Piuthan	49.67	277	eP	P	18 26 50.7	+0.3
	comp=Z,113nm,1.1s						
OTUK	Ortayu	50.06	305	P	P	18 26 53.7	+0.8
OTUK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BRVK	Borovoye	50.12	312	eP	P	18 26 53.1	-0.1
	comp=Z,6.6nm,1.1s						
BRVK	Borovoye	50.12	312	eP	P	18 26 53.1	-0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
IPM	Ipoh	50.19	238	eP	P	18 26 54.1	0.0
	comp=Z,11nm,1.0s						
AAK	Ala-Archa	50.30	298	eP	P	18 26 54.8	-0.1
	comp=Z,8.3nm,1.0s						
AAK	Ala-Archa	50.30	298⇑	eP	P	18 26 55.8	+0.9
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KSH	Kashi	50.31	293	P	P	18 26 59.8	+4.8
KSH				pP	pP	18 27 09.2	+1.5
KSH				sP	sP	18 27 13.8	+0.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,100nm,5.0s						
KSH				LR	LR		
	comp=Z,130nm,6.4s						
KSH				LR	LR		
	comp=Z,110nm,5.8s						
ARSB	Arslanbob	51.81	297	eP	P	18 27 05.3	-0.9
	comp=Z,9.2nm,0.9s						
KK31	Karatay Array	52.89	299	eP	P	18 27 11.7	-2.4
	comp=Z,4.4nm,1.0s						
KK31	Karatay Array	52.89	299	eP	P	18 27 11.7	-2.4
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	Karatay Array	52.89	299	eP	P	18 27 13.0	-1.1
	comp=Z,4.4nm,1.0s						
KKAR	Karatay Array	52.89	299	eP	P	18 27 13.0	-1.1
KKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SVE	Sverdlovsk	54.51	318	eP	P	18 27 25.8	+0.2
SVE				pmax	pmax		
	comp=Z,13nm,0.9s						
GAR	Garm	54.57	295	eP	P	18 27 24.7	-1.9
	comp=Z,6.9nm,0.7s						
GAR	Garm	54.57	295	eP	P	18 27 24.7	-1.9
GAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NIL	Nilore	54.66	288	eP	P	18 27 24.9	-2.3
	comp=Z,12nm,0.8s						
NIL	Nilore	54.66	288	P	P	18 27 28.1	+0.9
NIL				pmax	pmax		
	comp=Z,19nm,1.0s						
GSI	Gunungsitoli	54.84	239	eP	P	18 27 28.6	+0.1
	comp=Z,16nm,0.9s						
ARU	Arti	55.72	318	eP	P	18 27 34.0	-0.4
	comp=Z,19nm,1.4s						
ARU	Arti	55.72	318c	eP	P	18 27 34.5	+0.1
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBL	Kabul	57.39	290	eP	P	18 27 46.6	-0.3
	comp=Z,11nm,1.0s						
KBL	Kabul	57.39	290	eP	P	18 27 46.6	-0.3
KBL				pmax	pmax		
	comp=Z,11nm,1.0s						
ABKAR	Akbulak array	57.48	310	eP	P	18 27 46.5	-0.5
	comp=Z,4.9nm,0.6s						
WRAB	Tennant Creek	58.36	188⇓	eP	P	18 27 54.0	+0.6
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WB2	Warramunga Arr	58.37	188	eP	P	18 27 53.6	+0.2
	comp=Z,11nm,0.8s						
WR1	Warramunga Arr	58.37	188	eP	P	18 27 53.7	+0.2
WRA	Warramunga Arr	58.37	188	P	P	18 27 53.7	+0.2
	comp=Z,5.2nm,0.5s,baz=6.7,slow=9.2,SNR=44						
PRGR	Permogore	59.96	327	eP	P	18 28 03.2	-0.8
PRGR				e*PP	pP	18 28 16.9	0.0
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AS31	Alice Springs	62.10	188	eP	P	18 28 19.5	+0.6
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	62.10	188	P	P	18 28 19.4	+0.4
	comp=Z,3.8nm,0.7s,baz=344,slow=3.1,SNR=89						
YKA	Yellowknife Ar	62.49	31	P	P	18 28 22.1	+1.0
	comp=Z,0.6nm,0.7s,baz=310,slow=6.1,SNR=3.4						
YKB5	Yellowknife Ar	62.49	31	eP	P	18 28 22.1	+1.0
ARA0	ARCESS Array S	62.98	339	eP	P	18 28 24.8	+0.5
ARCES	ARCESS Array B	62.98	339	P	P	18 28 24.8	+0.5
	comp=Z,2.0nm,0.6s,baz=50,slow=8.0,SNR=9.8						
GEYT	Alibeck	63.62	299	P	P	18 28 29.0	-0.2
	comp=Z,2.3nm,0.9s,baz=54,slow=3.8,SNR=5.6						
OBN	Obninsk	67.36	323	i P	P	18 28 52.0	-0.8
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FIA0	FINESS Array S	67.91	332	eP	P	18 28 56.4	+0.1
FIA0	FINESS Array S	67.91	332	eP	P	18 28 56.4	+0.1
FINES	FINESS Array B	67.91	332	P	P	18 28 56.4	+0.1
	comp=Z,7.0nm,0.9s,baz=42,slow=7.9,SNR=14						
STKA	Stephens Creek	69.81	180	P	P	18 29 08.9	+0.6
	comp=Z,1.8nm,0.7s,baz=330,slow=8.3,SNR=4.8						
KIV	Kislovodsk	70.42	311	eP	P	18 29 11.7	-0.5
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	70.42	311	eP	P	18 29 13.2	+0.9
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KBZ	Khabaz	70.43	311	P	P	18 29 12.6	+0.5
	comp=Z,6.6nm,0.9s,baz=34,slow=3.0,SNR=11						
BEKR	Beckworth	71.74	53	eP	P	18 29 19.9	-0.6
	comp=Z,6.9nm,1.0s						
FFC	Flin Flon	72.40	33	eP	P	18 29 25.8	+1.9
	comp=Z,41nm,1.0s						
FFC	Flin Flon	72.40	33	eP	P	18 29 25.8	+1.9
FFC				pmax	pmax		
	comp=Z,41nm,1.0s						
CMB	Columbia Colle	72.77	55	eP	P	18 29 28.7	+2.3
	comp=Z,3.4nm,1.0s						
CMB	Columbia Colle	72.77	55	eP	P	18 29 28.7	+2.3
CMB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YERR	Yerington	72.95	54	eP	P	18 29 28.5	+0.8
	comp=Z,13nm,1.4s						
NC204	NORSAR Array S	73.15	338	eP	P	18 29 28.3	0.0
	comp=Z,71nm,1.6s						
NB201	NORSAR Array S	73.17	337	eP	P	18 29 28.9	+0.6
	comp=Z,150nm,2.0s						
NB2	NORSAR Subarra	73.20	337	P	P	18 29 28.7	+0.1
	comp=Z,2.3nm,0.7s,baz=38,slow=6.2						
NB200	NORSAR Array S	73.20	337	eP	P	18 29 28.9	+0.3
NOA	NORSAR Array B	73.20	337	P	P	18 29 28.9	+0.3
	comp=Z,4.5nm,0.8s,baz=38,slow=6.0,SNR=13						
NBO00	NORSAR Array S	73.34	338	eP	P	18 29 29.8	+0.5
	comp=Z,120nm,1.8s						
NAO01	NORSAR Array S	73.45	337	eP	P	18 29 30.8	+0.8
	comp=Z,131nm,1.9s						
BOZ	Bozeman (W)	73.52	45	eP	P	18 29 31.7	+0.8
	comp=Z,2.6nm,0.8s						
BOZ	Bozeman (W)	73.52	45	eP	P	18 29 31.7	+0.8
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	73.58	322	P	P	18 29 30.9	0.0
	comp=Z,3.7nm,0.5s,baz=46,slow=6.2,SNR=23						
AKBB	Malin Array Si	73.58	322	eP	P	18 29 30.9	0.0
	comp=Z,6.3nm,0.8s						
AKBB	Malin Array Si	73.58	322	eP	P	18 29 30.9	0.0
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KVN	Kaiserville	73.64	53	eP	P	18 29 32.5	+0.8
	comp=Z,7.8nm,0.9s						
KVN	Kaiserville	73.64	53	eP	P	18 29 32.5	+0.8
KVN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MDPB	Devils Postpil	73.85	55	eP	P	18 29 33.0	-0.1
	comp=Z,20nm,1.5s						
NV01	Mina Array Sit	73.87	54	eP	P	18 29 35.2	+2.1
NVAR	Mina Array Bea	73.87	54	P	P	18 29 35.2	+2.1
	comp=Z,0.4nm,0.5s,baz=298,slow=5.8,SNR=1.6						
HVU	Hansel Valley	75.23	48	eP	P	18 29 40.6	-0.3
	comp=Z,5.4nm,0.9s						
HVU	Hansel Valley	75.23	48	eP	P	18 29 40.6	-0.3
HVU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
R11A	Troy Canyon, C	75.63	52	eP	P	18 29 42.7	-0.6
	comp=Z,5.1nm,1.0s						
TPNV	Topopah Spring	76.06	54	eP	P	18 29 45.9	+0.1
	comp=Z,9.1nm,0.9s						
TPNV	Topopah Spring	76.06	54	eP	P	18 29 45.9	+0.1
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DUG	Dugway, Tooele	76.19	50	eP	P	18 29 46.0	-0.4
	comp=Z,5.0nm,0.9s						
DUG	Dugway, Tooele	76.19	50	eP	P	18 29 46.0	-0.4
DUG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BW06	Boulder Array	76.46	46	eP	P	18 29 49.4	+1.4
	comp=Z,2.7nm,0.8s						
PDAR	Pinedale Array	76.46	46	P	P	18 29 49.5	+1.6
	comp=Z,1.0nm,0.6s,baz=262,slow=2.1,SNR=14						
PSUT	Pine Spring	76.59	51	eP	P	18 29 48.2	-0.6
	comp=Z,8.4nm,0.9s						
BUR08	Bucovina Ar. S	77.59	322	eP	P	18 29 54.8	+0.7
	comp=Z,2.8nm,0.8s						
P17A	Butcher Ranch,	77.88	49	eP	P	18 29 56.1	+0.1
	comp=Z,11nm,0.9s						
LCMT	Little Creek M	77.92	52	eP	P	18 29 57.3	+1.2
	comp=Z,6.5nm,0.9s						
MTPU	Mount Pierson	77.92	51	eP	P	18 29 58.5	+2.0
	comp=Z,4.6nm,0.9s						
KOLS	Kolonicke sedl	78.07	324	eP	P	18 29 57.3	+0.7
KOLS	Kolonicke sedl	78.07	324	eP	P	18 29 57.2	+0.7
SRU	San Rafael Swe	78.24	49	eP	P	18 29 57.3	-0.7
	comp=Z,12nm,0.8s						
SRU	San Rafael Swe	78.24	49	eP	P	18 29 57.3	-0.7
SRU				pmax	pmax		
	comp=Z,12nm,0.8s						
OJC	Ojcow	78.24	326	eP	P	18 29 55.5	-2.0
	comp=Z,14nm,1.2s						
OJC	Ojcow	78.24	326	eP	P	18 29 55.5	-2.0
OJC				pmax	pmax		
	comp=Z,14nm,1.2s						
BR101	Keskin Array S	78.35	312	eP	P	18 29 58.6	+0.1
BRTR	Keskin Array B	78.35	312	P	P	18 29 58.6	+0.1
	comp=Z,1.1nm,0.6s,baz=90,slow=4.9,SNR=9.2						
BRTR	Keskin Array B	78.35	312c	eP	P	18 29 59.0	+0.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PV21	Cone Mtn., Par	79.52	49	eP	P	18 30 03.8	-1.3
	comp=Z,6.1nm,0.7s						
MORC	Moravsky Berou	79.55	327	eP	P	18 30 05.6	+0.9
	comp=Z,4.6nm,1.0s						
MORC	Moravsky Berou	79.55	327	eP	P	18 30 05.6	+0.9
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORC	Moravsky Berou	79.55	327	eP	P	18 30 05.5	+0.8
PV14	Lion Creek, Pa	79.61	49	eP	P	18 30 03.2	-2.3
	comp=Z,7.4nm,0.9s						
DPC	Dobruska-Polom	79.63	328	eP	P	18 30 06.1	+0.9
DPC	Dobruska-Polom	79.63	328	eP	P	18 30 06.1	+0.9
PV22	Blue Mesa, Par	79.65	49	eP	P	18 30 05.0	-0.8
	comp=Z,7.0nm,1.0s						
PV20	West Nyswonger	79.67	49	eP	P	18 30 05.4	-0.4
	comp=Z,7.1nm,0.9s						
PV19	Morning Glory	79.68	49	eP	P	18 30 05.5	-0.4
	comp=Z,7.7nm,0.7s						
PV17	East Wray Mesa	79.71	49	eP	P	18 30 06.3	+0.2
	comp=Z,15nm,1.1s						
PV16	Nyswonger Mesa	79.72	49	eP	P	18 30 07.0	+0.9
	comp=Z,5.6nm,0.8s						
PV11	David Mesa, Pa	79.75	49	eP	P	18 30 06.9	+0.6
	comp=Z,6.5nm,0.7s						
PV05	Paradox Valley	79.76	49	eP	P	18 30 06.2	-0.2
	comp=Z,8.8nm,0.8s						
PV18	Skein Mesa, Pa	79.77	49	eP	P	18 30 06.7	+0.3
	comp=Z,6.8nm,0.9s						
PV03	Paradox Valley	79.80	49	eP	P	18 30 05.6	-1.0
	comp=Z,4.7nm,0.8s						
PV13	Radium Mtn., P	79.88	49	eP	P	18 30 06.2	-0.8
	comp=Z,7.7nm,0.9s						
PSZ	Piszkesteto	79.89	325	eP	P	18 30 07.2	+0.5
	comp=Z,8.3nm,1.1s						
PSZ	Piszkesteto	79.89	325	eP	P	18 30 07.2	+0.5
PSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VYHS	Vyhne	79.94	326	eP	P	18 30 07.9	+1.0
VYHS	Vyhne	79.94	326	eP	P	18 30 07.9	+1.0
Y14A	Wickenburg	80.00	55	eP	P	18 30 07.4	-0.1
	comp=Z,7.6nm,1.0s						
PV01	Paradox Valley	80.04	49	eP	P	18 30 06.6	-1.3
	comp=Z,6.0nm,0.3s						
JAVC	Velka Javorina	80.18	326	eP	P	18 30 10.1	+1.9
BRG	Berggiesshubel	80.20	330	ePKP	P	18 30 08.7	+0.6
	comp=Z,6.0nm,1.1s						
BRG	Berggiesshubel	80.20	330	eP	P	18 30 08.7	+0.6
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	Collm	80.23	330⇓	iP	P	18 30 09.0	+0.7
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CLL	Collm	80.23	330⇓	iP	P	18 30 09.0	+0.7
	comp=Z,10.0nm,1.1s						
CLL				LmV		19 21 00.0	
	comp=Z,100nm,21.1s						
VRAC	Vranov	80.31	327	eP	P	18 30 09.9	+1.1
KRUC	Moravsky	80.58	327	P	P	18 30 11.3	+1.0
KRUC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KRUC	Moravsky	80.58	327	eP	P	18 30 11.1	+0.8
RAYN	Ar Rayn	80.60	292	eP	P	18 30 10.8	0.0
	comp=Z,4.6nm,1.0s						
RAYN	Ar Rayn	80.60	292	eP	P	18 30 10.8	0.0
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
X16A	Lo Mia Camp, P	80.69	53	eP	P	18 30 09.5	-1.9
	comp=Z,7.4nm,1.0s						
TREC	Trest	80.79	328	eP	P	18 30 12.3	+0.9
TREC	Trest	80.79	328	eP	P	18 30 12.3	+0.9
CONA	Conrad Observa	81.67	327	ePcP	P	18 30 17.4	+1.2
	comp=Z,3.9nm,1.0s						
KHC	Kasperske Hory	81.70	329	eP	P	18 30 17.1	+0.8
KHC	Kasperske Hory	81.70	329	eP	P	18 30 17.1	+0.8
GERES	GERESS Array B	81.88	328	P	P	18 30 17.3	0.0
	comp=Z,0.9nm,0.5s,baz=31,slow=6.2,SNR=11						
WET	Wettzell	81.98	329	P	P	18 30 19.1	+1.4
WET				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VTS	Vitosha	82.12	319	eP	P	18 30 19.3	+0.5
	comp=Z,4.8nm,0.8s						
VTS	Vitosha	82.12	319	eP	P	18 30 19.3	+0.5
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARSA	Arzberg	82.34	326	ePcP	P	18 30 20.9	+1.3
	comp=Z,2.2nm,0.6s						
SOKA	Soboth	83.00	326	ePcP	P	18 30 23.7	+0.6
	comp=Z,6.0nm,1.0s						
KBA	Koelnbreinsper	83.41	327	ePcP	P	18 30 27.0	+1.6
	comp=Z,3.0nm,0.8s						
KBA	Koelnbreinsper	83.41	327	P	P	18 30 26.7	+1.3
KBA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MYKA	Terra Mystica	83.64	327	ePcP	P	18 30 27.8	+1.4
	comp=Z,2.8nm,0.9s						
WTTA	Wattenberg	83.98	329	ePcP	P	18 30 28.7	+0.4
	comp=Z,4.8nm,1.2s						
MOTA	Moosalm	84.13	329	ePcP	P	18 30 30.0	+1.0
	comp=Z,3.6nm,0.9s						
RETA	Reutte	84.15	329	ePcP	P	18 30 29.9	+0.8
	comp=Z,6.8nm,1.0s						
LIT	Litokhoron	84.33	318	P	P	18 30 30.1	+0.1
LIT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BFO	Black Forest	84.42	331	i P	P	18 30 32.0	+1.7
FETA	Feichten	84.54	329	ePcP	P	18 30 31.6	+0.5
	comp=Z,2.1nm,0.6s						
DAVA	Damuels	84.67	330	ePcP	P	18 30 32.3	+0.5
	comp=Z,4.0nm,0.8s						
ECH	Echery	84.96	332	eP	P	18 30 33.3	+0.3
	comp=Z,5.2nm,0.9s						
ECH	Echery	84.96	332	eP	P	18 30 33.3	+0.3
ECH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TXAR	Lajitas Array	88.99	53	P	P	18 30 54.9	+1.9
	comp=Z,0.9nm,0.6s,baz=347,slow=5.1,SNR=2.2						
DRLN	Deer Lake	91.13	13	eP	P	18 31 01.0	-1.5
	comp=Z,11nm,0.8s						
KEST	Kesra	94.29	323	LR	LR	19 18 53.5	
	comp=Z,244nm,19.3s,baz=211,slow=39						
TOA1	Torodi Ar. Sit	116.75	316	ePKPdf	PKPdf	18 36 42.0	-0.6
TORD	Torodi Ar. Bea	116.75	316	PKP	PKPdf	18 36 42.0	-0.6
	comp=Z,0.2nm,0.6s,baz=57,slow=0.8,SNR=2.8						
VNA2	Neumayer--Watz	143.66	196	PKPdf	PKPbc	18 37 29.7	+0.7
VNA3	Neumayer Olymp	143.90	195	PKPdf	PKPbc	18 37 29.9	+0.1
VNA1	Neumayer--Stat	144.05	196	PKPdf	PKPbc	18 37 30.2	0.0
LPAZ	La Paz	145.66	59	PKPbc	PKPab	18 37 38.1	+0.1
	comp=Z,1.7nm,0.7s,baz=8.8,slow=3.6,SNR=6.8						

ISCJB **10** *18:19:41.0±0.2, 21°.60S±0°.03×68°.30W±0°.03, h105^{km}±2^{km}, mb4.7/142, Error ellipse: s-maj=4.8km s-min=3.2km az=38.9*

NEIC **10** *18:19:42.0±0.0, 21°.70S×68°.62W, h123^{km}, mb4.7/128, ML4.5(GUC), After GUC.*

IDC **10** *18:19:42.1±0.8, 21°.62S×68°.24W, h99^{km}±7^{km}, mb4.3/16, mb1 4.5/20, mb1mx4.4/30, mbtmp4.7/20, MS3.5/1, Ms1 3.5/1, ms1mx3.1/16, Error ellipse: s-maj=13.6km s-min=11.4km az=95.0*

MOS **10** *18:19:42.6±1.4, 21°.72S×68°.30W, h113^{km}, mb4.6/24, Error ellipse: s-maj=13.6km s-min=7.1km az=108.5*

VAO **10** *18:19:42.9±0.4, 21°.78S×68°.38W, h120^{km}±4^{km}, mb5.0*

GUC **10** *18:19:42.9±0.6, 21°.70S×68°.62W, h123^{km}±4^{km}, ML4.5*

BJI **10** *18:19:43.0±0.0, 21°.70S×68°.40W, h90^{km}, mB5.4/4*

SJA **10** *18:19:43.3±0.6, 21°.73S×68°.51W, h110^{km}±6^{km}, ML3.9, MW3.2*

ISC 10 18:19:42.7±0.6, **21°.74S**±0°.04×**68°.41W**±0°.05, **h109**^{km}±5^{km}, **n543**, σ**1^{s}.12**/566, **mb4.7**/142, **17C-8D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.78	265	eP	Pn	18 20 02.7	+0.7

PB09				eS	Sn	18 20 16.9	+0.6
PB09	IPOC Station P	0.78	265	⇑iP	Pn	18 20 02.6	+0.7
PB09				i S	Sn	18 20 16.9	+0.6
PB09				IAML		18 20 19.0	
	comp=N,8µm,0.6s						
LVC	Limon Verde	0.99	208	P	Pn	18 20 05.3	+1.1
	comp=N,2µm,0.3s,baz=21,slow=8.2,SNR=6496						
LVC				S	Sn	18 20 21.5	+1.2
	comp=N,850nm,0.3s,baz=90,slow=20,SNR=11						
LVC				LR	LR	18 20 41.9	
	comp=N,1µm,20.8s,baz=255,slow=51						
LVC	Limon Verde	0.99	208	ePn	Pn	18 20 05.1	+0.9
LVC	Limon Verde	0.99	208	eP	Pn	18 20 05.2	+1.1
LVC				eS	Sn	18 20 21.3	+1.0
LVC	Limon Verde	0.99	208	eP	Pn	18 20 05.1	+0.9
LVC	Limon Verde	0.99	208	eP	Pn	18 20 05.3	+1.1
LVC				i S	Sn	18 20 21.6	+1.4
LVC	Limon Verde	0.99	208	eP	Pn	18 20 05.4	+1.3
PB01	IPOC Station P	1.22	304	ePn	Pn	18 20 06.1	-0.3
PB01	IPOC Station P	1.22	304	eP	Pn	18 20 05.1	-1.2
PB01	IPOC Station P	1.22	304	⇑iP	Pn	18 20 06.2	-0.2
PB01				i S	Sn	18 20 23.4	-0.8
PB01				IAML		18 20 25.2	
	comp=N,9µm,0.3s						
PB03	IPOC Station P	1.29	256	eP	Pn	18 20 07.2	0.0
PB03	IPOC Station P	1.29	256	⇑iP	Pn	18 20 07.2	0.0
PB03				i S	Sn	18 20 25.3	-0.4
PB03				IAML		18 20 26.5	
	comp=E,7µm,0.5s						
PB07	IPOC Station P	1.37	270	⇑iP	Pn	18 20 07.9	-0.3
PB07				i S	Sn	18 20 26.7	-0.7
PB07				IAML		18 20 29.1	
	comp=N,7µm,0.5s						
PB02	IPOC Station P	1.45	286	⇑iP	Pn	18 20 08.6	-0.4
PB02				i S	Sn	18 20 27.7	-1.1
PB02				IAML		18 20 29.5	
	comp=N,11µm,0.6s						
PB06	IPOC Station P	1.45	228	eP	Pn	18 20 09.8	+0.7
PB06	IPOC Station P	1.45	228	⇑iP	Pn	18 20 09.7	+0.7
PB06				i S	Sn	18 20 29.9	+0.9
PB04	IPOC Station P	1.72	249	ePn	Pn	18 20 12.0	-0.3
PB04	IPOC Station P	1.72	249	⇑iP	Pn	18 20 12.1	-0.3
PB04				i S	Sn	18 20 34.1	-0.8
PB04				IAML		18 20 39.2	
	comp=N,7µm,0.6s						
PB15	IPOC Station P	1.77	214	eP	Pn	18 20 14.3	+1.3
PB15				eS	Sn	18 20 37.3	+1.4
PB15	IPOC Station P	1.77	214	⇑iP	Pn	18 20 13.9	+0.9
PB15				i S	Sn	18 20 37.1	+1.2
PB05	IPOC Station P	2.00	236	⇑iP	Pn	18 20 15.5	-0.3
PB05				i S	Sn	18 20 40.2	-0.8
PB05				IAML		18 20 49.0	
	comp=N,4µm,0.8s						
GO01	Chusmiza	2.18	340	ePn	Pn	18 20 19.0	+0.5
GO01	Chusmiza	2.18	340	⇓iP	Pn	18 20 19.2	+0.6
GO01				eS	Sn	18 20 46.9	+1.0
PB11	IPOC Station P	2.29	329	ePn	Pn	18 20 18.7	-0.8
PB11	IPOC Station P	2.29	329	⇓iP	Pn	18 20 19.3	-0.2
PB11				i S	Sn	18 20 46.7	-1.0
PB11				IAML		18 20 49.5	
	comp=N,5µm,0.5s						
PB10	IPOC Station P	2.66	228	ePn	Pn	18 20 22.9	-1.3
PSGC	Pisagua	2.67	323	IAML		18 20 58.6	
	comp=E,2µm,0.7s						
YJA	Yavi	2.72	100	eP	Pn	18 20 29.2	+3.8
YJA				IAML		18 21 07.1	
	comp=Z,252nm,0.7s						
MNMC	Minye Minye	2.82	337	ePn	Pn	18 20 26.0	-0.6
MNMC	Minye Minye	2.82	337	⇓iP	Pn	18 20 26.5	-0.1
MNMC				IAML		18 21 08.4	
	comp=E,3µm,0.3s						
HJA	Humahuaca	3.14	118	eP	Pn	18 20 34.4	+3.5
HJA				IAML		18 20 36.7	
	comp=Z,336nm,0.5s						
GO02	Mina Guanaco	3.58	197	ePn	Pn	18 20 36.5	-0.2
AZAP	Zapla	3.95	129	eP	Pn	18 20 44.8	+3.2
SLA	San Lorenzo	4.00	139	eP	Pn	18 20 45.3	+3.1
FSA	Cafayete	4.89	153	eP	Pn	18 20 56.9	+2.6
LPAZ	La Paz	5.42	3	P	Pn	18 21 03.5	+1.5
	comp=Z,6.8nm,0.3s,baz=183,slow=7.5,SNR=77						
LPAZ				S	Sn	18 21 54.2	-9.3
	comp=Z,0.7nm,0.3s,baz=134,slow=15,SNR=2.1						
LPAZ	La Paz	5.42	3	eP	Pn	18 21 03.8	+1.8
AHML	Horco Molle	5.76	151	eP	Pn	18 21 08.2	+2.3
GO03	Copiap	6.06	196	ePn	Pn	18 21 07.7	-2.3
LCO	Las Campanas	7.54	195	ePn	Pn	18 21 26.1	-4.1
LCO	Las Campanas	7.54	195	eP	Pn	18 21 26.1	-4.1
LCO	Las Campanas	7.54	195	eP	Pn	18 21 27.8	-2.4
GO04	Tololo Observa	8.67	194	ePn	Pn	18 21 41.6	-4.0
SIV	San Ignacio	8.99	52	P	Pn	18 21 47.6	-2.2
	comp=Z,44nm,0.3s,baz=246,slow=12,SNR=742						
CFA	Coronel Fontan	9.83	179	P	Pn	18 21 58.9	-2.2
	comp=Z,2.8nm,0.3s,baz=357,slow=13,SNR=48						
CFA				S	Sn	18 23 43.8	-5.8
	comp=Z,5.3nm,0.3s,baz=263,slow=20,SNR=5.5						
CFA				LR	LR	18 26 09.3	
	comp=Z,276nm,22.0s,baz=50,slow=39						
CPUP	Villa Florida	11.11	116	P	Pn	18 22 17.6	-0.7
	comp=Z,0.9nm,0.3s,baz=300,slow=13,SNR=15						
CPUP	Villa Florida	11.11	116	ePn	Pn	18 22 17.1	-1.3
CPUP	Villa Florida	11.11	116	eP	Pn	18 22 17.1	-1.3
CPUP	Villa Florida	11.11	116	eP	Pn	18 22 17.7	-0.7
AQDB	Aquidauana	11.93	86	eP	Pn	18 22 27.5	-1.8
TRCB	Terra Rica	14.64	97	eP	Pn	18 23 04.2	-0.5
C2SB	Chapadao do Su	14.91	81	eP	Pn	18 23 06.4	-1.6
CPSB	Cacapava Do Su	15.97	126	eP	Pn	18 23 20.7	-0.5
CLDB	Colider	16.21	50	eP	Pn	18 23 23.0	-1.3
PLTB	Pedras Altas	16.55	130	eP	Pn	18 23 26.3	-2.1
ITRB	Iturama	17.01	86	eP	Pn	18 23 33.6	-0.5
TRQA	Tornquist	17.19	163	eP	P	18 23 35.3	-0.7
	comp=Z,29nm,0.6s						
TRQA	Tornquist	17.19	163	eP	P	18 23 35.3	-0.7
TRQA				pmax	pmax		
	comp=Z,29nm,0.6s						
TRQA	Tornquist	17.19	163	eP	P	18 23 35.0	-1.0
OGAUY	Aigu	17.40	139	eP	P	18 23 38.2	-0.2
ATAH	Atahualpa	17.43	325	P	Pn	18 23 40.8	+1.2
	comp=Z,0.2nm,0.3s,baz=173,slow=17,SNR=4.3						
FRTB	Fartura	17.48	99	eP	Pn	18 23 40.4	+0.5
CNLB	Canela	17.54	119	eP	P	18 23 38.8	-1.2
BB19B	Bebedouro	18.53	92	eP	P	18 23 50.7	-0.2
PLCA	Paso Flores	19.03	185	P	P	18 23 56.6	+0.4
	comp=Z,1.2nm,0.3s,baz=30,slow=12,SNR=34						
PLCA	Paso Flores	19.03	185	eP	P	18 23 57.0	+0.8
	comp=Z,33nm,0.8s						
PLCA	Paso Flores	19.03	185	eP	P	18 23 57.0	+0.8
PLCA				pmax	pmax		
	comp=Z,33nm,0.8s						
PLCA	Paso Flores	19.03	185	eP	P	18 23 54.7	-1.5
RCLB	Rio Claro- Sao	19.36	96	eP	P	18 23 59.2	-0.8
SPB	Sao Paulo	19.45	99	eP	P	18 24 00.1	-0.8
	comp=Z,81nm,1.1s						
SPB	Sao Paulo	19.45	99	eP	P	18 24 00.5	-0.3
BDFB	Brasilia	20.24	76	P	P	18 24 08.5	-1.1
	comp=Z,18nm,0.8s,baz=230,slow=14,SNR=9.9						
BDFB	Brasilia	20.24	76	eP	P	18 24 08.5	-1.1
BDFB				eP	Pn	18 24 08.6	-3.9
PMNB	Patos De Minas	20.87	85	eP	P	18 24 15.3	-1.0
PARB	Paraibuna	21.11	99	eP	P	18 24 17.9	-0.9
PEXB	Peixe	21.47	67	eP	P	18 24 20.6	-2.0
BSCB	Bom Sucesso	22.02	92	eP	P	18 24 27.6	-0.9
ESAR	Angra dos Reis	22.20	98	eP	P	18 24 28.9	-1.3
PTGA	Pitinga	22.44	23	P	P	18 24 30.5	-2.3
	comp=Z,8.5nm,0.3s,baz=203,slow=12,SNR=16						
PTGA	Pitinga	22.44	23	eP	P	18 24 30.7	-2.1
	comp=Z,56nm,1.4s						
PTGA	Pitinga	22.44	23	eP	P	18 24 30.1	-2.7
SMTB	Santa Maria do	23.77	61	eP	P	18 24 44.1	-1.4
DUB01	Friburgo-RJ	24.15	96	eP	P	18 24 48.2	-0.7
GUVC	San Jose del G	24.48	350	eP	P	18 24 50.9	-1.0
SJMB	Sao Joao De Ma	25.71	88	eP	P	18 25 01.1	-1.9
ALF01	Guarapari-ES	25.83	93	eP	P	18 25 03.2	-0.9
BSFB	Barra de Sao F	26.00	89	eP	P	18 25 04.2	-1.4
VILC	Villavicencio,	26.20	348	eP	P	18 25 04.4	-3.2
RIB01	Linhares ES	26.33	90	eP	P	18 25 07.4	-1.2
ORTC	Ortega, Tolima	26.35	344	eP	P	18 25 08.6	-0.2
AGZ	La Independenc	26.80	351	eP	P	18 25 10.3	-2.6
GUY2C	Guyana, Caldas	27.65	345	eP	P	18 25 20.4	-0.5
RUSC	La Rusia	27.84	350	eP	P	18 25 21.2	-1.3
PTBC	PUERTO BERRIO,	28.72	347	eP	P	18 25 24.6	-5.3
PAMC	Pamplona, Colo	29.20	351	eP	P	18 25 33.9	-0.8
SOCV	Socops	29.93	355	eP	P	18 25 36.4	-4.2
SDV	Santo Domingo	30.51	356	eP	P	18 25 45.6	-0.3
SMLC	San Martn de	30.85	349	eP	P	18 25 44.9	-3.9
EFI	East Falkland	30.95	167	⇓eP	P	18 25 49.6	+0.4
EFI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SJCC	San Jacinto, C	32.13	347	eP	P	18 25 58.4	-1.6
USHA	Ushuaia	33.05	180	P	P	18 26 08.3	+0.8
	comp=Z,9.0nm,0.8s,baz=187,slow=0.9,SNR=3.9						
RCBR	Riachuelo	35.19	68	eP	P	18 26 26.2	-0.4
	comp=Z,48nm,0.9s						
RCBR	Riachuelo	35.19	68	eP	P	18 26 26.3	-0.4
RCBR				pmax	pmax		
	comp=Z,48nm,0.9s						
RCBR	Riachuelo	35.19	68	eP	P	18 26 26.3	-0.4
PMSA	Palmer Station	43.12	177	eP	P	18 27 30.8	-1.0
CMIG	Matias Romero	46.49	324	P	P	18 27 59.9	+0.6
	comp=Z,6.9nm,0.8s,baz=139,slow=3.0,SNR=7.8						
454A	Quitman	54.16	344	P	P	18 28 56.5	-0.3
	baz=163						
453A	Whigham	54.48	343	P	P	18 28 59.2	+0.2
	baz=162						
353A	Camilla	54.91	343	P	P	18 29 01.8	-0.4
	baz=162						
352A	Blakely	55.23	343	P	P	18 29 04.1	-0.3
	baz=162						
254A	Abbeville	55.25	345	P	P	18 29 04.2	-0.4
	baz=163						
LNIG	Linares	55.31	325	eP	P	18 29 04.5	-0.7
	comp=Z,6.5nm,0.9s						
155A	Kite	55.70	346	P	P	18 29 07.9	+0.1
	baz=164						
Z58A	St. Stephen	55.83	348	P	P	18 29 09.2	+0.5
	baz=167						
251A	Midway	55.94	343	P	P	18 29 09.4	-0.2
	baz=161						
Z57A	Bowman	55.97	348	P	P	18 29 10.3	+0.6
	baz=166						
249A	Camden	56.33	341	P	P	18 29 11.5	-0.8
	baz=159						
Y58A	Scranton	56.36	349	P	P	18 29 12.3	-0.2
	baz=168						
Z54A	Sparta	56.37	345	P	P	18 29 12.5	-0.1
	baz=164						
Z53A	Monticello	56.59	345	P	P	18 29 13.8	-0.3
	baz=163						
150A	Eclectic	56.60	342	P	P	18 29 13.9	-0.3
	baz=161,SNR=7.1						
GOGA	Godfrey	56.69	345	P	P	18 29 14.6	-0.2
	baz=164						
149A	Jones	56.81	341	P	P	18 29 15.5	-0.2
	baz=160						
Y55A	Saluda	56.83	347	P	P	18 29 15.9	+0.2
	baz=165						
Y54A	Tignall	56.94	346	P	P	18 29 16.2	-0.4
	baz=164						
148A	Greensboro	57.09	341	P	P	18 29 17.5	-0.2
	baz=159						
Z50A	Ashland	57.18	343	eP	P	18 29 17.8	-0.5
	comp=Z,15nm,0.8s						
Z50A	Ashland	57.18	343	P	P	18 29 18.1	-0.2
	baz=161,SNR=14						
X56A	White Oak	57.19	348	P	P	18 29 18.7	+0.3
	baz=166						
BIRD	Birdtown, Kers	57.23	348	eP	P	18 29 18.3	-0.3
	comp=Z,17nm,0.9s						
Y52A	Lilburn	57.27	345	P	P	18 29 18.4	-0.5
	baz=163						
LRAL	Lakeview Retre	57.28	341	eP	P	18 29 17.9	-1.2
	comp=Z,5.9nm,0.9s						
LRAL	Lakeview Retre	57.28	341	P	P	18 29 18.1	-0.9
	baz=160						
X55A	Gracelyn & Ava	57.29	347	P	P	18 29 19.1	0.0
	baz=166						
Z49A	Columbiana	57.30	342	P	P	18 29 18.8	-0.3
	baz=160,SNR=5.2						
W58A	Raeford	57.37	349	P	P	18 29 20.1	+0.5
	baz=168						
X54A	Belton	57.52	346	P	P	18 29 20.6	-0.1
	baz=165						
Y51A	Rockmart	57.56	344	P	P	18 29 20.4	-0.6
	baz=162						
W57A	Gilead	57.63	349	P	P	18 29 21.8	+0.4
	baz=168						
W56A	Indian Trail	57.73	348	P	P	18 29 22.5	+0.4
	baz=167						
Y50A	Piedmont	57.73	343	P	P	18 29 21.9	-0.3
	baz=161						
HKT	Hockley	57.77	332	P	P	18 29 23.6	+1.2
HKT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMSC	Kings Mountain	57.88	348	eP	P	18 29 22.9	-0.3
	comp=Z,7.1nm,0.8s						
KMSC	Kings Mountain	57.88	348	P	P	18 29 22.9	-0.3
	baz=166						
Y49A	Blount Mountai	57.88	342	eP	P	18 29 22.6	-0.7
	comp=Z,5.8nm,0.8s						
Y49A	Blount Mountai	57.88	342	P	P	18 29 23.0	-0.3
	baz=160						
W54A	Cherokee Point	58.00	347	P	P	18 29 24.0	0.0
	baz=165						
833A	Chaparral WMA,	58.07	328	P	P	18 29 24.9	+0.3
	baz=146						
V58A	Windy Hill, Pi	58.11	350	P	P	18 29 25.1	+0.3
	baz=168						
X51A	Calhoun	58.13	344	eP	P	18 29 24.5	-0.4
	comp=Z,15nm,0.8s						
X51A	Calhoun	58.13	344	P	P	18 29 24.8	-0.1
	baz=162						
Y48A	Jasper	58.15	342	P	P	18 29 24.6	-0.5
	baz=160						
W53A	Cullowhee	58.30	346	P	P	18 29 26.7	+0.4
	baz=164,SNR=5.3						
V57A	Coltrane Farms	58.31	349	P	P	18 29 26.0	-0.2
	baz=168						
V56A	Mocksville	58.37	348	eP	P	18 29 27.3	+0.7
	comp=Z,16nm,0.9s						
V56A	Mocksville	58.37	348	P	P	18 29 26.7	+0.2
	baz=167,SNR=5.9						
W52A	Murphy	58.41	345	eP	P	18 29 26.7	-0.2
	comp=Z,7.0nm,0.7s						
W52A	Murphy	58.41	345	P	P	18 29 26.4	-0.5
	baz=163						
V55A	Taylorsville	58.54	348	P	P	18 29 27.8	0.0
	baz=166						
V54A	Nebo	58.62	347	P	P	18 29 27.9	-0.5
	baz=166,SNR=8.6						
X48A	Hartselle	58.62	342	eP	P	18 29 27.9	-0.4
	comp=Z,16nm,0.9s						
X48A	Hartselle	58.62	342	P	P	18 29 27.4	-0.9
	baz=160,SNR=6.2						
W51A	Cleveland	58.67	344	P	P	18 29 28.1	-0.6
	baz=162						
V53A	Saluda	58.70	346	eP	P	18 29 29.0	+0.1
	comp=Z,4.6nm,0.8s						
V53A	Saluda	58.70	346	P	P	18 29 29.2	+0.2
	baz=165						
U57A	Blanch	58.77	350	P	P	18 29 29.4	+0.1
	baz=168						
W50A	Signal Mountai	58.85	344	eP	P	18 29 29.5	-0.5
	comp=Z,12nm,0.9s						
W50A	Signal Mountai	58.85	344	P	P	18 29 29.6	-0.4
	baz=162						
U56A	King	58.87	349	P	P	18 29 30.4	+0.3
	baz=167						
CPCT	Cooper Cave	58.89	345	eP	P	18 29 29.1	-1.1
	comp=Z,7.8nm,0.9s						
X47A	Russelville	58.92	341	P	P	18 29 29.2	-1.2
	baz=159						
T59A	Double "B" Far	59.02	351	P	P	18 29 31.4	+0.3
	baz=170						
W49A	Belvidere	59.03	343	P	P	18 29 30.4	-0.8
	baz=161						
SWET	Sewanee	59.03	343	eP	P	18 29 30.3	-0.9
	comp=Z,13nm,0.8s						
V52A	Sevierville	59.04	346	eP	P	18 29 30.6	-0.7
	comp=Z,17nm,0.9s						
V52A	Sevierville	59.04	346	P	P	18 29 30.7	-0.6
	baz=164,SNR=7.1						
T58A	Grand View Acr	59.14	351	P	P	18 29 32.1	+0.2
	baz=169						
U55A	TA2, Sparta	59.14	348	P	P	18 29 32.0	0.0
	baz=167						
V51A	Loudon	59.18	345	P	P	18 29 31.6	-0.6
	baz=163						
W48A	Pulaski	59.23	342	P	P	18 29 31.8	-0.8
	baz=160						
V50A	Pikevile	59.24	344	P	P	18 29 31.8	-0.8
	baz=162						
U54A	Nelsons Funny	59.31	347	eP	P	18 29 33.2	+0.1
	comp=Z,26nm,0.8s						
U54A	Nelsons Funny	59.31	347	P	P	18 29 33.8	+0.6
	baz=166,SNR=6.5						
U53A	Fall Branch	59.32	347	P	P	18 29 33.4	+0.2
	baz=165						
T56A	Rocky Mt	59.47	349	P	P	18 29 34.6	+0.4
	baz=168						
U52A	Thorn Hill	59.52	346	P	P	18 29 33.9	-0.7
	baz=164						
W47A	Westpoint	59.53	342	P	P	18 29 33.5	-1.1
	baz=160						
V49A	McMinnville	59.54	344	P	P	18 29 33.7	-1.0
	baz=161,SNR=6.3						
U51A	La Follette	59.65	345	P	P	18 29 34.7	-0.8
	baz=163						
T55A	Pulaski	59.69	349	P	P	18 29 36.4	+0.7
	baz=167						
TZTN	Tazewell	59.70	346	P	P	18 29 35.1	-0.8
	baz=164						
VNA3	Neumayer Olymp	59.70	161	P	P	18 29 36.5	+1.1
V48A	Smith Brothers	59.76	343	eP	P	18 29 35.3	-0.9
	comp=Z,16nm,1.1s						
V48A	Smith Brothers	59.76	343	P	P	18 29 35.4	-0.8
	baz=160,SNR=5.3						
T54A	Tazewell	59.78	348	P	P	18 29 35.8	-0.6
	baz=166						
U50A	Jamestown	59.89	345	P	P	18 29 36.8	-0.3
	baz=163						
T53A	Wise	59.90	347	P	P	18 29 37.2	0.0
	baz=165						
VNA1	Neumayer--Stat	59.91	160	P	P	18 29 38.4	+1.6
WLAR	White Oak Lake	59.93	336	eP	P	18 29 37.2	-0.2
	comp=Z,41nm,0.8s						
CLTN	Cedars of Leba	59.96	343	eP	P	18 29 37.0	-0.5
	comp=Z,8.1nm,1.0s						
S57A	Dark Hollow, R	60.00	350	P	P	18 29 38.2	+0.4
	baz=169						
V47A	Nunnelly	60.04	342	P	P	18 29 37.5	-0.7
	baz=160						
JCT	Junction City	60.04	329	eP	P	18 29 37.5	-0.8
JCT	Junction City	60.04	329	eP	P	18 29 37.5	-0.8
JCT	Junction City	60.04	329	P	P	18 29 38.2	-0.1
	baz=146,SNR=8.7						
T52A	Hallie	60.12	347	P	P	18 29 38.9	+0.3
	baz=165						
V46A	Holladay	60.19	342	P	P	18 29 38.8	-0.4
	baz=159						
U49A	Red Boiling Sp	60.21	344	P	P	18 29 39.1	-0.2
	baz=162						
S55A	Lewisburg	60.27	349	P	P	18 29 38.9	-0.9
	baz=167,SNR=10.0						
VNA2	Neumayer--Watz	60.28	161	P	P	18 29 40.7	+1.3
	baz=286,slow=8.0						
U48A	Cassie Pea, Po	60.41	343	P	P	18 29 40.0	-0.6
	baz=161						
WVT	Waverly	60.41	342	eP	P	18 29 39.7	-0.9
	comp=Z,16nm,0.9s						
WVT	Waverly	60.41	342	eP	P	18 29 39.7	-0.9
WVT				pmax	pmax		
	comp=Z,16nm,0.9s						
WVT	Waverly	60.41	342	P	P	18 29 39.6	-1.1
	baz=160						
S54A	Dingess, Beckl	60.45	348	P	P	18 29 41.0	+0.1
	baz=166						
T50A	Nancy	60.46	345	P	P	18 29 40.1	-0.8
	baz=163,SNR=5.1						
U47A	Clarksville	60.55	343	P	P	18 29 40.3	-1.3
	baz=160,SNR=6.6						
R55A	Marlinton	60.70	349	eP	P	18 29 43.9	+1.3
	comp=Z,7.2nm,0.8s						
R55A	Marlinton	60.70	349	P	P	18 29 43.6	+1.0
	baz=168						
T49A	Edmonton	60.71	344	eP	P	18 29 42.0	-0.6
	comp=Z,13nm,0.8s						
T49A	Edmonton	60.71	344	P	P	18 29 42.2	-0.5
	baz=162						
R54A	Victor	60.76	349	P	P	18 29 43.0	+0.1
	baz=167						
S51A	Beattyville	60.76	346	P	P	18 29 42.8	-0.1
	baz=164						
MIAR	Mount Ida	60.87	336	eP	P	18 29 43.7	-0.1
	comp=Z,10nm,0.9s						
MIAR	Mount Ida	60.87	336	eP	P	18 29 43.7	-0.1
MIAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MIAR	Mount Ida	60.87	336	P	P	18 29 43.2	-0.6
	baz=153,SNR=7.1						
T48A	Bowling Green	60.94	344	P	P	18 29 43.4	-0.8
	baz=161						
W41B	Gary Mavity, V	60.95	338	P	P	18 29 43.5	-0.8
	baz=155						
S50A	Richmond	60.98	346	P	P	18 29 43.8	-0.7
	baz=163						
T47A	Sharon Grove	61.01	343	eP	P	18 29 44.1	-0.6
	comp=Z,20nm,0.9s						
T47A	Sharon Grove	61.01	343	P	P	18 29 43.9	-0.8
	baz=160						
WHAR	Wooly Hollow	61.07	338	eP	P	18 29 44.8	-0.3
	comp=Z,6.6nm,0.9s						
R53A	Hurricane	61.09	348	P	P	18 29 44.7	-0.4
	baz=166						
TXAR	Lajitas Array	61.09	325	P	P	18 29 45.9	+0.4
	comp=Z,1.4nm,0.6s,baz=140,slow=8.2,SNR=4.1						
TX31	Lajitas Ar. Si	61.09	325	eP	P	18 29 45.7	+0.2
	comp=Z,2.1nm,0.6s						
Q57A	Strasburg	61.17	351	P	P	18 29 46.4	+0.7
	baz=170						
T46A	Princeton	61.28	342	P	P	18 29 46.0	-0.5
	baz=160						
Q56A	Snyder Ridge,	61.29	350	P	P	18 29 47.0	+0.4
	baz=169						
S48A	Wiedeman Farm,	61.37	344	P	P	18 29 46.4	-0.6
	baz=162						
Q55A	Buckhannon	61.39	350	P	P	18 29 48.0	+0.8
	baz=168						
R51A	Hillsboro	61.40	346	P	P	18 29 47.5	+0.3
	baz=164						
P59A	Jarrettsville	61.48	353	P	P	18 29 48.6	+0.8
	baz=172						
Q54A	Coxs Mills	61.51	349	eP	P	18 29 47.3	-0.7
	comp=Z,11nm,1.0s						
Q54A	Coxs Mills	61.51	349	P	P	18 29 47.9	-0.1
	baz=167						
Q53A	Leroy	61.52	348	P	P	18 29 48.0	0.0
	baz=166,SNR=5.9						
W39A	Magazine	61.53	336	eP	P	18 29 48.6	+0.4
	comp=Z,13nm,0.8s						
W39A	Magazine	61.53	336	P	P	18 29 48.3	+0.1
	baz=153,SNR=13						
FCAR	Ozark Folk Cen	61.55	338	eP	P	18 29 47.5	-0.8
	comp=Z,4.9nm,0.7s						
P57A	Homestead Farm	61.56	352	P	P	18 29 49.3	+1.0
	baz=170						
X37A	Clayton	61.60	335	eP	P	18 29 49.2	+0.5
	comp=Z,9.4nm,0.8s						
P56A	Dayton Farm, R	61.70	351	P	P	18 29 49.9	+0.7
	baz=169						
ABTX	Abilene, Hawle	61.75	330	eP	P	18 29 49.9	+0.1
	comp=Z,23nm,1.1s						
ABTX	Abilene, Hawle	61.75	330	P	P	18 29 49.5	-0.3
	baz=147						
R49A	Shelbyville	61.75	345	P	P	18 29 49.7	+0.1
	baz=163						
Q52A	Bidwell	61.76	348	P	P	18 29 49.2	-0.5
	baz=166						
PBMO	Poplar Bluff	61.80	340	eP	P	18 29 49.5	-0.4
	comp=Z,13nm,1.0s						
S46A	Don Dixon Farm	61.83	343	P	P	18 29 49.5	-0.7
	baz=160						
P55A	Reedsville	61.85	350	P	P	18 29 50.6	+0.3
	baz=168						
SNAA	Sanae	61.91	161	P	P	18 29 51.4	+1.0
SNAA	Sanae	61.91	161	P	P	18 29 51.2	+0.8
	comp=Z,13nm,0.7s,baz=279,slow=7.5,SNR=107						
SNAA	Sanae	61.91	161	eP	P	18 29 51.1	+0.8
	comp=Z,17nm,0.8s						
SNAA	Sanae	61.91	161	d iP	P	18 29 51.0	+0.6
WCI	Wyandotte Cave	61.97	344	P	P	18 29 50.7	-0.3
	baz=161						
P54A	Burton	62.05	349	P	P	18 29 52.0	+0.4
	baz=168						
R47A	Wooly Knot Far	62.09	344	P	P	18 29 51.1	-0.8
	baz=161						
P53A	Whipple	62.10	349	eP	P	18 29 52.3	+0.3
	comp=Z,17nm,0.9s						
P53A	Whipple	62.10	349	P	P	18 29 52.1	+0.2
	baz=167						
U40A	Yellville	62.23	338	P	P	18 29 52.0	-0.9

	baz=154,SNR=7.4						
S44A	Carbondale	62.28	341	P	P	18 29 52.2	-0.9
	baz=158						
O55A	Ligonier	62.45	351	P	P	18 29 54.4	+0.1
	baz=169						
HHAR	Hobbs	62.55	337	eP	P	18 29 54.4	-0.6
	comp=Z,8.2nm,0.9s						
R45A	Skylar, Fairfi	62.56	342	P	P	18 29 53.8	-1.2
	baz=159,SNR=6.1						
O54A	Avella	62.60	350	P	P	18 29 55.2	-0.1
	baz=168						
Q47A	Bedord North L	62.67	344	P	P	18 29 55.4	-0.4
	baz=161						
P50A	Jamestown	62.70	347	P	P	18 29 55.8	-0.2
	baz=164						
N57A	Milroy	62.75	352	P	P	18 29 56.9	+0.6
	baz=171						
O52A	Adamsville	62.79	348	eP	P	18 29 56.0	-0.5
	comp=Z,9.9nm,0.8s						
O52A	Adamsville	62.79	348	P	P	18 29 56.6	+0.1
	baz=166						
P49A	Miami Univ. Ec	62.83	346	P	P	18 29 55.6	-1.2
	baz=163						
N55A	Marion Center	62.97	351	eP	P	18 29 58.4	+0.7
	comp=Z,12nm,0.9s						
N55A	Marion Center	62.97	351	P	P	18 29 57.8	+0.1
	baz=169						
O51A	Pataskala	62.97	348	P	P	18 29 57.5	-0.2
	baz=165						
Q45A	Warren Harvey,	63.09	343	P	P	18 29 57.7	-0.8
	baz=160						
ACSO	Alum Creek Sta	63.13	348	eP	P	18 29 59.1	+0.3
	comp=Z,11nm,0.9s						
ACSO	Alum Creek Sta	63.13	348	P	P	18 29 58.6	-0.2
	baz=165						
P47A	Martinsville	63.15	345	P	P	18 29 58.0	-0.9
	baz=162						
O50A	Cable	63.17	347	P	P	18 29 58.1	-1.0
	baz=164						
CCM	Cathedral Cave	63.23	340	eP	P	18 29 58.9	-0.6
	comp=Z,9.8nm,0.8s						
CCM	Cathedral Cave	63.23	340	eP	P	18 29 58.9	-0.6
CCM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CCM	Cathedral Cave	63.23	340	P	P	18 29 58.9	-0.6
	baz=156						
N53A	Lisbon	63.29	349	P	P	18 30 00.3	+0.5
	baz=167						
N54A	Moraine State	63.30	350	P	P	18 29 59.8	0.0
	baz=168						
O49A	Covington	63.37	346	P	P	18 29 59.9	-0.4
	baz=164						
P45A	Graceland, Par	63.57	343	P	P	18 30 00.6	-1.0
	baz=160						
M54A	Oil Creek Stat	63.78	351	P	P	18 30 03.6	+0.5
	baz=169						
O47A	Sheridan	63.84	345	P	P	18 30 02.5	-0.9
	baz=162						
MNTX	Cornudas Mount	63.85	325	eP	P	18 30 03.2	-0.6
	comp=Z,4.1nm,0.9s						
MNTX	Cornudas Mount	63.85	325	P	P	18 30 03.3	-0.5
	baz=142,SNR=8.4						
M53A	WI Miller and	63.88	350	P	P	18 30 03.5	-0.1
	baz=168						
N49A	Columbus Grove	64.04	347	eP	P	18 30 04.2	-0.6
	comp=Z,17nm,0.8s						
N49A	Columbus Grove	64.04	347	P	P	18 30 04.6	-0.1
	baz=164						
M52A	Chesterland	64.09	349	P	P	18 30 05.4	+0.3
	baz=167						
P43A	Skaggs, Pawnee	64.17	342	P	P	18 30 05.3	-0.3
	baz=158						
L53A	Girard	64.31	350	P	P	18 30 06.8	+0.3
	baz=168						
MSTX	Muleshoe	64.34	329	eP	P	18 30 06.9	-0.2
	comp=Z,19nm,1.0s						
MSTX	Muleshoe	64.34	329	P	P	18 30 06.8	-0.2
	baz=145						
L54A	Sinclairville	64.44	351	P	P	18 30 07.6	+0.2
	baz=169						
AMTX	Amarillo	64.57	330	P	P	18 30 07.7	-0.7
	baz=146						
N44A	Piper City	64.86	344	P	P	18 30 09.3	-0.7
	baz=160						
L48A	N Adams	65.07	347	P	P	18 30 11.1	-0.3
	baz=164						
L49A	Milan	65.09	347	P	P	18 30 11.2	-0.3
	baz=164						
N43A	Stutzman Famil	65.27	343	P	P	18 30 11.6	-1.2
	baz=159						
J52A	Paris	65.60	350	P	P	18 30 14.5	-0.3
	baz=168						
M43A	Waltham Townsh	65.68	343	P	P	18 30 15.0	-0.4
	baz=159						
319A	Douglas	65.76	322	eP	P	18 30 16.0	-0.2
	comp=Z,8.8nm,0.9s						
K48A	Perry	65.83	347	P	P	18 30 16.0	-0.3
	baz=164						
I51A	Listowel	66.24	350	P	P	18 30 18.9	0.0
	baz=167						
BNM	Barren Site	66.42	326	eP	P	18 30 21.6	+1.0
BWLO	Walkerton	66.56	350	P	P	18 30 21.1	+0.2
	baz=167						
K43A	Burlington	66.70	344	P	P	18 30 21.6	-0.3
	baz=160						
L40A	Anamosa	66.89	342	P	P	18 30 23.0	-0.1
	baz=157						
ANMO	Albuquerque	66.95	327	eP	P	18 30 24.5	+0.6
	comp=Z,4.7nm,0.8s						
ANMO	Albuquerque	66.95	327	eP	P	18 30 24.8	+0.9
	comp=Z,4.7nm,0.8s						
ANMO	Albuquerque	66.95	327	deP	P	18 30 24.6	+0.7
ANMO				i *PP	pP	18 30 53.2	+0.9
ANMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ANMO	Albuquerque	66.95	327	P	P	18 30 24.8	+0.9
	baz=142						
TASM	ASL Pad, Albuq	66.95	327	P	P	18 30 24.5	+0.6
	baz=142						
TASM	ASL Pad, Albuq	66.95	327	P	P	18 30 24.8	+0.9
	baz=142						
CBKS	Cedar Bluff	67.01	334	eP	P	18 30 24.3	+0.3
	comp=Z,16nm,0.9s						
CBKS	Cedar Bluff	67.01	334	eP	P	18 30 24.3	+0.3
CBKS				pmax	pmax		
	comp=Z,16nm,0.9s						
CBKS	Cedar Bluff	67.01	334	P	P	18 30 23.9	-0.1
	baz=149						
TUC	Tucson	67.31	322	eP	P	18 30 27.5	+1.4
	comp=Z,16nm,1.5s						
TUC	Tucson	67.31	322	eP	P	18 30 27.5	+1.4
TUC				pmax	pmax		
	comp=Z,16nm,1.5s						
TUC	Tucson	67.31	322	P	P	18 30 27.1	+1.0
	baz=138						
JFWS	Jewell Farm	67.40	343	P	P	18 30 25.4	-1.0
	baz=158						
T25A	Trinidad	67.68	329	P	P	18 30 28.3	-0.2
	baz=144						
TRQ	Mont Tremblant	67.86	355	eP	P	18 30 29.4	+0.2
LIC	Lamto	68.01	73	eP	P	18 30 30.1	-0.6
	comp=Z,68nm,0.8s						
TIC	Toumodi	68.20	73	eP	P	18 30 31.4	-0.6
214A	Organ Pipe Nat	68.24	320	P	P	18 30 32.8	+1.0
	baz=136						
E54A	Lac Daplat, Po	68.31	353	P	P	18 30 32.3	+0.4
	baz=171						
KIC	Kosan Boka	68.32	73	eP	P	18 30 32.4	-0.3
	comp=Z,129nm,0.8s						
DBIC	Dimbokro	68.36	73	P	P	18 30 32.7	-0.2
	comp=Z,58nm,0.8s,baz=214,slow=6.5,SNR=75						
DBIC	Dimbokro	68.36	73	eP	P	18 30 32.5	-0.3
	comp=Z,70nm,0.8s						
DBIC	Dimbokro	68.36	73	eP	P	18 30 32.6	-0.3
DBIC				pmax	pmax		
	comp=Z,70nm,0.8s						
QSPA	South Pole Qui	68.46	180	eP	P	18 30 34.1	+1.2
	comp=Z,27nm,0.8s						
BGNE	Belgrade	68.61	336	P	P	18 30 33.6	-0.4
	baz=151						
SDCO	Great Sand Dun	68.69	329	eP	P	18 30 35.8	+1.0
	comp=Z,7.1nm,0.9s						
SDCO	Great Sand Dun	68.69	329	P	P	18 30 35.4	+0.6
	baz=143,SNR=16						
W18A	Petrified Fore	68.81	325	eP	P	18 30 36.4	+0.8
	comp=Z,6.3nm,0.9s						
W18A	Petrified Fore	68.81	325	P	P	18 30 36.3	+0.8
	baz=139						
D54A	Lac Fusel, La	68.97	354	P	P	18 30 36.3	+0.3
	baz=172						
D52A	ZEK Kipawa Sen	68.98	353	P	P	18 30 36.5	+0.4
	baz=170						
D53A	Lac Vacive, Po	69.00	353	P	P	18 30 36.4	+0.2
	baz=171						
Q24A	Divide	69.50	330	P	P	18 30 40.3	+0.4
	baz=144						
G40A	Rib Lake	69.58	344	P	P	18 30 40.2	+0.4
	baz=159						
D49A	Beulah Townshi	69.67	351	P	P	18 30 41.0	+0.7
	baz=167						
MVCO	Mesa Verde	69.75	327	eP	P	18 30 42.3	+1.0
	comp=Z,8.4nm,0.9s						
MVCO	Mesa Verde	69.75	327	P	P	18 30 41.6	+0.3
	baz=141						
Y14A	Wickenburg	69.77	322	eP	P	18 30 42.5	+1.2
	comp=Z,7.6nm,1.0s						
E43A	Lone Tree Farm	69.85	346	P	P	18 30 42.0	+0.6
	baz=162						
G39A	Holcombe	69.85	343	P	P	18 30 41.8	+0.3
	baz=158						
WUAZ	Wupatki	70.00	324	eP	P	18 30 44.5	+1.7
	comp=Z,13nm,1.0s						
WUAZ	Wupatki	70.00	324	P	P	18 30 44.2	+1.4
	baz=138,SNR=5.6						
F40A	Park Falls	70.16	344	P	P	18 30 43.4	0.0
	baz=159						
GLA	Glamis	70.22	320	P	P	18 30 45.4	+1.3
	baz=135						
ISCO	Idaho Springs	70.38	330	P	P	18 30 46.8	+1.6
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ISCO	Idaho Springs	70.38	330	P	P	18 30 45.8	+0.6
	baz=144						
PV01	Paradox Valley	70.49	327	eP	P	18 30 47.0	+1.1
	comp=Z,6.0nm,0.3s						
SMCO	Snowmass	70.52	329	eP	P	18 30 47.6	+1.4
	comp=Z,3.6nm,0.8s						
Y12C	Blythe	70.53	320	eP	P	18 30 47.6	+1.8
	comp=Z,7.8nm,0.9s						
IKP	In-Ko-Pah, Jac	70.72	319	P	P	18 30 48.2	+1.0
	baz=134						
D41A	Chassel	70.85	346	P	P	18 30 48.0	+0.5
	baz=160						
PV22	Blue Mesa, Par	70.91	327	eP	P	18 30 49.7	+1.3
	comp=Z,7.0nm,1.0s						
BC3	Big Chuckawall	71.01	320	P	P	18 30 49.9	+1.0
	baz=134,SNR=7.6						
MONP2	Monument Peak	71.08	319	P	P	18 30 50.7	+1.2
	baz=133						
BAR	Barrett	71.09	318	eP	P	18 30 51.0	+1.7
	comp=Z,6.3nm,0.8s						
W13A	Hualapai Mount	71.11	322	eP	P	18 30 51.1	+1.5
	comp=Z,3.5nm,0.9s						
U15A	North Rim	71.17	324	eP	P	18 30 51.7	+1.6
	comp=Z,9.9nm,0.9s						
IRM	Iron Mountain	71.18	320	P	P	18 30 51.1	+1.2
	baz=135,SNR=6.5						
CHGQ	Chibougamau	71.52	356	P	P	18 30 52.7	+1.2
	baz=174						
BELC	Belle Mtn. Jos	71.58	320	P	P	18 30 53.8	+1.5
	baz=134						
PFO	Pinyon Flats O	71.59	319	eP	P	18 30 54.1	+1.7
	comp=Z,6.4nm,1.1s						
PFO	Pinyon Flats O	71.59	319	eP	P	18 30 54.2	+1.7
PFO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PFO	Pinyon Flats O	71.59	319	P	P	18 30 54.1	+1.7
	baz=134						
MATQ	Matagami	71.64	354	P	P	18 30 52.2	0.0
	baz=171						
O20A	White River Ci	71.88	329	eP	P	18 30 55.1	+0.9
	comp=Z,10nm,0.8s						
KNB	Kanab	71.89	324	eP	P	18 30 56.4	+2.1
	comp=Z,25nm,1.0s						
KNB	Kanab	71.89	324	eP	P	18 30 56.4	+2.1
KNB				pmax	pmax		
	comp=Z,25nm,1.0s						
GMRC	Granite Mounta	71.92	321	P	P	18 30 55.9	+1.5
	baz=134,SNR=13						
LCMT	Little Creek M	72.12	324	eP	P	18 30 57.3	+1.8
	comp=Z,6.5nm,0.9s						
SRU	San Rafael Swe	72.23	327	eP	P	18 30 57.2	+1.0
	comp=Z,12nm,0.8s						
SRU	San Rafael Swe	72.23	327	eP	P	18 30 57.2	+1.0
SRU				pmax	pmax		
	comp=Z,12nm,0.8s						
MTPU	Mount Pierson	72.29	325	eP	P	18 30 57.7	+0.9
	comp=Z,3.7nm,0.8s						
HEC	Hector,Ludlow	72.35	320	P	P	18 30 58.4	+1.5
	baz=134,SNR=5.7						
EYMN	Ely	72.39	344	P	P	18 30 57.3	+0.5
	baz=158						
Q16A	Castle Valley	72.41	326	eP	P	18 30 59.7	+2.4
	comp=Z,4.7nm,0.8s						
TUQ	Turquoise Moun	72.53	321	P	P	18 30 59.2	+1.2
	baz=134						
CCUT	Cedar City	72.57	324	eP	P	18 31 00.1	+1.7
	comp=Z,15nm,0.9s						
P17A	Butcher Ranch,	72.61	327	eP	P	18 30 59.0	+0.6
	comp=Z,11nm,0.9s						
RWWY	Rawlins	72.62	331	eP	P	18 30 59.4	+0.8
	comp=Z,5.0nm,0.9s						
MSU	Marysvale	72.64	325	eP	P	18 31 00.3	+1.6
MSU	Marysvale	72.64	325	eP	P	18 31 00.3	+1.6
TMUT	Trail Mountain	72.72	326	eP	P	18 31 00.7	+1.4
	comp=Z,4.1nm,0.8s						
BFSC	Mount Baldy Ra	72.75	319	P	P	18 31 00.7	+1.4
	baz=133						
SHPR	Sheep Range	72.83	322	eP	P	18 31 01.6	+1.8
	comp=Z,6.3nm,0.9s						
GSC	Goldstone, Bar	72.95	320	eP	P	18 31 02.1	+1.6
	comp=Z,10nm,1.2s						
GSC	Goldstone, Bar	72.95	320	eP	P	18 31 02.1	+1.6
GSC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GSC	Goldstone, Bar	72.95	320	P	P	18 31 01.9	+1.4
	baz=134						
K22A	Casper	73.07	332	P	P	18 31 01.8	+0.6
	baz=143						
RSSD	Black Hills	73.21	334	P	P	18 31 02.4	+0.4
	baz=146						
EDW2	Edwards Air Fo	73.38	319	P	P	18 31 04.5	+1.5
	baz=133						
MPU	Maple Canyon	73.47	327	eP	P	18 31 04.5	+1.0
	comp=Z,6.7nm,0.9s						
PSUT	Pine Spring	73.55	324	eP	P	18 31 05.9	+1.8
	comp=Z,8.4nm,0.9s						
LRMC	Laurel Mtn Rad	73.60	320	P	P	18 31 05.7	+1.3
	baz=133						
TPNV	Topopah Spring	73.77	322	eP	P	18 31 06.8	+1.5
TPNV	Topopah Spring	73.77	322	eP	P	18 31 06.8	+1.5
TPNV	Topopah Spring	73.77	322	P	P	18 31 06.9	+1.5
	baz=134,SNR=9.5						
FURC	Furnace Creek,	73.79	321	P	P	18 31 06.5	+1.4
	baz=134						
MPMC	Manual Prospec	73.88	320	P	P	18 31 07.1	+1.1
	baz=133,SNR=5.9						
AGMN	Agassiz Nation	73.93	341	eP	P	18 31 05.3	-0.4
	comp=Z,12nm,0.3s						
AGMN	Agassiz Nation	73.93	341	P	P	18 31 06.1	+0.3
	baz=154						
TCUT	Toone Canyon	74.18	328	eP	P	18 31 09.1	+1.3
	comp=Z,8.1nm,0.9s						
ISA	Isabella, Lake	74.20	320	eP	P	18 31 09.3	+1.6
	comp=Z,13nm,0.9s						
ISA	Isabella, Lake	74.20	320	P	P	18 31 09.1	+1.4
	baz=132,SNR=8.3						
DUG	Dugway, Tooele	74.21	326	eP	P	18 31 07.8	-0.1
	comp=Z,5.0nm,0.9s						
DUG	Dugway, Tooele	74.21	326	P	P	18 31 09.8	+2.0
DUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DUG	Dugway, Tooele	74.21	326	P	P	18 31 09.0	+1.2
	baz=138,SNR=5.6						
R11A	Troy Canyon, C	74.37	323	eP	P	18 31 10.0	+1.2
	comp=Z,5.1nm,1.0s						
GRAC	Grapevine Rang	74.44	321	P	P	18 31 10.7	+1.6
	baz=134						
CWC	Cottonwood Cre	74.49	320	P	P	18 31 10.9	+1.4
	baz=133						
PKM	Mcpherson Peak	74.50	318	P	P	18 31 11.1	+1.5
	baz=131						
PDAR	Pinedale Array	74.55	330	P	P	18 31 10.1	+0.2
	comp=Z,1.2nm,0.8s,baz=150,slow=9.2,SNR=6.2						
HWUT	Hardware Ranch	74.63	328	eP	P	18 31 11.0	+0.8
	comp=Z,5.5nm,0.7s						
BGU	Big Grassy Mou	74.86	327	eP	P	18 31 12.4	+0.8
	comp=Z,4.6nm,1.0s						
SMMC	Simmler	74.90	318	P	P	18 31 13.4	+1.7
	baz=131						
AHID	Auburn Hatcher	75.28	329	eP	P	18 31 14.5	+0.6
	comp=Z,14nm,0.6s						
HVU	Hansel Valley	75.36	327	eP	P	18 31 15.1	+0.7
	comp=Z,5.4nm,0.9s						
HVU	Hansel Valley	75.36	327	eP	P	18 31 15.1	+0.7
HVU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SBA	Scott Base	75.68	190	P	P	18 31 18.3	+2.7
ULM	Lac du Bonnet	75.68	342	P	P	18 31 15.3	-0.5
	comp=Z,2.4nm,0.5s,baz=130,slow=4.4,SNR=3.9						
OMMB	Old Mammoth Mi	75.82	321	eP	P	18 31 18.0	+0.6
	comp=Z,10nm,1.0s						
ELK	Elko	75.88	325	eP	P	18 31 18.2	+0.7
	comp=Z,3.4nm,0.8s						
ELK	Elko	75.88	325	eP	P	18 31 18.2	+0.7
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NV11	Mina Array Sit	75.88	322	eP	P	18 31 18.8	+1.4
	comp=Z,0.3nm,0.9s						
NV01	Mina Array Sit	75.97	322	eP	P	18 31 18.9	+0.9
NVAR	Mina Array Bea	75.97	322	P	P	18 31 18.9	+0.9
	comp=Z,3.5nm,0.8s,baz=154,slow=6.4,SNR=15						
SYO	Syowa Base	76.12	159	⇑eP	P	18 31 17.8	-0.4
LAO	LASA Array	76.20	334	P	P	18 31 19.5	+0.5
	baz=144						
RLMT	Red Lodge	76.24	332	eP	P	18 31 20.3	+0.9
	comp=Z,6.2nm,0.8s						
RLMT	Red Lodge	76.24	332	P	P	18 31 20.3	+0.9
	baz=142,SNR=6.3						
KVN	Kaiserville	76.27	322	eP	P	18 31 20.1	+0.4
	comp=Z,7.8nm,0.9s						
KVN	Kaiserville	76.27	322	eP	P	18 31 20.1	+0.4
KVN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WAKR	Walker	76.67	321	eP	P	18 31 22.2	+0.2
	comp=Z,6.5nm,1.2s						
YHH	Holmes Hill	76.70	330	eP	P	18 31 23.6	+1.5
	comp=Z,8.6nm,0.9s						
VNDA	Vanda	76.70	190	P	P	18 31 23.7	+2.4
	comp=Z,2.9nm,0.8s,baz=130,slow=5.6,SNR=19						
VNDA	Vanda	76.70	190	P	P	18 31 24.1	+2.8
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
YHB	Horse Butte	76.83	330	eP	P	18 31 24.1	+1.3
	comp=Z,7.8nm,0.8s						
YERR	Yerington	76.88	322	eP	P	18 31 24.6	+1.5
	comp=Z,13nm,1.4s						
GCMT	Greycliff	76.94	332	eP	P	18 31 24.2	+1.0
TOA0	Torodi Ar. Sit	77.00	70	eP	P	18 31 23.6	-0.4
	comp=Z,25nm,1.0s						
TOA1	Torodi Ar. Sit	77.00	70	eP	P	18 31 21.9	-2.1
TORD	Torodi Ar. Bea	77.00	70	P	P	18 31 21.9	-2.1
	comp=Z,15nm,0.8s,baz=282,slow=4.8,SNR=72						
PNTR	Pine Nut	77.16	322	eP	P	18 31 25.4	+0.7
	comp=Z,9.8nm,0.9s						
PAHR	Pah Rah Range	77.45	322	eP	P	18 31 27.6	+1.4
	comp=Z,18nm,0.8s						
HLID	Hailey	77.49	328	eP	P	18 31 27.5	+1.1
	comp=Z,10nm,0.9s						
HLID	Hailey	77.49	328	P	P	18 31 27.7	+1.3
	baz=137,SNR=17						
MCMT	McKenzie Canyo	77.66	329	eP	P	18 31 28.8	+1.4
BOZ	Bozeman (W)	77.67	331	P	P	18 31 27.9	+0.5
	baz=140						
AFDM	Forest Hills D	77.86	321	eP	P	18 31 29.5	+1.0
	comp=Z,6.0nm,1.0s						
BEKR	Beckworth	78.11	322	eP	P	18 31 31.5	+1.5
	comp=Z,59nm,0.5s						
ORV	Oroville	78.57	321	eP	P	18 31 33.9	+1.6
	comp=Z,31nm,0.4s						
ORV	Oroville	78.57	321	eP	P	18 31 33.9	+1.6
ORV				pmax	pmax		
	comp=Z,31nm,0.4s						
EGMT	Eagleton	78.72	333	P	P	18 31 33.3	+0.4
	baz=142						
MOD	Modoc Plateau	79.44	323	eP	P	18 31 37.8	+0.7
	comp=Z,8.5nm,0.9s						
TSUM	Tsumeb	79.53	107	eP	P	18 31 39.0	+0.8
	comp=Z,15nm,1.0s						
WDC	Whiskeytown Da	79.84	321	eP	P	18 31 38.5	-0.7
	comp=Z,6.1nm,0.8s						
WDC	Whiskeytown Da	79.84	321	eP	P	18 31 38.5	-0.7
WDC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BMO	Blue Mountains	79.86	327	eP	P	18 31 40.0	+0.7
	comp=Z,8.3nm,0.9s						
BMO	Blue Mountains	79.86	327	eP	P	18 31 40.0	+0.7
BMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
I07A	Izee	80.47	325	eP	P	18 31 44.1	+1.5
	comp=Z,7.7nm,1.0s						
F10A	Beach Ranch, E	80.61	328	eP	P	18 31 44.1	+0.8
	comp=Z,5.2nm,0.6s						
PINE	Pine Mountain	81.04	324	eP	P	18 31 46.8	+1.1
	comp=Z,13nm,0.9s						
WALA	Waterton Lakes	81.30	332	eP	P	18 31 47.6	+0.7
	comp=Z,4.9nm,0.8s						
PTEO	Sao Teotonio	81.40	44	eP	P	18 31 48.7	+1.2
FFC	Flin Flon	81.40	341	eP	P	18 31 47.1	-0.1
	comp=Z,21nm,0.7s						
FFC	Flin Flon	81.40	341	ceP	P	18 31 47.7	+0.6
PBDV	Barranco-do-Ve	81.74	45	eP	P	18 31 50.7	+1.4
PNCL	Nicolau / Gran	81.85	44	eP	P	18 31 51.0	+1.1
PCVE	Castro Verde	81.89	44	eP	P	18 31 50.1	0.0
HAWA	Hanford	82.06	327	eP	P	18 31 51.5	+0.7
PBEJ	Beja	82.23	44	eP	P	18 31 54.1	+2.2
	comp=Z,18nm,1.7s						
C09A	Chrisman Ranch	82.41	329	eP	P	18 31 53.6	+1.0
	comp=Z,15nm,0.8s						
ALMR	Almeirim	82.43	43	eP	P	18 31 54.3	+1.4
	comp=Z,33nm,0.9s						
PMTG	Montargil	82.60	43	eP	P	18 31 54.7	+0.9
	comp=Z,25nm,1.7s						
PTOM	Tomar	82.80	42	eP	P	18 31 55.8	+1.0
	comp=Z,23nm,1.3s						
BOSA	Boshof	82.93	118	P	P	18 31 55.6	-0.4
	comp=Z,6.6nm,1.2s,baz=217,slow=4.5,SNR=6.4						
FCC	Fort Churchill	82.97	347	eP	P	18 31 55.8	+0.6
	comp=Z,5.7nm,0.8s						
FCC	Fort Churchill	82.97	347	eP	P	18 31 55.8	+0.6
FCC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MTE	Manteigas	83.80	42	eP	P	18 32 00.8	+0.8
	comp=Z,21nm,1.6s						
MAW	Mawson	83.97	163	P	P	18 32 01.6	+1.2
	comp=Z,11nm,0.7s,baz=212,slow=5.6,SNR=37						
MAW	Mawson	83.97	163	eP	P	18 32 01.8	+1.4
	comp=Z,2.6nm,0.8s						
MAW	Mawson	83.97	163	eP	P	18 32 01.8	+1.4
MAW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
POLO	Lamas de Olo	84.21	41	eP	P	18 32 02.7	+0.6
	comp=Z,8.4nm,1.8s						
PCAB	Cabril	84.26	41	eP	P	18 32 02.7	+0.4
	comp=Z,19nm,1.4s						
LBTB	Lobatse	84.50	115	P	P	18 32 06.0	+1.9
LBTB				pmax	pmax		
	comp=Z,8.0nm,1.8s						
TAM	Tamanrasset	84.51	63	eP	P	18 32 04.6	+0.5
	comp=Z,9.1nm,1.3s						
TAM	Tamanrasset	84.51	63	eP	P	18 32 04.6	+0.5
TAM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MVO	Moncorvo	84.56	42	eP	P	18 32 04.6	+0.8
	comp=Z,20nm,1.6s						
PBRG	Braganca	85.10	41	eP	P	18 32 07.4	+0.9
PAB	San Pablo	85.36	44	eP	P	18 32 08.5	+0.6
	comp=Z,14nm,1.0s						
PAB	San Pablo	85.36	44	eP	P	18 32 08.5	+0.6
PAB				pmax	pmax		
	comp=Z,14nm,1.0s						
ESDC	Sonseca Array	85.67	44	P	P	18 32 09.2	-0.2
	comp=Z,3.7nm,0.9s,baz=239,slow=5.1,SNR=22						
YKA	Yellowknife Ar	91.56	340	P	P	18 32 36.8	+0.2
	comp=Z,7.9nm,0.8s,baz=134,slow=4.4,SNR=28						
YKB5	Yellowknife Ar	91.56	340	eP	P	18 32 36.9	+0.2
YKW3	Yellowknife Ar	91.62	340	eP	P	18 32 37.2	+0.2
	comp=Z,8.1nm,0.9s						
DAG	Danmarks Havn	102.71	10	P	Pdif	18 33 30.3	+3.5
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BILL	Bilibino	122.91	339	⇑iPKIKP	PKiKP	18 38 26.4	+0.8
AS31	Alice Springs	129.92	207	ePKPdf	PKPdf	18 38 39.2	-1.1

ASAR	**Alice Springs**	**129.92**	**207**	PKP	**PKiKP**	**18 38 40.7**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=141,slow=1.9,SNR=32						
SEY	**Seymchan**	**130.50**	**337**⇑	*i*PKIKP	**PKiKP**	**18 38 41.6**	**+0.7**
WR1	**Warramunga Arr**	**132.99**	**210**	*e*PKPdf	**PKiKP**	**18 38 46.8**	**-0.5**
WRA	**Warramunga Arr**	**132.99**	**210**	PKP	**PKiKP**	**18 38 46.8**	**-0.5**
	comp=Z,3.7nm,0.7s,baz=166,slow=1.7,SNR=16						
PMG	**Port Moresby**	**133.35**	**232***d*	*i*PKIKP	**PKiKP**	**18 38 48.3**	**+0.2**
PMG				pmax	pmax		
	comp=Z,103nm,1.3s						
ZAA1	**Zalesovo Array**	**141.96**	**26**	*e*PKPdf	**PKPdf**	**18 38 57.7**	**-3.8**
ZAA1				*e*		18 39 02.9	
ZALV	**Zalesovo Beam**	**141.97**	**26**	PKhKP	PKPpre	18 38 57.7	
	comp=Z,0.6nm,0.4s,baz=333,slow=1.6,SNR=4.3						
ZALV				PKP	**PKPdf**	**18 39 02.8**	**+1.3**
	comp=Z,2.2nm,0.6s,baz=328,slow=5.1,SNR=4.3						
KSH	**Kashi**	**144.88**	**52**	*e*PKP	**PKPdf**	**18 39 07.2**	**-0.1**
KSH				sPKP		18 39 44.1	
KSH				PP	**PP**	**18 42 27.8**	**+1.7**
KSH				PKS	**PKSdf**	**18 42 41.8**	**-1.1**
KSH				SKS	**SKSdf**	**18 46 05.7**	**-1.1**
KSH				SKKS	**SKKSac**	**18 49 07.2**	**-1.0**
KSH				AMB	AMB		
	comp=Z,150nm,6.6s						
GRNR	**Gornyy**	**145.11**	**332**	*e*PKIKP	**PKPdf**	**18 39 08.0**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
MK32	**Makanchi Array**	**145.55**	**36**	*e*PKPbc	**PKPab**	**18 39 09.2**	**+0.4**
MKAR	**Makanchi Array**	**145.55**	**36**	PKPbc	**PKPab**	**18 39 09.2**	**+0.4**
	comp=Z,4.0nm,0.6s,baz=326,slow=4.2,SNR=37						
MKAR	**Makanchi Array**	**145.55**	**36***c*	*i*PKIKP	**PKPab**	**18 39 09.6**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DGZ	**Jazzator, Alta**	**146.18**	**29**⇑	*i*PKP2	**PKPab**	**18 39 12.0**	**+0.7**
ERM	**Erimo**	**146.71**	**315***c*	*i*PKP2	**PKPab**	**18 39 13.7**	**+0.4**
ERM				pmax	pmax		
	comp=Z,20nm,1.0s						
KLR	**Kul'dur**	**148.23**	**335***c*	*i*PKP2	**PKPbc**	**18 39 16.3**	**+0.4**
MOY	**Mondy**	**149.01**	**13**	*e*PKP2	**PKiKP**	**18 39 19.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**151.96**	**328**	PKPbc	**PKiKP**	**18 39 25.2**	**-0.2**
	comp=Z,7.9nm,0.8s,baz=22,slow=1.6,SNR=18						
MJAR	**Matsushiro Arr**	**152.58**	**308**	PKPbc	**PKiKP**	**18 39 26.8**	**-0.1**
	comp=Z,4.3nm,0.9s,baz=106,slow=1.5,SNR=10						
MAJO	**Matsushiro**	**152.58**	**308**	*e*PKPbc	**PKiKP**	**18 39 27.1**	**+0.2**
MAJO	**Matsushiro**	**152.58**	**308**	*e*PKIKP	**PKiKP**	**18 39 27.1**	**+0.2**
SONA0	**Songino Array**	**153.63**	**8**	*e*PKPdf	**PKPdf**	**18 39 22.5**	**+1.5**
SONA0				*e*PKPbc	**PKPbc**	**18 39 28.6**	**-0.2**
SONM	**Songino Array**	**153.63**	**8**	PKP	**PKPdf**	**18 39 22.5**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=336,slow=1.8,SNR=7.6						
SONM				PKPbc	**PKPbc**	**18 39 28.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=350,slow=3.2,SNR=3.6						
ULN	**Ulaanbaatar**	**153.68**	**7**⇓	*e*PKIKP	**PKPdf**	**18 39 23.0**	**+1.9**
ULN				pmax	pmax		
	comp=Z,4.0nm,2.5s						
KSRS	**Korea Array**	**158.91**	**322**	PKP	**PKPdf**	**18 39 29.1**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=51,slow=0.6,SNR=7.3						
KSRS				PKPab	**PKPab**	**18 40 04.4**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=46,slow=3.5,SNR=4.1						

SAR 10 18:28:59.6±0.7, 44°.08N×19°.14E, h8^{km}±4^{km}, ML0.9/3, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAPS	**Han Pijesak,BI**	**0.14**	**274**	*e*Pg	Pg	18 29 02.5	-0.1
HAPS				*e*Sg	Sg	18 29 05.9	+1.2
BBLS	**Lazići**	**0.28**	**138**	*e*Pg	Pg	18 29 05.1	-0.1
BBLS				*e*Sg	Sg	18 29 10.0	+1.0
RUDO	**Rudo**	**0.49**	**160**	*e*Pg	Pg	18 29 08.2	-0.8
RUDO				*e*Sg	Sg	18 29 16.4	+1.0
DIVS	**Divibare**	**0.61**	**88**	*e*Pg	Pg	18 29 10.7	-0.8
DIVS				*e*Sg	Sg	18 29 20.0	+0.5

MAN 10 18:41:42.5, 13°.12N×121°.16E, h30^{km}, mb4.0, ML2.8, MS2.4, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.43**	**332**⇑	*i*P	Pb	18 41 52.3	+0.3
PGP				*i* S	Sn	18 41 59.0	-0.6
SJMP	**San Jose**	**0.66**	**184**	*e*P	Pb	18 41 55.0	-0.5
SJMP				*e*S	Sn	18 42 05.1	0.0
BOAC	**Boac**	**0.74**	**63**	*e*P	Pb	18 41 58.8	+1.8
BOAC				*e*S	Sn	18 42 07.9	+0.6
LUBP	**Lubang**	**1.08**	**304**	*e*P	Pb	18 42 02.6	-0.1
LUBP				*e*S	Sb	18 42 18.5	+2.1

MAN 10 18:48:38.6, 12°.57N×120°.38E, h31^{km}, mb4.0, ML2.8, MS2.4, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUSP	**Coron**	**0.59**	**197**	*e*P	Pn	18 49 00.5	+10
BUSP				*e*S	Sn	18 49 14.3	+15
SJMP	**San Jose**	**0.73**	**98**	*e*P	Pb	18 48 53.4	+0.5
SJMP				*e*S	Sb	18 49 02.2	-0.4
PGP	**Puerto Galera**	**1.08**	**31**⇓	*e*P	Pn	18 48 53.5	-4.3
PGP				*e*S	Sn	18 49 02.1	-10
LUBP	**Lubang**	**1.17**	**354**	*e*P	Pn	18 48 58.0	-0.8
LUBP				*e*S	Sn	18 49 13.9	+0.2
OTRP	**Odiongan**	**1.62**	**97**	*e*P	Pb	18 49 08.4	+0.5
OTRP				*e*S	Sn	18 49 22.5	-2.3

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*IDC **10** 19:03:15.4±0.8, 53°.43N×109°.16E, h0^{km}, mb3.8/12, mb1 3.9/17, mb1mx3.7/42, mbtmp3.7/17, ML3.0/5, MS3.7/11, Ms1 3.7/11, ms1mx3.3/57, Error ellipse: s-maj=18.3km s-min=10.9km az=141.0*

*MOS **10** 19:03:16.2±1.1, 53°.34N×109°.01E, h12^{km}, mb4.2/5, Error ellipse: s-maj=9.1km s-min=6.1km az=60.7*

MOS Felt (III-IV) at Ust'-Barguzin; (II-III) at Maksimikha; (II) at Barguzin.

*ISCJB **10** 19:03:17.7±0.4, 53°.44N±0°.03×108°.98E±0°.04, h24^{km}±3^{km}, mb4.0/17, MS4.1/20, Error ellipse: s-maj=5.2km s-min=2.8km az=148.6*

*NEIC **10** 19:03:17.1±2.4, 53°.43N×109°.04E, h10^{km}±3^{km}, mb4.2/11, Error ellipse: s-maj=15.3km s-min=11.9km az=122.0*

*BYKL **10** 19:03:18.2±0.1, 53°.44N×108°.89E, h22^{km}±2^{km}, FELT I=III-IV MSK at Ust-Barguzin, II-III at Maximikha, II at Barguzin.*

ISC 10 19:03:17.2±0.8, 53°.41N±0°.02×108°.95E±0°.02, h9^{km}±5^{km}, n130, σ1°.92/172, mb4.0/17, MS4.2/20, 12C-12D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXMB	**Maximikha**	**0.19**	**220**⇓	*i*Pg	**Pb**	**19 03 22.8**	**+1.6**
MXMB				*e*Sg	**Sb**	**19 03 26.4**	**+2.5**
SYVR	**Suvo**	**0.67**	**68**⇑	*i*Pg	**Pb**	**19 03 31.0**	**-0.1**
	261nm,0.6s						
SYVR			⇑	*i*Pg	**Pb**	**19 03 31.0**	**-0.1**
	542nm,0.6s						
SYVR			⇑	*i*Pg	**Pb**	**19 03 31.0**	**-0.1**
	730nm,0.6s						
SYVR				*e*Sg	**Sb**	**19 03 40.7**	**+0.2**
SYVR				Smax		19 03 41.8	
	9µm,0.3s						
SYVR	**Suvo**	**0.67**	**68**	*e*PG	**Pb**	**19 03 31.0**	**-0.1**
SYVR				*e*		19 03 40.8	
SYVR				pmax	pmax		
	comp=Z,1µm,0.1s						
SYVR				smax	smax		
	comp=E,9µm,0.3s						
KELR	**Kotokel**	**0.84**	**219**⇑	*i*Pg	**Pb**	**19 03 33.1**	**-0.8**
KELR				*e*Pb	**Pg**	**19 03 34.4**	**+1.1**
KELR				*e*Sg	**Sb**	**19 03 44.9**	**-0.3**
OGRR	**Ongureny**	**0.84**	**287**⇑	*i*Pg	**Pb**	**19 03 33.8**	**-0.1**
OGRR				*e*		19 03 34.9	
OGRR				Pmax		19 03 35.0	
	comp=E,3µm,0.2s						
OGRR				*e*Sg	**Sb**	**19 03 44.4**	**-0.9**
OGRR				*e*Sb	**Sn**	**19 03 47.4**	**-0.3**
OGRR				max		19 03 49.2	
	comp=E,6µm,0.3s						
OGRR	**Ongureny**	**0.84**	**287**	*e*PG	**Pb**	**19 03 33.8**	**-0.1**
OGRR				*e*		19 03 44.5	
OGRR				pmax	pmax		
	comp=Z,800nm,0.3s						
OGRR				smax	smax		
	comp=N,6µm,0.4s						
ZRHB	**Zarechye**	**1.39**	**232**	*e*Pg	**Pn**	**19 03 42.4**	**-0.3**
ZRHB				Pmax		19 03 51.2	
	comp=N,1µm,0.4s						
ZRHB				*e*Sg	**Sb**	**19 04 01.7**	**+0.7**
ZRHB				*e*		19 04 09.4	
ZRHB				max		19 04 12.6	
	comp=N,16µm,1.1s						
TRTB	**Turuntaevo**	**1.43**	**215**⇑	*i*Pg	**Pn**	**19 03 43.3**	**0.0**
TRTB				*e*Sg	**Sb**	**19 04 03.5**	**+1.3**
TRG	**Tyrgan**	**1.70**	**248**⇓	*i*Pn	**Pn**	**19 03 46.2**	**-0.8**
TRG				*e*Pg	**Pb**	**19 03 48.0**	**-0.6**
TRG				Pmax		19 03 50.1	
	comp=N,454nm,0.2s						
TRG				*e*Sg	**Sb**	**19 04 10.2**	**+0.2**
TRG				Smax		19 04 11.6	
	comp=N,6µm,0.3s						
TRG	**Tyrgan**	**1.70**	**248**	*e*PN	**Pn**	**19 03 46.9**	**-0.1**
TRG				*e*		19 03 47.5	
TRG				*e*		19 04 10.3	
TRG				pmax	pmax		
	comp=Z,608nm,0.2s						
TRG				smax	smax		
	comp=N,6µm,0.3s						
UUDB	**Ulan-Yde**	**1.73**	**207**	*e*Pn	**Pn**	**19 03 47.8**	**+0.3**
UUDB				*e*Pg	**Pb**	**19 03 49.5**	**+0.3**
UUDB				Pmax		19 03 49.8	
	comp=N,960nm,0.5s						
UUDB				*e*Sg	**Sb**	**19 04 12.9**	**+1.9**
UUDB				Smax		19 04 15.3	
	comp=N,6µm,1.0s						
KAB	**Kabansk**	**1.95**	**227**	*e*Pn	**Pn**	**19 03 51.3**	**+0.9**
KAB				max		19 03 56.4	
	comp=N,549nm,0.5s						
KAB				*e*		19 04 16.3	
KAB				*e*Sg	**Sb**	**19 04 19.3**	**+2.0**
KAB				Smax		19 04 33.0	
	comp=N,8µm,0.9s						
KAB	**Kabansk**	**1.95**	**227**	*e*PN	**Pb**	**19 03 52.4**	**-0.4**
KAB				*e*		19 04 17.4	
KAB				pmax	pmax		
	comp=Z,345nm,0.5s						
KAB				smax	smax		
	comp=N,10µm,1.3s						
YLYR	**Ulyunkhan**	**1.96**	**41**⇓	*i*Pn	**Pn**	**19 03 51.1**	**+0.5**
YLYR				*e*		19 03 53.5	
YLYR				max		19 03 57.1	
	comp=N,263nm,0.4s						
YLYR				*e*Sg	**Sb**	**19 04 19.2**	**+1.6**
YLYR				Smax		19 04 20.9	
	comp=N,2µm,0.4s						
STDB	**Stepnoy Dvoret**	**2.00**	**233**	*e*Pn	**Pn**	**19 03 51.4**	**+0.3**
STDB				*e*		19 03 53.0	
STDB				*e*Pg	**Pb**	**19 03 55.4**	**+1.7**
STDB				*e*Sg	**Sb**	**19 04 19.3**	**+0.6**
HRMR	**Khuramsha**	**2.16**	**215**	*e*Pn	**Pn**	**19 03 53.6**	**+0.3**
HRMR				*e*		19 03 56.6	
HRMR				max		19 04 00.3	
	comp=N,2µm,0.5s						
HRMR				*e*		19 04 23.3	
HRMR				*e*Sg	**Sg**	**19 04 26.2**	**-0.4**
HRMR				Smax		19 04 32.8	
	comp=N,13µm,0.5s						
NIZ	**Nizh Angarsk**	**2.39**	**8**⇓	*i*Pn	**Pn**	**19 03 57.1**	**+0.6**
NIZ				*e*Pg	**Pb**	**19 03 59.6**	**-0.8**
NIZ				*e*		19 04 01.5	
NIZ				max		19 04 12.0	
	comp=N,415nm,0.5s						
NIZ				*e*Sg	**Sb**	**19 04 30.8**	**+0.8**
NIZ				Smax		19 04 32.0	
	comp=N,1µm,0.4s						
NIZ	**Nizh Angarsk**	**2.39**	**8**	*e*PN	**Pn**	**19 03 57.2**	**+0.7**
NIZ				*e*		19 04 01.3	
NIZ				*e*S	**Sn**	**19 04 25.0**	**-0.9**
NIZ				*e*		19 04 30.7	
NIZ				pmax	pmax		
	comp=Z,415nm,0.8s						
NIZ				smax	smax		
	comp=N,2µm,0.8s						
BGT	**Bolshoye Golou**	**2.55**	**239**⇓	*i*Pn	**Pn**	**19 03 58.0**	**-0.7**
BGT				*e*		19 04 02.1	
BGT				*e*Pg	**Pb**	**19 04 04.0**	**+0.9**
BGT				Pmax		19 04 10.3	
	comp=N,112nm,0.3s						
BGT				*e*Sn	**Sn**	**19 04 29.1**	**-0.7**
BGT				*e*Sg	**Sg**	**19 04 37.6**	**-1.5**
BGT				Smax		19 04 41.1	
	comp=N,1µm,0.4s						
KMO	**Kumora**	**2.80**	**27**⇓	*i*Pn	**Pn**	**19 04 02.8**	**+0.6**
KMO				*e*Pg	**Pb**	**19 04 08.3**	**+0.9**
KMO				*e*		19 04 15.1	
KMO				max		19 04 16.2	
	comp=N,525nm,0.4s						
KMO				*e*Sg	**Sb**	**19 04 44.8**	**+3.0**
KMO				*e*SgSg	**Sg**	**19 04 51.6**	**+4.4**
KMO				max		19 04 54.6	
	comp=N,4µm,1.1s						
KMO	**Kumora**	**2.80**	**27**	*e*PN	**Pn**	**19 04 02.8**	**+0.6**
KMO				*e*		19 04 10.2	
KMO				*e*		19 04 44.1	
KMO				pmax	pmax		
	comp=Z,115nm,0.4s						
KMO				smax	smax		
	comp=N,4µm,1.2s						
LSTR	**Listvyanka**	**2.95**	**240**⇓	*i*Pn	**Pn**	**19 04 03.6**	**-0.5**
LSTR				*e*		19 04 10.0	
LSTR				max		19 04 12.8	
	comp=N,114nm,0.5s						
LSTR				*e*Sn	**Sn**	**19 04 37.8**	**-1.8**
LSTR				*e*Sg	**Sb**	**19 04 47.2**	**+1.3**
LSTR				Smax		19 04 51.5	
	comp=N,1µm,0.9s						
IRK	**Irkutsk**	**3.07**	**249**	*e*Pg	**Pb**	**19 04 11.6**	**-0.3**
IRK				*e*		19 04 12.6	
IRK				max		19 04 21.2	
	comp=N,293nm,0.2s						
IRK				*e*Sg	**Sb**	**19 04 51.7**	**+2.3**
IRK				Smax		19 04 58.0	
	comp=N,5µm,0.5s						
IRK	**Irkutsk**	**3.07**	**249**	*e*PN	**Pn**	**19 04 05.3**	**-0.5**
IRK				*e*		19 04 12.3	
IRK				*e*		19 04 52.5	
IRK				pmax	pmax		
	comp=Z,292nm,0.2s						
IRK				smax	smax		
	comp=E,5µm,0.2s						
CIT	**Chita**	**3.13**	**115**	*e*Pn	**Pn**	**19 04 07.1**	**+0.5**
CIT				*e*Pg	**Pb**	**19 04 15.0**	**+2.1**
CIT				Pmax		19 04 17.3	
	comp=E,745nm,0.3s						
CIT				*e*Sn	**Sn**	**19 04 45.3**	**+1.2**
CIT				*e*Sg	**Sg**	**19 04 57.1**	**-0.4**
CIT				Smax		19 05 02.6	
	comp=E,4µm,0.7s						
CIT	**Chita**	**3.13**	**115**	*e*PN	**Pb**	**19 04 12.8**	**-0.1**
CIT				*e*S	**Sn**	**19 04 44.7**	**+0.6**
CIT				*e*		19 04 56.6	
CIT				pmax	pmax		
	comp=Z,865nm,0.8s						
CIT				smax	smax		
	comp=E,5µm,1.2s						
YOA	**Uoyan**	**3.17**	**29**	*e*Pn	**Pn**	**19 04 09.2**	**+2.1**
YOA				*e*		19 04 16.5	
YOA				max		19 04 36.7	
	comp=E,1µm,1.0s						
YOA				*e*Sg	**Sg**	**19 04 57.4**	**-1.3**
YOA				Smax		19 05 14.9	
	comp=E,10µm,2.0s						
YOA	**Uoyan**	**3.17**	**29**	*e*PN	**Pn**	**19 04 09.5**	**+2.4**
YOA				*i*		19 04 16.6	
YOA				*i*		19 04 57.6	
YOA				pmax	pmax		
	comp=Z,781nm,0.7s						
YOA				smax	smax		
	comp=E,8µm,0.7s						
IVK	**Ivanovka**	**3.20**	**242**	*e*Pn	**Pn**	**19 04 07.0**	**-0.6**
IVK				*e*		19 04 16.2	
IVK				max		19 04 16.9	
	comp=E,106nm,0.4s						
IVK				*e*Sn	**Sn**	**19 04 45.8**	**-0.1**
IVK				*e*Sg	**Sb**	**19 04 56.8**	**+3.6**
IVK				Smax		19 04 57.6	
	comp=E,975nm,0.4s						
TLY	**Talaya**	**3.67**	**244**	Pn	**Pn**	**19 04 13.6**	**-0.5**
	comp=E,0.0nm,0.3s,baz=83,slow=4.9,SNR=21						
TLY				Pg	**Pb**	**19 04 22.9**	**+0.7**
	comp=E,0.1nm,0.3s,baz=54,slow=10.0,SNR=26						
TLY				Lg	Lg	19 05 10.3	
	comp=E,0.4nm,0.3s,baz=215,slow=15,SNR=12						
TLY				LR	LR	19 05 55.8	
	comp=E,918nm,19.3s,baz=46,slow=42						
TLY	**Talaya**	**3.67**	**244**	*e*Pn	**Pn**	**19 04 12.7**	**-1.4**
TLY	**Talaya**	**3.67**	**244**	*e*Pn	**Pn**	**19 04 13.4**	**-0.7**
TLY				*e*Pg	**Pb**	**19 04 23.3**	**+1.1**
TLY				Pmax		19 04 37.7	
	comp=E,95nm,0.3s						
TLY				*e*		19 04 46.8	
TLY				*e*Sn	**Sn**	**19 04 56.4**	**-1.1**
TLY				*e*Sg	**Sb**	**19 05 10.2**	**+3.4**
TLY				*e*		19 05 13.0	
TLY				max		19 05 19.4	
	comp=E,857nm,0.6s						
TLY	**Talaya**	**3.67**	**244**	*e*PN	**Pn**	**19 04 13.4**	**-0.7**
TLY				*e*		19 04 23.2	
TLY				*e*		19 05 10.3	
TLY				pmax	pmax		
	comp=Z,187nm,0.3s						
TLY				smax	smax		
	comp=E,1.0nm,0.4s						
SVKR	**Severomuysk**	**3.81**	**43**	*e*Pn	**Pn**	**19 04 18.3**	**+2.3**
SVKR				*e*Pg	**Pb**	**19 04 28.0**	**+3.6**
SVKR				Pmax		19 04 45.5	
	comp=E,325nm,0.5s						
SVKR				*e*Sg	**Sg**	**19 05 17.5**	**-1.7**
SVKR				Smax		19 05 32.2	
	comp=E,3µm,0.5s						
SVKR	**Severomuysk**	**3.81**	**43**	*e*PN	**Pn**	**19 04 18.2**	**+2.3**
SVKR				*e*		19 04 28.0	
SVKR				*e*		19 05 17.5	
SVKR				pmax	pmax		
	comp=Z,328nm,0.6s						
SVKR				smax	smax		
	comp=E,3µm,0.6s						
ARS	**Arshan**	**4.24**	**252**	*e*Pn	**Pn**	**19 04 22.0**	**0.0**
ARS				*e*		19 04 28.7	
ARS				*e*		19 04 32.0	
ARS				max		19 04 42.9	
	comp=E,207nm,0.5s						
ARS				*e*Sg	**Sb**	**19 05 27.7**	**+4.4**
ARS				*e*		19 05 31.9	
ARS				max		19 05 32.4	
	comp=E,3µm,0.4s						
ARS	**Arshan**	**4.24**	**252**	*e*PN	**Pn**	**19 04 22.0**	**0.0**
ARS				*e*		19 04 33.4	
ARS				*e*		19 05 25.5	
ARS				pmax	pmax		
	comp=Z,206nm,0.5s						
ARS				smax	smax		
	comp=N,3µm,0.5s						
KPC	**Khapcheranga**	**4.29**	**149**	*e*Pn	**Pn**	**19 04 22.1**	**-0.5**
KPC				*e*		19 04 30.4	
KPC				*e*Pg	**Pb**	**19 04 36.1**	**+3.5**
KPC				Pmax		19 04 42.6	
	comp=N,168nm,0.6s						
KPC				*e*		19 05 29.9	
KPC				*e*Sg	**Sg**	**19 05 32.2**	**-2.5**
KPC				Smax		19 05 36.8	
	comp=N,811nm,1.0s						
KPC	**Khapcheranga**	**4.29**	**149**	*e*PN	**Pn**	**19 04 22.6**	**0.0**
KPC				*e*		19 04 34.2	
KPC				*e*S	**Sn**	**19 05 11.9**	**-0.8**
KPC				*e*		19 05 30.9	
KPC				pmax	pmax		
	comp=Z,169nm,0.7s						
KPC				smax	smax		
	comp=E,801nm,1.0s						
ZAK	**Zakamensk**	**4.64**	**231**⇓	*i*Pn	**Pn**	**19 04 27.7**	**+0.2**
ZAK				*e*		19 04 36.6	
ZAK				*e*Pg	**Pb**	**19 04 42.0**	**+3.3**
ZAK				Pmax		19 04 52.4	
	comp=E,80nm,0.6s						
ZAK				*e*Sg	**Sg**	**19 05 42.6**	**-3.4**
ZAK				*e*		19 05 47.8	
ZAK				max		19 05 49.8	
	comp=E,350nm,0.6s						
ZAK	**Zakamensk**	**4.64**	**231**	*e*PN	**Pn**	**19 04 27.7**	**+0.2**
ZAK				*e*		19 04 41.8	
ZAK				*e*		19 05 41.8	
ZAK				pmax	pmax		
	comp=Z,80nm,0.6s						
ZAK				smax	smax		
	comp=N,316nm,0.5s						
NLYR	**Nelyaty**	**4.97**	**49**⇓	*i*Pn	**Pn**	**19 04 32.3**	**+0.4**
NLYR				*e*Pg	**Pb**	**19 04 48.4**	**+4.2**
NLYR				*e*		19 04 54.2	
NLYR				max		19 04 56.6	
	comp=N,78nm,0.7s						
NLYR				*e*Sg	**Sg**	**19 05 52.0**	**-4.5**
NLYR				Smax		19 05 59.8	
	comp=N,2µm,1.2s						
MOY	**Mondy**	**5.16**	**253**	*e*	Pn	19 04 26.9	-7.7
MOY				*e*		19 04 35.6	
MOY				*e*		19 04 48.7	
MOY				max		19 05 05.0	
	comp=N,128nm,0.7s						
MOY				*e*		19 05 35.2	
MOY				*e*Sg	**Sb**	**19 05 55.8**	**+6.1**
MOY				Smax		19 05 59.2	
	comp=N,1µm,0.8s						
MOY				*e*		19 06 05.1	
MOY	**Mondy**	**5.16**	**253**	*e*PN	**Pn**	**19 04 36.4**	**+1.8**
MOY				*e*		19 04 50.6	
MOY				*e*S	**Sn**	**19 05 34.8**	**+0.5**
MOY				*e*		19 05 53.4	
MOY				pmax	pmax		
	comp=Z,132nm,0.9s						
MOY				smax	smax		
	comp=N,1µm,1.1s						
BOD	**Bodaibo**	**5.26**	**31**	*e*Pn	**Pn**	**19 04 36.1**	**+0.2**
BOD				*e*		19 04 41.7	
BOD				*e*		19 04 56.2	
BOD				max		19 05 24.2	
	comp=N,79nm,1.2s						
BOD				*e*Sg	**Sg**	**19 06 00.6**	**-5.4**
BOD				Smax		19 06 04.3	
	comp=N,547nm,1.3s						
BOD	**Bodaibo**	**5.26**	**31**	*e*PN	**Pn**	**19 04 35.2**	**-0.7**
BOD				*e*		19 04 51.0	
BOD				*e*S	**Sn**	**19 05 35.7**	**-0.9**
BOD				*e*		19 05 59.2	
BOD				pmax	pmax		
	comp=Z,57nm,1.1s						
BOD				smax	smax		
	comp=E,551nm,1.2s						
ORL	**Orlik**	**5.59**	**265**⇑	*i*Pn	**Pn**	**19 04 41.2**	**+0.7**
ORL				*e*		19 04 47.4	
ORL				max		19 04 51.7	
	comp=E,54nm,0.6s						
ORL				*e*		19 05 45.6	
ORL				*e*Sg	**Sg**	**19 06 10.1**	**-6.5**
ORL				Smax		19 06 19.3	
	comp=E,613nm,0.9s						
ORL	**Orlik**	**5.59**	**265**	*e*PN	**Pn**	**19 04 41.2**	**+0.7**
ORL				*e*		19 04 57.6	
ORL				*e*S	**Sn**	**19 05 45.6**	**+0.7**
ORL				*e*		19 06 08.3	
ORL				pmax	pmax		
	comp=Z,54nm,0.5s						
ORL				smax	smax		
	comp=E,583nm,0.7s						
ULN	**Ulaanbaatar**	**5.68**	**193**	*e*Pn	**Pn**	**19 04 41.6**	**-0.2**
ULN	**Ulaanbaatar**	**5.68**	**193**	*e*	**Pn**	**19 04 44.8**	**+3.0**
ULN				*e*Pg	**Pb**	**19 05 00.4**	**+3.9**
ULN				*e*		19 05 47.3	
ULN				*e*Sg	**Sg**	**19 06 16.5**	**-3.0**
ULN	**Ulaanbaatar**	**5.68**	**193**⇑	*e*PN	**Pn**	**19 04 42.5**	**+0.7**
SONA0	**Songino Array**	**5.81**	**197**	*e*Pn	**Pn**	**19 04 44.5**	**+0.8**
SONA0				*e*Pg	Pb	19 05 04.7	+5.9
SONM	**Songino Array**	**5.81**	**197**	Pn	**Pn**	**19 04 44.5**	**+0.8**
	comp=E,4.2nm,0.3s,baz=9.0,slow=14,SNR=73						
SONM				Pg	Pb	19 05 04.7	+5.9
	comp=E,12nm,0.3s,baz=9.5,slow=16,SNR=18						
SONM				Lg	Lg	19 06 22.6	
	comp=E,52nm,0.3s,baz=11,slow=31,SNR=17						
VTMR	**Vitim**	**6.36**	**17**	*e*Pn	**Pn**	**19 04 50.6**	**-0.4**
VTMR				*e*		19 04 55.5	
VTMR				*e*		19 05 00.1	
VTMR				*e*		19 06 14.8	
VTMR				*e*Sg	Sb	19 06 33.5	+9.4

CRS	**Chara**	**6.38**	**53**	*e*Pn	**Pn**	**19 04 51.7**	**+0.4**
CRS				*e*		19 05 01.0	
CRS				*e*		19 05 14.2	
CRS				max		19 05 23.0	
	comp=E,74nm,1.5s						
CRS				*e*Sg	**Sg**	**19 06 37.3**	**-4.5**
CRS				Smax		19 06 48.5	
	comp=E,1µm,1.7s						
CRS	**Chara**	**6.38**	**53**	*e*PN	**Pn**	**19 04 52.0**	**+0.7**
CRS				*e*		19 05 13.3	
CRS				*e*		19 06 33.4	
CRS				pmax	pmax		
	comp=Z,23nm,1.9s						
CRS				smax	smax		
	comp=E,291nm,1.9s						
TUP	**Tupik**	**6.58**	**77⇑**	*i*Pn	**Pn**	**19 04 54.6**	**+0.6**
TUP				*e*		19 05 02.3	
TUP				*e*		19 05 16.7	
TUP				max		19 05 24.0	
	comp=E,50nm,0.9s						
TUP				*e*Sg	**Sg**	**19 06 42.1**	**-6.1**
TUP				Smax		19 06 45.8	
	comp=E,1µm,0.8s						
TUP				*e*		19 06 48.7	
TUP	**Tupik**	**6.58**	**77**	*e*PN	**Pn**	**19 04 54.2**	**+0.2**
TUP				*e*		19 05 16.7	
TUP				*e*S	**Sn**	**19 06 09.1**	**0.0**
TUP				*e*		19 06 41.8	
TUP				pmax	pmax		
	comp=Z,50nm,0.9s						
TUP				smax	smax		
	comp=N,1µm,1.1s						
KHNR	**Khani**	**7.23**	**56**	*e*Pn	**Pn**	**19 05 04.3**	**+1.4**
KHNR				*e*		19 05 23.8	
KHNR				*e*		19 05 32.2	
KHNR				*e*		19 06 34.8	
KHNR				*e*Sg	**Sg**	**19 07 02.5**	**-6.4**
KHNR				*e*		19 07 09.7	
TDJR	**Todzha**	**7.84**	**268**	*e*	**Pn**	**19 05 14.5**	**+3.2**
TDJR				*e*		19 05 23.8	
TDJR				*e*Pg	Pb	19 05 39.1	+6.0
TDJR				*e*Sg	Sb	19 07 21.3	+15
HIA	**Hailar**	**7.93**	**117**	*i* PN	**Pn**	**19 05 11.0**	**-1.5**
KZLR	**Kyzyl**	**9.00**	**265**	*e*	Pn	19 05 48.1	+21
KZLR				*e*Pg	Pg	19 05 58.6	-11
KZLR				*e*		19 06 46.2	
KZLR				*e*Sg	Sn	19 07 55.8	+47
KZLR				*e*		19 07 58.3	
IENR	**Iengra**	**9.60**	**67**	*e*Pn	**Pn**	**19 05 36.0**	**+0.5**
IENR				*e*		19 05 43.0	
IENR				*e*		19 07 50.9	
IENR				*e*Sg	Sn	19 08 16.4	+53
KRAR	**Krasnoyarsk**	**9.66**	**292**	*i* P	**Pn**	**19 05 33.9**	**-2.3**
ZEA	**Zeya**	**10.89**	**81**	*e*P	Pn	19 06 04.8	+12
ZEA				*e*		19 08 00.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				smax	smax		
	comp=E,24nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,10.0s						
ZEA				MLR	MLR		
	comp=E,700nm,9.0s						
DGZ	**Jazzator, Alta**	**13.88**	**263⇓**	*e*P	**Pn**	**19 06 32.0**	**-2.0**
YAK	**Yakutsk**	**13.98**	**44**	*e*Pn	**Pn**	**19 06 32.8**	**-2.4**
YAK	**Yakutsk**	**13.98**	**44**	*e*P	**Pn**	**19 06 32.6**	**-2.6**
YAK				*e*S	**Sn**	**19 09 08.6**	**-1.7**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.8s						
YAK				pmax	pmax		
	comp=E,12nm,1.8s						
YAK				smax	smax		
	comp=E,31nm,2.3s						
YAK				smax	smax		
	comp=N,16nm,2.3s						
YAK				MLR	MLR		
	comp=Z,179nm,13.0s						
YAK				MLR	MLR		
	comp=N,83nm,13.0s						
YAK				MLR	MLR		
	comp=E,94nm,13.0s						
ZAA1	**Zalesovo Array**	**14.29**	**282**	*e*Pn	**Pn**	**19 06 42.3**	**+2.8**
ZALV	**Zalesovo Beam**	**14.30**	**282**	Pn	**Pn**	**19 06 42.3**	**+2.8**
	comp=E,0.2nm,0.3s,baz=85,slow=10,SNR=4.0						
ZALV				Lg	Lg	19 10 42.8	
	comp=E,0.4nm,0.3s,baz=87,slow=25,SNR=7.9						
KLR	**Kul'dur**	**14.84**	**97**	LR	LR	19 13 11.9	
	comp=E,186nm,21.5s,baz=297,slow=41						
USRK	**Ussuriysk Ar.**	**17.68**	**112**	Lg	Lg	19 12 35.3	
	comp=E,0.1nm,0.3s,baz=320,slow=29,SNR=5.8						
MK31	**Makanchi Array**	**18.27**	**260**	*e*P	**Pn**	**19 07 30.1**	**-0.6**
	comp=E,2.9nm,1.3s						
MK31	**Makanchi Array**	**18.27**	**260**	*e*P	**Pn**	**19 07 30.1**	**-0.6**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MK32	**Makanchi Array**	**18.27**	**260**	*e*P	**P**	**19 07 31.6**	**+0.7**
MKAR	**Makanchi Array**	**18.27**	**260**	Pn	**P**	**19 07 31.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=60,slow=9.9,SNR=4.2						
MKAR				Lg	Lg	19 12 50.1	
	comp=Z,0.0nm,0.3s,baz=52,slow=34,SNR=3.2						
MKAR				LR	LR	19 14 42.5	
	comp=Z,242nm,19.2s,baz=54,slow=37						
MAKZ	**Makanchi**	**18.45**	**260**	*e*P	**Pn**	**19 07 34.0**	**+1.1**
	comp=Z,1.4nm,0.9s						
MAKZ	**Makanchi**	**18.45**	**260**	*e*P	**Pn**	**19 07 34.0**	**+1.1**
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**18.77**	**274**	*e*P	**P**	**19 07 35.4**	**-0.9**
	comp=Z,4.8nm,1.1s						
KURK	**Kurchatov**	**18.77**	**274⇑**	*e*P	**Pn**	**19 07 38.3**	**+1.5**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**18.86**	**274**	Pn	**P**	**19 07 37.0**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=72,slow=13,SNR=3.9						
KURBB				Lg	Lg	19 13 05.1	
	comp=Z,0.1nm,0.3s,baz=74,slow=34,SNR=9.2						
TIXI	**Tiksi**	**20.27**	**18**	P	**P**	**19 07 51.8**	**-0.7**
	comp=Z,7.6nm,0.7s,baz=210,slow=6.9,SNR=14						
TIXI				Lg	Lg	19 13 46.7	
	comp=Z,3.9nm,0.8s,baz=312,slow=21,SNR=4.9						
TIXI				LR	LR	19 16 06.5	
	comp=Z,239nm,19.8s,baz=197,slow=38						
TIXI	**Tiksi**	**20.27**	**18**	*e*P	**P**	**19 07 51.0**	**-1.5**
	comp=Z,8.9nm,0.8s						
TIXI	**Tiksi**	**20.27**	**18*d***	*i*P	**P**	**19 07 51.1**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSRS	**Korea Array**	**20.68**	**133**	LR	LR	19 17 06.4	
	comp=Z,224nm,18.0s,baz=328,slow=40						
BVAR	**Borovoye Array**	**22.91**	**285**	P	**P**	**19 08 21.2**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=68,slow=9.7,SNR=9.0						
BRVK	**Borovoye**	**22.96**	**285**	*e*P	**P**	**19 08 22.9**	**+1.4**
	comp=Z,6.1nm,0.5s						
BRVK	**Borovoye**	**22.96**	**285⇓**	*e*P	**P**	**19 08 23.0**	**+1.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MA2	**Magadan**	**23.57**	**58**	LR	LR	19 17 57.9	
	comp=Z,188nm,18.1s,baz=266,slow=38						
SEY	**Seymchan**	**24.33**	**50⇑**	*e*P	**P**	**19 08 36.3**	**+1.5**
AAK	**Ala-Archa**	**25.20**	**259**	LR	LR	19 18 56.4	
	comp=Z,131nm,19.6s,baz=32,slow=37						
KUR	**Kuril'sk**	**26.37**	**92**	*e*P	**P**	**19 08 54.2**	**+0.8**
KUR				*e*S	**S**	**19 13 25.4**	**-1.0**
KUR				MLR	MLR		
	comp=Z,200nm,13.0s						
MJAR	**Matsushiro Arr**	**26.43**	**118**	LR	LR	19 19 47.8	
	comp=Z,102nm,19.7s,baz=320,slow=38						
BILL	**Bilibino**	**30.26**	**39⇑**	*e*P	**P**	**19 09 29.9**	**+2.0**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	**Obninsk**	**40.56**	**303**	*i* P	**P**	**19 10 55.1**	**-1.3**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FIA0	**FINESS Array S**	**42.42**	**315**	*e*P	**P**	**19 11 13.6**	**+2.0**
FIA0	**FINESS Array S**	**42.42**	**315**	*e*P	**P**	**19 11 13.6**	**+2.0**
FINES	**FINESS Array B**	**42.42**	**315**	P	**P**	**19 11 13.6**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=46,slow=6.0,SNR=2.9						
AKASG	**Malin Array Be**	**46.68**	**301**	P	**P**	**19 11 44.9**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=46,slow=8.3,SNR=3.8						
CAST	**Castle Rocks**	**47.67**	**37**	*e*P	P	19 11 48.1	-5.2
	comp=Z,10nm,0.9s						
WRH	**Wood River Hil**	**48.41**	**34**	*e*P	**P**	**19 11 59.0**	**0.0**
	comp=Z,3.0nm,0.5s						
ILAR	**Eielson Array**	**48.63**	**34**	P	**P**	**19 12 01.0**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=309,slow=7.3,SNR=5.8						
ILB	**Eielson Array**	**48.63**	**34**	*e*P	**P**	**19 12 01.1**	**+0.4**
	comp=Z,2.8nm,0.8s						
NOA	**NORSAR Array B**	**48.66**	**320**	LR	LR	19 34 00.4	
	comp=Z,48nm,18.4s,baz=225,slow=38						
DOT	**Dot Lake**	**50.30**	**34**	*e*P	**P**	**19 12 13.0**	**-0.4**
	comp=Z,2.9nm,0.8s						
BR101	**Keskin Array S**	**51.17**	**287**	*e*P	**P**	**19 12 20.8**	**+0.3**
BRTR	**Keskin Array B**	**51.17**	**287**	P	**P**	**19 12 20.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=23,slow=7.8,SNR=4.5						
BRTR	**Keskin Array B**	**51.17**	**287**	*i* P	**P**	**19 12 23.3**	**+2.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OKC	**Ostrava-Krasne**	**52.77**	**306**	AMS	AMS	19 37 20.0	
	comp=Z,400nm,12.9s						
OSTC	**Ostas**	**53.22**	**307**	AMS	AMS	19 37 20.0	
	comp=Z,200nm,13.8s						
CHVC	**Chvalec**	**53.28**	**307**	AMS	AMS	19 37 30.0	
	comp=Z,200nm,12.2s						
DPC	**Dobruska-Polom**	**53.31**	**307**	AMS	AMS	19 37 10.0	
	comp=Z,200nm,17.1s						
UPC	**Upice**	**53.35**	**307**	AMS	AMS	19 37 20.0	
	comp=Z,300nm,15.0s						
VRAC	**Vranov**	**53.88**	**306**	LR	LR	19 38 08.3	
	comp=Z,130nm,18.2s,baz=78,slow=39						
PVCC	**Panska Ves**	**54.02**	**308**	AMS	AMS	19 38 00.0	
	comp=Z,300nm,14.1s						
GOPC	**GO Pecny, Ondr**	**54.34**	**307**	AMS	AMS	19 38 50.0	
	comp=Z,200nm,10.2s						
PRU	**Pruhonice**	**54.40**	**308**	AMS	AMS	19 38 00.0	
	comp=Z,300nm,15.1s						
TREC	**Trest**	**54.42**	**307**	AMS	AMS	19 38 20.0	
	comp=Z,300nm,14.3s						
NKC	**Novy Kostel**	**55.22**	**309**	AMS	AMS	19 38 40.0	
	comp=Z,200nm,17.9s						
KHC	**Kasperske Hory**	**55.45**	**307**	AMS	AMS	19 38 30.0	
	comp=Z,200nm,15.1s						
DAVOX	**Davos/Dischmat**	**58.87**	**308**	LR	LR	19 40 15.7	
	comp=Z,72nm,19.4s,baz=86,slow=38						
YKA	**Yellowknife Ar**	**59.47**	**22**	P	**P**	**19 13 17.7**	**-2.1**
	comp=Z,0.6nm,0.7s,baz=326,slow=8.0,SNR=3.0						
YKB5	**Yellowknife Ar**	**59.47**	**22**	*e*P	**P**	**19 13 17.7**	**-2.1**
ESDC	**Sonseca Array**	**70.76**	**311**	P	**P**	**19 14 33.3**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=32,slow=6.4,SNR=8.8						
WR1	**Warramunga Arr**	**76.28**	**155**	*e*P	**P**	**19 15 05.9**	**0.0**
WRA	**Warramunga Arr**	**76.28**	**155**	P	**P**	**19 15 05.9**	**0.0**
	comp=Z,1.1nm,0.8s,baz=352,slow=5.2,SNR=3.0						
PDAR	**Pinedale Array**	**78.64**	**28**	P	**P**	**19 15 18.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=329,slow=3.4,SNR=4.4						
ASAR	**Alice Springs**	**79.75**	**157**	P	**P**	**19 15 24.6**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=354,slow=5.4,SNR=9.9						
TOA1	**Torodi Ar. Sit**	**89.53**	**292**	*e*P	**P**	**19 16 13.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**89.54**	**292**	P	**P**	**19 16 13.9**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=9.8,slow=4.9,SNR=4.3						

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*IDC **10** 19:20:58.0±0.4, 14°.55S×166°.79E, h0^{km}, mb4.8/23, mb1 4.9/25, mb1mx4.8/33, mbtmp4.8/25, ML3.2/2, MS4.5/7, Ms1 4.5/7, ms1mx4.0/34, Error ellipse: s-maj=17.6km s-min=11.9km az=89.0*

*SVSA **10** 19:21:01.9, 14°.53S×166°.68E, h21^{km}, MW5.1*

*ISCJB **10** 19:21:01.9±0.1, 14°.56S±0°.03×166°.68E±0°.03, h35^{km}, mb5.1/120, MS4.8/22, Error ellipse: s-maj=4.7km s-min=3.8km az=34.8*

*BJI **10** 19:21:02.2±0.0, 14°.05S×166°.80E, h25^{km}, mb5.1/41, mB5.1/27, Ms5.1/9, Ms7 4.8/9*

*MOS **10** 19:21:03.4±1.1, 14°.49S×166°.65E, h41^{km}, mb5.4/43, MS4.9/5, Error ellipse: s-maj=10.4km s-min=8.3km az=112.8*

*NEIC **10** 19:21:04.2±1.4, 14°.56S×166°.73E, h43^{km}±4^{km}, mb5.2/91, Error ellipse: s-maj=14.9km s-min=10.4km az=70.0*

*GCMT **10** 19:21:05.2±0.3, 14°.73S±0°.02×166°.38E±0°.03, h36^{km}, MW5.0/50, Moment Tensor Solution. s47,c56; s50,c63; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.08±.18; M$_{\theta\theta}$-1.04±.12; M$_{\phi\phi}$-3.05±.12; M$_{r\theta}$-0.18±.17; M$_{\theta\phi}$1.08±.11; M$_{\phi r}$-1.55±.13; Best double couple: M$_0$4.09500×10^{16} NP1: ϕ_s166.00000°, δ56.00000°, λ100.00000°. NP2: ϕ_s329.00000°, δ36.00000°, λ76.00000°. Principal axes: T 4.4310, Plg77.0000°, Azm109.0000°; N -0.6830, Plg8.0000°, Azm340.0000°; P -3.7590, Plg10.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 19:21:03.1±0.3**, 14°.57S**±0°.05×**166°.76E**±0°.06**, h35^{km}, n491,** σ**1^{s}09**/493**, mb5.2**/122**, MS5.0**/22**, 30C-17D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.47**	**182**	*e*Pn	**Pn**	**19 22 50.1**	**+0.4**
	80nm,0.4s						
DZM				*e*Sn	**Sn**	**19 24 10.2**	**-3.1**
	106nm,0.8s						
DZM				*e*LR	LR	19 24 33.8	
	comp=Z,3µm,25.1s						
DZM	**Mont Dzumac**	**7.47**	**182**	Pn	**Pn**	**19 22 50.1**	**+0.4**
	3.8nm,0.3s,baz=40,slow=4.4,SNR=52						
DZM				Sn	**Sn**	**19 24 12.2**	**-1.1**
	4.9nm,0.3s,baz=143,slow=20,SNR=3.5						
DZM	**Mont Dzumac**	**7.47**	**182**	*e*Pn	**Pn**	**19 22 50.4**	**+0.6**
ONTNC	**Ouen Toro**	**7.71**	**182**	*e*Pn	**Pn**	**19 22 53.2**	**+0.3**
PINNC	**Pines Island,**	**8.03**	**175**	*e*Pn	**Pn**	**19 22 59.8**	**+2.5**
HNR	**Honiara**	**8.39**	**307**	Pn	**Pn**	**19 23 03.9**	**+1.5**
	45nm,0.3s,baz=149,slow=6.2,SNR=6.3						
HNR				Sn	**Sn**	**19 24 34.4**	**-1.5**
	54nm,0.3s,baz=30,slow=20,SNR=5.4						
HNR				LR	LR	19 26 03.5	
	comp=Z,2µm,20.1s,baz=149,slow=36						
HNR	**Honiara**	**8.39**	**307**	*e*Pn	**Pn**	**19 23 03.2**	**+0.9**
HNR	**Honiara**	**8.39**	**307**	*e*P	**Pn**	**19 23 03.2**	**+0.9**
HNR	**Honiara**	**8.39**	**307**	*e*P	**Pn**	**19 23 03.0**	**+0.7**
HNR				*e*S	**Sn**	**19 24 35.0**	**-0.9**
EIDS	**Eidsvold**	**18.22**	**231**	P	**Pn**	**19 25 15.2**	**+1.9**
	baz=18,SNR=7.0						
PMG	**Port Moresby**	**19.84**	**283**	P	**P**	**19 25 30.4**	**-0.8**
	0.5nm,0.3s,baz=78,slow=5.7,SNR=5.3						
PMG	**Port Moresby**	**19.84**	**283*c***	*e*P	**Pn**	**19 25 32.1**	**-0.8**
PMG				pmax	pmax		
	comp=Z,107nm,0.8s						
CTA	**Charters Tower**	**20.32**	**251**	P	Pn	19 25 37.1	-1.4
	comp=Z,39nm,0.9s,baz=79,slow=13,SNR=22						
CTAO	**Charters Tower**	**20.32**	**251**	*e*P	Pn	19 25 36.8	-1.8
	comp=Z,53nm,0.9s						
CTAO	**Charters Tower**	**20.32**	**251**	*e*P	Pn	19 25 36.8	-1.8
CTAO				pmax	pmax		
	comp=Z,53nm,0.9s						
RMQ	**Roma**	**20.58**	**232**	P	Pn	19 25 39.9	-1.6
	baz=21,SNR=8.9						
ARMA	**Armidale**	**21.04**	**219**	*e*P	**P**	**19 25 45.4**	**+1.2**
	comp=Z,36nm,1.3s						
OUZ	**Omahuta**	**21.47**	**165**	*e*P	**P**	**19 25 51.0**	**+2.4**
	comp=Z,53nm,0.9s						
MTSU	**Mount Surprise**	**21.82**	**258**	P	**P**	**19 25 52.8**	**+0.3**
	baz=22,SNR=5.4						
RIV	**Riverview**	**23.82**	**214**	P	**P**	**19 26 14.7**	**+1.8**
RIV				pmax	pmax		
	comp=Z,99nm,1.1s						
KNTN	**Kanton**	**24.25**	**63**	*e*P	**P**	**19 26 18.8**	**+1.6**
	comp=Z,90nm,0.9s						
URZ	**Urewera**	**25.32**	**161**	P	**P**	**19 26 27.1**	**+0.6**
	comp=Z,40nm,0.9s,baz=343,slow=7.7,SNR=9.4						
URZ				LR	LR	19 35 22.6	
	comp=Z,601nm,18.2s,baz=358,slow=34						
URZ	**Urewera**	**25.32**	**161**	*e*P	**P**	**19 26 27.1**	**+0.6**
	comp=Z,41nm,0.8s						
CMSA	**Cobar Meteorol**	**25.63**	**225**	P	**P**	**19 26 30.6**	**+1.1**
	baz=26,SNR=9.3						
YNG	**Young**	**25.71**	**217**	P	**P**	**19 26 29.2**	**-1.1**
	baz=26,SNR=5.3						
CNB	**Canberra Magne**	**25.91**	**214**	P	**P**	**19 26 33.0**	**+0.9**
	baz=26,SNR=4.7						
BKZ	**Black Stump Fm**	**25.96**	**163**	*e*P	**P**	**19 26 33.8**	**+1.3**
	comp=Z,48nm,0.6s						
CAN	**Canberra**	**26.11**	**215**	P	**P**	**19 26 34.3**	**+0.4**
CAN				pmax	pmax		
	comp=Z,20nm,1.7s						
STKA	**Stephens Creek**	**28.73**	**229**	P	**P**	**19 26 57.5**	**+0.2**
	comp=Z,7.2nm,0.7s,baz=41,slow=9.1,SNR=20						
STKA				PcP	**PcP**	**19 30 07.5**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=79,slow=5.2,SNR=3.3						
STKA				LR	LR	19 38 28.3	
	comp=Z,1µm,18.4s,baz=53,slow=36						
STKA	**Stephens Creek**	**28.73**	**229**	*e*P	**P**	**19 26 57.7**	**+0.4**
	comp=Z,2.5nm,0.9s						
STKA	**Stephens Creek**	**28.73**	**229**	P	**P**	**19 26 57.6**	**+0.4**
	baz=29,SNR=18						
STKA	**Stephens Creek**	**28.73**	**229**	*e*P	**P**	**19 26 57.7**	**+0.4**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OXZ	**Oxford**	**29.02**	**172**	*e*P	**P**	**19 26 59.9**	**+0.2**
	comp=Z,49nm,1.2s						
RPZ	**Rata Peaks**	**29.28**	**174**	P	**P**	**19 27 02.8**	**+0.7**
	comp=Z,23nm,0.7s,baz=284,slow=2.7,SNR=14						
RPZ				LR	LR	19 38 51.3	
	comp=Z,715nm,18.4s,baz=354,slow=37						
RPZ	**Rata Peaks**	**29.28**	**174**	*e*P	**P**	**19 27 03.0**	**+0.9**
	comp=Z,35nm,0.8s						
DCZ	**Deep Cove**	**30.80**	**179**	*e*P	**P**	**19 27 16.6**	**+1.1**
	comp=Z,38nm,1.1s						
WRAB	**Tennant Creek**	**31.38**	**256⇓**	*e*P	**P**	**19 27 23.8**	**+2.9**
WR1	**Warramunga Arr**	**31.39**	**256**	*e*P	**P**	**19 27 20.0**	**-0.9**
WR1				*e*PcP	**PcP**	**19 30 14.3**	**0.0**
WRA	**Warramunga Arr**	**31.39**	**256**	P	**P**	**19 27 20.0**	**-1.0**
	comp=Z,4.4nm,1.0s,baz=85,slow=10,SNR=8.1						
WRA				PcP	**PcP**	**19 30 14.3**	**0.0**
	comp=Z,6.6nm,0.8s,baz=98,slow=1.7,SNR=8.3						
HTT	**Hallett**	**31.45**	**228**	P	**P**	**19 27 22.2**	**+0.7**
	baz=32,SNR=3.4						
AS31	**Alice Springs**	**32.27**	**249**	*e*P	**P**	**19 27 27.4**	**-1.3**
	comp=Z,2.7nm,0.6s						
ASAR	**Alice Springs**	**32.27**	**249**	P	**P**	**19 27 27.4**	**-1.4**
	comp=Z,5.4nm,0.9s,baz=71,slow=9.8,SNR=29						
ASAR				PcP	**PcP**	**19 30 16.6**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=87,slow=3.0,SNR=7.9						
ASAR				ScP	**ScP**	**19 33 59.6**	**+1.8**
	comp=Z,0.7nm,0.9s,baz=82,slow=3.3,SNR=4.2						
MOO	**Moorlands**	**32.50**	**207**	P	**P**	**19 27 31.9**	**+1.4**
	baz=33,SNR=3.7						
H11S2	**WAKE ISLAND Hy**	**32.85**	**360**	T	T	20 02 03.1	
	baz=183,slow=76,SNR=3.3						
H11S3	**WAKE ISLAND Hy**	**32.85**	**360**	T	T	20 02 07.6	
	baz=183,slow=76,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**32.87**	**360**	T	T	20 02 03.5	
	baz=183,slow=76,SNR=3.1						
H11N1	**WAKE ISLAND Hy**	**34.06**	**0**	T	T	20 03 33.1	
	baz=183,slow=76,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**34.07**	**0**	T	T	20 03 36.0	
	baz=183,slow=76,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**34.08**	**0**	T	T	20 03 31.9	
	baz=183,slow=76,SNR=3.4						
KNRA	**Kununurra**	**36.67**	**263**	P	**P**	**19 28 06.2**	**-0.6**
	baz=37,SNR=4.2						
WRKA	**Warakurna**	**37.54**	**248**	P	**P**	**19 28 13.1**	**-1.2**
	baz=38,SNR=23						
PALU	**Palau**	**38.72**	**302**	P	**P**	**19 28 25.1**	**+1.0**
	baz=39,SNR=3.3						
FORT	**Forrest**	**38.96**	**239**	*e*P	**P**	**19 28 26.0**	**-0.1**
	comp=Z,28nm,0.8s						
FORT	**Forrest**	**38.96**	**239**	P	**P**	**19 28 25.7**	**-0.3**
	baz=39,SNR=8.1						
LBMI	**Labuha**	**41.20**	**286**	P	**P**	**19 28 46.3**	**+1.5**
PPT2	**Papeete2**	**42.00**	**100**	*e*S	S	19 35 25.2	+17
	comp=Z,147nm,26.2s						
PPT2				*e*LQ	LQ	19 39 07.0	
	comp=Z,558nm,26.8s						
PPT2				*e*LR	LR	19 40 57.0	
	comp=Z,724nm,24.5s,baz=254						
PPT	**Papeete**	**42.00**	**100**	LR	LR	19 42 03.5	
	comp=Z,428nm,20.1s,baz=266,slow=30						
TBI	**Tubuai**	**42.18**	**109**	*e*S	S	19 35 28.8	+18
	comp=Z,138nm,29.8s						
TBI				*e*LQ	LQ	19 39 10.8	
	comp=Z,429nm,31.2s						
TBI				*e*LR	LR	19 40 59.6	
	comp=Z,680nm,26.5s,baz=279						
MNI	**Manado**	**44.44**	**287**	P	**P**	**19 29 10.5**	**-0.6**
MNI				pmax	pmax		
	comp=Z,44nm,0.8s						
MEEK	**Meekatharra**	**46.39**	**247**	P	**P**	**19 29 26.2**	**-0.3**
	baz=46,SNR=16						
KCP	**Kidapawan**	**46.55**	**295⇓**	*i*P	**P**	**19 29 29.1**	**+1.2**
NWAO	**Narrogin (SRO)**	**48.41**	**239**	LR	LR	19 50 53.5	
	comp=Z,726nm,18.1s,baz=120,slow=37						
MORW	**Morawa**	**48.89**	**244**	*e*P	**P**	**19 29 45.5**	**-0.3**
	comp=Z,17nm,0.8s						
MORW	**Morawa**	**48.89**	**244**	P	**P**	**19 29 45.5**	**-0.3**
	baz=49,SNR=9.4						
DNP	**Denpasar**	**50.74**	**271**	P	**P**	**19 29 59.8**	**-0.3**
DNP				pmax	pmax		
	comp=Z,192nm,1.1s						
TAOE	**Nuku Hiva Isla**	**52.20**	**90**	*e*LR	LR	19 45 39.0	
	comp=Z,507nm,23.9s						
KKM	**Kota Kinabalu**	**54.14**	**289**	*e*P	**P**	**19 30 25.9**	**+0.6**
	comp=Z,168nm,1.7s						
WOJI	**Wonogiri, Jawa**	**55.07**	**271**	P	**P**	**19 30 32.6**	**+0.6**
SBUM	**Sibu**	**56.59**	**283**	*e*P	**P**	**19 30 43.4**	**+0.4**
	comp=Z,4.8nm,1.0s						
MJAR	**Matsushiro Arr**	**57.53**	**333**	P	**P**	**19 30 48.3**	**-0.9**
	comp=Z,12nm,0.9s,baz=170,slow=8.2,SNR=25						
MAJO	**Matsushiro**	**57.54**	**333**	*e*P	**P**	**19 30 49.2**	**+0.1**
	comp=Z,13nm,0.6s						
MAJO	**Matsushiro**	**57.54**	**333*c***	*i*P	**P**	**19 30 49.0**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s						
MAT	**Matsushiro**	**57.54**	**333**	P	**P**	**19 30 48.1**	**-1.1**
MJB9	**Matsu-Tunnel**	**57.54**	**333**	*e*P	**P**	**19 30 49.2**	**0.0**
	comp=Z,14nm,0.6s						
JNU	**Nakatsue**	**58.50**	**325**	P	**P**	**19 30 56.5**	**+0.4**
	comp=Z,16nm,0.9s,baz=129,slow=3.2,SNR=11						
JNU	**Nakatsue**	**58.50**	**325**	*e*P	**P**	**19 30 56.4**	**+0.3**
	comp=Z,16nm,0.8s						
CGJI	**Cibinong**	**60.40**	**271**	P	**P**	**19 31 09.1**	**-0.4**
YUK	**Yuzh-Kuril'sk**	**61.36**	**343**	*e*P	**P**	**19 31 11.4**	**-4.0**
YUK				*e*		19 33 29.0	
YUK				*e*S	**S**	**19 39 34.4**	**+0.8**
YUK				*e*SS	**SS**	**19 43 32.2**	**-2.8**
YUK				*e*SSS	SSS	19 46 17.2	
YUK				pmax	pmax		
	comp=Z,65nm,1.8s						
YUK				pmax	pmax		
	comp=Z,58nm,0.9s						
YUK				pmax	pmax		
	comp=N,58nm,1.1s						
YUK				pmax	pmax		
	comp=E,39nm,0.7s						
YUK				MLR	MLR		
	comp=Z,328nm,20.0s						
YUK				MLR	MLR		
	comp=N,372nm,20.0s						
ASAJ	**Asahikawa**	**62.42**	**341**	P	**P**	**19 31 24.2**	**+1.7**
	comp=N,24nm,0.9s,baz=200,slow=3.0,SNR=16						
TJN	**Taejon**	**62.85**	**325⇓**	*e*P	**P**	**19 31 26.3**	**+0.7**
VNDA	**Vanda**	**63.01**	**181**	P	**P**	**19 31 27.1**	**+1.0**
	comp=N,9.8nm,0.8s,baz=358,slow=7.1,SNR=56						
VNDA	**Vanda**	**63.01**	**181**	*e*P	**P**	**19 31 26.9**	**+0.8**
	comp=N,78nm,1.8s						
VNDA	**Vanda**	**63.01**	**181**	*e*P	**P**	**19 31 26.9**	**+0.8**
VNDA				pmax	pmax		
	comp=Z,78nm,1.8s						
SBA	**Scott Base**	**63.30**	**180**	*e*P	**P**	**19 31 29.5**	**+1.6**
	comp=Z,47nm,0.9s						
SBA	**Scott Base**	**63.30**	**180**	*e*P	**P**	**19 31 29.5**	**+1.6**
SBA				pmax	pmax		
	comp=Z,47nm,0.9s						
KSRS	**Korea Array**	**63.33**	**326**	P	**P**	**19 31 29.0**	**+0.3**
	comp=Z,2.5nm,0.6s,baz=134,slow=6.5,SNR=9.8						
CASY	**Casey**	**63.49**	**202**	*e*P	**P**	**19 31 29.5**	**+0.1**
	comp=Z,45nm,1.5s						
YSS	**Yuzh-Sakhalins**	**64.92**	**342**	*e*P	**P**	**19 31 40.2**	**+1.2**
	comp=Z,73nm,1.0s						
YSS	**Yuzh-Sakhalins**	**64.92**	**342**	*e*P	**P**	**19 31 40.6**	**+1.7**
YSS				*e*		19 35 32.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
VLA	**Vladivostok**	**65.70**	**333⇑**	*e*P	**P**	**19 31 44.3**	**+0.2**
VLA				pmax	pmax		
	comp=Z,34nm,1.4s						
USA0B	**Ussuriysk Arra**	**66.52**	**333**	*e*P	**P**	**19 31 44.8**	**-4.5**
	comp=Z,38nm,1.1s						
USRK	**Ussuriysk Ar.**	**66.52**	**333**	P	**P**	**19 31 51.0**	**+1.7**
	comp=Z,17nm,1.0s,baz=147,slow=5.3,SNR=38						
SMY	**Shemya**	**67.32**	**5**	*e*P	**P**	**19 31 55.1**	**+0.9**
	comp=Z,67nm,0.4s						
SMY	**Shemya**	**67.32**	**5**	*e*P	**P**	**19 31 55.1**	**+0.9**
SMY				pmax	pmax		
	comp=Z,67nm,0.4s						
PETK	**Petropavlovsk-**	**67.85**	**354**	P	**P**	**19 31 58.5**	**+0.9**

	comp=Z,11nm,0.7s,baz=138,slow=8.1,SNR=10						
PEA1	Petropavlovsk-	67.85	354	eP	P	19 31 58.5	+0.8
DL2	Dalian	67.87	323	P	P	19 31 59.1	+1.1
DL2				pmax	pmax		
	comp=Z,27nm,0.6s						
MDJ	Mudanjiang	67.91	332	eP	P	19 31 58.8	+0.7
	comp=Z,34nm,1.1s						
TIA	Tai'an	68.89	319	P	P	19 32 04.7	+0.2
TIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CN2	Changchun	69.25	329	eP	P	19 32 07.6	+1.0
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
GSI	Gunungsitoli	70.22	277	eP	P	19 32 13.5	+0.3
	comp=Z,18nm,1.0s						
GRNR	Gornyy	70.27	340	eP	P	19 32 14.2	+1.5
GRNR				pmax	pmax		
	comp=Z,25nm,1.0s						
ENH	Enshi	70.88	310	eP	P	19 32 16.9	0.0
	comp=Z,32nm,0.9s						
BJT	Baijiatuau	71.82	321	eP	P	19 32 22.9	+0.6
	comp=Z,17nm,1.0s						
BJT	Baijiatuau	71.82	321	eP	P	19 32 22.9	+0.6
BJT				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN	Xi'an	73.22	313	eP	P	19 32 31.3	+0.5
	comp=Z,12nm,0.8s						
XAN	Xi'an	73.22	313	eP	P	19 32 31.3	+0.5
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
CM31	Chiang Mai Arr	74.43	294	eP	P	19 32 39.3	+1.1
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	74.43	294	P	P	19 32 39.6	+1.4
	comp=Z,6.9nm,0.9s,baz=127,slow=4.6,SNR=37						
CHTO	Chiang Mai	74.56	295	eP	P	19 32 39.8	+0.8
	comp=Z,13nm,1.1s						
CHTO	Chiang Mai	74.56	295	eP	P	19 32 39.8	+0.8
CHTO				pmax	pmax		
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	75.46	180	eP	P	19 32 44.1	+0.6
	comp=Z,163nm,2.0s						
ZEA	Zeya	75.95	337	eP	P	19 32 47.2	+1.0
ZEA				pmax	pmax		
	comp=Z,36nm,0.8s						
SEY	Seymchan	78.06	353	P	P	19 32 58.4	+0.5
	comp=Z,12nm,0.8s,baz=138,slow=5.5,SNR=26						
SEY	Seymchan	78.06	353	⇓iP	P	19 32 58.7	+0.9
DGPR	DIGLIPUR	78.11	287	eP	P	19 32 58.9	-0.2
OHAK	Old Harbor	78.81	21	eP	P	19 33 02.9	+0.8
	comp=Z,19nm,0.9s						
GAMB	Gambell	79.85	10	eP	P	19 33 08.6	+1.0
	comp=Z,29nm,0.9s						
MOKO	MOKOCHONG	81.09	300	eP	P	19 33 13.6	-1.8
KOHI	KOHIMA	81.22	299	eP	P	19 33 14.6	-1.5
KOHI				IAmb	IAmb	19 33 17.4	
	comp=Z,42nm,1.3s						
CNPM	China Poot	81.28	20	eP	P	19 33 17.5	+2.1
	comp=Z,16nm,0.7s						
JORH	JORHAT	81.47	300	eP	P	19 33 16.9	-0.2
RSO	Redoubt South	81.50	19	eP	P	19 33 17.4	+0.6
BRLK	Bradley Lake	81.57	20	eP	P	19 33 17.5	+0.5
	comp=Z,24nm,0.8s						
ULN	Ulaanbaatar	81.71	324	eP	P	19 33 19.0	+0.8
	comp=Z,18nm,1.0s						
ULN	Ulaanbaatar	81.71	324	c iP	P	19 33 18.8	+0.6
ULN				pmax	pmax		
	comp=Z,32nm,1.7s						
YAK	Yakutsk	81.73	343	eP	P	19 33 17.9	+0.3
	comp=Z,39nm,0.8s						
YAK	Yakutsk	81.73	343	eP	P	19 33 18.0	+0.3
YAK				pmax	pmax		
	comp=Z,41nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
MAW	Mawson	81.85	202	P	P	19 33 17.9	-0.5
	comp=E,4.3nm,0.9s,baz=122,slow=6.9,SNR=7.0						
MAW	Mawson	81.85	202	eP	P	19 33 19.0	+0.6
	comp=E,1.6nm,1.1s						
MAW	Mawson	81.85	202	P	P	19 33 18.8	+0.4
	baz=82,SNR=5.1						
MAW	Mawson	81.85	202	eP	P	19 33 19.0	+0.6
MAW				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONA0	Songino Array	82.07	324	eP	P	19 33 20.7	+0.7
SONA0				ePKKPdf	PKKPbc	19 51 49.5	-1.9
SONM	Songino Array	82.07	324	P	P	19 33 20.7	+0.7
	comp=Z,5.7nm,0.9s,baz=142,slow=6.0,SNR=41						
SONM				PKKPbc	PKKPbc	19 51 49.5	-1.9
	comp=Z,0.6nm,0.7s,baz=318,slow=2.8,SNR=4.0						
GTA	Gaotai	82.20	314	P	P	19 33 22.2	+1.3
GTA				pP	pP	19 33 31.6	+0.2
GTA				sP	sP	19 33 35.8	+0.6
GTA				pmax	pmax		
	comp=Z,24nm,1.1s						
SEW	Seward	82.31	20	eP	P	19 33 21.4	+0.6
	comp=Z,17nm,0.9s						
BILL	Bilibino	82.38	360	deP	P	19 33 21.8	+0.8
BILL				pmax	pmax		
	comp=Z,64nm,1.3s						
TTA	Tatalina	82.50	16	eP	P	19 33 22.8	+1.0
	comp=Z,13nm,1.0s						
TTA	Tatalina	82.50	16	eP	P	19 33 22.8	+1.0
TTA				pmax	pmax		
	comp=Z,13nm,1.0s						
TEZP	TEZPUR	82.64	300	eP	P	19 33 23.2	-0.1
TEZP				IAmb	IAmb	19 33 24.5	
RC01	Rabbit Creek A	82.94	20	eP	P	19 33 24.5	+0.4
	comp=Z,55nm,1.2s						
SHL	Shillong	83.06	299	eP	P	19 33 26.2	+0.5
	comp=Z,36nm,1.1s						
SHL	Shillong	83.06	299	eP	P	19 33 26.2	+0.5
SHL				pmax	pmax		
	comp=Z,36nm,1.1s						
SHL	Shillong	83.06	299	eP	P	19 33 25.3	-0.5
SHL				IAmb	IAmb	19 33 27.4	
	comp=Z,30nm,1.1s						
PMR	Palmer	83.51	20	eP	P	19 33 27.4	+0.4
	comp=Z,24nm,0.9s						
PMR	Palmer	83.51	20	eP	P	19 33 27.4	+0.4
PMR				pmax	pmax		
	comp=Z,24nm,0.9s						
PPLA	Purkeypile	83.55	18	eP	P	19 33 28.0	+0.6
	comp=Z,21nm,1.3s						
KNK	Knik Glacier	83.60	20	eP	P	19 33 28.4	+0.9
	comp=Z,28nm,0.9s						
GLI	Glacier Island	83.67	21	eP	P	19 33 28.6	+0.7
	comp=Z,23nm,0.6s						
TAWA	Tawang	83.75	300	eP	P	19 33 28.9	-0.6
EYAK	Cordova Ski Ar	83.91	21	eP	P	19 33 29.6	+0.5
	comp=Z,13nm,0.8s						
SML	Sawmill	83.93	20	eP	P	19 33 29.8	+0.6
	comp=Z,26nm,1.0s						
SML	Sawmill	83.93	20	eP	P	19 33 29.8	+0.6
SML				pmax	pmax		
	comp=Z,26nm,1.0s						
CAST	Castle Rocks	83.99	17	eP	P	19 33 29.4	0.0
	comp=Z,59nm,1.1s						
BOD	Bodaibo	84.12	335	eP	P	19 33 29.0	-1.2
BOD				pmax	pmax		
	comp=Z,11nm,1.5s						
SCM	Sheep Creek Mo	84.28	20	eP	P	19 33 32.0	+1.0
	comp=Z,41nm,1.2s						
SCM	Sheep Creek Mo	84.28	20	eP	P	19 33 32.0	+1.0
SCM				pmax	pmax		
	comp=Z,41nm,1.2s						
HMT	Hamilton	84.30	22	eP	P	19 33 31.1	0.0
	comp=Z,46nm,1.4s						
TURI	Tura	84.37	298	eP	P	19 33 33.3	+1.1
KTH	Kantishna Hill	84.43	18	eP	P	19 33 31.5	-0.2
	comp=Z,40nm,0.9s						
BPAW	Bear Paw Mtn.	84.82	17	eP	P	19 33 33.5	-0.2
	comp=Z,20nm,1.0s						
RND	Reindeer	84.94	18	eP	P	19 33 34.4	+0.1
	comp=Z,139nm,1.4s						
RND	Reindeer	84.94	18	eP	P	19 33 34.4	+0.1
RND				pmax	pmax		
	comp=Z,139nm,1.4s						
O02D	Mt. Diablo Mer	84.97	46	P	P	19 33 35.6	+0.5
	baz=246						
LSA	Lhasa	85.06	302	eP	P	19 33 35.4	-0.8
	comp=Z,13nm,1.0s						
LSA	Lhasa	85.06	302	P	P	19 33 37.3	+1.1
LSA				pmax	pmax		
	comp=Z,43nm,0.9s						
ZAK	Zakamensk	85.14	325	eP	P	19 33 35.4	-0.2
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
PKM	Mcpherson Peak	85.14	52	P	P	19 33 36.3	+0.2
	baz=249						
MCK	McKinley	85.15	18	eP	P	19 33 35.3	0.0
	comp=Z,64nm,1.1s						
MCK	McKinley	85.15	18	eP	P	19 33 35.3	0.0
MCK				pmax	pmax		
	comp=Z,65nm,1.1s						
DHY	Denali Highway	85.16	19	eP	P	19 33 36.1	+0.6
	comp=Z,17nm,1.1s						
BWN	Browne	85.32	18	eP	P	19 33 36.6	+0.4
	comp=Z,136nm,1.1s						
N02D	Trinity Center	85.35	46	P	P	19 33 37.4	+0.5
	baz=246						
M02C	Callahan	85.42	45	P	P	19 33 37.4	+0.1
	baz=246						
BALM	Baldy	85.47	22	eP	P	19 33 36.7	-0.4
	comp=Z,10nm,0.6s						
BALM	Baldy	85.47	22	eP	P	19 33 36.7	-0.4
BALM				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TLY	Talaya	85.58	326	eP	P	19 33 37.8	+0.1
TLY				e		19 44 12.1	
TLY				pmax	pmax		
	comp=Z,52nm,1.5s						
TLY				MLR	MLR		
	comp=Z,733nm,17.0s						
O03E	Paynes Creek	85.71	47	P	P	19 33 38.9	+0.2
	baz=247						
HUMO	Hull Mountain	85.84	44	eP	P	19 33 39.6	+0.4
	comp=Z,17nm,1.4s						
CMB	Columbia Colle	85.87	49	eP	P	19 33 39.1	-0.4
	comp=Z,2.6nm,0.8s						
CMB	Columbia Colle	85.87	49	eP	P	19 33 39.1	-0.4
CMB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRH	Wood River Hil	85.95	18	eP	P	19 33 38.8	-0.4
	comp=Z,25nm,0.6s						
L04D	Klamath Falls	86.12	45	P	P	19 33 39.3	-1.5
	baz=246						
CCB	Clear Creek Bu	86.16	18	eP	P	19 33 39.6	-0.6
	comp=Z,22nm,0.6s						
HDA	Harding Lake	86.25	18	eP	P	19 33 40.9	+0.1
	comp=Z,46nm,0.6s						
MENT	Mentasta	86.26	20	eP	P	19 33 40.9	+0.1
	comp=Z,4.7nm,0.6s						
TCOL	CIGO, UAF Yank	86.31	18	P	P	19 33 41.3	+0.3
	baz=224						
COLA	College	86.31	18	eP	P	19 33 40.7	-0.2
	comp=Z,32nm,0.9s						
COLA	College	86.31	18	ceP	P	19 33 40.3	-0.7
COLA				pmax	pmax		
	comp=Z,28nm,1.1s						
GTK	Tadong	86.41	299	eP	P	19 33 42.3	-0.2
RIDG	Independent Ri	86.44	19	eP	P	19 33 41.5	-0.2
	comp=Z,13nm,0.8s						
ISA	Isabella, Lake	86.44	52	P	P	19 33 42.3	-0.1
	baz=249						
ILAR	Eielson Array	86.53	18	P	P	19 33 41.5	-0.7
	comp=Z,20nm,0.7s,baz=238,slow=5.4,SNR=192						
ILAR				LR	LR	20 07 30.2	
	comp=Z,235nm,20.4s,baz=242,slow=32						
ILB	Eielson Array	86.53	18	eP	P	19 33 41.4	-0.7
	comp=Z,25nm,0.6s						
EDW2	Edwards Air Fo	86.53	53	P	P	19 33 43.0	+0.1
	baz=250						
BFSC	Mount Baldy Ra	86.57	53	P	P	19 33 42.9	-0.3
	baz=250						
POKR	Poker Plat Res	86.61	18	P	P	19 33 42.2	-0.3
	baz=224						
DOT	Dot Lake	86.63	20	eP	P	19 33 42.4	-0.2
	comp=Z,8.8nm,0.8s						
J04D	Umpqua Nationa	86.66	44	P	P	19 33 43.3	-0.2
	baz=247						
I04A	Tendick Farm,	86.68	43	P	P	19 33 43.4	0.0
	baz=246						
WAKR	Walker	86.74	49	eP	P	19 33 42.9	-1.1
	comp=Z,5.0nm,1.1s						
H04D	Lebanon	86.76	42	P	P	19 33 44.6	+0.9
	baz=246						
SCRK	Sand Creek	86.88	20	eP	P	19 33 43.9	0.0
	comp=Z,13nm,0.9s						
CWC	Cottonwood Cre	87.01	51	P	P	19 33 45.7	+0.4
	baz=250						
MONP2	Monument Peak	87.09	55	P	P	19 33 46.1	+0.2
	baz=251						
HYT	Haines Junctio	87.18	24	eP	P	19 33 45.0	-0.5
	comp=Z,13nm,1.7s						
IKP	In-Ko-Pah, Jac	87.26	55	P	P	19 33 46.8	+0.3
	baz=251						
J05D	Fort Rock, OR	87.27	44	P	P	19 33 46.5	+0.1
	baz=247						
PFO	Pinyon Flats O	87.30	54	P	P	19 33 46.9	+0.1
	baz=251						
COLD	Coldfoot	87.40	15	eP	P	19 33 46.1	-0.2
	comp=Z,9.5nm,0.8s						
PRP	Porcupine Dome	87.46	18	eP	P	19 33 45.8	-1.0
	comp=Z,3.7nm,0.7s						
NV01	Mina Array Sit	87.54	49	eP	P	19 33 48.3	+0.3
NVAR	Mina Array Bea	87.54	49	P	P	19 33 48.3	+0.3
	comp=Z,1.6nm,0.9s,baz=226,slow=6.1,SNR=3.0						
NVAR				PKPPKP	P'P'df	19 59 44.5	+1.2
	comp=Z,1.0nm,1.0s,baz=65,slow=5.1,SNR=4.8						
SWSC	Sam W. Stewart	87.61	55	P	P	19 33 48.2	+0.1
	baz=251						
BOK	Bokaro	87.68	295	eP	P	19 33 48.4	-0.3
BOK				IAmb	IAmb	19 33 49.8	
E04D	Cinebar	87.69	41	P	P	19 33 48.7	+0.6
	baz=246						
D03D	Eldon	87.77	40	P	P	19 33 49.4	+0.9
	baz=246						
BELC	Belle Mtn. Jos	87.79	54	P	P	19 33 48.8	-0.4
	baz=251						
FURC	Furnace Creek,	87.94	52	P	P	19 33 50.5	+0.9
	baz=250						
BC3	Big Chuckawall	88.11	55	P	P	19 33 51.2	+0.6
	baz=251						
GMRC	Granite Mounta	88.31	54	P	P	19 33 51.2	-0.3
	baz=251						
TUQ	Turquoise Moun	88.32	53	P	P	19 33 51.5	0.0
	baz=251						
EGAK	Eagle	88.33	20	eP	P	19 33 50.8	0.0
	comp=Z,5.5nm,0.8s						
GLA	Glamis	88.42	55	P	P	19 33 52.2	+0.3
	baz=252						
DAWY	Dawson	88.47	21	eP	P	19 33 51.2	-0.3
	comp=Z,2.7nm,0.8s						
IRM	Iron Mountain	88.51	54	P	P	19 33 52.7	+0.3
	baz=251						
JIRN	Jiri	88.55	299	eP	P	19 33 53.5	+0.4
	comp=Z,33nm,0.5s						
TPNV	Topopah Spring	88.57	51	P	P	19 33 53.4	+0.7
	baz=251						
WVOR	Wild Horse Val	88.72	46	eP	P	19 33 53.2	-0.1
	comp=Z,6.4nm,1.1s						
WVOR	Wild Horse Val	88.72	46	eP	P	19 33 53.2	-0.1
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
I07A	Izee	88.73	44	eP	P	19 33 53.3	0.0
	comp=Z,8.2nm,1.3s						
GUN	Gumba	88.89	299	eP	P	19 33 54.9	+0.2
	comp=Z,53nm,0.9s						
J08A	Circle Bar Ran	89.16	45	eP	P	19 33 55.6	+0.2
	comp=Z,13nm,1.1s						
PKI	Pulchoki	89.19	299	eP	P	19 33 56.2	+0.1
	comp=Z,36nm,0.7s						
PKIN	Phulchoki	89.20	299	eP	P	19 33 56.2	+0.1
	comp=Z,26nm,0.6s						
PDMCI	Parker Dam,Lak	89.35	54	P	P	19 33 57.4	+1.2
	baz=252						
KKN	Kakani	89.36	299	eP	P	19 33 57.0	+0.2
	comp=Z,47nm,0.8s						
DMN	Daman	89.45	299	eP	P	19 33 57.7	+0.4
	comp=Z,100nm,1.0s						
R11A	Troy Canyon, C	89.52	50	P	P	19 33 57.5	+0.2
	baz=251						
G08A	Pilot Rock	89.53	43	eP	P	19 33 56.8	-0.3
	comp=Z,9.7nm,1.0s						
TIXI	Tiksi	89.72	349	eP	P	19 33 56.3	-0.8
	comp=Z,5.4nm,1.0s						
TIXI	Tiksi	89.72	349	⇓eP	P	19 33 56.8	-0.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GKN	Gorkha	89.96	299	eP	P	19 33 59.2	-0.3
	comp=Z,68nm,0.9s						
BMO	Blue Mountains	90.48	44	eP	P	19 34 00.9	-0.5
	comp=Z,4.8nm,1.0s						
BMO	Blue Mountains	90.48	44	eP	P	19 34 00.9	-0.5
BMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
EPYK	Eagle Plains	90.77	20	eP	P	19 34 01.8	-0.5
	comp=Z,5.4nm,0.8s						
DANN	Dangsing	90.80	299	eP	P	19 34 02.3	-1.3
F10A	Beach Ranch, E	90.91	43	eP	P	19 34 03.0	-0.4
	comp=Z,6.3nm,0.8s						
PYUN	Piuthan	91.39	299	eP	P	19 34 05.0	-1.2
	comp=Z,44nm,1.2s						
NEW	Newport	91.76	40	P	P	19 34 07.2	0.0
	baz=250						
NGP	Nagpur	93.07	291	eP	P	19 34 12.4	-1.5
SNAA	Sanae	93.68	183	P	P	19 34 15.5	-0.3
SNAA	Sanae	93.68	183	eP	P	19 34 14.8	-1.0
	comp=Z,21nm,1.2s						
SNAA	Sanae	93.68	183	c iP	P	19 34 15.1	-0.7
DGZ	Jazzator, Alta	94.22	320	c iP	P	19 34 18.4	-0.3
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VNA3	Neumayer Olymp	94.37	181	P	P	19 34 18.4	-0.5
BOZ	Bozeman (W)	94.52	44	P	P	19 34 20.6	+0.4
	baz=254						
VNA2	Neumayer--Watz	94.63	182	P	P	19 34 20.1	0.0
	baz=161,slow=4.3						
VNA1	Neumayer--Stat	94.93	182	P	P	19 34 21.4	0.0
PDAR	Pinedale Array	95.20	47	P	P	19 34 21.9	-1.6
	comp=Z,0.1nm,0.4s,baz=231,slow=5.7,SNR=2.8						
GOA	Goa	96.55	284	eP	P	19 34 28.5	-1.4
MK31	Makanchi Array	96.75	316	eP	P	19 34 30.4	+0.2
	comp=Z,7.1nm,0.9s						
MK31	Makanchi Array	96.75	316	eP	P	19 34 30.4	+0.2
MK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK32	Makanchi Array	96.75	316	eP	P	19 34 30.3	+0.2
MK32				ePKiKP	PKiKP	19 39 06.0	-0.8
MKAR	Makanchi Array	96.75	316	P	P	19 34 30.3	+0.2
	comp=Z,6.2nm,0.8s,baz=99,slow=5.9,SNR=54						
MKAR				PKiKP	PKiKP	19 39 06.0	-0.8
	comp=Z,0.5nm,0.6s,baz=126,slow=2.0,SNR=5.3						
MAKZ	Makanchi	96.96	316	eP	P	19 34 30.8	-0.3
	comp=Z,9.4nm,1.1s						
MAKZ	Makanchi	96.96	316	eP	P	19 34 30.8	-0.3
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZAA0	Zalesovo Array	96.97	324	eP	P	19 34 30.1	-0.8
	comp=Z,7.2nm,0.8s						
ZALV	Zalesovo Beam	96.97	324	P	P	19 34 30.1	-0.8
	comp=Z,5.5nm,0.7s,baz=112,slow=4.7,SNR=24						
ZAA1	Zalesovo Array	96.97	324	eP	P	19 34 30.1	-0.8
SMLA	Simla	97.05	300	eP	Pdif	19 34 31.3	-0.6
SMLA				IAmb	IAmb	19 34 32.2	
	comp=Z,6.5nm,0.9s						
POO	Poona	97.21	287	eP	Pdif	19 34 32.8	-0.2
YKA	Yellowknife Ar	97.63	27	P	Pdif	19 34 33.0	-0.7
	comp=Z,1.8nm,0.6s,baz=254,slow=4.5,SNR=11						
YKB5	Yellowknife Ar	97.63	27	eP	Pdif	19 34 33.0	-0.7
DHRM	DHARAMSHALA	98.01	301	eP	P	19 34 35.5	-0.9
DHRM				IAmb	IAmb	19 34 48.0	
KSH	Kashi	99.71	308	eP	Pdif	19 34 46.4	+2.7
KSH				pP	pwP	19 34 56.0	-0.6
KURK	Kurchatov	99.96	320	⇑iP	Pdif	19 34 44.3	-0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KURBB	Kurchatov Arra	100.00	320	PKKPbc	PKKPbc	19 51 03.5	-1.8
	comp=Z,0.9nm,0.6s,baz=291,slow=3.4,SNR=5.5						
ARU	Arti	112.07	325	PKiKP	PKiKP	19 39 34.2	-0.4
	comp=Z,1.2nm,0.6s,baz=93,slow=3.0,SNR=7.3						
ARU	Arti	112.07	325	i PKIKP	PKiKP	19 39 34.3	-0.3
ARU						19 40 16.1	
ARU						19 46 45.3	
ARU				SP	SP	19 49 45.3	-2.2
AKTO	Aktyubinsk	113.02	319	PKiKP	PKiKP	19 39 36.6	0.0
	comp=Z,1.8nm,0.6s,baz=96,slow=3.9,SNR=8.0						
GEYT	Alibeck	113.44	305	PKiKP	PKiKP	19 39 37.5	-0.3
	comp=Z,1.0nm,0.6s,baz=72,slow=4.7,SNR=5.4						
HSPB	Hornsund (broa	115.82	353	ePdif	Pdif	19 35 54.9	+0.5
PRGR	Permogore	117.30	333	ePKIKP	PKPdf	19 39 43.3	-1.1
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPAZ	La Paz	117.72	117	PKP	PKiKP	19 39 47.8	+0.3
	comp=Z,2.4nm,0.6s,baz=233,slow=3.0,SNR=8.5						
LPAZ	La Paz	117.72	117	ePKPdf	PKPdf	19 39 45.2	-2.2
LPAZ	La Paz	117.72	117	ePKIKP	PKPdf	19 39 45.2	-2.2
HAMF	Hammerfest	119.59	347	ePKPdf	PKiKP	19 39 48.7	+0.1
ARA0	ARCESS Array S	119.97	345	ePKPdf	PKiKP	19 39 49.4	0.0
ARCES	ARCESS Array B	119.97	345	PKP	PKiKP	19 39 49.4	-0.1
	comp=Z,10nm,0.6s,baz=71,slow=1.1,SNR=55						
ARE0	ARCESS Array S	119.97	345	ePKPdf	PKiKP	19 39 49.6	+0.1
KTK1	Kautokeino	120.91	346	ePKPdf	PKiKP	19 39 51.3	0.0
CPUP	Villa Florida	120.92	133	PKP	PKiKP	19 39 52.5	-0.2
	comp=Z,3.8nm,0.7s,baz=235,slow=1.1,SNR=7.4						
TRO	Tromso	121.40	347	ePKPdf	PKiKP	19 39 52.0	-0.2
KIF	Kilpisjarvi	121.49	346	eP	PKPdf	19 39 51.1	-1.2
BOSA	Boshof	123.17	221	PKP	PKiKP	19 39 57.4	+0.2
	comp=Z,3.7nm,0.8s,baz=84,slow=3.0,SNR=4.7						
TBLG	Delisi	123.37	311	ePKPdf	PKiKP	19 39 57.4	+0.4
STEI	Steigen	123.57	348	ePKPdf	PKiKP	19 39 56.2	-0.3
GNI	Garni	123.64	309	PKP	PKiKP	19 39 57.8	0.0
	comp=Z,9.6nm,0.7s,baz=202,slow=22,SNR=4.4						
GNI	Garni	123.64	309	c iPKIKP	PKiKP	19 39 58.2	+0.4
ZEI	Tsey	123.77	312	i PKIKP	PKiKP	19 39 57.7	-0.3
NCK	Nalchik	123.84	313	⇓iPKIKP	PKiKP	19 39 58.4	+0.5
PKME	Peaks-Kenny Pk	123.97	45	ePKPdf	PKiKP	19 39 57.4	-0.6
LPSR	Galich'ya Gora	124.07	324	ePKIKP	PKiKP	19 39 58.1	+0.1
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
RAYN	Ar Rayn	124.08	289	ePKPdf	PKPdf	19 39 57.3	-1.4
RAYN	Ar Rayn	124.08	289	ePKIKP	PKPdf	19 39 57.3	-1.4
KBZ	Khabaz	124.28	313	PKP	PKiKP	19 39 58.9	+0.2
	comp=Z,2.5nm,0.7s,baz=112,slow=6.3,SNR=6.6						
OBN	Obninsk	124.30	328	PKP	PKiKP	19 39 58.4	0.0
	comp=Z,2.9nm,0.5s,baz=128,slow=19,SNR=3.4						
OBN	Obninsk	124.30	328	i PKIKP	PKiKP	19 39 58.8	+0.5
OBN				pmax	pmax		
	comp=Z,12nm,0.9s						
AKH	Akhalkalaki	124.35	310	ePKPdf	PKiKP	19 39 58.5	-0.7
AKH	Akhalkalaki	124.35	310	⇑iP	PKiKP	19 40 00.0	+0.8
AKH	Akhalkalaki	124.35	310	ePKIKP	PKiKP	19 39 58.5	-0.7
KIV	Kislovodsk	124.38	314	i PKIKP	PKiKP	19 39 58.6	-0.4
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
VSR	Storozhevoye	124.46	323	ePKIKP	PKiKP	19 39 57.8	-1.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NEY	Neytrino	124.52	313	⇑iPKIKP	PKiKP	19 40 00.7	+1.3
MOR8	Moi Rana	125.22	347	ePKPdf	PKiKP	19 39 59.3	-0.6
KONS	Konsvik	125.23	347	ePKPdf	PKiKP	19 39 59.7	-0.2
FIA1	FINESS Array S	125.39	338	ePKPdf	PKiKP	19 39 59.6	-0.7
FIA0	FINESS Array S	125.39	338	ePKPdf	PKiKP	19 39 59.8	-0.6
FIA0	FINESS Array S	125.39	338	ePKIKP	PKiKP	19 39 59.8	-0.6
FINES	FINESS Array B	125.39	338	PKP	PKiKP	19 39 59.8	-0.6
	comp=Z,9.6nm,0.9s,baz=78,slow=2.7,SNR=18						
BATG	Bathurst New B	125.56	42	ePKPdf	PKiKP	19 40 00.5	-0.6
GGN	Saint George	125.68	45	ePKPdf	PKPdf	19 40 00.0	-1.0
BCA	Borcka	125.71	311	⇓iP	PKiKP	19 40 02.4	+0.7
LMN	Caledonia Moun	126.83	43	ePKPdf	PKPdf	19 40 02.3	-1.0
VSU	Vasula	127.06	335	⇑iPKIKP	PKiKP	19 40 04.0	+0.3
VSU				pmax	pmax		
	comp=Z,87nm,2.5s						
NSS	Namsos	127.17	347	ePKPdf	PKiKP	19 40 03.5	-0.3
LSZ	Lusaka	129.44	236	ePKPdf	PKiKP	19 40 08.9	-1.1
LSZ	Lusaka	129.44	236	ePKIKP	PKiKP	19 40 08.9	-1.1
HUMP	Col San Antoni	129.53	78	ePKPdf	PKiKP	19 40 09.0	-0.9
DOMB	Dombas	129.99	346	ePKPdf	PKiKP	19 40 08.8	-0.8
NC303	NORSAR Array S	130.14	345	ePKPdf	PKiKP	19 40 09.6	-0.3
AKASG	Malin Array Be	130.32	326	PKP	PKiKP	19 40 09.5	-1.0
	comp=Z,1.7nm,0.5s,baz=54,slow=2.3,SNR=8.0						
AKASG	Malin Array Be	130.32	326	i PKIKP	PKiKP	19 40 09.8	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	130.32	326	ePKPdf	PKiKP	19 40 09.5	-1.0
AKBB	Malin Array Si	130.32	326	ePKIKP	PKiKP	19 40 09.5	-1.0
NB2	NORSAR Subarra	130.34	345	PKPdf	PKiKP	19 40 09.1	-1.2
	comp=Z,14nm,1.7s,baz=27,slow=1.8						
NB2	NORSAR Subarra	130.34	345	PKPdf	PKiKP	19 40 09.1	-1.2
	baz=27,slow=1.8						
NB200	NORSAR Array S	130.34	345	ePKPdf	PKiKP	19 40 09.9	-0.5
NB200				eSKPbc	SKPbc	19 43 32.5	+2.3
NOA	NORSAR Array B	130.34	345	PKP	PKiKP	19 40 09.9	-0.5
	comp=Z,3.9nm,0.7s,baz=32,slow=2.0,SNR=16						
NOA				SKPbc	SKPbc	19 43 32.5	+2.3
	comp=Z,0.6nm,0.7s,baz=31,slow=3.2,SNR=4.0						

NOA				SKP		19 43 42.5	
	comp=Z,3.9nm,0.9s,baz=31,slow=3.1,SNR=7.6						
HFS	Hagfors	130.42	343	PKP	PKiKP	19 40 09.4	-1.1
	comp=Z,5.8nm,0.8s,baz=207,slow=1.7,SNR=7.6						
NC602	NORSAR Array S	130.51	344	*e*PKPdf	PKiKP	19 40 09.7	-0.9
ASF	Jabal al Asfar	131.20	300	PKP	PKiKP	19 40 12.8	-0.3
	comp=Z,2.1nm,0.7s,baz=16,slow=8.8,SNR=4.2						
PTGA	Pitinga	131.34	104	*e*PKPdf	PKiKP	19 40 12.8	-1.0
BR101	Keskin Array S	132.03	311	*e*PKPdf	PKiKP	19 40 14.6	0.0
BRTR	Keskin Array B	132.03	311	PKP	PKiKP	19 40 14.6	0.0
	comp=Z,1.8nm,0.9s,baz=143,slow=4.3,SNR=6.4						
MMAI	Mount Meron Ar	132.30	301	PKP	PKiKP	19 40 14.9	-0.3
	comp=Z,2.1nm,0.6s,baz=81,slow=5.2,SNR=5.7						
EIL	Elat	133.22	297	PKP	PKiKP	19 40 17.0	-0.1
	comp=Z,3.6nm,0.7s,baz=336,slow=5.3,SNR=4.8						
CFR	Carcaliu	133.68	320	⇑*i*P	PKiKP	19 40 16.4	-1.1
CFR	Carcaliu	133.68	320	⇑PKIKP	PKiKP	19 40 16.4	-1.1
TLB	Topalu	134.01	319	⇑*i*P	PKiKP	19 40 17.8	-0.4
TLB	Topalu	134.01	319	⇑PKIKP	PKiKP	19 40 17.8	-0.4
BIZ	Bicaz	134.04	323	⇑*i*P	PKiKP	19 40 18.3	+0.1
BUR08	Bucovina Ar. S	134.18	324	*e*PKPdf	PKiKP	19 40 17.8	-0.8
BURAR	Bucovina Array	134.19	324	⇑*i*P	PKiKP	19 40 19.5	+0.9
BURAR	Bucovina Array	134.19	324	⇑PKIKP	PKiKP	19 40 19.5	+0.9
VRI	Vrincioaia	134.21	321	⇑*i*P	PKPdf	19 40 15.0	-2.3
VRI	Vrincioaia	134.21	321	⇑PKIKP	PKPdf	19 40 15.0	-2.3
BDFB	Brasilia	134.37	130	PKP	PKiKP	19 40 18.7	-1.2
	comp=Z,4.5nm,0.6s,baz=237,slow=2.5,SNR=6.5						
BDFB	Brasilia	134.37	130	*e*PKPdf	PKiKP	19 40 18.5	-1.4
BDFB				*e*PKPdf	PKiKP	19 40 18.7	-1.2
KWP	Kalwaria Pacla	134.39	328	*e*PKPdf	PKiKP	19 40 18.2	-0.6
MLR	Muntele Rosu	134.87	321	PKP	PKiKP	19 40 20.0	-0.1
	comp=Z,4.6nm,1.0s,baz=57,slow=4.5,SNR=4.9						
MLR	Muntele Rosu	134.87	321	*e*PKPdf	PKiKP	19 40 19.2	-0.9
MLR	Muntele Rosu	134.87	321	⇓*i*P	PKiKP	19 40 20.2	+0.1
MLR	Muntele Rosu	134.87	321	⇓PKIKP	PKiKP	19 40 20.2	+0.1
DOPR	Dopca	134.97	322	⇑*i*P	PKiKP	19 40 20.0	-0.1
KOLS	Kolonicke sedl	135.04	327	*e*PKIKP	PKiKP	19 40 20.4	+0.2
KOLS	Kolonicke sedl	135.04	327	*e*PKP	PKiKP	19 40 20.4	+0.2
VOIR		135.44	322	⇑*i*P	PKPdf	19 40 18.3	-1.4
VOIR		135.44	322	⇑PKIKP	PKPdf	19 40 18.3	-1.4
ELND	Elena	136.17	318	⇑*i*P	PKiKP	19 40 22.0	-0.7
LANS	Liptovska Anna	136.34	329	*e*PKIKP	PKiKP	19 40 23.9	+1.0
LANS	Liptovska Anna	136.34	329	*e*PKP	PKiKP	19 40 23.9	+1.0
OKC	Ostrava-Krasne	136.52	331	AMS	AMS	20 45 20.0	
	comp=Z,500nm,22.5s						
PLVB	Pleven	136.75	319	⇑*i*P	PKiKP	19 40 24.8	+1.0
GZR	Gura Zlata	136.82	323	⇓*i*P	PKiKP	19 40 22.5	-1.5
GZR	Gura Zlata	136.82	323	⇓PKIKP	PKiKP	19 40 22.5	-1.5
MORC	Moravsky Berou	136.85	331	⇓*i*P	PKiKP	19 40 22.8	-1.1
MORC	Moravsky Berou	136.85	331	⇓PKIKP	PKiKP	19 40 22.8	-1.1
MORC	Moravsky Berou	136.85	331	*e*PKP	PKiKP	19 40 22.6	-1.3
OSTC	Ostas	136.91	333	AMS	AMS	20 47 40.0	
	comp=Z,400nm,21.9s						
PSZ	Piszkesteto	136.91	327	*e*PKPdf	PKiKP	19 40 23.5	-0.6
PSZ	Piszkesteto	136.91	327	⇓*i*P	PKiKP	19 40 23.7	-0.4
PSZ	Piszkesteto	136.91	327	⇓PKIKP	PKiKP	19 40 23.7	-0.4
CHVC	Chvalec	136.96	333	AMS	AMS	20 47 50.0	
	comp=Z,400nm,19.6s						
DPC	Dobruska-Polom	137.01	332	*e*PKIKP	PKiKP	19 40 23.8	-0.4
DPC				MLR	MLR		
	comp=Z,300nm,18.2s						
DPC	Dobruska-Polom	137.01	332	*e*PKPDF	PKiKP	19 40 23.8	-0.4
DPC				AMS	AMS	20 48 00.0	
	comp=Z,300nm,18.2s						
UPC	Upice	137.03	333	AMS	AMS	20 48 00.0	
	comp=Z,400nm,18.6s						
VYHS	Vyhne	137.09	329	*e*PKIKP	PKiKP	19 40 23.6	-0.8
VYHS	Vyhne	137.09	329	*e*PKP	PKiKP	19 40 23.6	-0.8
BZS	Buzias	137.36	324	⇑*i*P	PKPdf	19 40 23.0	-0.1
BZS	Buzias	137.36	324	⇑PKIKP	PKPdf	19 40 23.0	-0.1
JAVC	Velka Javorina	137.42	330	*e*PKP	PKiKP	19 40 24.3	-0.8
PVCC	Panska Ves	137.65	334	*e*PKIKP	PKiKP	19 40 24.8	-0.6
PVCC				MLR	MLR		
	comp=Z,300nm,21.3s						
PVCC	Panska Ves	137.65	334	*e*PKPDF	PKiKP	19 40 24.8	-0.6
PVCC				AMS	AMS	20 49 10.0	
	comp=Z,300nm,21.3s						
BRG	Berggiesshubel	137.65	335	*e*PDIFF	Pdif	19 37 24.9	-7.1
	comp=Z,2.2nm,0.8s						
BRG	Berggiesshubel	137.65	335	*e*PKP	PKiKP	19 40 24.9	-0.5
	comp=Z,8.3nm,1.3s						
BRG				*e*SKP		19 43 57.4	
	comp=Z,7.7nm,1.5s						
BRG	Berggiesshubel	137.65	335	*e*PKIKP	PKiKP	19 40 24.9	-0.5
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CLL	Collm	137.70	336	*e*PKPdf	PKiKP	19 40 24.2	-1.3
CLL	Collm	137.70	336	*e*PKIKP	PKiKP	19 40 24.0	-1.5
CLL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CLL	Collm	137.70	336	*e*PKPdf	PKiKP	19 40 24.0	-1.5
	comp=Z,7.0nm,1.2s						
CLL				*e*PKiKP	PKPdf	19 40 26.0	+2.5
	comp=Z,7.0nm,0.9s						
CLL				*e*SKPdf	SKiKP	19 43 58.0	-1.1
MDVR	Moldovita	137.78	323	⇓*i*P	PKPdf	19 40 24.0	0.0
KRUC	Moravsky	137.89	331	*e*PKP	PKiKP	19 40 24.5	-1.5
MODS	Modra-Piesok	137.94	330	*e*PKIKP	PKiKP	19 40 24.9	-1.2
MODS	Modra-Piesok	137.94	330	*e*PKP	PKiKP	19 40 24.9	-1.2
GOPC	GO Pecny, Ondr	138.01	333	AMS	AMS	20 48 30.0	
	comp=Z,300nm,20.3s						
VTS	Vitosha	138.01	319	*e*PKPdf	PKPdf	19 40 23.0	-1.6
VTS	Vitosha	138.01	319	⇑*i*P	PKPdf	19 40 19.9	-4.7
VTS	Vitosha	138.01	319	⇑PKIKP	PKPdf	19 40 19.9	-4.7
PRU	Pruhonice	138.06	333	*e*PKIKP	PKiKP	19 40 26.4	+0.1
PRU				MLR	MLR		
	comp=Z,300nm,22.2s						
PRU	Pruhonice	138.06	333	*e*PKPDF	PKiKP	19 40 26.4	+0.1
PRU				AMS	AMS	20 49 00.0	
	comp=Z,300nm,22.2s						
TREC	Trest	138.14	332	*e*PKIKP	PKiKP	19 40 26.9	+0.4
TREC				MLR	MLR		
	comp=Z,500nm,21.9s						
TREC	Trest	138.14	332	*e*PKPDF	PKiKP	19 40 26.9	+0.4
TREC				AMS	AMS	20 46 50.0	
	comp=Z,500nm,21.9s						
EKA	Eskdalemuir Ar	138.57	351	PKhKP	PKPpre	19 40 13.9	
	comp=Z,0.4nm,0.6s,baz=17,slow=3.0,SNR=2.8						
EKA				PKP	PKiKP	19 40 26.4	-0.7
	comp=Z,1.7nm,0.6s,baz=20,slow=2.3,SNR=7.4						
NKC	Novy Kostel	138.76	335	AMS	AMS	20 46 30.0	
	comp=Z,300nm,19.8s						
CONA	Conrad Observa	138.93	330	PKPdf	PKPdf	19 40 24.9	-1.1
	comp=Z,5.5nm,0.6s						
CONA				*e*SKPab	SKPab	19 44 07.4	-0.5
	comp=Z,3.8nm,1.3s						
KHC	Kasperske Hory	139.12	333	*e*PKPdf	PKPdf	19 40 26.3	0.0
KHC	Kasperske Hory	139.12	333	*e*PKIKP	PKPdf	19 40 26.3	0.0
KHC	Kasperske Hory	139.12	333	*e*PKPDF	PKPdf	19 40 26.3	0.0
KHC				*e*x	x	19 40 35.0	
KHC				*e*PKS	PKSab	19 44 12.0	-0.5
KHC				AMS	AMS	20 47 20.0	
	comp=Z,300nm,21.2s						
GERES	GERESS Array B	139.27	333	PKhKP	PKPpre	19 40 19.6	
	comp=Z,0.2nm,0.4s,baz=39,slow=3.8,SNR=5.0						
GERES				PKP	PKiKP	19 40 27.7	-1.3
	comp=Z,3.7nm,0.9s,baz=67,slow=2.6,SNR=17						
GERES				SKPbc	SKiKP	19 44 03.1	+0.5
	comp=Z,0.7nm,0.8s,baz=92,slow=2.9,SNR=4.5						
GERES				SKPab	SKPab	19 44 13.6	+4.2
	comp=Z,2.6nm,1.0s,baz=40,slow=2.3,SNR=9.6						
ARSA	Arzberg	139.57	330	PKPdf	PKPdf	19 40 26.4	-0.7
	comp=Z,1.5nm,0.8s						
MOA	Molln	139.75	331	PKPdf	PKPdf	19 40 26.9	-0.6
	comp=Z,2.4nm,0.9s						
PERS	Pernice	140.20	329	*i* PKPbc	PKiKP	19 40 30.1	-0.7
SOKA	Soboth	140.21	329	PKPdf	PKPdf	19 40 25.2	-3.2
	comp=Z,3.4nm,0.9s						
SOKA				*e*SKPab	SKPab	19 44 15.5	+1.9
	comp=Z,2.9nm,1.0s						
KBA	Koelnbreinsper	140.74	331	PKPdf	PKPdf	19 40 28.7	-0.7
	comp=Z,4.7nm,1.2s						
LJU	Ljubljana	140.90	329	*i* PKPbc	PKPdf	19 40 30.0	+0.5
MYKA	Terra Mystica	140.92	330	PKPdf	PKPdf	19 40 26.8	-2.9
	comp=Z,1.4nm,0.5s						
MYKA				*e*SKPab	SKPab	19 44 17.7	+1.0
	comp=Z,2.5nm,0.8s						
CEY	Cerknica	141.17	329	*i* PKPbc	PKPdf	19 40 30.4	+0.3
WATA	Walderalm	141.35	333	*e*SKPab	SKPab	19 44 20.4	+1.7
	comp=Z,1.8nm,0.4s						
ABTA	Abfaltersbach	141.37	331	PKPdf	PKPdf	19 40 28.8	-1.7
	comp=Z,9.2nm,1.0s						
ABTA				*e*SKPab	SKPab	19 44 17.7	-1.0
	comp=Z,5.6nm,1.0s						
WTTA	Wattenberg	141.38	333	*e*PKPdf	PKPdf	19 40 28.9	-1.8
	comp=Z,14nm,1.7s						
MOTA	Moosalm	141.55	333	*e*PKPdf	PKPdf	19 40 31.3	+0.4
	comp=Z,3.2nm,0.7s						
MOTA				*e*SKPbc	SKPbc	19 44 04.4	-1.2
	comp=Z,2.9nm,0.7s						
SQTA	Sankt Quirin	141.60	333	PKPdf	PKPdf	19 40 29.0	-2.0
	comp=Z,7.0nm,0.9s						
BFO	Black Forest	141.91	337	*i* PKIKP	PKPdf	19 40 29.0	-2.3
FETA	Feichten	141.96	333	PKPdf	PKPdf	19 40 31.8	+0.1
	comp=Z,9.0nm,1.2s						
FETA				*e*SKPbc	SKPbc	19 44 04.6	-2.0
	comp=Z,4.0nm,0.8s						
DAVA	Damuels	142.12	334	PKPdf	PKPdf	19 40 30.1	-1.8
	comp=Z,2.3nm,0.6s						
DAVOX	Davos/Dischmat	142.52	334	PKhKP	PKPpre	19 40 29.2	
	comp=Z,4.4nm,0.8s,baz=308,slow=7.6,SNR=5.4						
TUE	Stuetta	142.99	334	*e*PKPdf	PKPdf	19 40 30.7	-2.9
SENIN	Lac Senin/Sane	143.92	336	*e*PKPdf	PKPdf	19 40 33.7	-1.5
AQU	L'Aquila	144.03	326	*e*PKPdf	PKPdf	19 40 34.5	-0.8
AQU	L'Aquila	144.03	326	*e*PKIKP	PKPdf	19 40 34.5	-0.8
CLF	Chambon-Foret	144.25	342	*e*PKPdf	PKPdf	19 40 35.8	+0.3
BNI	Bardonecchia	145.24	335	*e*PKPbc	PKPdf	19 40 37.1	-0.3
BNI	Bardonecchia	145.24	335	*e*PKIKP	PKPdf	19 40 37.1	-0.3
SSB	Saint Sauveur	145.89	337	*e*PKPdf	PKPab	19 40 38.5	-1.0
SSB	Saint Sauveur	145.89	337	*e*PKP2	PKPab	19 40 38.5	-1.0
CLTB	Caltabellotta	147.19	319	*e*PKPbc	PKPab	19 40 43.3	-1.6
H07N1	FLORES T-PHASE	150.46	29	*e*PKP	PKiKP	19 40 52.7	+0.6
H07S1	FLORES T-PHASE	150.67	29	*e*PKP	PKiKP	19 40 53.4	+0.8
KEST	Kesra	150.77	320	PKPbc	PKiKP	19 40 53.2	+0.3
	comp=Z,36nm,0.9s,baz=85,slow=0.3,SNR=20						
PBRG	Braganca	152.28	350	*e*PKPdf	PKPdf	19 40 47.9	-0.9
PBRG	Braganca	152.28	350	*e*PKPbc	PKiKP	19 40 56.2	+0.4
PGAV	Gavieira, Arco	152.36	352	*e*PKPbc	PKiKP	19 40 56.6	+0.5
PGAV	Gavieira, Arco	152.36	352	*e*LR	LR	20 44 46.9	
	comp=Z,202nm,20.0s						
ROSA	Rosais	152.54	26	*e*PKP	PKiKP	19 40 57.4	+1.0
ROSA	Rosais	152.54	26	*e*PKPbc	PKiKP	19 40 57.3	+0.8
PCAB	Cabril	152.58	352	*e*PKPbc	PKiKP	19 40 56.9	+0.5
PCAB	Cabril	152.58	352	*e*PKPab	PKPab	19 41 07.3	+0.7
PCAN	Candelaria	152.65	27	*e*PKP	PKiKP	19 40 57.7	+1.0
PMAN	Manadas	152.68	26	*e*PKP	PKiKP	19 40 57.7	+1.0
POLO	Lamas de Olo	152.87	351	*e*PKPbc	PKiKP	19 40 57.9	+0.8
POLO	Lamas de Olo	152.87	351	*e*PKPab	PKPab	19 41 09.3	+1.4
MVO	Moncorvo	152.95	350	*e*PKPbc	PKiKP	19 40 58.1	+0.8
MVO	Moncorvo	152.95	350	*e*PKPab	PKPab	19 41 07.6	-0.6
MVO	Moncorvo	152.95	350	*e*LR	LR	20 44 23.8	
	comp=Z,195nm,18.0s						
PVRL	Vila Real	152.96	351	*e*PKPbc	PKiKP	19 40 57.9	+0.6
PVRL	Vila Real	152.96	351	*e*PKPab	PKPab	19 41 09.4	+1.2
PTO	Porto	153.22	352	*e*PKPbc	PKiKP	19 40 58.6	+0.9
PVIS	Viseu	153.53	351	*e*PKPbc	PKiKP	19 40 59.1	+0.6
ESDC	Sonseca Array	153.69	344	PKP	PKPdf	19 40 51.2	+0.3
	comp=Z,0.1nm,0.3s,baz=12,slow=3.7,SNR=5.8						
ESDC				PKPbc	PKiKP	19 40 58.5	-0.4
	comp=Z,3.2nm,0.8s,baz=5.7,slow=2.8,SNR=19						
ESLA	Sonseca Array	153.69	344	*e*PKPbc	PKiKP	19 40 59.5	+0.7
MTE	Manteigas	153.78	350	*e*PKPdf	PKPdf	19 40 51.8	+0.7
MTE	Manteigas	153.78	350	*e*PKPbc	PKiKP	19 40 59.8	+0.8
MTE	Manteigas	153.78	350	*e*LR	LR	20 44 31.2	
	comp=Z,223nm,20.0s						
MTE	Manteigas	153.78	350	*e*PKPdf	PKPdf	19 40 51.3	+0.2
MTE				*e*PKPbc	PKiKP	19 40 58.9	-0.1
PAB	San Pablo	153.92	344	*e*PKPbc	PKiKP	19 41 00.1	+0.7
PAB	San Pablo	153.92	344	*e*PKIKP	PKiKP	19 41 00.1	+0.7
PCBR	Castelo Branco	154.32	350	*e*PKPdf	PKPdf	19 40 52.6	+0.9
PCBR	Castelo Branco	154.32	350	*e*PKPbc	PKiKP	19 41 00.5	+0.5
PTOM	Tomar	154.69	351	*e*PKPbc	PKiKP	19 41 02.4	+1.6
PMRV	Marv??o	154.71	349	*e*PKPdf	PKPdf	19 40 52.8	+0.5
PMRV	Marv??o	154.71	349	*e*PKPbc	PKiKP	19 41 01.8	+0.9
PMRV	Marv??o	154.71	349	*e*PKPab	PKPab	19 41 17.4	+1.8
PMRV	Marv??o	154.71	349	*e*LR	LR	20 44 45.1	
	comp=Z,159nm,20.0s						
PMTG	Montargil	155.19	351	*e*PKPbc	PKPdf	19 41 02.7	+10
PMTG	Montargil	155.19	351	*e*PKPab	PKPab	19 41 19.3	+1.6
PBEJ	Beja	156.15	349	*e*PKPab	PKPab	19 41 24.6	+2.8
PCVE	Castro Verde	156.57	350	*e*PKPab	PKPab	19 41 25.7	+2.1
MDT	Midelt	160.21	338	PKP	PKPdf	19 41 00.3	+0.8
	comp=Z,2.9nm,1.0s,baz=28,slow=3.0,SNR=5.0						
TORD	Torodi Ar. Bea	165.43	266	PKP	PKPdf	19 41 04.2	-0.7
	comp=Z,1.9nm,1.0s,baz=4.1,slow=2.7,SNR=9.6						
TORD				PKPab	PKPab	19 42 03.1	-0.1
	comp=Z,3.1nm,0.9s,baz=98,slow=4.7,SNR=9.3						
TOA1	Torodi Ar. Sit	165.43	266	*e*PKPdf	PKPdf	19 41 04.2	-0.7
TOA1				*e*PKPab	PKPab	19 42 03.1	-0.1

*ISCJB **10** 19:32:26.5±0.5, 28°.22S±0°.09×62°.7E±0°.1, h10^{km}, mb4.2/20, MS3.8/3, Error ellipse: s-maj=16.0km s-min=12.6km az=8.8*

*IDC **10** 19:32:26.5±0.8, 28°.27S×62°.72E, h0^{km}, mb4.0/14, mb1 4.1/14, mb1mx3.9/69, mbtmp4.0/14, MS3.8/3, Ms1 3.8/3, ms1mx3.2/38, Error ellipse: s-maj=24.6km s-min=18.8km az=120.0*

*NEIC **10** 19:32:28.4±1.3, 28°.19S×62°.67E, h10^{km}, mb4.6/9, Error ellipse: s-maj=31.0km s-min=17.1km az=64.0*

ISC 10 19:32:28.2±0.7**, 28°.2S**±0°.1×**62°.7E**±0°.1**, h10^{km}, n35, σ0^{s}.92**/32**, mb4.2**/20**, MS3.8**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRIV	Mauritius Mete	9.22	328	*e*Pn	Pn	19 34 39.5	-1.7
OPO	Ambohidratompo	17.18	301	Pn	P	19 36 33.3	+3.1
	0.5nm,0.3s,baz=117,slow=15,SNR=3.7						
OPO				Sn	Sn	19 39 26.7	-13
	0.4nm,0.3s,baz=177,slow=18,SNR=4.0						
BOSA	Boshof	32.88	260	P	P	19 39 02.5	-0.1
	6.9nm,1.0s,baz=103,slow=7.8,SNR=7.0						
BOSA	Boshof	32.88	260	*e*P	P	19 39 02.8	+0.2
	6.1nm,0.9s						
LSZ	Lusaka	34.44	285	*e*P	P	19 39 16.6	+0.2
	8.2nm,0.6s						
SUR	Sutherland	36.26	253	P	P	19 39 31.4	-0.5
	2.8nm,0.8s,baz=164,slow=7.4,SNR=5.1						
PALK	Pallekele	39.32	29	LR	LR	19 52 16.0	
	comp=Z,78nm,18.7s,baz=295,slow=30						
MAW	Mawson	39.41	180	P	P	19 39 58.0	+0.2
	1.5nm,0.7s,baz=4.4,slow=10,SNR=3.7						
MAW	Mawson	39.41	180	*e*P	P	19 39 58.6	+0.8
	0.8nm,0.9s						
TSUM	Tsumeb	42.10	272	P	P	19 40 19.4	-1.4
	3.9nm,0.8s,baz=108,slow=7.9,SNR=8.3						
TSUM	Tsumeb	42.10	272	*e*PKPdf	P	19 40 19.5	-1.3
TSUM	Tsumeb	42.10	272	*e*P	P	19 40 19.6	-1.3
	5.8nm,1.0s						
WSAR	Wadi Sarin	51.31	355	LR	LR	19 58 14.5	
	comp=Z,94nm,21.6s,baz=201,slow=30						
CMAR	Chiang Mai Arr	58.14	41	P	P	19 42 22.4	+0.1
	1.5nm,0.8s,baz=224,slow=7.5,SNR=7.3						
QSPA	South Pole Qui	61.93	180	*e*P	P	19 42 47.8	-0.1
	7.6nm,1.1s						
VNDA	Vanda	64.61	166	P	P	19 43 04.2	-1.2
	1.1nm,1.0s,baz=259,slow=5.2,SNR=4.3						
VNDA	Vanda	64.61	166	*e*P	P	19 43 05.4	+0.1
TBLG	Delisi	71.56	346	*e*P	P	19 43 49.5	+0.2
	4.9nm,0.6s						
TORD	Torodi Ar. Bea	71.94	296	P	P	19 43 52.5	+0.3
	1.5nm,0.9s,baz=96,slow=4.3,SNR=4.8						
TORD				LR	LR	20 15 10.0	
	comp=Z,75nm,18.1s,baz=295,slow=36						
TOA1	Torodi Ar. Sit	71.95	296	*e*P	P	19 43 52.5	+0.3
BR101	Keskin Array S	72.83	337	*e*P	P	19 43 57.9	+0.8
BRTR	Keskin Array B	72.83	337	P	P	19 43 57.9	+0.8
	1.0nm,0.7s,baz=165,slow=6.5,SNR=4.0						
KBZ	Khabaz	73.87	345	P	P	19 44 03.9	+0.9
	1.8nm,0.7s,baz=171,slow=3.7,SNR=4.0						
ABKAR	Akbulak array	77.17	358	*e*P	P	19 44 21.8	+0.1
	5.5nm,1.3s						
TIRR	Tirgusor	78.84	336	*e*P	P	19 44 31.3	+0.2
	28nm,1.2s						
KURBB	Kurchatov Arra	79.73	10	P	P	19 44 36.2	+0.3
	0.3nm,0.6s,baz=206,slow=6.1,SNR=4.4						
BVAR	Borovoye Array	81.18	5	P	P	19 44 43.7	+0.1
	0.5nm,0.6s,baz=174,slow=7.0,SNR=5.4						
AKASG	Malin Array Be	83.98	339	P	P	19 44 57.8	-0.4
	1.0nm,0.5s,baz=149,slow=3.5,SNR=4.6						
AKBB	Malin Array Si	83.98	339	*e*P	P	19 44 57.5	-0.8
	3.3nm,0.8s						
ZALV	Zalesovo Beam	84.04	13	P	P	19 44 58.4	-0.1
	1.1nm,0.7s,baz=211,slow=7.8,SNR=4.9						
ZAA1	Zalesovo Array	84.04	13	*e*P	P	19 44 58.4	-0.1
ESDC	Sonseca Array	91.70	315	P	P	19 45 36.8	+0.9
	0.3nm,0.4s,baz=108,slow=3.4,SNR=4.6						
HYT	Haines Junctio	144.66	17	*e*PKPdf	PKPbc	19 52 04.0	+0.5
YKA	Yellowknife Ar	145.68	358	PKPbc	PKPdf	19 52 05.9	-0.3
	2.4nm,0.8s,baz=349,slow=3.5,SNR=9.2						
YKB5	Yellowknife Ar	145.68	358	*e*PKPdf	PKPdf	19 52 05.9	-0.3

*DDA **10** 19:33:47.0, 39°.03N×29°.51E, h14^{km}±1^{km}, ML3.8*

ISC 10 19:33:47.2±0.9**, 38°.95N**±0°.03×**29°.53E**±0°.02**, h13^{km}**±7^{km}**, n51, σ0^{s}.97**/63**, 2C-12D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.15	345	*i* P	Pg	19 33 51.0	+0.1
GDZ				*i* S	Sg	19 33 52.2	-1.4
KHAL	Karahalli	0.58	183	*i* P	Pn	19 34 01.0	-0.2
KHAL				*i* S	Sn	19 34 09.2	-1.4
AFYO	Afyonkarahisar	0.62	105	*i* P	Pn	19 34 01.4	-0.5
AFYO				*i* S	Sn	19 34 10.9	-0.8
AFYO				IAML_P			
	comp=Z,14µm,0.1s						
KULA	Kula-Manisa	0.81	238	P	Pn	19 34 03.9	-0.5
AUKIR	Kırka- Seyitga	0.84	67	*i* P	Pn	19 34 04.8	-0.1
AUKIR				*i* S	Sg	19 34 14.3	-0.3
MANT	Manisa	0.89	239	*i* P	Pn	19 34 05.3	-0.3
MANT				*i* S	Sn	19 34 17.8	-0.7
MANT				IAML_P			
	comp=Z,8µm,0.1s						
DURS	Dursunbey	1.05	309	*i* P	Pb	19 34 07.8	+0.5
DURS				*i* S	Sb	19 34 19.6	-1.4
BOLV	Bolvadin	1.13	101	*i* P	Pg	19 34 10.3	+1.3
BOLV				*i* S	Sn	19 34 25.2	+0.8
BOLV				IAML_P			
	comp=Z,10µm,0.2s						
BORA	Eskisehir	1.18	37	*i* P	Pn	19 34 09.1	-0.4
BORA				*i* S	Sb	19 34 24.4	-0.2
ULDT	Uludag	1.23	346	*i* P	Pn	19 34 09.6	-0.7
ULDT				*i* S	Sb	19 34 25.5	-0.9
CIFT	Cifteler, Eski	1.26	70	*i* P	Pg	19 34 11.9	+0.5
CIFT				*i* S	Sg	19 34 28.6	+0.8
CIFT				IAML_P			
	comp=Z,4µm,0.1s						
BRDR	BURDUR-Merkez	1.32	161	*i* P	Pg	19 34 13.8	+1.3
BRDR				IAML_P			
	comp=Z,8µm,0.2s						
BAGO	Egridir - ISPA	1.37	134	*i* P	Pg	19 34 14.9	+1.4
SRCK	Saricakaya, Es	1.38	37	*i* P	Pn	19 34 13.2	+1.0
SRCK				*i* S	Sn	19 34 31.1	+0.6
STEP	BALIKESIR_Sava	1.47	288	*i* P	Pb	19 34 14.8	+0.3
STEP				*i* S	Sg	19 34 34.9	+0.3
STEP				IAML_P			
	comp=Z,5µm,0.2s						
AUSIV	SIVRIHISAR	1.64	72	*i* P	Pg	19 34 19.3	+0.7
GEYV	SAKARYA_Geyve	1.65	21	*i* P	Pb	19 34 18.2	+0.8
GEYV				IAML_P			
	comp=Z,10µm,0.3s						
AUMIH	MIHALICIK	1.77	58	*i* P	Pg	19 34 21.7	+0.5
AYDN	Tasoluk	1.83	226	*i* P	Pg	19 34 23.2	+0.9
DOGA	KONYA_Doganhis	1.88	116	*i* P	Pb	19 34 21.9	+0.6
ZEDA	zmir-Bergama	1.91	271	*i* P	Pg	19 34 24.2	+0.4
BUY	Buyukada	1.93	351	*i* P	Pb	19 34 23.8	+1.5
BTAS	Taskesti	1.98	34	*i* P	Pg	19 34 25.2	+0.1
KORT	Korkueli	2.05	161	*i* P	Pg	19 34 24.9	-1.5
KDHN	Kadinhani	2.07	101	*i* P	Pb	19 34 23.8	-0.8
ISK	Istanbul-Kandi	2.15	350	P	Pn	19 34 20.6	-2.1
SAHE	Sakarya_HENDEK	2.16	28	*i* P	Pn	19 34 23.1	+0.1
KAND	Kocaeli-Kandir	2.20	13	*i* P	Pn	19 34 23.2	-0.3
AYVA	Ayvalik	2.24	280	*i* P	Pg	19 34 31.7	+1.6
KIBS	BOLU	2.32	50	*i* P	Pg	19 34 31.7	+0.1
BAYC	CANAKKALE_Bayr	2.45	290	*i* P	Pg	19 34 34.8	+0.7
EZN	Ezine	2.63	290	P	Pn	19 34 30.6	+1.2
ALN	Alexandroupoli	3.31	307	P	Pn	19 34 39.3	+0.5
SMTH	Samothraki Isl	3.44	298	P	Pn	19 34 41.3	+0.8
EDRB	Edirne	3.59	325	P	Pn	19 34 42.8	+0.2
RDO	Rodhopi	3.77	307	P	Pn	19 34 46.0	+1.0
TIRR	Tirgusor	5.57	352	⇓*i*P	Pn	19 35 10.2	+0.5
TIRR	Tirgusor	5.57	352	S	Sn	19 36 10.2	-3.4
TLB	Topalu	5.74	349	⇓*i*P	Pn	19 35 12.3	+0.2
PLVB	Pleven	5.78	322	⇓*i*P	Pn	19 35 13.4	+0.8
HARR	Harsova	5.86	349	⇓*i*P	Pn	19 35 13.7	-0.1
CFR	Carcaliu	6.31	351	⇑*i*P	Pn	19 35 20.1	+0.2
MLR	Muntele Rosu	7.06	339	⇑*i*P	Pn	19 35 32.0	+1.7
VRI	Vrincioaia	7.22	344	⇓*i*P	Pn	19 35 33.4	+1.0
PLOR	Plostina	7.22	344	⇓*i*P	Pn	19 35 33.0	+0.5
VOIR		7.29	334	⇓*i*P	Pn	19 35 34.3	+0.9
DOPR	Dopca	7.65	338	⇓*i*P	Pn	19 35 39.2	+0.8
OZUR		7.66	340	⇓*i*P	Pn	19 35 39.4	+0.9
TESR	Tescani	7.85	345	⇓*i*P	Pn	19 35 41.4	+0.3
GZR	Gura Zlata	8.16	324	⇓*i*P	Pn	19 35 45.7	+0.3
MDVR	Moldovita	8.24	318	⇓*i*P	Pn	19 35 46.4	-0.1

*NEIC **10** 19:36:47.5±1.7, 4°.91S×149°.09E, h12^{km}±4^{km}, mb5.0/39, Error ellipse: s-maj=9.8km s-min=2.5km az=204.0*

*ISCJB **10** 19:36:49.3±0.3, 4°.94S±0°.03×148°.90E±0°.05, h33^{km}, mb4.8/59, MS4.5/24, Error ellipse: s-maj=7.4km s-min=4.7km az=5.0*

*DJA **10** 19:36:49.8±0.5, 5°S±5°×14°9E±°, h42^{km}±7^{km}, M5.1/12, mB5.5/5, mb5.0/12, MLv5.2/3, Mw(mB)5.0/5*

*GCMT **10** 19:36:52.5±0.1, 4°.93S±0°.01×148°.89E±0°.01, h12^{km}, MW5.2/121, Moment Tensor Solution. s67,c97; s121,c205; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.80±.12; $M_{\theta\theta}$3.30±.10; $M_{\phi\phi}$-2.50±.11; $M_{r\theta}$-0.16±.28; $M_{\theta\phi}$6.27±.09; $M_{\phi r}$1.94±.30; Best double couple: $M_0$7.20100×10^{16} NP1:ϕ_s193.00000°, δ84.00000°, λ-164.00000°. NP2:ϕ_s102.00000°, δ74.00000°, λ-7.00000°. Principal axes: T 7.4120, Plg6.0000°, Azm327.0000°; N -0.4230, Plg73.0000°, Azm215.0000°; P -6.9910, Plg16.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **10** 19:36:52.1±1.9, 4°.94S×148°.96E, h43^{km}±17^{km}, mb4.1/19, mb1 4.2/22, mb1mx4.0/47, mbtmp4.3/22, ML3.1/3, MS4.5/24, Ms1 4.5/24, ms1mx4.4/32 Error ellipse: s-maj=18.6km s-min=9.5km az=95.0*

ISC 10 19:36:51.0±0.4**, 4°.96S**±0°.05×**149°.10E**±0°.07**, h35^{km}, n107, σ1^{s}.72**/93**, mb4.9**/58**, MS4.6**/25**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.14	76	*e*Pn	Pn	19 37 37.7	-0.4
MANU	Manus Island	3.37	329	*e*Pn	Pn	19 37 39.9	-1.3
PMG	Port Moresby	4.83	203	P	Pn	19 38 01.8	+0.6
	13nm,0.3s,baz=55,slow=7.9,SNR=32						
PMG				S	Sn	19 38 57.6	+1.7
	38nm,0.3s,baz=53,slow=18,SNR=11						
PMG	Port Moresby	4.83	203	*e*Pn	Pn	19 38 02.8	+1.7
PMG				*e*Sn	Sn	19 38 57.6	+1.7
JAY	Jayapura	8.72	286	P	Pn	19 38 53.6	-1.2
	0.4nm,0.3s,baz=360,slow=7.7,SNR=4.4						
JAY	Jayapura	8.72	286	P	Pn	19 38 53.1	-1.7
GENI	Genyem	9.22	284	P	Pn	19 39 00.2	-1.4
HNR	Honiara	11.64	113	LR	LR	19 43 34.9	
	comp=Z,3µm,19.9s,baz=276,slow=34						
SRPI	Serui, Papua	13.20	283	P	Pn	19 39 52.9	-3.2
CTA	Charters Tower	15.30	190	P	Pn	19 40 24.6	+0.2
	0.2nm,0.3s,baz=13,slow=14,SNR=2.7						
CTA				LR	LR	19 45 49.6	
	comp=Z,2µm,20.8s,baz=14,slow=35						
GUMO	Guam	18.90	347	LR	LR	19 46 47.9	
	comp=Z,1µm,21.3s,baz=170,slow=32						
MTN	Manton Dam	19.40	245	*e*P	P	19 41 12.7	-1.5
	274nm,2.0s						
EIDS	Eidsvold	20.39	175	*e*P	P	19 41 24.9	0.0
	45nm,1.1s						
WRAB	Tennant Creek	20.69	223	*e*P	P	19 41 26.8	-1.4
	81nm,0.6s						
WB2	Warramunga Arr	20.69	223	*e*P	P	19 41 26.5	-1.8
	85nm,0.6s						
WR1	Warramunga Arr	20.70	223	*e*P	P	19 41 27.0	-1.3
WRA	Warramunga Arr	20.70	223	P	P	19 41 27.0	-1.3
	67nm,0.6s,baz=51,slow=10,SNR=398						
LBMI	Labuha	22.00	281	P	P	19 41 39.2	-3.1
TNTI	Ternate	22.45	284	*e*P	P	19 41 46.0	-1.2
	141nm,1.7s						
TNTI	Ternate	22.45	284	P	P	19 41 46.2	-1.0
ASAR	Alice Springs	23.68	217	P	P	19 41 58.3	-1.4
	30nm,0.6s,baz=51,slow=9.1,SNR=537						
ASAR				S	S	19 46 12.7	+0.3
	1.3nm,0.9s,baz=32,slow=20,SNR=3.1						
ASAR				LR	LR	19 52 38.8	
	comp=Z,2µm,18.0s,baz=52,slow=40						

DZM	Mont Dzumac	23.90	137	eP	P	19 42 04.9	+3.1
	227nm,1.4s						
DZM				eLR	LR	19 48 09.4	
	comp=Z,5µm,23.3s						
DZM	Mont Dzumac	23.90	137	P	P	19 42 02.8	+1.0
	31nm,1.0s,baz=308,slow=18,SNR=4.8						
DZM				LR	LR	19 50 06.0	
	comp=Z,4µm,21.3s,baz=318,slow=33						
DZM	Mont Dzumac	23.90	137	eP	P	19 42 02.1	+0.3
	87nm,1.1s						
SOEI	Soe	25.08	258	eP	P	19 42 11.8	-0.9
	206nm,1.3s						
SOEI	Soe	25.08	258	P	P	19 42 23.3	+11
ARMA	Armidale	25.44	175	eP	P	19 42 16.2	+0.4
	20nm,0.9s						
BATI	Baumata	25.74	257	P	P	19 42 17.2	-1.3
	76nm,0.9s,baz=55,slow=4.8,SNR=7.6						
BATI				LR	LR	19 54 38.2	
	comp=Z,2µm,21.3s,baz=103,slow=42						
BATI	Baumata	25.74	257	P	P	19 42 17.0	-1.6
LUWI	Luwuk	26.58	278	P	P	19 42 22.0	-4.1
EDFI	Ende, Flores	27.47	261	P	P	19 42 38.7	+4.4
STKA	Stephens Creek	27.69	194	P	P	19 42 35.8	-0.1
	2.4nm,0.6s,baz=26,slow=12,SNR=9.5						
STKA				LR	LR	19 54 03.5	
	comp=Z,1µm,18.4s,baz=14,slow=37						
STKA	Stephens Creek	27.69	194	eP	P	19 42 36.6	+0.7
	4.4nm,1.0s						
BBOO	Buckleboo	30.27	202	eP	P	19 42 58.7	-0.2
	37nm,1.3s						
FORT	Forrest	32.44	215	eP	P	19 43 16.9	-1.0
	32nm,1.0s						
TOO	Toolangi	32.63	185	eP	P	19 43 19.8	+0.2
	17nm,0.9s						
PSA00	Pilbara Seismi	32.82	237	eP	P	19 43 19.6	-1.8
	22nm,0.9s						
JNU	Nakatsue	41.63	337	P	P	19 44 35.7	-0.3
	31nm,0.9s,baz=148,slow=2.8,SNR=17						
JNU	Nakatsue	41.63	337	eP	P	19 44 35.3	-0.6
	39nm,1.0s						
URZ	Urewera	41.81	146	LR	LR	19 59 32.7	
	comp=Z,2µm,21.2s,baz=306,slow=32						
MJAR	Matsushiro Arr	42.52	347	P	P	19 44 43.0	-0.2
	1.3nm,0.8s,baz=165,slow=8.6,SNR=3.6						
MJAR				LR	LR	20 00 30.0	
	comp=Z,199nm,18.0s,baz=165,slow=33						
MAJO	Matsushiro	42.52	347	eP	P	19 44 43.0	-0.2
RPZ	Rata Peaks	43.19	157	P	P	19 44 49.9	+1.4
	6.5nm,0.7s,baz=320,slow=5.3,SNR=5.3						
RPZ				LR	LR	20 01 18.1	
	comp=Z,1µm,19.7s,baz=326,slow=34						
KSRS	Korea Array	46.58	337	P	P	19 45 14.7	-0.9
	4.4nm,0.9s,baz=141,slow=7.9,SNR=19						
KSRS				LR	LR	20 03 09.6	
	comp=Z,575nm,20.7s,baz=152,slow=34						
KS15	Wonju Array Si	46.58	337	eP	P	19 45 15.5	0.0
	20nm,1.0s						
SKNT	Sakolnakorn	49.62	297	P	P	19 45 44.8	+5.4
	12nm,0.9s						
NONG	Nongkai	50.77	298	P	P	19 45 49.6	+1.5
	0.4nm,0.9s						
TRTT	Trang	50.91	284	P	P	19 45 54.5	+5.3
	25nm,1.5s						
CHAI	Chaiyaphum	51.02	295	P	P	19 45 58.6	+8.6
	10µm,1.3s						
USA0B	Ussuriysk Arra	51.30	344	eP	P	19 45 52.1	+0.5
	13nm,1.1s						
USRK	Ussuriysk Ar.	51.30	344	P	P	19 45 52.7	+1.1
	7.0nm,0.8s,baz=181,slow=8.3,SNR=28						
USRK				LR	LR	20 05 11.6	
	comp=Z,408nm,21.2s,baz=142,slow=33						
ENH	Enshi	51.62	315	eP	P	19 45 53.4	-0.9
	66nm,2.0s						
MDJ	Mudanjiang	52.37	342	eP	P	19 46 00.0	+0.4
	15nm,1.0s						
UTTA	Uttaradit	52.95	296	P	P	19 46 12.1	+7.8
	17µm,1.3s						
PHRA	Phrae	53.50	297	P	P	19 46 16.1	+7.7
	2.3nm,1.2s						
KMI	Kunming	54.05	306	P	P	19 46 13.4	+0.7
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
KMI				pmax	pmax		
	comp=Z,200nm,7.1s						
PAYA	Payao	54.13	298	P	P	19 46 21.0	+7.9
	comp=Z,34µm,1.2s						
XAN	Xi'an	54.25	319	eP	P	19 46 12.8	-0.9
	comp=Z,24nm,1.3s						
XAN	Xi'an	54.25	319	P	P	19 46 12.8	-0.9
XAN				pP	sP	19 46 46.6	+18
XAN				S	S	19 53 55.6	+6.6
XAN	Xi'an	54.25	319	SS	SS	19 57 39.4	+7.9
XAN				pmax	pmax		
	comp=Z,15nm,2.1s						
XAN				pmax	pmax		
	comp=Z,200nm,5.3s						
XAN				LR	LR		
	comp=N,360nm,16.3s						
XAN				LR	LR		
	comp=E,250nm,20.6s						
XAN				LR	LR		
	comp=Z,640nm,16.3s						
CM31	Chiang Mai Arr	54.63	297	eP	P	19 46 15.8	-0.9
	comp=Z,26nm,1.3s						
CMAR	Chiang Mai Arr	54.63	297	P	P	19 46 16.1	-0.6
	comp=Z,1.9nm,0.9s,baz=116,slow=5.6,SNR=8.1						
CMAR				LR	LR	20 08 44.4	
	comp=Z,118nm,21.3s,baz=122,slow=35						
CMMT	Chiang Mai	54.75	297	P	P	19 46 25.0	+7.4
	comp=Z,8.6nm,1.4s						
PETK	Petropavlovsk-	58.30	6	LR	LR	20 08 58.3	
	comp=Z,228nm,21.1s,baz=180,slow=33						
PPT	Papeete	61.19	107	LR	LR	20 09 55.1	
	comp=Z,125nm,20.6s,baz=244,slow=32						
PPT2	Papeete2	61.19	107	eLR	LR	20 05 28.8	
	comp=Z,250nm,24.0s						
TBI	Tubuai	61.86	114	eLQ	LQ	20 03 09.5	
	comp=Z,770nm,34.0s						
TBI				eLR	LR	20 05 50.9	
	comp=Z,939nm,34.8s						
SHL	Shillong	63.23	302	eP	P	19 47 15.8	-0.7
	comp=Z,64nm,1.4s						
ULN	Ulaanbaatar	64.23	330	eP	P	19 47 23.4	+0.7
	comp=Z,19nm,1.2s						
SONA0	Songino Array	64.54	330	eP	P	19 47 25.5	+0.9
SONM	Songino Array	64.54	330	P	P	19 47 25.5	+0.9
	comp=Z,6.6nm,1.0s,baz=141,slow=5.4,SNR=34						
SONM				LR	LR	20 15 59.3	
	comp=Z,316nm,19.4s,baz=129,slow=36						
LSA	Lhasa	65.31	306	eP	P	19 47 30.4	0.0
	comp=Z,29nm,1.8s						
TLY	Talaya	68.41	331	P	P	19 47 49.7	+0.6
	comp=Z,0.7nm,0.4s,baz=151,slow=5.0,SNR=7.3						
TLY	Talaya	68.41	331	eP	P	19 47 49.5	+0.3
	comp=Z,5.8nm,0.8s						
YAK	Yakutsk	68.45	350	eP	P	19 47 48.8	-0.3
	comp=Z,18nm,1.2s						
VNDA	Vanda	72.83	177	P	P	19 48 15.9	+0.2
	comp=Z,1.0nm,0.8s,baz=328,slow=6.1,SNR=8.7						
VNDA				LR	LR	20 16 28.4	
	comp=Z,377nm,19.9s,baz=330,slow=33						
VNDA	Vanda	72.83	177	eP	P	19 48 16.1	+0.4
MK31	Makanchi Array	78.04	320	eP	P	19 48 45.1	-1.0
	comp=Z,8.8nm,1.2s						
MK32	Makanchi Array	78.04	320	eP	P	19 48 46.1	-0.1
MKAR	Makanchi Array	78.04	320	P	P	19 48 46.1	-0.1
	comp=Z,0.8nm,0.6s,baz=102,slow=8.8,SNR=3.3						
MKAR				LR	LR	20 22 37.6	
	comp=Z,304nm,19.1s,baz=94,slow=35						
MAKZ	Makanchi	78.25	320	eP	P	19 48 47.3	0.0
	comp=Z,20nm,1.4s						
ZAA0	Zalesovo Array	79.26	327	eP	P	19 48 51.9	-0.8
	comp=Z,4.1nm,0.8s						
ZALV	Zalesovo Beam	79.26	327	P	P	19 48 51.5	-1.1
	comp=Z,1.4nm,0.5s,baz=103,slow=6.7,SNR=6.8						
ZALV				LR	LR	20 23 46.5	
	comp=Z,348nm,19.7s,baz=70,slow=36						
ZAA1	Zalesovo Array	79.26	327	eP	P	19 48 51.5	-1.1
KURK	Kurchatov	81.64	323	eP	P	19 49 05.9	+0.4
	comp=Z,8.7nm,0.9s						
KURBB	Kurchatov Arra	81.67	323	P	P	19 49 03.5	-2.1
	comp=Z,1.2nm,0.8s,baz=110,slow=3.8,SNR=10						
RND	Reindeer	82.32	24	eP	P	19 49 09.5	+0.5
	comp=Z,7.4nm,1.0s						
DHY	Denali Highway	82.77	24	eP	P	19 49 12.4	+1.0
	comp=Z,6.0nm,0.8s						
WRH	Wood River Hil	83.11	23	eP	P	19 49 12.9	0.0
	comp=Z,7.0nm,1.1s						
ILAR	Eielson Array	83.71	23	P	P	19 49 14.6	-1.3
	comp=Z,0.8nm,0.8s,baz=251,slow=4.8,SNR=4.7						
ILAR				LR	LR	20 23 16.9	
	comp=Z,194nm,20.7s,baz=246,slow=33						
MAW	Mawson	84.01	203	LR	LR	20 25 14.8	
	comp=Z,401nm,20.0s,baz=62,slow=35						
GAR	Garm	84.42	310	eP	P	19 49 19.9	-0.5
	comp=Z,33nm,1.4s						
QSPA	South Pole Qui	85.00	180	eP	P	19 49 22.1	-0.6
	comp=Z,9.2nm,0.9s						
EGAK	Eagle	85.97	24	eP	P	19 49 27.0	-0.3
	comp=Z,16nm,1.4s						
HYT	Haines Junctio	86.29	28	eP	P	19 49 28.9	-0.2
	comp=Z,9.5nm,1.0s						
DAWY	Dawson	86.45	25	eP	P	19 49 30.5	+0.7
	comp=Z,16nm,1.4s						
BVAR	Borovoye Array	87.17	324	P	P	19 49 32.8	-0.7
	comp=Z,1.2nm,0.7s,baz=104,slow=6.3,SNR=8.2						
BRVK	Borovoye	87.24	324	eP	P	19 49 33.2	-0.6
	comp=Z,4.4nm,1.0s						
GEYT	Alibeck	93.79	308	P	P	19 50 02.8	-2.1
	comp=Z,0.8nm,0.7s,baz=85,slow=4.6,SNR=2.5						
GEYT				LR	LR	20 34 07.3	
	comp=Z,332nm,20.5s,baz=90,slow=37						
NVAR	Mina Array Bea	95.08	52	LR	LR	20 30 34.5	
	comp=Z,184nm,18.1s,baz=270,slow=34						
YKA	Yellowknife Ar	97.28	28	P	Pdif	19 50 22.1	+1.9
	comp=Z,0.8nm,0.8s,baz=272,slow=4.3,SNR=3.8						
YKA				LR	LR	20 31 09.0	
	comp=Z,21nm,20.1s,baz=282,slow=34						
YKB5	Yellowknife Ar	97.28	28	eP	Pdif	19 50 22.1	+1.9
CLL	Collm	121.16	329	ePKPdf	PKiKP	19 55 43.0	+2.7
CLL				ePS	PS	20 07 06.0	+3.0
CLL				ePPS	PPS	20 08 36.0	
CLL				eSS	SS	20 13 54.0	+14
CLL				eSSS	SSS	20 18 12.0	
CLL				e		20 19 30.0	
CLL				eSSSS		20 22 12.0	
CLL				Lm	MLR	20 48 00.0	
	comp=N,300nm,21.5s						
CLL				Lm	MLR	20 48 00.0	
	comp=E,200nm,21.4s						
CLL				Lm	MLR	20 48 00.0	
	comp=Z,400nm,21.0s						
TOA0	Torodi Ar. Sit	146.84	286	ePKPbc	PKPbc	19 56 30.7	+0.1
TORD	Torodi Ar. Bea	146.84	286	PKPbc	PKPdf	19 56 29.3	+0.5
	comp=Z,4.1nm,0.9s,baz=64,slow=3.5,SNR=28						
TOA1	Torodi Ar. Sit	146.84	286	ePKPdf	PKPdf	19 56 29.3	+0.5
PTGA	Pitinga	150.42	100	ePKPab	PKPab	19 56 45.9	-0.5

IDC ***10*** *19:41:22.4±0.8, 36°.85N×79°.76E, h0^{km}, mb3.6/12, mb1 3.8/16, mb1mx3.6/67, mbtmp3.6/16, ML3.5/4, Error ellipse: s-maj=23.2km s-min=17.3km az=38.0*

ISCJB ***10*** *19:41:23.3±0.4, 36°.97N±0°.04×79°.72E±0°.08, h10^{km}, mb3.6/13, Error ellipse: s-maj=10.0km s-min=5.2km az=157.3*

NNC ***10*** *19:41:28.0±3.5, 37°.17N×79°.72E, h3^{km}±11^{km}, mb4.1, mpv4.0, Error ellipse: s-maj=27.1km s-min=17.9km az=13.0*

BJI ***10*** *19:41:27.0±0.0, 37°.16N×79°.75E, h7^{km}, ML3.9/6, Ms3.6/2*

ISC 10 19:41:23.8±0.8**, 36°.89N**±0°.08×**79°.81E**±0°.09**, h10^{km}, n33, σ2^{s}.19**/27**, mb3.7**/13**, 8C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	6.28	355	Pg	Pn	19 43 02.8	+6.2
	5.7nm,0.6s						
UZB				Lg	Lg	19 44 08.9	
	34nm,0.6s						
PDGK	Podgornoye	6.43	358	Pg	Pn	19 43 04.5	+5.7
	2.4nm,0.5s						
PDGK				Lg	Lg	19 44 12.2	
	37nm,0.6s						
PDGK	Podgornoye	6.43	358	⇓Pn	Pn	19 43 00.2	+1.4
	6.1nm,0.5s						
PDGK				⇑Pg	Pg	19 43 21.5	-5.6
	9.8nm,0.5s						
PDGK				⇓Sn	Sn	19 44 12.0	-0.3
	72nm,0.6s						
KTMS	Ketmen	6.56	3	Pg	Pn	19 43 05.8	+5.3
	6.2nm,0.2s						
KTMS				Lg	Lg	19 44 14.8	
	49nm,0.5s						
KNDC	Almaty	6.69	342	⇑Pg	Pb	19 43 23.8	+3.6
	11nm,0.5s						
KNDC				⇓Lg	Lg	19 44 50.3	
	72nm,0.7s						
TKM2	Tokmak 2	6.84	333	⇓Pg	Pb	19 43 20.0	-2.8
	3.5nm,0.5s						
TKM2				⇑Lg	Lg	19 44 56.2	
	15nm,0.7s						
AAK	Ala-Archa	7.05	326	Pn	Pn	19 43 14.9	+7.7
	0.3nm,0.3s,baz=146,slow=7.3,SNR=2.5						
AAK				Pg	Pb	19 43 28.5	+2.1
	0.9nm,0.3s,baz=203,slow=2.6,SNR=4.9						
AAK				Lg	Lg	19 45 02.7	
	0.4nm,0.3s,baz=222,slow=18,SNR=4.6						
AAK	Ala-Archa	7.05	326	⇑Pg	Pg	19 43 31.8	-7.0
	8.9nm,1.1s						
AAK				⇑Lg	Lg	19 45 04.2	
	49nm,0.9s						
WMQ	Urumqi	9.17	39	P	Pn	19 43 39.6	+3.4
KK31	Karatay Array	9.45	314	⇓Pg	Pn	19 43 48.4	+8.4
	0.3nm,0.3s,baz=156,slow=11,SNR=7.0						
KK31				⇑Sn	Sn	19 45 27.7	+1.4
	2.1nm,0.6s						
KK31				⇓Lg	Lg	19 46 27.6	
	5.2nm,0.8s						
KOLN	Koldanda	9.64	160	eP	Pn	19 43 46.2	+3.4
GKN	Gorkha	9.75	154	eP	Pn	19 43 48.7	+4.4
	11nm,0.3s						
MK31	Makanchi Array	10.07	10	Pn	Pn	19 43 48.6	+0.2
	0.3nm,0.3s,baz=193,slow=13,SNR=70						
MK31				Pg		19 44 01.0	
	0.5nm,0.2s,baz=188,slow=14,SNR=8.2						
MK31				⇑Sn	Sn	19 45 36.3	-5.1
	11nm,0.7s,baz=194,slow=23						
MK31				⇑Lg	Lg	19 45 53.2	
	9.0nm,0.6s						
MKAR	Makanchi Array	10.07	10	Pn	Pn	19 43 48.8	+0.4
	0.7nm,0.3s,baz=195,slow=13,SNR=44						
MKAR				Sn	Sn	19 45 36.2	-5.1
	1.9nm,0.3s,baz=191,slow=23,SNR=8.5						
KKN	Kakani	10.18	151	eP	Pn	19 43 55.0	+4.7
PKIN	Phulchoki	10.42	151	eP	Pn	19 43 57.5	+4.0
	5.4nm,0.4s						
PKI	Pulchoki	10.43	151	eP	Pn	19 43 57.6	+3.9
	6.0nm,0.3s						
GEYT	Alibeck	17.27	280	P	P	19 45 25.9	-0.6
	0.2nm,0.3s,baz=91,slow=13,SNR=3.2						
ZALV	Zalesovo Beam	17.41	10	P	P	19 45 28.1	+0.2
	0.2nm,0.3s,baz=187,slow=10,SNR=2.5						
BVAR	Borovoye Array	17.43	341	P	P	19 45 28.4	+0.2
	0.5nm,0.3s,baz=165,slow=12,SNR=8.5						
SONM	Songino Array	22.37	52	P	P	19 46 24.0	+1.8
	0.2nm,0.4s,baz=246,slow=11,SNR=2.5						
ARU	Arti	24.20	331	P	P	19 46 40.6	+0.2
	0.9nm,0.6s,baz=185,slow=24,SNR=3.9						
FINES	FINESS Array B	41.23	324	P	P	19 49 08.9	+0.4
	1.4nm,0.5s,baz=106,slow=9.2,SNR=17						
HFS	Hagfors	47.16	321	P	P	19 49 56.0	-0.1
	1.5nm,0.7s,baz=73,slow=9.7,SNR=5.2						
NOA	NORSAR Array B	48.35	323	P	P	19 50 05.0	-0.4
	0.3nm,0.5s,baz=75,slow=5.4,SNR=2.4						
GERES	GERESS Array B	48.45	306	P	P	19 50 07.4	+0.9
	0.2nm,0.3s,baz=83,slow=8.1,SNR=3.3						
EKA	Eskdalemuir Ar	56.87	317	P	P	19 51 08.4	-0.1
	0.3nm,0.5s,baz=60,slow=7.5,SNR=3.1						
ILAR	Eielson Array	72.28	19	P	P	19 52 49.5	+0.5
	0.5nm,0.8s,baz=324,slow=3.8,SNR=4.3						
TORD	Torodi Ar. Bea	72.79	274	P	P	19 52 52.6	-0.2
	0.7nm,0.4s,baz=38,slow=6.1,SNR=21						
WRA	Warramunga Arr	76.41	128	P	P	19 53 13.5	-0.1
	1.1nm,0.9s,baz=324,slow=7.0,SNR=3.6						
ASAR	Alice Springs	78.90	131	P	P	19 53 28.2	+0.7
	0.3nm,0.7s,baz=305,slow=5.7,SNR=4.3						
YKA	Yellowknife Ar	80.28	7	P	P	19 53 34.6	+0.2
	0.3nm,0.4s,baz=339,slow=5.6,SNR=3.6						
STKA	Stephens Creek	89.52	131	P	P	19 54 17.4	-3.8
	0.9nm,0.6s,baz=302,slow=8.9,SNR=3.6						

KRSC 10 19:43:16.4±1.1**, 55°.98N**×**163°.68E, h6^{km}**±13^{km}**, ML4.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.54	296	eP	Pg	19 43 26.9	+0.2
KBTR				eS	Sg	19 43 34.0	+0.4
KBG	Krutoberegovo	0.61	298	eP	Pg	19 43 28.2	0.0
KBG				eS	Sg	19 43 36.0	-0.1
SMKR	Semkarok	1.37	297	eP	Pn	19 43 41.8	-0.4
SMKR				eS	Sb	19 43 59.9	-0.5
BDR	Baidarnaya	1.50	294	eP	Pn	19 43 44.3	+0.4
BDR				eS	Sn	19 44 03.8	-0.1
BKI	Bering	1.52	120	i P	Pb	19 43 44.7	-0.2
BKI				eS	Sg	19 44 04.8	-0.2
SRKR	Sorokina	1.56	297	eP	Pn	19 43 44.8	+0.1
SRKR				eS	Sn	19 44 05.0	-0.2
CIRR	Tsirk	1.65	276	eP	Pb	19 43 47.0	-0.3
CIRR				eS	Sn	19 44 07.8	+0.2
BZGR	Bezymyannyi-Gr	1.68	270	eP	Pn	19 43 46.5	+0.1
LGNR	Loginova	1.68	275	eP	Pb	19 43 48.1	+0.2
KLY	Klyuchi	1.73	283	eP	Pn	19 43 46.2	-0.7
KLY				eS	Sn	19 44 07.0	-2.3
KRSR	Krestovskiy	1.76	279	eP	Pn	19 43 48.3	+0.8
KRSR				eS	Sn	19 44 10.8	+0.5
BZWR	Bezymyannyi-We	1.79	271	eP	Pb	19 43 49.8	+0.1
MKZ	Mys Kozlova	1.81	219	eP	Pb	19 43 49.2	-0.6
MKZ				eS	Sb	19 44 12.3	-0.4
KIRR	Kirishev	1.88	271	eP	Pb	19 43 50.6	-0.5
KIRR				eS	Sb	19 44 14.8	-0.1
KPT	Kopyto	1.94	271	eP	Pb	19 43 51.9	-0.3
KPT				eS	Sb	19 44 17.3	+0.6
TUMD	Tumrok D	2.02	249	eP	Pb	19 43 52.9	-0.5
TUMD				eS	Sb	19 44 18.2	-0.6
KZV	Kizimen	2.11	247	eP	Pb	19 43 54.1	-1.0
TUMR	Tumrok	2.12	252	eP	Pb	19 43 54.9	-0.4
TUMR				eS	Sb	19 44 22.0	+0.1
KOZ	Kozyrevsk	2.14	274	eP	Pb	19 43 55.7	+0.2
SRDR	Sredinnyy	2.24	280	eP	Pb	19 43 55.8	-1.5
SRDR				eS	Sb	19 44 23.8	-1.5
ESO	Esso	2.80	271	eP	Pb	19 44 04.4	-2.4
SPN	Mys Shipunski	3.58	218	eP	Pn	19 44 14.4	+1.9
SDLR	Sedlovina	3.88	228	eP	Pn	19 44 19.6	+2.9
SMAR	Somma	3.93	228	eP	Pn	19 44 20.2	+2.8
AVH	Avacha	3.95	229	eP	Pn	19 44 21.6	+4.0
GNL	Ganaly	4.03	238	eP	Pn	19 44 22.3	+3.6
DALK	Dalny	4.12	226	eP	Pn	19 44 23.1	+3.3
PETK	Petropavlovsk-	4.51	233	Pn	Pn	19 44 29.3	+4.0
	0.3nm,0.3s,baz=57,slow=16,SNR=5.9						
PETK				Lg	Lg	19 44 59.6	
	2.2nm,0.3s,baz=213,slow=15,SNR=21						

IDC ***10*** *19:44:01.9±1.4, 51°.73N×156°.87E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.4/64, mbtmp3.7/6, MS4.3/4, Ms1 4.3/4, ms1mx3.2/42, Error ellipse: s-maj=40.3km s-min=23.3km az=92.0*

KRSC ***10*** *19:44:04.7±2.2, 49°.79N×157°.10E, h16^{km}±39^{km}, ML4.1*

ISC 10 19:44:02.9±1.6**, 49°.5N**±0°.1×**156°.4E**±0°.1**, h57^{km}, n28, σ1^{s}.95**/32**, mb3.7**/6**, MS4.2**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.16	351	eP	Pn	19 44 22.7	-0.2
SKR				eS	Sn	19 44 35.6	-2.2
PAU	Pauzhetka	1.95	8	eP	Pn	19 44 34.5	+0.9
PAU				eS	Sn	19 44 55.9	-1.0
ASAK	Asacha	3.01	18	eP	Pn	19 44 50.3	+2.2
MTVR	Mutnovka	3.16	20	eP	Pn	19 44 51.8	+1.6
MTVR				eS	Sn	19 45 26.2	-0.6
RUS	Russkaya	3.20	24	eP	Pn	19 44 51.1	+0.5
RUS				eS	Sn	19 45 25.4	-2.0
APC	Apacha	3.43	8	eP	Pn	19 44 56.0	+2.3
APC				eS	Sn	19 45 33.9	+0.8
KRMR	Karymshinskiy	3.48	18	eP	Pn	19 44 56.4	+2.0
KRMR				eS	Sn	19 45 33.9	-0.4
DALK	Dalny	3.80	22	eP	Pn	19 45 00.7	+1.9
DALK				eS	Sn	19 45 40.4	-1.8
UGLR	Uglovaya	3.98	22	eP	Pn	19 45 03.7	+2.3
AVH	Avacha	4.01	21	eP	Pn	19 45 04.3	+2.5
AVH				eS	Sn	19 45 47.6	0.0
SMAR	Somma	4.03	21	eP	Pn	19 45 05.1	+3.0
SDLR	Sedlovina	4.06	22	eP	Pn	19 45 04.9	+2.4
KRX	Arik	4.08	19	eP	Pn	19 45 06.5	+3.7
NLC	Nalytchevo	4.08	26	eP	Pn	19 45 03.6	+0.9
NLC				eS	Sn	19 45 46.6	-2.6
SPN	Mys Shipunski	4.23	31	eP	Pn	19 45 05.4	+0.6
SPN				eS	Sn	19 45 49.9	-2.9
GNL	Ganaly	4.28	12	eP	Pn	19 45 09.1	+3.6
MKZ	Mys Kozlova	6.01	31	eP	Pn	19 45 30.1	+1.0
KBTR	Krutoberegovo	7.73	28	eP	Pn	19 45 54.3	+1.7
JNU	Nakatsue	25.04	239	LR	LR	20 00 00.5	
	comp=Z,517nm,21.9s,baz=162,slow=36						
MKAR	Makanchi Array	47.63	297	P	P	19 52 32.4	-0.6
	0.2nm,0.4s,baz=60,slow=8.5,SNR=2.9						
KURBB	Kurchatov Arra	47.77	303	P	P	19 52 33.3	-0.6
	0.9nm,0.6s,baz=66,slow=8.2,SNR=7.3						
BVAR	Borovoye Array	50.80	309	P	P	19 52 56.0	-1.1
	0.3nm,0.5s,baz=55,slow=6.8,SNR=3.6						
WRA	Warramunga Arr	71.89	202	P	P	19 55 39.1	+19
	1.1nm,0.8s,baz=26,slow=7.8,SNR=3.2						
ASAR	Alice Springs	75.58	201	P	P	19 56 01.1	+20
	0.4nm,0.7s,baz=23,slow=5.8,SNR=5.5						
MMAI	Mount Meron Ar	82.55	313	P	P	19 56 20.5	+0.9
	1.1nm,0.5s,baz=47,slow=8.5,SNR=3.5						
CMIG	Matias Romero	88.77	65	LR	LR	20 34 57.9	
	comp=Z,128nm,21.8s,baz=274,slow=35						
APG	El Apazote	93.00	63	LR	LR	20 39 54.9	
	comp=Z,286nm,19.3s,baz=276,slow=37						
JTS	Las Juntas de	99.95	61	LR	LR	20 45 56.6	
	comp=Z,68nm,18.4s,baz=346,slow=38						

SNET 10 19:45:54.8±0.7**, 12°.00N**×**87°.83W, h13^{km}**±20^{km}**, ML3.5, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSGN	Cosiguina Volc	1.01	15	eP	Pb	19 46 12.2	-1.9
CSGN				eS	Sb	19 46 26.8	-0.6
CNGN	Cerro Negro	1.21	66	eP	Pn	19 46 15.5	-2.0
COPN	Copaltepe	1.22	81	eP	Pn	19 46 15.4	-2.2
CNCH	Conchagua	1.27	360	eP	Pn	19 46 16.2	-2.2
CNCH				eS	Sb	19 46 33.2	-1.8
CNCH				IAML		19 46 37.2	
	comp=Z,2µm,0.4s						
LCND	La Caada	1.30	357	eP	Pn	19 46 16.7	-2.1
LCND				IAML		19 46 37.3	
	comp=Z,480nm,0.2s						
PACA	Pacayal	1.54	342	eP	Pn	19 46 20.4	-1.7
TECA	Tecapa	1.63	336	eP	Pn	19 46 22.1	-1.3

IDC ***10*** *19:55:44.4±1.4, 10°.55S×152°.61E, h0^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.7/32, mbtmp3.8/9, ML3.5/2, Error ellipse: s-maj=44.5km s-min=21.8km az=117.0*

ISCJB ***10*** *19:55:48.3±1.1, 10°.7S±0°.1×152°.4E±0°.2, h33^{km}, mb3.7/6, Error ellipse: s-maj=24.7km s-min=12.9km az=20.4*

ISC 10 19:55:49.9±1.2**, 10°.6S**±0°.1×**152°.5E**±0°.2**, h35^{km}, n10, σ0^{s}.87**/11**, mb4.0**/6**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.37	283	Pn	Pn	19 57 07.4	-0.1
	0.8nm,0.3s,baz=94,slow=13,SNR=2.9						
PMG				Sn	Sn	19 58 25.6	+17
	1.2nm,0.3s,baz=150,slow=20,SNR=2.2						
CTA	Charters Tower	11.14	212	Pn	Pn	19 58 27.3	+0.5
	0.5nm,0.3s,baz=28,slow=14,SNR=5.8						
CTA				Sn	Sn	20 00 28.9	-1.3
	0.6nm,0.3s,baz=73,slow=17,SNR=5.9						
WRA	Warramunga Arr	19.77	240	P	Pn	20 00 19.0	+0.2
	0.1nm,0.3s,baz=66,slow=10,SNR=5.4						
ASAR	Alice Springs	21.93	231	P	P	20 00 41.6	+1.2
	0.4nm,0.7s,baz=57,slow=10,SNR=5.9						
STKA	Stephens Creek	23.41	204	P	P	20 00 55.6	-0.1
	1.3nm,0.8s,baz=344,slow=7.4,SNR=3.2						
SONM	Songino Array	71.10	329	P	P	20 07 05.5	+0.7
	1.0nm,0.8s,baz=132,slow=4.1,SNR=6.9						
MKAR	Makanchi Array	84.51	320	P	P	20 08 18.8	-0.5
	1.0nm,0.8s,baz=115,slow=4.7,SNR=8.8						
ZALV	Zalesovo Beam	85.81	327	P	P	20 08 24.2	-1.4
	0.7nm,0.4s,baz=120,slow=8.5,SNR=3.8						
ILAR	Eielson Array	87.66	22	P	P	20 08 34.4	-0.1
	1.0nm,0.8s,baz=256,slow=4.8,SNR=11						

TORD	**Torodi Ar. Bea**	**151.30**	**278**	PKPbc	**PKiKP**	**20 15 41.4**	**+0.1**
	0.8nm,0.7s,baz=100,slow=2.9,SNR=6.1						

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*ISCJB **10** 19:58:13.3±0.5, 37°.78N±0°.03×29°.15E±0°.04, h5km±6km, Error ellipse: s-maj=5.8km s-min=4.7km az=164.9*
*DDA **10** 19:58:13.3, 37°.78N×29°.17E, h7km±1km, ML2.6*
*ISK **10** 19:58:13.5, 37°.76N×29°.13E, h7km, ML2.2/10*
ISC 10 19:58:13.3±1.2**, 37°.78N**±0°.03×**29°.17E**±0°.03**, h4**km±13km**, n15, σ0s.81**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.11**	**257**	PG	**Pg**	**19 58 15.6**	**+0.1**
DENT				SG	**Sg**	**19 58 17.6**	**+0.5**
KHAL	**Karahalli**	**0.64**	**23**	*i* P	**Pg**	**19 58 25.9**	**+0.2**
KHAL				*i* S	**Sg**	**19 58 34.0**	**0.0**
KHAL				IAML_P			
	comp=Z,1μm,0.2s						
BRDR	**BURDUR-Merkez**	**0.71**	**96**	*i* P	**Pg**	**19 58 27.5**	**+0.5**
BRDR				*i* S	**Sb**	**19 58 38.1**	**-0.4**
KULA	**Kula-Manisa**	**0.84**	**332**	PG	**Pb**	**19 58 30.0**	**-0.5**
MANT	**Manisa**	**0.86**	**326**	*i* P	**Pg**	**19 58 30.1**	**+0.4**
MANT				*i* S	**Sb**	**19 58 42.8**	**-0.1**
MANT				IAML_P			
	comp=Z,806nm,0.2s						
YER	**Yerkesik**	**0.95**	**228**	PG	**Pg**	**19 58 31.2**	**-0.4**
TURN	**Turunc**	**1.01**	**207**	PN	**Pn**	**19 58 36.7**	**+2.4**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**280**	PG	**Pb**	**19 58 33.4**	**-0.3**
AYDN	**Tasoluk**	**1.03**	**264**	*i* P	**Pb**	**19 58 33.1**	**-0.7**
AYDN				*i* S	**Sg**	**19 58 45.4**	**-1.0**
DALY	**Dalyan (Mula)**	**1.04**	**203**	PG	**Pg**	**19 58 33.3**	**0.0**
FETY	**Fethiye**	**1.14**	**183**	PN	**Pb**	**19 58 35.3**	**-0.4**
ELL	**Elmali**	**1.19**	**150**	PN	**Pn**	**19 58 36.7**	**-0.1**
KORT	**Korkueli**	**1.22**	**129**	PN	**Pn**	**19 58 37.9**	**+0.6**
SHUT	**Suhut-Afyon**	**1.33**	**54**	PN	**Pn**	**19 58 38.9**	**0.0**
DAT	**Datca**	**1.65**	**231**	PN	**Pb**	**19 58 43.2**	**-1.1**

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*DDA **10** 20:06:23.1, 38°.62N×31°.65E, h7km±1km, ML2.6*
*ISK **10** 20:06:23.9, 38°.62N×31°.73E, h13km, ML1.9/8*
ISC 10 20:06:23.3±1.1**, 38°.61N**±0°.03×**31°.67E**±0°.03**, h13**km±12km**, n16, σ0s.43**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIZT	**Kizilcal**	**0.31**	**32**	PG	**Pg**	**20 06 30.2**	**+0.4**
KIZT				SG	**Sb**	**20 06 35.1**	**-0.8**
KDHN	**Kadinhani**	**0.36**	**105**	*i* P	**Pb**	**20 06 31.6**	**-0.1**
KDHN				*i* S	**Sb**	**20 06 36.7**	**-0.6**
KDHN				IAML_P			
	comp=Z,4μm,0.2s						
DOGA	**KONYA_Doganhis**	**0.51**	**180**	*i* P	**Pg**	**20 06 33.6**	**+0.2**
DOGA				*i* S	**Sb**	**20 06 41.6**	**+0.1**
DOGA				IAML_P			
	comp=Z,890nm,0.2s						
BOLV	**Bolvadin**	**0.57**	**281**	*i* P	**Pg**	**20 06 34.4**	**-0.2**
BOLV				*i* S	**Sg**	**20 06 41.7**	**-0.5**
BOLV				IAML_P			
	comp=Z,2μm,0.1s						
LADK	**Ladik-KONYA**	**0.69**	**127**	PG	**Pg**	**20 06 36.7**	**0.0**
LADK				SG	**Sb**	**20 06 46.6**	**0.0**
AUSIV	**SIVRIHISAR**	**0.83**	**353**	PG	**Pb**	**20 06 40.5**	**+0.8**
SVRH	**Sivrihisar-ESK**	**0.84**	**352**	PG	**Pn**	**20 06 41.0**	**+0.1**
KONT	**Konya--Tatoy**	**0.86**	**141**	PG	**Pg**	**20 06 40.1**	**+0.1**
KONT	**Konya--Tatoy**	**0.86**	**141**	*i* P	**Pb**	**20 06 40.2**	**+0.1**
CHBY	**Cihanbeyli**	**0.96**	**92**	PG	**Pg**	**20 06 41.6**	**-0.2**
KMER	**Konya-Meram**	**1.01**	**147**	*i* P	**Pn**	**20 06 43.6**	**+0.4**
KULU	**Kulu**	**1.12**	**67**	PG	**Pg**	**20 06 44.9**	**-0.1**
BORA	**Eskisehir**	**1.58**	**324**	PN	**Pb**	**20 06 52.7**	**+0.3**
BORA	**Eskisehir**	**1.58**	**324**	*i* P	**Pb**	**20 06 53.1**	**+0.7**
BORA				IAML_P			
	comp=Z,456nm,0.1s						
SRCK	**Saricakaya, Es**	**1.64**	**331**	PN	**Pb**	**20 06 53.3**	**-0.1**
TVSB	**Tavsanli**	**1.91**	**297**	PN	**Pb**	**20 06 57.7**	**-0.4**

IDC 10 20:39:28.3±13.0**, 7°.13S×155°.53E, h348**km±152km**, mb3.0**/5**, mb1 3.3**/7**, mb1mx3.1**/24**, mbtmp3.9**/7**, Error ellipse: s-maj=70.7km s-min=25.1km az=166.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**15.72**	**214**	P	P	20 42 50.4	-0.5
	0.1nm,0.3s,baz=37,slow=10,SNR=3.0						
DZM	**Mont Dzumac**	**18.21**	**146**	P	P	20 43 18.2	+0.4
	0.7nm,0.3s,baz=319,slow=19,SNR=5.0						
WRA	**Warramunga Arr**	**24.18**	**236**	P	P	20 44 15.8	+1.2
	5.7nm,0.6s,baz=62,slow=9.7,SNR=74						
ASAR	**Alice Springs**	**26.49**	**229**	P	P	20 44 33.8	-1.4
	0.7nm,1.1s,baz=60,slow=9.5,SNR=3.6						
SONM	**Songino Array**	**69.73**	**327**	P	P	20 50 01.3	-0.3
	0.4nm,0.5s,baz=137,slow=6.2,SNR=5.7						
ILAR	**Eielson Array**	**83.30**	**21**	P	P	20 51 15.8	-0.7
	0.3nm,0.5s,baz=256,slow=5.8,SNR=4.8						
MKAR	**Makanchi Array**	**83.86**	**319**	P	P	20 51 20.6	+0.9
	0.3nm,0.8s,baz=120,slow=5.2,SNR=3.0						

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*ARE **10** 20:42:35.0±0.0, 13°.96S×73°.43W, h16km*
*IDC **10** 20:42:35.2±1.0, 13°.78S×73°.38W, h0km, mb3.8/3, mb1 4.0/8, mb1mx3.8/32, mbtmp3.9/8, ML3.8/5, MS3.2/1, Ms1 3.2/1, ms1mx2.8/24, Error ellipse: s-maj=35.6km s-min=20.8km az=29.0*
*NEIC **10** 20:42:42.0±0.7, 13°.97S×73°.52W, h59km±6km, mb3.9/1, ML4.1(ARE), Error ellipse: s-maj=29.7km s-min=12.5km az=216.0*
NEIC Felt [II] at Andahuaylas.
ISC 10 20:42:42.6±0.7**, 14°.0S**±0°.1×**73°.77W**±0°.10**, h85**km**, n23, σ2s.40**/23**, mb3.7**/3**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.60**	**303**	Pn	**Pn**	**20 43 36.3**	**+0.1**
	6.3nm,0.3s,baz=181,slow=10,SNR=8.2						
NNA				Sn	**Sn**	**20 44 14.3**	**-3.3**
	4.9nm,0.3s,baz=214,slow=11,SNR=2.9						
NNA	**Nana**	**3.60**	**303**	*e*Pn	**Pn**	**20 43 37.7**	**+1.6**
LPAZ	**La Paz**	**5.91**	**113**	Pn	**Pn**	**20 44 07.0**	**-1.1**
	0.8nm,0.3s,baz=305,slow=13,SNR=10						
LPAZ	**La Paz**	**5.91**	**113**	*e*Pn	**Pn**	**20 44 04.8**	**-3.3**
MNMC	**Minye Minye**	**6.49**	**142**	*e*Pn	**Pn**	**20 44 13.0**	**-2.8**
GO01	**Chusmiza**	**7.15**	**143**	*e*Pn	**Pn**	**20 44 22.6**	**-2.3**
ATAH	**Atahualpa**	**8.19**	**326**	Pn	**Pn**	**20 44 39.7**	**+0.6**
	1.2nm,0.3s,baz=144,slow=15,SNR=5.7						
ATAH				Sn	**Sn**	**20 46 05.5**	**-4.7**
	0.4nm,0.3s,baz=132,slow=15,SNR=2.3						
LVC	**Limon Verde**	**9.73**	**152**	Pn	**Pn**	**20 44 56.4**	**-3.7**
	0.4nm,0.3s,baz=302,slow=9.5,SNR=2.0						
SIV	**San Ignacio**	**12.43**	**101**	Pn	Pn	20 45 29.5	-6.9
	0.3nm,0.3s,baz=307,slow=11,SNR=9.8						
SIV				Lg	Lg	20 49 01.5	
	0.2nm,0.3s,baz=129,slow=5.4,SNR=3.2						
ROSC	**El Rosal**	**18.72**	**358**	Lg	Lg	20 52 24.1	
	1.4nm,0.3s,baz=221,slow=19,SNR=1.9						
ROSC				LR	LR	20 54 42.9	
	comp=Z,80nm,21.7s,baz=172,slow=39						
PTGA	**Pitinga**	**18.98**	**47**	P	**P**	**20 46 55.0**	**-2.5**
	1.1nm,0.3s,baz=304,slow=21,SNR=7.0						
PTGA	**Pitinga**	**18.98**	**47**	*e*P	**P**	**20 46 55.6**	**-1.8**
	5.9nm,0.8s						
CPUP	**Villa Florida**	**19.69**	**131**	P	**P**	**20 47 05.7**	**+0.5**
	0.1nm,0.3s,baz=320,slow=12,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**79.45**	**74**	*e*P	**P**	**20 54 41.4**	**+1.1**
TORD	**Torodi Ar. Bea**	**79.45**	**74**	P	**P**	**20 54 41.4**	**+1.1**
	1.5nm,0.7s,baz=274,slow=5.3,SNR=9.0						
YKA	**Yellowknife Ar**	**82.63**	**342**	P	**P**	**20 54 58.9**	**+2.8**
	0.9nm,0.9s,baz=140,slow=6.2,SNR=5.6						
YKB5	**Yellowknife Ar**	**82.63**	**342**	*e*P	**P**	**20 54 58.9**	**+2.8**
ESDC	**Sonseca Array**	**83.92**	**47**	P	**P**	**20 55 04.3**	**+0.9**
	0.1nm,0.3s,baz=282,slow=6.4,SNR=3.6						
ASAR	**Alice Springs**	**133.81**	**216**	PKP	**PKiKP**	**21 01 55.0**	**+3.1**
	0.4nm,0.9s,baz=135,slow=2.3,SNR=2.8						
ZALV	**Zalesovo Beam**	**136.72**	**18**	PKP	**PKiKP**	**21 01 57.4**	**+0.7**
	1.1nm,0.7s,baz=321,slow=3.7,SNR=5.4						
SONA0	**Songino Array**	**146.26**	**360**	*e*PKPbc	**PKiKP**	**21 02 17.7**	**+1.0**
SONM	**Songino Array**	**146.26**	**360**	PKPbc	**PKiKP**	**21 02 17.7**	**+1.0**
	1.6nm,0.8s,baz=342,slow=1.3,SNR=14						
KSRS	**Korea Array**	**149.69**	**324**	PKPbc	**PKPab**	**21 02 27.6**	**-0.6**
	1.0nm,0.6s,baz=103,slow=0.2,SNR=4.3						

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*NIED **10** 20:59:00, 36°.50N×141°.30E, h32km, Mw3.6 Best double couple: M0 2.70000×10^14 NP1:φs 148.00000°, δ30.00000°, λ-67.00000°. NP2:φs 302.00000°, δ63.00000°, λ-102.00000°.*
*IDC **10** 20:59:02.9±1.1, 36°.48N×141°.48E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.5/52, mbtmp3.6/9, ML3.3/3, Error ellipse: s-maj=24.5km s-min=19.3km az=86.0*
*ISCJB **10** 20:59:05.9±1.0, 36°.44N±0°.03×141°.47E±0°.06, h31km±6km, mb3.5/6, Error ellipse: s-maj=8.2km s-min=5.4km az=173.0*
*JMA **10** 20:59:08.2±0.1, 36°.45N×141°.28E, h46km±2km, M3.6*
JMA Felt I J1.
ISC 10 20:59:05.9±0.9**, 36°.46N**±0°.04×**141°.47E**±0°.07**, h20**km±5km**, n22, σ0s.75**/34**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.72**	**261**	P	**Pb**	**20 59 20.4**	**+0.7**
JHYU				S	**Sb**	**20 59 28.8**	**-0.4**
JHO	**Hitachi**	**0.74**	**282**	P	**Pb**	**20 59 20.4**	**+0.4**
JHO				S	**Sb**	**20 59 28.7**	**-1.0**
ONAJ	**Iwakimizuishiy**	**0.83**	**320**	P	**Pb**	**20 59 22.2**	**+0.5**
CHOJ	**Chosi**	**0.90**	**213**	P	**Pb**	**20 59 23.4**	**+0.6**
CHOJ				S	**Sb**	**20 59 33.9**	**-0.5**
JIHU	**Itakohorinouch**	**0.91**	**237**	P	**Pb**	**20 59 23.7**	**+0.8**
JFK	**Kawauchi**	**1.02**	**332**	P	**Pn**	**20 59 25.2**	**+0.1**
JFK				S	**Sb**	**20 59 37.4**	**-0.5**
JYT	**Yasato**	**1.05**	**258**	P	**Pn**	**20 59 24.6**	**-0.9**
JFT	**Otama**	**1.39**	**320**	P	**Pn**	**20 59 31.3**	**+1.2**
JFT				S	**Sn**	**20 59 47.6**	**-0.3**
JMM	**Marumori**	**1.50**	**339**	P	**Pn**	**20 59 32.5**	**+0.9**
JMM				S	**Sn**	**20 59 50.2**	**-0.4**
JAG	**Ashikaga**	**1.62**	**269**	P	**Pn**	**20 59 32.9**	**-0.4**
JFY	**Yanaizu**	**1.70**	**304**	P	**Pn**	**20 59 35.3**	**+0.9**
JFY				S	**Sn**	**20 59 56.2**	**+0.7**
JKT	**Katashina**	**1.81**	**280**	P	**Pn**	**20 59 36.4**	**+0.4**
JKT				S	**Sn**	**20 59 57.3**	**-1.1**
MJAR	**Matsushiro Arr**	**2.62**	**273**	Pn	**Pn**	**20 59 47.6**	**+0.5**
	1.9nm,0.3s,baz=151,slow=5.8,SNR=56						
MJAR				Sn	**Sn**	**21 00 18.0**	**-0.4**
	1.7nm,0.3s,baz=91,slow=14,SNR=10						
MAT	**Matsushiro**	**2.63**	**273**	P	**Pn**	**20 59 48.5**	**+1.3**
MAT				S	**Sn**	**21 00 18.1**	**-0.3**
JHJ	**Hachijo jima 2**	**3.61**	**203**	Pn	**Pn**	**21 00 02.2**	**+1.5**
	22nm,0.3s,baz=110,slow=22,SNR=8.3						
JHJ				Sn	**Sn**	**21 00 42.3**	**-0.3**
	51nm,0.3s,baz=262,slow=22,SNR=9.7						
ASAJ	**Asahikawa**	**7.70**	**6**	Pn	**Pn**	**21 00 56.7**	**-0.1**
	0.4nm,0.3s,baz=205,slow=14,SNR=3.3						
ASAJ				Sn	**Sn**	**21 02 21.8**	**-1.4**
	0.1nm,0.3s,baz=72,slow=20,SNR=2.3						
SONM	**Songino Array**	**28.14**	**305**	P	**P**	**21 04 56.9**	**+0.2**
	0.2nm,0.4s,baz=69,slow=7.9,SNR=2.8						
ZALV	**Zalesovo Beam**	**42.33**	**313**	P	**P**	**21 06 57.4**	**-0.8**
	0.4nm,0.3s,baz=101,slow=7.7,SNR=3.9						
MKAR	**Makanchi Array**	**44.46**	**303**	P	**P**	**21 07 15.4**	**-0.1**
	0.3nm,0.7s,baz=87,slow=8.8,SNR=3.0						
ILAR	**Eielson Array**	**49.95**	**32**	P	**P**	**21 07 58.3**	**+0.3**
	0.2nm,0.3s,baz=270,slow=6.3,SNR=3.6						
WRA	**Warramunga Arr**	**56.50**	**188**	P	**P**	**21 08 46.8**	**+0.2**
	0.7nm,0.6s,baz=355,slow=8.4,SNR=6.9						
ASAR	**Alice Springs**	**60.23**	**188**	P	**P**	**21 09 12.2**	**-0.4**
	0.4nm,0.7s,baz=20,slow=7.1,SNR=5.1						

JMA 10 21:05:56.3±0.3**, 24°.89N×123°.44E, h34**km**, M1.2, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.58**	**223**	*i* P	Pn	21 06 07.8	-0.2
	baz=86						
YOJ				*i* S	Sb	21 06 15.3	-1.1
	baz=86						
YOJ	**Yonaguni jima**	**0.58**	**223**	P	Pn	21 06 07.8	-0.2
YOJ				*e*S	Sb	21 06 15.4	-0.9
IRIF	**Iriomote-Funau**	**0.61**	**154**	P	Pn	21 06 08.3	-0.2
IRIF				S	Sn	21 06 16.8	-0.4
JYNG	**Yonagunijimaku**	**0.63**	**226**	P	Pn	21 06 08.3	-0.4
JYNG				S	Sn	21 06 17.4	-0.2
JIJ	**Ishigaki jima**	**0.83**	**129**	P	Pn	21 06 11.3	-0.2
JIJ				S	Sn	21 06 21.4	-1.1
JKRS	**Kuro-shima**	**0.83**	**141**	P	Pb	21 06 12.0	-0.4
JKRS				*e*S	Sn	21 06 22.8	+0.2
JISG	**Ishigakijimahi**	**0.85**	**111**	*e*S	Sn	21 06 23.1	+0.1

TAP 10 21:05:57.6, 24°.49N×122°.51E, h41km**, ML2.1, B, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	**Nanao**	**0.70**	**265**	*e*P	Pn	21 06 10.2	-0.7
	baz=265						
ENA	**Nanau**	**0.70**	**265**	*e*P	Pn	21 06 11.1	0.0
	baz=265						
TWE	**Neicheng**	**0.80**	**287**	*e*P	Pn	21 06 12.6	+0.1
	baz=287						
NWF	**Wu-fen Shan**	**0.88**	**311**	*e*P	Pn	21 06 13.8	+0.2
	baz=311						
WFSB	**Wu-fen Shan**	**0.88**	**311**	*e*P	Pn	21 06 14.1	+0.5
	baz=311						

SNET 10 21:21:07.9±0.8**, 12°.93N×89°.08W, h36**km±79km**, ML3.7, 3C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNET	**Serv Nac Est T**	**0.76**	**349**	*e*P	Pn	21 21 22.5	+0.2
SNET				*e*S	Sn	21 21 33.7	+1.1
SNET				IAML		21 21 35.5	
	comp=Z,5μm,0.2s						
PAVA	**Las Pavas**	**0.79**	**10**	*e*P	Pn	21 21 23.0	+0.4
PAVA				IAML		21 21 36.5	
	comp=Z,2μm,0.4s						
TECA	**Tecapa**	**0.79**	**45**	*e*P	Pn	21 21 23.2	+0.5
UEES	**Universidad Ev**	**0.79**	**348**	*e*P	Pn	21 21 22.9	+0.1
UEES				IAML		21 21 36.9	
	comp=Z,4μm,0.1s						
CUSC	**Alcaldia de Cu**	**0.80**	**353**	*e*P	Pn	21 21 23.0	+0.2
LFU	**La Fuente**	**0.81**	**357**	⇑*i*P	Pn	21 21 23.3	+0.4
LCY	**Lacayo**	**0.90**	**57**	*e*P	Pn	21 21 24.7	+0.5
PACA	**Pacayal**	**0.91**	**54**	*e*P	Pn	21 21 24.6	+0.4
CEVE	**Cerro Verde**	**1.04**	**329**	*e*P	Pn	21 21 26.3	+0.2
CEVE				*e*S	Sn	21 21 41.7	+2.2
CEVE				IAML		21 21 45.6	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	**1.05**	**329**	*e*P	Pn	21 21 26.4	+0.2
SNJE	**San Jose**	**1.06**	**331**	*e*P	Pn	21 21 26.6	+0.1
VICT	**Victoria**	**1.10**	**23**	⇑*e*P	Pn	21 21 27.7	+0.8
RTR	**El Retiro**	**1.11**	**330**	*e*P	Pn	21 21 27.4	+0.4
LCND	**La Caada**	**1.21**	**72**	*e*P	Pn	21 21 28.5	+0.2
LCND				IAML		21 21 46.8	
	comp=Z,2μm,0.2s						
CNCH	**Conchagua**	**1.26**	**74**	*e*P	Pn	21 21 29.0	-0.1
MTO3	**Montecristo**	**1.48**	**349**	⇑*i*P	Pn	21 21 32.7	+0.5

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*NIC **10** 21:22:37.0±0.3, 34°.70N×34°.62E, h4km, ML3.7*
*GII **10** 21:22:41.2±0.0, 34°.73N×34°.38E, h10km, MD2.7/8*
*GRAL **10** 21:22:41.2±0.6, 34°.72N×34°.40E, h2km±7km, MD3.5*
*ISCJB **10** 21:22:41.6±0.6, 34°.74N±0°.02×34°.34E±0°.04, h26km±6km, Error ellipse: s-maj=5.6km s-min=2.8km az=155.5*
*NSSC **10** 21:22:42.3±1.2, 34°.03N×33°.83E, h35km±999km, ML2.4*
*ISK **10** 21:22:43.5, 35°.02N×34°.18E, h8km, ML3.1/14*
ISC 10 21:22:43.3±2.0**, 34°.77N**±0°.03×**34°.34E**±0°.04**, h34**km±4km**, n63, σ0s.90**/73**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHNC	**Paralimni**	**0.34**	**314**	P	Pb	21 22 48.5	-3.2
	baz=121						
PHNC				S	**Sb**	**21 22 57.2**	**-0.2**
MVOU	**Mavrovouni**	**0.63**	**294**	P	Pb	21 22 53.5	-2.5
	baz=110						
AKIN	**Akıncılar- Kıb**	**0.76**	**290**	PG	Pb	21 22 55.9	-2.2
CSS	**Mathiatis**	**0.85**	**284**	PG	Pn	21 22 57.8	-1.1
CSS				SG	**Sb**	**21 23 07.6**	**-3.2**
CSS	**Mathiatis**	**0.85**	**284**	P	**Pn**	**21 22 58.1**	**-0.7**
	baz=103						
CSS				S	**Sb**	**21 23 13.4**	**+2.6**
CSS	**Mathiatis**	**0.85**	**284**	Pg	Pn	21 22 57.7	-1.1
CSS	**Mathiatis**	**0.85**	**284**	P	Pn	21 22 57.8	-1.1
ASGA	**Asgata**	**0.90**	**272**	P	Pn	21 22 58.1	-1.4
	baz=93						
SZAC	**Souni**	**1.20**	**270**	P	**Pn**	**21 23 03.5**	**-0.1**
	baz=91						
LEF	**Lefka**	**1.24**	**287**	PN	**Pn**	**21 23 04.3**	**+0.1**
LEF				SN	**Sn**	**21 23 20.4**	**+0.7**
AKDN	**Akdeniz- Kıbrı**	**1.24**	**296**	PG	**Pn**	**21 23 03.9**	**-0.3**
BHL	**Bhannes**	**1.39**	**128**	*e*P	Pn	21 23 04.5	-1.9
HWQ	**Hawqa**	**1.42**	**110**	*e*P	Pn	21 23 05.1	-1.6
HWQ				*e*S	**Sn**	**21 23 22.7**	**-1.6**
DQRL	**Deir Qamar**	**1.47**	**136**	*e*P	Pn	21 23 05.9	-1.6
TISA	**Tisan-Mersin**	**1.49**	**339**	PN	**Pn**	**21 23 07.2**	**-0.5**
AKK2	**Akkuyu-Mersin**	**1.51**	**335**	PN	**Pn**	**21 23 07.6**	**-0.3**
AKK1	**Akkuyu-Mersin**	**1.52**	**335**	PN	**Pn**	**21 23 07.3**	**-0.8**
KARG	**Kargicak-Mersi**	**1.52**	**341**	PN	**Pn**	**21 23 07.7**	**-0.4**
AKKU	**Akkuyu-Mersin**	**1.53**	**336**	PN	**Pn**	**21 23 07.7**	**-0.5**
YESI	**Yesilovacik-Me**	**1.54**	**339**	PN	**Pn**	**21 23 07.7**	**-0.6**
IKL	**Isikli**	**1.56**	**340**	PN	**Pn**	**21 23 08.5**	**-0.1**
TEPE	**Tepekoy-Mersin**	**1.58**	**337**	PN	**Pn**	**21 23 08.5**	**-0.5**
SILI	**Silifke-Mersin**	**1.63**	**348**	PN	**Pn**	**21 23 09.5**	**-0.1**
SLFK	**Silifke-Mersin**	**1.65**	**349**	PN	**Pn**	**21 23 09.9**	**0.0**
TEKE	**Tekeli-Mersin**	**1.70**	**324**	PN	**Pn**	**21 23 09.9**	**-0.6**
KIZK	**Mersin**	**1.72**	**355**	PN	**Pn**	**21 23 11.1**	**+0.3**
KEBE	**Keben-Mersin**	**1.75**	**343**	PN	**Pn**	**21 23 11.5**	**+0.2**
RCY	**Rachaya**	**1.77**	**135**	*e*P	Pn	21 23 10.7	-1.1
RCY				*e*S	**Sn**	**21 23 32.6**	**-0.6**
HNTI	**Hanita**	**1.82**	**157**	Pn	**Pn**	**21 23 11.6**	**-0.6**
HNTI				Sn	**Sn**	**21 23 33.5**	**-0.5**
TEVE	**Tevekalti-Mers**	**1.82**	**337**	PN	**Pn**	**21 23 12.3**	**0.0**
BERE	**Bereket-Mersin**	**1.82**	**330**	PN	**Pn**	**21 23 11.6**	**-0.7**
SHBL	**Chebaa**	**1.83**	**140**	*e*P	**Pn**	**21 23 11.5**	**-1.0**
SHBL				*e*S	**Sn**	**21 23 33.7**	**-1.0**
NATI	**Neve Ativ**	**1.90**	**142**	Pn	**Pn**	**21 23 12.6**	**-0.6**
NATI				Sn	**Sn**	**21 23 35.9**	**-0.1**
BRBR	**Barbar**	**1.90**	**135**	*e*P	**Pn**	**21 23 13.0**	**-0.5**
BRBR				*e*S	**Sn**	**21 23 33.7**	**-2.8**
BRBR				AML	AML	21 23 38.7	
	comp=N,53nm,0.3s						
BRBR				AML	AML	21 23 39.0	
	comp=E,23nm,0.3s						
GEM	**Giv'at Ha'Em**	**1.90**	**144**	Pn	**Pn**	**21 23 12.6**	**-0.7**
KSDI	**Kefar Szold**	**1.92**	**145**	Pn	**Pn**	**21 23 12.8**	**-0.7**
KSDI	**Kefar Szold**	**1.92**	**145**	P	**Pn**	**21 23 15.2**	**+1.7**
MMA0B	**Mount Meron ar**	**1.96**	**153**	Pn	**Pn**	**21 23 13.2**	**-1.0**
KRTS	**Karatas**	**1.99**	**25**	PN	**Pn**	**21 23 15.4**	**+0.8**
QASN	**Qassioun**	**2.02**	**127**	*e*P	**Pn**	**21 23 15.2**	**+0.1**
QASN				*e*S	**Sn**	**21 23 39.7**	**+0.4**
QASN				AML	AML	21 23 45.5	
	comp=E,176nm,0.5s						
QASN				AML	AML	21 23 45.8	
	comp=N,92nm,1.3s						
MERS	**Mersin**	**2.10**	**4**	PN	**Pn**	**21 23 16.2**	**0.0**
KSHT	**Keshet**	**2.16**	**145**	Pn	**Pn**	**21 23 16.8**	**-0.1**
GAZI	**Gazipasa**	**2.21**	**312**	PN	**Pn**	**21 23 17.8**	**+0.3**
OFRI	**`Ofer**	**2.21**	**166**	Pn	**Pn**	**21 23 16.9**	**-0.6**
TOTH	**TOTAH**	**2.23**	**128**	*e*P	**Pn**	**21 23 18.2**	**+0.3**
TOTH				*e*S	**Sn**	**21 23 43.5**	**-0.8**
TOTH				AML	AML	21 23 47.1	
	comp=E,48nm,0.5s						
TOTH				AML	AML	21 23 50.3	
	comp=N,34nm,1.1s						
YURE	**YUREGIR**	**2.31**	**27**	PN	**Pn**	**21 23 20.2**	**+1.2**
MMLI	**Mount Malkishu**	**2.49**	**158**	Pn	**Pn**	**21 23 21.5**	**0.0**
MMLI				Sn	**Sn**	**21 23 51.9**	**+1.2**
KARA	**Karaisali**	**2.56**	**13**	PN	**Pn**	**21 23 22.5**	**+0.1**
SLTI	**Sal'it**	**2.59**	**167**	Pn	**Pn**	**21 23 22.0**	**-0.7**
SLTI				Sn	**Sn**	**21 23 52.7**	**-0.3**
HMDT	**Nahal Hemdat**	**2.70**	**158**	Pn	**Pn**	**21 23 23.9**	**-0.3**
HMDT				Sn	**Sn**	**21 23 56.0**	**+0.3**
AMAZ	**Amatzia**	**3.26**	**171**	Pn	**Pn**	**21 23 32.1**	**+0.1**
AMAZ				Sn	**Sn**	**21 24 09.9**	**+0.2**
DSI	**Dead Sea**	**3.31**	**164**	Pn	**Pn**	**21 23 32.1**	**-0.5**
ASF	**Jabal al Asfar**	**3.36**	**140**	P	**Pn**	**21 23 34.9**	**+1.5**
WALJ	**Wala**	**3.43**	**158**	P	**Pn**	**21 23 34.9**	**+0.6**
YTIR	**Yattir**	**3.46**	**169**	Pn	**Pn**	**21 23 35.0**	**+0.2**
YTIR				Sn	**Sn**	**21 24 15.6**	**+1.0**
MZDA	**Masada**	**3.55**	**166**	Pn	**Pn**	**21 23 35.7**	**-0.3**
MZDA				Sn	**Sn**	**21 24 17.8**	**+1.0**
KZIT	**Kziot**	**3.85**	**179**	Pn	**Pn**	**21 23 40.0**	**-0.1**
KZIT				Sn	**Sn**	**21 24 24.2**	**0.0**
ZFRI	**Zfri**	**4.26**	**170**	Pn	**Pn**	**21 23 46.1**	**+0.4**
PRNI	**Paran**	**4.44**	**172**	Pn	**Pn**	**21 23 48.3**	**+0.1**
PRNI				Sn	**Sn**	**21 24 39.1**	**+0.4**
HRFI	**Mount Harif**	**4.75**	**173**	Pn	**Pn**	**21 23 52.7**	**+0.1**
HRFI				Sn	**Sn**	**21 24 46.8**	**+0.3**
MBRI	**Mt Berech**	**4.98**	**174**	Pn	**Pn**	**21 23 55.9**	**+0.2**
AQBJ	**Aqaba**	**5.06**	**173**	P	**Pn**	**21 23 58.8**	**+2.1**
EIL	**Elat**	**5.11**	**174**	Pn	**Pn**	**21 23 57.8**	**+0.4**

IDC 10 21:24:51.6±2.1**, 8°.19S×125°.60E, h0**km**, mb3.4**/1**, mb1 3.6**/3**, mb1mx3.3**/26**, mbtmp3.4**/3**, ML3.3**/2**, Error ellipse: s-maj=184.3km s-min=34.1km az=60.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.42**	**145**	Pn	Pn	21 28 18.1	+0.8
	0.1nm,0.3s,baz=319,slow=14,SNR=1.3						
WRA				Sn	Sn	21 30 51.1	-7.0
	0.2nm,0.3s,baz=337,slow=25,SNR=4.8						
ASAR	**Alice Springs**	**17.32**	**154**	P	Pn	21 28 54.5	-0.6
	0.1nm,0.3s,baz=331,slow=13,SNR=4.5						
ASAR				S	Sn	21 31 55.0	-14
	0.0nm,0.3s,baz=328,slow=24,SNR=2.9						
MKAR	**Makanchi Array**	**66.92**	**329**	P	P	21 35 45.9	0.0
	0.2nm,0.5s,baz=126,slow=8.1,SNR=2.3						

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*ISK **10** 21:33:06.7, 42°.22N×26°.28E, h5km, ML2.6/4*
*ISCJB **10** 21:33:07.5±0.3, 42°.20N±0°.02×26°.28E±0°.03, h10km, Error ellipse: s-maj=3.6km s-min=2.5km az=152.9*
*SOF **10** 21:33:07.5, 42°.23N×26°.24E, h4km*
*DDA **10** 21:33:09.0, 42°.12N×26°.40E, h5km±2km, ML2.9*
ISC 10 21:33:07.6±0.8**, 42°.19N**±0°.02×**26°.27E**±0°.03**, h10**km**, n45, σ0s.71**/49**, 17C, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMB	**Yambol**	**0.37**	**40**	PG	**Pg**	**21 33 14.3**	**-0.6**
JMB				SG	**Sg**	**21 33 19.3**	**-0.4**
JMB	**Yambol**	**0.37**	**40**	P	**Pg**	**21 33 14.2**	**-0.6**
EDRB	**Edirne**	**0.49**	**133**	PG	**Pg**	**21 33 17.2**	**+0.1**
EDRB				SG	**Sg**	**21 33 24.0**	**+0.4**
DIM	**Dimitrovgrad**	**0.56**	**256**	P	**Pg**	**21 33 18.1**	**-0.4**
KIRK	**Kırklareli**	**0.74**	**123**	*i* P	**Pg**	**21 33 21.7**	**-0.1**
KIRK				*i* S	**Sg**	**21 33 31.0**	**-0.5**
KIRK				IAML_P			
	comp=Z,3μm,0.2s						
ELND	**Elena**	**0.80**	**339**	⇑*i*P	**Pg**	**21 33 22.0**	**-0.9**
ELND	**Elena**	**0.80**	**339**	S	**Sg**	**21 33 33.1**	**-0.2**
KDZ	**Kurdzhali**	**0.83**	**230**	PG	**Pb**	**21 33 24.6**	**+0.5**
KDZ	**Kurdzhali**	**0.83**	**230**	P	**Pn**	**21 33 25.2**	**-0.1**
PHSR	**Pinarhisar**	**1.09**	**120**	PN	**Pg**	**21 33 27.5**	**-1.0**
PHSR	**Pinarhisar**	**1.09**	**120**	⇑*i*P	**Pg**	**21 33 27.0**	**-1.5**
PHSR	**Pinarhisar**	**1.09**	**120**	S	**Sb**	**21 33 42.3**	**-0.5**
PLD	**Plovdiv**	**1.17**	**267**	PN	**Pb**	**21 33 29.1**	**-0.7**
RDO	**Rodhopi**	**1.17**	**208**	PN	**Pg**	**21 33 30.4**	**+0.3**
RZN	**Rozhen**	**1.26**	**247**	P	**Pn**	**21 33 31.2**	**-0.2**
ALN	**Alexandroupoli**	**1.30**	**187**	PN	**Pg**	**21 33 32.3**	**-0.2**
PRD	**Provadia**	**1.31**	**39**	P	**Pn**	**21 33 31.8**	**-0.1**
RAZG	**Razgrad**	**1.39**	**7**	⇑*i*P	**Pn**	**21 33 33.2**	**+0.1**
RAZG	**Razgrad**	**1.39**	**7**	S	**Sg**	**21 33 52.3**	**0.0**
KESN	**Edirne-Kesan**	**1.39**	**167**	*i* P	**Pg**	**21 33 34.3**	**0.0**
KESN				*i* S	**Sg**	**21 33 53.0**	**+0.5**
ENEZ	**Enez**	**1.45**	**183**	PN	**Pg**	**21 33 35.1**	**-0.3**
ZIMR		**1.61**	**336**	⇑*i*P	**Pn**	**21 33 36.6**	**+0.5**
ZIMR		**1.61**	**336**	S	**Sb**	**21 33 58.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.65**	**155**	PN	**Pb**	**21 33 37.7**	**-0.3**
PLVB	**Pleven**	**1.71**	**315**	⇑*i*P	**Pn**	**21 33 37.4**	**0.0**
PLVB	**Pleven**	**1.71**	**315**	S	**Sb**	**21 34 00.6**	**+0.1**
MRMT	**Marmara Adasi**	**1.87**	**147**	PN	**Pn**	**21 33 40.5**	**+0.8**
COPA	**Copaceanca**	**2.09**	**339**	S	**Sn**	**21 34 10.5**	**+1.7**
ICOR	**Ion Corvin**	**2.23**	**30**	⇑*i*P	**Pn**	**21 33 44.5**	**-0.1**
VLAD	**Vladila**	**2.27**	**324**	S	**Sb**	**21 34 16.0**	**-0.7**
VTS	**Vitosha**	**2.29**	**282**	⇑*i*P	**Pn**	**21 33 45.2**	**-0.3**
VTS	**Vitosha**	**2.29**	**282**	S	**Sn**	**21 34 13.4**	**-0.4**
VTS	**Vitosha**	**2.29**	**282**	P	**Pn**	**21 33 46.2**	**+0.7**
EZN	**Ezine**	**2.36**	**179**	⇑*i*P	**Pn**	**21 33 44.8**	**-1.5**

TLB	Topalu	2.73	28	⇑iP	Pn	21 33 51.9	+0.6
TIRR	Tirgusor	2.76	34	⇑iP	Pn	21 33 52.2	+0.4
CFR	Carcaliu	3.28	24	⇑iP	Pn	21 34 00.0	+1.0
CFR	Carcaliu	3.28	24	S	Sn	21 34 40.3	+2.2
MLR	Muntele Rosu	3.31	356	⇑iP	Pn	21 34 00.4	+0.8
VOIR		3.37	345	⇑iP	Pn	21 33 59.7	-0.6
VRI	Vrincioaia	3.69	5	⇑iP	Pn	21 34 04.8	+0.1
LOT	Lotru	3.73	332	⇑iP	Pn	21 34 05.1	-0.2
HERR	Herculane	3.89	315	⇑iP	Pn	21 34 08.4	+1.1
GZR	Gura Zlata	4.08	323	S	Sn	21 34 57.6	-0.3
MDVR	Moldovita	4.21	310	⇑iP	Pn	21 34 12.0	+0.2

MEX 10 21:49:11.7±0.4, 17°.08N×100°.23W, h42^{km}±3^{km}, MD3.6,
Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.05	226	i P	Pn	21 49 16.9	-1.5
CAIG				i S	Sn	21 49 21.2	-1.7
ACP2	Acapulco	0.39	122	eP	Pn	21 49 19.5	-1.6
ACP2				eS	Sn	21 49 25.8	-1.9
MEIG	Mezcala	1.02	35	eS	Sn	21 49 39.8	-3.1
ARIG	Puente Sto Nin	1.20	355	eP	Pn	21 49 30.3	-1.7
ARIG				eS	Sn	21 49 44.8	-2.3
ZIIG	Zihuatanejo	1.29	294	eP	Pn	21 49 32.5	-0.7
ZIIG				i S	Sn	21 49 46.9	-2.5
PLIG	Platanillo	1.48	28	eP	Pn	21 49 34.5	-1.5
PLIG				i S	Sn	21 49 52.3	-1.8
TLIG	Tlapa	1.66	73	eP	Pn	21 49 37.5	-0.9
TLIG				i S	Sn	21 49 56.0	-2.7
YAIG	Yautepec	2.09	32	eP	Pn	21 49 42.5	-1.9
YAIG				i S	Sn	21 50 07.2	-2.0

IDC 10 21:52:29.0±1.3, 0°.72N×126°.65E, h0^{km}, mb3.6/4,
mb1 3.8/4, mb1mx3.5/34, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1,
ms1mx2.4/41, Error ellipse: s-maj=131.6km
s-min=20.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	6.40	350	LR	LR	21 55 51.3	
	comp=Z,85nm,21.2s,baz=344,slow=32						
WRA	Warramunga Arr	21.87	160	P	P	21 57 22.7	-0.9
	2.2nm,0.7s,baz=337,slow=12,SNR=14						
ASAR	Alice Springs	25.24	164	P	P	21 57 57.4	+0.5
	0.5nm,0.8s,baz=347,slow=11,SNR=3.8						
SONM	Songino Array	50.12	342	P	P	22 01 24.7	-1.4
	0.5nm,0.6s,baz=162,slow=8.8,SNR=3.4						
MKAR	Makanchi Array	59.99	326	P	P	22 02 38.4	+0.9
	0.6nm,0.4s,baz=116,slow=8.2,SNR=15						

*NIED **10** 22:09:00, 37°.20N×142°.10E, h23^{km}, Mw4.1 Best double couple: M₀1.38000×10^{15} NP1:ϕs168.00000°, δ22.00000°, λ82.00000°. NP2:ϕs356.00000°, δ69.00000°, λ93.00000°.*
*ISCJB **10** 22:09:40.7±0.9, 37°.19N±0°.03×142°.25E±0°.04, h15^{km}±5^{km}, mb4.3/36, MS3.6/6, Error ellipse: s-maj=5.8km s-min=4.7km az=33.6*
*BJI **10** 22:09:41.9±0.0, 37°.17N×141°.88E, h11^{km}, mb4.5/32, mB4.8/20, Ms4.4/4, Ms7 4.4/1*
*NEIC **10** 22:09:41.6±2.1, 37°.19N×142°.32E, h13^{km}±4^{km}, mb4.5/19, Error ellipse: s-maj=12.4km s-min=1.7km az=116.0*
NEIC Recorded [1 JMA] in Fukushima and Miyagi.
*JMA **10** 22:09:43.4±0.2, 37°.20N×142°.14E, h33^{km}±4^{km}, M4.3*
JMA Felt I J1.
*IDC **10** 22:09:49.2±2.5, 37°.17N×142°.06E, h66^{km}±21^{km}, mb3.8/17, mb1 4.0/21, mb1mx3.9/41, mbtmp4.1/21, MS3.4/9, Ms1 3.5/9, ms1mx3.1/46, Error ellipse: s-maj=17.2km s-min=15.2km az=113.0*
ISC 10 22:09:41.7±3.1, 37°.21N±0°.04×142°.16E±0°.06, h11^{km}±19^{km},
n91, σ1^{s}.69/102, mb4.3/37, MS3.5/6, Off east coast of
Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	1.04	279	P	Pb	22 10 01.7	-0.1
JFK				eS	Sb	22 10 14.3	-1.1
ONAJ	Iwakimizuishiy	1.09	265	P	Pb	22 10 02.4	-0.3
ONAJ				eS	Sb	22 10 15.8	-1.2
JMST	Minamisoumatoc	1.14	297	P	Pb	22 10 03.2	-0.2
JMST				S	Sb	22 10 17.3	-0.9
JIKH	Ishinomakikobu	1.23	334	P	Pn	22 10 04.5	-0.4
JIKH				eS	Sb	22 10 20.1	-0.8
JMM	Marumori	1.27	302	P	Pn	22 10 05.3	-0.1
JMM				eS	Sb	22 10 20.8	-1.2
JFFD	Fukushimafurud	1.28	265	P	Pn	22 10 05.4	-0.2
JFFD				eS	Sb	22 10 21.1	-1.3
JIO	Ouri	1.40	333	P	Pn	22 10 07.1	-0.1
JIO				eS	Sn	22 10 23.4	-2.3
JFT	Otama	1.49	283	P	Pb	22 10 09.1	-0.3
JOU	Okura	1.66	315	P	Pn	22 10 11.5	+0.7
JOU				eS	Sn	22 10 32.2	+0.2
JMK	Ichinoseki	1.89	337	P	Pn	22 10 14.5	+0.5
JYS	Shirataka	1.94	302	P	Pb	22 10 16.4	-0.8
JYS				eS	Sn	22 10 39.7	+0.5
JFY	Yanaizu	1.97	277	P	Pn	22 10 16.4	+1.3
JFY				eS	Sb	22 10 41.1	-1.1
JYK	Kaneyama	2.22	321	P	Pn	22 10 19.6	+1.1
JYK				eS	Sn	22 10 46.8	+0.8
JAG	Ashikaga	2.31	251	P	Pn	22 10 19.9	+0.2
MJAR	Matsushiro Arr	3.24	259	P	Pn	22 10 34.3	+1.8
	3.9nm,0.3s,baz=90,slow=14,SNR=90						
MJAR				S	Sn	22 11 13.6	+2.5
	1.7nm,0.3s,baz=78,slow=13,SNR=5.1						
MJAR				LR	LR	22 12 03.5	
	comp=Z,623nm,18.2s,baz=80,slow=43						
MAJO	Matsushiro	3.24	259	ePn	Pn	22 10 34.9	+2.3
MAJO				eSn	Sn	22 11 13.6	+2.5
MAT	Matsushiro	3.24	259	P	Pn	22 10 34.6	+2.1
MAT				S	Sn	22 11 10.4	-0.7
MJB9	Matsu-Tunnel	3.24	259	ePn	Pn	22 10 34.9	+2.3
JHJ2	Mitsune	4.52	206	ePn	Pn	22 10 50.7	+0.6
JHJ2				eSn	Sn	22 11 38.4	-4.1
JHJ	Hachijo jima 2	4.52	206	P	Pn	22 10 48.5	-1.7
	36nm,0.3s,baz=100,slow=23,SNR=10.0						
JHJ				S	Sn	22 11 36.9	-5.8
	18nm,0.3s,baz=258,slow=14,SNR=2.6						
INU	Inuyama	4.55	247	ePn	Pn	22 10 53.1	+2.5
INU				eSn	Sn	22 11 40.6	-2.8
ERM	Erimo	4.86	9	ePn	Pn	22 10 53.6	-1.2
ERM				eSn	Sn	22 11 44.9	-6.1
ASAJ	Asahikawa	6.91	3	P	Pn	22 11 23.9	+1.0
	2.3nm,0.3s,baz=208,slow=7.7,SNR=6.6						
ASAJ				S	Sn	22 12 39.9	-1.6
	2.2nm,0.3s,baz=297,slow=18,SNR=3.2						
JNU	Nakatsue	10.09	250	P	Pn	22 12 09.8	+3.1
	0.4nm,0.3s,baz=63,slow=9.0,SNR=8.8						
JNU				LR	LR	22 16 11.6	
	comp=Z,142nm,20.3s,baz=162,slow=38						
USA0B	Ussuriysk Arra	10.40	315	ePn	Pn	22 12 10.7	-0.1
USRK	Ussuriysk Ar.	10.40	315	P	Pn	22 12 15.3	+4.5
	0.4nm,0.3s,baz=128,slow=13,SNR=13						
USRK				LR	LR	22 15 56.7	
	comp=Z,96nm,19.0s,baz=81,slow=35						
KSRS	Korea Array	11.34	276	P	Pn	22 12 27.5	+3.8
	0.3nm,0.3s,baz=88,slow=14,SNR=9.9						
KSRS				LR	LR	22 16 37.9	
	comp=Z,155nm,18.1s,baz=41,slow=36						
KS15	Wonju Array Si	11.37	275	ePn	Pn	22 12 25.6	+1.5
MDJ	Mudanjiang	12.04	312	ePn	Pn	22 12 34.0	+0.8
NJ2	Nanjing	19.84	262	eP	Pn	22 14 13.9	-0.2
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
YOJ	Yonaguni jima	20.73	238	eP	P	22 14 19.6	-2.7
	23nm,0.7s						
ANA2	Anatahan	21.02	170	eP	P	22 14 22.9	-2.6
	40nm,0.6s						
YULB	Yu-li	22.61	238	eP	P	22 14 42.2	-0.3
	4.7nm,0.9s						
MA2	Magadan	23.06	11	LR	LR	22 25 47.3	
	comp=Z,48nm,18.4s,baz=209,slow=41						
TWG	Pinlang	23.15	238	eP	P	22 14 48.3	+0.2
	27nm,0.7s						
HHC	Hu-ho-hao-te	23.98	288	P	P	22 14 57.0	+0.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,45nm,6.0s						
SEY	Seymchan	26.51	10	P	P	22 15 20.6	+1.7
	2.8nm,0.2s,baz=192,slow=6.9,SNR=3.8						
XAN	Xi'an	27.13	273	P	P	22 15 24.4	-0.5
XAN				pP	sP	22 15 32.7	+3.7
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
H11N2	WAKE ISLAND Hy	27.73	122	T	T	22 44 27.2	
	baz=315,slow=75,SNR=290						
H11N1	WAKE ISLAND Hy	27.74	122	T	T	22 44 27.0	
	baz=315,slow=75,SNR=192						
H11N3	WAKE ISLAND Hy	27.75	122	T	T	22 44 27.6	
	baz=315,slow=75,SNR=209						
ULN	Ulaanbaatar	27.75	304	eP	P	22 15 30.3	-0.2
	2.9nm,0.7s						
SONA0	Songino Array	28.18	304	eP	P	22 15 35.2	+0.9
SONM	Songino Array	28.18	304	P	P	22 15 35.2	+0.9
	4.5nm,0.8s,baz=99,slow=8.8,SNR=34						
H11S1	WAKE ISLAND Hy	28.46	124	T	T	22 45 24.8	
	baz=317,slow=76,SNR=136						
H11S3	WAKE ISLAND Hy	28.46	124	T	T	22 45 27.1	
	baz=317,slow=76,SNR=58						
H11S2	WAKE ISLAND Hy	28.47	124	T	T	22 45 21.7	
	baz=317,slow=76,SNR=73						
LZH	Lanzhou	30.63	280	eP	P	22 15 57.5	+1.4
LZH				pP	sP	22 16 03.6	+3.3
LZH				sP	pP	22 16 06.9	+7.8
LZH				PP	PnPn	22 16 51.9	-3.4
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,4.3s						
TLY	Talaya	30.67	311	P	P	22 15 57.2	+1.0
	0.5nm,0.3s,baz=122,slow=8.7,SNR=4.7						
CD2	Chengdu	32.27	270	eP	P	22 16 10.5	0.0
WMQ	Urumqi	41.29	297	eP	P	22 17 31.3	+4.1
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,36nm,4.5s						
WMQ				LR	LR		
	comp=N,90nm,25.9s						
WMQ				LR	LR		
	comp=E,320nm,29.2s						
CMAR	Chiang Mai Arr	42.12	256	LR	LR	22 37 18.7	
	comp=Z,43nm,18.7s,baz=220,slow=39						
ZAA0	Zalesovo Array	42.24	312	eP	P	22 17 34.0	-0.7
	2.9nm,0.8s						
ZALV	Zalesovo Beam	42.24	312	P	P	22 17 35.3	+0.6
	1.4nm,0.5s,baz=69,slow=8.1,SNR=9.7						
ZALV				PcP	PcP	22 19 28.3	-0.2
	0.5nm,0.4s,baz=93,slow=3.0,SNR=2.5						
ZALV				LR	LR	22 35 15.3	
	comp=Z,72nm,18.5s,baz=70,slow=36						
MK31	Makanchi Array	44.53	302	eP	P	22 17 53.8	+0.4
	3.2nm,0.8s						
MKAR	Makanchi Array	44.53	302	P	P	22 17 53.9	+0.6
	2.9nm,0.6s,baz=85,slow=9.3,SNR=28						
MAKZ	Makanchi	44.74	302	eP	P	22 17 55.2	+0.2
	4.7nm,0.9s						
KURK	Kurchatov	46.29	308	eP	P	22 18 07.6	+0.4
	11nm,0.6s						
ILAR	Eielson Array	49.03	32	P	P	22 18 29.6	+1.3
	1.8nm,0.7s,baz=263,slow=6.6,SNR=21						
ILB	Eielson Array	49.03	32	eP	P	22 18 27.7	-0.5
	1.9nm,0.6s						
KSH	Kashi	50.88	294	eP	P	22 18 48.2	+5.3
KSH				epP	sP	22 18 54.2	+7.1
GSI	Gunungsitoli	54.40	240	eP	P	22 19 08.4	-0.6
	14nm,0.8s						
ARU	Arti	56.62	319	eP	P	22 19 24.2	-0.3
	3.4nm,0.7s						
WR1	Warramunga Arr	57.32	189	eP	P	22 19 29.2	-0.5
WRA	Warramunga Arr	57.32	189	P	P	22 19 29.2	-0.5
	2.8nm,0.7s,baz=352,slow=7.8,SNR=12						
AS31	Alice Springs	61.05	189	eP	P	22 19 55.9	+0.4
	0.8nm,0.6s						
ASAR	Alice Springs	61.05	189	P	P	22 19 55.9	+0.4
	1.2nm,0.7s,baz=17,slow=7.6,SNR=10						
YKA	Yellowknife Ar	63.36	30	P	P	22 20 10.9	+0.3
	0.5nm,0.7s,baz=299,slow=6.7,SNR=2.6						
YKB5	Yellowknife Ar	63.36	30	eP	P	22 20 10.9	+0.3
GEYT	Alibeck	64.27	299	P	P	22 20 16.4	-0.7
	0.9nm,0.4s,baz=64,slow=3.4,SNR=3.2						
FINES	FINESS Array B	68.94	332	P	P	22 20 46.9	+0.4
	3.3nm,0.7s,baz=46,slow=5.5,SNR=8.7						
MOD	Modoc Plateau	71.19	51	eP	P	22 20 59.9	-1.0
	3.0nm,0.7s						
KBZ	Khabaz	71.24	311	P	P	22 21 00.4	-0.4
	1.7nm,0.7s,baz=76,slow=7.2,SNR=4.6						
KIV	Kislovodsk	71.24	311	eP	P	22 21 00.3	-0.7
	5.2nm,0.8s						
NB2	NORSAR Subarra	74.25	338	P	P	22 21 19.2	+0.7
	comp=Z,0.8nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	74.25	338	P	P	22 21 18.8	+0.2
	comp=Z,1.2nm,0.6s,baz=38,slow=5.9,SNR=6.2						
NOA				LR	LR	22 56 24.6	
	comp=Z,28nm,21.0s,baz=60,slow=38						
NV01	Mina Array Sit	74.41	54	eP	P	22 21 22.0	+1.9
NVAR	Mina Array Bea	74.41	54	P	P	22 21 22.0	+1.9
	comp=Z,0.4nm,0.6s,baz=282,slow=5.6,SNR=4.4						
AKASG	Malin Array Be	74.52	323	P	P	22 21 20.6	+0.4
	comp=Z,2.0nm,0.4s,baz=45,slow=6.2,SNR=15						
AKBB	Malin Array Si	74.52	323	eP	P	22 21 20.6	+0.4
	comp=Z,3.4nm,0.7s						
PDAR	Pinedale Array	77.12	46	P	P	22 21 36.7	+1.2
	comp=Z,0.2nm,0.4s,baz=270,slow=2.7,SNR=3.3						
KWP	Kalwaria Pacla	78.33	325	eP	P	22 21 42.3	+0.4
	comp=Z,49nm,1.1s						
VYHS	Vyhne	80.92	326	eP	P	22 21 57.1	+1.1
CLL	Collm	81.24	330	eP	P	22 21 58.0	+0.4
	comp=Z,4.0nm,1.0s						
GEC2	GERESS Array S	82.88	329	eP	P	22 22 06.8	+0.5
	comp=Z,1.8nm,0.8s						
GERES	GERESS Array B	82.88	329	P	P	22 22 06.8	+0.5
	comp=Z,0.8nm,0.6s,baz=28,slow=6.0,SNR=8.3						
ATD	Arta Tunnel	90.40	285	LR	LR	23 07 33.1	
	comp=Z,97nm,18.3s,baz=301,slow=38						
TOA1	Torodi Ar. Sit	117.62	316	ePKPdf	PKPdf	22 28 27.9	-0.5
TORD	Torodi Ar. Bea	117.63	316	PKP	PKPdf	22 28 27.9	-0.5
	comp=Z,0.2nm,0.7s,baz=9.1,slow=3.1,SNR=2.9						
LPAZ	La Paz	146.09	60	PKPbc	PKPab	22 29 23.5	-0.2
	comp=Z,1.8nm,0.8s,baz=44,slow=6.3,SNR=6.9						
LPAZ	La Paz	146.09	60	ePKPdf	PKPdf	22 29 22.0	-0.2

TRN 10 22:11:18.8, 16°.41N×60°.85W, h29^{km}, MD3.5, 1D,
Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABD	La Joyeuse, An	0.61	276	⇓eP	Pn	22 11 32.1	+0.6
MAGL	Barre de l'ile	0.62	222	eP	Pn	22 11 32.9	+1.3
CBE	Ff, Capester	0.80	245	eP	Pb	22 11 35.7	+1.5
TDBA	Terre de Bas,	0.94	234	eP	Pb	22 11 38.0	+1.5
DWS	Wesley	0.95	208	eP	Pb	22 11 37.5	+0.8
DWS				eS	Sb	22 11 51.0	+2.1
MDPO	Dominica; Chan	1.01	215	eP	Pb	22 11 38.7	+1.0
MDPO				eS	Sb	22 11 52.6	+2.0
DLPL	La Plaine	1.14	200	eP	Pb	22 11 40.7	+0.8
DLPL				eS	Sb	22 11 55.2	+0.9
BPA	Boggy Peak	1.15	303	eP	Pb	22 11 40.6	+0.4
BPA				eS	Sb	22 11 56.8	+2.0
MDN	Morne-Daniel	1.20	206	eP	Pb	22 11 40.8	-0.3
MDN				eS	Sb	22 11 57.2	+1.0
DBCT	Belle View Cho	1.23	203	eP	Pb	22 11 41.5	+0.1
DBCT				eS	Sb	22 11 58.9	+2.0
DPMT	Pointe Michel	1.25	204	eP	Pb	22 11 41.2	-0.6
DSHT	Scott's Head	1.29	203	eS	Sb	22 12 00.4	+1.6
MLYT	Lee's Yard	1.32	284	eP	Pb	22 11 43.4	+0.3
MLYT				eS	Sb	22 12 01.0	+1.4
ANWB	Willy Bob	1.54	325	eP	Pn	22 11 45.0	+0.7
ANWB				eS	Sb	22 12 05.3	-0.4
BAMF	Morne Balai	1.61	190	eP	Pb	22 11 47.7	-0.3
PCM	Pelee Case Pet	1.62	192	eP	Pb	22 11 47.5	-0.7
GBMF	Grand Be	1.63	191	eP	Pb	22 11 48.0	-0.4
PML	Morne Lenard	1.65	191	eP	Pb	22 11 47.7	-1.0
FDF	Fort de France	1.69	190	eP	Pb	22 11 48.0	-1.3
FDF				eS	Sb	22 12 08.9	-1.4
NEV	Hard Times	1.80	294	eP	Pb	22 11 49.5	-1.6
NEV				eS	Sb	22 12 12.2	-1.0
SKTB	Turtle Beach	1.87	295	eP	Pb	22 11 51.5	-0.8
TRMF	Trois Ilets	1.87	186	eP	Pb	22 11 50.8	-1.6
BIM	Bigot	1.90	186	eP	Pb	22 11 51.5	-1.3
MPOM	Morne Pois Mar	1.96	180	eP	Pn	22 11 51.8	+1.8
SKI	Saint Kitts	2.03	297	eP	Pn	22 11 52.8	+1.7
SKI				eS	Sb	22 12 18.1	-1.7
SKDB	Saint Kitts 2	2.11	298	eP	Pn	22 11 54.3	+2.0
SKDB				eS	Sn	22 12 19.3	+1.8
BSK	Brimstone Hill	2.12	296	eP	Pn	22 11 52.7	+0.4
BSK				eS	Sn	22 12 19.1	+1.4
SLBI	Saint Lucia, B	2.38	183	eP	Pn	22 11 57.7	+1.9
SLBI				eS	Sn	22 12 25.3	+1.3
SLW	Petit Monier	2.38	182	eP	Pn	22 11 57.0	+1.1
SLW				eS	Sn	22 12 26.4	+2.3
SLPA	Patience	2.54	181	eS	Sn	22 12 29.7	+1.5
SLB	Belfond	2.58	184	eP	Pn	22 12 00.2	+1.6
SLB				eS	Sn	22 12 30.6	+1.5
SLDE	Delcer	2.60	184	eP	Pn	22 12 00.6	+1.6
SLDE				eS	Sn	22 12 31.4	+1.8
MCLT	Moule a Chique	2.69	182	eP	Pn	22 12 02.5	+2.4
MCLT				eS	Sn	22 12 33.4	+1.6
SVCV	St. Vincent, C	3.13	185	eP	Pn	22 12 07.6	+1.3
SVCV				eS	Sn	22 12 44.1	+1.3
SVB	Belmont	3.15	187	eP	Pn	22 12 07.9	+1.4
SVB				eS	Sn	22 12 44.3	+1.3
FCV	Fort Charlotte	3.26	187	eP	Pn	22 12 09.7	+1.7
FCV				eS	Sn	22 12 47.3	+1.5

SJA 10 22:13:51.4±0.3, 31°.31S×68°.77W, h98^{km}±7^{km}, ML3.0,
MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	Leoncito	0.66	223	eP	Pn	22 14 10.0	+1.3
RTLS				eS	Sn	22 14 23.4	+1.8
RTLS				IAML		22 14 24.6	
	comp=Z,286nm,0.2s						
AROD	Rodeo	1.29	332	eP	Pn	22 14 16.9	+1.5
AROD				eS	Sn	22 14 35.7	+2.2
AGUA	GUANDACOL	1.84	8	eP	Pn	22 14 23.1	+1.2
APLL	PUNTA DE LOS L	2.14	65	eP	Pn	22 14 27.1	+1.4
VCA	Vinchina	2.62	11	eP	Pn	22 14 33.4	+1.2
MRA	San Martin	2.83	114	eP	Pn	22 14 36.2	+1.3
MRA				IAML		22 15 09.3	
	comp=Z,71nm,0.5s						

*DDA **10** 22:17:40.9, 36°.98N×36°.09E, h7^{km}±2^{km}, ML2.5*
*ISCJB **10** 22:17:41.2±0.6, 36°.99N±0°.05×36°.10E±0°.03, h4^{km}±6^{km}, Error ellipse: s-maj=8.4km s-min=3.7km az=162.4*
*ISK **10** 22:17:41.1, 36°.95N×36°.09E, h9^{km}, ML2.2/9*
ISC 10 22:17:40.7±1.2, 36°.96N±0°.05×36°.09E±0°.03, h5^{km}±14^{km},
n20, σ0^{s}.82/26, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	Ceyhan	0.27	281	PG	Pg	22 17 46.9	+0.8
CEYT				SG	Sb	22 17 51.7	-1.4
YURE	YUREGIR	0.39	250	PG	Pg	22 17 49.2	+1.0
YURE	YUREGIR	0.39	250	i P	Pb	22 17 49.4	-0.6
KAMA	Osmaniye	0.52	64	i P	Pg	22 17 51.0	+0.3
KAMA				i S	Sg	22 17 56.3	-1.2
ANDN	Andirin	0.65	18	i P	Pg	22 17 53.6	+0.2
ANDN				i S	Sg	22 18 01.4	-0.5
KRTS	Karatas	0.69	236	PG	Pb	22 17 55.2	0.0
HCB	Kahramanmara	0.76	59	i P	Pg	22 17 56.0	+0.7
HCB				i S	Sg	22 18 05.9	+0.6
KUZU	Kuzuini	0.82	103	i P	Pb	22 17 57.3	-0.1
KMRS	Kahramanmaras	0.85	50	PG	Pb	22 17 58.1	+0.1
GAZ	Gaziantep	0.93	76	PG	Pb	22 17 59.2	-0.1
GAZ				SG	Sb	22 18 12.6	+0.7
SAIM	ADANA	1.02	360	i P	Pb	22 18 01.1	+0.2
SAIM				IAML_P			
	comp=Z,396nm,0.1s						
GZT	Gaziantep	1.25	71	i P	Pg	22 18 05.6	+0.9
GZT				i S	Sg	22 18 19.2	-1.7
MERS	Mersin	1.26	266	PN	Pg	22 18 05.1	+0.3
YAHY	KAYSERI_Yahyal	1.27	333	i P	Pg	22 18 05.5	+0.4
YAHY				IAML_P			
	comp=Z,253nm,0.1s						
KIZK	Mersin	1.63	254	PN	Pn	22 18 10.6	+0.5
DARE	Darende-Malaty	1.95	34	PN	Pb	22 18 15.9	-1.0
KEBE	Keben-Mersin	1.97	256	PN	Pb	22 18 16.1	-1.1
SURC	SANLIURFA_SURC	2.03	91	i P	Pg	22 18 19.1	-0.5
IKL	Isikli	2.06	250	PN	Pn	22 18 16.6	+0.6
TEVE	Tevekalti-Mers	2.19	257	PN	Pn	22 18 18.8	+1.0

KRSC 10 22:22:41.7±1.6, 52°.22N×160°.81E, h57^{km}±21^{km}, ML3.7,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.00	332	i P	Pn	22 23 00.9	+1.3
SPN				eS	Sn	22 23 13.9	+1.1
NLC	Nalytchevo	1.30	317	eP	Pn	22 23 05.3	+1.7
NLC				eS	Sn	22 23 20.9	+0.9
RUS	Russkaya	1.43	279	eP	Pn	22 23 07.0	+1.7
RUS				eS	Sn	22 23 24.3	+1.3
DALK	Dalny	1.49	304	eP	Pn	22 23 08.4	+2.2
DALK				eS	Sn	22 23 27.1	+2.5
UGLR	Uglovaya	1.56	310	eP	Pn	22 23 09.8	+2.6
SDLR	Sedlovina	1.58	313	eP	Pn	22 23 09.8	+2.4
SMAR	Somma	1.61	311	eP	Pn	22 23 10.1	+2.2
MTVR	Mutnovka	1.63	280	eP	Pn	22 23 10.4	+2.2
MTVR				eS	Sn	22 23 30.0	+1.8
AVH	Avacha	1.64	310	eP	Pn	22 23 10.5	+2.3
KRER	Koryakskii	1.66	312	eP	Pn	22 23 10.1	+1.5
KOK	Koryaka	1.70	310	eP	Pn	22 23 10.0	+0.9
KRX	Arik	1.74	312	eP	Pn	22 23 12.4	+2.8
KDTR	Khodutka, Kamc	1.74	257	eP	Pn	22 23 10.7	+1.2
KDTR				eS	Sn	22 23 31.2	+0.6
KRMR	Karymshinskiy	1.75	291	i P	Pn	22 23 12.1	+2.5
KRMR				eS	Sn	22 23 33.0	+2.2
ASAK	Asacha	1.79	276	eP	Pn	22 23 12.9	+2.5
GNL	Ganaly	2.28	311	eP	Pn	22 23 20.9	+3.9
APC	Apacha	2.34	289	eP	Pn	22 23 20.7	+3.1
APC				eS	Sn	22 23 47.4	+2.2
MKZ	Mys Kozlova	2.40	13	eP	Pn	22 23 21.2	+2.7
MKZ				eS	Sn	22 23 48.4	+1.7
KZV	Kizimen	2.91	354	eP	Pn	22 23 29.0	+3.4
TUMD	Tumrok D	3.00	355	eP	Pn	22 23 30.6	+3.9
TUMR	Tumrok	3.09	353	eP	Pn	22 23 32.3	+4.2
KBTR	Krutoberegovo	4.16	16	P	Pn	22 23 46.9	+4.3
BKI	Bering	4.28	44	eP	Pn	22 23 47.1	+2.9
BKI				eS	Sn	22 24 32.9	+0.2

*ISCJB **10** 22:39:06.0±0.6, 23°.88S±0°.04×67°.13W±0°.04, h200^{km}±8^{km}, mb3.2/1, Error ellipse: s-maj=7.3km s-min=5.1km az=25.5*
*IDC **10** 22:39:05.5±1.2, 23°.85S×67°.37W, h228^{km}±26^{km}, mb3.0/1, mb1 3.2/5, mb1mx3.0/35, mbtmp3.8/5, Error ellipse: s-maj=39.9km s-min=20.4km az=97.0*
*SJA **10** 22:39:06.4±0.9, 23°.94S×67°.09W, h191^{km}±15^{km}, ML2.8, MW2.7*
*GUC **10** 22:39:08.9±0.5, 23°.68S×67°.52W, h220^{km}±5^{km}, ML3.9*
ISC 10 22:39:04.8±1.0, 23°.93S±0°.06×67°.07W±0°.05,
h208^{km}±10^{km}, n28, σ1^{s}.64/45, 6C-3D, Chile-Argentina
border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.64	119	i P	Pn	22 39 42.2	+1.6
SLA				IAML		22 39 43.1	
	comp=Z,138nm,0.5s						
SLA				i S	S	22 39 57.3	-11
HJA	Humahuaca	1.69	65	i P	Pn	22 39 42.4	+1.0
HJA				IAML		22 39 43.4	
	comp=Z,70nm,0.6s						
HJA				i S	S	22 40 09.0	-0.4
AZAP	Zapla	1.86	100	i P	Pn	22 39 43.8	+1.0
AZAP				IAML		22 39 44.3	
	comp=Z,110nm,0.4s						
LVC	Limon Verde	2.14	307	P	Pn	22 39 47.1	+1.3
	comp=Z,6.8nm,0.3s,baz=126,slow=8.7,SNR=23						
LVC				S	S	22 40 16.1	-1.0
	comp=Z,12nm,0.3s,baz=74,slow=23,SNR=5.9						
LVC	Limon Verde	2.14	307	i P	Pn	22 39 47.2	+1.4
LVC				i S	S	22 40 16.6	-0.5
LVC				IAML		22 40 21.3	
	comp=Z,32nm,0.1s						
LVC	Limon Verde	2.14	307	eP	Pn	22 39 47.2	+1.4
LVC				i S	S	22 40 16.8	-0.4
YJA	Yavi	2.26	40	i P	Pn	22 39 48.8	+1.7
YJA				i S	S	22 40 04.8	-15
YJA				IAML		22 40 21.6	
	comp=Z,4.8nm,0.5s						

PB15	**IPOC Station P**	2.31	288	⇑iP	Pn	22 39 48.9	+1.5
PB15				iS	S	22 40 19.7	-0.5
FSA	**Cafayete**	2.39	156	iP	Pn	22 39 49.6	+1.4
FSA				IAML		22 39 50.1	
	comp=Z,22nm,0.4s						
PB06	**IPOC Station P**	2.60	297	⇑iP	Pn	22 39 52.0	+1.5
PB06				iS	S	22 40 24.5	-1.1
PB06				IAML		22 40 26.8	
	comp=E,387nm,0.2s						
GO02	**Mina Guanaco**	2.60	241	IAML		22 40 28.9	
	comp=E,328nm,0.1s						
PB09	**IPOC Station P**	2.92	316	eP	Pn	22 39 56.3	+2.2
PB09				iS	S	22 40 31.9	-0.3
PB09				IAML		22 40 35.6	
	comp=N,112nm,0.1s						
PB05	**IPOC Station P**	3.07	290	⇓iP	Pn	22 39 57.0	+1.2
PB05				iS	S	22 40 33.1	-2.1
PB05				IAML		22 40 35.4	
	comp=E,144nm,0.2s						
PB03	**IPOC Station P**	3.10	307	⇑iP	Pn	22 39 57.6	+1.3
PB03				iS	S	22 40 34.3	-1.6
PB03				IAML		22 40 36.0	
	comp=E,216nm,0.1s						
PB14	**IPOC Station P**	3.12	256	iP	Pn	22 39 57.7	+1.1
PB14				iS	S	22 40 35.3	-1.3
PB14	**IPOC Station P**	3.12	256	IAML		22 40 37.9	
	comp=E,145nm,0.5s						
PB10	**IPOC Station P**	3.22	277	iP	Pn	22 39 58.7	+1.3
PB10				iS	S	22 40 37.4	-0.7
PB10	**IPOC Station P**	3.22	277	⇑iP	Pn	22 39 58.9	+1.4
PB10				iS	S	22 40 36.9	-1.2
PB10				IAML		22 40 38.7	
	comp=E,136nm,0.3s						
PB04	**IPOC Station P**	3.25	299	⇓iP	Pn	22 39 59.4	+1.4
PB04				iS	S	22 40 37.4	-1.6
PB04				IAML		22 40 44.8	
	comp=N,224nm,0.6s						
AHML	**Horco Molle**	3.25	151	iP	Pn	22 39 59.5	+1.6
AHML				IAML		22 40 00.1	
	comp=Z,21nm,0.4s						
PB07	**IPOC Station P**	3.40	310	⇓iP	Pn	22 40 01.1	+1.4
PB07				iS	S	22 40 40.2	-2.1
PB07				IAML		22 40 41.5	
	comp=E,299nm,0.5s						
PB01	**IPOC Station P**	3.64	322	⇑iP	Pn	22 40 03.8	+1.2
PB01				iS	S	22 40 45.8	-1.6
PB02	**IPOC Station P**	3.68	314	⇑iP	Pn	22 40 04.4	+1.3
PB02				iS	S	22 40 46.2	-2.2
LPAZ	**La Paz**	7.66	352	P	Pn	22 40 55.4	+1.0
	comp=E,0.5nm,0.3s,baz=170,slow=6.8,SNR=6.9						
LPAZ				S	S	22 42 21.4	-0.1
	comp=E,0.1nm,0.3s,baz=54,slow=19,SNR=1.7						
CFA	**Coronel Fontan**	7.72	187	P	Pn	22 40 55.8	+1.4
	comp=E,0.3nm,0.3s,baz=12,slow=20,SNR=1.5						
CFA				S	S	22 42 17.7	-4.1
	comp=E,0.6nm,0.3s,baz=144,slow=23,SNR=2.6						
SIV	**San Ignacio**	9.70	37	P	Pn	22 41 20.6	+0.3
	comp=E,0.6nm,0.3s,baz=217,slow=12,SNR=6.3						
SIV				S	S	22 43 05.3	-3.8
	comp=E,0.1nm,0.3s,baz=232,slow=17,SNR=2.3						
BDFB	**Brasilia**	19.72	69	P	P	22 43 21.0	+2.0
	comp=E,1.1nm,0.3s,baz=252,slow=9.8,SNR=7.0						
TORD	**Torodi Ar. Bea**	76.61	69	P	P	22 50 32.0	-1.0
	comp=E,0.6nm,1.0s,baz=242,slow=5.6,SNR=4.0						

RSNC 10 22:39:06.9±0.7, 3°.76N×71°.18W, h25km±9km, ML3.5, Mw3.7, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGZ	**La Independenc**	1.73	312	eP	Pn	22 39 34.1	-1.4
GUVC	**San Jose del G**	1.89	230	ePg	Pn	22 39 38.0	+0.5
GUVC				eS	Sn	22 40 00.2	-0.3
GUVC				i		22 40 07.2	
	comp=Z,664nm,0.2s						
YOPC	**Yopal, Colombi**	2.01	322	eP	Pn	22 39 38.8	-0.5
YOPC				eS	Sn	22 40 03.2	-0.4
YOPC				i		22 40 08.1	
	comp=N,583nm,0.3s						
VILC	**Villavicencio,**	2.53	278	eP	Pn	22 39 46.2	-0.4
VILC				eS	Sn	22 40 16.0	-0.7
VILC				i		22 40 34.3	
	comp=N,620nm,0.4s						
CHIC	**Chingaza**	2.69	289	eP	Pn	22 39 48.3	-0.6
CHIC				eS	Sn	22 40 20.0	-0.9
TAMC	**Tame, Arauca**	2.72	347	eP	Pn	22 39 48.6	-0.5
TAMC				eSg	Sb	22 40 26.6	-1.4
TAMC				i		22 40 30.6	
	comp=Z,161nm,0.2s						
RUSC	**La Rusia**	2.84	318	eP	Pn	22 39 50.4	-0.7
RUSC				eS	Sn	22 40 24.6	-0.2
RUSC				i		22 40 37.2	
	comp=Z,62nm,0.5s						
MACC	**Macarena, Meta**	3.11	239	eP	Pn	22 39 55.6	+1.2
MACC				eS	Sb	22 40 36.4	-2.8
MACC				i		22 40 45.2	
	comp=Z,222nm,0.7s						
PRAC	**Prado**	3.70	269	eP	Pn	22 40 03.0	+0.5
PRAC				i		22 41 12.3	
	comp=Z,46nm,0.6s						
ORTC	**Ortega, Tolima**	4.06	272	eS	Sb	22 41 06.8	+0.4
FLOC	**Florencia**	4.96	244	eP	Pn	22 40 19.3	-0.7
FLOC				eSg	Sb	22 41 30.9	-1.6
YOTC	**Yotoco, Valle**	5.16	273	eP	Pn	22 40 21.4	-1.2

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*NIED **10** 22:47:00, 23°.90N×122°.30E, h32km, Mw3.7 Best double couple: $M_0$4.15000×10^{14} NP1:ϕ_s17.00000°, δ47.00000°, λ172.00000°. NP2:ϕ_s113.00000°, δ84.00000°, λ43.00000°.*

*ISCJB **10** 22:47:51.9±0.5, 23°.95N±0°.01×122°.28E±0°.01, h10km±4km, Error ellipse: s-maj=2.2km s-min=1.8km az=40.3*

*JMA **10** 22:47:52.7±0.1, 23°.90N×122°.26E, h28km±3km, M3.6*

*TAP **10** 22:47:53.6, 23°.99N×122°.25E, h30km, ML3.8, D*

ISC 10 22:47:52.7±1.1, 23°.94N±0°.02×122°.26E±0°.02, h24km±12km, n107, $\sigma 0^{s}88$/197, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	0.60	273	P	Pb	22 48 05.3	+0.7
	baz=257						
ENLB	**Shoufeng**	0.60	266	eP	Pb	22 48 02.6	-2.0
	baz=252						
ENLB				eS	Sb	22 48 11.8	-0.9
	baz=252						
EOS1	**EOS1**	0.61	349	iP	Pb	22 48 04.9	+0.1
	baz=348						
EOS1				iS	Sb	22 48 13.2	+0.1
	baz=348						
TWD	**Chiawan**	0.62	283	iP	Pb	22 48 05.0	+0.1
	baz=278						
TWD				S	Sb	22 48 13.6	+0.3
	baz=278						
NACB	**Ninganchiao**	0.65	291	P	Pb	22 48 05.4	0.0
	baz=274						
NACB				iS	Sb	22 48 14.0	0.0
	baz=274						
NANB	**Nanao**	0.67	316	P	Pb	22 48 06.0	+0.3
	baz=320						
NANB				S	Sn	22 48 15.8	-0.5
	baz=320						
ENA	**Nanau**	0.68	316	P	Pn	22 48 06.6	-0.1
	baz=320						
ENA				eS	Sn	22 48 16.1	-0.4
	baz=320						
ETLH	**Xiulin Townshi**	0.76	291	P	Pb	22 48 07.2	-0.1
	baz=277						
ETLH				S	Sb	22 48 17.3	+0.1
	baz=277						
TWC	**Suao**	0.76	331	iP	Pb	22 48 06.9	-0.4
	baz=339						
TWC				eS	Sb	22 48 15.9	-1.3
	baz=339						
ESL	**Shilin**	0.77	261	P	Pb	22 48 07.0	-0.4
	baz=249						
EGFH	**Guangfu**	0.81	250	P	Pn	22 48 07.8	-0.7
	baz=237						
EGFH				S	Sb	22 48 19.4	+0.8
	baz=237						
JYNG	**Yonagunijimaku**	0.81	51	P	Pn	22 48 08.1	-0.4
JYNG				S	Sb	22 48 18.5	-0.1
YOJ	**Yonaguni jima**	0.86	53	eP	Pn	22 48 09.1	-0.1
	baz=55						
YOJ				eS	Sb	22 48 19.7	-0.4
	baz=55						
YOJ	**Yonaguni jima**	0.86	53	P	Pn	22 48 09.1	-0.1
YOJ				S	Sb	22 48 20.8	+0.7
HGSD	**Ruisui**	0.89	240	iP	Pn	22 48 09.1	-0.5
	baz=237						
HGSD				iS	Sb	22 48 20.8	-0.1
	baz=237						
WHF	**Hehuan Shan**	0.93	283	iP	Pn	22 48 10.1	-0.5
	baz=267						
WHF				eS	Sb	22 48 22.5	0.0
	baz=267						
NNSB	**Datong**	0.93	301	iP	Pn	22 48 10.2	-0.2
	baz=298						
NNSB				iS	Sn	22 48 21.9	-1.2
	baz=298						
ENTT	**Nioudou**	0.94	318	P	Pn	22 48 10.4	0.0
	baz=315						
ENTT				eS	Sn	22 48 22.0	-1.0
	baz=315						
ILA	**Ilan**	0.94	331	eP	Pn	22 48 09.0	-1.4
	baz=328						
ILA				eS	Sb	22 48 22.9	+0.5
	baz=328						
TWE	**Neicheng**	0.94	325	iP	Pn	22 48 10.5	+0.1
	baz=323						
TWE				S	Sn	22 48 22.5	-0.6
	baz=323						
NDT	**Datong Townshi**	0.94	314	eP	Pb	22 48 10.8	+0.4
	baz=311						
NDT				eS	Sn	22 48 21.6	-1.5
	baz=311						
NNS	**Nan Shan**	0.95	302	iP	Pn	22 48 10.3	-0.3
	baz=298						
NNS				iS	Sn	22 48 22.6	-0.8
	baz=298						
EHY	**Hungye**	0.96	243	P	Pn	22 48 10.2	-0.4
	baz=240						
EHY				eS	Sn	22 48 23.0	-0.6
	baz=240						
NTC	**Toucheng**	0.99	337	iP	Pn	22 48 11.0	0.0
	baz=346						
NTC				S	Sn	22 48 23.3	-0.9
	baz=346						
CHGB	**Renai**	1.00	277	iP	Pn	22 48 11.3	-0.1
	baz=264						
CHGB				eS	Sn	22 48 23.1	-1.7
	baz=264						
TWT	**Tachien**	1.03	288	eP	Pb	22 48 12.3	+0.2
	baz=274						
TWT				eS	Sn	22 48 25.5	-0.1
	baz=274						
YULB	**Yu-li**	1.04	238	iP	Pn	22 48 11.5	-0.2
	baz=227						
YULB				S	Sn	22 48 24.9	-0.6
	baz=227						
VWDT	**VWDT**	1.04	260	iP	Pn	22 48 11.8	+0.1
	baz=251						
TDCB	**Techi**	1.05	287	eP	Pn	22 48 12.2	+0.2
	baz=274						
TDCB				eS	Sn	22 48 25.1	-0.9
	baz=274						
TWF1	**Yuli**	1.06	236	iP	Pn	22 48 12.0	0.0
	baz=224						
TWF1				iS	Sb	22 48 26.1	+0.3
	baz=224						
YHNB	**Yeheng**	1.08	312	P	Pn	22 48 12.7	+0.3
	baz=309						
YHNB				eS	Sn	22 48 25.2	-1.4
	baz=309						
TWB1	**Santiao Chiao**	1.09	347	eP	Pn	22 48 11.9	-0.5
	baz=334						
TWB1				eS	Sn	22 48 25.9	-0.8
	baz=334						
TIPB	**Shuangxi**	1.10	339	iP	Pn	22 48 12.5	0.0
	baz=346						
TIPB				S	Sn	22 48 26.1	-0.9
	baz=346						
NSK	**Sanguang**	1.10	312	eP	Pb	22 48 13.1	+0.1
	baz=309						
NSK				eS	Sn	22 48 26.6	-0.5
	baz=309						
CHKT	**Chengkung**	1.17	224	eS	Sn	22 48 26.7	-2.0
	baz=212						
TWA	**Mucha**	1.20	329	P	Pb	22 48 15.0	+0.2
	baz=326						
TWA				eS	Sn	22 48 29.8	+0.3
	baz=326						
SSLB	**Suanglung**	1.20	263	P	Pn	22 48 14.0	0.0
	baz=260						
SSLB				eS	Sn	22 48 29.9	+0.3
	baz=260						
NWF	**Wu-fen Shan**	1.20	339	P	Pn	22 48 14.2	+0.1
	baz=351						
NWF				S	Sn	22 48 29.5	-0.2
	baz=351						
WFSB	**Wu-fen Shan**	1.20	339	P	Pn	22 48 14.2	+0.2
	baz=351						
WFSB				eS	Sn	22 48 28.3	-1.3
	baz=351						
DPDB	**Guoxing**	1.22	275	P	Pb	22 48 14.9	-0.2
	baz=264						
DPDB				eS	Sb	22 48 31.3	+0.8
	baz=264						
SMLT	**Sun Moon Lake**	1.24	268	iP	Pn	22 48 15.1	+0.5
	baz=264						
SMLT				eS	Sb	22 48 32.2	+1.0
	baz=264						
TATO	**Taipei**	1.24	326	iP	Pn	22 48 15.2	+0.7
	baz=323						
TATO				iS	Sb	22 48 31.1	0.0
	baz=323						
WHP	**Taichung City**	1.24	286	eP	Pb	22 48 15.9	+0.4
	baz=273						
WHP				eS	Sb	22 48 31.5	+0.3
	baz=273						
YUS	**Yu-Shan**	1.28	250	eP	Pn	22 48 15.7	+0.2
	baz=247						
YUS				eS	Sn	22 48 31.3	-0.7
	baz=247						
TYC	**Yuchr**	1.28	269	iP	Pn	22 48 15.6	+0.6
	baz=266						
TYC				eS	Sb	22 48 33.7	+1.5
	baz=266						
TAP	**Taipei**	1.29	328	eS	Sn	22 48 32.1	+0.4
	baz=325						
WLTB	**Daxi**	1.29	315	eS	Sn	22 48 31.4	-0.2
	baz=311						
WHYT	**Xinyi Township**	1.31	259	P	Pb	22 48 16.4	-0.3
	baz=250						
WHYT				eS	Sb	22 48 34.0	+1.0
	baz=250						
LIOB	**Emei**	1.33	302	P	Pb	22 48 17.4	+0.4
	baz=288						
LIOB				S	Sb	22 48 33.9	+0.2
	baz=288						
NSTT	**Nanjuang**	1.33	301	P	Pb	22 48 17.4	+0.3
	baz=287						
NSTT				S	Sb	22 48 33.7	-0.1
	baz=287						
YM01	**YM01**	1.35	333	eP	Pn	22 48 16.3	+0.2
	baz=345						
YM01				eS	Sb	22 48 34.2	-0.1
	baz=345						
ELDTW	**Lidau**	1.36	237	eP	Pn	22 48 16.1	-0.2
	baz=235						
ELDTW				eS	Sn	22 48 31.9	-1.7
	baz=235						
YM10	**YM10**	1.36	332	eP	Pn	22 48 16.4	+0.2
	baz=330						
YM10				eS	Sn	22 48 33.6	0.0
	baz=330						
YM05	**YM05**	1.37	333	eP	Pn	22 48 16.4	+0.1
	baz=329						
YM05				eS	Sb	22 48 34.5	-0.3
	baz=329						
YM08	**YM08**	1.38	334	eP	Pn	22 48 16.4	0.0
	baz=345						
YM08				eS	Sn	22 48 32.5	-1.5
	baz=345						
TWS1	**Kuangyinshan**	1.38	327	eP	Pb	22 48 17.5	-0.4
	baz=324						
TWS1				eS	Sb	22 48 35.3	+0.2
	baz=324						
YM03	**YM03**	1.39	332	eP	Pb	22 48 18.1	0.0
	baz=329						
YM03				eS	Sn	22 48 34.9	+0.6
	baz=329						
ALS	**Alishan**	1.40	252	eP	Pn	22 48 17.7	+0.8
	baz=250						
ALS				eS	Sn	22 48 35.4	+0.6
	baz=250						
IRIF	**Iriomote-Funau**	1.40	74	P	Pn	22 48 17.1	+0.4
WJS	**Zhushan**	1.41	265	eP	Pb	22 48 18.3	+0.1
	baz=263						
WJS				eS	Sb	22 48 38.1	+2.3
	baz=263						
ANP	**Anpu**	1.41	332	eP	Pb	22 48 18.0	-0.4
	baz=329						
ANP				eS	Sn	22 48 33.7	-1.0
	baz=329						
NCU	**National Centr**	1.41	317	eS	Sb	22 48 36.3	+0.3
	baz=313						
NCUH	**Zhongli**	1.41	316	eS	Sb	22 48 36.2	+0.2
	baz=313						
TWQ1	**Liyutan**	1.41	287	P	Pb	22 48 18.6	+0.1
	baz=284						
TWQ1				S	Sb	22 48 37.0	+0.9
	baz=284						
HATJ	**Hateruma jima**	1.42	85	P	Pn	22 48 17.4	+0.4
HATJ				eS	Sn	22 48 34.8	-0.1
NTST	**Danshui**	1.42	329	eP	Pb	22 48 19.9	+1.4
	baz=336						
NTST				eS	Sb	22 48 36.3	+0.1
	baz=336						
SBCB	**Hsinchu**	1.44	306	eS	Sb	22 48 37.5	+0.9
	baz=303						
WNT	**Mingjian**	1.44	268	eP	Pb	22 48 19.5	+0.7
	baz=265						
WNT				eS	Sb	22 48 38.2	+1.5
	baz=265						
NSY	**Sanyi**	1.45	289	eP	Pb	22 48 19.2	+0.2
	baz=286						
NSY				eS	Sb	22 48 38.1	+1.1
	baz=286						
HSN	**Hsinchu**	1.45	306	eP	Pn	22 48 16.5	-0.9
	baz=304						
HSN				eS	Sn	22 48 36.4	+0.7
	baz=304						
TWY	**Chenhua**	1.46	336	eP	Pb	22 48 19.0	-0.1
	baz=348						
TWY				eS	Sb	22 48 37.4	+0.2
	baz=348						
TCU	**Taichung**	1.46	278	P	Pb	22 48 19.6	+0.4
	baz=275						
TCU				eS	Sb	22 48 38.9	+1.6
	baz=275						
NMLH	**Miaoli**	1.46	294	eP	Pb	22 48 19.6	+0.3
	baz=291						
NMLH				eS	Sb	22 48 37.1	-0.3
	baz=291						
CHN5	**Tsauling**	1.49	257	P	Pb	22 48 19.5	-0.2
	baz=245						
CHN5				eS	Sb	22 48 39.1	+0.9
	baz=245						
PTSB	**Yuanli**	1.50	290	eP	Pb	22 48 19.5	-0.4
	baz=286						
PTSB				eS	Sb	22 48 38.7	+0.1
	baz=286						
WDJ	**Dajia District**	1.53	286	eS	Sb	22 48 39.6	+0.2
	baz=282						
TWGBT	**Beinan**	1.56	224	eP	Pn	22 48 18.4	-0.4
	baz=234						
TWGBT				eS	Sn	22 48 37.1	-1.1
	baz=234						
WCHH	**Zhanghua**	1.56	275	eP	Pb	22 48 21.2	+0.3
	baz=272						
WCHH				eS	Sb	22 48 41.6	+1.4
	baz=272						
TWG	**Pinlang**	1.56	225	eP	Pn	22 48 18.4	-0.5
	baz=234						
TWG				eS	Sn	22 48 37.4	-1.0
	baz=234						
TTN	**Taitung**	1.56	221	eS	Sn	22 48 38.6	+0.3
	baz=211						
WGK	**Gukeng**	1.57	261	eS	Sb	22 48 42.6	+2.0
	baz=259						
STYT	**Tauyuan**	1.58	241	eS	Sn	22 48 39.4	+0.5
	baz=230						
WDLH	**Douliu**	1.59	261	eP	Pb	22 48 21.2	-0.2
	baz=259						
WDLH				eS	Sb	22 48 43.7	+2.5
	baz=259						
TPUB	**Ta-pu**	1.62	247	eP	Pb	22 48 21.4	-0.6
	baz=245						
TPUB				eS	Sb	22 48 42.5	+0.4
	baz=245						
JKRS	**Kuro-shima**	1.63	79	P	Pn	22 48 20.7	+0.9
JKRS				S	Sb	22 48 41.5	-0.7
WTP	**Ta-pu**	1.66	246	eP	Pb	22 48 22.0	-0.6
	baz=244						
WTP				eS	Sb	22 48 43.4	+0.3
	baz=244						
CHN2	**Minshiung**	1.68	256	eP	Pb	22 48 23.5	+0.5
	baz=254						
CHN2				eS	Sb	22 48 46.4	+2.7
	baz=254						
PCYT	**Pengchaiyu**	1.69	354	eP	Pn	22 48 20.4	-0.3
	baz=353						
CHY	**Chiayi**	1.74	256	eP	Pb	22 48 23.6	-0.4
	baz=254						
CHY				eS	Sb	22 48 46.5	+1.2
	baz=254						
RLNB	**Erlin**	1.74	269	eP	Pb	22 48 23.2	-0.7
	baz=280						
RLNB				eS	Sb	22 48 46.8	+1.5
	baz=280						
SLGT	**Liugui**	1.75	238	eP	Pn	22 48 23.1	+1.5
	baz=228						
SLGT				eS	Sb	22 48 44.8	-1.0
	baz=228						
CHN1	**Nanshi**	1.76	245	eP	Pb	22 48 23.6	-0.7
	baz=244						
CHN1				eS	Sb	22 48 47.3	+1.4
	baz=244						
TWK	**Hsinying**	1.76	248	eP	Pb	22 48 23.8	-0.5
	baz=246						
TWK				eS	Sb	22 48 46.6	+0.7
	baz=246						
SGST	**Jiashian**	1.76	241	eP	Pb	22 48 24.0	-0.3
	baz=228						
SGST				eS	Sb	22 48 46.8	+0.8
	baz=228						
SNST	**Tainan City**	1.77	246	eP	Pb	22 48 25.0	+0.5
	baz=245						
SNST				eS	Sb	22 48 47.8	+1.7
	baz=245						
JIJ	**Ishigaki jima**	1.77	76	P	Pn	22 48 21.8	0.0
JIJ				eS	Sn	22 48 44.6	+1.0
ECL	**Taimali**	1.80	222	eS	Sn	22 48 42.3	-1.9
	baz=222						
WTCT	**Ta-ch'eng**	1.81	268	eP	Pb	22 48 24.6	-0.5
	baz=278						
WTCT				eS	Sb	22 48 48.2	+0.8
	baz=278						
WSF	**Szhu**	1.89	261	eP	Pb	22 48 25.6	-0.9
	baz=259						
WSF				eS	Sb	22 48 50.3	+0.7
	baz=259						
SSD	**Sandimen**	1.91	232	eP	Pn	22 48 25.5	+1.8
	baz=225						
SSD				eS	Sb	22 48 49.8	-0.5
	baz=225						
CHN8	**Yiju**	1.97	253	eP	Pb	22 48 26.5	-1.3
	baz=251						
CHN8				eS	Sb	22 48 51.6	-0.3
	baz=251						
JISG	**Ishigakijimahi**	1.98	71	P	Pn	22 48 24.6	-0.1
MASBT	**Mashibuluo**	2.00	229	eP	Pn	22 48 25.8	+0.9
	baz=224						
MASBT				eS	Sn	22 48 49.1	-0.1
	baz=224						
LAY	**Lan-yu**	2.00	199	eP	Pn	22 48 26.2	+1.2
	baz=200						
LAY				eS	Sn	22 48 45.8	-3.5
	baz=200						
TAW	**Tawu**	2.02	219	eP	Pb	22 48 27.2	-1.4
	baz=219						
TAW				eS	Sn	22 48 48.7	-0.9
	baz=219						
TWM1	**Shoushan**	2.02	237	eP	Pb	22 48 29.0	+0.3
	baz=235						
TWM1				eS	Sb	22 48 56.1	+2.7
	baz=235						
JTJ	**Tarama**	2.34	72	P	Pn	22 48 30.3	+0.7
JTJ				eS	Sn	22 48 59.2	+1.7

*IDC **10** 22:59:51.8±2.2, 8°.99N×126°.61E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.6/37, mbtmp3.8/4, Error ellipse: s-maj=194.4km s-min=26.1km az=67.0*

*ISCJB **10** 22:59:59.2±1.0, 8°.84N±0°.05×126°.44E±0°.08, h69^{km}±10^{km}, mb3.7/4, Error ellipse: s-maj=13.3km s-min=7.5km az=167.2*

*MAN **10** 22:59:59.2, 8°.84N×126°.44E, h41^{km}, mb5.2, ML4.1, MS4.3*

ISC 10 23:00:01.4±1.3, **8°.80N**±0°.04×**126°.34E**±0°.09, **h67**^{km}±12^{km}, **n15**, σ**2^{s}.03**/25, **mb3.6**/4, **4C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.73	283	eP	Pn	23 00 15.1	-1.4
BUTP				eS	Sn	23 00 26.8	-0.7
BUKP	Musuan	1.56	234	eP	Pn	23 00 26.6	-0.5
BUKP				eS	Sn	23 00 48.9	+2.3
CGP	Cagayan de Oro	1.66	258	⇑ iP	Pn	23 00 27.5	-1.0
CGP				i S	Sn	23 00 48.2	-0.7
MATI	Mati	1.84	182	eP	Pn	23 00 29.6	-1.4
MATI				eS	Sn	23 00 51.8	-1.5
DMPH	Davao City--Mi	1.89	206	⇑ eP	Pn	23 00 34.6	+3.0
DMPH				eS	Sn	23 00 57.6	+3.1
MSLP	Maasin	1.97	312	eP	Pn	23 00 32.0	-0.6
MSLP				eS	Sn	23 00 59.3	+2.9
KCP	Kidapawan	2.17	215	⇑ eP	Pn	23 00 35.2	-0.1
KCP				i S	Sn	23 01 01.8	+0.5
CTBH	Cotabato--PC H	2.60	233	⇓ iP	Pn	23 00 40.9	-0.2
PLP	Palo	2.71	330	⇑ eP	Pn	23 00 43.3	+0.7
PLP				i S	Sn	23 01 18.6	+4.3
DDMP	Don Marcelino,	2.75	193	eP	Pn	23 00 43.4	+0.2
DDMP				eS	Sn	23 01 19.6	+4.3
PAGZ	Pagadian	3.07	252	eP	Pn	23 00 47.4	-0.2
PAGZ				eS	Sn	23 01 25.2	+2.0
WRA	Warramunga Arr	29.63	165	P	P	23 06 00.5	-0.1
	0.6nm,0.6s,baz=344,slow=12,SNR=1.5						
ASAR	Alice Springs	33.10	167	P	P	23 06 30.6	-0.6
	0.5nm,0.5s,baz=352,slow=7.2,SNR=3.9						
MKAR	Makanchi Array	53.23	323	P	P	23 09 12.9	-0.2
	0.4nm,0.6s,baz=113,slow=5.8,SNR=5.4						
FINES	FINESS Array B	87.21	332	P	P	23 12 38.6	-1.6
	3.6nm,1.2s,baz=79,slow=7.2,SNR=2.1						

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*ISCJB **10** 23:01:47.3±1.4, 12°.2N±0°.2×48°.4E±0°.1, h10^{km}, mb3.5/8, MS3.4/5, Error ellipse: s-maj=33.3km s-min=15.0km az=165.4*

*IDC **10** 23:01:47.7±2.2, 12°.23N×48°.34E, h0^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.5/39, mbtmp3.5/9, ML3.6/1, MS3.5/6, Ms1 3.5/6, ms1mx3.1/31, Error ellipse: s-maj=48.7km s-min=25.0km az=3.0*

ISC 10 23:01:49.3±1.6, **12°.3N**±0°.3×**48°.4E**±0°.1, **h10**^{km}, **n12**, σ**0^{s}.93**/9, **mb3.6**/8, **MS3.5**/5, **Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	5.43	263	Pn	Pn	23 03 10.8	+0.3
	1.9nm,0.3s,baz=100,slow=22,SNR=11						
WSAR	Wadi Sarin	14.66	40	LR	LR	23 10 33.0	
	comp=Z,175nm,19.7s,baz=230,slow=36						
GEYT	Alibeck	27.02	17	P	P	23 07 32.2	+0.5
	0.6nm,0.5s,baz=228,slow=15,SNR=2.6						
GEYT				LR	LR	23 20 06.9	
	comp=Z,122nm,18.2s,baz=185,slow=41						
GNI	Garni	27.97	354	LR	LR	23 20 06.3	
	comp=Z,90nm,19.5s,baz=176,slow=39						
BRTR	Keskin Array B	30.30	337	P	P	23 08 01.1	+0.1
	0.8nm,1.0s,baz=122,slow=1.6,SNR=3.6						
BRTR				LR	LR	23 20 46.0	
	comp=Z,30nm,18.9s,baz=105,slow=38						
AKASG	Malin Array Be	41.41	342	P	P	23 09 34.8	-0.9
	0.2nm,0.3s,baz=161,slow=6.7,SNR=3.0						
MKAR	Makanchi Array	44.73	33	P	P	23 10 03.1	+0.2
	0.4nm,0.7s,baz=232,slow=7.6,SNR=3.8						
BOSA	Boshof	46.36	208	LR	LR	23 29 01.2	
	comp=Z,65nm,18.9s,baz=70,slow=35						
GERES	GERESS Array B	46.41	329	P	P	23 10 15.9	-0.3
	0.2nm,0.3s,baz=150,slow=4.3,SNR=3.4						
CMAR	Chiang Mai Arr	49.05	76	P	P	23 10 36.0	-1.1
	0.3nm,0.3s,baz=259,slow=9.1,SNR=3.3						
CMAR				LR	LR	23 31 16.0	
	comp=Z,45nm,19.0s,baz=199,slow=36						
ZALV	Zalesovo Beam	50.60	27	P	P	23 10 47.9	-0.3
	0.3nm,0.4s,baz=238,slow=8.2,SNR=2.4						
SONM	Songino Array	59.71	41	P	P	23 11 56.0	+1.6
	0.4nm,0.8s,baz=270,slow=2.9,SNR=2.8						

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*ISCJB **10** 23:26:01.7±0.6, 20°.07N±0°.06×145°.6E±0°.2, h109^{km}, mb3.9/13, Error ellipse: s-maj=21.6km s-min=7.9km az=178.7*

*IDC **10** 23:26:04.3±3.0, 20°.01N×145°.56E, h123^{km}±29^{km}, mb3.6/13, mb1 3.8/15, mb1mx3.6/41, mbtmp4.0/15, Error ellipse: s-maj=22.4km s-min=16.2km az=68.0*

ISC 10 23:26:03.2±0.7, **20°.07N**±0°.08×**145°.5E**±0°.2, **h109**^{km}, **n23**, σ**0^{s}.83**/18, **mb3.9**/13, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.48	186	P	Pn	23 27 35.8	-0.3
	9.8nm,0.3s,baz=226,slow=16,SNR=4.7						
GUMO				S	Sn	23 28 49.8	+1.1
	5.7nm,0.3s,baz=195,slow=20,SNR=1.9						
MJAR	Matsushiro Arr	17.62	340	P	Pn	23 30 02.3	+0.5
	0.1nm,0.3s,baz=162,slow=9.3,SNR=3.6						
H11S3	WAKE ISLAND Hy	20.02	91	T	T	23 50 36.8	
	baz=273,slow=74						
H11S1	WAKE ISLAND Hy	20.03	91	T	T	23 50 38.0	
	baz=273,slow=74						
H11S2	WAKE ISLAND Hy	20.04	91	T	T	23 50 36.2	
	baz=273						
H11N1	WAKE ISLAND Hy	20.08	87	T	T	23 51 15.6	
	baz=274,slow=75,SNR=20						
H11N2	WAKE ISLAND Hy	20.08	87	T	T	23 51 16.1	
	baz=274,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	20.09	87	T	T	23 51 17.5	
	baz=274,slow=75,SNR=22						
KSRS	Korea Array	23.14	322	P	P	23 30 60.0	0.0
	2.4nm,0.5s,baz=140,slow=8.2,SNR=10						
SONM	Songino Array	41.99	321	P	P	23 33 43.5	-0.2
	0.9nm,0.4s,baz=125,slow=10,SNR=4.0						
CMAR	Chiang Mai Arr	43.91	276	P	P	23 33 59.8	+0.4
	1.0nm,0.3s,baz=76,slow=7.8,SNR=4.3						
ASAR	Alice Springs	44.93	195	P	P	23 34 06.1	-1.3
	0.6nm,0.6s,baz=19,slow=6.8,SNR=11						
ZALV	Zalesovo Beam	56.85	322	P	P	23 35 35.1	-1.2
	1.4nm,0.5s,baz=106,slow=7.1,SNR=6.5						
MKAR	Makanchi Array	57.41	313	P	P	23 35 40.7	+0.2
	1.9nm,0.6s,baz=92,slow=9.2,SNR=23						
ILAR	Eielson Array	62.48	27	P	P	23 36 14.4	-0.3
	0.8nm,0.7s,baz=246,slow=5.1,SNR=7.6						
GEYT	Alibeck	75.98	305	P	P	23 37 39.7	+1.1
	2.5nm,0.7s,baz=68,slow=5.3,SNR=4.0						
YKA	Yellowknife Ar	76.85	28	P	P	23 37 42.8	-0.1
	0.8nm,0.5s,baz=291,slow=5.1,SNR=5.3						
ARCES	ARCESS Array B	81.15	342	P	P	23 38 07.0	+0.7
	1.5nm,0.5s,baz=68,slow=6.7,SNR=11						
NVAR	Mina Array Bea	82.41	52	P	P	23 38 15.0	+1.2
	0.4nm,0.7s,baz=255,slow=5.5,SNR=3.2						
FINES	FINESS Array B	85.58	335	P	P	23 38 28.1	-1.0
	2.1nm,0.4s,baz=65,slow=4.7,SNR=33						
NOA	NORSAR Array B	91.24	340	P	P	23 38 55.1	-1.0
	0.3nm,0.6s,baz=39,slow=4.9,SNR=2.6						
TORD	Torodi Ar. Bea	131.47	310	PKP	PKPdf	23 45 03.9	+0.1
	0.4nm,1.0s,baz=54,slow=2.5,SNR=3.6						
LPAZ	La Paz	147.82	89	PKPbc	PKPdf	23 45 34.0	-0.1
	0.9nm,0.6s,baz=333,slow=4.5,SNR=1.6						

IDC 10 23:30:02.0±1.9, **6°.67S**×**126°.54E**, **h0**^{km}, **mb3.7**/1, **mb1 4.0**/3, **mb1mx3.6**/30, **mbtmp3.8**/3, **ML3.9**/2, **MS3.6**/2, **Ms1 3.5**/2, **ms1mx3.0**/28, **Error ellipse: s-maj=216.4km s-min=30.2km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.21	151	Pn	Pn	23 33 36.6	-1.6
	0.3nm,0.3s,baz=326,slow=14,SNR=9.6						
WRA				Sn	Sn	23 36 22.1	-5.4
	0.4nm,0.3s,baz=323,slow=25,SNR=4.6						
ASAR	Alice Springs	18.32	158	P	P	23 34 18.2	+0.3
	1.3nm,0.3s,baz=335,slow=11,SNR=54						
ASAR				S	Sn	23 37 33.2	-10
	0.1nm,0.3s,baz=337,slow=26,SNR=2.7						
STKA	Stephens Creek	28.75	153	LR	LR	23 49 25.9	
	comp=Z,69nm,18.8s,baz=201,slow=40						
MKAR	Makanchi Array	66.11	328	P	P	23 40 51.1	0.0
	0.4nm,0.6s,baz=124,slow=9.1,SNR=6.6						
GEYT	Alibeck	77.40	311	LR	LR	00 22 16.3	
	comp=Z,50nm,19.2s,baz=60,slow=40						

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*KRSC **10** 23:33:45.9±2.2, 50°.13N×158°.83E, h84^{km}±31^{km}, ML5.9, FELT [II] at Severo-Kurilsk.*

*NEIC **10** 23:33:46.6±1.9, 49°.99N×158°.82E, h36^{km}±5^{km}, mb5.0/354, Error ellipse: s-maj=13.6km s-min=11.1km az=129.0*

*ISCJB **10** 23:33:46.2±0.4, 50°.07N±0°.02×158°.89E±0°.02, h42^{km}±3^{km}, mb5.0/192, MS4.3/52, Error ellipse: s-maj=4.2km s-min=2.2km az=170.3*

*BJI **10** 23:33:48.9±0.0, 50°.59N×158°.38E, h47^{km}, mb4.8/50, mB5.0/40, Ms4.6/42, Ms7 4.3/40*

*MOS **10** 23:33:49.0±0.9, 50°.22N×158°.76E, h61^{km}, mb5.4/79, MS4.3/12, Error ellipse: s-maj=6.7km s-min=2.6km az=94.2*

MOS Felt (II) at Severo-Kuril'sk.

*GCMT **10** 23:33:49.6±0.3, 50°.03N±0°.02×158°.75E±0°.03, h36^{km}±1^{km}, MW5.0/81, Moment Tensor Solution. s35,c49; s81,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.15±.19; M$_{\theta\theta}$1.01±.12; M$_{\phi\phi}$-3.15±.12; M$_{r\theta}$2.27±.16; M$_{\theta\phi}$-1.47±.08; M$_{\phi r}$0.09±.13; Best double couple: M$_0$3.87900×10^{16} NP1:φ$_s$51.00000°, δ64.00000°, λ134.00000°. NP2: φ$_s$165.00000°, δ50.00000°, λ35.00000°. Principal axes: T 4.0220, Plg50.0000°, Azm11.0000°; N -0.2770, Plg39.0000°, Azm208.0000°; P -3.7350, Plg9.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **10** 23:33:50.3±1.4, 50°.12N×158°.74E, h63^{km}±11^{km}, mb4.4/35, mb1 4.6/40, mb1mx4.5/51, mbtmp4.7/40, MS4.1/26, Ms1 4.1/26, ms1mx3.9/39 Error ellipse: s-maj=9.9km s-min=8.9km az=128.0*

ISC 10 23:33:47.8±0.4, **50°.09N**±0°.04×**158°.91E**±0°.03, **h46**^{km}±3^{km}, **h47**^{km}**:pP-P, n1085**, σ**1^{s}.22**/1155, **mb5.0**/197, **MS4.3**/53, **88C-21D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.88	290	i P	Pn	23 34 16.4	-1.0
SKR				eS	Sn	23 34 38.5	-1.5
SKR	Severo-Kuril's	1.88	290	⇓ iPN	Pn	23 34 16.5	-1.0
SKR				i S	Sn	23 34 38.2	-1.8
SKR				pmax	pmax		
	comp=Z,9μm,1.3s						
SKR				pmax	pmax		
	comp=Z,8μm,0.9s						
SKR				smax	smax		
	comp=E,20μm,0.7s						
SKR				smax	smax		
	comp=N,21μm,0.9s						
PAU	Pauzhetka	1.92	317	eP	Pn	23 34 17.9	-0.1
PAU				eS	Sn	23 34 39.8	-1.1
PAU	Pauzhetka	1.92	317	PN	Pn	23 34 17.9	-0.1
PAU				S	Sn	23 34 39.8	-1.1
ALID	Alaid	2.28	291	eP	Pn	23 34 22.9	-0.2
ALID				eS	Sn	23 34 49.5	-0.6
ALID	Alaid	2.28	291	PN	Pn	23 34 22.9	-0.2
ALID				S	Sn	23 34 49.5	-0.6
RUS	Russkaya	2.36	354	eP	Pn	23 34 23.9	-0.2
RUS				eS	Sn	23 34 51.3	-0.5
RUS	Russkaya	2.36	354	PN	Pn	23 34 23.9	-0.2
RUS				S	Sn	23 34 51.3	-0.5
ASAK	Asacha	2.38	345	eP	Pn	23 34 25.0	+0.5
ASAK	Asacha	2.38	345	PN	Pn	23 34 25.0	+0.5
MTVR	Mutnovka	2.44	350	eP	Pn	23 34 25.6	+0.3
MTVR				eS	Sn	23 34 53.9	-0.1
MTVR	Mutnovka	2.44	350	PN	Pn	23 34 25.6	+0.3
MTVR				S	Sn	23 34 53.9	-0.1
GRL	Gorelyy	2.52	348	eP	Pn	23 34 27.1	+0.7
GRL	Gorelyy	2.52	348	PN	Pn	23 34 27.1	+0.7
PET	Petropavlovsk	2.94	357	ePn	Pn	23 34 32.2	+0.2
PET				eSn	Sn	23 35 00.9	-5.2
PET	Petropavlovsk	2.94	357	i P	Pn	23 34 32.4	+0.4
PET	Petropavlovsk	2.94	357	⇑ iPN	Pn	23 34 32.3	+0.2
PET				eS	Sn	23 35 05.6	-0.5
PET				pmax	pmax		
	comp=Z,3μm,0.6s						
PET				smax	smax		
	comp=N,16μm,1.4s						
PET				smax	smax		
	comp=N,3μm,1.4s						
PET				smax	smax		
	comp=N,16μm,0.9s						
PET				smax	smax		
	comp=E,8μm,0.6s						
PET				MLR	MLR		
	comp=Z,4μm,14.0s						
PET				MLR	MLR		
	comp=Z,4μm,20.0s						
DALK	Dalny	2.95	358	eP	Pn	23 34 32.1	0.0
DALK				eS	Sn	23 35 05.9	-0.3
DALK	Dalny	2.95	358	PN	Pn	23 34 32.1	0.0
DALK				S	Sn	23 35 05.9	-0.3
SPN	Mys Shipunski	3.09	13	eP	Pn	23 34 34.3	+0.2
SPN				eS	Sn	23 35 09.2	-0.6
SPN	Mys Shipunski	3.09	13	PN	Pn	23 34 34.3	+0.2
SPN				S	Sn	23 35 09.2	-0.6
NLC	Nalytchevo	3.10	5	eP	Pn	23 34 33.7	-0.5
NLC				eS	Sn	23 35 08.5	-1.4
NLC	Nalytchevo	3.10	5	PN	Pn	23 34 33.7	-0.5
NLC				S	Sn	23 35 08.5	-1.4
PEA0B	Petropavlovsk-	3.12	346	ePn	Pn	23 34 35.5	+1.0
PETK	Petropavlovsk-	3.12	346	P	Pn	23 34 35.4	+0.9
	comp=Z,91nm,0.3s,baz=140,slow=15,SNR=626						
PETK				S	Sn	23 35 12.3	+1.9
	comp=Z,98nm,0.3s,baz=135,slow=21,SNR=6.7						
PETK				LR	LR	23 36 06.3	
	comp=Z,5μm,20.9s,baz=118,slow=44						
PEA1	Petropavlovsk-	3.12	346	ePn	Pn	23 34 35.4	+0.8
PEA1				eSn	Sn	23 35 12.3	+1.7
UGLR	Uglovaya	3.13	359	eP	Pn	23 34 35.0	+0.3
SMAR	Somma	3.18	359	eP	Pn	23 34 35.6	+0.1
SMAR	Somma	3.18	359	PN	Pn	23 34 35.6	+0.1
AVH	Avacha	3.18	358	eP	Pn	23 34 36.0	+0.6
AVH				eS	Sn	23 35 12.5	+0.4
AVH	Avacha	3.18	358	PN	Pn	23 34 36.0	+0.6
AVH				S	Sn	23 35 12.5	+0.4
SDLR	Sedlovina	3.19	360	eP	Pn	23 34 35.4	-0.2
SDLR	Sedlovina	3.19	360	PN	Pn	23 34 35.4	-0.2
KOK	Koryaka	3.21	357	eP	Pn	23 34 37.0	+1.2
KOK	Koryaka	3.21	357	PN	Pn	23 34 37.0	+1.2
KRER	Koryakskii	3.22	358	eP	Pn	23 34 36.4	+0.3
KRER	Koryakskii	3.22	358	PN	Pn	23 34 36.4	+0.3
KRX	Arik	3.28	357	eP	Pn	23 34 37.4	+0.6
KRX	Arik	3.28	357	PN	Pn	23 34 37.4	+0.6
GNL	Ganaly	3.66	351	eP	Pn	23 34 43.1	+1.1
GNL	Ganaly	3.66	351	PN	Pn	23 34 43.1	+1.1
MKZ	Mys Kozlova	4.80	20	eP	Pn	23 34 56.9	-0.5
MKZ				eS	Sn	23 35 49.3	-2.4
MKZ	Mys Kozlova	4.80	20	PN	Pn	23 34 56.9	-0.5
KZV	Kizimen	5.10	9	eP	Pn	23 35 03.0	+1.2
KZV				eS	Sn	23 35 59.2	-0.3
KZV	Kizimen	5.10	9	PN	Pn	23 35 03.0	+1.2
TUMD	Tumrok D	5.20	9	eP	Pn	23 35 03.9	+0.8
TUMD				eS	Sn	23 36 01.4	-0.3
TUMR	Tumrok	5.26	8	eP	Pn	23 35 05.4	+1.5
TUMR	Tumrok	5.26	8	PN	Pn	23 35 05.4	+1.5
ESO	Esso	5.85	359	eP	Pn	23 35 13.4	+1.5
ESO	Esso	5.85	359	PN	Pn	23 35 13.4	+1.5
KIRR	Kirishev	5.94	8	eP	Pn	23 35 15.0	+1.7
KIRR	Kirishev	5.94	8	PN	Pn	23 35 15.0	+1.7
KPT	Kopyto	5.94	7	eP	Pn	23 35 14.8	+1.6
KPT	Kopyto	5.94	7	PN	Pn	23 35 14.8	+1.6
BZGR	Bezymyannyi-Gr	5.96	10	eP	Pn	23 35 14.8	+1.3
BZGR	Bezymyannyi-Gr	5.96	10	PN	Pn	23 35 14.8	+1.3
BZWR	Bezymyannyi-We	5.96	9	eP	Pn	23 35 15.4	+1.8
BZWR	Bezymyannyi-We	5.96	9	PN	Pn	23 35 15.4	+1.8
KOZ	Kozyrevsk	6.01	5	eP	Pn	23 35 15.6	+1.5
KOZ	Kozyrevsk	6.01	5	PN	Pn	23 35 15.6	+1.5
LGNR	Loginova	6.10	9	eP	Pn	23 35 17.5	+1.9
LGNR	Loginova	6.10	9	PN	Pn	23 35 17.5	+1.9
CIRR	Tsirk	6.14	10	eP	Pn	23 35 17.9	+1.9
KRSR	Krestovskiy	6.22	9	eP	Pn	23 35 18.5	+1.4
KRSR	Krestovskiy	6.22	9	PN	Pn	23 35 18.5	+1.4
SRDR	Sredinnyy	6.26	4	eP	Pn	23 35 18.3	+0.7
SRDR	Sredinnyy	6.26	4	PN	Pn	23 35 18.3	+0.7
KLY	Klyuchi	6.32	9	eP	Pn	23 35 20.3	+1.9
KLY	Klyuchi	6.32	9	PN	Pn	23 35 20.3	+1.9
KBTR	Krutoberegovo	6.57	19	eP	Pn	23 35 21.9	+0.2
KBTR				eS	Sn	23 36 33.0	-2.1
KBTR	Krutoberegovo	6.57	19	PN	Pn	23 35 21.9	+0.2
KBG	Krutoberegovo	6.58	19	eP	Pn	23 35 22.6	+0.7
KBG	Krutoberegovo	6.58	19	PN	Pn	23 35 22.6	+0.7
BDR	Baidarnaya	6.64	11	eP	Pn	23 35 23.8	+1.1
BDR	Baidarnaya	6.64	11	PN	Pn	23 35 23.8	+1.1
SMKR	Semkarok	6.68	12	eP	Pn	23 35 24.6	+1.2
SMKR	Semkarok	6.68	12	PN	Pn	23 35 24.6	+1.2
BKI	Bering	6.69	37	eP	Pn	23 35 22.4	-0.9
BKI				eS	Sn	23 36 31.6	-6.5
BKI	Bering	6.69	37	PN	Pn	23 35 22.4	-0.9
SRKR	Sorokina	6.72	11	eP	Pn	23 35 25.0	+1.2
SRKR	Sorokina	6.72	11	PN	Pn	23 35 25.0	+1.2
KUR	Kuril'sk	8.89	241	ePN	Pn	23 35 52.7	-0.9
KUR				pmax	pmax		
	comp=Z,117nm,0.8s						
KUR				pmax	pmax		
	comp=E,63nm,0.6s						
KUR				pmax	pmax		
	comp=N,51nm,0.5s						
KUR				MLR	MLR		
	comp=N,800nm,16.0s						
KUR				MLR	MLR		
	comp=E,900nm,13.0s						
PALN	Palana	9.04	3	eP	Pn	23 35 55.6	0.0
PALN	Palana	9.04	3	PN	Pn	23 35 55.6	0.0
OSSR	Ossora	9.49	13	eP	Pn	23 36 01.7	0.0
OSSR	Ossora	9.49	13	PN	Pn	23 36 01.7	0.0
SMY	Shemya	9.85	69	ePn	Pn	23 36 06.5	-0.2
SMY				eSn	Sn	23 37 49.2	-6.6
SMY	Shemya	9.85	69	ePN	Pn	23 36 06.5	-0.2
TYV	Tymovskoe	10.39	281	ePN	Pn	23 36 16.0	+1.9
TYV				pmax	pmax		
	comp=Z,400nm,2.1s						
TYV				pmax	pmax		
	comp=Z,63nm,0.9s						
OKH	Okha	10.48	295	dePN	Pn	23 36 17.0	+1.8
OKH				pmax	pmax		
	comp=Z,200nm,9.9s						
OKH				MLR	MLR		
	comp=Z,700nm,12.0s						
MA2	Magadan	10.59	337	P	Pn	23 36 17.4	+0.6
	comp=Z,1.2nm,0.3s,baz=147,slow=9.4,SNR=6.7						
MA2				LR	LR	23 40 59.8	
	comp=Z,1μm,19.9s,baz=156,slow=41						
MA2	Magadan	10.59	337	ePn	Pn	23 36 17.9	+1.1
MA2	Magadan	10.59	337	PN	Pn	23 36 16.9	+0.1
GRPR	Tuman	10.83	241	ePN	Pn	23 36 18.0	-2.2
UGL	Uglegorsk	10.99	271	⇑ iPN	Pn	23 36 25.0	+2.8
UGL				S	Sn	23 38 28.0	+4.5
UGL				pmax	pmax		
	comp=Z,345nm,0.9s						
UGL				MLR	MLR		
	comp=Z,1μm,15.0s						
UGL				MLR	MLR		
	comp=E,1μm,11.0s						
TILK	Tilichiki	11.16	19	eP	Pn	23 36 25.3	+0.8
TILK	Tilichiki	11.16	19	PN	Pn	23 36 25.3	+0.8
YSS	Yuzh-Sakhalins	11.16	260	ePn	Pn	23 36 25.5	+0.8
YSS	Yuzh-Sakhalins	11.16	260	ePN	Pn	23 36 25.8	+1.2
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
NKL	Nikolayevsk	11.74	292	ePN	Pn	23 36 30.5	-1.9
NKL				pmax	pmax		
	comp=N,9.0nm,1.5s						
NKL				pmax	pmax		
	comp=Z,38nm,1.5s						
NKL				pmax	pmax		
	comp=E,20nm,1.1s						
NKL				MLR	MLR		
	comp=N,652nm,19.0s						
NKL				MLR	MLR		
	comp=Z,904nm,21.0s						
ASAJ	Asahikawa	12.61	248	P	Pn	23 36 43.5	-0.8
	comp=Z,2.1nm,0.3s,baz=81,slow=14,SNR=12						
ASAJ				LR	LR	23 41 20.7	
	comp=Z,559nm,20.9s,baz=64,slow=36						
KMSK	Kamenskaya	13.04	15	eP	Pn	23 36 51.0	+0.9
KMSK	Kamenskaya	13.04	15	PN	Pn	23 36 51.0	+0.9
SEY	Seymchan	13.36	347	P	Pn	23 36 55.0	+0.4
	comp=Z,0.2nm,0.3s,baz=147,slow=13,SNR=10						
SEY	Seymchan	13.36	347	⇑ ePN	Pn	23 36 55.9	+1.4
ERM	Erimo	13.58	240	ePn	Pn	23 36 53.7	-3.9
ERM				eSn	Sn	23 39 12.4	-14
ERM	Erimo	13.58	240	⇑ eP	Pn	23 36 53.9	-3.7
GRNR	Gornyy	14.34	281	eP	Pn	23 37 08.2	+0.3
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
KIWB	Kanaga Island	15.17	74	ePn	P	23 37 21.3	-1.8
ADK	Adak	15.46	74	ePn	Pn	23 37 21.4	-1.1
	comp=Z,35nm,0.8s						
ADK				eSn	Sn	23 40 05.1	-7.4
ADK	Adak	15.46	74	eP	Pn	23 37 21.4	-1.1
ADK				pmax	pmax		
	comp=Z,35nm,0.8s						
GSTR	Great Sitkin T	15.83	73	ePn	Pn	23 37 28.1	+0.7
TEY	Ternei	15.86	260	⇓ iP	Pn	23 37 26.5	-1.2
TEY				pmax	pmax		
	comp=Z,50nm,1.0s						
TEY				pmax	pmax		
	comp=N,20nm,1.2s						
TEY				pmax	pmax		
	comp=E,40nm,1.2s						
ATKA	Atka Island	16.97	72	ePn	P	23 37 44.6	+1.6
	comp=E,44nm,0.8s						
KLR	Kul'dur	17.57	278	LR	LR	23 45 01.4	
	comp=E,739nm,20.0s,baz=25,slow=38						
BILL	Bilibino	18.37	9	eP	Pn	23 37 58.8	0.0
	comp=E,75nm,0.9s						
BILL	Bilibino	18.37	9	c iP	P	23 37 58.1	-0.3
BILL				eS	S	23 41 26.8	+1.2
BILL				pmax	pmax		
	comp=Z,70nm,0.8s						
BILL				MLR	MLR		
	comp=Z,73nm,20.0s						
USA0B	Ussuriysk Arra	19.18	262	eP	P	23 38 03.8	-3.5
	comp=Z,10nm,1.0s						
USRK	Ussuriysk Ar.	19.18	262	P	P	23 38 05.8	-1.6
	comp=Z,0.4nm,0.3s,baz=63,slow=12,SNR=9.8						
USRK				LR	LR	23 45 32.7	
	comp=Z,308nm,19.3s,baz=57,slow=37						
SPIA	Saint Paul Isl	19.49	57	eP	P	23 38 08.9	-1.7
	comp=Z,89nm,1.1s						
ZEA	Zeya	19.78	293	eP	P	23 38 13.2	-0.6
ZEA				eS	S	23 41 51.0	-3.0
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
ZEA				smax	smax		
	comp=E,200nm,3.0s						
ZEA				MLR	MLR		
	comp=N,1μm,16.0s						
YAK	Yakutsk	20.02	318	eP	P	23 38 14.3	-2.0
	comp=N,168nm,1.0s						
YAK	Yakutsk	20.02	318	eP	P	23 38 14.0	-2.4
YAK				eS	S	23 41 51.2	-7.4
YAK				pmax	pmax		
	comp=Z,189nm,1.0s						
YAK				pmax	pmax		
	comp=N,102nm,1.1s						
YAK				pmax	pmax		
	comp=E,109nm,1.0s						
YAK				pmax	pmax		
	comp=Z,127nm,1.3s						
YAK				pmax	pmax		
	comp=N,92nm,1.5s						
YAK				pmax	pmax		
	comp=E,130nm,1.6s						
YAK				smax	smax		
	comp=N,226nm,1.9s						
YAK				smax	smax		
	comp=E,113nm,2.2s						
YAK				MLR	MLR		
	comp=Z,648nm,20.0s						
YAK				MLR	MLR		
	comp=N,876nm,24.0s						
YAK				MLR	MLR		
	comp=E,870nm,23.0s						
MAJO	Matsushiro	20.16	236	eP	P	23 38 14.8	-3.4

	comp=E,52nm,0.9s						
MAJO	Matsushiro	20.16	236	d iP	P	23 38 19.1	+0.9
MAJO				pmax	pmax		
	comp=Z,50nm,0.9s						
MAT	Matsushiro	20.16	236	P	Pn	23 38 19.5	-0.9
MAT				S	S	23 42 01.6	-0.3
MJAR	Matsushiro Arr	20.16	236	P	P	23 38 18.4	+0.2
	comp=Z,30nm,0.9s,baz=23,slow=10,SNR=43						
MJAR				LR	LR	23 46 24.1	
	comp=Z,237nm,21.4s,baz=55,slow=38						
MJB9	Matsu-Tunnel	20.16	236	eP	P	23 38 13.7	-4.4
	comp=Z,52nm,0.9s						
NIKH	Nikolski High	20.17	69	eP	P	23 38 16.2	-1.9
	comp=Z,100nm,1.2s						
MSHR	Mys Shultsa	20.50	259	deP	P	23 38 21.4	-0.3
MDJ	Mudanjiang	20.52	266	eP	P	23 38 19.3	-2.7
	comp=Z,109nm,0.9s						
MDJ	Mudanjiang	20.52	266	P	P	23 38 19.8	-2.2
MDJ				pP	pP	23 38 30.4	-1.1
MDJ				sP	sP	23 38 36.7	+0.1
MDJ				S	S	23 42 08.1	-0.8
MDJ				sS	sS	23 42 24.5	+0.6
MDJ				pmax	pmax		
	comp=Z,11nm,0.6s						
MDJ				LR	LR		
	comp=Z,840nm,15.7s						
MDJ				LR	LR		
	comp=Z,710nm,13.5s						
MDJ				LR	LR		
	comp=Z,680nm,17.1s						
INU	Inuyama	21.70	236	eP	P	23 38 32.4	-2.3
	comp=Z,47nm,1.0s						
SDPT	Sand Point	24.89	62	eP	P	23 39 04.4	-1.5
	comp=Z,14nm,1.1s						
HIA	Hailar	25.16	283	⇓eP	P	23 39 08.3	-0.3
HIA				pmax	pmax		
	comp=Z,46nm,1.0s						
KSRS	Korea Array	25.49	252	P	P	23 39 12.6	+1.1
	comp=Z,23nm,0.9s,baz=45,slow=10.0,SNR=58						
TIXI	Tiksi	25.56	338	P	P	23 39 11.4	-0.4
	comp=Z,301nm,0.9s,baz=128,slow=9.8,SNR=252						
TIXI				S	S	23 43 35.4	-0.6
	comp=Z,1.9nm,0.5s,baz=278,slow=16,SNR=9.9						
TIXI				LR	LR	23 50 37.8	
	comp=Z,924nm,19.3s,baz=188,slow=40						
TIXI	Tiksi	25.56	338	eP	P	23 39 11.6	-0.3
	comp=Z,335nm,1.0s						
TIXI	Tiksi	25.56	338	c iP	P	23 39 11.5	-0.3
TIXI				pmax	pmax		
	comp=Z,288nm,0.9s						
TJN	Taejon	26.53	251	⇑eP	P	23 39 19.2	-1.7
JNU	Nakatsue	26.73	241	P	P	23 39 23.7	+0.9
	comp=Z,4.0nm,0.5s,baz=57,slow=6.1,SNR=1.8						
JNU				LR	LR	23 50 02.2	
	comp=Z,206nm,22.0s,baz=12,slow=36						
JNU	Nakatsue	26.73	241	eP	P	23 39 25.7	+2.9
	comp=Z,79nm,1.1s						
BOD	Bodaibo	27.09	304	eP	P	23 39 23.3	-2.5
BOD				pmax	pmax		
	comp=Z,17nm,1.1s						
DL2	Dalian	28.56	261	P	P	23 39 48.7	+10
DL2				S	S	23 44 39.7	+16
DL2				pmax	pmax		
	comp=Z,13nm,0.6s						
DL2				LR	LR		
	comp=N,400nm,19.0s						
DL2				LR	LR		
	comp=E,350nm,16.7s						
DL2				LR	LR		
	comp=Z,270nm,18.8s						
CNPM	China Poot	29.57	52	eP	P	23 39 48.2	+0.3
	comp=Z,10nm,0.8s						
MLY	Manley	29.88	41	eP	P	23 39 51.7	+1.0
	comp=Z,11nm,0.9s						
MLY				ePcP	PcP	23 42 53.1	+0.8
RC01	Rabbit Creek A	30.23	49	eP	P	23 39 53.7	0.0
	comp=Z,5.0nm,0.9s						
COLD	Coldfoot	30.37	37	eP	P	23 39 57.2	+2.3
	comp=Z,7.0nm,1.1s						
TOLK	Toolik Lake Re	30.84	34	P	P	23 39 59.7	+0.6
	baz=260						
H11N2	WAKE ISLAND Hy	30.95	165	T	T	00 14 09.6	
	baz=350,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	30.97	165	T	T	00 14 09.6	
	baz=350,slow=76,SNR=21						
H11N1	WAKE ISLAND Hy	30.97	165	T	T	00 14 09.6	
	baz=350,slow=76,SNR=54						
TCOL	CIGO, UAF Yank	31.09	41	P	P	23 40 02.1	+0.8
	baz=268						
COLA	College	31.10	41	eP	P	23 40 02.5	+1.2
	comp=Z,39nm,0.8s						
COLA	College	31.10	41	c iP	P	23 40 02.2	+0.9
COLA				pmax	pmax		
	comp=Z,34nm,1.0s						
POKR	Poker Plat Res	31.29	41	P	P	23 40 04.2	+1.2
	baz=268,SNR=26						
BJI	Beijing	31.42	268	eP	P	23 40 06.4	+2.0
BJI				LR	LR		
	comp=Z,220nm,16.1s						
BJI				LR	LR		
	comp=Z,130nm,19.8s						
HDA	Harding Lake	31.48	42	P	P	23 40 03.9	-0.8
	baz=269						
ILAR	Eielson Array	31.51	42	P	P	23 40 05.2	+0.2
	comp=Z,5.1nm,0.9s,baz=248,slow=8.0,SNR=52						
ILAR				PcP	PcP	23 42 55.4	-1.2
	comp=Z,1.7nm,0.8s,baz=280,slow=3.3,SNR=5.4						
H11S1	WAKE ISLAND Hy	32.12	166	T	T	00 14 52.4	
	baz=347,slow=76,SNR=154						
H11S3	WAKE ISLAND Hy	32.13	166	T	T	00 14 55.3	
	baz=347,slow=76,SNR=210						
H11S2	WAKE ISLAND Hy	32.14	166	T	T	00 14 53.8	
	baz=347,slow=76,SNR=132						
PAX	Paxson	32.16	45	eP	P	23 40 10.8	0.0
	comp=Z,7.5nm,1.0s						
PAX				ePcP	PcP	23 42 59.7	+1.2
PAX	Paxson	32.16	45	eP	P	23 40 10.8	0.0
PAX				e		23 42 59.7	
PAX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FYU	Fort Yukon	32.26	38	eP	P	23 40 13.0	+1.6
	comp=Z,55nm,1.0s						
DOT	Dot Lake	32.76	44	eP	P	23 40 15.6	-0.3
	comp=Z,6.7nm,0.8s						
DOT				ePcP	PcP	23 43 01.9	+1.8
TIA	Tai'an	33.03	261	P	P	23 40 28.2	+10
TIA				pmax	pmax		
	comp=Z,16nm,0.9s						
ULN	Ulaanbaatar	33.55	287	eP	P	23 40 22.5	-0.6
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	33.55	287	⇑eP	P	23 40 22.6	-0.6
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HHC	Hu-ho-hao-te	33.95	273	P	P	23 40 27.8	+1.1
HHC				PP	PnPn	23 41 41.9	+1.3
HHC				S	S	23 45 47.5	-0.8
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
HHC				LR	LR		
	comp=Z,940nm,18.6s						
HHC				LR	LR		
	comp=Z,470nm,16.7s						
HHC				LR	LR		
	comp=Z,650nm,17.3s						
SONM	Songino Array	33.97	287	P	P	23 40 26.4	-0.4
	comp=Z,0.8nm,0.4s,baz=64,slow=7.9,SNR=11						
SONM				PcP	PcP	23 43 03.8	-0.1
	comp=Z,1.3nm,0.8s,baz=67,slow=4.8,SNR=4.2						
SONM				LR	LR	23 55 03.1	
	comp=Z,374nm,19.9s,baz=70,slow=38						
TLY	Talaya	34.20	294	LR	LR	23 55 41.8	
	comp=Z,1µm,18.7s,baz=83,slow=38						
TLY	Talaya	34.20	294	eP	P	23 40 28.9	+0.3
	comp=Z,30nm,1.0s						
TLY	Talaya	34.20	294	eP	P	23 40 28.4	-0.2
TLY				e		23 40 47.5	
TLY				e		23 41 47.2	
TLY				eS	S	23 45 45.8	-5.9
TLY				pmax	pmax		
	comp=Z,24nm,1.4s						
TLY				MLR	MLR		
	comp=Z,955nm,16.0s						
TLY	Talaya	34.20	294	P	P	23 40 29.2	+0.6
	SNR=22						
TLY				P	P	23 40 29.2	+0.6
	SNR=22						
NJ2	Nanjing	34.65	254	eP	P	23 40 33.6	+1.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
DAWY	Dawson	34.79	43	eP	P	23 40 34.5	+0.9
	comp=Z,9.9nm,1.0s						
DAWY				ePcP	PcP	23 43 07.3	+1.4
ZAK	Zakamensk	34.87	292	eP	P	23 40 34.2	-0.3
ZAK				pmax	pmax		
	comp=Z,19nm,1.3s						
EPYK	Eagle Plains	35.68	39	eP	P	23 40 42.4	+1.2
	comp=Z,48nm,1.0s						
EPYK				ePcP	PcP	23 43 09.8	+1.4
EPYK	Eagle Plains	35.68	39	P	P	23 40 42.6	+1.4
	baz=275,SNR=18						
MOY	Mondy	35.75	295	eP	P	23 40 42.2	+0.1
MOY				pmax	pmax		
	comp=Z,37nm,1.3s						
INK	Inuvik	36.73	35	P	P	23 40 50.5	+0.5
	comp=Z,20nm,0.9s,baz=272,slow=5.8,SNR=15						
INK				LR	LR	23 57 03.4	
	comp=Z,176nm,21.9s,baz=266,slow=38						
INK	Inuvik	36.73	35	eP	P	23 40 51.5	+1.5
	comp=Z,32nm,1.0s						
GUMO	Guam	38.17	202	LR	LR	23 53 16.1	
	comp=Z,122nm,20.6s,baz=24,slow=31						
WHN	Wuhan	38.49	257	P	P	23 41 14.2	+8.9
WRAK	Wrangell Islan	40.03	54	eP	P	23 41 20.1	+2.2
	comp=Z,24nm,1.0s						
DLBC	Dease Lake	40.49	50	LR	LR	23 59 14.1	
	comp=Z,162nm,20.4s,baz=306,slow=38						
LZH	Lanzhou	41.64	272	eP	P	23 41 32.1	+0.5
LZH				pP	pP	23 41 42.0	-0.5
LZH				sP	pwP	23 41 51.8	+2.4
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=Z,620nm,17.3s						
LZH				LR	LR		
	comp=Z,410nm,16.3s						
LZH				LR	LR		
	comp=Z,440nm,16.3s						
GTA	Gaotai	42.27	279	eP	P	23 41 37.6	+0.9
GTA				pP	pP	23 41 49.8	+2.2
GTA				sP	pwP	23 41 55.3	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,97nm,5.5s						
GTA				LR	LR		
	comp=Z,320nm,19.2s						
GTA				LR	LR		
	comp=Z,250nm,15.8s						
GTA				LR	LR		
	comp=Z,260nm,18.2s						
ZALV	Zalesovo Beam	43.84	305	P	P	23 41 47.7	-1.2
	comp=Z,2.3nm,0.5s,baz=58,slow=7.3,SNR=12						
ZALV				PcP	PcP	23 43 34.0	-0.5
	comp=Z,3.1nm,0.8s,baz=86,slow=6.1,SNR=2.5						
DGZ	Jazzator, Alta	44.39	298	d iP	P	23 41 54.0	+0.3
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CD2	Chengdu	44.98	266	eP	P	23 41 57.0	-1.5
CD2				S	S	23 48 31.5	-2.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,310nm,8.3s						
CD2				LR	LR		
	comp=Z,360nm,11.3s						
CD2				LR	LR		
	comp=Z,370nm,10.3s						
CD2				LR	LR		
	comp=Z,500nm,10.3s						
YKW3	Yellowknife Ar	45.88	40	eP	P	23 42 06.4	+1.3
YKA	Yellowknife Ar	45.91	40	P	P	23 42 06.6	+1.3
	comp=Z,17nm,0.8s,baz=296,slow=7.8,SNR=58						
YKA				PcP	PcP	23 43 42.0	+0.4
	comp=Z,3.2nm,0.8s,baz=300,slow=3.4,SNR=7.5						
YKA				LR	LR	00 02 55.8	
	comp=Z,14nm,21.4s,baz=292,slow=38						
GYA	Guiyang	46.17	259	⇑iP	P	23 42 01.7	-6.3
GYA				pP	pP	23 42 13.9	-5.0
GYA				PP	PcP	23 43 48.8	+5.6
GYA				S	S	23 48 37.2	-14
GYA				sS	sS	23 48 59.5	-9.5
GYA				SS	ScS	23 51 54.4	-5.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
GYA				pmax	pmax		
	comp=Z,80nm,5.6s						
GYA				LR	LR		
	comp=N,170nm,16.1s						
GYA				LR	LR		
	comp=E,120nm,14.7s						
GYA				LR	LR		
	comp=Z,180nm,15.1s						
RES	Resolute Bay	46.40	21	eP	P	23 42 10.0	+1.0
	comp=Z,27nm,0.8s						
RES	Resolute Bay	46.40	21	eP	P	23 42 10.0	+1.0
RES				pmax	pmax		
	comp=Z,27nm,0.8s						
WMQ	Urumqi	47.32	291	eP	P	23 42 16.6	-0.1
	comp=Z,18nm,0.8s						
WMQ	Urumqi	47.32	291	eP	P	23 42 17.7	+1.0
WMQ				pP	pP	23 42 25.9	-1.9
WMQ				sP	pwP	23 42 38.0	+3.4
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,35nm,3.9s						
WMQ				LR	LR		
	comp=Z,150nm,17.1s						
WMQ				LR	LR		
	comp=Z,150nm,14.3s						
WMQ				LR	LR		
	comp=Z,190nm,22.9s						
WMQ	Urumqi	47.32	291	eP	P	23 42 16.6	-0.1
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
KURK	Kurchatov	48.74	304	eP	P	23 42 27.0	-0.5
	comp=Z,45nm,1.0s						
KURK	Kurchatov	48.74	304	ceP	P	23 42 26.6	-0.9
KURK				pmax	pmax		
	comp=Z,28nm,0.8s						
KURK	Kurchatov	48.74	304	P	P	23 42 27.4	-0.1
	SNR=16						
MKAR	Makanchi Array	48.84	297	P	P	23 42 28.0	-0.3
	comp=Z,9.5nm,0.9s,baz=60,slow=7.0,SNR=57						
MKAR				S	S	23 49 24.5	-3.7
	comp=Z,0.2nm,0.8s,baz=127,slow=31,SNR=2.5						
MKAR				LR	LR	00 04 00.3	
	comp=Z,450nm,20.2s,baz=44,slow=37						
MAKZ	Makanchi	49.01	298	eP	P	23 42 29.3	-0.4
	comp=Z,13nm,0.7s						
MAKZ	Makanchi	49.01	298	eP	P	23 42 29.3	-0.4
MAKZ				pmax	pmax		
	comp=Z,13nm,0.7s						
D03D	Eldon	49.21	61	P	P	23 42 33.0	+1.8
	baz=304						
B05A	Bryant	49.36	60	P	P	23 42 33.5	+1.2
	baz=304						
D04E	Lakebay	49.59	61	P	P	23 42 35.5	+1.5
	baz=304						
KMI	Kunming	49.60	261	eP	P	23 42 32.8	-1.9
	comp=Z,28nm,1.0s						
KMI	Kunming	49.60	261	P	P	23 42 35.8	+1.1
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				pmax	pmax		
	comp=Z,100nm,4.3s						
KMI	Kunming	49.60	261	eP	P	23 42 32.8	-1.9
KMI				pmax	pmax		
	comp=Z,28nm,1.0s						
QIZ	Qiongzhong	49.67	250	P	P	23 42 34.5	-0.5
QIZ				S	S	23 49 40.2	-0.2
QIZ				LR	LR		
	comp=Z,120nm,15.2s						
QIZ				LR	LR		
	comp=Z,160nm,6.1s						
QIZ				LR	LR		
	comp=Z,160nm,5.9s						
KBS	Kingsbay	49.75	352	eP	P	23 42 35.5	+0.6
	comp=Z,40nm,0.8s						
KBS	Kingsbay	49.75	352	eP	P	23 42 35.5	+0.6
KBS				pmax	pmax		
	comp=Z,40nm,0.8s						
SPA0	Spitsbergen Ar	49.98	351	eP	P	23 42 37.7	+1.1
E04D	Cinebar	50.06	62	P	P	23 42 39.3	+1.8
	baz=305						
F04D	Rainier, OR	50.07	63	P	P	23 42 38.8	+1.1
	baz=305						
G03D	McMinnville, O	50.43	64	P	P	23 42 42.8	+2.4
	baz=305						
G05D	Wamic, OR	51.53	63	P	P	23 42 50.4	+1.6
	baz=306						
K02D	Willamette Mer	51.67	67	P	P	23 42 51.6	+1.7
	baz=307						
BRVK	Borovoye	51.74	310	eP	P	23 42 49.7	-0.5
	comp=Z,18nm,0.8s						
BRVK	Borovoye	51.74	310	c iP	P	23 42 49.4	-0.8
BRVK				pmax	pmax		
	comp=Z,15nm,0.8s						
BRVK	Borovoye	51.74	310	P	P	23 42 50.4	+0.2
	SNR=8.1						
BRVK				P	P	23 42 50.4	+0.2
	SNR=8.1						
L02E	Cave Junction	52.03	67	P	P	23 42 54.9	+2.4
	baz=307						
I05D	Terrebonne, OR	52.05	64	P	P	23 42 53.7	+1.0
	baz=306						
NEW	Newport	52.10	57	P	P	23 42 53.8	+0.8
	baz=306						
J05D	Fort Rock, OR	52.74	65	P	P	23 42 60.0	+2.0
	baz=307						
L04D	Klamath Falls	52.76	66	P	P	23 42 59.7	+1.6
	baz=308						
M02C	Callahan	52.94	67	P	P	23 43 01.7	+2.4
	baz=308						
N02D	Trinity Center	53.29	68	P	P	23 43 04.1	+2.3
	baz=308						
M04C	Macdoel	53.30	66	P	P	23 43 04.2	+2.2
	baz=308						
DAG	Danmarks Havn	53.41	359	⇑iP	P	23 43 02.5	+0.4
	comp=Z,24nm,0.9s						
O02D	Mt. Diablo Mer	53.73	69	P	P	23 43 07.5	+2.4
	baz=308						
LSA	Lhasa	53.90	275	eP	P	23 43 07.0	0.0
	comp=Z,8.9nm,0.8s						
LSA	Lhasa	53.90	275	eP	P	23 43 07.0	0.0
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SVE	Sverdlovsk	53.98	318	d iP	P	23 43 06.7	+0.1
SVE				pmax	pmax		
	comp=Z,52nm,0.9s						
O03E	Paynes Creek	54.25	68	P	P	23 43 10.1	+1.2
	baz=309,SNR=6.5						
PANO	Nakornpanom	54.30	253	P	P	23 43 18.1	+8.7
	comp=Z,0.8nm,1.0s						
NONG	Nongkai	54.51	255	P	P	23 43 18.7	+7.7
	comp=Z,0.5nm,0.9s						
PLID	Pearl Lake	54.62	60	eP	P	23 43 12.1	+0.3
	comp=Z,8.7nm,0.9s						
MSO	Missoula	54.68	57	P	P	23 43 12.8	+0.8
	baz=308						
TKM2	Tokmak 2	54.96	297	P	P	23 43 14.3	+0.1
	SNR=9.9						
ARU	Arti	55.13	318	eP	P	23 43 14.6	-0.4
	comp=Z,44nm,1.0s						
ARU	Arti	55.13	318	c iP	P	23 43 14.2	-0.7
ARU				pmax	pmax		
	comp=Z,71nm,1.7s						
LVZ	Lovozero	55.19	338	eP	P	23 43 14.9	-0.4
	comp=Z,91nm,1.1s						
LVZ	Lovozero	55.19	338	ceP	P	23 43 14.7	-0.6
LVZ				pmax	pmax		
	comp=Z,120nm,2.5s						
USP	Ospenovka	55.37	298	P	P	23 43 17.5	+0.5
	SNR=12						
CHMS	Chumysh	55.40	298	P	P	23 43 17.8	+0.6
	SNR=5.7						
KBK	Karagaybulak	55.50	297	P	P	23 43 18.5	+0.5
	SNR=5.8						
PAYA	Payao	55.60	259	P	P	23 43 26.6	+7.7
	comp=Z,64µm,0.8s,comp=Z,629µm						
FFC	Flin Flon	55.68	44	eP	P	23 43 20.1	+1.2
	comp=Z,29nm,0.9s						
FFC				ePcP	PcP	23 44 18.3	+0.5
FFC	Flin Flon	55.68	44	eP	P	23 43 20.1	+1.2
FFC				e		23 44 18.3	
FFC				pmax	pmax		
	comp=Z,29nm,0.9s						
AAK	Ala-Archa	55.77	297	eP	P	23 43 20.1	+0.2
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	55.77	297	i P	P	23 43 20.3	+0.3
	SNR=6.1						
AAK	Ala-Archa	55.77	297	c iP	P	23 43 20.0	0.0
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	55.77	297	P	P	23 43 20.4	+0.4
	SNR=5.2						
ARCES	ARCESS Array B	55.92	342	P	P	23 43 20.7	+0.3
	comp=Z,24nm,0.9s,baz=30,slow=9.8,SNR=18						
ARCES				LR	LR	00 13 33.4	
	comp=Z,244nm,18.2s,baz=360,slow=43						
ARE0	ARCESS Array S	55.92	342	eP	P	23 43 20.5	0.0
	comp=Z,2.2nm,1.0s						
ARE0	ARCESS Array S	55.92	342	eP	P	23 43 20.3	-0.1
EGMT	Eagleton	56.16	54	P	P	23 43 23.3	+0.7
	baz=309,SNR=7.1						
EKS2	Erkin-Say	56.17	298	P	P	23 43 23.4	+0.6
	SNR=10						
SHL	Shillong	56.26	270	eP	P	23 43 25.0	+1.3
FCC	Fort Churchill	56.31	37	eP	P	23 43 23.7	+0.3
	comp=Z,22nm,0.9s						
FCC	Fort Churchill	56.31	37	eP	P	23 43 23.7	+0.3
FCC				pmax	pmax		
	comp=Z,22nm,0.9s						
UTTA	Uttaradit	56.37	257	P	P	23 43 32.2	+7.9
	comp=Z,26µm,0.9s,comp=Z,292µm						
HLID	Hailey	56.47	61	P	P	23 43 26.7	+1.7
	baz=310,SNR=11						
CMMT	Chiang Mai	56.59	259	P	P	23 43 28.6	+2.7
	comp=Z,33nm,1.3s,comp=Z,431nm						
CHTO	Chiang Mai	56.59	259	eP	P	23 43 27.3	+1.4
	comp=Z,26nm,0.9s						
CHTO	Chiang Mai	56.59	259	eP	P	23 43 27.3	+1.4
CHTO				pmax	pmax		
	comp=Z,26nm,0.9s						
PRGR	Permogore	56.60	328	⇑iP	P	23 43 25.8	+0.4
PRGR				pmax	pmax		
	comp=Z,44nm,0.8s						
BOZ	Bozeman (W)	56.71	57	P	P	23 43 28.1	+1.5
	baz=310						
KTK1	Kautokeino	56.80	342	eP	P	23 43 27.2	+0.5
CM31	Chiang Mai Arr	56.86	259	eP	P	23 43 28.0	+0.2
CMAR	Chiang Mai Arr	56.86	259	P	P	23 43 29.0	+1.3
	comp=Z,3.9nm,0.7s,baz=31,slow=7.4,SNR=8.8						
CHAI	Chaiyaphum	56.87	254	P	P	23 43 35.9	+8.0
	comp=Z,31µm,0.8s						
KSH	Kashi	56.90	294	P	P	23 43 32.4	+4.4
KSH				pP	pwP	23 43 46.3	-0.3
KSH				sP	sP	23 43 51.5	+7.6
KSH				PcP	PcP	23 44 26.6	+3.5
KSH				PP	PP	23 45 42.4	+7.9
KSH				S	S	23 51 21.6	+3.2
KSH				SS	SS	23 55 12.5	+5.9
KSH				pmax	pmax		
	comp=Z,68nm,1.7s						
KSH				pmax	pmax		
	comp=Z,110nm,4.4s						
KSH				LR	LR		
	comp=Z,86nm,8.2s						
KSH				LR	LR		
	comp=Z,120nm,9.3s						
KSH				LR	LR		
	comp=Z,75nm,12.4s						
SUMG	Summit	57.03	6	⇑iP	P	23 43 30.1	+1.3
SUMG				pmax	pmax		
	comp=Z,230nm,1.2s						
SUMG	Summit	57.03	6	⇑iP	P	23 43 30.1	+1.3
	comp=Z,228nm,1.2s						
TRO	Tromso	57.06	344	eP	P	23 43 28.0	-0.5
NVAR	Mina Array Bea	57.52	67	P	P	23 43 34.3	+1.8
	comp=Z,2.7nm,0.9s,baz=292,slow=8.3,SNR=13						
NVAR				LR	LR	00 07 19.8	
	comp=Z,31nm,18.8s,baz=277,slow=35						
YFT	Old Faithful	57.88	58	eP	P	23 43 37.9	+2.9
	comp=Z,16nm,0.9s						
H17A	Grant Village	58.05	58	P	P	23 43 39.5	+3.3
	baz=311						
RLMT	Red Lodge	58.28	56	P	P	23 43 39.8	+2.0

	baz=311,SNR=11						
JIRN	Jiri	58.47	276	*e*P	P	23 43 40.8	+1.3
GUN	Gumba	58.50	277	*e*P	P	23 43 41.6	+2.0
UMPA	Umpang Tak	58.59	257	P	P	23 43 53.7	+14
LAO	LASA Array	58.86	53	P	P	23 43 43.4	+1.9
	baz=312						
PKM	Mcpherson Peak	58.95	72	P	P	23 43 45.6	+3.1
	baz=312						
KKN	Kakani	58.96	277	*e*P	P	23 43 43.9	+1.2
CWC	Cottonwood Cre	58.97	69	P	P	23 43 44.7	+2.1
	baz=312						
ILULI	Ilulissat	58.98	12	*i* P	P	23 43 42.3	+0.4
ILULI				pmax	pmax		
	comp=Z,44nm,1.0s						
ILULI	Ilulissat	58.98	12	*i* P	P	23 43 42.3	+0.4
	comp=Z,44nm,1.0s						
PKI	Pulchoki	59.03	277	*e*P	P	23 43 44.4	+1.1
PKIN	Phulchoki	59.03	277	*e*P	P	23 43 44.4	+1.1
R11A	Troy Canyon, C	59.18	66	P	P	23 43 45.4	+1.3
	baz=312,SNR=11						
DMN	Daman	59.20	277	*e*P	P	23 43 45.7	+1.3
GKN	Gorkha	59.23	278	*e*P	P	23 43 45.9	+1.4
HNR	Honiara	59.27	179	*e*P	P	23 43 43.4	-1.2
	comp=Z,680nm,0.4s						
HNR	Honiara	59.27	179	*e*P	P	23 43 43.4	-1.2
HNR	Honiara	59.27	179	*i* P	P	23 43 40.5	-4.1
HNR				*i* S	P	23 43 44.0	-0.6
OUL	Oulu	59.55	339	P	P	23 43 46.6	+0.7
OUL				pmax	pmax		
	comp=Z,34nm,0.9s						
DUG	Dugway, Tooele	59.56	63	P	P	23 43 48.4	+1.7
	baz=312,SNR=15						
MPMC	Manual Prospec	59.58	69	P	P	23 43 48.3	+1.5
	baz=312						
FURC	Furnace Creek,	59.68	68	P	P	23 43 49.2	+2.0
	baz=312						
BW06	Boulder Array	59.68	59	P	P	23 43 48.7	+1.2
	baz=312,SNR=21						
PDAR	Pinedale Array	59.68	59	P	P	23 43 49.0	+1.4
	comp=Z,8.6nm,0.8s,baz=309,slow=3.1,SNR=60						
TPNV	Topopah Spring	59.72	68	P	P	23 43 49.0	+1.2
	baz=312,SNR=7.2						
LRMC	Laurel Mtn Rad	59.85	70	P	P	23 43 49.2	+0.6
	baz=312						
KOLN	Koldanda	60.05	278	*e*P	P	23 43 50.2	0.0
EDW2	Edwards Air Fo	60.06	70	P	P	23 43 51.0	+1.0
	baz=312,SNR=5.2						
JLU	Jordanelle	60.07	61	*e*P	P	23 43 51.8	+1.5
	comp=Z,7.1nm,1.0s						
PYUN	Piuthan	60.21	279	*e*P	P	23 43 50.9	-0.4
GSC	Goldstone, Bar	60.49	69	P	P	23 43 54.2	+1.2
	baz=313						
MOR8	Moi Rana	60.92	344	*e*P	P	23 43 54.4	-1.0
TUQ	Turquoise Moun	60.93	69	P	P	23 43 57.2	+1.1
	baz=313						
SFJD	Kangerlussuaq	61.11	13	*e*P	P	23 43 57.4	+0.9
	comp=Z,20nm,0.9s						
SFJD	Kangerlussuaq	61.11	13	*e*P	P	23 43 57.4	+0.9
SFJD				pmax	pmax		
	comp=Z,20nm,0.9s						
SZCU	Shurtz Canyon	61.15	65	*e*P	P	23 43 57.5	-0.1
	comp=Z,9.2nm,1.2s						
Q16A	Castle Valley	61.36	63	*e*P	P	23 43 59.0	0.0
MDND	Maddock	61.38	49	P	P	23 43 59.8	+1.0
	baz=314						
K22A	Casper	61.41	57	P	P	23 44 00.1	+0.9
	baz=313						
CHGR	Chuyangaron	61.44	297	*e*P	P	23 44 02.6	+3.2
	comp=Z,55nm,0.9s						
ULM	Lac du Bonnet	61.45	45	P	P	23 44 00.1	+1.0
	comp=Z,12nm,0.9s,baz=317,slow=7.2,SNR=12						
ULM				LR	LR	00 12 02.7	
	comp=Z,96nm,20.2s,baz=332,slow=37						
GMRC	Granite Mounta	61.53	69	P	P	23 44 01.3	+1.1
	baz=313						
RSSD	Black Hills	61.73	54	*e*P	P	23 44 02.8	+1.4
	comp=Z,27nm,0.8s						
RSSD	Black Hills	61.73	54	*e*P	P	23 44 02.8	+1.4
RSSD				pmax	pmax		
	comp=Z,27nm,0.8s						
RSSD	Black Hills	61.73	54	P	P	23 44 02.3	+0.9
	baz=314						
BELC	Belle Mtn. Jos	61.87	70	P	P	23 44 03.2	+0.8
	baz=313						
O20A	White River Ci	62.19	60	P	P	23 44 05.6	+1.1
	baz=313						
IRM	Iron Mountain	62.27	69	P	P	23 44 06.1	+1.2
	baz=314,SNR=5.2						
NIL	Nilore	62.45	290	*e*P	P	23 44 06.9	+0.8
	comp=Z,94nm,0.9s						
NIL	Nilore	62.45	290	*e*P	P	23 44 06.9	+0.8
NIL				pmax	pmax		
	comp=Z,94nm,0.9s						
FINES	FINESS Array B	62.59	337	P	P	23 44 06.9	+0.3
	comp=Z,20nm,0.7s,baz=36,slow=7.5,SNR=84						
FINES				LR	LR	00 14 41.3	
	comp=Z,218nm,21.7s,baz=30,slow=39						
PDMCI	Parker Dam,Lak	62.77	68	P	P	23 44 10.0	+1.8
	baz=314						
AGMN	Agassiz Nation	62.84	46	P	P	23 44 09.3	+0.8
	baz=316,SNR=11						
NSS	Namsos	62.85	345	*e*P	P	23 44 08.9	+0.6
N23A	Red Feather La	62.93	58	P	P	23 44 10.9	+1.3
	baz=314,SNR=9.7						
GLA	Glamis	63.23	70	P	P	23 44 12.4	+1.0
	baz=314						
WUAZ	Wupatki	63.58	66	P	P	23 44 15.3	+1.5
	baz=314						
MOS	Moscow	63.79	327	*e*P	P	23 44 13.5	-1.1
MOS				*e*		23 44 32.4	
MOS				pmax	pmax		
	comp=Z,100nm,1.3s						
MOS				pmax	pmax		
	comp=Z,200nm,1.8s						
ISCO	Idaho Springs	63.88	59	P	P	23 44 17.5	+1.7
	baz=314,SNR=18						
MVCO	Mesa Verde	64.07	62	P	P	23 44 18.1	+1.1
	baz=314						
KBL	Kabul	64.34	294	*e*P	P	23 44 18.5	-0.4
KBL	Kabul	64.34	294	*e*P	P	23 44 18.5	-0.4
S22A	4UR Ranch, Cre	64.64	61	P	P	23 44 22.6	+1.7
	baz=315,SNR=17						
OBN	Obninsk	64.65	328	*e*P	P	23 44 20.2	-0.1
	comp=Z,78nm,1.0s						
OBN	Obninsk	64.65	328	*c* *i*P	P	23 44 20.1	-0.1
OBN				*i*		23 44 37.8	
OBN				*i*		23 44 52.6	
OBN				pmax	pmax		
	comp=Z,75nm,1.1s						
OBN				MLR	MLR		
	comp=Z,198nm,18.0s						
W18A	Petrified Fore	64.81	65	P	P	23 44 23.4	+1.5
	baz=315						
VSU	Vasula	64.95	335	*e*P	P	23 44 22.6	+0.4
VSU				IAmb	IAmb	23 44 23.3	
	comp=Z,133nm,0.8s						
VSU				*e*pP	pP	23 44 31.7	-1.8
VSU	Vasula	64.95	335	*c* *i*P	P	23 44 22.5	+0.4
VSU				pmax	pmax		
	comp=Z,130nm,0.7s						
OGNE	Ogallala	65.01	56	P	P	23 44 24.2	+1.3
	baz=316,SNR=5.0						
EYMN	Ely	65.10	44	P	P	23 44 23.9	+0.6
	baz=318,SNR=6.6						
214A	Organ Pipe Nat	65.21	69	P	P	23 44 25.5	+1.2
	baz=315						
SDCO	Great Sand Dun	65.38	60	P	P	23 44 27.2	+1.5
	baz=315,SNR=10						
MOL	Molde	65.41	346	*e*P	P	23 44 26.4	+1.4
BORG	Borgarnes	65.50	0	*e*P	P	23 44 26.5	+0.9
	comp=Z,56nm,1.0s						
BORG	Borgarnes	65.50	0	*e*P	P	23 44 26.5	+0.9
BORG				pmax	pmax		
	comp=Z,56nm,1.0s						
DOMB	Dombas	65.66	345	*e*P	P	23 44 27.0	+0.2
ECSD	EROS Data Cent	65.78	50	P	P	23 44 28.4	+0.5
	baz=317,SNR=20						
LPSR	Galich'ya Gora	65.81	325	*e*P	P	23 44 27.5	-0.3
LPSR				pmax	pmax		
	comp=Z,110nm,1.0s						
AKN	Aaknes	65.87	346	*e*P	P	23 44 27.2	-0.9
E38A	The Farm, Brul	66.08	45	P	P	23 44 29.9	+0.2
	baz=318,SNR=14						
C40A	Isle Royale Na	66.17	43	P	P	23 44 30.4	+0.2
	baz=319						
TUC	Tucson	66.17	68	*e*P	P	23 44 30.8	+0.2
	comp=Z,2.2nm,1.1s						
TUC	Tucson	66.17	68	*e*P	P	23 44 30.8	+0.2
TUC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TUC	Tucson	66.17	68	P	P	23 44 31.5	+0.9
	baz=315						
NB2	NORSAR Subarra	66.22	343	P	P	23 44 30.6	+0.2
	comp=Z,47nm,1.1s,baz=23,slow=6.9						
NB2	NORSAR Subarra	66.22	343	P	P	23 44 30.6	+0.2
	baz=23,slow=6.9						
NOA	NORSAR Array B	66.22	343	P	P	23 44 30.8	+0.4
	comp=Z,13nm,0.6s,baz=22,slow=6.6,SNR=53						
NOA				LR	LR	00 18 39.6	
	comp=Z,182nm,19.7s,baz=30,slow=41						
T25A	Trinidad	66.42	60	P	P	23 44 33.5	+1.2
	baz=316,SNR=6.9						
NC602	NORSAR Array S	66.44	343	*e*P	P	23 44 31.8	+0.1
NORES	NORESS Array B	66.44	343	P	P	23 44 32.9	+1.2
NORES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SPMN	Marine on St.	66.53	47	P	P	23 44 33.0	+0.4
	baz=318,SNR=9.4						
BGNE	Belgrade	66.70	53	P	P	23 44 34.3	+0.5
	baz=317						
VSR	Storozhevoye	66.82	324	*e*P	P	23 44 34.2	-0.1
VSR				pmax	pmax		
	comp=Z,100nm,1.1s						
TASM	ASL Pad, Albuq	66.83	63	P	P	23 44 36.3	+1.4
	baz=316,SNR=6.5						
TASM	ASL Pad, Albuq	66.83	63	P	P	23 44 36.1	+1.2
	baz=316,SNR=6.7						
ANMO	Albuquerque	66.83	63	*e*P	P	23 44 34.7	-0.2
	comp=Z,5.2nm,1.0s						
ANMO	Albuquerque	66.83	63	*c**e*P	P	23 44 36.3	+1.4
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANMO	Albuquerque	66.83	63	P	P	23 44 36.2	+1.4
	baz=316						
SLIT	Slitere, Latvi	66.86	336	*e*P	P	23 44 34.6	+0.1
SLIT				IAmb	IAmb	23 44 36.2	
	comp=Z,603nm,1.1s						
SLIT				*e*pP	pP	23 44 43.0	-2.8
F39A	Loretta	66.89	45	P	P	23 44 35.4	+0.6
	baz=319,SNR=16						
VORD	Divnogorie	66.97	323	*e*P	P	23 44 35.6	+0.4
VORD				pmax	pmax		
	comp=Z,110nm,1.2s						
SKAR	Skarslia	67.07	345	*e*P	P	23 44 36.1	+0.3
D41A	Chassel	67.08	43	P	P	23 44 36.4	+0.4
	baz=320						
G39A	Holcombe	67.24	46	P	P	23 44 37.2	+0.1
	baz=319,SNR=12						
F40A	Park Falls	67.25	45	P	P	23 44 37.5	+0.4
	baz=319,SNR=10						
OSL	Oslo	67.34	343	*e*P	P	23 44 38.7	+1.3
NRS	Narsarsuaq	67.39	12	*i* P	P	23 44 31.7	-6.0
NRS	Narsarsuaq	67.39	12	*i* P	P	23 44 31.7	-6.0
IZAR	Zarasai	67.41	333	*e*P	P	23 44 38.6	+0.6
IZAR				IAmb	IAmb	23 44 40.0	
	comp=Z,40nm,1.1s						
IZAR				*e*pP	pP	23 44 47.6	-1.8
ISAL	Salakas	67.60	333	*e*P	P	23 44 40.0	+0.8
ISAL				IAmb	IAmb	23 44 41.3	
	comp=Z,34nm,1.0s						
ISAL				*e*pP	pP	23 44 48.8	-1.8
G40A	Rib Lake	67.70	45	P	P	23 44 40.4	+0.4
	baz=320,SNR=7.5						
IIGN	Ignalina	67.76	333	*e*P	P	23 44 41.2	+1.0
IIGN				IAmb	IAmb	23 44 42.4	
	comp=Z,55nm,1.0s						
IIGN				*e*pP	pP	23 44 49.6	-2.0
CBKS	Cedar Bluff	67.77	56	P	P	23 44 40.7	+0.1
	baz=317						
121A	Cookes Peak, D	67.79	66	P	P	23 44 42.6	+1.6
	baz=316						
KONO	Kongsberg	67.81	344	*e*P	P	23 44 40.3	-0.1
	comp=Z,25nm,1.0s						
KONO	Kongsberg	67.81	344	*c**e*P	P	23 44 41.2	+0.8
KONO				pmax	pmax		
	comp=Z,39nm,1.7s						
KONO	Kongsberg	67.81	344	*e*P	P	23 44 40.6	+0.2
MICGM	Minsk	67.99	332	*e*	P	23 44 42.0	+0.3
MNK	Minsk	67.99	332	*e*P	P	23 44 42.0	+0.3
ODD1	Odda	68.07	345	*e*P	P	23 44 43.5	+1.3
GEYT	Alibeck	68.11	303	P	P	23 44 43.6	+0.9
	comp=Z,26nm,1.0s,baz=19,slow=5.0,SNR=44						
E43A	Lone Tree Farm	68.29	43	P	P	23 44 43.7	+0.1
	baz=321						
BLS5	Blasjo	68.57	345	*e*P	P	23 44 46.0	+0.8
SCHQ	Schefferville	68.67	26	P	P	23 44 46.3	+0.4
	comp=Z,5.1nm,0.8s,baz=343,slow=2.3,SNR=2.5						
SCHQ				LR	LR	00 18 15.0	
	comp=Z,99nm,20.2s,baz=317,slow=39						
SCIA	State Center	68.81	50	P	P	23 44 47.5	+0.5
	baz=319,SNR=8.9						
D46A	Sault St. Mari	69.16	41	P	P	23 44 48.8	-0.3
	baz=322						
KSU1	Kansas State U	69.20	54	P	P	23 44 48.7	-0.7
	baz=318						
I42A	Draeger Farm,	69.35	46	P	P	23 44 50.4	+0.1
	baz=320,SNR=6.3						
MATQ	Matagami	69.39	35	P	P	23 44 50.0	-0.4
	baz=325						
D47A	Chapleau	69.42	40	P	P	23 44 50.1	-0.6
	baz=323						
H43A	Windswept, Lux	69.42	45	P	P	23 44 51.1	+0.4
	baz=321						
E46A	Sault Ste Mari	69.46	41	P	P	23 44 50.7	-0.3
	baz=322						
SNART	Snartemo	69.47	345	*e*P	P	23 44 51.8	+1.0
JFWS	Jewell Farm	69.48	47	P	P	23 44 50.7	-0.4
	baz=320						
F45A	CMU Biological	69.48	42	P	P	23 44 51.1	0.0
	baz=322						
RGRI	Rengat	69.50	243	P	P	23 44 51.4	-0.2
	comp=Z,765nm,0.4s,comp=Z,85µm						
AMTX	Amarillo	69.58	60	P	P	23 44 52.8	+0.9
	baz=317						
MSTX	Muleshoe	69.64	61	P	P	23 44 53.2	+0.8
	baz=317						
L40A	Anamosa	69.66	48	P	P	23 44 52.2	0.0
	baz=320,SNR=10						
MAK	Makhachkala	69.71	313	*e*P	P	23 44 50.4	-2.1
MAK				*e*		23 47 26.0	
MAK				*e*S	S	23 53 53.7	-3.9
MAK				*e*SS	SS	23 58 24.2	-1.3
MAK				pmax	pmax		
	comp=Z,64nm,1.1s						
MNTX	Cornudas Mount	69.80	65	P	P	23 44 54.4	+1.1
	baz=317,SNR=14						
SUW	Suwalki	69.80	334	*e*P	P	23 44 52.9	0.0
SUW	Suwalki	69.80	334	⇑*e*P	P	23 44 52.9	0.0
E47A	Iron Bridge	69.83	41	P	P	23 44 52.7	-0.5
	baz=323						
D48A	Paudash Townsh	69.86	39	P	P	23 44 52.5	-0.9
	baz=323						
G45A	Suttons Bay	69.92	43	P	P	23 44 54.0	+0.2
	baz=322						
D49A	Beulah Townshi	69.97	39	P	P	23 44 53.5	-0.6
	baz=324						
G46A	Petoskey	70.05	42	P	P	23 44 54.6	0.0
	baz=322						
H45A	Beulah	70.08	43	P	P	23 44 54.4	-0.3
	baz=322						
GOF	Gofitskoye	70.10	317	⇑*i*P	P	23 44 55.7	+0.8
GOF				pmax	pmax		
	comp=Z,120nm,0.9s						
LSQQ	Lebel-sur-Quev	70.22	35	P	P	23 44 55.4	-0.1
	baz=326						
E48A	Lockeyer	70.27	40	P	P	23 44 55.9	0.0
	baz=323						
GROC	Groznyy	70.31	314	*e*P	P	23 44 56.4	+0.2
GROC				*e*		23 45 16.6	
GROC				*e*		23 47 28.5	
GROC				*e*S	S	23 54 02.5	-2.2
GROC				pmax	pmax		
	comp=Z,37nm,1.1s						
N40A	Mertquake, Sal	70.39	49	P	P	23 44 57.0	+0.3
	baz=320						
L42A	Oliver, Polo	70.45	47	P	P	23 44 56.8	-0.3
	baz=321,SNR=6.3						
CHGQ	Chibougamau	70.45	33	P	P	23 44 56.7	-0.2
	baz=327						
I45A	Fountain	70.45	44	P	P	23 44 57.6	+0.5
	baz=322						
H46A	Fife Lake	70.52	43	P	P	23 44 57.8	+0.4
	baz=322,SNR=5.0						
M41A	Milan	70.52	48	P	P	23 44 57.5	0.0
	baz=320,SNR=6.0						
K43A	Burlington	70.54	46	P	P	23 44 57.5	-0.1
	baz=321,SNR=5.8						
HYB	Hyderabad	70.70	274	*i* P	P	23 44 59.0	0.0
HYB				*e*sP	sP	23 45 16.0	+0.8
AKT	Akhty	70.74	312	⇑*i*P	P	23 44 59.6	+0.6
AKT				*e*		23 45 19.5	
AKT				*e*		23 47 34.8	
AKT				*e*S	S	23 54 16.1	+6.1
AKT				pmax	pmax		
	comp=Z,45nm,0.8s						
AKASG	Malin Array Be	70.81	329	P	P	23 44 59.0	-0.1
	comp=Z,32nm,0.8s,baz=32,slow=6.3,SNR=109						
AKASG	Malin Array Be	70.81	329	P	P	23 44 59.0	-0.1
N41A	Harden Midland	70.88	49	P	P	23 45 00.1	+0.4
	baz=320,SNR=8.4						
I46A	Reed City	70.88	44	P	P	23 45 00.1	+0.4
	baz=322						
MUD	Monsted U'grnd	70.89	343	⇑*i*P	P	23 45 00.7	+1.2
MUD				pmax	pmax		
	comp=Z,30nm,1.1s						
MUD	Monsted U'grnd	70.89	343	⇑*i*P	P	23 45 00.7	+1.2
	comp=Z,30nm,1.1s						
BSD	Bornholm Skovb	70.93	339	*e*P	P	23 45 01.1	+1.3
BSD	Bornholm Skovb	70.93	339	*i* P	P	23 45 01.1	+1.3
NCK	Nalchik	71.08	316	⇑*i*P	P	23 45 01.7	+0.8
NCK				pmax	pmax		
	comp=Z,42nm,0.9s						
KIV	Kislovodsk	71.12	317	*e*P	P	23 45 02.2	+0.9
	comp=Z,20nm,0.8s						
KIV	Kislovodsk	71.12	317	⇑*i*P	P	23 45 02.2	+0.9
KIV	Kislovodsk	71.12	317	*i* P	P	23 45 02.1	+0.9
	SNR=7.2						
KIV	Kislovodsk	71.12	317	*e*P	P	23 45 02.0	+0.7
KIV				*e*S	S	23 54 14.7	+0.3
KIV				pmax	pmax		
	comp=Z,117nm,3.5s						
KIV				pmax	pmax		
	comp=Z,61nm,1.0s						
KIV	Kislovodsk	71.12	317	P	P	23 45 02.5	+1.2
	SNR=9.1						
L44A	Lake County Fo	71.14	46	P	P	23 45 01.0	-0.3
	baz=321						
ZKTA	Zakatala	71.14	313	P	P	23 45 02.0	+0.7
SEKA	Sheki	71.20	312	P	P	23 45 02.0	+0.2
KBZ	Khabaz	71.21	317	P	P	23 45 02.8	+1.2
	comp=Z,29nm,0.8s,baz=73,slow=3.6,SNR=58						
M43A	Waltham Townsh	71.23	47	P	P	23 45 01.8	0.0
	baz=321						
I47A	Gladwin	71.23	43	P	P	23 45 02.1	+0.3
	baz=323						
J46A	Howard City	71.26	44	P	P	23 45 02.4	+0.5
	baz=322						
WMOK	Wichita Mounta	71.29	58	P	P	23 45 03.2	+0.8
	baz=318,SNR=15						
ZEI	Tsey	71.50	315	*e*P	P	23 45 02.9	-0.8
ZEI				pmax	pmax		
	comp=Z,28nm,1.0s						
N43A	Stutzman Famil	71.51	48	P	P	23 45 03.7	+0.1
	baz=321						
MNGR	Mingechevir, A	71.59	312	P	P	23 45 04.7	+0.7
NEY	Neytrino	71.67	316	⇓*e*P	P	23 45 05.8	+1.1
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
M44A	Midewin, Midew	71.70	47	P	P	23 45 04.7	0.0
	baz=321						
J47A	Sunmer	71.71	44	P	P	23 45 05.2	+0.5
	baz=323						
K46A	Dorr	71.72	45	P	P	23 45 04.8	0.0
	baz=322						
HDIL	Hopedale	71.75	48	P	P	23 45 05.4	+0.4
	baz=321,SNR=16						
D54A	Lac Fusel, La	71.91	36	P	P	23 45 05.1	-0.8
	baz=326						
TBLG	Delisi	71.95	314	*e*P	P	23 45 07.2	+1.0
F52A	Sundridge	71.98	39	P	P	23 45 06.3	0.0
	baz=325						
L46A	Eue Claire	72.02	45	P	P	23 45 06.7	+0.1
	baz=322						
TUL1	Leonard	72.02	55	P	P	23 45 07.1	+0.4
	baz=319						
GANJ	Ganja	72.06	312	P	P	23 45 07.4	+0.5
GKP	Gorka Klasztor	72.06	337	*e*P	P	23 45 07.0	+0.4
GKP	Gorka Klasztor	72.06	337	*e*P	P	23 45 07.0	+0.4
K47A	Vermontville	72.08	44	P	P	23 45 07.2	+0.2
	baz=323						
N44A	Piper City	72.12	47	P	P	23 45 07.4	+0.3
	baz=322						
DZM	Mont Dzumac	72.15	173	*e*LR	LR	00 06 59.9	
	comp=Z,306nm,26.3s						
E53A	Dumoine, Ponti	72.17	37	P	P	23 45 06.8	-0.6
	baz=326						
BUKO	Buck Lake	72.24	39	P	P	23 45 07.3	-0.5
	baz=325						
E54A	Lac Daplat, Po	72.31	37	P	P	23 45 07.6	-0.6
	baz=326						
P43A	Skaggs, Pawnee	72.35	49	P	P	23 45 08.7	+0.1
	baz=321						
J49A	Marlette	72.36	43	P	P	23 45 08.8	+0.3
	baz=323						
LKRN	Lenkeran, Azer	72.36	310	P	P	23 45 09.2	+0.5
N45A	Kentland	72.37	47	P	P	23 45 08.9	+0.3
	baz=322						
K48A	Perry	72.37	43	P	P	23 45 09.3	+0.6
	baz=323,SNR=5.3						
ABTX	Abilene, Hawle	72.39	60	P	P	23 45 09.8	+0.8
	baz=319,SNR=5.6						
BEL	Belsk	72.41	334	*e*P	P	23 45 09.8	+1.1
BEL	Belsk	72.41	334	*e*P	P	23 45 09.8	+1.1
O44A	Mansfield	72.46	48	P	P	23 45 09.3	+0.1
	baz=322						
M46A	Old House Fiel	72.47	46	P	P	23 45 09.5	+0.3
	baz=322						
TXAR	Lajitas Array	72.53	65	P	P	23 45 11.2	+1.3
	comp=Z,6.9nm,0.7s,baz=302,slow=4.4,SNR=39						
L47A	Sherwood	72.55	45	P	P	23 45 09.8	0.0
	baz=323						
ANN	Anapa	72.68	321	*e*P	P	23 45 08.9	-1.5
ANN				*e*S	S	23 54 29.3	-2.6
ANN				*e*		23 55 08.3	
ANN				pmax	pmax		
	comp=Z,28nm,1.2s						
K49A	Clarkson	72.68	43	P	P	23 45 11.1	+0.6
	baz=323,SNR=6.0						
N46A	Monticello	72.69	46	P	P	23 45 10.7	+0.1
	baz=322						
H52A	Wyevale	72.70	40	P	P	23 45 10.6	+0.1
	baz=325						
SOC	Sochi	72.71	318	*e*P	P	23 45 10.0	-0.7
SOC				*e*		23 47 55.0	
SOC				*e*PPP	PPP	23 49 36.8	
SOC				*e*S	S	23 54 31.5	-0.9
SOC				*e*SSS	SSS	00 02 27.7	
SOC				pmax	pmax		
	comp=Z,42nm,1.0s						
SOC				MLR	MLR		
	comp=Z,212nm,21.0s						
CCM	Cathedral Cave	72.73	51	*e*P	P	23 45 11.1	+0.2
	comp=Z,20nm,0.9s						
CCM	Cathedral Cave	72.73	51	*e*P	P	23 45 11.1	+0.2
CCM				pmax	pmax		
	comp=Z,20nm,0.9s						
CCM	Cathedral Cave	72.73	51	P	P	23 45 11.1	+0.2
	baz=321						
O45A	Potomac	72.74	47	P	P	23 45 11.4	+0.6
	baz=322,SNR=5.2						
AKH	Akhalkalaki	72.78	315	*e*P	P	23 45 12.4	+1.1
AKH	Akhalkalaki	72.78	315	⇓*i*P	P	23 45 12.7	+1.4
AKH	Akhalkalaki	72.78	315	P	P	23 45 12.7	+1.4
G53A	Haliburton	72.82	39	P	P	23 45 10.9	-0.4
	baz=325						
M47A	Cromwell	72.84	45	P	P	23 45 11.4	-0.1
	baz=323						
I51A	Listowel	72.91	41	P	P	23 45 12.2	+0.3
	baz=324						
PEMO	Pembroke	72.91	38	P	P	23 45 11.1	-0.7
	baz=326						
L48A	N Adams	72.92	44	P	P	23 45 12.2	+0.3
	baz=323,SNR=7.0						
SFIN	Lafayette	72.93	47	P	P	23 45 12.1	+0.1
	baz=322,SNR=6.0						
AAM	Ann Arbor	72.98	44	P	P	23 45 12.9	+0.6
	baz=323						
WRAB	Tennant Creek	73.02	204	⇓*e*P	P	23 45 12.8	+0.2

WRAB				pmax	pmax		
	comp=Z,46nm,3.9s						
WR1	Warramunga Arr	73.04	204	*e*P	P	23 45 12.9	+0.2
WRA	Warramunga Arr	73.04	204	P	P	23 45 12.9	+0.3
	comp=Z,3.6nm,0.8s,baz=20,slow=7.5,SNR=8.7						
WRA	Warramunga Arr	73.04	204	P	P	23 45 13.0	+0.3
L49A	Milan	73.08	44	P	P	23 45 13.6	+0.7
	baz=323						
F55A	Otter Lake	73.13	37	P	P	23 45 13.5	+0.5
	baz=326						
LATQ	La Tuque	73.15	34	P	P	23 45 13.6	+0.4
	baz=328						
M48A	Edgerton	73.16	45	P	P	23 45 13.6	+0.3
	baz=323						
BANO	Bancroft	73.18	38	P	P	23 45 12.9	-0.5
	baz=326						
N47A	Urbana	73.19	46	P	P	23 45 13.4	-0.1
	baz=323						
GNI	Garni	73.19	313	*e*P	P	23 45 15.7	+1.9
GNI	Garni	73.19	313	*e*P	P	23 45 15.0	+1.2
	comp=Z,39nm,0.8s						
GNI	Garni	73.19	313	P	P	23 45 15.5	+1.7
GNI	Garni	73.19	313	c *i*P	P	23 45 15.3	+1.5
GNI				pmax	pmax		
	comp=Z,259nm,1.7s						
GNI	Garni	73.19	313	P	P	23 45 15.9	+2.1
	SNR=10.0						
U40A	Yellville	73.22	53	P	P	23 45 13.7	-0.1
	baz=320,SNR=20						
LVV	L'vov	73.24	331	*e*P	P	23 45 13.5	-0.2
P45A	Graceland, Par	73.30	48	P	P	23 45 14.6	+0.4
	baz=322,SNR=5.6						
BATM	Batumi	73.44	316	*e*P	P	23 45 15.3	+0.3
BATM	Batumi	73.44	316	⇑*i*P	P	23 45 14.7	-0.3
G55A	Calabogie	73.47	37	P	P	23 45 14.5	-0.6
	baz=326						
O47A	Sheridan	73.48	46	P	P	23 45 15.0	-0.3
	baz=322						
P46A	Rosedale	73.48	47	P	P	23 45 15.6	+0.3
	baz=322,SNR=13						
M49A	Liberty Center	73.50	44	P	P	23 45 15.7	+0.3
	baz=323						
PLVO	Plevna	73.50	38	P	P	23 45 14.7	-0.6
	baz=326						
N48A	Decatur	73.51	45	P	P	23 45 15.4	0.0
	baz=323,SNR=12						
L50A	Kingsville	73.56	43	P	P	23 45 16.0	+0.3
	baz=324						
PKRO	Pickering	73.59	40	P	P	23 45 16.0	+0.2
	baz=325						
KARS	Kars	73.59	314	*e*P	P	23 45 17.4	+1.3
Q45A	Warren Harvey,	73.59	49	P	P	23 45 16.3	+0.3
	baz=322,SNR=9.6						
J52A	Paris	73.60	41	P	P	23 45 16.3	+0.4
	baz=325						
BCA	Borcka	73.60	316	*e*P	P	23 45 16.4	+0.4
BCA	Borcka	73.60	316	⇑*i*P	P	23 45 16.4	+0.4
NAX	Nakhchivan	73.61	312	P	P	23 45 16.7	+0.6
W39A	Magazine	73.62	55	P	P	23 45 16.5	+0.3
	baz=320,SNR=5.2						
DELO	Deloro Mine	73.72	38	P	P	23 45 16.0	-0.6
	baz=326						
ORIO	Orleans, Innes	73.77	37	P	P	23 45 16.1	-0.7
	baz=327						
DRWO	Darlington Wes	73.81	40	P	P	23 45 17.5	+0.4
	baz=326						
KWP	Kalwaria Pacla	73.81	332	*e*P	P	23 45 18.2	+1.1
KWP	Kalwaria Pacla	73.81	332	*e*P	P	23 45 18.2	+1.1
N49A	Columbus Grove	73.85	45	P	P	23 45 17.7	+0.4
	baz=323						
H55A	Tweed	73.87	38	P	P	23 45 17.5	0.0
	baz=326						
EKA	Eskdalemuir Ar	73.89	349	P	P	23 45 18.1	+0.8
	baz=18,slow=5.5						
SIM	Simferopol'	73.89	323	d *i*P	P	23 45 18.4	+0.8
SIM				*e*		23 45 35.8	
SIM				pmax	pmax		
	comp=Z,23nm,0.9s						
WLVO	Wesleyville	73.90	39	P	P	23 45 17.9	+0.3
	baz=326						
ESK	Eskdalemuir	73.91	349	*e*P	P	23 45 17.5	0.0
	comp=Z,14nm,0.9s						
ESK	Eskdalemuir	73.91	349	c*e*P	P	23 45 19.0	+1.5
JCT	Junction City	73.91	62	P	P	23 45 18.7	+0.7
	baz=319						
O48A	Farmland	73.93	46	P	P	23 45 17.6	-0.3
	baz=323,SNR=9.2						
I55A	Frankford	73.95	39	P	P	23 45 17.8	-0.1
	baz=326						
SENK	Senkaya-Erzuru	73.98	315	*e*P	P	23 45 19.8	+1.4
S44A	Carbondale	74.00	50	P	P	23 45 18.7	+0.4
	baz=322,SNR=8.8						
R45A	Skylar, Fairfi	74.01	49	P	P	23 45 18.8	+0.5
	baz=322						
P47A	Martinsville	74.03	47	P	P	23 45 18.6	+0.2
	baz=323,SNR=8.2						
WHTX	Lake Whitney,	74.08	59	P	P	23 45 19.7	+0.8
	baz=320						
KIS	Kishinev	74.11	327	*e*P	P	23 45 18.0	-0.8
	comp=Z,110nm,1.2s						
KIS	Kishinev	74.11	327	*i* PcP	PcP	23 45 28.0	-5.8
KIS				*e*L	L	00 12 24.0	
KIS				LRM	MLR	00 20 28.0	
	comp=Z,300nm,18.0s						
KIS	Kishinev	74.11	327	*e*P	P	23 45 18.0	-0.8
KIS				*i*		23 45 36.0	
KIS				pmax	pmax		
	comp=Z,110nm,1.2s						
KIS				MLR	MLR		
	comp=Z,300nm,18.0s						
OJC	Ojcow	74.13	334	*e*P	P	23 45 19.8	+0.9
OJC	Ojcow	74.13	334	*e*P	P	23 45 19.8	+0.9
MILM	Milestii Mici	74.19	327	⇓*i*P	P	23 45 19.0	-0.2
H56A	Elgin	74.20	38	P	P	23 45 19.1	-0.3
	baz=327						
MIAR	Mount Ida	74.23	55	P	P	23 45 20.3	+0.6
	baz=320,SNR=18						
J54A	Appleton	74.34	40	P	P	23 45 20.5	+0.3
	baz=326						
O49A	Covington	74.36	45	P	P	23 45 20.6	+0.1
	baz=323,SNR=6.6						
CLDR	Caldiran	74.38	313	*e*P	P	23 45 22.2	+1.4
IAS	Iasi	74.38	328	⇑*i*P	P	23 45 20.5	+0.1
IAS	Iasi	74.38	328	P	P	23 45 20.5	+0.1
Q47A	Bedord North L	74.39	47	P	P	23 45 21.0	+0.5
	baz=323,SNR=8.8						
M51A	Elyria	74.41	43	P	P	23 45 21.0	+0.3
	baz=324						
N50A	Nevada	74.43	44	P	P	23 45 21.3	+0.5
	baz=324						
R46A	Gibon Southern	74.44	49	P	P	23 45 21.5	+0.6
	baz=322						
W41B	Gary Mavity, V	74.44	54	P	P	23 45 21.0	+0.1
	baz=321,SNR=11						
P48A	Milroy	74.44	46	P	P	23 45 20.7	-0.2
	baz=323,SNR=7.2						
PECO	Prince Edward	74.46	38	P	P	23 45 20.7	-0.1
	baz=326						
AGRB	Hanur-Agry	74.47	314	*e*P	P	23 45 22.9	+1.6
MEDO	Medina	74.50	40	P	P	23 45 21.4	+0.2
	baz=326						
KSP	Ksiaz	74.51	336	*e*P	P	23 45 21.9	+0.8
KSP	Ksiaz	74.51	336	*e*P	P	23 45 21.9	+0.8
KOLS	Kolonicke sedl	74.56	332	*e*P	P	23 45 22.2	+0.8
KOLS				pmax	pmax		
	comp=Z,26nm,1.2s						
KOLS	Kolonicke sedl	74.56	332	*e*P	P	23 45 22.2	+0.8
M52A	Chesterland	74.60	43	P	P	23 45 22.1	+0.3
	baz=325						
KOPR	Koprukoy-ERZUR	74.66	315	*e*P	P	23 45 23.7	+1.3
N51A	Ashland	74.66	44	P	P	23 45 22.5	+0.4
	baz=324,SNR=5.0						
X40A	Basin Creek Fa	74.67	54	P	P	23 45 22.6	+0.3
	baz=321						
J55A	Hilton	74.68	39	P	P	23 45 21.9	-0.2
	baz=326						
PRAR	RASCA	74.69	329	⇑*i*P	P	23 45 23.0	+0.8
NIE	Niedzica	74.71	333	*e*P	P	23 45 23.4	+1.1
NIE	Niedzica	74.71	333	*e*P	P	23 45 23.4	+1.1
P49A	Miami Univ. Ec	74.71	46	P	P	23 45 22.5	0.0
	baz=323,SNR=6.0						
ERPA	Erie	74.72	41	P	P	23 45 22.7	+0.3
	baz=325						
Q48A	North Vernon	74.72	47	P	P	23 45 22.6	0.0
	baz=323						
O50A	Cable	74.72	45	P	P	23 45 22.8	+0.3
	baz=324,SNR=5.9						
L53A	Girard	74.74	42	P	P	23 45 23.2	+0.6
	baz=325						
S46A	Don Dixon Farm	74.76	49	P	P	23 45 23.3	+0.5
	baz=322						
OSTC	Ostas	74.80	336	*e*P	P	23 45 23.5	+0.7
OSTC				AMS	AMS	00 23 10.0	
	comp=Z,200nm,17.8s						
BURAR	Bucovina Array	74.80	330	⇓*i*P	P	23 45 23.2	+0.2
BURAR	Bucovina Array	74.80	330	P	P	23 45 23.1	+0.1
CHVC	Chvalec	74.81	336	*e*P	P	23 45 23.5	+0.6
CHVC				AMS	AMS	00 23 10.0	
	comp=Z,200nm,18.0s						
UZH	Uzhgorod	74.83	332	*e*P	P	23 45 22.6	-0.3
UZH				*e*		23 45 36.6	
LONY	Lake Ozonia	74.83	36	P	P	23 45 23.4	+0.4
	baz=328						
R47A	Wooly Knot Far	74.85	48	P	P	23 45 23.8	+0.5
	baz=323,SNR=10.0						
K54A	Basiliko Farm,	74.86	40	P	P	23 45 23.5	+0.2
	baz=326						
UPC	Upice	74.89	336	*e*P	P	23 45 24.2	+0.9
UPC				*e*		23 45 41.1	
UPC				MLR	MLR		
	comp=Z,200nm,13.1s						
UPC	Upice	74.89	336	*e*P	P	23 45 24.2	+0.9
UPC				*e*sP	sP	23 45 41.1	+1.6
UPC				AMS	AMS	00 23 00.0	
	comp=Z,200nm,13.1s						
CLL	Collm	74.89	339	⇑*i*P	P	23 45 23.8	+0.5
CLL				*i*		23 45 40.9	
CLL				pmax	pmax		
	comp=Z,33nm,1.2s						
CLL	Collm	74.89	339	⇑*i*P	P	23 45 23.8	+0.5
	comp=Z,33nm,1.2s						
CLL				*i* (pP)	pP	23 45 32.3	-2.6
CLL				*i* sP	sP	23 45 40.9	+1.5
CLL				*i*		23 45 45.0	
L54A	Sinclairville	74.91	41	P	P	23 45 23.9	+0.4
	baz=326						
OKC	Ostrava-Krasne	74.94	335	*e*P	P	23 45 24.2	+0.6
OKC				*e*		23 45 41.6	
OKC				MLR	MLR		
	comp=Z,200nm,17.2s						
OKC	Ostrava-Krasne	74.94	335	*e*P	P	23 45 24.2	+0.6
OKC				*e*x	x	23 45 31.0	
OKC				*e*sP	pwP	23 45 41.6	-1.1
OKC				AMS	AMS	00 21 40.0	
	comp=Z,200nm,17.2s						
ACSO	Alum Creek Sta	74.94	44	P	P	23 45 24.1	+0.3
	baz=324						
DPC	Dobruska-Polom	74.96	336	*e*P	P	23 45 24.7	+1.0
DPC				*e*		23 45 41.7	
DPC				MLR	MLR		
	comp=Z,200nm,19.5s						
DPC	Dobruska-Polom	74.96	336	*e*P	P	23 45 24.7	+1.0
DPC				*e*pP	pP	23 45 31.5	-3.8
DPC				*e*sP	pwP	23 45 41.7	-1.2
DPC				AMS	AMS	00 23 00.0	
	comp=Z,200nm,19.5s						
M53A	WI Miller and	74.98	42	P	P	23 45 24.5	+0.6
	baz=325						
WCI	Wyandotte Cave	75.01	48	*e*P	P	23 45 24.9	+0.7
	comp=Z,48nm,0.8s						
WCI	Wyandotte Cave	75.01	48	*e*P	P	23 45 24.9	+0.7
WCI				pmax	pmax		
	comp=Z,48nm,0.8s						
WCI	Wyandotte Cave	75.01	48	P	P	23 45 24.8	+0.6
	baz=323						
K55A	Perry	75.02	40	P	P	23 45 24.3	+0.1
	baz=326,SNR=7.6						
MLAZ	Malazgirt-MUS	75.02	314	*e*P	P	23 45 26.3	+1.8
N52A	McGinn’s Farm,	75.05	43	P	P	23 45 24.5	+0.1
	baz=325						
Q49A	Aurora	75.05	46	P	P	23 45 24.6	+0.2
	baz=323						
VANB	Van	75.06	313	*e*P	P	23 45 26.9	+2.2
BRG	Berggiesshubel	75.07	338	*e*P	P	23 45 24.2	-0.1
	comp=Z,4.9nm,0.9s						
BRG				*i*		23 45 41.6	
	comp=Z,12nm,0.9s						
	comp=N,154nm,22.1s						
	comp=E,118nm,15.7s						
	comp=Z,294nm,20.2s						
BRG	Berggiesshubel	75.07	338	*e*P	P	23 45 24.2	-0.1
BRG				*i*		23 45 41.6	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				MLR	MLR		
	comp=N,154nm,22.1s						
BRG				MLR	MLR		
	comp=E,118nm,15.7s						
BRG				MLR	MLR		
	comp=Z,294nm,20.2s						
P50A	Jamestown	75.08	45	P	P	23 45 24.6	0.0
	baz=324,SNR=7.4						
KRLC	Kraliky	75.09	336	*e*P	P	23 45 25.5	+1.0
KRLC				*e*		23 45 42.5	
KRLC	Kraliky	75.09	336	*e*P	P	23 45 25.5	+1.0
KRLC				*e*x	x	23 45 32.0	
KRLC				*e*sP	pwP	23 45 42.5	-1.1
BIZ	Bicaz	75.10	329	⇑*i*P	P	23 45 25.2	+0.6
MORC	Moravsky Berou	75.16	335	⇑*i*P	P	23 45 26.0	+1.1
MORC	Moravsky Berou	75.16	335	P	P	23 45 26.0	+1.1
MORC	Moravsky Berou	75.16	335	*e*P	P	23 45 25.6	+0.7
MORC				*e*sP	sP	23 45 42.4	+1.3
BIR	Birlad	75.16	327	⇑*i*P	P	23 45 26.3	+1.3
BIR	Birlad	75.16	327	P	P	23 45 26.2	+1.3
T46A	Princeton	75.18	50	P	P	23 45 26.2	+1.0
	baz=322,SNR=25						
O51A	Pataskala	75.18	44	P	P	23 45 25.1	-0.1
	baz=324,SNR=6.2						
LANS	Liptovska Anna	75.19	334	*e*P	P	23 45 26.8	+1.7
LANS	Liptovska Anna	75.19	334	*e*P	P	23 45 26.8	+1.7
PVCC	Panska Ves	75.24	337	*e*P	P	23 45 26.1	+0.8
PVCC				MLR	MLR		
	comp=Z,200nm,18.0s						
PVCC	Panska Ves	75.24	337	*e*P	P	23 45 26.1	+0.8
PVCC				AMS	AMS	00 23 00.0	
	comp=Z,200nm,18.0s						
S47A	Hartford	75.24	49	P	P	23 45 26.0	+0.5
	baz=323,SNR=6.1						
TESR	Tescani	75.28	328	⇑*i*P	P	23 45 25.8	+0.1
BMR	Baia Mare	75.30	331	⇑*i*P	P	23 45 26.7	+1.0
BMR	Baia Mare	75.30	331	P	P	23 45 26.7	+1.0
L55A	Hinsdale	75.32	40	P	P	23 45 26.3	+0.3
	baz=326						
M54A	Oil Creek Stat	75.36	41	P	P	23 45 26.5	+0.3
	baz=326,SNR=7.6						
N53A	Lisbon	75.43	43	P	P	23 45 27.0	+0.4
	baz=325						
AKDM	Akdamar-Van	75.47	313	*e*P	P	23 45 27.6	+0.5
R49A	Shelbyville	75.50	47	P	P	23 45 27.8	+0.8
	baz=323,SNR=5.7						
VRTB	Varto-Mus	75.51	315	*e*P	P	23 45 38.4	+11
P51A	Williamsport	75.52	45	P	P	23 45 26.9	-0.2
	baz=324						
ARCR	ARCALIA	75.55	330	⇑*i*P	P	23 45 28.5	+1.4
O52A	Adamsville	75.55	44	P	P	23 45 27.6	+0.3
	baz=325						
S48A	Wiedeman Farm,	75.58	48	P	P	23 45 27.9	+0.5
	baz=323,SNR=9.2						
WTSB	Winterswijk	75.60	343	*e*P	P	23 45 27.5	+0.2
	comp=Z,48nm,1.1s						
WTSB				*e*pP	pP	23 45 39.3	+0.6
T47A	Sharon Grove	75.61	49	P	P	23 45 28.5	+0.8
	baz=323,SNR=11						
Q50A	Georgetown	75.61	46	P	P	23 45 28.0	+0.4
	baz=324,SNR=5.1						
X43A	Marvell	75.66	53	P	P	23 45 28.4	+0.4
	baz=322						
N54A	Moraine State	75.67	42	P	P	23 45 28.3	+0.3
	baz=325,SNR=11						
TLCR		75.67	326	⇑*i*P	P	23 45 28.1	+0.2
TLCR		75.67	326	P	P	23 45 28.0	+0.2
O53A	New Philadelph	75.72	43	P	P	23 45 27.9	-0.3
	baz=325						
PRU	Pruhonice	75.74	337	*e*P	P	23 45 28.8	+0.6
PRU				*e*		23 45 37.9	
PRU				*e*		23 45 46.3	
PRU				MLR	MLR		
	comp=Z,300nm,18.6s						
PRU	Pruhonice	75.74	337	*e*P	P	23 45 28.8	+0.6
PRU				*e*pP	pP	23 45 37.9	-1.9
PRU				*e*sP	pwP	23 45 46.3	-1.0
PRU				AMS	AMS	00 24 20.0	
	comp=Z,300nm,18.6s						
GOPC	GO Pecny, Ondr	75.75	337	*e*P	P	23 45 29.0	+0.7
GOPC				*e*		23 45 45.8	
GOPC				*e*		23 45 49.9	
GOPC				MLR	MLR		
	comp=Z,300nm,20.4s						
GOPC	GO Pecny, Ondr	75.75	337	*e*P	P	23 45 29.0	+0.7
GOPC				*e*sP	sP	23 45 45.8	+1.4
GOPC				AMS	AMS	00 24 10.0	
	comp=Z,300nm,20.4s						
Q51A	Peebles	75.75	45	P	P	23 45 28.9	+0.4
	baz=324,SNR=5.8						
PETR	Petresti	75.77	327	⇑*i*P	P	23 45 29.5	+1.1
M55A	Ridgway	75.77	41	P	P	23 45 29.0	+0.4
	baz=326,SNR=12						
NATX	Nacogdoches	75.79	57	P	P	23 45 30.0	+1.2
	baz=320						
P52A	Corning	75.81	44	P	P	23 45 28.8	0.0
	baz=324						
VRI	Vrincioaia	75.82	328	⇑*i*P	P	23 45 30.0	+1.2
VRI	Vrincioaia	75.82	328	P	P	23 45 29.9	+1.2
VRAC	Vranov	75.84	336	P	P	23 45 30.0	+1.2
	comp=Z,17nm,1.1s,baz=16,slow=6.8,SNR=25						
VRAC	Vranov	75.84	336	⇑*i*P	P	23 45 30.0	+1.2
VRAC	Vranov	75.84	336	*e*P	P	23 45 29.5	+0.7
VRAC				*e*sP	pwP	23 45 46.8	-1.1
S49A	Springfield	75.85	47	P	P	23 45 29.8	+0.8
	baz=323,SNR=13						
T48A	Bowling Green	75.86	49	P	P	23 45 29.7	+0.6
	baz=323,SNR=5.1						
PLOR	Plostina	75.86	328	⇑*i*P	P	23 45 29.5	+0.5
PLOR	Plostina	75.86	328	P	P	23 45 29.5	+0.5
R50A	Paris	75.90	46	P	P	23 45 29.9	+0.6
	baz=324						
CFR	Carcaliu	75.92	326	⇓*i*P	P	23 45 29.3	0.0
CFR	Carcaliu	75.92	326	P	P	23 45 29.3	0.0
WVT	Waverly	75.93	50	*e*P	P	23 45 30.6	+1.1
	comp=Z,14nm,1.0s						
WVT	Waverly	75.93	50	*e*P	P	23 45 30.6	+1.1
WVT				pmax	pmax		
	comp=Z,14nm,1.0s						
WVT	Waverly	75.93	50	P	P	23 45 30.2	+0.7
	baz=322						
OZUR		75.94	328	⇑*i*P	P	23 45 28.9	-0.6
U47A	Clarksville	75.95	50	P	P	23 45 30.3	+0.7
	baz=323,SNR=8.1						
JAVC	Velka Javorina	75.96	335	*e*P	P	23 45 31.2	+1.7
JAVC				*e*sP	pwP	23 45 48.3	-0.3
VYHS	Vyhne	75.96	334	*e*P	P	23 45 30.5	+1.0
VYHS				pmax	pmax		
	comp=Z,16nm,1.4s						
VYHS	Vyhne	75.96	334	*e*P	P	23 45 30.5	+1.0
BNGB	Bingl	76.00	315	*e*P	P	23 45 31.3	+1.3
M56A	Emporium	76.01	41	P	P	23 45 30.0	+0.1
	baz=326,SNR=5.2						
NKC	Novy Kostel	76.02	339	*e*P	P	23 45 30.5	+0.7
NKC				*e*		23 45 39.7	
NKC				*e*		23 45 51.0	
NKC				MLR	MLR		
	comp=Z,200nm,21.3s						
NKC	Novy Kostel	76.02	339	*e*P	P	23 45 30.5	+0.7
NKC				*e*x	x	23 45 39.7	
NKC				*e*x	x	23 45 51.0	
NKC				AMS	AMS	00 19 30.0	
	comp=Z,200nm,21.3s						
CUKT	Cukurca	76.04	312	*e*P	P	23 45 30.6	+0.3
V46A	Holladay	76.05	50	P	P	23 45 30.6	+0.4
	baz=322,SNR=9.5						
BISRR	Bisoca	76.10	328	⇑*i*P	P	23 45 32.0	+1.6
KRUC	Moravsky	76.12	336	*e*P	P	23 45 31.1	+0.8
KRUC				*e*sP	pwP	23 45 48.2	-1.3
O54A	Avella	76.14	43	P	P	23 45 31.2	+0.5
	baz=325						
TREC	Trest	76.14	336	*e*P	P	23 45 31.3	+0.8
TREC				*e*		23 45 48.4	
TREC				*e*		23 45 52.7	
TREC				MLR	MLR		
	comp=Z,200nm,16.4s						
TREC	Trest	76.14	336	*e*P	P	23 45 31.3	+0.8
TREC				*e*x	x	23 45 38.2	
TREC				*e*sP	pwP	23 45 48.4	-1.2
TREC				AMS	AMS	00 24 00.0	
	comp=Z,200nm,16.4s						
LBNH	Lisbon	76.15	35	P	P	23 45 31.5	+0.9
	baz=329						
PSZ	Piszkesteto	76.18	333	⇑*i*P	P	23 45 30.9	+0.1
PSZ	Piszkesteto	76.18	333	P	P	23 45 30.9	+0.1
PSZ	Piszkesteto	76.18	333	⇑*e*P	P	23 45 31.1	+0.2
DOPR	Dopca	76.19	329	⇑*i*P	P	23 45 31.7	+0.9
PKME	Peaks-Kenny Pk	76.21	33	P	P	23 45 31.5	+0.6
	baz=330						
R51A	Hillsboro	76.23	46	P	P	23 45 31.9	+0.7
	baz=324,SNR=8.4						
N55A	Marion Center	76.25	41	P	P	23 45 31.7	+0.4
	baz=326,SNR=7.8						
U48A	Cassie Pea, Po	76.26	49	P	P	23 45 32.1	+0.7
	baz=323,SNR=6.7						
P53A	Whipple	76.26	44	P	P	23 45 31.6	+0.2
	baz=325						
T49A	Edmonton	76.27	48	P	P	23 45 31.9	+0.5
	baz=323,SNR=10						
Q52A	Bidwell	76.30	45	P	P	23 45 31.7	+0.2
	baz=325,SNR=5.2						
BINY	Binghamton	76.31	39	P	P	23 45 31.6	-0.1
	baz=327						
V47A	Nunnelly	76.32	50	P	P	23 45 32.3	+0.6
	baz=323						
DRGR		76.33	331	⇑*i*P	P	23 45 32.4	+0.7
DRGR		76.33	331	P	P	23 45 32.3	+0.6
S50A	Richmond	76.35	47	P	P	23 45 32.4	+0.5
	baz=324,SNR=5.4						
MLR	Muntele Rosu	76.42	328	P	P	23 45 32.9	+0.6
	comp=Z,8.5nm,0.7s,baz=329,slow=5.4,SNR=16						
MLR	Muntele Rosu	76.42	328	⇓*i*P	P	23 45 33.3	+1.0
OXF	Oxford	76.42	52	P	P	23 45 32.6	+0.3
	baz=322						
N56A	West Decatur	76.43	41	P	P	23 45 32.7	+0.4
	baz=326,SNR=8.5						
SVAN	Silvan-Diyarba	76.44	314	*e*P	P	23 45 33.5	+1.0
TIRR	Tirgusor	76.45	326	⇑*i*P	P	23 45 32.8	+0.5
TIRR	Tirgusor	76.45	326	P	P	23 45 32.8	+0.5
TLB	Topalu	76.47	326	⇑*i*P	P	23 45 32.9	+0.5
TLB	Topalu	76.47	326	P	P	23 45 32.8	+0.4
MODS	Modra-Piesok	76.51	335	*e*P	P	23 45 32.9	+0.3
MODS				pmax	pmax		
	comp=Z,44nm,1.7s						
MODS	Modra-Piesok	76.51	335	*e*P	P	23 45 32.9	+0.3
HKT	Hockley	76.54	59	⇑*e*P	P	23 45 33.9	+1.0
P54A	Burton	76.57	43	P	P	23 45 33.3	+0.2
	baz=325						
O55A	Ligonier	76.59	42	P	P	23 45 33.3	+0.1
	baz=326,SNR=6.3						
U49A	Red Boiling Sp	76.63	48	P	P	23 45 34.0	+0.5
	baz=323,SNR=11						
R52A	Catlettsburg	76.63	45	P	P	23 45 33.9	+0.5
	baz=324						
T50A	Nancy	76.67	48	P	P	23 45 34.4	+0.6
	baz=324,SNR=16						
MFTR	Murfatlar	76.69	326	⇑*i*P	P	23 45 41.7	+8.1
AS31	Alice Springs	76.70	203	*e*P	P	23 45 33.0	-0.9
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	76.71	203	P	P	23 45 34.0	+0.2
	comp=Z,0.9nm,0.6s,baz=17,slow=5.3,SNR=11						
Q53A	Leroy	76.72	44	P	P	23 45 34.4	+0.5
	baz=325,SNR=8.7						
ZST	Bratislava	76.72	335	*e*P	P	23 45 34.7	+1.0
ZST	Bratislava	76.72	335	*e*P	P	23 45 34.7	+1.0
SRO	Srobarova	76.73	334	*e*P	P	23 45 35.4	+1.6
SRO	Srobarova	76.73	334	*e*P	P	23 45 35.4	+1.6
V48A	Smith Brothers	76.74	50	P	P	23 45 34.5	+0.4
	baz=323,SNR=6.5						
TOKT	Tokat	76.74	318	*e*P	P	23 45 35.2	+1.1
W47A	Westpoint	76.74	50	P	P	23 45 34.6	+0.4
	baz=323						
SRO2	Moca	76.75	334	*e*P	P	23 45 34.3	+0.4
SRO2	Moca	76.75	334	*e*P	P	23 45 34.3	+0.4
S51A	Beattyville	76.76	46	P	P	23 45 34.5	+0.3
	baz=324						
VOIR		76.77	329	⇓*i*P	P	23 45 35.0	+0.8
VOIR		76.77	329	P	P	23 45 34.9	+0.8
SECR		76.77	328	⇑*i*P	P	23 45 33.4	-0.7
KHC	Kasperske Hory	76.78	337	*e*P	P	23 45 35.4	+1.3
KHC				*e*		23 45 51.9	
KHC				*e*		23 45 56.7	

KHC				MLR	MLR		
	comp=Z,300nm,15.6s						
KHC	**Kasperske Hory**	**76.78**	**337**	*e*P	**P**	**23 45 35.4**	**+1.3**
KHC				*e*x	x	23 45 38.3	
KHC				*e*sP	**sP**	**23 45 51.9**	**+1.6**
KHC				AMS	AMS	00 24 10.0	
	comp=Z,300nm,15.6s						
X46A	**Booneville**	**76.80**	**52**	P	**P**	**23 45 34.8**	**+0.3**
	baz=322						
MCWV	**Mont Chateau**	**76.80**	**43**	P	**P**	**23 45 35.3**	**+0.9**
	baz=326						
GRFO	**Grafenberg**	**76.82**	**339**	*e*P	**P**	**23 45 34.6**	**+0.3**
	comp=Z,43nm,0.9s						
GRFO	**Grafenberg**	**76.82**	**339**	*e*P	**P**	**23 45 34.6**	**+0.3**
GRFO				pmax	pmax		
	comp=Z,43nm,0.9s						
BUD	**Budapest**	**76.82**	**333**	P	**P**	**23 45 36.5**	**+2.1**
BUD	**Budapest**	**76.82**	**333**	⇑*e*P	**P**	**23 45 35.1**	**+0.7**
SSPA	**Standing Stone**	**76.83**	**41**	*e*P	**P**	**23 45 35.3**	**+0.8**
	comp=Z,11nm,0.8s						
SSPA	**Standing Stone**	**76.83**	**41**	P	**P**	**23 45 35.0**	**+0.5**
	baz=326						
O56A	**Blue Knob Stat**	**76.85**	**41**	P	**P**	**23 45 35.0**	**+0.3**
	baz=326						
N57A	**Milroy**	**76.88**	**41**	P	**P**	**23 45 35.0**	**+0.2**
	baz=327,SNR=9.3						
HGN	**Heimansgroeve**	**76.91**	**343**	*e*P	**P**	**23 45 34.9**	**+0.1**
HGN				*e*P	**P**	**23 45 35.5**	**+0.7**
	comp=Z,65nm,1.1s						
HGN				*e*pP	**pwP**	**23 45 53.1**	**-1.3**
Q54A	**Coxs Mills**	**76.92**	**44**	P	**P**	**23 45 35.7**	**+0.6**
	baz=325,SNR=6.1						
BEBN	**Eben Emael**	**76.93**	**343**	⇑P	**P**	**23 45 35.6**	**+0.8**
BEBN				⇓pP	**pP**	**23 45 47.9**	**+1.5**
BEBN				⇑sP	**pwP**	**23 45 53.7**	**-0.9**
P55A	**Reedsville**	**76.94**	**43**	P	**P**	**23 45 35.8**	**+0.6**
	baz=326,SNR=8.1						
R53A	**Hurricane**	**76.95**	**45**	P	**P**	**23 45 35.9**	**+0.6**
	baz=325						
ICOR	**Ion Corvin**	**76.96**	**326**	⇓*i*P	**P**	**23 45 35.7**	**+0.5**
S52A	**Salyersville**	**76.97**	**46**	P	**P**	**23 45 36.0**	**+0.6**
	baz=324						
GERES	**GERESS Array B**	**77.01**	**337**	P	**P**	**23 45 36.3**	**+0.8**
	comp=Z,2.7nm,0.4s,baz=35,slow=4.9,SNR=35						
GERES				LR	LR	00 24 29.2	
	comp=Z,265nm,18.6s,baz=20,slow=40						
MEM	**Membach**	**77.05**	**343**	⇑P	**P**	**23 45 36.5**	**+0.9**
	comp=Z,37nm,1.0s						
MEM				⇑pP	**pP**	**23 45 48.3**	**+1.3**
MEM				⇑sP	**pwP**	**23 45 54.4**	**-0.9**
M59A	**Waymart**	**77.09**	**39**	P	**P**	**23 45 36.8**	**+0.8**
	baz=328						
SIRR	**Siria**	**77.13**	**331**	⇑*i*P	**P**	**23 45 36.6**	**+0.5**
T51A	**Gray**	**77.14**	**47**	P	**P**	**23 45 36.7**	**+0.4**
	baz=324,SNR=5.3						
CSKK	**Cskako**	**77.15**	**334**	*e*P	**P**	**23 45 37.1**	**+0.9**
U50A	**Jamestown**	**77.16**	**48**	P	**P**	**23 45 37.0**	**+0.5**
	baz=324,SNR=9.7						
W48A	**Pulaski**	**77.16**	**50**	P	**P**	**23 45 37.0**	**+0.5**
	baz=323,SNR=8.8						
V49A	**McMinnville**	**77.17**	**49**	P	**P**	**23 45 36.6**	**+0.1**
	baz=323						
LOT	**Lotru**	**77.18**	**329**	⇑*i*P	**P**	**23 45 37.2**	**+0.6**
LMN	**Caledonia Moun**	**77.19**	**30**	*e*P	**P**	**23 45 36.9**	**+0.4**
	comp=Z,15nm,1.0s						
X47A	**Russelville**	**77.19**	**51**	P	**P**	**23 45 36.7**	**0.0**
	baz=323						
Q55A	**Buckhannon**	**77.25**	**43**	P	**P**	**23 45 37.5**	**+0.5**
	baz=326,SNR=5.2						
O57A	**Amberson**	**77.30**	**41**	P	**P**	**23 45 37.5**	**+0.3**
	baz=327,SNR=8.6						
CONA	**Conrad Observa**	**77.30**	**336**	*e*P	**P**	**23 45 38.6**	**+1.4**
	comp=Z,20nm,1.4s,SNR=14						
SOP	**Sopron**	**77.33**	**335**	⇑*e*P	**P**	**23 45 38.1**	**+0.8**
AMBH	**Ambrzfalva**	**77.34**	**332**	*e*P	**P**	**23 45 37.0**	**-0.2**
MAZI	**Mazidag**	**77.35**	**314**	*e*P	**P**	**23 45 39.3**	**+1.6**
BCLA	**Clavier**	**77.36**	**343**	⇑P	**P**	**23 45 38.0**	**+0.7**
	comp=Z,18nm,1.5s						
BCLA				⇑pP	**pP**	**23 45 50.1**	**+1.3**
BCLA				⇓sP	**pwP**	**23 45 55.9**	**-1.1**
P56A	**Dayton Farm, R**	**77.37**	**42**	P	**P**	**23 45 38.3**	**+0.7**
	baz=326,SNR=8.0						
S53A	**Williamson**	**77.40**	**45**	P	**P**	**23 45 38.0**	**+0.2**
	baz=325						
SNF	**Seneffe**	**77.46**	**344**	⇑P	**P**	**23 45 37.4**	**-0.5**
SNF				⇑pP	**pP**	**23 45 50.8**	**+1.4**
T52A	**Hallie**	**77.47**	**46**	P	**P**	**23 45 39.0**	**+0.7**
	baz=324,SNR=5.6						
N59A	**State Game Lan**	**77.48**	**39**	P	**P**	**23 45 38.3**	**+0.1**
	baz=328						
W49A	**Belvidere**	**77.51**	**50**	P	**P**	**23 45 38.7**	**+0.3**
	baz=323,SNR=5.5						
R54A	**Victor**	**77.51**	**44**	P	**P**	**23 45 38.8**	**+0.4**
	baz=325,SNR=5.3						
GZR	**Gura Zlata**	**77.55**	**330**	⇑*i*P	**P**	**23 45 38.9**	**+0.3**
U51A	**La Follette**	**77.58**	**47**	P	**P**	**23 45 39.1**	**+0.3**
	baz=324,SNR=6.3						
Q56A	**Snyder Ridge,**	**77.60**	**43**	P	**P**	**23 45 39.4**	**+0.5**
	baz=326						
V50A	**Pikevile**	**77.63**	**49**	P	**P**	**23 45 39.6**	**+0.5**
	baz=324,SNR=8.8						
X48A	**Hartselle**	**77.65**	**51**	P	**P**	**23 45 39.2**	**-0.1**
	baz=323						
TZTN	**Tazewell**	**77.67**	**47**	P	**P**	**23 45 40.0**	**+0.6**
	baz=324,SNR=7.8						
O58A	**Lewisberry**	**77.67**	**40**	P	**P**	**23 45 39.5**	**+0.2**
	baz=327						
S54A	**Dingess, Beckl**	**77.68**	**45**	P	**P**	**23 45 39.7**	**+0.3**
	baz=325						
TIH	**Tihany**	**77.68**	**334**	*e*P	**P**	**23 45 38.1**	**-1.1**
BZS	**Buzias**	**77.72**	**331**	⇑*i*P	**P**	**23 45 39.6**	**+0.2**
BZS	**Buzias**	**77.72**	**331**	P	**P**	**23 45 39.6**	**+0.2**
P57A	**Homestead Farm**	**77.74**	**42**	P	**P**	**23 45 40.3**	**+0.6**
	baz=327						
GIVF	**Givet**	**77.75**	**343**	*e*P	**P**	**23 45 39.7**	**+0.2**
GIVF				pmax	pmax		
	comp=Z,15nm,1.0s						
HRV	**Adam Dziewonsk**	**77.78**	**36**	P	**P**	**23 45 40.0**	**+0.2**
	baz=330						
DARE	**Darende-Malaty**	**77.78**	**317**	*e*P	**P**	**23 45 40.9**	**+0.9**
T53A	**Wise**	**77.78**	**46**	P	**P**	**23 45 40.8**	**+0.8**
	baz=325,SNR=5.7						
MOA	**Molln**	**77.79**	**336**	*e*P	**P**	**23 45 40.7**	**+0.9**
	comp=Z,9.8nm,1.0s,SNR=7.0						
N60A	**Cedar Hill Far**	**77.79**	**39**	P	**P**	**23 45 40.0**	**+0.1**
	baz=328						
DOU	**Dourbes**	**77.80**	**343**	⇑P	**P**	**23 45 40.6**	**+0.8**
	comp=Z,11nm,1.2s						
DOU				⇑pP	**pP**	**23 45 52.3**	**+1.0**
DOU				⇑sP	**pwP**	**23 45 58.4**	**-1.1**
R55A	**Marlinton**	**77.82**	**44**	P	**P**	**23 45 40.5**	**+0.3**
	baz=326,SNR=6.4						
COPA	**Copaceanca**	**77.86**	**328**	⇑*i*P	**P**	**23 45 40.7**	**+0.5**
U52A	**Thorn Hill**	**77.87**	**47**	P	**P**	**23 45 41.2**	**+0.8**
	baz=324,SNR=11						
V51A	**Loudon**	**77.88**	**48**	P	**P**	**23 45 40.9**	**+0.4**
	baz=324						
RAZG	**Razgrad**	**77.90**	**327**	⇑*i*P	**P**	**23 45 40.2**	**-0.3**
W50A	**Signal Mountai**	**77.91**	**49**	P	**P**	**23 45 41.0**	**+0.3**
	baz=324						
BAIF	**Baives**	**77.91**	**344**	*e*P	**P**	**23 45 40.7**	**+0.3**
BAIF				pmax	pmax		
	comp=Z,19nm,1.0s						
WLF	**Walferdange**	**77.92**	**342**	⇑P	**P**	**23 45 41.8**	**+1.4**
Q57A	**Strasburg**	**77.94**	**42**	P	**P**	**23 45 41.1**	**+0.3**
	baz=326						
M61A	**Granite Spring**	**77.95**	**38**	P	**P**	**23 45 40.3**	**-0.4**
	baz=328						
X49A	**Woodville**	**77.96**	**50**	P	**P**	**23 45 41.0**	**0.0**
	baz=323						
ARSA	**Arzberg**	**78.01**	**335**	*e*P	**P**	**23 45 42.3**	**+1.3**
	comp=Z,16nm,1.4s,SNR=11						
Y48A	**Jasper**	**78.02**	**51**	P	**P**	**23 45 41.1**	**-0.2**
	baz=323						
R56A	**Bull Pasture M**	**78.03**	**43**	P	**P**	**23 45 41.6**	**+0.2**
	baz=326						
P58A	**Pank, Wackersv**	**78.04**	**41**	P	**P**	**23 45 41.5**	**+0.3**
	baz=327						
S55A	**Lewisburg**	**78.06**	**44**	P	**P**	**23 45 41.8**	**+0.3**
	baz=326						
SHME	**Shamm**	**78.11**	**296**	P	**P**	**23 45 41.6**	**-0.4**
O60A	**Telford**	**78.13**	**39**	P	**P**	**23 45 41.8**	**+0.1**
	baz=328						
PAL	**Palisades**	**78.15**	**38**	P	**P**	**23 45 41.8**	**-0.1**
	baz=328						
T54A	**Tazewell**	**78.16**	**45**	P	**P**	**23 45 42.6**	**+0.5**
	baz=325,SNR=7.5						
W51A	**Cleveland**	**78.20**	**49**	P	**P**	**23 45 42.5**	**+0.2**
	baz=324,SNR=5.9						
V52A	**Sevierville**	**78.21**	**47**	P	**P**	**23 45 42.4**	**0.0**
	baz=324						
ZIMR		**78.22**	**327**	⇓*i*P	**P**	**23 45 42.6**	**+0.4**
U53A	**Fall Branch**	**78.27**	**46**	P	**P**	**23 45 43.2**	**+0.5**
	baz=325,SNR=12						
P59A	**Jarrettsville**	**78.30**	**40**	P	**P**	**23 45 43.0**	**+0.3**
	baz=327						
Q58A	**Fox Den Farm,**	**78.33**	**42**	P	**P**	**23 45 43.6**	**+0.6**
	baz=327,SNR=6.9						
X50B	**Fort Payne**	**78.33**	**50**	P	**P**	**23 45 43.1**	**+0.1**
	baz=324,SNR=8.1						
BEHE	**Becsehely**	**78.39**	**334**	*e*P	**P**	**23 45 40.0**	**-3.1**
MDVR	**Moldovita**	**78.44**	**330**	⇑*i*P	**P**	**23 45 43.3**	**-0.2**
Y49A	**Blount Mountai**	**78.44**	**51**	P	**P**	**23 45 43.8**	**+0.2**
	baz=323						
147A	**Livingston**	**78.45**	**53**	P	**P**	**23 45 44.3**	**+0.6**
	baz=323						
BR131	**Keskin Array S**	**78.46**	**320**	P	**P**	**23 45 44.8**	**+1.0**
	SNR=6.3						
BRTR	**Keskin Array B**	**78.46**	**320**	P	**P**	**23 45 44.5**	**+0.6**
	comp=Z,4.5nm,1.0s,baz=62,slow=2.9,SNR=23						
BRTR				PP	**PP**	**23 48 39.7**	**-1.2**
	comp=Z,1.7nm,1.0s,baz=44,slow=8.8,SNR=3.5						
P60A	**Greenville**	**78.46**	**40**	P	**P**	**23 45 43.8**	**+0.1**
	baz=328						
T55A	**Pulaski**	**78.48**	**45**	P	**P**	**23 45 44.1**	**+0.3**
	baz=326,SNR=5.4						
U54A	**Nelsons Funny**	**78.49**	**46**	P	**P**	**23 45 44.2**	**+0.3**
	baz=325						
R57A	**Stanardsville**	**78.51**	**43**	P	**P**	**23 45 44.5**	**+0.6**
	baz=326,SNR=6.3						
S56A	**Natural Bridge**	**78.56**	**44**	P	**P**	**23 45 44.9**	**+0.6**
	baz=326						
BLA	**Blacksburg**	**78.56**	**44**	P	**P**	**23 45 44.7**	**+0.4**
	baz=326						
MDH	**Madha**	**78.59**	**296**	P	**P**	**23 45 43.7**	**-0.9**
MSFE	**Esma-Masafi**	**78.63**	**296**	P	**P**	**23 45 44.6**	**-0.2**
X51A	**Calhoun**	**78.64**	**49**	P	**P**	**23 45 45.2**	**+0.6**
	baz=324						
W52A	**Murphy**	**78.66**	**48**	P	**P**	**23 45 45.2**	**+0.4**
	baz=324						
O61A	**Allentown**	**78.67**	**39**	P	**P**	**23 45 44.7**	**0.0**
	baz=328						
SOKA	**Soboth**	**78.67**	**336**	*i* P	**P**	**23 45 45.8**	**+1.0**
	comp=Z,20nm,1.0s,SNR=24						
FRGS	**Fruska Gora**	**78.69**	**332**	*e*P	**P**	**23 45 45.0**	**+0.1**
PLVB	**Pleven**	**78.72**	**328**	⇑*i*P	**P**	**23 45 45.3**	**+0.3**
V53A	**Saluda**	**78.72**	**47**	P	**P**	**23 45 45.7**	**+0.5**
	baz=325,SNR=5.2						
R58A	**Rapidan**	**78.73**	**42**	P	**P**	**23 45 45.8**	**+0.7**
	baz=327,SNR=5.3						
KBA	**Koelnbreinsper**	**78.74**	**337**	*e*P	**P**	**23 45 46.7**	**+1.5**
	comp=Z,40nm,0.9s,SNR=26						
KBA	**Koelnbreinsper**	**78.74**	**337**	P	**P**	**23 45 46.6**	**+1.3**
BFO	**Black Forest**	**78.74**	**340**	*e*P	**P**	**23 45 45.6**	**+0.5**
	comp=Z,14nm,0.9s						
BFO	**Black Forest**	**78.74**	**340**	*ce*P	**P**	**23 45 46.0**	**+0.9**
Y50A	**Piedmont**	**78.75**	**50**	P	**P**	**23 45 45.5**	**+0.2**
	baz=324,SNR=5.3						
S57A	**Dark Hollow, R**	**78.76**	**43**	P	**P**	**23 45 45.9**	**+0.5**
	baz=326,SNR=5.8						
LRAL	**Lakeview Retre**	**78.81**	**51**	P	**P**	**23 45 45.7**	**+0.1**
	baz=323						
148A	**Greensboro**	**78.83**	**52**	P	**P**	**23 45 46.0**	**+0.2**
	baz=323						
U55A	**TA2, Sparta**	**78.86**	**45**	P	**P**	**23 45 46.3**	**+0.3**
	baz=325,SNR=6.6						
CDF	**Champ du Feu**	**78.89**	**341**	*e*P	**P**	**23 45 46.1**	**+0.2**
CDF				pmax	pmax		
	comp=Z,19nm,1.1s						
Z49A	**Columbiana**	**78.91**	**51**	P	**P**	**23 45 46.3**	**+0.1**
	baz=323						
UOSS	**Minazif**	**78.92**	**296**	*e*P	**P**	**23 45 46.2**	**-0.2**
	comp=Z,87nm,1.1s						
UOSS	**Minazif**	**78.92**	**296**	P	**P**	**23 45 46.0**	**-0.4**
KMRS	**Kahramanmaras**	**78.92**	**317**	*e*P	**P**	**23 45 47.1**	**+0.9**
TAOE	**Nuku Hiva Isla**	**78.92**	**118**	*e*LR	LR	00 10 08.6	
	comp=Z,3µm,30.1s						
WATA	**Walderalm**	**78.94**	**338**	*i* P	**P**	**23 45 48.0**	**+1.6**
	comp=Z,10nm,0.8s						
OBKA	**Obir**	**78.95**	**336**	*e*P	**P**	**23 45 47.3**	**+0.9**
	comp=Z,10.0nm,0.9s,SNR=6.9						
W53A	**Cullowhee**	**78.96**	**48**	P	**P**	**23 45 47.2**	**+0.6**
	baz=325						
RETA	**Reutte**	**78.99**	**339**	*e*P	**P**	**23 45 47.4**	**+0.9**
	comp=Z,11nm,1.0s,SNR=6.6						
WTTA	**Wattenberg**	**78.99**	**338**	*e*P	**P**	**23 45 48.0**	**+1.4**
	comp=Z,27nm,1.0s,SNR=12						
V54A	**Nebo**	**79.04**	**46**	P	**P**	**23 45 47.4**	**+0.5**
	baz=325						
MOTA	**Moosalm**	**79.04**	**338**	*i* P	**P**	**23 45 47.8**	**+0.9**
	comp=Z,16nm,0.9s,SNR=16						
HATD	**Hatta, Dubai**	**79.05**	**296**	P	**P**	**23 45 47.0**	**-0.2**
R58B	**Mineral**	**79.06**	**42**	P	**P**	**23 45 47.4**	**+0.4**
	baz=327						
Y51A	**Rockmart**	**79.07**	**50**	P	**P**	**23 45 47.2**	**+0.1**
	baz=324,SNR=7.1						
MYKA	**Terra Mystica**	**79.08**	**336**	*i* P	**P**	**23 45 47.6**	**+0.6**
	comp=Z,8.6nm,1.2s,SNR=6.3						
SQTA	**Sankt Quirin**	**79.13**	**338**	*e*P	**P**	**23 45 48.6**	**+1.2**
	comp=Z,18nm,0.9s,SNR=14						
Z50A	**Ashland**	**79.17**	**51**	P	**P**	**23 45 47.9**	**+0.2**
	baz=324,SNR=14						
NAZ	**Nazwa, Dubai**	**79.20**	**296**	P	**P**	**23 45 47.8**	**-0.1**
PHSR	**Pinarhisar**	**79.22**	**325**	⇑*i*P	**P**	**23 45 47.9**	**+0.1**
ABTA	**Abfaltersbach**	**79.26**	**337**	*i* P	**P**	**23 45 48.6**	**+0.6**
	comp=Z,14nm,1.0s,SNR=12						
149A	**Jones**	**79.26**	**52**	P	**P**	**23 45 48.8**	**+0.6**
	baz=323						
T57A	**Hurt**	**79.26**	**44**	P	**P**	**23 45 48.3**	**+0.2**
	baz=326						
S58A	**Poland Farm, P**	**79.28**	**43**	P	**P**	**23 45 48.4**	**+0.3**
	baz=327						
U56A	**King**	**79.29**	**45**	P	**P**	**23 45 48.6**	**+0.3**
	baz=326						
V55A	**Taylorsville**	**79.32**	**46**	P	**P**	**23 45 48.8**	**+0.4**
	baz=325						
CRES	**Cresnjev**	**79.34**	**335**	*e*P	**P**	**23 45 48.9**	**+0.5**
DAVA	**Damuels**	**79.38**	**339**	*e*P	**P**	**23 45 49.9**	**+1.2**
	comp=Z,9.7nm,1.0s						
LJU	**Ljubljana**	**79.39**	**336**	*i* P	**P**	**23 45 49.0**	**+0.3**
LJU				*i*		23 46 06.0	
FAQ	**Al Faqa, Dubai**	**79.43**	**296**	P	**P**	**23 45 48.4**	**-0.8**
FETA	**Feichten**	**79.43**	**338**	*i* P	**P**	**23 45 50.2**	**+1.2**
	comp=Z,12nm,0.9s,SNR=10						
X53A	**Estanollee**	**79.44**	**48**	P	**P**	**23 45 49.9**	**+0.8**
	baz=325,SNR=7.3						
HAU	**Haudompre**	**79.46**	**342**	*e*P	**P**	**23 45 49.1**	**+0.1**
HAU				pmax	pmax		
	comp=Z,19nm,1.1s						
S59A	**Mechanicsville**	**79.49**	**42**	P	**P**	**23 45 50.0**	**+0.8**
	baz=327						
Z51A	**Franklin**	**79.49**	**50**	P	**P**	**23 45 49.4**	**+0.1**
	baz=324						
W54A	**Cherokee Point**	**79.49**	**47**	P	**P**	**23 45 49.7**	**+0.4**
	baz=325						
OZLJ	**Ozalj**	**79.53**	**335**	*i* P	**P**	**23 45 49.9**	**+0.5**
HINF	**Hinteralfeld**	**79.54**	**341**	*e*P	**P**	**23 45 49.3**	**-0.2**
HINF				pmax	pmax		
	comp=Z,8.0nm,1.1s						
249A	**Camden**	**79.59**	**52**	P	**P**	**23 45 50.8**	**+0.9**
	baz=323,SNR=7.1						
Y52A	**Lilburn**	**79.59**	**49**	P	**P**	**23 45 50.1**	**+0.2**
	baz=324						
DIVS	**Divibare**	**79.59**	**331**	*e*P	**P**	**23 45 49.6**	**-0.3**
T58A	**Grand View Acr**	**79.63**	**43**	P	**P**	**23 45 50.0**	**0.0**
	baz=327						
150A	**Eclectic**	**79.64**	**51**	P	**P**	**23 45 50.4**	**+0.2**
	baz=324,SNR=7.4						
ASUD	**Al Ashush, Dub**	**79.67**	**296**	P	**P**	**23 45 50.0**	**-0.5**
V56A	**Mocksville**	**79.68**	**45**	P	**P**	**23 45 50.9**	**+0.5**
	baz=326						
U57A	**Blanch**	**79.69**	**44**	P	**P**	**23 45 50.8**	**+0.4**
	baz=326,SNR=6.6						
CEY	**Cerknica**	**79.70**	**336**	*e*P	**P**	**23 45 50.3**	**0.0**
S60A	**Water View**	**79.81**	**42**	P	**P**	**23 45 52.5**	**+1.4**
	baz=327						
PLD	**Plovdiv**	**79.82**	**327**	P	**P**	**23 45 52.8**	**+1.8**
Y53A	**Monroe**	**79.83**	**49**	P	**P**	**23 45 51.8**	**+0.5**
	baz=325						
X54A	**Belton**	**79.84**	**47**	P	**P**	**23 45 52.0**	**+0.7**
	baz=325,SNR=6.3						
KMSC	**Kings Mountain**	**79.85**	**46**	P	**P**	**23 45 51.9**	**+0.6**
	baz=326						
DAVOX	**Davos/Dischmat**	**79.86**	**339**	P	**P**	**23 45 52.6**	**+1.2**
	comp=Z,11nm,0.9s,baz=358,slow=4.7,SNR=12						
VTS	**Vitosha**	**79.87**	**328**	⇑*i*P	**P**	**23 45 51.9**	**+0.4**
FLN	**La Foliniere**	**79.95**	**346**	*e*P	**P**	**23 45 51.7**	**+0.1**
FLN				pmax	pmax		
	comp=Z,25nm,1.0s						
V57A	**Coltrane Farms**	**79.95**	**45**	P	**P**	**23 45 52.1**	**+0.3**
	baz=326						
Z52A	**Williamson**	**79.96**	**50**	P	**P**	**23 45 52.6**	**+0.6**
	baz=324,SNR=7.0						
BBLS	**Lazići**	**79.98**	**332**	*e*P	**P**	**23 45 52.6**	**+0.6**
250A	**Grady**	**80.02**	**52**	P	**P**	**23 45 53.2**	**+0.9**
	baz=324,SNR=5.1						
T59A	**Double "B" Far**	**80.03**	**43**	P	**P**	**23 45 52.8**	**+0.5**
	baz=327						
151A	**Opelika**	**80.05**	**51**	P	**P**	**23 45 52.8**	**+0.4**
	baz=324						
349A	**Repton**	**80.05**	**53**	P	**P**	**23 45 53.5**	**+1.1**
	baz=323						
LDF	**La Druitiere**	**80.06**	**346**	*e*P	**P**	**23 45 52.3**	**+0.1**
LDF				pmax	pmax		
	comp=Z,14nm,0.9s						
U58A	**Oxford**	**80.08**	**44**	P	**P**	**23 45 52.8**	**+0.3**
	baz=327,SNR=5.2						
W56A	**Indian Trail**	**80.20**	**46**	P	**P**	**23 45 53.4**	**+0.2**
	baz=326						
152A	**Waverly Hall**	**80.24**	**50**	P	**P**	**23 45 53.6**	**+0.2**
	baz=324,SNR=6.4						
GOGA	**Godfrey**	**80.25**	**49**	P	**P**	**23 45 53.5**	**0.0**
	baz=325						
S61A	**Accomac**	**80.25**	**41**	P	**P**	**23 45 53.7**	**+0.3**
	baz=328						
Y54A	**Tignall**	**80.25**	**48**	P	**P**	**23 45 54.4**	**+0.9**
	baz=325,SNR=26						
X55A	**Gracelyn & Ava**	**80.26**	**47**	P	**P**	**23 45 53.8**	**+0.3**
	baz=325						
BRAL	**Brewton**	**80.27**	**53**	P	**P**	**23 45 54.6**	**+1.0**
	baz=323						
Z53A	**Monticello**	**80.30**	**49**	P	**P**	**23 45 54.3**	**+0.5**
	baz=325,SNR=7.0						
V58A	**Windy Hill, Pi**	**80.32**	**44**	P	**P**	**23 45 54.5**	**+0.6**
	baz=326,SNR=6.3						
251A	**Midway**	**80.36**	**51**	P	**P**	**23 45 54.5**	**+0.4**
	baz=324,SNR=5.4						
GRR	**Gorron**	**80.37**	**346**	*e*P	**P**	**23 45 54.2**	**+0.4**
GRR				pmax	pmax		
	comp=Z,39nm,1.0s						
ALN	**Alexandroupoli**	**80.41**	**326**	*e*P	**P**	**23 45 53.2**	**-1.0**
	comp=Z,11nm,0.9s						
ALN	**Alexandroupoli**	**80.41**	**326**	*e*P	**P**	**23 45 53.2**	**-1.0**
ALN				pmax	pmax		
	comp=Z,11nm,0.9s						
350A	**Dozier**	**80.43**	**52**	P	**P**	**23 45 55.5**	**+1.0**
	baz=324						
U59A	**Littleton**	**80.45**	**43**	P	**P**	**23 45 55.0**	**+0.6**
	baz=327						
UDBI	**Udbina**	**80.45**	**334**	*i* P	**P**	**23 45 54.7**	**+0.2**
W57A	**Gilead**	**80.46**	**45**	P	**P**	**23 45 54.9**	**+0.4**
	baz=326						
449A	**Pace**	**80.51**	**53**	P	**P**	**23 45 56.3**	**+1.4**
	baz=323						
X56A	**White Oak**	**80.52**	**46**	P	**P**	**23 45 55.3**	**+0.4**
	baz=326						
Y55A	**Saluda**	**80.59**	**47**	P	**P**	**23 45 56.0**	**+0.7**
	baz=325,SNR=6.4						
U60A	**Pendleton**	**80.63**	**43**	P	**P**	**23 45 55.9**	**+0.5**
	baz=327						
LOR	**Lormes**	**80.66**	**343**	*e*P	**P**	**23 45 55.6**	**+0.1**
LOR				pmax	pmax		
	comp=Z,24nm,1.0s						
NVLJ	**Novalja**	**80.67**	**335**	*i* P	**P**	**23 45 52.5**	**-2.9**
153A	**Fort Valley**	**80.69**	**49**	P	**P**	**23 45 56.6**	**+0.8**
	baz=325						
Z54A	**Sparta**	**80.69**	**48**	P	**P**	**23 45 56.5**	**+0.7**
	baz=325,SNR=8.3						
UPM	**Unac-Piva**	**80.74**	**332**	*e*P	**P**	**23 45 55.9**	**-0.3**
V59A	**Middlesex**	**80.74**	**44**	P	**P**	**23 45 56.6**	**+0.6**
	baz=327						
SGMF	**Saint Gilles**	**80.75**	**348**	*e*P	**P**	**23 45 56.3**	**+0.4**
SGMF				pmax	pmax		
	comp=Z,33nm,1.0s						
KIJV	**Kijevo**	**80.75**	**334**	*i* P	**P**	**23 45 55.7**	**-0.3**
ROSF	**Rostrenen**	**80.76**	**348**	*e*P	**P**	**23 45 56.5**	**+0.5**
ROSF				pmax	pmax		
	comp=Z,39nm,1.2s						
252A	**Lumpkin**	**80.77**	**50**	P	**P**	**23 45 56.6**	**+0.3**
	baz=324						
450A	**Crestview**	**80.80**	**52**	P	**P**	**23 45 57.6**	**+1.2**
	baz=324						
CABF	**La Chapelle**	**80.85**	**341**	*e*P	**P**	**23 45 56.9**	**+0.3**
CABF				pmax	pmax		
	comp=Z,21nm,1.3s						
W58A	**Raeford**	**80.91**	**45**	P	**P**	**23 45 57.5**	**+0.5**
	baz=326						
SSF	**Saint Saulge**	**80.92**	**343**	*e*P	**P**	**23 45 57.1**	**+0.3**
SSF				pmax	pmax		
	comp=Z,12nm,0.9s						
253A	**Americus**	**81.02**	**50**	P	**P**	**23 45 58.2**	**+0.5**
	baz=325						
Z55A	**Blythe**	**81.04**	**48**	P	**P**	**23 45 58.8**	**+1.1**
	baz=325						
U61A	**Possum Corner**	**81.05**	**42**	P	**P**	**23 45 58.6**	**+0.9**
	baz=328						
154A	**Montrose**	**81.07**	**49**	P	**P**	**23 45 58.7**	**+0.8**
	baz=325						
MORI	**Morici**	**81.08**	**334**	*i* P	**P**	**23 45 59.1**	**+1.4**
SRS	**Serrai**	**81.08**	**327**	P	**P**	**23 45 58.4**	**+0.6**
352A	**Blakely**	**81.09**	**51**	P	**P**	**23 45 59.0**	**+1.0**
	baz=324						
BRY	**Bratogost**	**81.12**	**332**	*e*P	**P**	**23 45 57.5**	**-0.7**
QUIF	**Quistinic**	**81.16**	**348**	*e*P	**P**	**23 45 58.4**	**+0.3**
QUIF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
V60A	**Jim Taylor Roa**	**81.17**	**43**	P	**P**	**23 45 59.2**	**+0.9**
	baz=327						
PPT	**Papeete**	**81.20**	**131**	LR	LR	00 14 47.9	
	comp=Z,106nm,19.6s,baz=339,slow=30						
AVF	**Avril sur Loir**	**81.21**	**343**	*e*P	**P**	**23 45 58.7**	**+0.3**
AVF				pmax	pmax		
	comp=Z,22nm,1.0s						
PPT2	**Papeete2**	**81.22**	**131**	*e*LR	LR	00 11 10.5	
	comp=Z,168nm,22.2s						
SMF	**Signal de Mont**	**81.26**	**343**	*e*P	**P**	**23 45 59.0**	**+0.3**
SMF				pmax	pmax		
	comp=Z,29nm,1.2s						
ZIRJ	**Zirje**	**81.29**	**334**	*i* P	**P**	**23 45 58.6**	**-0.2**
155A	**Kite**	**81.38**	**49**	P	**P**	**23 46 00.4**	**+0.9**
	baz=325,SNR=7.9						
254A	**Abbeville**	**81.53**	**49**	P	**P**	**23 46 01.2**	**+0.9**
	baz=325,SNR=6.9						
353A	**Camilla**	**81.56**	**50**	P	**P**	**23 46 01.4**	**+0.9**
	baz=325,SNR=8.6						
Y58A	**Scranton**	**81.64**	**46**	P	**P**	**23 46 01.5**	**+0.6**
	baz=326						
Z57A	**Bowman**	**81.66**	**47**	P	**P**	**23 46 01.6**	**+0.6**
	baz=326						
LPL	**La Plagne**	**81.76**	**341**	*e*P	**P**	**23 46 02.4**	**+0.8**
LPL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LPG	**La Plagne**	**81.77**	**341**	*e*P	**P**	**23 46 02.6**	**+0.9**
LPG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIGA	**Tifton**	**81.79**	**50**	P	**P**	**23 46 02.8**	**+1.1**
	baz=325,SNR=7.4						
156A	**Sylvania**	**81.81**	**48**	P	**P**	**23 46 03.0**	**+1.2**
	baz=326						
X60A	**Albert Glenn T**	**81.85**	**44**	P	**P**	**23 46 02.7**	**+0.7**
	baz=327						
TCF	**Toulx Ste Croi**	**81.90**	**344**	*e*P	**P**	**23 46 02.7**	**+0.6**
TCF				pmax	pmax		
	comp=Z,19nm,1.1s						
453A	**Whigham**	**81.91**	**51**	P	**P**	**23 46 03.5**	**+1.2**
	baz=325						
255A	**Hazlehurst**	**81.94**	**49**	P	**P**	**23 46 03.7**	**+1.2**
	baz=325						
MFF	**Saint Martin d**	**82.00**	**346**	*e*P	**P**	**23 46 03.3**	**+0.8**
MFF				pmax	pmax		
	comp=Z,28nm,1.1s						
Z58A	**St. Stephen**	**82.05**	**46**	P	**P**	**23 46 03.6**	**+0.7**
	baz=326						
355A	**Pearson**	**82.23**	**50**	P	**P**	**23 46 05.3**	**+1.3**
	baz=325						
454A	**Quitman**	**82.36**	**50**	P	**P**	**23 46 06.0**	**+1.3**
	baz=325						
158A	**Hollywood**	**82.36**	**47**	P	**P**	**23 46 05.6**	**+0.9**
	baz=326						
MBDF	**Montbardon**	**82.50**	**340**	*e*P	**P**	**23 46 07.4**	**+2.0**

MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ORIF	Oris-en-Rattie	82.51	341	eP	P	23 46 06.3	+0.9
ORIF				pmax	pmax		
	comp=Z,17nm,1.2s						
455A	Stateville	82.64	50	P	P	23 46 07.4	+1.2
	baz=325,SNR=5.2						
VIVF	Saint-Julien-l	82.81	342	eP	P	23 46 07.6	+0.7
VIVF				pmax	pmax		
	comp=Z,13nm,1.3s						
554A	Perry	82.85	51	P	P	23 46 08.5	+1.3
	baz=325						
RJF	Les Rejaudoux	82.98	344	eP	P	23 46 08.3	+0.6
RJF				pmax	pmax		
	comp=Z,36nm,1.2s						
STKA	Stephens Creek	83.04	195	P	P	23 46 08.3	+0.4
	comp=Z,2.2nm,0.9s,baz=2.4,slow=8.7,SNR=3.6						
STKA	Stephens Creek	83.04	195	eP	P	23 46 07.3	-0.5
	comp=Z,2.2nm,1.1s						
STKA	Stephens Creek	83.04	195	eP	P	23 46 07.4	-0.5
STKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AQU	L'Aquila	83.11	335	eP	P	23 46 09.9	+1.4
456A	Hilliard	83.14	49	P	P	23 46 10.2	+1.5
	baz=326						
555A	McAlpin	83.17	50	P	P	23 46 10.3	+1.4
	baz=325						
SBF	Sospel	83.18	340	eP	P	23 46 08.7	-0.1
SBF				pmax	pmax		
	comp=Z,28nm,1.0s						
CAF	Calviac	83.25	344	eP	P	23 46 10.0	+0.9
CAF				pmax	pmax		
	comp=Z,27nm,1.2s						
MMAI	Mount Meron Ar	83.34	315	P	P	23 46 10.1	+0.3
	comp=Z,3.2nm,0.5s,baz=38,slow=7.3,SNR=2.7						
ASF	Jabal al Asfar	83.35	314	P	P	23 46 10.4	+0.5
	comp=Z,5.2nm,0.9s,baz=21,slow=0.9						
LFF	La Frestale	83.47	345	eP	P	23 46 10.9	+0.7
LFF				pmax	pmax		
	comp=Z,20nm,1.1s						
655A	Horseshoe Beac	83.53	51	P	P	23 46 12.2	+1.5
	baz=325						
556A	Lake Butler	83.55	50	P	P	23 46 12.1	+1.2
	baz=325						
FRF	La Foret Royal	83.64	340	eP	P	23 46 11.1	0.0
FRF				pmax	pmax		
	comp=Z,23nm,1.2s						
557A	Orange Park	83.87	49	P	P	23 46 13.9	+1.4
	baz=326						
LMR	La Mourre	83.89	340	eP	P	23 46 12.5	+0.1
LMR				pmax	pmax		
	comp=Z,24nm,1.1s						
656A	Willston	84.00	50	P	P	23 46 14.3	+1.1
	baz=325,SNR=5.1						
657A	Interlachen	84.16	50	P	P	23 46 15.3	+1.3
	baz=326						
757A	Oxford	84.59	50	P	P	23 46 17.7	+1.6
	baz=326						
658A	Bunnell	84.59	49	P	P	23 46 17.9	+1.8
	baz=326						
MTLF	Montolieu	84.75	343	eP	P	23 46 17.5	+0.7
MTLF				pmax	pmax		
	comp=Z,5.0nm,1.2s						
758A	Lake Helen	85.00	50	P	P	23 46 19.5	+1.3
	baz=326						
857A	Zephyrhills	85.06	51	P	P	23 46 19.8	+1.3
	baz=326						
EPF	Esparros	85.39	344	eP	P	23 46 20.1	+0.1
EPF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DWPF	Disney Wildern	85.59	50	P	P	23 46 22.5	+1.3
	baz=326						
IDI	Anoyia	85.77	324	P	P	23 46 20.8	-1.3
	comp=Z,3.8nm,0.6s,baz=42,slow=16,SNR=3.5						
RAYN	Ar Rayn	86.06	302	eP	P	23 46 23.1	-0.6
	comp=Z,33nm,0.8s						
RAYN	Ar Rayn	86.06	302	i P	P	23 46 23.5	-0.1
	SNR=7.2						
RAYN	Ar Rayn	86.06	302	eP	P	23 46 23.1	-0.6
RAYN				pmax	pmax		
	comp=Z,33nm,0.8s						
TBI	Tubuai	86.21	134	eLR	LR	00 13 24.2	
	comp=Z,171nm,31.2s						
058A	Arcadia	86.27	51	P	P	23 46 25.8	+1.2
	baz=326						
959A	Okeechobee	86.34	50	P	P	23 46 26.3	+1.4
	baz=326						
EIL	Elat	86.36	314	P	P	23 46 23.9	-1.0
	comp=Z,3.4nm,0.9s,baz=7.1,slow=8.1,SNR=2.3						
ESDC	Sonseca Array	89.35	347	P	P	23 46 39.0	-0.2
	comp=Z,6.0nm,1.0s,baz=6.6,slow=4.3,SNR=30						
ESDC				PP	PP	23 50 09.5	0.0
	comp=Z,0.9nm,0.8s,baz=19,slow=9.4,SNR=4.4						
ESDC				LR	LR	00 33 19.8	
	comp=Z,88nm,20.1s,baz=100,slow=40						
URZ	Urewera	89.42	166	LR	LR	00 19 49.5	
	comp=Z,109nm,19.9s,baz=13,slow=31						
KEST	Kesra	90.41	336	P	P	23 46 43.7	-0.6
	comp=Z,2.9nm,0.8s,baz=27,slow=2.3,SNR=4.4						
NWAO	Narrogin (SRO)	90.53	214	LR	LR	00 26 22.9	
	comp=Z,72nm,18.9s,baz=80,slow=35						
RPZ	Rata Peaks	94.02	171	LR	LR	00 22 41.5	
	comp=Z,268nm,21.7s,baz=353,slow=31						
TORD	Torodi Ar. Bea	113.93	336	PP	PP	23 53 08.8	-6.0
	comp=Z,1.9nm,0.9s,baz=12,slow=7.6,SNR=5.8						
TORD				PKKPab	PKKPab	00 03 10.6	-2.3
	comp=Z,0.4nm,0.8s,baz=223,slow=3.4,SNR=2.5						
TORD				PKKP	PKKPdf	00 03 20.2	-2.1
	comp=Z,0.8nm,1.0s,baz=222,slow=1.9,SNR=3.4						
DBIC	Dimbokro	121.74	341	PKP	PKPdf	23 52 36.5	-0.3
	comp=Z,0.9nm,0.4s,baz=267,slow=2.2,SNR=4.7						
LPAZ	La Paz	129.40	65	PKP	PKPdf	23 52 52.2	+0.1
	comp=Z,1.6nm,0.7s,baz=335,slow=2.9,SNR=7.7						
LPAZ	La Paz	129.40	65	ePKPdf	PKPdf	23 52 51.8	-0.3
LPAZ	La Paz	129.40	65	ePKIKP	PKPdf	23 52 51.8	-0.3
BDFB	Brasilia	139.31	42	ePKPdf	PKPdf	23 53 10.3	+0.3
BDFB	Brasilia	139.31	42	ePKIKP	PKPdf	23 53 10.3	+0.3
CPUP	Villa Florida	143.49	63	PKP	PKPbc	23 53 14.8	+0.4
	comp=Z,6.1nm,1.1s,baz=303,slow=4.2,SNR=6.4						
CPUP	Villa Florida	143.49	63	ePKPpre	PKPbc	23 53 14.9	+0.5
PLCA	Paso Flores	144.62	94	PKP	PKPab	23 53 17.5	0.0
	comp=Z,5.3nm,0.8s,baz=324,slow=4.6,SNR=12						
PLCA	Paso Flores	144.62	94	ePKPdf	PKPdf	23 53 18.4	-0.3
SYO	Syowa Base	145.81	214	⇑eP	PKPdf	23 53 18.9	-0.8
SYO	Syowa Base	145.81	214	⇑eP	PKiKP	23 53 31.2	+7.4
SPB	Sao Paulo	146.51	48	ePKPdf	PKPdf	23 53 23.0	+0.6

ISCJB ***10*** *23:42:58.5±0.6, 26°.83N±0°.08×140°.7E±0°.1, h500km, mb3.5/10, Error ellipse: s-maj=17.1km s-min=9.4km az=164.3*

JMA ***10*** *23:43:00.8±0.1, 27°.15N×141°.16E, h497km, M3.8*

IDC ***10*** *23:43:02.7±2.6, 26°.79N×140°.22E, h524km±27km, mb3.2/10, mb1 3.3/12, mb1mx3.0/56, mbtmp4.0/12, Error ellipse: s-maj=36.1km s-min=12.7km az=74.0*

ISC 10 23:42:59.6±0.7**, 26°.9N**±0°.1×**140°.8E**±0°.2**, h500km, n25, σ1s.52**/29**, mb3.5**/10**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.27	83	P	P	23 44 01.9	+0.2
CBIJ				S	S	23 44 50.3	-1.8
JHH2	Haha-jima-NKT2	1.29	103	P	P	23 44 02.5	+0.7
JHH2				S	S	23 44 51.0	-1.2
BSO1	Boso 1	7.69	1	P	P	23 44 53.8	+1.7
BSO3	Boso 3	7.84	358	P	P	23 44 55.4	+1.4
JIE	Ise	8.21	336	P	P	23 45 00.3	+2.2
JOD2	Odawara 2	8.42	351	P	P	23 45 02.4	+2.1
JRY	Ryogami san	9.19	350	P	P	23 45 09.2	+0.9
JAG	Ashikaga	9.53	354	P	P	23 45 11.6	-0.2
JAG				eS	S	23 46 57.3	-3.3
MJAR	Matsushiro Arr	9.82	348	P	P	23 45 18.0	+3.0
	0.1nm,0.3s,baz=178,slow=7.5,SNR=3.1						
JFK	Kawauchi	10.40	0	P	P	23 45 23.5	+2.4
KSRS	Korea Array	15.09	317	P	P	23 46 12.7	+2.0
	0.4nm,0.3s,baz=144,slow=8.9,SNR=6.8						
SONM	Songino Array	33.96	317	P	P	23 49 00.9	+0.1
	0.6nm,0.5s,baz=134,slow=8.4,SNR=4.2						
WRA	Warramunga Arr	47.02	188	P	P	23 50 44.5	-0.9
	1.1nm,0.3s,baz=356,slow=7.3,SNR=23						
ZALV	Zalesovo Beam	48.78	319	P	P	23 50 57.7	-0.5
	0.4nm,0.3s,baz=103,slow=8.6,SNR=2.5						
MKAR	Makanchi Array	49.60	310	P	P	23 51 04.0	-0.4
	0.7nm,0.6s,baz=90,slow=9.4,SNR=7.5						
MKAR				PcP	PcP	23 52 17.3	+0.3
	0.3nm,0.5s,baz=90,slow=5.8,SNR=3.3						
ASAR	Alice Springs	50.74	188	P	P	23 51 12.4	-0.6
	0.5nm,0.5s,baz=0.2,slow=4.9,SNR=11						
KBZ	Khabaz	77.19	313	P	P	23 54 01.5	0.0
	2.2nm,0.8s,baz=43,slow=2.8,SNR=3.9						
FINES	FINESS Array B	77.53	333	P	P	23 54 03.4	+0.4
	1.6nm,0.3s,baz=64,slow=5.1,SNR=31						
AKASG	Malin Array Be	82.00	323	P	P	23 54 25.8	-1.0
	1.0nm,0.3s,baz=52,slow=5.5,SNR=6.7						
HFS	Hagfors	83.07	336	P	P	23 54 31.3	-0.7
	1.4nm,0.5s,baz=57,slow=5.3,SNR=12						
NB2	NORSAR Subarra	83.28	338	P	P	23 54 32.9	-0.2
	comp=Z,0.5nm,0.4s,baz=56,slow=5.1						
NOA	NORSAR Array B	83.28	338	P	P	23 54 32.9	-0.2
	comp=Z,0.3nm,0.3s,baz=54,slow=6.6,SNR=9.2						
TORD	Torodi Ar. Bea	123.73	310	PKP	PKPdf	00 00 59.9	-1.1
	comp=Z,0.2nm,0.4s,baz=47,slow=1.2,SNR=7.3						
PLCA	Paso Flores	150.74	126	PKPbc	PKiKP	00 01 57.0	+1.4
	comp=Z,1.0nm,0.6s,baz=252,slow=3.2,SNR=2.4						
LPAZ	La Paz	151.18	74	PKPbc	PKiKP	00 01 59.9	+2.1
	comp=Z,0.5nm,0.4s,baz=297,slow=4.5,SNR=3.9						

THR ***10*** *23:53:34.8, 30°.54N×57°.35E, h14km, ML3.4*

TEH ***10*** *23:53:34.6, 30°.54N×57°.36E, h10km, ML3.5*

ISCJB ***10*** *23:53:35.7±0.6, 30°.49N±0°.04×57°.32E±0°.06, h15km, Error ellipse: s-maj=8.2km s-min=5.8km az=20.3*

ISC 10 23:53:34.4±1.1**, 30°.37N**±0°.04×**57°.38E**±0°.05**, h15km, n23, σ1s.00**/23**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMN	Cheshme madani	0.53	165	ePg	Pn	23 53 48.2	+0.5
CHMN				IAMB	IAmb	23 54 00.8	
	comp=Z,0.0nm,0.3s						
TVBK	TV Kerman	0.66	235	ePg	Pn	23 53 49.5	0.0
TVBK				IAMB	IAmb	23 54 05.1	
	comp=Z,0.0nm,0.2s						
KRBR	Kerman	0.66	234	ePg	Pn	23 53 49.5	0.0
KRBR	Kerman	0.66	234	Pg	Pn	23 53 49.5	0.0
KHGB	Koh Gabri	0.78	271	ePg	Pb	23 53 48.9	-0.9
KHGB				IAMB	IAmb	23 53 58.9	
	comp=Z,0.0nm,0.3s						
NGRK	Negar Kerman	0.92	218	ePg	Pn	23 53 54.8	+1.7
NGRK				IAMB	IAmb	23 53 56.1	
	comp=Z,0.0nm,0.2s						
IBAF	Bafgh	1.98	308	IAMB	IAmb	23 54 09.1	
	comp=Z,8µm,0.4s						
IBAF				ePn	Pb	23 54 08.5	-1.7
BSRN	Basiran	2.18	43	ePn	Pn	23 54 11.2	+0.9
BSRN	Basiran	2.18	43	Pn	Pn	23 54 11.2	+0.9
KHNJ	Kahnooj	2.43	173	ePn	Pg	23 54 20.5	-0.5
IKOO	Kooshah	2.47	34	ePn	Pn	23 54 15.3	+0.9
IKOO				IAMB	IAmb	23 54 54.8	
	comp=Z,5µm,0.2s						
IMEH	Mehriz	2.59	294	ePn	Pn	23 54 17.0	+1.0
IMEH				IAMB	IAmb	23 54 58.8	
	comp=Z,2µm,0.5s						
ITEG	Tejag	2.77	25	ePn	Pn	23 54 19.0	+0.5
ITEG				IAMB	IAmb	23 55 04.3	
	comp=Z,2µm,0.4s						
YZKH	Yazd	3.12	311	ePn	Pn	23 54 24.2	+1.0
YZKH	Yazd	3.12	311	Pn	Pn	23 54 24.2	+1.0
YZKH				Sg	Sb	23 55 08.4	+0.8
GENO	Geno	3.15	200	ePn	Pb	23 54 29.9	-0.2
TKDS	Koohdasht(Taba	3.24	356	ePn	Pn	23 54 25.1	+0.3
TABS	Tabas	3.28	356	ePn	Pn	23 54 25.6	+0.3
TABS	Tabas	3.28	356	AML	AML	23 55 22.3	
	comp=N,96nm,0.3s						
TABS	Tabas	3.28	356	P	Pn	23 54 25.6	+0.3
ISAD	Sadrabad	3.52	297	ePn	Pn	23 54 30.9	+2.1
ISAD				IAMB	IAmb	23 55 32.8	
	comp=N,677nm,0.4s						
ANAR	Anarak	4.19	313	ePn	Pn	23 54 38.6	+0.7
IZEF	Zefreh	4.99	302	ePn	Pn	23 54 50.2	+1.2
IZEF				IAMB	IAmb	23 56 15.6	
	comp=Z,114nm,0.4s						

ISCJB ***11*** *00:01:12.7±0.7, 24°.01N±0°.03×122°.87E±0°.02, h6km±5km, Error ellipse: s-maj=4.4km s-min=2.4km az=176.3*

JMA ***11*** *00:01:13.7±0.2, 24°.06N×122°.87E, h14km±4km, M2.9*

TAP ***11*** *00:01:13.1, 24°.09N×122°.89E, h11km±1km, ML2.9, D*

ISC 11 00:01:13.4±1.1**, 24°.07N**±0°.04×**122°.88E**±0°.02**, h14km**±9km**, n49, σ0s.57**/81**, 2C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.39	9	P	Pb	00 01 21.7	-0.4
JYNG				S	Sb	00 01 27.2	-0.7
YOJ	Yonaguni jima	0.41	17	P	Pb	00 01 22.2	-0.2
	baz=15						
YOJ				S	Sb	00 01 27.9	-0.7
	baz=15						
YOJ	Yonaguni jima	0.41	17	P	Pb	00 01 22.0	-0.5
YOJ				S	Sb	00 01 27.9	-0.7
IRIF	Iriomote-Funau	0.82	71	P	Pg	00 01 29.4	0.0
IRIF				S	Sb	00 01 40.6	+0.2
EOS1	EOS1	0.83	305	eP	Pb	00 01 29.7	0.0
	baz=303						
EOS1				eS	Sn	00 01 42.1	-0.7
	baz=303						
HATJ	Hateruma jima	0.85	90	P	Pg	00 01 29.7	-0.1
HATJ				eS	Sb	00 01 41.3	+0.2
JKRS	Kuro-shima	1.05	80	P	Pn	00 01 33.8	+0.2
JKRS				eS	Sg	00 01 47.6	+0.3
TWC	Suao	1.08	300	eP	Pb	00 01 33.7	-0.2
	baz=298						
TWC				eS	Sb	00 01 47.7	-0.2
	baz=298						
NANB	Nanao	1.09	290	P	Pb	00 01 33.5	-0.5
	baz=287						
NANB				eS	Sb	00 01 47.6	-0.5
	baz=287						
ENA	Nanau	1.10	289	eP	Pb	00 01 33.7	-0.4
	baz=287						
ENA				eS	Sb	00 01 48.0	-0.3
	baz=287						
NACB	Ninganchiao	1.18	275	eP	Pn	00 01 35.2	-0.2
	baz=274						
NACB				eS	Sg	00 01 51.3	-0.1
	baz=274						
JIJ	Ishigaki jima	1.19	75	P	Pn	00 01 35.7	+0.1
JIJ				S	Sb	00 01 51.1	0.0
NTC	Toucheng	1.24	310	eP	Pg	00 01 37.1	-0.1
	baz=308						
NTC				eS	Sg	00 01 53.5	+0.2
	baz=308						
TWB1	Santiao Chiao	1.24	319	eS	Sb	00 01 52.5	+0.1
	baz=318						
ETLH	Xiulin Townshi	1.28	277	⇑P	Pn	00 01 37.0	0.0
	baz=275						
ETLH				eS	Sn	00 01 54.6	+0.6
	baz=275						
TWE	Neicheng	1.28	301	eP	Pg	00 01 37.9	-0.2
	baz=299						
TWE				eS	Sg	00 01 55.3	+0.5
	baz=299						
TIPB	Shuangxi	1.31	314	eP	Pn	00 01 37.7	+0.3
	baz=312						
TIPB				eS	Sn	00 01 54.9	+0.2
	baz=312						
ENTT	Nioudou	1.32	296	eP	Pb	00 01 38.5	+0.4
	baz=294						
ENTT				eS	Sg	00 01 56.1	-0.1
	baz=294						
ESL	Shilin	1.34	260	eP	Pn	00 01 37.0	-0.7
	baz=258						
ESL				eS	Sb	00 01 54.4	-1.0
	baz=258						
NDT	Datong Townshi	1.35	294	eP	Pb	00 01 38.8	+0.3
	baz=292						
NDT				eS	Sb	00 01 55.7	0.0
	baz=292						
JISG	Ishigakijimahi	1.41	68	P	Pn	00 01 38.8	+0.2
JISG				S	Sb	00 01 57.5	+0.3
NNSB	Datong	1.41	285	eP	Pb	00 01 39.6	0.0
	baz=283						
NNSB				eS	Sb	00 01 57.8	+0.4
	baz=283						
NWF	Wu-fen Shan	1.41	315	eP	Pn	00 01 39.0	+0.3
	baz=314						
WFSB	Wu-fen Shan	1.41	315	eP	Pn	00 01 38.3	-0.3
	baz=314						
NNS	Nan Shan	1.42	285	eP	Pb	00 01 40.1	+0.3
	baz=284						
NNS				eS	Sb	00 01 58.5	+0.7
	baz=284						
HGSD	Ruisui	1.45	247	eP	Pn	00 01 37.8	-1.3
	baz=246						
WHF	Hehuan Shan	1.48	273	⇓eP	Pn	00 01 40.0	+0.1
	baz=272						
WHF				S	Sb	00 01 59.8	+0.2
	baz=272						
YHNB	Yeheng	1.50	294	⇓eP	Pb	00 01 41.6	+0.6
	baz=292						
NSK	Sanguang	1.51	294	eP	Pb	00 01 41.7	+0.4
	baz=292						
NSK				eS	Sn	00 02 00.1	+0.5
	baz=292						
EHY	Hungye	1.53	249	eP	Pn	00 01 39.8	-0.5
	baz=247						
EHY				eS	Sn	00 01 59.3	-0.7
	baz=247						
TATO	Taipei	1.56	306	eS	Sb	00 02 01.4	-0.1
	baz=304						
CHGB	Renai	1.56	270	eP	Pn	00 01 41.0	+0.2
	baz=268						
CHGB				eS	Sb	00 02 02.5	+0.7
	baz=268						
YULB	Yu-li	1.59	245	⇑eP	Pn	00 01 40.8	-0.4
	baz=244						
TWF1	Yuli	1.61	244	eP	Pn	00 01 40.6	-0.8
	baz=243						
TWF1				eS	Sn	00 02 01.4	-0.7
	baz=243						
YM10	YM10	1.62	312	eP	Pn	00 01 41.8	+0.2
	baz=311						
VWDT	VWDT	1.62	259	eP	Pn	00 01 41.5	+0.1
	baz=258						
YM05	YM05	1.62	313	eP	Pb	00 01 43.1	0.0
	baz=311						
JTJ	Tarama	1.76	71	eS	Sb	00 02 07.3	-0.1
SSLB	Suanglung	1.78	261	eP	Pn	00 01 43.6	-0.2
	baz=260						
SSLB				eS	Sb	00 02 08.0	-0.1
	baz=260						
NSTT	Nanjuang	1.80	289	eP	Pb	00 01 46.2	0.0
	baz=287						
SMLT	Sun Moon Lake	1.82	265	eP	Pn	00 01 44.5	+0.2
	baz=263						
YUS	Yu-Shan	1.85	252	eP	Pn	00 01 45.1	-0.1
	baz=251						
YUS				eS	Sn	00 02 07.9	-0.8
	baz=251						
WHYT	Xinyi Township	1.89	259	eP	Pn	00 01 46.3	+1.1
	baz=258						
TPUB	Ta-pu	2.20	250	eP	Pn	00 01 50.8	+1.3
	baz=249						
TPUB				eS	Sn	00 02 15.9	-0.6
	baz=249						
SLGT	Liugui	2.31	243	eP	Pn	00 01 51.0	-0.1
	baz=242						
SLGT				eS	Sb	00 02 21.9	-1.3
	baz=242						
CHN1	Nanshi	2.33	248	eP	Pn	00 01 53.1	+1.9
	baz=247						
CHN1				eS	Sn	00 02 21.6	+1.9
	baz=247						
MASBT	Mashibuluo	2.52	235	eP	Pn	00 01 54.2	+0.3
	baz=234						
WDGT	Dungji	3.06	255	eP	Pn	00 02 01.8	+0.5
	baz=254						
PHUB	P'eng-hu	3.08	260	eS	Sn	00 02 38.5	+0.4
	baz=259						

NIED ***11*** *00:14:00, 30°.60N×142°.20E, h5km, Mw5.4 Best double couple: M0 1.59000×10^17 NP1:φs175.00000°, δ13.00000°, λ89.00000°. NP2:φs356.00000°, δ77.00000°, λ90.00000°.*

ISCJB ***11*** *00:14:30.8±0.8, 30°.49N±0°.02×141°.73E±0°.02, h5km±4km, mb5.3/166, MS4.9/539, Error ellipse: s-maj=3.0km s-min=2.7km az=166.3*

IDC ***11*** *00:14:31.2±0.4, 30°.48N×141°.84E, h0km, mb4.9/38, mb1 5.0/43, mb1mx5.0/53, mbtmp4.9/43, ML3.5/5, MS4.8/30, Ms1 4.8/30, ms1mx4.7/33, Error ellipse: s-maj=13.1km s-min=9.0km az=80.0*

JMA ***11*** *00:14:33.5±0.2, 30°.62N×142°.15E, h43km, M5.4*

MOS ***11*** *00:14:33.8±0.9, 30°.45N×141°.69E, h27km, mb5.5/78, MS5.0/64, Error ellipse: s-maj=7.6km s-min=3.9km az=110.5*

NEIC ***11*** *00:14:34.8±2.5, 30°.48N×141°.77E, h26km±3km, mb5.3/316, MS4.9/507, Error ellipse: s-maj=12.7km s-min=8.2km az=69.0*

BJI ***11*** *00:14:34.2±0.0, 30°.54N×141°.70E, h37km, mb5.2/82, mB5.1/67, Ms5.3/88, Ms7 5.2/81*

GCMT ***11*** *00:14:36.8±0.1, 30°.47N±0°.01×141°.78E±0°.01, h19km, MW5.3/114, Moment Tensor Solution. s91,c152; s114,c215; Duration: 1s.2 Moment tensor: Scale 10^17 Nm; Mrr1.08±.02; Mθθ0.13±.01; Mφφ-1.21±.02; Mrθ-0.07±.03; Mθφ-0.05±.01; Mφr0.64±.03; Best double couple: M0 1.31400×10^17 NP1:φs358.00000°, δ60.00000°, λ85.00000°. NP2:φs187.00000°, δ31.00000°, λ98.00000°. Principal axes: T 1.2520, Plg75.0000°, Azm254.0000°; N 0.1260, Plg4.0000°, Azm0.0000°; P -1.3770, Plg15.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 00:14:36.0±0.4**, 30°.54N**±0°.03×**141°.71E**±0°.03**, h29km**±2km**, h29km:pP-P, n1162, σ1s.60**/873**, mb5.3**/188**, MS4.9**/542**, 53C-20D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.54	320	P	Pn	00 15 15.8	+0.5
JHCJ	Hachijojimakas	3.01	328	P	Pn	00 15 21.1	-0.6
JHCJ				eS	Sn	00 15 58.3	+1.6
JHJ2	Mitsune	3.03	328	ePn	Pn	00 15 22.1	+0.1
JHJ2				eSn	Sn	00 15 49.1	-8.2
JHJ2	Mitsune	3.03	328	P	Pn	00 15 23.1	+1.1
JHJ2				eS	Sn	00 16 00.1	+2.8
JHJ	Hachijo jima 2	3.05	328	Pn	Pn	00 15 22.1	-0.2
	60nm,0.3s,baz=251,slow=23,SNR=14						
JHJ				Sn	Sn	00 15 57.0	-0.8
	304nm,0.3s,baz=208,slow=22,SNR=8.8						
JHJ				LR	LR	00 16 28.0	
	comp=Z,12µm,20.5s,baz=90,slow=37						
CBIJ	Chichi jima	3.46	173	P	Pn	00 15 26.9	-1.0
CBIJ				eS	Sn	00 16 05.9	-1.9
JMKN	Mikurajimanish	3.80	332	P	Pn	00 15 31.2	-1.3
JMKN				eS	Sn	00 16 17.0	+0.8
JHH2	Haha-jima-NKT2	3.91	174	P	Pn	00 15 35.3	+1.1
JHH2				eS	Sn	00 16 19.7	+0.6
BSO1	Boso 1	4.15	352	P	Pn	00 15 36.6	-0.3
BSO3	Boso 3	4.37	347	P	Pn	00 15 40.1	-0.1
BSO4	Boso 4	4.59	346	P	Pn	00 15 44.9	+1.6
JOD2	Odawara 2	5.20	336	P	Pn	00 15 52.7	+0.8
JFNN	Fujinakano	5.29	332	S	Sn	00 16 55.2	+2.0
SHZ3	Shizuoka 3	5.39	328	S	Sn	00 17 03.7	+8.1
JHU	Hanno	5.68	340	P	Pn	00 15 58.9	+0.5
JHU				eS	Sn	00 17 01.8	-0.8
JIE	Ise	5.71	314	P	Pn	00 16 02.3	+3.4
JNY	Yasuok	5.79	327	P	Pn	00 16 03.2	+3.1
JYT	Yasato	5.81	348	P	Pn	00 16 00.4	+0.2
JYT				eS	Sn	00 17 05.8	-0.1
JHYU	Hitachinakayam	5.86	351	S	Sn	00 17 03.4	-3.7
JRY	Ryogami san	5.95	337	P	Pn	00 16 03.6	+1.5
JHO	Hitachi	6.13	351	P	Pn	00 16 03.3	-1.3
JAG	Ashikaga	6.17	343	P	Pn	00 16 05.0	-0.1
INU	Inuyama	6.21	322	ePn	Pn	00 16 07.9	+2.2
JNG	Nsakai	6.58	334	P	Pn	00 16 13.5	+2.6
MJAR	Matsushiro Arr	6.66	335	Pn	Pn	00 16 12.9	+0.9
	3.1nm,0.3s,baz=157,slow=11,SNR=117						
MJAR				Sn	Sn	00 17 25.1	-1.8
	3.3nm,0.3s,baz=158,slow=19,SNR=6.6						
MJAR				LR	LR	00 18 49.5	
	comp=Z,7µm,19.1s,baz=165,slow=38						
MAJO	Matsushiro	6.66	335	ePn	Pn	00 16 13.1	+1.1
MAJO				eSn	Sn	00 17 25.1	-1.9
MAJO	Matsushiro	6.66	335	eP	Pn	00 16 13.1	+1.1
MAJO				e		00 17 25.1	
MAT	Matsushiro	6.66	335	P	Pn	00 16 13.3	+1.3
MAT				S	Sn	00 17 25.6	-1.3
MAT	Matsushiro	6.66	335	P	Pn	00 16 13.9	+1.9
MJB9	Matsu-Tunnel	6.67	335	ePn	Pn	00 16 13.2	+1.2
JGN	Niukaw	6.76	328	P	Pn	00 16 17.2	+3.9

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JFK   Kawauchi            6.85 354  P     Pn      00 16 12.5 -2.0
JFK                                eS     Sn      00 17 24.9 -6.5
JHK   Hiroka              7.06 342  S     Sn      00 17 34.5 -2.1
JJN   Nakama              7.18 337  P     Pn      00 16 20.2 +1.2
JJN                                 S     Sn      00 17 40.3 +0.7
JSD   Sado                8.01 340  P     Pn      00 16 30.8 +0.5
JNU   Nakatsue            9.57 288  Pn    Pn      00 16 53.2 +1.4
      0.3nm,0.3s,baz=90,slow=8.8,SNR=2.8
JNU                                 LR    LR      00 20 35.7
      comp=Z,13µm,18.5s,baz=136,slow=38
JNU   Nakatsue            9.57 288 ePn    Pn      00 16 53.5 +1.6
JNU                                eSn    Sn      00 18 16.4  -22
ERM   Erimo              11.51   5 ePn    Pn      00 17 14.0 -4.3
ERM                                eSn    Sn      00 19 08.7  -17
ERM   Erimo              11.51   5⇑eP     Pn      00 17 13.9 -4.4
JOW   Kunigami           12.36 256 ePn    Pn      00 17 28.2 -1.8
KSRS  Korea Array        13.35 305  Pn    Pn      00 17 44.9 +1.4
      0.3nm,0.3s,baz=116,slow=13,SNR=30
KSRS                                LR    LR      00 22 45.6
      comp=Z,4µm,18.9s,baz=114,slow=37
KS15  Wonju Array Si     13.37 305 ePn    Pn      00 17 44.2 +0.4
ASAJ  Asahikawa          13.57   3  Pn    Pn      00 17 43.2 -3.3
      5.6nm,0.3s,baz=216,slow=13,SNR=14
ASAJ                                Sn    Sn      00 20 05.3  -11
      3.5nm,0.3s,baz=249,slow=29,SNR=4.9
ASAJ                                LR    LR      00 23 40.1
      comp=Z,4µm,21.4s,baz=190,slow=40
GRPR  Tuman              13.81  12  P     Pn      00 17 42.7 -7.0
GRPR                                pmax  pmax
      comp=Z,71nm,0.4s
YUK   Yuzh-Kuril'sk      13.87  13 eP     Pn      00 17 54.2 +3.7
YUK                                eS     Sn      00 20 28.3 +4.9
YUK                                 pmax  pmax
      comp=Z,80nm,0.3s
YUK                                 pmax  pmax
      comp=Z,180nm,1.1s
YUK                                 smax  smax
      comp=N,727nm,1.1s
YUK                                 smax  smax
      comp=E,1.0nm,1.1s
YUK                                 MLR   MLR
      comp=Z,990nm,13.0s
YUK                                 MLR   MLR
      comp=E,285nm,12.0s
YUK                                 MLR   MLR
      comp=N,1µm,14.0s
ANA2  Anatahan           14.60 165 ePn    Pn      00 17 59.9 -0.8
MSHR  Mys Shultsa        14.69 328⇓eP     Pn      00 18 00.6 -1.2
TEY   Ternei             15.02 346⇑eP     Pn      00 18 03.6 -2.5
TEY                                 pmax  pmax
      comp=E,10.0nm,1.1s
TEY                                 pmax  pmax
      comp=N,20nm,0.9s
TEY                                 pmax  pmax
      comp=Z,20nm,1.1s
TEY                                 MLR   MLR
      comp=E,100nm,17.0s
TEY                                 MLR   MLR
      comp=E,200nm,15.0s
TEY                                 MLR   MLR
      comp=Z,200nm,19.0s
KUR   Kuril'sk           15.45  17  P     Pn      00 18 08.8 -2.9
KUR                                 pmax  pmax
      comp=Z,87nm,0.9s
KUR                                 pmax  pmax
      comp=E,33nm,0.7s
KUR                                 pmax  pmax
      comp=Z,739nm,2.0s
KUR                                 MLR   MLR
      comp=N,2µm,10.0s
KUR                                 MLR   MLR
      comp=Z,2µm,10.0s
KUR                                 MLR   MLR
      comp=E,1µm,9.0s
USA0B Ussuriysk Arra     15.66 333 ePn    Pn      00 18 11.8 -2.7
      comp=E,42nm,1.0s
USRK  Ussuriysk Ar.      15.66 333  Pn    Pn      00 18 14.1 -0.4
      comp=E,0.3nm,0.3s,baz=147,slow=11,SNR=22
USRK                                LR    LR      00 24 03.4
      comp=E,3µm,18.8s,baz=139,slow=36
YSS   Yuzh-Sakhalins     16.41   3 ePn    Pn      00 18 21.7 -2.4
      comp=E,128nm,1.0s
YSS                                eSn    Sn      00 21 09.9  -15
YSS   Yuzh-Sakhalins     16.41   3⇑iP     Pn      00 18 21.8 -2.4
YSS                                eSS    S       00 21 36.6 -0.3
YSS                                 pmax  pmax
      comp=Z,60nm,0.9s
YSS                                 pmax  pmax
      comp=N,50nm,0.8s
YSS                                 MLR   MLR
      comp=Z,4µm,16.0s
YSS                                 MLR   MLR
      comp=N,2µm,17.0s
YSS                                 MLR   MLR
      comp=E,2µm,15.0s
MDJ   Mudanjiang         16.99 329 ePn    Pn      00 18 29.4 -2.0
      comp=E,205nm,1.3s
MDJ   Mudanjiang         16.99 329  P     Pn      00 18 31.0 -0.5
MDJ                                 pmax  pmax
      comp=E,37nm,1.1s
MDJ                                 pmax  pmax
      comp=E,700nm,8.6s
MDJ                                 LR    LR
      comp=E,4µm,16.3s
MDJ                                 LR    LR
      comp=E,4µm,17.5s
MDJ                                 LR    LR
      comp=E,7µm,16.7s
GUMO  Guam               17.12 170  P     Pn      00 18 33.7 +0.5
      comp=E,4.3nm,0.3s,baz=255,slow=3.3,SNR=17
GUMO                                S     S       00 21 51.6 -0.1
      comp=E,1.9nm,0.3s,baz=18,slow=17,SNR=1.1
GUMO                                LR    LR      00 23 27.4
      comp=E,2µm,20.2s,baz=359,slow=32
GUMO  Guam               17.12 170 ePn    Pn      00 18 30.1 -3.1
      comp=E,881nm,1.1s
GUMO  Guam               17.12 170 eP     Pn      00 18 30.1 -3.1
GUMO                                pmax  pmax
      comp=Z,881nm,1.1s
SSE   Sheshan            17.64 277  P     Pn      00 18 39.1 -0.5
SSE                                 S     Sn      00 21 54.5 -0.8
SSE                                 pmax  pmax
      comp=Z,24nm,0.7s
SSE                                 pmax  pmax
      comp=Z,740nm,9.3s
SSE                                 LR    LR
      comp=Z,770nm,14.3s
SSE                                 LR    LR
      comp=Z,3µm,16.3s
YOJ   Yonaguni jima      17.65 254 ePn    Pn      00 18 38.9 -0.9
      comp=Z,208nm,1.1s
YOJ   Yonaguni jima      17.65 254 eP     Pn      00 18 38.9 -0.9
YOJ                                 pmax  pmax
      comp=Z,209nm,1.1s
DL2   Dalian             18.47 302 ⇑P     P       00 18 46.4 -3.1
DL2                                 PP    PnPn    00 19 03.3 +1.7
DL2                                 S     Sn      00 22 12.4 -2.9
DL2                                 SS    SnSn    00 22 32.0 +2.8
DL2                                 pmax  pmax
      comp=Z,49nm,1.2s
DL2                                 pmax  pmax
      comp=Z,870nm,7.0s
DL2                                 LR    LR
      comp=Z,4µm,17.4s
DL2                                 LR    LR
      comp=Z,5µm,16.3s
DL2                                 LR    LR
      comp=Z,6µm,16.9s
CN2   Changchun          18.48 320⇓iP     P       00 18 49.0 -0.6
CN2                                epP    pP      00 18 56.8 +0.4
CN2                                eS     Sn      00 22 11.8 -3.7
CN2                                 pmax  pmax
      comp=Z,100nm,1.2s
CN2                                 pmax  pmax
      comp=Z,700nm,7.0s
CN2                                 LR    LR
      comp=Z,4µm,15.0s
CN2                                 LR    LR
      comp=Z,3µm,15.0s
CN2                                 LR    LR
      comp=Z,4µm,16.0s
UGL   Uglegorsk          18.52   1 eP     Pn      00 18 51.3 +1.1
UGL                                eS     S       00 22 21.3 +1.8
UGL                                 pmax  pmax
      comp=Z,91nm,0.4s
UGL                                 smax  smax
      comp=E,3µm,10.0s
UGL                                 MLR   MLR
      comp=N,3µm,18.0s
UGL                                 MLR   MLR
      comp=Z,2µm,18.0s
UGL                                 MLR   MLR
      comp=E,3µm,20.0s
TATO  Taipei             18.73 258 eP     Pn      00 18 52.5 -0.4
TATO                               ePn    P       00 18 53.4 +1.0
TATO  Taipei             18.73 258  P     Pn      00 18 54.9 +1.9
      SNR=9.4
YHNB  Yeheng             18.94 257 eP     Pn      00 18 55.5 -0.1
      comp=E,346nm,1.2s
NACB  Ninganchiao        18.95 255 eP     Pn      00 18 55.3 -0.4
      comp=E,286nm,1.3s
YULB  Yu-li              19.52 254 eP     P       00 19 01.3 +0.2
      comp=E,158nm,0.9s
NJ2   Nanjing            19.59 280 eP     P       00 19 02.0 +0.2
NJ2                                 sP    pwP     00 19 15.6 +2.6
NJ2                                 S     Sn      00 22 42.0 -0.4
NJ2                                 pmax  pmax
      comp=E,65nm,0.9s
NJ2                                 pmax  pmax
      comp=E,500nm,3.5s
NJ2                                 LR    LR
      comp=E,1µm,15.2s
NJ2                                 LR    LR
      comp=E,5µm,17.5s
NJ2                                 LR    LR
      comp=E,6µm,18.0s
TWG   Pinlang            19.96 252 eP     Pn      00 19 06.8 -1.0
      comp=E,663nm,1.0s
TPUB  Ta-pu              20.11 254  PFAKE         00 19 20.0  +10
TPUB                                LR    LR
      comp=Z,3µm,22.0s
KLR   Kul'dur            20.14 341  P     P       00 19 07.5 -0.2
      comp=Z,22nm,0.9s,baz=154,slow=12,SNR=37
TYV   Tymovskoe          20.32   2 eP     Pn      00 19 11.9 +0.2
TYV                                eS     Sn      00 22 59.8 +0.2
TYV                                 pmax  pmax
      comp=Z,69nm,1.3s
TYV                                 pmax  pmax
      comp=Z,700nm,4.9s
TYV                                 smax  smax
      comp=E,2µm,8.0s
TYV                                 smax  smax
      comp=E,19nm,1.2s
TYV                                 MLR   MLR
      comp=N,2µm,23.0s
TYV                                 MLR   MLR
      comp=Z,3µm,23.0s
GRNR  Gornyy             20.59 350 eP     P       00 19 13.4 +0.8
GRNR                                pmax  pmax
      comp=Z,42nm,1.0s
QZH   Quanzhou           21.19 260⇑iP     P       00 19 18.8 -0.4
QZH                                 S     S       00 23 12.3 -1.2
QZH                                 pmax  pmax
      comp=Z,52nm,1.0s
QZH                                 pmax  pmax
      comp=Z,710nm,8.2s
QZH                                 LR    LR
      comp=Z,3µm,18.5s
QZH                                 LR    LR
      comp=Z,3µm,19.0s
QZH                                 LR    LR
      comp=Z,4µm,19.8s
TIA   Tai'an             21.27 292  P     P       00 19 19.8 -0.2
TIA                                 sP    pwP     00 19 32.2 +1.0
TIA                                 S     S       00 23 16.4 +1.5
TIA                                 pmax  pmax
      comp=Z,37nm,1.0s
TIA                                 LR    LR
      comp=Z,4µm,12.8s
TIA                                 LR    LR
      comp=Z,3µm,14.2s
TIA                                 LR    LR
      comp=Z,5µm,15.0s
KNMB  Chin-men Tao       21.54 259 eP     P       00 19 22.6 -0.3
      comp=Z,117nm,0.9s
KNMB                                LR    LR
      comp=Z,4µm,20.0s
NKL   Nikolayevsk        22.61 358 eP     P       00 19 34.6 +0.5
NKL                                eS     S       00 23 38.9 -1.0
NKL                                 pmax  pmax
      comp=N,41nm,1.2s
NKL                                 pmax  pmax
      comp=Z,88nm,1.2s
NKL                                 pmax  pmax
      comp=E,17nm,1.1s
NKL                                 MLR   MLR
      comp=Z,2µm,16.0s
NKL                                 MLR   MLR
      comp=N,1µm,16.0s
NKL                                 MLR   MLR
      comp=E,1µm,16.0s
SKR   Severo-Kuril's     22.82  24 eP     P       00 19 30.6 -5.9
SKR                                eS     S       00 23 45.2 +1.4
SKR                                 pmax  pmax
      comp=Z,300nm,2.8s
SKR                                 MLR   MLR
      comp=Z,2µm,15.0s
SKR                                 MLR   MLR
      comp=Z,2µm,15.0s
BJT   Baijiatuau         22.83 301  PFAKE         00 19 50.0  +13
BJT                                 LR    LR
      comp=Z,5µm,19.0s
PVCP  Virac              23.38 228 eP     P       00 19 42.8 +0.5
WHN   Wuhan              23.55 277⇑iP     P       00 19 43.0 -0.9
WHN                                 pmax  pmax
      comp=Z,120nm,1.1s
WHN                                 pmax  pmax
      comp=Z,1µm,11.2s
WHN                                 LR    LR
      comp=Z,4µm,17.1s
WHN                                 LR    LR
      comp=Z,13µm,16.3s
WHN                                 LR    LR
      comp=Z,14µm,16.4s
SMPP  San Manuel, Pa     23.98 238 eP     P       00 19 45.8 -2.4
BOLP  Bolinao            24.40 240 eP     P       00 19 51.8 -0.2
HIA   Hailar             25.02 325 eP     P       00 19 58.0 +0.5
      comp=Z,453nm,1.1s
HIA                                 LR    LR
      comp=Z,2µm,18.0s
HIA   Hailar             25.02 325d iP    P       00 19 57.6 +0.2
H11N2 WAKE ISLAND Hy     25.16 109  T     T       00 46 32.2
      baz=300,slow=74
H11N1 WAKE ISLAND Hy     25.16 109  T     T       00 46 17.3
      baz=300
TGY   Tagaytay City      25.16 234  P     P       00 19 59.0  0.0
      comp=Z,177nm,0.3s,baz=152,slow=9.4,SNR=9.8
TGY                                 LR    LR      00 29 00.5
      comp=Z,2µm,19.3s,baz=38,slow=34
TGY   Tagaytay City      25.16 234  P     P       00 19 59.0  0.0
TGY                                 pmax  pmax
      comp=Z,177nm,0.3s
TGY                                 MLR   MLR
      comp=Z,2µm,19.3s
H11N3 WAKE ISLAND Hy     25.17 109  T     T       00 46 15.5
      baz=300,slow=74
WAKE  Wake Island        25.19 111  PFAKE         00 20 10.0  +11
WAKE                                LR    LR
      comp=Z,2µm,18.0s
TIY   Taiyuan            25.20 294 eP     P       00 19 58.8 -0.4
TIY                                 PP    PnPn    00 20 40.5 +6.6
TIY                                 S     S       00 24 17.0 -5.8
TIY                                 pmax  pmax
      comp=Z,310nm,1.4s
TIY                                 LR    LR
      comp=Z,2µm,14.6s
TIY                                 LR    LR
      comp=Z,4µm,16.5s
TIY                                 LR    LR
      comp=Z,5µm,16.8s
PEA0B Petropavlovsk-     25.39  23 eP     P       00 19 58.6 -2.1
      comp=Z,76nm,1.3s
PEA0B                               LR    LR
      comp=Z,1µm,18.0s
PETK  Petropavlovsk-     25.39  23  P     P       00 19 59.9 -0.8
      comp=Z,8.6nm,1.1s,baz=192,slow=12,SNR=2.7
PETK                                LR    LR      00 34 19.6
      comp=Z,764nm,18.0s,baz=203,slow=47
PEA1  Petropavlovsk-     25.39  23 eP     P       00 19 59.9 -0.8
ZEA   Zeya               25.44 340 eP     P       00 20 00.5 -0.6
ZEA                                eS     S       00 24 27.0 +0.9
ZEA                                 pmax  pmax
      comp=N,230nm,1.2s
ZEA                                 pmax  pmax
      comp=E,86nm,1.2s
ZEA                                 pmax  pmax
      comp=Z,500nm,1.2s
ZEA                                 pmax  pmax
      comp=N,500nm,9.0s
ZEA                                 pmax  pmax
      comp=E,300nm,9.0s
ZEA                                 pmax  pmax
      comp=Z,1µm,9.0s
ZEA                                 smax  smax
      comp=Z,1µm,13.0s
ZEA                                 smax  smax
      comp=E,2µm,11.0s
ZEA                                 smax  smax
      comp=N,900nm,12.0s
ZEA                                 MLR   MLR
      comp=Z,2µm,16.0s
ZEA                                 MLR   MLR
      comp=E,1µm,11.0s
ZEA                                 MLR   MLR
      comp=N,2µm,15.0s
H11S3 WAKE ISLAND Hy     25.63 112  T     T       00 47 09.5
      baz=305,slow=74
H11S1 WAKE ISLAND Hy     25.63 112  T     T       00 47 07.7
      baz=305,slow=74
H11S2 WAKE ISLAND Hy     25.65 112  T     T       00 46 59.6
      baz=305,slow=74
PET   Petropavlovsk      25.65  24 eP     P       00 20 02.8 -0.2
      comp=N,100nm,1.3s
PET                                 LR    LR
      comp=Z,1µm,20.0s
PET   Petropavlovsk      25.65  24 eP     P       00 20 02.8 -0.2
PET                                 pmax  pmax
      comp=Z,100nm,1.3s
PET                                 MLR   MLR
      comp=Z,1µm,20.0s
MSLP  Maasin             25.66 221 eP     P       00 20 12.7 +9.3
LUBP  Lubang             25.90 234 eP     P       00 20 04.3 -1.3
HKPS  Hong Kong Po S     25.98 258 eP     P       00 20 07.6 +1.3
      comp=Z,47nm,1.1s
HKPS                                LR    LR
      comp=Z,3µm,20.0s
BUTP  Butuan             26.20 218 eP     P       00 20 10.3 +2.0
HHC   Hu-ho-hao-te       26.44 301  P     P       00 20 09.5 -1.0
HHC                                 sP    pwP     00 20 23.7 +1.7
HHC                                 PP    PnPn    00 20 47.3 -3.5
HHC                                 S     S       00 24 36.4 -6.0
HHC                                 SS            00 25 44.3
HHC                                 pmax  pmax
      comp=Z,48nm,0.9s
HHC                                 pmax  pmax
      comp=Z,580nm,5.1s
HHC                                 LR    LR
      comp=Z,3µm,14.2s
HHC                                 LR    LR
      comp=Z,6µm,14.2s
HHC                                 LR    LR
      comp=Z,9µm,12.3s
BTO   Baotou             27.54 300 eP     P       00 20 19.1 -1.2
BTO                                 S     S       00 24 59.2 -0.5
ENH   Enshi              27.75 278 eP     P       00 20 20.2 -2.0
      comp=Z,36nm,0.6s
ENH                                 LR    LR
      comp=Z,4µm,19.0s
DAV   Davao City (W)     27.82 216  PFAKE         00 20 30.0 +7.1
DAV                                 LR    LR
      comp=Z,2µm,20.0s
XAN   Xi'an              27.87 286 eP     P       00 20 21.9 -1.4
      comp=Z,120nm,0.9s
XAN                                 LR    LR
      comp=Z,3µm,21.0s
XAN   Xi'an              27.87 286  P     P       00 20 22.0 -1.4
XAN                                 pmax  pmax
      comp=Z,32nm,1.4s
XAN                                 pmax  pmax
      comp=Z,380nm,6.9s
XAN                                 LR    LR
      comp=Z,2µm,15.2s
XAN                                 LR    LR
      comp=Z,2µm,18.4s
XAN                                 LR    LR
      comp=Z,2µm,21.6s
XAN   Xi'an              27.87 286 eP     P       00 20 21.9 -1.4
XAN                                 pmax  pmax
      comp=Z,120nm,0.9s
XAN                                 MLR   MLR
      comp=Z,3µm,21.0s
KCP   Kidapawan          28.12 217⇑iP     P       00 20 24.9 -0.8
PATS  Pohnpei            28.26 143  PFAKE         00 20 40.0  +13
PATS                                LR    LR
      comp=Z,2µm,19.0s
MA2   Magadan            29.68   9  PFAKE         00 20 50.0  +11
MA2                                 LR    LR
      comp=Z,1µm,19.0s
CIT   Chita              29.82 324 eP     P       00 20 41.3 +0.8
CIT                                e              00 20 45.3
CIT                                e              00 20 51.4
CIT                                 pmax  pmax
      comp=Z,121nm,1.4s
SGSI  Sangihe            30.77 213  P     P       00 20 49.2 +0.1
GYA   Guiyang            30.99 271⇑iP     P       00 20 49.6 -1.5
GYA                                 pP    pwP     00 21 05.2 +2.4
GYA                                 PP    PnPn    00 21 53.8 +1.3
GYA                                 S     S       00 25 52.6 -1.7
GYA                                 sS    sS      00 26 08.6 +2.0
GYA                                 pmax  pmax
      comp=Z,30nm,1.1s
GYA                                 pmax  pmax
      comp=Z,270nm,11.0s
GYA                                 LR    LR
      comp=Z,2µm,16.8s
GYA                                 LR    LR
      comp=Z,2µm,15.4s
GYA                                 LR    LR
      comp=Z,3µm,18.1s
QIZ   Qiongzhong         31.01 256  PFAKE         00 21 00.0 +8.8
QIZ                                 LR    LR
      comp=Z,2µm,20.0s
QIZ   Qiongzhong         31.01 256  P     P       00 20 51.8 +0.6
QIZ                                 PP    PP      00 21 58.3 -3.2
QIZ                                 pmax  pmax
      comp=Z,19nm,1.0s
QIZ                                 pmax  pmax
      comp=Z,300nm,8.8s
QIZ                                 LR    LR
      comp=Z,840nm,15.7s
QIZ                                 LR    LR
      comp=Z,1µm,18.6s
QIZ                                 LR    LR
      comp=Z,2µm,20.8s
BATP  Bataraza           31.09 231 eP     P       00 20 52.3 +0.5
ULN   Ulaanbaatar        31.61 313 eP     P       00 20 57.0 +0.6
      comp=Z,60nm,0.9s
ULN                                 LR    LR
      comp=Z,2µm,18.0s
ULN   Ulaanbaatar        31.61 313 eP     P       00 20 57.0 +0.6
ULN                                 pmax  pmax
      comp=Z,60nm,0.9s
ULN                                 MLR   MLR
      comp=Z,2µm,18.0s
ULN   Ulaanbaatar        31.61 313  P     P       00 20 57.3 +0.9
      SNR=64
LZH   Lanzhou            31.98 290 ⇓P     P       00 20 59.2 -0.6
LZH                                 pP    sP      00 21 10.4 -0.2
LZH                                 sP    pwP     00 21 16.3 +4.9
LZH                                 sS    sS      00 26 28.0 +5.8
LZH                                 SS    SnSn    00 27 56.8 -3.0
LZH                                 pmax  pmax
      comp=Z,59nm,1.3s
LZH                                 pmax  pmax
      comp=Z,180nm,5.0s
LZH                                 LR    LR
      comp=Z,3µm,15.2s
LZH                                 LR    LR
      comp=Z,3µm,14.1s
LZH                                 LR    LR
      comp=Z,3µm,14.6s
SONM  Songino Array      32.01 313  P     P       00 21 00.3 +0.4
      comp=Z,15nm,0.6s,baz=120,slow=9.4,SNR=112
SONM                                ScP   ScP     00 27 31.0 +0.3
      comp=Z,1.3nm,1.0s,baz=111,slow=3.2,SNR=3.5
SONM                                LR    LR      00 34 44.8
      comp=Z,3µm,18.1s,baz=111,slow=38
SONM  Songino Array      32.01 313  P     P       00 21 00.3 +0.4
SONM                                pmax  pmax
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	comp=Z,15nm,0.6s						
SONM				pmax	pmax		
	comp=N,1.0nm,1.0s						
SONM				MLR	MLR		
	comp=Z,3µm,18.1s						
KWAJ	**Kwajalein Atol**	**32.44**	**126**	PFAKE		00 21 10.0	+6.2
KWAJ				LR	LR		
	comp=Z,1µm,22.0s						
YAK	**Yakutsk**	**32.47**	**349**	*e*P	**P**	**00 21 03.4**	**-0.1**
	comp=Z,66nm,0.9s						
YAK				LR	LR		
	comp=Z,800nm,18.0s						
YAK	**Yakutsk**	**32.47**	**349**	*e*P	**P**	**00 21 03.0**	**-0.5**
YAK				*e**PP	**pP**	**00 21 11.3**	**+0.6**
YAK				*e*PPP	PPP	00 22 22.8	
YAK				*e*		00 23 46.4	
YAK				*e*S	**S**	**00 26 16.2**	**0.0**
YAK				pmax	pmax		
	comp=Z,60nm,1.3s						
YAK				pmax	pmax		
	comp=N,53nm,1.4s						
YAK				pmax	pmax		
	comp=E,15nm,1.3s						
YAK				pmax	pmax		
	comp=Z,154nm,2.3s						
YAK				pmax	pmax		
	comp=N,106nm,2.0s						
YAK				pmax	pmax		
	comp=E,44nm,2.2s						
YAK				smax	smax		
	comp=N,90nm,1.9s						
YAK				smax	smax		
	comp=E,48nm,1.9s						
YAK				MLR	MLR		
	comp=Z,1µm,19.0s						
YAK				MLR	MLR		
	comp=N,1µm,20.0s						
YAK				MLR	MLR		
	comp=E,444nm,20.0s						
CD2	**Chengdu**	**32.52**	**281**	⇑*i*P	**P**	**00 21 00.5**	**-4.0**
CD2				pP	sP	00 21 15.5	+0.3
CD2				PP	**PP**	**00 22 16.5**	**-1.7**
CD2				S	**S**	**00 26 24.4**	**+6.4**
CD2				sS	sS	00 26 32.7	+2.2
CD2				pmax	pmax		
	comp=E,20nm,0.7s						
CD2				pmax	pmax		
	comp=E,430nm,7.5s						
CD2				LR	LR		
	comp=E,4µm,15.7s						
CD2				LR	LR		
	comp=E,5µm,19.4s						
CD2				LR	LR		
	comp=E,5µm,16.7s						
TNTI	**Ternate**	**32.59**	**207**	*e*P	**P**	**00 21 03.8**	**-1.2**
	comp=E,86nm,1.2s						
TNTI				LR	LR		
	comp=Z,900nm,20.0s						
TNTI	**Ternate**	**32.59**	**207**	P	**P**	**00 21 03.1**	**-1.9**
MANU	**Manus Island**	**32.85**	**170**	*e*P	**P**	**00 21 06.0**	**-1.3**
	comp=Z,70nm,1.4s						
JAY	**Jayapura**	**32.88**	**182**	P	**P**	**00 21 06.9**	**-0.7**
	comp=Z,9.4nm,0.9s,baz=0.0,slow=12,SNR=3.5						
JAY	**Jayapura**	**32.88**	**182**	P	**P**	**00 21 08.3**	**+0.7**
	comp=Z,188nm,1.2s						
GENI	**Genyem**	**32.98**	**183**	P	**P**	**00 21 08.9**	**+0.5**
SEY	**Seymchan**	**33.13**	**9**	P	**P**	**00 21 08.9**	**-0.4**
	comp=Z,1.6nm,0.2s,baz=185,slow=18,SNR=5.8						
SEY	**Seymchan**	**33.13**	**9**	⇑*e*P	**P**	**00 21 10.7**	**+1.4**
BOD	**Bodaibo**	**33.29**	**333**	*e*P	**P**	**00 21 11.5**	**+0.7**
BOD				pmax	pmax		
	comp=Z,78nm,1.3s						
LBMI	**Labuha**	**33.83**	**206**	P	**P**	**00 21 13.8**	**-2.1**
KKM	**Kota Kinabalu**	**34.17**	**230**	*e*P	**P**	**00 21 17.4**	**-1.6**
	comp=Z,58nm,1.2s						
KKM				LR	LR		
	comp=Z,2µm,20.0s						
FAKI	**Fak Fak**	**34.48**	**197**	PFAKE		00 21 30.0	+8.5
FAKI				LR	LR		
	comp=Z,2µm,20.0s						
KMI	**Kunming**	**34.76**	**271**	PFAKE		00 21 40.0	+16
KMI				LR	LR		
	comp=Z,1µm,18.0s						
ZAK	**Zakamensk**	**34.81**	**316**	*e*P	**P**	**00 21 24.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,37nm,1.6s						
IRK	**Irkutsk**	**34.92**	**319**	*e*P	**P**	**00 21 25.5**	**+0.5**
IRK				pmax	pmax		
	comp=Z,162nm,2.2s						
TLY	**Talaya**	**35.06**	**318**	P	**P**	**00 21 26.5**	**+0.2**
	comp=Z,21nm,1.0s,baz=126,slow=7.8,SNR=47						
TLY	**Talaya**	**35.06**	**318**	*e*P	**P**	**00 21 27.5**	**+1.2**
	comp=Z,173nm,1.4s						
TLY				LR	LR		
	comp=Z,5µm,18.0s						
TLY	**Talaya**	**35.06**	**318**	c *i*P	**P**	**00 21 27.4**	**+1.2**
TLY				*e*		00 22 51.7	
TLY				*e*PPP	PPP	00 23 04.0	
TLY				*e*S	**S**	**00 27 01.6**	**+4.8**
TLY				pmax	pmax		
	comp=Z,329nm,1.4s						
TLY				MLR	MLR		
	comp=Z,11µm,17.0s						
TLY	**Talaya**	**35.06**	**318**	P	**P**	**00 21 27.6**	**+1.4**
	SNR=65						
SLVN	**Son La**	**35.08**	**264**	*e*P	**P**	**00 21 26.0**	**-0.8**
	comp=Z,24nm,1.0s						
SLVN				LR	LR		
	comp=Z,3µm,20.0s						
GTA	**Gaotai**	**35.19**	**296**	P	**P**	**00 21 26.6**	**-1.1**
GTA				pP	sP	00 21 36.7	-1.6
GTA				sP	pwP	00 21 40.6	+1.3
GTA				PP	**PP**	**00 22 49.3**	**+1.6**
GTA				S	**S**	**00 26 53.6**	**-5.7**
GTA				sS	sS	00 27 13.4	+1.5
GTA				pmax	pmax		
	comp=Z,250nm,7.3s						
GTA				LR	LR		
	comp=Z,2µm,16.1s						
GTA				LR	LR		
	comp=Z,4µm,18.6s						
GTA				LR	LR		
	comp=Z,5µm,18.6s						
MIDW	**Midway**	**35.60**	**83**	*e*P	**P**	**00 21 29.6**	**-1.5**
	comp=Z,60nm,0.8s						
MIDW				LR	LR		
	comp=Z,1µm,20.0s						
DLV	**T Lat**	**35.88**	**246**	PFAKE		00 21 50.0	+16
DLV				LR	LR		
	comp=Z,1µm,20.0s						
RABL	**Rabaul**	**35.95**	**162**	PFAKE		00 21 40.0	+5.8
RABL				LR	LR		
	comp=Z,800nm,22.0s						
LUWI	**Luwuk**	**36.22**	**213**	*e*P	**P**	**00 21 34.9**	**-1.5**
	comp=Z,156nm,1.2s						
LUWI				LR	LR		
	comp=Z,900nm,20.0s						
LUWI	**Luwuk**	**36.22**	**213**	P	**P**	**00 21 38.7**	**+2.3**
	comp=Z,123nm,1.2s,comp=Z,2µm						
PANO	**Nakornpanom**	**36.28**	**257**	P	**P**	**00 21 37.7**	**+0.6**
	comp=Z,1.0nm,0.9s,comp=Z,411nm						
MOY	**Mondy**	**36.60**	**317**	*e*P	**P**	**00 21 40.0**	**+0.4**
MOY				pmax	pmax		
	comp=Z,67nm,1.6s						
APSI	**Ampana**	**36.65**	**215**	P	**P**	**00 21 40.0**	**-0.1**
	comp=Z,96nm,1.2s,comp=Z,867nm						
KIWB	**Kanaga Island**	**36.91**	**43**	*e*P	**P**	**00 21 40.3**	**-1.7**
NONG	**Nongkai**	**37.10**	**259**	P	**P**	**00 21 44.2**	**+0.2**
	comp=Z,1.1nm,1.3s						
ADK	**Adak**	**37.19**	**43**	*e*P	**P**	**00 21 43.8**	**-0.6**
	comp=Z,53nm,1.1s						
ADK				LR	LR		
	comp=Z,1µm,20.0s						
ADK	**Adak**	**37.19**	**43**	*e*P	**P**	**00 21 43.8**	**-0.6**
ADK				pmax	pmax		
	comp=Z,53nm,1.1s						
ADK				MLR	MLR		
	comp=Z,1µm,20.0s						
GSTR	**Great Sitkin T**	**37.62**	**43**	*e*P	**P**	**00 21 46.7**	**-1.5**
ATKA	**Atka Island**	**38.75**	**43**	PFAKE		00 22 10.0	+12
ATKA				LR	LR		
	comp=Z,2µm,21.0s						
CHAI	**Chaiyaphum**	**39.09**	**257**	P	**P**	**00 22 00.4**	**-0.4**
	comp=Z,150µm,1.0s						
PAYA	**Payao**	**39.33**	**264**	P	**P**	**00 22 04.7**	**+1.8**
	comp=Z,36µm,0.9s,comp=Z,607µm						
UTTA	**Uttaradit**	**39.45**	**261**	P	**P**	**00 22 03.4**	**-0.4**
	comp=Z,59µm,1.0s,comp=Z,450µm						
SBUM	**Sibu**	**39.49**	**231**	*e*P	**P**	**00 22 03.0**	**-1.1**
	comp=Z,26nm,1.5s						
SBUM				LR	LR		
	comp=Z,1µm,19.0s						
SAUI	**Saumlaki**	**39.58**	**196**	*e*P	**P**	**00 22 03.5**	**-1.4**
	comp=Z,558nm,0.9s						
SPSI	**Sidrap Palu**	**40.21**	**215**	P	**P**	**00 22 10.6**	**+0.5**
	comp=Z,29nm,0.9s						
BILL	**Bilibino**	**40.22**	**14**	⇑*i*P	**P**	**00 22 11.8**	**+2.2**
BILL				*i* *PP	**sP**	**00 22 19.8**	**-0.4**
BILL				*e**SP	**pwP**	**00 22 23.0**	**+1.0**
BILL						00 24 15.0	
BILL				*e*SSS	SSS	00 31 48.0	
BILL				pmax	pmax		
	comp=Z,51nm,1.7s						
BILL				MLR	MLR		
	comp=Z,929nm,16.0s						
CMMT	**Chiang Mai**	**40.35**	**263**	P	**P**	**00 22 10.8**	**-0.6**
	comp=Z,14nm,1.1s						
CHTO	**Chiang Mai**	**40.36**	**263**	*e*P	**P**	**00 22 10.2**	**-1.1**
	comp=Z,30nm,1.0s						
CHTO				LR	LR		
	comp=Z,2µm,20.0s						
CHTO	**Chiang Mai**	**40.36**	**263**	*e*P	**P**	**00 22 10.3**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,30nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,2µm,20.0s						
CHTO	**Chiang Mai**	**40.36**	**263**	P	**P**	**00 22 10.7**	**-0.7**
	SNR=8.8						
MTKI	**Muara Teweh, K**	**40.39**	**224**	P	**P**	**00 22 11.9**	**+0.3**
CHBT	**CHBT**	**40.40**	**253**	P	P	00 22 16.8	+5.1
	comp=Z,47nm,0.6s,comp=Z,1µm						
BNSI	**Bone**	**40.42**	**214**	P	P	00 22 19.8	+8.0
CM31	**Chiang Mai Arr**	**40.51**	**263**	*e*P	**P**	**00 22 12.3**	**-0.3**
	comp=Z,84nm,1.9s						
CM31				*e*ScP	**ScP**	**00 28 05.9**	**+3.6**
CMAR	**Chiang Mai Arr**	**40.51**	**263**	P	**P**	**00 22 12.3**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=51,slow=7.2,SNR=18						
CMAR				PcP	**PcP**	**00 24 15.7**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=45,slow=1.1,SNR=4.7						
CMAR				ScP	**ScP**	**00 28 05.9**	**+3.6**
	comp=Z,1.5nm,0.3s,baz=78,slow=1.3,SNR=4.2						
CMAR				LR	LR	00 39 50.3	
	comp=Z,2µm,19.1s,baz=68,slow=37						
KAPI	**Kappang**	**41.13**	**214**	*e*P	**P**	**00 22 15.8**	**-1.8**
	comp=Z,55nm,1.1s						
KAPI				LR	LR		
	comp=Z,700nm,20.0s						
KAPI	**Kappang**	**41.13**	**214**	*e*P	**P**	**00 22 15.8**	**-1.8**
KAPI				pmax	pmax		
	comp=Z,55nm,1.1s						
KAPI				MLR	MLR		
	comp=Z,700nm,20.0s						
MOKO	**MOKOCHONG**	**41.48**	**276**	*e*P	**P**	**00 22 18.9**	**-1.8**
MOKO				IAmb	IAmb	00 22 21.1	
	comp=Z,8µm,5.8s						
KSM	**Kuching**	**41.49**	**232**	*e*P	**P**	**00 22 19.5**	**-1.2**
	comp=Z,50nm,1.3s						
KSM				LR	LR		
	comp=Z,2µm,19.0s						
UMPA	**Umpang Tak**	**41.59**	**260**	P	**P**	**00 22 24.3**	**+2.8**
	comp=Z,63µm,1.3s						
TIXI	**Tiksi**	**41.76**	**354**	P	**P**	**00 22 22.4**	**+0.2**
	comp=Z,7.0nm,0.6s,baz=159,slow=6.4						
TIXI				LR	LR	00 41 46.0	
	comp=Z,289nm,18.9s,baz=178,slow=39						
TIXI	**Tiksi**	**41.76**	**354**	*e*P	**P**	**00 22 21.8**	**-0.4**
	comp=Z,15nm,1.0s						
TIXI				LR	LR		
	comp=Z,500nm,18.0s						
TIXI	**Tiksi**	**41.76**	**354**	*e*P	**P**	**00 22 21.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,500nm,18.0s						
KOHI	**KOHIMA**	**42.01**	**276**	*e*P	**P**	**00 22 21.9**	**-3.2**
KOHI				IAmb	IAmb	00 22 26.8	
	comp=Z,18nm,1.0s						
NIKH	**Nikolski High**	**42.10**	**43**	PFAKE		00 22 40.0	+15
NIKH				LR	LR		
	comp=Z,1µm,22.0s						
SRDT	**SRDT**	**42.26**	**257**	P	**P**	**00 22 30.1**	**+3.1**
	comp=Z,17nm,1.7s,comp=Z,2µm						
SPIA	**Saint Paul Isl**	**42.42**	**37**	PFAKE		00 22 40.0	+12
SPIA				LR	LR		
	comp=Z,1µm,20.0s						
PHET	**Kaeng Krachan**	**42.56**	**255**	P	P	00 22 42.2	+13
TEZP	**TEZPUR**	**42.87**	**277**	*e*P	**P**	**00 22 30.9**	**-1.0**
TAWA	**Tawang**	**43.38**	**279**	*e*P	**P**	**00 22 33.9**	**-2.6**
SOEI	**Soe**	**43.43**	**205**	*e*P	**P**	**00 22 34.9**	**-1.6**
	comp=Z,148nm,1.1s						
LSA	**Lhasa**	**43.44**	**282**	PFAKE		00 22 50.0	+13
LSA				LR	LR		
	comp=Z,3µm,19.0s						
EDFI	**Ende, Flores**	**43.54**	**209**	P	**P**	**00 22 37.1**	**-0.3**
UNV	**Unalaska Valle**	**43.65**	**42**	PFAKE		00 22 50.0	+12
UNV				LR	LR		
	comp=Z,1µm,22.0s						
SHL	**Shillong**	**43.97**	**276**	*e*P	**P**	**00 22 39.5**	**-1.5**
BATI	**Baumata**	**44.07**	**206**	P	**P**	**00 22 40.3**	**-1.3**
	comp=Z,30nm,0.6s,baz=53,slow=5.1,SNR=3.3						
AKUT	**Akutan**	**44.13**	**42**	PFAKE		00 22 50.0	+8.4
AKUT				LR	LR		
	comp=Z,1µm,22.0s						
COEN	**Coen**	**44.26**	**178**	*e*P	**P**	**00 22 41.5**	**-1.5**
	comp=Z,37nm,1.0s						
WMQ	**Urumqi**	**44.29**	**303**	PFAKE		00 22 50.0	+6.8
WMQ				LR	LR		
	comp=Z,1µm,20.0s						
WMQ	**Urumqi**	**44.29**	**303**	*e*P	**P**	**00 22 44.3**	**+1.1**
WMQ				PcP	**PcP**	**00 24 28.3**	**+1.1**
WMQ				PP	**PP**	**00 24 29.8**	**+3.2**
WMQ				ScS	ScS	00 32 38.7	-0.8
WMQ				pmax	pmax		
	comp=Z,45nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=Z,1µm,27.3s						
WMQ				LR	LR		
	comp=Z,870nm,14.3s						
WMQ				LR	LR		
	comp=Z,1µm,22.5s						
DGZ	**Jazzator, Alta**	**44.64**	**311**	c *i*P	**P**	**00 22 46.6**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,93nm,1.2s						
SKLT	**Songkhla**	**44.93**	**247**	P	P	00 22 59.6	+11
SIMRM	**Sittwe**	**45.03**	**269**	PFAKE		00 23 00.0	+11
SIMRM				LR	LR		
	comp=Z,700nm,18.0s						
TRTT	**Trang**	**45.29**	**249**	P	**P**	**00 22 54.7**	**+3.3**
	comp=Z,16nm,1.3s						
PLAI	**Plampang**	**45.39**	**214**	P	**P**	**00 22 51.1**	**-1.0**
FALS	**False Pass**	**45.61**	**41**	PFAKE		00 23 00.0	+6.6
FALS				LR	LR		
	comp=Z,1µm,18.0s						
MYKOM	**Kota Tinggi**	**45.85**	**239**	PFAKE		00 23 10.0	+14
MYKOM				LR	LR		
	comp=Z,2µm,21.0s						
KULM	**Kulim**	**46.04**	**245**	PFAKE		00 23 10.0	+13
KULM				LR	LR		
	comp=Z,900nm,18.0s						
IPM	**Ipoh**	**46.25**	**244**	PFAKE		00 23 10.0	+11
IPM				LR	LR		
	comp=Z,900nm,21.0s						
ZAA0	**Zalesovo Array**	**46.66**	**317**	PFAKE		00 23 10.0	+8.3
ZAA0				LR	LR		
	comp=Z,3µm,18.0s						
ZALV	**Zalesovo Beam**	**46.66**	**317**	P	**P**	**00 23 01.5**	**-0.2**
	comp=Z,17nm,1.0s,baz=100,slow=6.6,SNR=42						
ZALV				PcP	**PcP**	**00 24 35.2**	**+0.2**
	comp=Z,6.6nm,0.8s,baz=111,slow=3.3,SNR=4.3						
ZALV				ScP	**ScP**	**00 28 29.0**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=86,slow=2.0,SNR=3.9						
ZALV				LR	LR	00 43 23.5	
	comp=Z,3µm,18.4s,baz=76,slow=37						
JAGI	**Jajag, Banyuwa**	**46.95**	**219**	PFAKE		00 23 20.0	+16
JAGI				LR	LR		
	comp=Z,600nm,22.0s						
SDPT	**Sand Point**	**47.35**	**41**	*e*P	**P**	**00 23 05.6**	**-1.4**
	comp=Z,20nm,0.8s						
SDPT				LR	LR		
	comp=Z,700nm,19.0s						
MK31	**Makanchi Array**	**48.02**	**307**	*i* P	**P**	**00 23 12.6**	**+0.2**
MK31				pmax	pmax		
	comp=Z,34nm,0.8s						
MKAR	**Makanchi Array**	**48.02**	**307**	P	**P**	**00 23 13.0**	**+0.6**
	comp=Z,26nm,0.8s,baz=90,slow=9.6,SNR=195						
MKAR				ScP	**ScP**	**00 28 35.6**	**+3.1**
	comp=Z,1.3nm,1.0s,baz=94,slow=4.3,SNR=2.6						
MKAR				LR	LR	00 44 23.3	
	comp=Z,2µm,18.8s,baz=87,slow=37						
MKAR	**Makanchi Array**	**48.02**	**307**	P	**P**	**00 23 13.0**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,26nm,0.8s						
MKAR				pmax	pmax		
	comp=N,1.0nm,1.0s						
MKAR				MLR	MLR		
	comp=Z,2µm,18.8s						
JIRN	**Jiri**	**48.19**	**281**	*e*P	**P**	**00 23 14.2**	**-0.2**
	comp=Z,121nm,0.5s						
MAKZ	**Makanchi**	**48.23**	**307**	*e*P	**P**	**00 23 14.2**	**+0.2**
	comp=Z,132nm,1.4s						
MAKZ				LR	LR		
	comp=Z,2µm,20.0s						
MAKZ	**Makanchi**	**48.23**	**307**	P	**P**	**00 23 13.6**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,73nm,1.3s						
GUN	**Gumba**	**48.38**	**282**	*e*P	**P**	**00 23 15.5**	**-0.4**
	comp=Z,197nm,0.8s						
CHGN	**Chignik**	**48.62**	**40**	PFAKE		00 23 30.0	+13
CHGN				LR	LR		
	comp=Z,700nm,20.0s						
PKI	**Pulchoki**	**48.88**	**281**	*e*P	**P**	**00 23 18.4**	**-1.3**
	comp=Z,50nm,0.8s						
PKIN	**Phulchoki**	**48.88**	**281**	*e*P	**P**	**00 23 18.5**	**-1.2**
	comp=Z,57nm,1.0s						
BKNI	**Bangkinang**	**48.91**	**240**	PFAKE		00 23 30.0	+10
BKNI				LR	LR		
	comp=Z,1µm,22.0s						
KKN	**Kakani**	**48.92**	**282**	*e*P	**P**	**00 23 19.2**	**-0.7**
	comp=Z,97nm,0.9s						
PSI	**Prapat**	**48.93**	**244**	*e*P	**P**	**00 23 19.9**	**-0.1**
PSI				*e*PcP	**PcP**	**00 24 45.9**	**+1.9**
PSI				LR	LR		
	comp=Z,700nm,19.0s						
PSI	**Prapat**	**48.93**	**244**	*e*P	**P**	**00 23 19.9**	**-0.1**
PSI				*e*		00 24 45.9	
PSI				MLR	MLR		
	comp=Z,700nm,19.0s						
DMN	**Daman**	**49.12**	**282**	*e*P	**P**	**00 23 20.5**	**-1.0**
	comp=Z,40nm,0.8s						
RDOG	**Red Dog Mine**	**49.25**	**24**	PFAKE		00 23 30.0	+8.4
RDOG				LR	LR		
	comp=Z,500nm,20.0s						
GKN	**Gorkha**	**49.40**	**282**	*e*P	**P**	**00 23 22.7**	**-0.8**
	comp=Z,170nm,1.1s						
BOK	**Bokaro**	**49.70**	**276**	*e*P	**P**	**00 23 25.1**	**-0.5**
BOK				IAmb	IAmb	00 23 27.3	
CISI	**Cisompet, Garu**	**49.91**	**226**	PFAKE		00 23 40.0	+13
CISI				LR	LR		
	comp=Z,700nm,21.0s						
DANN	**Dangsing**	**50.03**	**283**	*e*P	**P**	**00 23 27.7**	**-0.8**
	comp=Z,303nm,1.2s						
PDGK	**Podgornoye**	**50.27**	**303**	P	**P**	**00 23 29.7**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,168nm,1.0s						
KURK	**Kurchatov**	**50.32**	**313**	*e*P	**P**	**00 23 29.7**	**-0.2**
	comp=Z,122nm,0.9s						
KURK				LR	LR		
	comp=Z,3µm,19.0s						
KURK	**Kurchatov**	**50.32**	**313**	*e*P	**P**	**00 23 29.7**	**-0.2**
KURK				pmax	pmax		
	comp=Z,122nm,0.9s						
KURK				MLR	MLR		
	comp=Z,3µm,19.0s						
KURK	**Kurchatov**	**50.32**	**313**	P	**P**	**00 23 30.0**	**+0.1**
	SNR=79						
KOLN	**Koldanda**	**50.34**	**282**	*e*P	**P**	**00 23 30.0**	**-0.7**
	comp=Z,76nm,0.7s						
KURBB	**Kurchatov Arra**	**50.38**	**312**	P	**P**	**00 23 30.2**	**-0.1**
	comp=Z,65nm,0.9s,baz=90,slow=7.9,SNR=205						
CMBY	**CAMPBELL BAY**	**50.45**	**252**	*e*P	**P**	**00 23 33.1**	**+1.8**
CTA	**Charters Tower**	**50.52**	**174**	P	**P**	**00 23 31.3**	**-0.5**
	comp=Z,14nm,1.0s,baz=349,slow=8.5,SNR=8.7						
SVW2	**Sparrevohn**	**50.65**	**34**	*e*P	**P**	**00 23 32.3**	**0.0**
	comp=Z,21nm,1.2s						
SVW2				LR	LR		
	comp=Z,600nm,20.0s						
WRAB	**Tennant Creek**	**50.68**	**189**	*e*P	**P**	**00 23 32.6**	**-0.3**
	comp=Z,42nm,0.8s						
WRAB	**Tennant Creek**	**50.68**	**189**	⇑*e*P	**P**	**00 23 33.2**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,49nm,0.8s						
WB2	**Warramunga Arr**	**50.69**	**189**	*e*P	**P**	**00 23 32.3**	**-0.7**
	comp=Z,54nm,0.9s						
WRA	**Warramunga Arr**	**50.69**	**189**	P	**P**	**00 23 32.5**	**-0.4**
	comp=Z,40nm,0.9s,baz=6.0,slow=8.7,SNR=46						
WRA				PcP	**PcP**	**00 24 50.7**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=1.1,slow=4.2,SNR=1.4						
WRA				ScP	**ScP**	**00 28 45.9**	**+1.8**
	comp=Z,4.3nm,1.1s,baz=350,slow=4.4,SNR=5.4						
WRA				S	**S**	**00 30 44.4**	**-2.0**
	comp=Z,6.4nm,1.1s,baz=15,slow=20,SNR=4.5						
TTA	**Tatalina**	**50.71**	**32**	*e*P	**P**	**00 23 32.6**	**-0.2**
	comp=Z,17nm,1.2s						
TTA				LR	LR		
	comp=Z,500nm,19.0s						
TTA	**Tatalina**	**50.71**	**32**	*e*P	**P**	**00 23 32.6**	**-0.2**
TTA				pmax	pmax		
	comp=Z,17nm,1.2s						
TTA				MLR	MLR		
	comp=Z,500nm,19.0s						
PYUN	**Piuthan**	**50.76**	**283**	*e*P	**P**	**00 23 33.3**	**-0.5**
	comp=Z,267nm,0.9s						
SII	**Sitkinak Islan**	**50.98**	**40**	PFAKE		00 23 50.0	+15
SII				LR	LR		
	comp=Z,900nm,20.0s						
PRZ	**Przheval'sk**	**51.18**	**302**	PFAKE		00 23 50.0	+13
PRZ				LR	LR		
	comp=Z,2µm,18.0s						
OHAK	**Old Harbor**	**51.50**	**39**	PFAKE		00 23 50.0	+11
OHAK				LR	LR		
	comp=Z,1µm,20.0s						
KDAK	**Kodiak Island**	**51.90**	**38**	*e*P	**P**	**00 23 41.8**	**+0.2**
	comp=Z,57nm,1.3s						
KDAK				LR	LR		
	comp=Z,1µm,20.0s						
KDAK	**Kodiak Island**	**51.90**	**38**	*e*P	**P**	**00 23 41.8**	**+0.2**
KDAK				pmax	pmax		
	comp=Z,57nm,1.3s						
KDAK				MLR	MLR		
	comp=Z,1µm,20.0s						
KDJ	**Kajisay**	**52.13**	**302**	PFAKE		00 24 00.0	+16
KDJ				LR	LR		
	comp=Z,1µm,21.0s						
PPLA	**Purkeypile**	**52.44**	**32**	PFAKE		00 24 00.0	+14
PPLA				LR	LR		
	comp=Z,600nm,20.0s						
CAST	**Castle Rocks**	**52.55**	**31**	PFAKE		00 24 00.0	+14
CAST				LR	LR		
	comp=Z,400nm,21.0s						
CNPM	**China Poot**	**52.67**	**36**	PFAKE		00 24 00.0	+13
CNPM				LR	LR		
	comp=Z,800nm,19.0s						
ULHL	**Ulahol**	**52.80**	**302**	P	**P**	**00 23 49.8**	**+0.9**
	SNR=9.6						
BRLK	**Bradley Lake**	**52.85**	**36**	PFAKE		00 24 00.0	+11
BRLK				LR	LR		
	comp=Z,700nm,19.0s						
BOOM	**Boomskoye usch**	**52.98**	**302**	PFAKE		00 24 00.0	+10
BOOM				LR	LR		
	comp=Z,1µm,21.0s						
KTH	**Kantishna Hill**	**53.08**	**31**	PFAKE		00 24 00.0	+10
KTH				LR	LR		
	comp=Z,500nm,19.0s						
BPAW	**Bear Paw Mtn.**	**53.10**	**30**	PFAKE		00 24 00.0	+9.5
BPAW				LR	LR		
	comp=Z,600nm,18.0s						
TKM2	**Tokmak 2**	**53.15**	**303**	P	**P**	**00 23 51.2**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,115nm,1.5s						
TKM2	**Tokmak 2**	**53.15**	**303**	P	**P**	**00 23 52.2**	**+0.7**
	SNR=68						
MLY	**Manley**	**53.30**	**29**	PFAKE		00 24 00.0	+8.0
MLY				LR	LR		
	comp=Z,400nm,20.0s						
KSH	**Kashi**	**53.51**	**299**	P	**P**	**00 23 57.6**	**+3.5**
KSH				pP	pwP	00 24 07.5	+1.0

KSH				sP	sP	00 24 11.5	+6.6
KSH				PcP	**PcP**	**00 25 02.5**	**+1.8**
KSH				PP	**PP**	**00 26 01.2**	**+6.6**
KSH				S	**S**	**00 31 26.3**	**+1.0**
KSH				ScS	**ScS**	**00 33 39.6**	**-2.1**
KSH				SS	**SKiKP**	**00 35 07.1**	**-0.6**
KSH				pmax	pmax		
	comp=Z,110nm,0.9s						
KSH				pmax	pmax		
	comp=Z,340nm,8.4s						
KSH				LR	LR		
	comp=Z,2µm,15.7s						
KSH				LR	LR		
	comp=Z,1µm,15.8s						
KSH				LR	LR		
	comp=Z,930nm,13.9s						
KZA	**Kyzart**	**53.55**	**302**	P	**P**	**00 23 56.5**	**+1.8**
	SNR=22						
SEW	**Seward**	**53.59**	**35**	PFAKE		00 24 10.0	+16
SEW				LR	LR		
	comp=Z,1µm,20.0s						
KBK	**Karagaybulak**	**53.67**	**303**	P	**P**	**00 23 56.3**	**+1.1**
	SNR=42						
CHMS	**Chumysh**	**53.75**	**303**	P	**P**	**00 23 56.5**	**+0.9**
	SNR=42						
BWN	**Browne**	**53.77**	**30**	PFAKE		00 24 10.0	+15
BWN				LR	LR		
	comp=Z,500nm,18.0s						
PMR	**Palmer**	**53.78**	**34**	PFAKE		00 24 10.0	+14
PMR				LR	LR		
	comp=Z,600nm,22.0s						
FRU1	**Bishkek**	**53.87**	**303**	PFAKE		00 24 10.0	+13
FRU1				LR	LR		
	comp=Z,1µm,19.0s						
USP	**Ospenovka**	**53.88**	**304**	P	**P**	**00 23 56.9**	**+0.3**
	SNR=36						
MCK	**McKinley**	**53.98**	**31**	PFAKE		00 24 10.0	+13
MCK				LR	LR		
	comp=Z,500nm,18.0s						
RND	**Reindeer**	**53.99**	**31**	PFAKE		00 24 10.0	+13
RND				LR	LR		
	comp=Z,600nm,18.0s						
AAK	**Ala-Archa**	**54.00**	**303**	P	**P**	**00 23 58.2**	**+0.5**
	comp=Z,26nm,0.8s,baz=93,slow=6.6,SNR=49						
AAK	**Ala-Archa**	**54.00**	**303**	*e*P	**P**	**00 23 58.4**	**+0.7**
	comp=Z,44nm,1.0s						
AAK				LR	LR		
	comp=Z,1µm,18.0s						
AAK	**Ala-Archa**	**54.00**	**303**	*i* P	**P**	**00 23 58.2**	**+0.5**
	SNR=25						
AAK	**Ala-Archa**	**54.00**	**303**	P	**P**	**00 23 58.0**	**+0.3**
AAK				pmax	pmax		
	comp=Z,75nm,1.5s						
AAK	**Ala-Archa**	**54.00**	**303**	P	**P**	**00 23 58.4**	**+0.7**
	SNR=23						
AAK	**Ala-Archa**	**54.00**	**303**	P	**P**	**00 23 58.3**	**+0.6**
	SNR=23						
UCH	**Uchtor**	**54.06**	**302**	P	**P**	**00 23 59.2**	**+0.8**
	SNR=77						
TOLK	**Toolik Lake Re**	**54.19**	**25**	PFAKE		00 24 10.0	+12
TOLK				LR	LR		
	comp=Z,400nm,19.0s						
WRH	**Wood River Hil**	**54.39**	**30**	PFAKE		00 24 10.0	+10
WRH				LR	LR		
	comp=Z,400nm,20.0s						
ASAR	**Alice Springs**	**54.41**	**189**	P	**P**	**00 24 00.1**	**-0.5**
	comp=Z,9.4nm,0.7s,baz=3.3,slow=5.4,SNR=38						
ASAR				ScP	**ScP**	**00 29 02.1**	**+1.8**
	comp=Z,1.2nm,1.1s,baz=14,slow=5.7,SNR=3.5						
ASAR				S	**S**	**00 31 34.4**	**-2.9**
	comp=Z,2.0nm,0.9s,baz=4.8,slow=12,SNR=8.2						
ASAR				LR	LR	00 47 05.0	
	comp=Z,719nm,21.0s,baz=18,slow=36						
COLA	**College**	**54.51**	**30**	PFAKE		00 24 10.0	+9.2
COLA				LR	LR		
	comp=Z,300nm,20.0s						
COLA	**College**	**54.51**	**30**⇓	*e*P	**P**	**00 24 02.0**	**+1.2**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EKS2	**Erkin-Say**	**54.52**	**303**	P	**P**	**00 24 02.3**	**+0.9**
	SNR=15						
CCB	**Clear Creek Bu**	**54.52**	**30**	PFAKE		00 24 10.0	+9.2
CCB				LR	LR		
	comp=Z,500nm,20.0s						
OTUK	**Ortayu**	**54.60**	**310**	P	**P**	**00 24 02.5**	**+0.7**
OTUK				pmax	pmax		
	comp=Z,273nm,1.2s						
DHY	**Denali Highway**	**54.65**	**32**	PFAKE		00 24 10.0	+8.0
DHY				LR	LR		
	comp=Z,600nm,21.0s						
SCM	**Sheep Creek Mo**	**54.65**	**33**	PFAKE		00 24 10.0	+8.0
SCM				LR	LR		
	comp=Z,500nm,19.0s						
SMLA	**Simla**	**54.68**	**288**	*e*P	**P**	**00 24 02.1**	**-0.5**
SMLA				IAmb	IAmb	00 24 03.4	
	comp=Z,57nm,0.6s						
SMLA				IAMs_20	IAMs_20	00 50 00.3	
	comp=Z,2µm,11.0s						
POKR	**Poker Plat Res**	**54.70**	**29**	P	**P**	**00 24 01.2**	**-1.1**
	baz=267						
HDA	**Harding Lake**	**54.88**	**30**	P	**P**	**00 24 01.6**	**-1.8**
	baz=268						
ILAR	**Eielson Array**	**54.92**	**30**	P	**P**	**00 24 03.4**	**-0.4**
	comp=Z,5.5nm,0.8s,baz=261,slow=5.9,SNR=46						
ILAR				LR	LR	00 51 04.0	
	comp=Z,236nm,18.5s,baz=276,slow=40						
ILAR	**Eielson Array**	**54.92**	**30**	P	**P**	**00 24 03.4**	**-0.4**
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,236nm,18.5s						
DHRM	**DHARAMSHALA**	**55.06**	**290**	*e*P	**P**	**00 24 04.9**	**-0.7**
DHRM				IAmb	IAmb	00 24 06.4	
	comp=Z,46nm,0.9s						
BVAR	**Borovoye Array**	**55.26**	**316**	P	**P**	**00 24 07.1**	**+0.7**
	comp=Z,13nm,0.7s,baz=96,slow=7.9,SNR=43						
BRVK	**Borovoye**	**55.32**	**316**	*e*P	**P**	**00 24 07.2**	**+0.3**
	comp=Z,85nm,1.7s						
BRVK				LR	LR		
	comp=Z,2µm,18.0s						
BRVK	**Borovoye**	**55.32**	**316**	P	**P**	**00 24 06.7**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,34nm,1.3s						
BRVK	**Borovoye**	**55.32**	**316**	P	**P**	**00 24 07.6**	**+0.7**
	SNR=16						
ARSB	**Arslanbob**	**55.37**	**301**	PFAKE		00 24 20.0	+12
ARSB				LR	LR		
	comp=Z,2µm,20.0s						
EYAK	**Cordova Ski Ar**	**55.43**	**35**	PFAKE		00 24 20.0	+13
EYAK				LR	LR		
	comp=Z,1µm,20.0s						
PAX	**Paxson**	**55.52**	**32**	PFAKE		00 24 20.0	+12
PAX				LR	LR		
	comp=Z,600nm,19.0s						
PRP	**Porcupine Dome**	**55.52**	**29**	PFAKE		00 24 20.0	+12
PRP				LR	LR		
	comp=Z,400nm,21.0s						
RIDG	**Independent Ri**	**55.79**	**31**	PFAKE		00 24 20.0	+10
RIDG				LR	LR		
	comp=Z,700nm,19.0s						
PSAD2	**Pilbara Seismi**	**55.91**	**205**	PFAKE		00 24 20.0	+8.6
PSAD2				LR	LR		
	comp=Z,1µm,19.0s						
DOT	**Dot Lake**	**56.14**	**31**	PFAKE		00 24 20.0	+7.4
DOT				LR	LR		
	comp=Z,600nm,18.0s						
SCRK	**Sand Creek**	**56.17**	**31**	PFAKE		00 24 20.0	+7.1
SCRK				LR	LR		
	comp=Z,400nm,19.0s						
HMT	**Hamilton**	**56.17**	**35**	PFAKE		00 24 20.0	+7.1
HMT				LR	LR		
	comp=Z,800nm,20.0s						
MENT	**Mentasta**	**56.32**	**32**	PFAKE		00 24 30.0	+16
MENT				LR	LR		
	comp=Z,500nm,21.0s						
NGP	**Nagpur**	**56.55**	**276**	*e*P	**P**	**00 24 15.5**	**-0.7**
KK31	**Karatay Array**	**56.78**	**304**	*i* P	**P**	**00 24 17.7**	**+0.2**
KK31				pmax	pmax		
	comp=Z,91nm,0.9s						
BALM	**Baldy**	**57.07**	**34**	PFAKE		00 24 30.0	+11
BALM				LR	LR		
	comp=Z,600nm,21.0s						
NIL	**Nilore**	**57.10**	**292**	*e*P	**P**	**00 24 19.8**	**-0.2**
	comp=Z,161nm,1.1s						
NIL				LR	LR		
	comp=Z,400nm,19.0s						
NIL	**Nilore**	**57.10**	**292**	*e*P	**P**	**00 24 19.8**	**-0.2**
NIL				pmax	pmax		
	comp=Z,161nm,1.1s						
NIL				MLR	MLR		
	comp=Z,400nm,19.0s						
BHPL	**Bhopal**	**57.13**	**279**	*e*P	**P**	**00 24 19.0**	**-1.3**
BHPL				IAmb	IAmb	00 24 20.2	
	comp=Z,26nm,0.7s						
BTK	**Batken**	**57.26**	**300**	PFAKE		00 24 30.0	+9.0
BTK				LR	LR		
	comp=Z,2µm,19.0s						
EGAK	**Eagle**	**57.37**	**30**	PFAKE		00 24 30.0	+8.7
EGAK				LR	LR		
	comp=Z,400nm,20.0s						
DZM	**Mont Dzumac**	**57.45**	**153**	*e*P	**P**	**00 24 24.4**	**+2.0**
	comp=Z,120nm,1.2s						
DZM				*e*S	**S**	**00 32 20.6**	**+2.7**
	comp=Z,2µm,29.6s						
DZM	**Mont Dzumac**	**57.45**	**153**	P	**P**	**00 24 25.0**	**+2.6**
	comp=Z,15nm,0.8s,baz=18,slow=4.9,SNR=5.0						
DZM	**Mont Dzumac**	**57.45**	**153**	*e*P	**P**	**00 24 22.7**	**+0.3**
	comp=Z,77nm,1.2s						
DZM				LR	LR		
	comp=Z,1µm,20.0s						
GAR	**Garm**	**57.90**	**299**	PFAKE		00 24 40.0	+14
GAR				LR	LR		
	comp=Z,6µm,19.0s						
PCA	**Pinnacle**	**58.19**	**35**	PFAKE		00 24 40.0	+13
PCA				LR	LR		
	comp=Z,500nm,20.0s						
DAWY	**Dawson**	**58.19**	**31**	*e*P	**P**	**00 24 28.4**	**+1.3**
	comp=Z,69nm,1.5s						
DAWY				LR	LR		
	comp=Z,900nm,21.0s						
BCPM	**Bancas Point**	**58.51**	**35**	PFAKE		00 24 40.0	+11
BCPM				LR	LR		
	comp=Z,500nm,19.0s						
CHGR	**Chuyangaron**	**58.87**	**299**	PFAKE		00 24 40.0	+7.7
CHGR				LR	LR		
	comp=Z,3µm,20.0s						
EPYK	**Eagle Plains**	**59.09**	**28**	PFAKE		00 24 50.0	+17
EPYK				LR	LR		
	comp=Z,400nm,19.0s						
EPYK	**Eagle Plains**	**59.09**	**28**	P	**P**	**00 24 32.0**	**-1.3**
	baz=276						
INK	**Inuvik**	**60.09**	**25**	PFAKE		00 24 50.0	+10
INK				LR	LR		
	comp=Z,700nm,22.0s						
KBL	**Kabul**	**60.16**	**295**	*e*P	**P**	**00 24 41.1**	**-0.4**
	comp=Z,82nm,1.0s						
KBL				LR	LR		
	comp=Z,1µm,20.0s						
KBL	**Kabul**	**60.16**	**295**	*e*P	**P**	**00 24 41.1**	**-0.4**
KBL				pmax	pmax		
	comp=Z,82nm,1.0s						
KBL				MLR	MLR		
	comp=Z,1µm,20.0s						
SVE	**Sverdlovsk**	**60.27**	**321**	*de*P	**P**	**00 24 42.1**	**+0.6**
SVE				*e*S	**S**	**00 32 49.7**	**-3.9**
SVE				pmax	pmax		
	comp=Z,107nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,18.0s						
WHY	**Whitehorse**	**60.74**	**34**	PFAKE		00 25 00.0	+15
WHY				LR	LR		
	comp=Z,600nm,22.0s						
SKAG	**Skagway**	**60.75**	**36**	PFAKE		00 25 00.0	+15
SKAG				LR	LR		
	comp=Z,600nm,20.0s						
BESE	**Bessie Mountai**	**61.16**	**36**	PFAKE		00 25 00.0	+12
BESE				LR	LR		
	comp=Z,400nm,21.0s						
SIT	**Sitka**	**61.24**	**38**	PFAKE		00 25 00.0	+12
SIT				LR	LR		
	comp=Z,800nm,21.0s						
ARU	**Arti**	**61.47**	**321**	P	**P**	**00 24 50.0**	**+0.3**
	comp=Z,13nm,0.7s,baz=85,slow=4.1,SNR=83						
ARU	**Arti**	**61.47**	**321**	*e*P	**P**	**00 24 49.9**	**+0.1**
	comp=Z,84nm,0.9s						
ARU				LR	LR		
	comp=Z,1µm,18.0s						
ARU	**Arti**	**61.47**	**321**	*c i*P	**P**	**00 24 49.7**	**0.0**
ARU						00 25 32.5	
ARU				S	**S**	**00 33 09.3**	**+0.3**
ARU						00 34 34.4	
ARU				SS	**SS**	**00 37 05.5**	**-4.1**
ARU				pmax	pmax		
	comp=Z,110nm,1.0s						
ARU				MLR	MLR		
	comp=Z,1µm,17.0s						
STKA	**Stephens Creek**	**62.08**	**180**	P	**P**	**00 24 53.6**	**-0.3**
	comp=Z,4.3nm,0.6s,baz=60,slow=4.2,SNR=4.9						
STKA				LR	LR	00 53 00.6	
	comp=Z,452nm,20.3s,baz=359,slow=37						
STKA	**Stephens Creek**	**62.08**	**180**	*e*P	**P**	**00 24 53.4**	**-0.5**
	comp=Z,9.0nm,1.1s						
STKA	**Stephens Creek**	**62.08**	**180**	*e*P	**P**	**00 24 53.4**	**-0.5**
STKA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
POO	**Poona**	**62.08**	**276**	*e*P	**P**	**00 24 53.8**	**-0.7**
FORT	**Forrest**	**62.35**	**193**	*e*P	**P**	**00 24 53.7**	**-2.1**
	comp=Z,38nm,0.8s						
AB31	**Akbulak array**	**62.43**	**313**	*i* P	**P**	**00 24 56.4**	**+0.2**
AB31				pmax	pmax		
	comp=Z,11nm,0.5s						
WRAK	**Wrangell Islan**	**62.98**	**38**	PFAKE		00 25 10.0	+10
WRAK				LR	LR		
	comp=Z,900nm,22.0s						
AKTO	**Aktyubinsk**	**63.30**	**315**	P	**P**	**00 25 02.3**	**+0.3**
	comp=Z,12nm,0.6s,baz=70,slow=13,SNR=22						
AKTO	**Aktyubinsk**	**63.30**	**315**	P	**P**	**00 25 02.3**	**+0.3**
AKTO				pmax	pmax		
	comp=Z,39nm,1.1s						
DLBC	**Dease Lake**	**63.66**	**36**	*e*P	**P**	**00 25 03.2**	**-1.1**
	comp=Z,20nm,1.1s						
KIRV	**Kirov**	**65.63**	**325**	P	**P**	**00 25 18.3**	**+1.2**
	comp=Z,40nm,0.7s,baz=271,slow=21,SNR=28						
PRGR	**Permogore**	**66.39**	**329**⇑	*i*P	**P**	**00 25 22.3**	**+0.4**
PRGR				*e**PP	**pP**	**00 25 28.6**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,94nm,1.3s						
SPA0	**Spitsbergen Ar**	**66.93**	**349**	*e*P	**P**	**00 25 25.0**	**-0.2**
SPITS	**Spitsbergen Ar**	**66.93**	**349**	P	**P**	**00 25 26.0**	**+0.8**
	comp=Z,27nm,1.1s,baz=92,slow=12,SNR=3.7						
SPITS	**Spitsbergen Ar**	**66.93**	**349**	P	**P**	**00 25 26.0**	**+0.8**
SPITS				pmax	pmax		
	comp=Z,18nm,1.0s						
KBS	**Kingsbay**	**67.09**	**351**	PFAKE		00 25 40.0	+14
KBS				LR	LR		
	comp=Z,400nm,19.0s						
KBS	**Kingsbay**	**67.09**	**351**⇓	*e*P	**P**	**00 25 27.8**	**+1.7**
KBS				pmax	pmax		
	comp=Z,132nm,1.0s						
KBS	**Kingsbay**	**67.09**	**351**	*e*P	**P**	**00 25 26.5**	**+0.4**
NWAO	**Narrogin (SRO)**	**67.24**	**202**	P	**P**	**00 25 26.8**	**-0.9**
	comp=Z,33nm,1.0s,baz=53,slow=7.8,SNR=8.8						
NWAO	**Narrogin (SRO)**	**67.24**	**202**	*e*P	**P**	**00 25 26.8**	**-0.9**
NWAO				*e*P	**P**	**00 25 27.1**	**-0.5**
GEYT	**Alibeck**	**67.32**	**302**	P	**P**	**00 25 29.2**	**+0.8**
	comp=Z,54nm,1.1s,baz=64,slow=3.4,SNR=103						
GEYT				PP	**PP**	**00 27 58.6**	**+1.9**
	comp=Z,9.9nm,1.2s,baz=65,slow=10,SNR=4.1						
GEYT				LR	LR	00 57 01.4	
	comp=Z,804nm,18.3s,baz=65,slow=38						
GYA0B	**ALIBECK ARRAY**	**67.32**	**302**	PFAKE		00 25 40.0	+12
GYA0B				LR	LR		
	comp=Z,1µm,18.0s						
HSPB	**Hornsund (broa**	**67.84**	**349**	*e*P	**P**	**00 25 31.9**	**+1.0**
HSPB				LMZ	LR	00 56 07.7	
	comp=Z,4µm,21.7s						
HSPB	**Hornsund (broa**	**67.84**	**349**	*e*P	**P**	**00 25 31.9**	**+1.0**
HSPB				MLR	MLR		
	comp=Z,4µm,21.7s						
HSPB	**Hornsund (broa**	**67.84**	**349**	*e*P	**P**	**00 25 31.0**	**+0.1**
TOO	**Toolangi**	**67.85**	**177**	*e*P	**P**	**00 25 31.0**	**-0.4**
	comp=Z,32nm,1.0s						
TOO	**Toolangi**	**67.85**	**177**	*e*P	**P**	**00 25 31.0**	**-0.4**
TOO				pmax	pmax		
	comp=Z,32nm,1.0s						
LVZ	**Lovozero**	**68.15**	**337**	*e*P	**P**	**00 25 31.9**	**-1.2**
	comp=Z,60nm,1.2s						
LVZ				LR	LR		
	comp=Z,1µm,20.0s						
LVZ	**Lovozero**	**68.15**	**337**⇓	*e*P	**P**	**00 25 33.8**	**+0.7**
LVZ				pmax	pmax		
	comp=Z,17nm,1.0s						
YKA	**Yellowknife Ar**	**69.33**	**29**	P	**P**	**00 25 40.0**	**-0.4**
	comp=Z,8.9nm,1.1s,baz=294,slow=6.1,SNR=18						
YKA				PKP2ab		00 53 57.5	
	comp=Z,0.4nm,0.7s,baz=132,slow=3.1,SNR=4.7						
YKA				LR	LR	01 03 26.8	
	comp=Z,15nm,18.2s,baz=298,slow=42						
YKA	**Yellowknife Ar**	**69.33**	**29**	P	**P**	**00 25 40.0**	**-0.4**
YKA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HAMF	**Hammerfest**	**70.03**	**342**	*e*P	**P**	**00 25 44.9**	**+0.2**
HAMF				*e*pP	**pP**	**00 25 52.0**	**-0.4**
ARCES	**ARCESS Array B**	**70.17**	**340**	P	**P**	**00 25 45.7**	**+0.2**
	comp=Z,14nm,0.8s,baz=69,slow=6.6,SNR=14						
ARCES				LR	LR	01 01 53.0	
	comp=Z,743nm,18.5s,baz=60,slow=40						
ARE0	**ARCESS Array S**	**70.17**	**340**	*e*P	**P**	**00 25 44.5**	**-1.0**
NLWA	**Neilton Lookou**	**70.99**	**46**	PFAKE		00 26 00.0	+9.1
NLWA				LR	LR		
	comp=Z,500nm,20.0s						
KTK1	**Kautokeino**	**71.13**	**340**	*e*P	**P**	**00 25 51.5**	**+0.1**
D03D	**Eldon**	**71.41**	**45**	P	**P**	**00 25 53.3**	**-0.1**
	baz=295						
TULEG	**Thule**	**71.49**	**7**	PFAKE		00 26 10.0	+17
TULEG				LR	LR		
	comp=Z,400nm,19.0s						
B05A	**Bryant**	**71.70**	**44**	P	**P**	**00 25 55.0**	**-0.2**
	baz=295						
TRO	**Tromso**	**71.94**	**342**	*e*P	**P**	**00 25 56.6**	**+0.4**
E04D	**Cinebar**	**72.15**	**46**	P	**P**	**00 25 57.6**	**-0.3**
	baz=296						
DAG	**Danmarks Havn**	**72.25**	**355**⇑	*i*P	**P**	**00 25 58.5**	**+0.5**
DAG				pmax	pmax		
	comp=Z,79nm,1.3s						
DAG	**Danmarks Havn**	**72.25**	**355**⇑	*i*P	**P**	**00 25 58.5**	**+0.5**
	comp=Z,41nm,1.3s						
G03D	**McMinnville, O**	**72.29**	**48**	P	**P**	**00 25 58.2**	**-0.5**
	baz=296						
LON	**Longmire**	**72.53**	**46**	PFAKE		00 26 10.0	+10
LON				LR	LR		
	comp=Z,300nm,20.0s						
COR	**Corvallis**	**72.54**	**48**	PFAKE		00 26 10.0	+10
COR				LR	LR		
	comp=Z,800nm,20.0s						
MOS	**Moscow**	**72.65**	**325**	*e*P	**P**	**00 25 57.6**	**-3.1**
MOS				*e*		00 26 08.1	
MOS				*e*S	**S**	**00 35 19.3**	**-4.3**
MOS				*e*		00 36 00.2	
MOS				pmax	pmax		
	comp=Z,86nm,1.3s						
MOS				pmax	pmax		
	comp=Z,200nm,1.6s						
MOS				MLR	MLR		
	comp=N,600nm,16.0s						
MOS				MLR	MLR		
	comp=E,900nm,16.0s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
MAK	**Makhachkala**	**72.73**	**310**	*e*P	**P**	**00 26 01.8**	**+0.4**
MAK				*e*		00 28 44.7	
MAK				*e*S	**S**	**00 35 25.5**	**+0.5**
MAK				*e*SS	**SS**	**00 40 04.0**	**-0.3**
MAK				pmax	pmax		
	comp=Z,97nm,1.2s						
MAK				MLR	MLR		
	comp=Z,3µm,18.0s						
I03D	**Drain, OR**	**72.89**	**49**	P	**P**	**00 26 03.0**	**+0.6**
	baz=296						
H04D	**Lebanon**	**72.93**	**48**	P	**P**	**00 26 02.9**	**+0.4**
	baz=296						
LTY	**Liberty**	**73.01**	**45**	PFAKE		00 26 10.0	+6.9
LTY				LR	LR		
	comp=Z,500nm,20.0s						
K02D	**Willamette Mer**	**73.12**	**50**	P	**P**	**00 26 04.2**	**+0.4**
	baz=296						
F05D	**White Salmon**	**73.13**	**46**	P	**P**	**00 26 04.1**	**+0.3**
	baz=296						
BIDO	**Bidbid**	**73.19**	**288**	P	**P**	**00 26 06.0**	**+1.5**
	SNR=6.3						
H04A	**Detroit Lake**	**73.21**	**48**	PFAKE		00 26 20.0	+16
H04A				LR	LR		
	comp=Z,500nm,20.0s						
AKT	**Akhty**	**73.22**	**308**⇑	*i*P	**P**	**00 26 05.1**	**+0.6**
AKT				*e*		00 26 21.0	
AKT				*e*		00 28 45.1	
AKT				*e*S	**S**	**00 35 30.3**	**-0.7**
AKT				*e*		00 36 11.8	
AKT				pmax	pmax		
	comp=Z,142nm,1.0s						
I04A	**Tendick Farm,**	**73.46**	**49**	P	**P**	**00 26 06.0**	**+0.2**
	baz=296						
KRMB	**Red Mountain**	**73.48**	**51**	PFAKE		00 26 20.0	+14
KRMB				LR	LR		
	comp=Z,700nm,20.0s						
OBN	**Obninsk**	**73.48**	**325**	*e*P	**P**	**00 26 05.8**	**+0.2**
	comp=Z,86nm,1.3s						
OBN				LR	LR		
	comp=Z,1µm,19.0s						
OBN	**Obninsk**	**73.48**	**325**	*c i*P	**P**	**00 26 05.7**	**+0.2**
OBN				*i* *PP	**pP**	**00 26 14.4**	**+0.7**
OBN				*e**SP	**pwP**	**00 26 17.7**	**-0.3**
OBN				*e*		00 26 23.0	
OBN				*i*		00 28 46.1	
OBN				PPP	PPP	00 30 30.0	
OBN				*i* S	**SKiKP**	**00 35 37.4**	**+3.4**
OBN				*e*		00 36 25.6	
OBN				*e*SSS	SSS	00 43 26.0	
OBN				pmax	pmax		
	comp=Z,74nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,15.0s						
LPSR	**Galich'ya Gora**	**73.49**	**322**	*e*P	**P**	**00 26 05.5**	**-0.2**
LPSR				*e*S	**S**	**00 35 31.4**	**-1.9**
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
LPSR				smax	smax		
	comp=E,40nm,2.0s						
LPSR				MLR	MLR		
	comp=Z,740nm,14.0s						
G05D	**Wamic, OR**	**73.51**	**47**	P	**P**	**00 26 06.2**	**+0.2**
	baz=297						
HUMO	**Hull Mountain**	**73.63**	**50**	PFAKE		00 26 20.0	+13
HUMO				LR	LR		
	comp=Z,1µm,21.0s						
SHME	**Shamm**	**73.69**	**291**	*i* P	**P**	**00 26 08.7**	**+1.2**
	SNR=53						
GROC	**Groznyy**	**73.75**	**311**	*e*P	**P**	**00 26 07.4**	**0.0**
GROC				*e*		00 26 23.5	
GROC				*e*		00 28 52.1	
GROC				*e*S	**SKiKP**	**00 35 35.6**	**+0.8**
GROC				pmax	pmax		
	comp=Z,90nm,1.2s						
VORR	**Voronezh**	**73.78**	**321**	P	**P**	**00 26 06.0**	**-1.4**
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
HOQ	**Hoqain**	**73.84**	**288**	P	**P**	**00 26 09.7**	**+1.4**
	SNR=6.8						
KHMM	**Horse Mountain**	**73.88**	**52**	PFAKE		00 26 20.0	+12
KHMM				LR	LR		
	comp=Z,1µm,21.0s						
MDH	**Madha**	**73.90**	**290**	P	**P**	**00 26 08.8**	**+0.2**
J04D	**Umpqua Nationa**	**73.90**	**49**	P	**P**	**00 26 08.0**	**-0.6**
	baz=297						
I05D	**Terrebonne, OR**	**73.91**	**48**	P	**P**	**00 26 07.8**	**-0.7**
	baz=297						
G06A	**Carlson Farm,**	**73.94**	**47**	PFAKE		00 26 20.0	+11
G06A				LR	LR		
	comp=Z,400nm,19.0s						
MSFE	**Esma-Masafi**	**73.98**	**290**	*i* P	**P**	**00 26 09.6**	**+0.5**
	SNR=9.2						
VSR	**Storozhevoye**	**74.03**	**320**	*e*P	**P**	**00 26 08.7**	**-0.2**
VSR				*e*S	**SKiKP**	**00 35 37.1**	**+2.1**
VSR				pmax	pmax		
	comp=Z,40nm,0.8s						
VSR				smax	smax		
	comp=N,70nm,3.4s						
VSR				MLR	MLR		
	comp=Z,1µm,16.0s						
VORD	**Divnogorie**	**74.08**	**320**	*e*P	**P**	**00 26 08.3**	**-0.9**
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
STEI	**Steigen**	**74.08**	**342**	*e*P	**P**	**00 26 09.1**	**+0.2**
F07A	**Phinny Hill Vi**	**74.08**	**46**	*e*P	**P**	**00 26 09.6**	**+0.3**
	comp=Z,36nm,1.1s						
HAWA	**Hanford**	**74.10**	**45**	PFAKE		00 26 20.0	+11
HAWA				LR	LR		

	comp=Z,400nm,20.0s						
UOSS	Minazif	74.13	290	*e*P	P	00 26 08.1	-1.9
	comp=Z,61nm,1.2s						
UOSS	Minazif	74.13	290	*i* P	P	00 26 10.2	+0.2
	SNR=10						
YBH	Yreka Blue Hor	74.19	51	PFAKE		00 26 20.0	+10
YBH				LR	LR		
	comp=Z,800nm,20.0s						
KMRM	Mail Ridge	74.19	52	PFAKE		00 26 20.0	+10
KMRM				LR	LR		
	comp=Z,1µm,19.0s						
L04D	Klamath Falls	74.24	50	P	P	00 26 10.2	-0.3
	baz=297						
HATD	Hatta, Dubai	74.24	290	*i* P	P	00 26 11.7	+1.0
	SNR=25						
HATD	Hatta, Dubai	74.24	290	P	P	00 26 12.1	+1.4
	SNR=7.6						
M02C	Callahan	74.24	51	P	P	00 26 10.7	+0.2
	baz=297						
E08A	Dider Farm, El	74.34	45	PFAKE		00 26 20.0	+9.2
E08A				LR	LR		
	comp=Z,400nm,18.0s						
ASHO	Ashiyiah	74.37	290	*i* P	P	00 26 12.7	+1.3
	SNR=18						
ASHO	Ashiyiah	74.37	290	P	P	00 26 12.8	+1.4
	SNR=9.5						
KULLO	Kullorsuaq	74.41	5	*i* P	P	00 26 12.3	+1.6
KULLO				pmax	pmax		
	comp=Z,50nm,1.2s						
KULLO	Kullorsuaq	74.41	5	*i* P	P	00 26 12.3	+1.6
	comp=Z,50nm,1.2s						
PINE	Pine Mountain	74.41	48	PFAKE		00 26 20.0	+8.4
PINE				LR	LR		
	comp=Z,700nm,19.0s						
J05D	Fort Rock, OR	74.45	49	P	P	00 26 11.8	0.0
	baz=297						
KCPM	Cahto Peak	74.52	53	PFAKE		00 26 20.0	+7.8
KCPM				LR	LR		
	comp=Z,1µm,19.0s						
N02D	Trinity Center	74.53	51	P	P	00 26 11.8	-0.3
	baz=297						
NAZ	Nazwa, Dubai	74.55	290	*i* P	P	00 26 13.1	+0.7
	SNR=12						
NAZ	Nazwa, Dubai	74.55	290	P	P	00 26 14.0	+1.5
	SNR=8.0						
GOF	Gofitskoye	74.66	313	⇑*e*P	P	00 26 13.1	+0.4
GOF				*e*S	S	00 35 47.9	+1.1
GOF				pmax	pmax		
	comp=Z,42nm,0.9s						
GOF				smax	smax		
	comp=N,31nm,0.9s						
GOF				smax	smax		
	comp=E,46nm,0.9s						
NEW	Newport	74.66	43	PFAKE		00 26 20.0	+7.3
NEW				LR	LR		
	comp=Z,300nm,20.0s						
NEW	Newport	74.66	43	P	P	00 26 13.1	+0.4
	baz=299,SNR=9.4						
FINES	FINESS Array B	74.69	333	P	P	00 26 13.3	+0.7
	comp=Z,19nm,0.9s,baz=58,slow=5.3,SNR=47						
FINES				PP	PP	00 29 01.4	+2.2
	comp=Z,5.3nm,1.0s,baz=46,slow=8.0,SNR=4.3						
FINES				LR	LR	01 01 39.6	
	comp=Z,583nm,18.2s,baz=56,slow=38						
FAQ	Al Faqa, Dubai	74.72	290	*i* P	P	00 26 13.5	+0.1
	SNR=18						
FAQ	Al Faqa, Dubai	74.72	290	P	P	00 26 14.2	+0.8
	SNR=6.9						
M04C	Macdoel	74.74	50	P	P	00 26 13.5	+0.1
	baz=297						
WDC	Whiskeytown Da	74.82	52	PFAKE		00 26 20.0	+6.3
WDC				LR	LR		
	comp=Z,700nm,19.0s						
O02D	Mt. Diablo Mer	74.84	52	P	P	00 26 14.1	+0.1
	baz=297						
E09A	Wood Farm, Sta	74.89	45	PFAKE		00 26 30.0	+16
E09A				LR	LR		
	comp=Z,400nm,20.0s						
ALNE	Al Ain	74.90	289	*i* P	P	00 26 14.7	+0.3
	SNR=11						
K05A	Summer Lake	74.93	49	PFAKE		00 26 30.0	+15
K05A				LR	LR		
	comp=Z,1µm,21.0s						
G08A	Pilot Rock	74.97	46	PFAKE		00 26 30.0	+15
G08A				LR	LR		
	comp=Z,400nm,22.0s						
ASUD	Al Ashush, Dub	74.98	290	*i* P	P	00 26 15.6	+0.6
	SNR=20						
ASUD	Al Ashush, Dub	74.98	290	P	P	00 26 17.0	+2.0
	SNR=11						
NCK	Nalchik	75.04	312	⇓*i*P	P	00 26 16.0	+1.0
NCK				pmax	pmax		
	comp=Z,21nm,1.0s						
TBLG	Delisi	75.11	310	*e*P	P	00 26 16.7	+1.3
ZEI	Tsey	75.17	311	*e*P	P	00 26 14.1	-1.9
ZEI				pmax	pmax		
	comp=Z,47nm,1.0s						
HOPS	Hopland Field	75.19	53	PFAKE		00 26 30.0	+14
HOPS				LR	LR		
	comp=Z,900nm,19.0s						
AJN	Ajban	75.29	290	*i* P	P	00 26 17.7	+1.0
	SNR=5.5						
KBZ	Khabaz	75.38	312	P	P	00 26 17.9	+1.0
	comp=Z,39nm,0.9s,baz=63,slow=2.9,SNR=57						
KBZ				LR	LR	01 01 45.2	
	comp=Z,766nm,20.3s,baz=77,slow=38						
KIV	Kislovodsk	75.41	313	*e*P	P	00 26 18.1	+0.9
	comp=Z,224nm,1.6s						
KIV				LR	LR		
	comp=Z,801nm,20.0s						
KIV	Kislovodsk	75.41	313	*i* P	P	00 26 18.6	+1.5
	SNR=25						
KIV	Kislovodsk	75.41	313	*e*P	P	00 26 17.9	+0.7
KIV				*e*S	S	00 35 55.4	+0.1
KIV						00 44 02.3	
KIV				pmax	pmax		
	comp=Z,210nm,1.1s						
KIV				pmax	pmax		
	comp=Z,356nm,4.7s						
KIV				MLR	MLR		
	comp=Z,2µm,18.0s						
KIV	Kislovodsk	75.41	313	P	P	00 26 19.1	+1.9
	SNR=36						
O03E	Paynes Creek	75.45	52	P	P	00 26 17.1	-0.4
	baz=298						
GDXM	Geysers	75.46	53	PFAKE		00 26 30.0	+12
GDXM				LR	LR		
	comp=Z,800nm,19.0s						
MOR8	Moi Rana	75.54	340	*e*P	P	00 26 16.7	-0.7
ONI	Oni	75.56	311	*e*P	P	00 26 20.6	+2.6
MOD	Modoc Plateau	75.70	50	PFAKE		00 26 30.0	+11
MOD				LR	LR		
	comp=Z,600nm,19.0s						
F10A	Beach Ranch, E	75.71	45	PFAKE		00 26 30.0	+11
F10A				LR	LR		
	comp=Z,400nm,21.0s						
MCCM	Marconi Confer	75.71	54	PFAKE		00 26 30.0	+11
MCCM				LR	LR		
	comp=Z,702nm,19.0s						
NEY	Neytrino	75.72	312	⇓*e*P	P	00 26 21.1	+2.0
NEY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GNI	Garni	75.85	308	*e*P	P	00 26 21.8	+2.0
GNI	Garni	75.85	308	*e*P	P	00 26 21.5	+1.6
	comp=Z,101nm,1.0s						
GNI				LR	LR		
	comp=Z,500nm,18.0s						
GNI	Garni	75.85	308	*i* P	P	00 26 21.4	+1.5
	SNR=17						
GNI	Garni	75.85	308	*ce*P	P	00 26 21.2	+1.3
GNI				pmax	pmax		
	comp=Z,942nm,1.7s						
GNI	Garni	75.85	308	P	P	00 26 21.9	+2.0
	SNR=27						
ORV	Oroville	76.01	52	PFAKE		00 26 30.0	+9.4
ORV				LR	LR		
	comp=Z,700nm,19.0s						
AKH	Akhalkalaki	76.09	310	*e*P	P	00 26 22.9	+1.7
AKH	Akhalkalaki	76.09	310	PFAKE		00 26 30.0	+8.8
AKH				LR	LR		
	comp=Z,3µm,19.0s						
AKH	Akhalkalaki	76.09	310	⇑*i*P	P	00 26 23.6	+2.4
VSU	Vasula	76.19	331	*e*P	P	00 26 21.6	+0.4
VSU				IAmb	IAmb	00 26 23.6	
	comp=Z,131nm,1.0s						
VSU	Vasula	76.19	331	*c i*P	P	00 26 21.6	+0.4
VSU				pmax	pmax		
	comp=Z,139nm,1.0s						
J08A	Circle Bar Ran	76.20	48	PFAKE		00 26 30.0	+8.3
J08A				LR	LR		
	comp=Z,600nm,22.0s						
BMO	Blue Mountains	76.20	46	PFAKE		00 26 30.0	+8.3
BMO				LR	LR		
	comp=Z,300nm,20.0s						
TASB	TASBURUN-IGDIR	76.27	308	*e*P	P	00 26 23.4	+1.3
WVOR	Wild Horse Val	76.54	49	PFAKE		00 26 30.0	+6.3
WVOR				LR	LR		
	comp=Z,800nm,21.0s						
BEKR	Beckworth	76.63	52	PFAKE		00 26 40.0	+16
BEKR				LR	LR		
	comp=Z,800nm,22.0s						
AFDM	Forest Hills D	76.65	53	PFAKE		00 26 40.0	+16
AFDM				LR	LR		
	comp=Z,600nm,20.0s						
KARS	Kars	76.74	309	*e*P	P	00 26 26.9	+2.0
CLDR	Caldiran	76.89	308	*e*P	P	00 26 27.6	+1.7
CLDR	Caldiran	76.89	308	*i* P	P	00 26 27.8	+1.9
CLDR				IAML_P			
	comp=Z,49nm,0.2s						
RUBR	Rubicon Trail	77.16	52	PFAKE		00 26 40.0	+13
RUBR				LR	LR		
	comp=Z,800nm,20.0s						
SUMG	Summit	77.16	0	PFAKE		00 26 40.0	+13
SUMG				LR	LR		
	comp=Z,2µm,22.0s						
SUMG	Summit	77.16	0	*i* P	P	00 26 28.5	+1.5
SUMG				pmax	pmax		
	comp=Z,110nm,1.1s						
SUMG	Summit	77.16	0	*i* P	P	00 26 28.5	+1.5
	comp=Z,111nm,1.1s						
BATM	Batumi	77.18	311	*e*P	P	00 26 28.5	+1.3
BATM	Batumi	77.18	311	⇑*i*P	P	00 26 28.0	+0.8
MSO	Missoula	77.25	43	P	P	00 26 27.2	-0.4
	baz=301,SNR=12						
SENK	Senkaya-Erzuru	77.26	310	*e*P	P	00 26 29.8	+1.9
DAGI	Agillar	77.29	310	*i* P	P	00 26 29.0	+1.1
DAGI				IAML_P			
	comp=Z,139nm,0.7s						
BCA	Borcka	77.31	311	⇓*i*P	P	00 26 28.8	+0.9
AGRB	Hanur-Agry	77.31	308	*e*P	P	00 26 30.0	+1.8
SAO	San Andreas Ge	77.36	55	*e*P	P	00 26 27.6	-0.7
	comp=Z,17nm,1.2s						
SAO				LR	LR		
	comp=Z,800nm,18.0s						
SAO	San Andreas Ge	77.36	55	*e*P	P	00 26 27.6	-0.7
SAO				pmax	pmax		
	comp=Z,17nm,1.2s						
SAO				MLR	MLR		
	comp=Z,800nm,18.0s						
PAHR	Pah Rah Range	77.37	51	PFAKE		00 26 40.0	+12
PAHR				LR	LR		
	comp=Z,700nm,21.0s						
VCNR	Virginia City	77.39	52	PFAKE		00 26 40.0	+11
VCNR				LR	LR		
	comp=Z,700nm,20.0s						
NSS	Namsos	77.45	340	*e*P	P	00 26 28.3	+0.1
SOC	Sochi	77.47	313	*e*P	P	00 26 28.1	-0.6
SOC				*e**PP	PcP	00 26 38.2	-0.8
SOC				*e**SP	pwP	00 26 41.4	+0.2
SOC				*e*		00 29 21.6	
SOC				*e*S	S	00 36 18.9	+1.2
SOC				*e*SS	SS	00 41 19.0	+2.9
SOC				*e*SSS	SSS	00 44 39.5	
SOC				pmax	pmax		
	comp=Z,52nm,0.8s						
SOC				MLR	MLR		
	comp=Z,1µm,15.0s						
DBAD	Bademkaya	77.47	310	*i* P	P	00 26 30.7	+1.8
DBAD				IAML_P			
	comp=Z,549nm,0.7s						
CMB	Columbia Colle	77.49	53	PFAKE		00 26 40.0	+11
CMB				LR	LR		
	comp=Z,600nm,19.0s						
EATA	Eleskirt	77.50	309	*i* P	P	00 26 31.8	+2.4
EATA				IAML_P			
	comp=Z,642nm,0.8s						
TUTA	Tutak	77.51	308	*i* P	P	00 26 31.6	+2.2
TUTA				IAML_P			
	comp=Z,600nm,1.0s						
VANB	Van	77.51	307	*e*P	P	00 26 30.9	+1.7
PNTR	Pine Nut	77.52	52	PFAKE		00 26 40.0	+11
PNTR				LR	LR		
	comp=Z,900nm,19.0s						
MLAZ	Malazgirt-MUS	77.82	308	*e*P	P	00 26 32.9	+1.9
YERR	Yerington	77.82	52	PFAKE		00 26 40.0	+9.0
YERR				LR	LR		
	comp=Z,1µm,21.0s						
KOPR	Koprukoy-ERZUR	77.87	309	*e*P	P	00 26 32.8	+1.5
WAKR	Walker	77.92	52	PFAKE		00 26 40.0	+8.4
WAKR				LR	LR		
	comp=Z,700nm,22.0s						
AKDM	Akdamar-Van	77.92	307	*e*P	P	00 26 33.2	+1.6
CUKT	Cukurca	78.02	306	*e*P	P	00 26 32.7	+0.6
MICGM	Minsk	78.03	327	*e*	P	00 26 32.0	+0.4
MICGM				*e*LR	LR	01 01 28.0	
MNK	Minsk	78.03	327	*e*P	P	00 26 32.0	+0.4
IZAR	Zarasai	78.04	329	*e*P	P	00 26 32.2	+0.6
IZAR				IAmb	IAmb	00 26 34.3	
	comp=Z,26nm,1.3s						
ISAL	Salakas	78.20	328	*e*P	P	00 26 32.6	+0.1
ISAL				IAmb	IAmb	00 26 35.2	
	comp=Z,17nm,1.0s						
ANN	Anapa	78.25	315	*e*P	P	00 26 33.3	+0.3
ANN				*e*S	S	00 36 24.3	-1.8
ANN				pmax	pmax		
	comp=Z,68nm,1.0s						
ANN				MLR	MLR		
	comp=E,711nm,17.0s						
ANN				MLR	MLR		
	comp=Z,973nm,17.0s						
ANN				MLR	MLR		
	comp=N,1µm,17.0s						
IIGN	Ignalina	78.29	328	*e*P	P	00 26 32.6	-0.4
IIGN				IAmb	IAmb	00 26 41.1	
	comp=Z,10nm,0.8s						
BMN	Battle Mountai	78.45	50	PFAKE		00 26 50.0	+16
BMN				LR	LR		
	comp=Z,800nm,18.0s						
RYN	Ryan	78.48	52	PFAKE		00 26 50.0	+15
RYN				LR	LR		
	comp=Z,700nm,20.0s						
VRTB	Varto-Mus	78.55	309	*e*P	P	00 26 38.4	+3.4
KVN	Kaiserville	78.56	51	PFAKE		00 26 50.0	+15
KVN				LR	LR		
	comp=Z,700nm,18.0s						
SCO	Scoresbysund	78.58	354	*i* P	P	00 26 35.7	+1.3
SCO				*i*		00 26 46.6	
SCO				pmax	pmax		
	comp=Z,24nm,1.2s						
SCO	Scoresbysund	78.58	354	*i* P	P	00 26 35.7	+1.3
	comp=Z,24nm,1.2s						
SCO				*i*		00 26 46.6	
OXZ	Oxford	78.59	158	PFAKE		00 26 50.0	+15
OXZ				LR	LR		
	comp=Z,1µm,22.0s						
MDPB	Devils Postpil	78.59	53	PFAKE		00 26 50.0	+15
MDPB				LR	LR		
	comp=Z,600nm,18.0s						
RPZ	Rata Peaks	78.63	159	P	P	00 26 33.5	-1.4
	comp=Z,8.9nm,1.0s,baz=281,slow=5.2,SNR=2.5						
HLID	Hailey	78.65	46	PFAKE		00 26 50.0	+14
HLID				LR	LR		
	comp=Z,400nm,18.0s						
HLID	Hailey	78.65	46	P	P	00 26 34.6	-1.0
	baz=301,SNR=18						
OMMB	Old Mammoth Mi	78.66	53	PFAKE		00 26 50.0	+14
OMMB				LR	LR		
	comp=Z,700nm,18.0s						
PAGB	Antelope Grade	78.71	55	PFAKE		00 26 50.0	+14
PAGB				LR	LR		
	comp=Z,800nm,20.0s						
MUSM	Mu-Merkez	78.73	308	*i* P	P	00 26 37.3	+1.3
MUSM				IAML_P			
	comp=Z,353nm,0.9s						
NVAR	Mina Array Bea	78.73	52	P	P	00 26 36.5	+0.3
	comp=Z,7.5nm,0.7s,baz=291,slow=5.6,SNR=62						
NVAR				LR	LR	00 58 28.6	
	comp=Z,457nm,19.2s,baz=292,slow=34						
KTUT	Trabzon	78.75	311	*e*P	P	00 26 36.8	+0.9
KOPT	Kop Dagi	78.76	310	*i* P	P	00 26 38.3	+2.0
KOPT				IAML_P			
	comp=Z,585nm,0.5s						
MLAC	Mammoth, Mammo	78.76	53	P	P	00 26 35.1	-1.2
	baz=300						
SRTM	Siirt_Merkez	78.81	307	*i* P	P	00 26 37.4	+0.9
SRTM				IAML_P			
	comp=Z,702nm,0.9s						
NV11	Mina Array Sit	78.83	52	PFAKE		00 26 50.0	+13
NV11				LR	LR		
	comp=Z,100nm,19.0s						
BNGL	BINGOL	78.86	309	*i* P	P	00 26 39.5	+2.8
TBLU	Trondheim	78.91	340	*e*P	P	00 26 35.2	-1.1
EGMT	Eagleton	79.01	40	PFAKE		00 26 50.0	+13
EGMT				LR	LR		
	comp=Z,300nm,20.0s						
EGMT	Eagleton	79.01	40	P	P	00 26 37.5	+0.2
	baz=304						
YEDI	Yedisu-Bingol	79.02	309	*e*P	P	00 26 39.3	+1.7
FFC	Flin Flon	79.05	32	*e*P	P	00 26 36.0	-1.3
	comp=Z,198nm,0.9s						
FFC				LR	LR		
	comp=Z,500nm,21.0s						
FFC	Flin Flon	79.05	32	*e*P	P	00 26 36.0	-1.3
FFC				pmax	pmax		
	comp=Z,198nm,0.9s						
FFC				MLR	MLR		
	comp=Z,500nm,21.0s						
BNGB	Bingl	79.15	309	*e*P	P	00 26 39.7	+1.4
BGOL	Bingol	79.16	309	*i* P	P	00 26 40.1	+1.7
BGOL				IAML_P			
	comp=Z,29nm,0.2s						
SVAN	Silvan-Diyarba	79.23	308	*e*P	P	00 26 39.9	+1.3
BOZ	Bozeman (W)	79.26	43	P	P	00 26 38.0	-0.8
	baz=303,SNR=18						
PKM	Mcpherson Peak	79.44	56	P	P	00 26 40.2	+0.2
	baz=300						
VES	Vestal, Richgr	79.48	55	P	P	00 26 40.0	0.0
	baz=300						
KELT	Kelkit	79.51	310	*i* P	P	00 26 42.3	+2.0
KELT				IAML_P			
	comp=Z,414nm,0.7s						
ELK	Elko	79.59	49	PFAKE		00 26 50.0	+9.2
ELK				LR	LR		
	comp=Z,1µm,22.0s						
AKASG	Malin Array Be	79.61	323	P	P	00 26 40.4	0.0
	comp=Z,6.6nm,0.6s,baz=48,slow=6.1,SNR=55						
AKASG				PP	PP	00 29 40.8	+0.1
	comp=Z,5.7nm,1.0s,baz=49,slow=8.4,SNR=5.9						
AKASG				LR	LR	01 04 24.4	
	comp=Z,2µm,19.6s,baz=55,slow=38						
AKBB	Malin Array Si	79.61	323	*e*P	P	00 26 40.3	-0.1
	comp=Z,33nm,1.1s						
AKBB	Malin Array Si	79.61	323	*e*P	P	00 26 40.3	-0.1
AKBB				pmax	pmax		
	comp=Z,33nm,1.1s						
HANI	Diyarbakir_Han	79.64	308	*i* P	P	00 26 41.8	+0.9
HANI				IAML_P			
	comp=Z,22nm,0.1s						
FCC	Fort Churchill	79.70	26	PFAKE		00 26 50.0	+9.3
FCC				LR	LR		
	comp=Z,300nm,20.0s						
TNCL	Tunceli-Merkez	79.85	309	*i* P	P	00 26 43.7	+1.6
TNCL				IAML_P			
	comp=Z,199nm,0.5s						
CWC	Cottonwood Cre	79.88	54	P	P	00 26 42.4	0.0
	baz=300						
ISA	Isabella, Lake	80.00	55	PFAKE		00 26 50.0	+7.1
ISA				LR	LR		
	comp=Z,1µm,20.0s						
ISA	Isabella, Lake	80.00	55	P	P	00 26 42.2	-0.7
	baz=300						
ARVC	Arvin	80.02	55	P	P	00 26 42.2	-0.7
	baz=300						
MAZI	Mazidag	80.09	308	*e*P	P	00 26 44.7	+1.3
GRAC	Grapevine Rang	80.09	53	P	P	00 26 43.9	+0.6
	baz=301						
ILULI	Ilulissat	80.10	5	PFAKE		00 26 50.0	+7.3
ILULI				LR	LR		
	comp=Z,400nm,19.0s						
SIM	Simferopol'	80.17	317	*ce*P	P	00 26 43.4	-0.1
SIM				S	S	00 36 47.7	+1.2
SIM				pmax	pmax		
	comp=Z,21nm,1.0s						
DOMB	Dombas	80.19	339	*e*P	P	00 26 43.1	-0.2
NB2	NORSAR Subarra	80.27	338	P	P	00 26 43.8	0.0
	comp=Z,45nm,1.4s,baz=43,slow=5.3						
NB2	NORSAR Subarra	80.27	338	P	P	00 26 43.8	0.0
	baz=43,slow=5.3						
NOA	NORSAR Array B	80.27	338	P	P	00 26 43.9	0.0
	comp=Z,10nm,1.0s,baz=40,slow=5.3,SNR=19						
NOA				LR	LR	01 05 31.2	
	comp=Z,924nm,20.4s,baz=40,slow=38						
NOA	NORSAR Array B	80.27	338	P	P	00 26 43.9	0.0
NOA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NOA				MLR	MLR		
	comp=Z,925nm,20.4s						
DAC	Darwin (Calif)	80.30	54	PFAKE		00 27 00.0	+15
DAC				LR	LR		
	comp=Z,600nm,21.0s						
OSI	Osito Audit: C	80.35	56	PFAKE		00 27 00.0	+15
OSI				LR	LR		
	comp=Z,900nm,19.0s						
BLG	Laguna Peak, P	80.36	56	P	P	00 26 44.0	-0.8
	baz=300						
SVRC	Sivrice-ELAZID	80.39	309	*e*P	P	00 26 46.7	+1.6
NC602	NORSAR Array S	80.39	338	*e*P	P	00 26 44.5	+0.1
NC602				*e*pP	pP	00 26 52.7	+0.4
KEMA	Kemaliye	80.47	310	*i* P	P	00 26 47.9	+2.5
MPMC	Manual Prospec	80.49	54	P	P	00 26 45.2	-0.5
	baz=301,SNR=9.9						
SUW	Suwalki	80.51	328	*e*P	P	00 26 45.9	+0.7
SUW				LMZ	LR	01 05 57.4	
	comp=Z,1µm,17.4s						
SUW	Suwalki	80.51	328	PFAKE		00 27 00.0	+15
SUW				LR	LR		
	comp=Z,600nm,18.0s						
SUW	Suwalki	80.51	328	*e*P	P	00 26 45.9	+0.7
SUW				MLR	MLR		
	comp=Z,1µm,17.4s						
H17A	Grant Village	80.54	44	P	P	00 26 46.3	+0.4
	baz=304						
IMW	Indian Meadow	80.60	44	PFAKE		00 27 00.0	+14
IMW				LR	LR		
	comp=Z,300nm,20.0s						
R11A	Troy Canyon, C	80.61	51	PFAKE		00 27 00.0	+14
R11A				LR	LR		
	comp=Z,700nm,19.0s						
R11A	Troy Canyon, C	80.61	51	P	P	00 26 46.9	+0.6
	baz=302,SNR=21						
LRMC	Laurel Mtn Rad	80.65	54	P	P	00 26 46.4	-0.1
	baz=301						
AKN	Aaknes	80.69	340	*e*P	P	00 26 46.4	+0.3
FURC	Furnace Creek,	80.71	53	P	P	00 26 46.9	+0.4
	baz=301,SNR=9.8						
EDW2	Edwards Air Fo	80.73	55	P	P	00 26 47.3	+0.5
	baz=301,SNR=12						
TPAW	Teton Pass	80.82	45	PFAKE		00 27 00.0	+13
TPAW				LR	LR		
	comp=Z,300nm,20.0s						
TPNV	Topopah Spring	80.88	53	PFAKE		00 27 00.0	+12
TPNV				LR	LR		
	comp=Z,600nm,21.0s						
TPNV	Topopah Spring	80.88	53	P	P	00 26 48.2	+0.4
	baz=301,SNR=21						
RLMT	Red Lodge	80.91	43	PFAKE		00 27 00.0	+12
RLMT				LR	LR		
	comp=Z,300nm,20.0s						
RLMT	Red Lodge	80.91	43	P	P	00 26 48.5	+0.6
	baz=304,SNR=18						
SNOW	Snow King Moun	80.95	45	PFAKE		00 27 00.0	+12
SNOW				LR	LR		
	comp=Z,400nm,20.0s						
PASC	Pasadena Art C	80.96	56	PFAKE		00 27 00.0	+12
PASC				LR	LR		
	comp=Z,1µm,19.0s						
LOHW	Long Hollow	80.96	44	PFAKE		00 27 00.0	+12
LOHW				LR	LR		
	comp=Z,200nm,22.0s						
MWC	Mount Wilson	81.02	56	PFAKE		00 27 00.0	+11
MWC				LR	LR		
	comp=Z,1µm,19.0s						
KVT	Kavak	81.09	313	*e*P	P	00 26 50.3	+1.7
AHID	Auburn Hatcher	81.12	45	PFAKE		00 27 00.0	+11
AHID				LR	LR		
	comp=Z,500nm,20.0s						
TOKT	Tokat	81.18	312	*e*P	P	00 26 49.5	+0.4

CIS	Catalina Islan	81.18	57	P	P	00 26 48.4	-0.8
	baz=301						
URFA	Urfa	81.21	308	eP	P	00 26 51.2	+1.8
OSL	Oslo	81.26	337	eP	P	00 26 50.4	+1.4
BFSC	Mount Baldy Ra	81.30	55	P	P	00 26 49.8	-0.2
	baz=301						
SCI2	San Clemente I	81.30	57	P	P	00 26 49.5	-0.3
	baz=301						
GSC	Goldstone, Bar	81.35	54	PFAKE		00 27 00.0	+10
GSC				LR	LR		
	comp=Z,600nm,18.0s						
GSC	Goldstone, Bar	81.35	54	P	P	00 26 50.7	+0.5
	baz=301,SNR=6.5						
SHOC	Shoshone, Teco	81.41	53	P	P	00 26 50.4	0.0
	baz=301						
RRX	Edison Barstow	81.44	55	P	P	00 26 51.0	+0.4
	baz=301						
DUG	Dugway, Tooele	81.45	48	PFAKE		00 27 00.0	+9.3
DUG				LR	LR		
	comp=Z,700nm,21.0s						
DUG	Dugway, Tooele	81.45	48	P	P	00 26 51.4	+0.8
	baz=303,SNR=29						
SKAR	Skarslia	81.47	339	eP	P	00 26 50.1	-0.2
HWUT	Hardware Ranch	81.47	47	PFAKE		00 27 00.0	+9.2
HWUT				LR	LR		
	comp=Z,300nm,21.0s						
DARE	Darende-Malaty	81.51	310	eP	P	00 26 53.0	+2.1
PPT	Papeete	81.54	116	LR	LR	00 54 48.3	
	comp=Z,269nm,21.9s,baz=314,slow=30						
PPT2	Papeete2	81.55	116	eS	S	00 37 02.0	+0.3
	comp=Z,102nm,22.8s						
PPT2	Papeete2	81.55	116	eLR	LR	00 52 01.6	
	comp=Z,821nm,24.2s,baz=304						
HYA	Hoyanger	81.73	340	eP	P	00 26 51.6	+0.1
LAO	LASA Array	81.75	40	P	P	00 26 52.4	+0.4
	baz=306						
KONO	Kongsberg	81.85	338	PFAKE		00 27 00.0	+7.8
KONO				LR	LR		
	comp=Z,800nm,20.0s						
SHPR	Sheep Range	81.86	52	PFAKE		00 27 00.0	+7.1
SHPR				LR	LR		
	comp=Z,600nm,20.0s						
TUQ	Turquoise Moun	81.90	54	P	P	00 26 53.0	-0.1
	baz=302,SNR=7.7						
HEC	Hector,Ludlow	81.93	54	P	P	00 26 53.5	+0.3
	baz=302						
MURC	Murrieta	81.96	56	P	P	00 26 52.9	-0.4
	baz=301						
KIS	Kishinev	82.02	320	eP	P	00 26 53.0	-0.3
KIS				eL	L	01 00 10.0	
KIS				LRM	MLR	01 05 42.0	
	comp=Z,2µm,16.0s						
KIS	Kishinev	82.02	320	eP	P	00 26 53.0	-0.3
KIS				e		00 27 03.0	
KIS				MLR	MLR		
	comp=Z,2µm,16.0s						
KIS				MLR	MLR		
	comp=N,1µm,16.0s						
BW06	Boulder Array	82.07	45	PFAKE		00 27 00.0	+6.0
BW06				LR	LR		
	comp=Z,400nm,20.0s						
BW06	Boulder Array	82.07	45	P	P	00 26 54.2	+0.2
	baz=304,SNR=13						
PDAR	Pinedale Array	82.07	45	P	P	00 26 52.9	-1.1
	comp=Z,5.3nm,0.8s,baz=280,slow=3.0,SNR=32						
MILM	Milestii Mici	82.07	320	⇑iP	P	00 26 53.4	-0.2
SFJD	Kangerlussuaq	82.32	5	eP	P	00 26 55.3	+0.8
	comp=Z,22nm,1.0s						
SFJD				LR	LR		
	comp=Z,400nm,21.0s						
SFJD	Kangerlussuaq	82.32	5	eP	P	00 26 55.3	+0.8
SFJD				pmax	pmax		
	comp=Z,23nm,1.0s						
SFJD				MLR	MLR		
	comp=Z,400nm,21.0s						
SFJD	Kangerlussuaq	82.32	5	i P	P	00 26 55.5	+1.0
	comp=Z,23nm,1.1s						
YOZ	Yozgat	82.34	312	eP	P	00 26 56.5	+1.1
109C	Camp Elliot, M	82.39	56	P	P	00 26 54.4	-1.1
	baz=301						
GMRC	Granite Mounta	82.42	54	P	P	00 26 56.1	+0.2
	baz=302,SNR=15						
BNN	Bunyan	82.43	311	eP	P	00 26 57.2	+1.4
GAZ	Gaziantep	82.44	309	eP	P	00 26 57.6	+1.8
KMRS	Kahramanmaras	82.47	309	eP	P	00 26 58.0	+2.1
PFO	Pinyon Flats O	82.47	55	eP	P	00 26 56.3	+0.1
	comp=Z,27nm,1.2s						
PFO				LR	LR		
	comp=Z,900nm,18.0s						
PFO	Pinyon Flats O	82.47	55	eP	P	00 26 56.3	+0.1
PFO				pmax	pmax		
	comp=Z,27nm,1.2s						
PFO				MLR	MLR		
	comp=Z,900nm,18.0s						
PFO	Pinyon Flats O	82.47	55	P	P	00 26 56.2	+0.1
	baz=302,SNR=11						
ASK	Askoy	82.57	340	eP	P	00 26 56.1	+0.2
ILGA	Ilgaz	82.58	314	PFAKE		00 27 10.0	+13
ILGA				LR	LR		
	comp=Z,800nm,22.0s						
BELC	Belle Mtn. Jos	82.60	55	P	P	00 26 56.8	0.0
	baz=302,SNR=11						
LDFC	Landfair	82.65	54	PFAKE		00 27 10.0	+13
LDFC				LR	LR		
	comp=Z,600nm,20.0s						
LVV	L'vov	82.78	325	eP	P	00 26 58.0	+0.7
LVV				e		00 30 07.5	
LVV				eS	S	00 37 12.8	-0.6
LVV				MLR	MLR		
	comp=N,900nm,18.0s						
LVV				MLR	MLR		
	comp=E,1µm,18.0s						
LVV				MLR	MLR		
	comp=Z,2µm,18.0s						
BAR	Barrett	82.81	56	PFAKE		00 27 10.0	+12
BAR				LR	LR		
	comp=Z,600nm,19.0s						
MONP2	Monument Peak	82.88	56	P	P	00 26 58.6	+0.3
	baz=302,SNR=6.2						
BEL	Belsk	83.03	328	eP	P	00 26 59.6	+1.1
BEL	Belsk	83.03	328	eP	P	00 26 59.6	+1.1
BLS5	Blasjo	83.04	339	eP	P	00 26 57.6	-0.8
IRM	Iron Mountain	83.12	54	P	P	00 27 00.1	+0.7
	baz=302,SNR=7.5						
NEE2	Needles Airpor	83.16	54	P	P	00 26 58.9	-0.6
	baz=302						
BC3	Big Chuckawall	83.17	55	P	P	00 26 59.9	+0.2
	baz=302,SNR=8.2						
PRAR	RASCA	83.20	322	⇑iP	P	00 26 59.9	+0.4
IKP	In-Ko-Pah, Jac	83.23	56	P	P	00 26 59.3	-0.7
	baz=302						
HOMB	Homborsund	83.28	337	eP	P	00 26 59.3	-0.3
SWSC	Sam W. Stewart	83.30	56	P	P	00 26 59.3	-0.9
	baz=302						
BR131	Keskin Array S	83.37	312	P	P	00 27 01.8	+1.1
	SNR=54						
BRTR	Keskin Array B	83.37	312	P	P	00 27 01.3	+0.6
	comp=Z,38nm,0.9s,baz=104,slow=3.2,SNR=134						
BRTR				PP	PP	00 30 11.9	-0.3
	comp=Z,2.3nm,1.0s,baz=83,slow=3.9,SNR=3.9						
BRTR				LR	LR	01 08 22.1	
	comp=Z,339nm,18.8s,baz=52,slow=39						
RAYN	Ar Rayn	83.39	293	eP	P	00 27 01.9	+0.9
	comp=Z,189nm,1.0s						
RAYN	Ar Rayn	83.39	293	i P	P	00 27 01.9	+0.9
	SNR=131						
RAYN	Ar Rayn	83.39	293	eP	P	00 27 01.9	+0.9
RAYN				pmax	pmax		
	comp=Z,189nm,1.0s						
W13A	Hualapai Mount	83.49	53	PFAKE		00 27 10.0	+8.5
W13A				LR	LR		
	comp=Z,600nm,18.0s						
CFR	Carcaliu	83.49	319	⇑iP	P	00 27 00.7	-0.3
TESR	Tescani	83.50	321	⇓iP	P	00 27 01.1	0.0
CEYT	Ceyhan	83.51	309	eP	P	00 27 03.1	+1.9
BIZ	Bicaz	83.53	322	⇑iP	P	00 27 01.7	+0.5
KWP	Kalwaria Pacla	83.56	325	eP	P	00 27 02.4	+1.1
KWP				eS	S	00 37 19.3	-2.1
KWP				LMZ	LR	01 07 21.9	
	comp=Z,2µm,16.9s						
KWP	Kalwaria Pacla	83.56	325	PFAKE		00 27 10.0	+8.7
KWP				LR	LR		
	comp=Z,9µm,21.0s						
KWP	Kalwaria Pacla	83.56	325	eP	P	00 27 02.4	+1.1
KWP				eS	S	00 37 19.3	-2.1
KWP				MLR	MLR		
	comp=Z,2µm,16.9s						
BURAR	Bucovina Array	83.58	322	⇑iP	P	00 27 02.3	+0.7
GKP	Gorka Klasztor	83.63	330	eP	P	00 27 01.9	+0.4
GKP				LMZ	LR	01 14 09.8	
	comp=Z,1µm,17.5s						
GKP	Gorka Klasztor	83.63	330	eP	P	00 27 01.9	+0.4
SNART	Snartemo	83.65	338	eP	P	00 27 01.4	-0.1
SNART				epP	pP	00 27 09.8	+0.3
PETR	Petresti	83.66	320	⇓iP	P	00 27 04.4	+2.5
YURE	YUREGIR	83.68	309	eP	P	00 27 04.5	+2.3
PDMCI	Parker Dam,Lak	83.74	54	P	P	00 27 01.6	-0.9
	baz=303						
Y12C	Blythe	83.77	54	PFAKE		00 27 10.0	+7.3
Y12C				LR	LR		
	comp=Z,1µm,20.0s						
Y12C	Blythe	83.77	54	P	P	00 27 01.9	-0.7
	baz=303						
TIRR	Tirgusor	83.77	319	PFAKE		00 27 10.0	+7.6
TIRR				LR	LR		
	comp=Z,2µm,18.0s						
TIRR	Tirgusor	83.77	319	⇓iP	P	00 27 04.2	+1.8
ANTO	Ankara	83.83	313	eP	P	00 27 03.4	+0.4
	comp=Z,70nm,1.1s						
ANTO				LR	LR		
	comp=Z,500nm,21.0s						
ANTO	Ankara	83.83	313	⇑iP	P	00 27 03.8	+0.8
ANTO	Ankara	83.83	313	eP	P	00 27 03.4	+0.4
ANTO				pmax	pmax		
	comp=Z,70nm,1.1s						
ANTO				MLR	MLR		
	comp=Z,500nm,21.0s						
ANTO	Ankara	83.83	313	P	P	00 27 04.4	+1.4
	SNR=15						
KARA	Karaisali	83.83	310	eP	P	00 27 04.2	+1.3
U15A	North Rim	83.85	51	PFAKE		00 27 10.0	+6.6
U15A				LR	LR		
	comp=Z,500nm,19.0s						
VRI	Vrincioaia	83.85	320	⇓iP	P	00 27 03.5	+0.6
TLB	Topalu	83.90	319	⇑iP	P	00 27 04.2	+1.1
PLOR	Plostina	83.91	320	⇑iP	P	00 27 03.6	+0.4
GLA	Glamis	83.93	55	PFAKE		00 27 10.0	+6.4
GLA				LR	LR		
	comp=Z,700nm,19.0s						
GLA	Glamis	83.93	55	P	P	00 27 03.7	+0.1
	baz=302						
K22A	Casper	83.96	44	PFAKE		00 27 10.0	+6.3
K22A				LR	LR		
	comp=Z,300nm,18.0s						
K22A	Casper	83.96	44	P	P	00 27 03.9	+0.2
	baz=306						
BISRR	Bisoca	84.06	320	⇓iP	P	00 27 05.8	+1.8
RWWY	Rawlins	84.11	45	PFAKE		00 27 20.0	+15
RWWY				LR	LR		
	comp=Z,500nm,22.0s						
OZUR		84.22	321	⇑iP	P	00 27 05.6	+0.8
KOLS	Kolonicke sedl	84.23	325	eP	P	00 27 05.4	+0.6
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KOLS	Kolonicke sedl	84.23	325	eP	P	00 27 05.4	+0.6
ICOR	Ion Corvin	84.33	319	⇑iP	P	00 27 06.8	+1.5
RGN	Rugen	84.33	333	PFAKE		00 27 20.0	+15
RGN				LR	LR		
	comp=Z,900nm,18.0s						
ARCR	ARCALIA	84.36	322	⇑iP	P	00 27 06.5	+1.0
O20A	White River Ci	84.38	46	P	P	00 27 06.0	+0.1
	baz=306						
MERS	Mersin	84.40	310	eP	P	00 27 06.7	+0.8
UZH	Uzhgorod	84.42	325	⇓iP	P	00 27 06.5	+0.8
UZH				e		00 27 10.2	
UZH				eS	S	00 37 28.5	-1.4
UZH				MLR	MLR		
	comp=Z,100nm,18.0s						
BMR	Baia Mare	84.44	323	⇑iP	P	00 27 06.8	+1.0
MUD	Monsted U'grnd	84.45	336	i P	P	00 27 05.3	-0.3
MUD				pmax	pmax		
	comp=Z,27nm,1.1s						
MUD	Monsted U'grnd	84.45	336	i P	P	00 27 05.3	-0.3
	comp=Z,27nm,1.1s						
MDUB	Mudurnu	84.48	314	PFAKE		00 27 20.0	+14
MDUB				LR	LR		
	comp=Z,2µm,18.0s						
MLR	Muntele Rosu	84.52	320	PFAKE		00 27 20.0	+14
MLR				LR	LR		
	comp=Z,2µm,18.0s						
MLR	Muntele Rosu	84.52	320	⇑iP	P	00 27 07.5	+1.1
RSSD	Black Hills	84.52	41	eP	P	00 27 05.8	-0.8
	comp=Z,15nm,1.3s						
RSSD	Black Hills	84.52	41	eP	P	00 27 05.8	-0.8
RSSD				pmax	pmax		
	comp=Z,15nm,1.3s						
RSSD	Black Hills	84.52	41	P	P	00 27 06.7	+0.1
	baz=308						
DOPR	Dopca	84.52	321	⇑iP	P	00 27 07.2	+0.9
MDND	Maddock	84.56	36	PFAKE		00 27 20.0	+14
MDND				LR	LR		
	comp=Z,300nm,20.0s						
MDND	Maddock	84.56	36	P	P	00 27 06.4	-0.1
	baz=310						
OJC	Ojcow	84.58	327	eP	P	00 27 07.5	+1.0
OJC				eS	S	00 37 31.1	-0.3
OJC				LMZ	LR	01 07 58.0	
	comp=Z,2µm,17.5s						
OJC	Ojcow	84.58	327	eP	P	00 27 07.5	+1.0
OJC				eS	S	00 37 31.2	-0.3
OJC				MLR	MLR		
	comp=Z,2µm,17.5s						
Y14A	Wickenburg	84.73	54	PFAKE		00 27 20.0	+12
Y14A				LR	LR		
	comp=Z,500nm,19.0s						
SECR		84.73	320	⇑iP	P	00 27 08.5	+1.1
ULM	Lac du Bonnet	84.79	33	P	P	00 27 06.5	-1.1
	comp=Z,3.7nm,0.9s,baz=313,slow=5.1,SNR=3.8						
ULM				LR	LR	01 02 51.7	
	comp=Z,271nm,22.0s,baz=312,slow=34						
113A	Mohawk Valley,	84.83	55	PFAKE		00 27 20.0	+12
113A				LR	LR		
	comp=Z,800nm,20.0s						
PV23	Carpenter Ridg	84.87	48	PFAKE		00 27 20.0	+11
PV23				LR	LR		
	comp=Z,600nm,20.0s						
NIE	Niedzica	84.88	326	eP	P	00 27 08.5	+0.4
NIE				eS	S	00 37 40.1	+5.5
NIE				LMZ	LR	01 08 43.8	
	comp=Z,500nm,16.8s						
NIE	Niedzica	84.88	326	eP	P	00 27 08.5	+0.4
NIE				eS	S	00 37 40.1	+5.5
NIE				MLR	MLR		
	comp=Z,500nm,16.8s						
PV14	Lion Creek, Pa	84.91	48	PFAKE		00 27 20.0	+11
PV14				LR	LR		
	comp=Z,800nm,18.0s						
PV20	West Nyswonger	84.96	48	PFAKE		00 27 20.0	+11
PV20				LR	LR		
	comp=Z,600nm,19.0s						
PV19	Morning Glory	84.97	48	PFAKE		00 27 20.0	+11
PV19				LR	LR		
	comp=Z,700nm,18.0s						
PV04	Paradox Valley	84.97	48	PFAKE		00 27 20.0	+11
PV04				LR	LR		
	comp=Z,700nm,19.0s						
WUAZ	Wupatki	84.97	52	PFAKE		00 27 20.0	+11
WUAZ				LR	LR		
	comp=Z,500nm,20.0s						
WUAZ	Wupatki	84.97	52	P	P	00 27 09.2	+0.3
	baz=304						
TBI	Tubuai	85.00	121	eS	S	00 37 37.7	+1.5
	comp=Z,374nm,28.3s						
TBI	Tubuai	85.00	121	eLR	LR	00 53 44.5	
	comp=Z,724nm,26.8s,baz=311						
VOIR		85.04	321	⇓iP	P	00 27 09.3	+0.3
PV18	Skein Mesa, Pa	85.05	48	PFAKE		00 27 20.0	+11
PV18				LR	LR		
	comp=Z,700nm,18.0s						
PV12	Saucer Basin,	85.08	48	PFAKE		00 27 20.0	+10
PV12				LR	LR		
	comp=Z,1µm,19.0s						
SILI	Silifke-Mersin	85.08	310	eP	P	00 27 09.5	+0.2
PV03	Paradox Valley	85.09	48	PFAKE		00 27 20.0	+10
PV03				LR	LR		
	comp=Z,400nm,22.0s						
PV07	Paradox Valley	85.11	48	PFAKE		00 27 20.0	+10
PV07				LR	LR		
	comp=Z,800nm,20.0s						
PV13	Radium Mtn., P	85.16	48	PFAKE		00 27 20.0	+10
PV13				LR	LR		
	comp=Z,900nm,19.0s						
N23A	Red Feather La	85.35	45	PFAKE		00 27 20.0	+9.1
N23A				LR	LR		
	comp=Z,400nm,19.0s						
N23A	Red Feather La	85.35	45	P	P	00 27 11.1	+0.2
	baz=307						
PHWY	Pilot Hill	85.40	44	PFAKE		00 27 20.0	+8.8
PHWY				LR	LR		
	comp=Z,300nm,20.0s						
X16A	Lo Mia Camp, P	85.54	53	PFAKE		00 27 20.0	+8.1
X16A				LR	LR		
	comp=Z,500nm,18.0s						
YLV	Yalova	85.54	315	⇑iP	P	00 27 11.5	-0.1
OKC	Ostrava-Krasne	85.62	327	eP	P	00 27 12.1	+0.4
OKC				eS	S	00 37 38.0	-3.7
OKC				MLR	MLR		
	comp=Z,700nm,16.1s						
OKC	Ostrava-Krasne	85.62	327	eP	P	00 27 12.1	+0.4
OKC				eS	S	00 37 38.0	-3.7
OKC				AMS	AMS	01 08 40.0	
	comp=Z,700nm,16.1s						
SMCO	Snowmass	85.74	47	PFAKE		00 27 20.0	+7.0
SMCO				LR	LR		
	comp=Z,700nm,21.0s						
KSP	Ksiaz	85.76	329	eP	P	00 27 13.1	+0.7
KSP				eS	S	00 37 43.8	+0.7
KSP				LMZ	LR	01 10 11.6	
	comp=Z,800nm,18.0s						
KSP	Ksiaz	85.76	329	eP	P	00 27 13.1	+0.7
KSP				eS	S	00 37 43.8	+0.7
MVCO	Mesa Verde	85.92	49	PFAKE		00 27 20.0	+6.3
MVCO				LR	LR		
	comp=Z,700nm,22.0s						
MVCO	Mesa Verde	85.92	49	P	P	00 27 13.5	-0.2
	baz=306						
MORC	Moravsky Berou	85.94	327	PFAKE		00 27 20.0	+6.6
MORC				LR	LR		
	comp=Z,700nm,20.0s						
MORC	Moravsky Berou	85.94	327	⇑iP	P	00 27 12.9	-0.5
MORC	Moravsky Berou	85.94	327	eP	P	00 27 13.4	0.0
214A	Organ Pipe Nat	85.95	55	P	P	00 27 13.5	-0.2
	baz=304						
OSTC	Ostas	86.00	329	eP	P	00 27 14.8	+1.2
OSTC				eS	S	00 37 45.4	-0.1
OSTC				AMS	AMS	01 09 30.0	
	comp=Z,1µm,17.0s						
PHSR	Pinarhisar	86.01	317	⇑iP	P	00 27 15.5	+1.7
CHVC	Chvalec	86.05	329	eP	P	00 27 14.4	+0.6
CHVC				AMS	AMS	01 09 30.0	
	comp=Z,900nm,17.7s						
KRLC	Kraliky	86.08	328	eP	P	00 27 14.2	+0.2
KRLC	Kraliky	86.08	328	eP	P	00 27 14.2	+0.2
PSZ	Piszkesteto	86.09	325	PFAKE		00 27 30.0	+16
PSZ				LR	LR		
	comp=Z,2µm,18.0s						
PSZ	Piszkesteto	86.09	325	⇑iP	P	00 27 14.5	+0.3
PSZ	Piszkesteto	86.09	325	⇑eP	P	00 27 14.0	-0.1
DPC	Dobruska-Polom	86.09	328	eP	P	00 27 14.9	+0.8
DPC				eS	S	00 37 42.0	-4.5
DPC				MLR	MLR		
	comp=Z,1µm,15.8s						
DPC	Dobruska-Polom	86.09	328	eP	P	00 27 14.9	+0.8
DPC				eS	S	00 37 42.0	-4.5
DPC				AMS	AMS	01 09 30.0	
	comp=Z,1µm,15.8s						
UPC	Upice	86.12	329	eP	P	00 27 14.1	-0.1
UPC				eS	S	00 37 40.8	-5.9
UPC				MLR	MLR		
	comp=Z,1µm,15.9s						
UPC	Upice	86.12	329	eP	P	00 27 14.1	-0.1
UPC				eSKS	S	00 37 40.8	-5.9
UPC				AMS	AMS	01 09 30.0	
	comp=Z,1µm,15.9s						
AGMN	Agassiz Nation	86.13	34	PFAKE		00 27 20.0	+5.7
AGMN				LR	LR		
	comp=Z,400nm,21.0s						
AGMN	Agassiz Nation	86.13	34	P	P	00 27 14.1	-0.2
	baz=313						
ELND	Elena	86.16	319	⇑iP	P	00 27 15.4	+0.9
ISCO	Idaho Springs	86.21	45	PFAKE		00 27 30.0	+15
ISCO				LR	LR		
	comp=Z,400nm,21.0s						
ISCO	Idaho Springs	86.21	45	P	P	00 27 15.0	-0.2
	baz=307						
VYHS	Vyhne	86.22	326	eP	P	00 27 15.1	+0.4
VYHS				pmax	pmax		
	comp=Z,12nm,1.3s						
VYHS	Vyhne	86.22	326	eP	P	00 27 15.1	+0.4
CSS	Mathiatis	86.28	309	PFAKE		00 27 30.0	+15
CSS				LR	LR		
	comp=Z,1µm,20.0s						
GZR	Gura Zlata	86.29	322	⇓iP	P	00 27 15.3	+0.1
W18A	Petrified Fore	86.30	51	PFAKE		00 27 30.0	+14
W18A				LR	LR		
	comp=Z,600nm,20.0s						
W18A	Petrified Fore	86.30	51	P	P	00 27 15.4	-0.2
	baz=305						
ISP	Isparta	86.46	312	PFAKE		00 27 30.0	+14
ISP				LR	LR		
	comp=Z,500nm,20.0s						
X18A	Snowflake	86.49	52	PFAKE		00 27 30.0	+13
X18A				LR	LR		
	comp=Z,600nm,20.0s						
S22A	4UR Ranch, Cre	86.68	48	PFAKE		00 27 30.0	+12
S22A				LR	LR		
	comp=Z,600nm,20.0s						
S22A	4UR Ranch, Cre	86.68	48	P	P	00 27 16.9	-0.7
	baz=306						
AMBH	Ambrzfalva	86.73	324	⇑eP	P	00 27 17.1	-0.1
PVCC	Panska Ves	86.75	329	eP	P	00 27 18.3	+1.1
PVCC				MLR	MLR		
	comp=Z,800nm,16.7s						
PVCC	Panska Ves	86.75	329	eP	P	00 27 18.3	+1.1
PVCC				AMS	AMS	01 16 20.0	
	comp=Z,800nm,16.7s						
BZS	Buzias	86.76	323	⇑iP	P	00 27 17.0	-0.4
BRG	Berggiesshubel	86.77	330	eP	P	00 27 17.1	-0.3
	comp=Z,17nm,1.5s						
BRG				ePP	PP	00 30 39.2	0.0
	comp=Z,26nm,1.6s						
BRG				S	S	00 37 56.0	+3.0
BRG				SS	SS	00 43 36.0	+2.4
	comp=N,501nm,15.3s						
	comp=E,688nm,15.9s						
	comp=Z,766nm,14.4s						
BRG	Berggiesshubel	86.77	330	eP	P	00 27 17.1	-0.3
BRG				e		00 30 39.2	
BRG				S	S	00 37 56.0	+3.0
BRG				SS	SS	00 43 36.0	+2.4
BRG				pmax	pmax		
	comp=Z,17nm,1.5s						
BRG				pmax	pmax		
	comp=Z,26nm,1.6s						
BRG				MLR	MLR		
	comp=N,501nm,15.3s						
BRG				MLR	MLR		
	comp=E,688nm,15.9s						
BRG				MLR	MLR		
	comp=Z,766nm,14.4s						
CLL	Collm	86.85	331	PFAKE		00 27 30.0	+12
CLL				LR	LR		
	comp=Z,800nm,18.0s						
CLL	Collm	86.85	331	i P	P	00 27 17.3	-0.4
CLL				i		00 27 26.0	
CLL				eS	S	00 37 53.0	-0.7
CLL				pmax	pmax		
	comp=Z,43nm,2.1s						
CLL				MLR	MLR		
	comp=Z,700nm,18.5s						
CLL	Collm	86.85	331	i P	P	00 27 17.3	-0.4
	comp=Z,43nm,2.1s						
CLL				i pP	pP	00 27 26.0	+0.3
CLL				e		00 30 21.0	
CLL				ePP	PP	00 30 38.0	-1.9
CLL				eS	S	00 37 53.0	-0.7
CLL				ePS		00 38 55.0	
CLL				eSS	SS	00 43 33.0	-1.8
CLL				e		00 48 00.0	
CLL				LmV		01 09 00.0	
	comp=Z,700nm,18.5s						
KRUC	Moravsky	86.97	327	eP	P	00 27 18.3	-0.1
Q24A	Divide	87.00	46	PFAKE		00 27 30.0	+11
Q24A				LR	LR		
	comp=Z,500nm,22.0s						
Q24A	Divide	87.00	46	P	P	00 27 19.1	0.0

	baz=307						
BALB	Balikesir	87.01	315	PFAKE		00 27 30.0	+11
BALB				LR	LR		
	comp=Z,1µm,20.0s						
MODS	Modra-Piesok	87.05	327	eP	P	00 27 18.7	-0.1
MODS				pmax	pmax		
	comp=Z,16nm,1.2s						
MODS	Modra-Piesok	87.05	327	eP	P	00 27 18.7	-0.1
GOPC	GO Pecny, Ondr	87.10	329	eP	P	00 27 24.1	+5.1
GOPC				eS	S	00 37 52.3	-3.9
GOPC				MLR	MLR		
	comp=Z,900nm,15.9s						
GOPC	GO Pecny, Ondr	87.10	329	eP	P	00 27 24.1	+5.1
GOPC				eS	S	00 37 52.3	-3.9
GOPC				AMS	AMS	01 10 50.0	
	comp=Z,900nm,15.9s						
PRU	Pruhonice	87.15	329	eP	P	00 27 20.0	+0.8
PRU				eS	SKSac	00 37 45.4	+0.9
PRU				MLR	MLR		
	comp=Z,800nm,16.9s						
PRU	Pruhonice	87.15	329	eP	P	00 27 20.0	+0.8
PRU				eSKS	SKSac	00 37 45.4	+0.9
PRU				AMS	AMS	01 10 50.0	
	comp=Z,800nm,16.9s						
TUC	Tucson	87.18	54	eP	P	00 27 19.2	-0.6
	comp=Z,19nm,1.5s						
TUC				LR	LR		
	comp=Z,900nm,18.0s						
TUC	Tucson	87.18	54	eP	P	00 27 19.3	-0.6
TUC				pmax	pmax		
	comp=Z,19nm,1.5s						
TUC				MLR	MLR		
	comp=Z,900nm,18.0s						
TUC	Tucson	87.18	54	P	P	00 27 19.7	-0.1
	baz=305						
TREC	Trest	87.23	328	eP	P	00 27 20.3	+0.7
TREC				MLR	MLR		
	comp=Z,900nm,16.7s						
TREC	Trest	87.23	328	eP	P	00 27 20.3	+0.7
TREC				AMS	AMS	01 09 00.0	
	comp=Z,900nm,16.7s						
CSKK	Cskako	87.28	325	eP	P	00 27 18.0	-1.9
MANT	Manisa	87.30	314	PFAKE		00 27 30.0	+10
MANT				LR	LR		
	comp=Z,3µm,19.0s						
ALN	Alexandroupoli	87.34	317	PFAKE		00 27 30.0	+10
ALN				LR	LR		
	comp=Z,200nm,20.0s						
SDCO	Great Sand Dun	87.52	47	PFAKE		00 27 30.0	+8.4
SDCO				LR	LR		
	comp=Z,500nm,21.0s						
SDCO	Great Sand Dun	87.52	47	P	P	00 27 21.5	-0.1
	baz=307						
TIH	Tihany	87.78	325	eP	P	00 27 19.0	-3.2
EZN	Ezine	87.84	316	⇑iP	P	00 27 23.3	+0.6
VTS	Vitosha	87.85	320	⇑iP	P	00 27 23.2	+0.2
SOP	Sopron	87.88	326	eP	P	00 27 21.1	-1.7
MORH	Mrgy, Hungar	87.88	324	⇑eP	P	00 27 22.0	-0.8
NKC	Novy Kostel	87.89	330	AMS	AMS	01 10 20.0	
	comp=Z,600nm,17.1s						
CONA	Conrad Observa	88.03	327	ePcP	P	00 27 24.1	+0.5
	comp=Z,9.5nm,1.2s,SNR=7.8						
CONA				PP	PP	00 30 52.5	+2.9
	comp=Z,9.0nm,1.3s						
KHC	Kasperske Hory	88.21	329	PFAKE		00 27 40.0	+16
KHC				LR	LR		
	comp=Z,300nm,19.0s						
KHC	Kasperske Hory	88.21	329	eP	P	00 27 23.9	-0.5
KHC				e		00 27 34.8	
KHC				eS	S	00 38 06.5	-0.4
KHC				MLR	MLR		
	comp=Z,1µm,15.7s						
KHC	Kasperske Hory	88.21	329	eP	P	00 27 23.9	-0.5
KHC				epP	sP	00 27 34.8	-0.4
KHC				eS	S	00 38 06.5	-0.4
KHC				AMS	AMS	01 11 20.0	
	comp=Z,1µm,15.7s						
IVI	Ivigtut	88.23	5	PFAKE		00 27 30.0	+5.9
IVI				LR	LR		
	comp=Z,400nm,20.0s						
GERES	GERESS Array B	88.36	329	P	P	00 27 25.1	0.0
	comp=Z,1.4nm,0.8s,baz=36,slow=5.0,SNR=12						
GERES				PP	PP	00 30 54.1	+1.9
	comp=Z,3.4nm,1.0s,baz=51,slow=7.0,SNR=9.3						
GERES				LR	LR	01 10 21.1	
	comp=Z,1µm,18.8s,baz=52,slow=38						
GERES	GERESS Array B	88.36	329	P	P	00 27 25.2	0.0
GERES						00 30 54.1	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GERES				MLR	MLR		
	comp=Z,1µm,18.8s						
EYMN	Ely	88.46	33	PFAKE		00 27 40.0	+14
EYMN				LR	LR		
	comp=Z,400nm,19.0s						
EYMN	Ely	88.46	33	P	P	00 27 24.5	-1.1
	baz=316						
KSCO	Kaye Shedlock’	88.52	45	PFAKE		00 27 40.0	+14
KSCO				LR	LR		
	comp=Z,500nm,19.0s						
T25A	Trinidad	88.58	47	PFAKE		00 27 40.0	+13
T25A				LR	LR		
	comp=Z,500nm,20.0s						
T25A	Trinidad	88.58	47	P	P	00 27 25.9	-0.7
	baz=308						
TASM	ASL Pad, Albuq	88.58	50	P	P	00 27 25.9	-0.8
	baz=307						
TASM	ASL Pad, Albuq	88.58	50	P	P	00 27 26.0	-0.6
	baz=307						
ANMO	Albuquerque	88.58	50	eP	P	00 27 26.7	0.0
	comp=Z,11nm,1.3s						
ANMO				LR	LR		
	comp=Z,900nm,21.0s						
ANMO	Albuquerque	88.58	50	ceP	P	00 27 27.9	+1.3
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ANMO	Albuquerque	88.58	50	P	P	00 27 25.6	-1.0
	baz=307						
ARSA	Arzberg	88.68	327	ePcP	P	00 27 26.8	+0.2
	comp=Z,5.5nm,1.1s						
ARSA				ePP	PP	00 30 56.8	+2.2
	comp=Z,4.0nm,1.2s						
319A	Douglas	88.76	54	PFAKE		00 27 40.0	+13
319A				LR	LR		
	comp=Z,800nm,19.0s						
Y22D	IRIS PASSCAL I	88.80	51	PFAKE		00 27 40.0	+12
Y22D				LR	LR		
	comp=Z,500nm,20.0s						
GRA1	Grafenberg Arr	88.82	330	PFAKE		00 27 40.0	+13
GRA1				LR	LR		
	comp=Z,400nm,20.0s						
MOA	Molln	88.83	328	ePcP	P	00 27 27.4	+0.1
	comp=Z,6.1nm,1.2s						
MOA				ePP	PP	00 30 56.1	+0.2
	comp=Z,26nm,1.4s						
ECSD	EROS Data Cent	88.86	38	PFAKE		00 27 40.0	+12
ECSD				LR	LR		
	comp=Z,300nm,18.0s						
ECSD	EROS Data Cent	88.86	38	P	P	00 27 27.3	-0.3
	baz=313						
HSIG		88.92	57	PFAKE		00 27 40.0	+12
HSIG				LR	LR		
	comp=Z,500nm,19.0s						
SRIG	Santa Rosalia	88.93	59	PFAKE		00 27 40.0	+12
SRIG				LR	LR		
	comp=Z,1µm,21.0s						
121A	Cookes Peak, D	89.12	52	P	P	00 27 29.3	+0.1
	baz=306						
SOKA	Soboth	89.32	326	ePcP	P	00 27 29.4	-0.3
	comp=Z,16nm,1.1s,SNR=18						
SOKA				ePP	PP	00 30 54.3	-5.6
	comp=Z,6.2nm,1.3s						
ESK	Eskdalemuir	89.36	341	PFAKE		00 27 40.0	+10
ESK				LR	LR		
	comp=Z,500nm,20.0s						
ESK	Eskdalemuir	89.36	341	iP	P	00 27 32.0	+2.4
E38A	The Farm, Brul	89.40	34	PFAKE		00 27 40.0	+10
E38A				LR	LR		
	comp=Z,400nm,20.0s						
E38A	The Farm, Brul	89.40	34	P	P	00 27 29.3	-0.7
	baz=316						
C40A	Isle Royale Na	89.56	31	PFAKE		00 27 40.0	+9.4
C40A				LR	LR		
	comp=Z,300nm,21.0s						
BGNE	Belgrade	89.58	41	PFAKE		00 27 40.0	+9.0
BGNE				LR	LR		
	comp=Z,400nm,20.0s						
BLY	Banja Luka	89.64	324	PFAKE		00 27 40.0	+8.9
BLY				LR	LR		
	comp=Z,1µm,19.0s						
BLY	Banja Luka	89.64	324	⇓iP	P	00 27 31.2	+0.1
OBKA	Obir	89.67	327	ePcP	P	00 27 30.9	-0.5
	comp=Z,4.1nm,0.9s						
OBKA				ePP	PP	00 31 04.1	+1.4
	comp=Z,18nm,1.3s						
SPMN	Marine on St.	89.78	35	PFAKE		00 27 40.0	+8.2
SPMN				LR	LR		
	comp=Z,400nm,21.0s						
SPMN	Marine on St.	89.78	35	P	P	00 27 32.0	+0.2
	baz=315						
KBA	Koelnbreinsper	89.82	328	ePcP	P	00 27 32.4	+0.3
	comp=Z,1.7nm,0.5s						
KBA				PP	PP	00 31 06.4	+2.5
	comp=Z,14nm,1.1s						
LIT	Litokhoron	89.92	318	PFAKE		00 27 40.0	+7.4
LIT				LR	LR		
	comp=Z,500nm,19.0s						
MYKA	Terra Mystica	90.02	327	ePcP	P	00 27 32.6	-0.3
	comp=Z,3.1nm,0.6s						
MYKA				ePP	PP	00 31 08.3	+2.9
	comp=Z,21nm,2.0s						
BOJS	Bojanci	90.06	326	iP	P	00 27 32.7	-0.4
BOJS				ePP	PP	00 31 07.3	+1.6
TTG	Podgorica	90.17	321	PFAKE		00 27 40.0	+6.4
TTG				LR	LR		
	comp=Z,600nm,18.0s						
F39A	Loretta	90.21	34	P	P	00 27 33.8	0.0
	baz=317						
STU	Stuttgart	90.38	331	PFAKE		00 27 50.0	+16
STU				LR	LR		
	comp=Z,500nm,21.0s						
WATA	Walderalm	90.44	329	ePcP	P	00 27 34.6	-0.4
	comp=Z,1.1nm,0.4s						
WATA				ePP	PP	00 31 10.4	+1.6
	comp=Z,17nm,1.1s						
EPT	El Paso	90.45	52	PFAKE		00 27 50.0	+15
EPT				LR	LR		
	comp=Z,500nm,18.0s						
ABTA	Abfaltersbach	90.45	328	ePcP	P	00 27 33.8	-1.2
	comp=Z,12nm,1.1s,SNR=11						
WTTA	Wattenberg	90.46	329	ePcP	P	00 27 34.9	-0.3
	comp=Z,5.4nm,1.1s						
WTTA				PP	PP	00 31 11.8	+2.7
	comp=Z,19nm,1.2s						
G39A	Holcombe	90.54	34	P	P	00 27 35.8	+0.5
	baz=317						
TIR	Tirane	90.57	320	PFAKE		00 27 50.0	+14
TIR				LR	LR		
	comp=Z,1µm,18.0s						
F40A	Park Falls	90.58	33	P	P	00 27 35.3	-0.2
	baz=317						
TRI	Trieste	90.63	326	PFAKE		00 27 50.0	+14
TRI				LR	LR		
	comp=Z,600nm,20.0s						
MOTA	Moosalm	90.64	329	ePcP	P	00 27 35.4	-0.5
	comp=Z,6.4nm,1.1s						
MOTA				PP	PP	00 31 06.4	-4.1
	comp=Z,2.2nm,0.8s						
RETA	Reutte	90.69	329	ePcP	P	00 27 36.3	+0.2
	comp=Z,7.5nm,1.1s,SNR=5.8						
RETA				PP	PP	00 31 12.5	+1.9
	comp=Z,6.7nm,1.4s						
SQTA	Sankt Quirin	90.69	329	ePcP	P	00 27 35.7	-0.4
	comp=Z,3.0nm,0.9s						
SQTA				PP	PP	00 31 08.9	-1.8
	comp=Z,20nm,1.2s						
AGG	Agios Georgios	90.73	317	PFAKE		00 27 50.0	+14
AGG				LR	LR		
	comp=Z,400nm,19.0s						
COWI	Conover	90.91	33	PFAKE		00 27 50.0	+13
COWI				LR	LR		
	comp=Z,300nm,19.0s						
WLF	Walferdange	90.91	333	PFAKE		00 27 50.0	+13
WLF				LR	LR		
	comp=Z,2µm,18.0s						
G40A	Rib Lake	91.02	34	PFAKE		00 27 50.0	+12
G40A				LR	LR		
	comp=Z,400nm,22.0s						
G40A	Rib Lake	91.02	34	P	P	00 27 37.6	0.0
	baz=317						
FETA	Feichten	91.05	329	ePcP	P	00 27 37.6	-0.3
	comp=Z,6.3nm,1.0s,SNR=8.1						
FETA				PP	PP	00 31 10.5	-3.2
	comp=Z,13nm,1.4s						
BFO	Black Forest	91.08	331	eP	P	00 27 36.6	-1.2
	comp=Z,16nm,1.1s						
BFO				LR	LR		
	comp=Z,500nm,19.0s						
BFO	Black Forest	91.08	331	eP	P	00 27 36.6	-1.2
BFO				pmax	pmax		
	comp=Z,16nm,1.1s						
BFO				MLR	MLR		
	comp=Z,500nm,19.0s						
DAVA	Damuels	91.23	330	ePcP	P	00 27 38.6	0.0
	comp=Z,8.6nm,1.0s,SNR=7.5						
DAVA				PP	PP	00 31 17.3	+2.2
	comp=Z,9.3nm,1.3s						
MNTX	Cornudas Mount	91.25	52	P	P	00 27 39.2	+0.3
	baz=307						
SCHQ	Schefferville	91.50	16	LR	LR	01 17 56.2	
	comp=Z,90nm,18.1s,baz=4.5,slow=42						
FUORN	Ofenpass-Fuorn	91.57	329	PFAKE		00 27 50.0	+10
FUORN				LR	LR		
	comp=Z,1µm,18.0s						
MSTX	Muleshoe	91.59	49	PFAKE		00 27 50.0	+9.4
MSTX				LR	LR		
	comp=Z,800nm,21.0s						
ECH	Echery	91.66	332	PFAKE		00 27 50.0	+10
ECH				LR	LR		
	comp=Z,400nm,20.0s						
AMTX	Amarillo	91.71	47	PFAKE		00 27 50.0	+8.9
AMTX				LR	LR		
	comp=Z,500nm,22.0s						
AMTX	Amarillo	91.71	47	P	P	00 27 41.5	+0.4
	baz=310						
SCIA	State Center	91.93	38	PFAKE		00 27 50.0	+8.2
SCIA				LR	LR		
	comp=Z,400nm,18.0s						
E44A	Grand Marais A	91.97	31	PFAKE		00 27 50.0	+8.1
E44A				LR	LR		
	comp=Z,400nm,19.0s						
KSU1	Kansas State U	92.00	41	PFAKE		00 27 50.0	+7.8
KSU1				LR	LR		
	comp=Z,400nm,22.0s						
KSU1	Kansas State U	92.00	41	P	P	00 27 41.8	-0.4
	baz=313						
DSB	Dublin	92.06	341	PFAKE		00 27 50.0	+7.8
DSB				LR	LR		
	comp=Z,400nm,21.0s						
I41A	Arkdale	92.07	34	PFAKE		00 27 50.0	+7.6
I41A				LR	LR		
	comp=Z,400nm,21.0s						
TUE	Stuetta	92.09	329	PFAKE		00 27 50.0	+7.3
TUE				LR	LR		
	comp=Z,800nm,19.0s						
ITM	Ithomi	92.18	316	PFAKE		00 27 50.0	+6.9
ITM				LR	LR		
	comp=Z,600nm,21.0s						
D46A	Sault St. Mari	92.58	29	P	P	00 27 45.2	+0.4
	baz=322						
I42A	Draeger Farm,	92.66	34	PFAKE		00 28 00.0	+15
I42A				LR	LR		
	comp=Z,400nm,22.0s						
I42A	Draeger Farm,	92.66	34	P	P	00 27 44.8	-0.3
	baz=318						
JFWS	Jewell Farm	92.73	35	PFAKE		00 28 00.0	+15
JFWS				LR	LR		
	comp=Z,300nm,18.0s						
H43A	Windswept, Lux	92.77	33	PFAKE		00 28 00.0	+14
H43A				LR	LR		
	comp=Z,300nm,20.0s						
L40A	Anamosa	92.85	37	PFAKE		00 28 00.0	+14
L40A				LR	LR		
	comp=Z,400nm,18.0s						
L40A	Anamosa	92.85	37	P	P	00 27 46.2	+0.1
	baz=316						
E46A	Sault Ste Mari	92.87	30	PFAKE		00 28 00.0	+14
E46A				LR	LR		
	comp=Z,500nm,22.0s						
SENIN	Lac Senin/Sane	93.06	330	PFAKE		00 28 00.0	+13
SENIN				LR	LR		
	comp=Z,1µm,18.0s						
AQU	L'Aquila	93.27	324	PFAKE		00 28 00.0	+12
AQU				LR	LR		
	comp=Z,1µm,20.0s						
VLC	Villacollemand	93.39	327	PFAKE		00 28 00.0	+11
VLC				LR	LR		
	comp=Z,1µm,18.0s						
N40A	Mertquake, Sal	93.52	38	P	P	00 27 49.3	+0.1
	baz=316						
WMOK	Wichita Mounta	93.62	46	PFAKE		00 28 00.0	+10
WMOK				LR	LR		
	comp=Z,700nm,22.0s						
WMOK	Wichita Mounta	93.62	46	P	P	00 27 49.5	-0.3
	baz=311						
L42A	Oliver, Polo	93.69	36	PFAKE		00 28 00.0	+10
L42A				LR	LR		
	comp=Z,300nm,19.0s						
L42A	Oliver, Polo	93.69	36	P	P	00 27 49.8	-0.1
	baz=318						
CLF	Chambon-Foret	93.75	334	PFAKE		00 28 00.0	+10
CLF				LR	LR		
	comp=Z,800nm,20.0s						
TIP	Timpagrande	93.79	320	PFAKE		00 28 00.0	+9.5
TIP				LR	LR		
	comp=Z,700nm,18.0s						
I45A	Fountain	93.82	32	PFAKE		00 28 00.0	+10
I45A				LR	LR		
	comp=Z,400nm,19.0s						
K43A	Burlington	93.83	34	PFAKE		00 28 00.0	+9.4
K43A				LR	LR		
	comp=Z,400nm,22.0s						
TXAR	Lajitas Array	93.87	53	P	P	00 27 51.1	-0.1
	comp=Z,20nm,1.1s,baz=320,slow=2.4,SNR=33						
TXAR				PP	PP	00 31 42.3	+5.9
	comp=Z,0.7nm,0.5s,baz=299,slow=8.1,SNR=6.5						
TXAR				LR	LR	01 07 26.9	
	comp=Z,562nm,19.5s,baz=0.0,slow=34						
HPIG		93.93	56	PFAKE		00 28 00.0	+8.4
HPIG				LR	LR		
	comp=Z,600nm,18.0s						
GLMI	Grayling	93.94	31	PFAKE		00 28 00.0	+8.9
GLMI				LR	LR		
	comp=Z,400nm,22.0s						
GLMI	Grayling	93.94	31	P	P	00 27 52.1	+1.1
	baz=321						
N41A	Harden Midland	94.03	37	PFAKE		00 28 00.0	+8.5
N41A				LR	LR		
	comp=Z,400nm,19.0s						
N41A	Harden Midland	94.03	37	P	P	00 27 52.0	+0.4
	baz=317						
BNI	Bardonecchia	94.36	330	PFAKE		00 28 00.0	+6.8
BNI				LR	LR		
	comp=Z,700nm,21.0s						
ABTX	Abilene, Hawle	94.46	48	PFAKE		00 28 00.0	+6.3
ABTX				LR	LR		
	comp=Z,900nm,20.0s						
ABTX	Abilene, Hawle	94.46	48	P	P	00 27 54.5	+0.8
	baz=311						
TUL1	Leonard	94.65	43	PFAKE		00 28 10.0	+16
TUL1				LR	LR		
	comp=Z,400nm,20.0s						
N43A	Stutzman Famil	94.72	36	P	P	00 27 55.5	+0.8
	baz=318						
D52A	ZEK Kipawa Sen	94.78	26	P	P	00 27 55.2	+0.3
	baz=326						
HDIL	Hopedale	94.94	36	PFAKE		00 28 10.0	+14
HDIL				LR	LR		
	comp=Z,400nm,18.0s						
M44A	Midewin, Midew	94.96	35	PFAKE		00 28 10.0	+14
M44A				LR	LR		
	comp=Z,300nm,21.0s						
D53A	Lac Vacive, Po	94.96	26	PFAKE		00 28 10.0	+14
D53A				LR	LR		
	comp=Z,500nm,19.0s						
J47A	Sunmer	95.09	32	PFAKE		00 28 10.0	+14
J47A				LR	LR		
	comp=Z,400nm,18.0s						
SSB	Saint Sauveur	95.09	331	PFAKE		00 28 10.0	+14
SSB				LR	LR		
	comp=Z,400nm,18.0s						
L46A	Eue Claire	95.34	34	PFAKE		00 28 10.0	+13
L46A				LR	LR		
	comp=Z,400nm,22.0s						
I49A	Point Hope	95.43	31	PFAKE		00 28 10.0	+12
I49A				LR	LR		
	comp=Z,400nm,22.0s						
J48A	Bridge Port	95.51	32	PFAKE		00 28 10.0	+12
J48A				LR	LR		
	comp=Z,300nm,18.0s						
CCM	Cathedral Cave	95.74	39	eP	P	00 27 58.2	-1.2
	comp=Z,11nm,1.1s						
CCM				LR	LR		
	comp=Z,300nm,19.0s						
CCM	Cathedral Cave	95.74	39	eP	P	00 27 58.2	-1.2
CCM				pmax	pmax		
	comp=Z,11nm,1.1s						
CCM				MLR	MLR		
	comp=Z,300nm,19.0s						
CCM	Cathedral Cave	95.74	39	P	P	00 27 59.6	+0.2
	baz=316						
JCT	Junction City	95.74	50	PFAKE		00 28 10.0	+10
JCT				LR	LR		
	comp=Z,600nm,18.0s						
JCT	Junction City	95.74	50	P	P	00 28 00.1	+0.4
	baz=310						
ALGO	Algonquin Park	95.77	27	P	P	00 27 59.8	+0.4
	baz=326						
M46A	Old House Fiel	95.77	34	PFAKE		00 28 10.0	+11
M46A				LR	LR		
	comp=Z,500nm,21.0s						
U40A	Yellville	96.05	41	P	P	00 28 01.1	+0.3
	baz=315						
SFIN	Lafayette	96.19	35	PFAKE		00 28 10.0	+8.6
SFIN				LR	LR		
	comp=Z,400nm,18.0s						
WHTX	Lake Whitney,	96.27	47	PFAKE		00 28 10.0	+8.1
WHTX				LR	LR		
	comp=Z,800nm,22.0s						
WHTX	Lake Whitney,	96.27	47	P	P	00 28 02.6	+0.7
	baz=312						
PEMO	Pembroke	96.31	26	P	P	00 28 01.9	+0.1
	baz=327						
SADO	Sadowa	96.31	28	PFAKE		00 28 10.0	+8.1
SADO				LR	LR		
	comp=Z,300nm,19.0s						
W39A	Magazine	96.33	43	PFAKE		00 28 10.0	+7.9
W39A				LR	LR		
	comp=Z,400nm,20.0s						
W39A	Magazine	96.33	43	P	P	00 28 02.4	+0.3
	baz=314						
AAM	Ann Arbor	96.35	32	PFAKE		00 28 10.0	+7.9
AAM				LR	LR		
	comp=Z,300nm,19.0s						
K50A	Casco	96.45	31	PFAKE		00 28 10.0	+7.5
K50A				LR	LR		
	comp=Z,300nm,20.0s						
M48A	Edgerton	96.50	33	PFAKE		00 28 10.0	+7.2
M48A				LR	LR		
	comp=Z,400nm,18.0s						
P45A	Graceland, Par	96.50	36	PFAKE		00 28 10.0	+7.2
P45A				LR	LR		
	comp=Z,300nm,18.0s						
FURI	Furi	96.58	284	eP	P	00 28 04.3	+0.3
	comp=Z,28nm,1.0s						
CLTB	Caltabellotta	96.87	321	PFAKE		00 28 20.0	+15
CLTB				LR	LR		
	comp=Z,700nm,19.0s						
MIAR	Mount Ida	96.90	43	PFAKE		00 28 20.0	+15
MIAR				LR	LR		
	comp=Z,400nm,20.0s						
MIAR	Mount Ida	96.90	43	P	P	00 28 05.0	+0.3
	baz=314						
PLVO	Plevna	96.91	27	PFAKE		00 28 20.0	+15
PLVO				LR	LR		
	comp=Z,300nm,21.0s						
OLIL	Olney	96.92	37	PFAKE		00 28 20.0	+15
OLIL				LR	LR		
	comp=Z,300nm,19.0s						
435B	Jarrell	96.99	48	PFAKE		00 28 20.0	+15
435B				LR	LR		
	comp=Z,600nm,19.0s						
PBMO	Poplar Bluff	97.11	40	PFAKE		00 28 20.0	+14
PBMO				LR	LR		
	comp=Z,300nm,21.0s						
WHAR	Wooly Hollow	97.13	42	PFAKE		00 28 20.0	+14

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WHAR                              LR       LR
      comp=Z,300nm,19.0s
N49A  Columbus Grove    97.19  33 PFAKE            00 28 20.0  +14
N49A                              LR       LR
      comp=Z,300nm,22.0s
W41B  Gary Mavity, V    97.23  42 PFAKE            00 28 20.0  +14
W41B                              LR       LR
      comp=Z,300nm,18.0s
M50A  Fremont           97.34  32 PFAKE            00 28 20.0  +13
M50A                              LR       LR
      comp=Z,300nm,20.0s
X40A  Basin Creek Fa    97.38  43 PFAKE            00 28 20.0  +13
X40A                              LR       LR
      comp=Z,300nm,20.0s
BLO   Bloomington       97.39  36 PFAKE            00 28 20.0  +13
BLO                               LR       LR
      comp=Z,400nm,20.0s
833A  Chaparral WMA,    97.41  51 PFAKE            00 28 20.0  +13
833A                              LR       LR
      comp=Z,700nm,18.0s
WDD   Wied Dalam        97.41 319 PFAKE            00 28 20.0  +13
WDD                               LR       LR
      comp=Z,400nm,19.0s
UALR  University of     97.46  42 PFAKE            00 28 20.0  +13
UALR                              LR       LR
      comp=Z,400nm,22.0s
PARMO Parma             97.56  39 PFAKE            00 28 20.0  +12
PARMO                             LR       LR
      comp=Z,300nm,20.0s
O49A  Covington         97.69  34 PFAKE            00 28 20.0  +12
O49A                              LR       LR
      comp=Z,500nm,19.0s
USIN  University of     97.72  37 PFAKE            00 28 20.0  +12
USIN                              LR       LR
      comp=Z,400nm,18.0s
P48A  Milroy            97.72  35 PFAKE            00 28 20.0  +12
P48A                              LR       LR
      comp=Z,400nm,20.0s
J54A  Appleton          97.75  29 PFAKE            00 28 20.0  +12
J54A                              LR       LR
      comp=Z,400nm,19.0s
PVMO  Portageville      97.78  40 PFAKE            00 28 20.0  +11
PVMO                              LR       LR
      comp=Z,300nm,20.0s
WLAR  White Oak Lake    97.78  43 PFAKE            00 28 20.0  +11
WLAR                              LR       LR
      comp=Z,500nm,19.0s
HBAR  Harrisburg        97.87  41 PFAKE            00 28 20.0  +11
HBAR                              LR       LR
      comp=Z,1μm,21.0s
T45A  Paducah           97.90  38 PFAKE            00 28 20.0  +11
T45A                              LR       LR
      comp=Z,400nm,21.0s
M52A  Chesterland       98.00  31 PFAKE            00 28 20.0  +10
M52A                              LR       LR
      comp=Z,200nm,22.0s
N51A  Ashland           98.03  32 PFAKE            00 28 20.0  +10
N51A                              LR       LR
      comp=Z,400nm,19.0s
J55A  Hilton            98.10  28 PFAKE            00 28 20.0  +10
J55A                              LR       LR
      comp=Z,300nm,19.0s
ERPA  Erie              98.13  30 PFAKE            00 28 20.0  +10
ERPA                              LR       LR
      comp=Z,400nm,22.0s
NATX  Nacogdoches       98.17  46 PFAKE            00 28 20.0 +9.4
NATX                              LR       LR
      comp=Z,400nm,20.0s
LONY  Lake Ozonia       98.20  25 PFAKE            00 28 20.0  +10
LONY                              LR       LR
      comp=Z,300nm,18.0s
WCI   Wyandotte Cave    98.22  36 PFAKE            00 28 20.0 +9.3
WCI                               LR       LR
      comp=Z,400nm,22.0s
Z41A  Richland Creek    98.26  44 PFAKE            00 28 20.0 +9.1
Z41A                              LR       LR
      comp=Z,300nm,21.0s
ACSO  Alum Creek Sta    98.30  33 PFAKE            00 28 20.0 +9.1
ACSO                              LR       LR
      comp=Z,500nm,18.0s
HALT  Halls             98.34  40 PFAKE            00 28 20.0 +8.8
HALT                              LR       LR
      comp=Z,300nm,22.0s
FRNY  Flat Rock         98.38  25 PFAKE            00 28 20.0 +8.8
FRNY                              LR       LR
      comp=Z,300nm,20.0s
X43A  Marvell           98.49  42 PFAKE            00 28 20.0 +8.1
X43A                              LR       LR
      comp=Z,400nm,19.0s
MMNY  Mt. Morris Dam    98.50  28 PFAKE            00 28 20.0 +8.2
MMNY                              LR       LR
      comp=Z,300nm,19.0s
BATG  Bathurst New B    98.60  19 PFAKE            00 28 20.0 +7.8
BATG                              LR       LR
      comp=Z,400nm,22.0s
HKT   Hockley           98.67  48 PFAKE            00 28 20.0 +7.3
HKT                               LR       LR
      comp=Z,500nm,19.0s
DRLN  Deer Lake         98.73  13 PFAKE            00 28 20.0 +7.3
DRLN                              LR       LR
      comp=Z,500nm,20.0s
T47A  Sharon Grove      98.74  38 PFAKE            00 28 20.0 +7.0
T47A                              LR       LR
      comp=Z,400nm,18.0s
R49A  Shelbyville       98.75  36 PFAKE            00 28 20.0 +7.0
R49A                              LR       LR
      comp=Z,400nm,20.0s
M54A  Oil Creek Stat    98.77  30 PFAKE            00 28 20.0 +6.9
M54A                              LR       LR
      comp=Z,400nm,20.0s
N53A  Lisbon            98.82  31 PFAKE            00 28 20.0 +6.7
N53A                              LR       LR
      comp=Z,200nm,20.0s
P51A  Williamsport      98.85  33 PFAKE            00 28 20.0 +6.6
P51A                              LR       LR
      comp=Z,300nm,18.0s
NCB   Newcomb           98.89  25 PFAKE            00 28 20.0 +6.4
NCB                               LR       LR
      comp=Z,300nm,19.0s
O52A  Adamsville        98.92  32 PFAKE            00 28 20.0 +6.3
O52A                              LR       LR
      comp=Z,300nm,20.0s
WVT   Waverly           99.00  39 PFAKE            00 28 20.0 +5.8
WVT                               LR       LR
      comp=Z,400nm,19.0s
Q51A  Peebles           99.07  34 PFAKE            00 28 30.0  +16
Q51A                              LR       LR
      comp=Z,400nm,22.0s
N54A  Moraine State     99.07  31 PFAKE            00 28 30.0  +16
N54A                              LR       LR
      comp=Z,300nm,20.0s
R50A  Paris             99.17  35 PFAKE            00 28 30.0  +15
R50A                              LR       LR
      comp=Z,300nm,20.0s
OXF   Oxford            99.33  41 PFAKE            00 28 30.0  +14
OXF                               LR       LR
      comp=Z,300nm,20.0s
PKME  Peaks-Kenny Pk    99.46  22 PFAKE            00 28 30.0  +14
PKME                              LR       LR
      comp=Z,300nm,19.0s
T49A  Edmonton          99.47  37 PFAKE            00 28 30.0  +14
T49A                              LR       LR
      comp=Z,300nm,18.0s
LBNH  Lisbon            99.48  24 PFAKE            00 28 30.0  +14
LBNH                              LR       LR
      comp=Z,300nm,18.0s
P53A  Whipple           99.63  32 PFAKE            00 28 30.0  +13
P53A                              LR       LR
      comp=Z,400nm,19.0s
N55A  Marion Center     99.66  30 PFAKE            00 28 30.0  +13
N55A                              LR       LR
      comp=Z,300nm,20.0s
PLAL  Pickwick Lake     99.72  40 PFAKE            00 28 30.0  +13
PLAL                              LR       LR
      comp=Z,300nm,20.0s
BINY  Binghamton        99.72  27 PFAKE            00 28 30.0  +13
BINY                              LR       LR
      comp=Z,500nm,19.0s
HNH   Hanover           99.83  24 PFAKE            00 28 30.0  +12
HNH                               LR       LR
      comp=Z,400nm,20.0s
CLTN  Cedars of Leba    99.83  38 PFAKE            00 28 30.0  +12
CLTN                              LR       LR
      comp=Z,200nm,20.0s
V48A  Smith Brothers    99.83  38 PFAKE            00 28 30.0  +12
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V48A                              LR       LR
      comp=Z,300nm,19.0s
WVL   Waterville        99.96  22 PFAKE            00 28 30.0  +12
WVL                               LR       LR
      comp=Z,300nm,21.0s
S51A  Beattyville      100.04  35 PFAKE            00 28 30.0  +11
S51A                              LR       LR
      comp=Z,300nm,19.0s
MCWV  Mont Chateau     100.20  31 PFAKE            00 28 30.0  +11
MCWV                              LR       LR
      comp=Z,200nm,19.0s
SSPA  Standing Stone   100.25  30 PFAKE            00 28 30.0  +10
SSPA                              LR       LR
      comp=Z,400nm,21.0s
FFD   Franklin Falls   100.25  24 PFAKE            00 28 30.0  +10
FFD                               LR       LR
      comp=Z,300nm,20.0s
O56A  Blue Knob Stat   100.26  30 PFAKE            00 28 30.0  +10
O56A                              LR       LR
      comp=Z,500nm,22.0s
R53A  Hurricane        100.29  33 PFAKE            00 28 30.0  +10
R53A                              LR       LR
      comp=Z,300nm,21.0s
Q54A  Coxs Mills       100.29  32 PFAKE            00 28 30.0  +10
Q54A                              LR       LR
      comp=Z,400nm,18.0s
KEST  Kesra            100.31 322 P        Pdif    00 28 19.9 -0.2
      comp=Z,2.4nm,0.7s,baz=10,slow=6.2,SNR=4.3
GGN   Saint George     100.34  20 PFAKE            00 28 30.0  +10
GGN                               LR       LR
      comp=Z,300nm,19.0s
EMMW  East Machias     100.53  21 PFAKE            00 28 30.0 +9.3
EMMW                              LR       LR
      comp=Z,300nm,21.0s
X48A  Hartselle        100.68  39 PFAKE            00 28 30.0 +8.3
X48A                              LR       LR
      comp=Z,300nm,20.0s
SWET  Sewanee          100.70  38 PFAKE            00 28 30.0 +8.2
SWET                              LR       LR
      comp=Z,300nm,19.0s
T52A  Hallie           100.75  35 PFAKE            00 28 30.0 +8.0
T52A                              LR       LR
      comp=Z,300nm,21.0s
N59A  State Game Lan   100.89  28 PFAKE            00 28 30.0 +7.5
N59A                              LR       LR
      comp=Z,600nm,18.0s
TZTN  Tazewell         100.91  36 PFAKE            00 28 30.0 +7.3
TZTN                              LR       LR
      comp=Z,400nm,22.0s
QUA2  Belchertown      101.04  25 PFAKE            00 28 30.0 +6.9
QUA2                              LR       LR
      comp=Z,300nm,20.0s
W50A  Signal Mountai   101.04  38 PFAKE            00 28 30.0 +6.7
W50A                              LR       LR
      comp=Z,400nm,20.0s
V51A  Loudon           101.08  37 PFAKE            00 28 30.0 +6.6
V51A                              LR       LR
      comp=Z,400nm,20.0s
PAGS  Pennsylvania G   101.08  29 PFAKE            00 28 30.0 +6.7
PAGS                              LR       LR
      comp=Z,300nm,18.0s
HRV   Adam Dziewonsk   101.13  24 PFAKE            00 28 30.0 +6.5
HRV                               LR       LR
      comp=Z,300nm,18.0s
R55A  Marlinton        101.19  32 PFAKE            00 28 30.0 +6.1
R55A                              LR       LR
      comp=Z,400nm,18.0s
ODNJ  Ogdensburg       101.22  27 PFAKE            00 28 30.0 +6.1
ODNJ                              LR       LR
      comp=Z,400nm,20.0s
CPCT  Cooper Cave      101.27  37 PFAKE            00 28 30.0 +5.7
CPCT                              LR       LR
      comp=Z,400nm,20.0s
147A  Livingston       101.32  41 PFAKE            00 28 40.0  +15
147A                              LR       LR
      comp=Z,400nm,20.0s
WES   Weston           101.32  24 PFAKE            00 28 40.0  +16
WES                               LR       LR
      comp=Z,300nm,18.0s
V52A  Sevierville      101.44  36 PFAKE            00 28 40.0  +15
V52A                              LR       LR
      comp=Z,400nm,18.0s
Y49A  Blount Mountai   101.47  39 PFAKE            00 28 40.0  +15
Y49A                              LR       LR
      comp=Z,400nm,20.0s
GBN   Guysborough      101.52  16 PFAKE            00 28 40.0  +15
GBN                               LR       LR
      comp=Z,500nm,21.0s
PAL   Palisades        101.56  27 PFAKE            00 28 40.0  +15
PAL                               LR       LR
      comp=Z,400nm,20.0s
BRNJ  Basking Ridge    101.58  27 PFAKE            00 28 40.0  +15
BRNJ                              LR       LR
      comp=Z,400nm,19.0s
BRYW  Bryant College   101.65  25 PFAKE            00 28 40.0  +14
BRYW                              LR       LR
      comp=Z,300nm,20.0s
HAL   Halifax          101.70  18 PFAKE            00 28 40.0  +14
HAL                               LR       LR
      comp=Z,300nm,22.0s
LRAL  Lakeview Retre   101.77  40 PFAKE            00 28 40.0  +13
LRAL                              LR       LR
      comp=Z,300nm,19.0s
X51A  Calhoun          101.77  38 PFAKE            00 28 40.0  +13
X51A                              LR       LR
      comp=Z,400nm,19.0s
U54A  Nelsons Funny    101.79  35 PFAKE            00 28 40.0  +13
U54A                              LR       LR
      comp=Z,300nm,21.0s
W52A  Murphy           101.85  37 PFAKE            00 28 40.0  +13
W52A                              LR       LR
      comp=Z,300nm,21.0s
PSUB  Penn St. - Bra   101.86  28 PFAKE            00 28 40.0  +13
PSUB                              LR       LR
      comp=Z,600nm,19.0s
BLA   Blacksburg       101.91  33 PFAKE            00 28 40.0  +13
BLA                               LR       LR
      comp=Z,400nm,18.0s
V53A  Saluda           101.97  36 PFAKE            00 28 40.0  +13
V53A                              LR       LR
      comp=Z,300nm,21.0s
S57A  Dark Hollow, R   102.14  32 PFAKE            00 28 40.0  +12
S57A                              LR       LR
      comp=Z,300nm,20.0s
Z50A  Ashland          102.19  39 PFAKE            00 28 40.0  +12
Z50A                              LR       LR
      comp=Z,300nm,20.0s
BG3   Lake Jocassee    102.44  36 PFAKE            00 28 40.0  +10
BG3                               LR       LR
      comp=Z,200nm,21.0s
R58B  Mineral          102.46  31 PFAKE            00 28 40.0  +10
R58B                              LR       LR
      comp=Z,300nm,20.0s
CBN   Corbin Frederi   102.49  31 PFAKE            00 28 40.0  +10
CBN                               LR       LR
      comp=Z,300nm,19.0s
T57A  Hurt             102.63  33 PFAKE            00 28 40.0  +10
T57A                              LR       LR
      comp=Z,400nm,19.0s
S58A  Poland Farm, P   102.67  31 PFAKE            00 28 40.0  +10
S58A                              LR       LR
      comp=Z,300nm,19.0s
Y52A  Lilburn          102.73  38 PFAKE            00 28 40.0 +9.2
Y52A                              LR       LR
      comp=Z,400nm,18.0s
250A  Grady            102.97  40 PFAKE            00 28 40.0 +8.1
250A                              LR       LR
      comp=Z,500nm,22.0s
V56A  Mocksville       103.00  34 PFAKE            00 28 40.0 +8.0
V56A                              LR       LR
      comp=Z,300nm,20.0s
KMBO  Kilima Mbogo     103.02 276 Pdiff    Pdif    00 28 32.8 +0.1
      comp=Z,2.1nm,0.6s,baz=19,slow=5.6,SNR=5.2
KMSC  Kings Mountain   103.12  35 PFAKE            00 28 40.0 +7.5
KMSC                              LR       LR
      comp=Z,400nm,21.0s
PAULI Pauline          103.14  36 PFAKE            00 28 40.0 +7.4
PAULI                             LR       LR
      comp=Z,300nm,19.0s
ESDC  Sonseca Array    103.20 333 PP       PP      00 32 50.8 +3.8
      comp=Z,2.0nm,0.9s,baz=24,slow=7.5,SNR=4.3
152A  Waverly Hall     103.30  39 PFAKE            00 28 40.0 +6.7
152A                              LR       LR
      comp=Z,400nm,20.0s
HODGE Hodges           103.38  36 PFAKE            00 28 40.0 +6.3
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HODGE                             LR       LR
      comp=Z,300nm,20.0s
GOGA  Godfrey          103.39  38 PFAKE            00 28 40.0 +6.3
GOGA                              LR       LR
      comp=Z,400nm,18.0s
PAB   San Pablo        103.46 334 PFAKE            00 28 40.0 +5.9
PAB                               LR       LR
      comp=Z,400nm,19.0s
T60A  Surry            103.65  31 PFAKE            00 28 50.0  +15
T60A                              LR       LR
      comp=Z,300nm,20.0s
W57A  Gilead           103.77  34 PFAKE            00 28 50.0  +15
W57A                              LR       LR
      comp=Z,400nm,18.0s
U59A  Littleton        103.83  32 PFAKE            00 28 50.0  +14
U59A                              LR       LR
      comp=Z,300nm,19.0s
JSC   Jenkinsville     103.84  36 PFAKE            00 28 50.0  +14
JSC                               LR       LR
      comp=Z,300nm,19.0s
MTE   Manteigas        103.88 336 PFAKE            00 28 50.0  +14
MTE                               LR       LR
      comp=Z,800nm,18.0s
BIRD  Birdtown, Kers   103.95  35 PFAKE            00 28 50.0  +14
BIRD                              LR       LR
      comp=Z,400nm,19.0s
352A  Blakely          104.09  40 PFAKE            00 28 50.0  +13
352A                              LR       LR
      comp=Z,400nm,22.0s
154A  Montrose         104.20  38 PFAKE            00 28 50.0  +13
154A                              LR       LR
      comp=Z,400nm,19.0s
COI   Coimbra          104.35 337 PFAKE            00 28 50.0  +12
COI                               LR       LR
      comp=Z,400nm,20.0s
Y57A  Sumter           104.49  35 PFAKE            00 28 50.0  +11
Y57A                              LR       LR
      comp=Z,400nm,19.0s
Z56A  Williston        104.55  36 PFAKE            00 28 50.0  +11
Z56A                              LR       LR
      comp=Z,400nm,19.0s
V60A  Jim Taylor Roa   104.56  32 PFAKE            00 28 50.0  +11
V60A                              LR       LR
      comp=Z,400nm,19.0s
X58A  Rowland          104.57  34 PFAKE            00 28 50.0  +11
X58A                              LR       LR
      comp=Z,400nm,21.0s
Y58A  Scranton         104.93  35 PFAKE            00 28 50.0 +9.4
Y58A                              LR       LR
      comp=Z,400nm,20.0s
255A  Hazlehurst       105.07  38 PFAKE            00 33 10.0  +14
255A                              LR       LR
      comp=Z,400nm,20.0s
Y60A  Bolivia          105.56  34 PFAKE            00 33 10.0  +13
Y60A                              LR       LR
      comp=Z,300nm,19.0s
PVAQ  Vaqueiros        106.60 335 PFAKE            00 33 10.0  +12
PVAQ                              LR       LR
      comp=Z,600nm,19.0s
SFS   San Fernando     106.86 333 PFAKE            00 33 10.0  +11
SFS                               LR       LR
      comp=Z,300nm,19.0s
656A  Willston         107.03  40 PFAKE            00 33 10.0  +11
656A                              LR       LR
      comp=Z,400nm,19.0s
PFVI  Vila Bisbo       107.24 336 PFAKE            00 33 10.0  +10
PFVI                              LR       LR
      comp=Z,500nm,19.0s
658A  Bunnell          107.68  39 PFAKE            00 33 10.0 +9.3
658A                              LR       LR
      comp=Z,400nm,22.0s
VNDA  Vanda            108.50 175 PP       PP      00 33 31.1 +4.6
      comp=Z,0.7nm,0.8s,baz=337,slow=7.7,SNR=3.2
DWPF  Disney Wildern   108.61  40 PFAKE            00 33 10.0 +7.6
DWPF                              LR       LR
      comp=Z,400nm,19.0s
TAM   Tamanrasset      112.32 316 PFAKE            00 33 20.0  +10
TAM                               LR       LR
      comp=Z,300nm,20.0s
QSPA  South Pole Qui   120.30 180 ePKPdf   PKiKP   00 33 23.7 +0.1
QSPA                              ePP      PP      00 34 48.8 -1.3
TOC2  Torodi Ar. Sit   121.96 312 PFAKE            00 33 40.0  +12
TOC2                              LR       LR
      comp=Z,400nm,20.0s
TOC1  Torodi Ar. Sit   121.96 312 PFAKE            00 33 40.0  +12
TOC1                              LR       LR
      comp=Z,400nm,20.0s
TOB2  Torodi Ar. Sit   121.97 312 PFAKE            00 33 40.0  +12
TOB2                              LR       LR
      comp=Z,700nm,21.0s
TOA1  Torodi Ar. Sit   121.98 312 ePKPdf   PKPdf   00 33 28.3  0.0
TOA1                              LR       LR
      comp=Z,400nm,21.0s
TORD  Torodi Ar. Bea   121.98 312 PKP      PKPdf   00 33 28.3  0.0
      comp=Z,2.5nm,1.0s,baz=359,slow=2.0,SNR=9.7
TORD                              PP       PP      00 35 04.0 +2.2
      comp=Z,1.8nm,1.0s,baz=52,slow=6.6,SNR=4.4
TORD                              PKKPab   PKKPab  00 43 29.1 +1.3
      comp=Z,1.9nm,1.2s,baz=194,slow=5.6,SNR=4.3
SDD   Santo Domingo    122.56  36 PFAKE            00 33 40.0  +10
SDD                               LR       LR
      comp=Z,1μm,22.0s
LBTB  Lobatse          123.86 259 ePKPdf   PKPdf   00 33 30.1 -1.6
LBTB  Lobatse          123.86 259 ePKIKP   PKPdf   00 33 30.1 -1.6
BOSA  Boshof           125.37 255 PKP      PKiKP   00 33 34.7 -0.2
      comp=Z,5.5nm,1.1s,baz=90,slow=4.7,SNR=4.9
SMRT  St. Maarten      126.12  30 PFAKE            00 33 50.0  +13
SMRT                              LR       LR
      comp=Z,100nm,20.0s
SABA  Saba             126.43  30 PFAKE            00 33 50.0  +13
SABA                              LR       LR
      comp=Z,500nm,19.0s
SDV   Santo Domingo    129.99  44 ePKPdf   PKPdf   00 33 41.5 -2.5
DBIC  Dimbokro         131.06 313 PKP      PKPdf   00 33 46.0 +0.3
      comp=Z,5.2nm,1.1s,baz=63,slow=2.3,SNR=3.0
DBIC  Dimbokro         131.06 313 ePKPdf   PKPdf   00 33 44.3 -1.4
DBIC  Dimbokro         131.06 313 ePKIKP   PKPdf   00 33 44.3 -1.4
SNAA  Sanae            134.59 195 PKiKP    PKiKP   00 33 51.8 -0.2
SNAA  Sanae            134.59 195 ePKPdf   PKiKP   00 33 51.7 -0.4
SNAA  Sanae            134.59 195 ePKIKP   PKiKP   00 33 51.7 -0.4
VNA2  Neumayer--Watz   136.13 194 PKiKP    PKiKP   00 33 55.6 +0.5
      baz=80,slow=1.3
VNA3  Neumayer Olymp   136.34 193 PKiKP    PKiKP   00 33 55.6 +0.1
VNA1  Neumayer--Stat   136.52 194 PKiKP    PKiKP   00 33 57.9 +2.0
PTGA  Pitinga          143.91  39 ePKPdf   PKPbc   00 34 07.4 +0.3
ASCN  Ascension        148.26 310 PFAKE            00 34 30.0 +6.9
ASCN                              LR       LR
      comp=Z,41μm,19.0s
LPAZ  La Paz           149.28  69 PKPbc    PKPbc   00 34 22.1 -1.1
      comp=Z,14nm,0.9s,baz=360,slow=3.2,SNR=28
LPAZ  La Paz           149.28  69 ePKPbc   PKPbc   00 34 21.3 -2.0
PB01  IPOC Station P   150.44  79 ePKPdf   PKPdf   00 34 17.5 -2.6
PB01                              ePKPbc   PKiKP   00 34 27.2 +1.1
GO02  Mina Guanaco     151.87  87 ePKPdf   PKPdf   00 34 20.2 -2.2
GO02                              ePKPbc   pPKPdf  00 34 30.4 -0.4
LCO   Las Campanas     151.88  95 ePKPdf   PKPdf   00 34 19.4 -2.9
LCO   Las Campanas     151.88  95 ePKIKP   PKPdf   00 34 19.4 -2.9
PLCA  Paso Flores      152.01 120 PKPbc    PKPbc   00 34 28.5  0.0
      comp=Z,7.1nm,1.1s,baz=296,slow=2.6,SNR=7.1
PLCA  Paso Flores      152.01 120 ePKPdf   PKPdf   00 34 20.0 -1.9
PLCA                              ePKPbc   PKPbc   00 34 28.1 -0.3
PLCA  Paso Flores      152.01 120 ePKIKP   PKPdf   00 34 20.0 -1.9
PLCA                              e                00 34 28.1
RCBR  Riachuelo        155.32 354 PFAKE            00 34 40.0  -12
RCBR                              LR       LR
      comp=Z,14μm,21.0s
```

NNC 11 00:15:05.0±3.3, 38°.43N×71°.84E, h2km±11km, mb3.8, mpv3.5, 8C-4D, Error ellipse: s-maj=23.8km s-min=17.3km az=6.0, Afghanistan-Tajikistan border region

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                    Op       ISC      h  m  s   ISC
IUG   Iuzhnay            3.96 340   Pg       Pb      00 16 17.6 +2.1
      3.4nm,0.4s
IUG                                 Lg       Lg      00 17 05.4
      12nm,0.6s
MRKS  Merke              4.43  13   Pg       Pb      00 16 26.1 +2.5
      9.3nm,0.4s
MRKS                                Lg       Lg      00 17 20.0
      6.1nm,0.7s
DZA   Taraz              4.47 355   Pg       Pb      00 16 24.8 +0.6
      28nm,0.5s
```

DZA				Lg	Lg	00 17 17.5	
	31nm,0.2s						
AAK	Ala-Archa	4.66	25	⇑Pn	Pn	00 16 15.6	-0.9
	2.6nm,0.8s						
AAK				⇓Pg	Pb	00 16 29.5	+2.0
	3.1nm,0.7s						
AAK				⇓Sn	Sn	00 17 13.6	+2.3
	7.4nm,0.7s						
AAK				⇓Lg	Lg	00 17 33.9	
	7.5nm,0.8s						
KK31	Karatay Array	4.77	348	Pn	Pn	00 16 16.9	-1.0
	1.0nm,0.3s,baz=172,slow=12,SNR=25						
KK31				⇑Pg	Pg	00 16 33.2	-3.2
	3.0nm,0.5s,baz=178,slow=14,SNR=4.2						
KK31				⇓Sn	Sn	00 17 16.6	+2.8
	1.4nm,0.5s,baz=172,slow=20,SNR=5.0						
KK31				⇑Lg	Lg	00 17 38.8	
	2.8nm,0.7s,baz=172,slow=17,SNR=6.2						
BRLS	Borolday	4.84	342	Pg	Pb	00 16 29.7	-0.7
BRLS				Lg	Lg	00 17 26.0	
	0.8nm,0.4s						
TKM2	Tokmak 2	5.32	31	⇑Pn	Pn	00 16 24.8	-0.7
	1.1nm,0.6s						
TKM2				⇑Pg	Pb	00 16 41.7	+3.0
	1.6nm,0.7s						
TKM2				⇑Lg	Lg	00 17 54.5	
	5.4nm,0.8s						
KST	Kastek	5.57	33	Pg	Pg	00 16 48.0	-3.7
	4.1nm,0.6s						
KST				Lg	Lg	00 17 57.9	
	4.3nm,0.4s						
MDOK	Medeo	6.16	38	Pg	Pg	00 16 59.4	-3.6
	2.5nm,0.5s						
MDOK				Lg	Lg	00 18 17.4	
	4.6nm,0.8s						
KUU	Kurty	6.42	30	Pg	Pg	00 17 03.2	-4.9
	1.0nm,0.1s						
KUU				Lg	Lg	00 18 23.5	
	6.7nm,0.8s						
AB31	Akbulak array	13.79	325	⇑Pn	Pn	00 18 16.6	-4.7
	0.2nm,0.4s,baz=148,slow=13,SNR=8.1						
AKTO	Aktyubinsk	15.50	325	⇑Pn	Pn	00 18 42.4	-2.1
	2.7nm,1.0s						

ISCJB 11 00:18:44.2±0.6, 31°.69S±0°.05×138°.52E±0°.05, h10^{km}, Error ellipse: s-maj=7.3km s-min=5.8km az=35.8

AUST 11 00:18:45.2±1.1, 31°.83S×138°.52E, h2^{km}±8^{km}, Error ellipse: s-maj=5.3km s-min=3.1km az=29.0

IDC 11 00:18:48.7±4.5, 31°.44S×138°.79E, h0^{km}, mb1 3.3/3, mb1mx3.2/34, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=79.6km s-min=16.4km az=31.0

ISC 11 00:18:46.3±0.9, 31°.80S±0°.07×138°.50E±0°.05, h10^{km}, n9, σ1^{s}.13/14, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	Hallett	1.67	168	P	Pn	00 19 14.6	-1.1
	baz=1.6						
HTT				S	Sn	00 19 38.1	+0.9
	baz=1.6						
BBOO	Buckleboo	2.30	243	P	Pn	00 19 25.1	+0.7
	baz=2.3						
BBOO				S	Sn	00 19 53.8	+1.0
	baz=2.3						
STKA	Stephens Creek	2.63	93	Pn	Pn	00 19 28.8	-0.1
	1.7nm,0.3s,baz=276,slow=11,SNR=24						
STKA				Pg	Pb	00 19 33.8	+0.2
	3.1nm,0.3s,baz=276,slow=16,SNR=33						
STKA				Sn	Sn	00 20 00.6	-0.3
	3.1nm,0.3s,baz=263,slow=8.1,SNR=3.2						
STKA				Lg	Lg	00 20 06.5	
	6.1nm,0.3s,baz=177,slow=23,SNR=5.6						
STKA	Stephens Creek	2.63	93	P	Pn	00 19 28.9	0.0
	baz=2.6						
ARPS	Mount Arapiles	5.68	152	P	Pn	00 20 09.6	-1.1
	baz=5.6						
FORT	Forrest	8.99	274	P	Pn	00 20 55.9	-0.3
	baz=9.0						
ASAR	Alice Springs	9.06	332	Pn	Pn	00 20 59.4	+2.1
	0.2nm,0.3s,baz=149,slow=13,SNR=5.0						
ASAR				Sn	Sn	00 22 37.3	-2.1
	0.3nm,0.3s,baz=152,slow=22,SNR=5.0						
WRKA	Warakurna	11.22	304	P	Pn	00 21 27.0	+0.1
	baz=11						
WRA	Warramunga Arr	12.38	341	Pn	Pn	00 21 42.8	+0.1
	0.1nm,0.3s,baz=158,slow=12,SNR=4.6						

MOS 11 00:40:58.6±1.8, 46°.59N×141°.98E, h12^{km}, mb3.7/1, Error ellipse: s-maj=22.3km s-min=15.2km az=95.2

MOS Felt (II) at Nevel'sk.

JMA 11 00:41:00.2±0.6, 46°.78N×141°.55E, h14^{km}, M2.9

SKHL 11 00:41:00.0±0.4, 46°.66N×141°.78E, h10^{km}, mb4.1/5

SKHL Felt (II) at Nevel'sk.

ISC 11 00:41:00.4±1.0, 46°.65N±0°.05×141°.81E±0°.07, h17^{km}±7^{km}, n12, σ1^{s}.06/15, 3C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEVR	Nevel`sk	0.04	55	*e*PN	Pg	00 41 03.3	-0.2
NEVR				*e*		00 41 05.3	
NEVR				pmax	pmax		
	comp=Z,9.0nm,0.2s						
NEVR				smax	smax		
	comp=N,140nm,0.2s						
YSS	Yuzh-Sakhalins	0.71	65	*e*PN	Pb	00 41 14.8	+0.4
YSS				*e*		00 41 20.8	
YSS				smax	smax		
	comp=N,430nm,0.4s						
YSS				smax	smax		
	comp=E,280nm,0.3s						
YSS	Yuzh-Sakhalins	0.71	65	*e*Pg	Pb	00 41 14.8	+0.4
YSS				AMB	AMB	00 41 15.6	
	comp=E,30nm,0.2s						
YSS				*e*Sg	Sb	00 41 25.0	+1.1
YSS				A	A	00 41 25.7	
	comp=E,430nm,0.4s						
YSS				A	A	00 41 25.7	
	comp=E,280nm,0.4s						
JRBN	Rebuntou	1.34	203	P	Pb	00 41 24.9	-0.1
JRBN				*e*S	Sg	00 41 43.0	-0.6
JWK2	Keihoku	1.34	177	P	Pg	00 41 26.2	0.0
JWK2				*e*S	Sg	00 41 45.1	+1.4
JSE	Soyaes	1.78	162	P	Pb	00 41 32.8	+0.2
KUR	Kuril'sk	4.46	106	⇑*e*PN	Pn	00 42 05.9	-1.3
ERM	Erimo	4.74	168	*i* PN	Pn	00 42 10.5	-0.5
PET	Petropavlovsk	12.59	53	*e*PN	Pn	00 43 58.2	-0.3
YAK	Yakutsk	16.90	340	*e*P	P	00 44 58.0	+0.2
ULN	Ulaanbaatar	23.51	286	⇑*e*P	P	00 46 11.5	+2.0
ULN				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BILL	Bilibino	24.84	22	⇑*e*P	P	00 46 19.9	-1.5
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						

IDC 11 01:06:06.5±1.8, 5°.07S×153°.11E, h0^{km}, mb3.5/6, mb1 3.8/6, mb1mx3.7/19, mbtmp3.6/6, Error ellipse: s-maj=60.4km s-min=25.6km az=118.0

ISCJB 11 01:06:11.6±1.9, 5°.0S±0°.2×153°.0E±0°.4, h43^{km}, mb3.4/6, Error ellipse: s-maj=58.7km s-min=21.9km az=25.7

ISC 11 01:06:12.8±1.9, 5°.1S±0°.3×153°.0E±0°.4, h43^{km}, n7, σ0^{s}.58/7, mb3.5/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.43	229	P	P	01 11 17.8	-0.5
	0.6nm,0.3s,baz=54,slow=8.5,SNR=7.2						
ASAR	Alice Springs	26.09	223	P	P	01 11 43.4	+0.7
	0.2nm,0.5s,baz=61,slow=8.7,SNR=5.9						
CMAR	Chiang Mai Arr	58.23	295	P	P	01 16 02.9	-0.4
	0.3nm,0.4s,baz=108,slow=5.8,SNR=4.2						
SONM	Songino Array	66.71	328	P	P	01 16 59.9	+0.2
	0.3nm,0.7s,baz=142,slow=7.2,SNR=3.1						
MKAR	Makanchi Array	80.72	319	P	P	01 18 22.2	+0.5
	0.3nm,0.7s,baz=103,slow=6.2,SNR=2.5						
ILAR	Eielson Array	82.35	22	P	P	01 18 29.6	-0.3
	0.3nm,0.4s,baz=245,slow=5.3,SNR=3.3						
TORD	Torodi Ar. Bea	150.63	288	PKPbc	PKPbc	01 26 01.1	-0.1
	0.5nm,0.6s,baz=67,slow=2.4,SNR=8.3						

ISCJB 11 01:58:33.8±0.6, 18°.0S±0°.2×178°.5W±0°.1, h579^{km}, mb3.7/14, Error ellipse: s-maj=22.8km s-min=10.5km az=149.0

IDC 11 01:58:37.1±3.6, 18°.02S×178°.52W, h606^{km}±41^{km}, mb3.3/14, mb1 3.5/15, mb1mx3.4/36, mbtmp4.2/15, Error ellipse: s-maj=24.7km s-min=17.2km az=135.0

ISC 11 01:58:34.4±0.7, 18°.0S±0°.2×178°.5W±0°.1, h579^{km}, n46, σ1^{s}.02/48, mb3.8/14, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.70	252	P	P	02 01 42.3	+1.8
	0.4nm,0.3s,baz=78,slow=20,SNR=3.9						
DZM				S	S	02 04 09.3	-3.7
	0.1nm,0.3s,baz=130,slow=23,SNR=1.0						
STKA	Stephens Creek	38.49	241	P	P	02 05 09.5	+1.4
	0.7nm,0.4s,baz=108,slow=13,SNR=2.5						
WRA	Warramunga Arr	44.52	260	P	P	02 05 56.4	+0.7
	1.5nm,0.4s,baz=86,slow=8.4,SNR=16						
ASAR	Alice Springs	44.67	254	P	P	02 05 58.0	+1.0
	4.2nm,0.5s,baz=87,slow=9.0,SNR=56						
ASAR				PcP	PcP	02 07 26.9	0.0
	1.1nm,0.5s,baz=107,slow=4.1,SNR=8.6						
MJAR	Matsushiro Arr	67.94	323	P	P	02 08 35.9	-0.5
	1.7nm,0.8s,baz=152,slow=5.7,SNR=4.9						
PETK	Petropavlovsk-	73.76	345	P	P	02 09 10.3	+0.2
	2.6nm,0.6s,baz=103,slow=8.6,SNR=6.0						
USRK	Ussuriysk Ar.	76.65	326	P	P	02 09 27.0	+0.6
	0.6nm,0.6s,baz=100,slow=6.6,SNR=5.0						
NVAR	Mina Array Bea	79.57	44	P	P	02 09 43.3	+0.8
	1.4nm,0.7s,baz=226,slow=8.9,SNR=14						
MAW	Mawson	83.72	200	P	P	02 10 03.1	+0.3
	1.1nm,0.5s,baz=139,slow=9.3,SNR=3.8						
ILAR	Eielson Array	86.02	13	P	P	02 10 13.0	-0.8
	1.0nm,0.4s,baz=228,slow=6.1,SNR=12						
TXAR	Lajitas Array	86.14	58	P	P	02 10 16.3	+0.9
	1.9nm,0.7s,baz=217,slow=6.0,SNR=17						
PDAR	Pinedale Array	87.50	43	P	P	02 10 21.8	+0.2
	1.0nm,0.6s,baz=224,slow=4.2,SNR=14						
CMAR	Chiang Mai Arr	88.83	290	P	P	02 10 28.6	+0.6
	1.6nm,0.4s,baz=62,slow=2.1,SNR=4.2						
SNAA	Sanae	90.49	179	P	P	02 10 33.8	-1.0
	0.7nm,0.7s,baz=180,slow=8.2,SNR=4.8						
SONM	Songino Array	93.57	319	P	P	02 10 49.9	+0.5
	0.1nm,0.3s,baz=123,slow=5.3,SNR=2.0						
MKAR	Makanchi Array	109.14	314	PKiKP	PKiKP	02 15 57.8	-1.3
	0.6nm,0.7s,baz=90,slow=0.6,SNR=3.9						
ARCES	ARCESS Array B	126.41	350	PKP	PKPdf	02 16 30.5	-1.0
	2.4nm,0.8s,baz=48,slow=1.3,SNR=3.6						
FINES	FINESS Array B	133.27	344	PKP	PKPdf	02 16 42.8	-1.8
	3.6nm,1.1s,baz=5.4,slow=4.0,SNR=3.8						
AKASG	Malin Array Be	140.61	332	PKP	PKPdf	02 16 57.0	-1.5
	0.6nm,0.5s,baz=48,slow=3.0,SNR=4.5						
BRTR	Keskin Array B	144.79	315	PKP	PKPdf	02 17 06.3	-0.1
	1.1nm,0.5s,baz=105,slow=2.6,SNR=7.7						
OSTC	Ostas	145.47	343	*e*PKP	PKPbc	02 17 08.6	+0.1
CLL	Collm	145.55	347	⇑*i*PKPbc	PKPbc	02 17 08.5	-0.1
	comp=Z,11nm,0.7s						
UPC	Upice	145.57	344	*e*PKP	PKPbc	02 17 08.7	0.0
DPC	Dobruska-Polom	145.62	343	*e*PKP	PKPbc	02 17 09.3	+0.3
BRG	Berggiesshubel	145.75	346	*i* PKP	PKPbc	02 17 09.2	0.0
	comp=Z,5.4nm,0.8s						
MLR	Muntele Rosu	145.88	329	PKPbc	PKPbc	02 17 09.4	-0.5
	comp=Z,3.1nm,0.6s,baz=342,slow=8.4,SNR=6.4						
PVCC	Panska Ves	145.92	345	*e*PKP	PKPbc	02 17 10.0	+0.3
MMAI	Mount Meron Ar	146.12	303	PKPbc	PKPbc	02 17 11.2	+0.3
	comp=Z,3.1nm,0.5s,baz=66,slow=4.8,SNR=8.4						
PRU	Pruhonice	146.43	345	*e*PKP	PKPbc	02 17 10.8	-0.3
PRU				*e*x	x	02 17 14.1	
GOPC	GO Pecny, Ondr	146.43	344	*e*PKP	PKPbc	02 17 10.2	-1.0
TREC	Trest	146.81	343	*e*PKP	PKPbc	02 17 12.2	0.0
KHC	Kasperske Hory	147.46	345	*e*PKP	PKPbc	02 17 13.8	-0.2
KHC				*e*x	x	02 17 18.3	
GERES	GERESS Array B	147.69	345	PKPbc	PKPbc	02 17 14.4	-0.2
	comp=Z,3.4nm,0.7s,baz=22,slow=3.6,SNR=16						
CONA	Conrad Observa	147.94	342	*e*PKPbc	PKPbc	02 17 15.5	+0.2
	comp=Z,1.6nm,0.6s						
MOA	Molln	148.46	343	*e*PKPbc	PKiKP	02 17 17.2	-0.4
	comp=Z,1.1nm,0.5s						
ARSA	Arzberg	148.65	341	*e*PKPdf	PKPbc	02 17 15.1	-1.9
	comp=Z,0.6nm,0.5s						
SOKA	Soboth	149.31	342	*e*PKPbc	PKiKP	02 17 19.9	+0.4
	comp=Z,4.6nm,1.0s						
KBA	Koelnbreinsper	149.42	344	PKPdf	PKPbc	02 17 17.6	-1.4
	comp=Z,4.0nm,1.1s						
OBKA	Obir	149.60	342	*e*PKPdf	PKPbc	02 17 17.4	-2.0
	comp=Z,5.0nm,1.4s						
RETA	Reutte	149.64	348	*e*PKPbc	PKPbc	02 17 19.3	-0.2
	comp=Z,1.7nm,0.7s						
WTTA	Wattenberg	149.66	346	*e*PKPbc	PKPbc	02 17 19.2	-0.4
	comp=Z,7.1nm,0.6s						
MOTA	Moosalm	149.70	347	*e*PKPbc	PKPbc	02 17 19.3	-0.4
	comp=Z,3.1nm,0.8s						
SQTA	Sankt Quirin	149.80	347	*e*PKPbc	PKPbc	02 17 19.4	-0.5
	comp=Z,4.9nm,0.6s						
ABTA	Abfaltersbach	149.94	345	*e*PKPdf	PKPbc	02 17 19.2	-1.0
	comp=Z,6.4nm,0.7s						
FETA	Feichten	150.09	347	*e*PKPbc	PKPbc	02 17 20.6	0.0
	comp=Z,2.9nm,0.7s						
DAVOX	Davos/Dischmat	150.49	348	PKPbc	PKPbc	02 17 21.4	-0.2
	comp=Z,6.4nm,0.7s,baz=232,slow=0.1,SNR=11						

BJI 11 02:05:16.8±0.0, 12°.09N×47°.84E, h5^{km}, mb4.8/46, mB5.2/38, Ms4.9/43, Ms7 4.7/43

GCMT 11 02:05:20.9±0.1, 12°.83N±0°.01×48°.02E±0°.01, h12^{km}, MW5.2/101, Moment Tensor Solution. s67,c106; s101,c191; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.82±.01; M$_{\theta\theta}$0.66±.01; M$_{\phi\phi}$0.16±.02; M$_{r\theta}$0.28±.04; M$_{\theta\phi}$-0.40±.01; M$_{\phi r}$0.25±.04; Best double couple: M$_0$0.92700×10^{17} NP1:φ$_s$279.00000°, δ53.00000°, λ-117.00000°. NP2:φ$_s$139.00000°, δ45.00000°, λ-59.00000°. Principal axes: T 0.8870, Plg4.0000°, Azm27.0000°; N 0.0790, Plg21.0000°, Azm296.0000°; P -0.9660, Plg68.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

OMAN 11 02:05:21.9±1.2, 12°.64N×48°.15E, h0^{km}±8^{km}, mb5.6/5, ms5.2/2 Error ellipse: s-maj=20.3km s-min=5.6km az=313.0

ISCJB 11 02:05:21.6±0.8, 12°.74N±0°.03×48°.17E±0°.02, h6^{km}±4^{km}, mb4.7/176, MS4.5/69, Error ellipse: s-maj=4.6km s-min=3.8km az=177.8

MOS 11 02:05:22.6±1.1, 12°.67N×48°.13E, h15^{km}, mb5.1/67, MS4.5/20, Error ellipse: s-maj=8.4km s-min=4.2km az=95.5

IDC 11 02:05:22.0±0.4, 12°.68N×48°.22E, h0^{km}, mb4.3/44, mb1 4.4/47, mb1mx4.4/64, mbtmp4.4/47, ML4.1/3, MS4.5/39, Ms1 4.5/39, ms1mx4.5/44, Error ellipse: s-maj=11.2km s-min=9.4km az=104.0

NEIC 11 02:05:23.9±2.2, 12°.71N×48°.20E, h10^{km}±2^{km}, mb5.0/90, Error ellipse: s-maj=11.0km s-min=8.3km az=127.0

ISC 11 02:05:23.9±0.5, 12°.71N±0°.04×48°.22E±0°.04, h10^{km}±2^{km}, h11^{km}:pP-P, n438, σ1^{s}.95/512, mb4.8/176, MS4.5/69, 30C-21D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAMY	Dhamar	4.15	297	*e*Pn	Pn	02 06 25.7	-2.0
DAMY				*e*Sn	Sn	02 07 15.8	-0.7
ATD	Arta Tunnel	5.38	258	Pn	Pn	02 06 42.3	-2.0
	39nm,0.3s,baz=185,slow=7.6,SNR=51						
ATD				Sn	Sn	02 07 47.7	+1.3
	baz=44,slow=23,SNR=0.6						
ATD				LR	LR	02 08 16.5	
	comp=Z,9µm,19.6s,baz=76,slow=32						
ATD	Arta Tunnel	5.38	258	*e*Pn	Pn	02 06 42.4	-2.0
ATD				*e*Sn	Sn	02 07 44.1	-2.3
ATD	Arta Tunnel	5.38	258	P	Pn	02 06 42.4	-2.0
ABTO	Aybut	6.74	46	P	Pn	02 07 02.2	-0.8
WHFO	Wadi Hawf	7.45	45	P	Pn	02 07 13.3	+0.5
RBK	Rabkut	7.49	50	P	Pn	02 07 13.1	-0.3
DESE	Dese	8.54	260	*e*P	Pn	02 07 29.0	+0.9
DESE				*e*S	Sg	02 09 55.9	-2.5
DESE	Dese	8.54	260	*e*S	Sn	02 09 18.2	+13
ANKE	Ethiopia-Afar	8.88	250	*e*P	Pn	02 07 33.9	+1.2
ANKE				*e*S	Sg	02 10 43.4	+34
AAE	Adis Abeba	9.97	249	*i* P	Pn	02 07 49.5	+1.8
AAE				*e*S	Sn	02 09 46.3	+6.4
AAE	Adis Abeba	9.97	249	*i* P	Pn	02 07 49.5	+1.8
AAE				*e*S	Sn	02 09 46.3	+6.4
FURI	Furi	10.11	249	*e*Pn	Pn	02 07 49.7	+0.2
RAYN	Ar Rayn	11.06	347	*e*Pn	Pn	02 07 57.5	-4.8
RAYN				*e*Sn	Sn	02 10 06.3	+0.1
RAYN	Ar Rayn	11.06	347	Pn	Pn	02 07 57.2	-5.1
RAYN	Ar Rayn	11.06	347	*e*P	Pn	02 07 57.5	-4.8
RAYN				*e*		02 10 06.3	
MHTO	MHTO	12.44	47	P	Pn	02 08 18.2	-3.0
BSY	Bisya	13.14	39	P	P	02 08 38.9	-2.0
ARQ	Araqi	13.19	36	P	P	02 08 39.8	-1.7
ASUD	Al Ashush, Dub	13.63	29	Pn	Pn	02 08 33.5	-3.9
ASUD	Al Ashush, Dub	13.63	29	P	Pn	02 08 40.0	+2.6
SMDO	Samad	13.90	41	P	Pn	02 08 43.9	+2.6
	SNR=6.9						
ASHO	Ashiyiah	14.03	31	Pn	Pn	02 08 39.0	-3.9
NAZ	Nazwa, Dubai	14.10	29	Pn	Pn	02 08 39.1	-4.6
HATD	Hatta, Dubai	14.19	31	Pn	Pn	02 08 39.7	-5.3
HATD	Hatta, Dubai	14.19	31	P	P	02 08 49.4	-3.1
	SNR=5.7						
BIDO	Bidbid	14.29	40	P	Pn	02 08 48.1	+1.7
	SNR=5.9						
UOSS	Minazif	14.32	31	*e*Pn	Pn	02 08 44.5	-2.4
UOSS				*e*Sn	Sn	02 11 23.3	-2.5
UOSS	Minazif	14.32	31	Pn	Pn	02 08 40.6	-6.3
UOSS	Minazif	14.32	31	P	P	02 08 51.5	-2.5
	SNR=6.7						
WSAR	Wadi Sarin	14.41	42	Pn	Pn	02 08 48.1	0.0
	0.6nm,0.3s,baz=251,slow=8.1,SNR=6.1						
WSAR				Lg	Lg	02 13 05.2	
	0.1nm,0.3s,baz=222,slow=22,SNR=2.2						
WSAR				LR	LR	02 14 15.4	
	comp=Z,5µm,20.9s,baz=236,slow=37						
MSFE	Esma-Masafi	14.65	30	Pn	Pn	02 08 47.7	-3.6
SHME	Shamm	15.22	28	Pn	Pn	02 08 50.3	-8.9
KMBO	Kilima Mbogo	17.53	219	P	Pn	02 09 28.6	-0.3
	0.2nm,0.3s,baz=45,slow=14,SNR=18						
KMBO				S	Sn	02 12 35.1	-9.2
	0.1nm,0.3s,baz=56,slow=22,SNR=1.6						
KMBO				Lg	Lg	02 14 39.1	
	0.2nm,0.3s,baz=120,slow=18,SNR=3.1						
KMBO				LR	LR	02 15 54.3	
	comp=Z,5µm,19.3s,baz=18,slow=36						
KMBO	Kilima Mbogo	17.53	219	*e*Pn	Pn	02 09 26.0	-2.8
KMBO				*e*P	Pn	02 09 28.1	-0.7
KMBO				*e*Sn	Sn	02 12 40.6	-3.8
KMBO	Kilima Mbogo	17.53	219	Pn	Pn	02 09 28.1	-0.7
KMBO	Kilima Mbogo	17.53	219	*e*P	Pn	02 09 26.0	-2.8
KMBO				*e*		02 12 40.6	
EIL	Elat	20.89	326	P	P	02 10 06.7	+0.2
	4.5nm,0.8s,baz=180,slow=8.9,SNR=4.6						
EIL				Lg	Lg	02 16 10.5	
	29nm,1.2s,baz=81,slow=7.3,SNR=6.6						
EIL				LR	LR	02 17 30.2	
	comp=Z,2µm,18.1s,baz=150,slow=35						
HRFI	Mount Harif	21.13	327	P	P	02 10 10.2	+1.1
	65nm,1.2s						
JDRJ	Daraweish	21.36	329	P	P	02 10 16.8	+5.2
	52nm,0.9s						
MBAR	Mbarara	21.81	234	P	P	02 10 15.8	-0.9
	4.2nm,0.9s,baz=64,slow=7.0,SNR=5.5						
MBAR				LR	LR	02 17 49.1	
	comp=Z,2µm,20.5s,baz=54,slow=34						
MBAR	Mbarara	21.81	234	*e*P	P	02 10 16.6	0.0
	20nm,1.3s						
MBAR	Mbarara	21.81	234	⇑*e*P	P	02 10 15.7	-0.9
MBAR				pmax	pmax		
	comp=Z,18nm,1.8s						
WALJ	Wala	21.97	331	P	P	02 10 22.5	+4.5
	comp=Z,69nm,1.0s						
ASF	Jabal al Asfar	21.98	334	P	P	02 10 19.1	+0.8
	comp=Z,8.4nm,0.8s,baz=110,slow=3.3,SNR=17						
ASF				Lg	Lg	02 16 53.6	
	comp=Z,0.8nm,0.4s,baz=119,slow=20,SNR=1.2						
ASF	Jabal al Asfar	21.98	334	P	P	02 10 21.3	+3.0
	comp=Z,47nm,2.0s						
KZIT	Kziot	22.15	327	P	P	02 10 16.8	-3.2
	comp=Z,79nm,1.1s						
AMAZ	Amatzia	22.38	329	P	P	02 10 23.8	+1.3
	comp=Z,128nm,1.4s						
MMAI	Mount Meron Ar	23.36	332	P	P	02 10 33.3	+0.5
	comp=Z,3.8nm,0.6s,baz=135,slow=12,SNR=12						
MMAI				Lg	Lg	02 17 40.2	
	comp=Z,3.1nm,1.0s,baz=162,slow=27,SNR=2.7						
MMAI				LR	LR	02 19 06.3	
	comp=Z,1µm,18.8s,baz=155,slow=35						
CSS	Mathiatis	25.94	331	*e*P	P	02 10 57.1	+0.6
	comp=Z,25nm,1.1s						
GEYT	Alibeck	26.63	18	P	P	02 11 03.2	+0.5
	comp=Z,8.4nm,0.7s,baz=198,slow=9.3,SNR=9.3						
GEYT				LR	LR	02 23 38.0	
	comp=Z,5µm,18.4s,baz=200,slow=41						
GYA0B	ALIBECK ARRAY	26.63	18	*e*P	P	02 11 02.7	-0.1
	comp=Z,20nm,1.0s						
GNI	Garni	27.50	354	P	P	02 11 12.1	+1.3
	comp=Z,9.6nm,0.7s,baz=122,slow=2.8,SNR=6.8						
GNI				LR	LR	02 23 36.9	
	comp=Z,3µm,19.9s,baz=175,slow=40						
GNI	Garni	27.50	354	*e*P	P	02 11 11.3	+0.6
	comp=Z,163nm,1.9s						
GNI	Garni	27.50	354	P	P	02 11 09.4	-1.3
GNI	Garni	27.50	354	⇓*e*P	P	02 11 13.2	+2.4
GNI	Garni	27.50	354	P	P	02 11 17.4	+6.6
	SNR=17						
KARS	Kars	28.18	352	*e*P	P	02 11 14.5	-2.2
	comp=Z,90nm,1.6s						
KARS	Kars	28.18	352	*e*P	P	02 11 14.5	-2.2
KARS				pmax	pmax		
	comp=Z,90nm,1.6s						
AKT	Akhty	28.67	359	*e*P	P	02 11 23.3	+2.2
AKT				*e*		02 12 11.7	
AKT				*e*		02 14 32.2	
AKT				pmax	pmax		
	comp=Z,20nm,1.0s						
KBL	Kabul	28.80	38	*e*P	P	02 11 19.7	-2.8
	comp=Z,18nm,1.4s						
KBL	Kabul	28.80	38	*e*P	P	02 11 19.7	-2.8
KBL				pmax	pmax		
	comp=Z,18nm,1.4s						
AKH	Akhalkalaki	28.89	353	*e*P	P	02 11 20.5	-2.6
	comp=Z,8.6nm,1.0s						
AKH	Akhalkalaki	28.89	353	⇓*i*P	P	02 11 25.4	+2.3
AKH	Akhalkalaki	28.89	353	*e*P	P	02 11 20.5	-2.6
AKH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TBLG	Delisi	29.07	355	*e*P	P	02 11 27.3	+2.7
	comp=Z,88nm,1.7s						
TBLG	Delisi	29.07	355	*e*P	P	02 11 27.3	+2.7
TBLG				pmax	pmax		
	comp=Z,88nm,1.7s						
BRTR	Keskin Array B	29.83	337	P	P	02 11 31.7	+0.2
	comp=Z,2.0nm,0.8s,baz=155,slow=9.1,SNR=13						
BRTR				PcP	PcP	02 14 34.6	-0.2
	comp=Z,1.0nm,0.7s,baz=147,slow=6.0,SNR=3.9						
BRTR				LR	LR	02 23 20.2	
	comp=Z,668nm,20.4s,baz=141,slow=36						
BR101	Keskin Array S	29.83	337	*e*P	P	02 11 31.7	+0.2
BR101				*e*PcP	PcP	02 14 34.6	-0.2
BR131	Keskin Array S	29.83	337	*e*P	P	02 11 32.5	+1.0
	comp=Z,52nm,2.0s						
BR131	Keskin Array S	29.83	337	P	P	02 11 34.1	+2.7
	SNR=9.1						
MAK	Makhachkala	30.15	359	*e*P	P	02 11 30.0	-4.0
MAK				*e*S	S	02 16 28.0	-4.9
MAK				pmax	pmax		
	comp=Z,108nm,1.4s						
MAK				MLR	MLR		
	comp=Z,4µm,18.0s						
ZEI	Tsey	30.20	354	*e*P	P	02 11 40.2	+5.4
ZEI				pmax	pmax		
	comp=Z,25nm,1.1s						
BR231	Keskin MP Arra	30.27	336	*e*P	P	02 11 34.9	-0.4
	comp=Z,99nm,1.9s						
ANTO	Ankara	30.28	336	*e*P	P	02 11 36.2	+0.8
	comp=Z,36nm,1.2s						
ANTO	Ankara	30.28	336	*e*P	P	02 11 36.2	+0.8
ANTO				pmax	pmax		
	comp=Z,36nm,1.2s						
ANTO	Ankara	30.28	336	P	P	02 11 37.9	+2.5
	SNR=7.7						
GROC	Groznyy	30.46	357	*e*P	P	02 11 36.7	-0.1
GROC				*e*		02 12 33.5	
GROC				*e*S	S	02 16 37.3	-0.5
GROC				pmax	pmax		
	comp=Z,41nm,1.2s						
NEY	Neytrino	30.80	352	⇓*e*P	P	02 11 44.8	+4.8
NIL	Nilore	30.90	43	*e*P	P	02 11 42.1	+1.2
	comp=Z,39nm,1.5s						
NIL	Nilore	30.90	43	*e*P	P	02 11 42.1	+1.2

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NIL                               pmax    pmax
      comp=Z,39nm,1.5s
NCK   Nalchik          30.94 353⇓eP       P      02 11 42.9 +1.9
NCK                               pmax    pmax
      comp=Z,5.0nm,1.3s
ILGA  Ilgaz            30.96 338 eP       P      02 11 41.9 +0.3
      comp=Z,61nm,1.2s
MANT  Manisa           31.06 329 eP       P      02 11 40.1 -2.3
      comp=Z,55nm,0.9s
OPO   Ambohidratompo   31.10 182  P       P      02 11 42.6 -0.2
      comp=Z,5.1nm,0.9s,baz=349,slow=11,SNR=2.9
OPO                               LR      LR     02 22 37.1
      comp=Z,1µm,21.8s,baz=191,slow=33
KBZ   Khabaz           31.25 353  P       P      02 11 44.3 +0.6
      comp=Z,1.1nm,0.7s,baz=126,slow=5.8,SNR=5.3
KBZ                               LR      LR     02 25 49.6
      comp=Z,1µm,19.2s,baz=187,slow=39
SHA1  Shidzhatmaz      31.29 352⇑eP       P      02 11 45.7 +1.3
KVAR  Kislovodsk Arr   31.50 352  P       P      02 11 46.5 +0.4
      comp=Z,2.6nm,0.9s,baz=43,slow=22,SNR=3.2
KVAR                              LR      LR     02 25 01.4
      comp=Z,1µm,20.6s,baz=80,slow=37
KIV   Kislovodsk       31.50 352 eP       P      02 11 46.5 +0.4
      comp=Z,16nm,1.1s
KIV   Kislovodsk       31.50 352 eP       P      02 11 47.7 +1.6
KIV                              eS       S      02 16 57.2 +2.9
KIV                               pmax    pmax
      comp=Z,28nm,1.1s
KIV                               MLR     MLR
      comp=Z,3µm,15.0s
SOC   Sochi            31.63 348 eP       P      02 11 47.3 +0.2
SOC                              e               02 12 49.6
SOC                              eS       S      02 16 57.2 +1.1
SOC                              eSS      SnSn   02 18 40.8 -1.2
SOC                               pmax    pmax
      comp=Z,12nm,0.6s
SOC                               MLR     MLR
      comp=Z,1µm,15.0s
CHGR  Chuyangaron      31.84  32 eP       P      02 11 48.7 -0.5
      comp=Z,41nm,1.0s
BALB  Balikesir        32.28 330 eP       P      02 11 55.2 +2.3
      comp=Z,78nm,1.1s
YLV   Yalova           32.31 333⇑iP       P      02 11 55.0 +1.8
PALK  Pallekele        32.43  96  LR      LR     02 22 09.8
      comp=Z,903nm,21.4s,baz=296,slow=31
GOF   Gofitskoye       32.54 353⇑eP       P      02 11 57.0 +1.9
GAR   Garm             32.70  33 eP       P      02 11 58.2 +1.5
      comp=Z,46nm,0.7s
GAR   Garm             32.70  33 eP       P      02 11 58.2 +1.5
GAR                               pmax    pmax
      comp=Z,46nm,0.7s
ANN   Anapa            33.28 346 eP       P      02 12 01.5 -0.1
ANN                              eS       S      02 17 26.4 +4.6
ANN                               pmax    pmax
      comp=Z,42nm,1.4s
ANN                               MLR     MLR
      comp=Z,1µm,17.0s
BTK   Batken           33.74  32 eP       P      02 12 04.9 -0.9
      comp=Z,26nm,1.0s
BTK   Batken           33.74  32 eP       P      02 12 04.9 -0.9
BTK                               pmax    pmax
      comp=Z,26nm,1.0s
ALN   Alexandroupoli   34.15 329 eP       P      02 12 11.1 +1.9
      comp=Z,13nm,0.9s
LSZ   Lusaka           34.15 216  P       P      02 12 08.6 -0.9
      comp=Z,4.4nm,0.8s,baz=69,slow=9.0,SNR=3.8
LSZ   Lusaka           34.15 216 eP       P      02 12 08.7 -0.9
      comp=Z,55nm,2.0s
LSZ   Lusaka           34.15 216 eP       P      02 12 08.7 -0.9
LSZ                               pmax    pmax
      comp=Z,55nm,2.0s
SIM   Simferopol'      34.31 342ceP       P      02 12 11.2 +0.6
SIM                              eS       S      02 17 40.3 +2.5
SIM                               pmax    pmax
      comp=Z,17nm,0.9s
AGG   Agios Georgios   34.82 323 eP       P      02 12 15.4 +0.4
      comp=Z,17nm,0.9s
AGG   Agios Georgios   34.82 323 eP       P      02 12 15.5 +0.4
AGG                               pmax    pmax
      comp=Z,17nm,0.9s
LIT   Litokhoron       35.46 325 eP       P      02 12 18.8 -1.8
      comp=Z,14nm,0.8s
LIT   Litokhoron       35.46 325 eP       P      02 12 18.8 -1.8
LIT                               pmax    pmax
      comp=Z,14nm,0.8s
ELND  Elena            35.78 331⇓iP       P      02 12 23.2 -0.1
ARSB  Arslanbob        35.79  33 eP       P      02 12 24.7 +1.1
      comp=Z,65nm,1.4s
KK31  Karatay Array    35.90  28 eP       P      02 12 26.2 +1.9
      comp=Z,8.4nm,1.1s
KK31                             ePcP     PcP    02 14 49.1 -2.3
KK31  Karatay Array    35.90  28 eP       P      02 12 26.2 +1.9
KK31                             e               02 14 49.1
KK31                              pmax    pmax
      comp=Z,8.0nm,1.1s
KKAR  Karatay Array    35.90  28 eP       P      02 12 26.2 +1.9
      comp=Z,8.4nm,1.1s
KKAR                             ePcP     PcP    02 14 50.9 -0.5
KKAR  Karatay Array    35.90  28 eP       P      02 12 26.2 +1.9
KKAR                             e               02 14 50.9
KKAR                              pmax    pmax
      comp=Z,8.0nm,1.1s
TIRR  Tirgusor         35.90 336 eP       P      02 12 24.3 +0.1
      comp=Z,79nm,1.2s
TIRR  Tirgusor         35.90 336⇑iP       P      02 12 24.1 -0.1
TIRR  Tirgusor         35.90 336 eP       P      02 12 24.3 +0.1
TIRR                              pmax    pmax
      comp=Z,79nm,1.2s
TLB   Topalu           36.16 335⇑iP       P      02 12 26.9 +0.5
KSH   Kashi            36.24  38  P       P      02 12 24.6 -2.8
KSH                               sP      pwP    02 12 32.3 -0.4
KSH                               PP      PP     02 13 46.5 -3.4
KSH                               PcP     PcP    02 14 52.1 -0.5
KSH                               pmax    pmax
      comp=Z,6.0nm,0.9s
KSH                               pmax    pmax
      comp=Z,130nm,6.0s
KSH                               LR      LR
      comp=Z,440nm,11.5s
KSH                               LR      LR
      comp=Z,500nm,12.2s
KSH                               LR      LR
      comp=Z,540nm,14.4s
CFR   Carcaliu         36.61 336⇓iP       P      02 12 30.8 +0.6
PLVB  Pleven           36.72 331⇑iP       P      02 12 31.5 +0.2
VTS   Vitosha          36.83 329 eP       P      02 12 33.1 +0.7
      comp=Z,9.8nm,0.9s
VTS   Vitosha          36.83 329⇑iP       P      02 12 32.1 -0.3
VTS   Vitosha          36.83 329 eP       P      02 12 33.1 +0.7
VTS                               pmax    pmax
      comp=Z,10.0nm,0.9s
HUMR  Humele           37.43 332⇑iP       P      02 12 37.9 +0.6
AAK   Ala-Archa        37.52  32  P       P      02 12 38.6 +0.3
      comp=Z,6.0nm,0.8s,baz=224,slow=7.1,SNR=15
AAK   Ala-Archa        37.52  32 eP       P      02 12 38.0 -0.3
      comp=Z,14nm,1.0s
AAK   Ala-Archa        37.52  32  P       P      02 12 38.2 -0.1
AAK   Ala-Archa        37.52  32 eP       P      02 12 38.0 -0.3
AAK                               pmax    pmax
      comp=Z,14nm,1.0s
AAK   Ala-Archa        37.52  32  P       P      02 12 40.7 +2.4
      SNR=13
AB31  Akbulak array    37.71  13 i P      P      02 12 39.5 -0.1
AB31                              pmax    pmax
      comp=Z,18nm,1.0s
ABKAR Akbulak array    37.71  13 eP       P      02 12 40.0 +0.5
      comp=Z,105nm,2.0s
ABKAR                            ePcP     PcP    02 14 55.0 -1.6
FRU1  Bishkek          37.71  32 eP       P      02 12 39.3 -0.5
      comp=Z,31nm,0.3s
FRU1  Bishkek          37.71  32 eP       P      02 12 39.3 -0.5
FRU1                              pmax    pmax
      comp=Z,31nm,0.3s
VRI   Vrincioaia       37.74 335⇑iP       P      02 12 39.4 -0.5
PLOR  Plostina         37.76 335⇑iP       P      02 12 40.2 +0.1
MLR   Muntele Rosu     37.76 334  P       P      02 12 41.1 +0.8
      comp=Z,6.1nm,0.9s,baz=197,slow=0.9,SNR=8.3
MLR                               PcP     PcP    02 14 55.6 -1.5
      comp=Z,1.6nm,0.8s,baz=112,slow=5.4,SNR=2.3
MLR   Muntele Rosu     37.76 334 eP       P      02 12 42.0 +1.7
      comp=Z,41nm,1.4s
MLR   Muntele Rosu     37.76 334⇑iP       P      02 12 41.0 +0.8
KIS   Kishinev         37.87 338 eP       P      02 12 41.0  0.0
KIS   Kishinev         37.87 338 ePP      PP     02 14 08.0 +0.5
KIS                              eS       S      02 18 30.0 -2.3
KIS                              eSS      SS     02 21 28.0 +9.4
KIS                              eL       L      02 23 40.0
KIS                               LRM     MLR    02 31 00.0
      comp=Z,600nm,17.0s
KIS   Kishinev         37.87 338 eP       P      02 12 41.0  0.0
KIS                              e               02 14 08.0
KIS                              eS       S      02 18 30.0 -2.3
KIS                               MLR     MLR
      comp=Z,600nm,17.0s
KIS                               MLR     MLR
      comp=N,600nm,17.0s
VOIR                   38.10 333⇑iP       P      02 12 43.3 +0.2
BOOM  Boomskoye usch   38.19  34 eP       P      02 12 41.9 -2.1
      comp=N,14nm,0.8s
BOOM  Boomskoye usch   38.19  34 eP       P      02 12 41.9 -2.1
BOOM                              pmax    pmax
      comp=Z,14nm,0.8s
TESR  Tescani          38.30 336⇑iP       P      02 12 44.3 -0.3
TKM2  Tokmak 2         38.30  33  P       P      02 12 45.7 +0.8
TKM2                              pmax    pmax
      comp=Z,6.0nm,1.0s
OZUR                   38.31 335⇑iP       P      02 12 45.2 +0.4
DOPR  Dopca            38.38 334⇑iP       P      02 12 45.1 -0.2
AKTO  Aktyubinsk       38.47  10  P       P      02 12 46.4 +0.4
      comp=Z,3.2nm,0.8s,baz=202,slow=7.9,SNR=13
AKTO  Aktyubinsk       38.47  10  P       P      02 12 46.8 +0.8
AKTO                              pmax    pmax
      comp=Z,13nm,1.0s
KDJ   Kajisay          38.63  35 eP       P      02 12 47.5 -0.2
      comp=Z,96nm,1.9s
KDJ   Kajisay          38.63  35 eP       P      02 12 47.5 -0.2
KDJ                               pmax    pmax
      comp=Z,96nm,1.9s
LOT   Lotru            38.69 332⇑iP       P      02 12 47.2 -0.8
PDG   Podgorica        38.83 325 eP       P      02 12 48.8 -0.3
TTG   Podgorica        38.83 325 eP       P      02 12 52.8 +3.8
      comp=Z,11nm,0.9s
VORD  Divnogorie       38.84 351 eP       P      02 12 48.8 -0.2
VORD                              pmax    pmax
      comp=Z,20nm,0.9s
BIZ   Bicaz            38.86 336⇑iP       P      02 12 49.8 +0.5
HERR  Herculane        38.89 330⇓iP       P      02 12 49.8 +0.2
VAE   Valguarnera      38.97 315  P       P      02 12 52.8 +2.4
      comp=Z,6.1nm,1.0s,baz=114,slow=18,SNR=2.5
VAE                               LR      LR     02 28 41.8
      comp=Z,217nm,18.0s,baz=179,slow=36
GZR   Gura Zlata       39.10 331⇑iP       P      02 12 51.4 -0.1
VSR   Storozhevoye     39.10 351 eP       P      02 12 51.3 +0.1
VSR                               pmax    pmax
      comp=Z,40nm,1.0s
MDVR  Moldovita        39.16 330⇓iP       P      02 12 50.0 -2.0
TREB  Trebinje         39.52 325 eP       P      02 12 55.4 +0.5
BRY   Bratogost        39.53 325 eP       P      02 12 53.4 -1.8
DIVS  Divibare         39.55 328 eP       P      02 12 53.9 -1.4
PRZ   Przheval'sk      39.55  36 eP       P      02 12 52.5 -2.9
      comp=Z,18nm,0.8s
PRZ   Przheval'sk      39.55  36 eP       P      02 12 52.5 -2.9
PRZ                               pmax    pmax
      comp=Z,18nm,0.8s
DBRK  Dubrovnik        39.60 325  P       P      02 12 55.4 -0.2
BURAR Bucovina Array   39.76 336⇓iP       P      02 12 57.0  0.0
BUR08 Bucovina Ar. S   39.79 336 eP       P      02 12 58.6 +1.4
      comp=Z,65nm,2.0s
BZS   Buzias           39.82 331⇑iP       P      02 12 55.9 -1.4
STON  Ston             39.99 324  P       P      02 12 58.1 -0.6
STON  Ston             39.99 324 eP       P      02 12 57.1 -1.7
SIRR  Siria            40.27 331⇑iP       P      02 13 00.1 -1.1
LPSR  Galich'ya Gora   40.48 351 eP       P      02 13 02.8 +0.1
LPSR                              pmax    pmax
      comp=Z,30nm,0.9s
LPSR                              MLR     MLR
      comp=Z,610nm,15.0s
MAKA  Makarska         40.64 324  P       P      02 13 03.6 -0.5
PDGK  Podgornoye       40.71  36  P       P      02 13 06.0 +1.1
PDGK                              pmax    pmax
      comp=Z,12nm,1.0s
OTUK  Ortayu           40.72  25  P       P      02 13 04.8  0.0
OTUK                              pmax    pmax
      comp=Z,43nm,1.4s
AMBH  Ambrzfalva       40.78 331⇓eP       P      02 13 17.0  +12
AKASG Malin Array Be   40.94 342  P       P      02 13 05.9 -0.6
      comp=Z,5.0nm,0.9s,baz=152,slow=7.4,SNR=18
AKASG                             PcP     PcP    02 15 06.5 -0.3
      comp=Z,3.9nm,0.9s,baz=162,slow=2.3,SNR=4.9
AKASG                             LR      LR     02 33 16.0
      comp=Z,425nm,18.9s,baz=120,slow=41
AKBB  Malin Array Si   40.94 342 eP       P      02 13 06.8 +0.3
      comp=Z,120nm,1.9s
AKBB                             ePcP     PcP    02 15 06.5 -0.3
AKBB  Malin Array Si   40.94 342 eP       P      02 13 06.8 +0.3
AKBB                             e               02 15 06.5
AKBB                              pmax    pmax
      comp=Z,120nm,1.9s
KIJV  Kijevo           41.43 325  P       P      02 13 10.6 -0.2
BLY   Banja Luka       41.48 326 eP       P      02 13 11.1  0.0
      comp=Z,23nm,1.0s
BLY   Banja Luka       41.48 326⇑iP       P      02 13 09.7 -1.4
BLY   Banja Luka       41.48 326 eP       P      02 13 10.0 -1.1
MORH  Mrgy, Hungar     41.70 329 eP       P      02 13 11.1 -1.8
MORI  Morici           41.74 324  P       P      02 13 12.8 -0.5
TAM   Tamanrasset      41.75 290 eP       P      02 13 13.2 -0.6
      comp=Z,12nm,1.1s
TAM   Tamanrasset      41.75 290 eP       P      02 13 13.2 -0.6
TAM                               pmax    pmax
      comp=Z,12nm,1.1s
UZH   Uzhgorod         41.77 334 eP       P      02 13 14.0 +0.6
UZH                              e               02 13 23.8
UZH                              e               02 14 56.6
UZH                              eS       S      02 19 29.0 -1.7
KEST  Kesra            41.82 310  P       P      02 13 13.9 -0.2
      comp=Z,1.8nm,0.6s,baz=102,slow=4.3,SNR=4.2
KEST                              PcP     PcP    02 15 10.2 +0.1
      comp=Z,3.3nm,0.8s,baz=91,slow=10,SNR=3.3
KEST                              LR      LR     02 31 03.7
      comp=Z,481nm,19.3s,baz=299,slow=37
KEST  Kesra            41.82 310 eP       P      02 13 13.9 -0.2
      comp=Z,14nm,1.6s
KEST                             ePcP     PcP    02 15 10.2 +0.1
LVV   L'vov            42.00 337 eP       P      02 13 14.1 -1.2
LVV                              e               02 14 51.9
LVV                               MLR     MLR
      comp=N,300nm,17.0s
LVV                               MLR     MLR
      comp=E,600nm,17.0s
LVV                               MLR     MLR
      comp=Z,400nm,18.0s
KOLS  Kolonicke sedl   42.02 334 eP       P      02 13 16.9 +1.5
KOLS  Kolonicke sedl   42.02 334 eP       P      02 13 16.9 +1.5
UDBI  Udbina           42.12 325  P       P      02 13 16.3 -0.1
DUGI  Dugi Otok        42.19 324  P       P      02 13 17.0 +0.1
AQU   L'Aquila         42.22 321 eP       P      02 13 13.3 -3.9
      comp=Z,9.0nm,1.2s
AQU   L'Aquila         42.22 321 eP       P      02 13 13.3 -3.9
AQU                               pmax    pmax
      comp=Z,9.0nm,1.2s
PSZ   Piszkesteto      42.30 332 eP       P      02 13 18.4 +0.5
      comp=Z,48nm,1.7s
PSZ   Piszkesteto      42.30 332⇑iP       P      02 13 16.3 -1.6
PSZ   Piszkesteto      42.30 332 eP       P      02 13 15.0 -2.8
KWP   Kalwaria Pacla   42.38 335 eP       P      02 13 19.3 +0.9
KWP   Kalwaria Pacla   42.38 335 eP       P      02 13 17.8 -0.6
      comp=Z,219nm,0.9s
KWP   Kalwaria Pacla   42.38 335 eP       P      02 13 17.8 -0.6
KWP                               pmax    pmax
      comp=Z,219nm,0.9s
BUD   Budapest         42.40 331⇓eP       P      02 13 18.1 -0.5
TIH   Tihany           42.55 329 eP       P      02 13 19.1 -0.7
NVLJ  Novalja          42.65 325  P       P      02 13 19.4 -1.2
CSKK  Cskako           42.69 330 eP       P      02 13 18.1 -2.9
BEHE  Becsehely        42.83 328 eP       P      02 13 22.1  0.0
CRES  Cresnjev         43.11 326 eP       P      02 13 22.5 -1.9
VYHS  Vyhne            43.21 332 eP       P      02 13 25.1 -0.1
VYHS  Vyhne            43.21 332 eP       P      02 13 25.1 -0.1
OBN   Obninsk          43.28 350  P       P      02 13 25.5 -0.1
      comp=Z,2.2nm,0.5s,baz=50,slow=4.6,SNR=5.5
OBN                               PcP     PcP    02 15 13.7 -0.7
      comp=Z,2.2nm,0.4s,baz=86,slow=1.5,SNR=4.5
OBN                               LR      LR     02 33 42.1
      comp=Z,198nm,20.2s,baz=168,slow=39
OBN   Obninsk          43.28 350 eP       P      02 13 25.5 -0.1
      comp=Z,32nm,1.1s
OBN                              ePcP     PcP    02 15 13.7 -0.7
OBN   Obninsk          43.28 350⇓iP       P      02 13 26.3 +0.8
OBN                              e*PP     sP     02 13 28.9 -0.2
OBN                              i *SP    pwP    02 13 31.4 +0.7
OBN                              e               02 15 08.0
OBN                              e               02 15 14.6
OBN                              eS       S      02 19 54.6 +2.0
OBN                               SS      SS     02 23 06.0  0.0
OBN                               SSS     SSS    02 23 47.0
OBN                               pmax    pmax
      comp=Z,55nm,2.5s
OBN                               MLR     MLR
      comp=Z,674nm,18.0s
LBTB  Lobatse          43.50 210 eP       P      02 13 29.6 +1.8
      comp=Z,20nm,1.0s
MOS   Moscow           43.72 351 eP       P      02 13 26.4 -2.7
MOS                              e               02 15 13.4
MOS                              e               02 15 42.0
MOS                              eS       S      02 19 55.6 -3.5
MOS                              eSS      SS     02 23 21.4 +6.8
MOS                               pmax    pmax
      comp=Z,54nm,1.7s
MOS                               MLR     MLR
      comp=Z,600nm,18.0s
SOP   Sopron           43.75 329 eP       P      02 13 29.1 -0.4
TSUM  Tsumeb           43.78 224 eP       P      02 13 32.5 +2.3
      comp=Z,7.1nm,1.1s
MODS  Modra-Piesok     43.87 330 eP       P      02 13 32.3 +1.8
MODS  Modra-Piesok     43.87 330 eP       P      02 13 32.3 +1.8
SOKA  Soboth           43.88 327 eP       P      02 13 30.4 -0.2
      comp=Z,12nm,1.1s
BRVK  Borovoye         43.94  19 eP       P      02 13 28.6 -2.3
      comp=Z,26nm,1.6s
BRVK  Borovoye         43.94  19⇓eP       P      02 13 31.4 +0.5
BRVK                              pmax    pmax
      comp=Z,5.0nm,1.0s
BRVK  Borovoye         43.94  19  P       P      02 13 31.7 +0.8
      SNR=7.2
BRVK                              P       P      02 13 31.7 +0.8
      SNR=7.2
BVAR  Borovoye Array   43.94  19  P       P      02 13 31.2 +0.3
      comp=Z,3.6nm,0.7s,baz=187,slow=7.5,SNR=10
BVAR                              PcP     PcP    02 15 16.3 -0.5
      comp=Z,3.8nm,0.7s,baz=214,slow=5.0,SNR=5.7
ARSA  Arzberg          43.99 328 eP       P      02 13 31.6 +0.1
      comp=Z,7.9nm,1.3s
JAVC  Velka Javorina   44.02 331 eP       P      02 13 31.7  0.0
JAVC                             eS       S      02 20 10.1 +6.3
OBKA  Obir             44.03 327 eP       P      02 13 32.5 +0.6
      comp=Z,10nm,1.1s
OJC   Ojcow            44.04 334 eP       P      02 13 31.4 -0.4
OJC   Ojcow            44.04 334 eP       P      02 13 31.7 -0.1
      comp=Z,18nm,1.2s
OJC   Ojcow            44.04 334 eP       P      02 13 31.7 -0.1
OJC                               pmax    pmax
      comp=Z,18nm,1.2s
CONA  Conrad Observa   44.26 329 eP       P      02 13 33.1 -0.7
      comp=Z,13nm,1.4s
MAKZ  Makanchi         44.27  33 eP       P      02 13 34.0 +0.3
      comp=Z,15nm,0.9s
MAKZ  Makanchi         44.27  33  P       P      02 13 33.7  0.0
MAKZ                              pmax    pmax
      comp=Z,21nm,1.1s
ARU   Arti             44.35   8  P       P      02 13 34.4 +0.3
      comp=Z,1.8nm,0.5s,baz=171,slow=7.3,SNR=9.0
ARU                               LR      LR     02 36 28.0
      comp=Z,2µm,18.5s,baz=195,slow=42
ARU   Arti             44.35   8 eP       P      02 13 34.5 +0.3
      comp=Z,24nm,1.0s
ARU   Arti             44.35   8diP       P      02 13 34.7 +0.5
ARU                                              02 15 20.8
ARU                               PPP     PPP    02 15 54.3
ARU                               S       S      02 20 11.1 +2.8
ARU                               SS      ScS    02 23 36.6 +4.1
ARU                               pmax    pmax
      comp=Z,12nm,0.9s
ARU                               MLR     MLR
      comp=Z,1µm,18.0s
MK31  Makanchi Array   44.43  33 eP       P      02 13 35.5 +0.5
      comp=Z,10nm,0.8s
MK31  Makanchi Array   44.43  33 i P      P      02 13 35.0  0.0
MK31                              pmax    pmax
      comp=Z,14nm,0.9s
MK32  Makanchi Array   44.43  33 eP       P      02 13 35.1 +0.1
MKAR  Makanchi Array   44.43  33  P       P      02 13 35.1 +0.1
      comp=Z,7.8nm,0.8s,baz=219,slow=8.0,SNR=30
MKAR                              LR      LR     02 36 09.8
      comp=Z,542nm,18.4s,baz=232,slow=42
OKC   Ostrava-Krasne   44.49 332 eS       S      02 20 09.9 -0.6
OKC                               AMS     AMS    02 40 00.0
      comp=Z,400nm,16.7s
MYKA  Terra Mystica    44.59 326 eP       P      02 13 36.6 +0.2
      comp=Z,21nm,1.5s
MICGM Minsk            44.66 343 e        P      02 13 36.0 -0.7
MICGM                            eLR      LR     03 33 04.0
MNK   Minsk            44.66 343 eP       P      02 13 26.0  -11
MORC  Moravsky Berou   44.72 332 eP       P      02 13 37.4 +0.1
      comp=Z,13nm,1.2s
MORC  Moravsky Berou   44.72 332 eP       P      02 13 37.4 +0.1
MORC                              pmax    pmax
      comp=Z,13nm,1.2s
MORC  Moravsky Berou   44.72 332 eP       P      02 13 36.5 -0.8
MORC                             eS       S      02 20 17.1 +3.1
KRUC  Moravsky         44.76 330 eP       P      02 13 36.4 -1.2
KRUC                             eS       S      02 20 15.3 +0.7
VRAC  Vranov           44.84 331  P       P      02 13 38.5 +0.3
      comp=Z,4.2nm,0.7s,baz=134,slow=5.0,SNR=7.9
VRAC  Vranov           44.84 331⇑iP       P      02 13 35.1 -3.1
VRAC  Vranov           44.84 331 eP       P      02 13 36.4 -1.8
VRAC                             eS       S      02 20 19.4 +3.7
MOA   Molln            45.03 328 eP       P      02 13 39.3 -0.5
      comp=Z,11nm,1.1s
KBA   Koelnbreinsper   45.03 326 eP       P      02 13 40.0  0.0
      comp=Z,5.8nm,0.9s
SVE   Sverdlovsk       45.05  10 eP       P      02 13 41.1 +1.4
SVE                              eS       S      02 20 22.7 +4.2
SVE                               pmax    pmax
      comp=Z,32nm,1.3s
SVE                               MLR     MLR
      comp=Z,2µm,15.0s
KURK  Kurchatov        45.27  27 eP       P      02 13 41.9 +0.3
      comp=Z,21nm,1.1s
KURK  Kurchatov        45.27  27diP       P      02 13 41.4 -0.2
KURK                              pmax    pmax
      comp=Z,16nm,1.0s
KURK  Kurchatov        45.27  27  P       P      02 13 42.0 +0.4
      SNR=9.8
ABTA  Abfaltersbach    45.28 326 eP       P      02 13 42.2 +0.3
      comp=Z,8.3nm,1.4s
TOA0  Torodi Ar. Sit   45.29 276 eP       P      02 13 41.2 -1.1
      comp=Z,8.9nm,0.9s
TORD  Torodi Ar. Bea   45.29 276  P       P      02 13 41.1 -1.3
      comp=Z,3.9nm,0.8s,baz=72,slow=6.0,SNR=21
TORD                              PcP     PcP    02 15 22.0 -0.2
      comp=Z,1.9nm,0.7s,baz=79,slow=3.2,SNR=7.7
TORD                              LR      LR     02 31 38.3
      comp=Z,427nm,19.8s,baz=15,slow=35
TOA1  Torodi Ar. Sit   45.30 276 eP       P      02 13 41.1 -1.3
TOA1                             ePcP     PcP    02 15 22.0 -0.2
TREC  Trest            45.36 330 eS       S      02 20 26.9 +3.7
TREC                              AMS     AMS    02 41 40.0
      comp=Z,400nm,20.3s
DPC   Dobruska-Polom   45.69 332 eP       P      02 13 44.1 -0.9
DPC                              eS       S      02 20 23.7 -4.3
DPC                               MLR     MLR
      comp=Z,300nm,17.5s
DPC   Dobruska-Polom   45.69 332 eP       P      02 13 44.1 -0.9
DPC                              eS       S      02 20 23.7 -4.3
DPC                               AMS     AMS    02 34 00.0
      comp=Z,300nm,17.5s
SUW   Suwalki          45.71 340 eP       P      02 13 45.0  0.0
SUW   Suwalki          45.71 340 eP       P      02 13 45.4 +0.4
      comp=Z,73nm,1.0s
SUW   Suwalki          45.71 340 eP       P      02 13 45.0  0.0
KIRV  Kirov            45.80   1  P       P      02 13 45.2 -0.3
      comp=Z,9.3nm,0.5s,baz=178,slow=2.1,SNR=7.1
OSTC  Ostas            45.88 332 eP       P      02 13 45.6 -0.9
OSTC                             eS       S      02 20 28.5 -2.2
OSTC                              AMS     AMS    02 40 40.0
      comp=Z,300nm,18.5s
WMQ   Urumqi           45.89  40 eP       P      02 13 51.2 +4.4
WMQ                               sP      pwP    02 13 58.7 +6.6
WMQ                               pmax    pmax
      comp=Z,37nm,1.1s
WMQ                               pmax    pmax
      comp=Z,220nm,5.9s
WMQ                               LR      LR
      comp=Z,230nm,19.5s
WMQ                               LR      LR
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	comp=Z,310nm,20.5s						
WMQ				LR	LR		
	comp=Z,760nm,29.2s						
UPC	**Upice**	45.94	332	*e*P	P	02 13 44.7	-2.2
UPC				*e*S	S	02 20 30.1	-1.4
UPC				MLR	MLR		
	comp=Z,300nm,19.5s						
UPC	**Upice**	45.94	332	*e*P	P	02 13 44.7	-2.2
UPC				*e*S	S	02 20 30.1	-1.4
UPC				AMS	AMS	02 34 10.0	
	comp=Z,300nm,19.5s						
GEC2	**GERESS Array S**	45.95	329	*e*P	P	02 13 46.2	-1.0
	comp=Z,50nm,2.0s						
GEC2				*e*PcP	PcP	02 15 22.9	-1.0
GEC2	**GERESS Array S**	45.95	329	*e*P	P	02 13 46.2	-1.0
GEC2				*e*		02 15 22.9	
GEC2				pmax	pmax		
	comp=Z,50nm,2.0s						
GERES	**GERESS Array B**	45.95	329	P	P	02 13 46.4	-0.7
	comp=Z,2.3nm,0.5s,baz=139,slow=8.5,SNR=24						
GERES				PcP	PcP	02 15 22.9	-1.0
	comp=Z,0.7nm,0.7s,baz=125,slow=4.9,SNR=1.9						
CHVC	**Chvalec**	45.97	332	*e*P	P	02 13 44.8	-2.4
CHVC				AMS	AMS	02 40 40.0	
	comp=Z,300nm,16.1s						
KSP	**Ksiaz**	46.04	332	*e*P	P	02 13 46.8	-0.9
KSP	**Ksiaz**	46.04	332	*e*P	P	02 13 46.8	-0.9
WTTA	**Wattenberg**	46.07	326	*e*P	P	02 13 47.7	-0.6
	comp=Z,8.0nm,1.3s						
GOPC	**GO Pecny, Ondr**	46.11	330	*e*P	P	02 13 47.4	-0.9
GOPC				*e*S	S	02 20 32.6	-1.5
GOPC				MLR	MLR		
	comp=Z,300nm,22.7s						
GOPC	**GO Pecny, Ondr**	46.11	330	*e*P	P	02 13 47.4	-0.9
GOPC				*e*S	S	02 20 32.6	-1.5
GOPC				AMS	AMS	02 41 30.0	
	comp=Z,300nm,22.7s						
WATA	**Walderalm**	46.15	326	*e*P	P	02 13 47.5	-1.3
	comp=Z,1.0nm,0.4s						
KHC	**Kasperske Hory**	46.20	329	*e*P	P	02 13 47.4	-1.7
	comp=Z,19nm,2.0s						
KHC	**Kasperske Hory**	46.20	329	*e*P	P	02 13 47.2	-1.8
KHC				*e*S	S	02 20 33.5	-1.9
KHC				MLR	MLR		
	comp=Z,400nm,21.1s						
KHC	**Kasperske Hory**	46.20	329	*e*P	P	02 13 47.2	-1.8
KHC				*e*S	S	02 20 33.5	-1.9
KHC				AMS	AMS	02 42 30.0	
	comp=Z,400nm,21.1s						
PRU	**Pruhonice**	46.28	330	*e*P	P	02 13 48.6	-1.0
PRU				*e*S	S	02 20 35.9	-0.5
PRU				MLR	MLR		
	comp=Z,300nm,16.8s						
PRU	**Pruhonice**	46.28	330	*e*P	P	02 13 48.6	-1.0
PRU				*e*S	S	02 20 35.9	-0.5
PRU				AMS	AMS	02 41 20.0	
	comp=Z,300nm,16.8s						
SQTA	**Sankt Quirin**	46.28	325	*e*P	P	02 13 48.8	-1.1
	comp=Z,4.6nm,0.9s						
MOTA	**Moosalm**	46.41	325	*e*P	P	02 13 49.6	-1.3
	comp=Z,1.7nm,0.6s						
WIN	**Windhoek**	46.46	221	*e*P	P	02 13 55.1	+3.5
	comp=Z,19nm,1.3s						
FUORN	**Ofenpass-Fuorn**	46.47	324	*e*P	P	02 13 55.7	+4.2
	comp=Z,30nm,1.7s						
PVCC	**Panska Ves**	46.63	331	*e*P	P	02 13 58.1	+5.8
PVCC				MLR	MLR		
	comp=Z,300nm,20.8s						
PVCC	**Panska Ves**	46.63	331	*e*P	P	02 13 58.1	+5.8
PVCC				AMS	AMS	02 37 40.0	
	comp=Z,300nm,20.8s						
RETA	**Reutte**	46.69	325	*e*P	P	02 13 51.7	-1.3
	comp=Z,4.0nm,1.0s						
BOSA	**Boshof**	46.70	208	P	P	02 13 53.8	+0.5
	comp=Z,6.2nm,0.8s,baz=22,slow=7.7,SNR=13						
BOSA				LR	LR	02 34 08.6	
	comp=Z,2µm,18.2s,baz=43,slow=37						
BOSA	**Boshof**	46.70	208	*e*P	P	02 13 54.4	+1.1
	comp=Z,12nm,0.9s						
DAVOX	**Davos/Dischmat**	46.78	324	P	P	02 13 53.5	-0.4
	comp=Z,2.4nm,0.5s,baz=86,slow=8.7,SNR=5.3						
TUE	**Stuetta**	46.92	324	*e*P	P	02 13 52.2	-2.7
	comp=Z,8.1nm,1.3s						
DAVA	**Damuels**	47.06	325	*e*P	P	02 13 55.0	-1.0
	comp=Z,8.9nm,1.3s						
BRG	**Berggiesshubel**	47.15	331	*e*P	P	02 13 55.4	-1.0
	comp=Z,9.7nm,1.3s						
BRG				S	S	02 20 52.0	+3.1
BRG				SS	SS	02 24 23.0	+7.0
	comp=N,183nm,13.3s						
	comp=E,161nm,14.5s						
	comp=Z,289nm,18.5s						
BRG	**Berggiesshubel**	47.15	331	*e*P	P	02 13 55.4	-1.0
BRG				S	S	02 20 52.0	+3.1
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,183nm,13.3s						
BRG				MLR	MLR		
	comp=E,161nm,14.5s						
BRG				MLR	MLR		
	comp=Z,289nm,18.5s						
NKC	**Novy Kostel**	47.47	329	*e*S	S	02 20 52.1	-1.3
NKC				AMS	AMS	02 42 20.0	
	comp=Z,400nm,21.6s						
GRA1	**Grafenberg Arr**	47.75	328	*e*P	P	02 14 00.5	-0.6
	comp=Z,27nm,1.5s						
GRF	**Grafenberg Arr**	47.75	328	*e*P	P	02 14 00.5	-0.6
GRF				pmax	pmax		
	comp=Z,27nm,1.5s						
GRFO	**Grafenberg**	47.75	328	*e*P	P	02 14 00.1	-1.0
	comp=Z,57nm,1.9s						
GRFO	**Grafenberg**	47.75	328	*e*P	P	02 14 00.1	-1.0
GRFO				pmax	pmax		
	comp=Z,57nm,1.9s						
BNI	**Bardonecchia**	47.78	321	*e*P	P	02 14 02.1	+0.5
	comp=Z,5.2nm,0.9s						
BNI	**Bardonecchia**	47.78	321	*e*P	P	02 14 02.1	+0.5
BNI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	47.89	331	*e*P	P	02 14 01.0	-1.1
CLL				*e*S	S	02 20 58.0	-1.3
CLL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CLL	**Collm**	47.89	331	*e*P	P	02 14 01.0	-1.1
	comp=Z,10.0nm,1.3s						
CLL				*e*sP	pwP	02 14 07.0	-0.5
CLL				*e*		02 14 11.0	
	comp=Z,43nm,1.9s						
CLL				*e*S	S	02 20 58.0	-1.3
	comp=N,100nm,21.5s						
CLL				*e*S	S	02 20 58.0	-1.3
	comp=E,300nm,29.6s						
CLL				*e*		02 22 02.0	
CLL				*e*SS	SS	02 24 31.0	+3.1
CLL				*e*SSS	SSS	02 25 36.0	
SENIN	**Lac Senin/Sane**	48.06	322	*e*P	P	02 14 03.8	0.0
	comp=E,20nm,1.1s						
BFO	**Black Forest**	48.51	325	*e*P	P	02 14 06.5	-0.6
	comp=E,14nm,1.0s						
BFO	**Black Forest**	48.51	325	*i* P	P	02 14 07.1	0.0
PRGR	**Permogore**	48.88	358	*e*P	P	02 14 08.3	-1.3
PRGR				*e*		02 15 35.6	
PRGR				pmax	pmax		
	comp=Z,47nm,1.0s						
DGZ	**Jazzator, Alta**	48.92	33	*d i*P	P	02 14 10.8	+0.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
CM31	**Chiang Mai Arr**	49.07	77	*e*P	P	02 14 11.4	-0.4
	comp=Z,23nm,1.3s						
CM31				*e*PcP	PcP	02 15 35.8	+0.3
CMAR	**Chiang Mai Arr**	49.07	77	P	P	02 14 11.4	-0.4
	comp=Z,5.4nm,0.7s,baz=277,slow=8.8,SNR=21						
CMAR				PcP	PcP	02 15 35.8	+0.3
	comp=Z,0.6nm,0.3s,baz=280,slow=5.2,SNR=2.0						
CMAR				LR	LR	02 33 31.8	
	comp=Z,229nm,21.5s,baz=297,slow=34						
ECH	**Echery**	49.11	324	*e*P	P	02 14 09.7	-2.0
	comp=Z,17nm,1.4s						
ECH	**Echery**	49.11	324	*e*P	P	02 14 09.7	-2.0
ECH				pmax	pmax		
	comp=Z,17nm,1.4s						
SSB	**Saint Sauveur**	49.22	320	*e*P	P	02 14 14.1	+1.5
	comp=Z,53nm,2.0s						
SSB	**Saint Sauveur**	49.22	320	*e*P	P	02 14 14.1	+1.5
SSB				pmax	pmax		
	comp=Z,53nm,2.0s						
GSI	**Gunungsitoli**	50.18	99	P	P	02 14 22.3	+2.0
ZAA0	**Zalesovo Array**	50.26	27	*e*P	P	02 14 19.1	-1.1
	comp=Z,13nm,0.9s						
ZALV	**Zalesovo Beam**	50.26	27	P	P	02 14 18.9	-1.3
	comp=Z,5.2nm,0.7s,baz=232,slow=8.3,SNR=21						
ZALV				LR	LR	02 38 23.8	
	comp=Z,425nm,18.9s,baz=251,slow=39						
ZAA1	**Zalesovo Array**	50.26	27	*e*P	P	02 14 18.9	-1.3
WLF	**Walferdange**	50.44	326	⇑P	P	02 14 21.3	-0.4
FIA0	**FINESS Array S**	51.24	347	*e*P	P	02 14 27.0	-0.5
FIA0	**FINESS Array S**	51.24	347	*e*P	P	02 14 27.0	-0.5
FIA1	**FINESS Array S**	51.24	347	*e*P	P	02 14 28.4	+0.9
	comp=Z,20nm,1.0s						
FINES	**FINESS Array B**	51.24	347	P	P	02 14 27.0	-0.5
	comp=Z,6.1nm,0.7s,baz=139,slow=9.1,SNR=13						
FINES				LR	LR	02 38 28.6	
	comp=Z,462nm,18.7s,baz=150,slow=39						
MDT	**Midelt**	52.09	302	P	P	02 14 34.4	-0.1
	comp=Z,3.9nm,0.8s,baz=118,slow=9.5,SNR=11						
GTA	**Gaotai**	52.57	50	*e*P	P	02 14 39.0	+1.0
GTA				pP	pwP	02 14 43.5	+0.1
GTA				sP	sP	02 14 46.1	+4.4
GTA				S	S	02 22 04.8	-0.4
GTA				sS	sS	02 22 14.1	+4.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,100nm,4.4s						
GTA				LR	LR		
	comp=Z,340nm,20.3s						
GTA				LR	LR		
	comp=Z,360nm,22.7s						
GTA				LR	LR		
	comp=Z,730nm,23.4s						
DBIC	**Dimbokro**	52.58	269	P	P	02 14 38.0	-0.3
	comp=Z,2.3nm,0.7s,baz=61,slow=8.9,SNR=3.4						
DBIC				LR	LR	02 37 15.2	
	comp=Z,412nm,18.7s,baz=68,slow=36						
DBIC	**Dimbokro**	52.58	269	*e*P	P	02 14 38.0	-0.3
	comp=Z,9.5nm,1.0s						
DBIC	**Dimbokro**	52.58	269	*e*P	P	02 14 38.0	-0.3
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	**Kunming**	52.72	68	P	P	02 14 40.1	+0.6
KMI				pP	pwP	02 14 44.1	-0.9
KMI				sP	sP	02 14 46.7	+3.6
KMI				PP	PP	02 16 42.0	+3.2
KMI				S	S	02 22 08.3	+0.4
KMI				SS	SS	02 25 44.9	-1.7
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
KMI				pmax	pmax		
	comp=Z,180nm,4.8s						
KMI				LR	LR		
	comp=Z,620nm,17.4s						
KMI				LR	LR		
	comp=Z,690nm,19.0s						
KMI				LR	LR		
	comp=Z,1µm,20.3s						
ESDC	**Sonseca Array**	53.07	310	P	P	02 14 41.4	-0.3
	comp=Z,1.3nm,0.7s,baz=104,slow=6.9,SNR=11						
ESDC				PcP	PcP	02 15 49.5	-0.5
	comp=Z,0.4nm,0.6s,baz=108,slow=3.2,SNR=2.6						
ESDC				LR	LR	02 36 55.4	
	comp=Z,106nm,21.2s,baz=130,slow=36						
ESLA	**Sonseca Array**	53.07	310	*e*P	P	02 14 38.5	-3.1
	comp=Z,15nm,1.3s						
NONG	**Nongkai**	53.08	77	P	P	02 14 44.3	+2.4
	comp=Z,0.3nm,1.2s						
PAB	**San Pablo**	53.33	310	*e*P	P	02 14 41.3	-2.2
	comp=Z,48nm,1.9s						
PAB	**San Pablo**	53.33	310	*e*P	P	02 14 41.3	-2.2
PAB				pmax	pmax		
	comp=Z,48nm,1.9s						
SLVN	**Son La**	53.71	73	*e*P	P	02 14 45.9	-0.7
	comp=Z,16nm,1.3s						
CD2	**Chengdu**	54.11	61	*e*P	P	02 14 49.0	-0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,550nm,27.9s						
CD2				LR	LR		
	comp=Z,680nm,20.1s						
CD2				LR	LR		
	comp=Z,650nm,24.5s						
PANO	**Nakornpanom**	54.52	78	P	P	02 14 53.0	+0.5
	comp=Z,0.3nm,0.8s,comp=Z,205nm						
LZH	**Lanzhou**	54.94	55	*e*P	P	02 14 57.5	+2.0
LZH				pP	pwP	02 15 02.4	+1.5
LZH				sP	sP	02 15 05.7	+6.6
LZH				S	S	02 22 43.1	+5.6
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,180nm,4.3s						
LZH				LR	LR		
	comp=Z,380nm,17.9s						
LZH				LR	LR		
	comp=Z,690nm,17.3s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
NB2	**NORSAR Subarra**	55.23	339	P	P	02 14 55.2	-1.8
	comp=Z,1.1nm,0.6s,baz=135,slow=7.4						
NB200	**NORSAR Array S**	55.23	339	*e*P	P	02 14 55.6	-1.4
NOA	**NORSAR Array B**	55.23	339	P	P	02 14 55.6	-1.4
	comp=Z,0.8nm,0.6s,baz=133,slow=7.1,SNR=8.2						
NOA				LR	LR	02 41 39.2	
	comp=Z,464nm,19.4s,baz=130,slow=39						
LVZ	**Lovozero**	55.85	354	⇓*e*P	P	02 15 04.3	+3.0
LVZ				pmax	pmax		
	comp=Z,40nm,1.3s						
GYA	**Guiyang**	56.32	67	⇑*i*P	P	02 15 04.9	-0.6
GYA				PP	PP	02 17 13.3	+2.4
GYA				S	S	02 22 56.1	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,140nm,6.8s						
GYA				LR	LR		
	comp=Z,300nm,17.8s						
GYA				LR	LR		
	comp=Z,590nm,19.5s						
GYA				LR	LR		
	comp=Z,740nm,20.5s						
JMBI	**JAMBI**	56.82	100	P	P	02 15 09.4	+0.4
MDSI	**Maura Dua**	58.16	103	P	P	02 15 21.0	+2.5
ZAK	**Zakamensk**	58.29	38	*e*P	P	02 15 13.5	-5.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
ARA0	**ARCESS Array S**	58.59	351	*e*P	P	02 15 20.7	+0.1
ARCES	**ARCESS Array B**	58.59	351	P	P	02 15 20.7	+0.1
	comp=Z,5.1nm,0.9s,baz=157,slow=6.6,SNR=7.2						
ARCES				LR	LR	02 43 56.3	
	comp=Z,644nm,18.7s,baz=154,slow=40						
QIZ	**Qiongzhong**	59.37	75	P	P	02 15 28.0	+1.1
QIZ				S	S	02 23 31.8	-4.2
QIZ				LR	LR		
	comp=Z,250nm,24.0s						
QIZ				LR	LR		
	comp=Z,220nm,27.9s						
QIZ				LR	LR		
	comp=Z,290nm,39.2s						
SONA0	**Songino Array**	59.46	42	*e*P	P	02 15 27.4	+0.2
SONM	**Songino Array**	59.46	42	P	P	02 15 27.4	+0.2
	comp=Z,3.1nm,0.8s,baz=247,slow=6.7,SNR=21						
SONM				LR	LR	02 44 43.5	
	comp=Z,433nm,20.8s,baz=264,slow=40						
ULN	**Ulaanbaatar**	59.89	42	*e*P	P	02 15 30.4	+0.2
	comp=Z,7.2nm,1.1s						
ULN	**Ulaanbaatar**	59.89	42	⇓*e*P	P	02 15 31.1	+0.9
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC	**Hu-ho-hao-te**	61.67	50	P	P	02 15 43.8	+1.4
HHC				ScP	ScP	02 20 27.1	+1.2
HHC				S	S	02 24 02.0	-3.2
HHC				pmax	pmax		
	comp=Z,15nm,1.2s						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
HHC				LR	LR		
	comp=Z,400nm,14.7s						
HHC				LR	LR		
	comp=Z,420nm,15.4s						
HHC				LR	LR		
	comp=Z,630nm,16.3s						
SBUM	**Sibu**	64.11	93	*e*P	P	02 15 59.8	+0.9
	comp=Z,12nm,1.2s						
BOD	**Bodaibo**	66.50	32	*e*P	P	02 16 12.8	-0.8
BOD				pmax	pmax		
	comp=Z,10.0nm,1.7s						
NJ2	**Nanjing**	67.04	60	*e*P	P	02 16 17.5	-0.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
SPA0	**Spitsbergen Ar**	67.37	353	*e*P	P	02 16 18.9	0.0
	comp=Z,67nm,1.5s						
SPITS	**Spitsbergen Ar**	67.37	353	P	P	02 16 18.9	0.0
	comp=Z,7.4nm,0.8s,baz=120,slow=11,SNR=4.1						
TGY	**Tagaytay City**	70.48	79	LR	LR	02 47 33.7	
	comp=Z,103nm,19.4s,baz=318,slow=36						
CN2	**Changchun**	72.13	48	*e*P	P	02 16 48.8	0.0
CN2				*e*S	S	02 26 09.2	-2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
DAG	**Danmarks Havn**	72.48	347	*e*P	P	02 16 49.6	-0.7
DAG	**Danmarks Havn**	72.48	347	*i* P	P	02 16 49.6	-0.7
KS15	**Wonju Array Si**	74.24	54	*e*P	P	02 17 00.3	-1.2
	comp=Z,18nm,1.3s						
KSRS	**Korea Array**	74.27	54	P	P	02 17 00.3	-1.3
	comp=Z,1.8nm,0.8s,baz=275,slow=6.2,SNR=7.1						
YAK	**Yakutsk**	74.87	29	*e*P	P	02 17 04.4	-0.2
YAK				*e**PP	PcP	02 17 17.5	-1.0
YAK				*e*S	S	02 26 40.1	-1.4
YAK				*e**SS	ScS	02 27 25.7	+9.3
YAK				pmax	pmax		
	comp=Z,14nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,92nm,3.8s						
YAK				pmax	pmax		
	comp=N,70nm,3.7s						
YAK				pmax	pmax		
	comp=E,39nm,3.3s						
YAK				smax	smax		
	comp=N,38nm,1.9s						
YAK				smax	smax		
	comp=E,26nm,1.8s						
YAK				MLR	MLR		
	comp=Z,887nm,19.0s						
YAK				MLR	MLR		
	comp=N,163nm,18.0s						
YAK				MLR	MLR		
	comp=E,622nm,18.0s						
TIXI	**Tiksi**	75.08	19	P	P	02 17 05.1	-0.5
	comp=E,5.3nm,0.6s,baz=272,slow=7.1,SNR=9.3						
TIXI	**Tiksi**	75.08	19	*e*P	P	02 17 05.0	-0.5
	comp=E,29nm,1.4s						
TIXI	**Tiksi**	75.08	19	⇑*e*P	P	02 17 05.1	-0.5
TIXI				pmax	pmax		
	comp=Z,20nm,1.6s						
USRK	**Ussuriysk Ar.**	76.82	47	P	P	02 17 14.9	-1.2
	comp=Z,1.2nm,0.8s,baz=289,slow=4.4,SNR=4.3						
USRK				LR	LR	02 54 35.9	
	comp=Z,323nm,21.4s,baz=279,slow=38						
SUMG	**Summit**	76.97	342	*e*P	P	02 17 16.8	-0.1
SUMG	**Summit**	76.97	342	*i* P	P	02 17 16.8	-0.1
JNU	**Nakatsue**	77.09	59	LR	LR	02 52 31.3	
	comp=Z,156nm,20.5s,baz=323,slow=37						
PSA00	**Pilbara Seismi**	78.09	115	*e*P	P	02 17 23.5	-0.1
	comp=Z,73nm,2.0s						
NWAO	**Narrogin (SRO)**	79.89	127	P	P	02 17 32.6	-0.6
	comp=Z,11nm,0.9s,baz=274,slow=4.8,SNR=3.0						
TEY	**Ternei**	80.00	46	⇑*e*P	P	02 17 32.7	-1.0
TEY				pmax	pmax		
	comp=Z,10.0nm,2.6s						
MAW	**Mawson**	80.80	174	P	P	02 17 37.7	+0.4
	comp=Z,2.5nm,0.6s,baz=8.8,slow=4.9,SNR=9.5						
MAW				LR	LR	02 50 09.8	
	comp=Z,315nm,18.2s,baz=346,slow=33						
MAW	**Mawson**	80.80	174	*e*P	P	02 17 38.5	+1.2
	comp=Z,14nm,1.9s						
MAW	**Mawson**	80.80	174	*e*P	P	02 17 38.5	+1.2
MAW				pmax	pmax		
	comp=Z,14nm,1.9s						
NKL	**Nikolayevsk**	81.42	37	*e*P	P	02 17 35.5	-5.5
NKL				*e*S	S	02 27 46.0	-6.3
NKL				*e*SS	SS	02 33 04.8	-3.3
NKL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NKL				pmax	pmax		
	comp=N,9.0nm,1.1s						
NKL				pmax	pmax		
	comp=E,5.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,30nm,3.5s						
SYO	**Syowa Base**	81.74	183	⇑*e*P	P	02 17 45.0	+2.8
MAJO	**Matsushiro**	82.55	54	*e*P	P	02 17 46.9	-0.5
MAJO	**Matsushiro**	82.55	54	*e*P	P	02 17 46.9	-0.5
MJAR	**Matsushiro Arr**	82.55	54	P	P	02 17 46.9	-0.5
	comp=Z,3.2nm,0.7s,baz=271,slow=3.1,SNR=6.2						
MJAR				LR	LR	02 58 37.9	
	comp=Z,281nm,18.7s,baz=270,slow=39						
SEY	**Seymchan**	85.12	26	⇓*e*P	P	02 18 01.1	+1.1
YUK	**Yuzh-Kuril'sk**	86.69	46	*e*P	P	02 18 06.1	-2.0
YUK				*e*		02 21 29.0	
YUK				*e*PPP	PPP	02 23 23.2	
YUK				*e*S	SKSac	02 28 33.2	-2.0
YUK				*e*SS	SS	02 34 25.4	-1.0
YUK				*e*SSS	SSS	02 38 01.5	
YUK				pmax	pmax		
	comp=E,57nm,1.1s						
YUK				pmax	pmax		
	comp=Z,102nm,1.1s						
YUK				pmax	pmax		
	comp=N,47nm,0.8s						
YUK				pmax	pmax		
	comp=Z,92nm,1.2s						
BILL	**Bilibino**	88.29	19	⇓*e*P	P	02 18 16.5	+1.1
BILL				*PP	pwP	02 18 21.0	+0.1
BILL				*SP	sP	02 18 23.0	+3.9
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,582nm,23.0s						
WRA	**Warramunga Arr**	90.69	110	P	P	02 18 27.8	+0.2
	comp=Z,12nm,0.9s,baz=283,slow=4.7,SNR=28						
WR1	**Warramunga Arr**	90.69	110	*e*P	P	02 18 27.8	+0.2
WRAB	**Tennant Creek**	90.70	110	*de*P	P	02 18 27.5	-0.1
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s						
WB2	**Warramunga Arr**	90.70	110	*e*P	P	02 18 27.9	+0.2
	comp=Z,23nm,1.0s						
SNAA	**Sanae**	90.76	194	P	P	02 18 25.8	-1.0
SNAA	**Sanae**	90.76	194	P	P	02 18 26.3	-0.5
	comp=Z,2.8nm,0.8s,baz=97,slow=5.2,SNR=5.5						
SNAA	**Sanae**	90.76	194	*e*P	P	02 18 27.4	+0.6
	comp=Z,16nm,1.5s						
SNAA	**Sanae**	90.76	194	*e*P	P	02 18 27.4	+0.6
SNAA				pmax	pmax		
	comp=Z,16nm,1.5s						
ASAR	**Alice Springs**	91.14	114	P	P	02 18 29.9	+0.2
	comp=Z,4.8nm,0.9s,baz=286,slow=4.5,SNR=18						
ASAR				LR	LR	02 57 48.3	
	comp=Z,92nm,19.4s,baz=282,slow=34						
AS31	**Alice Springs**	91.15	114	*e*P	P	02 18 30.5	+0.8
	comp=Z,2.4nm,1.0s						
PETK	**Petropavlovsk-**	91.25	35	LR	LR	03 04 00.8	
	comp=Z,162nm,18.7s,baz=293,slow=39						
VNA2	**Neumayer--Watz**	91.44	196	P	P	02 18 30.4	+0.5
	baz=29,slow=6.0						
VNA1	**Neumayer--Stat**	91.52	196	P	P	02 18 30.4	+0.2
VNA3	**Neumayer Olymp**	92.23	196	P	P	02 18 34.0	+0.4
BDFB	**Brasilia**	99.24	256	LR	LR	02 59 12.9	
	comp=Z,201nm,21.7s,baz=78,slow=33						
STKA	**Stephens Creek**	99.43	121	LR	LR	02 57 48.7	
	comp=Z,264nm,20.7s,baz=226,slow=32						
ILAR	**Eielson Array**	101.90	7	PP	PP	02 23 32.5	+4.7
	comp=Z,1.2nm,0.9s,baz=348,slow=7.0,SNR=7.6						
YKA	**Yellowknife Ar**	103.84	352	PP	PKiKP	02 23 41.6	-2.3
	comp=Z,1.0nm,0.8s,baz=12,slow=7.6,SNR=2.7						
GLAT	**Glass**	116.92	322	*e*PKPdf	PKiKP	02 24 10.3	+0.9

DZM	Mont Dzumac	120.65	108	eLR	LR	03 01 21.5	
	comp=Z,277nm,24.1s						
GO03	Copiap	120.88	245	ePKPdf	PKiKP	02 24 17.8	+0.4
PD31	Pinedale Array	121.15	341	ePKPdf	PKPdf	02 24 16.6	-1.1
PDAR	Pinedale Array	121.15	341	PKP	PKPdf	02 24 16.6	-1.1
	comp=Z,0.4nm,0.6s,baz=50,slow=4.6,SNR=3.9						
WMOK	Wichita Mounta	123.36	328	ePKPdf	PKPdf	02 24 21.8	-0.1
SDCO	Great Sand Dun	124.08	335	ePKPdf	PKiKP	02 24 25.5	+1.7
BMN	Battle Mountai	125.43	346	ePdif	Pdif	02 21 02.1	-0.9
BMN	Battle Mountai	125.43	346	eP	Pdif	02 21 02.1	-0.9
ATAH	Atahualpa	127.19	271	PKP	PKPdf	02 24 29.9	-0.3
	comp=Z,3.2nm,0.6s,baz=117,slow=4.5,SNR=2.3						
NV11	Mina Array Sit	127.55	347	ePKPdf	PKiKP	02 24 32.8	+2.3
LCMT	Little Creek M	127.56	341	ePKPdf	PKiKP	02 24 31.9	+1.4
NV01	Mina Array Sit	127.59	347	ePKPdf	PKPdf	02 24 30.1	0.0
NVAR	Mina Array Bea	127.59	347	PKP	PKPdf	02 24 30.1	0.0
	comp=Z,1.7nm,0.7s,baz=359,slow=0.8,SNR=18						
MNTX	Cornudas Mount	129.10	331	ePKPdf	PKiKP	02 24 35.2	+1.6
TXAR	Lajitas Array	130.16	327	PKP	PKPdf	02 24 34.8	-0.3
	comp=Z,0.8nm,0.9s,baz=110,slow=3.5,SNR=7.4						
TX31	Lajitas Ar. Si	130.16	327	ePKPdf	PKPdf	02 24 35.4	+0.2
TBI	Tubuai	160.16	125	eLR	LR	03 19 38.5	
	comp=Z,321nm,23.0s						
PPT2	Papeete2	162.16	108	eLR	LR	03 20 35.0	
	comp=Z,400nm,24.5s						

MAN 11 02:06:57.1, 17°.22N×119°.92E, h12^{km}, mb4.4, ML3.2, MS3.0, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.84	180	eP	Pg	02 07 12.9	-0.5
SMPP	San Manuel, Pa	1.29	146	eP	Pn	02 07 19.4	-1.7
SMPP				eS	Sn	02 07 38.5	+0.2
APYP	Conner	1.41	63	eP	Pn	02 07 21.2	-1.5
APYP				eS	Sb	02 07 42.0	+0.6
SCZP	Santa Cruz	1.44	180	eP	Pn	02 07 22.6	-0.5
CAUP	Cauayan	1.84	98	eP	Pb	02 07 30.8	0.0
CVP	Callao Caves	1.88	75	⇓iP	Pn	02 07 28.9	-0.2
CVP				i S	Sb	02 07 54.9	+0.1
BALP	Baler	2.17	133	eP	Pn	02 07 34.2	+1.1

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*ISCJB **11** 02:09:06.0±0.6, 12°.63N±0°.10×48°.23E±0°.07, h10^{km}, mb4.3/23, Error ellipse: s-maj=14.1km s-min=10.3km az=170.5*

*IDC **11** 02:09:06.8±1.0, 12°.68N×48°.21E, h0^{km}, mb4.1/9, mb1 4.2/10, mb1mx3.7/64, mbtmp4.1/10, ML3.8/1, Error ellipse: s-maj=30.2km s-min=21.4km az=166.0*

*NEIC **11** 02:09:07.1±1.8, 12°.54N×48°.20E, h10^{km}±2^{km}, mb4.5/14, Error ellipse: s-maj=16.4km s-min=10.6km az=117.0*

ISC 11 02:09:07.5±0.8**, 12°.5N**±0°.1×**48°.26E**±0°.09**, h10^{km}, n34, σ1^{s}.31**/31**, mb4.3**/23**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	5.39	260	Pn	Pn	02 10 28.6	+0.5
	2.9nm,0.3s,baz=12,slow=19,SNR=4.3						
MBAR	Mbarara	21.74	234	eP	P	02 13 51.6	-7.8
	24nm,1.9s						
ASF	Jabal al Asfar	22.17	334	eSn	Sn	02 18 14.5	-4.9
GNI	Garni	27.70	354	eP	P	02 14 53.0	-3.0
	11nm,1.0s						
AKH	Akhalkalaki	29.08	353	eP	P	02 15 08.9	+0.5
	5.5nm,1.2s						
NIL	Nilore	31.00	43	eP	P	02 15 24.6	-0.7
	13nm,1.2s						
CHGR	Chuyangaron	31.97	32	eP	P	02 15 38.2	+4.3
	13nm,0.9s						
PALK	Pallekele	32.36	96	eP	P	02 15 37.7	+0.1
	34nm,1.2s						
GAR	Garm	32.83	33	eP	P	02 15 41.9	+0.5
	17nm,0.9s						
BRVK	Borovoye	44.10	19	eP	P	02 17 15.3	-0.5
	3.3nm,0.8s						
BVAR	Borovoye Array	44.10	19	P	P	02 17 16.0	+0.1
	1.7nm,0.7s,baz=199,slow=7.6,SNR=2.2						
OJC	Ojcow	44.23	334	eP	P	02 17 16.1	-0.8
	6.0nm,1.2s						
MAKZ	Makanchi	44.40	33	eP	P	02 17 18.2	-0.2
	3.8nm,0.9s						
MK31	Makanchi Array	44.55	33	eP	P	02 17 19.7	+0.1
	4.7nm,0.9s						
MK32	Makanchi Array	44.55	33	eP	P	02 17 20.3	+0.7
MKAR	Makanchi Array	44.55	33	P	P	02 17 20.3	+0.7
	4.9nm,1.1s,baz=226,slow=7.8,SNR=6.5						
TORD	Torodi Ar. Bea	45.36	276	P	P	02 17 26.0	-0.4
	1.1nm,1.0s,baz=99,slow=7.6,SNR=3.8						
TOA1	Torodi Ar. Sit	45.36	276	eP	P	02 17 26.0	-0.4
CM31	Chiang Mai Arr	49.07	76	eP	P	02 17 56.0	+0.6
	6.0nm,0.6s						
CMAR	Chiang Mai Arr	49.07	76	P	P	02 17 56.0	+0.6
	1.0nm,0.5s,baz=270,slow=7.2,SNR=5.0						
GSI	Gunungsitoli	50.11	99	eP	P	02 18 01.2	-2.1
	38nm,1.5s						
ZALV	Zalesovo Beam	50.40	27	P	P	02 18 04.1	-0.8
	0.5nm,0.3s,baz=226,slow=7.7,SNR=2.7						
ZAA1	Zalesovo Array	50.40	27	eP	P	02 18 04.1	-0.8
FIA0	FINESS Array S	51.44	347	eP	P	02 18 12.4	-0.2
FINES	FINESS Array B	51.44	347	P	P	02 18 12.4	-0.2
	1.3nm,0.8s,baz=145,slow=7.7,SNR=2.6						
SONA0	Songino Array	59.56	42	eP	P	02 19 11.2	-0.3
SONM	Songino Array	59.56	42	P	P	02 19 11.2	-0.3
	0.3nm,0.3s,baz=246,slow=7.2,SNR=4.1						
WR1	Warramunga Arr	90.58	110	eP	P	02 22 12.1	+1.5
WRA	Warramunga Arr	90.58	110	P	P	02 22 12.1	+1.5
	3.2nm,1.0s,baz=288,slow=5.8,SNR=3.8						
ASAR	Alice Springs	91.03	114	P	P	02 22 14.5	+1.8
	2.1nm,1.0s,baz=284,slow=4.7,SNR=6.5						
AS31	Alice Springs	91.03	114	eP	P	02 22 11.3	-1.4
	1.2nm,1.1s						
PV12	Saucer Basin,	125.06	338	ePKPpre	PKPpre	02 28 01.1	
NV01	Mina Array Sit	127.78	347	ePKPdf	PKiKP	02 28 15.2	+0.5
NVAR	Mina Array Bea	127.78	347	PKP	PKiKP	02 28 15.2	+0.5
	0.3nm,0.6s,baz=144,slow=1.7,SNR=3.1						

DJA 11 02:16:50.2±0.6**, 0°S**±5°×**12°0E**±°**, h10^{km}, M4.0**/8**, MLv4.0**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	1.89	109	P	Pn	02 17 22.5	-0.1
APSI				S	Sn	02 17 47.5	+1.0
TTSI	Tana Toraja	2.74	181	P	Pn	02 17 34.4	+0.2
TTSI				S	Sn	02 18 08.5	+1.1
LUWI	Luwuk	3.01	104	P	Pn	02 17 38.1	+0.2
BKB	Balikpapan	3.12	252	P	Pn	02 17 38.9	-0.5
SPSI	Sidrap Palu	3.65	181	P	Pn	02 17 45.7	-1.1
BNSI	Bone	4.09	177	P	Pn	02 17 53.1	+0.3

IDC 11 02:18:15.1±4.0**, 4°.35S×152°.07E, h0^{km}, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.3**/27**, mbtmp3.3**/2**, Error ellipse: s-maj=182.3km s-min=50.7km az=118.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.21	227	P	P	02 23 23.5	-0.4
	0.8nm,0.6s,baz=51,slow=9.4,SNR=1.1						
ASAR	Alice Springs	26.00	221	P	P	02 23 50.4	+0.4
	0.3nm,0.6s,baz=55,slow=9.5,SNR=2.0						
TORD	Torodi Ar. Bea	149.48	289	PKPbc	PKPbc	02 38 06.9	-0.5
	0.3nm,0.6s,baz=82,slow=1.7,SNR=6.2						

IDC 11 02:22:11.6±3.0**, 18°.58S×172°.42W, h0^{km}, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.7**/28**, mbtmp3.8**/4**, Error ellipse: s-maj=202.4km s-min=32.4km az=148.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.35	243	P	P	02 30 15.8	+0.1
	1.6nm,0.6s,baz=80,slow=12,SNR=4.4						
ASAR	Alice Springs	50.09	254	P	P	02 31 08.8	0.0
	1.4nm,0.6s,baz=94,slow=8.6,SNR=17						
WRA	Warramunga Arr	50.11	259	P	P	02 31 08.4	-0.5
	0.4nm,0.3s,baz=97,slow=6.4,SNR=1.2						
NVAR	Mina Array Bea	76.08	41	P	P	02 34 01.4	+0.1
	0.2nm,0.4s,baz=224,slow=5.0,SNR=2.9						

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*NEIC **11** 02:25:15.8±0.0, 17°.84N×68°.65W, h30^{km}, MD3.4(RSPR), After RSPR.*

RSPR 11 02:25:15.8, 17°.84N×68°.64W, h29^{km}±17^{km}**, MD3.4**/6**, 12C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.72	20	⇑iP	Pb	02 25 28.1	-1.8
PCDR	Punta Cana, DR	0.72	20	⇑iP	Pb	02 25 28.1	-1.8
PCDR	Punta Cana, DR	0.72	20	ePn	Pb	02 25 28.1	-1.8
PCDR				eSg	Sb	02 25 37.7	-1.8
SDD	Santo Domingo	1.35	297	ePn	Pn	02 25 39.2	+0.5
SDD				eSn	Sb	02 25 57.0	-0.6
MPR	Mayaguez	1.48	75	ePn	Pn	02 25 39.4	-1.1
MPR				eSn	Sn	02 25 56.6	-2.2
LSP	Las Mesas	1.52	77	⇑eP	Pn	02 25 39.7	-1.4
LSP	Las Mesas	1.52	77	ePn	Pn	02 25 39.7	-1.4
MLPR	Magueyes Islan	1.53	85	⇑eP	Pn	02 25 39.2	-2.0
MLPR	Magueyes Islan	1.53	85	eS	Sn	02 25 58.3	-1.7
AGP	Aguadilla	1.54	68	ePn	Pn	02 25 40.8	-0.5
AGP				eSn	Sn	02 25 59.0	-1.4
AGPR	Aguadilla, PR	1.59	66	⇓eP	Pn	02 25 40.8	-1.1
AGPR	Aguadilla, PR	1.59	66	eS	Sn	02 25 59.0	-2.5
AOPR	Arecibo Observ	1.87	74	⇑eP	Pn	02 25 44.3	-1.6
AOPR	Arecibo Observ	1.87	74	⇑eP	Pn	02 25 44.7	-1.1
AOPR				eS	Sn	02 26 06.3	-2.2
AOPR	Arecibo Observ	1.87	74	ePn	Pn	02 25 44.3	-1.6
AOPR				eSn	Sn	02 26 06.3	-2.2
OBIP	Obispado Ponce	1.95	84	ePn	Pn	02 25 45.9	-1.1
OBIP				eSn	Sn	02 26 07.2	-3.3
EMPR	Esperanza - Ma	2.11	72	⇓eP	Pn	02 25 48.1	-1.0
EMPR	Esperanza - Ma	2.11	72	eS	Sn	02 26 12.8	-1.6
EMPR	Esperanza - Ma	2.11	72	ePn	Pn	02 25 48.1	-1.0
EMPR				eSn	Sn	02 26 12.8	-1.6
SJG	San Juan	2.39	83	⇑eP	Pn	02 25 51.7	-1.3
SJG	San Juan	2.39	83	eS	Sn	02 26 19.2	-2.1
SJG	San Juan	2.39	83	ePn	Pn	02 25 51.1	-1.9
SJG				ePg	Pb	02 25 51.7	-6.5
SJG				eSn	Sn	02 26 19.2	-2.1
IGPR	InterUniversit	2.42	87	⇓eP	Pn	02 25 51.6	-1.8
PDPR	Patillas Dam,	2.50	85	⇑eP	Pn	02 25 52.7	-1.8
HUMP	Col San Antoni	2.68	83	⇑eP	Pn	02 25 55.5	-1.5
HUMP	Col San Antoni	2.68	83	ePn	Pn	02 25 55.5	-1.5
HUMP				eSn	Sn	02 26 26.7	-1.7
CBYP	Canovanas	2.69	80	⇑eP	Pn	02 25 55.8	-1.4
CBYP	Canovanas	2.69	80	⇑eP	Pn	02 25 56.2	-1.0
CBYP	Canovanas	2.69	80	ePn	Pn	02 25 56.2	-1.0
CBYP				eSn	Sn	02 26 28.1	-0.7
SDDR	Presa de Saban	2.76	295	ePg	Pb	02 26 05.5	+1.0
SDDR				eSn	Sn	02 26 30.6	+0.1
MTP	Monte Pirata	2.95	85	⇑eP	Pn	02 25 59.3	-1.5
MTP	Monte Pirata	2.95	85	ePn	Pn	02 25 59.3	-1.5
MTP				eSn	Sn	02 26 34.7	-0.6
CUPR	Culebra, Puert	3.23	81	⇑eP	Pn	02 26 03.2	-1.4
CUPR	Culebra, Puert	3.23	81	ePn	Pn	02 26 03.2	-1.4
CUPR				eSn	Sn	02 26 38.4	-3.7
STVI	Saint Thomas	3.55	81	⇑eP	Pn	02 26 08.1	-0.9
STVI	Saint Thomas	3.55	81	ePn	Pn	02 26 08.0	-0.9
STVI				ePn	Pb	02 26 08.1	-10
STVI				eSn	Sn	02 26 45.9	-4.0
GRTK	Grand Turk	4.34	328	ePn	Pn	02 26 19.8	-0.1
GRTK				eSn	Sn	02 27 06.2	-3.3

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*IDC **11** 02:40:12.2±0.8, 31°.12N×141°.76E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.8/32, mbtmp3.7/10, ML2.9/2, Error ellipse: s-maj=28.0km s-min=18.0km az=70.0*

*ISCJB **11** 02:40:15.4±0.8, 31°.14N±0°.09×141°.8E±0°.2, h35^{km}, mb3.7/8, Error ellipse: s-maj=23.3km s-min=7.8km az=151.6*

ISC 11 02:40:17.4±0.9**, 31°.1N**±0°.1×**141°.7E**±0°.2**, h35^{km}, n17, σ1^{s}.11**/15**, mb3.8**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.58	321	Pn	Pn	02 40 55.0	-1.8
	6.1nm,0.3s,baz=107,slow=19,SNR=3.0						
JHJ				Sn	Sn	02 41 27.6	+0.7
	15nm,0.3s,baz=60,slow=22,SNR=2.1						
MJAR	Matsushiro Arr	6.15	333	Pn	Pn	02 41 44.9	-0.8
	0.2nm,0.3s,baz=151,slow=11,SNR=9.8						
MJAR				Sn	Sn	02 42 53.5	-1.3
	0.0nm,0.3s,baz=131,slow=15,SNR=3.2						
MAT	Matsushiro	6.15	333	P	Pn	02 41 45.7	-0.1
MAT				S	Sn	02 42 57.1	+2.2
H11N2	WAKE ISLAND Hy	25.35	111	T	T	03 12 04.4	
	baz=305						
H11N1	WAKE ISLAND Hy	25.36	111	T	T	03 12 02.3	
	baz=305						
H11N3	WAKE ISLAND Hy	25.37	111	T	T	03 12 05.5	
	baz=305						
H11S3	WAKE ISLAND Hy	25.85	113	T	T	03 12 31.3	
	baz=304						
H11S1	WAKE ISLAND Hy	25.85	113	T	T	03 12 43.5	
	baz=304						
H11S2	WAKE ISLAND Hy	25.87	113	T	T	03 12 35.9	
	baz=304						
SONM	Songino Array	31.63	312	P	P	02 46 37.6	+0.4
	1.2nm,0.8s,baz=119,slow=7.2,SNR=8.9						
MKAR	Makanchi Array	47.67	307	P	P	02 48 50.7	+0.3
	0.6nm,0.5s,baz=87,slow=9.2,SNR=7.3						
MKAR				PcP	PcP	02 50 19.9	+0.4
	0.1nm,0.4s,baz=89,slow=3.1,SNR=2.1						
WRA	Warramunga Arr	51.26	189	P	P	02 49 17.3	-0.5
	0.8nm,0.4s,baz=356,slow=7.2,SNR=11						
ILAR	Eielson Array	54.42	30	P	P	02 49 39.4	-1.3
	0.1nm,0.3s,baz=268,slow=6.3,SNR=3.2						
ASAR	Alice Springs	54.98	189	P	P	02 49 45.5	+0.2
	0.9nm,0.8s,baz=16,slow=14,SNR=8.4						
FINES	FINESS Array B	74.18	333	P	P	02 51 50.5	+0.3
	1.0nm,0.7s,baz=52,slow=5.4,SNR=2.4						
NVAR	Mina Array Bea	78.38	52	P	P	02 52 15.8	+1.0
	0.2nm,0.5s,baz=267,slow=3.5,SNR=3.4						
BRTR	Keskin Array B	82.98	312	P	P	02 52 39.4	+0.1
	0.5nm,0.7s,baz=56,slow=1.7,SNR=4.1						

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*ATH **11** 02:45:36.3, 38°.44N×25°.38E, h14^{km}±5^{km}, ML2.9/4, Error ellipse: s-maj=6.6km s-min=2.5km az=79.0*

*ISCJB **11** 02:45:38.4±0.5, 38°.50N±0°.02×25°.53E±0°.03, h11^{km}±3^{km}, Error ellipse: s-maj=4.5km s-min=3.7km az=42.0*

*ISK **11** 02:45:38.6, 38°.51N×25°.57E, h18^{km}, ML2.7/11*

*DDA **11** 02:45:39.3, 38°.66N×25°.60E, h7^{km}±2^{km}, ML2.8*

*THE **11** 02:45:39.1, 38°.50N×25°.54E, h11^{km}±2^{km}, ML2.4/5, Error ellipse: s-maj=2.9km s-min=0.8km az=106.0*

ISC 11 02:45:38.7±0.9**, 38°.51N**±0°.03×**25°.55E**±0°.03**, h14^{km}**±5^{km}**, n36, σ0^{s}.52**/54**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSRA	Psara	0.04	21	P	Pg	02 45 41.4	+0.1
PSRA				S	Sg	02 45 42.3	-0.7
PSRA				AML	AML	02 45 42.5	
	comp=N,91862µm,0.1s						
PSRA				AML	AML	02 45 42.6	
	comp=E,99747µm,0.2s						
CHOS	Chios island	0.42	107	PG	Pg	02 45 47.4	+0.3
CHOS				SG	Sg	02 45 53.1	+0.4
CHOS	Chios island	0.42	107	P	Pg	02 45 47.3	+0.2
CHOS				S	Sb	02 45 53.4	-0.7
	comp=E,818nm,0.2s						
CHOS	Chios island	0.42	107	P	Pg	02 45 47.2	+0.2
CHOS				S	Sg	02 45 53.2	+0.5
CHOS				AML	AML	02 45 54.2	
	comp=E,1931µm,0.2s						
CHOS				AML	AML	02 45 54.3	
	comp=N,1262µm,0.2s						
CESE	eme	0.62	106	PG	Pg	02 45 50.8	0.0
SIGR	SIGRI	0.74	19	PG	Pg	02 45 53.1	-0.1
SIGR				SG	Sb	02 46 04.3	+0.8
SIGR	SIGRI	0.74	19	P	Pg	02 45 53.1	-0.1
SIGR				S	Sb	02 46 04.1	+0.7
	comp=N,468nm,0.3s						
SIGR	SIGRI	0.74	19	P	Pg	02 45 53.1	-0.1
SIGR				S	Sb	02 46 04.2	+0.8
SIGR				AML	AML	02 46 07.5	
	comp=N,1139µm,0.5s						
SIGR				AML	AML	02 46 07.9	
	comp=E,818µm,0.3s						
KRBN	Karaburun	0.79	83	PG	Pg	02 45 54.2	+0.1
URLA	Izmir	0.84	100	PG	Pb	02 45 55.2	+0.2
URLA	Izmir	0.84	100	i P	Pb	02 45 55.5	+0.5
URLA				i S	Sb	02 46 06.3	+0.2
URLA				IAML_P			
	comp=Z,5µm,0.2s						
PRK	Paraskevi	0.93	37	P	Pn	02 45 57.2	-0.1
PRK				S	Sn	02 46 10.3	-0.1
	comp=Z,382nm,0.7s						
PRK	Paraskevi	0.93	37	P	Pn	02 45 57.2	-0.1
PRK				S	Sn	02 46 11.3	+0.9
PRK				AML	AML	02 46 19.9	
	comp=N,960µm,0.5s						
PRK				AML	AML	02 46 21.0	
	comp=E,549µm,0.9s						
FOCM	Foa	0.95	77	PG	Pg	02 45 57.3	+0.3
BLCB	Balcova	1.18	95	PN	Pn	02 46 00.6	-0.1
AYVA	Ayvalik	1.20	48	i P	Pb	02 46 01.5	+0.4
AYVA				i S	Sb	02 46 15.7	-0.8
AYVA				IAML_P			
	comp=Z,165nm,0.1s						
DKL	Dikili	1.20	62	PN	Pn	02 46 00.9	-0.1
ZEDA	zmir-Bergama	1.28	69	i P	Pb	02 46 02.6	+0.1
ZEDA				i S	Sg	02 46 19.6	-0.4
ZEDA				IAML_P			
	comp=Z,523nm,0.1s						
SMG	Samos	1.29	128	P	Pn	02 46 01.5	-0.8
DION	Dionisos Attik	1.34	252	P	Pn	02 46 03.3	+0.3
DION				S	Sn	02 46 20.9	+0.3
	comp=Z,72nm,0.4s						
BOZC	Bozcaada	1.39	16	PN	Pn	02 46 03.2	-0.4
BOZC	Bozcaada	1.39	16	i P	Pn	02 46 04.2	+0.6
BOZC				i S	Sn	02 46 20.2	-1.6
LIA	Limnos Island	1.42	349	P	Pn	02 46 04.0	0.0
LIA				S	Sn	02 46 22.4	-0.1
	comp=Z,95nm,0.5s						
LIA	Limnos Island	1.42	349	P	Pn	02 46 03.4	-0.7
APE	Apeiranthos	1.44	181	PN	Pn	02 46 04.5	+0.2
EZN	Ezine	1.45	24	PN	Pn	02 46 04.3	-0.1
EZN	Ezine	1.45	24	P	Pn	02 46 04.1	-0.3
EZN				S	Sb	02 46 24.6	+0.9
BAYC	CANAKKALE_Bayr	1.46	32	i P	Pn	02 46 04.3	-0.3
BAYC				i S	Sn	02 46 22.9	-0.6
BAYC				IAML_P			
	comp=Z,422nm,0.1s						
VLY	Voula,Athens	1.53	245	P	Pn	02 46 05.5	0.0
VLY				S	Sn	02 46 24.4	-0.8
GCAM	G?zelcaml?	1.56	121	PN	Pn	02 46 05.9	0.0
SERI	Serifos	1.58	212	P	Pn	02 46 05.8	-0.5
STEP	BALIKESIR_Sava	1.90	62	i P	Pg	02 46 14.5	-0.7
AYDB	Zeytinkoy-Aydi	1.93	106	PN	Pn	02 46 11.7	+0.5
SMTH	Samothraki Isl	1.96	360	P	Pn	02 46 11.5	0.0
GELI	Tayfur-Gelibol	2.02	21	PN	Pn	02 46 12.3	0.0
AYDN	Tasoluk	2.02	114	i P	Pg	02 46 17.1	-0.4
AYDN				IAML_P			
	comp=Z,100nm,0.1s						

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*SKO **11** 03:15:39.3, 41°.86N×22°.64E, h15^{km}, M1.6, ML3.0*

*SOF **11** 03:15:40.1, 41°.85N×22°.72E, h2^{km}*

*BEO **11** 03:15:41.8±0.6, 41°.90N×22°.65E, h10^{km}±3^{km}, ML2.5/11*

*ATH **11** 03:15:41.1, 41°.77N×22°.72E, h23^{km}±1^{km}, ML2.3/5, Error ellipse: s-maj=3.1km s-min=1.3km az=159.0*

*THE **11** 03:15:42.1, 41°.74N×22°.74E, h2^{km}±1^{km}, ML2.3/8, Error ellipse: s-maj=2.1km s-min=1.4km az=156.0*

ISC 11 03:15:39.0±1.1**, 41°.83N**±0°.02×**22°.62E**±0°.02**, h2^{km}**±10^{km}**, n60, σ1^{s}.09**/94**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.35	83	i Pg	Pg	03 15 46.6	+0.9
KKB				i Sg	Sb	03 15 52.2	-1.7
KKB	Krupnik	0.35	83	Pg	Pg	03 15 46.6	+0.9
STIP	Stip	0.35	248	i Pg	Pg	03 15 43.5	-2.2
STIP				i Sg	Sg	03 15 47.2	-3.1
VAY	Valandovo	0.51	184	i Pg	Pb	03 15 50.7	+0.1
VAY				i Sg	Sb	03 15 58.0	-0.3
VAY				eLg	Lg	03 15 58.2	
	comp=E,513nm,0.2s						
VAY				eLg	Lg	03 15 58.4	
	comp=N,440nm,0.3s						
MMB	Musomiste	0.86	105	i Pg	Pb	03 15 56.2	-0.4
MMB				i Sg	Sb	03 16 07.5	-1.2
MMB	Musomiste	0.86	105	Pg	Pb	03 15 56.3	-0.4
SKO	Skopje	0.89	280	ePg	Pg	03 15 57.3	+1.2
SKO				i Sn	Sn	03 16 11.4	-0.6
SKO				eLg	Lg	03 16 15.3	
	comp=E,2.2nm,0.3s						
SKO				eLg	Lg	03 16 15.4	
	comp=N,3.5nm,0.5s						
VTS	Vitosha	0.92	30	ePg	Pg	03 15 55.9	-0.7
VTS				eSg	Sg	03 16 07.7	-0.7
VTS	Vitosha	0.92	30	i Pg	Pg	03 15 55.9	-0.7
VTS				i Sg	Sg	03 16 07.7	-0.7
SRS	Serrai	1.02	134	P	Pg	03 15 58.8	+0.3
SRS				S	Sb	03 16 12.7	-0.4
	comp=N,208nm,0.3s						
SRS	Serrai	1.02	134	i Pg	Pg	03 15 58.7	+0.3
SRS				i Sg	Sn	03 16 14.1	-1.0
SRS	Serrai	1.02	134	P	Pg	03 15 58.8	+0.3
SRS				S	Sb	03 16 12.2	-0.9
SRS				AML	AML	03 16 16.3	
	comp=N,478µm,0.4s						
SRS				AML	AML	03 16 17.1	
	comp=E,358µm,0.2s						
NVR	Nevrokopi	1.05	117	P	Pg	03 15 59.4	+0.3
NVR				S	Sb	03 16 13.0	-1.0
	comp=E,172nm,0.4s						
NVR	Nevrokopi	1.05	117	P	Pg	03 15 59.4	+0.3
NVR				S	Sb	03 16 12.9	-1.1
NVR				AML	AML	03 16 16.6	
	comp=E,364µm,0.4s						
NVR				AML	AML	03 16 16.7	
	comp=N,318µm,0.4s						
SOH	Sokhos	1.15	151	P	Pn	03 16 02.1	+0.1
SOH				S	Sg	03 16 15.4	-0.4
	comp=N,275nm,0.3s						
SOH	Sokhos	1.15	151	i Pg	Pn	03 16 02.1	+0.1
SOH				i Sg	Sn	03 16 17.8	-0.4
SOH	Sokhos	1.15	151	P	Pn	03 16 01.8	-0.2
BARS	Barje	1.16	329	ePg	Pn	03 16 02.3	+0.1
BARS				eSg	Sg	03 16 17.7	+1.5
BARS	Barje	1.16	329	ePn	Sn	03 16 19.1	+0.5
THE	Thessaloniki	1.22	168	P	Pg	03 16 03.7	+1.3
THE				S	Sn	03 16 19.6	-0.4
	comp=N,95nm,0.4s						
THE	Thessaloniki	1.22	168	i Pg	Pg	03 16 03.7	+1.3
THE				i Sg	Sn	03 16 19.8	-0.2
THE	Thessaloniki	1.22	168	P	Pg	03 16 03.2	+0.8
THE				S	Sg	03 16 19.0	+0.9
THE				AML	AML	03 16 20.6	
	comp=E,202µm,0.4s						
THE				AML	AML	03 16 23.2	
	comp=N,177µm,0.4s						
HORT	Hortiatis	1.28	163	P	Pg	03 16 04.6	+1.1
HORT				S	Sb	03 16 20.6	-0.1
	comp=N,90nm,0.4s						
HORT	Hortiatis	1.28	163	P	Pg	03 16 04.3	+0.8
HORT				S	Sb	03 16 20.3	-0.4
HORT				AML	AML	03 16 23.8	
	comp=E,167µm,0.3s						
HORT				AML	AML	03 16 24.8	
	comp=N,194µm,0.5s						
PGB	Panagyurishte	1.36	57	Pg	Pb	03 16 05.0	-0.2
ZAPS	Zavoj	1.45	0	ePg	Pg	03 16 07.8	+1.0
ZAPS				eSg	Sg	03 16 26.3	+0.8
RZN	Rozhen	1.57	94	P	Pg	03 16 09.2	0.0
PLG	Polygyros	1.58	156	P	Pb	03 16 08.7	-0.2
PLG				S	Sg	03 16 30.1	+0.4
PLG	Polygyros	1.58	156	P	Pb	03 16 08.9	0.0
PLD	Plovdiv	1.58	79	ePg	Pg	03 16 09.6	+0.3
PLD				eSg	Sg	03 16 30.5	+0.8
PLD	Plovdiv	1.58	79	i Pn	Pg	03 16 09.3	+0.1
PLD				i Sn	Sg	03 16 30.5	+0.8
KAVA	Kavala	1.65	120	P	Pb	03 16 09.5	-0.5
KAVA				S	Sb	03 16 30.8	-0.4
	comp=N,98nm,0.3s						
KAVA	Kavala	1.65	120	P	Pb	03 16 09.5	-0.5
KAVA				S	Sb	03 16 30.5	-0.8
KAVA				AML	AML	03 16 33.1	
	comp=E,180µm,0.3s						
KAVA				AML	AML	03 16 35.1	
	comp=N,196µm,0.3s						
KZN	Kozani	1.65	203	P	Pn	03 16 09.8	+0.8
KZN	Kozani	1.65	203	P	Pb	03 16 10.4	+0.3

LIT	**Litokhoron**	1.73	183	*i* Pn	Pb	03 16 12.2	+0.9
LIT	**Litokhoron**	1.73	183	P	Pb	03 16 11.6	+0.2
SELS	**Selova**	1.78	322	*e*Pg	Pb	03 16 13.3	+0.9
SELS				*e*Sg	Sg	03 16 37.8	+1.6
OUR	**Ouranopolis**	1.81	145	P	Pn	03 16 11.8	+0.6
OUR				S	Sb	03 16 36.3	+0.4
	comp=N,110nm,0.3s						
OUR	**Ouranopolis**	1.81	145	P	Pn	03 16 11.7	+0.6
NEST	**Nestorio**	1.84	221	P	Pb	03 16 13.8	+0.4
BOVS	**Bovan**	1.93	340	*e*Pg	Pb	03 16 15.2	+0.3
BOVS				*e*Sg	Sg	03 16 41.1	+0.1
THAS	**Thassos island**	2.00	127	P	Pn	03 16 14.0	+0.2
ZAGS	**Zajecar**	2.01	352	*e*Sg	Sb	03 16 42.9	+1.3
KDZ	**Kurdzhali**	2.10	94	P	Pb	03 16 18.2	+0.4
RDO	**Rodhopi**	2.29	106	P	Pn	03 16 18.9	+1.1
RDO				S	Sb	03 16 47.9	-1.9
	comp=N,58nm,0.2s						
THL	**Klokotos Trika**	2.30	192	P	Pn	03 16 19.4	+1.4
SJES	**Sjenica**	2.43	307	*e*Pn	Pb	03 16 22.2	-1.2
GRUS	**Gruza**	2.49	326	*e*Pn	Pn	03 16 21.3	+0.8
GRUS				*e*Sg	Sg	03 16 58.6	-0.5
IVAS	**Ivanjica**	2.52	315	*e*Pn	Pn	03 16 21.3	+0.3
IVAS				*e*Sn	Sn	03 16 52.7	+0.3
SVIS	**Svilajnac**	2.65	338	*e*Sg	Sg	03 17 03.5	-0.6
KUBS	**Kucevo**	2.68	345	*e*Pn	Pn	03 16 25.0	+1.9
KUBS				*e*Sn	Sn	03 16 56.4	+0.3
ALN	**Alexandroupoli**	2.74	109	P	Pn	03 16 24.7	+0.8
ALN	**Alexandroupoli**	2.74	109	P	Pn	03 16 24.8	+0.8
AGG	**Agios Georgios**	2.81	185	P	Pn	03 16 26.3	+1.4
TRUS	**Trudelj**	2.90	327	*e*Pn	Pn	03 16 27.4	+1.3
TRUS				*e*Sg	Sg	03 17 11.4	-0.6
DIVS	**Divibare**	2.98	321	*e*Pn	Pn	03 16 28.0	+0.7
BBLS	**Lazići**	3.12	312	*e*Pn	Pn	03 16 30.6	+1.3
SRO	**Srobarova**	6.72	334	*e*PN	Pn	03 17 14.0	-4.6
VYHS	**Vyhne**	7.18	339	*e*PN	Pn	03 17 21.5	-3.5

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*IDC **11** 03:44:10.6±3.7, 36°50N×70°43E, h0^{km}, mb3.7/4, mb1 3.7/5, mb1mx3.4/31, mbtmp3.7/5, ML3.2/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/33, Error ellipse: s-maj=89.8km s-min=27.7km az=141.0*

*NNC **11** 03:44:35.1±2.6, 37°17N×71°09E, h165^{km}±37^{km}, mb3.0, mpv3.8, Error ellipse: s-maj=23.7km s-min=13.3km az=15.0*

ISC 11 03:44:30.5±2.4**, 36°9N**±0°2×**71°1E**±0°1**, h150**^{km}**, n12,** σ**1**^{s}**76**/13**, mb3.3**/3**, 8C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	6.19	356	⇑P	Pn	03 46 01.7	+2.0
	1.6nm,0.2s,baz=176,slow=12,SNR=46						
KK31				⇑S	Sn	03 47 09.9	+0.4
	7.0nm,0.4s,baz=186,slow=16,SNR=32						
AAK	**Ala-Archa**	6.29	24	⇑P	Pn	03 46 02.6	+1.4
	2.9nm,0.3s						
AAK				⇑S	Sn	03 47 12.2	-0.1
	30nm,1.2s						
TKM2	**Tokmak 2**	6.94	29	⇓P	Pn	03 46 10.6	+0.8
	5.7nm,0.6s						
TKM2				⇑S	Sn	03 47 27.0	-0.7
	6.2nm,0.9s						
MAKZ	**Makanchi**	12.79	36	⇑P	Pn	03 47 29.0	+2.0
	4.2nm,0.9s						
MK31	**Makanchi Array**	12.93	37	⇑P	Pn	03 47 31.4	+2.7
	1.9nm,0.7s,baz=211,slow=9.6,SNR=8.6						
MKAR	**Makanchi Array**	12.93	37	Pn	Pn	03 47 26.2	-2.5
	0.1nm,0.3s,baz=223,slow=12,SNR=4.0						
AB31	**Akbulak array**	14.74	330	⇑P	Pn	03 47 52.2	+0.7
	0.2nm,0.3s,baz=143,slow=14,SNR=12						
AB31				S	Sn	03 50 33.5	-1.5
	0.6nm,0.5s,baz=151,slow=23,SNR=5.0						
ZALV	**Zalesovo Beam**	19.52	25	P	P	03 48 44.5	-1.6
	2.6nm,0.4s,baz=227,slow=11,SNR=8.6						
ARCES	**ARCESS Array B**	40.77	337	P	P	03 51 55.5	-1.0
	3.4nm,0.9s,baz=110,slow=7.8,SNR=1.9						
NOA	**NORSAR Array B**	44.07	323	P	P	03 52 19.6	-3.7
	0.4nm,0.7s,baz=100,slow=8.1,SNR=1.7						
KEST	**Kesra**	48.94	288	LR	LR	04 17 07.7	
	comp=Z,40nm,18.1s,baz=232,slow=41						
TORD	**Torodi Ar. Bea**	65.77	268	P	P	03 54 54.4	-5.3
	0.2nm,0.5s,baz=40,slow=6.5,SNR=7.6						

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*IDC **11** 03:45:08.6±0.9, 17°80S×173°79W, h0^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.9/32, mbtmp3.9/8, ML3.1/1, Error ellipse: s-maj=40.0km s-min=19.4km az=143.0*

*ISCJB **11** 03:45:18.6±0.8, 18°3S±0°2×173°6W±0°1, h100^{km}, mb3.7/7, Error ellipse: s-maj=29.4km s-min=15.4km az=167.8*

ISC 11 03:45:20.0±0.8**, 18°2S**±0°2×**173°5W**±0°1**, h100**^{km}**, n9,** σ**1**^{s}**20**/9**, mb3.8**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	13.29	105	Pn	Pn	03 48 23.9	-0.9
	0.9nm,0.3s,baz=306,slow=19,SNR=3.7						
URZ	**Urewera**	21.58	200	P	P	03 50 03.6	+2.0
	8.2nm,0.5s,baz=343,slow=2.4,SNR=13						
STKA	**Stephens Creek**	42.58	243	P	P	03 53 04.9	-1.4
	1.7nm,1.1s,baz=76,slow=8.3,SNR=1.8						
WRA	**Warramunga Arr**	49.14	259	P	P	03 53 57.4	-0.6
	1.0nm,0.6s,baz=90,slow=7.1,SNR=9.6						
ASAR	**Alice Springs**	49.18	254	P	P	03 53 58.4	+0.1
	1.5nm,0.6s,baz=89,slow=8.7,SNR=15						
NVAR	**Mina Array Bea**	76.50	42	P	P	03 56 59.7	+0.2
	0.4nm,0.7s,baz=218,slow=5.7,SNR=4.2						
PDAR	**Pinedale Array**	84.44	42	P	P	03 57 42.6	+0.8
	0.4nm,0.8s,baz=216,slow=4.5,SNR=3.0						
ILAR	**Eielson Array**	85.22	11	P	P	03 57 45.6	+0.7
	0.3nm,0.7s,baz=228,slow=6.2,SNR=5.7						
BRTR	**Keskin Array B**	148.21	318	PKPbc	PKPbc	04 04 54.4	-0.4
	0.5nm,0.6s,baz=66,slow=3.5,SNR=4.1						

SCB 11 04:16:22.2±5.5**, 17°48S**×**65°71W, h8**^{km}±66^{km}**, ML3.5**/2**, Error ellipse: s-maj=28.6km s-min=15.1km az=0.0, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BS10	**CO. Tuti**	0.14	279	Pg	Pg	04 16 26.6	+1.1
BS10				Sg	Sg	04 16 31.8	+3.9
BS10				AML	AML	04 16 32.1	
	3µm,0.4s						
BB01	**Montecillos**	0.73	144	Pg	Pb	04 16 37.1	-0.2
BS05	**Cuyupaya**	1.27	291	P	Pg	04 16 44.6	-2.0
BS08	**Valle Grande**	1.83	124	P	Pn	04 16 53.7	-0.5
BBOE	**La Paz, Chanca**	2.27	287	P	Pn	04 17 01.0	+0.4
BBOJ	**La Paz, Jacaqu**	2.42	282	P	Pn	04 17 03.7	+1.0
LPAZ	**La Paz**	2.60	297	P	Pn	04 17 05.4	+0.2
LPAZ				S	Sb	04 17 40.0	-2.0
BBOB	**La Paz, Bander**	2.67	299	P	Pn	04 17 05.4	-0.7
BBOB				S	Sn	04 17 39.2	+0.2
BBOB				AML	AML	04 17 39.7	
	1µm,0.2s						
BB08	**Puerto Suarez**	7.66	102	P	Pn	04 18 12.2	-1.9

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*IDC **11** 04:31:39.8±11.0, 56°14S×27°52W, h96^{km}±105^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.5/23, mbtmp4.1/4, Error ellipse: s-maj=39.2km s-min=25.7km az=72.0*

*ISCJB **11** 04:31:40.0±0.9, 56°1S±0°1×27°6W±0°4, h112^{km}, mb4.0/4, Error ellipse: s-maj=39.3km s-min=12.1km az=153.1*

ISC 11 04:31:41.5±0.9**, 56°1S**±0°2×**27°6W**±0°3**, h112**^{km}**, n10,** σ**0**^{s}**50**/10**, mb4.0**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	16.83	158	P	P	04 35 31.0	+0.8
VNA3	**Neumayer Olymp**	17.02	160	P	P	04 35 32.2	-0.1
VNA2	**Neumayer--Watz**	17.23	157	P	Pn	04 35 34.9	+0.1
	baz=316,slow=13						
SNAA	**Sanae**	18.79	156	P	P	04 35 51.8	+0.1
CPUP	**Villa Florida**	36.67	312	P	P	04 38 36.8	-0.4
	1.0nm,0.6s,baz=149,slow=5.9,SNR=3.6						
VNDA	**Vanda**	46.50	183	P	P	04 39 56.3	-0.4
	0.5nm,0.6s,baz=190,slow=5.8,SNR=5.8						
LPAZ	**La Paz**	50.21	306	P	P	04 40 27.3	+0.7
	2.4nm,0.4s,baz=139,slow=5.1,SNR=38						
TORD	**Torodi Ar. Bea**	73.23	30	P	P	04 43 00.2	0.0
	1.8nm,0.5s,baz=200,slow=6.7,SNR=24						
ILAR	**Eielson Array**	149.97	312	PKPbc	PKPbc	04 51 16.9	-0.3
	1.6nm,0.8s,baz=123,slow=1.5,SNR=15						
SONM	**Songino Array**	150.98	87	PKPbc	PKPbc	04 51 20.0	-0.2
	1.4nm,0.6s,baz=222,slow=3.3,SNR=10						

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*STR **11** 04:32:18.8±0.6, 44°N±3°×1°2E±°, h0^{km}, mB4.8/6, mb4.2/7, MLv4.2/6, Mw(mB)4.1/6*

*ROM **11** 04:32:20.9±0.1, 43°816N±0°005×12°055E±0°006, h8^{km}, ML3.9/94, Mw4.0, Error ellipse: s-maj=0.5km s-min=0.4km az=218.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.29; $M_{\theta\theta}$0.43; $M_{\phi\phi}$0.86; $M_{r\theta}$-0.24; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.03; Fault plane solution: $M_0$1.28558×10^{15} NP1:ϕ_s333.00000°, δ42.00000°, λ-79.00000°. NP2:ϕ_s138.00000°, δ49.00000°, λ-100.00000°.*

*IDC **11** 04:32:20.7±0.7, 43°87N×12°02E, h0^{km}, mb4.1/12, mb1 4.0/25, mb1mx3.9/51, mbtmp3.9/25, ML3.7/11, MS3.4/24, Ms1 3.4/24, ms1mx3.2/43 Error ellipse: s-maj=12.0km s-min=10.9km az=113.0*

*MOS **11** 04:32:20.9±1.0, 43°94N×12°02E, h10^{km}, mb4.4/19, Error ellipse: s-maj=5.0km s-min=4.0km az=91.2*

*PDG **11** 04:32:21.1±1.0, 43°83N×12°08E, h11^{km}±2^{km}, ML4.0/8, Error ellipse: s-maj=1.0km s-min=1.2km az=0.0*

*ISCJB **11** 04:32:21.3±0.2, 43°82N±0°01×12°04E±0°01, h18^{km}±1^{km}, mb4.2/30, MS3.5/16, Error ellipse: s-maj=1.9km s-min=1.2km az=20.4*

*NEIC **11** 04:32:21.0±0.0, 43°81N×12°03E, h8^{km}, mb4.2/13, MW4.1, ML3.9(ROM), Moment Tensor Solution. s18 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.64; $M_{\theta\theta}$0.46; $M_{\phi\phi}$1.18; $M_{r\theta}$-0.45; $M_{\theta\phi}$-0.50; $M_{\phi r}$-0.12; Best double couple: $M_0$1.60000×10^{15} NP1:ϕ_s345.00000°, δ45.00000°, λ-71.00000°. NP2:ϕ_s140.00000°, δ48.00000°, λ-108.00000°. Principal axes: T 1.4400, Plg2.0000°, Azm242.0000°; N 0.3100, Plg13.0000°, Azm152.0000°; P -1.7500, Plg77.0000°, Azm340.0000°; After ROM.*

NEIC Felt at Cesena, Imola and Lerici.

*PRU **11** 04:32:21.7±0.0, 43°94N×12°03E, h0^{km}, M4.2*

*LDG **11** 04:32:21.2±0.1, 43°87N×12°10E, h8^{km}, Md3.8/2, Ml4.0/39, Error ellipse: s-maj=3.0km s-min=2.0km az=173.0*

*BEO **11** 04:32:41.1±1.1, 44°03N×14°12E, h1^{km}±5^{km}, ML3.7/6*

ISC 11 04:32:22.3±0.7**, 43°80N**±0°02×**12°01E**±0°02**, h12**^{km}±4^{km}**, n525,** σ**2**^{s}**27**/620**, mb4.3**/30**, MS3.5**/16**, 25C-23D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASQU	**Asqua**	0.16	271	P	Pg	04 32 25.5	-0.4
ASQU				S	Sg	04 32 29.2	+0.6
SFI	**Santa Sofia**	0.16	313	P	Pg	04 32 25.1	-0.9
SFI				S	Sg	04 32 28.2	-0.4
SFI				AML	AML		
	comp=E,89350µm,0.9s						
SFI				AML	AML		
	comp=N,77700µm,1.1s						
SFI				AML	AML		
	comp=E,77500µm,1.5s						
SFI				AML	AML		
	comp=N,76650µm,0.8s						
SFI				AML	AML		
	comp=E,89350µm,0.9s						
SFI				AML	AML		
	comp=N,77700µm,1.1s						
SFI				AML	AML		
	comp=E,77450µm,1.5s						
SFI				AML	AML		
	comp=N,76600µm,0.8s						
SFI				AML	AML		
	comp=E,89350µm,0.9s						
SFI				AML	AML		
	comp=N,77700µm,1.1s						
SFI				AML	AML		
	comp=E,77500µm,1.5s						
SFI				AML	AML		
	comp=N,76650µm,0.8s						
SFI				AML	AML		
	comp=E,89350µm,0.9s						
SFI				AML	AML		
	comp=N,76650µm,0.8s						
SFI				AML	AML		
	comp=N,77700µm,1.1s						
SFI				AML	AML		
	comp=E,77500µm,1.5s						
SFI				AML	AML		
	comp=E,89350µm,0.9s						
SFI				AML	AML		
	comp=N,76650µm,0.8s						
SFI				AML	AML		
	comp=N,77700µm,1.1s						
SFI				AML	AML		
	comp=E,77500µm,1.5s						
PARC	**Parchiule**	0.22	131	P	Pg	04 32 25.9	-1.2
PARC				S	Sg	04 32 29.7	-0.5
PARC				AML	AML		
	comp=E,60500µm,0.2s						
PARC				AML	AML		
	comp=N,53300µm,1.1s						
PARC				AML	AML		
	comp=E,60500µm,0.2s						
PARC				AML	AML		
	comp=N,53300µm,1.1s						
PARC				AML	AML		
	comp=E,60500µm,0.2s						
PARC				AML	AML		
	comp=N,53300µm,1.1s						
PARC				AML	AML		
	comp=E,60500µm,0.2s						
PARC				AML	AML		
	comp=N,53300µm,1.1s						
PARC				AML	AML		
	comp=N,53300µm,1.1s						
PARC				AML	AML		
	comp=E,60500µm,0.2s						
CPGN	**Carpegna, Ital**	0.23	88	P	Pg	04 32 25.7	-1.5
CPGN				S	Sg	04 32 30.3	-0.2
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
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CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
CPGN				AML	AML		
SSP9	**Sansepolcro**	0.24	158	P	Pg	04 32 26.6	-0.7
SSP9				S	Sg	04 32 31.8	+1.2
SSP9				AML	AML		
	comp=E,34350µm,1.5s						
SSP9				AML	AML		
	comp=N,60150µm,1.1s						
SSP9				AML	AML		
	comp=E,34300µm,1.5s						
SSP9				AML	AML		
	comp=N,60000µm,1.1s						
SSP9				AML	AML		
	comp=E,34350µm,1.5s						
SSP9				AML	AML		
	comp=N,60050µm,1.1s						
SSP9				AML	AML		
	comp=N,60050µm,1.1s						
SSP9				AML	AML		
	comp=E,34350µm,1.5s						
BADI	**Badiali**	0.33	149	P	Pg	04 32 27.9	-1.0
BADI				S	Sg	04 32 34.1	+0.6
BADI				AML	AML		
	comp=E,44150µm,0.7s						
BADI				AML	AML		
	comp=N,25550µm,0.5s						
BADI				AML	AML		
	comp=E,44150µm,0.7s						
BADI				AML	AML		
	comp=N,25550µm,0.5s						
BADI				AML	AML		
	comp=E,44150µm,0.7s						
BADI				AML	AML		
	comp=N,25550µm,0.5s						
BADI				AML	AML		
	comp=E,44150µm,0.7s						
BADI				AML	AML		
	comp=N,25550µm,0.5s						
BADI				AML	AML		
	comp=N,25550µm,0.5s						
BADI				AML	AML		
	comp=E,44150µm,0.7s						
RUFI	**Rufina**	0.36	277	P	Pg	04 32 28.9	-0.6
RUFI				S	Sb	04 32 35.5	-0.9
RUFI				AML	AML		
	comp=E,42500µm,0.3s						
RUFI				AML	AML		
	comp=N,51600µm,1.2s						
RUFI				AML	AML		
	comp=E,42450µm,0.3s						
RUFI				AML	AML		
	comp=N,51600µm,1.2s						
RUFI				AML	AML		
	comp=E,42500µm,0.3s						
RUFI				AML	AML		
	comp=N,51650µm,1.2s						
RUFI				AML	AML		
	comp=E,42500µm,0.3s						
RUFI				AML	AML		
	comp=N,51650µm,1.2s						
RUFI				AML	AML		
	comp=N,51600µm,1.2s						
RUFI				AML	AML		
	comp=E,42450µm,0.3s						
CDCA	**Citt‘ di Caste**	0.37	154	P	Pg	04 32 28.8	-0.9
CDCA				S	Sg	04 32 35.5	+0.8
CDCA				AML	AML		
	comp=E,47050µm,1.0s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=E,47650µm,1.5s						
CDCA				AML	AML		
	comp=N,27300µm,1.5s						
CDCA				AML	AML		
	comp=E,46100µm,0.8s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=E,46100µm,1.5s						
CDCA				AML	AML		
	comp=N,28000µm,1.5s						
CDCA				AML	AML		
	comp=E,47050µm,1.0s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=E,47450µm,1.5s						
CDCA				AML	AML		
	comp=N,27400µm,1.5s						
CDCA				AML	AML		
	comp=E,47450µm,1.5s						
CDCA				AML	AML		
	comp=N,27400µm,1.5s						
CDCA				AML	AML		
	comp=E,47050µm,1.0s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=E,47450µm,1.5s						
CDCA				AML	AML		
	comp=N,27400µm,1.5s						
CDCA				AML	AML		
ATPI	**Pietralunga -**	0.45	140	P	Pg	04 32 29.8	-1.3
ATPI				AML	AML		
	comp=E,14100µm,1.6s						
ATPI				AML	AML		
	comp=N,12200µm,1.0s						
ATPI				AML	AML		
	comp=E,14100µm,1.6s						
ATPI				AML	AML		
	comp=N,12200µm,1.0s						
ATPI				AML	AML		
	comp=E,14100µm,1.6s						
ATPI				AML	AML		
	comp=N,12200µm,1.0s						
NARO	**Abbazia di Nar**	0.45	114	P	Pg	04 32 29.2	-2.0
NARO				S	Sg	04 32 36.6	-0.6
NARO				AML	AML		
	comp=E,9070µm,1.5s						
NARO				AML	AML		
	comp=N,9195µm,1.0s						
NARO				AML	AML		
	comp=E,9070µm,1.5s						
NARO				AML	AML		
	comp=N,9195µm,1.0s						
NARO				AML	AML		
	comp=E,9070µm,1.5s						
NARO				AML	AML		
	comp=N,9195µm,1.0s						
NARO				AML	AML		
	comp=E,9070µm,1.5s						
NARO				AML	AML		
	comp=N,9195µm,1.0s						
CAFI	**Castiglion Fio**	0.47	184	P	Pg	04 32 30.9	-0.5
CAFI				S	Sb	04 32 39.3	-0.1
CAFI				AML	AML		
	comp=E,16500µm,1.1s						
CAFI				AML	AML		
	comp=N,14350µm,1.1s						
CAFI				AML	AML		
	comp=E,16750µm,1.1s						
CAFI				AML	AML		
	comp=N,15500µm,1.1s						
CAFI				AML	AML		
	comp=E,16500µm,1.1s						
CAFI				AML	AML		
	comp=N,14350µm,1.1s						
CAFI				AML	AML		
	comp=E,16750µm,1.1s						
CAFI				AML	AML		
	comp=N,15500µm,1.1s						
CAFI				AML	AML		
	comp=E,16500µm,1.1s						
CAFI				AML	AML		
	comp=N,15500µm,1.1s						
CAFI				AML	AML		
	comp=N,14350µm,1.1s						
CAFI				AML	AML		
	comp=E,16750µm,1.1s						
CAFI				AML	AML		
	comp=N,14350µm,1.1s						
CAFI				AML	AML		
	comp=N,15500µm,1.1s						
CAFI				AML	AML		
	comp=E,16500µm,1.1s						
BLLA	**Bellaria**	0.48	44	P	Pg	04 32 30.3	-1.5
BLLA				AML	AML		
	comp=E,49300µm,1.5s						
BLLA				AML	AML		
	comp=N,53200µm,1.6s						
BLLA				AML	AML		
	comp=E,62750µm,1.6s						
BLLA				AML	AML		
	comp=N,52850µm,1.6s						
BLLA				AML	AML		
	comp=E,62750µm,1.6s						
BLLA				AML	AML		
	comp=N,52850µm,1.6s						
BLLA				AML	AML		
	comp=E,62650µm,1.6s						
ATMI	**Monte Miggiano**	0.50	158	P	Pg	04 32 31.2	-0.9
ATMI				AML	AML		
	comp=E,27100µm,0.3s						
ATMI				AML	AML		
	comp=N,33650µm,0.6s						
ATMI				AML	AML		
	comp=E,27100µm,0.3s						
ATMI				AML	AML		
	comp=N,33650µm,0.6s						
ATMI				AML	AML		
	comp=E,27100µm,0.3s						
ATMI				AML	AML		
	comp=N,33650µm,0.6s						
ATMI				AML	AML		
	comp=E,27100µm,0.3s						
ATMI				AML	AML		
	comp=N,33650µm,0.6s						
ATVO	**AVT- Monte Val**	0.50	145	P	Pg	04 32 31.0	-1.2
ATVO				AML	AML		
	comp=E,25950µm,0.5s						

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ATVO                                        AML      AML
        comp=N,16850µm,1.0s
ATVO                                        AML      AML
        comp=E,25950µm,0.5s
ATVO                                        AML      AML
        comp=N,16850µm,1.0s
ATVO                                        AML      AML
        comp=E,25950µm,0.5s
ATVO                                        AML      AML
        comp=N,16850µm,1.0s
ATVO                                        AML      AML
        comp=E,25950µm,0.5s
BRIS    BRISIGHELLA         0.51 315        P        Pg       04 32 30.4  -1.8
BRIS                                        S        Sg       04 32 38.5  -0.4
BRIS                                        AML      AML
        comp=E,44750µm,0.3s
BRIS                                        AML      AML
        comp=N,35500µm,0.5s
BRIS                                        AML      AML
        comp=E,44750µm,0.3s
BRIS                                        AML      AML
        comp=N,35500µm,0.5s
BRIS                                        AML      AML
        comp=E,44750µm,0.3s
BRIS                                        AML      AML
        comp=N,35500µm,0.5s
BRIS                                        AML      AML
        comp=E,44750µm,0.3s
BRIS                                        AML      AML
        comp=N,35500µm,0.5s
BRIS                                        AML      AML
        comp=E,55200µm,0.3s
SEI     Scarperia           0.54 299        P        Pg       04 32 31.7  -1.1
SEI                                         S        Sb       04 32 40.9  -0.6
SEI                                         AML      AML
        comp=E,37350µm,0.6s
SEI                                         AML      AML
        comp=N,90450µm,0.7s
SEI                                         AML      AML
        comp=E,37350µm,0.6s
SEI                                         AML      AML
        comp=N,90450µm,0.7s
SEI                                         AML      AML
        comp=E,37350µm,0.6s
SEI                                         AML      AML
        comp=N,90450µm,0.7s
SEI                                         AML      AML
        comp=N,90450µm,0.7s
MPAG    Monte Paganucc      0.57 107        P        Pg       04 32 31.2  -2.2
MPAG                                        AML      AML
        comp=E,6155µm,0.6s
MPAG                                        AML      AML
        comp=N,14400µm,0.6s
MPAG                                        AML      AML
        comp=E,6175µm,0.6s
MPAG                                        AML      AML
        comp=N,14600µm,0.6s
MPAG                                        AML      AML
        comp=E,6160µm,0.6s
MPAG                                        AML      AML
        comp=N,14400µm,0.6s
MPAG                                        AML      AML
        comp=E,6185µm,0.6s
MPAG                                        AML      AML
        comp=N,14600µm,0.6s
MPAG                                        AML      AML
        comp=E,6160µm,0.6s
MPAG                                        AML      AML
        comp=N,14600µm,0.6s
MPAG                                        AML      AML
        comp=N,14400µm,0.6s
MPAG                                        AML      AML
        comp=E,6185µm,0.6s
MPAG                                        AML      AML
        comp=E,6155µm,0.6s
MPAG                                        AML      AML
        comp=N,14400µm,0.6s
MPAG                                        AML      AML
        comp=N,14600µm,0.6s
FRON    Frontone            0.59 118        P        Pg       04 32 31.8  -2.0
FRON                                        S        Sg       04 32 41.7  +0.1
FRON                                        AML      AML
        comp=E,8810µm,0.7s
FRON                                        AML      AML
        comp=N,8920µm,0.7s
FRON                                        AML      AML
        comp=E,8950µm,1.0s
FRON                                        AML      AML
        comp=N,9160µm,0.8s
FRON                                        AML      AML
        comp=N,9160µm,0.8s
FRON                                        AML      AML
        comp=E,8950µm,1.0s
FRON                                        AML      AML
        comp=N,9165µm,0.8s
ATFO    Monte Foce - G      0.59 136        P        Pg       04 32 32.2  -1.7
ATFO                                        AML      AML
        comp=E,14500µm,1.5s
ATFO                                        AML      AML
        comp=N,11700µm,0.7s
ATFO                                        AML      AML
        comp=E,14500µm,1.5s
ATFO                                        AML      AML
        comp=N,11700µm,0.7s
ATFO                                        AML      AML
        comp=E,14500µm,1.5s
ATFO                                        AML      AML
        comp=N,11700µm,0.7s
ATFO                                        AML      AML
        comp=N,11700µm,0.7s
IMOL    Imola, Italy        0.60 341        P        Pg       04 32 34.0  +0.1
CSNT    Castellina Chi      0.61 238        P        Pg       04 32 33.6  -0.6
CSNT                                        AML      AML
        comp=E,12250µm,1.0s
CSNT                                        AML      AML
        comp=N,26350µm,0.5s
CSNT                                        AML      AML
        comp=E,12250µm,1.0s
CSNT                                        AML      AML
        comp=N,26350µm,0.5s
CSNT                                        AML      AML
        comp=N,26350µm,0.5s
CSNT                                        AML      AML
        comp=E,12250µm,1.0s
CSNT                                        AML      AML
        comp=N,26350µm,0.5s
CSNT                                        AML      AML
        comp=E,12250µm,1.0s
OSSC    Osservatorio P      0.62 244       eP        Pg       04 32 33.9  -0.4
PESA    Pesaro              0.62  76        P        Pg       04 32 32.3  -2.0
PESA                                        S        Sg       04 32 42.5   0.0
PESA                                        AML      AML
        comp=E,19350µm,1.1s
PESA                                        AML      AML
        comp=N,17700µm,1.0s
PESA                                        AML      AML
        comp=E,19350µm,1.1s
PESA                                        AML      AML
        comp=N,17700µm,1.0s
PESA                                        AML      AML
        comp=N,17700µm,1.0s
PESA                                        AML      AML
        comp=E,19350µm,1.1s
PESA                                        AML      AML
        comp=E,19350µm,1.1s
ATTE    AVT- Monte Tez      0.65 157        P        Pg       04 32 33.7  -1.2
MURB    Monte Urbino        0.65 145        P        Pg       04 32 33.6  -1.3
MURB                                        AML      AML
        comp=E,23950µm,0.4s
MURB                                        AML      AML
        comp=N,19950µm,0.4s
MURB                                        AML      AML
        comp=E,26000µm,0.4s
MURB                                        AML      AML
        comp=N,20700µm,0.4s
MURB                                        AML      AML
        comp=E,23950µm,0.4s
MURB                                        AML      AML
        comp=N,19900µm,0.4s
MURB                                        AML      AML
        comp=E,26000µm,0.4s
MURB                                        AML      AML
        comp=N,20700µm,0.4s
MURB                                        AML      AML
        comp=E,23950µm,0.4s
MURB                                        AML      AML
        comp=N,19900µm,0.4s
MURB                                        AML      AML
        comp=N,20700µm,0.4s
MURB                                        AML      AML
        comp=E,26000µm,0.4s
MURB                                        AML      AML
        comp=E,26000µm,0.4s
MURB                                        AML      AML
        comp=N,19900µm,0.4s
MURB                                        AML      AML
        comp=N,20700µm,0.4s
SSFR    Montelago di S      0.67 122        P        Pg       04 32 33.4  -1.8
SSFR                                        S        Sg       04 32 44.4  +0.4
SSFR                                        AML      AML
        comp=E,14350µm,0.2s
SSFR                                        AML      AML
        comp=N,13550µm,1.4s
SSFR                                        AML      AML
        comp=E,15300µm,0.2s
SSFR                                        AML      AML
        comp=N,13000µm,0.2s
SSFR                                        AML      AML
        comp=E,14350µm,0.2s
SSFR                                        AML      AML
        comp=N,13550µm,1.4s
SSFR                                        AML      AML
        comp=E,15300µm,0.2s
SSFR                                        AML      AML
        comp=N,13000µm,0.2s
SSFR                                        AML      AML
        comp=E,14350µm,0.2s
SSFR                                        AML      AML
        comp=E,15300µm,0.2s
SSFR                                        AML      AML
        comp=N,13550µm,1.4s
SSFR                                        AML      AML
        comp=N,13000µm,0.2s
SSFR                                        AML      AML
        comp=N,13000µm,0.2s
SSFR                                        AML      AML
        comp=E,14350µm,0.2s
SSFR                                        AML      AML
        comp=E,15300µm,0.2s
PTF     Prato               0.70 284        P        Pg       04 32 34.8  -1.0
MTRZ    Monterenzio         0.70 326        P        Pg       04 32 35.0  -0.9
MTRZ                                        AML      AML
        comp=E,20150µm,0.6s
MTRZ                                        AML      AML
        comp=N,22200µm,1.4s
MTRZ                                        AML      AML
        comp=E,21050µm,0.6s
MTRZ                                        AML      AML
        comp=N,22700µm,1.4s
MTRZ                                        AML      AML
        comp=E,21050µm,0.6s
MTRZ                                        AML      AML
        comp=N,22700µm,1.4s
MTRZ                                        AML      AML
        comp=N,22200µm,1.4s
MTRZ                                        AML      AML
        comp=E,20150µm,0.6s
COR1    Corinaldo           0.74 102        P        Pg       04 32 35.1  -1.5
COR1                                        AML      AML
        comp=E,26400µm,0.7s
COR1                                        AML      AML
        comp=N,16050µm,0.4s
COR1                                        AML      AML
        comp=E,14300µm,0.7s
COR1                                        AML      AML
        comp=N,15460µm,0.4s
COR1                                        AML      AML
        comp=E,26400µm,0.7s
COR1                                        AML      AML
        comp=N,16100µm,0.4s
COR1                                        AML      AML
        comp=E,14400µm,0.7s
COR1                                        AML      AML
        comp=N,15405µm,0.4s
COR1                                        AML      AML
        comp=N,16100µm,0.4s
COR1                                        AML      AML
        comp=E,26400µm,0.7s
COR1                                        AML      AML
        comp=E,14400µm,0.7s
COR1                                        AML      AML
        comp=N,15405µm,0.4s
COR1                                        AML      AML
        comp=N,15425µm,0.4s
COR1                                        AML      AML
        comp=E,26400µm,0.7s
COR1                                        AML      AML
        comp=N,16100µm,0.4s
ARVD    Arcevia             0.74 113        P        Pg       04 32 34.3  -2.3
ARVD                                        AML      AML
        comp=E,6075µm,0.7s
ARVD                                        AML      AML
        comp=N,5870µm,1.3s
ARVD                                        AML      AML
        comp=E,6075µm,0.7s
ARVD                                        AML      AML
        comp=N,5870µm,1.3s
ARVD                                        AML      AML
        comp=N,5870µm,1.3s
ARVD                                        AML      AML
        comp=E,6075µm,0.7s
ARVD                                        AML      AML
        comp=N,5870µm,1.3s
FOSV    Fossato di Vic      0.74 132        AML      AML
        comp=E,5965µm,1.3s
FOSV                                        AML      AML
        comp=E,5980µm,1.3s
FOSV                                        AML      AML
        comp=N,6825µm,0.8s
FOSV                                        AML      AML
        comp=N,6820µm,0.8s
FOSV                                        AML      AML
        comp=N,6820µm,0.8s
FOSV                                        AML      AML
        comp=E,5965µm,1.3s
FOSV                                        AML      AML
        comp=N,6820µm,0.8s
CRMI    Carmignano          0.75 270        P        Pg       04 32 35.9  -0.9
CRMI                                        AML      AML
        comp=E,13700µm,0.9s
CRMI                                        AML      AML
        comp=N,9765µm,1.5s
CRMI                                        AML      AML
        comp=E,5690µm,1.0s
CRMI                                        AML      AML
        comp=N,4035µm,1.5s
CRMI                                        AML      AML
        comp=N,9765µm,1.5s
CRMI                                        AML      AML
        comp=E,5690µm,1.0s
CRMI                                        AML      AML
        comp=E,13700µm,0.9s
CRMI                                        AML      AML
        comp=N,4035µm,1.5s
CRMI                                        AML      AML
        comp=E,5690µm,1.0s
CRMI                                        AML      AML
        comp=N,4035µm,1.5s
CRMI                                        AML      AML
        comp=E,13700µm,0.9s
ATCC    AVT- Casa Cast      0.76 143        P        Pg       04 32 35.7  -1.4
ATCC                                        AML      AML
        comp=E,12850µm,1.0s
ATCC                                        AML      AML
        comp=N,9925µm,1.4s
ATCC                                        AML      AML
        comp=E,12900µm,1.0s
ATCC                                        AML      AML
        comp=N,9920µm,1.4s
ATCC                                        AML      AML
        comp=N,9920µm,1.4s
ATCC                                        AML      AML
        comp=E,12900µm,1.0s
ATCC                                        AML      AML
        comp=N,9920µm,1.4s
MTCR    Monte La Croce      0.77 288        P        Pg       04 32 36.2  -0.9
MTCR                                        AML      AML
        comp=E,11535µm,0.9s
MTCR                                        AML      AML
        comp=N,9690µm,1.4s
MTCR                                        AML      AML
        comp=E,11570µm,0.9s
MTCR                                        AML      AML
        comp=N,9750µm,1.4s
MTCR                                        AML      AML
        comp=E,11570µm,0.9s
MTCR                                        AML      AML
        comp=N,9750µm,1.4s
MTCR                                        AML      AML
        comp=N,9765µm,1.4s
CMPO    Campotto Po         0.80 350        P        Pb       04 32 38.5  +0.4
FROS    Frosini             0.85 227        P        Pg       04 32 38.5  -0.3
FROS                                        AML      AML
        comp=E,16050µm,0.8s
FROS                                        AML      AML
        comp=N,12900µm,0.7s
FROS                                        AML      AML
        comp=N,12900µm,0.7s
FROS                                        AML      AML
        comp=E,16050µm,0.8s
FROS                                        AML      AML
        comp=N,12900µm,0.7s
SNTG    Esanatoglia         0.87 128        P        Pg       04 32 37.1  -1.9
SNTG                                        AML      AML
        comp=E,702µm,0.6s
SNTG                                        AML      AML
        comp=N,891µm,1.4s
SNTG                                        AML      AML
        comp=E,5535µm,0.6s
SNTG                                        AML      AML
        comp=N,7400µm,0.6s
SNTG                                        AML      AML
        comp=E,702µm,0.6s
SNTG                                        AML      AML
        comp=N,890µm,1.4s
SNTG                                        AML      AML
        comp=E,5535µm,0.6s
SNTG                                        AML      AML
        comp=N,7400µm,0.6s
SNTG                                        AML      AML
        comp=E,5535µm,0.6s
SNTG                                        AML      AML
        comp=E,702µm,0.6s
SNTG                                        AML      AML
        comp=N,7400µm,0.6s
SNTG                                        AML      AML
        comp=N,890µm,1.4s
MGAB    Montegabbione       0.89 175        P        Pg       04 32 38.3  -1.1
MGAB                                        AML      AML
        comp=E,17250µm,0.6s
MGAB                                        AML      AML
        comp=N,11930µm,0.8s
MGAB                                        AML      AML
        comp=E,17850µm,0.6s
MGAB                                        AML      AML
        comp=N,12050µm,0.4s
MGAB                                        AML      AML
        comp=N,11930µm,0.8s
MGAB                                        AML      AML
        comp=E,17250µm,0.6s
MGAB                                        AML      AML
        comp=E,17850µm,0.6s
MGAB                                        AML      AML
        comp=N,12050µm,0.4s
MGAB                                        AML      AML
        comp=N,12050µm,0.4s
MGAB                                        AML      AML
        comp=N,11930µm,0.8s
MGAB                                        AML      AML
        comp=E,17850µm,0.6s
ASSB    Assisi San Ben      0.89 148        P        Pg       04 32 38.0  -1.4
ASSB                                        AML      AML
        comp=E,4300µm,1.0s
ASSB                                        AML      AML
        comp=N,4740µm,1.0s
ASSB                                        AML      AML
        comp=N,4740µm,1.0s
ASSB                                        AML      AML
        comp=E,4300µm,1.0s
ASSB                                        AML      AML
        comp=E,4300µm,1.0s
SENI    Senigallia          0.89  95        P        Pg       04 32 38.0  -1.5
SENI                                        AML      AML
        comp=E,39900µm,0.4s
SENI                                        AML      AML
        comp=N,27900µm,0.5s
SENI                                        AML      AML
        comp=E,8365µm,1.0s
SENI                                        AML      AML
        comp=N,8165µm,0.5s
SENI                                        AML      AML
        comp=E,39950µm,0.4s
SENI                                        AML      AML
        comp=N,27900µm,0.5s
SENI                                        AML      AML
        comp=E,8275µm,1.0s
SENI                                        AML      AML
        comp=N,8130µm,0.5s
SENI                                        AML      AML
        comp=N,27900µm,0.5s
SENI                                        AML      AML
        comp=N,8130µm,0.5s
SENI                                        AML      AML
        comp=E,39950µm,0.4s
SENI                                        AML      AML
        comp=E,8275µm,1.0s
SENI                                        AML      AML
        comp=E,8275µm,1.0s
SENI                                        AML      AML
        comp=N,27850µm,0.5s
SENI                                        AML      AML
        comp=E,39900µm,0.4s
FIU     Minerbio Fiu        0.92 336        P        Pn       04 32 42.2  +1.1
ZCCA    Zocca               0.93 307        AML      AML
        comp=N,6325µm,1.3s
ZCCA                                        AML      AML
        comp=E,7340µm,1.2s
ZCCA                                        AML      AML
        comp=N,6260µm,1.0s
ZCCA                                        AML      AML
        comp=E,7485µm,1.2s
ZCCA                                        AML      AML
        comp=N,6325µm,1.3s
ZCCA                                        AML      AML
        comp=N,6260µm,1.0s
ZCCA                                        AML      AML
        comp=E,7340µm,1.2s
ZCCA                                        AML      AML
        comp=E,7485µm,1.2s
POPM    Popiglio            0.94 286        P        Pg       04 32 39.4  -1.0
POPM                                        S        Sb       04 32 53.0   0.0
POPM    Popiglio            0.94 286        P        Pg       04 32 39.4  -1.0
POPM                                        AML      AML
        comp=E,6055µm,1.2s
POPM                                        AML      AML
        comp=N,11500µm,0.3s
POPM                                        AML      AML
        comp=E,6055µm,1.2s
POPM                                        AML      AML
        comp=N,11500µm,0.3s
POPM                                        AML      AML
        comp=E,6055µm,1.2s
SACS    San Casciano d      0.95 184        P        Pg       04 32 39.8  -0.8
SACS                                        AML      AML
        comp=E,10700µm,0.5s
SACS                                        AML      AML
        comp=N,6490µm,0.5s
SACS                                        AML      AML
        comp=E,10290µm,0.5s
SACS                                        AML      AML
        comp=N,6775µm,1.0s
SACS                                        AML      AML
        comp=N,6490µm,0.5s
SACS                                        AML      AML
        comp=E,10700µm,0.5s
SACS                                        AML      AML
        comp=N,6775µm,1.0s
SACS                                        AML      AML
        comp=E,10290µm,0.5s
SACS                                        AML      AML
        comp=E,10700µm,0.5s
SACS                                        AML      AML
        comp=N,6490µm,0.5s
SACS                                        AML      AML
        comp=E,10290µm,0.5s
CING    Cingoli             0.96 115        P        Pg       04 32 38.7  -2.1
CING                                        AML      AML
        comp=E,6505µm,1.4s
CING                                        AML      AML
        comp=N,11600µm,0.6s
CING                                        AML      AML
        comp=N,11600µm,0.6s
CING                                        AML      AML
        comp=E,6505µm,1.4s
```

CING			AML	AML			comp=E,6505µm,1.4s
ARCI	**Arcidosso**	**1.02 203**	P	**Pg**	**04 32 41.1**	**-0.8**	
ARCI			AML	AML			comp=E,3815µm,1.4s
ARCI			AML	AML			comp=N,7895µm,0.9s
ARCI			AML	AML			comp=E,3820µm,1.4s
ARCI			AML	AML			comp=N,7895µm,0.9s
ARCI			AML	AML			comp=N,7895µm,0.9s
ARCI			AML	AML			comp=E,3820µm,1.4s
ARCI			AML	AML			comp=E,3820µm,1.4s
CESI	**CESI - Serrava**	**1.02 140**	AML	AML			comp=E,1082µm,0.4s
CESI			AML	AML			comp=E,1082µm,0.4s
CESI			AML	AML			comp=N,2590µm,0.9s
CESI			AML	AML			comp=N,2590µm,0.9s
MCIV	**Monte Civitell**	**1.04 194**	P	**Pb**	**04 32 41.6**	**-0.8**	
MCIV			AML	AML			comp=E,1675µm,0.9s
MCIV			AML	AML			comp=N,2095µm,0.9s
MCIV			AML	AML			comp=E,1675µm,0.9s
MCIV			AML	AML			comp=N,2095µm,0.9s
MCIV			AML	AML			comp=N,2095µm,0.9s
MCIV			AML	AML			comp=E,1675µm,0.9s
TRIF	**Trifonti**	**1.05 230**	P	**Pb**	**04 32 42.0**	**-0.6**	
TRIF			AML	AML			comp=E,2870µm,0.9s
TRIF			AML	AML			comp=N,4015µm,0.6s
TRIF			AML	AML			comp=N,4015µm,0.6s
TRIF			AML	AML			comp=E,2870µm,0.9s
TRIF			AML	AML			comp=E,2870µm,0.9s
TRIF			AML	AML			comp=N,4015µm,0.6s
BDI	**Bagni Di Lucca**	**1.05 285**	P	**Pb**	**04 32 41.2**	**-1.3**	
BDI			AML	AML			comp=E,5140µm,0.9s
BDI			AML	AML			comp=N,5430µm,1.0s
BDI			AML	AML			comp=E,5065µm,0.9s
BDI			AML	AML			comp=N,6130µm,1.0s
BDI			AML	AML			comp=E,5140µm,0.9s
BDI			AML	AML			comp=N,6130µm,1.0s
BDI			AML	AML			comp=N,5430µm,1.0s
BDI			AML	AML			comp=E,5065µm,0.9s
MOMA	**Monte Martano**	**1.07 157**	P	**Pb**	**04 32 42.0**	**-0.9**	
MOMA			AML	AML			comp=E,5485µm,0.5s
MOMA			AML	AML			comp=N,4175µm,0.9s
MOMA			AML	AML			comp=E,5245µm,0.4s
MOMA			AML	AML			comp=N,4320µm,1.4s
MOMA			AML	AML			comp=N,4320µm,1.4s
MOMA			AML	AML			comp=E,5485µm,0.5s
MOMA			AML	AML			comp=N,4175µm,0.9s
MOMA			AML	AML			comp=E,5245µm,0.4s
MOMA			AML	AML			comp=N,4175µm,0.9s
MOMA			AML	AML			comp=E,5245µm,0.4s
MOMA			AML	AML			comp=E,5485µm,0.5s
FDMO	**Fiordimonte**	**1.09 134**	P	**Pb**	**04 32 41.3**	**-1.9**	
FDMO			AML	AML			comp=E,6710µm,0.9s
FDMO			AML	AML			comp=N,4495µm,0.8s
FDMO			AML	AML			comp=E,6710µm,0.9s
FDMO			AML	AML			comp=N,4495µm,0.8s
FDMO			AML	AML			comp=E,6710µm,0.9s
FDMO			AML	AML			comp=N,4495µm,0.8s
MAIM	**Mastiano**	**1.10 277**	P	**Pb**	**04 32 42.1**	**-1.2**	
MAIM			S	**Sb**	**04 32 55.4**	**-2.3**	
MAIM	**Mastiano**	**1.10 277**	P	**Pb**	**04 32 42.1**	**-1.2**	
MAIM			AML	AML			comp=E,4015µm,1.4s
MAIM			AML	AML			comp=N,3460µm,1.1s
MAIM			AML	AML			comp=N,3460µm,1.1s
MAIM			AML	AML			comp=E,4015µm,1.4s
MAIM			AML	AML			comp=E,4015µm,1.4s
CARD	**Cardoso**	**1.13 282**	P	**Pb**	**04 32 42.3**	**-1.5**	
CARD			S	**Sb**	**04 32 57.8**	**-0.6**	
CARD	**Cardoso**	**1.13 282**	P	**Pb**	**04 32 42.2**	**-1.6**	
CARD			AML	AML			comp=E,3965µm,1.3s
CARD			AML	AML			comp=N,6595µm,0.6s
CARD			AML	AML			comp=N,6595µm,0.6s
CARD			AML	AML			comp=E,3965µm,1.3s
CARD			AML	AML			comp=N,6595µm,0.6s
VLC	**Villacollemand**	**1.23 288**	*e*Pn	**Pn**	**04 32 43.8**	**-1.6**	
VLC			*e*Sn	**Sb**	**04 32 59.5**	**-1.7**	
VLC	**Villacollemand**	**1.23 288**	P	**Pn**	**04 32 44.0**	**-1.3**	
VLC			AML	AML			comp=E,3300µm,1.2s
VLC			AML	AML			comp=N,4400µm,1.0s
VLC			AML	AML			comp=E,3260µm,1.2s
VLC			AML	AML			comp=N,4360µm,1.0s
VLC			AML	AML			comp=N,4400µm,1.0s
VLC			AML	AML			comp=N,4360µm,1.0s
VLC			AML	AML			comp=E,3260µm,1.2s
VLC			AML	AML			comp=E,3300µm,1.2s
VLC			AML	AML			comp=E,3300µm,1.2s
VLC			AML	AML			comp=N,4400µm,1.0s
VLC			AML	AML			comp=E,3260µm,1.2s
NRCA	**Norcia**	**1.25 140**	P	**Pn**	**04 32 44.7**	**-1.1**	
NRCA			AML	AML			comp=E,2980µm,1.2s
NRCA			AML	AML			comp=N,2995µm,1.2s
NRCA			AML	AML			comp=E,3115µm,1.2s
NRCA			AML	AML			comp=N,3170µm,1.6s
NRCA			AML	AML			comp=N,3170µm,1.6s
NRCA			AML	AML			comp=E,3115µm,1.2s
NRCA			AML	AML			comp=N,2995µm,1.2s
NRCA			AML	AML			comp=E,2980µm,1.2s
NRCA			AML	AML			comp=E,3115µm,1.2s
NRCA			AML	AML			comp=N,3170µm,1.6s
NRCA			AML	AML			comp=E,2980µm,1.2s
NRCA			AML	AML			comp=N,2995µm,1.2s
CESX	**Cesi**	**1.26 160**	P	**Pn**	**04 32 44.8**	**-0.9**	
CESX			AML	AML			comp=E,3095µm,1.6s
CESX			AML	AML			comp=N,3595µm,1.2s
CESX			AML	AML			comp=E,3095µm,1.6s
CESX			AML	AML			comp=N,3595µm,1.2s
CESX			AML	AML			comp=N,3595µm,1.2s
CESX			AML	AML			comp=E,3095µm,1.6s
CAVE	**Cavezzo**	**1.29 326**	AML	AML			comp=N,8680µm,0.8s
CAVE			AML	AML			comp=E,8135µm,0.9s
CAVE			AML	AML			comp=E,8135µm,0.9s
CAVE			AML	AML			comp=N,8680µm,0.8s
CAVE			AML	AML			comp=N,8680µm,0.8s
CAVE			AML	AML			comp=E,8135µm,0.9s
CASP	**Castiglione de**	**1.30 220**	P	**Pn**	**04 32 45.0**	**-1.5**	
CASP			AML	AML			comp=E,1276µm,1.5s
CASP			AML	AML			comp=N,1545µm,0.5s
CASP			AML	AML			comp=E,1276µm,1.5s
CASP			AML	AML			comp=N,1545µm,0.5s
CASP			AML	AML			comp=N,1545µm,0.5s
ERBM	**Eremo**	**1.31 299**	P	**Pn**	**04 32 46.7**	**+0.2**	
ERBM			AML	AML			comp=E,5220µm,1.0s
ERBM			AML	AML			comp=N,5745µm,1.3s
ERBM			AML	AML			comp=N,5745µm,1.3s
ERBM			AML	AML			comp=E,5220µm,1.0s
ERBM			AML	AML			comp=N,5740µm,1.3s
ERBM			AML	AML			comp=E,5220µm,1.0s
ARRO	**Arrone**	**1.33 155**	P	**Pn**	**04 32 46.1**	**-0.7**	
ARRO			AML	AML			comp=E,2250µm,1.2s
ARRO			AML	AML			comp=N,2025µm,0.9s
ARRO			AML	AML			comp=E,2250µm,1.2s
ARRO			AML	AML			comp=N,2025µm,0.9s
ARRO			AML	AML			comp=N,2025µm,0.9s
EQUI	**Equi**	**1.39 286**	P	**Pn**	**04 32 46.2**	**-1.3**	
EQUI	**Equi**	**1.39 286**	P	**Pn**	**04 32 46.3**	**-1.3**	
EQUI			AML	AML			comp=E,1725µm,0.6s
EQUI			AML	AML			comp=N,2515µm,0.4s
EQUI			AML	AML			comp=N,2515µm,0.4s
EQUI			AML	AML			comp=E,1725µm,0.6s
EQUI			AML	AML			comp=N,2515µm,0.4s
EQUI			AML	AML			comp=E,1725µm,0.6s
LNSS	**Leonessa**	**1.41 147**	P	**Pn**	**04 32 46.9**	**-1.0**	
LNSS			AML	AML			comp=E,3925µm,1.0s
LNSS			AML	AML			comp=N,4230µm,0.8s
LNSS			AML	AML			comp=N,4230µm,0.8s
LNSS			AML	AML			comp=E,3925µm,1.0s
LNSS			AML	AML			comp=N,4230µm,0.8s
LNSS			AML	AML			comp=E,3925µm,1.0s
MAON	**Monte Argentar**	**1.51 205**	AML	AML			comp=N,758µm,1.4s
MAON			AML	AML			comp=E,623µm,1.4s
MAON			AML	AML			comp=E,623µm,1.4s
MAON			AML	AML			comp=N,758µm,1.4s
MAON			AML	AML			comp=E,623µm,1.4s
MAON			AML	AML			comp=N,758µm,1.4s
SMA1	**SAN MARTINO**	**1.52 140**	AML	AML			comp=N,5315µm,1.6s
SMA1			AML	AML			comp=E,4460µm,1.2s
SMA1			AML	AML			comp=N,5315µm,1.6s
SMA1			AML	AML			comp=E,4460µm,1.2s
GRAM	**Graiana**	**1.56 297**	P	**Pn**	**04 32 50.3**	**+0.3**	
GRAM			AML	AML			comp=E,3880µm,0.7s
GRAM			AML	AML			comp=N,3920µm,1.5s
GRAM			AML	AML			comp=N,3920µm,1.5s
GRAM			AML	AML			comp=E,3880µm,0.7s
GRAM			AML	AML			comp=N,3920µm,1.5s
GROG	**Isola di Gorgo**	**1.58 257**	P	**Pn**	**04 32 49.4**	**-0.7**	
GROG			AML	AML			comp=E,1335µm,0.4s
GROG			AML	AML			comp=N,1510µm,0.6s
GROG			AML	AML			comp=E,1335µm,0.4s
GROG			AML	AML			comp=N,1510µm,0.6s
GROG			AML	AML			comp=E,1335µm,0.4s
PLMA	**Palmaria, Port**	**1.58 280**	AML	AML			comp=E,1375µm,1.3s
PLMA			AML	AML			comp=E,1375µm,1.3s
PLMA			AML	AML			comp=N,1875µm,0.7s
PLMA			AML	AML			comp=E,1375µm,1.3s
PLMA			AML	AML			comp=N,1875µm,0.7s
PLMA			AML	AML			comp=N,1875µm,0.7s
GUMA	**Gualdo di Mace**	**1.58 117**	P	Pn	04 32 44.1	-6.2	
GUMA			AML	AML			comp=E,17400µm,0.5s
GUMA			AML	AML			comp=N,16200µm,0.5s
GUMA			AML	AML			comp=E,20050µm,0.5s
GUMA			AML	AML			comp=N,14750µm,0.6s
GUMA			AML	AML			comp=N,14750µm,0.6s
GUMA			AML	AML			comp=N,16200µm,0.5s
GUMA			AML	AML			comp=E,20050µm,0.5s
GUMA			AML	AML			comp=E,17400µm,0.5s
GUMA			AML	AML			comp=N,14750µm,0.6s
GUMA			AML	AML			comp=N,16200µm,0.5s
GUMA			AML	AML			comp=E,20050µm,0.5s
GUMA			AML	AML			comp=E,17400µm,0.5s
TEOL	**Teolo**	**1.58 351**	P	**Pn**	**04 32 49.0**	**-1.2**	
TERO	**Teramo**	**1.65 135**	P	**Pn**	**04 32 51.4**	**+0.2**	
TERO			AML	AML			comp=E,1505µm,1.0s
TERO			AML	AML			comp=N,1253µm,0.7s
TERO			AML	AML			comp=N,1253µm,0.7s
TERO			AML	AML			comp=E,1505µm,1.0s
TERO			AML	AML			comp=N,1253µm,0.7s
TERO			AML	AML			comp=E,1505µm,1.0s
FIAM	**Fiamignano**	**1.73 152**	P	**Pn**	**04 32 51.8**	**-0.5**	
FIAM			AML	AML			comp=E,1965µm,0.8s
FIAM			AML	AML			comp=N,1625µm,1.0s
FIAM			AML	AML			comp=N,1625µm,1.0s
FIAM			AML	AML			comp=E,1965µm,0.8s
FIAM			AML	AML			comp=E,1965µm,0.8s
FIAM			AML	AML			comp=N,1625µm,1.0s
TOLF	**Tolfa**	**1.73 180**	P	**Pn**	**04 32 51.4**	**-0.8**	
TOLF			AML	AML			comp=E,732µm,1.2s
TOLF			AML	AML			comp=N,931µm,1.4s
TOLF			AML	AML			comp=E,732µm,1.2s
TOLF			AML	AML			comp=N,931µm,1.4s
TOLF			AML	AML			comp=E,732µm,1.2s
TOLF			AML	AML			comp=N,931µm,1.4s
T0104	**Madonna delle**	**1.73 145**	AML	AML			comp=E,4475µm,1.0s
T0104			AML	AML			comp=E,4475µm,1.0s
T0104			AML	AML			comp=N,3195µm,0.9s
T0104			AML	AML			comp=E,4265µm,0.9s
T0104			AML	AML			comp=N,3380µm,0.9s
T0104			AML	AML			comp=N,3380µm,0.9s
T0104			AML	AML			comp=N,3195µm,0.9s
T0104			AML	AML			comp=E,4265µm,0.9s
AQU	**L'Aquila**	**1.77 144**	*e*Pn	**Pb**	**04 32 54.2**	**-0.5**	
AQU			*e*Sn	**Sn**	**04 33 13.9**	**-1.3**	
AQU	**L'Aquila**	**1.77 144**	*e*P	**Pb**	**04 32 54.2**	**-0.5**	
AQU			*e*		04 33 13.9		
AQU	**L'Aquila**	**1.77 144**	*e*Pn	**Pb**	**04 32 54.5**	**-0.2**	
AQU	**L'Aquila**	**1.77 144**	AML	AML			comp=N,2010µm,1.2s
AQU			AML	AML			comp=E,3205µm,1.0s
AQU			AML	AML			comp=N,2010µm,1.2s
AQU			AML	AML			comp=E,3125µm,1.0s
AQU			AML	AML			comp=N,2075µm,1.1s
AQU			AML	AML			comp=N,2075µm,1.1s
AQU			AML	AML			comp=N,2010µm,1.2s
AQU			AML	AML			comp=E,3125µm,1.0s
AQU			AML	AML			comp=E,3205µm,1.0s
AQU			AML	AML			comp=E,3125µm,1.0s
AQU			AML	AML			comp=E,3205µm,1.0s
AQU			AML	AML			comp=N,2075µm,1.1s
MTCE	**Montecelio**	**1.85 163**	AML	AML			comp=N,665µm,0.7s
MTCE			AML	AML			comp=E,1145µm,1.2s
MTCE			AML	AML			comp=N,665µm,0.7s
MTCE			AML	AML			comp=E,1145µm,1.2s
MTCE			AML	AML			comp=E,1145µm,1.2s
MTCE			AML	AML			comp=N,665µm,0.7s
MSSA	**Maissana**	**1.87 287**	P	**Pn**	**04 32 53.1**	**-1.1**	
MSSA			AML	AML			comp=E,1125µm,1.2s
MSSA			AML	AML			comp=N,1375µm,1.6s
MSSA			AML	AML			comp=E,1125µm,1.2s
MSSA			AML	AML			comp=N,1375µm,1.6s
MSSA			AML	AML			comp=N,1375µm,1.6s
MSSA			AML	AML			comp=E,1125µm,1.2s
ROVR	**Rover Verones**	**1.97 341**	AML	AML			comp=E,1012µm,0.9s
ROVR			AML	AML			comp=E,2545µm,1.0s
ROVR			AML	AML			comp=N,3565µm,0.4s
ROVR			AML	AML			comp=E,1012µm,0.9s
ROVR			AML	AML			comp=N,1450µm,0.4s
ROVR			AML	AML			comp=E,2545µm,1.0s
ROVR			AML	AML			comp=N,3565µm,0.4s
ROVR			AML	AML			comp=N,1450µm,0.4s
CERT	**Cerreto**	**1.98 158**	P	**Pn**	**04 32 55.1**	**-0.6**	
CERT			AML	AML			comp=E,1470µm,1.0s
CERT			AML	AML			comp=N,788µm,0.7s
CERT			AML	AML			comp=N,788µm,0.7s
CERT			AML	AML			comp=E,1470µm,1.0s
CERT			AML	AML			comp=N,788µm,0.7s
CERT			AML	AML			comp=E,1470µm,1.0s
PTQR	**Pietraquaria**	**2.05 150**	AML	AML			comp=N,707µm,1.6s
PTQR			AML	AML			comp=E,777µm,1.6s
PTQR			AML	AML			comp=N,707µm,1.6s
PTQR			AML	AML			comp=N,707µm,1.6s
PTQR			AML	AML			comp=E,777µm,1.6s
PTQR			AML	AML			comp=E,777µm,1.6s
CGRP	**Cima Grappa**	**2.09 356**	P	**Pn**	**04 32 56.0**	**-1.4**	
CGRP			AML	AML			comp=E,3635µm,1.2s
CGRP			AML	AML			comp=N,3910µm,0.8s
CGRP			AML	AML			comp=N,3910µm,0.8s

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CGRP                                 AML       AML
            comp=E,3635µm,1.2s
GORR  Gorreto             2.12 294   AML       AML
            comp=E,2035µm,1.3s
GORR                                 AML       AML
            comp=N,1895µm,1.3s
GORR                                 AML       AML
            comp=N,1895µm,1.3s
GORR                                 AML       AML
            comp=E,2035µm,1.3s
NVLJ  Novalja             2.20  69  ePn        Pn        04 32 57.9  -0.8
NVLJ                                 Sn        Sn        04 33 25.3  -0.5
MAGA  Magasa              2.21 334   P         Pn        04 32 57.9  -1.1
MAGA                                 AML       AML
            comp=E,6010µm,0.4s
MAGA                                 AML       AML
            comp=N,4650µm,1.5s
MAGA                                 AML       AML
            comp=N,4650µm,1.5s
MAGA                                 AML       AML
            comp=E,6010µm,0.4s
MAGA                                 AML       AML
            comp=E,6010µm,0.4s
MAGA                                 AML       AML
            comp=N,4650µm,1.5s
DUGI  Dugi Otok           2.21  84  ePn        Pn        04 32 58.0  -0.9
POLC  Polcenigo           2.26   9   P         Pn        04 32 58.2  -1.3
POLC                                 AML       AML
            comp=E,5885µm,0.7s
POLC                                 AML       AML
            comp=N,7765µm,0.5s
POLC                                 AML       AML
            comp=N,7765µm,0.5s
POLC                                 AML       AML
            comp=E,5885µm,0.7s
POLC                                 AML       AML
            comp=N,7765µm,0.5s
VVLD  Villa Vallelon      2.26 148   AML       AML
            comp=E,919µm,1.6s
VVLD                                 AML       AML
            comp=E,919µm,1.6s
VVLD                                 AML       AML
            comp=N,976µm,1.1s
VVLD                                 AML       AML
            comp=N,976µm,1.1s
VVLD                                 AML       AML
            comp=E,919µm,1.6s
VVLD                                 AML       AML
            comp=N,976µm,1.1s
INTR  Introdacqua         2.26 141   AML       AML
            comp=N,2615µm,1.3s
INTR                                 AML       AML
            comp=E,1810µm,1.1s
INTR                                 AML       AML
            comp=N,2615µm,1.3s
INTR                                 AML       AML
            comp=E,1810µm,1.1s
INTR                                 AML       AML
            comp=N,2615µm,1.3s
INTR                                 AML       AML
INTR                                 AML       AML
            comp=E,1810µm,1.1s
INTR                                 AML       AML
SKDS  Skadanscina         2.26  39  i Pn       Pn        04 32 57.0  -2.6
SKDS                                i Sn       Sn        04 33 27.6  +0.1
CTI   Castel Tesino       2.27 354   P         Pn        04 32 58.5  -1.2
CTI                                  AML       AML
            comp=E,2290µm,0.9s
CTI                                  AML       AML
            comp=N,2155µm,0.5s
CTI                                  AML       AML
            comp=E,2290µm,0.9s
CTI                                  AML       AML
            comp=N,2155µm,0.5s
TRI   Trieste             2.29  33  ePn        Pn        04 32 58.8  -1.1
TRI                                 eSn        Sn        04 33 26.8  -1.2
TRI   Trieste             2.29  33  eP         Pn        04 32 58.8  -1.1
TRI                                 e                    04 33 26.8
TRI   Trieste             2.29  33   P         Pn        04 32 58.1  -1.8
TRI                                  AML       AML
            comp=E,1455µm,0.9s
TRI                                  AML       AML
            comp=N,1345µm,0.9s
TRI                                  AML       AML
            comp=N,1345µm,0.9s
TRI                                  AML       AML
            comp=E,1455µm,0.9s
TRI                                  AML       AML
            comp=N,1345µm,0.9s
RIY   Rijeka              2.34  48   ePn       Pn        04 32 58.6  -2.0
RIY                                  Sn        Sn        04 33 28.3  -0.9
RIY   Rijeka              2.34  48  ePn        Pn        04 32 58.9  -1.7
KNDS  Knezji Dol          2.42  44  i Pn       Pn        04 32 59.7  -2.2
KNDS                                i Sn       Sn        04 33 30.7  -0.8
POFI  Posta Fibreno       2.43 148   AML       AML
            comp=N,634µm,1.5s
POFI                                 AML       AML
            comp=E,693µm,1.3s
POFI                                 AML       AML
            comp=E,714µm,1.2s
POFI                                 AML       AML
            comp=N,595µm,1.4s
POFI                                 AML       AML
            comp=N,634µm,1.5s
POFI                                 AML       AML
            comp=E,714µm,1.2s
POFI                                 AML       AML
            comp=N,595µm,1.4s
POFI                                 AML       AML
            comp=E,693µm,1.3s
SABO  M.te Sabotino       2.46  27   AML       AML
            comp=N,3145µm,0.8s
SABO                                 AML       AML
            comp=E,3030µm,0.6s
SABO                                 AML       AML
            comp=N,3145µm,0.8s
SABO                                 AML       AML
            comp=E,3030µm,0.6s
AGOR  Agordo              2.49   1   AML       AML
            comp=N,1164µm,1.3s
AGOR                                 AML       AML
            comp=E,1480µm,0.6s
AGOR                                 AML       AML
            comp=N,1164µm,1.3s
AGOR                                 AML       AML
            comp=E,1480µm,0.6s
MABI  Malga Bissina       2.50 335   P         Pn        04 33 02.5  -0.5
MABI                                 AML       AML
            comp=E,496µm,0.9s
MABI                                 AML       AML
            comp=N,539µm,0.9s
MABI                                 AML       AML
            comp=N,539µm,0.9s
MABI                                 AML       AML
            comp=E,496µm,0.9s
MABI                                 AML       AML
            comp=E,496µm,0.9s
STAL  STALIGIAL           2.52  11   AML       AML
            comp=E,2110µm,1.4s
STAL                                 AML       AML
            comp=N,2675µm,0.8s
STAL                                 AML       AML
            comp=E,2450µm,1.5s
STAL                                 AML       AML
            comp=N,3115µm,0.8s
STAL                                 AML       AML
            comp=N,2675µm,0.8s
STAL                                 AML       AML
            comp=N,3115µm,0.8s
STAL                                 AML       AML
            comp=E,2110µm,1.4s
STAL                                 AML       AML
            comp=E,2450µm,1.5s
PGF   Pioggiola           2.53 242  ePn        Pn        04 33 02.3  -1.0
PGF                                 eSn        Sn        04 33 32.5  -1.6
            comp=E,289nm,0.4s
PGF   Pioggiola           2.53 242  ePn        Pn        04 33 02.3  -1.0
PGF                                 eSn        Sn        04 33 32.5  -1.6
PGF   Pioggiola           2.53 242   Pn        Pn        04 33 03.0  -0.3
PGF                                  Sn        Sn        04 33 33.9  -0.2
PGF   Pioggiola           2.53 242  eP         Pn        04 33 02.3  -1.0
PGF                                 e                    04 33 32.5
JAVS  Javornik            2.56  34  i Pn       Pn        04 33 01.2  -2.5
JAVS                                i Sn       Sn        04 33 35.8  +0.9
MDI   Monti di Nese       2.57 321   AML       AML
            comp=N,965µm,1.0s
MDI                                  AML       AML
            comp=E,900µm,1.0s
MDI                                  AML       AML
            comp=E,960µm,0.9s
MDI                                  AML       AML
            comp=N,1061µm,1.0s
MDI                                  AML       AML
            comp=N,1061µm,1.0s
MDI                                  AML       AML
            comp=E,900µm,1.0s
MDI                                  AML       AML
            comp=E,960µm,0.9s
MDI                                  AML       AML
            comp=N,965µm,1.0s
MDI                                  AML       AML
            comp=N,962µm,1.0s
MDI                                  AML       AML
            comp=N,1061µm,1.0s
MDI                                  AML       AML
            comp=E,960µm,0.9s
MDI                                  AML       AML
            comp=E,900µm,1.0s
CEY   Cerknica            2.60  41  ePn        Pn        04 33 01.6  -2.6
GEPF  Gemona              2.61  18   AML       AML
            comp=E,1255µm,0.7s
GEPF                                 AML       AML
            comp=E,1255µm,0.7s
GEPF                                 AML       AML
            comp=N,1115µm,0.7s
GEPF                                 AML       AML
            comp=N,1115µm,0.7s
RNI2  Rionero Sannit      2.62 142   AML       AML
            comp=N,1202µm,1.6s
RNI2                                 AML       AML
            comp=E,1276µm,1.6s
RNI2                                 AML       AML
            comp=E,1299µm,1.6s
RNI2                                 AML       AML
            comp=N,1230µm,1.6s
RNI2                                 AML       AML
            comp=N,1202µm,1.6s
RNI2                                 AML       AML
            comp=E,1276µm,1.6s
RNI2                                 AML       AML
            comp=E,1299µm,1.6s
RNI2                                 AML       AML
            comp=N,1230µm,1.6s
RNI2                                 AML       AML
            comp=N,1202µm,1.6s
RNI2                                 AML       AML
            comp=E,1299µm,1.6s
RNI2                                 AML       AML
            comp=E,1276µm,1.6s
RNI2                                 AML       AML
            comp=N,1230µm,1.6s
ZIRJ  Zirje               2.64  92  i Pn       Pn        04 33 04.3  -0.4
ZIRJ                                 Sn        Sn        04 33 35.3  -1.4
CERA  Filignano           2.65 145   AML       AML
            comp=E,1121µm,1.0s
CERA                                 AML       AML
            comp=E,1121µm,1.0s
CERA                                 AML       AML
            comp=N,985µm,1.4s
CERA                                 AML       AML
            comp=E,1136µm,0.9s
CERA                                 AML       AML
            comp=N,1014µm,1.4s
CERA                                 AML       AML
            comp=E,1136µm,0.9s
CERA                                 AML       AML
            comp=E,1121µm,1.0s
CERA                                 AML       AML
            comp=N,985µm,1.4s
CERA                                 AML       AML
            comp=N,1014µm,1.4s
CERA                                 AML       AML
            comp=N,1014µm,1.4s
CERA                                 AML       AML
            comp=N,985µm,1.4s
CERA                                 AML       AML
            comp=E,1136µm,0.9s
MORI  Morici              2.68  87  i Pn       Pn        04 33 05.2  -0.1
MORI                                 Sn        Sn        04 33 37.2  -0.4
FINB  Finale Ligure       2.69 279   AML       AML
            comp=N,414µm,0.5s
FINB                                 AML       AML
            comp=E,372µm,0.4s
FINB                                 AML       AML
            comp=N,414µm,0.5s
FINB                                 AML       AML
            comp=E,372µm,0.4s
FINB                                 AML       AML
            comp=N,414µm,0.5s
FINB                                 AML       AML
            comp=E,372µm,0.4s
KOSI  Kohlern             2.71 351   AML       AML
            comp=N,1900µm,0.6s
KOSI                                 AML       AML
            comp=E,1765µm,0.9s
KOSI                                 AML       AML
            comp=N,1900µm,0.6s
KOSI                                 AML       AML
            comp=E,1765µm,0.9s
KOSI                                 AML       AML
            comp=E,1765µm,0.9s
APPI  Appiano             2.74 349   P         Pn        04 33 06.1  -0.1
APPI                                 AML       AML
            comp=E,1081µm,1.3s
APPI                                 AML       AML
            comp=N,1245µm,0.5s
APPI                                 AML       AML
            comp=N,1245µm,0.5s
APPI                                 AML       AML
            comp=E,1081µm,1.3s
APPI                                 AML       AML
            comp=N,1240µm,0.5s
PTCC  Patocco-Chiusa      2.78  20   P         Pn        04 33 05.2  -1.5
PTCC                                 AML       AML
            comp=E,988µm,0.6s
PTCC                                 AML       AML
            comp=N,980µm,1.1s
PTCC                                 AML       AML
            comp=E,988µm,0.6s
PTCC                                 AML       AML
            comp=N,980µm,1.1s
PTCC                                 AML       AML
            comp=N,980µm,1.1s
UDBI  Udbina              2.80  74  i Pn       Pn        04 33 07.8  +0.8
FVI   Forni Avoltri       2.85  11   AML       AML
            comp=E,1445µm,0.7s
FVI                                  AML       AML
            comp=E,1445µm,0.7s
FVI                                  AML       AML
            comp=N,1320µm,1.4s
FVI                                  AML       AML
            comp=N,1320µm,1.4s
FVI                                  AML       AML
            comp=E,1445µm,0.7s
FVI                                  AML       AML
            comp=N,1320µm,1.4s
LJU   Ljubljana           2.87  38  ePn        Pn        04 33 06.3  -1.7
LJU   Ljubljana           2.87  38   AML       AML
            comp=E,2740µm,1.0s
LJU                                  AML       AML
            comp=N,3685µm,0.9s
LJU                                  AML       AML
            comp=N,3685µm,0.9s
LJU                                  AML       AML
            comp=E,2740µm,1.0s
LJU                                  AML       AML
            comp=N,3685µm,0.9s
BOJS  Bojanci             2.88  52   AML       AML
            comp=E,1125µm,0.8s
BOJS                                 AML       AML
            comp=N,1100µm,1.4s
BOJS                                 AML       AML
            comp=E,1125µm,0.8s
BOJS                                 AML       AML
            comp=N,1100µm,1.4s
BOJS                                 AML       AML
            comp=E,1125µm,0.8s
ABSI  Aberstueckl         2.97 351   AML       AML
            comp=E,2405µm,0.7s
ABSI                                 AML       AML
            comp=N,1965µm,0.8s
ABSI                                 AML       AML
            comp=N,1965µm,0.8s
ABSI                                 AML       AML
            comp=E,2405µm,0.7s
ABSI                                 AML       AML
            comp=N,1965µm,0.8s
ABTA  Abfaltersbach       2.97   7  ePn        Pn        04 33 08.9  -0.5
            comp=N,6.5nm,0.1s,SNR=59
ABTA                                 Sn        Sn        04 33 45.1  -0.1
            comp=N,741nm,0.8s
MUGIO Muggio              3.00 316   AML       AML
            comp=N,582µm,0.7s
MUGIO                                AML       AML
            comp=E,448µm,0.6s
MUGIO                                AML       AML
            comp=N,582µm,0.7s
MUGIO                                AML       AML
            comp=E,448µm,0.6s
MUGIO                                AML       AML
            comp=N,582µm,0.7s
MUGIO                                AML       AML
            comp=E,448µm,0.6s
MOSI  Grossmontoni        3.00 340   AML       AML
            comp=N,3045µm,0.8s
MOSI                                 AML       AML
            comp=E,2255µm,0.9s
MOSI                                 AML       AML
            comp=N,3045µm,0.8s
MOSI                                 AML       AML
            comp=N,3045µm,0.8s
MOSI                                 AML       AML
            comp=E,2255µm,0.9s
GBOS  Grotte di Boss      3.04 280   AML       AML
            comp=E,220µm,0.5s
GBOS                                 AML       AML
            comp=E,220µm,0.5s
GBOS                                 AML       AML
            comp=N,234µm,0.5s
GBOS                                 AML       AML
            comp=N,234µm,0.5s
GBOS                                 AML       AML
            comp=N,234µm,0.5s
GBOS                                 AML       AML
            comp=E,220µm,0.5s
MGRO  Montegrosso         3.04 276   AML       AML
            comp=E,465µm,1.0s
MGRO                                 AML       AML
            comp=N,448µm,0.5s
MGRO                                 AML       AML
            comp=N,448µm,0.5s
MGRO                                 AML       AML
            comp=E,465µm,1.0s
MYKA  Terra Mystica       3.06  22  ePn        Pn        04 33 09.5  -1.1
            comp=E,1.2nm,0.2s,SNR=9.3
MYKA                                 Sn        Sn        04 33 48.0  +0.8
            comp=E,80nm,0.4s
MYKA                                 Sg        Sg        04 34 02.5  +1.9
            comp=E,174nm,0.7s
OZLJ  Ozalj               3.06  52  ePn        Pn        04 33 08.2  -2.4
FUORN Ofenpass-Fuorn      3.08 337  ePn        Pn        04 33 12.2  +1.2
FUORN                               eSn        Sn        04 33 46.7  -1.3
FUORN Ofenpass-Fuorn      3.08 337   AML       AML
            comp=E,698µm,1.6s
FUORN                                AML       AML
            comp=N,781µm,0.9s
FUORN                                AML       AML
            comp=N,781µm,0.9s
FUORN                                AML       AML
            comp=E,698µm,1.6s
FUORN                                AML       AML
            comp=E,698µm,1.6s
VARE  Varese              3.10 313   AML       AML
            comp=E,926µm,1.1s
VARE                                 AML       AML
            comp=E,926µm,1.1s
VARE                                 AML       AML
            comp=N,839µm,1.6s
VARE                                 AML       AML
            comp=N,839µm,1.6s
MELA  Melanico ??? S      3.10 131   AML       AML
            comp=N,916µm,1.0s
MELA                                 AML       AML
            comp=E,982µm,1.6s
MELA                                 AML       AML
            comp=N,962µm,1.1s
MELA                                 AML       AML
            comp=E,1010µm,1.6s
MELA                                 AML       AML
            comp=E,982µm,1.6s
MELA                                 AML       AML
            comp=N,916µm,1.0s
MELA                                 AML       AML
            comp=E,1010µm,1.6s
MELA                                 AML       AML
            comp=N,962µm,1.1s
MELA                                 AML       AML
            comp=E,1010µm,1.6s
MELA                                 AML       AML
            comp=E,982µm,1.6s
MELA                                 AML       AML
            comp=N,963µm,1.1s
RISI  Rein                3.15   1   P         Pn        04 33 12.1  +0.1
RISI                                 AML       AML
            comp=E,1780µm,0.5s
RISI                                 AML       AML
            comp=N,2070µm,0.5s
RISI                                 AML       AML
            comp=N,2070µm,0.5s
RISI                                 AML       AML
            comp=E,1780µm,0.5s
RISI                                 AML       AML
            comp=E,1780µm,0.5s
ROSI  Rosskopf            3.16 353   AML       AML
            comp=N,1800µm,1.1s
ROSI                                 AML       AML
            comp=E,1410µm,0.7s
ROSI                                 AML       AML
            comp=E,1410µm,0.7s
ROSI                                 AML       AML
            comp=N,1800µm,1.1s
ROSI                                 AML       AML
            comp=N,1800µm,1.1s
KIJV  Kijevo              3.19  85  ePn        Pn        04 33 11.9  -0.3
KIJV                                 Sn        Sn        04 33 50.2   0.0
CRES  Cresnjev            3.19  49  ePn        Pn        04 33 10.7  -1.6
SAOF  Saorge              3.22 275   Pn        Pn        04 33 12.3  -0.5
SAOF  Saorge              3.22 275   AML       AML
            comp=N,590µm,0.9s
SAOF                                 AML       AML
            comp=E,754µm,0.5s
SAOF                                 AML       AML
            comp=N,590µm,0.9s
SAOF                                 AML       AML
            comp=E,754µm,0.5s
SAOF                                 AML       AML
            comp=E,754µm,0.5s
SAOF                                 AML       AML
            comp=N,590µm,0.9s
OBKA  Obir                3.26  33  ePn        Pn        04 33 12.3  -1.0
            comp=N,7.1nm,0.3s,SNR=18
OBKA                                eSn        Sn        04 33 49.5  -2.6
            comp=N,196nm,0.6s
OBKA                                 Sg        Sg        04 34 06.1  -0.8
            comp=N,415nm,0.8s
TUE   Stuetta             3.27 326  ePn        Pn        04 33 14.2  +0.5
TUE                                 eSn        Sn        04 33 51.1  -1.5
TUE   Stuetta             3.27 326   AML       AML
            comp=N,382µm,0.6s
TUE                                  AML       AML
            comp=E,394µm,1.0s
TUE                                  AML       AML
            comp=N,382µm,0.6s
TUE                                  AML       AML
            comp=E,516µm,0.6s
TUE                                  AML       AML
            comp=N,482µm,0.6s
TUE                                  AML       AML
            comp=N,482µm,0.6s
TUE                                  AML       AML
            comp=E,394µm,1.0s
TUE                                  AML       AML
            comp=E,516µm,0.6s
HVAR  Hvar                3.29  99  ePn        Pn        04 33 12.8  -0.9
SBF   Sospel              3.31 273  ePn        Pn        04 33 12.7  -1.3
SBF                                 eSn        Sn        04 33 50.2  -3.1
            comp=E,336nm,0.5s
SBF   Sospel              3.31 273  ePn        Pn        04 33 12.7  -1.3
SBF                                 eSn        Sn        04 33 50.2  -3.1
SBF   Sospel              3.31 273  eP         Pn        04 33 12.7  -1.3
SBF                                 e                    04 33 50.2
DAVOX Davos/Dischmat      3.34 334   Pn        Pn        04 33 15.7  +1.1
            comp=E,16nm,0.3s,baz=357,slow=6.5,SNR=36
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DAVOX                               Sn    Sn      04 33 56.0 +1.7
      comp=E,19nm,0.3s,baz=104,slow=20,SNR=12
FETA  Feichten           3.35 345  ePn    Pn      04 33 15.7 +1.1
      comp=E,119nm,0.8s,SNR=133
FETA                               eSn    Sn      04 33 56.5 +2.1
      comp=E,79nm,0.6s
ESCA  l'Escarene         3.35 272   Pn    Pn      04 33 14.1 -0.5
ESCA                                Sn    Sn      04 33 53.5 -0.9
REVF  Revere             3.36 271   Pn    Pn      04 33 14.0 -0.7
REVF                                Sn    Sn      04 33 54.4 -0.2
KBA   Koelnbreinsper     3.42  16  ePn    Pn      04 33 15.1 -0.4
      comp=E,26nm,0.3s,SNR=63
KBA                                eSn    Sn      04 33 57.1 +0.9
      comp=E,58nm,0.3s
KBA                                 Sg    Sg      04 34 14.9 +2.9
      comp=E,135nm,0.5s
SGRT  San Giovanni R     3.42 125   AML   AML
      comp=N,447µm,0.9s
SGRT                                AML   AML
      comp=E,393µm,1.0s
SGRT                                AML   AML
      comp=N,447µm,0.9s
SGRT                                AML   AML
      comp=E,393µm,1.0s
SGRT                                AML   AML
      comp=E,393µm,1.0s
SQTA  Sankt Quirin       3.47 351  ePn    Pn      04 33 18.0 +1.7
      comp=E,56nm,0.3s,SNR=66
SQTA                                Sn    Sn      04 34 01.4 +4.0
      comp=E,173nm,0.5s
WTTA  Wattenberg         3.48 356  ePn    Pn      04 33 17.7 +1.2
      comp=E,31nm,0.4s,SNR=21
WTTA                                Sn    Sn      04 34 00.1 +2.4
      comp=E,111nm,0.5s
WTTA  Wattenberg         3.48 356   AML   AML
      comp=E,1295µm,0.9s
WTTA                                AML   AML
      comp=N,982µm,0.6s
WTTA                                AML   AML
      comp=E,1295µm,0.9s
WTTA                                AML   AML
      comp=N,982µm,0.6s
TRAV  Traversella        3.49 301   AML   AML
      comp=N,359µm,1.6s
TRAV                                AML   AML
      comp=E,552µm,1.0s
TRAV                                AML   AML
      comp=N,359µm,1.6s
TRAV                                AML   AML
      comp=E,552µm,1.0s
TRAV                                AML   AML
      comp=N,359µm,1.6s
TRAV                                AML   AML
      comp=E,552µm,1.0s
PTJ   Puntijarka         3.52  52   ePn           04 33 15.5
EILF  Villa Eilenroc     3.55 268   P     Pn      04 33 16.6 -0.6
MSAG  Monte S. Angel     3.55 125   AML   AML
      comp=E,306µm,1.1s
MSAG                                AML   AML
      comp=N,522µm,1.1s
MSAG                                AML   AML
      comp=E,314µm,1.1s
MSAG                                AML   AML
      comp=N,554µm,1.2s
MSAG                                AML   AML
      comp=E,306µm,1.1s
MSAG                                AML   AML
      comp=N,522µm,1.1s
MSAG                                AML   AML
      comp=N,554µm,1.2s
MSAG                                AML   AML
      comp=E,314µm,1.1s
WATA  Walderalm          3.55 355  ePn    Pn      04 33 19.0 +1.5
      comp=E,62nm,0.4s,SNR=28
FUSIO Fusio              3.56 320   AML   AML
      comp=N,389µm,1.0s
FUSIO                               AML   AML
      comp=E,578µm,0.8s
FUSIO                               AML   AML
      comp=N,389µm,1.0s
FUSIO                               AML   AML
      comp=E,578µm,0.8s
SOKA  Soboth             3.59  35   Pn    Pn      04 33 16.3 -1.5
      comp=E,1.1nm,0.2s
SOKA                                Sg    Sg      04 34 18.5 +1.0
      comp=E,83nm,0.8s
ISO   Isola              3.60 278   Pn    Pn      04 33 17.9 -0.1
ISO                                 Sn    Sn      04 34 00.1 -0.4
MOTA  Moosalm            3.61 350  ePn    Pn      04 33 19.3 +1.1
      comp=E,7.7nm,0.3s,SNR=95
CIRO  Champorcher        3.65 301   P     Pn      04 33 18.8  0.0
MMK   Mattmark           3.65 310   P     Pn      04 33 21.4 +2.5
MMK                                 AML   AML
      comp=E,304µm,0.8s
MMK                                 AML   AML
      comp=N,306µm,1.1s
MMK                                 AML   AML
      comp=N,306µm,1.1s
MMK                                 AML   AML
      comp=E,304µm,0.8s
MMK                                 AML   AML
      comp=N,306µm,1.1s
MMK                                 AML   AML
      comp=E,304µm,0.8s
MAKA  Makarska           3.68  96  ePn    Pn      04 33 18.8 -0.2
CALF  Calern             3.68 271   Pn    Pn      04 33 18.9 -0.3
CALF                                Sn    Sn      04 34 01.7 -0.9
MGRS  Mrkonjic Grad      3.71  79  ePn    Pn      04 33 19.3 -0.2
RETA  Reutte             3.79 347  i Pn   Pn      04 33 21.7 +1.0
      comp=E,9.0nm,0.2s,SNR=47
RETA                               eSn    Sn      04 34 08.1 +2.8
      comp=E,127nm,0.6s
DAVA  Damuels            3.80 338  ePn    Pn      04 33 22.1 +1.3
      comp=E,20nm,0.3s,SNR=46
DAVA                               eSn    Sn      04 34 08.4 +2.9
      comp=E,247nm,0.8s
SURF  Saint Ours         3.80 282   Pn    Pn      04 33 20.3 -0.6
BLY   Banja Luka         3.84  74  ePn    Pn      04 33 21.5 +0.3
BLY                                eSn    Sn      04 34 07.5 +1.3
BLY   Banja Luka         3.84  74  ePn    Pn      04 33 19.9 -1.3
BLY   Banja Luka         3.84  74⇑iP      Pn      04 33 19.2 -2.0
BLY   Banja Luka         3.84  74  ePn    Pn      04 33 21.0 -0.2
MBDF  Montbardon         3.88 286  ePn    Pn      04 33 20.8 -1.1
MBDF                               eSn    Sn      04 34 03.9 -3.5
      comp=E,136nm,0.6s
MBDF  Montbardon         3.88 286  ePn    Pn      04 33 20.8 -1.1
MBDF                               eSn    Sn      04 34 03.9 -3.5
MBDF  Montbardon         3.88 286  eP     Pn      04 33 20.8 -1.1
MBDF                               e              04 34 03.9
FRF   La Foret Royal     3.90 268  ePn    Pn      04 33 21.2 -0.8
FRF                                eSn    Sn      04 34 04.4 -3.3
      comp=E,94nm,0.4s
FRF   La Foret Royal     3.90 268  ePn    Pn      04 33 21.2 -0.8
FRF                                eSn    Sn      04 34 04.4 -3.3
FRF   La Foret Royal     3.90 268  eP     Pn      04 33 21.2 -0.8
FRF                                e              04 34 04.4
KALN  Kalnik             3.93  52  ePn    Pn      04 33 19.8 -2.6
BNALP Bannalp            3.98 322   P     Pn      04 33 25.4 +2.0
BNALP                               S     Sn      04 34 13.0 +3.0
BNALP                               AML   AML
      comp=E,435µm,0.7s
BNALP                               AML   AML
      comp=N,488µm,0.5s
BNALP                               AML   AML
      comp=N,488µm,0.5s
BNALP                               AML   AML
      comp=E,435µm,0.7s
BNALP                               AML   AML
      comp=N,488µm,0.5s
KOGS  Kog                4.01  47   P     Pn      04 33 21.4 -2.1
REMY  Saint-Rhmy-en      4.01 302   S     Sb      04 34 19.0 -2.7
REMY                                AML   AML
      comp=E,740µm,0.7s
REMY                                AML   AML
      comp=N,936µm,1.1s
REMY                                AML   AML
      comp=E,740µm,0.7s
REMY                                AML   AML
      comp=N,936µm,1.1s
BNI   Bardonecchia       4.02 290  ePn    Pn      04 33 24.4 +0.6
BNI                                eSn    Sn      04 34 10.2 -0.7
LMR   La Mourre          4.02 265  ePn    Pn      04 33 22.9 -0.8
LMR                                eSn    Sn      04 34 08.4 -2.4
      comp=N,44nm,0.4s
LMR   La Mourre          4.02 265  ePn    Pn      04 33 22.9 -0.8
LMR                                eSn    Sn      04 34 08.4 -2.4
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LMR   La Mourre          4.02 265  eP     Pn      04 33 22.9 -0.8
LMR                                e              04 34 08.4
MRGE  Morge              4.04 301   P     Pn      04 33 28.4 +4.3
MRGE                                S     Sn      04 34 12.0 +0.5
PALZ  Palazzo San Ge     4.08 133   P     Pn      04 33 26.4 +1.7
PALZ                                AML   AML
      comp=E,590µm,1.3s
PALZ                                AML   AML
      comp=N,615µm,1.6s
PALZ                                AML   AML
      comp=N,615µm,1.6s
PALZ                                AML   AML
      comp=E,590µm,1.3s
PALZ                                AML   AML
      comp=N,615µm,1.6s
PALZ                                AML   AML
      comp=E,590µm,1.3s
LPG   La Plagne          4.12 296  eP     Pn      04 33 26.1 +0.7
LPG                                eSn    Sn      04 34 09.1 -4.5
      comp=E,41nm,0.5s
LPG   La Plagne          4.12 296  ePn    Pn      04 33 26.1 +0.7
LPG                                eSn    Sn      04 34 09.1 -4.5
LPG   La Plagne          4.12 296  eP     Pn      04 33 26.1 +0.7
LPG                                e              04 34 09.1
OGDI  Digne              4.13 276   P     Pn      04 33 27.1 +1.8
LPL   La Plagne          4.14 296  eP     Pn      04 33 26.3 +0.7
LPL                                eSn    Sn      04 34 10.1 -3.9
      comp=E,70nm,0.4s
LPL   La Plagne          4.14 296  ePn    Pn      04 33 26.3 +0.7
LPL                                eSn    Sn      04 34 10.1 -3.9
LPL   La Plagne          4.14 296  eP     Pn      04 33 26.3 +0.7
LPL                                e              04 34 10.1
SENIN Lac Senin/Sane     4.21 309  ePn    Pn      04 33 28.1 +1.5
ARSA  Arzberg            4.25  34  ePn    Pn      04 33 25.0 -1.8
      comp=E,3.6nm,0.5s
STON  Ston               4.25 101  ePn    Pn      04 33 27.0 +0.1
STON                               eSn    Sn      04 34 02.9  -14
STON  Ston               4.25 101  i Pn   Pn      04 33 26.9  0.0
STON                                Sn    Sn      04 34 15.1 -1.4
STON  Ston               4.25 101  ePn    Pn      04 33 26.3 -0.6
STON  Ston               4.25 101   P     Pn      04 33 25.0 -1.9
STON                                S     Sn      04 34 15.0 -1.4
RSL   Roselend           4.28 298   P     Pn      04 33 28.1 +0.7
BEHE  Becsehely          4.30  50  ePn    Pn      04 33 26.6 -1.0
BLAF  les Blancs         4.31 274   Pn    Pn      04 33 28.3 +0.5
MOA   Molln              4.35  20  ePn    Pn      04 33 28.1 -0.2
      comp=E,4.9nm,0.2s,SNR=15
MOA                                 Sn    Sn      04 34 17.5 -1.5
      comp=E,51nm,0.6s
ASEAF Site Antares,      4.38 259   Pn    Pn      04 33 28.3 -0.1
AMUR  Altamura           4.46 129   S     Sn      04 34 24.0 +2.3
AMUR                                AML   AML
      comp=E,176µm,1.0s
AMUR                                AML   AML
      comp=N,172µm,0.4s
AMUR                                AML   AML
      comp=N,172µm,0.4s
AMUR                                AML   AML
      comp=E,176µm,1.0s
BAI   Bari               4.49 125  ePn    Pn      04 33 19.6  -11
BAI                                 Sn    Sn      04 34 22.3 -0.1
ARTF  Artigues           4.50 269   Pn    Pn      04 33 30.6 +0.2
MLYF  Mely               4.51 275   Pn    Pn      04 33 31.5 +0.9
MLYF                                Sn    Sn      04 34 22.2 -0.8
ORIF  Oris-en-Rattie     4.54 286  eP     Pn      04 33 32.2 +1.3
ORIF                               eSn    Sn      04 34 20.0 -3.6
      comp=E,68nm,0.5s
ORIF  Oris-en-Rattie     4.54 286  ePn    Pn      04 33 32.2 +1.3
ORIF                               eSn    Sn      04 34 20.0 -3.6
ORIF  Oris-en-Rattie     4.54 286   P     Pn      04 33 31.1 +0.2
ORIF  Oris-en-Rattie     4.54 286  eP     Pn      04 33 32.2 +1.3
ORIF                               e              04 34 20.0
SG1   Sgolgore (BA)      4.55 129  ePn    Pn      04 33 21.7 -9.3
SG1                                 Sn    Sn      04 34 25.3 +1.4
BSTF  la Bastide-des     4.60 273   Pn    Pn      04 33 32.0 +0.2
DBRK  Dubrovnik          4.62 102  ePn    Pn      04 33 31.5 -0.5
SMRF  Simiane la Rot     4.65 274  eSn    Sn      04 34 22.8 -3.6
      comp=E,48nm,0.5s
SMRF  Simiane la Rot     4.65 274  eSn    Sn      04 34 22.8 -3.6
MATE  Matera             4.69 130⇓iP      Pn      04 33 34.6 +1.6
RUSF  Rustrel            4.72 274   Pn    Pn      04 33 33.9 +0.5
OG02  Monnetier-Morn     4.74 302   P     Pn      04 33 34.4 +0.8
TREB  Trebinje           4.76 101  ePn    Pn      04 33 34.1 +0.3
TREB                               eSg    Sn      04 34 28.1 -0.8
TREB  Trebinje           4.76 101  ePn    Pn      04 33 33.0 -0.8
NOCI  Noci               4.80 127   P     Pn      04 33 36.6 +2.1
NOCI                                AML   AML
      comp=E,167µm,0.3s
NOCI                                AML   AML
      comp=N,233µm,1.2s
NOCI                                AML   AML
      comp=E,167µm,0.3s
NOCI                                AML   AML
      comp=N,233µm,1.2s
NOCI                                AML   AML
      comp=E,167µm,0.3s
NOCI                                AML   AML
      comp=N,233µm,1.2s
BRY   Bratogost          4.85  98⇓iPn     Pn      04 33 35.6 +0.4
BRY                                i Sn   Sn      04 34 28.1 -3.2
BRY   Bratogost          4.85  98  ePn    Pn      04 33 35.3 +0.1
OGSM  Saint Maurice      4.85 294   P     Pn      04 33 35.9 +0.7
ARBF  Arbois             4.85 269   Pn    Pn      04 33 35.7 +0.5
T0721 Laino Castello     4.86 141   P     Pn      04 33 32.7 -2.6
CONA  Conrad Observa     4.93  32  ePn    Pn      04 33 35.1 -1.3
      comp=N,1.6nm,0.3s,SNR=8.2
CONA                                Pg    Pg      04 33 56.5 -0.2
      comp=N,24nm,0.6s
CONA                                Sn    Sn      04 34 31.6 -1.7
      comp=N,30nm,0.5s
HCY   Herceg Novi        4.94 104  ePn    Pn      04 33 35.8 -0.5
MASS  Massafra           4.95 128  ePn    Pn      04 33 37.0 +0.5
FASA  Fasano             4.96 125⇑iPn     Pn      04 33 37.1 +0.5
FASA                                Sn    Sn      04 34 34.5 +0.7
HAPS  Han Pijesak,Bl     5.02  84  ePn    Pn      04 33 36.3 -1.3
SOP   Sopron             5.03  38  ePg    Pg      04 34 02.1 +3.6
CABF  La Chapelle        5.04 306  eP     Pn      04 33 39.0 +1.1
CABF                               eSn    Sn      04 34 30.8 -5.3
      comp=N,89nm,0.8s
CABF  La Chapelle        5.04 306  ePn    Pn      04 33 39.0 +1.1
CABF                               eSn    Sn      04 34 30.8 -5.3
KIZ   Kirchzarten        5.05 327   Pn    Pn      04 33 37.8  0.0
UPM   Unac-Piva          5.05  94⇓iPn     Pn      04 33 39.5 +1.4
UPM                                i Sn   Sn      04 34 38.0 +1.5
UPM   Unac-Piva          5.05  94  ePn    Pn      04 33 39.1 +1.0
LOMF  Lomont             5.09 316   Pn    Pn      04 33 39.1 +0.7
OG35  Corcelles          5.09 298   Pn    Pn      04 33 39.6 +1.1
TAR1  Taranto            5.10 128  ePn    Pn      04 33 39.4 +0.8
CHMF  Charmoille         5.11 314   Pn    Pn      04 33 39.2 +0.5
CHMF                                Sn    Sn      04 34 35.8 -1.8
NKME  Niksic             5.17  99⇓iPn     Pn      04 33 39.7 +0.1
NKME                               i Sn   Sn      04 34 37.3 -2.0
GEC2  GERESS Array S     5.19  12  ePn    Pn      04 33 38.2 -1.6
GEC2                               eSn    Sn      04 34 37.7 -2.0
GEC2  GERESS Array S     5.19  12  eP     Pn      04 33 38.2 -1.6
GEC2                               e              04 34 37.7
GERES GERESS Array B     5.19  12   Pn    Pn      04 33 38.2 -1.6
      comp=N,3.5nm,0.3s,baz=192,slow=14,SNR=53
GERES                               Sn    Sn      04 34 37.7 -2.0
      comp=N,9.7nm,0.3s,baz=183,slow=24,SNR=8.8
GERES                               Lg    Lg      04 34 53.7
      comp=N,4.8nm,0.3s,baz=200,slow=26,SNR=4.3
NKY   Niksic             5.19  98⇓iPn     Pn      04 33 41.5 +1.6
NKY                                i Sn   Sn      04 34 38.4 -1.4
CEME  Cevo               5.21 101⇓iPn     Pn      04 33 39.9 -0.2
CEME                               i Sn   Sn      04 34 39.6 -0.5
BFO   Black Forest       5.21 332  ePn    Pn      04 33 40.0 -0.1
BFO                                eSn    Sn      04 34 38.9 -1.1
BFO   Black Forest       5.21 332  eP     Pn      04 33 40.0 -0.1
BFO                                e              04 34 38.9
BUM   Brajici-Budva      5.26 104⇑iPn     Pn      04 33 40.8  0.0
BUM                                i Sn   Sn      04 34 40.6 -0.9
MORH  Mrgy, Hungar       5.29  60  ePg    Pg      04 34 00.1 -3.5
MOF   Molkenrain         5.30 322   Pn    Pn      04 33 41.7 +0.3
RUDO  Rudo               5.34  89  ePn    Pn      04 33 41.6 -0.3
STU   Stuttgart          5.35 340  ePn    Pn      04 33 42.8 +0.8
BBLS  Lazi&#263;i        5.35  87  ePn    Pn      04 33 40.6 -1.5
BBLS  Lazi&#263;i        5.35  87  ePn    Pn      04 33 42.6 +0.5
VIVF  Saint-Julien-l     5.37 284  eP     Pn      04 33 41.9 -0.4
VIVF                               eSn    Sn      04 34 39.5 -4.6
      comp=N,5.8nm,0.4s
VIVF  Saint-Julien-l     5.37 284  ePn    Pn      04 33 41.9 -0.4
VIVF                               eSn    Sn      04 34 39.5 -4.6
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HINF  Hinteralfeld       5.40 320  eP     Pn      04 33 42.4 -0.3
HINF                               eSn    Sn      04 34 38.5 -6.3
      comp=N,109nm,0.7s
HINF  Hinteralfeld       5.40 320  ePn    Pn      04 33 42.4 -0.3
KHC   Kasperske Hory     5.45  11  ePn    Pn      04 33 41.8 -1.5
KHC                                eSn    Sn      04 34 43.1 -2.9
KHC   Kasperske Hory     5.45  11  eP     Pn      04 33 41.8 -1.5
KHC                                e              04 34 43.1
KHC   Kasperske Hory     5.45  11  ePN    Pn      04 33 41.6 -1.8
KHC                                eSN    Sn      04 34 41.2 -4.8
KHC                                 AMS   AMS     04 36 00.0
      comp=N,700nm,12.8s
PDG   Podgorica          5.48 102  ePn    Pn      04 33 45.1 +1.4
PDG                                eSg    Sn      04 34 50.2 +3.5
PDG   Podgorica          5.48 102⇓iP      Pn      04 33 43.8  0.0
PDG   Podgorica          5.48 102  ePn    Pn      04 33 44.0 +0.3
TTG   Podgorica          5.48 102⇓iPn     Pn      04 33 43.7  0.0
TTG                                i Sn   Sn      04 34 46.0 -0.7
TTG   Podgorica          5.48 102  ePn    Pn      04 33 44.8 +1.1
TTG                                eSn    Sn      04 34 46.4 -0.3
DRME  Dracevica, Mon     5.50 105⇑iPn     Pn      04 33 44.1 -0.1
DRME                               i Sn   Sn      04 34 46.6 -0.7
DRME  Dracevica, Mon     5.50 105  ePn    Pn      04 33 44.0 -0.1
SSB   Saint Sauveur      5.54 288  ePn    Pn      04 33 45.2 +0.6
SSB   Saint Sauveur      5.54 288   Pn    Pn      04 33 44.8 +0.2
KOME  Kolasin            5.56  97⇑iPn     Pn      04 33 45.0 +0.1
KOME                               i Sn   Sn      04 34 47.8 -1.0
ECH   Echery             5.56 324  ePn    Pn      04 33 44.7 -0.2
ECH                                eSn    Sn      04 34 45.6 -3.3
ECH   Echery             5.56 324  eP     Pn      04 33 44.7 -0.2
ECH                                e              04 34 45.6
ULC   Ulcinj             5.62 107⇓iPn     Pn      04 33 45.3 -0.5
ULC                                i Sn   Sn      04 34 47.0 -3.3
ZST   Bratislava         5.65  37  eP     Pn      04 33 44.3 -1.8
ZST                                e              04 34 44.9
ZST   Bratislava         5.65  37  ePN    Pn      04 33 44.3 -1.8
ZST                                eSN    Sn      04 34 44.9 -6.1
CDF   Champ du Feu       5.67 326  eP     Pn      04 33 46.3 -0.2
CDF                                eSn    Sn      04 34 44.4 -7.1
      comp=N,311nm,0.9s
CDF   Champ du Feu       5.67 326  ePn    Pn      04 33 46.3 -0.2
CDF   Champ du Feu       5.67 326  eP     Pn      04 33 46.3 -0.2
FRGS  Fruska Gora        5.75  74  ePn    Pn      04 33 46.7 -0.8
FRGS  Fruska Gora        5.75  74  ePn    Pn      04 33 49.2 +1.7
DIVS  Divibare           5.77  84  ePn    Pn      04 33 45.4 -2.5
DIVS  Divibare           5.77  84  ePn    Pn      04 33 47.2 -0.7
HAU   Haudompre          5.77 319  eP     Pn      04 33 47.7 -0.1
HAU                                eSn    Sn      04 34 48.1 -5.9
      comp=N,216nm,0.5s
HAU   Haudompre          5.77 319  ePn    Pn      04 33 47.7 -0.1
HAU   Haudompre          5.77 319  eP     Pn      04 33 47.7 -0.1
SOLUN Solunto            5.81 168   P     Pn      04 33 46.3 -2.0
SJES  Sjenica            5.82  93  ePn    Pn      04 33 48.4 -0.1
SJES                               eSg    Sn      04 34 58.1 +2.9
IVA   Berane             5.83  96⇓iPn     Pn      04 33 48.5 -0.1
IVA                                i Sn   Sn      04 34 53.2 -2.2
TIP   Timpagrande        5.83 141  ePn    Pn      04 33 47.2 -1.5
TIP   Timpagrande        5.83 141⇓iP      Pn      04 33 53.0 +4.3
MODS  Modra-Piesok       5.87  37  eP     Pn      04 33 46.4 -2.7
MODS                               e              04 34 51.1
MODS  Modra-Piesok       5.87  37  ePN    Pn      04 33 46.4 -2.7
MODS                               eSN    Sn      04 34 51.1 -5.1
LASF  Ste Croix          5.89 276  ePn    Pn      04 33 48.4 -1.1
LASF                               eSn    Sn      04 34 53.0 -4.0
      comp=N,22nm,0.5s
LASF  Ste Croix          5.89 276  ePn    Pn      04 33 48.4 -1.1
LASF                               eSn    Sn      04 34 53.0 -4.0
IVAS  Ivanjica           5.91  89  ePn    Pn      04 33 49.2 -0.5
GRA1  Grafenberg Arr     5.92 355  ePn    Pn      04 33 48.5 -1.4
GRA1                               eSn    Sn      04 34 51.7 -6.0
GRF   Grafenberg Arr     5.92 355  eP     Pn      04 33 48.5 -1.4
GRF                                e              04 34 51.7
PVY   Plav               5.94  99⇓iPn     Pn      04 33 51.1 +1.0
PVY                                i Sn   Sn      04 34 57.5 -0.6
TREC  Trest              6.00  22  eP     Pn      04 33 49.0 -1.9
TREC                               e              04 34 55.2
TREC                                MLR   MLR
      comp=Z,600nm,15.6s
TREC  Trest              6.00  22  ePN    Pn      04 33 49.0 -1.9
TREC                               eSN    Sn      04 34 55.2 -4.4
TREC                                AMS   AMS     04 36 20.0
      comp=Z,600nm,15.6s
TRUS  Trudelj            6.07  83  ePn    Pn      04 33 50.4 -1.5
KRUC  Moravsky           6.08  28  ePN    Pn      04 33 50.4 -1.6
CLTB  Caltabellotta      6.28 171  ePn    Pn      04 33 55.5 +0.6
TIR   Tirane             6.29 110  ePn    Pn      04 33 55.2 +0.3
TIR                                eSn    Sn      04 35 04.2 -2.6
TIR   Tirane             6.29 110  ePn    Pn      04 33 55.8 +0.8
TIR                                eSn    Sn      04 34 54.3  -13
TIR   Tirane             6.29 110⇑iP      Pn      04 33 55.3 +0.3
TIR   Tirane             6.29 110  eP     Pn      04 33 55.3 +0.3
TIR                                e              04 35 04.2
GRUS  Gruza              6.30  86  ePn    Pn      04 33 54.4 -0.6
VRAC  Vranov             6.36  28   Pn    Pn      04 33 54.5 -1.3
      comp=Z,1.1nm,0.3s,baz=213,slow=15,SNR=3.5
VRAC                                Lg    Lg      04 35 30.2
      comp=Z,0.5nm,0.3s,baz=146,slow=17,SNR=3.1
VRAC  Vranov             6.36  28⇑iP      Pn      04 33 54.3 -1.5
VRAC  Vranov             6.36  28  ePN    Pn      04 33 54.6 -1.2
GOPC  GO Pecny, Ondr     6.41  16  eP     Pn      04 33 54.3 -2.3
GOPC                               e              04 35 04.0
GOPC                                MLR   MLR
      comp=Z,800nm,11.8s
GOPC  GO Pecny, Ondr     6.41  16  ePN    Pn      04 33 54.3 -2.3
GOPC                               eSN    Sn      04 35 04.0 -5.7
GOPC                                AMS   AMS     04 36 40.0
      comp=Z,800nm,11.8s
SMF   Signal de Mont     6.43 299  eP     Pn      04 33 57.2 +0.3
SMF                                eSn    Sn      04 35 05.4 -4.8
      comp=Z,45nm,0.5s
SMF   Signal de Mont     6.43 299  ePn    Pn      04 33 57.2 +0.3
SMF                                eSn    Sn      04 35 05.4 -4.8
SMF   Signal de Mont     6.43 299  eP     Pn      04 33 57.2 +0.3
SMF                                e              04 35 05.4
PRU   Pruhonice          6.43  15  eP     Pn      04 33 54.9 -2.0
PRU                                e              04 35 05.0
PRU                                 MLR   MLR
      comp=Z,900nm,11.1s
PRU   Pruhonice          6.43  15  ePN    Pn      04 33 54.9 -2.0
PRU                                eSN    Sn      04 35 05.0 -5.2
PRU                                 AMS   AMS     04 36 40.0
      comp=Z,900nm,11.1s
NKC   Novy Kostel        6.45   3  eP     Pn      04 33 55.7 -1.4
NKC                                e              04 35 04.9
NKC                                 MLR   MLR
      comp=Z,500nm,13.6s
NKC   Novy Kostel        6.45   3  ePN    Pn      04 33 55.7 -1.4
NKC                                eSN    Sn      04 35 04.9 -5.7
NKC                                 AMS   AMS     04 37 00.0
      comp=Z,500nm,13.6s
PAGF  Fort de Pagny      6.46 320  eP     Pn      04 34 00.0 +2.8
      baz=139
PAGF                               eSn    Sn      04 35 05.3 -5.5
      comp=Z,136nm,0.8s
PAGF  Fort de Pagny      6.46 320  ePn    Pn      04 34 00.0 +2.8
SFTF  Sexfontaines       6.56 315  eP     Pn      04 33 58.7 +0.1
      baz=134
SFTF                               eSn    Sn      04 35 07.0 -6.3
      comp=Z,170nm,1.0s
SFTF  Sexfontaines       6.56 315  ePn    Pn      04 33 58.7 +0.1
SELS  Selova             6.65  92  ePn    Pn      04 33 59.1 -0.8
SELS                               eSn    Sn      04 34 56.6  -19
VYHS  Vyhne              6.68  43  eP     Pn      04 34 00.1 -0.1
VYHS                               e              04 35 09.9
VYHS  Vyhne              6.68  43  ePN    Pn      04 34 00.1 -0.1
VYHS                               eSN    Sn      04 35 09.9 -6.3
LOR   Lormes             6.69 304  eP     Pn      04 34 00.8 +0.3
      baz=124
LOR                                eSn    Sn      04 35 10.3 -6.4
      comp=Z,77nm,0.6s,baz=120
LOR   Lormes             6.69 304  ePn    Pn      04 34 00.8 +0.3
LOR   Lormes             6.69 304  eP     Pn      04 34 00.8 +0.3
MEZF  Maizieres J'vi     6.74 317  eP     Pn      04 34 03.3 +2.2
      baz=136
MEZF                               eSn    Sn      04 35 11.3 -6.5
      comp=Z,21nm,0.4s
MEZF  Maizieres J'vi     6.74 317  ePn    Pn      04 34 03.3 +2.2
AVF   Avril sur Loir     6.80 299  eP     Pn      04 34 02.5 +0.6
AVF                                eSn    Sn      04 35 14.3 -4.9
      comp=Z,34nm,0.8s
AVF   Avril sur Loir     6.80 299  ePn    Pn      04 34 02.5 +0.6
AVF                                eSn    Sn      04 35 14.3 -4.9
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AVF	Avril sur Loir	6.80	299	eP	Pn	04 34 02.5	+0.6
AVF				e		04 35 14.3	
SSF	Saint Saulge	6.81	302	eP	Pn	04 34 02.6	+0.5
SSF				eSn	Sn	04 35 12.8	-6.8
	comp=Z,36nm,0.5s						
SSF	Saint Saulge	6.81	302	ePn	Pn	04 34 02.6	+0.5
SSF	Saint Saulge	6.81	302	eP	Pn	04 34 02.6	+0.5
PSZ	Piszkesteto	6.88	50	⇓iP	Pn	04 33 59.8	-3.2
PVCC	Panska Ves	6.96	14	eSN	Sn	04 35 17.2	-5.9
PVCC				AMS	AMS	04 37 00.0	
	comp=Z,700nm,10.3s						
MAHO	Mahon	6.97	239	eP	Pn	04 34 05.8	+1.6
MAHO				eS	Sn	04 35 18.5	-4.9
BOVS	Bovan	7.03	88	ePn	Pn	04 34 03.6	-1.4
MDVR	Moldovita	7.04	79	⇑iP	Pn	04 34 02.4	-2.8
BGF	Bois d'Agland	7.04	296	eP	Pn	04 34 05.7	+0.5
BGF				eSn	Sn	04 35 19.0	-6.1
	comp=Z,45nm,0.5s						
BGF	Bois d'Agland	7.04	296	ePn	Pn	04 34 05.7	+0.5
BGF	Bois d'Agland	7.04	296	eP	Pn	04 34 05.7	+0.5
KRLC	Kraliky	7.08	26	eP	Pn	04 34 03.1	-2.7
KRLC	Kraliky	7.08	26	ePN	Pn	04 34 03.1	-2.7
BZS	Buzias	7.08	72	⇓iP	Pn	04 34 04.6	-1.2
MORC	Moravsky Berou	7.09	30	ePn	Pn	04 34 08.7	+2.9
MORC	Moravsky Berou	7.09	30	⇓iP	Pn	04 34 04.1	-1.8
WLF	Walferdange	7.12	328	⇑Pn	Pn	04 34 07.7	+1.5
WLF	Walferdange	7.12	328	⇑Sn	Sn	04 35 24.9	-2.1
	comp=N,35nm,0.0s						
MTLF	Montolieu	7.13	270	ePn	Pn	04 34 06.0	-0.4
MTLF				eSn	Sn	04 35 22.0	-5.3
	comp=N,9.5nm,0.5s						
MTLF	Montolieu	7.13	270	ePn	Pn	04 34 06.0	-0.4
MTLF				eSn	Sn	04 35 22.0	-5.3
MTLF	Montolieu	7.13	270	eP	Pn	04 34 06.0	-0.4
MTLF				e		04 35 22.0	
SKO	Skopje	7.16	101	i Pn	Pn	04 34 09.1	+2.2
SKO				i Sn	Sn	04 35 27.4	-0.9
DPC	Dobruska-Polom	7.19	23	eP	Pn	04 34 04.9	-2.3
DPC				e		04 35 23.2	
DPC				MLR	MLR		
	comp=Z,600nm,11.3s						
DPC	Dobruska-Polom	7.19	23	ePN	Pn	04 34 04.9	-2.3
DPC				eSN	Sn	04 35 23.2	-5.6
DPC				AMS	AMS	04 37 10.0	
	comp=Z,600nm,11.3s						
BRG	Berggiesshubel	7.20	10	PN	Pn	04 34 05.8	-1.6
BRG				SN	Sn	04 35 23.8	-5.3
BRG				SG	Sg	04 36 13.1	-0.2
	comp=Z,75nm,1.1s						
	comp=N,488nm,11.0s						
	comp=E,494nm,15.5s						
	comp=Z,625nm,10.2s						
BRG	Berggiesshubel	7.20	10	P	Pn	04 34 05.8	-1.6
BRG						04 35 23.8	
BRG				smax	smax		
	comp=N,75nm,1.1s						
BRG				MLR	MLR		
	comp=N,488nm,11.0s						
BRG				MLR	MLR		
	comp=E,494nm,15.5s						
BRG				MLR	MLR		
	comp=Z,625nm,10.2s						
CAF	Calviac	7.22	282	eP	Pn	04 34 07.7	0.0
CAF				eSn	Sn	04 35 25.3	-4.3
	comp=Z,10nm,0.6s						
CAF	Calviac	7.22	282	ePn	Pn	04 34 07.7	0.0
CAF				eSn	Sn	04 35 25.3	-4.3
CAF	Calviac	7.22	282	eP	Pn	04 34 07.7	0.0
CAF				e		04 35 25.3	
BARS	Barje	7.22	94	ePn	Pn	04 34 06.6	-1.1
UPC	Upice	7.25	21	AMS	AMS	04 37 10.0	
	comp=Z,700nm,12.4s						
FNEB	Nbias	7.27	266	Pn	Pn	04 34 08.6	+0.2
CHVC	Chvalec	7.33	21	ePN	Pn	04 34 06.4	-2.8
CHVC				AMS	AMS	04 37 10.0	
	comp=Z,700nm,12.5s						
OSTC	Ostas	7.35	21	AMS	AMS	04 37 10.0	
	comp=Z,600nm,11.5s						
OKC	Ostrava-Krasne	7.37	33	AMS	AMS	04 37 50.0	
	comp=Z,700nm,7.8s						
TCF	Toulx Ste Croi	7.37	293	eP	Pn	04 34 11.0	+1.2
TCF				eSn	Sn	04 35 27.4	-6.0
	comp=Z,18nm,0.7s						
TCF	Toulx Ste Croi	7.37	293	ePn	Pn	04 34 11.0	+1.2
HYF	Humbligny	7.44	301	eP	Pn	04 34 13.7	+3.0
HYF				eSn	Sn	04 35 28.3	-6.7
HYF	Humbligny	7.44	301	ePn	Pn	04 34 13.7	+3.0
HERR	Herculane	7.54	78	⇑iP	Pn	04 34 09.6	-2.5
CLL	Collm	7.55	5	ePn	Pn	04 34 11.0	-1.1
CLL	Collm	7.55	5	i P	Pn	04 34 11.4	-0.7
CLL	Collm	7.55	5	i Pn	Pn	04 34 11.4	-0.7
CLL				e		04 34 24.0	
CLL				e		04 35 31.0	
CLL				e		04 35 51.0	
CLL				eSg	Sg	04 36 21.0	-3.3
	comp=Z,87nm,1.3s						
CLL				Lmax		04 38 00.0	
RJF	Les Rejaudoux	7.65	285	eP	Pn	04 34 17.0	+3.5
RJF				eSn	Sn	04 35 34.2	-5.9
	comp=Z,20nm,0.8s						
RJF	Les Rejaudoux	7.65	285	ePn	Pn	04 34 17.0	+3.5
RJF	Les Rejaudoux	7.65	285	eP	Pn	04 34 17.0	+3.5
STIP	Stip	7.78	102	i Pn	Pn	04 34 15.7	+0.3
STIP				i Sn	Sn	04 35 43.6	+0.2
GZR	Gura Zlata	7.85	75	⇑iP	Pn	04 34 14.4	-2.0
MEM	Membach	7.95	331	⇑Pn	Pn	04 34 19.1	+1.5
MEM				⇑Sn	Sn	04 35 41.9	-5.5
	comp=N,27nm,0.0s						
GIVF	Givet	8.00	325	eP	Pn	04 34 20.2	+1.9
GIVF				eSn	Sn	04 35 40.3	-8.3
	comp=N,127nm,1.0s						
GIVF	Givet	8.00	325	ePn	Pn	04 34 20.2	+1.9
GIVF	Givet	8.00	325	eP	Pn	04 34 20.2	+1.9
MLS	Moulis	8.00	268	Pn	Pn	04 34 18.7	+0.4
BCLA	Clavier	8.05	328	⇑Pn	Pn	04 34 20.0	+1.0
BCLA				⇑Sn	Sn	04 35 44.8	-5.1
	comp=N,19nm,0.0s						
DOU	Dourbes	8.09	324	⇑Pn	Pn	04 34 19.7	+0.2
DOU				⇑Sn	Sn	04 35 47.2	-3.6
	comp=E,20nm,0.0s						
HGN	Heimansgroeve	8.10	332	ePn	Pn	04 34 21.6	+1.9
	comp=E,7.2nm,0.4s						
HGN				eSn	Sn	04 35 49.8	-1.4
BAIF	Baives	8.23	322	eP	Pn	04 34 28.2	+6.7
BAIF				eSn	Sn	04 35 46.1	-8.2
	comp=E,55nm,0.9s						
VTS	Vitosha	8.29	94	ePn	Pn	04 34 21.9	-0.5
VTS	Vitosha	8.29	94	⇑iP	Pn	04 34 21.6	-0.8
VTS	Vitosha	8.29	94	eP	Pn	04 34 21.9	-0.5
KEST	Kesra	8.31	195	Pn	Pn	04 34 22.9	+0.2
	comp=E,0.1nm,0.3s,baz=0.0,slow=13,SNR=2.2						
EPF	Esparros	8.53	269	ePn	Pn	04 34 24.8	-0.9
EPF				eSn	Sn	04 35 55.6	-6.3
	comp=E,5.5nm,0.5s						
EPF	Esparros	8.53	269	ePn	Pn	04 34 24.8	-0.9
EPF	Esparros	8.53	269	eP	Pn	04 34 24.8	-0.9
LOT	Lotru	8.55	75	⇓iP	Pn	04 34 23.6	-2.4
ETSF	Etsaut	9.20	269	eP	Pn	04 34 37.7	+2.8
ETSF				eSn	Sn	04 36 12.5	-5.9
	comp=E,5.1nm,0.5s						
ETSF	Etsaut	9.20	269	ePn	Pn	04 34 37.7	+2.8
ETSF	Etsaut	9.20	269	eP	Pn	04 34 37.7	+2.8
KWP	Kalwaria Pacla	9.38	48	ePn	Pn	04 34 40.7	+3.4
KWP	Kalwaria Pacla	9.38	48	eP	Pn	04 34 40.7	+3.4
VOIR		9.45	75	⇓iP	Pn	04 34 36.9	-1.4
LDF	La Druitiere	9.68	304	eP	Pn	04 34 44.9	+3.5
LDF				eSn	Sn	04 36 21.4	-8.6
	comp=E,107nm,1.5s						
LDF	La Druitiere	9.68	304	ePn	Pn	04 34 44.9	+3.5
LDF	La Druitiere	9.68	304	eP	Pn	04 34 44.9	+3.5
FLN	La Foliniere	9.97	304	eP	Pn	04 34 48.2	+2.9
	baz=121						
FLN				eSn	Sn	04 36 28.6	-8.5
	comp=E,46nm,1.1s						
FLN	La Foliniere	9.97	304	ePn	Pn	04 34 48.2	+2.9
BURAR	Bucovina Array	10.00	63	⇓iP	Pn	04 34 44.1	-1.7
GRR	Gorron	10.05	302	eP	Pn	04 34 48.2	+1.8
GRR				eSn	Sn	04 36 30.5	-8.5
	comp=E,4.4nm,0.4s						
GRR	Gorron	10.05	302	ePn	Pn	04 34 48.2	+1.8
GRR	Gorron	10.05	302	eP	Pn	04 34 48.2	+1.8
MLR	Muntele Rosu	10.08	75	Pn	Pn	04 34 47.8	+0.8
	comp=E,0.2nm,0.3s,baz=268,slow=9.6,SNR=4.7						
MLR				LR	LR	04 39 26.9	
	comp=E,179nm,20.3s,baz=288,slow=42						
MLR	Muntele Rosu	10.08	75	⇑iP	Pn	04 34 45.0	-2.0
VRI	Vrincioaia	10.66	74	⇓iP	Pn	04 34 52.8	-2.0
QUIF	Quistinic	11.35	297	eP	Pn	04 35 07.2	+2.9
QUIF	Quistinic	11.35	297	ePn	Pn	04 35 07.2	+2.9
QUIF	Quistinic	11.35	297	eP	Pn	04 35 07.2	+2.9
KIS	Kishinev	12.24	69	eP	Pn	04 35 04.0	-12
KIS				LRM	MLR	04 40 40.0	
	comp=E,300nm,16.0s						
KIS	Kishinev	12.24	69	eP	Pn	04 35 04.0	-12
KIS				MLR	MLR		
	comp=Z,300nm,17.0s						
KIS				MLR	MLR		
	comp=N,200nm,18.0s						
ESDC	Sonseca Array	12.62	256	Pn	Pn	04 35 21.2	-0.4
	comp=N,0.6nm,0.3s,baz=59,slow=14,SNR=9.1						
ESDC				LR	LR	04 40 03.0	
	comp=N,113nm,19.5s,baz=50,slow=37						
IDI	Anoyia	13.06	126	LR	LR	04 42 40.1	
	comp=N,104nm,18.6s,baz=312,slow=47						
AKASG	Malin Array Be	13.56	53	Pn	Pn	04 35 34.2	-0.3
	comp=N,0.5nm,0.3s,baz=247,slow=12,SNR=4.7						
AKASG				LR	LR	04 41 28.7	
	comp=N,98nm,19.9s,baz=240,slow=40						
AKBB	Malin Array Si	13.56	53	ePn	Pn	04 35 34.2	-0.2
AKBB	Malin Array Si	13.56	53	eP	Pn	04 35 34.2	-0.2
EKA	Eskdalemuir Ar	15.13	325	Pn	Pn	04 35 54.7	-1.0
	baz=138,slow=14,SNR=3.5						
EKA				Sn	Sn	04 38 41.3	-1.8
	baz=142,slow=24,SNR=3.9						
DSB	Dublin	15.38	314	eP	P	04 36 05.5	+1.8
	comp=N,17nm,0.9s						
HFS	Hagfors	16.40	3	Pn	Pn	04 36 10.8	-1.3
	comp=N,0.1nm,0.3s,baz=143,slow=10,SNR=2.5						
HFS				LR	LR	04 43 21.3	
	comp=N,108nm,19.4s,baz=188,slow=40						
BR101	Keskin Array S	16.63	97	eP	P	04 36 16.6	-1.2
BRTR	Keskin Array B	16.63	97	Pn	P	04 36 16.6	-1.2
	comp=N,0.1nm,0.3s,baz=307,slow=11,SNR=3.1						
BRTR				LR	LR	04 43 41.2	
	comp=N,156nm,19.2s,baz=286,slow=41						
MDT	Midelt	17.00	235	P	Pn	04 36 20.5	+0.4
	comp=N,0.1nm,0.3s,baz=80,slow=8.5,SNR=2.8						
MDT				LR	LR	04 41 58.8	
	comp=N,125nm,20.4s,baz=52,slow=34						
NB2	NORSAR Subarra	17.28	359	P	P	04 36 25.1	+0.4
	comp=Z,6.8nm,1.2s,baz=177,slow=11						
NB200	NORSAR Array S	17.28	359	eP	Pn	04 36 23.6	+0.3
NOA	NORSAR Array B	17.28	359	P	Pn	04 36 23.6	+0.3
	comp=Z,0.0nm,0.3s,baz=178,slow=11,SNR=5.4						
NOA				LR	LR	04 43 26.4	
	comp=Z,74nm,20.1s,baz=180,slow=39						
VSU	Vasula	17.29	27	⇓eP	P	04 36 25.4	+0.6
VSU				pmax	pmax		
	comp=Z,90nm,1.7s						
OBN	Obninsk	19.46	46	LR	LR	04 45 09.2	
	comp=Z,33nm,20.6s,baz=318,slow=40						
FIA0	FINESS Array S	19.55	20	eP	Pn	04 36 50.3	-0.6
FIA0	FINESS Array S	19.55	20	eP	Pn	04 36 50.3	-0.6
FINES	FINESS Array B	19.55	20	P	Pn	04 36 50.3	-0.6
	comp=Z,0.1nm,0.3s,baz=205,slow=6.2,SNR=3.8						
FINES				LR	LR	04 45 19.4	
	comp=Z,169nm,19.8s,baz=210,slow=40						
VSR	Storozhevoye	19.71	58	eP	Pn	04 36 52.7	-0.2
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPSR	Galich'ya Gora	19.89	54	eP	P	04 36 53.7	+0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MMAI	Mount Meron Ar	21.19	113	LR	LR	04 47 22.5	
	comp=Z,69nm,19.8s,baz=65,slow=42						
TAM	Tamanrasset	21.62	196	eP	P	04 37 18.3	+5.8
	comp=Z,5.7nm,1.1s						
TAM	Tamanrasset	21.62	196	eP	P	04 37 18.3	+5.8
TAM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV	Kislovodsk	22.06	79	eP	P	04 37 18.7	+1.7
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
KIV				MLR	MLR		
	comp=Z,91nm,14.0s						
KBZ	Khabaz	22.25	79	P	P	04 37 19.9	+1.0
	comp=Z,3.7nm,0.8s,baz=324,slow=6.1,SNR=7.3						
KBZ				LR	LR	04 47 26.2	
	comp=Z,49nm,19.9s,baz=332,slow=41						
ASF	Jabal al Asfar	22.70	112	P	P	04 37 24.9	+1.0
	comp=Z,2.7nm,0.6s,baz=276,slow=2.3,SNR=4.4						
ZEI	Tsey	23.17	81	eP	P	04 37 32.6	+3.8
GNI	Garni	24.52	87	P	P	04 37 43.6	+1.8
	comp=Z,6.6nm,0.5s,baz=154,slow=19,SNR=5.9						
GNI				LR	LR	04 49 54.4	
	comp=Z,49nm,20.0s,baz=323,slow=43						
GNI	Garni	24.52	87	P	P	04 37 43.6	+1.8
GNI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GNI				MLR	MLR		
	comp=Z,49nm,20.0s						
AKT	Akhty	26.26	83	⇑eP	P	04 37 58.2	+0.7
ARCES	ARCESS Array B	26.72	11	LR	LR	04 47 55.1	
	comp=Z,45nm,18.1s,baz=6.0,slow=35						
KIRV	Kirov	27.28	44	LR	LR	04 49 50.9	
	comp=Z,135nm,18.6s,baz=177,slow=39						
ARU	Arti	31.78	50	c iP	P	04 38 45.8	-0.5
ARU						04 39 46.5	
ARU				S	S	04 43 58.4	+2.5
ARU				SS	SnSn	04 45 40.3	-2.5
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TOA1	Torodi Ar. Sit	31.80	199	eP	P	04 38 46.2	-0.5
TOA0	Torodi Ar. Sit	31.80	199	eP	P	04 38 47.5	+0.7
	comp=Z,5.8nm,0.8s						
TORD	Torodi Ar. Bea	31.80	199	P	P	04 38 46.2	-0.6
	comp=Z,3.7nm,0.6s,baz=12,slow=9.2,SNR=47						
TORD				LR	LR	04 52 36.5	
	comp=Z,89nm,18.9s,baz=325,slow=38						
BRVK	Borovoye	38.77	55	eP	P	04 39 48.0	+1.6
	comp=Z,4.7nm,1.1s						
BRVK	Borovoye	38.77	55	d iP	P	04 39 47.1	+0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DBIC	Dimbokro	39.83	207	LR	LR	04 57 28.1	
	comp=Z,99nm,18.6s,baz=9.5,slow=38						
KURK	Kurchatov	44.35	57	eP	P	04 40 32.7	+0.6
	comp=Z,3.2nm,0.8s						
KURK	Kurchatov	44.35	57	⇑eP	P	04 40 32.3	+0.1
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AAK	Ala-Archa	44.58	69	⇓eP	P	04 40 35.8	+1.5
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZAA1	Zalesovo Array	46.94	51	eP	P	04 40 52.0	-0.6
ZALV	Zalesovo Beam	46.94	51	P	P	04 40 52.0	-0.6
	comp=Z,1.4nm,0.4s,baz=283,slow=9.0,SNR=5.0						
ZALV				LR	LR	05 01 53.6	
	comp=Z,49nm,20.3s,baz=250,slow=38						
ZALV	Zalesovo Beam	46.94	51	P	P	04 40 52.0	-0.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV				MLR	MLR		
	comp=Z,49nm,20.3s						
MK31	Makanchi Array	48.01	60	eP	P	04 41 01.6	+0.5
	comp=Z,2.3nm,0.8s						
MK31	Makanchi Array	48.01	60	eP	P	04 41 01.6	+0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	Makanchi Array	48.01	60	eP	P	04 41 01.6	+0.4
MKAR	Makanchi Array	48.01	60	P	P	04 41 01.6	+0.4
	comp=Z,2.9nm,0.8s,baz=299,slow=5.4,SNR=24						
DGZ	Jazzator, Alta	50.00	55	⇑eP	P	04 41 17.7	+1.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WMQ	Urumqi	52.74	62	eP	P	04 41 40.7	+3.7
WMQ				LR	LR		
	comp=N,460nm,13.7s						
WMQ				LR	LR		
	comp=E,550nm,13.7s						
WMQ				LR	LR		
	comp=Z,360nm,23.9s						
TLY	Talaya	58.21	47	⇓eP	P	04 42 17.5	+1.3
SONA0	Songino Array	61.82	50	eP	P	04 42 40.5	-0.6
SONM	Songino Array	61.82	50	P	P	04 42 40.5	-0.6
	comp=Z,3.1nm,0.9s,baz=290,slow=8.5,SNR=22						
SONM				LR	LR	05 10 10.1	
	comp=Z,50nm,18.0s,baz=330,slow=37						
MSEY	Mahe Island	62.10	129	i P	P	04 42 41.7	-1.5
ULN	Ulaanbaatar	62.16	49	⇑eP	P	04 42 45.5	+2.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	Yellowknife Ar	65.78	336	P	P	04 43 05.5	-1.3
	comp=Z,0.4nm,0.6s,baz=45,slow=6.2,SNR=2.8						
YKB5	Yellowknife Ar	65.78	336	eP	P	04 43 05.5	-1.3
ULM	Lac du Bonnet	67.29	319	P	P	04 43 16.1	-0.6
	comp=Z,1.8nm,0.4s,baz=74,slow=5.6,SNR=2.3						
ULM				LR	LR	05 10 26.1	
	comp=Z,32nm,19.3s,baz=299,slow=34						
LZH	Lanzhou	67.32	61	eP	P	04 43 18.2	+0.9
LZH				pP	pP	04 43 21.8	+0.5
LZH				sP	sP	04 43 24.4	+1.6
LZH				PP	PP	04 45 39.6	-5.6
LZH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LZH				pmax	pmax		
	comp=Z,98nm,4.9s						
HHC	Hu-ho-hao-te	69.01	53	eP	P	04 43 29.8	+2.0
HHC				pmax	pmax		
	comp=Z,34nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.1s						
DAWY	Dawson	70.13	347	eP	P	04 43 35.5	+1.3
	comp=Z,3.9nm,1.1s						
ILAR	Eielson Array	70.52	351	P	P	04 43 37.3	+0.8
	comp=Z,0.9nm,1.0s,baz=5.3,slow=6.3,SNR=9.4						
ILB	Eielson Array	70.52	351	eP	P	04 43 37.3	+0.8
CD2	Chengdu	70.52	66	eP	P	04 43 37.0	-0.1
ECSD	EROS Data Cent	72.09	314	eP	P	04 43 47.0	+0.6
	comp=Z,7.1nm,1.3s						
DHY	Denali Highway	72.21	350	eP	P	04 43 48.3	+1.4
	comp=Z,4.3nm,0.8s						
CMAR	Chiang Mai Arr	75.30	78	LR	LR	05 27 53.0	
	comp=Z,11nm,18.1s,baz=250,slow=44						
MIAR	Mount Ida	76.78	305	eP	P	04 44 16.8	+3.0
	comp=Z,5.8nm,1.1s						
MIAR	Mount Ida	76.78	305	eP	P	04 44 16.8	+3.0
MIAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PETK	Petropavlovsk-	79.07	20	LR	LR	05 24 14.1	
	comp=Z,28nm,18.5s,baz=331,slow=39						
PD31	Pinedale Array	79.20	320	eP	P	04 44 28.1	+0.7
	comp=Z,0.7nm,0.8s						
PDAR	Pinedale Array	79.20	320	P	P	04 44 28.1	+0.7
	comp=Z,0.4nm,0.8s,baz=101,slow=4.7,SNR=5.0						
WMOK	Wichita Mounta	79.66	308	eP	P	04 44 30.2	+0.5
	comp=Z,2.0nm,0.8s						
WMOK	Wichita Mounta	79.66	308	eP	P	04 44 30.3	+0.5
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YSS	Yuzh-Sakhalins	79.71	32	eP	P	04 44 31.0	+1.2
KSRS	Korea Array	80.46	47	LR	LR	05 24 15.1	
	comp=Z,37nm,18.5s,baz=170,slow=39						
BDFB	Brasilia	80.57	238	LR	LR	05 17 24.4	
	comp=Z,34nm,18.1s,baz=153,slow=34						
BMO	Blue Mountains	80.89	326	eP	P	04 44 37.6	+1.3
	comp=Z,2.4nm,0.9s						
BMO	Blue Mountains	80.89	326	eP	P	04 44 37.6	+1.3
BMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TXAR	Lajitas Array	86.44	308	P	P	04 45 06.1	+1.1
	comp=Z,0.7nm,0.5s,baz=73,slow=6.8,SNR=4.1						

DJA 11 04:34:11.4±1.4**,0°S**±4°×**12°4E**±°**,h12**^{km}±11^{km}**,M4.4**/13**,**
mb4.8/3**,mB5.0**/3**,MLv4.2**/13**,Mw(mB)4.3**/3**,Minahassa**
Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.35	244	P	Pb	04 34 36.7	+0.1
LUWI				S	Sn	04 34 54.2	+0.3
APSI	Ampana	2.38	259	P	Pn	04 34 50.2	0.0
SANI	Sanana	2.57	129	P	Pn	04 34 51.8	-1.0
LBMI	Labuha	3.53	93	P	Pn	04 35 05.5	-0.6
TNTI	Ternate	3.59	70	P	Pn	04 35 06.4	-0.6
NLAI	Namlea	4.18	132	P	Pn	04 35 14.9	-0.1
TTSI	Tana Toraja	4.90	238	P	Pn	04 35 25.2	+0.3
SPSI	Sidrap Palu	5.47	230	P	Pn	04 35 33.4	+0.6
	87nm,0.4s,3µm0.5nm						
BNSI	Bone	5.52	224	P	Pn	04 35 34.0	+0.6
	24nm,0.6s,936nm0.2nm						

ISCJB ***11*** *04:34:43.2±0.9, 2°6N±0°1×89°69E±0°07, h10*^{km}*, mb4.2/11,*
Error ellipse: s-maj=21.1km s-min=7.2km az=19.4
IDC ***11*** *04:34:43.1±2.3, 2°54N×89°50E, h0*^{km}*, mb4.0/6, mb1 4.1/6,*
mb1mx3.7/36, mbtmp4.0/6, Error ellipse: s-maj=83.0km
s-min=28.8km az=55.0
NEIC ***11*** *04:34:46.3±1.9, 2°55N×89°69E, h16*^{km}*±6*^{km}*, mb4.5/6,*
Error ellipse: s-maj=26.2km s-min=10.7km az=199.0
ISC 11 04:34:44.8±1.2**,2°5N**±0°2×**89°68E**±0°09**,h10**^{km}**,n28,**
σ**1**^{s}**30**/24**,mb4.2**/11**,North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	7.98	98	ePn	Pn	04 36 41.5	+0.5
GSI				eSn	Sn	04 38 07.9	-3.4
PSI	Prapat	9.24	88	ePn	Pn	04 36 59.3	+0.9
PSI				eSn	Sn	04 38 44.5	+1.9
PALK	Pallekele	10.13	298	ePn	Pn	04 37 11.2	+0.7
KULM	Kulim	11.30	75	ePn	Pn	04 37 27.9	+1.5
H08S3	Diego Garcia H	19.88	240	T	T	05 00 06.0	
	baz=58,slow=74,SNR=431						
H08S2	Diego Garcia H	19.88	239	T	T	05 00 07.0	
	baz=58,slow=74,SNR=85						
H08S1	Diego Carcia H	19.89	239	T	T	05 00 18.7	
	baz=58,slow=74,SNR=62						
DLV	T Lat	20.88	62	eP	P	04 39 25.9	-1.7
	40nm,1.7s						
LSA	Lhasa	27.11	3	eP	P	04 40 30.4	+1.8
	8.4nm,0.8s						
BTK	Batken	41.13	338	eP	P	04 42 28.7	-0.6
	6.1nm,0.5s						
H01W3	Cape Leeuwin H	43.68	150	T	T	05 29 40.0	
	baz=326,slow=75,SNR=16						
H01W2	Cape Leeuwin H	43.69	150	T	T	05 29 42.4	
	baz=326,slow=75,SNR=19						
H01W1	Cape Leeuwin H	43.70	150	T	T	05 29 49.0	
	baz=326,slow=75,SNR=15						
JOW	Kunigami	44.19	53	eP	P	04 42 54.5	+0.2
	79nm,1.4s						
MK32	Makanchi Array	44.61	353	eP	P	04 42 56.6	-0.7
MKAR	Makanchi Array	44.61	353	P	P	04 42 56.6	-0.7
	0.7nm,0.6s,baz=172,slow=9.8,SNR=4.4						
SONA0	Songino Array	47.44	15	eP	P	04 43 19.7	-0.1
SONM	Songino Array	47.44	15	P	P	04 43 19.7	-0.1
	1.5nm,0.6s,baz=194,slow=9.8,SNR=9.3						
ULN	Ulaanbaatar	47.64	16	eP	P	04 43 21.5	+0.1
	8.8nm,1.8s						
WRA	Warramunga Arr	49.16	119	P	P	04 43 34.5	+1.1
	1.5nm,0.9s,baz=295,slow=9.8,SNR=5.0						
WR1	Warramunga Arr	49.16	119	eP	P	04 43 34.5	+1.1
ZALV	Zalesovo Beam	51.46	356	P	P	04 43 48.6	-1.6
	0.7nm,0.3s,baz=180,slow=7.2,SNR=3.1						
ZAA1	Zalesovo Array	51.46	356	eP	P	04 43 48.6	-1.6
ABKAR	Akbulak array	53.07	336	eP	P	04 44 02.5	+0.2
	1.6nm,0.8s						
FIA0	FINESS Array S	75.46	334	eP	P	04 46 28.1	-0.7
FINES	FINESS Array B	75.46	334	P	P	04 46 28.1	-0.7
	1.2nm,0.7s,baz=117,slow=14,SNR=3.5						
ARA0	ARCESS Array S	78.86	341	eP	P	04 46 47.4	-0.5
ARCES	ARCESS Array B	78.86	341	P	P	04 46 47.4	-0.5
	2.4nm,0.9s,baz=108,slow=6.0,SNR=3.5						

ISCJB ***11*** *04:50:20.7±0.8, 15°6S±0°2×177°5W±0°2, h386*^{km}*, mb3.7/8,*
Error ellipse: s-maj=40.0km s-min=16.8km az=143.4
IDC ***11*** *04:50:24.0±10.0, 15°58S×177°51W, h407*^{km}*±110*^{km}*,*
mb3.4/8, mb1 3.8/8, mb1mx3.5/25, mbtmp4.2/8, Error
ellipse: s-maj=30.4km s-min=24.8km az=125.0
ISC 11 04:50:22.0±0.9**,15°5S**±0°3×**177°5W**±0°2**,h386**^{km}**,n10,**
σ**0**^{s}**53**/9**,mb3.8**/8**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.53	239	P	P	04 57 25.3	-0.2
	1.7nm,0.8s,baz=104,slow=12,SNR=3.8						
WRA	Warramunga Arr	45.93	257	P	P	04 58 08.4	+0.1
	3.2nm,0.8s,baz=84,slow=8.5,SNR=32						
ASAR	Alice Springs	46.28	252	P	P	04 58 11.7	+0.7
	15nm,0.7s,baz=84,slow=7.8,SNR=128						
VNDA	Vanda	62.87	185	P	P	05 00 07.5	-0.2
	0.5nm,0.5s,baz=347,slow=4.9,SNR=10						

NVAR	**Mina Array Bea**	**77.14**	**44**	P	**P**	**05 01 34.8**	**+0.3**
	1.6nm,0.7s,baz=229,slow=8.8,SNR=18						
ILAR	**Eielson Array**	**83.40**	**13**	P	**P**	**05 02 06.0**	**-0.6**
	2.0nm,0.9s,baz=223,slow=6.1,SNR=19						
TXAR	**Lajitas Array**	**84.02**	**57**	P	**P**	**05 02 11.3**	**+0.6**
	1.3nm,0.6s,baz=226,slow=6.1,SNR=6.9						
PDAR	**Pinedale Array**	**85.06**	**43**	P	**P**	**05 02 15.2**	**-0.5**
	0.5nm,0.7s,baz=195,slow=4.6,SNR=4.6						
BRTR	**Keskin Array B**	**143.66**	**318**	PKP	PKPab	05 09 10.3	+0.2
	1.3nm,0.8s,baz=102,slow=2.9,SNR=5.8						
GERES	**GERESS Array B**	**145.53**	**347**	PKPbc	**PKPbc**	**05 09 15.9**	**+0.1**
	0.4nm,0.2s,baz=348,slow=5.9,SNR=3.9						

IDC 11 05:00:28.2±13.0**, 6°.36S×127°.82E, h372**^{km}±152^{km}**, mb3.0**/2**, mb1 3.2**/4**, mb1mx2.9**/20**, mbtmp3.9**/4**, Error ellipse: s-maj=271.6km s-min=44.3km az=59.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.91**	**155**	P	P	05 03 41.3	+0.4
	1.2nm,0.3s,baz=333,slow=12,SNR=102						
ASAR	**Alice Springs**	**18.17**	**162**	P	P	05 04 15.8	-0.1
	0.8nm,0.3s,baz=344,slow=12,SNR=45						
STKA	**Stephens Creek**	**28.46**	**155**	P	P	05 05 50.5	0.0
	1.0nm,0.5s,baz=338,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**66.52**	**328**	P	P	05 10 39.2	0.0
	0.3nm,0.6s,baz=140,slow=7.2,SNR=3.1						

GEN 11 05:00:57.3, 44°.17N×10°.16E, h4^{km}**, Ml0.6, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	**Equi**	**0.01**	**208**	P	Pg	05 00 58.3	+0.2
EQUI				S	Sg	05 00 58.8	+0.3
GRAM	**Graiana**	**0.33**	**348**	P	Pg	05 01 04.0	+0.3
GRAM				S	Sg	05 01 08.8	+0.9

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*ISCJB **11** 05:01:07.5±0.3, 43°.78N±0°.03×11°.96E±0°.02, h23^{km}±2^{km}, Error ellipse: s-maj=4.8km s-min=2.6km az=14.1*

*LDG **11** 05:01:07.5±0.1, 43°.86N×12°.07E, h10^{km}, Md2.6/2, Ml2.6/9, Error ellipse: s-maj=2.3km s-min=1.1km az=38.0*

*ROM **11** 05:01:07.3±0.1, 43°.826N±0°.005×12°.050E±0°.006, h8^{km}, ML2.4/9, Error ellipse: s-maj=0.7km s-min=0.2km az=216.0*

ISC 11 05:01:07.3±0.8**, 43°.83N**±0°.02×**11°.98E**±0°.02**, h17**^{km}±5^{km}**, n42,** σ1^{s}**54**/66**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.12**	**307**	P	**Pb**	**05 01 11.2**	**0.0**
SFI				S	**Sg**	**05 01 14.2**	**+0.6**
SFI				AML	AML		
	comp=E,2875µm,0.2s						
SFI				AML	AML		
	comp=N,1965µm,0.6s						
SFI				AML	AML		
	comp=E,1790µm,0.6s						
SFI				AML	AML		
	comp=N,2880µm,0.2s						
SFI				AML	AML		
	comp=E,2875µm,0.2s						
SFI				AML	AML		
	comp=E,1790µm,0.6s						
SFI				AML	AML		
	comp=N,2880µm,0.2s						
SFI				AML	AML		
	comp=N,1965µm,0.6s						
SFI				AML	AML		
	comp=E,2875µm,0.2s						
SFI				AML	AML		
	comp=E,1790µm,0.6s						
SFI				AML	AML		
	comp=N,2880µm,0.2s						
SFI				AML	AML		
	comp=N,1965µm,0.6s						
ASQU	**Asqua**	**0.14**	**255**	P	**Pg**	**05 01 11.9**	**+0.5**
ASQU				S	**Sg**	**05 01 15.4**	**+1.3**
ASQU				AML	AML		
	comp=E,2510µm,0.5s						
ASQU				AML	AML		
	comp=N,5065µm,0.3s						
ASQU				AML	AML		
	comp=N,5065µm,0.3s						
ASQU				AML	AML		
	comp=E,2510µm,0.5s						
ASQU				AML	AML		
	comp=N,5065µm,0.3s						
ASQU				AML	AML		
	comp=E,2510µm,0.5s						
CPGN	**Carpegna, Ital**	**0.25**	**97**	P	**Pg**	**05 01 12.4**	**-0.6**
CPGN				AML	AML		
	comp=E,2465µm,0.3s						
CPGN				AML	AML		
	comp=N,2165µm,1.6s						
CPGN				AML	AML		
	comp=E,2410µm,0.3s						
CPGN				AML	AML		
	comp=N,2165µm,1.6s						
CPGN				AML	AML		
	comp=N,2165µm,1.6s						
CPGN				AML	AML		
	comp=E,2410µm,0.3s						
CPGN				AML	AML		
	comp=E,2465µm,0.3s						
CPGN				AML	AML		
	comp=N,2165µm,1.6s						
CPGN				AML	AML		
	comp=N,2165µm,1.6s						
CPGN				AML	AML		
	comp=E,2410µm,0.3s						
CPGN				AML	AML		
	comp=E,2465µm,0.3s						
CPGN				AML	AML		
	comp=N,2165µm,1.6s						
PARC	**Parchiule**	**0.26**	**134**	P	**Pg**	**05 01 12.4**	**-0.8**
PARC				S	**Sg**	**05 01 16.4**	**-0.8**
PARC				AML	AML		
	comp=E,1110µm,0.2s						
PARC				AML	AML		
	comp=N,1315µm,0.4s						
PARC				AML	AML		
	comp=N,1315µm,0.4s						
PARC				AML	AML		
	comp=E,1110µm,0.2s						
PARC				AML	AML		
	comp=N,1315µm,0.4s						
PARC				AML	AML		
	comp=E,1110µm,0.2s						
SSP9	**Sansepolcro**	**0.28**	**157**	P	**Pg**	**05 01 13.4**	**-0.1**
SSP9				S	**Sg**	**05 01 18.1**	**+0.5**
RUFI	**Rufina**	**0.34**	**271**	P	**Pb**	**05 01 15.3**	**+0.4**
RUFI				S	**Sb**	**05 01 21.7**	**+1.7**
BADI	**Badiali**	**0.38**	**149**	P	**Pg**	**05 01 14.6**	**-0.5**
BADI				S	**Sg**	**05 01 20.6**	**+0.2**
BRIS	**BRISIGHELLA**	**0.46**	**313**	P	**Pg**	**05 01 16.7**	**+0.1**
BRIS				S	**Sb**	**05 01 24.6**	**+1.0**
NARO	**Abbazia di Nar**	**0.49**	**117**	P	**Pg**	**05 01 16.4**	**-0.7**
NARO				S	**Sg**	**05 01 23.4**	**-0.3**
ATPI	**Pietralunga -**	**0.49**	**141**	P	**Pg**	**05 01 16.6**	**-0.6**
CAFI	**Castiglion Fio**	**0.50**	**181**	P	**Pg**	**05 01 17.8**	**+0.4**
CAFI				S	**Sb**	**05 01 25.8**	**+1.0**
CAFI				AML	AML		
	comp=E,624µm,0.5s						
CAFI				AML	AML		
	comp=N,1768µm,1.6s						
CAFI				AML	AML		
	comp=E,650µm,0.5s						
CAFI				AML	AML		
	comp=N,428µm,0.7s						
CAFI				AML	AML		
	comp=E,650µm,0.5s						
CAFI				AML	AML		
	comp=E,624µm,0.5s						
CAFI				AML	AML		
	comp=N,428µm,0.7s						
CAFI				AML	AML		
	comp=N,1768µm,1.6s						
CAFI				AML	AML		
	comp=E,650µm,0.5s						
CAFI				AML	AML		
	comp=E,624µm,0.5s						
CAFI				AML	AML		
	comp=N,428µm,0.7s						
CAFI				AML	AML		
	comp=N,1768µm,1.6s						
ATMI	**Monte Miggiano**	**0.54**	**157**	P	**Pg**	**05 01 17.9**	**-0.1**
ATVO	**AVT- Monte Val**	**0.55**	**145**	P	**Pg**	**05 01 17.7**	**-0.5**
MPAG	**Monte Paganucc**	**0.60**	**110**	P	**Pg**	**05 01 18.2**	**-1.0**
MPAG				S	**Sg**	**05 01 27.3**	**0.0**
PTF	**Prato**	**0.67**	**281**	P	**Pg**	**05 01 21.4**	**+1.0**
ATTE	**AVT- Monte Tez**	**0.69**	**157**	P	**Pb**	**05 01 20.3**	**-0.7**
CRMI	**Carmignano**	**0.73**	**267**	P	**Pn**	**05 01 22.9**	**0.0**
MTCR	**Monte La Croce**	**0.73**	**286**	P	**Pn**	**05 01 22.8**	**-0.2**
ARVD	**Arcevia**	**0.78**	**115**	P	**Pb**	**05 01 21.6**	**-0.7**
ARCI	**Arcidosso**	**1.05**	**201**	P	**Pg**	**05 01 27.9**	**+0.3**
VLC	**Villacollemand**	**1.19**	**286**	AML	AML		
	comp=E,33µm,1.6s						
VLC				AML	AML		
	comp=N,46µm,1.1s						
VLC				AML	AML		
	comp=E,33µm,1.6s						
VLC				AML	AML		
	comp=N,46µm,1.1s						
VLC				AML	AML		
	comp=E,33µm,1.6s						
VLC				AML	AML		
	comp=N,46µm,1.1s						
T0912	**Minucciano (LU**	**1.32**	**285**	AML	AML		
	comp=E,914µm,0.2s						
T0912				AML	AML		
	comp=E,914µm,0.2s						
T0912				AML	AML		
	comp=N,1585µm,0.1s						
T0912				AML	AML		
	comp=N,1585µm,0.1s						
T0912				AML	AML		
	comp=E,914µm,0.2s						
T0912				AML	AML		
	comp=N,1585µm,0.1s						
GRAM	**Graiana**	**1.52**	**296**	AML	AML		
	comp=E,81µm,0.3s						
GRAM				AML	AML		
	comp=N,88µm,0.4s						
GRAM				AML	AML		
	comp=N,88µm,0.4s						
GRAM				AML	AML		
	comp=E,81µm,0.3s						
GRAM				AML	AML		
	comp=N,88µm,0.4s						
GRAM				AML	AML		
	comp=E,81µm,0.3s						
NVLJ	**Novalja**	**2.21**	**70**	*e*Pn	**Pn**	**05 01 43.7**	**+0.6**
NVLJ				Sn	**Sn**	**05 02 10.7**	**+0.7**
DUGI	**Dugi Otok**	**2.23**	**85**	*e*Pn	**Pn**	**05 01 44.0**	**+0.5**
DUGI				Sn	**Sn**	**05 02 12.2**	**+1.5**
PGF	**Pioggiola**	**2.53**	**240**	*e*Pn	**Pn**	**05 01 47.8**	**+0.1**
PGF				*e*Sn	**Sn**	**05 02 17.4**	**-0.7**
	comp=E,11nm,0.4s						
ZIRJ	**Zirje**	**2.66**	**93**	*e*Pn	**Pn**	**05 01 50.2**	**+0.8**
ZIRJ				Sn	**Sn**	**05 02 21.8**	**+0.5**
MORI	**Morici**	**2.70**	**88**	*e*Pn	**Pn**	**05 01 51.7**	**+1.8**
MORI				Sn	**Sn**	**05 02 23.8**	**+1.7**
MUGIO	**Muggio**	**2.95**	**316**	AML	AML		
	comp=E,13µm,1.0s						
MUGIO				AML	AML		
	comp=E,13µm,1.0s						
MUGIO				AML	AML		
	comp=N,20µm,1.3s						
MUGIO				AML	AML		
	comp=N,20µm,1.3s						
MUGIO				AML	AML		
	comp=E,13µm,1.0s						
MUGIO				AML	AML		
	comp=N,20µm,1.3s						
KIJV	**Kijevo**	**3.20**	**85**	*i* Pn	**Pn**	**05 01 59.5**	**+2.7**
KIJV				Sn	**Sn**	**05 02 35.7**	**+1.0**
OBKA	**Obir**	**3.23**	**33**	Pg	**Pg**	**05 02 07.9**	**-1.4**
	comp=N,1.2nm,0.2s						
OBKA				Sg	**Sg**	**05 02 51.8**	**+0.6**
	comp=N,8.5nm,0.5s						
SBF	**Sospel**	**3.29**	**272**	*e*Pn	**Pn**	**05 01 58.3**	**+0.2**
SBF				*e*Sn	**Sn**	**05 02 35.8**	**-1.0**
	comp=N,7.1nm,0.5s						
HVAR	**Hvar**	**3.32**	**100**	*e*Pn	**Pn**	**05 01 59.8**	**+1.4**
HVAR				Sn	**Sn**	**05 02 37.4**	**0.0**
KBA	**Koelnbreinsper**	**3.38**	**16**	Pn	**Pn**	**05 02 01.7**	**+2.2**
	comp=N,1.1nm,0.3s						
KBA				*e*Sn	**Sn**	**05 02 43.5**	**+4.1**
	comp=N,1.0nm,0.2s						
SQTA	**Sankt Quirin**	**3.43**	**351**	*e*Pn	**Pb**	**05 02 05.6**	**-2.1**
	comp=N,1.8nm,0.3s						
SQTA				Sn	**Sb**	**05 02 48.0**	**-1.1**
	comp=N,5.7nm,0.5s						
DAVA	**Damuels**	**3.75**	**338**	Pg	**Pb**	**05 02 13.3**	**+0.1**
	comp=N,1.6nm,0.3s						
DAVA				*e*Sn	**Sb**	**05 02 55.2**	**-3.3**
	comp=N,3.0nm,0.5s						
MBDF	**Montbardon**	**3.84**	**285**	*e*Pn	**Pn**	**05 02 06.0**	**+0.2**
MBDF				*e*Sn	**Sn**	**05 02 49.3**	**-1.4**
	comp=N,3.3nm,0.5s						
FRF	**La Foret Royal**	**3.88**	**268**	*e*Pn	**Pn**	**05 02 06.2**	**+0.1**
FRF				*e*Sn	**Sn**	**05 02 49.8**	**-1.4**
	comp=N,2.0nm,0.3s						
LMR	**La Mourre**	**4.00**	**265**	*e*Pn	**Pn**	**05 02 07.9**	**+0.1**
LMR				*e*Sn	**Sn**	**05 02 52.8**	**-1.6**
	comp=N,1.7nm,0.4s						
SMRF	**Simiane la Rot**	**4.63**	**274**	*e*P	**Pn**	**05 02 20.1**	**+3.6**
SMRF				*e*Sn	**Sn**	**05 03 08.1**	**-1.8**
	comp=N,0.7nm,0.2s						
CABF	**La Chapelle**	**5.00**	**306**	*e*P	**Pn**	**05 02 25.3**	**+3.6**
CABF				*e*Sn	**Sn**	**05 03 16.1**	**-3.0**
	comp=N,1.0nm,0.3s						
CDF	**Champ du Feu**	**5.62**	**326**	*e*P	**Pn**	**05 02 32.8**	**+2.6**
CDF				*e*Sn	**Sn**	**05 03 30.2**	**-4.2**
	comp=N,1.5nm,0.3s						

IDC 11 05:05:40.9±1.9**, 12°.45N×47°.59E, h0**^{km}**, mb3.6**/5**, mb1 3.7**/6**, mb1mx3.5**/27**, mbtmp3.6**/6**, ML3.5**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.6**/29**, Error ellipse: s-maj=46.0km s-min=26.6km az=149.0, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**16.95**	**218**	Pn	Pn	05 09 39.8	-0.1
	0.2nm,0.3s,baz=29,slow=14,SNR=5.6						
GEYT	**Alibeck**	**27.06**	**19**	LR	LR	05 24 21.4	
	comp=Z,70nm,19.6s,baz=225,slow=41						
AKASG	**Malin Array Be**	**40.98**	**342**	P	P	05 13 25.5	+0.1
	0.3nm,0.4s,baz=147,slow=7.4,SNR=2.1						
TORD	**Torodi Ar. Bea**	**44.71**	**276**	P	P	05 13 56.0	-0.2
	0.2nm,0.6s,baz=63,slow=9.9,SNR=3.7						
MKAR	**Makanchi Array**	**44.98**	**34**	P	P	05 13 56.5	-1.5
	0.9nm,1.0s,baz=231,slow=5.8,SNR=5.5						
GERES	**GERESS Array B**	**45.85**	**329**	P	P	05 14 04.5	-0.4
	2.2nm,0.3s,baz=149,slow=7.8,SNR=9.7						
FINES	**FINESS Array B**	**51.35**	**347**	P	P	05 14 47.2	+0.3
	2.5nm,0.9s,baz=161,slow=13,SNR=3.0						
SONM	**Songino Array**	**60.05**	**42**	P	P	05 15 50.7	+0.7
	0.2nm,0.3s,baz=243,slow=6.3,SNR=3.0						

ROM 11 05:13:01.1±0.1**, 43°.834N**±0°.005×**12°.051E**±0°.006**, h8**^{km}**, Md1.7**/4**, Error ellipse: s-maj=0.7km s-min=0.1km az=213.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**296**	P	Pg	05 13 05.0	+0.4
SFI				S	Sg	05 13 08.1	+1.2
SFI				AML	AML		
	comp=E,2285µm,0.1s						
SFI				AML	AML		
	comp=N,1276µm,0.1s						
SFI				AML	AML		
	comp=E,1375µm,0.4s						
SFI				AML	AML		
	comp=N,2335µm,0.1s						
SFI				AML	AML		
	comp=E,4510µm,1.3s						
SFI				AML	AML		
	comp=N,2580µm,1.4s						
SFI				AML	AML		
	comp=E,2890µm,0.3s						
SFI				AML	AML		
	comp=N,4550µm,1.3s						
SFI				END			
ASQU	**Asqua**	**0.19**	**259**	P	Pg	05 13 05.7	+0.6
ASQU				S	Sg	05 13 09.3	+1.5
ASQU				AML	AML		
	comp=E,4475µm,0.8s						
ASQU				AML	AML		
	comp=N,7785µm,0.2s						
ASQU				END			
CPGN	**Carpegna, Ital**	**0.20**	**100**	P	Pg	05 13 06.2	+1.0
CPGN				AML	AML		
	comp=E,1115µm,0.3s						
CPGN				AML	AML		
	comp=N,941µm,0.4s						
CPGN				AML	AML		
	comp=E,3605µm,0.3s						
CPGN				AML	AML		
	comp=N,3410µm,1.6s						
CPGN				AML	AML		
	comp=E,3485µm,0.3s						
CPGN				AML	AML		
	comp=N,3185µm,1.6s						
CPGN				END			
PARC	**Parchiule**	**0.23**	**144**	P	Pg	05 13 06.3	+0.6
PARC				S	Sg	05 13 10.4	+1.6
PARC				AML	AML		
	comp=E,712µm,0.2s						
PARC				AML	AML		
	comp=N,468µm,0.2s						
PARC				AML	AML		
	comp=E,1620µm,0.4s						
PARC				AML	AML		
	comp=N,1930µm,0.6s						
SSP9	**Sansepolcro**	**0.27**	**167**	P	Pg	05 13 07.1	+0.7
SSP9				S	Sb	05 13 11.8	-1.0
SSP9				AML	AML		
	comp=E,342µm,0.5s						
SSP9				AML	AML		
	comp=N,310µm,0.5s						
SSP9				END			
BADI	**Badiali**	**0.35**	**157**	P	Pg	05 13 08.5	+0.5
BADI				S	Sb	05 13 14.4	-0.9
BADI				AML	AML		
	comp=E,504µm,0.2s						
BADI				AML	AML		
	comp=N,487µm,0.2s						
BADI				AML	AML		
	comp=E,1620µm,0.6s						
BADI				AML	AML		
	comp=N,1022µm,1.2s						
RUFI	**Rufina**	**0.39**	**271**	P	Pg	05 13 09.1	+0.4
RUFI				S	Sb	05 13 15.4	-1.0
RUFI				AML	AML		
	comp=E,1475µm,0.3s						
RUFI				AML	AML		
	comp=N,1619µm,0.5s						
NARO	**Abbazia di Nar**	**0.44**	**120**	P	Pg	05 13 09.9	+0.2
NARO				S	Sb	05 13 17.1	-0.8
NARO				AML	AML		
	comp=E,94µm,0.2s						
NARO				AML	AML		
	comp=N,107µm,0.2s						
NARO				AML	AML		
	comp=E,266µm,0.3s						
NARO				AML	AML		
	comp=N,398µm,1.0s						
ATPI	**Pietralunga -**	**0.46**	**146**	P	Pg	05 13 10.5	+0.5
ATPI				S	Sb	05 13 17.9	-0.5
ATPI				AML	AML		
	comp=E,492µm,1.3s						
ATPI				AML	AML		
	comp=N,446µm,0.5s						
BRIS	**BRISIGHELLA**	**0.50**	**309**	P	Pg	05 13 10.5	-0.3
BRIS				AML	AML		
	comp=E,416µm,0.2s						
BRIS				AML	AML		
	comp=N,406µm,0.3s						
BRIS				AML	AML		
	comp=E,1720µm,0.3s						
BRIS				AML	AML		
	comp=N,1740µm,1.4s						
CAFI	**Castiglion Fio**	**0.51**	**187**	P	Pg	05 13 11.4	+0.5
CAFI				S	Sb	05 13 19.5	-0.3
CAFI				AML	AML		
	comp=E,882µm,0.6s						
CAFI				AML	AML		
	comp=N,546µm,0.8s						
ATVO	**AVT- Monte Val**	**0.52**	**150**	P	Pg	05 13 11.6	+0.5
ATVO				S	Sb	05 13 20.3	+0.2
ATVO				AML	AML		
	comp=E,592µm,0.4s						
ATVO				AML	AML		
	comp=N,613µm,0.8s						
SEI	**Scarperia**	**0.55**	**294**	P	Pg	05 13 12.0	+0.4
SEI				S	Sb	05 13 20.7	-0.2
SEI				AML	AML		
	comp=E,1855µm,0.3s						
SEI				AML	AML		
	comp=N,2625µm,0.4s						
MPAG	**Monte Paganucc**	**0.55**	**112**	P	Pg	05 13 11.9	+0.1
MPAG				S	Sb	05 13 20.8	-0.3
MPAG				AML	AML		
	comp=E,238µm,0.8s						
MPAG				AML	AML		
	comp=N,298µm,0.3s						
FRON	**Frontone**	**0.58**	**123**	P	Pg	05 13 12.8	+0.5
FRON				S	Sb	05 13 21.7	-0.2
PTF	**Prato**	**0.72**	**280**	P	Pg	05 13 15.4	+0.4
ARVD	**Arcevia**	**0.73**	**117**	AML	AML		
	comp=N,134µm,0.6s						
ARVD				AML	AML		
	comp=E,206µm,0.4s						
MOMA	**Monte Martano**	**1.10**	**160**	AML	AML		
	comp=E,186µm,0.5s						
MOMA				AML	AML		
	comp=N,146µm,0.3s						

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*ROM **11** 05:13:40.7±0.1, 43°.817N±0°.006×12°.035E±0°.007, h8^{km}, ML2.4/20, Error ellipse: s-maj=0.8km s-min=0.1km az=35.0*

*ISCJB **11** 05:13:41.1±0.3, 43°.79N±0°.02×11°.97E±0°.03, h19^{km}±3^{km}, Error ellipse: s-maj=4.4km s-min=2.7km az=31.7*

*LDG **11** 05:13:41.3±0.1, 43°.85N×12°.07E, h2^{km}, Md2.7/2, Ml2.7/10, Error ellipse: s-maj=3.5km s-min=1.3km az=43.0*

*VIE **11** 05:13:52.2±2.6, 44°.15N×11°.68E, h8^{km}, mb2.3/7, ml2.6/9, Error ellipse: s-maj=29.9km s-min=14.3km az=143.0*

ISC 11 05:13:40.5±0.8**, 43°.87N**±0°.02×**12°.04E**±0°.02**, h16**^{km}±5^{km}**, n41,** σ1^{s}**39**/63**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.15**	**286**	P	**Pg**	**05 13 44.5**	**-0.1**
SFI				S	**Sg**	**05 13 47.6**	**+0.3**
SFI				AML	AML		
	comp=E,4510µm,1.3s						
SFI				AML	AML		
	comp=N,2575µm,1.4s						
SFI				AML	AML		
	comp=E,2895µm,0.3s						
SFI				AML	AML		
	comp=N,4550µm,1.3s						
SFI				AML	AML		
	comp=E,4510µm,1.3s						
SFI				AML	AML		
	comp=N,2575µm,1.4s						
SFI				AML	AML		
	comp=E,2890µm,0.3s						
SFI				AML	AML		
	comp=N,4550µm,1.3s						
SFI				AML	AML		
	comp=N,4545µm,1.3s						
SFI				AML	AML		
	comp=N,2575µm,1.4s						
SFI				AML	AML		
	comp=E,2890µm,0.3s						
SFI				AML	AML		
	comp=E,4510µm,1.3s						
SFI				AML	AML		
	comp=N,4545µm,1.3s						
SFI				AML	AML		
	comp=N,2575µm,1.4s						
SFI				AML	AML		
	comp=E,2890µm,0.3s						
SFI				AML	AML		
	comp=E,4510µm,1.3s						
ASQU	**Asqua**	**0.20**	**249**	P	**Pg**	**05 13 45.1**	**-0.1**
ASQU				S	**Sg**	**05 13 48.7**	**+0.2**

ASQU				AML	AML		
	comp=E,4475µm,0.8s						
ASQU				AML	AML		
	comp=N,7785µm,0.2s						
ASQU				AML	AML		
	comp=E,4475µm,0.8s						
ASQU				AML	AML		
	comp=N,7785µm,0.2s						
ASQU				AML	AML		
	comp=E,4475µm,0.8s						
ASQU				AML	AML		
	comp=N,7785µm,0.2s						
CPGN	**Carpegna, Ital**	**0.21**	**108**	P	**Pg**	**05 13 45.6**	**+0.1**
CPGN				S	**Sb**	**05 13 49.9**	**+0.1**
CPGN				AML	AML		
	comp=E,3605µm,0.3s						
CPGN				AML	AML		
	comp=N,3410µm,1.6s						
CPGN				AML	AML		
	comp=E,3485µm,0.3s						
CPGN				AML	AML		
	comp=N,3210µm,1.6s						
CPGN				AML	AML		
	comp=E,3610µm,0.3s						
CPGN				AML	AML		
	comp=N,3415µm,1.6s						
CPGN				AML	AML		
	comp=N,3410µm,1.6s						
CPGN				AML	AML		
	comp=E,3605µm,0.3s						
CPGN				AML	AML		
	comp=N,3410µm,1.6s						
CPGN				AML	AML		
	comp=E,3605µm,0.3s						
PARC	**Parchiule**	**0.26**	**147**	P	**Pg**	**05 13 45.7**	**-0.6**
PARC				S	**Sg**	**05 13 49.7**	**-0.4**
PARC				AML	AML		
	comp=E,1620µm,0.4s						
PARC				AML	AML		
	comp=N,1930µm,0.6s						
PARC				AML	AML		
	comp=E,1620µm,0.4s						
PARC				AML	AML		
	comp=N,1930µm,0.6s						
PARC				AML	AML		
	comp=E,1620µm,0.4s						
PARC				AML	AML		
	comp=N,1930µm,0.6s						
PARC				AML	AML		
	comp=E,1620µm,0.4s						
PARC				AML	AML		
	comp=N,1930µm,0.6s						
SSP9	**Sansepolcro**	**0.30**	**167**	P	**Pg**	**05 13 46.4**	**-0.5**
SSP9				S	**Sg**	**05 13 51.1**	**-0.1**
SSP9				AML	AML		
	comp=E,1010µm,0.4s						
SSP9				AML	AML		
	comp=N,1270µm,0.7s						
SSP9				AML	AML		
	comp=N,1270µm,0.7s						
SSP9				AML	AML		
	comp=E,1010µm,0.4s						
SSP9				AML	AML		
	comp=N,1270µm,0.7s						
SSP9				AML	AML		
	comp=E,1010µm,0.4s						
BADI	**Badiali**	**0.39**	**158**	P	**Pg**	**05 13 47.9**	**-0.5**
BADI				S	**Sg**	**05 13 53.8**	**+0.1**
BADI				AML	AML		
	comp=E,1620µm,0.6s						
BADI				AML	AML		
	comp=N,1026µm,1.2s						
BADI				AML	AML		
	comp=E,1620µm,0.6s						
BADI				AML	AML		
	comp=N,1022µm,1.2s						
BADI				AML	AML		
	comp=N,1021µm,1.2s						
BADI				AML	AML		
	comp=E,1620µm,0.6s						
BADI				AML	AML		
	comp=N,1021µm,1.2s						
BADI				AML	AML		
	comp=E,1620µm,0.6s						
RUFI	**Rufina**	**0.39**	**266**	P	**Pg**	**05 13 48.5**	**+0.1**
RUFI				S	**Sb**	**05 13 54.9**	**+0.2**
BRIS	**BRISIGHELLA**	**0.48**	**307**	P	**Pg**	**05 13 49.9**	**-0.1**
BRIS				S	**Sb**	**05 13 57.8**	**+0.4**
BRIS				AML	AML		
	comp=E,1410µm,0.3s						
BRIS				AML	AML		
	comp=N,1420µm,1.4s						
BRIS				AML	AML		
	comp=N,1420µm,1.4s						
BRIS				AML	AML		
	comp=E,1410µm,0.3s						
BRIS				AML	AML		
	comp=N,1420µm,1.4s						
BRIS				AML	AML		
	comp=E,1410µm,0.3s						
ATPI	**Pietralunga -**	**0.49**	**148**	P	**Pg**	**05 13 49.7**	**-0.6**
ATPI				S	**Sb**	**05 13 57.6**	**-0.1**
ATPI				AML	AML		
	comp=E,492µm,1.3s						
ATPI				AML	AML		
	comp=N,446µm,0.5s						
ATPI				AML	AML		
	comp=E,491µm,1.3s						
ATPI				AML	AML		
	comp=N,446µm,0.5s						
ATPI				AML	AML		
	comp=E,490µm,1.3s						
ATPI				AML	AML		
	comp=N,446µm,0.5s						
ATPI				AML	AML		
	comp=E,490µm,1.3s						
ATPI				AML	AML		
	comp=N,446µm,0.5s						
SEI	**Scarperia**	**0.53**	**291**	P	**Pb**	**05 13 51.4**	**0.0**
CAFI	**Castiglion Fio**	**0.54**	**186**	P	**Pg**	**05 13 50.9**	**-0.3**
CAFI				S	**Sb**	**05 13 58.9**	**-0.2**
CAFI				AML	AML		
	comp=E,859µm,0.6s						
CAFI				AML	AML		
	comp=N,814µm,0.7s						
CAFI				AML	AML		
	comp=N,814µm,0.7s						
CAFI				AML	AML		
	comp=E,859µm,0.6s						
CAFI				AML	AML		
	comp=N,814µm,0.7s						
CAFI				AML	AML		
	comp=E,859µm,0.6s						
ATVO	**AVT- Monte Val**	**0.55**	**151**	P	**Pg**	**05 13 50.9**	**-0.6**
ATVO				S	**Sb**	**05 13 59.4**	**0.0**
ATVO				AML	AML		
	comp=E,592µm,0.4s						
ATVO				AML	AML		
	comp=N,613µm,0.8s						
ATVO				AML	AML		
	comp=E,592µm,0.4s						
ATVO				AML	AML		
	comp=N,613µm,0.8s						
ATVO				AML	AML		
	comp=E,592µm,0.4s						
ATVO				AML	AML		
	comp=N,613µm,0.8s						
MPAG	**Monte Paganucc**	**0.57**	**114**	P	**Pg**	**05 13 51.4**	**-0.4**
MPAG				S	**Sb**	**05 14 00.5**	**+0.4**
MPAG				AML	AML		
	comp=E,238µm,0.8s						
MPAG				AML	AML		
	comp=N,297µm,0.3s						
MPAG				AML	AML		
	comp=N,298µm,0.3s						
MPAG				AML	AML		
	comp=E,238µm,0.8s						
MPAG				AML	AML		
	comp=N,298µm,0.3s						
MPAG				AML	AML		
	comp=E,238µm,0.8s						
PESA	**Pesaro**	**0.58**	**82**	P	**Pb**	**05 13 52.8**	**+0.5**
PESA				AML	AML		
	comp=E,728µm,1.4s						
PESA				AML	AML		
	comp=N,612µm,0.2s						
PESA				AML	AML		
	comp=E,728µm,1.4s						
PESA				AML	AML		
	comp=N,612µm,0.2s						
PESA				AML	AML		
	comp=E,728µm,1.4s						
PESA				AML	AML		
	comp=N,612µm,0.2s						
FRON	**Frontone**	**0.61**	**125**	P	**Pg**	**05 13 52.1**	**-0.4**
FRON				AML	AML		
	comp=E,228µm,0.7s						
FRON				AML	AML		
	comp=N,322µm,0.9s						
FRON				AML	AML		
	comp=N,322µm,0.9s						
FRON				AML	AML		
	comp=E,228µm,0.7s						
FRON				AML	AML		
	comp=N,322µm,0.9s						
FRON				AML	AML		
	comp=E,228µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.70**	**161**	P	**Pg**	**05 13 53.4**	**-0.9**
ATTE				S	**Sb**	**05 14 03.9**	**-0.1**
ATTE				AML	AML		
	comp=E,445µm,0.3s						
ATTE				AML	AML		
	comp=N,386µm,0.6s						
ATTE				AML	AML		
	comp=N,386µm,0.6s						
ATTE				AML	AML		
	comp=E,445µm,0.3s						
ATTE				AML	AML		
	comp=N,386µm,0.6s						
ATTE				AML	AML		
	comp=E,445µm,0.3s						
PTF	**Prato**	**0.71**	**278**	P	**Pb**	**05 13 54.7**	**+0.2**
ARVD	**Arcevia**	**0.75**	**119**	P	**Pg**	**05 13 53.9**	**-1.3**
ARVD				S	**Sb**	**05 14 06.2**	**+1.0**
ARVD				AML	AML		
	comp=E,206µm,0.4s						
ARVD				AML	AML		
	comp=N,134µm,0.6s						
ARVD				AML	AML		
	comp=E,206µm,0.4s						
ARVD				AML	AML		
	comp=N,134µm,0.6s						
ARVD				AML	AML		
	comp=E,206µm,0.4s						
ARVD				AML	AML		
	comp=N,134µm,0.6s						
MTCR	**Monte La Croce**	**0.77**	**282**	P	**Pb**	**05 13 56.1**	**+0.4**
MTCR				S	**Sn**	**05 14 08.0**	**-0.2**
CRMI	**Carmignano**	**0.78**	**265**	AML	AML		
	comp=E,130µm,0.7s						
CRMI				AML	AML		
	comp=E,130µm,0.7s						
CRMI				AML	AML		
	comp=N,101µm,1.5s						
CRMI				AML	AML		
	comp=N,101µm,1.5s						
CRMI				AML	AML		
	comp=E,130µm,0.7s						
CRMI				AML	AML		
	comp=N,101µm,1.5s						
MGAB	**Montegabbione**	**0.95**	**177**	AML	AML		
	comp=E,461µm,0.5s						
MGAB				AML	AML		
	comp=N,423µm,0.7s						
MGAB				AML	AML		
	comp=E,456µm,0.6s						
MGAB				AML	AML		
	comp=N,449µm,0.5s						
MGAB				AML	AML		
	comp=N,449µm,0.5s						
MGAB				AML	AML		
	comp=E,461µm,0.5s						
MGAB				AML	AML		
	comp=E,456µm,0.6s						
MGAB				AML	AML		
	comp=N,423µm,0.7s						
MGAB				AML	AML		
	comp=N,449µm,0.5s						
MGAB				AML	AML		
	comp=E,461µm,0.5s						
MGAB				AML	AML		
	comp=E,456µm,0.6s						
MGAB				AML	AML		
	comp=N,423µm,0.7s						
CING	**Cingoli**	**0.97**	**120**	AML	AML		
	comp=N,382µm,0.4s						
CING				AML	AML		
	comp=E,211µm,0.9s						
CING				AML	AML		
	comp=N,382µm,0.4s						
CING				AML	AML		
	comp=E,211µm,0.9s						
CING				AML	AML		
	comp=E,211µm,0.9s						
CING				AML	AML		
	comp=N,382µm,0.4s						
ARRO	**Arrone**	**1.39**	**157**	AML	AML		
	comp=E,76µm,1.0s						
ARRO				AML	AML		
	comp=E,76µm,1.0s						
ARRO				AML	AML		
	comp=N,85µm,0.7s						
ARRO				AML	AML		
	comp=E,76µm,1.0s						
ARRO				AML	AML		
	comp=N,85µm,0.7s						
ARRO				AML	AML		
	comp=N,85µm,0.7s						
PGF	**Pioggiola**	**2.58**	**240**	*e*Pn	**Pn**	**05 14 22.4**	**+0.6**
PGF				*e*Sn	**Sn**	**05 14 52.3**	**-0.6**
	comp=N,10.0nm,0.3s						
ABTA	**Abfaltersbach**	**2.90**	**6**	Sn	**Sb**	**05 15 05.4**	**-1.8**
	comp=N,28nm,0.8s						
MYKA	**Terra Mystica**	**2.99**	**22**	Pn	**Pg**	**05 14 38.9**	**+1.2**
	comp=N,0.7nm,0.2s						
MYKA				Sn	**Sb**	**05 15 07.1**	**-2.5**
	comp=N,1.1nm,0.2s						
GBOS	**Grotte di Boss**	**3.05**	**279**	AML	AML		
	comp=E,11µm,1.4s						
GBOS				AML	AML		
	comp=E,11µm,1.4s						
GBOS				AML	AML		
	comp=N,9µm,0.5s						
GBOS				AML	AML		
	comp=N,9µm,0.5s						
GBOS				AML	AML		
	comp=E,11µm,1.4s						
GBOS				AML	AML		
	comp=N,9µm,0.5s						
OBKA	**Obir**	**3.18**	**33**	*e*Pn	**Pg**	**05 14 41.8**	**+0.3**
	comp=N,2.3nm,0.3s						
OBKA				*e*Sn	**Sg**	**05 15 23.7**	**+0.9**
	comp=N,16nm,0.5s						
FETA	**Feichten**	**3.29**	**344**	Pn	**Pb**	**05 14 37.1**	**-1.5**
	comp=N,3.2nm,0.6s						
SBF	**Sospel**	**3.33**	**272**	*e*Pn	**Pn**	**05 14 32.8**	**+0.8**
SBF				*e*Sn	**Sn**	**05 15 10.7**	**-0.5**
	comp=N,8.1nm,0.3s						
SQTA	**Sankt Quirin**	**3.41**	**350**	*e*Pn	**Pb**	**05 14 38.3**	**-2.2**
	comp=N,4.6nm,0.3s						
SQTA				*e*Sn	**Sb**	**05 15 20.8**	**-0.9**
	comp=N,15nm,0.7s						
MOTA	**Moosalm**	**3.54**	**350**	*e*Pn	**Pb**	**05 14 42.0**	**-0.9**
	comp=N,0.9nm,0.2s						
DAVA	**Damuels**	**3.74**	**337**	Pn	**Pb**	**05 14 44.4**	**-1.9**
	comp=N,0.8nm,0.2s						
DAVA				*e*Sn	**Sb**	**05 15 27.8**	**-3.6**
	comp=N,4.3nm,0.5s						
MBDF	**Montbardon**	**3.88**	**285**	*e*Pn	**Pn**	**05 14 40.6**	**+1.0**
MBDF				*e*Sn	**Sn**	**05 15 24.2**	**-0.7**
	comp=N,5.8nm,0.5s						
FRF	**La Foret Royal**	**3.92**	**267**	*e*Pn	**Pn**	**05 14 41.0**	**+0.9**
FRF				*e*Sn	**Sn**	**05 15 24.4**	**-1.3**
	comp=N,4.8nm,0.4s						
LMR	**La Mourre**	**4.05**	**264**	*e*Pn	**Pn**	**05 14 42.5**	**+0.7**
LMR				*e*Sn	**Sn**	**05 15 27.7**	**-1.2**
	comp=N,2.6nm,0.5s						
LPL	**La Plagne**	**4.13**	**295**	*e*P	**Pn**	**05 14 47.8**	**+4.7**
LPL				*e*Sn	**Sn**	**05 15 30.6**	**-0.6**
	comp=N,3.4nm,0.4s						
ORIF	**Oris-en-Rattie**	**4.54**	**286**	*e*P	**Pn**	**05 14 53.2**	**+4.6**
ORIF				*e*Sn	**Sn**	**05 15 39.8**	**-1.3**
	comp=N,2.7nm,0.4s						
SMRF	**Simiane la Rot**	**4.67**	**274**	*e*Pn	**Pn**	**05 14 51.1**	**+0.7**
SMRF				*e*Sn	**Sn**	**05 15 42.8**	**-1.5**
	comp=N,0.6nm,0.2s						
CABF	**La Chapelle**	**5.02**	**305**	*e*P	**Pn**	**05 14 57.8**	**+2.6**
CDF	**Champ du Feu**	**5.62**	**326**	*e*P	**Pn**	**05 15 06.1**	**+2.6**

ROM 11 05:15:14.1±0.1,43°.841N±0°.006×12°.053E±0°.006, h8^{km},ML2.0/10,Error ellipse: s-maj=0.8km s-min=0.1km az=211.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**293**	P	Pg	05 15 17.9	+0.4
SFI				S	Sg	05 15 21.0	+1.2
ASQU	**Asqua**	**0.20**	**257**	P	Pg	05 15 18.7	+0.6
ASQU				S	Sg	05 15 22.3	+1.4
ASQU				AML	AML		
	comp=E,724µm,0.8s						
ASQU				AML	AML		
	comp=N,1405µm,0.2s						
ASQU				AML	AML		
	comp=E,724µm,0.8s						
ASQU				AML	AML		
	comp=N,1405µm,0.2s						
CPGN	**Carpegna, Ital**	**0.20**	**101**	P	Pg	05 15 19.2	+1.1
CPGN				AML	AML		
	comp=E,572µm,0.3s						
CPGN				AML	AML		
	comp=N,530µm,1.6s						
CPGN				AML	AML		
	comp=E,1195µm,0.3s						
CPGN				AML	AML		
	comp=N,706µm,1.4s						
CPGN				AML	AML		
	comp=E,1195µm,0.3s						
CPGN				AML	AML		
	comp=N,706µm,1.4s						
PARC	**Parchiule**	**0.23**	**145**	P	Pg	05 15 19.4	+0.6
PARC				S	Sg	05 15 23.5	+1.5
PARC				AML	AML		
	comp=E,814µm,0.2s						
PARC				AML	AML		
	comp=N,886µm,0.8s						
PARC				AML	AML		
	comp=E,814µm,0.2s						
PARC				AML	AML		
	comp=N,886µm,0.8s						
PARC				AML	AML		
	comp=N,886µm,0.8s						
PARC				AML	AML		
	comp=E,814µm,0.2s						
SSP9	**Sansepolcro**	**0.27**	**168**	P	Pg	05 15 20.2	+0.7
SSP9				S	Sb	05 15 25.1	-0.8
BADI	**Badiali**	**0.36**	**157**	P	Pg	05 15 21.6	+0.5
BADI				S	Sb	05 15 27.6	-0.8
BADI				AML	AML		
	comp=E,526µm,0.3s						
BADI				AML	AML		
	comp=N,882µm,0.2s						
BADI				AML	AML		
	comp=E,929µm,0.2s						
BADI				AML	AML		
	comp=N,882µm,0.2s						
BADI				AML	AML		
	comp=N,882µm,0.2s						
BADI				AML	AML		
	comp=E,929µm,0.2s						
RUFI	**Rufina**	**0.39**	**270**	P	Pg	05 15 22.1	+0.4
RUFI				S	Sb	05 15 28.6	-0.8
NARO	**Abbazia di Nar**	**0.45**	**121**	P	Pg	05 15 23.1	+0.4
NARO				S	Sb	05 15 30.2	-0.7
NARO				AML	AML		
	comp=E,78µm,0.3s						
NARO				AML	AML		
	comp=N,107µm,0.1s						
NARO				AML	AML		
	comp=E,118µm,0.6s						
NARO				AML	AML		
	comp=N,141µm,1.4s						
NARO				AML	AML		
	comp=N,141µm,1.4s						
NARO				AML	AML		
	comp=E,118µm,0.6s						
ATPI	**Pietralunga -**	**0.47**	**147**	P	Pg	05 15 23.8	+0.7
ATPI				AML	AML		
	comp=E,166µm,0.5s						
ATPI				AML	AML		
	comp=N,134µm,0.2s						
ATPI				AML	AML		
	comp=N,134µm,0.2s						
ATPI				AML	AML		
	comp=E,166µm,0.5s						
CAFI	**Castiglion Fio**	**0.52**	**187**	P	Pg	05 15 24.6	+0.5
CAFI				S	Sb	05 15 32.6	-0.4
CAFI				AML	AML		
	comp=E,170µm,0.5s						
CAFI				AML	AML		
	comp=N,194µm,0.4s						
CAFI				AML	AML		
	comp=E,170µm,0.5s						
CAFI				AML	AML		
	comp=N,194µm,0.4s						
ATVO	**AVT- Monte Val**	**0.53**	**151**	P	Pg	05 15 24.6	+0.4
ATVO				S	Sb	05 15 33.2	0.0
ATVO				AML	AML		
	comp=E,148µm,0.6s						
ATVO				AML	AML		
	comp=N,143µm,0.2s						
ATVO				AML	AML		
	comp=E,246µm,0.5s						
ATVO				AML	AML		
	comp=N,231µm,1.4s						
ATVO				AML	AML		
	comp=E,246µm,0.5s						
ATVO				AML	AML		
	comp=N,231µm,1.4s						
SEI	**Scarperia**	**0.55**	**293**	P	Pg	05 15 25.0	+0.4
SEI				S	Sb	05 15 33.8	-0.1
SEI				AML	AML		
	comp=E,230µm,0.4s						
SEI				AML	AML		
	comp=N,508µm,0.7s						
SEI				AML	AML		
	comp=E,230µm,0.4s						
SEI				AML	AML		
	comp=N,508µm,0.7s						
MPAG	**Monte Paganucc**	**0.55**	**112**	P	Pg	05 15 24.9	+0.2
MPAG				S	Sb	05 15 34.1	0.0
MPAG				AML	AML		
	comp=E,66µm,0.4s						
MPAG				AML	AML		
	comp=N,83µm,1.6s						
MPAG				AML	AML		
	comp=E,97µm,0.3s						
MPAG				AML	AML		
	comp=N,120µm,0.3s						
MPAG				AML	AML		
	comp=N,120µm,0.3s						
MPAG				AML	AML		
	comp=E,97µm,0.3s						

ROM 11 05:15:41.0±0.1,43°.811N±0°.005×12°.058E±0°.007, h8^{km},ML2.1/6,Error ellipse: s-maj=0.7km s-min=0.1km az=229.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.18**	**302**	P	Pg	05 15 45.0	+0.4
SFI				S	Sg	05 15 48.3	+1.1
CPGN	**Carpegna, Ital**	**0.19**	**93**	P	Pg	05 15 45.8	+0.9
CPGN				AML	AML		
	comp=E,1128µm,0.3s						
CPGN				AML	AML		
	comp=N,687µm,1.0s						
PARC	**Parchiule**	**0.21**	**141**	P	Pg	05 15 45.8	+0.6
PARC				S	Sg	05 15 49.6	+1.6
PARC				AML	AML		
	comp=E,814µm,0.2s						
PARC				AML	AML		
	comp=N,886µm,0.8s						
PARC				AML	AML		
	comp=E,814µm,0.2s						
PARC				AML	AML		
	comp=N,886µm,0.8s						
PARC				AML	AML		
	comp=E,814µm,0.2s						
PARC				AML	AML		

	comp=N,886µm,0.8s						
PARC				AML	AML		
	comp=E,814µm,0.2s						
PARC				AML	AML		
	comp=N,886µm,0.8s						
SSP9	**Sansepolcro**	**0.24**	**167**	P	Pg	05 15 46.8	+1.0
SSP9				S	Sg	05 15 51.1	+2.0
SSP9				AML	AML		
	comp=E,388µm,0.6s						
SSP9				AML	AML		
	comp=N,491µm,0.7s						
BADI	**Badiali**	**0.33**	**156**	P	Pg	05 15 47.9	+0.5
BADI				S	Sb	05 15 53.6	-0.9
BADI				AML	AML		
	comp=E,929µm,0.2s						
BADI				AML	AML		
	comp=N,882µm,0.2s						
BADI				AML	AML		
	comp=N,882µm,0.2s						
BADI				AML	AML		
	comp=E,929µm,0.2s						
BADI				AML	AML		
	comp=N,882µm,0.2s						
BADI				AML	AML		
	comp=E,929µm,0.2s						
NARO	**Abbazia di Nar**	**0.43**	**118**	P	Pg	05 15 49.5	+0.3
NARO				S	Sb	05 15 56.7	-0.6
ATPI	**Pietralunga -**	**0.44**	**145**	P	Pg	05 15 49.9	+0.4
ATPI				S	Sb	05 15 57.0	-0.7
ATPI				AML	AML		
	comp=E,166µm,0.5s						
ATPI				AML	AML		
	comp=N,133µm,0.2s						
CAFI	**Castiglion Fio**	**0.49**	**188**	P	Pb	05 15 51.2	-0.6
CAFI				S	Sb	05 15 58.7	-0.3
ATVO	**AVT- Monte Val**	**0.50**	**149**	P	Pg	05 15 51.0	+0.4
ATVO				S	Sb	05 15 59.4	0.0
ATVO				AML	AML		
	comp=E,246µm,0.5s						
ATVO				AML	AML		
	comp=N,230µm,1.4s						
ATVO				AML	AML		
	comp=E,246µm,0.5s						
ATVO				AML	AML		
	comp=N,231µm,1.4s						
ATVO				AML	AML		
	comp=N,231µm,1.4s						
ATVO				AML	AML		
	comp=E,246µm,0.5s						
ATVO				AML	AML		
	comp=N,230µm,1.4s						
ATVO				AML	AML		
	comp=E,246µm,0.5s						
ATMI	**Monte Miggiano**	**0.50**	**162**	P	Pg	05 15 51.0	+0.4
ATMI				S	Sb	05 15 58.8	-0.6
ATMI				AML	AML		
	comp=E,395µm,0.6s						
ATMI				AML	AML		
	comp=N,402µm,0.8s						
ATMI				AML	AML		
	comp=E,394µm,0.6s						
ATMI				AML	AML		
	comp=N,401µm,0.8s						
ATMI				AML	AML		
	comp=N,401µm,0.8s						
ATMI				AML	AML		
	comp=E,394µm,0.6s						
ATMI				AML	AML		
	comp=N,401µm,0.8s						
ATMI				AML	AML		
	comp=E,394µm,0.6s						
BRIS	**BRISIGHELLA**	**0.52**	**311**	P	Pg	05 15 50.6	-0.4
BRIS				S	Sg	05 15 58.4	+0.5
MPAG	**Monte Paganucc**	**0.54**	**109**	P	Pg	05 15 51.8	+0.3
MPAG				S	Sb	05 16 00.4	-0.2
SEI	**Scarperia**	**0.56**	**296**	P	Pg	05 15 52.2	+0.3
SEI				S	Sb	05 16 01.1	-0.2
PESA	**Pesaro**	**0.58**	**77**	P	Pg	05 15 52.5	+0.4
PESA				AML	AML		
	comp=E,342µm,1.5s						
PESA				AML	AML		
	comp=N,232µm,1.3s						
PESA				AML	AML		
	comp=N,232µm,1.3s						
PESA				AML	AML		
	comp=E,342µm,1.5s						
PESA				AML	AML		
	comp=N,232µm,1.3s						
PESA				AML	AML		
	comp=E,342µm,1.5s						
ATTE	**AVT- Monte Tez**	**0.65**	**161**	AML	AML		
	comp=N,160µm,1.0s						
ATTE				AML	AML		
	comp=E,125µm,0.3s						
ATTE				AML	AML		
	comp=N,160µm,1.0s						
ATTE				AML	AML		
	comp=E,125µm,0.3s						
ATTE				AML	AML		
	comp=N,160µm,1.0s						
ATTE				AML	AML		
	comp=E,125µm,0.3s						

ROM 11 05:19:26.4±0.1**, 43°.809N**±0°.004×**12°.049E**±0°.005**,**
h9km, ML2.1/17**, Error ellipse: s-maj=0.6km**
s-min=0.1km az=211.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.17**	**303**	P	Pg	05 19 30.5	+0.4
SFI				S	Sg	05 19 33.8	+1.1
ASQU	**Asqua**	**0.19**	**266**	P	Pg	05 19 31.0	+0.6
ASQU				S	Sg	05 19 34.5	+1.4
ASQU				AML	AML		
	comp=E,1388µm,0.8s						
ASQU				AML	AML		
	comp=N,1720µm,0.2s						
ASQU				AML	AML		
	comp=E,1755µm,0.9s						
ASQU				AML	AML		
	comp=N,2665µm,0.2s						
ASQU				AML	AML		
	comp=E,1755µm,0.9s						
ASQU				AML	AML		
	comp=N,2665µm,0.2s						
ASQU				AML	AML		
	comp=E,1755µm,0.9s						
ASQU				AML	AML		
	comp=N,2665µm,0.2s						
CPGN	**Carpegna, Ital**	**0.20**	**92**	P	Pg	05 19 31.3	+0.7
CPGN				S	Sg	05 19 34.9	+1.5
CPGN				AML	AML		
	comp=E,970µm,0.9s						
CPGN				AML	AML		
	comp=N,538µm,1.0s						
CPGN				AML	AML		
	comp=E,1175µm,0.3s						
CPGN				AML	AML		
	comp=N,1120µm,1.4s						
CPGN				AML	AML		
	comp=N,1115µm,1.4s						
CPGN				AML	AML		
	comp=E,1175µm,0.3s						
CPGN				AML	AML		
	comp=N,1115µm,1.4s						
CPGN				AML	AML		
	comp=E,1175µm,0.3s						
PARC	**Parchiule**	**0.21**	**139**	P	Pg	05 19 31.3	+0.5
PARC				S	Sg	05 19 35.2	+1.4
PARC				AML	AML		
	comp=E,589µm,0.3s						
PARC				AML	AML		
	comp=N,496µm,0.2s						
PARC				AML	AML		
	comp=E,589µm,0.3s						
PARC				AML	AML		
	comp=N,698µm,0.2s						
PARC				AML	AML		
	comp=E,589µm,0.3s						
PARC				AML	AML		
	comp=N,698µm,0.2s						
PARC				AML	AML		
	comp=E,589µm,0.3s						
PARC				AML	AML		
	comp=N,698µm,0.2s						
SSP9	**Sansepolcro**	**0.24**	**166**	P	Pg	05 19 32.2	+0.9
SSP9				S	Sg	05 19 36.5	+1.9
SSP9				AML	AML		
	comp=E,395µm,1.4s						
SSP9				AML	AML		
	comp=N,469µm,0.5s						
SSP9				AML	AML		
	comp=E,395µm,1.4s						
SSP9				AML	AML		
	comp=N,469µm,0.5s						
SSP9				AML	AML		
	comp=E,395µm,1.4s						
SSP9				AML	AML		
	comp=N,469µm,0.5s						
BADI	**Badiali**	**0.33**	**155**	P	Pg	05 19 33.5	+0.5
BADI				S	Sb	05 19 39.2	-0.7
BADI				AML	AML		
	comp=E,403µm,0.7s						
BADI				AML	AML		
	comp=N,348µm,0.5s						
BADI				AML	AML		
	comp=E,884µm,0.2s						
BADI				AML	AML		
	comp=N,817µm,0.2s						
BADI				AML	AML		
	comp=N,817µm,0.2s						
BADI				AML	AML		
	comp=E,884µm,0.2s						
BADI				AML	AML		
	comp=N,817µm,0.2s						
BADI				AML	AML		
	comp=E,884µm,0.2s						
RUFI	**Rufina**	**0.39**	**275**	P	Pg	05 19 34.5	+0.4
RUFI				S	Sb	05 19 40.9	-0.8
RUFI				AML	AML		
	comp=E,428µm,0.3s						
RUFI				AML	AML		
	comp=N,462µm,0.5s						
RUFI				AML	AML		
	comp=E,428µm,0.3s						
RUFI				AML	AML		
	comp=N,465µm,0.5s						
RUFI				AML	AML		
	comp=E,428µm,0.3s						
RUFI				AML	AML		
	comp=N,465µm,0.5s						
NARO	**Abbazia di Nar**	**0.43**	**117**	P	Pg	05 19 34.9	0.0
NARO				S	Sb	05 19 42.0	-0.9
NARO				AML	AML		
	comp=E,104µm,0.5s						
NARO				AML	AML		
	comp=N,115µm,0.9s						
NARO				AML	AML		
	comp=E,104µm,0.5s						
NARO				AML	AML		
	comp=N,115µm,0.9s						
NARO				AML	AML		
	comp=E,104µm,0.5s						
NARO				AML	AML		
	comp=N,115µm,0.9s						
ATPI	**Pietralunga -**	**0.44**	**144**	P	Pg	05 19 35.5	+0.4
ATPI				S	Sb	05 19 42.5	-0.6
ATPI				AML	AML		
	comp=E,132µm,0.7s						
ATPI				AML	AML		
	comp=N,104µm,0.5s						
ATPI				AML	AML		
	comp=E,198µm,0.3s						
ATPI				AML	AML		
	comp=N,175µm,1.1s						
ATPI				AML	AML		
	comp=E,198µm,0.3s						
ATPI				AML	AML		
	comp=N,175µm,1.1s						
ATPI				AML	AML		
	comp=E,198µm,0.3s						
ATPI				AML	AML		
	comp=N,175µm,1.1s						
CAFI	**Castiglion Fio**	**0.48**	**187**	P	Pb	05 19 36.7	-0.4
CAFI				AML	AML		
	comp=E,332µm,0.7s						
CAFI				AML	AML		
	comp=N,395µm,1.4s						
CAFI				AML	AML		
	comp=E,360µm,0.7s						
CAFI				AML	AML		
	comp=N,254µm,0.9s						
CAFI				AML	AML		
	comp=N,395µm,1.4s						
CAFI				AML	AML		
	comp=E,332µm,0.7s						
CAFI				AML	AML		
	comp=N,254µm,0.9s						
CAFI				AML	AML		
	comp=E,360µm,0.7s						
CAFI				AML	AML		
	comp=N,395µm,1.4s						
CAFI				AML	AML		
	comp=E,332µm,0.7s						
CAFI				AML	AML		
	comp=N,254µm,0.9s						
CAFI				AML	AML		
	comp=E,360µm,0.7s						
ATVO	**AVT- Monte Val**	**0.50**	**149**	P	Pg	05 19 36.7	+0.6
ATVO				AML	AML		
	comp=E,276µm,0.3s						
ATVO				AML	AML		
	comp=N,247µm,0.7s						
ATVO				AML	AML		
	comp=E,276µm,0.3s						
ATVO				AML	AML		
	comp=N,247µm,0.7s						
ATVO				AML	AML		
	comp=E,276µm,0.3s						
ATVO				AML	AML		
	comp=N,247µm,0.7s						
ATMI	**Monte Miggiano**	**0.50**	**161**	AML	AML		
	comp=E,374µm,0.2s						
ATMI				AML	AML		
	comp=E,374µm,0.2s						
ATMI				AML	AML		
	comp=N,452µm,0.3s						
ATMI				AML	AML		
	comp=N,452µm,0.3s						
ATMI				AML	AML		
	comp=E,374µm,0.2s						
ATMI				AML	AML		
	comp=N,452µm,0.3s						
BRIS	**BRISIGHELLA**	**0.52**	**311**	P	Pg	05 19 36.1	-0.4
BRIS				S	Sg	05 19 43.9	+0.6
BRIS				AML	AML		
	comp=E,542µm,0.3s						
BRIS				AML	AML		
	comp=N,550µm,0.5s						
BRIS				AML	AML		
	comp=E,542µm,0.3s						
BRIS				AML	AML		
	comp=N,550µm,0.5s						
BRIS				AML	AML		
	comp=E,542µm,0.3s						
BRIS				AML	AML		
	comp=N,550µm,0.5s						
MPAG	**Monte Paganucc**	**0.55**	**109**	P	Pg	05 19 37.2	+0.1
MPAG				S	Sb	05 19 46.0	-0.2
MPAG				AML	AML		
	comp=E,101µm,0.6s						
MPAG				AML	AML		
	comp=N,111µm,0.9s						
MPAG				AML	AML		
	comp=N,111µm,0.9s						
MPAG				AML	AML		
	comp=E,101µm,0.6s						
MPAG				AML	AML		
	comp=N,111µm,0.9s						
MPAG				AML	AML		
	comp=E,101µm,0.6s						
SEI	**Scarperia**	**0.56**	**296**	P	Pg	05 19 37.3	0.0
SEI				S	Sb	05 19 46.2	-0.2
SEI				AML	AML		
	comp=E,500µm,0.3s						
SEI				AML	AML		
	comp=N,690µm,0.6s						
SEI				AML	AML		
	comp=E,500µm,0.3s						
SEI				AML	AML		
	comp=N,690µm,0.6s						
SEI				AML	AML		
	comp=E,500µm,0.3s						
SEI				AML	AML		
	comp=N,690µm,0.6s						
FRON	**Frontone**	**0.57**	**120**	P	Pg	05 19 37.5	0.0
FRON				S	Sb	05 19 46.6	-0.2
FRON				AML	AML		
	comp=E,68µm,0.4s						
FRON				AML	AML		
	comp=N,122µm,1.2s						
FRON				AML	AML		
	comp=E,68µm,0.4s						
FRON				AML	AML		
	comp=N,122µm,1.2s						
FRON				AML	AML		
	comp=E,68µm,0.4s						
FRON				AML	AML		
	comp=N,122µm,1.2s						
CSNT	**Castellina Chi**	**0.65**	**239**	P	Pg	05 19 39.2	+0.3
CSNT				AML	AML		
	comp=E,129µm,1.2s						
CSNT				AML	AML		
	comp=N,186µm,0.6s						
CSNT				AML	AML		
	comp=E,129µm,1.2s						
CSNT				AML	AML		
	comp=N,186µm,0.6s						
CSNT				AML	AML		
	comp=E,129µm,1.2s						
CSNT				AML	AML		
	comp=N,186µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.65**	**160**	P	Pg	05 19 39.0	+0.1
ATTE				AML	AML		
	comp=E,160µm,0.3s						
ATTE				AML	AML		
	comp=N,172µm,0.2s						
ATTE				AML	AML		
	comp=N,172µm,0.2s						
ATTE				AML	AML		
	comp=E,160µm,0.3s						
ATTE				AML	AML		
	comp=N,172µm,0.2s						
ATTE				AML	AML		
	comp=E,160µm,0.3s						
MTCR	**Monte La Croce**	**0.79**	**286**	P	Pg	05 19 41.9	+0.2

ROM 11 05:19:52.9±0.1**, 43°.816N**±0°.006×**12°.027E**±0°.006**,**
h9km, ML2.2/9**, Error ellipse: s-maj=0.8km s-min=0.0km**
az=216.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.16**	**304**	P	Pg	05 19 56.7	+0.4
SFI				S	Sg	05 19 59.7	+1.0
SFI				AML	AML		
	comp=E,1041µm,0.1s						
SFI				AML	AML		
	comp=N,1282µm,0.1s						
SFI				AML	AML		
	comp=E,1042µm,0.1s						
SFI				AML	AML		
	comp=N,1279µm,0.1s						
SFI				AML	AML		
	comp=N,1279µm,0.1s						
SFI				AML	AML		
	comp=E,1044µm,0.1s						
SFI				AML	AML		
	comp=N,1279µm,0.1s						
SFI				AML	AML		
	comp=E,1044µm,0.1s						
ASQU	**Asqua**	**0.17**	**264**	P	Pg	05 19 57.2	+0.6
ASQU				S	Sg	05 20 00.5	+1.3
ASQU				AML	AML		
	comp=E,1755µm,0.9s						
ASQU				AML	AML		
	comp=N,2665µm,0.2s						
ASQU				AML	AML		
	comp=E,1755µm,0.9s						
ASQU				AML	AML		
	comp=N,2665µm,0.2s						
ASQU				AML	AML		
	comp=E,1755µm,0.9s						
ASQU				AML	AML		
	comp=N,2665µm,0.2s						
CPGN	**Carpegna, Ital**	**0.21**	**94**	P	Pg	05 19 57.9	+0.5
CPGN				S	Sg	05 20 02.5	+2.2
PARC	**Parchiule**	**0.23**	**137**	P	Pg	05 19 57.8	+0.3
PARC				S	Sg	05 20 02.0	+1.4
PARC				AML	AML		
	comp=E,554µm,0.2s						
PARC				AML	AML		
	comp=N,698µm,0.2s						
PARC				AML	AML		
	comp=E,554µm,0.2s						
PARC				AML	AML		
	comp=N,698µm,0.2s						
PARC				AML	AML		
	comp=N,698µm,0.2s						
PARC				AML	AML		
	comp=E,554µm,0.2s						
PARC				AML	AML		
	comp=N,698µm,0.2s						
PARC				AML	AML		
	comp=E,554µm,0.2s						
SSP9	**Sansepolcro**	**0.25**	**163**	P	Pg	05 19 58.8	+0.8
SSP9				S	Sb	05 20 03.5	-0.6
BADI	**Badiali**	**0.34**	**153**	P	Pg	05 19 60.0	+0.3
BADI				S	Sb	05 20 06.1	-0.7
BADI				AML	AML		
	comp=E,883µm,0.2s						
BADI				AML	AML		
	comp=N,817µm,0.2s						
BADI				AML	AML		
	comp=E,884µm,0.2s						
BADI				AML	AML		
	comp=N,817µm,0.2s						
BADI				AML	AML		
	comp=N,817µm,0.2s						
BADI				AML	AML		
	comp=E,884µm,0.2s						
BADI				AML	AML		
	comp=N,817µm,0.2s						
BADI				AML	AML		
	comp=E,884µm,0.2s						
RUFI	**Rufina**	**0.38**	**274**	P	Pg	05 20 00.7	+0.4
RUFI				S	Sb	05 20 07.1	-0.6
NARO	**Abbazia di Nar**	**0.45**	**117**	P	Pg	05 20 02.0	+0.3
NARO				S	Sb	05 20 08.8	-1.1
ATPI	**Pietralunga -**	**0.46**	**143**	P	Pg	05 20 02.0	+0.3
ATPI				S	Sb	05 20 09.8	-0.2
CAFI	**Castiglion Fio**	**0.49**	**185**	P	Pb	05 20 03.2	-0.5
CAFI				AML	AML		
	comp=E,360µm,0.7s						
CAFI				AML	AML		
	comp=N,254µm,0.9s						
CAFI				AML	AML		
	comp=N,254µm,0.9s						
CAFI				AML	AML		
	comp=E,360µm,0.7s						
CAFI				AML	AML		
	comp=N,254µm,0.9s						
CAFI				AML	AML		
	comp=E,360µm,0.7s						
BRIS	**BRISIGHELLA**	**0.50**	**312**	P	Pg	05 20 02.1	-0.5
BRIS				S	Sg	05 20 09.8	+0.6
BRIS				AML	AML		
	comp=E,542µm,0.3s						
BRIS				AML	AML		
	comp=N,550µm,0.5s						
BRIS				AML	AML		
	comp=E,542µm,0.3s						
BRIS				AML	AML		
	comp=N,550µm,0.5s						
BRIS				AML	AML		
	comp=E,542µm,0.3s						
BRIS				AML	AML		
	comp=N,550µm,0.5s						
BRIS				AML	AML		
	comp=E,542µm,0.3s						
BRIS				AML	AML		
	comp=N,550µm,0.5s						
ATVO	**AVT- Monte Val**	**0.51**	**147**	P	Pg	05 20 03.2	+0.3
ATVO				S	Sb	05 20 11.6	-0.1
ATVO				AML	AML		
	comp=E,276µm,0.3s						
ATVO				AML	AML		
	comp=N,247µm,0.7s						
ATVO				AML	AML		

	comp=E,276µm,0.3s						
ATVO				AML	AML		
	comp=N,247µm,0.7s						
ATVO				AML	AML		
	comp=E,276µm,0.3s						
ATVO				AML	AML		
	comp=N,247µm,0.7s						
ATVO				AML	AML		
	comp=E,276µm,0.3s						
ATVO				AML	AML		
	comp=N,247µm,0.7s						
SEI	**Scarperia**	**0.54**	**296**	P	Pg	05 20 03.6	+0.2
SEI				S	Sb	05 20 11.7	-0.8
SEI				AML	AML		
	comp=E,500µm,0.3s						
SEI				AML	AML		
	comp=N,690µm,0.6s						
SEI				AML	AML		
	comp=E,500µm,0.3s						
SEI				AML	AML		
	comp=N,690µm,0.6s						
SEI				AML	AML		
	comp=E,500µm,0.3s						
SEI				AML	AML		
	comp=N,690µm,0.6s						
VLC	**Villacollemand**	**1.23**	**287**	AML	AML		
	comp=N,43µm,0.1s						
VLC				AML	AML		
	comp=E,32µm,0.1s						
VLC				AML	AML		
	comp=N,43µm,0.1s						
VLC				AML	AML		
	comp=N,43µm,0.1s						
VLC				AML	AML		
	comp=E,32µm,0.1s						
VLC				AML	AML		
	comp=E,32µm,0.1s						

GEN 11 05:20:10.5, 44°.19N×10°.16E, h3^{km}, Ml0.5, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.02**	**200**	P	Pg	05 20 11.3	+0.2
EQUI				S	Sg	05 20 11.9	+0.2
GRAM	**Graiana**	**0.31**	**347**	P	Pg	05 20 16.8	+0.3
GRAM				S	Sg	05 20 21.8	+1.1

NEIC 11 05:27:46.0±0.0**, 53°.88N×163°.87W, h42^{km}, ML3.5**(AEIC)**,**
After AEIC., Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**0.78**	**5**	*e*Pn	Pn	05 28 00.8	+0.3
WESP	**Westdahl Peak**	**0.80**	**321**	*e*Pn	Pn	05 28 01.2	+0.4
WESP				*e*Sn	Sn	05 28 12.9	+1.3
SSLS	**Shishaldin Sou**	**0.84**	**355**	*e*Pn	Pn	05 28 01.8	+0.3
WEBT	**Westdahl Beart**	**0.89**	**324**	*e*Pn	Pn	05 28 02.6	+0.6
SSBA	**Shishaldin**	**0.91**	**351**	*e*Pn	Pn	05 28 02.5	+0.1
SSBA				*e*Sn	Sn	05 28 15.4	+1.0
FALS	**False Pass**	**1.02**	**15**	*e*Pn	Pn	05 28 03.6	-0.1
FALS				*e*Sn	Sn	05 28 16.9	0.0
AKSA	**Akutan Strait**	**1.11**	**284**	*e*Pn	Pn	05 28 05.5	+0.4
AKSA				*e*Sn	Sn	05 28 20.1	+1.0
AKUT	**Akutan**	**1.15**	**284**	*e*Pn	Pn	05 28 06.3	+0.7
AKUT				*e*Sn	Sn	05 28 21.4	+1.3
AKRB	**Akutan Reef Bi**	**1.32**	**282**	*e*Pn	Pn	05 28 08.9	+1.0
UNV	**Unalaska Valle**	**1.56**	**270**	*e*Pn	Pn	05 28 11.2	0.0
UNV				*e*Sn	Sn	05 28 29.7	-0.4
MREP	**Makushin Rep’t**	**1.71**	**269**	*e*Pn	Pn	05 28 13.5	+0.3
MSW	**Makushin Switc**	**1.73**	**272**	*e*Pn	Pn	05 28 13.7	+0.2
MSW				*e*Sn	Sn	05 28 36.6	+2.3
DOL	**Dolgoi Island**	**1.73**	**42**	*e*Pn	Pn	05 28 14.0	+0.4
MCIR	**Makushin Cirqu**	**1.79**	**274**	*e*Pn	Pn	05 28 15.3	+0.9
PS4A	**Pavlof South-4**	**1.88**	**38**	*e*Pn	Pn	05 28 17.1	+1.5
PVV	**Pavlof Volcano**	**1.93**	**38**	*e*Pn	Pn	05 28 17.7	+1.5
SDPT	**Sand Point**	**2.46**	**52**	*e*Pn	Pn	05 28 24.4	+0.8
OKER	**Okmok East Rim**	**2.52**	**262**	*e*Pn	Pn	05 28 25.5	+1.0
CHGN	**Chignik**	**3.97**	**50**	*e*Pn	Pn	05 28 45.1	+1.0
SPIA	**Saint Paul Isl**	**4.91**	**315**	*e*Pn	Pn	05 28 58.6	+1.6
CHIR	**Chirikof Islan**	**5.15**	**64**	*e*Pn	Pn	05 28 59.8	-0.6
CHIA	**Chirikof Islan**	**5.18**	**64**	*e*Pn	Pn	05 28 59.8	-1.0
SII	**Sitkinak Islan**	**6.16**	**60**	*e*Pn	Pn	05 29 14.1	-0.2
ATKA	**Atka Island**	**6.45**	**259**	*e*Pn	Pn	05 29 17.1	-1.2
OHAK	**Old Harbor**	**6.88**	**57**	*e*Pn	Pn	05 29 24.0	0.0
KDAK	**Kodiak Island**	**7.46**	**54**	*e*Pn	Pn	05 29 31.1	-1.0
GSTR	**Great Sitkin T**	**7.57**	**261**	*e*Pn	Pn	05 29 33.4	-0.3
ADK	**Adak**	**8.01**	**261**	*e*Pn	Pn	05 29 39.9	+0.3
CNPM	**China Poot**	**8.96**	**46**	*e*Pn	Pn	05 29 52.6	0.0
TTA	**Tatalina**	**9.96**	**21**	*e*Pn	Pn	05 30 06.5	+0.1
KTH	**Kantishna Hill**	**11.78**	**29**	*e*Sn	Sn	05 32 46.7	+5.5
SCRK	**Sand Creek**	**14.34**	**37**	*e*P	P	05 31 10.3	-2.1

ROM 11 05:31:23.9±0.1**, 43°.816N**±0°.007×**12°.048E**±0°.006**,**
h9^{km}, Md1.4/2**, Error ellipse: s-maj=0.9km s-min=0.2km**
az=30.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.17**	**301**	P	Pg	05 31 28.0	+0.5
SFI				S	Sg	05 31 31.1	+1.1
SFI				AML	AML		
	comp=E,2650µm,0.8s						
SFI				AML	AML		
	comp=N,3805µm,0.4s						
SFI				AML	AML		
	comp=E,2650µm,0.8s						
SFI				AML	AML		
	comp=N,3810µm,0.4s						
SFI				AML	AML		
	comp=N,3810µm,0.4s						
SFI				AML	AML		
	comp=E,2650µm,0.8s						
SFI				END			
ASQU	**Asqua**	**0.19**	**264**	P	Pg	05 31 28.6	+0.7
ASQU				S	Sg	05 31 31.9	+1.3
ASQU				AML	AML		
	comp=E,3775µm,0.6s						
ASQU				AML	AML		
	comp=N,6400µm,0.2s						
ASQU				AML	AML		
	comp=E,3775µm,0.6s						
ASQU				AML	AML		
	comp=N,6400µm,0.2s						
ASQU				AML	AML		
	comp=N,6400µm,0.2s						
ASQU				AML	AML		
	comp=E,3775µm,0.6s						
ASQU				END			
CPGN	**Carpegna, Ital**	**0.20**	**94**	P	Pg	05 31 28.9	+0.9
CPGN				AML	AML		
	comp=E,3435µm,0.6s						
CPGN				AML	AML		
	comp=N,3780µm,1.6s						
CPGN				AML	AML		
	comp=E,3390µm,0.6s						
CPGN				AML	AML		
	comp=N,3635µm,1.6s						
CPGN				AML	AML		
	comp=E,3430µm,0.6s						
CPGN				AML	AML		
	comp=N,3780µm,1.6s						
CPGN				AML	AML		
	comp=E,3385µm,0.6s						
CPGN				AML	AML		
	comp=N,3650µm,1.6s						
CPGN				AML	AML		
	comp=N,3780µm,1.6s						
CPGN				AML	AML		
	comp=E,3385µm,0.6s						
CPGN				AML	AML		
	comp=E,3430µm,0.6s						
CPGN				AML	AML		
	comp=N,3650µm,1.6s						
PARC	**Parchiule**	**0.22**	**140**	P	Pg	05 31 28.8	+0.5
PARC				S	Sg	05 31 32.9	+1.5
PARC				AML	AML		
	comp=E,1450µm,0.5s						
PARC				AML	AML		
	comp=N,1665µm,0.5s						
PARC				AML	AML		
	comp=E,1450µm,0.5s						
PARC				AML	AML		
	comp=N,1665µm,0.5s						
PARC				AML	AML		
	comp=E,1450µm,0.5s						
PARC				AML	AML		
	comp=N,1665µm,0.5s						
BADI	**Badiali**	**0.34**	**155**	P	Pg	05 31 31.0	+0.4
BADI				S	Sb	05 31 36.7	-0.9
BADI				AML	AML		
	comp=E,1410µm,0.5s						
BADI				AML	AML		
	comp=N,952µm,0.1s						
BADI				AML	AML		
	comp=E,1410µm,0.5s						
BADI				AML	AML		
	comp=N,952µm,0.1s						
BADI				AML	AML		
	comp=N,952µm,0.1s						
BADI				AML	AML		
	comp=E,1410µm,0.5s						
RUFI	**Rufina**	**0.39**	**274**	P	Pg	05 31 31.9	+0.4
RUFI				S	Sb	05 31 38.4	-0.7
RUFI				AML	AML		
	comp=E,1341µm,0.3s						
RUFI				AML	AML		
	comp=N,1431µm,0.5s						
RUFI				AML	AML		
	comp=E,1340µm,0.3s						
RUFI				AML	AML		
	comp=N,1436µm,0.5s						
RUFI				AML	AML		
	comp=N,1436µm,0.5s						
RUFI				AML	AML		
	comp=E,1340µm,0.3s						
ATPI	**Pietralunga -**	**0.45**	**145**	P	Pg	05 31 32.9	+0.3
ATPI				AML	AML		
	comp=E,522µm,0.4s						
ATPI				AML	AML		
	comp=N,489µm,0.5s						
ATPI				AML	AML		
	comp=E,522µm,0.4s						
ATPI				AML	AML		
	comp=N,488µm,0.5s						
ATPI				AML	AML		
	comp=N,488µm,0.5s						
ATPI				AML	AML		
	comp=E,522µm,0.4s						
CAFI	**Castiglion Fio**	**0.49**	**187**	P	Pb	05 31 34.1	-0.5
CAFI				AML	AML		
	comp=E,816µm,0.6s						
CAFI				AML	AML		
	comp=N,480µm,0.8s						
CAFI				AML	AML		
	comp=N,480µm,0.8s						
CAFI				AML	AML		
	comp=E,816µm,0.6s						
ATVO	**AVT- Monte Val**	**0.51**	**149**	P	Pg	05 31 34.1	+0.4
ATVO				S	Sb	05 31 42.2	-0.2
ATVO				AML	AML		
	comp=E,584µm,0.6s						
ATVO				AML	AML		
	comp=N,600µm,0.8s						
ATVO				AML	AML		
	comp=E,584µm,0.6s						
ATVO				AML	AML		
	comp=N,600µm,0.8s						
SEI	**Scarperia**	**0.55**	**296**	AML	AML		
	comp=E,1750µm,0.3s						
SEI				AML	AML		
	comp=N,2545µm,0.4s						
SEI				AML	AML		
	comp=E,1750µm,0.3s						
SEI				AML	AML		
	comp=N,2545µm,0.4s						
SEI				AML	AML		
	comp=N,2545µm,0.4s						
SEI				AML	AML		
	comp=E,1750µm,0.3s						

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*ISCJB **11** 05:31:39.3±0.3, 43°.81N±0°.03×11°.97E±0°.02, h23^{km}±2^{km},*
Error ellipse: s-maj=4.9km s-min=2.3km az=18.2
*ROM **11** 05:31:39.1±0.1, 43°.827N±0°.005×12°.044E±0°.006,*
h8^{km}, ML2.5/22, Error ellipse: s-maj=0.7km s-min=0.2km
az=219.0
*LDG **11** 05:31:39.0±0.2, 43°.89N×12°.09E, h2^{km}, Md2.6/2, Ml2.7/10,*
Error ellipse: s-maj=3.7km s-min=1.5km az=47.0
ISC 11 05:31:38.2±0.9**, 43°.91N**±0°.03×**12°.12E**±0°.02**, h19**^{km}±2^{km}**,**
n42, σ**1ˢ.37**/63**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPGN	**Carpegna, Ital**	**0.18**	**125**	AML	AML		
	comp=N,3650µm,1.6s						
CPGN				AML	AML		
	comp=E,3435µm,0.6s						
CPGN				AML	AML		
	comp=N,3780µm,1.6s						
CPGN				AML	AML		
	comp=E,3390µm,0.6s						
CPGN				AML	AML		
	comp=N,3635µm,1.6s						
CPGN				AML	AML		
	comp=E,3435µm,0.6s						
CPGN				AML	AML		
	comp=N,3780µm,1.6s						
CPGN				AML	AML		
	comp=E,3385µm,0.6s						
CPGN				AML	AML		
	comp=N,3650µm,1.6s						
CPGN				AML	AML		
	comp=E,3385µm,0.6s						
CPGN				AML	AML		
	comp=N,3780µm,1.6s						
CPGN				AML	AML		
	comp=E,3435µm,0.6s						
CPGN				AML	AML		
	comp=E,3385µm,0.6s						
CPGN				AML	AML		
	comp=N,3780µm,1.6s						
CPGN				AML	AML		
	comp=N,3650µm,1.6s						
CPGN				AML	AML		
	comp=E,3435µm,0.6s						
SFI	**Santa Sofia**	**0.19**	**270**	P	**Pg**	**05 31 42.9**	**-0.3**
SFI				S	**Sg**	**05 31 46.0**	**-0.7**
SFI				AML	AML		
	comp=E,2650µm,0.8s						
SFI				AML	AML		
	comp=N,3805µm,0.4s						
SFI				AML	AML		
	comp=E,2650µm,0.8s						
SFI				AML	AML		
	comp=N,3810µm,0.4s						
SFI				AML	AML		
	comp=N,3810µm,0.4s						
SFI				AML	AML		
	comp=E,2650µm,0.8s						
SFI				AML	AML		
	comp=N,3810µm,0.4s						
SFI				AML	AML		
	comp=E,2655µm,0.8s						
ASQU	**Asqua**	**0.26**	**246**	P	**Pb**	**05 31 43.6**	**-0.6**
ASQU				S	**Sb**	**05 31 47.1**	**-1.0**
ASQU				AML	AML		
	comp=E,3775µm,0.6s						
ASQU				AML	AML		
	comp=N,6400µm,0.2s						
ASQU				AML	AML		
	comp=N,6400µm,0.2s						
ASQU				AML	AML		
	comp=E,3775µm,0.6s						
ASQU				AML	AML		
	comp=N,6400µm,0.2s						
ASQU				AML	AML		
	comp=E,3775µm,0.6s						
PARC	**Parchiule**	**0.27**	**161**	P	**Pg**	**05 31 44.2**	**-0.2**
PARC				S	**Sb**	**05 31 48.4**	**-0.1**
PARC				AML	AML		
	comp=E,1450µm,0.5s						
PARC				AML	AML		
	comp=N,1665µm,0.5s						
PARC				AML	AML		
	comp=E,1450µm,0.5s						
PARC				AML	AML		
	comp=N,1665µm,0.5s						
PARC				AML	AML		
	comp=E,1450µm,0.5s						
PARC				AML	AML		
	comp=N,1665µm,0.5s						
PARC				AML	AML		
	comp=E,1450µm,0.5s						
PARC				AML	AML		
	comp=N,1665µm,0.5s						
SSP9	**Sansepolcro**	**0.33**	**178**	P	**Pg**	**05 31 45.1**	**-0.3**
SSP9				S	**Sg**	**05 31 49.8**	**-0.4**
SSP9				AML	AML		
	comp=E,1029µm,1.5s						
SSP9				AML	AML		
	comp=N,1152µm,0.5s						
BADI	**Badiali**	**0.41**	**167**	P	**Pg**	**05 31 46.4**	**-0.3**
BADI				S	**Sb**	**05 31 52.3**	**-0.4**
BADI				AML	AML		
	comp=E,1410µm,0.5s						
BADI				AML	AML		
	comp=N,952µm,0.1s						
BADI				AML	AML		
	comp=E,1410µm,0.5s						
BADI				AML	AML		
	comp=N,952µm,0.1s						
BADI				AML	AML		
	comp=N,952µm,0.1s						
BADI				AML	AML		
	comp=E,1410µm,0.5s						
BADI				AML	AML		
	comp=N,952µm,0.1s						
BADI				AML	AML		
	comp=E,1415µm,0.5s						
RUFI	**Rufina**	**0.44**	**262**	P	**Pg**	**05 31 47.0**	**-0.4**
RUFI				S	**Sg**	**05 31 53.3**	**-0.2**
RUFI				AML	AML		
	comp=E,1341µm,0.3s						
RUFI				AML	AML		
	comp=N,1431µm,0.5s						
RUFI				AML	AML		
	comp=E,1340µm,0.3s						
RUFI				AML	AML		
	comp=N,1436µm,0.5s						
RUFI				AML	AML		
	comp=N,1436µm,0.5s						
RUFI				AML	AML		
	comp=E,1340µm,0.3s						
RUFI				AML	AML		
	comp=N,1435µm,0.5s						
RUFI				AML	AML		
	comp=E,1340µm,0.3s						
NARO	**Abbazia di Nar**	**0.45**	**131**	P	**Pb**	**05 31 47.8**	**+0.3**
NARO				S	**Sb**	**05 31 55.5**	**+1.6**
NARO				AML	AML		
	comp=E,256µm,0.5s						
NARO				AML	AML		
	comp=N,326µm,0.9s						
NARO				AML	AML		
	comp=E,255µm,0.5s						
NARO				AML	AML		
	comp=N,326µm,0.9s						
NARO				AML	AML		
	comp=E,255µm,0.5s						
NARO				AML	AML		
	comp=N,326µm,0.9s						
NARO				AML	AML		
	comp=E,255µm,0.5s						
NARO				AML	AML		
	comp=N,326µm,0.9s						
ATPI	**Pietralunga -**	**0.50**	**155**	P	**Pb**	**05 31 48.4**	**0.0**
ATPI				S	**Sb**	**05 31 55.7**	**+0.4**
ATPI				AML	AML		
	comp=E,522µm,0.4s						
ATPI				AML	AML		
	comp=N,488µm,0.5s						
ATPI				AML	AML		
	comp=N,488µm,0.5s						
ATPI				AML	AML		
	comp=E,522µm,0.4s						
ATPI				AML	AML		
	comp=N,489µm,0.5s						
ATPI				AML	AML		
	comp=E,522µm,0.4s						
BRIS	**BRISIGHELLA**	**0.50**	**300**	P	**Pg**	**05 31 48.4**	**0.0**
BRIS				S	**Sb**	**05 31 56.1**	**+0.9**
BRIS				AML	AML		
	comp=E,1068µm,0.5s						
BRIS				AML	AML		
	comp=N,1120µm,0.7s						
BRIS				AML	AML		
	comp=N,1120µm,0.7s						
BRIS				AML	AML		
	comp=E,1068µm,0.5s						
BRIS				AML	AML		
	comp=N,1120µm,0.7s						
BRIS				AML	AML		
	comp=E,1068µm,0.5s						
PESA	**Pesaro**	**0.53**	**86**	P	**Pn**	**05 31 51.0**	**+0.4**
PESA				AML	AML		
	comp=E,568µm,0.4s						
PESA				AML	AML		
	comp=N,606µm,0.3s						
PESA				AML	AML		
	comp=N,606µm,0.3s						
PESA				AML	AML		
	comp=E,568µm,0.4s						
PESA				AML	AML		
	comp=N,606µm,0.3s						
PESA				AML	AML		
	comp=E,568µm,0.4s						
MPAG	**Monte Paganucc**	**0.54**	**120**	P	**Pn**	**05 31 50.4**	**-0.6**
MPAG				S	**Sn**	**05 31 59.0**	**-0.6**
MPAG				AML	AML		
	comp=E,231µm,0.6s						
MPAG				AML	AML		
	comp=N,305µm,0.3s						
MPAG				AML	AML		
	comp=N,305µm,0.3s						
MPAG				AML	AML		
	comp=E,231µm,0.6s						
MPAG				AML	AML		
	comp=N,305µm,0.3s						
MPAG				AML	AML		
	comp=E,231µm,0.6s						
ATVO	**AVT- Monte Val**	**0.56**	**158**	P	**Pb**	**05 31 49.5**	**+0.1**
ATVO				S	**Sb**	**05 31 57.9**	**+0.9**
ATVO				AML	AML		
	comp=E,584µm,0.6s						
ATVO				AML	AML		
	comp=N,600µm,0.8s						
ATVO				AML	AML		
	comp=E,584µm,0.6s						
ATVO				AML	AML		
	comp=N,600µm,0.8s						
ATVO				AML	AML		
	comp=E,584µm,0.6s						
ATVO				AML	AML		
	comp=N,600µm,0.8s						
SEI	**Scarperia**	**0.57**	**286**	P	**Pg**	**05 31 49.9**	**+0.3**
SEI				S	**Sb**	**05 31 58.6**	**+1.5**
CAFI	**Castiglion Fio**	**0.58**	**191**	P	**Pb**	**05 31 49.4**	**-0.3**
CAFI				S	**Sg**	**05 31 57.3**	**-0.5**
CAFI				AML	AML		
	comp=E,816µm,0.6s						
CAFI				AML	AML		
	comp=N,480µm,0.8s						
CAFI				AML	AML		
	comp=E,816µm,0.6s						
CAFI				AML	AML		
	comp=N,480µm,0.8s						
CAFI				AML	AML		
	comp=N,480µm,0.8s						
CAFI				AML	AML		
	comp=E,816µm,0.6s						
CAFI				AML	AML		
	comp=N,480µm,0.8s						
CAFI				AML	AML		
	comp=E,816µm,0.6s						
FRON	**Frontone**	**0.59**	**131**	P	**Pg**	**05 31 50.8**	**+0.8**
FRON				S	**Sn**	**05 31 59.8**	**-0.8**
FRON				AML	AML		
	comp=E,261µm,0.6s						
FRON				AML	AML		
	comp=N,311µm,0.8s						
FRON				AML	AML		
	comp=E,261µm,0.6s						
FRON				AML	AML		
	comp=N,311µm,0.8s						
FRON				AML	AML		
	comp=E,261µm,0.6s						
FRON				AML	AML		

	comp=N,311µm,0.8s						
ATTE	**AVT- Monte Tez**	**0.73**	**166**	P	**Pg**	**05 31 52.5**	**0.0**
ATTE				AML	AML		
	comp=E,435µm,0.3s						
ATTE				AML	AML		
	comp=N,438µm,0.5s						
ATTE				AML	AML		
	comp=E,435µm,0.3s						
ATTE				AML	AML		
	comp=N,438µm,0.5s						
ATTE				AML	AML		
	comp=E,435µm,0.3s						
ATTE				AML	AML		
	comp=N,438µm,0.5s						
CSNT	**Castellina Chi**	**0.74**	**234**	AML	AML		
	comp=E,514µm,0.5s						
CSNT				AML	AML		
	comp=E,514µm,0.5s						
CSNT				AML	AML		
	comp=N,720µm,0.6s						
CSNT				AML	AML		
	comp=N,720µm,0.6s						
CSNT				AML	AML		
	comp=E,514µm,0.5s						
CSNT				AML	AML		
	comp=N,720µm,0.6s						
PTF	**Prato**	**0.76**	**275**	P	**Pg**	**05 31 53.2**	**+0.1**
ATCC	**AVT- Casa Cast**	**0.81**	**152**	P	**Pn**	**05 31 54.7**	**0.0**
ATCC				AML	AML		
	comp=E,636µm,0.9s						
ATCC				AML	AML		
	comp=N,316µm,0.9s						
ATCC				AML	AML		
	comp=E,636µm,0.9s						
ATCC				AML	AML		
	comp=N,316µm,0.9s						
ATCC				AML	AML		
	comp=E,636µm,0.9s						
ATCC				AML	AML		
	comp=N,316µm,0.9s						
MTCR	**Monte La Croce**	**0.82**	**279**	P	**Pg**	**05 31 54.5**	**+0.2**
MTCR				AML	AML		
	comp=E,333µm,0.5s						
MTCR				AML	AML		
	comp=N,333µm,0.4s						
MTCR				AML	AML		
	comp=N,333µm,0.4s						
MTCR				AML	AML		
	comp=E,333µm,0.5s						
MTCR				AML	AML		
	comp=N,333µm,0.4s						
MTCR				AML	AML		
	comp=E,333µm,0.5s						
CRMI	**Carmignano**	**0.84**	**263**	P	**Pg**	**05 31 54.5**	**-0.1**
CRMI				AML	AML		
	comp=E,132µm,0.7s						
CRMI				AML	AML		
	comp=N,103µm,1.4s						
CRMI				AML	AML		
	comp=N,103µm,1.4s						
CRMI				AML	AML		
	comp=E,132µm,0.7s						
CRMI				AML	AML		
	comp=N,103µm,1.4s						
CRMI				AML	AML		
	comp=E,132µm,0.7s						
SNTG	**Esanatoglia**	**0.88**	**137**	AML	AML		
	comp=E,174µm,0.7s						
SNTG				AML	AML		
	comp=E,174µm,0.7s						
SNTG				AML	AML		
	comp=N,228µm,0.7s						
SNTG				AML	AML		
	comp=E,174µm,0.7s						
SNTG				AML	AML		
	comp=N,228µm,0.7s						
SNTG				AML	AML		
	comp=N,228µm,0.7s						
SACS	**San Casciano d**	**1.07**	**188**	AML	AML		
	comp=N,264µm,1.0s						
SACS				AML	AML		
	comp=E,276µm,0.8s						
SACS				AML	AML		
	comp=N,264µm,1.0s						
SACS				AML	AML		
	comp=E,276µm,0.8s						
SACS				AML	AML		
	comp=N,264µm,1.0s						
SACS				AML	AML		
	comp=E,276µm,0.8s						
CSP1	**Cessapalombo**	**1.14**	**135**	AML	AML		
	comp=E,231µm,0.5s						
CSP1				AML	AML		
	comp=N,325µm,0.5s						
CSP1				AML	AML		
	comp=E,231µm,0.5s						
CSP1				AML	AML		
	comp=N,325µm,0.5s						
CSP1				AML	AML		
	comp=E,231µm,0.5s						
CSP1				AML	AML		
	comp=N,325µm,0.5s						
NVLJ	**Novalja**	**2.09**	**71**	*e*Pn	**Pb**	**05 32 14.7**	**-0.7**
NVLJ				Sn	**Sb**	**05 32 43.0**	**+2.0**
DUGI	**Dugi Otok**	**2.13**	**87**	*e*Pn	**Pb**	**05 32 15.6**	**-0.6**
DUGI				Sn	**Sb**	**05 32 43.2**	**+1.0**
ZIRJ	**Zirje**	**2.57**	**94**	*e*Pn	**Pb**	**05 32 23.4**	**-0.2**
ZIRJ				Sn	**Sb**	**05 32 54.0**	**-0.7**
MORI	**Morici**	**2.60**	**90**	*e*Pn	**Pb**	**05 32 24.0**	**-0.1**
MORI				Sn	**Sb**	**05 32 55.7**	**0.0**
PGF	**Pioggiola**	**2.65**	**240**	*e*Pn	**Pn**	**05 32 20.5**	**+0.5**
PGF				*e*Sn	**Sn**	**05 32 50.4**	**-1.2**
	comp=N,8.0nm,0.3s						
KIJV	**Kijevo**	**3.10**	**87**	*e*Pn	**Pn**	**05 32 27.4**	**+1.4**
KIJV				Sn	**Sb**	**05 33 07.3**	**-2.8**
OBKA	**Obir**	**3.12**	**33**	Pg	Pg	05 32 38.7	+0.6
	comp=N,1.1nm,0.3s						
OBKA				Sg	Sg	05 33 24.6	+6.1
	comp=N,10nm,0.5s						
KBA	**Koelnbreinsper**	**3.29**	**15**	*e*Pn	**Pb**	**05 32 33.1**	**-2.9**
	comp=N,0.9nm,0.4s						
SBF	**Sospel**	**3.38**	**271**	*e*Pn	**Pn**	**05 32 30.1**	**+0.1**
SBF				*e*Sn	**Sn**	**05 33 08.6**	**-1.1**
	comp=N,8.6nm,0.4s						
DAVA	**Damuels**	**3.73**	**336**	*e*Pn	**Pb**	**05 32 42.9**	**-0.6**
	comp=N,1.8nm,0.2s						
DAVA				Sn	**Sb**	**05 33 27.0**	**-1.4**
	comp=N,7.4nm,0.6s						
MBDF	**Montbardon**	**3.92**	**284**	*e*Pn	**Pn**	**05 32 38.1**	**+0.6**
MBDF	**Montbardon**	**3.92**	**284**	*e*Pg	Pg	05 32 51.0	-2.4
MBDF				*e*Sn	**Sn**	**05 33 22.0**	**-1.1**
	comp=N,7.7nm,0.7s						
FRF	**La Foret Royal**	**3.98**	**267**	*e*Pn	**Pn**	**05 32 38.9**	**+0.8**
FRF				*e*Sn	**Sn**	**05 33 22.9**	**-1.3**
	comp=N,7.2nm,0.5s						
LMR	**La Mourre**	**4.11**	**264**	*e*Pn	**Pn**	**05 32 40.3**	**+0.4**
LMR				*e*Sn	**Sn**	**05 33 25.9**	**-1.6**
	comp=N,2.6nm,0.4s						
LPG	**La Plagne**	**4.14**	**294**	*e*P	**Pn**	**05 32 45.3**	**+4.6**
LPG				*e*Sn	**Sn**	**05 33 27.3**	**-1.4**
	comp=N,2.5nm,0.4s						
LPL	**La Plagne**	**4.16**	**295**	*e*P	**Pn**	**05 32 44.8**	**+3.9**
LPL				*e*Sn	**Sn**	**05 33 27.7**	**-1.4**
	comp=N,4.8nm,0.5s						
ORIF	**Oris-en-Rattie**	**4.58**	**285**	*e*P	**Pn**	**05 32 51.0**	**+4.5**
ORIF				*e*Sn	**Sn**	**05 33 37.9**	**-1.3**
	comp=N,2.5nm,0.4s						

IDC 11 05:38:01.3±3.1**, 7°.47S**×**156°.69E, h418**^{km}±30^{km}**, mb3.2**/8**,**
mb1 3.4/9**, mb1mx3.2**/29**, mbtmp4.1**/9**, Error ellipse:**
s-maj=25.9km s-min=13.9km az=112.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAY	**Jayapura**	**16.66**	**286**	P	P	05 41 30.8	-0.4
	1.4nm,0.3s,baz=148,slow=5.1,SNR=5.1						
WRA	**Warramunga Arr**	**24.96**	**238**	P	P	05 42 49.9	+0.4
	2.4nm,0.3s,baz=69,slow=9.2,SNR=73						
WRA				PcP	PcP	05 46 12.3	+0.5
	0.9nm,0.6s,baz=53,slow=4.6,SNR=4.5						
ASAR	**Alice Springs**	**27.15**	**231**	P	P	05 43 08.3	-0.6
	0.9nm,0.5s,baz=63,slow=9.0,SNR=11						
ASAR				PcP	PcP	05 46 17.1	+0.2
	0.1nm,0.5s,baz=80,slow=2.6,SNR=4.1						
ASAR				S	S	05 47 17.0	+0.2
	0.3nm,0.7s,baz=47,slow=17,SNR=3.5						
KSRS	**Korea Array**	**52.15**	**331**	P	P	05 46 31.4	+0.3
	1.0nm,0.7s,baz=146,slow=8.8,SNR=3.7						
VNDA	**Vanda**	**70.07**	**179**	P	P	05 48 29.4	+0.3
	0.5nm,0.8s,baz=0.0,slow=7.1,SNR=3.2						
SONM	**Songino Array**	**70.65**	**327**	P	P	05 48 33.7	+0.5
	1.0nm,0.8s,baz=134,slow=5.1,SNR=5.3						
ILAR	**Eielson Array**	**83.20**	**21**	P	P	05 49 40.4	-1.5
	0.3nm,0.4s,baz=250,slow=4.9,SNR=6.7						
MKAR	**Makanchi Array**	**84.87**	**318**	P	P	05 49 51.0	+0.5
	1.3nm,0.5s,baz=95,slow=5.7,SNR=14						
ZALV	**Zalesovo Beam**	**85.51**	**326**	P	P	05 49 52.7	-0.7
	0.9nm,0.3s,baz=103,slow=4.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**154.77**	**285**	PKPbc	PKiKP	05 57 14.4	-0.5
	0.2nm,0.5s,baz=96,slow=1.4,SNR=2.6						
TORD				PKPab	PKPab	05 57 31.7	-0.3
	0.1nm,0.5s,baz=71,slow=4.6,SNR=4.6						

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*JMA **11** 05:44:22.4±0.1, 24°.27N×121°.52E, h30^{km}±2^{km}, M2.7*
*ISCJB **11** 05:44:23.6±0.2, 24°.33N±0°.01×121°.67E±0°.02, h23^{km}±2^{km},*
Error ellipse: s-maj=2.5km s-min=1.7km az=30.5
*TAP **11** 05:44:23.1, 24°.33N×121°.64E, h24^{km}, ML3.5, B*
ISC 11 05:44:23.6±0.8**, 24°.34N**±0°.01×**121°.65E**±0°.02**, h18**^{km}±2^{km}**,**
n103, σ0^{s}**71**/157**, 8C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.12**	**46**	⇑*i*P	**Pg**	**05 44 28.2**	**+0.7**
	baz=47						
ENA				*i* S	**Sg**	**05 44 31.4**	**+1.3**
	baz=47						
NANB	**Nanao**	**0.13**	**49**	⇑P	**Pg**	**05 44 28.2**	**+0.6**
	baz=46						
NANB				S	**Sg**	**05 44 31.4**	**+1.1**
	baz=46						
NACB	**Ninganchiao**	**0.18**	**195**	⇑P	**Pb**	**05 44 28.2**	**+0.3**
	baz=195						
NACB				S	**Sg**	**05 44 31.6**	**+0.3**
	baz=195						
ETLH	**Xiulin Townshi**	**0.20**	**228**	⇑P	**Pb**	**05 44 29.0**	**+0.4**
	baz=229						
ETLH				S	**Sg**	**05 44 32.8**	**+0.7**
	baz=229						
NNSB	**Datong**	**0.25**	**289**	⇓P	**Pb**	**05 44 29.7**	**+0.1**
	baz=298						
NNSB				S	**Sb**	**05 44 33.9**	**+0.2**
	baz=298						
NNS	**Nan Shan**	**0.27**	**291**	⇓*i*P	**Pb**	**05 44 29.8**	**0.0**
	baz=299						
NNS				S	**Sg**	**05 44 34.5**	**+0.7**
	baz=299						
TWD	**Chiawan**	**0.27**	**190**	⇑*i*P	**Pb**	**05 44 29.3**	**-0.5**
	baz=187						
TWD				S	**Sb**	**05 44 34.3**	**+0.3**
	baz=187						
NDT	**Datong Townshi**	**0.28**	**335**	⇓*i*P	**Pg**	**05 44 30.3**	**+0.3**
	baz=341						
NDT				S	**Sb**	**05 44 35.0**	**+0.4**
	baz=341						
ENTT	**Nioudou**	**0.30**	**346**	⇓*i*P	**Pg**	**05 44 30.6**	**+0.3**
	baz=352						
ENTT				*i* S	**Sg**	**05 44 35.5**	**+0.8**
	baz=352						
TWC	**Suao**	**0.32**	**35**	⇑*i*P	**Pg**	**05 44 30.8**	**+0.3**
	baz=36						
TWC				S	**Sg**	**05 44 35.9**	**+0.6**
	baz=36						
HWA	**Hwalien**	**0.37**	**186**	P	**Pg**	**05 44 31.6**	**+0.3**
	baz=184						
TWE	**Neicheng**	**0.38**	**3**	⇓*i*P	**Pg**	**05 44 31.7**	**+0.2**
	baz=9.0						
TWE				S	**Sg**	**05 44 37.2**	**+0.4**
	baz=9.0						
WHF	**Hehuan Shan**	**0.40**	**240**	⇑*i*P	**Pg**	**05 44 32.1**	**0.0**
	baz=241						
WHF				S	**Sg**	**05 44 38.0**	**+0.2**
	baz=241						
YHNB	**Yeheng**	**0.41**	**323**	⇓P	**Pg**	**05 44 32.1**	**0.0**
	baz=324						
YHNB				S	**Sg**	**05 44 38.0**	**+0.2**
	baz=324						
NSK	**Sanguang**	**0.42**	**322**	⇓*i*P	**Pg**	**05 44 32.3**	**0.0**
	baz=324						
NSK				S	**Sg**	**05 44 38.1**	**-0.1**
	baz=324						
ILA	**Ilan**	**0.43**	**12**	P	**Pg**	**05 44 32.7**	**+0.3**
	baz=9.0						
ILA				S	**Sg**	**05 44 39.1**	**+0.7**
	baz=9.0						
TWT	**Tachien**	**0.44**	**258**	P	**Pg**	**05 44 32.6**	**0.0**
	baz=256						
TWT				S	**Sg**	**05 44 38.8**	**0.0**
	baz=256						
TDCB	**Techi**	**0.45**	**259**	⇓P	**Pg**	**05 44 32.9**	**0.0**
	baz=257						
TDCB				S	**Sg**	**05 44 38.7**	**-0.5**
	baz=257						
EOS1	**EOS1**	**0.48**	**65**	*e*P	**Pg**	**05 44 34.2**	**+0.8**
	baz=58						
CHGB	**Renai**	**0.52**	**237**	P	**Pg**	**05 44 33.8**	**-0.3**
	baz=238						
CHGB				*e*S	**Sg**	**05 44 41.3**	**+0.2**
	baz=238						
NTC	**Toucheng**	**0.54**	**18**	*e*P	**Pb**	**05 44 34.1**	**-0.4**
	baz=18						
NTC				S	**Sb**	**05 44 42.3**	**+0.5**
	baz=18						
ESL	**Shilin**	**0.56**	**200**	*e*P	**Pb**	**05 44 33.4**	**-1.5**
	baz=199						
WLTB	**Daxi**	**0.62**	**325**	P	**Pg**	**05 44 36.5**	**+0.6**
	baz=325						
TWA	**Mucha**	**0.64**	**355**	P	**Pb**	**05 44 36.0**	**-0.2**
	baz=2.0						
TWA				S	**Sb**	**05 44 44.8**	**0.0**
	baz=2.0						
WHP	**Taichung City**	**0.64**	**264**	⇓*i*P	**Pb**	**05 44 36.2**	**-0.1**
	baz=265						
WHP				*e*S	**Sb**	**05 44 44.6**	**-0.4**
	baz=265						
TATO	**Taipei**	**0.65**	**347**	⇓P	**Pb**	**05 44 36.1**	**-0.2**
	baz=352						
TATO				*e*S	**Sb**	**05 44 44.5**	**-0.5**
	baz=352						
TIPB	**Shuangxi**	**0.65**	**15**	⇓*i*P	**Pb**	**05 44 36.0**	**-0.3**
	baz=7.0						
TIPB				S	**Sb**	**05 44 44.6**	**-0.5**
	baz=7.0						
LIOB	**Emei**	**0.65**	**298**	⇓*i*P	**Pb**	**05 44 36.6**	**+0.2**
	baz=292						
LIOB				S	**Sb**	**05 44 45.3**	**+0.2**
	baz=292						
NSTT	**Nanjuang**	**0.65**	**296**	⇓*i*P	**Pb**	**05 44 36.4**	**-0.1**
	baz=297						
NSTT				S	**Sb**	**05 44 45.0**	**-0.2**
	baz=297						
EGFH	**Guangfu**	**0.70**	**197**	*e*P	**Pb**	**05 44 36.5**	**-0.8**
	baz=196						
TAP	**Taipei**	**0.70**	**350**	*e*P	**Pb**	**05 44 37.6**	**+0.3**
	baz=350						
TAP				*e*S	**Sb**	**05 44 47.1**	**+0.4**
	baz=350						
DPDB	**Guoxing**	**0.73**	**245**	*e*P	**Pb**	**05 44 37.5**	**-0.3**
	baz=245						
NWF	**Wu-fen Shan**	**0.73**	**10**	P	**Pb**	**05 44 37.9**	**0.0**
	baz=9.0						
NWF				S	**Sb**	**05 44 48.1**	**+0.4**
	baz=9.0						
WFSB	**Wu-fen Shan**	**0.73**	**10**	P	**Pb**	**05 44 37.9**	**0.0**
	baz=9.0						
WFSB				S	**Sb**	**05 44 48.0**	**+0.4**
	baz=9.0						
VWDT	**VWDT**	**0.75**	**218**	*e*P	**Pb**	**05 44 37.5**	**-0.6**
	baz=223						
VWDT				*e*S	**Sb**	**05 44 47.7**	**-0.2**
	baz=223						
SBCB	**Hsinchu**	**0.75**	**307**	P	**Pg**	**05 44 38.8**	**+0.5**
	baz=307						
SBCB				*e*S	**Sn**	**05 44 50.3**	**0.0**
	baz=307						
NCU	**National Centr**	**0.75**	**326**	P	**Pb**	**05 44 38.6**	**+0.5**
	baz=327						
NCU				S	**Sn**	**05 44 50.0**	**-0.2**
	baz=327						
NCUH	**Zhongli**	**0.75**	**326**	*e*P	**Pb**	**05 44 38.3**	**+0.2**
	baz=326						
NCUH				*e*S	**Sg**	**05 44 49.4**	**+1.1**
	baz=326						
HSN	**Hsinchu**	**0.77**	**307**	P	**Pb**	**05 44 38.7**	**+0.3**
	baz=311						
HSN				S	**Sn**	**05 44 50.4**	**-0.2**
	baz=311						
TWS1	**Kuangyinshan**	**0.78**	**345**	P	**Pb**	**05 44 39.2**	**+0.5**
	baz=357						
TWS1				S	**Sg**	**05 44 50.6**	**+1.3**
	baz=357						
YM01	**YM01**	**0.80**	**355**	P	**Pb**	**05 44 39.1**	**+0.1**
	baz=343						
YM01				S	**Sb**	**05 44 49.7**	**+0.1**
	baz=343						
NMLH	**Miaoli**	**0.80**	**284**	*e*P	**Pn**	**05 44 40.4**	**+0.3**
	baz=284						
NSY	**Sanyi**	**0.81**	**275**	*e*P	**Pb**	**05 44 39.7**	**+0.5**
	baz=276						
YM10	**YM10**	**0.81**	**355**	P	**Pb**	**05 44 39.5**	**+0.2**
	baz=354						
YM10				S	**Sb**	**05 44 50.1**	**+0.2**
	baz=354						
YM05	**YM05**	**0.82**	**355**	P	**Pb**	**05 44 39.2**	**-0.2**
	baz=354						
YM05				S	**Sb**	**05 44 50.1**	**0.0**
	baz=354						
SMLT	**Sun Moon Lake**	**0.82**	**236**	*e*P	**Pb**	**05 44 38.9**	**-0.6**
	baz=237						
SMLT				*e*S	**Sb**	**05 44 49.3**	**-0.9**
	baz=237						
NTST	**Danshui**	**0.84**	**348**	*e*P	**Pb**	**05 44 39.7**	**0.0**
	baz=359						
NTST				*e*S	**Sg**	**05 44 52.1**	**+1.1**
	baz=359						
YM03	**YM03**	**0.84**	**353**	*e*P	**Pb**	**05 44 39.7**	**0.0**
	baz=353						
YM03				*e*S	**Sb**	**05 44 50.5**	**-0.1**
	baz=353						
SSLB	**Suanglung**	**0.84**	**229**	*e*P	**Pb**	**05 44 39.0**	**-0.7**
	baz=230						
SSLB				*e*S	**Sb**	**05 44 50.4**	**-0.3**
	baz=230						
YM08	**YM08**	**0.84**	**357**	P	**Pb**	**05 44 39.5**	**-0.2**
	baz=345						
YM08				*e*S	**Sb**	**05 44 50.1**	**-0.6**
	baz=345						
TYC	**Yuchr**	**0.84**	**239**	⇑P	**Pb**	**05 44 39.5**	**-0.2**
	baz=239						
TYC				*e*S	**Sb**	**05 44 51.0**	**+0.3**
	baz=239						
ANP	**Anpu**	**0.85**	**352**	*e*P	**Pb**	**05 44 39.5**	**-0.4**
	baz=351						
PTSB	**Yuanli**	**0.86**	**277**	P	**Pg**	**05 44 40.8**	**+0.4**
	baz=278						
PTSB				S	**Sn**	**05 44 52.9**	**-0.1**
	baz=278						
HGSD	**Ruisui**	**0.87**	**194**	*e*P	**Pb**	**05 44 38.5**	**-1.7**
	baz=203						
EHY	**Hungye**	**0.89**	**200**	*e*P	**Pb**	**05 44 39.4**	**-1.1**
	baz=191						
TCU	**Taichung**	**0.91**	**258**	*e*P	**Pb**	**05 44 41.5**	**+0.7**
	baz=258						
WDJ	**Dajia District**	**0.92**	**270**	*e*P	**Pb**	**05 44 41.6**	**+0.6**
	baz=271						
TWY	**Chenhua**	**0.93**	**357**	*e*P	**Pb**	**05 44 41.9**	**+0.7**
	baz=346						
WHYT	**Xinyi Township**	**0.97**	**229**	*e*P	**Pb**	**05 44 42.0**	**0.0**
	baz=229						
WJS	**Zhushan**	**0.99**	**238**	*e*P	**Pb**	**05 44 42.7**	**+0.5**
	baz=232						
WNT	**Mingjian**	**0.99**	**242**	*e*P	**Pn**	**05 44 43.1**	**+0.5**
	baz=255						
YULB	**Yu-li**	**1.00**	**199**	*e*P	**Pb**	**05 44 41.0**	**-1.4**
	baz=199						
WCHH	**Zhanghua**	**1.03**	**255**	*e*P	**Pn**	**05 44 43.5**	**+0.3**
	baz=256						
WCHH				*e*S	**Sg**	**05 44 58.9**	**+1.8**
	baz=256						
TWF1	**Yuli**	**1.04**	**198**	*e*P	**Pb**	**05 44 42.4**	**-0.7**
	baz=198						
YUS	**Yu-Shan**	**1.06**	**217**	*e*P	**Pb**	**05 44 42.6**	**-1.2**
	baz=224						
ALS	**Alishan**	**1.13**	**223**	*e*P	**Pn**	**05 44 44.6**	**-0.2**
	baz=210						
CHN5	**Tsauling**	**1.16**	**230**	*e*P	**Pb**	**05 44 45.5**	**+0.4**
	baz=231						
CHN5				*e*S	**Sn**	**05 45 01.0**	**+0.7**
	baz=231						
WGK	**Gukeng**	**1.19**	**237**	*e*P	**Pn**	**05 44 45.8**	**+0.5**
	baz=236						
JYNG	**Yonagunijimaku**	**1.19**	**85**	P	**Pn**	**05 44 45.0**	**-0.3**
JYNG				*e*S	**Sb**	**05 45 00.6**	**-0.1**
WDLH	**Douliu**	**1.21**	**237**	*e*P	**Pn**	**05 44 45.7**	**+0.1**
	baz=237						
YOJ	**Yonaguni jima**	**1.25**	**84**	P	**Pn**	**05 44 45.6**	**-0.6**
	baz=84						
YOJ				S	**Sb**	**05 45 03.1**	**+0.6**
	baz=84						
YOJ	**Yonaguni jima**	**1.25**	**84**	P	**Pn**	**05 44 45.7**	**-0.5**
YOJ				*e*S	**Sb**	**05 45 03.0**	**+0.6**
RLNB	**Erlin**	**1.26**	**249**	*e*P	**Pn**	**05 44 46.5**	**+0.2**
	baz=262						
RLNB				*e*S	**Sg**	**05 45 04.4**	**0.0**
	baz=262						
ELDTW	**Lidau**	**1.29**	**207**	*e*P	**Pn**	**05 44 44.5**	**-2.3**
	baz=193						
PCYT	**Pengchaiyu**	**1.34**	**17**	*e*P	**Pn**	**05 44 45.1**	**-2.3**
	baz=14						
TPUB	**Ta-pu**	**1.40**	**222**	*e*P	**Pn**	**05 44 48.4**	**+0.2**
	baz=211						
TPUB				S	**Sb**	**05 45 08.1**	**+1.4**
	baz=211						
CHY	**Chiayi**	**1.40**	**233**	*e*P	**Pb**	**05 44 50.1**	**+0.9**
	baz=233						
TWK	**Hsinying**	**1.51**	**225**	*e*P	**Pb**	**05 44 51.2**	**+0.1**
	baz=207						
CHN1	**Nanshi**	**1.54**	**222**	*e*P	**Pb**	**05 44 51.5**	**-0.2**
	baz=205						
SGST	**Jiashian**	**1.59**	**218**	*e*P	**Pn**	**05 44 51.4**	**+0.5**
	baz=204						
TWG	**Pinlang**	**1.60**	**199**	*e*P	**Pn**	**05 44 51.2**	**+0.1**
	baz=186						
TWGBT	**Beinan**	**1.61**	**199**	*e*P	**Pn**	**05 44 51.4**	**+0.3**
	baz=186						
SLGT	**Liugui**	**1.63**	**214**	*e*P	**Pn**	**05 44 52.2**	**+0.8**
	baz=201						
SSD	**Sandimen**	**1.84**	**211**	*e*P	**Pn**	**05 44 55.4**	**+1.0**
	baz=194						
IRIF	**Iriomote-Funau**	**1.90**	**90**	P	**Pn**	**05 44 55.1**	**0.0**
IRIF				*e*S	**Sn**	**05 45 17.6**	**-1.0**
MASBT	**Mashibuluo**	**1.96**	**209**	*e*P	**Pn**	**05 44 56.8**	**+0.9**
	baz=193						
PTTC	**Pingtan**	**2.06**	**304**	*e*P	**Pn**	**05 44 55.6**	**-1.6**
	baz=305						
PNG	**Penghu**	**2.06**	**248**	*e*P	**Pn**	**05 44 56.4**	**-0.9**
	baz=247						
PHUB	**P'eng-hu**	**2.07**	**247**	*e*P	**Pn**	**05 44 56.3**	**-1.1**
	baz=245						
EAST	**Anshuo**	**2.08**	**201**	*e*P	**Pn**	**05 44 58.6**	**+0.9**
	baz=190						
WDGT	**Dungji**	**2.12**	**240**	*e*P	**Pn**	**05 44 58.0**	**-0.1**
	baz=248						
JKRS	**Kuro-shima**	**2.16**	**92**	P	**Pn**	**05 44 59.7**	**+1.0**
SCZT	**Fangliau**	**2.18**	**206**	*e*P	**Pn**	**05 44 59.8**	**+0.8**
	baz=190						
JIJ	**Ishigaki jima**	**2.28**	**89**	P	**Pn**	**05 45 00.9**	**+0.6**
JIJ				*e*S	**Sn**	**05 45 27.3**	**-0.6**
VCHM	**Qimei**	**2.32**	**241**	*e*P	**Pn**	**05 45 00.2**	**-0.7**
	baz=239						
MATB	**Ma-tsu**	**2.37**	**320**	*e*P	**Pn**	**05 44 59.8**	**-1.8**
	baz=320						
PTMZ	**Houxiangcun**	**2.40**	**287**	*e*P	**Pn**	**05 45 00.4**	**-1.6**
	baz=288						
JISG	**Ishigakijimahi**	**2.44**	**84**	P	**Pn**	**05 45 01.9**	**-0.7**
JISG				S	**Sn**	**05 45 31.0**	**-0.9**
LYJJ	**Jianjiangzhen**	**2.78**	**323**	*e*P	**Pn**	**05 45 05.8**	**-1.4**
	baz=323						
XPSS	**Dashiqiu**	**2.89**	**333**	*e*P	**Pn**	**05 45 07.3**	**-1.4**
	baz=334						
MHZQ	**Yeshan**	**2.94**	**307**	*e*P	**Pn**	**05 45 08.2**	**-1.3**
	baz=308						
KNMB	**Chin-men Tao**	**2.97**	**273**	*e*P	**Pn**	**05 45 09.1**	**-0.8**
	baz=273						
AXDP	**Jialang**	**3.39**	**280**	*e*P	**Pn**	**05 45 15.0**	**-0.7**
	baz=280						

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*ISCJB **11** 06:13:12.3±0.5, 32°.16N±0°.02×115°.21W±0°.02, h22^{km}±4^{km},*
Error ellipse: s-maj=4.2km s-min=3.5km az=1.3

ECX ***11*** *06:13:13.9±0.5, 32°.17N×115°.23W, h6^{km}, MD2.7, ML2.9*
ANF ***11*** *06:13:13.1±0.7, 32°.30N×115°.18W, h29^{km}±5^{km}, ML2.9/12, Error ellipse: s-maj=6.2km s-min=3.2km az=12.0*
SCEDC ***11*** *06:13:13.4, 32°.20N×115°.22W, h15^{km}*
NEIC ***11*** *06:13:13.9±0.0, 32°.17N×115°.23W, h12^{km}, MD2.9(ECX), ML2.7(PAS), After ECX.*
MEX ***11*** *06:13:14.5±0.7, 32°.23N×115°.14W, h21^{km}±21^{km}, MD3.6*
PAS ***11*** *06:13:21.9±0.0, 32°.54N×115°.70W, h15^{km}*
ISC 11 06:13:11.0±1.2**, 32°.19N**±0°.03×**115°.29W**±0°.03**, h13**^{km}±10^{km}**, n45, σ1ˢ.35**/65**, 4C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.23	358	⇑eP	Pb	06 13 18.6	+1.5
CPBX				eS	Sb	06 13 22.6	+1.4
CPBX				e		06 13 23.8	
CPBX				IAML		06 13 23.8	
	comp=N,12µm,0.2s						
MBIG	Mexicali	0.23	20	ePg	Pb	06 13 18.2	+1.1
MBIG				eSg	Sb	06 13 22.0	+0.7
MBIG	Mexicali	0.23	20	eP	Pb	06 13 18.2	+1.1
MBIG				eS	Sb	06 13 22.0	+0.7
UABX	UABC, Campus M	0.46	344	eS	Sn	06 13 30.6	-0.9
DREC	Desert Rsrch C	0.63	348	⇓eP	Pn	06 13 25.4	-0.3
WESC	Westside Schoo	0.68	327	⇑eP	Pn	06 13 26.6	+0.2
RMX	La Rumorosa	0.78	302	⇑eP	Pn	06 13 27.3	-0.6
RMX				eS	Sn	06 13 37.8	-1.9
RMX				IAML		06 13 38.1	
	comp=E,643nm,0.2s						
RMX				e		06 13 38.1	
IKP	In-Ko-Pah, Jac	0.83	304	P	Pn	06 13 29.1	+0.5
	baz=120,SNR=162						
IKP				S	Sn	06 13 40.5	-0.3
	baz=120						
IKP	In-Ko-Pah, Jac	0.83	304	⇑eP	Pn	06 13 29.1	+0.5
IKP				IAML		06 13 41.4	
	comp=N,251nm,0.4s						
SWSC	Sam W. Stewart	0.87	331	P	Pn	06 13 29.0	0.0
	baz=146,SNR=35						
SWSC				S	Sn	06 13 40.0	-1.5
	baz=146						
GLA	Glamis	0.95	24	ePg	Pb	06 13 29.2	-0.2
GLA				eSg	Sg	06 13 41.1	-0.6
GLA	Glamis	0.95	24	P	Pb	06 13 28.8	-0.6
	baz=201,SNR=68						
GLA				S	Sb	06 13 40.4	-1.5
	baz=201						
SPIG	San Pedro Mart	1.15	187	ePn	Pn	06 13 33.8	+0.7
SPIG				eSg	Sb	06 13 48.4	+0.6
SPIG	San Pedro Mart	1.15	187	eP	Pn	06 13 33.8	+0.7
SPIG				eS	Sb	06 13 48.4	+0.6
SPIG	San Pedro Mart	1.15	187	⇓eP	Pn	06 13 33.8	+0.6
SPX	San Pedro Mart	1.15	187	eP	Pn	06 13 32.5	-0.6
SPX				eS	Sb	06 13 46.9	-1.0
SPX	San Pedro Mart	1.15	187	IAML		06 13 50.2	
	comp=E,166nm,0.5s						
SPX				⇓e		06 13 50.2	
CBX	Cerro Bola	1.17	277	ePn	Pg	06 13 34.4	+0.9
CBX				eSg	Sn	06 13 49.9	+0.8
CBX	Cerro Bola	1.17	277	eP	Pg	06 13 34.4	+0.9
CBX				eS	Sn	06 13 49.9	+0.8
MONP2	Monument Peak	1.19	307	P	Pg	06 13 33.9	+0.1
	baz=124,SNR=80						
MONP2				S	Sn	06 13 50.9	+1.2
	baz=124						
TJIG	Tijuana	1.20	282	eP	Pg	06 13 34.8	+0.7
TJIG				eS	Sn	06 13 49.5	-0.1
BAR	Barrett	1.27	293	ePn	Pg	06 13 36.0	+0.7
BAR				eSn	Sg	06 13 52.7	+0.9
113A	Mohawk Valley,	1.41	65	ePn	Pn	06 13 35.9	-0.5
113A				eSn	Sn	06 13 52.4	-2.6
109C	Camp Elliot, M	1.68	295	P	Pb	06 13 41.9	0.0
	baz=113,SNR=20						
109C				S	Sb	06 14 03.2	+0.2
	baz=113						
CPE	Camp Elliot	1.68	295	ePn	Pb	06 13 42.1	+0.2
CPE				eSn	Sg	06 14 04.7	-0.5
Y12C	Blythe	1.69	22	ePn	Pg	06 13 43.7	+0.3
Y12C				eSn	Sg	06 14 04.9	-0.4
PFO	Pinyon Flats O	1.73	326	ePn	Pn	06 13 40.8	-0.1
PFO	Pinyon Flats O	1.73	326	P	Pn	06 13 40.7	-0.2
	baz=143						
PFO				S	Sn	06 14 02.3	-0.7
	baz=143						
214A	Organ Pipe Nat	2.12	96	P	Pn	06 13 45.2	-1.0
	baz=278,SNR=22						
MURC	Murrieta	2.13	312	S	Sb	06 14 13.7	-2.3
	baz=130						
Y14A	Wickenburg	2.60	47	ePn	Pn	06 13 53.5	+0.7
BFSC	Mount Baldy Ra	2.85	317	Sb	Sg	06 14 40.4	-2.2
	baz=134						
SCI2	San Clemente I	2.86	287	Sb	Sg	06 14 41.8	-1.1
	baz=104						
LDFC	Landfair	2.89	3	ePn	Pb	06 14 01.2	-1.3
CIS	Catalina Islan	2.90	296	Sb	Sg	06 14 41.7	-2.4
	baz=113						
FMP	Fort Macarthur	2.95	302	Sb	Sg	06 14 44.0	-1.7
	baz=120						
W13A	Hualapai Mount	3.13	22	ePn	Pn	06 14 02.0	+1.7
EDW2	Edwards Air Fo	3.51	321	Sb	Sg	06 15 00.2	-3.5
	baz=138						
X16A	Lo Mia Camp, P	3.92	54	ePn	Pn	06 14 11.9	+0.8
WUAZ	Wupatki	4.65	43	ePn	Pn	06 14 23.5	+2.3
TPNV	Topopah Spring	4.82	351	ePn	Pn	06 14 26.5	+3.1
U15A	North Rim	4.91	30	ePn	Pn	06 14 27.3	+2.5
X18A	Snowflake	5.04	61	ePn	Pn	06 14 27.8	+1.2
LCMT	Little Creek M	5.10	19	ePn	Pn	06 14 30.1	+2.8
KNB	Kanab	5.23	22	ePn	Pn	06 14 31.5	+2.3

ISCJB ***11*** *06:13:33.5±1.1, 14°.2N±0°.1×90°.97W±0°.08, h106^{km}±9^{km}, Error ellipse: s-maj=26.4km s-min=5.1km az=28.9*
MEX ***11*** *06:13:33.9±0.7, 14°.22N×90°.87W, h105^{km}±16^{km}, MD3.7*
SNET ***11*** *06:13:33.9±1.0, 13°.17N×90°.85W, h18^{km}±5^{km}, ML2.4*
GCG ***11*** *06:13:35.3±0.5, 15°.03N×90°.75W, h61^{km}±999^{km}, MD3.5*
ISC 11 06:13:34.3±1.7**, 14°.3N**±0°.2×**90°.95W**±0°.09**, h100**^{km}±11^{km}**, n10, σ0ˢ.61**/20**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.21	30	eP	Pn	06 13 48.6	-0.2
FUG				eS	Sn	06 13 59.5	-0.1
PCG	Pacaya	0.35	70	eP	Pn	06 13 49.8	+0.3
PCG				eS	Sn	06 14 01.2	+0.3
STG3	Santiaguito 3,	0.74	306	eP	Pn	06 13 52.4	0.0
STG3				eS	Sn	06 14 05.3	-0.7
RTR	El Retiro	1.32	106	eP	Pn	06 13 57.9	-0.7
RTR				eS	Sn	06 14 18.4	+1.5
SBLS	San Blas	1.36	108	eP	Pn	06 13 58.6	-0.6
SBLS				eS	Sn	06 14 17.8	0.0
CEVE	Cerro Verde	1.36	109	eP	Pn	06 13 59.1	-0.1
CEVE				eS	Sn	06 14 17.7	-0.3
SNJE	San Jose	1.36	107	eP	Pn	06 13 59.1	-0.1
SNJE				eS	Sn	06 14 18.2	+0.3
THIG		1.42	297	eP	Pn	06 13 58.9	-0.8
THIG				i S	Sn	06 14 19.9	+1.0
CCIG	Comitan	2.31	330	eP	Pn	06 14 10.7	-0.5
CCIG				i S	Sn	06 14 39.5	+0.2
PCIG		2.62	303	eP	Pn	06 14 15.4	+0.4
PCIG				eS	Sn	06 14 46.6	+0.3

MAN 11 06:24:51.8, 6°.30N×126°.21E, h53^{km}**, mb4.7, ML3.6, MS3.5, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.53	248	eP	Pn	06 25 05.9	+2.3
DDMP				eS	Sn	06 25 16.4	+4.4
MATI	Mati	0.64	5	eP	Pn	06 25 06.0	+1.0
MATI				eS	Sn	06 25 16.9	+2.4
DMPH	Davao City--Mi	1.04	318	⇓eP	Pn	06 25 11.7	+1.6
DMPH				eS	Sn	06 25 25.1	+1.4
GSPH	General Santos	1.27	260	⇑iP	Pn	06 25 13.3	0.0
GSPH				i S	Sn	06 25 31.3	+2.0
KCP	Kidapawan	1.31	302	⇑iP	Pn	06 25 14.3	+0.4
KCP				i S	Sn	06 25 30.9	+0.6
SKMP	Bagumbayan, Su	1.67	278	eP	Pn	06 25 19.1	+0.5
BUKP	Musuan	1.93	324	eP	Pn	06 25 22.9	+0.6
BUKP				eS	Sn	06 25 47.3	+1.9

GUC 11 06:25:53.6±0.5**, 35°.85S×73°.52W, h19**^{km}±7^{km}**, ML4.0, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COCH	Cobquecura	0.65	115	eS	Sg	06 26 15.2	-0.1
COCH				IAML		06 26 16.4	
	comp=E,18µm,0.5s						
CCSP	San Pedro de C	1.04	162	eP	Pb	06 26 12.3	-0.8
CCSP				eS	Sb	06 26 26.6	+0.3
CCSP				IAML		06 26 31.0	
	comp=N,8µm,0.5s						
CCHI	Chillan	1.39	123	eP	Pn	06 26 18.1	+0.2
CCHI				eS	Sn	06 26 35.8	+0.2
CCHI				IAML		06 26 40.3	
	comp=N,4µm,0.6s						
GO05	Huala	1.54	58	eP	Pn	06 26 20.1	-0.1
GO05				eS	Sb	06 26 40.8	0.0

ISK ***11*** *06:29:36.8, 42°.21N×26°.31E, h9^{km}, ML2.9/12*
SOF ***11*** *06:29:37.1, 42°.18N×26°.29E, h5^{km}*
THE ***11*** *06:29:39.2, 42°.17N×26°.38E, h13^{km}±6^{km}, ML2.8/4, Error ellipse: s-maj=8.8km s-min=1.5km az=58.0*
DDA ***11*** *06:29:39.0, 42°.10N×26°.22E, h7^{km}±4^{km}, ML3.4*
ISC 11 06:29:37.6±1.0**, 42°.21N**±0°.02×**26°.29E**±0°.02**, h13**^{km}±8^{km}**, n69, σ1ˢ.20**/79**, 14C-3D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	Yambol	0.34	40	PG	Pg	06 29 44.4	-0.1
JMB				SG	Sg	06 29 49.3	+0.2
JMB	Yambol	0.34	40	P	Pg	06 29 44.3	-0.2
EDRB	Edirne	0.49	137	PG	Pg	06 29 47.3	0.0
EDRB				SG	Sg	06 29 53.8	0.0
EDRB	Edirne	0.49	137	P	Pg	06 29 47.3	0.0
EDRB				S	Sg	06 29 54.1	+0.3
DIM	Dimitrovgrad	0.58	255	P	Pg	06 29 48.3	-0.7
ELND	Elena	0.79	337	⇑iP	Pg	06 29 52.3	-0.6
ELND	Elena	0.79	337	S	Sn	06 30 06.4	+0.3
KDZ	Kurdzhali	0.86	230	PG	Pb	06 29 54.7	+0.3
KDZ	Kurdzhali	0.86	230	P	Pb	06 29 54.5	+0.1
PHSR	Pinarhisar	1.08	122	PG	Pb	06 29 57.4	-0.8
PHSR	Pinarhisar	1.08	122	⇑iP	Pb	06 29 57.7	-0.5
PHSR	Pinarhisar	1.08	122	S	Sb	06 30 12.0	-0.3
RDO	Rodhopi	1.20	208	PN	Pb	06 30 00.4	+0.2
RDO	Rodhopi	1.20	208	P	Pb	06 30 00.3	+0.1
RDO				S	Sn	06 30 16.2	0.0
	895nm,0.3s						
RZN	Rozhen	1.28	247	P	Pn	06 30 01.3	-0.1
PRD	Provadia	1.29	39	P	Pg	06 30 01.9	-0.5
ALN	Alexandroupoli	1.32	188	PN	Pb	06 30 02.3	+0.1
ALN	Alexandroupoli	1.32	188	P	Pb	06 30 02.4	+0.2
ALN				S	Sg	06 30 20.0	-0.1
	182nm,0.4s						
RAZG	Razgrad	1.37	7	⇑iP	Pg	06 30 03.5	-0.5
RAZG	Razgrad	1.37	7	S	Sg	06 30 24.4	+2.6
KESN	Edirne-Kesan	1.41	168	i P	Pg	06 30 04.9	+0.2
KESN				i S	Sg	06 30 23.6	+0.5
PGB	Panagyurishte	1.61	283	P	Pn	06 30 06.6	+0.8
SART	Tekirdag	1.66	156	i P	Pg	06 30 09.9	+0.5
SART				i S	Sg	06 30 31.3	+0.4
SART				IAML_P			
	comp=Z,5µm,0.2s						
CTYL	Yalikoy Yolu	1.66	115	⇑iP	Pb	06 30 07.8	-0.3
CTYL	Yalikoy Yolu	1.66	115	S	Sb	06 30 29.3	+0.4
PLVB	Pleven	1.71	314	⇑iP	Pg	06 30 09.9	-0.4
KAVA	Kavala	1.80	228	P	Pn	06 30 09.4	+1.1
KAVA				S	Sg	06 30 35.0	-0.5
	comp=Z,210nm,0.3s						
GELI	Tayfur-Gelibol	1.81	176	PN	Pn	06 30 08.9	+0.4
SMTH	Samothraki Isl	1.82	199	P	Pb	06 30 10.4	-0.5
LPK	Lapseki	1.86	169	PN	Pn	06 30 09.8	+0.6
MRMT	Marmara Adasi	1.88	148	PN	Pn	06 30 09.7	+0.2
CTKS	Kestanelik-??a	1.92	120	PN	Pn	06 30 10.3	+0.3
KALB	Balgarevo	1.97	52	⇑iP	Pb	06 30 13.6	+0.2
KALB	Balgarevo	1.97	52	S	Sg	06 30 41.4	+0.4
THAS	Thassos island	1.99	217	P	Pn	06 30 11.6	+0.7
THAS				S	Sb	06 30 39.5	+1.2
	comp=Z,195nm,0.4s						
SGRR	Singureni	2.03	354	⇓iP	Pb	06 30 15.3	+0.9
SGRR	Singureni	2.03	354	S	Sg	06 30 43.4	+0.5
COPA	Copaceanca	2.08	338	S	Sg	06 30 44.5	-0.1
BGKT	Bogazkoy	2.12	118	PN	Pn	06 30 13.2	+0.4
ICOR	Ion Corvin	2.21	30	⇑iP	Pb	06 30 17.3	-0.1
ICOR	Ion Corvin	2.21	30	S	Sg	06 30 48.7	+0.2
VLAD	Vladila	2.26	323	S	Sb	06 30 47.9	+1.7
KLYT	Kilyos	2.27	114	S	Sb	06 30 45.8	-0.5
SRS	Serrai	2.30	243	P	Pn	06 30 16.3	+1.1
VTS	Vitosha	2.30	281	P	Pn	06 30 16.5	+1.1
VTS	Vitosha	2.30	281	⇑iP	Pn	06 30 16.6	+1.1
VTS	Vitosha	2.30	281	S	Sn	06 30 44.6	+0.9
VTS	Vitosha	2.30	281	P	Pn	06 30 16.3	+0.9
MANR	Mangalia	2.33	45	⇑iP	Pb	06 30 19.0	-0.5
ISK	Istanbul-Kandi	2.37	118	PN	Pn	06 30 16.7	+0.6
ISK	Istanbul-Kandi	2.37	118	P	Pn	06 30 16.9	+0.8
KAVV	Kandilli-Istan	2.37	118	PN	Pn	06 30 16.7	+0.5
EZN	Ezine	2.38	179	PN	Pn	06 30 17.1	+0.8
MFTR	Murfatlar	2.51	38	⇑iP	Pb	06 30 21.2	-1.4
MFTR	Murfatlar	2.51	38	S	Sg	06 30 56.7	-1.7
BUY	Buyukada	2.52	122	PN	Pn	06 30 18.7	+0.5
TLB	Topalu	2.70	28	⇓iP	Pb	06 30 25.0	-0.8
TLB	Topalu	2.70	28	S	Sg	06 31 01.6	-2.7
TIRR	Tirgusor	2.73	34	⇓iP	Pb	06 30 25.4	-0.9
TIRR	Tirgusor	2.73	34	S	Sb	06 31 02.0	+2.3
KNT	Kendrikon	2.75	249	P	Pn	06 30 22.3	+0.9
VAY	Valandovo	2.92	254	ePn	Pn	06 30 21.9	-1.8
STIP	Stip	3.10	262	ePn	Pn	06 30 24.6	-1.7
STIP				i Sn	Sn	06 31 00.1	-3.2
CFR	Carcaliu	3.26	24	⇑iP	Pb	06 30 32.3	-3.0
CFR	Carcaliu	3.26	24	S	Sb	06 31 13.2	-1.7
MLR	Muntele Rosu	3.29	356	⇑iP	Pn	06 30 31.6	+2.6
VOIR		3.35	345	⇑iP	Pn	06 30 31.8	+2.0
VOIR		3.35	345	S	Sb	06 31 15.0	-2.7
VRI	Vrincioaia	3.67	5	⇑iP	Pn	06 30 37.9	+3.7

NNC 11 06:30:09.8±1.5**, 54°.34N×86°.27E, h0**^{km}**, mb3.5, mpv2.6, 4C-2D, Error ellipse: s-maj=31.2km s-min=8.6km az=161.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.94	246	⇓P	Pg	06 30 27.8	0.0
	0.5nm,0.6s						
ZAA0				⇑S	Sb	06 30 41.0	-0.9
	1.1nm,0.6s						
KURBB	Kurchatov Arra	6.02	235	⇓Pn	Pn	06 31 41.0	+1.1
	3.4nm,1.1s						
KURBB				⇑Lg	Lg	06 33 20.2	
	6.5nm,0.9s						
MK31	Makanchi Array	7.97	200	⇑Pn	Pn	06 32 06.6	-0.1
	0.5nm,0.7s,baz=28,slow=14,SNR=5.7						
MK31				⇑Lg	Lg	06 34 22.4	
	2.1nm,0.9s						

ISCJB ***11*** *06:32:36.3±0.4, 16°.87N±0°.05×94°.40W±0°.03, h121^{km}±4^{km}, mb4.2/11, Error ellipse: s-maj=7.9km s-min=4.6km az=6.8*
MEX ***11*** *06:32:38.3±0.7, 16°.91N×94°.39W, h124^{km}±4^{km}, MD4.1*
NEIC ***11*** *06:32:38.2±0.0, 16°.84N×94°.42W, h122^{km}, mb4.1/22, MD4.1(MEX), After MEX.*
ISC 11 06:32:37.4±0.8**, 16°.88N**±0°.05×**94°.43W**±0°.03**, h121**^{km}±7^{km}**, n43, σ1ˢ.15**/55**, mb4.1**/11**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.48	296	ePn	Pn	06 32 55.4	+0.1
CMIG				eSn	Sn	06 33 08.7	-0.1
CMIG	Matias Romero	0.48	296	i P	Pn	06 32 55.4	+0.1
CMIG				i S	Sn	06 33 08.7	-0.1
TUIG	Tuzandepetl	1.14	0	ePn	Pn	06 33 00.7	-0.2
TUIG	Tuzandepetl	1.14	0	eP	Pn	06 33 00.7	-0.2
TUIG				i S	Sn	06 33 18.3	-0.5
TGIG		1.26	95	ePn	Pn	06 33 02.0	-0.2
TGIG				eSn	Sn	06 33 19.2	-1.8
TGIG		1.26	95	eP	Pn	06 33 02.0	-0.2
TGIG				eS	Sn	06 33 20.1	-1.0
PCIG		1.65	135	ePn	Pn	06 33 06.6	-0.1
PCIG		1.65	135	eP	Pn	06 33 06.6	-0.1
PCIG				i S	Sn	06 33 27.8	-1.2
HUIG	Huatulco	1.95	236	ePn	Pn	06 33 08.2	-2.1
HUIG	Huatulco	1.95	236	eP	Pn	06 33 08.2	-2.1
HUIG				i S	Sn	06 33 34.2	-1.2
VHO	Vista Hermosa	2.21	275	ePn	Pn	06 33 14.4	+0.7
VHO	Vista Hermosa	2.21	275	eP	Pn	06 33 14.3	+0.6
VHO				eS	Sn	06 33 41.8	+0.3
CCIG	Comitan	2.28	105	ePn	Pn	06 33 14.8	+0.2
CCIG				eSn	Sn	06 33 42.0	-1.1
LVIG	Laguna Verde	3.40	327	ePn	Pn	06 33 27.7	-1.2
LVIG				eSn	Sn	06 34 05.2	-3.5
TLIG	Tlapa	4.01	280	ePn	Pn	06 33 38.0	+0.8
TLIG				eSn	Sn	06 34 21.9	-1.6
TLIG	Tlapa	4.01	280	eP	Pn	06 33 37.7	+0.5
TLIG				eS	Sn	06 34 23.2	-0.2
MYIG	Mrida	6.01	47	ePn	Pn	06 34 02.4	-1.6
TEIG	Tepich	6.72	59	ePn	Pn	06 34 10.9	-2.6
TEIG				eSn	Sn	06 35 27.3	-1.4
TGUH	Tegucigalpa,Un	7.45	111	ePn	Pn	06 34 24.0	+0.4
833A	Chaparral WMA,	12.27	339	ePn	P	06 35 33.1	-2.2
BRAL	Brewton	15.73	24	eP	P	06 36 13.7	0.0
	17nm,0.9s						
352A	Blakely	16.91	29	eP	P	06 36 27.8	+1.1
	12nm,0.6s						
LRAL	Lakeview Retre	17.43	21	eP	Pn	06 36 33.4	+0.4
	11nm,1.3s						
TIGA	Tifton	17.53	32	eP	P	06 36 33.1	-0.4
	15nm,0.8s						
GDL2	Guadalupe Moun	17.71	331	eP	Pn	06 36 38.0	+1.5
152A	Waverly Hall	18.00	27	eP	Pn	06 36 39.8	-0.1
	8.7nm,1.3s						
Z50A	Ashland	18.02	24	eP	P	06 36 39.4	+0.5
	13nm,0.8s						
W39A	Magazine	18.25	2	eP	Pn	06 36 42.7	-0.1
	6.4nm,1.1s						
GOGA	Godfrey	19.19	29	eP	P	06 36 52.6	+0.9
	10nm,0.9s						
Y52A	Lilburn	19.31	27	eP	Pn	06 36 55.4	+0.2
	19nm,1.0s						
BG3	Lake Jocassee	20.76	28	eP	Pn	06 37 11.4	-0.9
	7.6nm,0.8s						
ANMO	Albuquerque	20.95	331	eP	P	06 37 11.3	+0.4
	1.1nm,0.8s						
T25A	Trinidad	22.02	338	eP	P	06 37 23.1	+0.9
	3.7nm,1.0s						
Q24A	Divide	23.91	339	eP	P	06 37 41.9	+1.5
	4.4nm,0.8s						
WUAZ	Wupatki	23.92	324	eP	P	06 37 40.6	+0.2
	4.1nm,1.0s						
PV13	Radium Mtn., P	24.68	332	eP	P	06 37 48.6	+1.3
	7.9nm,1.1s						
PV03	Paradox Valley	24.77	332	eP	P	06 37 49.0	+0.9
	2.9nm,0.6s						
PV12	Saucer Basin,	24.80	332	eP	P	06 37 48.5	+0.2
	6.8nm,1.2s						
SJG	San Juan	26.99	83	eP	P	06 38 07.7	-0.4
	15nm,1.1s						
CBYP	Canovanas	27.27	83	eP	P	06 38 09.6	-1.0
	18nm,1.1s						
J08A	Circle Bar Ran	33.36	327	eP	P	06 39 04.3	+0.2
	3.8nm,0.7s						
F10A	Beach Ranch, E	34.67	332	eP	P	06 39 15.3	-0.1
	3.7nm,0.8s						
ILULI	Ilulissat	58.78	17	eP	P	06 42 24.2	+1.8
	36nm,0.7s						

LDG ***11*** *06:40:27.6±0.2, 43°.90N×12°.11E, h2^{km}, Ml2.8/5, Error ellipse: s-maj=5.0km s-min=1.9km az=35.0*
ISCJB ***11*** *06:40:28.0±0.4, 43°.82N±0°.02×12°.01E±0°.02, h13^{km}±2^{km}, Error ellipse: s-maj=3.4km s-min=2.4km az=30.2*
ROM ***11*** *06:40:28.1±0.1, 43°.810N±0°.004×12°.042E±0°.005, h9^{km}, ML2.7/19, Error ellipse: s-maj=0.6km s-min=0.1km az=35.0*
ISC 11 06:40:28.0±0.9**, 43°.82N**±0°.02×**11°.99E**±0°.02**, h14**^{km}±6^{km}**, n44, σ1ˢ.15**/70**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	Santa Sofia	0.14	311	P	Pg	06 40 32.0	+0.4
SFI				S	Sb	06 40 35.1	-0.3
ASQU	Asqua	0.15	263	P	Pb	06 40 32.6	0.0
ASQU				S	Sb	06 40 36.2	+0.5
CPGN	Carpegna, Ital	0.24	93	P	Pg	06 40 32.9	-0.3
CPGN				S	Sg	06 40 37.0	+0.3
CPGN				AML	AML		
	comp=E,6240µm,0.3s						
CPGN				AML	AML		
	comp=N,4595µm,0.6s						
CPGN				AML	AML		
	comp=E,6230µm,0.3s						
CPGN				AML	AML		
	comp=N,4365µm,1.4s						
CPGN				AML	AML		
	comp=E,6240µm,0.3s						
CPGN				AML	AML		
	comp=N,4590µm,0.6s						
CPGN				AML	AML		
	comp=E,6225µm,0.3s						
CPGN				AML	AML		
	comp=N,4380µm,1.4s						
CPGN				AML	AML		
	comp=N,4590µm,0.6s						
CPGN				AML	AML		
	comp=E,6240µm,0.3s						
CPGN				AML	AML		
	comp=N,4380µm,1.4s						
CPGN				AML	AML		
	comp=E,6225µm,0.3s						
PARC	Parchiule	0.24	133	P	Pg	06 40 33.0	-0.3
PARC				S	Sg	06 40 36.8	0.0
PARC				AML	AML		
	comp=E,2440µm,0.2s						
PARC				AML	AML		
	comp=N,2295µm,1.5s						
PARC				AML	AML		
	comp=E,2440µm,0.2s						
PARC				AML	AML		
	comp=N,2295µm,1.5s						
PARC				AML	AML		
	comp=N,2295µm,1.5s						
PARC				AML	AML		
	comp=E,2440µm,0.2s						
SSP9	Sansepolcro	0.26	157	P	Pg	06 40 33.8	+0.2
SSP9				S	Sb	06 40 38.3	-0.6
SSP9				AML	AML		
	comp=E,1345µm,1.6s						
SSP9				AML	AML		
	comp=N,2220µm,0.6s						
RUFI	Rufina	0.35	274	P	Pb	06 40 36.0	0.0
RUFI				S	Sb	06 40 42.6	+1.2
BADI	Badiali	0.36	149	P	Pg	06 40 35.1	-0.1
BADI				S	Sb	06 40 41.0	-0.6
BADI				AML	AML		
	comp=E,2420µm,0.3s						
BADI				AML	AML		
	comp=N,1555µm,0.2s						
BADI				AML	AML		
	comp=E,2420µm,0.3s						
BADI				AML	AML		
	comp=N,1560µm,0.2s						
BADI				AML	AML		
	comp=E,2420µm,0.3s						
BADI				AML	AML		
	comp=N,1560µm,0.2s						
CDCA	Citt‘ di Caste	0.40	154	P	Pg	06 40 36.1	+0.2
CDCA				AML	AML		
CDCA				AML	AML		
	comp=N,4475µm,0.7s						
CDCA				AML	AML		
	comp=E,1180µm,1.5s						
CDCA				AML	AML		
	comp=N,1112µm,0.9s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=N,4475µm,0.7s						
CDCA				AML	AML		
	comp=E,1140µm,1.5s						
CDCA				AML	AML		
	comp=N,1115µm,0.9s						
CDCA				AML	AML		
	comp=N,1115µm,0.9s						
CDCA				AML	AML		
	comp=N,4475µm,0.7s						
CDCA				AML	AML		

	comp=E,1140μm,1.5s						
CDCA				AML	AML		
ATPI	**Pietralunga -**	**0.47**	**141**	P	**Pg**	**06 40 36.9**	**-0.4**
ATPI				S	**Sb**	**06 40 44.5**	**-0.5**
ATPI				AML	AML		
	comp=E,760μm,1.0s						
ATPI				AML	AML		
	comp=N,688μm,0.4s						
ATPI				AML	AML		
	comp=E,760μm,1.0s						
ATPI				AML	AML		
	comp=N,687μm,0.4s						
ATPI				AML	AML		
	comp=N,687μm,0.4s						
ATPI				AML	AML		
	comp=E,760μm,1.0s						
BRIS	**BRISIGHELLA**	**0.48**	**314**	P	**Pg**	**06 40 37.5**	**0.0**
BRIS				S	**Sb**	**06 40 45.3**	**0.0**
CAFI	**Castiglion Fio**	**0.49**	**182**	P	**Pb**	**06 40 38.2**	**-0.2**
CAFI				S	**Sb**	**06 40 45.4**	**0.0**
CAFI				AML	AML		
	comp=E,701μm,0.5s						
CAFI				AML	AML		
	comp=N,746μm,0.6s						
CAFI				AML	AML		
	comp=E,701μm,0.5s						
CAFI				AML	AML		
	comp=N,746μm,0.6s						
SEI	**Scarperia**	**0.52**	**298**	P	**Pb**	**06 40 38.9**	**0.0**
SEI				S	**Sb**	**06 40 47.6**	**+1.3**
ATMI	**Monte Miggiano**	**0.52**	**157**	P	**Pg**	**06 40 38.4**	**+0.2**
ATMI				S	**Sg**	**06 40 45.7**	**+0.5**
ATMI				AML	AML		
	comp=E,1545μm,0.4s						
ATMI				AML	AML		
	comp=N,1540μm,0.4s						
ATMI				AML	AML		
	comp=E,1545μm,0.4s						
ATMI				AML	AML		
	comp=N,1540μm,0.4s						
ATMI				AML	AML		
	comp=E,1545μm,0.4s						
ATMI				AML	AML		
	comp=N,1540μm,0.4s						
ATVO	**AVT- Monte Val**	**0.53**	**145**	P	**Pg**	**06 40 38.1**	**-0.3**
ATVO				S	**Sb**	**06 40 46.5**	**-0.1**
ATVO				AML	AML		
	comp=E,1140μm,0.4s						
ATVO				AML	AML		
	comp=N,836μm,1.4s						
ATVO				AML	AML		
	comp=E,1140μm,0.4s						
ATVO				AML	AML		
	comp=N,835μm,1.4s						
ATVO				AML	AML		
	comp=E,1140μm,0.4s						
ATVO				AML	AML		
	comp=N,835μm,1.4s						
MPAG	**Monte Paganucc**	**0.59**	**108**	P	**Pg**	**06 40 38.6**	**-0.9**
MPAG				S	**Sg**	**06 40 47.4**	**+0.1**
MPAG				AML	AML		
	comp=E,282μm,0.3s						
MPAG				AML	AML		
	comp=N,634μm,0.7s						
MPAG				AML	AML		
	comp=E,282μm,0.3s						
MPAG				AML	AML		
	comp=N,634μm,0.7s						
FRON	**Frontone**	**0.61**	**119**	P	**Pg**	**06 40 39.2**	**-0.8**
FRON				S	**Sb**	**06 40 48.2**	**-0.7**
FRON				AML	AML		
	comp=E,344μm,0.6s						
FRON				AML	AML		
	comp=N,442μm,0.6s						
FRON				AML	AML		
	comp=N,442μm,0.6s						
FRON				AML	AML		
	comp=E,344μm,0.6s						
ATTE	**AVT- Monte Tez**	**0.67**	**157**	P	**Pg**	**06 40 40.8**	**-0.3**
ATTE				S	**Sg**	**06 40 50.3**	**+0.3**
ATTE				AML	AML		
	comp=E,596μm,0.2s						
ATTE				AML	AML		
	comp=N,532μm,1.0s						
ATTE				AML	AML		
	comp=N,532μm,1.0s						
ATTE				AML	AML		
	comp=E,596μm,0.2s						
MURB	**Monte Urbino**	**0.68**	**145**	P	**Pg**	**06 40 40.9**	**-0.3**
MURB				AML	AML		
	comp=E,1010μm,0.4s						
MURB				AML	AML		
	comp=N,1380μm,0.3s						
MURB				AML	AML		
	comp=E,978μm,0.4s						
MURB				AML	AML		
	comp=N,1455μm,0.3s						
MURB				AML	AML		
	comp=N,1455μm,0.3s						
MURB				AML	AML		
	comp=E,978μm,0.4s						
MURB				AML	AML		
	comp=E,1010μm,0.4s						
MURB				AML	AML		
	comp=N,1380μm,0.3s						
ARVD	**Arcevia**	**0.76**	**114**	P	**Pb**	**06 40 41.9**	**-1.1**
ARVD				S	**Sg**	**06 40 53.1**	**+0.4**
ARVD				AML	AML		
	comp=E,229μm,0.6s						
ARVD				AML	AML		
	comp=N,234μm,0.5s						
ARVD				AML	AML		
	comp=E,229μm,0.6s						
ARVD				AML	AML		
	comp=N,234μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.79**	**143**	P	**Pb**	**06 40 42.8**	**-0.7**
ATCC				AML	AML		
	comp=E,772μm,1.1s						
ATCC				AML	AML		
	comp=N,463μm,0.4s						
ATCC				AML	AML		
	comp=E,772μm,1.1s						
ATCC				AML	AML		
	comp=N,463μm,0.4s						
MGAB	**Montegabbione**	**0.91**	**174**	P	**Pb**	**06 40 45.6**	**+0.1**
MGAB				AML	AML		
	comp=E,724μm,0.5s						
MGAB				AML	AML		
	comp=N,550μm,0.7s						
MGAB				AML	AML		
	comp=E,876μm,0.5s						
MGAB				AML	AML		
	comp=N,514μm,0.4s						
MGAB				AML	AML		
	comp=N,550μm,0.7s						
MGAB				AML	AML		
	comp=N,514μm,0.4s						
MGAB				AML	AML		
	comp=E,724μm,0.5s						
MGAB				AML	AML		
	comp=E,876μm,0.5s						
EL6	**Elcito**	**0.94**	**121**	P	**Pb**	**06 40 45.6**	**-0.6**
SACS	**San Casciano d**	**0.97**	**184**	P	**Pg**	**06 40 46.9**	**+0.2**
SACS				AML	AML		
	comp=E,514μm,0.6s						
SACS				AML	AML		
	comp=N,301μm,0.5s						
SACS				AML	AML		
	comp=E,514μm,0.6s						
SACS				AML	AML		
	comp=N,301μm,0.5s						
ARCI	**Arcidosso**	**1.03**	**202**	AML	AML		
	comp=E,138μm,0.3s						
ARCI				AML	AML		
	comp=N,284μm,0.9s						
ARCI				AML	AML		
	comp=E,138μm,0.3s						
ARCI				AML	AML		
	comp=N,284μm,0.9s						
BDI	**Bagni Di Lucca**	**1.04**	**284**	P	**Pg**	**06 40 48.3**	**+0.3**
BDI				AML	AML		
	comp=E,136μm,0.5s						
BDI				AML	AML		
	comp=N,170μm,1.0s						
BDI				AML	AML		
	comp=E,136μm,0.5s						
BDI				AML	AML		
	comp=N,170μm,1.0s						
NVLJ	**Novalja**	**2.20**	**69**	*i* Pn	**Pn**	**06 41 04.4**	**+0.2**
NVLJ				Sn	**Sn**	**06 41 31.5**	**+0.3**
DUGI	**Dugi Otok**	**2.22**	**84**	*e*Pn	**Pn**	**06 41 04.8**	**+0.3**
PGF	**Pioggiola**	**2.53**	**241**	*e*Pn	**Pn**	**06 41 09.2**	**+0.5**
PGF				*e*Sn	**Sn**	**06 41 40.6**	**+1.2**
	comp=N,8.6nm,0.4s						
ZIRJ	**Zirje**	**2.65**	**92**	*e*Pn	**Pn**	**06 41 11.0**	**+0.7**
ZIRJ				Sn	**Sn**	**06 41 42.6**	**+0.3**
MORI	**Morici**	**2.69**	**88**	*e*Pn	**Pn**	**06 41 12.3**	**+1.5**
MORI				Sn	**Sn**	**06 41 45.1**	**+1.9**
ABTA	**Abfaltersbach**	**2.96**	**7**	Sn	**Sn**	**06 41 52.3**	**+2.4**
	comp=N,22nm,0.8s						
KIJV	**Kijevo**	**3.20**	**85**	*e*Pn	**Pn**	**06 41 18.5**	**+0.6**
KIJV				Sn	**Sn**	**06 41 57.4**	**+1.6**
OBKA	**Obir**	**3.25**	**33**	Pg	**Pb**	**06 41 26.8**	**+1.4**
	comp=N,1.3nm,0.3s						
OBKA				Sg	**Sg**	**06 42 13.4**	**+1.3**
	comp=N,9.3nm,0.6s						
SBF	**Sospel**	**3.30**	**272**	*e*Pn	**Pn**	**06 41 18.9**	**-0.4**
SBF				*e*Sn	**Sn**	**06 41 57.7**	**-0.6**
	comp=N,7.0nm,0.3s						
HVAR	**Hvar**	**3.31**	**100**	Sn	**Sn**	**06 41 56.9**	**-1.5**
FETA	**Feichten**	**3.33**	**345**	*e*Pn	**Pb**	**06 41 23.8**	**-3.1**
	comp=N,1.8nm,0.4s						
KBA	**Koelnbreinsper**	**3.40**	**16**	*e*Pn	**Pn**	**06 41 22.2**	**+1.4**
	comp=N,0.8nm,0.3s						
KBA				Sn	**Sn**	**06 42 04.3**	**+3.3**
	comp=N,2.5nm,0.3s						
SQTA	**Sankt Quirin**	**3.45**	**351**	*e*Pn	**Pb**	**06 41 26.0**	**-2.9**
	comp=N,0.6nm,0.1s						
WTTA	**Wattenberg**	**3.46**	**356**	*e*Pn	**Pn**	**06 41 23.0**	**+1.4**
	comp=N,1.8nm,0.3s						
MOTA	**Moosalm**	**3.58**	**350**	*e*Pn	**Pb**	**06 41 30.1**	**-1.1**
	comp=N,1.2nm,0.2s						
DAVA	**Damuels**	**3.77**	**338**	Pn	**Pn**	**06 41 25.6**	**-0.4**
	comp=N,0.9nm,0.2s						
DAVA				*e*Sn	**Sb**	**06 42 16.2**	**-3.9**
	comp=N,9.9nm,0.5s						
MBDF	**Montbardon**	**3.86**	**285**	*e*Pn	**Pn**	**06 41 26.2**	**-0.9**
MBDF				*e*Sn	**Sn**	**06 42 10.4**	**-1.9**
	comp=N,6.2nm,0.6s						
LMR	**La Mourre**	**4.01**	**265**	*e*Pn	**Pn**	**06 41 28.8**	**-0.2**
LMR				*e*Sn	**Sn**	**06 42 15.2**	**-0.7**
	comp=N,3.1nm,0.4s						
PZUN	**Potenza**	**4.25**	**137**	AML	AML		
	comp=N,266μm,0.4s						
PZUN				AML	AML		
	comp=E,162μm,0.3s						
PZUN				AML	AML		
	comp=E,162μm,0.3s						
PZUN				AML	AML		
	comp=N,266μm,0.4s						

NEIC ***11*** *06:42:38.8±0.0, 18°.55N×66°.27W, h26^{km}, MD2.7(RSPR), After RSPR.*

RSPR 11 06:42:38.8, 18°.55N×66°.27W, h26^{km}±2^{km}**, MD2.7**/12**, 15C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.26**	**255**	⇑*e*P	Pb	06 42 44.8	-0.5
EMPR	**Esperanza - Ma**	**0.26**	**255**	*e*S	Sb	06 42 49.9	+0.1
EMPR	**Esperanza - Ma**	**0.26**	**255**	*e*Pg	Pb	06 42 44.4	-0.9
SJG	**San Juan**	**0.45**	**165**	⇑*e*P	Pb	06 42 47.1	-1.0
SJG	**San Juan**	**0.45**	**165**	*e*S	Sb	06 42 54.0	-0.5
SJG	**San Juan**	**0.45**	**165**	*e*Pg	Pb	06 42 47.1	-1.1
SJG				*e*Sg	Sb	06 42 54.6	+0.1
CBYP	**Canovanas**	**0.48**	**125**	⇑*e*P	Pb	06 42 47.4	-1.3
CBYP	**Canovanas**	**0.48**	**125**	⇑*e*P	Pb	06 42 47.5	-1.2
CBYP				*e*S	Sb	06 42 54.6	-0.8
CBYP	**Canovanas**	**0.48**	**125**	*e*Pg	Pb	06 42 47.4	-1.3
CBYP				*e*Sg	Sb	06 42 54.6	-0.8
CBYP	**Canovanas**	**0.48**	**125**	*e*S	Pb	06 42 47.5	-1.2
HUMP	**Col San Antoni**	**0.56**	**135**	⇑*e*P	Pb	06 42 48.8	-1.3
HUMP	**Col San Antoni**	**0.56**	**135**	⇑*e*P	Pb	06 42 48.8	-1.4
HUMP				*e*S	Sb	06 42 56.6	-1.3
HUMP	**Col San Antoni**	**0.56**	**135**	*e*Pn	Pb	06 42 48.7	-1.4
HUMP				*e*Sg	Sb	06 42 56.5	-1.3
PDPR	**Patillas Dam,**	**0.57**	**156**	⇑*e*P	Pb	06 42 48.8	-1.5
PDPR	**Patillas Dam,**	**0.57**	**156**	*e*S	Sb	06 42 57.3	-0.8
PDPR	**Patillas Dam,**	**0.57**	**156**	*e*S	Sb	06 42 57.4	-0.7
OBIP	**Obispado Ponce**	**0.59**	**213**	⇑*e*P	Pb	06 42 49.1	-1.5
OBIP	**Obispado Ponce**	**0.59**	**213**	*e*S	Sb	06 42 57.0	-1.7
OBIP	**Obispado Ponce**	**0.59**	**213**	*e*Pn	Pb	06 42 49.1	-1.6
OBIP				*e*Sg	Sb	06 42 57.1	-1.5
IGPR	**InterUniversit**	**0.60**	**165**	⇑*e*P	Pb	06 42 49.3	-1.4
IGPR	**InterUniversit**	**0.60**	**165**	*e*S	Sb	06 42 57.3	-1.4
AGPR	**Aguadilla, PR**	**0.80**	**265**	⇑*e*P	Pb	06 42 52.2	-1.9
AGPR	**Aguadilla, PR**	**0.80**	**265**	*e*S	Sb	06 43 02.3	-2.4
MTP	**Monte Pirata**	**0.81**	**123**	⇑*e*P	Pb	06 42 52.5	-1.8
MTP	**Monte Pirata**	**0.81**	**123**	*e*S	Sb	06 43 03.0	-1.8
MTP	**Monte Pirata**	**0.81**	**123**	*e*Pn	Pb	06 42 52.7	-1.6
MTP				*e*Sg	Sb	06 43 03.1	-1.8
AGP	**Aguadilla**	**0.84**	**261**	*e*Pn	Pb	06 42 52.1	-2.7
AGP				*e*Sg	Sb	06 43 02.3	-3.4
LSP	**Las Mesas**	**0.86**	**245**	⇑*e*P	Pb	06 42 53.4	-1.7
LSP	**Las Mesas**	**0.86**	**245**	*e*S	Sb	06 43 04.3	-1.9
LSP	**Las Mesas**	**0.86**	**245**	*e*Pn	Pb	06 42 53.4	-1.7
LSP				*e*Sg	Sb	06 43 04.3	-1.9
MPR	**Mayaguez**	**0.89**	**248**	*e*Pn	Pb	06 42 53.8	-1.9
MPR				*e*Sg	Sb	06 43 04.6	-2.6
MLPR	**Magueyes Islan**	**0.93**	**232**	⇑*e*P	Pn	06 42 54.4	-1.9
MLPR	**Magueyes Islan**	**0.93**	**232**	*e*S	Sb	06 43 06.3	-2.0
CUPR	**Culebra, Puert**	**0.96**	**104**	⇑*e*P	Pn	06 42 54.4	-2.3
CUPR	**Culebra, Puert**	**0.96**	**104**	*e*S	Sb	06 43 06.6	-2.6
CUPR	**Culebra, Puert**	**0.96**	**104**	*e*Pn	Pn	06 42 56.2	-0.5
STVI	**Saint Thomas**	**1.26**	**99**	⇑*e*P	Pn	06 42 59.1	-1.6
STVI	**Saint Thomas**	**1.26**	**99**	*e*S	Sn	06 43 14.4	-2.5
STVI	**Saint Thomas**	**1.26**	**99**	*e*Pn	Pn	06 42 60.0	-0.7
STVI				*e*Sn	Sn	06 43 14.3	-2.6

TIR ***11*** *06:50:27.2, 40°.29N×19°.69E, h26^{km}, Md2.5/4*

THE ***11*** *06:50:28.6, 40°.25N×19°.67E, h12^{km}±3^{km}, ML1.8/1, Error ellipse: s-maj=3.4km s-min=0.8km az=38.0*

ISC 11 06:50:28.1±1.0**, 40°.26N**±0°.04×**19°.68E**±0°.05**, h20**^{km}±3^{km}**, n10, σ0^{s}.62**/17**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	**Vlora**	**0.25**	**326**	P	**Pb**	**06 50 33.1**	**-0.7**
VLO				S	**Sg**	**06 50 38.5**	**+0.6**
VLO	**Vlora**	**0.25**	**326**	*i* PG	**Pg**	**06 50 33.6**	**-0.3**
VLO				*i* SG	**Sg**	**06 50 38.4**	**+0.6**
TPE	**Tepelena**	**0.26**	**83**	P	**Pb**	**06 50 33.5**	**-0.5**
TPE				S	**Sg**	**06 50 38.4**	**+0.2**
TPE	**Tepelena**	**0.26**	**83**	*i* PG	**Pb**	**06 50 33.6**	**-0.4**
TPE				*i* SG	**Sg**	**06 50 38.6**	**+0.4**
SRN	**Sarande**	**0.46**	**147**	P	**Pg**	**06 50 36.8**	**-0.7**
SRN				S	**Sb**	**06 50 44.3**	**+0.5**
SRN	**Sarande**	**0.46**	**147**	*i* PG	**Pb**	**06 50 37.5**	**0.0**
SRN				*i* SG	**Sb**	**06 50 45.0**	**+1.2**
KEK	**Kerkira**	**0.56**	**170**	P	**Pg**	**06 50 39.2**	**-0.1**
IGT	**Igoumenitsa**	**0.89**	**145**	P	**Pn**	**06 50 45.4**	**-0.1**
IGT				S	**Sn**	**06 50 58.0**	**+0.2**
	65nm,0.4s						
LKD2	**Lefkada island**	**1.66**	**152**	P	**Pb**	**06 50 57.0**	**-1.0**
PUK	**Puka**	**1.78**	**5**	*i* PG	**Pb**	**06 50 60.0**	**-0.2**

NNC ***11*** *06:50:46.5±5.0, 44°.32N×84°.80E, h28^{km}±33^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=38.9km s-min=16.5km az=110.0*

SOME ***11*** *06:50:50.5, 43°.73N×84°.63E, h10^{km}*

ISC 11 06:50:47.2±3.1**, 44°.5N**±0°.1×**84°.8E**±0°.2**, h10**^{km}**, n10, σ2^{s}.38**/14**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**2.20**	**106**	*e*P	Pn	06 51 14.4	-9.5
WMQ				LR	LR		
	comp=N,180nm,28.8s						
WMQ				LR	LR		
	comp=E,280nm,28.7s						
WMQ				LR	LR		
	comp=Z,220nm,26.3s						
MK31	**Makanchi Array**	**2.90**	**324**	⇑Pn	**Pn**	**06 51 32.6**	**-0.9**
	baz=124,slow=8.6,SNR=6.7						
MK31				⇓Pg	**Pb**	**06 51 40.6**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=137,slow=17,SNR=7.7						
MK31				⇑Lg	Lg	06 52 24.8	
	comp=Z,2.3nm,0.6s,baz=139,slow=31,SNR=5.3						
MAKZ	**Makanchi**	**3.05**	**321**	⇑Pg	**Pb**	**06 51 42.7**	**+1.1**
	comp=Z,0.9nm,0.8s						
MAKZ				⇓Lg	Lg	06 52 30.0	
	comp=Z,1.3nm,0.8s						
KTMS	**Ketmen**	**3.35**	**254**	Pg	**Pb**	**06 51 47.8**	**+0.9**
KTMS				Lg	Lg	06 52 29.1	
	comp=Z,3.0nm,0.4s						
KTMS	**Ketmen**	**3.35**	**254**	*e*P	**Pb**	**06 51 47.8**	**+0.9**
	comp=Z,0.7nm,0.2s						
KTMS				*e*S	**Sb**	**06 52 29.1**	**+1.4**
	comp=Z,3.0nm,0.4s						
DJR	**Jarkent**	**3.58**	**269**	Pg	**Pg**	**06 51 55.3**	**-0.4**
	comp=Z,2.1nm,0.4s						
DJR				Lg	Lg	06 52 42.1	
	comp=Z,3.1nm,0.5s						
DJR	**Jarkent**	**3.58**	**269**	*e*P	**Pg**	**06 51 55.2**	**-0.4**
	comp=Z,2.1nm,0.4s						
DJR				⇓*i*S	**Sg**	**06 52 42.1**	**+0.1**
	comp=Z,3.5nm,0.5s						
UZB	**Uzynbulak**	**4.37**	**254**	Pg	**Pb**	**06 52 06.4**	**+2.3**
	comp=Z,5.3nm,1.0s						
UZB				Lg	Lg	06 53 00.9	
	comp=Z,5.1nm,0.6s						
UZB	**Uzynbulak**	**4.37**	**254**	*e*P	**Pb**	**06 52 06.4**	**+2.3**
	comp=Z,5.3nm,1.0s						
UZB				*e*S	**Sb**	**06 53 00.9**	**+4.0**
	comp=Z,5.1nm,0.6s						
KPKS	**Kokpek**	**4.51**	**259**	*e*P	**Pg**	**06 52 10.4**	**-3.2**
	comp=Z,6.9nm,0.1s						
KPKS				*e*S	**Sg**	**06 53 07.8**	**-4.2**
	comp=Z,4.9nm,0.2s						

ROM ***11*** *06:57:04.9±0.1, 43°.808N±0°.004×12°.054E±0°.005, h9^{km}, ML2.5/22, Error ellipse: s-maj=0.6km s-min=0.1km az=34.0*

ISCJB ***11*** *06:57:05.2±0.3, 43°.82N±0°.02×12°.06E±0°.03, h12^{km}±2^{km}, Error ellipse: s-maj=3.9km s-min=2.4km az=40.2*

LDG ***11*** *06:57:05.1±0.2, 43°.83N×12°.04E, h10^{km}, Ml2.6/5, Error ellipse: s-maj=6.4km s-min=3.3km az=25.0*

ISC 11 06:57:05.0±0.8**, 43°.78N**±0°.02×**11°.99E**±0°.02**, h18**^{km}±5^{km}**, n40, σ1^{s}.66**/65**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASQU	**Asqua**	**0.14**	**278**	P	**Pg**	**06 57 09.5**	**+0.4**
ASQU				S	**Sg**	**06 57 13.1**	**+1.1**
ASQU				AML	AML		
	comp=E,3230μm,0.4s						
ASQU				AML	AML		
	comp=N,6935μm,0.2s						
ASQU				AML	AML		
	comp=E,3230μm,0.4s						
ASQU				AML	AML		
	comp=N,6935μm,0.2s						
ASQU				AML	AML		
	comp=E,3230μm,0.4s						
ASQU				AML	AML		
	comp=N,6935μm,0.2s						
ASQU				AML	AML		
	comp=N,6935μm,0.2s						
ASQU				AML	AML		
	comp=E,3230μm,0.4s						
SFI	**Santa Sofia**	**0.16**	**322**	P	**Pg**	**06 57 09.1**	**-0.3**
SFI				S	**Sg**	**06 57 12.3**	**-0.1**
SFI				AML	AML		
	comp=E,3210μm,0.3s						
SFI				AML	AML		
	comp=N,2105μm,0.2s						
SFI				AML	AML		
	comp=E,2795μm,0.3s						
SFI				AML	AML		
	comp=N,2700μm,0.2s						
SFI				AML	AML		
	comp=E,3205μm,0.3s						
SFI				AML	AML		
	comp=N,2105μm,0.2s						
SFI				AML	AML		
	comp=E,2795μm,0.3s						
SFI				AML	AML		
	comp=N,2695μm,0.2s						
SFI				AML	AML		
	comp=E,3210μm,0.3s						
SFI				AML	AML		
	comp=N,2105μm,0.2s						
SFI				AML	AML		
	comp=E,2795μm,0.3s						
SFI				AML	AML		
	comp=N,2700μm,0.2s						
SFI				AML	AML		
	comp=E,2795μm,0.3s						
SFI				AML	AML		
	comp=E,3210μm,0.3s						
SFI				AML	AML		
	comp=N,2700μm,0.2s						
SFI				AML	AML		
	comp=N,2105μm,0.2s						
PARC	**Parchiule**	**0.22**	**125**	P	**Pg**	**06 57 09.7**	**-0.5**
PARC				S	**Sg**	**06 57 13.5**	**-0.3**
PARC				AML	AML		
	comp=E,1350μm,0.2s						
PARC				AML	AML		
	comp=N,1735μm,0.4s						
PARC				AML	AML		
	comp=E,1350μm,0.2s						
PARC				AML	AML		
	comp=N,1735μm,0.4s						
PARC				AML	AML		
	comp=E,1350μm,0.2s						
PARC				AML	AML		
	comp=N,1735μm,0.4s						
PARC				AML	AML		
	comp=E,1350μm,0.2s						
PARC				AML	AML		
	comp=N,1735μm,0.4s						
SSP9	**Sansepolcro**	**0.23**	**153**	P	**Pg**	**06 57 10.6**	**+0.4**
SSP9				S	**Sg**	**06 57 14.9**	**+1.0**
SSP9				AML	AML		
	comp=E,1222μm,0.9s						
SSP9				AML	AML		
	comp=N,1570μm,0.7s						
SSP9				AML	AML		
	comp=E,1220μm,0.9s						
SSP9				AML	AML		
	comp=N,1565μm,0.7s						
SSP9				AML	AML		
	comp=E,1224μm,0.9s						
SSP9				AML	AML		
	comp=N,1565μm,0.7s						
SSP9				AML	AML		
	comp=E,1224μm,0.9s						
SSP9				AML	AML		
	comp=N,1565μm,0.7s						
CPGN	**Carpegna, Ital**	**0.24**	**84**	P	**Pg**	**06 57 09.7**	**-0.9**
CPGN				S	**Sg**	**06 57 13.3**	**-1.2**
CPGN				AML	AML		
	comp=E,2665μm,0.9s						
CPGN				AML	AML		
	comp=N,2605μm,0.7s						
CPGN				AML	AML		
	comp=E,2500μm,0.8s						
CPGN				AML	AML		
	comp=N,2565μm,0.7s						
CPGN				AML	AML		
	comp=E,2665μm,0.9s						
CPGN				AML	AML		
	comp=N,2605μm,0.7s						
CPGN				AML	AML		
	comp=E,2500μm,0.8s						
CPGN				AML	AML		
	comp=N,2565μm,0.7s						
CPGN				AML	AML		
	comp=E,2665μm,0.9s						
CPGN				AML	AML		
	comp=N,2610μm,0.7s						
CPGN				AML	AML		
	comp=E,2500μm,0.8s						
CPGN				AML	AML		
	comp=N,2560μm,0.7s						
CPGN				AML	AML		
	comp=E,2665μm,0.9s						
CPGN				AML	AML		
	comp=E,2500μm,0.8s						
CPGN				AML	AML		
	comp=N,2610μm,0.7s						
CPGN				AML	AML		

	comp=N,2560µm,0.7s						
BADI	**Badiali**	**0.33**	**145**	P	**Pg**	**06 57 11.9**	**0.0**
BADI				S	**Sb**	**06 57 17.6**	**+0.4**
BADI				AML	AML		
	comp=E,1120µm,0.3s						
BADI				AML	AML		
	comp=N,770µm,0.2s						
BADI				AML	AML		
	comp=E,1119µm,0.3s						
BADI				AML	AML		
	comp=N,770µm,0.2s						
BADI				AML	AML		
	comp=E,1120µm,0.3s						
BADI				AML	AML		
	comp=N,769µm,0.2s						
BADI				AML	AML		
	comp=E,1120µm,0.3s						
BADI				AML	AML		
	comp=N,769µm,0.2s						
RUFI	**Rufina**	**0.35**	**281**	P	**Pg**	**06 57 13.0**	**+0.6**
RUFI				S	**Sb**	**06 57 19.4**	**+1.4**
RUFI				AML	AML		
	comp=E,2210µm,0.2s						
RUFI				AML	AML		
	comp=N,1530µm,0.5s						
RUFI				AML	AML		
	comp=E,2210µm,0.2s						
RUFI				AML	AML		
	comp=N,1529µm,0.5s						
RUFI				AML	AML		
	comp=E,2210µm,0.2s						
RUFI				AML	AML		
	comp=N,1530µm,0.5s						
RUFI				AML	AML		
	comp=E,2210µm,0.2s						
RUFI				AML	AML		
	comp=N,1530µm,0.5s						
ATPI	**Pietralunga -**	**0.44**	**137**	P	**Pg**	**06 57 13.7**	**-0.3**
ATPI				S	**Sb**	**06 57 20.6**	**0.0**
ATPI				AML	AML		
	comp=E,594µm,0.8s						
ATPI				AML	AML		
	comp=N,412µm,0.7s						
ATPI				AML	AML		
	comp=E,594µm,0.8s						
ATPI				AML	AML		
	comp=N,412µm,0.7s						
ATPI				AML	AML		
	comp=E,594µm,0.8s						
ATPI				AML	AML		
	comp=N,412µm,0.7s						
ATPI				AML	AML		
	comp=E,594µm,0.8s						
ATPI				AML	AML		
	comp=N,412µm,0.7s						
CAFI	**Castiglion Fio**	**0.45**	**182**	P	**Pg**	**06 57 14.9**	**+0.8**
CAFI				S	**Sb**	**06 57 23.0**	**+2.3**
CAFI				AML	AML		
	comp=E,500µm,0.5s						
CAFI				AML	AML		
	comp=N,726µm,0.6s						
CAFI				AML	AML		
	comp=E,500µm,0.5s						
CAFI				AML	AML		
	comp=N,726µm,0.6s						
CAFI				AML	AML		
	comp=N,726µm,0.6s						
CAFI				AML	AML		
	comp=E,500µm,0.5s						
ATMI	**Monte Miggiano**	**0.49**	**155**	P	**Pg**	**06 57 15.0**	**+0.3**
ATMI				S	**Sb**	**06 57 23.2**	**+1.4**
ATMI				AML	AML		
	comp=E,781µm,0.3s						
ATMI				AML	AML		
	comp=N,997µm,0.7s						
ATMI				AML	AML		
	comp=E,780µm,0.3s						
ATMI				AML	AML		
	comp=N,997µm,0.7s						
ATMI				AML	AML		
	comp=E,780µm,0.3s						
ATMI				AML	AML		
	comp=N,997µm,0.7s						
ATVO	**AVT- Monte Val**	**0.50**	**142**	P	**Pg**	**06 57 14.8**	**-0.2**
ATVO				S	**Sb**	**06 57 23.2**	**+1.0**
ATVO				AML	AML		
	comp=E,631µm,0.6s						
ATVO				AML	AML		
	comp=N,546µm,0.6s						
ATVO				AML	AML		
	comp=E,631µm,0.6s						
ATVO				AML	AML		
	comp=N,546µm,0.6s						
ATVO				AML	AML		
	comp=E,631µm,0.6s						
ATVO				AML	AML		
	comp=N,546µm,0.6s						
BRIS	**BRISIGHELLA**	**0.51**	**318**	P	**Pg**	**06 57 14.5**	**-0.6**
BRIS				S	**Sg**	**06 57 22.4**	**+0.3**
BRIS				AML	AML		
	comp=E,1108µm,1.3s						
BRIS				AML	AML		
	comp=N,2190µm,0.3s						
BRIS				AML	AML		
	comp=E,1104µm,1.3s						
BRIS				AML	AML		
	comp=N,2190µm,0.3s						
BRIS				AML	AML		
	comp=E,1104µm,1.3s						
BRIS				AML	AML		
	comp=N,2190µm,0.3s						
SEI	**Scarperia**	**0.53**	**302**	P	**Pg**	**06 57 16.0**	**+0.4**
SEI				S	**Sb**	**06 57 25.0**	**+1.7**
SEI				AML	AML		
	comp=E,1155µm,0.4s						
SEI				AML	AML		
	comp=N,2020µm,0.9s						
SEI				AML	AML		
	comp=E,1155µm,0.4s						
SEI				AML	AML		
	comp=N,2020µm,0.9s						
SEI				AML	AML		
	comp=E,1155µm,0.4s						
SEI				AML	AML		
	comp=N,2020µm,0.9s						
MPAG	**Monte Paganucc**	**0.58**	**104**	P	**Pg**	**06 57 15.3**	**-1.2**
MPAG				S	**Sb**	**06 57 24.1**	**-0.5**
MPAG				AML	AML		
	comp=E,204µm,0.5s						
MPAG				AML	AML		
	comp=N,244µm,0.8s						
MPAG				AML	AML		
	comp=E,204µm,0.5s						
MPAG				AML	AML		
	comp=N,243µm,0.8s						
MPAG				AML	AML		
	comp=E,204µm,0.5s						
MPAG				AML	AML		
	comp=N,243µm,0.8s						
FRON	**Frontone**	**0.59**	**115**	P	**Pg**	**06 57 15.9**	**-0.8**
FRON				S	**Sb**	**06 57 24.9**	**-0.1**
FRON				AML	AML		
	comp=E,218µm,0.7s						
FRON				AML	AML		
	comp=N,306µm,0.5s						
FRON				AML	AML		
	comp=E,218µm,0.7s						
FRON				AML	AML		
	comp=N,306µm,0.5s						
FRON				AML	AML		
	comp=E,218µm,0.7s						
FRON				AML	AML		
	comp=N,306µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.64**	**155**	P	**Pg**	**06 57 17.5**	**0.0**
ATTE				S	**Sb**	**06 57 27.0**	**+0.8**
ATTE				AML	AML		
	comp=E,337µm,0.4s						
ATTE				AML	AML		
	comp=N,380µm,0.5s						
ATTE				AML	AML		
	comp=E,337µm,0.4s						
ATTE				AML	AML		
	comp=N,380µm,0.5s						
ATTE				AML	AML		
	comp=E,337µm,0.4s						
ATTE				AML	AML		
	comp=N,380µm,0.5s						
PESA	**Pesaro**	**0.64**	**75**	P	**Pg**	**06 57 16.4**	**-1.2**
PESA				AML	AML		
	comp=E,682µm,1.1s						
PESA				AML	AML		
	comp=N,497µm,0.3s						
PESA				AML	AML		
	comp=E,682µm,1.1s						
PESA				AML	AML		
	comp=N,497µm,0.3s						
PESA				AML	AML		
	comp=N,497µm,0.3s						
PESA				AML	AML		
	comp=E,682µm,1.1s						
MURB	**Monte Urbino**	**0.65**	**142**	AML	AML		
	comp=N,532µm,0.3s						
MURB				AML	AML		
	comp=E,662µm,0.3s						
MURB				AML	AML		
	comp=E,662µm,0.3s						
MURB				AML	AML		
	comp=N,532µm,0.3s						
MURB				AML	AML		
	comp=E,662µm,0.3s						
MURB				AML	AML		
	comp=N,532µm,0.3s						
ARVD	**Arcevia**	**0.75**	**111**	P	**Pb**	**06 57 19.1**	**-0.3**
ARVD				S	**Sb**	**06 57 29.0**	**-0.3**
ARVD				AML	AML		
	comp=E,152µm,0.7s						
ARVD				AML	AML		
	comp=N,142µm,1.4s						
ARVD				AML	AML		
	comp=E,152µm,0.7s						
ARVD				AML	AML		
	comp=N,142µm,1.4s						
ARVD				AML	AML		
	comp=E,152µm,0.7s						
ARVD				AML	AML		
	comp=N,142µm,1.4s						
MTCR	**Monte La Croce**	**0.76**	**290**	P	**Pg**	**06 57 20.4**	**+0.6**
MTCR				AML	AML		
	comp=E,387µm,0.2s						
MTCR				AML	AML		
	comp=N,354µm,1.6s						
SACS	**San Casciano d**	**0.93**	**184**	AML	AML		
	comp=E,308µm,0.7s						
SACS				AML	AML		
	comp=N,278µm,0.4s						
SACS				AML	AML		
	comp=E,308µm,0.7s						
SACS				AML	AML		
	comp=N,278µm,0.4s						
SACS				AML	AML		
	comp=N,278µm,0.4s						
SACS				AML	AML		
	comp=E,308µm,0.7s						
ARCI	**Arcidosso**	**1.00**	**202**	AML	AML		
	comp=N,282µm,0.8s						
ARCI				AML	AML		
	comp=E,121µm,0.6s						
ARCI				AML	AML		
	comp=E,121µm,0.6s						
ARCI				AML	AML		
	comp=N,282µm,0.8s						
ARCI				AML	AML		
	comp=N,282µm,0.8s						
ARCI				AML	AML		
	comp=E,121µm,0.6s						
RMP	**Rome, Mte Porz**	**2.03**	**165**	AML	AML		
	comp=E,660µm,0.8s						
RMP				AML	AML		
	comp=E,660µm,0.8s						
RMP				AML	AML		
	comp=N,451µm,0.1s						
RMP				AML	AML		
	comp=N,451µm,0.1s						
NVLJ	**Novalja**	**2.22**	**68**	*e*Pn	**Pn**	**06 57 40.9**	**0.0**
NVLJ				Sn	**Sn**	**06 58 07.2**	**-0.6**
DUGI	**Dugi Otok**	**2.23**	**83**	*e*Pn	**Pn**	**06 57 41.6**	**+0.6**
PGF	**Pioggiola**	**2.51**	**242**	*e*Pn	**Pn**	**06 57 46.6**	**+1.6**
PGF				*e*Sn	**Sn**	**06 58 15.0**	**-0.1**
	comp=N,8.4nm,0.5s						
ZIRJ	**Zirje**	**2.65**	**91**	*e*Pn	**Pn**	**06 57 47.3**	**+0.4**
ZIRJ				Sn	**Sn**	**06 58 19.3**	**+0.7**
MORI	**Morici**	**2.69**	**87**	*e*Pn	**Pn**	**06 57 49.3**	**+1.9**
ABTA	**Abfaltersbach**	**3.00**	**7**	Pg	**Pg**	**06 58 01.3**	**-1.1**
	comp=N,1.3nm,0.2s						
MYKA	**Terra Mystica**	**3.08**	**22**	Pg	**Pg**	**06 58 04.6**	**+0.5**
	comp=N,2.2nm,0.3s						
MYKA				Sg	**Sg**	**06 58 40.9**	**-3.1**
	comp=N,1.7nm,0.2s						
KIJV	**Kijevo**	**3.20**	**84**	*i* Pn	**Pn**	**06 57 56.0**	**+1.6**
KIJV				Sn	**Sn**	**06 58 34.0**	**+1.8**
OBKA	**Obir**	**3.28**	**33**	Pg	**Pb**	**06 58 01.6**	**-1.1**
	comp=N,1.7nm,0.3s						
OBKA				Sg	**Sg**	**06 58 50.7**	**+0.4**
	comp=N,10nm,0.6s						
SBF	**Sospel**	**3.30**	**273**	*e*Pn	**Pn**	**06 57 54.3**	**-1.5**
SBF				*e*Sn	**Sn**	**06 58 31.1**	**-3.4**
	comp=N,5.0nm,0.2s						
FETA	**Feichten**	**3.36**	**345**	Pg	**Pb**	**06 58 04.6**	**+0.4**
	comp=N,1.5nm,0.4s						
FETA				Sn	**Sn**	**06 58 40.1**	**+3.7**
	comp=N,1.3nm,0.4s						
KBA	**Koelnbreinsper**	**3.44**	**16**	*e*Pn	**Pn**	**06 58 00.9**	**+3.0**
	comp=N,0.8nm,0.3s						
KBA				Sn	**Sn**	**06 58 42.0**	**+3.8**
	comp=N,1.6nm,0.4s						
WTTA	**Wattenberg**	**3.50**	**356**	*e*Pn	**Pb**	**06 58 03.0**	**-3.4**
	comp=N,1.0nm,0.2s						
WTTA				Sn	**Sn**	**06 58 44.0**	**+4.4**
	comp=N,6.3nm,0.5s						
SOKA	**Soboth**	**3.61**	**35**	Sg	**Sg**	**06 58 59.9**	**-1.0**
	comp=N,4.0nm,0.6s						
DAVA	**Damuels**	**3.81**	**338**	Sn	**Sn**	**06 58 49.4**	**+2.0**
	comp=N,2.9nm,0.2s						
MBDF	**Montbardon**	**3.87**	**286**	*e*Pn	**Pn**	**06 58 01.5**	**-2.2**
MBDF				*e*Sn	**Sn**	**06 58 47.0**	**-1.7**
	comp=N,0.9nm,0.2s						
LMR	**La Mourre**	**4.01**	**266**	*e*Pn	**Pn**	**06 58 03.9**	**-1.6**
LMR				*e*Sn	**Sn**	**06 58 47.7**	**-4.3**
	comp=N,1.4nm,0.3s						

JMA 11 07:11:36.1±0.3, 24°.72N×123°.42E, h26^{km}, M1.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.45**	**235**	P	Pb	07 11 45.2	-0.4
YOJ				S	Sb	07 11 51.5	-0.5
IRIF	**Iriomote-Funau**	**0.48**	**144**	P	Pb	07 11 45.9	-0.1
IRIF				S	Sb	07 11 52.0	-0.6
JYNG	**Yonagunijimaku**	**0.51**	**238**	P	Pb	07 11 46.3	-0.2
JYNG				S	Sb	07 11 53.4	-0.1
JKRS	**Kuro-shima**	**0.72**	**132**	P	Pb	07 11 50.1	+0.1
JKRS				S	Sb	07 11 59.5	0.0
HATJ	**Hateruma jima**	**0.75**	**152**	P	Pb	07 11 50.1	-0.4
JIJ	**Ishigaki jima**	**0.75**	**118**	P	Pb	07 11 49.9	-0.6
JIJ				S	Sb	07 11 58.6	-1.7

TAP 11 07:11:52.6, 24°.08N×121°.58E, h8^{km}, ML0.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.01**	**75**	P	Pg	07 11 54.4	+0.4
	baz=76						
TWD				S	Sg	07 11 55.7	+0.8
	baz=76						
NACB	**Ninganchiao**	**0.10**	**6**	*e*P	Pg	07 11 55.4	+0.5
	baz=5.0						
NACB				*e*S	Sg	07 11 57.7	+1.2
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.16**	**324**	*e*P	Pg	07 11 57.0	+1.0
	baz=324						
ETLH				*e*S	Sg	07 11 59.9	+1.6
	baz=324						
WHF	**Hehuan Shan**	**0.30**	**283**	*e*P	Pb	07 11 59.7	-0.9
	baz=283						
WHF				*e*S	Sb	07 12 04.3	-1.5
	baz=283						

ROM 11 07:12:59.3±0.1, 43°.814N±0°.004×12°.055E±0°.005, h8^{km}, ML2.3/19, Error ellipse: s-maj=0.6km s-min=0.1km az=216.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.18**	**301**	P	Pg	07 13 03.4	+0.4
SFI				S	Sg	07 13 06.5	+1.1
SFI				AML	AML		
	comp=E,1360µm,0.4s						
SFI				AML	AML		
	comp=N,992µm,0.6s						
SFI				AML	AML		
	comp=E,1130µm,0.4s						
SFI				AML	AML		
	comp=N,1215µm,0.5s						
SFI				AML	AML		
	comp=E,1360µm,0.4s						
SFI				AML	AML		
	comp=N,994µm,0.6s						
SFI				AML	AML		
	comp=E,1125µm,0.4s						
SFI				AML	AML		
	comp=N,1215µm,0.5s						
SFI				AML	AML		
	comp=E,1360µm,0.4s						
SFI				AML	AML		
	comp=N,1215µm,0.5s						
SFI				AML	AML		
	comp=N,994µm,0.6s						
SFI				AML	AML		
	comp=E,1125µm,0.4s						
ASQU	**Asqua**	**0.19**	**265**	P	Pg	07 13 04.0	+0.7
ASQU				S	Sg	07 13 07.6	+1.6
ASQU				AML	AML		
	comp=E,1655µm,0.3s						
ASQU				AML	AML		
	comp=N,1955µm,0.3s						
ASQU				AML	AML		
	comp=N,1955µm,0.3s						
ASQU				AML	AML		
	comp=E,1655µm,0.3s						
CPGN	**Carpegna, Ital**	**0.19**	**94**	P	Pg	07 13 04.2	+0.9
CPGN				S	Sg	07 13 07.4	+1.4
CPGN				AML	AML		
	comp=E,1795µm,0.4s						
CPGN				AML	AML		
	comp=N,1395µm,1.5s						
CPGN				AML	AML		
	comp=E,1790µm,0.3s						
CPGN				AML	AML		
	comp=N,1395µm,1.6s						
CPGN				AML	AML		
	comp=E,1790µm,0.3s						
CPGN				AML	AML		
	comp=N,1395µm,1.6s						
PARC	**Parchiule**	**0.21**	**141**	P	Pg	07 13 04.2	+0.5
PARC				S	Sg	07 13 08.1	+1.6
PARC				AML	AML		
	comp=E,698µm,0.3s						
PARC				AML	AML		
	comp=N,720µm,0.5s						
PARC				AML	AML		
	comp=E,1465µm,0.2s						
PARC				AML	AML		
	comp=N,1153µm,0.7s						
PARC				AML	AML		
	comp=E,1465µm,0.2s						
PARC				AML	AML		
	comp=N,1153µm,0.7s						
SSP9	**Sansepolcro**	**0.25**	**167**	P	Pg	07 13 05.0	+0.8
SSP9				S	Sg	07 13 09.7	+2.1
BADI	**Badiali**	**0.33**	**156**	P	Pg	07 13 06.4	+0.5
BADI				S	Sb	07 13 12.1	-0.9
BADI				AML	AML		
	comp=E,590µm,1.3s						
BADI				AML	AML		
	comp=N,310µm,0.4s						
BADI				AML	AML		
	comp=E,1160µm,0.1s						
BADI				AML	AML		
	comp=N,630µm,1.1s						
BADI				AML	AML		
	comp=E,1160µm,0.1s						
BADI				AML	AML		
	comp=N,630µm,1.1s						
PE3	**Peglio**	**0.34**	**110**	P	Pg	07 13 06.7	+0.6
PE3				S	Sb	07 13 12.5	-0.7
PE3				AML	AML		
	comp=E,1182µm,0.3s						
PE3				AML	AML		
	comp=N,810µm,0.4s						
PE3				AML	AML		
	comp=E,2085µm,0.3s						
PE3				AML	AML		
	comp=N,1140µm,0.3s						
PE3				AML	AML		
	comp=N,1140µm,0.3s						
PE3				AML	AML		
	comp=E,2085µm,0.3s						
RUFI	**Rufina**	**0.40**	**274**	P	Pg	07 13 07.4	+0.4
RUFI				S	Sb	07 13 13.8	-1.0
ATPI	**Pietralunga -**	**0.44**	**145**	P	Pg	07 13 08.4	+0.5
ATPI				S	Sb	07 13 15.8	-0.3
ATPI				AML	AML		
	comp=E,222µm,0.3s						
ATPI				AML	AML		
	comp=N,239µm,1.3s						
ATPI				AML	AML		
	comp=N,239µm,1.3s						
ATPI				AML	AML		
	comp=E,222µm,0.3s						
BLLA	**Bellaria**	**0.45**	**42**	P	Pg	07 13 08.4	+0.5
BLLA				S	Sb	07 13 16.0	-0.1
CAFI	**Castiglion Fio**	**0.49**	**188**	P	Pg	07 13 09.3	+0.6
CAFI				S	Sb	07 13 17.3	-0.2
CAFI				AML	AML		
	comp=E,238µm,1.3s						
CAFI				AML	AML		
	comp=N,200µm,0.4s						
CAFI				AML	AML		
	comp=E,238µm,1.3s						
CAFI				AML	AML		
	comp=N,200µm,0.4s						
ATVO	**AVT- Monte Val**	**0.50**	**149**	P	Pg	07 13 09.5	+0.5
ATVO				S	Sb	07 13 17.6	-0.3
ATVO				AML	AML		
	comp=E,339µm,0.3s						
ATVO				AML	AML		
	comp=N,376µm,1.4s						
ATVO				AML	AML		
	comp=E,339µm,0.3s						
ATVO				AML	AML		
	comp=N,376µm,1.4s						
ATMI	**Monte Miggiano**	**0.50**	**162**	P	Pg	07 13 09.7	+0.6
ATMI				AML	AML		
	comp=E,520µm,1.3s						
ATMI				AML	AML		
	comp=N,512µm,0.4s						
ATMI				AML	AML		
	comp=E,520µm,1.3s						
ATMI				AML	AML		
	comp=N,512µm,0.4s						
BRIS	**BRISIGHELLA**	**0.52**	**311**	P	Pg	07 13 08.9	-0.4
BRIS				S	Sg	07 13 16.9	+0.8
BRIS				AML	AML		
	comp=E,455µm,1.3s						
BRIS				AML	AML		
	comp=N,437µm,1.0s						
BRIS				AML	AML		
	comp=E,336µm,0.5s						
BRIS				AML	AML		
	comp=N,372µm,1.5s						
BRIS				AML	AML		
	comp=E,455µm,1.3s						
BRIS				AML	AML		
	comp=N,437µm,1.0s						
BRIS				AML	AML		
	comp=E,455µm,1.3s						
BRIS				AML	AML		
	comp=N,437µm,1.0s						
BRIS				AML	AML		
	comp=E,336µm,0.5s						
BRIS				AML	AML		
	comp=N,372µm,1.5s						
MPAG	**Monte Paganucc**	**0.54**	**110**	P	Pg	07 13 09.9	+0.1
MPAG				S	Sb	07 13 18.6	-0.5
MPAG				AML	AML		
	comp=E,92µm,1.1s						
MPAG				AML	AML		
	comp=N,160µm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MPAG				AML	AML		
	comp=N,160µm,0.8s						
MPAG				AML	AML		
	comp=E,92µm,1.1s						
SEI	**Scarperia**	0.56	296	P	Pg	07 13 10.3	+0.2
SEI				S	Sb	07 13 19.6	+0.1
SEI				AML	AML		
	comp=E,490µm,0.6s						
SEI				AML	AML		
	comp=N,1200µm,0.5s						
SEI				AML	AML		
	comp=N,1200µm,0.5s						
SEI				AML	AML		
	comp=E,490µm,0.6s						
ATTE	**AVT- Monte Tez**	0.65	160	P	Pg	07 13 11.9	0.0
ATTE				S	Sb	07 13 22.1	-0.2
ATTE				AML	AML		
	comp=E,212µm,0.3s						
ATTE				AML	AML		
	comp=N,223µm,1.0s						
ATTE				AML	AML		
	comp=N,223µm,1.0s						
ATTE				AML	AML		
	comp=E,212µm,0.3s						
ARVD	**Arcevia**	0.72	116	P	Pg	07 13 13.3	+0.2
ARVD				AML	AML		
	comp=E,83µm,0.5s						
ARVD				AML	AML		
	comp=N,81µm,1.2s						
ARVD				AML	AML		
	comp=N,81µm,1.2s						
ARVD				AML	AML		
	comp=E,83µm,0.5s						
MGAB	**Montegabbione**	0.90	177	AML	AML		
	comp=N,170µm,0.5s						
MGAB				AML	AML		
	comp=E,228µm,0.5s						
MGAB				AML	AML		
	comp=N,170µm,0.5s						
MGAB				AML	AML		
	comp=E,228µm,0.5s						
MNTV	**Mantova**	1.61	326	AML	AML		
	comp=E,988µm,0.4s						
MNTV				AML	AML		
	comp=N,834µm,0.4s						
MNTV				AML	AML		
	comp=N,834µm,0.4s						
MNTV				AML	AML		
	comp=E,988µm,0.4s						
VVLD	**Villa Vallelon**	2.26	149	AML	AML		
	comp=E,202µm,0.3s						
VVLD				AML	AML		
	comp=N,201µm,0.5s						
VVLD				AML	AML		
	comp=N,201µm,0.5s						
VVLD				AML	AML		
	comp=E,202µm,0.3s						
POFI	**Posta Fibreno**	2.42	149	AML	AML		
	comp=E,59µm,0.9s						
POFI				AML	AML		
	comp=N,29µm,0.2s						
POFI				AML	AML		
	comp=N,29µm,0.2s						
POFI				AML	AML		
	comp=E,59µm,0.9s						

ROM 11 07:13:27.7±0.1**, 43°.801N**±0°.004×**12°.035E**±0°.005**, h8^{km}, ML2.3**/4**, Error ellipse: s-maj=0.5km s-min=0.2km az=215.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	0.17	307	P	Pg	07 13 31.7	+0.4
SFI				S	Sg	07 13 34.9	+1.2
ASQU	**Asqua**	0.18	269	P	Pg	07 13 32.3	+0.9
ASQU				S	Sg	07 13 34.9	+0.9
CPGN	**Carpegna, Ital**	0.21	90	P	Pg	07 13 32.4	+0.5
CPGN				S	Sg	07 13 36.8	+1.9
PARC	**Parchiule**	0.21	136	P	Pg	07 13 32.5	+0.6
PARC				S	Sg	07 13 36.3	+1.4
PARC				AML	AML		
	comp=E,1465µm,0.2s						
PARC				AML	AML		
	comp=N,1153µm,0.7s						
PARC				AML	AML		
	comp=E,1465µm,0.2s						
PARC				AML	AML		
	comp=N,1153µm,0.7s						
PARC				AML	AML		
	comp=N,1153µm,0.7s						
PARC				AML	AML		
	comp=E,1465µm,0.2s						
SSP9	**Sansepolcro**	0.24	163	P	Pg	07 13 33.4	+0.9
SSP9				S	Sg	07 13 37.7	+2.1
BADI	**Badiali**	0.33	152	P	Pg	07 13 34.7	+0.6
BADI				S	Sb	07 13 40.3	-0.9
BADI				AML	AML		
	comp=E,1160µm,0.1s						
BADI				AML	AML		
	comp=N,631µm,1.1s						
BADI				AML	AML		
	comp=E,1160µm,0.1s						
BADI				AML	AML		
	comp=N,630µm,1.1s						
BADI				AML	AML		
	comp=E,1160µm,0.1s						
BADI				AML	AML		
	comp=N,630µm,1.1s						
PE3	**Peglio**	0.35	107	P	Pg	07 13 35.0	+0.4
PE3				S	Sb	07 13 41.0	-0.9
PE3				AML	AML		
	comp=E,2085µm,0.3s						
PE3				AML	AML		
	comp=N,1145µm,0.3s						
PE3				AML	AML		
	comp=E,2085µm,0.3s						
PE3				AML	AML		
	comp=N,1140µm,0.3s						
PE3				AML	AML		
	comp=E,2085µm,0.3s						
PE3				AML	AML		
	comp=N,1140µm,0.3s						
RUFI	**Rufina**	0.38	276	P	Pg	07 13 35.7	+0.5
RUFI				S	Sb	07 13 42.2	-0.5
ATPI	**Pietralunga -**	0.44	143	P	Pg	07 13 36.6	+0.3
ATPI				S	Sb	07 13 43.8	-0.6
BLLA	**Bellaria**	0.46	42	P	Pb	07 13 37.7	-0.4
BLLA				S	Sb	07 13 44.9	-0.2
CAFI	**Castiglion Fio**	0.47	186	P	Pb	07 13 37.7	-0.6
CAFI				S	Sb	07 13 45.6	+0.2
ATVO	**AVT- Monte Val**	0.50	147	P	Pg	07 13 37.9	+0.6
ATVO				S	Sb	07 13 45.9	-0.2
BRIS	**BRISIGHELLA**	0.52	313	P	Pg	07 13 37.4	-0.3
BRIS				S	Sg	07 13 45.2	+0.8
MPAG	**Monte Paganucc**	0.55	108	P	Pg	07 13 38.1	-0.2
MPAG				S	Sb	07 13 47.1	-0.6
FRON	**Frontone**	0.58	119	P	Pg	07 13 38.9	+0.1
FRON				S	Sb	07 13 47.7	-0.6
PESA	**Pesaro**	0.60	76	P	Pg	07 13 39.8	+0.5
PESA				S	Sb	07 13 48.7	-0.3
ATTE	**AVT- Monte Tez**	0.65	159	P	Pg	07 13 40.2	0.0
ATTE				S	Sb	07 13 50.0	-0.3
ARVD	**Arcevia**	0.72	114	P	Pg	07 13 41.4	-0.2
ARVD				S	Sb	07 13 52.4	-0.2
TRI	**Trieste**	2.27	32	AML	AML		
	comp=E,27µm,0.8s						
TRI				AML	AML		
	comp=N,17µm,1.5s						
TRI				AML	AML		
	comp=N,17µm,1.5s						
TRI				AML	AML		
	comp=E,27µm,0.8s						

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*ISCJB **11** 07:13:37.9±0.8, 33°.59N±0°.03×32°.06E±0°.06, h10^{km}, Error ellipse: s-maj=7.5km s-min=3.5km az=170.1*

*NIC **11** 07:13:40.2±0.1, 33°.69N×31°.74E, h25^{km}, ML3.0*

*GII **11** 07:13:42.0±0.0, 33°.64N×31°.94E, h31^{km}, MD2.5/4*

*NSSC **11** 07:13:49.1±0.5, 33°.29N×32°.90E, h6^{km}±999^{km}, ML2.4*

ISC 11 07:13:37.2±1.7**, 33°.65N**±0°.04×**31°.93E**±0°.09**, h10^{km}, n28, σ1^{s}.08**/46**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	**Paphos**	1.28	16	P	**Pn**	**07 14 01.1**	**0.0**
	baz=202						
SZAC	**Souni**	1.36	35	P	**Pn**	**07 14 02.7**	**+0.5**
	baz=222						
SZAC				S	**Sb**	**07 14 20.5**	**+0.4**
ALFC	**Alefka**	1.60	20	P	**Pn**	**07 14 05.4**	**-0.2**
	baz=206						
ALFC				S	**Sn**	**07 14 25.5**	**-0.9**
CSS	**Mathiatis**	1.75	41	P	**Pn**	**07 14 08.6**	**+1.0**
	baz=226						
CSS				S	**Sn**	**07 14 30.5**	**+0.5**
CSS	**Mathiatis**	1.75	41	Pn	**Pn**	**07 14 07.6**	**0.0**
CSS				Sn	**Sn**	**07 14 29.5**	**-0.5**
HNTI	**Hanita**	2.77	101	Sn	**Sn**	**07 14 54.0**	**-1.3**
SLTI	**Sal'it**	2.97	117	Sn	**Sn**	**07 14 58.7**	**-1.4**
MMA0B	**Mount Meron ar**	2.98	101	Pn	**Pn**	**07 14 25.3**	**+0.8**
MMA0B				Sn	**Sn**	**07 14 59.4**	**-1.0**
KSDI	**Kefar Szold**	3.15	97	Pn	**Pn**	**07 14 27.5**	**+0.6**
KSDI				Sn	**Sn**	**07 15 03.4**	**-1.2**
GEM	**Giv'at Ha'Em**	3.15	97	Pn	**Pn**	**07 14 27.4**	**+0.5**
GEM				Sn	**Sn**	**07 15 04.0**	**-0.6**
MMLI	**Mount Malkishu**	3.17	111	Pn	**Pn**	**07 14 27.8**	**+0.6**
MMLI				Sn	**Sn**	**07 15 03.8**	**-1.3**
NATI	**Neve Ativ**	3.21	96	Pn	**Pn**	**07 14 28.0**	**+0.4**
NATI				Sn	**Sn**	**07 15 04.3**	**-1.6**
RCY	**Rachaya**	3.27	92	*e*P	**Pn**	**07 14 28.8**	**+0.2**
KSHT	**Keshet**	3.32	101	Pn	**Pn**	**07 14 29.6**	**+0.4**
HMDT	**Nahal Hemdat**	3.33	114	Pn	**Pn**	**07 14 30.2**	**+0.9**
HMDT				Sn	**Sn**	**07 15 08.1**	**-0.9**
BRBR	**Barbar**	3.37	93	*e*P	**Pn**	**07 14 30.9**	**+0.9**
BRBR				*e*S	Sn	07 15 02.0	-8.2
BRBR				AML	AML	07 15 11.5	
	comp=N,41nm,0.5s						
BRBR				AML	AML	07 15 14.1	
	comp=E,19nm,0.4s						
KZIT	**Kziot**	3.44	142	Pn	**Pn**	**07 14 31.4**	**+0.5**
KZIT				Sn	**Sn**	**07 15 10.1**	**-1.7**
YTIR	**Yattir**	3.53	129	Pn	**Pn**	**07 14 33.1**	**+0.9**
YTIR	**Yattir**	3.53	129	Pn	**Pn**	**07 14 33.1**	**+0.9**
YTIR				Sn	**Sn**	**07 15 13.2**	**-0.8**
DSI	**Dead Sea**	3.58	125	Pn	**Pn**	**07 14 33.5**	**+0.8**
DSI				Sn	**Sn**	**07 15 14.4**	**-0.6**
QASN	**Qassioun**	3.63	91	*e*P	**Pn**	**07 14 35.7**	**+2.1**
QASN				*e*S	Sn	07 15 08.2	-8.3
QASN				AML	AML	07 15 23.7	
	comp=N,54nm,0.5s						
QASN				AML	AML	07 15 24.9	
	comp=E,77nm,0.4s						
MZDA	**Masada**	3.72	128	Pn	**Pn**	**07 14 35.6**	**+0.9**
MZDA				Sn	**Sn**	**07 15 17.8**	**-0.8**
TOTH	**TOTAH**	3.77	93	*e*P	**Pn**	**07 14 37.3**	**+1.9**
TOTH				*e*S	Sn	07 15 11.1	-8.9
TOTH				AML	AML	07 15 22.3	
	comp=N,27nm,0.4s						
TOTH				AML	AML	07 15 27.2	
	comp=E,20nm,0.6s						
PRNI	**Paran**	4.20	141	Pn	**Pn**	**07 14 42.8**	**+1.5**
PRNI				Sn	**Sn**	**07 15 28.9**	**-1.6**
KRMI	**Paran Flat**	4.25	145	Pn	**Pn**	**07 14 43.3**	**+1.3**
KRMI				Sn	**Sn**	**07 15 30.2**	**-1.5**
HRFI	**Mount Harif**	4.47	143	Sn	**Sn**	**07 15 36.2**	**-0.9**
MBRI	**Mt Berech**	4.61	146	Pn	**Pn**	**07 14 48.4**	**+1.4**
MBRI				Sn	**Sn**	**07 15 39.3**	**-1.4**
EIL	**Elat**	4.73	146	Pn	**Pn**	**07 14 50.1**	**+1.5**
EIL				Sn	**Sn**	**07 15 42.3**	**-1.2**

BUC 11 07:15:57.5±0.4**, 45°.73N×26°.55E, h109^{km}±3^{km}, MD3.3**/6**, 20C-26D, Error ellipse: s-maj=3.0km s-min=2.8km az=12.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	0.14	31	⇑*i*P	Pn	07 16 12.6	-0.1
PLOR				*i* S	Sn	07 16 23.1	-1.0
PLOR	**Plostina**	0.14	31	⇑*i*P	Pn	07 16 12.6	-0.1
VRI	**Vrincioaia**	0.18	43	⇓*i*P	Pn	07 16 12.9	+0.2
VRI				*i* S	Sn	07 16 23.4	-0.8
VRI	**Vrincioaia**	0.18	43	⇓*i*P	Pn	07 16 12.9	+0.2
ODBI	**Odobesti**	0.35	85	⇓*i*P	Pn	07 16 14.3	+1.0
ODBI				*i* S	Sn	07 16 24.4	-0.8
ODBI	**Odobesti**	0.35	85	⇓*i*P	Pn	07 16 14.3	+1.0
PETR	**Petresti**	0.48	91	⇓*i*P	Pn	07 16 14.6	+0.6
PETR				*i* S	Sn	07 16 26.9	+0.5
PETR	**Petresti**	0.48	91	⇓*i*P	Pn	07 16 14.6	+0.6
MLR	**Muntele Rosu**	0.49	240	⇓*i*P	Pn	07 16 14.7	+0.4
MLR				*i* S	Sn	07 16 26.4	-0.5
MLR	**Muntele Rosu**	0.49	240	⇓*i*P	Pn	07 16 14.7	+0.4
ISR	**Istrita**	0.61	180	⇑*i*P	Pn	07 16 15.6	+0.5
ISR				*i* S	Sn	07 16 29.1	+0.8
ISR	**Istrita**	0.61	180	⇑*i*P	Pn	07 16 15.6	+0.5
OZUR		0.64	304	⇑*i*P	Pn	07 16 15.2	-0.1
OZUR				*i* S	Sn	07 16 29.0	+0.3
OZUR		0.64	304	⇑*i*P	Pn	07 16 15.2	-0.1
SECR		0.78	206	⇓*i*P	Pn	07 16 17.1	+0.7
SECR				*i* S	Sn	07 16 31.3	+0.6
SECR		0.78	206	⇓*i*P	Pn	07 16 17.1	+0.7
TESR	**Tescani**	0.78	5	⇑*i*P	Pn	07 16 16.9	+0.4
TESR				*i* S	Sn	07 16 30.2	-0.5
TESR	**Tescani**	0.78	5	⇑*i*P	Pn	07 16 16.9	+0.4
TUDR		0.80	100	⇑*i*P	Pn	07 16 16.6	+0.1
TUDR				*i* S	Sn	07 16 31.2	+0.3
TUDR		0.80	100	⇑*i*P	Pn	07 16 16.6	+0.1
DOPR	**Dopca**	0.84	286	⇑*i*P	Pn	07 16 17.4	+0.3
DOPR				*i* S	Sn	07 16 32.0	+0.2
DOPR	**Dopca**	0.84	286	⇑*i*P	Pn	07 16 17.4	+0.3
BIR	**Birlad**	0.92	54	⇓*i*P	Pn	07 16 18.5	+0.8
BIR				*i* S	Sn	07 16 33.3	+0.3
BIR	**Birlad**	0.92	54	⇓*i*P	Pn	07 16 18.5	+0.8
SULR		1.08	191	⇑*i*P	Pn	07 16 19.8	+0.4
SULR				*i* S	Sn	07 16 36.1	+0.2
SULR		1.08	191	⇑*i*P	Pn	07 16 19.8	+0.4
VOIR		1.09	255	⇓*i*P	Pn	07 16 19.9	+0.2
VOIR				*i* S	Sn	07 16 35.5	-0.9
VOIR		1.09	255	⇓*i*P	Pn	07 16 19.9	+0.2
GIUM	**Giurgiulesti**	1.19	101	⇓*i*P	Pn	07 16 21.4	+0.8
GIUM				*i* S	Sn	07 16 38.3	+0.2
GIUM	**Giurgiulesti**	1.19	101	⇓*i*P	Pn	07 16 21.4	+0.8
BIZ	**Bicaz**	1.24	346	⇑*i*P	Pn	07 16 22.1	+0.9
BIZ				*i* S	Sn	07 16 39.1	-0.1
BIZ	**Bicaz**	1.24	346	⇑*i*P	Pn	07 16 22.1	+0.9
CFR	**Carcaliu**	1.25	116	⇓*i*P	Pn	07 16 21.0	-0.2
CFR				*i* S	Sn	07 16 38.3	-0.9
CFR	**Carcaliu**	1.25	116	⇓*i*P	Pn	07 16 21.0	-0.2
LEHL	**Lehliu**	1.27	171	⇓*i*P	Pn	07 16 21.9	+0.3
LEHL				*i* S	Sn	07 16 39.5	-0.3
LEHL	**Lehliu**	1.27	171	⇓*i*P	Pn	07 16 21.9	+0.3
HARR	**Harsova**	1.43	136	⇑*i*P	Pn	07 16 23.1	-0.3
HARR	**Harsova**	1.43	136	⇑*i*P	Pn	07 16 23.1	-0.3
TLB	**Topalu**	1.56	137	⇓*i*P	Pn	07 16 24.8	-0.1
TLB				*i* S	Sn	07 16 44.0	-1.7
TLB	**Topalu**	1.56	137	⇓*i*P	Pn	07 16 24.8	-0.1
TLCR		1.69	108	⇑*i*P	Pn	07 16 27.6	+1.2
TLCR				*i* S	Sn	07 16 48.0	-0.5
TLCR		1.69	108	⇑*i*P	Pn	07 16 27.6	+1.2
TIRR	**Tirgusor**	1.83	133	⇓*i*P	Pn	07 16 28.3	0.0
TIRR				*i* S	Sn	07 16 50.5	-1.3
TIRR	**Tirgusor**	1.83	133	⇓*i*P	Pn	07 16 28.3	0.0
ICOR	**Ion Corvin**	1.84	151	⇓*i*P	Pn	07 16 28.8	+0.4
ICOR				*i* S	Sn	07 16 51.7	-0.3
ICOR	**Ion Corvin**	1.84	151	⇓*i*P	Pn	07 16 28.8	+0.4

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*BJI **11** 07:16:18.9±0.0, 1°.16N×98°.87E, h5^{km}, mb4.7/38, mB4.8/29, Ms4.9/27, Ms7 4.6/25*

*ISCJB **11** 07:16:23.5±0.2, 1°.85N±0°.02×99°.10E±0°.03, h10^{km}, mb4.7/75, MS4.3/42, Error ellipse: s-maj=4.5km s-min=2.8km az=148.9*

*IDC **11** 07:16:23.3±0.6, 1°.84N×99°.32E, h0^{km}, mb4.3/13, mb1 4.4/14, mb1mx4.1/41, mbtmp4.3/14, ML4.7/1, MS4.1/29, Ms1 4.1/29, ms1mx4.0/41, Error ellipse: s-maj=27.8km s-min=9.3km az=62.0*

*NEIC **11** 07:16:24.6±2.9, 1°.80N×98°.99E, h10^{km}±1^{km}, mb4.8/44, MW4.9, Error ellipse: s-maj=5.0km s-min=3.4km az=135.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.71; $M_{\theta\theta}$-1.92; $M_{\phi\phi}$2.63; $M_{r\theta}$-0.52; $M_{\theta\phi}$1.44; $M_{\phi r}$-0.65; Best double couple: $M_0$2.90000×10^{16} NP1: ϕ_s61.00000°, δ90.00000°, λ-16.00000°. NP2: ϕ_s151.00000°, δ74.00000°, λ-180.00000°. Principal axes: T 3.2000, Plg11.0000°, Azm107.0000°; N -0.8000, Plg74.0000°, Azm240.0000°; P -2.4000, Plg11.0000°, Azm15.0000°;*

NEIC Felt [IV] at Sibolga. Felt [II] at Kajang, Kuala Lumpur and Sungai Chua, Malaysia. Also felt at Ampang, Banting, Shah Alam and Subang.

*DJA **11** 07:16:25.7±0.2, 2°N±2°×9°9E±°, h10^{km}, M4.7/18, mb4.5/3, mB5.0/2, MLv4.8/18, Mw(mB)4.3/2*

*MOS **11** 07:16:26.8±1.3, 1°.92N×99°.24E, h33^{km}, mb4.8/44, MS4.1/11, Error ellipse: s-maj=13.9km s-min=6.1km az=112.7*

*GCMT **11** 07:16:28.6±0.3, 1°.82N±0°.02×99°.17E±0°.02, h20^{km}±1^{km}, MW5.0/78, Moment Tensor Solution. s36,c43; s78,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.58±.15; $M_{\theta\theta}$-3.04±.12; $M_{\phi\phi}$3.62±.15; $M_{r\theta}$-0.94±.24; $M_{\theta\phi}$1.28±.11; $M_{\phi r}$-0.93±.27; Best double couple: $M_0$3.79800×10^{16} NP1: ϕ_s55.00000°, δ89.00000°, λ-20.00000°. NP2: ϕ_s145.00000°, δ70.00000°, λ-179.00000°. Principal axes: T 4.1140, Plg13.0000°, Azm102.0000°; N -0.6300, Plg70.0000°, Azm231.0000°; P -3.4820, Plg15.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 07:16:25.3±0.3**, 1°.83N**±0°.03×**99°.02E**±0°.03**, h10^{km}, n231, σ1^{s}.97**/206**, mb4.8**/83**, MS4.3**/42**, 5C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBSI	**Sibolga**	0.30	205	P	**Pn**	**07 16 34.4**	**-1.4**
PSI	**Prapat**	0.97	354	Pg	**Pg**	**07 16 42.8**	**-1.2**
	376nm,0.3s,baz=158,slow=10,SNR=500						
PSI				Lg	Lg	07 16 55.1	
	370nm,0.3s,baz=47,slow=19,SNR=17						
PSI				LR	LR	07 17 19.3	
	comp=Z,8µm,18.8s,baz=310,slow=59						
PSI	**Prapat**	0.97	354	*e*Pn	**Pg**	**07 16 42.7**	**-1.4**
PSI				*e*Sg	**Sg**	**07 16 50.1**	**-6.7**
PSI	**Prapat**	0.97	354	*e*P	**Pg**	**07 16 42.7**	**-1.4**
PSI				*e*		07 16 50.1	
MNSI	**Mandailing Nat**	1.17	151	P	**Pb**	**07 16 45.2**	**-2.4**
GSI	**Gunungsitoli**	1.53	250	*e*Pn	**Pg**	**07 16 54.1**	**-0.6**
GSI				*e*Sn	**Sg**	**07 17 15.1**	**+0.4**
GSI	**Gunungsitoli**	1.53	250	P	**Pg**	**07 16 53.3**	**-1.4**
TSI	**Tuntungan**	1.72	345	P	**Pg**	**07 16 58.1**	**-0.3**
PBSI	**Pulau Batu**	2.01	202	P	**Pn**	**07 16 59.4**	**+0.1**
KCSI	**Kotacane, Aceh**	2.10	324	P	**Pb**	**07 17 03.1**	**-0.3**
TPTI		2.32	308	P	**Pb**	**07 17 05.2**	**-2.1**
BKNI	**Bangkinang**	2.51	126	*e*Pn	**Pn**	**07 17 04.2**	**-2.0**
BKNI				*e*Sn	**Sn**	**07 17 36.5**	**-0.4**
BKNI	**Bangkinang**	2.51	126	P	**Pn**	**07 17 05.0**	**-1.2**
SNSI	**Sinabang, Aceh**	2.75	282	P	**Pb**	**07 17 13.0**	**-1.6**
PDSI	**Padang**	3.08	152	P	**Pn**	**07 17 14.6**	**+0.6**
SISI	**Saibi**	3.13	179	P	**Pn**	**07 17 14.8**	**+0.1**
IPM	**Ipoh**	3.31	37	*e*Pn	**Pn**	**07 17 18.6**	**+1.3**
IPM				*e*Sg	**Sg**	**07 18 09.1**	**-2.6**
MLSI	**Meulaboh, Aceh**	3.56	313	P	**Pb**	**07 17 24.0**	**-4.5**
SDSI	**Sungai Dareh**	3.65	139	P	**Pn**	**07 17 20.3**	**-1.6**
KULM	**Kulim**	3.81	25	*e*Pn	**Pn**	**07 17 24.9**	**+0.8**
KULM				*e*Sg	**Sb**	**07 18 23.3**	**+4.4**
RGRI	**Rengat**	3.96	123	P	**Pb**	**07 17 37.6**	**+2.4**
LHMI	**Lhok Sumawe**	3.96	329	*e*Pn	**Pn**	**07 17 26.1**	**0.0**
LHMI				*e*Sn	**Sn**	**07 18 12.8**	**+0.1**
LHMI	**Lhok Sumawe**	3.96	329	P	**Pn**	**07 17 28.8**	**+2.6**
PPSI	**Pulau Pagai**	4.67	168	P	**Pn**	**07 17 35.3**	**-0.5**
MYKOM	**Kota Tinggi**	4.83	90	*e*Pn	**Pn**	**07 17 35.8**	**-2.3**
MYKOM				*e*Sn	**Sn**	**07 18 33.0**	**-1.2**
SKLT	**Songkhla**	5.54	17	P	**Pn**	**07 17 49.5**	**+1.6**
	103nm,0.7s,1µm1.2nm						
TRTT	**Trang**	6.01	6	P	**Pn**	**07 17 56.6**	**+2.3**
	215nm,0.6s,2µm2.2nm						
PKDT	**Phuket**	6.06	354	P	Pn	07 18 00.3	+5.2
	232nm,0.7s,3µm1.2nm						
LHSI	**Lahat**	7.20	141	P	Pn	07 18 16.6	+5.9
MNAI	**Manna**	7.30	147	*e*Pn	**Pn**	**07 18 13.4**	**+1.4**
MNAI				*e*Sn	**Sn**	**07 19 35.4**	**+0.4**
MDSI	**Maura Dua**	8.12	141	P	**Pn**	**07 18 22.9**	**-0.4**
TNG	**Tangerang**	11.01	136	P	Pn	07 19 09.3	+6.4
PHET	**Kaeng Krachan**	11.03	3	P	Pn	07 19 15.8	+13
CHBT	**CHBT**	11.34	17	P	Pn	07 19 19.8	+12
LEM	**Lembang**	12.15	135	LR	LR	07 24 08.4	
	comp=Z,2µm,18.6s,baz=236,slow=39						
SRDT	**SRDT**	12.44	0	P	Pn	07 19 31.4	+8.8
SBUM	**Sibu**	13.21	87	*e*Pn	**Pn**	**07 19 29.2**	**-3.9**
DLV	**T Lat**	13.75	43	*e*Pn	**Pn**	**07 19 38.4**	**-2.3**
CHAI	**Chaiyaphum**	14.29	12	P	**P**	**07 19 52.8**	**-2.3**
	51µm,0.9s						
SMRI	**Semarang**	14.41	128	*e*Pn	**Pn**	**07 19 50.9**	**+1.3**
SKNT	**Sakolnakorn**	15.82	18	P	**P**	**07 20 12.7**	**+0.5**
	44nm,0.9s						
UTTA	**Uttaradit**	15.89	5	P	**P**	**07 20 16.9**	**+4.0**
MTKI	**Muara Teweh, K**	16.11	100	P	**P**	**07 20 17.5**	**+2.1**
CM31	**Chiang Mai Arr**	16.53	360	*e*P	**Pn**	**07 20 18.1**	**+0.7**
	49nm,1.3s						
CMAR	**Chiang Mai Arr**	16.53	360	Pn	**Pn**	**07 20 17.7**	**+0.3**
	1.1nm,0.3s,baz=192,slow=12,SNR=18						
CMAR				LR	LR	07 26 43.2	
	comp=Z,919nm,19.9s,baz=196,slow=38						
PHRA	**Phrae**	16.61	4	P	**P**	**07 20 23.0**	**+2.1**
	3.0nm,1.4s,726nm						
NONG	**Nongkai**	16.64	14	P	**P**	**07 20 23.5**	**+2.3**
	0.5nm,1.1s						
CMMT	**Chiang Mai**	16.88	360	P	**P**	**07 20 25.9**	**+2.0**
	10nm,1.5s,393nm						
CHTO	**Chiang Mai**	16.88	360	*e*P	**Pn**	**07 20 21.5**	**-0.4**
	38nm,1.4s						
CHTO	**Chiang Mai**	16.88	360	*e*P	**Pn**	**07 20 21.5**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,38nm,1.4s						
PAYA	**Payao**	17.45	3	P	**P**	**07 20 33.6**	**+3.4**
	comp=Z,30µm,0.8s,comp=Z,967µm						
JAGI	**Jajag, Banyuwa**	18.23	124	*e*P	**P**	**07 20 39.4**	**+0.5**
	comp=Z,93nm,1.1s						
PALK	**Pallekele**	19.04	287	LR	LR	07 28 06.7	
	comp=Z,767nm,18.9s,baz=117,slow=36						
SLVN	**Son La**	19.97	13	*e*P	**P**	**07 20 58.2**	**+0.2**
	comp=Z,28nm,1.0s						
QIZ	**Qiongzhong**	20.12	31	P	Pn	07 21 01.8	+0.4
QIZ				S	Sn	07 24 53.6	+5.6
QIZ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
QIZ				LR	LR		
	comp=Z,1µm,13.5s						
QIZ				LR	LR		
	comp=Z,1µm,15.7s						
QIZ				LR	LR		
	comp=Z,1µm,14.2s						
TTSI	**Tana Toraja**	21.35	103	P	P	07 21 21.6	+8.7
SAIH	**SAIHA**	21.36	345	*e*P	**P**	**07 21 13.6**	**+0.6**
SAIH				IAmb	IAmb	07 21 22.8	
	comp=Z,16nm,0.7s						
SPSI	**Sidrap Palu**	21.52	106	P	P	07 21 22.7	+7.9
KAPI	**Kappang**	21.80	108	*e*P	**P**	**07 21 14.6**	**-3.1**
	comp=Z,73nm,1.5s						
KAPI	**Kappang**	21.80	108	*e*P	**P**	**07 21 14.6**	**-3.1**
KAPI				pmax	pmax		
	comp=Z,73nm,1.5s						
BNSI	**Bone**	21.96	106	P	P	07 21 26.6	+7.1
APSI	**Ampana**	22.79	97	P	P	07 21 35.2	+6.8
KMI	**Kunming**	23.44	9	P	**P**	**07 21 37.5**	**+2.4**
KMI				pP	sP	07 21 40.3	+0.5
KMI				sP	pP	07 21 41.5	+3.1
KMI				PP	**PnPn**	**07 22 09.7**	**+8.1**
KMI				S	**S**	**07 25 49.9**	**+1.1**
KMI				sS	sS	07 25 57.7	+3.3
KMI				SS	SnSn	07 26 42.6	+18
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,4.2s						
KMI				LR	LR		
	comp=Z,1µm,14.2s						
KMI				LR	LR		
	comp=Z,1µm,14.2s						
KMI				LR	LR		
	comp=Z,1µm,15.0s						
SILR	**SILCHAR**	23.60	346	*e*P	**P**	**07 21 35.9**	**-0.5**
SILR				IAmb	IAmb	07 21 36.5	
LUWI	**Luwuk**	23.92	97	*e*P	**P**	**07 21 40.5**	**+0.8**
	comp=Z,167nm,1.1s						
LUWI	**Luwuk**	23.92	97	P	**P**	**07 21 45.2**	**+5.5**
SHL	**Shillong**	24.59	344	*e*P	**P**	**07 21 45.6**	**-0.3**

SHL				IAmb	IAmb	07 21 51.8	
	comp=Z,10nm,0.6s						
MOKO	MOKOCHONG	24.74	350	eP	P	07 21 46.7	-0.6
BOK	Bokaro	25.27	331	eP	P	07 21 50.9	-1.1
BOK				IAmb	IAmb	07 21 58.9	
	comp=Z,11nm,0.5s						
TEZP	TEZPUR	25.36	347	eP	P	07 21 51.9	-0.8
TEZP				IAmb	IAmb	07 22 03.4	
	comp=Z,23nm,1.4s						
HYB	Hyderabad	25.39	309	i P	P	07 21 56.5	+3.4
GYA	Guiyang	25.57	16	eP	P	07 21 59.2	+4.4
GYA				PP	PnPn	07 22 42.4	+12
GYA				S	S	07 26 31.9	+9.1
GYA				SS		07 27 38.8	
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,100nm,7.3s						
GYA				LR	LR		
	comp=Z,880nm,11.5s						
GYA				LR	LR		
	comp=Z,680nm,13.7s						
GYA				LR	LR		
	comp=Z,880nm,13.7s						
DHUB	DHUBRI	25.57	341	eP	P	07 21 54.3	-0.4
DHUB				IAmb	IAmb	07 21 58.0	
	comp=Z,162nm,2.0s						
H08S2	Diego Garcia H	28.08	250	T	T	07 50 21.0	
	baz=71,slow=74,SNR=26						
H08S3	Diego Garcia H	28.09	250	T	T	07 49 59.2	
	baz=71,slow=74,SNR=31						
H08S1	Diego Carcia H	28.10	250	T	T	07 50 13.1	
	baz=71,slow=74,SNR=21						
CD2	Chengdu	29.27	8	eP	P	07 22 29.0	+1.1
CD2				S	S	07 27 24.2	+3.2
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,160nm,9.3s						
CD2				LR	LR		
	comp=Z,1µm,12.8s						
CD2				LR	LR		
	comp=Z,2µm,11.8s						
CD2				LR	LR		
	comp=Z,1µm,11.8s						
WHN	Wuhan	32.05	25	P	P	07 23 01.6	+9.3
WHN				S	S	07 28 04.0	-0.3
WHN				LR	LR		
	comp=Z,2µm,14.9s						
LZH	Lanzhou	34.38	7	eP	P	07 23 15.3	+2.4
LZH				pP	sP	07 23 17.9	+0.3
LZH				sP	pP	07 23 22.2	+6.0
LZH				PP	PnPn	07 24 28.4	+0.9
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,640nm,13.0s						
LZH				LR	LR		
	comp=Z,750nm,13.6s						
LZH				LR	LR		
	comp=Z,680nm,15.4s						
DDI	Dehra Dun	34.62	327	eP	P	07 23 15.8	+0.9
DDI				IAmb	IAmb	07 23 17.9	
	comp=Z,71nm,0.2s						
MORW	Morawa	34.78	153	eP	P	07 23 17.1	+0.9
	comp=Z,43nm,1.4s						
NJ2	Nanjing	35.40	30	eP	P	07 23 23.0	+1.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
NJ2				LR	LR		
	comp=Z,1µm,16.1s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s						
SMLA	Simla	35.73	327	eP	P	07 23 24.2	-0.1
SMLA				IAmb	IAmb	07 23 25.4	
	comp=Z,4.0nm,0.8s						
DHRM	DHARAMSHALA	37.06	327	eP	P	07 23 35.3	-0.7
DHRM				IAmb	IAmb	07 23 41.0	
	comp=Z,24nm,0.6s						
GTA	Gaotai	37.41	1	P	P	07 23 39.2	+0.4
GTA				pP	sP	07 23 44.9	+1.3
GTA				sP	pP	07 23 47.3	+5.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,40nm,5.1s						
GTA				LR	LR		
	comp=Z,430nm,16.5s						
GTA				LR	LR		
	comp=Z,510nm,14.1s						
GTA				LR	LR		
	comp=Z,500nm,17.5s						
NIL	Nilore	39.80	325	eP	P	07 23 58.4	-0.4
	comp=Z,18nm,0.9s						
NIL	Nilore	39.80	325	eP	P	07 23 58.4	-0.4
NIL				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC	Hu-ho-hao-te	40.47	15	eP	P	07 24 07.3	+3.0
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,95nm,4.9s						
HHC				LR	LR		
	comp=Z,640nm,13.2s						
HHC				LR	LR		
	comp=Z,860nm,12.1s						
HHC				LR	LR		
	comp=Z,750nm,13.1s						
WR1	Warramunga Arr	40.84	124	eP	P	07 24 05.4	-2.2
WRA	Warramunga Arr	40.84	124	P	P	07 24 05.4	-2.2
	comp=Z,2.8nm,0.6s,baz=300,slow=8.6,SNR=12						
WRAB	Tennant Creek	40.85	124	eP	P	07 24 05.9	-1.8
	comp=Z,13nm,1.0s						
WRAB	Tennant Creek	40.85	124	ceP	P	07 24 05.6	-2.1
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s						
WB2	Warramunga Arr	40.85	124	eP	P	07 24 06.5	-1.2
	comp=Z,17nm,1.1s						
WC3	Warramunga Arr	40.88	124	eP	P	07 24 05.9	-2.0
	comp=Z,24nm,1.4s						
AS31	Alice Springs	42.34	129	eP	P	07 24 20.2	+0.2
	comp=Z,2.5nm,1.3s						
ASAR	Alice Springs	42.34	129	P	P	07 24 17.6	-2.3
	comp=Z,0.8nm,0.6s,baz=299,slow=7.5,SNR=13						
ASAR				PcP	PcP	07 26 11.6	-1.9
	comp=Z,0.8nm,0.6s,baz=301,slow=4.8,SNR=4.6						
ASAR				LR	LR	07 41 52.3	
	comp=Z,240nm,21.8s,baz=296,slow=36						
ASAR	Alice Springs	42.34	129	P	P	07 24 17.6	-2.3
ASAR						07 26 11.6	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR				MLR	MLR		
	comp=Z,240nm,21.8s						
FORT	Forrest	42.61	142	eP	P	07 24 22.2	+0.3
	comp=Z,96nm,1.9s						
KSH	Kashi	42.99	334	eP	P	07 24 23.8	-1.2
KSH				pP	pP	07 24 28.5	0.0
KSH				PP	PP	07 26 06.9	+2.0
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WMQ	Urumqi	43.01	348	eP	P	07 24 27.3	+2.2
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,84nm,4.3s						
WMQ				LR	LR		
	comp=Z,250nm,28.9s						
WMQ				LR	LR		
	comp=Z,330nm,23.9s						
WMQ				LR	LR		
	comp=Z,180nm,29.1s						
NRN	Naryn	44.55	335	eP	P	07 24 36.0	-1.8
	comp=Z,12nm,0.9s						
NRN	Naryn	44.55	335	eP	P	07 24 36.0	-1.8
NRN				pmax	pmax		
	comp=Z,12nm,0.9s						
KDJ	Kajisay	44.66	337	eP	P	07 24 37.4	-1.1
	comp=Z,17nm,1.1s						
KDJ	Kajisay	44.66	337	eP	P	07 24 37.4	-1.1
KDJ				pmax	pmax		
	comp=Z,17nm,1.1s						
GAR	Garm	45.34	328	eP	P	07 24 43.8	-0.1
	comp=Z,9.5nm,1.0s						
GAR	Garm	45.34	328	eP	P	07 24 43.8	-0.1
GAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOOM	Boomskoye usch	45.46	336	eP	P	07 24 44.3	-0.6
	comp=Z,9.4nm,1.1s						
BOOM	Boomskoye usch	45.46	336	eP	P	07 24 44.3	-0.6
BOOM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CHGR	Chuyangaron	45.70	327	eP	P	07 24 46.1	-0.7
	comp=Z,24nm,1.2s						
ARSB	Arslanbob	45.80	333	eP	P	07 24 43.7	-3.8
BTK	Batken	45.86	330	eP	P	07 24 47.2	-0.8
	comp=Z,9.6nm,1.0s						
BTK	Batken	45.86	330	eP	P	07 24 47.2	-0.8
BTK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AAK	Ala-Archa	46.18	335	eP	P	07 24 51.5	+1.0
	comp=Z,16nm,1.1s						
AAK	Ala-Archa	46.18	335	eP	P	07 24 51.5	+1.0
AAK				pmax	pmax		
	comp=Z,16nm,1.1s						
SONA0	Songino Array	46.27	7	eP	P	07 24 50.4	-0.7
SONM	Songino Array	46.27	7	P	P	07 24 50.4	-0.7
	comp=Z,1.7nm,0.6s,baz=192,slow=9.5,SNR=15						
SONM				LR	LR	07 46 23.0	
	comp=Z,480nm,18.9s,baz=188,slow=39						
ULN	Ulaanbaatar	46.38	7	ceP	P	07 24 50.4	-1.6
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	47.10	344	eP	P	07 24 57.1	-0.4
	comp=Z,6.9nm,1.0s						
MK31	Makanchi Array	47.10	344	eP	P	07 24 57.1	-0.4
MK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MK32	Makanchi Array	47.10	344	eP	P	07 24 57.2	-0.3
MKAR	Makanchi Array	47.10	344	P	P	07 24 57.2	-0.3
	comp=Z,5.5nm,0.8s,baz=154,slow=7.6,SNR=27						
MKAR				LR	LR	07 48 04.6	
	comp=Z,98nm,20.7s,baz=157,slow=40						
MAKZ	Makanchi	47.20	344	eP	P	07 24 57.7	-0.6
	comp=Z,4.4nm,0.8s						
MAKZ	Makanchi	47.20	344	eP	P	07 24 57.7	-0.6
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CN2	Changchun	47.94	26	eP	P	07 25 07.4	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
CN2				LR	LR		
	comp=Z,800nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
ANA2	Anatahan	48.16	70	eP	P	07 25 05.5	-0.7
	comp=Z,62nm,0.6s						
KK31	Karatay Array	48.33	332	eP	P	07 25 06.5	-0.6
	comp=Z,12nm,1.4s						
KK31	Karatay Array	48.33	332	eP	P	07 25 06.5	-0.6
KK31				pmax	pmax		
	comp=Z,12nm,1.4s						
DGZ	Jazzator, Alta	48.71	350	i P	P	07 25 11.1	+1.0
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	Talaya	49.83	4	LR	LR	07 50 16.1	
	comp=Z,296nm,20.0s,baz=174,slow=41						
USRK	Ussuriysk Ar.	51.31	30	LR	LR	07 49 49.7	
	comp=Z,305nm,18.4s,baz=210,slow=39						
KURK	Kurchatov	51.69	344	eP	P	07 25 32.1	-0.3
	comp=Z,20nm,1.4s						
KURK	Kurchatov	51.69	344	eP	P	07 25 32.1	-0.3
KURK				pmax	pmax		
	comp=Z,20nm,1.4s						
GEYT	Alibeck	51.92	319	P	P	07 25 35.5	+1.0
	comp=Z,1.1nm,0.4s,baz=163,slow=5.3,SNR=4.2						
GEYT				LR	LR	07 50 41.5	
	comp=Z,146nm,20.0s,baz=170,slow=40						
GYA0B	ALIBECK ARRAY	51.92	319	eP	P	07 25 34.0	-0.5
	comp=Z,6.9nm,0.8s						
STKA	Stephens Creek	52.44	133	P	P	07 25 37.4	-1.0
	comp=Z,3.1nm,0.6s,baz=301,slow=10,SNR=5.6						
STKA				LR	LR	07 49 44.3	
	comp=Z,273nm,20.0s,baz=299,slow=38						
STKA	Stephens Creek	52.44	133	eP	P	07 25 38.9	+0.5
	comp=Z,6.1nm,1.6s						
ZAA0	Zalesovo Array	53.25	350	eP	P	07 25 43.4	-0.6
	comp=Z,165nm,1.8s						
ZALV	Zalesovo Beam	53.25	350	P	P	07 25 42.8	-1.2
	comp=Z,14nm,0.9s,baz=178,slow=6.1,SNR=17						
ZALV				LR	LR	07 53 01.9	
	comp=Z,122nm,18.4s,baz=250,slow=41						
ZAA1	Zalesovo Array	53.26	350	eP	P	07 25 42.8	-1.2
KLR	Kul'dur	54.90	26	i P	P	07 25 54.0	-2.1
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	56.08	297	eP	P	07 26 05.4	+0.3
	comp=Z,4.7nm,0.8s						
RAYN	Ar Rayn	56.08	297	eP	P	07 26 05.4	+0.3
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	Borovoye Array	56.28	340	LR	LR	07 53 30.1	
	comp=Z,98nm,21.6s,baz=183,slow=40						
BRVK	Borovoye	56.34	340	eP	P	07 26 05.6	-0.8
	comp=Z,4.7nm,0.9s						
BRVK	Borovoye	56.34	340	eP	P	07 26 05.6	-0.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOD	Bodaibo	57.08	9	eP	P	07 26 11.8	+0.2
BOD				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ABKAR	Akbulak array	57.84	331	eP	P	07 26 16.4	-0.6
	comp=Z,18nm,1.4s						
AKTO	Aktyubinsk	59.55	331	LR	LR	07 55 19.5	
	comp=Z,192nm,20.6s,baz=136,slow=39						
AKT	Akhty	60.62	318	eP	P	07 26 35.5	-1.2
AKT				e		07 28 50.1	
AKT				pmax	pmax		
	comp=Z,13nm,1.4s						
NKL	Nikolayevsk	61.64	27	eP	P	07 26 38.6	-4.5
NKL				e		07 27 21.8	
NKL				e		07 28 53.1	
NKL				eS	S	07 35 02.6	-2.8
NKL				e		07 36 31.1	
NKL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,5.0nm,1.2s						
NKL				pmax	pmax		
	comp=E,7.0nm,1.2s						
NKL				pmax	pmax		
	comp=Z,16nm,1.6s						
NKL				MLR	MLR		
	comp=E,93nm,12.0s						
NKL				MLR	MLR		
	comp=Z,390nm,16.0s						
NKL				MLR	MLR		
	comp=N,42nm,12.0s						
KMBO	Kilima Mbogo	61.83	268	i P	P	07 26 50.7	+5.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GNI	Garni	62.12	315	LR	LR	07 57 21.3	
	comp=Z,73nm,18.6s,baz=152,slow=39						
TBLG	Delisi	62.76	317	eP	P	07 26 51.6	+0.6
	comp=Z,12nm,0.7s						
TBLG	Delisi	62.76	317	eP	P	07 26 51.6	+0.6
TBLG				pmax	pmax		
	comp=Z,12nm,0.7s						
ARU	Arti	63.33	336	LR	LR	07 56 54.4	
	comp=Z,260nm,20.2s,baz=139,slow=38						
ARU	Arti	63.33	336	eP	P	07 26 53.5	-0.9
	comp=Z,17nm,1.4s						
ARU	Arti	63.33	336	c iP	P	07 26 59.3	+4.9
ARU						07 29 14.9	
ARU				S	S	07 35 37.5	+11
ARU				pmax	pmax		
	comp=Z,11nm,1.4s						
CRZF	Crozet Islands	63.43	215	eP	P	07 26 54.2	-1.1
	comp=Z,218nm,1.5s						
ZEI	Tsey	63.76	318	eP	P	07 27 02.0	+4.2
NCK	Nalchik	64.25	318	i P	P	07 27 05.3	+4.5
NCK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
YAK	Yakutsk	64.33	15	i P	P	07 27 00.6	-0.3
KBZ	Khabaz	64.80	318	P	P	07 27 05.3	+1.0
	comp=Z,5.0nm,0.8s,baz=131,slow=5.3,SNR=12						
KBZ				LR	LR	07 58 36.7	
	comp=Z,71nm,21.6s,baz=122,slow=39						
KIV	Kislovodsk	65.03	318	eP	P	07 27 04.4	-1.6
	comp=Z,7.2nm,0.7s						
KIV	Kislovodsk	65.03	318	eP	P	07 27 08.5	+2.5
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIV				MLR	MLR		
	comp=Z,162nm,17.0s						
MMAI	Mount Meron Ar	67.02	305	LR	LR	07 57 28.2	
	comp=Z,90nm,21.6s,baz=335,slow=37						
KIRV	Kirov	68.52	335	LR	LR	07 59 47.3	
	comp=Z,157nm,20.8s,baz=172,slow=38						
DZM	Mont Dzumac	69.87	114	eLR	LR	07 48 56.0	
	comp=Z,320nm,24.6s						
BR101	Keskin Array S	70.05	312	eP	P	07 27 38.7	+0.8
BR131	Keskin Array S	70.05	312	eP	P	07 27 37.8	-0.1
	comp=Z,4.1nm,0.6s						
BR131	Keskin Array S	70.05	312	eP	P	07 27 37.8	-0.1
BR131				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	Keskin Array B	70.05	312	P	P	07 27 38.7	+0.8
	comp=Z,1.9nm,0.7s,baz=126,slow=5.8,SNR=10						
BRTR				LR	LR	07 59 42.0	
	comp=Z,85nm,21.9s,baz=102,slow=37						
BRTR	Keskin Array B	70.05	312	ceP	P	07 27 39.7	+1.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VSR	Storozhevoye	70.10	325	eP	P	07 27 40.2	+2.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PEA0B	Petropavlovsk-	70.22	33	eP	P	07 27 39.6	+1.2
	comp=Z,122nm,1.7s						
PEA0B	Petropavlovsk-	70.22	33	eP	P	07 27 39.6	+1.2
PEA0B				pmax	pmax		
	comp=Z,122nm,1.7s						
PETK	Petropavlovsk-	70.22	33	LR	LR	07 59 56.8	
	comp=Z,87nm,18.6s,baz=231,slow=37						
ILGA	Ilgaz	70.33	313	eP	P	07 27 37.8	-1.9
	comp=Z,13nm,1.0s						
LPSR	Galich'ya Gora	70.79	326	eP	P	07 27 43.6	+1.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PRGR	Permogore	71.79	336	eP	P	07 27 47.3	-0.5
PRGR				pmax	pmax		
	comp=Z,13nm,0.4s						
TIXI	Tiksi	72.27	10	eP	P	07 27 50.5	0.0
	comp=Z,23nm,1.3s						
TIXI	Tiksi	72.27	10	i P	P	07 27 48.5	-2.0
TIXI				pmax	pmax		
	comp=Z,13nm,1.1s						
SEY	Seymchan	72.48	23	i P	P	07 27 49.8	-2.1
MOS	Moscow	72.74	329	eP	P	07 28 05.3	+12
MOS				e		07 28 15.3	
MOS				pmax	pmax		
	comp=Z,44nm,0.8s						
OBN	Obninsk	73.05	328	LR	LR	08 05 49.0	
	comp=Z,22nm,19.3s,baz=136,slow=40						
OBN	Obninsk	73.05	328	⇓eP	P	07 27 59.5	+4.1
OBN						07 28 14.0	
OBN				eS	SKiKP	07 37 27.5	-1.0
OBN				e		07 38 05.7	
OBN				SS	SS	07 42 08.0	+4.4
OBN				pmax	pmax		
	comp=Z,37nm,1.7s						
OBN				MLR	MLR		
	comp=Z,97nm,22.0s						
MAW	Mawson	73.74	194	LR	LR	07 53 08.6	
	comp=Z,147nm,21.7s,baz=34,slow=30						
AKASG	Malin Array Be	75.88	322	LR	LR	08 05 04.6	
	comp=Z,70nm,21.5s,baz=90,slow=38						
AKASG	Malin Array Be	75.88	322	ceP	P	07 28 16.6	+4.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	75.88	322	eP	P	07 28 10.1	-1.9
	comp=Z,4.7nm,1.0s						
AKBB	Malin Array Si	75.88	322	eP	P	07 28 10.1	-1.9
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOSA	Boshof	76.67	240	P	P	07 28 18.5	+1.4
	comp=Z,1.3nm,0.6s,baz=122,slow=13,SNR=2.0						
MLR	Muntele Rosu	76.87	316	eP	P	07 28 16.1	-1.9
	comp=Z,23nm,1.5s						
MLR	Muntele Rosu	76.87	316	eP	P	07 28 16.1	-1.9
MLR				pmax	pmax		
	comp=Z,23nm,1.5s						
BUR08	Bucovina Ar. S	77.78	318	eP	P	07 28 20.9	-2.1
	comp=Z,9.4nm,1.1s						
UZH	Uzhgorod	79.87	319	eP	P	07 28 39.2	+4.9
UZH				e		07 28 43.8	
UZH				e		07 28 47.4	
KOLS	Kolonicke sedl	79.93	319	eP	P	07 28 40.6	+6.0
KOLS	Kolonicke sedl	79.93	319	eP	P	07 28 40.6	+6.0
BILL	Bilibino	79.94	21	i P	P	07 28 34.1	-0.2
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FIA0	FINESS Array S	80.29	332	eP	P	07 28 35.2	-1.1
FIA0	FINESS Array S	80.29	332	eP	P	07 28 35.2	-1.1
FINES	FINESS Array B	80.29	332	P	P	07 28 35.2	-1.1
	comp=Z,2.3nm,0.6s,baz=96,slow=6.7,SNR=7.5						
FINES				LR	LR	08 10 27.2	
	comp=Z,120nm,18.5s,baz=112,slow=40						
VYHS	Vyhne	82.13	319	eP	P	07 28 50.2	+3.8
VYHS	Vyhne	82.13	319	eP	P	07 28 50.2	+3.8
ARA0	ARCESS Array S	82.56	340	eP	P	07 28 47.0	-1.2
ARCES	ARCESS Array B	82.56	340	P	P	07 28 47.0	-1.2
	comp=Z,2.1nm,0.8s,baz=81,slow=7.5,SNR=5.5						
ARCES				LR	LR	08 08 33.3	
	comp=Z,255nm,21.4s,baz=106,slow=38						
ARCES	ARCESS Array B	82.56	340	P	P	07 28 47.0	-1.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,255nm,21.5s						
MORC	Moravsky Berou	83.10	320	eP	P	07 28 49.7	-1.8
	comp=Z,4.4nm,1.0s						
MORC	Moravsky Berou	83.10	320	eP	P	07 28 49.7	-1.8
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	85.55	319	LR	LR	08 13 57.8	
	comp=Z,25nm,18.6s,baz=92,slow=40						
VNDA	Vanda	86.08	169	LR	LR	08 06 29.9	
	comp=Z,65nm,18.6s,baz=307,slow=35						
CLL	Collm	86.09	321	eP	P	07 29 08.0	+1.6
CLL	Collm	86.09	321	eP	P	07 29 08.0	+1.6
CLL				LmV		08 11 00.0	
	comp=Z,100nm,20.0s						
NB2	NORSAR Subarra	87.35	331	P	P	07 29 11.9	-0.6
	comp=Z,3.7nm,1.0s,baz=94,slow=4.8						
NB200	NORSAR Array S	87.35	331	eP	P	07 29 11.9	-0.6
NOA	NORSAR Array B	87.35	331	P	P	07 29 11.9	-0.6
	comp=Z,0.8nm,0.8s,baz=96,slow=4.9,SNR=4.0						
NOA				LR	LR	08 13 31.5	
	comp=Z,79nm,19.2s,baz=105,slow=39						
TORD	Torodi Ar. Bea	96.72	283	LR	LR	08 12 02.5	
	comp=Z,65nm,19.1s,baz=35,slow=34						
BPAW	Bear Paw Mtn.	96.99	25	eP	P	07 29 56.4	-0.7
	comp=Z,5.1nm,1.2s						
COLA	College	97.99	23	i P	Pdif	07 30 01.8	+0.3
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TBI	Tubuai	110.45	114	eLR	LR	08 07 42.9	
	comp=Z,154nm,24.2s						
PPT2	Papeete2	110.94	108	eLR	LR	08 07 57.8	
	comp=Z,149nm,23.2s						
NV01	Mina Array Sit	127.21	37	ePKPdf	PKiKP	07 35 31.1	-0.2
NVAR	Mina Array Bea	127.21	37	PKP	PKiKP	07 35 31.1	-0.3
	comp=Z,0.4nm,0.6s,baz=251,slow=1.4,SNR=4.8						
PDAR	Pinedale Array	128.68	27	PKP	PKiKP	07 35 33.9	-0.3
	comp=Z,0.4nm,0.6s,baz=112,slow=1.6,SNR=5.3						
ANMO	Albuquerque	136.32	31	i PKIKP	PKPdf	07 35 46.8	-1.3
TXAR	Lajitas Array	142.17	33	PKP	PKPdf	07 35 59.1	+0.3
	comp=Z,1.0nm,0.8s,baz=303,slow=1.2,SNR=5.0						
JCT	Junction City	143.20	28	ePKPdf	PKPdf	07 36 00.5	-0.1
JCT	Junction City	143.20	28	ePKIKP	PKPdf	07 36 00.5	-0.1
BDFB	Brasilia	144.72	245	PKPbc	PKPdf	07 36 03.5	-0.1
	comp=Z,5.4nm,0.9s,baz=152,slow=6.0,SNR=5.4						
152A	Waverly Hall	145.51	6	ePKPdf	PKPab	07 36 04.5	-0.1
CPUP	Villa Florida	146.68	221	PKPbc	PKPbc	07 36 07.0	-1.2
	comp=Z,4.9nm,1.1s,baz=106,slow=2.3,SNR=6.3						
LNIG	Linares	147.95	33	ePKPbc	PKPbc	07 36 12.0	+0.2
LNIG				ePKPab	pPKPbc	07 36 14.8	-0.8

*ISN **11** 07:17:02.3±0.3, 37°.01N×42°.64E, h0^{km}, ML2.7*
*ISCJB **11** 07:17:03.0±0.6, 37°.01N±0°.04×42°.46E±0°.04, h10^{km}, Error ellipse: s-maj=5.9km s-min=3.6km az=28.8*
*DDA **11** 07:17:03.4, 37°.12N×42°.44E, h7^{km}±3^{km}, ML2.8*
*ISK **11** 07:17:03.4, 37°.13N×42°.46E, h5^{km}, ML2.7/5*
ISC 11 07:17:02.6±0.9, 37°.05N±0°.04×42°.47E±0°.04, h10^{km}, n12, σ0^{s}.97/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL	**Mosul** baz=328	**0.82**	**141**	*e*Pg	**Pg**	**07 17 18.0**	**-0.5**
MSL				*e*Sg	**Sg**	**07 17 29.0**	**-0.3**
CUKT	**Cukurca**	**0.93**	**77**	PG	**Pn**	**07 17 21.8**	**-0.1**
CUKT				SG	**Sn**	**07 17 34.8**	**-0.6**
CUKT	**Cukurca**	**0.93**	**77**	*i* P	**Pn**	**07 17 22.4**	**+0.4**
CUKT				*i* S	**Sn**	**07 17 38.0**	**+2.6**
CUKT	comp=Z,2µm,0.2s			IAML_P			
SRTM	**Siirt_Merkez**	**1.04**	**335**	*i* P	**Pg**	**07 17 22.2**	**-0.4**
SRTM				*i* S	**Sb**	**07 17 36.7**	**+0.2**
SRTM	comp=Z,841nm,0.2s			IAML_P			
HAKT	**HAKKARI**	**1.11**	**62**	*i* P	**Pn**	**07 17 24.9**	**+0.4**
HAKT				*i* S	**Sn**	**07 17 40.9**	**+0.9**
HAKT	comp=Z,1µm,0.2s			IAML_P			
BTMN	**Batman**	**1.27**	**312**	*i* P	**Pg**	**07 17 27.8**	**+0.7**
BTMN				*i* S	**Sn**	**07 17 43.6**	**-0.2**
BTMN	comp=Z,290nm,0.2s			IAML_P			
AKDM	**Akdamar-Van**	**1.34**	**17**	PN	**Pg**	**07 17 28.2**	**-0.3**
AKDM				SN	**Sg**	**07 17 45.9**	**0.0**
BLIS	**Bitlis-Merkez**	**1.40**	**349**	*i* P	**Pn**	**07 17 28.4**	**+0.1**
BLIS				*i* S	**Sg**	**07 17 47.8**	**+0.2**
BLIS	comp=Z,703nm,0.3s			IAML_P			
MAZI	**Mazidag**	**1.67**	**285**	PN	**Pb**	**07 17 33.1**	**-0.4**
MAZI				SN	**Sg**	**07 17 55.7**	**-0.5**
MUSM	**Mu-Merkez**	**1.84**	**336**	*i* P	**Pn**	**07 17 33.0**	**-1.4**
MUSM				*i* S	**Sn**	**07 17 57.8**	**0.0**
MUSM	comp=Z,166nm,0.3s			IAML_P			
DYBB	**Diyarbakir**	**2.06**	**297**	PN	**Pb**	**07 17 39.1**	**-1.1**
SVRC	**Sivrice-ELAZID**	**2.84**	**299**	PN	**Pn**	**07 17 50.4**	**+2.2**

ROM 11 07:25:54.5±0.1, 43°.823N±0°.008×12°.037E±0°.006, h9^{km}, ML1.5/7, Error ellipse: s-maj=1.0km s-min=0.1km az=202.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.16**	**301**	P	Pg	07 25 58.3	+0.3
SFI				S	Sg	07 26 01.4	+1.0
SFI	comp=E,370µm,0.1s			AML	AML		
SFI	comp=N,223µm,0.3s			AML	AML		
SFI	comp=E,240µm,0.4s			AML	AML		
SFI	comp=N,375µm,0.1s			AML	AML		
SFI	comp=E,240µm,0.4s			AML	AML		
SFI	comp=N,375µm,0.1s			AML	AML		
SFI	comp=E,240µm,0.4s			AML	AML		
SFI	comp=N,375µm,0.1s			AML	AML		
ASQU	**Asqua**	**0.18**	**262**	P	Pg	07 25 59.0	+0.6
ASQU				S	Sg	07 26 02.5	+1.5
ASQU	comp=E,273µm,0.8s			AML	AML		
ASQU	comp=N,546µm,0.3s			AML	AML		
CPGN	**Carpegna, Ital**	**0.21**	**96**	P	Pg	07 25 59.5	+0.7
CPGN				S	Sg	07 26 03.9	+2.1
CPGN	comp=E,280µm,0.2s			AML	AML		
CPGN	comp=N,236µm,1.6s			AML	AML		
PARC	**Parchiule**	**0.23**	**140**	P	Pg	07 25 59.6	+0.4
PARC				S	Sg	07 26 03.6	+1.4
PARC	comp=E,146µm,0.3s			AML	AML		
PARC	comp=N,134µm,0.4s			AML	AML		
PARC	comp=E,146µm,0.3s			AML	AML		
PARC	comp=N,134µm,0.4s			AML	AML		
PARC	comp=E,146µm,0.3s			AML	AML		
PARC	comp=N,134µm,0.4s			AML	AML		
PE3	**Peglio**	**0.36**	**111**	P	Pg	07 26 02.0	+0.4
PE3				S	Sb	07 26 07.8	-0.9
PE3	comp=E,141µm,1.5s			AML	AML		
PE3	comp=N,256µm,0.5s			AML	AML		
PE3	comp=N,256µm,0.5s			AML	AML		
PE3	comp=E,141µm,1.5s			AML	AML		
RUFI	**Rufina**	**0.38**	**273**	P	Pg	07 26 02.4	+0.4
RUFI				S	Sb	07 26 08.8	-0.7
RUFI	comp=E,93µm,0.5s			AML	AML		
RUFI	comp=N,116µm,0.5s			AML	AML		
CAFI	**Castiglion Fio**	**0.50**	**186**	P	Pb	07 26 04.9	-0.5
CAFI	comp=E,77µm,0.5s			AML	AML		
CAFI	comp=N,44µm,0.7s			AML	AML		
CAFI	comp=N,44µm,0.7s			AML	AML		
CAFI	comp=E,77µm,0.5s			AML	AML		
BRIS	**BRISIGHELLA**	**0.50**	**311**	P	Pg	07 26 03.9	-0.3
BRIS	comp=E,84µm,0.5s			AML	AML		
BRIS	comp=N,95µm,1.0s			AML	AML		
BRIS	comp=E,84µm,0.5s			AML	AML		
BRIS	comp=N,96µm,1.0s			AML	AML		
BRIS	comp=E,84µm,0.5s			AML	AML		
BRIS	comp=N,96µm,1.0s			AML	AML		
ATVO	**AVT- Monte Val**	**0.52**	**148**	P	Pg	07 26 04.9	+0.3
ATVO				S	Sb	07 26 13.4	+0.1
ATVO	comp=E,37µm,0.9s			AML	AML		
ATVO	comp=N,43µm,0.8s			AML	AML		
ATVO	comp=E,37µm,0.9s			AML	AML		
ATVO	comp=N,43µm,0.8s			AML	AML		
ATVO	comp=N,43µm,0.8s			AML	AML		
ATVO	comp=E,37µm,0.9s			AML	AML		
SEI	**Scarperia**	**0.54**	**295**	P	Pg	07 26 05.3	+0.3
SEI				S	Sb	07 26 13.9	-0.3
SEI	comp=E,124µm,0.3s			AML	AML		
SEI	comp=N,162µm,0.4s			AML	AML		
SEI	comp=E,124µm,0.3s			AML	AML		
SEI	comp=N,162µm,0.4s			AML	AML		
MPAG	**Monte Paganucc**	**0.56**	**110**	P	Pg	07 26 05.2	-0.2
MPAG				S	Sb	07 26 14.4	-0.3

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*ISCJB **11** 07:26:14.2±0.5, 12°.79N±0°.07×47°.86E±0°.06, h10^{km}, mb3.9/18, Error ellipse: s-maj=11.1km s-min=7.4km az=158.5*
*NEIC **11** 07:26:15.6±2.3, 12°.76N×47°.83E, h10^{km}, mb4.0/13, Error ellipse: s-maj=18.5km s-min=6.5km az=139.0*
*IDC **11** 07:26:15.2±1.2, 12°.79N×47°.91E, h0^{km}, mb3.8/6, mb1 3.8/7, mb1mx3.6/37, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=42.3km s-min=21.5km az=140.0*
ISC 11 07:26:16.3±0.8, 12°.80N±0°.09×47°.81E±0°.09, h10^{km}, n29, σ1^{s}.13/30, mb4.0/18, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAMY	**Dhamar**	**3.76**	**298**	*e*Pn	**Pn**	**07 27 13.7**	**-1.0**
DAMY				*e*Sn	**Sn**	**07 27 59.4**	**+0.1**
ATD	**Arta Tunnel** 4.2nm,0.3s,baz=74,slow=8.6,SNR=8.2	**5.02**	**256**	Pn	**Pn**	**07 27 32.7**	**+1.0**
ATD	**Arta Tunnel**	**5.02**	**256**	*e*Pn	**Pn**	**07 27 30.4**	**-1.3**
KMBO	**Kilima Mbogo** 3.4nm,0.9s	**17.36**	**218**	*e*P	**Pn**	**07 30 18.4**	**-0.7**
BR101	**Keskin Array S**	**29.59**	**338**	*e*P	**P**	**07 32 23.1**	**+1.4**
BRTR	**Keskin Array B** 0.7nm,0.6s,baz=172,slow=11,SNR=4.1	**29.59**	**338**	P	**P**	**07 32 23.1**	**+1.4**
KKAR	**Karatay Array** 2.2nm,1.3s	**36.00**	**29**	*e*P	**P**	**07 33 15.6**	**-2.1**
AAK	**Ala-Archa** 4.3nm,1.3s	**37.65**	**33**	*e*P	**P**	**07 33 30.9**	**-0.9**
NRN	**Naryn** 8.1nm,1.4s	**37.66**	**36**	*e*P	**P**	**07 33 30.3**	**-1.9**
ABKAR	**Akbulak array** 3.1nm,1.0s	**37.71**	**13**	*e*P	**P**	**07 33 32.3**	**+0.3**
KDJ	**Kajisay** 6.5nm,1.1s	**38.79**	**36**	*e*P	**P**	**07 33 40.5**	**-0.9**
BUR08	**Bucovina Ar. S** 3.9nm,1.2s	**39.55**	**336**	*e*P	**P**	**07 33 46.6**	**-1.0**
AKBB	**Malin Array Si** 2.1nm,0.9s	**40.73**	**342**	*e*P	**P**	**07 33 56.8**	**-0.4**
TSUM	**Tsumeb** 3.0nm,1.1s	**43.57**	**224**	*e*P	**P**	**07 34 20.1**	**-0.8**
ARU	**Arti** 5.0nm,0.6s	**44.32**	**9**	*e*P	**P**	**07 34 26.2**	**-0.1**
MAKZ	**Makanchi** 2.2nm,0.6s	**44.41**	**33**	*e*P	**P**	**07 34 27.6**	**+0.3**
MK31	**Makanchi Array** 1.6nm,0.9s	**44.57**	**34**	*e*P	**P**	**07 34 26.7**	**-1.9**
MK32	**Makanchi Array**	**44.57**	**34**	*e*P	**P**	**07 34 26.7**	**-1.8**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=243,slow=7.9,SNR=4.4	**44.57**	**34**	P	**P**	**07 34 26.7**	**-1.8**
TORD	**Torodi Ar. Bea** 0.9nm,1.0s,baz=71,slow=7.6,SNR=5.4	**44.89**	**276**	P	**P**	**07 34 32.2**	**+0.7**
TOA1	**Torodi Ar. Sit**	**44.89**	**276**	*e*P	**P**	**07 34 32.2**	**+0.6**
KURK	**Kurchatov** 3.7nm,1.3s	**45.37**	**27**	*e*P	**P**	**07 34 35.8**	**+1.0**
BOSA	**Boshof** 1.6nm,0.7s,baz=18,slow=6.2,SNR=3.6	**46.59**	**208**	P	**P**	**07 34 45.3**	**+0.5**
ZALV	**Zalesovo Beam** 0.7nm,0.4s,baz=240,slow=4.8,SNR=3.1	**50.36**	**28**	P	**P**	**07 35 13.4**	**0.0**
ZAA1	**Zalesovo Array**	**50.36**	**28**	*e*P	**P**	**07 35 13.4**	**0.0**
SONA0	**Songino Array**	**59.65**	**42**	*e*P	**P**	**07 36 21.7**	**+0.8**
SONM	**Songino Array** 0.6nm,0.7s,baz=250,slow=4.3,SNR=4.7	**59.65**	**42**	P	**P**	**07 36 21.7**	**+0.8**
NV01	**Mina Array Sit**	**127.41**	**346**	*e*PKPdf	**PKiKP**	**07 45 23.6**	**+0.9**
NVAR	**Mina Array Bea** 0.2nm,0.6s,baz=29,slow=2.3,SNR=2.6	**127.41**	**346**	PKP	**PKiKP**	**07 45 23.6**	**+0.9**

TAP 11 07:36:56.0, 24°.25N×121°.70E, h10^{km}±1^{km}, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	**Ninganchiao** baz=231	**0.12**	**232**	P	Pb	07 36 59.9	-0.6
NACB	baz=231			S	Sg	07 37 02.4	+1.3
ENA	**Nanau** baz=13	**0.18**	**11**	P	Pb	07 37 00.8	-0.6
ENA	baz=13			*e*S	Sg	07 37 03.7	+1.1
NANB	**Nanao** baz=13	**0.18**	**14**	*e*P	Pb	07 37 00.8	-0.6
NANB	baz=13			*e*S	Sg	07 37 03.7	+1.1
TWD	**Chiawan** baz=207	**0.20**	**210**	*e*P	Pg	07 37 00.9	+0.8
TWD	baz=207			*e*S	Sg	07 37 04.0	+1.0
ETLH	**Xiulin Townshi** baz=257	**0.21**	**257**	*e*P	Pb	07 37 01.5	-0.4
ETLH	baz=257			*e*S	Sg	07 37 05.1	+1.7
NNSB	**Datong** baz=301	**0.34**	**301**	*e*S	Sb	07 37 09.4	-0.3
NDT	**Datong Townshi** baz=333	**0.39**	**334**	*e*P	Pb	07 37 05.3	+0.3
NDT	baz=333			*e*S	Sb	07 37 11.1	0.0
WHF	**Hehuan Shan** baz=254	**0.41**	**255**	*e*P	Pb	07 37 05.5	-0.2
WHF	baz=254			*e*S	Sb	07 37 11.3	-0.9
YHNB	**Yeheng** baz=324	**0.51**	**324**	*e*S	Sb	07 37 14.6	-0.1

JMA 11 07:37:07.0±0.1, 24°.11N×123°.57E, h19^{km}±2^{km}, M1.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.22**	**104**	P	Pb	07 37 12.0	0.0
HATJ				*e*S	Sg	07 37 16.0	0.0
IRIF	**Iriomote-Funau**	**0.27**	**33**	P	Pb	07 37 12.8	-0.3
IRIF				S	Sb	07 37 17.0	-0.1
JKRS	**Kuro-shima**	**0.42**	**72**	P	Pg	07 37 15.5	-0.2
JKRS				S	Sb	07 37 21.9	0.0
JIJ	**Ishigaki jima**	**0.58**	**64**	P	Pb	07 37 17.8	-0.7
JIJ				S	Sb	07 37 25.9	-0.4
YOJ	**Yonaguni jima**	**0.62**	**305**	P	Pb	07 37 19.2	+0.1
YOJ				S	Sb	07 37 27.5	+0.1
JYNG	**Yonagunijimaku**	**0.66**	**301**	P	Pb	07 37 19.6	-0.3
JYNG				S	Sg	07 37 28.9	-0.1
JISG	**Ishigakijimahi**	**0.83**	**55**	P	Pb	07 37 22.3	-0.4
JISG				*e*S	Sb	07 37 33.3	-0.2

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*ASRS **11** 07:47:03.2, 53°.71N×91°.07E, M3.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*IDC **11** 07:47:06.8±2.9, 53°.50N×90°.84E, h0^{km}, mb1 3.5/4, mb1mx3.3/56, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=25.5km s-min=19.2km az=57.0*
*NNC **11** 07:47:15.2±4.2, 53°.41N×90°.30E, h13^{km}±18^{km}, mb4.0, mpv4.1, Error ellipse: s-maj=29.3km s-min=20.1km az=94.0, Suspected Mining explosion.*
ISC 11 07:47:08.3±3.8, 53°.6N±0°.1×90°.5E±0°.2, h0^{km}, n17, σ0^{s}.89/13, 6C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=91,slow=310,SNR=4.6	**3.37**	**278**	*i*		08 10 45.0	
ZAA0	**Zalesovo Array** 6.1nm,1.1s	**3.37**	**278**	⇑Pn	**Pb**	**07 48 08.1**	**-0.8**
ZAA0	36nm,0.8s			⇑Lg	Lg	07 49 00.3	
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=98,slow=10,SNR=4.2	**3.37**	**278**	Pn	**Pn**	**07 48 03.1**	**+1.0**
ZALV	6.3nm,0.3s,baz=93,slow=25,SNR=12			Lg	Lg	07 49 00.3	
SEM	**Semipalatinsk** 21nm,0.1s	**7.08**	**247**	Pg	Pb	07 49 17.2	+5.1
SEM	243nm,1.3s			Lg	Lg	07 50 55.7	
ZSN	**Zaisan** 3.5nm,0.6s	**7.13**	**212**	Pg	**Pg**	**07 49 24.1**	**-0.6**
ZSN	16nm,1.0s			Lg	Lg	07 51 06.9	
KURBB	**Kurchatov Arra** 0.4nm,0.3s,baz=65,slow=14,SNR=12	**7.93**	**253**	Pn	**Pn**	**07 49 05.4**	**+0.6**
KURBB	0.1nm,0.3s,baz=67,slow=25,SNR=5.7			Sn	**Sn**	**07 50 35.7**	**+0.5**
KURBB	0.2nm,0.3s,baz=65,slow=31,SNR=8.8			Lg	Lg	07 51 24.1	
KURBB	**Kurchatov Arra** 9.3nm,0.8s	**7.93**	**253**	⇑Pn	**Pn**	**07 49 05.4**	**+0.6**
KURBB	74nm,0.8s			⇓Sn	**Sn**	**07 50 35.7**	**+0.5**
KURBB	122nm,0.8s			⇑Lg	Lg	07 51 24.3	
MK31	**Makanchi Array** 7.7nm,0.9s,baz=35,slow=13,SNR=41	**8.60**	**221**	⇑Pn	**Pn**	**07 49 15.1**	**+1.0**
MK31	7.4nm,0.8s,baz=48,slow=28,SNR=4.2			⇓Sn	**Sn**	**07 50 53.2**	**+1.4**
MK31	35nm,1.0s,baz=27,slow=41,SNR=3.6			⇑Lg	Lg	07 51 41.3	
MKAR	**Makanchi Array** 0.8nm,0.3s,baz=40,slow=12,SNR=40	**8.60**	**221**	Pn	**Pn**	**07 49 14.3**	**+0.3**
MKAR	0.1nm,0.3s,baz=30,slow=26,SNR=2.1			Sn	**Sn**	**07 50 50.6**	**-1.2**
MKAR	0.3nm,0.3s,baz=41,slow=29,SNR=6.9			Lg	Lg	07 51 41.6	
KAPS	**Kapalarasan** 12nm,1.0s	**11.02**	**225**	Lg	Lg	07 53 01.4	
DJR	**Jarkent** 6.3nm,1.1s	**11.63**	**221**	Lg	Lg	07 53 26.7	
BVAR	**Borovoye Array** 0.1nm,0.3s,baz=71,slow=14,SNR=2.6	**12.02**	**275**	Pn	**Pn**	**07 50 00.6**	**-0.1**
BVAR	0.1nm,0.3s,baz=70,slow=17,SNR=2.3			Sn	**Sn**	**07 52 15.4**	**0.0**
OTUK	**Ortayu** 8.1nm,1.0s	**12.62**	**252**	Lg	Lg	07 53 52.4	
CHKK	**Chushkaly** 5.7nm,1.3s	**13.19**	**228**	Lg	Lg	07 54 08.3	
BTLS	**Baital** 10nm,1.3s	**13.69**	**238**	Lg	Lg	07 54 23.8	
AAK	**Ala-Archa** 0.4nm,0.3s,baz=135,slow=22,SNR=4.4	**15.27**	**230**	Lg	Lg	07 55 12.8	
AKTO	**Aktyubinsk** 0.6nm,0.5s,baz=58,slow=12,SNR=3.7	**20.12**	**274**	P	Pn	07 51 48.5	+3.2

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*NEIC **11** 07:51:12.4±1.4, 29°.34N×142°.36E, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=22.4km s-min=9.1km az=66.0*
*IDC **11** 07:51:12.1±1.5, 29°.27N×142°.17E, h0^{km}, mb4.1/5, mb1 4.2/6, mb1mx3.7/51, mbtmp4.0/6, ML3.1/1, Error ellipse: s-maj=53.8km s-min=26.2km az=69.0*
*ISCJB **11** 07:51:13.9±0.7, 29°.41N±0°.07×142°.1E±0°.1, h24^{km}, mb4.3/11, Error ellipse: s-maj=15.9km s-min=9.6km az=164.8*
ISC 11 07:51:15.2±0.9, 29°.4N±0°.1×142°.3E±0°.1, h24^{km}, n18, σ1^{s}.17/19, mb4.3/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr** 0.3nm,0.3s,baz=158,slow=10,SNR=11	**7.92**	**336**	Pn	**Pn**	**07 53 08.0**	**-0.8**
MAJO	**Matsushiro**	**7.92**	**336**	*e*Pn	**Pn**	**07 53 06.9**	**-2.0**
MAJO				*e*		07 53 08.0	
MAJO				*e*Sn	**Sn**	**07 54 37.6**	**-0.2**
JNU	**Nakatsue**	**10.44**	**294**	*e*Pn	**Pn**	**07 53 43.1**	**-0.3**
YULB	**Yu-li** 18nm,1.3s	**19.70**	**257**	*e*P	**Pn**	**07 55 42.8**	**-1.6**
SSLB	**Suanglung** 5.5nm,0.6s	**19.84**	**259**	*e*P	**Pn**	**07 55 45.3**	**-0.9**
MK32	**Makanchi Array**	**49.11**	**308**	*e*P	**P**	**08 00 01.4**	**+0.7**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=89,slow=9.8,SNR=6.6	**49.11**	**308**	P	**P**	**08 00 01.4**	**+0.7**
WR1	**Warramunga Arr**	**49.62**	**190**	*e*P	**P**	**08 00 04.3**	**-0.5**
WRA	**Warramunga Arr** 1.0nm,0.4s,baz=0.8,slow=7.5,SNR=2.7	**49.62**	**190**	P	**P**	**08 00 04.3**	**-0.5**
KURK	**Kurchatov** 5.2nm,1.3s	**51.46**	**313**	*e*P	**P**	**08 00 19.6**	**+1.1**
KURBB	**Kurchatov Arra** 1.0nm,0.5s,baz=90,slow=7.7,SNR=11	**51.52**	**313**	P	**P**	**08 00 19.9**	**+1.0**
BVAR	**Borovoye Array** 1.5nm,0.5s,baz=100,slow=8.1,SNR=7.9	**56.43**	**316**	P	**P**	**08 00 55.4**	**+0.6**
KK31	**Karatay Array** 5.8nm,1.4s	**57.83**	**305**	*e*P	**P**	**08 01 05.8**	**+1.0**
ABKAR	**Akbulak array** 1.2nm,0.9s	**63.57**	**314**	*e*P	**P**	**08 01 44.7**	**+0.9**
FIA1	**FINESS Array S** 30nm,1.5s	**75.94**	**334**	*e*P	**P**	**08 03 01.4**	**+1.7**
U15A	**North Rim** 3.2nm,1.4s	**84.20**	**51**	*e*P	**P**	**08 03 43.9**	**-1.3**
TXAR	**Lajitas Array** 0.9nm,0.6s,baz=308,slow=4.4,SNR=3.8	**94.19**	**53**	P	**P**	**08 04 33.7**	**+1.1**
SENIN	**Lac Senin/Sane** 5.9nm,0.7s	**94.31**	**331**	*e*P	**P**	**08 04 31.6**	**-1.3**

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*ISCJB **11** 07:56:01.2±0.6, 24°.02N±0°.02×122°.87E±0°.02, h8^{km}±4^{km}, Error ellipse: s-maj=3.2km s-min=2.4km az=171.4*
*TAP **11** 07:56:01.2, 24°.05N×122°.86E, h9^{km}±1^{km}, ML3.2, D*
*JMA **11** 07:56:02.5±0.1, 24°.09N×122°.88E, h18^{km}±2^{km}, M3.3*
ISC 11 07:56:01.4±1.1, 24°.03N±0°.03×122°.87E±0°.02, h12^{km}±9^{km}, n71, σ0^{s}.63/117, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.42**	**9**	P	**Pg**	**07 56 10.0**	**+0.2**
JYNG				S	**Sg**	**07 56 15.3**	**-0.1**
YOJ	**Yonaguni jima** baz=17	**0.44**	**17**	*e*P	**Pg**	**07 56 10.6**	**+0.4**
YOJ	baz=17			*e*S	**Sg**	**07 56 16.3**	**+0.2**
YOJ	**Yonaguni jima**	**0.44**	**17**	P	**Pg**	**07 56 10.5**	**+0.3**
YOJ				S	**Sg**	**07 56 16.0**	**-0.1**
IRIF	**Iriomote-Funau**	**0.84**	**69**	P	**Pg**	**07 56 17.7**	**+0.1**
IRIF				S	**Sb**	**07 56 29.3**	**+0.1**
EOS1	**EOS1** baz=306	**0.85**	**307**	*e*P	**Pb**	**07 56 18.1**	**0.0**
EOS1	baz=306			*e*S	**Sb**	**07 56 29.8**	**+0.3**
HATJ	**Hateruma jima**	**0.85**	**88**	P	**Pg**	**07 56 18.2**	**+0.3**
HATJ				S	**Sg**	**07 56 29.2**	**+0.1**
JKRS	**Kuro-shima**	**1.06**	**79**	P	**Pg**	**07 56 21.9**	**+0.1**
JKRS				*e*S	**Sg**	**07 56 35.8**	**+0.2**
TWC	**Suao** baz=301	**1.09**	**302**	P	**Pb**	**07 56 21.6**	**-0.7**
TWC	baz=301			S	**Sb**	**07 56 36.5**	**0.0**
NANB	**Nanao** baz=290	**1.10**	**291**	*e*P	**Pb**	**07 56 21.8**	**-0.5**
NANB	baz=290			*e*S	**Sb**	**07 56 36.6**	**0.0**
ENA	**Nanau** baz=290	**1.10**	**291**	P	**Pb**	**07 56 22.1**	**-0.3**
ENA	baz=290			S	**Sb**	**07 56 36.8**	**0.0**
TWD	**Chiawan** baz=271	**1.17**	**273**	P	**Pb**	**07 56 23.2**	**-0.4**
TWD	baz=271			S	**Sn**	**07 56 39.9**	**+0.5**
NACB	**Ninganchiao** baz=276	**1.18**	**277**	*e*P	**Pn**	**07 56 23.5**	**-0.2**
NACB	baz=276			*e*S	**Sn**	**07 56 39.8**	**+0.1**
JIJ	**Ishigaki jima**	**1.21**	**74**	P	**Pn**	**07 56 23.8**	**-0.3**
JIJ				S	**Sb**	**07 56 39.6**	**-0.1**
NTC	**Toucheng** baz=310	**1.25**	**311**	*e*P	**Pn**	**07 56 24.5**	**-0.3**
NTC	baz=310			*e*S	**Sb**	**07 56 40.9**	**-0.2**
TWB1	**Santiao Chiao** baz=320	**1.26**	**320**	P	**Pn**	**07 56 24.9**	**+0.1**
TWB1	baz=320			S	**Sb**	**07 56 40.9**	**-0.4**
ETLH	**Xiulin Townshi** baz=277	**1.28**	**278**	*e*P	**Pn**	**07 56 25.2**	**0.0**
TWE	**Neicheng** baz=301	**1.29**	**302**	P	**Pb**	**07 56 25.9**	**+0.2**
TWE	baz=301			S	**Sg**	**07 56 43.0**	**-0.1**
ESL	**Shilin** baz=259	**1.33**	**261**	P	**Pn**	**07 56 25.3**	**-0.6**
ESL	baz=259			S	**Sg**	**07 56 44.2**	**-0.2**
TIPB	**Shuangxi** baz=314	**1.33**	**315**	P	**Pn**	**07 56 25.9**	**0.0**
TIPB	baz=314			S	**Sn**	**07 56 43.4**	**-0.2**
ENTT	**Nioudou** baz=296	**1.34**	**297**	P	**Pb**	**07 56 26.4**	**-0.1**
ENTT	baz=296			S	**Sg**	**07 56 44.4**	**-0.1**
SLBB	**Yuanshan** baz=302	**1.34**	**303**	*e*P	**Pg**	**07 56 27.1**	**0.0**
SLBB	baz=302			*e*S	**Sg**	**07 56 44.3**	**-0.2**
NDT	**Datong Townshi** baz=294	**1.36**	**295**	*e*P	**Pb**	**07 56 27.0**	**+0.1**

NDT				*e*S	Sg	07 56 44.9	-0.5
	baz=294						
EGFH	Guangfu	1.37	255	*e*P	Pn	07 56 26.2	-0.2
	baz=253						
EGFH				*e*S	Sb	07 56 45.2	+0.7
	baz=253						
NNSB	Datong	1.42	286	*e*P	Pb	07 56 27.8	0.0
	baz=285						
NNSB				*e*S	Sb	07 56 46.2	+0.3
	baz=285						
JISG	Ishigakijimahi	1.42	67	P	Pn	07 56 27.0	-0.1
JISG				S	Sb	07 56 46.0	0.0
NNS	Nan Shan	1.43	287	P	Pb	07 56 28.2	+0.1
	baz=285						
NNS				S	Sb	07 56 46.4	+0.2
	baz=285						
HGSD	Ruisui	1.43	248	*e*P	Pn	07 56 26.5	-0.7
	baz=247						
HGSD				*e*S	Sn	07 56 45.0	-0.9
	baz=247						
NWF	Wu-fen Shan	1.43	316	P	Pn	07 56 27.3	-0.1
	baz=315						
NWF				S	Sb	07 56 46.7	+0.3
	baz=315						
WFSB	Wu-fen Shan	1.43	316	*e*P	Pn	07 56 27.3	+0.1
	baz=315						
WFSB				*e*S	Sg	07 56 47.3	-0.3
	baz=315						
WHF	Hehuan Shan	1.47	275	P	Pn	07 56 28.0	-0.2
	baz=273						
WHF				*e*S	Sn	07 56 47.2	-0.4
	baz=273						
TWA	Mucha	1.50	309	P	Pn	07 56 27.7	-0.5
	baz=308						
TWA				S	Sb	07 56 48.5	+0.2
	baz=308						
YHNB	Yeheng	1.50	295	*e*P	Pb	07 56 29.4	0.0
	baz=294						
YHNB				*e*S	Sb	07 56 48.3	-0.1
	baz=294						
EHY	Hungye	1.51	250	P	Pn	07 56 28.0	-0.4
	baz=248						
EHY				S	Sn	07 56 48.0	0.0
	baz=248						
NSK	Sanguang	1.52	295	*i* P	Pb	07 56 30.0	+0.4
	baz=294						
NSK				S	Sb	07 56 49.0	+0.1
	baz=294						
CHGB	Renai	1.55	271	*e*P	Pn	07 56 29.3	+0.2
	baz=270						
YULB	Yu-li	1.58	246	*e*P	Pn	07 56 28.9	-0.3
	baz=245						
YULB				*e*S	Sn	07 56 49.2	-0.4
	baz=245						
TWF1	Yuli	1.59	245	P	Pn	07 56 29.3	-0.2
	baz=244						
TWF1				S	Sn	07 56 50.6	+0.5
	baz=244						
VWDT	VWDT	1.61	260	*e*P	Pn	07 56 30.1	+0.4
	baz=259						
YM01	YM01	1.62	313	*e*P	Pn	07 56 30.5	+0.6
	baz=312						
YM01				*e*S	Sn	07 56 50.9	+0.1
	baz=312						
YM10	YM10	1.64	313	*e*P	Pb	07 56 30.9	-0.7
	baz=312						
YM10				*e*S	Sn	07 56 51.1	0.0
	baz=312						
YM05	YM05	1.64	314	*e*S	Sb	07 56 52.1	-0.1
	baz=313						
YM08	YM08	1.64	315	*e*P	Pb	07 56 30.9	-0.7
	baz=314						
YM08				*e*S	Sn	07 56 50.9	-0.2
	baz=314						
TWY	Chenhua	1.69	317	*e*P	Pb	07 56 31.9	-0.6
	baz=316						
TWY				*e*S	Sb	07 56 53.6	-0.2
	baz=316						
SSLB	Suanglung	1.77	262	*e*P	Pn	07 56 32.0	+0.1
	baz=261						
JTJ	Tarama	1.77	70	S	Sb	07 56 56.4	+0.3
DPDB	Guoxing	1.78	270	*e*P	Pb	07 56 33.2	-0.9
	baz=269						
LIOB	Emei	1.80	290	*e*P	Pn	07 56 33.0	+0.7
	baz=289						
LIOB				*e*S	Sn	07 56 55.0	-0.1
	baz=289						
NSTT	Nanjuang	1.81	290	P	Pb	07 56 34.6	+0.2
	baz=288						
SMLT	Sun Moon Lake	1.81	266	P	Pn	07 56 33.2	+0.6
	baz=264						
SMLT				S	Sn	07 56 56.4	+0.8
	baz=264						
YUS	Yu-Shan	1.84	253	P	Pn	07 56 33.6	+0.4
	baz=252						
YUS				S	Sn	07 56 56.3	-0.5
	baz=252						
TYC	Yuchr	1.85	266	P	Pn	07 56 34.0	+1.0
	baz=265						
TYC				S	Sn	07 56 57.2	+1.0
	baz=265						
WHYT	Xinyi Township	1.88	260	*e*P	Pn	07 56 34.5	+1.1
	baz=259						
ELDTW	Lidau	1.90	244	P	Pn	07 56 33.0	-0.7
	baz=242						
ELDTW				*e*S	Sn	07 56 57.7	+0.1
	baz=242						
ALS	Alishan	1.96	255	P	Pn	07 56 35.8	+0.9
	baz=253						
ALS				*e*S	Sn	07 57 00.8	+1.3
	baz=253						
TWGBT	Beinan	2.04	234	*e*P	Pn	07 56 34.8	-0.9
	baz=233						
TWG	Pinlang	2.05	234	P	Pn	07 56 35.1	-0.6
	baz=233						
TWG				S	Sn	07 57 00.8	-0.4
	baz=233						
CHN5	Tsauling	2.06	258	*e*P	Pb	07 56 37.7	-1.0
	baz=257						
WCHH	Zhanghua	2.12	272	*e*P	Pb	07 56 39.0	-0.7
	baz=270						
TPUB	Ta-pu	2.18	251	*e*P	Pn	07 56 38.9	+1.3
	baz=249						
SLGT	Liugui	2.29	244	*e*P	Pn	07 56 40.8	+1.8
	baz=242						
SGST	Jiashian	2.30	246	*e*P	Pn	07 56 40.2	+0.9
	baz=245						
CHN1	Nanshi	2.31	249	*e*P	Pn	07 56 41.1	+1.8
	baz=248						
TWK	Hsinying	2.32	251	*e*P	Pb	07 56 41.6	-1.5
	baz=250						
SSD	Sandimen	2.42	239	*e*P	Pn	07 56 41.5	+0.6
	baz=237						
EAST	Anshuo	2.48	229	*e*P	Pn	07 56 41.3	-0.4
	baz=228						
MASBT	Mashibuluo	2.50	236	*e*P	Pn	07 56 42.3	+0.4
	baz=235						
SSPT	Xinbi	2.62	234	*e*P	Pn	07 56 45.9	+2.3
	baz=233						
SCZT	Fangliau	2.65	232	*e*P	Pn	07 56 46.2	+2.2
	baz=230						
WDGT	Dungji	3.04	256	*e*P	Pn	07 56 50.7	+1.3
	baz=254						
PHUB	P'eng-hu	3.07	261	*e*P	Pn	07 56 49.4	-0.3
	baz=259						
PTMZ	Houxiangcun	3.56	287	*e*P	Pn	07 56 56.9	+0.4
	baz=286						

IDC ***11*** *07:58:53.5±5.5, 42°.40N×143°.24E, h0^{km}, mb3.8/3, mb1 3.6/5, mb1mx3.4/47, mbtmp3.6/5, ML2.1/2, Error ellipse: s-maj=101.9km s-min=44.4km az=94.0*
NEIC ***11*** *07:58:57.8±2.3, 42°.60N×142°.83E, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=19.7km s-min=2.2km az=67.0*
ISCJB ***11*** *07:58:59.9±0.6, 41°.83N±0°.06×142°.70E±0°.05, h64^{km}±4^{km}, mb3.9/9, Error ellipse: s-maj=11.1km s-min=5.9km az=162.3*
NIED ***11*** *07:59:00, 41°.80N×142°.70E, h47^{km}, Mw3.7 Best double couple: $M_0$4.19000×10^{14} NP1:ϕ_s212.00000°, δ23.00000°, λ94.00000°. NP2:ϕ_s28.00000°, δ67.00000°, λ88.00000°.*
JMA ***11*** *07:59:01.2±0.1, 41°.84N×142°.69E, h54^{km}±2^{km}, M3.6*
ISC 11 07:59:00.5±0.9**, 41°.83N**±0°.06×**142°.71E**±0°.04**, h59**^{km}±7^{km}**, n30, σ0^{s}.76**/34**, mb3.9**/9**, 3C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	0.39	61	*e*Pg	Pn	07 59 11.5	+0.3
ERM				*e*Sg	Sn	07 59 18.2	-0.7
JEM	Erimo	0.39	61	⇑P	Pn	07 59 11.4	+0.2
JEM				*e*S	Sn	07 59 19.0	+0.1
JNBK	Urakawa-nobuka	0.45	4	⇓P	Pn	07 59 11.9	0.0
JNBK				*e*S	Sn	07 59 20.0	-0.1
JSHD	Hidakashinhida	0.61	343	⇓P	Pn	07 59 13.9	+0.3
JSHD				*e*S	Sn	07 59 23.4	+0.3
JTHR	Tokachihiroo	0.64	43	⇑P	Pn	07 59 14.4	+0.5
JTHR				*e*S	Sn	07 59 24.1	+0.4
JCH	Churui	0.93	32	⇓P	Pn	07 59 18.0	+0.5
JBT2	Biratori 2	0.98	345	⇓P	Pn	07 59 18.6	+0.3
JIAM	Iburiatsuma	0.99	324	P	Pn	07 59 19.5	+1.2
JKB	Kayabe	1.25	273	⇓P	Pn	07 59 21.9	+0.1
JKB				*e*S	Sn	07 59 37.6	-0.1
JARK	Aomorirokkasho	1.30	231	⇑P	Pn	07 59 23.5	+1.1
JOT	Ohata	1.32	251	⇓P	Pn	07 59 23.3	+0.6
JOT				*e*S	Sn	07 59 39.4	+0.1
JFR	Furan	1.34	356	P	Pn	07 59 24.0	+1.0
JOB	Onbets	1.36	37	⇓P	Pn	07 59 24.8	+1.5
JEW	Eniwo	1.38	318	⇓P	Pn	07 59 24.1	+0.6
JNB	Noboribetsu	1.40	298	⇓P	Pn	07 59 23.5	-0.2
JNB				*e*S	Sn	07 59 40.2	-1.0
MJB9	Matsu-Tunnel	6.33	215	*e*Pn	Pn	08 00 38.5	+7.3
MJAR	Matsushiro Arr	6.33	215	Pn	Pn	08 00 37.7	+6.5
	0.1nm,0.3s,baz=30,slow=13,SNR=4.0						
MAJO	Matsushiro	6.33	215	*e*Pn	Pn	08 00 37.7	+6.5
MAJO				*e*		08 00 38.7	
USRK	Ussuriysk Ar.	8.20	290	Pn	Pn	08 00 57.0	+0.2
	0.1nm,0.3s,baz=96,slow=12,SNR=5.4						
MK31	Makanchi Array	42.59	298	*e*P	P	08 06 50.8	+0.2
	0.8nm,0.9s						
MK32	Makanchi Array	42.59	298	*e*P	P	08 06 50.5	0.0
MKAR	Makanchi Array	42.59	298	P	P	08 06 50.5	0.0
	0.4nm,0.5s,baz=89,slow=7.4,SNR=4.8						
MAKZ	Makanchi	42.79	298	*e*P	P	08 06 53.4	+1.2
	6.7nm,1.7s						
KURK	Kurchatov	43.90	304	*e*P	P	08 07 02.2	+1.2
	1.6nm,0.7s						
KURBB	Kurchatov Arra	43.98	304	P	P	08 07 02.4	+0.7
	1.2nm,0.5s,baz=76,slow=8.8,SNR=9.8						
DHY	Denali Highway	44.90	37	*e*P	P	08 07 07.3	-1.7
	6.6nm,1.4s						
SCRK	Sand Creek	46.29	36	*e*P	P	08 07 13.6	-6.4
	6.0nm,1.7s						
BVAR	Borovoye Array	48.19	309	P	P	08 07 35.4	+0.6
	0.4nm,0.3s,baz=84,slow=9.3,SNR=5.0						
ABKAR	Akbulak array	55.69	308	*e*P	P	08 08 31.4	+0.8
	5.5nm,1.7s						
MCMT	McKenzie Canyo	70.48	47	*e*P	P	08 10 08.2	-0.7

ROM 11 08:02:18.9±0.1**, 43°.818N**±0°.005×**12°.045E**±0°.006**, h9**^{km}**, Md1.6**/2**, Error ellipse: s-maj=0.7km s-min=0.1km az=213.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	Santa Sofia	0.17	301	P	Pg	08 02 22.9	+0.4
SFI				S	Sg	08 02 25.9	+1.0
SFI				AML	AML		
	comp=E,7565µm,0.3s						
SFI				AML	AML		
	comp=N,4795µm,0.5s						
SFI				AML	AML		
	comp=E,5505µm,0.4s						
SFI				AML	AML		
	comp=N,6395µm,0.3s						
SFI				AML	AML		
	comp=N,4795µm,0.5s						
SFI				AML	AML		
	comp=E,7565µm,0.3s						
SFI				AML	AML		
	comp=N,6395µm,0.3s						
SFI				AML	AML		
	comp=E,5505µm,0.4s						
SFI				END			
SFI				END			
ASQU	Asqua	0.19	264	P	Pg	08 02 23.4	+0.6
ASQU				S	Sg	08 02 27.0	+1.5
ASQU				AML	AML		
	comp=E,5835µm,0.4s						
ASQU				AML	AML		
	comp=N,14300µm,0.3s						
ASQU				AML	AML		
	comp=N,14300µm,0.3s						
ASQU				AML	AML		
	comp=E,5835µm,0.4s						
ASQU				END			
ASQU				END			
CPGN	Carpegna, Ital	0.20	95	P	Pg	08 02 23.8	+0.7
CPGN				S	Sg	08 02 27.9	+1.9
CPGN				AML	AML		
	comp=E,7490µm,0.4s						
CPGN				AML	AML		
	comp=N,5185µm,1.5s						
CPGN				AML	AML		
	comp=E,7200µm,0.4s						
CPGN				AML	AML		
	comp=N,5085µm,1.5s						
CPGN				AML	AML		
	comp=E,7495µm,0.4s						
CPGN				AML	AML		
	comp=N,5180µm,1.5s						
CPGN				AML	AML		
	comp=E,7200µm,0.4s						
CPGN				AML	AML		
	comp=N,5100µm,1.5s						
CPGN				AML	AML		
	comp=N,5100µm,1.5s						
CPGN				AML	AML		
	comp=E,7495µm,0.4s						
CPGN				AML	AML		
	comp=E,7200µm,0.4s						
CPGN				AML	AML		
	comp=N,5180µm,1.5s						
PARC	Parchiule	0.22	140	P	Pg	08 02 23.8	+0.5
PARC				S	Sg	08 02 27.8	+1.4
PARC				AML	AML		
	comp=E,2170µm,1.0s						
PARC				AML	AML		
	comp=N,3945µm,0.5s						
PARC				AML	AML		
	comp=E,2170µm,1.0s						
PARC				AML	AML		
	comp=N,3945µm,0.5s						
PARC				AML	AML		
	comp=N,3945µm,0.5s						
PARC				AML	AML		
	comp=E,2170µm,1.0s						
SSP9	Sansepolcro	0.25	166	P	Pg	08 02 24.8	+0.8
SSP9				S	Sb	08 02 29.3	-0.8
SSP9				AML	AML		
	comp=E,1765µm,0.6s						
SSP9				AML	AML		
	comp=N,2450µm,0.8s						
BADI	Badiali	0.34	155	P	Pg	08 02 26.1	+0.5
BADI				S	Sb	08 02 31.9	-0.7
BADI				AML	AML		
	comp=E,2115µm,0.6s						
BADI				AML	AML		
	comp=N,1230µm,0.5s						
BADI				AML	AML		
	comp=E,2120µm,0.6s						
BADI				AML	AML		
	comp=N,1230µm,0.5s						
BADI				AML	AML		
	comp=E,2120µm,0.6s						
BADI				AML	AML		
	comp=N,1230µm,0.5s						
PE3	Peglio	0.35	110	P	Pg	08 02 26.1	+0.4
PE3				S	Sb	08 02 32.5	-0.4
PE3				AML	AML		
	comp=E,5030µm,0.6s						
PE3				AML	AML		
	comp=N,3905µm,0.5s						
PE3				AML	AML		
	comp=N,3905µm,0.5s						
PE3				AML	AML		
	comp=E,5030µm,0.6s						
RUFI	Rufina	0.39	273	P	Pg	08 02 26.8	+0.3
RUFI				S	Sb	08 02 33.2	-0.8
RUFI				AML	AML		
	comp=E,1915µm,0.4s						
RUFI				AML	AML		
	comp=N,2305µm,1.3s						
RUFI				AML	AML		
	comp=E,1905µm,0.4s						
RUFI				AML	AML		
	comp=N,2320µm,1.3s						
RUFI				AML	AML		
	comp=N,2320µm,1.3s						
RUFI				AML	AML		
	comp=E,1905µm,0.4s						
NARO	Abbazia di Nar	0.44	118	P	Pg	08 02 27.4	-0.1
NARO				S	Sb	08 02 34.5	-1.0
NARO				AML	AML		
	comp=E,450µm,1.3s						
NARO				AML	AML		
	comp=N,485µm,1.0s						
NARO				AML	AML		
	comp=E,534µm,1.1s						
NARO				AML	AML		
	comp=N,610µm,0.5s						
NARO				AML	AML		
	comp=N,610µm,0.5s						
NARO				AML	AML		
	comp=E,534µm,1.1s						
ATPI	Pietralunga -	0.45	145	P	Pg	08 02 28.1	+0.4
ATPI				S	Sb	08 02 35.7	-0.2
ATPI				AML	AML		
	comp=E,996µm,0.7s						
ATPI				AML	AML		
	comp=N,746µm,0.6s						
ATPI				AML	AML		
	comp=E,996µm,0.7s						
ATPI				AML	AML		
	comp=N,746µm,0.6s						
CAFI	Castiglion Fio	0.49	187	P	Pg	08 02 29.0	+0.6
CAFI				S	Sb	08 02 36.5	-0.5
CAFI				AML	AML		
	comp=E,894µm,0.5s						
CAFI				AML	AML		
	comp=N,856µm,0.5s						
CAFI				AML	AML		
	comp=N,856µm,0.5s						
CAFI				AML	AML		
	comp=E,894µm,0.5s						
ATVO	AVT- Monte Val	0.51	149	P	Pg	08 02 29.2	+0.4
ATVO				S	Sb	08 02 37.4	-0.2
ATVO				AML	AML		
	comp=E,1535µm,0.6s						
ATVO				AML	AML		
	comp=N,1040µm,0.5s						
ATVO				AML	AML		
	comp=N,1040µm,0.5s						
ATVO				AML	AML		
	comp=E,1535µm,0.6s						
BRIS	BRISIGHELLA	0.51	311	P	Pg	08 02 28.3	-0.4
BRIS				S	Sg	08 02 36.0	+0.6
BRIS				AML	AML		
	comp=E,2180µm,0.3s						
BRIS				AML	AML		
	comp=N,2605µm,0.3s						
BRIS				AML	AML		
	comp=E,2180µm,0.3s						
BRIS				AML	AML		
	comp=N,2605µm,0.3s						
BRIS				AML	AML		
	comp=E,2180µm,0.3s						
BRIS				AML	AML		
	comp=N,2605µm,0.3s						
MPAG	Monte Paganucc	0.55	110	P	Pg	08 02 29.4	-0.2
MPAG				S	Sb	08 02 38.3	-0.5
MPAG				AML	AML		
	comp=E,410µm,0.8s						
MPAG				AML	AML		
	comp=N,844µm,0.8s						
MPAG				AML	AML		
	comp=N,844µm,0.8s						
MPAG				AML	AML		
	comp=E,410µm,0.8s						
SEI	Scarperia	0.55	296	P	Pg	08 02 29.7	+0.1
SEI				S	Sb	08 02 38.5	-0.3
SEI				AML	AML		
	comp=E,3275µm,0.5s						
SEI				AML	AML		
	comp=N,4580µm,0.4s						
SEI				AML	AML		
	comp=N,4580µm,0.4s						
SEI				AML	AML		
	comp=E,3275µm,0.5s						
OSSC	Osservatorio P	0.65	243	AML	AML		
	comp=E,1235µm,0.5s						
OSSC				AML	AML		
	comp=E,1235µm,0.5s						
OSSC				AML	AML		
	comp=N,1605µm,1.3s						
OSSC				AML	AML		
	comp=E,1270µm,0.5s						
OSSC				AML	AML		
	comp=N,1535µm,1.3s						
OSSC				AML	AML		
	comp=N,1535µm,1.3s						
OSSC				AML	AML		
	comp=E,1270µm,0.5s						
OSSC				AML	AML		
	comp=N,1605µm,1.3s						
ATTE	AVT- Monte Tez	0.66	160	P	Pg	08 02 31.9	+0.3
ATTE				S	Sb	08 02 41.8	-0.1
ATTE				AML	AML		
	comp=E,542µm,0.4s						
ATTE				AML	AML		
	comp=N,606µm,0.5s						
ATTE				AML	AML		
	comp=E,542µm,0.4s						
ATTE				AML	AML		
	comp=N,606µm,0.5s						
SACS	San Casciano d	0.97	186	AML	AML		
	comp=N,459µm,0.7s						
SACS				AML	AML		
	comp=E,444µm,0.7s						
SACS				AML	AML		
	comp=E,444µm,0.7s						
SACS				AML	AML		
	comp=N,459µm,0.7s						
MOMA	Monte Martano	1.08	159	AML	AML		
	comp=N,188µm,0.5s						
MOMA				AML	AML		
	comp=E,234µm,1.5s						
MOMA				AML	AML		
	comp=E,234µm,1.5s						
MOMA				AML	AML		
	comp=N,188µm,0.5s						
TRI	Trieste	2.25	32	AML	AML		
	comp=E,89µm,1.0s						
TRI				AML	AML		
	comp=E,89µm,1.0s						
TRI				AML	AML		
	comp=N,68µm,0.4s						
TRI				AML	AML		
	comp=N,68µm,0.4s						
DOI	San Damiano	3.52	283	AML	AML		
	comp=N,36µm,0.1s						
DOI				AML	AML		
	comp=E,40µm,0.7s						
DOI				AML	AML		
	comp=N,36µm,0.1s						
DOI				AML	AML		
	comp=E,40µm,0.7s						

ROM ***11*** *08:02:34.3±0.1, 43°.814N±0°.005×12°.051E±0°.006, h8^{km}, ML2.8/16, Error ellipse: s-maj=0.7km s-min=0.1km az=218.0*
VIE ***11*** *08:02:45.4±1.3, 44°.57N×11°.59E, h10^{km}, mb2.2/10, ml2.5/10, Error ellipse: s-maj=13.2km s-min=9.6km az=33.0*
ISC 11 08:02:34.9±0.9**, 43°.82N**±0°.03×**12°.04E**±0°.03**, h9**^{km}±8^{km}**, n28, σ1^{s}.68**/37**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	Santa Sofia	0.16	300	P	Pg	08 02 38.4	0.0
SFI				S	Sg	08 02 41.4	+0.7
ASQU	Asqua	0.18	261	P	Pg	08 02 38.9	+0.1
ASQU				S	Sg	08 02 42.4	+1.0
ASQU				AML	AML		
	comp=E,5835µm,0.4s						
ASQU				AML	AML		
	comp=N,14300µm,0.3s						
ASQU				AML	AML		

```
      comp=N,14300µm,0.3s
ASQU                             AML    AML
      comp=E,5835µm,0.4s
CPGN  Carpegna, Ital   0.20  96  P      Pg     08 02 39.2 +0.1
CPGN                             AML    AML
      comp=E,6170µm,0.5s
CPGN                             AML    AML
      comp=N,5180µm,1.5s
CPGN                             AML    AML
      comp=E,5900µm,0.5s
CPGN                             AML    AML
      comp=N,5005µm,0.9s
CPGN                             AML    AML
      comp=E,7490µm,0.4s
CPGN                             AML    AML
      comp=N,5185µm,1.5s
CPGN                             AML    AML
      comp=E,7200µm,0.4s
CPGN                             AML    AML
      comp=N,5105µm,1.5s
CPGN                             AML    AML
      comp=N,5095µm,1.5s
CPGN                             AML    AML
      comp=N,5180µm,1.5s
CPGN                             AML    AML
      comp=E,7495µm,0.4s
PARC  Parchiule        0.23 141  P      Pg     08 02 39.2 -0.3
PARC                             S      Sg     08 02 43.0 +0.4
PARC                             AML    AML
      comp=E,1850µm,0.4s
PARC                             AML    AML
      comp=N,3945µm,0.5s
PARC                             AML    AML
      comp=E,2170µm,1.0s
PARC                             AML    AML
      comp=N,3945µm,0.5s
PARC                             AML    AML
      comp=N,3945µm,0.5s
PARC                             AML    AML
      comp=E,2170µm,1.0s
SSP9  Sansepolcro      0.26 165  P      Pg     08 02 40.2 +0.2
SSP9                             S      Sg     08 02 44.5 +0.9
SSP9                             AML    AML
      comp=E,1760µm,0.6s
SSP9                             AML    AML
      comp=N,1674µm,0.5s
BADI  Badiali          0.35 155  P      Pg     08 02 41.4 -0.4
BADI                             S      Sb     08 02 46.9 -2.0
BADI                             AML    AML
      comp=E,1095µm,0.5s
BADI                             AML    AML
      comp=N,847µm,0.2s
BADI                             AML    AML
      comp=E,2120µm,0.6s
BADI                             AML    AML
      comp=N,1230µm,0.5s
BADI                             AML    AML
      comp=E,2120µm,0.6s
BADI                             AML    AML
      comp=N,1230µm,0.5s
PE3   Peglio           0.35 111  P      Pb     08 02 42.1 -1.3
PE3                              S      Sb     08 02 47.6 -1.6
PE3                              AML    AML
      comp=E,5030µm,0.6s
PE3                              AML    AML
      comp=N,3905µm,0.5s
PE3                              AML    AML
      comp=N,3905µm,0.5s
PE3                              AML    AML
      comp=E,5030µm,0.6s
RUFI  Rufina           0.38 273  P      Pg     08 02 42.3 -0.1
RUFI                             S      Sb     08 02 48.9 -1.1
RUFI                             AML    AML
      comp=E,1915µm,0.4s
RUFI                             AML    AML
      comp=N,2305µm,1.2s
RUFI                             AML    AML
      comp=E,1905µm,0.4s
RUFI                             AML    AML
      comp=N,2315µm,1.3s
RUFI                             AML    AML
      comp=N,2315µm,1.3s
NARO  Abbazia di Nar   0.45 118  AML    AML
      comp=E,428µm,0.5s
NARO                             AML    AML
      comp=N,381µm,0.3s
NARO                             AML    AML
      comp=E,534µm,1.1s
NARO                             AML    AML
      comp=N,610µm,0.5s
NARO                             AML    AML
      comp=N,610µm,0.5s
NARO                             AML    AML
      comp=E,534µm,1.1s
ATPI  Pietralunga -    0.46 145  AML    AML
      comp=E,996µm,0.7s
ATPI                             AML    AML
      comp=N,746µm,0.6s
ATPI                             AML    AML
      comp=E,996µm,0.7s
ATPI                             AML    AML
      comp=N,746µm,0.6s
CAFI  Castiglion Fio   0.50 186  P      Pg     08 02 44.5 -0.1
CAFI                             S      Sb     08 02 52.8 -0.5
CAFI                             AML    AML
      comp=E,751µm,0.6s
CAFI                             AML    AML
      comp=N,544µm,0.8s
CAFI                             AML    AML
      comp=E,894µm,0.5s
CAFI                             AML    AML
      comp=N,856µm,0.5s
CAFI                             AML    AML
      comp=E,894µm,0.5s
BRIS  BRISIGHELLA      0.50 311  P      Pg     08 02 43.9 -0.7
BRIS                             S      Sg     08 02 51.5 +0.3
BRIS                             AML    AML
      comp=E,2690µm,0.3s
BRIS                             AML    AML
      comp=N,2600µm,0.8s
BRIS                             AML    AML
      comp=E,2690µm,0.3s
BRIS                             AML    AML
      comp=N,3230µm,0.3s
BRIS                             AML    AML
      comp=E,2690µm,0.3s
ATVO  AVT- Monte Val   0.52 149  AML    AML
      comp=E,1535µm,0.6s
ATVO                             AML    AML
      comp=N,1040µm,0.5s
ATVO                             AML    AML
      comp=E,1535µm,0.6s
SEI   Scarperia        0.54 295  P      Pg     08 02 45.5  0.0
SEI                              S      Sb     08 02 54.0 -0.6
SEI                              AML    AML
      comp=E,3275µm,0.5s
SEI                              AML    AML
      comp=N,4580µm,0.4s
SEI                              AML    AML
      comp=N,4580µm,0.4s
MPAG  Monte Paganucc   0.56 110  AML    AML
      comp=N,844µm,0.8s
MPAG                             AML    AML
      comp=E,410µm,0.8s
MPAG                             AML    AML
      comp=N,844µm,0.8s
OSSC  Osservatorio P   0.65 243  AML    AML
      comp=E,1270µm,0.5s
OSSC                             AML    AML
      comp=E,1270µm,0.5s
OSSC                             AML    AML
      comp=N,1535µm,1.3s
MURB  Monte Urbino     0.66 148  P      Pg     08 02 47.0 -0.7
ATTE  AVT- Monte Tez   0.67 160  AML    AML
      comp=N,606µm,0.5s
ATTE                             AML    AML
      comp=E,542µm,0.4s
ATTE                             AML    AML
      comp=N,606µm,0.5s
SACS  San Casciano d   0.98 186  AML    AML
      comp=E,444µm,0.7s
SACS                             AML    AML
      comp=N,459µm,0.7s
SACS                             AML    AML
      comp=E,444µm,0.7s
ABTA  Abfaltersbach    2.94   6  Sg     Sn     08 03 59.5 +2.0
      comp=E,36nm,0.8s
MYKA  Terra Mystica    3.02  21  Pn     Pn     08 03 24.8 +1.7
      comp=E,1.1nm,0.2s
OBKA  Obir             3.22  33  Pg     Pg     08 03 38.2 +1.7
      comp=E,6.2nm,0.4s
OBKA                             Sg     Sg     08 04 20.0 +1.8
      comp=E,8.7nm,0.3s
FETA  Feichten         3.33 344  Pg     Pb     08 03 31.6 -2.6
      comp=E,3.7nm,0.4s
FETA                             Sg     Sb     08 04 10.9 -4.0
      comp=E,5.9nm,0.8s
KBA   Koelnbreinsper   3.38  15  Pn     Pn     08 03 28.7 +0.6
      comp=E,1.8nm,0.2s
SQTA  Sankt Quirin     3.45 351  Pg     Pb     08 03 36.2  0.0
      comp=E,6.0nm,0.3s
SQTA                             Sg     Sb     08 04 14.7 -3.6
      comp=E,13nm,0.6s
WTTA  Wattenberg       3.45 355  Pn     Pn     08 03 29.3 +0.3
      comp=E,0.9nm,0.2s
WTTA                             Sg     Sb     08 04 14.6 -3.8
      comp=E,12nm,0.5s
DAVA  Damuels          3.78 337  Pn     Pn     08 03 35.5 +2.0
      comp=E,2.4nm,0.3s
DAVA                             Sg     Sn     08 04 21.4 +3.1
      comp=E,13nm,0.8s
MOA   Molln            4.32  20  ePn    Pn     08 03 42.1 +1.3
      comp=E,0.9nm,0.2s
MOA                              Sn     Sn     08 04 31.0 -0.2
      comp=E,3.5nm,0.6s
```

ROM 11 08:05:01.8±0.1, 43°.828N±0°.008×12°.036E±0°.006, h8km, ML1.6/4, Error ellipse: s-maj=0.9km s-min=0.1km az=24.0, Central Italy

```
Code  Station Name      Δ°   AZ°    Phase ID          Time     Res
                                 Op     ISC      h  m  s    ISC
SFI   Santa Sofia      0.16 299  P      Pg     08 05 05.5 +0.4
SFI                              S      Sg     08 05 08.6 +1.2
SFI                              AML    AML
      comp=E,260µm,1.0s
SFI                              AML    AML
      comp=N,403µm,0.1s
SFI                              AML    AML
      comp=E,260µm,1.0s
SFI                              AML    AML
      comp=N,403µm,0.1s
SFI                              AML    AML
      comp=E,260µm,1.0s
SFI                              AML    AML
      comp=N,403µm,0.1s
ASQU  Asqua            0.18 260  P      Pg     08 05 06.2 +0.6
ASQU                             S      Sg     08 05 09.8 +1.6
ASQU                             AML    AML
      comp=E,226µm,0.8s
ASQU                             AML    AML
      comp=N,407µm,0.2s
ASQU                             AML    AML
      comp=E,330µm,0.9s
ASQU                             AML    AML
      comp=N,426µm,0.3s
ASQU                             AML    AML
      comp=E,330µm,0.9s
ASQU                             AML    AML
      comp=N,426µm,0.3s
CPGN  Carpegna, Ital   0.21  97  P      Pg     08 05 06.8 +0.8
CPGN                             S      Sg     08 05 10.4 +1.5
PARC  Parchiule        0.23 141  P      Pg     08 05 06.9 +0.4
PARC                             S      Sg     08 05 11.0 +1.4
RUFI  Rufina           0.38 272  P      Pg     08 05 09.6 +0.4
RUFI                             S      Sb     08 05 15.9 -0.9
CAFI  Castiglion Fio   0.50 186  P      Pg     08 05 12.0 +0.5
CAFI                             S      Sb     08 05 20.1 -0.2
CAFI                             AML    AML
      comp=E,64µm,0.7s
CAFI                             AML    AML
      comp=N,53µm,0.9s
CAFI                             AML    AML
      comp=E,64µm,0.7s
CAFI                             AML    AML
      comp=N,53µm,0.9s
SEI   Scarperia        0.54 295  P      Pg     08 05 12.5 +0.3
SEI                              S      Sb     08 05 21.4 -0.1
SEI                              AML    AML
      comp=E,93µm,0.4s
SEI                              AML    AML
      comp=N,137µm,0.4s
SEI                              AML    AML
      comp=E,97µm,0.4s
SEI                              AML    AML
      comp=N,137µm,0.4s
SEI                              AML    AML
      comp=N,137µm,0.4s
SEI                              AML    AML
      comp=E,97µm,0.4s
MPAG  Monte Paganucc   0.56 110  P      Pg     08 05 13.0 +0.3
MPAG                             S      Sb     08 05 21.9 -0.2
```

ROM 11 08:05:36.0±0.1, 43°.825N±0°.007×12°.028E±0°.006, h9km, Md1.6/3, Error ellipse: s-maj=0.8km s-min=0.2km az=24.0, Central Italy

```
Code  Station Name      Δ°   AZ°    Phase ID          Time     Res
                                 Op     ISC      h  m  s    ISC
SFI   Santa Sofia      0.15 301  P      Pg     08 05 39.8 +0.5
SFI                              S      Sg     08 05 42.6 +0.9
SFI                              AML    AML
      comp=E,144µm,1.6s
SFI                              AML    AML
      comp=N,167µm,1.5s
SFI                              AML    AML
      comp=E,806µm,0.2s
SFI                              AML    AML
      comp=N,1080µm,0.1s
SFI                              AML    AML
      comp=N,1080µm,0.1s
SFI                              AML    AML
      comp=E,806µm,0.2s
SFI                              END
ASQU  Asqua            0.17 261  P      Pg     08 05 40.3 +0.6
ASQU                             S      Sg     08 05 43.6 +1.4
ASQU                             AML    AML
      comp=E,330µm,0.9s
ASQU                             AML    AML
      comp=N,426µm,0.3s
ASQU                             AML    AML
      comp=E,1290µm,0.9s
ASQU                             AML    AML
      comp=N,1870µm,0.2s
ASQU                             AML    AML
      comp=E,1290µm,0.9s
ASQU                             AML    AML
      comp=N,1870µm,0.2s
ASQU                             END
CPGN  Carpegna, Ital   0.21  96  P      Pg     08 05 41.1 +0.7
CPGN                             S      Sg     08 05 45.5 +2.1
CPGN                             AML    AML
      comp=E,966µm,0.3s
CPGN                             AML    AML
      comp=N,943µm,1.5s
CPGN                             AML    AML
      comp=N,943µm,1.5s
CPGN                             AML    AML
      comp=E,966µm,0.3s
PARC  Parchiule        0.23 139  P      Pg     08 05 41.0 +0.2
PARC                             S      Sg     08 05 45.1 +1.2
PARC                             AML    AML
      comp=E,112µm,0.4s
PARC                             AML    AML
      comp=N,150µm,0.5s
PARC                             AML    AML
      comp=E,351µm,0.4s
PARC                             AML    AML
      comp=N,414µm,0.5s
PARC                             AML    AML
      comp=N,414µm,0.5s
PARC                             AML    AML
      comp=E,351µm,0.4s
PARC                             END
SSP9  Sansepolcro      0.26 163  P      Pb     08 05 42.4 -0.6
SSP9                             S      Sb     08 05 46.3 -1.2
RUFI  Rufina           0.38 272  P      Pg     08 05 43.9 +0.5
RUFI                             S      Sb     08 05 50.0 -0.8
CAFI  Castiglion Fio   0.50 185  P      Pb     08 05 46.5 -0.5
CAFI                             S      Sb     08 05 54.2 -0.1
CAFI                             AML    AML
      comp=E,64µm,0.7s
CAFI                             AML    AML
      comp=N,53µm,0.9s
CAFI                             AML    AML
      comp=E,206µm,0.6s
CAFI                             AML    AML
      comp=N,198µm,0.2s
CAFI                             AML    AML
      comp=E,206µm,0.6s
CAFI                             AML    AML
      comp=N,198µm,0.2s
ATVO  AVT- Monte Val   0.52 148  P      Pg     08 05 46.4 +0.3
ATVO                             S      Sb     08 05 54.6 -0.4
ATVO                             AML    AML
      comp=E,57µm,0.3s
ATVO                             AML    AML
      comp=N,52µm,1.4s
ATVO                             AML    AML
      comp=E,199µm,0.3s
ATVO                             AML    AML
      comp=N,168µm,0.2s
ATVO                             AML    AML
      comp=N,168µm,0.2s
ATVO                             AML    AML
      comp=E,199µm,0.3s
MPAG  Monte Paganucc   0.57 110  P      Pg     08 05 47.0  0.0
MPAG                             S      Sb     08 05 55.8 -0.6
```

ROM 11 08:06:22.7±0.1, 43°.830N±0°.005×12°.038E±0°.005, h8km, ML2.0/16, Error ellipse: s-maj=0.6km s-min=0.1km az=33.0, Central Italy

```
Code  Station Name      Δ°   AZ°    Phase ID          Time     Res
                                 Op     ISC      h  m  s    ISC
SFI   Santa Sofia      0.16 299  P      Pg     08 06 26.5 +0.5
SFI                              S      Sg     08 06 29.5 +1.2
SFI                              AML    AML
      comp=E,808µm,0.2s
SFI                              AML    AML
      comp=N,1080µm,0.1s
SFI                              AML    AML
      comp=E,806µm,0.2s
SFI                              AML    AML
      comp=N,1080µm,0.1s
SFI                              AML    AML
      comp=N,1080µm,0.1s
SFI                              AML    AML
      comp=E,806µm,0.2s
ASQU  Asqua            0.18 260  P      Pg     08 06 27.1 +0.6
ASQU                             S      Sg     08 06 30.7 +1.6
ASQU                             AML    AML
      comp=E,1290µm,0.9s
ASQU                             AML    AML
      comp=N,1870µm,0.2s
ASQU                             AML    AML
      comp=E,1290µm,0.9s
ASQU                             AML    AML
      comp=N,1870µm,0.2s
CPGN  Carpegna, Ital   0.21  98  P      Pg     08 06 27.6 +0.6
CPGN                             S      Sg     08 06 31.4 +1.6
CPGN                             AML    AML
      comp=E,967µm,0.3s
CPGN                             AML    AML
      comp=N,893µm,1.5s
CPGN                             AML    AML
      comp=E,968µm,0.3s
CPGN                             AML    AML
      comp=N,885µm,1.5s
CPGN                             AML    AML
      comp=N,885µm,1.5s
CPGN                             AML    AML
      comp=E,968µm,0.3s
PARC  Parchiule        0.23 141  P      Pg     08 06 28.4 +1.1
PARC                             S      Sg     08 06 31.8 +1.3
PARC                             AML    AML
      comp=E,351µm,0.4s
PARC                             AML    AML
      comp=N,414µm,0.5s
PARC                             AML    AML
      comp=E,351µm,0.4s
PARC                             AML    AML
      comp=N,414µm,0.5s
PARC                             AML    AML
      comp=N,414µm,0.5s
PARC                             AML    AML
      comp=E,351µm,0.4s
SSP9  Sansepolcro      0.26 165  P      Pg     08 06 28.7 +0.8
SSP9                             S      Sb     08 06 33.3 -1.1
BADI  Badiali          0.35 155  P      Pg     08 06 30.1 +0.4
BADI                             S      Sb     08 06 35.9 -1.1
BADI                             AML    AML
      comp=E,416µm,0.2s
BADI                             AML    AML
      comp=N,333µm,0.2s
BADI                             AML    AML
      comp=E,416µm,0.2s
BADI                             AML    AML
      comp=N,334µm,0.2s
BADI                             AML    AML
      comp=N,334µm,0.2s
BADI                             AML    AML
      comp=E,416µm,0.2s
PE3   Peglio           0.36 112  P      Pg     08 06 30.4 +0.7
PE3                              S      Sb     08 06 36.8 -0.4
PE3                              AML    AML
      comp=E,601µm,0.6s
PE3                              AML    AML
      comp=N,619µm,0.5s
PE3                              AML    AML
      comp=E,601µm,0.6s
PE3                              AML    AML
      comp=N,620µm,0.5s
PE3                              AML    AML
      comp=E,601µm,0.6s
PE3                              AML    AML
      comp=N,620µm,0.5s
RUFI  Rufina           0.38 272  P      Pg     08 06 30.6 +0.4
RUFI                             S      Sb     08 06 36.9 -0.9
RUFI                             AML    AML
      comp=E,312µm,0.7s
RUFI                             AML    AML
      comp=N,309µm,0.4s
RUFI                             AML    AML
      comp=E,312µm,0.7s
RUFI                             AML    AML
      comp=N,309µm,0.4s
NARO  Abbazia di Nar   0.45 119  P      Pg     08 06 31.7 +0.2
NARO                             S      Sb     08 06 39.0 -0.8
NARO                             AML    AML
      comp=E,94µm,0.6s
NARO                             AML    AML
      comp=N,98µm,0.7s
ATPI  Pietralunga -    0.46 145  P      Pg     08 06 32.4 +0.7
ATPI                             S      Sb     08 06 39.7 -0.5
ATPI                             AML    AML
      comp=E,130µm,0.5s
ATPI                             AML    AML
      comp=N,112µm,0.4s
ATPI                             AML    AML
      comp=N,112µm,0.4s
ATPI                             AML    AML
      comp=E,130µm,0.5s
BRIS  BRISIGHELLA      0.50 310  P      Pg     08 06 32.0 -0.4
BRIS                             S      Sg     08 06 39.6 +0.7
BRIS                             AML    AML
      comp=E,288µm,1.0s
BRIS                             AML    AML
      comp=N,308µm,0.7s
BRIS                             AML    AML
      comp=E,287µm,1.0s
BRIS                             AML    AML
      comp=N,308µm,0.7s
BRIS                             AML    AML
      comp=N,308µm,0.7s
BRIS                             AML    AML
      comp=E,287µm,1.0s
CAFI  Castiglion Fio   0.50 186  P      Pg     08 06 32.9 +0.5
CAFI                             S      Sb     08 06 41.2 -0.1
CAFI                             AML    AML
      comp=E,206µm,0.6s
CAFI                             AML    AML
      comp=N,198µm,0.2s
CAFI                             AML    AML
      comp=E,206µm,0.6s
CAFI                             AML    AML
      comp=N,198µm,0.2s
ATVO  AVT- Monte Val   0.52 149  P      Pg     08 06 33.2 +0.4
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ATVO				S	Sb	08 06 41.5	-0.4
ATVO				AML	AML		
	comp=E,199µm,0.3s						
ATVO				AML	AML		
	comp=N,168µm,0.2s						
ATVO				AML	AML		
	comp=E,199µm,0.3s						
ATVO				AML	AML		
	comp=N,168µm,0.2s						
ATVO				AML	AML		
	comp=N,168µm,0.2s						
ATVO				AML	AML		
	comp=E,199µm,0.3s						
ATMI	**Monte Miggiano**	**0.52**	**161**	P	Pg	08 06 33.4	+0.5
ATMI				S	Sb	08 06 42.0	+0.1
ATMI				AML	AML		
	comp=E,256µm,0.3s						
ATMI				AML	AML		
	comp=N,304µm,0.3s						
ATMI				AML	AML		
	comp=E,256µm,0.3s						
ATMI				AML	AML		
	comp=N,304µm,0.3s						
ATMI				AML	AML		
	comp=E,256µm,0.3s						
ATMI				AML	AML		
	comp=N,304µm,0.3s						
SEI	**Scarperia**	**0.54**	**295**	P	Pg	08 06 33.5	+0.2
SEI				S	Sb	08 06 42.3	-0.1
SEI				AML	AML		
	comp=E,320µm,0.3s						
SEI				AML	AML		
	comp=N,530µm,0.3s						
SEI				AML	AML		
	comp=N,530µm,0.3s						
SEI				AML	AML		
	comp=E,320µm,0.3s						
MPAG	**Monte Paganucc**	**0.56**	**111**	P	Pg	08 06 33.6	0.0
MPAG				S	Sb	08 06 42.8	-0.2
CSNT	**Castellina Chi**	**0.65**	**237**	AML	AML		
	comp=E,105µm,0.4s						
CSNT				AML	AML		
	comp=N,156µm,0.5s						
CSNT				AML	AML		
	comp=N,156µm,0.5s						
CSNT				AML	AML		
	comp=E,105µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.67**	**160**	P	Pg	08 06 36.1	+0.5
ATTE				S	Sb	08 06 46.4	+0.2
ATTE				AML	AML		
	comp=E,105µm,0.3s						
ATTE				AML	AML		
	comp=N,97µm,0.7s						
ATTE				AML	AML		
	comp=N,97µm,0.7s						
ATTE				AML	AML		
	comp=E,105µm,0.3s						
T0912	**Minucciano (LU**	**1.36**	**285**	AML	AML		
	comp=E,1130µm,0.1s						
T0912				AML	AML		
	comp=E,1130µm,0.1s						
T0912				AML	AML		
	comp=N,992µm,0.1s						
T0912				AML	AML		
	comp=N,992µm,0.1s						

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*IDC **11** 08:08:17.9±0.9, 0°.40S×125°.19E, h0^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.7/34, mbtmp3.8/8, MS3.6/3, Ms1 3.6/3, ms1mx2.8/44, Error ellipse: s-maj=56.1km s-min=18.0km az=75.0*

*DJA **11** 08:08:22.7±0.3, 0°S±2°×12°5E±°, h10^{km}, M4.1/6, MLv4.1/6*

ISC 11 08:08:19.0±0.7**, 0°.36S**±0°.06×**125°.23E**±0°.05**, h10^{km}, n16, σ0^{s}.97**/15**, mb3.8**/8**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**1.84**	**156**	P	**Pg**	**08 08 53.8**	**-0.6**
SANI				S	**Sg**	**08 09 19.2**	**+0.8**
TNTI	**Ternate**	**2.41**	**62**	P	**Pb**	**08 09 01.0**	**-1.6**
LUWI	**Luwuk**	**2.55**	**255**	P	**Pg**	**08 09 07.1**	**-0.9**
APSI	**Ampana**	**3.62**	**261**	P	**Pb**	**08 09 22.1**	**-1.1**
DAV	**Davao City (W)**	**7.39**	**3**	LR	LR	08 13 13.6	
	comp=Z,140nm,20.0s,baz=170,slow=40						
WRA	**Warramunga Arr**	**21.41**	**156**	P	**P**	**08 13 06.7**	**-0.6**
	0.8nm,0.7s,baz=334,slow=11,SNR=7.8						
ASAR	**Alice Springs**	**24.65**	**161**	P	**P**	**08 13 40.3**	**+0.2**
	0.6nm,0.6s,baz=345,slow=11,SNR=12						
ASAR				PcP	**PcP**	**08 17 18.9**	**+1.1**
	0.3nm,0.6s,baz=358,slow=2.5,SNR=4.3						
KSRS	**Korea Array**	**37.71**	**4**	P	**P**	**08 15 36.2**	**+1.4**
	0.4nm,0.4s,baz=184,slow=12,SNR=3.0						
MJAR	**Matsushiro Arr**	**38.64**	**17**	P	**P**	**08 15 42.5**	**-0.3**
	1.5nm,0.6s,baz=198,slow=11,SNR=3.5						
USRK	**Ussuriysk Ar.**	**44.77**	**7**	P	**P**	**08 16 33.9**	**+1.0**
	0.7nm,0.6s,baz=200,slow=10,SNR=4.4						
SONM	**Songino Array**	**50.72**	**344**	P	**P**	**08 17 19.5**	**+0.3**
	0.8nm,0.7s,baz=157,slow=8.5,SNR=6.1						
MKAR	**Makanchi Array**	**60.10**	**327**	P	**P**	**08 18 26.7**	**0.0**
	1.6nm,0.5s,baz=123,slow=7.8,SNR=12						
ZALV	**Zalesovo Beam**	**63.57**	**335**	P	**P**	**08 18 50.5**	**+0.7**
	0.6nm,0.3s,baz=116,slow=6.6,SNR=2.4						
GEYT	**Alibeck**	**72.32**	**310**	LR	LR	08 54 32.8	
	comp=Z,66nm,19.5s,baz=100,slow=38						
AKASG	**Malin Array Be**	**94.09**	**321**	LR	LR	09 07 08.5	
	comp=Z,50nm,21.9s,baz=45,slow=38						
TORD	**Torodi Ar. Bea**	**122.65**	**285**	PKP	**PKiKP**	**08 27 16.7**	**+0.3**
	0.3nm,0.7s,baz=126,slow=1.4,SNR=2.9						

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*ISCJB **11** 08:11:02.8±1.1, 30°.56S±0°.09×179°.3E±0°.2, h500^{km}, mb3.5/5, Error ellipse: s-maj=21.9km s-min=11.1km az=162.8*

*IDC **11** 08:11:05.4±3.6, 30°.65S×178°.98E, h506^{km}±29^{km}, mb3.0/5, mb1 3.3/8, mb1mx3.1/28, mbtmp4.2/8, Error ellipse: s-maj=47.5km s-min=17.9km az=52.0*

ISC 11 08:11:04.8±1.6**, 30°.7S**±0°.1×**179°.1E**±0°.2**, h500^{km}, n14, σ1^{s}.04**/16**, mb3.7**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.75**	**192**	P	**P**	**08 12 59.8**	**+1.4**
	6.5nm,0.3s,baz=299,slow=3.8,SNR=36						
URZ				S	**S**	**08 14 29.9**	**-1.9**
	0.7nm,0.3s,baz=28,slow=22,SNR=5.5						
DZM	**Mont Dzumac**	**14.20**	**304**	P	**P**	**08 14 07.5**	**+0.7**
	0.6nm,0.3s,baz=71,slow=17,SNR=5.6						
RPZ	**Rata Peaks**	**14.51**	**204**	P	**P**	**08 14 09.8**	**+0.2**
	3.5nm,0.3s,baz=338,slow=0.5,SNR=15						
RPZ				S	**S**	**08 16 42.9**	**+0.9**
	0.2nm,0.3s,baz=28,slow=18,SNR=2.2						
CTA	**Charters Tower**	**31.39**	**282**	P	**P**	**08 16 44.0**	**-0.3**
	3.7nm,0.5s,baz=96,slow=12,SNR=6.7						
STKA	**Stephens Creek**	**31.98**	**258**	P	**P**	**08 16 49.7**	**+0.5**
	0.9nm,0.3s,baz=101,slow=9.4,SNR=5.6						
ASAR	**Alice Springs**	**40.60**	**269**	P	**P**	**08 17 59.5**	**-1.2**
	0.3nm,0.3s,baz=107,slow=7.5,SNR=6.8						
ASAR				PcP	**PP**	**08 19 49.4**	**+0.7**
	0.3nm,0.9s,baz=124,slow=5.2,SNR=3.3						
WRA	**Warramunga Arr**	**41.62**	**274**	P	**P**	**08 18 07.2**	**-1.6**
	1.3nm,0.3s,baz=102,slow=9.1,SNR=30						
VNDA	**Vanda**	**47.60**	**185**	P	**P**	**08 18 54.4**	**+0.3**
	0.3nm,0.4s,baz=360,slow=8.3,SNR=6.6						
SNAA	**Sanae**	**77.94**	**179**	P	**P**	**08 22 09.5**	**-0.8**
VNA3	**Neumayer Olymp**	**78.19**	**177**	P	**P**	**08 22 11.1**	**-0.5**
VNA2	**Neumayer--Watz**	**78.59**	**178**	P	**P**	**08 22 12.9**	**-0.8**
	baz=185,slow=4.9						
VNA1	**Neumayer--Stat**	**78.83**	**178**	P	**P**	**08 22 14.7**	**-0.3**
FINES	**FINESS Array B**	**144.49**	**338**	PKP	PKPbc	08 29 41.2	-1.8
	1.1nm,0.7s,baz=54,slow=3.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**162.40**	**188**	PKPab	**PKPab**	**08 31 00.9**	**+0.8**
	0.2nm,0.5s,baz=178,slow=4.3,SNR=3.3						

ROM 11 08:19:08.5±0.1**, 43°.832N**±0°.005×**12°.049E**±0°.006**, h8^{km}, Md1.7**/6**, Error ellipse: s-maj=0.7km s-min=0.2km az=217.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**296**	P	Pg	08 19 12.5	+0.5
SFI				S	Sg	08 19 15.2	+0.9
SFI				AML	AML		
	comp=E,5145µm,0.3s						
SFI				AML	AML		
	comp=N,5840µm,0.2s						
SFI				AML	AML		
	comp=E,5520µm,0.2s						
SFI				AML	AML		
	comp=N,6780µm,0.2s						
SFI				AML	AML		
	comp=E,5140µm,0.3s						
SFI				AML	AML		
	comp=N,5840µm,0.2s						
SFI				AML	AML		
	comp=E,5520µm,0.2s						
SFI				AML	AML		
	comp=N,6780µm,0.2s						
SFI				AML	AML		
	comp=N,5840µm,0.2s						
SFI				AML	AML		
	comp=N,6780µm,0.2s						
SFI				AML	AML		
	comp=E,5140µm,0.3s						
SFI				AML	AML		
	comp=E,5520µm,0.2s						
SFI				END			
SFI				END			
SFI				END			
ASQU	**Asqua**	**0.19**	**259**	P	Pg	08 19 13.1	+0.7
ASQU				S	Sg	08 19 16.7	+1.5
ASQU				AML	AML		
	comp=E,10785µm,0.9s						
ASQU				AML	AML		
	comp=N,17000µm,0.2s						
ASQU				AML	AML		
	comp=E,10785µm,0.9s						
ASQU				AML	AML		
	comp=N,17000µm,0.2s						
ASQU				END			
ASQU				END			
ASQU				END			
CPGN	**Carpegna, Ital**	**0.20**	**99**	P	Pg	08 19 13.7	+1.1
CPGN				AML	AML		
	comp=E,5675µm,0.5s						
CPGN				AML	AML		
	comp=N,5935µm,1.5s						
CPGN				AML	AML		
	comp=E,5645µm,0.5s						
CPGN				AML	AML		
	comp=N,5935µm,1.5s						
CPGN				AML	AML		
	comp=E,5670µm,0.5s						
CPGN				AML	AML		
	comp=N,5935µm,1.5s						
CPGN				AML	AML		
	comp=E,5655µm,0.5s						
CPGN				AML	AML		
	comp=N,5780µm,1.5s						
CPGN				AML	AML		
	comp=N,5780µm,1.5s						
CPGN				AML	AML		
	comp=N,5935µm,1.5s						
CPGN				AML	AML		
	comp=E,5655µm,0.5s						
CPGN				AML	AML		
	comp=E,5670µm,0.5s						
CPGN				END			
CPGN				END			
CPGN				END			
PARC	**Parchiule**	**0.23**	**143**	P	Pg	08 19 13.8	+0.6
PARC				S	Sg	08 19 17.8	+1.6
PARC				AML	AML		
	comp=E,2675µm,0.8s						
PARC				AML	AML		
	comp=N,2985µm,0.5s						
PARC				AML	AML		
	comp=E,3455µm,0.7s						
PARC				AML	AML		
	comp=N,3325µm,0.4s						
PARC				AML	AML		
	comp=E,3455µm,0.7s						
PARC				AML	AML		
	comp=N,3325µm,0.4s						
PARC				END			
PARC				END			
PARC				END			
SSP9	**Sansepolcro**	**0.27**	**167**	P	Pb	08 19 14.8	-0.8
SSP9				S	Sb	08 19 19.3	-1.0
SSP9				AML	AML		
	comp=E,1670µm,1.4s						
SSP9				AML	AML		
	comp=N,2195µm,0.5s						
SSP9				END			
SSP9				END			
SSP9				END			
PE3	**Peglio**	**0.35**	**113**	P	Pg	08 19 16.1	+0.7
PE3				S	Sb	08 19 22.4	-0.4
PE3				AML	AML		
	comp=E,4430µm,0.5s						
PE3				AML	AML		
	comp=N,4285µm,0.5s						
PE3				AML	AML		
	comp=E,4430µm,0.5s						
PE3				AML	AML		
	comp=N,4285µm,0.5s						
BADI	**Badiali**	**0.35**	**156**	P	Pg	08 19 16.0	+0.5
BADI				S	Sb	08 19 21.9	-0.9
BADI				AML	AML		
	comp=E,2365µm,0.6s						
BADI				AML	AML		
	comp=N,1540µm,0.5s						
BADI				AML	AML		
	comp=E,2445µm,0.6s						
BADI				AML	AML		
	comp=N,1670µm,0.8s						
BADI				AML	AML		
	comp=E,2445µm,0.6s						
BADI				AML	AML		
	comp=N,1670µm,0.8s						
BADI				END			
BADI				END			
BADI				END			
RUFI	**Rufina**	**0.39**	**271**	P	Pg	08 19 16.5	+0.4
RUFI				S	Sb	08 19 22.9	-1.0
RUFI				AML	AML		
	comp=E,2810µm,0.7s						
RUFI				AML	AML		
	comp=N,3195µm,0.4s						
RUFI				AML	AML		
	comp=E,2815µm,0.7s						
RUFI				AML	AML		
	comp=N,3195µm,0.4s						
RUFI				AML	AML		
	comp=N,3195µm,0.4s						
RUFI				AML	AML		
	comp=E,2815µm,0.7s						
NARO	**Abbazia di Nar**	**0.44**	**120**	P	Pg	08 19 17.4	+0.3
NARO				S	Sb	08 19 24.3	-1.1
NARO				AML	AML		
	comp=E,462µm,0.3s						
NARO				AML	AML		
	comp=N,402µm,0.4s						
NARO				AML	AML		
	comp=E,486µm,0.8s						
NARO				AML	AML		
	comp=N,603µm,1.1s						
NARO				AML	AML		
	comp=N,603µm,1.1s						
NARO				AML	AML		
	comp=E,486µm,0.8s						
ATPI	**Pietralunga -**	**0.46**	**146**	P	Pg	08 19 17.9	+0.4
ATPI				S	Sb	08 19 26.0	+0.1
ATPI				AML	AML		
	comp=E,823µm,0.7s						
ATPI				AML	AML		
	comp=N,661µm,1.2s						
ATPI				AML	AML		
	comp=E,945µm,0.5s						
ATPI				AML	AML		
	comp=N,952µm,0.5s						
ATPI				AML	AML		
	comp=N,952µm,0.5s						
ATPI				AML	AML		
	comp=E,945µm,0.5s						
BRIS	**BRISIGHELLA**	**0.50**	**309**	P	Pg	08 19 18.0	-0.3
BRIS				S	Sg	08 19 25.5	+0.7
BRIS				AML	AML		
	comp=E,2705µm,0.5s						
BRIS				AML	AML		
	comp=N,2445µm,0.5s						
BRIS				AML	AML		
	comp=E,2705µm,0.5s						
BRIS				AML	AML		
	comp=N,2485µm,1.6s						
BRIS				AML	AML		
	comp=E,2705µm,0.5s						
BRIS				AML	AML		
	comp=N,2485µm,1.6s						
CAFI	**Castiglion Fio**	**0.51**	**187**	P	Pg	08 19 18.9	+0.6
CAFI				S	Sb	08 19 27.3	+0.1
CAFI				AML	AML		
	comp=E,1905µm,0.7s						
CAFI				AML	AML		
	comp=N,966µm,0.7s						
CAFI				AML	AML		
	comp=E,1905µm,0.7s						
CAFI				AML	AML		
	comp=N,966µm,0.7s						
ATVO	**AVT- Monte Val**	**0.52**	**150**	P	Pg	08 19 19.1	+0.5
ATVO				S	Sb	08 19 27.4	-0.2
ATVO				AML	AML		
	comp=E,1650µm,0.5s						
ATVO				AML	AML		
	comp=N,1185µm,0.6s						
ATVO				AML	AML		
	comp=N,1185µm,0.6s						
ATVO				AML	AML		
	comp=E,1650µm,0.5s						
ATMI	**Monte Miggiano**	**0.52**	**162**	P	Pb	08 19 19.4	-0.5
ATMI				S	Sb	08 19 27.5	-0.2
ATMI				AML	AML		
	comp=E,1745µm,0.3s						
ATMI				AML	AML		
	comp=N,2020µm,0.4s						
ATMI				AML	AML		
	comp=E,1745µm,0.3s						
ATMI				AML	AML		
	comp=N,2020µm,0.4s						
SEI	**Scarperia**	**0.55**	**294**	P	Pg	08 19 19.4	+0.2
SEI				S	Sb	08 19 28.2	-0.3
SEI				AML	AML		
	comp=E,3515µm,0.5s						
SEI				AML	AML		
	comp=N,5185µm,0.4s						
SEI				AML	AML		
	comp=E,3515µm,0.5s						
SEI				AML	AML		
	comp=N,5185µm,0.4s						
MPAG	**Monte Paganucc**	**0.55**	**111**	P	Pg	08 19 19.4	+0.2
MPAG				S	Sb	08 19 28.4	-0.3
MPAG				AML	AML		
	comp=E,371µm,1.3s						
MPAG				AML	AML		
	comp=N,562µm,0.9s						
MPAG				AML	AML		
	comp=N,562µm,0.9s						
MPAG				AML	AML		
	comp=E,371µm,1.3s						
FRON	**Frontone**	**0.58**	**122**	P	Pg	08 19 20.3	+0.5
FRON				AML	AML		
	comp=E,431µm,0.5s						
FRON				AML	AML		
	comp=N,578µm,0.8s						
FRON				AML	AML		
	comp=E,431µm,0.5s						
FRON				AML	AML		
	comp=N,578µm,0.8s						
ATTE	**AVT- Monte Tez**	**0.67**	**161**	P	Pg	08 19 21.7	+0.2
ATTE				AML	AML		
	comp=E,917µm,0.4s						
ATTE				AML	AML		
	comp=N,856µm,0.5s						
ATTE				AML	AML		
	comp=E,917µm,0.4s						
ATTE				AML	AML		
	comp=N,856µm,0.5s						
MTCR	**Monte La Croce**	**0.78**	**285**	P	Pg	08 19 23.9	+0.3

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*ISCJB **11** 08:19:29.8±0.6, 43°.83N±0°.04×12°.03E±0°.04, h13^{km}±2^{km}, Error ellipse: s-maj=7.8km s-min=3.1km az=36.1*

*ROM **11** 08:19:29.2±0.1, 43°.836N±0°.006×12°.046E±0°.007, h8^{km}, ML2.8/10, Error ellipse: s-maj=0.9km s-min=0.2km az=34.0*

*LDG **11** 08:19:31.9, 43°.67N×12°.37E, h30^{km}*

ISC 11 08:19:30.3±0.9**, 43°.80N**±0°.05×**12°.03E**±0°.04**, h12^{km}**±5^{km}**, n22, σ1^{s}.08**/36**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**308**	P	**Pg**	**08 19 33.2**	**-0.9**
SFI				S	**Sg**	**08 19 36.1**	**-0.6**
SFI				AML	AML		
	comp=E,5520µm,0.2s						
SFI				AML	AML		
	comp=N,6780µm,0.2s						
SFI				AML	AML		
	comp=E,5520µm,0.2s						
SFI				AML	AML		
	comp=N,6780µm,0.2s						
SFI				AML	AML		
	comp=N,6775µm,0.2s						
SFI				AML	AML		
	comp=E,5525µm,0.2s						
ASQU	**Asqua**	**0.17**	**268**	P	**Pg**	**08 19 33.8**	**-0.4**
ASQU				S	**Sg**	**08 19 37.2**	**+0.2**
ASQU				AML	AML		
	comp=E,10785µm,0.9s						
ASQU				AML	AML		
	comp=N,17000µm,0.2s						
ASQU				AML	AML		
	comp=E,10785µm,0.9s						
ASQU				AML	AML		
	comp=N,17000µm,0.2s						
CPGN	**Carpegna, Ital**	**0.21**	**91**	P	**Pg**	**08 19 34.4**	**-0.6**
CPGN				AML	AML		
	comp=E,5675µm,0.5s						
CPGN				AML	AML		
	comp=N,5930µm,1.5s						
CPGN				AML	AML		
	comp=E,5645µm,0.5s						
CPGN				AML	AML		
	comp=N,5935µm,1.5s						
CPGN				AML	AML		
	comp=E,5670µm,0.5s						
CPGN				AML	AML		
	comp=N,5930µm,1.5s						
CPGN				AML	AML		
	comp=E,5655µm,0.5s						
CPGN				AML	AML		
	comp=N,5780µm,1.5s						
CPGN				AML	AML		
	comp=N,5930µm,1.5s						
CPGN				AML	AML		
	comp=N,5800µm,1.5s						
CPGN				AML	AML		
	comp=E,5655µm,0.5s						
CPGN				AML	AML		
	comp=E,5675µm,0.5s						
PARC	**Parchiule**	**0.22**	**135**	P	**Pg**	**08 19 34.5**	**-0.5**
PARC				S	**Sg**	**08 19 38.4**	**+0.2**
PARC				AML	AML		
	comp=E,3455µm,0.7s						
PARC				AML	AML		
	comp=N,3325µm,0.4s						
PARC				AML	AML		
	comp=E,3455µm,0.7s						
PARC				AML	AML		
	comp=N,3325µm,0.4s						
PARC				AML	AML		
	comp=E,3455µm,0.7s						
PARC				AML	AML		
	comp=N,3325µm,0.4s						
SSP9	**Sansepolcro**	**0.24**	**162**	P	**Pb**	**08 19 35.4**	**-1.2**
SSP9				S	**Sb**	**08 19 40.0**	**+1.2**
SSP9				AML	AML		
	comp=E,1865µm,0.6s						
SSP9				AML	AML		
	comp=N,2295µm,0.7s						
BADI	**Badiali**	**0.33**	**152**	P	**Pg**	**08 19 36.6**	**-0.4**
BADI				S	**Sb**	**08 19 42.5**	**-1.1**
BADI				AML	AML		
	comp=E,2445µm,0.6s						
BADI				AML	AML		
	comp=N,1675µm,0.8s						
BADI				AML	AML		
	comp=E,2445µm,0.6s						

BADI				AML	AML		
	comp=N,1670µm,0.8s						
BADI				AML	AML		
	comp=E,2445µm,0.6s						
BADI				AML	AML		
	comp=N,1675µm,0.8s						
RUFI	**Rufina**	**0.38**	**276**	P	**Pg**	**08 19 37.3**	**-0.5**
RUFI				S	**Sb**	**08 19 43.5**	**-1.2**
RUFI				AML	AML		
	comp=E,2810µm,0.7s						
RUFI				AML	AML		
	comp=N,3195µm,0.4s						
NARO	**Abbazia di Nar**	**0.45**	**115**	P	**Pg**	**08 19 38.3**	**-0.8**
NARO				AML	AML		
	comp=E,485µm,0.8s						
NARO				AML	AML		
	comp=N,603µm,1.1s						
NARO				AML	AML		
	comp=E,486µm,0.8s						
NARO				AML	AML		
	comp=N,603µm,1.1s						
NARO				AML	AML		
	comp=N,603µm,1.1s						
NARO				AML	AML		
	comp=E,486µm,0.8s						
ATPI	**Pietralunga -**	**0.45**	**142**	P	**Pg**	**08 19 38.8**	**-0.3**
ATPI				S	**Sb**	**08 19 46.4**	**-0.4**
CAFI	**Castiglion Fio**	**0.48**	**185**	P	**Pb**	**08 19 39.8**	**-0.8**
CAFI				S	**Sb**	**08 19 48.1**	**+0.4**
CAFI				AML	AML		
	comp=E,1905µm,0.7s						
CAFI				AML	AML		
	comp=N,966µm,0.7s						
CAFI				AML	AML		
	comp=E,1905µm,0.7s						
CAFI				AML	AML		
	comp=N,966µm,0.7s						
CAFI				AML	AML		
	comp=N,966µm,0.7s						
CAFI				AML	AML		
	comp=E,1905µm,0.7s						
ATVO	**AVT- Monte Val**	**0.51**	**147**	P	**Pb**	**08 19 40.1**	**-1.0**
ATVO				S	**Sb**	**08 19 48.3**	**-0.2**
BRIS	**BRISIGHELLA**	**0.51**	**313**	P	**Pg**	**08 19 38.7**	**-1.6**
BRIS				AML	AML		
	comp=E,2705µm,0.5s						
BRIS				AML	AML		
	comp=N,2485µm,1.6s						
BRIS				AML	AML		
	comp=E,2705µm,0.5s						
BRIS				AML	AML		
	comp=N,2485µm,1.6s						
ERBM	**Eremo**	**1.31**	**298**	AML	AML		
	comp=E,250µm,0.9s						
ERBM				AML	AML		
	comp=N,186µm,1.0s						
ERBM				AML	AML		
	comp=E,250µm,0.9s						
ERBM				AML	AML		
	comp=N,186µm,1.0s						
PGF	**Pioggiola**	**2.54**	**241**	*e*Pn	**Pn**	**08 20 12.5**	**+1.0**
PGF				*e*Sn	**Sn**	**08 20 41.1**	**-1.4**
	comp=N,12nm,0.3s						
BOJS	**Bojanci**	**2.86**	**52**	AML	AML		
	comp=N,52µm,0.6s						
BOJS				AML	AML		
	comp=E,45µm,1.2s						
BOJS				AML	AML		
	comp=E,45µm,1.2s						
BOJS				AML	AML		
	comp=N,52µm,0.6s						
SBF	**Sospel**	**3.32**	**273**	*e*Pn	**Pn**	**08 20 23.8**	**+1.6**
SBF				*e*Sn	**Sn**	**08 21 02.8**	**+1.2**
	comp=N,17nm,0.5s						
MBDF	**Montbardon**	**3.89**	**286**	*e*Pn	**Pn**	**08 20 31.8**	**+1.8**
MBDF				*e*Sn	**Sn**	**08 21 16.8**	**+1.2**
	comp=N,10nm,0.6s						
FRF	**La Foret Royal**	**3.91**	**268**	*e*Sn	**Sn**	**08 21 16.5**	**+0.5**
	comp=N,10.0nm,0.4s						
LMR	**La Mourre**	**4.04**	**265**	*e*Pn	**Pn**	**08 20 31.9**	**0.0**
LMR				*e*Sn	**Sn**	**08 21 18.8**	**-0.3**
	comp=N,5.2nm,0.4s						
LPG	**La Plagne**	**4.13**	**296**	*e*Pn	**Pn**	**08 20 35.5**	**+2.1**
LPG				*e*Sn	**Sn**	**08 21 23.0**	**+1.2**
	comp=N,4.9nm,0.4s						
LPL	**La Plagne**	**4.15**	**296**	*e*Pn	**Pn**	**08 20 35.5**	**+1.8**
LPL				*e*Sg	**Sn**	**08 21 23.3**	**+1.1**
	comp=N,8.3nm,0.5s						
SMRF	**Simiane la Rot**	**4.67**	**274**	*e*Pn	**Pn**	**08 20 42.1**	**+1.5**
SMRF				*e*Sn	**Sn**	**08 21 34.9**	**+0.2**
	comp=N,3.1nm,0.5s						

ROM 11 08:20:25.5±0.1,43°.837N±0°.010×12°.034E±0°.007, h10^{km},Md1.4/5,Error ellipse: s-maj=1.1km s-min=0.3km az=18.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.15**	**297**	P	Pg	08 20 29.3	+0.4
SFI				S	Sg	08 20 32.2	+1.0
SFI				AML	AML		
	comp=E,1000µm,0.4s						
SFI				AML	AML		
	comp=N,1350µm,0.1s						
SFI				AML	AML		
	comp=E,3305µm,1.3s						
SFI				AML	AML		
	comp=N,1951µm,0.5s						
SFI				AML	AML		
	comp=E,3080µm,0.1s						
SFI				AML	AML		
	comp=N,3095µm,0.8s						
SFI				AML	AML		
	comp=E,3305µm,1.3s						
SFI				AML	AML		
	comp=N,3095µm,0.8s						
SFI				AML	AML		
	comp=E,3080µm,0.1s						
SFI				AML	AML		
	comp=N,1951µm,0.5s						
SFI				END			
ASQU	**Asqua**	**0.18**	**257**	P	Pg	08 20 29.9	+0.6
ASQU				S	Sg	08 20 33.4	+1.4
ASQU				AML	AML		
	comp=E,1180µm,0.9s						
ASQU				AML	AML		
	comp=N,1890µm,0.2s						
ASQU				AML	AML		
	comp=E,5060µm,0.5s						
ASQU				AML	AML		
	comp=N,6615µm,0.4s						
ASQU				AML	AML		
	comp=N,6615µm,0.4s						
ASQU				AML	AML		
	comp=E,5060µm,0.5s						
ASQU				END			
CPGN	**Carpegna, Ital**	**0.21**	**100**	P	Pg	08 20 30.6	+0.8
CPGN				S	Sg	08 20 34.9	+2.0
CPGN				AML	AML		
	comp=E,6335µm,0.3s						
CPGN				AML	AML		
	comp=N,5330µm,1.5s						
CPGN				AML	AML		
	comp=E,6285µm,0.3s						
CPGN				AML	AML		
	comp=N,5035µm,1.4s						
CPGN				AML	AML		
	comp=N,5035µm,1.4s						
CPGN				AML	AML		
	comp=E,6335µm,0.3s						
CPGN				AML	AML		
	comp=E,6285µm,0.3s						
CPGN				AML	AML		
	comp=N,5330µm,1.5s						
CPGN				END			
PARC	**Parchiule**	**0.24**	**142**	P	Pg	08 20 30.8	+0.4
PARC				S	Sg	08 20 35.0	+1.3
PARC				AML	AML		
	comp=E,2835µm,0.4s						
PARC				AML	AML		
	comp=N,2895µm,0.5s						
PARC				AML	AML		
	comp=N,2895µm,0.5s						
PARC				AML	AML		
	comp=E,2835µm,0.4s						
SSP9	**Sansepolcro**	**0.27**	**165**	P	Pb	08 20 31.8	-0.7
SSP9				S	Sb	08 20 36.1	-1.1
SSP9				END			
BADI	**Badiali**	**0.36**	**155**	P	Pg	08 20 32.9	+0.3
BADI				S	Sb	08 20 39.0	-0.8
BADI				AML	AML		
	comp=E,3170µm,0.8s						
BADI				AML	AML		
	comp=N,2480µm,0.2s						
BADI				AML	AML		
	comp=E,3170µm,0.8s						
BADI				AML	AML		
	comp=N,2480µm,0.2s						
BADI				END			
RUFI	**Rufina**	**0.38**	**271**	P	Pg	08 20 33.2	+0.3
RUFI				S	Sb	08 20 39.7	-0.6
RUFI				AML	AML		
	comp=E,1028µm,0.3s						
RUFI				AML	AML		
	comp=N,1410µm,0.4s						
RUFI				AML	AML		
	comp=E,1028µm,0.3s						
RUFI				AML	AML		
	comp=N,1410µm,0.4s						
NARO	**Abbazia di Nar**	**0.46**	**120**	P	Pg	08 20 34.5	+0.1
NARO				S	Sb	08 20 42.5	0.0
NARO				AML	AML		
	comp=E,390µm,1.0s						
NARO				AML	AML		
	comp=N,474µm,0.9s						
NARO				AML	AML		
	comp=E,390µm,1.0s						
NARO				AML	AML		
	comp=N,474µm,0.9s						
CAFI	**Castiglion Fio**	**0.51**	**186**	P	Pg	08 20 35.9	+0.5
CAFI				S	Sb	08 20 44.0	-0.1
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,1090µm,1.0s						
CAFI				AML	AML		
	comp=N,1090µm,1.0s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						

ROM 11 08:21:18.3±0.1,43°.826N±0°.004×12°.037E±0°.005, h8^{km},ML2.7/25,Error ellipse: s-maj=0.5km s-min=0.1km az=214.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.16**	**300**	P	Pg	08 21 22.1	+0.4
SFI				S	Sg	08 21 24.9	+0.9
SFI				AML	AML		
	comp=E,3310µm,1.3s						
SFI				AML	AML		
	comp=N,1950µm,0.5s						
SFI				AML	AML		
	comp=E,3080µm,0.1s						
SFI				AML	AML		
	comp=N,3095µm,0.8s						
SFI				AML	AML		
	comp=E,3305µm,1.3s						
SFI				AML	AML		
	comp=N,1950µm,0.5s						
SFI				AML	AML		
	comp=E,3080µm,0.1s						
SFI				AML	AML		
	comp=N,3095µm,0.8s						
SFI				AML	AML		
	comp=E,3305µm,1.3s						
SFI				AML	AML		
	comp=N,1951µm,0.5s						
SFI				AML	AML		
	comp=E,3080µm,0.1s						
SFI				AML	AML		
	comp=N,3095µm,0.8s						
SFI				AML	AML		
	comp=E,3305µm,1.3s						
SFI				AML	AML		
	comp=N,1951µm,0.5s						
SFI				AML	AML		
	comp=N,3095µm,0.8s						
SFI				AML	AML		
	comp=E,3080µm,0.1s						
ASQU	**Asqua**	**0.18**	**261**	P	Pg	08 21 22.7	+0.6
ASQU				S	Sg	08 21 26.2	+1.6
ASQU				AML	AML		
	comp=E,5060µm,0.5s						
ASQU				AML	AML		
	comp=N,6615µm,0.4s						
ASQU				AML	AML		
	comp=E,5060µm,0.5s						
ASQU				AML	AML		
	comp=N,6615µm,0.4s						
ASQU				AML	AML		
	comp=N,6615µm,0.4s						
ASQU				AML	AML		
	comp=E,5060µm,0.5s						
CPGN	**Carpegna, Ital**	**0.21**	**97**	P	Pg	08 21 23.4	+0.9
CPGN				S	Sg	08 21 27.0	+1.6
CPGN				AML	AML		
	comp=E,6335µm,0.3s						
CPGN				AML	AML		
	comp=N,5330µm,1.5s						
CPGN				AML	AML		
	comp=E,6285µm,0.3s						
CPGN				AML	AML		
	comp=N,5045µm,1.4s						
CPGN				AML	AML		
	comp=E,6335µm,0.3s						
CPGN				AML	AML		
	comp=N,5330µm,1.5s						
CPGN				AML	AML		
	comp=E,6280µm,0.3s						
CPGN				AML	AML		
	comp=N,5040µm,1.4s						
CPGN				AML	AML		
	comp=E,6335µm,0.3s						
CPGN				AML	AML		
	comp=N,5330µm,1.5s						
CPGN				AML	AML		
	comp=E,6285µm,0.3s						
CPGN				AML	AML		
	comp=N,5035µm,1.4s						
CPGN				AML	AML		
	comp=E,6335µm,0.3s						
CPGN				AML	AML		
	comp=N,5330µm,1.5s						
CPGN				AML	AML		
	comp=N,5035µm,1.4s						
CPGN				AML	AML		
	comp=E,6285µm,0.3s						
PARC	**Parchiule**	**0.23**	**140**	P	Pg	08 21 23.4	+0.5
PARC				S	Sg	08 21 27.5	+1.5
PARC				AML	AML		
	comp=E,2835µm,0.4s						
PARC				AML	AML		
	comp=N,2895µm,0.5s						
PARC				AML	AML		
	comp=E,2835µm,0.4s						
PARC				AML	AML		
	comp=N,2895µm,0.5s						
PARC				AML	AML		
	comp=E,2835µm,0.4s						
PARC				AML	AML		
	comp=N,2895µm,0.5s						
PARC				AML	AML		
	comp=N,2895µm,0.5s						
PARC				AML	AML		
	comp=E,2835µm,0.4s						
SSP9	**Sansepolcro**	**0.26**	**165**	P	Pb	08 21 24.4	-0.9
SSP9				S	Sb	08 21 28.9	-1.0
SSP9				AML	AML		
	comp=E,1488µm,0.9s						
SSP9				AML	AML		
	comp=N,2020µm,0.4s						
SSP9				AML	AML		
	comp=E,1490µm,0.9s						
SSP9				AML	AML		
	comp=N,2015µm,0.4s						
SSP9				AML	AML		
	comp=E,1495µm,0.9s						
SSP9				AML	AML		
	comp=N,2015µm,0.4s						
SSP9				AML	AML		
	comp=E,1495µm,0.9s						
SSP9				AML	AML		
	comp=N,2015µm,0.4s						
BADI	**Badiali**	**0.35**	**154**	P	Pg	08 21 25.7	+0.5
BADI				S	Sb	08 21 31.5	-1.0
BADI				AML	AML		
	comp=E,3165µm,0.8s						
BADI				AML	AML		
	comp=N,2480µm,0.2s						
BADI				AML	AML		
	comp=E,3165µm,0.8s						
BADI				AML	AML		
	comp=N,2480µm,0.2s						
BADI				AML	AML		
	comp=E,3170µm,0.8s						
BADI				AML	AML		
	comp=N,2480µm,0.2s						
BADI				AML	AML		
	comp=E,3170µm,0.8s						
BADI				AML	AML		
	comp=N,2480µm,0.2s						
PE3	**Peglio**	**0.36**	**111**	P	Pg	08 21 25.9	+0.6
PE3				S	Sb	08 21 32.0	-0.7
PE3				AML	AML		
	comp=E,3530µm,0.4s						
PE3				AML	AML		
	comp=N,3635µm,0.5s						
PE3				AML	AML		
	comp=E,3535µm,0.4s						
PE3				AML	AML		
	comp=N,3635µm,0.5s						
PE3				AML	AML		
	comp=E,3535µm,0.4s						
PE3				AML	AML		
	comp=N,3635µm,0.5s						
PE3				AML	AML		
	comp=E,3535µm,0.4s						
PE3				AML	AML		
	comp=N,3635µm,0.5s						
RUFI	**Rufina**	**0.38**	**272**	P	Pg	08 21 26.1	+0.4
RUFI				S	Sb	08 21 32.4	-1.0
RUFI				AML	AML		
	comp=E,1029µm,0.3s						
RUFI				AML	AML		
	comp=N,1405µm,0.4s						
RUFI				AML	AML		
	comp=E,1031µm,0.3s						
RUFI				AML	AML		
	comp=N,1410µm,0.4s						
BLLA	**Bellaria**	**0.45**	**44**	P	Pg	08 21 27.6	+0.6
NARO	**Abbazia di Nar**	**0.45**	**118**	P	Pg	08 21 27.1	+0.1
NARO				S	Sb	08 21 34.6	-0.7
NARO				AML	AML		
	comp=E,390µm,1.0s						
NARO				AML	AML		
	comp=N,474µm,0.9s						
NARO				AML	AML		
	comp=E,390µm,1.0s						
NARO				AML	AML		
	comp=N,474µm,0.9s						
NARO				AML	AML		
	comp=E,390µm,1.0s						
NARO				AML	AML		
	comp=N,474µm,0.9s						
ATPI	**Pietralunga -**	**0.46**	**145**	P	Pg	08 21 27.6	+0.4
ATPI				S	Sb	08 21 35.3	-0.4
ATPI				AML	AML		
	comp=E,702µm,1.4s						
ATPI				AML	AML		
	comp=N,822µm,0.2s						
ATPI				AML	AML		
	comp=E,702µm,1.4s						
ATPI				AML	AML		
	comp=N,823µm,0.2s						
ATPI				AML	AML		
	comp=N,823µm,0.2s						
ATPI				AML	AML		
	comp=E,702µm,1.4s						
BRIS	**BRISIGHELLA**	**0.50**	**311**	P	Pg	08 21 27.6	-0.4
BRIS				S	Sg	08 21 34.9	+0.4
BRIS				AML	AML		
	comp=E,1435µm,0.5s						
BRIS				AML	AML		
	comp=N,1210µm,0.5s						
BRIS				AML	AML		
	comp=E,1435µm,0.5s						
BRIS				AML	AML		
	comp=N,1210µm,0.5s						
BRIS				AML	AML		
	comp=N,1210µm,0.5s						
BRIS				AML	AML		
	comp=E,1435µm,0.5s						
CAFI	**Castiglion Fio**	**0.50**	**186**	P	Pg	08 21 28.5	+0.5
CAFI				S	Sb	08 21 36.4	-0.4
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,1090µm,1.0s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,1090µm,1.0s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,1090µm,1.0s						
CAFI				AML	AML		
	comp=N,1090µm,1.0s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
ATVO	**AVT- Monte Val**	**0.52**	**149**	P	Pg	08 21 28.6	+0.2
ATVO				S	Sb	08 21 36.7	-0.6
ATVO				AML	AML		
	comp=E,1325µm,0.3s						
ATVO				AML	AML		
	comp=N,1305µm,0.2s						
ATVO				AML	AML		
	comp=E,1325µm,0.3s						
ATVO				AML	AML		
	comp=N,1305µm,0.2s						
ATVO				AML	AML		
	comp=E,1325µm,0.3s						
ATVO				AML	AML		
	comp=N,1305µm,0.2s						
ATMI	**Monte Miggiano**	**0.52**	**161**	P	Pg	08 21 28.7	+0.4
ATMI				S	Sb	08 21 36.6	-0.7
ATMI				AML	AML		
	comp=E,1885µm,0.2s						
ATMI				AML	AML		
	comp=N,2185µm,0.3s						
ATMI				AML	AML		
	comp=E,1885µm,0.2s						
ATMI				AML	AML		
	comp=N,2185µm,0.3s						
ATMI				AML	AML		
	comp=E,1885µm,0.2s						
ATMI				AML	AML		
	comp=N,2185µm,0.3s						
SEI	**Scarperia**	**0.54**	**295**	P	Pg	08 21 29.0	+0.2
SEI				S	Sb	08 21 37.9	-0.2
SEI				AML	AML		
	comp=E,1700µm,0.4s						
SEI				AML	AML		
	comp=N,2775µm,0.5s						
SEI				AML	AML		
	comp=E,1700µm,0.4s						
SEI				AML	AML		
	comp=N,2775µm,0.5s						
SEI				AML	AML		
	comp=E,1700µm,0.4s						
SEI				AML	AML		
	comp=N,2775µm,0.5s						
MPAG	**Monte Paganucc**	**0.56**	**110**	P	Pg	08 21 29.2	+0.1
MPAG				S	Sb	08 21 38.5	-0.1
MPAG				AML	AML		
	comp=E,352µm,1.5s						
MPAG				AML	AML		
	comp=N,512µm,0.3s						
MPAG				AML	AML		
	comp=E,351µm,1.5s						
MPAG				AML	AML		
	comp=N,512µm,0.3s						
MPAG				AML	AML		
	comp=E,351µm,1.5s						
MPAG				AML	AML		
	comp=N,512µm,0.3s						
FRON	**Frontone**	**0.59**	**121**	P	Pg	08 21 29.8	+0.2
FRON				S	Sb	08 21 39.3	0.0

FRON				AML	AML		
	comp=E,344µm,0.7s						
FRON				AML	AML		
	comp=N,486µm,0.4s						
FRON				AML	AML		
	comp=E,344µm,0.7s						
FRON				AML	AML		
	comp=N,487µm,0.4s						
FRON				AML	AML		
	comp=E,344µm,0.7s						
FRON				AML	AML		
	comp=N,487µm,0.4s						
PESA	**Pesaro**	**0.59**	**78**	P	Pg	08 21 30.0	+0.3
PESA				S	Sb	08 21 39.5	+0.1
PESA				AML	AML		
	comp=E,876µm,0.5s						
PESA				AML	AML		
	comp=N,782µm,1.5s						
PESA				AML	AML		
	comp=E,876µm,0.5s						
PESA				AML	AML		
	comp=N,782µm,1.5s						
PESA				AML	AML		
	comp=E,876µm,0.5s						
PESA				AML	AML		
	comp=N,782µm,1.5s						
MURB	**Monte Urbino**	**0.67**	**148**	P	Pg	08 21 31.4	+0.3
MURB				AML	AML		
	comp=E,1395µm,0.3s						
MURB				AML	AML		
	comp=N,1395µm,0.2s						
MURB				AML	AML		
	comp=E,1425µm,0.2s						
MURB				AML	AML		
	comp=N,1560µm,0.2s						
MURB				AML	AML		
	comp=E,1395µm,0.2s						
MURB				AML	AML		
	comp=N,1395µm,0.2s						
MURB				AML	AML		
	comp=E,1425µm,0.2s						
MURB				AML	AML		
	comp=N,1560µm,0.2s						
MURB				AML	AML		
	comp=N,1395µm,0.2s						
MURB				AML	AML		
	comp=E,1425µm,0.2s						
MURB				AML	AML		
	comp=E,1395µm,0.2s						
MURB				AML	AML		
	comp=N,1560µm,0.2s						
ATTE	**AVT- Monte Tez**	**0.67**	**160**	P	Pg	08 21 31.1	-0.1
ATTE				S	Sb	08 21 41.6	-0.1
ATTE				AML	AML		
	comp=E,786µm,0.4s						
ATTE				AML	AML		
	comp=N,727µm,0.5s						
ATTE				AML	AML		
	comp=E,786µm,0.4s						
ATTE				AML	AML		
	comp=N,727µm,0.5s						
ATTE				AML	AML		
	comp=E,786µm,0.4s						
ATTE				AML	AML		
	comp=N,727µm,0.5s						
PTF	**Prato**	**0.71**	**281**	P	Pg	08 21 32.4	+0.4
CRMI	**Carmignano**	**0.77**	**268**	P	Pb	08 21 33.6	-0.4
CRMI				AML	AML		
	comp=E,137µm,0.8s						
CRMI				AML	AML		
	comp=N,104µm,0.6s						
CRMI				AML	AML		
	comp=E,136µm,0.8s						
CRMI				AML	AML		
	comp=N,104µm,0.6s						
CRMI				AML	AML		
	comp=E,136µm,0.8s						
CRMI				AML	AML		
	comp=N,104µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.78**	**145**	P	Pb	08 21 33.7	-0.3
ATCC				AML	AML		
	comp=E,941µm,1.0s						
ATCC				AML	AML		
	comp=N,508µm,0.9s						
ATCC				AML	AML		
	comp=E,940µm,1.0s						
ATCC				AML	AML		
	comp=N,510µm,0.9s						
ATCC				AML	AML		
	comp=E,940µm,1.0s						
ATCC				AML	AML		
	comp=N,510µm,0.9s						
MTCR	**Monte La Croce**	**0.78**	**285**	P	Pg	08 21 33.5	+0.3
POPM	**Popiglio**	**0.95**	**284**	P	Pn	08 21 37.8	-0.2
POPM				AML	AML		
	comp=E,230µm,0.7s						
POPM				AML	AML		
	comp=N,215µm,1.4s						
POPM				AML	AML		
	comp=E,230µm,0.7s						
POPM				AML	AML		
	comp=N,215µm,1.4s						
POPM				AML	AML		
	comp=N,215µm,1.4s						
POPM				AML	AML		
	comp=E,230µm,0.7s						
SACS	**San Casciano d**	**0.98**	**185**	P	Pb	08 21 37.5	0.0
SACS				AML	AML		
	comp=E,506µm,0.7s						
SACS				AML	AML		
	comp=N,404µm,1.1s						
SACS				AML	AML		
	comp=E,506µm,0.8s						
SACS				AML	AML		
	comp=N,392µm,0.5s						
SACS				AML	AML		
	comp=E,506µm,0.7s						
SACS				AML	AML		
	comp=N,404µm,1.1s						
SACS				AML	AML		
	comp=E,506µm,0.8s						
SACS				AML	AML		
	comp=N,392µm,0.5s						
SACS				AML	AML		
	comp=E,506µm,0.8s						
SACS				AML	AML		
	comp=N,404µm,1.1s						
SACS				AML	AML		
	comp=N,392µm,0.5s						
SACS				AML	AML		
	comp=E,506µm,0.7s						
ARCI	**Arcidosso**	**1.06**	**203**	P	Pg	08 21 38.6	+0.1
ARCI				AML	AML		
	comp=E,166µm,0.6s						
ARCI				AML	AML		
	comp=N,422µm,1.0s						
ARCI				AML	AML		
	comp=E,165µm,0.6s						
ARCI				AML	AML		
	comp=N,423µm,1.0s						
ARCI				AML	AML		
	comp=E,165µm,0.6s						
ARCI				AML	AML		
	comp=N,423µm,1.0s						
MAIM	**Mastiano**	**1.12**	**275**	P	Pg	08 21 39.8	0.0
MAIM				AML	AML		
	comp=E,126µm,0.7s						
MAIM				AML	AML		
	comp=N,144µm,0.6s						
MAIM				AML	AML		
	comp=E,126µm,0.7s						
MAIM				AML	AML		
	comp=N,144µm,0.6s						
MAIM				AML	AML		
	comp=E,126µm,0.7s						
MAIM				AML	AML		
	comp=N,144µm,0.6s						

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*IDC **11** 08:32:08.8±1.6, 3°.90S×104°.05W, $h0^{km}$, mb4.0/8, mb1 4.3/8, mb1mx4.0/23, mbtmp4.0/8, MS4.2/14, Ms1 4.2/14, ms1mx4.1/18, Error ellipse: s-maj=59.5km s-min=20.9km az=68.0*

*ISCJB **11** 08:32:09.5±0.6, 3°.81S±0°.08×103°.49W±0°.08, $h10^{km}$, mb4.3/113, MS4.2/18, Error ellipse: s-maj=12.4km s-min=11.5km az=141.0*

*NEIC **11** 08:32:10.4±1.6, 3°.92S×103°.52W, $h10^{km}$, mb4.4/111, Error ellipse: s-maj=38.0km s-min=21.8km az=259.0*

*GCMT **11** 08:32:11.4±0.3, 3°.86S±0°.01×103°.63W±0°.02, $h19^{km}\pm1^{km}$, MW5.0/88, Moment Tensor Solution. s43,c48; s88,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.72±.14; $M_{\theta\theta}$1.28±.13; $M_{\phi\phi}$-0.56±.13; $M_{r\theta}$2.14±.34; $M_{\theta\phi}$3.92±.11; $M_{\phi r}$-0.97±.27; Best double couple: $M_0$4.70100×10^{16} NP1:ϕ_s274.00000°, δ80.00000°, λ-30.00000°. NP2: ϕ_s10.00000°, δ61.00000°, λ-168.00000°. Principal axes: T 4.6250, Plg13.0000°, Azm325.0000°; N 0.1480, Plg59.0000°, Azm77.0000°; P -4.7770, Plg28.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 08:32:11.6±0.7, **3°.8S**±0°.1×**103°.6W**±0°.1, $h10^{km}$, **n144**, $\sigma 1^{s}19$/129, **mb4.4**/113, **MS4.2**/18, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**22.74**	**35**	P	**P**	**08 37 17.3**	**+2.9**
	5.4nm,1.0s,baz=236,slow=14,SNR=2.5						
CCIG	**Comitan**	**22.92**	**29**	*e*P	P	08 37 08.6	-7.6
	25nm,1.3s						
ESPN	**Las Esperanzas**	**24.89**	**50**	*e*P	**P**	**08 37 33.0**	**-1.8**
	33nm,1.2s						
LNIG	**Linares**	**28.77**	**8**	*e*P	**P**	**08 38 09.9**	**+0.2**
	5.8nm,1.2s						
ROSC	**El Rosal**	**30.48**	**74**	LR	LR	08 47 21.1	
	comp=Z,215nm,19.1s,baz=222,slow=30						
TX31	**Lajitas Ar. Si**	**32.91**	**360**	*e*P	**P**	**08 38 46.0**	**-0.3**
	9.1nm,1.8s						
TXAR	**Lajitas Array**	**32.91**	**360**	P	**P**	**08 38 46.5**	**+0.2**
	0.5nm,0.9s,baz=170,slow=15,SNR=4.3						
TXAR				LR	LR	08 50 11.8	
	comp=Z,681nm,21.5s,baz=0.0,slow=33						
CBCY	**The Bluff, Cay**	**33.09**	**44**	*e*P	**P**	**08 38 44.9**	**-3.0**
	91nm,0.9s						
HSIG		**33.35**	**348**	*e*P	**P**	**08 38 50.6**	**+0.5**
	4.4nm,0.7s						
JCT	**Junction City**	**34.24**	**6**	*e*P	**P**	**08 38 57.9**	**+0.1**
	4.2nm,0.8s						
MNTX	**Cornudas Mount**	**35.30**	**357**	*e*P	**P**	**08 39 06.1**	**-0.9**
	5.7nm,1.5s						
319A	**Douglas**	**35.36**	**352**	*e*P	**P**	**08 39 07.3**	**-0.3**
	5.4nm,0.9s						
RKT	**Rikitea**	**35.92**	**235**	*e*T	T	09 16 53.8	
	3.4nm,0.3s						
WHTX	**Lake Whitney,**	**36.03**	**9**	*e*P	**P**	**08 39 12.1**	**-1.1**
	14nm,1.4s						
NATX	**Nacogdoches**	**36.34**	**13**	*e*P	**P**	**08 39 14.8**	**-1.0**
	36nm,1.5s						
ABTX	**Abilene, Hawle**	**36.38**	**6**	*e*P	**P**	**08 39 17.1**	**+0.9**
	9.6nm,1.1s						
TUC	**Tucson**	**36.51**	**350**	*e*P	**P**	**08 39 17.3**	**-0.1**
	8.2nm,1.7s						
TAOE	**Nuku Hiva Isla**	**36.66**	**260**	*e*LR	LR	08 49 01.5	
	comp=Z,573nm,26.1s						
LPAZ	**La Paz**	**37.01**	**112**	LR	LR	08 51 52.0	
	comp=Z,398nm,20.7s,baz=289,slow=32						
MSTX	**Muleshoe**	**37.53**	**1**	*e*P	**P**	**08 39 27.0**	**+0.8**
	22nm,1.8s						
BNM	**Barren Site**	**37.81**	**356**	*e*P	**P**	**08 39 29.4**	**+0.8**
LENM	**Lemitar**	**37.86**	**355**	*e*P	**P**	**08 39 29.1**	**+0.1**
Z41A	**Richland Creek**	**38.21**	**15**	*e*P	**P**	**08 39 32.0**	**+0.3**
	8.2nm,0.6s						
AMTX	**Amarillo**	**38.48**	**3**	*e*P	**P**	**08 39 33.7**	**-0.4**
	5.3nm,1.0s						
Y14A	**Wickenburg**	**38.53**	**347**	*e*P	**P**	**08 39 34.1**	**-0.4**
	11nm,1.5s						
X18A	**Snowflake**	**38.55**	**352**	*e*P	**P**	**08 39 35.2**	**+0.4**
	3.0nm,0.8s						
WMOK	**Wichita Mounta**	**38.56**	**6**	*e*P	**P**	**08 39 36.2**	**+1.5**
	4.7nm,1.4s						
ANMO	**Albuquerque**	**38.59**	**356**	*e*P	**P**	**08 39 36.1**	**+0.9**
	6.9nm,1.8s						
X16A	**Lo Mia Camp, P**	**38.69**	**350**	*e*P	**P**	**08 39 36.1**	**+0.2**
	3.0nm,1.2s						
Y12C	**Blythe**	**38.71**	**345**	*e*P	**P**	**08 39 36.9**	**+1.0**
	4.5nm,1.0s						
W18A	**Petrified Fore**	**39.10**	**352**	*e*P	**P**	**08 39 38.3**	**-1.1**
	4.4nm,0.8s						
MIAR	**Mount Ida**	**39.26**	**13**	*e*P	**P**	**08 39 40.1**	**-0.4**
	11nm,1.0s						
WUAZ	**Wupatki**	**39.74**	**350**	*e*P	**P**	**08 39 45.6**	**+0.9**
	3.6nm,0.9s						
W39A	**Magazine**	**39.83**	**13**	*e*P	**P**	**08 39 44.8**	**-0.5**
	14nm,1.1s						
W13A	**Hualapai Mount**	**39.84**	**347**	*e*P	**P**	**08 39 45.8**	**+0.1**
	9.0nm,1.7s						
TUL1	**Leonard**	**40.14**	**10**	*e*P	**P**	**08 39 48.5**	**+0.6**
	6.5nm,0.8s						
T25A	**Trinidad**	**40.70**	**359**	*e*P	**P**	**08 39 50.1**	**-2.6**
	4.9nm,1.0s						
GSC	**Goldstone, Bar**	**40.78**	**343**	*e*P	**P**	**08 39 54.2**	**+0.9**
	7.4nm,1.4s						
HHAR	**Hobbs**	**40.85**	**12**	*e*P	**P**	**08 39 52.8**	**-0.9**
	7.1nm,0.8s						
FCAR	**Ozark Folk Cen**	**40.88**	**14**	*e*P	**P**	**08 39 54.2**	**+0.3**
	6.8nm,1.2s						
MVCO	**Mesa Verde**	**41.01**	**354**	*e*P	**P**	**08 39 55.1**	**-0.2**
	6.2nm,0.9s						
PLAL	**Pickwick Lake**	**41.21**	**19**	*e*P	**P**	**08 39 57.9**	**+1.2**
	20nm,1.3s						
SDCO	**Great Sand Dun**	**41.33**	**358**	*e*P	**P**	**08 39 59.9**	**+1.9**
	18nm,2.0s						
S22A	**4UR Ranch, Cre**	**41.40**	**356**	*e*P	**P**	**08 39 59.5**	**+0.9**
	5.2nm,1.1s						
KNB	**Kanab**	**41.47**	**349**	*e*P	**P**	**08 40 00.1**	**+1.1**
	5.8nm,1.1s						
SHPR	**Sheep Range**	**41.49**	**346**	*e*P	**P**	**08 39 59.8**	**+0.7**
	8.4nm,1.5s						
ISA	**Isabella, Lake**	**41.62**	**342**	*e*P	**P**	**08 40 00.9**	**+0.7**
	3.8nm,0.9s						
PKCU	**Pink Cliffs**	**41.79**	**350**	*e*P	**P**	**08 40 03.3**	**+1.5**
	28nm,1.8s						
PV01	**Paradox Valley**	**41.94**	**354**	*e*P	**P**	**08 40 02.9**	**-0.1**
	7.1nm,1.3s						
PV05	**Paradox Valley**	**41.94**	**354**	*e*P	**P**	**08 40 03.4**	**+0.5**
	8.4nm,0.8s						
PV13	**Radium Mtn., P**	**41.99**	**354**	*e*P	**P**	**08 40 04.4**	**+1.1**
	8.0nm,0.9s						
PV02	**Paradox Valley**	**42.03**	**354**	*e*P	**P**	**08 40 01.9**	**-1.7**
	6.2nm,0.9s						
PV18	**Skein Mesa, Pa**	**42.08**	**354**	*e*P	**P**	**08 40 03.0**	**-1.0**
	5.2nm,1.0s						
PV03	**Paradox Valley**	**42.08**	**354**	*e*P	**P**	**08 40 04.7**	**+0.6**
	4.4nm,1.0s						
CCUT	**Cedar City**	**42.09**	**348**	*e*P	**P**	**08 40 04.5**	**+0.4**
	3.4nm,1.2s						
PV17	**East Wray Mesa**	**42.12**	**354**	*e*P	**P**	**08 40 04.9**	**+0.5**
	15nm,1.5s						
PV11	**David Mesa, Pa**	**42.13**	**354**	*e*P	**P**	**08 40 05.3**	**+0.9**
	17nm,1.6s						
PV12	**Saucer Basin,**	**42.14**	**354**	*e*P	**P**	**08 40 04.9**	**+0.3**
	6.3nm,0.9s						
PV16	**Nyswonger Mesa**	**42.15**	**354**	*e*P	**P**	**08 40 04.0**	**-0.6**
	5.2nm,1.2s						
PBMO	**Poplar Bluff**	**42.16**	**16**	*e*P	**P**	**08 40 04.7**	**+0.2**
	15nm,1.0s						
PV20	**West Nyswonger**	**42.18**	**354**	*e*P	**P**	**08 40 04.6**	**-0.3**
	2.5nm,0.8s						
PARMO	**Parma**	**42.24**	**17**	*e*P	**P**	**08 40 05.8**	**+0.7**
	11nm,0.7s						
PV07	**Paradox Valley**	**42.24**	**354**	*e*P	**P**	**08 40 04.7**	**-0.7**
	3.7nm,0.9s						
V48A	**Smith Brothers**	**42.33**	**20**	*e*P	**P**	**08 40 05.7**	**-0.1**
	11nm,1.1s						
WVT	**Waverly**	**42.34**	**19**	*e*P	**P**	**08 40 05.5**	**-0.4**
	10nm,1.1s						
MTPU	**Mount Pierson**	**42.34**	**350**	*e*P	**P**	**08 40 08.5**	**+2.1**
	9.4nm,1.7s						
PV22	**Blue Mesa, Par**	**42.35**	**354**	*e*P	**P**	**08 40 06.2**	**0.0**
	11nm,1.7s						
MSU	**Marysvale**	**42.80**	**350**	*e*P	**P**	**08 40 10.1**	**+0.1**
CPCT	**Cooper Cave**	**42.92**	**23**	*e*P	**P**	**08 40 09.8**	**-0.8**
	15nm,1.3s						
Q16A	**Castle Valley**	**43.04**	**351**	*e*P	**P**	**08 40 11.7**	**-0.1**
	4.1nm,0.9s						
SRU	**San Rafael Swe**	**43.13**	**352**	*e*P	**P**	**08 40 11.7**	**-0.9**
	5.6nm,1.0s						
PSUT	**Pine Spring**	**43.14**	**348**	*e*P	**P**	**08 40 11.8**	**-0.9**
	3.3nm,1.0s						
CCM	**Cathedral Cave**	**43.16**	**14**	*e*P	**P**	**08 40 11.6**	**-0.9**
	9.0nm,1.0s						
R11A	**Troy Canyon, C**	**43.34**	**346**	*e*P	**P**	**08 40 14.8**	**+0.5**
	5.9nm,1.4s						
T47A	**Sharon Grove**	**43.36**	**19**	*e*P	**P**	**08 40 14.2**	**0.0**
	7.7nm,1.0s						
P17A	**Butcher Ranch,**	**43.52**	**352**	*e*P	**P**	**08 40 15.4**	**-0.2**
	6.0nm,1.1s						
MDPB	**Devils Postpil**	**43.62**	**342**	*e*P	**P**	**08 40 14.8**	**-1.8**
	2.7nm,1.0s						
O20A	**White River Ci**	**43.89**	**355**	*e*P	**P**	**08 40 18.9**	**+0.3**
	7.7nm,1.0s						
NV01	**Mina Array Sit**	**44.13**	**343**	*e*P	**P**	**08 40 19.5**	**-1.1**
NVAR	**Mina Array Bea**	**44.13**	**343**	P	**P**	**08 40 19.5**	**-1.1**
	0.5nm,0.8s,baz=181,slow=7.0,SNR=5.0						
NVAR				LR	LR	08 54 56.4	
	comp=Z,341nm,19.6s,baz=166,slow=31						
MPU	**Maple Canyon**	**44.18**	**351**	*e*P	**P**	**08 40 21.1**	**+0.1**
	6.5nm,0.9s						
N23A	**Red Feather La**	**44.49**	**357**	*e*P	**P**	**08 40 24.4**	**+0.8**
	6.1nm,1.1s						
DUG	**Dugway, Tooele**	**44.55**	**350**	*e*P	**P**	**08 40 22.9**	**-1.0**
	3.8nm,0.9s						
OLIL	**Olney**	**44.65**	**17**	*e*P	**P**	**08 40 25.1**	**+0.6**
	26nm,1.5s						
CTU	**Camp Tracy**	**44.86**	**351**	*e*P	**P**	**08 40 24.4**	**-2.0**
	2.7nm,0.7s						
PNTR	**Pine Nut**	**45.12**	**342**	*e*P	**P**	**08 40 28.9**	**+0.4**
	7.6nm,1.0s						
BGU	**Big Grassy Mou**	**45.30**	**350**	*e*P	**P**	**08 40 29.0**	**-0.9**
	4.1nm,1.2s						
VCNR	**Virginia City**	**45.33**	**342**	*e*P	**P**	**08 40 31.0**	**+0.8**
	5.9nm,1.2s						
AFDM	**Forest Hills D**	**45.42**	**341**	*e*P	**P**	**08 40 30.7**	**0.0**
	4.6nm,1.3s						
SPUT	**South Promonto**	**45.57**	**351**	*e*P	**P**	**08 40 31.7**	**-0.3**
	4.3nm,1.0s						
PAHR	**Pah Rah Range**	**45.63**	**343**	*e*P	**P**	**08 40 33.6**	**+1.1**
	5.8nm,1.2s						
HWUT	**Hardware Ranch**	**45.73**	**352**	*e*P	**P**	**08 40 33.0**	**-0.3**
	3.7nm,0.8s						
HVU	**Hansel Valley**	**46.09**	**350**	*e*P	**P**	**08 40 36.6**	**+0.5**
	4.2nm,0.9s						
PDAR	**Pinedale Array**	**46.62**	**354**	P	**P**	**08 40 39.3**	**-1.1**
	2.0nm,0.8s,baz=163,slow=6.8,SNR=18						
PPT	**Papeete**	**47.07**	**250**	LR	LR	08 55 04.7	
	comp=Z,214nm,20.2s,baz=91,slow=30						
PPT2	**Papeete2**	**47.07**	**249**	*e*S	**S**	**08 47 32.6**	**-3.9**
	98nm,24.8s						
PPT2				*e*LQ	LQ	08 51 50.6	
	562nm,28.8s						
PPT2				*e*LR	LR	08 54 03.5	
	comp=Z,593nm,25.0s,baz=67						
PLCA	**Paso Flores**	**47.32**	**146**	P	**P**	**08 40 46.0**	**+0.3**
	3.5nm,1.2s,baz=342,slow=10,SNR=2.7						
PLCA				LR	LR	08 55 36.8	
	comp=Z,614nm,19.9s,baz=344,slow=30						
PLCA	**Paso Flores**	**47.32**	**146**	*e*P	**P**	**08 40 43.6**	**-2.2**
	30nm,2.0s						
P53A	**Whipple**	**47.65**	**23**	*e*P	**P**	**08 40 48.8**	**+0.6**
	16nm,1.2s						
RSSD	**Black Hills**	**47.66**	**360**	*e*P	**P**	**08 40 47.1**	**-1.3**
	4.3nm,1.1s						
ECSD	**EROS Data Cent**	**47.70**	**7**	*e*P	**P**	**08 40 47.1**	**-1.4**
	5.4nm,1.3s						
HLID	**Hailey**	**48.10**	**349**	*e*P	**P**	**08 40 52.0**	**+0.2**
	2.9nm,0.9s						
YPP	**Pitchstone Pla**	**48.25**	**353**	*e*P	**P**	**08 40 54.1**	**+1.0**
	3.9nm,1.1s						
H17A	**Grant Village**	**48.34**	**353**	*e*P	**P**	**08 40 54.0**	**+0.2**
	8.3nm,1.6s						
TBI	**Tubuai**	**48.36**	**242**	*e*S	**S**	**08 47 55.4**	**+0.8**
	119nm,26.0s						
TBI				*e*LQ	LQ	08 52 30.5	
	195nm,31.8s						
TBI				*e*LR	LR	08 54 47.8	
	comp=Z,588nm,28.5s,baz=72						
TBI	**Tubuai**	**48.36**	**242**	*e*T	T	09 32 25.0	
	4.2nm,0.3s						
YFT	**Old Faithful**	**48.43**	**353**	*e*P	**P**	**08 40 55.5**	**+1.1**
	16nm,1.6s						
YMR	**Madison River**	**48.66**	**353**	*e*P	**P**	**08 40 56.3**	**+0.2**
	8.6nm,1.2s						
YHH	**Holmes Hill**	**48.76**	**353**	*e*P	**P**	**08 40 58.2**	**+1.1**
	6.5nm,1.2s						
YHB	**Horse Butte**	**48.77**	**353**	*e*P	**P**	**08 40 57.6**	**+0.6**
	5.0nm,0.9s						
QLMT	**Earthquake Lak**	**48.88**	**353**	*e*P	**P**	**08 40 57.9**	**+0.1**
RLMT	**Red Lodge**	**48.93**	**355**	*e*P	**P**	**08 40 57.1**	**-1.1**
	4.3nm,0.9s						
MCMT	**McKenzie Canyo**	**49.07**	**351**	*e*P	**P**	**08 40 57.7**	**-1.6**
GCMT	**Greycliff**	**49.63**	**354**	*e*P	**P**	**08 41 01.9**	**-1.5**
CPUP	**Villa Florida**	**49.63**	**122**	P	**P**	**08 41 03.7**	**0.0**
	1.6nm,0.8s,baz=310,slow=9.3,SNR=3.2						
CPUP				LR	LR	08 58 43.9	
	comp=Z,250nm,20.2s,baz=280,slow=32						
HRY	**Holter Researc**	**50.78**	**353**	*e*P	**P**	**08 41 12.4**	**+0.2**
F10A	**Beach Ranch, E**	**50.98**	**348**	*e*P	**P**	**08 41 13.4**	**-0.2**
	16nm,1.8s						
COWI	**Conover**	**51.28**	**13**	*e*P	**P**	**08 41 14.4**	**-1.4**
	6.9nm,1.0s						
AGMN	**Agassiz Nation**	**52.28**	**7**	*e*P	**P**	**08 41 22.9**	**-0.3**
	7.8nm,1.0s						
EYMN	**Ely**	**52.58**	**10**	*e*P	**P**	**08 41 24.9**	**-0.5**
	7.4nm,1.1s						
ULM	**Lac du Bonnet**	**54.21**	**6**	P	**P**	**08 41 37.1**	**-0.3**
	3.4nm,0.5s,baz=194,slow=8.8,SNR=5.0						
ULM				LR	LR	09 03 39.5	
	comp=Z,490nm,18.8s,baz=192,slow=35						
BDFB	**Brasilia**	**55.90**	**106**	LR	LR	09 03 24.9	
	comp=Z,163nm,21.3s,baz=40,slow=33						
SCHQ	**Schefferville**	**65.84**	**22**	LR	LR	09 10 59.5	
	comp=Z,278nm,19.1s,baz=226,slow=35						
YKA	**Yellowknife Ar**	**66.60**	**354**	P	**P**	**08 43 01.2**	**-0.7**
	0.9nm,0.8s,baz=160,slow=6.5,SNR=6.2						
YKA				LR	LR	09 09 44.7	
	comp=Z,23nm,20.0s,baz=174,slow=34						
YKB5	**Yellowknife Ar**	**66.60**	**354**	*e*P	**P**	**08 43 01.2**	**-0.7**
RIDG	**Independent Ri**	**74.01**	**342**	*e*P	**P**	**08 43 46.8**	**-0.5**
	5.5nm,1.2s						
RND	**Reindeer**	**75.05**	**341**	*e*P	**P**	**08 43 53.5**	**+0.1**
	8.8nm,1.1s						
MCK	**McKinley**	**75.30**	**341**	*e*P	**P**	**08 43 54.1**	**-0.6**
	13nm,1.6s						
ILB	**Eielson Array**	**75.38**	**342**	*e*P	**P**	**08 43 54.2**	**-0.9**
	4.9nm,1.3s						
PRP	**Porcupine Dome**	**75.51**	**343**	*e*P	**P**	**08 43 55.9**	**-0.2**
	4.1nm,1.2s						
WRH	**Wood River Hil**	**75.53**	**342**	*e*P	**P**	**08 43 55.3**	**-0.8**
	8.4nm,1.4s						
KTH	**Kantishna Hill**	**75.84**	**340**	*e*P	**P**	**08 43 55.1**	**-2.8**
	6.3nm,1.1s						
MLY	**Manley**	**76.75**	**341**	*e*P	**P**	**08 44 03.7**	**+0.7**
	5.8nm,1.2s						
VNDA	**Vanda**	**87.34**	**193**	LR	LR	09 16 50.0	
	comp=Z,90nm,19.6s,baz=116,slow=31						
DZM	**Mont Dzumac**	**88.56**	**248**	*e*LR	LR	09 13 18.6	
	comp=Z,113nm,23.2s						
BORG	**Borgarnes**	**90.08**	**25**	LR	LR	09 24 16.5	
	comp=Z,71nm,19.0s,baz=266,slow=35						
H11S2	**WAKE ISLAND Hy**	**90.88**	**288**	T	T	10 25 51.0	
	baz=95,slow=74						
H11S1	**WAKE ISLAND Hy**	**90.89**	**288**	T	T	10 25 51.8	
	baz=95,slow=74						
H11S3	**WAKE ISLAND Hy**	**90.90**	**288**	T	T	10 25 48.5	
	baz=95						
JMIC	**Jan Mayen**	**95.20**	**19**	LR	LR	09 27 46.6	
	comp=Z,119nm,20.6s,baz=270,slow=35						
WHN	**Wuhan**	**135.38**	**311**	*e*PKP	**PKiKP**	**08 51 38.6**	**+4.5**
LZH	**Lanzhou**	**139.07**	**325**	*e*PKP	**PKPdf**	**08 51 39.5**	**+0.1**
LZH				pPKP	sPKPdf	08 51 47.2	+4.5
LZH				sPKP		08 51 51.9	
CD2	**Chengdu**	**142.65**	**319**	PKP	**PKPdf**	**08 51 48.4**	**+2.5**
KSH	**Kashi**	**144.41**	**1**	*e*PKP	**PKiKP**	**08 51 52.9**	**+0.4**
KSH				PP	PP	08 55 11.0	+8.2
KSH				PKS	**PKSdf**	**08 55 28.6**	**+4.0**

JMA 11 08:33:44.1±0.2, **37°.43N×144°.53E**, $h42^{km}$, **M4.0**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.58**	**291**	P	Pn	08 34 24.9	+1.6
JIKH				S	Sn	08 34 54.7	+1.3
JIO	**Ouri**	**2.71**	**293**	P	Pn	08 34 26.3	+1.1
JIO				*e*S	Sn	08 34 58.0	+1.2
JKMT	**Kesennumamotoy**	**2.78**	**301**	P	Pn	08 34 27.5	+1.5
JKMT				*e*S	Sn	08 34 59.7	+1.4
OFUJ	**Ofunato**	**2.79**	**307**	P	Pn	08 34 27.5	+1.3

JMK	Ichinoseki	3.02	301	P	Pn	08 34 31.2	+1.8
JMK				eS	Sn	08 35 06.2	+1.9
JOU	Okura	3.20	288	P	Pn	08 34 33.9	+2.0
JOU				eS	Sn	08 35 11.7	+3.0
JOM	Ohasama	3.26	310	P	Pn	08 34 34.5	+1.8
JOM				eS	Sn	08 35 11.9	+1.7
JFT	Otama	3.34	273	P	Pn	08 34 36.1	+2.3
JFT				eS	Sn	08 35 15.0	+2.8
JYK	Kaneyama	3.61	296	P	Pn	08 34 39.9	+2.4
JYK				eS	Sn	08 35 21.4	+2.6
JRG	Rokugo	3.64	304	P	Pn	08 34 40.3	+2.5
JRG				eS	Sn	08 35 21.8	+2.3
BSO1	Boso 1	4.00	227	P	Pn	08 34 42.3	0.0
BSO1				eS	Sn	08 35 27.3	-0.3
JTM	Tenmabayashi	4.30	322	P	Pn	08 34 48.5	+1.6
JTM				eS	Sn	08 35 35.1	-0.7
JRY	Ryogami san	4.74	254	P	Pn	08 34 53.7	+0.7
JRY				eS	Sn	08 35 45.2	-1.5
JOT	Ohata	4.78	327	P	Pn	08 34 55.0	+1.5
JOT				eS	Sn	08 35 47.7	+0.1
JOD2	Odawara 2	4.90	245	eS	Sn	08 35 49.3	-1.3
MAT	Matsushiro	5.14	262	P	Pn	08 35 00.7	+2.2
MAT				S	Sn	08 35 57.5	+0.9
JKB	Kayabe	5.21	330	P	Pn	08 35 00.9	+1.5
JKB				eS	Sn	08 35 58.2	+0.1
JCH	Churui	5.25	351	P	Pn	08 34 59.8	-0.3
JCH				eS	Sn	08 35 55.8	-3.5
NEM2	Nemuro 2	6.00	8	P	Pn	08 35 07.2	-3.1
NEM2				eS	Sn	08 36 13.0	-4.6
JTKR	Abashiri--Toko	6.55	356	P	Pn	08 35 17.5	-0.3
JTKR				eS	Sn	08 36 27.2	-4.0

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*IDC **11** 08:45:24.9±0.7, 40°.73N×74°.08E, h0km, mb4.0/16, mb1 4.2/22, mb1mx4.0/49, mbtmp4.1/22, ML3.2/5, MS3.5/11, Ms1 3.5/11, ms1mx3.2/41, Error ellipse: s-maj=13.8km s-min=9.5km az=136.0*

*NNC **11** 08:45:26.8±1.2, 40°.80N×74°.04E, h0km, mb4.7, mpv4.3, Error ellipse: s-maj=9.7km s-min=7.0km az=148.0*

*BJI **11** 08:45:27.7±0.0, 41°.00N×74°.03E, h5km, mb4.0/3, mB4.3/5, ML4.5/5, Ms4.1/3, Ms7 3.8/1*

*KRNET **11** 08:45:28.2±0.1, 40°.95N×74°.15E, h16km, mb4.8*

*SOME **11** 08:45:29.0, 40°.90N×74°.23E, h20km*

*MOS **11** 08:45:29.4±1.5, 40°.91N×73°.98E, h33km, mb4.4/18, Error ellipse: s-maj=7.1km s-min=5.0km az=76.6*

*NEIC **11** 08:45:31.4±3.0, 40°.90N×73°.98E, h43km±7km, mb4.3/15, Error ellipse: s-maj=6.7km s-min=3.7km az=122.0*

ISC 11 08:45:25.9±1.1**, 40°.85N**±0°.02×**74°.02E**±0°.02**, h3**km±7km**,**
n191, σ1°.85/259**, mb4.2**/33**, MS3.4**/11**, 40C-27D,**
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.91	301	ePn	Pn	08 45 46.1	+0.3
ARSB				eSn	Sn	08 45 58.9	-0.7
ARSB	Arslanbob	0.91	301	i P	Pn	08 45 47.0	+1.2
	baz=93						
ARSB				i S	Sn	08 46 00.2	+0.6
	baz=93						
ARLS	Aral	1.03	13	⇓iP	Pg	08 45 45.7	0.0
	baz=8.0						
ARLS				⇓iS	Sg	08 45 58.6	-0.5
	baz=8.0						
UCH	Uchtor	1.42	15	i P	Pn	08 45 53.1	0.0
	baz=12						
UCH				i S	Sg	08 46 11.4	-0.2
	baz=12						
UCH	Uchtor	1.42	15	P	Pg	08 45 53.2	0.0
	SNR=1321						
KZA	Kyzart	1.53	37	i P	Pn	08 45 54.7	+0.1
	baz=36						
KZA				i S	Sb	08 46 13.7	-1.6
	baz=36						
KZA	Kyzart	1.53	37	P	Pn	08 45 54.7	+0.1
	SNR=679						
NRN	Naryn	1.60	68	ePn	Pn	08 45 55.5	0.0
NRN				eSn	Sn	08 46 16.6	-0.3
NRN	Naryn	1.60	68	ePN	Pn	08 45 55.5	0.0
NRN				e		08 46 16.6	
NRN	Naryn	1.60	68	⇑iP	Pn	08 45 55.2	-0.3
	baz=70						
NRN				⇑iS	Sn	08 46 15.9	-1.0
	baz=70						
ARK	Arkit	1.81	302	⇑iP	Pg	08 46 02.1	+1.4
	baz=98						
ARK				⇑iS	Sg	08 46 27.0	+2.9
	baz=98						
EKS2	Erkin-Say	1.81	354	i P	Pg	08 46 00.6	-0.1
	baz=51						
EKS2				i S	Sg	08 46 24.1	-0.1
	baz=51						
EKS2	Erkin-Say	1.81	354	P	Pg	08 46 00.7	0.0
	SNR=452						
AAK	Ala-Archa	1.82	11	Pn	Pg	08 46 00.4	-0.4
	baz=189,slow=14						
AAK				Sn	Sn	08 46 20.4	-1.5
	142nm,0.3s,baz=150,slow=18,SNR=6.2						
AAK				LR	LR	08 46 53.6	
	comp=Z,917nm,18.6s,baz=129,slow=46						
AAK	Ala-Archa	1.82	11	ePn	Pg	08 46 00.4	-0.4
AAK				eSn	Sn	08 46 21.4	-0.6
AAK	Ala-Archa	1.82	11	⇓P	Pg	08 46 00.3	-0.4
	376nm,0.5s						
AAK				⇓S	Sg	08 46 25.4	+1.1
	2µm,0.9s						
AAK	Ala-Archa	1.82	11	ePN	Pg	08 46 00.4	-0.4
AAK				e		08 46 21.4	
AAK	Ala-Archa	1.82	11	i P	Pb	08 46 00.3	+0.4
	baz=9.0						
AAK				i S	Sb	08 46 23.2	0.0
	baz=9.0						
AAK	Ala-Archa	1.82	11	P	Pg	08 46 00.4	-0.4
	SNR=148						
KBK	Karagaybulak	1.93	21	⇑iP	Pb	08 46 02.1	+0.2
	baz=19						
KBK				⇑iS	Sb	08 46 26.7	+0.2
	baz=19						
KBK	Karagaybulak	1.93	21	P	Pg	08 46 02.4	-0.5
	SNR=112						
MRKS	Merke	1.98	343	⇑iP	Pg	08 46 03.7	-0.2
	1µm,0.5s						
MRKS				eS	Sg	08 46 29.4	-0.1
	1µm,0.6s						
FRU1	Bishkek	2.01	13	ePn	Pg	08 46 04.3	-0.1
FRU1				eSn	Sn	08 46 25.1	-1.3
FRU1	Bishkek	2.01	13	ePN	Pg	08 46 04.3	-0.1
FRU1				e		08 46 25.2	
FRU1	Bishkek	2.01	13	⇑iP	Pb	08 46 03.7	+0.6
	baz=11						
FRU1				⇑iS	Sb	08 46 29.0	+0.4
	baz=11						
KSH	Kashi	2.01	131	Pn	Pg	08 46 05.4	+1.0
KSH				Sn	Sg	08 46 31.7	+1.3
KSH				smax	smax		
	comp=N,3µm,0.5s						
KSH				smax	smax		
	comp=E,2µm,1.0s						
ULHL	Ulahol	2.17	49	⇑iP	Pb	08 46 05.7	-0.3
	baz=50						
ULHL				⇑iS	Sb	08 46 33.1	-0.3
	baz=50						
ULHL	Ulahol	2.17	49	P	Pn	08 46 04.5	+1.3
	SNR=324						
BOOM	Boomskoye usch	2.18	41	ePn	Pb	08 46 05.2	-0.9
BOOM				eSn	Sn	08 46 31.3	+0.4
BOOM	Boomskoye usch	2.18	41	ePN	Pb	08 46 05.2	-0.9
BOOM				e		08 46 31.3	
BOOM	Boomskoye usch	2.18	41	⇓iP	Pb	08 46 05.8	-0.3
	baz=40						
BOOM				⇓iS	Sb	08 46 33.4	-0.2
	baz=40						
CHMS	Chumysh	2.21	14	⇓iP	Pb	08 46 06.7	+0.1
	baz=12						
CHMS				⇓iS	Sb	08 46 34.5	+0.1
	baz=12						
CHMS	Chumysh	2.21	14	P	Pb	08 46 06.6	0.0
	SNR=461						
TKM2	Tokmak 2	2.38	29	⇑Pn	Pb	08 46 09.3	-0.2
	466nm,0.7s						
TKM2				⇓Sn	Sb	08 46 38.4	-1.0
	2µm,0.6s						
TKM2	Tokmak 2	2.38	29	PN	Pb	08 46 09.5	0.0
TKM2						08 46 39.4	
TKM2				pmax	pmax		
	comp=Z,466nm,0.7s						
TKM2				smax	smax		
	comp=N,2µm,0.6s						
TKM2	Tokmak 2	2.38	29	⇓iP	Pb	08 46 08.9	-0.6
	baz=28						
TKM2				⇓iS	Sb	08 46 38.4	-1.0
	baz=28						
TKM2	Tokmak 2	2.38	29	P	Pb	08 46 08.7	-0.9
	SNR=429						
USP	Ospenovka	2.44	8	⇑iP	Pb	08 46 09.8	-0.6
	baz=6.0						
USP				⇑iS	Sb	08 46 40.1	-0.8
	baz=6.0						
USP	Ospenovka	2.44	8	P	Pb	08 46 10.0	-0.5
	SNR=254						
BTK	Batken	2.57	253	ePn	Pb	08 46 11.9	-0.8
BTK				eSn	Sn	08 46 37.9	-2.4
BTK	Batken	2.57	253	⇑iP	Pg	08 46 15.0	-0.1
	baz=52						
BTK				⇑iS	Sg	08 46 48.6	+0.2
	baz=52						
KST	Kastek	2.62	33	⇑iP	Pb	08 46 14.4	+0.8
	comp=N,335nm,0.6s						
KST				⇓iS	Sb	08 46 48.0	+1.7
	comp=N,2µm,0.4s						
KDJ	Kajisay	2.70	61	ePn	Pn	08 46 11.8	+1.5
KDJ				eSn	Sn	08 46 43.9	+0.2
KDJ	Kajisay	2.70	61	ePN	Pn	08 46 11.9	+1.5
KDJ				e		08 46 43.9	
KDJ	Kajisay	2.70	61	⇑iP	Pb	08 46 13.0	-1.9
	baz=62						
KDJ				⇑iS	Sb	08 46 46.1	-2.4
	baz=62						
DZA	Taraz	2.86	316	eP	Pg	08 46 20.8	+0.1
	comp=N,687nm,0.3s						
DZA				⇓iS	Sg	08 46 59.0	+1.2
	comp=N,2µm,0.8s						
MTBS	Maitube	2.90	38	⇓iP	Pb	08 46 19.6	+1.3
	comp=N,636nm,0.5s						
MTBS				⇑iS	Sb	08 46 56.4	+2.2
	comp=N,2µm,0.5s						
IZV	Izvestkoviy	2.92	41	eP	Pb	08 46 19.7	+1.0
	comp=N,564nm,0.5s						
IZV				eS	Sb	08 46 57.0	+2.2
	comp=N,2µm,0.9s						
TNSS	Tian-Shan	3.09	44	eP	Pb	08 46 23.0	+1.3
	comp=N,535nm,0.4s						
TNSS				eS	Sg	08 47 02.7	-2.4
	comp=N,2µm,0.6s						
AAA	Alma-Ata	3.19	42	ePN	Pg	08 46 25.7	-1.4
AAA				eS	Sg	08 47 06.5	-2.0
AAA				pmax	pmax		
	comp=Z,313nm,0.5s						
AAA				smax	smax		
	comp=E,4µm,0.5s						
AAA	Alma-Ata	3.19	42	eP	Pb	08 46 25.1	+1.8
	comp=E,312nm,0.5s						
AAA				eS	Sg	08 47 06.5	-2.0
	comp=E,4µm,0.5s						
KNDC	Almaty	3.22	42	⇓Pg	Pg	08 46 25.8	-1.9
	comp=E,749nm,0.7s						
KNDC				⇑Lg	Lg	08 47 09.8	
	comp=E,6µm,1.1s						
MDOK	Medeo	3.23	43	⇑iP	Pb	08 46 25.1	+1.1
	comp=E,347nm,0.6s						
MDOK				⇑iS	Sg	08 47 06.7	-2.9
	comp=E,3µm,0.5s						
IUG	Iuzhnay	3.26	295	eP	Pg	08 46 29.4	+1.0
	comp=E,86nm,0.6s						
IUG				eS	Sg	08 47 13.2	+2.5
	comp=E,3µm,0.6s						
KOTS	Kotyrbulak	3.31	43	eP	Pb	08 46 27.1	+1.7
	comp=E,516nm,0.5s						
KOTS				eS	Sg	08 47 09.6	-2.7
	comp=E,10µm,0.9s						
GAR	Garm	3.40	238	ePn	Pb	08 46 24.9	-1.9
GAR				eSn	Sn	08 46 58.5	-2.3
GAR	Garm	3.40	238	ePN	Pb	08 46 24.9	-1.9
KK31	Karatay Array	3.45	312	ePn	Pn	08 46 23.2	+2.7
KK31				eSn	Sn	08 47 01.8	-0.1
KK31	Karatay Array	3.45	312	⇓Pn	Pn	08 46 23.0	+2.5
	comp=E,3.8nm,0.3s,baz=119,slow=14,SNR=810						
KK31				⇑Pg	Pg	08 46 30.7	-1.2
	comp=E,49nm,0.4s,baz=134,slow=16,SNR=58						
KK31				⇑Lg	Lg	08 47 15.4	
	comp=E,341nm,0.5s,baz=131,slow=30						
KK31	Karatay Array	3.45	312	ePN	Pn	08 46 23.2	+2.7
KK31				e		08 47 01.8	
KTBS	Karatobe	3.47	34	eP	Pb	08 46 29.7	+1.6
	comp=E,276nm,0.6s						
KTBS				eS	Sg	08 47 14.1	-3.4
	comp=E,2µm,0.5s						
KUU	Kurty	3.49	29	eP	Pb	08 46 29.8	+1.4
	comp=E,216nm,0.4s						
KUU				⇑iS	Sb	08 47 14.0	+2.9
	comp=E,2µm,0.9s						
TAS	Tashkent	3.61	279	⇓iP	Pb	08 46 28.1	-2.3
	baz=78						
TAS				⇓iS	Sb	08 47 12.6	-1.9
	baz=78						
PRZ	Przheval'sk	3.66	62	ePn	Pb	08 46 27.9	-3.5
PRZ				eSn	Sn	08 47 09.0	+1.5
PRZ	Przheval'sk	3.66	62	ePN	Pb	08 46 27.9	-3.5
PRZ				e		08 47 09.0	
PRZ	Przheval'sk	3.66	62	⇑iP	Pn	08 46 26.5	+2.8
	baz=63						
PRZ				⇑iS	Sn	08 47 09.4	+1.9
	baz=63						
CHKK	Chushkaly	3.72	35	eP	Pb	08 46 33.9	+1.6
	comp=E,154nm,0.6s						
CHKK				eS	Sb	08 47 21.0	+3.3
	comp=E,1µm,0.6s						
BRLS	Borolday	3.80	306	eP	Pg	08 46 37.7	-1.1
	comp=E,34nm,0.7s						
BRLS				eS	Sg	08 47 27.2	-0.8
	comp=E,649nm,0.9s						
SATY	Saty	3.94	55	⇓iP	Pb	08 46 37.8	+1.7
	comp=E,490nm,0.5s						
SATY				⇑iS	Sg	08 47 28.4	-4.2
	comp=E,2µm,0.7s						
KURS	Kuram	4.05	48	eP	Pb	08 46 39.3	+1.2
	comp=E,174nm,0.6s						
KURS				eS	Sb	08 47 30.8	+3.3
	comp=E,635nm,0.8s						
BTLS	Baital	4.18	0	eP	Pb	08 46 42.6	+2.4
	comp=E,121nm,0.6s						
BTLS				eS	Sg	08 47 36.6	-3.7
	comp=E,222nm,0.6s						
KPKS	Kokpek	4.34	52	eP	Pb	08 46 44.8	+1.9
	comp=E,334nm,0.5s						
KPKS				eS	Sb	08 47 39.9	+4.2
	comp=E,2µm,0.7s						
UZB	Uzynbulak	4.38	57	eP	Pb	08 46 45.1	+1.5
	comp=E,95nm,0.6s						
UZB				eS	Sb	08 47 41.2	+4.4
	comp=E,542nm,0.7s						
MNBS	Baschi	4.57	44	eP	Pb	08 46 49.6	+2.7
	comp=E,63nm,0.5s						
MNBS				eS	Sg	08 47 48.2	-4.5
	comp=E,1µm,0.9s						
PDGK	Podgornoye	4.76	57	⇓Pn	Pn	08 46 39.6	+0.8
	comp=E,12nm,0.6s						
PDGK				⇓Pg	Pb	08 46 52.9	+2.7
	comp=E,101nm,0.5s						
PDGK				⇑Lg	Lg	08 47 54.8	
	comp=E,627nm,0.6s						
PDGK	Podgornoye	4.76	57	PN	Pn	08 46 39.5	+0.8
PDGK				pmax	pmax		
	comp=Z,12nm,0.6s						
TDK	Taldyqorghan	5.25	36	eP	Pb	08 47 00.4	+2.1
	comp=Z,187nm,0.5s						
TDK				eS	Sb	08 48 07.2	+5.5
	comp=Z,2µm,0.7s						
KTMS	Ketmen	5.37	59	eP	Pb	08 47 02.9	+2.4
	comp=Z,109nm,0.3s						
KTMS				eS	Sb	08 48 11.8	+6.3
	comp=Z,448nm,0.6s						
DJR	Jarkent	5.50	49	eP	Pb	08 47 04.5	+1.9
	comp=Z,108nm,0.8s						
DJR				⇓iS	Sb	08 48 14.2	+5.3
	comp=Z,461nm,0.6s						
KAPS	Kapalarasan	5.91	40	eP	Pg	08 47 16.0	-3.1
	comp=Z,53nm,0.5s						
KAPS				eS	Sg	08 48 31.7	-3.9
	comp=Z,210nm,0.8s						
CHCP	Chirah Chowk	7.21	185	P	Pn	08 47 16.9	+4.7
CEP	Cherat	7.22	194	P	Pn	08 47 16.4	+4.0
CEP				S	Sn	08 48 37.0	+2.0
NIL	Nilore	7.22	185	ePn	Pn	08 47 15.2	+2.8
NIL				eSn	Sn	08 48 37.1	+2.3
NIL	Nilore	7.22	185	eP	Pn	08 47 15.2	+2.8
NIL				e		08 48 37.1	
KBL	Kabul	7.43	214	ePn	Pn	08 47 18.8	+3.3
KBL				eSn	Sn	08 48 41.1	+0.7
KBL	Kabul	7.43	214	eP	Pn	08 47 18.8	+3.3
KBL				e		08 48 41.1	
OTUK	Ortayu	7.49	351	⇑Pn	Pn	08 47 17.4	+1.3
	comp=Z,9.3nm,0.6s						
OTUK				⇑Lg	Lg	08 49 22.2	
	comp=Z,268nm,0.8s						
OTUK	Ortayu	7.49	351	P	Pn	08 47 17.3	+1.3
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OTUK				pmax	pmax		
	comp=N,804nm,1.8s						
THW	Thamme Wali	8.25	193	P	Pn	08 47 28.9	+2.4
MAKZ	Makanchi	8.27	41	ePn	Pn	08 47 27.4	+0.6
MAKZ				eSn	Sn	08 49 01.5	+0.7
MAKZ	Makanchi	8.27	41	⇓Pn	Pn	08 47 29.3	+2.5
	comp=N,6.5nm,0.6s						
MAKZ				⇑Lg	Lg	08 49 44.9	
	comp=N,121nm,1.1s						
MAKZ	Makanchi	8.27	41	eP	Pn	08 47 27.4	+0.6
MAKZ				e		08 49 01.5	
MK31	Makanchi Array	8.42	42	ePn	Pn	08 47 30.8	+1.9
MK31	Makanchi Array	8.42	42	⇑Pn	Pn	08 47 29.4	+0.6
	comp=N,1.8nm,0.5s,baz=218,slow=13,SNR=75						
MK31				⇓Pg	Pg	08 48 01.8	-5.4
	comp=N,6.4nm,0.5s,baz=223,slow=14,SNR=14						
MK31				⇑Lg	Lg	08 49 48.5	
	comp=N,84nm,0.8s						
MK31	Makanchi Array	8.42	42	eP	Pn	08 47 30.8	+1.9
MK32	Makanchi Array	8.42	42	ePn	Pn	08 47 28.3	-0.6
MK32				eSn	Sn	08 49 06.0	+1.6
MKAR	Makanchi Array	8.42	42	Pn	Pn	08 47 28.3	-0.6
	comp=N,0.1nm,0.3s,baz=221,slow=15,SNR=3.0						
MKAR				Sn	Sn	08 49 06.0	+1.6
	comp=N,0.5nm,0.3s,baz=242,slow=21,SNR=2.7						
MKAR				Lg	Lg	08 49 48.9	
	comp=N,3.1nm,0.3s,baz=225,slow=26,SNR=6.2						
KURBB	Kurchatov Arra	10.26	16	Pn	Pn	08 47 54.1	0.0
	comp=N,0.0nm,0.3s,baz=203,slow=13,SNR=4.7						
KURBB				Pg		08 48 36.7	
	comp=N,0.3nm,0.3s,baz=208,slow=17,SNR=7.1						
KURBB				Sn	Sn	08 49 50.1	+0.6
	comp=N,0.2nm,0.3s,baz=200,slow=18,SNR=4.4						
KURBB				Lg	Lg	08 50 47.0	
	comp=N,0.5nm,0.3s,baz=208,slow=30,SNR=5.7						
KURBB	Kurchatov Arra	10.26	16	⇓Pn	Pn	08 47 57.0	+3.0
	comp=N,8.8nm,0.6s						
KURBB				⇑Lg	Lg	08 50 51.3	
	comp=N,385nm,1.0s						
KURK	Kurchatov	10.37	16	ePn	Pn	08 47 56.0	+0.5
KURK				eSn	Sn	08 49 50.5	-1.6
KURK	Kurchatov	10.37	16	⇑Pn	Pn	08 47 58.6	+3.1
	comp=N,11nm,1.2s						
KURK				⇑Lg	Lg	08 50 53.1	
	comp=N,247nm,1.0s						
KURK	Kurchatov	10.37	16	i P	Pn	08 47 56.5	+1.0
WMQ	Urumqi	10.55	69	eP	Pn	08 47 58.2	+0.1
WMQ				pP		08 48 00.9	
WMQ				pmax	pmax		
	comp=N,36nm,3.8s						
NDI	New Delhi	12.42	167	eP	Pn	08 48 23.0	-0.7
BVAR	Borovoye Array	12.42	350	Pn	Pn	08 48 23.3	-0.2
	comp=N,1.1nm,0.3s,baz=164,slow=12,SNR=24						
BVAR				Pg		08 49 14.7	
	comp=N,0.9nm,0.3s,baz=172,slow=12,SNR=3.6						
BVAR				Lg	Lg	08 51 59.5	
	comp=N,1.1nm,0.3s,baz=159,slow=29,SNR=3.7						
BRVK	Borovoye	12.47	350	ePn	Pn	08 48 25.3	+1.1
BRVK	Borovoye	12.47	350	⇑Pn	Pn	08 48 24.3	+0.1
	comp=N,13nm,0.8s						
BRVK				⇑Lg	Lg	08 52 05.9	
	comp=N,114nm,1.0s						
BRVK	Borovoye	12.47	350	eP	Pn	08 48 25.3	+1.1
GEYT	Alibeck	12.64	262	Pn	Pn	08 48 25.2	-1.5
	comp=N,0.7nm,0.3s,baz=52,slow=8.3,SNR=5.7						
GEYT				Sn	Sn	08 50 45.1	-2.9
	comp=N,1.3nm,0.3s,baz=78,slow=22,SNR=3.6						
GYA0B	ALIBECK ARRAY	12.64	262	ePn	Pn	08 48 26.6	-0.1
DGZ	Jazzator, Alta	12.92	42	i P	Pn	08 48 32.4	+1.8
AB31	Akbulak array	13.01	315	⇓Pn	Pn	08 48 30.3	-1.2
	comp=N,5.4nm,0.6s,baz=122,slow=13,SNR=86						
AB31	Akbulak array	13.01	315	i P	Pn	08 48 30.5	-1.0
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	13.01	315	ePn	Pn	08 48 31.5	0.0
AKTO	Aktyubinsk	14.70	316	Pn	Pn	08 48 54.6	-0.1
	comp=Z,4.7nm,0.3s,baz=17,slow=17,SNR=28						
AKTO	Aktyubinsk	14.70	316	⇓Pn	Pn	08 48 53.9	-0.8
	comp=Z,9.2nm,0.5s						
PYUN	Piuthan	14.71	147	eP	Pn	08 48 52.3	-2.8
	comp=Z,33nm,0.5s						
ZALV	Zalesovo Beam	14.98	25	Pn	Pn	08 49 00.5	+2.2
	baz=208,slow=9.0,SNR=1.5						
ZALV				LR	LR	08 54 55.2	
	comp=Z,147nm,18.0s,baz=246,slow=38						
ZAA1	Zalesovo Array	14.98	25	ePn	Pn	08 49 00.5	+2.1
KOLN	Koldanda	15.25	146	eP	Pn	08 48 59.0	-3.4
	comp=Z,29nm,0.7s						
GKN	Gorkha	15.51	142	eP	Pn	08 49 02.3	-3.5
	comp=Z,17nm,0.3s						
KKN	Kakani	15.99	141	eP	Pn	08 49 08.7	-3.4
	comp=Z,21nm,0.5s						
DMN	Daman	16.06	142	eP	Pn	08 49 09.6	-3.4
	comp=Z,16nm,0.7s						
PKIN	Phulchoki	16.23	141	eP	Pn	08 49 11.9	-3.2
	comp=Z,21nm,0.7s						
PKI	Pulchoki	16.24	141	eP	Pn	08 49 12.1	-3.2
	comp=Z,20nm,0.6s						
JIRN	Jiri	16.54	139	eP	Pn	08 49 16.3	-3.0
	comp=Z,40nm,0.6s						
ARU	Arti	18.56	332	P	P	08 49 43.1	-0.6
	comp=Z,0.0nm,0.3s,baz=129,slow=20,SNR=2.7						
ARU	Arti	18.56	332	eP	Pn	08 49 43.9	0.0
	comp=Z,9.7nm,1.0s						
ARU	Arti	18.56	332	P	Pn	08 49 44.3	+0.5
ARU				S	Sn	08 53 10.8	-0.8
GTA	Gaotai	19.76	86	eP	Pn	08 49 59.7	+1.1
GTA				pP	sP	08 50 05.3	+5.8
GTA				sP	pP	08 50 08.2	+9.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AKT	Akhty	19.78	280	eP	Pn	08 49 59.3	+0.5
AKT				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GROC	Groznyy	21.06	286	eP	P	08 50 13.4	+2.4
GROC				eS	S	08 54 04.8	-1.1
GROC				pmax	pmax		
	comp=Z,64nm,1.2s						
WSAR	Wadi Sarin	21.82	221	P	P	08 50 18.4	-0.9
	comp=Z,10nm,1.1s,baz=84,slow=9.2,SNR=2.8						
WSAR				LR	LR	09 01 11.6	
	comp=Z,128nm,18.2s,baz=66,slow=44						
TBLG	Delisi	21.98	282	eP	P	08 50 22.8	+1.9
	comp=Z,9.2nm,0.8s						
TBLG	Delisi	21.98	282	eP	P	08 50 22.8	+1.9
TBLG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GNI	Garni	22.23	278	P	P	08 50 22.6	-1.3
	comp=Z,3.2nm,0.3s,baz=139,slow=15,SNR=2.2						
GNI	Garni	22.23	278	eP	P	08 50 24.4	+0.5
	comp=Z,46nm,1.1s						
ZAK	Zakamensk	22.45	55	eP	P	08 50 26.3	+0.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZEI	Tsey	22.47	285	eP	P	08 50 23.6	-2.9
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NCK	Nalchik	22.64	287	i P	P	08 50 29.2	+1.1
NCK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKH	Akhalkalaki	22.95	281	eP	P	08 50 29.5	-1.9
	comp=Z,20nm,1.3s						
AKH	Akhalkalaki	22.95	281	eP	P	08 50 29.5	-1.9
AKH				pmax	pmax		
	comp=Z,20nm,1.3s						
TLY	Talaya	23.01	52	eP	P	08 50 29.9	-2.0
	comp=Z,2.9nm,0.9s						
TLY	Talaya	23.01	52	i P	P	08 50 36.0	+4.2
KBZ	Khabaz	23.13	287	P	P	08 50 34.1	+1.0

	comp=Z,0.8nm,0.5s,baz=94,slow=3.8,SNR=2.6						
KBZ				LR	LR	09 00 18.4	
	comp=Z,53nm,18.4s,baz=85,slow=38						
KIV	**Kislovodsk**	**23.27**	**288**	*e*P	**P**	**08 50 33.1**	**-1.6**
	comp=Z,11nm,0.6s						
KIV	**Kislovodsk**	**23.27**	**288**	*e*P	**P**	**08 50 36.8**	**+2.1**
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KIV				MLR	MLR		
	comp=Z,113nm,14.0s						
NEY	**Neytrino**	**23.30**	**286**	*i* P	**P**	**08 50 37.5**	**+2.5**
NEY				pmax	pmax		
	comp=Z,4.0nm,2.0s						
KIRV	**Kirov**	**23.61**	**327**	P	**P**	**08 50 37.3**	**-0.4**
	comp=Z,9.3nm,0.4s,baz=176,slow=7.7,SNR=3.6						
KIRV				LR	LR	09 00 27.5	
	comp=Z,192nm,19.9s,baz=129,slow=38						
SONA0	**Songino Array**	**24.06**	**62**	*e*P	**P**	**08 50 43.0**	**+0.6**
SONM	**Songino Array**	**24.06**	**62**	P	**P**	**08 50 43.0**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=275,slow=9.9,SNR=6.1						
SONM				LR	LR	09 00 05.5	
	comp=Z,40nm,19.0s,baz=82,slow=37						
ULN	**Ulaanbaatar**	**24.50**	**62**	*e*P	**P**	**08 50 46.4**	**-0.1**
	comp=Z,2.6nm,0.7s						
ULN	**Ulaanbaatar**	**24.50**	**62**	*e*P	**P**	**08 50 46.4**	**-0.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**28.26**	**78**	*e*P	P	08 51 29.8	+9.4
HHC	**Hu-ho-hao-te**	**28.26**	**78**	P	**P**	**08 51 20.8**	**+0.4**
HHC				pmax	pmax		
	comp=Z,160nm,7.0s						
BR101	**Keskin Array S**	**30.63**	**281**	*e*P	**P**	**08 51 40.5**	**-1.0**
BR131	**Keskin Array S**	**30.63**	**281**	*e*P	**P**	**08 51 39.5**	**-2.0**
	comp=Z,4.1nm,1.1s						
BRTR	**Keskin Array B**	**30.63**	**281**	P	**P**	**08 51 40.5**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=301,slow=20,SNR=3.0						
BRTR	**Keskin Array B**	**30.63**	**281**	P	**P**	**08 51 40.5**	**-1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.91**	**129**	LR	LR	09 05 30.5	
	comp=Z,59nm,19.4s,baz=38,slow=39						
FIA0	**FINESS Array S**	**35.35**	**322**	*e*P	**P**	**08 52 22.9**	**+0.7**
FIA0	**FINESS Array S**	**35.35**	**322**	*e*P	**P**	**08 52 23.0**	**+0.7**
FINES	**FINESS Array B**	**35.35**	**322**	P	**P**	**08 52 22.9**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=99,slow=12,SNR=8.2						
FINES				LR	LR	09 07 23.3	
	comp=Z,70nm,20.8s,baz=72,slow=37						
FINES	**FINESS Array B**	**35.35**	**322**	P	**P**	**08 52 23.0**	**+0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,70nm,20.8s						
ARA0	**ARCESS Array S**	**38.12**	**335**	*e*P	**P**	**08 52 46.1**	**+0.3**
ARCES	**ARCESS Array B**	**38.12**	**335**	P	**P**	**08 52 46.1**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=108,slow=7.8,SNR=3.7						
TIXI	**Tiksi**	**40.85**	**23**	LR	LR	09 11 05.1	
	comp=Z,61nm,21.1s,baz=267,slow=38						
NB2	**NORSAR Subarra**	**42.44**	**320**	P	**P**	**08 53 21.2**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=91,slow=7.9						
NB200	**NORSAR Array S**	**42.44**	**320**	*e*P	**P**	**08 53 21.4**	**-0.4**
NOA	**NORSAR Array B**	**42.44**	**320**	P	**P**	**08 53 21.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=93,slow=7.6,SNR=3.5						
NOA				LR	LR	09 11 55.2	
	comp=Z,32nm,21.0s,baz=70,slow=37						
GEC2	**GERESS Array S**	**42.49**	**302**	*e*P	**P**	**08 53 21.8**	**-0.6**
	comp=Z,5.4nm,1.4s						
GEC2	**GERESS Array S**	**42.49**	**302**	*e*P	**P**	**08 53 21.8**	**-0.6**
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GERES	**GERESS Array B**	**42.49**	**302**	P	**P**	**08 53 24.3**	**+1.9**
	comp=Z,6.0nm,0.2s,baz=60,slow=8.3,SNR=5.0						
ESDC	**Sonseca Array**	**57.57**	**297**	P	**P**	**08 55 17.5**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=55,slow=6.4,SNR=3.4						
ESDC				LR	LR	09 23 33.0	
	comp=Z,92nm,19.6s,baz=240,slow=40						
TOA1	**Torodi Ar. Sit**	**68.18**	**269**	*e*P	**P**	**08 56 27.0**	**-0.8**
TOA0	**Torodi Ar. Sit**	**68.18**	**269**	*e*P	**P**	**08 56 28.8**	**+0.9**
	comp=Z,20nm,1.9s						
TORD	**Torodi Ar. Bea**	**68.18**	**269**	P	**P**	**08 56 27.0**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=49,slow=5.1,SNR=11						
INK	**Inuvik**	**69.22**	**11**	P	**P**	**08 56 35.6**	**+2.1**
	comp=Z,1.3nm,0.6s,baz=355,slow=3.2,SNR=2.5						
RIDG	**Independent Ri**	**71.28**	**17**	*e*P	**P**	**08 56 46.0**	**-0.3**
	comp=Z,14nm,1.8s						
PAX	**Paxson**	**71.81**	**18**	*e*P	**P**	**08 56 48.7**	**-0.9**
	comp=Z,3.1nm,1.0s						
PAX	**Paxson**	**71.81**	**18**	*e*P	**P**	**08 56 48.7**	**-0.9**
PAX				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKA	**Yellowknife Ar**	**76.77**	**4**	P	**P**	**08 57 18.9**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=348,slow=5.8,SNR=11						
YKB5	**Yellowknife Ar**	**76.77**	**4**	*e*P	**P**	**08 57 18.9**	**+0.6**
WR1	**Warramunga Arr**	**82.39**	**124**	*e*P	**P**	**08 57 48.2**	**-1.3**
WRA	**Warramunga Arr**	**82.39**	**124**	P	**P**	**08 57 48.2**	**-1.3**
	comp=Z,2.1nm,0.9s,baz=310,slow=6.4,SNR=6.6						
WB2	**Warramunga Arr**	**82.40**	**124**	*e*P	**P**	**08 57 48.8**	**-0.7**
	comp=Z,49nm,1.8s						
WC3	**Warramunga Arr**	**82.42**	**124**	*e*P	**P**	**08 57 48.4**	**-1.2**
	comp=Z,13nm,1.3s						
BOSA	**Boshof**	**82.58**	**222**	P	**P**	**08 57 49.6**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=145,slow=11,SNR=2.6						
BOSA				LR	LR	09 37 40.0	
	comp=Z,96nm,18.4s,baz=208,slow=38						
AS31	**Alice Springs**	**84.90**	**127**	*e*P	**P**	**08 58 01.6**	**-0.7**
	comp=Z,2.3nm,1.4s						
ASAR	**Alice Springs**	**84.90**	**127**	P	**P**	**08 58 00.9**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=331,slow=5.0,SNR=9.1						
ASAR	**Alice Springs**	**84.90**	**127**	P	**P**	**08 58 01.0**	**-1.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

ROM 11 08:56:09.3±0.1**, 43°.833N**±0°.010×**12°.04E**±0°.01**, h10**^{km}±1^{km}**,**
Md1.7/3**, Error ellipse: s-maj=1.2km s-min=1.0km**
az=22.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.15**	**298**	P	Pg	08 56 13.1	+0.3
SFI				S	Sg	08 56 16.2	+0.9
SFI				END			
ASQU	**Asqua**	**0.18**	**258**	P	Pg	08 56 13.8	+0.5
ASQU				S	Sg	08 56 17.4	+1.4
ASQU				END			
CPGN	**Carpegna, Ital**	**0.21**	**99**	AML	AML		
	comp=N,1846µm,1.5s						
CPGN				AML	AML		
	comp=E,2918µm,0.3s						
PARC	**Parchiule**	**0.24**	**141**	P	Pg	08 56 14.4	+0.2
PARC				S	Sg	08 56 18.5	+1.0
BADI	**Badiali**	**0.36**	**155**	P	Pb	08 56 17.4	-0.4
BADI				S	Sb	08 56 22.5	-0.9
PE3	**Peglio**	**0.36**	**112**	P	Pg	08 56 17.0	+0.5
PE3				S	Sb	08 56 23.1	-0.5
PE3				END			
RUFI	**Rufina**	**0.38**	**271**	P	Pg	08 56 17.2	+0.3
NARO	**Abbazia di Nar**	**0.45**	**119**	AML	AML		
	comp=E,218µm,0.3s						
NARO				AML	AML		
	comp=N,204µm,0.3s						
BRIS	**BRISIGHELLA**	**0.49**	**310**	P	Pg	08 56 18.7	-0.3
CAFI	**Castiglion Fio**	**0.51**	**186**	P	Pg	08 56 19.5	+0.3
ATVO	**AVT- Monte Val**	**0.53**	**149**	P	Pb	08 56 20.3	-0.3
ATVO				AML	AML		
	comp=E,424µm,1.5s						
ATVO				AML	AML		
	comp=N,384µm,1.4s						
FRON	**Frontone**	**0.59**	**122**	P	Pg	08 56 20.9	0.0
MCIV	**Monte Civitell**	**1.09**	**194**	AML	AML		
	comp=N,274µm,0.3s						
MCIV				AML	AML		
	comp=E,257µm,0.4s						
NDIM	**Novi di Modena**	**1.33**	**323**	AML	AML		
	comp=N,2685µm,0.5s						
NDIM				AML	AML		
	comp=E,3700µm,0.3s						
ARRO	**Arrone**	**1.36**	**157**	AML	AML		
	comp=E,42µm,0.8s						
ARRO				AML	AML		
	comp=N,53µm,0.8s						
MAGA	**Magasa**	**2.19**	**333**	AML	AML		
	comp=E,148µm,0.8s						
MAGA				AML	AML		
	comp=N,177µm,0.8s						
MAGA				AML	AML		
	comp=E,148µm,0.8s						
MAGA				AML	AML		
	comp=N,177µm,0.8s						

ROM 11 08:56:48.0±0.1**, 43°.809N**±0°.004×**12°.058E**±0°.005**,**
h9^{km}**, ML2.4**/19**, Error ellipse: s-maj=0.5km**
s-min=0.1km az=217.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.18**	**302**	P	Pg	08 56 52.2	+0.5
SFI				S	Sg	08 56 55.6	+1.2
SFI				AML	AML		
	comp=E,2160µm,0.4s						
SFI				AML	AML		
	comp=N,1580µm,0.2s						
SFI				AML	AML		
	comp=E,2165µm,0.4s						
SFI				AML	AML		
	comp=N,1580µm,0.2s						
SFI				AML	AML		
	comp=E,2165µm,0.4s						
SFI				AML	AML		
	comp=N,1580µm,0.2s						
SFI				AML	AML		
	comp=E,2165µm,0.4s						
SFI				AML	AML		
	comp=N,1580µm,0.2s						
CPGN	**Carpegna, Ital**	**0.19**	**92**	P	Pg	08 56 52.9	+0.9
CPGN				S	Sg	08 56 56.1	+1.4
CPGN				AML	AML		
	comp=E,2920µm,0.3s						
CPGN				AML	AML		
	comp=N,1858µm,1.5s						
CPGN				AML	AML		
	comp=E,2918µm,0.3s						
CPGN				AML	AML		
	comp=N,1846µm,1.5s						
CPGN				AML	AML		
	comp=N,1860µm,1.5s						
CPGN				AML	AML		
	comp=E,2920µm,0.3s						
CPGN				AML	AML		
	comp=N,1860µm,1.5s						
CPGN				AML	AML		
	comp=E,2920µm,0.3s						
ASQU	**Asqua**	**0.20**	**266**	P	Pg	08 56 52.7	+0.6
ASQU				S	Sg	08 56 56.1	+1.3
ASQU				AML	AML		
	comp=E,2045µm,0.5s						
ASQU				AML	AML		
	comp=N,4245µm,0.2s						
ASQU				AML	AML		
	comp=N,4245µm,0.2s						
ASQU				AML	AML		
	comp=E,2045µm,0.5s						
ASQU				AML	AML		
	comp=N,4245µm,0.2s						
ASQU				AML	AML		
	comp=E,2045µm,0.5s						
PARC	**Parchiule**	**0.21**	**141**	P	Pg	08 56 52.8	+0.6
PARC				S	Sg	08 56 56.7	+1.6
PARC				AML	AML		
	comp=E,1205µm,0.5s						
PARC				AML	AML		
	comp=N,1355µm,0.7s						
PARC				AML	AML		
	comp=E,1205µm,0.5s						
PARC				AML	AML		
	comp=N,1355µm,0.7s						
PARC				AML	AML		
	comp=E,1205µm,0.5s						
PARC				AML	AML		
	comp=N,1355µm,0.7s						
PARC				AML	AML		
	comp=E,1205µm,0.5s						
PARC				AML	AML		
	comp=N,1355µm,0.7s						
SSP9	**Sansepolcro**	**0.24**	**167**	P	Pg	08 56 53.6	+0.8
SSP9				S	Sg	08 56 58.0	+1.9
SSP9				AML	AML		
	comp=E,966µm,0.6s						
SSP9				AML	AML		
	comp=N,982µm,0.7s						
BADI	**Badiali**	**0.33**	**156**	P	Pg	08 56 55.0	+0.5
BADI				S	Sb	08 57 00.8	-0.7
BADI				AML	AML		
	comp=E,1525µm,0.2s						
BADI				AML	AML		
	comp=N,1410µm,0.2s						
BADI				AML	AML		
	comp=E,1525µm,0.2s						
BADI				AML	AML		
	comp=N,1410µm,0.2s						
BADI				AML	AML		
	comp=N,1410µm,0.2s						
BADI				AML	AML		
	comp=E,1525µm,0.2s						
BADI				AML	AML		
	comp=N,1410µm,0.2s						
BADI				AML	AML		
	comp=E,1525µm,0.2s						
PE3	**Peglio**	**0.34**	**109**	P	Pb	08 56 55.6	-0.6
PE3				S	Sb	08 57 01.4	-0.3
PE3				AML	AML		
	comp=E,2085µm,0.4s						
PE3				AML	AML		
	comp=N,1830µm,0.5s						
PE3				AML	AML		
	comp=E,2085µm,0.4s						
PE3				AML	AML		
	comp=N,1830µm,0.5s						
PE3				AML	AML		
	comp=E,2085µm,0.4s						
PE3				AML	AML		
	comp=N,1830µm,0.5s						
RUFI	**Rufina**	**0.40**	**275**	P	Pg	08 56 56.1	+0.4
RUFI				S	Sb	08 57 02.7	-0.7
RUFI				AML	AML		
	comp=E,2150µm,1.6s						
RUFI				AML	AML		
	comp=N,900µm,0.5s						
RUFI				AML	AML		
	comp=N,900µm,0.5s						
RUFI				AML	AML		
	comp=E,2150µm,1.6s						
RUFI				AML	AML		
	comp=N,900µm,0.5s						
RUFI				AML	AML		
	comp=E,2150µm,1.6s						
NARO	**Abbazia di Nar**	**0.43**	**117**	P	Pg	08 56 56.5	+0.2
NARO				S	Sb	08 57 03.6	-0.7
NARO				AML	AML		
	comp=E,219µm,0.3s						
NARO				AML	AML		
	comp=N,204µm,0.3s						
NARO				AML	AML		
	comp=E,218µm,0.3s						
NARO				AML	AML		
	comp=N,204µm,0.3s						
NARO				AML	AML		
	comp=N,204µm,0.3s						
NARO				AML	AML		
	comp=E,218µm,0.3s						
NARO				AML	AML		
	comp=N,204µm,0.3s						
NARO				AML	AML		
	comp=E,218µm,0.3s						
ATPI	**Pietralunga -**	**0.44**	**145**	P	Pg	08 56 56.5	0.0
ATPI				S	Sb	08 57 03.6	-0.9
ATPI				AML	AML		
	comp=E,334µm,0.9s						
ATPI				AML	AML		
	comp=N,264µm,0.8s						
ATPI				AML	AML		
	comp=E,334µm,0.9s						
ATPI				AML	AML		
	comp=N,264µm,0.8s						
ATPI				AML	AML		
	comp=E,334µm,0.9s						
ATPI				AML	AML		
	comp=N,264µm,0.8s						
BLLA	**Bellaria**	**0.45**	**42**	P	Pg	08 56 57.1	+0.4
BLLA				S	Sb	08 57 05.0	+0.2
CAFI	**Castiglion Fio**	**0.48**	**188**	P	Pg	08 56 58.0	+0.7
CAFI				S	Sb	08 57 05.8	-0.1
CAFI				AML	AML		
	comp=E,374µm,0.5s						
CAFI				AML	AML		
	comp=N,422µm,0.4s						
CAFI				AML	AML		
	comp=N,422µm,0.4s						
CAFI				AML	AML		
	comp=E,374µm,0.5s						
CAFI				AML	AML		
	comp=E,374µm,0.5s						
CAFI				AML	AML		
	comp=N,422µm,0.4s						
ATVO	**AVT- Monte Val**	**0.50**	**149**	P	Pg	08 56 57.9	+0.3
ATVO				S	Sb	08 57 06.4	+0.1
ATVO				AML	AML		
	comp=E,424µm,1.5s						
ATVO				AML	AML		
	comp=N,384µm,1.4s						
ATVO				AML	AML		
	comp=E,424µm,1.5s						
ATVO				AML	AML		
	comp=N,384µm,1.4s						
ATVO				AML	AML		
	comp=E,424µm,1.5s						
ATVO				AML	AML		
	comp=N,384µm,1.4s						
ATMI	**Monte Miggiano**	**0.50**	**162**	P	Pg	08 56 58.0	+0.3
ATMI				S	Sb	08 57 06.0	-0.4
ATMI				AML	AML		
	comp=E,832µm,0.6s						
ATMI				AML	AML		
	comp=N,840µm,0.8s						
ATMI				AML	AML		
	comp=E,832µm,0.6s						
ATMI				AML	AML		
	comp=N,840µm,0.8s						
ATMI				AML	AML		
	comp=N,840µm,0.8s						
ATMI				AML	AML		
	comp=E,832µm,0.6s						
ATMI				AML	AML		
	comp=N,840µm,0.8s						
ATMI				AML	AML		
	comp=E,832µm,0.6s						
BRIS	**BRISIGHELLA**	**0.52**	**311**	P	Pg	08 56 57.6	-0.5
BRIS				S	Sg	08 57 05.1	+0.1
BRIS				AML	AML		
	comp=E,665µm,1.3s						
BRIS				AML	AML		
	comp=N,1032µm,0.3s						
BRIS				AML	AML		
	comp=E,665µm,1.3s						
BRIS				AML	AML		
	comp=N,1032µm,0.3s						
BRIS				AML	AML		
	comp=E,665µm,1.3s						
BRIS				AML	AML		
	comp=N,1032µm,0.3s						
MPAG	**Monte Paganucc**	**0.54**	**109**	P	Pg	08 56 58.6	+0.2
MPAG				AML	AML		
	comp=E,176µm,0.5s						
MPAG				AML	AML		
	comp=N,254µm,1.0s						
MPAG				AML	AML		
	comp=E,176µm,0.5s						
MPAG				AML	AML		
	comp=N,254µm,1.0s						
MPAG				AML	AML		
	comp=E,176µm,0.5s						
MPAG				AML	AML		
	comp=N,254µm,1.0s						
SEI	**Scarperia**	**0.56**	**296**	P	Pg	08 56 59.0	+0.1
SEI				S	Sb	08 57 08.2	-0.1
SEI				AML	AML		
	comp=E,699µm,0.4s						
SEI				AML	AML		
	comp=N,1250µm,0.7s						
SEI				AML	AML		
	comp=E,699µm,0.4s						
SEI				AML	AML		
	comp=N,1250µm,0.7s						
SEI				AML	AML		
	comp=E,699µm,0.4s						
SEI				AML	AML		
	comp=N,1250µm,0.7s						
FRON	**Frontone**	**0.56**	**121**	P	Pg	08 56 59.0	+0.1
FRON				AML	AML		
	comp=E,154µm,0.6s						
FRON				AML	AML		
	comp=N,205µm,0.4s						
FRON				AML	AML		
	comp=N,205µm,0.4s						
FRON				AML	AML		
	comp=E,154µm,0.6s						
FRON				AML	AML		
	comp=N,205µm,0.4s						
FRON				AML	AML		
	comp=E,154µm,0.6s						
PESA	**Pesaro**	**0.58**	**77**	P	Pg	08 56 59.4	+0.2
PESA				AML	AML		
	comp=E,747µm,1.5s						
PESA				AML	AML		
	comp=N,451µm,1.0s						
PESA				AML	AML		
	comp=N,451µm,1.0s						
PESA				AML	AML		
	comp=E,747µm,1.5s						
PESA				AML	AML		
	comp=N,451µm,1.0s						
PESA				AML	AML		
	comp=E,747µm,1.5s						
ATTE	**AVT- Monte Tez**	**0.65**	**161**	P	Pg	08 57 00.5	0.0
ATTE				S	Sb	08 57 10.8	+0.1
ATTE				AML	AML		
	comp=E,265µm,1.2s						
ATTE				AML	AML		
	comp=N,303µm,1.0s						
ATTE				AML	AML		
	comp=N,303µm,1.0s						
ATTE				AML	AML		
	comp=E,265µm,1.2s						
ATTE				AML	AML		
	comp=N,303µm,1.0s						
ATTE				AML	AML		
	comp=E,265µm,1.2s						
MTCR	**Monte La Croce**	**0.80**	**286**	P	Pg	08 57 03.5	+0.2
SACS	**San Casciano d**	**0.97**	**186**	AML	AML		
	comp=N,180µm,0.4s						
SACS				AML	AML		
	comp=E,210µm,1.0s						
SACS				AML	AML		
	comp=N,180µm,0.4s						
SACS				AML	AML		
	comp=E,210µm,1.0s						
SACS				AML	AML		
	comp=N,180µm,0.4s						
SACS				AML	AML		
	comp=E,210µm,1.0s						

IDC ***11*** *08:59:37.9±4.5, 64°.56N×33°.05E, h0*^{km}*, mb1 3.2/4,*
mb1mx3.0/47, mbtmp3.1/4, ML2.3/4, Error ellipse:
s-maj=64.4km s-min=12.7km az=108.0
UPP ***11*** *08:59:43.9±2.4, 64°.58N×30°.80E, h0*^{km}*, ML1.5, Suspected*
explosion
KOLA ***11*** *08:59:43.2, 64°.69N×30°.46E, h0*^{km}
ISCJB ***11*** *08:59:45.6±0.6, 64°.96N±0°.03×30°.39E±0°.09, h0*^{km}*, Error*
ellipse: s-maj=5.9km s-min=3.4km az=19.6
HEL ***11*** *08:59:45.4±0.3, 64°.96N×30°.64E, h0*^{km}*, ML2.0, Explosion*
ISC 11 08:59:45.9±1.1**, 64°.93N**±0°.03×**30°.45E**±0°.05**, h0**^{km}**, n29,**
σ**1°.72**/45**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSF	**Maaselka**	**1.15**	**330**	PN	**Pb**	**09 00 08.5**	**-0.1**
MSF				SN	**Sn**	**09 00 26.1**	**+0.4**
OUL	**Oulu**	**1.94**	**277**	PG	**Pb**	**09 00 21.2**	**-0.8**
	baz=87						
OUL				SB	**Sg**	**09 00 47.7**	**-0.4**
RNF	**Rovaniemi**	**2.49**	**315**	PG	**Pb**	**09 00 30.5**	**-0.9**
	baz=130						
RNF				SG	**Sg**	**09 01 05.0**	**-0.8**
OUF	**Merijarvi**	**2.52**	**260**	PN	**Pn**	**09 00 29.1**	**+1.0**
	baz=79						
OUF				MSG		09 01 02.4	
	comp=Z,8.7nm,0.2s						
OUF				SB	**Sb**	**09 01 04.0**	**+0.5**

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TOF    Tornio             2.80 297   PG      Pb     09 00 36.5  -0.3
TOF                                  MSG            09 01 09.6
       comp=Z,4.4nm,0.2s
TOF                                  SG      Sb     09 01 12.8  +1.2
APA0   Apatity Array      2.88  20   P       Pn     09 00 32.8  -0.2
APA0                                 S       Sn     09 01 09.8  +1.5
APA    Apatity            2.91  23   P       Pn     09 00 33.1  -0.3
APA                                  S       Sn     09 01 10.5  +1.5
SUF    Sumiainen          2.92 223   PN      Pn     09 00 34.3  +0.8
SUF                                  SN      Sn     09 01 11.9  +2.6
SUF                                  MSG            09 01 13.8
       comp=Z,4.0nm,0.2s
KALU   Kalix              3.11 291   P       Pn     09 00 37.9  +1.8
KALU                                 S       Sb     09 01 17.5  -2.9
KALU   Kalix              3.11 291   PG      Pg     09 00 45.7  +0.3
       baz=108
PAJU   Pajala             3.67 308   P       Pn     09 00 45.4  +1.6
PAJU                                 S       Sb     09 01 33.0  -3.4
KEF    Keuruu             3.73 225   PN      Pn     09 00 45.3  +0.7
SJUU   Sjulsmark          3.77 283   P       Pn     09 00 45.5  +0.3
SJUU                                 S       Sn     09 01 33.8  +3.6
ERTU   Ertsjaerv          3.78 299   P       Pn     09 00 47.5  +2.2
ERTU   Ertsjaerv          3.78 299   PB      Pn     09 00 48.8  +3.5
BURU   Burvik             3.90 269   P       Pn     09 00 47.0   0.0
BURU                                 S       Sn     09 01 34.4  +1.0
FIA0   FINESS Array S     4.02 212   PN      Pn     09 00 47.2  -1.4
       baz=32
FIA0                                 SB      Sb     09 01 47.8  +1.3
FINES  FINESS Array B     4.02 212   Pn      Pn     09 00 45.5  -3.1
       comp=Z,0.1nm,0.3s,baz=39,slow=13,SNR=4.6
FINES                                Pg      Pb     09 00 55.7  -1.7
       comp=Z,0.3nm,0.3s,baz=42,slow=15,SNR=7.2
FINES                                Sn      Sn     09 01 39.1  +2.8
       comp=Z,0.4nm,0.3s,baz=44,slow=20,SNR=2.9
FINES                                Lg      Lg     09 01 48.7
       comp=Z,1.1nm,0.3s,baz=33,slow=27,SNR=12
HARU   Harads             4.13 292   P       Pn     09 00 51.9  +1.8
MASU   Masugnsbyn         4.26 310   P       Pn     09 00 54.4  +2.4
UMAU   Umeaa              4.37 261   P       Pn     09 00 52.0  -1.4
HEF    Hetta              4.42 325   SG      Sg     09 02 05.3  -2.3
LILU   Lilltraesk         4.50 279   P       Pn     09 00 55.6  +0.5
VJF    Virojoki           4.60 198   SB      Sb     09 02 04.2  +1.0
LANU   Lannavaara         4.62 317   SN      Sn     09 01 48.6  -2.4
SVAU   Svanoeiden         4.69 270   P       Pn     09 00 57.4  -0.3
ARCES  ARCESS Array B     5.01 340   Pn      Pn     09 01 02.8  +0.6
       comp=Z,0.7nm,0.3s,baz=151,slow=13,SNR=44
ARCES                                Sn      Sn     09 02 01.9  +1.1
       comp=Z,0.3nm,0.3s,baz=142,slow=24,SNR=5.7
ARCES                                Lg      Lg     09 02 23.0
       comp=Z,0.6nm,0.3s,baz=161,slow=33,SNR=6.3
HFS    Hagfors            9.10 246   Pn      Pn     09 01 57.2  -1.0
       comp=Z,0.0nm,0.3s,baz=52,slow=17,SNR=3.9
NOA    NORSAR Array B     9.56 255   Pn      Pn     09 02 04.7   0.0
       comp=Z,0.0nm,0.3s,baz=57,slow=12,SNR=2.7
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*ANF **11** 09:06:18.8±0.5, 32°.57N×115°.65W, h28km±2km, ML2.4/12, Error ellipse: s-maj=3.6km s-min=2.0km az=169.0*
*ISCJB **11** 09:06:19.3±0.4, 32°.56N±0°.03×115°.64W±0°.02, h24km±5km, Error ellipse: s-maj=4.6km s-min=3.4km az=7.7*
*ECX **11** 09:06:20.6±0.5, 32°.55N×115°.68W, h4km, MD2.7, ML2.9*
*SCEDC **11** 09:06:20.1, 32°.55N×115°.66W, h10km*
*MEX **11** 09:06:20.7±0.8, 32°.65N×115°.64W, h10km, MD3.4*
ISC 11 09:06:18.2±1.2, **32°.59N**±0°.03×**115°.65W**±0°.02, **h14**km±10km, **n26**, σ**0.86**/43, **8C-4D, California-Baja California border region**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s    ISC
UABX   UABC, Campus M     0.18  75 ⇑iP      Pb     09 06 24.8  +1.4
WESC   Westside Schoo     0.18 339 ⇓iP      Pb     09 06 24.8  +1.3
YUH    Yuha Desert        0.23 285 ⇑iP      Pb     09 06 24.8  +0.5
DREC   Desert Rsrch C     0.28  38 ⇑eP      Pn     09 06 26.8  -1.2
CPBX   Cerro Prieto       0.34 119 ⇑eP      Pb     09 06 26.8  +0.7
CPBX                                eS      Sb     09 06 32.1  +0.8
CPBX                                e              09 06 34.6
CPBX                                 IAML          09 06 34.6
       comp=E,4µm,0.2s
CPBX                                e              09 06 35.5
CPBX                                 IAML          09 06 35.5
       comp=N,3µm,0.2s
RMX    La Rumorosa        0.36 273 ⇑iP      Pb     09 06 26.4  -0.1
RMX                                 eS      Sg     09 06 30.8  +0.1
RMX                                  IAML          09 06 31.0
       comp=N,2µm,0.2s
RMX                                ⇑e              09 06 31.0
RMX                                  IAML          09 06 31.1
       comp=E,2µm,0.2s
RMX                                ⇓e              09 06 31.1
SWSC   Sam W. Stewart     0.38 341   P       Pb     09 06 27.8  +1.1
       baz=164,SNR=16
SWSC                                 S       Sb     09 06 33.6  +1.1
       baz=164
SWSC   Sam W. Stewart     0.38 341 ⇓eP      Pb     09 06 27.9  +1.1
IKP    In-Ko-Pah, Jac     0.39 280   P       Pb     09 06 27.6  +0.6
       baz=105,SNR=70
IKP                                  S       Sb     09 06 33.1  +0.2
       baz=105
IKP    In-Ko-Pah, Jac     0.39 280 ⇑eP      Pb     09 06 27.6  +0.6
IKP                                 eS      Sb     09 06 33.0  +0.2
CRR    Carrizo Plain      0.40 319 ⇓iP      Pb     09 06 28.3  +1.1
MONP2  Monument Peak      0.72 296   P       Pn     09 06 33.6  -0.6
       baz=118,SNR=46
MONP2                                S       Sb     09 06 43.0  +0.6
       baz=118
GLA    Glamis             0.84  56   P       Pn     09 06 35.0  -0.7
       baz=235,SNR=17
GLA                                  S       Sb     09 06 46.0  +0.2
       baz=235
TJIG   Tijuana            0.88 260  eP      Pb     09 06 35.8  +0.5
TJIG                                eS      Sb     09 06 47.0  +0.2
CBX    Cerro Bola         0.90 253  eP      Pb     09 06 36.0  +0.4
CBX                                 eS      Sg     09 06 47.2  -0.2
CBX    Cerro Bola         0.90 253 ⇑eP      Pn     09 06 36.4  -0.1
CBX                                 eS      Sb     09 06 48.1  +0.6
CBX                                  IAML          09 06 50.8
       comp=N,297nm,0.3s
BC3    Big Chuckawall     1.08   9   S       Sb     09 06 53.2  +0.4
       baz=189
PFO    Pinyon Flats O     1.23 327   Pb      Pb     09 06 41.3   0.0
       baz=148,SNR=8.1
PFO                                  S       Sb     09 06 56.8  -0.3
       baz=148
109C   Camp Elliot, M     1.26 284   Pb      Pg     09 06 42.1  -0.4
       baz=105,SNR=19
109C                                 Sb      Sg     09 06 58.9  -0.1
       baz=105
Y12C   Blythe             1.50  39   Sb      Sg     09 07 06.7  +0.1
       baz=219
SPIG   San Pedro Mart     1.54 174  eP      Pn     09 06 45.7   0.0
SPIG                                eS      Sn     09 07 06.2  +0.6
SPX    San Pedro Mart     1.54 174  eP      Pn     09 06 44.8  -0.9
SPX                                 eS      Sn     09 07 05.8  +0.2
MURC   Murrieta           1.64 308   Pb      Pg     09 06 49.8   0.0
       baz=129,SNR=10
MURC                                 Sb      Sg     09 07 11.3  +0.1
       baz=129
BFSC   Mount Baldy Ra     2.35 315   Sb      Sg     09 07 32.0  -1.9
       baz=135
CIS    Catalina Islan     2.46 290   Pb      Pb     09 07 02.8  +0.5
       baz=110
CIS                                  Sb      Sb     09 07 34.7  +2.3
       baz=110
214A   Organ Pipe Nat     2.49 104   P       Pn     09 06 57.4  -0.9
       baz=285
214A                                 S       Sn     09 07 27.0  -1.6
       baz=285
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*KRAR **11** 09:06:36.6±0.3, 53°.64N×87°.82E, M2.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **11** 09:06:38.4±3.0, 53°.51N×87°.91E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=23.0km s-min=11.0km az=63.0, Suspected Mining explosion.*
*IDC **11** 09:06:40.1±2.4, 53°.51N×87°.79E, h0km, mb1 3.6/3, mb1mx3.3/38, mbtmp3.3/35, Error ellipse: s-maj=21.2km s-min=12.7km az=61.0*
ISC 11 09:06:38.5±2.8, **53°.7N**±0°.1×**87°.8E**±0°.1, **h0**km, **n13**, σ**2.56**/16, **5C-5D, Southwestern Siberia**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s    ISC
I46RU  ZALESOVO INFRA     1.79 280  i              09 18 25.0
       baz=98,slow=310,SNR=11
ZAA0   Zalesovo Array     1.79 280 ⇓P       Pb     09 07 11.0  -1.2
       2.8nm,0.7s
ZAA0                               ⇑S       Sg     09 07 37.5  +1.4
       18nm,1.1s
ZALV   Zalesovo Beam      1.79 280   Pg      Pb     09 07 11.5  -0.7
       4.8nm,0.3s,baz=99,slow=15,SNR=34
ZALV                                 Lg      Lg     09 07 38.0
       9.4nm,0.3s,baz=105,slow=24,SNR=23
SEM    Semipalatinsk      5.69 238   Pg      Sn     09 09 16.9  +6.4
       7.1nm,0.1s
SEM                                  Lg      Lg     09 09 42.8
       29nm,0.4s
KURBB  Kurchatov Arra     6.47 246   Pn      Pn     09 08 15.9  +1.0
       0.4nm,0.3s,baz=62,slow=14,SNR=42
KURBB                                Sn      Sn     09 09 28.6  -0.8
       0.1nm,0.3s,baz=63,slow=24,SNR=4.6
KURBB                                Lg      Lg     09 10 04.4
       0.1nm,0.3s,baz=63,slow=33,SNR=10
KURBB  Kurchatov Arra     6.47 246 ⇓Pn      Pn     09 08 15.8  +1.0
       8.5nm,0.6s
KURBB                              ⇑Sn      Sn     09 09 27.7  -1.6
       15nm,0.7s
KURBB                              ⇑Lg      Lg     09 10 03.2
       31nm,0.7s
ZSN    Zaisan             6.50 198   Pg      Sn     09 09 31.6  +1.5
       2.3nm,0.2s
ZSN                                  Lg      Lg     09 10 08.4
       4.5nm,0.5s
MK31   Makanchi Array     7.73 209 ⇑Pn      Pn     09 08 33.0  +0.8
       0.4nm,0.3s,baz=29,slow=13,SNR=24
MK31                               ⇓Sn      Sn     09 09 58.2  -2.3
       3.0nm,0.9s,baz=33,slow=22,SNR=4.3
MK31                               ⇑Lg      Lg     09 10 40.7
       6.2nm,0.8s,baz=34,slow=31,SNR=5.3
MKAR   Makanchi Array     7.73 209   Pn      Pn     09 08 33.2  +1.0
       0.5nm,0.3s,baz=26,slow=13,SNR=18
MKAR                                 Sn      Sn     09 09 58.8  -1.7
       0.3nm,0.3s,baz=30,slow=20,SNR=5.6
MKAR                                 Lg      Lg     09 10 40.3
       0.2nm,0.3s,baz=30,slow=35,SNR=5.8
MAKZ   Makanchi           7.81 211 ⇓Sn      Sn     09 10 00.3  -2.2
       1.7nm,0.6s
MAKZ                               ⇓Lg      Lg     09 10 41.0
       8.4nm,0.9s
TLY    Talaya             9.82  95   Lg      Lg     09 11 50.8
       0.0nm,0.3s,baz=209,slow=18,SNR=3.4
KAPS   Kapalarasan       10.02 217   Pg      Pn     09 09 45.2  +42
       0.8nm,0.2s
KAPS                                 Lg      Lg     09 10 31.6
       3.8nm,0.5s
BVAR   Borovoye Array    10.44 274   Pn      Pn     09 09 10.9  +1.6
       0.5nm,0.3s,baz=76,slow=15,SNR=7.3
BVAR                                 Sn      Sn     09 11 02.9  -4.0
       0.3nm,0.3s,baz=84,slow=24,SNR=5.8
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*ISCJB **11** 09:16:43.6±0.3, 16°.31N±0°.06×46°.56W±0°.06, h13km, mb4.4/48, MS3.5/11, Error ellipse: s-maj=9.6km s-min=7.1km az=150.4*
*NEIC **11** 09:16:44.5±2.5, 16°.32N×46°.48W, h10km, mb4.7/36, Error ellipse: s-maj=20.4km s-min=17.5km az=144.0*
*IDC **11** 09:16:44.6±0.6, 16°.02N×46°.02W, h0km, mb4.1/19, mb1 4.3/21, mb1mx4.2/44, mbtmp4.2/21, ML4.6/2, MS3.5/13, Ms1 3.5/13, ms1mx3.3/41, Error ellipse: s-maj=26.8km s-min=12.6km az=127.0*
ISC 11 09:16:45.9±0.5, **16°.30N**±0°.08×**46°.56W**±0°.10, **h13**km, **n74**, σ**1.41**/60, **mb4.5**/48, **MS3.4**/11, **Northern Mid-Atlantic Ridge**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s    ISC
MDP    Montagnes des     12.62 209   Pn      Pn     09 19 46.1  +0.8
       1.1nm,0.3s,baz=16,slow=15,SNR=17
MDP                                  Sn      Sn     09 21 56.5  -9.4
       0.2nm,0.3s,baz=122,slow=20,SNR=4.2
MDP                                  LR      LR     09 23 47.4
       comp=Z,107nm,21.2s,baz=31,slow=33
SVB    Belmont           14.52 260  ePn     Pn     09 20 09.0  -2.3
GRGR   Grenville         15.21 256  ePn     Pn     09 20 17.8  -2.7
       183nm,1.1s
MTP    Monte Pirata      18.24 278  eP      Pn     09 20 58.9   0.0
       26nm,1.0s
SJG    San Juan          18.80 278   P       Pn     09 21 12.1  +6.3
       5.1nm,0.3s,baz=108,slow=8.3,SNR=3.3
SJG                                  LR      LR     09 27 01.7
       comp=Z,186nm,21.4s,baz=84,slow=32
PTGA   Pitinga           21.48 219   P       P      09 21 35.2  +0.8
       7.1nm,0.8s,baz=38,slow=15,SNR=12
PTGA                                 LR      LR     09 29 01.0
       comp=Z,136nm,21.7s,baz=38,slow=34
PTGA   Pitinga           21.48 219  eP      P      09 21 35.5  +1.1
       18nm,1.1s
ROSC   El Rosal          29.52 250   LR      LR     09 36 27.7
       comp=Z,55nm,18.5s,baz=81,slow=40
BDFB   Brasilia          31.77 183   P       P      09 23 09.1  -1.0
       1.0nm,0.3s,baz=175,slow=26,SNR=2.0
Z56A   Williston         35.65 305  eP      P      09 23 44.5  +0.8
       24nm,1.0s
LPAZ   La Paz            38.74 214   P       P      09 24 11.4  +0.5
       3.7nm,0.8s,baz=14,slow=5.6,SNR=15
LPAZ                                 LR      LR     09 40 00.3
       comp=Z,37nm,19.7s,baz=30,slow=36
LPAZ   La Paz            38.74 214  eP      P      09 24 11.6  +0.8
H10N3  ASCENSION HYDR39.77 125       T       T      10 06 41.6
       baz=307,slow=75,SNR=128
H10N2  ASCENSION HYDR39.77 125       T       T      10 06 41.9
       baz=307,slow=75,SNR=133
H10N1  ASCENSION HYDR39.79 125       T       T      10 06 43.1
       baz=307,slow=75,SNR=147
H10S3  ASCENSION HYDR40.32 126       T       T      10 07 23.5
       baz=308,slow=75,SNR=136
H10S1  ASCENSION HYDR40.33 126       T       T      10 07 23.8
       baz=308,slow=75,SNR=130
H10S2  ASCENSION HYDR40.34 126       T       T      10 07 24.8
       baz=308,slow=75,SNR=129
SCHQ   Schefferville     41.53 342   LR      LR     09 39 41.8
       comp=Z,34nm,18.4s,baz=72,slow=33
DBIC   Dimbokro          41.89  98   LR      LR     09 38 34.6
       comp=Z,105nm,20.9s,baz=252,slow=32
E46A   Sault Ste Mari    43.37 322  eP      P      09 24 47.3  -0.6
       11nm,1.0s
CPUP   Villa Florida     43.65 194   P       P      09 24 50.4  +0.1
       9.5nm,0.8s,baz=20,slow=7.6,SNR=21
CPUP   Villa Florida     43.65 194  eP      P      09 24 50.6  +0.3
ESDC   Sonseca Array     43.70  49   P       P      09 24 49.8  -1.0
       0.4nm,0.4s,baz=251,slow=8.0,SNR=4.7
ESDC                                 LR      LR     09 41 03.8
       comp=Z,45nm,18.3s,baz=125,slow=34
TOA1   Torodi Ar. Sit    46.69  87  eP      P      09 25 11.6  -3.2
TORD   Torodi Ar. Bea    46.69  87   P       P      09 25 11.6  -3.3
       1.8nm,0.9s,baz=304,slow=7.1,SNR=9.1
TORD                                 LR      LR     09 42 25.3
       comp=Z,121nm,20.8s,baz=300,slow=33
ULM    Lac du Bonnet     52.00 322   P       P      09 25 55.8  +0.9
       1.9nm,0.4s,baz=101,slow=6.1,SNR=4.7
ULM                                  LR      LR     09 44 40.6
       comp=Z,49nm,21.7s,baz=138,slow=32
TXAR   Lajitas Array     53.75 295   P       P      09 26 08.8  +0.5
       0.7nm,0.4s,baz=121,slow=7.7,SNR=7.2
TXAR                                 PcP     PcP    09 27 14.4   0.0
       0.3nm,0.5s,baz=111,slow=6.9,SNR=5.1
TXAR                                 LR      LR     09 49 48.1
       comp=Z,31nm,19.2s,baz=0.0,slow=36
BFO    Black Forest      54.81  42  eP      P      09 26 12.6  -3.1
       4.4nm,0.7s
GERES  GERESS Array B    58.40  42   P       P      09 26 39.4  -1.8
       1.9nm,0.2s,baz=113,slow=3.0,SNR=4.6
CLL    Collm             58.50  39  eP      P      09 26 41.0  -0.8
       comp=Z,7.0nm,1.1s
CLL                                 esP     sP     09 26 48.0  +1.8
PDAR   Pinedale Array    59.36 310   P       P      09 26 47.7  -0.5
       comp=Z,1.8nm,1.0s,baz=112,slow=6.9,SNR=9.4
RLMT   Red Lodge         59.42 313  eP      P      09 26 48.9  +0.2
       comp=Z,9.6nm,1.3s
SRU    San Rafael Swe    59.79 306  eP      P      09 26 50.6  -0.6
       comp=Z,4.1nm,1.2s
TUC    Tucson            59.87 298  eP      P      09 26 52.0  +0.3
       comp=Z,6.2nm,1.4s
VRAC   Vranov            60.35  42   P       P      09 26 54.4  -0.3
       comp=Z,1.4nm,0.3s,baz=4.8,slow=8.7,SNR=2.5
WUAZ   Wupatki           60.35 302  eP      P      09 26 55.7  +0.6
       comp=Z,7.4nm,1.2s
NB200  NORSAR Array S    60.47  28  eP      P      09 26 54.7  -0.6
NOA    NORSAR Array B    60.47  28   P       P      09 26 54.7  -0.6
       comp=Z,1.2nm,0.9s,baz=246,slow=6.7,SNR=2.6
YMR    Madison River     60.57 312  eP      P      09 26 57.1  +0.6
       comp=Z,11nm,1.2s
MODS   Modra-Piesok      60.65  43  eP      P      09 26 56.8  +0.1
YHB    Horse Butte       60.74 312  eP      P      09 26 57.4  -0.3
       comp=Z,9.7nm,0.9s
PLCA   Paso Flores       60.96 201   P       P      09 26 58.9  +0.1
       comp=Z,1.1nm,0.8s,baz=26,slow=12,SNR=3.2
MTPU   Mount Pierson     61.05 305  eP      P      09 27 01.3  +1.2
       comp=Z,2.4nm,1.0s
HFS    Hagfors           61.32  30   P       P      09 27 01.0   0.0
       comp=Z,1.8nm,0.6s,baz=224,slow=5.6,SNR=3.8
SPUT   South Promonto    61.39 308  eP      P      09 27 01.8  -0.2
       comp=Z,12nm,1.1s
VYHS   Vyhne             61.69  43  eP      P      09 27 06.5  +2.7
BGU    Big Grassy Mou    61.81 308  eP      P      09 27 03.9  -1.0
       comp=Z,10nm,1.1s
PSUT   Pine Spring       62.38 305  eP      P      09 27 08.2  -0.6
       comp=Z,3.9nm,1.0s
HLID   Hailey            62.96 311  eP      P      09 27 10.8  -1.8
       comp=Z,3.5nm,1.0s
R11A   Troy Canyon, C    63.73 305  eP      P      09 27 15.7  -2.1
       comp=Z,2.6nm,1.0s
NEW    Newport           65.10 316  eP      P      09 27 25.7  -0.7
       comp=Z,9.1nm,0.9s
YKA    Yellowknife Ar    65.56 332   P       P      09 27 27.8  -1.3
       comp=Z,1.3nm,0.8s,baz=104,slow=7.2,SNR=7.3
YKB5   Yellowknife Ar    65.56 332  eP      P      09 27 27.8  -1.3
NV01   Mina Array Sit    65.87 305  eP      P      09 27 37.1  +5.4
NVAR   Mina Array Bea    65.87 305   P       P      09 27 37.1  +5.4
       comp=Z,0.6nm,0.8s,baz=96,slow=6.6,SNR=5.8
NVAR                                 LR      LR     09 55 26.4
       comp=Z,48nm,19.9s,baz=198,slow=35
MLR    Muntele Rosu      66.34  47   P       P      09 27 35.1  +0.5
       comp=Z,0.6nm,0.4s,baz=271,slow=16,SNR=3.0
FIA0   FINESS Array S    67.53  30  eP      P      09 27 42.4  +0.8
FINES  FINESS Array B    67.53  30   P       P      09 27 42.4  +0.8
       comp=Z,2.6nm,0.8s,baz=261,slow=8.3,SNR=5.4
AKASG  Malin Array Be    68.58  41   P       P      09 27 43.4  -5.0
       comp=Z,0.2nm,0.2s,baz=273,slow=5.1,SNR=4.7
BR101  Keskin Array S    72.33  53  eP      P      09 28 11.4  -0.3
BRTR   Keskin Array B    72.33  53   P       P      09 28 11.4  -0.3
       comp=Z,0.7nm,0.7s,baz=255,slow=4.7,SNR=4.2
KBZ    Khabaz            78.54  48   P       P      09 28 48.4  +1.3
       comp=Z,0.8nm,0.3s,baz=241,slow=6.5,SNR=4.2
ILB    Eielson Array     79.74 335  eP      P      09 28 51.9  -1.5
       comp=Z,7.4nm,0.9s
CCB    Clear Creek Bu    80.15 335  eP      P      09 28 54.0  -1.5
       comp=Z,6.0nm,1.0s
WRH    Wood River Hil    80.32 334  eP      P      09 28 55.1  -1.4
       comp=Z,8.0nm,1.0s
SCM    Sheep Creek Mo    80.78 332  eP      P      09 28 56.7  -2.4
       comp=Z,7.4nm,0.8s
LBTB   Lobatse           81.39 119   LR      LR     09 56 29.8
       comp=Z,67nm,19.3s,baz=272,slow=30
BPAW   Bear Paw Mtn.     81.64 335  eP      P      09 29 02.3  -1.3
       comp=Z,4.4nm,1.0s
KTH    Kantishna Hill    81.80 334  eP      P      09 29 03.1  -1.4
       comp=Z,15nm,1.3s
ARU    Arti              84.68  33   P       P      09 29 21.1  +1.7
       comp=Z,2.8nm,0.2s,baz=287,slow=18,SNR=5.1
AKTO   Aktyubinsk        86.57  38   P       P      09 29 28.9   0.0
       comp=Z,1.3nm,0.8s,baz=298,slow=3.3,SNR=4.0
ABKAR  Akbulak array     88.17  39  eP      P      09 29 35.8  -0.9
       comp=Z,11nm,1.8s
KURBB  Kurchatov Arra    97.86  32   P       P      09 30 21.2  -0.1
       comp=Z,0.1nm,0.5s,baz=327,slow=6.7,SNR=3.2
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*MEX **11** 09:30:57.8±0.3, 14°.46N×92°.80W, h12km±11km, MD3.7*
*GCG **11** 09:30:58.6±0.3, 14°.42N×92°.57W, h35km±999km, MD4.0*
ISC 11 09:30:55.0±2.4, **14°.5N**±0°.1×**92°.73W**±0°.07, **h19**km±7km, **n8**, σ**0.86**/14, **Near coast of Chiapas**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s    ISC
THIG                      0.62  46  eP      Pn     09 31 09.2  +0.3
THIG                                eS      Sn     09 31 17.9  -0.4
STG3   Santiaguito 3,     1.15  78  eP      Pg     09 31 16.9  -0.4
PCIG                      1.31 339  eP      Pn     09 31 18.0  -0.3
PCIG                                i S     Sn     09 31 34.0  -1.3
FUG    Fuego 3            1.83  90  eP      Pn     09 31 26.0  +0.4
FUG                                 eS      Sn     09 31 47.5  -0.8
CCIG   Comitan            1.89  18  i P     Pn     09 31 27.9  +1.4
CCIG                                eS      Sn     09 31 49.4  -0.4
PCG    Pacaya             2.06  92  eP      Pn     09 31 29.6  +0.8
TGIG                      2.33 351  i P     Pn     09 31 32.8  +0.5
TGIG                                i S     Sn     09 32 00.7  +0.2
CMIG   Matias Romero      3.33 322  eP      Pn     09 31 47.0  +0.9
CMIG                                eS      Sn     09 32 24.8  -0.4
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*AAE **11** 09:45:39.8±22.0, 13°.39N×50°.15E, h0km±999km*
*GCMT **11** 09:46:05.9±0.2, 12°.73N±0°.01×48°.00E±0°.01, h12km, MW5.2/99, Moment Tensor Solution. s58,c89; s99,c173; Duration: 1.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.10±.01; $M_{\theta\theta}$0.74±.01; $M_{\phi\phi}$-0.63±.01; $M_{r\theta}$0.15±.04; $M_{\theta\phi}$0.34±.01; $M_{\phi r}$0.14±.04; Best double couple: $M_0$0.79400×10^{17} NP1:ϕ_s32.00000°,δ89.00000°, λ166.00000°. NP2:ϕ_s122.00000°,δ76.00000°,λ1.00000°. Principal axes: T 0.8530, Plg11.0000°, Azm346.0000°; N -0.1180, Plg76.0000°, Azm209.0000°; P -0.7360, Plg10.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **11** 09:46:05.2±0.0, 12°.31N×47°.64E, h10km, mb4.9/53, mB5.2/42, Ms5.0/41, Ms7 4.7/40*
*IDC **11** 09:46:08.7±0.4, 12°.57N×48°.07E, h0km, mb4.6/41, mb1 4.7/44, mb1mx4.7/51, mbtmp4.6/44, ML4.1/3, MS4.6/33, Ms1 4.6/33, ms1mx4.5/38, Error ellipse: s-maj=11.8km s-min=10.6km az=102.0*
*OMAN **11** 09:46:08.4±4.2, 12°.41N×48°.25E, h4km±32km, mb5.6/3, Error ellipse: s-maj=51.1km s-min=16.0km az=316.0*
*MOS **11** 09:46:09.5±0.9, 12°.60N×48°.12E, h17km, mb5.1/55, MS4.7/20, Error ellipse: s-maj=8.9km s-min=4.4km az=96.1*
*ISCJB **11** 09:46:09.3±0.2, 12°.61N±0°.03×48°.10E±0°.02, h15km, mb4.8/149, MS4.7/66, Error ellipse: s-maj=4.3km s-min=3.3km az=176.4*
*NEIC **11** 09:46:10.9±2.3, 12°.67N×47°.97E, h10km, mb5.0/72, Error ellipse: s-maj=15.0km s-min=7.7km az=130.0*
ISC 11 09:46:11.8±0.6, **12°.60N**±0°.04×**48°.08E**±0°.04, **h17**km±3km, **h18**km**:pP-P, n393**, σ**1.81**/446, **mb4.9**/150, **MS4.6**/67, **37C-25D, Eastern Gulf of Aden**

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Code   Station Name       Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s    ISC
DAMY   Dhamar             4.08 299  ePn     Pn     09 47 10.6  -3.2
ATD    Arta Tunnel        5.22 259   Pn      Pn     09 47 27.4  -1.8
       32nm,0.3s,baz=68,slow=9.3,SNR=47
ATD                                  Sn      Sn     09 48 28.4  -0.7
       baz=96,slow=19,SNR=1.0
ATD                                  LR      LR     09 48 57.5
       comp=Z,11µm,18.3s,baz=79,slow=32
ATD    Arta Tunnel        5.22 259  ePn     Pn     09 47 26.1  -3.1
ATD    Arta Tunnel        5.22 259   P       Pn     09 47 26.9  -2.3
       SNR=12
ATD    Arta Tunnel        5.22 259  eP      Pn     09 47 25.1  -4.2
ATD                                 eS      Sb     09 48 43.3  -2.0
ABTO   Aybut              6.91  46   P       Pn     09 47 48.4  -4.1
WHFO   Wadi Hawf          7.63  45   P       Pn     09 48 00.7  -1.6
RBK    Rabkut             7.67  50   P       Pn     09 47 59.8  -3.1
DESE   Dese               8.39 261  i P     Pn     09 48 14.4  +1.3
DESE                                eS      Sb     09 50 08.4  -8.2
DESE   Dese               8.39 261  i P     Pn     09 48 14.4  +1.3
DESE                                eS      Sb     09 50 08.4  -8.2
DESE   Dese               8.39 261  eP      Pn     09 48 14.7  +1.7
DESE                                eS      Sb     09 50 06.7   -10
ANKE   Ethiopia-Afar      8.71 251  i P     Pn     09 48 16.1  -1.4
ANKE                                i S     Sn     09 50 05.8   +10
ANKE   Ethiopia-Afar      8.71 251  i P     Pn     09 48 16.1  -1.4
ANKE                                i S     Sn     09 50 05.8   +10
ANKE   Ethiopia-Afar      8.71 251  eP      Pn     09 48 15.5  -2.0
ANKE                                eS      Sn     09 50 30.5   +35
AAE    Adis Abeba         9.81 250  eP      Pn     09 48 33.4  +1.0
AAE                                 eS      Sn     09 50 33.7   +11
AAE    Adis Abeba         9.81 250  eP      Pn     09 48 33.4  +1.0
AAE                                 eS      Sn     09 50 33.7   +11
AAE    Adis Abeba         9.81 250  eP      Pn     09 48 34.0  +1.5
AAE                                 eS      Sn     09 51 02.5   +40
FURI   Furi               9.94 249  ePn     Pn     09 48 33.9  -0.4
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FURI	Furi	9.94	249	eP	Pn	09 48 35.7	+1.4
FURI				eS	Sn	09 50 33.2	+7.6
RAYN	Ar Rayn	11.13	348	ePn	Pn	09 48 47.7	-2.7
RAYN	Ar Rayn	11.13	348	eP	Pn	09 48 47.7	-2.7
MHTO	MHTO	12.62	47	P	Pn	09 49 10.5	0.0
BSY	Bisya	13.31	39	P	Pn	09 49 19.8	-0.3
SMDO	Samad	14.08	41	P	Pn	09 49 30.5	-0.2
	SNR=7.9						
ASHO	Ashiyiah	14.20	31	P	Pn	09 49 32.3	+0.1
BIDO	Bidbid	14.46	40	P	Pn	09 49 34.6	-1.2
	SNR=7.8						
UOSS	Minazif	14.48	31	ePn	Pn	09 49 37.9	+1.8
UOSS	Minazif	14.48	31	P	Pn	09 49 36.0	-0.1
WSAR	Wadi Sarin	14.58	42	Pn	Pn	09 49 37.5	0.0
	0.4nm,0.3s,baz=262,slow=14,SNR=3.7						
WSAR				LR	LR	09 55 03.6	
	comp=Z,4µm,19.3s,baz=240,slow=37						
MDH	Madha	14.83	30	P	Pn	09 49 41.2	+0.4
KMBO	Kilima Mbogo	17.36	219	P	Pn	09 50 11.2	-2.5
	0.2nm,0.3s,baz=28,slow=14,SNR=10.0						
KMBO				LR	LR	09 56 37.3	
	comp=Z,2µm,20.6s,baz=16,slow=36						
KMBO	Kilima Mbogo	17.36	219	ePn	Pn	09 50 11.2	-2.5
KMBO				eP	P	09 50 11.4	-3.6
KMBO	Kilima Mbogo	17.36	219	ceP	Pn	09 50 12.1	-1.6
KMBO				pmax	pmax		
	comp=Z,11nm,0.9s						
KMBO	Kilima Mbogo	17.36	219	P	Pn	09 50 12.4	-1.3
EIL	Elat	20.90	326	P	P	09 50 53.5	0.0
	comp=Z,12nm,0.8s,baz=144,slow=5.9,SNR=6.3						
EIL				LR	LR	09 57 47.5	
	comp=Z,3µm,21.7s,baz=150,slow=33						
HRFI	Mount Harif	21.14	327	P	P	09 50 55.7	-0.4
MBAR	Mbarara	21.63	234	eP	P	09 51 01.8	+0.2
	comp=Z,61nm,1.2s						
MBAR	Mbarara	21.63	234	eP	P	09 51 01.8	+0.2
MBAR				pmax	pmax		
	comp=Z,61nm,1.2s						
ASF	Jabal al Asfar	22.02	334	P	P	09 51 06.7	+1.1
	comp=Z,14nm,1.0s,baz=125,slow=3.5,SNR=15						
ASF	Jabal al Asfar	22.02	334	P	P	09 51 06.6	+1.1
	comp=Z,51nm,1.3s						
KZIT	Kziot	22.17	327	P	P	09 51 09.5	+2.4
MMLI	Mount Malkishu	22.91	332	P	P	09 51 16.7	+1.8
MMAI	Mount Meron Ar	23.40	332	P	P	09 51 21.1	+1.1
	comp=Z,1.6nm,0.3s,baz=139,slow=7.7,SNR=7.4						
MMAI				LR	LR	09 59 50.6	
	comp=Z,3µm,18.4s,baz=150,slow=35						
KSDI	Kefar Szold	23.43	333	P	P	09 51 19.5	-0.7
	comp=Z,83nm,1.4s						
GEYT	Alibeck	26.77	18	P	P	09 51 50.5	-0.3
	comp=Z,11nm,0.7s,baz=211,slow=10.0,SNR=8.0						
GEYT				LR	LR	10 03 53.3	
	comp=Z,2µm,21.0s,baz=195,slow=40						
GYA0B	ALIBECK ARRAY	26.77	18	eP	P	09 51 50.4	-0.4
	comp=Z,53nm,1.4s						
GNI	Garni	27.60	354	P	P	09 51 59.2	+0.8
	comp=Z,3.7nm,0.3s,baz=10,slow=20,SNR=2.1						
GNI				LR	LR	10 04 21.8	
	comp=Z,4µm,19.4s,baz=160,slow=40						
GNI	Garni	27.60	354	eP	P	09 51 59.9	+1.5
	comp=Z,55nm,1.2s						
GNI	Garni	27.60	354	eP	P	09 51 59.9	+1.5
GNI				pmax	pmax		
	comp=Z,55nm,1.2s						
AKT	Akhty	28.77	359	eP	P	09 52 09.2	+0.4
AKT				e		09 53 01.5	
AKT				pmax	pmax		
	comp=Z,22nm,1.0s						
KBL	Kabul	28.97	38	eP	P	09 52 12.0	+1.2
	comp=Z,12nm,1.0s						
KBL	Kabul	28.97	38	eP	P	09 52 12.0	+1.2
KBL				pmax	pmax		
	comp=Z,12nm,1.0s						
AKH	Akhalkalaki	28.98	353	eP	P	09 52 11.8	+1.1
	comp=Z,20nm,1.1s						
AKH	Akhalkalaki	28.98	353	⇓iP	P	09 52 13.1	+2.4
AKH	Akhalkalaki	28.98	353	eP	P	09 52 11.8	+1.1
AKH				pmax	pmax		
	comp=Z,20nm,1.1s						
HYB	Hyderabad	29.80	77	i P	P	09 52 21.5	+3.3
BR101	Keskin Array S	29.88	337	ePcP	PcP	09 55 22.8	+1.2
BR131	Keskin Array S	29.88	337	eP	P	09 52 18.7	+0.1
	comp=Z,14nm,0.9s						
BR131	Keskin Array S	29.88	337	P	P	09 52 18.9	+0.2
	SNR=11						
BRTR	Keskin Array B	29.88	337	P	P	09 52 18.9	+0.2
	comp=Z,6.4nm,0.9s,baz=152,slow=11,SNR=24						
BRTR				PcP	PcP	09 55 22.8	+1.2
	comp=Z,1.5nm,0.9s,baz=154,slow=4.3,SNR=4.7						
BRTR				LR	LR	10 04 27.4	
	comp=Z,1µm,18.7s,baz=154,slow=37						
BRTR	Keskin Array B	29.88	337	ceP	P	09 52 18.8	+0.1
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAK	Makhachkala	30.25	359	eP	P	09 52 16.4	-5.4
MAK				eS	S	09 57 14.9	-5.8
MAK				pmax	pmax		
	comp=Z,16nm,0.3s						
MAK				MLR	MLR		
	comp=Z,4µm,19.0s						
ZEI	Tsey	30.30	354	eP	P	09 52 32.3	+10
ZEI				pmax	pmax		
	comp=Z,16nm,0.8s						
ANTO	Ankara	30.33	336	eP	P	09 52 22.6	0.0
	comp=Z,40nm,1.0s						
ANTO	Ankara	30.33	336	⇓iP	P	09 52 24.3	+1.7
ANTO	Ankara	30.33	336	⇓P	P	09 52 24.3	+1.7
GROC	Groznyy	30.56	357	eP	P	09 52 23.6	-0.8
GROC				e		09 53 23.7	
GROC				eS	S	09 57 25.7	+0.3
GROC				pmax	pmax		
	comp=Z,84nm,1.2s						
IDI	Anoyia	30.82	321	P	P	09 52 26.6	-0.3
	comp=Z,14nm,1.0s,baz=148,slow=0.1,SNR=2.5						
NEY	Neytrino	30.89	352	i P	P	09 52 27.1	-0.5
OPO	Ambohidratompo	30.99	182	P	P	09 52 28.5	-0.1
	comp=Z,5.2nm,1.0s,baz=246,slow=19,SNR=2.9						
ILGA	Ilgaz	31.01	339	eP	P	09 52 29.4	+0.7
	comp=Z,44nm,1.0s						
NCK	Nalchik	31.03	354	i P	P	09 52 29.9	+1.3
NCK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DIKM	Dikmen	31.03	341	⇑iP	P	09 52 29.6	+0.9
KBZ	Khabaz	31.34	353	P	P	09 52 32.7	+1.4
	comp=Z,3.5nm,0.7s,baz=111,slow=6.5,SNR=8.6						
KBZ				LR	LR	10 06 35.4	
	comp=Z,2µm,18.7s,baz=145,slow=39						
KVAR	Kislovodsk Arr	31.59	353	P	P	09 52 33.6	-0.1
	comp=Z,2.6nm,0.4s,baz=270,slow=20,SNR=1.3						
KIV	Kislovodsk	31.59	353	eP	P	09 52 33.1	-0.5
	comp=Z,40nm,1.2s						
KIV	Kislovodsk	31.59	353	eP	P	09 52 35.2	+1.5
KIV				eS	S	09 57 45.3	+3.5
KIV				pmax	pmax		
	comp=Z,82nm,1.1s						
KIV				pmax	pmax		
	comp=Z,273nm,4.6s						
KIV				MLR	MLR		
	comp=Z,5µm,15.0s						
SOC	Sochi	31.70	348	eP	P	09 52 33.8	-0.8
SOC				e		09 53 34.8	
SOC				eS	S	09 57 45.0	+1.6
SOC				eSS	SnSn	09 59 39.4	+8.9
SOC						10 03 08.9	
SOC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,2µm,14.0s						
BZK	Bozkurt	31.72	340	⇓iP	P	09 52 36.9	+2.2
CHGR	Chuyangaron	32.01	32	eP	P	09 52 35.0	-2.4
	comp=Z,58nm,1.0s						
GOF	Gofitskoye	32.63	353	⇑eP	P	09 52 45.7	+3.0
GAR	Garm	32.87	33	eP	P	09 52 44.5	-0.5
	comp=Z,93nm,1.1s						
GAR	Garm	32.87	33	eP	P	09 52 44.5	-0.5
GAR				pmax	pmax		
	comp=Z,93nm,1.1s						
ANN	Anapa	33.36	346	eP	P	09 52 49.8	+0.8
ANN				eS	S	09 58 12.0	+2.9
ANN				pmax	pmax		
	comp=Z,33nm,1.4s						
ANN				MLR	MLR		
	comp=Z,2µm,14.0s						
LSZ	Lusaka	33.98	216	eP	P	09 52 54.6	-0.3
	comp=Z,22nm,0.9s						
LSZ	Lusaka	33.98	216	eP	P	09 52 54.6	-0.3
LSZ				pmax	pmax		
	comp=Z,22nm,0.9s						
SEVA	Sevastopol	34.13	342	⇑iP	P	09 52 58.6	+2.9
ALN	Alexandroupoli	34.17	330	eP	P	09 52 56.6	+0.4
	comp=Z,22nm,1.1s						
ALN	Alexandroupoli	34.17	330	eP	P	09 52 56.6	+0.4
ALN				pmax	pmax		
	comp=Z,22nm,1.1s						
SIM	Simferopol'	34.37	342	deP	P	09 52 58.2	+0.3
SIM				S	S	09 58 28.5	+3.6
SIM				pmax	pmax		
	comp=Z,33nm,0.8s						
SIM				MLR	MLR		
	comp=Z,460nm,11.0s						
KDZ	Kurdzhali	35.05	330	eP	P	09 53 02.0	-1.8
PRD	Provadia	35.34	333	eP	P	09 53 07.0	+0.8
RZN	Rozhen	35.42	329	eP	P	09 53 05.0	-2.2
ELND	Elena	35.81	332	⇑iP	P	09 53 10.9	+0.6
TIRR	Tirgusor	35.94	336	⇓iP	P	09 53 11.1	-0.3
TIRR	Tirgusor	35.94	336	⇓P	P	09 53 11.1	-0.3
PYUN	Piuthan	36.03	59	eP	P	09 53 11.4	-1.2
	comp=Z,97nm,1.0s						
KSH	Kashi	36.41	38	P	P	09 53 14.4	-1.3
KSH				pP	pP	09 53 19.7	-0.8
KSH				sP	sP	09 53 21.2	-1.3
KSH				PP	PnPn	09 54 36.1	-2.1
KSH				PcP	PcP	09 55 40.9	+1.1
KSH				pmax	pmax		
	comp=Z,13nm,1.2s						
KSH				pmax	pmax		
	comp=Z,120nm,5.7s						
KSH				LR	LR		
	comp=Z,760nm,13.7s						
KSH				LR	LR		
	comp=Z,170nm,10.6s						
KOLN	Koldanda	36.44	60	eP	P	09 53 16.2	0.0
	comp=Z,150nm,1.0s						
CFR	Carcaliu	36.65	336	⇓iP	P	09 53 17.0	-0.4
CFR	Carcaliu	36.65	336	⇓P	P	09 53 17.0	-0.4
DANN	Dangsing	36.75	59	eP	P	09 53 14.9	-4.0
	comp=Z,156nm,1.1s						
VTS	Vitosha	36.85	329	⇑iP	P	09 53 19.7	+0.3
VTS	Vitosha	36.85	329	⇑P	P	09 53 19.7	+0.3
VTS	Vitosha	36.85	329	eP	P	09 53 16.0	-3.4
GKN	Gorkha	37.38	60	eP	P	09 53 21.9	-2.3
BISRR	Bisoca	37.53	335	⇑iP	P	09 53 25.3	+0.3
DMN	Daman	37.67	61	eP	P	09 53 26.0	-0.7
	comp=Z,73nm,1.0s						
AAK	Ala-Archa	37.68	32	LR	LR	10 10 40.0	
	comp=Z,642nm,19.6s,baz=218,slow=39						
AAK	Ala-Archa	37.68	32	eP	P	09 53 27.2	+0.7
	comp=Z,24nm,1.1s						
AAK	Ala-Archa	37.68	32	eP	P	09 53 27.2	+0.7
AAK				pmax	pmax		
	comp=Z,24nm,1.1s						
AAK	Ala-Archa	37.68	32	P	P	09 53 27.3	+0.7
	SNR=14						
VRI	Vrincioaia	37.78	335	⇑iP	P	09 53 28.1	+1.1
VRI	Vrincioaia	37.78	335	⇑P	P	09 53 28.1	+1.1
PLOR	Plostina	37.80	335	⇑iP	P	09 53 28.5	+1.3
PLOR	Plostina	37.80	335	⇑P	P	09 53 28.5	+1.3
MLR	Muntele Rosu	37.80	334	P	P	09 53 28.9	+1.5
	comp=Z,7.6nm,0.9s,baz=159,slow=5.9,SNR=12						
MLR	Muntele Rosu	37.80	334	⇓iP	P	09 53 27.4	0.0
MLR	Muntele Rosu	37.80	334	⇓P	P	09 53 27.4	0.0
AB31	Akbulak array	37.84	13	i P	P	09 53 26.0	-1.5
AB31				pmax	pmax		
	comp=Z,12nm,0.8s						
KKN	Kakani	37.87	61	eP	P	09 53 26.6	-1.7
	comp=Z,118nm,1.1s						
PKIN	Phulchoki	37.91	61	eP	P	09 53 28.1	-0.7
	comp=Z,61nm,1.2s						
KIS	Kishinev	37.92	338	eP	P	09 53 28.0	-0.2
	comp=Z,180nm,2.5s						
KIS	Kishinev	37.92	338	i PcP	PcP	09 54 56.0	-48
KIS	Kishinev	37.92	338	i PcS	PcS	09 59 20.0	-13
KIS				eS	S	09 59 36.0	+17
KIS	Kishinev	37.92	338	eP	P	09 53 28.0	-0.2
KIS				i		09 54 56.0	
KIS				i		09 59 20.0	
KIS				ePS	PKiKP	10 02 25.0	-35
KIS				pmax	pmax		
	comp=Z,180nm,2.5s						
KIS				MLR	MLR		
	comp=Z,2µm,16.0s						
KIS				MLR	MLR		
	comp=N,1µm,15.0s						
PKI	Pulchoki	37.92	61	eP	P	09 53 28.2	-0.7
	comp=N,70nm,1.1s						
VOIR		38.14	334	⇓iP	P	09 53 30.4	+0.2
VOIR		38.14	334	⇓P	P	09 53 30.4	+0.2
TIP	Timpagrande	38.32	319	eP	P	09 53 31.8	+0.1
	comp=N,19nm,1.0s						
TESR	Tescani	38.34	336	⇓iP	P	09 53 31.4	-0.3
DOPR	Dopca	38.41	334	⇑iP	P	09 53 32.3	-0.1
GUN	Gumba	38.41	61	eP	P	09 53 30.2	-2.9
	comp=N,154nm,1.1s						
TKM2	Tokmak 2	38.46	33	P	P	09 53 32.8	-0.3
TKM2				pmax	pmax		
	comp=Z,39nm,2.7s						
AKTO	Aktyubinsk	38.60	10	P	P	09 53 35.1	+1.2
	comp=Z,6.3nm,1.0s,baz=183,slow=7.9,SNR=6.5						
AKTO				LR	LR	10 12 50.8	
	comp=Z,1µm,19.8s,baz=178,slow=42						
AKTO	Aktyubinsk	38.60	10	P	P	09 53 33.3	-0.6
AKTO				pmax	pmax		
	comp=Z,42nm,2.3s						
JIRN	Jiri	38.62	61	eP	P	09 53 32.9	-1.9
	comp=Z,137nm,1.2s						
PDG	Podgorica	38.84	325	⇑iP	P	09 53 34.8	-1.2
BIZ	Bicaz	38.90	336	⇑iP	P	09 53 37.5	+1.0
HERR	Herculane	38.92	331	⇓iP	P	09 53 36.5	-0.1
VORD	Divnogorie	38.92	351	eP	P	09 53 35.8	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GZR	Gura Zlata	39.13	332	⇑iP	P	09 53 38.9	+0.4
GZR	Gura Zlata	39.13	332	⇑P	P	09 53 38.9	+0.4
MDVR	Moldovita	39.19	330	⇓iP	P	09 53 38.1	-0.8
VSR	Storozhevoye	39.19	351	eP	P	09 53 37.6	-1.2
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
BURAR	Bucovina Array	39.80	336	⇑iP	P	09 53 45.2	+1.1
BURAR	Bucovina Array	39.80	336	⇑P	P	09 53 45.2	+1.1
DRGR		40.22	333	⇑iP	P	09 53 47.4	-0.1
DRGR		40.22	333	⇑P	P	09 53 47.4	-0.1
SIRR	Siria	40.30	332	⇓iP	P	09 53 47.5	-0.7
LPSR	Galich'ya Gora	40.57	351	eP	P	09 53 49.1	-1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
AMBH	Ambrzfalva	40.80	331	⇓eP	P	09 53 52.1	-0.2
PDGK	Podgornoye	40.87	36	P	P	09 53 52.5	-0.6
PDGK				pmax	pmax		
	comp=Z,23nm,1.1s						
OTUK	Ortayu	40.88	25	P	P	09 53 52.5	-0.4
OTUK				pmax	pmax		
	comp=Z,41nm,1.0s						
AKASG	Malin Array Be	40.99	342	P	P	09 53 53.0	-0.7
	comp=Z,7.8nm,0.8s,baz=152,slow=7.3,SNR=25						
AKASG				PcP	PcP	09 55 53.7	0.0
	comp=Z,3.8nm,0.8s,baz=152,slow=2.5,SNR=7.0						
AKASG				LR	LR	10 14 01.2	
	comp=Z,707nm,18.3s,baz=130,slow=41						
AKASG	Malin Array Be	40.99	342	ceP	P	09 53 53.2	-0.6
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKBB	Malin Array Si	40.99	342	ePcP	PcP	09 55 53.7	0.0
TRPA	Tarpa	41.32	334	⇓eP	P	09 53 56.0	-0.5
BLY	Banja Luka	41.49	326	⇓iP	P	09 53 58.0	0.0
MORH	Mrgy, Hungar	41.72	329	eP	P	09 53 58.0	-1.8
KEST	Kesra	41.78	310	P	P	09 53 59.5	-1.1
	comp=Z,4.7nm,0.9s,baz=136,slow=8.7,SNR=6.6						
KEST				PcP	PcP	09 55 57.3	+0.6
	comp=Z,12nm,0.9s,baz=218,slow=3.6,SNR=8.0						
KEST				LR	LR	10 11 47.9	
	comp=Z,2µm,19.3s,baz=18,slow=37						
KEST	Kesra	41.78	310	eP	P	09 54 00.8	+0.1
	comp=Z,15nm,1.1s						
KEST				ePcP	PcP	09 55 57.3	+0.6
UZH	Uzhgorod	41.81	334	eP	P	09 54 00.0	-0.5
UZH				e		09 54 08.5	
UZH				eS	S	10 00 16.0	-1.3
UZH				eSS	SS	10 03 17.2	-6.4
LVV	L'vov	42.05	337	eP	P	09 54 01.1	-1.3
PSZ	Piszkesteto	42.34	332	⇑iP	P	09 54 05.0	+0.1
PSZ	Piszkesteto	42.34	332	⇑P	P	09 54 05.0	+0.1
PSZ	Piszkesteto	42.34	332	eP	P	09 54 02.1	-2.9
KWP	Kalwaria Pacla	42.42	336	eP	P	09 54 05.9	+0.4
KWP	Kalwaria Pacla	42.42	336	eP	P	09 54 05.6	+0.1
	comp=Z,372nm,1.3s						
KWP	Kalwaria Pacla	42.42	336	eP	P	09 54 05.6	+0.1
KWP				pmax	pmax		
	comp=Z,372nm,1.3s						
BUD	Budapest	42.43	331	eP	P	09 54 05.1	-0.5
TIH	Tihany	42.57	329	eP	P	09 54 06.1	-0.7
CSKK	Cskako	42.71	330	eP	P	09 54 02.1	-5.8
SHL	Shillong	43.17	66	eP	P	09 54 09.5	-2.7
VYHS	Vyhne	43.24	332	eP	P	09 54 12.0	-0.2
VYHS	Vyhne	43.24	332	eP	P	09 54 12.0	-0.2
NIE	Niedzica	43.26	334	eP	P	09 54 12.7	+0.3
NIE				eS	S	10 00 43.0	+4.2
NIE	Niedzica	43.26	334	eP	P	09 54 12.7	+0.3
NIE				eS	S	10 00 43.0	+4.2
LEGS	Legarje	43.27	327	i P	P	09 54 14.1	+1.6
LBTB	Lobatse	43.34	210	P	P	09 54 13.5	+0.2
	comp=Z,25nm,0.9s,baz=37,slow=9.2,SNR=9.3						
LBTB	Lobatse	43.34	210	eP	P	09 54 13.7	+0.3
	comp=Z,45nm,1.0s						
LBTB	Lobatse	43.34	210	eP	P	09 54 13.7	+0.3
LBTB				pmax	pmax		
	comp=Z,45nm,1.0s						
OBN	Obninsk	43.36	350	P	P	09 54 13.3	+0.3
	comp=Z,12nm,0.4s,baz=53,slow=20,SNR=2.5						
OBN				LR	LR	10 14 27.6	
	comp=Z,261nm,18.9s,baz=163,slow=39						
OBN	Obninsk	43.36	350	⇑eP	P	09 54 11.2	-1.8
OBN				e		09 54 16.3	
OBN				e*PP	pwP	09 54 22.4	+1.8
OBN				e		09 56 08.4	
OBN				eS	S	10 00 42.5	+2.6
OBN				SSS	SSS	10 04 38.0	
OBN				pmax	pmax		
	comp=Z,11nm,1.1s						
OBN				MLR	MLR		
	comp=Z,774nm,16.0s						
LJU	Ljubljana	43.76	326	eP	P	09 54 18.1	+1.7
SOP	Sopron	43.77	329	eP	P	09 54 15.1	-1.3
MOS	Moscow	43.80	351	eP	P	09 54 13.2	-3.4
MOS				e		09 55 56.8	
MOS				e		09 56 32.5	
MOS				pmax	pmax		
	comp=Z,78nm,1.5s						
MOS				pmax	pmax		
	comp=Z,300nm,2.5s						
MOS				MLR	MLR		
	comp=Z,900nm,18.0s						
MODS	Modra-Piesok	43.89	331	eP	P	09 54 17.4	0.0
MODS	Modra-Piesok	43.89	331	eP	P	09 54 17.4	0.0
SOKA	Soboth	43.89	327	eP	P	09 54 17.4	-0.2
	comp=Z,13nm,1.0s,SNR=24						
ARSA	Arzberg	44.01	328	epP	P	09 54 18.8	+0.4
	comp=Z,4.5nm,1.0s						
OBKA	Obir	44.04	327	eP	P	09 54 18.6	-0.1
	comp=Z,20nm,1.6s						
JAVC	Velka Javorina	44.04	331	eP	P	09 54 18.2	-0.5
OJC	Ojcow	44.08	334	eP	P	09 54 18.0	-0.9
OJC				eS	S	10 00 51.8	+1.2
OJC	Ojcow	44.08	334	eP	P	09 54 17.0	-1.9
	comp=Z,16nm,0.9s						
OJC	Ojcow	44.08	334	eP	P	09 54 18.0	-0.9
OJC				eS	S	10 00 51.8	+1.2
BRVK	Borovoye	44.08	19	eP	P	09 54 18.9	0.0
	comp=Z,28nm,1.2s						
BRVK	Borovoye	44.08	19	eP	P	09 54 18.9	0.0
BRVK				pmax	pmax		
	comp=Z,28nm,1.2s						
BRVK	Borovoye	44.08	19	P	P	09 54 18.9	0.0
	SNR=15						
BVAR	Borovoye Array	44.09	19	P	P	09 54 19.0	0.0
	comp=Z,7.6nm,0.7s,baz=203,slow=5.5,SNR=3.6						
BVAR				PcP	PcP	09 56 04.6	+0.6
	comp=Z,6.1nm,0.8s,baz=222,slow=2.0,SNR=4.8						
CONA	Conrad Observa	44.28	329	P	P	09 54 20.6	-0.1
	comp=Z,4.5nm,0.8s						
MAKZ	Makanchi	44.43	33	eP	P	09 54 20.3	-1.5
	comp=Z,27nm,1.1s						
MAKZ	Makanchi	44.43	33	P	P	09 54 20.9	-0.9
MAKZ				pmax	pmax		
	comp=Z,30nm,1.3s						
ARU	Arti	44.48	8	d iP	P	09 54 21.8	-0.2
ARU						09 56 01.0	
ARU				S	S	10 01 00.5	+4.3
ARU				SS	ScS	10 04 22.2	+3.0
ARU				pmax	pmax		
	comp=Z,19nm,0.9s						
ARU				MLR	MLR		
	comp=Z,774nm,15.0s						
OKC	Ostrava-Krasne	44.52	333	eS	S	10 00 56.8	-0.3
OKC				AMS	AMS	10 16 20.0	
	comp=Z,500nm,13.1s						
MK31	Makanchi Array	44.59	33	i P	P	09 54 19.0	-4.1
MK31				pmax	pmax		
	comp=Z,21nm,0.9s						
MKAR	Makanchi Array	44.59	33	P	P	09 54 21.5	-1.6
	comp=Z,12nm,1.1s,baz=231,slow=8.3,SNR=20						
MKAR				LR	LR	10 15 28.5	
	comp=Z,750nm,18.0s,slow=39						
MYKA	Terra Mystica	44.61	326	eP	P	09 54 23.2	-0.1
	comp=Z,9.4nm,1.1s						
MORC	Moravsky Berou	44.75	332	eP	P	09 54 23.8	-0.5
KRUC	Moravsky	44.79	331	eP	P	09 54 24.0	-0.6
VRAC	Vranov	44.86	331	P	P	09 54 24.2	-1.0
	comp=Z,2.5nm,0.3s,baz=143,slow=6.6,SNR=9.1						
VRAC	Vranov	44.86	331	⇑iP	P	09 54 23.5	-1.7
VRAC	Vranov	44.86	331	⇑P	P	09 54 23.5	-1.7
VRAC	Vranov	44.86	331	eP	P	09 54 24.1	-1.1
KBA	Koelnbreinsper	45.04	327	eP	P	09 54 26.0	-0.8
	comp=Z,7.5nm,1.0s,SNR=9.0						
MOA	Molln	45.04	328	eP	P	09 54 26.1	-0.6
	comp=Z,6.7nm,0.8s						
TOA0	Torodi Ar. Sit	45.17	276	eP	P	09 54 27.7	-0.4
	comp=Z,49nm,1.3s						
TOA0	Torodi Ar. Sit	45.17	276	P	P	09 54 27.5	-0.6
	SNR=11						
TORD	Torodi Ar. Bea	45.17	276	P	P	09 54 25.7	-2.4
	comp=Z,12nm,1.0s,baz=94,slow=5.4,SNR=31						
TORD				PcP	PcP	09 56 08.1	-0.3
	comp=Z,6.9nm,0.9s,baz=42,slow=5.2,SNR=6.4						
TOA1	Torodi Ar. Sit	45.17	276	eP	P	09 54 25.7	-2.4
TOA1				ePcP	PcP	09 56 08.1	-0.3
SVE	Sverdlovsk	45.18	10	eP	P	09 54 26.1	-1.5
SVE				eS	S	10 01 10.5	+4.1
SVE				pmax	pmax		
	comp=Z,34nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,17.0s						
ABTA	Abfaltersbach	45.29	326	eP	P	09 54 28.1	-0.7
	comp=Z,11nm,1.4s						
KRLC	Kraliky	45.31	332	eP	P	09 54 28.1	-0.7
KRLC	Kraliky	45.31	332	eP	P	09 54 28.1	-0.7
KURBB	Kurchatov Arra	45.32	27	P	P	09 54 27.4	-1.4
	comp=Z,8.6nm,0.9s,baz=228,slow=7.7,SNR=20						
KURBB				PcP	PcP	09 56 08.8	+0.6
	comp=Z,2.7nm,0.8s,baz=233,slow=4.1,SNR=3.4						
TREC	Trest	45.38	330	AMS	AMS	10 17 50.0	
	comp=Z,400nm,12.9s						
KURK	Kurchatov	45.43	27	eP	P	09 54 28.1	-1.5
	comp=Z,26nm,1.0s						
KURK	Kurchatov	45.43	27	ceP	P	09 54 28.5	-1.1
KURK				pmax	pmax		
	comp=Z,20nm,1.0s						
KURK	Kurchatov	45.43	27	P	P	09 54 28.8	-0.8
	SNR=15						
DPC	Dobruska-Polom	45.72	332	eP	P	09 54 31.5	-0.5
DPC				eS	S	10 01 13.5	-0.9
DPC				MLR	MLR		
	comp=Z,600nm,27.2s						
DPC	Dobruska-Polom	45.72	332	eP	P	09 54 31.5	-0.5
DPC				eS	S	10 01 13.5	-0.9
DPC				AMS	AMS	10 14 40.0	
	comp=Z,600nm,27.2s						
SUW	Suwalki	45.77	340	eP	P	09 54 32.2	0.0
SUW	Suwalki	45.77	340	eP	P	09 54 32.2	0.0
KIRV	Kirov	45.91	1	P	P	09 54 33.3	+0.1
	comp=Z,11nm,0.5s,baz=26,slow=4.2,SNR=5.0						
OSTC	Ostas	45.91	332	eP	P	09 54 33.1	-0.4
OSTC				ex	x	09 54 42.0	
OSTC				eS	S	10 01 16.9	-0.3
OSTC				AMS	AMS	10 19 10.0	

	comp=Z,400nm,15.8s						
IIGN	Ignalina	45.94	343	eP	P	09 54 34.8	+1.2
UPC	Upice	45.97	332	eP	P	09 54 33.3	-0.6
UPC				eS	S	10 01 16.9	-1.1
UPC				MLR	MLR		
	comp=Z,400nm,14.9s						
UPC	Upice	45.97	332	eP	P	09 54 33.3	-0.6
UPC				eS	S	10 01 16.9	-1.1
UPC				AMS	AMS	10 19 20.0	
	comp=Z,400nm,14.9s						
GERES	GERESS Array B	45.97	329	P	P	09 54 32.6	-1.5
	comp=Z,6.4nm,0.9s,baz=131,slow=7.5,SNR=13						
GERES				PcP	PcP	09 56 10.2	-0.5
	comp=Z,2.9nm,0.9s,baz=152,slow=4.4,SNR=2.9						
CHVC	Chvalec	46.00	332	eP	P	09 54 33.7	-0.5
CHVC				AMS	AMS	10 19 20.0	
	comp=Z,500nm,13.0s						
WMQ	Urumqi	46.06	40	eP	P	09 54 38.4	+3.5
WMQ				sP	pwP	09 54 43.0	+0.9
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,90nm,3.7s						
WMQ				LR	LR		
	comp=Z,760nm,25.7s						
WMQ				LR	LR		
	comp=Z,500nm,28.9s						
WMQ				LR	LR		
	comp=Z,740nm,29.2s						
KSP	Ksiaz	46.07	332	eP	P	09 54 34.8	+0.1
KSP				eS	S	10 01 21.3	+1.8
KSP	Ksiaz	46.07	332	eP	P	09 54 34.8	+0.1
KSP				eS	S	10 01 21.3	+1.8
WTTA	Wattenberg	46.08	326	eP	P	09 54 34.0	-1.1
	comp=Z,4.8nm,0.6s						
GOPC	GO Pecny, Ondr	46.14	331	eP	P	09 54 34.2	-1.1
GOPC				eS	S	10 01 18.4	-2.1
GOPC				MLR	MLR		
	comp=Z,400nm,13.9s						
GOPC	GO Pecny, Ondr	46.14	331	eP	P	09 54 34.2	-1.1
GOPC				eS	S	10 01 18.4	-2.1
GOPC				AMS	AMS	10 17 00.0	
	comp=Z,400nm,13.9s						
ISAL	Salakas	46.16	343	eP	P	09 54 36.0	+0.7
KHC	Kasperske Hory	46.22	329	eP	P	09 54 34.6	-1.4
KHC				e		09 54 39.0	
KHC				eS	S	10 01 19.3	-2.4
KHC				MLR	MLR		
	comp=Z,400nm,18.4s						
KHC	Kasperske Hory	46.22	329	eP	P	09 54 34.6	-1.4
KHC				epP	pP	09 54 39.0	-1.9
KHC				eS	S	10 01 19.3	-2.4
KHC				AMS	AMS	10 19 00.0	
	comp=Z,400nm,18.4s						
IZAR	Zarasai	46.28	343	eP	P	09 54 34.8	-1.4
WIN	Windhoek	46.29	221	eP	P	09 54 37.2	+0.2
	comp=Z,26nm,1.0s						
WIN	Windhoek	46.29	221	eP	P	09 54 37.3	+0.2
WIN				pmax	pmax		
	comp=Z,26nm,1.0s						
SQTA	Sankt Quirin	46.29	326	eP	P	09 54 36.4	-0.3
	comp=Z,6.7nm,1.2s						
PRU	Pruhonice	46.31	330	eP	P	09 54 35.7	-0.9
PRU				eS	S	10 01 19.0	-3.8
PRU				MLR	MLR		
	comp=Z,500nm,14.6s						
PRU	Pruhonice	46.31	330	eP	P	09 54 35.7	-0.9
PRU				ex	x	09 54 53.9	
PRU				eS	S	10 01 19.0	-3.8
PRU				AMS	AMS	10 17 00.0	
	comp=Z,500nm,14.6s						
MOTA	Moosalm	46.42	326	eP	P	09 54 36.8	-0.9
	comp=Z,3.1nm,1.0s						
FETA	Feichten	46.44	325	eP	P	09 54 37.0	-0.9
	comp=Z,3.4nm,1.0s						
FUORN	Ofenpass-Fuorn	46.48	324	eP	P	09 54 38.8	+0.5
	comp=Z,19nm,1.3s						
BOSA	Boshof	46.54	208	P	P	09 54 36.2	-2.5
	comp=Z,9.4nm,1.0s,baz=20,slow=6.6,SNR=8.8						
BOSA				LR	LR	10 12 32.3	
	comp=Z,660nm,19.3s,baz=32,slow=34						
BOSA	Boshof	46.54	208	eP	P	09 54 38.5	-0.3
	comp=Z,33nm,0.9s						
BOSA	Boshof	46.54	208	eP	P	09 54 38.5	-0.3
BOSA				pmax	pmax		
	comp=Z,33nm,0.9s						
PVCC	Panska Ves	46.65	331	AMS	AMS	10 17 40.0	
	comp=Z,300nm,15.0s						
RETA	Reutte	46.70	326	eP	P	09 54 39.0	-0.8
	comp=Z,5.4nm,1.2s						
DAVOX	Davos/Dischmat	46.79	324	P	P	09 54 39.9	-0.7
	comp=Z,2.4nm,0.5s,baz=109,slow=9.0,SNR=5.2						
DAVA	Damuels	47.07	325	eP	P	09 54 41.6	-1.2
	comp=Z,5.8nm,0.9s						
BRG	Berggiesshubel	47.18	331	eP	P	09 54 42.2	-1.2
	comp=Z,8.8nm,1.2s						
BRG				e		09 54 45.9	
	comp=Z,8.0nm,0.9s						
BRG				ePCP	PcP	09 56 13.2	-1.6
	comp=Z,6.0nm,1.1s						
BRG				PP	PP	09 56 35.0	+0.6
BRG				S	S	10 01 35.0	-0.3
BRG				SS	SS	10 05 07.0	+4.4
	comp=N,232nm,22.5s						
	comp=E,301nm,15.0s						
	comp=Z,443nm,14.4s						
BRG	Berggiesshubel	47.18	331	eP	P	09 54 42.2	-1.2
BRG				e		09 54 45.9	
BRG				e		09 56 13.2	
BRG						09 56 35.0	
BRG				S	S	10 01 35.0	-0.3
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,232nm,22.5s						
BRG				MLR	MLR		
	comp=E,301nm,15.0s						
BRG				MLR	MLR		
	comp=Z,443nm,14.4s						
NKC	Novy Kostel	47.49	330	eS	S	10 01 40.3	+0.5
NKC				AMS	AMS	10 20 40.0	
	comp=Z,400nm,13.4s						
CLL	Collm	47.91	331	eP	P	09 54 47.9	-1.1
	comp=Z,32nm,1.6s						
CLL	Collm	47.91	331	eP	P	09 54 48.0	-1.1
CLL				eS	S	10 01 45.0	-0.7
CLL				pmax	pmax		
	comp=Z,49nm,2.0s						
CLL	Collm	47.91	331	eP	P	09 54 48.0	-1.1
	comp=Z,49nm,2.0s						
CLL				eS	S	10 01 45.0	-0.7
CLL				e(SS)		10 05 30.0	
SENIN	Lac Senin/Sane	48.06	323	eP	P	09 54 49.1	-1.5
	comp=Z,37nm,1.2s						
BFO	Black Forest	48.52	325	eP	P	09 54 53.2	-0.7
	comp=Z,33nm,1.3s						
BFO	Black Forest	48.52	325	ceP	P	09 54 53.9	0.0
VSU	Vasula	48.52	345	eP	P	09 54 52.6	-1.0
PRGR	Permogore	48.99	358	eP	P	09 54 52.4	-4.8
PRGR				e		09 56 15.3	
PRGR				pmax	pmax		
	comp=Z,38nm,0.8s						
DGZ	Jazzator, Alta	49.08	33	⇓iP	P	09 54 57.9	-0.5
DGZ				pmax	pmax		
	comp=Z,9.0nm,2.1s						
ECH	Echery	49.12	325	eP	P	09 54 57.7	-0.8
	comp=Z,10nm,1.1s						
SSB	Saint Sauveur	49.22	320	eP	P	09 54 57.3	-2.0
	comp=Z,10nm,0.9s						
SSB	Saint Sauveur	49.22	320	eP	P	09 54 57.3	-2.0
SSB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	49.23	76	P	P	09 54 58.5	-1.2
	comp=Z,18nm,0.9s,baz=274,slow=8.7,SNR=32						
CMAR				LR	LR	10 15 52.0	
	comp=Z,200nm,18.4s,baz=312,slow=36						
CMMT	Chiang Mai	49.23	76	P	P	09 55 02.9	+3.1
	comp=Z,4.3nm,1.0s						
PAYA	Payao	50.10	75	P	P	09 55 09.6	+3.2
	comp=Z,26µm,0.9s						
ZALV	Zalesovo Beam	50.41	27	P	P	09 55 06.5	-1.7
	comp=Z,16nm,0.8s,baz=238,slow=8.1,SNR=25						
ZALV				LR	LR	10 18 44.8	
	comp=Z,430nm,18.4s,baz=248,slow=39						
PHRA	Phrae	50.45	76	P	P	09 55 12.8	+3.8
	comp=Z,1.4nm,1.6s						
UTTA	Uttaradit	50.78	77	P	P	09 55 15.1	+3.6
	comp=Z,12µm,0.8s						
TRTT	Trang	50.95	90	P	P	09 55 17.8	+4.9
	comp=Z,21nm,1.7s						
FINES	FINESS Array B	51.32	347	P	P	09 55 13.3	-1.5
	comp=Z,9.4nm,0.8s,baz=132,slow=11,SNR=19						
FINES	FINESS Array B	51.32	347	ceP	P	09 55 15.1	+0.3
FINES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIC	Kosan Boka	52.39	268	eP	P	09 55 25.8	+2.1
	comp=Z,95nm,1.5s						
DBIC	Dimbokro	52.45	269	P	P	09 55 23.9	-0.2
	comp=Z,10nm,1.1s,baz=115,slow=10,SNR=3.0						
DBIC				LR	LR	10 19 04.1	
	comp=Z,529nm,20.0s,baz=66,slow=38						
TIC	Toumodi	52.61	269	eP	P	09 55 27.6	+2.3
LIC	Lamto	52.70	268	eP	P	09 55 28.1	+2.2
	comp=Z,65nm,1.3s						
GTA	Gaotai	52.74	50	P	P	09 55 26.8	+0.7
GTA				pP	pP	09 55 30.2	-0.9
GTA				sP	sP	09 55 32.8	-0.1
GTA				S	S	10 02 50.2	-3.5
GTA				sS	sS	10 03 02.9	+1.0
GTA				SS	SS	10 06 32.4	+0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,63nm,4.8s						
GTA				LR	LR		
	comp=Z,290nm,16.8s						
GTA				LR	LR		
	comp=Z,420nm,20.6s						
GTA				LR	LR		
	comp=Z,550nm,21.3s						
KMI	Kunming	52.89	68	P	P	09 55 30.6	+3.1
KMI				pmax	pmax		
	comp=Z,19nm,0.7s						
KMI				pmax	pmax		
	comp=Z,200nm,6.0s						
ESDC	Sonseca Array	53.04	310	P	P	09 55 27.4	-0.7
	comp=Z,4.8nm,0.8s,baz=96,slow=6.8,SNR=19						
ESDC				PcP	PcP	09 56 36.7	+0.1
	comp=Z,1.2nm,0.6s,baz=81,slow=1.8,SNR=5.3						
ESDC				LR	LR	10 19 05.4	
	comp=Z,281nm,18.1s,baz=125,slow=37						
ESLA	Sonseca Array	53.04	310	eP	P	09 55 27.2	-1.0
	comp=Z,20nm,1.2s						
NONG	Nongkai	53.23	77	P	P	09 55 32.1	+2.3
	comp=Z,0.5nm,1.1s						
PAB	San Pablo	53.29	310	eP	P	09 55 29.6	-0.5
	comp=Z,31nm,1.6s						
PAB	San Pablo	53.29	310	eP	P	09 55 29.6	-0.5
PAB				pmax	pmax		
	comp=Z,31nm,1.6s						
HFS	Hagfors	53.78	339	P	P	09 55 32.3	-0.8
	comp=Z,8.3nm,0.8s						
SLVN	Son La	53.87	73	eP	P	09 55 34.7	+0.1
	comp=Z,41nm,1.7s						
SKNT	Sakolnakorn	54.09	78	P	P	09 55 35.5	-0.6
	comp=Z,30nm,1.0s						
CD2	Chengdu	54.28	61	eP	P	09 55 35.8	-1.6
CD2				S	S	10 03 13.3	-1.3
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,340nm,6.7s						
CD2				LR	LR		
	comp=Z,710nm,19.6s						
CD2				LR	LR		
	comp=Z,680nm,16.2s						
CD2				LR	LR		
	comp=Z,740nm,22.1s						
PANO	Nakornpanom	54.68	78	P	P	09 55 39.7	-0.7
	comp=Z,0.7nm,1.0s						
LZH	Lanzhou	55.12	55	eP	P	09 55 47.4	+3.9
LZH				pP	pwP	09 55 52.5	+1.7
LZH				sP	sP	09 55 55.9	+5.5
LZH				PP	PP	09 57 49.2	+2.3
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=Z,540nm,17.3s						
LZH				LR	LR		
	comp=Z,770nm,18.4s						
LZH				LR	LR		
	comp=Z,1µm,17.9s						
NB2	NORSAR Subarra	55.28	339	P	P	09 55 41.2	-2.9
	comp=Z,1.5nm,0.7s,baz=134,slow=7.4						
NOA	NORSAR Array B	55.28	339	P	P	09 55 42.3	-1.8
	comp=Z,2.9nm,0.8s,baz=130,slow=8.1,SNR=6.7						
NOA				LR	LR	10 22 23.7	
	comp=Z,665nm,19.1s,baz=135,slow=39						
PVAQ	Vaqueiros	55.38	307	eP	P	09 55 46.8	+1.6
PVAQ				eS	S	10 03 29.5	+0.5
PVAQ				eLQ	LQ	10 11 35.5	
PVAQ				eLR	LR	10 12 51.6	
	comp=Z,468nm,20.0s						
PMRV	Marv??o	55.55	309	eP	P	09 55 42.2	-4.2
PMRV	Marv??o	55.55	309	eLR	LR	10 17 40.4	
	comp=Z,289nm,18.0s						
MVO	Moncorvo	55.68	311	eS	S	10 03 29.1	-4.0
MVO				eLQ	LQ	10 09 41.0	
MVO				eLR	LR	10 13 33.4	
	comp=Z,331nm,20.0s						
APA	Apatity	55.77	353	⇓iP	P	09 55 52.0	+4.6
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,300nm,22.0s						
MTE	Manteigas	55.88	310	eP	P	09 55 57.6	+8.8
MTE				eS	S	10 03 39.3	+3.5
MTE				eLR	LR	10 13 29.4	
	comp=Z,236nm,18.0s						
LVZ	Lovozero	55.95	354	i P	P	09 55 48.2	-0.6
LVZ				pmax	pmax		
	comp=Z,14nm,1.2s						
MYKOM	Kota Tinggi	56.25	96	eP	P	09 55 53.7	+1.9
	comp=Z,38nm,1.2s						
GYA	Guiyang	56.49	67	⇑iP	P	09 55 51.5	-1.9
GYA				PP	PP	09 57 57.8	-1.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,210nm,6.8s						
GYA				LR	LR		
	comp=Z,190nm,16.8s						
GYA				LR	LR		
	comp=Z,640nm,16.1s						
GYA				LR	LR		
	comp=Z,910nm,20.0s						
PGAV	Gavieira, Arco	56.78	312	eP	P	09 55 57.6	+2.4
PGAV				eS	S	10 03 50.7	+3.0
PGAV	Gavieira, Arco	56.78	312	eLR	LR	10 14 26.9	
	comp=Z,405nm,20.0s						
MOY	Mondy	57.58	36	eP	P	09 56 04.2	+3.5
MOY				pmax	pmax		
	comp=Z,32nm,2.3s						
ZAK	Zakamensk	58.46	38	eP	P	09 56 05.0	-1.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ARCES	ARCESS Array B	58.67	351	P	P	09 56 07.7	-0.3
	comp=Z,4.6nm,0.8s,baz=152,slow=5.5,SNR=6.7						
ARCES				LR	LR	10 23 38.8	
	comp=Z,730nm,18.3s,baz=106,slow=38						
XAN	Xi'an	58.96	58	eP	P	09 56 10.3	-0.3
	comp=Z,18nm,0.9s						
XAN	Xi'an	58.96	58	P	P	09 56 13.3	+2.7
XAN				pP	pwP	09 56 19.8	+1.8
XAN				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	Xi'an	58.96	58	eP	P	09 56 10.3	-0.3
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
TLY	Talaya	59.12	37	P	P	09 56 13.0	+1.6
	comp=Z,0.8nm,0.5s,baz=239,slow=9.6,SNR=3.2						
TLY	Talaya	59.12	37	i P	P	09 56 10.4	-1.0
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
QIZ	Qiongzhong	59.53	75	P	P	09 56 13.6	-1.1
QIZ				pP	pP	09 56 17.8	-2.0
QIZ				S	S	10 04 25.9	+1.8
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
QIZ				LR	LR		
	comp=Z,220nm,20.6s						
QIZ				LR	LR		
	comp=Z,260nm,24.5s						
QIZ				LR	LR		
	comp=Z,340nm,36.3s						
SONA0	Songino Array	59.63	42	eP	P	09 56 14.5	-0.6
SONM	Songino Array	59.63	42	P	P	09 56 14.5	-0.6
	comp=Z,4.6nm,0.9s,baz=245,slow=6.9,SNR=22						
SONM				LR	LR	10 25 47.2	
	comp=Z,312nm,19.1s,baz=268,slow=40						
ULN	Ulaanbaatar	60.06	42	eP	P	09 56 17.4	-0.7
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	60.06	42	ceP	P	09 56 17.4	-0.7
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
BTO	Baotou	60.65	50	eP	P	09 56 20.6	-1.7
HHC	Hu-ho-hao-te	61.85	50	eP	P	09 56 30.2	-0.2
HHC				sP	pwP	09 56 39.4	+1.6
HHC				S	S	10 04 54.8	+1.4
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.6s						
HHC				LR	LR		
	comp=Z,540nm,14.9s						
HHC				LR	LR		
	comp=Z,500nm,12.2s						
HHC				LR	LR		
	comp=Z,630nm,14.9s						
PMOZ	Porto Moniz, M	62.56	300	eP	P	09 56 33.4	-1.9
PMOZ				eS	S	10 05 02.8	+0.1
PMOZ	Porto Moniz, M	62.56	300	eLR	LR	10 18 54.0	
	comp=Z,506nm,20.0s						
KSM	Kuching	62.60	95	eP	P	09 56 34.8	-0.9
	comp=Z,15nm,1.0s						
WHN	Wuhan	63.35	62	⇑P	P	09 56 43.6	+3.2
SBUM	Sibu	64.24	93	eP	P	09 56 47.1	+0.5
	comp=Z,17nm,1.3s						
BOD	Bodaibo	66.66	32	eP	P	09 57 15.6	+14
BOD				pmax	pmax		
	comp=Z,13nm,1.8s						
NJ2	Nanjing	67.21	60	eP	P	09 57 09.1	+3.7
NJ2				pmax	pmax		
	comp=Z,23nm,0.5s						
KKM	Kota Kinabalu	67.41	89	eP	P	09 57 07.8	+0.7
	comp=Z,70nm,1.4s						
DL2	Dalian	69.44	53	P	P	09 57 22.4	+3.1
DL2				S	S	10 06 29.7	+3.7
DL2				pmax	pmax		
	comp=Z,28nm,0.9s						
DL2				LR	LR		
	comp=Z,360nm,17.1s						
DL2				LR	LR		
	comp=Z,280nm,19.8s						
DL2				LR	LR		
	comp=Z,410nm,20.9s						
CN2	Changchun	72.30	48	eP	P	09 57 36.1	-0.5
CN2				epP	pP	09 57 40.0	-1.7
CN2				eS	S	10 06 59.2	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
ZEA	Zeya	73.54	37	eP	P	09 57 46.8	+3.0
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
KSRS	Korea Array	74.44	54	P	P	09 57 47.8	-1.5
	comp=Z,5.5nm,0.9s,baz=270,slow=6.6,SNR=7.2						
KSRS				LR	LR	10 35 49.2	
	comp=Z,126nm,18.0s,baz=274,slow=40						
YAK	Yakutsk	75.03	29	eP	P	09 57 51.8	-0.4
	comp=Z,36nm,0.7s						
YAK	Yakutsk	75.03	29	eP	P	09 57 50.2	-2.0
YAK				e*PP	pwP	09 58 01.8	+2.1
YAK				ePPP	PPP	10 02 28.7	
YAK				eS	S	10 07 26.8	-2.4
YAK				e*SS	SKSac	10 07 53.7	-6.6
YAK				pmax	pmax		
	comp=Z,46nm,1.0s						
YAK				pmax	pmax		
	comp=E,23nm,1.4s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,106nm,3.8s						
YAK				pmax	pmax		
	comp=N,99nm,4.1s						
YAK				pmax	pmax		
	comp=E,66nm,5.7s						
YAK				smax	smax		
	comp=N,57nm,3.3s						
YAK				smax	smax		
	comp=E,37nm,3.3s						
YAK				MLR	MLR		
	comp=Z,616nm,19.0s						
YAK				MLR	MLR		
	comp=N,184nm,21.0s						
YAK				MLR	MLR		
	comp=E,488nm,19.0s						
TIXI	Tiksi	75.22	19	P	P	09 57 51.4	-1.8
	comp=E,12nm,1.1s,baz=267,slow=8.2,SNR=4.7						
TIXI	Tiksi	75.22	19	eP	P	09 57 52.7	-0.5
	comp=E,34nm,1.2s						
TIXI	Tiksi	75.22	19	ceP	P	09 57 51.7	-1.5
TIXI				pmax	pmax		
	comp=Z,39nm,1.7s						
DAV	Davao City (W)	76.34	86	LR	LR	10 32 23.7	
	comp=Z,108nm,19.7s,baz=278,slow=36						
KLR	Kul'dur	76.46	42	i P	P	09 57 59.1	-1.6
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
USRK	Ussuriysk Ar.	77.00	47	P	P	09 58 03.7	-0.1
	comp=Z,4.9nm,1.0s,baz=266,slow=4.3,SNR=8.1						
USRK				LR	LR	10 36 01.3	
	comp=Z,264nm,18.3s,baz=283,slow=39						
TEY	Ternei	80.18	46	⇓eP	P	09 58 24.0	+2.7
TEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,30nm,1.3s						
MAW	Mawson	80.71	174	P	P	09 58 24.4	+0.8
	comp=Z,4.8nm,0.9s,baz=360,slow=9.7,SNR=10						
MAW				LR	LR	10 29 34.4	
	comp=Z,407nm,18.1s,baz=352,slow=32						
MAW	Mawson	80.71	174	eP	P	09 58 24.9	+1.4
	comp=Z,1.9nm,0.8s						
MAW	Mawson	80.71	174	eP	P	09 58 24.9	+1.4
MAW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NKL	Nikolayevsk	81.59	37	eP	P	09 58 24.5	-4.2
NKL				e		10 01 36.7	
NKL				eS	S	10 08 38.4	-1.6
NKL				eSS	SS	10 13 57.1	+0.4
NKL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,5.0nm,1.2s						
NKL				pmax	pmax		
	comp=E,15nm,1.2s						
NKL				pmax	pmax		
	comp=Z,18nm,1.1s						
NKL				MLR	MLR		
	comp=Z,545nm,19.0s						
NKL				MLR	MLR		
	comp=N,141nm,11.0s						
NKL				MLR	MLR		
	comp=E,849nm,17.0s						
SYO	Syowa Base	81.62	183	⇑epP	pP	09 58 37.4	+3.9
MAJO	Matsushiro	82.72	54	eP	P	09 58 35.2	+0.1
MAJO	Matsushiro	82.72	54	eP	P	09 58 35.2	+0.1
MAT	Matsushiro	82.72	54	P	P	09 58 35.0	-0.1
MAT				S	S	10 08 48.0	-4.4
MJAR	Matsushiro Arr	82.72	54	P	P	09 58 35.2	+0.1
	comp=E,6.9nm,0.9s,baz=276,slow=5.0,SNR=9.7						
MJAR				LR	LR	10 38 25.5	
	comp=E,251nm,20.4s,baz=285,slow=38						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	84.07	43	eP	P	09 58 39.6	-2.1
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
SEY	Seymchan	85.28	26	i P	P	09 58 47.7	+0.2
BILL	Bilibino	88.43	19	⇓eP	P	09 59 01.2	-1.6
BILL				e		09 59 04.2	
BILL				e*PP	pwP	09 59 13.1	+2.7
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,327nm,19.0s						
SNAA	Sanae	90.62	194	P	P	09 59 14.5	+1.6
SNAA	Sanae	90.62	194	eP	P	09 59 14.8	+1.9
	comp=Z,12nm,0.9s						
SNAA	Sanae	90.62	194	eP	P	09 59 14.8	+1.9
SNAA				pmax	pmax		
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	90.78	110	P	P	09 59 14.4	-0.3
	comp=Z,20nm,1.0s,baz=280,slow=4.8,SNR=14						
WRAB	Tennant Creek	90.79	110	eP	P	09 59 15.5	+0.8
	comp=Z,37nm,1.1s						
WRAB	Tennant Creek	90.79	110	ceP	P	09 59 13.9	-0.8
WRAB				pmax	pmax		
	comp=Z,19nm,1.1s						
WB2	Warramunga Arr	90.79	110	eP	P	09 59 13.7	-1.1
	comp=Z,32nm,1.1s						
ASAR	Alice Springs	91.23	114	P	P	09 59 16.9	+0.1
	comp=Z,16nm,1.1s,baz=283,slow=4.6,SNR=18						
ASAR				LR	LR	10 34 17.6	
	comp=Z,144nm,21.3s,baz=288,slow=32						
VNA2	Neumayer--Watz	91.30	196	P	P	09 59 16.9	+0.9
	baz=34,slow=6.0						
PETK	Petropavlovsk-	91.42	35	LR	LR	10 45 54.4	
	comp=Z,391nm,18.8s,baz=299,slow=39						
VNA3	Neumayer Olymp	92.09	196	P	P	09 59 20.3	+0.6
SCHQ	Schefferville	93.50	328	LR	LR	10 43 57.3	
	comp=Z,76nm,18.2s,baz=78,slow=37						
BDFB	Brasilia	99.08	256	LR	LR	10 39 54.2	
	comp=Z,163nm,21.8s,slow=33						
STKA	Stephens Creek	99.49	121	LR	LR	10 40 30.0	
	comp=Z,586nm,18.6s,baz=246,slow=33						
YKA	Yellowknife Ar	103.93	352	PP	PP	10 04 33.8	+4.1
	comp=Z,1.0nm,0.8s,baz=15,slow=7.5,SNR=5.7						
VNDA	Vanda	107.29	168	PP	PP	10 04 56.7	+1.7
	comp=Z,0.8nm,0.9s,baz=273,slow=6.5,SNR=3.1						
DZM	Mont Dzumac	120.75	108	eLR	LR	10 42 17.9	
	comp=Z,190nm,24.9s						
PDAR	Pinedale Array	121.21	341	PKP	PKPdf	10 05 03.9	-0.6
	comp=Z,1.4nm,0.9s,baz=90,slow=3.0,SNR=11						
DUG	Dugway, Tooele	124.56	342	ePKPdf	PKiKP	10 05 11.8	+0.6
DUG	Dugway, Tooele	124.56	342	ePKIKP	PKiKP	10 05 11.8	+0.6
NVAR	Mina Array Bea	127.66	346	PKP	PKiKP	10 05 17.9	+0.4
	comp=Z,3.8nm,0.8s,baz=258,slow=0.7,SNR=18						
MNTX	Cornudas Mount	129.13	331	ePKPdf	PKiKP	10 05 20.4	0.0
TX31	Lajitas Ar. Si	130.18	327	ePKPdf	PKPdf	10 05 22.2	+0.4
TXAR	Lajitas Array	130.18	327	PKP	PKPdf	10 05 21.8	0.0
	comp=Z,1.8nm,0.8s,baz=85,slow=2.3,SNR=19						
TBI	Tubuai	160.21	125	eLR	LR	11 00 25.5	
	comp=Z,338nm,22.5s						
PPT2	Papeete2	162.25	108	eLR	LR	11 01 16.9	
	comp=Z,324nm,22.8s						

MEX 11 09:52:30.0±0.8**, 15°.11N**×**93°.70W, h33**^{km}±52^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.76	38	eP	Pn	09 52 42.3	-2.1
PCIG				eS	Sn	09 52 51.9	-2.7
TGIG		1.75	18	eP	Pn	09 52 57.0	-1.2
TGIG				i S	Sn	09 53 17.0	-2.4
CCIG	Comitan	1.91	52	eP	Pn	09 52 58.7	-1.7
CCIG				i S	Sn	09 53 20.8	-2.5
CMIG	Matias Romero	2.28	330	eP	Pn	09 53 02.8	-2.5
CMIG				i S	Sn	09 53 29.9	-2.4

IDC 11 09:57:22.9±3.0**, 53°.52N**×**87°.72E, h0**^{km}**, mb1 3.3**/2**, mb1mx3.0**/45**, mbtmp3.3**/2**, ML3.0**/2**, 1C-4D, Error ellipse: s-maj=25.5km s-min=15.0km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.78	285	i		10 08 20.0	
	baz=100,slow=287,SNR=1.4						
ZAA0	Zalesovo Array	1.78	285	⇓Pg	Pn	09 57 54.5	-0.3
	0.4nm,0.3s						
ZAA0				⇓Lg	Lg	09 58 19.2	
	3.2nm,0.6s						
ZALV	Zalesovo Beam	1.78	285	Pg	Pn	09 57 54.5	-0.4
	4.5nm,0.3s,baz=105,slow=14,SNR=23						
ZALV				Lg	Lg	09 58 19.3	
	8.5nm,0.3s,baz=108,slow=32,SNR=14						
KURBB	Kurchatov Arra	6.37	247	Pn	Pn	09 58 58.7	+0.8
	0.3nm,0.3s,baz=62,slow=14,SNR=23						
KURBB				Sn	Sn	10 00 10.5	-0.7
	0.1nm,0.3s,baz=58,slow=24,SNR=3.5						
KURBB				Lg	Lg	10 00 45.0	
	0.1nm,0.3s,baz=62,slow=32,SNR=5.4						
KURBB	Kurchatov Arra	6.37	247	⇓Pn	Pn	09 58 58.6	+0.7
	3.3nm,0.5s,baz=63,slow=14						
KURBB				⇑Sn	Sn	10 00 09.9	-1.3
	6.4nm,0.5s						
KURBB				⇓Lg	Lg	10 00 44.7	
	6.5nm,0.6s						
MKAR	Makanchi Array	7.58	210	Pn	Pn	09 59 15.8	+1.2
	0.2nm,0.3s,baz=28,slow=14,SNR=5.8						
MKAR				Sn	Sn	10 00 41.1	-0.2
	0.1nm,0.3s,baz=30,slow=27,SNR=2.3						
MKAR				Lg	Lg	10 01 21.3	
	0.1nm,0.3s,baz=28,slow=31,SNR=2.9						

IDC ***11*** *10:23:47.3±1.0, 13°.07N×95°.85E, h0*^{km}*, mb3.8/8, mb1 4.0/8, mb1mx3.7/40, mbtmp3.8/8, Error ellipse: s-maj=54.2km s-min=20.5km az=63.0*

ISCJB ***11*** *10:23:51.0±0.8, 13°.07N±0°.08×95°.9E±0°.1, h33*^{km}*, mb3.9/10, Error ellipse: s-maj=18.9km s-min=10.7km az=15.6*

ISC 11 10:23:52.4±0.8**, 13°.0N**±0°.1×**95°.8E**±0°.1**, h35**^{km}**, n14,** σ**1ˢ.60**/16**, mb3.9**/10**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.20	29	Pn	Pn	10 25 22.4	+0.9
	baz=187,slow=13,SNR=2.4						
CMAR				Sn	Sn	10 26 31.2	+0.1
	0.6nm,0.3s,baz=229,slow=25,SNR=3.4						
MKAR	Makanchi Array	35.55	344	P	P	10 30 46.7	+0.5
	2.2nm,0.9s,baz=155,slow=9.1,SNR=12						
SONM	Songino Array	35.83	12	P	P	10 30 47.9	-0.8
	0.8nm,0.9s,baz=211,slow=1.7,SNR=3.0						
SONM				PcP	PcP	10 33 15.3	-0.5
	0.3nm,0.7s,baz=134,slow=4.2,SNR=3.1						
GEYT	Alibeck	41.69	313	P	P	10 31 41.3	+3.4
	2.7nm,0.5s,baz=155,slow=7.8,SNR=5.4						
ZALV	Zalesovo Beam	41.76	350	P	P	10 31 38.2	+0.1
	2.2nm,0.7s,baz=168,slow=7.6,SNR=6.5						
WRA	Warramunga Arr	50.10	130	P	P	10 32 45.7	+1.3
	0.8nm,0.7s,baz=301,slow=9.7,SNR=3.8						
ASAR	Alice Springs	52.12	134	P	P	10 33 00.3	+0.8
	0.3nm,0.7s,baz=310,slow=7.7,SNR=4.2						
BRTR	Keskin Array B	60.44	308	P	P	10 33 59.5	+0.5
	0.8nm,0.8s,baz=120,slow=8.5,SNR=3.7						
GERES	GERESS Array B	75.15	317	P	P	10 35 27.9	-3.4
	0.7nm,0.2s,baz=97,slow=7.0,SNR=5.0						
ILAR	Eielson Array	89.40	22	P	P	10 36 44.8	-0.5
	0.3nm,0.7s,baz=260,slow=2.9,SNR=4.1						
VNDA	Vanda	97.60	168	P	P	10 37 22.9	+0.3
	0.4nm,0.5s,baz=288,slow=6.4,SNR=5.4						
NVAR	Mina Array Bea	119.69	30	PKP	PKPdf	10 42 39.2	-0.3
	0.3nm,0.6s,baz=316,slow=3.8,SNR=3.0						
PDAR	Pinedale Array	119.81	21	PKP	PKPdf	10 42 38.3	-1.3
	0.1nm,0.6s,baz=302,slow=5.2,SNR=2.7						
TXAR	Lajitas Array	133.89	24	PKP	PKPdf	10 43 04.9	-1.8
	0.1nm,0.5s,baz=46,slow=2.6,SNR=2.7						

GUC ***11*** *10:30:19.1±0.7, 19°.82S×69°.16W, h1*^{km}*±3*^{km}*, ML3.7*

SJA ***11*** *10:30:19.1±0.8, 19°.81S×69°.22W, h10*^{km}*±3*^{km}*, MD3.2*

ISC 11 10:30:18.4±1.2**, 19°.82S**±0°.02×**69°.14W**±0°.05**, h18**^{km}±3^{km}**, n26,** σ**0ˢ.91**/50**, 11C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	0.16	342	⇑iP	Pb	10 30 22.0	-0.5
GO01				i S	Sb	10 30 24.6	-0.5
PB08	IPOC Station P	0.32	182	⇑iP	Pg	10 30 25.3	-0.2
PB08				eS	Sg	10 30 29.7	-0.7
PB08				IAML		10 30 29.9	
	comp=E,11μm,0.1s						
PB11	IPOC Station P	0.48	277	i P	Pg	10 30 28.3	0.0
PB11				i S	Sg	10 30 34.6	-0.4
PB11	IPOC Station P	0.48	277	⇑iP	Pg	10 30 28.0	-0.3
PB11				eS	Sg	10 30 34.6	-0.4
MNMC	Minye Minye	0.81	328	⇑iP	Pg	10 30 34.3	+0.1
MNMC				eS	Sg	10 30 45.2	+0.2
MNMC				IAML		10 30 46.3	
	comp=N,4μm,0.3s						
MNMCX	Minye Minye	0.81	328	i P	Pg	10 30 34.3	+0.1
MNMCX				i S	Sg	10 30 45.8	+0.8
PSGCX	Pisagua	0.95	283	eP	Pb	10 30 36.3	0.0
PSGCX				eS	Sb	10 30 48.6	0.0
PSGC	Pisagua	0.95	283	⇓eP	Pb	10 30 36.2	-0.1
PSGC				eS	Sb	10 30 48.8	+0.1
PB01	IPOC Station P	1.26	195	eP	Pb	10 30 42.0	+0.4
PB01				eS	Sn	10 30 58.2	+0.5
PB01	IPOC Station P	1.26	195	⇑iP	Pb	10 30 41.6	0.0
PB01				eS	Sn	10 30 57.9	+0.1
PB16	IPOC Station P	1.52	347	⇑iP	Pb	10 30 47.0	+0.7
PB16				i S	Sg	10 31 06.8	-0.8
PB12	IPOC Station P	1.64	317	eP	Pb	10 30 47.7	-0.5
PB12				eS	Sb	10 31 09.4	+0.8
PB12	IPOC Station P	1.64	317	⇑iP	Pb	10 30 47.6	-0.5
PB12				eS	Sb	10 31 09.3	+0.8
PB12				IAML		10 31 10.8	
	comp=N,622nm,0.1s						
PB02	IPOC Station P	1.65	205	eP	Pb	10 30 48.3	0.0
PB02				eS	Sb	10 31 09.9	+1.1
PB02	IPOC Station P	1.65	205	⇑iP	Pb	10 30 48.1	-0.3
PB02				eS	Sb	10 31 09.8	+0.9
PB02				IAML		10 31 11.5	
	comp=E,2μm,0.5s						
PB09	IPOC Station P	1.97	183	eP	Pg	10 30 55.2	-1.1
PB09				eS	Sg	10 31 21.7	-0.2
PB09	IPOC Station P	1.97	183	IAML		10 31 22.5	
	comp=E,672nm,0.5s						
PB07	IPOC Station P	2.02	200	eP	Pb	10 30 54.8	+0.1
PB07				eS	Sb	10 31 21.4	+1.8
PB07	IPOC Station P	2.02	200	⇑iP	Pb	10 30 54.6	-0.1
PB07				eS	Sb	10 31 20.5	+0.9
PB07				IAML		10 31 23.9	
	comp=E,1μm,0.3s						
PB03	IPOC Station P	2.29	194	eP	Pb	10 30 59.2	-0.1
PB03				eS	Sb	10 31 28.8	+1.5
PB03	IPOC Station P	2.29	194	⇑iP	Pb	10 30 58.9	-0.4
PB03				eS	Sb	10 31 28.4	+1.1
PB03				IAML		10 31 30.7	
	comp=E,890nm,0.2s						
PB03				IAML		10 31 32.8	
	comp=N,741nm,0.4s						
PB04	IPOC Station P	2.67	200	eP	Pb	10 31 04.6	-1.2
PB04				eS	Sb	10 31 38.9	+0.5
PB04	IPOC Station P	2.67	200	⇑iP	Pb	10 31 04.6	-1.2
PB04				eS	Sb	10 31 39.1	+0.7
PB04				IAML		10 31 42.3	
	comp=E,540nm,0.2s						
PB06	IPOC Station P	2.90	188	eP	Pb	10 31 07.9	-1.8
PB06				eS	Sb	10 31 46.4	+1.5
PB05	IPOC Station P	3.18	198	eP	Pb	10 31 11.8	-2.6
PB05				eS	Sb	10 31 53.5	+0.7
PB15	IPOC Station P	3.39	185	eP	Pb	10 31 17.4	-0.6
PB15				eS	Sb	10 32 01.3	+2.4

IDC ***11*** *10:32:16.0±6.4, 18°.76S×177°.80W, h392*^{km}*±66*^{km}*, mb3.4/10, mb1 3.6/11, mb1mx3.4/27, mbtmp4.1/11, Error ellipse: s-maj=27.6km s-min=16.6km az=64.0*

ISCJB ***11*** *10:32:27.2±0.8, 19°.0S±0°.1×178°.1W±0°.2, h532*^{km}*, mb3.6/10, Error ellipse: s-maj=24.0km s-min=15.6km az=16.7*

ISC 11 10:32:28.5±0.8**, 18°.9S**±0°.1×**178°.1W**±0°.2**, h532**^{km}**, n13,** σ**1ˢ.31**/13**, mb3.6**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	19.72	191	P	P	10 36 19.8	-2.9
	1.3nm,0.3s,baz=37,slow=15,SNR=9.3						
RPZ	Rata Peaks	26.35	198	P	P	10 37 19.9	-2.1
	2.5nm,0.5s,baz=30,slow=5.8,SNR=4.0						
STKA	Stephens Creek	38.40	242	P	P	10 39 04.8	+0.3
	2.3nm,0.3s,baz=98,slow=7.1,SNR=7.9						
WRA	Warramunga Arr	44.73	260	P	P	10 39 54.9	+0.2
	0.6nm,0.2s,baz=97,slow=7.2,SNR=7.6						
ASAR	Alice Springs	44.79	255	P	P	10 39 55.5	+0.4
	4.8nm,0.7s,baz=91,slow=8.4,SNR=88						
VNDA	Vanda	59.47	185	P	P	10 41 40.5	+0.9
	0.7nm,0.6s,baz=5.6,slow=6.0,SNR=9.8						
MJAR	Matsushiro Arr	68.88	323	P	P	10 42 39.4	-0.6
	1.0nm,0.8s,baz=166,slow=7.2,SNR=4.3						
PETK	Petropavlovsk-	74.72	345	P	P	10 43 13.3	-0.4
	2.5nm,0.6s,baz=98,slow=8.8,SNR=6.1						
MAW	Mawson	83.01	200	P	P	10 43 59.1	+1.5
	0.9nm,0.5s,baz=107,slow=11,SNR=4.7						
TXAR	Lajitas Array	86.30	57	P	P	10 44 14.5	0.0
	0.4nm,0.5s,baz=224,slow=5.2,SNR=3.5						
ILAR	Eielson Array	86.80	13	P	P	10 44 15.8	-0.1
	0.1nm,0.4s,baz=220,slow=5.3,SNR=4.0						
DBIC	Dimbokro	166.17	151	PKPab	PKPab	10 52 38.0	+0.1
	1.3nm,0.4s,baz=211,slow=5.9,SNR=2.7						
TORD	Torodi Ar. Bea	174.26	178	PKPab	PKPab	10 53 14.3	+0.8
	0.8nm,1.0s,baz=186,slow=6.2,SNR=2.3						

SJA ***11*** *10:35:33.0±0.9, 21°.55S×66°.88W, h226*^{km}*±9*^{km}*, ML3.2, MW2.7*

ISCJB ***11*** *10:35:34.1±0.7, 21°.54S±0°.03×66°.99W±0°.06, h221*^{km}*±13*^{km}*, Error ellipse: s-maj=8.8km s-min=5.2km az=167.2*

SCB ***11*** *10:35:34.7±2.5, 21°.40S×66°.88W, h184*^{km}*±28*^{km}*, ML4.0/2, Error ellipse: s-maj=8.6km s-min=5.2km az=1.0*

ISC 11 10:35:33.1±1.8**, 21°.51S**±0°.04×**66°.94W**±0°.06**, h227**^{km}±17^{km}**, n33,** σ**1ˢ.31**/53**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.48	117	i P	Pn	10 36 09.3	-0.3
YJA				IAML		10 36 10.3	
	comp=Z,86nm,0.2s						
YJA	Yavi	1.48	117	Pg	Pn	10 36 09.3	-0.3
PB09	IPOC Station P	2.16	262	i P	Pn	10 36 16.8	+1.4
PB09				i S	Sn	10 36 50.1	+1.5
HJA	Humahuaca	2.21	140	i P	Pn	10 36 16.6	+0.4
HJA				IAML		10 36 16.8	
	comp=Z,141nm,0.3s						
PB01	IPOC Station P	2.42	281	i P	Pn	10 36 18.9	+0.9
PB01				i S	Sn	10 36 52.7	-0.5
PB01	IPOC Station P	2.42	281	P	Pn	10 36 18.0	0.0
PB01				S	Sn	10 36 51.0	-2.2
PB08	IPOC Station P	2.48	303	i P	Pn	10 36 20.3	+1.4
PB08				i S	Sn	10 36 55.1	+0.3
PB08	IPOC Station P	2.48	303	P	Pn	10 36 18.6	-0.3
PB03	IPOC Station P	2.67	258	i P	Pn	10 36 21.7	+1.0
PB03				i S	Sn	10 36 57.0	-1.1
PB06	IPOC Station P	2.71	244	i P	Pn	10 36 22.2	+1.0
PB06				i S	Sn	10 36 59.7	+0.8
PB06	IPOC Station P	2.71	244	P	Pn	10 36 23.1	+1.9
PB07	IPOC Station P	2.75	265	i P	Pn	10 36 22.4	+0.9
PB07				i S	Sn	10 36 58.7	-0.9
PB02	IPOC Station P	2.76	273	i P	Pn	10 36 22.4	+0.8
PB02				i S	Sn	10 36 58.5	-1.3
PB15	IPOC Station P	2.89	234	i P	Pn	10 36 24.0	+0.9
PB15				i S	Sn	10 37 02.4	-0.1
PB11	IPOC Station P	3.08	304	i P	Pn	10 36 25.8	+0.5
PB11				i S	Sn	10 37 05.6	-0.7
PB11	IPOC Station P	3.08	304	P	Pn	10 36 25.4	+0.1
PB11				S	Sn	10 37 04.4	-2.0
PB04	IPOC Station P	3.09	254	i P	Pn	10 36 26.2	+0.8
PB04				i S	Sn	10 37 05.5	-1.0
PB04	IPOC Station P	3.09	254	P	Pn	10 36 26.2	+0.8
AZAP	Zapla	3.21	148	i P	Pn	10 36 26.4	-0.4
AZAP				IAML		10 36 29.6	
	comp=Z,24nm,0.3s						
PB05	IPOC Station P	3.30	246	i P	Pn	10 36 28.4	+0.6
PB05				i S	Sn	10 37 10.1	-0.7
MNMC	Minye Minye	3.44	313	P	Pn	10 36 30.3	+0.8
MNMC				S	Sn	10 37 13.1	-0.9
MNMC				AML	AML	10 37 13.9	
	comp=Z,172nm,0.2s						
MNMCX	Minye Minye	3.44	313	i P	Pn	10 36 30.7	+1.2
MNMCX				i S	Sn	10 37 14.6	+0.7
SLA	San Lorenzo	3.46	158	P	Pn	10 36 30.6	+1.0
PSGC	Pisagua	3.54	302	P	Pn	10 36 30.6	+0.1
PSGCX	Pisagua	3.54	302	i P	Pn	10 36 30.4	-0.1
PSGCX				i S	Sn	10 37 13.2	-2.6
PB16	IPOC Station P	3.98	322	i P	Pn	10 36 37.8	+1.6
PB16				i S	Sn	10 37 27.2	+1.2
PB12	IPOC Station P	4.29	312	i P	Pn	10 36 39.4	-0.2
PB12				i S	Sn	10 37 28.3	-3.9
PB14	IPOC Station P	4.45	225	i P	Pn	10 36 42.0	+0.3
PB14				i S	Sn	10 37 33.6	-2.3
BBOJ	La Paz, Jacaqu	4.66	345	P	Pn	10 36 46.2	+1.6
BBOE	La Paz, Chanca	4.78	348	P	Pn	10 36 48.2	+2.2
LPAZ	La Paz	5.32	348	P	Pn	10 36 54.6	+1.8
LPAZ				S	Sn	10 37 54.9	-1.1
LPAZ				AML	AML	10 37 56.3	
	comp=Z,86nm,0.7s						
AHML	Horco Molle	5.45	165	P	Pn	10 36 55.7	+1.8
BBOB	La Paz, Bander	5.46	348	P	Pn	10 36 55.8	+1.3

IDC ***11*** *10:44:47.1±1.4, 3°.05S×28°.45E, h0*^{km}*, mb3.8/4, mb1 3.8/5, mb1mx3.6/27, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=32.3km s-min=30.8km az=118.0*

ISC 11 10:44:49.0±1.2**, 2°.8S**±0°.1×**28°.61E**±0°.10**, h10**^{km}**, n6,** σ**1ˢ.96**/8**, mb3.8**/4**, 2C, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	3.07	44	⇑eP	Pb	10 45 42.5	-1.4
MBAR				⇑eS	Sb	10 46 19.6	-1.8
KMBO	Kilima Mbogo	8.80	79	Pn	Pn	10 46 57.9	+1.3
	0.5nm,0.3s,baz=242,slow=16,SNR=4.2						
KMBO				Sn	Sn	10 48 36.2	+0.1
	1.1nm,0.3s,baz=310,slow=18,SNR=3.6						
KMBO				Lg	Lg	10 49 24.3	
	1.9nm,0.3s,baz=345,slow=22,SNR=6.4						
BOSA	Boshof	25.84	187	P	P	10 50 18.4	-2.4
	1.3nm,0.8s,baz=357,slow=8.6,SNR=2.0						
TORD	Torodi Ar. Bea	31.08	301	P	P	10 51 07.0	-0.7
	2.8nm,0.9s,baz=105,slow=7.4,SNR=14						
BRTR	Keskin Array B	42.60	6	P	P	10 52 46.9	+1.4
	0.3nm,0.4s,baz=184,slow=11,SNR=2.6						
MKAR	Makanchi Array	68.23	37	P	P	10 55 51.9	+2.0
	0.7nm,0.7s,baz=243,slow=5.7,SNR=3.0						

WEL 11 10:55:14.3, 45°S±3°×**16°8E**±°**, h121**^{km}±3^{km}**, M3.7**/23**, MLv3.7**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=57.5, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.44	35	P	Pn	10 55 32.3	+0.4
MSZ				S	Sn	10 55 45.2	0.0
MLZ	Mavora Lakes	0.51	131	P	Pn	10 55 33.1	+0.7
MLZ				S	Sn	10 55 47.1	+1.1
DCZ	Deep Cove	0.52	214	P	Pn	10 55 32.2	-0.2
DCZ				S	Sn	10 55 45.5	-0.5
WHZ	Wether Hill Ro	0.90	163	P	Pn	10 55 36.1	+0.7
WHZ				S	Sn	10 55 52.1	+0.7
WKZ	Wanaka	1.05	79	P	Pn	10 55 37.9	+1.1
EAZ	Earnscleugh	1.25	100	P	Pn	10 55 39.9	+1.0
EAZ				S	Sn	10 55 57.4	-0.1
JCZ	Jackson Bay	1.29	43	P	Pn	10 55 39.3	-0.2
TUZ	Tuapeka	1.72	123	P	Pn	10 55 45.4	+1.2
TUZ				S	Sn	10 56 06.6	-0.5
APZ	The Paps	1.82	171	P	Pn	10 55 46.0	+0.5
SYZ	Scrubby Hill	1.86	144	P	Pn	10 55 47.1	+1.2
SYZ				S	Sn	10 56 10.3	0.0
LBZ	Lake Benmore	1.97	72	P	Pn	10 55 47.0	-0.4
LBZ				S	Sn	10 56 10.4	-2.3
ODZ	Otahua Downs	2.18	91	P	Pn	10 55 50.1	+0.2
HHSZ	Highcliff Hill	2.30	113	P	Pn	10 55 52.4	+1.0
GCSZ	Gaunt Creek Bo	2.62	50	P	Pn	10 55 54.0	-1.7
RPZ	Rata Peaks	2.83	63	P	Pn	10 55 56.9	-1.3
WVZ	Waitaha Valley	3.01	51	P	Pn	10 55 58.9	-1.7
WACZ	Wakanui South	3.24	72	P	Pn	10 56 02.5	-1.2
INZ	Inchbonnie	3.63	52	P	Pn	10 56 06.7	-2.1
OXZ	Oxford	3.64	64	P	Pn	10 56 07.5	-1.5
MQZ	McQueen's Vall	3.88	72	P	Pn	10 56 11.8	-0.3
CRLZ	Canterbury Las	3.91	70	P	Pn	10 56 12.3	-0.2
AKCZ	Akaroa Harbour	4.00	75	P	Pn	10 56 12.9	-0.8
LTZ	Lake Taylor	4.08	58	P	Pn	10 56 12.7	-2.1
AMCZ	Amberley	4.10	65	P	Pn	10 56 15.4	+0.3
OKCZ	Okains Bay	4.15	74	P	Pn	10 56 16.0	+0.3
GVZ	Greta Valley S	4.45	64	P	Pn	10 56 18.5	-1.3
DSZ	Denniston Nort	4.51	45	P	Pn	10 56 18.8	-1.9
KHZ	Kahutara	5.05	61	P	Pn	10 56 26.7	-1.2
THZ	Tophouse	5.08	52	P	Pn	10 56 25.9	-2.4
QRZ	Quartz Range	5.56	43	P	Pn	10 56 32.7	-2.0
NNZ	Nelson	5.71	50	P	Pn	10 56 35.7	-1.0
TUWZ	Tuamarina	5.88	55	P	Pn	10 56 36.6	-2.4
CAW	Cannon Point	6.75	57	P	Pn	10 56 47.2	-3.5
VRZ	Vera Road	7.96	45	P	Pn	10 57 05.3	-1.8
HIZ	Hauiti	8.49	42	P	Pn	10 57 11.9	-2.4
TWGZ	Tauwhareparae	10.37	52	P	Pn	10 57 36.6	-3.1

IDC ***11*** *11:08:19.6±2.4, 38°.72N×22°.07E, h0*^{km}*, mb3.5/2, mb1 3.5/3, mb1mx3.2/28, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=135.0km s-min=26.3km az=146.0*

ATH ***11*** *11:08:20.8, 38°.60N×22°.06E, h19*^{km}*±1*^{km}*, ML3.4/26, Error ellipse: s-maj=1.1km s-min=0.6km az=239.0*

ISCJB ***11*** *11:08:21.1±0.2, 38°.62N±0°.01×22°.05E±0°.02, h10*^{km}*±2*^{km}*, mb3.5/2, Error ellipse: s-maj=2.5km s-min=2.1km az=153.7*

THE ***11*** *11:08:21.7, 38°.61N×22°.07E, h6*^{km}*, ML3.4/11, Error ellipse: s-maj=0.9km s-min=0.4km az=234.0*

ISC 11 11:08:21.3±0.8**, 38°.61N**±0°.01×**22°.05E**±0°.01**, h13**^{km}±5^{km}**, n131,** σ**0ˢ.94**/177**, 7C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANX	Ano Chora	0.10	260	P	Pg	11 08 24.3	-0.2
ANX				S	Sg	11 08 26.5	-0.2
	58μm,0.3s						
ANX	Ano Chora	0.10	260	P	Pg	11 08 24.3	-0.2
ANX				S	Sg	11 08 26.4	-0.2
ANX				AML	AML	11 08 27.5	
ANX				AML	AML	11 08 27.8	
	comp=E,57468μm,0.3s						
SERG	Sergoula	0.20	179	P	Pg	11 08 25.5	-0.2
SERG				S	Sg	11 08 28.9	+0.1
SERG	Sergoula	0.20	179	P	Pg	11 08 25.5	-0.2
SERG				S	Sg	11 08 28.8	+0.1
SERG				AML	AML	11 08 29.1	
SERG				AML	AML	11 08 29.4	
EFP	Efpalio	0.22	212	P	Pg	11 08 25.8	-0.2
EFP				S	Sg	11 08 29.5	+0.2
	comp=E,29μm,0.3s						
EFP	Efpalio	0.22	212	P	Pg	11 08 25.8	-0.2
EFP				S	Sg	11 08 29.5	+0.2
EFP				AML	AML	11 08 30.2	
	comp=N,50250μm,0.4s						
EFP				AML	AML	11 08 30.4	
	comp=E,58199μm,0.3s						
KALE	Kalithea	0.23	163	P	Pg	11 08 26.0	-0.3
KALE				S	Sg	11 08 29.5	-0.2
KALE	Kalithea	0.23	163	P	Pg	11 08 26.0	-0.3
KALE				S	Sg	11 08 29.8	+0.1
KALE				AML	AML	11 08 30.8	
	comp=E,37580μm,0.3s						
KALE				AML	AML	11 08 31.6	
	comp=N,44520μm,0.3s						
TRIZ	Trizonia	0.25	176	P	Pg	11 08 26.2	-0.3
TRIZ				S	Sg	11 08 30.1	+0.1
ALIK	Aliki, Aigiali	0.35	172	P	Pg	11 08 28.4	0.0
ALIK				S	Sb	11 08 34.5	-0.4
EVR	Evrytania	0.36	328	P	Pg	11 08 28.6	0.0
EVR				S	Sb	11 08 34.7	-0.6
	comp=N,8μm,0.6s						
EVR	Evrytania	0.36	328	P	Pg	11 08 28.6	0.0
EVR				S	Sb	11 08 34.7	-0.6
EVR				AML	AML	11 08 35.4	
	comp=N,22588μm,0.6s						

EVR				AML	AML	11 08 41.9	
	comp=E,9140µm,0.7s						
DLFA	Delphi	0.37	111	P	Pg	11 08 28.4	-0.4
DLFA				S	Sg	11 08 34.3	+0.4
DLFA				AML	AML	11 08 35.9	
	comp=N,9607µm,0.1s						
DLFA				AML	AML	11 08 36.1	
	comp=E,12684µm,0.2s						
LAKA	Lakka	0.38	189	P	Pg	11 08 28.4	-0.5
LAKA				S	Sg	11 08 34.1	+0.2
LAKA	Lakka	0.38	189	P	Pg	11 08 28.4	-0.5
LAKA				S	Sg	11 08 34.6	+0.6
LAKA				AML	AML	11 08 37.5	
	comp=N,11220µm,0.6s						
LAKA				AML	AML	11 08 37.5	
	comp=E,7828µm,0.3s						
UPR	University Cam	0.39	213	P	Pg	11 08 29.1	0.0
UPR				S	Sb	11 08 35.4	-0.5
UPR	University Cam	0.39	213	P	Pg	11 08 29.2	+0.2
UPR				S	Sg	11 08 34.9	+0.6
PVO	Paravola	0.41	271	P	Pg	11 08 29.3	-0.2
PVO	Paravola	0.41	271	P	Pg	11 08 29.4	-0.2
PVO				S	Sb	11 08 36.3	-0.4
PVO				AML	AML	11 08 44.2	
	comp=N,3859µm,0.6s						
PVO				AML	AML	11 08 44.6	
	comp=E,3852µm,0.6s						
DSF	Desfina	0.42	118	P	Pg	11 08 29.2	-0.5
DSF				S	Sg	11 08 35.7	+0.3
	comp=E,11µm,0.2s						
DSF	Desfina	0.42	118	P	Pg	11 08 29.0	-0.8
DSF				S	Sg	11 08 34.7	-0.7
DSF				AML	AML	11 08 37.2	
	comp=E,15165µm,0.2s						
DSF				AML	AML	11 08 37.4	
	comp=N,27530µm,0.2s						
TRAZ	Trapeza	0.46	164	P	Pg	11 08 30.1	-0.3
TRAZ				S	Sg	11 08 37.1	+0.6
TRAZ	Trapeza	0.46	164	P	Pg	11 08 30.1	-0.3
TRAZ				S	Sg	11 08 37.1	+0.6
TRAZ				AML	AML	11 08 39.2	
	comp=E,35888µm,0.3s						
TRAZ				AML	AML	11 08 39.6	
	comp=N,47467µm,0.3s						
AGG	Agios Georgios	0.46	28	P	Pg	11 08 30.1	-0.4
AGG				S	Sb	11 08 38.0	-0.2
	comp=N,9µm,0.3s						
AGG	Agios Georgios	0.46	28	P	Pg	11 08 30.2	-0.4
AGG				S	Sg	11 08 36.5	-0.3
AGG				AML	AML	11 08 38.4	
	comp=E,18302µm,0.2s						
AGG				AML	AML	11 08 38.9	
	comp=N,17931µm,0.4s						
KLV	Kalavryta, Ach	0.57	172	P	Pg	11 08 31.9	-0.6
KLV				S	Sb	11 08 40.7	-0.6
KLV	Kalavryta, Ach	0.57	172	P	Pg	11 08 31.6	-0.9
KLV				S	Sg	11 08 40.0	-0.1
KLV				AML	AML	11 08 42.0	
	comp=E,16392µm,0.7s						
KLV				AML	AML	11 08 43.6	
	comp=N,9244µm,0.4s						
GUR	Goura	0.71	161	P	Pg	11 08 34.1	-1.1
GUR				S	Sg	11 08 44.4	-0.1
GUR	Goura	0.71	161	P	Pg	11 08 34.1	-1.1
GUR				S	Sg	11 08 44.2	-0.3
RLS	Riolos of Patr	0.72	220	P	Pg	11 08 35.1	-0.2
RLS				S	Sb	11 08 46.4	+0.9
	comp=N,2µm,0.4s						
RLS	Riolos of Patr	0.72	220	P	Pg	11 08 34.9	-0.3
LKR	Lokris	0.74	87	P	Pg	11 08 34.8	-0.9
LKR				S	Sb	11 08 46.8	+0.7
LKR	Lokris	0.74	87	P	Pg	11 08 34.6	-1.1
LKR				AML	AML	11 08 46.5	
	comp=N,8155µm,0.4s						
LKR				AML	AML	11 08 48.2	
	comp=E,8433µm,0.2s						
THAL	Thalero	0.75	140	P	Pg	11 08 35.6	-0.2
THAL				S	Sg	11 08 45.9	+0.3
THAL	Thalero	0.75	140	P	Pg	11 08 35.6	-0.2
PROD	Prodromos	0.75	118	P	Pg	11 08 35.2	-0.7
PROD				S	Sb	11 08 46.9	+0.4
PROD	Prodromos	0.75	118	P	Pg	11 08 35.1	-0.9
PROD				AML	AML	11 08 51.0	
	comp=E,7408µm,0.3s						
PROD				AML	AML	11 08 52.0	
	comp=N,5763µm,0.3s						
ATAL	Atalanti	0.76	84	P	Pg	11 08 35.5	-0.6
ATAL				S	Sb	11 08 46.9	+0.2
	comp=N,1µm,0.2s						
ATAL	Atalanti	0.76	84	P	Pg	11 08 35.3	-0.8
ATAL				AML	AML	11 08 47.5	
	comp=N,2985µm,0.3s						
ATAL				AML	AML	11 08 51.0	
	comp=E,1749µm,0.2s						
SMIA	Simia	0.94	73	P	Pb	11 08 39.0	-0.5
SMIA				S	Sg	11 08 52.5	+0.6
SMIA	Simia	0.94	73	P	Pb	11 08 39.0	-0.5
SMIA				AML	AML	11 08 55.0	
	comp=N,8406µm,0.5s						
SMIA				AML	AML	11 08 57.9	
	comp=E,7809µm,0.7s						
THL	Klokotos Trika	0.95	358	P	Pb	11 08 39.5	-0.2
THL				S	Sg	11 08 52.9	+0.7
	comp=E,2µm,0.6s						
THL	Klokotos Trika	0.95	358	P	Pb	11 08 39.0	-0.7
THL				S	Sg	11 08 52.5	+0.3
THL				AML	AML	11 08 57.4	
	comp=E,3654µm,0.7s						
THL				AML	AML	11 08 57.8	
	comp=N,3357µm,0.6s						
LOUT	Loutraki	0.96	130	P	Pb	11 08 39.4	-0.3
LOUT				S	Sn	11 08 53.8	-0.1
LOUT	Loutraki	0.96	130	P	Pb	11 08 39.5	-0.2
ACOR	Acrocorinthos	0.96	138	P	Pb	11 08 39.9	-0.1
ACOR				S	Sb	11 08 52.1	-0.4
ACOR				AML	AML	11 08 55.2	
	comp=N,2773µm,0.8s						
ACOR				AML	AML	11 08 55.8	
	comp=E,3322µm,0.7s						
VTN	Vitineika	0.97	225	P	Pb	11 08 39.9	-0.1
MGNA	Meganis	0.99	273	P	Pb	11 08 40.0	-0.3
VIL2	Platees	1.03	112	P	Pg	11 08 41.4	+0.1
VIL2				AML	AML	11 09 02.3	
	comp=N,3676µm,0.3s						
VIL2				AML	AML	11 09 06.5	
	comp=E,4915µm,0.5s						
FYTO	Fytoko, Volos	1.05	41	P	Pg	11 08 42.4	+0.8
FYTO	Fytoko, Volos	1.05	41	P	Pb	11 08 41.4	0.0
VILL	Villia	1.09	114	P	Pb	11 08 41.9	-0.1
EVGI	Lefkada island	1.09	271	P	Pb	11 08 42.0	-0.1
EVGI	Lefkada island	1.09	271	P	Pb	11 08 41.8	-0.3
TRIP	Tripoli	1.09	171	P	Pb	11 08 41.3	-0.9
TRIP				S	Sn	11 08 58.2	+0.7
TRIP	Tripoli	1.09	171	P	Pb	11 08 41.1	-1.1
TRIP				AML	AML	11 09 00.3	
	comp=E,3328µm,0.6s						
TRIP				AML	AML	11 09 09.2	
	comp=N,2470µm,0.6s						
LKD2	Lefkada island	1.11	280	P	Pg	11 08 43.0	+0.4
LKD2	Lefkada island	1.11	280	P	Pg	11 08 42.8	+0.1
LKD2				AML	AML	11 09 07.5	
	comp=E,2033µm,0.7s						
LKD2				AML	AML	11 09 12.7	
	comp=N,1741µm,0.6s						
AMT	Artemida-Makis	1.11	194	P	Pb	11 08 41.9	-0.5
AMT				S	Sn	11 08 59.0	+1.2
	comp=N,2µm,0.5s						
AMT	Artemida-Makis	1.11	194	P	Pb	11 08 41.5	-0.9
AMT				AML	AML	11 09 03.9	
	comp=N,4846µm,0.5s						
AMT				AML	AML	11 09 05.5	
	comp=E,3460µm,0.4s						
KFL	Anninata	1.11	244	P	Pb	11 08 41.8	-0.6
KFL	Anninata	1.11	244	P	Pb	11 08 41.8	-0.6
KFL				AML	AML	11 09 08.0	
	comp=E,2268µm,0.6s						
KFL				AML	AML	11 09 11.9	
	comp=N,1978µm,0.8s						
TSLK	Tsoukalades, L	1.11	281	P	Pn	11 08 42.6	0.0
NEO	Neokhori	1.15	52	P	Pn	11 08 43.1	0.0
XOR	Xorichti	1.17	49	P	Pn	11 08 43.2	-0.1
XOR	Xorichti	1.17	49	P	Pn	11 08 43.0	-0.4
FSK	Fiskardo	1.18	263	P	Pn	11 08 43.2	-0.3
FSK	Fiskardo	1.18	263	P	Pn	11 08 43.0	-0.4
MRKA	Markates	1.21	85	P	Pb	11 08 44.2	+0.2
MRKA	Markates	1.21	85	P	Pn	11 08 43.7	-0.1
VLS	Valsamata	1.23	250	P	Pn	11 08 43.4	-0.8
VLS	Valsamata	1.23	250	P	Pn	11 08 43.1	-1.1
SKIA	Skiathos	1.23	63	P	Pb	11 08 44.4	-0.1
SKIA				S	Sg	11 09 01.0	-0.1
SKIA	Skiathos	1.23	63	P	Pn	11 08 44.1	-0.1
VLX	Vlachokerasia	1.27	168	P	Pn	11 08 44.6	-0.2
VLX	Vlachokerasia	1.27	168	P	Pn	11 08 43.8	-0.9
VLX				AML	AML	11 09 07.7	
	comp=N,4974µm,0.5s						
VLX				AML	AML	11 09 07.7	
	comp=E,5617µm,0.4s						
EPID	Epidavros	1.30	139	P	Pb	11 08 45.6	0.0
MEV	Metsovon	1.33	332	P	Pb	11 08 46.3	0.0
JAN	Janina	1.40	319	P	Pb	11 08 47.4	0.0
JAN	Janina	1.40	319	P	Pb	11 08 47.8	+0.5
JAN				AML	AML	11 09 14.5	
	comp=N,1514µm,0.7s						
JAN				AML	AML	11 09 14.7	
	comp=E,2008µm,1.1s						
ITM	Ithomi	1.43	184	P	Pn	11 08 46.8	-0.2
ITM				S	Sg	11 09 08.9	+1.4
ITM	Ithomi	1.43	184	P	Pn	11 08 46.8	-0.2
KPRO	Kipourio	1.44	338	P	Pb	11 08 48.3	+0.2
KPRO	Kipourio	1.44	338	P	Pb	11 08 48.2	+0.2
DID	Didima	1.45	139	P	Pn	11 08 47.5	+0.3
DID				S	Sg	11 09 08.2	+0.3
	comp=E,1µm,0.6s						
DID	Didima	1.45	139	P	Pn	11 08 47.4	+0.2
DID				AML	AML	11 09 10.7	
	comp=E,3104µm,0.6s						
DID				AML	AML	11 09 12.4	
	comp=N,2181µm,0.5s						
KRND	KRANIDI	1.50	144	P	Pn	11 08 48.1	+0.2
KRND	KRANIDI	1.50	144	P	Pn	11 08 48.2	+0.2
ATHU	Athens Univers	1.51	115	P	Pb	11 08 49.0	-0.1
ATHU	Athens Univers	1.51	115	P	Pn	11 08 48.3	+0.3
LIT	Litokhoron	1.53	13	P	Pn	11 08 48.5	+0.2
LIT	Litokhoron	1.53	13	P	Pn	11 08 48.2	-0.1
PTL	Penteli	1.53	111	P	Pn	11 08 48.3	-0.1
VLY	Voula,Athens	1.57	118	P	Pb	11 08 49.5	-0.7
VLY	Voula,Athens	1.57	118	P	Pn	11 08 49.1	+0.3
DION	Dionisos Attik	1.57	109	P	Pb	11 08 49.7	-0.6
DION				S	Sb	11 09 09.7	-0.3
DION	Dionisos Attik	1.57	109	P	Pn	11 08 49.4	+0.4
KZN	Kozani	1.71	353	P	Pn	11 08 50.6	-0.2
PYL	PYLOS	1.73	188	P	Pb	11 08 52.8	-0.1
PYL	PYLOS	1.73	188	P	Pb	11 08 52.9	-0.1
KARY	Karystos	1.96	106	P	Pn	11 08 54.8	+0.5
VLI	Veliai	2.02	159	P	Pn	11 08 55.1	0.0
VLI	Veliai	2.02	159	P	Pn	11 08 55.0	0.0
PLG	Polygyros	2.06	31	P	Pn	11 08 55.5	-0.2
KEK	Kerkira	2.07	303	P	Pb	11 08 58.1	-0.6
KEK	Kerkira	2.07	303	P	Pb	11 08 58.2	-0.6
HORT	Hortiatis	2.14	22	P	Pn	11 08 56.5	-0.4
SOH	Sokhos	2.42	24	P	Pn	11 09 01.3	+0.6
SOH	Sokhos	2.42	24	P	Pn	11 09 01.1	+0.4
KTHA	Kythira Island	2.48	161	P	Pn	11 09 02.1	+0.6
VAY	Valandovo	2.73	8	*i* Pn	Pn	11 09 05.4	+0.5
STIP	Stip	3.08	2	*i* Pn	Pn	11 09 11.2	+1.6
TIR	Tirane	3.21	329	⇑*i*P	Pg	11 09 21.3	-1.5
VTS	Vitosha	4.10	12	⇑*i*P	Pn	11 09 25.2	+1.4
TIP	Timpagrande	4.17	279	⇑*i*P	Pn	11 09 23.4	-1.3
PDG	Podgorica	4.37	332	⇓*i*P	Pb	11 09 33.1	-4.8
MATE	Matera	4.60	298	⇓*i*P	Pn	11 09 35.1	+4.5
ELND	Elena	5.20	33	⇓*i*P	Pn	11 09 39.3	+0.5
MAKA	Makarska	6.03	322	*e*Pn	Pn	11 09 51.0	+0.9
MAKA				Sn	Sn	11 10 55.9	-3.1
KIJV	Kijevo	6.86	324	*e*Pn	Pn	11 10 02.3	+0.7
ZIRJ	Zirje	6.98	318	*e*Pn	Pn	11 10 04.1	+0.9
ZIRJ				Sn	Sn	11 11 18.1	-4.3
BZS	Buzias	7.01	357	⇑*i*P	Pn	11 10 05.8	+2.2
MORI	Morici	7.10	320	*i* Pn	Pn	11 10 05.8	+0.9
VOIR		7.18	17	⇑*i*P	Pn	11 10 07.1	+1.1
MLR	Muntele Rosu	7.46	22	⇑*i*P	Pn	11 10 12.8	+2.9
DUGI	Dugi Otok	7.52	318	*e*Pn	Pn	11 10 12.4	+1.8
DUGI				Sn	Sn	11 11 33.7	-2.1
PLOR	Plostina	8.00	24	⇑*i*P	Pn	11 10 20.3	+3.1
VRI	Vrincioaia	8.04	24	⇓*i*P	Pn	11 10 22.0	+4.3
BRTR	Keskin Array B	9.07	79	Pn	Pn	11 10 34.1	+2.1
	comp=N,0.3nm,0.3s,baz=254,slow=13,SNR=6.5						
TORD	Torodi Ar. Bea	31.13	221	P	P	11 14 40.9	+1.1
	comp=N,0.3nm,0.5s,baz=37,slow=10.0,SNR=4.3						
MKAR	Makanchi Array	44.05	59	P	P	11 16 28.4	-0.3
	comp=N,0.5nm,0.5s,baz=278,slow=7.8,SNR=6.4						

IDC 11 11:26:38.1±1.9**,16°.47S**×**177°.77W,h0^{km},mb3.7**/6**,**
mb1 4.1/6**,mb1mx3.8**/36**,mbtmp3.7**/6**,Error ellipse:**
s-maj=127.0km s-min=23.5km az=153.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.51	258	P	P	11 35 00.0	+0.3
	0.8nm,0.9s,baz=87,slow=7.9,SNR=6.1						
ASAR	Alice Springs	45.79	253	P	P	11 35 01.6	-0.4
	0.5nm,0.9s,baz=86,slow=8.6,SNR=6.3						
NVAR	Mina Array Bea	77.97	44	P	P	11 38 40.6	+2.0
	0.6nm,0.7s,baz=224,slow=8.3,SNR=6.0						
ILAR	Eielson Array	84.36	13	P	P	11 39 11.1	-0.6
	0.3nm,0.4s,baz=218,slow=5.2,SNR=6.6						
TXAR	Lajitas Array	84.71	57	P	P	11 39 13.9	-0.6
	0.6nm,0.4s,baz=219,slow=6.1,SNR=13						
PDAR	Pinedale Array	85.89	43	P	P	11 39 19.1	-1.2
	0.4nm,0.6s,baz=212,slow=3.2,SNR=4.2						

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*IDC **11** 11:35:06.5±2.3,5°.45N×127°.10E,h0^{km},mb3.9/6,*
mb1 4.1/6,mb1mx3.7/42,mbtmp3.9/6,MS3.8/1,Ms1 3.7/1,
ms1mx2.7/39,Error ellipse: s-maj=254.8km s-min=17.9km az=66.0
*ISCJB **11** 11:35:09.9±0.8,5°.37N±0°.09×127°.29E±0°.09,h35^{km},*
mb3.8/6,MS3.7/1,Error ellipse: s-maj=16.9km s-min=6.6km az=137.3
*MAN **11** 11:35:09.6,5°.28N×127°.26E,h44^{km},mb4.5,ML3.3,MS3.1*
ISC 11 11:35:12.0±1.0**,5°.36N**±0°.10×**127°.2E**±0°.1**,h35^{km},n12,**
σ1^{s}.09/16**,mb3.9**/6**,2C,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.67	297	*e*P	Pn	11 35 37.2	-1.5
DDMP				*e*S	Sn	11 36 00.2	+1.4
MATI	Mati	1.84	329	*e*P	Pn	11 35 40.3	-0.8
MATI				*e*S	Sn	11 36 04.0	+0.8
GSPH	General Santos	2.36	288	⇑*i*P	Pn	11 35 47.5	-0.9
SKMP	Bagumbayan, Su	2.89	294	*e*P	Pn	11 35 55.3	-0.3
SKMP				*e*S	Sn	11 36 29.5	+0.3
BUKP	Musuan	3.29	320	*e*P	Pn	11 36 01.6	+0.5
BUKP				*e*S	Sn	11 36 40.6	+1.5
CTBH	Cotabato--PC H	3.48	302	⇑*i*P	Pn	11 36 04.9	+1.3
WRA	Warramunga Arr	26.10	165	P	P	11 40 43.7	+0.9
	2.9nm,0.6s,baz=348,slow=12,SNR=26						
ASAR	Alice Springs	29.58	167	P	P	11 41 13.9	+0.1
	0.4nm,0.4s,baz=346,slow=6.9,SNR=16						
STKA	Stephens Creek	39.48	161	P	P	11 42 40.1	+0.9
	1.9nm,0.6s,baz=344,slow=8.9,SNR=5.8						
STKA				LR	LR	12 00 47.0	
	comp=Z,114nm,18.3s,baz=19,slow=39						
MKAR	Makanchi Array	56.51	324	P	P	11 44 49.7	-1.1
	0.4nm,0.5s,baz=115,slow=7.5,SNR=4.0						
KURBB	Kurchatov Arra	60.64	327	P	P	11 45 18.3	-1.1
	0.5nm,0.5s,baz=123,slow=5.9,SNR=9.8						
BVAR	Borovoye Array	66.23	326	P	P	11 45 55.4	-1.0
	0.7nm,0.6s,baz=138,slow=9.0,SNR=5.5						

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*IDC **11** 11:39:02.4±0.8,0°.39N×132°.90E,h0^{km},mb4.0/11,*
mb1 4.2/12,mb1mx4.0/46,mbtmp4.1/12,ML3.9/1,MS3.5/12,
Ms1 3.5/12,ms1mx3.2/36,Error ellipse: s-maj=33.6km s-min=14.5km az=75.0
*NEIC **11** 11:39:04.8±1.9,0°.35N×132°.78E,h14^{km}±4^{km},mb4.6/12,*
Error ellipse: s-maj=17.6km s-min=9.9km az=53.0
*ISCJB **11** 11:39:05.9±0.4,0°.35N±0°.03×132°.72E±0°.04,h33^{km},*
mb4.3/20,MS3.4/8,Error ellipse: s-maj=5.6km s-min=4.9km az=168.6
*DJA **11** 11:39:06.5±1.1,0°N±4°×13°3E±°,h24^{km}±11^{km},M4.6/18,*
mB5.0/4,mb4.8/18,MLv4.6/11,Mw(mB)4.3/4
ISC 11 11:39:08.1±0.5**,0°.30N**±0°.05×**132°.75E**±0°.06**,h35^{km},n75,**
σ1^{s}.62/65**,mb4.2**/20**,MS3.4**/8**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.89	232	Pn	Pn	11 39 37.3	-0.5
	37nm,0.3s,baz=35,slow=15,SNR=107						
SIJI				Sn	Sn	11 39 58.6	-1.8
	195nm,0.3s,baz=156,slow=19,SNR=30						
SIJI				LR	LR	11 40 28.8	
	comp=Z,1µm,21.0s,baz=140,slow=42						
SWI	Sorong	1.89	232	P	Pn	11 39 37.3	-0.6
SWI				S	Sn	11 39 59.0	-1.4
FAKI	Fak Fak	3.24	189	*e*Pn	Pn	11 39 58.2	+1.7
FAKI	Fak Fak	3.24	189	P	Pn	11 39 56.4	-0.1
FAKI				S	Sn	11 40 34.7	+0.8
BAKI	Biak	3.67	114	P	Pn	11 40 00.5	-1.9
LBMI	Labuha	5.33	260	P	Pn	11 40 23.8	-1.5
TNTI	Ternate	5.40	275	*e*Pn	Pn	11 40 26.3	0.0
TNTI	Ternate	5.40	275	P	Pn	11 40 25.1	-1.2
	54nm,0.8s,896nm0.2nm						
BNDI	Bandanaira	5.57	211	P	Pn	11 40 28.3	-0.3
AAI	Ambon	6.04	229	P	Pn	11 40 34.4	-0.6
NLAI	Namlea	6.65	238	P	Pn	11 40 46.6	+3.2
SANI	Sanana	7.15	251	P	Pn	11 40 49.9	-0.4
	28nm,0.6s						
JAY	Jayapura	8.43	109	P	Pn	11 41 06.3	-1.6
KMSI	Cibinong	8.77	272	P	Pn	11 41 13.1	+0.5
DAV	Davao City (W)	9.82	313	LR	LR	11 44 34.9	
	comp=Z,258nm,21.7s,baz=122,slow=34						
LUWI	Luwuk	10.07	262	*e*Pn	Pn	11 41 28.8	-1.5
LUWI				*e*Sn	Sn	11 43 20.5	-1.6
LUWI	Luwuk	10.07	262	P	Pn	11 41 30.0	-0.3
KDU	Kakadu	12.91	181	P	Pn	11 42 08.5	-0.6
	baz=13,SNR=11						
MTN	Manton Dam	13.16	187	*e*Pn	Pn	11 42 12.1	-0.5
MTN				*e*Sn	Sn	11 44 33.9	-3.9
MTN	Manton Dam	13.16	187	P	Pn	11 42 11.9	-0.7
	baz=13,SNR=26						
TTSI	Tana Toraja	13.35	255	P	P	11 42 22.0	-2.3
SPSI	Sidrap Palu	13.65	252	P	Pn	11 42 19.0	-0.3
BATI	Baumata	13.81	221	LR	LR	11 48 13.7	
	comp=Z,224nm,19.1s,baz=77,slow=40						
KAPI	Kappang	14.02	248	Pn	P	11 42 28.1	-3.7
	1.8nm,0.3s,baz=135,slow=17,SNR=2.7						
KAPI				LR	LR	11 47 48.4	
	comp=Z,100nm,19.1s,baz=305,slow=37						
EDFI	Ende, Flores	14.22	231	P	P	11 42 38.4	+4.2
KNRA	Kununurra	16.36	194	P	Pn	11 42 53.2	-2.0
	baz=17,SNR=14						
COEN	Coen	17.53	144	P	Pn	11 43 09.8	-0.1
	baz=18						
WC1	Warramunga Arr	20.16	176	P	P	11 43 40.7	+1.0
	baz=20						
WRAB	Tennant Creek	20.17	176	*e*P	P	11 43 40.8	+1.0
	26nm,0.8s						
WR1	Warramunga Arr	20.18	176	*e*P	P	11 43 40.8	+1.0
WRA	Warramunga Arr	20.18	176	P	P	11 43 40.8	+1.0
	18nm,0.6s,baz=353,slow=12,SNR=73						
WB2	Warramunga Arr	20.18	176	*e*Pn	Pn	11 43 41.2	-0.6
	28nm,0.8s						
QIS	Mount Isa	21.79	162	P	P	11 43 57.9	+0.7
	baz=22,SNR=12						
KSM	Kuching	22.47	273	*e*P	P	11 44 07.4	+2.8
	8.9nm,0.9s						
AS15	Alice Springs	23.82	177	P	P	11 44 19.5	+1.4
	baz=24						
AS31	Alice Springs	23.85	177	*e*P	P	11 44 18.9	+0.6
	20nm,0.8s						
ASAR	Alice Springs	23.85	177	P	P	11 44 19.4	+1.1
	73nm,0.9s,baz=358,slow=10,SNR=282						
PSA00	Pilbara Seismi	25.13	209	*e*P	P	11 44 30.5	+0.5
	24nm,1.1s						
WRKA	Warakurna	25.56	189	P	P	11 44 35.8	+1.9
	baz=26,SNR=36						
LEM	Lembang	26.06	254	LR	LR	11 56 27.1	
	comp=Z,54nm,19.6s,baz=250,slow=40						
TPRI	Tanjung Pinang	28.23	271	P	P	11 45 14.1	+16
HNR	Honiara	28.75	110	LR	LR	11 55 27.1	
	comp=Z,67nm,19.7s,baz=266,slow=34						
FORT	Forrest	31.23	188	*e*P	P	11 45 26.7	+2.3
	62nm,0.8s						
FORT	Forrest	31.23	188	P	P	11 45 26.2	+1.8
	baz=32,SNR=8.7						
KULM	Kulim	32.43	279	*e*P	P	11 45 34.7	-0.5
	8.9nm,1.1s						
JNU	Nakatsue	32.69	357	LR	LR	11 59 39.6	
	comp=Z,66nm,18.0s,baz=172,slow=38						
SKNT	Sakolnakorn	32.82	302	P	P	11 45 46.5	+7.9
	6.8nm,1.5s						
STKA	Stephens Creek	33.08	166	P	P	11 45 40.2	-0.5
	5.1nm,0.8s,baz=352,slow=6.1,SNR=9.8						
STKA	Stephens Creek	33.08	166	*e*P	P	11 45 40.5	-0.2
	1.0nm,0.8s						
STKA	Stephens Creek	33.08	166	P	P	11 45 40.8	+0.1
	baz=33,SNR=6.7						
NONG	Nongkai	34.03	303	P	P	11 45 56.5	+7.4
WHN	Wuhan	34.79	331	P	P	11 45 54.8	-0.7
MJAR	Matsushiro Arr	36.41	7	LR	LR	11 58 10.7	
	comp=Z,89nm,20.2s,baz=185,slow=32						
KSRS	Korea Array	37.24	354	LR	LR	11 58 51.9	
	comp=Z,84nm,21.1s,baz=167,slow=32						
CMAR	Chiang Mai Arr	37.78	300	P	P	11 46 21.6	+0.3
	0.8nm,0.4s,baz=119,slow=7.3,SNR=4.0						
CMAR				LR	LR	12 02 43.1	
	comp=Z,36nm,18.6s,baz=100,slow=38						
H11N1	WAKE ISLAND Hy	38.60	58	T	T	12 27 27.8	
	baz=245,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	38.62	58	T	T	12 27 39.5	
	baz=245,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	38.62	58	T	T	12 27 45.2	
	baz=245,slow=75,SNR=12						
SONA0	Songino Array	52.59	338	*e*P	P	11 48 19.5	+1.0
SONM	Songino Array	52.59	338	P	P	11 48 19.5	+1.0
	0.8nm,0.8s,baz=166,slow=7.6,SNR=9.4						
PETK	Petropavlovsk-	56.58	18	LR	LR	12 08 52.8	
	comp=Z,63nm,21.4s,baz=156,slow=32						
MK32	Makanchi Array	63.82	324	*e*P	P	11 49 36.9	-0.1
MKAR	Makanchi Array	63.82	324	P	P	11 49 36.9	-0.1
	1.1nm,0.7s,baz=108,slow=9.7,SNR=8.4						
MAKZ	Makanchi	64.01	324	*e*P	P	11 49 37.8	-0.4
	6.9nm,0.8s						
KSH	Kashi	64.72	314	P	P	11 49 47.3	+4.2
KSH				sP	pwP	11 49 58.9	+0.6
KSH				PcP	PcP	11 50 20.6	+4.0
KSH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH				pmax	pmax		
	comp=Z,120nm,4.3s						
ZALV	Zalesovo Beam	66.41	331	P	P	11 49 52.8	-0.8
	0.8nm,0.3s,baz=92,slow=8.0,SNR=3.5						
ZAA1	Zalesovo Array	66.41	331	*e*P	P	11 49 52.8	-0.8
KURBB	Kurchatov Arra	67.89	326	P	P	11 50 02.4	-0.6
	1.2nm,0.7s,baz=127,slow=5.5,SNR=9.0						
BVAR	Borovoye Array	73.48	326	P	P	11 50 36.8	-0.3
	1.5nm,0.9s,baz=158,slow=4.3,SNR=6.3						
PPT	Papeete	78.34	108	LR	LR	12 22 04.8	
	comp=Z,36nm,18.9s,baz=310,slow=33						
VNDA	Vanda	79.34	174	P	P	11 51 09.8	0.0
	1.5nm,0.9s,baz=329,slow=6.2,SNR=8.6						
AKTO	Aktyubinsk	80.07	321	P	P	11 51 13.9	-0.4
	0.5nm,0.5s,baz=86,slow=15,SNR=3.8						
ILAR	Eielson Array	85.61	25	P	P	11 51 41.4	-1.4
	0.6nm,1.0s,baz=260,slow=5.3,SNR=4.4						
QSPA	South Pole Qui	90.23	180	*e*P	P	11 52 04.5	-0.5
	0.5nm,0.8s						
CPUP	Villa Florida	152.36	160	PKPbc	PKPbc	11 59 00.0	-1.3
	2.1nm,0.8s,baz=161,slow=1.7,SNR=3.6						

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*NNC **11** 11:40:50.2±1.8,39°.61N×73°.98E,h0^{km},mb3.6,mpv3.4,*
Error ellipse: s-maj=40.2km s-min=11.4km az=117.0
*KRNET **11** 11:41:01.6±0.1,39°.37N×75°.34E,mb2.7*
ISC 11 11:41:07.2±2.4**,39°.4N**±0°.1×**75°.34E**±0°.09**,h28^{km},n15,**
σ1^{s}.30/23**,10C-6D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	2.66	318	⇓*i*P	Pn	11 41 47.0	-1.4
	baz=18						
ARSB				⇓*i*S	Sn	11 42 21.3	+1.5
	baz=18						
KZA	Kyzart	2.72	359	⇓*i*P	Pn	11 41 48.6	-0.8
	baz=59						
KZA				⇓*i*S	Sn	11 42 22.3	+0.7
	baz=59						
DRK	Karamyk	2.74	274	⇑*i*P	Pn	11 41 48.9	-0.7
	baz=74						

DRK				⇑iS	**Sn**	**11 42 23.2**	**+1.3**
	baz=74						
UCH	**Uchtor**	**2.94**	**348**	⇑iP	**Pn**	**11 41 51.6**	**-0.8**
	baz=48						
UCH				⇑iS	**Sn**	**11 42 27.8**	**+0.9**
	baz=48						
KDJ	**Kajisay**	**3.10**	**26**	⇑iP	**Pn**	**11 41 53.1**	**-1.4**
	baz=26						
KDJ				⇑iS	**Sn**	**11 42 32.1**	**+1.4**
	baz=26						
BOOM	**Boomskoye usch**	**3.16**	**8**	⇓iP	**Pn**	**11 41 54.4**	**-0.9**
	baz=8.0						
BOOM				⇓iS	**Sn**	**11 42 32.7**	**+0.5**
	baz=8.0						
KBK	**Karagaybulak**	**3.31**	**355**	⇑iP	**Pn**	**11 41 56.7**	**-0.6**
	baz=55						
KBK				⇑iS	**Sn**	**11 42 36.4**	**+0.6**
	baz=55						
BTK	**Batken**	**3.55**	**283**	⇑iP	**Pn**	**11 42 00.1**	**-0.5**
	baz=83						
BTK				⇑iS	**Sn**	**11 42 42.2**	**+0.5**
	baz=83						
KST	**Kastek**	**3.71**	**7**	Pg	**Pn**	**11 41 58.9**	**-3.9**
	2.6nm,0.2s						
KST				Lg	Lg	11 42 50.0	
	6.9nm,0.8s						
IZV	**Izvestkoviy**	**3.80**	**14**	Pg	**Pn**	**11 42 03.4**	**-0.7**
	2.4nm,0.3s						
IZV				Lg	Lg	11 42 57.7	
	11nm,0.5s						
TNSS	**Tian-Shan**	**3.87**	**18**	Pg	**Pn**	**11 42 04.8**	**-0.4**
	2.0nm,0.3s						
TNSS				Lg	Lg	11 43 00.0	
	5.2nm,0.6s						
MDOK	**Medeo**	**4.02**	**18**	Pg	**Pn**	**11 42 07.1**	**+0.1**
	1.5nm,0.3s						
MDOK				Lg	Lg	11 43 04.1	
	5.3nm,0.3s						
KOTS	**Kotyrbulak**	**4.10**	**18**	Pg	**Pn**	**11 42 09.0**	**+0.9**
	2.3nm,0.4s						
KOTS				Lg	Lg	11 43 07.4	
	17nm,0.8s						
KTBS	**Karatobe**	**4.47**	**13**	Pg	**Pn**	**11 42 14.1**	**+1.0**
	0.9nm,0.5s						
KTBS				Lg	Lg	11 43 16.4	
	4.3nm,0.6s						
KUU	**Kurty**	**4.59**	**9**	Pg	**Pn**	**11 42 13.7**	**-1.1**
	4.6nm,0.1s						
KUU				Lg	Lg	11 43 15.8	
	4.7nm,0.6s						

*ISCJB **11** 11:47:58.4±1.3, 14°.2N±0°.1×91°.58W±0°.08, h82^{km}, Error ellipse: s-maj=19.6km s-min=6.7km az=28.6*
*MEX **11** 11:47:59.0±0.7, 14°.23N×91°.47W, h85^{km}±15^{km}, MD3.8*
*GCG **11** 11:48:06.7±0.3, 14°.29N×91°.07W, h31^{km}±8^{km}, MD3.8*
ISC 11 11:47:59.1±2.1**, 14°.3N**±0°.2×**91°.56W**±0°.08**, h82**^{km}**, n9, σ0^{s}.70**/13**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.18**	**356**	eP	Pn	11 48 17.0	+5.9
FUG	**Fuego 3**	**0.72**	**75**	eP	**Pn**	**11 48 14.4**	**-0.9**
PCG	**Pacaya**	**0.93**	**82**	eP	**Pn**	**11 48 17.3**	**-0.4**
THIG		**0.94**	**313**	eP	**Pn**	**11 48 16.6**	**-1.0**
THIG				eS	**Sn**	**11 48 32.3**	**+0.8**
NBG	**Las Nubes**	**1.22**	**74**	eP	**Pn**	**11 48 22.0**	**+0.8**
CCIG	**Comitan**	**2.09**	**344**	i P	**Pn**	**11 48 32.3**	**-0.2**
CCIG				i S	**Sn**	**11 48 57.7**	**-0.2**
PCIG		**2.16**	**312**	eP	**Pn**	**11 48 33.5**	**+0.3**
PCIG				i S	**Sn**	**11 48 59.3**	**+0.1**
TGIG		**2.93**	**329**	i P	**Pn**	**11 48 43.3**	**-0.3**
TGIG				i S	**Sn**	**11 49 17.6**	**-0.3**
CMIG	**Matias Romero**	**4.27**	**312**	eP	**Pn**	**11 49 01.6**	**-0.2**
CMIG				i S	**Sn**	**11 49 51.5**	**+1.1**

*DDA **11** 11:52:32.2, 37°.27N×27°.47E, h7^{km}±4^{km}, ML2.5*
*ISK **11** 11:52:32.2, 37°.19N×27°.89E, h16^{km}±2^{km}, ML2.0/4, Suspected Mining explosion.*
*ISCJB **11** 11:52:33.4±0.7, 37°.16N±0°.04×27°.90E±0°.04, h0^{km}, Error ellipse: s-maj=6.2km s-min=4.3km az=154.9*
ISC 11 11:52:32.5±1.1**, 37°.16N**±0°.04×**27°.88E**±0°.04**, h0**^{km}**, n7, σ1^{s}.56**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.33**	**95**	PG	**Pg**	**11 52 39.3**	**+0.6**
YER				SG	**Sg**	**11 52 44.4**	**+1.5**
BDRM	**Kayabasi**	**0.36**	**254**	i P	**Pg**	**11 52 40.6**	**+1.2**
BDRM				i S	**Sg**	**11 52 46.7**	**+2.7**
BODT	**Bodrum**	**0.46**	**258**	PG	**Pb**	**11 52 41.8**	**-1.7**
BODT				SG	**Sb**	**11 52 49.5**	**-1.5**
AYDN	**Tasoluk**	**0.50**	**0**	i P	**Pb**	**11 52 43.4**	**-0.7**
AYDN				i S	**Sb**	**11 52 50.8**	**-1.2**
AYDN				IAML_P			
	comp=Z,2μm,0.3s						
DAT	**Datca**	**0.50**	**209**	PG	**Pb**	**11 52 42.9**	**-1.2**
DAT				SG	**Sb**	**11 52 50.6**	**-1.4**
DAT	**Datca**	**0.50**	**209**	i P	**Pg**	**11 52 42.5**	**+0.6**
DAT				i S	**Sb**	**11 52 52.0**	**0.0**
TURN	**Turunc**	**0.65**	**116**	PG	Pg	11 52 42.5	-2.4

*SOF **11** 12:03:19.9, 42°.17N×26°.30E, h5^{km}*
*ISK **11** 12:03:19.3, 42°.28N×26°.19E, h7^{km}, ML3.3/15*
*THE **11** 12:03:24.0, 42°.02N×26°.35E, h0^{km}±3^{km}, ML2.9/5, Error ellipse: s-maj=4.2km s-min=1.4km az=2.0*
ISC 11 12:03:19.8±1.1**, 42°.18N**±0°.02×**26°.28E**±0°.02**, h4**^{km}±10^{km}**, n92, σ1^{s}.43**/99**, 16C-11D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	**Yambol**	**0.36**	**38**	PG	**Pg**	**12 03 26.9**	**0.0**
JMB				SG	**Sg**	**12 03 32.0**	**+0.4**
JMB	**Yambol**	**0.36**	**38**	Pg	**Pg**	**12 03 27.1**	**+0.2**
EDRB	**Edirne**	**0.48**	**134**	P	**Pb**	**12 03 30.0**	**-0.8**
EDRB				S	**Sb**	**12 03 36.5**	**-1.7**
DIM	**Dimitrovgrad**	**0.57**	**257**	P	**Pg**	**12 03 31.1**	**+0.3**
ELND	**Elena**	**0.81**	**338**	⇑iP	**Pg**	**12 03 35.0**	**-0.3**
ELND	**Elena**	**0.81**	**338**	S	**Sg**	**12 03 45.4**	**-0.4**
KDZ	**Kurdzhali**	**0.83**	**231**	PG	**Pb**	**12 03 37.2**	**+0.3**
KDZ				SG	**Sn**	**12 03 50.2**	**-1.0**
KDZ	**Kurdzhali**	**0.83**	**231**	P	**Pb**	**12 03 37.4**	**+0.5**
PHSR	**Pinarhisar**	**1.08**	**120**	⇓iP	**Pb**	**12 03 40.8**	**-0.2**
PHSR	**Pinarhisar**	**1.08**	**120**	S	**Sb**	**12 03 55.0**	**-0.4**
RDO	**Rodhopi**	**1.17**	**209**	P	**Pn**	**12 03 43.1**	**+0.1**
RDO				S	**Sn**	**12 03 59.2**	**-0.2**
	1μm,0.3s						
PLD	**Plovdiv**	**1.18**	**267**	PN	**Pg**	**12 03 41.2**	**-1.2**
RZN	**Rozhen**	**1.27**	**248**	P	**Pg**	**12 03 44.0**	**-0.1**
ALN	**Alexandroupoli**	**1.29**	**188**	PN	**Pb**	**12 03 45.1**	**+0.4**
ALN	**Alexandroupoli**	**1.29**	**188**	P	**Pb**	**12 03 45.1**	**+0.4**
ALN				S	**Sn**	**12 04 03.0**	**+0.6**
	285nm,0.6s						
PRD	**Provadia**	**1.31**	**38**	P	**Pn**	**12 03 44.4**	**-0.6**
RAZG	**Razgrad**	**1.40**	**7**	⇓iP	**Pn**	**12 03 46.3**	**+0.1**
RAZG	**Razgrad**	**1.40**	**7**	S	**Sn**	**12 04 05.9**	**+0.8**
ENEZ	**Enez**	**1.44**	**184**	PN	**Pg**	**12 03 48.0**	**+0.6**
PGB	**Panagyurishte**	**1.61**	**284**	P	**Pn**	**12 03 49.6**	**+0.5**
ZIMR		**1.62**	**336**	⇑iP	**Pb**	**12 03 50.7**	**+0.3**
ZIMR		**1.62**	**336**	S	**Sg**	**12 04 13.7**	**+1.7**
RKY	**Sarkoy-Tekirda**	**1.63**	**155**	PN	**Pg**	**12 03 51.1**	**0.0**
CTYL	**Yalikoy Yolu**	**1.66**	**114**	PN	**Pg**	**12 03 51.1**	**-0.4**
CTYL	**Yalikoy Yolu**	**1.66**	**114**	⇑iP	**Pg**	**12 03 51.6**	**+0.1**
CTYL	**Yalikoy Yolu**	**1.66**	**114**	S	**Sg**	**12 04 14.4**	**+1.4**
PLVB	**Pleven**	**1.72**	**315**	⇑iP	**Pg**	**12 03 52.8**	**0.0**
PLVB	**Pleven**	**1.72**	**315**	S	**Sg**	**12 04 15.7**	**+0.6**
KAVA	**Kavala**	**1.77**	**229**	P	**Pb**	**12 03 52.3**	**-0.6**
KAVA				S	**Sg**	**12 04 18.2**	**+1.4**
	358nm,0.6s						
SMTH	**Samothraki Isl**	**1.80**	**199**	P	**Pg**	**12 03 54.5**	**+0.3**
SMTH				S	**Sg**	**12 04 17.2**	**-0.3**
	215nm,0.5s						
LPK	**Lapseki**	**1.84**	**169**	PN	**Pb**	**12 03 53.3**	**-0.7**
MRMT	**Marmara Adasi**	**1.86**	**147**	PN	**Pb**	**12 03 54.0**	**-0.4**
THAS	**Thassos island**	**1.96**	**217**	P	**Pg**	**12 03 57.3**	**-0.1**
THAS				S	**Sg**	**12 04 22.2**	**-0.6**
	238nm,0.4s						
NVR	**Nevrokopi**	**1.99**	**246**	P	**Pg**	**12 03 58.3**	**+0.4**
KALB	**Balgarevo**	**1.99**	**51**	⇓iP	**Pg**	**12 03 57.4**	**-0.6**
KALB	**Balgarevo**	**1.99**	**51**	S	**Sg**	**12 04 24.1**	**+0.3**
MMB	**Musomiste**	**2.00**	**254**	P	**Pb**	**12 03 56.7**	**0.0**
SGRR	**Singureni**	**2.06**	**354**	⇑iP	**Pb**	**12 03 57.5**	**-0.2**
SGRR	**Singureni**	**2.06**	**354**	S	**Sg**	**12 04 26.0**	**+0.1**
COPA	**Copaceanca**	**2.11**	**339**	⇑iP	**Pb**	**12 03 58.9**	**+0.3**
COPA	**Copaceanca**	**2.11**	**339**	S	**Sb**	**12 04 26.3**	**+1.2**
BGKT	**Bogazkoy**	**2.12**	**117**	PN	**Pb**	**12 03 57.7**	**-1.0**
MPEP	**Malo Peshtene**	**2.21**	**303**	P	**Pn**	**12 03 57.6**	**+0.3**
KLYT	**Kilyos**	**2.26**	**113**	⇑iP	**Pb**	**12 03 59.6**	**-1.6**
KLYT	**Kilyos**	**2.26**	**113**	S	**Sg**	**12 04 33.8**	**+1.3**
VLAD	**Vladila**	**2.28**	**324**	S	**Sb**	**12 04 29.8**	**-0.4**
VTS	**Vitosha**	**2.30**	**282**	⇓iP	**Pn**	**12 03 58.9**	**+0.2**
VTS	**Vitosha**	**2.30**	**282**	S	**Sn**	**12 04 27.6**	**+0.1**
VTS	**Vitosha**	**2.30**	**282**	P	**Pn**	**12 03 58.8**	**+0.1**
EZN	**Ezine**	**2.35**	**179**	⇑iP	**Pn**	**12 04 00.0**	**+0.8**
EZN	**Ezine**	**2.35**	**179**	S	**Sn**	**12 04 29.0**	**+0.5**
MANR	**Mangalia**	**2.35**	**45**	⇓iP	**Pb**	**12 04 02.0**	**-0.8**
MANR	**Mangalia**	**2.35**	**45**	S	**Sb**	**12 04 33.3**	**+1.1**
ISK	**Istanbul-Kandi**	**2.36**	**117**	PN	**Pb**	**12 04 01.2**	**-1.7**
KAVV	**Kandilli-Istan**	**2.36**	**117**	PN	**Pb**	**12 04 01.3**	**-1.6**
GONE	**Gonen-Balikesi**	**2.38**	**153**	PN	**Pb**	**12 04 01.8**	**-1.4**
LIA	**Limnos Island**	**2.42**	**200**	P	**Pn**	**12 04 01.3**	**+1.1**
KCTX	**Karacabey (Bur**	**2.47**	**140**	PN	**Pb**	**12 04 02.8**	**-2.0**
BUY	**Buyukada**	**2.51**	**121**	PN	**Pb**	**12 04 03.4**	**-2.0**
ARMT	**Armutlu**	**2.52**	**129**	PN	**Pb**	**12 04 03.7**	**-2.0**
OUR	**Ouranopolis**	**2.53**	**224**	PN	**Pn**	**12 04 02.5**	**+0.8**
HUMR	**Humele**	**2.54**	**338**	⇓iP	**Pb**	**12 04 04.0**	**-1.9**
HUMR	**Humele**	**2.54**	**338**	S	**Sg**	**12 04 43.2**	**+2.0**
SILT	**Sile**	**2.72**	**111**	PN	**Pn**	**12 04 06.2**	**+1.9**
SILT	**Sile**	**2.72**	**111**	⇑iP	**Pg**	**12 04 13.5**	**+1.6**
SILT	**Sile**	**2.72**	**111**	S	**Sg**	**12 04 47.6**	**+0.5**
TIRR	**Tirgusor**	**2.76**	**34**	⇑iP	**Pb**	**12 04 07.8**	**-1.9**
TIRR	**Tirgusor**	**2.76**	**34**	S	**Sb**	**12 04 44.4**	**+0.5**
HARR	**Harsova**	**2.78**	**25**	⇓iP	**Pn**	**12 04 07.2**	**+2.0**
HRT	**Hereke**	**2.88**	**117**	PN	**Pb**	**12 04 09.2**	**-2.6**
ISR	**Istrita**	**2.95**	**4**	⇓iP	**Pb**	**12 04 11.1**	**-1.8**
ISR	**Istrita**	**2.95**	**4**	S	**Sg**	**12 04 53.5**	**-0.9**
BLKB	**Belogradchik**	**3.02**	**300**	⇓iP	**Pn**	**12 04 08.9**	**+0.4**
BLKB	**Belogradchik**	**3.02**	**300**	S	**Sn**	**12 04 41.6**	**-3.5**
STIP	**Stip**	**3.09**	**262**	i Pn	**Pn**	**12 04 07.4**	**-2.1**
CFR	**Carcaliu**	**3.29**	**24**	⇓iP	**Pn**	**12 04 15.0**	**+2.9**
CFR	**Carcaliu**	**3.29**	**24**	S	**Sb**	**12 04 56.5**	**-2.6**
MLR	**Muntele Rosu**	**3.32**	**356**	⇑iP	**Pn**	**12 04 16.0**	**+3.3**
MLR	**Muntele Rosu**	**3.32**	**356**	S	**Sn**	**12 04 52.7**	**0.0**
VOIR		**3.38**	**345**	⇑iP	**Pn**	**12 04 16.5**	**+3.0**
VOIR		**3.38**	**345**	S	**Sn**	**12 04 57.8**	**+3.7**
BISRR	**Bisoca**	**3.38**	**5**	⇓iP	**Pn**	**12 04 15.6**	**+2.1**
BISRR	**Bisoca**	**3.38**	**5**	S	**Sb**	**12 04 59.3**	**-2.6**
TLCR		**3.52**	**31**	S	**Sg**	**12 05 09.9**	**-3.1**
VRI	**Vrincioaia**	**3.70**	**5**	⇑iP	**Pn**	**12 04 19.9**	**+2.1**
HERR	**Herculane**	**3.90**	**315**	⇑iP	**Pn**	**12 04 20.9**	**+0.4**
HERR	**Herculane**	**3.90**	**315**	S	**Sn**	**12 05 08.6**	**+1.8**
GZR	**Gura Zlata**	**4.10**	**323**	⇑iP	**Pn**	**12 04 23.6**	**+0.3**
GZR	**Gura Zlata**	**4.10**	**323**	S	**Sn**	**12 05 14.3**	**+2.6**
MDVR	**Moldovita**	**4.22**	**310**	⇑iP	**Pn**	**12 04 24.9**	**-0.1**
MDVR	**Moldovita**	**4.22**	**310**	S	**Sn**	**12 05 11.6**	**-3.2**
VYHS	**Vyhne**	**8.21**	**323**	ePN	Pn	12 05 14.1	-5.6

*IDC **11** 12:08:27.2±1.3, 43°.94N×11°.79E, h0^{km}, mb3.5/3, mb1 3.5/5, mb1mx3.3/38, mbtmp3.3/5, ML3.1/2, Error ellipse: s-maj=41.8km s-min=15.5km az=104.0*
*ROM **11** 12:08:28.9±0.1, 43°.823N±0°.004×12°.062E±0°.005, h8^{km}, ML3.2/53, Error ellipse: s-maj=0.6km s-min=0.2km az=212.0*
*LDG **11** 12:08:28.6±0.1, 43°.91N×12°.10E, h2^{km}, Md3.3/2, Ml3.3/17, Error ellipse: s-maj=3.7km s-min=2.0km az=48.0*
*ISCJB **11** 12:08:29.4±0.2, 43°.83N±0°.02×12°.06E±0°.02, h18^{km}±3^{km}, mb3.5/3, Error ellipse: s-maj=2.9km s-min=1.9km az=22.7*
*PRU **11** 12:08:30.4±0.0, 43°.87N×12°.37E, h0^{km}*
ISC 11 12:08:29.3±0.8**, 43°.83N**±0°.02×**12°.03E**±0°.02**, h16**^{km}±5^{km}**, n131, σ1^{s}.88**/176**, mb3.6**/3**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.15**	**299**	P	**Pg**	**12 08 33.1**	**-0.3**
SFI				S	**Sg**	**12 08 36.3**	**+0.2**
SFI				AML	AML		
	comp=E,9050μm,0.4s						
SFI				AML	AML		
	comp=N,8050μm,0.5s						
SFI				AML	AML		
	comp=E,8785μm,0.9s						
SFI				AML	AML		
	comp=N,8220μm,0.4s						
SFI				AML	AML		
	comp=E,9025μm,0.4s						
SFI				AML	AML		
	comp=N,8050μm,0.5s						
SFI				AML	AML		
	comp=E,8785μm,0.9s						
SFI				AML	AML		
	comp=N,8230μm,0.4s						
SFI				AML	AML		
	comp=E,9025μm,0.4s						
SFI				AML	AML		
	comp=E,8785μm,0.9s						
SFI				AML	AML		
	comp=N,8050μm,0.5s						
SFI				AML	AML		
	comp=N,8230μm,0.4s						
SFI				AML	AML		
	comp=E,9025μm,0.4s						
SFI				AML	AML		
	comp=E,8785μm,0.9s						
SFI				AML	AML		
	comp=N,8050μm,0.5s						
SFI				AML	AML		
	comp=N,8230μm,0.4s						
ASQU	**Asqua**	**0.17**	**259**	P	**Pg**	**12 08 33.7**	**-0.1**
ASQU				S	**Sg**	**12 08 37.1**	**+0.3**
CPGN	**Carpegna, Ital**	**0.22**	**98**	P	**Pg**	**12 08 33.8**	**-0.7**
CPGN				AML	AML		
	comp=E,25200μm,0.3s						
CPGN				AML	AML		
	comp=N,20550μm,1.5s						
CPGN				AML	AML		
	comp=E,24600μm,0.3s						
CPGN				AML	AML		
	comp=N,19000μm,1.4s						
CPGN				AML	AML		
	comp=E,25200μm,0.3s						
CPGN				AML	AML		
	comp=N,20550μm,1.5s						
CPGN				AML	AML		
	comp=E,24650μm,0.3s						
CPGN				AML	AML		
	comp=N,19000μm,1.4s						
CPGN				AML	AML		
	comp=E,25200μm,0.3s						
CPGN				AML	AML		
	comp=N,20500μm,1.5s						
CPGN				AML	AML		
	comp=E,24650μm,0.3s						
CPGN				AML	AML		
	comp=N,19000μm,1.4s						
CPGN				AML	AML		
	comp=N,19000μm,1.4s						
CPGN				AML	AML		
	comp=E,25200μm,0.3s						
CPGN				AML	AML		
	comp=E,24650μm,0.3s						
CPGN				AML	AML		
	comp=N,20500μm,1.5s						
CPGN				AML	AML		
	comp=N,19000μm,1.4s						
CPGN				AML	AML		
	comp=E,25200μm,0.3s						
CPGN				AML	AML		
	comp=E,24650μm,0.3s						
CPGN				AML	AML		
	comp=N,20500μm,1.5s						
PARC	**Parchiule**	**0.24**	**140**	P	**Pg**	**12 08 33.9**	**-0.9**
PARC				S	**Sg**	**12 08 37.8**	**-0.6**
PARC				AML	AML		
	comp=E,10465μm,0.4s						
PARC				AML	AML		
	comp=N,12150μm,0.6s						
PARC				AML	AML		
	comp=E,10465μm,0.4s						
PARC				AML	AML		
	comp=N,12100μm,0.6s						
PARC				AML	AML		
	comp=E,10465μm,0.4s						
PARC				AML	AML		
	comp=N,12150μm,0.6s						
PARC				AML	AML		
	comp=N,12150μm,0.6s						
PARC				AML	AML		
	comp=E,10465μm,0.4s						
PARC				AML	AML		
	comp=N,12150μm,0.6s						
PARC				AML	AML		
	comp=E,10465μm,0.4s						
SSP9	**Sansepolcro**	**0.27**	**163**	P	**Pg**	**12 08 34.9**	**-0.3**
SSP9				S	**Sg**	**12 08 39.4**	**+0.2**
SSP9				AML	AML		
	comp=E,6550μm,0.7s						
SSP9				AML	AML		
	comp=N,6855μm,0.7s						
SSP9				AML	AML		
	comp=E,6565μm,0.7s						
SSP9				AML	AML		
	comp=N,6855μm,0.7s						
SSP9				AML	AML		
	comp=E,6555μm,0.7s						
SSP9				AML	AML		
	comp=N,6860μm,0.7s						
SSP9				AML	AML		
	comp=E,6555μm,0.7s						
SSP9				AML	AML		
	comp=N,6860μm,0.7s						
SSP9				AML	AML		
	comp=E,6555μm,0.7s						
SSP9				AML	AML		
	comp=N,6860μm,0.7s						
BADI	**Badiali**	**0.36**	**154**	P	**Pg**	**12 08 36.1**	**-0.7**
BADI				S	**Sg**	**12 08 41.8**	**0.0**
BADI				AML	AML		
	comp=E,8420μm,1.4s						
BADI				AML	AML		
	comp=N,6300μm,0.8s						
BADI				AML	AML		
	comp=E,8415μm,1.4s						
BADI				AML	AML		
	comp=N,6300μm,0.8s						
BADI				AML	AML		
	comp=E,8420μm,1.4s						
BADI				AML	AML		
	comp=N,6300μm,0.8s						
BADI				AML	AML		
	comp=E,8420μm,1.4s						
BADI				AML	AML		
	comp=N,6300μm,0.8s						
BADI				AML	AML		
	comp=E,8420μm,1.4s						
BADI				AML	AML		
	comp=N,6300μm,0.8s						
RUFI	**Rufina**	**0.37**	**271**	P	**Pg**	**12 08 37.1**	**+0.1**
RUFI				S	**Sb**	**12 08 44.0**	**+0.9**
RUFI				AML	AML		
	comp=E,3170μm,0.3s						
RUFI				AML	AML		
	comp=N,4835μm,1.2s						
RUFI				AML	AML		
	comp=E,3165μm,0.3s						
RUFI				AML	AML		
	comp=N,4830μm,1.2s						
RUFI				AML	AML		
	comp=E,3165μm,0.3s						
RUFI				AML	AML		
	comp=N,4840μm,1.2s						
RUFI				AML	AML		
	comp=N,4840μm,1.2s						
RUFI				AML	AML		
	comp=E,3165μm,0.3s						
RUFI				AML	AML		
	comp=N,4840μm,1.2s						
RUFI				AML	AML		
	comp=E,3165μm,0.3s						
CDCA	**Citt‘ di Caste**	**0.40**	**158**	P	**Pg**	**12 08 36.9**	**-0.6**
CDCA				S	**Sg**	**12 08 43.8**	**+0.7**
CDCA				AML	AML		
	comp=E,3528μm,1.0s						
CDCA				AML	AML		
	comp=N,4865μm,1.1s						
CDCA				AML	AML		
	comp=E,3465μm,1.0s						
CDCA				AML	AML		
	comp=N,4895μm,1.1s						
CDCA				AML	AML		
	comp=E,13400μm,1.2s						
CDCA				AML	AML		
	comp=N,14750μm,0.8s						
CDCA				AML	AML		
	comp=E,3505μm,1.0s						
CDCA				AML	AML		
	comp=N,4880μm,1.1s						
CDCA				AML	AML		
	comp=N,4880μm,1.1s						
CDCA				AML	AML		
	comp=E,3505μm,1.0s						
CDCA				AML	AML		
	comp=E,13400μm,1.2s						
CDCA				AML	AML		
	comp=N,14750μm,0.8s						
CDCA				AML	AML		
	comp=N,4880μm,1.1s						
CDCA				AML	AML		
	comp=E,3505μm,1.0s						
CDCA				AML	AML		
	comp=E,13400μm,1.2s						
CDCA				AML	AML		
	comp=N,14750μm,0.8s						
BLLA	**Bellaria**	**0.45**	**46**	P	**Pb**	**12 08 38.4**	**-0.5**
BLLA				AML	AML		
	comp=E,4270μm,1.5s						
BLLA				AML	AML		
	comp=N,4405μm,0.4s						
BLLA				AML	AML		
	comp=E,4350μm,1.5s						
BLLA				AML	AML		
	comp=N,4410μm,0.4s						
BLLA				AML	AML		
	comp=E,4250μm,1.5s						
BLLA				AML	AML		
	comp=N,4400μm,0.4s						
BLLA				AML	AML		
	comp=N,4400μm,0.4s						
BLLA				AML	AML		
	comp=E,4250μm,1.5s						
BLLA				AML	AML		
	comp=N,4400μm,0.4s						
BLLA				AML	AML		
	comp=E,4250μm,1.5s						
ATPI	**Pietralunga -**	**0.47**	**144**	P	**Pg**	**12 08 37.8**	**-0.9**
ATPI				S	**Sg**	**12 08 45.2**	**+0.1**
ATPI				AML	AML		
	comp=E,3185μm,1.5s						
ATPI				AML	AML		
	comp=N,2050μm,0.6s						
ATPI				AML	AML		
	comp=E,3180μm,1.5s						
ATPI				AML	AML		
	comp=N,2050μm,0.6s						
ATPI				AML	AML		
	comp=E,3185μm,1.5s						
ATPI				AML	AML		
	comp=N,2050μm,0.6s						
ATPI				AML	AML		
	comp=E,3185μm,1.5s						
ATPI				AML	AML		
	comp=N,2050μm,0.6s						
ATPI				AML	AML		
	comp=E,3185μm,1.5s						
ATPI				AML	AML		
	comp=N,2050μm,0.6s						
BRIS	**BRISIGHELLA**	**0.49**	**311**	P	**Pg**	**12 08 38.4**	**-0.7**
BRIS				AML	AML		
	comp=E,4875μm,1.5s						
BRIS				AML	AML		
	comp=N,4635μm,0.5s						
BRIS				AML	AML		
	comp=E,4875μm,1.5s						
BRIS				AML	AML		
	comp=N,4635μm,0.5s						
BRIS				AML	AML		
	comp=E,4875μm,1.5s						
BRIS				AML	AML		
	comp=N,4635μm,0.5s						
ATMI	**Monte Miggiano**	**0.53**	**160**	P	**Pg**	**12 08 39.1**	**-0.7**
ATMI				S	**Sg**	**12 08 47.9**	**+1.0**
ATMI				AML	AML		

	comp=E,5780μm,1.5s						
ATMI				AML	AML		
	comp=N,5865μm,1.4s						
ATMI				AML	AML		
	comp=E,5780μm,1.5s						
ATMI				AML	AML		
	comp=N,5865μm,1.4s						
ATMI				AML	AML		
	comp=E,5780μm,1.5s						
ATMI				AML	AML		
	comp=N,5865μm,1.4s						
ATMI				AML	AML		
	comp=E,5780μm,1.5s						
ATMI				AML	AML		
	comp=N,5865μm,1.4s						
ATMI				AML	AML		
	comp=E,5780μm,1.5s						
ATMI				AML	AML		
	comp=N,5865μm,1.4s						
ATVO	**AVT- Monte Val**	**0.53**	**148**	P	**Pg**	**12 08 39.0**	**-0.8**
ATVO				S	**Sg**	**12 08 47.6**	**+0.7**
ATVO				AML	AML		
	comp=E,3520μm,1.0s						
ATVO				AML	AML		
	comp=N,3065μm,0.7s						
ATVO				AML	AML		
	comp=E,3520μm,1.0s						
ATVO				AML	AML		
	comp=N,3065μm,0.7s						
ATVO				AML	AML		
	comp=N,3065μm,0.7s						
ATVO				AML	AML		
	comp=E,3520μm,1.0s						
ATVO				AML	AML		
	comp=N,3065μm,0.7s						
ATVO				AML	AML		
	comp=E,3520μm,1.0s						
SEI	**Scarperia**	**0.53**	**295**	P	**Pg**	**12 08 39.9**	**-0.1**
SEI				S	**Sb**	**12 08 49.1**	**+1.4**
SEI				AML	AML		
	comp=E,7870μm,0.4s						
SEI				AML	AML		
	comp=N,9945μm,0.5s						
SEI				AML	AML		
	comp=E,7870μm,0.4s						
SEI				AML	AML		
	comp=N,9945μm,0.5s						
SEI				AML	AML		
	comp=E,7870μm,0.4s						
SEI				AML	AML		
	comp=N,9945μm,0.5s						
SEI				AML	AML		
	comp=E,7870μm,0.4s						
SEI				AML	AML		
	comp=N,9945μm,0.5s						
SEI				AML	AML		
	comp=E,7870μm,0.4s						
SEI				AML	AML		
	comp=N,9945μm,0.5s						
MPAG	**Monte Paganucc**	**0.57**	**111**	P	**Pg**	**12 08 39.5**	**-1.1**
MPAG				S	**Sb**	**12 08 48.9**	**+0.1**
MPAG				AML	AML		
	comp=E,1700μm,0.8s						
MPAG				AML	AML		
	comp=N,2240μm,0.6s						
MPAG				AML	AML		
	comp=E,1655μm,0.8s						
MPAG				AML	AML		
	comp=N,2340μm,0.6s						
MPAG				AML	AML		
	comp=E,1655μm,0.8s						
MPAG				AML	AML		
	comp=N,2335μm,0.6s						
MPAG				AML	AML		
	comp=N,2335μm,0.6s						
MPAG				AML	AML		
	comp=E,1655μm,0.8s						
MPAG				AML	AML		
	comp=N,2335μm,0.6s						
MPAG				AML	AML		
	comp=E,1655μm,0.8s						
FRON	**Frontone**	**0.60**	**121**	P	**Pg**	**12 08 40.0**	**-1.1**
FRON				S	**Sg**	**12 08 49.7**	**+0.6**
FRON				AML	AML		
	comp=E,1255μm,0.3s						
FRON				AML	AML		
	comp=N,2315μm,0.2s						
FRON				AML	AML		
	comp=E,1255μm,0.3s						
FRON				AML	AML		
	comp=N,2315μm,0.2s						
FRON				AML	AML		
	comp=N,2315μm,0.2s						
FRON				AML	AML		
	comp=E,1255μm,0.3s						
FRON				AML	AML		
	comp=N,2315μm,0.2s						
FRON				AML	AML		
	comp=E,1255μm,0.3s						
PESA	**Pesaro**	**0.60**	**79**	P	**Pg**	**12 08 40.2**	**-0.9**
PESA				S	**Sb**	**12 08 49.8**	**+0.2**
PESA				AML	AML		
	comp=E,5935μm,0.5s						
PESA				AML	AML		
	comp=N,4690μm,1.4s						
PESA				AML	AML		
	comp=E,5935μm,0.5s						
PESA				AML	AML		
	comp=N,4690μm,1.4s						
PESA				AML	AML		
	comp=N,4690μm,1.4s						
PESA				AML	AML		
	comp=E,5935μm,0.5s						
PESA				AML	AML		
	comp=N,4690μm,1.4s						
PESA				AML	AML		
	comp=E,5935μm,0.5s						
ATFO	**Monte Foce - G**	**0.61**	**139**	P	**Pg**	**12 08 40.5**	**-1.0**
ATFO				AML	AML		
	comp=E,3165μm,1.0s						
ATFO				AML	AML		
	comp=N,1990μm,0.7s						
ATFO				AML	AML		
	comp=E,3165μm,1.0s						
ATFO				AML	AML		
	comp=N,1990μm,0.7s						
ATFO				AML	AML		
	comp=E,3165μm,1.0s						
ATFO				AML	AML		
	comp=N,1990μm,0.7s						
ATFO				AML	AML		
	comp=N,1990μm,0.7s						
ATFO				AML	AML		
	comp=E,3165μm,1.0s						
ATFO				AML	AML		
	comp=N,1990μm,0.7s						
ATFO				AML	AML		
	comp=E,3165μm,1.0s						
CSNT	**Castellina Chi**	**0.64**	**236**	P	**Pg**	**12 08 42.4**	**+0.4**
CSNT				S	**Sg**	**12 08 51.9**	**+1.4**
CSNT				AML	AML		
	comp=E,2460μm,0.5s						
CSNT				AML	AML		
	comp=N,3110μm,0.4s						
CSNT				AML	AML		
	comp=E,2460μm,0.5s						
CSNT				AML	AML		
	comp=N,3110μm,0.4s						
CSNT				AML	AML		
	comp=N,3110μm,0.4s						
CSNT				AML	AML		
	comp=E,2460μm,0.5s						
CSNT				AML	AML		
	comp=N,3110μm,0.4s						
CSNT				AML	AML		
	comp=E,2460μm,0.5s						
MURB	**Monte Urbino**	**0.67**	**147**	P	**Pg**	**12 08 42.1**	**-0.5**
MURB				S	**Sg**	**12 08 51.7**	**+0.2**
MURB				AML	AML		
	comp=E,4095μm,1.5s						
MURB				AML	AML		
	comp=N,5580μm,0.4s						
MURB				AML	AML		
	comp=E,4665μm,0.4s						
MURB				AML	AML		
	comp=N,5605μm,0.3s						
MURB				AML	AML		
	comp=E,4095μm,1.5s						
MURB				AML	AML		
	comp=N,5580μm,0.4s						
MURB				AML	AML		
	comp=E,4665μm,0.4s						
MURB				AML	AML		
	comp=N,5605μm,0.3s						
MURB				AML	AML		
	comp=E,4090μm,1.5s						
MURB				AML	AML		
	comp=N,5575μm,0.4s						
MURB				AML	AML		
	comp=E,4665μm,0.4s						
MURB				AML	AML		
	comp=N,5605μm,0.3s						
MURB				AML	AML		
	comp=E,4090μm,1.5s						
MURB				AML	AML		
	comp=N,5575μm,0.4s						
MURB				AML	AML		
	comp=N,5605μm,0.3s						
MURB				AML	AML		
	comp=E,4665μm,0.4s						
MURB				AML	AML		
	comp=E,4090μm,1.5s						
MURB				AML	AML		
	comp=N,5575μm,0.4s						
MURB				AML	AML		
	comp=N,5605μm,0.3s						
MURB				AML	AML		
	comp=E,4665μm,0.4s						
ATTE	**AVT- Monte Tez**	**0.68**	**159**	P	**Pg**	**12 08 41.4**	**-1.2**
ATTE				S	**Sg**	**12 08 52.3**	**+0.7**
ATTE				AML	AML		
	comp=E,2850μm,0.4s						
ATTE				AML	AML		
	comp=N,1955μm,0.3s						
ATTE				AML	AML		
	comp=E,2850μm,0.4s						
ATTE				AML	AML		
	comp=N,1955μm,0.3s						
ATTE				AML	AML		
	comp=E,2850μm,0.4s						
ATTE				AML	AML		
	comp=N,1955μm,0.3s						
ATTE				AML	AML		
	comp=E,2850μm,0.4s						
ATTE				AML	AML		
	comp=N,1955μm,0.3s						
ATTE				AML	AML		
	comp=E,2850μm,0.4s						
ATTE				AML	AML		
	comp=N,1955μm,0.3s						
SSFR	**Montelago di S**	**0.68**	**125**	P	**Pg**	**12 08 41.5**	**-1.1**
SSFR				S	**Sg**	**12 08 51.6**	**0.0**
SSFR				AML	AML		
	comp=E,3940μm,0.2s						
SSFR				AML	AML		
	comp=N,4970μm,0.3s						
SSFR				AML	AML		
	comp=E,4145μm,1.3s						
SSFR				AML	AML		
	comp=N,5025μm,0.3s						
SSFR				AML	AML		
	comp=E,3940μm,0.2s						
SSFR				AML	AML		
	comp=N,5025μm,0.3s						
SSFR				AML	AML		
	comp=N,4970μm,0.3s						
SSFR				AML	AML		
	comp=E,4145μm,1.3s						
SSFR				AML	AML		
	comp=E,4145μm,1.3s						
SSFR				AML	AML		
	comp=N,4970μm,0.3s						
SSFR				AML	AML		
	comp=N,5025μm,0.3s						
SSFR				AML	AML		
	comp=E,3940μm,0.2s						
PTF	**Prato**	**0.70**	**281**	P	**Pg**	**12 08 43.2**	**+0.1**
COR1	**Corinaldo**	**0.73**	**105**	P	**Pg**	**12 08 43.2**	**-0.5**
COR1				AML	AML		
	comp=E,4590μm,0.9s						
COR1				AML	AML		
	comp=N,3830μm,0.7s						
COR1				AML	AML		
	comp=E,2615μm,0.9s						
COR1				AML	AML		
	comp=N,3645μm,0.7s						
COR1				AML	AML		
	comp=E,4595μm,0.9s						
COR1				AML	AML		
	comp=N,3832μm,0.7s						
COR1				AML	AML		
	comp=E,5500μm,1.6s						
COR1				AML	AML		
	comp=N,3660μm,0.7s						
COR1				AML	AML		
	comp=N,3832μm,0.7s						
COR1				AML	AML		
	comp=E,4595μm,0.9s						
COR1				AML	AML		
	comp=N,3660μm,0.7s						
COR1				AML	AML		
	comp=E,5500μm,1.6s						
COR1				AML	AML		
	comp=N,3660μm,0.7s						
COR1				AML	AML		
	comp=E,4595μm,0.9s						
COR1				AML	AML		
	comp=N,3832μm,0.7s						
COR1				AML	AML		
	comp=E,5500μm,1.6s						
ARVD	**Arcevia**	**0.74**	**116**	P	**Pg**	**12 08 42.5**	**-1.4**
ARVD				S	**Sg**	**12 08 53.6**	**-0.1**
ARVD				AML	AML		
	comp=E,1055μm,0.3s						
ARVD				AML	AML		
	comp=N,924μm,0.1s						
ARVD				AML	AML		
	comp=E,1055μm,0.3s						
ARVD				AML	AML		
	comp=N,924μm,0.1s						
ARVD				AML	AML		
	comp=E,1055μm,0.3s						
ARVD				AML	AML		
	comp=N,924μm,0.1s						
ARVD				AML	AML		
	comp=E,1055μm,0.3s						
ARVD				AML	AML		
	comp=N,924μm,0.1s						
CRMI	**Carmignano**	**0.77**	**267**	P	**Pg**	**12 08 44.5**	**+0.3**
CRMI				AML	AML		
	comp=E,566μm,0.9s						
CRMI				AML	AML		
	comp=N,468μm,1.5s						
CRMI				AML	AML		
	comp=N,468μm,1.5s						
CRMI				AML	AML		
	comp=E,566μm,0.9s						
CRMI				AML	AML		
	comp=N,468μm,1.5s						
CRMI				AML	AML		
	comp=E,566μm,0.9s						
MTCR	**Monte La Croce**	**0.77**	**285**	P	**Pg**	**12 08 44.3**	**0.0**
MTCR				AML	AML		
	comp=E,1540μm,0.6s						
MTCR				AML	AML		
	comp=N,1141μm,1.4s						
ATCC	**AVT- Casa Cast**	**0.79**	**145**	P	**Pg**	**12 08 43.8**	**-0.9**
ATCC				AML	AML		
	comp=E,3200μm,0.5s						
ATCC				AML	AML		
	comp=N,1635μm,0.5s						
ATCC				AML	AML		
	comp=E,3200μm,0.5s						
ATCC				AML	AML		
	comp=N,1635μm,0.5s						
ATCC				AML	AML		
	comp=E,3200μm,0.5s						
ATCC				AML	AML		
	comp=N,1635μm,0.5s						
ATCC				AML	AML		
	comp=E,3200μm,0.5s						
ATCC				AML	AML		
	comp=N,1635μm,0.5s						
SNTG	**Esanatoglia**	**0.88**	**131**	P	**Pg**	**12 08 45.2**	**-1.2**
SNTG				AML	AML		
	comp=E,1105μm,0.8s						
SNTG				AML	AML		
	comp=N,1285μm,0.3s						
SNTG				AML	AML		
	comp=E,1105μm,0.8s						
SNTG				AML	AML		
	comp=N,1280μm,0.3s						
SNTG				AML	AML		
	comp=E,1105μm,0.8s						
SNTG				AML	AML		
	comp=N,1280μm,0.3s						
SNTG				AML	AML		
	comp=E,1105μm,0.8s						
SNTG				AML	AML		
	comp=N,1280μm,0.3s						
FROS	**Frosini**	**0.89**	**226**	P	**Pg**	**12 08 46.7**	**+0.1**
FROS				AML	AML		
	comp=E,2950μm,0.6s						
FROS				AML	AML		
	comp=N,1800μm,0.5s						
FROS				AML	AML		
	comp=E,2950μm,0.6s						
FROS				AML	AML		
	comp=N,1800μm,0.5s						
FROS				AML	AML		
	comp=N,1800μm,0.5s						
FROS				AML	AML		
	comp=E,2950μm,0.6s						
FROS				AML	AML		
	comp=N,1800μm,0.5s						
FROS				AML	AML		
	comp=E,2950μm,0.6s						
ASSB	**Assisi San Ben**	**0.91**	**149**	P	**Pg**	**12 08 45.6**	**-1.5**
ASSB				AML	AML		
	comp=E,882μm,1.5s						
ASSB				AML	AML		
	comp=N,1075μm,0.6s						
ASSB				AML	AML		
	comp=E,882μm,1.5s						
ASSB				AML	AML		
	comp=N,1075μm,0.6s						
ASSB				AML	AML		
	comp=E,882μm,1.5s						
ASSB				AML	AML		
	comp=N,1075μm,0.6s						
EL6	**Elcito**	**0.93**	**122**	P	**Pg**	**12 08 46.0**	**-1.4**
EL6				AML	AML		
	comp=E,2800μm,0.5s						
EL6				AML	AML		
	comp=N,2980μm,0.6s						
EL6				AML	AML		
	comp=E,2815μm,0.5s						
EL6				AML	AML		
	comp=N,2985μm,0.6s						
EL6				AML	AML		
	comp=E,2815μm,0.5s						
EL6				AML	AML		
	comp=N,2985μm,0.6s						
EL6				AML	AML		
	comp=E,2815μm,0.5s						
EL6				AML	AML		
	comp=N,2985μm,0.6s						
POPM	**Popiglio**	**0.94**	**284**	P	**Pg**	**12 08 47.5**	**-0.1**
POPM				AML	AML		
	comp=E,701μm,0.7s						
POPM				AML	AML		
	comp=N,811μm,0.7s						
POPM				AML	AML		
	comp=E,701μm,0.7s						
POPM				AML	AML		
	comp=N,811μm,0.7s						
POPM				AML	AML		
	comp=N,811μm,0.7s						
POPM				AML	AML		
	comp=E,701μm,0.7s						
POPM				AML	AML		
	comp=N,811μm,0.7s						
POPM				AML	AML		
	comp=E,701μm,0.7s						
CING	**Cingoli**	**0.96**	**118**	P	**Pg**	**12 08 47.0**	**-1.0**
CING				AML	AML		
	comp=E,860μm,0.4s						
CING				AML	AML		
	comp=N,1480μm,0.8s						
CING				AML	AML		
	comp=E,860μm,0.4s						
CING				AML	AML		
	comp=N,1480μm,0.8s						
CING				AML	AML		
	comp=E,860μm,0.4s						
CING				AML	AML		
	comp=N,1480μm,0.8s						
ARCI	**Arcidosso**	**1.06**	**202**	P	**Pg**	**12 08 49.2**	**-0.6**
ARCI				AML	AML		
	comp=E,730μm,1.3s						
ARCI				AML	AML		
	comp=N,1565μm,0.9s						
ARCI				AML	AML		
	comp=E,730μm,1.3s						
ARCI				AML	AML		
	comp=N,1565μm,0.9s						
ARCI				AML	AML		
	comp=N,1565μm,0.9s						
ARCI				AML	AML		
	comp=E,730μm,1.3s						
ARCI				AML	AML		
	comp=N,1565μm,0.9s						
ARCI				AML	AML		
	comp=E,730μm,1.3s						
MCIV	**Monte Civitell**	**1.08**	**194**	AML	AML		
	comp=N,293μm,0.7s						
MCIV				AML	AML		
	comp=E,316μm,0.7s						
MCIV				AML	AML		
	comp=N,293μm,0.7s						
MCIV				AML	AML		
	comp=E,316μm,0.7s						
MCIV				AML	AML		
	comp=E,316μm,0.7s						
MCIV				AML	AML		
	comp=N,293μm,0.7s						
MOMA	**Monte Martano**	**1.10**	**159**	P	**Pg**	**12 08 49.3**	**-1.4**
MOMA				AML	AML		
	comp=E,880μm,0.6s						
MOMA				AML	AML		
	comp=N,905μm,0.3s						
MOMA				AML	AML		
	comp=E,880μm,0.6s						
MOMA				AML	AML		
	comp=N,905μm,0.3s						
MOMA				AML	AML		
	comp=N,905μm,0.3s						
MOMA				AML	AML		
	comp=E,880μm,0.6s						
MOMA				AML	AML		
	comp=N,905μm,0.3s						
MOMA				AML	AML		
	comp=E,880μm,0.6s						
FDMO	**Fiordimonte**	**1.11**	**135**	AML	AML		
	comp=E,1048μm,0.7s						
FDMO				AML	AML		
	comp=E,1048μm,0.7s						
FDMO				AML	AML		
	comp=N,860μm,0.4s						
FDMO				AML	AML		
	comp=N,860μm,0.4s						
FDMO				AML	AML		
	comp=E,1048μm,0.7s						
FDMO				AML	AML		
	comp=N,860μm,0.4s						
FDMO				AML	AML		
	comp=E,1048μm,0.7s						
FDMO				AML	AML		
	comp=N,860μm,0.4s						
MAIM	**Mastiano**	**1.11**	**275**	P	**Pg**	**12 08 50.4**	**-0.4**
MAIM				AML	AML		
	comp=E,531μm,0.4s						
MAIM				AML	AML		
	comp=N,634μm,0.6s						
MAIM				AML	AML		
	comp=N,634μm,0.6s						
MAIM				AML	AML		
	comp=E,531μm,0.4s						
MAIM				AML	AML		
	comp=N,634μm,0.6s						
MAIM				AML	AML		
	comp=E,531μm,0.4s						
CSP1	**Cessapalombo**	**1.13**	**130**	P	**Pg**	**12 08 49.5**	**-1.8**
VLC	**Villacollemand**	**1.23**	**286**	P	**Pb**	**12 08 52.0**	**-0.1**

VLC				AML	AML		
	comp=E,268µm,1.1s						
VLC				AML	AML		
	comp=N,328µm,1.6s						
VLC				AML	AML		
	comp=E,256µm,1.1s						
VLC				AML	AML		
	comp=N,320µm,1.6s						
VLC				AML	AML		
	comp=E,256µm,1.1s						
VLC				AML	AML		
	comp=E,268µm,1.1s						
VLC				AML	AML		
	comp=N,320µm,1.6s						
VLC				AML	AML		
	comp=N,328µm,1.6s						
VLC				AML	AML		
	comp=E,256µm,1.1s						
VLC				AML	AML		
	comp=E,268µm,1.1s						
VLC				AML	AML		
	comp=N,328µm,1.6s						
VLC				AML	AML		
	comp=N,320µm,1.6s						
CESX	**Cesi**	**1.29**	**161**	P	**Pn**	**12 08 53.0**	**+0.3**
CESX				AML	AML		
	comp=E,664µm,0.6s						
CESX				AML	AML		
	comp=N,592µm,0.4s						
CESX				AML	AML		
	comp=E,664µm,0.6s						
CESX				AML	AML		
	comp=N,592µm,0.4s						
CESX				AML	AML		
	comp=E,664µm,0.6s						
CESX				AML	AML		
	comp=N,592µm,0.4s						
CASP	**Castiglione de**	**1.34**	**220**	P	**Pn**	**12 08 53.1**	**-0.2**
CASP				AML	AML		
	comp=E,194µm,0.4s						
CASP				AML	AML		
	comp=N,274µm,0.7s						
CASP				AML	AML		
	comp=N,274µm,0.7s						
CASP				AML	AML		
	comp=E,194µm,0.4s						
CASP				AML	AML		
	comp=N,274µm,0.7s						
CASP				AML	AML		
	comp=E,194µm,0.4s						
LNSS	**Leonessa**	**1.44**	**149**	AML	AML		
	comp=E,854µm,0.4s						
LNSS				AML	AML		
	comp=E,854µm,0.4s						
LNSS				AML	AML		
	comp=N,789µm,0.8s						
LNSS				AML	AML		
	comp=N,789µm,0.8s						
LNSS				AML	AML		
	comp=E,854µm,0.4s						
LNSS				AML	AML		
	comp=N,789µm,0.8s						
FIAM	**Fiamignano**	**1.76**	**153**	AML	AML		
	comp=E,362µm,0.7s						
FIAM				AML	AML		
	comp=N,354µm,0.7s						
FIAM				AML	AML		
	comp=E,362µm,0.7s						
FIAM				AML	AML		
	comp=N,354µm,0.7s						
FIAM				AML	AML		
	comp=E,362µm,0.7s						
FIAM				AML	AML		
	comp=N,354µm,0.7s						
AQU	**L'Aquila**	**1.79**	**145**	*e*Pn	**Pb**	**12 09 02.8**	**+1.1**
CGRP	**Cima Grappa**	**2.05**	**356**	AML	AML		
	comp=N,394µm,0.5s						
CGRP				AML	AML		
	comp=E,462µm,0.6s						
CGRP				AML	AML		
	comp=N,394µm,0.5s						
CGRP				AML	AML		
	comp=E,462µm,0.6s						
CGRP				AML	AML		
	comp=E,462µm,0.6s						
CGRP				AML	AML		
	comp=N,394µm,0.5s						
NVLJ	**Novalja**	**2.17**	**69**	*e*Pn	**Pn**	**12 09 05.2**	**+0.5**
NVLJ				Sn	**Sn**	**12 09 32.7**	**+1.4**
MAGA	**Magasa**	**2.18**	**333**	AML	AML		
	comp=E,1021µm,0.4s						
MAGA				AML	AML		
	comp=N,746µm,1.4s						
MAGA				AML	AML		
	comp=E,1021µm,0.4s						
MAGA				AML	AML		
	comp=N,746µm,1.4s						
MAGA				AML	AML		
	comp=E,1021µm,0.4s						
MAGA				AML	AML		
	comp=N,746µm,1.4s						
DUGI	**Dugi Otok**	**2.20**	**85**	*e*Pn	**Pn**	**12 09 05.2**	**+0.1**
POLC	**Polcenigo**	**2.22**	**9**	AML	AML		
	comp=N,1110µm,0.5s						
POLC				AML	AML		
	comp=E,592µm,1.0s						
POLC				AML	AML		
	comp=N,1110µm,0.5s						
POLC				AML	AML		
	comp=E,592µm,1.0s						
POLC				AML	AML		
	comp=N,1110µm,0.5s						
POLC				AML	AML		
	comp=E,592µm,1.0s						
SKDS	**Skadanscina**	**2.23**	**39**	*i* Pn	**Pn**	**12 09 04.9**	**-0.7**
SKDS				*i* Sn	**Sn**	**12 09 33.2**	**+0.6**
TRI	**Trieste**	**2.25**	**33**	AML	AML		
	comp=N,196µm,0.4s						
TRI				AML	AML		
	comp=E,206µm,1.2s						
TRI				AML	AML		
	comp=E,206µm,1.2s						
TRI				AML	AML		
	comp=N,196µm,0.4s						
TRI				AML	AML		
	comp=E,206µm,1.2s						
TRI				AML	AML		
	comp=N,196µm,0.4s						
RIY	**Rijeka**	**2.31**	**49**	iPn		12 09 06.6	
RIY	**Rijeka**	**2.31**	**49**	*e*Pn	**Pn**	**12 09 06.6**	**0.0**
KNDS	**Knezji Dol**	**2.39**	**44**	*i* Pn	**Pn**	**12 09 07.5**	**-0.3**
KNDS				*i* Sn	**Sn**	**12 09 36.5**	**-0.3**
SABO	**M.te Sabotino**	**2.42**	**27**	AML	AML		
	comp=N,451µm,0.7s						
SABO				AML	AML		
	comp=E,460µm,0.4s						
SABO				AML	AML		
	comp=E,460µm,0.4s						
SABO				AML	AML		
	comp=N,451µm,0.7s						
SABO				AML	AML		
	comp=E,460µm,0.4s						
SABO				AML	AML		
	comp=N,451µm,0.7s						
STAL	**STALIGIAL**	**2.48**	**11**	AML	AML		
	comp=N,290µm,1.4s						
STAL				AML	AML		
	comp=E,371µm,0.7s						
STAL				AML	AML		
	comp=N,395µm,1.2s						
STAL				AML	AML		
	comp=E,432µm,0.4s						
STAL				AML	AML		
	comp=N,290µm,1.4s						
STAL				AML	AML		
	comp=E,371µm,0.7s						
STAL				AML	AML		
	comp=E,432µm,0.4s						
STAL				AML	AML		
	comp=N,290µm,1.4s						
STAL				AML	AML		
	comp=N,395µm,1.2s						
STAL				AML	AML		
	comp=E,371µm,0.7s						
STAL				AML	AML		
	comp=E,432µm,0.4s						
STAL				AML	AML		
	comp=N,395µm,1.2s						
JAVS	**Javornik**	**2.52**	**34**	*i* Pn	**Pn**	**12 09 09.1**	**-0.5**
JAVS				*i* Sn	**Sn**	**12 09 39.1**	**-1.0**
PGF	**Pioggiola**	**2.56**	**241**	*e*Pn	**Pn**	**12 09 10.3**	**+0.1**
PGF				*e*Sn	**Sn**	**12 09 41.6**	**+0.6**
	comp=N,37nm,0.3s						
CEY	**Cerknica**	**2.56**	**41**	*e*Pn	**Pn**	**12 09 09.8**	**-0.4**
ZIRJ	**Zirje**	**2.63**	**93**	*i* Pn	**Pn**	**12 09 11.9**	**+0.9**
ZIRJ				Sn	**Sn**	**12 09 43.1**	**+0.6**
RNI2	**Rionero Sannit**	**2.64**	**143**	AML	AML		
	comp=N,132µm,1.2s						
RNI2				AML	AML		
	comp=E,165µm,1.6s						
RNI2				AML	AML		
	comp=E,165µm,1.6s						
RNI2				AML	AML		
	comp=N,132µm,1.2s						
RNI2				AML	AML		
	comp=E,165µm,1.6s						
RNI2				AML	AML		
	comp=N,132µm,1.2s						
MORI	**Morici**	**2.66**	**88**	*e*Pn	**Pn**	**12 09 13.1**	**+1.6**
MORI				Sn	**Sn**	**12 09 44.2**	**+0.8**
QLNO	**Quiliano**	**2.70**	**282**	AML	AML		
	comp=E,62µm,0.5s						
QLNO				AML	AML		
	comp=N,72µm,0.5s						
QLNO				AML	AML		
	comp=E,62µm,0.5s						
QLNO				AML	AML		
	comp=N,72µm,0.5s						
QLNO				AML	AML		
	comp=E,62µm,0.5s						
QLNO				AML	AML		
	comp=N,72µm,0.5s						
UDBI	**Udbina**	**2.78**	**74**	*e*Pn	**Pn**	**12 09 14.8**	**+1.6**
LJU	**Ljubljana**	**2.84**	**38**	*e*Pn	**Pn**	**12 09 14.2**	**+0.3**
LJU	**Ljubljana**	**2.84**	**38**	AML	AML		
	comp=N,592µm,0.5s						
LJU				AML	AML		
	comp=E,388µm,1.5s						
LJU				AML	AML		
	comp=N,592µm,0.5s						
LJU				AML	AML		
	comp=E,388µm,1.5s						
LJU				AML	AML		
	comp=N,592µm,0.5s						
LJU				AML	AML		
	comp=E,388µm,1.5s						
BOJS	**Bojanci**	**2.84**	**53**	AML	AML		
	comp=N,126µm,0.5s						
BOJS				AML	AML		
	comp=E,153µm,1.0s						
BOJS				AML	AML		
	comp=N,126µm,0.5s						
BOJS				AML	AML		
	comp=E,153µm,1.0s						
BOJS				AML	AML		
	comp=N,126µm,0.5s						
BOJS				AML	AML		
	comp=E,153µm,1.0s						
ABTA	**Abfaltersbach**	**2.94**	**7**	*e*Pn	**Pn**	**12 09 15.7**	**+0.3**
	comp=E,2.2nm,0.2s,SNR=6.8						
ABTA				Sn	**Sn**	**12 09 52.3**	**+2.0**
	comp=E,49nm,0.6s						
MYKA	**Terra Mystica**	**3.02**	**22**	*e*Pn	**Pn**	**12 09 16.4**	**-0.1**
	comp=E,0.8nm,0.2s						
MYKA				Sg	**Sg**	**12 10 09.2**	**+2.8**
	comp=E,27nm,0.4s						
OZLJ	**Ozalj**	**3.03**	**53**	*i* Pn	**Pn**	**12 09 17.6**	**+1.1**
CRES	**Cresnjev**	**3.15**	**50**	*e*Pn	**Pn**	**12 09 18.8**	**+0.5**
KIJV	**Kijevo**	**3.17**	**85**	*e*Pn	**Pn**	**12 09 19.9**	**+1.4**
KIJV				Sn	**Sn**	**12 09 56.1**	**+0.2**
OBKA	**Obir**	**3.22**	**33**	*e*Pn	**Pn**	**12 09 18.1**	**-1.1**
	comp=E,0.4nm,0.1s						
OBKA				Sg	**Sg**	**12 10 14.2**	**+1.5**
	comp=E,69nm,0.6s						
HVAR	**Hvar**	**3.28**	**100**	*i* Pn	**Pn**	**12 09 20.8**	**+0.8**
HVAR				Sn	**Sn**	**12 09 59.9**	**+1.1**
DAVOX	**Davos/Dischmat**	**3.31**	**334**	Pn	**Pn**	**12 09 18.6**	**-2.1**
	comp=E,0.5nm,0.3s,baz=152,slow=16,SNR=2.6						
DAVOX				Sn	**Sn**	**12 10 03.5**	**+3.7**
	comp=E,3.3nm,0.3s,baz=177,slow=16,SNR=7.7						
FETA	**Feichten**	**3.32**	**344**	*i* Pn	**Pb**	**12 09 24.7**	**-3.1**
	comp=E,0.7nm,0.2s,SNR=7.8						
FETA				*e*Sn	**Sb**	**12 10 04.4**	**-3.6**
	comp=E,15nm,0.5s						
SBF	**Sospel**	**3.32**	**272**	*e*Pn	**Pn**	**12 09 21.6**	**+1.0**
SBF				*e*Sn	**Sn**	**12 09 58.9**	**-0.9**
	comp=E,39nm,0.4s						
KBA	**Koelnbreinsper**	**3.38**	**15**	*i* Pn	**Pn**	**12 09 23.1**	**+1.6**
	comp=E,5.0nm,0.3s,SNR=10						
KBA				Sg	**Sg**	**12 10 21.4**	**+3.6**
	comp=E,12nm,0.3s						
SGRT	**San Giovanni R**	**3.43**	**126**	AML	AML		
	comp=N,75µm,0.9s						
SGRT				AML	AML		
	comp=E,71µm,0.5s						
SGRT				AML	AML		
	comp=N,75µm,0.9s						
SGRT				AML	AML		
	comp=E,71µm,0.5s						
SGRT				AML	AML		
	comp=N,75µm,0.9s						
SGRT				AML	AML		
	comp=E,71µm,0.5s						
SQTA	**Sankt Quirin**	**3.44**	**351**	*e*Pn	**Pn**	**12 09 25.7**	**+3.4**
	comp=E,6.5nm,0.2s,SNR=10						
SQTA				*e*Sn	**Sb**	**12 10 07.9**	**-3.5**
	comp=E,11nm,0.3s						
WTTA	**Wattenberg**	**3.44**	**356**	*e*Pn	**Pn**	**12 09 25.8**	**+3.4**
	comp=E,3.4nm,0.3s						
WTTA				*e*Sn	**Sn**	**12 10 05.9**	**+3.0**
	comp=E,24nm,0.4s						
PTJ	**Puntijarka**	**3.49**	**52**	ePn		12 09 23.5	
WATA	**Walderalm**	**3.52**	**355**	*e*Pn	**Pn**	**12 09 26.7**	**+3.3**
	comp=E,6.2nm,0.2s						
WATA				*e*Sn	**Sb**	**12 10 12.6**	**-1.2**
	comp=E,23nm,0.6s						
SOKA	**Soboth**	**3.55**	**36**	*e*Pn	**Pn**	**12 09 24.6**	**+0.8**
	comp=E,1.1nm,0.2s						
SOKA				Sg	**Sg**	**12 10 23.4**	**+0.1**
	comp=E,8.0nm,0.4s						
MSAG	**Monte S. Angel**	**3.56**	**125**	AML	AML		
	comp=E,67µm,1.0s						
MSAG				AML	AML		
	comp=N,115µm,0.5s						
MSAG				AML	AML		
	comp=N,115µm,0.5s						
MSAG				AML	AML		
	comp=E,67µm,1.0s						
MSAG				AML	AML		
	comp=N,115µm,0.5s						
MSAG				AML	AML		
	comp=E,67µm,1.0s						
MOTA	**Moosalm**	**3.57**	**350**	*e*Pn	**Pn**	**12 09 26.2**	**+2.0**
	comp=E,2.3nm,0.3s						
MOTA				*e*Sn	**Sb**	**12 10 13.9**	**-1.4**
	comp=E,8.0nm,0.4s						
MAKA	**Makarska**	**3.67**	**97**	*e*Pn	**Pn**	**12 09 26.4**	**+1.0**
MAKA				Sn	**Sn**	**12 10 08.9**	**+0.7**
MGRS	**Mrkonjic Grad**	**3.69**	**79**	*e*Pn	**Pn**	**12 09 27.0**	**+1.3**
RETA	**Reutte**	**3.76**	**347**	*e*Pn	**Pn**	**12 09 30.3**	**+3.6**
	comp=E,2.3nm,0.2s						
RETA				*i* Sn	**Sn**	**12 10 14.9**	**+4.2**
	comp=E,1.5nm,0.1s						
DAVA	**Damuels**	**3.77**	**337**	*e*Pn	**Pn**	**12 09 29.7**	**+2.8**
	comp=E,2.3nm,0.3s,SNR=15						
DAVA				*e*Sn	**Sn**	**12 10 15.9**	**+5.0**
	comp=E,16nm,0.4s						
BLY	**Banja Luka**	**3.81**	**74**	*e*Pn	**Pb**	**12 09 38.0**	**+1.8**
MBDF	**Montbardon**	**3.88**	**285**	*e*P	**Pn**	**12 09 30.6**	**+2.2**
MBDF	**Montbardon**	**3.88**	**285**	*e*Pg	**Pg**	**12 09 42.6**	**-1.0**
MBDF				*e*Sn	**Sn**	**12 10 11.6**	**-2.0**
	comp=E,20nm,0.5s						
MBDF				*e*Sg	**Sg**	**12 10 31.5**	**-2.3**
	comp=E,23nm,0.7s						
KALN	**Kalnik**	**3.89**	**52**	*i* Pn	**Pn**	**12 09 28.2**	**-0.3**
FRF	**La Foret Royal**	**3.91**	**268**	*e*Pn	**Pn**	**12 09 28.2**	**-0.5**
FRF				*e*Sn	**Sn**	**12 10 13.0**	**-1.2**
	comp=E,12nm,0.3s						
LMR	**La Mourre**	**4.04**	**265**	*e*Pn	**Pn**	**12 09 30.7**	**+0.3**
LMR				*e*Sn	**Sn**	**12 10 15.1**	**-2.3**
	comp=E,6.8nm,0.3s						
LPG	**La Plagne**	**4.12**	**296**	*e*P	**Pn**	**12 09 35.1**	**+3.4**
LPG				*e*Sn	**Sn**	**12 10 16.8**	**-2.9**
	comp=E,20nm,0.6s						
LPL	**La Plagne**	**4.13**	**296**	*e*P	**Pn**	**12 09 35.9**	**+3.9**
LPL				*e*Sn	**Sn**	**12 10 17.6**	**-2.4**
	comp=E,10nm,0.4s						
ARSA	**Arzberg**	**4.21**	**34**	*e*Pn	**Pn**	**12 09 33.0**	**+0.2**
	comp=E,1.0nm,0.2s						
ARSA				Sg	**Sg**	**12 10 46.5**	**+2.0**
	comp=E,4.2nm,0.4s						
STON	**Ston**	**4.25**	**101**	*e*Pn	**Pn**	**12 09 34.5**	**+1.2**
STON				Sn	**Sn**	**12 10 22.2**	**-0.3**
STON	**Ston**	**4.25**	**101**	*e*Pn	**Pn**	**12 09 34.0**	**+0.7**
MOA	**Molln**	**4.31**	**20**	*e*Pn	**Pn**	**12 09 35.7**	**+1.5**
	comp=E,1.1nm,0.2s						
MOA				*e*Sn	**Sn**	**12 10 25.5**	**+1.3**
	comp=E,5.8nm,0.4s						
ORIF	**Oris-en-Rattie**	**4.54**	**286**	*e*P	**Pn**	**12 09 41.1**	**+3.7**
ORIF				*e*Sn	**Sn**	**12 10 27.1**	**-2.7**
	comp=E,17nm,0.6s						
SMRF	**Simiane la Rot**	**4.66**	**274**	*e*P	**Pn**	**12 09 41.3**	**+2.2**
SMRF				*e*Sn	**Sn**	**12 10 31.0**	**-1.8**
TREB	**Trebinje**	**4.75**	**101**	*e*Pn	**Pn**	**12 09 40.2**	**0.0**
BRY	**Bratogost**	**4.84**	**99**	*e*Pn	**Pn**	**12 09 42.1**	**+0.5**
CONA	**Conrad Observa**	**4.89**	**32**	*i* Pn	**Pn**	**12 09 43.5**	**+1.2**
	comp=E,0.1nm,0.0s						
CONA				*i* Sn	**Sn**	**12 10 39.4**	**+0.8**
	comp=E,1.6nm,0.1s						
HAPS	**Han Pijesak,Bl**	**5.01**	**85**	*e*Pn	**Pn**	**12 09 40.2**	**-3.6**
CABF	**La Chapelle**	**5.03**	**306**	*e*P	**Pn**	**12 09 47.0**	**+2.8**
CABF				*e*Sn	**Sn**	**12 10 38.2**	**-3.8**
	comp=E,10nm,0.6s						
UPM	**Unac-Piva**	**5.04**	**95**	*e*Pn	**Pn**	**12 09 46.1**	**+1.7**
GERES	**GERESS Array B**	**5.15**	**12**	Pn	**Pn**	**12 09 46.2**	**+0.4**
	comp=E,0.9nm,0.3s,baz=192,slow=15,SNR=8.5						
GERES				Sn	**Sn**	**12 10 43.2**	**-1.6**
	comp=E,1.2nm,0.3s,baz=199,slow=15,SNR=4.8						
HINF	**Hinteralfeld**	**5.38**	**320**	*e*P	**Pn**	**12 09 51.1**	**+2.2**
HINF				*e*Sn	**Sn**	**12 10 46.9**	**-3.6**
	comp=E,19nm,0.6s						
KHC	**Kasperske Hory**	**5.41**	**11**	*e*PN	**Pn**	**12 09 49.7**	**+0.4**
KHC				*e*SN	**Sn**	**12 10 50.7**	**-0.5**
DRME	**Dracevica, Mon**	**5.50**	**105**	*e*Pn	**Pn**	**12 09 51.1**	**+0.6**
CDF	**Champ du Feu**	**5.65**	**326**	*e*P	**Pn**	**12 09 54.6**	**+2.0**
CDF				*e*Sn	**Sn**	**12 10 52.2**	**-4.9**
	comp=E,40nm,0.9s						
HAU	**Haudompre**	**5.75**	**318**	*e*P	**Pn**	**12 09 56.0**	**+2.0**
HAU				*e*Sn	**Sn**	**12 10 55.3**	**-4.3**
	comp=E,23nm,0.4s						
MODS	**Modra-Piesok**	**5.83**	**37**	*e*SN	**Sn**	**12 10 56.5**	**-4.9**
LASF	**Ste Croix**	**5.90**	**275**	*e*P	**Pn**	**12 09 58.9**	**+2.8**
PRU	**Pruhonice**	**6.39**	**15**	*e*SN	**Sn**	**12 11 13.9**	**-1.5**
SMF	**Signal de Mont**	**6.43**	**299**	*e*P	**Pn**	**12 10 06.7**	**+3.5**
SFTF	**Sexfontaines**	**6.54**	**314**	*e*P	**Pn**	**12 10 07.4**	**+2.6**
VYHS	**Vyhne**	**6.64**	**43**	*e*PN	**Pn**	**12 10 09.1**	**+2.9**
VYHS				*e*SN	**Sn**	**12 11 18.6**	**-2.8**
LOR	**Lormes**	**6.68**	**304**	*e*P	**Pn**	**12 10 10.1**	**+3.3**
LOR				*e*Sn	**Sn**	**12 11 18.1**	**-4.5**
	comp=E,6.5nm,0.4s						
BGF	**Bois d'Agland**	**7.03**	**296**	*e*P	**Pn**	**12 10 14.0**	**+2.4**
MTLF	**Montolieu**	**7.14**	**269**	*e*P	**Pn**	**12 10 16.1**	**+3.1**
CLL	**Collm**	**7.51**	**5**	*e*Pn	**Pn**	**12 10 21.0**	**+3.0**
CLL				*e*Sg		12 12 29.0	
TORD	**Torodi Ar. Bea**	**31.84**	**199**	P	**P**	**12 14 55.2**	**+1.8**
	comp=E,0.7nm,0.5s,baz=7.7,slow=8.2,SNR=7.6						
MKAR	**Makanchi Array**	**47.98**	**61**	P	**P**	**12 17 07.7**	**+0.5**
	comp=E,0.4nm,0.8s,baz=298,slow=5.4,SNR=5.2						
ILAR	**Eielson Array**	**70.48**	**351**	P	**P**	**12 19 40.5**	**-2.0**
	comp=E,0.2nm,0.6s,baz=353,slow=6.5,SNR=2.6						

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*SKHL **11** 12:17:53.6±0.5, 46°.73N×141°.73E, h10^{km}, mb3.6/2*
SKHL Felt (III) at Nevel'sk.
*JMA **11** 12:17:53.1±0.5, 46°.75N×141°.63E, h0^{km}, M2.9*
ISC 11 12:17:52.9±2.8**, 46°.8N**±0°.1×**141°.6E**±0°.2**, h9^{km}, n5, σ0^{s}.30**/9**,**
Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.80**	**77**	*e*Pg	**Pg**	**12 18 08.2**	**-0.1**
YSS				AMB	AMB	12 18 10.1	
	30nm,0.3s						
YSS				*e*Sg	**Sg**	**12 18 18.5**	**-0.2**
YSS				A	A	12 18 19.1	
	290nm,0.3s						
YSS				A	A	12 18 19.1	
	250nm,0.3s						
JRBN	**Rebuntou**	**1.41**	**196**	P	**Pn**	**12 18 18.6**	**-0.1**
JRBN				*e*S	**Sb**	**12 18 36.9**	**-0.5**
JWK2	**Keihoku**	**1.48**	**172**	P	**Pn**	**12 18 20.0**	**+0.4**
JWK2				*e*S	**Sn**	**12 18 39.1**	**+0.1**
JRR	**Rishiri**	**1.66**	**188**	P	**Pb**	**12 18 23.8**	**+0.3**
JRR				*e*S	**Sg**	**12 18 45.9**	**-0.2**
JSE	**Soyaes**	**1.94**	**159**	P	**Pn**	**12 18 26.0**	**0.0**

WEL 11 12:19:56.8, 39°S±28°×**17°5E**±3°1**, h281^{km}**±39^{km}**, M3.6**/6**,**
ML3.7/4**, MLv3.6**/6**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=118.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**2.33**	**200**	P	Pn	12 20 45.4	+0.7
DUWZ				S	S	12 21 21.4	-1.5
TCW	**Tory Channel**	**2.65**	**192**	P	Pn	12 20 48.0	+0.4
TCW				S	S	12 21 24.8	-3.3
NNZ	**Nelson**	**2.88**	**205**	P	Pn	12 20 50.6	+0.7
NNZ				S	S	12 21 31.3	-0.9
QRZ	**Quartz Range**	**2.91**	**220**	P	Pn	12 20 50.6	+0.4
TUWZ	**Tuamarina**	**2.92**	**196**	P	Pn	12 20 51.0	+0.7
BSWZ	**Blackbirch Sta**	**3.21**	**195**	P	Pn	12 20 54.1	+0.8
BSWZ				S	S	12 21 36.7	-1.7
THZ	**Tophouse**	**3.53**	**206**	P	Pn	12 20 58.5	+1.8
DSZ	**Denniston Nort**	**3.97**	**217**	P	Pn	12 21 02.3	+0.7

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*MAN **11** 12:27:50.6, 13°.19N×125°.10E, h8^{km}, mb4.7, ML3.6, MS3.6*
*IDC **11** 12:27:52.7±1.1, 12°.95N×124°.84E, h0^{km}, mb3.7/6,*
mb1 3.9/7, mb1mx3.7/43, mbtmp3.8/7, ML4.5/1, MS3.9/2,
Ms1 3.9/2, ms1mx2.8/40, Error ellipse: s-maj=64.2km
s-min=16.9km az=65.0
ISC 11 12:27:53.4±1.8**, 12°.94N**±0°.05×**124°.79E**±0°.06**, h4^{km}**±13^{km}**,**
n27, σ1^{s}.49/33**, mb3.7**/6**, 2C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.45**	**196**	*e*P	**Pn**	**12 28 05.7**	**-0.9**
CNP				*e*S	**Sb**	**12 28 13.2**	**+2.4**
MMPH	**Masbate**	**1.28**	**243**⇓	*e*P	**Pn**	**12 28 16.7**	**-1.3**
MMPH				*e*S	**Sb**	**12 28 32.5**	**-2.3**
BESP	**Borongan**	**1.48**	**154**	*e*P	**Pg**	**12 28 21.9**	**+0.2**
PLP	**Palo**	**1.78**	**174**⇑	*i*P	**Pb**	**12 28 26.5**	**-0.1**
PLP				*i* S	**Sb**	**12 28 49.8**	**+0.5**
OCLP	**Ormoc**	**1.89**	**185**	*e*P	**Pb**	**12 28 28.1**	**-0.3**
AUQP	**San Andres**	**2.09**	**281**	*e*P	**Pn**	**12 28 29.6**	**+0.3**
AUQP				*e*S	**Sg**	**12 29 01.9**	**+1.2**
GQP	**Guinayangan**	**2.47**	**293**⇑	*e*P	**Pn**	**12 28 35.4**	**+0.9**
GQP				*e*S	**Sb**	**12 29 08.1**	**-1.2**
OTRP	**Odiongan**	**2.76**	**258**	*e*P	**Pn**	**12 28 37.5**	**-1.0**
MSLP	**Maasin**	**2.79**	**179**	*e*P	**Pb**	**12 28 43.8**	**0.0**
BOAC	**Boac**	**2.91**	**280**	*e*P	**Pn**	**12 28 38.8**	**-1.8**
BOAC				*e*S	**Sb**	**12 29 20.4**	**-1.5**
POLP	**Polilio Island**	**3.29**	**303**	*e*P	**Pn**	**12 28 47.9**	**+2.2**
JAP	**San Jose, Anti**	**3.54**	**232**⇓	*e*P	**Pn**	**12 28 52.0**	**+2.9**
JAP				*i* S	**Sb**	**12 29 39.5**	**-0.3**
SJMP	**San Jose**	**3.61**	**263**	*e*P	**Pn**	**12 28 50.5**	**+0.3**
TGY	**Tagaytay City**	**3.92**	**288**	Pn	**Pn**	**12 28 54.9**	**+0.4**
	33nm,0.3s,baz=124,slow=11,SNR=2.0						
BUTP	**Butuan**	**4.03**	**168**	*e*P	**Pb**	**12 29 02.1**	**-2.9**
BALP	**Baler**	**4.17**	**312**	*e*P	**Pn**	**12 28 56.6**	**-1.3**
CGP	**Cagayan de Oro**	**4.46**	**181**	*e*P	Pn	12 29 06.5	+4.6
LUBP	**Lubang**	**4.49**	**281**	*e*P	**Pn**	**12 29 05.5**	**+3.3**
CAUP	**Cauayan**	**4.90**	**325**	*e*P	**Pn**	**12 29 08.7**	**+0.8**
CAUP				*e*S	**Sn**	**12 30 06.8**	**+1.6**
SMPP	**San Manuel, Pa**	**5.10**	**309**	*e*P	**Pn**	**12 29 09.9**	**-0.7**
WRA	**Warramunga Arr**	**34.00**	**164**	P	**P**	**12 34 37.6**	**-0.9**
	0.7nm,0.8s,baz=348,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**37.46**	**166**	P	**P**	**12 35 08.4**	**+0.2**
	0.7nm,0.5s,baz=345,slow=7.1,SNR=29						
ASAR				LR	LR	12 49 29.2	
	comp=Z,120nm,21.5s,baz=261,slow=35						
SONM	**Songino Array**	**38.02**	**340**	P	**P**	**12 35 13.4**	**+0.5**
	0.3nm,0.5s,baz=126,slow=9.1,SNR=2.6						
STKA	**Stephens Creek**	**47.39**	**160**	P	**P**	**12 36 28.9**	**0.0**
	2.1nm,0.8s,baz=342,slow=9.8,SNR=4.1						
MKAR	**Makanchi Array**	**49.04**	**322**	P	**P**	**12 36 42.2**	**+0.6**
	0.6nm,0.7s,baz=121,slow=9.1,SNR=5.6						

ZALV	Zalesovo Beam	51.60	331	P	P	12 36 59.7	-1.1
	0.4nm,0.3s,baz=116,slow=6.6,SNR=2.3						
YBH	Yreka Blue Hor	97.57	44	LR	LR	13 16 16.0	
	comp=Z,91nm,21.0s,baz=80,slow=30						

MEX 11 12:32:07.3±0.7**,18°.58N**×**103°.35W,h34**^{km}±14^{km}**,MD3.8, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.29	180	*e*P	Pn	12 32 13.0	-2.0
MMIG				*e*S	Sn	12 32 19.0	-0.4
EZ5V		0.93	345	*e*P	Pn	12 32 22.1	-2.1
EZ5V				*e*S	Sn	12 32 33.9	-2.5
CJM	Chamela	1.85	300	*i* P	Pn	12 32 35.5	-1.1
CJM				*i* S	Sn	12 32 56.1	-2.7
ARIG	Puente Sto Nin	2.86	95	*e*P	Pn	12 32 49.4	-1.2
ARIG				*i* S	Sn	12 33 22.3	-1.6

IDC **11** *12:32:43.9±0.8, 7°.10N×123°.72E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.8/39, mbtmp4.0/9, ML3.9/1, MS3.5/12, Ms1 3.5/12, ms1mx3.2/45, Error ellipse: s-maj=30.1km s-min=15.2km az=57.0*

ISCJB **11** *12:32:44.2±1.1, 7°.03N±0°.03×123°.43E±0°.04, h21^{km}±9^{km}, mb3.8/16, MS3.5/11, Error ellipse: s-maj=7.0km s-min=4.3km az=176.0*

MAN **11** *12:32:44.0, 7°.12N×123°.43E, h5^{km}, mb4.9, ML3.8, MS3.8*

NEIC **11** *12:32:50.8±2.3, 7°.07N×123°.86E, h64^{km}±13^{km}, mb4.2/4, Error ellipse: s-maj=14.1km s-min=6.3km az=190.0*

DJA **11** *12:32:54.6±1.1, 6°N±8°×12°4E±°, h10^{km}, M4.8/8, mB5.2/2, mb4.9/8, MLv4.7/6, Mw(mB)4.6/2*

ISC 11 12:32:44.1±1.4**,7°.04N**±0°.03×**123°.42E**±0°.04**,h7**^{km}±9^{km}**, n60,**σ**2**^{s}**56**/59**,mb3.9**/16**,MS3.5**/11**,6C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.84	78	⇓*i*P	Pg	12 32 59.8	-0.6
CTBH				*i* S	Sg	12 33 09.8	-1.6
SKMP	Bagumbayan, Su	1.23	115	*e*P	Pg	12 33 06.8	-1.1
SKMP				*e*S	Sb	12 33 24.6	+0.6
ZCP	Zamboanga City	1.33	265	⇓*i*P	Pn	12 33 08.6	-0.6
ZCP				*i* S	Sb	12 33 20.4	-6.4
DCPH	Dipolog City	1.53	358	⇑*e*P	Pb	12 33 11.5	-1.4
DCPH				*e*S	Sb	12 33 30.3	-2.2
GSPH	General Santos	1.80	122	⇑*i*P	Pg	12 33 22.2	+3.6
BUKP	Musuan	1.83	63	*e*P	Pn	12 33 15.3	-0.8
BUKP				*e*S	Sb	12 33 39.4	-1.8
CGP	Cagayan de Oro	1.89	42	⇑*i*P	Pn	12 33 15.5	-1.3
CGP				*i* S	Sn	12 33 38.5	-2.4
DMPH	Davao City--Mi	2.08	89	⇑*e*P	Pb	12 33 20.9	-1.3
DMPH				*e*S	Sb	12 33 48.5	+0.3
DAV	Davao City (W)	2.15	89	Pn	Pn	12 33 18.3	-2.1
	82nm,0.3s,baz=243,slow=2.3,SNR=2.5						
DAV				Lg	Lg	12 33 49.1	
	85nm,0.3s,baz=142,slow=19,SNR=20						
DAV	Davao City (W)	2.15	89	*e*Pn	Pn	12 33 18.3	-2.1
DAV				*e*		12 33 18.9	
DAV				*e*		12 33 19.0	
SNPH	Sibulan	2.29	356	⇑*i*P	Pn	12 33 22.4	0.0
SNPH				*i* S	Sn	12 33 50.2	-0.7
DDMP	Don Marcelino,	2.46	112	*e*P	Pn	12 33 25.9	+1.1
DDMP				*e*S	Sg	12 34 02.4	-1.0
TBP	Tagbilaran	2.67	10	*e*P	Pn	12 33 25.8	-1.8
TBP				*i* S	Sn	12 33 58.3	-1.9
MATI	Mati	2.82	92	*e*P	Pn	12 33 28.8	-0.9
BUTP	Butuan	2.90	49	*e*P	Pb	12 33 33.4	-2.9
BUTP				*e*S	Sg	12 34 23.2	+5.7
MSLP	Maasin	3.39	25	*e*P	Pn	12 33 36.4	-1.0
GUIM	Jordan	3.65	347	*e*P	Pn	12 33 41.6	+0.5
SGSI	Sangihe	3.94	148	P	Pn	12 33 44.7	-0.4
SGSI				S	Sn	12 34 25.2	-6.5
JAP	San Jose, Anti	3.96	339	⇑*e*P	Pb	12 33 50.7	-3.5
CUYO	Cuyo Island	4.46	328	*e*P	Pn	12 33 50.9	-1.3
KMSI	Cibinong	6.45	175	P	Pn	12 34 20.8	+1.2
KKM	Kota Kinabalu	7.22	263	*e*Pn	Pn	12 34 39.1	+8.8
TNTI	Ternate	7.37	148	P	Pn	12 34 31.8	-0.5
LUWI	Luwuk	8.06	185	*e*Pn	Pn	12 34 45.8	+4.1
LUWI				*e*Sn	Sn	12 36 14.7	+1.6
LUWI	Luwuk	8.06	185	P	Pn	12 34 44.6	+2.9
LUWI				S	Sn	12 36 07.2	-5.9
LBMI	Labuha	8.65	152	P	Pn	12 34 50.1	+0.3
SANI	Sanana	9.39	164	P	Pn	12 34 59.5	-0.5
SIJI	Sorong	11.10	135	Pn	Pn	12 35 22.6	-0.8
	0.9nm,0.3s,baz=341,slow=11,SNR=3.8						
SIJI				LR	LR	12 39 55.2	
	comp=Z,191nm,21.8s,baz=336,slow=40						
JAY	Jayapura	19.70	118	LR	LR	12 44 40.1	
	comp=Z,140nm,19.5s,baz=264,slow=37						
PANO	Nakornpanom	20.93	300	P	Pn	12 37 37.6	+7.5
	0.6nm,1.4s						
LEM	Lembang	20.93	229	LR	LR	12 45 52.8	
	comp=Z,142nm,18.6s,baz=218,slow=37						
MTN	Manton Dam	21.19	159	*e*P	P	12 37 30.8	+0.4
	20nm,1.0s						
SKNT	Sakolnakorn	21.40	299	P	P	12 37 42.2	+10
	8.1nm,1.6s						
NONG	Nongkai	22.59	301	P	P	12 37 59.3	+14
	0.2nm,1.3s						
PSI	Prapat	24.76	261	LR	LR	12 48 58.1	
	comp=Z,121nm,18.9s,baz=208,slow=39						
WHN	Wuhan	24.88	341	P	P	12 38 03.7	-3.9
PHRA	Phrae	25.28	299	P	P	12 38 18.4	+7.0
	1.2nm,1.8s,2µm						
CMAR	Chiang Mai Arr	26.39	298	P	P	12 38 25.4	+4.0
	2.0nm,0.8s,baz=106,slow=8.2,SNR=9.4						
CMAR				LR	LR	12 48 58.5	
	comp=Z,92nm,18.6s,baz=122,slow=37						
WRAB	Tennant Creek	28.89	158	*e*P	P	12 38 42.5	-1.2
	5.5nm,0.8s						
WR1	Warramunga Arr	28.89	158	*e*P	P	12 38 43.2	-0.6
WRA	Warramunga Arr	28.89	158	P	P	12 38 43.2	-0.6
	2.9nm,0.8s,baz=342,slow=12,SNR=7.5						
WB2	Warramunga Arr	28.90	158	*e*P	P	12 38 43.7	-0.2
	4.1nm,0.8s						
ASAR	Alice Springs	32.20	162	P	P	12 39 12.8	-0.2
	1.1nm,0.7s,baz=336,slow=6.1,SNR=12						
MJAR	Matsushiro Arr	32.32	23	LR	LR	12 51 03.5	
	comp=Z,68nm,20.7s,baz=90,slow=34						
LZH	Lanzhou	34.01	331	*e*P	P	12 39 30.4	+1.5
LZH				pP	pwP	12 39 37.2	+1.6
LZH				sP	sP	12 39 40.5	+10
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USRK	Ussuriysk Ar.	37.76	10	P	P	12 40 00.4	-0.4
	1.1nm,0.7s,baz=250,slow=5.6,SNR=5.1						
GTA	Gaotai	38.59	330	*e*P	P	12 40 14.1	+6.1
GTA				pP	pwP	12 40 18.2	+3.5
GTA				sP	sP	12 40 21.2	+12
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,60nm,5.5s						
GTA				LR	LR		
	comp=N,140nm,16.8s						
GTA				LR	LR		
	comp=E,130nm,15.5s						
STKA	Stephens Creek	42.42	157	P	P	12 40 39.9	+0.4
	4.7nm,0.8s,baz=340,slow=8.4,SNR=7.8						
STKA	Stephens Creek	42.42	157	*e*P	P	12 40 35.5	-4.1
	1.3nm,1.0s						
SONA0	Songino Array	43.16	343	*e*P	P	12 40 45.0	-0.6
SONM	Songino Array	43.16	343	P	P	12 40 45.0	-0.6
	0.6nm,0.4s,baz=163,slow=7.2,SNR=5.7						
SONM				LR	LR	12 59 24.4	
	comp=Z,62nm,20.3s,baz=190,slow=37						
MK32	Makanchi Array	52.97	326	*e*P	P	12 42 02.9	+1.4
MKAR	Makanchi Array	52.97	326	P	P	12 42 02.9	+1.4
	0.7nm,0.7s,baz=132,slow=7.4,SNR=4.9						
KSH	Kashi	53.38	315	*e*P	P	12 42 05.5	+0.8
PETK	Petropavlovsk-	53.73	25	LR	LR	13 02 10.3	
	comp=Z,22nm,21.8s,baz=229,slow=33						
ZALV	Zalesovo Beam	56.17	334	LR	LR	13 06 29.0	
	comp=Z,39nm,18.4s,baz=70,slow=36						
BRTR	Keskin Array B	85.38	309	P	P	12 45 25.8	+3.0
	0.4nm,0.6s,baz=58,slow=3.8,SNR=2.5						
NOA	NORSAR Array B	94.36	333	LR	LR	13 31 54.8	
	comp=Z,34nm,19.0s,baz=60,slow=38						
BBB	Bella Bella	95.60	36	LR	LR	13 23 32.7	
	comp=Z,16nm,20.2s,baz=4.5,slow=32						
GERES	GERESS Array B	97.45	321	LR	LR	13 33 05.6	
	comp=Z,20nm,18.4s,baz=116,slow=37						

ISCJB **11** *12:34:58.9±0.3, 23°.51S±0°.02×69°.66W±0°.05, h96^{km}±3^{km}, mb4.1/8, Error ellipse: s-maj=7.4km s-min=4.1km az=4.3*

SJA **11** *12:34:59.1±0.4, 23°.51S×69°.65W, h82^{km}±3^{km}, ML2.8, MW2.7*

NEIC **11** *12:35:00.0±0.0, 23°.45S×69°.63W, h83^{km}, mb4.3/6, ML4.1(GUC), After GUC.*

NEIC Felt [III] at Sierra Gorda.

GUC **11** *12:35:00.7±0.8, 23°.41S×69°.66W, h82^{km}±4^{km}, ML4.1*

IDC **11** *12:35:00.9±0.8, 23°.59S×69°.27W, h91^{km}±5^{km}, mb3.9/6, mb1 4.0/9, mb1mx3.6/36, mbtmp4.2/9, MS3.7/2, Ms1 3.7/2, ms1mx3.0/22, Error ellipse: s-maj=32.9km s-min=9.6km az=99.0*

ISC 11 12:34:59.2±0.6**,23°.54S**±0°.03×**69°.64W**±0°.04**,h85**^{km}±5^{km}**, n59,**σ**1**^{s}**48**/85**,mb4.3**/8**,5C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.36	25	*e*P	Pn	12 35 12.5	-0.2
PB15				*e*S	Sn	12 35 23.2	+0.6
PB15	IPOC Station P	0.36	25	*i* P	Pn	12 35 13.4	+0.7
PB15				*e*S	Sn	12 35 23.3	+0.7
PB06	IPOC Station P	0.83	4	*e*P	Pn	12 35 17.2	+0.4
PB06				*e*S	Sn	12 35 30.5	+0.6
PB06	IPOC Station P	0.83	4	⇓*i*P	Pn	12 35 17.3	+0.4
PB06				*e*S	Sn	12 35 29.5	-0.5
PB06				IAML		12 35 31.3	
	comp=E,6µm,0.2s						
PB10	IPOC Station P	0.84	271	*e*Pn	Pn	12 35 18.0	+1.2
PB10				*e*Sn	Sn	12 35 31.5	+1.6
PB10	IPOC Station P	0.84	271	*e*P	Pn	12 35 17.2	+0.4
PB10	IPOC Station P	0.84	271	*e*	Pn	12 35 17.9	+1.2
PB10				⇑*i*P	Pn	12 35 17.9	+1.2
PB10				*e*S	Sn	12 35 31.3	+1.4
PB10				IAML		12 35 32.8	
	comp=E,5µm,0.3s						
PB05	IPOC Station P	0.86	323	*e*P	Pn	12 35 17.6	+0.5
PB05	IPOC Station P	0.86	323	⇓*i*P	Pn	12 35 18.1	+1.0
PB05				*e*S	Sn	12 35 31.8	+1.4
PB05				IAML		12 35 34.3	
	comp=E,8µm,0.4s						
LVC	Limon Verde	1.14	36	P	Pn	12 35 21.3	+0.7
	comp=E,474nm,0.3s,baz=193,slow=8.5,SNR=4810						
LVC				S	Sn	12 35 36.9	+0.3
	comp=E,2µm,0.3s,baz=202,slow=23,SNR=128						
LVC	Limon Verde	1.14	36	*e*Pn	Pn	12 35 21.4	+0.7
LVC				*e*Sn	Sn	12 35 37.4	+0.7
PB04	IPOC Station P	1.29	338	*e*Pn	Pn	12 35 22.6	+0.3
PB04				*e*Sn	Sn	12 35 39.2	-0.3
PB04	IPOC Station P	1.29	338	⇓*i*P	Pn	12 35 22.6	+0.3
PB04				*e*S	Sn	12 35 39.2	-0.3
PB04				IAML		12 35 41.9	
	comp=E,4µm,0.2s						
PB14	IPOC Station P	1.29	213	*e*P	Pn	12 35 23.8	+1.4
PB14				*e*S	Sn	12 35 41.6	+1.8
PB14	IPOC Station P	1.29	213	⇑*i*P	Pn	12 35 23.1	+0.7
PB14				*e*S	Sn	12 35 41.1	+1.3
PB14				IAML		12 35 41.9	
	comp=E,4µm,0.4s						
PB03	IPOC Station P	1.49	356	⇓*i*P	Pn	12 35 25.1	+0.4
PB03				*e*S	Sn	12 35 43.8	-0.1
PB03				IAML		12 35 45.3	
	comp=E,7µm,0.2s						
GO02	Mina Guanaco	1.62	178	*e*Pn	Pn	12 35 27.7	+1.2
GO02				*e*Sn	Sn	12 35 48.3	+1.1
GO02	Mina Guanaco	1.62	178	⇑*i*P	Pn	12 35 27.6	+1.0
GO02				*e*S	Sn	12 35 48.7	+1.4
PB09	IPOC Station P	1.77	12	⇑*i*P	Pn	12 35 29.6	+1.1
PB09				*e*S	Sn	12 35 50.5	0.0
PB09				IAML		12 35 57.0	
	comp=N,4µm,0.4s						
PB07	IPOC Station P	1.82	353	*i* P	Pn	12 35 29.2	+0.1
PB07				*e*S	Sn	12 35 51.2	-0.4
PB07				IAML		12 35 55.0	
	comp=E,3µm,0.4s						
PB01	IPOC Station P	2.49	3	*e*Pn	Pn	12 35 38.2	+0.4
PB01				*e*Sn	Sn	12 36 05.1	-2.3
PB01	IPOC Station P	2.49	3	⇑*i*P	Pn	12 35 38.1	+0.2
PB01				*e*S	Sn	12 36 06.7	-0.7
PB01				IAML		12 36 08.9	
	comp=E,3µm,0.2s						
PB11	IPOC Station P	3.76	360	*e*Pn	Pn	12 35 53.9	-1.2
GO01	Chusmiza	3.87	6	*e*Pn	Pn	12 35 56.3	-0.6
HJA	Humahuaca	3.90	86	*e*P	Pn	12 35 59.2	+2.0
HJA				IAML		12 36 35.0	
	comp=Z,34nm,0.6s						
YJA	Yavi	4.04	71	*e*P	Pn	12 36 01.2	+2.1
YJA				IAML		12 36 29.6	
	comp=Z,10nm,0.6s						
GO03	Copiap	4.08	187	*e*Pn	Pn	12 35 58.8	-0.5
FSA	Cafayete	4.20	128	*e*P	Pn	12 36 03.1	+2.1
FSA				IAML		12 36 36.1	
	comp=Z,5.9nm,0.5s						
AZAP	Zapla	4.24	100	*e*P	Pn	12 36 03.8	+2.1
MNMC	Minye Minye	4.38	1	*e*Pn	Pn	12 36 02.9	-0.9
AHML	Horco Molle	5.07	131	*e*P	Pn	12 36 14.2	+1.5
VCA	Vinchina	5.33	166	*e*P	Pn	12 36 18.4	+1.9
LCO	Las Campanas	5.53	190	*e*Pn	Pn	12 36 17.1	-2.2
LCO				*e*Sn	Sn	12 37 18.9	-2.9
GO04	Tololo Observa	6.69	189	*e*Pn	Pn	12 36 33.3	-1.8
LPAZ	La Paz	7.35	11	P	Pn	12 36 45.6	+1.1
	comp=Z,4.6nm,0.3s,baz=217,slow=5.5,SNR=84						
LPAZ				LR	LR	12 40 48.7	
	comp=Z,15nm,20.4s,baz=246,slow=47						
LPAZ	La Paz	7.35	11	*e*Pn	Pn	12 36 45.3	+0.9
CFA	Coronel Fontan	8.13	172	P	Pn	12 36 53.1	-1.4
	comp=Z,3.2nm,0.3s,baz=15,slow=14,SNR=16						
CFA				S	Sn	12 38 17.3	-7.5
	comp=Z,1.4nm,0.3s,baz=223,slow=19,SNR=3.7						
SIV	San Ignacio	11.01	49	P	Pn	12 37 30.0	-3.9
	comp=Z,3.8nm,0.3s,baz=252,slow=9.0,SNR=63						
SIV				S	Sn	12 39 22.2	-13
	comp=Z,0.4nm,0.3s,baz=329,slow=19,SNR=3.6						
TRQA	Tornquist	15.89	157	*e*Pn	Pn	12 38 38.0	+0.2
	comp=Z,14nm,0.8s						
PLCA	Paso Flores	17.16	182	P	Pn	12 38 52.7	-1.0
	comp=Z,0.3nm,0.3s,baz=28,slow=13,SNR=12						
PLCA	Paso Flores	17.16	182	*e*P	Pn	12 38 52.7	-1.0
	comp=Z,16nm,1.2s						
BDFB	Brasilia	21.82	73	P	P	12 39 41.1	-3.7
	comp=Z,2.2nm,0.4s,baz=149,slow=18,SNR=2.5						
PTGA	Pitinga	24.54	24	P	P	12 40 10.9	-0.2
	comp=Z,4.7nm,0.3s,baz=200,slow=12,SNR=15						
PTGA	Pitinga	24.54	24	*e*P	P	12 40 10.9	-0.2
	comp=Z,24nm,1.5s						
SNAA	Sanae	60.59	160	P	P	12 45 01.4	+0.8
	comp=Z,1.2nm,0.6s,baz=299,slow=9.9,SNR=4.8						
SNAA				pP	pP	12 45 23.2	+0.6
	comp=Z,1.2nm,0.7s,baz=270,slow=12,SNR=3.2						
QSPA	South Pole Qui	66.66	180	*e*P	P	12 45 42.0	+1.2
	comp=Z,18nm,1.6s						
ELK	Elko	76.72	326	LR	LR	13 19 40.8	
	comp=Z,62nm,20.9s,baz=322,slow=35						
TOA0	Torodi Ar. Sit	78.67	70	*e*P	P	12 46 52.4	-0.2
	comp=Z,4.7nm,0.8s						
TOA1	Torodi Ar. Sit	78.67	70	*e*P	P	12 46 52.4	-0.2
TOA1				*e*pP	pP	12 47 15.6	0.0
TORD	Torodi Ar. Bea	78.67	70	P	P	12 46 52.4	-0.2
	comp=Z,1.4nm,0.6s,baz=247,slow=5.0,SNR=14						
TORD				pP	pP	12 47 15.6	0.0
	comp=Z,3.4nm,0.6s,baz=234,slow=6.2,SNR=12						
TORD				LR	LR	13 19 40.8	
	comp=Z,27nm,20.1s,baz=265,slow=34						
MAW	Mawson	82.58	163	P	P	12 47 13.6	+1.1
	comp=Z,2.5nm,0.6s,baz=190,slow=7.7,SNR=7.4						
MAW	Mawson	82.58	163	*e*P	P	12 47 13.4	+0.9
	comp=Z,1.1nm,1.1s						
YKA	Yellowknife Ar	92.88	341	P	P	12 48 02.5	+0.4
	comp=Z,0.3nm,0.5s,baz=143,slow=5.1,SNR=3.6						
YKB5	Yellowknife Ar	92.88	341	*e*P	P	12 48 02.5	+0.4
ASAR	Alice Springs	127.80	208	PKP	PKPdf	12 53 56.0	+0.3
	comp=Z,0.3nm,0.6s,baz=124,slow=1.9,SNR=5.5						
WR1	Warramunga Arr	130.86	210	*e*PKPdf	PKiKP	12 54 02.5	0.0
WRA	Warramunga Arr	130.87	210	PKP	PKiKP	12 54 02.5	0.0
	comp=Z,1.3nm,1.0s,baz=197,slow=1.7,SNR=3.9						
MK32	Makanchi Array	147.66	37	*e*PKPbc	PKPbc	12 54 35.0	+1.0
MK32				*e*		12 54 58.8	
MKAR	Makanchi Array	147.66	37	PKPbc	PKPbc	12 54 35.0	+1.0
	comp=Z,0.4nm,0.6s,baz=358,slow=4.0,SNR=4.4						
MKAR				pPKPbc	pPKPbc	12 54 58.8	+0.7
	comp=Z,2.6nm,0.7s,baz=318,slow=2.7,SNR=18						

IDC **11** *12:37:47.1±2.5, 23°.84S×179°.44W, h457^{km}±27^{km}, mb3.8/20, mb1 3.9/21, mb1mx3.7/43, mbtmp4.6/21, Error ellipse: s-maj=14.3km s-min=13.2km az=25.0*

NEIC **11** *12:37:49.7±2.5, 23°.78S×179°.49W, h490^{km}±5^{km}, mb4.5/31, Error ellipse: s-maj=16.8km s-min=16.0km az=128.0*

ISCJB **11** *12:37:50.5±0.3, 23°.96S±0°.03×179°.50W±0°.06, h512^{km}, mb4.3/40, Error ellipse: s-maj=7.0km s-min=4.6km az=176.5*

ISC 11 12:37:51.2±0.5**,24°.00S**±0°.06×**179°.41W**±0°.08**,h512**^{km}**, n99,**σ**1**^{s}**45**/103**,mb4.4**/40**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.41	166	P	P	12 39 20.9	-1.4
GLKZ				S	S	12 40 34.5	-2.5
NIUE	Niue	10.10	63	*e*P	P	12 40 08.8	-1.0
MARNC	Mare, Loyalty	11.86	280	*e*P	P	12 40 26.5	-1.8
PINNC	Pines Island,	12.16	274	*e*P	P	12 40 32.0	+0.6
AFI	Afiamalu	12.36	37	*e*P	P	12 40 31.3	-2.5
OUZ	Omahuta	12.72	207	*e*P	P	12 40 38.9	+1.7
OUZ	Omahuta	12.72	207	P	P	12 40 38.8	+1.7
WCZ	Waipu Caves	13.06	203	P	P	12 40 42.5	+1.7
DZM	Mont Dzumac	13.16	276	P	P	12 40 42.4	+0.2
	0.5nm,0.3s,baz=72,slow=20,SNR=5.0						
KUZ	Kuaotunu	13.37	197	P	P	12 40 44.6	+0.6
WIAZ	Waiheke Island	13.59	199	P	P	12 40 47.0	+0.8
MBAZ	Motutapu North	13.63	200	P	P	12 40 47.5	+0.7
ETAZ	East Tamaki Re	13.79	199	P	P	12 40 49.3	+0.9
MKAZ	Moumakai	13.87	198	P	P	12 40 49.8	+0.6
WTAZ	Waiatarua	13.89	200	P	P	12 40 50.3	+0.8
HAZ	Te Kaha	13.92	189	P	P	12 40 50.0	+0.3
HAZ				S	S	12 43 18.1	+1.2
KBAZ	Karaka Road Bo	13.94	199	P	P	12 40 51.1	+1.2
AWAZ	Awhitu Peninsu	13.98	200	P	P	12 40 50.4	0.0
PKGZ	Pakihiroa	14.01	188	P	P	12 40 51.5	+0.7
RUGZ	Raukumara Rang	14.14	189	P	P	12 40 52.5	+0.3
PUZ	Puketiti	14.17	188	P	P	12 40 53.1	+0.7
PUZ				S	S	12 43 17.7	-4.0
TWGZ	Tauwhareparae	14.30	188	P	P	12 40 53.4	-0.4
URZ	Urewera	14.52	191	P	P	12 40 52.5	-3.5
	0.9nm,0.3s,baz=342,slow=20,SNR=6.6						
URZ				S	S	12 43 24.3	-4.1
	0.2nm,0.3s,baz=119,slow=19,SNR=1.7						
URZ	Urewera	14.52	191	P	P	12 40 54.3	-1.7
MWZ	Matawai	14.52	190	P	P	12 40 53.1	-3.0
RIGZ	Rimuhau	14.85	189	P	P	12 41 00.2	+0.6
RTZ	Ruatahuna	14.89	191	P	P	12 41 01.5	+1.5
SNGZ	Shannon Statio	14.99	190	P	P	12 41 01.4	+0.4
MTHZ	Maungataniwha	15.14	191	P	P	12 41 02.0	-0.6
HIZ	Hauiti	15.27	197	*e*P	P	12 41 05.1	+1.3
	31nm,1.0s						
HIZ	Hauiti	15.27	197	P	P	12 41 05.6	+1.7
NMHZ	Naumai	15.39	191	P	P	12 41 02.8	-2.4
BKZ	Black Stump Fm	15.51	192	*e*P	P	12 41 04.9	-1.5
	10nm,0.9s						
BKZ	Black Stump Fm	15.51	192	P	P	12 41 05.5	-1.0
OTVZ	Oturere	15.68	194	P	P	12 41 06.8	-1.6
KWHZ	Kaweka Forest	15.78	192	P	P	12 41 10.1	+0.9
VRZ	Vera Road	15.87	197	P	P	12 41 09.5	-0.6
MOVZ	Moawhango	15.89	194	P	P	12 41 09.7	-0.7
BHHZ	Black Hill Sta	15.91	193	P	P	12 41 08.8	-1.8
KRHZ	Kereru	16.00	192	P	P	12 41 10.5	-1.0
KAHZ	Kahuranaki	16.05	190	P	P	12 41 12.1	+0.1
PXZ	Pawanui	16.29	190	P	P	12 41 14.4	+0.1
THZ	Tophouse	18.83	198	*e*P	P	12 41 38.3	-0.1
	12nm,0.7s						
LTZ	Lake Taylor	19.95	198	*e*P	P	12 41 48.1	-0.6
	13nm,0.8s						
OXZ	Oxford	20.52	198	*e*P	P	12 41 52.6	-1.1
	23nm,0.7s						
MQZ	McQueen’s Vall	20.71	196	*e*P	P	12 41 54.9	-0.5
	2.8nm,1.0s						
RPZ	Rata Peaks	21.17	199	P	P	12 41 58.3	-1.3
	13nm,0.5s,baz=349,slow=0.5,SNR=21						
RPZ	Rata Peaks	21.17	199	*e*P	P	12 42 00.5	+0.9
	15nm,0.8s						
LBZ	Lake Benmore	22.04	200	*e*P	P	12 42 05.7	-1.8
	4.8nm,1.1s						
ODZ	Otahua Downs	22.50	199	*e*P	P	12 42 10.2	-1.3
	10nm,1.2s						
WKZ	Wanaka	22.82	202	*e*P	P	12 42 13.6	-0.8
	24nm,1.1s						
MLZ	Mavora Lakes	23.60	202	*e*P	P	12 42 21.2	-0.2
	4.2nm,0.8s						
ARMA	Armidale	26.49	250	*e*P	P	12 42 48.6	+1.2
	13nm,0.7s						
EIDS	Eidsvold	26.82	261	*e*P	P	12 42 50.2	0.0
	16nm,0.6s						
CAN	Canberra	29.56	240	*e*P	P	12 43 14.7	+0.6
	13nm,0.8s						
CTA	Charters Tower	32.01	270	P	P	12 43 35.3	0.0
	46nm,0.4s,baz=93,slow=11,SNR=144						
CTAO	Charters Tower	32.01	270	*e*P	P	12 43 35.4	0.0
	50nm,0.5s						
TOO	Toolangi	32.84	237	*e*P	P	12 43 42.7	+0.5
	11nm,0.6s						
TAU	Tasmania Unive	33.26	227	*e*P	P	12 43 46.0	+0.4
	14nm,0.9s						
PMG	Port Moresby	35.04	289	P	P	12 43 59.7	-1.1
	57nm,1.1s,baz=69,slow=5.9,SNR=4.6						
PMG	Port Moresby	35.04	289	*e*P	P	12 44 00.6	-0.3
	54nm,0.9s						
STKA	Stephens Creek	35.18	248	P	P	12 44 02.1	+0.2
	4.5nm,0.4s,baz=96,slow=10,SNR=8.3						
STKA	Stephens Creek	35.18	248	*e*P	P	12 44 02.2	+0.2
	1.2nm,0.6s						
COEN	Coen	36.66	279	*e*P	P	12 44 14.2	-0.2
	5.8nm,0.6s						
BBOO	Buckleboo	39.90	247	*e*P	P	12 44 39.8	-0.8
	4.4nm,0.8s						
AS31	Alice Springs	42.55	261	*e*P	P	12 45 01.2	-0.6
	5.8nm,0.6s						
ASAR	Alice Springs	42.55	261	P	P	12 45 01.3	-0.5
	14nm,0.5s,baz=98,slow=7.2,SNR=415						
ASAR				ScP	ScP	12 49 49.3	+4.6
	0.7nm,0.9s,baz=120,slow=4.0,SNR=4.0						
WB2	Warramunga Arr	42.92	266	*e*P	P	12 45 03.8	-0.9
	36nm,0.7s						
WRAB	Tennant Creek	42.93	266	*e*P	P	12 45 02.2	-2.6
	33nm,0.8s						
WR1	Warramunga Arr	42.94	266	*e*P	P	12 45 03.8	-1.0
WRA	Warramunga Arr	42.94	266	P	P	12 45 03.8	-1.0
	36nm,0.4s,baz=95,slow=9.3,SNR=533						
JAY	Jayapura	44.05	293	P	P	12 45 12.7	-0.9
	12nm,0.5s,baz=144,slow=5.2,SNR=11						
FORT	Forrest	46.78	250	*e*P	P	12 45 33.6	-0.7
	62nm,0.6s						
MTN	Manton Dam	48.00	274	*e*P	P	12 45 42.4	-1.2
	13nm,0.6s						
SIJI	Sorong	52.98	288	P	P	12 46 19.1	-1.0
	43nm,0.7s,baz=98,slow=5.5,SNR=28						
VNDA	Vanda	54.32	185	P	P	12 46 31.4	+2.9
	1.1nm,0.7s,baz=11,slow=6.1,SNR=7.8						
BATI	Baumata	55.77	274	P	P	12 46 41.0	+1.2
	42nm,0.6s,baz=151,slow=3.4,SNR=10						
QSPA	South Pole Qui	66.08	180	*e*P	P	12 47 49.5	+2.6
	4.1nm,0.9s						
LEM	Lembang	71.72	271	P	P	12 48 22.0	+0.1
	20nm,0.7s,baz=24,slow=7.5,SNR=5.0						
MJAR	Matsushiro Arr	72.29	325	P	P	12 48 23.1	-1.4
	1.3nm,0.7s,baz=163,slow=4.2,SNR=3.0						
MAJO	Matsushiro	72.29	325	*e*P	P	12 48 23.1	-1.4
KSM	Kuching	72.65	280	*e*P	P	12 48 27.1	0.0
	12nm,0.7s						
MAW	Mawson	77.84	200	P	P	12 48 56.1	+1.0
	2.3nm,0.8s,baz=114,slow=9.4,SNR=4.9						
PFO	Pinyon Flats O	82.87	49	P	P	12 49 23.4	+1.4
	1.5nm,0.4s,baz=96,slow=4.0,SNR=4.0						
YBH	Yreka Blue Hor	83.83	39	P	P	12 49 27.5	+1.0
	1.4nm,0.7s,baz=171,slow=9.9,SNR=3.3						
NV01	Mina Array Sit	84.45	44	*e*P	P	12 49 30.9	+0.9
NVAR	Mina Array Bea	84.45	44	P	P	12 49 30.9	+0.9
	0.3nm,0.4s,baz=225,slow=7.9,SNR=5.7						
TUC	Tucson	86.16	52	*e*P	P	12 49 40.8	+2.7
	3.5nm,0.8s						
ELK	Elko	87.72	43	P	P	12 49 44.8	-0.7
	0.4nm,0.5s,baz=254,slow=14,SNR=2.8						
TXAR	Lajitas Array	90.03	58	P	P	12 49 58.1	+1.8
	1.8nm,0.7s,baz=213,slow=6.5,SNR=18						
CMAR	Chiang Mai Arr	90.07	290	P	P	12 49 58.0	+1.4
	1.6nm,0.8s,baz=125,slow=3.3,SNR=7.7						
ILAR	Eielson Array	92.00	13	P	P	12 50 03.4	-1.0
	0.2nm,0.6s,baz=218,slow=5.7,SNR=3.8						
PD31	Pinedale Array	92.39	44	*e*P	P	12 50 07.3	+0.3
PDAR	Pinedale Array	92.39	44	P	P	12 50 07.3	+0.3

	0.4nm,0.6s,baz=221,slow=4.0,SNR=5.2						
HFS	**Hagfors**	**142.75**	**349**	PKhKP	PKPpre	12 56 22.6	
	0.8nm,0.5s,baz=50,slow=4.5,SNR=6.2						
BR101	**Keskin Array S**	**148.07**	**307**	ePKPbc	**PKPbc**	**12 56 39.3**	**0.0**
BRTR	**Keskin Array B**	**148.07**	**307**	PKPbc	**PKPbc**	**12 56 39.3**	**0.0**
	0.3nm,0.4s,baz=99,slow=4.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**169.15**	**186**	PKPab	**PKPab**	**12 58 16.8**	**+1.4**
	0.5nm,0.8s,baz=185,slow=5.2,SNR=3.4						
TOA1	**Torodi Ar. Sit**	**169.16**	**186**	ePKPab	**PKPab**	**12 58 16.8**	**+1.4**

MAN 11 12:42:12.1, 13°.01N×124°.67E, h9^{km}, mb4.6, ML3.5, MS3.4, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.50**	**181**	eP	Pg	12 42 22.1	+0.4
CNP				eS	Sb	12 42 29.7	-0.7
BESP	**Borongan**	**1.59**	**152**	eP	Pn	12 42 39.5	-0.9
BESP				eS	Sb	12 43 01.7	-0.1
PLP	**Palo**	**1.86**	**171**	⇑iP	Pn	12 42 43.0	-1.1
PLP				i S	Sn	12 43 06.8	-1.0
OTRP	**Odiongan**	**2.66**	**256**	eP	Pn	12 42 55.3	+0.1
MSLP	**Maasin**	**2.87**	**176**	eP	Pn	12 42 60.0	+2.0
JAP	**San Jose, Anti**	**3.49**	**230**	⇑eP	Pn	12 43 09.0	+2.4

*ISCJB **11** 13:10:05.0±0.3, 23°.78N±0°.02×121°.75E±0°.02, h22^{km}±2^{km},*
Error ellipse: s-maj=3.2km s-min=1.9km az=42.6
*JMA **11** 13:10:04.4±0.1, 23°.76N×121°.76E, h16^{km}±3^{km}, M3.0*
*TAP **11** 13:10:05.4, 23°.79N×121°.67E, h23^{km}, ML3.3, B*
ISC 11 13:10:05.2±0.9, **23°.78N**±0°.02×**121°.71E**±0°.02, **h23**^{km}±7^{km},
n107, σ0^{s}.**64**/152, **4C-14D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.22**	**334**	P	**Pb**	**13 10 11.0**	**0.0**
	baz=346						
HWA				S	**Sb**	**13 10 15.8**	**+1.0**
	baz=346						
ESL	**Shilin**	**0.26**	**279**	⇑iP	**Pb**	**13 10 11.1**	**-0.4**
	baz=269						
ESL				S	**Sb**	**13 10 15.0**	**-0.7**
	baz=269						
EGFH	**Guangfu**	**0.28**	**248**	P	**Pb**	**13 10 11.9**	**+0.1**
	baz=242						
EGFH				eS	**Sb**	**13 10 16.9**	**+0.6**
	baz=242						
TWD	**Chiawan**	**0.32**	**340**	⇑iP	**Pb**	**13 10 12.2**	**-0.2**
	baz=354						
TWD				i S	**Sb**	**13 10 17.1**	**-0.2**
	baz=354						
HGSD	**Ruisui**	**0.39**	**223**	eP	**Pn**	**13 10 14.3**	**-1.1**
	baz=216						
HGSD				S	**Sn**	**13 10 21.3**	**-0.9**
	baz=216						
NACB	**Ninganchiao**	**0.41**	**345**	⇑P	**Pb**	**13 10 13.5**	**-0.4**
	baz=351						
NACB				S	**Sb**	**13 10 19.4**	**-0.4**
	baz=351						
EHY	**Hungye**	**0.45**	**233**	⇓iP	**Pb**	**13 10 14.3**	**-0.2**
	baz=240						
EHY				S	**Sb**	**13 10 21.2**	**+0.5**
	baz=240						
ETLH	**Xiulin Townshi**	**0.48**	**334**	⇑P	**Pb**	**13 10 14.8**	**-0.3**
	baz=335						
ETLH				S	**Sb**	**13 10 21.7**	**-0.1**
	baz=335						
VWDT	**VWDT**	**0.53**	**268**	⇓P	**Pb**	**13 10 15.8**	**0.0**
	baz=266						
VWDT				S	**Sb**	**13 10 23.1**	**+0.1**
	baz=266						
YULB	**Yu-li**	**0.54**	**225**	⇓P	**Pb**	**13 10 15.8**	**-0.3**
	baz=233						
WHF	**Hehuan Shan**	**0.55**	**312**	⇓iP	**Pb**	**13 10 15.8**	**-0.7**
	baz=313						
WHF				S	**Sb**	**13 10 23.2**	**-0.9**
	baz=313						
TWF1	**Yuli**	**0.57**	**222**	⇓iP	**Pb**	**13 10 16.3**	**-0.2**
	baz=232						
CHGB	**Renai**	**0.57**	**300**	⇓P	**Pb**	**13 10 16.2**	**-0.5**
	baz=305						
CHGB				S	**Sb**	**13 10 24.1**	**-0.4**
	baz=305						
NANB	**Nanao**	**0.65**	**3**	P	**Pb**	**13 10 17.7**	**-0.2**
	baz=5.0						
NANB				S	**Sb**	**13 10 27.1**	**+0.6**
	baz=5.0						
ENA	**Nanau**	**0.65**	**2**	P	**Pb**	**13 10 17.7**	**-0.3**
	baz=5.0						
ENA				S	**Sb**	**13 10 27.2**	**+0.6**
	baz=5.0						
TWT	**Tachien**	**0.69**	**314**	P	**Pb**	**13 10 18.2**	**-0.4**
	baz=314						
TWT				S	**Sb**	**13 10 27.3**	**-0.4**
	baz=314						
SSLB	**Suanglung**	**0.70**	**271**	⇓P	**Pb**	**13 10 18.1**	**-0.6**
	baz=270						
SSLB				S	**Sb**	**13 10 26.8**	**-1.1**
	baz=270						
TDCB	**Techi**	**0.70**	**313**	P	**Pb**	**13 10 18.4**	**-0.4**
	baz=314						
TDCB				S	**Sb**	**13 10 27.4**	**-0.7**
	baz=314						
NNSB	**Datong**	**0.72**	**335**	⇓P	**Pb**	**13 10 18.6**	**-0.5**
	baz=328						
NNSB				S	**Sb**	**13 10 28.1**	**-0.6**
	baz=328						
NNS	**Nan Shan**	**0.73**	**335**	P	**Pb**	**13 10 18.9**	**-0.5**
	baz=330						
NNS				S	**Sb**	**13 10 28.6**	**-0.4**
	baz=330						
CHKT	**Chengkung**	**0.74**	**206**	eP	**Pb**	**13 10 19.5**	**0.0**
	baz=189						
SMLT	**Sun Moon Lake**	**0.75**	**278**	⇓iP	**Pb**	**13 10 19.4**	**-0.4**
	baz=278						
SMLT				S	**Sb**	**13 10 29.0**	**-0.6**
	baz=278						
YUS	**Yu-Shan**	**0.75**	**248**	⇓iP	**Pb**	**13 10 19.9**	**-0.1**
	baz=246						
YUS				i S	**Sb**	**13 10 29.5**	**-0.5**
	baz=246						
DPDB	**Guoxing**	**0.77**	**290**	⇓P	**Pb**	**13 10 19.6**	**-0.3**
	baz=289						
DPDB				S	**Sb**	**13 10 29.6**	**-0.3**
	baz=289						
WHYT	**Xinyi Township**	**0.79**	**264**	P	**Pb**	**13 10 20.3**	**0.0**
	baz=263						
TYC	**Yuchr**	**0.80**	**279**	⇓iP	**Pb**	**13 10 19.9**	**-0.4**
	baz=279						
TYC				S	**Sb**	**13 10 29.8**	**-0.9**
	baz=279						
TWC	**Suao**	**0.84**	**8**	P	**Pn**	**13 10 21.4**	**-0.3**
	baz=1.0						
TWC				eS	**Sb**	**13 10 32.5**	**+0.5**
	baz=1.0						
NDT	**Datong Townshi**	**0.84**	**347**	eP	**Pb**	**13 10 21.1**	**-0.1**
	baz=348						
NDT				eS	**Sb**	**13 10 32.6**	**+0.4**
	baz=348						
EOS1	**EOS1**	**0.86**	**26**	eP	**Pn**	**13 10 21.8**	**-0.1**
	baz=42						
WHP	**Taichung City**	**0.86**	**306**	P	**Pb**	**13 10 21.2**	**-0.4**
	baz=306						
ELDTW	**Lidau**	**0.87**	**228**	⇓P	**Pb**	**13 10 20.6**	**-1.0**
	baz=226						
ELDTW				eS	**Sb**	**13 10 32.0**	**-0.8**
	baz=226						
ENTT	**Nioudou**	**0.87**	**351**	eP	**Pb**	**13 10 21.8**	**+0.1**
	baz=353						
ALS	**Alishan**	**0.87**	**253**	P	**Pb**	**13 10 21.9**	**0.0**
	baz=251						
ALS				eS	**Sb**	**13 10 33.2**	**0.0**
	baz=251						
WJS	**Zhushan**	**0.90**	**273**	eP	**Pn**	**13 10 22.8**	**+0.3**
	baz=269						
TWE	**Neicheng**	**0.94**	**357**	eP	**Pb**	**13 10 22.5**	**-0.4**
	baz=360						
YHNB	**Yeheng**	**0.94**	**341**	P	**Pb**	**13 10 22.6**	**-0.3**
	baz=342						
YHNB				eS	**Sb**	**13 10 34.2**	**-0.9**
	baz=342						
WNT	**Mingjian**	**0.95**	**276**	P	**Pn**	**13 10 23.5**	**+0.3**
	baz=276						
CHN5	**Tsauling**	**0.97**	**260**	⇓iP	**Pn**	**13 10 23.6**	**+0.1**
	baz=259						
CHN5				eS	**Sn**	**13 10 36.9**	**+0.4**
	baz=259						
SLBB	**Yuanshan**	**0.98**	**356**	eP	**Pb**	**13 10 23.1**	**-0.4**
	baz=357						
TCU	**Taichung**	**1.02**	**292**	eP	**Pb**	**13 10 24.6**	**+0.4**
	baz=292						
TWQ1	**Liyutan**	**1.03**	**304**	P	**Pb**	**13 10 25.0**	**+0.6**
	baz=312						
WGK	**Gukeng**	**1.06**	**265**	eP	**Pb**	**13 10 24.9**	**+0.1**
	baz=265						
STYT	**Tauyuan**	**1.07**	**235**	eP	**Pn**	**13 10 24.8**	**-0.1**
	baz=224						
NSTT	**Nanjuang**	**1.07**	**323**	eP	**Pb**	**13 10 25.2**	**+0.1**
	baz=323						
NSTT				S	**Sb**	**13 10 38.3**	**-0.4**
	baz=323						
LIOB	**Emei**	**1.08**	**324**	eP	**Pb**	**13 10 25.5**	**+0.3**
	baz=325						
NTC	**Toucheng**	**1.08**	**6**	eP	**Pb**	**13 10 25.6**	**+0.4**
	baz=7.0						
WDLH	**Douliu**	**1.08**	**266**	eP	**Pb**	**13 10 25.2**	**0.0**
	baz=265						
WCHH	**Zhanghua**	**1.10**	**286**	eP	**Pb**	**13 10 25.9**	**+0.3**
	baz=286						
TWGBT	**Beinan**	**1.12**	**212**	eP	**Pn**	**13 10 24.1**	**-1.4**
	baz=195						
TWG	**Pinlang**	**1.12**	**212**	eP	**Pn**	**13 10 24.1**	**-1.4**
	baz=195						
NMLH	**Miaoli**	**1.13**	**312**	P	**Pb**	**13 10 26.6**	**+0.4**
	baz=312						
NMLH				eS	**Sn**	**13 10 42.0**	**+1.4**
	baz=312						
WDJ	**Dajia District**	**1.14**	**300**	eP	**Pb**	**13 10 26.6**	**+0.4**
	baz=301						
PTSB	**Yuanli**	**1.14**	**306**	eP	**Pb**	**13 10 26.5**	**+0.2**
	baz=307						
TIPB	**Shuangxi**	**1.20**	**5**	P	**Pb**	**13 10 27.3**	**+0.1**
	baz=351						
TIPB				eS	**Sb**	**13 10 43.3**	**+1.0**
	baz=351						
TWA	**Mucha**	**1.21**	**354**	eP	**Pn**	**13 10 26.4**	**-0.3**
	baz=356						
SBCB	**Hsinchu**	**1.21**	**327**	eP	**Pb**	**13 10 29.2**	**+1.7**
	baz=340						
TATO	**Taipei**	**1.21**	**350**	eP	**Pn**	**13 10 26.5**	**-0.3**
	baz=351						
CHY	**Chiayi**	**1.22**	**257**	eP	**Pb**	**13 10 27.2**	**-0.3**
	baz=256						
TWK	**Hsinying**	**1.23**	**246**	P	**Pb**	**13 10 27.7**	**-0.1**
	baz=245						
TWK				S	**Sb**	**13 10 45.0**	**+1.6**
	baz=245						
CHN1	**Nanshi**	**1.24**	**242**	P	**Pb**	**13 10 28.0**	**0.0**
	baz=253						
CHN1				S	**Sb**	**13 10 44.8**	**+1.4**
	baz=253						
RLNB	**Erlin**	**1.25**	**276**	eP	**Pb**	**13 10 28.1**	**+0.1**
	baz=276						
RLNB				S	**Sb**	**13 10 45.7**	**+2.0**
	baz=276						
SNST	**Tainan City**	**1.25**	**244**	eP	**Pb**	**13 10 28.3**	**+0.2**
	baz=243						
SGST	**Jiashian**	**1.25**	**237**	eP	**Pb**	**13 10 28.1**	**0.0**
	baz=226						
SGST				eS	**Sb**	**13 10 45.8**	**+2.1**
	baz=226						
SLGT	**Liugui**	**1.25**	**232**	eP	**Pb**	**13 10 28.1**	**0.0**
	baz=230						
TWB1	**Santiao Chiao**	**1.25**	**11**	eP	**Pb**	**13 10 29.0**	**+0.8**
	baz=13						
NCUH	**Zhongli**	**1.28**	**338**	eP	**Pb**	**13 10 28.4**	**-0.3**
	baz=339						
NWF	**Wu-fen Shan**	**1.29**	**3**	eP	**Pb**	**13 10 28.9**	**+0.1**
	baz=349						
WFSB	**Wu-fen Shan**	**1.29**	**3**	eP	**Pb**	**13 10 29.3**	**+0.5**
	baz=349						
JYNG	**Yonagunijimaku**	**1.31**	**59**	P	**Pn**	**13 10 28.3**	**+0.2**
JYNG				eS	**Sb**	**13 10 45.3**	**-0.2**
WTCT	**Ta-ch'eng**	**1.31**	**274**	eP	**Pb**	**13 10 29.4**	**+0.2**
	baz=274						
WTCT				eS	**Sb**	**13 10 48.1**	**+2.5**
	baz=274						
WLGB	**Puzi**	**1.33**	**257**	eP	**Pb**	**13 10 29.2**	**-0.3**
	baz=257						
TWS1	**Kuangyinshan**	**1.35**	**349**	eP	**Pb**	**13 10 30.1**	**+0.3**
	baz=350						
ECL	**Taimali**	**1.36**	**211**	eP	**Pn**	**13 10 29.0**	**+0.1**
	baz=197						
YOJ	**Yonaguni jima**	**1.37**	**60**	eP	**Pn**	**13 10 28.6**	**-0.4**
	baz=61						
YOJ	**Yonaguni jima**	**1.37**	**60**	P	**Pn**	**13 10 28.9**	**0.0**
YOJ				S	**Sn**	**13 10 46.0**	**-0.4**
YM01	**YM01**	**1.37**	**355**	eP	**Pn**	**13 10 29.1**	**+0.1**
	baz=355						
YM10	**YM10**	**1.38**	**354**	eP	**Pn**	**13 10 29.0**	**-0.2**
	baz=355						
YM05	**YM05**	**1.39**	**354**	eP	**Pn**	**13 10 28.7**	**-0.7**
	baz=355						
YM03	**YM03**	**1.41**	**354**	eP	**Pn**	**13 10 28.7**	**-0.9**
	baz=354						
YM08	**YM08**	**1.41**	**355**	eP	**Pn**	**13 10 29.4**	**-0.2**
	baz=356						
ANP	**Anpu**	**1.42**	**353**	eP	**Pn**	**13 10 29.6**	**-0.1**
	baz=354						
SSD	**Sandimen**	**1.43**	**224**	eP	**Pb**	**13 10 30.7**	**-0.4**
	baz=232						
CHN8	**Yiju**	**1.44**	**253**	eP	**Pb**	**13 10 30.6**	**-0.8**
	baz=252						
TWM1	**Shoushan**	**1.52**	**232**	eP	**Pb**	**13 10 33.9**	**+1.2**
	baz=230						
MASBT	**Mashibuluo**	**1.53**	**221**	eP	**Pn**	**13 10 31.1**	**0.0**
	baz=218						
MASBT				S	**Sb**	**13 10 53.0**	**+1.3**
	baz=218						
EAST	**Anshuo**	**1.60**	**210**	eP	**Pn**	**13 10 32.4**	**+0.3**
	baz=198						
SSPT	**Xinbi**	**1.66**	**220**	eP	**Pb**	**13 10 34.6**	**-0.6**
	baz=210						
SCZT	**Fangliau**	**1.72**	**216**	eP	**Pb**	**13 10 35.6**	**-0.6**
	baz=201						
IRIF	**Iriomote-Funau**	**1.93**	**73**	P	**Pn**	**13 10 36.9**	**+0.3**
IRIF				S	**Sn**	**13 11 00.3**	**+0.2**
HATJ	**Hateruma jima**	**1.93**	**81**	S	**Sn**	**13 11 00.3**	**0.0**
WDGT	**Dungji**	**1.95**	**255**	P	**Pn**	**13 10 37.1**	**+0.1**
	baz=255						
PHUB	**P'eng-hu**	**1.98**	**263**	P	**Pn**	**13 10 37.4**	**0.0**
	baz=247						
PNG	**Penghu**	**1.99**	**264**	P	**Pn**	**13 10 37.5**	**+0.1**
	baz=265						
JKRS	**Kuro-shima**	**2.15**	**77**	P	**Pn**	**13 10 40.6**	**+0.9**
JKRS				S	**Sn**	**13 11 05.5**	**-0.1**
VCHM	**Qimei**	**2.17**	**255**	eP	**Pn**	**13 10 39.8**	**-0.2**
	baz=255						
JIJ	**Ishigaki jima**	**2.30**	**75**	P	**Pn**	**13 10 41.8**	**+0.1**
JIJ				S	**Sn**	**13 11 08.6**	**-0.7**
PTTC	**Pingtan**	**2.46**	**315**	eP	**Pn**	**13 10 43.6**	**-0.4**
	baz=315						
JISG	**Ishigakijimahi**	**2.51**	**71**	P	**Pn**	**13 10 45.0**	**+0.4**
JISG				eS	**Sn**	**13 11 13.9**	**-0.5**
PTMZ	**Houxiangcun**	**2.68**	**299**	eP	**Pn**	**13 10 46.4**	**-0.6**
	baz=299						
MATB	**Ma-tsu**	**2.86**	**326**	eP	**Pn**	**13 10 49.1**	**-0.4**
	baz=327						
JTJ	**Tarama**	**2.86**	**72**	S	**Sn**	**13 11 24.2**	**+1.0**
KNMB	**Chin-men Tao**	**3.12**	**283**	eP	**Pn**	**13 10 52.3**	**-0.7**
	baz=283						
JIRB	**Irabujima**	**3.33**	**71**	P	**Pn**	**13 10 55.2**	**-0.7**
JIRB				S	**Sn**	**13 11 33.8**	**-0.9**
JIKM	**Ikemajima**	**3.42**	**70**	P	**Pn**	**13 10 56.9**	**-0.3**
JMJ2	**Miyako jima3**	**3.44**	**73**	P	**Pn**	**13 10 56.8**	**-0.6**
JMJ2				S	**Sn**	**13 11 37.3**	**-0.1**
AXDP	**Jialang**	**3.59**	**289**	eP	**Pn**	**13 10 59.4**	**-0.1**
	baz=288						
ZPLA	**Ao Xicun**	**3.63**	**273**	eP	**Pn**	**13 11 00.3**	**+0.2**
	baz=274						

*SOME **11** 13:23:49.1, 42°.08N×73°.87E, h10^{km}*
*KRNET **11** 13:23:49.2±0.1, 42°.07N×73°.90E, h14^{km}, mb2.0*
*NNC **11** 13:23:50.2±1.1, 42°.16N×73°.86E, h0^{km}, mb2.7, mpv2.5,*
Error ellipse: s-maj=8.2km s-min=3.9km az=172.0
ISC 11 13:23:48.9±1.3, **42°.06N**±0°.04×**73°.87E**±0°.04, **h6**^{km}±15^{km},
n18, σ0^{s}.**33**/32, **19C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**0.39**	**121**	⇓iP	**Pg**	**13 23 56.4**	**-0.1**
	baz=22						
ARLS				⇓iS	**Sg**	**13 24 01.5**	**-0.1**
	baz=22						
UCH	**Uchtor**	**0.50**	**71**	⇑iP	**Pg**	**13 23 58.6**	**0.0**
	baz=71						
UCH				⇑iS	**Sg**	**13 24 05.6**	**+0.3**
	baz=71						
EKS2	**Erkin-Say**	**0.60**	**353**	⇑iP	**Pg**	**13 24 00.7**	**+0.2**
	baz=51						
EKS2				⇑iS	**Sg**	**13 24 08.8**	**+0.4**
	baz=51						
AAK	**Ala-Archa**	**0.74**	**38**	⇑P	**Pg**	**13 24 03.0**	**-0.1**
	0.7nm,0.3s						
AAK				⇑S	**Sg**	**13 24 12.5**	**-0.1**
	6.4nm,0.3s						
AAK	**Ala-Archa**	**0.74**	**38**	⇑iP	**Pg**	**13 24 03.0**	**-0.1**
	baz=38						
AAK				⇑iS	**Sg**	**13 24 12.9**	**+0.3**
	baz=38						
MRKS	**Merke**	**0.83**	**325**	P	**Pg**	**13 24 04.6**	**-0.3**
	2.6nm,0.1s						
MRKS				S	**Sg**	**13 24 16.1**	**+0.3**
	8.4nm,0.2s						
MRKS	**Merke**	**0.83**	**325**	eP	**Pg**	**13 24 04.5**	**-0.3**
	2.6nm,0.1s						
MRKS				eS	**Sg**	**13 24 16.0**	**+0.3**
	8.7nm,0.1s						
KBK	**Karagaybulak**	**0.99**	**53**	⇑iP	**Pg**	**13 24 07.7**	**-0.2**
	baz=53						
KBK				⇑iS	**Sg**	**13 24 20.9**	**0.0**
	baz=53						
KZA	**Kyzart**	**1.02**	**89**	⇓iP	**Pg**	**13 24 08.3**	**-0.2**
	baz=89						
KZA				⇓iS	**Sg**	**13 24 22.1**	**+0.2**
	baz=89						
CHMS	**Chumysh**	**1.14**	**34**	⇑iP	**Pb**	**13 24 10.2**	**-0.8**
	baz=34						
CHMS				⇑iS	**Sg**	**13 24 25.3**	**-0.2**
	baz=34						
TKM2	**Tokmak 2**	**1.54**	**55**	⇓Pg	**Pb**	**13 24 17.7**	**-0.2**
	0.6nm,0.3s						
TKM2				⇓Lg	Lg	13 24 37.8	
	1.5nm,0.5s						
TKM2	**Tokmak 2**	**1.54**	**55**	⇑iP	**Pb**	**13 24 17.5**	**-0.4**
	baz=55						
TKM2				⇑iS	**Sb**	**13 24 37.4**	**-0.3**
	baz=55						
BOOM	**Boomskoye usch**	**1.59**	**74**	⇓iP	**Pb**	**13 24 18.4**	**-0.4**
	baz=74						
BOOM				⇓iS	**Sb**	**13 24 39.6**	**+0.3**
	baz=74						
NRN	**Naryn**	**1.71**	**111**	⇑iP	**Pb**	**13 24 20.8**	**-0.1**
	baz=12						
NRN				⇑iS	**Sb**	**13 24 43.4**	**+0.6**
	baz=12						
ULHL	**Ulahol**	**1.77**	**83**	⇑iP	**Pb**	**13 24 21.6**	**-0.3**
	baz=84						
ULHL				⇑iS	**Sb**	**13 24 44.7**	**+0.3**
	baz=84						
KST	**Kastek**	**1.83**	**57**	P	**Pb**	**13 24 23.2**	**+0.4**
	2.9nm,0.2s						
KST				S	**Sg**	**13 24 47.8**	**+0.2**
	2.5nm,0.2s						
KUU	**Kurty**	**2.57**	**44**	Pg	**Pb**	**13 24 35.8**	**+0.3**
	0.9nm,0.1s						
KUU				Lg	Lg	13 25 09.8	
	6.9nm,0.4s						
KK31	**Karatay Array**	**2.69**	**294**	⇑Lg	Lg	13 25 13.0	
	0.4nm,0.3s						

*ISCJB **11** 13:29:06.9±2.2, 33°.99N±0°.05×36°.2E±0°.1, h29^{km}±22^{km},*
Error ellipse: s-maj=15.0km s-min=7.4km az=161.4
*NSSC **11** 13:29:06.8±0.4, 34°.01N×36°.22E, h14^{km}±25^{km}, ML1.7*
*GRAL **11** 13:29:07.2±0.3, 33°.96N×36°.28E, h0^{km}±121^{km}, MD2.6*
ISC 11 13:29:05.7±1.8, **34°.02N**±0°.06×**36°.2E**±0°.1, **h28**^{km}±13^{km}, **n6**,
σ**0^{s}.29**/11, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWQ	**Hawqa**	**0.32**	**323**	eP	**Pn**	**13 29 14.8**	**+0.1**
HWQ				eS	**Sn**	**13 29 20.3**	**-0.2**
QASN	**Qassioun**	**0.49**	**171**	eP	**Pn**	**13 29 16.8**	**-0.2**
QASN				eS	**Sb**	**13 29 23.3**	**+0.2**
QASN				AML	AML	13 29 25.7	
	comp=N,139nm,0.2s						
QASN				AML	AML	13 29 26.3	
	comp=E,251nm,0.3s						
RCY	**Rachaya**	**0.60**	**209**	eP	**Pb**	**13 29 17.7**	**0.0**
RCY				eS	**Sb**	**13 29 25.6**	**-0.3**
DQRL	**Deir Qamar**	**0.60**	**238**	eP	**Pn**	**13 29 18.8**	**+0.4**
BRBR	**Barbar**	**0.64**	**198**	eP	**Pn**	**13 29 19.1**	**+0.1**
BRBR				eS	**Sn**	**13 29 28.4**	**0.0**
BRBR				AML	AML	13 29 32.3	
	comp=N,24nm,0.5s						
BRBR				AML	AML	13 29 35.9	
	comp=E,14nm,0.6s						
TOTH	**TOTAH**	**0.69**	**163**	eP	**Pn**	**13 29 20.1**	**+0.4**
TOTH				eS	**Sn**	**13 29 29.2**	**-0.2**
TOTH				AML	AML	13 29 34.1	
	comp=N,24nm,0.5s						
TOTH				AML	AML	13 29 34.2	
	comp=E,19nm,0.4s						

*ISCJB **11** 13:38:30.7±0.2, 23°.89S±0°.03×66°.87W±0°.03, h210^{km}±2^{km},*
mb4.3/30, Error ellipse: s-maj=4.9km s-min=3.4km
az=137.5
*IDC **11** 13:38:31.3±0.9, 23°.87S×66°.70W, h190^{km}±8^{km}, mb3.8/12,*
mb1 4.1/19, mb1mx4.0/28, mbtmp4.4/19, MS2.5/2,
Ms1 2.5/2, ms1mx2.4/25, Error ellipse: s-maj=13.0km
s-min=10.9km az=55.0
*NEIC **11** 13:38:31.4±2.6, 23°.89S×66°.80W, h204^{km}±6^{km}, mb4.4/39,*
ML4.7(GUC), Error ellipse: s-maj=12.3km s-min=8.8km
az=93.0
*SJA **11** 13:38:31.7±0.4, 23°.94S×66°.85W, h204^{km}±5^{km}, ML3.6,*
MW3.6
*VAO **11** 13:38:31.5±0.3, 23°.93S×66°.80W, h194^{km}, mb4.7*
*GUC **11** 13:38:33.3±0.4, 23°.66S×67°.32W, h241^{km}±8^{km}, ML4.7*
ISC 11 13:38:31.2±0.6, **23°.89S**±0°.04×**66°.84W**±0°.05, **h197**^{km}±6^{km},
n143, σ1^{s}.**41**/163, **mb4.4**/30, **15C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.47**	**124**	eP	**Pn**	**13 39 06.2**	**+1.7**
HJA	**Humahuaca**	**1.48**	**63**	eP	**Pn**	**13 39 07.2**	**+2.3**
HJA				IAML		13 39 08.2	
	comp=Z,631nm,0.8s						
AZAP	**Zapla**	**1.65**	**102**	eP	**Pn**	**13 39 08.3**	**+2.1**
AZAP				IAML		13 39 08.9	
	comp=Z,842nm,0.6s						
YJA	**Yavi**	**2.10**	**36**	eP	**Pn**	**13 39 13.6**	**+2.6**
YJA				IAML		13 39 15.7	
	comp=Z,122nm,0.3s						
LVC	**Limon Verde**	**2.29**	**303**	P	**Pn**	**13 39 15.2**	**+2.2**
	baz=119,slow=6.8						
LVC				S	**Sn**	**13 39 46.3**	**+0.8**
	comp=Z,77nm,0.3s,baz=254,slow=20,SNR=20						
LVC				LR	LR	13 40 08.0	
	comp=Z,102nm,21.5s,baz=124,slow=41						
LVC	**Limon Verde**	**2.29**	**303**	ePn	**Pn**	**13 39 15.1**	**+2.0**
LVC	**Limon Verde**	**2.29**	**303**	eP	**Pn**	**13 39 14.3**	**+1.3**
FSA	**Cafayete**	**2.34**	**161**	eP	**Pn**	**13 39 14.8**	**+1.6**
FSA				IAML		13 39 15.0	
	comp=Z,63nm,0.3s						
FSA				eS	**Sn**	**13 39 46.3**	**0.0**
PB15	**IPOC Station P**	**2.51**	**285**	eP	**Pn**	**13 39 16.8**	**+1.6**
PB15				eS	**Sn**	**13 39 50.0**	**+0.5**
PB15	**IPOC Station P**	**2.51**	**285**	⇑iP	**Pn**	**13 39 17.1**	**+1.8**
PB15				i S	**Sn**	**13 39 50.2**	**+0.7**
PB06	**IPOC Station P**	**2.78**	**295**	eP	**Pn**	**13 39 19.9**	**+1.6**
PB06				eS	**Sn**	**13 39 55.6**	**+0.6**
PB06	**IPOC Station P**	**2.78**	**295**	⇑iP	**Pn**	**13 39 20.0**	**+1.7**
PB06				i S	**Sn**	**13 39 55.1**	**+0.2**
PB06				IAML		13 39 56.8	
	comp=N,3µm,0.1s						
GO02	**Mina Guanaco**	**2.81**	**243**	ePn	**Pn**	**13 39 20.3**	**+1.6**
GO02				eSn	**Sn**	**13 39 56.9**	**+1.0**
GO02	**Mina Guanaco**	**2.81**	**243**	⇑iP	**Pn**	**13 39 20.3**	**+1.6**
GO02				i S	**Sn**	**13 39 56.7**	**+0.8**
PB09	**IPOC Station P**	**3.05**	**313**	⇑iP	**Pn**	**13 39 23.4**	**+2.0**
PB09				i S	**Sn**	**13 40 01.2**	**+0.6**
PB09				IAML		13 40 05.0	
	comp=E,748nm,0.3s						
AHML	**Horco Molle**	**3.18**	**155**	eP	**Pn**	**13 39 23.9**	**+1.0**
PB03	**IPOC Station P**	**3.25**	**304**	eP	**Pn**	**13 39 25.2**	**+1.2**

PB03	IPOC Station P	3.25	304	⇑*i*P	Pn	13 39 25.1	+1.2
PB03				*i* S	Sn	13 40 04.0	-1.0
PB03				IAML		13 40 05.3	
	comp=N,2µm,0.5s						
PB05	IPOC Station P	3.26	288	⇑*i*P	Pn	13 39 24.8	+0.9
PB05				*i* S	Sn	13 40 03.9	-1.2
PB05				IAML		13 40 08.4	
	comp=E,814nm,0.4s						
PB04	IPOC Station P	3.42	296	*e*Pn	Pn	13 39 27.1	+1.1
PB04	IPOC Station P	3.42	296	⇑*i*P	Pn	13 39 26.9	+1.0
PB04				*i* S	Sn	13 40 07.5	-1.2
PB10	IPOC Station P	3.43	276	*e*Pn	Pn	13 39 26.8	+1.0
PB10	IPOC Station P	3.43	276	*e*P	Pn	13 39 27.1	+1.3
PB10	IPOC Station P	3.43	276	⇑*i*P	Pn	13 39 26.9	+1.1
PB10				*i* S	Sn	13 40 07.7	-0.8
PB07	IPOC Station P	3.54	307	⇑*i*P	Pn	13 39 28.4	+1.0
PB07				*i* S	Sn	13 40 10.1	-1.3
PB01	IPOC Station P	3.75	319	*e*Pn	Pn	13 39 30.6	+0.7
PB01	IPOC Station P	3.75	319	⇑*i*P	Pn	13 39 30.6	+0.7
PB01				*i* S	Sn	13 40 14.8	-1.0
PB02	IPOC Station P	3.81	312	⇑*i*P	Pn	13 39 31.2	+0.5
PB02				*i* S	Sn	13 40 15.3	-2.0
PB08	IPOC Station P	4.31	330	⇑*i*P	Pn	13 39 38.6	+1.4
PB08				*i* S	Sn	13 40 28.9	0.0
GO01	Chusmiza	4.74	332	*e*Pn	Pn	13 39 43.5	+0.8
GO03	Copiap	4.79	219	*e*Pn	Pn	13 39 42.5	-0.4
PB11	IPOC Station P	4.88	327	*e*Pn	Pn	13 39 43.7	-0.4
PB11	IPOC Station P	4.88	327	⇑*i*P	Pn	13 39 43.8	-0.4
PB11				*i* S	Sn	13 40 38.9	-2.6
VCA	Vinchina	4.98	194	*e*P	Pn	13 39 46.5	+1.1
PSGC	Pisagua	5.25	324	*e*P	Pn	13 39 47.4	-1.5
PSGC				*i* S	Sn	13 40 45.3	-4.9
MNMC	Minye Minye	5.39	331	*e*Pn	Pn	13 39 51.3	+0.5
MNMC	Minye Minye	5.39	331	⇑*i*P	Pn	13 39 50.8	0.0
MNMC				*i* S	Sn	13 40 51.4	-2.2
LCO	Las Campanas	6.16	213	*e*Pn	Pn	13 39 59.7	-1.0
LCO	Las Campanas	6.16	213	*e*P	Pn	13 39 59.5	-1.2
GO04	Tololo Observa	7.18	209	*e*Pn	Pn	13 40 12.1	-1.9
LPAZ	La Paz	7.66	351	P	Pn	13 40 21.9	+1.2
	comp=E,1.7nm,0.3s,baz=173,slow=7.8,SNR=39						
LPAZ				S	Sn	13 41 47.1	-0.5
	comp=E,0.7nm,0.3s,baz=354,slow=15,SNR=6.2						
LPAZ				LR	LR	13 43 24.1	
	comp=E,30nm,20.8s,baz=141,slow=38						
LPAZ	La Paz	7.66	351	*e*Pn	Pn	13 40 20.1	-0.6
LPAZ				*e*Sn	Sn	13 41 47.1	-0.5
LPAZ	La Paz	7.66	351	*e*P	Pn	13 40 21.7	+1.0
CFA	Coronel Fontan	7.78	189	P	Pn	13 40 20.7	-0.9
	comp=E,4.2nm,0.3s,baz=0.2,slow=9.3,SNR=108						
CFA				S	Sn	13 41 43.6	-5.8
	comp=E,12nm,0.3s,baz=161,slow=20,SNR=13						
CPUP	Villa Florida	8.95	108	P	Pn	13 40 36.3	-0.5
	comp=E,0.7nm,0.3s,baz=290,slow=10,SNR=26						
CPUP	Villa Florida	8.95	108	*e*Pn	Pn	13 40 36.0	-0.8
CPUP				*e*		13 40 36.3	
CPUP	Villa Florida	8.95	108	*e*P	Pn	13 40 36.7	-0.1
SIV	San Ignacio	9.55	36	P	Pn	13 40 43.6	-1.0
	comp=E,3.6nm,0.3s,baz=227,slow=13,SNR=75						
SIV				S	Sn	13 42 18.7	-13
	baz=236,slow=16,SNR=3.5						
AQDB	Aquidauana	10.86	74	*e*P	Pn	13 41 01.2	-0.4
TRCB	Terra Rica	13.09	88	*e*P	P	13 41 31.5	-1.7
PTGB	Pitanga	13.50	96	*e*P	P	13 41 37.0	-0.7
CPSB	Cacapava Do Su	13.57	121	*e*P	Pn	13 41 35.4	-0.5
C2SB	Chapadao do Su	14.00	71	*e*P	P	13 41 42.4	-0.9
PLTB	Pedras Altas	14.08	127	*e*P	Pn	13 41 41.2	-1.0
TRQA	Tornquist	14.72	165	*e*P	Pn	13 41 49.2	-0.8
CNLB	Canela	15.28	114	*e*P	Pn	13 41 56.4	-0.6
FRTB	Fartura	15.84	92	*e*P	Pn	13 42 05.1	+1.3
ITRB	Iturama	15.86	78	*e*P	Pn	13 42 05.8	+1.7
CLDB	Colider	16.68	41	*e*P	P	13 42 12.8	0.0
PLCA	Paso Flores	17.08	190	P	Pn	13 42 17.9	-0.7
	comp=E,0.4nm,0.3s,baz=36,slow=11,SNR=20						
PLCA	Paso Flores	17.08	190	*e*P	Pn	13 42 18.1	-0.3
	comp=E,13nm,0.7s						
PLCA	Paso Flores	17.08	190	*e*P	Pn	13 42 17.8	-0.7
BB19B	Bebedouro	17.15	84	*e*P	P	13 42 18.4	+0.3
SPB	Sao Paulo	17.77	93	*e*P	P	13 42 25.4	+0.7
RCLB	Rio Claro- Sao	17.82	89	*e*P	P	13 42 25.3	0.0
PARB	Paraibuna	19.45	93	*e*P	P	13 42 43.5	+0.5
BDFB	Brasilia	19.51	69	P	P	13 42 44.1	+0.3
	comp=E,13nm,0.3s,baz=245,slow=9.9,SNR=110						
BDFB	Brasilia	19.51	69	*e*P	P	13 42 44.0	+0.3
	comp=E,115nm,0.7s						
BDFB				*e*P	P	13 42 44.1	+0.3
PMNB	Patos De Minas	19.74	78	*e*P	P	13 42 45.8	-0.4
ESAR	Angra dos Reis	20.56	92	*e*P	P	13 42 54.5	-0.3
BSCB	Bom Sucesso	20.59	86	*e*P	P	13 42 54.9	-0.3
PEXB	Peixe	21.14	60	*e*P	P	13 43 00.1	-0.9
DUB01	Friburgo-RJ	22.59	90	*e*P	P	13 43 14.8	-0.4
SMTB	Santa Maria do	23.71	54	*e*P	P	13 43 24.0	-1.4
PTGA	Pitinga	23.97	17	P	P	13 43 27.3	-0.4
	comp=E,2.4nm,0.3s,baz=196,slow=15,SNR=8.1						
PTGA	Pitinga	23.97	17	*e*P	P	13 43 26.9	-0.8
	comp=E,3.4nm,0.9s						
PTGA	Pitinga	23.97	17	*e*P	P	13 43 27.5	-0.2
ALF01	Guarapari-ES	24.37	87	*e*P	P	13 43 31.1	-0.3
SJMB	Sao Joao De Ma	24.43	83	*e*P	P	13 43 31.2	-0.8
BSFB	Barra de Sao F	24.70	83	*e*P	P	13 43 33.7	-0.6
SOTA	Rioblanco	27.56	338	*e*P	P	13 44 02.9	+2.4
BBAC	Balboa, Cauca	27.68	337	*e*P	P	13 44 03.2	+1.9
EFI	East Falkland	28.55	169	*e*P	P	13 44 07.0	-1.3
	comp=E,24nm,1.1s						
ORTC	Ortega, Tolima	28.82	342	*e*P	P	13 44 11.2	0.0
GO10	Punta Arenas	29.39	185	*e*P	P	13 44 13.2	-2.6
	comp=E,43nm,1.0s						
YOPC	Yopal, Colombi	29.57	349	*e*P	P	13 44 26.6	+8.7
PTBC	PUERTO BERRIO,	31.15	345	*e*P	P	13 44 28.8	-2.8
SOCV	Socops	32.22	353	*e*P	P	13 44 38.9	-2.2
SMLC	San Martn de	33.25	347	*e*P	P	13 44 44.7	-5.2
RCBR	Riachuelo	34.74	64	*e*P	P	13 45 02.0	-0.9
	comp=E,21nm,1.1s						
HOPE	Hope Point	37.87	151	*e*P	P	13 45 29.0	+0.2
	comp=E,19nm,1.1s						
ANWB	Willy Bob	41.60	7	*e*P	P	13 46 00.2	+0.2
	comp=E,49nm,0.8s						
TEIG	Tepich	48.57	333	*e*P	P	13 46 55.6	+0.8
	comp=E,7.4nm,0.7s						
061Z	Ochoppi	51.31	344	*e*P	P	13 47 14.4	-0.9
	comp=E,67nm,1.1s						
VNA3	Neumayer Olymp	57.20	161	P	P	13 47 58.2	+0.9
VNA1	Neumayer--Stat	57.40	160	P	P	13 47 60.0	+1.4
VNA2	Neumayer--Watz	57.77	160	P	P	13 48 02.6	+1.4
	baz=282,slow=8.2						
SNAA	Sanae	59.40	161	P	P	13 48 13.4	+0.9
SNAA	Sanae	59.40	161	*e*P	P	13 48 13.3	+0.9
	comp=E,3.4nm,0.8s						
LRAL	Lakeview Retre	59.79	340	*e*P	P	13 48 15.5	0.0
	comp=E,7.1nm,1.1s						
WHTX	Lake Whitney,	62.81	331	*e*P	P	13 48 35.4	-0.5
	comp=E,7.7nm,0.6s						
WVT	Waverly	62.91	341	*e*P	P	13 48 35.7	-0.7
	comp=E,13nm,0.8s						
TXAR	Lajitas Array	63.68	324	P	P	13 48 43.1	+1.4
	comp=E,1.7nm,0.6s,baz=138,slow=8.5,SNR=9.1						
W39A	Magazine	64.08	336	*e*P	P	13 48 45.2	+1.1
	comp=E,9.2nm,0.8s						
CCM	Cathedral Cave	65.75	339	*e*P	P	13 48 54.9	+0.2
	comp=E,14nm,0.7s						
QSPA	South Pole Qui	66.31	180	*e*P	P	13 48 59.7	+1.5
	comp=E,8.6nm,0.9s						
LIC	Lamto	67.26	72	*e*PKP1	P	13 49 05.4	+0.5
	comp=E,46nm,1.4s						
TIC	Toumodi	67.47	71	*e*PKP1	P	13 49 06.0	-0.3
KIC	Kosan Boka	67.58	72	*e*PKP1	P	13 49 06.0	-0.9
	comp=E,29nm,1.0s						
DBIC	Dimbokro	67.63	71	P	P	13 49 06.2	-1.0
	comp=E,1.9nm,0.5s,baz=221,slow=9.3,SNR=5.4						
DBIC	Dimbokro	67.63	71	*e*P	P	13 49 06.2	-1.0
	comp=E,3.8nm,1.0s						
ANMO	Albuquerque	69.54	326	*e*P	P	13 49 16.5	-2.3
	comp=E,3.8nm,0.7s						
SYO	Syowa Base	73.59	159	⇑*e*P	P	13 49 42.0	-0.3
VNDA	Vanda	74.83	190	P	P	13 49 51.2	+1.9
	comp=E,1.1nm,0.9s,baz=137,slow=2.6,SNR=4.7						
TOA0	Torodi Ar. Sit	76.39	69	*e*P	P	13 49 59.1	-0.2
	comp=E,7.7nm,0.6s						
TOA1	Torodi Ar. Sit	76.39	69	*e*P	P	13 49 58.6	-0.6
TORD	Torodi Ar. Bea	76.39	69	P	P	13 49 58.6	-0.6
	comp=E,5.1nm,0.6s,baz=245,slow=5.5,SNR=29						
PDAR	Pinedale Array	77.13	329	P	P	13 50 04.2	+1.2
	comp=E,0.8nm,0.5s,baz=136,slow=6.9,SNR=11						
ULM	Lac du Bonnet	78.17	341	P	P	13 50 08.9	+0.5
	comp=E,5.1nm,0.6s,baz=147,slow=2.7,SNR=6.1						
NVAR	Mina Array Bea	78.55	321	P	P	13 50 12.4	+1.4
	comp=E,0.7nm,0.6s,baz=155,slow=6.5,SNR=7.2						
BOSA	Boshof	80.65	117	P	P	13 50 22.8	+0.2
	comp=E,1.5nm,0.4s,baz=320,slow=2.9,SNR=4.5						
MAW	Mawson	81.49	163	P	P	13 50 27.2	+1.1
	comp=E,2.8nm,0.6s,baz=220,slow=7.4,SNR=7.9						
MAW	Mawson	81.49	163	*e*P	P	13 50 27.2	+1.1
	comp=E,0.6nm,0.8s						
ESDC	Sonseca Array	86.22	44	P	P	13 50 51.6	+1.2
	comp=E,1.2nm,0.8s,baz=249,slow=4.2,SNR=3.1						
YKA	Yellowknife Ar	94.08	340	P	P	13 51 27.1	+0.6
	comp=E,1.8nm,0.6s,baz=136,slow=4.7,SNR=11						
ASAR	Alice Springs	128.62	205	PKP	PKPdf	13 57 15.8	+0.3
	comp=E,2.1nm,0.7s,baz=133,slow=1.8,SNR=15						
AS31	Alice Springs	128.62	205	*e*PKPdf	PKPdf	13 57 15.8	+0.3
WR1	Warramunga Arr	131.79	207	*e*PKPdf	PKiKP	13 57 22.3	-0.2
WRA	Warramunga Arr	131.79	207	PKP	PKiKP	13 57 22.3	-0.3
	comp=E,1.7nm,0.5s,baz=196,slow=2.0,SNR=16						
SEY	Seymchan	133.04	337	PKP	PKiKP	13 57 24.1	+0.4
	comp=E,1.3nm,0.7s,baz=76,slow=8.3,SNR=5.8						
KURBB	Kurchatov Arra	142.20	36	PKP	PKPdf	13 57 39.5	-0.2
	comp=E,0.5nm,0.6s,baz=292,slow=2.5,SNR=6.8						
ZAA1	Zalesovo Array	143.23	28	*e*PKPdf	PKPbc	13 57 39.9	+0.8
ZALV	Zalesovo Beam	143.23	28	PKP	PKPbc	13 57 39.9	+0.8
	comp=E,3.0nm,0.8s,baz=309,slow=5.4,SNR=9.2						
MK32	Makanchi Array	146.35	40	*e*PKPbc	PKPbc	13 57 48.3	-0.4
MKAR	Makanchi Array	146.35	40	PKPbc	PKPbc	13 57 48.3	-0.4
	comp=E,4.7nm,0.8s,baz=301,slow=2.7,SNR=20						
WMQ	Urumqi	151.17	40	*e*P	PKPdf	13 57 53.9	-1.1
WMQ				pmax	pmax		
	comp=Z,71nm,4.5s						
SONA0	Songino Array	155.51	11	*e*PKPab	PKPab	13 58 29.0	+1.2
SONM	Songino Array	155.51	11	PKPab	PKPab	13 58 29.0	+1.2
	comp=Z,0.9nm,0.7s,baz=326,slow=3.8,SNR=5.1						
LZH	Lanzhou	165.42	31	*e*PKP	PKPdf	13 58 07.7	-4.7
LZH				pPKP	PKPab	13 59 15.2	+3.7
LZH				sPKP		13 59 31.9	
CM31	Chiang Mai Arr	165.68	109	*e*PKPab	PKPab	13 59 13.7	+0.6
CMAR	Chiang Mai Arr	165.68	109	PKPab	PKPab	13 59 13.7	+0.6
	comp=Z,1.0nm,0.6s,baz=245,slow=5.4,SNR=5.9						
CD2	Chengdu	169.11	48	PKP	PKPdf	13 58 12.3	-2.8
WHN	Wuhan	173.29	351	PKP	PKPdf	13 58 22.0	+4.9

ISC 11 13:43:00.4±1.3**,50°.11N**±0°.06×**19°.27E**±0°.04**,h0**^{km}**,n5,** σ**0**^{s}**.77**/10**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.35	72	*e*Pg	Pg	13 43 07.4	+0.2
OJC				*e*Sg	Sg	13 43 12.5	+0.7
NIE	Niedzica	0.96	136	*e*Pg	Pg	13 43 18.8	0.0
NIE				*e*Sg	Sb	13 43 33.0	-0.2
LANS	Liptovska Anna	0.97	172	*e*PG	Pg	13 43 19.4	+0.4
LANS				*e*SG	Sg	13 43 32.8	+1.3
MORC	Moravsky Berou	1.17	254	*e*PG	Pg	13 43 22.9	+0.2
MORC				*e*SG	Sb	13 43 39.5	+0.4
VYHS	Vyhne	1.65	190	*e*PN	Pn	13 43 29.9	-0.6
VYHS				*e*SN	Sn	13 43 51.3	-1.1

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*NIED **11** 13:44:00, 38°.70N×141°.90E, h59^{km}, Mw4.2 Best double couple: M₀2.43000×10^{15} NP1:φ$_s$50.00000°, δ35.00000°, λ121.00000°. NP2:φ$_s$193.00000°, δ60.00000°, λ70.00000°.*

*BJI **11** 13:44:23.5±0.0, 38°.63N×142°.05E, h80^{km}, mb4.7/41, mB4.9/25, Ms4.2/8, Ms7 4.0/8*

*ISCJB **11** 13:44:23.8±0.3, 38°.72N±0°.03×141°.96E±0°.04, h66^{km}±2^{km}, mb4.2/61, Error ellipse: s-maj=5.8km s-min=3.5km az=35.9*

*MOS **11** 13:44:24.2±1.1, 38°.79N×141°.90E, h66^{km}, mb4.5/32, Error ellipse: s-maj=8.2km s-min=5.5km az=95.8*

*JMA **11** 13:44:25.0, 38°.68N×141°.93E, h57^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1: φ$_s$182.00000°, δ71.00000°, λ63.00000°. NP2:φ$_s$59.00000°, δ33.00000°, λ142.00000°. Principal axes: T Plg56.0000°, Azm57.0000°; N Plg25.0000°, Azm192.0000°; P Plg21.0000°, Azm292.0000°;*

JMA Felt III J1.

*NEIC **11** 13:44:26.5±1.6, 38°.80N×141°.89E, h70^{km}±7^{km}, mb4.4/34 Error ellipse: s-maj=17.0km s-min=9.2km az=123.0*

NEIC Recorded [3 JMA] in Iwate and Miyagi.

*IDC **11** 13:44:27.6±2.0, 38°.68N×141°.82E, h83^{km}±19^{km}, mb3.9/22, mb1 4.0/27, mb1mx3.9/41, mbtmp4.2/27, MS3.1/10, Ms1 3.2/10, ms1mx2.9/40, Error ellipse: s-maj=14.3km s-min=12.9km az=120.0*

ISC 11 13:44:24.9±0.7**,38°.70N**±0°.04×**141°.98E**±0°.05**,h61**^{km}±6^{km}**, n156,** σ**1**^{s}**.43**/168**,mb4.3**/61**,11C-9D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.41	286	⇑P	Pn	13 44 35.6	-0.3
JKMT				S	Sn	13 44 43.0	-1.0
OFUJ	Ofunato	0.45	328	⇑P	Pn	13 44 36.3	-0.1
OFUJ				S	Sn	13 44 44.2	-0.5
JIO	Ouri	0.55	244	⇑P	Pn	13 44 36.9	-0.5
JIO				S	Sn	13 44 45.2	-1.3
JIKH	Ishinomakikobu	0.56	226	⇑P	Pn	13 44 36.9	-0.6
JIKH				S	Sn	13 44 45.4	-1.3
JMK	Ichinoseki	0.64	293	⇓P	Pn	13 44 38.3	-0.1
JMK				S	Sn	13 44 47.8	-0.5
JOM	Ohasama	0.94	326	⇓P	Pn	13 44 42.2	+0.1
JOM				S	Sn	13 44 54.8	-0.1
JOU	Okura	1.08	252	⇓P	Pn	13 44 43.6	-0.4
JOU				S	Sn	13 44 57.3	-0.9
JMM	Marumori	1.25	229	⇑P	Pn	13 44 45.3	-0.9
JMM				S	Sn	13 45 00.7	-1.4
JRG	Rokugo	1.25	304	⇓P	Pn	13 44 46.1	-0.2
JRG				*e*S	Sn	13 45 02.2	-0.1
JYK	Kaneyama	1.28	280	⇓P	Pn	13 44 46.4	-0.2
JYK				*e*S	Sn	13 45 02.8	-0.1
JYS	Shirataka	1.57	253	⇓P	Pn	13 44 50.6	0.0
JYS				S	Sn	13 45 10.1	+0.2
JFK	Kawauchi	1.59	213	⇑P	Pn	13 44 50.3	-0.5
JFK				S	Sn	13 45 09.2	-1.2
ERM	Erimo	3.43	15	*e*Pn	Pn	13 45 15.4	-0.4
ERM				*e*Sn	Sn	13 45 56.6	+1.3
ERM	Erimo	3.43	15	*e*P	Pn	13 45 15.4	-0.4
ERM				*e*		13 45 56.6	
MJAR	Matsushiro Arr	3.69	235	P	Pn	13 45 21.2	+1.8
	2.2nm,0.3s,baz=35,slow=12,SNR=69						
MJAR				LR	LR	13 47 00.8	
	comp=Z,226nm,21.2s,baz=35,slow=43						
MAJO	Matsushiro	3.69	235	*e*Pn	Pn	13 45 21.4	+2.0
MAJO	Matsushiro	3.69	235	*d i*P	Pn	13 45 21.1	+1.7
MAJO				pmax	pmax		
	comp=Z,120nm,0.6s						
MAT	Matsushiro	3.69	235	P	Pn	13 45 21.2	+1.8
MAT				S	Sn	13 46 04.6	+3.0
MJB9	Matsu-Tunnel	3.69	235	*e*Pn	Pn	13 45 21.4	+2.0
INU	Inuyama	5.19	231	*e*Pn	Pn	13 45 41.4	+1.5
ASAJ	Asahikawa	5.43	5	P	Pn	13 45 42.6	-0.6
	comp=Z,4.8nm,0.3s,baz=210,slow=13,SNR=38						
ASAJ				S	Sn	13 46 41.5	-2.8
	comp=Z,3.0nm,0.3s,baz=270,slow=20,SNR=3.7						
JHJ	Hachijo jima 2	5.85	198	P	Pn	13 45 49.9	+0.9
	comp=Z,12nm,0.3s,baz=60,slow=20,SNR=3.2						
JHJ				S	Sn	13 46 50.3	-4.3
	comp=Z,24nm,0.3s,baz=233,slow=20,SNR=3.2						
GRPR	Tuman	6.01	27	*e*P	Pn	13 45 50.1	-1.0
GRPR				*e*S	Sn	13 46 53.2	-5.3
GRPR				pmax	pmax		
	comp=Z,251nm,0.3s						
GRPR				smax	smax		
	comp=E,772nm,0.3s						
GRPR				smax	smax		
	comp=N,863nm,0.2s						
YUK	Yuzh-Kuril'sk	6.08	27	*e*P	Pn	13 45 54.6	+2.6
YUK				*e*S	Sn	13 46 59.7	-0.5
YUK				pmax	pmax		
	comp=N,35nm,0.2s						
YUK				pmax	pmax		
	comp=E,43nm,0.2s						
YUK				pmax	pmax		
	comp=Z,139nm,0.2s						
YUK				smax	smax		
	comp=N,460nm,0.5s						
YUK				smax	smax		
	comp=E,788nm,0.4s						
TEY	Ternei	7.49	329	⇑*e*P	Pn	13 46 13.8	+2.4
TEY				pmax	pmax		
	comp=Z,10.0nm,2.4s						
TEY				pmax	pmax		
	comp=E,20nm,0.7s						
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
KUR	Kuril'sk	7.86	32	*e*P	Pn	13 46 15.4	-1.1
KUR				*e*S	Sn	13 47 39.3	-4.6
KUR				pmax	pmax		
	comp=Z,34nm,0.5s						
KUR				pmax	pmax		
	comp=N,8.0nm,0.3s						
YSS	Yuzh-Sakhalins	8.27	4	*e*Pn	Pn	13 46 21.2	-0.8
YSS	Yuzh-Sakhalins	8.27	4	⇑*e*P	Pn	13 46 22.7	+0.7
YSS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VLA	Vladivostok	8.82	303	*i* P	Pn	13 46 28.7	-0.9
MSHR	Mys Shultsa	9.09	299	*i* P	Pn	13 46 33.7	+0.4
USA0B	Ussuriysk Arra	9.29	309	*e*Pn	Pn	13 46 36.9	+0.8
USRK	Ussuriysk Ar.	9.29	309	P	Pn	13 46 36.6	+0.6
	comp=Z,2.0nm,0.3s,baz=108,slow=16,SNR=41						
USRK				LR	LR	13 49 57.6	
	comp=Z,108nm,21.2s,baz=141,slow=36						
JNU	Nakatsue	10.58	242	P	Pn	13 46 55.2	+1.6
	comp=Z,0.4nm,0.3s,baz=83,slow=3.9,SNR=6.5						
JNU				LR	LR	13 51 00.4	
	comp=Z,201nm,19.6s,baz=350,slow=38						
MDJ	Mudanjiang	10.98	307	P	Pn	13 47 02.9	+3.8
MDJ				pmax	pmax		
	comp=Z,19nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.2s						
KSRS	Korea Array	11.15	268	P	Pn	13 47 04.2	+2.9
	comp=Z,1.5nm,0.3s,baz=81,slow=14,SNR=36						
KSRS				LR	LR	13 50 50.1	
	comp=Z,87nm,20.8s,baz=40,slow=35						
KS15	Wonju Array Si	11.18	268	*e*Pn	Pn	13 47 04.4	+2.5
KLR	Kul'dur	12.83	328	*i* P	Pn	13 47 22.7	-1.6
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CN2	Changchun	13.43	298	*e*P	Pn	13 47 31.5	-1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DL2	Dalian	15.87	277	*e*P	P	13 48 05.0	-1.9
DL2				pmax	pmax		
	comp=Z,23nm,0.7s						
PETK	Petropavlovsk-	18.03	32	LR	LR	13 56 09.8	
	comp=Z,20nm,18.5s,baz=216,slow=39						
ZEA	Zeya	18.11	331	*e*P	P	13 48 29.6	-2.0
ZEA				pmax	pmax		
	comp=N,22nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,32nm,0.9s						
NJ2	Nanjing	19.96	258	*e*P	Pn	13 48 53.0	-1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI	Beijing	19.97	282	P	Pn	13 48 54.4	+0.1
BJI				pP	pP	13 49 06.8	+1.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MA2	Magadan	21.63	12	P	P	13 49 11.2	+1.4
	comp=Z,6.0nm,0.6s,baz=195,slow=9.2,SNR=6.3						
MA2				LR	LR	13 57 18.5	
	comp=Z,34nm,19.1s,baz=152,slow=36						
HHC	Hu-ho-hao-te	23.42	285	*e*P	P	13 49 26.0	-2.6
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.9s						
WHN	Wuhan	24.08	259	*e*P	P	13 49 34.0	-0.6
YAK	Yakutsk	24.55	346	*e*P	P	13 49 36.9	-1.6
	comp=Z,13nm,0.9s						
YAK	Yakutsk	24.55	346	*e*P	P	13 49 27.8	-11
YAK				*e**PP	pP	13 49 49.6	-3.8
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
SEY	Seymchan	25.07	11	P	P	13 49 44.5	+1.2
	comp=E,6.2nm,0.8s,baz=195,slow=4.6,SNR=12						
BOD	Bodaibo	26.38	326	*e*P	P	13 49 54.5	-0.7
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	Ulaanbaatar	26.83	301	*e*P	P	13 49 58.2	-1.4
	comp=Z,3.4nm,0.7s						
ULN	Ulaanbaatar	26.83	301	*c e*P	P	13 49 58.7	-0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SONA0	Songino Array	27.26	301	*e*P	P	13 50 02.5	-0.9
SONM	Songino Array	27.26	301	P	P	13 50 02.5	-0.9
	comp=Z,1.1nm,0.5s,baz=104,slow=11,SNR=9.6						
SONM				LR	LR	14 01 13.9	
	comp=Z,63nm,19.4s,baz=89,slow=37						
ENH	Enshi	27.95	262	*e*P	P	13 50 09.6	0.0
	comp=Z,13nm,0.7s						
H11N2	WAKE ISLAND Hy	28.67	124	T	T	14 20 34.0	
	baz=316,slow=75,SNR=1106						
H11N1	WAKE ISLAND Hy	28.68	124	T	T	14 20 36.0	
	baz=316,slow=75,SNR=1588						
H11N3	WAKE ISLAND Hy	28.68	124	T	T	14 20 37.5	
	baz=316,slow=75,SNR=1321						
H11S1	WAKE ISLAND Hy	29.44	126	T	T	14 21 37.5	
	baz=318,slow=76,SNR=381						
H11S3	WAKE ISLAND Hy	29.44	126	T	T	14 21 33.8	
	baz=318,slow=76,SNR=525						
H11S2	WAKE ISLAND Hy	29.45	126	T	T	14 21 34.9	
	baz=318,slow=76,SNR=370						
TLY	Talaya	29.61	309	P	P	13 50 24.4	+0.2
	comp=Z,2.0nm,0.8s,baz=112,slow=4.2,SNR=10						
TLY				LR	LR	14 02 52.3	
	comp=Z,153nm,18.3s,baz=181,slow=37						
TLY	Talaya	29.61	309	*e*P	P	13 50 24.3	+0.2
	comp=Z,6.2nm,1.0s						
TLY	Talaya	29.61	309	*e*P	P	13 50 24.4	+0.2
TLY				pmax	pmax		
	comp=Z,12nm,0.8s						
ZAK	Zakamensk	29.62	306	*e*P	P	13 50 24.0	-0.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LZH	Lanzhou	30.27	277	*e*P	P	13 50 30.0	-0.3
LZH				pP	pP	13 50 48.0	+2.9
LZH				sP	sP	13 50 56.4	+4.1
LZH				PP	PnPn	13 51 31.0	+0.9
LZH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LZH				pmax	pmax		
	comp=Z,90nm,4.9s						
LZH				LR	LR		
	comp=Z,360nm,12.9s						
LZH				LR	LR		
	comp=Z,370nm,13.3s						
LZH				LR	LR		
	comp=Z,420nm,15.5s						
CD2	Chengdu	32.15	268	*e*P	P	13 50 44.9	-1.9
GTA	Gaotai	32.53	285	*e*P	P	13 50 50.4	+0.3
GTA				pP	pP	13 51 08.4	+3.3
GTA				sP	sP	13 51 17.8	+5.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,110nm,5.4s						
GTA				LR	LR		
	comp=Z,110nm,15.1s						
GTA				LR	LR		
	comp=Z,150nm,17.2s						
GTA				LR	LR		
	comp=Z,200nm,15.5s						
DGZ	Jazzator, Alta	39.80	304	*d i*P	P	13 51 52.8	+0.8
DGZ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ	Urumqi	40.51	295	*e*P	P	13 51 58.8	+0.9
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,99nm,4.7s						
WMQ				LR	LR		
	comp=Z,71nm,21.5s						
WMQ				LR	LR		
	comp=Z,340nm,29.2s						
WMQ				LR	LR		
	comp=Z,120nm,29.0s						
ZAA0	Zalesovo Array	41.14	311	*e*P	P	13 52 02.6	-0.2
	comp=Z,6.9nm,1.0s						
ZAA1	Zalesovo Array	41.14	311	*e*P	P	13 52 02.8	-0.1
ZALV	Zalesovo Beam	41.14	311	P	P	13 52 02.8	0.0

	comp=Z,4.5nm,0.4s,baz=87,slow=7.7,SNR=15						
ZALV				LR	LR	14 11 51.3	
	comp=Z,14nm,19.6s,baz=70,slow=40						
ZALV	**Zalesovo Beam**	**41.14**	**311**	P	**P**	**13 52 02.8**	**0.0**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZALV				MLR	MLR		
	comp=Z,14nm,19.6s						
CM31	**Chiang Mai Arr**	**42.37**	**254**	*e*P	**P**	**13 52 13.2**	**-0.1**
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**42.37**	**254**	P	**P**	**13 52 13.2**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=48,slow=7.9,SNR=3.5						
MK31	**Makanchi Array**	**43.63**	**301**	*e*P	**P**	**13 52 23.4**	**+0.3**
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**43.63**	**301**	*e*P	**P**	**13 52 23.5**	**+0.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**43.63**	**301**	P	**P**	**13 52 22.4**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=86,slow=11,SNR=12						
MKAR	**Makanchi Array**	**43.63**	**301**	*i* P	**P**	**13 52 23.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MAKZ	**Makanchi**	**43.84**	**301**	*e*P	**P**	**13 52 25.1**	**+0.2**
	comp=Z,5.7nm,1.0s						
MAKZ	**Makanchi**	**43.84**	**301**	*e*P	**P**	**13 52 25.1**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SVW2	**Sparrevohn**	**43.94**	**38**	*e*P	**P**	**13 52 27.5**	**+2.1**
	comp=Z,3.9nm,0.6s						
OHAK	**Old Harbor**	**45.24**	**44**	*e*P	**P**	**13 52 36.4**	**+0.6**
	comp=Z,6.9nm,1.1s						
KURK	**Kurchatov**	**45.27**	**307**	*e*P	**P**	**13 52 35.9**	**-0.3**
	comp=Z,16nm,0.6s						
KURK	**Kurchatov**	**45.27**	**307**	P	**P**	**13 52 36.4**	**+0.2**
KURK				pmax	pmax		
	comp=Z,13nm,0.6s						
KURBB	**Kurchatov Arra**	**45.34**	**307**	P	**P**	**13 52 36.4**	**-0.4**
	comp=Z,13nm,0.5s,baz=81,slow=8.2,SNR=43						
KDAK	**Kodiak Island**	**45.57**	**43**	*e*P	**P**	**13 52 39.0**	**+0.6**
	comp=Z,7.8nm,0.9s						
KDAK	**Kodiak Island**	**45.57**	**43**	*e*P	**P**	**13 52 39.0**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SPU	**Mount Spurr**	**45.65**	**38**	*e*P	**P**	**13 52 39.0**	**0.0**
BPAW	**Bear Paw Mtn.**	**46.09**	**34**	*e*P	**P**	**13 52 43.5**	**+0.9**
	comp=Z,1.0nm,0.7s						
KTH	**Kantishna Hill**	**46.12**	**35**	*e*P	**P**	**13 52 43.9**	**+1.0**
	comp=Z,5.7nm,1.0s						
RC01	**Rabbit Creek A**	**46.77**	**38**	*e*P	**P**	**13 52 47.2**	**-0.6**
	comp=Z,4.2nm,0.9s						
TOLK	**Toolik Lake Re**	**46.79**	**28**	*e*P	**P**	**13 52 47.5**	**-0.5**
	comp=Z,2.0nm,0.8s						
PMR	**Palmer**	**47.03**	**38**	*e*P	**P**	**13 52 49.0**	**-0.8**
	comp=Z,2.3nm,0.7s						
PMR	**Palmer**	**47.03**	**38**	*e*P	**P**	**13 52 49.0**	**-0.8**
PMR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JIRN	**Jiri**	**47.33**	**274**	*e*P	**P**	**13 52 52.1**	**-1.0**
	comp=Z,12nm,0.3s						
SML	**Sawmill**	**47.39**	**37**	*e*P	**P**	**13 52 51.5**	**-1.2**
	comp=Z,5.3nm,0.8s						
SML	**Sawmill**	**47.39**	**37**	*e*P	**P**	**13 52 51.6**	**-1.2**
SML				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CCB	**Clear Creek Bu**	**47.47**	**33**	*e*P	**P**	**13 52 51.2**	**-2.0**
	comp=Z,1.0nm,0.8s						
DHY	**Denali Highway**	**47.74**	**35**	*e*P	**P**	**13 52 56.3**	**+0.7**
	comp=Z,1.8nm,1.0s						
ILAR	**Eielson Array**	**47.85**	**33**	P	**P**	**13 52 56.6**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=269,slow=6.5,SNR=38						
SCM	**Sheep Creek Mo**	**47.87**	**37**	*e*P	**P**	**13 52 57.5**	**+1.0**
	comp=Z,3.2nm,0.6s						
SCM	**Sheep Creek Mo**	**47.87**	**37**	*e*P	**P**	**13 52 57.5**	**+1.0**
SCM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKN	**Kakani**	**47.98**	**275**	*e*P	**P**	**13 52 57.5**	**-0.4**
	comp=Z,12nm,0.4s						
PKI	**Pulchoki**	**47.98**	**274**	*e*P	**P**	**13 52 57.5**	**-0.6**
	comp=Z,4.0nm,0.3s						
PKIN	**Phulchoki**	**47.99**	**274**	*e*P	**P**	**13 52 57.5**	**-0.6**
	comp=Z,6.3nm,0.5s						
DMN	**Daman**	**48.20**	**275**	*e*P	**P**	**13 52 59.2**	**-0.5**
	comp=Z,7.1nm,0.4s						
RIDG	**Independent Ri**	**48.82**	**34**	*e*P	**P**	**13 53 04.2**	**+0.4**
	comp=Z,1.2nm,0.8s						
DANN	**Dangsing**	**48.90**	**276**	*e*P	**P**	**13 53 05.5**	**+0.4**
	comp=Z,27nm,0.3s						
BOOM	**Boomskoye usch**	**49.15**	**297**	*e*P	**P**	**13 53 05.1**	**-1.6**
	comp=Z,10nm,0.9s						
BOOM	**Boomskoye usch**	**49.15**	**297**	*e*P	**P**	**13 53 05.1**	**-1.6**
BOOM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SCRK	**Sand Creek**	**49.18**	**34**	*e*P	**P**	**13 53 06.7**	**+0.2**
	comp=Z,2.9nm,0.7s						
KOLN	**Koldanda**	**49.30**	**276**	*e*P	**P**	**13 53 07.5**	**-0.5**
	comp=Z,8.9nm,0.3s						
PYUN	**Piuthan**	**49.61**	**276**	*e*P	**P**	**13 53 10.4**	**-0.1**
	comp=Z,37nm,0.9s						
BVAR	**Borovoye Array**	**49.79**	**311**	P	**P**	**13 53 11.1**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=69,slow=9.0,SNR=7.0						
BRVK	**Borovoye**	**49.85**	**311**	*i* P	**P**	**13 53 12.0**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**50.10**	**297**	*ce*P	**P**	**13 53 14.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	**Inuvik**	**52.71**	**28**	P	**P**	**13 53 33.5**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=269,slow=7.0,SNR=5.5						
NIL	**Nilore**	**54.53**	**287**	*e*P	**P**	**13 53 45.0**	**-1.7**
NIL				*e*		13 53 46.6	
NIL	**Nilore**	**54.53**	**287**	*e*P	**P**	**13 53 45.0**	**-1.7**
ARU	**Arti**	**55.42**	**318**	*d i*P	**P**	**13 53 56.0**	**+3.3**
ARU						13 55 54.5	
ARU				S	**S**	**14 01 37.4**	**+4.8**
ARU				SS	**SS**	**14 05 11.8**	**-5.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ABKAR	**Akbulak array**	**57.22**	**309**	*e*P	**P**	**13 54 05.2**	**-0.4**
	comp=Z,2.5nm,0.6s						
WR1	**Warramunga Arr**	**58.77**	**188**	*e*P	**P**	**13 54 16.2**	**-0.5**
WRA	**Warramunga Arr**	**58.77**	**188**	P	**P**	**13 54 16.2**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=5.7,slow=9.2,SNR=8.9						
RES	**Resolute Bay**	**60.88**	**15**	P	**P**	**13 54 30.6**	**+0.1**
	comp=Z,5.1nm,0.9s,baz=326,slow=5.0,SNR=6.7						
RES	**Resolute Bay**	**60.88**	**15**	*e*P	**P**	**13 54 30.6**	**+0.1**
	comp=Z,6.9nm,1.0s						
YKA	**Yellowknife Ar**	**62.15**	**31**	P	**P**	**13 54 40.1**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=301,slow=5.9,SNR=3.7						
YKB5	**Yellowknife Ar**	**62.15**	**31**	*e*P	**P**	**13 54 40.1**	**+0.9**
AS31	**Alice Springs**	**62.50**	**188**	*e*P	**P**	**13 54 41.7**	**-0.3**
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**62.50**	**188**	P	**P**	**13 54 41.7**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=8.5,slow=5.4,SNR=6.9						
FIA0	**FINESS Array S**	**67.55**	**332**	*e*P	**P**	**13 55 14.4**	**+0.1**
FIA0	**FINESS Array S**	**67.55**	**332**	*e*P	**P**	**13 55 14.5**	**+0.1**
FINES	**FINESS Array B**	**67.55**	**332**	P	**P**	**13 55 14.4**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=38,slow=9.6,SNR=4.5						
KIV	**Kislovodsk**	**70.16**	**311**	*e*P	**P**	**13 55 29.9**	**-1.1**
KIV				pmax	pmax		
	comp=Z,13nm,0.9s						
KBZ	**Khabaz**	**70.16**	**310**	P	**P**	**13 55 31.3**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=359,slow=6.9,SNR=4.0						
FFC	**Flin Flon**	**72.07**	**33**	*i* P	**P**	**13 55 43.8**	**+1.5**
NB200	**NORSAR Array S**	**72.82**	**337**	*e*P	**P**	**13 55 44.9**	**-1.8**
NOA	**NORSAR Array B**	**72.82**	**337**	P	**P**	**13 55 44.9**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=37,slow=6.0,SNR=3.6						
NOA				LR	LR	14 31 57.8	
	comp=Z,20nm,18.1s,baz=70,slow=39						
BOZ	**Bozeman (W)**	**73.24**	**45**	*e*P	**P**	**13 55 51.2**	**+1.6**
	comp=Z,2.6nm,0.6s						
BOZ	**Bozeman (W)**	**73.24**	**45**	*e*P	**P**	**13 55 51.2**	**+1.6**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**73.25**	**322**	P	**P**	**13 55 49.2**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=45,slow=6.0,SNR=3.9						
AKASG	**Malin Array Be**	**73.25**	**322**	*ce*P	P	13 55 53.4	+4.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	**Malin Array Si**	**73.25**	**322**	*e*P	**P**	**13 55 49.2**	**-0.2**
	comp=Z,2.5nm,0.8s						
AKBB	**Malin Array Si**	**73.25**	**322**	*e*P	**P**	**13 55 49.2**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NV01	**Mina Array Sit**	**73.64**	**54**	*e*P	**P**	**13 55 53.7**	**+1.5**
NVAR	**Mina Array Bea**	**73.64**	**54**	P	**P**	**13 55 53.7**	**+1.5**
	comp=Z,2.0nm,0.9s,baz=291,slow=6.3,SNR=9.7						
PD31	**Pinedale Array**	**76.19**	**46**	*e*P	**P**	**13 56 07.5**	**+0.7**
PDAR	**Pinedale Array**	**76.19**	**46**	P	**P**	**13 56 07.5**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=275,slow=1.4,SNR=23						
VYHS	**Vyhne**	**79.61**	**326**	*e*P	P	13 56 31.7	+6.3
VYHS	**Vyhne**	**79.61**	**326**	*e*P	P	13 56 31.7	+6.3
CLL	**Collm**	**79.87**	**330**	*e*P	**P**	**13 56 25.0**	**-1.7**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TXAR	**Lajitas Array**	**88.76**	**53**	P	**P**	**13 57 13.5**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=288,slow=2.9,SNR=5.1						
LPAZ	**La Paz**	**145.45**	**58**	PKPbc	**PKPab**	**14 03 57.5**	**0.0**
	comp=Z,2.5nm,0.7s,baz=319,slow=5.7,SNR=9.9						
LPAZ	**La Paz**	**145.45**	**58**	*e*PKPdf	**PKPab**	**14 03 57.7**	**+0.2**
LPAZ	**La Paz**	**145.45**	**58**	*e*PKIKP	**PKPab**	**14 03 57.7**	**+0.2**

IDC 11 13:46:48.9±3.4, 5°.40S×149°.84E, h0^{km}, mb4.1/2, mb1 4.5/2, mb1mx3.6/23, mbtmp4.3/2, MS3.5/9, Ms1 3.5/9, ms1mx3.4/22, Error ellipse: s-maj=121.5km s-min=45.9km az=114.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**19.50**	**345**	LR	LR	13 58 23.7	
	comp=Z,56nm,18.7s,baz=166,slow=36						
WRA	**Warramunga Arr**	**20.89**	**225**	P	P	13 51 32.2	-0.8
	7.9nm,0.6s,baz=52,slow=10,SNR=20						
ASAR	**Alice Springs**	**23.78**	**219**	P	P	13 52 03.9	+0.4
	3.8nm,0.7s,baz=50,slow=8.4,SNR=24						
ASAR				LR	LR	14 01 40.8	
	comp=Z,222nm,19.0s,baz=50,slow=38						
STKA	**Stephens Creek**	**27.45**	**195**	LR	LR	14 04 42.1	
	comp=Z,208nm,18.2s,baz=24,slow=39						
MJAR	**Matsushiro Arr**	**43.12**	**346**	LR	LR	14 11 27.7	
	comp=Z,30nm,18.7s,baz=160,slow=34						
KSRS	**Korea Array**	**47.27**	**336**	LR	LR	14 12 49.9	
	comp=Z,53nm,21.6s,baz=174,slow=33						
CMAR	**Chiang Mai Arr**	**55.48**	**297**	LR	LR	14 22 02.4	
	comp=Z,25nm,18.1s,baz=126,slow=38						
PETK	**Petropavlovsk-**	**58.66**	**6**	LR	LR	14 17 30.7	
	comp=Z,70nm,21.4s,baz=185,slow=31						
SONM	**Songino Array**	**65.29**	**329**	LR	LR	14 26 51.8	
	comp=Z,34nm,18.9s,baz=126,slow=37						
ZALV	**Zalesovo Beam**	**80.03**	**327**	LR	LR	14 33 37.5	
	comp=Z,20nm,21.8s,baz=70,slow=35						
TORD	**Torodi Ar. Bea**	**147.66**	**286**	PKPbc	PKPbc	14 06 35.9	-0.7
	0.3nm,0.7s,baz=74,slow=2.7,SNR=2.6						

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*ISCJB **11** 13:47:49.8±0.4, 24°.05N±0°.03×122°.88E±0°.02, h18^{km}±5^{km}, Error ellipse: s-maj=5.8km s-min=2.5km az=0.2*

*TAP **11** 13:47:49.9, 24°.07N×122°.81E, h11^{km}±1^{km}, ML2.6, D*

*JMA **11** 13:47:50.1±0.1, 24°.11N×122°.87E, h20^{km}±3^{km}, M2.4*

ISC 11 13:47:49.2±1.1, 24°.12N±0°.04×122°.89E±0°.02, h15^{km}±9^{km}, n34, σ0^{s}.80/63, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.34**	**8**	P	**Pb**	**13 47 57.4**	**+0.6**
JYNG				S	**Sb**	**13 48 02.6**	**+0.6**
YOJ	**Yonaguni jima**	**0.36**	**18**	*e*S	**Sn**	**13 48 05.1**	**-1.5**
	baz=22						
YOJ	**Yonaguni jima**	**0.36**	**18**	P	**Pb**	**13 47 57.9**	**+0.7**
YOJ				S	**Sb**	**13 48 03.4**	**+0.7**
IRIF	**Iriomote-Funau**	**0.80**	**74**	P	**Pb**	**13 48 05.0**	**+0.3**
IRIF				S	**Sn**	**13 48 16.9**	**-0.5**
EOS1	**EOS1**	**0.82**	**302**	*e*P	**Pg**	**13 48 05.2**	**+0.2**
	baz=308						
EOS1				*e*S	**Sb**	**13 48 16.2**	**+0.3**
	baz=308						
HATJ	**Hateruma jima**	**0.84**	**94**	P	**Pn**	**13 48 06.2**	**-0.2**
HATJ				S	**Sb**	**13 48 17.3**	**+0.9**
JKRS	**Kuro-shima**	**1.03**	**83**	P	**Pg**	**13 48 09.3**	**+0.2**
JKRS				S	**Sn**	**13 48 23.6**	**+0.5**
TWC	**Suao**	**1.07**	**297**	*e*P	**Pb**	**13 48 08.9**	**-0.4**
	baz=293						
TWC				*e*S	**Sb**	**13 48 23.5**	**+0.4**
	baz=293						
NANB	**Nanao**	**1.09**	**287**	*e*P	**Pb**	**13 48 09.2**	**-0.4**
	baz=302						
NANB				S	**Sb**	**13 48 23.8**	**+0.2**
	baz=302						
ENA	**Nanau**	**1.09**	**287**	*e*P	**Pb**	**13 48 09.5**	**-0.3**
	baz=302						
ENA				S	**Sb**	**13 48 23.8**	**0.0**
	baz=302						
JIJ	**Ishigaki jima**	**1.17**	**78**	P	**Pb**	**13 48 11.2**	**+0.2**
JIJ				S	**Sg**	**13 48 26.8**	**-0.2**
NACB	**Ninganchiao**	**1.19**	**273**	*e*P	**Pn**	**13 48 10.8**	**-0.3**
	baz=289						
NACB				*e*S	**Sb**	**13 48 26.8**	**+0.3**
	baz=289						
TWE	**Neicheng**	**1.27**	**299**	P	**Pg**	**13 48 13.7**	**+0.1**
	baz=304						
TWE				*e*S	**Sg**	**13 48 29.7**	**-0.5**
	baz=304						
ETLH	**Xiulin Townshi**	**1.29**	**274**	P	**Pn**	**13 48 12.7**	**0.0**
	baz=260						
ETLH				*e*S	**Sg**	**13 48 31.0**	**+0.1**
	baz=260						
TIPB	**Shuangxi**	**1.29**	**311**	P	**Pb**	**13 48 13.1**	**-0.1**
	baz=317						
TIPB				S	**Sg**	**13 48 30.5**	**-0.4**
	baz=317						
SLBB	**Yuanshan**	**1.31**	**299**	*e*P	**Pg**	**13 48 14.4**	**0.0**
	baz=295						
SLBB				*e*S	**Sg**	**13 48 32.2**	**+0.7**
	baz=295						
ENTT	**Nioudou**	**1.31**	**294**	P	**Pb**	**13 48 13.7**	**+0.1**
	baz=298						
ENTT				*e*S	**Sn**	**13 48 30.7**	**+0.5**
	baz=298						
NDT	**Datong Townshi**	**1.35**	**291**	*e*P	**Pg**	**13 48 14.6**	**-0.5**
	baz=296						
NDT				*e*S	**Sb**	**13 48 31.4**	**+0.3**
	baz=296						
JISG	**Ishigakijimahi**	**1.38**	**70**	P	**Pb**	**13 48 14.7**	**+0.1**
JISG				S	**Sg**	**13 48 33.1**	**-0.5**
NNSB	**Datong**	**1.41**	**283**	P	**Pb**	**13 48 15.3**	**+0.1**
	baz=296						
NNSB				S	**Sb**	**13 48 33.6**	**+0.6**
	baz=296						
NNS	**Nan Shan**	**1.42**	**283**	*e*P	**Pb**	**13 48 15.7**	**+0.2**
	baz=297						
NNS				S	**Sb**	**13 48 34.1**	**+0.7**
	baz=297						
HGSD	**Ruisui**	**1.48**	**245**	*e*P	**Pn**	**13 48 14.2**	**-1.0**
	baz=247						
HGSD				*e*S	**Sn**	**13 48 33.1**	**-1.2**
	baz=247						
YHNB	**Yeheng**	**1.49**	**292**	*e*P	**Pg**	**13 48 17.2**	**-0.6**
	baz=296						
YHNB				*e*S	**Sb**	**13 48 36.1**	**+0.9**
	baz=296						
NSK	**Sanguang**	**1.50**	**292**	P	**Pg**	**13 48 17.5**	**-0.6**
	baz=296						
NSK				S	**Sb**	**13 48 36.2**	**+0.5**
	baz=296						
YM01	**YM01**	**1.58**	**311**	*e*S	**Sb**	**13 48 38.4**	**+0.5**
	baz=316						
YULB	**Yu-li**	**1.63**	**244**	*e*P	**Pn**	**13 48 16.4**	**-0.9**
	baz=246						
YULB				*e*S	**Sn**	**13 48 36.6**	**-1.3**
	baz=246						
VWDT	**VWDT**	**1.64**	**258**	*e*P	**Pn**	**13 48 17.1**	**-0.3**
	baz=260						
VWDT				*e*S	**Sn**	**13 48 35.9**	**-2.4**
	baz=260						
TWF1	**Yuli**	**1.65**	**243**	*e*P	**Pn**	**13 48 16.9**	**-0.6**
	baz=244						
TWF1				*e*S	**Sn**	**13 48 37.5**	**-0.9**
	baz=244						
JTJ	**Tarama**	**1.73**	**72**	P	**Pn**	**13 48 18.1**	**-0.6**
JTJ				S	**Sn**	**13 48 38.8**	**-1.7**
SSLB	**Suanglung**	**1.80**	**260**	*e*P	**Pn**	**13 48 20.5**	**+0.8**
	baz=261						
TYC	**Yuchr**	**1.87**	**264**	*e*P	**Pn**	**13 48 21.3**	**+0.7**
	baz=265						
WHYT	**Xinyi Township**	**1.91**	**258**	*e*P	**Pn**	**13 48 22.3**	**+1.1**
	baz=259						
CHN1	**Nanshi**	**2.36**	**247**	*e*P	**Pn**	**13 48 28.8**	**+1.5**
	baz=249						
CHN1				*e*S	**Sn**	**13 48 57.9**	**+1.9**
	baz=249						
TWK	**Hsinying**	**2.36**	**249**	*e*P	**Pn**	**13 48 28.6**	**+1.3**
	baz=252						
TWK				S	**Sn**	**13 48 57.6**	**+1.5**
	baz=252						

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*ISCJB **11** 14:19:13.7±0.5, 14°.48N±0°.06×144°.3E±0°.1, h400^{km}, mb3.8/16, Error ellipse: s-maj=16.7km s-min=8.4km az=175.2*

*IDC **11** 14:19:14.2±0.4, 14°.46N×144°.36E, h390^{km}±4^{km}, mb3.5/17, mb1 3.7/18, mb1mx3.5/35, mbtmp4.3/18, Error ellipse: s-maj=15.2km s-min=8.0km az=91.0*

ISC 11 14:19:14.8±0.5, 14°.45N±0°.07×144°.4E±0°.1, h400^{km}, n30, σ0^{s}.86/29, mb3.8/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.98**	**151**	P	**Pn**	**14 20 05.5**	**-0.4**
	104nm,0.3s,baz=14,slow=4.2,SNR=45						
GUMO				S	**S**	**14 20 44.6**	**-2.4**
	67nm,0.3s,baz=137,slow=23,SNR=10						
JAY	**Jayapura**	**17.24**	**192**	P	**P**	**14 22 52.9**	**+1.4**
	0.7nm,0.3s,baz=337,slow=13,SNR=3.8						
SIJI	**Sorong**	**20.00**	**222**	P	**P**	**14 23 19.4**	**0.0**
	22nm,0.5s,baz=12,slow=15,SNR=16						
H11S3	**WAKE ISLAND Hy**	**21.77**	**76**	T	T	14 44 59.5	
	baz=268,slow=74,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**21.78**	**76**	T	T	14 44 59.8	
	baz=268						
H11S2	**WAKE ISLAND Hy**	**21.78**	**76**	T	T	14 45 01.1	
	baz=268,slow=74,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**22.14**	**73**	T	T	14 45 23.4	
	baz=263,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**22.15**	**73**	T	T	14 45 23.9	
	baz=263,slow=75,SNR=9.8						
H11N3	**WAKE ISLAND Hy**	**22.16**	**73**	T	T	14 45 24.6	
	baz=263,slow=75,SNR=10						
JNU	**Nakatsue**	**22.28**	**329**	P	**P**	**14 23 40.0**	**0.0**
	13nm,0.9s,baz=195,slow=4.2,SNR=6.0						
MJAR	**Matsushiro Arr**	**22.69**	**347**	P	**P**	**14 23 43.6**	**0.0**
	2.1nm,0.5s,baz=168,slow=6.9,SNR=7.2						
KSRS	**Korea Array**	**27.19**	**330**	P	**P**	**14 24 23.2**	**-0.5**
	0.6nm,0.7s,baz=143,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**35.57**	**196**	P	**P**	**14 25 36.3**	**-0.1**
	5.2nm,0.3s,baz=11,slow=7.9,SNR=97						
ASAR	**Alice Springs**	**39.24**	**195**	P	**P**	**14 26 07.0**	**+0.2**
	2.4nm,0.5s,baz=16,slow=11,SNR=67						
ASAR				PcP	**PcP**	**14 28 06.6**	**+0.1**
	0.4nm,0.7s,baz=15,slow=3.8,SNR=3.9						
ASAR				S	**S**	**14 31 36.6**	**-0.6**
	0.5nm,0.9s,baz=24,slow=20,SNR=2.4						
DZM	**Mont Dzumac**	**42.25**	**149**	P	**P**	**14 26 32.0**	**+0.9**
	14nm,1.0s,baz=299,slow=19,SNR=3.7						
CMAR	**Chiang Mai Arr**	**43.67**	**282**	P	**P**	**14 26 42.9**	**+0.5**
	1.8nm,0.6s,baz=87,slow=5.9,SNR=11						
CMAR				PcP	**PcP**	**14 28 22.0**	**+0.5**
	1.0nm,0.7s,baz=71,slow=2.9,SNR=5.0						
SONM	**Songino Array**	**45.76**	**325**	P	**P**	**14 26 59.1**	**+0.7**
	0.6nm,0.4s,baz=141,slow=5.9,SNR=4.4						
SONM				PcP	**PcP**	**14 28 28.8**	**+0.4**
	0.6nm,0.6s,baz=152,slow=3.9,SNR=4.3						
STKA	**Stephens Creek**	**46.13**	**183**	P	**P**	**14 27 01.8**	**+0.5**
	2.2nm,0.3s,baz=12,slow=7.7,SNR=11						
SEY	**Seymchan**	**48.76**	**5**	P	**P**	**14 27 21.3**	**+0.6**
	2.0nm,0.9s,baz=217,slow=20,SNR=2.9						
SEY				PcP	**pP**	**14 28 39.9**	**+0.2**
	0.4nm,0.4s,baz=53,slow=17,SNR=1.3						
MKAR	**Makanchi Array**	**60.55**	**316**	P	**P**	**14 28 44.5**	**-0.2**
	2.2nm,0.3s,baz=89,slow=8.7,SNR=1.8						
ZALV	**Zalesovo Beam**	**60.65**	**324**	P	**P**	**14 28 44.7**	**-0.4**
	0.6nm,0.4s,baz=98,slow=5.0,SNR=2.8						
ILAR	**Eielson Array**	**68.00**	**26**	P	**P**	**14 29 31.7**	**-0.4**
	1.6nm,0.8s,baz=250,slow=6.1,SNR=16						
YKA	**Yellowknife Ar**	**82.32**	**27**	P	**P**	**14 30 53.7**	**+0.9**
	1.3nm,0.7s,baz=288,slow=5.5,SNR=4.7						
NVAR	**Mina Array Bea**	**86.76**	**51**	P	**P**	**14 31 16.4**	**+0.9**
	0.8nm,0.7s,baz=260,slow=5.7,SNR=8.3						
FINES	**FINESS Array B**	**90.19**	**335**	P	**P**	**14 31 29.0**	**-1.7**
	1.2nm,0.5s,baz=81,slow=2.5,SNR=9.7						
SNAA	**Sanae**	**119.53**	**191**	PKP	**PKPdf**	**14 37 16.2**	**-0.9**
	0.6nm,0.5s,baz=202,slow=7.1,SNR=12						
TORD	**Torodi Ar. Bea**	**133.99**	**305**	PKP	**PKiKP**	**14 37 46.4**	**-1.3**
	0.4nm,0.5s,baz=42,slow=4.1,SNR=4.4						
DBIC	**Dimbokro**	**142.97**	**302**	PKhKP	PKPpre	14 37 59.4	
	5.2nm,0.6s,baz=22,slow=2.5,SNR=7.3						
CFA	**Coronel Fontan**	**145.65**	**125**	PKPbc	**PKPab**	**14 38 08.3**	**-0.8**
	2.7nm,0.5s,baz=245,slow=5.3,SNR=5.9						
LPAZ	**La Paz**	**148.62**	**98**	PKPbc	**PKPbc**	**14 38 16.7**	**-0.4**
	1.6nm,0.6s,baz=332,slow=2.7,SNR=7.8						

ATH 11 14:21:17.3, 38°.30N×23°.64E, h11^{km}±5^{km}, ML1.7/9, Error ellipse: s-maj=5.6km s-min=0.7km az=130.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EREA	**Eretria**	**0.26**	**62**	P	Pg	14 21 22.6	-0.2
EREA				S	Sg	14 21 26.8	+0.4
EREA				AML	AML	14 21 27.3	
	comp=E,315µm,0.2s						
EREA				AML	AML	14 21 27.9	
	comp=N,208µm,0.1s						
VIL2	**Platees**	**0.30**	**254**	P	Pg	14 21 23.1	-0.4
VIL2				S	Sg	14 21 27.5	-0.1
VIL2				AML	AML	14 21 29.6	
	comp=N,255µm,0.3s						
VIL2				AML	AML	14 21 35.2	
	comp=E,240µm,0.3s						
PTL	**Penteli**	**0.30**	**144**	P	Pg	14 21 23.3	-0.2
PTL				S	Sg	14 21 27.7	0.0
DION	**Dionisos Attik**	**0.32**	**133**	P	Pg	14 21 23.9	+0.1
DION				S	Sg	14 21 28.5	+0.4
ATH	**Athens Observa**	**0.33**	**169**	P	Pg	14 21 24.5	+0.5
ATH				S	Sg	14 21 28.8	+0.4
ATHU	**Athens Univers**	**0.35**	**161**	P	Pg	14 21 24.5	+0.2
ATHU				S	Sg	14 21 28.5	-0.5
MRKA	**Markates**	**0.41**	**354**	P	Pg	14 21 25.2	-0.3
MRKA				S	Sg	14 21 31.1	+0.2
MRKA				AML	AML	14 21 31.4	
	comp=E,142µm,0.3s						
MRKA				AML	AML	14 21 35.1	
	comp=N,153µm,0.2s						
VLY	**Voula,Athens**	**0.46**	**164**	P	Pg	14 21 26.5	+0.2
VLY				S	Sg	14 21 32.3	-0.1
PROD	**Prodromos**	**0.58**	**267**	P	Pg	14 21 28.7	0.0
PROD				S	Sb	14 21 37.1	-0.7
PROD				AML	AML	14 21 38.9	
	comp=N,205µm,0.2s						
PROD				AML	AML	14 21 40.3	
	comp=E,248µm,0.2s						
LOUT	**Loutraki**	**0.61**	**240**	P	Pg	14 21 28.6	-0.5
LKR	**Lokris**	**0.61**	**305**	P	Pg	14 21 28.4	-0.9
LKR				S	Sg	14 21 37.9	+0.5
LKR				AML	AML	14 21 39.0	
	comp=E,174µm,0.1s						
LKR				AML	AML	14 21 39.6	
	comp=N,151µm,0.2s						
ATAL	**Atalanti**	**0.63**	**309**	P	Pg	14 21 28.6	-0.9
SMIA	**Simia**	**0.67**	**330**	P	Pg	14 21 30.3	-0.1
SMIA				S	Sg	14 21 39.6	+0.4
SMIA				AML	AML	14 21 43.6	
	comp=N,251µm,0.3s						
SMIA				AML	AML	14 21 45.7	
	comp=E,205µm,0.6s						
KARY	**Karystos**	**0.68**	**112**	P	Pg	14 21 30.8	+0.2
ACOR	**Acrocorinthos**	**0.73**	**237**	P	Pb	14 21 31.9	-0.1
EPID	**Epidavros**	**0.80**	**211**	P	Pg	14 21 31.9	-0.8
THAL	**Thalero**	**0.81**	**252**	P	Pb	14 21 33.3	-0.1
THAL				S	Sb	14 21 44.6	+0.3
THAL				AML	AML	14 21 46.8	
	comp=E,211µm,0.6s						
THAL				AML	AML	14 21 48.3	
	comp=N,249µm,0.3s						
DID	**Didima**	**0.85**	**202**	P	Pg	14 21 33.1	-0.6
DID				S	Sg	14 21 44.6	-0.2
DID				AML	AML	14 21 47.9	
	comp=E,173µm,0.4s						
DID				AML	AML	14 21 49.2	
	comp=N,112µm,0.2s						
SKIA	**Skiathos**	**0.88**	**351**	P	Pg	14 21 34.2	-0.2
SKIA				S	Sg	14 21 45.5	-0.3
DSF	**Desfina**	**0.88**	**278**	P	Pg	14 21 34.1	-0.3
DSF				AML	AML	14 21 49.5	
	comp=E,97µm,0.2s						
DSF				AML	AML	14 21 49.8	
	comp=N,77µm,0.2s						
SKY	**Skiros Island**	**0.92**	**51**	P	Pg	14 21 34.6	-0.5
SKY				S	Sn	14 21 48.6	-0.8
GUR	**Goura**	**1.08**	**251**	P	Pn	14 21 38.5	0.0

THE 11 14:21:27.6, 38°.42N×21°.95E, h10^{km}±1^{km}, ML1.4/7, Error ellipse: s-maj=1.3km s-min=0.5km az=277.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.04**	**287**	P	Pg	14 21 29.2	-0.3
EFP				S	Sg	14 21 30.7	-0.1
	742nm,0.2s						
SERG	**Sergoula**	**0.08**	**91**	P	Pg	14 21 29.6	-0.3
SERG				S	Sg	14 21 31.4	-0.2
	465nm,0.1s						
TRIZ	**Trizonia**	**0.11**	**118**	P	Pg	14 21 29.9	-0.3
TRIZ				S	Sg	14 21 32.0	-0.1
	440nm,0.2s						
KALE	**Kalithea**	**0.15**	**99**	P	Pg	14 21 30.7	-0.2
KALE				S	Sg	14 21 33.6	+0.3
	92nm,0.1s						
LAKA	**Lakka**	**0.18**	**174**	P	Pg	14 21 31.1	-0.3
LAKA				S	Sg	14 21 34.0	+0.1
ANX	**Ano Chora**	**0.18**	**352**	P	Pg	14 21 31.4	-0.1
ANX				S	Sg	14 21 34.8	+0.6
	132nm,0.2s						
ALIK	**Aliki, Aigiali**	**0.20**	**141**	P	Pg	14 21 31.8	+0.1
ALIK				S	Sg	14 21 35.4	+0.9
TRAZ	**Trapeza**	**0.32**	**140**	P	Pg	14 21 34.0	0.0
TRAZ				S	Sg	14 21 38.9	+0.7
	118nm,0.2s						
DSF	**Desfina**	**0.45**	**90**	P	Pg	14 21 35.5	-0.9
DSF				S	Sg	14 21 42.8	+0.4
	45nm,0.2s						

SOME ***11*** *14:27:17.6, 44°.70N×82°.15E, h0^{km}*
NNC ***11*** *14:27:18.3±1.4, 44°.69N×82°.19E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=13.6km s-min=5.0km az=120.0*
ISC 11 14:27:18.3±1.6**, 44°.70N**±0°.04×**82°.16E**±0°.07**, h10^{km}, n22, σ1^{s}.59**/32**, 5C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.73**	**258**	P	**Pg**	**14 27 51.2**	**-0.4**
	18nm,0.4s						
DJR				S	**Sg**	**14 28 15.9**	**+1.8**
	21nm,0.6s						
DJR	**Jarkent**	**1.73**	**258**	*e*P	**Pg**	**14 27 51.2**	**-0.4**
	18nm,0.4s						
DJR				*e*S	**Sg**	**14 28 15.8**	**+1.7**
	21nm,0.6s						
KTMS	**Ketmen**	**1.81**	**227**	Pg	**Pg**	**14 27 52.5**	**-0.5**
	6.7nm,0.1s						
KTMS				Lg	Lg	14 28 18.1	
	35nm,0.5s						
KTMS	**Ketmen**	**1.81**	**227**	*e*P	**Pg**	**14 27 52.5**	**-0.5**
	6.7nm,0.1s						
KTMS				*e*S	**Sg**	**14 28 18.0**	**+1.5**
	35nm,0.5s						
KAPS	**Kapalarasan**	**2.07**	**287**	Pg	**Pg**	**14 27 56.9**	**-1.2**
	4.5nm,0.2s						
KAPS				Lg	Lg	14 28 25.5	
	19nm,0.6s						
KAPS	**Kapalarasan**	**2.07**	**287**	*e*P	**Pg**	**14 27 56.9**	**-1.2**
	4.5nm,0.2s						
KAPS				*e*S	**Sg**	**14 28 25.5**	**+0.6**
	19nm,0.6s						
MK31	**Makanchi Array**	**2.09**	**2**	⇓Pg	**Pg**	**14 27 57.4**	**-1.0**
	22nm,0.5s,baz=184,slow=15,SNR=286						
MK31				⇑Lg	Lg	14 28 25.0	
	20nm,0.5s,baz=184,slow=27,SNR=29						
MAKZ	**Makanchi**	**2.11**	**357**	⇑Pg	**Pb**	**14 27 57.0**	**+0.3**
	7.4nm,0.4s						
MAKZ				⇓Lg	Lg	14 28 25.1	
	41nm,0.5s						
PDGK	**Podgornoye**	**2.36**	**235**	Pg	**Pb**	**14 28 01.3**	**+0.2**
	2.7nm,0.3s						
PDGK				Lg	Lg	14 28 33.1	
	21nm,0.5s						
PDGK	**Podgornoye**	**2.36**	**235**	⇑Pg	**Pb**	**14 28 00.4**	**-0.7**
	2.9nm,0.5s						
PDGK				⇓Lg	Lg	14 28 32.2	
	66nm,0.7s						
TDK	**Taldyqorghan**	**2.69**	**278**	Pg	**Pb**	**14 28 07.1**	**+0.6**
	56nm,0.2s						
TDK				Lg	Lg	14 28 43.1	
	97nm,0.5s						
TDK	**Taldyqorghan**	**2.69**	**278**	*e*P	**Pb**	**14 28 07.1**	**+0.6**
	56nm,0.2s						
TDK				*e*S	**Sg**	**14 28 43.1**	**-1.5**
	87nm,0.5s						
UZB	**Uzynbulak**	**2.75**	**237**	Pg	**Pb**	**14 28 07.3**	**-0.3**
	4.9nm,0.4s						
UZB				Lg	Lg	14 28 43.5	
	11nm,0.5s						
UZB	**Uzynbulak**	**2.75**	**237**	*e*P	**Pb**	**14 28 07.3**	**-0.3**
	4.9nm,0.4s						
UZB				*e*S	**Sb**	**14 28 43.5**	**+2.0**
	11nm,0.5s						
KPKS	**Kokpek**	**2.79**	**245**	*e*P	**Pb**	**14 28 08.4**	**0.0**
	11nm,0.2s						
KPKS				*e*S	**Sg**	**14 28 45.3**	**-2.8**
	50nm,0.5s						
CHKK	**Chushkaly**	**3.81**	**259**	Pg	**Pb**	**14 28 27.1**	**+1.5**
	2.3nm,0.2s						
CHKK				Lg	Lg	14 29 17.4	
	13nm,0.4s						
CHKK	**Chushkaly**	**3.81**	**259**	*e*P	**Pb**	**14 28 27.1**	**+1.5**
	1.2nm,0.6s						
CHKK				*e*S	**Sg**	**14 29 17.4**	**-3.2**
	13nm,0.4s						
MDOK	**Medeo**	**4.00**	**249**	Pg	**Pg**	**14 28 33.0**	**-1.9**
	4.0nm,0.5s						
MDOK	**Medeo**	**4.00**	**249**	*e*P	**Pg**	**14 28 33.0**	**-1.9**
	4.0nm,0.5s						
MDOK				*e*S	**Sg**	**14 29 27.7**	**+1.0**
	9.8nm,0.6s						
KTBS	**Karatobe**	**4.06**	**258**	Pg	**Pb**	**14 28 31.7**	**+1.7**
	2.7nm,0.3s						
KTBS				Lg	Lg	14 29 25.0	
	24nm,0.6s						
KTBS	**Karatobe**	**4.06**	**258**	*e*P	**Pb**	**14 28 31.7**	**+1.7**
	2.7nm,0.3s						
KTBS				*e*S	**Sg**	**14 29 25.0**	**-3.7**
	24nm,0.6s						
KURBB	**Kurchatov Arra**	**6.41**	**339**	⇑Sn	**Sn**	**14 30 06.9**	**+1.0**
	3.4nm,0.5s						
KURBB				⇑Lg	Lg	14 30 41.6	
	9.6nm,0.6s						

ISC 11 14:42:47.0±2.9**, 48°.2N**±0°.1×**16°.93E**±0°.08**, h1^{km}**±14^{km}**, n6, σ0^{s}.76**/12**, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZST	**Bratislava**	**0.12**	**73**	*e*PG	**Pg**	**14 42 48.7**	**-0.6**
ZST				*e*SG	**Sg**	**14 42 50.9**	**+0.1**
MODS	**Modra-Piesok**	**0.31**	**47**	*e*PG	**Pg**	**14 42 52.5**	**-0.5**
MODS				*e*SG	**Sg**	**14 42 56.9**	**-0.2**
MODS				*e*LG	Lg	14 43 03.4	
JAVC	**Velka Javorina**	**0.85**	**35**	*e*PG	**Pb**	**14 43 04.5**	**-0.2**
JAVC				*e*SG	**Sn**	**14 43 19.7**	**+0.3**
KRUC	**Moravsky**	**0.97**	**339**	*e*PG	**Pg**	**14 43 05.3**	**-0.3**
KRUC				*e*SG	**Sb**	**14 43 19.9**	**0.0**
VRAC	**Vranov**	**1.17**	**349**	*e*PG	**Pn**	**14 43 10.2**	**-0.3**
VRAC				*e*SG	**Sg**	**14 43 25.9**	**+1.3**
VYHS	**Vyhne**	**1.31**	**75**	*e*PG	**Pg**	**14 43 13.5**	**+1.3**
VYHS				*e*SG	**Sg**	**14 43 28.9**	**-0.3**

IDC ***11*** *14:43:25.9±0.9, 13°.10N×124°.73E, h0^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.6/49, mbtmp3.6/10, ML4.4/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/30, Error ellipse: s-maj=40.5km s-min=16.1km az=64.0*
ISCJB ***11*** *14:43:28.6±1.3, 13°.12N±0°.05×124°.75E±0°.06, h29^{km}±9^{km}, mb3.6/9, MS3.1/1, Error ellipse: s-maj=11.0km s-min=6.8km az=149.2*
MAN ***11*** *14:43:30.0, 12°.96N×124°.66E, h17^{km}, mb4.7, ML3.6, MS3.5*
ISC 11 14:43:30.1±1.4**, 13°.00N**±0°.05×**124°.77E**±0°.06**, h30^{km}**±10^{km}**, n35, σ1^{s}.88**/33**, mb3.7**/9**, 3C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.49**	**192**	*e*P	**Pb**	**14 43 40.1**	**-0.3**
CNP				*e*S	**Sb**	**14 43 48.0**	**+0.5**
MMPH	**Masbate**	**1.28**	**240**	⇑*e*P	**Pn**	**14 43 51.2**	**-0.9**
MMPH				*i* S	**Sn**	**14 44 06.9**	**-1.4**
BESP	**Borongan**	**1.54**	**155**	*e*P	**Pn**	**14 43 55.4**	**-0.1**
PLP	**Palo**	**1.83**	**173**	⇑*e*P	**Pn**	**14 44 00.8**	**+1.2**
PLP				*i* S	**Sb**	**14 44 26.0**	**+0.5**
OCLP	**Ormoc**	**1.94**	**185**	*e*P	**Pn**	**14 44 02.6**	**+1.5**
AUQP	**San Andres**	**2.06**	**279**	*e*P	**Pn**	**14 44 04.5**	**+1.7**
AUQP				*e*S	**Sb**	**14 44 34.8**	**+2.6**
GQP	**Guinayangan**	**2.43**	**292**	⇑*e*P	**Pn**	**14 44 03.9**	**-4.0**
GQP				*e*S	**Sb**	**14 44 42.3**	**-0.4**
RCP	**Roxas**	**2.44**	**234**	⇓*e*P	**Pn**	**14 44 08.5**	**+0.5**
OTRP	**Odiongan**	**2.75**	**257**	*e*P	**Pn**	**14 44 12.2**	**-0.1**
MSLP	**Maasin**	**2.85**	**178**	*e*P	**Pb**	**14 44 18.2**	**-2.1**
BOAC	**Boac**	**2.88**	**279**	*e*P	**Pn**	**14 44 13.7**	**-0.4**
BOAC				*e*S	**Sb**	**14 44 59.9**	**+4.1**
POLP	**Polilio Island**	**3.24**	**302**	*e*P	**Pn**	**14 44 18.1**	**-0.9**
SJMP	**San Jose**	**3.60**	**262**	*e*P	**Pn**	**14 44 25.4**	**+1.4**
TGY	**Tagaytay City**	**3.88**	**287**	Pn	**Pn**	**14 44 28.1**	**+0.2**
	26nm,0.3s,baz=120,slow=8.1,SNR=2.1						
BALP	**Baler**	**4.12**	**312**	*e*P	**Pb**	**14 44 39.8**	**-2.3**
BUSP	**Coron**	**4.57**	**258**	*e*P	**Pn**	**14 44 37.7**	**+0.4**
APYP	**Conner**	**5.91**	**325**	*e*P	**Pn**	**14 44 58.1**	**+2.4**
APYP				*e*S	**Sn**	**14 46 07.3**	**+4.8**
DAV	**Davao City (W)**	**5.94**	**172**	LR	LR	14 47 48.8	
	comp=Z,166nm,21.1s,baz=342,slow=43						
KCP	**Kidapawan**	**5.96**	**177**	⇓*i*P	Pn	14 45 03.2	+6.7
KSRS	**Korea Array**	**24.52**	**6**	P	**P**	**14 48 46.5**	**-0.5**
	0.4nm,0.6s,baz=198,slow=11,SNR=2.5						
CMAR	**Chiang Mai Arr**	**25.43**	**286**	P	**P**	**14 48 54.1**	**-1.4**
	0.4nm,0.3s,baz=99,slow=5.6,SNR=4.1						
WRA	**Warramunga Arr**	**34.06**	**164**	P	**P**	**14 50 11.8**	**-0.2**
	1.1nm,0.9s,baz=343,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**37.52**	**166**	P	**P**	**14 50 42.9**	**+1.1**
	0.5nm,0.5s,baz=349,slow=7.0,SNR=25						
SONM	**Songino Array**	**37.97**	**340**	P	**P**	**14 50 44.0**	**-1.4**
	0.2nm,0.4s,baz=157,slow=7.8,SNR=2.0						
H11S3	**WAKE ISLAND Hy**	**40.65**	**77**	T	T	15 34 53.5	
	baz=269,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy**	**40.66**	**77**	T	T	15 34 54.6	
	baz=269,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy**	**40.67**	**77**	T	T	15 34 55.2	
	baz=269,slow=75,SNR=46						
H11N1	**WAKE ISLAND Hy**	**40.89**	**75**	T	T	15 35 03.7	
	baz=267,slow=75,SNR=111						
H11N2	**WAKE ISLAND Hy**	**40.89**	**75**	T	T	15 35 01.9	
	baz=267,slow=75,SNR=105						
H11N3	**WAKE ISLAND Hy**	**40.90**	**75**	T	T	15 35 03.7	
	baz=267,slow=75,SNR=130						
STKA	**Stephens Creek**	**47.45**	**160**	P	**P**	**14 52 04.0**	**+1.7**
	1.0nm,0.6s,baz=337,slow=7.7,SNR=2.3						
MKAR	**Makanchi Array**	**48.98**	**322**	P	**P**	**14 52 13.3**	**-0.8**
	0.7nm,0.7s,baz=110,slow=9.4,SNR=5.4						
ZALV	**Zalesovo Beam**	**51.54**	**331**	LR	LR	15 15 06.0	
	comp=Z,17nm,18.9s,baz=68,slow=37						
KURBB	**Kurchatov Arra**	**53.01**	**325**	P	**P**	**14 52 43.3**	**-0.9**
	0.4nm,0.4s,baz=124,slow=7.8,SNR=4.9						
BVAR	**Borovoye Array**	**58.60**	**325**	P	**P**	**14 53 24.1**	**-0.1**
	0.4nm,0.6s,baz=108,slow=8.2,SNR=2.2						

ISCJB ***11*** *14:48:38.0±0.4, 35°.53S±0°.06×104°.06W±0°.07, h10^{km}, mb4.5/29, MS4.5/20, Error ellipse: s-maj=9.6km s-min=7.7km az=42.0*
IDC ***11*** *14:48:38.2±0.8, 35°.63S×104°.09W, h0^{km}, mb4.4/12, mb1 4.6/12, mb1mx4.4/26, mbtmp4.4/12, MS4.5/15, Ms1 4.4/15, ms1mx4.4/16, Error ellipse: s-maj=24.0km s-min=19.5km az=28.0*
NEIC ***11*** *14:48:39.8±2.1, 35°.41S×104°.15W, h10^{km}, mb4.7/22, Error ellipse: s-maj=25.2km s-min=4.8km az=262.0*
BJI ***11*** *14:48:41.8±0.0, 35°.60S×104°.30W, h10^{km}, Ms4.7/1*
GCMT ***11*** *14:48:43.8±0.1, 35°.68S±0°.01×104°.21W±0°.01, h18^{km}, MW5.3/118, Moment Tensor Solution. s81,c122; s118,c213; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.12±.02; $M_{\theta\theta}$-0.30±.02; $M_{\phi\phi}$0.42±.02; $M_{r\theta}$0.07±.04; $M_{\theta\phi}$-0.89±.01; $M_{\phi r}$-0.35±.04; Best double couple: $M_0$1.01900×10^{17} NP1:ϕ_s191.00000°, δ87.00000°, λ18.00000°. NP2:ϕ_s100.00000°, δ72.00000°, λ176.00000°. Principal axes: T 1.1130, Plg15.0000°, Azm57.0000°; N -0.1880, Plg71.0000°, Azm201.0000°; P -0.9250, Plg10.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 11 14:48:39.5±0.5**, 35°.55S**±0°.09×**104°.16W**±0°.08**, h10^{km}, n98, σ1^{s}.47**/84**, mb4.7**/29**, MS4.5**/20**, 1C, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**9.49**	**331**	LR	LR	14 53 40.4	
	comp=Z,5μm,19.3s,baz=112,slow=32						
RPN	**Rapa Nui**	**9.49**	**331**	*e*Pn	**Pn**	**14 50 56.4**	**+0.1**
GO05	**Huala**	**26.26**	**98**	*e*P	**P**	**14 54 15.0**	**+0.1**
	23nm,1.0s						
PLCA	**Paso Flores**	**26.83**	**111**	P	**P**	**14 54 20.5**	**+0.3**
	3.9nm,1.1s,baz=294,slow=11,SNR=5.1						
PLCA				LR	LR	15 02 13.9	
	comp=Z,551nm,20.5s,baz=292,slow=30						
PLCA	**Paso Flores**	**26.83**	**111**	*e*P	**P**	**14 54 22.2**	**+2.1**
	6.3nm,1.0s						
GO09	**Cerro Castillo**	**27.67**	**134**	*e*P	**P**	**14 54 29.4**	**+1.9**
	17nm,1.1s						
PEL	**Peldehue**	**27.67**	**95**	*e*P	**P**	**14 54 28.6**	**+0.9**
	12nm,0.9s						
GO04	**Tololo Observa**	**28.45**	**89**	*e*P	**P**	**14 54 34.9**	**0.0**
	33nm,1.1s						
LCO	**Las Campanas**	**28.94**	**86**	*e*P	**P**	**14 54 40.4**	**+1.1**
	7.2nm,0.8s						
LCO	**Las Campanas**	**28.94**	**86**	*e*P	**P**	**14 54 37.9**	**-1.4**
RKT	**Rikitea**	**29.45**	**286**	*e*LQ	LQ	15 01 03.8	
	2μm,31.2s						
CFA	**Coronel Fontan**	**30.08**	**93**	P	**P**	**14 54 48.1**	**-1.0**
	17nm,1.0s,baz=256,slow=8.4,SNR=22						
CFA				LR	LR	15 04 04.2	
	comp=Z,997nm,18.9s,baz=272,slow=31						
GO02	**Mina Guanaco**	**31.44**	**80**	*e*P	**P**	**14 55 03.1**	**+1.6**
	11nm,0.8s						
LVC	**Limon Verde**	**33.22**	**77**	*e*P	**P**	**14 55 15.8**	**-1.4**
PB01	**IPOC Station P**	**33.59**	**74**	*e*P	**P**	**14 55 19.1**	**-1.0**
	13nm,1.1s						
TRQA	**Tornquist**	**33.66**	**107**	*e*P	**P**	**14 55 19.1**	**-1.4**
	0.1nm,0.6s						
TRQA	**Tornquist**	**33.66**	**107**	*e*P	**P**	**14 55 17.4**	**-3.1**
PB11	**IPOC Station P**	**34.16**	**72**	*e*P	**P**	**14 55 23.7**	**-1.5**
	21nm,1.0s						
MNMC	**Minye Minye**	**34.57**	**71**	*e*P	**P**	**14 55 29.7**	**+0.8**
	17nm,0.9s						
GO01	**Chusmiza**	**34.58**	**72**	*e*P	**P**	**14 55 30.1**	**+1.0**
	8.1nm,0.8s						
ATAH	**Atahualpa**	**36.85**	**46**	P	**P**	**14 55 48.8**	**+0.2**
	5.5nm,0.7s,baz=270,slow=11,SNR=4.1						
PAYG	**Puerto Ayora**	**37.03**	**23**	*e*P	**P**	**14 55 51.1**	**+1.5**
	42nm,1.0s						
LPAZ	**La Paz**	**37.38**	**69**	P	**P**	**14 55 54.3**	**+1.0**
	5.2nm,0.7s,baz=233,slow=5.5,SNR=19						
LPAZ				LR	LR	15 08 33.0	
	comp=Z,413nm,19.4s,baz=247,slow=32						
LPAZ	**La Paz**	**37.38**	**69**	*e*P	**P**	**14 55 54.6**	**+1.3**
	12nm,1.1s						
OGAUY	**Aigu**	**40.21**	**103**	*e*P	**P**	**14 56 15.8**	**-0.4**
CPUP	**Villa Florida**	**40.89**	**90**	P	**P**	**14 56 20.9**	**-0.9**
	4.3nm,0.9s,baz=243,slow=7.7,SNR=5.3						
CPUP				LR	LR	15 11 20.6	
	comp=Z,406nm,18.1s,baz=250,slow=33						
CPUP	**Villa Florida**	**40.89**	**90**	*e*P	**P**	**14 56 21.5**	**-0.4**
TBI	**Tubuai**	**40.95**	**275**	*e*S	**S**	**15 02 34.7**	**+0.3**
	346nm,29.5s						
TBI				*e*LQ	LQ	15 05 54.5	
	2μm,33.2s						
TBI				*e*LR	LR	15 07 37.8	
	comp=Z,1μm,25.2s,baz=102						
PLTB	**Pedras Altas**	**41.88**	**100**	*e*P	**P**	**14 56 29.0**	**-1.0**
TAOE	**Nuku Hiva Isla**	**42.22**	**300**	*e*LR	LR	15 08 15.8	
	comp=Z,3μm,27.6s						
CPSB	**Cacapava Do Su**	**42.48**	**98**	*e*P	**P**	**14 56 34.4**	**-0.5**
SIV	**San Ignacio**	**43.01**	**74**	P	**P**	**14 56 39.4**	**0.0**
	5.8nm,0.7s,baz=246,slow=8.2,SNR=30						
PPT2	**Papeete2**	**43.96**	**282**	*e*S	**S**	**15 03 17.8**	**-1.2**
	447nm,24.9s						
PPT2				*e*LQ	LQ	15 06 50.3	
	2μm,34.0s						
PPT2				*e*LR	LR	15 09 03.2	
	comp=Z,581nm,22.5s,baz=114						
PPT	**Papeete**	**43.97**	**282**	LR	LR	15 10 02.8	
	comp=Z,638nm,18.1s,baz=116,slow=29						
PTLC	**Puerto Leguiza**	**44.85**	**44**	*e*P	**P**	**14 56 53.0**	**-1.1**
AQDB	**Aquidauana**	**44.91**	**84**	*e*P	**P**	**14 56 53.6**	**-0.9**
CNLB	**Canela**	**44.97**	**98**	*e*P	**P**	**14 56 54.3**	**-0.8**
PTGB	**Pitanga**	**45.87**	**91**	*e*P	**P**	**14 57 01.8**	**-0.4**
TRCB	**Terra Rica**	**46.28**	**89**	*e*P	**P**	**14 57 04.8**	**-0.7**
YOTC	**Yotoco, Valle**	**47.19**	**39**	*e*P	**P**	**14 57 13.3**	**+0.6**
ORTC	**Ortega, Tolima**	**47.71**	**41**	*e*P	**P**	**14 57 18.2**	**+1.6**
FRTB	**Fartura**	**48.53**	**91**	*e*P	**P**	**14 57 22.2**	**-0.7**
ROSC	**El Rosal**	**48.98**	**41**	P	**P**	**14 57 26.6**	**-0.2**
	9.9nm,0.6s,baz=149,slow=8.7,SNR=7.0						
ROSC				LR	LR	15 14 31.7	
	comp=Z,678nm,20.9s,baz=228,slow=32						
HOPE	**Hope Point**	**49.42**	**134**	*e*P	**P**	**14 57 30.5**	**+1.3**
	21nm,1.0s						
ITRB	**Iturama**	**49.63**	**86**	*e*P	**P**	**14 57 30.5**	**-0.9**
SPB	**Sao Paulo**	**50.15**	**92**	*e*P	**P**	**14 57 34.8**	**-0.5**
CLDB	**Colider**	**50.16**	**73**	*e*P	**P**	**14 57 34.3**	**-1.2**
PTBC	**PUERTO BERRIO,**	**50.34**	**40**	*e*P	**P**	**14 57 34.1**	**-2.6**
BB19B	**Bebedouro**	**50.45**	**89**	*e*P	**P**	**14 57 36.5**	**-1.2**
RUSC	**La Rusia**	**50.53**	**42**	*e*	**P**	**14 57 36.5**	**-2.3**
RUSC				*e*P	**P**	**14 57 36.5**	**-2.3**
RCLB	**Rio Claro- Sao**	**50.62**	**91**	*e*P	**P**	**14 57 38.3**	**-0.6**
ZARC	**Zaragoza, Cauc**	**50.94**	**39**	*e*P	**P**	**14 57 42.5**	**+1.2**
PMNB	**Patos De Minas**	**53.41**	**87**	*e*P	**P**	**14 57 58.8**	**-1.0**
BSCB	**Bom Sucesso**	**53.55**	**91**	*e*P	**P**	**14 57 58.8**	**-2.0**
BDFB	**Brasilia**	**53.65**	**83**	P	**P**	**14 58 00.5**	**-1.2**
	7.9nm,0.8s,baz=227,slow=5.3,SNR=6.8						
BDFB				LR	LR	15 19 47.7	
	comp=Z,452nm,18.2s,baz=228,slow=35						
PTGA	**Pitinga**	**53.71**	**60**	*e*P	**P**	**14 58 00.8**	**-1.1**
QSPA	**South Pole Qui**	**54.66**	**180**	*e*P	**P**	**14 58 09.2**	**+0.8**
	11nm,1.1s						
DUB01	**Friburgo-RJ**	**54.98**	**94**	*e*P	**P**	**14 58 10.0**	**-1.2**
VNDA	**Vanda**	**56.45**	**195**	LR	LR	15 17 46.7	
	comp=Z,336nm,18.4s,baz=98,slow=31						
ALF01	**Guarapari-ES**	**57.03**	**93**	*e*P	**P**	**14 58 25.3**	**-0.5**
SJMB	**Sao Joao De Ma**	**57.61**	**91**	*e*P	**P**	**14 58 29.6**	**-0.3**
SMTB	**Santa Maria do**	**57.83**	**77**	*e*P	**P**	**14 58 30.8**	**-0.7**
VNA3	**Neumayer Olymp**	**58.19**	**158**	P	**P**	**14 58 33.8**	**+0.5**
VNA1	**Neumayer--Stat**	**58.81**	**157**	P	**P**	**14 58 38.4**	**+0.8**
VNA2	**Neumayer--Watz**	**59.00**	**158**	P	**P**	**14 58 39.8**	**+0.9**
	baz=258,slow=5.6						
SNAA	**Sanae**	**60.10**	**159**	P	**P**	**14 58 46.8**	**+0.2**
SNAA	**Sanae**	**60.10**	**159**	*e*P	**P**	**14 58 47.2**	**+0.7**
	6.1nm,1.1s						
TX31	**Lajitas Ar. Si**	**64.54**	**0**	*e*P	**P**	**14 59 15.8**	**-0.9**
	2.6nm,0.9s						
TXAR	**Lajitas Array**	**64.54**	**0**	P	**P**	**14 59 18.5**	**+1.7**
	1.6nm,0.7s,baz=178,slow=8.1,SNR=5.4						
TXAR				LR	LR	15 22 01.5	
	comp=Z,191nm,19.2s,baz=0.0,slow=31						
JCT	**Junction City**	**65.81**	**4**	*e*P	**P**	**14 59 28.5**	**+3.7**
	6.0nm,0.8s						
SYO	**Syowa Base**	**72.36**	**167**	⇑*e*pP	pP	15 00 06.2	-1.1
NV01	**Mina Array Sit**	**74.77**	**349**	*e*P	**P**	**15 00 21.9**	**+2.1**
NVAR	**Mina Array Bea**	**74.77**	**349**	P	**P**	**15 00 21.9**	**+2.1**
	2.1nm,0.7s,baz=186,slow=7.7,SNR=16						
NVAR				LR	LR	15 26 09.7	
	comp=Z,168nm,21.3s,baz=161,slow=30						
MAW	**Mawson**	**76.69**	**175**	P	**P**	**15 00 31.5**	**+1.2**
	1.3nm,0.7s,baz=225,slow=16,SNR=3.0						
MAW				LR	LR	15 30 32.5	
	comp=Z,147nm,21.4s,baz=186,slow=33						
DZM	**Mont Dzumac**	**77.04**	**252**	*e*S	**S**	**15 10 19.3**	**-2.9**
	907nm,35.9s						
DZM	**Mont Dzumac**	**77.04**	**252**	*e*LR	LR	15 24 19.7	
	comp=Z,1μm,28.6s						
PD31	**Pinedale Array**	**78.10**	**356**	*e*P	**P**	**15 00 38.5**	**-0.1**
PDAR	**Pinedale Array**	**78.10**	**356**	P	**P**	**15 00 38.5**	**-0.1**
	1.2nm,0.7s,baz=157,slow=5.4,SNR=9.9						
STKA	**Stephens Creek**	**88.89**	**231**	LR	LR	15 33 22.7	
	comp=Z,471nm,21.5s,baz=174,slow=30						
SCHQ	**Schefferville**	**95.57**	**21**	LR	LR	15 41 10.8	
	comp=Z,161nm,21.2s,baz=278,slow=33						
YKA	**Yellowknife Ar**	**98.07**	**355**	LR	LR	15 41 10.1	
	comp=Z,14nm,19.8s,baz=162,slow=32						
ASAR	**Alice Springs**	**99.46**	**232**	LR	LR	15 41 14.4	
	comp=Z,457nm,19.3s,baz=146,slow=32						
H01W1	**Cape Leeuwin H**	**101.32**	**211**	T	T	16 55 56.9	
	baz=153						
H01W2	**Cape Leeuwin H**	**101.32**	**211**	T	T	16 55 59.1	
	baz=153						
H01W3	**Cape Leeuwin H**	**101.33**	**211**	T	T	16 55 57.4	
	baz=153						
AKASG	**Malin Array Be**	**143.41**	**51**	PKP	PKPbc	15 08 12.1	+1.2
	0.2nm,0.3s,baz=272,slow=3.2,SNR=3.9						
NJ2	**Nanjing**	**144.29**	**277**	*e*PKP	**PKPdf**	**15 08 16.0**	**+0.2**
BR101	**Keskin Array S**	**146.55**	**70**	*e*PKPbc	**PKPbc**	**15 08 21.1**	**-0.1**
BRTR	**Keskin Array B**	**146.55**	**70**	PKPbc	**PKPbc**	**15 08 21.1**	**-0.1**
	3.9nm,1.0s,baz=224,slow=3.4,SNR=14						
WHN	**Wuhan**	**147.48**	**272**	PKPbc	**PKiKP**	**15 08 29.2**	**+3.2**
HHC	**Hu-ho-hao-te**	**151.56**	**292**	*e*PKPbc	**PKPdf**	**15 08 27.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**153.39**	**236**	PKPbc	**PKPbc**	**15 08 37.1**	**-1.4**
	0.4nm,0.7s,baz=198,slow=1.8,SNR=3.3						
KBZ	**Khabaz**	**153.49**	**62**	PKPbc	**PKiKP**	**15 08 37.9**	**-0.1**
	1.1nm,0.6s,baz=315,slow=7.1,SNR=2.3						
SONA0	**Songino Array**	**154.27**	**308**	*e*PKPbc	**PKiKP**	**15 08 39.7**	**0.0**
SONM	**Songino Array**	**154.27**	**308**	PKPbc	**PKiKP**	**15 08 39.7**	**0.0**
	0.5nm,0.7s,baz=96,slow=1.6,SNR=6.1						
CD2	**Chengdu**	**156.23**	**267**	PKP	**PKPdf**	**15 08 33.0**	**-1.5**
LZH	**Lanzhou**	**157.31**	**280**	*e*PKP	**PKPdf**	**15 08 29.7**	**-6.2**
LZH				pPKP	sPKPdf	15 08 40.2	+1.2
LZH				sPKP		15 08 47.0	
LZH				LR	LR		
	comp=N,130nm,18.1s						
LZH				LR	LR		
	comp=E,130nm,18.3s						
LZH				LR	LR		
	comp=Z,150nm,20.0s						
WMQ	**Urumqi**	**167.70**	**316**	*e*PKP	**PKPdf**	**15 08 46.2**	**+0.4**
WMQ				LR	LR		
	comp=Z,120nm,29.2s						

ROM 11 14:50:28.6±0.1**, 43°.818N**±0°.008×**12°.040E**±0°.006**, h9^{km}, ML2.0**/11**, Error ellipse: s-maj=1.0km s-min=0.2km az=23.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.16**	**302**	P	Pg	14 50 32.5	+0.4
SFI				S	Sg	14 50 35.7	+1.1
SFI				AML	AML		
	comp=E,188μm,0.5s						
SFI				AML	AML		
	comp=N,228μm,0.1s						
SFI				AML	AML		
	comp=E,1710μm,0.1s						
SFI				AML	AML		
	comp=N,889μm,0.1s						
SFI				AML	AML		
	comp=E,1012μm,0.1s						
SFI				AML	AML		
	comp=N,1715μm,0.1s						
SFI				AML	AML		
	comp=E,1012μm,0.1s						
SFI				AML	AML		
	comp=N,1715μm,0.1s						
SFI				AML	AML		
	comp=N,889μm,0.1s						
SFI				AML	AML		
	comp=E,1710μm,0.1s						
SFI				AML	AML		
	comp=E,1012μm,0.1s						
SFI				AML	AML		
	comp=N,1715μm,0.1s						
SFI				AML	AML		
	comp=N,889μm,0.1s						
SFI				AML	AML		
	comp=E,1710μm,0.1s						
ASQU	**Asqua**	**0.18**	**263**	P	Pg	14 50 33.1	+0.6
ASQU				S	Sg	14 50 36.8	+1.7
ASQU				AML	AML		
	comp=E,1380μm,0.8s						
ASQU				AML	AML		
	comp=N,1910μm,0.2s						
ASQU				AML	AML		
	comp=E,1380μm,0.8s						
ASQU				AML	AML		
	comp=N,1910μm,0.2s						
ASQU				AML	AML		
	comp=E,1380μm,0.8s						
ASQU				AML	AML		
	comp=N,1910μm,0.2s						
CPGN	**Carpegna, Ital**	**0.20**	**95**	P	Pg	14 50 33.5	+0.6
CPGN				S	Sg	14 50 37.5	+1.7

CPGN				AML	AML		
	comp=E,218µm,0.7s						
CPGN				AML	AML		
	comp=N,187µm,0.5s						
CPGN				AML	AML		
	comp=E,780µm,0.3s						
CPGN				AML	AML		
	comp=N,656µm,1.6s						
CPGN				AML	AML		
	comp=N,656µm,1.6s						
CPGN				AML	AML		
	comp=E,780µm,0.3s						
CPGN				AML	AML		
	comp=N,656µm,1.6s						
CPGN				AML	AML		
	comp=E,780µm,0.3s						
PARC	**Parchiule**	**0.22**	**140**	P	Pg	14 50 33.6	+0.4
PARC				S	Sg	14 50 37.9	+1.6
PARC				AML	AML		
	comp=E,152µm,0.2s						
PARC				AML	AML		
	comp=N,143µm,0.8s						
PARC				AML	AML		
	comp=E,456µm,0.3s						
PARC				AML	AML		
	comp=N,369µm,0.5s						
PARC				AML	AML		
	comp=N,369µm,0.5s						
PARC				AML	AML		
	comp=E,456µm,0.3s						
PARC				AML	AML		
	comp=N,369µm,0.5s						
PARC				AML	AML		
	comp=E,456µm,0.3s						
BADI	**Badiali**	**0.34**	**154**	P	Pg	14 50 35.8	+0.4
BADI				S	Sb	14 50 41.8	-0.7
BADI				AML	AML		
	comp=E,187µm,0.2s						
BADI				AML	AML		
	comp=N,128µm,0.4s						
BADI				AML	AML		
	comp=E,401µm,0.3s						
BADI				AML	AML		
	comp=N,378µm,1.2s						
BADI				AML	AML		
	comp=E,401µm,0.3s						
BADI				AML	AML		
	comp=N,378µm,1.2s						
BADI				AML	AML		
	comp=E,401µm,0.3s						
BADI				AML	AML		
	comp=N,378µm,1.2s						
PE3	**Peglio**	**0.35**	**110**	P	Pg	14 50 36.2	+0.6
PE3				S	Sb	14 50 42.3	-0.5
PE3				AML	AML		
	comp=E,150µm,0.4s						
PE3				AML	AML		
	comp=N,162µm,0.5s						
PE3				AML	AML		
	comp=E,680µm,0.5s						
PE3				AML	AML		
	comp=N,651µm,0.3s						
PE3				AML	AML		
	comp=E,680µm,0.5s						
PE3				AML	AML		
	comp=N,651µm,0.3s						
PE3				AML	AML		
	comp=E,680µm,0.5s						
PE3				AML	AML		
	comp=N,651µm,0.3s						
RUFI	**Rufina**	**0.38**	**273**	P	Pg	14 50 36.5	+0.3
RUFI				S	Sb	14 50 43.0	-0.7
ATPI	**Pietralunga -**	**0.45**	**144**	P	Pg	14 50 37.9	+0.4
ATPI				AML	AML		
	comp=E,114µm,0.4s						
ATPI				AML	AML		
	comp=N,98µm,0.2s						
ATPI				AML	AML		
	comp=N,98µm,0.2s						
ATPI				AML	AML		
	comp=E,114µm,0.4s						
ATPI				AML	AML		
	comp=N,98µm,0.2s						
ATPI				AML	AML		
	comp=E,114µm,0.4s						
PIEI	**Pieia**	**0.46**	**128**	P	Pg	14 50 37.8	+0.2
PIEI				AML	AML		
	comp=E,31µm,0.9s						
PIEI				AML	AML		
	comp=N,22µm,1.4s						
PIEI				AML	AML		
	comp=E,114µm,0.6s						
PIEI				AML	AML		
	comp=N,76µm,1.1s						
PIEI				AML	AML		
	comp=N,76µm,1.1s						
PIEI				AML	AML		
	comp=E,114µm,0.6s						
PIEI				AML	AML		
	comp=N,76µm,1.1s						
PIEI				AML	AML		
	comp=E,114µm,0.6s						
CAFI	**Castiglion Fio**	**0.49**	**186**	P	Pb	14 50 38.9	-0.6
CAFI				AML	AML		
	comp=E,44µm,0.5s						
CAFI				AML	AML		
	comp=N,31µm,0.7s						
CAFI				AML	AML		
	comp=E,186µm,0.2s						
CAFI				AML	AML		
	comp=N,126µm,1.4s						
CAFI				AML	AML		
	comp=E,186µm,0.2s						
CAFI				AML	AML		
	comp=N,126µm,1.4s						
CAFI				AML	AML		
	comp=E,186µm,0.2s						
CAFI				AML	AML		
	comp=N,126µm,1.4s						
ATVO	**AVT- Monte Val**	**0.51**	**148**	P	Pg	14 50 38.9	+0.4
ATVO				S	Sb	14 50 47.3	0.0
ATVO				AML	AML		
	comp=E,131µm,1.0s						
ATVO				AML	AML		
	comp=N,122µm,0.3s						
ATVO				AML	AML		
	comp=N,122µm,0.3s						
ATVO				AML	AML		
	comp=E,131µm,1.0s						
ATVO				AML	AML		
	comp=N,122µm,0.3s						
ATVO				AML	AML		
	comp=E,131µm,1.0s						
SEI	**Scarperia**	**0.55**	**296**	P	Pg	14 50 39.5	+0.2
SEI				S	Sb	14 50 48.4	0.0
MPAG	**Monte Paganucc**	**0.56**	**110**	P	Pg	14 50 39.8	+0.4
MPAG				S	Sb	14 50 48.7	0.0
BOB	**Bobbio (Coli)**	**2.09**	**298**	AML	AML		
	comp=N,52µm,1.5s						
BOB				AML	AML		
	comp=E,58µm,0.1s						
BOB				AML	AML		
	comp=N,52µm,1.5s						
BOB				AML	AML		
	comp=E,58µm,0.1s						
BOB				AML	AML		
	comp=N,52µm,1.5s						
BOB				AML	AML		
	comp=E,58µm,0.1s						

ROM 11 14:51:20.2±0.1, 43°.821N±0°.005×12°.040E±0°.006, h8^{km}, ML2.0/11, Error ellipse: s-maj=0.7km s-min=0.1km az=37.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**301**	P	Pg	14 51 23.9	+0.3
SFI				S	Sg	14 51 27.0	+1.1
SFI				AML	AML		
	comp=E,1710µm,0.1s						
SFI				AML	AML		
	comp=N,888µm,0.1s						
SFI				AML	AML		
	comp=E,1010µm,0.1s						
SFI				AML	AML		
	comp=N,1710µm,0.1s						
SFI				AML	AML		
	comp=E,1710µm,0.1s						
SFI				AML	AML		
	comp=N,889µm,0.1s						
SFI				AML	AML		
	comp=E,1012µm,0.1s						
SFI				AML	AML		
	comp=N,1715µm,0.1s						
SFI				AML	AML		
	comp=E,1710µm,0.1s						
SFI				AML	AML		
	comp=N,889µm,0.1s						
SFI				AML	AML		
	comp=E,1012µm,0.1s						
SFI				AML	AML		
	comp=N,1715µm,0.1s						
SFI				AML	AML		
	comp=E,1710µm,0.1s						
SFI				AML	AML		
	comp=N,889µm,0.1s						
SFI				AML	AML		
	comp=E,1012µm,0.1s						
SFI				AML	AML		
	comp=N,1715µm,0.1s						
ASQU	**Asqua**	**0.18**	**262**	P	Pg	14 51 24.6	+0.6
ASQU				S	Sg	14 51 28.2	+1.7
ASQU				AML	AML		
	comp=E,1380µm,0.8s						
ASQU				AML	AML		
	comp=N,1910µm,0.2s						
ASQU				AML	AML		
	comp=E,1380µm,0.8s						
ASQU				AML	AML		
	comp=N,1910µm,0.2s						
ASQU				AML	AML		
	comp=E,1380µm,0.8s						
ASQU				AML	AML		
	comp=N,1910µm,0.2s						
CPGN	**Carpegna, Ital**	**0.20**	**96**	P	Pg	14 51 25.2	+0.8
CPGN				S	Sg	14 51 29.1	+1.9
CPGN				AML	AML		
	comp=E,780µm,0.3s						
CPGN				AML	AML		
	comp=N,656µm,1.6s						
CPGN				AML	AML		
	comp=E,760µm,0.3s						
CPGN				AML	AML		
	comp=N,594µm,0.4s						
CPGN				AML	AML		
	comp=E,780µm,0.3s						
CPGN				AML	AML		
	comp=N,656µm,1.6s						
CPGN				AML	AML		
	comp=N,656µm,1.6s						
CPGN				AML	AML		
	comp=E,780µm,0.3s						
CPGN				AML	AML		
	comp=N,656µm,1.6s						
CPGN				AML	AML		
	comp=E,780µm,0.3s						
PARC	**Parchiule**	**0.23**	**140**	P	Pg	14 51 25.2	+0.5
PARC				S	Sg	14 51 29.4	+1.6
PARC				AML	AML		
	comp=E,456µm,0.3s						
PARC				AML	AML		
	comp=N,368µm,0.5s						
PARC				AML	AML		
	comp=E,456µm,0.3s						
PARC				AML	AML		
	comp=N,369µm,0.5s						
PARC				AML	AML		
	comp=N,369µm,0.5s						
PARC				AML	AML		
	comp=E,456µm,0.3s						
PARC				AML	AML		
	comp=N,369µm,0.5s						
PARC				AML	AML		
	comp=E,456µm,0.3s						
SSP9	**Sansepolcro**	**0.26**	**165**	P	Pb	14 51 26.2	-0.8
SSP9				S	Sb	14 51 30.7	-0.9
BADI	**Badiali**	**0.34**	**154**	P	Pg	14 51 27.3	+0.4
BADI				S	Sb	14 51 33.4	-0.7
BADI				AML	AML		
	comp=E,400µm,0.3s						
BADI				AML	AML		
	comp=N,378µm,1.2s						
BADI				AML	AML		
	comp=E,401µm,0.3s						
BADI				AML	AML		
	comp=N,378µm,1.2s						
BADI				AML	AML		
	comp=N,378µm,1.2s						
BADI				AML	AML		
	comp=E,401µm,0.3s						
BADI				AML	AML		
	comp=N,378µm,1.2s						
BADI				AML	AML		
	comp=E,401µm,0.3s						
PE3	**Peglio**	**0.35**	**111**	P	Pg	14 51 27.7	+0.6
PE3				S	Sb	14 51 33.9	-0.5
PE3				AML	AML		
	comp=E,680µm,0.5s						
PE3				AML	AML		
	comp=N,651µm,0.3s						
PE3				AML	AML		
	comp=N,651µm,0.3s						
PE3				AML	AML		
	comp=E,680µm,0.5s						
PE3				AML	AML		
	comp=N,651µm,0.3s						
PE3				AML	AML		
	comp=E,680µm,0.5s						
RUFI	**Rufina**	**0.38**	**273**	P	Pg	14 51 28.0	+0.4
RUFI				S	Sb	14 51 34.5	-0.8
ATPI	**Pietralunga -**	**0.45**	**145**	P	Pg	14 51 29.4	+0.4
ATPI				S	Sb	14 51 37.0	-0.3
ATPI				AML	AML		
	comp=E,128µm,0.4s						
ATPI				AML	AML		
	comp=N,98µm,0.2s						
PIEI	**Pieia**	**0.46**	**128**	P	Pg	14 51 29.6	+0.5
PIEI				AML	AML		
	comp=E,114µm,0.6s						
PIEI				AML	AML		
	comp=N,76µm,1.1s						
PIEI				AML	AML		
	comp=E,114µm,0.6s						
PIEI				AML	AML		
	comp=N,76µm,1.1s						
PIEI				AML	AML		
	comp=E,114µm,0.6s						
PIEI				AML	AML		
	comp=N,76µm,1.1s						
PIEI				AML	AML		
	comp=E,114µm,0.6s						
PIEI				AML	AML		
	comp=N,76µm,1.1s						
CAFI	**Castiglion Fio**	**0.49**	**186**	P	Pb	14 51 30.5	-0.7
CAFI				S	Sb	14 51 38.6	+0.1
CAFI				AML	AML		
	comp=E,186µm,0.2s						
CAFI				AML	AML		
	comp=N,126µm,1.4s						
CAFI				AML	AML		
	comp=E,186µm,0.2s						
CAFI				AML	AML		
	comp=N,126µm,1.4s						
CAFI				AML	AML		
	comp=N,126µm,1.4s						
CAFI				AML	AML		
	comp=E,186µm,0.2s						
CAFI				AML	AML		
	comp=N,126µm,1.4s						
CAFI				AML	AML		
	comp=E,186µm,0.2s						
BRIS	**BRISIGHELLA**	**0.50**	**311**	P	Pg	14 51 29.5	-0.4
BRIS				S	Sg	14 51 37.4	+0.8
BRIS				AML	AML		
	comp=E,272µm,1.1s						
BRIS				AML	AML		
	comp=N,214µm,0.3s						
BRIS				AML	AML		
	comp=E,272µm,1.1s						
BRIS				AML	AML		
	comp=N,214µm,0.3s						
BRIS				AML	AML		
	comp=E,272µm,1.1s						
BRIS				AML	AML		
	comp=N,214µm,0.3s						
ATVO	**AVT- Monte Val**	**0.51**	**149**	P	Pg	14 51 30.5	+0.4
ATVO				S	Sb	14 51 38.9	-0.1
ATVO				AML	AML		
	comp=E,131µm,1.0s						
ATVO				AML	AML		
	comp=N,122µm,0.3s						
ATVO				AML	AML		
	comp=E,131µm,1.0s						
ATVO				AML	AML		
	comp=N,122µm,0.3s						
ATVO				AML	AML		
	comp=E,131µm,1.0s						
ATVO				AML	AML		
	comp=N,122µm,0.3s						
ATMI	**Monte Miggiano**	**0.51**	**161**	P	Pg	14 51 30.3	+0.2
ATMI				S	Sb	14 51 38.8	-0.3
SEI	**Scarperia**	**0.55**	**296**	P	Pg	14 51 30.9	+0.1
SEI				S	Sb	14 51 39.8	-0.2
SEI				AML	AML		
	comp=E,366µm,0.3s						
SEI				AML	AML		
	comp=N,556µm,0.2s						
SEI				AML	AML		
	comp=E,366µm,0.3s						
SEI				AML	AML		
	comp=N,556µm,0.2s						
SEI				AML	AML		
	comp=E,366µm,0.3s						
SEI				AML	AML		
	comp=N,556µm,0.2s						
MPAG	**Monte Paganucc**	**0.56**	**110**	P	Pg	14 51 31.2	+0.2
MTCR	**Monte La Croce**	**0.78**	**286**	P	Pg	14 51 35.6	+0.4

ROM 11 14:52:06.9±0.1, 43°.82N±0°.01×12°.04E±0°.01, h8^{km}, ML1.4/2, Error ellipse: s-maj=1.4km s-min=0.2km az=26.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**303**	P	Pg	14 52 10.8	+0.4
SFI				S	Sg	14 52 13.7	+1.0
SFI				AML	AML		
	comp=E,148µm,1.3s						
SFI				AML	AML		
	comp=N,236µm,0.1s						
SFI				AML	AML		
	comp=E,148µm,1.3s						
SFI				AML	AML		
	comp=N,236µm,0.1s						
SFI				AML	AML		
	comp=N,236µm,0.1s						
SFI				AML	AML		
	comp=E,148µm,1.3s						
ASQU	**Asqua**	**0.18**	**264**	P	Pg	14 52 11.4	+0.7
ASQU				S	Sg	14 52 14.5	+1.3
ASQU				AML	AML		
	comp=E,176µm,0.8s						
ASQU				AML	AML		
	comp=N,258µm,0.2s						
ASQU				AML	AML		
	comp=E,176µm,0.8s						
ASQU				AML	AML		
	comp=N,258µm,0.2s						
ASQU				AML	AML		
	comp=E,176µm,0.8s						
ASQU				AML	AML		
	comp=N,258µm,0.2s						
CPGN	**Carpegna, Ital**	**0.21**	**94**	P	Pg	14 52 11.8	+0.6
PARC	**Parchiule**	**0.22**	**139**	P	Pg	14 52 12.0	+0.6
PARC				S	Sg	14 52 16.2	+1.7
RUFI	**Rufina**	**0.38**	**274**	P	Pg	14 52 14.7	+0.3
RUFI				S	Sb	14 52 21.2	-0.8
SEI	**Scarperia**	**0.55**	**296**	P	Pb	14 52 18.7	0.0
SEI				S	Sb	14 52 26.7	-0.1
FIU	**Minerbio Fiu**	**0.91**	**335**	AML	AML		
	comp=E,677µm,0.3s						
FIU				AML	AML		
	comp=E,677µm,0.3s						
FIU				AML	AML		
	comp=N,546µm,0.3s						
FIU				AML	AML		
	comp=E,677µm,0.3s						
FIU				AML	AML		
	comp=N,546µm,0.3s						
FIU				AML	AML		
	comp=N,546µm,0.3s						
VULT	**Monte Vulture**	**3.90**	**136**	AML	AML		
	comp=E,86µm,0.4s						
VULT				AML	AML		
	comp=N,95µm,0.1s						
VULT				AML	AML		
	comp=N,95µm,0.1s						
VULT				AML	AML		
	comp=E,86µm,0.4s						

MEX 11 14:57:40.7±0.4, 18°.18N×103°.09W, h16^{km}±5^{km}, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.26**	**294**	*e*P	Pg	14 57 45.7	-0.7
MMIG				*e*S	Sg	14 57 49.8	-0.6
EZ5V		**1.38**	**340**	*e*P	Pn	14 58 01.8	-3.8
EZ5V				*e*S	Sn	14 58 18.3	-5.3
ZIIG	**Zihuatanejo**	**1.65**	**110**	*e*P	Pn	14 58 05.3	-3.8
ZIIG				*i* S	Sn	14 58 25.5	-4.5
CJM	**Chamela**	**2.27**	**306**	*e*P	Pn	14 58 14.1	-3.4
CJM				*e*S	Sn	14 58 40.1	-5.0
ARIG	**Puente Sto Nin**	**2.61**	**87**	*e*P	Pn	14 58 19.8	-2.5
ARIG				*i* S	Sn	14 58 48.7	-5.1
ANIG	**Ahuacatlan**	**3.16**	**335**	*i* P	Pn	14 58 27.1	-2.8
ANIG				*e*S	Sn	14 59 03.8	-3.5

ROM 11 15:05:42.0±0.1, 43°.837N±0°.010×12°.032E±0°.007, h10^{km}, Md1.4/2, Error ellipse: s-maj=1.2km s-min=0.4km az=15.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.15**	**297**	P	Pg	15 05 45.8	+0.4
SFI				S	Sg	15 05 48.6	+0.9
SFI				AML	AML		
	comp=E,1134µm,0.7s						
SFI				AML	AML		
	comp=N,884µm,0.2s						
SFI				AML	AML		
	comp=E,814µm,0.2s						
SFI				AML	AML		
	comp=N,1305µm,0.1s						
SFI				AML	AML		
	comp=E,10660µm,0.7s						
SFI				AML	AML		
	comp=N,7220µm,0.1s						
SFI				AML	AML		
	comp=E,9275µm,0.2s						
SFI				AML	AML		
	comp=N,11905µm,0.1s						
SFI				END			
ASQU	**Asqua**	**0.18**	**257**	P	Pg	15 05 46.4	+0.5
ASQU				S	Sg	15 05 49.8	+1.2
ASQU				AML	AML		
	comp=E,1039µm,0.9s						
ASQU				AML	AML		
	comp=N,1935µm,0.2s						
ASQU				AML	AML		
	comp=E,9795µm,0.9s						
ASQU				AML	AML		
	comp=N,16000µm,0.3s						
ASQU				END			
CPGN	**Carpegna, Ital**	**0.21**	**100**	P	Pg	15 05 47.4	+0.9
CPGN				AML	AML		
	comp=E,510µm,0.3s						
CPGN				AML	AML		
	comp=N,594µm,1.6s						
CPGN				AML	AML		
	comp=E,6350µm,0.8s						
CPGN				AML	AML		
	comp=N,6600µm,0.6s						
CPGN				AML	AML		
	comp=E,6410µm,1.0s						
CPGN				AML	AML		

	comp=N,6410µm,1.6s						
PARC	**Parchiule**	**0.24**	**141**	P	Pg	15 05 47.4	+0.4
PARC				S	Sg	15 05 51.5	+1.3
PARC				AML	AML		
	comp=E,368µm,0.5s						
PARC				AML	AML		
	comp=N,392µm,0.5s						
PARC				AML	AML		
	comp=E,4260µm,0.2s						
PARC				AML	AML		
	comp=N,4940µm,1.6s						
PE3	**Peglio**	**0.36**	**113**	AML	AML		
	comp=N,7110µm,0.4s						
PE3				AML	AML		
	comp=E,474µm,0.5s						
PE3				AML	AML		
	comp=N,438µm,0.4s						
PE3				AML	AML		
	comp=E,11200µm,0.4s						
RUFI	**Rufina**	**0.38**	**271**	P	Pg	15 05 49.9	+0.4
RUFI				S	Sb	15 05 56.2	-0.6
RUFI				AML	AML		
	comp=E,1615µm,0.4s						
RUFI				AML	AML		
	comp=N,3060µm,0.5s						
PIEI	**Pieia**	**0.47**	**129**	P	Pg	15 05 51.7	+0.5
PIEI				S	Sb	15 05 58.9	-0.6
BRIS	**BRISIGHELLA**	**0.49**	**310**	AML	AML		
	comp=N,240µm,0.3s						
BRIS				AML	AML		
	comp=E,251µm,0.2s						
BRIS				AML	AML		
	comp=E,2615µm,1.0s						
BRIS				AML	AML		
	comp=N,2350µm,0.2s						
CAFI	**Castiglion Fio**	**0.51**	**185**	P	Pb	15 05 52.6	-0.5
CAFI				AML	AML		
	comp=E,166µm,0.2s						
CAFI				AML	AML		
	comp=N,118µm,0.2s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,934µm,0.8s						

ROM 11 15:05:54.5±0.1**,43°.831N**±0°.004×**12°.029E**±0°.005**, h8^{km},ML3.0**/8**,Error ellipse: s-maj=0.6km s-min=0.1km az=214.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.15**	**299**	P	Pg	15 05 58.1	+0.4
SFI				S	Sg	15 06 01.0	+1.0
SFI				AML	AML		
	comp=E,1134µm,0.7s						
SFI				AML	AML		
	comp=N,884µm,0.2s						
SFI				AML	AML		
	comp=E,814µm,0.2s						
SFI				AML	AML		
	comp=N,1305µm,0.1s						
SFI				AML	AML		
	comp=E,10660µm,0.7s						
SFI				AML	AML		
	comp=N,7220µm,0.1s						
SFI				AML	AML		
	comp=E,9275µm,0.2s						
SFI				AML	AML		
	comp=N,11905µm,0.1s						
SFI				AML	AML		
	comp=N,7220µm,0.1s						
SFI				AML	AML		
	comp=N,11905µm,0.1s						
SFI				AML	AML		
	comp=E,10625µm,0.7s						
SFI				AML	AML		
	comp=E,9280µm,0.2s						
SFI				AML	AML		
	comp=N,7220µm,0.1s						
SFI				AML	AML		
	comp=N,11905µm,0.1s						
SFI				AML	AML		
	comp=E,10660µm,0.7s						
SFI				AML	AML		
	comp=E,9275µm,0.2s						
ASQU	**Asqua**	**0.18**	**259**	P	Pg	15 05 58.8	+0.6
ASQU				S	Sg	15 06 02.0	+1.3
ASQU				AML	AML		
	comp=E,1039µm,0.9s						
ASQU				AML	AML		
	comp=N,1935µm,0.2s						
ASQU				AML	AML		
	comp=E,9795µm,0.9s						
ASQU				AML	AML		
	comp=N,16000µm,0.3s						
ASQU				AML	AML		
	comp=E,9795µm,0.9s						
ASQU				AML	AML		
	comp=N,16000µm,0.3s						
ASQU				AML	AML		
	comp=E,9795µm,0.9s						
ASQU				AML	AML		
	comp=N,16000µm,0.3s						
CPGN	**Carpegna, Ital**	**0.21**	**98**	P	Pg	15 05 59.5	+0.6
CPGN				S	Sg	15 06 03.4	+1.6
CPGN				AML	AML		
	comp=E,510µm,0.3s						
CPGN				AML	AML		
	comp=N,594µm,1.6s						
CPGN				AML	AML		
	comp=E,6350µm,0.8s						
CPGN				AML	AML		
	comp=N,6600µm,0.6s						
CPGN				AML	AML		
	comp=E,6410µm,1.0s						
CPGN				AML	AML		
	comp=N,6410µm,1.6s						
CPGN				AML	AML		
	comp=N,6335µm,1.6s						
CPGN				AML	AML		
	comp=E,6345µm,0.8s						
CPGN				AML	AML		
	comp=N,6600µm,0.6s						
CPGN				AML	AML		
	comp=E,6410µm,1.0s						
CPGN				AML	AML		
	comp=N,6410µm,1.6s						
CPGN				AML	AML		
	comp=E,6350µm,0.8s						
CPGN				AML	AML		
	comp=N,6600µm,0.6s						
CPGN				AML	AML		
	comp=E,6410µm,1.0s						
PARC	**Parchiule**	**0.24**	**140**	P	Pg	15 05 59.6	+0.4
PARC				S	Sg	15 06 03.9	+1.5
PARC				AML	AML		
	comp=E,368µm,0.5s						
PARC				AML	AML		
	comp=N,392µm,0.5s						
PARC				AML	AML		
	comp=E,4260µm,0.2s						
PARC				AML	AML		
	comp=N,4940µm,1.6s						
PARC				AML	AML		
	comp=N,4940µm,1.6s						
PARC				AML	AML		
	comp=E,4260µm,0.2s						
PARC				AML	AML		
	comp=N,4940µm,1.6s						
PARC				AML	AML		
	comp=E,4260µm,0.2s						
SSP9	**Sansepolcro**	**0.27**	**164**	P	Pb	15 06 01.4	-0.1
SSP9				S	Sb	15 06 05.0	-1.2
BADI	**Badiali**	**0.36**	**154**	P	Pg	15 06 02.2	+0.8
BADI				S	Sb	15 06 07.8	-1.1
PE3	**Peglio**	**0.36**	**112**	P	Pg	15 06 02.1	+0.5
PE3				S	Sb	15 06 08.5	-0.5
PE3				AML	AML		
	comp=E,474µm,0.5s						
PE3				AML	AML		
	comp=N,438µm,0.4s						
PE3				AML	AML		
	comp=E,11200µm,0.4s						
PE3				AML	AML		
	comp=N,7110µm,0.4s						
PE3				AML	AML		
	comp=E,11250µm,0.4s						
PE3				AML	AML		
	comp=N,7110µm,0.4s						
PE3				AML	AML		
	comp=E,11200µm,0.4s						
PE3				AML	AML		
	comp=N,7110µm,0.4s						
RUFI	**Rufina**	**0.38**	**272**	P	Pg	15 06 02.2	+0.4
RUFI				S	Sb	15 06 08.4	-0.9
RUFI				AML	AML		
	comp=E,1620µm,0.4s						
RUFI				AML	AML		
	comp=N,3060µm,0.5s						
RUFI				AML	AML		
	comp=N,3060µm,0.5s						
RUFI				AML	AML		
	comp=E,1615µm,0.4s						
RUFI				AML	AML		
	comp=N,3060µm,0.5s						
RUFI				AML	AML		
	comp=E,1620µm,0.4s						
ATPI	**Pietralunga -**	**0.47**	**144**	P	Pb	15 06 04.4	-0.5
ATPI				S	Sb	15 06 11.0	-1.0
PIEI	**Pieia**	**0.47**	**129**	P	Pg	15 06 04.3	+0.6
PIEI				S	Sb	15 06 11.2	-0.9
BRIS	**BRISIGHELLA**	**0.49**	**311**	P	Pg	15 06 03.3	-0.7
BRIS				S	Sg	15 06 11.0	+0.6
BRIS				AML	AML		
	comp=E,251µm,0.2s						
BRIS				AML	AML		
	comp=N,240µm,0.3s						
BRIS				AML	AML		
	comp=E,2615µm,1.0s						
BRIS				AML	AML		
	comp=N,2350µm,0.2s						
BRIS				AML	AML		
	comp=E,2615µm,1.0s						
BRIS				AML	AML		
	comp=N,2505µm,1.1s						
BRIS				AML	AML		
	comp=E,2615µm,1.0s						
BRIS				AML	AML		
	comp=N,2350µm,0.2s						
CAFI	**Castiglion Fio**	**0.50**	**185**	P	Pg	15 06 04.9	+0.7
CAFI				S	Sb	15 06 13.0	0.0
CAFI				AML	AML		
	comp=E,166µm,0.2s						
CAFI				AML	AML		
	comp=N,118µm,0.2s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,934µm,0.8s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,934µm,0.8s						
CAFI				AML	AML		
	comp=E,1420µm,0.6s						
CAFI				AML	AML		
	comp=N,934µm,0.8s						
ATMI	**Monte Miggiano**	**0.53**	**161**	P	Pg	15 06 05.2	+0.5
ATMI				S	Sb	15 06 13.4	-0.3
ATVO	**AVT- Monte Val**	**0.53**	**148**	P	Pb	15 06 05.4	-0.5
ATVO				S	Sb	15 06 13.4	-0.3
SEI	**Scarperia**	**0.54**	**295**	P	Pg	15 06 05.1	+0.3
SEI				S	Sb	15 06 13.8	-0.2
MPAG	**Monte Paganucc**	**0.57**	**111**	P	Pg	15 06 05.8	+0.4
MPAG				S	Sb	15 06 14.5	-0.5
ARVD	**Arcevia**	**0.74**	**116**	P	Pg	15 06 08.9	+0.2
ARVD				S	Sb	15 06 20.1	+0.2

WEL 11 15:06:57.9,39°S±10°×**18°0E**±1°4**,h33^{km},M3.4**/31**, ML3.6**/24**,MLv3.4**/31**,Error ellipse: s-maj=0.0km s-min=0.0km az=66.3,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**1.10**	**288**	P	Pn	15 07 17.3	+0.5
PUZ	**Puketiti**	**1.26**	**307**	P	Pn	15 07 18.8	-0.4
PUZ				S	Sn	15 07 33.6	-1.3
PRGZ	**Paritu Road**	**1.29**	**265**	P	Pn	15 07 19.9	+0.2
MHGZ	**Mahia Peninsul**	**1.31**	**255**	P	Pn	15 07 20.1	+0.3
WMGZ	**Waiomatatini S**	**1.34**	**318**	P	Pn	15 07 20.1	-0.2
TKGZ	**Te Karaka**	**1.38**	**286**	P	Pn	15 07 21.0	+0.3
TWGZ	**Tauwhareparae**	**1.38**	**298**	P	Pn	15 07 21.1	+0.2
RIGZ	**Rimuhau**	**1.39**	**274**	P	Pn	15 07 21.3	+0.3
KNZ	**Kokohu**	**1.47**	**262**	P	Pn	15 07 22.3	+0.3
PKGZ	**Pakihiroa**	**1.48**	**309**	P	Pn	15 07 22.3	0.0
MXZ	**Matakaoa Point**	**1.59**	**322**	P	Pn	15 07 23.7	0.0
MWZ	**Matawai**	**1.65**	**287**	P	Pn	15 07 24.5	0.0
MWZ				S	Sn	15 07 43.7	-0.9
RAGZ	**Rawiri**	**1.69**	**281**	P	Pn	15 07 25.3	+0.1
RUGZ	**Raukumara Rang**	**1.70**	**300**	P	Pn	15 07 25.3	+0.1
SNGZ	**Shannon Statio**	**1.72**	**271**	P	Pn	15 07 26.2	+0.7
HAZ	**Te Kaha**	**1.75**	**307**	P	Pn	15 07 25.8	0.0
WHHZ	**Waihua**	**1.81**	**261**	P	Pn	15 07 27.2	+0.5
RAHZ	**Arahi**	**1.92**	**267**	P	Pn	15 07 29.2	+1.0
URZ	**Urewera**	**1.99**	**286**	P	Pn	15 07 29.8	+0.7
RTZ	**Ruatahuna**	**2.01**	**275**	P	Pn	15 07 30.1	+0.5
ARHZ	**Aropaoanui**	**2.03**	**257**	P	Pn	15 07 30.1	+0.5
MTHZ	**Maungataniwha**	**2.11**	**268**	P	Pn	15 07 31.4	+0.6
MTHZ				S	Sn	15 07 54.7	-1.2
NMHZ	**Naumai**	**2.15**	**262**	P	Pn	15 07 32.2	+0.8
MUGZ	**Murupara**	**2.19**	**278**	P	Pn	15 07 32.8	+0.8
KAHZ	**Kahuranaki**	**2.28**	**244**	P	Pn	15 07 33.2	0.0
MCHZ	**McNeill Hill**	**2.29**	**254**	P	Pn	15 07 34.1	+0.7
MCHZ				S	Sn	15 07 59.9	-0.5
PXZ	**Pawanui**	**2.40**	**239**	P	Pn	15 07 33.9	-0.8
PXZ				S	Sn	15 08 01.2	-1.7
BKZ	**Black Stump Fm**	**2.40**	**261**	P	Pn	15 07 35.5	+0.7
MARZ	**Manawahe**	**2.40**	**290**	P	Pn	15 07 35.0	+0.1
MRHZ	**Matea Rd**	**2.44**	**269**	P	Pn	15 07 36.5	+1.2
TARZ	**Mount Tarawera**	**2.45**	**283**	P	Pn	15 07 36.8	+1.2
PRRZ	**Plateau Road**	**2.48**	**277**	P	Pn	15 07 36.5	+0.5
KWHZ	**Kaweka Forest**	**2.50**	**255**	P	Pn	15 07 36.6	+0.4
ALRZ	**Allen Road**	**2.51**	**275**	P	Pn	15 07 37.1	+0.7
OPRZ	**Ohinepanea**	**2.54**	**292**	P	Pn	15 07 36.9	+0.1
HLRZ	**Highlands Stat**	**2.56**	**282**	P	Pn	15 07 38.3	+1.2
KRHZ	**Kereru**	**2.59**	**251**	P	Pn	15 07 37.3	-0.1
HSRZ	**Hossack Road**	**2.63**	**280**	P	Pn	15 07 38.5	+0.5
PRHZ	**Porangahau**	**2.67**	**236**	P	Pn	15 07 36.7	-1.7
KARZ	**Kaharoa**	**2.71**	**286**	P	Pn	15 07 39.4	+0.3
BHHZ	**Black Hill Sta**	**2.78**	**255**	P	Pn	15 07 40.3	+0.2
RITZ	**Rihia Road**	**2.88**	**266**	P	Pn	15 07 42.1	+0.8
DVHZ	**Dannevirke**	**2.99**	**240**	P	Pn	15 07 42.2	-0.7
MOVZ	**Moawhango**	**3.00**	**258**	P	Pn	15 07 43.8	+0.6
TUVZ	**Tukino**	**3.06**	**261**	P	Pn	15 07 45.4	+1.4
NGZ	**Ngauruhoe**	**3.09**	**262**	P	Pn	15 07 44.9	+0.5
WHVZ	**Whangaehu Hut**	**3.11**	**260**	P	Pn	15 07 45.4	+0.7
FWVZ	**Far West T-bar**	**3.13**	**261**	P	Pn	15 07 45.7	+0.6
BFZ	**Birch Farm**	**3.14**	**233**	P	Pn	15 07 43.2	-1.8
POWZ	**Post Office Ro**	**3.30**	**241**	P	Pn	15 07 46.4	-0.9
TOZ	**Tahuroa Road**	**3.36**	**288**	P	Pn	15 07 47.4	-0.6
WAZ	**Wanganui**	**3.65**	**254**	P	Pn	15 07 53.7	+1.6
KUZ	**Kuaotunu**	**3.67**	**303**	P	Pn	15 07 51.9	-0.3
HIZ	**Hauiti**	**3.68**	**273**	P	Pn	15 07 53.1	+0.7
VRZ	**Vera Road**	**3.74**	**264**	P	Pn	15 07 53.7	+0.5
MKAZ	**Moumakai**	**3.86**	**295**	P	Pn	15 07 54.7	-0.2
MBAZ	**Motutapu North**	**4.21**	**298**	P	Pn	15 07 59.8	+0.1
PKE	**Pukeiti**	**4.34**	**263**	P	Pn	15 08 03.8	+2.3
OKCZ	**Okains Bay**	**6.91**	**223**	P	Pn	15 08 35.7	-1.1
ODZ	**Otahua Downs**	**9.08**	**224**	P	Pn	15 09 05.2	-1.3

KRSC 11 15:10:14.1±1.4**,54°.36N**×**165°.38E,h22^{km}**±19^{km}**,ML3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**2.14**	**277**	*e*P	Pb	15 10 50.7	-1.3
MKZ				*e*S	Sb	15 11 17.3	-0.7
KBTR	**Krutoberegovo**	**2.36**	**323**	*e*P	Pn	15 10 53.5	+2.1
KZV	**Kizimen**	**3.04**	**286**	*e*P	Pn	15 11 03.2	+2.3
KZV				*e*S	Sn	15 11 39.3	+2.6
TUMR	**Tumrok**	**3.16**	**289**	*e*P	Pn	15 11 05.4	+2.8
SPN	**Mys Shipunski**	**3.42**	**250**	*e*P	Pn	15 11 09.3	+3.3
SPN				*e*S	Sn	15 11 49.4	+3.5
NLC	**Nalytchevo**	**3.77**	**254**	*e*S	Sn	15 11 57.3	+2.8
SDLR	**Sedlovina**	**4.00**	**257**	*e*P	Pn	15 11 18.2	+4.1
SDLR				*e*S	Sn	15 12 05.9	+5.7
SMAR	**Somma**	**4.05**	**257**	*e*P	Pn	15 11 19.3	+4.4
SMAR				*e*S	Sn	15 12 07.3	+5.6
UGLR	**Uglovaya**	**4.05**	**256**	*e*P	Pn	15 11 19.2	+4.4
KRER	**Koryakskii**	**4.07**	**258**	*e*P	Pn	15 11 19.0	+3.9
KRER				*e*S	Sn	15 12 07.3	+5.2
AVH	**Avacha**	**4.08**	**257**	*e*P	Pn	15 11 19.6	+4.4
AVH				*e*S	Sn	15 12 08.2	+5.9
KRX	**Arik**	**4.11**	**259**	*e*P	Pn	15 11 20.0	+4.4
GNL	**Ganaly**	**4.43**	**264**	*e*P	Pn	15 11 24.2	+4.2
GNL				*e*S	Sn	15 12 16.5	+5.5
MTVR	**Mutnovka**	**4.70**	**249**	*e*P	Pn	15 11 27.6	+3.9
MTVR				*e*S	Sn	15 12 21.5	+4.0
ASAK	**Asacha**	**4.89**	**249**	*e*P	Pn	15 11 31.0	+4.7

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*ISCJB **11** 15:12:20.0±0.7,36°.15N±0°.05×140°.13E±0°.06,h62^{km}±5^{km}, mb3.4/5,Error ellipse: s-maj=9.6km s-min=6.3km az=45.0*
*JMA **11** 15:12:21.5±0.1,36°.18N×140°.11E,h51^{km}±1^{km},M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s39.00000°,δ74.00000°,λ81.00000°. NP2:ϕ_s250.00000°, δ19.00000°,λ120.00000°. Principal axes: T Plg60.0000°, Azm296.0000°; N Plg9.0000°, Azm42.0000°; P Plg28.0000°, Azm137.0000°;*
JMA Felt II J1.
*IDC **11** 15:12:22.4±3.2,36°.12N×139°.96E,h66^{km}±26^{km},mb3.2/5, mb1 3.3/6,mb1mx3.1/27,mbtmp3.4/6,ML1.6/1,MS3.5/1, Ms1 3.6/1,ms1mx2.7/11 Error ellipse: s-maj=28.8km s-min=24.7km az=72.0*
ISC 11 15:12:21.1±1.0**,36°.16N**±0°.06×**140°.12E**±0°.05**,h55^{km}**±7^{km}**, n22,σ1^{s}10**/25**,mb3.3**/5**,1C-4D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.10**	**42**	⇑P	**Pn**	**15 12 29.5**	**0.0**
JYT				S	**Sn**	**15 12 35.0**	**-0.6**
JAG	**Ashikaga**	**0.60**	**297**	⇓P	**Pn**	**15 12 33.9**	**+0.1**
JAG				S	**Sn**	**15 12 42.6**	**-0.5**
JKT	**Katashina**	**0.93**	**311**	⇓P	**Pn**	**15 12 38.1**	**0.0**
JKT				S	**Sn**	**15 12 50.7**	**+0.1**
JRY	**Ryogami san**	**0.99**	**262**	⇓P	**Pn**	**15 12 39.2**	**+0.3**
JRY				S	**Sn**	**15 12 52.1**	**+0.1**
JOD2	**Odawara 2**	**1.22**	**223**	S	**Sn**	**15 12 57.9**	**+0.4**
JFY	**Yanaizu**	**1.29**	**345**	⇓P	**Pn**	**15 12 43.2**	**+0.3**
JFY				S	**Sn**	**15 12 59.8**	**+0.6**
JFK	**Kawauchi**	**1.35**	**27**	P	**Pn**	**15 12 43.4**	**-0.3**
JFK				S	**Sn**	**15 12 59.7**	**-1.0**
JFT	**Otama**	**1.37**	**7**	P	**Pn**	**15 12 44.2**	**+0.2**
JFT				S	**Sn**	**15 13 01.1**	**0.0**
MJAR	**Matsushiro Arr**	**1.59**	**285**	P	**Pn**	**15 12 47.2**	**+0.4**
	3.9nm,0.3s,baz=110,slow=6.5,SNR=152						
MJAR				S	**Sn**	**15 13 04.2**	**-2.1**
	1.8nm,0.3s,baz=91,slow=28,SNR=12						
MAT	**Matsushiro**	**1.59**	**285**	P	**Pn**	**15 12 47.9**	**+1.0**
MAT				S	**Sn**	**15 13 03.1**	**-3.2**
USRK	**Ussuriysk Ar.**	**10.15**	**325**	P	**Pn**	**15 14 45.9**	**+1.8**
	0.1nm,0.3s,baz=130,slow=15,SNR=2.4						
SONM	**Songino Array**	**27.43**	**306**	P	**P**	**15 18 02.7**	**+1.0**
	0.3nm,0.6s,baz=104,slow=7.8,SNR=2.6						
H11N2	**WAKE ISLAND Hy**	**28.63**	**118**	T	T	15 48 19.6	
	baz=313,slow=75,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	**28.64**	**118**	T	T	15 48 22.2	
	baz=313,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**28.65**	**118**	T	T	15 48 20.3	
	baz=313,slow=75,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	**29.30**	**120**	T	T	15 49 09.3	
	baz=314,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.30**	**120**	T	T	15 49 09.5	
	baz=314,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.31**	**120**	T	T	15 49 10.5	
	baz=314,slow=76,SNR=8.9						
ZALV	**Zalesovo Beam**	**41.74**	**313**	P	**P**	**15 20 03.1**	**-1.4**
	0.4nm,0.4s,baz=79,slow=7.5,SNR=2.7						
MKAR	**Makanchi Array**	**43.71**	**303**	P	**P**	**15 20 20.2**	**-0.4**
	0.4nm,0.7s,baz=84,slow=12,SNR=3.3						
ILAR	**Eielson Array**	**50.79**	**32**	P	**P**	**15 21 15.7**	**+0.3**
	0.2nm,0.6s,baz=266,slow=5.4,SNR=3.8						
ILAR				LR	LR	15 41 44.6	
	comp=Z,47nm,21.3s,baz=138,slow=35						
WRA	**Warramunga Arr**	**56.06**	**187**	P	**P**	**15 21 54.1**	**-0.4**
	0.9nm,0.8s,baz=1.5,slow=6.9,SNR=3.6						

IDC 11 15:14:18.2±3.8**,5°.84S**×**149°.51E,h0^{km},mb3.5**/3**, mb1 3.8**/3**,mb1mx3.5**/18**,mbtmp3.6**/3**,Error ellipse: s-maj=126.2km s-min=32.1km az=107.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.35**	**225**	P	P	15 18 55.6	-0.7
	1.9nm,0.5s,baz=52,slow=11,SNR=11						
ASAR	**Alice Springs**	**23.23**	**219**	P	P	15 19 27.5	+0.2
	1.5nm,0.7s,baz=50,slow=8.5,SNR=18						
MKAR	**Makanchi Array**	**78.97**	**320**	P	P	15 26 24.0	0.0
	0.1nm,0.5s,baz=116,slow=5.6,SNR=2.2						
TORD	**Torodi Ar. Bea**	**147.46**	**285**	PKPbc	PKPbc	15 34 04.7	-0.5
	0.3nm,0.6s,baz=76,slow=6.1,SNR=2.6						

MAN 11 15:18:42.2,17°.99N×**121°.02E,h17^{km},mb4.2,ML3.0, MS2.7,1C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	**Conner**	**0.25**	**121**	*e*P	Pb	15 18 48.2	-0.1
APYP				*e*S	Sb	15 18 52.3	-0.1
CVP	**Callao Caves**	**0.82**	**110**	⇑*i*P	Pb	15 18 57.1	-0.9
CVP				*i* S	Sb	15 19 07.6	-1.1
SGCP	**Mt. Cagua**	**1.01**	**75**	*e*P	Pb	15 19 01.4	+0.1
SGCP				*e*S	Sn	15 19 15.4	-0.1
CAUP	**Cauayan**	**1.29**	**143**	*e*P	Pn	15 19 05.5	0.0
CAUP				*e*S	Sg	15 19 23.8	-0.3
PALP	**Palanan**	**1.63**	**124**	*e*P	Pn	15 19 10.2	0.0
PALP				*e*S	Sb	15 19 32.4	+0.3
SMPP	**San Manuel, Pa**	**1.86**	**190**	*e*P	Pn	15 19 11.3	-2.0
BOLP	**Bolinao**	**1.92**	**214**	*e*P	Pn	15 19 14.5	+0.4
BOLP				*e*S	Sn	15 19 38.7	+0.8

MEX 11 15:21:49.0±0.8**,16°.32N**×**95°.58W,h55^{km}**±14^{km}**,MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.75**	**223**	*e*P	Pn	15 22 01.8	-1.8
HUIG				*e*S	Sn	15 22 12.6	-1.5
CMIG	**Matias Romero**	**1.02**	**41**	*e*P	Pn	15 22 05.5	-1.6
CMIG				*e*S	Sn	15 22 18.3	-2.2
PANG	**Puerto Angel**	**1.08**	**233**	*e*P	Pn	15 22 06.6	-1.3
PANG				*e*S	Sn	15 22 19.5	-2.4
VHO	**Vista Hermosa**	**1.34**	**304**	*e*P	Pn	15 22 10.7	-0.9
VHO				*e*S	Sn	15 22 26.8	-1.7
PCIG		**2.35**	**105**	*e*P	Pn	15 22 24.3	-0.9
PCIG				*i* S	Sn	15 22 51.3	-1.5
TGIG		**2.40**	**79**	*i* P	Pn	15 22 23.7	-2.2
TGIG				*i* S	Sn	15 22 52.6	-1.6
CCIG	**Comitan**	**3.31**	**90**	*i* P	Pn	15 22 37.5	-0.9
CCIG				*i* S	Sn	15 23 14.8	-1.8

ROM 11 15:24:47.7±0.1**,43°.828N**±0°.006×**12°.028E**±0°.006**, h8^{km},ML1.6**/8**,Error ellipse: s-maj=0.8km s-min=0.1km az=207.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.15**	**300**	P	Pg	15 24 51.3	+0.3
SFI				S	Sg	15 24 54.1	+0.9
SFI				AML	AML		
	comp=E,458µm,0.8s						
SFI				AML	AML		
	comp=N,660µm,0.1s						
SFI				AML	AML		
	comp=E,458µm,0.8s						
SFI				AML	AML		
	comp=N,660µm,0.1s						
SFI				AML	AML		
	comp=N,660µm,0.1s						
SFI				AML	AML		
	comp=E,458µm,0.8s						
SFI				AML	AML		
	comp=N,660µm,0.1s						
SFI				AML	AML		

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                comp=E,458µm,0.8s
ASQU  Asqua            0.18 260  P      Pg     15 24 52.0 +0.7
ASQU                             S      Sg     15 24 55.3 +1.4
ASQU                             AML    AML
      comp=E,476µm,0.9s
ASQU                             AML    AML
      comp=N,810µm,0.3s
ASQU                             AML    AML
      comp=E,476µm,0.9s
ASQU                             AML    AML
      comp=N,810µm,0.3s
ASQU                             AML    AML
      comp=E,476µm,0.9s
ASQU                             AML    AML
      comp=N,810µm,0.3s
ASQU                             AML    AML
      comp=E,476µm,0.9s
ASQU                             AML    AML
      comp=N,810µm,0.3s
CPGN  Carpegna, Ital   0.21  97  P      Pg     15 24 52.9 +0.9
CPGN                             S      Sg     15 24 57.0 +2.0
CPGN                             AML    AML
      comp=E,215µm,1.4s
CPGN                             AML    AML
      comp=N,266µm,0.6s
PARC  Parchiule        0.23 140  P      Pg     15 24 52.8 +0.4
PARC                             S      Sg     15 24 57.2 +1.5
PARC                             AML    AML
      comp=E,172µm,0.3s
PARC                             AML    AML
      comp=N,161µm,0.4s
PARC                             AML    AML
      comp=E,172µm,0.3s
PARC                             AML    AML
      comp=N,161µm,0.4s
PARC                             AML    AML
      comp=E,172µm,0.3s
PARC                             AML    AML
      comp=N,161µm,0.4s
PARC                             AML    AML
      comp=E,172µm,0.3s
PARC                             AML    AML
      comp=N,161µm,0.4s
PE3   Peglio           0.36 111  P      Pg     15 24 55.2 +0.4
PE3                              S      Sb     15 25 01.5  -0.7
PE3                              AML    AML
      comp=E,478µm,0.5s
PE3                              AML    AML
      comp=N,226µm,0.5s
PE3                              AML    AML
      comp=E,477µm,0.5s
PE3                              AML    AML
      comp=N,226µm,0.5s
PE3                              AML    AML
      comp=E,477µm,0.5s
PE3                              AML    AML
      comp=N,226µm,0.5s
PE3                              AML    AML
      comp=E,477µm,0.5s
PE3                              AML    AML
      comp=N,226µm,0.5s
RUFI  Rufina           0.38 272  P      Pg     15 24 55.5 +0.4
RUFI                             S      Sb     15 25 01.8  -0.7
ATPI  Pietralunga -    0.46 144  P      Pb     15 24 57.4  -0.7
PIEI  Pieia            0.47 128  P      Pb     15 24 57.8  -0.4
PIEI                             S      Sb     15 25 04.1  -1.1
PIEI                             AML    AML
      comp=E,41µm,0.1s
PIEI                             AML    AML
      comp=N,36µm,0.3s
PIEI                             AML    AML
      comp=E,41µm,0.1s
PIEI                             AML    AML
      comp=N,36µm,0.3s
PIEI                             AML    AML
      comp=E,41µm,0.1s
PIEI                             AML    AML
      comp=N,36µm,0.3s
PIEI                             AML    AML
      comp=E,41µm,0.1s
PIEI                             AML    AML
      comp=N,36µm,0.3s
BRIS  BRISIGHELLA      0.49 311  P      Pg     15 24 56.8  -0.5
BRIS                             S      Sg     15 25 04.2 +0.5
CAFI  Castiglion Fio   0.50 185  P      Pb     15 24 58.1  -0.6
CAFI                             AML    AML
      comp=E,66µm,0.6s
CAFI                             AML    AML
      comp=N,41µm,1.1s
CAFI                             AML    AML
      comp=E,66µm,0.6s
CAFI                             AML    AML
      comp=N,41µm,1.1s
CAFI                             AML    AML
      comp=E,66µm,0.6s
CAFI                             AML    AML
      comp=N,41µm,1.1s
CAFI                             AML    AML
      comp=E,66µm,0.6s
CAFI                             AML    AML
      comp=N,41µm,1.1s
ATVO  AVT- Monte Val   0.52 148  P      Pg     15 24 58.3 +0.5
ATVO                             S      Sb     15 25 06.9 +0.1
ATVO                             AML    AML
      comp=E,48µm,1.6s
ATVO                             AML    AML
      comp=N,38µm,0.2s
ATVO                             AML    AML
      comp=N,38µm,0.2s
ATVO                             AML    AML
      comp=E,48µm,1.6s
ATVO                             AML    AML
      comp=N,38µm,0.2s
ATVO                             AML    AML
      comp=E,48µm,1.6s
SEI   Scarperia        0.54 295  P      Pb     15 24 58.8  -0.5
SEI                              S      Sb     15 25 07.0  -0.2
MPAG  Monte Paganucc   0.57 110  P      Pg     15 24 58.7 +0.1
MPAG                             S      Sb     15 25 07.4  -0.7
FIU   Minerbio Fiu     0.90 335  AML    AML
      comp=E,522µm,1.5s
FIU                              AML    AML
      comp=N,505µm,0.5s
FIU                              AML    AML
      comp=N,505µm,0.5s
FIU                              AML    AML
      comp=E,522µm,1.5s
FIU                              AML    AML
      comp=N,505µm,0.5s
FIU                              AML    AML
      comp=E,522µm,1.5s
```

ISCJB ***11*** *15:25:23.0±0.2, 44°.19N±0°.02×10°.07E±0°.03, h12km±2km,*
Error ellipse: s-maj=3.8km s-min=3.1km az=17.9
ROM ***11*** *15:25:22.7±0.1, 44°.221N±0°.004×10°.112E±0°.005,*
h10km, ML2.2/16, Error ellipse: s-maj=0.5km s-min=0.4km
az=192.0
GEN ***11*** *15:25:23.2, 44°.22N×10°.10E, h7km±2km, Ml2.3*
LDG ***11*** *15:25:23.6±0.1, 44°.22N×10°.11E, h2km, Md2.7/2, Ml2.7/15,*
Error ellipse: s-maj=1.5km s-min=1.2km az=34.0
ISC 11 15:25:22.8±0.8**, 44°.21N**±0°.02×**10°.09E**±0°.02**, h11**km±4km**,**
n54, σ1ˢ.41/83**, Northern Italy**

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Code  Station Name      Δ°   AZ°  Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
FIVI  Fivizzano        0.04  40  P      Pg     15 25 24.6  -0.3
FIVI                             S      Sg     15 25 25.7  -0.8
EQUI  Equi             0.06 129  P      Pg     15 25 25.2 +0.2
EQUI                             S      Sg     15 25 26.8   0.0
EQUI  Equi             0.06 129  P      Pg     15 25 25.3 +0.2
EQUI                             S      Sg     15 25 26.7   0.0
T0911 Castelpoggio (   0.09 186  P      Pg     15 25 26.1 +0.7
T0911                            S      Sg     15 25 28.2 +0.8
T0912 Minucciano (LU   0.10 112  P      Pg     15 25 25.7 +0.2
T0912                            S      Sg     15 25 27.6 +0.1
FOSD  Fosdinovo        0.12 214  P      Pg     15 25 26.6 +0.9
VLC   Villacollemand   0.22 102  P      Pg     15 25 27.7 +0.2
VLC                              S      Sg     15 25 31.0 +0.4
VLC                              AML    AML
      comp=E,483µm,0.5s
VLC                              AML    AML
      comp=N,410µm,0.8s
VLC                              AML    AML
      comp=E,498µm,0.5s
VLC                              AML    AML
      comp=N,422µm,0.8s
VLC                              AML    AML
      comp=E,482µm,0.5s
VLC                              AML    AML
      comp=N,411µm,0.8s
VLC                              AML    AML
      comp=E,498µm,0.5s
VLC                              AML    AML
      comp=N,422µm,0.8s
VLC                              AML    AML
      comp=N,422µm,0.8s
VLC                              AML    AML
      comp=E,482µm,0.5s
VLC                              AML    AML
      comp=E,498µm,0.5s
VLC                              AML    AML
      comp=N,411µm,0.8s
VLC                              AML    AML
      comp=N,411µm,0.8s
VLC                              AML    AML
      comp=E,482µm,0.5s
VLC                              AML    AML
      comp=E,498µm,0.5s
VLC                              AML    AML
      comp=N,422µm,0.8s
PLMA  Palmaria, Port   0.23 228  P      Pg     15 25 28.6 +1.0
PLMA                             S      Sg     15 25 32.2 +1.4
GRAM  Graiana          0.29 357  P      Pg     15 25 28.8 +0.1
GRAM                             S      Sg     15 25 32.8 +0.2
GRAM  Graiana          0.29 357  P      Pg     15 25 28.8 +0.1
GRAM                             S      Sg     15 25 32.8 +0.2
ERBM  Eremo            0.32  47  P      Pg     15 25 29.4 +0.2
ERBM                             S      Sb     15 25 34.6  -1.1
ERBM                             AML    AML
      comp=E,1585µm,0.2s
ERBM                             AML    AML
      comp=N,1605µm,0.3s
ERBM                             AML    AML
      comp=E,1585µm,0.2s
ERBM                             AML    AML
      comp=N,1605µm,0.3s
ERBM                             AML    AML
      comp=N,1605µm,0.3s
ERBM                             AML    AML
      comp=E,1585µm,0.2s
ERBM                             AML    AML
      comp=N,1605µm,0.3s
ERBM                             AML    AML
      comp=E,1585µm,0.2s
CARD  Cardoso          0.34 122  P      Pg     15 25 30.3 +0.7
CARD                             S      Sg     15 25 34.5 +0.5
CARD  Cardoso          0.34 122  P      Pg     15 25 30.0 +0.5
CARD                             S      Sg     15 25 34.5 +0.5
CARD                             AML    AML
      comp=E,790µm,1.2s
CARD                             AML    AML
      comp=N,719µm,0.1s
CARD                             AML    AML
      comp=E,790µm,1.2s
CARD                             AML    AML
      comp=N,719µm,0.1s
CARD                             AML    AML
      comp=E,790µm,1.2s
CARD                             AML    AML
      comp=N,719µm,0.1s
CARD                             AML    AML
      comp=E,790µm,1.2s
CARD                             AML    AML
      comp=N,719µm,0.1s
BDI   Bagni Di Lucca   0.39 111  P      Pg     15 25 30.9 +0.3
BDI                              S      Sg     15 25 36.5 +0.6
MAIM  Mastiano         0.41 135  P      Pg     15 25 31.5 +0.5
MAIM                             S      Sg     15 25 36.9 +0.5
MAIM  Mastiano         0.41 135  P      Pg     15 25 31.4 +0.5
MAIM                             S      Sg     15 25 37.2 +0.8
MAIM                             AML    AML
      comp=E,642µm,0.7s
MAIM                             AML    AML
      comp=N,560µm,0.4s
MAIM                             AML    AML
      comp=E,642µm,0.7s
MAIM                             AML    AML
      comp=N,560µm,0.4s
MAIM                             AML    AML
      comp=E,642µm,0.7s
MAIM                             AML    AML
      comp=N,560µm,0.4s
MAIM                             AML    AML
      comp=E,642µm,0.7s
MAIM                             AML    AML
      comp=N,560µm,0.4s
MSSA  Maissana         0.42 285  P      Pg     15 25 31.7 +0.6
MSSA                             S      Sg     15 25 37.7 +0.9
MSSA                             AML    AML
      comp=E,314µm,0.7s
MSSA                             AML    AML
      comp=N,300µm,0.4s
MSSA                             AML    AML
      comp=E,314µm,0.7s
MSSA                             AML    AML
      comp=N,300µm,0.4s
MSSA                             AML    AML
      comp=N,300µm,0.4s
MSSA                             AML    AML
      comp=E,314µm,0.7s
MSSA                             AML    AML
      comp=N,300µm,0.4s
MSSA                             AML    AML
      comp=E,314µm,0.7s
POPM  Popiglio         0.51 108  P      Pg     15 25 33.0 +0.2
POPM                             S      Sg     15 25 40.1 +0.6
POPM  Popiglio         0.51 108  P      Pg     15 25 33.0 +0.2
POPM                             S      Sg     15 25 40.1 +0.6
POPM                             AML    AML
      comp=E,610µm,0.8s
POPM                             AML    AML
      comp=N,810µm,0.6s
POPM                             AML    AML
      comp=E,610µm,0.8s
POPM                             AML    AML
      comp=N,810µm,0.6s
POPM                             AML    AML
      comp=N,810µm,0.6s
POPM                             AML    AML
      comp=E,610µm,0.8s
POPM                             AML    AML
      comp=N,810µm,0.6s
POPM                             AML    AML
      comp=E,610µm,0.8s
ZCCA  Zocca            0.66  77  AML    AML
      comp=E,307µm,0.4s
ZCCA                             AML    AML
      comp=E,307µm,0.4s
ZCCA                             AML    AML
      comp=N,351µm,0.5s
ZCCA                             AML    AML
      comp=N,351µm,0.5s
ZCCA                             AML    AML
      comp=E,307µm,0.4s
ZCCA                             AML    AML
      comp=N,351µm,0.5s
GORR  Gorreto          0.70 306  P      Pg     15 25 36.7 +0.4
GORR                             S      Sg     15 25 46.4 +0.9
GORR  Gorreto          0.70 306  P      Pg     15 25 36.6 +0.4
GORR                             S      Sg     15 25 45.8 +0.4
GORR                             AML    AML
      comp=E,280µm,1.4s
GORR                             AML    AML
      comp=N,311µm,1.4s
GORR                             AML    AML
      comp=E,281µm,1.4s
GORR                             AML    AML
      comp=N,311µm,1.4s
GORR                             AML    AML
      comp=N,311µm,1.4s
GORR                             AML    AML
      comp=E,281µm,1.4s
GORR                             AML    AML
      comp=N,311µm,1.4s
GORR                             AML    AML
      comp=E,281µm,1.4s
BOB   Bobbio (Coli)    0.72 321  P      Pg     15 25 37.0 +0.2
GROG  Isola di Gorgo   0.79 190  P      Pg     15 25 38.6 +0.6
PCP   Piancastagn      1.16 287  P      Pg     15 25 44.9  -0.1
PCP                              AML    AML
      comp=E,64µm,0.8s
PCP                              AML    AML
      comp=N,68µm,0.6s
PCP                              AML    AML
      comp=N,68µm,0.6s
PCP                              AML    AML
      comp=E,64µm,0.8s
PCP                              AML    AML
      comp=N,68µm,0.6s
PCP                              AML    AML
      comp=E,64µm,0.8s
QLNO  Quiliano         1.26 276  P      Pn     15 25 46.3  -0.1
QLNO                             AML    AML
      comp=E,71µm,1.0s
QLNO                             AML    AML
      comp=N,128µm,0.7s
QLNO                             AML    AML
      comp=N,128µm,0.7s
QLNO                             AML    AML
      comp=E,71µm,1.0s
QLNO                             AML    AML
      comp=N,128µm,0.7s
QLNO                             AML    AML
      comp=E,71µm,1.0s
RORO  Rocca Rossa      1.46 267  AML    AML
      comp=E,60µm,0.8s
RORO                             AML    AML
      comp=E,60µm,0.8s
RORO                             AML    AML
      comp=N,68µm,0.1s
RORO                             AML    AML
      comp=E,60µm,0.8s
RORO                             AML    AML
      comp=N,68µm,0.1s
RORO                             AML    AML
      comp=N,68µm,0.1s
CASP  Castiglione de   1.52 158  P      Pn     15 25 50.0 +0.1
CASP                             AML    AML
      comp=E,43µm,0.5s
CASP                             AML    AML
      comp=N,40µm,0.9s
CASP                             AML    AML
      comp=N,40µm,0.9s
CASP                             AML    AML
      comp=E,43µm,0.5s
CASP                             AML    AML
      comp=N,40µm,0.9s
CASP                             AML    AML
      comp=E,43µm,0.5s
GBOS  Grotte di Boss   1.62 272  AML    AML
      comp=E,22µm,0.3s
GBOS                             AML    AML
      comp=N,28µm,0.7s
GBOS                             AML    AML
      comp=E,22µm,0.3s
GBOS                             AML    AML
      comp=N,28µm,0.7s
GBOS                             AML    AML
      comp=E,22µm,0.3s
GBOS                             AML    AML
      comp=N,28µm,0.7s
NEGI  Seborga          1.76 259  P      Pn     15 25 53.7 +0.5
NEGI                             AML    AML
      comp=E,43µm,1.3s
NEGI                             AML    AML
      comp=N,73µm,0.6s
NEGI                             AML    AML
      comp=N,73µm,0.6s
NEGI                             AML    AML
      comp=E,43µm,1.3s
NEGI                             AML    AML
      comp=N,73µm,0.6s
NEGI                             AML    AML
      comp=E,43µm,1.3s
PGF   Pioggiola        1.84 206  ePn    Pn     15 25 55.0 +0.6
PGF                              eSn    Sn     15 26 17.0  -0.6
      comp=E,13nm,0.3s
SAOF  Saorge           1.84 264  P      Pn     15 25 54.9 +0.6
SAOF                             AML    AML
      comp=E,36µm,1.6s
SAOF                             AML    AML
      comp=N,45µm,0.8s
SAOF                             AML    AML
      comp=E,36µm,1.6s
SAOF                             AML    AML
      comp=N,45µm,0.8s
SAOF                             AML    AML
      comp=E,36µm,1.6s
SAOF                             AML    AML
      comp=N,45µm,0.8s
SBF   Sospel           1.94 261  ePn    Pn     15 25 56.5 +0.7
SBF                              eSn    Sn     15 26 20.3 +0.1
      comp=N,18nm,0.2s
MBDF  Montbardon       2.43 284  eP     Pn     15 26 05.5 +2.9
MBDF                             eSn    Sn     15 26 31.7  -0.7
      comp=N,15nm,0.7s
FRF   La Foret Royal   2.57 257  ePn    Pn     15 26 04.6 +0.3
FRF                              eSn    Sn     15 26 34.6  -1.0
      comp=N,8.1nm,0.2s
NRCA  Norcia           2.59 121  AML    AML
      comp=N,72µm,0.2s
NRCA                             AML    AML
      comp=E,126µm,0.1s
NRCA                             AML    AML
      comp=N,72µm,0.2s
NRCA                             AML    AML
      comp=N,72µm,0.2s
NRCA                             AML    AML
      comp=E,126µm,0.1s
NRCA                             AML    AML
      comp=E,126µm,0.1s
LPG   La Plagne        2.70 300  eP     Pb     15 26 10.4  -0.9
LPG                              eSn    Sn     15 26 38.0  -1.3
      comp=E,4.2nm,0.3s
LPL   La Plagne        2.72 300  eP     Pn     15 26 09.9 +3.2
LPL                              eSn    Sn     15 26 38.6  -1.1
      comp=E,4.0nm,0.3s
LMR   La Mourre        2.73 253  ePn    Pn     15 26 06.6   0.0
LMR                              eSn    Sn     15 26 37.5  -2.1
      comp=E,11nm,0.2s
FETA  Feichten         2.85   9  i Pn   Pb     15 26 15.0 +1.2
      comp=E,0.4nm,0.2s
DAVA  Damuels          3.09 357  i Pn   Pb     15 26 15.8  -2.0
      comp=E,1.6nm,0.2s
ORIF  Oris-en-Rattie   3.09 285  eP     Pn     15 26 14.1 +2.5
ORIF                             eSn    Sn     15 26 47.2  -1.4
      comp=E,4.1nm,0.4s
SQTA  Sankt Quirin     3.12  14  i Pn   Pb     15 26 17.9  -0.4
      comp=E,1.6nm,0.2s
MOTA  Moosalm          3.22  12  i Pn   Pb     15 26 18.0  -2.1
      comp=E,1.3nm,0.2s
WTTA  Wattenberg       3.25  19  i Pn   Pn     15 26 17.6 +3.8
      comp=E,1.7nm,0.3s
SMRF  Simiane la Rot   3.26 268  ePn    Pn     15 26 14.2 +0.3
SMRF                             eSn    Sn     15 26 51.3  -1.4
      comp=E,4.6nm,0.4s
WATA  Walderalm        3.30  18  i Pn   Pb     15 26 19.3  -2.2
      comp=E,1.1nm,0.2s
CABF  La Chapelle      3.70 312  eP     Pn     15 26 22.9 +2.9
CABF                             eSn    Sn     15 27 01.6  -2.1
      comp=E,1.8nm,0.4s
HINF  Hinteralfeld     4.26 329  eP     Pn     15 26 30.3 +2.7
HINF                             eSn    Sn     15 27 14.9  -2.4
      comp=E,3.3nm,0.3s
LASF  Ste Croix        4.49 271  ePn    Pn     15 26 31.2 +0.5
LASF                             eSn    Sn     15 27 20.9  -2.0
      comp=E,1.1nm,0.3s
CDF   Champ du Feu     4.64 336  eP     Pn     15 26 34.9 +2.1
CDF                              eSn    Sn     15 27 23.4  -3.3
      comp=E,5.6nm,0.4s
MOA   Molln            4.66  37  i Pn   Pn     15 26 36.2 +3.1
      comp=E,1.7nm,0.4s
ARSA  Arzberg          4.87  49  i Pn   Pn     15 26 38.2 +2.1
      comp=E,0.8nm,0.2s
SMF   Signal de Mont   5.03 301  eP     Pn     15 26 42.1 +4.0
```

ISCJB ***11*** *15:28:42.8±0.4, 24°.38N±0°.02×122°.07E±0°.02, h63km±4km,*
Error ellipse: s-maj=3.4km s-min=2.5km az=135.5
JMA ***11*** *15:28:42.1±0.1, 24°.33N×122°.03E, h69km±2km, M2.2*
TAP ***11*** *15:28:42.4, 24°.40N×121°.99E, h70km, ML3.0, C*
ISC 11 15:28:43.3±1.3**, 24°.37N**±0°.03×**122°.07E**±0°.02**, h61**km±7km**,**
n71, σ0ˢ.80/129**, Taiwan region**

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Code  Station Name      Δ°   AZ°  Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
EOS1  EOS1             0.19  18  P      Pn     15 28 53.2 +0.4
      baz=50
```

EOS1	baz=50			S	Sn	15 29 01.7	+2.0
NANB	Nanao baz=278	0.29	281	P	Pn	15 28 53.4	-0.1
NANB	baz=278			S	Sn	15 29 01.1	+0.2
ENA	Nanau baz=278	0.30	281	P	Pn	15 28 53.3	-0.3
ENA	baz=278			S	Sn	15 29 01.6	+0.5
TWC	Suao baz=332	0.31	320	P	Pn	15 28 53.6	0.0
TWC	baz=332			S	Sn	15 29 01.7	+0.6
NACB	Ninganchiao baz=235	0.47	245	P	Pn	15 28 54.2	-0.9
NACB	baz=235			S	Sn	15 29 03.5	-0.2
ILA	Ilan baz=335	0.49	324	P	Pn	15 28 56.2	+0.9
ILA	baz=335			S	Sn	15 29 05.4	+1.5
TWE	Neicheng baz=316	0.50	314	P	Pn	15 28 55.4	0.0
TWE	baz=316			S	Sn	15 29 04.7	+0.5
TWD	Chiawan baz=222	0.52	236	eP	Pn	15 28 55.5	-0.1
TWD	baz=222			S	Sn	15 29 05.0	+0.5
NTC	Toucheng baz=349	0.53	336	eP	Pn	15 28 55.2	-0.4
ENTT	Nioudou baz=297	0.53	301	P	Pn	15 28 55.5	-0.2
ENTT	baz=297			S	Sn	15 29 04.9	+0.1
SLBB	Yuanshan baz=318	0.55	314	P	Pn	15 28 56.0	+0.1
SLBB	baz=318			eS	Sn	15 29 05.9	+0.8
NDT	Datong Townshi baz=293	0.55	295	P	Pn	15 28 55.8	-0.2
NDT	baz=293			S	Sn	15 29 05.2	0.0
ETLH	Xiulin Townshi baz=248	0.56	253	P	Pn	15 28 55.6	-0.5
ETLH	baz=248			S	Sn	15 29 05.1	-0.4
NNSB	Datong baz=268	0.62	275	P	Pn	15 28 56.3	-0.6
NNSB	baz=268			eS	Sn	15 29 06.2	-0.6
NNS	Nan Shan baz=269	0.63	276	P	Pn	15 28 56.6	-0.4
NNS	baz=269			S	Sn	15 29 07.2	+0.1
TIPB	Shuangxi baz=357	0.64	340	i P	Pn	15 28 56.5	-0.5
TIPB	baz=357			eS	Sn	15 29 06.4	-0.4
TWB1	Santiao Chiao baz=10.0	0.64	354	P	Pn	15 28 56.1	-0.8
TWB1	baz=10.0			S	Sn	15 29 05.5	-1.3
YHNB	Yeheng baz=289	0.69	295	eP	Pn	15 28 57.2	-0.5
YHNB	baz=289			S	Sn	15 29 07.6	-0.5
NSK	Sanguang baz=289	0.71	295	P	Pn	15 28 57.4	-0.5
NSK	baz=289			eS	Sn	15 29 08.0	-0.5
NWF	Wu-fen Shan baz=355	0.74	340	eP	Pn	15 28 57.6	-0.6
NWF	baz=355			eS	Sn	15 29 08.6	-0.6
WFSB	Wu-fen Shan baz=355	0.74	340	eP	Pn	15 28 57.7	-0.5
WFSB	baz=355			eS	Sn	15 29 08.2	-0.8
TWA	Mucha baz=329	0.75	324	eP	Pn	15 28 58.2	0.0
TWA	baz=329			eS	Sn	15 29 09.2	0.0
WHF	Hehuan Shan baz=248	0.76	253	P	Pn	15 28 58.2	-0.7
WHF	baz=248			S	Sn	15 29 09.8	-0.4
TATO	Taipei baz=322	0.80	319	eP	Pn	15 28 58.4	-0.4
TATO	baz=322			eS	Sn	15 29 10.1	-0.1
ESL	Shilin baz=228	0.80	226	eP	Pn	15 28 57.3	-1.6
ESL	baz=228			S	Sn	15 29 09.0	-1.3
JYNG	Yonagunijimaku	0.81	84	P	Pn	15 28 58.8	-0.1
JYNG				eS	Sn	15 29 10.3	-0.1
TDCB	Techi baz=259	0.84	262	P	Pn	15 28 59.5	0.0
TDCB	baz=259			S	Sn	15 29 11.1	-0.2
YOJ	Yonaguni jima baz=77	0.87	84	eP	Pn	15 29 01.1	+1.4
YOJ	baz=77			eS	Sn	15 29 11.8	+0.1
YOJ	Yonaguni jima	0.87	84	P	Pn	15 28 59.5	-0.2
YOJ				S	Sn	15 29 11.9	+0.1
CHGB	Renai baz=239	0.87	249	P	Pn	15 28 59.7	-0.3
CHGB	baz=239			eS	Sn	15 29 12.4	+0.2
YM01	YM01 baz=343	0.89	330	P	Pn	15 28 59.5	-0.6
YM01	baz=343			S	Sn	15 29 11.8	-0.6
YM10	YM10 baz=343	0.91	330	P	Pn	15 28 59.7	-0.6
YM10	baz=343			eS	Sn	15 29 12.3	-0.5
YM05	YM05 baz=343	0.91	330	P	Pn	15 28 59.5	-0.8
YM05	baz=343			S	Sn	15 29 12.1	-0.7
EGFH	Guangfu baz=223	0.91	220	eS	Sn	15 29 11.8	-0.9
YM08	YM08 baz=344	0.92	332	eP	Pn	15 28 59.6	-0.8
YM08	baz=344			eS	Sn	15 29 11.7	-1.4
TWS1	Kuangyinshan baz=316	0.93	321	P	Pn	15 29 00.2	-0.3
TWS1	baz=316			eS	Sn	15 29 13.6	+0.3
YM03	YM03 baz=341	0.94	329	eP	Pn	15 29 00.4	-0.2
YM03	baz=341			eS	Sn	15 29 13.8	+0.4
ANP	Anpu baz=340	0.95	329	eP	Pn	15 29 00.4	-0.5
ANP	baz=340			eS	Sn	15 29 13.3	-0.5
NTST	Danshui baz=336	0.97	325	eS	Sn	15 29 14.2	+0.2
LIOB	Emei baz=287	0.99	286	eP	Pn	15 29 01.0	-0.3
LIOB	baz=287			eS	Sn	15 29 14.8	+0.1
TWY	Chenhua baz=349	0.99	335	eS	Sn	15 29 14.2	-0.5
NCU	National Centr baz=309	1.00	307	eS	Sn	15 29 14.8	0.0
NSTT	Nanjuang baz=286	1.00	285	eP	Pn	15 29 01.2	-0.2
NSTT	baz=286			S	Sn	15 29 14.9	+0.1
WHP	Taichung City baz=262	1.02	265	eP	Pn	15 29 02.5	+0.7
WHP	baz=262			eS	Sn	15 29 16.1	+0.6
VWDT	VWDT baz=224	1.04	234	eP	Pn	15 29 01.4	-0.5
VWDT	baz=224			eS	Sn	15 29 15.5	-0.4
HGSD	Ruisui baz=219	1.05	214	eP	Pn	15 29 01.3	-0.8
HGSD	baz=219			eS	Sn	15 29 15.6	-0.4
DPDB	Guoxing baz=247	1.09	252	eP	Pn	15 29 02.5	-0.1
DPDB	baz=247			eS	Sn	15 29 17.6	+0.5
EHY	Hungye baz=222	1.10	218	eP	Pn	15 29 01.0	-1.7
EHY	baz=222			S	Sn	15 29 15.1	-2.0
SMLT	Sun Moon Lake baz=233	1.17	246	eP	Pn	15 29 03.9	+0.2
SSLB	Suanglung baz=234	1.17	240	eP	Pn	15 29 04.4	+0.7
TYC	Yuchr baz=238	1.20	247	eP	Pn	15 29 03.9	0.0
TYC	baz=238			eS	Sn	15 29 19.4	0.0
YULB	Yu-li baz=218	1.20	216	eP	Pn	15 29 02.4	-1.7
YULB	baz=218			eS	Sn	15 29 17.9	-1.6
TWF1	Yuli baz=217	1.23	215	eP	Pn	15 29 03.1	-1.4
TWF1	baz=217			eS	Sn	15 29 18.8	-1.5
WHYT	Xinyi Township baz=229	1.30	239	eP	Pn	15 29 06.2	+0.8
WHYT	baz=229			eS	Sn	15 29 23.3	+1.4
WJS	Zhushan baz=255	1.34	246	eP	Pn	15 29 06.5	+0.6
WJS	baz=255			eS	Sn	15 29 24.0	+1.2
YUS	Yu-Shan baz=217	1.34	229	P	Pn	15 29 06.2	-0.2
YUS	baz=217			S	Sn	15 29 22.8	-0.9
WNT	Mingjian baz=257	1.35	249	S	Sn	15 29 24.6	+1.4
CHN5	Tsauling baz=226	1.48	239	eP	Pn	15 29 08.5	+0.6
CHN5	baz=226			eS	Sn	15 29 28.2	+1.8
ELDTW	Lidau baz=215	1.52	219	eP	Pn	15 29 07.1	-1.3
ELDTW	baz=215			eS	Sn	15 29 26.3	-1.0
IRIF	Iriomote-Funau	1.52	91	P	Pn	15 29 07.9	-0.4
IRIF				eS	Sn	15 29 27.2	+0.1
WGK	Gukeng baz=253	1.53	244	S	Sn	15 29 29.6	+2.2
WDLH	Douliu baz=254	1.55	244	eP	Pn	15 29 09.3	+0.5
WDLH	baz=254			eS	Sn	15 29 29.3	+1.4
RLNB	Erlin baz=261	1.63	253	eS	Sn	15 29 30.0	+0.2
JKRS	Kuro-shima	1.78	94	P	Pn	15 29 12.0	+0.2
JKRS				S	Sn	15 29 34.3	+0.9
TWK	Hsinying baz=229	1.81	233	eP	Pn	15 29 13.2	+0.9
TWK	baz=229			eS	Sn	15 29 34.9	+0.5
WSF	Szhu baz=254	1.84	247	eS	Sn	15 29 34.6	-0.1
CHN1	Nanshi baz=226	1.84	230	eP	Pn	15 29 13.9	+1.3
CHN1	baz=226			S	Sn	15 29 36.0	+1.2
SGST	Jiashian baz=223	1.87	227	eS	Sn	15 29 36.5	+0.9
SLGT	Liugui baz=220	1.89	224	eP	Pn	15 29 14.5	+1.2
SLGT	baz=220			eS	Sn	15 29 37.0	+0.9
JIJ	Ishigaki jima	1.90	90	P	Pn	15 29 12.9	-0.4
JIJ				eS	Sn	15 29 36.1	-0.1
CHN8	Yiju baz=248	1.98	239	eS	Sn	15 29 39.0	+0.8

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*NSSC **11** 15:37:41.3±0.8, 33°.88N×35°.75E, h4^{km}±167^{km}, ML1.4*
*ISCJB **11** 15:37:42.1±1.8, 33°.81N±0°.05×35°.7E±0°.1, h22^{km}±14^{km},*
Error ellipse: s-maj=15.5km s-min=8.0km az=163.0
*GRAL **11** 15:37:42.8±0.3, 33°.80N×35°.77E, h17^{km}±3^{km}, MD2.5*
ISC 11 15:37:42.4±1.1, **33°.83N**±0°.05×**35°.78E**±0°.06, **h15**^{km}±11^{km},
n7, σ0^{s}.63/12, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.12	304	eP	Pb	15 37 46.6	0.0
BHL				eS	Sg	15 37 49.4	+0.8
DQRL	Deir Qamar	0.21	233	eP	Pg	15 37 47.2	-0.2
RCY	Rachaya	0.34	172	eP	Pg	15 37 48.9	-0.6
RCY				eS	Sg	15 37 53.5	-0.9
BRBR	Barbar	0.45	161	eP	Pg	15 37 51.1	-0.3
BRBR				eS	Sg	15 37 58.1	+0.6
BRBR	comp=E,14nm,0.4s			AML	AML	15 37 59.7	
BRBR	comp=N,30nm,0.3s			AML	AML	15 37 60.0	
HWQ	Hawqa	0.46	18	eP	Pb	15 37 52.0	-0.4
QASN	Qassioun	0.51	126	eP	Pg	15 37 52.3	-0.3
QASN				eS	Sg	15 37 59.7	+0.2
QASN	comp=E,73nm,0.3s			AML	AML	15 38 03.5	
QASN	comp=N,52nm,0.4s			AML	AML	15 38 11.0	
TOTH	TOTAH	0.72	131	eP	Pb	15 37 57.0	+0.3
TOTH				eS	Sb	15 38 07.1	+0.7
TOTH	comp=N,9.9nm,0.4s			AML	AML	15 38 16.2	
TOTH	comp=E,7.1nm,0.4s			AML	AML	15 38 17.2	

WEL 11 15:44:28.5±0.5, **32°S**±9°×**18°0W**±1°9, **h33**^{km}, **M4.6**/14,
mB5.1/5, **ML4.9**/14, **MLv4.6**/14, **Mw(mB)4.4**/5, **Error ellipse: s-maj=0.0km s-min=0.0km az=113.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.43	26	P	Pn	15 45 19.3	-0.3
GLKZ				S	Sn	15 45 58.1	-1.0
MXZ	Matakaoa Point	5.45	197	P	Pn	15 45 51.3	+3.9
WMGZ	Waiomatatini S	5.67	196	P	Pn	15 45 51.9	+1.5
HAZ	Te Kaha	5.78	201	P	Pn	15 45 53.0	+1.2
PKGZ	Pakihiroa	5.82	198	P	Pn	15 45 52.9	+0.4
PKGZ				S	Sn	15 46 54.5	-3.6
PUZ	Puketiti	5.95	196	P	Pn	15 45 53.9	-0.3
RUGZ	Raukumara Rang	6.00	201	P	Pn	15 45 56.2	+1.1
TWGZ	Tauwhareparae	6.12	198	P	Pn	15 45 56.6	+0.1
TWGZ				S	Sn	15 47 03.4	-2.0
WCZ	Waipu Caves	6.12	233	P	Pn	15 45 54.3	-2.3
OPRZ	Ohinepanea	6.29	209	P	Pn	15 46 00.7	+1.8
CNGZ	Carnagh Statio	6.35	195	P	Pn	15 45 58.9	-0.8
MARZ	Manawahe	6.37	207	P	Pn	15 46 03.4	+3.4
MWZ	Matawai	6.39	200	P	Pn	15 45 59.8	-0.5
TKGZ	Te Karaka	6.40	198	P	Pn	15 45 59.4	-1.0
URZ	Urewera	6.45	203	P	Pn	15 46 00.5	-0.6
URZ				S	Sn	15 47 13.4	-0.1
TOZ	Tahuroa Road	6.67	215	P	Pn	15 46 12.1	+8.1
RIGZ	Rimuhau	6.67	198	P	Pn	15 46 05.0	+0.8
MUGZ	Murupara	6.76	205	P	Pn	15 46 07.9	+2.5
RTZ	Ruatahuna	6.82	203	P	Pn	15 46 05.0	-1.2
PRGZ	Paritu Road	6.85	196	P	Pn	15 46 08.2	+1.7
SNGZ	Shannon Statio	6.86	200	P	Pn	15 46 06.9	+0.2
PRRZ	Plateau Road	6.92	207	P	Pn	15 46 09.2	+1.7
KNZ	Kokohu	6.99	197	P	Pn	15 46 10.0	+1.5
WPRZ	Whakapapatarin	7.03	208	P	Pn	15 46 12.9	+3.8
RAHZ	Arahi	7.06	201	P	Pn	15 46 09.1	-0.3
MHGZ	Mahia Peninsul	7.06	196	P	Pn	15 46 11.1	+1.7
MTHZ	Maungataniwha	7.08	203	P	Pn	15 46 08.5	-1.3
WHHZ	Waihua	7.16	200	P	Pn	15 46 11.9	+1.1
MRHZ	Matea Rd	7.21	205	P	Pn	15 46 13.1	+1.6
NMHZ	Naumai	7.31	202	P	Pn	15 46 14.8	+1.8
ARHZ	Aropaoanui	7.40	201	P	Pn	15 46 14.7	+0.5
BKZ	Black Stump Fm	7.48	204	P	Pn	15 46 16.7	+1.5
HIZ	Hauiti	7.60	215	P	Pn	15 46 22.2	+5.3
MCHZ	McNeill Hill	7.66	202	P	Pn	15 46 18.5	+0.8
KWHZ	Kaweka Forest	7.73	203	P	Pn	15 46 19.2	+0.5
BHHZ	Black Hill Sta	7.91	205	P	Pn	15 46 21.2	0.0
KAHZ	Kahuranaki	7.93	200	P	Pn	15 46 21.2	-0.2
KRHZ	Kereru	7.95	203	P	Pn	15 46 21.2	-0.4
PXZ	Pawanui	8.15	199	P	Pn	15 46 24.0	-0.4
BFZ	Birch Farm	8.93	201	P	Pn	15 46 33.8	-1.4
MRZ	Mangatainoka R	9.13	204	P	Pn	15 46 35.4	-2.4
CTZ	Chatham Island	11.60	169	P	Pn	15 47 07.4	-4.3

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*ISCJB **11** 15:48:26.7±0.3, 24°.49N±0°.02×122°.62E±0°.01, h90^{km}±3^{km},*
mb3.5/6, Error ellipse: s-maj=3.0km s-min=2.1km az=163.9
*JMA **11** 15:48:26.9±0.1, 24°.41N×122°.58E, h87^{km}±2^{km}, M3.3*
*TAP **11** 15:48:27.1, 24°.47N×122°.62E, h89^{km}, ML4.2, C*
*IDC **11** 15:48:32.3±8.9, 24°.61N×122°.84E, h147^{km}±92^{km}, mb3.2/6,*
mb1 3.3/7, mb1mx3.1/41, mbtmp3.7/7, Error ellipse:
s-maj=65.1km s-min=17.9km az=69.0
ISC 11 15:48:26.9±0.8, **24°.48N**±0°.03×**122°.61E**±0°.02, **h88**^{km}±5^{km},
n121, σ1^{s}.12/219, **mb3.5**/6, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.30	95	P	Pn	15 48 40.3	+0.2
JYNG				eS	Sn	15 48 50.1	+0.2
YOJ	Yonaguni jima baz=91	0.36	92	P	Pn	15 48 40.8	+0.3
YOJ	baz=91			S	Sn	15 48 50.4	-0.1
YOJ	Yonaguni jima	0.36	92	P	Pn	15 48 40.7	+0.2
YOJ				eS	Sn	15 48 50.3	-0.2
EOS1	EOS1 baz=283	0.45	279	P	Pn	15 48 41.7	+0.7
EOS1	baz=283			eS	Sn	15 48 52.6	+1.1
TWB1	Santiao Chiao baz=316	0.78	313	eP	Pn	15 48 44.1	+0.1
TWB1	baz=316			eS	Sn	15 48 56.0	-0.7
NANB	Nanao baz=263	0.79	267	P	Pn	15 48 44.3	+0.2
NANB	baz=263			S	Sn	15 48 57.4	+0.4
ENA	Nanau baz=263	0.80	267	eP	Pn	15 48 44.8	+0.6
ENA	baz=263			S	Sn	15 48 57.6	+0.5
NTC	Toucheng baz=297	0.80	298	eP	Pn	15 48 44.9	+0.6
NTC	baz=297			S	Sn	15 48 57.3	0.0
ILA	Ilan baz=290	0.84	290	eS	Sn	15 48 57.9	0.0
TIPB	Shuangxi baz=304	0.87	305	P	Pn	15 48 45.3	+0.2
TIPB	baz=304			S	Sn	15 48 58.1	-0.5
TWE	Neicheng baz=286	0.89	286	P	Pn	15 48 45.7	+0.5
TWE	baz=286			S	Sn	15 48 59.2	+0.2
SLBB	Yuanshan baz=292	0.93	287	P	Pn	15 48 46.4	+0.6
SLBB	baz=292			eS	Sn	15 48 59.9	+0.1
NWF	Wu-fen Shan baz=301	0.96	308	eP	Pn	15 48 47.0	+0.9
NWF	baz=301			eS	Sn	15 49 00.1	-0.4
WFSB	Wu-fen Shan baz=301	0.96	308	eP	Pn	15 48 46.7	+0.6
WFSB	baz=301			eS	Sn	15 49 00.8	+0.4
ENTT	Nioudou baz=284	0.97	280	P	Pn	15 48 47.0	+0.9
ENTT	baz=284			eS	Sn	15 49 00.8	+0.4
NACB	Ninganchiao baz=245	0.98	252	P	Pn	15 48 45.9	-0.3
NACB	baz=245			S	Sn	15 48 59.9	-0.7
NDT	Datong Townshi baz=281	1.01	277	eP	Pn	15 48 47.1	+0.5
NDT	baz=281			eS	Sn	15 49 01.9	+0.5
TWD	Chiawan baz=247	1.01	247	P	Pn	15 48 46.3	-0.3
TWD	baz=247			S	Sn	15 49 00.3	-0.9
IRIF	Iriomote-Funau	1.03	98	P	Pn	15 48 47.2	+0.4
IRIF				S	Sn	15 49 01.9	+0.2
HWA	Hwalien baz=241	1.04	242	eP	Pn	15 48 47.1	+0.1
HWA	baz=241			eS	Sn	15 49 02.5	+0.4
ETLH	Xiulin Townshi baz=250	1.06	256	P	Pn	15 48 47.3	-0.1
ETLH	baz=250			eS	Sn	15 49 02.4	-0.3
ENLB	Shoufeng baz=238	1.08	238	eS	Sn	15 49 01.1	-1.7
NNSB	Datong baz=261	1.12	268	P	Pn	15 48 48.1	+0.1
NNSB	baz=261			eS	Sn	15 49 03.9	0.0
NNS	Nan Shan baz=262	1.13	268	P	Pn	15 48 48.4	+0.3
NNS	baz=262			S	Sn	15 49 04.2	+0.2
TATO	Taipei baz=296	1.14	296	P	Pn	15 48 48.4	+0.3
TATO	baz=296			S	Sn	15 49 03.2	-0.7
YHNB	Yeheng baz=279	1.14	280	eP	Pn	15 48 49.0	+0.8
YHNB	baz=279			S	Sn	15 49 04.4	+0.2
TAP	Taipei baz=290	1.15	299	eP	Pn	15 48 47.6	-0.6
TAP	baz=290			eS	Sn	15 49 04.2	-0.1
YM01	YM01 baz=297	1.16	305	P	Pn	15 48 48.9	+0.5
YM01	baz=297			eS	Sn	15 49 04.4	-0.1
NSK	Sanguang baz=280	1.16	280	eP	Pn	15 48 48.9	+0.5
NSK	baz=280			eS	Sn	15 49 04.8	+0.3
HATJ	Hateruma jima	1.17	111	S	Sn	15 49 05.2	+0.6
YM08	YM08 baz=300	1.17	308	P	Pn	15 48 48.7	+0.2
YM08	baz=300			eS	Sn	15 49 04.1	-0.6
YM10	YM10 baz=297	1.17	305	eP	Pn	15 48 49.1	+0.5
YM10	baz=297			S	Sn	15 49 04.7	-0.1
YM05	YM05 baz=298	1.17	306	eP	Pn	15 48 49.0	+0.4
YM05	baz=298			eS	Sn	15 49 04.5	-0.3
YM03	YM03 baz=297	1.20	306	eP	Pn	15 48 49.1	+0.2
YM03	baz=297			eS	Sn	15 49 05.5	0.0
TWY	Chenhua baz=305	1.22	311	eP	Pn	15 48 50.6	+1.6
TWY	baz=305			S	Sn	15 49 07.1	+1.4
ANP	Anpu baz=297	1.22	306	eP	Pn	15 48 49.6	+0.4
ANP	baz=297			eS	Sn	15 49 06.2	+0.4
PCYT	Pengchaiyu baz=336	1.25	337	eP	Pn	15 48 50.8	+1.3
TWS1	Kuangyinshan baz=300	1.25	300	eP	Pn	15 48 50.1	+0.6
TWS1	baz=300			S	Sn	15 49 06.4	0.0
NTST	Danshui baz=296	1.26	303	eP	Pn	15 48 49.9	+0.3
NTST	baz=296			S	Sn	15 49 06.7	+0.1
ESL	Shilin baz=244	1.26	239	P	Pn	15 48 49.2	-0.5
ESL	baz=244			S	Sn	15 49 05.8	-0.9
WHF	Hehuan Shan baz=261	1.27	255	P	Pn	15 48 50.4	+0.2
WHF				S	Sn	15 49 06.8	-0.8

	baz=261						
JKRS	Kuro-shima	1.30	100	P	Pn	15 48 51.0	+1.0
JKRS				S	Sn	15 49 08.5	+1.1
TDCB	Techi	1.34	261	P	Pn	15 48 51.6	+0.9
	baz=260						
TDCB				S	Sn	15 49 08.4	-0.4
	baz=260						
EGFH	Guangfu	1.35	234	P	Pn	15 48 50.2	-0.5
	baz=233						
EGFH				S	Sn	15 49 08.0	-0.7
	baz=233						
CHGB	Renai	1.38	253	*e*P	Pn	15 48 51.6	+0.4
	baz=246						
CHGB				*e*S	Sn	15 49 08.9	-0.7
	baz=246						
NCU	National Centr	1.39	291	*e*P	Pn	15 48 51.8	+0.7
	baz=290						
NCU				S	Sn	15 49 10.2	+0.8
	baz=290						
NCUH	Zhongli	1.39	291	*e*P	Pn	15 48 52.5	+1.3
	baz=290						
NCUH				*e*S	Sn	15 49 09.7	+0.2
	baz=290						
JIJ	Ishigaki jima	1.40	94	P	Pn	15 48 51.6	+0.3
JIJ				S	Sn	15 49 09.0	-0.8
LIOB	Emei	1.46	277	P	Pn	15 48 53.0	+0.9
	baz=276						
LIOB				*e*S	Sn	15 49 12.2	+1.0
	baz=276						
HGSD	Ruisui	1.46	228	*e*P	Pn	15 48 51.9	-0.2
	baz=226						
HGSD				*e*S	Sn	15 49 10.3	-0.9
	baz=226						
NSTT	Nanjuang	1.47	276	*e*P	Pn	15 48 53.2	+0.9
	baz=276						
NSTT				S	Sn	15 49 11.8	+0.4
	baz=276						
SBCB	Hsinchu	1.51	282	*e*S	Sn	15 49 13.1	+0.8
	baz=282						
VWDT	VWDT	1.52	242	*e*P	Pn	15 48 53.4	+0.6
	baz=236						
VWDT				*e*S	Sn	15 49 12.0	-0.5
	baz=236						
EHY	Hungye	1.52	231	*e*P	Pn	15 48 52.7	-0.3
	baz=230						
EHY				*e*S	Sn	15 49 11.7	-0.9
	baz=230						
HSN	Hsinchu	1.53	283	*e*S	Sn	15 49 12.8	+0.2
	baz=283						
WHP	Taichung City	1.53	263	P	Pn	15 48 54.8	+1.7
	baz=262						
WHP				S	Sn	15 49 14.3	+1.4
	baz=262						
JISG	Ishigakijimahi	1.55	86	P	Pn	15 48 53.7	+0.5
JISG				S	Sn	15 49 12.7	-0.4
DPDB	Guoxing	1.60	254	P	Pn	15 48 55.0	+1.1
	baz=251						
DPDB				S	Sn	15 49 15.1	+0.7
	baz=251						
YULB	Yu-li	1.62	228	*e*P	Pn	15 48 53.5	-0.6
	baz=237						
YULB				*e*S	Sn	15 49 13.3	-1.4
	baz=237						
TWF1	Yuli	1.64	227	*e*P	Pn	15 48 54.0	-0.5
	baz=236						
TWF1				*e*S	Sn	15 49 14.1	-1.2
	baz=236						
NMLH	Miaoli	1.66	272	*e*P	Pn	15 48 55.5	+0.8
	baz=272						
NMLH				S	Sn	15 49 16.3	+0.7
	baz=272						
SSLB	Suanglung	1.66	246	*e*P	Pn	15 48 55.1	+0.4
	baz=246						
SSLB				*e*S	Sn	15 49 15.6	-0.2
	baz=246						
SMLT	Sun Moon Lake	1.67	250	*e*P	Pn	15 48 55.6	+0.7
	baz=245						
SMLT				*e*S	Sn	15 49 16.8	+0.7
	baz=245						
TWQ1	Liyutan	1.68	266	*e*P	Pn	15 48 56.0	+1.1
	baz=265						
TWQ1				S	Sn	15 49 17.2	+1.0
	baz=265						
NSY	Sanyi	1.69	268	*e*P	Pn	15 48 55.6	+0.6
	baz=268						
NSY				S	Sn	15 49 17.2	+0.9
	baz=268						
TYC	Yuchr	1.70	251	P	Pn	15 48 56.2	+1.1
	baz=246						
TYC				S	Sn	15 49 17.9	+1.4
	baz=246						
PTSB	Yuanli	1.74	269	*e*S	Sn	15 49 17.9	+0.5
	baz=269						
WHYT	Xinyi Township	1.79	245	P	Pn	15 48 57.8	+1.4
	baz=244						
WHYT				S	Sn	15 49 20.4	+1.8
	baz=244						
TCU	Taichung	1.80	260	*e*P	Pn	15 48 56.9	+0.5
	baz=270						
TCU				*e*S	Sn	15 49 20.2	+1.4
	baz=270						
WDJ	Dajia District	1.80	266	*e*S	Sn	15 49 19.2	+0.3
	baz=266						
YUS	Yu-Shan	1.81	237	P	Pn	15 48 57.6	+0.6
	baz=237						
YUS				S	Sn	15 49 19.0	-0.8
	baz=237						
WJS	Zhushan	1.84	250	P	Pn	15 48 58.9	+1.9
	baz=249						
WJS				S	Sn	15 49 22.1	+2.3
	baz=249						
WNT	Mingjian	1.86	252	P	Pn	15 48 59.5	+2.3
	baz=251						
WNT				S	Sn	15 49 22.5	+2.2
	baz=251						
JTJ	Tarama	1.91	85	S	Sn	15 49 22.2	+0.7
WCHH	Zhanghua	1.92	258	*e*S	Sn	15 49 23.0	+1.4
	baz=269						
ELDTW	Lidau	1.94	229	*e*P	Pn	15 48 58.0	-0.5
	baz=229						
ELDTW				S	Sn	15 49 21.1	-1.4
	baz=229						
CHN5	Tsauling	1.97	244	P	Pn	15 49 00.2	+1.4
	baz=237						
CHN5				S	Sn	15 49 24.8	+1.7
	baz=237						
WGK	Gukeng	2.03	248	*e*P	Pn	15 49 01.3	+1.8
	baz=260						
WGK				S	Sn	15 49 27.0	+2.7
	baz=260						
WDLH	Douliu	2.05	248	*e*P	Pn	15 49 01.5	+1.8
	baz=260						
WDLH				*e*S	Sn	15 49 27.4	+2.6
	baz=260						
RLNB	Erlin	2.14	255	*e*P	Pn	15 49 01.7	+0.9
	baz=254						
RLNB				*e*S	Sn	15 49 27.1	+0.3
	baz=254						
STYT	Tauyuan	2.14	233	*e*P	Pn	15 49 02.4	+1.3
	baz=229						
STYT				S	Sn	15 49 27.7	+0.7
	baz=229						
CHN2	Minshiung	2.17	245	*e*P	Pn	15 49 03.2	+1.9
	baz=257						
CHN2				*e*S	Sn	15 49 30.4	+2.9
	baz=257						
TWGBT	Beinan	2.17	221	P	Pn	15 49 00.8	-0.6
	baz=220						
TWGBT				S	Sn	15 49 25.9	-1.7
	baz=220						
TWG	Pinlang	2.17	221	P	Pn	15 49 00.6	-0.7
	baz=220						
TWG				S	Sn	15 49 26.9	-0.8
	baz=220						
WTCT	Ta-ch'eng	2.21	254	S	Sn	15 49 29.0	+0.4
	baz=254						
CHY	Chiayi	2.23	244	*e*P	Pn	15 49 03.8	+1.7
	baz=257						
CHY				*e*S	Sn	15 49 29.7	+0.8
	baz=257						
TWK	Hsinying	2.29	239	*e*P	Pn	15 49 04.5	+1.6
	baz=239						
TWK				S	Sn	15 49 32.1	+1.7
	baz=239						
CHN1	Nanshi	2.30	236	*e*P	Pn	15 49 04.5	+1.4
	baz=236						
CHN1				S	Sn	15 49 32.6	+1.8
	baz=236						
SNST	Tainan City	2.31	238	*e*P	Pn	15 49 04.3	+1.2
	baz=238						
SNST				*e*S	Sn	15 49 32.6	+1.7
	baz=238						
SGST	Jiashian	2.32	234	P	Pn	15 49 04.6	+1.3
	baz=244						
SGST				S	Sn	15 49 33.2	+2.0
	baz=244						
SLGT	Liugui	2.33	231	*e*P	Pn	15 49 05.4	+1.9
	baz=238						
SLGT				*e*S	Sn	15 49 33.1	+1.7
	baz=238						
WLGB	Puzi	2.34	245	*e*P	Pn	15 49 05.2	+1.6
	baz=256						
WLGB				*e*S	Sn	15 49 33.6	+2.1
	baz=256						
WSF	Szhu	2.34	250	*e*P	Pn	15 49 04.5	+1.0
	baz=259						
WSF				S	Sn	15 49 32.2	+0.7
	baz=259						
JIRB	Irabujima	2.36	81	P	Pn	15 49 04.3	+0.5
JIRB				*e*S	Sn	15 49 32.0	0.0
ECL	Taimali	2.41	219	*e*P	Pn	15 49 04.5	0.0
	baz=219						
ECL				S	Sn	15 49 31.3	-2.1
	baz=219						
JIKM	Ikemajima	2.44	79	S	Sn	15 49 34.9	+0.9
CHN8	Yiju	2.47	243	*e*S	Sn	15 49 35.7	+1.0
	baz=243						
SSD	Sandimen	2.50	227	P	Pn	15 49 07.7	+2.0
	baz=227						
SSD				S	Sn	15 49 37.4	+1.9
	baz=227						
SCLT	Jiali	2.57	240	*e*S	Sn	15 49 38.7	+1.7
	baz=241						
TWM1	Shoushan	2.60	231	*e*S	Sn	15 49 41.1	+3.3
	baz=231						
MASBT	Mashibuluo	2.60	225	*e*P	Pn	15 49 08.2	+1.1
	baz=224						
MASBT				*e*S	Sn	15 49 39.2	+1.4
	baz=224						
SGLT	Jiouru	2.61	229	*e*P	Pn	15 49 09.3	+2.1
	baz=228						
SGLT				*e*S	Sn	15 49 40.8	+2.6
	baz=228						
EAST	Anshuo	2.64	218	*e*P	Pn	15 49 07.3	-0.3
	baz=217						
EAST				*e*S	Sn	15 49 37.0	-1.9
	baz=217						
SSPT	Xinbi	2.73	224	*e*P	Pn	15 49 10.4	+1.6
	baz=236						
SSPT				*e*S	Sn	15 49 43.0	+2.0
	baz=236						
PTTC	Pingtan	2.77	292	*e*P	Pn	15 49 09.1	-0.2
	baz=290						
SCZT	Fangliau	2.78	222	*e*P	Pn	15 49 10.6	+1.1
	baz=233						
SCZT				S	Sn	15 49 43.5	+1.3
	baz=233						
MATB	Ma-tsu	2.93	305	*e*P	Pn	15 49 11.9	+0.4
	baz=304						
MATB				*e*S	Sn	15 49 44.9	-0.9
	baz=304						
PNG	Penghu	2.94	253	*e*P	Pn	15 49 11.7	+0.1
	baz=253						
PNG				S	Sn	15 49 44.7	-1.2
	baz=253						
PHUB	P'eng-hu	2.94	252	*e*P	Pn	15 49 10.9	-0.8
	baz=252						
PHUB				*e*S	Sn	15 49 44.0	-2.1
	baz=252						
WDGT	Dungji	2.96	246	P	Pn	15 49 12.4	+0.5
	baz=247						
WDGT				*e*S	Sn	15 49 45.3	-1.3
	baz=247						
HEN	Hengchun	3.00	215	*e*P	Pn	15 49 13.5	+1.1
	baz=206						
HEN				*e*S	Sn	15 49 47.7	+0.2
	baz=206						
VCHM	Qimei	3.17	247	*e*P	Pn	15 49 14.3	-0.5
	baz=248						
VCHM				S	Sn	15 49 50.3	-1.4
	baz=248						
PTMZ	Houxiangcun	3.22	281	*e*P	Pn	15 49 15.7	+0.3
	baz=271						
PTMZ				*e*S	Sn	15 49 50.0	-2.9
	baz=271						
KNMB	Chin-men Tao	3.85	271	*e*P	Pn	15 49 23.6	-0.2
	baz=270						
KNMB				*e*S	Sn	15 50 05.3	-2.8
	baz=270						
KSRS	Korea Array	13.71	18	P	Pn	15 51 39.7	+2.3
	0.3nm,0.3s,baz=197,slow=11,SNR=19						
USRK	Ussuriysk Ar.	21.11	19	P	P	15 53 02.4	-2.0
	1.2nm,0.7s,baz=216,slow=11,SNR=6.5						
SONM	Songino Array	26.63	335	P	P	15 53 56.1	-1.2
	0.7nm,0.8s,baz=158,slow=9.2,SNR=5.8						
MKAR	Makanchi Array	39.04	315	P	P	15 55 45.1	0.0
	0.2nm,0.5s,baz=112,slow=11,SNR=2.3						
WRA	Warramunga Arr	45.60	164	P	P	15 56 38.5	-0.1
	1.1nm,0.7s,baz=346,slow=9.6,SNR=4.0						
ASAR	Alice Springs	49.10	166	P	P	15 57 05.2	-0.4
	0.3nm,0.4s,baz=344,slow=6.8,SNR=5.6						
FINES	FINESS Array B	71.85	330	P	P	15 59 39.3	-0.7
	1.2nm,0.8s,baz=16,slow=7.2,SNR=3.1						

JMA 11 15:49:22.8±0.2,38°.59N×144°.19E,h52^{km},M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.03	285	P	Pn	15 49 55.6	+1.1
OFUJ				S	Sn	15 50 19.9	+1.2
MIYJ	Miyakonagasawa	2.09	299	P	Pn	15 49 56.2	+0.8
MIYJ				S	Sn	15 50 20.8	+0.6
JKMT	Kesennumamotoy	2.14	277	P	Pn	15 49 56.9	+0.9
JKMT				S	Sn	15 50 22.1	+0.8
JIKH	Ishinomakikobu	2.16	263	P	Pn	15 49 57.0	+0.7
JIKH				S	Sn	15 50 21.6	-0.2
JMK	Ichinoseki	2.35	280	P	Pn	15 50 00.4	+1.5
JMK				S	Sn	15 50 28.5	+1.9
JOM	Ohasama	2.42	292	P	Pn	15 50 01.4	+1.5
JOM				S	Sn	15 50 29.9	+1.5
JANG	Nango	2.73	312	P	Pn	15 50 04.8	+0.6
JANG				*e*S	Sn	15 50 36.4	+0.5
JYK	Kaneyama	3.01	277	P	Pn	15 50 10.1	+2.1
JYK				*e*S	Sn	15 50 44.7	+1.8
JFT	Otama	3.22	252	P	Pn	15 50 11.9	+1.0
JFT				S	Sn	15 50 49.2	+1.1
JOT	Ohata	3.69	320	P	Pn	15 50 17.8	+0.6
JOT				*e*S	Sn	15 51 00.2	+0.8
JNBK	Urakawa-nobuka	3.85	344	P	Pn	15 50 19.8	+0.4
JNBK				S	Sn	15 51 02.9	-0.4
JCH	Churui	4.07	351	P	Pn	15 50 22.4	-0.1
JCH				S	Sn	15 51 06.3	-2.5
JKB	Kayabe	4.08	325	P	Pn	15 50 24.5	+1.8
JKB				*e*S	Sn	15 51 08.7	-0.5
NEM2	Nemuro 2	4.91	13	P	Pn	15 50 32.4	-1.6
NEM2				S	Sn	15 51 24.7	-4.8
JRY	Ryogami san	4.94	240	P	Pn	15 50 35.5	+1.1
JRY				*e*S	Sn	15 51 28.7	-1.5
JTKR	Abashiri--Toko	5.38	358	P	Pn	15 50 40.8	+0.4
JTKR				S	Sn	15 51 38.5	-2.5

NEIC 11 16:30:22.9±0.0,52°.32N×170°.24W,h22^{km},ML3.2(AEIC), After AEIC.,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.06	52	*e*Pn	Pn	16 30 41.0	-1.5
NIKH				*e*Sn	Sb	16 30 55.0	-1.1
OKAK	Okmok	1.70	41	*e*Pn	Pn	16 30 49.6	-1.6
OKAK				*e*Sn	Sn	16 31 10.7	-1.6
OKTU	Okmok Mt. Tuli	1.70	51	*e*Pn	Pn	16 30 50.9	-0.5
OKER	Okmok East Rim	1.74	49	*e*Pn	Pn	16 30 52.2	+0.2
KOSE	Korovin Southe	2.34	272	*e*Pn	Pn	16 31 00.5	+0.4
KOFP	Korovin Flat P	2.37	270	*e*Pn	Pn	16 31 01.2	+0.6
ATKA	Atka Island	2.44	269	*e*Pn	Pn	16 31 00.9	-0.4
ATKA				*e*Sn	Sn	16 31 30.9	+0.4
MREP	Makushin Rep't	2.58	53	*e*Pn	Pn	16 31 04.2	+0.8
MCIR	Makushin Cirqu	2.59	50	*e*Pn	Pn	16 31 05.0	+1.4
MSW	Makushin Switc	2.62	51	*e*Pn	Pn	16 31 04.1	+0.2
MSW				*e*Sn	Sn	16 31 37.6	+2.5
UNV	Unalaska Valle	2.72	54	*e*Pn	Pn	16 31 05.1	-0.2
UNV				*e*Sn	Sn	16 31 39.4	+2.0
AKRB	Akutan Reef Bi	3.09	52	*e*Pn	Pn	16 31 11.6	+1.1
AHB	Akutan Harbor	3.21	54	*e*Pn	Pn	16 31 12.9	+0.8
AKUT	Akutan	3.24	54	*e*Pn	Pn	16 31 12.8	+0.3
GSTR	Great Sitkin T	3.59	269	*e*Pn	Pn	16 31 18.1	+0.8
GSTD	Great Sitkin T	3.65	268	*e*Pn	Pn	16 31 19.2	+1.1
GSTD				*e*Sn	Sn	16 32 01.5	+1.1
ETKA	Kagalaska Isla	3.83	266	*e*Pn	Pn	16 31 21.6	+1.1
ADAG	Mount Adagdak	3.94	268	*e*Pn	Pn	16 31 23.3	+1.3
ADK	Adak	4.00	266	*e*Pn	Pn	16 31 23.4	+0.5
ADK				*e*Pg	Pb	16 31 23.6	-9.0
ADK				*e*Sn	Sn	16 32 10.6	+1.6
KIWB	Kanaga Island	4.29	266	*e*Pn	Pn	16 31 28.4	+1.6
FALS	False Pass	4.79	55	*e*Pn	Pn	16 31 30.8	-2.9
SPIA	Saint Paul Isl	4.87	360	*e*Pn	Pn	16 31 35.5	+0.7
SDPT	Sand Point	6.52	58	*e*Pn	Pn	16 31 58.6	+1.1
CHGN	Chignik	7.98	55	*e*Pn	Pn	16 32 18.2	+0.8
CHIA	Chirikof Islan	9.30	62	*e*Pn	Pn	16 32 33.8	-1.9
SII	Sitkinak Islan	10.26	59	*e*Pn	Pn	16 32 47.5	-1.3
KDAK	Kodiak Island	11.49	55	*e*Pn	Pn	16 33 03.7	-1.8
SVW2	Sparrevohn	11.89	37	*e*Pn	Pn	16 33 09.5	-1.6
CNPM	China Poot	12.83	48	*e*Pn	Pn	16 33 23.8	0.0
SML	Sawmill	15.16	43	*e*Pn	Pn	16 33 54.8	-0.7
BPAW	Bear Paw Mtn.	15.47	33	*e*Pn	Pn	16 33 59.1	-0.5
SCM	Sheep Creek Mo	15.59	43	*e*Pn	Pn	16 34 01.1	-0.1

ISCJB **11** *16:39:36.1±0.5, 44°.22N±0°.02×10°.06E±0°.02, h15^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=2.4km az=14.7*

ROM **11** *16:39:36.0±0.1, 44°.229N±0°.004×10°.114E±0°.005, h10^{km}, ML2.1/14, Error ellipse: s-maj=0.4km s-min=0.4km az=200.0*

GEN **11** *16:39:36.6, 44°.23N×10°.11E, h6^{km}±2^{km}, Ml2.0*

LDG **11** *16:39:36.7±0.0, 44°.23N×10°.10E, h2^{km}, Md2.5/2, Ml2.5/11, Error ellipse: s-maj=1.1km s-min=0.8km az=24.0*

ISC 11 16:39:36.7±0.8,44°.21N±0°.02×10°.07E±0°.02,h10^{km}±4^{km}, n41,σ1^{s}.26/68,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIVI	Fivizzano	0.05	59	P	Pg	16 39 38.0	-0.8
FIVI				S	Sg	16 39 39.0	-1.3
FIVI				AML	AML		
	comp=E,13350μm,0.1s						
FIVI				AML	AML		
	comp=N,8510μm,0.4s						
EQUI	Equi	0.08	127	P	Pg	16 39 38.6	-0.4
EQUI				S	Sg	16 39 40.0	-0.6
EQUI	Equi	0.08	127	P	Pg	16 39 38.6	-0.4
EQUI				S	Sg	16 39 40.1	-0.6
EQUI				AML	AML		
	comp=E,4865μm,0.4s						
EQUI				AML	AML		
	comp=N,4475μm,0.2s						
T0911	Castelpoggio (	0.10	177	P	Pg	16 39 39.5	+0.2
T0911				S	Sg	16 39 41.9	+0.7
T0911				AML	AML		
	comp=E,1735μm,0.2s						
T0911				AML	AML		
	comp=N,2035μm,0.5s						
T0911				AML	AML		
	comp=N,2035μm,0.5s						
T0911				AML	AML		
	comp=E,1735μm,0.2s						
T0911				AML	AML		
	comp=N,2035μm,0.5s						
T0911				AML	AML		
	comp=E,1735μm,0.2s						
T0912	Minucciano (LU	0.11	114	P	Pg	16 39 39.0	-0.5
T0912				S	Sg	16 39 40.9	-0.6
T0912				AML	AML		
	comp=E,21850μm,0.1s						
T0912				AML	AML		
	comp=N,30000μm,0.3s						
T0912				AML	AML		
	comp=E,21200μm,0.1s						
T0912				AML	AML		
	comp=N,29600μm,0.3s						
FOSD	Fosdinovo	0.12	206	P	Pg	16 39 39.9	+0.4
FOSD				S	Sg	16 39 42.5	+1.0
FOSD				AML	AML		
	comp=E,2465μm,0.2s						
FOSD				AML	AML		
	comp=N,2125μm,0.2s						
FOSD				AML	AML		
	comp=E,2465μm,0.2s						
FOSD				AML	AML		
	comp=N,2125μm,0.2s						
FOSD				AML	AML		
	comp=N,2125μm,0.2s						
FOSD				AML	AML		
	comp=E,2465μm,0.2s						
FOSD				AML	AML		
	comp=N,2125μm,0.2s						
FOSD				AML	AML		
	comp=E,2465μm,0.2s						
PLMA	Palmaria, Port	0.23	224	P	Pg	16 39 41.9	+0.6
PLMA				AML	AML		
	comp=E,1348μm,0.2s						
PLMA				AML	AML		
	comp=N,670μm,0.1s						
PLMA				AML	AML		
	comp=E,1344μm,0.2s						
PLMA				AML	AML		
	comp=N,670μm,0.1s						
PLMA				AML	AML		
	comp=N,670μm,0.1s						
PLMA				AML	AML		
	comp=E,1344μm,0.2s						
PLMA				AML	AML		
	comp=N,670μm,0.1s						
PLMA				AML	AML		
	comp=E,1344μm,0.2s						
VLC	Villacollemand	0.24	103	P	Pg	16 39 41.1	-0.5
VLC				S	Sg	16 39 44.6	-0.2
VLC				AML	AML		
	comp=E,397μm,0.7s						
VLC				AML	AML		
	comp=N,477μm,0.2s						
VLC				AML	AML		
	comp=E,432μm,0.4s						
VLC				AML	AML		
	comp=N,492μm,0.2s						
VLC				AML	AML		
	comp=E,397μm,0.7s						
VLC				AML	AML		
	comp=N,478μm,0.2s						
VLC				AML	AML		
	comp=E,432μm,0.4s						
VLC				AML	AML		
	comp=N,492μm,0.2s						
VLC				AML	AML		
	comp=N,478μm,0.2s						
VLC				AML	AML		
	comp=N,492μm,0.2s						
VLC				AML	AML		
	comp=E,432μm,0.4s						
VLC				AML	AML		
	comp=E,397μm,0.7s						
VLC				AML	AML		
	comp=N,478μm,0.2s						
VLC				AML	AML		
	comp=N,492μm,0.2s						
VLC				AML	AML		
	comp=E,432μm,0.4s						
VLC				AML	AML		
	comp=E,397μm,0.7s						
GRAM	Graiana	0.28	360	P	Pg	16 39 42.1	-0.2
GRAM				S	Sg	16 39 46.1	-0.1
GRAM	Graiana	0.28	360	P	Pg	16 39 42.1	-0.2
GRAM				S	Sg	16 39 46.3	+0.1
GRAM				AML	AML		
	comp=E,2160μm,0.2s						
GRAM				AML	AML		
	comp=N,1375μm,0.6s						
GRAM				AML	AML		
	comp=E,2160μm,0.2s						
GRAM				AML	AML		
	comp=N,1375μm,0.6s						
GRAM				AML	AML		
	comp=N,1375μm,0.6s						
GRAM				AML	AML		
	comp=E,2160μm,0.2s						
GRAM				AML	AML		
	comp=N,1375μm,0.6s						

GRAM				AML	AML		
	comp=E,2160µm,0.2s						
ERBM	**Eremo**	**0.32**	**50**	P	**Pg**	**16 39 42.8**	**-0.4**
ERBM				S	**Sg**	**16 39 47.3**	**-0.2**
ERBM				AML	AML		
	comp=E,704µm,1.5s						
ERBM				AML	AML		
	comp=N,770µm,0.2s						
ERBM				AML	AML		
	comp=E,704µm,1.5s						
ERBM				AML	AML		
	comp=N,770µm,0.2s						
ERBM				AML	AML		
	comp=E,704µm,1.5s						
ERBM				AML	AML		
	comp=N,770µm,0.2s						
ERBM				AML	AML		
	comp=E,704µm,1.5s						
ERBM				AML	AML		
	comp=N,770µm,0.2s						
CARD	**Cardoso**	**0.35**	**122**	P	**Pg**	**16 39 43.5**	**-0.2**
CARD				S	**Sg**	**16 39 48.2**	**-0.2**
CARD	**Cardoso**	**0.35**	**122**	P	**Pg**	**16 39 43.3**	**-0.4**
CARD				S	**Sg**	**16 39 48.2**	**-0.2**
CARD				AML	AML		
	comp=E,696µm,1.5s						
CARD				AML	AML		
	comp=N,691µm,0.6s						
CARD				AML	AML		
	comp=N,691µm,0.6s						
CARD				AML	AML		
	comp=E,696µm,1.5s						
CARD				AML	AML		
	comp=N,691µm,0.6s						
CARD				AML	AML		
	comp=E,696µm,1.5s						
MSSA	**Maissana**	**0.41**	**285**	P	**Pg**	**16 39 45.1**	**+0.3**
MSSA				AML	AML		
	comp=E,128µm,0.3s						
MSSA				AML	AML		
	comp=N,136µm,1.4s						
MSSA				AML	AML		
	comp=E,128µm,0.3s						
MSSA				AML	AML		
	comp=N,136µm,1.4s						
MSSA				AML	AML		
	comp=E,128µm,0.3s						
MSSA				AML	AML		
	comp=N,136µm,1.4s						
BDI	**Bagni Di Lucca**	**0.41**	**111**	P	**Pg**	**16 39 44.3**	**-0.5**
BDI				S	**Sg**	**16 39 50.0**	**-0.2**
BDI				AML	AML		
	comp=E,230µm,0.2s						
BDI				AML	AML		
	comp=N,207µm,0.5s						
BDI				AML	AML		
	comp=E,232µm,0.5s						
BDI				AML	AML		
	comp=N,208µm,0.1s						
BDI				AML	AML		
	comp=N,208µm,0.1s						
BDI				AML	AML		
	comp=E,232µm,0.5s						
BDI				AML	AML		
	comp=E,230µm,0.2s						
BDI				AML	AML		
	comp=N,207µm,0.5s						
BDI				AML	AML		
	comp=N,208µm,0.1s						
BDI				AML	AML		
	comp=E,232µm,0.5s						
BDI				AML	AML		
	comp=E,230µm,0.2s						
BDI				AML	AML		
	comp=N,207µm,0.5s						
MAIM	**Mastiano**	**0.43**	**134**	P	**Pg**	**16 39 44.7**	**-0.4**
MAIM				S	**Sg**	**16 39 50.4**	**-0.3**
MAIM	**Mastiano**	**0.43**	**134**	P	**Pg**	**16 39 44.6**	**-0.4**
MAIM				S	**Sg**	**16 39 50.8**	**+0.1**
MAIM				AML	AML		
	comp=E,303µm,0.3s						
MAIM				AML	AML		
	comp=N,294µm,0.9s						
MAIM				AML	AML		
	comp=E,303µm,0.3s						
MAIM				AML	AML		
	comp=N,294µm,0.9s						
MAIM				AML	AML		
	comp=E,303µm,0.3s						
MAIM				AML	AML		
	comp=N,294µm,0.9s						
POPM	**Popiglio**	**0.52**	**108**	P	**Pg**	**16 39 46.3**	**-0.6**
POPM				S	**Sg**	**16 39 53.7**	**-0.1**
POPM	**Popiglio**	**0.52**	**108**	P	**Pg**	**16 39 46.3**	**-0.6**
POPM				AML	AML		
	comp=E,463µm,0.1s						
POPM				AML	AML		
	comp=N,626µm,0.2s						
POPM				AML	AML		
	comp=N,626µm,0.2s						
POPM				AML	AML		
	comp=E,463µm,0.1s						
POPM				AML	AML		
	comp=N,626µm,0.2s						
POPM				AML	AML		
	comp=E,463µm,0.1s						
MTCR	**Monte La Croce**	**0.70**	**105**	P	**Pg**	**16 39 49.6**	**-0.5**
TRIF	**Trifonti**	**1.25**	**151**	AML	AML		
	comp=N,34µm,0.3s						
TRIF				AML	AML		
	comp=E,42µm,0.9s						
TRIF				AML	AML		
	comp=E,42µm,0.9s						
TRIF				AML	AML		
	comp=N,34µm,0.3s						
TRIF				AML	AML		
	comp=E,42µm,0.9s						
TRIF				AML	AML		
	comp=N,34µm,0.3s						
CASP	**Castiglione de**	**1.54**	**158**	AML	AML		
	comp=E,22µm,1.4s						
CASP				AML	AML		
	comp=N,23µm,1.3s						
CASP				AML	AML		
	comp=N,23µm,1.3s						
CASP				AML	AML		
	comp=E,22µm,1.4s						
CASP				AML	AML		
	comp=N,23µm,1.3s						
CASP				AML	AML		
	comp=E,22µm,1.4s						
PGF	**Pioggiola**	**1.84**	**205**	*e*Pn	**Pn**	**16 40 07.9**	**-0.5**
PGF				*e*Sn	**Sn**	**16 40 30.4**	**-1.3**
	comp=E,6.8nm,0.3s						
SBF	**Sospel**	**1.93**	**260**	*e*Pn	**Pn**	**16 40 09.1**	**-0.5**
SBF				*e*Sn	**Sn**	**16 40 33.0**	**-1.0**
	comp=E,12nm,0.2s						
BHB	**Bricherasio**	**2.10**	**288**	AML	AML		
	comp=E,34µm,0.7s						
BHB				AML	AML		
	comp=E,34µm,0.7s						
BHB				AML	AML		
	comp=N,20µm,0.7s						
BHB				AML	AML		
	comp=N,20µm,0.7s						
BHB				AML	AML		
	comp=E,34µm,0.7s						
BHB				AML	AML		
	comp=N,20µm,0.7s						
MBDF	**Montbardon**	**2.42**	**283**	*e*Pn	**Pn**	**16 40 16.2**	**-0.2**
MBDF	**Montbardon**	**2.42**	**283**	*e*Pg	**Pb**	**16 40 21.9**	**+1.6**
MBDF				*e*Sn	**Sn**	**16 40 44.4**	**-1.6**
MBDF				*e*Sg	**Sg**	**16 40 53.9**	**-0.4**
	comp=N,1.9nm,0.3s						
FRF	**La Foret Royal**	**2.56**	**256**	*e*Pn	**Pn**	**16 40 17.8**	**-0.4**
FRF				*e*Sn	**Sn**	**16 40 47.9**	**-1.4**
	comp=N,10.0nm,0.3s						
LPG	**La Plagne**	**2.69**	**300**	*e*P	**Pn**	**16 40 22.2**	**+2.0**
LPG				*e*Sn	**Sn**	**16 40 51.0**	**-1.9**
	comp=N,1.5nm,0.3s						
LPL	**La Plagne**	**2.71**	**300**	*e*P	**Pn**	**16 40 20.7**	**+0.3**
LMR	**La Mourre**	**2.72**	**252**	*e*Pn	**Pn**	**16 40 19.9**	**-0.5**
LMR				*e*Sn	**Sn**	**16 40 51.2**	**-2.2**
	comp=N,7.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.08**	**285**	*e*P	**Pn**	**16 40 27.7**	**+2.3**
ORIF				*e*Sn	**Sn**	**16 41 00.3**	**-1.9**
	comp=N,5.6nm,0.6s						
SMRF	**Simiane la Rot**	**3.25**	**267**	*e*Pn	**Pn**	**16 40 27.6**	**-0.1**
SMRF				*e*Sn	**Sn**	**16 41 04.5**	**-1.9**
	comp=N,4.4nm,0.5s						
NVLJ	**Novalja**	**3.46**	**83**	*e*Pn	**Pn**	**16 40 32.7**	**+2.1**
DUGI	**Dugi Otok**	**3.60**	**92**	*i* Pn	**Pn**	**16 40 33.9**	**+1.4**
DUGI				Sn	**Sn**	**16 41 13.9**	**-1.1**
CABF	**La Chapelle**	**3.69**	**312**	*e*P	**Pn**	**16 40 35.8**	**+2.0**
CABF				*e*Sn	**Sn**	**16 41 14.7**	**-2.7**
	comp=N,0.6nm,0.2s						
ZIRJ	**Zirje**	**4.07**	**96**	*e*Pn	**Pn**	**16 40 40.0**	**+1.1**
ZIRJ				Sn	**Sn**	**16 41 27.1**	**+0.6**
HINF	**Hinteralfeld**	**4.24**	**329**	*e*P	**Pn**	**16 40 43.8**	**+2.4**
HINF				*e*Sn	**Sn**	**16 41 27.7**	**-3.3**
	comp=N,1.4nm,0.3s						
HAU	**Haudompre**	**4.59**	**327**	*e*P	**Pn**	**16 40 48.5**	**+2.4**
HAU				*e*Sn	**Sn**	**16 41 36.0**	**-3.5**
	comp=N,4.6nm,0.3s						
CDF	**Champ du Feu**	**4.62**	**336**	*e*P	**Pn**	**16 40 48.2**	**+1.6**
SMF	**Signal de Mont**	**5.01**	**301**	*e*P	**Pn**	**16 40 52.3**	**+0.4**

ROM 11 16:40:32.5±0.2**,44°.23N**±0°.01×**10°.11E**±0°.01**,h10^{km},**
Md1.2/3**,Error ellipse: s-maj=1.2km s-min=0.7km**
az=160.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIVI	**Fivizzano**	**0.01**	**53**	P	Pg	16 40 34.7	+0.3
FIVI				S	Sg	16 40 35.7	0.0
EQUI	**Equi**	**0.07**	**157**	P	Pg	16 40 35.4	+0.5
EQUI				S	Sg	16 40 36.8	+0.4
EQUI				AML	AML		
	comp=E,910µm,0.1s						
EQUI				AML	AML		
	comp=N,796µm,0.4s						
EQUI				END			
T0912	**Minucciano (LU**	**0.09**	**132**	P	Pg	16 40 35.8	+0.6
T0912				S	Sg	16 40 37.6	+0.6
T0912				AML	AML		
	comp=E,3285µm,0.9s						
T0912				AML	AML		
	comp=N,4255µm,0.4s						
T0912				AML	AML		
	comp=E,3285µm,0.9s						
T0912				AML	AML		
	comp=N,4180µm,0.4s						
T0912				END			
T0911	**Castelpoggio (**	**0.12**	**193**	P	Pb	16 40 36.4	-0.6
T0911				S	Sg	16 40 38.3	+0.7
T0911				END			
FOSD	**Fosdinovo**	**0.15**	**214**	P	Pb	16 40 36.7	-0.7
FOSD				S	Sg	16 40 39.4	+1.2
VLC	**Villacollemand**	**0.21**	**110**	P	Pg	16 40 37.7	+0.8
VLC				S	Sg	16 40 41.1	+1.1
VLC				AML	AML		
	comp=E,67µm,1.0s						
VLC				AML	AML		
	comp=N,72µm,0.1s						
PLMA	**Palmaria, Port**	**0.26**	**226**	P	Pb	16 40 38.9	-0.4
PLMA				S	Sg	16 40 42.3	+0.9
PLMA				AML	AML		
	comp=E,346µm,0.2s						
PLMA				AML	AML		
	comp=N,156µm,0.1s						

ROM 11 16:41:05.8±0.1**,44°.227N**±0°.004×**10°.110E**±0°.006**,**
h10^{km},ML1.6/9**,Error ellipse: s-maj=0.5km**
s-min=0.4km az=153.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIVI	**Fivizzano**	**0.02**	**46**	P	Pg	16 41 07.7	+0.2
FIVI				S	Sg	16 41 08.7	-0.1
EQUI	**Equi**	**0.07**	**153**	P	Pg	16 41 08.3	+0.4
EQUI				S	Sg	16 41 10.0	+0.5
T0912	**Minucciano (LU**	**0.09**	**129**	P	Pg	16 41 08.7	+0.5
T0912				S	Sg	16 41 10.6	+0.5
T0912				AML	AML		
	comp=E,3290µm,0.8s						
T0912				AML	AML		
	comp=N,4250µm,0.4s						
T0912				AML	AML		
	comp=E,3285µm,0.9s						
T0912				AML	AML		
	comp=N,4175µm,0.4s						
T0912				AML	AML		
	comp=E,3290µm,0.8s						
T0912				AML	AML		
	comp=N,4255µm,0.4s						
T0912				AML	AML		
	comp=E,3285µm,0.9s						
T0912				AML	AML		
	comp=N,4180µm,0.4s						
T0912				AML	AML		
	comp=E,3290µm,0.8s						
T0912				AML	AML		
	comp=E,3285µm,0.9s						
T0912				AML	AML		
	comp=N,4250µm,0.4s						
T0912				AML	AML		
	comp=N,4180µm,0.4s						
T0911	**Castelpoggio (**	**0.12**	**193**	P	Pg	16 41 09.2	+0.6
T0911				S	Sg	16 41 11.4	+0.8
FOSD	**Fosdinovo**	**0.14**	**214**	P	Pg	16 41 09.7	+0.8
FOSD				S	Sg	16 41 12.2	+1.1
VLC	**Villacollemand**	**0.21**	**109**	P	Pg	16 41 10.8	+0.7
VLC				S	Sg	16 41 14.2	+1.1
VLC				AML	AML		
	comp=E,67µm,1.0s						
VLC				AML	AML		
	comp=N,72µm,0.1s						
VLC				AML	AML		
	comp=E,67µm,1.0s						
VLC				AML	AML		
	comp=N,72µm,0.1s						
VLC				AML	AML		
	comp=E,67µm,1.0s						
VLC				AML	AML		
	comp=N,72µm,0.1s						
PLMA	**Palmaria, Port**	**0.26**	**227**	P	Pb	16 41 11.8	-0.7
PLMA				S	Sg	16 41 15.3	+0.9
PLMA				AML	AML		
	comp=E,346µm,0.2s						
PLMA				AML	AML		
	comp=N,156µm,0.1s						
PLMA				AML	AML		
	comp=E,346µm,0.2s						
PLMA				AML	AML		
	comp=N,156µm,0.1s						
PLMA				AML	AML		
	comp=N,156µm,0.1s						
PLMA				AML	AML		
	comp=E,346µm,0.2s						
GRAM	**Graiana**	**0.27**	**353**	P	Pg	16 41 11.9	+0.7
GRAM				S	Sg	16 41 16.0	+1.1
ERBM	**Eremo**	**0.29**	**48**	P	Pb	16 41 12.6	-0.6
ERBM				S	Sb	16 41 17.4	-0.7
ERBM				AML	AML		
	comp=E,126µm,0.1s						
ERBM				AML	AML		
	comp=N,143µm,0.9s						
ERBM				AML	AML		
	comp=E,126µm,0.1s						
ERBM				AML	AML		
	comp=N,144µm,0.9s						
ERBM				AML	AML		
	comp=N,144µm,0.9s						
ERBM				AML	AML		
	comp=E,126µm,0.1s						
CARD	**Cardoso**	**0.34**	**127**	P	Pg	16 41 13.1	+0.7
CARD				S	Sg	16 41 17.9	+1.1
CARD				AML	AML		
	comp=E,142µm,0.2s						
CARD				AML	AML		
	comp=N,163µm,0.1s						
CARD				AML	AML		
	comp=E,141µm,0.2s						
CARD				AML	AML		
	comp=N,163µm,0.1s						
CARD				AML	AML		
	comp=E,141µm,0.2s						
CARD				AML	AML		
	comp=N,163µm,0.1s						
MAIM	**Mastiano**	**0.42**	**139**	P	Pb	16 41 14.6	-0.6
MAIM				AML	AML		
	comp=E,53µm,1.3s						
MAIM				AML	AML		
	comp=N,54µm,1.1s						
MAIM				AML	AML		
	comp=E,53µm,1.3s						
MAIM				AML	AML		
	comp=N,54µm,1.1s						
MAIM				AML	AML		
	comp=N,54µm,1.1s						
MAIM				AML	AML		
	comp=E,53µm,1.3s						
MSSA	**Maissana**	**0.43**	**282**	P	Pb	16 41 15.1	-0.5
MSSA				AML	AML		
	comp=E,29µm,1.1s						
MSSA				AML	AML		
	comp=N,33µm,1.2s						
MSSA				AML	AML		
	comp=E,29µm,1.1s						
MSSA				AML	AML		
	comp=N,33µm,1.2s						
POPM	**Popiglio**	**0.50**	**111**	P	Pb	16 41 16.4	-0.3
POPM				AML	AML		
	comp=E,91µm,0.1s						
POPM				AML	AML		
	comp=N,109µm,0.2s						
POPM				AML	AML		
	comp=E,91µm,0.1s						
POPM				AML	AML		
	comp=N,109µm,0.2s						
POPM				AML	AML		
	comp=E,91µm,0.1s						
POPM				AML	AML		
	comp=N,109µm,0.2s						
FNVD	**Fontana Vidola**	**0.73**	**94**	AML	AML		
	comp=N,1545µm,0.1s						
FNVD				AML	AML		
	comp=E,762µm,0.1s						
FNVD				AML	AML		
	comp=N,1545µm,0.1s						
FNVD				AML	AML		
	comp=E,762µm,0.1s						

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*GII **11** 16:46:23.9±0.0, 35°.04N×32°.54E, h1^{km}±4^{km}*
*ISCJB **11** 16:46:39.6±0.8, 34°.51N±0°.03×32°.90E±0°.06, h14^{km}, Error*
ellipse: s-maj=7.8km s-min=3.7km az=153.1
*NIC **11** 16:46:39.2±0.3, 34°.53N×32°.89E, h20^{km}, ML2.6*
ISC 11 16:46:38.6±1.2**,34°.46N**±0°.05×**32°.88E**±0°.05**,h14^{km},n11,**
σ**2^{s}.34**/16**,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.30**	**360**	P	**Pg**	**16 46 44.8**	**0.0**
	baz=178						
SZAC				S	**Sg**	**16 46 49.6**	**+0.5**
ASGA	**Asgata**	**0.45**	**42**	P	**Pg**	**16 46 47.7**	**+0.2**
	baz=229						
ASGA				S	**Sg**	**16 46 53.9**	**+0.4**
PPCY	**Paphos**	**0.62**	**314**	P	**Pg**	**16 46 50.4**	**-0.3**
	baz=128						
CSS	**Mathiatis**	**0.62**	**36**	P	**Pg**	**16 46 50.6**	**-0.2**
	baz=220						
CSS				S	**Sg**	**16 46 58.6**	**-0.5**
ALFC	**Alefka**	**0.74**	**342**	P	**Pg**	**16 46 53.1**	**+0.2**
	baz=159						
ALFC				S	**Sg**	**16 47 02.0**	**-0.7**
MMA0B	**Mount Meron ar**	**2.54**	**124**	Sn	**Sb**	**16 47 52.6**	**-2.6**
GEM	**Giv'at Ha'Em**	**2.63**	**117**	Sn	**Sn**	**16 47 54.7**	**+2.5**
NATI	**Neve Ativ**	**2.66**	**116**	Sn	**Sn**	**16 47 54.3**	**+1.4**
MMLI	**Mount Malkishu**	**2.92**	**133**	Sn	**Sb**	**16 48 03.2**	**-2.9**
DSI	**Dead Sea**	**3.56**	**143**	Sn	**Sn**	**16 48 19.4**	**+4.1**
YTIR	**Yattir**	**3.61**	**148**	Sn	**Sn**	**16 48 20.4**	**+3.7**
YTIR				Sn	**Sb**	**16 48 22.0**	**-3.9**

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*IDC **11** 16:47:22.4±1.3, 34°.27N×25°.08E, h0^{km}, mb3.8/6,*
mb1 3.7/11, mb1mx3.5/47, mbtmp3.6/11, ML3.9/4, Error
ellipse: s-maj=23.4km s-min=19.3km az=31.0
*THE **11** 16:47:24.0, 34°.17N×25°.09E, h0^{km}±3^{km}, ML3.0/4, Error*
ellipse: s-maj=7.0km s-min=1.9km az=159.0
*ATH **11** 16:47:25.8, 34°.29N×25°.05E, h29^{km}±1^{km}, ML2.9/7, Error*
ellipse: s-maj=2.8km s-min=1.4km az=356.0
ISC 11 16:47:22.6±1.8**,34°.19N**±0°.06×**25°.11E**±0°.04**,h3^{km}**±11^{km}**,**
n31,σ**1^{s}.21**/44**,mb3.8**/6**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.86**	**343**	P	**Pb**	**16 47 40.7**	**+0.5**
SIVA				S	**Sn**	**16 47 55.0**	**+0.2**
	3µm,0.5s						
SIVA	**Sivas**	**0.86**	**343**	P	**Pb**	**16 47 40.7**	**+0.5**
SIVA				S	**Sb**	**16 47 51.3**	**-0.9**
SIVA				AML	AML	16 48 01.5	
	comp=N,5623µm,0.6s						
SIVA				AML	AML	16 48 09.1	
	comp=E,5798µm,0.7s						
LAST	**Lasithi**	**1.01**	**17**	P	**Pn**	**16 47 44.0**	**+0.1**
LAST				S	**Sn**	**16 47 58.8**	**+0.1**
	comp=E,288nm,0.7s						
LAST	**Lasithi**	**1.01**	**17**	P	**Pn**	**16 47 43.9**	**+0.1**
LAST				S	**Sn**	**16 47 57.9**	**-0.9**
LAST				AML	AML	16 48 04.7	
	comp=N,552µm,0.6s						
LAST				AML	AML	16 48 07.9	
	comp=E,564µm,0.6s						
GVD	**Gavdhos**	**1.06**	**308**	P	**Pb**	**16 47 44.0**	**+0.3**
GVD				S	**Sn**	**16 47 59.3**	**-0.5**
	comp=E,1µm,0.4s						
GVD	**Gavdhos**	**1.06**	**308**	P	**Pb**	**16 47 43.9**	**+0.3**
GVD				S	**Sn**	**16 47 58.9**	**-0.9**
GVD				AML	AML	16 48 05.5	
	comp=N,2205µm,0.5s						
GVD				AML	AML	16 48 05.8	
	comp=E,1986µm,0.4s						
IDI	**Anoyia**	**1.11**	**351**	Pn	**Pg**	**16 47 43.4**	**-0.5**
	comp=E,11nm,0.3s,baz=185,slow=14,SNR=45						
IDI				Sn	**Sg**	**16 47 56.9**	**-1.4**
	comp=E,19nm,0.3s,baz=138,slow=11,SNR=11						
IDI	**Anoyia**	**1.11**	**351**	P	**Pb**	**16 47 44.8**	**+0.3**
IDI				S	**Sb**	**16 47 59.0**	**-0.4**
IDI				AML	AML	16 48 10.2	
	comp=E,593µm,0.4s						
IDI				AML	AML	16 48 16.8	
	comp=N,696µm,0.5s						
NPS	**Neapolis**	**1.15**	**21**	P	**Pb**	**16 47 45.4**	**+0.3**
ZKR	**Zakros**	**1.30**	**44**	P	**Pn**	**16 47 49.9**	**+2.2**
ZKR				S	**Sn**	**16 48 06.7**	**+1.1**
ZKR				AML	AML	16 48 26.4	
	comp=N,258µm,0.8s						
ZKR				AML	AML	16 48 27.2	
	comp=E,676µm,0.8s						
VAM	**Vamos**	**1.43**	**329**	P	**Pb**	**16 47 50.0**	**+0.2**
VAM				S	**Sn**	**16 48 11.0**	**+2.3**
	comp=E,435nm,0.6s						
VAM	**Vamos**	**1.43**	**329**	P	**Pb**	**16 47 50.1**	**+0.2**
VAM				S	**Sb**	**16 48 07.7**	**-0.7**
VAM				AML	AML	16 48 22.9	
	comp=N,937µm,0.6s						
VAM				AML	AML	16 48 31.2	
	comp=E,839µm,0.7s						
IMMV	**Iera Moni Meta**	**1.57**	**324**	P	**Pg**	**16 47 52.9**	**+0.2**
IMMV	**Iera Moni Meta**	**1.57**	**324**	P	**Pg**	**16 47 52.9**	**+0.2**
IMMV				S	**Sg**	**16 48 11.7**	**-1.4**
IMMV				AML	AML	16 48 23.9	
	comp=E,776µm,0.5s						
IMMV				AML	AML	16 48 30.2	
	comp=N,615µm,0.8s						
THR3	**Thira Island,**	**2.23**	**6**	P	**Pn**	**16 48 02.0**	**+1.5**
THR5	**Thira Island,**	**2.23**	**5**	P	**Pn**	**16 48 01.6**	**+1.1**
ANKY	**Antikythira Is**	**2.23**	**319**	P	**Pn**	**16 48 01.5**	**+0.9**
MHLO	**Agia Marina, M**	**2.56**	**347**	P	**Pn**	**16 48 05.8**	**+0.7**
KTHA	**Kythira Island**	**2.66**	**321**	P	**Pn**	**16 48 07.8**	**+1.4**
KLV	**Kalavryta, Ach**	**4.53**	**329**	P	**Pn**	**16 48 33.2**	**+1.0**
MMAI	**Mount Meron Ar**	**8.67**	**95**	Pn	**Pn**	**16 49 28.9**	**-0.1**
	comp=N,0.7nm,0.3s,baz=293,slow=12,SNR=2.9						
MMAI				Sn	**Sn**	**16 51 02.4**	**-5.0**
	comp=N,0.9nm,0.3s,baz=306,slow=28,SNR=2.7						
BRTR	**Keskin Array B**	**8.78**	**49**	Pn	**Pn**	**16 49 31.8**	**+1.1**
	comp=N,0.1nm,0.3s,baz=231,slow=8.7,SNR=2.7						
EIL	**Elat**	**9.50**	**116**	Pn	**Pn**	**16 49 41.6**	**+1.3**
	comp=N,0.4nm,0.3s,baz=300,slow=20,SNR=4.4						
AKASG	**Malin Array Be**	**16.77**	**9**	Pn	**Pn**	**16 51 19.1**	**+0.7**
	comp=N,0.7nm,0.3s,baz=199,slow=10,SNR=5.5						
GERES	**GERESS Array B**	**16.92**	**333**	Pn	**Pn**	**16 51 21.1**	**+0.6**
	comp=N,0.3nm,0.3s,baz=147,slow=13,SNR=11						

HFS	Hagfors	27.01	347	P	P	16 53 04.5	-1.2
	comp=N,1.8nm,0.9s,baz=170,slow=8.8,SNR=3.7						
EKA	Eskdalemuir Ar	28.81	326	P	P	16 53 22.1	+0.3
	comp=N,0.2nm,0.3s,baz=124,slow=9.6,SNR=2.8						
TORD	Torodi Ar. Bea	29.84	231	P	P	16 53 31.5	+0.2
	comp=N,0.5nm,0.6s,baz=44,slow=7.7,SNR=4.2						
MKAR	Makanchi Array	44.35	56	P	P	16 55 34.1	0.0
	comp=N,0.9nm,0.5s,baz=280,slow=6.6,SNR=11						
ZALV	Zalesovo Beam	45.71	45	P	P	16 55 44.0	-0.8
	comp=N,1.1nm,0.4s,baz=268,slow=9.3,SNR=7.0						
SONM	Songino Array	60.13	50	P	P	16 57 32.1	+0.5
	comp=N,0.4nm,0.6s,baz=273,slow=5.6,SNR=3.3						

HLW 11 16:50:59.3, 35°.94N×26°.46E, h2^{km}±31^{km}, Ml4.0

ATH 11 16:51:02.6, 36°.03N×26°.06E, h130^{km}±3^{km}, ML3.2/10, Error ellipse: s-maj=3.6km s-min=1.4km az=163.0

ISCJB 11 16:51:02.0±0.5, 35°.99N±0°.03×26°.11E±0°.03, h134^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=3.8km az=176.7

THE 11 16:51:05.7, 36°.09N×26°.12E, h127^{km}±3^{km}, ML3.3/6, Error ellipse: s-maj=3.2km s-min=1.1km az=184.0

DDA 11 16:51:05.8, 35°.61N×26°.87E, h5^{km}±2^{km}, ML3.0

ISK 11 16:51:06.2, 36°.18N×26°.21E, h16^{km}, ML3.1/10

ISC 11 16:51:00.9±1.3**, 36°.03N**±0°.04×**26°.12E**±0°.03**, h145**^{km}±7^{km}**, n81, σ1^{s}.83**/107**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANAF	Anafi Island	0.43	319	P	Pn	16 51 22.1	+0.8
ANAF				S	Sn	16 51 35.1	-1.8
	4µm,0.4s						
ANAF	Anafi Island	0.43	319	P	Pn	16 51 22.2	+0.8
ANAF				AML	AML	16 51 35.6	
	comp=E,5780µm,0.4s						
ANAF				AML	AML	16 51 35.7	
	comp=N,11786µm,0.5s						
THR8	Santorini-Mono	0.64	306	P	Pn	16 51 23.4	+1.0
THR8	Santorini-Mono	0.64	306	P	Pn	16 51 23.5	+1.1
THR6	Thira Island,	0.67	299	P	Pn	16 51 23.5	+0.9
THR6	Thira Island,	0.67	299	P	Pn	16 51 23.5	+0.9
SAP1	Santorini-Akro	0.67	299	P	Pn	16 51 23.4	+0.8
THR2	Thira island,	0.69	307	P	Pn	16 51 23.6	+0.8
THR3	Thira Island,	0.70	303	P	Pn	16 51 23.6	+0.8
THR3	Thira Island,	0.70	303	P	Pn	16 51 23.6	+0.8
THT2	Imerovigli	0.70	306	P	Pn	16 51 23.6	+0.8
THR9	Santorini-Faro	0.70	298	P	Pn	16 51 23.5	+0.7
THR9	Santorini-Faro	0.70	298	P	Pn	16 51 23.7	+0.9
CMBO	Columbo, Santo	0.73	307	P	Pn	16 51 23.6	+0.6
CMBO	Columbo, Santo	0.73	307	P	Pn	16 51 23.6	+0.6
THR5	Thira Island,	0.74	302	P	Pn	16 51 23.9	+0.8
THR5	Thira Island,	0.74	302	P	Pn	16 51 24.0	+1.0
SAP3	Santorini-Thir	0.75	303	P	Pn	16 51 23.8	+0.7
AMGA	Amorgos Island	0.82	347	P	Pn	16 51 24.5	+0.8
STIA	Sitia Lasithi	0.83	182	P	Pn	16 51 25.3	+1.5
STIA				S	Sn	16 51 41.0	-0.1
NPS	Neapolis	0.87	209	P	Pn	16 51 24.9	+0.8
NPS				S	Sn	16 51 40.6	-1.2
	comp=N,2µm,0.3s						
NPS	Neapolis	0.87	209	P	Pn	16 51 25.0	+0.9
NPS				S	Sn	16 51 40.3	-1.5
NPS				AML	AML	16 51 42.3	
	comp=N,1821µm,0.2s						
NPS				AML	AML	16 51 43.0	
	comp=E,2424µm,0.2s						
ZKR	Zakros	0.92	175	PG	Pn	16 51 26.3	+1.7
ZKR				SG	Sn	16 51 42.2	-0.2
ZKR	Zakros	0.92	175	P	Pn	16 51 26.2	+1.7
ZKR				S	Sn	16 51 42.8	+0.4
	comp=E,600nm,0.3s						
ZKR	Zakros	0.92	175	P	Pn	16 51 26.2	+1.7
ZKR				S	Sn	16 51 42.2	-0.2
ZKR				AML	AML	16 51 44.2	
	comp=E,1534µm,0.2s						
ZKR				AML	AML	16 51 44.4	
	comp=N,863µm,0.5s						
IOSP	Ios island	0.97	316	P	Pn	16 51 25.6	+0.8
KARP	Karpathos	0.97	119	PG	Pn	16 51 26.3	+1.3
KARP	Karpathos	0.97	119	P	Pn	16 51 26.5	+1.5
KARP				S	Sn	16 51 42.3	-0.9
	comp=N,1µm,0.2s						
KARP	Karpathos	0.97	119	P	Pn	16 51 26.5	+1.5
KARP				AML	AML	16 51 44.1	
	comp=E,1823µm,0.3s						
KARP				AML	AML	16 51 44.1	
	comp=N,2066µm,0.1s						
LAST	Lasithi	1.01	211	P	Pn	16 51 26.5	+1.1
LAST				S	Sn	16 51 43.6	-0.4
	comp=N,418nm,0.4s						
LAST	Lasithi	1.01	211	P	Pn	16 51 26.2	+0.8
LAST				S	Sn	16 51 43.3	-0.7
LAST				AML	AML	16 51 43.9	
	comp=E,1040µm,0.5s						
LAST				AML	AML	16 51 46.4	
	comp=N,613µm,0.3s						
APE	Apeiranthos	1.14	335	PG	Pn	16 51 26.9	+0.4
APE	Apeiranthos	1.14	335	P	Pn	16 51 27.4	+1.0
APE	Apeiranthos	1.14	335	P	Pn	16 51 27.5	+1.0
IDI	Anoyia	1.25	234	P	Pn	16 51 28.3	+0.7
IDI				S	Sn	16 51 46.1	-1.7
IDI				AML	AML	16 51 47.5	
	comp=E,605µm,0.3s						
IDI				AML	AML	16 51 48.5	
	comp=N,632µm,0.3s						
DAT	Datca	1.36	59	PN	Pn	16 51 30.2	+1.5
DAT	Datca	1.36	59	*i* P	Pn	16 51 30.3	+1.6
DAT				IAML_P			
	comp=Z,382nm,0.2s						
BODT	Bodrum	1.41	43	PN	Pn	16 51 29.8	+0.7
MHLO	Agia Marina, M	1.54	296	P	Pn	16 51 31.1	+0.6
ARG	Arkhangelos	1.63	83	PN	Pn	16 51 33.4	+1.9
ARG				SN	Sn	16 51 54.3	-0.5
ARG	Arkhangelos	1.63	83	P	Pn	16 51 33.4	+1.9
ARG				S	Sn	16 51 54.9	+0.1
	comp=Z,445nm,0.3s						
ARG	Arkhangelos	1.63	83	P	Pn	16 51 33.4	+1.9
ARG				AML	AML	16 51 55.0	
	comp=N,638µm,0.4s						
ARG				S	Sn	16 51 55.1	+0.3
ARG				AML	AML	16 51 55.6	
	comp=E,1161µm,0.3s						
VAM	Vamos	1.69	249	P	Pn	16 51 33.6	+1.5
VAM	Vamos	1.69	249	P	Pn	16 51 33.5	+1.5
VAM				S	Sn	16 51 54.7	-1.2
VAM				AML	AML	16 51 57.3	
	comp=N,659µm,0.2s						
VAM				AML	AML	16 51 57.9	
	comp=E,554µm,0.2s						
BBRN	Bozburun-Marma	1.69	67	PN	Pn	16 51 34.3	+2.2
BBRN				SN	Sn	16 51 54.8	-1.2
SERI	Serifos	1.74	311	P	Pn	16 51 34.0	+1.3
SMG	Samos	1.77	19	P	Pn	16 51 34.6	+1.5
SMG	Samos	1.77	19	P	Pn	16 51 34.5	+1.5
IMMV	Iera Moni Meta	1.83	253	P	Pn	16 51 36.7	+2.9
IMMV	Iera Moni Meta	1.83	253	P	Pn	16 51 34.9	+1.2
IMMV				S	Sn	16 51 57.4	-1.5
IMMV				AML	AML	16 51 58.9	
	comp=E,843µm,0.3s						
IMMV				AML	AML	16 52 05.6	
	comp=N,736µm,0.3s						
YER	Yerkesik	2.06	57	PN	Pn	16 51 38.9	+2.5
YER				SN	Sn	16 52 03.4	-0.3
TURN	Turunc	2.17	66	PN	Pn	16 51 35.9	-1.7
TURN				SN	Sn	16 51 59.0	-6.9
TURN	Turunc	2.17	66	*i* P	Pn	16 51 36.0	-1.7
TURN				*i* S	Sn	16 51 59.5	-6.4
TURN				IAML_P			
	comp=Z,2µm,0.2s						
DALY	Dalyan (Mula)	2.19	68	PN	Pn	16 51 40.6	+2.7
DALY				SN	Sn	16 52 06.8	+0.5
DALY	Dalyan (Mula)	2.19	68	*i* P	Pn	16 51 41.2	+3.3
DALY				*i* S	Sn	16 52 06.0	-0.3
ANKY	Antikythira Is	2.30	267	P	Pn	16 51 40.0	+0.8
CHOS	Chios island	2.35	359	P	Pn	16 51 41.5	+1.5
FETY	Fethiye	2.46	75	*i* P	Pn	16 51 44.7	+3.4
FETY				IAML_P			
	comp=Z,933nm,0.2s						
KTHA	Kythira Island	2.49	276	P	Pn	16 51 42.6	+1.0
KTHA				AML	AML	16 52 13.4	
	comp=E,558µm,0.5s						
KTHA				AML	AML	16 52 13.8	
	comp=N,391µm,0.5s						
VLY	Voula,Athens	2.61	315	P	Pn	16 51 44.4	+1.4
VLI	Veliai	2.66	286	P	Pn	16 51 44.7	+1.0
VLI	Veliai	2.66	286	P	Pn	16 51 44.7	+1.0
DID	Didima	2.75	303	P	Pn	16 51 46.4	+1.5
AKAS	Kas	2.83	85	*i* P	Pn	16 51 48.7	+2.8
AKAS				*i* S	Sn	16 52 17.3	-3.4
EPID	Epidavros	2.88	304	P	Pn	16 51 48.4	+1.8
AKUM	Antalya-Kumluc	3.43	84	*i* P	Pn	16 51 56.0	+2.5
TRIP	Tripoli	3.44	297	P	Pn	16 51 55.0	+1.3
ITM	Ithomi	3.57	290	P	Pn	16 51 57.3	+2.0
GUR	Goura	3.58	303	P	Pn	16 51 56.8	+1.2
PYL	PYLOS	3.64	285	P	Pn	16 51 56.8	+0.6
DSF	Desfina	3.73	311	P	Pn	16 51 59.2	+1.8
KLV	Kalavryta, Ach	3.76	303	P	Pn	16 51 59.0	+1.1
AMT	Artemida-Makis	3.85	294	P	Pn	16 52 01.5	+2.5
KALE	Kalithea	3.96	308	P	Pn	16 52 02.0	+1.5
LAKA	Lakka	3.98	305	P	Pn	16 52 02.1	+1.4
AGG	Agios Georgios	4.24	316	P	Pn	16 52 06.6	+2.4
KEPZ	Antalya-Kepez	4.50	77	*i* P	Pn	16 52 10.1	+2.5
SLUM	Salum	4.59	190	P	Pn	16 52 10.3	+1.5
	baz=194						
SLUM				AMP		16 52 00.0	
	baz=194						
SLUM				S	Sn	16 52 58.9	-2.8
	baz=194						
KOT	Kottamia	7.75	140	P	Pn	16 52 51.6	+0.7
	baz=141						
KOT				AMP		16 54 00.0	
	baz=141						
KOT				S	Sn	16 54 13.1	-4.2
	baz=141						
HHAG	Hagoal	7.87	139	P	Pn	16 52 52.5	-0.1
	baz=140						
HHAG				S	Sn	16 54 16.4	-3.9
	baz=140						
RSH		8.11	126	P	Pn	16 52 56.2	+0.4
	baz=127						

IDC 11 16:57:52.0±1.4, 10°.07S×124°.12E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.6/39, mbtmp3.7/6, ML3.8/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/32, Error ellipse: s-maj=28.4km s-min=9.0km az=154.0

ISCJB 11 16:57:52.8±0.3, 10°.56S±0°.04×123°.70E±0°.04, h27^{km}, mb4.0/9, MS3.5/1, Error ellipse: s-maj=7.9km s-min=3.6km az=42.4

DJA 11 16:57:54.9±0.5, 10°S±3°×12°4E±°, h10^{km}±3^{km}, M4.3/9, mb4.7/4, MLv4.2/9

NEIC 11 16:57:59.9±2.3, 10°.38S×124°.02E, h76^{km}±9^{km}, mb4.1/8, Error ellipse: s-maj=19.7km s-min=10.8km az=71.0

ISC 11 16:57:54.6±0.6**, 10°.54S**±0°.05×**123°.68E**±0°.05**, h27**^{km}**, n35, σ2^{s}.63**/43**, mb4.1**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.33	357	Pg	Pb	16 58 01.2	-1.1
	2µm,0.3s,baz=77,slow=19,SNR=1031						
BATI				Lg	Lg	16 58 07.3	
	3µm,0.3s,baz=41,slow=20,SNR=70						
BATI	Baumata	0.33	357	P	Pb	16 58 01.1	-1.1
BATI				S	Sb	16 58 06.7	-0.8
SOEI	Soe	0.97	37	*e*Pn	Pb	16 58 16.2	+3.4
SOEI	Soe	0.97	37	P	Pb	16 58 16.0	+3.2
SOEI				S	Sn	16 58 38.0	+13
MMRI	Maumere	2.37	323	*e*Pn	Pn	16 58 33.6	+2.0
MMRI	Maumere	2.37	323	P	Pn	16 58 29.2	-2.5
MMRI				S	Sn	16 59 00.9	+1.0
EDFI	Ende, Flores	2.65	312	P	Pn	16 58 36.3	+0.7
BASI	Baing, Sumba	3.07	276	P	Pn	16 58 42.5	+1.2
BASI				S	Sn	16 59 17.3	+0.1
WBSI	Waikabubak, Su	4.32	282	P	Pn	16 58 58.3	-0.3
WBSI				S	Sn	16 59 45.9	-2.2
PLAI	Plampang	6.07	286	P	Pn	16 59 23.6	+1.0
	72nm,0.7s						
KAPI	Kappang	6.73	324	LR	LR	17 01 59.2	
	comp=Z,56nm,22.0s,baz=120,slow=37						
MTN	Manton Dam	7.65	108	*e*Pn	Pn	16 59 45.4	+1.1
MTN				*e*Sn	Sn	17 01 10.3	+0.1
SAUI	Saumlaki	7.94	72	*e*Pn	Pn	16 59 44.4	-3.9
FAKI	Fak Fak	11.38	49	*e*Pn	Pn	17 00 32.3	-3.2
WR1	Warramunga Arr	13.89	134	*e*Pn	Pn	17 01 10.5	+0.7
WR1				*e*Sn	Sn	17 03 36.0	-7.3
WRA	Warramunga Arr	13.89	134	Pn	Pn	17 01 10.5	+0.7
	0.4nm,0.3s,baz=308,slow=11,SNR=31						
WRA				Sn	Sn	17 03 36.0	-7.2
	0.4nm,0.3s,baz=312,slow=21,SNR=6.5						
WRAB	Tennant Creek	13.89	133	*e*Pn	Pn	17 01 11.8	+1.9
WRAB				*e*Sn	Sn	17 03 42.8	-0.5
WB2	Warramunga Arr	13.90	134	*e*Pn	Pn	17 01 10.7	+0.8
AS31	Alice Springs	16.29	145	*e*Pn	Pn	17 01 43.6	+1.9
	1.6nm,0.6s						
AS31				*e*Sn	Sn	17 04 39.4	-2.4
ASAR	Alice Springs	16.29	145	Pn	Pn	17 01 43.5	+1.8
	0.4nm,0.3s,baz=320,slow=12,SNR=38						
ASAR				Sn	Sn	17 04 35.8	-6.0
	0.3nm,0.3s,baz=314,slow=23,SNR=9.3						
ASAR				LR	LR	17 07 42.6	
	comp=Z,90nm,21.1s,baz=308,slow=36						
KKM	Kota Kinabalu	18.07	335	*e*P	P	17 02 04.8	+0.6
	20nm,1.3s						
MORW	Morawa	19.77	200	*e*P	P	17 02 23.5	+0.8
	21nm,1.4s						
NWAO	Narrogin (SRO)	23.06	194	*e*P	P	17 03 01.9	+4.0
	40nm,1.5s						
CTAO	Charters Tower	23.72	116	*e*P	P	17 03 03.2	-1.5
	36nm,1.4s						
BBOO	Buckleboo	24.93	155	*e*P	P	17 03 20.3	+4.7
	8.1nm,0.9s						
PSI	Prapat	27.98	297	LR	LR	17 15 44.9	
	comp=Z,117nm,18.2s,baz=170,slow=38						
CMAR	Chiang Mai Arr	37.76	320	P	P	17 05 07.3	-1.3
	0.5nm,0.9s,baz=131,slow=6.5,SNR=2.9						
SONA0	Songino Array	60.11	347	*e*P	P	17 08 00.6	+0.9
SONM	Songino Array	60.11	347	P	P	17 08 00.6	+0.9
	0.2nm,0.5s,baz=165,slow=6.0,SNR=2.0						
MK31	Makanchi Array	67.99	331	*e*P	P	17 08 51.5	+0.1
	1.1nm,0.8s						
MK32	Makanchi Array	67.99	331	*e*P	P	17 08 51.8	+0.5
MKAR	Makanchi Array	67.99	331	P	P	17 08 51.8	+0.5
	1.1nm,0.6s,baz=137,slow=7.4,SNR=16						
ZALV	Zalesovo Beam	72.18	337	P	P	17 09 15.8	-1.0
	0.4nm,0.3s,baz=129,slow=7.8,SNR=3.4						
ZAA1	Zalesovo Array	72.18	337	*e*P	P	17 09 15.8	-1.0
KURK	Kurchatov	72.47	332	*e*P	P	17 09 18.4	-0.1
	1.9nm,0.9s						

IDC 11 17:00:20.3±1.1, 11°.36N×139°.31E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.8/47, mbtmp3.9/9, ML4.0/1, MS3.3/7, Ms1 3.4/7, ms1mx3.0/40, Error ellipse: s-maj=31.3km s-min=23.7km az=95.0

ISCJB 11 17:00:23.3±0.6, 11°.30N±0°.08×139°.2E±0°.2, h33^{km}, mb4.0/12, MS3.3/5, Error ellipse: s-maj=21.8km s-min=10.9km az=172.9

NEIC 11 17:00:26.7±1.5, 11°.31N×139°.18E, h46^{km}±7^{km}, mb4.2/4, Error ellipse: s-maj=38.7km s-min=21.3km az=81.0

ISC 11 17:00:25.4±0.8**, 11°.3N**±0°.1×**139°.3E**±0°.2**, h35**^{km}**, n23, σ0^{s}.78**/18**, mb4.1**/12**, MS3.3**/5**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	13.81	174	Pn	Pn	17 03 38.7	-0.2
	0.7nm,0.3s,baz=47,slow=5.5,SNR=5.2						
JAY				LR	LR	17 07 54.5	
	comp=Z,155nm,20.2s,baz=6.0,slow=33						
SIJI	Sorong	14.50	214	LR	LR	17 08 02.2	
	comp=Z,98nm,21.7s,baz=34,slow=32						
MJAR	Matsushiro Arr	25.14	358	LR	LR	17 14 36.0	
	comp=Z,52nm,20.2s,baz=55,slow=34						
KSRS	Korea Array	27.96	340	LR	LR	17 17 19.8	
	comp=Z,71nm,18.0s,baz=183,slow=36						
AS31	Alice Springs	35.16	189	*e*P	P	17 07 16.1	0.0
	1.3nm,1.0s						
ASAR	Alice Springs	35.16	189	P	P	17 07 15.7	-0.4
	0.8nm,0.6s,baz=13,slow=12,SNR=4.2						
CMAR	Chiang Mai Arr	39.57	285	P	P	17 07 54.7	+1.1
	2.4nm,0.8s,baz=89,slow=6.8,SNR=16						
STKA	Stephens Creek	43.00	177	LR	LR	17 26 21.1	
	comp=Z,70nm,20.1s,baz=21,slow=36						
PETK	Petropavlovsk-	44.23	16	P	P	17 08 31.3	+0.2
	3.1nm,1.0s,baz=201,slow=7.7,SNR=2.3						
PETK				LR	LR	17 28 27.1	
	comp=Z,21nm,18.7s,baz=187,slow=38						
PEA1	Petropavlovsk-	44.23	16	*e*P	P	17 08 31.3	+0.2
SONA0	Songino Array	45.66	329	*e*P	P	17 08 41.7	-1.1
SONM	Songino Array	45.66	329	P	P	17 08 41.7	-1.1
	0.9nm,1.0s,baz=144,slow=8.6,SNR=5.3						
MK31	Makanchi Array	59.43	318	*e*P	P	17 10 25.4	+0.7
	1.8nm,1.1s						
MK32	Makanchi Array	59.43	318	*e*P	P	17 10 24.1	-0.6
MKAR	Makanchi Array	59.43	318	P	P	17 10 24.1	-0.6
	1.3nm,0.8s,baz=106,slow=8.9,SNR=7.6						
ZALV	Zalesovo Beam	60.39	326	P	P	17 10 30.3	-0.7
	1.0nm,0.6s,baz=87,slow=3.3,SNR=4.6						
ZAA1	Zalesovo Array	60.39	326	*e*P	P	17 10 30.3	-0.8
KURK	Kurchatov	62.88	321	*e*P	P	17 10 47.9	-0.1
	3.3nm,0.7s						
BRVK	Borovoye	68.44	323	*e*P	P	17 11 24.2	+0.4
	2.3nm,0.7s						
ILAR	Eielson Array	72.95	26	P	P	17 11 50.5	-0.5
	0.3nm,0.6s,baz=249,slow=6.6,SNR=4.1						
YKA	Yellowknife Ar	87.34	27	P	P	17 13 09.7	+1.1
	0.7nm,0.6s,baz=289,slow=5.4,SNR=3.6						
YKB5	Yellowknife Ar	87.34	27	*e*P	P	17 13 09.7	+1.1
ARCES	ARCESS Array B	87.52	341	LR	LR	17 54 45.1	
	comp=Z,34nm,21.3s,baz=200,slow=37						

IDC 11 17:08:30.1±1.4, 33°.99N×24°.75E, h0^{km}, mb3.8/4, mb1 3.6/8, mb1mx3.4/37, mbtmp3.5/8, ML3.9/3, MS2.6/1, Ms1 2.6/1, ms1mx2.0/49, Error ellipse: s-maj=27.7km s-min=21.8km az=130.0

THE 11 17:08:34.5, 34°.14N×25°.11E, h4^{km}±9^{km}, ML2.9/3, Error ellipse: s-maj=10.9km s-min=2.2km az=161.0

ATH 11 17:08:36.6, 34°.29N×24°.97E, h25^{km}±1^{km}, ML2.7/7, Error ellipse: s-maj=3.6km s-min=1.6km az=354.0

ISC 11 17:08:35.4±2.1**, 34°.20N**±0°.09×**25°.00E**±0°.04**, h12**^{km}±10^{km}**, n30, σ0^{s}.91**/40**, mb3.8**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.83	349	P	Pg	17 08 51.6	+0.1
SIVA				S	Sn	17 09 06.3	+1.2
	2µm,0.5s						
SIVA	Sivas	0.83	349	P	Pg	17 08 51.3	-0.2
SIVA				S	Sg	17 09 02.8	+0.4
SIVA				AML	AML	17 09 09.0	
	comp=N,4419µm,0.6s						
SIVA				AML	AML	17 09 12.2	
	comp=E,4614µm,0.5s						
TMBK	Timbaki Herakl	0.89	348	P	Pg	17 08 52.7	+0.1
GVD	Gavdhos	0.99	311	P	Pb	17 08 55.0	+0.6
GVD				S	Sn	17 09 10.3	+1.3
	comp=E,828nm,0.3s						
GVD	Gavdhos	0.99	311	P	Pb	17 08 54.8	+0.4
GVD				S	Sg	17 09 07.1	-0.3
GVD				AML	AML	17 09 11.7	
	comp=E,1737µm,0.2s						
GVD				AML	AML	17 09 16.2	
	comp=N,1594µm,0.4s						
LAST	Lasithi	1.04	22	P	Pg	17 08 54.7	-0.7
LAST				S	Sg	17 09 09.3	+0.2
	comp=N,200nm,0.5s						
LAST	Lasithi	1.04	22	P	Pg	17 08 54.8	-0.7
LAST				S	Sg	17 09 09.2	+0.2
LAST				AML	AML	17 09 13.8	
	comp=E,399µm,1.0s						
LAST				AML	AML	17 09 15.4	
	comp=N,470µm,0.5s						
IDI	Anoyia	1.09	355	Pn	Pg	17 08 55.4	-1.0
	comp=N,18nm,0.3s,baz=168,slow=20,SNR=26						
IDI				Sn	Sg	17 09 10.6	-0.1
	comp=N,28nm,0.3s,baz=162,slow=20,SNR=11						
IDI	Anoyia	1.09	355	P	Pg	17 08 55.5	-0.9
IDI				S	Sg	17 09 09.3	-1.4
IDI				AML	AML	17 09 19.1	
	comp=N,519µm,0.5s						
IDI				AML	AML	17 09 20.9	
	comp=E,500µm,0.4s						
NPS	Neapolis	1.18	25	P	Pg	17 08 58.3	+0.3
NPS				S	Sg	17 09 12.9	-0.5
PRNS	Prines Rethymn	1.23	341	P	Pg	17 08 58.8	-0.3
ZKR	Zakros	1.36	47	P	Pg	17 09 01.9	+0.4
ZKR				S	Sg	17 09 20.2	+1.0
ZKR				AML	AML	17 09 25.0	
	comp=N,196µm,0.5s						
ZKR				AML	AML	17 09 37.0	
	comp=E,430µm,0.9s						
VAM	Vamos	1.38	332	P	Pn	17 09 00.9	+0.5
VAM				S	Sb	17 09 18.5	0.0
VAM				AML	AML	17 09 33.3	
	comp=N,702µm,0.6s						
VAM				AML	AML	17 09 35.5	
	comp=E,601µm,0.5s						
IMMV	Iera Moni Meta	1.51	327	P	Pb	17 09 03.8	+0.4
IMMV				AML	AML	17 09 34.6	
	comp=E,536µm,0.4s						
IMMV				AML	AML	17 09 46.3	
	comp=N,338µm,0.7s						
ANKY	Antikythira Is	2.17	321	P	Pn	17 09 11.3	0.0
THR3	Thira Island,	2.23	8	P	Pn	17 09 12.7	+0.5
THR5	Thira Island,	2.23	7	P	Pn	17 09 13.0	+0.9
MHLO	Agia Marina, M	2.54	349	P	Pn	17 09 16.5	+0.1
KTHA	Kythira Island	2.60	323	P	Pn	17 09 19.3	+2.1
APE	Apeiranthos	2.90	8	P	Pn	17 09 21.4	0.0
SERI	Serifos	2.99	352	P	Pn	17 09 22.5	0.0
DID	Didima	3.60	337	P	Pn	17 09 31.7	+0.7
MMAI	Mount Meron Ar	8.76	95	Pn	Pn	17 10 41.9	0.0
	comp=N,0.5nm,0.3s,baz=280,slow=13,SNR=2.9						
BRTR	Keskin Array B	8.84	49	Pn	Pn	17 10 44.7	+1.5
	comp=N,0.0nm,0.3s,baz=248,slow=11,SNR=2.6						
AKASG	Malin Array Be	16.78	9	P	Pn	17 12 29.7	-0.4
	comp=N,0.5nm,0.3s,baz=200,slow=11,SNR=3.8						
GERES	GERESS Array B	16.88	334	Pn	Pn	17 12 32.8	+1.4
	comp=N,0.2nm,0.3s,baz=141,slow=11,SNR=8.6						
GERES				LR	LR	17 19 25.4	
	comp=N,22nm,21.8s,baz=132,slow=39						
HFS	Hagfors	26.98	348	P	P	17 14 14.3	-2.4
	comp=N,4.7nm,1.2s,baz=150,slow=9.9,SNR=3.2						
TORD	Torodi Ar. Bea	29.77	231	P	P	17 14 35.7	-6.3
	comp=N,0.2nm,0.4s,baz=52,slow=9.3,SNR=2.6						
MKAR	Makanchi Array	44.42	56	P	P	17 16 45.2	-0.8
	comp=N,0.5nm,0.5s,baz=280,slow=7.0,SNR=6.3						
ZALV	Zalesovo Beam	45.77	45	P	P	17 16 55.1	-1.4
	comp=N,0.9nm,0.5s,baz=270,slow=7.6,SNR=4.4						

ISCJB 11 17:13:01.7±0.8, 12°.00N±0°.06×89°.61W±0°.05, h33^{km}, mb4.2/20, MS5.0/1, Error ellipse: s-maj=9.8km s-min=5.2km az=26.0

SNET 11 17:13:02.8±1.2, 12°.07N×89°.63W, h35^{km}±999^{km}, ML4.1

NEIC 11 17:13:03.3±1.9, 11°.88N×89°.45W, h48^{km}±17^{km}, mb4.3/29, MD4.1(SNET), Error ellipse: s-maj=19.2km s-min=2.1km az=221.0

NEIC Felt [I] at San Salvador, El Salvador.

GCG 11 17:13:06.8±0.9, 12°.43N×89°.99W, h0^{km}±84^{km}, MD4.0

ISC 11 17:13:03.4±1.0**, 12°.03N**±0°.08×**89°.56W**±0°.06**, h33**^{km}**, n58, σ1^{s}.23**/64**, mb4.3**/20**, 11C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNET	Serv Nac Est T	1.68	11	*e*P	Pn	17 13 29.6	-1.0
OPAM	Oficina de Pla	1.71	12	*e*P	Pn	17 13 30.4	-0.8
LFU	La Fuente	1.77	14	⇑*i*P	Pn	17 13 31.4	-0.4
PAVA	Las Pavas	1.78	20	⇑*i*P	Pn	17 13 31.6	-0.5
TECA	Tecapa	1.79	35	⇑*i*P	Pn	17 13 31.6	-0.6
CEVE	Cerro Verde	1.79	358	⇑*i*P	Pn	17 13 31.5	-0.8
CEVE				*e*S	Sn	17 13 53.2	-0.9
CEVE				IAML		17 13 56.2	
	comp=Z,2µm,0.4s						
SBLS	San Blas	1.80	358	⇑*i*P	Pn	17 13 31.6	-0.9
SNJE	San Jose	1.83	359	⇑*i*P	Pn	17 13 32.0	-0.8
RTR	El Retiro	1.86	357	*i* P	Pn	17 13 32.5	-0.7
PACA	Pacayal	1.88	40	⇑*i*P	Pn	17 13 32.9	-0.4
PACA				*e*P	Pn	17 13 33.0	-0.4
PACA				IAML		17 13 35.4	
VSM	San Miguel	1.88	42	⇑*i*P	Pn	17 13 33.2	-0.3
LCND	La Caada	2.07	52	*i* P	Pn	17 13 35.2	-0.7
LCND				IAML		17 13 37.2	
	comp=Z,1µm,0.3s						
LCND				*e*S	Sn	17 14 02.1	+1.5
CNCH	Conchagua	2.09	53	*e*P	Pn	17 13 35.4	-0.9
VICT	Victoria	2.12	25	⇑*i*P	Pn	17 13 36.8	+0.1
CSGN	Cosiguina Volc	2.17	64	*e*Pn	Pn	17 13 36.6	-0.7
CSGN	Cosiguina Volc	2.17	64	*e*P	Pn	17 13 37.8	+0.4
MTO3	Montecristo	2.37	5	⇑*i*P	Pn	17 13 40.1	-0.1
PCG	Pacaya	2.56	337	*e*P	Pn	17 13 42.6	-0.3
PCG				*e*S	Sn	17 14 10.6	-2.5

NBG	Las Nubes	2.66	343	eP	Pn	17 13 45.4	+1.1
NBG				eS	Sn	17 14 14.9	-0.6
FUG	Fuego 3	2.71	333	eP	Pn	17 13 44.2	-0.7
FUG				eS	Sn	17 14 14.4	-2.3
TGUH	Tegucigalpa,Un	3.01	48	ePn	Pn	17 13 48.5	-0.4
TGUH	Tegucigalpa,Un	3.01	48	⇑iP	Pn	17 13 48.0	-1.0
ESTN	Estel	3.29	71	ePn	Pn	17 13 49.8	-3.1
STG3	Santiaguito 3,	3.31	324	eP	Pn	17 13 52.9	-0.2
STG3				eS	Sn	17 14 28.2	-3.2
ACON	Acoyapa	4.29	90	ePn	Pn	17 14 06.8	+0.4
JTS	Las Juntas de	4.84	110	ePn	Pn	17 14 10.4	-3.6
CCIG	Comitan	4.92	330	ePn	Pn	17 14 16.6	+1.3
TEIG	Tepich	8.25	8	ePn	Pn	17 15 02.1	+1.3
LNIG	Linares	15.87	325	eP	P	17 16 48.9	+1.0
	comp=Z,45nm,1.8s						
833A	Chaparral WMA,	18.64	332	eP	Pn	17 17 19.8	+0.9
	comp=Z,111nm,1.9s						
352A	Blakely	19.83	12	eP	P	17 17 29.6	-1.8
	comp=Z,32nm,0.7s						
TIGA	Tifton	20.09	15	eP	P	17 17 34.7	+0.4
	comp=Z,25nm,0.9s						
147A	Livingston	20.59	3	eP	Pn	17 17 40.9	-1.1
	comp=Z,14nm,0.6s						
152A	Waverly Hall	21.02	11	eP	P	17 17 44.8	+0.4
	comp=Z,5.4nm,0.6s						
LRAL	Lakeview Retre	21.04	6	eP	P	17 17 45.0	+0.4
	comp=Z,5.7nm,0.9s						
WHTX	Lake Whitney,	21.16	341	eP	P	17 17 44.4	-1.5
	comp=Z,14nm,0.8s						
Z50A	Ashland	21.39	8	eP	P	17 17 49.0	+0.7
	comp=Z,6.8nm,1.0s						
Y49A	Blount Mountai	21.92	7	eP	P	17 17 54.0	0.0
	comp=Z,6.5nm,0.7s						
GOGA	Godfrey	22.00	14	eP	P	17 17 54.4	-0.5
	comp=Z,27nm,1.8s						
Y52A	Lilburn	22.31	12	eP	P	17 17 56.6	-1.6
	comp=Z,6.3nm,0.9s						
OXF	Oxford	22.39	0	eP	P	17 17 58.8	-0.2
	comp=Z,24nm,0.9s						
X48A	Hartselle	22.44	5	eP	P	17 17 59.1	-0.5
	comp=Z,5.4nm,0.9s						
MIAR	Mount Ida	22.71	351	eP	P	17 18 03.7	+1.2
	comp=Z,18nm,1.6s						
WHAR	Wooly Hollow	23.29	354	eP	P	17 18 09.5	+1.1
	comp=Z,12nm,1.4s						
FCAR	Ozark Folk Cen	23.87	355	eP	P	17 18 13.8	-0.2
	comp=Z,4.4nm,0.7s						
WMOK	Wichita Mounta	24.11	341	eP	P	17 18 16.9	+0.6
	comp=Z,15nm,1.8s						
MNTX	Cornudas Mount	24.41	326	eP	P	17 18 20.4	+1.3
	comp=Z,7.5nm,1.8s						
W57A	Gilead	24.61	19	eP	P	17 18 21.2	+0.5
	comp=Z,9.2nm,0.6s						
PBMO	Poplar Bluff	24.66	358	eP	P	17 18 21.1	-0.1
	comp=Z,9.4nm,0.6s						
T49A	Edmonton	25.23	8	eP	P	17 18 25.9	-0.5
	comp=Z,34nm,2.0s						
U54A	Nelsons Funny	25.37	15	eP	P	17 18 26.7	-1.0
	comp=Z,35nm,1.6s						
CCM	Cathedral Cave	25.97	357	eP	P	17 18 32.7	-0.3
	comp=Z,7.6nm,0.6s						
COWI	Conover	33.96	1	eP	P	17 19 42.2	-1.6
	comp=Z,5.0nm,0.6s						
VYHS	Vyhne	92.91	39	eP	P	17 26 12.8	-0.5
WMQ	Urumqi	124.37	2	eP	PKiKP	17 32 01.0	+1.2
WMQ				pmax	pmax		
	comp=Z,52nm,4.3s						
WMQ				LR	LR		
	comp=N,190nm,29.3s						
WMQ				LR	LR		
	comp=E,340nm,29.0s						
WMQ				LR	LR		
	comp=Z,630nm,28.3s						
KSH	Kashi	126.98	14	ePKP	PKiKP	17 32 07.0	+1.8
KSH				sPKP		17 32 21.6	
LZH	Lanzhou	130.50	346	ePKP	PKiKP	17 32 14.4	+2.0
LZH				pPKP	sPKPdf	17 32 23.8	0.0
LZH				sP	pPKPdf	17 32 27.6	+6.9
CD2	Chengdu	135.43	344	PKP	PKPdf	17 32 20.0	-0.8

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*ISCJB **11** 17:19:59.6±0.3, 67°.04N±0°.02×20°.99E±0°.05, h0^{km}, Error ellipse: s-maj=3.1km s-min=2.7km az=167.5*
*IDC **11** 17:20:00.2±0.9, 67°.08N×20°.80E, h0^{km}, mb1 2.9/4, mb1mx2.8/58, mbtmp2.9/4, ML1.9/4, Error ellipse: s-maj=17.9km s-min=8.0km az=117.0*
*HEL **11** 17:20:00.8±0.0, 67°.06N×20°.96E, h0^{km}, ML2.0, ML2.0(UPP), Explosion*
*UPP **11** 17:20:00.1±0.1, 67°.06N×20°.95E, h0^{km}, ML2.0, Explosion*
*BER **11** 17:20:01.3±1.9, 66°.85N×21°.30E, h0^{km}, ML1.3, Suspected explosion*
ISC 11 17:19:59.8±0.7, **67°.06N**±0°.02×**20°.92E**±0°.02, **h0^{km}, n48,** σ**1^{s}27**/71, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.15	294	P	Pg	17 20 03.4	+0.8
DUNU				S	Sg	17 20 06.2	+1.5
DUNU	Dundret	0.15	294	iP	Pg	17 20 03.4	+0.8
DUNU				iS	Sg	17 20 06.2	+1.5
MASU	Masugnsbyn	0.58	46	P	Pg	17 20 11.0	+0.2
MASU	Masugnsbyn	0.58	46	iP	Pg	17 20 11.0	+0.2
ERTU	Ertsjaerv	0.71	135	P	Pg	17 20 13.3	-0.1
ERTU	Ertsjaerv	0.71	135	eP	Pg	17 20 13.3	-0.1
PAJU	Pajala	0.86	91	P	Pg	17 20 16.0	-0.3
PAJU				S	Sg	17 20 27.5	+0.1
PAJU	Pajala	0.86	91	iP	Pg	17 20 16.0	-0.3
PAJU				iS	Sg	17 20 27.5	+0.1
HARU	Harads	0.90	179	P	Pg	17 20 16.9	-0.2
HARU	Harads	0.90	179	eP	Pg	17 20 16.9	-0.2
RATU	Laukkuluspa	0.92	327	P	Pg	17 20 17.2	-0.2
RATU				S	Sg	17 20 29.6	+0.3
RATU	Laukkuluspa	0.92	327	eP	Pg	17 20 17.2	-0.2
RATU				eS	Sg	17 20 29.6	+0.3
SALU	Saltoluokta	0.99	290	P	Pg	17 20 18.8	0.0
SALU	Saltoluokta	0.99	290	eP	Pg	17 20 18.8	0.0
LANU	Lannavaara	1.07	22	P	Pg	17 20 19.8	-0.5
LANU	Lannavaara	1.07	22	eP	Pg	17 20 19.7	-0.7
LANU				eSB	Sb	17 20 36.2	+0.4
NIKU	Nikkaluokta	1.09	319	P	Pg	17 20 20.4	-0.2
NIKU	Nikkaluokta	1.09	319	eP	Pg	17 20 20.4	-0.2
KALU	Kalix	1.55	140	eP	Pn	17 20 28.3	-0.3
KALU				eSN	Sg	17 20 54.2	+4.6
SJUU	Sjulsmark	1.58	170	P	Pn	17 20 29.1	0.0
SJUU	Sjulsmark	1.58	170	eP	Pn	17 20 29.1	0.0
TOF	Tornio	1.68	124	eP	Pn	17 20 30.5	+0.1
	baz=315						
TOF				MSG		17 20 49.6	
	comp=Z,15nm,0.2s						
HEF	Hetta	1.71	36	eP	Pn	17 20 30.8	+0.1
HEF				MSG		17 20 50.1	
	comp=Z,12nm,0.2s						
HEF				eSG	Sn	17 20 53.2	-0.1
HEF	Hetta	1.71	36	eP	Pn	17 20 30.9	+0.1
HEF				eS	Sn	17 20 53.2	-0.1
LILU	Lilltraesk	1.84	194	P	Pn	17 20 33.1	+0.6
LILU	Lilltraesk	1.84	194	eP	Pn	17 20 33.1	+0.6
KIF	Kilpisjarvi	1.95	359	ePG	Pb	17 20 36.6	+0.5
	baz=177						
KIF				MSG		17 20 60.0	
	comp=Z,21nm,0.2s						
KIF				eSG	Sg	17 21 03.1	+0.6
KIF	Kilpisjarvi	1.95	359	eP	Pb	17 20 36.3	+0.2
KIF				eS	Sg	17 21 02.8	+0.3
RNF	Rovaniemi	2.06	100	ePB	Pn	17 20 36.6	+1.0
KTK1	Kautokeino	2.14	23	eP	Pb	17 20 38.7	-0.8
KTK1				eS	Sb	17 21 06.9	+0.4
SGF	Sodankyl	2.21	77	ePB	Pn	17 20 38.8	+1.1
STEI	Steigen	2.35	294	eP	Pn	17 20 41.1	+1.5
STEI				eS	Sb	17 21 13.0	+0.5
STEI				IAML		17 21 22.6	
	comp=Z,3.7nm,0.1s						
BURU	Burvik	2.50	175	eP	Pn	17 20 43.0	+1.5
	baz=356						
TRO	Tromso	2.69	345	eP	Pb	17 20 47.4	-1.3
TRO				eS	Sb	17 21 21.5	-0.6
TRO				IAML		17 21 27.3	
	comp=Z,5.7nm,0.1s						
MOR8	Moi Rana	2.73	254	eP	Pn	17 20 45.2	+0.3
MOR8				eS	Sn	17 21 15.8	-2.8
MOR8				IAML		17 21 25.8	
	comp=Z,3.9nm,0.2s						
OUL	Oulu	2.84	132	ePB	Pb	17 20 49.2	-2.0
ARE0	ARCESS Array S	3.01	32	eP	Pn	17 20 49.3	+0.6
ARE0				eSB	Sb	17 21 31.6	+0.1
ARE0	ARCESS Array S	3.01	32	eP	Pn	17 20 49.5	+0.8
ARE0				eS	Sn	17 21 27.3	+1.9
ARE0				IAML		17 21 35.2	
	comp=Z,0.2nm,0.1s						
ARCES	ARCESS Array B	3.01	32	Pn	Pn	17 20 49.4	+0.7
	comp=Z,0.4nm,0.3s,baz=216,slow=13,SNR=17						
ARCES				Sn	Sn	17 21 27.1	+1.7
	comp=Z,1.1nm,0.3s,baz=220,slow=24,SNR=10.0						
OUF	Merijarvi	3.13	148	eP	Pn	17 20 52.3	+2.0
OUF				MSG		17 21 32.4	
	comp=Z,2.0nm,0.2s						
KONS	Konsvik	3.14	263	eP	Pn	17 20 52.0	+1.6
KONS				eS	Sn	17 21 28.7	+0.2
KONS				IAML		17 21 52.2	
	comp=Z,3.6nm,0.2s						
UMAU	Umeaa	3.19	182	eP	Pn	17 20 52.2	+1.0
MSF	Maaselka	3.45	106	ePB	Pn	17 20 57.8	+3.0
VAF	Ylistaro	4.10	169	eP	Pn	17 21 05.1	+1.5
	baz=348						
HEMU	Hemsoen	4.57	197	eP	Pn	17 21 11.4	+1.4
FINES	FINESS Array B	6.07	156	Pn	Pn	17 21 31.8	+1.1
	comp=Z,0.1nm,0.3s,baz=345,slow=13,SNR=9.1						
FINES				Sn	Sn	17 22 42.0	+1.3
	comp=Z,0.1nm,0.3s,baz=343,slow=19,SNR=3.5						
NOA	NORSAR Array B	7.38	220	Pn	Pn	17 21 46.8	-1.9
	comp=Z,0.0nm,0.3s,baz=30,slow=11,SNR=2.3						
NOA				Sn	Sn	17 23 10.1	-3.0
	comp=Z,0.0nm,0.3s,baz=33,slow=23,SNR=1.5						
HFS	Hagfors	7.66	208	Pn	Pn	17 21 50.5	-2.0
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=7.2						
HFS				Sn	Sn	17 23 16.7	-3.1
	baz=26,slow=30,SNR=2.5						

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*IDC **11** 17:29:30.4±2.8, 36°.37N×71°.08E, h204^{km}±24^{km}, mb3.4/10, mb1 3.5/15, mb1mx3.2/57, mbtmp3.9/15, Error ellipse: s-maj=21.7km s-min=17.2km az=19.0*
*ISCJB **11** 17:29:31.5±0.4, 36°.64N±0°.04×70°.97E±0°.05, h200^{km}, mb4.0/17, Error ellipse: s-maj=5.6km s-min=4.9km az=157.8*
*NEIC **11** 17:29:33.7±1.1, 36°.69N×71°.13E, h218^{km}±10^{km}, mb4.6/8, Error ellipse: s-maj=15.2km s-min=9.1km az=104.0*
*NNC **11** 17:29:39.6±2.8, 37°.13N×71°.16E, h234^{km}±35^{km}, mb2.7, mpv4.0, Error ellipse: s-maj=28.4km s-min=16.2km az=10.0*
ISC 11 17:29:31.9±0.6, **36°.66N**±0°.05×**71°.03E**±0°.06, **h200^{km}, n58,** σ**1^{s}76**/66, **mb4.1**/17, **4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.40	347	ePn	Pn	17 30 18.1	+3.4
GAR				eS	Sn	17 30 50.0	+1.7
KBL	Kabul	2.67	218	ePn	Pn	17 30 21.6	+3.7
KBL				eS	Sn	17 30 55.9	+2.2
BTK	Batken	3.40	357	ePn	Pn	17 30 29.1	+2.9
NIL	Nilore	3.51	148	ePn	Pn	17 30 31.1	+3.4
ARSB	Arslanbob	4.90	17	ePn	Pn	17 30 46.7	+1.6
NRN	Naryn	6.13	38	ePn	Pn	17 31 01.2	+0.1
UCH	Uchtor	6.18	25	P	Pn	17 31 03.7	+1.9
	SNR=54						
KZA	Kyzart	6.32	30	P	Pn	17 31 04.9	+1.4
	SNR=34						
EKS2	Erkin-Say	6.35	19	P	Pn	17 31 05.8	+2.0
	SNR=7.9						
KK31	Karatay Array	6.45	357	ePn	Pn	17 31 06.5	+1.7
KK31				eS	Sn	17 32 17.5	-1.1
KK31	Karatay Array	6.45	357	⇓P	Pn	17 31 07.8	+3.0
	1.6nm,0.4s,baz=181,slow=13,SNR=36						
KK31				⇑S	Sn	17 32 16.8	-1.7
	5.5nm,0.3s,baz=169,slow=16,SNR=16						
KKAR	Karatay Array	6.45	357	ePn	Pn	17 31 06.5	+1.7
KKAR				eS	Sn	17 32 17.0	-1.5
AAK	Ala-Archa	6.54	23	P	Pn	17 31 08.4	+2.2
	7.8nm,0.3s,baz=185,slow=5.6,SNR=40						
AAK				S	Sn	17 32 19.7	-1.2
	0.9nm,0.3s,baz=188,slow=14,SNR=4.2						
AAK	Ala-Archa	6.54	23	ePn	Pn	17 31 08.1	+1.9
AAK	Ala-Archa	6.54	23	⇑P	Pn	17 31 08.1	+1.9
	8.7nm,0.3s						
AAK				⇑S	Sn	17 32 20.4	-0.5
	37nm,0.8s						
AAK	Ala-Archa	6.54	23	P	Pn	17 31 08.2	+2.1
	SNR=17						
KBK	Karagaybulak	6.70	26	P	Pn	17 31 10.5	+2.2
	SNR=17						
ULHL	Ulahol	6.88	34	P	Pn	17 31 12.2	+1.5
	SNR=17						
BOOM	Boomskoye usch	6.94	32	ePn	Pn	17 31 13.2	+1.8
CHMS	Chumysh	6.95	23	P	Pn	17 31 13.3	+2.0
	SNR=7.9						
USP	Ospenovka	7.11	21	P	Pn	17 31 15.4	+1.9
	SNR=5.2						
TKM2	Tokmak 2	7.17	28	⇓P	Pn	17 31 16.0	+1.6
	16nm,0.5s						
TKM2				⇑S	Sn	17 32 34.5	-1.4
	14nm,0.9s						
TKM2	Tokmak 2	7.17	28	P	Pn	17 31 16.2	+1.7
	SNR=11						
GEYT	Alibeck	10.37	281	P	Pn	17 31 56.0	+0.1
	0.6nm,0.3s,baz=122,slow=14,SNR=6.0						
GEYT				S	Sn	17 33 48.6	-3.0
	0.3nm,0.3s,baz=137,slow=13,SNR=2.6						
MAKZ	Makanchi	13.01	35	ePn	Pn	17 32 29.6	+0.3
MK31	Makanchi Array	13.14	36	ePn	Pn	17 32 31.8	+0.7
MK31	Makanchi Array	13.14	36	P	Pn	17 32 31.4	+0.4
	0.4nm,0.3s,baz=215,slow=15,SNR=11						
MKAR	Makanchi Array	13.14	36	P	Pn	17 32 31.6	+0.6
	0.4nm,0.3s,baz=220,slow=16,SNR=14						
PYUN	Piuthan	13.22	127	eP	Pn	17 32 31.4	-0.9
	9.5nm,0.3s						
KOLN	Koldanda	13.84	126	eP	Pn	17 32 35.0	-5.0
	31nm,0.9s						
GKN	Gorkha	14.37	123	eP	P	17 32 48.6	+0.6
	14nm,0.3s						
KKN	Kakani	14.94	122	eP	P	17 32 55.4	+1.0
	9.5nm,0.5s						
AB31	Akbulak array	14.96	331	P	P	17 32 56.4	+2.4
	0.2nm,0.3s,baz=146,slow=11,SNR=12						
PKIN	Phulchoki	15.16	123	eP	Pn	17 32 56.5	+0.2
	5.2nm,0.3s						
PKI	Pulchoki	15.17	123	eP	Pn	17 32 56.4	-0.1
	5.5nm,0.3s						
JIRN	Jiri	15.65	121	eP	Pn	17 33 06.1	+3.8
	27nm,0.4s						
BVAR	Borovoye Array	16.37	359	P	Pn	17 33 11.8	+1.4
	0.3nm,0.3s,baz=164,slow=10,SNR=4.4						
AKTO	Aktyubinsk	16.65	330	P	P	17 33 13.3	+0.6
	0.4nm,0.3s,baz=144,slow=8.2,SNR=6.8						
AKTO	Aktyubinsk	16.65	330	⇓P	Pn	17 33 14.4	+0.6
	1.6nm,0.6s						
ZALV	Zalesovo Beam	19.76	25	P	P	17 33 46.5	+0.1
	0.9nm,0.4s,baz=234,slow=10,SNR=4.8						
FIA1	FINESS Array S	37.36	326	eP	P	17 36 25.5	+0.6
	25nm,1.5s						
FINES	FINESS Array B	37.36	326	P	P	17 36 24.9	0.0
	1.1nm,0.4s,baz=120,slow=9.0,SNR=9.1						
ARCES	ARCESS Array B	41.01	338	P	P	17 36 56.0	+1.1
	2.3nm,0.8s,baz=113,slow=8.5,SNR=9.9						
GSI	Gunungsitoli	42.90	139	eP	P	17 37 09.9	-0.9
	39nm,1.7s						
NC405	NORSAR Array S	44.03	323	eP	P	17 37 19.5	+0.1
	46nm,1.6s						
NC602	NORSAR Array S	44.08	323	eP	P	17 37 20.1	+0.4
	83nm,2.0s						
NC303	NORSAR Array S	44.21	323	eP	P	17 37 21.3	+0.5
	54nm,1.6s						
NB201	NORSAR Array S	44.23	323	eP	P	17 37 21.8	+0.8
	82nm,1.7s						
NB2	NORSAR Subarra	44.27	323	P	P	17 37 21.7	+0.4
	comp=Z,1.0nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.27	323	P	P	17 37 21.9	+0.6
	comp=Z,0.9nm,0.5s,baz=96,slow=7.7,SNR=9.2						
NBO00	NORSAR Array S	44.48	323	eP	P	17 37 23.3	+0.3
	comp=Z,112nm,1.9s						
NC204	NORSAR Array S	44.51	323	eP	P	17 37 23.3	+0.1
	comp=Z,108nm,2.0s						
TORD	Torodi Ar. Bea	65.75	269	P	P	17 39 52.6	-3.0
	comp=Z,0.2nm,0.4s,baz=56,slow=7.9,SNR=3.6						
INK	Inuvik	73.74	9	P	P	17 40 43.2	-0.2
	comp=Z,1.6nm,0.4s,baz=52,slow=4.7,SNR=3.6						
ILAR	Eielson Array	74.62	16	P	P	17 40 47.2	-1.4
	comp=Z,0.3nm,0.8s,baz=330,slow=6.7,SNR=4.1						
YKA	Yellowknife Ar	81.08	3	P	P	17 41 24.2	0.0
	comp=Z,0.5nm,0.4s,baz=348,slow=5.5,SNR=2.8						
WRA	Warramunga Arr	82.05	122	P	P	17 41 27.5	-2.5
	comp=Z,1.3nm,0.8s,baz=314,slow=5.2,SNR=6.6						
ASAR	Alice Springs	84.33	125	P	P	17 41 38.7	-2.8
	comp=Z,0.3nm,0.6s,baz=310,slow=4.6,SNR=9.3						

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*DDA **11** 17:37:14.3, 40°.50N×43°.01E, h7^{km}±2^{km}, ML2.9*
*ISK **11** 17:37:14.6, 40°.55N×43°.03E, h6^{km}, ML2.4/3*
ISC 11 17:37:14.8±1.1, **40°.53N**±0°.03×**43°.03E**±0°.03, **h8^{km}**±10^{km}, **n20,** σ**0^{s}85**/28, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARS	Kars	0.10	21	PG	Pg	17 37 16.9	-0.5
DIGO	Kars	0.29	114	iP	Pg	17 37 20.9	+0.3
EAK	Akyaka	0.47	70	iP	Pb	17 37 24.9	-0.4
EAK				iS	Sb	17 37 32.6	+0.2
SENK	Senkaya-Erzuru	0.52	274	PG	Pg	17 37 24.9	0.0
SENK				SG	Sb	17 37 32.9	-1.1
EATA	Eleskirt	0.79	212	iP	Pg	17 37 29.8	-0.2
EATA				IAML_P			
	comp=Z,4μm,0.3s						
BGD	Bogdanovka	0.85	30	P	Pg	17 37 31.2	0.0
BGD				S	Sb	17 37 43.4	-0.1
AKH	Akhalkalaki	0.94	22	PG	Pg	17 37 32.7	-0.3
AKH				SG	Sb	17 37 46.0	-0.2
AKH	Akhalkalaki	0.94	22	P	Pg	17 37 32.4	-0.6
AKH				S	Sg	17 37 43.6	-1.6
AGRB	Hanur-Agry	0.95	182	PG	Pb	17 37 33.7	+0.1
EPOS	Posof	1.00	347	iP	Pb	17 37 34.3	-0.1
DAGI	Agillar	1.01	303	iP	Pb	17 37 34.5	0.0
DBAD	Bademkaya	1.12	296	iP	Pn	17 37 36.7	-0.2
DBAD				IAML_P			
	comp=Z,1μm,0.2s						
TUTA	Tutak	1.14	188	iP	Pn	17 37 37.0	-0.2
DBOC	Borcka	1.31	309	iP	Pn	17 37 39.3	-0.2
DBOC				IAML_P			
	comp=Z,782nm,0.2s						
AKDA	Akdag	1.34	252	iP	Pg	17 37 40.6	+0.1
BCA	Borcka	1.40	311	PN	Pn	17 37 40.7	+0.1
BATM	Batumi	1.47	317	PN	Pb	17 37 42.4	0.0
BATM	Batumi	1.47	317	P	Pb	17 37 42.3	0.0
BATM				S	Sg	17 38 02.6	+0.5
TKB	Tkibuli	1.82	359	P	Pb	17 37 48.1	-0.1
TKB				S	Sg	17 38 13.7	+0.5
ONI	Oni	2.08	9	P	Pb	17 37 53.1	+0.3
ONI				S	Sg	17 38 25.1	+3.5

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*DDA **11** 17:48:55.6, 40°.82N×35°.95E, h7^{km}±2^{km}, ML2.6*
*ISCJB **11** 17:48:56.6±0.5, 40°.85N±0°.03×35°.99E±0°.06, h8^{km}, Error ellipse: s-maj=6.1km s-min=3.9km az=171.5*
*ISK **11** 17:48:56.2, 40°.88N×36°.03E, h13^{km}, ML2.2/3*
ISC 11 17:48:56.0±0.9, **40°.86N**±0°.03×**35°.98E**±0°.04, **h8^{km}, n12,** σ**0^{s}60**/16, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KVT	Kavak	0.22	14	PG	Pg	17 49 01.0	+0.5
KVT				SG	Sg	17 49 04.5	+0.9
AMSY	Amasya-Merkez	0.25	206	iP	Pg	17 49 02.1	+1.1
HAVZ	Havza	0.29	317	iP	Pb	17 49 03.0	-0.5
HAVZ				IAML_P			
	comp=Z,5μm,0.1s						
SAMS	Samsun-Alacam	0.52	18	iP	Pb	17 49 07.1	-0.4
SAMS				iS	Sb	17 49 15.2	+0.1
ERBA	Erbaa	0.62	107	iP	Pb	17 49 08.6	-0.4
ERBA				IAML_P			
	comp=Z,2μm,0.1s						
TOKT	Tokat	0.69	141	PG	Pb	17 49 09.9	-0.4
TOKT				SG	Sb	17 49 19.9	-0.2
DIKM	Dikmen	0.95	326	PG	Pn	17 49 15.2	-0.5
DIKM				SG	Sn	17 49 29.1	-0.4
COAL	Corum-Alaca	0.97	232	iP	Pb	17 49 15.0	0.0
COAL				IAML_P			
	comp=Z,164nm,0.2s						
CORM	Corum	1.23	237	PN	Pg	17 49 19.9	+0.3
SINO	SINOP_Merkez	1.29	334	iP	Pg	17 49 21.5	+0.7
SIRC	Yozgat	1.65	203	iP	Pb	17 49 26.1	-0.6
DELI	KIRIKKALE	1.79	242	iP	Pb	17 49 28.6	-0.5
DELI				IAML_P			
	comp=Z,95nm,0.1s						

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*GEN **11** 17:57:48.9, 44°.16N×10°.14E, h3^{km}, Ml1.2*
ROM 11 17:57:48.5±0.1, **44°.161N**±0°.004×**10°.141E**±0°.004, **h7^{km}, ML1.4**/5, **Error ellipse: s-maj=0.3km s-min=0.3km az=330.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	Equi	0.01	61	P	Pg	17 57 49.6	-0.3
EQUI				S	Sg	17 57 50.1	-0.7
EQUI	Equi	0.01	61	P	Pg	17 57 49.6	-0.2
T0912	Minucciano (LU	0.05	82	P	Pg	17 57 50.5	+0.3
T0912				S	Sg	17 57 51.7	+0.3
T0911	Castelpoggio (	0.07	224	P	Pg	17 57 50.7	+0.3
T0911				S	Sg	17 57 52.2	+0.5
FIVI	Fivizzano	0.08	353	P	Pg	17 57 50.8	+0.3
FIVI				S	Sg	17 57 52.4	+0.4
FOSD	Fosdinovo	0.12	243	P	Pg	17 57 51.6	+0.6
FOSD				S	Sg	17 57 53.9	+1.1
VLC	Villacollemand	0.18	91	P	Pg	17 57 52.8	+0.7
VLC				S	Sg	17 57 55.8	+1.2
VLC				AML	AML		
	comp=E,66μm,0.7s						
VLC				AML	AML		
	comp=N,78μm,1.3s						
VLC				AML	AML		
	comp=E,66μm,0.7s						
VLC				AML	AML		
	comp=N,78μm,1.3s						
VLC				AML	AML		
	comp=E,66μm,0.7s						
VLC				AML	AML		
	comp=N,78μm,1.3s						
PLMA	Palmaria, Port	0.24	242	P	Pg	17 57 54.0	+0.8
PLMA				S	Sg	17 57 57.3	+1.0
PLMA				AML	AML		
	comp=E,165μm,0.4s						
PLMA				AML	AML		
	comp=N,239μm,0.3s						
PLMA				AML	AML		
	comp=E,164μm,0.4s						
PLMA				AML	AML		
	comp=N,239μm,0.3s						
PLMA				AML	AML		
	comp=E,164μm,0.4s						
PLMA				AML	AML		
	comp=N,239μm,0.3s						
CARD	Cardoso	0.28	119	P	Pb	17 57 55.2	-0.7
CARD				S	Sg	17 57 58.9	+1.1
CARD				AML	AML		
	comp=E,156μm,0.7s						
CARD				AML	AML		
	comp=N,152μm,0.4s						
CARD				AML	AML		
	comp=E,156μm,0.7s						
CARD				AML	AML		
	comp=N,152μm,0.4s						
CARD				AML	AML		
	comp=N,152μm,0.4s						
CARD				AML	AML		
	comp=E,156μm,0.7s						
ERBM	Eremo	0.32	37	P	Pb	17 57 56.1	-0.6
ERBM				S	Sb	17 58 01.7	-0.5
GRAM	Graiana	0.33	351	P	Pg	17 57 55.9	+0.7
GRAM				S	Sg	17 58 00.9	+1.3
GRAM	Graiana	0.33	351	P	Pg	17 57 55.9	+0.8
GRAM				S	Sb	17 58 01.2	-1.3
GRAM				AML	AML		
	comp=E,314μm,0.2s						
GRAM				AML	AML		
	comp=N,276μm,1.2s						
GRAM				AML	AML		
	comp=N,276μm,1.2s						
GRAM				AML	AML		
	comp=E,314μm,0.2s						
MAIM	Mastiano	0.35	134	P	Pb	17 57 56.4	-0.7
MAIM				S	Sg	17 58 01.3	+1.2
MAIM	Mastiano	0.35	134	P	Pb	17 57 56.5	-0.6

MAIM				AML	AML		
	comp=E,67µm,1.0s						
MAIM				AML	AML		
	comp=N,66µm,0.6s						
MAIM				AML	AML		
	comp=E,67µm,1.0s						
MAIM				AML	AML		
	comp=N,66µm,0.6s						
MAIM				AML	AML		
	comp=N,66µm,0.6s						
MAIM				AML	AML		
	comp=E,67µm,1.0s						
POPM	**Popiglio**	**0.46**	**104**	P	Pg	17 57 57.9	+0.5
POPM				S	Sb	17 58 05.0	-1.0
POPM	**Popiglio**	**0.46**	**104**	P	Pg	17 57 58.0	+0.6
POPM				S	Sb	17 58 05.3	-0.6
GROG	**Isola di Gorgo**	**0.76**	**194**	P	Pb	17 58 03.8	-0.2
GROG				S	Sb	17 58 14.3	-0.2

ROM 11 17:58:20.6±0.1**, 43°.815N**±0°.005×**11°.969E**±0°.006**, h8^{km}, ML2.0**/19**, Error ellipse: s-maj=0.7km s-min=0.1km az=219.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.13**	**316**	P	Pg	17 58 23.7	+0.3
SFI				S	Sg	17 58 26.0	+0.7
SFI				AML	AML		
	comp=E,1030µm,1.0s						
SFI				AML	AML		
	comp=N,782µm,1.4s						
SFI				AML	AML		
	comp=E,966µm,1.0s						
SFI				AML	AML		
	comp=N,814µm,0.3s						
SFI				AML	AML		
	comp=E,1029µm,1.0s						
SFI				AML	AML		
	comp=N,782µm,1.4s						
SFI				AML	AML		
	comp=E,966µm,1.0s						
SFI				AML	AML		
	comp=N,814µm,0.3s						
SFI				AML	AML		
	comp=N,814µm,0.3s						
SFI				AML	AML		
	comp=N,782µm,1.4s						
SFI				AML	AML		
	comp=E,1029µm,1.0s						
SFI				AML	AML		
	comp=E,966µm,1.0s						
SFI				AML	AML		
	comp=N,814µm,0.3s						
SFI				AML	AML		
	comp=N,782µm,1.4s						
SFI				AML	AML		
	comp=E,1029µm,1.0s						
SFI				AML	AML		
	comp=E,966µm,1.0s						
ASQU	**Asqua**	**0.13**	**262**	P	Pg	17 58 24.1	+0.6
ASQU				S	Sg	17 58 26.8	+1.3
ASQU				AML	AML		
	comp=E,2330µm,0.8s						
ASQU				AML	AML		
	comp=N,2690µm,0.3s						
ASQU				AML	AML		
	comp=N,2690µm,0.3s						
ASQU				AML	AML		
	comp=E,2330µm,0.8s						
ASQU				AML	AML		
	comp=N,2690µm,0.3s						
ASQU				AML	AML		
	comp=E,2330µm,0.8s						
CPGN	**Carpegna, Ital**	**0.26**	**93**	P	Pb	17 58 26.8	-0.8
CPGN				AML	AML		
	comp=E,539µm,0.4s						
CPGN				AML	AML		
	comp=N,428µm,0.4s						
PARC	**Parchiule**	**0.26**	**130**	P	Pg	17 58 26.2	+0.5
PARC				S	Sb	17 58 31.0	-1.1
PARC				AML	AML		
	comp=E,515µm,0.1s						
PARC				AML	AML		
	comp=N,581µm,0.1s						
PARC				AML	AML		
	comp=E,515µm,0.1s						
PARC				AML	AML		
	comp=N,581µm,0.1s						
PARC				AML	AML		
	comp=E,515µm,0.1s						
PARC				AML	AML		
	comp=N,581µm,0.1s						
PARC				AML	AML		
	comp=E,515µm,0.1s						
PARC				AML	AML		
	comp=N,581µm,0.1s						
SSP9	**Sansepolcro**	**0.27**	**154**	P	Pg	17 58 26.7	+0.8
SSP9				S	Sb	17 58 31.3	-1.1
RUFI	**Rufina**	**0.33**	**274**	P	Pg	17 58 27.6	+0.5
RUFI				S	Sb	17 58 33.0	-1.2
RUFI				AML	AML		
	comp=E,401µm,0.2s						
RUFI				AML	AML		
	comp=N,464µm,1.4s						
RUFI				AML	AML		
	comp=E,401µm,0.2s						
RUFI				AML	AML		
	comp=N,464µm,1.4s						
RUFI				AML	AML		
	comp=E,401µm,0.2s						
RUFI				AML	AML		
	comp=N,464µm,1.4s						
BADI	**Badiali**	**0.36**	**147**	P	Pg	17 58 28.3	+0.6
BADI				S	Sb	17 58 34.6	-0.6
BADI				AML	AML		
	comp=E,360µm,0.2s						
BADI				AML	AML		
	comp=N,261µm,1.1s						
BADI				AML	AML		
	comp=E,359µm,0.2s						
BADI				AML	AML		
	comp=N,261µm,1.1s						
BADI				AML	AML		
	comp=E,359µm,0.2s						
BADI				AML	AML		
	comp=N,261µm,1.1s						
BADI				AML	AML		
	comp=E,359µm,0.2s						
BADI				AML	AML		
	comp=N,261µm,1.1s						
PE3	**Peglio**	**0.40**	**107**	P	Pb	17 58 29.5	-0.4
PE3				S	Sb	17 58 36.1	-0.1
PE3				AML	AML		
	comp=E,938µm,0.3s						
PE3				AML	AML		
	comp=N,556µm,1.3s						
PE3				AML	AML		
	comp=E,938µm,0.3s						
PE3				AML	AML		
	comp=N,556µm,1.3s						
PE3				AML	AML		
	comp=E,938µm,0.3s						
PE3				AML	AML		
	comp=N,556µm,1.3s						
BRIS	**BRISIGHELLA**	**0.47**	**316**	P	Pg	17 58 29.8	+0.1
BRIS				S	Sb	17 58 37.4	-0.9
BRIS				AML	AML		
	comp=E,652µm,0.3s						
BRIS				AML	AML		
	comp=N,493µm,0.3s						
BRIS				AML	AML		
	comp=E,652µm,0.3s						
BRIS				AML	AML		
	comp=N,493µm,0.3s						
BRIS				AML	AML		
	comp=E,652µm,0.3s						
BRIS				AML	AML		
	comp=N,493µm,0.3s						
ATPI	**Pietralunga -**	**0.48**	**139**	P	Pg	17 58 30.2	+0.3
ATPI				S	Sb	17 58 38.3	-0.2
ATPI				AML	AML		
	comp=E,98µm,0.6s						
ATPI				AML	AML		
	comp=N,116µm,0.2s						
ATPI				AML	AML		
	comp=E,98µm,0.6s						
ATPI				AML	AML		
	comp=N,116µm,0.2s						
ATPI				AML	AML		
	comp=N,116µm,0.2s						
ATPI				AML	AML		
	comp=E,98µm,0.6s						
ATPI				AML	AML		
	comp=N,116µm,0.2s						
ATPI				AML	AML		
	comp=E,98µm,0.6s						
CAFI	**Castiglion Fio**	**0.49**	**180**	P	Pb	17 58 30.8	-0.6
CAFI				S	Sb	17 58 38.4	-0.3
CAFI				AML	AML		
	comp=E,140µm,0.6s						
CAFI				AML	AML		
	comp=N,212µm,0.6s						
CAFI				AML	AML		
	comp=E,141µm,0.6s						
CAFI				AML	AML		
	comp=N,212µm,0.6s						
CAFI				AML	AML		
	comp=E,141µm,0.6s						
CAFI				AML	AML		
	comp=N,212µm,0.6s						
CAFI				AML	AML		
	comp=E,141µm,0.6s						
CAFI				AML	AML		
	comp=N,212µm,0.6s						
PIEI	**Pieia**	**0.50**	**124**	P	Pg	17 58 30.2	0.0
PIEI				S	Sb	17 58 38.2	-0.8
PIEI				AML	AML		
	comp=E,171µm,0.1s						
PIEI				AML	AML		
	comp=N,93µm,1.1s						
PIEI				AML	AML		
	comp=E,171µm,0.1s						
PIEI				AML	AML		
	comp=N,93µm,1.1s						
PIEI				AML	AML		
	comp=E,171µm,0.1s						
PIEI				AML	AML		
	comp=N,93µm,1.1s						
SEI	**Scarperia**	**0.50**	**299**	P	Pg	17 58 30.7	+0.4
SEI				S	Sb	17 58 38.7	-0.5
SEI				AML	AML		
	comp=E,439µm,0.5s						
SEI				AML	AML		
	comp=N,584µm,0.7s						
SEI				AML	AML		
	comp=E,439µm,0.5s						
SEI				AML	AML		
	comp=N,584µm,0.7s						
SEI				AML	AML		
	comp=E,439µm,0.5s						
SEI				AML	AML		
	comp=N,584µm,0.7s						
SEI				AML	AML		
	comp=E,439µm,0.5s						
SEI				AML	AML		
	comp=N,584µm,0.7s						
ATMI	**Monte Miggiano**	**0.53**	**156**	P	Pb	17 58 31.7	-0.4
ATMI				AML	AML		
	comp=E,290µm,0.4s						
ATMI				AML	AML		
	comp=N,254µm,0.8s						
ATMI				AML	AML		
	comp=E,290µm,0.4s						
ATMI				AML	AML		
	comp=N,254µm,0.8s						
ATMI				AML	AML		
	comp=E,290µm,0.4s						
ATMI				AML	AML		
	comp=N,254µm,0.8s						
ATVO	**AVT- Monte Val**	**0.54**	**144**	P	Pg	17 58 31.3	+0.3
ATVO				S	Sb	17 58 40.1	-0.1
ATVO				AML	AML		
	comp=E,208µm,0.8s						
ATVO				AML	AML		
	comp=N,156µm,0.5s						
ATVO				AML	AML		
	comp=E,208µm,0.8s						
ATVO				AML	AML		
	comp=N,156µm,0.5s						
ATVO				AML	AML		
	comp=E,208µm,0.8s						
ATVO				AML	AML		
	comp=N,156µm,0.5s						
MPAG	**Monte Paganucc**	**0.60**	**108**	P	Pg	17 58 32.4	+0.1
MPAG				AML	AML		
	comp=E,48µm,1.4s						
MPAG				AML	AML		
	comp=N,76µm,1.0s						
MPAG				AML	AML		
	comp=E,48µm,1.4s						
MPAG				AML	AML		
	comp=N,76µm,1.0s						
MPAG				AML	AML		
	comp=E,48µm,1.4s						
MPAG				AML	AML		
	comp=N,76µm,1.0s						
ATFO	**Monte Foce - G**	**0.63**	**135**	P	Pg	17 58 32.8	+0.1
ATFO				AML	AML		
	comp=E,101µm,0.8s						
ATFO				AML	AML		
	comp=N,76µm,1.3s						
ATFO				AML	AML		
	comp=E,101µm,0.8s						
ATFO				AML	AML		
	comp=N,76µm,1.3s						
ATFO				AML	AML		
	comp=E,101µm,0.8s						
ATFO				AML	AML		
	comp=N,76µm,1.3s						
ATTE	**AVT- Monte Tez**	**0.68**	**155**	P	Pb	17 58 34.4	-0.3
ATTE				AML	AML		
	comp=E,180µm,0.5s						
ATTE				AML	AML		
	comp=N,125µm,0.3s						
ATTE				AML	AML		
	comp=E,180µm,0.5s						
ATTE				AML	AML		
	comp=N,125µm,0.3s						
ATTE				AML	AML		
	comp=E,180µm,0.5s						
ATTE				AML	AML		
	comp=N,125µm,0.3s						
MURB	**Monte Urbino**	**0.68**	**144**	P	Pg	17 58 34.2	+0.5
MURB				AML	AML		
	comp=E,239µm,1.3s						
MURB				AML	AML		
	comp=N,223µm,0.4s						
MURB				AML	AML		
	comp=E,239µm,1.3s						
MURB				AML	AML		
	comp=N,223µm,0.4s						
MURB				AML	AML		
	comp=E,239µm,1.3s						
MURB				AML	AML		
	comp=N,223µm,0.4s						
MTCR	**Monte La Croce**	**0.73**	**287**	P	Pg	17 58 35.0	+0.3
MGAB	**Montegabbione**	**0.91**	**173**	P	Pb	17 58 38.5	-0.1
MGAB				AML	AML		
	comp=E,141µm,0.8s						
MGAB				AML	AML		
	comp=N,178µm,0.5s						
MGAB				AML	AML		
	comp=E,141µm,0.8s						
MGAB				AML	AML		
	comp=N,178µm,0.5s						
MGAB				AML	AML		
	comp=E,141µm,0.8s						
MGAB				AML	AML		
	comp=N,178µm,0.5s						
ARCI	**Arcidosso**	**1.03**	**201**	AML	AML		
	comp=N,107µm,0.8s						
ARCI				AML	AML		
	comp=E,39µm,1.0s						
ARCI				AML	AML		
	comp=N,107µm,0.8s						
ARCI				AML	AML		
	comp=E,39µm,1.0s						
ARCI				AML	AML		
	comp=N,107µm,0.8s						
ARCI				AML	AML		
	comp=E,39µm,1.0s						

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*ISCJB **11** 18:07:09.6±0.7, 40°.1S±0°.1×78°.0E±0°.2, h10^{km}, mb4.3/10, MS3.8/3, Error ellipse: s-maj=21.9km s-min=13.5km az=30.6*

*IDC **11** 18:07:09.8±1.0, 40°.13S×78°.04E, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.8/33, mbtmp4.0/7, MS3.8/3, Ms1 3.8/3, ms1mx3.3/30, Error ellipse: s-maj=34.8km s-min=22.6km az=124.0*

*NEIC **11** 18:07:11.5±1.2, 40°.08S×77°.84E, h10^{km}, mb4.6/6, Error ellipse: s-maj=42.7km s-min=24.6km az=103.0*

ISC 11 18:07:11.7±0.8**, 40°.2S**±0°.1×**78°.2E**±0°.2**, h10^{km}, n31, σ1^{s}.17**/23**, mb4.2**/10**, MS3.9**/3**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	**Mawson**	**28.77**	**192**	P	**P**	**18 13 08.0**	**-1.2**
	3.3nm,0.8s,baz=20,slow=14,SNR=6.1						
MAW	**Mawson**	**28.77**	**192**	*e*P	**P**	**18 13 09.5**	**+0.3**
	2.6nm,1.4s						
H01W2	**Cape Leeuwin H**	**28.87**	**91**	T	T	18 43 16.6	
	baz=248,slow=74,SNR=21						
H01W3	**Cape Leeuwin H**	**28.88**	**91**	T	T	18 43 14.9	
	baz=248,slow=74,SNR=19						
H01W1	**Cape Leeuwin H**	**28.89**	**91**	T	T	18 43 15.6	
	baz=248,slow=74,SNR=19						
NWAO	**Narrogin (SRO)**	**32.01**	**89**	LR	LR	18 23 31.9	
	comp=Z,309nm,20.6s,baz=288,slow=31						
H08S2	**Diego Garcia H**	**32.76**	**350**	T	T	18 48 00.9	
H08S1	**Diego Carcia H**	**32.76**	**350**	T	T	18 47 59.6	
	baz=242,slow=74,SNR=4.1						
H08S3	**Diego Garcia H**	**32.78**	**350**	T	T	18 48 01.4	
	baz=174,slow=74,SNR=7.6						
OPO	**Ambohidratompo**	**34.24**	**300**	LR	LR	18 24 28.8	
	comp=Z,72nm,21.0s,baz=25,slow=30						
ASAR	**Alice Springs**	**49.31**	**88**	P	**P**	**18 16 00.9**	**-0.1**
	0.5nm,0.9s,baz=224,slow=6.5,SNR=5.0						
ASAR				PcP	**PcP**	**18 17 22.7**	**-1.1**
	1.0nm,0.9s,baz=226,slow=2.4,SNR=4.5						
SNAA	**Sanae**	**49.67**	**204**	P	**P**	**18 16 03.5**	**+0.3**
SNAA	**Sanae**	**49.67**	**204**	P	**P**	**18 16 03.3**	**+0.1**
	4.2nm,0.9s,baz=90,slow=8.1,SNR=9.9						
SNAA	**Sanae**	**49.67**	**204**	*e*P	**P**	**18 16 03.6**	**+0.3**
	10nm,1.2s						
VNDA	**Vanda**	**49.82**	**164**	P	**P**	**18 16 04.2**	**0.0**
	2.2nm,0.8s,baz=271,slow=8.1,SNR=13						
VNDA	**Vanda**	**49.82**	**164**	*e*P	**P**	**18 16 05.0**	**+0.8**
	8.0nm,1.3s						
QSPA	**South Pole Qui**	**50.01**	**180**	*e*P	**P**	**18 16 06.2**	**+0.1**
	13nm,1.0s						
STKA	**Stephens Creek**	**51.01**	**102**	P	**P**	**18 16 12.9**	**-0.9**
	2.0nm,0.9s,baz=82,slow=21,SNR=3.6						
VNA1	**Neumayer--Stat**	**51.58**	**205**	P	**P**	**18 16 18.3**	**+0.7**
WR1	**Warramunga Arr**	**51.74**	**84**	*e*P	**P**	**18 16 21.4**	**+1.9**
WRA	**Warramunga Arr**	**51.74**	**84**	P	**P**	**18 16 21.4**	**+1.9**
	2.3nm,1.1s,baz=236,slow=9.0,SNR=2.5						
VNA3	**Neumayer Olymp**	**51.90**	**204**	P	**P**	**18 16 20.4**	**+0.5**
BTK	**Batken**	**80.11**	**354**	*e*P	**P**	**18 19 23.9**	**+2.3**
	11nm,1.1s						
MK31	**Makanchi Array**	**86.64**	**3**	*e*P	**P**	**18 19 53.9**	**-1.0**
	8.4nm,1.9s						
MK32	**Makanchi Array**	**86.64**	**3**	*e*P	**P**	**18 19 53.0**	**-2.0**
MKAR	**Makanchi Array**	**86.64**	**3**	P	**P**	**18 19 53.0**	**-2.0**
	0.9nm,0.9s,baz=178,slow=5.8,SNR=6.6						
BVAR	**Borovoye Array**	**93.04**	**355**	LR	LR	18 57 42.7	
	comp=Z,50nm,22.0s,baz=0.0,slow=33						
INK	**Inuvik**	**147.00**	**21**	PKPbc	**PKPab**	**18 26 54.4**	**-0.5**
	3.1nm,0.9s,baz=294,slow=4.2,SNR=2.1						
TXAR	**Lajitas Array**	**169.11**	**172**	PKP	**PKPdf**	**18 27 18.9**	**-0.4**
	0.4nm,0.3s,baz=106,slow=2.0,SNR=3.4						
PD31	**Pinedale Array**	**173.64**	**63**	*e*PKPdf	**PKPdf**	**18 27 21.1**	**-0.3**
PDAR	**Pinedale Array**	**173.64**	**63**	PKP	**PKPdf**	**18 27 21.1**	**-0.3**
	0.1nm,0.3s,baz=186,slow=3.0,SNR=3.9						

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*ISCJB **11** 18:14:45.0±0.4, 40°.31S±0°.08×78°.2E±0°.1, h10^{km}, mb4.4/14, MS4.4/22, Error ellipse: s-maj=14.9km s-min=11.2km az=22.5*

*IDC **11** 18:14:44.6±0.7, 40°.32S×78°.15E, h0^{km}, mb4.1/10, mb1 4.3/10, mb1mx4.0/32, mbtmp4.1/10, MS4.3/19, Ms1 4.3/19, ms1mx4.2/28, Error ellipse: s-maj=23.0km s-min=18.9km az=144.0*

*NEIC **11** 18:14:47.0±1.5, 40°.29S×78°.24E, h10^{km}, mb4.7/8, Error ellipse: s-maj=29.4km s-min=4.3km az=267.0*

*GCMT **11** 18:14:50.0±0.2, 40°.15S±0°.01×77°.94E±0°.01, h13^{km}±1^{km}, MW5.2/101, Moment Tensor Solution. s63,c82; s101,c163; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.27±.02; M$_{\theta\theta}$-0.59±.02; M$_{\phi\phi}$0.85±.02; M$_{r\theta}$-0.02±.04; M$_{\theta\phi}$0.15±.01; M$_{\phi r}$0.15±.04; Best double couple: M$_0$0.75100×10^{17} NP1:φ$_s$321.00000°, δ89.00000°, λ171.00000°. NP2:φ$_s$51.00000°, δ81.00000°, λ1.00000°. Principal axes: T 0.8920, Plg7.0000°, Azm276.0000°; N -0.2830, Plg81.0000°, Azm135.0000°; P -0.6090, Plg6.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 18:14:46.6±0.6**, 40°.3S**±0°.1×**78°.2E**±0°.1**, h10^{km}, n50, σ1^{s}.03**/30**, mb4.3**/14**, MS4.5**/22**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	**Mawson**	**28.64**	**192**	P	**P**	**18 20 43.1**	**+0.1**
	34nm,1.4s,baz=20,slow=7.7,SNR=8.2						
MAW				LR	LR	18 30 14.5	
	comp=Z,1µm,18.8s,baz=18,slow=32						
MAW	**Mawson**	**28.64**	**192**	*e*P	**P**	**18 20 43.7**	**+0.7**
	4.1nm,1.4s						
H01W2	**Cape Leeuwin H**	**28.86**	**91**	T	T	18 51 02.9	
	baz=248,slow=74,SNR=126						
H01W3	**Cape Leeuwin H**	**28.87**	**91**	T	T	18 51 10.6	
	baz=248,slow=74,SNR=100						
H01W1	**Cape Leeuwin H**	**28.88**	**91**	T	T	18 51 07.3	
	baz=248,slow=74,SNR=120						
H08S2	**Diego Garcia H**	**32.90**	**350**	T	T	18 55 40.5	
	baz=172,slow=76,SNR=6.1						
H08S1	**Diego Carcia H**	**32.90**	**350**	T	T	18 55 40.8	
	baz=172,slow=76,SNR=7.6						
H08S3	**Diego Garcia H**	**32.91**	**350**	T	T	18 55 44.6	
	baz=172,slow=76,SNR=24						
BOSA	**Boshof**	**44.58**	**268**	P	**P**	**18 22 56.9**	**-2.2**
	2.3nm,1.0s,baz=126,slow=8.7,SNR=2.6						
BOSA				LR	LR	18 37 53.5	
	comp=Z,1µm,19.7s,baz=122,slow=31						
ASAR	**Alice Springs**	**49.30**	**88**	P	**P**	**18 23 34.8**	**-1.2**
	1.0nm,0.8s,baz=243,slow=4.4,SNR=11						
ASAR				PcP	**PcP**	**18 24 56.5**	**-2.1**
	0.8nm,0.8s,baz=241,slow=3.3,SNR=5.8						
ASAR				LR	LR	18 42 22.7	
	comp=Z,1µm,18.1s,baz=248,slow=34						
SNAA	**Sanae**	**49.55**	**204**	P	**P**	**18 23 37.5**	**+0.3**
SNAA	**Sanae**	**49.55**	**204**	P	**P**	**18 23 36.1**	**-1.2**
	5.8nm,0.9s,baz=120,slow=13,SNR=16						
SNAA	**Sanae**	**49.55**	**204**	*e*P	**P**	**18 23 37.8**	**+0.5**
	13nm,1.2s						
VNDA	**Vanda**	**49.69**	**164**	P	**P**	**18 23 37.6**	**-0.5**
	1.3nm,0.7s,baz=258,slow=7.7,SNR=11						
VNDA				LR	LR	18 43 16.2	
	comp=Z,625nm,18.4s,baz=270,slow=34						
VNDA	**Vanda**	**49.69**	**164**	*e*P	**P**	**18 23 39.0**	**+0.9**
	13nm,1.6s						
QSPA	**South Pole Qui**	**49.88**	**180**	*e*P	**P**	**18 23 40.2**	**+0.3**
	12nm,1.0s						
STKA	**Stephens Creek**	**50.97**	**102**	P	**P**	**18 23 47.1**	**-1.3**
	3.5nm,0.8s,baz=311,slow=7.7,SNR=6.4						
STKA				LR	LR	18 41 09.9	
	comp=Z,444nm,21.4s,baz=231,slow=31						
STKA	**Stephens Creek**	**50.97**	**102**	*e*P	**P**	**18 23 48.0**	**-0.5**
	4.7nm,1.7s						
VNA2	**Neumayer--Watz**	**51.12**	**205**	P	**P**	**18 23 49.5**	**+0.4**
	baz=90,slow=7.7						
VNA1	**Neumayer--Stat**	**51.46**	**205**	P	**P**	**18 23 52.1**	**+0.6**
WRA	**Warramunga Arr**	**51.75**	**84**	P	**P**	**18 23 54.9**	**+0.5**
	2.2nm,1.0s,baz=233,slow=9.2,SNR=4.7						
WR1	**Warramunga Arr**	**51.75**	**84**	*e*P	**P**	**18 23 54.9**	**+0.5**
VNA3	**Neumayer Olymp**	**51.78**	**204**	P	**P**	**18 23 54.5**	**+0.5**
KMBO	**Kilima Mbogo**	**53.81**	**306**	LR	LR	18 42 17.9	
	comp=Z,413nm,20.8s,baz=100,slow=31						
CTA	**Charters Tower**	**60.77**	**92**	LR	LR	18 48 26.5	
	comp=Z,392nm,21.7s,baz=255,slow=33						
CMAR	**Chiang Mai Arr**	**61.56**	**22**	P	**P**	**18 25 04.3**	**+0.3**
	0.5nm,0.3s,baz=208,slow=7.1,SNR=7.7						
CMAR				LR	LR	18 47 30.8	
	comp=Z,46nm,21.7s,baz=196,slow=32						
DZM	**Mont Dzumac**	**74.81**	**106**	*e*SS	SS	18 40 46.9	-4.9
	302nm,26.9s						

DZM				*e*LR	LR	18 49 33.6	
	comp=Z,488nm,25.4s						
KBL	Kabul	74.93	352	*e*P	P	18 26 28.1	+0.3
	33nm,1.6s						
GAR	Garm	79.23	354	*e*P	P	18 26 53.1	+1.3
	9.1nm,1.1s						
BTK	Batken	80.25	354	*e*P	P	18 26 58.8	+1.5
	32nm,1.8s						
AAK	Ala-Archa	82.61	357	LR	LR	19 00 23.3	
	comp=Z,232nm,20.1s,baz=178,slow=33						
MK32	Makanchi Array	86.77	3	*e*P	P	18 27 29.8	-0.8
MKAR	Makanchi Array	86.77	3	P	P	18 27 29.8	-0.8
	0.6nm,0.7s,baz=148,slow=7.1,SNR=5.2						
MKAR				LR	LR	19 02 51.5	
	comp=Z,108nm,21.3s,baz=186,slow=33						
TORD	Torodi Ar. Bea	88.36	289	P	P	18 27 39.2	+0.3
	0.8nm,1.1s,baz=127,slow=3.8,SNR=3.1						
TORD				LR	LR	19 05 21.0	
	comp=Z,713nm,19.6s,baz=10.0,slow=34						
TOA1	Torodi Ar. Sit	88.37	289	*e*P	P	18 27 39.2	+0.2
DBIC	Dimbokro	88.98	280	LR	LR	19 02 20.4	
	comp=Z,422nm,21.4s,baz=118,slow=32						
BRTR	Keskin Array B	89.40	327	LR	LR	19 03 04.3	
	comp=Z,42nm,20.0s,baz=182,slow=32						
KSRS	Korea Array	89.81	37	LR	LR	19 05 38.1	
	comp=Z,38nm,19.6s,baz=211,slow=34						
SONM	Songino Array	91.25	19	LR	LR	19 06 51.6	
	comp=Z,113nm,20.7s,baz=194,slow=34						
AKTO	Aktyubinsk	92.06	347	LR	LR	19 07 22.1	
	comp=Z,39nm,18.4s,baz=153,slow=34						
ZALV	Zalesovo Beam	94.03	4	LR	LR	19 07 35.8	
	comp=Z,83nm,21.6s,baz=250,slow=34						
MJAR	Matsushiro Arr	94.25	44	LR	LR	19 06 49.0	
	comp=Z,19nm,21.3s,baz=190,slow=33						
KEST	Kesra	98.61	310	LR	LR	19 12 58.9	
	comp=Z,227nm,18.1s,baz=30,slow=35						
TBI	Tubuai	102.70	136	*e*LR	LR	19 02 33.2	
	comp=Z,134nm,27.8s						
PPT2	Papeete2	107.28	132	*e*LQ	LQ	18 59 40.8	
	379nm,26.8s						
PPT2				*e*LR	LR	19 04 39.9	
	comp=Z,250nm,24.0s						
RKT	Rikitea	109.77	148	*e*T	T	20 32 42.2	
	2.8nm,0.2s						
ILAR	Eielson Array	144.44	31	PKP	PKPdf	18 34 23.4	+1.3
	0.1nm,0.2s,baz=284,slow=0.7,SNR=3.2						
EPYK	Eagle Plains	147.38	25	*e*PKPbc	PKPdf	18 34 28.5	+1.4
PD31	Pinedale Array	173.69	64	*e*PKPdf	PKPdf	18 34 57.2	+1.0
PDAR	Pinedale Array	173.69	64	PKP	PKPdf	18 34 57.2	+1.0
	0.2nm,0.4s,baz=252,slow=2.7,SNR=2.5						

GCG ***11*** *18:17:35.4±0.4,13°.50N×91°.66W,h9^{km}±60^{km},MD3.9*

ISCJB ***11*** *18:17:39.3±1.2,13°.77N±0°.09×91°.58W±0°.06,h28^{km},Error ellipse: s-maj=14.7km s-min=4.4km az=29.2*

MEX ***11*** *18:17:42.8±0.4,13°.78N×91°.68W,h15^{km},MD3.9*

SNET ***11*** *18:17:43.0±0.9,13°.73N×91°.19W,h8^{km}±11^{km},ML3.3*

ISC 11 18:17:39.4±2.3,**13°.7N**±0°.1×**91°.55W**±0°.07,**h28**^{km},**n13**,σ**0^{s}.94**/20,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.96	359	*e*P	Pb	18 17 57.7	0.0
FUG	Fuego 3	0.98	44	*e*P	Pb	18 17 58.1	+0.1
PCG	Pacaya	1.12	55	*e*P	Pb	18 18 00.2	-0.1
THIG		1.35	329	*e*P	Pn	18 18 01.9	-0.4
THIG				*i* S	Sn	18 18 17.8	-1.6
NBG	Las Nubes	1.44	54	*e*P	Pb	18 18 05.5	-0.2
NBG				*e*S	Sb	18 18 23.2	-0.5
RTR	El Retiro	1.86	85	*e*P	Pn	18 18 10.8	+1.2
CEVE	Cerro Verde	1.87	87	*e*P	Pn	18 18 10.1	+0.3
CEVE				*e*S	Sn	18 18 31.9	-0.8
CEVE				IAML		18 18 38.8	
	comp=Z,850nm,0.4s						
SBLS	San Blas	1.88	87	*e*P	Pn	18 18 10.7	+0.8
UNIC	Universidad Ca	1.96	83	*e*P	Pn	18 18 11.4	+0.7
UNIC				*e*S	Sn	18 18 33.5	-0.9
LFU	La Fuente	2.37	90	*e*P	Pn	18 18 17.2	+0.7
PCIG		2.53	321	*e*P	Pn	18 18 19.5	+0.8
PCIG				*e*S	Sn	18 18 47.3	-1.2
CCIG	Comitan	2.59	347	*e*P	Pn	18 18 21.4	+1.8
CCIG				*e*S	Sn	18 18 49.9	-0.4
TGIG		3.38	334	*i* P	Pn	18 18 31.6	+1.2
TGIG				*i* S	Sn	18 19 09.7	+0.1

NIED ***11*** *18:18:00,36°.80N×140°.60E,h5^{km},Mw3.6 Best double couple: M$_0$3.22000×10^{14} NP1:φ$_s$183.00000°,δ44.00000°,λ-83.00000°. NP2:φ$_s$353.00000°,δ47.00000°,λ-97.00000°.*

ISCJB ***11*** *18:18:30.8±0.6,36°.74N±0°.03×140°.71E±0°.05,h21^{km}±3^{km},mb3.7/9,MS4.2/2,Error ellipse: s-maj=6.7km s-min=3.9km az=30.6*

JMA ***11*** *18:18:32.2,36°.78N×140°.57E,h9^{km}±1^{km},M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$336.00000°,δ55.00000°,λ-120.00000°. NP2: φ$_s$201.00000°,δ45.00000°,λ-54.00000°. Principal axes: T Plg5.0000°, Azm87.0000°; N Plg24.0000°, Azm355.0000°; P Plg65.0000°, Azm189.0000°;*

JMA Felt II J1.

IDC ***11*** *18:18:35.8±2.3,36°.83N×140°.64E,h48^{km}±20^{km},mb3.5/7,mb1 3.7/8,mb1mx3.4/42,mbtmp3.7/8,ML3.5/1,MS4.1/2,Ms1 4.1/2,ms1mx2.9/33 Error ellipse: s-maj=21.5km s-min=13.2km az=126.0*

NEIC ***11*** *18:18:35.7±1.7,36°.76N×140°.64E,h50^{km}±9^{km},mb4.1/2,Error ellipse: s-maj=16.9km s-min=9.8km az=135.0*

ISC 11 18:18:31.5±1.1,**36°.76N**±0°.03×**140°.64E**±0°.05,**h15**^{km}±7^{km},**n39**,σ**1^{s}.07**/43,**mb3.9**/9,**3C-2D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.16	200	⇓P	Pb	18 18 35.7	-0.4
JHO				S	Sb	18 18 38.2	-1.0
JFFD	Fukushimafurud	0.34	350	⇓P	Pg	18 18 38.3	-0.1
JFFD				S	Sg	18 18 42.9	-0.3
ONAJ	Iwakimizuishiy	0.37	21	P	Pg	18 18 39.5	+0.5
ONAJ				S	Sb	18 18 45.1	-0.3
JSB	Shiboa	0.61	290	⇑P	Pb	18 18 43.5	-0.4
JSB				S	Sb	18 18 51.2	-1.2
JFK	Kawauchi	0.64	17	P	Pb	18 18 44.1	-0.3
JFK				S	Sg	18 18 52.8	+0.4
JYT	Yasato	0.64	214	P	Pb	18 18 44.1	-0.2
JYT				S	Sb	18 18 52.3	-0.7
JFT	Otama	0.80	343	P	Pb	18 18 46.7	-0.4
JFT				S	Sb	18 18 57.3	-0.4
JFY	Yanaizu	0.99	311	⇑P	Pb	18 18 49.8	-0.5
JFY				S	Sb	18 19 02.3	-0.9
JAG	Ashikaga	1.01	251	⇑P	Pb	18 18 49.7	-0.9
JAG				S	Sb	18 19 02.7	-1.0
MJAR	Matsushiro Arr	1.96	264	P	Pn	18 19 04.9	+0.6
	4.2nm,0.3s,baz=322,slow=15,SNR=180						
MJAR				S	Sn	18 19 30.2	+1.5
	11nm,0.3s,baz=215,slow=20,SNR=7.4						
MJAR				LR	LR	18 20 06.4	
	comp=Z,74nm,20.9s,baz=230,slow=47						
MAJO	Matsushiro	1.96	264	*e*Pn	Pn	18 19 05.6	+1.3
MAJO				*e*Sn	Sn	18 19 30.2	+1.5
MAT	Matsushiro	1.96	264	P	Pn	18 19 05.9	+1.6
MAT				S	Sn	18 19 30.6	+1.9
MJB9	Matsu-Tunnel	1.97	265	*e*Pn	Pn	18 19 05.5	+1.2
INU	Inuyama	3.25	245	*e*Pn	Pn	18 19 24.6	+2.7
ASAJ	Asahikawa	7.50	11	P	Pn	18 20 21.9	+1.5
	0.8nm,0.3s,baz=218,slow=12,SNR=7.7						
ASAJ				S	Sn	18 21 46.6	+1.5
	0.3nm,0.3s,baz=328,slow=22,SNR=2.8						
KSRS	Korea Array	10.18	278	P	Pn	18 21 03.6	+6.6
	0.1nm,0.3s,baz=104,slow=14,SNR=5.2						
KSRS				LR	LR	18 24 26.3	
	comp=Z,32nm,20.5s,baz=170,slow=34						
SONA0	Songino Array	27.43	305	*e*P	P	18 24 16.5	-0.2
SONM	Songino Array	27.43	305	P	P	18 24 16.5	-0.2
	0.9nm,0.8s,baz=102,slow=8.6,SNR=5.5						
H11N2	WAKE ISLAND Hy	28.55	119	T	T	18 54 15.2	
	baz=312,slow=75,SNR=762						
H11N1	WAKE ISLAND Hy	28.56	119	T	T	18 54 15.7	
	baz=312,slow=75,SNR=721						
H11N3	WAKE ISLAND Hy	28.57	119	T	T	18 54 16.5	
	baz=312,slow=75,SNR=772						
H11S1	WAKE ISLAND Hy	29.24	121	T	T	18 55 07.5	
	baz=314,slow=76,SNR=1374						
H11S3	WAKE ISLAND Hy	29.24	121	T	T	18 55 06.7	
	baz=314,slow=76,SNR=1249						
H11S2	WAKE ISLAND Hy	29.26	121	T	T	18 55 08.2	
	baz=314,slow=76,SNR=1228						
ZAA1	Zalesovo Array	41.64	313	*e*P	P	18 26 19.3	+0.3
ZALV	Zalesovo Beam	41.64	313	P	P	18 26 19.3	+0.3
	0.5nm,0.3s,baz=107,slow=7.7,SNR=3.2						
MK32	Makanchi Array	43.74	302	*e*P	P	18 26 36.5	+0.4
MKAR	Makanchi Array	43.74	302	P	P	18 26 36.5	+0.4
	0.3nm,0.5s,baz=102,slow=5.3,SNR=4.0						
KURK	Kurchatov	45.61	308	*e*P	P	18 26 50.2	-0.7
	3.4nm,1.0s						
WR1	Warramunga Arr	56.70	187	*e*P	P	18 28 14.9	+0.4
WRA	Warramunga Arr	56.71	187	P	P	18 28 14.9	+0.4
	0.8nm,0.6s,baz=356,slow=8.9,SNR=6.0						
ABKAR	Akbulak array	57.64	310	*e*P	P	18 28 21.1	+0.1
	1.0nm,0.8s						
ASAR	Alice Springs	60.43	187	P	P	18 28 41.6	+1.1
	0.3nm,0.6s,baz=16,slow=6.0,SNR=5.3						
GEYT	Alibeck	63.42	299	LR	LR	18 59 50.7	
	comp=Z,57nm,18.3s,baz=140,slow=39						
FIA0	FINESS Array S	68.77	332	*e*P	P	18 29 32.6	-1.9
FINES	FINESS Array B	68.77	332	P	P	18 29 32.6	-1.9
	1.7nm,0.8s,baz=250,slow=10.0,SNR=2.7						
NV01	Mina Array Sit	75.65	53	*e*P	P	18 30 15.4	-1.0
NVAR	Mina Array Bea	75.65	53	P	P	18 30 15.4	-1.0
	0.9nm,0.8s,baz=294,slow=4.9,SNR=4.9						
ESDC	Sonseca Array	97.26	333	LR	LR	19 19 23.3	
	comp=Z,162nm,19.5s,baz=145,slow=38						

ISCJB ***11*** *18:41:36.9±0.4,9°.88S±0°.04×124°.21E±0°.03,h70^{km}±3^{km},mb4.5/29,Error ellipse: s-maj=6.7km s-min=4.1km az=35.8*

BJI ***11*** *18:41:37.0±0.0,9°.80S×124°.20E,h65^{km},mb4.7/5,mB5.1/5,Ms5.0/2,Ms7 4.7/2*

DJA ***11*** *18:41:38.2±0.2,10°S±3°×12°4E±°,h65^{km}±3^{km},M4.9/19,mb4.8/19,mB5.4/9,MLv5.0/13,Mw(mB)4.8/9*

NEIC ***11*** *18:41:38.1±1.7,9°.71S×124°.36E,h58^{km}±4^{km},mb4.4/17,Error ellipse: s-maj=9.8km s-min=8.1km az=93.0*

IDC ***11*** *18:41:39.8±1.3,9°.64S×124°.01E,h63^{km}±12^{km},mb3.9/13,mb1 4.0/13,mb1mx3.7/31,mbtmp4.2/13,MS3.5/6,Ms1 3.5/6,ms1mx3.1/22,Error ellipse: s-maj=26.9km s-min=13.9km az=65.0*

ISC 11 18:41:38.7±0.6,**9°.74S**±0°.04×**124°.21E**±0°.04,**h60**^{km}±6^{km},**n100**,σ**2^{s}.13**/105,**mb4.3**/29,**MS3.5**/5,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.06	102	*e*Pn	Pn	18 41 47.3	-0.4
SOEI	Soe	0.06	102	P	Pn	18 41 47.5	-0.2
SOEI				S	Sn	18 41 54.3	0.0
BATI	Baumata	0.71	230	P	Pn	18 41 54.7	+1.6
	456nm,0.3s,baz=100,slow=3.0,SNR=500						
BATI				S	Sn	18 42 05.7	+2.1
	2μm,0.3s,baz=5.5,slow=5.8,SNR=77						
BATI	Baumata	0.71	230	P	Pn	18 41 55.0	+1.9
BATI				S	Sn	18 42 06.3	+2.7
MMRI	Maumere	2.24	299	*e*Pn	Pn	18 42 14.8	+1.4
MMRI	Maumere	2.24	299	P	Pn	18 42 15.0	+1.6
MMRI				S	Sn	18 42 41.0	+1.0
EDFI	Ende, Flores	2.68	291	P	Pn	18 42 20.0	+0.5
EDFI				S	Sn	18 42 50.3	-0.6
WSI	Waingapu	3.86	271	P	Pn	18 42 36.3	+0.7
WSI				S	Sn	18 43 20.1	+0.4
WBSI	Waikabubak, Su	4.75	271	P	Pn	18 42 47.8	-0.1
WBSI				S	Sn	18 43 38.1	-3.7
BSSI	Bau Bau, Buton	5.14	314	P	Pn	18 42 55.1	+2.0
	565nm,0.7s,5μm1.8nm						
BKSI	Bulukumba	5.98	317	P	Pn	18 43 06.3	+1.7
	68nm,1.0s,637nm0.2nm						
PLAI	Plampang	6.42	278	P	Pn	18 43 10.8	+0.2
	319nm,0.7s,6μm1.6nm						
KAPI	Kappang	6.45	316	P	Pn	18 43 11.9	+0.7
	4.6nm,0.3s,baz=136,slow=12,SNR=18						
KAPI				S	Sn	18 44 24.5	+1.0
	baz=19,slow=7.8,SNR=1.2						
KAPI	Kappang	6.45	316	*e*Pn	Pn	18 43 13.4	+2.3
BNSI	Bone	6.69	322	P	Pn	18 43 17.1	+2.7
	112nm,0.9s,0.3nm						
KNRA	Kununurra	7.38	143	P	Pn	18 43 22.5	-1.3
	baz=7.2,SNR=100						
MTN	Manton Dam	7.45	115	*e*Pn	Pn	18 43 24.3	-0.5
MTN				*e*Sn	Sn	18 44 41.5	-6.5
MTN	Manton Dam	7.45	115	P	Pn	18 43 24.6	-0.3
	baz=7.5,SNR=263						
SANI	Sanana	7.84	13	P	Pn	18 43 41.2	+11
TTSI	Tana Toraja	7.96	326	P	Pn	18 43 34.7	+3.0
	44nm,1.0s,534nm						
KDU	Kakadu	8.62	111	P	Pn	18 43 39.7	-1.0
	baz=8.7,SNR=76						
APSI	Ampana	9.14	344	P	Pn	18 43 48.3	+0.4
FAKI	Fak Fak	10.47	50	P	Pn	18 44 06.7	+0.5
KMMI	Kalianget	10.48	284	P	Pn	18 44 06.1	-0.2
SIJI	Sorong	11.27	39	P	Pn	18 44 21.9	+4.8
	0.9nm,0.3s,baz=217,slow=20,SNR=3.9						
SIJI				S	Sn	18 46 25.6	+4.1
	0.1nm,0.3s,baz=100,slow=23,SNR=3.2						
PWJI	Pagerwojo	12.38	277	P	Pn	18 44 28.5	-3.7
WOJI	Wonogiri, Jawa	13.27	277	P	Pn	18 44 41.3	-3.0
UGM	Wanagama	13.65	277	P	Pn	18 44 46.0	-3.5
WR1	Warramunga Arr	14.09	137	*e*Pn	Pn	18 44 51.5	-3.8
WR1				*e*Sn	Sn	18 47 16.9	-13
WRA	Warramunga Arr	14.09	137	P	Pn	18 44 51.5	-3.8
	3.2nm,0.3s,baz=320,slow=15,SNR=143						
WRA				S	Sn	18 47 17.0	-13
WRAB	Tennant Creek	14.09	137	*e*Pn	Pn	18 44 50.8	-4.5
WB2	Warramunga Arr	14.09	137	*e*Pn	Pn	18 44 51.1	-4.4
WRKA	Warakurna	15.70	166	P	Pn	18 45 13.4	-2.8
	baz=16,SNR=114						
JCJI	Jatiwangi	16.11	280	P	P	18 45 26.0	+2.2
CISI	Cisompet, Garu	16.36	276	P	Pn	18 45 19.5	-5.1
AS31	Alice Springs	16.66	147	*e*P	Pn	18 45 26.0	-2.3
	6.1nm,0.6s						
ASAR	Alice Springs	16.66	147	P	Pn	18 45 25.6	-2.7
	2.9nm,0.3s,baz=320,slow=12,SNR=204						
ASAR				S	Sn	18 48 18.2	-14
	4.0nm,0.3s,baz=325,slow=22,SNR=13						
ASAR				LR	LR	18 51 27.0	
	comp=Z,163nm,20.5s,baz=312,slow=35						
LEM	Lembang	16.68	279	P	Pn	18 45 24.7	-4.0
	1.7nm,0.3s,baz=349,slow=8.0,SNR=7.7						
LEM	Lembang	16.68	279	P	Pn	18 45 22.9	-5.8
SBUM	Sibu	17.01	315	*e*P	P	18 45 33.9	+0.2
	6.9nm,0.9s						
KKM	Kota Kinabalu	17.59	333	*e*P	P	18 45 41.2	+0.9
	28nm,0.8s						
MEEK	Meekatharra	17.62	197	P	Pn	18 45 40.1	-0.1
	baz=17,SNR=8.8						
KSM	Kuching	17.77	308	*e*P	P	18 45 42.9	+0.7
	20nm,1.4s						
QIS	Mount Isa	18.32	128	P	Pn	18 45 48.6	-0.1
	baz=18,SNR=23						
CGJI	Cibinong	18.59	278	P	P	18 45 48.5	-2.7
PPBI	Pangkal Pinang	19.48	292	P	P	18 45 59.7	-1.2
KASI	Kota Agung	19.98	281	P	P	18 46 05.6	-0.8
MORW	Morawa	20.70	201	P	P	18 46 14.5	+0.5
	baz=20,SNR=4.2						
MTSU	Mount Surprise	21.20	115	P	P	18 46 22.3	+2.7
	baz=21,SNR=36						
FORT	Forrest	21.23	171	*e*P	P	18 46 20.7	+1.0
	49nm,0.9s						
FORT	Forrest	21.23	171	P	P	18 46 21.0	+1.3
	baz=21,SNR=11						
CTA	Charters Tower	23.62	118	P	P	18 46 46.9	+2.3
	7.3nm,0.6s,baz=316,slow=14,SNR=10.0						
BBOO	Buckleboo	25.43	156	P	P	18 47 02.1	+1.2
	baz=25,SNR=8.4						
HTT	Hallett	27.19	152	P	P	18 47 19.0	+2.2
	baz=27,SNR=14						
STKA	Stephens Creek	27.29	146	P	P	18 47 19.9	+2.3
	3.3nm,0.6s,baz=320,slow=5.6,SNR=8.2						
STKA				LR	LR	19 00 13.5	
	comp=Z,71nm,18.8s,baz=28,slow=40						
STKA	Stephens Creek	27.29	146	*e*P	P	18 47 15.9	-1.8
	3.8nm,1.4s						
STKA	Stephens Creek	27.29	146	P	P	18 47 20.0	+2.3
	baz=27,SNR=6.7						
PSI	Prapat	28.11	295	LR	LR	18 58 44.8	
	comp=Z,107nm,19.1s,baz=139,slow=37						
CMSA	Cobar Meteorol	29.45	141	P	P	18 47 39.7	+2.8
	baz=29,SNR=21						
ARPS	Mount Arapiles	31.29	152	P	P	18 47 56.0	+3.0
	baz=31,SNR=20						
PANO	Nakornpanom	33.01	324	P	P	18 48 08.6	+0.3
	0.3nm,0.9s						
CHAI	Chaiyaphum	33.67	319	P	P	18 48 15.1	+1.0
	16μm,0.7s						
CNB	Canberra Magne	34.26	142	P	P	18 48 22.8	+3.6
	baz=34,SNR=6.0						
UTTA	Uttaradit	35.95	319	P	P	18 48 34.5	+0.8
	12μm,0.8s						
CM31	Chiang Mai Arr	37.51	318	*e*P	P	18 48 47.6	+0.5
	8.2nm,0.9s						
CMAR	Chiang Mai Arr	37.51	318	P	P	18 48 47.2	+0.1
	4.3nm,0.8s,baz=143,slow=6.7,SNR=31						
CMAR				LR	LR	19 07 05.4	
	comp=Z,14nm,18.7s,baz=110,slow=41						
PAYA	Payao	37.58	320	P	P	18 48 47.8	+0.2
	26μm,0.6s,360μm						
CHTO	Chiang Mai	37.77	319	*e*P	P	18 48 49.1	-0.2
	5.8nm,0.8s						
MAJO	Matsushiro	47.88	15	*e*P	P	18 50 11.7	+0.8
MJAR	Matsushiro Arr	47.88	15	P	P	18 50 11.7	+0.8
	1.1nm,0.6s,baz=203,slow=10,SNR=5.3						
GTA	Gaotai	53.90	337	*e*P	P	18 50 56.2	0.0
ULN	Ulaanbaatar	59.34	347	*e*P	P	18 51 35.0	+0.3
	3.0nm,1.1s						
SONA0	Songino Array	59.47	346	*e*P	P	18 51 35.1	-0.4
SONM	Songino Array	59.47	346	P	P	18 51 35.1	-0.4
	0.9nm,0.5s,baz=158,slow=8.1,SNR=12						
WMQ	Urumqi	62.78	331	*e*P	P	18 51 59.4	+1.4
NIL	Nilore	64.84	314	*e*P	P	18 52 10.2	-1.5
	12nm,1.2s						
MK31	Makanchi Array	67.56	330	*e*P	P	18 52 28.2	-0.6
	1.9nm,0.8s						
MK32	Makanchi Array	67.56	330	*e*P	P	18 52 28.2	-0.6
MKAR	Makanchi Array	67.56	330	P	P	18 52 28.2	-0.6
	2.7nm,0.6s,baz=132,slow=7.7,SNR=30						
MAKZ	Makanchi	67.72	330	*e*P	P	18 52 29.0	-0.8
	4.4nm,0.8s						
BOOM	Boomskoye usch	68.15	324	*e*P	P	18 52 32.4	-0.5
	13nm,1.2s						
PETK	Petropavlovsk-	68.81	21	P	P	18 52 38.2	+1.7
	2.2nm,0.8s,baz=232,slow=2.8,SNR=3.8						
PEA1	Petropavlovsk-	68.81	21	*e*P	P	18 52 38.1	+1.7
AAK	Ala-Archa	69.09	323	P	P	18 52 38.2	-0.5
	1.3nm,0.3s,baz=103,slow=3.4,SNR=4.8						
AAK	Ala-Archa	69.09	323	*e*P	P	18 52 38.6	-0.1
	3.2nm,0.6s						
ARSB	Arslanbob	69.25	321	*e*P	P	18 52 39.3	-0.4
	6.3nm,1.0s						
MAW	Mawson	70.34	201	P	P	18 52 47.4	+1.7
	0.5nm,0.4s,baz=90,slow=7.1,SNR=3.8						
VNDA	Vanda	70.49	172	P	P	18 52 48.2	+1.7
	0.6nm,0.6s,baz=311,slow=5.8,SNR=8.7						
VNDA	Vanda	70.49	172	*e*P	P	18 52 47.4	+0.8
ZALV	Zalesovo Beam	71.66	337	P	P	18 52 52.0	-1.8
	0.5nm,0.3s,baz=149,slow=5.6,SNR=3.8						
ZAA1	Zalesovo Array	71.66	337	*e*P	P	18 52 52.0	-1.9
KURBB	Kurchatov Arra	72.00	331	P	P	18 52 54.8	-1.2
	0.6nm,0.3s,baz=144,slow=5.4,SNR=4.3						
KURK	Kurchatov	72.02	331	*e*P	P	18 52 56.0	-0.1
	3.6nm,0.9s						
BVAR	Borovoye Array	77.44	330	P	P	18 53 24.8	-2.6
	0.2nm,0.5s,baz=110,slow=6.3,SNR=2.8						
GEYT	Alibeck	77.70	312	LR	LR	19 33 59.5	
	comp=Z,21nm,18.1s,baz=0.0,slow=40						
AKTO	Aktyubinsk	82.81	324	P	P	18 53 55.7	-0.7
	2.1nm,0.8s,baz=87,slow=4.3,SNR=7.7						
BOSA	Boshof	93.14	240	LR	LR	19 28 38.9	
	comp=Z,91nm,21.8s,baz=160,slow=30						
PAX	Paxson	98.75	28	*e*P	P	18 55 08.8	-2.7
	11nm,1.0s						
CPUP	Villa Florida	144.11	178	PKP	PKPdf	19 01 08.3	-0.1
	0.8nm,0.4s,baz=41,slow=0.3,SNR=3.6						
LPAZ	La Paz	151.40	155	PKPbc	PKiKP	19 01 29.5	+1.5
	1.0nm,0.4s,baz=90,slow=5.6,SNR=4.4						

IDC ***11*** *18:48:08.0±0.8,29°.15N×96°.00E,h0^{km},mb3.8/12,mb1 3.9/13,mb1mx3.6/46,mbtmp3.7/13,ML3.4/1,Error ellipse: s-maj=29.0km s-min=15.3km az=63.0*

ISCJB ***11*** *18:48:11.1±0.4,29°.10N±0°.04×95°.71E±0°.04,h34^{km},mb3.9/12,Error ellipse: s-maj=6.0km s-min=4.1km az=143.3*

NDI ***11*** *18:48:12.1±2.5,28°.96N×95°.85E,h10^{km},ML4.0*

NEIC ***11*** *18:48:12.4±1.0,29°.09N×95°.94E,h26^{km}±7^{km},mb4.2/1,Error ellipse: s-maj=23.8km s-min=4.9km az=182.0*

BJI ***11*** *18:48:12.9±0.0,29°.00N×95°.79E,h6^{km},ML3.9/6,Ms3.6/5,Ms7 3.4/4*

ISC 11 18:48:12.9±0.6,**29°.06N**±0°.06×**95°.77E**±0°.05,**h34**^{km},**n44**,σ**1^{s}.98**/60,**mb4.0**/12,**Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIRO	ZIRO	2.28	228	*e*P	Pn	18 48 49.8	+1.4
ZIRO				*e*S	Sn	18 49 18.4	+2.9
ZIRO				IAML		18 49 25.2	
	comp=E,3μm,0.3s						
ZIRO				IAML		18 49 26.1	
	comp=N,5μm,0.3s						
JORH	JORHAT	2.67	211	*e*P	Pn	18 48 54.9	+1.3
JORH				*e*S	Sn	18 49 26.8	+2.0
JORH				IAML		18 49 38.2	
	comp=N,2μm,0.3s						
JORH				IAML		18 49 38.8	
	comp=E,1μm,0.2s						
TEZP	TEZPUR	3.59	228	*e*P	Pn	18 49 06.4	+0.3
TEZP				*e*S	Sn	18 49 48.6	+1.2
TEZP				IAML		18 50 04.7	
	comp=N,584nm,0.1s						
TEZP				IAML		18 50 05.9	
	comp=E,627nm,0.1s						
KOHI	KOHIMA	3.64	204	*e*P	Pn	18 49 07.6	+0.5
KOHI				*e*x	Sn	18 49 48.1	-0.9
KOHI				IAML		18 50 09.9	
	comp=N,488nm,0.6s						
KOHI				IAML		18 50 13.6	
	comp=E,508nm,0.2s						
TAWA	Tawang	3.74	248	*e*P	Pn	18 49 11.4	+2.8
TAWA				*e*S	Sn	18 49 54.2	+2.6
TAWA				IAML		18 50 12.6	
	comp=N,1μm,0.2s						
TAWA				IAML		18 50 16.2	
	comp=E,1μm,0.4s						
LSA	Lhasa	4.08	280	*e*Pn	Pn	18 49 16.4	+3.0
LSA				*e*Pg	Pb	18 49 17.2	-7.2
LSA	Lhasa	4.08	280	Pn	Pn	18 49 16.8	+3.4
LSA				Sn	Sn	18 50 04.8	+4.5
LSA				smax	smax		
	comp=E,190nm,0.5s						
LSA				smax	smax		
	comp=E,280nm,0.6s						
SHL	Shillong	4.91	226	*e*P	Pn	18 49 23.6	-0.9
SHL				*e*S	Sn	18 50 18.3	-1.9
SHL				IAML		18 50 20.5	
	comp=E,166nm,0.3s						
SHL				IAML		18 50 20.9	
	comp=N,183nm,0.3s						
TURI	Tura	5.97	235	*e*P	Pn	18 49 41.3	+2.3
TURI				*e*S	Sn	18 50 45.9	-0.3
TURI				IAML		18 50 48.8	
	comp=E,122nm,0.2s						
TURI				IAML		18 50 49.5	
	comp=N,123nm,0.2s						
GTK	Tadong	6.56	256	*e*P	Pn	18 49 49.6	+2.4
GTK				*e*S	Sn	18 50 59.6	-1.4
KMI	Kunming	7.34	121	P	Pn	18 50 06.1	+8.1
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				pmax	pmax		
	comp=Z,220nm,5.7s						
BRDH	Bariadhala	7.37	211	Pn	Pn	18 50 01.0	+2.9
	comp=Z,55nm,0.3s,baz=74,slow=23,SNR=2.1						
BRDH				Sn	Sn	18 51 19.8	-0.8
	comp=Z,28nm,0.3s,baz=58,slow=21,SNR=1.3						
JIRN	Jiri	8.56	263	*e*Pn	Pn	18 50 16.6	+1.8
JIRN				*e*Sn	Sn	18 51 49.0	-1.3
	comp=Z,80nm,0.4s						
GUN	Gumba	8.78	265	*e*Pn	Pn	18 50 18.3	+0.5
GUN				*e*Sn	Sn	18 51 52.8	-3.0
	comp=Z,53nm,0.4s						
PKI	Pulchoki	9.26	263	*e*Pn	Pn	18 50 25.4	+1.1
PKI				*e*Sn	Sn	18 52 05.3	-2.1
	comp=Z,41nm,0.6s						
PKIN	Phulchoki	9.26	263	*e*Pn	Pn	18 50 25.3	+0.9
PKIN				*e*Sn	Sn	18 52 05.8	-1.8
	comp=Z,26nm,0.4s						

KKN	Kakani	9.32	265	*e*Pn	Pn	18 50 25.9	+0.7
KKN				*e*Sn	Sn	18 52 06.6	-2.4
	comp=Z,42nm,0.4s						
DMN	Daman	9.51	264	*e*Pn	Pn	18 50 28.7	+1.0
DMN				*e*Sn	Sn	18 52 11.3	-2.3
	comp=Z,40nm,0.7s						
GKN	Gorkha	9.85	267	*e*Pn	Pn	18 50 32.9	+0.6
GKN				*e*Sn	Sn	18 52 17.0	-4.8
	comp=Z,38nm,0.3s						
KOLN	Koldanda	10.79	266	*e*Pn	Pn	18 50 44.6	-0.7
CMAR	Chiang Mai Arr	10.95	164	Pn	Pn	18 50 47.0	-0.2
	comp=Z,0.1nm,0.3s,baz=340,slow=13,SNR=1.6						
PYUN	Piuthan	11.28	268	*e*Pn	Pn	18 50 50.5	-1.4
PYUN				*e*Sn	Sn	18 52 50.3	-6.6
	comp=Z,23nm,0.5s						
ENH	Enshi	11.99	81	*e*Pn	Pn	18 51 01.4	-0.1
WHN	Wuhan	16.20	80	P	P	18 52 02.8	+2.1
SONA0	Songino Array	20.47	21	*e*P	P	18 52 47.3	-0.4
SONM	Songino Array	20.47	21	P	P	18 52 47.3	-0.4
	comp=Z,1.1nm,0.8s,baz=201,slow=9.5,SNR=6.2						
MK32	Makanchi Array	20.60	333	*e*P	P	18 52 50.2	+1.1
MKAR	Makanchi Array	20.60	333	P	P	18 52 50.2	+1.2
	comp=Z,1.5nm,0.6s,baz=136,slow=8.9,SNR=5.0						
KURBB	Kurchatov Arra	25.16	334	P	P	18 53 34.9	+0.1
	comp=Z,0.6nm,0.6s,baz=148,slow=9.7,SNR=4.3						
ZALV	Zalesovo Beam	26.12	345	P	P	18 53 43.8	+0.3
	comp=Z,0.7nm,0.4s,baz=151,slow=6.6,SNR=2.0						
ZAA1	Zalesovo Array	26.12	345	*e*P	P	18 53 43.8	+0.3
USRK	Ussuriysk Ar.	32.46	52	P	P	18 54 37.1	-2.9
	comp=Z,1.2nm,0.7s,baz=254,slow=12,SNR=3.3						
AKTO	Aktyubinsk	35.49	318	P	P	18 55 11.6	+5.4
	comp=Z,1.4nm,0.7s,baz=141,slow=6.5,SNR=2.7						
FIA0	FINESS Array S	55.26	327	*e*P	P	18 57 43.0	+0.5
FINES	FINESS Array B	55.26	327	P	P	18 57 43.0	+0.5
	comp=Z,0.8nm,0.7s,baz=86,slow=8.5,SNR=1.4						
WRA	Warramunga Arr	61.31	138	P	P	18 58 25.3	0.0
	comp=Z,2.8nm,0.7s,baz=316,slow=7.1,SNR=4.7						
WR1	Warramunga Arr	61.31	138	*e*P	P	18 58 25.3	0.0
NB200	NORSAR Array S	62.45	327	*e*P	P	18 58 32.5	+0.1
NOA	NORSAR Array B	62.45	327	P	P	18 58 32.5	+0.1
	comp=Z,0.3nm,0.5s,baz=95,slow=4.7,SNR=2.0						
GERES	GERESS Array B	63.73	313	P	P	18 58 40.8	-0.4
	comp=Z,0.3nm,0.5s,baz=72,slow=5.9,SNR=4.3						
AS31	Alice Springs	63.99	141	*e*P	P	18 58 43.3	+0.1
	comp=Z,2.7nm,1.5s						
ASAR	Alice Springs	63.99	141	P	P	18 58 43.3	+0.2
	comp=Z,0.8nm,0.5s,baz=324,slow=6.3,SNR=15						
KEST	Kesra	71.01	301	P	P	18 59 28.4	+0.8
	comp=Z,1.4nm,0.8s,baz=112,slow=5.4,SNR=2.0						
STKA	Stephens Creek	74.63	141	P	P	18 59 48.4	-0.4
	comp=Z,1.1nm,0.6s,baz=354,slow=4.0,SNR=3.3						

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*NEIC **11** 18:56:05.8±1.0, 47°.70N×151°.85E, h70^{km}±8^{km}, mb4.5/5, Error ellipse: s-maj=24.9km s-min=8.2km az=143.0*

*ISCJB **11** 18:56:07.5±0.4, 47°.84N±0°.09×152°.0E±0°.1, h100^{km}, mb3.9/13, Error ellipse: s-maj=16.1km s-min=6.9km az=137.0*

*IDC **11** 18:56:08.1±2.7, 47°.74N×151°.98E, h89^{km}±25^{km}, mb3.6/10, mb1 3.8/13, mb1mx3.4/49, mbtmp3.9/13, MS4.4/2, Ms1 4.4/2, ms1mx2.9/38, Error ellipse: s-maj=23.5km s-min=14.0km az=135.0*

ISC 11 18:56:09.2±0.7**, 47°.8N**±0°.1×**152°.0E**±0°.1**, h100**^{km}**, n35, σ0**^{s}**.99**/26**, mb3.9**/13**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEA0B	Petropavlovsk-	6.43	33	*e*Pn	Pn	18 57 39.7	-1.5
PETK	Petropavlovsk-	6.43	33	P	Pn	18 57 39.8	-1.4
	0.7nm,0.3s,baz=178,slow=11,SNR=15						
PEA1	Petropavlovsk-	6.43	33	*e*Pn	Pn	18 57 39.8	-1.5
ASAJ	Asahikawa	7.50	244	P	Pn	18 57 55.8	-0.1
	0.3nm,0.3s,baz=73,slow=17,SNR=3.5						
ASAJ				LR	LR	19 00 37.1	
	comp=Z,64nm,18.9s,baz=228,slow=36						
ERM	Erimo	8.53	230	*e*Pn	Pn	18 58 04.3	-5.5
MJAR	Matsushiro Arr	15.17	227	P	Pn	18 59 38.3	+0.2
	0.1nm,0.3s,baz=37,slow=9.7,SNR=5.7						
MAJO	Matsushiro	15.18	227	*e*P	Pn	18 59 38.3	+0.2
ADK	Adak	20.53	67	*e*P	P	19 00 39.9	+0.5
	57nm,1.2s						
H11N2	WAKE ISLAND Hy	30.55	151	T	T	19 33 21.8	
	baz=340,slow=76,SNR=185						
H11N1	WAKE ISLAND Hy	30.57	151	T	T	19 33 43.9	
	baz=340,slow=76,SNR=229						
H11N3	WAKE ISLAND Hy	30.57	151	T	T	19 33 41.5	
	baz=340,slow=76,SNR=154						
H11S1	WAKE ISLAND Hy	31.64	153	T	T	19 35 12.5	
	baz=342,slow=76,SNR=389						
H11S3	WAKE ISLAND Hy	31.64	153	T	T	19 35 13.1	
	baz=342,slow=76,SNR=296						
H11S2	WAKE ISLAND Hy	31.66	153	T	T	19 35 13.8	
	baz=342,slow=76,SNR=176						
SML	Sawmill	35.74	45	*e*P	P	19 02 58.1	+0.1
	8.3nm,0.8s						
ILAR	Eielson Array	36.20	39	P	P	19 03 00.8	-1.1
	1.1nm,0.8s,baz=265,slow=8.1,SNR=12						
MK32	Makanchi Array	45.74	296	*e*P	P	19 04 20.6	+0.3
MKAR	Makanchi Array	45.74	296	P	P	19 04 20.6	+0.3
	0.6nm,0.8s,baz=69,slow=6.6,SNR=4.3						
KURBB	Kurchatov Arra	46.20	302	P	P	19 04 24.3	+0.5
	0.6nm,0.7s,baz=68,slow=8.5,SNR=4.3						
YKA	Yellowknife Ar	50.53	37	P	P	19 04 57.0	+0.2
	0.9nm,0.8s,baz=295,slow=6.1,SNR=3.8						
YKB5	Yellowknife Ar	50.53	37	*e*P	P	19 04 57.0	+0.2
NV01	Mina Array Sit	62.63	62	*e*P	P	19 06 24.4	+1.2
NVAR	Mina Array Bea	62.63	62	P	P	19 06 24.4	+1.2
	1.0nm,0.6s,baz=304,slow=7.9,SNR=4.7						
FIA0	FINESS Array S	62.72	334	*e*P	P	19 06 23.5	+0.5
FINES	FINESS Array B	62.72	334	P	P	19 06 23.5	+0.5
	1.0nm,0.8s,baz=40,slow=13,SNR=2.5						
PD31	Pinedale Array	64.74	54	*e*P	P	19 06 37.7	+0.7
PDAR	Pinedale Array	64.74	54	P	P	19 06 37.7	+0.7
	0.8nm,0.6s,baz=312,slow=5.6,SNR=6.3						
WR1	Warramunga Arr	69.30	198	*e*P	P	19 07 03.8	-1.8
WRA	Warramunga Arr	69.30	198	P	P	19 07 03.8	-1.9
	1.5nm,0.7s,baz=14,slow=7.3,SNR=4.8						
SCHQ	Schefferville	72.61	22	LR	LR	19 41 41.8	
	comp=Z,291nm,18.4s,baz=99,slow=38						
AS31	Alice Springs	73.00	197	*e*P	P	19 07 27.0	-0.9
	2.6nm,1.4s						
ASAR	Alice Springs	73.00	197	P	P	19 07 27.6	-0.4
	1.3nm,0.5s,baz=11,slow=5.9,SNR=23						
SADO	Sadowa	77.45	35	LR	LR	19 43 00.5	
	comp=Z,167nm,20.2s,baz=164,slow=36						
TX31	Lajitas Ar. Si	77.64	60	*e*P	P	19 07 55.7	+1.0
	3.2nm,0.6s						
TXAR	Lajitas Array	77.64	60	P	P	19 07 55.7	+1.0
	2.8nm,0.6s,baz=296,slow=4.2,SNR=43						

DJA 11 19:12:38.8±0.7**, 8°S**±3°×**10°.7E**±°**, h33**^{km}±11^{km}**, M4.3**/13**, mb4.9**/1**, MLv4.0**/13**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.81	43	P	Pn	19 12 53.8	-0.1
CISI				S	Sn	19 13 03.9	-0.9
LEM	Lembang	1.36	15	P	Pn	19 13 02.6	+0.9
LEM				S	Sn	19 13 19.8	+1.1
TNG	Tangerang	2.06	343	P	Pn	19 13 11.7	+0.6
CGJI	Cibinong	2.18	314	P	Pn	19 13 12.5	-0.3
CGJI				S	Sn	19 13 36.2	-2.4
SBJI	Serang	2.31	331	P	Pn	19 13 15.1	+0.6
SBJI				S	Sn	19 13 42.3	+0.5
UGM	Wanagama	3.24	86	P	Pn	19 13 28.1	+0.7
UGM				S	Sn	19 14 04.2	-0.7
WOJI	Wonogiri, Jawa	3.64	85	P	Pn	19 13 33.6	+0.7
KASI	Kota Agung	3.79	313	P	Pn	19 13 34.3	-0.6
KASI				S	Sn	19 14 14.7	-3.6
PWJI	Pagerwojo	4.50	89	P	Pn	19 13 45.5	+0.8
PWJI				S	Sn	19 14 35.6	-0.4
MDSI	Maura Dua	4.76	320	P	Pn	19 13 48.4	+0.2

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*ISCJB **11** 19:21:11.4±0.3, 43°.84N±0°.02×12°.02E±0°.02, h12^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=2.2km az=136.1*

*ROM **11** 19:21:11.1±0.1, 43°.830N±0°.006×12°.046E±0°.006, h5^{km}, ML2.5/25, Error ellipse: s-maj=0.7km s-min=0.2km az=216.0*

*LDG **11** 19:21:11.4±0.1, 43°.86N×12°.06E, h2^{km}, Ml2.7/6, Error ellipse: s-maj=3.8km s-min=1.8km az=36.0*

ISC 11 19:21:11.6±0.8**, 43°.82N**±0°.02×**12°.01E**±0°.02**, h14**^{km}±5^{km}**, n51, σ1**^{s}**.25**/78**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	Santa Sofia	0.15	308	P	Pg	19 21 14.9	-0.6
SFI				S	Sg	19 21 17.8	-0.2
SFI				AML	AML		
	comp=E,2170µm,0.9s						
SFI				AML	AML		
	comp=N,1815µm,0.2s						
SFI				AML	AML		
	comp=E,2005µm,0.9s						
SFI				AML	AML		
	comp=N,2285µm,0.1s						
SFI				AML	AML		
	comp=E,2170µm,0.9s						
SFI				AML	AML		
	comp=N,1815µm,0.2s						
SFI				AML	AML		
	comp=E,2000µm,0.9s						
SFI				AML	AML		
	comp=N,2290µm,0.1s						
SFI				AML	AML		
	comp=E,2000µm,0.9s						
SFI				AML	AML		
	comp=N,2290µm,0.1s						
SFI				AML	AML		
	comp=N,1815µm,0.2s						
SFI				AML	AML		
	comp=E,2170µm,0.9s						
SFI				AML	AML		
	comp=E,2000µm,0.9s						
SFI				AML	AML		
	comp=N,2290µm,0.1s						
SFI				AML	AML		
	comp=N,1815µm,0.2s						
SFI				AML	AML		
	comp=E,2170µm,0.9s						
ASQU	Asqua	0.16	264	P	Pg	19 21 15.6	-0.1
ASQU				S	Sg	19 21 19.3	+0.9
CPGN	Carpegna, Ital	0.23	93	P	Pg	19 21 16.3	-0.5
CPGN				AML	AML		
	comp=E,3335µm,0.3s						
CPGN				AML	AML		
	comp=N,3205µm,1.6s						
CPGN				AML	AML		
	comp=E,3310µm,0.3s						
CPGN				AML	AML		
	comp=N,2975µm,1.6s						
CPGN				AML	AML		
	comp=E,3335µm,0.3s						
CPGN				AML	AML		
	comp=N,3205µm,1.5s						
CPGN				AML	AML		
	comp=E,3310µm,0.3s						
CPGN				AML	AML		
	comp=N,2970µm,1.6s						
CPGN				AML	AML		
	comp=E,3335µm,0.3s						
CPGN				AML	AML		
	comp=N,3200µm,1.6s						
CPGN				AML	AML		
	comp=E,3310µm,0.3s						
CPGN				AML	AML		
	comp=N,2975µm,1.6s						
CPGN				AML	AML		
	comp=E,3310µm,0.3s						
CPGN				AML	AML		
	comp=E,3335µm,0.3s						
CPGN				AML	AML		
	comp=N,2975µm,1.6s						
CPGN				AML	AML		
	comp=N,3200µm,1.6s						
CPGN				AML	AML		
	comp=E,3335µm,0.3s						
CPGN				AML	AML		
	comp=E,3310µm,0.3s						
CPGN				AML	AML		
	comp=N,3200µm,1.6s						
CPGN				AML	AML		
	comp=N,2975µm,1.6s						
PARC	Parchiule	0.23	135	P	Pg	19 21 16.3	-0.5
PARC				S	Sg	19 21 20.4	+0.1
PARC				AML	AML		
	comp=E,1900µm,0.2s						
PARC				AML	AML		
	comp=N,1655µm,0.5s						
PARC				AML	AML		
	comp=E,1900µm,0.2s						
PARC				AML	AML		
	comp=N,1655µm,0.5s						
PARC				AML	AML		
	comp=E,1900µm,0.2s						
PARC				AML	AML		
	comp=N,1655µm,0.5s						
PARC				AML	AML		
	comp=E,1900µm,0.2s						
PARC				AML	AML		
	comp=N,1655µm,0.5s						
PARC				AML	AML		
	comp=E,1900µm,0.2s						
PARC				AML	AML		
	comp=N,1655µm,0.5s						
SSP9	Sansepolcro	0.26	160	P	Pg	19 21 17.0	-0.2
SSP9				S	Sg	19 21 21.3	+0.4
SSP9				AML	AML		
	comp=E,902µm,0.6s						
SSP9				AML	AML		
	comp=N,1298µm,0.6s						
SSP9				AML	AML		
	comp=E,902µm,0.6s						
SSP9				AML	AML		
	comp=N,1300µm,0.6s						
SSP9				AML	AML		
	comp=E,901µm,0.6s						
SSP9				AML	AML		
	comp=N,1300µm,0.6s						
SSP9				AML	AML		
	comp=N,1300µm,0.6s						
SSP9				AML	AML		
	comp=E,901µm,0.6s						
SSP9				AML	AML		
	comp=N,1300µm,0.6s						
SSP9				AML	AML		
	comp=E,901µm,0.6s						
BADI	Badiali	0.35	151	P	Pg	19 21 18.5	-0.3
BADI				S	Sg	19 21 24.5	+0.9
BADI				AML	AML		
	comp=E,1585µm,1.4s						
BADI				AML	AML		
	comp=N,1350µm,0.2s						
BADI				AML	AML		
	comp=E,1585µm,1.4s						
BADI				AML	AML		
	comp=N,1350µm,0.2s						
BADI				AML	AML		
	comp=E,1585µm,1.4s						
BADI				AML	AML		
	comp=N,1350µm,0.2s						
BADI				AML	AML		
	comp=E,1585µm,1.4s						
BADI				AML	AML		
	comp=N,1350µm,0.2s						
BADI				AML	AML		
	comp=E,1585µm,1.4s						
BADI				AML	AML		
	comp=N,1350µm,0.2s						
RUFI	Rufina	0.36	274	P	Pg	19 21 19.0	0.0
RUFI				S	Sb	19 21 25.6	+0.2
RUFI				AML	AML		
	comp=E,1215µm,0.7s						
RUFI				AML	AML		
	comp=N,1190µm,0.4s						
RUFI				AML	AML		
	comp=E,1215µm,0.7s						
RUFI				AML	AML		
	comp=N,1190µm,0.4s						
PE3	Peglio	0.37	108	P	Pg	19 21 18.7	-0.5
PE3				S	Sb	19 21 25.2	-0.5
PE3				AML	AML		
	comp=E,2055µm,0.5s						
PE3				AML	AML		
	comp=N,2235µm,0.4s						
PE3				AML	AML		
	comp=E,2055µm,0.5s						
PE3				AML	AML		
	comp=N,2235µm,0.4s						
PE3				AML	AML		
	comp=E,2050µm,0.5s						
PE3				AML	AML		
	comp=N,2235µm,0.4s						
PE3				AML	AML		
	comp=E,2050µm,0.5s						
PE3				AML	AML		
	comp=N,2235µm,0.4s						
PE3				AML	AML		
	comp=E,2050µm,0.5s						
PE3				AML	AML		
	comp=N,2235µm,0.4s						
CDCA	Citt' di Caste	0.39	155	P	Pb	19 21 20.6	+0.2
CDCA				S	Sb	19 21 26.4	+0.2
CDCA				AML	AML		
	comp=E,603µm,1.6s						
CDCA				AML	AML		
	comp=N,940µm,0.6s						
ATPI	Pietralunga -	0.46	142	P	Pg	19 21 20.3	-0.6
ATPI				S	Sb	19 21 28.9	+0.6
ATPI				AML	AML		
	comp=E,436µm,0.5s						
ATPI				AML	AML		
	comp=N,390µm,0.3s						
ATPI				AML	AML		
	comp=E,436µm,0.5s						
ATPI				AML	AML		
	comp=N,390µm,0.3s						
ATPI				AML	AML		
	comp=E,436µm,0.5s						
ATPI				AML	AML		
	comp=N,390µm,0.3s						
ATPI				AML	AML		
	comp=E,436µm,0.5s						
ATPI				AML	AML		
	comp=N,390µm,0.3s						
ATPI				AML	AML		
	comp=E,436µm,0.5s						
ATPI				AML	AML		
	comp=N,390µm,0.3s						
PIEI	Pieia	0.47	126	P	Pg	19 21 20.0	-1.0
PIEI				AML	AML		
	comp=E,388µm,0.5s						
PIEI				AML	AML		
	comp=N,288µm,0.5s						
PIEI				AML	AML		
	comp=E,388µm,0.5s						
PIEI				AML	AML		
	comp=N,288µm,0.5s						
PIEI				AML	AML		
	comp=E,388µm,0.5s						
PIEI				AML	AML		
	comp=N,288µm,0.5s						
PIEI				AML	AML		
	comp=N,288µm,0.5s						
PIEI				AML	AML		
	comp=E,388µm,0.5s						
PIEI				AML	AML		
	comp=N,288µm,0.5s						
PIEI				AML	AML		
	comp=E,388µm,0.5s						
CAFI	Castiglion Fio	0.49	184	P	Pg	19 21 21.4	+0.1
CAFI				S	Sb	19 21 29.9	+0.9
CAFI				AML	AML		
	comp=E,803µm,0.6s						
CAFI				AML	AML		
	comp=N,732µm,0.8s						
CAFI				AML	AML		
	comp=E,803µm,0.6s						
CAFI				AML	AML		
	comp=N,732µm,0.8s						
CAFI				AML	AML		
	comp=N,732µm,0.8s						
CAFI				AML	AML		
	comp=E,803µm,0.6s						
CAFI				AML	AML		
	comp=N,732µm,0.8s						
CAFI				AML	AML		
	comp=E,803µm,0.6s						
BRIS	BRISIGHELLA	0.49	313	P	Pg	19 21 20.4	-1.0
BRIS				S	Sg	19 21 28.6	+0.6
BRIS				AML	AML		
	comp=E,1365µm,0.5s						
BRIS				AML	AML		
	comp=N,1270µm,0.2s						
BRIS				AML	AML		
	comp=E,1365µm,0.5s						
BRIS				AML	AML		
	comp=N,1270µm,0.2s						
BRIS				AML	AML		
	comp=N,1270µm,0.2s						
BRIS				AML	AML		
	comp=E,1365µm,0.5s						
BRIS				AML	AML		
	comp=N,1270µm,0.2s						
BRIS				AML	AML		
	comp=E,1365µm,0.5s						
ATMI	Monte Miggiano	0.52	158	P	Pg	19 21 22.0	+0.2
ATMI				S	Sb	19 21 30.5	+0.6
ATMI				AML	AML		
	comp=E,1013µm,1.6s						
ATMI				AML	AML		
	comp=N,1010µm,0.2s						
ATMI				AML	AML		
	comp=E,1012µm,1.6s						
ATMI				AML	AML		
	comp=N,1009µm,0.2s						
ATMI				AML	AML		
	comp=E,1012µm,1.6s						
ATMI				AML	AML		
	comp=N,1009µm,0.2s						
ATMI				AML	AML		
	comp=E,1012µm,1.6s						
ATMI				AML	AML		
	comp=N,1009µm,0.2s						
ATVO	AVT- Monte Val	0.52	146	P	Pg	19 21 21.6	-0.4
ATVO				S	Sb	19 21 31.0	+1.0
SEI	Scarperia	0.53	297	P	Pg	19 21 21.9	-0.2
SEI				S	Sb	19 21 31.3	+1.0
SEI				AML	AML		
	comp=E,1525µm,1.5s						
SEI				AML	AML		
	comp=N,1840µm,0.6s						
SEI				AML	AML		
	comp=E,1525µm,1.5s						
SEI				AML	AML		
	comp=N,1840µm,0.6s						
SEI				AML	AML		
	comp=E,1525µm,1.5s						
SEI				AML	AML		
	comp=N,1840µm,0.6s						
SEI				AML	AML		
	comp=E,1525µm,1.5s						
SEI				AML	AML		
	comp=N,1840µm,0.6s						
MPAG	Monte Paganucc	0.57	109	P	Pg	19 21 22.0	-1.0
MPAG				S	Sb	19 21 31.7	+0.1
MPAG				AML	AML		
	comp=E,206µm,0.3s						
MPAG				AML	AML		
	comp=N,330µm,1.2s						
MPAG				AML	AML		
	comp=E,206µm,0.3s						
MPAG				AML	AML		
	comp=N,330µm,1.2s						
MPAG				AML	AML		
	comp=N,330µm,1.2s						
MPAG				AML	AML		
	comp=E,206µm,0.3s						
MPAG				AML	AML		
	comp=N,330µm,1.2s						
MPAG				AML	AML		
	comp=E,206µm,0.3s						
ATFO	Monte Foce - G	0.61	137	P	Pg	19 21 22.9	-0.7
ATFO				AML	AML		
	comp=E,451µm,0.6s						
ATFO				AML	AML		
	comp=N,360µm,0.5s						
ATFO				AML	AML		
	comp=E,451µm,0.6s						
ATFO				AML	AML		
	comp=N,360µm,0.5s						
ATFO				AML	AML		
	comp=N,360µm,0.5s						
ATFO				AML	AML		
	comp=E,451µm,0.6s						
ATFO				AML	AML		
	comp=N,360µm,0.5s						

ATFO				AML	AML		
	comp=E,451µm,0.6s						
PESA	**Pesaro**	**0.61**	**78**	P	**Pg**	**19 21 22.9**	**-0.8**
PESA				S	**Sb**	**19 21 33.2**	**+0.6**
CSNT	**Castellina Chi**	**0.62**	**237**	P	**Pb**	**19 21 24.8**	**+0.5**
CSNT				S	**Sb**	**19 21 34.9**	**+2.0**
CSNT				AML	AML		
	comp=E,340µm,1.2s						
CSNT				AML	AML		
	comp=N,542µm,1.6s						
CSNT				AML	AML		
	comp=E,340µm,1.2s						
CSNT				AML	AML		
	comp=N,542µm,1.6s						
CSNT				AML	AML		
	comp=N,542µm,1.6s						
CSNT				AML	AML		
	comp=E,340µm,1.2s						
CSNT				AML	AML		
	comp=N,542µm,1.6s						
CSNT				AML	AML		
	comp=E,340µm,1.2s						
ATTE	**AVT- Monte Tez**	**0.67**	**158**	P	**Pg**	**19 21 24.4**	**-0.2**
ATTE				S	**Sb**	**19 21 34.7**	**+0.5**
ATTE				AML	AML		
	comp=E,396µm,0.3s						
ATTE				AML	AML		
	comp=N,422µm,0.5s						
ATTE				AML	AML		
	comp=E,396µm,0.3s						
ATTE				AML	AML		
	comp=N,422µm,0.5s						
ATTE				AML	AML		
	comp=N,422µm,0.5s						
ATTE				AML	AML		
	comp=E,396µm,0.3s						
ATTE				AML	AML		
	comp=N,422µm,0.5s						
ATTE				AML	AML		
	comp=E,396µm,0.3s						
MURB	**Monte Urbino**	**0.67**	**146**	P	**Pg**	**19 21 24.2**	**-0.5**
MURB				AML	AML		
	comp=E,750µm,0.6s						
MURB				AML	AML		
	comp=N,818µm,1.4s						
MURB				AML	AML		
	comp=E,786µm,0.3s						
MURB				AML	AML		
	comp=N,882µm,1.4s						
MURB				AML	AML		
	comp=E,786µm,0.3s						
MURB				AML	AML		
	comp=N,882µm,1.4s						
MURB				AML	AML		
	comp=N,882µm,1.4s						
MURB				AML	AML		
	comp=E,786µm,0.3s						
MURB				AML	AML		
	comp=N,882µm,1.4s						
MURB				AML	AML		
	comp=E,786µm,0.3s						
PTF	**Prato**	**0.69**	**282**	P	**Pg**	**19 21 25.1**	**0.0**
ARVD	**Arcevia**	**0.75**	**115**	P	**Pg**	**19 21 25.2**	**-1.0**
ARVD				AML	AML		
	comp=E,160µm,0.3s						
ARVD				AML	AML		
	comp=N,128µm,0.3s						
ARVD				AML	AML		
	comp=E,160µm,0.3s						
ARVD				AML	AML		
	comp=N,128µm,0.3s						
ARVD				AML	AML		
	comp=E,160µm,0.3s						
ARVD				AML	AML		
	comp=N,128µm,0.3s						
ARVD				AML	AML		
	comp=E,160µm,0.3s						
ARVD				AML	AML		
	comp=N,128µm,0.3s						
MTCR	**Monte La Croce**	**0.76**	**287**	P	**Pg**	**19 21 26.5**	**+0.1**
ATCC	**AVT- Casa Cast**	**0.78**	**144**	P	**Pg**	**19 21 26.4**	**-0.4**
ATCC				AML	AML		
	comp=E,462µm,0.9s						
ATCC				AML	AML		
	comp=N,306µm,0.4s						
ATCC				AML	AML		
	comp=E,462µm,0.9s						
ATCC				AML	AML		
	comp=N,305µm,0.4s						
ATCC				AML	AML		
	comp=E,462µm,0.9s						
ATCC				AML	AML		
	comp=N,305µm,0.4s						
ATCC				AML	AML		
	comp=E,462µm,0.9s						
ATCC				AML	AML		
	comp=N,305µm,0.4s						
FROS	**Frosini**	**0.87**	**226**	P	**Pb**	**19 21 29.3**	**+0.8**
FROS				AML	AML		
	comp=E,395µm,0.5s						
FROS				AML	AML		
	comp=N,342µm,1.5s						
FROS				AML	AML		
	comp=E,395µm,0.5s						
FROS				AML	AML		
	comp=N,342µm,1.5s						
FROS				AML	AML		
	comp=E,395µm,0.5s						
FROS				AML	AML		
	comp=N,342µm,1.5s						
FROS				AML	AML		
	comp=E,395µm,0.5s						
FROS				AML	AML		
	comp=N,342µm,1.5s						
SNTG	**Esanatoglia**	**0.88**	**129**	P	**Pg**	**19 21 27.8**	**-0.8**
SNTG				AML	AML		
	comp=E,152µm,0.5s						
SNTG				AML	AML		
	comp=N,184µm,0.3s						
SNTG				AML	AML		
	comp=E,152µm,0.5s						
SNTG				AML	AML		
	comp=N,185µm,0.3s						
SNTG				AML	AML		
	comp=N,185µm,0.3s						
SNTG				AML	AML		
	comp=E,152µm,0.5s						
SNTG				AML	AML		
	comp=N,185µm,0.3s						
SNTG				AML	AML		
	comp=E,152µm,0.5s						
MGAB	**Montegabbione**	**0.91**	**175**	P	**Pg**	**19 21 29.1**	**-0.1**
MGAB				AML	AML		
	comp=E,382µm,0.6s						
MGAB				AML	AML		
	comp=N,558µm,0.3s						
MGAB				AML	AML		
	comp=E,470µm,0.6s						
MGAB				AML	AML		
	comp=N,626µm,0.3s						
MGAB				AML	AML		
	comp=E,382µm,0.6s						
MGAB				AML	AML		
	comp=N,558µm,0.3s						
MGAB				AML	AML		
	comp=E,470µm,0.6s						
MGAB				AML	AML		
	comp=N,626µm,0.3s						
MGAB				AML	AML		
	comp=N,558µm,0.3s						
MGAB				AML	AML		
	comp=E,470µm,0.6s						
MGAB				AML	AML		
	comp=E,382µm,0.6s						
MGAB				AML	AML		
	comp=N,626µm,0.3s						
MGAB				AML	AML		
	comp=N,626µm,0.3s						
MGAB				AML	AML		
	comp=E,470µm,0.6s						
MGAB				AML	AML		
	comp=E,382µm,0.6s						
MGAB				AML	AML		
	comp=N,558µm,0.3s						
ASSB	**Assisi San Ben**	**0.91**	**148**	P	**Pg**	**19 21 28.8**	**-0.4**
POPM	**Popiglio**	**0.93**	**285**	AML	AML		
	comp=E,200µm,0.8s						
POPM				AML	AML		
	comp=E,200µm,0.8s						
POPM				AML	AML		
	comp=N,177µm,0.7s						
POPM				AML	AML		
	comp=E,200µm,0.8s						
POPM				AML	AML		
	comp=N,177µm,0.7s						
POPM				AML	AML		
	comp=N,177µm,0.7s						
POPM				AML	AML		
	comp=N,177µm,0.7s						
POPM				AML	AML		
	comp=E,200µm,0.8s						
MAIM	**Mastiano**	**1.10**	**276**	P	**Pg**	**19 21 32.4**	**-0.5**
MAIM				AML	AML		
	comp=E,77µm,0.6s						
MAIM				AML	AML		
	comp=N,82µm,0.5s						
MAIM				AML	AML		
	comp=E,77µm,0.6s						
MAIM				AML	AML		
	comp=N,82µm,0.5s						
MAIM				AML	AML		
	comp=N,82µm,0.5s						
MAIM				AML	AML		
	comp=E,77µm,0.6s						
MAIM				AML	AML		
	comp=N,82µm,0.5s						
MAIM				AML	AML		
	comp=E,77µm,0.6s						
FDMO	**Fiordimonte**	**1.11**	**134**	P	**Pg**	**19 21 32.3**	**-0.7**
FDMO				AML	AML		
	comp=E,125µm,0.7s						
FDMO				AML	AML		
	comp=N,123µm,0.6s						
FDMO				AML	AML		
	comp=E,125µm,0.7s						
FDMO				AML	AML		
	comp=N,123µm,0.6s						
FDMO				AML	AML		
	comp=N,123µm,0.6s						
FDMO				AML	AML		
	comp=E,125µm,0.7s						
FDMO				AML	AML		
	comp=N,123µm,0.6s						
FDMO				AML	AML		
	comp=E,125µm,0.7s						
PGF	**Pioggiola**	**2.54**	**241**	*e*Pn	**Pn**	**19 21 52.2**	**-0.3**
PGF				*e*Sn	**Sn**	**19 22 22.0**	**-1.3**
	comp=E,6.1nm,0.3s						
ABTA	**Abfaltersbach**	**2.95**	**7**	*i* Pn	**Pb**	**19 22 01.3**	**-2.8**
	comp=E,0.8nm,0.2s						
ABTA				*i* Sn	**Sn**	**19 22 35.3**	**+1.8**
	comp=E,10nm,0.8s						
MYKA	**Terra Mystica**	**3.04**	**22**	*e*Sn	**Sn**	**19 22 36.1**	**+0.5**
	comp=E,2.4nm,0.4s						
OBKA	**Obir**	**3.24**	**33**	*i* Pn	**Pn**	**19 22 01.9**	**-0.2**
	comp=E,0.3nm,0.2s						
OBKA				*i* Sn	**Sn**	**19 22 40.5**	**0.0**
	comp=E,4.5nm,0.4s						
SBF	**Sospel**	**3.31**	**272**	*e*Pn	**Pn**	**19 22 02.7**	**-0.4**
SBF				*e*Sn	**Sn**	**19 22 40.5**	**-1.7**
	comp=E,12nm,0.6s						
FETA	**Feichten**	**3.33**	**345**	*i* Pn	**Pn**	**19 22 03.9**	**+0.4**
	comp=E,1.7nm,0.6s						
FETA				*i* Sn	**Sn**	**19 22 45.6**	**+2.7**
	comp=E,1.2nm,0.5s						
KBA	**Koelnbreinsper**	**3.40**	**16**	*i* Pn	**Pn**	**19 22 05.3**	**+1.0**
	comp=E,0.8nm,0.2s						
KBA				*i* Sn	**Sn**	**19 22 45.3**	**+0.7**
	comp=E,1.4nm,0.3s						
SQTA	**Sankt Quirin**	**3.45**	**351**	*i* Pn	**Pn**	**19 22 05.4**	**+0.3**
	comp=E,1.1nm,0.2s						
SQTA				*i* Sn	**Sn**	**19 22 48.9**	**+3.1**
	comp=E,1.3nm,0.3s						
SOKA	**Soboth**	**3.57**	**36**	*i* Sg	**Sg**	**19 23 08.3**	**+2.0**
	comp=E,0.8nm,0.2s						
MOTA	**Moosalm**	**3.59**	**350**	*i* Pn	**Pn**	**19 22 10.0**	**+3.1**
	comp=E,0.8nm,0.3s						
RETA	**Reutte**	**3.77**	**347**	*i* Pn	**Pn**	**19 22 09.7**	**+0.3**
	comp=E,1.1nm,0.3s						
DAVA	**Damuels**	**3.78**	**337**	*i* Pn	**Pn**	**19 22 09.6**	**0.0**
	comp=E,1.8nm,0.5s						
DAVA				*i* Sn	**Sn**	**19 22 57.0**	**+3.1**
	comp=E,7.5nm,0.6s						
FRF	**La Foret Royal**	**3.90**	**268**	*e*Pn	**Pn**	**19 22 10.6**	**-0.5**
FRF				*e*Sn	**Sn**	**19 22 54.3**	**-2.3**
LMR	**La Mourre**	**4.03**	**265**	*e*Pn	**Pn**	**19 22 12.6**	**-0.2**
LMR				*e*Sn	**Sn**	**19 22 57.3**	**-2.4**
	comp=E,1.5nm,0.3s						
SMRF	**Simiane la Rot**	**4.65**	**274**	*e*Pn	**Pn**	**19 22 21.5**	**0.0**
HINF	**Hinteralfeld**	**5.38**	**320**	*e*Sn	**Sn**	**19 23 30.0**	**-3.3**
	comp=E,1.4nm,0.3s						
CDF	**Champ du Feu**	**5.65**	**326**	*e*Pn	**Pn**	**19 22 34.6**	**-0.7**
HAU	**Haudompre**	**5.76**	**319**	*e*Sn	**Sn**	**19 23 38.7**	**-3.8**
	comp=E,4.5nm,0.4s						

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*IDC **11** 19:39:44.8±0.8, 33°.07N×75°.60E, h0^{km}, mb3.7/12, mb1 3.8/16, mb1mx3.7/44, mbtmp3.7/16, ML3.2/4, MS3.2/5, Ms1 3.2/5, ms1mx2.8/37, Error ellipse: s-maj=22.5km s-min=16.1km az=61.0*

*ISCJB **11** 19:39:46.6±0.5, 33°.26N±0°.03×75°.65E±0°.06, h18^{km}±3^{km}, mb3.7/12, MS3.1/3, Error ellipse: s-maj=8.6km s-min=4.7km az=152.1*

*HYB **11** 19:39:47.9±0.3, 33°.13N×75°.69E, h16^{km}±2^{km}, ML3.8*

*NDI **11** 19:39:50.2±2.7, 33°.08N×75°.52E, h10^{km}, ML3.9*

ISC 11 19:39:47.5±0.7**, 33°.16N**±0°.03×**75°.61E**±0°.04**, h18**^{km}±2^{km}**, n38, σ2^{s}.12**/46**, mb3.8**/12**, MS3.1**/3**, 2C-3D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DODA	**Doda**	**0.05**	**253**	⇑*e*P	**Pg**	**19 39 51.3**	**+0.4**
DODA				*e*S	**Sg**	**19 39 53.8**	**+0.5**
DODA				IAML		19 39 54.6	
	comp=Z,36µm,0.2s						
THTRI	**Thathri**	**0.15**	**95**	⇓*e*P	**Pb**	**19 39 50.9**	**+0.2**
THTRI				*e*S	**Sb**	**19 39 53.4**	**+0.5**
THTRI				IAML		19 39 53.8	
	comp=Z,12µm,0.1s						
KSHWR	**Kishtwar**	**0.21**	**42**	⇓*e*P	**Pg**	**19 39 52.4**	**-0.3**
KSHWR				IAML		19 39 58.0	
	comp=Z,12µm,0.3s						
BDRWA	**Bhadarwah**	**0.22**	**154**	⇑*e*P	**Pg**	**19 39 52.2**	**-0.7**
BDRWA				*e*S	**Sb**	**19 39 55.0**	**-1.1**
BDRWA				IAML		19 39 56.2	
	comp=Z,21µm,0.3s						
GANDO	**Gandoh**	**0.28**	**116**	⇓*e*P	**Pg**	**19 39 52.8**	**-1.1**
GANDO				*e*S	**Sg**	**19 39 56.0**	**-2.2**
GANDO				IAML		19 39 56.6	
	comp=Z,12µm,0.1s						
DHRM	**DHARAMSHALA**	**1.08**	**147**	*e*P	**Pg**	**19 40 09.1**	**+0.8**
DHRM				*e*S	**Sg**	**19 40 24.4**	**+1.9**
DHRM				IAML		19 40 30.1	
	comp=N,2µm,0.3s						
DHRM				IAML		19 40 30.8	
	comp=E,3µm,0.3s						
BHK	**Bhakra**	**1.87**	**158**	*e*P	**Pb**	**19 40 21.8**	**+0.8**
BHK				*e*S	**Sb**	**19 40 45.2**	**+1.2**
SMLA	**Simla**	**2.42**	**147**	*e*P	**Pb**	**19 40 30.3**	**-0.1**
SMLA				*e*S	**Sb**	**19 41 00.8**	**+1.0**
SMLA				IAML		19 41 04.2	
	comp=E,2µm,0.5s						
SMLA				IAML		19 41 04.9	
	comp=N,967nm,0.2s						
DDI	**Dehra Dun**	**3.51**	**143**	*e*P	**Pb**	**19 40 45.3**	**-3.8**
DDI				*e*S	**Sn**	**19 41 25.2**	**+3.0**
DDI				IAML		19 41 39.9	
	comp=N,401nm,0.3s						
DDI				IAML		19 41 40.4	
	comp=E,431nm,0.2s						
NDI	**New Delhi**	**4.67**	**162**	*e*P	**Pn**	**19 41 00.5**	**+3.5**
NDI				*e*x	Sn	19 42 09.0	+18
PYUN	**Piuthan**	**8.11**	**126**	*e*P	**Pn**	**19 41 47.0**	**+2.5**
	comp=E,23nm,0.3s						
KOLN	**Koldanda**	**8.74**	**126**	*e*P	**Pn**	**19 41 48.6**	**-4.5**
	comp=E,21nm,0.4s						
GKN	**Gorkha**	**9.32**	**121**	*e*P	**Pn**	**19 42 04.2**	**+3.2**
	comp=E,16nm,0.2s						
AAK	**Ala-Archa**	**9.50**	**355**	Pn	**Pn**	**19 42 06.0**	**+2.5**
	comp=E,0.4nm,0.3s,baz=153,slow=12,SNR=3.9						
AAK				Sn	**Sn**	**19 43 49.9**	**+0.1**
	comp=E,0.2nm,0.3s,baz=165,slow=21,SNR=2.4						
AAK				LR	LR	19 46 04.9	
	comp=E,108nm,18.8s,baz=184,slow=40						
DMN	**Daman**	**9.89**	**122**	*e*P	**Pn**	**19 42 09.1**	**+0.2**
	comp=E,24nm,0.6s						
BHPL	**Bhopal**	**10.01**	**170**	*e*P	**Pn**	**19 42 10.2**	**-0.2**
BHPL				*e*S	**Sn**	**19 43 57.1**	**-5.2**
PKIN	**Phulchoki**	**10.12**	**121**	*e*P	**Pn**	**19 42 13.2**	**+1.2**
	comp=E,17nm,0.4s						
PKI	**Pulchoki**	**10.13**	**121**	*e*P	**Pn**	**19 42 13.2**	**+0.9**
	comp=E,14nm,0.4s						
JIRN	**Jiri**	**10.65**	**118**	*e*P	**Pn**	**19 42 23.7**	**+4.3**
MKAR	**Makanchi Array**	**14.54**	**19**	Pn	**Pn**	**19 43 12.6**	**+0.4**
	comp=E,0.1nm,0.3s,baz=195,slow=12,SNR=7.0						
MKAR				Sn	**Sn**	**19 45 48.2**	**-4.7**
	comp=E,0.1nm,0.3s,baz=224,slow=48,SNR=1.6						
GEYT	**Alibeck**	**15.01**	**293**	Pn	**Pn**	**19 43 18.4**	**-0.3**
	comp=E,0.2nm,0.3s,baz=154,slow=14,SNR=3.2						
KURBB	**Kurchatov Arra**	**17.58**	**6**	P	**Pn**	**19 43 50.4**	**-0.9**
	comp=E,0.0nm,0.3s,baz=193,slow=11,SNR=11						
WSAR	**Wadi Sarin**	**17.91**	**241**	LR	LR	19 53 28.0	
	comp=E,60nm,18.4s,baz=146,slow=46						
BVAR	**Borovoye Array**	**20.21**	**351**	P	Pn	19 44 23.2	+0.1
	comp=E,3.2nm,0.6s,baz=161,slow=9.4,SNR=24						
AKTO	**Aktyubinsk**	**21.59**	**328**	P	**P**	**19 44 37.6**	**+1.6**
	comp=E,9.4nm,1.0s,baz=132,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**21.79**	**15**	P	**P**	**19 44 37.8**	**-0.3**
	comp=E,0.9nm,0.5s,baz=213,slow=11,SNR=5.6						
ZALV				LR	LR	19 53 39.2	
	comp=E,52nm,18.7s,baz=250,slow=38						
CMAR	**Chiang Mai Arr**	**25.52**	**119**	P	**P**	**19 45 15.7**	**+0.7**
	comp=E,2.4nm,0.8s,baz=300,slow=10,SNR=5.7						
ARU	**Arti**	**26.08**	**338**	LR	LR	19 56 13.9	
	comp=E,51nm,18.6s,baz=213,slow=38						
SONM	**Songino Array**	**27.40**	**49**	P	**P**	**19 45 33.8**	**+1.9**
	comp=E,0.7nm,0.8s,baz=241,slow=9.3,SNR=5.1						
BRTR	**Keskin Array B**	**34.16**	**293**	P	**P**	**19 46 28.3**	**-3.3**
	comp=E,0.3nm,0.5s,baz=100,slow=3.4,SNR=2.5						
FINES	**FINESS Array B**	**42.35**	**327**	P	**P**	**19 47 42.3**	**+2.2**
	comp=E,2.1nm,1.0s,baz=60,slow=8.2,SNR=3.1						
FINES				LR	LR	20 06 55.7	
	comp=E,33nm,18.3s,baz=101,slow=38						
NB2	**NORSAR Subarra**	**49.31**	**325**	P	**P**	**19 48 35.8**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=98,slow=7.4						
NOA	**NORSAR Array B**	**49.31**	**325**	P	**P**	**19 48 35.9**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=96,slow=8.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**69.55**	**273**	P	**P**	**19 50 54.7**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=48,slow=5.0,SNR=4.2						
ILAR	**Eielson Array**	**76.89**	**17**	P	**P**	**19 51 37.4**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=297,slow=4.0,SNR=3.0						
WRA	**Warramunga Arr**	**76.99**	**124**	P	**P**	**19 51 39.5**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=296,slow=6.6,SNR=4.3						
BOSA	**Boshof**	**77.81**	**224**	P	**P**	**19 51 43.9**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=35,slow=2.8,SNR=3.7						
ASAR	**Alice Springs**	**79.23**	**127**	P	**P**	**19 51 51.9**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=315,slow=5.5,SNR=4.5						

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*IDC **11** 19:49:57.1±1.3, 12°.06N×92°.62E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.6/47, mbtmp3.7/9, ML3.9/1, Error ellipse: s-maj=40.9km s-min=25.9km az=51.0*

*ISCJB **11** 19:49:58.9±1.1, 12°.1N±0°.2×92°.7E±0°.2, h23^{km}, mb3.7/8, Error ellipse: s-maj=24.3km s-min=22.0km az=31.1*

ISC 11 19:50:00.6±1.3**, 12°.0N**±0°.2×**92°.6E**±0°.2**, h23**^{km}**, n12, σ0^{s}.67**/9**, mb3.8**/8**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.84**	**43**	Pn	**Pn**	**19 52 07.8**	**+0.7**
	0.3nm,0.3s,baz=236,slow=15,SNR=5.7						
H08S3	**Diego Garcia H**	**27.96**	**227**	T	T	20 24 45.2	
	baz=41,slow=74,SNR=7.3						
H08S2	**Diego Garcia H**	**27.97**	**227**	T	T	20 24 46.4	
H08S1	**Diego Carcia H**	**27.98**	**227**	T	T	20 24 45.2	
	baz=15,slow=74,SNR=3.4						
MKAR	**Makanchi Array**	**35.71**	**348**	P	**P**	**19 56 56.8**	**-0.7**
	0.5nm,0.6s,baz=184,slow=9.7,SNR=4.4						
SONM	**Songino Array**	**37.51**	**15**	P	**P**	**19 57 12.1**	**-0.8**
	0.8nm,0.9s,baz=198,slow=9.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**42.25**	**353**	P	**P**	**19 57 51.8**	**-0.2**
	0.5nm,0.4s,baz=183,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**51.95**	**127**	P	**P**	**19 59 08.1**	**-0.1**
	1.1nm,0.8s,baz=293,slow=9.4,SNR=5.1						
FINES	**FINESS Array B**	**68.34**	**332**	P	**P**	**20 01 00.3**	**+0.4**
	1.2nm,0.7s,baz=154,slow=14,SNR=4.6						
GERES	**GERESS Array B**	**73.73**	**318**	P	**P**	**20 01 33.9**	**+0.8**
	0.9nm,0.8s,baz=88,slow=4.5,SNR=6.7						
NOA	**NORSAR Array B**	**75.38**	**330**	P	**P**	**20 01 42.5**	**+0.3**
	0.8nm,0.9s,baz=90,slow=5.6,SNR=3.1						
ILAR	**Eielson Array**	**91.46**	**22**	P	**P**	**20 03 04.5**	**-0.5**
	0.3nm,0.6s,baz=298,slow=4.1,SNR=4.1						

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*ISCJB **11** 19:52:30.6±0.6, 10°.52S±0°.09×165°.63E±0°.08, h10^{km}, mb4.0/11, MS3.6/6, Error ellipse: s-maj=12.9km s-min=10.9km az=17.1*

*IDC **11** 19:52:30.6±1.2, 10°.43S×165°.66E, h0^{km}, mb4.0/9, mb1 4.2/11, mb1mx4.0/36, mbtmp4.1/11, ML4.7/2, MS3.6/6, Ms1 3.6/6, ms1mx3.3/25, Error ellipse: s-maj=30.6km s-min=21.3km az=111.0*

*NEIC **11** 19:52:32.9±1.1, 10°.46S×165°.42E, h9^{km}±4^{km}, mb4.3/3, Error ellipse: s-maj=23.5km s-min=10.4km az=47.0*

ISC 11 19:52:32.2±0.8**, 10°.57S**±0°.09×**165°.7E**±0°.1**, h10**^{km}**, n30, σ1^{s}.65**/22**, mb4.2**/11**, MS3.6**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.73**	**281**	Pn	**Pn**	**19 53 58.1**	**+0.7**
	24nm,0.3s,baz=149,slow=2.9,SNR=15						
HNR				Sn	**Sn**	**19 55 04.4**	**+1.1**
	21nm,0.3s,baz=314,slow=18,SNR=2.8						
HNR				LR	LR	19 56 16.4	
	comp=Z,800nm,19.0s,baz=124,slow=40						
HNR	**Honiara**	**5.73**	**281**	*e*Pn	**Pn**	**19 53 54.5**	**-3.0**
HNR	**Honiara**	**5.73**	**281**	*e*P	**Pn**	**19 53 57.0**	**-0.5**
DZM	**Mont Dzumac**	**11.46**	**176**	*e*Pn	**Pn**	**19 55 18.0**	**+1.8**
	23nm,0.4s						
DZM				*e*Sn	**Sn**	**19 57 20.2**	**-4.2**
	2.3nm,0.2s						
DZM				*e*LR	LR	19 58 01.2	
	comp=Z,274nm,29.2s						
DZM	**Mont Dzumac**	**11.46**	**176**	Pn	**Pn**	**19 55 18.3**	**+2.1**
	4.2nm,0.3s,baz=318,slow=9.3,SNR=62						
DZM				Sn	Sn	19 57 17.8	-6.6
	0.1nm,0.3s,baz=12,slow=23,SNR=1.3						
DZM				LR	LR	19 59 44.0	
	comp=Z,345nm,18.5s,baz=40,slow=37						
JAY	**Jayapura**	**26.02**	**286**	LR	LR	20 09 15.0	
	comp=Z,163nm,19.0s,baz=128,slow=39						
H11S2	**WAKE ISLAND Hy**	**28.89**	**2**	T	T	20 28 40.8	
	baz=181,slow=76,SNR=327						
H11S3	**WAKE ISLAND Hy**	**28.90**	**2**	T	T	20 28 39.9	
	baz=181,slow=76,SNR=252						
H11S1	**WAKE ISLAND Hy**	**28.91**	**2**	T	T	20 28 42.2	
	baz=181,slow=76,SNR=207						
H11N1	**WAKE ISLAND Hy**	**30.12**	**2**	T	T	20 30 11.0	
	baz=182,slow=76,SNR=301						
H11N3	**WAKE ISLAND Hy**	**30.12**	**2**	T	T	20 30 12.2	
	baz=182,slow=76,SNR=335						
H11N2	**WAKE ISLAND Hy**	**30.14**	**2**	T	T	20 30 13.1	
	baz=182,slow=76,SNR=249						
STKA	**Stephens Creek**	**30.72**	**223**	P	**P**	**19 58 49.3**	**+1.7**
	1.6nm,0.8s,baz=42,slow=15,SNR=3.1						
STKA				LR	LR	20 10 18.1	
	comp=Z,94nm,18.7s,baz=23,slow=35						
WR1	**Warramunga Arr**	**31.56**	**249**	*e*P	**P**	**19 58 55.2**	**0.0**
WRA	**Warramunga Arr**	**31.56**	**249**	P	**P**	**19 58 55.2**	**0.0**
	1.5nm,1.0s,baz=78,slow=9.1,SNR=5.4						
ASAR	**Alice Springs**	**32.93**	**243**	P	**P**	**19 59 05.7**	**-1.5**
	0.9nm,0.8s,baz=64,slow=10,SNR=11						
ASAR				LR	LR	20 13 06.1	
	comp=Z,45nm,18.2s,baz=78,slow=38						
PPT	**Papeete**	**43.90**	**104**	LR	LR	20 15 04.7	
	comp=Z,63nm,18.6s,baz=344,slow=31						
PPT2	**Papeete2**	**43.90**	**104**	*e*LR	LR	20 13 05.8	
	comp=Z,123nm,25.2s						
TBI	**Tubuai**	**44.59**	**113**	*e*LR	LR	20 13 32.6	
	comp=Z,170nm,29.0s						
USRK	**Ussuriysk Ar.**	**62.48**	**333**	P	**P**	**20 02 56.2**	**+0.3**
	1.4nm,0.8s,baz=188,slow=5.8,SNR=5.9						
CMAR	**Chiang Mai Arr**	**71.84**	**293**	P	**P**	**20 03 55.3**	**-0.5**
	2.0nm,0.9s,baz=126,slow=5.4,SNR=8.6						
ULN	**Ulaanbaatar**	**77.86**	**324**	*e*P	**P**	**20 04 29.2**	**-1.1**
	3.0nm,1.0s						
SONA0	**Songino Array**	**78.23**	**324**	*e*P	**P**	**20 04 32.0**	**-0.3**
SONM	**Songino Array**	**78.23**	**324**	P	**P**	**20 04 32.0**	**-0.3**
	1.8nm,1.1s,baz=131,slow=5.6,SNR=7.2						
HDA	**Harding Lake**	**82.83**	**19**	*e*P	**P**	**20 04 57.6**	**+1.1**

	5.2nm,1.1s						
ILAR	**Eielson Array**	**83.09**	**19**	P	**P**	**20 04 56.1**	**-1.7**
	0.2nm,0.2s,baz=239,slow=5.3,SNR=4.9						
MAW	**Mawson**	**85.12**	**202**	P	**P**	**20 05 09.9**	**+1.6**
	3.5nm,1.0s,baz=110,slow=14,SNR=3.5						
MAW	**Mawson**	**85.12**	**202**	*e*P	**P**	**20 05 09.4**	**+1.2**
	1.3nm,1.1s						
MK32	**Makanchi Array**	**93.11**	**317**	*e*P	**P**	**20 05 46.0**	**-0.6**
MKAR	**Makanchi Array**	**93.11**	**317**	P	**P**	**20 05 46.0**	**-0.6**
	1.1nm,1.0s,baz=93,slow=8.5,SNR=6.5						

*ISCJB **11** 20:05:25.8±0.7,24°.11S±0°.05×68°.9W±0°.1,h119^{km}±9^{km}, mb3.9/3,Error ellipse: s-maj=17.1km s-min=7.5km az=12.6*

*GUC **11** 20:05:26.3±0.5,24°.12S×68°.95W,h110^{km}±5^{km},ML3.4*

*IDC **11** 20:05:32.2±1.3,23°.56S×68°.42W,h126^{km}±13^{km},mb3.7/3, mb1 3.6/6,mb1mx3.4/31,mbtmp4.0/6,MS3.8/1,Ms1 3.8/1, ms1mx2.6/27,Error ellipse: s-maj=35.2km s-min=21.5km az=91.0*

ISC 11 20:05:26.3±1.0,**24°.12S**±0°.05×**68°.9W**±0°.1,**h112**^{km}±11^{km}, **n18**,σ**0^{s}.49**/22,**mb4.0**/3,**4C-3D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	**1.06**	**328**	⇓*i*P	**Pn**	**20 05 48.6**	**0.0**
PB15				*i* S	**Sn**	**20 06 05.6**	**+0.2**
GO02	**Mina Guanaco**	**1.23**	**212**	⇑*i*P	**Pn**	**20 05 50.7**	**+0.2**
GO02				*i* S	**Sn**	**20 06 09.0**	**+0.1**
PB14	**IPOC Station P**	**1.49**	**250**	⇑*i*P	**Pn**	**20 05 53.5**	**-0.1**
PB14				*i* S	**Sn**	**20 06 14.1**	**-0.1**
PB14				IAML		20 06 14.9	
	comp=E,617nm,0.3s						
LVC	**Limon Verde**	**1.50**	**358**	P	**Pn**	**20 05 53.9**	**+0.2**
	comp=E,24nm,0.3s,baz=156,slow=7.7,SNR=172						
LVC				S	**Sn**	**20 06 13.7**	**-0.7**
	comp=E,92nm,0.3s,baz=117,slow=23,SNR=49						
LVC				LR	LR	20 06 20.9	
	comp=E,65nm,20.7s,baz=74,slow=46						
PB06	**IPOC Station P**	**1.55**	**335**	⇓*i*P	**Pn**	**20 05 54.2**	**+0.2**
PB06				*i* S	**Sn**	**20 06 15.6**	**+0.5**
PB06				IAML		20 06 25.3	
	comp=E,464nm,0.1s						
PB10	**IPOC Station P**	**1.66**	**291**	*e*P	**Pn**	**20 05 55.6**	**+0.4**
PB10				*e*S	**Sn**	**20 06 16.3**	**-0.9**
PB10				IAML		20 06 34.5	
	comp=N,269nm,0.2s						
PB05	**IPOC Station P**	**1.76**	**315**	⇓*i*P	**Pn**	**20 05 57.0**	**+0.5**
PB05				*i* S	**Sn**	**20 06 19.3**	**-0.2**
PB05				IAML		20 06 25.1	
	comp=N,326nm,0.3s						
PB04	**IPOC Station P**	**2.13**	**326**	*e*P	**Pn**	**20 06 01.3**	**0.0**
PB04				IAML		20 06 37.9	
	comp=N,320nm,0.7s						
PB03	**IPOC Station P**	**2.22**	**338**	⇑*i*P	**Pn**	**20 06 02.6**	**+0.3**
PB03				IAML		20 06 36.4	
	comp=E,292nm,0.4s						
PB09	**IPOC Station P**	**2.34**	**351**	⇑*i*P	**Pn**	**20 06 04.8**	**+0.9**
PB09				IAML		20 06 44.4	
	comp=N,300nm,0.6s						
CFA	**Coronel Fontan**	**7.48**	**176**	P	Pn	20 07 27.4	+15
	comp=N,1.0nm,0.3s,baz=351,slow=12,SNR=8.7						
LPAZ	**La Paz**	**7.82**	**5**	P	**Pn**	**20 07 17.8**	**-0.2**
	comp=N,0.7nm,0.3s,baz=184,slow=7.4,SNR=6.4						
LPAZ				S	Sn	20 08 19.4	-26
	comp=N,0.2nm,0.3s,baz=202,slow=4.0,SNR=5.7						
SIV	**San Ignacio**	**10.90**	**44**	P	Pn	20 07 54.7	-4.5
	comp=N,1.5nm,0.3s,baz=246,slow=10,SNR=18						
BDFB	**Brasilia**	**21.32**	**71**	P	**P**	**20 10 03.8**	**-0.7**
	comp=N,4.1nm,0.5s,baz=236,slow=13,SNR=5.6						
PTGA	**Pitinga**	**24.80**	**22**	P	**P**	**20 10 37.8**	**-0.1**
	comp=N,1.5nm,0.3s,baz=208,slow=8.2,SNR=5.3						
NVAR	**Mina Array Bea**	**77.58**	**322**	LR	LR	20 50 02.3	
	comp=N,48nm,18.4s,baz=73,slow=34						
TORD	**Torodi Ar. Bea**	**78.20**	**70**	P	**P**	**20 17 14.7**	**+0.7**
	comp=N,0.7nm,0.5s,baz=255,slow=6.1,SNR=11						
MKAR	**Makanchi Array**	**147.69**	**38**	PKPbc	**PKiKP**	**20 24 59.4**	**-0.3**
	comp=N,0.4nm,0.6s,baz=308,slow=3.3,SNR=6.4						

*DDA **11** 20:10:07.5,39°.99N×29°.03E,h7^{km}±2^{km},ML2.6*

*ISK **11** 20:10:07.3,40°.00N×29°.03E,h5^{km},ML1.9/8*

*ISCJB **11** 20:10:08.2±0.5,40°.04N±0°.04×28°.98E±0°.06,h10^{km}±4^{km}, Error ellipse: s-maj=9.3km s-min=4.7km az=137.8*

ISC 11 20:10:07.8±1.0,**39°.98N**±0°.04×**29°.01E**±0°.04,**h10**^{km}±8^{km}, **n17**,σ**0^{s}.58**/20,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORLT	**Orhaneli**	**0.11**	**305**	PG	**Pg**	**20 10 10.3**	**-0.2**
ORLT				SG	**Sg**	**20 10 12.5**	**0.0**
ULDT	**Uludag**	**0.18**	**30**	*i* P	**Pg**	**20 10 12.2**	**+0.4**
ULDT				*i* S	**Sg**	**20 10 14.2**	**-0.4**
DURS	**Dursunbey**	**0.56**	**228**	*i* P	**Pb**	**20 10 19.9**	**0.0**
DURS				*i* S	**Sb**	**20 10 27.6**	**-0.4**
DURS				IAML_P			
	comp=Z,2μm,0.1s						
KCTX	**Karacabey (Bur**	**0.58**	**300**	PG	**Pg**	**20 10 19.1**	**+0.1**
ARMT	**Armutlu**	**0.59**	**349**	PG	**Pg**	**20 10 19.1**	**-0.2**
YLV	**Yalova**	**0.65**	**25**	PG	**Pg**	**20 10 20.1**	**-0.2**
BUY	**Buyukada**	**0.87**	**5**	*i* P	**Pg**	**20 10 24.1**	**-0.5**
BUY				IAML_P			
	comp=Z,793nm,0.1s						
HRT	**Hereke**	**0.98**	**31**	PG	**Pg**	**20 10 25.8**	**-0.8**
KAVV	**Kandilli-Istan**	**1.08**	**2**	PG	**Pb**	**20 10 28.6**	**0.0**
ISK	**Istanbul-Kandi**	**1.08**	**2**	PG	**Pb**	**20 10 28.3**	**-0.3**
BALY	**Balya**	**1.10**	**258**	*i* P	**Pg**	**20 10 28.1**	**-0.8**
BALY				IAML_P			
	comp=Z,192nm,0.2s						
GEYV	**SAKARYA_Geyve**	**1.10**	**63**	*i* P	**Pn**	**20 10 30.4**	**+1.0**
GEYV				IAML_P			
	comp=Z,629nm,0.2s						
BORA	**Eskisehir**	**1.11**	**95**	*i* P	**Pg**	**20 10 28.2**	**-0.9**
BORA				IAML_P			
	comp=Z,1μm,0.1s						
STEP	**BALIKESIR_Sava**	**1.17**	**239**	*i* P	**Pn**	**20 10 30.5**	**+0.2**
STEP				IAML_P			
	comp=Z,601nm,0.2s						
SRCK	**Saricakaya, Es**	**1.24**	**87**	*i* P	**Pn**	**20 10 32.3**	**+1.1**
SRCK				IAML_P			
	comp=Z,840nm,0.3s						
KULA	**Kula-Manisa**	**1.49**	**191**	PN	**Pb**	**20 10 35.5**	**-0.1**
MANT	**Manisa**	**1.53**	**194**	*i* P	**Pg**	**20 10 37.4**	**+0.2**
MANT				IAML_P			
	comp=Z,755nm,0.2s						

*ISCJB **11** 20:16:05.7±0.4,47°.87N±0°.03×70°.18W±0°.03,h19^{km}±4^{km}, MS3.6/1,Error ellipse: s-maj=4.4km s-min=3.6km az=165.3*

*ANF **11** 20:16:06.1±0.5,47°.86N×70°.21W,h9^{km}±3^{km},ML4.7/9, Error ellipse: s-maj=5.2km s-min=2.5km az=33.0*

*NEIC **11** 20:16:07.0±0.0,47°.81N×70°.05W,h15^{km},mb4.4/9, MN4.0(OTT),After OTT.*

NEIC Felt at La Malbaie.

*IDC **11** 20:16:07.5±1.0,47°.78N×70°.10W,h16^{km}±3^{km},mb3.6/4, mb1 4.0/7,mb1mx3.5/51,mbtmp4.0/7,ML3.3/3,MS2.8/2, Ms1 2.8/2,ms1mx2.4/42,Error ellipse: s-maj=26.1km s-min=9.2km az=139.0*

*OTT **11** 20:16:08.0±0.1,47°.81N×70°.05W,h15^{km},MN4.0/25*

OTT Charlevoix Seismic Zone, Qc. 19km northeast from La Malbaie, Qc Felt.

ISC 11 20:16:07.1±0.6,**47°.84N**±0°.03×**70°.13W**±0°.03,**h15**^{km}±4^{km}, **n124**,σ**1^{s}.34**/125,**4C-3D,Southern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
A61	**Sainte Mathild**	**0.14**	**170**	⇑PG	**Pb**	**20 16 11.3**	**-0.2**
A61				SG	**Sb**	**20 16 13.6**	**-0.8**
A64	**Saint Simeon**	**0.16**	**93**	⇑PG	**Pg**	**20 16 11.1**	**+0.1**
A64				SG	**Sg**	**20 16 13.3**	**-0.4**
A21	**Saint Andre**	**0.32**	**114**	⇓PG	**Pg**	**20 16 13.4**	**-0.4**
A21				SG	**Sg**	**20 16 16.7**	**-1.6**
A16	**Riviere Ouelle**	**0.37**	**167**	⇑PG	**Pg**	**20 16 14.5**	**-0.1**
A16				SG	**Sg**	**20 16 19.4**	**-0.4**
A54	**Misere**	**0.42**	**207**	⇓PG	**Pb**	**20 16 16.0**	**-0.3**
A54				SG	**Sb**	**20 16 22.2**	**-0.4**
A11	**Saint Roch-des**	**0.59**	**185**	PG	**Pg**	**20 16 18.6**	**-0.2**
A11				SG	**Sb**	**20 16 26.5**	**-0.9**
A11				Trac		20 16 30.9	
	comp=Z,244nm,0.0s						
BCLQ	**Boischatel**	**1.15**	**218**	⇓PG	**Pn**	**20 16 27.9**	**-0.8**
BCLQ				SG	**Sn**	**20 16 43.7**	**-0.5**
QCQ	**Quebec**	**1.31**	**217**	PG	**Pn**	**20 16 30.8**	**-0.1**
QCQ				Trac		20 16 52.1	
	comp=Z,268nm,0.1s						
DMCQ	**Dolbeau-Mistas**	**1.72**	**312**	⇑PG	**Pb**	**20 16 38.1**	**-0.2**
DMCQ				SG	**Sg**	**20 17 02.2**	**-0.1**
PQI	**Presque Isle**	**1.85**	**128**	*e*Pn	**Pn**	**20 16 37.0**	**-1.3**
LATQ	**La Tuque**	**1.85**	**257**	Pg	**Pb**	**20 16 40.4**	**-0.2**
	baz=76,SNR=42						
LATQ				Sg	**Sg**	**20 17 05.9**	**-0.8**
	baz=76						
LATQ	**La Tuque**	**1.85**	**257**	PG	**Pb**	**20 16 40.5**	**-0.2**
CNQ	**Baie Comeau**	**2.00**	**42**	Trac		20 17 08.1	
	comp=Z,541nm,0.1s						
DPQ	**Saint Jean**	**2.14**	**238**	Trac		20 17 16.7	
	comp=Z,180nm,0.1s						
GSQ	**Grosses Roches**	**2.28**	**61**	Trac		20 17 24.5	
	comp=Z,302nm,0.2s						
ICQ	**Pointe Anglais**	**2.54**	**47**	Trac		20 17 28.6	
	comp=Z,244nm,0.1s						
PKME	**Peaks-Kenny Pk**	**2.63**	**167**	*e*Pn	**Pn**	**20 16 49.4**	**+0.4**
PKME	**Peaks-Kenny Pk**	**2.63**	**167**	P	**Pn**	**20 16 49.6**	**+0.5**
	baz=349						
PKME				S	**Sn**	**20 17 20.6**	**-0.1**
	baz=349						
PKME	**Peaks-Kenny Pk**	**2.63**	**167**	Trac		20 17 28.0	
	comp=Z,232nm,0.3s						
BATG	**Bathurst New B**	**2.81**	**100**	*e*Pn	**Pn**	**20 16 50.0**	**-1.5**
MNQ	**Manicouagan**	**2.84**	**18**	Trac		20 17 40.8	
	comp=Z,205nm,0.1s						
MOQ	**Mont Orford**	**2.92**	**211**	*e*Pn	**Pn**	**20 16 53.4**	**+0.3**
MOQ	**Mont Orford**	**2.92**	**211**	Trac		20 17 42.2	
	comp=Z,47nm,0.1s						
SMQ	**Clarke City**	**3.28**	**42**	Trac		20 17 53.2	
	comp=Z,205nm,0.2s						
WVL	**Waterville**	**3.29**	**174**	*e*Pn	**Pn**	**20 16 57.6**	**-0.5**
MNTQ	**Montreal, Queb**	**3.35**	**227**	Trac		20 17 50.9	
	comp=Z,64nm,0.1s						
TRQ	**Mont Tremblant**	**3.43**	**244**	*e*Pn	**Pn**	**20 17 00.2**	**+0.1**
TRQ	**Mont Tremblant**	**3.43**	**244**	Trac		20 18 01.3	
	comp=Z,104nm,0.2s						
CHGQ	**Chibougamau**	**3.49**	**308**	S	**Sn**	**20 17 42.2**	**+0.4**
	baz=125						
GGN	**Saint George**	**3.54**	**139**	*e*Pn	**Pn**	**20 17 00.4**	**-1.1**
GGN	**Saint George**	**3.54**	**139**	Trac		20 17 59.4	
	comp=Z,124nm,0.3s						
EMMW	**East Machias**	**3.63**	**148**	*e*Pn	**Pn**	**20 17 01.9**	**-0.8**
LBNH	**Lisbon**	**3.81**	**200**	*e*Pn	**Pn**	**20 17 04.7**	**-0.5**
LBNH	**Lisbon**	**3.81**	**200**	P	**Pn**	**20 17 05.4**	**+0.2**
	baz=19						
LBNH				S	**Sn**	**20 17 50.8**	**+1.1**
	baz=19						
LBNH	**Lisbon**	**3.81**	**200**	Trac		20 18 08.3	
	comp=Z,84nm,0.2s						
FRNY	**Flat Rock**	**3.84**	**220**	*e*Pn	**Pn**	**20 17 06.3**	**+0.7**
FRNY	**Flat Rock**	**3.84**	**220**	Trac		20 18 11.1	
	comp=Z,104nm,0.3s						
VT1	**Waterbury**	**3.95**	**208**	*e*Pn	**Pn**	**20 17 08.1**	**+0.9**
LMN	**Caledonia Moun**	**4.16**	**117**	*e*Pn	**Pn**	**20 17 07.9**	**-2.1**
LMN	**Caledonia Moun**	**4.16**	**117**	Trac		20 18 23.1	
	comp=Z,163nm,0.6s						
GAC	**Glen Almond**	**4.25**	**242**	Trac		20 18 23.1	
	comp=Z,159nm,0.3s						
LONY	**Lake Ozonia**	**4.46**	**226**	*e*Pn	**Pn**	**20 17 15.0**	**+0.8**
LONY	**Lake Ozonia**	**4.46**	**226**	P	**Pn**	**20 17 14.3**	**+0.2**
	baz=43,SNR=6.2						
LONY				S	**Sn**	**20 18 07.4**	**+1.6**
	baz=43						
D54A	**Lac Fusel, La**	**4.48**	**264**	P	**Pn**	**20 17 13.6**	**-0.8**
	baz=79,SNR=30						
D54A				S	**Sn**	**20 18 05.1**	**-1.2**
	baz=79						
WBO	**Williamsburg**	**4.55**	**233**	Trac		20 18 31.4	
	comp=Z,113nm,0.3s						
F55A	**Otter Lake**	**4.72**	**247**	P	**Pn**	**20 17 17.1**	**-0.5**
	baz=63						
LSQQ	**Lebel-sur-Quev**	**4.72**	**288**	S	**Sn**	**20 18 12.3**	**0.0**
	baz=103						
NCB	**Newcomb**	**4.81**	**218**	*e*Pn	**Pn**	**20 17 18.7**	**-0.2**
VLDQ	**Val d'Or**	**4.93**	**276**	*e*Pn	**Pn**	**20 17 22.1**	**+1.5**
VLDQ	**Val d'Or**	**4.93**	**276**	Trac		20 18 51.4	
	comp=Z,185nm,0.4s						
E54A	**Lac Daplat, Po**	**5.02**	**256**	P	**Pn**	**20 17 20.7**	**-1.1**
	baz=72,SNR=39						
E54A				S	**Sn**	**20 18 17.5**	**-2.0**
	baz=72						
ACCN	**Adirondack Com**	**5.10**	**210**	*e*Pn	**Pn**	**20 17 23.3**	**+0.4**
D53A	**Lac Vacive, Po**	**5.19**	**264**	*e*Pn	**Pn**	**20 17 23.4**	**-0.8**
D53A	**Lac Vacive, Po**	**5.19**	**264**	P	**Pn**	**20 17 23.3**	**-1.0**
	baz=79,SNR=55						
D53A				S	**Sn**	**20 18 22.6**	**-1.3**
	baz=79						
G55A	**Calabogie**	**5.23**	**243**	P	**Pn**	**20 17 23.5**	**-1.3**
	baz=58						
G55A				S	**Sn**	**20 18 25.3**	**+0.5**
	baz=58						
MATQ	**Matagami**	**5.32**	**294**	P	**Pn**	**20 17 24.8**	**-1.2**
	baz=108,SNR=10						
MATQ				S	**Sn**	**20 18 26.6**	**-0.5**
	baz=108						
PEMO	**Pembroke**	**5.35**	**249**	P	**Pn**	**20 17 25.1**	**-1.2**
	baz=64						
E53A	**Dumoine, Ponti**	**5.35**	**257**	P	**Pn**	**20 17 25.0**	**-1.4**
	baz=72,SNR=11						
E53A				S	**Sn**	**20 18 27.5**	**-0.1**
	baz=72						
HRV	**Adam Dziewonsk**	**5.42**	**191**	P	**Pn**	**20 17 26.8**	**-0.6**
	baz=11						
HAL	**Halifax**	**5.55**	**123**	Trac		20 18 47.4	
	comp=Z,11nm,0.1s						
PLVO	**Plevna**	**5.56**	**242**	*e*Pn	**Pn**	**20 17 30.1**	**+0.9**
PLVO	**Plevna**	**5.56**	**242**	P	**Pn**	**20 17 28.8**	**-0.4**
	baz=58,SNR=5.1						
D52A	**ZEK Kipawa Sen**	**5.69**	**264**	P	**Pn**	**20 17 30.3**	**-0.7**
	baz=79,SNR=58						
D52A				S	**Sn**	**20 18 35.3**	**-0.8**
	baz=79						
KGNO	**Kingston**	**5.71**	**233**	Trac		20 19 03.8	
	comp=Z,73nm,0.3s						
ALGO	**Algonquin Park**	**5.75**	**254**	S	**Sn**	**20 18 37.6**	**+0.1**
	baz=68						
H55A	**Tweed**	**5.90**	**239**	P	**Pn**	**20 17 32.8**	**-1.1**
	baz=54						
H55A				S	**Sn**	**20 18 41.9**	**+0.7**
	baz=54						
E52A	**Mattawa**	**6.03**	**258**	P	**Pn**	**20 17 34.4**	**-1.3**
	baz=72						
E52A				S	**Sn**	**20 18 44.3**	**-0.1**
	baz=72						
BANO	**Bancroft**	**6.08**	**245**	S	**Sn**	**20 18 45.4**	**-0.3**
	baz=60						
DELO	**Deloro Mine**	**6.17**	**240**	*e*Pn	**Pn**	**20 17 39.4**	**+1.8**
PECO	**Prince Edward**	**6.18**	**233**	*e*Pn	**Pn**	**20 17 39.3**	**+1.6**
EEO	**Eldee**	**6.21**	**262**	Trac		20 19 23.8	
	comp=Z,376nm,0.6s						
I55A	**Frankford**	**6.38**	**238**	P	**Pn**	**20 17 39.8**	**-0.7**
	baz=53						
GBN	**Guysborough**	**6.41**	**109**	Trac		20 19 35.5	
	comp=Z,127nm,0.8s						
E51A	**G1948 Merrick**	**6.51**	**262**	P	**Pn**	**20 17 40.7**	**-1.7**
	baz=75,SNR=19						
E51A				S	**Sn**	**20 18 56.2**	**-0.2**
	baz=75						
BUKO	**Buck Lake**	**6.82**	**253**	P	**Pn**	**20 17 45.2**	**-1.3**
	baz=66						
BUKO				S	**Sn**	**20 19 03.6**	**-0.2**
	baz=66						
SADO	**Sadowa**	**6.96**	**247**	Pn	**Pn**	**20 17 47.8**	**-0.6**
	1.2nm,0.3s,baz=85,slow=12,SNR=4.7						
SADO				Sn	**Sn**	**20 19 03.9**	**-3.4**
	7.7nm,0.3s,baz=91,slow=9.5,SNR=7.9						
SADO				Lg	Lg	20 19 38.4	
	20nm,0.3s,baz=104,slow=22,SNR=13						
SADO				LR	LR	20 20 04.2	
	comp=Z,16nm,19.6s,baz=346,slow=34						
SADO	**Sadowa**	**6.96**	**247**	*e*Pn	**Pn**	**20 17 51.2**	**+2.8**
SADO	**Sadowa**	**6.96**	**247**	Trac		20 19 46.0	
	comp=Z,222nm,0.6s						
F51A	**Arnstein**	**6.97**	**258**	P	**Pn**	**20 17 47.2**	**-1.5**
	baz=71,SNR=11						
J55A	**Hilton**	**7.07**	**233**	*e*Pn	Pn	20 17 54.8	+4.8
SCHQ	**Schefferville**	**7.30**	**15**	Pn	**Pn**	**20 17 52.4**	**-0.8**
	3.8nm,0.3s,baz=195,slow=8.4,SNR=8.0						
SCHQ				Sn	**Sn**	**20 19 10.7**	**-5.1**
	18nm,0.3s,baz=122,slow=18,SNR=7.9						
SCHQ				Lg	Lg	20 19 48.1	
	17nm,0.3s,baz=111,slow=18,SNR=5.6						
SCHQ	**Schefferville**	**7.30**	**15**	Trac		20 19 53.7	
	comp=Z,107nm,0.5s						
E50A	**Wahnapitae**	**7.38**	**263**	P	**Pn**	**20 17 52.5**	**-1.7**
	baz=75						
KSPA	**Keystone Colle**	**7.45**	**215**	*e*Pn	**Pn**	**20 17 56.7**	**+1.5**
D48A	**Paudash Townsh**	**7.94**	**270**	P	**Pn**	**20 18 00.2**	**-1.7**
	baz=81						
D47A	**Chapleau**	**8.83**	**270**	P	**Pn**	**20 18 11.4**	**-2.8**
	baz=80,SNR=6.8						
M54A	**Oil Creek Stat**	**9.28**	**231**	*e*Pn	**Pn**	**20 18 22.8**	**+2.4**
N55A	**Marion Center**	**9.48**	**225**	*e*Pn	**Pn**	**20 18 25.6**	**+2.4**
O56A	**Blue Knob Stat**	**9.70**	**222**	*e*Pn	**Pn**	**20 18 22.9**	**-3.2**
O56A	**Blue Knob Stat**	**9.70**	**222**	P	**Pn**	**20 18 22.8**	**-3.2**
	baz=36,SNR=6.6						
E46A	**Sault Ste Mari**	**9.78**	**267**	*e*Pn	**Pn**	**20 18 29.9**	**+2.7**
N54A	**Moraine State**	**9.84**	**229**	*e*Pn	**Pn**	**20 18 27.8**	**-0.2**
E44A	**Grand Marais A**	**10.81**	**269**	*e*Pn	**Pn**	**20 18 40.6**	**-0.6**
E43A	**Lone Tree Farm**	**11.59**	**269**	*e*Pn	**Pn**	**20 18 53.6**	**+1.7**
D41A	**Chassel**	**12.51**	**273**	*e*Pn	**Pn**	**20 19 06.0**	**+1.6**
C40A	**Isle Royale Na**	**12.78**	**277**	*e*Pn	**Pn**	**20 19 08.9**	**+0.8**
COWI	**Conover**	**13.10**	**269**	*e*Pn	**Pn**	**20 19 14.6**	**+2.1**
FRB	**Frobisher Bay**	**15.97**	**3**	Lg	Lg	20 24 19.1	
	2.7nm,0.3s,baz=260,slow=21,SNR=5.1						
ULM	**Lac du Bonnet**	**17.03**	**288**	P	**Pn**	**20 20 03.6**	**-0.8**
	1.8nm,0.3s,baz=84,slow=12,SNR=8.9						
ULM				Lg	Lg	20 24 50.9	
	1.5nm,0.3s,baz=172,slow=22,SNR=3.4						
ULM	**Lac du Bonnet**	**17.03**	**288**	*e*P	**Pn**	**20 20 04.8**	**+0.3**
	8.7nm,0.6s						
W39A	**Magazine**	**21.65**	**243**	*e*P	**P**	**20 20 56.2**	**-0.6**
	7.4nm,1.0s						
PD31	**Pinedale Array**	**27.97**	**274**	*e*P	**P**	**20 21 59.0**	**+1.8**
PDAR	**Pinedale Array**	**27.97**	**274**	P	**P**	**20 21 59.1**	**+1.8**
	0.3nm,0.5s,baz=76,slow=13,SNR=4.3						
YKA	**Yellowknife Ar**	**28.64**	**317**	P	**P**	**20 22 03.8**	**+1.2**
	0.2nm,0.3s,baz=94,slow=9.3,SNR=3.0						
YKA				pP	**sP**	**20 22 10.0**	**+0.8**
	1.0nm,0.7s,baz=93,slow=9.2,SNR=3.3						
YKA				Lg	Lg	20 30 52.3	
	2.7nm,0.9s,baz=101,slow=28,SNR=5.0						
YKB5	**Yellowknife Ar**	**28.64**	**317**	*e*P	**P**	**20 22 03.9**	**+1.2**
JLU	**Jordanelle**	**30.20**	**272**	*e*P	P	20 22 22.3	+5.3
	41nm,0.5s						
CTU	**Camp Tracy**	**30.36**	**272**	*e*P	**P**	**20 22 18.6**	**+0.2**
	40nm,0.7s						
MPU	**Maple Canyon**	**30.60**	**271**	*e*P	**P**	**20 22 22.4**	**+1.8**
	15nm,0.8s						
NLU	**North Lily Min**	**30.92**	**271**	*e*P	**P**	**20 22 22.6**	**-0.8**
	60nm,1.2s						
BGU	**Big Grassy Mou**	**31.11**	**273**	*e*P	**P**	**20 22 26.0**	**+1.0**
	13nm,0.6s						
DUG	**Dugway, Tooele**	**31.30**	**272**	*e*P	**P**	**20 22 22.9**	**-3.8**
	50nm,0.6s						
PCA	**Pinnacle**	**41.04**	**314**	*e*P	**P**	**20 23 51.1**	**+1.6**
	13nm,0.7s						
MLY	**Manley**	**44.30**	**323**	*e*P	**P**	**20 24 18.4**	**+2.6**
ARA0	**ARCESS Array S**	**48.05**	**28**	*e*P	**P**	**20 24 45.8**	**+0.5**
ARCES	**ARCESS Array B**	**48.05**	**28**	P	**P**	**20 24 45.8**	**+0.5**
	2.7nm,0.9s,baz=295,slow=7.0,SNR=12						
ARCES				pP	**pP**	**20 24 50.2**	**+0.2**
	3.5nm,0.9s,baz=293,slow=6.6,SNR=1.6						
CLL	**Collm**	**51.26**	**53**	*e*pP	pP	20 25 14.0	-0.7
TORD	**Torodi Ar. Bea**	**68.17**	**94**	LR	LR	20 55 11.0	
	comp=Z,36nm,19.0s,baz=320,slow=34						
KURBB	**Kurchatov Arra**	**78.28**	**20**	P	**P**	**20 28 06.5**	**+0.5**
	3.3nm,0.2s,baz=333,slow=5.0,SNR=3.4						
KURBB				pP	**pP**	**20 28 11.1**	**+0.1**
	0.8nm,0.2s,baz=6.3,slow=16,SNR=1.5						
MK32	**Makanchi Array**	**82.72**	**19**	*e*P	**P**	**20 28 29.6**	**-0.4**
MKAR	**Makanchi Array**	**82.72**	**19**	P	**P**	**20 28 29.6**	**-0.4**
	0.1nm,0.3s,baz=319,slow=3.5,SNR=3.6						
WR1	**Warramunga Arr**	**145.84**	**316**	*e*PKPdf	**PKPab**	**20 35 46.2**	**0.0**
WR1				*e*pPKPbc	pPKPbc	20 35 51.2	+0.2
WRA	**Warramunga Arr**	**145.84**	**316**	PKPbc	**PKPab**	**20 35 46.2**	**0.0**
	1.3nm,0.8s,baz=34,slow=4.3,SNR=7.1						
WRA				pPKPbc	pPKPbc	20 35 51.2	+0.2
ASAR	**Alice Springs**	**149.22**	**313**	PKPbc	**PKPbc**	**20 35 55.0**	**-0.1**
	1.2nm,0.6s,baz=23,slow=2.3,SNR=12						
ASAR				pPKPbc	**PKPab**	**20 35 59.8**	**+0.2**
	1.5nm,0.7s,baz=34,slow=2.4,SNR=7.5						
STKA	**Stephens Creek**	**151.15**	**292**	PKPbc	**PKPbc**	**20 35 59.0**	**-0.4**
	0.5nm,0.4s,baz=4.7,slow=6.4,SNR=4.0						

*BJI **11** 20:26:47.1±0.0,12°.61N×49°.95E,h30^{km},mb4.7/32, mB4.9/9,Ms4.3/6,Ms7 4.0/7*

*GCMT **11** 20:26:48.0±0.2,13°.27N±0°.01×50°.30E±0°.02,h12^{km}, MW5.0/74,Moment Tensor Solution. s43,c55; s74,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.49±.08; $M_{\theta\theta}$2.68±.06; $M_{\phi\phi}$-0.19±.08; $M_{r\theta}$1.47±.21; $M_{\theta\phi}$-0.21±.06; $M_{\phi r}$1.56±.27; Best double couple: $M_0$3.34000×10^{16} NP1:ϕ_s248.00000°,δ64.00000°,λ-115.00000°. NP2: ϕ_s115.00000°,δ35.00000°,λ-48.00000°. Principal axes: T 3.0810, Plg16.0000°, Azm356.0000°; N 0.5120, Plg23.0000°, Azm259.0000°; P -3.5980, Plg62.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **11** 20:26:49.9±1.1,13°.29N±0°.03×50°.52E±0°.02,h8^{km}±7^{km}, mb4.6/127,MS4.0/49 Error ellipse: s-maj=5.9km s-min=4.0km az=177.3*

*MOS **11** 20:26:50.9±1.2,13°.29N×50°.57E,h15^{km},mb4.8/49, MS4.0/15,Error ellipse: s-maj=8.2km s-min=4.5km az=98.1*

*IDC **11** 20:26:50.7±0.4,13°.29N×50°.55E,h0^{km},mb4.3/33, mb1 4.4/36,mb1mx4.4/46,mbtmp4.3/36,ML3.9/3,MS4.0/32, Ms1 4.0/32,ms1mx3.9/41,Error ellipse: s-maj=12.1km s-min=10.2km az=132.0*

*NEIC **11** 20:26:52.0±1.8,13°.34N×50°.52E,h10^{km}±3^{km},mb4.8/70, Error ellipse: s-maj=13.2km s-min=2.0km az=153.0*

*ARO **11** 20:27:42.1,11°N±382°×4°7E±6°1,h15^{km}±99^{km},Ml3.3*

ISC 11 20:26:53.1±0.7,**13°.39N**±0°.05×**50°.56E**±0°.05,**h17**^{km}±4^{km}, **n321**,σ**1^{s}.57**/345,**mb4.7**/135,**MS4.0**/49,**34C-13D,Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAMY	**Dhamar**	**6.10**	**282**	*e*Pn	**Pn**	**20 28 21.1**	**-1.7**
OBO	**Obock**	**7.22**	**260**	*e*P	**Pn**	**20 28 37.7**	**-0.3**
ATA	**Atar**	**7.43**	**256**	*e*P	**Pn**	**20 28 38.7**	**-2.2**
TDD	**Tadjoura Ara**	**7.63**	**259**	*e*P	**Pn**	**20 28 43.4**	**-0.2**
ATD	**Arta Tunnel**	**7.75**	**257**	Pn	**Pn**	**20 28 45.0**	**-0.3**
	14nm,0.3s,baz=0.4,slow=5.3,SNR=43						
ATD				Sn	**Sn**	**20 30 12.3**	**-0.5**
	0.3nm,0.3s,baz=96,slow=22,SNR=0.9						
ATD				LR	LR	20 30 51.0	
	comp=Z,550nm,21.4s,baz=100,slow=31						
ATD	**Arta Tunnel**	**7.75**	**257**	*e*Pn	**Pn**	**20 28 44.2**	**-1.1**
ATD	**Arta Tunnel**	**7.75**	**257**	*e*P	**Pn**	**20 28 43.7**	**-1.6**
ATD	**Arta Tunnel**	**7.75**	**257**	*e*P	**Pn**	**20 28 43.7**	**-1.6**
ATD				*e*S		20 28 48.5	
DAY	**Day**	**7.90**	**259**	*e*P	**Pn**	**20 28 47.2**	**0.0**
SGH	**Sud-Ghoubbet**	**7.98**	**257**	*e*P	**Pn**	**20 28 47.1**	**-1.3**
KSDD	**Koussour**	**8.13**	**258**	*e*P	**Pn**	**20 28 49.9**	**-0.6**
GBR	**Grand-Bara**	**8.21**	**255**	*e*P	**Pn**	**20 28 47.5**	**-4.2**
MAOD	**Malaho**	**8.23**	**262**	*e*P	**Pn**	**20 28 54.1**	**+2.2**
RAYN	**Ar Rayn**	**11.16**	**335**	*e*Pn	**Pn**	**20 29 28.8**	**-3.2**
RAYN	**Ar Rayn**	**11.16**	**335**	*e*P	**Pn**	**20 29 28.8**	**-3.2**
WSAR	**Wadi Sarin**	**12.44**	**37**	Pn	**Pn**	**20 29 48.9**	**-0.5**
	0.2nm,0.3s,baz=249,slow=8.6,SNR=4.3						
WSAR				Sn	**Sn**	**20 31 59.9**	**-7.8**
	0.2nm,0.3s,baz=95,slow=10,SNR=1.9						
WSAR				LR	LR	20 34 21.6	
	comp=Z,1μm,20.7s,baz=234,slow=36						
UOSS	**Minazif**	**12.67**	**24**	*e*Pn	**Pn**	**20 29 52.0**	**-0.7**
MSEY	**Mahe Island**	**18.60**	**164**	*e*P	**P**	**20 31 08.6**	**-1.1**
	72nm,1.1s						
MSEY	**Mahe Island**	**18.60**	**164**	*e*P	**P**	**20 31 08.6**	**-1.1**
MSEY				pmax	pmax		
	comp=Z,72nm,1.1s						
KMBO	**Kilima Mbogo**	**19.55**	**223**	P	**P**	**20 31 20.2**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=38,slow=11,SNR=8.2						
KMBO				LR	LR	20 38 41.9	
	comp=Z,378nm,20.1s,baz=45,slow=36						
KMBO	**Kilima Mbogo**	**19.55**	**223**	*e*P	**P**	**20 31 19.5**	**-0.9**
KMBO				*e*Pn	**Pn**	**20 31 19.9**	**-1.8**
KMBO				*e*pP	**pP**	**20 31 20.1**	**-4.3**
KMBO	**Kilima Mbogo**	**19.55**	**223**	*e*P	**P**	**20 31 19.5**	**-0.9**
EIL	**Elat**	**21.71**	**321**	P	**P**	**20 31 45.6**	**+2.2**

	comp=Z,5.6nm,0.8s,baz=45,slow=4.3,SNR=3.3						
EIL				LR	LR	20 40 10.3	
	comp=Z,1µm,18.1s,baz=136,slow=37						
ASF	**Jabal al Asfar**	**22.50**	**328**	P	**P**	**20 31 54.2**	**+2.2**
	comp=Z,4.6nm,0.9s,baz=86,slow=9.0,SNR=6.7						
MMAI	**Mount Meron Ar**	**23.94**	**327**	P	**P**	**20 32 09.2**	**+2.7**
	comp=Z,9.0nm,1.1s,baz=133,slow=16,SNR=3.2						
MBAR	**Mbarara**	**24.07**	**236**	P	**P**	**20 32 08.2**	**+0.2**
	comp=Z,4.6nm,0.7s,baz=68,slow=5.2,SNR=5.9						
MBAR	**Mbarara**	**24.07**	**236**	*e*P	**P**	**20 32 07.5**	**-0.5**
	comp=Z,13nm,1.1s						
MBAR	**Mbarara**	**24.07**	**236**	*e*P	**P**	**20 32 07.5**	**-0.5**
MBAR				pmax	pmax		
	comp=Z,13nm,1.1s						
GEYT	**Alibeck**	**25.35**	**14**	P	**P**	**20 32 21.4**	**+2.0**
	comp=Z,13nm,0.8s,baz=198,slow=7.6,SNR=25						
GEYT				LR	LR	20 44 24.5	
	comp=Z,2µm,18.1s,baz=195,slow=41						
GYA0B	**ALIBECK ARRAY**	**25.35**	**14**	*e*P	**P**	**20 32 21.3**	**+2.0**
	comp=Z,28nm,1.1s						
KBL	**Kabul**	**26.91**	**35**	*e*P	**P**	**20 32 34.7**	**+1.1**
	comp=Z,31nm,1.4s						
KBL	**Kabul**	**26.91**	**35**	*e*P	**P**	**20 32 34.7**	**+1.1**
KBL				pmax	pmax		
	comp=Z,31nm,1.4s						
GNI	**Garni**	**27.14**	**350**	P	**P**	**20 32 40.3**	**+4.6**
	comp=Z,16nm,0.9s,baz=8.5,slow=21,SNR=3.9						
GNI				LR	LR	20 45 20.1	
	comp=Z,1µm,19.7s,baz=172,slow=41						
AKT	**Akhty**	**28.09**	**355**	*e*P	**P**	**20 32 46.8**	**+2.7**
AKT				*e*		20 33 38.5	
AKT				pmax	pmax		
	comp=Z,23nm,1.6s						
H08N2	**Diego Garcia H**	**28.21**	**133**	T	T	21 01 56.5	
	baz=314,slow=76,SNR=36						
H08N3	**Diego Garcia H**	**28.22**	**133**	T	T	21 01 57.4	
	baz=314,slow=76,SNR=33						
H08N1	**Diego Carcia H**	**28.23**	**133**	T	T	21 01 38.5	
	baz=314,slow=76,SNR=76						
TBLG	**Delisi**	**28.69**	**351**	*e*P	**P**	**20 32 51.8**	**+2.5**
	comp=Z,14nm,1.1s						
TBLG	**Delisi**	**28.69**	**351**	*e*P	**P**	**20 32 51.8**	**+2.5**
TBLG				pmax	pmax		
	comp=Z,14nm,1.1s						
NIL	**Nilore**	**28.86**	**42**	*e*P	**P**	**20 32 53.9**	**+3.0**
	comp=Z,27nm,1.5s						
NIL	**Nilore**	**28.86**	**42**	*e*P	**P**	**20 32 53.9**	**+3.0**
NIL				pmax	pmax		
	comp=Z,27nm,1.5s						
MAK	**Makhachkala**	**29.58**	**355**	*e*P	**P**	**20 32 54.8**	**-2.3**
MAK				*e*S	**S**	**20 37 50.0**	**-1.5**
MAK				pmax	pmax		
	comp=Z,39nm,0.7s						
MAK				MLR	MLR		
	comp=Z,358nm,16.0s						
GROC	**Groznyy**	**29.99**	**353**	*e*P	**P**	**20 33 00.2**	**-0.6**
GROC				*e*		20 33 57.3	
GROC				*e*		20 36 00.3	
GROC				pmax	pmax		
	comp=Z,14nm,0.6s						
CHGR	**Chuyangaron**	**30.09**	**30**	*e*P	**P**	**20 33 00.9**	**-0.9**
	comp=Z,25nm,1.0s						
BRTR	**Keskin Array B**	**30.17**	**333**	P	**P**	**20 33 03.2**	**+0.6**
	comp=Z,2.2nm,1.0s,baz=153,slow=9.3,SNR=8.8						
BRTR				PcP	**PcP**	**20 36 04.4**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=190,slow=2.1,SNR=5.8						
BRTR				LR	LR	20 45 32.5	
	comp=Z,269nm,20.7s,baz=134,slow=37						
BR101	**Keskin Array S**	**30.17**	**333**	*e*P	**P**	**20 33 03.2**	**+0.6**
BR101				*e*PcP	**PcP**	**20 36 04.4**	**+0.7**
BR131	**Keskin Array S**	**30.17**	**333**	*e*P	**P**	**20 33 02.5**	**-0.1**
	comp=Z,4.4nm,1.2s						
BR131	**Keskin Array S**	**30.17**	**333**	*e*P	**P**	**20 33 02.5**	**-0.1**
BR131				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NEY	**Neytrino**	**30.51**	**349**	*i* P	**P**	**20 33 05.6**	**0.0**
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ANTO	**Ankara**	**30.66**	**333**	*e*P	**P**	**20 33 04.7**	**-2.2**
	comp=Z,20nm,1.0s						
ANTO	**Ankara**	**30.66**	**333**	⇑*i*P	**P**	**20 33 05.5**	**-1.4**
ANTO	**Ankara**	**30.66**	**333**	⇑P	**P**	**20 33 05.5**	**-1.4**
GAR	**Garm**	**30.92**	**31**	*e*P	**P**	**20 33 07.8**	**-1.4**
	comp=Z,28nm,1.2s						
GAR	**Garm**	**30.92**	**31**	*e*P	**P**	**20 33 07.8**	**-1.4**
GAR				pmax	pmax		
	comp=Z,28nm,1.2s						
KBZ	**Khabaz**	**30.94**	**349**	P	**P**	**20 33 11.1**	**+1.9**
	comp=Z,3.0nm,0.9s,baz=181,slow=6.2,SNR=4.8						
KBZ				LR	LR	20 48 06.3	
	comp=Z,785nm,18.7s,baz=167,slow=41						
KIV	**Kislovodsk**	**31.20**	**349**	*e*P	**P**	**20 33 10.5**	**-1.0**
	comp=Z,21nm,1.2s						
KIV	**Kislovodsk**	**31.20**	**349**	*e*P	**P**	**20 33 13.2**	**+1.6**
KIV				*e*		20 36 07.3	
KIV				*e*S	**S**	**20 38 20.8**	**+3.7**
KIV				pmax	pmax		
	comp=Z,45nm,1.1s						
KIV				pmax	pmax		
	comp=Z,57nm,4.7s						
KIV				MLR	MLR		
	comp=Z,1µm,15.0s						
SOC	**Sochi**	**31.50**	**345**	*e*P	**P**	**20 33 11.9**	**-2.2**
SOC				*e*		20 34 16.4	
SOC				*e*S	**S**	**20 38 21.7**	**+0.1**
SOC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,765nm,16.0s						
OPO	**Ambohidratompo**	**31.93**	**186**	PcP	**PcP**	**20 36 08.8**	**+0.1**
	comp=Z,9.2nm,1.0s,baz=98,slow=4.0,SNR=3.6						
BTK	**Batken**	**31.98**	**30**	*e*P	**P**	**20 33 20.3**	**+1.8**
	comp=Z,18nm,1.1s						
BTK	**Batken**	**31.98**	**30**	*e*P	**P**	**20 33 20.3**	**+1.8**
BTK				pmax	pmax		
	comp=Z,18nm,1.1s						
ANN	**Anapa**	**33.25**	**343**	*e*P	**P**	**20 33 31.1**	**+1.7**
ANN				*e*S	**S**	**20 38 52.5**	**+3.8**
ANN				pmax	pmax		
	comp=Z,26nm,1.2s						
ANN				MLR	MLR		
	comp=Z,478nm,15.0s						
PYUN	**Piuthan**	**33.55**	**59**	*e*P	**P**	**20 33 34.4**	**+1.9**
	comp=Z,96nm,1.1s						
KOLN	**Koldanda**	**33.95**	**60**	*e*P	**P**	**20 33 37.3**	**+1.2**
	comp=Z,116nm,1.2s						
ARSB	**Arslanbob**	**34.02**	**31**	*e*P	**P**	**20 33 38.6**	**+2.3**
	comp=Z,16nm,1.3s						
KK31	**Karatay Array**	**34.25**	**26**	*e*P	**P**	**20 33 38.1**	**-0.1**
	comp=Z,7.2nm,1.1s						
KK31	**Karatay Array**	**34.25**	**26**	*e*P	**P**	**20 33 38.1**	**-0.1**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	**34.25**	**26**	*e*P	**P**	**20 33 37.9**	**-0.3**
	comp=Z,7.2nm,1.1s						
KKAR	**Karatay Array**	**34.25**	**26**	*e*P	**P**	**20 33 37.9**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH	**Kashi**	**34.34**	**36**	P	**P**	**20 33 39.7**	**+0.6**
KSH				PP	**PP**	**20 34 56.3**	**-0.7**
KSH				S	**S**	**20 39 00.6**	**-5.5**
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
KSH				pmax	pmax		
	comp=Z,100nm,5.1s						
KSH				LR	LR		
	comp=Z,140nm,8.0s						
KSH				LR	LR		
	comp=Z,120nm,9.4s						
KSH				LR	LR		
	comp=Z,230nm,12.8s						
SIM	**Simferopol'**	**34.43**	**339**	P	**P**	**20 33 43.2**	**+3.5**
SIM				S	S	20 39 16.4	+9.3
SIM				pmax	pmax		
	comp=Z,13nm,0.8s						
SIM				MLR	MLR		
	comp=Z,74nm,11.0s						
GKN	**Gorkha**	**34.90**	**60**	*e*P	**P**	**20 33 45.3**	**+1.1**
	comp=Z,67nm,1.1s						
DMN	**Daman**	**35.18**	**61**	*e*P	**P**	**20 33 47.7**	**+1.0**
	comp=Z,46nm,1.0s						
KKN	**Kakani**	**35.38**	**61**	*e*P	**P**	**20 33 49.7**	**+1.3**
	comp=Z,57nm,0.9s						
PKIN	**Phulchoki**	**35.42**	**61**	*e*P	**P**	**20 33 49.4**	**+0.6**
	comp=Z,27nm,1.0s						
PKI	**Pulchoki**	**35.43**	**61**	*e*P	**P**	**20 33 49.7**	**+0.8**
	comp=Z,31nm,1.0s						
NRN	**Naryn**	**35.66**	**34**	*e*P	**P**	**20 33 51.6**	**+0.8**
	comp=Z,27nm,1.2s						
NRN	**Naryn**	**35.66**	**34**	*e*P	**P**	**20 33 51.6**	**+0.8**
NRN				pmax	pmax		
	comp=Z,27nm,1.2s						
AAK	**Ala-Archa**	**35.74**	**31**	P	**P**	**20 33 54.1**	**+2.8**
	comp=Z,2.8nm,0.7s,baz=224,slow=7.8,SNR=8.1						
AAK	**Ala-Archa**	**35.74**	**31**	*e*P	**P**	**20 33 53.1**	**+1.8**
	comp=Z,20nm,1.4s						
AAK	**Ala-Archa**	**35.74**	**31*c***	*e*P	**P**	**20 33 51.6**	**+0.3**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GUN	**Gumba**	**35.92**	**61**	*e*P	**P**	**20 33 54.3**	**+1.1**
	comp=Z,143nm,1.2s						
FRU1	**Bishkek**	**35.94**	**31**	*e*P	**P**	**20 33 54.8**	**+2.0**
	comp=Z,38nm,1.5s						
FRU1	**Bishkek**	**35.94**	**31**	*e*P	**P**	**20 33 54.8**	**+2.0**
FRU1				pmax	pmax		
	comp=Z,38nm,1.5s						
JIRN	**Jiri**	**36.12**	**61**	*e*P	**P**	**20 33 55.7**	**+0.8**
	comp=Z,94nm,1.2s						
TIRR	**Tirgusor**	**36.28**	**333**	*e*P	**P**	**20 33 56.5**	**+0.9**
	comp=Z,25nm,1.1s						
TIRR	**Tirgusor**	**36.28**	**333**	⇓*i*P	**P**	**20 33 55.8**	**+0.2**
TIRR	**Tirgusor**	**36.28**	**333**	⇓P	**P**	**20 33 55.8**	**+0.2**
ELND	**Elena**	**36.33**	**329**	⇓*i*P	**P**	**20 33 59.6**	**+3.5**
BOOM	**Boomskoye usch**	**36.38**	**32**	*e*P	**P**	**20 33 58.8**	**+2.1**
	comp=Z,15nm,1.2s						
BOOM	**Boomskoye usch**	**36.38**	**32**	*e*P	**P**	**20 33 58.8**	**+2.1**
BOOM				pmax	pmax		
	comp=Z,15nm,1.2s						
TLB	**Topalu**	**36.55**	**333**	⇑*i*P	**P**	**20 33 59.6**	**+1.7**
TLB	**Topalu**	**36.55**	**333**	⇑P	**P**	**20 33 59.6**	**+1.7**
ABKAR	**Akbulak array**	**36.59**	**10**	*e*P	**P**	**20 33 59.2**	**+1.0**
	comp=Z,23nm,1.4s						
HARR	**Harsova**	**36.68**	**333**	⇑*i*P	P	20 34 09.5	+10
HARR	**Harsova**	**36.68**	**333**	⇑P	P	20 34 09.5	+10
CFR	**Carcaliu**	**36.97**	**333**	⇓*i*P	**P**	**20 34 03.6**	**+2.1**
CFR	**Carcaliu**	**36.97**	**333**	⇓P	**P**	**20 34 03.6**	**+2.1**
AKTO	**Aktyubinsk**	**37.44**	**8**	P	**P**	**20 34 06.8**	**+1.4**
	comp=Z,4.8nm,1.0s,baz=209,slow=12,SNR=8.6						
AKTO				PcP	**PcP**	**20 36 23.5**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=120,slow=12,SNR=3.6						
VTS	**Vitosha**	**37.49**	**326**	*e*P	**P**	**20 34 05.6**	**-0.6**
	comp=Z,19nm,1.8s						
VTS	**Vitosha**	**37.49**	**326**	⇓*i*P	**P**	**20 34 07.6**	**+1.4**
VTS	**Vitosha**	**37.49**	**326**	*e*P	**P**	**20 34 05.6**	**-0.6**
VTS				pmax	pmax		
	comp=Z,19nm,1.8s						
HUMR	**Humele**	**37.94**	**330**	⇑*i*P	**P**	**20 34 12.4**	**+2.7**
VRI	**Vrincioaia**	**38.13**	**333**	⇑*i*P	**P**	**20 34 12.5**	**+1.2**
VRI	**Vrincioaia**	**38.13**	**333**	⇑P	**P**	**20 34 12.5**	**+1.2**
KIS	**Kishinev**	**38.14**	**336**	*e*P	**P**	**20 34 15.0**	**+3.6**
KIS				LRM	MLR	20 52 56.0	
	comp=Z,300nm,16.0s						
KIS	**Kishinev**	**38.14**	**336**	*e*P	**P**	**20 34 15.0**	**+3.6**
KIS				*e*		20 34 20.0	
KIS				MLR	MLR		
	comp=Z,300nm,16.0s						
KIS				MLR	MLR		
	comp=N,400nm,18.0s						
PLOR	**Plostina**	**38.15**	**333**	⇑*i*P	**P**	**20 34 14.6**	**+3.0**
PLOR	**Plostina**	**38.15**	**333**	⇑P	**P**	**20 34 14.6**	**+3.0**
MLR	**Muntele Rosu**	**38.20**	**332**	*e*P	**P**	**20 34 13.8**	**+1.8**
	comp=N,7.8nm,1.1s						
MLR	**Muntele Rosu**	**38.20**	**332**	⇑*i*P	P	20 34 17.1	+5.1
MLR	**Muntele Rosu**	**38.20**	**332**	*e*P	**P**	**20 34 13.8**	**+1.8**
MLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VOIR		**38.57**	**331**	⇑*i*P	**P**	**20 34 17.4**	**+2.2**
VOIR		**38.57**	**331**	⇑P	**P**	**20 34 17.4**	**+2.2**
DOPR	**Dopca**	**38.81**	**332**	⇑*i*P	P	20 34 10.5	-6.6
LOT	**Lotru**	**39.20**	**330**	⇑*i*P	**P**	**20 34 22.2**	**+1.8**
BIZ	**Bicaz**	**39.23**	**333**	⇑*i*P	**P**	**20 34 22.6**	**+2.0**
GZR	**Gura Zlata**	**39.65**	**329**	⇑*i*P	**P**	**20 34 25.9**	**+1.7**
GZR	**Gura Zlata**	**39.65**	**329**	⇑P	**P**	**20 34 25.9**	**+1.7**
MATP	**Matopo**	**39.99**	**213**	P	**P**	**20 34 28.1**	**+0.8**
	comp=Z,2.5nm,0.9s,baz=34,slow=9.8,SNR=4.9						
BURAR	**Bucovina Array**	**40.14**	**333**	⇓*i*P	**P**	**20 34 31.0**	**+2.8**
BURAR	**Bucovina Array**	**40.14**	**333**	⇓P	**P**	**20 34 31.0**	**+2.8**
BUR08	**Bucovina Ar. S**	**40.17**	**333**	*e*P	**P**	**20 34 28.9**	**+0.4**
	comp=Z,11nm,1.4s						
BZS	**Buzias**	**40.39**	**328**	⇓*i*P	**P**	**20 34 30.0**	**-0.2**
BZS	**Buzias**	**40.39**	**328**	⇓P	**P**	**20 34 30.0**	**-0.2**
SIRR	**Siria**	**40.82**	**329**	⇓*i*P	**P**	**20 34 34.4**	**+0.6**
LSA	**Lhasa**	**40.86**	**60**	*e*P	**P**	**20 34 34.6**	**-0.3**
	comp=Z,15nm,1.7s						
LSA	**Lhasa**	**40.86**	**60**	*e*P	**P**	**20 34 34.6**	**-0.3**
LSA				pmax	pmax		
	comp=Z,15nm,1.7s						
AKASG	**Malin Array Be**	**41.06**	**339**	P	**P**	**20 34 36.2**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=145,slow=7.3,SNR=19						
AKASG				PP	**PP**	**20 36 09.0**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=144,slow=9.5,SNR=4.5						
AKASG				LR	LR	20 54 57.8	
	comp=Z,126nm,18.8s,baz=135,slow=41						
AKASG	**Malin Array Be**	**41.06**	**339**	*i* P	**P**	**20 34 36.2**	**+0.6**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKBB	**Malin Array Si**	**41.06**	**339**	*e*P	**P**	**20 34 35.4**	**-0.2**
	comp=Z,15nm,1.0s						
AKBB	**Malin Array Si**	**41.06**	**339**	*e*P	**P**	**20 34 35.4**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,15nm,1.0s						
AMBH	**Ambrzfalva**	**41.35**	**329**	*e*P	**P**	**20 34 35.0**	**-3.0**
TRPA	**Tarpa**	**41.72**	**332**	⇓*i*P	**P**	**20 34 43.4**	**+2.3**
BLY	**Banja Luka**	**42.22**	**324**	*e*P	**P**	**20 34 43.8**	**-1.5**
	comp=Z,38nm,1.7s						
BLY	**Banja Luka**	**42.22**	**324**	⇑*i*P	**P**	**20 34 45.9**	**+0.6**
MORH	**Mrgy, Hungar**	**42.34**	**327**	*e*P	**P**	**20 34 49.0**	**+2.9**
KOLS	**Kolonicke sedl**	**42.43**	**332**	*e*P	**P**	**20 34 48.9**	**+2.0**
KOLS	**Kolonicke sedl**	**42.43**	**332**	*e*P	**P**	**20 34 48.9**	**+2.0**
MAKZ	**Makanchi**	**42.47**	**32**	*e*P	**P**	**20 34 48.2**	**+0.9**
	comp=Z,30nm,1.6s						
MAKZ	**Makanchi**	**42.47**	**32**	*e*P	**P**	**20 34 48.2**	**+0.9**
MAKZ				pmax	pmax		
	comp=Z,30nm,1.6s						
BRVK	**Borovoye**	**42.58**	**18**	*e*P	**P**	**20 34 49.3**	**+1.3**
	comp=Z,19nm,1.9s						
BRVK	**Borovoye**	**42.58**	**18**	*e*P	**P**	**20 34 49.3**	**+1.3**
BRVK				pmax	pmax		
	comp=Z,19nm,1.9s						
BVAR	**Borovoye Array**	**42.58**	**18**	P	**P**	**20 34 49.2**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=198,slow=7.8,SNR=12						
BVAR				PcP	**PcP**	**20 36 39.3**	**-1.0**
	comp=Z,4.5nm,0.9s,baz=212,slow=5.3,SNR=12						
MK31	**Makanchi Array**	**42.62**	**32**	*e*P	**P**	**20 34 49.4**	**+0.8**
	comp=Z,12nm,1.3s						
MK31	**Makanchi Array**	**42.62**	**32**	*e*P	**P**	**20 34 49.4**	**+0.8**
MK31				pmax	pmax		
	comp=Z,12nm,1.3s						
MK32	**Makanchi Array**	**42.62**	**32**	*e*P	**P**	**20 34 49.9**	**+1.3**
MKAR	**Makanchi Array**	**42.62**	**32**	P	**P**	**20 34 49.9**	**+1.3**
	comp=Z,2.0nm,0.5s,baz=222,slow=8.1,SNR=29						
MKAR				LR	LR	20 54 57.5	
	comp=Z,114nm,22.0s,baz=242,slow=40						
KWP	**Kalwaria Pacla**	**42.75**	**333**	*e*P	**P**	**20 34 50.2**	**+0.7**
	comp=Z,98nm,1.1s						
KWP	**Kalwaria Pacla**	**42.75**	**333**	*e*P	**P**	**20 34 50.2**	**+0.7**
KWP				pmax	pmax		
	comp=Z,98nm,1.1s						
PSZ	**Piszkesteto**	**42.83**	**330**	⇑*i*P	P	20 34 40.4	-10
PSZ	**Piszkesteto**	**42.83**	**330**	⇑P	P	20 34 40.4	-10
PSZ	**Piszkesteto**	**42.83**	**330**	⇑*e*P	**P**	**20 34 49.0**	**-1.3**
OBN	**Obninsk**	**43.04**	**348**	LR	LR	20 56 09.5	
	comp=Z,48nm,18.2s,baz=174,slow=41						
OBN	**Obninsk**	**43.04**	**348**	⇑*e*P	**P**	**20 34 52.7**	**+1.0**
OBN				*e*		20 34 59.6	
OBN						20 36 34.0	
OBN				*e*		20 36 42.8	
OBN				PPP	PPP	20 37 10.0	
OBN				*e*S	**S**	**20 41 17.8**	**+1.2**
OBN				*e*SS	**SS**	**20 44 26.2**	**-2.7**
OBN				pmax	pmax		
	comp=Z,12nm,1.4s						
OBN				MLR	MLR		
	comp=Z,201nm,16.0s						
KEST	**Kesra**	**43.16**	**308**	P	**P**	**20 34 55.6**	**+2.5**
	comp=Z,4.7nm,0.8s,baz=150,slow=8.3,SNR=5.4						
KEST				PcP	**PcP**	**20 36 42.5**	**-0.1**
	comp=Z,8.1nm,1.0s,baz=126,slow=0.6,SNR=4.7						
KEST				LR	LR	20 52 46.7	
	comp=Z,216nm,21.4s,baz=1.0,slow=36						
KEST	**Kesra**	**43.16**	**308**	*e*P	**P**	**20 34 53.8**	**+0.6**
	comp=Z,34nm,1.8s						
ARU	**Arti**	**43.39**	**6**	P	**P**	**20 34 55.6**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=202,slow=7.3,SNR=4.7						
ARU	**Arti**	**43.39**	**6**	*e*P	**P**	**20 34 53.6**	**-1.0**
	comp=Z,7.7nm,1.2s						
ARU	**Arti**	**43.39**	**6*c***	*i*P	**P**	**20 34 53.0**	**-1.6**
ARU						20 36 33.7	
ARU				PPP	PPP	20 37 09.8	
ARU				S	**S**	**20 41 22.0**	**+0.3**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARU				MLR	MLR		
	comp=Z,234nm,17.0s						
MOS	**Moscow**	**43.43**	**349**	*e*P	**P**	**20 34 57.6**	**+2.7**
MOS				*e*		20 36 43.7	
KURBB	**Kurchatov Arra**	**43.55**	**26**	P	**P**	**20 34 57.7**	**+1.8**
	comp=Z,5.5nm,1.0s,baz=224,slow=8.0,SNR=21						
KURBB				PcP	**PcP**	**20 36 44.0**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=226,slow=4.4,SNR=5.0						
KURK	**Kurchatov**	**43.65**	**26**	*e*P	**P**	**20 34 57.7**	**+0.9**
	comp=Z,10nm,1.1s						
KURK	**Kurchatov**	**43.65**	**26*c***	*e*P	**P**	**20 34 57.4**	**+0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TAM	**Tamanrasset**	**43.67**	**289**	*e*P	**P**	**20 34 57.8**	**+0.3**
	comp=Z,6.2nm,1.0s						
VYHS	**Vyhne**	**43.74**	**330**	*e*P	**P**	**20 34 58.3**	**+0.7**
VYHS	**Vyhne**	**43.74**	**330**	*e*P	**P**	**20 34 58.3**	**+0.7**
SOP	**Sopron**	**44.37**	**327**	*e*P	**P**	**20 35 05.1**	**+2.5**
MODS	**Modra-Piesok**	**44.44**	**328**	*e*P	**P**	**20 35 02.9**	**-0.3**
MODS	**Modra-Piesok**	**44.44**	**328**	*e*P	**P**	**20 35 02.9**	**-0.3**
OJC	**Ojcow**	**44.48**	**332**	*e*P	**P**	**20 35 03.5**	**+0.1**
	comp=Z,20nm,1.5s						
OJC	**Ojcow**	**44.48**	**332**	*e*P	**P**	**20 35 03.5**	**+0.1**
OJC				pmax	pmax		
	comp=Z,20nm,1.5s						
JAVC	**Velka Javorina**	**44.56**	**329**	*e*P	**P**	**20 35 04.0**	**-0.2**
SOKA	**Soboth**	**44.58**	**325**	*i* pP	**P**	**20 35 05.9**	**+1.5**
	comp=Z,6.2nm,1.7s						
ARSA	**Arzberg**	**44.66**	**326**	*i* pP	pP	20 35 08.4	-1.1
	comp=Z,6.4nm,1.1s						
OBKA	**Obir**	**44.76**	**325**	*i* pP	**P**	**20 35 07.3**	**+1.5**
	comp=Z,13nm,1.1s						
CONA	**Conrad Observa**	**44.89**	**327**	*i* pP	**P**	**20 35 08.1**	**+1.2**
	comp=Z,11nm,1.8s						
KIRV	**Kirov**	**45.12**	**359**	LR	LR	20 57 22.3	
	comp=Z,258nm,19.6s,baz=211,slow=40						
MORC	**Moravsky Berou**	**45.23**	**330**	*e*P	**P**	**20 35 09.5**	**0.0**
	comp=Z,6.1nm,1.0s						
MORC	**Moravsky Berou**	**45.23**	**330**	⇑*i*P	**P**	**20 35 10.6**	**+1.1**
MORC	**Moravsky Berou**	**45.23**	**330**	⇑P	**P**	**20 35 10.6**	**+1.1**
MORC	**Moravsky Berou**	**45.23**	**330**	*e*P	**P**	**20 35 10.1**	**+0.6**
LBTB	**Lobatse**	**45.27**	**213**	P	**P**	**20 35 10.4**	**+0.2**
	comp=Z,4.7nm,0.9s,baz=40,slow=10,SNR=5.4						
KRUC	**Moravsky**	**45.33**	**329**	*e*P	**P**	**20 35 09.9**	**-0.3**
MYKA	**Terra Mystica**	**45.34**	**324**	*i* pP	**P**	**20 35 11.8**	**+1.4**
	comp=Z,9.0nm,0.9s						
VRAC	**Vranov**	**45.39**	**329**	LR	LR	20 57 06.2	
	comp=Z,52nm,18.4s,baz=130,slow=40						
VRAC	**Vranov**	**45.39**	**329**	⇑*i*P	**P**	**20 35 11.8**	**+1.1**
VRAC	**Vranov**	**45.39**	**329**	⇑P	**P**	**20 35 11.8**	**+1.1**
VRAC	**Vranov**	**45.39**	**329**	*e*P	**P**	**20 35 11.3**	**+0.6**
MOA	**Molln**	**45.70**	**326**	*i* P	**P**	**20 35 13.6**	**+0.4**
	comp=Z,8.5nm,1.2s						
KBA	**Koelnbreinsper**	**45.76**	**325**	*i* P	**P**	**20 35 13.6**	**-0.2**
	comp=Z,9.4nm,1.2s						
SUW	**Suwalki**	**45.91**	**338**	*e*P	**P**	**20 35 15.2**	**+0.5**
	comp=Z,45nm,1.1s						
SUW	**Suwalki**	**45.91**	**338**	*e*P	**P**	**20 35 15.2**	**+0.5**
SUW				pmax	pmax		
	comp=Z,45nm,1.1s						
TREC	**Trest**	**45.94**	**328**	*e*P	**P**	**20 35 15.7**	**+0.6**
TREC				MLR	MLR		
	comp=Z,100nm,16.5s						
TREC	**Trest**	**45.94**	**328**	*e*P	**P**	**20 35 15.7**	**+0.6**
TREC				AMS	AMS	21 00 10.0	
	comp=Z,100nm,16.5s						
IIGN	**Ignalina**	**45.95**	**341**	*e*P	**P**	**20 35 15.2**	**+0.2**
IIGN				IAmb	IAmb	20 35 20.7	
	comp=Z,8.1nm,1.1s						
ABTA	**Abfaltersbach**	**46.05**	**324**	*i* P	**P**	**20 35 15.4**	**-0.6**
	comp=Z,5.8nm,1.1s						
ISAL	**Salakas**	**46.16**	**341**	*e*P	**P**	**20 35 17.1**	**+0.5**
ISAL				IAmb	IAmb	20 35 26.9	
	comp=Z,12nm,1.2s						
DPC	**Dobruska-Polom**	**46.20**	**330**	*e*P	**P**	**20 35 17.9**	**+0.7**
DPC				MLR	MLR		
	comp=Z,200nm,24.0s						
DPC	**Dobruska-Polom**	**46.20**	**330**	*e*P	**P**	**20 35 17.9**	**+0.7**
DPC				AMS	AMS	20 55 40.0	
	comp=Z,200nm,24.0s						
IZAR	**Zarasai**	**46.27**	**341**	*e*P	**P**	**20 35 17.9**	**+0.4**
IZAR				IAmb	IAmb	20 35 27.8	
	comp=Z,8.7nm,1.0s						
OSTC	**Ostas**	**46.39**	**330**	*e*P	**P**	**20 35 19.4**	**+0.8**
OSTC				AMS	AMS	20 56 00.0	
	comp=Z,100nm,16.3s						
UPC	**Upice**	**46.46**	**330**	*e*P	**P**	**20 35 19.9**	**+0.8**
UPC				*e*S	**S**	**20 42 09.2**	**+2.8**
UPC				MLR	MLR		
	comp=Z,200nm,17.4s						
UPC	**Upice**	**46.46**	**330**	*e*P	**P**	**20 35 19.9**	**+0.8**
UPC				*e*S	**S**	**20 42 09.2**	**+2.8**
UPC				AMS	AMS	20 56 10.0	
	comp=Z,200nm,17.4s						
CHVC	**Chvalec**	**46.49**	**330**	*e*P	**P**	**20 35 20.1**	**+0.7**
CHVC				AMS	AMS	20 56 00.0	
	comp=Z,200nm,19.9s						
GEC2	**GERESS Array S**	**46.59**	**327**	*e*P	**P**	**20 35 20.5**	**+0.2**
	comp=Z,6.3nm,1.2s						
GEC2	**GERESS Array S**	**46.59**	**327**	*e*P	**P**	**20 35 20.5**	**+0.2**
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GERES	**GERESS Array B**	**46.59**	**327**	P	**P**	**20 35 19.6**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=139,slow=6.3,SNR=10						
GERES				PcP	**PcP**	**20 36 54.2**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=111,slow=3.0,SNR=4.9						
GERES				LR	LR	20 57 17.4	
	comp=Z,89nm,19.8s,baz=126,slow=39						
GOPC	**GO Pecny, Ondr**	**46.69**	**329**	*e*P	**P**	**20 35 21.1**	**+0.2**
GOPC				*e*S	**S**	**20 42 09.5**	**-0.2**
GOPC				MLR	MLR		
	comp=Z,100nm,13.2s						
GOPC	**GO Pecny, Ondr**	**46.69**	**329**	*e*P	**P**	**20 35 21.1**	**+0.2**
GOPC				*e*S	**S**	**20 42 09.5**	**-0.2**
GOPC				AMS	AMS	20 58 10.0	
	comp=Z,100nm,13.2s						
CM31	**Chiang Mai Arr**	**46.70**	**77**	*e*P	**P**	**20 35 21.5**	**0.0**
	comp=Z,28nm,1.4s						
CMAR	**Chiang Mai Arr**	**46.70**	**77**	P	**P**	**20 35 21.9**	**+0.5**
	comp=Z,4.6nm,0.8s,baz=273,slow=8.5,SNR=24						
CMAR				PcP	**PcP**	**20 36 55.6**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=276,slow=5.2,SNR=5.3						
CMAR				LR	LR	20 55 18.8	
	comp=Z,36nm,19.5s,baz=312,slow=37						
CMAR	**Chiang Mai Arr**	**46.70**	**77*c***	*e*P	**P**	**20 35 22.0**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KHC	**Kasperske Hory**	**46.83**	**327**	*e*P	**P**	**20 35 22.8**	**+0.7**
KHC				*e*S	**S**	**20 42 08.8**	**-3.1**
KHC				MLR	MLR		
	comp=Z,100nm,18.7s						
KHC	**Kasperske Hory**	**46.83**	**327**	*e*P	**P**	**20 35 22.8**	**+0.7**
KHC				*e*S	**S**	**20 42 08.8**	**-3.1**
KHC				AMS	AMS	20 57 10.0	
	comp=Z,100nm,18.7s						
PRU	**Pruhonice**	**46.85**	**329**	*e*P	**P**	**20 35 22.7**	**+0.5**
PRU				*e*S	**S**	**20 42 14.5**	**+2.4**
PRU				MLR	MLR		
	comp=Z,100nm,18.3s						
PRU	**Pruhonice**	**46.85**	**329**	*e*P	**P**	**20 35 22.7**	**+0.5**
PRU				*e*S	**S**	**20 42 14.5**	**+2.4**
PRU				AMS	AMS	20 58 10.0	
	comp=Z,100nm,18.3s						
SQTA	**Sankt Quirin**	**47.05**	**324**	*i* P	**P**	**20 35 24.2**	**+0.2**
	comp=Z,3.5nm,1.0s						
DGZ	**Jazzator, Alta**	**47.12**	**32**	*i* P	**P**	**20 35 24.2**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MOTA	**Moosalm**	**47.18**	**324**	*i* P	**P**	**20 35 24.6**	**-0.4**
	comp=Z,2.5nm,0.7s						
PVCC	**Panska Ves**	**47.18**	**329**	*e*P	**P**	**20 35 25.0**	**+0.3**
PVCC				MLR	MLR		
	comp=Z,100nm,19.5s						
PVCC	**Panska Ves**	**47.18**	**329**	*e*P	**P**	**20 35 25.0**	**+0.3**
PVCC				AMS	AMS	21 00 00.0	

	comp=Z,100nm,19.5s						
FETA	**Feichten**	**47.22**	**323**	*i* P	**P**	**20 35 24.4**	**-0.9**
	comp=Z,5.6nm,1.1s						
RETA	**Reutte**	**47.45**	**324**	*i* P	**P**	**20 35 26.9**	**-0.1**
	comp=Z,6.4nm,1.0s						
TOA0	**Torodi Ar. Sit**	**47.49**	**276**	*e*P	**P**	**20 35 27.7**	**0.0**
	comp=Z,33nm,1.8s						
TORD	**Torodi Ar. Bea**	**47.49**	**276**	P	**P**	**20 35 26.2**	**-1.5**
	comp=Z,6.1nm,1.0s,baz=98,slow=6.9,SNR=21						
TORD				PcP	**PcP**	**20 36 57.2**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=61,slow=5.3,SNR=4.8						
TOA1	**Torodi Ar. Sit**	**47.49**	**276**	*e*P	**P**	**20 35 26.2**	**-1.6**
TOA1				*e*PcP	**PcP**	**20 36 57.2**	**-0.8**
DAVOX	**Davos/Dischmat**	**47.59**	**323**	LR	LR	20 57 12.5	
	comp=Z,72nm,20.4s,baz=92,slow=38						
BRG	**Berggiesshubel**	**47.70**	**329**	*e*P	**P**	**20 35 28.6**	**-0.2**
	comp=Z,5.0nm,1.0s						
BRG				S	**S**	**20 42 29.0**	**+4.8**
BRG				SS	SS	20 46 07.0	+15
	comp=N,103nm,16.9s						
	comp=E,79nm,15.3s						
	comp=Z,147nm,17.3s						
BRG	**Berggiesshubel**	**47.70**	**329**	*e*P	**P**	**20 35 28.6**	**-0.2**
BRG				S	**S**	**20 42 29.0**	**+4.8**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				MLR	MLR		
	comp=N,103nm,16.9s						
BRG				MLR	MLR		
	comp=E,79nm,15.3s						
BRG				MLR	MLR		
	comp=Z,147nm,17.3s						
DAVA	**Damuels**	**47.85**	**323**	*i* P	**P**	**20 35 29.5**	**-0.7**
	comp=Z,10.0nm,1.2s						
PRGR	**Permogore**	**48.30**	**357**	*e*P	**P**	**20 35 33.2**	**0.0**
PRGR				*e**PP	**pP**	**20 35 37.5**	**-0.4**
PRGR				*e*		20 36 54.3	
PRGR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BOSA	**Boshof**	**48.40**	**210**	P	**P**	**20 35 34.8**	**+0.2**
	comp=Z,5.0nm,1.1s,baz=68,slow=5.3,SNR=3.2						
BOSA				LR	LR	20 54 39.1	
	comp=Z,260nm,21.2s,baz=38,slow=34						
CLL	**Collm**	**48.44**	**329**	*e*P	**P**	**20 35 35.0**	**+0.5**
CLL				*i*		20 35 41.5	
CLL				*e*S	**S**	**20 42 35.0**	**+0.5**
CLL				pmax	pmax		
	comp=Z,14nm,1.7s						
CLL	**Collm**	**48.44**	**329**	*e*P	**P**	**20 35 35.0**	**+0.5**
	comp=Z,14nm,1.7s						
CLL				*i* (sP)	**pwP**	**20 35 41.5**	**-0.7**
CLL				*e*S	**S**	**20 42 35.0**	**+0.5**
CLL				*e*SS	**SS**	**20 46 00.0**	**-4.3**
CLL				*e*SSS	SSS	20 47 18.0	
ZAA0	**Zalesovo Array**	**48.62**	**26**	*e*P	**P**	**20 35 35.4**	**-0.5**
	comp=Z,8.9nm,0.9s						
ZALV	**Zalesovo Beam**	**48.62**	**26**	P	**P**	**20 35 35.9**	**+0.1**
	comp=Z,6.6nm,0.9s,baz=234,slow=7.1,SNR=22						
ZALV				LR	LR	20 58 48.6	
	comp=Z,96nm,19.5s,baz=250,slow=39						
ZALV	**Zalesovo Beam**	**48.62**	**26**	*i* P	**P**	**20 35 35.9**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZAA1	**Zalesovo Array**	**48.63**	**26**	*e*P	**P**	**20 35 35.9**	**0.0**
PSI	**Prapat**	**48.94**	**98**	P	**P**	**20 35 39.4**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=268,slow=5.0,SNR=4.7						
PSI	**Prapat**	**48.94**	**98**	*e*P	**P**	**20 35 39.2**	**+0.2**
	comp=Z,6.6nm,1.0s						
PSI	**Prapat**	**48.94**	**98**	*e*P	**P**	**20 35 39.2**	**+0.2**
PSI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SENIN	**Lac Senin/Sane**	**48.94**	**321**	*e*P	**P**	**20 35 38.3**	**-0.5**
	comp=Z,26nm,1.5s						
BFO	**Black Forest**	**49.29**	**324**	*e*P	**P**	**20 35 41.1**	**0.0**
	comp=Z,12nm,1.2s						
BFO	**Black Forest**	**49.29**	**324**	*i* P	**P**	**20 35 42.0**	**+0.9**
KULM	**Kulim**	**50.00**	**94**	*e*P	**P**	**20 35 45.9**	**-1.1**
	comp=Z,18nm,1.1s						
MNSI	**Mandailing Nat**	**50.11**	**100**	P	**P**	**20 35 48.1**	**+0.2**
	comp=Z,12nm,1.1s						
GTA	**Gaotai**	**50.39**	**50**	P	**P**	**20 35 51.4**	**+1.6**
GTA				pP	pwP	20 35 58.6	+0.9
GTA				sP	sP	20 36 02.9	+7.0
GTA				PcP	**PcP**	**20 37 09.6**	**+1.4**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,93nm,5.7s						
GTA				LR	LR		
	comp=Z,180nm,18.9s						
GTA				LR	LR		
	comp=Z,95nm,17.2s						
GTA				LR	LR		
	comp=Z,140nm,18.9s						
NONG	**Nongkai**	**50.70**	**78**	P	**P**	**20 35 53.0**	**+0.7**
	comp=Z,0.2nm,1.5s,comp=Z,139nm						
FIA0	**FINESS Array S**	**51.14**	**345**	*e*P	**P**	**20 35 54.8**	**-0.1**
FIA0	**FINESS Array S**	**51.14**	**345**	*e*P	**P**	**20 35 54.8**	**-0.1**
FINES	**FINESS Array B**	**51.14**	**345**	P	**P**	**20 35 54.8**	**-0.1**
	comp=Z,6.1nm,0.9s,baz=126,slow=9.7,SNR=12						
FINES				LR	LR	21 01 01.1	
	comp=Z,213nm,18.0s,baz=154,slow=40						
WLF	**Walferdange**	**51.20**	**324**	*e*P	**P**	**20 35 55.2**	**-0.3**
	comp=Z,58nm,1.0s						
WLF	**Walferdange**	**51.20**	**324**	*e*P	**P**	**20 35 55.2**	**-0.3**
WLF				pmax	pmax		
	comp=Z,58nm,1.0s						
SLVN	**Son La**	**51.33**	**73**	*e*P	**P**	**20 35 56.0**	**-1.1**
	comp=Z,17nm,1.7s						
SKNT	**Sakolnakorn**	**51.56**	**79**	P	**P**	**20 35 59.6**	**+0.8**
	comp=Z,18nm,1.4s						
PANO	**Nakornpanom**	**52.15**	**79**	P	**P**	**20 36 04.0**	**+0.9**
	comp=Z,0.3nm,1.2s						
HFS	**Hagfors**	**53.92**	**338**	LR	LR	21 02 53.0	
	comp=Z,180nm,19.3s,baz=124,slow=40						
MYKOM	**Kota Tinggi**	**53.95**	**98**	*e*P	**P**	**20 36 16.1**	**-0.4**
	comp=Z,45nm,1.6s						
ESDC	**Sonseca Array**	**54.39**	**309**	P	**P**	**20 36 19.8**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=93,slow=6.4,SNR=14						
ESDC				LR	LR	20 59 44.7	
	comp=Z,46nm,21.3s,baz=135,slow=36						
ESLA	**Sonseca Array**	**54.39**	**309**	*e*P	**P**	**20 36 20.1**	**+0.7**
	comp=Z,10nm,1.1s						
PAB	**San Pablo**	**54.65**	**309**	*e*P	**P**	**20 36 21.8**	**+0.5**
	comp=Z,14nm,1.3s						
PAB	**San Pablo**	**54.65**	**309**	*e*P	**P**	**20 36 21.8**	**+0.5**
PAB				pmax	pmax		
	comp=Z,14nm,1.3s						
DBIC	**Dimbokro**	**54.88**	**269**	P	**P**	**20 36 23.2**	**0.0**
	comp=Z,8.2nm,0.9s,baz=71,slow=6.3,SNR=5.5						
DBIC				LR	LR	20 58 15.7	
	comp=Z,72nm,18.3s,baz=40,slow=34						
NC602	**NORSAR Array S**	**55.12**	**338**	*e*P	**P**	**20 36 23.8**	**-0.4**
	comp=Z,18nm,0.9s						
NC405	**NORSAR Array S**	**55.30**	**338**	*e*P	**P**	**20 36 25.2**	**-0.4**
	comp=Z,66nm,1.8s						
NAO01	**NORSAR Array S**	**55.43**	**338**	*e*P	**P**	**20 36 26.6**	**+0.2**
	comp=Z,25nm,1.0s						
NB2	**NORSAR Subarra**	**55.44**	**338**	P	**P**	**20 36 25.8**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=129,slow=7.4						
NB200	**NORSAR Array S**	**55.44**	**338**	*e*P	**P**	**20 36 26.2**	**-0.3**
NOA	**NORSAR Array B**	**55.44**	**338**	P	**P**	**20 36 26.2**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=126,slow=7.5,SNR=13						
NOA				LR	LR	21 03 48.5	
	comp=Z,165nm,19.2s,baz=155,slow=40						
MOY	**Mondy**	**55.52**	**36**	*e*P	**P**	**20 36 29.1**	**+1.6**
ENH	**Enshi**	**56.64**	**63**	*e*P	**P**	**20 36 36.0**	**+0.3**
	comp=Z,33nm,1.7s						
TLY	**Talaya**	**57.05**	**36**	*i* P	**P**	**20 36 38.4**	**+0.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.5s						
SONA0	**Songino Array**	**57.44**	**41**	*e*P	**P**	**20 36 42.3**	**+1.1**
SONM	**Songino Array**	**57.44**	**41**	P	**P**	**20 36 42.3**	**+1.1**
	comp=Z,2.4nm,0.8s,baz=248,slow=6.8,SNR=18						
SONM				LR	LR	21 04 25.4	
	comp=Z,114nm,21.7s,baz=270,slow=39						
ULN	**Ulaanbaatar**	**57.87**	**42**	*e*P	**P**	**20 36 45.0**	**+0.8**
	comp=Z,5.4nm,1.1s						
ULN	**Ulaanbaatar**	**57.87**	**42**	*ce*P	**P**	**20 36 44.4**	**+0.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ARA0	**ARCESS Array S**	**58.30**	**350**	*e*P	**P**	**20 36 46.8**	**+0.1**
ARCES	**ARCESS Array B**	**58.30**	**350**	P	**P**	**20 36 46.8**	**+0.1**
	comp=Z,7.6nm,1.0s,baz=54,slow=13,SNR=5.5						
ARCES				LR	LR	21 04 33.4	
	comp=Z,358nm,21.0s,baz=162,slow=39						
DSB	**Dublin**	**59.80**	**324**	*e*P	**P**	**20 36 57.7**	**+0.3**
	comp=Z,7.3nm,0.9s						
KSM	**Kuching**	**60.27**	**96**	*e*P	**P**	**20 37 01.8**	**+0.6**
	comp=Z,10nm,0.9s						
WHN	**Wuhan**	**60.85**	**62**	P	**P**	**20 37 05.9**	**+1.0**
SBUM	**Sibu**	**61.88**	**94**	*e*P	**P**	**20 37 13.0**	**+0.8**
	comp=Z,5.4nm,0.9s						
BOD	**Bodaibo**	**64.71**	**32**	*e*P	**P**	**20 37 29.8**	**-0.4**
BOD				pmax	pmax		
	comp=Z,8.0nm,2.0s						
CN2	**Changchun**	**69.98**	**48**	*e*P	**P**	**20 38 05.1**	**+1.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
KSRS	**Korea Array**	**72.02**	**55**	P	**P**	**20 38 16.5**	**+0.2**
	comp=Z,5.5nm,1.1s,baz=266,slow=6.6,SNR=10						
MDJ	**Mudanjiang**	**72.95**	**47**	*e*P	**P**	**20 38 22.6**	**+0.8**
	comp=Z,20nm,1.5s						
YAK	**Yakutsk**	**73.17**	**29**	*e*P	**P**	**20 38 22.6**	**-0.1**
	comp=Z,16nm,0.5s						
YAK	**Yakutsk**	**73.17**	**29**	*e*P	**P**	**20 38 21.2**	**-1.5**
YAK				*e**PP	**pwP**	**20 38 34.2**	**+3.8**
YAK				*e*PPP	PPP	20 42 56.4	
YAK				*e*S	**S**	**20 47 45.8**	**-3.9**
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,40nm,3.1s						
YAK				pmax	pmax		
	comp=N,26nm,2.7s						
YAK				pmax	pmax		
	comp=E,37nm,3.0s						
YAK				smax	smax		
	comp=N,33nm,3.1s						
YAK				smax	smax		
	comp=E,32nm,3.3s						
TIXI	**Tiksi**	**73.70**	**19**	*i* P	**P**	**20 38 23.4**	**-2.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KLR	**Kul'dur**	**74.25**	**42**	*i* P	**P**	**20 38 29.7**	**+0.4**
KLR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**74.69**	**48**	P	**P**	**20 38 32.3**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=308,slow=6.3,SNR=5.8						
TNTI	**Ternate**	**76.99**	**92**	*e*P	**P**	**20 38 44.7**	**-1.0**
	comp=Z,48nm,1.6s						
INU	**Inuyama**	**79.54**	**56**	*e*P	**P**	**20 38 59.3**	**-0.1**
	comp=Z,12nm,0.9s						
MAJO	**Matsushiro**	**80.30**	**55**	*e*P	**P**	**20 39 04.2**	**+0.6**
MAJO	**Matsushiro**	**80.30**	**55**	*e*P	**P**	**20 39 04.2**	**+0.6**
MJAR	**Matsushiro Arr**	**80.30**	**55**	P	**P**	**20 39 04.2**	**+0.6**
	comp=Z,5.4nm,1.1s,baz=285,slow=5.6,SNR=7.4						
MJAR				LR	LR	21 17 01.7	
	comp=Z,33nm,18.4s,baz=240,slow=38						
MAW	**Mawson**	**81.27**	**175**	P	**P**	**20 39 07.7**	**-0.1**
	comp=Z,4.2nm,1.0s,baz=358,slow=4.7,SNR=5.5						
MAW				LR	LR	21 09 33.7	
	comp=Z,156nm,19.4s,baz=11,slow=32						
MAW	**Mawson**	**81.27**	**175**	*e*P	**P**	**20 39 08.8**	**+1.0**
	comp=Z,5.2nm,1.4s						
MAW	**Mawson**	**81.27**	**175**	*e*P	**P**	**20 39 08.8**	**+1.0**
MAW				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ERM	**Erimo**	**83.08**	**49**	*i* P	**P**	**20 39 18.3**	**+0.3**
ERM				pmax	pmax		
	comp=Z,12nm,1.1s						
SEY	**Seymchan**	**83.49**	**27**	*i* P	**P**	**20 39 19.3**	**-0.5**
BILL	**Bilibino**	**86.88**	**20**	⇓*e*P	**P**	**20 39 38.2**	**+1.5**
BILL				*e*		20 39 41.3	
BILL				*e*		20 39 45.4	
BILL				*e*SS	SS	20 56 01.9	+6.5
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,273nm,23.0s						
WR1	**Warramunga Arr**	**88.79**	**111**	*e*P	**P**	**20 39 46.7**	**0.0**
WRA	**Warramunga Arr**	**88.79**	**111**	P	**P**	**20 39 46.7**	**0.0**
	comp=Z,18nm,1.0s,baz=289,slow=5.2,SNR=26						
WRAB	**Tennant Creek**	**88.80**	**111**	*e*P	**P**	**20 39 47.1**	**+0.4**
	comp=Z,22nm,0.9s						
WRAB	**Tennant Creek**	**88.80**	**111**	*ce*P	**P**	**20 39 44.6**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,33nm,1.3s						
WB2	**Warramunga Arr**	**88.80**	**111**	*e*P	**P**	**20 39 47.0**	**+0.3**
	comp=Z,24nm,1.0s						
AS31	**Alice Springs**	**89.34**	**114**	*e*P	**P**	**20 39 49.4**	**+0.1**
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**89.34**	**114**	P	**P**	**20 39 49.2**	**0.0**
	comp=Z,9.1nm,0.9s,baz=289,slow=4.5,SNR=43						
ASAR				LR	LR	21 17 30.5	
	comp=Z,68nm,18.3s,baz=284,slow=34						
PETK	**Petropavlovsk-**	**89.39**	**35**	LR	LR	21 24 12.1	
	comp=Z,57nm,19.9s,baz=294,slow=38						
SCHQ	**Schefferville**	**94.09**	**329**	LR	LR	21 27 07.3	
	comp=Z,29nm,18.4s,baz=272,slow=38						
STKA	**Stephens Creek**	**97.81**	**121**	LR	LR	21 21 19.3	
	comp=Z,77nm,19.2s,baz=209,slow=33						
PD31	**Pinedale Array**	**121.21**	**343**	*e*PKPdf	**PKPdf**	**20 45 45.2**	**-0.6**
PDAR	**Pinedale Array**	**121.21**	**343**	PKP	**PKPdf**	**20 45 45.2**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=64,slow=3.4,SNR=4.9						
NV01	**Mina Array Sit**	**127.41**	**349**	*e*PKPdf	**PKiKP**	**20 45 58.8**	**+0.5**
NVAR	**Mina Array Bea**	**127.41**	**349**	PKP	**PKiKP**	**20 45 58.8**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=282,slow=0.4,SNR=18						
LCMT	**Little Creek M**	**127.60**	**344**	*e*PKPdf	**PKiKP**	**20 45 59.5**	**+0.9**
U15A	**North Rim**	**127.87**	**342**	*e*PKPdf	**PKiKP**	**20 46 00.4**	**+1.0**
TX31	**Lajitas Ar. Si**	**130.77**	**330**	*e*PKPdf	**PKPdf**	**20 46 03.0**	**-1.3**
TXAR	**Lajitas Array**	**130.77**	**330**	PKP	**PKiKP**	**20 46 05.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=31,slow=2.9,SNR=3.5						

ROM 11 20:32:56.4±0.1, 43°.827N±0°.006×12°.039E±0°.005, h9$^{\text{km}}$, ML1.5/9, Error ellipse: s-maj=0.7km s-min=0.2km az=27.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**299**	P	Pg	20 33 00.3	+0.4
SFI				S	Sg	20 33 03.2	+1.0
SFI				AML	AML		
	comp=E,162µm,1.5s						
SFI				AML	AML		
	comp=N,157µm,0.5s						
SFI				AML	AML		
	comp=E,160µm,1.5s						
SFI				AML	AML		
	comp=N,157µm,0.5s						
SFI				AML	AML		
	comp=E,160µm,1.5s						
SFI				AML	AML		
	comp=N,157µm,0.5s						
SFI				AML	AML		
	comp=E,160µm,1.5s						
SFI				AML	AML		
	comp=N,157µm,0.5s						
ASQU	**Asqua**	**0.18**	**261**	P	Pg	20 33 01.0	+0.7
ASQU				S	Sg	20 33 04.6	+1.6
ASQU				AML	AML		
	comp=E,416µm,1.0s						
ASQU				AML	AML		
	comp=N,320µm,0.2s						
ASQU				AML	AML		
	comp=E,416µm,1.0s						
ASQU				AML	AML		
	comp=N,320µm,0.2s						
ASQU				AML	AML		
	comp=N,320µm,0.2s						
ASQU				AML	AML		
	comp=E,416µm,1.0s						
ASQU				AML	AML		
	comp=N,320µm,0.2s						
ASQU				AML	AML		
	comp=E,416µm,1.0s						
CPGN	**Carpegna, Ital**	**0.20**	**97**	P	Pg	20 33 01.5	+0.8
PARC	**Parchiule**	**0.23**	**141**	P	Pg	20 33 01.6	+0.5
PARC				S	Sg	20 33 05.7	+1.4
PARC				AML	AML		
	comp=E,218µm,0.4s						
PARC				AML	AML		
	comp=N,188µm,0.2s						
PARC				AML	AML		
	comp=E,218µm,0.4s						
PARC				AML	AML		
	comp=N,188µm,0.2s						
PARC				AML	AML		
	comp=N,188µm,0.2s						
PARC				AML	AML		
	comp=E,218µm,0.4s						
PARC				AML	AML		
	comp=N,188µm,0.2s						
PARC				AML	AML		
	comp=E,218µm,0.4s						
BADI	**Badiali**	**0.35**	**155**	P	Pg	20 33 04.0	+0.6
BADI				S	Sb	20 33 09.6	-0.9
BADI				AML	AML		
	comp=E,134µm,0.2s						
BADI				AML	AML		
	comp=N,94µm,0.2s						
BADI				AML	AML		
	comp=E,134µm,0.2s						
BADI				AML	AML		
	comp=N,93µm,0.2s						
BADI				AML	AML		
	comp=E,134µm,0.2s						
BADI				AML	AML		
	comp=N,93µm,0.2s						
BADI				AML	AML		
	comp=E,134µm,0.2s						
BADI				AML	AML		
	comp=N,93µm,0.2s						
PE3	**Peglio**	**0.36**	**111**	P	Pg	20 33 04.1	+0.6
PE3				S	Sb	20 33 10.4	-0.3
PE3				AML	AML		
	comp=E,522µm,0.5s						
PE3				AML	AML		
	comp=N,281µm,0.4s						
PE3				AML	AML		
	comp=E,523µm,0.5s						
PE3				AML	AML		
	comp=N,281µm,0.4s						
PE3				AML	AML		
	comp=E,523µm,0.5s						
PE3				AML	AML		
	comp=N,281µm,0.4s						
PE3				AML	AML		
	comp=E,523µm,0.5s						
PE3				AML	AML		
	comp=N,281µm,0.4s						
RUFI	**Rufina**	**0.38**	**272**	P	Pg	20 33 04.4	+0.5
RUFI				S	Sb	20 33 10.7	-0.7
ATPI	**Pietralunga -**	**0.46**	**145**	P	Pb	20 33 06.3	-0.5
ATPI				S	Sb	20 33 13.3	-0.4
PIEI	**Pieia**	**0.46**	**129**	P	Pg	20 33 05.7	+0.2
PIEI				S	Sb	20 33 13.0	-0.8
BRIS	**BRISIGHELLA**	**0.50**	**310**	P	Pg	20 33 05.9	-0.2
BRIS				AML	AML		
	comp=E,77µm,0.2s						
BRIS				AML	AML		
	comp=N,70µm,0.4s						
BRIS				AML	AML		
	comp=E,77µm,0.2s						
BRIS				AML	AML		
	comp=N,70µm,0.4s						
BRIS				AML	AML		
	comp=E,77µm,0.2s						
BRIS				AML	AML		
	comp=N,70µm,0.4s						
CAFI	**Castiglion Fio**	**0.50**	**186**	P	Pg	20 33 06.7	+0.6
CAFI				AML	AML		
	comp=E,33µm,1.4s						
CAFI				AML	AML		
	comp=N,28µm,0.7s						
CAFI				AML	AML		
	comp=E,33µm,1.4s						
CAFI				AML	AML		
	comp=N,28µm,0.7s						
CAFI				AML	AML		
	comp=E,33µm,1.4s						
CAFI				AML	AML		
	comp=N,28µm,0.7s						
ATVO	**AVT- Monte Val**	**0.52**	**149**	P	Pg	20 33 06.9	+0.4
ATVO				S	Sb	20 33 15.2	-0.2
ATVO				AML	AML		
	comp=E,63µm,1.5s						
ATVO				AML	AML		
	comp=N,40µm,1.4s						
ATVO				AML	AML		
	comp=E,63µm,1.5s						
ATVO				AML	AML		
	comp=N,40µm,1.4s						
ATVO				AML	AML		
	comp=N,40µm,1.4s						
ATVO				AML	AML		
	comp=E,63µm,1.5s						
ATVO				AML	AML		
	comp=N,40µm,1.4s						
ATVO				AML	AML		
	comp=E,63µm,1.5s						
SEI	**Scarperia**	**0.54**	**295**	P	Pg	20 33 07.1	+0.1
SEI				AML	AML		
	comp=E,90µm,0.6s						
SEI				AML	AML		
	comp=N,106µm,0.3s						
SEI				AML	AML		
	comp=N,106µm,0.3s						
SEI				AML	AML		
	comp=E,90µm,0.6s						
SEI				AML	AML		
	comp=N,106µm,0.3s						
SEI				AML	AML		
	comp=E,90µm,0.6s						
MPAG	**Monte Paganucc**	**0.56**	**111**	P	Pg	20 33 07.5	+0.2
MPAG				S	Sb	20 33 16.3	-0.3

IDC 11 20:35:18.8±1.4, 1°.27N×122°.97E, h0$^{\text{km}}$, mb3.4/4, mb1 3.6/4, mb1mx3.4/28, mbtmp3.4/4, Error ellipse: s-maj=164.9km s-min=23.7km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.85**	**153**	P	P	20 40 35.0	+1.1
	0.3nm,0.3s,baz=334,slow=11,SNR=0.6						
ASAR	**Alice Springs**	**26.97**	**157**	P	P	20 41 02.2	-0.2
	0.3nm,0.6s,baz=342,slow=12,SNR=4.4						
SONM	**Songino Array**	**48.56**	**345**	P	P	20 44 05.1	+1.1
	0.5nm,0.6s,baz=177,slow=7.8,SNR=4.0						
MKAR	**Makanchi Array**	**57.52**	**328**	P	P	20 45 08.1	-1.9
	0.3nm,0.6s,baz=134,slow=8.3,SNR=3.1						

UCR 11 20:46:26.8±0.9, 11°.26N×85°.69W, h192$^{\text{km}}$±7$^{\text{km}}$, MW3.6, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GB1A	**Borinquen Arri**	**0.53**	**147**	*e*P	Pn	20 46 53.3	+0.1
GB1A				*e*S	Sn	20 47 14.5	+0.9
BUEV	**Buena Vista**	**0.54**	**149**	*e*P	Pn	20 46 53.1	-0.2
BUEV				*e*S	Sn	20 47 14.1	+0.4
MESS	**Mesas**	**0.71**	**137**	*e*P	Pn	20 46 54.4	+0.3
CUI	**Cuipilapa**	**0.79**	**139**	*e*P	Pn	20 46 54.9	+0.4
CUI				*e*S	Sn	20 47 17.1	+1.3
JTS	**Las Juntas de**	**1.21**	**143**	*e*P	Pn	20 46 58.0	+0.6
JTS				*e*S	Sn	20 47 21.3	+0.3

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*GUC **11** 21:11:29.7±0.7, 20°.66S×68°.96W, h106$^{\text{km}}$±3$^{\text{km}}$, ML3.6*
*SJA **11** 21:11:29.6±0.8, 20°.67S×68°.92W, h105$^{\text{km}}$±5$^{\text{km}}$, MD3.0*
*ISCJB **11** 21:11:30.0±0.9, 20°.67S±0°.02×69°.0W±0°.1, h113$^{\text{km}}$±8$^{\text{km}}$,*
Error ellipse: s-maj=16.0km s-min=4.1km az=178.3

ISC 11 21:11:30.3±1.7, 20°.67S±0°.03×68°.97W±0°.10, h108$^{\text{km}}$±10$^{\text{km}}$, n28, σ0^{s}83/53, 8C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.55**	**342**	*i* P	**Pn**	**21 11 47.5**	**-0.3**
PB08				*i* S	**Sn**	**21 12 00.7**	**-0.3**
PB08	**IPOC Station P**	**0.55**	**342**	⇑*i*P	**Pn**	**21 11 47.5**	**-0.3**
PB08				*i* S	**Sn**	**21 12 00.5**	**-0.5**
PB08				IAML		21 12 01.4	
	comp=E,2µm,0.3s						
PB01	**IPOC Station P**	**0.61**	**232**	*i* P	**Pn**	**21 11 47.5**	**-0.5**
PB01				*i* S	**Sn**	**21 12 01.1**	**-0.1**
PB01	**IPOC Station P**	**0.61**	**232**	⇑*i*P	**Pn**	**21 11 47.5**	**-0.5**
PB01				*i* S	**Sn**	**21 12 01.1**	**-0.1**
PB01				IAML		21 12 02.4	
	comp=E,4µm,0.5s						
GO01	**Chusmiza**	**1.02**	**348**	⇑*i*P	**Pn**	**21 11 51.9**	**-0.3**
GO01				*i* S	**Sn**	**21 12 08.4**	**-0.1**

GO01				IAML		21 12 11.6	
	comp=N,4µm,0.1s						
PB02	**IPOC Station P**	**1.08**	**233**	*i* P	**Pn**	**21 11 52.4**	**0.0**
PB02				*i* S	**Sn**	**21 12 10.3**	**+1.2**
PB02	**IPOC Station P**	**1.08**	**233**	⇑*i*P	**Pn**	**21 11 52.4**	**0.0**
PB02				*i* S	**Sn**	**21 12 09.6**	**+0.6**
PB02				IAML		21 12 11.2	
	comp=E,2µm,0.4s						
PB11	**IPOC Station P**	**1.11**	**324**	*i* P	**Pn**	**21 11 52.5**	**-0.3**
PB11				*i* S	**Sn**	**21 12 10.0**	**+0.3**
PB11	**IPOC Station P**	**1.11**	**324**	⇑*i*P	**Pn**	**21 11 52.5**	**-0.3**
PB11				*i* S	**Sn**	**21 12 09.7**	**+0.1**
PB11				IAML		21 12 10.6	
	comp=E,2µm,0.2s						
PB09	**IPOC Station P**	**1.15**	**193**	*i* P	**Pn**	**21 11 53.5**	**+0.2**
PB09				*i* S	**Sn**	**21 12 11.7**	**+1.2**
PB09	**IPOC Station P**	**1.15**	**193**	⇑*i*P	**Pn**	**21 11 53.3**	**+0.1**
PB09				*e*S	**Sn**	**21 12 10.9**	**+0.4**
PB09				IAML		21 12 14.0	
	comp=E,914nm,0.3s						
PB07	**IPOC Station P**	**1.36**	**219**	*i* P	**Pn**	**21 11 55.6**	**0.0**
PB07				*i* S	**Sn**	**21 12 14.8**	**+0.2**
PB07	**IPOC Station P**	**1.36**	**219**	⇑*i*P	**Pn**	**21 11 55.6**	**0.0**
PB07				*i* S	**Sn**	**21 12 14.9**	**+0.2**
PSGC	**Pisagua**	**1.52**	**314**	⇓*i*P	**Pn**	**21 11 57.2**	**-0.2**
PSGC				*i* S	**Sn**	**21 12 17.8**	**-0.2**
PSGC				IAML		21 12 21.7	
	comp=E,478nm,0.2s						
PSGCX	**Pisagua**	**1.52**	**314**	*i* P	**Pn**	**21 11 57.4**	**0.0**
PSGCX				*i* S	**Sn**	**21 12 18.9**	**+0.9**
PB03	**IPOC Station P**	**1.56**	**208**	*i* P	**Pn**	**21 11 58.0**	**+0.1**
PB03				*i* S	**Sn**	**21 12 19.6**	**+0.8**
PB03	**IPOC Station P**	**1.56**	**208**	⇑*i*P	**Pn**	**21 11 58.0**	**+0.1**
PB03				*i* S	**Sn**	**21 12 19.2**	**+0.3**
PB03				IAML		21 12 19.9	
	comp=E,532nm,0.2s						
MNMC	**Minye Minye**	**1.64**	**339**	*e*P	**Pn**	**21 11 59.3**	**+0.3**
MNMC				*i* S	**Sn**	**21 12 21.8**	**+1.0**
MNMC				IAML		21 12 27.2	
	comp=E,1µm,0.2s						
MNMCX	**Minye Minye**	**1.64**	**339**	*i* P	**Pn**	**21 11 59.7**	**+0.7**
MNMCX				*i* S	**Sn**	**21 12 21.9**	**+1.0**
PB04	**IPOC Station P**	**1.99**	**213**	*i* P	**Pn**	**21 12 04.2**	**+0.9**
PB04	**IPOC Station P**	**1.99**	**213**	*e*P	**Pn**	**21 12 03.6**	**+0.3**
PB04				IAML		21 12 34.6	
	comp=E,472nm,0.3s						
PB06	**IPOC Station P**	**2.10**	**195**	*i* P	**Pn**	**21 12 05.4**	**+0.6**
PB06				*i* S	**Sn**	**21 12 29.7**	**-1.3**
PB06	**IPOC Station P**	**2.10**	**195**	⇓*i*P	**Pn**	**21 12 04.9**	**+0.2**
PB06				*i* S	**Sn**	**21 12 30.5**	**-0.5**
PB06				IAML		21 12 35.9	
	comp=E,343nm,0.4s						
PB12	**IPOC Station P**	**2.41**	**328**	*i* P	**Pn**	**21 12 08.1**	**-0.6**
PB12				*i* S	**Sn**	**21 12 38.7**	**+0.6**
PB12	**IPOC Station P**	**2.41**	**328**	⇓*i*P	**Pn**	**21 12 08.0**	**-0.6**
PB12				*i* S	**Sn**	**21 12 37.3**	**-0.8**
PB12				IAML		21 12 49.2	
	comp=N,296nm,0.2s						
PB05	**IPOC Station P**	**2.46**	**208**	*i* P	**Pn**	**21 12 09.9**	**+0.6**
PB05				*i* S	**Sn**	**21 12 34.8**	**-4.4**
PB05	**IPOC Station P**	**2.46**	**208**	*e*P	**Pn**	**21 12 09.6**	**+0.3**
PB05				IAML		21 12 48.5	
	comp=E,258nm,0.6s						
PB15	**IPOC Station P**	**2.57**	**190**	*e*P	**Pn**	**21 12 11.2**	**+0.3**
PB15				*e*S	**Sn**	**21 12 42.2**	**+0.3**

TAP 11 21:23:10.3, 21°.40N×121°.99E, h165^{km}, ML3.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	**0.76**	**328**	*e*P	Pn	21 23 34.9	0.0
	baz=328						
LAY				*e*S	Sn	21 23 52.7	-1.0
	baz=328						
TSEB	**Hengchuen, Pin**	**1.13**	**297**	*e*P	Pn	21 23 36.7	-0.9
	baz=292						
TWKBT	**Hengchun**	**1.22**	**297**	P	Pn	21 23 38.9	+0.5
	baz=294						
TWKBT				S	Sn	21 23 59.7	-0.3
	baz=294						
TWK1	**Hengchun**	**1.23**	**297**	P	Pn	21 23 39.1	+0.6
	baz=294						
TWK1				S	Sn	21 23 59.8	-0.3
	baz=294						
HEN	**Hengchun**	**1.31**	**298**	P	Pn	21 23 39.9	+0.7
	baz=298						
HEN				*e*S	Sn	21 24 01.2	-0.3
	baz=298						
TAW	**Tawu**	**1.39**	**314**	*e*P	Pn	21 23 40.0	0.0
	baz=318						
EAST	**Anshuo**	**1.44**	**313**	P	Pn	21 23 40.6	+0.1
	baz=313						
EAST				*e*S	Sn	21 24 02.4	-1.5
	baz=313						
ECL	**Taimali**	**1.53**	**322**	P	Pn	21 23 40.9	-0.5
	baz=318						
ECL				S	Sn	21 24 03.6	-1.8
	baz=318						
SCZT	**Fangliau**	**1.60**	**308**	P	Pn	21 23 42.3	+0.2
	baz=308						
SCZT				*e*S	Sn	21 24 05.2	-1.3
	baz=308						
TWGBT	**Beinan**	**1.65**	**330**	P	Pn	21 23 42.6	0.0
	baz=324						
TWGBT				S	Sn	21 24 06.2	-1.3
	baz=324						
TWG	**Pinlang**	**1.65**	**329**	P	Pn	21 23 42.4	-0.2
	baz=324						
TWG				S	Sn	21 24 06.0	-1.6
	baz=324						
SSPT	**Xinbi**	**1.70**	**310**	P	Pn	21 23 42.9	-0.3
	baz=310						
SSPT				*e*S	Sn	21 24 08.3	-0.2
	baz=310						
MASBT	**Mashibuluo**	**1.74**	**314**	P	Pn	21 23 43.9	+0.3
	baz=320						
MASBT				S	Sn	21 24 07.8	-1.6
	baz=320						
WLCH	**Liuqiu**	**1.77**	**303**	*e*P	Pn	21 23 44.2	+0.4
	baz=296						
SSD	**Sandimen**	**1.84**	**317**	*e*P	Pn	21 23 44.9	+0.2
	baz=317						
SSD				*e*S	Sn	21 24 09.9	-1.2
	baz=317						
ELDTW	**Lidau**	**2.00**	**334**	*e*P	Pn	21 23 47.7	+1.2
	baz=333						
ELDTW				*e*S	Sn	21 24 13.6	-0.9
	baz=333						
SLGT	**Liugui**	**2.02**	**322**	P	Pn	21 23 46.6	+0.1
	baz=322						
SLGT				*e*S	Sn	21 24 13.5	-1.2
	baz=322						
TWM1	**Shoushan**	**2.03**	**315**	*e*P	Pn	21 23 48.1	+1.3
	baz=321						
TWF1	**Yuli**	**2.05**	**342**	*e*P	Pn	21 23 47.1	+0.2
	baz=334						
TWF1				*e*S	Sn	21 24 15.0	-0.4
	baz=334						
YULB	**Yu-li**	**2.09**	**342**	*e*P	Pn	21 23 47.6	+0.2
	baz=334						
YULB				*e*S	Sn	21 24 15.0	-1.2
	baz=334						
SGST	**Jiashian**	**2.12**	**323**	*e*S	Sn	21 24 16.4	-0.4
	baz=322						
HGSD	**Ruisui**	**2.15**	**346**	*e*S	Sn	21 24 17.5	+0.1
	baz=347						
EHY	**Hungye**	**2.19**	**344**	*e*S	Sn	21 24 16.7	-1.5
	baz=337						
CHN1	**Nanshi**	**2.23**	**323**	P	Pn	21 23 49.4	+0.3
	baz=323						
CHN1				S	Sn	21 24 18.4	-0.8
	baz=323						
SNST	**Tainan City**	**2.28**	**323**	*e*P	Pn	21 23 49.5	-0.1
	baz=323						
SNST				*e*S	Sn	21 24 19.5	-0.6
	baz=323						
YUS	**Yu-Shan**	**2.29**	**336**	*e*P	Pn	21 23 50.9	+0.6
	baz=335						
TWK	**Hsinying**	**2.32**	**324**	P	Pn	21 23 50.1	0.0
	baz=324						
TWK				S	Sn	21 24 19.2	-1.8
	baz=324						
ALS	**Alishan**	**2.37**	**333**	P	Pn	21 23 51.5	+0.5
	baz=325						
ALS				S	Sn	21 24 22.2	-0.3
	baz=325						
VWDT	**VWDT**	**2.47**	**342**	*e*P	Pn	21 23 53.2	+1.3
	baz=344						
VWDT				*e*S	Sn	21 24 23.7	-0.5
	baz=344						
WHYT	**Xinyi Township**	**2.52**	**336**	P	Pn	21 23 52.6	+0.1
	baz=327						
WHYT				S	Sn	21 24 24.4	-0.8
	baz=327						
CHN8	**Yiju**	**2.54**	**320**	*e*P	Pn	21 23 52.8	+0.1
	baz=326						
CHY	**Chiayi**	**2.54**	**326**	*e*S	Sn	21 24 24.2	-1.4
	baz=321						
SSLB	**Suanglung**	**2.56**	**338**	P	Pn	21 23 53.3	+0.3
	baz=330						
SSLB				S	Sn	21 24 25.7	-0.5
	baz=330						
WLGB	**Puzi**	**2.59**	**323**	*e*S	Sn	21 24 26.2	-0.5
	baz=318						
WGK	**Gukeng**	**2.63**	**330**	*e*S	Sn	21 24 25.9	-1.7
	baz=330						
WDLH	**Douliu**	**2.65**	**330**	*e*S	Sn	21 24 26.1	-1.7
	baz=330						
SMLT	**Sun Moon Lake**	**2.67**	**338**	*e*P	Pn	21 23 54.5	+0.1
	baz=330						
WJS	**Zhushan**	**2.68**	**335**	*e*S	Sn	21 24 27.1	-1.5
	baz=334						
WNT	**Mingjian**	**2.75**	**334**	*e*S	Sn	21 24 30.3	+0.2
	baz=334						
CHGB	**Renai**	**2.76**	**344**	*e*P	Pn	21 23 56.8	+1.3
	baz=344						
CHGB				*e*S	Sn	21 24 30.5	-0.1
	baz=344						
WSF	**Szhu**	**2.76**	**324**	*e*S	Sn	21 24 29.2	-1.2
	baz=324						
DPDB	**Guoxing**	**2.80**	**340**	*e*P	Pn	21 23 55.4	-0.5
	baz=332						
DPDB				*e*S	Sn	21 24 31.4	0.0
	baz=332						
WHF	**Hehuan Shan**	**2.82**	**346**	*e*S	Sn	21 24 31.6	-0.7
	baz=352						
WDGT	**Dungji**	**2.84**	**311**	*e*P	Pn	21 23 56.0	-0.3
	baz=311						
WDGT				*e*S	Sn	21 24 30.2	-1.9
	baz=311						
RLNB	**Erlin**	**2.90**	**329**	*e*S	Sn	21 24 32.5	-1.0
	baz=333						
PHUB	**P'eng-hu**	**3.07**	**314**	*e*P	Pn	21 23 58.5	-0.6
	baz=319						
PHUB				S	Sn	21 24 34.7	-2.4
	baz=319						
PNG	**Penghu**	**3.12**	**314**	P	Pn	21 23 59.2	-0.5
	baz=314						
PNG				S	Sn	21 24 36.1	-2.1
	baz=314						

IDC 11 21:26:33.9±2.9, 6°.72S×151°.32E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.5/32, mbtmp3.7/4, ML1.2/1, Error ellipse: s-maj=73.0km s-min=46.5km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.91**	**237**	Pn	Pn	21 27 48.2	-0.8
	0.6nm,0.3s,baz=291,slow=16,SNR=2.1						
PMG				Sn	Sn	21 28 40.1	-6.6
	1.1nm,0.3s,baz=201,slow=18,SNR=1.7						
WRA	**Warramunga Arr**	**21.09**	**230**	P	P	21 31 19.2	-0.8
	1.1nm,0.6s,baz=57,slow=10.0,SNR=3.4						
ASAR	**Alice Springs**	**23.75**	**223**	P	P	21 31 48.2	+0.1
	0.7nm,0.5s,baz=56,slow=8.9,SNR=15						
STKA	**Stephens Creek**	**26.63**	**199**	P	P	21 32 14.7	+0.4
	0.6nm,0.4s,baz=9.9,slow=10,SNR=4.6						
TORD	**Torodi Ar. Bea**	**149.43**	**284**	PKPbc	PKPbc	21 46 25.9	-0.2
	0.5nm,0.7s,baz=96,slow=2.6,SNR=2.6						

ISC 11 21:28:37.1±0.8, 50°.04N±0°.04×18°.40E±0°.02, h0^{km}, n22, σ1^{s}13/35, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.14**	**290**	*e*Pg	**Pg**	**21 28 40.7**	**+1.0**
RAC				*e*Sg	**Sg**	**21 28 44.2**	**+2.7**
MORC	**Moravsky Berou**	**0.61**	**245**	*e*PG	**Pg**	**21 28 49.2**	**+0.4**
MORC				*e*SG	**Sg**	**21 28 57.4**	**+0.7**
OJC	**Ojcow**	**0.92**	**78**	*e*Pg	**Pg**	**21 28 53.1**	**-1.7**
OJC				*e*Sg	**Sg**	**21 29 05.5**	**-1.2**
KRLC	**Kraliky**	**1.04**	**273**	*e*PG	**Pg**	**21 28 55.8**	**-1.2**
KRLC				*e*SG	**Sg**	**21 29 10.6**	**+0.1**
	comp=Z,2.4nm,0.3s						
LANS	**Liptovska Anna**	**1.13**	**141**	*e*PG	**Pg**	**21 28 58.7**	**0.0**
LANS				*e*SG	**Sb**	**21 29 16.3**	**+1.5**
JAVC	**Velka Javorina**	**1.27**	**202**	*e*PG	**Pg**	**21 29 00.6**	**-0.8**
DPC	**Dobruska-Polom**	**1.37**	**284**	*e*PG	**Pg**	**21 29 02.6**	**-0.7**
DPC				*e*SG	**Sb**	**21 29 21.6**	**-0.1**
	comp=Z,14nm,0.7s						
VRAC	**Vranov**	**1.38**	**239**	*e*PG	**Pg**	**21 29 03.0**	**-0.5**
VRAC				*e*SG	**Sn**	**21 29 21.7**	**-0.9**
NIE	**Niedzica**	**1.38**	**116**	*e*Pg	**Pn**	**21 29 03.1**	**-0.6**
NIE				*e*Sg	**Sg**	**21 29 22.8**	**+1.3**
OSTC	**Ostas**	**1.49**	**291**	*e*PG	**Pn**	**21 29 04.0**	**-1.2**
OSTC				*e*SG	**Sn**	**21 29 25.6**	**+0.2**
	comp=Z,8.5nm,0.8s						
VYHS	**Vyhne**	**1.57**	**169**	*e*PG	**Pn**	**21 29 05.5**	**-0.8**
VYHS				*e*SG	**Sg**	**21 29 28.1**	**+0.6**
CHVC	**Chvalec**	**1.60**	**291**	*e*PG	**Pn**	**21 29 06.2**	**-0.5**
CHVC				*e*SG	**Sg**	**21 29 28.8**	**+0.4**
	comp=Z,5.2nm,0.5s						
UPC	**Upice**	**1.60**	**288**	*e*PG	**Pn**	**21 29 06.5**	**-0.2**
UPC				*e*SG	**Sg**	**21 29 28.4**	**-0.1**
	comp=Z,5.0nm,0.5s						
KRUC	**Moravsky**	**1.63**	**234**	*e*PN	**Pn**	**21 29 07.1**	**+0.1**
KRUC				*e*SG	**Sg**	**21 29 29.3**	**-0.1**
MODS	**Modra-Piesok**	**1.82**	**204**	*e*SN	**Sn**	**21 29 30.8**	**-2.6**
TREC	**Trest**	**2.03**	**250**	*e*SG	**Sg**	**21 29 41.4**	**-0.9**
	comp=Z,4.2nm,0.6s						
GOPC	**GO Pecny, Ondr**	**2.33**	**268**	*e*SG	**Sg**	**21 29 51.0**	**-1.0**
	comp=Z,5.2nm,0.8s						
PRU	**Pruhonice**	**2.49**	**270**	*e*SG	**Sg**	**21 29 55.9**	**-1.0**
	comp=Z,3.6nm,0.6s						
PVCC	**Panska Ves**	**2.50**	**283**	*e*SG	**Sg**	**21 29 57.4**	**-0.1**
	comp=Z,7.4nm,0.6s						
KOLS	**Kolonicke sedl**	**2.76**	**112**	*e*PG	**Pb**	**21 29 29.5**	**+2.2**
BRG	**Berggiesshubel**	**2.97**	**288**	SG	**Sg**	**21 30 11.9**	**-0.4**
	2.3nm,0.4s						
KHC	**Kasperske Hory**	**3.26**	**256**	*e*SG	**Sg**	**21 30 20.5**	**-1.4**
	comp=Z,3.1nm,0.5s						

*ISCJB **11** 21:41:02.3±0.3, 47°.13N±0°.03×143°.76E±0°.06, h400^{km}, mb3.9/41, Error ellipse: s-maj=5.8km s-min=3.7km az=178.6*

*MOS **11** 21:41:03.6±0.9, 47°.13N×143°.75E, h425^{km}, mb3.9/22, Error ellipse: s-maj=10.5km s-min=7.8km az=97.5*

*IDC **11** 21:41:04.7±0.9, 47°.20N×143°.70E, h412^{km}±10^{km}, mb3.3/12, mb1 3.4/19, mb1mx3.2/38, mbtmp4.2/19, Error ellipse: s-maj=15.6km s-min=11.7km az=97.0*

*SKHL **11** 21:41:04.6±0.4, 47°.11N×143°.77E, h409^{km}±17^{km}, mb4.4/11, msh4.6/6*

*JMA **11** 21:41:05.9±0.4, 46°.65N×143°.84E, h435^{km}, M3.8*

*NEIC **11** 21:41:05.0±0.8, 47°.13N×143°.65E, h415^{km}±7^{km}, mb4.2/23, Error ellipse: s-maj=17.3km s-min=14.9km az=113.0*

ISC 11 21:41:03.9±0.5, 47°.02N±0°.05×143°.66E±0°.06, h400^{km}, n125, σ2^{s}00/141, mb3.9/41, 5C-8D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**0.62**	**264**	*e*P	**Pn**	**21 41 57.5**	**+3.7**
YSS	**Yuzh-Sakhalins**	**0.62**	**264**	⇓*i*PN	**Pn**	**21 41 57.3**	**+3.5**
YSS				*e*S	**S**	**21 42 38.6**	**+4.4**
YSS				pmax	pmax		
	comp=Z,130nm,0.8s						
YSS				smax	smax		
	comp=E,120nm,1.1s						
YSS				smax	smax		
	comp=N,270nm,1.4s						
YSS	**Yuzh-Sakhalins**	**0.62**	**264**	⇓*i*P	**Pn**	**21 41 57.6**	**+3.7**
YSS				AMB	AMB	21 41 58.4	
	comp=N,130nm,0.8s						
YSS				*e*S	**S**	**21 42 38.9**	**+4.7**
YSS				A	A	21 42 39.7	
	comp=N,270nm,1.4s						
YSS				A	A	21 42 39.7	
	comp=N,120nm,1.4s						
JWK2	**Keihoku**	**2.10**	**216**	P	**Pn**	**21 42 04.6**	**+4.1**
JWK2				*e*S	**S**	**21 42 51.4**	**+5.2**
JSE	**Soyaes**	**2.19**	**200**	P	**Pn**	**21 42 04.5**	**+3.4**
UGL	**Uglegorsk**	**2.32**	**333**	*e*P	**Pn**	**21 42 04.4**	**+2.7**
UGL				AMB	AMB	21 42 05.2	
	comp=N,280nm,0.6s						
ASAJ	**Asahikawa**	**3.00**	**195**	P	**Pn**	**21 42 10.5**	**+3.4**
	comp=N,2.4nm,0.3s,baz=32,slow=6.9,SNR=39						
ASAJ				S	**S**	**21 43 03.2**	**+4.9**
	baz=58,slow=33,SNR=4.2						
JTKR	**Abashiri--Toko**	**3.06**	**177**	P	**Pn**	**21 42 10.1**	**+2.5**
JKK2	**Kamakawa 2**	**3.21**	**192**	P	**Pn**	**21 42 12.1**	**+3.2**
JAR	**Ashorobuto**	**3.73**	**179**	P	**Pn**	**21 42 15.7**	**+2.3**
TYV	**Tymovskoe**	**3.90**	**351**	*e*P	**Pn**	**21 42 16.8**	**+2.0**
TYV				AMB	AMB	21 42 17.0	
	comp=N,110nm,0.7s						
NEM2	**Nemuro 2**	**3.94**	**157**	P	**Pn**	**21 42 15.7**	**+0.3**
NEM2				*e*S	**S**	**21 43 11.0**	**-2.4**
JCH	**Churui**	**4.41**	**183**	P	**Pn**	**21 42 20.5**	**+0.5**
JCH				*e*S	**S**	**21 43 19.3**	**-2.4**
JEW	**Eniwo**	**4.46**	**201**	P	**Pn**	**21 42 23.3**	**+2.8**
JEW				*e*S	**S**	**21 43 24.1**	**+1.4**
JNBK	**Urakawa-nobuka**	**4.78**	**188**	P	**Pn**	**21 42 24.7**	**+1.0**
ERM	**Erimo**	**5.02**	**184**	*e*P	**Pn**	**21 42 27.9**	**+1.9**
ERM	**Erimo**	**5.02**	**184**	*c i*PN	**Pn**	**21 42 27.3**	**+1.2**
TEY	**Ternei**	**5.30**	**251**	⇓*i*PN	**Pn**	**21 42 31.7**	**+2.8**
TEY				pmax	pmax		
	comp=E,30nm,0.9s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
TEY	**Ternei**	**5.30**	**251**	⇓*i*P	**Pn**	**21 42 32.0**	**+3.1**
TEY				AMB	AMB	21 42 32.5	
	comp=Z,30nm,1.0s						
JKB	**Kayabe**	**5.46**	**201**	P	**Pn**	**21 42 31.2**	**+0.4**
JKB				*e*S	**S**	**21 43 38.0**	**-3.4**
JOSM	**Okushiri--Mats**	**5.77**	**213**	P	**Pn**	**21 42 35.0**	**+1.0**
JOT	**Ohata**	**5.94**	**199**	P	**Pn**	**21 42 35.6**	**-0.3**
JOT				*e*S	**S**	**21 43 46.7**	**-4.1**
GRNR	**Gornyy**	**6.07**	**311**	*e*P	**Pn**	**21 42 39.0**	**+2.0**
GRNR				AMB	AMB	21 42 40.0	
	comp=Z,26nm,0.9s						
GRNR				*e*S	**S**	**21 43 55.0**	**+1.9**
GRNR				A	A	21 43 55.8	
	comp=Z,35nm,0.9s						
NKL	**Nikolayevsk**	**6.43**	**344**	*e*PN	**Pn**	**21 42 42.0**	**+1.1**
NKL				pmax	pmax		
	comp=Z,4.0nm,0.3s						
NKL				pmax	pmax		
	comp=E,21nm,0.9s						
NKL				pmax	pmax		
	comp=N,9.0nm,1.0s						
NKL	**Nikolayevsk**	**6.43**	**344**	*e*P	**Pn**	**21 42 42.2**	**+1.3**
NKL				AMB	AMB	21 42 42.8	
	comp=N,58nm,0.9s						
JANG	**Nango**	**6.82**	**194**	P	**Pn**	**21 42 45.2**	**-0.4**
JANG				*e*S	**S**	**21 44 03.4**	**-5.3**
JOM	**Ohasama**	**7.74**	**194**	P	**Pn**	**21 42 56.6**	**+0.7**
JMK	**Ichinoseki**	**8.26**	**193**	P	**Pn**	**21 43 02.6**	**+0.8**
KLR	**Kul'dur**	**8.27**	**290**	*d i*PN	**P**	**21 43 03.9**	**+1.8**
KLR				pmax	pmax		
	comp=Z,12nm,1.0s						
USA0B	**Ussuriysk Arra**	**8.65**	**255**	*e*P	**P**	**21 43 07.5**	**+1.0**
USRK	**Ussuriysk Ar.**	**8.65**	**255**	P	**P**	**21 43 07.6**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=64,slow=10,SNR=16						
EKMR	**Ekimchan**	**9.16**	**315**	*e*P	**Pn**	**21 43 14.0**	**+2.0**
EKMR				AMB	AMB	21 43 31.0	
	comp=Z,4.0nm,0.6s						
EKMR				*e*S	**S**	**21 44 57.5**	**+0.2**
EKMR				A	A	21 44 58.5	
	comp=Z,11nm,1.0s						
MDJ	**Mudanjiang**	**10.11**	**261**	*e*P	**P**	**21 43 23.7**	**+1.1**
MDJ				*e*		21 43 23.9	
PEA0B	**Petropavlovsk-**	**10.88**	**51**	*e*P	**P**	**21 43 31.1**	**+0.2**
PETK	**Petropavlovsk-**	**10.88**	**51**	P	**P**	**21 43 31.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=222,slow=8.2,SNR=5.9						
MJB9	**Matsu-Tunnel**	**11.23**	**203**	*e*P	**Pn**	**21 43 36.9**	**+0.7**
MAJO	**Matsushiro**	**11.23**	**203**	*e*P	**Pn**	**21 43 36.6**	**+0.5**
MAJO	**Matsushiro**	**11.23**	**203**	*d i*PN	**Pn**	**21 43 36.9**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAT	**Matsushiro**	**11.23**	**203**	P	**Pn**	**21 43 37.0**	**+0.8**
MJAR	**Matsushiro Arr**	**11.23**	**203**	P	**Pn**	**21 43 37.9**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=6.8,slow=12,SNR=22						
PET	**Petropavlovsk**	**11.36**	**53**	*e*P	**P**	**21 43 36.2**	**0.0**
PET	**Petropavlovsk**	**11.36**	**53**	*e*PN	**P**	**21 43 36.2**	**0.0**
BMKR	**Bomnak**	**12.10**	**315**	*e*P	**P**	**21 43 46.0**	**+1.6**
BMKR				AMB	AMB	21 43 47.5	
	comp=Z,1.0nm,0.5s						
INU	**Inuyama**	**12.68**	**205**	*e*P	**Pn**	**21 43 53.0**	**+0.1**
KROS	**Kirovskiy**	**12.89**	**311**	*e*P	**P**	**21 43 54.0**	**+0.9**
KROS				AMB	AMB	21 43 54.9	
	comp=Z,3.0nm,0.4s						
CN2	**Changchun**	**13.19**	**263**	*e*P	**P**	**21 43 54.8**	**-1.7**
MA2	**Magadan**	**13.27**	**16**	*e*P	**P**	**21 43 56.4**	**-0.7**
MA2	**Magadan**	**13.27**	**16**	*e*PN	**P**	**21 43 56.4**	**-0.7**
JHJ2	**Mitsune**	**14.20**	**193**	*e*P	**P**	**21 44 09.8**	**+2.2**
KSRS	**Korea Array**	**15.05**	**236**	P	**P**	**21 44 19.7**	**+2.9**
	comp=Z,1.5nm,0.3s,baz=46,slow=10,SNR=28						
KS15	**Wonju Array Si**	**15.08**	**236**	*e*P	**P**	**21 44 18.6**	**+1.5**
	comp=Z,14nm,1.0s						
SEY	**Seymchan**	**16.69**	**14**	P	**P**	**21 44 33.6**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=199,slow=7.2,SNR=14						
SEY	**Seymchan**	**16.69**	**14**	*i* P	**P**	**21 44 32.6**	**-1.4**
JNU	**Nakatsue**	**16.95**	**220**	P	**P**	**21 44 41.0**	**+3.7**
	comp=Z,0.9nm,0.3s,baz=42,slow=2.2,SNR=5.9						
JNU	**Nakatsue**	**16.95**	**220**	*e*P	**P**	**21 44 39.0**	**+1.7**
	comp=Z,17nm,1.1s						
YAK	**Yakutsk**	**17.02**	**337**	*e*P	**P**	**21 44 38.3**	**+0.7**
	comp=Z,17nm,0.5s						
YAK	**Yakutsk**	**17.02**	**337**	*e*P	**P**	**21 44 38.3**	**+0.7**
YAK				pmax	pmax		
	comp=Z,17nm,0.5s						
BOD	**Bodaibo**	**20.89**	**312**	*e*P	**P**	**21 45 15.6**	**-0.4**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.9s						
BJI	**Beijing**	**21.04**	**261**	⇑*e*P	**P**	**21 45 19.0**	**+1.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT	**Baijiatuau**	**21.05**	**261**	*e*P	**P**	**21 45 18.6**	**+0.8**
	comp=Z,10nm,0.8s						
BJT	**Baijiatuau**	**21.05**	**261**	*e*P	**P**	**21 45 18.6**	**+0.8**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.81**	**267**	*e*P	**P**	**21 45 44.2**	**+1.4**
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.0s						
BILL	**Bilibino**	**24.03**	**21**	⇓*e*P	**P**	**21 45 47.0**	**+2.6**
BILL				e*SP	**sP**	**21 47 46.4**	**+6.3**
BILL				S	**S**	**21 49 27.0**	**-4.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**24.63**	**286**	*e*P	**P**	**21 45 50.0**	**-0.2**
	comp=Z,6.7nm,0.7s						
ULN	**Ulaanbaatar**	**24.63**	**286**	*ce*P	**P**	**21 45 49.7**	**-0.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	**Songino Array**	**25.07**	**286**	P	**P**	**21 45 54.0**	**0.0**
	comp=Z,5.6nm,0.8s,baz=75,slow=8.9,SNR=25						
TLY	**Talaya**	**26.24**	**295**	*i* P	**P**	**21 46 02.2**	**-2.0**
WHN	**Wuhan**	**27.93**	**244**	P	**P**	**21 46 21.6**	**+2.2**
GTA	**Gaotai**	**32.49**	**273**	*e*P	**P**	**21 46 59.8**	**+0.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CD2	**Chengdu**	**34.52**	**257**	*e*P	**P**	**21 47 15.6**	**-0.8**
DGZ	**Jazzator, Alta**	**36.71**	**295**	*i* P	**P**	**21 47 33.6**	**-1.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**37.10**	**303**	P	**P**	**21 47 36.7**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=71,slow=7.5,SNR=4.1						
WMQ	**Urumqi**	**38.70**	**286**	*e*P	**P**	**21 47 51.0**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,42nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.9s						
WMQ				LR	LR		
	comp=N,300nm,27.9s						
WMQ				LR	LR		
	comp=E,400nm,29.2s						
WMQ				LR	LR		
	comp=Z,44nm,29.2s						

ILAR	**Eielson Array**	**40.37**	**38**	P	**P**	**21 48 03.0**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=280,slow=7.1,SNR=3.7						
MK31	**Makanchi Array**	**40.96**	**293**	*e*P	**P**	**21 48 09.0**	**-0.4**
	comp=Z,4.6nm,0.8s						
MK31	**Makanchi Array**	**40.96**	**293**	*e*P	**P**	**21 48 09.0**	**-0.4**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**40.96**	**293**	P	**P**	**21 48 08.9**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=73,slow=8.2,SNR=52						
MKAR	**Makanchi Array**	**40.96**	**293**	*ce*P	**P**	**21 48 08.8**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAKZ	**Makanchi**	**41.15**	**293**	*e*P	**P**	**21 48 10.4**	**-0.5**
	comp=Z,4.7nm,0.8s						
MAKZ	**Makanchi**	**41.15**	**293**	*e*P	**P**	**21 48 10.4**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**41.71**	**300**	*e*P	**P**	**21 48 14.5**	**-0.7**
	comp=Z,5.7nm,0.4s						
KURK	**Kurchatov**	**41.71**	**300**	*i* P	**P**	**21 48 14.2**	**-1.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LSA	**Lhasa**	**43.79**	**266**	*e*P	**P**	**21 48 32.9**	**+0.3**
	comp=Z,4.7nm,0.6s						
LSA	**Lhasa**	**43.79**	**266**	*e*P	**P**	**21 48 32.9**	**+0.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**45.60**	**306**	*i* P	**P**	**21 48 44.4**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OTUK	**Ortayu**	**46.45**	**299**	*i* P	**P**	**21 48 52.2**	**-0.3**
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AAK	**Ala-Archa**	**47.79**	**291**	*ce*P	**P**	**21 48 59.9**	**-3.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
JIRN	**Jiri**	**48.46**	**268**	*e*P	**P**	**21 49 08.5**	**+0.1**
	comp=Z,20nm,0.3s						
GUN	**Gumba**	**48.51**	**268**	*e*P	**P**	**21 49 08.7**	**0.0**
	comp=Z,11nm,0.3s						
KKN	**Kakani**	**49.00**	**268**	*e*P	**P**	**21 49 12.8**	**+0.6**
	comp=Z,7.7nm,0.2s						
PKI	**Pulchoki**	**49.05**	**268**	*e*P	**P**	**21 49 12.5**	**-0.2**
PKIN	**Phulchoki**	**49.05**	**268**	*e*P	**P**	**21 49 12.7**	**0.0**
	comp=Z,4.2nm,0.4s						
GKN	**Gorkha**	**49.30**	**269**	*e*P	**P**	**21 49 14.5**	**+0.1**
	comp=Z,20nm,0.4s						
KK31	**Karatay Array**	**50.07**	**294**	*e*P	**P**	**21 49 19.1**	**-0.6**
	comp=Z,3.0nm,0.7s						
KK31	**Karatay Array**	**50.07**	**294**	*e*P	**P**	**21 49 19.1**	**-0.6**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARU	**Arti**	**50.29**	**314**	*e*P	**P**	**21 49 20.2**	**-0.9**
	comp=Z,8.1nm,1.2s						
ARU	**Arti**	**50.29**	**314**	*d i*P	**P**	**21 49 17.7**	**-3.4**
ARU				*PP	**PcP**	**21 50 35.1**	**+1.9**
ARU				S	**S**	**21 55 57.6**	**-4.6**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PYUN	**Piuthan**	**50.37**	**270**	*e*P	**P**	**21 49 23.1**	**+0.7**
	comp=Z,9.2nm,0.3s						
FAKI	**Fak Fak**	**50.73**	**195**	*e*P	**P**	**21 49 25.4**	**+0.5**
	comp=Z,39nm,1.1s						
BTK	**Batken**	**51.50**	**290**	*e*P	**P**	**21 49 29.1**	**-1.4**
	comp=Z,4.0nm,0.4s						
BTK	**Batken**	**51.50**	**290**	*e*P	**P**	**21 49 29.1**	**-1.4**
BTK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GAR	**Garm**	**52.41**	**290**	*e*P	**P**	**21 49 36.7**	**-0.4**
	comp=Z,6.1nm,1.0s						
GAR	**Garm**	**52.41**	**290**	*e*P	**P**	**21 49 36.7**	**-0.4**
GAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	**ARCESS Array B**	**55.31**	**338**	P	**P**	**21 49 55.8**	**-1.3**
	comp=Z,4.6nm,0.9s,baz=15,slow=5.0,SNR=4.4						
ARCES	**ARCESS Array B**	**55.31**	**338**	P	**P**	**21 49 55.8**	**-1.3**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GSI	**Gunungsitoli**	**60.60**	**236**	*e*P	**P**	**21 50 33.4**	**-0.7**
	comp=Z,4.9nm,0.8s						
MTN	**Manton Dam**	**60.64**	**194**	*e*P	**P**	**21 50 35.3**	**+1.0**
	comp=Z,33nm,1.4s						
GEYT	**Alibeck**	**60.76**	**295**	P	**P**	**21 50 34.5**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=46,slow=4.5,SNR=5.1						
GYA0B	**ALIBECK ARRAY**	**60.76**	**295**	*e*P	**P**	**21 50 33.8**	**-1.2**
	comp=Z,2.5nm,0.6s						
FIA1	**FINESS Array S**	**60.83**	**331**	*e*P	**P**	**21 50 33.4**	**-1.6**
	comp=Z,19nm,1.5s						
FINES	**FINESS Array B**	**60.83**	**331**	P	**P**	**21 50 33.3**	**-1.6**
	comp=Z,1.3nm,0.4s,baz=54,slow=7.6,SNR=26						
FINES	**FINESS Array B**	**60.83**	**331**	*i* P	**P**	**21 50 33.2**	**-1.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
COR	**Corvallis**	**61.03**	**55**	*e*P	**P**	**21 50 35.9**	**-0.7**
	comp=Z,45nm,1.4s						
COR	**Corvallis**	**61.03**	**55**	*e*P	**P**	**21 50 35.9**	**-0.7**
COR				pmax	pmax		
	comp=Z,45nm,1.4s						
OBN	**Obninsk**	**61.22**	**321**	*i* P	**P**	**21 50 36.5**	**-1.1**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB2	**NORSAR Subarra**	**65.64**	**337**	P	**P**	**21 51 04.7**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**65.64**	**337**	P	**P**	**21 51 04.5**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=32,slow=6.3,SNR=4.6						
KIV	**Kislovodsk**	**65.77**	**309**	*e*P	**P**	**21 51 07.4**	**0.0**
	comp=Z,5.2nm,0.7s						
KIV	**Kislovodsk**	**65.77**	**309**	*e*P	**P**	**21 51 06.4**	**-1.0**
KIV				pmax	pmax		
	comp=Z,18nm,0.9s						
KBZ	**Khabaz**	**65.81**	**309**	P	**P**	**21 51 07.4**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=117,slow=4.1,SNR=3.6						
WB2	**Warramunga Arr**	**67.18**	**189**	*e*P	**P**	**21 51 16.4**	**+0.2**
	comp=Z,9.7nm,1.4s						
WRA	**Warramunga Arr**	**67.18**	**190**	P	**P**	**21 51 16.3**	**0.0**
	comp=Z,1.4nm,0.6s,baz=0.0,slow=7.5,SNR=9.2						
AKASG	**Malin Array Be**	**67.49**	**321**	P	**P**	**21 51 16.1**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=37,slow=6.9,SNR=4.1						
AS31	**Alice Springs**	**70.90**	**189**	*e*P	**P**	**21 51 39.7**	**+0.8**
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**70.91**	**189**	P	**P**	**21 51 40.0**	**+1.1**
	comp=Z,4.0nm,0.7s,baz=1.9,slow=5.1,SNR=36						

MEX 11 21:55:54.8±0.6**, 16°.35N**×**98°.65W, h21**^{km}±49^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.21**	**4**	*i* P	Pn	21 56 13.2	-3.5
TLIG				*i* S	Sb	21 56 28.0	-4.4
CAIG	**El Cayaco**	**1.70**	**295**	*e*P	Pn	21 56 21.1	-2.1
CAIG				*i* S	Sn	21 56 39.9	-4.5
MEIG	**Mezcala**	**1.82**	**330**	*e*P	Pn	21 56 22.4	-2.7
MEIG				*i* S	Sn	21 56 43.2	-4.4
VHO	**Vista Hermosa**	**1.98**	**68**	*e*P	Pn	21 56 25.0	-2.3
VHO				*i* S	Sn	21 56 47.5	-4.0
PLIG	**Platanillo**	**2.19**	**338**	*i* P	Pn	21 56 27.8	-2.4
PLIG				*e*S	Sn	21 56 53.1	-3.6
HUIG	**Huatulco**	**2.51**	**103**	*i* P	Pn	21 56 32.2	-2.2
HUIG				*i* S	Sn	21 57 01.6	-2.9
CMIG	**Matias Romero**	**3.69**	**78**	*e*P	Pn	21 56 48.0	-2.6
CMIG				*i* S	Sn	21 57 30.0	-3.4

NSSC ***11*** *22:30:08.4±0.3, 33°.96N×35°.87E, h12*^{km}*±2*^{km}*, ML1.3*

ISCJB ***11*** *22:30:09.4±1.3, 33°.92N±0°.05×35°.84E±0°.08, h18*^{km}*±19*^{km}*, Error ellipse: s-maj=10.6km s-min=8.4km az=178.0*

GRAL ***11*** *22:30:10.4±0.3, 33°.90N×35°.88E, h3*^{km}*±12*^{km}*, MD2.6*

ISC 11 22:30:09.4±1.3**, 33°.91N**±0°.04×**35°.86E**±0°.06**, h16**^{km}±14^{km}**, n8,** σ**0**^{s}**.43**/14**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.17**	**269**	*e*P	**Pg**	**22 30 13.8**	**+0.1**
BHL				*e*S	**Sg**	**22 30 16.4**	**-0.3**
DQRL	**Deir Qamar**	**0.31**	**230**	*e*P	**Pg**	**22 30 16.4**	**+0.3**
DQRL				*e*S	**Sg**	**22 30 20.6**	**0.0**
HWQ	**Hawqa**	**0.38**	**11**	*e*P	**Pg**	**22 30 17.3**	**+0.1**
QRWL	**Qaraoun**	**0.39**	**202**	*e*P	**Pg**	**22 30 17.4**	**0.0**
RCY	**Rachaya**	**0.41**	**183**	*e*P	**Pg**	**22 30 17.8**	**0.0**
RCY				*e*S	**Sg**	**22 30 23.2**	**-0.3**
BRBR	**Barbar**	**0.50**	**171**	*e*P	**Pg**	**22 30 19.1**	**-0.3**
BRBR				*e*S	**Sg**	**22 30 27.4**	**+1.1**
BRBR				AML	AML	22 30 30.6	
	comp=E,9.5nm,0.3s						
BRBR				AML	AML	22 30 31.0	
	comp=N,17nm,0.6s						
QASN	**Qassioun**	**0.51**	**137**	*e*P	**Pg**	**22 30 19.4**	**-0.2**
QASN				*e*S	**Sg**	**22 30 26.9**	**+0.4**
QASN				AML	AML	22 30 29.1	
	comp=N,42nm,0.5s						
QASN				AML	AML	22 30 30.2	
	comp=E,79nm,0.3s						
TOTH	**TOTAH**	**0.72**	**139**	*e*P	**Pb**	**22 30 23.4**	**-0.3**
TOTH				*e*S	**Sb**	**22 30 33.5**	**+0.1**
TOTH				AML	AML	22 30 35.1	
	comp=N,13nm,0.3s						
TOTH				AML	AML	22 30 35.1	
	comp=E,6.4nm,0.3s						

IGQ 11 23:08:13.5±0.2**, 2°S**±2°×**7°9W**±°**, h10**^{km}**, MLv4.2, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	**Cochancay**	**0.17**	**230**	P	Pg	23 08 17.4	+0.3
COHC				P	Pg	23 08 17.4	+0.3
COHC				S	Sg	23 08 20.6	+1.0
COHC				S		23 08 20.7	
MILO	**Milagro-Astudi**	**0.44**	**280**	P	Pg	23 08 22.1	+0.1
MILO				S	Sb	23 08 29.6	-0.3
ARIO	**Riobamba**	**0.82**	**31**	P	Pg	23 08 27.8	-1.6
IGUA	**Igualata**	**0.99**	**29**	P	Pg	23 08 31.0	-1.7
BMAS	**Trigal station**	**1.07**	**37**	P	Pg	23 08 32.1	-2.0
BMAS				S	Sg	23 08 46.6	-1.4
ARRY	**Arrayan**	**1.08**	**38**	P	Pg	23 08 32.1	-2.3
PAT1	**Patacocha**	**1.09**	**39**	P	Pg	23 08 32.8	-1.7
BIL2	**Estacion Bilba**	**1.09**	**35**	P	Pg	23 08 32.9	-1.7
BPAT	**Tungurahua Vol**	**1.10**	**39**	P	Pg	23 08 32.8	-1.8
BPAT				S	Sg	23 08 47.4	-1.6
BBIL	**Ulba Tungurahu**	**1.11**	**35**	P	Pg	23 08 33.3	-1.5
RETU	**Refugio**	**1.13**	**37**	P	Pg	23 08 33.5	-1.8
BULB	**Ulba Tungurahu**	**1.16**	**38**	P	Pg	23 08 33.9	-2.0
BULB				S	Sg	23 08 49.2	-1.8
RUN5	**Runtun**	**1.17**	**37**	P	Pb	23 08 34.5	-1.5
BRUN	**Tungurahua Vol**	**1.17**	**37**	P	Pb	23 08 34.0	-2.1
BRUN				S	Sg	23 08 48.9	-2.5
AAM2	**Ambato 2 (Merc**	**1.20**	**25**	P	Pb	23 08 34.9	-1.6
MORR	**Playas El Morr**	**1.24**	**257**	P	Pn	23 08 34.3	-2.6
APUY	**Puyo**	**1.44**	**52**	P	Pn	23 08 40.1	+0.3
APUY				S	Sg	23 09 00.1	+0.2
PIS1	**Pisayambo**	**1.49**	**30**	P	Pn	23 08 40.0	-0.8
PIS1				S	Sb	23 09 01.0	+0.3
PISA	**Pisayambo**	**1.49**	**30**	P	Pn	23 08 39.9	-0.9
ILLI	**Illinizas Sur**	**1.68**	**14**	P	Pn	23 08 43.2	-0.2
BMOR	**Cotopaxi Volca**	**1.75**	**22**	P	Pn	23 08 44.7	+0.3
BNAS	**Cotopaxi Volca**	**1.80**	**21**	P	Pn	23 08 45.5	+0.5
BREF	**Cotopaxi Volca**	**1.81**	**22**	P	Pn	23 08 46.0	+0.7
BTAM	**Cotopaxi Volca**	**1.82**	**24**	P	Pn	23 08 46.0	+0.6
BVC2	**Cotopaxi Volca**	**1.83**	**23**	P	Pn	23 08 46.3	+0.7
VC1	**Cotopaxi 1**	**1.85**	**23**	P	Pn	23 08 46.7	+0.9
COV1	**Cotopaxi Volc**	**1.86**	**25**	P	Pn	23 08 45.9	-0.1
SALI	**Salinas**	**1.87**	**275**	P	Pn	23 08 42.2	-3.4
ATEN	**Tena**	**1.88**	**44**	P	Pn	23 08 46.6	+0.9
ATEN				S	Sb	23 09 11.1	-0.5
GONZ	**Gonzanam**	**1.89**	**188**	P	Pn	23 08 47.1	+1.0
ARDO	**Archidona, Ten**	**1.90**	**44**	P	Pn	23 08 46.8	+0.8
ARDO				S	Sb	23 09 11.4	-0.6
PITA	**Cotopaxi Volc**	**1.92**	**21**	P	Pb	23 08 47.8	-1.0
NINA	**Atacazo Ninahu**	**2.02**	**15**	P	Pb	23 08 49.6	-1.0
ANTM	**Antisana-La Mi**	**2.02**	**27**	P	Pn	23 08 49.1	+0.9
ANTG	**Antisana-Guama**	**2.04**	**25**	P	Pn	23 08 49.6	+1.2
ANTS	**Antisana-Sarah**	**2.08**	**27**	P	Pn	23 08 50.0	+1.0
ANTI	**Antisana**	**2.13**	**27**	P	Pn	23 08 50.9	+1.2
MCRA	**Macar, Loja**	**2.16**	**202**	P	Pn	23 08 45.9	-3.7
GGPC	**Guagua Pichinc**	**2.23**	**14**	P	Pb	23 08 52.9	-1.4
TERV	**Terraza Guagua**	**2.23**	**14**	P	Pb	23 08 53.4	-0.8
YANA	**Yana**	**2.29**	**14**	P	Pb	23 08 53.8	-1.5
MAG1	**Magdalena**	**2.36**	**344**	P	Pn	23 08 51.1	-1.3
PULU	**Pululahua**	**2.45**	**15**	P	Pb	23 08 56.3	-1.5
ZUMB	**Zumba**	**2.49**	**180**	P	Pn	23 08 56.1	+1.8
PAC1	**Pacto, Paraso**	**2.63**	**7**	P	Pn	23 08 57.7	+1.6
REVS	**Reventador Sur**	**2.70**	**34**	P	Pb	23 09 00.8	-1.3
CUSW	**Cuicocha Oeste**	**2.74**	**16**	P	Pb	23 09 02.9	+0.1
CUSE	**Cuicocha Este**	**2.74**	**15**	P	Pb	23 09 01.3	-1.6
CUIC	**Cuicocha-Domo**	**2.75**	**16**	P	Pb	23 09 01.2	-1.9
URCU	**Urcuqui**	**2.91**	**17**	P	Pb	23 09 03.8	-2.0
CASC	**Dorado de Casc**	**3.06**	**36**	P	Pb	23 09 07.1	-0.9

ISCJB ***11*** *23:09:00.3±0.4, 4°.78S±0°.04×147°.80E±0°.07, h10*^{km}*, Error ellipse: s-maj=10.1km s-min=5.6km az=10.8*

IDC ***11*** *23:09:01.3±1.4, 4°.80S×147°.70E, h0*^{km}*, mb3.7/5, mb1 4.0/7, mb1mx3.8/30, mbtmp3.8/7, ML4.1/1, Error ellipse: s-maj=58.3km s-min=18.8km az=97.0*

NEIC ***11*** *23:09:02.4±1.3, 4°.76S×147°.84E, h14*^{km}*±3*^{km}*, mb4.6/19, Error ellipse: s-maj=14.5km s-min=7.9km az=100.0*

ISC 11 23:09:02.2±0.6**, 4°.76S**±0°.05×**147°.8E**±0°.1**, h10**^{km}**, n34,** σ**0**^{s}**.92**/35**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**2.73**	**351**	*e*Pn	**Pn**	**23 09 45.6**	**-0.6**
PMG	**Port Moresby**	**4.66**	**187**	Pn	**Pn**	**23 10 12.1**	**-0.6**
	3.6nm,0.3s,baz=175,slow=7.1,SNR=4.1						
PMG				Sn	**Sn**	**23 11 06.7**	**-0.2**
	6.4nm,0.3s,baz=24,slow=21,SNR=9.1						
COEN	**Coen**	**10.21**	**206**	*e*Pn	**Pn**	**23 11 27.7**	**-1.2**
CTAO	**Charters Tower**	**15.31**	**185**	*e*Pn	**Pn**	**23 12 39.3**	**+0.7**
	66nm,1.6s						
FAKI	**Fak Fak**	**15.60**	**276**	*e*Pn	**Pn**	**23 12 42.5**	**+0.1**
	63nm,1.3s						
SAUI	**Saumlaki**	**16.68**	**258**	*e*Pn	**Pn**	**23 12 56.0**	**-0.3**
	993nm,1.3s						
GUMO	**Guam**	**18.45**	**351**	*e*P	**Pn**	**23 13 19.5**	**+1.2**
	201nm,1.4s						
WRAB	**Tennant Creek**	**19.96**	**220**	*e*P	**P**	**23 13 35.8**	**+1.0**
	13nm,0.8s						
WB2	**Warramunga Arr**	**19.97**	**220**	*e*P	**P**	**23 13 35.6**	**+0.7**
	12nm,0.8s						
WR1	**Warramunga Arr**	**19.98**	**220**	*e*P	**P**	**23 13 34.9**	**0.0**
WRA	**Warramunga Arr**	**19.98**	**220**	P	**P**	**23 13 34.9**	**0.0**
	0.5nm,0.3s,baz=51,slow=10,SNR=23						
AS31	**Alice Springs**	**23.07**	**214**	*e*P	**P**	**23 14 07.6**	**-0.6**
	3.0nm,0.9s						
ASAR	**Alice Springs**	**23.07**	**214**	P	**P**	**23 14 07.3**	**-0.9**
	2.8nm,0.6s,baz=51,slow=8.7,SNR=35						
ONTNC	**Ouen Toro**	**25.13**	**136**	*e*P	**P**	**23 14 28.6**	**+1.0**
	64nm,1.0s						
STKA	**Stephens Creek**	**27.59**	**191**	P	**P**	**23 14 50.8**	**+1.0**
	0.7nm,0.5s,baz=356,slow=15,SNR=2.5						
NACB	**Ninganchiao**	**38.44**	**320**	*e*P	**P**	**23 16 23.8**	**-0.6**
	24nm,0.8s						
SSLB	**Suanglung**	**38.59**	**318**	*e*P	**P**	**23 16 25.5**	**-0.2**
	73nm,2.0s						
MCQ	**Macquarie Isla**	**50.42**	**172**	*e*P	**P**	**23 18 00.9**	**+1.2**
	484nm,1.6s						
USA0B	**Ussuriysk Arra**	**50.76**	**345**	*e*P	**P**	**23 18 01.6**	**-0.8**
	21nm,1.9s						
UWB	**Uwekahuna B**	**60.94**	**65**	*e*P	**P**	**23 19 14.8**	**-1.3**
	213nm,1.6s						
KKO	**Keanakako`i**	**60.94**	**65**	*e*P	**P**	**23 19 15.2**	**-1.0**
	124nm,1.1s						
SBLHI	**Steaming Bluff**	**60.95**	**65**	*e*P	**P**	**23 19 14.8**	**-1.4**
	426nm,2.0s						
BYL	**Byron's Ledge**	**60.95**	**65**	*e*P	**P**	**23 19 15.1**	**-1.1**
	125nm,1.1s						
SONA0	**Songino Array**	**63.71**	**330**	*e*P	**P**	**23 19 35.7**	**+1.5**
SONM	**Songino Array**	**63.71**	**330**	P	**P**	**23 19 35.7**	**+1.5**
	0.3nm,0.4s,baz=150,slow=6.2,SNR=4.3						
MK32	**Makanchi Array**	**77.04**	**320**	*e*P	**P**	**23 20 56.2**	**+0.5**
MKAR	**Makanchi Array**	**77.04**	**320**	P	**P**	**23 20 56.2**	**+0.5**
	0.1nm,0.3s,baz=101,slow=6.2,SNR=2.6						
ILAR	**Eielson Array**	**84.04**	**23**	P	**P**	**23 21 33.5**	**+0.7**
	0.4nm,0.7s,baz=248,slow=6.2,SNR=4.5						
ILB	**Eielson Array**	**84.04**	**23**	*e*P	**P**	**23 21 33.5**	**+0.7**
RIDG	**Independent Ri**	**84.45**	**24**	*e*P	**P**	**23 21 34.0**	**-1.0**
	8.0nm,1.3s						
BALM	**Baldy**	**84.55**	**27**	*e*P	**P**	**23 21 34.5**	**-1.1**
	2.2nm,0.6s						
DOT	**Dot Lake**	**84.74**	**25**	*e*P	**P**	**23 21 36.3**	**-0.1**
	4.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**145.51**	**286**	PKPbc	**PKPdf**	**23 28 41.0**	**-0.9**
	0.4nm,0.6s,baz=90,slow=4.7,SNR=3.8						
TOA1	**Torodi Ar. Sit**	**145.51**	**286**	*e*PKPdf	**PKPdf**	**23 28 41.0**	**-0.9**

IDC ***11*** *23:09:54.7±2.0, 5°.05S×148°.06E, h0*^{km}*, mb3.7/4, mb1 4.1/5, mb1mx3.8/29, mbtmp3.8/5, ML4.0/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/17, Error ellipse: s-maj=75.0km s-min=27.1km az=112.0*

ISCJB ***11*** *23:09:58.6±1.8, 5°.1S±0°.2×147°.9E±0°.5, h33*^{km}*, mb3.7/4, MS3.6/2, Error ellipse: s-maj=70.9km s-min=19.9km az=21.9*

ISC 11 23:09:59.7±1.8**, 5°.2S**±0°.2×**148°.1E**±0°.5**, h35**^{km}**, n8,** σ**1**^{s}**.64**/6**, mb3.8**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.83**	**221**	P	**Pn**	**23 14 28.1**	**-1.2**
	0.4nm,0.3s,baz=52,slow=11,SNR=2.1						
ASAR	**Alice Springs**	**22.88**	**215**	P	**P**	**23 15 01.6**	**+1.2**
	2.5nm,0.6s,baz=49,slow=9.1,SNR=4.1						
BATI	**Baumata**	**24.68**	**257**	LR	LR	23 28 28.9	
	comp=Z,299nm,18.4s,baz=103,slow=45						
DAV	**Davao City (W)**	**25.53**	**298**	LR	LR	23 23 48.5	
	comp=Z,95nm,19.9s,baz=86,slow=33						
SONM	**Songino Array**	**64.23**	**330**	P	**P**	**23 20 30.0**	**-1.3**
	0.9nm,0.9s,baz=142,slow=5.4,SNR=2.3						
MKAR	**Makanchi Array**	**77.56**	**320**	P	**P**	**23 21 53.9**	**+1.8**
	0.7nm,1.0s,baz=154,slow=44,SNR=1.8						
ILAR	**Eielson Array**	**84.33**	**23**	P	**P**	**23 22 27.8**	**0.0**
	0.4nm,0.7s,baz=229,slow=6.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**145.90**	**286**	PKPbc	**PKPdf**	**23 29 35.2**	**-0.7**
	0.7nm,0.8s,baz=83,slow=4.6,SNR=2.2						

IDC ***11*** *23:10:59.9±1.7, 5°.04S×149°.14E, h0*^{km}*, mb4.0/7, mb1 4.3/8, mb1mx4.0/31, mbtmp4.1/8, ML2.2/1, MS3.6/6, Ms1 3.6/6, ms1mx3.4/17, Error ellipse: s-maj=54.4km s-min=20.0km az=108.0*

ISCJB ***11*** *23:11:02.3±0.4, 5°.05S±0°.05×149°.12E±0°.06, h33*^{km}*, mb4.8/19, Error ellipse: s-maj=9.5km s-min=5.8km az=26.3*

NEIC ***11*** *23:11:03.6±2.5, 5°.07S×149°.20E, h34*^{km}*±2*^{km}*, mb4.7/19, Error ellipse: s-maj=13.7km s-min=11.4km az=129.0*

ISC 11 23:11:04.0±0.5**, 5°.05S**±0°.06×**149°.18E**±0°.07**, h35**^{km}**, n44,** σ**1**^{s}**.34**/40**, mb5.0**/19**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.10**	**74**	*e*Pn	**Pn**	**23 11 52.9**	**+2.5**
MANU	**Manus Island**	**3.49**	**329**	*e*Pg	Pn	23 12 02.2	+6.3
PMG	**Port Moresby**	**4.77**	**205**	Pn	**Pn**	**23 12 15.2**	**+1.8**
	7.5nm,0.3s,baz=1.9,slow=20,SNR=2.5						
PMG				Sn	**Sn**	**23 13 09.6**	**+2.1**
	11nm,0.3s,baz=5.6,slow=21,SNR=8.2						
PMG	**Port Moresby**	**4.77**	**205**	*e*Pg	**Pn**	**23 12 15.5**	**+2.1**
PMG				*e*Sn	**Sn**	**23 13 09.6**	**+2.1**
JAY	**Jayapura**	**8.82**	**286**	LR	LR	23 16 48.7	
	comp=Z,210nm,18.3s,baz=134,slow=40						
COEN	**Coen**	**10.64**	**213**	*e*Pn	**Pn**	**23 13 33.0**	**-1.1**
HNR	**Honiara**	**11.54**	**113**	*e*Pn	**Pn**	**23 13 44.1**	**-2.2**
PATS	**Pohnpei**	**14.92**	**38**	*e*Pn	**Pn**	**23 14 32.5**	**+0.1**
CTAO	**Charters Tower**	**15.21**	**191**	*e*Pn	**Pn**	**23 14 36.3**	**-0.1**
	127nm,1.9s						
SAUI	**Saumlaki**	**18.00**	**260**	*e*P	**Pn**	**23 15 10.7**	**-0.9**
	842nm,1.2s						
GUMO	**Guam**	**19.01**	**347**	LR	LR	23 21 03.6	
	comp=Z,168nm,21.5s,baz=166,slow=32						
MTN	**Manton Dam**	**19.42**	**245**	*e*P	**P**	**23 15 26.1**	**-1.4**
	98nm,1.8s						
WRAB	**Tennant Creek**	**20.67**	**223**	*e*P	**P**	**23 15 40.6**	**-0.4**
	29nm,0.6s						
WB2	**Warramunga Arr**	**20.67**	**223**	*e*P	**P**	**23 15 40.8**	**-0.3**
	26nm,0.6s						
WR1	**Warramunga Arr**	**20.68**	**223**	*e*P	**P**	**23 15 40.5**	**-0.7**
WRA	**Warramunga Arr**	**20.68**	**223**	P	**P**	**23 15 40.5**	**-0.7**
	9.5nm,0.5s,baz=53,slow=11,SNR=13						
KWAJ	**Kwajalein Atol**	**22.96**	**53**	*e*P	**P**	**23 16 03.9**	**-1.7**
	163nm,0.8s						
AS31	**Alice Springs**	**23.65**	**217**	*e*P	**P**	**23 16 12.5**	**+0.2**
	6.5nm,0.8s						
ASAR	**Alice Springs**	**23.65**	**217**	P	**P**	**23 16 12.2**	**-0.1**
	4.9nm,0.6s,baz=52,slow=8.9,SNR=6.0						
ASAR				LR	LR	23 27 07.6	
	comp=Z,210nm,18.5s,baz=56,slow=41						
DZM	**Mont Dzumac**	**23.79**	**137**	LR	LR	23 24 08.8	
	comp=Z,352nm,21.3s,baz=284,slow=33						
ONTNC	**Ouen Toro**	**23.95**	**137**	*e*P	**P**	**23 16 14.7**	**-0.4**
	77nm,1.1s						
ARMA	**Armidale**	**25.34**	**175**	*e*P	**P**	**23 16 29.4**	**+1.6**
	23nm,1.4s						
FORT	**Forrest**	**32.40**	**215**	*e*P	**P**	**23 17 30.0**	**-0.7**
	17nm,0.7s						
TOO	**Toolangi**	**32.54**	**185**	*e*P	**P**	**23 17 31.3**	**-0.6**
	11nm,1.1s						
JAGI	**Jajag, Banyuwa**	**34.94**	**262**	*e*P	**P**	**23 17 50.0**	**-2.9**
	65nm,1.2s						
JOW	**Kunigami**	**37.60**	**329**	*e*P	**P**	**23 18 15.2**	**-0.3**
	119nm,1.4s						
YOJ	**Yonaguni jima**	**38.85**	**320**	*e*P	**P**	**23 18 26.5**	**+0.4**
	635nm,1.7s						
LEM	**Lembang**	**41.37**	**265**	LR	LR	23 40 32.1	
	comp=Z,50nm,18.1s,baz=138,slow=43						
OXZ	**Oxford**	**43.14**	**156**	*e*P	**P**	**23 19 02.5**	**+1.3**
	64nm,1.8s						
USRK	**Ussuriysk Ar.**	**51.41**	**344**	LR	LR	23 39 38.7	
	comp=Z,67nm,19.9s,baz=156,slow=33						
GSI	**Gunungsitoli**	**51.93**	**276**	*e*P	**P**	**23 20 09.3**	**-0.7**
	17nm,0.9s						
XMAS	**Kiritimati**	**53.79**	**84**	*e*P	**P**	**23 20 21.7**	**-2.0**
	97nm,1.1s						
CMAR	**Chiang Mai Arr**	**54.74**	**297**	P	**P**	**23 20 31.9**	**+1.3**
	1.0nm,0.4s,baz=134,slow=6.4,SNR=4.1						
KHLH	**Kahului Airpor**	**59.25**	**62**	*e*P	**P**	**23 21 01.9**	**-0.6**
	310nm,1.6s						
SONA0	**Songino Array**	**64.66**	**330**	*e*P	**P**	**23 21 39.5**	**+1.1**
SONM	**Songino Array**	**64.66**	**330**	P	**P**	**23 21 39.5**	**+1.1**
	1.0nm,0.8s,baz=146,slow=5.7,SNR=3.5						
MK32	**Makanchi Array**	**78.16**	**320**	*e*P	**P**	**23 23 00.9**	**+1.0**
MKAR	**Makanchi Array**	**78.16**	**320**	P	**P**	**23 23 00.9**	**+1.0**
	0.2nm,0.3s,baz=123,slow=5.3,SNR=3.1						
ZALV	**Zalesovo Beam**	**79.38**	**327**	P	**P**	**23 23 07.4**	**+1.1**
	0.5nm,0.5s,baz=134,slow=4.2,SNR=2.5						
ZAA1	**Zalesovo Array**	**79.38**	**327**	*e*P	**P**	**23 23 07.4**	**+1.1**
ILAR	**Eielson Array**	**83.77**	**23**	P	**P**	**23 23 30.6**	**+1.3**
	0.3nm,0.4s,baz=251,slow=5.6,SNR=2.8						
ILB	**Eielson Array**	**83.77**	**23**	*e*P	**P**	**23 23 30.6**	**+1.3**
TORD	**Torodi Ar. Bea**	**146.93**	**286**	PKPbc	**PKPab**	**23 30 45.6**	**+0.3**
	1.5nm,0.6s,baz=75,slow=3.7,SNR=6.3						
TOA1	**Torodi Ar. Sit**	**146.93**	**286**	*e*PKPbc	**PKPab**	**23 30 45.6**	**+0.3**

NNC ***11*** *23:19:27.3±0.7, 43°.71N×69°.94E, h0*^{km}*, mpv1.4, Error ellipse: s-maj=8.4km s-min=3.8km az=55.0*

KRNET 11 23:19:27.0±0.1**, 42°.52N**×**71°.57E, mb2.2, 14C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.78**	**157**	⇓*i*P	Pg	23 19 42.6	+0.8
	baz=57						
ARK				⇓*i*S	Sb	23 19 53.7	-0.9
	baz=57						
KK06	**Karatay Array**	**0.96**	**307**	⇓P	Pg	23 19 41.5	-3.8
KK06				⇓S	Sg	23 19 51.5	-6.3
KK07	**Karatay Array**	**0.97**	**307**	⇑P	Pg	23 19 41.7	-3.9
KK07				⇑S	Sg	23 19 51.7	-6.4
KK02	**Karatay Array**	**0.97**	**307**	⇑P	Pg	23 19 41.7	-3.9
KK02				⇑S	Sg	23 19 51.7	-6.5
KK31	**Karatay Array**	**0.97**	**307**	P	Pg	23 19 41.2	-4.4
	0.2nm,0.2s,baz=326,slow=28,SNR=30						
KK31				S	Sg	23 19 52.5	-5.7
	0.3nm,0.2s,baz=70,slow=37,SNR=7.3						
KK05	**Karatay Array**	**0.97**	**308**	⇓P	Pg	23 19 41.7	-4.0
KK05				⇓S	Sg	23 19 51.6	-6.6
KK01	**Karatay Array**	**0.98**	**307**	⇑P	Pg	23 19 41.9	-3.8
KK01				⇓S	Sg	23 19 51.8	-6.5
KK03	**Karatay Array**	**0.98**	**307**	⇓P	Pg	23 19 41.8	-4.0
KK03				⇑S	Sg	23 19 51.6	-6.8
KK04	**Karatay Array**	**0.98**	**308**	⇑P	Pg	23 19 41.8	-3.9
KK04				⇑S	Sg	23 19 51.7	-6.7
KK08	**Karatay Array**	**0.99**	**307**	⇓P	Pg	23 19 41.8	-4.1
KK08				⇑S	Sg	23 19 51.8	-6.9
KK09	**Karatay Array**	**0.99**	**308**	⇓P	Pg	23 19 41.8	-4.2
KK09				⇑S	Sg	23 19 51.6	-7.2
EKS2	**Erkin-Say**	**1.64**	**84**	⇑*i*P	Pb	23 19 57.7	-0.5
	baz=84						
EKS2				⇑*i*S	Sg	23 20 20.4	+0.7
	baz=84						

UCH	Uchtor	2.20	97	⇓iP	Pb	23 20 07.8	-0.2
	baz=97						
UCH				⇓iS	Sg	23 20 37.5	-0.3
	baz=97						
CHMS	Chumysh	2.40	77	⇑iP	Pn	23 20 09.0	+1.5
	baz=77						
CHMS				⇑iS	Sb	23 20 40.0	-1.1
	baz=77						
KZA	Kyzart	2.77	98	⇓iP	Pb	23 20 15.4	-2.2
	baz=98						
KZA				⇓iS	Sb	23 20 51.4	-0.8
	baz=98						

*ISCJB **11** 23:19:31.5±0.4, 15°.87N±0°.06×92°.88W±0°.04, h175^{km}±4^{km}, mb3.8/5, Error ellipse: s-maj=9.8km s-min=4.6km az=26.8*

*IDC **11** 23:19:31.3±0.8, 15°.69N×92°.92W, h161^{km}±7^{km}, mb3.5/5, mb1 3.8/8, mb1mx3.4/40, mbtmp4.1/8, MS2.3/2, Ms1 2.3/2, ms1mx2.1/20, Error ellipse: s-maj=36.3km s-min=6.2km az=30.0*

*NEIC **11** 23:19:33.4±0.0, 15°.86N×92°.86W, h178^{km}, MD4.4(MEX), After MEX.*

*MEX **11** 23:19:33.9±0.7, 15°.85N×92°.90W, h173^{km}±4^{km}, MD4.3*

ISC 11 23:19:32.4±0.7, **15°.87N**±0°.06×**92°.87W**±0°.04, **h176**^{km}±6^{km}, **n32,** σ**1^{s}30**/47, **mb3.8**/5, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.38	245	ePn	Pn	23 19 56.3	0.0
PCIG				eSn	Sn	23 20 14.3	-0.2
PCIG		0.38	245	i P	Pn	23 19 56.3	0.0
PCIG				i S	Sn	23 20 13.3	-1.2
CCIG	Comitan	0.81	59	ePn	Pn	23 19 59.0	+0.3
CCIG				ePn	Pn	23 19 59.0	+0.4
CCIG				eSn	Sn	23 20 17.8	-1.0
CCIG				eSn	Sn	23 20 20.0	+1.2
CCIG	Comitan	0.81	59	eP	Pn	23 19 59.0	+0.3
CCIG				eS	Sn	23 20 17.8	-1.0
TGIG		0.94	345	ePn	Pn	23 19 59.4	+0.1
TGIG				eSn	Sn	23 20 18.3	-2.0
TGIG		0.94	345	eP	Pn	23 19 59.4	+0.1
TGIG				eS	Sn	23 20 18.6	-1.6
THIG		1.12	149	ePn	Pn	23 20 00.9	+0.2
THIG				eSn	Sn	23 20 22.3	-0.1
THIG		1.12	149	eP	Pn	23 20 00.9	+0.2
THIG				eS	Sn	23 20 21.4	-1.0
CMIG	Matias Romero	2.29	302	P	Pn	23 20 12.5	+0.1
	66nm,0.3s,baz=151,slow=8.9,SNR=518						
CMIG				S	Sn	23 20 41.8	-1.6
	140nm,0.3s,baz=48,slow=23,SNR=32						
CMIG				LR	LR	23 21 00.1	
	comp=Z,57nm,21.3s,baz=120,slow=38						
CMIG	Matias Romero	2.29	302	eP	Pn	23 20 12.5	+0.1
CMIG				i S	Sn	23 20 41.9	-1.6
APG	El Apazote	2.47	110	P	Pn	23 20 13.8	-0.9
	13nm,0.3s,baz=204,slow=19,SNR=35						
APG				LR	LR	23 20 36.0	
	comp=Z,72nm,18.0s,baz=352,slow=26						
APG				S	Sn	23 20 44.9	-2.7
	23nm,0.3s,baz=342,slow=15,SNR=17						
HUIG	Huatulco	3.12	269	ePn	Pn	23 20 21.6	-0.8
HUIG	Huatulco	3.12	269	eP	Pn	23 20 21.6	-0.8
HUIG				eS	Sn	23 21 00.4	-0.9
VHO	Vista Hermosa	3.90	288	ePn	Pn	23 20 34.1	+1.8
VHO	Vista Hermosa	3.90	288	eP	Pn	23 20 31.5	-0.8
VHO				i S	Sn	23 21 17.9	-1.2
LVIG	Laguna Verde	5.11	319	ePn	Pn	23 20 48.2	+0.4
LVIG				eSn	Sn	23 21 43.2	-3.7
TLIG	Tlapa	5.72	288	ePn	Pn	23 20 58.0	+2.2
TLIG	Tlapa	5.72	288	eP	Pn	23 20 56.4	+0.5
TLIG				i S	Sn	23 21 59.6	-1.7
MYIG	Mrida	5.87	30	ePn	Pn	23 20 57.4	-0.2
JTS	Las Juntas de	9.49	125	P	Pn	23 21 45.3	-0.2
	3.7nm,0.3s,baz=14,slow=21,SNR=13						
JTS				S	Sn	23 23 30.9	-0.5
	1.3nm,0.3s,baz=21,slow=21,SNR=4.0						
LNIG	Linares	10.91	327	ePn	Pn	23 22 03.4	-0.5
ZAIG	Zacatecas	11.44	308	ePn	Pn	23 22 11.5	+0.4
833A	Chaparral WMA,	13.79	335	ePn	Pn	23 22 40.2	-0.4
BCIP	Isla Barro Col	14.35	116	ePn	Pn	23 22 48.6	+0.8
061Z	Ochoppi	14.95	46	eP	Pn	23 22 56.2	+1.1
GOGA	Godfrey	19.43	24	eP	P	23 23 45.5	+0.2
NVAR	Mina Array Bea	31.70	320	P	P	23 25 42.9	+3.0
	0.8nm,0.7s,baz=132,slow=8.1,SNR=8.6						
LPAZ	La Paz	40.21	142	P	P	23 26 52.8	+0.1
	1.3nm,0.5s,baz=344,slow=7.4,SNR=8.1						
BDFB	Brasilia	54.23	123	P	P	23 28 38.5	-2.1
	1.8nm,0.5s,baz=250,slow=13,SNR=3.3						
CPUP	Villa Florida	54.34	140	P	P	23 28 39.7	-1.3
	2.1nm,0.7s,baz=340,slow=8.7,SNR=4.8						
ILAR	Eielson Array	60.80	337	P	P	23 29 26.6	+1.0
	0.6nm,0.7s,baz=129,slow=6.3,SNR=7.6						
CMAR	Chiang Mai Arr	143.96	341	PKP	PKPab	23 38 45.9	+0.4
	0.3nm,0.5s,baz=349,slow=3.9,SNR=2.5						

*IDC **11** 23:25:55.5±0.8, 10°.94N×91°.71E, h0^{km}, mb4.0/12, mb1 4.1/14, mb1mx3.9/43, mbtmp4.0/14, ML4.2/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/32, Error ellipse: s-maj=28.3km s-min=15.0km az=53.0*

*ISCJB **11** 23:25:56.2±0.3, 10°.92N±0°.05×91°.72E±0°.05, h20^{km}, mb4.3/34, Error ellipse: s-maj=8.7km s-min=5.4km az=142.6*

*NEIC **11** 23:25:59.5±1.1, 10°.91N×91°.68E, h31^{km}±5^{km}, mb4.2/25, Error ellipse: s-maj=11.5km s-min=2.1km az=124.0*

ISC 11 23:25:58.2±0.5, **10°.93N**±0°.07×**91°.69E**±0°.06, **h20**^{km}, **n60,** σ**0^{s}84**/59, **mb4.2**/34, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	7.69	137	ePn	Pn	23 27 49.5	+0.4
CM31	Chiang Mai Arr	10.26	42	ePn	Pn	23 28 24.9	+0.5
CMAR	Chiang Mai Arr	10.26	42	Pn	Pn	23 28 25.2	+0.8
	0.8nm,0.3s,baz=230,slow=15,SNR=4.2						
KULM	Kulim	10.49	122	ePn	Pn	23 28 28.1	+0.5
CHTO	Chiang Mai	10.52	41	ePn	Pn	23 28 27.6	-0.3
PSI	Prapat	10.80	138	ePn	Pn	23 28 33.0	+1.0
GSI	Gunungsitoli	11.21	148	ePn	Pn	23 28 37.7	+0.3
IPM	Ipoh	11.25	124	ePn	Pn	23 28 35.7	-2.4
PALK	Pallekele	11.44	252	Pn	Pn	23 28 42.0	+1.4
	0.8nm,0.3s,baz=112,slow=3.8,SNR=2.0						
PALK				Sn	Sn	23 30 38.4	-10
	1.0nm,0.3s,baz=295,slow=16,SNR=1.6						
PALK				LR	LR	23 32 05.4	
	comp=Z,57nm,22.0s,baz=117,slow=32						
PALK	Pallekele	11.44	252	ePn	Pn	23 28 40.4	-0.2
PALK				eSn	Sn	23 30 45.6	-2.3
SLVN	Son La	15.64	47	ePn	Pn	23 29 37.2	-0.5
	6.9nm,1.0s						
SBUM	Sibu	22.05	111	eP	P	23 30 52.3	+0.4
	3.9nm,1.3s						
HKPS	Hong Kong Po S	24.26	59	eP	P	23 31 13.4	-0.8
	30nm,1.1s						
CISI	Cisompet, Garu	24.39	138	eP	P	23 31 15.7	+0.2
	131nm,1.7s						
H08S3	Diego Garcia H	26.55	227	T	T	23 59 24.6	
	baz=45,slow=74,SNR=147						
H08S2	Diego Garcia H	26.56	227	T	T	23 59 20.6	
	baz=45,slow=74,SNR=27						
H08S1	Diego Carcia H	26.57	227	T	T	23 59 20.6	
	baz=45,slow=74,SNR=141						
JAGI	Jajag, Banyuwa	29.51	130	eP	P	23 32 00.9	-0.6
	41nm,0.8s						
NACB	Ninganchiao	31.33	61	eP	P	23 32 16.9	-0.6
	164nm,2.0s						
ARSB	Arslanbob	34.46	335	eP	P	23 32 44.6	-0.2
	4.9nm,0.9s						
AAK	Ala-Archa	34.97	338	P	P	23 32 50.3	+1.0
	1.1nm,0.3s,baz=225,slow=8.6,SNR=2.7						
MK31	Makanchi Array	36.63	349	eP	P	23 33 03.5	+0.3
	2.5nm,0.9s						
MK32	Makanchi Array	36.63	349	eP	P	23 33 03.5	+0.2
MKAR	Makanchi Array	36.63	349	P	P	23 33 03.5	+0.2
	1.7nm,0.6s,baz=166,slow=8.6,SNR=22						
MAKZ	Makanchi	36.70	349	eP	P	23 33 03.5	-0.3
	1.6nm,0.6s						
KK31	Karatay Array	36.97	334	eP	P	23 33 06.8	+0.6
	2.1nm,0.8s						
KKAR	Karatay Array	36.97	334	eP	P	23 33 06.8	+0.6
	2.1nm,0.8s						
SONA0	Songino Array	38.82	16	eP	P	23 33 22.0	+0.1
SONM	Songino Array	38.82	16	P	P	23 33 22.0	+0.1
	1.9nm,0.6s,baz=207,slow=7.7,SNR=16						
GEYT	Alibeck	40.33	317	P	P	23 33 36.4	+1.9
	0.7nm,0.6s,baz=151,slow=6.6,SNR=2.8						
KURK	Kurchatov	41.10	347	eP	P	23 33 40.4	-0.2
	2.1nm,0.9s						
TLY	Talaya	41.79	11	eP	P	23 33 46.6	+0.3
	2.4nm,1.0s						
ZAA0	Zalesovo Array	43.26	354	eP	P	23 33 57.9	-0.3
	2.2nm,0.6s						
ZALV	Zalesovo Beam	43.26	354	P	P	23 33 57.8	-0.4
	1.7nm,0.4s,baz=170,slow=7.4,SNR=7.9						
ZAA1	Zalesovo Array	43.27	354	eP	P	23 33 57.8	-0.4
ABKAR	Akbulak array	46.41	332	eP	P	23 34 24.3	+0.9
	1.8nm,0.9s						
INU	Inuyama	47.71	52	eP	P	23 34 33.5	-0.2
	39nm,1.6s						
WR1	Warramunga Arr	52.00	126	eP	P	23 35 06.7	+0.1
WRA	Warramunga Arr	52.00	126	P	P	23 35 06.7	+0.1
	1.9nm,0.3s,baz=299,slow=9.4,SNR=67						
WRAB	Tennant Creek	52.00	126	eP	P	23 35 06.6	0.0
	14nm,1.4s						
WB2	Warramunga Arr	52.01	126	eP	P	23 35 06.7	0.0
	35nm,1.8s						
ARU	Arti	52.16	337	eP	P	23 35 07.2	0.0
	3.3nm,0.9s						
ASAR	Alice Springs	53.72	130	P	P	23 35 19.8	+0.5
	1.4nm,0.7s,baz=306,slow=7.1,SNR=15						
ASAR				PcP	PcP	23 36 26.1	+0.7
	1.1nm,0.7s,baz=311,slow=3.1,SNR=8.0						
BR101	Keskin Array S	58.62	310	eP	P	23 35 53.5	-0.7
BRTR	Keskin Array B	58.62	310	P	P	23 35 53.5	-0.7
	0.6nm,0.9s,baz=98,slow=6.4,SNR=4.4						
STKA	Stephens Creek	63.95	134	P	P	23 36 30.8	+0.5
	0.7nm,0.4s,baz=326,slow=8.4,SNR=3.7						
FIA0	FINESS Array S	68.90	332	eP	P	23 37 01.5	+0.1
FINES	FINESS Array B	68.90	332	P	P	23 37 01.5	+0.1
	1.1nm,0.6s,baz=116,slow=8.9,SNR=5.4						
PSZ	Piszkesteto	69.77	317	eP	P	23 37 06.3	-0.9
	3.7nm,0.8s						
MORC	Moravsky Berou	71.50	319	eP	P	23 37 17.2	-0.4
	8.1nm,1.6s						
ARA0	ARCESS Array S	71.59	340	eP	P	23 37 18.4	+0.6
ARCES	ARCESS Array B	71.59	340	P	P	23 37 18.4	+0.6
	4.9nm,0.9s,baz=76,slow=6.4,SNR=4.3						
GEC2	GERESS Array S	73.95	318	eP	P	23 37 32.4	0.0
	7.4nm,1.6s						
GERES	GERESS Array B	73.95	318	P	P	23 37 32.4	0.0
	0.2nm,0.4s,baz=83,slow=8.0,SNR=4.5						
RSO	Redoubt South	92.66	27	eP	P	23 39 08.4	-0.4
RND	Reindeer	92.82	23	eP	P	23 39 06.1	-3.3
	4.0nm,0.6s						
RIDG	Independent Ri	94.14	22	eP	P	23 39 14.6	-0.9
	13nm,1.8s						
SEW	Seward	94.27	26	eP	P	23 39 16.5	+0.5
NV01	Mina Array Sit	123.47	28	ePKPdf	PKiKP	23 44 55.2	0.0
NVAR	Mina Array Bea	123.47	28	PKP	PKiKP	23 44 55.2	0.0
	0.4nm,0.7s,baz=292,slow=0.8,SNR=3.8						

*SJA **11** 23:27:16.6±0.4, 22°.57S×66°.19W, h268^{km}±3^{km}, ML2.6, MW2.8*

*ISCJB **11** 23:27:18.8±0.9, 22°.56S±0°.04×66°.33W±0°.04, h253^{km}±8^{km}, mb3.4/1, Error ellipse: s-maj=7.3km s-min=6.5km az=16.0*

*IDC **11** 23:27:18.1±2.7, 22°.51S×66°.36W, h268^{km}±45^{km}, mb3.3/1, mb1 3.2/3, mb1mx3.0/27, mbtmp3.7/3, Error ellipse: s-maj=77.5km s-min=22.0km az=99.0*

*GUC **11** 23:27:18.5±0.5, 22°.48S×66°.87W, h301^{km}±11^{km}, ML3.2*

ISC 11 23:27:17.3±1.1, **22°.56S**±0°.05×**66°.26W**±0°.05, **h260**^{km}±8^{km}, **n27,** σ**1^{s}16**/46, **13C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	0.79	61	eP	Pn	23 27 53.5	+0.5
YJA				IAML		23 27 53.9	
	comp=Z,63nm,0.8s						
YJA				eS	S	23 28 20.8	-0.2
HJA	Humahuaca	1.02	130	eP	Pn	23 27 54.5	+0.6
HJA				IAML		23 27 55.0	
	comp=Z,22nm,0.3s						
HJA				eS	S	23 28 22.3	-0.6
AZAP	Zapla	1.99	147	eP	Pn	23 28 00.7	-0.1
AZAP				IAML		23 28 02.0	
	comp=Z,6.7nm,0.3s						
LVC	Limon Verde	2.45	268	P	Pn	23 28 06.5	+1.3
	comp=Z,11nm,0.3s,baz=86,slow=5.3,SNR=94						
LVC				S	S	23 28 43.2	+0.2
	comp=Z,4.6nm,0.3s,baz=297,slow=5.7,SNR=14						
PB09	IPOC Station P	2.86	285	eP	Pn	23 28 09.9	+0.7
PB09	IPOC Station P	2.86	285	⇑iP	Pn	23 28 10.9	+1.7
PB09				IAML		23 28 57.1	
	comp=N,32nm,0.3s						
PB15	IPOC Station P	3.03	257	⇓iP	Pn	23 28 12.3	+1.3
PB15				i S	S	23 28 53.6	+0.2
PB06	IPOC Station P	3.06	267	eP	Pn	23 28 12.3	+1.0
PB06	IPOC Station P	3.06	267	⇑iP	Pn	23 28 12.3	+1.0
PB06				i S	S	23 28 53.6	-0.4
PB03	IPOC Station P	3.27	278	eP	Pn	23 28 14.7	+1.1
PB03				eS	S	23 28 57.2	-1.0
PB03	IPOC Station P	3.27	278	⇑iP	Pn	23 28 14.4	+0.9
PB03				i S	S	23 28 57.0	-1.1
PB01	IPOC Station P	3.35	296	i P	Pn	23 28 15.3	+0.9
PB01				i S	S	23 28 58.8	-1.0
PB07	IPOC Station P	3.46	283	⇑iP	Pn	23 28 16.8	+1.1
PB07				i S	S	23 29 00.5	-1.4
PB02	IPOC Station P	3.59	289	eP	Pn	23 28 18.0	+0.9
PB02	IPOC Station P	3.59	289	⇑iP	Pn	23 28 17.8	+0.7
PB02				i S	S	23 29 02.9	-1.6
PB04	IPOC Station P	3.60	273	⇑iP	Pn	23 28 18.3	+1.1
PB04				i S	S	23 29 02.8	-2.0
PB08	IPOC Station P	3.61	311	⇑iP	Pn	23 28 19.3	+1.7
PB08				i S	S	23 29 05.7	+0.3
PB05	IPOC Station P	3.65	265	⇑iP	Pn	23 28 18.7	+1.0
PB05				i S	S	23 29 04.0	-1.7
GO01	Chusmiza	3.97	316	⇑iP	Pn	23 28 22.9	+1.1
GO01				i S	S	23 29 13.1	+0.2
GO02	Mina Guanaco	4.00	229	⇑iP	Pn	23 28 23.2	+1.3
GO02				i S	S	23 29 13.3	0.0
PB10	IPOC Station P	4.07	256	⇑iP	Pn	23 28 23.0	+0.7
PB10				i S	S	23 29 12.3	-1.8
PB11	IPOC Station P	4.22	311	eP	Pn	23 28 25.0	+0.7
PB11	IPOC Station P	4.22	311	⇑iP	Pn	23 28 24.6	+0.3
PB11				i S	S	23 29 15.1	-2.5
MNMC	Minye Minye	4.62	317	⇑iP	Pn	23 28 30.2	+1.0
MNMC				i S	S	23 29 25.0	-1.5
LPAZ	La Paz	6.48	344	P	Pn	23 28 53.8	+1.4
	comp=N,0.6nm,0.3s,baz=162,slow=10,SNR=13						
LPAZ				S	S	23 30 07.4	-1.1
	comp=N,0.1nm,0.3s,baz=273,slow=19,SNR=7.1						
TORD	Torodi Ar. Bea	75.42	69	P	P	23 38 33.0	-0.2
	comp=N,0.4nm,0.4s,baz=251,slow=5.9,SNR=12						
MKAR	Makanchi Array	144.98	39	PKPbc	PKPab	23 46 23.5	-0.1
	comp=N,0.3nm,0.7s,baz=264,slow=3.9,SNR=3.8						

*BEO **11** 23:36:51.1±1.0, 40°.83N×19°.98E, h5^{km}, ML2.0/6*

*TIR **11** 23:36:53.7, 41°.09N×20°.21E, h7^{km}, Md2.8/4*

ISC 11 23:36:51.9±2.7, **40°.9N**±0°.1×**20°.05E**±0°.05, **h5**^{km}±11^{km}, **n17,** σ**1^{s}36**/27, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.43	341	ePg	Pg	23 37 00.8	+0.6
TIR				eSg	Sb	23 37 07.8	-1.0
TIR	Tirane	0.43	341	i PG	Pg	23 37 01.1	+0.9
TIR				i SG	Sg	23 37 07.4	+1.5
PHP	Peshkopia	0.80	22	i PG	Pg	23 37 06.1	-1.2
PHP				i SG	Sg	23 37 15.7	-2.0
PUK	Puka	1.11	354	i PG	Pg	23 37 09.4	-3.8
PUK				i SG	Sg	23 37 27.5	-0.1
DRME	Dracevica, Mon	1.40	333	ePn	Pn	23 37 18.3	+0.1
BCI	Bajram Curri	1.43	1	i PN	Pg	23 37 19.5	+0.2
BCI				i SN	Sn	23 37 37.4	-0.3
PDG	Podgorica	1.60	339	ePn	Pn	23 37 21.2	+0.3
PDG				eSn	Sb	23 37 43.0	+0.5
PDG	Podgorica	1.60	339	ePn	Pn	23 37 20.7	-0.2
TREB	Trebinje	2.18	325	ePn	Pg	23 37 33.5	-0.2
BRY	Bratogost	2.26	331	ePn	Pn	23 37 28.9	-1.2
BARS	Barje	2.29	35	ePg	Pb	23 37 33.9	+0.1
BARS				eSn	Sb	23 38 01.4	-1.0
SJES	Sjenica	2.32	359	ePg	Pb	23 37 35.3	+1.0
SJES				eSn	Sb	23 38 02.0	-1.3
STON	Ston	2.61	319	ePn	Pb	23 37 38.3	-0.8
IVAS	Ivanjica	2.64	2	ePg	Pb	23 37 40.5	+0.8
IVAS				eSg	Sg	23 38 19.1	+2.5
RUDO	Rudo	2.72	350	ePn	Pn	23 37 37.5	+1.2
BBLS	Lazići	2.96	351	ePg	Pb	23 37 45.3	+0.1
ZAPS	Zavoj	3.02	39	ePn	Pn	23 37 41.8	+1.3
ZAPS				eSn	Sn	23 38 18.3	+1.2

WEL 12 00:11:18.0, 43°S±6°×**17°2E**±°, **h5**^{km}, **M3.7**/25, **ML3.9**/18, **MLv3.7**/25, **Error ellipse: s-maj=0.0km s-min=0.0km az=11.2, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTZ	Lake Taylor	0.25	55	P	Pg	00 11 25.1	+2.3
LTZ				S	Sg	00 11 29.4	+3.4
OXZ	Oxford	0.40	176	P	Pb	00 11 27.9	+0.3
OXZ				S	Sb	00 11 33.9	-0.1
INZ	Inchbonnie	0.45	296	P	Pb	00 11 28.3	-0.2
AMCZ	Amberley	0.54	118	P	Pn	00 11 31.4	-0.9
EYCZ	Eyrewell	0.56	152	P	Pb	00 11 31.5	+1.2
GVZ	Greta Valley S	0.76	94	P	Pn	00 11 35.7	+0.3
CRLZ	Canterbury Las	0.79	145	P	Pn	00 11 35.7	-0.1
MQZ	McQueen’s Vall	0.92	149	P	Pn	00 11 37.6	+0.1
WVZ	Waitaha Valley	0.94	260	P	Pb	00 11 37.1	+0.4
RPZ	Rata Peaks	1.05	221	P	Pn	00 11 39.4	+0.1
OKCZ	Okains Bay	1.11	136	P	Pn	00 11 40.8	+0.6
AKCZ	Akaroa Harbour	1.16	145	P	Pn	00 11 41.2	+0.4
DSZ	Denniston Nort	1.19	353	P	Pn	00 11 42.2	+1.0
KHZ	Kahutara	1.25	66	P	Pn	00 11 44.4	+2.3
GCSZ	Gaunt Creek Bo	1.28	252	P	Pb	00 11 43.7	+1.1
THZ	Tophouse	1.34	30	P	Pg	00 11 44.3	+0.5
BSWZ	Blackbirch Sta	1.84	50	P	Pb	00 11 52.6	+0.4
LBZ	Lake Benmore	1.96	221	P	Pn	00 11 52.8	+0.9
NNZ	Nelson	1.99	32	P	Pg	00 11 55.5	-0.6
TUWZ	Tuamarina	2.08	45	P	Pb	00 11 56.4	+0.3
QRZ	Quartz Range	2.13	11	P	Pb	00 11 56.1	-1.0
ODZ	Otahua Downs	2.33	204	P	Pn	00 11 57.0	0.0
TCW	Tory Channel	2.41	45	P	Pb	00 12 01.6	-0.2
DUWZ	D’Urville Isla	2.56	35	P	Pb	00 12 03.6	-0.9
JCZ	Jackson Bay	2.60	243	P	Pn	00 12 02.1	+1.3
MSWZ	Moikau Station	2.85	59	P	Pn	00 12 05.6	+1.4
WKZ	Wanaka	2.87	228	P	Pn	00 12 05.2	+0.8
HOWZ	Holdsworth Sta	3.32	54	P	Pn	00 12 12.5	+2.0
TUZ	Tuapeka	3.47	208	P	Pn	00 12 12.8	+0.3
MRZ	Mangatainoka R	3.51	51	P	Pn	00 12 14.2	+1.1
MLZ	Mavora Lakes	3.71	228	P	Pn	00 12 16.0	+0.1
PREZ	Palmer Road	3.93	25	P	Pn	00 12 23.1	+4.1
KHEZ	Kahui Hut	3.94	23	P	Pn	00 12 22.7	+3.6
PKE	Pukeiti	4.02	23	P	Pn	00 12 24.2	+4.0
SYZ	Scrubby Hill	4.15	208	P	Pn	00 12 22.0	+0.2
VRZ	Vera Road	4.33	30	P	Pn	00 12 28.3	+3.8
MOVZ	Moawhango	4.51	40	P	Pn	00 12 30.7	+3.7
WHVZ	Whangaehu Hut	4.54	38	P	Pn	00 12 29.9	+2.4
TUVZ	Tukino	4.58	38	P	Pn	00 12 31.6	+3.6
BHHZ	Black Hill Sta	4.60	43	P	Pn	00 12 32.1	+3.8
NGZ	Ngauruhoe	4.63	37	P	Pn	00 12 31.2	+2.5
APZ	The Paps	4.83	215	P	Pn	00 12 30.9	-0.5
HIZ	Hauiti	4.91	27	P	Pn	00 12 34.9	+2.4
WIAZ	Waiheke Island	6.58	23	P	Pn	00 12 57.9	+2.5
OUZ	Omahuta	7.79	10	P	Pn	00 13 16.0	+3.9

ROM 12 00:11:29.5±0.1, **43°.822N**±0°.004×**12°.046E**±0°.005, **h8**^{km}, **ML1.8**/15, **Error ellipse: s-maj=0.5km s-min=0.3km az=223.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFI	Santa Sofia	0.17	300	P	Pg	00 11 33.5	+0.5
SFI				S	Sg	00 11 36.7	+1.3
SFI				AML	AML		
	comp=E,616µm,0.8s						
SFI				AML	AML		
	comp=N,486µm,0.4s						
SFI				AML	AML		
	comp=E,1081µm,0.4s						
SFI				AML	AML		
	comp=N,768µm,0.5s						
SFI				AML	AML		
	comp=N,768µm,0.5s						
SFI				AML	AML		
	comp=E,1081µm,0.4s						
SFI				AML	AML		
	comp=N,768µm,0.5s						
SFI				AML	AML		
	comp=E,1081µm,0.4s						
ASQU	Asqua	0.19	262	P	Pg	00 11 34.1	+0.7
ASQU				S	Sg	00 11 37.8	+1.8
CPGN	Carpegna, Ital	0.20	96	P	Pg	00 11 34.4	+0.8
CPGN				S	Sg	00 11 38.1	+1.7
CPGN				END			
PARC	Parchiule	0.22	141	P	Pg	00 11 34.5	+0.5
PARC				S	Sg	00 11 38.5	+1.5
PARC				AML	AML		
	comp=E,271µm,0.4s						
PARC				AML	AML		
	comp=N,384µm,0.4s						
PARC				AML	AML		
	comp=E,407µm,0.8s						
PARC				AML	AML		
	comp=N,592µm,0.5s						
PARC				AML	AML		
	comp=E,407µm,0.8s						
PARC				AML	AML		
	comp=N,592µm,0.5s						
PARC				AML	AML		
	comp=E,407µm,0.8s						
PARC				AML	AML		
	comp=N,592µm,0.5s						
PARC				END			
PARC				END			
SSP9	Sansepolcro	0.26	166	P	Pg	00 11 35.2	+0.7
SSP9				S	Sb	00 11 39.5	-1.4
SSP9				END			
SSP9				END			
BADI	Badiali	0.34	155	P	Pg	00 11 36.6	+0.4
BADI				S	Sb	00 11 42.5	-1.0
BADI				AML	AML		
	comp=E,317µm,0.9s						
BADI				AML	AML		
	comp=N,248µm,0.6s						
BADI				AML	AML		
	comp=E,396µm,1.3s						
BADI				AML	AML		
	comp=N,248µm,0.6s						
BADI				AML	AML		
	comp=N,248µm,0.6s						
BADI				AML	AML		
	comp=E,396µm,1.3s						
BADI				AML	AML		
	comp=N,248µm,0.6s						
BADI				AML	AML		
	comp=E,396µm,1.3s						
BADI				END			
BADI				END			
PE3	Peglio	0.35	111	P	Pg	00 11 36.8	+0.5
PE3				S	Sb	00 11 43.2	-0.4
PE3				AML	AML		
	comp=E,386µm,0.5s						
PE3				AML	AML		
	comp=N,330µm,0.7s						
PE3				AML	AML		
	comp=E,630µm,0.5s						
PE3				AML	AML		
	comp=N,497µm,0.7s						
PE3				AML	AML		
	comp=E,630µm,0.5s						
PE3				AML	AML		
	comp=N,497µm,0.7s						
PE3				AML	AML		
	comp=E,630µm,0.5s						
PE3				AML	AML		
	comp=N,497µm,0.7s						
PE3				END			
PE3				END			
CDCA	Citt‘ di Caste	0.39	159	P	Pg	00 11 37.4	+0.3
CDCA				S	Sb	00 11 44.1	-0.6
CDCA				END			
RUFI	Rufina	0.39	273	P	Pg	00 11 37.6	+0.5
RUFI				S	Sb	00 11 44.0	-0.7
BLLA	Bellaria	0.44	43	P	Pb	00 11 39.1	-0.4
BLLA				S	Sb	00 11 45.9	-0.4
ATPI	Pietralunga -	0.45	145	P	Pg	00 11 38.8	+0.6
ATPI				S	Sb	00 11 46.2	-0.4

ATPI				AML	AML		
	comp=E,121µm,0.3s						
ATPI				AML	AML		
	comp=N,138µm,0.6s						
ATPI				AML	AML		
	comp=N,138µm,0.6s						
ATPI				AML	AML		
	comp=E,121µm,0.3s						
ATPI				AML	AML		
	comp=N,138µm,0.6s						
ATPI				AML	AML		
	comp=E,121µm,0.3s						
ATPI				END			
ATPI				END			
PIEI	**Pieia**	**0.46**	**129**	P	Pg	00 11 38.2	-0.1
PIEI				S	Sb	00 11 45.6	-1.1
PIEI				AML	AML		
	comp=E,79µm,0.1s						
PIEI				AML	AML		
	comp=N,51µm,0.6s						
PIEI				AML	AML		
	comp=E,79µm,0.1s						
PIEI				AML	AML		
	comp=N,51µm,0.6s						
PIEI				AML	AML		
	comp=E,79µm,0.1s						
PIEI				AML	AML		
	comp=N,51µm,0.6s						
PIEI				END			
PIEI				END			
CAFI	**Castiglion Fio**	**0.50**	**187**	P	Pb	00 11 39.9	-0.6
CAFI				S	Sb	00 11 47.8	-0.1
CAFI				AML	AML		
	comp=E,102µm,1.5s						
CAFI				AML	AML		
	comp=N,74µm,0.9s						
CAFI				AML	AML		
	comp=E,136µm,1.1s						
CAFI				AML	AML		
	comp=N,103µm,0.9s						
CAFI				AML	AML		
	comp=N,103µm,0.9s						
CAFI				AML	AML		
	comp=E,136µm,1.1s						
CAFI				AML	AML		
	comp=N,103µm,0.9s						
CAFI				AML	AML		
	comp=E,136µm,1.1s						
CAFI				END			
CAFI				END			
BRIS	**BRISIGHELLA**	**0.51**	**311**	P	Pg	00 11 38.7	-0.6
BRIS				AML	AML		
	comp=E,135µm,0.6s						
BRIS				AML	AML		
	comp=N,201µm,0.5s						
BRIS				AML	AML		
	comp=E,234µm,0.6s						
BRIS				AML	AML		
	comp=N,328µm,0.5s						
BRIS				AML	AML		
	comp=N,328µm,0.5s						
BRIS				AML	AML		
	comp=E,234µm,0.6s						
BRIS				AML	AML		
	comp=N,328µm,0.5s						
BRIS				AML	AML		
	comp=E,234µm,0.6s						
ATVO	**AVT- Monte Val**	**0.51**	**149**	P	Pg	00 11 39.8	+0.4
ATVO				S	Sb	00 11 48.0	-0.3
ATVO				AML	AML		
	comp=E,218µm,0.6s						
ATVO				AML	AML		
	comp=N,136µm,0.5s						
ATVO				AML	AML		
	comp=E,218µm,0.6s						
ATVO				AML	AML		
	comp=N,136µm,0.5s						
ATVO				AML	AML		
	comp=E,218µm,0.6s						
ATVO				AML	AML		
	comp=N,136µm,0.5s						
ATVO				END			
ATVO				END			
ATMI	**Monte Miggiano**	**0.51**	**162**	P	Pb	00 11 40.1	-0.7
ATMI				S	Sb	00 11 48.1	-0.3
ATMI				AML	AML		
	comp=E,275µm,1.3s						
ATMI				AML	AML		
	comp=N,261µm,1.6s						
ATMI				AML	AML		
	comp=E,275µm,1.3s						
ATMI				AML	AML		
	comp=N,261µm,1.6s						
ATMI				AML	AML		
	comp=E,275µm,1.3s						
ATMI				AML	AML		
	comp=N,261µm,1.6s						
ATMI				END			
SEI	**Scarperia**	**0.55**	**295**	P	Pg	00 11 40.5	+0.4
SEI				AML	AML		
	comp=E,665µm,0.4s						
SEI				AML	AML		
	comp=N,799µm,1.4s						
SEI				AML	AML		
	comp=E,665µm,0.4s						
SEI				AML	AML		
	comp=N,799µm,1.4s						
SEI				AML	AML		
	comp=E,665µm,0.4s						
SEI				AML	AML		
	comp=N,799µm,1.4s						
MPAG	**Monte Paganucc**	**0.55**	**110**	P	Pg	00 11 40.5	+0.3
MPAG				S	Sb	00 11 49.3	-0.2
MPAG				AML	AML		
	comp=E,52µm,1.3s						
MPAG				AML	AML		
	comp=N,52µm,0.9s						
MPAG				AML	AML		
	comp=E,52µm,1.3s						
MPAG				AML	AML		
	comp=N,52µm,0.9s						
MPAG				AML	AML		
	comp=E,52µm,1.3s						
MPAG				AML	AML		
	comp=N,52µm,0.9s						
MPAG				END			
MPAG				END			
FRON	**Frontone**	**0.58**	**121**	P	Pg	00 11 40.9	+0.3
FRON				S	Sb	00 11 50.4	+0.2
FRON				AML	AML		
	comp=E,54µm,0.9s						
FRON				AML	AML		
	comp=N,81µm,1.6s						
FRON				AML	AML		
	comp=E,54µm,0.9s						
FRON				AML	AML		
	comp=N,81µm,1.6s						
FRON				AML	AML		
	comp=E,54µm,0.9s						
FRON				AML	AML		
	comp=N,81µm,1.6s						
FRON				END			
ATFO	**Monte Foce - G**	**0.59**	**140**	P	Pb	00 11 41.6	-0.5
ATFO				AML	AML		
	comp=E,95µm,0.6s						
ATFO				AML	AML		
	comp=N,66µm,0.8s						
ATFO				AML	AML		
	comp=N,66µm,0.8s						
ATFO				AML	AML		
	comp=E,95µm,0.6s						
ATFO				AML	AML		
	comp=N,66µm,0.8s						
ATFO				AML	AML		
	comp=E,95µm,0.6s						
ATFO				END			
ATTE	**AVT- Monte Tez**	**0.66**	**160**	P	Pg	00 11 42.4	+0.2
ATTE				S	Sb	00 11 53.0	+0.3
ATTE				AML	AML		
	comp=E,80µm,0.3s						
ATTE				AML	AML		
	comp=N,91µm,1.1s						
ATTE				AML	AML		
	comp=E,80µm,0.3s						
ATTE				AML	AML		
	comp=N,91µm,1.1s						
ATTE				AML	AML		
	comp=E,80µm,0.3s						
ATTE				AML	AML		
	comp=N,91µm,1.1s						
ATTE				END			
ARVD	**Arcevia**	**0.73**	**116**	P	Pg	00 11 43.2	-0.2
ARVD				END			

IDC 12 00:11:36.1±1.6**, 0°.88N**×**122°.79E, h0^{km}, mb3.5**/3**,**
mb1 3.7/3**, mb1mx3.3**/36**, mbtmp3.5**/3**, Error ellipse:**
s-maj=208.7km s-min=24.9km az=62.0, Minahassa
Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.59**	**152**	P	P	00 16 49.5	+0.8
	0.9nm,0.8s,baz=330,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**26.68**	**157**	P	P	00 17 16.8	-0.3
	0.2nm,0.5s,baz=343,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**57.76**	**328**	P	P	00 21 28.7	-0.4
	0.4nm,0.3s,baz=127,slow=8.1,SNR=8.5						

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*ISCJB **12** 00:12:20.3±0.5, 43°.87N±0°.03×12°.05E±0°.04, h17^{km}±7^{km},*
Error ellipse: s-maj=6.0km s-min=3.9km az=36.8

*ROM **12** 00:12:20.4±0.1, 43°.84N±0°.01×12°.051E±0°.007,*
h10^{km}±1^{km}, ML2.0/11, Error ellipse: s-maj=1.4km
s-min=0.6km az=355.0

ISC 12 00:12:20.3±0.9**, 43°.86N**±0°.03×**12°.06E**±0°.03**, h17**^{km}±6^{km}**,**
n23, σ**0**^{s}**.47**/37**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.16**	**285**	P	**Pg**	**00 12 24.5**	**-0.1**
SFI				S	**Sg**	**00 12 27.4**	**0.0**
CPGN	**Carpegna, Ital**	**0.20**	**108**	P	**Pg**	**00 12 25.4**	**+0.2**
CPGN				S	**Sg**	**00 12 29.0**	**+0.5**
CPGN				END			
ASQU	**Asqua**	**0.21**	**251**	P	**Pg**	**00 12 25.1**	**-0.2**
ASQU				S	**Sg**	**00 12 28.8**	**+0.2**
PARC	**Parchiule**	**0.25**	**149**	P	**Pg**	**00 12 25.4**	**-0.5**
PARC				S	**Sg**	**00 12 29.2**	**-0.5**
PARC				AML	AML		
	comp=E,408µm,0.8s						
PARC				AML	AML		
	comp=N,592µm,0.5s						
PARC				AML	AML		
	comp=E,407µm,0.8s						
PARC				AML	AML		
	comp=N,592µm,0.5s						
PARC				AML	AML		
	comp=N,592µm,0.5s						
PARC				AML	AML		
	comp=E,407µm,0.8s						
PARC				AML	AML		
	comp=N,592µm,0.5s						
PARC				AML	AML		
	comp=E,407µm,0.8s						
PARC				END			
PARC				END			
SSP9	**Sansepolcro**	**0.29**	**170**	P	**Pg**	**00 12 26.2**	**-0.4**
SSP9				S	**Sg**	**00 12 30.7**	**-0.2**
SSP9				AML	AML		
	comp=E,307µm,1.5s						
SSP9				AML	AML		
	comp=N,393µm,1.1s						
SSP9				END			
SSP9				END			
PE3	**Peglio**	**0.36**	**118**	P	**Pg**	**00 12 27.9**	**+0.2**
PE3				S	**Sb**	**00 12 33.9**	**+0.3**
PE3				AML	AML		
	comp=E,630µm,0.5s						
PE3				AML	AML		
	comp=N,497µm,0.7s						
PE3				AML	AML		
	comp=N,497µm,0.7s						
PE3				AML	AML		
	comp=E,630µm,0.5s						
PE3				AML	AML		
	comp=N,497µm,0.7s						
PE3				AML	AML		
	comp=E,630µm,0.5s						
PE3				END			
PE3				END			
BADI	**Badiali**	**0.38**	**159**	P	**Pg**	**00 12 27.6**	**-0.5**
BADI				S	**Sg**	**00 12 33.3**	**-0.1**
BADI				AML	AML		
	comp=E,396µm,1.3s						
BADI				AML	AML		
	comp=N,242µm,0.2s						
BADI				AML	AML		
	comp=N,242µm,0.2s						
BADI				AML	AML		
	comp=E,396µm,1.3s						
BADI				AML	AML		
	comp=N,242µm,0.2s						
BADI				AML	AML		
	comp=E,396µm,1.3s						
BADI				END			
BADI				END			
CDCA	**Citt‘ di Caste**	**0.42**	**163**	P	**Pb**	**00 12 29.4**	**+0.1**
CDCA				S	**Sb**	**00 12 35.1**	**-0.3**
CDCA				AML	AML		
	comp=E,1927µm,1.4s						
CDCA				AML	AML		
	comp=N,912µm,0.4s						
CDCA				AML	AML		
	comp=N,912µm,0.4s						
CDCA				AML	AML		
	comp=E,1927µm,1.4s						
CDCA				AML	AML		
	comp=N,912µm,0.4s						
CDCA				AML	AML		
	comp=E,1927µm,1.4s						
CDCA				END			
CDCA				END			
PIEI	**Pieia**	**0.47**	**133**	P	**Pg**	**00 12 29.3**	**-0.6**
PIEI				S	**Sg**	**00 12 36.4**	**+0.1**
PIEI				AML	AML		
	comp=E,78µm,0.7s						
PIEI				AML	AML		
	comp=N,51µm,0.6s						
PIEI				AML	AML		
	comp=N,51µm,0.6s						
PIEI				AML	AML		
	comp=E,78µm,0.7s						
PIEI				AML	AML		
	comp=N,51µm,0.6s						
PIEI				AML	AML		
	comp=E,78µm,0.7s						
PIEI				END			
PIEI				END			
ATPI	**Pietralunga -**	**0.48**	**149**	P	**Pg**	**00 12 29.5**	**-0.4**
ATPI				S	**Sb**	**00 12 37.3**	**+0.1**
ATPI				AML	AML		
	comp=E,121µm,0.3s						
ATPI				AML	AML		
	comp=N,138µm,0.6s						
ATPI				AML	AML		
	comp=N,138µm,0.6s						
ATPI				AML	AML		
	comp=E,121µm,0.3s						
ATPI				AML	AML		
	comp=N,138µm,0.6s						
ATPI				AML	AML		
	comp=E,121µm,0.3s						
ATPI				END			
ATPI				END			
CAFI	**Castiglion Fio**	**0.54**	**187**	P	**Pg**	**00 12 30.6**	**-0.4**
CAFI				S	**Sb**	**00 12 38.5**	**-0.3**
CAFI				AML	AML		
	comp=E,136µm,1.1s						
CAFI				AML	AML		
	comp=N,103µm,0.9s						
CAFI				AML	AML		
	comp=N,103µm,0.9s						
CAFI				AML	AML		
	comp=E,136µm,1.1s						
CAFI				AML	AML		
	comp=N,103µm,0.9s						
CAFI				AML	AML		
	comp=E,136µm,1.1s						
ATVO	**AVT- Monte Val**	**0.54**	**152**	P	**Pg**	**00 12 30.6**	**-0.4**
ATVO				S	**Sb**	**00 12 39.0**	**+0.1**
ATVO				AML	AML		
	comp=E,218µm,0.6s						
ATVO				AML	AML		
	comp=N,136µm,0.5s						
ATVO				AML	AML		
	comp=E,218µm,0.6s						
ATVO				AML	AML		
	comp=N,136µm,0.5s						
ATVO				AML	AML		
	comp=E,218µm,0.6s						
ATVO				AML	AML		
	comp=N,136µm,0.5s						
ATVO				END			
ATVO				END			
ATMI	**Monte Miggiano**	**0.55**	**164**	P	**Pg**	**00 12 30.8**	**-0.4**
ATMI				S	**Sb**	**00 12 39.0**	**-0.1**
ATMI				AML	AML		
	comp=E,275µm,1.3s						
ATMI				AML	AML		
	comp=N,261µm,1.6s						
ATMI				AML	AML		
	comp=E,275µm,1.3s						
ATMI				AML	AML		
	comp=N,261µm,1.6s						
ATMI				AML	AML		
	comp=E,275µm,1.3s						
ATMI				AML	AML		
	comp=N,261µm,1.6s						
ATMI				END			
ATMI				END			
MPAG	**Monte Paganucc**	**0.56**	**115**	P	**Pg**	**00 12 31.4**	**0.0**
MPAG				S	**Sb**	**00 12 40.3**	**+0.9**
MPAG				END			
MPAG				END			
CSNT	**Castellina Chi**	**0.68**	**235**	P	**Pb**	**00 12 34.3**	**+0.5**
OSSC	**Osservatorio P**	**0.68**	**240**	P	**Pg**	**00 12 33.6**	**0.0**
ATTE	**AVT- Monte Tez**	**0.70**	**162**	P	**Pg**	**00 12 33.3**	**-0.7**
ATTE				S	**Sb**	**00 12 43.7**	**+0.2**
ATTE				AML	AML		
	comp=E,80µm,0.3s						
ATTE				AML	AML		
	comp=N,91µm,1.1s						
ATTE				AML	AML		
	comp=N,91µm,1.1s						
ATTE				AML	AML		
	comp=E,80µm,0.3s						
ATTE				AML	AML		
	comp=N,91µm,1.1s						
ATTE				AML	AML		
	comp=E,80µm,0.3s						
ATTE				END			
ATTE				END			
MMUR	**Monte Murano**	**0.80**	**121**	AML	AML		
	comp=N,268µm,1.5s						
MMUR				AML	AML		
	comp=E,846µm,1.2s						
MMUR				AML	AML		
	comp=N,268µm,1.5s						
MMUR				AML	AML		
	comp=E,846µm,1.2s						
MMUR				AML	AML		
	comp=N,268µm,1.5s						
MMUR				AML	AML		
	comp=E,846µm,1.2s						
SACS	**San Casciano d**	**1.02**	**186**	P	**Pb**	**00 12 39.7**	**+0.2**
ABTA	**Abfaltersbach**	**2.90**	**6**	*i* Pn	**Pb**	**00 13 10.2**	**-1.5**
	comp=E,1.7nm,0.5s						
OBKA	**Obir**	**3.18**	**33**	*i* Pn	**Pb**	**00 13 16.2**	**-0.1**
	comp=E,0.9nm,0.3s						
SQTA	**Sankt Quirin**	**3.41**	**350**	*i* Pn	**Pn**	**00 13 13.0**	**+0.2**
	comp=E,0.4nm,0.1s						
MOTA	**Moosalm**	**3.55**	**349**	*i* Pn	**Pn**	**00 13 15.4**	**+0.7**
	comp=E,0.6nm,0.4s						

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*IDC **12** 00:14:26.1±1.0, 12°.20N×144°.54E, h0^{km}, mb3.7/6,*
mb1 3.9/6, mb1mx3.6/45, mbtmp3.7/6, MS3.4/2, Ms1 3.5/2,
ms1mx2.8/36, Error ellipse: s-maj=38.0km s-min=18.6km
az=94.0

*ISCJB **12** 00:14:28.1±0.9, 12°.18N±0°.09×144°.6E±0°.2, h29^{km},*
mb3.7/6, MS3.4/2, Error ellipse: s-maj=34.6km
s-min=9.6km az=13.4

ISC 12 00:14:29.9±1.0**, 12°.2N**±0°.1×**144°.7E**±0°.2**, h29**^{km}**, n16,**
σ**0**^{s}**.92**/9**, mb3.7**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.37**	**7**	Pn	**Pn**	**00 14 51.8**	**-1.3**
	74nm,0.3s,baz=206,slow=2.1,SNR=22						
GUMO				Sn	**Sn**	**00 15 10.3**	**0.0**
	104nm,0.3s,baz=143,slow=20,SNR=24						
H11S3	**WAKE ISLAND Hy**	**22.10**	**71**	T	T	00 43 15.9	
	baz=258,slow=75,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**22.12**	**71**	T	T	00 43 18.7	
	baz=258,slow=75,SNR=10						
H11S2	**WAKE ISLAND Hy**	**22.12**	**71**	T	T	00 43 20.3	
	baz=258,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**22.59**	**68**	T	T	00 43 51.9	
	baz=255,slow=75,SNR=29						
H11N2	**WAKE ISLAND Hy**	**22.60**	**68**	T	T	00 43 52.1	
	baz=255,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**22.61**	**68**	T	T	00 43 49.0	
	baz=255,slow=75,SNR=26						
WRA	**Warramunga Arr**	**33.55**	**198**	P	**P**	**00 21 06.0**	**-1.3**
	1.7nm,0.6s,baz=14,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**37.19**	**196**	P	**P**	**00 21 38.5**	**-0.3**
	0.3nm,0.4s,baz=22,slow=10,SNR=3.0						
PETK	**Petropavlovsk-**	**42.09**	**12**	LR	LR	00 37 55.8	
	comp=Z,45nm,19.3s,baz=196,slow=34						
CMAR	**Chiang Mai Arr**	**44.46**	**284**	LR	LR	00 39 16.0	
	comp=Z,50nm,20.0s,baz=122,slow=34						
SONM	**Songino Array**	**47.75**	**326**	P	**P**	**00 23 04.6**	**+0.2**
	0.3nm,0.5s,baz=136,slow=6.7,SNR=3.2						
MKAR	**Makanchi Array**	**62.35**	**317**	P	**P**	**00 24 50.1**	**+0.3**
	0.3nm,0.6s,baz=90,slow=8.5,SNR=2.9						
BVAR	**Borovoye Array**	**70.89**	**322**	P	**P**	**00 25 45.0**	**+0.8**
	0.3nm,0.4s,baz=105,slow=8.7,SNR=3.6						
NVAR	**Mina Array Bea**	**87.91**	**51**	P	**P**	**00 27 18.3**	**+0.9**
	0.8nm,0.8s,baz=257,slow=6.4,SNR=5.0						
LPAZ	**La Paz**	**147.96**	**101**	PKPbc	**PKPab**	**00 34 17.2**	**+0.4**
	0.7nm,0.8s,baz=353,slow=3.4,SNR=3.5						

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*IDC **12** 00:18:52.8±0.8, 12°.53N×143°.93E, h0^{km}, mb3.9/7,*
mb1 4.2/7, mb1mx3.7/46, mbtmp3.9/7, MS3.5/1, Ms1 3.5/1,
ms1mx2.7/30, Error ellipse: s-maj=26.1km s-min=16.1km
az=120.0

*ISCJB **12** 00:18:54.2±0.3, 12°.46N±0°.05×143°.91E±0°.05, h27^{km},*
mb4.9/38, Error ellipse: s-maj=8.1km s-min=6.6km
az=39.9

*NEIC **12** 00:18:56.5±1.2, 12°.52N×143°.92E, h29^{km}±6^{km}, mb4.6/31,*
Error ellipse: s-maj=16.7km s-min=7.9km az=127.0

ISC 12 00:18:56.1±0.5**, 12°.54N**±0°.09×**143°.93E**±0°.08**, h27**^{km}**, n55,**
σ**0**^{s}**.91**/53**, mb4.8**/38**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.39**	**41**	Pn	**Pn**	**00 19 20.2**	**+0.4**
	180nm,0.3s,baz=248,slow=2.5,SNR=32						
GUMO				Sn	**Sb**	**00 19 38.4**	**-0.4**
	276nm,0.3s,baz=180,slow=20,SNR=31						
GUMO	**Guam**	**1.39**	**41**	*e*Pn	**Pn**	**00 19 20.4**	**+0.7**
JAY	**Jayapura**	**15.29**	**192**	LR	LR	00 28 23.0	
	comp=Z,171nm,18.2s,baz=348,slow=37						
JOW	**Kunigami**	**20.45**	**316**	*e*P	**P**	**00 23 31.2**	**-0.4**
	180nm,1.7s						
H11N1	**WAKE ISLAND Hy**	**23.17**	**69**	T	T	00 48 15.0	
	baz=255,slow=75,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**23.18**	**69**	T	T	00 48 18.1	
	baz=255,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**23.19**	**69**	T	T	00 48 16.7	
	baz=255,slow=75,SNR=6.5						
KWAJ	**Kwajalein Atol**	**23.57**	**97**	*e*P	**P**	**00 24 05.4**	**+0.7**
	919nm,1.8s						
TWG	**Pinlang**	**24.02**	**298**	*e*P	**P**	**00 24 07.7**	**-1.4**
	140nm,0.9s						
YULB	**Yu-li**	**24.04**	**300**	*e*P	**P**	**00 24 09.7**	**+0.5**
	42nm,1.3s						
NACB	**Ninganchiao**	**24.11**	**302**	*e*P	**P**	**00 24 09.9**	**+0.1**
	145nm,1.9s						
USA0B	**Ussuriysk Arra**	**33.18**	**344**	*e*P	**P**	**00 25 30.2**	**-0.2**
	17nm,1.8s						
WRAB	**Tennant Creek**	**33.62**	**196**	*e*P	**P**	**00 25 35.0**	**+0.4**
	6.5nm,0.6s						
WB2	**Warramunga Arr**	**33.63**	**196**	*e*P	**P**	**00 25 34.9**	**+0.3**
	8.7nm,0.9s						

WR1	Warramunga Arr	33.63	196	*e*P	P	00 25 34.5	-0.2
WRA	Warramunga Arr	33.63	196	P	P	00 25 34.5	-0.2
	4.5nm,0.6s,baz=14,slow=8.3,SNR=38						
AS31	Alice Springs	37.29	195	*e*PcP	PcP	00 28 26.8	+1.4
ASAR	Alice Springs	37.30	195	P	P	00 26 06.3	+0.2
	0.7nm,0.5s,baz=14,slow=12,SNR=9.8						
ASAR				PcP	PcP	00 28 26.8	+1.4
	0.7nm,0.7s,baz=26,slow=3.2,SNR=6.9						
KULM	Kulim	43.31	264	*e*P	P	00 26 55.3	-0.9
	20nm,1.6s						
CMAR	Chiang Mai Arr	43.66	284	P	P	00 26 59.1	+0.2
	0.9nm,0.8s,baz=82,slow=7.4,SNR=4.4						
SONA0	Songino Array	47.07	326	*e*P	P	00 27 27.0	+1.3
SONM	Songino Array	47.07	326	P	P	00 27 27.0	+1.3
	0.1nm,0.3s,baz=132,slow=7.6,SNR=2.5						
GSTR	Great Sitkin T	50.86	31	*e*P	P	00 27 53.7	-0.9
HON	Honolulu	55.98	73	*e*P	P	00 28 32.9	+0.3
	217nm,1.0s						
KHLH	Kahului Airpor	57.46	73	*e*P	P	00 28 41.9	-1.2
	381nm,1.6s						
HLP	Hilina Pali	58.58	75	*e*P	P	00 28 51.4	+0.2
	241nm,1.1s						
PUH	Pauahi	58.66	75	*e*P	P	00 28 52.2	+0.5
	522nm,1.9s						
STCH	Steam Cracks	58.75	75	*e*P	P	00 28 51.4	-0.9
	237nm,0.6s						
MXZ	Matakaoa Point	59.37	149	*e*P	P	00 28 55.8	-0.3
	294nm,1.5s						
BKZ	Black Stump Fm	59.73	151	*e*P	P	00 28 58.8	+0.1
	58nm,1.6s						
THZ	Tophouse	60.27	155	*e*P	P	00 29 00.7	-1.6
	129nm,1.7s						
MK32	Makanchi Array	61.61	317	*e*P	P	00 29 12.4	+1.0
MKAR	Makanchi Array	61.61	317	P	P	00 29 12.4	+1.0
	0.2nm,0.6s,baz=89,slow=7.8,SNR=2.8						
CRLZ	Canterbury Las	61.68	157	*e*P	P	00 29 11.5	-0.3
	79nm,1.3s						
MAKZ	Makanchi	61.82	317	*e*P	P	00 29 12.9	0.0
	3.8nm,1.4s						
BPAW	Bear Paw Mtn.	68.01	25	*e*P	P	00 29 53.2	+0.4
	6.1nm,1.6s						
GLI	Glacier Island	68.93	29	*e*P	P	00 29 59.4	+0.8
	5.2nm,0.9s						
SCM	Sheep Creek Mo	69.03	28	*e*P	P	00 30 00.0	+0.8
	21nm,1.8s						
ILAR	Eielson Array	69.90	25	P	P	00 30 04.4	-0.1
	0.5nm,0.2s,baz=257,slow=5.9,SNR=2.9						
ILB	Eielson Array	69.90	25	*e*P	P	00 30 04.4	-0.1
RIDG	Independent Ri	70.55	27	*e*P	P	00 30 09.1	+0.6
	11nm,1.8s						
MENT	Mentasta	70.90	27	*e*P	P	00 30 10.8	+0.1
	6.8nm,0.7s						
WVOR	Wild Horse Val	87.05	47	*e*P	P	00 31 36.7	-3.0
	2.7nm,0.7s						
BMO	Blue Mountains	87.38	45	*e*P	P	00 31 42.4	+1.2
	2.6nm,1.0s						
KVN	Kaiserville	88.29	50	*e*P	P	00 31 46.0	+0.2
	3.9nm,1.2s						
NV01	Mina Array Sit	88.29	51	*e*P	P	00 31 46.5	+0.7
NVAR	Mina Array Bea	88.29	51	P	P	00 31 46.5	+0.7
	1.4nm,0.7s,baz=262,slow=6.9,SNR=10						
FIA0	FINESS Array S	91.72	335	*e*P	P	00 31 59.5	-1.5
FINES	FINESS Array B	91.72	335	P	P	00 31 59.5	-1.5
	1.6nm,0.9s,baz=54,slow=7.2,SNR=3.9						
JLU	Jordanelle	92.74	48	*e*P	P	00 32 05.8	-0.8
	8.9nm,1.6s						
MPU	Maple Canyon	92.80	48	*e*P	P	00 32 06.6	-0.2
	3.7nm,0.9s						
MSU	Marysvale	92.88	50	*e*P	P	00 32 07.0	-0.3
Q16A	Castle Valley	93.49	49	*e*P	P	00 32 10.3	+0.3
	12nm,1.8s						
P17A	Butcher Ranch,	93.63	48	*e*P	P	00 32 09.1	-1.5
	40nm,0.8s						
LPAZ	La Paz	148.75	101	PKPbc	PKiKP	00 38 44.7	+0.5
	1.3nm,0.7s,baz=273,slow=0.6,SNR=8.3						

ISCJB ***12*** *00:22:16.0±0.3, 12°.58N±0°.05×143°.70E±0°.05, h27^{km}, mb5.2/51, MS3.4/1, Error ellipse: s-maj=8.5km s-min=6.5km az=141.9*

IDC ***12*** *00:22:15.1±0.8, 12°.69N×143°.56E, h0^{km}, mb4.1/5, mb1 4.4/5, mb1mx3.7/48, mbtmp4.1/5, MS3.5/1, Ms1 3.5/1, ms1mx2.7/24, Error ellipse: s-maj=43.1km s-min=21.9km az=101.0*

NEIC ***12*** *00:22:18.8±1.7, 12°.60N×143°.70E, h36^{km}±7^{km}, mb4.9/47, Error ellipse: s-maj=14.4km s-min=12.0km az=141.0*

ISC 12 00:22:17.6±0.4**, 12°.60N**±0°.08×**143°.73E**±0°.07**, h27**^{km}**, n66, σ1^{s}24**/62**, mb5.0**/51**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.48	48	*e*Pn	Pn	00 22 43.1	+0.5
SARN	Sarigan	4.54	26	*e*Pn	Pn	00 23 25.6	+1.0
H11N1	WAKE ISLAND Hy	23.33	69	T	T	00 51 40.2	
	baz=255,slow=75,SNR=9.3						
H11N2	WAKE ISLAND Hy	23.34	69	T	T	00 51 41.0	
	baz=255,slow=75,SNR=8.3						
H11N3	WAKE ISLAND Hy	23.34	69	T	T	00 51 42.8	
	baz=255,slow=75,SNR=8.3						
KWAJ	Kwajalein Atol	23.76	97	*e*P	P	00 27 29.6	+1.6
	254nm,1.0s						
NACB	Ninganchiao	23.92	302	*e*P	P	00 27 29.8	+0.3
	44nm,1.0s						
HKPS	Hong Kong Po S	29.77	293	*e*P	P	00 28 21.7	-0.5
	27nm,1.0s						
USA0B	Ussuriysk Arra	33.07	344	*e*P	P	00 28 51.4	+0.4
	2.9nm,0.6s						
WRAB	Tennant Creek	33.62	196	*e*P	P	00 28 57.1	+1.1
	44nm,2.0s						
WB2	Warramunga Arr	33.62	196	*e*P	P	00 28 56.8	+0.7
	22nm,1.7s						
WR1	Warramunga Arr	33.63	196	*e*P	P	00 28 57.3	+1.2
WRA	Warramunga Arr	33.63	196	P	P	00 28 57.3	+1.2
	3.7nm,0.5s,baz=12,slow=8.1,SNR=31						
JAGI	Jajag, Banyuwa	36.08	236	*e*P	P	00 29 17.1	-0.3
	78nm,1.2s						
ENH	Enshi	36.21	305	*e*P	P	00 29 18.2	-0.2
	11nm,0.4s						
AS31	Alice Springs	37.30	195	*e*PcP	PcP	00 31 49.4	+2.6
ASAR	Alice Springs	37.30	195	P	P	00 29 29.8	+2.1
	0.5nm,0.4s,baz=15,slow=12,SNR=8.3						
ASAR				PcP	PcP	00 31 49.4	+2.6
	0.6nm,0.7s,baz=32,slow=3.5,SNR=6.0						
EIDS	Eidsvold	38.41	169	*e*P	P	00 29 37.5	+0.5
	64nm,1.8s						
SMRI	Semarang	38.41	241	*e*P	P	00 29 37.7	+0.4
	203nm,1.9s						
SLVN	Son La	38.98	288	*e*P	P	00 29 41.1	-0.9
	8.1nm,1.6s						
MIDW	Midway	39.43	61	*e*P	P	00 29 42.7	-2.8
	80nm,0.8s						
LEM	Lembang	40.75	244	LR	LR	00 47 58.0	
	comp=Z,52nm,18.3s,baz=50,slow=38						
KULM	Kulim	43.12	264	*e*P	P	00 30 15.5	-0.7
	24nm,1.7s						
JOHN	Johnston Islan	45.33	79	*e*P	P	00 30 33.5	-0.2
	228nm,0.9s						
FORT	Forrest	45.68	199	*e*P	P	00 30 35.8	-0.4
	27nm,1.3s						
LHMI	Lhok Sumawe	46.74	265	*e*P	P	00 30 44.4	-0.5
	31nm,0.9s						
KNTN	Kanton	46.80	106	*e*P	P	00 30 45.5	+0.1
	168nm,1.4s						
NIKH	Nikolski High	55.10	33	*e*P	P	00 31 47.6	+0.3
	89nm,1.6s						
OUZ	Omahuta	55.34	150	*e*P	P	00 31 49.7	+0.6
	45nm,1.4s						
OPA	Opana	56.13	72	*e*P	P	00 31 55.0	-0.2
	143nm,1.1s						
HON	Honolulu	56.15	73	*e*P	P	00 31 55.6	+0.3
	181nm,0.9s						
SPIA	Saint Paul Isl	56.57	28	*e*P	P	00 31 58.5	+0.8
	372nm,1.6s						
HLP	Hilina Pali	58.75	75	*e*P	P	00 32 13.5	-0.3
	338nm,1.2s						
WRMHI	West Rim	58.75	75	*e*P	P	00 32 14.5	+0.6
	1µm,1.6s						
SBLHI	Steaming Bluff	58.78	75	*e*P	P	00 32 12.6	-1.5
	2µm,1.8s						
PUH	Pauahi	58.83	75	*e*P	P	00 32 13.7	-0.8
	326nm,1.5s						
XMAS	Kiritimati	59.15	95	*e*P	P	00 32 16.0	-0.5
	108nm,1.1s						
RPZ	Rata Peaks	61.33	158	*e*P	P	00 32 30.4	-0.5
	93nm,1.8s						
MK32	Makanchi Array	61.44	317	*e*P	P	00 32 32.5	+0.8
MKAR	Makanchi Array	61.44	317	P	P	00 32 32.5	+0.8
	0.2nm,0.6s,baz=108,slow=7.7,SNR=2.2						
KDJ	Kajisay	64.29	311	*e*P	P	00 32 48.9	-2.2
	4.3nm,0.8s						
ILAR	Eielson Array	69.94	25	P	P	00 33 27.9	+1.7
	0.2nm,0.4s,baz=249,slow=6.1,SNR=2.8						
ILB	Eielson Array	69.94	25	*e*P	P	00 33 27.9	+1.7
LLLB	Lillooet	83.14	40	*e*P	P	00 34 41.5	+0.2
	10.0nm,1.5s						
COR	Corvallis	83.37	46	*e*P	P	00 34 42.4	-0.1
	139nm,1.8s						
MOD	Modoc Plateau	86.08	48	*e*P	P	00 34 57.0	+0.6
	15nm,1.8s						
AFDM	Forest Hills D	86.25	51	*e*P	P	00 34 58.2	+1.0
	6.0nm,1.4s						
NEW	Newport	86.70	41	*e*P	P	00 35 00.8	+1.6
	7.7nm,1.3s						
BMO	Blue Mountains	87.47	45	*e*P	P	00 35 04.1	+1.0
	2.7nm,1.1s						
YERR	Yerington	87.56	51	*e*P	P	00 35 04.3	+0.5
	25nm,0.7s						
RYN	Ryan	88.19	51	*e*P	P	00 35 06.4	-0.3
	6.0nm,1.5s						
KVN	Kaiserville	88.40	50	*e*P	P	00 35 08.4	+0.6
	1.9nm,0.9s						
NV01	Mina Array Sit	88.40	51	*e*P	P	00 35 10.1	+2.3
NVAR	Mina Array Bea	88.40	51	P	P	00 35 10.1	+2.3
	0.9nm,0.7s,baz=256,slow=5.1,SNR=7.0						
BMN	Battle Mountai	88.69	49	*e*P	P	00 35 08.9	-0.2
	1.4nm,0.6s						
DAC	Darwin (Calif)	89.50	53	*e*P	P	00 35 12.0	-1.0
	7.5nm,1.4s						
MWC	Mount Wilson	89.67	55	*e*P	P	00 35 11.6	-2.2
	8.2nm,0.8s						
LRM	Limekiln Ridge	90.47	43	*e*P	P	00 35 12.5	-4.9
FIA0	FINESS Array S	91.59	335	*e*P	P	00 35 22.1	+0.2
FINES	FINESS Array B	91.59	335	P	P	00 35 22.1	+0.2
	1.3nm,0.9s,baz=58,slow=8.7,SNR=3.4						
YHB	Horse Butte	91.66	43	*e*P	P	00 35 21.8	-1.1
	4.4nm,0.7s						
LDFC	Landfair	91.78	54	*e*P	P	00 35 22.7	-0.9
	10nm,0.9s						
PTCN	Pitcairn Islan	91.85	115	*e*P	P	00 35 20.3	-3.5
	826nm,1.4s						
GCMT	Greycliff	92.31	42	*e*P	P	00 35 25.8	0.0
RER	Riviere de l'E	92.62	249	*e*P	P	00 35 26.5	-1.1
	224nm,1.6s						
LPAZ	La Paz	148.94	101	PKPbc	PKiKP	00 42 06.6	+0.4
	0.7nm,0.5s,baz=334,slow=3.5,SNR=4.7						

IDC ***12*** *00:28:34.1±1.8, 12°.82N×143°.14E, h0^{km}, mb4.0/4, mb1 4.3/4, mb1mx3.6/50, mbtmp4.0/4, MS3.5/2, Ms1 3.6/2, ms1mx2.8/28, Error ellipse: s-maj=154.3km s-min=25.6km az=113.0*

ISCJB ***12*** *00:28:35.6±0.4, 12°.60N±0°.06×144°.00E±0°.08, h27^{km}, MS3.4/1, Error ellipse: s-maj=12.0km s-min=7.7km az=24.5*

NEIC ***12*** *00:28:38.8±2.4, 12°.67N×143°.96E, h38^{km}±6^{km}, mb4.7/29, Error ellipse: s-maj=16.2km s-min=1.9km az=145.0*

ISC 12 00:28:37.8±0.6**, 12°.64N**±0°.09×**144°.0E**±0°.1**, h27**^{km}**, n49, σ1^{s}36**/41**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.27	42	*e*Pn	Pb	00 29 01.9	+0.7
ANA2	Anatahan	4.04	24	*e*Pn	Pn	00 29 36.5	-1.5
SARN	Sarigan	4.39	23	*e*Pn	Pn	00 29 44.7	+1.9
PATS	Pohnpei	15.24	111	*e*Pn	Pn	00 32 11.8	+0.5
	205nm,1.5s						
RABL	Rabaul	18.59	154	*e*P	P	00 32 52.4	-0.7
	160nm,0.3s						
DAV	Davao City (W)	18.96	255	LR	LR	00 38 26.3	
	comp=Z,169nm,21.6s,baz=168,slow=32						
DAV	Davao City (W)	18.96	255	*e*P	P	00 32 55.0	-2.2
	212nm,0.5s						
H11S3	WAKE ISLAND Hy	22.61	72	T	T	00 57 34.6	
	baz=258,slow=75,SNR=6.5						
H11S1	WAKE ISLAND Hy	22.63	72	T	T	00 57 25.2	
	baz=258,slow=75,SNR=7.5						
H11S2	WAKE ISLAND Hy	22.63	72	T	T	00 57 25.8	
	baz=258,slow=75,SNR=9.7						
H11N1	WAKE ISLAND Hy	23.07	69	T	T	00 57 57.6	
	baz=255,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	23.08	69	T	T	00 58 04.6	
	baz=255,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	23.09	69	T	T	00 57 56.4	
	baz=255,slow=75,SNR=13						
WB2	Warramunga Arr	33.74	196	*e*P	P	00 35 16.8	-0.5
	29nm,1.6s						
WR1	Warramunga Arr	33.74	196	*e*P	P	00 35 16.7	-0.6
WRA	Warramunga Arr	33.74	196	P	P	00 35 16.7	-0.6
	2.5nm,0.5s,baz=13,slow=8.9,SNR=27						
JAGI	Jajag, Banyuwa	36.32	236	*e*P	P	00 35 41.6	+2.0
	73nm,0.9s						
AS31	Alice Springs	37.41	195	*e*PcP	PcP	00 38 09.2	+1.8
ASAR	Alice Springs	37.41	195	P	P	00 35 48.5	-0.3
	0.5nm,0.5s,baz=16,slow=9.8,SNR=6.9						
ASAR				PcP	PcP	00 38 09.2	+1.8
	0.4nm,0.7s,baz=25,slow=3.3,SNR=4.3						
CMAR	Chiang Mai Arr	43.70	284	LR	LR	00 53 38.9	
	comp=Z,51nm,19.7s,baz=126,slow=35						
JOHN	Johnston Islan	45.07	79	*e*P	P	00 36 49.6	-2.3
	356nm,1.1s						
LHI	Lord Howe Isla	46.23	162	*e*P	P	00 37 01.7	+1.0
	94nm,1.4s						
KIP	Kipapa	55.88	73	*e*P	P	00 38 13.3	-0.3
	144nm,1.3s						
OPA	Opana	55.88	72	*e*P	P	00 38 13.7	+0.1
	305nm,1.6s						
HON	Honolulu	55.89	73	*e*P	P	00 38 12.6	-1.0
	191nm,1.0s						
KHLH	Kahului Airpor	57.37	73	*e*P	P	00 38 24.4	+0.2
	349nm,1.5s						
HLP	Hilina Pali	58.49	75	*e*P	P	00 38 30.3	-1.9
	246nm,1.0s						
RIM	Rim	58.52	75	*e*P	P	00 38 31.6	-0.9
	520nm,1.2s						
XMAS	Kiritimati	58.91	95	*e*P	P	00 38 34.9	-0.2
	113nm,1.3s						
KDJ	Kajisay	64.46	311	*e*P	P	00 39 11.2	-1.1
	4.4nm,0.8s						
SEW	Seward	67.50	30	*e*P	P	00 39 31.6	+0.4
	12nm,1.0s						
KTH	Kantishna Hill	67.76	26	*e*P	P	00 39 33.3	+0.3
	3.7nm,0.9s						
BWN	Browne	68.55	26	*e*P	P	00 39 38.5	+0.7
	117nm,1.4s						
GLI	Glacier Island	68.81	29	*e*P	P	00 39 39.3	-0.2
	19nm,1.7s						
COLD	Coldfoot	69.15	22	*e*P	P	00 39 40.6	-0.9
	2.6nm,0.9s						
BESE	Bessie Mountai	74.70	32	*e*P	P	00 40 14.4	-0.7
	42nm,2.0s						
INK	Inuvik	75.56	22	*e*P	P	00 40 19.8	+0.1
	3.3nm,0.9s						
DLBC	Dease Lake	77.24	33	*e*P	P	00 40 29.7	+0.2
	17nm,1.7s						
YKA	Yellowknife Ar	84.09	27	P	P	00 41 07.8	+1.8
	0.9nm,0.7s,baz=284,slow=4.9,SNR=2.7						
YKB5	Yellowknife Ar	84.09	27	*e*P	P	00 41 07.8	+1.8
NV01	Mina Array Sit	88.18	51	*e*P	P	00 41 29.9	+2.9
NVAR	Mina Array Bea	88.18	51	P	P	00 41 29.9	+2.9
	0.6nm,0.6s,baz=284,slow=5.7,SNR=5.2						
ELK	Elko	89.84	48	*e*P	P	00 41 35.0	+0.2
	1.8nm,0.9s						
YHB	Horse Butte	91.45	44	*e*P	P	00 41 40.3	-1.9
	13nm,1.5s						
PSUT	Pine Spring	91.51	50	*e*P	P	00 41 41.5	-1.1
	1.6nm,1.0s						
DUG	Dugway, Tooele	91.77	48	*e*P	P	00 41 42.0	-1.7
	3.9nm,1.3s						
MAW	Mawson	98.22	202	*e*P	Pdif	00 42 12.7	+0.5
	0.8nm,0.8s						
MNMC	Minye Minye	147.10	106	*e*PKPdf	PKPdf	00 48 16.6	-0.9
LPAZ	La Paz	148.70	101	PKPbc	PKiKP	00 48 26.6	+0.7
	0.7nm,0.7s,baz=270,slow=1.0,SNR=3.8						

ATH 12 00:35:54.0, 38°.24N×20°.60E, h20^{km}±3^{km}**, ML1.7**/1**, Error ellipse: s-maj=5.6km s-min=1.2km az=240.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.06	185	P	Pg	00 35 57.5	-0.1
VLS				S	Sg	00 36 00.1	0.0
VLS				AML	AML	00 36 00.2	
	comp=N,674µm,0.1s						
VLS				AML	AML	00 36 00.2	
	comp=E,914µm,0.1s						
KFL	Anninata	0.20	131	P	Pg	00 35 59.1	0.0
KFL				S	Sg	00 36 02.6	0.0
FSK	Fiskardo	0.22	353	P	Pg	00 35 59.3	-0.1
FSK				S	Sg	00 36 03.4	+0.3
EVGI	Lefkada island	0.38	7	P	Pg	00 36 01.9	-0.2
LKD2	Lefkada island	0.55	5	P	Pb	00 36 05.0	0.0
TSLK	Tsoukalades, L	0.59	5	P	Pb	00 36 05.4	-0.1
PVO	Paravola	0.82	62	P	Pb	00 36 09.7	+0.1

GEN 12 00:36:25.7, 44°.24N×10°.13E, h6^{km}±2^{km}**, Ml0.9, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	Equi	0.08	168	P	Pg	00 36 27.9	+0.4
EQUI				S	Sg	00 36 29.5	+0.6

SOF ***12*** *00:36:56.4, 40°.42N×25°.97E, h1^{km}, MD3.9*

IDC ***12*** *00:36:56.1±0.9, 40°.36N×25°.94E, h0^{km}, mb3.3/6, mb1 3.5/12, mb1mx3.4/51, mbtmp3.4/12, ML3.7/7, MS2.8/10, Ms1 2.8/10, ms1mx2.6/29, Error ellipse: s-maj=16.6km s-min=12.0km az=64.0*

DDA ***12*** *00:36:57.1, 40°.37N×25°.95E, h28^{km}, ML4.3*

ATH ***12*** *00:36:57.0, 40°.36N×25°.93E, h30^{km}, ML3.9/27, Error ellipse: s-maj=1.2km s-min=0.6km az=58.0*

PDG ***12*** *00:36:57.8±0.6, 40°.37N×25°.93E, h22^{km}, ML3.8/8, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

ISK ***12*** *00:36:57.5, 40°.39N×25°.97E, h16^{km}, ML4.3/35*

ISCJB ***12*** *00:36:58.0±0.2, 40°.376N±0°.009×25°.92E±0°.01, h25^{km}±2^{km}, mb3.2/6, MS2.7/6, Error ellipse: s-maj=1.6km s-min=1.5km az=158.7*

NEIC ***12*** *00:36:58.4±0.0, 40°.37N×25°.93E, h11^{km}, ML4.0(THE), ML4.3(ISK), After THE.*

THE ***12*** *00:36:58.4, 40°.37N×25°.93E, h11^{km}, ML4.0/17, Error ellipse: s-maj=0.8km s-min=0.4km az=40.0*

BEO ***12*** *00:37:00.4±0.7, 40°.38N×25°.60E, h3^{km}±3^{km}, ML3.8/6*

ISC 12 00:36:58.1±0.8**, 40°.38N**±0°.01×**25°.95E**±0°.01**, h18**^{km}±3^{km}**, n395, σ1^{s}31**/466**, mb3.4**/6**, MS2.8**/6**, 49C-47D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOKC	Gokceada-Canak	0.18	188	PG	Pb	00 37 02.7	+0.2
GOKC				SG	Sb	00 37 05.9	+0.6
SMTH	Samothraki Isl	0.33	286	*e*Pg	Pg	00 37 05.0	-0.2
SMTH	Samothraki Isl	0.33	286	P	Pg	00 37 05.0	-0.2
SMTH				S	Sg	00 37 09.9	-0.2
SMTH	Samothraki Isl	0.33	286	P	Pg	00 37 05.2	-0.1
SMTH				S	Sg	00 37 10.1	0.0
SMTH				AML	AML	00 37 10.4	
	comp=E,55939µm,0.2s						
SMTH				AML	AML	00 37 10.5	
	comp=N,97104µm,0.3s						
ENEZ	Enez	0.39	23	PG	Pg	00 37 05.9	-0.3
ENEZ				SG	Sg	00 37 11.8	+0.2
GELI	Tayfur-Gelibol	0.40	87	PG	Pg	00 37 05.8	-0.6
ALN	Alexandroupoli	0.52	8	PG	Pb	00 37 08.3	-0.4
ALN				SG	Sg	00 37 15.9	+0.3
ALN	Alexandroupoli	0.52	8	*e*Pg	Pb	00 37 08.5	-0.3
ALN	Alexandroupoli	0.52	8	P	Pb	00 37 08.4	-0.3
ALN				S	Sg	00 37 16.0	+0.3
ALN	Alexandroupoli	0.52	8	P	Pb	00 37 08.5	-0.3
ALN				S	Sg	00 37 16.2	+0.5
ALN				AML	AML	00 37 16.3	
	comp=E,24531µm,0.3s						
ALN				AML	AML	00 37 16.4	
	comp=N,16808µm,0.2s						
BOZC	Bozcaada	0.54	172	PG	Pb	00 37 08.9	-0.2
BOZC				SG	Sb	00 37 16.4	-0.1
BOZC	Bozcaada	0.54	172	⇑*i*P	Pg	00 37 09.8	+0.8
BOZC				*i* S	Sb	00 37 16.5	-0.1
LPK	Lapseki	0.62	90	PG	Pb	00 37 09.9	-0.5
EZN	Ezine	0.62	152	PG	Pb	00 37 10.2	-0.2
EZN	Ezine	0.62	152	*e*Pg	Pb	00 37 09.9	-0.5
EZN				*e*Sg	Sg	00 37 19.2	+0.4
EZN	Ezine	0.62	152	P	Pb	00 37 09.9	-0.5
EZN				S	Sg	00 37 19.2	+0.4
EZN	Ezine	0.62	152	⇓*i*P	Pb	00 37 09.9	-0.5
EZN				S	Sb	00 37 18.6	-0.2
KESN	Edirne-Kesan	0.71	51	⇑*i*P	Pb	00 37 11.8	-0.4
KESN				*i* S	Sg	00 37 22.9	+1.1
KESN				IAML_P			
	comp=Z,40µm,0.1s						
LIA	Limnos Island	0.76	231	P	Pb	00 37 12.8	0.0
LIA				S	Sg	00 37 23.3	+0.2
LIA	Limnos Island	0.76	231	P	Pb	00 37 12.8	0.0
LIA				S	Sg	00 37 23.2	+0.1
LIA				AML	AML	00 37 25.8	
	comp=N,23140µm,0.4s						
LIA				AML	AML	00 37 27.1	
	comp=E,28123µm,0.4s						
BAYC	CANAKKALE_Bayr	0.79	144	⇓*i*P	Pb	00 37 13.2	-0.1
BAYC				*i* S	Sg	00 37 24.1	+0.1
RDO	Rodhopi	0.83	338	PG	Pb	00 37 13.9	0.0
RDO	Rodhopi	0.83	338	*e*Pg	Pb	00 37 13.8	-0.1
RDO				*e*Sn	Sn	00 37 26.7	+0.1
RDO	Rodhopi	0.83	338	P	Pb	00 37 13.8	-0.1
RDO				S	Sn	00 37 26.7	+0.1
RDO	Rodhopi	0.83	338	P	Pb	00 37 13.9	0.0
RDO				S	Sb	00 37 25.0	+0.3
RDO				AML	AML	00 37 28.4	
	comp=N,29501µm,0.2s						
RDO				AML	AML	00 37 28.5	
	comp=E,28244µm,0.2s						
THAS	Thassos island	0.96	284	P	Pb	00 37 16.0	-0.3
THAS				S	Sn	00 37 30.6	+0.6
THAS	Thassos island	0.96	284	P	Pb	00 37 16.0	-0.3
THAS				S	Sb	00 37 28.8	+0.1
THAS				AML	AML	00 37 30.9	
	comp=N,24475µm,0.2s						
THAS				AML	AML	00 37 30.9	
	comp=E,24219µm,0.4s						
RKY	Sarkoy-Tekirda	0.98	71	PG	Pb	00 37 15.9	-0.8
SART	Tekirdag	0.99	71	⇑*i*P	Pb	00 37 16.7	0.0
SART				*i* S	Sn	00 37 30.4	-0.2
SART				IAML_P			
	comp=Z,82µm,0.1s						
PRK	Paraskevi	1.16	168	P	Pg	00 37 20.8	+0.2
PRK				S	Sg	00 37 36.5	+0.7
PRK	Paraskevi	1.16	168	P	Pg	00 37 20.6	+0.1
PRK				S	Sn	00 37 34.7	-0.1
PRK				AML	AML	00 37 37.5	
	comp=N,56183µm,0.5s						
PRK				AML	AML	00 37 37.8	
	comp=E,58490µm,0.6s						
SIGR	SIGRI	1.17	184	PN	Pn	00 37 19.5	0.0
SIGR	SIGRI	1.17	184	P	Pn	00 37 19.5	0.0
SIGR				S	Sg	00 37 35.9	-0.2
SIGR	SIGRI	1.17	184	P	Pn	00 37 19.6	0.0
SIGR				S	Sb	00 37 34.1	-0.5
SIGR				AML	AML	00 37 36.5	
	comp=N,44350µm,0.3s						
SIGR				AML	AML	00 37 36.9	
	comp=E,38095µm,0.3s						
AYVA	Ayvalik	1.21	152	⇓*i*P	Pg	00 37 21.5	-0.1
AYVA				*i* S	Sg	00 37 37.3	-0.1
KAVA	Kavala	1.25	300	*e*Pn	Pn	00 37 20.6	-0.1
KAVA				*e*Sn	Sg	00 37 38.8	+0.1
KAVA	Kavala	1.25	300	P	Pn	00 37 20.6	-0.1
KAVA				S	Sg	00 37 38.8	+0.1
KAVA	Kavala	1.25	300	P	Pn	00 37 20.6	-0.1
KAVA				S	Sn	00 37 37.1	0.0
KAVA				AML	AML	00 37 42.0	
	comp=E,6248µm,0.3s						
KAVA				AML	AML	00 37 42.4	
	comp=N,5985µm,0.3s						
MRMT	Marmara Adasi	1.27	79	PN	Pn	00 37 20.7	-0.4
KVLA	Kavala	1.31	296	P	Pn	00 37 21.5	0.0
KVLA				AML	AML	00 37 43.0	
	comp=N,6263µm,0.4s						
KVLA				AML	AML	00 37 44.4	
	comp=E,4804µm,0.5s						
KDZ	Kurdzhali	1.33	343	PN	Pn	00 37 21.9	+0.1
KDZ	Kurdzhali	1.33	343	P	Pn	00 37 22.0	+0.1
TKR	Tekirdag	1.35	63	PN	Pn	00 37 21.8	-0.3
GONE	Gonen-Balikesi	1.37	104	PN	Pn	00 37 22.2	-0.1

BALY	Balya	1.43	116	⇓iP	Pb	00 37 24.2	-0.1
BALY				i S	Sg	00 37 44.6	+0.2
EDC	Edincik	1.46	91	PN	Pn	00 37 23.5	-0.1
DKL	Dikili	1.50	150	PN	Pn	00 37 24.5	+0.4
OUR	Ouranopolis	1.50	269	PN	Pn	00 37 23.9	-0.3
OUR	Ouranopolis	1.50	269	ePn	Pn	00 37 23.7	-0.5
OUR				eSn	Sb	00 37 44.1	-0.1
OUR	Ouranopolis	1.50	269	P	Pn	00 37 23.7	-0.5
OUR				S	Sb	00 37 44.1	-0.1
OUR	Ouranopolis	1.50	269	P	Pn	00 37 23.9	-0.3
OUR				AML	AML	00 37 49.0	
	comp=N,10328µm,0.4s						
OUR				AML	AML	00 37 50.2	
	comp=E,16445µm,0.6s						
CRLT	Corlu	1.55	61	PN	Pn	00 37 24.8	0.0
EDRB	Edirne	1.58	22	PN	Pn	00 37 24.5	-0.8
EDRB	Edirne	1.58	22	P	Pn	00 37 24.8	-0.5
EDRB				S	Sb	00 37 46.9	+0.4
RZN	Rozhen	1.60	325	P	Pn	00 37 26.2	+0.4
KIRK	Kırklareli	1.65	31	⇑iP	Pn	00 37 25.7	-0.4
KIRK				i S	Sb	00 37 49.9	+1.5
BALB	Balikesir	1.66	116	PN	Pn	00 37 26.5	+0.2
BALB	Balikesir	1.66	116	ePn	Pn	00 37 27.2	+0.9
ZEDA	zmir-Bergama	1.66	148	⇓iP	Pb	00 37 28.0	-0.2
ZEDA				i S	Sb	00 37 49.1	+0.4
STEP	BALIKESIR_Sava	1.69	126	⇓iP	Pb	00 37 28.5	-0.2
STEP				i S	Sg	00 37 52.9	+0.2
STEP				IAML_P			
	comp=Z,34µm,0.2s						
DIM	Dimitrovgrad	1.70	349	P	Pn	00 37 27.2	+0.4
DIM				Pg	Pb	00 37 29.9	+1.1
PHSR	Pinarhisar	1.73	43	PN	Pn	00 37 26.8	-0.4
PHSR	Pinarhisar	1.73	43	⇑iP	Pn	00 37 27.2	0.0
PHSR	Pinarhisar	1.73	43	S	Sb	00 37 50.6	0.0
FOCM	Foa	1.77	160	PN	Pn	00 37 28.1	+0.3
KCTX	Karacabey (Bur	1.84	93	PN	Pn	00 37 28.9	0.0
KRBN	Karaburun	1.84	165	PN	Pn	00 37 29.3	+0.4
SKY	Skiros Island	1.85	216	ePn	Pn	00 37 28.3	-0.6
SKY				eSn	Sn	00 37 52.7	+0.8
SKY	Skiros Island	1.85	216	P	Pn	00 37 28.3	-0.6
SKY				S	Sn	00 37 52.7	+0.8
SKY	Skiros Island	1.85	216	P	Pn	00 37 28.4	-0.6
SKY				AML	AML	00 38 06.2	
	comp=N,3912µm,0.3s						
SKY				AML	AML	00 38 08.9	
	comp=E,3634µm,0.5s						
NVR	Nevrokopi	1.86	302	P	Pn	00 37 29.2	+0.1
NVR				S	Sn	00 37 52.9	+0.8
NVR	Nevrokopi	1.86	302	P	Pn	00 37 29.4	+0.4
NVR				AML	AML	00 37 59.2	
	comp=N,2721µm,0.5s						
NVR				AML	AML	00 38 02.5	
	comp=E,2524µm,0.3s						
PLG	Polygyros	1.91	271	P	Pn	00 37 29.6	-0.3
PLG				S	Sn	00 37 54.2	+0.7
PLG	Polygyros	1.91	271	P	Pn	00 37 29.6	-0.3
PLG				AML	AML	00 38 01.2	
	comp=N,6280µm,0.4s						
PLG				AML	AML	00 38 01.8	
	comp=E,7506µm,0.7s						
SRS	Serrai	1.94	293	ePg	Pn	00 37 30.2	+0.1
SRS				eSg	Sn	00 37 53.3	-0.7
SRS	Serrai	1.94	293	P	Pn	00 37 30.0	-0.1
SRS				S	Sn	00 37 55.0	+1.0
SRS	Serrai	1.94	293	P	Pn	00 37 30.1	-0.1
SRS				AML	AML	00 38 02.1	
	comp=N,2687µm,0.3s						
SRS				AML	AML	00 38 02.4	
	comp=E,5882µm,0.6s						
PLD	Plovdiv	1.96	332	PN	Pn	00 37 31.4	+1.0
PLD	Plovdiv	1.96	332	ePg	Pg	00 37 35.0	-0.9
PLD	Plovdiv	1.96	332	P	Pn	00 37 31.5	+1.0
PLD				Pg	Pg	00 37 34.9	-0.9
CHOS	Chios island	1.99	178	PN	Pn	00 37 31.4	+0.4
CHOS	Chios island	1.99	178	P	Pn	00 37 31.3	+0.4
CHOS				S	Sn	00 37 56.0	+0.5
CHOS	Chios island	1.99	178	P	Pn	00 37 31.4	+0.4
CHOS				AML	AML	00 38 05.0	
	comp=N,6751µm,0.3s						
CHOS				AML	AML	00 38 06.5	
	comp=E,13230µm,0.6s						
ALNA	Alonissos	2.02	233	P	Pn	00 37 30.6	-0.7
ALNA				AML	AML	00 38 11.8	
	comp=E,6121µm,0.7s						
ALNA				AML	AML	00 38 13.6	
	comp=N,5348µm,0.9s						
SOH	Sokhos	2.02	283	P	Pn	00 37 31.3	-0.1
SOH				S	Sn	00 37 56.9	+0.6
SOH	Sokhos	2.02	283	P	Pn	00 37 31.4	-0.1
SOH				AML	AML	00 38 05.0	
	comp=N,3463µm,0.4s						
SOH				AML	AML	00 38 07.9	
	comp=E,5077µm,0.5s						
MMB	Musomiste	2.07	306	i P	Pn	00 37 32.1	+0.1
MMB				Pg	Pg	00 37 36.7	-1.2
AKS	Akhisar	2.08	136	PN	Pn	00 37 32.4	+0.3
AKHS	Akhisar	2.08	136	⇓iP	Pn	00 37 33.7	+1.6
AKHS				i S	Sg	00 38 03.7	-1.3
AKHS				IAML_P			
	comp=Z,10µm,0.2s						
URLA	Izmir	2.08	166	PN	Pn	00 37 32.6	+0.5
URLA	Izmir	2.08	166	⇓iP	Pn	00 37 33.4	+1.3
URLA				i S	Sb	00 37 59.6	-1.2
URLA				IAML_P			
	comp=Z,10µm,0.2s						
CTYL	Yalikoy Yolu	2.08	58	PN	Pn	00 37 31.9	-0.2
CTYL	Yalikoy Yolu	2.08	58	⇓iP	Pn	00 37 32.0	-0.2
CTYL	Yalikoy Yolu	2.08	58	S	Sn	00 37 57.8	+0.2
DURS	Dursunbey	2.09	111	⇓iP	Pn	00 37 33.5	+1.2
DURS				i S	Sg	00 38 04.0	-1.4
DURS				IAML_P			
	comp=Z,7µm,0.2s						
CTKS	Kestanelik-??a	2.12	65	PN	Pn	00 37 32.3	-0.3
JMB	Yambol	2.14	13	ePg	Pg	00 37 39.5	+0.3
JMB	Yambol	2.14	13	P	Pn	00 37 33.5	+0.6
JMB				Pg	Pg	00 37 38.3	-0.9
BLCB	Balcova	2.17	157	PN	Pn	00 37 33.8	+0.5
HORT	Hortiatis	2.19	277	P	Pn	00 37 33.4	-0.2
HORT				S	Sn	00 38 00.5	+0.3
HORT	Hortiatis	2.19	277	P	Pn	00 37 33.4	-0.2
HORT				AML	AML	00 38 11.1	
	comp=N,3324µm,1.0s						
HORT				AML	AML	00 38 11.6	
	comp=E,2628µm,0.5s						
ARMT	Armutlu	2.23	84	PN	Pn	00 37 34.5	+0.3
MDNY	Mudanya-Bursa	2.24	89	PN	Pn	00 37 34.6	+0.3
GOMA	Golmarmara-Man	2.26	137	PN	Pn	00 37 35.0	+0.4
SKIA	Skiathos	2.27	238	P	Pn	00 37 33.8	-0.9
SKIA	Skiathos	2.27	238	P	Pn	00 37 33.6	-1.0
SKIA				AML	AML	00 38 14.1	
	comp=E,9454µm,0.7s						
SKIA				AML	AML	00 38 14.8	
	comp=N,6887µm,1.0s						
ORLT	Orhaneli	2.28	97	PN	Pn	00 37 35.2	+0.3
BGKT	Bogazkoy	2.29	69	PN	Pn	00 37 35.1	+0.2
THE	Thessaloniki	2.29	277	P	Pn	00 37 35.3	+0.3
THE				AML	AML	00 38 15.2	
	comp=N,2328µm,0.6s						
THE				AML	AML	00 38 17.1	
	comp=E,1345µm,0.7s						
XOR	Xorichti	2.35	245	P	Pn	00 37 34.9	-1.0
XOR				AML	AML	00 38 17.5	
	comp=E,1218µm,0.6s						
XOR				AML	AML	00 38 19.0	
	comp=N,1542µm,0.5s						
NEO	Neokhori	2.36	244	P	Pn	00 37 34.8	-1.1
NEO				AML	AML	00 38 23.4	
	comp=N,1814µm,0.6s						
NEO				AML	AML	00 38 26.2	
	comp=E,1188µm,0.7s						
KNT	Kendrikon	2.45	290	P	Pn	00 37 37.6	+0.5
KNT	Kendrikon	2.45	290	P	Pn	00 37 37.7	+0.5
KNT				AML	AML	00 38 18.7	
	comp=N,2764µm,0.5s						
KNT				AML	AML	00 38 24.2	
	comp=E,2039µm,0.7s						
ULDT	Uludag	2.45	95	i P	Pn	00 37 38.6	+1.3
ULDT				i S	Sb	00 38 14.2	+2.6
BUY	Buyukada	2.46	78	PN	Pn	00 37 36.7	-0.6
ISK	Istanbul-Kandi	2.46	73	PN	Pn	00 37 37.1	-0.2
KAVV	Kandilli-Istan	2.46	73	PN	Pn	00 37 37.4	+0.1
GEMT	Gemlik	2.47	88	PN	Pn	00 37 38.2	+0.7
MRKA	Markates	2.48	228	P	Pn	00 37 37.1	-0.5
KLYT	Kilyos	2.50	69	PN	Pn	00 37 37.8	-0.1
KLYT	Kilyos	2.50	69	⇓iP	Pn	00 37 37.6	-0.3
KLYT	Kilyos	2.50	69	S	Sn	00 38 07.5	-0.4
EREA	Eretria	2.51	219	P	Pn	00 37 37.4	-0.6
EREA	Eretria	2.51	219	P	Pn	00 37 37.7	-0.3
FYTO	Fytoko, Volos	2.51	248	P	Pn	00 37 37.6	-0.5
ELND	Elena	2.55	359	⇓iP	Pn	00 37 39.4	+0.9
ELND	Elena	2.55	359	S	Sb	00 38 12.3	-2.0
SMIA	Simia	2.59	236	P	Pn	00 37 39.3	+0.1
SMIA	Simia	2.59	236	P	Pn	00 37 39.2	0.0
YLV	Yalova	2.62	85	⇓iP	Pn	00 37 39.1	-0.5
YLV	Yalova	2.62	85	S	Sn	00 38 10.2	-0.7
KARY	Karystos	2.62	207	P	Pn	00 37 39.0	-0.5
KKB	Krupnik	2.62	305	P	Pn	00 37 40.1	+0.5
LIT	Litokhoron	2.66	265	ePn	Pn	00 37 39.7	-0.5
LIT	Litokhoron	2.66	265	P	Pn	00 37 39.7	-0.5
LIT				AML	AML	00 38 26.9	
	comp=E,990µm,0.9s						
LIT				AML	AML	00 38 28.2	
	comp=N,646µm,0.5s						
VAY	Valandovo	2.73	291	ePg	Pb	00 37 45.1	-1.3
VAY	Valandovo	2.73	291	i Pn	Pn	00 37 42.0	+1.0
SMG	Samos	2.76	165	P	Pn	00 37 42.0	+0.6
SMG				S	Sn	00 38 16.0	+1.8
SMG	Samos	2.76	165	P	Pn	00 37 42.3	+0.9
SMG				AML	AML	00 38 30.2	
	comp=N,6062µm,0.5s						
SMG				AML	AML	00 38 30.3	
	comp=E,4187µm,0.3s						
MANT	Manisa	2.76	132	ePn	Pn	00 37 42.9	+1.2
DION	Dionisos Attik	2.78	215	P	Pn	00 37 41.3	-0.5
ATAL	Atalanti	2.82	234	P	Pn	00 37 42.0	-0.4
PTL	Penteli	2.84	215	P	Pn	00 37 42.1	-0.5
GCAM	G?zelcaml?	2.86	159	PN	Pn	00 37 43.2	+0.4
LKR	Lokris	2.86	234	P	Pn	00 37 42.4	-0.4
TNSA	Tinos	2.90	192	P	Pn	00 37 44.0	+0.6
SILT	Sile	2.91	73	⇑iP	Pn	00 37 43.7	+0.2
SILT	Sile	2.91	73	S	Sn	00 38 17.6	-0.4
ATHU	Athens Univers	2.94	216	P	Pn	00 37 43.3	-0.6
ATH	Athens Observa	2.97	217	P	Pn	00 37 43.9	-0.3
VIL2	Platees	3.00	225	P	Pn	00 37 44.4	-0.4
PRD	Provadia	3.02	21	P	Pn	00 37 44.7	-0.3
VTS	Vitosha	3.02	319	ePn	Pn	00 37 46.2	+1.0
VTS	Vitosha	3.02	319	⇑iP	Pn	00 37 46.7	+1.4
VTS	Vitosha	3.02	319	S	Sn	00 38 24.2	+3.1
VTS	Vitosha	3.02	319	P	Pn	00 37 46.4	+1.1
VLY	Voula,Athens	3.03	214	P	Pn	00 37 44.5	-0.7
AGG	Agios Georgios	3.10	245	ePn	Pn	00 37 46.1	-0.1
AGG	Agios Georgios	3.10	245	P	Pn	00 37 45.8	-0.4
THL	Klokotos Trika	3.13	256	P	Pn	00 37 46.6	+0.1
PLVB	Pleven	3.16	342	⇓iP	Pn	00 37 48.4	+1.4
PLVB	Pleven	3.16	342	S	Sn	00 38 26.5	+2.2
PROD	Prodromos	3.17	229	P	Pn	00 37 46.9	-0.3
KZN	Kozani	3.19	270	P	Pn	00 37 48.0	+0.5
KZN				AML	AML	00 38 45.8	
	comp=N,528µm,0.6s						
KZN				AML	AML	00 38 51.5	
	comp=E,890µm,0.6s						
RAZG	Razgrad	3.21	7	⇓iP	Pn	00 37 48.8	+1.1
RAZG	Razgrad	3.21	7	S	Sn	00 38 27.1	+1.7
DSF	Desfina	3.30	235	P	Pn	00 37 48.4	-0.5
ZIMR		3.30	353	⇓iP	Pn	00 37 50.2	+1.3
ZIMR		3.30	353	S	Sg	00 38 43.4	-0.8
APE	Apeiranthos	3.32	186	⇓iP	Pn	00 37 48.7	-0.6
APE	Apeiranthos	3.32	186	S	Sn	00 38 27.8	-0.5
APE	Apeiranthos	3.32	186	P	Pn	00 37 48.6	-0.7
LOUT	Loutraki	3.33	225	P	Pn	00 37 49.1	-0.1
MPEP	Malo Peshtene	3.40	332	P	Pn	00 37 51.5	+1.2
SERI	Serifos	3.41	200	P	Pn	00 37 50.0	-0.5
ACOR	Acrocorinthos	3.45	225	P	Pn	00 37 50.6	-0.4
THAL	Thalero	3.46	229	P	Pn	00 37 51.1	0.0
EVR	Evrytania	3.52	247	P	Pn	00 37 52.2	+0.2
EPID	Epidavros	3.54	220	P	Pn	00 37 51.7	-0.4
KPRO	Kipourio	3.54	265	P	Pn	00 37 53.1	+0.8
AMGA	Amorgos Island	3.54	181	P	Pn	00 37 52.1	-0.1
KALE	Kalithea	3.56	237	P	Pn	00 37 52.3	-0.2
DID	Didima	3.57	217	P	Pn	00 37 52.0	-0.5
ANX	Ano Chora	3.59	241	P	Pn	00 37 53.2	+0.2
SERG	Sergoula	3.60	238	P	Pn	00 37 52.9	-0.1
TRIZ	Trizonia	3.62	237	P	Pn	00 37 53.2	0.0
TRAZ	Trapeza	3.65	234	P	Pn	00 37 53.9	+0.2
MEV	Metsovon	3.67	262	P	Pn	00 37 54.7	+0.6
IOSP	Ios island	3.69	188	P	Pn	00 37 53.6	-0.6
EFP	Efpalio	3.69	239	P	Pn	00 37 54.5	+0.2
PSN	Preselentsi	3.69	26	i P	Pn	00 37 54.4	+0.1
KRND	KRANIDI	3.71	217	P	Pn	00 37 53.6	-0.8
GUR	Goura	3.72	230	P	Pn	00 37 54.5	-0.2
NEST	Nestorio	3.74	272	P	Pn	00 37 56.3	+1.3
NEST				AML	AML	00 38 13.6	
	comp=E,227µm,0.5s						
NEST				AML	AML	00 38 20.3	
	comp=N,161µm,0.6s						
SKO	Skopje	3.76	296	ePn	Pn	00 37 56.0	+0.9
KLV	Kalavryta, Ach	3.76	233	P	Pn	00 37 55.0	-0.3
COPA	Copaceanca	3.79	352	⇑iP	Pn	00 37 56.3	+0.7
COPA	Copaceanca	3.79	352	S	Sg	00 38 59.0	-0.8
VLAD	Vladila	3.79	343	⇑iP	Pn	00 37 57.2	+1.6
VLAD	Vladila	3.79	343	S	Sg	00 39 01.7	+1.8
ZAPS	Zavoj	3.81	320	ePn	Pn	00 37 57.8	+1.9
ZAPS				eSn	Sn	00 38 40.1	-0.1
MHLA	Plaka, Milos I	3.82	199	P	Pn	00 37 55.7	-0.4
SGRR	Singureni	3.84	0	⇑iP	Pn	00 37 58.4	+2.1
SGRR	Singureni	3.84	0	S	Sg	00 38 59.8	-1.6
PVO	Paravola	3.85	244	P	Pn	00 37 57.3	+0.9
MHLO	Agia Marina, M	3.88	199	P	Pn	00 37 56.4	-0.5
CMBO	Columbo, Santo	3.93	186	P	Pn	00 37 57.1	-0.4
RASA	Rasa	3.93	13	⇑iP	Pn	00 37 58.6	+1.1
RASA	Rasa	3.93	13	S	Sb	00 38 56.1	+2.0
BARS	Barje	3.94	309	ePn	Pn	00 37 59.0	+1.3
BARS	Barje	3.94	309	ePn	Pb	00 38 08.3	+1.2
BARS				eSn	Sn	00 38 42.0	-1.5
MANR	Mangalia	3.95	29	⇓iP	Pn	00 37 58.6	+0.8
BUC1	Bucharest	3.96	1	⇑iP	Pb	00 38 06.0	-1.4
BUC1	Bucharest	3.96	1	S	Sg	00 39 03.2	-2.2
ICOR	Ion Corvin	3.98	20	⇓iP	Pn	00 37 59.4	+1.2
JAN	Janina	3.98	261	P	Pn	00 37 59.1	+0.9
MDUB	Mudurnu	4.01	87	ePn	Pn	00 38 00.3	+1.6
ANAF	Anafi Island	4.02	182	P	Pn	00 37 57.7	-1.1
TRIP	Tripoli	4.04	226	P	Pn	00 37 59.4	+0.3
INCR	INCERC-Sediu C	4.06	2	⇓iP	Pn	00 38 01.3	+2.0
VLX	Vlachokerasia	4.10	224	P	Pn	00 38 00.3	+0.3
BAIL	Bailesti	4.12	333	⇓iP	Pn	00 38 01.0	+0.9
LEHL	Lehliu	4.14	9	⇓iP	Pb	00 38 09.6	-0.8
RLS	Riolos of Patr	4.18	238	P	Pn	00 38 02.1	+1.1
EFOR	EFORIE	4.20	27	⇑iP	Pn	00 38 01.8	+0.6
HUMR	Humele	4.21	351	⇑iP	Pn	00 38 01.9	+0.6
HUMR	Humele	4.21	351	S	Sn	00 38 50.7	+0.7
MFTR	Murfatlar	4.21	25	⇓iP	Pn	00 38 02.4	+1.0
CVDA	Cernavoda	4.24	21	⇑iP	Pn	00 38 03.2	+1.4
SULR		4.30	3	⇑iP	Pn	00 38 03.4	+0.8
AMRR	Amara	4.35	13	⇑iP	Pb	00 38 16.5	+2.5
VLI	Veliai	4.35	214	P	Pn	00 38 02.7	-0.6
AMT	Artemida-Makis	4.36	231	P	Pn	00 38 04.6	+1.1
TSLK	Tsoukalades, L	4.38	251	P	Pn	00 38 05.2	+1.5
ISP	Isparta	4.38	124	ePn	Pn	00 38 05.0	+1.2
ISP	Isparta	4.38	124	⇑iP	Pn	00 38 03.0	-0.8
ISP	Isparta	4.38	124	P	Pn	00 38 05.2	+1.3
LKD2	Lefkada island	4.39	250	P	Pn	00 38 05.9	+2.1
IGT	Igoumenitsa	4.40	261	P	Pn	00 38 06.2	+2.2
ZAGS	Zajecar	4.41	322	ePn	Pn	00 38 05.1	+1.0
TIRR	Tirgusor	4.46	23	ePn	Pn	00 38 04.8	-0.1
TIRR	Tirgusor	4.46	23	⇓iP	Pn	00 38 05.5	+0.7
TLB	Topalu	4.48	20	⇑iP	Pn	00 38 05.6	+0.6
ITM	Ithomi	4.48	226	ePn	Pn	00 38 06.1	+0.9
ITM	Ithomi	4.48	226	P	Pn	00 38 06.4	+1.2
ARG	Arkhangelos	4.50	157	P	Pn	00 38 06.5	+1.1
GOLR		4.52	351	⇑iP	Pn	00 38 07.8	+2.2
BOVS	Bovan	4.54	317	ePn	Pn	00 38 07.1	+1.3
BOVS				eSn	Sn	00 38 56.8	-1.3
HARR	Harsova	4.55	18	⇓iP	Pn	00 38 07.0	+1.0
SELS	Selova	4.59	310	ePn	Pn	00 38 07.1	+0.4
SELS				eSn	Sn	00 38 58.0	-1.5
KTHA	Kythira Island	4.70	210	P	Pn	00 38 08.1	0.0
TIR	Tirane	4.71	284	ePn	Pb	00 38 14.8	-5.5
TIR	Tirane	4.71	284	⇑iP	Pn	00 38 09.9	+1.6
SRE	Strehaia	4.74	336	⇑iP	Pn	00 38 09.6	+1.0
ISR	Istrita	4.75	5	⇓iP	Pn	00 38 10.3	+1.4
KEK	Kerkira	4.77	264	P	Pn	00 38 10.8	+1.7
PYL	PYLOS	4.79	225	P	Pn	00 38 10.8	+1.4
ANKY	Antikythira Is	4.97	206	P	Pn	00 38 11.9	+0.1
DJES	Djerdap	4.98	331	ePn	Pn	00 38 13.1	+1.2
PVY	Plav	5.01	298	⇓iPn	Pn	00 38 13.2	+0.7
PVY				i Sn	Sn	00 39 09.8	-0.3
GRER		5.05	8	⇓iP	Pn	00 38 16.1	+3.1
CFR	Carcaliu	5.06	18	⇓iP	Pn	00 38 13.6	+0.6
VOIR		5.10	353	⇑iP	Pn	00 38 14.4	+0.8
MLR	Muntele Rosu	5.11	360	Pn	Pn	00 38 15.1	+1.2
	comp=N,4.4nm,0.3s,baz=207,slow=3.1,SNR=52						
MLR				Lg	Lg	00 39 41.0	
	comp=N,5.9nm,0.3s,baz=131,slow=19,SNR=6.2						
MLR	Muntele Rosu	5.11	360	ePn	Pn	00 38 15.4	+1.5
MLR	Muntele Rosu	5.11	360	⇑iP	Pn	00 38 15.8	+2.0
KUBS	Kucevo	5.12	323	ePn	Pn	00 38 14.0	+0.1
IDI	Anoyia	5.15	190	Pn	Pn	00 38 14.0	-0.4
	comp=N,1.2nm,0.3s,baz=327,slow=7.5,SNR=13						
IDI				Sn	Sn	00 39 11.5	-2.0
	comp=N,1.5nm,0.3s,baz=312,slow=18,SNR=2.9						
IDI	Anoyia	5.15	190	P	Pn	00 38 14.0	-0.4
IMMV	Iera Moni Meta	5.15	198	P	Pn	00 38 15.0	+0.6
VAM	Vamos	5.16	196	P	Pn	00 38 14.3	-0.1
IVA	Berane	5.18	301	⇑iPn	Pn	00 38 15.7	+1.0
IVA				i Sn	Sn	00 39 13.5	-0.5
BISRR	Bisoca	5.20	6	⇓iP	Pn	00 38 17.6	+2.6
HERR	Herculane	5.20	331	⇓iP	Pn	00 38 15.9	+1.0
LAST	Lasithi	5.22	184	P	Pn	00 38 15.1	-0.3
SVIS	Svilajnac	5.23	319	ePn	Pn	00 38 17.9	+2.5
GRUS	Gruza	5.24	314	ePn	Pn	00 38 16.3	+0.8
GRUS				eSn	Sn	00 39 15.0	-0.4
TLCR		5.24	23	⇑iP	Pn	00 38 16.7	+1.1
BR231	Keskin MP Arra	5.26	94	ePn	Pn	00 38 17.5	+1.6
ZKR	Zakros	5.26	178	P	Pn	00 38 16.3	+0.4
ANTO	Ankara	5.27	93	ePn	Pn	00 38 16.7	+0.7
ULC	Ulcinj	5.30	290	⇓iPn	Pn	00 38 19.5	+3.1
LOT	Lotru	5.31	343	⇑iP	Pn	00 38 17.4	+0.8
SJES	Sjenica	5.31	305	ePn	Pn	00 38 18.1	+1.5
TUDR		5.36	13	⇑iP	Pn	00 38 18.7	+1.5
IVAS	Ivanjica	5.37	308	ePn	Pn	00 38 18.0	+0.6
IVAS				eSn	Sn	00 39 16.1	-2.7
MDVR	Moldovita	5.40	326	⇑iP	Pn	00 38 18.3	+0.6
DRME	Dracevica, Mon	5.41	292	⇑iPn	Pn	00 38 21.3	+3.5
DRME	Dracevica, Mon	5.41	292	ePn	Pn	00 38 20.7	+2.9
KOME	Kolasin	5.42	299	⇓iPn	Pn	00 38 18.9	+0.8
KOME				i Sn	Sn	00 39 19.4	-0.6
PETR	Petresti	5.42	10	⇑iP	Pn	00 38 20.1	+2.1
PDG	Podgorica	5.43	294	⇓iP	Pn	00 38 20.4	+2.2
PDG	Podgorica	5.43	294	ePn	Pn	00 38 20.4	+2.2
TTG	Podgorica	5.43	294	⇑iPn	Pn	00 38 19.0	+0.8
TTG				i Sn	Sn	00 39 19.9	-0.3
TTG	Podgorica	5.43	294	ePn	Pn	00 38 20.8	+2.7
ODBI	Odobesti	5.44	8	⇑iP	Pn	00 38 20.9	+2.6
PLOR	Plostina	5.49	5	⇑iP	Pn	00 38 21.2	+2.2
VRI	Vrincioaia	5.51	6	⇓iP	Pn	00 38 21.4	+2.1
GZR	Gura Zlata	5.53	336	⇑iP	Pn	00 38 20.2	+0.7
DOPR	Dopca	5.60	356	⇓iP	Pn	00 38 22.1	+1.6
TRUS	Trudelj	5.62	315	ePn	Pn	00 38 21.0	+0.2
BUM	Brajici-Budva	5.65	292	⇑iPn	Pn	00 38 24.4	+3.2
CEME	Cevo	5.71	295	ePn	Pn	00 38 22.4	+0.4
CEME				i Sn	Sn	00 39 27.7	+0.6
OZUR		5.71	359	⇑iP	Pn	00 38 23.9	+1.8
PLE	Pljevlja	5.72	303	⇑iPn	Pn	00 38 23.1	+0.9
PLE				i Sn	Sn	00 39 26.9	-0.5
SCTE	Santa Cesarea	5.74	269	P	Pn	00 38 23.1	+0.7
NKY	Niksic	5.75	297	⇑iPn	Pn	00 38 23.6	+0.9
NKY				i Sn	Sn	00 39 27.9	-0.4
NKME	Niksic	5.76	297	⇓iPn	Pn	00 38 23.6	+0.8
DIVS	Divibare	5.78	312	ePn	Pn	00 38 23.4	+0.4
DIVS				eSn	Sn	00 39 25.8	-3.0
DIVS	Divibare	5.78	312	ePn	Pn	00 38 23.3	+0.3
MDB	Medias	5.87	349	⇓iP	Pn	00 38 25.7	+1.5
RUDO	Rudo	5.87	306	ePn	Pn	00 38 24.3	+0.1
BRTR	Keskin Array B	5.94	94	Pn	Pn	00 38 26.2	+1.0
	comp=N,3.4nm,0.3s,baz=262,slow=10.0,SNR=135						
BRTR				Sn	Sn	00 39 31.2	-1.6
	comp=N,1.2nm,0.3s,baz=275,slow=23,SNR=4.9						
BRTR				Lg	Lg	00 40 07.1	
	baz=267,slow=24,SNR=2.0						
UPM	Unac-Piva	5.97	300	⇓iPn	Pn	00 38 26.3	+0.5
UPM				i Sn	Sn	00 39 33.9	+0.1
UPM	Unac-Piva	5.97	300	ePn	Pn	00 38 27.7	+1.9
HCY	Herceg Novi	5.97	293	⇑iPn	Pn	00 38 28.9	+3.3
HCY	Herceg Novi	5.97	293	ePn	Pn	00 38 30.0	+4.4
BBLS	Lazići	5.98	308	ePn	Pn	00 38 26.4	+0.6
BBLS	Lazići	5.98	308	ePn	Pn	00 38 26.9	+1.1
BIR	Birlad	6.01	11	⇓iP	Pn	00 38 27.4	+1.3
BRY	Bratogost	6.10	297	⇑iPn	Pn	00 38 28.3	+0.9
BRY				i Sn	Sn	00 39 35.6	-1.2
BRY	Bratogost	6.10	297	ePn	Pn	00 38 30.3	+2.9
BZS	Buzias	6.12	330	⇓iP	Pn	00 38 28.2	+0.6
TESR	Tescani	6.15	5	⇑iP	Pn	00 38 29.5	+1.5
TREB	Trebinje	6.16	295	ePn	Pn	00 38 31.1	+2.9
DBRK	Dubrovnik	6.29	294	ePn	Pn	00 38 32.4	+2.5
TEKS	Tekeris	6.32	313	ePn	Pn	00 38 30.7	+0.4
HAPS	Han Pijesak,Bl	6.38	308	ePn	Pn	00 38 31.8	+0.5
CGL1	Ceglie Messapi	6.46	275	ePn	Pn	00 38 33.1	+0.8
CJR	Cluj-Napoca	6.56	346	⇑iP	Pn	00 38 35.8	+2.2
BIZ	Bicaz	6.56	1	⇓iP	Pn	00 38 35.7	+2.1
FRGS	Fruska Gora	6.57	319	ePn	Pn	00 38 36.3	+2.5
FRGS	Fruska Gora	6.57	319	ePn	Pn	00 38 36.4	+2.6
GIRR	Girov	6.58	3	⇓iP	Pn	00 38 35.9	+1.9
SIRR	Siria	6.66	333	⇓iP	Pn	00 38 35.7	+0.6
STON	Ston	6.66	295	ePn	Pn	00 38 38.5	+3.4
STON	Ston	6.66	295	ePn	Pn	00 38 38.2	+3.2
NOCI	Noci	6.78	276	P	Pn	00 38 37.0	+0.4
ARCR	ARCALIA	6.80	351	⇓iP	Pn	00 38 38.7	+1.7
DRGR		6.83	341	⇑iP	Pn	00 38 39.8	+2.4
MILM	Milestii Mici	6.86	17	⇑iP	Pn	00 38 39.1	+1.4
IAS	Iasi	6.91	9	⇓iP	Pn	00 38 39.2	+0.8
BAI	Bari	6.93	279	ePn	Pn	00 38 38.6	-0.1
KIS	Kishinev	6.93	16	eP	Pn	00 38 42.0	+3.3
SEVA	Sevastopol	7.06	52	⇑iP	Pn	00 38 40.0	-0.5
SG1	Sgolgore (BA)	7.07	277	ePn	Pn	00 38 42.2	+1.5
TIP	Timpagrande	7.18	263	ePn	Pn	00 38 43.3	+1.0
TIP	Timpagrande	7.18	263	⇓iP	Pn	00 38 43.0	+0.7
TIP	Timpagrande	7.18	263	P	Pn	00 38 43.3	+1.0
BURAR	Bucovina Array	7.25	356	⇑iP	Pn	00 38 45.7	+2.5
MAKA	Makarska	7.27	296	ePn	Pn	00 38 46.1	+2.7
MAKA				Sn	Sn	00 40 09.1	+3.6
BUR08	Bucovina Ar. S	7.28	356	ePn	Pn	00 38 45.6	+2.0
BMR	Baia Mare	7.50	347	⇑iP	Pn	00 38 48.2	+1.6
HVAR	Hvar	7.63	295	ePn	Pn	00 38 49.2	+0.8
CUC	Castrocucco	7.77	270	P	Pn	00 38 52.4	+2.0
BLY	Banja Luka	7.80	307	ePn	Pn	00 38 51.5	+0.8
ZIRJ	Zirje	8.34	296	ePn	Pn	00 39 00.1	+2.0
ZIRJ				Sn	Sn	00 40 31.8	+0.1
MORI	Morici	8.37	298	ePn	Pn	00 39 02.6	+4.1
UDBI	Udbina	8.59	302	ePn	Pn	00 39 05.0	+3.3
PSZ	Piszkesteto	8.70	332	⇑iP	Pn	00 39 05.1	+2.0
DUGI	Dugi Otok	8.85	298	ePn	Pn	00 39 07.2	+2.1
KOLS	Kolonicke sedl	8.94	344	ePN	Pn	00 39 10.2	+3.9
PTJ	Puntijarka	9.15	310	ePn		00 39 11.2	
NVLJ	Novalja	9.19	301	ePn	Pn	00 39 11.0	+1.3
VYHS	Vyhne	9.57	330	ePN	Pn	00 39 15.7	+0.8
LANS	Liptovska Anna	9.90	334	ePN	Pn	00 39 22.2	+2.7
SOKA	Soboth	10.12	312	i Pn	Pn	00 39 23.7	+1.2
	comp=N,3.5nm,1.1s						
SOKA				i Sn	Sn	00 41 14.6	-0.9
	comp=N,0.6nm,0.3s						
ARSA	Arzberg	10.19	316	i Pn	Pn	00 39 25.6	+2.2
	comp=N,3.7nm,0.9s						
OBKA	Obir	10.30	310	i Pn	Pn	00 39 26.9	+1.8
	comp=N,1.3nm,0.5s						
CONA	Conrad Observa	10.46	320	i Pn	Pn	00 39 29.7	+2.6
	comp=N,2.2nm,0.9s						
MMAI	Mount Meron Ar	10.56	131	Pn	Pn	00 39 28.9	+0.3
	comp=N,0.5nm,0.3s,baz=310,slow=11,SNR=4.5						
MMAI				Sn	Sn	00 41 18.4	-8.0
	comp=N,0.5nm,0.3s,baz=319,slow=28,SNR=3.9						
MMAI				LR	LR	00 45 08.8	
	comp=N,14nm,21.5s,baz=140,slow=47						
AKASG	Malin Array Be	10.57	11	Pn	Pn	00 39 27.8	-0.8
	comp=N,1.3nm,0.3s,baz=198,slow=12,SNR=4.9						
AKASG				Sn	Sn	00 41 20.9	-5.5
	comp=N,1.1nm,0.3s,baz=196,slow=26,SNR=3.7						
MYKA	Terra Mystica	10.90	309	i Sn	Sn	00 41 37.5	+2.9
	comp=N,2.1nm,0.4s						
VRAC	Vranov	11.12	327	LR	LR	00 45 15.4	
	comp=N,34nm,19.5s,baz=129,slow=45						
KBA	Koelnbreinsper	11.30	310	i Pn	Pn	00 39 40.8	+2.0
	comp=N,7.2nm,1.1s						
ABTA	Abfaltersbach	11.63	308	i Pn	Pn	00 39 44.0	+0.7
	comp=N,4.6nm,0.8s						

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GERES GERESS Array B  12.14 318   Pn      Pn       00 39 52.1 +1.9
      comp=N,0.1nm,0.3s,baz=138,slow=14,SNR=2.6
WTTA  Wattenberg      12.41 308 i Pn      Pn       00 39 52.8 -1.1
      comp=N,0.3nm,0.2s
WATA  Walderalm       12.48 309 i Pn      Pn       00 39 53.7 -1.2
      comp=N,2.4nm,0.5s
SQTA  Sankt Quirin    12.64 308 i Pn      Pn       00 39 59.8 +2.7
      comp=N,1.4nm,0.5s
MOTA  Moosalm         12.77 308 i Pn      Pn       00 40 01.5 +2.7
      comp=N,1.8nm,0.5s
FETA  Feichten        12.85 306 i Pn      Pn       00 39 59.7 -0.2
      comp=N,5.5nm,1.6s
EIL   Elat            12.97 143   Pn      Pn       00 40 01.4 -0.2
      comp=N,0.4nm,0.3s,baz=309,slow=13,SNR=5.6
DAVOX Davos/Dischmat  13.28 304   Pn      Pn       00 40 09.7 +3.9
      comp=N,0.2nm,0.3s,baz=108,slow=19,SNR=3.1
DAVOX                             LR      LR       00 45 18.1
      comp=N,45nm,19.5s,baz=93,slow=38
GNI   Garni           14.35  85   LR      LR       00 45 58.6
      comp=N,59nm,18.9s,baz=164,slow=38
FINES FINESS Array B  21.09   0   P       P        00 41 40.7 -0.6
      comp=N,2.2nm,1.0s,baz=194,slow=7.3,SNR=3.8
FINES                             LR      LR       00 50 00.8
      comp=N,52nm,18.6s,baz=172,slow=37
HFS   Hagfors         21.20 343   P       P        00 41 41.5 -0.9
      comp=N,1.3nm,0.7s,baz=156,slow=14,SNR=3.0
HFS                               LR      LR       00 50 27.4
      comp=N,50nm,19.2s,baz=172,slow=38
NB2   NORSAR Subarra  22.59 341   P       P        00 41 56.1 -1.3
      comp=Z,2.6nm,1.0s,baz=147,slow=11
NOA   NORSAR Array B  22.59 341   P       P        00 41 57.0 -0.3
      comp=Z,0.6nm,0.7s,baz=147,slow=12,SNR=3.1
NOA                               LR      LR       00 52 13.5
      comp=Z,24nm,21.5s,baz=55,slow=41
KIRV  Kirov           23.54  31   LR      LR       00 52 26.4
      comp=Z,30nm,18.0s,baz=171,slow=40
EKA   Eskdalemuir Ar  24.36 318   P       P        00 42 15.3 +0.5
      comp=Z,0.2nm,0.5s,baz=112,slow=11,SNR=3.5
AKTO  Aktyubinsk      24.48  55   LR      LR       00 53 32.9
      comp=Z,11nm,20.2s,baz=250,slow=41
MDT   Midelt          25.58 263   LR      LR       00 53 15.5
      comp=Z,23nm,19.1s,baz=348,slow=38
TORD  Torodi Ar. Bea  34.48 225   P       P        00 43 45.9 +0.8
      comp=Z,0.3nm,0.6s,baz=34,slow=7.7,SNR=3.0
MKAR  Makanchi Array  40.55  62   P       P        00 44 37.7 +1.5
      comp=Z,0.4nm,0.8s,baz=275,slow=6.4,SNR=3.5
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*ISCJB **12** 00:38:02.9±0.4, 0°.72N±0°.04×99°.71E±0°.06, h143km±4km, mb3.7/7, Error ellipse: s-maj=10.4km s-min=4.7km az=148.3*

*IDC **12** 00:38:03.6±2.2, 0°.80N×100°.00E, h130km±12km, mb3.6/7, mb1 3.7/8, mb1mx3.3/53, mbtmp4.0/8, Error ellipse: s-maj=111.5km s-min=14.2km az=54.0*

*DJA **12** 00:38:04.7±0.4, 1°N±2°×10°0E±°, h124km±4km, M4.0/12, mb4.1/2, MLv4.0/12*

ISC 12 00:38:04.0±0.7**, 0°.72N**±0°.05×**99°.71E**±0°.06**, h141**km±6km**, n19, σ1s.11**/33**, mb3.8**/7**, Northern Sumatera**

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Code  Station Name     Δ°  AZ°   Phase ID            Time     Res
                                 Op      ISC       h  m  s    ISC
MNSI  Mandailing Nat   0.15 302  P       Pn       00 38 23.3 +0.2
MNSI                             S       Sn       00 38 36.2 -1.3
BKNI  Bangkinang       1.39 106  P       Pn       00 38 31.1 -0.6
BKNI                             S       Sn       00 38 52.3 -0.5
PDSI  Padang           1.78 155  P       Pn       00 38 36.9 +0.8
PDSI                             S       Sn       00 39 01.7 +1.0
SISI  Saibi            2.12 197  P       Pn       00 38 39.6 -0.5
SISI                             S       Sn       00 39 06.8 -0.9
GSI   Gunungsitoli     2.21 285  P       Pn       00 38 42.4 +1.3
GSI                              S       Sn       00 39 09.4 -0.2
PSI   Prapat           2.21 339  P       Pn       00 38 41.0 -0.4
      4.1nm,0.3s,baz=151,slow=11,SNR=18
PSI                              S       Sn       00 39 07.8 -2.2
      3.3nm,0.3s,baz=106,slow=19,SNR=13
KRJI  Kerinci          3.29 148  P       Pn       00 38 56.0 +1.1
KRJI                             S       Sn       00 39 35.9 +1.6
KCSI  Kotacane, Aceh   3.39 325  P       Pn       00 38 56.5 +0.4
KCSI                             S       Sn       00 39 35.1 -1.4
PPSI  Pulau Pagai      3.47 175  P       Pn       00 38 55.2 -1.9
PPSI                             S       Sn       00 39 36.3 -1.9
MLSI  Meulaboh, Aceh   4.83 317  P       Pn       00 39 15.7 +0.6
LHMI  Lhok Sumawe      5.26 328  P       Pn       00 39 20.1 -0.7
MDSI  Maura Dua        6.83 139  P       Pn       00 39 41.5 -0.3
WRA   Warramunga Arr  39.66 123  P       P        00 45 21.3 -1.2
      1.7nm,0.5s,baz=296,slow=9.8,SNR=14
WRA                              PcP     PcP      00 47 26.9 +0.2
      0.4nm,0.4s,baz=291,slow=4.0,SNR=5.3
ASAR  Alice Springs   41.12 128  P       P        00 45 33.2 -1.3
      0.4nm,0.3s,baz=296,slow=7.6,SNR=8.1
ASAR                             PcP     PcP      00 47 31.9 +0.5
      0.6nm,0.5s,baz=305,slow=2.7,SNR=6.6
ASAR                             ScP     ScP      00 51 07.5 -0.8
      0.4nm,0.6s,baz=299,slow=4.7,SNR=4.0
MKAR  Makanchi Array  48.35 344  P       P        00 46 32.8 +1.4
      0.2nm,0.3s,baz=166,slow=7.3,SNR=7.0
MKAR                             pP      pP       00 47 04.6 +0.8
      0.4nm,0.4s,baz=150,slow=7.1,SNR=3.3
STKA  Stephens Creek  51.19 133  P       P        00 46 52.5 -0.5
      0.6nm,0.4s,baz=270,slow=9.1,SNR=3.6
ZALV  Zalesovo Beam   54.46 349  P       P        00 47 17.2 +0.5
      0.5nm,0.3s,baz=155,slow=7.8,SNR=3.3
ZALV                             pP      pP       00 47 50.6 +1.0
      2.3nm,0.6s,baz=173,slow=6.8,SNR=8.1
FINES FINESS Array B  81.59 332  P       P        00 50 06.7 +0.8
      1.8nm,0.9s,baz=104,slow=8.0,SNR=4.5
ARCES ARCESS Array B  83.84 340  P       P        00 50 18.2 +0.8
      5.8nm,0.9s,baz=103,slow=4.0,SNR=6.3
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*LDG **12** 00:42:55.9±0.1, 43°.89N×12°.08E, h10km, Ml2.5/4, Error ellipse: s-maj=2.4km s-min=1.2km az=39.0*

*ISCJB **12** 00:42:56.3±0.2, 43°.83N±0°.02×12°.01E±0°.02, h25km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=25.8*

*ROM **12** 00:42:56.4±0.1, 43°.812N±0°.005×12°.031E±0°.006, h8km, ML2.3/27, Error ellipse: s-maj=0.5km s-min=0.5km az=16.0*

ISC 12 00:42:56.5±0.8**, 43°.82N**±0°.02×**12°.04E**±0°.02**, h16**km±5km**, n54, σ1s.35**/88**, Central Italy**

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Code  Station Name     Δ°  AZ°   Phase ID            Time     Res
                                 Op      ISC       h  m  s    ISC
SFI   Santa Sofia      0.17 302  P       Pg       00 43 00.2 -0.6
SFI                              S       Sg       00 43 03.3 -0.3
SFI                              AML     AML
      comp=E,2635µm,0.8s
SFI                              AML     AML
      comp=N,1155µm,0.6s
SFI                              AML     AML
      comp=E,2140µm,0.8s
SFI                              AML     AML
      comp=N,2010µm,0.1s
SFI                              AML     AML
      comp=E,2630µm,0.8s
SFI                              AML     AML
      comp=N,1155µm,0.6s
SFI                              AML     AML
      comp=E,2140µm,0.8s
SFI                              AML     AML
      comp=N,2010µm,0.1s
SFI                              AML     AML
      comp=E,2140µm,0.8s
SFI                              AML     AML
      comp=N,2010µm,0.1s
SFI                              AML     AML
      comp=N,2010µm,0.1s
SFI                              AML     AML
      comp=E,2140µm,0.8s
SFI                              AML     AML
      comp=N,2010µm,0.1s
SFI                              AML     AML
      comp=E,2140µm,0.8s
SFI                              END
SFI                              END
ASQU  Asqua            0.18 264  P       Pg       00 43 00.8 -0.2
ASQU                             S       Sg       00 43 04.3 +0.2
ASQU                             AML     AML
      comp=E,1970µm,0.8s
ASQU                             AML     AML
      comp=N,3320µm,0.5s
ASQU                             AML     AML
      comp=E,1970µm,0.8s
ASQU                             AML     AML
      comp=N,3320µm,0.5s
ASQU                             AML     AML
      comp=E,2280µm,0.8s
ASQU                             AML     AML
      comp=N,3535µm,0.5s
ASQU                             AML     AML
      comp=E,2280µm,0.8s
ASQU                             AML     AML
      comp=N,3535µm,0.5s
ASQU                             AML     AML
      comp=E,2280µm,0.8s
ASQU                             AML     AML
      comp=N,3535µm,0.5s
ASQU                             END
ASQU                             END
CPGN  Carpegna, Ital   0.20  95  P       Pg       00 43 01.3 -0.1
CPGN                             S       Sg       00 43 05.7 +1.1
CPGN                             AML     AML
      comp=E,980µm,0.4s
CPGN                             AML     AML
      comp=N,954µm,0.9s
CPGN                             AML     AML
      comp=E,958µm,0.4s
CPGN                             AML     AML
      comp=N,1002µm,0.9s
CPGN                             AML     AML
      comp=E,977µm,0.4s
CPGN                             AML     AML
      comp=N,954µm,0.9s
CPGN                             AML     AML
      comp=E,961µm,0.4s
CPGN                             AML     AML
      comp=N,1006µm,0.9s
CPGN                             AML     AML
      comp=E,1340µm,0.3s
CPGN                             AML     AML
      comp=N,1165µm,1.5s
CPGN                             AML     AML
      comp=E,1241µm,0.4s
CPGN                             AML     AML
      comp=N,1166µm,1.1s
CPGN                             AML     AML
      comp=N,1175µm,1.1s
CPGN                             AML     AML
      comp=E,1340µm,0.3s
CPGN                             AML     AML
      comp=N,1160µm,1.5s
CPGN                             AML     AML
      comp=E,1241µm,0.3s
CPGN                             AML     AML
      comp=N,1166µm,1.1s
CPGN                             AML     AML
      comp=E,1241µm,0.4s
CPGN                             AML     AML
      comp=N,1165µm,1.5s
CPGN                             AML     AML
      comp=E,1340µm,0.3s
CPGN                             END
PARC  Parchiule        0.22 140  P       Pg       00 43 01.2 -0.3
PARC                             S       Sg       00 43 05.4 +0.4
PARC                             AML     AML
      comp=E,784µm,0.6s
PARC                             AML     AML
      comp=N,1096µm,0.9s
PARC                             AML     AML
      comp=E,784µm,0.6s
PARC                             AML     AML
      comp=N,1096µm,0.9s
PARC                             AML     AML
      comp=E,1050µm,0.8s
PARC                             AML     AML
      comp=N,1370µm,0.9s
PARC                             AML     AML
      comp=N,1370µm,0.9s
PARC                             AML     AML
      comp=E,1050µm,0.8s
PARC                             AML     AML
      comp=N,1370µm,0.9s
PARC                             AML     AML
      comp=E,1050µm,0.8s
PARC                             END
PARC                             END
SSP9  Sansepolcro      0.25 165  P       Pg       00 43 02.1  0.0
SSP9                             S       Sg       00 43 06.8 +1.0
SSP9                             AML     AML
      comp=E,742µm,1.5s
SSP9                             AML     AML
      comp=N,935µm,0.5s
SSP9                             AML     AML
      comp=N,935µm,0.5s
SSP9                             AML     AML
      comp=E,742µm,1.5s
SSP9                             AML     AML
      comp=N,935µm,0.5s
SSP9                             AML     AML
      comp=E,742µm,1.5s
SSP9                             END
SSP9                             END
BADI  Badiali          0.34 154  P       Pg       00 43 03.4 -0.2
BADI                             S       Sg       00 43 09.4 +1.0
BADI                             AML     AML
      comp=E,576µm,0.2s
BADI                             AML     AML
      comp=N,332µm,1.0s
BADI                             AML     AML
      comp=E,577µm,0.2s
BADI                             AML     AML
      comp=N,332µm,1.0s
BADI                             AML     AML
      comp=E,1172µm,0.2s
BADI                             AML     AML
      comp=N,712µm,0.6s
BADI                             AML     AML
      comp=E,1176µm,0.2s
BADI                             AML     AML
      comp=N,712µm,0.6s
BADI                             AML     AML
      comp=E,1172µm,0.2s
BADI                             AML     AML
      comp=N,712µm,0.6s
BADI                             END
BADI                             END
PE3   Peglio           0.35 110  P       Pg       00 43 03.8  0.0
PE3                              S       Sb       00 43 10.2 +0.4
PE3                              AML     AML
      comp=E,1230µm,0.5s
PE3                              AML     AML
      comp=N,969µm,0.5s
PE3                              AML     AML
      comp=E,1230µm,0.5s
PE3                              AML     AML
      comp=N,969µm,0.5s
PE3                              AML     AML
      comp=E,1805µm,0.5s
PE3                              AML     AML
      comp=N,1325µm,0.5s
PE3                              AML     AML
      comp=E,1800µm,0.5s
PE3                              AML     AML
      comp=N,1325µm,0.5s
PE3                              AML     AML
      comp=E,1805µm,0.5s
PE3                              AML     AML
      comp=N,1325µm,0.5s
PE3                              END
CDCA  Citt‘ di Caste   0.39 159  P       Pg       00 43 04.2 -0.2
CDCA                             S       Sb       00 43 11.1 +0.4
CDCA                             AML     AML
      comp=E,372µm,1.6s
CDCA                             AML     AML
      comp=N,429µm,1.6s
CDCA                             AML     AML
      comp=E,2155µm,0.8s
CDCA                             AML     AML
      comp=N,1970µm,0.5s
CDCA                             AML     AML
      comp=N,1970µm,0.5s
CDCA                             AML     AML
      comp=E,2155µm,0.8s
CDCA                             AML     AML
      comp=N,1970µm,0.5s
CDCA                             AML     AML
      comp=E,2155µm,0.8s
CDCA                             END
BLLA  Bellaria         0.45  43  P       Pb       00 43 05.8 -0.3
BLLA                             S       Sb       00 43 14.3 +1.7
BLLA                             AML     AML
      comp=E,496µm,1.6s
BLLA                             AML     AML
      comp=N,544µm,0.7s
ATPI  Pietralunga -    0.45 144  P       Pg       00 43 05.4 -0.2
ATPI                             S       Sb       00 43 13.2 +0.5
ATPI                             AML     AML
      comp=E,229µm,0.4s
ATPI                             AML     AML
      comp=N,250µm,0.4s
ATPI                             AML     AML
      comp=E,277µm,0.3s
ATPI                             AML     AML
      comp=N,312µm,0.5s
ATPI                             AML     AML
      comp=E,277µm,0.3s
ATPI                             AML     AML
      comp=N,312µm,0.5s
ATPI                             AML     AML
      comp=E,277µm,0.3s
ATPI                             AML     AML
      comp=N,312µm,0.5s
ATPI                             END
PIEI  Pieia            0.46 128  P       Pg       00 43 05.2 -0.5
PIEI                             S       Sb       00 43 12.9 +0.1
PIEI                             AML     AML
      comp=E,153µm,0.3s
PIEI                             AML     AML
      comp=N,110µm,1.0s
PIEI                             AML     AML
      comp=E,230µm,0.3s
PIEI                             AML     AML
      comp=N,154µm,1.0s
PIEI                             AML     AML
      comp=N,154µm,1.0s
PIEI                             AML     AML
      comp=E,230µm,0.3s
PIEI                             AML     AML
      comp=N,154µm,1.0s
PIEI                             AML     AML
      comp=E,230µm,0.3s
PIEI                             END
PIEI                             END
CAFI  Castiglion Fio   0.49 186  P       Pg       00 43 06.6 +0.3
CAFI                             S       Sb       00 43 14.4 +0.6
CAFI                             AML     AML
      comp=E,240µm,1.5s
CAFI                             AML     AML
      comp=N,181µm,0.5s
CAFI                             AML     AML
      comp=E,358µm,1.5s
CAFI                             AML     AML
      comp=N,254µm,0.2s
CAFI                             AML     AML
      comp=N,255µm,0.2s
CAFI                             AML     AML
      comp=E,358µm,1.5s
CAFI                             AML     AML
      comp=N,254µm,0.2s
CAFI                             AML     AML
      comp=E,358µm,1.5s
CAFI                             END
CAFI                             END
BRIS  BRISIGHELLA      0.51 311  P       Pg       00 43 05.5 -1.1
BRIS                             AML     AML
      comp=E,571µm,0.4s
BRIS                             AML     AML
      comp=N,694µm,0.5s
BRIS                             AML     AML
      comp=E,585µm,0.7s
BRIS                             AML     AML
      comp=N,796µm,0.6s
BRIS                             AML     AML
      comp=N,796µm,0.6s
BRIS                             AML     AML
      comp=E,585µm,0.7s
BRIS                             AML     AML
      comp=N,796µm,0.6s
BRIS                             AML     AML
      comp=E,585µm,0.7s
BRIS                             END
ATMI  Monte Miggiano   0.51 161  P       Pg       00 43 06.7  0.0
ATMI                             S       Sb       00 43 15.3 +1.0
ATMI                             AML     AML
      comp=E,500µm,1.6s
ATMI                             AML     AML
      comp=N,596µm,1.6s
ATMI                             AML     AML
      comp=E,734µm,0.5s
ATMI                             AML     AML
      comp=N,969µm,1.6s
ATMI                             AML     AML
      comp=N,969µm,1.6s
ATMI                             AML     AML
      comp=E,734µm,0.5s
ATMI                             AML     AML
      comp=N,969µm,1.6s
ATMI                             AML     AML
      comp=E,734µm,0.5s
ATMI                             END
ATMI                             END
ATVO  AVT- Monte Val   0.51 149  P       Pg       00 43 06.5 -0.2
ATVO                             S       Sb       00 43 14.8 +0.4
ATVO                             AML     AML
      comp=E,316µm,0.6s
ATVO                             AML     AML
      comp=N,206µm,1.3s
ATVO                             AML     AML
      comp=E,438µm,0.4s
ATVO                             AML     AML
      comp=N,311µm,1.3s
ATVO                             AML     AML
      comp=N,310µm,1.3s
ATVO                             AML     AML
      comp=E,438µm,0.4s
ATVO                             AML     AML
      comp=N,311µm,1.3s
ATVO                             AML     AML
      comp=E,438µm,0.4s
ATVO                             END
ATVO                             END
SEI   Scarperia        0.55 296  P       Pg       00 43 07.1 -0.3
SEI                              S       Sb       00 43 15.9 +0.4
SEI                              AML     AML
      comp=E,1495µm,0.4s
SEI                              AML     AML
      comp=N,1960µm,0.4s
SEI                              AML     AML
      comp=E,1545µm,0.4s
SEI                              AML     AML
      comp=N,1955µm,0.4s
SEI                              AML     AML
      comp=N,1955µm,0.4s
SEI                              AML     AML
      comp=E,1545µm,0.4s
SEI                              AML     AML
      comp=N,1955µm,0.4s
SEI                              AML     AML
      comp=E,1545µm,0.4s
MPAG  Monte Paganucc   0.55 110  P       Pg       00 43 07.2 -0.3
MPAG                             S       Sb       00 43 16.2 +0.6
MPAG                             AML     AML
      comp=E,89µm,0.4s
MPAG                             AML     AML
      comp=N,130µm,1.3s
MPAG                             AML     AML
      comp=E,135µm,0.9s
MPAG                             AML     AML
      comp=N,192µm,0.8s
MPAG                             AML     AML
      comp=E,135µm,0.9s
MPAG                             AML     AML
      comp=N,192µm,0.8s
MPAG                             AML     AML
      comp=E,135µm,0.9s
MPAG                             AML     AML
      comp=N,192µm,0.8s
FRON  Frontone         0.58 121  P       Pg       00 43 07.7 -0.3
FRON                             S       Sb       00 43 17.1 +0.8
FRON                             AML     AML
      comp=E,120µm,0.5s
FRON                             AML     AML
      comp=N,160µm,1.5s
FRON                             AML     AML
      comp=E,160µm,0.6s
FRON                             AML     AML
      comp=N,193µm,1.5s
FRON                             AML     AML
      comp=E,160µm,0.6s
FRON                             AML     AML
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	comp=N,193µm,1.5s						
FRON				AML	AML		
	comp=E,160µm,0.6s						
FRON				AML	AML		
	comp=N,193µm,1.5s						
FRON				END			
PESA	**Pesaro**	**0.59**	**78**	P	**Pb**	**00 43 08.5**	**0.0**
PESA				S	**Sb**	**00 43 18.2**	**+1.5**
PESA				AML	AML		
	comp=E,284µm,0.7s						
PESA				AML	AML		
	comp=N,265µm,1.4s						
PESA				AML	AML		
	comp=E,452µm,0.9s						
PESA				AML	AML		
	comp=N,385µm,1.6s						
PESA				AML	AML		
	comp=N,384µm,1.6s						
PESA				AML	AML		
	comp=E,452µm,0.9s						
PESA				AML	AML		
	comp=N,385µm,1.6s						
PESA				AML	AML		
	comp=E,452µm,0.9s						
ATFO	**Monte Foce - G**	**0.59**	**139**	P	**Pg**	**00 43 07.8**	**-0.4**
ATFO				S	**Sb**	**00 43 18.0**	**+1.2**
ATFO				AML	AML		
	comp=E,197µm,0.7s						
ATFO				AML	AML		
	comp=N,214µm,0.6s						
ATFO				AML	AML		
	comp=E,258µm,0.6s						
ATFO				AML	AML		
	comp=N,287µm,0.7s						
ATFO				AML	AML		
	comp=E,258µm,0.6s						
ATFO				AML	AML		
	comp=N,287µm,0.7s						
ATFO				AML	AML		
	comp=E,258µm,0.6s						
ATFO				AML	AML		
	comp=N,287µm,0.7s						
ATFO				END			
CSNT	**Castellina Chi**	**0.65**	**238**	P	**Pg**	**00 43 09.4**	**+0.2**
CSNT				AML	AML		
	comp=E,154µm,0.7s						
CSNT				AML	AML		
	comp=N,202µm,0.6s						
CSNT				AML	AML		
	comp=E,185µm,0.7s						
CSNT				AML	AML		
	comp=N,256µm,0.6s						
CSNT				AML	AML		
	comp=E,185µm,0.7s						
CSNT				AML	AML		
	comp=N,256µm,0.6s						
CSNT				AML	AML		
	comp=E,185µm,0.7s						
CSNT				AML	AML		
	comp=N,256µm,0.6s						
OSSC	**Osservatorio P**	**0.65**	**243**	P	**Pg**	**00 43 09.4**	**+0.2**
OSSC				AML	AML		
	comp=E,243µm,1.4s						
OSSC				AML	AML		
	comp=N,371µm,0.5s						
OSSC				AML	AML		
	comp=E,199µm,1.5s						
OSSC				AML	AML		
	comp=N,304µm,0.5s						
OSSC				AML	AML		
	comp=E,247µm,1.5s						
OSSC				AML	AML		
	comp=N,343µm,0.5s						
OSSC				AML	AML		
	comp=N,343µm,0.5s						
OSSC				AML	AML		
	comp=E,247µm,1.5s						
OSSC				AML	AML		
	comp=N,343µm,0.5s						
OSSC				AML	AML		
	comp=E,247µm,1.5s						
MURB	**Monte Urbino**	**0.66**	**147**	P	**Pg**	**00 43 09.7**	**+0.2**
MURB				S	**Sg**	**00 43 18.6**	**+0.4**
MURB				AML	AML		
	comp=E,405µm,0.8s						
MURB				AML	AML		
	comp=N,328µm,0.3s						
MURB				AML	AML		
	comp=E,512µm,0.7s						
MURB				AML	AML		
	comp=N,450µm,1.1s						
MURB				AML	AML		
	comp=E,512µm,0.7s						
MURB				AML	AML		
	comp=N,450µm,1.1s						
MURB				AML	AML		
	comp=E,512µm,0.7s						
MURB				AML	AML		
	comp=N,450µm,1.1s						
MURB				END			
ATTE	**AVT- Monte Tez**	**0.66**	**160**	P	**Pg**	**00 43 09.4**	**-0.1**
ATTE				S	**Sb**	**00 43 19.4**	**+0.7**
ATTE				AML	AML		
	comp=E,165µm,0.4s						
ATTE				AML	AML		
	comp=N,187µm,0.3s						
ATTE				AML	AML		
	comp=E,243µm,0.3s						
ATTE				AML	AML		
	comp=N,289µm,0.2s						
ATTE				AML	AML		
	comp=N,289µm,0.2s						
ATTE				AML	AML		
	comp=E,243µm,0.3s						
ATTE				AML	AML		
	comp=N,289µm,0.2s						
ATTE				AML	AML		
	comp=E,243µm,0.3s						
ATTE				END			
PTF	**Prato**	**0.72**	**282**	P	**Pg**	**00 43 10.3**	**-0.3**
COR1	**Corinaldo**	**0.72**	**105**	P	**Pb**	**00 43 11.1**	**+0.4**
ARVD	**Arcevia**	**0.73**	**116**	P	**Pg**	**00 43 10.3**	**-0.4**
ARVD				S	**Sb**	**00 43 22.2**	**+1.6**
ARVD				AML	AML		
	comp=E,74µm,0.4s						
ARVD				AML	AML		
	comp=N,66µm,0.5s						
ARVD				AML	AML		
	comp=E,101µm,0.5s						
ARVD				AML	AML		
	comp=N,92µm,0.4s						
ARVD				AML	AML		
	comp=N,92µm,0.4s						
ARVD				AML	AML		
	comp=E,102µm,0.5s						
ARVD				AML	AML		
	comp=N,92µm,0.4s						
ARVD				AML	AML		
	comp=E,101µm,0.5s						
ARVD				END			
FROS	**Frosini**	**0.89**	**227**	P	**Pb**	**00 43 14.2**	**+0.6**
FROS				AML	AML		
	comp=E,184µm,0.8s						
FROS				AML	AML		
	comp=N,134µm,0.4s						
FROS				AML	AML		
	comp=E,210µm,0.6s						
FROS				AML	AML		
	comp=N,183µm,0.5s						
FROS				AML	AML		
	comp=N,183µm,0.5s						
FROS				AML	AML		
	comp=E,210µm,0.6s						
FROS				AML	AML		
	comp=N,183µm,0.5s						
FROS				AML	AML		
	comp=E,210µm,0.6s						
POPM	**Popiglio**	**0.96**	**284**	P	**Pg**	**00 43 14.4**	**-0.6**
POPM				S	**Sn**	**00 43 29.3**	**+0.6**
POPM	**Popiglio**	**0.96**	**284**	P	**Pb**	**00 43 14.9**	**+0.1**
POPM				AML	AML		
	comp=E,140µm,1.4s						
POPM				AML	AML		
	comp=N,238µm,0.2s						
POPM				AML	AML		
	comp=E,145µm,0.7s						
POPM				AML	AML		
	comp=N,238µm,0.2s						
POPM				AML	AML		
	comp=N,238µm,0.2s						
POPM				AML	AML		
	comp=E,145µm,0.7s						
POPM				AML	AML		
	comp=N,238µm,0.2s						
POPM				AML	AML		
	comp=E,145µm,0.7s						
SACS	**San Casciano d**	**0.97**	**186**	P	**Pg**	**00 43 15.4**	**0.0**
SACS				AML	AML		
	comp=E,139µm,0.4s						
SACS				AML	AML		
	comp=N,134µm,0.5s						
SACS				AML	AML		
	comp=E,143µm,0.4s						
SACS				AML	AML		
	comp=N,142µm,0.5s						
SACS				AML	AML		
	comp=E,200µm,0.4s						
SACS				AML	AML		
	comp=N,168µm,0.5s						
SACS				AML	AML		
	comp=E,189µm,0.4s						
SACS				AML	AML		
	comp=N,174µm,0.7s						
SACS				AML	AML		
	comp=E,200µm,0.4s						
SACS				AML	AML		
	comp=E,189µm,0.4s						
SACS				AML	AML		
	comp=N,168µm,0.5s						
SACS				AML	AML		
	comp=N,174µm,0.7s						
SACS				AML	AML		
	comp=E,200µm,0.4s						
SACS				AML	AML		
	comp=E,189µm,0.4s						
SACS				AML	AML		
	comp=N,168µm,0.5s						
SACS				AML	AML		
	comp=N,174µm,0.7s						
MAIM	**Mastiano**	**1.12**	**275**	P	**Pb**	**00 43 17.9**	**+0.3**
MAIM				S	**Sg**	**00 43 32.5**	**-0.4**
GRAM	**Graiana**	**1.57**	**296**	P	**Pg**	**00 43 29.1**	**+2.3**
GRAM				S	**Sg**	**00 43 51.6**	**+4.4**
PGF	**Pioggiola**	**2.56**	**241**	*e*Pn	**Pn**	**00 43 36.5**	**-1.0**
	comp=N,4.3nm,0.5s						
PGF				*e*Sn	**Sn**	**00 44 06.3**	**-2.1**
ABTA	**Abfaltersbach**	**2.95**	**6**	*i* Pg	**Pg**	**00 43 51.9**	**-1.2**
	comp=N,2.6nm,0.5s						
ABTA				*i* Sn	**Sn**	**00 44 17.6**	**-0.4**
	comp=N,1.9nm,0.6s						
OBKA	**Obir**	**3.22**	**33**	*i* Pn	**Pn**	**00 43 43.1**	**-3.5**
	comp=N,2.6nm,0.4s						
OBKA				*i* Sn	**Sn**	**00 44 25.2**	**+0.5**
	comp=N,1.9nm,0.3s						
SBF	**Sospel**	**3.33**	**272**	*e*Pn	**Pn**	**00 43 46.7**	**-1.4**
SBF				*e*Sn	**Sn**	**00 44 24.2**	**-3.2**
	comp=N,4.2nm,0.3s						
FETA	**Feichten**	**3.33**	**344**	*i* Pn	**Pb**	**00 43 53.6**	**-1.8**
	comp=N,0.9nm,0.4s						
KBA	**Koelnbreinsper**	**3.39**	**15**	*i* Sn	**Sn**	**00 44 28.9**	**0.0**
	comp=N,0.5nm,0.1s						
SQTA	**Sankt Quirin**	**3.45**	**351**	*i* Pn	**Pn**	**00 43 50.4**	**+0.6**
	comp=N,4.0nm,1.0s						
SQTA				*i* Sn	**Sn**	**00 44 33.5**	**+3.1**
	comp=N,0.9nm,0.2s						
WTTA	**Wattenberg**	**3.46**	**355**	*i* Pn	**Pn**	**00 43 48.6**	**-1.3**
	comp=N,0.3nm,0.2s						
WATA	**Walderalm**	**3.53**	**355**	*i* Pn	**Pn**	**00 43 50.0**	**-0.9**
	comp=N,0.4nm,0.2s						
SOKA	**Soboth**	**3.56**	**35**	*i* Pn	**Pn**	**00 43 50.6**	**-0.6**
	comp=N,0.6nm,0.4s						
SOKA				*i* Sn	**Sn**	**00 44 30.8**	**-2.1**
	comp=N,0.5nm,0.3s						
MOTA	**Moosalm**	**3.59**	**350**	*i* Pn	**Pn**	**00 43 50.3**	**-1.4**
	comp=N,0.8nm,0.5s						
RETA	**Reutte**	**3.78**	**347**	*i* Pn	**Pb**	**00 44 02.5**	**-0.4**
	comp=N,6.3nm,1.2s						
RETA				*i* Sn	**Sn**	**00 44 37.5**	**-0.9**
	comp=N,0.6nm,0.2s						
DAVA	**Damuels**	**3.79**	**337**	*i* Pn	**Pb**	**00 44 01.1**	**-2.0**
	comp=N,2.7nm,0.6s						
DAVA				*i* Sn	**Sn**	**00 44 37.5**	**-1.2**
	comp=N,2.0nm,0.2s						
FRF	**La Foret Royal**	**3.92**	**268**	*e*Pn	**Pn**	**00 43 54.6**	**-1.5**
FRF				*e*Sn	**Sn**	**00 44 37.3**	**-4.5**
	comp=N,2.6nm,0.3s						
LMR	**La Mourre**	**4.05**	**265**	*e*Pn	**Pn**	**00 43 55.9**	**-2.0**
MOA	**Molln**	**4.32**	**20**	*i* Pn	**Pn**	**00 44 03.4**	**+1.8**
	comp=N,0.3nm,0.1s						
SMRF	**Simiane la Rot**	**4.68**	**274**	*e*P	**Pn**	**00 44 08.7**	**+2.2**
CDF	**Champ du Feu**	**5.66**	**326**	*e*P	**Pn**	**00 44 21.8**	**+1.7**
HAU	**Haudompre**	**5.77**	**319**	*e*P	**Pn**	**00 44 23.1**	**+1.6**
PAGF	**Fort de Pagny**	**6.45**	**319**	*e*P	**Pn**	**00 44 33.0**	**+2.1**
BGF	**Bois d'Agland**	**7.05**	**296**	*e*P	**Pn**	**00 44 41.0**	**+1.9**

ROM 12 00:43:36.3±0.1**, 43°.819N**±0°.005×**12°.043E**±0°.005**,**
h8$^{\text{km}}$**, ML2.3**/17**, Error ellipse: s-maj=0.7km**
s-min=0.2km az=24.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.17**	**301**	P	Pg	00 43 40.2	+0.3
SFI				S	Sg	00 43 43.4	+1.1
SFI				AML	AML		
	comp=E,2330µm,0.8s						
SFI				AML	AML		
	comp=N,1275µm,1.3s						
SFI				AML	AML		
	comp=E,1990µm,0.8s						
SFI				AML	AML		
	comp=N,1700µm,0.3s						
SFI				AML	AML		
	comp=E,1995µm,0.8s						
SFI				AML	AML		
	comp=N,1705µm,0.3s						
SFI				AML	AML		
	comp=E,2330µm,0.8s						
SFI				AML	AML		
	comp=E,1990µm,0.8s						
SFI				AML	AML		
	comp=N,1275µm,1.3s						
SFI				AML	AML		
	comp=N,1700µm,0.3s						
SFI				AML	AML		
	comp=N,1705µm,0.3s						
SFI				AML	AML		
	comp=E,1995µm,0.8s						
ASQU	**Asqua**	**0.18**	**263**	P	Pg	00 43 40.7	+0.5
ASQU				S	Sg	00 43 44.5	+1.7
ASQU				AML	AML		
	comp=E,2280µm,0.8s						
ASQU				AML	AML		
	comp=N,3535µm,0.5s						
ASQU				AML	AML		
	comp=E,2280µm,0.8s						
ASQU				AML	AML		
	comp=N,3535µm,0.5s						
ASQU				AML	AML		
	comp=E,2280µm,0.8s						
ASQU				AML	AML		
	comp=N,3535µm,0.5s						
ASQU				AML	AML		
	comp=E,2280µm,0.8s						
ASQU				AML	AML		
	comp=N,3535µm,0.5s						
CPGN	**Carpegna, Ital**	**0.20**	**95**	P	Pg	00 43 41.2	+0.7
CPGN				S	Sg	00 43 45.7	+2.4
CPGN				AML	AML		
	comp=E,1340µm,0.3s						
CPGN				AML	AML		
	comp=N,1165µm,1.5s						
CPGN				AML	AML		
	comp=E,1340µm,0.3s						
CPGN				AML	AML		
	comp=N,1160µm,1.5s						
CPGN				AML	AML		
	comp=E,1241µm,0.3s						
CPGN				AML	AML		
	comp=N,1175µm,1.1s						
CPGN				AML	AML		
	comp=E,1340µm,0.3s						
CPGN				AML	AML		
	comp=N,1165µm,1.5s						
CPGN				AML	AML		
	comp=E,1241µm,0.3s						
CPGN				AML	AML		
	comp=N,1160µm,1.5s						
CPGN				AML	AML		
	comp=E,1340µm,0.3s						
CPGN				AML	AML		
	comp=N,1175µm,1.1s						
CPGN				AML	AML		
	comp=E,1340µm,0.3s						
CPGN				AML	AML		
	comp=N,1165µm,1.5s						
PARC	**Parchiule**	**0.22**	**140**	P	Pg	00 43 41.3	+0.5
PARC				S	Sg	00 43 45.3	+1.4
PARC				AML	AML		
	comp=E,1050µm,0.8s						
PARC				AML	AML		
	comp=N,1370µm,0.9s						
PARC				AML	AML		
	comp=E,1050µm,0.8s						
PARC				AML	AML		
	comp=N,1370µm,0.9s						
PARC				AML	AML		
	comp=E,1050µm,0.8s						
PARC				AML	AML		
	comp=N,1370µm,0.9s						
PARC				AML	AML		
	comp=E,1050µm,0.8s						
PARC				AML	AML		
	comp=N,1370µm,0.9s						
PARC				AML	AML		
	comp=E,1050µm,0.8s						
PARC				AML	AML		
	comp=N,1370µm,0.9s						
SSP9	**Sansepolcro**	**0.25**	**165**	P	Pg	00 43 42.0	+0.6
SSP9				S	Sb	00 43 46.6	-1.1
BADI	**Badiali**	**0.34**	**155**	P	Pg	00 43 43.4	+0.3
BADI				S	Sb	00 43 49.2	-1.0
BADI				AML	AML		
	comp=E,1174µm,0.2s						
BADI				AML	AML		
	comp=N,712µm,0.6s						
BADI				AML	AML		
	comp=E,1176µm,0.2s						
BADI				AML	AML		
	comp=N,712µm,0.6s						
BADI				AML	AML		
	comp=E,1172µm,0.2s						
BADI				AML	AML		
	comp=N,712µm,0.6s						
BADI				AML	AML		
	comp=E,1176µm,0.2s						
BADI				AML	AML		
	comp=N,712µm,0.6s						
BADI				AML	AML		
	comp=E,1172µm,0.2s						
BADI				AML	AML		
	comp=N,712µm,0.6s						
PE3	**Peglio**	**0.35**	**110**	P	Pg	00 43 43.6	+0.3
PE3				S	Sb	00 43 50.0	-0.5
PE3				AML	AML		
	comp=E,1800µm,0.5s						
PE3				AML	AML		
	comp=N,1325µm,0.5s						
PE3				AML	AML		
	comp=E,1805µm,0.5s						
PE3				AML	AML		
	comp=N,1325µm,0.5s						
PE3				AML	AML		
	comp=N,1325µm,0.5s						
PE3				AML	AML		
	comp=E,1800µm,0.5s						
PE3				AML	AML		
	comp=E,1805µm,0.5s						
PE3				AML	AML		
	comp=N,1325µm,0.5s						
CDCA	**Citt‘ di Caste**	**0.39**	**159**	P	Pg	00 43 44.2	+0.3
CDCA				S	Sb	00 43 50.4	-1.0
RUFI	**Rufina**	**0.39**	**273**	P	Pg	00 43 44.3	+0.4
RUFI				S	Sb	00 43 50.9	-0.7
RUFI				AML	AML		
	comp=E,1566µm,0.3s						
RUFI				AML	AML		
	comp=N,835µm,0.4s						
RUFI				AML	AML		
	comp=N,835µm,0.4s						
RUFI				AML	AML		
	comp=E,1566µm,0.3s						
ATPI	**Pietralunga -**	**0.45**	**145**	P	Pg	00 43 45.4	+0.2
ATPI				S	Sb	00 43 52.9	-0.5
PIEI	**Pieia**	**0.46**	**128**	P	Pg	00 43 45.0	-0.2
PIEI				S	Sb	00 43 52.6	-0.9
PIEI				AML	AML		
	comp=E,230µm,0.3s						
PIEI				AML	AML		
	comp=N,154µm,1.0s						
PIEI				AML	AML		
	comp=E,230µm,0.3s						
PIEI				AML	AML		
	comp=N,154µm,1.0s						
PIEI				AML	AML		
	comp=E,230µm,0.3s						
PIEI				AML	AML		
	comp=N,154µm,1.0s						
PIEI				AML	AML		
	comp=E,230µm,0.3s						
PIEI				AML	AML		
	comp=N,154µm,1.0s						
PIEI				AML	AML		
	comp=N,154µm,1.0s						
PIEI				AML	AML		
	comp=E,230µm,0.3s						
CAFI	**Castiglion Fio**	**0.49**	**187**	P	Pg	00 43 46.4	+0.5
CAFI				S	Sb	00 43 54.5	-0.1
CAFI				AML	AML		
	comp=E,358µm,1.5s						
CAFI				AML	AML		
	comp=N,255µm,0.2s						
CAFI				AML	AML		
	comp=E,358µm,1.5s						
CAFI				AML	AML		
	comp=N,254µm,0.2s						
CAFI				AML	AML		
	comp=N,255µm,0.2s						
CAFI				AML	AML		
	comp=E,358µm,1.5s						
CAFI				AML	AML		
	comp=N,254µm,0.2s						
CAFI				AML	AML		
	comp=E,358µm,1.5s						
BRIS	**BRISIGHELLA**	**0.51**	**311**	P	Pg	00 43 45.5	-0.7
ATVO	**AVT- Monte Val**	**0.51**	**149**	P	Pg	00 43 46.6	+0.4
ATVO				S	Sb	00 43 54.6	-0.5
ATVO				AML	AML		
	comp=E,438µm,0.4s						
ATVO				AML	AML		
	comp=N,310µm,1.3s						
ATVO				AML	AML		
	comp=E,438µm,0.4s						
ATVO				AML	AML		
	comp=N,311µm,1.3s						
ATVO				AML	AML		
	comp=N,310µm,1.3s						
ATVO				AML	AML		
	comp=E,438µm,0.4s						
ATVO				AML	AML		
	comp=N,311µm,1.3s						
ATVO				AML	AML		
	comp=E,438µm,0.4s						
ATMI	**Monte Miggiano**	**0.51**	**161**	P	Pg	00 43 46.5	+0.3
ATMI				S	Sb	00 43 54.5	-0.7
ATMI				AML	AML		
	comp=E,735µm,0.5s						
ATMI				AML	AML		
	comp=N,969µm,1.6s						
ATMI				AML	AML		
	comp=E,734µm,0.5s						
ATMI				AML	AML		
	comp=N,969µm,1.6s						
ATMI				AML	AML		
	comp=E,734µm,0.5s						
ATMI				AML	AML		
	comp=N,969µm,1.6s						
ATMI				AML	AML		
	comp=N,969µm,1.6s						
ATMI				AML	AML		
	comp=E,734µm,0.5s						

ATMI				AML	AML		
	comp=N,969µm,1.6s						
ATMI				AML	AML		
	comp=E,734µm,0.5s						
SEI	**Scarperia**	0.55	296	P	Pg	00 43 47.1	+0.2
SEI				AML	AML		
	comp=E,1545µm,0.4s						
SEI				AML	AML		
	comp=N,1915µm,0.4s						
SEI				AML	AML		
	comp=E,1545µm,0.4s						
SEI				AML	AML		
	comp=N,1915µm,0.4s						
SEI				AML	AML		
	comp=E,1545µm,0.4s						
SEI				AML	AML		
	comp=N,1915µm,0.4s						
SEI				AML	AML		
	comp=E,1545µm,0.4s						
SEI				AML	AML		
	comp=N,1915µm,0.4s						
MPAG	**Monte Paganucc**	0.55	110	P	Pg	00 43 47.0	0.0
MPAG				S	Sb	00 43 56.3	-0.1
MPAG				AML	AML		
	comp=E,135µm,0.9s						
MPAG				AML	AML		
	comp=N,192µm,0.8s						
MPAG				AML	AML		
	comp=E,135µm,0.9s						
MPAG				AML	AML		
	comp=N,192µm,0.8s						
FRON	**Frontone**	0.58	121	P	Pg	00 43 47.5	0.0
FRON				S	Sb	00 43 56.9	-0.2
PESA	**Pesaro**	0.59	78	P	Pg	00 43 48.3	+0.6
PESA				S	Sb	00 43 57.0	-0.3
PESA				AML	AML		
	comp=E,452µm,0.9s						
PESA				AML	AML		
	comp=N,384µm,1.6s						
PESA				AML	AML		
	comp=E,452µm,0.9s						
PESA				AML	AML		
	comp=N,385µm,1.6s						
PESA				AML	AML		
	comp=E,452µm,0.9s						
PESA				AML	AML		
	comp=N,384µm,1.6s						
PESA				AML	AML		
	comp=E,452µm,0.9s						
PESA				AML	AML		
	comp=N,385µm,1.6s						
ATFO	**Monte Foce - G**	0.59	139	P	Pg	00 43 48.1	+0.3
ATFO				S	Sb	00 43 57.9	+0.3
CSNT	**Castellina Chi**	0.65	238	P	Pb	00 43 50.0	+0.2
OSSC	**Osservatorio P**	0.65	243	P	Pb	00 43 49.4	-0.5
OSSC				AML	AML		
	comp=E,247µm,1.5s						
OSSC				AML	AML		
	comp=N,343µm,0.5s						
OSSC				AML	AML		
	comp=E,247µm,1.5s						
OSSC				AML	AML		
	comp=N,343µm,0.5s						
OSSC				AML	AML		
	comp=E,247µm,1.5s						
OSSC				AML	AML		
	comp=N,343µm,0.5s						
OSSC				AML	AML		
	comp=N,343µm,0.5s						
OSSC				AML	AML		
	comp=E,247µm,1.5s						
ATTE	**AVT- Monte Tez**	0.66	160	P	Pg	00 43 49.3	+0.2
ATTE				S	Sb	00 43 59.5	0.0
ATTE				AML	AML		
	comp=E,243µm,0.3s						
ATTE				AML	AML		
	comp=N,289µm,0.2s						
ATTE				AML	AML		
	comp=E,243µm,0.3s						
ATTE				AML	AML		
	comp=N,289µm,0.2s						
ATTE				AML	AML		
	comp=N,289µm,0.2s						
ATTE				AML	AML		
	comp=E,243µm,0.3s						
ATTE				AML	AML		
	comp=N,289µm,0.2s						
ATTE				AML	AML		
	comp=E,243µm,0.3s						
ARVD	**Arcevia**	0.73	116	P	Pg	00 43 50.3	0.0
ARVD				S	Sb	00 44 01.3	0.0
ARVD				AML	AML		
	comp=E,102µm,0.5s						
ARVD				AML	AML		
	comp=N,92µm,0.4s						
ARVD				AML	AML		
	comp=E,101µm,0.5s						
ARVD				AML	AML		
	comp=N,92µm,0.4s						
ARVD				AML	AML		
	comp=N,92µm,0.4s						
ARVD				AML	AML		
	comp=E,102µm,0.5s						
ARVD				AML	AML		
	comp=N,92µm,0.4s						
ARVD				AML	AML		
	comp=E,101µm,0.5s						
CRMI	**Carmignano**	0.78	268	P	Pb	00 43 51.8	-0.3
MTCR	**Monte La Croce**	0.78	286	P	Pg	00 43 51.8	+0.3
FROS	**Frosini**	0.89	227	P	Pb	00 43 54.0	+0.1
ASSB	**Assisi San Ben**	0.90	150	P	Pb	00 43 54.2	+0.1
POPM	**Popiglio**	0.96	284	P	Pg	00 43 54.9	+0.2
SACS	**San Casciano d**	0.97	186	P	Pb	00 43 55.5	0.0
SACS				AML	AML		
	comp=E,200µm,0.4s						
SACS				AML	AML		
	comp=N,168µm,0.5s						
SACS				AML	AML		
	comp=E,189µm,0.4s						
SACS				AML	AML		
	comp=N,174µm,0.7s						
SACS				AML	AML		
	comp=E,189µm,0.4s						
SACS				AML	AML		
	comp=N,168µm,0.5s						
SACS				AML	AML		
	comp=N,174µm,0.7s						
SACS				AML	AML		
	comp=E,200µm,0.4s						

UCR 12 01:07:56.1±1.3,10°.91N×85°.78W,h179^{km}±10^{km},MW3.6, 1C,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	**Buena Vista**	0.39	107	*e*P	Pn	01 08 20.1	-0.4
BUEV				*e*S	Sn	01 08 40.5	+1.4
MESS	**Mesas**	0.60	107	*e*P	Pn	01 08 21.0	-0.4
CUI	**Cuipilapa**	0.66	113	⇑*i*P	Pn	01 08 21.9	+0.3
CUI				*e*S	Sn	01 08 41.9	+0.8
JTS	**Las Juntas de**	1.02	127	*e*P	Pn	01 08 24.5	+0.6
JTS				*e*S	Sn	01 08 45.8	+0.4
LCR2	**La Lucha 2**	2.10	123	*e*P	Pn	01 08 36.1	+1.6
LCR2				*e*S	Sn	01 09 05.3	+1.2

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*GUC **12** 01:10:56.3±0.6,30°.29S×69°.76W,h145^{km}±4^{km},ML3.6*

*ISCJB **12** 01:10:57.5±1.1,30°.35S±0°.04×69°.49W±0°.05, h114^{km}±11^{km},Error ellipse: s-maj=7.0km s-min=6.4km az=35.8*

*SJA **12** 01:10:57.4±0.4,30°.35S×69°.50W,h106^{km}±2^{km},ML3.8, MW3.2*

ISC 12 01:10:58.1±1.8,30°.34S±0°.04×69°.50W±0°.04, h109^{km}±14^{km},n13,σ0^{s}.61/22,2C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AROD	**Rodeo**	0.18	8	*e*P	Pn	01 11 13.8	-0.1
AROD				*e*S	Sn	01 11 25.9	+0.3
GO04	**Tololo Observa**	1.14	278	⇑*i*P	Pn	01 11 21.0	0.0
GO04				*e*S	Sn	01 11 39.5	+1.3
GO04				IAML		01 11 41.6	
	comp=N,2µm,0.2s						
AGUA	**GUANDACOL**	1.22	46	*e*P	Pn	01 11 21.6	-0.2
AGUA				*e*S	Sn	01 11 39.7	0.0
RTLL	**Cerro Villicun**	1.32	138	*e*P	Pn	01 11 22.1	-0.7
RTLL				*e*S	Sn	01 11 40.6	-1.0
RTLL				IAML		01 11 41.5	
	comp=N,640nm,0.4s						
RTLS	**Leoncito**	1.46	173	*e*P	Pn	01 11 25.0	+0.2
RTLS				IAML		01 11 25.3	
	comp=Z,404nm,0.3s						
CO02	**Combarbal**	1.55	236	⇑*e*P	Pn	01 11 25.3	-0.4
CO02				*e*S	Sn	01 11 47.3	+0.8
LSCH	**La Serena**	1.57	286	*e*P	Pn	01 11 25.0	-0.7
LSCH				*e*S	Sn	01 11 45.9	-0.8
LCO	**Las Campanas**	1.69	322	*e*P	Pn	01 11 27.6	+0.1
LCO				IAML		01 11 50.8	
	comp=Z,4µm,0.2s						
LCO	**Las Campanas**	1.69	322	*e*P	Pn	01 11 27.0	-0.5
LCO				*e*S	Sn	01 11 49.6	-0.2
LCO				IAML		01 11 51.0	
	comp=E,309nm,0.2s						
RTCV	**Cerro Valdivia**	1.72	152	*e*P	Pn	01 11 27.8	+0.1
RTCV				*e*S	Sn	01 11 50.1	-0.1
AUSP	**Uspallata**	1.88	177	*e*P	Pn	01 11 30.5	+0.7
VCA	**Vinchina**	1.96	36	*e*P	Pn	01 11 31.1	+0.4
VCA				IAML		01 11 57.3	
	comp=Z,301nm,0.2s						
VCA	**Vinchina**	1.96	36	*e*P	Pn	01 11 30.8	0.0
VCA				*e*S	Sn	01 11 56.3	+0.7
VCA				IAML		01 12 00.6	
	comp=E,439nm,0.4s						

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*IDC **12** 01:11:55.8±1.0,4°.84S×147°.95E,h0^{km},mb4.1/11, mb1 4.3/12,mb1mx4.2/28,mbtmp4.1/12,ML2.1/1,MS3.9/20, Ms1 3.9/20,ms1mx3.8/24,Error ellipse: s-maj=40.6km s-min=15.0km az=93.0*

*DJA **12** 01:11:55.3±3.1,5°S±5°×14°9E±°,h29^{km}±33^{km},M4.8/5, mb4.7/5,MLv4.8/3*

*GCMT **12** 01:11:58.3±0.3,5°.02S±0°.02×148°.81E±0°.02,h13^{km}±2^{km}, MW4.8/75,Moment Tensor Solution. s12,c12; s75,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.12±.09; M$_{\theta\theta}$1.14±.08; M$_{\phi\phi}$-1.26±.09; M$_{r\theta}$0.25±.23; M$_{\theta\phi}$1.64±.09; M$_{\phi r}$0.20±.22; Best double couple: M$_0$2.05800×10^{16} NP1:φ$_s$18.00000°,δ85.00000°,λ172.00000°. NP2: φ$_s$108.00000°,δ82.00000°,λ5.00000°. Principal axes: T 2.0220, Plg9.0000°, Azm333.0000°; N 0.0720, Plg81.0000°, Azm163.0000°; P -2.0940, Plg2.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 01:12:03.3±1.9,5°.08S×147°.76E,h45^{km}±4^{km},mb4.3/22 Error ellipse: s-maj=26.4km s-min=9.7km az=84.0*

ISC 12 01:12:01.9±0.8,4°.98S±0°.05×147°.9E±0°.2,h35^{km},n55, σ1^{s}.59/44,mb4.5/28,MS3.9/19,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	2.96	350	*e*Pn	Pn	01 12 48.9	+2.3
PMG	**Port Moresby**	4.46	189	Pn	Pn	01 13 07.1	0.0
	6.3nm,0.3s,baz=12,slow=13,SNR=13						
PMG				Sn	Sn	01 14 01.3	+3.6
	6.4nm,0.3s,baz=38,slow=18,SNR=11						
PMG				LR	LR	01 14 39.7	
	comp=Z,501nm,21.2s,baz=216,slow=36						
PMG	**Port Moresby**	4.46	189	*e*Pn	Pn	01 13 05.8	-1.2
PMG				*e*Sn	Sn	01 14 01.4	+3.6
GUMO	**Guam**	18.69	351	LR	LR	01 21 44.5	
	comp=Z,568nm,21.5s,baz=176,slow=32						
WRAB	**Tennant Creek**	19.87	220	*e*P	P	01 16 30.6	+0.3
	36nm,0.8s						
WB2	**Warramunga Arr**	19.87	220	*e*P	P	01 16 30.4	+0.1
	29nm,0.7s						
WR1	**Warramunga Arr**	19.88	220	*e*P	P	01 16 30.6	+0.2
WRA	**Warramunga Arr**	19.88	220	P	P	01 16 30.6	+0.1
	15nm,0.7s,baz=49,slow=10,SNR=58						
SANI	**Sanana**	22.05	277	P	P	01 17 05.8	+12
AS31	**Alice Springs**	22.95	215	*e*P	P	01 17 02.9	-0.6
	7.8nm,0.9s						
ASAR	**Alice Springs**	22.96	215	P	P	01 17 02.5	-1.0
	8.3nm,0.7s,baz=50,slow=8.3,SNR=58						
ASAR				LR	LR	01 27 41.7	
	comp=Z,476nm,19.2s,baz=52,slow=41						
BATI	**Baumata**	24.56	256	LR	LR	01 29 19.8	
	comp=Z,454nm,21.5s,baz=119,slow=42						
DZM	**Mont Dzumac**	24.72	135	*e*LQ	LQ	01 23 04.5	
	5µm,30.0s						
DZM				*e*LR	LR	01 24 07.4	
	comp=Z,1µm,22.8s						
DZM	**Mont Dzumac**	24.72	135	LR	LR	01 24 59.1	
	comp=Z,876nm,21.7s,baz=299,slow=32						
DAV	**Davao City (W)**	25.28	298	LR	LR	01 28 13.4	
	comp=Z,131nm,18.3s,baz=310,slow=39						
STKA	**Stephens Creek**	27.40	192	P	P	01 17 45.6	+1.4
	2.0nm,0.7s,baz=5.8,slow=11,SNR=2.4						
STKA				LR	LR	01 29 14.6	
	comp=Z,325nm,18.0s,baz=16,slow=38						
KAPI	**Kappang**	28.03	269	LR	LR	01 31 59.7	
	comp=Z,93nm,20.2s,baz=118,slow=43						
JNU	**Nakatsue**	41.19	338	*e*P	P	01 19 46.6	+3.3
	17nm,1.0s						
MJAR	**Matsushiro Arr**	42.29	348	LR	LR	01 36 13.6	
	comp=Z,100nm,18.4s,baz=155,slow=35						
KSRS	**Korea Array**	46.14	338	P	P	01 20 21.6	-1.4
	1.3nm,0.8s,baz=141,slow=8.1,SNR=5.6						
KSRS				LR	LR	01 38 16.4	
	comp=Z,102nm,21.2s,baz=130,slow=34						
KS15	**Wonju Array Si**	46.14	338	*e*P	P	01 20 21.6	-1.5
	76nm,1.9s						
USRK	**Ussuriysk Ar.**	51.01	345	P	P	01 20 58.2	-2.1
	1.6nm,0.7s,baz=161,slow=8.0,SNR=6.8						
USRK				LR	LR	01 40 08.1	
	comp=Z,97nm,20.5s,baz=148,slow=33						
CM31	**Chiang Mai Arr**	53.57	297	*e*P	P	01 21 19.9	0.0
	10nm,1.1s						
CMAR	**Chiang Mai Arr**	53.57	297	P	P	01 21 19.9	0.0
	0.8nm,0.3s,baz=120,slow=5.3,SNR=2.9						
CMAR				LR	LR	01 44 20.4	
	comp=Z,28nm,19.8s,baz=110,slow=36						
PETK	**Petropavlovsk-**	58.46	7	LR	LR	01 44 05.9	
	comp=Z,57nm,21.1s,baz=190,slow=33						
TBI	**Tubuai**	62.95	114	*e*LR	LR	01 42 01.0	
	comp=Z,191nm,35.5s						
ULN	**Ulaanbaatar**	63.66	331	*e*P	P	01 22 29.6	-0.2
	15nm,1.6s						
SONA0	**Songino Array**	63.96	330	*e*P	P	01 22 30.8	-1.0
SONM	**Songino Array**	63.96	330	P	P	01 22 30.8	-1.0
	1.5nm,0.8s,baz=144,slow=6.5,SNR=9.8						
SONM				LR	LR	01 51 04.4	
	comp=Z,73nm,19.3s,baz=140,slow=37						
VNDA	**Vanda**	72.87	177	P	P	01 23 26.7	-0.2
	0.6nm,0.8s,baz=331,slow=8.3,SNR=3.8						
VNDA				LR	LR	01 51 32.1	
	comp=Z,70nm,20.4s,baz=340,slow=32						
MK32	**Makanchi Array**	77.29	320	*e*P	P	01 23 51.4	-1.6
MKAR	**Makanchi Array**	77.29	320	P	P	01 23 51.4	-1.6
	0.7nm,0.9s,baz=101,slow=6.3,SNR=5.3						
MKAR				LR	LR	01 58 12.0	
	comp=Z,80nm,18.6s,baz=92,slow=36						
ZALV	**Zalesovo Beam**	78.63	327	P	P	01 23 58.1	-2.1
	0.6nm,0.3s,baz=111,slow=8.0,SNR=3.2						
ZALV				LR	LR	01 58 43.7	
	comp=Z,98nm,20.0s,baz=70,slow=36						
ZAA1	**Zalesovo Array**	78.63	327	*e*P	P	01 23 58.1	-2.1
TTA	**Tatalina**	79.77	23	*e*P	P	01 24 07.2	+0.9
	6.5nm,1.5s						
CNPM	**China Poot**	80.04	27	*e*P	P	01 24 08.7	+0.9
	14nm,0.9s						
NIL	**Nilore**	80.06	305	*e*P	P	01 24 08.6	+0.1
	7.8nm,0.7s						
KURK	**Kurchatov**	80.93	323	*e*P	P	01 24 12.4	-0.3
	3.8nm,1.0s						
AAK	**Ala-Archa**	81.27	314	*e*P	P	01 24 17.3	+2.4
	1.8nm,0.7s						
KTH	**Kantishna Hill**	82.07	23	*e*P	P	01 24 18.9	+0.4
	5.8nm,1.1s						
SCM	**Sheep Creek Mo**	82.79	26	*e*P	P	01 24 25.2	+2.8
	14nm,1.3s						
MCK	**McKinley**	82.94	24	*e*P	P	01 24 23.6	+0.6
	9.9nm,0.9s						
MAW	**Mawson**	83.52	203	LR	LR	02 01 06.0	
	comp=Z,93nm,18.8s,baz=81,slow=35						
WRH	**Wood River Hil**	83.60	23	*e*P	P	01 24 28.6	+2.2
	4.9nm,1.0s						
ILAR	**Eielson Array**	84.20	23	P	P	01 24 28.4	-1.1
	0.9nm,0.7s,baz=252,slow=5.1,SNR=9.5						
ILB	**Eielson Array**	84.20	23	*e*P	P	01 24 28.4	-1.1
KK31	**Karatay Array**	84.22	314	*e*P	P	01 24 29.8	-0.3
	4.9nm,1.0s						
KKAR	**Karatay Array**	84.22	314	*e*P	P	01 24 30.5	+0.4
	4.9nm,1.0s						
QSPA	**South Pole Qui**	84.98	180	*e*P	P	01 24 32.9	-0.7
	17nm,1.6s						
HYT	**Haines Junctio**	86.88	28	*e*P	P	01 24 44.4	+1.4
DAWY	**Dawson**	86.98	25	*e*P	P	01 24 44.6	+1.2
	7.2nm,1.2s						
GEYT	**Alibeck**	92.85	308	LR	LR	02 09 13.4	
	comp=Z,80nm,20.6s,baz=60,slow=37						
NVAR	**Mina Array Bea**	96.04	52	LR	LR	02 05 33.1	
	comp=Z,46nm,18.1s,baz=262,slow=34						
TORD	**Torodi Ar. Bea**	145.68	286	PKPbc	PKPdf	01 31 36.2	-1.6
	1.6nm,0.8s,baz=31,slow=6.2,SNR=8.7						
TOA1	**Torodi Ar. Sit**	145.69	286	*e*PKPdf	PKPdf	01 31 36.2	-1.6

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*SOME **12** 01:12:01.6,39°.27N×71°.00E,h20^{km}*

*KRNET **12** 01:12:02.1±0.1,39°.09N×70°.28E,mb3.3*

*NNC **12** 01:12:02.1±4.9,39°.05N×69°.80E,h0^{km},mb3.8,mpv3.4, Error ellipse: s-maj=37.9km s-min=22.8km az=7.0*

ISC 12 01:12:07.1±2.4,39°.2N±0°.1×70°.47E±0°.07,h10^{km},n22, σ2^{s}.44/42,28C-10D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	0.86	18	⇑*i*P	Pg	01 12 22.1	-1.5
	baz=23						
BTK				⇑*i*S	Sn	01 12 36.7	-1.3
	baz=23						
DRK	**Karamyk**	1.05	77	⇑*i*P	Pg	01 12 26.1	-1.3
	baz=71						
DRK				⇑*i*S	Sn	01 12 42.8	-0.3
	baz=71						
TAS	**Tashkent**	2.27	337	⇓*i*P	Pn	01 12 44.7	0.0
	baz=42						
TAS				⇓*i*S	Sb	01 13 14.3	-2.2
	baz=42						
ARK	**Arkit**	2.79	23	⇑*i*P	Pn	01 12 53.1	+1.1
	baz=25						
ARK				⇑*i*S	Sb	01 13 29.3	-2.2
	baz=25						
ARSB	**Arslanbob**	2.83	42	⇓*i*P	Pn	01 12 53.3	+0.8
	baz=42						
ARSB				⇓*i*S	Sb	01 13 30.5	-2.0
	baz=42						
IUG	**Iuzhnay**	2.92	354	*e*P	Pn	01 12 55.2	+1.5
	28nm,0.1s						
IUG				*e*S	Sn	01 13 30.4	+1.5
	180nm,0.3s						
KK31	**Karatay Array**	3.86	0	Pn	Pn	01 13 07.0	+0.5
	3.3nm,0.5s,baz=184,slow=13,SNR=32						
KK31				⇓Sn	Sn	01 13 55.7	+3.8
	15nm,0.7s,baz=192,slow=27						
KK31				⇓Lg	Lg	01 14 08.6	
	8.9nm,0.5s,baz=185,slow=26,SNR=7.5						
ARLS	**Aral**	3.93	47	⇑*i*P	Pn	01 13 08.7	+1.1
	baz=47						
ARLS				⇑*i*S	Sn	01 13 57.2	+3.3
	baz=47						
MRKS	**Merke**	4.07	30	*e*P	Pn	01 13 12.0	+2.5
	6.7nm,0.2s						
MRKS				*e*S	Sn	01 13 59.0	+1.7
	8.8nm,0.3s						
EKS2	**Erkin-Say**	4.23	35	⇓*i*P	Pn	01 13 12.6	+0.8
	baz=35						
EKS2				⇓*i*S	Sn	01 14 04.7	+3.4
	baz=35						
UCH	**Uchtor**	4.28	45	⇑*i*P	Pn	01 13 13.8	+1.1
	baz=44						
UCH				⇑*i*S	Sn	01 14 06.5	+3.6
	baz=44						
AAK	**Ala-Archa**	4.56	41	⇑Pn	Pn	01 13 18.6	+2.3
	2.0nm,0.5s						
AAK				⇑Sn	Sb	01 14 21.0	-1.2
	4.3nm,0.5s						
AAK	**Ala-Archa**	4.56	41	⇑*i*P	Pn	01 13 16.7	+0.4
	baz=41						
AAK				⇑*i*S	Sn	01 14 12.8	+3.4
	baz=41						
KZA	**Kyzart**	4.61	51	⇑*i*P	Pn	01 13 18.0	+0.9
	baz=50						
KZA				⇑*i*S	Sn	01 14 14.6	+3.7
	baz=50						
FRU1	**Bishkek**	4.75	40	⇑*i*P	Pn	01 13 20.4	+1.6
	baz=40						
FRU1				⇑*i*S	Sn	01 14 17.1	+3.1
	baz=40						
NRN	**Naryn**	4.76	61	⇑*i*P	Pn	01 13 19.7	+0.6
	baz=60						
NRN				⇑*i*S	Sn	01 14 16.2	+1.7
	baz=60						
KBK	**Karagaybulak**	4.81	43	⇑*i*P	Pn	01 13 21.0	+1.3
	baz=43						
KBK				⇑*e*S	Sn	01 14 18.4	+2.9
	baz=43						
CHMS	**Chumysh**	4.95	39	⇑*i*P	Pn	01 13 22.9	+1.4
	baz=39						
CHMS				⇑*i*S	Sn	01 14 22.2	+3.3
	baz=39						
USP	**Ospenovka**	5.04	36	⇑*i*P	Pn	01 13 23.2	+0.5
	baz=36						
USP				⇑*i*S	Sn	01 14 23.6	+2.6
	baz=36						
BOOM	**Boomskoye usch**	5.26	50	⇓*i*P	Pn	01 13 27.2	+1.3
	baz=50						
BOOM				⇓*i*S	Sn	01 14 29.0	+2.3
	baz=50						
TKM2	**Tokmak 2**	5.34	45	⇑Pn	Pn	01 13 29.7	+2.7
	5.8nm,0.8s						
TKM2				⇑Sn	Sb	01 14 37.6	-7.2
	4.3nm,0.7s						
AB31	**Akbulak array**	12.53	326	P	Pn	01 14 59.0	-6.2
	0.8nm,0.4s,baz=141,slow=12,SNR=28						

IDC 12 01:45:38.9±3.6,4°.40S×153°.45E,h0^{km},mb3.5/2, mb1 3.7/2,mb1mx3.3/33,mbtmp3.5/2,Error ellipse: s-maj=165.3km s-min=49.3km az=121.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	24.20	229	P	P	01 50 57.8	+0.4
	0.7nm,0.6s,baz=56,slow=10,SNR=5.7						
ASAR	**Alice Springs**	26.88	223	P	P	01 51 22.4	+0.6
	0.3nm,0.5s,baz=59,slow=8.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	150.79	289	PKPbc	PKPbc	02 05 33.3	-1.1
	0.2nm,0.5s,baz=72,slow=2.4,SNR=5.6						

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*IDC **12** 01:50:52.2±3.6,31°.86N×141°.25E,h0^{km},mb3.6/4, mb1 3.7/5,mb1mx3.5/33,mbtmp3.5/5,ML2.5/1,Error ellipse: s-maj=127.2km s-min=18.2km az=65.0*

ISC 12 01:50:55.9±1.8,31°.9N±0°.2×141°.3E±0°.3,h26^{km},n6, σ0^{s}.88/7,mb3.6/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	1.73	314	Pn	Pn	01 51 23.9	-0.4
	32nm,0.3s,baz=84,slow=21,SNR=7.1						
JHJ				Sn	Sb	01 51 48.4	+0.1
	16nm,0.3s,baz=65,slow=19,SNR=3.9						
MJAR	**Matsushiro Arr**	5.26	332	Pn	Pn	01 52 12.6	-0.2
	0.2nm,0.3s,baz=152,slow=11,SNR=3.8						
SONM	**Songino Array**	30.80	311	P	P	01 57 10.5	+0.9
	0.4nm,0.5s,baz=113,slow=10.0,SNR=3.9						
MKAR	**Makanchi Array**	46.88	306	P	P	01 59 23.4	-0.5
	0.4nm,0.5s,baz=98,slow=8.9,SNR=3.8						
WRA	**Warramunga Arr**	51.99	188	P	P	02 00 04.0	+0.9
	0.6nm,0.5s,baz=6.2,slow=7.7,SNR=8.2						
ASAR	**Alice Springs**	55.72	188	P	P	02 00 29.3	-1.0
	0.3nm,0.5s,baz=10,slow=7.5,SNR=3.0						

NNC 12 01:54:48.7±6.0,37°.84N×71°.80E,h215^{km}±121^{km},mb2.6, mpv3.7,4C-1D,Error ellipse: s-maj=75.8km s-min=44.4km az=4.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	5.21	22	⇑P	Pn	01 56 06.4	+0.2
	3.6nm,0.4s						
AAK				⇑S	S	01 57 09.7	+2.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	3.4nm,0.5s						
KK31	Karatay Array	5.34	350	P	Pn	01 56 07.1	-0.6
	7.8nm,0.3s,baz=176,slow=12,SNR=143						
KK31				⇓S	S	01 57 10.3	+0.1
	1.2nm,0.3s,baz=168,slow=22,SNR=4.5						
TKM2	Tokmak 2	5.84	29	⇑P	Pn	01 56 14.4	+0.2
	2.6nm,0.5s						
TKM2				⇑S	S	01 57 20.8	-1.1
AB31	Akbulak array	14.26	327	P	P	01 58 01.8	-0.4
	0.4nm,0.3s,baz=164,slow=9.9,SNR=20						

NEIC **12** *02:06:16.9±0.0, 31.°84N×114.°91W, h21^{km}, ML3.2(PAS), After PAS.*
SCEDC **12** *02:06:16.9, 31.°84N×114.°91W, h21^{km}*
PAS **12** *02:06:16.9, 31.°84N×114.°91W, h21^{km}, ML3.2*
ANF **12** *02:06:19.0±1.1, 32.°06N×114.°93W, h31^{km}±10^{km}, ML2.8/10, Error ellipse: s-maj=6.7km s-min=2.6km az=21.0*
ECX **12** *02:06:19.6±0.6, 31.°92N×115.°03W, h9^{km}, MD3.0, ML3.2*
MEX **12** *02:06:20.1±0.6, 31.°97N×114.°94W, h13^{km}±8^{km}, MD3.5*
ISC 12 02:06:17.6±1.3**, 31.°94N**±0.°03×**114.°99W**±0.°03**, h23**^{km}±14^{km}**, n36, σ0.^{s}98**/54**, 4C-4D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.50	339	ePg	Pn	02 06 28.9	-0.5
MBIG				eSg	Sb	02 06 34.8	+0.1
MBIG	Mexicali	0.50	339	eP	Pn	02 06 28.9	-0.5
MBIG				eS	Sb	02 06 34.8	+0.1
CPBX	Cerro Prieto	0.55	331	⇑eP	Pn	02 06 29.3	-0.7
CPBX				eS	Sn	02 06 37.5	-1.1
CPBX				IAML		02 06 39.7	
	comp=N,7µm,0.1s						
CPBX				⇑e		02 06 39.7	
CPBX				IAML		02 06 40.8	
	comp=E,6µm,0.3s						
CPBX				e		02 06 40.8	
SPIG	San Pedro Mart	0.98	205	ePn	Pn	02 06 36.3	0.0
SPIG				eSn	Sn	02 06 49.3	-0.2
SPIG	San Pedro Mart	0.98	205	eP	Pn	02 06 36.3	0.0
SPIG				eS	Sn	02 06 49.3	-0.2
SPIG	San Pedro Mart	0.98	205	⇓eP	Pn	02 06 36.2	0.0
WESC	Westside Schoo	1.03	323	⇓eP	Pn	02 06 37.8	+1.1
YUH	Yuha Desert	1.06	312	eP	Pb	02 06 37.7	+0.3
GLA	Glamis	1.12	7	ePn	Pn	02 06 37.1	-0.9
GLA	Glamis	1.12	7	P	Pn	02 06 37.5	-0.5
	baz=183,SNR=49						
GLA				S	Sb	02 06 50.1	-2.4
	baz=183						
RMX	La Rumorosa	1.14	306	⇑eP	Pb	02 06 38.0	-0.6
RMX				eS	Sb	02 06 51.8	-1.4
RMX				⇓e		02 06 52.7	
RMX				IAML		02 06 52.7	
	comp=N,579nm,0.2s						
IKP	In-Ko-Pah, Jac	1.19	307	P	Pn	02 06 38.1	-0.8
	baz=128,SNR=96						
IKP				S	Sn	02 06 54.7	+0.3
	baz=128						
IKP	In-Ko-Pah, Jac	1.19	307	⇑eP	Pb	02 06 39.9	+0.4
SWSC	Sam W. Stewart	1.22	326	P	Pb	02 06 39.6	-0.3
	baz=146,SNR=24						
SWSC				Sb	Sb	02 06 56.5	+1.2
	baz=146						
113A	Mohawk Valley,	1.32	51	ePn	Pn	02 06 41.0	+0.3
CBX	Cerro Bola	1.47	285	ePn	Pb	02 06 43.1	-1.3
CBX				eSn	Sn	02 07 00.8	-0.7
CBX	Cerro Bola	1.47	285	eP	Pb	02 06 43.1	-1.3
CBX				eS	Sn	02 07 00.8	-0.7
CBX	Cerro Bola	1.47	285	eP	Pb	02 06 44.3	0.0
CBX				eS	Sb	02 07 04.1	+1.4
CBX				⇓e		02 07 05.2	
CBX				IAML		02 07 05.2	
	comp=E,371nm,0.2s						
TJIG	Tijuana	1.51	290	eP	Pn	02 06 43.4	0.0
TJIG				eS	Sb	02 07 03.0	-0.8
MONP2	Monument Peak	1.54	309	P	Pn	02 06 43.8	-0.1
	baz=129,SNR=55						
MONP2				S	Sb	02 07 03.8	-1.0
	baz=129						
MONP2	Monument Peak	1.54	309	eP	Pb	02 06 46.4	+0.8
BAR	Barrett	1.61	298	ePn	Pn	02 06 44.8	+0.2
BC3	Big Chuckawall	1.76	347	P	Pn	02 06 46.4	-0.4
	baz=166						
BC3				S	Sn	02 07 06.9	-1.7
	baz=166						
214A	Organ Pipe Nat	1.85	89	P	Pn	02 06 47.8	-0.1
	baz=267						
214A				S	Sn	02 07 10.5	-0.2
	baz=267						
Y12C	Blythe	1.85	12	ePn	Pn	02 06 48.6	+0.6
109C	Camp Elliot, M	2.03	298	P	Pn	02 06 51.2	+0.8
	baz=119						
109C				S	Sn	02 07 16.0	+1.0
	baz=119						
CPE	Camp Elliot	2.03	298	ePn	Pn	02 06 50.4	0.0
PFO	Pinyon Flats O	2.08	324	ePn	Pn	02 06 51.5	+0.2
PFO	Pinyon Flats O	2.08	324	P	Pn	02 06 50.7	-0.5
	baz=143						
PFO				Sb	Sb	02 07 22.1	+1.8
	baz=143						
BELC	Belle Mtn. Jos	2.23	338	Sb	Sb	02 07 25.4	+0.9
	baz=157						
MURC	Murrieta	2.49	312	Sb	Sb	02 07 35.0	+3.1
	baz=132						
Y14A	Wickenburg	2.60	39	ePn	Pn	02 06 59.4	+1.1
LDFC	Landfair	3.13	358	ePn	Pn	02 07 06.9	+1.2
W13A	Hualapai Mount	3.29	16	ePn	Pn	02 07 09.1	+1.2
TUC	Tucson	3.59	83	ePn	Pn	02 07 12.0	+0.1
X16A	Lo Mia Camp, P	3.87	49	ePn	Pn	02 07 16.7	+0.8

CNRM **12** *02:19:49.9, 34.°93N×9.°08W, h23^{km}*
IGIL **12** *02:19:51.9, 34.°22N×9.°65W, h31^{km}, ML1.8*
MDD **12** *02:19:51.8±2.2, 34.°21N×9.°63W, h74^{km}, mb3.0/5, Error ellipse: s-maj=29.4km s-min=18.8km az=104.0, PRXIMO*
INMG **12** *02:19:52.9±0.7, 34.°25N×9.°74W, h31^{km}, ML1.8, Error ellipse: s-maj=10.2km s-min=5.0km az=108.0*
ISC 12 02:19:48.7±2.0**, 34.°34N**±0.°07×**9.°3W**±0.°1**, h10**^{km}**, n28, σ2.^{s}67**/54**, 1C-1D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHG	ZHG	2.35	112	P	Pb	02 20 29.8	-1.5
ZHG				S	Sn	02 20 59.9	+3.4
PFVI	Vila Bisbo	2.81	7	eSn	Sn	02 21 08.4	+0.8
PFVI	Vila Bisbo	2.81	7	P	Pb	02 20 35.8	-3.2
	3.6nm,1.4s,SNR=7.9						
PFVI				S	Sn	02 21 08.5	+1.0
	19nm,1.1s,SNR=7.9						
RSA	Sarsar	2.89	78	P	Pn	02 20 31.8	-3.1
RSA				S	Sn	02 21 03.9	-5.8
MORF	Marmelete	3.00	9	eP	Pb	02 20 38.7	-3.6
MORF				eS	Sn	02 21 12.8	+0.4
MORF				AML	AML	02 21 15.5	
	comp=N,3.3nm,0.1s						
MORF	Marmelete	3.00	9	⇓ePn	Pb	02 20 38.7	-3.6
MORF				eSn	Sn	02 21 13.4	+1.0
MORF				A	A	02 21 18.5	
	comp=N,3.1nm,0.8s						
MORF	Marmelete	3.00	9	P	Pb	02 20 38.7	-3.6
MORF				S	Sn	02 21 13.4	+1.0
	comp=N,3.1nm,0.8s						
PBDV	Barranco-do-Ve	3.09	20	ePn	Pb	02 20 42.0	-1.8
PBDV				eSn	Sn	02 21 17.5	+2.9
PBDV	Barranco-do-Ve	3.09	20	P	Pb	02 20 42.0	-1.8
PBDV				S	Sn	02 21 17.5	+2.9
PTEO	Sao Teotonio	3.23	8	⇑ePn	Pb	02 20 42.0	-4.1
PTEO				eSn	Sn	02 21 18.7	+0.8
PTEO				A	A	02 21 19.7	
	comp=N,1.7nm,0.1s						
PTEO	Sao Teotonio	3.23	8	P	Pb	02 20 42.0	-4.1
PTEO				S	Sn	02 21 18.7	+0.8
	comp=N,0.9nm,0.1s						
PVAQ	Vaqueiros	3.30	22	ePn	Pb	02 20 44.0	-3.4
PVAQ				eSn	Sn	02 21 22.5	+2.7
PVAQ	Vaqueiros	3.30	22	P	Pb	02 20 44.0	-3.4
PVAQ				S	Sn	02 21 22.5	+2.7
PCVE	Castro Verde	3.43	16	ePn	Pb	02 20 45.5	-4.1
PCVE				eSn	Sn	02 21 24.5	+1.6
PCVE				A	A	02 21 30.5	
	comp=N,1.6nm,0.6s						
PCVE	Castro Verde	3.43	16	P	Pb	02 20 45.5	-4.1
PCVE				S	Sn	02 21 24.5	+1.6
	comp=N,1.6nm,0.6s						
EGRO	El Granado	3.50	24	P	Pn	02 20 46.5	+3.4
	comp=N,2.8nm,0.7s,SNR=7.9						
EGRO				S	Sn	02 21 26.8	+2.2
	comp=N,3.2nm,1.4s,SNR=7.9						
PNCL	Nicolau / Gran	3.81	9	ePn	Pn	02 20 50.2	+2.8
PNCL				eSn	Sn	02 21 32.9	+0.6
PNCL				A	A	02 21 37.2	
	comp=N,1.6nm,0.7s						
PNCL	Nicolau / Gran	3.81	9	P	Pn	02 20 50.2	+2.8
PNCL				S	Sn	02 21 32.9	+0.6
	comp=N,1.6nm,0.7s						
EMIN	Mina Concepcio	4.01	31	P	Pn	02 20 53.7	+3.5
	comp=N,3.0nm,2.2s,SNR=7.9						
EMIN				S	Sn	02 21 39.4	+2.1
	comp=N,1.9nm,1.6s,SNR=7.9						
MD31	MD31	4.04	110	P	Pn	02 20 50.8	+0.1
MD31				S	Sn	02 21 40.5	+2.5
MDT	Midelt	4.17	110	P	Pn	02 20 54.0	+1.5
MDT				S	Sn	02 21 43.8	+2.4
PMAFR	Mafra	4.60	360	P	Pn	02 21 00.4	+2.0
	comp=N,12nm,0.8s,SNR=7.9						
PMAFR				S	Sn	02 21 51.1	-0.8
	comp=N,3.8nm,1.4s,SNR=7.9						
PMTG	Montargil	4.79	10	ePn	Pn	02 21 03.1	+2.2
PMTG				eSn	Sn	02 21 55.6	-0.9
PMTG				A	A	02 22 00.1	
	comp=N,0.7nm,0.2s						
PMTG	Montargil	4.79	10	P	Pn	02 21 03.1	+2.2
PMTG				S	Sn	02 21 55.6	-0.9
	comp=N,0.7nm,0.2s						
ECAB	El Cabril	4.85	39	P	Pn	02 21 05.7	+3.9
	comp=N,3.1nm,1.1s,SNR=7.9						
ECAB				S	Sn	02 22 00.1	+2.1
	comp=N,2.3nm,1.0s,SNR=7.9						
PMRV	Marv??o	5.29	16	ePn	Pn	02 21 10.3	+2.5
PMRV				eSn	Sn	02 22 09.2	+0.3
PMRV				A	A	02 22 11.4	
	comp=N,1.1nm,0.8s						
PMRV	Marv??o	5.29	16	P	Pn	02 21 10.3	+2.5
PMRV				S	Sn	02 22 09.2	+0.3
	comp=N,1.1nm,0.8s						
EADA	Adamuz	5.38	43	P	Pn	02 21 12.4	+3.4
	SNR=7.9						

LDG **12** *02:20:44.9±0.2, 43.°93N×11.°99E, h2^{km}, Ml2.4/4, Error ellipse: s-maj=5.3km s-min=1.7km az=24.0*
ISCJB **12** *02:20:46.4±0.3, 43.°84N±0.°02×12.°00E±0.°02, h20^{km}±3^{km}, Error ellipse: s-maj=4.2km s-min=2.6km az=18.2*
ROM **12** *02:20:46.3±0.1, 43.°826N±0.°005×12.°034E±0.°005, h9^{km}, ML2.2/23, Error ellipse: s-maj=0.6km s-min=0.2km az=25.0*
ISC 12 02:20:46.2±0.8**, 43.°84N**±0.°03×**12.°00E**±0.°02**, h17**^{km}±5^{km}**, n45, σ1.^{s}06**/73**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	Santa Sofia	0.13	301	P	Pb	02 20 50.1	-0.2
SFI				S	Sg	02 20 53.0	+0.4
ASQU	Asqua	0.16	254	P	Pb	02 20 50.8	0.0
ASQU				S	Sg	02 20 54.1	+0.8
ASQU				AML	AML		
	comp=E,1530µm,0.5s						
ASQU				AML	AML		
	comp=N,2595µm,0.3s						
ASQU				AML	AML		
	comp=E,1530µm,0.5s						
ASQU				AML	AML		
	comp=N,2595µm,0.3s						
ASQU				AML	AML		
	comp=E,1530µm,0.5s						
ASQU				AML	AML		
	comp=N,2595µm,0.3s						
ASQU				AML	AML		
	comp=N,2595µm,0.3s						
ASQU				AML	AML		
	comp=E,1530µm,0.5s						
ASQU				AML	AML		
	comp=N,2595µm,0.3s						
ASQU				AML	AML		
	comp=E,1530µm,0.5s						
CPGN	Carpegna, Ital	0.24	99	P	Pg	02 20 51.5	-0.2
CPGN				S	Sg	02 20 55.7	+0.2
CPGN				AML	AML		
	comp=E,1735µm,0.4s						
CPGN				AML	AML		
	comp=N,2120µm,1.5s						
CPGN				AML	AML		
	comp=E,1678µm,0.4s						
CPGN				AML	AML		
	comp=N,1955µm,1.6s						
CPGN				AML	AML		
	comp=E,1735µm,0.4s						
CPGN				AML	AML		
	comp=N,2120µm,1.6s						
CPGN				AML	AML		
	comp=E,1680µm,0.4s						
CPGN				AML	AML		
	comp=N,1950µm,1.6s						
CPGN				AML	AML		
	comp=E,1735µm,0.4s						
CPGN				AML	AML		
	comp=N,2115µm,1.6s						
CPGN				AML	AML		
	comp=N,2115µm,1.6s						
CPGN				AML	AML		
	comp=E,1735µm,0.4s						
CPGN				AML	AML		
	comp=N,2115µm,1.6s						
CPGN				AML	AML		
	comp=E,1735µm,0.4s						
PARC	Parchiule	0.26	138	P	Pg	02 20 51.4	-0.6
PARC				S	Sg	02 20 55.6	-0.3
PARC				AML	AML		
	comp=E,808µm,0.7s						
PARC				AML	AML		
	comp=N,1080µm,0.3s						
PARC				AML	AML		
	comp=E,808µm,0.7s						
PARC				AML	AML		
	comp=N,1080µm,0.3s						
PARC				AML	AML		
	comp=E,808µm,0.7s						
PARC				AML	AML		
	comp=N,1080µm,0.3s						
PARC				AML	AML		
	comp=E,808µm,0.7s						
PARC				AML	AML		
	comp=N,1080µm,0.3s						
PARC				AML	AML		
	comp=E,808µm,0.7s						
PARC				AML	AML		
	comp=N,1080µm,0.3s						
SSP9	Sansepolcro	0.28	160	P	Pg	02 20 52.1	-0.2
SSP9				S	Sg	02 20 56.9	+0.3
SSP9				AML	AML		
	comp=E,460µm,0.8s						
SSP9				AML	AML		
	comp=N,718µm,1.4s						
SSP9				AML	AML		
	comp=E,464µm,0.8s						
SSP9				AML	AML		
	comp=N,722µm,1.4s						
RUFI	Rufina	0.35	270	P	Pg	02 20 54.2	+0.6
RUFI				S	Sb	02 21 00.5	+1.2
RUFI				AML	AML		
	comp=E,507µm,0.5s						
RUFI				AML	AML		
	comp=N,490µm,0.6s						
BADI	Badiali	0.38	151	P	Pg	02 20 53.5	-0.5
BADI				S	Sg	02 20 59.5	+0.2
BADI				AML	AML		
	comp=E,668µm,1.4s						
BADI				AML	AML		
	comp=N,584µm,0.2s						
BADI				AML	AML		
	comp=E,668µm,1.4s						
BADI				AML	AML		
	comp=N,584µm,0.2s						
BADI				AML	AML		
	comp=E,667µm,1.4s						
BADI				AML	AML		
	comp=N,583µm,0.2s						
BADI				AML	AML		
	comp=E,667µm,1.4s						
BADI				AML	AML		
	comp=N,583µm,0.2s						
BADI				AML	AML		
	comp=E,667µm,1.4s						
BADI				AML	AML		
	comp=N,583µm,0.2s						
PE3	Peglio	0.39	112	P	Pg	02 20 53.8	-0.4
PE3				S	Sg	02 21 00.0	+0.4
PE3				AML	AML		
	comp=E,1410µm,0.4s						
PE3				AML	AML		
	comp=N,1300µm,0.9s						
PE3				AML	AML		
	comp=E,1410µm,0.4s						
PE3				AML	AML		
	comp=N,1300µm,0.9s						
PE3				AML	AML		
	comp=E,1410µm,0.4s						
PE3				AML	AML		
	comp=N,1300µm,0.9s						
PE3				AML	AML		
	comp=E,1410µm,0.4s						
PE3				AML	AML		
	comp=N,1300µm,0.9s						
CDCA	Citt' di Caste	0.42	156	P	Pg	02 20 54.6	-0.1
CDCA				S	Sg	02 21 00.8	+0.4
BRIS	BRISIGHELLA	0.47	312	P	Pg	02 20 55.6	0.0
BRIS				AML	AML		
	comp=E,369µm,0.3s						
BRIS				AML	AML		
	comp=N,339µm,0.5s						
BRIS				AML	AML		
	comp=E,369µm,0.3s						
BRIS				AML	AML		
	comp=N,339µm,0.5s						
BRIS				AML	AML		
	comp=N,339µm,0.5s						
BRIS				AML	AML		
	comp=E,369µm,0.3s						
BRIS				AML	AML		
	comp=N,339µm,0.5s						
BRIS				AML	AML		
	comp=E,369µm,0.3s						
ATPI	Pietralunga -	0.49	143	P	Pg	02 20 55.5	-0.5
ATPI				S	Sg	02 21 03.4	+0.7
ATPI				AML	AML		
	comp=E,264µm,0.5s						
ATPI				AML	AML		
	comp=N,257µm,0.6s						
ATPI				AML	AML		
	comp=E,264µm,0.5s						
ATPI				AML	AML		
	comp=N,257µm,0.6s						
ATPI				AML	AML		
	comp=N,257µm,0.6s						
ATPI				AML	AML		
	comp=E,264µm,0.5s						
ATPI				AML	AML		
	comp=N,257µm,0.6s						
ATPI				AML	AML		
	comp=E,264µm,0.5s						
PIEI	Pieia	0.49	128	P	Pg	02 20 55.3	-0.8
PIEI				S	Sg	02 21 03.0	+0.2
PIEI				AML	AML		
	comp=E,242µm,0.3s						
PIEI				AML	AML		
	comp=N,156µm,0.3s						
PIEI				AML	AML		
	comp=E,242µm,0.3s						
PIEI				AML	AML		
	comp=N,156µm,0.3s						
PIEI				AML	AML		
	comp=E,242µm,0.3s						
PIEI				AML	AML		
	comp=N,156µm,0.3s						
PIEI				AML	AML		
	comp=E,242µm,0.3s						
PIEI				AML	AML		
	comp=N,156µm,0.3s						
PIEI				AML	AML		
	comp=E,242µm,0.3s						
PIEI				AML	AML		
	comp=N,156µm,0.3s						
SEI	Scarperia	0.51	295	P	Pg	02 20 56.9	+0.5
SEI				AML	AML		
	comp=E,660µm,0.4s						
SEI				AML	AML		
	comp=N,918µm,0.5s						
SEI				AML	AML		
	comp=E,661µm,0.4s						
SEI				AML	AML		
	comp=N,919µm,0.5s						
SEI				AML	AML		
	comp=E,661µm,0.4s						
SEI				AML	AML		
	comp=N,919µm,0.5s						
SEI				AML	AML		
	comp=E,661µm,0.4s						
SEI				AML	AML		
	comp=N,919µm,0.5s						
CAFI	Castiglion Fio	0.51	183	P	Pg	02 20 56.6	+0.1
CAFI				S	Sb	02 21 04.7	+0.7
CAFI				AML	AML		
	comp=E,430µm,0.5s						
CAFI				AML	AML		
	comp=N,615µm,1.4s						
CAFI				AML	AML		
	comp=E,426µm,0.5s						
CAFI				AML	AML		
	comp=N,272µm,0.7s						
ATMI	Monte Miggiano	0.54	159	P	Pg	02 20 57.0	0.0
ATMI				S	Sg	02 21 05.4	+1.1
ATMI				AML	AML		
	comp=E,462µm,1.2s						
ATMI				AML	AML		
	comp=N,612µm,0.4s						
ATMI				AML	AML		
	comp=E,462µm,1.2s						
ATMI				AML	AML		
	comp=N,612µm,0.4s						
ATMI				AML	AML		
	comp=E,462µm,1.2s						
ATMI				AML	AML		
	comp=N,612µm,0.4s						
ATMI				AML	AML		
	comp=E,462µm,1.2s						
ATMI				AML	AML		
	comp=N,612µm,0.4s						
ATVO	AVT- Monte Val	0.55	147	P	Pg	02 20 56.8	-0.3
ATVO				S	Sg	02 21 04.9	+0.5
ATVO				AML	AML		
	comp=E,356µm,0.3s						
ATVO				AML	AML		
	comp=N,258µm,0.4s						
ATVO				AML	AML		
	comp=E,356µm,0.3s						
ATVO				AML	AML		
	comp=N,258µm,0.4s						
ATVO				AML	AML		
	comp=N,258µm,0.4s						
ATVO				AML	AML		
	comp=E,356µm,0.3s						
ATVO				AML	AML		
	comp=N,258µm,0.4s						
ATVO				AML	AML		
	comp=E,356µm,0.3s						
MPAG	Monte Paganucc	0.59	111	P	Pg	02 20 57.0	-0.9
MPAG				S	Sg	02 21 06.1	+0.2
MPAG				AML	AML		
	comp=E,146µm,0.2s						
MPAG				AML	AML		
	comp=N,253µm,0.8s						
MPAG				AML	AML		
	comp=E,145µm,0.2s						
MPAG				AML	AML		
	comp=N,252µm,0.8s						
MPAG				AML	AML		
	comp=N,252µm,0.8s						
MPAG				AML	AML		
	comp=E,145µm,0.2s						
MPAG				AML	AML		
	comp=N,252µm,0.8s						
MPAG				AML	AML		
	comp=E,145µm,0.2s						
PESA	Pesaro	0.62	80	P	Pb	02 20 57.9	-0.7
PESA				S	Sb	02 21 07.5	+0.6
PESA				AML	AML		

	comp=E,362µm,1.0s						
PESA				AML	AML		
	comp=N,466µm,1.4s						
PESA				AML	AML		
	comp=E,362µm,1.0s						
PESA				AML	AML		
	comp=N,466µm,1.4s						
PESA				AML	AML		
	comp=E,362µm,1.0s						
PESA				AML	AML		
	comp=N,466µm,1.4s						
PESA				AML	AML		
	comp=E,362µm,1.0s						
PESA				AML	AML		
	comp=N,466µm,1.4s						
FRON	**Frontone**	**0.62**	**121**	P	**Pb**	**02 20 57.9**	**-0.7**
FRON				S	**Sg**	**02 21 07.5**	**+0.8**
FRON				AML	AML		
	comp=E,121µm,0.2s						
FRON				AML	AML		
	comp=N,198µm,1.2s						
FRON				AML	AML		
	comp=E,121µm,0.2s						
FRON				AML	AML		
	comp=N,198µm,1.2s						
FRON				AML	AML		
	comp=N,198µm,1.2s						
FRON				AML	AML		
	comp=E,121µm,0.2s						
FRON				AML	AML		
	comp=N,198µm,1.2s						
FRON				AML	AML		
	comp=E,121µm,0.2s						
ATFO	**Monte Foce - G**	**0.63**	**138**	P	**Pb**	**02 20 58.5**	**-0.4**
ATFO				S	**Sg**	**02 21 06.3**	**-0.8**
ATFO				AML	AML		
	comp=E,218µm,0.8s						
ATFO				AML	AML		
	comp=N,151µm,0.6s						
ATFO				AML	AML		
	comp=E,218µm,0.8s						
ATFO				AML	AML		
	comp=N,152µm,0.6s						
ATFO				AML	AML		
	comp=E,218µm,0.8s						
ATFO				AML	AML		
	comp=N,152µm,0.6s						
ATFO				AML	AML		
	comp=E,218µm,0.8s						
ATFO				AML	AML		
	comp=N,152µm,0.6s						
CSNT	**Castellina Chi**	**0.63**	**235**	P	**Pg**	**02 20 59.7**	**+1.1**
CSNT				AML	AML		
	comp=E,174µm,1.1s						
CSNT				AML	AML		
	comp=N,262µm,0.6s						
CSNT				AML	AML		
	comp=E,174µm,1.1s						
CSNT				AML	AML		
	comp=N,262µm,0.6s						
CSNT				AML	AML		
	comp=E,174µm,1.1s						
CSNT				AML	AML		
	comp=N,262µm,0.6s						
CSNT				AML	AML		
	comp=E,174µm,1.1s						
CSNT				AML	AML		
	comp=N,262µm,0.6s						
OSSC	**Osservatorio P**	**0.63**	**240**	P	**Pg**	**02 20 59.8**	**+1.1**
OSSC				AML	AML		
	comp=E,264µm,0.9s						
OSSC				AML	AML		
	comp=N,424µm,0.5s						
OSSC				AML	AML		
	comp=E,246µm,0.8s						
OSSC				AML	AML		
	comp=N,388µm,0.5s						
OSSC				AML	AML		
	comp=E,264µm,0.9s						
OSSC				AML	AML		
	comp=N,424µm,0.5s						
OSSC				AML	AML		
	comp=E,246µm,0.8s						
OSSC				AML	AML		
	comp=N,388µm,0.5s						
OSSC				AML	AML		
	comp=E,246µm,0.8s						
OSSC				AML	AML		
	comp=E,264µm,0.9s						
OSSC				AML	AML		
	comp=N,388µm,0.5s						
OSSC				AML	AML		
	comp=N,424µm,0.5s						
OSSC				AML	AML		
	comp=E,246µm,0.8s						
OSSC				AML	AML		
	comp=E,264µm,0.9s						
OSSC				AML	AML		
	comp=N,388µm,0.5s						
OSSC				AML	AML		
	comp=N,424µm,0.5s						
PTF	**Prato**	**0.68**	**280**	P	**Pb**	**02 21 00.2**	**+0.5**
ATTE	**AVT- Monte Tez**	**0.69**	**158**	P	**Pb**	**02 20 59.4**	**-0.5**
ATTE				S	**Sb**	**02 21 08.9**	**-0.3**
ATTE				AML	AML		
	comp=E,184µm,0.3s						
ATTE				AML	AML		
	comp=N,165µm,0.5s						
ATTE				AML	AML		
	comp=E,184µm,0.3s						
ATTE				AML	AML		
	comp=N,165µm,0.5s						
ATTE				AML	AML		
	comp=E,184µm,0.3s						
ATTE				AML	AML		
	comp=N,165µm,0.5s						
ATTE				AML	AML		
	comp=E,184µm,0.3s						
ATTE				AML	AML		
	comp=N,165µm,0.5s						
SSFR	**Montelago di S**	**0.70**	**125**	P	**Pb**	**02 20 59.4**	**-0.6**
SSFR				S	**Sb**	**02 21 09.5**	**+0.2**
SSFR				AML	AML		
	comp=E,404µm,0.2s						
SSFR				AML	AML		
	comp=N,407µm,0.2s						
SSFR				AML	AML		
	comp=E,396µm,0.2s						
SSFR				AML	AML		
	comp=N,388µm,0.2s						
SSFR				AML	AML		
	comp=E,404µm,0.2s						
SSFR				AML	AML		
	comp=N,407µm,0.2s						
SSFR				AML	AML		
	comp=E,396µm,0.2s						
SSFR				AML	AML		
	comp=N,388µm,0.2s						
SSFR				AML	AML		
	comp=E,404µm,0.2s						
SSFR				AML	AML		
	comp=N,388µm,0.2s						
SSFR				AML	AML		
	comp=N,407µm,0.2s						
SSFR				AML	AML		
	comp=E,396µm,0.2s						
SSFR				AML	AML		
	comp=E,396µm,0.2s						
SSFR				AML	AML		
	comp=N,407µm,0.2s						
SSFR				AML	AML		
	comp=N,388µm,0.2s						
SSFR				AML	AML		
	comp=E,404µm,0.2s						
MTCR	**Monte La Croce**	**0.75**	**285**	P	**Pg**	**02 21 01.5**	**+0.7**
COR1	**Corinaldo**	**0.76**	**106**	AML	AML		
	comp=E,234µm,0.5s						
COR1				AML	AML		
	comp=E,234µm,0.5s						
COR1				AML	AML		
	comp=N,310µm,0.9s						
COR1				AML	AML		
	comp=N,310µm,0.9s						
COR1				AML	AML		
	comp=E,234µm,0.5s						
COR1				AML	AML		
	comp=N,310µm,0.9s						
ARVD	**Arcevia**	**0.77**	**116**	P	**Pb**	**02 21 00.8**	**-0.3**
ARVD				S	**Sb**	**02 21 10.8**	**-0.4**
ARVD				AML	AML		
	comp=E,111µm,0.4s						
ARVD				AML	AML		
	comp=N,80µm,1.6s						
ARVD				AML	AML		
	comp=E,111µm,0.4s						
ARVD				AML	AML		
	comp=N,80µm,1.6s						
ARVD				AML	AML		
	comp=E,111µm,0.4s						
ARVD				AML	AML		
	comp=N,80µm,1.6s						
ARVD				AML	AML		
	comp=E,111µm,0.4s						
ARVD				AML	AML		
	comp=N,80µm,1.6s						
ATCC	**AVT- Casa Cast**	**0.81**	**144**	P	**Pb**	**02 21 02.0**	**+0.2**
ATCC				AML	AML		
	comp=E,326µm,0.9s						
ATCC				AML	AML		
	comp=N,181µm,0.3s						
ATCC				AML	AML		
	comp=E,326µm,0.9s						
ATCC				AML	AML		
	comp=N,182µm,0.3s						
ATCC				AML	AML		
	comp=N,182µm,0.3s						
ATCC				AML	AML		
	comp=E,326µm,0.9s						
ATCC				AML	AML		
	comp=N,182µm,0.3s						
ATCC				AML	AML		
	comp=E,326µm,0.9s						
FROS	**Frosini**	**0.88**	**224**	P	**Pg**	**02 21 04.0**	**+0.7**
FROS				AML	AML		
	comp=E,192µm,0.6s						
FROS				AML	AML		
	comp=N,174µm,1.1s						
FROS				AML	AML		
	comp=E,192µm,0.6s						
FROS				AML	AML		
	comp=N,174µm,1.1s						
FROS				AML	AML		
	comp=E,192µm,0.6s						
FROS				AML	AML		
	comp=N,174µm,1.1s						
FROS				AML	AML		
	comp=E,192µm,0.6s						
FROS				AML	AML		
	comp=N,174µm,1.1s						
NVLJ	**Novalja**	**2.19**	**70**	*e*Pn	**Pn**	**02 21 23.0**	**+1.2**
NVLJ				Sn	**Sn**	**02 21 49.5**	**+0.9**
DUGI	**Dugi Otok**	**2.22**	**85**	*i* Pn	**Pn**	**02 21 23.8**	**+1.5**
DUGI				Sn	**Sn**	**02 21 49.1**	**-0.2**
RIY	**Rijeka**	**2.31**	**49**	ePn		02 21 24.2	
RIY				Sn	**Sn**	**02 21 52.8**	**+1.2**
PGF	**Pioggiola**	**2.54**	**241**	*e*Pn	**Pn**	**02 21 25.5**	**-1.3**
PGF				*e*Sn	**Sn**	**02 21 56.5**	**-1.0**
	comp=N,4.8nm,0.3s						
ZIRJ	**Zirje**	**2.65**	**93**	*e*Pn	**Pn**	**02 21 28.6**	**+0.4**
ZIRJ				Sn	**Sn**	**02 22 00.5**	**+0.7**
MORI	**Morici**	**2.68**	**88**	*e*Pn	**Pn**	**02 21 29.9**	**+1.3**
MORI				Sn	**Sn**	**02 22 03.0**	**+2.3**
ABTA	**Abfaltersbach**	**2.93**	**7**	*i* Pn	**Pb**	**02 21 37.5**	**-0.5**
	comp=N,1.1nm,0.4s						
SBF	**Sospel**	**3.30**	**272**	*e*Pn	**Pn**	**02 21 35.6**	**-1.6**
SBF				*e*Sn	**Sn**	**02 22 13.7**	**-2.4**
	comp=N,5.5nm,0.4s						
FETA	**Feichten**	**3.30**	**345**	*i* Pn	**Pb**	**02 21 43.7**	**-0.8**
	comp=N,0.9nm,0.4s						
HVAR	**Hvar**	**3.31**	**100**	*i* Pn	**Pn**	**02 21 36.9**	**-0.3**
HVAR				Sn	**Sn**	**02 22 17.2**	**+1.1**
SQTA	**Sankt Quirin**	**3.43**	**351**	*i* Pn	**Pb**	**02 21 43.9**	**-2.6**
	comp=N,0.4nm,0.2s						
MOTA	**Moosalm**	**3.56**	**350**	*i* Pn	**Pb**	**02 21 48.2**	**-0.6**
	comp=N,0.8nm,0.3s						
RETA	**Reutte**	**3.75**	**347**	*i* Pn	**Pb**	**02 21 50.4**	**-1.5**
	comp=N,0.9nm,0.4s						
DAVA	**Damuels**	**3.75**	**337**	*i* Pn	**Pb**	**02 21 50.7**	**-1.5**
	comp=N,0.6nm,0.2s						
FRF	**La Foret Royal**	**3.89**	**268**	*e*P	**Pn**	**02 21 47.2**	**+2.0**
FRF				*e*Sn	**Sn**	**02 22 26.2**	**-4.3**
	comp=N,1.5nm,0.4s						

ROM 12 02:21:37.4±0.1**, 43°.86N**±0°.01×**12°.051E**±0°.007**, h10^{km}, ML1.6**/1**, Error ellipse: s-maj=1.3km s-min=0.5km az=10.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.15**	**286**	P	Pg	02 21 41.2	+0.4
SFI				S	Sg	02 21 44.1	+0.9
ASQU	**Asqua**	**0.20**	**251**	P	Pg	02 21 42.3	+0.7
ASQU				S	Sg	02 21 45.9	+1.4
ASQU				AML	AML		
	comp=E,190µm,0.6s						
ASQU				AML	AML		
	comp=N,356µm,0.3s						
ASQU				AML	AML		
	comp=N,356µm,0.3s						
ASQU				AML	AML		
	comp=E,190µm,0.6s						
ASQU				AML	AML		
	comp=N,356µm,0.3s						
ASQU				AML	AML		
	comp=E,190µm,0.6s						
CPGN	**Carpegna, Ital**	**0.20**	**107**	P	Pg	02 21 41.6	-0.1
CPGN				S	Sg	02 21 46.6	+2.0
PARC	**Parchiule**	**0.25**	**147**	P	Pg	02 21 43.2	+0.6
PARC				S	Sg	02 21 47.0	+1.0
SSP9	**Sansepolcro**	**0.29**	**168**	P	Pg	02 21 43.8	+0.5
SSP9				S	Sb	02 21 48.7	-1.0
PE3	**Peglio**	**0.36**	**117**	P	Pb	02 21 45.6	-0.4
PE3				S	Sb	02 21 51.0	-0.7
BADI	**Badiali**	**0.38**	**158**	P	Pg	02 21 45.3	+0.4
BADI				S	Sb	02 21 51.2	-0.9
RUFI	**Rufina**	**0.39**	**267**	P	Pg	02 21 45.4	+0.3
RUFI				S	Sb	02 21 52.1	-0.4
CAFI	**Castiglion Fio**	**0.54**	**187**	P	Pg	02 21 48.3	+0.5
CAFI				S	Sb	02 21 56.6	-0.1
MCIV	**Monte Civitell**	**1.12**	**194**	AML	AML		
	comp=N,108µm,1.3s						
MCIV				AML	AML		
	comp=E,138µm,0.1s						
MCIV				AML	AML		
	comp=N,108µm,1.3s						
MCIV				AML	AML		
	comp=E,138µm,0.1s						
MCIV				AML	AML		
	comp=N,108µm,1.3s						
MCIV				AML	AML		
	comp=E,138µm,0.1s						

NEIC ***12*** *02:33:11.3±0.0, 32°.12N×115°.26W, h18^{km}, ML3.2(PAS), After PAS.*
ANF ***12*** *02:33:11.1±0.6, 32°.24N×115°.25W, h13^{km}±3^{km}, ML2.9/13, Error ellipse: s-maj=5.4km s-min=2.7km az=7.0*
SCEDC ***12*** *02:33:11.3, 32°.12N×115°.26W, h18^{km}*
PAS ***12*** *02:33:11.3, 32°.12N×115°.26W, h18^{km}, ML3.2*
ISCJB ***12*** *02:33:12.2±0.5, 32°.22N±0°.03×115°.23W±0°.03, h21^{km}±4^{km}, Error ellipse: s-maj=5.4km s-min=3.6km az=173.6*
ECX ***12*** *02:33:13.4±0.6, 32°.19N×115°.29W, h5^{km}, MD3.1, ML3.3*
MEX ***12*** *02:33:14.8±0.9, 32°.26N×115°.26W, h10^{km}, MD3.4*
ISC 12 02:33:11.9±1.0**, 32°.19N**±0°.03×**115°.27W**±0°.03**, h19**^{km}±2^{km}**, n48,** $\sigma 1^{s}.11$/64**, 4C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBIG	**Mexicali**	**0.22**	**15**	*e*Pg	**Pg**	**02 33 17.7**	**+0.4**
MBIG				*e*Sg	**Sg**	**02 33 20.8**	**-0.2**
MBIG	**Mexicali**	**0.22**	**15**	*e*P	**Pg**	**02 33 17.7**	**+0.4**
MBIG				*e*S	**Sg**	**02 33 20.8**	**-0.2**
CPBX	**Cerro Prieto**	**0.23**	**352**	⇓*e*P	**Pb**	**02 33 17.2**	**0.0**
CPBX				*e*S	**Sg**	**02 33 21.5**	**+0.4**
CPBX				*e*		02 33 23.8	
CPBX				IAML		02 33 23.8	
	comp=N,16µm,0.2s						
CPBX				IAML		02 33 27.9	
	comp=E,20µm,0.4s						
WESC	**Westside Schoo**	**0.69**	**325**	*e*P	**Pg**	**02 33 25.3**	**-0.2**
RMX	**La Rumorosa**	**0.80**	**301**	*e*P	**Pb**	**02 33 26.1**	**-1.3**
RMX				*e*S	**Sb**	**02 33 35.6**	**-2.3**
RMX				IAML		02 33 35.9	
	comp=E,1µm,0.2s						
RMX				⇑*e*		02 33 35.9	
IKP	**In-Ko-Pah, Jac**	**0.85**	**303**	P	**Pg**	**02 33 27.9**	**-0.6**
	baz=126,SNR=61						
IKP				S	**Sb**	**02 33 38.6**	**-0.6**
	baz=126						
IKP	**In-Ko-Pah, Jac**	**0.85**	**303**	⇓*e*P	**Pg**	**02 33 27.9**	**-0.6**
SWSC	**Sam W. Stewart**	**0.88**	**329**	P	**Pb**	**02 33 27.4**	**-1.2**
	baz=151,SNR=44						
SWSC				S	**Sb**	**02 33 38.8**	**-1.2**
	baz=151						
GLA	**Glamis**	**0.93**	**23**	*e*Pn	**Pb**	**02 33 28.6**	**-1.0**
GLA	**Glamis**	**0.93**	**23**	P	**Pb**	**02 33 28.6**	**-1.0**
	baz=202,SNR=76						
GLA				S	**Sb**	**02 33 40.2**	**-1.5**
	baz=202						
SPIG	**San Pedro Mart**	**1.16**	**189**	*e*Pn	**Pg**	**02 33 33.8**	**-0.6**
SPIG				*e*Sg	**Sg**	**02 33 50.8**	**+1.2**
SPIG	**San Pedro Mart**	**1.16**	**189**	*e*P	**Pg**	**02 33 33.8**	**-0.6**
SPIG				*e*S	**Sg**	**02 33 50.8**	**+1.2**
SPIG	**San Pedro Mart**	**1.16**	**189**	*e*P	**Pg**	**02 33 33.8**	**-0.6**
CBX	**Cerro Bola**	**1.19**	**276**	*e*Pn	**Pb**	**02 33 33.6**	**-0.4**
CBX				*e*Sn	**Sb**	**02 33 48.8**	**-0.4**
CBX	**Cerro Bola**	**1.19**	**276**	*e*P	**Pb**	**02 33 33.6**	**-0.4**
CBX				*e*S	**Sb**	**02 33 48.8**	**-0.4**
CBX	**Cerro Bola**	**1.19**	**276**	⇑*e*P	**Pb**	**02 33 33.6**	**-0.4**
CBX				*e*S	**Sn**	**02 33 49.3**	**-0.3**
CBX				IAML		02 33 50.5	
	comp=N,681nm,0.4s						
MONP2	**Monument Peak**	**1.20**	**306**	P	**Pb**	**02 33 34.0**	**-0.3**
	baz=128,SNR=45						
MONP2				S	**Sb**	**02 33 49.0**	**-0.6**
	baz=128						
MONP2	**Monument Peak**	**1.20**	**306**	⇑*e*P	**Pg**	**02 33 34.2**	**-1.0**
TJIG	**Tijuana**	**1.22**	**282**	*e*P	**Pn**	**02 33 33.7**	**-0.3**
TJIG				*e*S	**Sb**	**02 33 49.1**	**-0.7**
BAR	**Barrett**	**1.29**	**293**	*e*Pn	**Pg**	**02 33 35.9**	**-0.9**
BAR				*e*Sn	**Sb**	**02 33 51.4**	**-0.4**
BAR	**Barrett**	**1.29**	**293**	⇑*e*P	**Pb**	**02 33 35.0**	**-0.6**
113A	**Mohawk Valley,**	**1.39**	**65**	*e*Pn	**Pn**	**02 33 36.0**	**-0.4**
BC3	**Big Chuckawall**	**1.47**	**354**	P	**Pn**	**02 33 36.4**	**-1.2**
	baz=174,SNR=42						
EML	**El Monte Cty P**	**1.51**	**298**	*e*P	**Pb**	**02 33 39.2**	**-0.2**
SDRC	**San Diego Road**	**1.52**	**291**	*e*P	**Pb**	**02 33 39.4**	**-0.2**
Y12C	**Blythe**	**1.68**	**22**	*e*Pn	**Pb**	**02 33 41.6**	**-0.6**
Y12C	**Blythe**	**1.68**	**22**	S	**Sb**	**02 34 01.7**	**-1.3**
	baz=201						
109C	**Camp Elliot, M**	**1.70**	**295**	S	**Sb**	**02 34 03.8**	**0.0**
	baz=116						
CPE	**Camp Elliot**	**1.70**	**295**	*e*Pn	**Pb**	**02 33 41.4**	**-1.3**
PFO	**Pinyon Flats O**	**1.74**	**325**	*e*Pn	**Pn**	**02 33 40.1**	**-1.2**
PFO	**Pinyon Flats O**	**1.74**	**325**	P	**Pn**	**02 33 40.1**	**-1.2**
	baz=146						
PFO				Sb	**Sb**	**02 34 05.6**	**+0.8**
	baz=146						
214A	**Organ Pipe Nat**	**2.10**	**96**	P	**Pn**	**02 33 45.6**	**-0.5**
	baz=275,SNR=20						
MURC	**Murrieta**	**2.15**	**311**	Sb	**Sb**	**02 34 18.1**	**+1.5**
	baz=132						
Y14A	**Wickenburg**	**2.58**	**47**	*e*Pn	**Pn**	**02 33 53.1**	**+0.4**
BFSC	**Mount Baldy Ra**	**2.86**	**316**	Sb	**Sb**	**02 34 39.0**	**+1.8**
	baz=136						
SCI2	**San Clemente I**	**2.88**	**287**	Sb	**Sb**	**02 34 39.7**	**+2.1**
	baz=106						
LDFC	**Landfair**	**2.88**	**3**	*e*Pn	**Pn**	**02 33 57.6**	**+0.6**
CIS	**Catalina Islan**	**2.91**	**295**	Sb	**Sb**	**02 34 40.6**	**+1.9**
	baz=115						
MWC	**Mount Wilson**	**3.10**	**312**	*e*Pn	**Pn**	**02 34 02.5**	**+2.5**
W13A	**Hualapai Mount**	**3.12**	**21**	*e*Pn	**Pn**	**02 34 00.6**	**+0.2**
TUC	**Tucson**	**3.80**	**87**	*e*Pn	**Pn**	**02 34 09.8**	**+0.2**
X16A	**Lo Mia Camp, P**	**3.90**	**54**	*e*Pn	**Pn**	**02 34 12.0**	**+1.0**
SHPR	**Sheep Range**	**4.30**	**1**	*e*Pn	**Pn**	**02 34 19.1**	**+2.5**
WUAZ	**Wupatki**	**4.63**	**43**	*e*Pn	**Pn**	**02 34 22.5**	**+1.3**
TPNV	**Topopah Spring**	**4.81**	**351**	*e*Pn	**Pn**	**02 34 25.5**	**+1.9**
U15A	**North Rim**	**4.89**	**29**	*e*Pn	**Pn**	**02 34 26.5**	**+1.7**
X18A	**Snowflake**	**5.02**	**61**	*e*Pn	**Pn**	**02 34 28.4**	**+2.0**
KNB	**Kanab**	**5.22**	**22**	*e*Pn	**Pn**	**02 34 30.5**	**+1.3**

ROM 12 02:40:49.9±0.1**, 43°.400N**±0°.004×**12°.483E**±0°.006**, h9^{km}, ML1.3**/11**, Error ellipse: s-maj=0.4km s-min=0.4km az=263.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.07**	**117**	P	Pg	02 40 52.1	+0.1
ATFO				S	Sg	02 40 53.7	0.0
ATFO				AML	AML		
	comp=E,212µm,1.3s						
ATFO				AML	AML		
	comp=N,266µm,1.1s						
ATFO				AML	AML		
	comp=E,212µm,1.3s						
ATFO				AML	AML		
	comp=N,266µm,1.1s						
ATFO				AML	AML		
	comp=E,212µm,1.3s						
ATFO				AML	AML		
	comp=N,266µm,1.1s						
ATPI	**Pietralunga -**	**0.08**	**311**	P	Pg	02 40 52.3	+0.1
ATPI				S	Sg	02 40 53.8	0.0
ATPI				AML	AML		
	comp=E,86µm,0.1s						
ATPI				AML	AML		
	comp=N,144µm,0.4s						
ATPI				AML	AML		
	comp=E,162µm,0.5s						
ATPI				AML	AML		
	comp=N,160µm,0.2s						
ATPI				AML	AML		
	comp=N,160µm,0.2s						
ATPI				AML	AML		
	comp=E,162µm,0.5s						
MURB	**Monte Urbino**	**0.14**	**167**	P	Pg	02 40 53.6	+0.6
MURB				S	Sg	02 40 56.6	+1.3
MURB				AML	AML		
	comp=E,116µm,0.6s						
MURB				AML	AML		
	comp=N,107µm,0.8s						
MURB				AML	AML		
	comp=E,264µm,0.3s						
MURB				AML	AML		
	comp=N,274µm,0.2s						
MURB				AML	AML		
	comp=E,264µm,0.3s						
MURB				AML	AML		
	comp=N,274µm,0.2s						
PIEI	**Pieia**	**0.14**	**16**	P	Pg	02 40 53.6	+0.6
PIEI				S	Sg	02 40 56.7	+1.5
PIEI				AML	AML		
	comp=E,69µm,0.2s						
PIEI				AML	AML		
	comp=N,76µm,0.7s						
PIEI				AML	AML		
	comp=E,162µm,0.9s						
PIEI				AML	AML		
	comp=N,98µm,0.3s						
PIEI				AML	AML		
	comp=E,162µm,0.9s						
PIEI				AML	AML		
	comp=N,98µm,0.3s						
BADI	**Badiali**	**0.20**	**302**	P	Pg	02 40 54.9	+0.7
BADI				S	Sg	02 40 58.6	+1.6
BADI				AML	AML		
	comp=E,780µm,0.2s						
BADI				AML	AML		
	comp=N,650µm,0.2s						
BADI				AML	AML		
	comp=N,650µm,0.2s						
BADI				AML	AML		
	comp=E,781µm,0.2s						
FRON	**Frontone**	**0.21**	**56**	P	Pg	02 40 54.7	+0.5
FRON				S	Sg	02 40 58.5	+1.3
FRON				AML	AML		
	comp=E,75µm,0.6s						
FRON				AML	AML		
	comp=N,113µm,0.5s						
FRON				AML	AML		
	comp=N,113µm,0.5s						
FRON				AML	AML		
	comp=E,75µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.22**	**205**	P	Pg	02 40 55.3	+0.8

ATTE				S	Sg	02 40 58.6	+1.1
ATTE				AML	AML		
	comp=E,149µm,0.3s						
ATTE				AML	AML		
	comp=N,138µm,0.2s						
ATTE				AML	AML		
	comp=N,138µm,0.2s						
ATTE				AML	AML		
	comp=E,149µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.24**	**152**	P	Pg	02 40 55.5	+0.7
ATCC				S	Sg	02 41 00.2	+2.1
ATCC				AML	AML		
	comp=E,192µm,1.0s						
ATCC				AML	AML		
	comp=N,96µm,1.5s						
ATCC				AML	AML		
	comp=E,192µm,1.0s						
ATCC				AML	AML		
	comp=N,96µm,1.5s						
PARC	**Parchiule**	**0.30**	**325**	AML	AML		
	comp=N,609µm,0.9s						
PARC				AML	AML		
	comp=E,107µm,0.2s						
PARC				AML	AML		
	comp=N,80µm,0.5s						
PARC				AML	AML		
	comp=E,583µm,0.2s						
PARC				AML	AML		
	comp=E,583µm,0.2s						
PARC				AML	AML		
	comp=N,609µm,0.9s						
ARVD	**Arcevia**	**0.35**	**74**	P	Pg	02 40 57.3	+0.5
ARVD				S	Sb	02 41 03.2	-0.7
ARVD				AML	AML		
	comp=E,60µm,1.4s						
ARVD				AML	AML		
	comp=N,57µm,0.4s						
ARVD				AML	AML		
	comp=N,57µm,0.4s						
ARVD				AML	AML		
	comp=E,60µm,1.4s						
SNTG	**Esanatoglia**	**0.36**	**113**	P	Pg	02 40 57.5	+0.4
SNTG				S	Sb	02 41 03.6	-0.7
SNTG				AML	AML		
	comp=E,59µm,0.3s						
SNTG				AML	AML		
	comp=N,75µm,0.5s						
SNTG				AML	AML		
	comp=E,59µm,0.3s						
SNTG				AML	AML		
	comp=N,75µm,0.5s						

LDG ***12*** *02:41:17.5±0.1, 43°.88N×12°.04E, h23^{km}, Ml2.1/4, Error ellipse: s-maj=2.8km s-min=0.9km az=32.0*

ROM 12 02:41:18.7±0.1**, 43°.826N**±0°.006×**12°.030E**±0°.006**, h9**^{km}**, ML2.0**/18**, Error ellipse: s-maj=0.7km s-min=0.2km az=27.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.15**	**301**	P	Pg	02 41 22.4	+0.4
SFI				S	Sg	02 41 25.4	+1.1
SFI				AML	AML		
	comp=E,761µm,1.3s						
SFI				AML	AML		
	comp=N,1077µm,0.1s						
SFI				AML	AML		
	comp=E,761µm,1.3s						
SFI				AML	AML		
	comp=N,1080µm,0.1s						
SFI				AML	AML		
	comp=E,761µm,1.3s						
SFI				AML	AML		
	comp=N,1080µm,0.1s						
SFI				AML	AML		
	comp=E,761µm,1.3s						
SFI				AML	AML		
	comp=N,1080µm,0.1s						
ASQU	**Asqua**	**0.18**	**261**	P	Pg	02 41 23.1	+0.7
ASQU				S	Sg	02 41 26.6	+1.6
ASQU				AML	AML		
	comp=E,1510µm,0.8s						
ASQU				AML	AML		
	comp=N,2145µm,0.2s						
ASQU				AML	AML		
	comp=E,1510µm,0.8s						
ASQU				AML	AML		
	comp=N,2145µm,0.2s						
ASQU				AML	AML		
	comp=E,1510µm,0.8s						
ASQU				AML	AML		
	comp=N,2145µm,0.2s						
CPGN	**Carpegna, Ital**	**0.21**	**97**	P	Pg	02 41 23.7	+0.6
CPGN				S	Sg	02 41 28.1	+2.1
CPGN				AML	AML		
	comp=E,1355µm,0.3s						
CPGN				AML	AML		
	comp=N,1100µm,1.5s						
CPGN				AML	AML		
	comp=E,1305µm,0.3s						
CPGN				AML	AML		
	comp=N,1069µm,1.4s						
CPGN				AML	AML		
	comp=E,1355µm,0.3s						
CPGN				AML	AML		
	comp=N,1100µm,1.5s						
CPGN				AML	AML		
	comp=N,1100µm,1.5s						
CPGN				AML	AML		
	comp=E,1355µm,0.3s						
CPGN				AML	AML		
	comp=N,1100µm,1.5s						
CPGN				AML	AML		
	comp=E,1355µm,0.3s						
PARC	**Parchiule**	**0.23**	**139**	P	Pg	02 41 23.8	+0.4
PARC				S	Sg	02 41 27.9	+1.3
PARC				AML	AML		
	comp=E,583µm,0.2s						
PARC				AML	AML		
	comp=N,609µm,0.9s						
PARC				AML	AML		
	comp=E,583µm,0.2s						
PARC				AML	AML		
	comp=N,609µm,0.9s						
PARC				AML	AML		
	comp=E,583µm,0.2s						
PARC				AML	AML		
	comp=N,609µm,0.9s						
PARC				AML	AML		
	comp=E,583µm,0.2s						
PARC				AML	AML		
	comp=N,609µm,0.9s						
SSP9	**Sansepolcro**	**0.26**	**164**	P	Pg	02 41 24.6	+0.7
SSP9				S	Sb	02 41 29.5	-0.8
SSP9				AML	AML		
	comp=E,322µm,0.9s						
SSP9				AML	AML		
	comp=N,416µm,0.5s						
BADI	**Badiali**	**0.35**	**154**	P	Pg	02 41 25.9	+0.3
BADI				S	Sb	02 41 31.9	-0.9
BADI				AML	AML		
	comp=E,781µm,0.2s						
BADI				AML	AML		
	comp=N,650µm,0.2s						
BADI				AML	AML		
	comp=E,780µm,0.2s						
BADI				AML	AML		
	comp=N,650µm,0.2s						
BADI				AML	AML		
	comp=N,650µm,0.2s						
BADI				AML	AML		
	comp=E,781µm,0.2s						
BADI				AML	AML		
	comp=N,650µm,0.2s						
BADI				AML	AML		
	comp=E,781µm,0.2s						
PE3	**Peglio**	**0.36**	**111**	P	Pg	02 41 26.1	+0.3
PE3				S	Sb	02 41 32.4	-0.7
PE3				AML	AML		
	comp=E,771µm,0.5s						
PE3				AML	AML		
	comp=N,863µm,0.4s						
PE3				AML	AML		
	comp=E,771µm,0.5s						
PE3				AML	AML		
	comp=N,863µm,0.4s						
PE3				AML	AML		
	comp=N,863µm,0.4s						
PE3				AML	AML		
	comp=E,771µm,0.5s						
PE3				AML	AML		
	comp=N,863µm,0.4s						
PE3				AML	AML		
	comp=E,771µm,0.5s						
RUFI	**Rufina**	**0.38**	**272**	P	Pg	02 41 26.5	+0.4
RUFI				S	Sb	02 41 32.9	-0.7
CDCA	**Citt‘ di Caste**	**0.40**	**158**	P	Pg	02 41 26.6	+0.2
CDCA				S	Sb	02 41 33.4	-0.6
ATPI	**Pietralunga -**	**0.46**	**144**	P	Pg	02 41 28.0	+0.3
ATPI				S	Sb	02 41 35.4	-0.7
ATPI				AML	AML		
	comp=E,162µm,0.5s						
ATPI				AML	AML		
	comp=N,160µm,0.2s						
ATPI				AML	AML		
	comp=E,162µm,0.5s						
ATPI				AML	AML		
	comp=N,160µm,0.2s						
ATPI				AML	AML		
	comp=E,162µm,0.5s						
ATPI				AML	AML		
	comp=N,160µm,0.2s						
PIEI	**Pieia**	**0.47**	**128**	P	Pg	02 41 27.6	-0.2
PIEI				S	Sb	02 41 35.2	-1.0
PIEI				AML	AML		
	comp=E,162µm,0.9s						
PIEI				AML	AML		
	comp=N,98µm,0.3s						
PIEI				AML	AML		
	comp=N,98µm,0.3s						
PIEI				AML	AML		
	comp=E,162µm,0.9s						
PIEI				AML	AML		
	comp=N,98µm,0.3s						
PIEI				AML	AML		
	comp=E,162µm,0.9s						
BRIS	**BRISIGHELLA**	**0.50**	**311**	P	Pg	02 41 27.9	-0.4
BRIS				AML	AML		
	comp=E,270µm,0.3s						
BRIS				AML	AML		
	comp=N,235µm,0.3s						
BRIS				AML	AML		
	comp=N,235µm,0.3s						
BRIS				AML	AML		
	comp=E,270µm,0.3s						
BRIS				AML	AML		
	comp=N,235µm,0.3s						
BRIS				AML	AML		
	comp=E,270µm,0.3s						
CAFI	**Castiglion Fio**	**0.50**	**185**	P	Pb	02 41 29.1	-0.6
CAFI				S	Sb	02 41 36.9	-0.2
CAFI				AML	AML		
	comp=E,313µm,0.7s						
CAFI				AML	AML		
	comp=N,245µm,0.9s						
CAFI				AML	AML		
	comp=E,313µm,0.7s						
CAFI				AML	AML		
	comp=N,245µm,0.9s						
CAFI				AML	AML		
	comp=E,313µm,0.7s						
CAFI				AML	AML		
	comp=N,245µm,0.9s						
ATMI	**Monte Miggiano**	**0.52**	**161**	P	Pg	02 41 29.4	+0.6
ATMI				AML	AML		
	comp=E,364µm,0.3s						
ATMI				AML	AML		
	comp=N,408µm,0.3s						
ATMI				AML	AML		
	comp=E,364µm,0.3s						
ATMI				AML	AML		
	comp=N,408µm,0.3s						
ATMI				AML	AML		
	comp=E,364µm,0.3s						
ATMI				AML	AML		
	comp=N,408µm,0.3s						
ATVO	**AVT- Monte Val**	**0.52**	**148**	P	Pg	02 41 29.0	+0.3
ATVO				S	Sb	02 41 37.6	-0.1
ATVO				AML	AML		
	comp=E,230µm,0.3s						
ATVO				AML	AML		
	comp=N,194µm,0.7s						
ATVO				AML	AML		
	comp=E,230µm,0.3s						
ATVO				AML	AML		
	comp=N,194µm,0.7s						
ATVO				AML	AML		
	comp=E,230µm,0.3s						
ATVO				AML	AML		
	comp=N,194µm,0.7s						
SEI	**Scarperia**	**0.54**	**295**	P	Pg	02 41 29.4	+0.3
SEI				AML	AML		
	comp=E,474µm,0.5s						
SEI				AML	AML		
	comp=N,624µm,0.4s						
SEI				AML	AML		
	comp=E,474µm,0.5s						
SEI				AML	AML		
	comp=N,624µm,0.4s						
SEI				AML	AML		
	comp=E,474µm,0.5s						
SEI				AML	AML		
	comp=N,624µm,0.4s						
MPAG	**Monte Paganucc**	**0.56**	**110**	P	Pg	02 41 29.5	-0.1
MPAG				S	Sb	02 41 39.0	0.0
MPAG				AML	AML		
	comp=E,94µm,1.0s						
MPAG				AML	AML		
	comp=N,114µm,1.0s						
MPAG				AML	AML		
	comp=N,114µm,1.0s						
MPAG				AML	AML		
	comp=E,94µm,1.0s						
MPAG				AML	AML		
	comp=N,114µm,1.0s						
MPAG				AML	AML		
	comp=E,94µm,1.0s						
FRON	**Frontone**	**0.59**	**121**	P	Pg	02 41 30.4	+0.2
FRON				S	Sb	02 41 40.0	+0.3
FRON				AML	AML		
	comp=E,75µm,0.6s						
FRON				AML	AML		
	comp=N,113µm,0.5s						
FRON				AML	AML		
	comp=N,113µm,0.5s						
FRON				AML	AML		
	comp=E,75µm,0.6s						
FRON				AML	AML		
	comp=N,113µm,0.5s						
FRON				AML	AML		
	comp=E,75µm,0.6s						
ATFO	**Monte Foce - G**	**0.60**	**139**	P	Pg	02 41 30.4	+0.1
ATFO				AML	AML		
	comp=E,159µm,0.5s						
ATFO				AML	AML		
	comp=N,103µm,0.6s						
ATFO				AML	AML		
	comp=E,159µm,0.5s						
ATFO				AML	AML		
	comp=N,103µm,0.6s						
ATFO				AML	AML		
	comp=E,159µm,0.5s						
ATFO				AML	AML		
	comp=N,103µm,0.6s						
OSSC	**Osservatorio P**	**0.64**	**242**	P	Pb	02 41 32.3	+0.2
PTF	**Prato**	**0.71**	**281**	P	Pg	02 41 32.6	+0.3
COR1	**Corinaldo**	**0.73**	**105**	P	Pb	02 41 33.3	-0.2
ARVD	**Arcevia**	**0.74**	**116**	P	Pg	02 41 32.7	-0.2
ARVD				S	Sb	02 41 44.2	+0.2
ARVD				AML	AML		
	comp=E,60µm,1.4s						
ARVD				AML	AML		
	comp=N,57µm,0.4s						
ARVD				AML	AML		
	comp=N,57µm,0.4s						
ARVD				AML	AML		
	comp=E,60µm,1.4s						
ARVD				AML	AML		
	comp=N,57µm,0.4s						
ARVD				AML	AML		
	comp=E,60µm,1.4s						
MTCR	**Monte La Croce**	**0.77**	**285**	P	Pg	02 41 33.9	+0.3
SACS	**San Casciano d**	**0.98**	**185**	AML	AML		
	comp=E,90µm,0.9s						
SACS				AML	AML		
	comp=E,90µm,0.9s						
SACS				AML	AML		
	comp=N,82µm,1.1s						
SACS				AML	AML		
	comp=E,89µm,0.7s						
SACS				AML	AML		
	comp=N,83µm,1.0s						
SACS				AML	AML		
	comp=E,89µm,0.7s						
SACS				AML	AML		
	comp=E,90µm,0.9s						
SACS				AML	AML		
	comp=N,82µm,1.1s						
SACS				AML	AML		
	comp=N,83µm,1.0s						
SACS				AML	AML		
	comp=E,89µm,0.7s						
SACS				AML	AML		
	comp=N,82µm,1.1s						
SACS				AML	AML		
	comp=N,83µm,1.0s						
PGF	**Pioggiola**	**2.56**	**241**	*e*Pn	Pn	02 41 56.4	-4.0
PGF				*e*Sn	Sn	02 42 25.0	-6.8
	comp=N,2.3nm,0.3s						
SBF	**Sospel**	**3.33**	**272**	*e*P	Pn	02 42 09.8	-1.1
MBDF	**Montbardon**	**3.88**	**285**	*e*Sg	Sg	02 43 19.2	-4.1
	comp=N,1.1nm,0.3s						
FRF	**La Foret Royal**	**3.91**	**268**	*e*Pn	Pn	02 42 14.4	-4.6
LPL	**La Plagne**	**4.14**	**296**	*e*Sg	Sb	02 43 26.8	+4.8
	comp=N,0.7nm,0.3s						

ISCJB ***12*** *02:45:18.2±1.3, 1°.71N±0°.09×30°.9E±0°.1, h10^{km}, mb3.9/2, Error ellipse: s-maj=19.2km s-min=12.7km az=161.1*

IDC ***12*** *02:45:18.5±2.3, 1°.62N×30°.93E, h0^{km}, mb4.0/2, mb1 3.9/3, mb1mx3.4/27, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=247.8km s-min=21.4km az=21.0*

ISC 12 02:45:20.4±1.3**, 1°.54N**±0°.10×**30°.8E**±0°.1**, h10**^{km}**, n4, σ0^{s}.41**/5**, 2C, Uganda**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**2.13**	**183**	⇑*e*P	**Pn**	**02 45 56.6**	**+0.3**
MBAR				⇑*e*S	**Sb**	**02 46 25.5**	**-0.3**
KMBO	**Kilima Mbogo**	**6.94**	**112**	Pn	**Pn**	**02 47 02.6**	**+0.1**
	1.6nm,0.3s,baz=275,slow=17,SNR=17						
KMBO				Lg	Lg	02 48 55.1	
	5.6nm,0.3s,baz=5.7,slow=18,SNR=11						
TORD	**Torodi Ar. Bea**	**31.07**	**293**	P	**P**	**02 51 38.8**	**-0.3**
	0.8nm,0.9s,baz=112,slow=9.4,SNR=4.1						
DBIC	**Dimbokro**	**35.95**	**279**	P	**P**	**02 52 21.8**	**+0.2**
	4.2nm,1.0s,baz=87,slow=9.3,SNR=3.7						

ISCJB ***12*** *02:46:57.9±0.3, 43°.86N±0°.02×11°.94E±0°.03, h17^{km}±3^{km}, Error ellipse: s-maj=4.2km s-min=2.6km az=40.8*

LDG ***12*** *02:46:57.2±0.1, 43°.89N×11°.90E, h16^{km}, Ml2.8/8, Error ellipse: s-maj=3.3km s-min=2.3km az=53.0*

ROM ***12*** *02:46:57.8±0.1, 43°.85N±0°.01×11°.92E±0°.02, h11^{km}±1^{km}, ML2.7/17, Error ellipse: s-maj=1.3km s-min=1.1km az=294.0*

ISC 12 02:46:57.2±0.8**, 43°.77N**±0°.02×**11°.86E**±0°.02**, h17**^{km}±5^{km}**, n51, σ1^{s}.96**/84**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASQU	**Asqua**	**0.06**	**299**	P	**Pg**	**02 47 00.5**	**-0.1**
ASQU				S	**Sg**	**02 47 03.9**	**+1.2**
ASQU				AML	AML		
	comp=E,5330µm,0.4s						
ASQU				AML	AML		
	comp=N,5565µm,0.2s						
ASQU				AML	AML		
	comp=E,5330µm,0.4s						
ASQU				AML	AML		
	comp=N,5565µm,0.2s						
ASQU				AML	AML		
	comp=N,5565µm,0.2s						
ASQU				AML	AML		
	comp=E,5330µm,0.4s						
ASQU				AML	AML		
	comp=N,5565µm,0.2s						
ASQU				AML	AML		
	comp=E,5330µm,0.4s						
SFI	**Santa Sofia**	**0.14**	**356**	P	**Pg**	**02 46 59.9**	**-1.3**
SFI				S	**Sg**	**02 47 02.7**	**-1.2**
SFI				AML	AML		
	comp=E,3715µm,1.1s						
SFI				AML	AML		
	comp=N,3195µm,0.2s						
SFI				AML	AML		
	comp=E,3310µm,0.4s						
SFI				AML	AML		
	comp=N,4530µm,0.2s						
SFI				AML	AML		
	comp=E,3715µm,1.1s						
SFI				AML	AML		
	comp=N,3190µm,0.2s						
SFI				AML	AML		
	comp=E,3310µm,0.4s						
SFI				AML	AML		
	comp=N,4530µm,0.2s						
SFI				AML	AML		
	comp=N,3195µm,0.2s						
SFI				AML	AML		
	comp=N,4530µm,0.2s						
SFI				AML	AML		
	comp=E,3715µm,1.1s						
SFI				AML	AML		
	comp=E,3310µm,0.4s						
SFI				AML	AML		
	comp=N,3195µm,0.2s						
SFI				AML	AML		
	comp=N,4530µm,0.2s						
SFI				AML	AML		
	comp=E,3715µm,1.1s						
SFI				AML	AML		
	comp=E,3310µm,0.4s						
RUFI	**Rufina**	**0.26**	**286**	P	**Pg**	**02 47 04.0**	**+0.9**
RUFI				AML	AML		
	comp=E,1438µm,0.7s						
RUFI				AML	AML		
	comp=N,1716µm,0.4s						
RUFI				AML	AML		
	comp=E,1440µm,0.7s						
RUFI				AML	AML		
	comp=N,1720µm,0.4s						
RUFI				AML	AML		
	comp=E,1440µm,0.7s						
RUFI				AML	AML		
	comp=N,1720µm,0.4s						
RUFI				AML	AML		
	comp=E,1440µm,0.7s						
RUFI				AML	AML		
	comp=N,1720µm,0.4s						
SSP9	**Sansepolcro**	**0.28**	**135**	P	**Pb**	**02 47 05.2**	**+1.5**
SSP9				S	**Sb**	**02 47 09.2**	**+1.2**
PARC	**Parchiule**	**0.30**	**114**	P	**Pb**	**02 47 04.1**	**0.0**
PARC				S	**Sb**	**02 47 08.2**	**-0.5**
PARC				AML	AML		
	comp=E,2080µm,0.7s						
PARC				AML	AML		
	comp=N,2665µm,0.6s						
PARC				AML	AML		
	comp=E,2080µm,0.7s						
PARC				AML	AML		
	comp=N,2660µm,0.6s						
PARC				AML	AML		
	comp=N,2665µm,0.6s						
PARC				AML	AML		
	comp=E,2080µm,0.7s						
PARC				AML	AML		
	comp=N,2665µm,0.6s						
PARC				AML	AML		
	comp=E,2080µm,0.7s						
CPGN	**Carpegna, Ital**	**0.34**	**84**	P	**Pg**	**02 47 04.1**	**-0.3**
CPGN				S	**Sg**	**02 47 08.6**	**-0.6**
CPGN				AML	AML		
	comp=E,6055µm,0.3s						
CPGN				AML	AML		
	comp=N,4790µm,0.5s						
CPGN				AML	AML		
	comp=E,5905µm,0.3s						
CPGN				AML	AML		

	comp=N,4325µm,0.3s						
CPGN				AML	AML		
	comp=E,6055µm,0.3s						
CPGN				AML	AML		
	comp=N,4790µm,0.5s						
CPGN				AML	AML		
	comp=E,5905µm,0.3s						
CPGN				AML	AML		
	comp=N,4320µm,0.3s						
CPGN				AML	AML		
	comp=N,4320µm,0.3s						
CPGN				AML	AML		
	comp=E,6055µm,0.3s						
CPGN				AML	AML		
	comp=E,5905µm,0.3s						
CPGN				AML	AML		
	comp=N,4790µm,0.5s						
CPGN				AML	AML		
	comp=N,4320µm,0.3s						
CPGN				AML	AML		
	comp=E,6055µm,0.3s						
CPGN				AML	AML		
	comp=E,5905µm,0.3s						
CPGN				AML	AML		
	comp=N,4790µm,0.5s						
BADI	**Badiali**	**0.38**	**133**	P	**Pb**	**02 47 06.6**	**+1.1**
BADI				S	**Sb**	**02 47 12.1**	**+1.1**
BADI				AML	AML		
	comp=E,3090µm,1.5s						
BADI				AML	AML		
	comp=N,2845µm,0.2s						
BADI				AML	AML		
	comp=E,3090µm,1.5s						
BADI				AML	AML		
	comp=N,2850µm,0.2s						
BADI				AML	AML		
	comp=E,3090µm,1.5s						
BADI				AML	AML		
	comp=N,2850µm,0.2s						
BADI				AML	AML		
	comp=E,3090µm,1.5s						
BADI				AML	AML		
	comp=N,2850µm,0.2s						
CDCA	**Citt‘ di Caste**	**0.41**	**139**	P	**Pn**	**02 47 07.4**	**-0.9**
CDCA				S	**Sb**	**02 47 13.7**	**+1.8**
CAFI	**Castiglion Fio**	**0.45**	**170**	P	**Pn**	**02 47 09.3**	**+0.5**
CAFI				S	**Sn**	**02 47 15.4**	**-1.0**
CAFI				AML	AML		
	comp=E,1254µm,0.6s						
CAFI				AML	AML		
	comp=N,1208µm,1.0s						
CAFI				AML	AML		
	comp=E,1295µm,0.6s						
CAFI				AML	AML		
	comp=N,1325µm,1.0s						
CAFI				AML	AML		
	comp=E,1254µm,0.6s						
CAFI				AML	AML		
	comp=N,1208µm,1.0s						
CAFI				AML	AML		
	comp=N,1325µm,1.0s						
CAFI				AML	AML		
	comp=E,1295µm,0.6s						
CAFI				AML	AML		
	comp=E,1254µm,0.6s						
CAFI				AML	AML		
	comp=N,1208µm,1.0s						
CAFI				AML	AML		
	comp=N,1325µm,1.0s						
CAFI				AML	AML		
	comp=E,1295µm,0.6s						
BRIS	**BRISIGHELLA**	**0.46**	**327**	P	**Pg**	**02 47 05.4**	**-1.0**
BRIS				AML	AML		
	comp=E,1880µm,0.6s						
BRIS				AML	AML		
	comp=N,1520µm,0.3s						
BRIS				AML	AML		
	comp=E,1880µm,0.6s						
BRIS				AML	AML		
	comp=N,1520µm,0.3s						
BRIS				AML	AML		
	comp=E,1880µm,0.6s						
BRIS				AML	AML		
	comp=N,1520µm,0.3s						
BRIS				AML	AML		
	comp=E,1880µm,0.6s						
BRIS				AML	AML		
	comp=N,1520µm,0.3s						
ATPI	**Pietralunga -**	**0.51**	**129**	P	**Pb**	**02 47 08.8**	**+1.2**
ATPI				S	**Sb**	**02 47 15.5**	**+0.8**
ATPI				AML	AML		
	comp=E,875µm,0.3s						
ATPI				AML	AML		
	comp=N,791µm,0.2s						
ATPI				AML	AML		
	comp=E,876µm,0.3s						
ATPI				AML	AML		
	comp=N,792µm,0.2s						
ATPI				AML	AML		
	comp=E,876µm,0.3s						
ATPI				AML	AML		
	comp=N,792µm,0.2s						
OSSC	**Osservatorio P**	**0.51**	**241**	AML	AML		
	comp=E,998µm,1.0s						
OSSC				AML	AML		
	comp=E,968µm,0.9s						
OSSC				AML	AML		
	comp=N,1232µm,0.6s						
OSSC				AML	AML		
	comp=E,998µm,1.0s						
OSSC				AML	AML		
	comp=N,1252µm,0.6s						
OSSC				AML	AML		
	comp=E,968µm,0.9s						
OSSC				AML	AML		
	comp=E,998µm,1.0s						
OSSC				AML	AML		
	comp=N,1232µm,0.6s						
OSSC				AML	AML		
	comp=N,1252µm,0.6s						
OSSC				AML	AML		
	comp=E,968µm,0.9s						
OSSC				AML	AML		
	comp=N,1232µm,0.6s						
OSSC				AML	AML		
	comp=N,1252µm,0.6s						
ATVO	**AVT- Monte Val**	**0.55**	**134**	P	**Pn**	**02 47 09.7**	**-0.6**
ATVO				S	**Sb**	**02 47 17.6**	**+1.5**
ATVO				AML	AML		
	comp=E,1290µm,0.3s						
ATVO				AML	AML		
	comp=N,1160µm,0.3s						
ATVO				AML	AML		
	comp=E,1290µm,0.3s						
ATVO				AML	AML		
	comp=N,1160µm,0.3s						
ATVO				AML	AML		
	comp=E,1290µm,0.3s						
ATVO				AML	AML		
	comp=N,1160µm,0.3s						
CRMI	**Carmignano**	**0.65**	**272**	P	**Pn**	**02 47 11.8**	**+0.3**
CRMI				AML	AML		
	comp=E,130µm,0.7s						
CRMI				AML	AML		
	comp=N,130µm,1.2s						
CRMI				AML	AML		
	comp=E,130µm,0.7s						
CRMI				AML	AML		
	comp=N,130µm,1.2s						
CRMI				AML	AML		
	comp=E,130µm,0.7s						
CRMI				AML	AML		
	comp=N,130µm,1.2s						
ATFO	**Monte Foce - G**	**0.66**	**128**	P	**Pn**	**02 47 11.4**	**-0.3**
ATFO				S	**Sb**	**02 47 20.1**	**+1.1**
ATFO				AML	AML		
	comp=E,842µm,0.5s						
ATFO				AML	AML		
	comp=N,598µm,0.7s						
ATFO				AML	AML		
	comp=E,842µm,0.5s						
ATFO				AML	AML		
	comp=N,598µm,0.7s						
ATFO				AML	AML		
	comp=E,842µm,0.5s						
ATFO				AML	AML		
	comp=N,598µm,0.7s						
ATTE	**AVT- Monte Tez**	**0.67**	**148**	P	**Pn**	**02 47 12.5**	**+0.5**
ATTE				S	**Sn**	**02 47 22.6**	**+0.4**
PESA	**Pesaro**	**0.73**	**76**	P	**Pb**	**02 47 11.5**	**+0.1**
PESA				S	**Sg**	**02 47 20.4**	**-0.7**
PESA				AML	AML		
	comp=E,1006µm,0.2s						
PESA				AML	AML		
	comp=N,854µm,0.6s						
PESA				AML	AML		
	comp=E,1006µm,0.2s						
PESA				AML	AML		
	comp=N,854µm,0.6s						
PESA				AML	AML		
	comp=E,1006µm,0.2s						
PESA				AML	AML		
	comp=N,854µm,0.6s						
POPM	**Popiglio**	**0.84**	**289**	AML	AML		
	comp=N,198µm,1.4s						
POPM				AML	AML		
	comp=E,232µm,0.2s						
POPM				AML	AML		
	comp=E,232µm,0.2s						
POPM				AML	AML		
	comp=N,198µm,1.4s						
POPM				AML	AML		
	comp=E,232µm,0.2s						
POPM				AML	AML		
	comp=N,198µm,1.4s						
MGAB	**Montegabbione**	**0.88**	**168**	P	**Pn**	**02 47 15.1**	**+0.4**
MGAB				AML	AML		
	comp=E,648µm,0.3s						
MGAB				AML	AML		
	comp=N,578µm,0.3s						
MGAB				AML	AML		
	comp=E,686µm,0.3s						
MGAB				AML	AML		
	comp=N,696µm,0.3s						
MGAB				AML	AML		
	comp=E,648µm,0.3s						
MGAB				AML	AML		
	comp=E,686µm,0.3s						
MGAB				AML	AML		
	comp=N,578µm,0.3s						
MGAB				AML	AML		
	comp=N,696µm,0.3s						
MGAB				AML	AML		
	comp=E,648µm,0.3s						
MGAB				AML	AML		
	comp=E,686µm,0.3s						
MGAB				AML	AML		
	comp=N,578µm,0.3s						
MGAB				AML	AML		
	comp=N,696µm,0.3s						
FDMO	**Fiordimonte**	**1.16**	**129**	AML	AML		
	comp=N,230µm,0.5s						
FDMO				AML	AML		
	comp=E,255µm,0.7s						
FDMO				AML	AML		
	comp=N,230µm,0.5s						
FDMO				AML	AML		
	comp=E,255µm,0.7s						
FDMO				AML	AML		
	comp=N,230µm,0.5s						
FDMO				AML	AML		
	comp=E,255µm,0.7s						
NVLJ	**Novalja**	**2.31**	**69**	*e*Pn	**Pn**	**02 47 33.0**	**-1.4**
NVLJ				Sn	**Sn**	**02 48 00.5**	**-1.8**
DUGI	**Dugi Otok**	**2.32**	**83**	*i* Pn	**Pn**	**02 47 35.6**	**+1.0**
DUGI				Sn	**Sn**	**02 48 00.9**	**-1.8**
PGF	**Pioggiola**	**2.42**	**241**	*e*Pn	**Pn**	**02 47 35.4**	**-0.6**
PGF				*e*Sn	**Sn**	**02 48 04.1**	**-1.2**
	comp=E,8.5nm,0.3s						
RIY	**Rijeka**	**2.44**	**49**	ePn		02 47 36.7	
RIY				Sn	**Sn**	**02 48 04.0**	**-1.5**
ZIRJ	**Zirje**	**2.75**	**91**	*e*Pn	**Pn**	**02 47 41.3**	**+0.9**
ZIRJ				Sn	**Sn**	**02 48 11.4**	**-1.7**
MORI	**Morici**	**2.79**	**87**	*e*Pn	**Pn**	**02 47 41.4**	**+0.5**
MORI				Sn	**Sn**	**02 48 14.7**	**+0.6**
ABTA	**Abfaltersbach**	**3.01**	**9**	*i* Pn	**Pn**	**02 47 46.4**	**+2.3**
	comp=E,2.5nm,0.4s						
ABTA				*i* Sn	**Sn**	**02 48 20.4**	**+0.5**
	comp=E,20nm,0.7s						
MYKA	**Terra Mystica**	**3.13**	**23**	*i* Pn	**Pn**	**02 47 48.1**	**+2.4**
	comp=E,1.6nm,0.4s						
MYKA				*i* Sn	**Sn**	**02 48 22.7**	**0.0**
	comp=E,1.3nm,0.3s						
OZLJ	**Ozalj**	**3.17**	**53**	*e*Pn	**Pn**	**02 47 45.0**	**-1.2**
OZLJ				Sn	**Sn**	**02 48 21.1**	**-2.3**
SBF	**Sospel**	**3.20**	**273**	*e*P	**Pn**	**02 47 48.6**	**+1.9**
SBF				*e*Sn	**Sn**	**02 48 22.3**	**-2.2**
	comp=E,27nm,0.7s						
OBKA	**Obir**	**3.34**	**34**	*i* Pn	**Pn**	**02 47 51.0**	**+2.4**
	comp=E,2.6nm,0.3s						
OBKA				*i* Sn	**Sn**	**02 48 26.9**	**-1.0**
	comp=E,3.4nm,0.3s						
FETA	**Feichten**	**3.35**	**347**	*i* Pn	**Pb**	**02 47 55.9**	**-0.3**
	comp=E,3.1nm,0.5s						
FETA				*i* Sn	**Sn**	**02 48 29.5**	**+1.3**
	comp=E,0.8nm,0.3s						
HVAR	**Hvar**	**3.39**	**98**	*e*Pn	**Pn**	**02 47 50.7**	**+1.5**
HVAR				Sn	**Sn**	**02 48 28.6**	**-0.4**
KBA	**Koelnbreinsper**	**3.47**	**17**	*i* Pn	**Pn**	**02 47 50.4**	**-0.1**
	comp=E,1.2nm,0.2s						
KBA				*i* Sn	**Sn**	**02 48 30.6**	**-0.7**
	comp=E,1.2nm,0.2s						
SQTA	**Sankt Quirin**	**3.48**	**353**	*i* Pn	**Pn**	**02 47 52.2**	**+1.6**
	comp=E,1.1nm,0.2s						
WTTA	**Wattenberg**	**3.50**	**358**	*i* Pn	**Pn**	**02 47 53.3**	**+2.4**
	comp=E,1.8nm,0.3s						
WTTA				*i* Sn	**Sn**	**02 48 34.4**	**+2.4**
	comp=E,4.9nm,0.5s						
WATA	**Walderalm**	**3.57**	**357**	*i* Pn	**Pn**	**02 47 54.5**	**+2.6**
	comp=E,2.4nm,0.3s						
MOTA	**Moosalm**	**3.62**	**352**	*i* Pn	**Pn**	**02 47 51.4**	**-1.1**
	comp=E,2.4nm,0.4s						
SOKA	**Soboth**	**3.67**	**37**	*i* Pn	**Pb**	**02 47 59.8**	**-1.8**
	comp=E,0.4nm,0.3s						
SOKA				*i* Sn	**Sn**	**02 48 35.6**	**-0.5**
	comp=E,1.7nm,0.4s						
DAVA	**Damuels**	**3.78**	**339**	*i* Pn	**Pn**	**02 47 58.3**	**+3.5**
	comp=E,0.7nm,0.2s						
DAVA				*i* Sn	**Sn**	**02 48 41.6**	**+2.6**
	comp=E,4.8nm,0.6s						
FRF	**La Foret Royal**	**3.79**	**269**	*e*P	**Pn**	**02 47 56.9**	**+2.2**
FRF				*e*Sn	**Sn**	**02 48 35.5**	**-3.4**
	comp=E,3.0nm,0.4s						
RETA	**Reutte**	**3.80**	**349**	*i* Pn	**Pn**	**02 47 57.5**	**+2.6**
	comp=E,0.4nm,0.2s						
RETA				*i* Sn	**Sn**	**02 48 40.4**	**+1.2**
	comp=E,0.3nm,0.2s						
LMR	**La Mourre**	**3.91**	**265**	*e*Pn	**Pn**	**02 47 54.8**	**-1.6**
LMR	**La Mourre**	**3.91**	**265**	*e*P	**Pn**	**02 47 58.8**	**+2.4**
LMR				*e*Sn	**Sn**	**02 48 38.8**	**-3.1**
	comp=E,2.1nm,0.3s						
MOA	**Molln**	**4.41**	**22**	*i* Pn	**Pn**	**02 48 03.5**	**+0.1**
	comp=E,0.7nm,0.3s						
SMRF	**Simiane la Rot**	**4.55**	**275**	*e*P	**Pn**	**02 48 08.1**	**+2.9**
HINF	**Hinteralfeld**	**5.35**	**321**	*e*P	**Pn**	**02 48 18.0**	**+1.8**
KHC	**Kasperske Hory**	**5.49**	**12**	*e*PN	**Pn**	**02 48 21.0**	**+2.8**
KHC				*e*PG	**Pg**	**02 48 42.0**	**-0.3**
KHC				*e*SN	**Sn**	**02 49 20.0**	**-0.9**
KHC				*e*x	x	02 49 56.0	
CDF	**Champ du Feu**	**5.63**	**327**	*e*P	**Pn**	**02 48 21.4**	**+1.3**
HAU	**Haudompre**	**5.72**	**320**	*e*P	**Pn**	**02 48 22.8**	**+1.5**
HAU				*e*Sn	**Sn**	**02 49 19.0**	**-7.5**
	comp=E,11nm,0.6s						
LOR	**Lormes**	**6.62**	**305**	*e*P	**Pn**	**02 48 35.8**	**+2.2**
	baz=124						
LOR				*e*Sn	**Sn**	**02 49 41.4**	**-7.2**
	comp=E,1.7nm,0.3s						

IDC ***12*** *02:53:11.8±0.6,28°.60S×177°.24W,h0^{km},mb4.5/13, mb1 4.7/13,mb1mx4.5/21,mbtmp4.5/13,MS3.6/10, Ms1 3.6/10,ms1mx3.5/17,Error ellipse: s-maj=21.4km s-min=18.0km az=115.0*

ISCJB ***12*** *02:53:14.9±0.3,29°.07S±0°.04×177°.32W±0°.06,h31^{km}, mb4.7/38,MS3.6/10,Error ellipse: s-maj=9.1km s-min=4.8km az=32.3*

WEL ***12*** *02:53:20.0±1.6,29°S±8°×17°7W±1°2,h33^{km},M5.2/2, mB5.0/1,ML5.6/2,MLv5.2/2,Mw(mB)4.3/1,Error ellipse: s-maj=0.0km s-min=0.0km az=62.0*

NEIC ***12*** *02:53:30.1±0.8,28°.70S×177°.67W,h145^{km}±5^{km},mb4.4/30, Error ellipse: s-maj=22.2km s-min=4.9km az=134.0*

ISC 12 02:53:17.9±0.5**,29°.14S**±0°.07×**177°.04W**±0°.07**,h31**^{km}**,**
n149,σ**2°.39**/108**,mb4.7**/38**,MS3.8**/10**,2D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**0.78**	**261**	P	**Pn**	**02 53 34.5**	**+1.8**
GLKZ				S	**Sn**	**02 53 45.8**	**+2.5**
RIZ	**Raoul Island**	**0.79**	**262**	P	**Pn**	**02 53 35.0**	**+2.2**
RIZ				S	**Sn**	**02 53 46.6**	**+3.1**
WMGZ	**Waiomatatini S**	**9.45**	**202**	P	**Pn**	**02 55 31.3**	**-0.6**
HAZ	**Te Kaha**	**9.62**	**205**	P	**Pn**	**02 55 32.3**	**-1.8**
PKGZ	**Pakihiroa**	**9.63**	**204**	P	**Pn**	**02 55 32.7**	**-1.7**
PUZ	**Puketiti**	**9.73**	**203**	P	**Pn**	**02 55 32.3**	**-3.4**
TWGZ	**Tauwhareparae**	**9.92**	**203**	P	**Pn**	**02 55 37.0**	**-1.4**
WCZ	**Waipu Caves**	**9.94**	**225**	P	Pn	02 55 49.0	+10
OUZ	**Omahuta**	**9.98**	**230**	*e*Pn	Pn	02 55 48.2	+9.1
OUZ	**Omahuta**	**9.98**	**230**	P	Pn	02 55 48.1	+8.9
CNGZ	**Carnagh Statio**	**10.12**	**202**	P	**Pn**	**02 55 38.4**	**-2.7**
URZ	**Urewera**	**10.32**	**207**	Pn	**Pn**	**02 55 41.5**	**-2.2**
	0.9nm,0.3s,baz=263,slow=3.7,SNR=7.8						
URZ				Sn	**Sn**	**02 57 38.3**	**0.0**
	7.1nm,0.3s,baz=248,slow=21,SNR=10						
URZ	**Urewera**	**10.32**	**207**	P	**Pn**	**02 55 40.2**	**-3.5**
RAGZ	**Rawiri**	**10.41**	**205**	P	**Pn**	**02 55 41.9**	**-3.1**
PRHZ	**Porangahau**	**12.26**	**203**	P	**Pn**	**02 56 06.0**	**-4.3**
PRHZ				S	**Sn**	**02 58 21.8**	**-3.9**
DVHZ	**Dannevirke**	**12.45**	**205**	S	**Sn**	**02 58 25.0**	**-5.5**
POWZ	**Post Office Ro**	**12.68**	**206**	P	**Pn**	**02 56 17.9**	**+1.9**
PRWZ	**Pori Road**	**12.75**	**205**	P	**P**	**02 56 28.9**	**+1.2**
BFZ	**Birch Farm**	**12.76**	**204**	P	**Pn**	**02 56 15.7**	**-1.4**
MRZ	**Mangatainoka R**	**12.99**	**206**	P	**Pn**	**02 56 19.8**	**-0.4**
HOWZ	**Holdsworth Sta**	**13.22**	**205**	P	Pn	02 56 17.2	-6.2
TMWZ	**Te Maipa**	**13.26**	**204**	P	**Pn**	**02 56 19.3**	**-4.7**
DZM	**Mont Dzumac**	**16.47**	**292**	*e*LR	LR	03 00 44.7	
	comp=Z,745nm,25.1s						
DZM	**Mont Dzumac**	**16.47**	**292**	LR	LR	03 01 56.8	
	comp=Z,446nm,20.7s,baz=108,slow=33						
RPZ	**Rata Peaks**	**17.39**	**210**	P	**Pn**	**02 57 17.8**	**-0.3**
	3.5nm,0.3s,baz=161,slow=2.6,SNR=12						
RPZ				LR	LR	03 03 41.1	
	comp=Z,198nm,20.1s,baz=39,slow=35						
RAR	**Rarotonga**	**17.50**	**67**	LR	LR	03 02 13.6	
	comp=Z,250nm,21.3s,baz=262,slow=31						
LHI	**Lord Howe Isla**	**20.76**	**257**	P	**P**	**02 57 56.0**	**-0.2**
	baz=21,SNR=3.1						
TBI	**Tubuai**	**25.37**	**83**	*e*S	**S**	**03 03 12.0**	**+5.1**
	77nm,27.5s						
TBI				*e*LR	LR	03 05 04.7	
	comp=Z,346nm,26.2s						
TBI	**Tubuai**	**25.37**	**83**	*e*T	T	03 25 03.6	
	36nm,0.4s						
ARMA	**Armidale**	**27.18**	**259**	P	**P**	**02 58 59.0**	**+0.1**
	baz=27,SNR=9.7						
MGCD	**Mangrove Creek**	**27.50**	**253**	P	**P**	**02 59 01.9**	**+0.4**
	baz=28						
PAE	**Paea**	**27.60**	**72**	*e*T	T	03 27 44.5	
	15nm,0.3s						
PPT2	**Papeete2**	**27.64**	**71**	*e*S	**S**	**03 03 48.0**	**+5.0**
	61nm,26.5s						
PPT2				*e*LR	LR	03 06 04.4	
	comp=Z,339nm,25.8s						
PPT2	**Papeete2**	**27.64**	**71**	*e*T	T	03 27 48.0	
	7.3nm,0.3s						
PPT	**Papeete**	**27.65**	**71**	LR	LR	03 06 56.5	
	comp=Z,116nm,19.7s,baz=216,slow=30						
TVO	**Taravao**	**27.81**	**72**	*e*T	T	03 28 00.9	
	1.7nm,0.3s						
MEH	**Mehetia**	**28.76**	**73**	*e*T	T	03 29 12.5	
	7.7nm,0.2s						
HNR	**Honiara**	**29.15**	**308**	LR	LR	03 09 42.5	
	comp=Z,55nm,19.3s,baz=142,slow=34						
MILA	**Mila**	**29.29**	**245**	P	**P**	**02 59 17.7**	**+0.2**
	baz=29						
CAN	**Canberra**	**29.29**	**249**	P	**P**	**02 59 17.5**	**0.0**
	baz=29						
VAH	**Vaihoa**	**30.44**	**69**	*e*T	T	03 31 15.8	
	29nm,0.3s						
CMSA	**Cobar Meteorol**	**32.16**	**256**	P	**P**	**02 59 42.0**	**-0.8**
	baz=32,SNR=14						
CTA	**Charters Tower**	**34.45**	**277**	P	P	03 00 00.1	-2.9
	10.0nm,0.6s,baz=108,slow=11,SNR=12						
STKA	**Stephens Creek**	**35.59**	**255**	P	**P**	**03 00 11.5**	**-1.2**
	6.3nm,0.6s,baz=97,slow=10,SNR=20						
STKA				LR	LR	03 12 27.6	
	comp=Z,159nm,19.2s,baz=33,slow=32						
STKA	**Stephens Creek**	**35.59**	**255**	*e*P	**P**	**03 00 10.3**	**-2.4**
	1.4nm,0.6s						
STKA	**Stephens Creek**	**35.59**	**255**	P	**P**	**03 00 11.6**	**-1.2**
	baz=36,SNR=15						
HTT	**Hallett**	**37.67**	**252**	P	**P**	**03 00 28.8**	**-1.6**
	baz=38,SNR=14						
COEN	**Coen**	**39.76**	**284**	P	P	03 00 44.8	-3.2
	baz=40,SNR=3.7						
TAOE	**Nuku Hiva Isla**	**40.05**	**67**	*e*LR	LR	03 11 44.6	
	comp=Z,176nm,25.5s						
BBOO	**Buckleboo**	**40.13**	**253**	P	**P**	**03 00 49.3**	**-1.7**
	baz=40,SNR=8.4						
AS31	**Alice Springs**	**44.03**	**265**	*e*P	P	03 01 19.4	-3.5
	1.5nm,0.8s						
ASAR	**Alice Springs**	**44.03**	**265**	P	P	03 01 19.8	-3.2
	4.7nm,0.6s,baz=96,slow=6.9,SNR=77						
ASAR				ScP	**ScP**	**03 07 01.9**	**+4.1**
	0.6nm,0.7s,baz=121,slow=3.6,SNR=4.5						
ASAR				LR	LR	03 18 09.8	
	comp=Z,152nm,20.6s,baz=103,slow=34						
WC2	**Warramunga Arr**	**44.89**	**270**	P	P	03 01 26.2	-3.7
	baz=45						
WB2	**Warramunga Arr**	**44.89**	**270**	*e*P	P	03 01 26.0	-3.9
	15nm,1.0s						
WRAB	**Tennant Creek**	**44.90**	**270**	*e*P	P	03 01 26.0	-3.9
	13nm,1.0s						
WR1	**Warramunga Arr**	**44.90**	**270**	*e*P	P	03 01 26.3	-3.6
WRA	**Warramunga Arr**	**44.90**	**270**	P	P	03 01 26.3	-3.6
	5.8nm,0.5s,baz=98,slow=9.0,SNR=62						
FORT	**Forrest**	**47.19**	**254**	*e*P	P	03 01 44.3	-3.5
	20nm,0.6s						
FORT	**Forrest**	**47.19**	**254**	P	P	03 01 44.5	-3.3
	baz=47,SNR=15						
WRKA	**Warakurna**	**48.48**	**261**	P	P	03 01 54.1	-3.8
	baz=48,SNR=57						
SBA	**Scott Base**	**49.35**	**184**	*e*P	**P**	**03 02 08.0**	**+4.1**
	24nm,0.9s						
VNDA	**Vanda**	**49.43**	**186**	P	**P**	**03 02 08.4**	**+4.0**
	2.3nm,0.7s,baz=9.9,slow=9.3,SNR=15						
VNDA				LR	LR	03 18 43.1	
	comp=Z,23nm,21.7s,baz=282,slow=31						
VNDA	**Vanda**	**49.43**	**186**	*e*P	**P**	**03 02 07.8**	**+3.4**
	3.6nm,0.8s						
MEEK	**Meekatharra**	**56.29**	**256**	P	P	03 02 51.9	-4.0
	baz=56,SNR=3.9						
CASY	**Casey**	**56.64**	**207**	*e*P	**P**	**03 02 57.0**	**-0.7**
	16nm,0.6s						
MORW	**Morawa**	**57.70**	**252**	P	P	03 03 02.0	-3.7
	baz=58,SNR=3.9						
QSPA	**South Pole Qui**	**60.97**	**180**	*e*P	**P**	**03 03 30.6**	**+2.7**
	49nm,1.6s						
MAW	**Mawson**	**73.78**	**200**	P	**P**	**03 04 50.0**	**+1.3**
	3.7nm,0.6s,baz=124,slow=9.0,SNR=8.0						
MAW	**Mawson**	**73.78**	**200**	*e*P	**P**	**03 04 49.5**	**+0.8**
	2.2nm,0.3s						
MAW	**Mawson**	**73.78**	**200**	P	**P**	**03 04 50.2**	**+1.5**
	baz=74,SNR=5.0						
MJAR	**Matsushiro Arr**	**77.69**	**325**	P	P	03 05 07.2	-4.3
	1.7nm,0.5s,baz=165,slow=6.2,SNR=6.8						
MAJO	**Matsushiro**	**77.69**	**325**	*e*P	P	03 05 07.2	-4.3
SYO	**Syowa Base**	**78.53**	**193**⇓	*e*P	**P**	**03 05 15.0**	**-0.7**
SYO	**Syowa Base**	**78.53**	**193**⇓	*e*PcP	**PcP**	**03 05 24.6**	**-0.1**
SNAA	**Sanae**	**79.39**	**178**	P	**P**	**03 05 21.6**	**+1.1**
SNAA	**Sanae**	**79.39**	**178**	P	**P**	**03 05 21.6**	**+1.1**
	5.3nm,0.8s,baz=201,slow=9.5,SNR=28						
SNAA	**Sanae**	**79.39**	**178**	*e*P	**P**	**03 05 21.8**	**+1.3**
	9.4nm,1.0s						
VNA3	**Neumayer Olymp**	**79.50**	**176**	P	**P**	**03 05 22.0**	**+0.9**
VNA2	**Neumayer--Watz**	**79.95**	**177**	P	**P**	**03 05 25.0**	**+1.5**
VNA1	**Neumayer--Stat**	**80.17**	**176**	P	**P**	**03 05 26.1**	**+1.5**
PLCA	**Paso Flores**	**82.75**	**133**	LR	LR	03 33 32.8	
	comp=Z,40nm,21.7s,baz=250,slow=29						
PETK	**Petropavlovsk-**	**84.81**	**345**	P	P	03 05 45.3	-3.5
	8.6nm,0.6s,baz=120,slow=6.9,SNR=20						
PEA1	**Petropavlovsk-**	**84.81**	**345**	*e*P	P	03 05 45.3	-3.6
AFDM	**Forest Hills D**	**85.55**	**40**	*e*P	**P**	**03 05 51.5**	**-1.5**
	3.8nm,0.9s						
GSC	**Goldstone, Bar**	**85.61**	**45**	*e*P	**P**	**03 05 52.1**	**-1.3**
	4.2nm,1.0s						
USRK	**Ussuriysk Ar.**	**86.58**	**326**	P	P	03 05 55.1	-2.8
	2.4nm,0.7s,baz=169,slow=3.9,SNR=7.2						
NVAR	**Mina Array Bea**	**86.75**	**42**	P	**P**	**03 05 57.6**	**-1.5**

	2.1nm,0.8s,baz=223,slow=8.1,SNR=17						
NVAR				LR	LR	03 39 27.4	
	comp=Z,42nm,18.1s,baz=272,slow=32						
NV11	**Mina Array Sit**	**86.84**	**42**	*e*P	**P**	**03 05 58.0**	**-1.4**
	0.3nm,1.1s						
PAHR	**Pah Rah Range**	**86.97**	**41**	*e*P	**P**	**03 05 58.8**	**-1.3**
	6.3nm,0.7s						
TUC	**Tucson**	**87.67**	**51**	*e*P	**P**	**03 06 03.7**	**+0.1**
	12nm,1.8s						
WHN	**Wuhan**	**88.26**	**307**	P	**P**	**03 06 09.3**	**+3.0**
X16A	**Lo Mia Camp, P**	**88.50**	**49**	*e*P	**P**	**03 06 07.1**	**-0.5**
	3.3nm,1.1s						
U15A	**North Rim**	**89.16**	**47**	*e*P	**P**	**03 06 10.7**	**-0.1**
	5.3nm,1.0s						
CCUT	**Cedar City**	**89.18**	**45**	*e*P	**P**	**03 06 10.4**	**-0.3**
	6.8nm,1.6s						
KNB	**Kanab**	**89.19**	**46**	*e*P	**P**	**03 06 10.0**	**-0.7**
	6.0nm,1.2s						
WUAZ	**Wupatki**	**89.20**	**48**	*e*P	**P**	**03 06 10.3**	**-0.5**
	3.8nm,1.0s						
WVOR	**Wild Horse Val**	**89.22**	**39**	*e*P	**P**	**03 06 09.8**	**-0.9**
	5.2nm,1.3s						
MSU	**Marysvale**	**90.51**	**45**	*e*P	**P**	**03 06 16.3**	**-0.7**
G08A	**Pilot Rock**	**90.95**	**37**	*e*P	**P**	**03 06 17.4**	**-1.3**
	7.1nm,1.0s						
LENM	**Lemitar**	**91.34**	**51**	*e*P	**P**	**03 06 19.6**	**-1.3**
HAWA	**Hanford**	**91.40**	**36**	*e*P	**P**	**03 06 18.9**	**-1.7**
	24nm,1.9s						
TMUT	**Trail Mountain**	**91.58**	**45**	*e*P	**P**	**03 06 21.3**	**-0.8**
	4.2nm,0.8s						
E09A	**Wood Farm, Sta**	**92.19**	**36**	*e*P	P	03 06 22.3	-2.0
	4.8nm,0.8s						
HLID	**Hailey**	**92.31**	**40**	*e*P	**P**	**03 06 23.5**	**-1.6**
	2.0nm,0.8s						
F10A	**Beach Ranch, E**	**92.31**	**37**	*e*P	P	03 06 22.7	-2.2
	4.6nm,0.8s						
PDAR	**Pinedale Array**	**94.65**	**43**	P	P	03 06 33.9	-2.1
	0.6nm,0.7s,baz=242,slow=3.2,SNR=5.5						
PDAR				PKKPbc	**PKKPbc**	**03 23 32.7**	**-2.1**
	0.3nm,0.6s,baz=85,slow=2.0,SNR=4.5						
HHC	**Hu-ho-hao-te**	**95.96**	**314**	*e*P	P	03 06 38.2	-3.7
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.2s						
CD2	**Chengdu**	**96.13**	**302**	*e*P	P	03 06 38.0	-4.8
ILAR	**Eielson Array**	**96.52**	**13**	P	P	03 06 40.1	-3.6
	comp=Z,0.4nm,0.7s,baz=243,slow=3.8,SNR=4.9						
MK32	**Makanchi Array**	**117.60**	**310**	*e*PKPdf	**PKPdf**	**03 11 56.8**	**-3.8**
MKAR	**Makanchi Array**	**117.60**	**310**	PKP	**PKPdf**	**03 11 56.8**	**-3.8**
	comp=Z,1.0nm,0.5s,baz=73,slow=1.6,SNR=9.9						
GEYT	**Alibeck**	**133.77**	**296**	SKP	**SKPdf**	**03 16 05.3**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=236,slow=8.0,SNR=4.4						
ARA0	**ARCESS Array S**	**137.53**	**348**	*e*PKPdf	**PKPdf**	**03 12 33.2**	**-4.5**
ARCES	**ARCESS Array B**	**137.53**	**348**	PKP	**PKPdf**	**03 12 33.2**	**-4.5**
	comp=Z,4.4nm,0.9s,baz=64,slow=2.1,SNR=4.2						
KTK1	**Kautokeino**	**138.38**	**349**	*e*PKPdf	**PKPdf**	**03 12 36.8**	**-2.5**
H10S3	**ASCENSION HYDR**	**138.49**	**153**	T	T	05 48 29.9	
	baz=205,slow=75,SNR=25						
H10S2	**ASCENSION HYDR**	**138.49**	**153**	T	T	05 48 30.4	
	baz=205,slow=75,SNR=33						
H10S1	**ASCENSION HYDR**	**138.51**	**153**	T	T	05 48 31.5	
	baz=205,slow=75,SNR=25						
H10N3	**ASCENSION HYDR**	**139.57**	**153**	T	T	05 49 52.6	
	baz=204,slow=75,SNR=30						
H10N1	**ASCENSION HYDR**	**139.57**	**153**	T	T	05 49 54.1	
	baz=204,slow=75,SNR=57						
H10N2	**ASCENSION HYDR**	**139.59**	**153**	T	T	05 49 53.9	
	baz=204,slow=75,SNR=48						
MOR8	**Moi Rana**	**142.27**	**352**	*e*PKPdf	**PKPdf**	**03 12 43.4**	**-3.0**
MOR8				*e*pPKPdf	sPKPdf	03 13 21.7	+23
NSS	**Namsos**	**144.13**	**353**	*e*PKPdf	**PKPab**	**03 12 46.9**	**-0.5**
FINES	**FINESS Array B**	**144.24**	**341**	PKhKP	PKPpre	03 12 44.6	
	comp=Z,1.2nm,0.4s,baz=69,slow=3.6,SNR=13						
KBZ	**Khabaz**	**145.08**	**306**	PKP	**PKPbc**	**03 12 48.7**	**-2.8**
	comp=Z,1.9nm,0.8s,baz=92,slow=3.2,SNR=4.3						
TBLU	**Trondheim**	**145.55**	**354**	*e*PKPab	**PKPdf**	**03 12 48.6**	**-3.6**
DOMB	**Dombas**	**146.85**	**355**	*e*PKPab	**PKPdf**	**03 12 54.0**	**-0.5**
AKN	**Aaknes**	**146.85**	**357**	*e*PKPbc	**PKPdf**	**03 12 53.1**	**-1.4**
NB2	**NORSAR Subarra**	**147.62**	**353**	PKP	**PKPdf**	**03 12 54.6**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=16,slow=3.0						
NB2	**NORSAR Subarra**	**147.62**	**353**	PKP	**PKPdf**	**03 12 54.6**	**-1.2**
	baz=16,slow=3.0						
NB200	**NORSAR Array S**	**147.62**	**353**	*e*PKPbc	**PKPdf**	**03 12 54.8**	**-1.0**
NOA	**NORSAR Array B**	**147.62**	**353**	PKPbc	**PKPdf**	**03 12 54.8**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=14,slow=4.5,SNR=15						
NC602	**NORSAR Array S**	**147.88**	**352**	*e*PKPbc	**PKPdf**	**03 12 55.8**	**-0.4**
SUE	**Sulen**	**148.06**	**358**	*e*PKPbc	**PKPdf**	**03 12 56.5**	**+0.1**
SKAR	**Skarslia**	**148.25**	**355**	*e*PKPdf	**PKPdf**	**03 12 54.0**	**-2.9**
KONO	**Kongsberg**	**149.16**	**353**	*e*PKPbc	**PKPdf**	**03 12 58.8**	**+0.5**
BLS5	**Blasjo**	**149.63**	**356**	*e*PKPbc	**PKPdf**	**03 13 00.5**	**+1.3**
HOMB	**Homborsund**	**150.62**	**354**	*e*PKPbc	**PKPdf**	**03 13 03.4**	**+2.8**
SNART	**Snartemo**	**150.66**	**355**	*e*PKPbc	**PKPdf**	**03 13 02.9**	**+2.2**
AKASG	**Malin Array Be**	**150.78**	**325**	PKPbc	**PKPdf**	**03 13 03.5**	**+2.4**
	comp=Z,6.1nm,0.6s,baz=46,slow=2.8,SNR=26						
AKBB	**Malin Array Si**	**150.78**	**325**	*e*PKPbc	**PKPdf**	**03 13 03.6**	**+2.5**
BR101	**Keskin Array S**	**152.70**	**301**	*e*PKPbc	**PKPdf**	**03 13 08.6**	**+4.0**
BRTR	**Keskin Array B**	**152.70**	**301**	PKPbc	**PKPdf**	**03 13 08.6**	**+4.0**
	comp=Z,3.3nm,0.5s,baz=146,slow=4.3,SNR=18						
CLL	**Collm**	**156.61**	**344**	*e*PKPab	**PKPab**	**03 13 34.0**	**-4.5**
GEC2	**GERESS Array S**	**158.66**	**340**	*e*PKPab	**PKPab**	**03 13 43.6**	**-4.0**
GERES	**GERESS Array B**	**158.66**	**340**	PKPab	**PKPab**	**03 13 43.6**	**-4.0**
	comp=Z,0.3nm,0.5s,baz=8.9,slow=4.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**164.04**	**176**	PKP	**PKPdf**	**03 13 17.1**	**-1.7**
	comp=Z,1.9nm,1.1s,baz=299,slow=2.0,SNR=7.3						
TORD				PKPab	**PKPab**	**03 14 12.3**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=180,slow=4.0,SNR=8.2						
TOA1	**Torodi Ar. Sit**	**164.05**	**175**	*e*PKPdf	**PKPdf**	**03 13 17.1**	**-1.7**
TOA1				*e*PKPab	**PKPab**	**03 14 12.3**	**+0.6**
ESDC	**Sonseca Array**	**168.04**	**27**	PKPab	**PKPab**	**03 14 26.3**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=345,slow=3.1,SNR=4.7						

ISCJB ***12*** *03:00:09.6±0.3, 43°.82N±0°.02×12°.03E±0°.03, h12^{km}, Error ellipse: s-maj=3.7km s-min=2.2km az=30.4*

ROM ***12*** *03:00:09.2±0.1, 43°.814N±0°.005×12°.036E±0°.006, h8^{km}, ML2.1/25, Error ellipse: s-maj=0.6km s-min=0.2km az=26.0*

ISC 12 03:00:10.0±0.8**, 43°.82N**±0°.03×**12°.04E**±0°.02**, h12^{km}, n35, σ0^{s}.91**/52**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	**Santa Sofia**	**0.16**	**301**	P	**Pg**	**03 00 13.1**	**-0.7**
SFI				S	**Sg**	**03 00 16.3**	**-0.2**
SFI				AML	AML		
	comp=E,1625µm,0.2s						
SFI				AML	AML		
	comp=N,800µm,0.7s						
SFI				AML	AML		
	comp=E,1410µm,0.4s						
SFI				AML	AML		
	comp=N,1140µm,0.2s						
SFI				AML	AML		
	comp=E,1625µm,0.2s						
SFI				AML	AML		
	comp=N,798µm,0.7s						
SFI				AML	AML		
	comp=E,1415µm,0.4s						
SFI				AML	AML		
	comp=N,1140µm,0.2s						
SFI				AML	AML		
	comp=E,1415µm,0.4s						
SFI				AML	AML		
	comp=E,1625µm,0.2s						
SFI				AML	AML		
	comp=N,798µm,0.7s						
SFI				AML	AML		
	comp=N,1140µm,0.2s						
SFI				AML	AML		
	comp=E,1415µm,0.4s						
SFI				AML	AML		
	comp=E,1625µm,0.2s						
SFI				AML	AML		
	comp=N,798µm,0.7s						
SFI				AML	AML		
	comp=N,1140µm,0.2s						
ASQU	**Asqua**	**0.18**	**263**	P	**Pg**	**03 00 13.8**	**-0.4**
ASQU				S	**Sg**	**03 00 17.2**	**+0.2**
ASQU				AML	AML		
	comp=E,1410µm,0.5s						
ASQU				AML	AML		
	comp=N,2055µm,0.5s						
ASQU				AML	AML		
	comp=E,1410µm,0.5s						
ASQU				AML	AML		
	comp=N,2055µm,0.5s						
ASQU				AML	AML		
	comp=N,2055µm,0.5s						
ASQU				AML	AML		
	comp=E,1410µm,0.5s						
ASQU				AML	AML		
	comp=N,2055µm,0.5s						
ASQU				AML	AML		
	comp=E,1410µm,0.5s						
CPGN	**Carpegna, Ital**	**0.20**	**95**	P	**Pg**	**03 00 14.1**	**-0.5**
CPGN				S	**Sg**	**03 00 18.6**	**+1.0**
CPGN				AML	AML		
	comp=E,924µm,0.4s						
CPGN				AML	AML		
	comp=N,876µm,0.5s						
CPGN				AML	AML		
	comp=E,846µm,0.4s						
CPGN				AML	AML		
	comp=N,920µm,0.5s						
CPGN				AML	AML		
	comp=E,924µm,0.4s						
CPGN				AML	AML		
	comp=N,877µm,0.5s						
CPGN				AML	AML		
	comp=E,846µm,0.4s						
CPGN				AML	AML		
	comp=N,920µm,0.5s						
CPGN				AML	AML		
	comp=E,920µm,0.4s						
CPGN				AML	AML		
	comp=N,877µm,0.5s						
CPGN				AML	AML		
	comp=N,877µm,0.5s						
CPGN				AML	AML		
	comp=E,920µm,0.4s						
CPGN				AML	AML		
	comp=N,877µm,0.5s						
CPGN				AML	AML		
	comp=E,920µm,0.4s						
PARC	**Parchiule**	**0.22**	**140**	P	**Pg**	**03 00 14.1**	**-0.7**
PARC				S	**Sg**	**03 00 18.2**	**+0.2**
PARC				AML	AML		
	comp=E,701µm,0.9s						
PARC				AML	AML		
	comp=N,918µm,0.5s						
PARC				AML	AML		
	comp=E,701µm,0.9s						
PARC				AML	AML		
	comp=N,918µm,0.5s						
PARC				AML	AML		
	comp=N,918µm,0.5s						
PARC				AML	AML		
	comp=E,701µm,0.9s						
PARC				AML	AML		
	comp=N,918µm,0.5s						
PARC				AML	AML		
	comp=E,701µm,0.9s						
SSP9	**Sansepolcro**	**0.25**	**165**	P	**Pg**	**03 00 14.9**	**-0.4**
SSP9				S	**Sg**	**03 00 19.2**	**+0.3**
SSP9				AML	AML		
	comp=E,495µm,0.4s						
SSP9				AML	AML		
	comp=N,650µm,1.1s						
SSP9				AML	AML		
	comp=E,496µm,0.4s						
SSP9				AML	AML		
	comp=N,659µm,1.1s						
SSP9				AML	AML		
	comp=E,496µm,0.4s						
SSP9				AML	AML		
	comp=N,659µm,1.1s						
SSP9				AML	AML		
	comp=E,496µm,0.4s						
SSP9				AML	AML		
	comp=N,659µm,1.1s						
BADI	**Badiali**	**0.34**	**154**	P	**Pg**	**03 00 16.3**	**-0.6**
BADI				S	**Sb**	**03 00 22.2**	**-1.3**
BADI				AML	AML		
	comp=E,792µm,0.9s						
BADI				AML	AML		
	comp=N,549µm,0.6s						
BADI				AML	AML		
	comp=E,793µm,0.9s						
BADI				AML	AML		
	comp=N,548µm,0.6s						
BADI				AML	AML		
	comp=E,792µm,0.9s						
BADI				AML	AML		
	comp=N,549µm,0.6s						
BADI				AML	AML		
	comp=E,792µm,0.9s						
BADI				AML	AML		
	comp=N,549µm,0.6s						
BADI				AML	AML		
	comp=E,792µm,0.9s						
BADI				AML	AML		
	comp=N,549µm,0.6s						
PE3	**Peglio**	**0.35**	**110**	P	**Pg**	**03 00 16.5**	**-0.6**
PE3				S	**Sb**	**03 00 22.8**	**-1.0**
PE3				AML	AML		
	comp=E,944µm,0.5s						
PE3				AML	AML		
	comp=N,804µm,0.7s						
PE3				AML	AML		
	comp=E,946µm,0.5s						
PE3				AML	AML		
	comp=N,804µm,0.7s						
PE3				AML	AML		
	comp=E,946µm,0.5s						
PE3				AML	AML		
	comp=N,804µm,0.7s						
PE3				AML	AML		
	comp=N,804µm,0.7s						
PE3				AML	AML		
	comp=E,946µm,0.5s						
PE3				AML	AML		
	comp=N,804µm,0.7s						
PE3				AML	AML		
	comp=E,946µm,0.5s						
RUFI	**Rufina**	**0.38**	**273**	P	**Pg**	**03 00 17.2**	**-0.5**
RUFI				S	**Sb**	**03 00 23.7**	**-1.0**
RUFI				AML	AML		
	comp=E,998µm,0.3s						
RUFI				AML	AML		
	comp=N,520µm,0.4s						
CDCA	**Citt‘ di Caste**	**0.39**	**159**	P	**Pg**	**03 00 16.9**	**-0.8**
CDCA				S	**Sb**	**03 00 23.6**	**-1.1**
CDCA				AML	AML		
	comp=E,313µm,1.2s						
CDCA				AML	AML		
	comp=N,336µm,1.2s						
CDCA				AML	AML		
	comp=E,313µm,1.2s						
CDCA				AML	AML		
	comp=N,336µm,1.2s						
CDCA				AML	AML		
	comp=E,313µm,1.2s						
CDCA				AML	AML		
	comp=N,336µm,1.2s						
ATPI	**Pietralunga -**	**0.45**	**144**	P	**Pg**	**03 00 18.3**	**-0.7**
ATPI				S	**Sb**	**03 00 26.1**	**-0.6**
ATPI				AML	AML		
	comp=E,207µm,0.3s						
ATPI				AML	AML		
	comp=N,216µm,0.6s						
ATPI				AML	AML		
	comp=E,207µm,0.3s						
ATPI				AML	AML		
	comp=N,217µm,0.6s						
ATPI				AML	AML		
	comp=N,217µm,0.6s						
ATPI				AML	AML		
	comp=E,207µm,0.3s						
ATPI				AML	AML		
	comp=N,217µm,0.6s						
ATPI				AML	AML		
	comp=E,207µm,0.3s						
PIEI	**Pieia**	**0.46**	**128**	P	**Pg**	**03 00 18.0**	**-1.1**
PIEI				S	**Sb**	**03 00 25.6**	**-1.2**
CAFI	**Castiglion Fio**	**0.49**	**186**	P	**Pg**	**03 00 19.4**	**-0.3**
CAFI				S	**Sb**	**03 00 27.2**	**-0.6**
CAFI				AML	AML		
	comp=E,239µm,1.5s						
CAFI				AML	AML		
	comp=N,174µm,0.9s						
CAFI				AML	AML		
	comp=E,239µm,1.5s						
CAFI				AML	AML		
	comp=N,174µm,0.9s						
CAFI				AML	AML		
	comp=E,239µm,1.5s						
CAFI				AML	AML		
	comp=N,174µm,0.9s						
CAFI				AML	AML		
	comp=E,239µm,1.5s						
CAFI				AML	AML		
	comp=N,174µm,0.9s						
CAFI				AML	AML		
	comp=E,239µm,1.5s						
CAFI				AML	AML		
	comp=N,174µm,0.9s						
BRIS	**BRISIGHELLA**	**0.51**	**311**	P	**Pg**	**03 00 18.4**	**-1.5**
BRIS				AML	AML		
	comp=E,318µm,0.5s						
BRIS				AML	AML		
	comp=N,520µm,0.5s						
BRIS				AML	AML		
	comp=E,318µm,0.5s						
BRIS				AML	AML		
	comp=N,521µm,0.5s						
BRIS				AML	AML		
	comp=E,318µm,0.5s						
BRIS				AML	AML		
	comp=N,520µm,0.5s						
BRIS				AML	AML		
	comp=E,318µm,0.5s						
BRIS				AML	AML		
	comp=N,520µm,0.5s						
BRIS				AML	AML		
	comp=E,318µm,0.5s						
BRIS				AML	AML		
	comp=N,520µm,0.5s						
ATVO	**AVT- Monte Val**	**0.51**	**149**	P	**Pg**	**03 00 19.4**	**-0.6**
ATVO				S	**Sb**	**03 00 27.8**	**-0.6**
ATVO				AML	AML		
	comp=E,330µm,0.6s						
ATVO				AML	AML		
	comp=N,228µm,0.5s						
ATVO				AML	AML		
	comp=E,330µm,0.6s						
ATVO				AML	AML		
	comp=N,228µm,0.5s						
ATVO				AML	AML		
	comp=E,330µm,0.6s						
ATVO				AML	AML		
	comp=N,227µm,0.5s						
ATVO				AML	AML		
	comp=E,330µm,0.6s						
ATVO				AML	AML		
	comp=N,227µm,0.5s						
ATVO				AML	AML		
	comp=E,330µm,0.6s						
ATVO				AML	AML		
	comp=N,227µm,0.5s						
ATMI	**Monte Miggiano**	**0.51**	**161**	P	**Pg**	**03 00 19.4**	**-0.7**
ATMI				S	**Sb**	**03 00 27.3**	**-1.1**
ATMI				AML	AML		
	comp=E,466µm,1.3s						
ATMI				AML	AML		
	comp=N,522µm,1.6s						
ATMI				AML	AML		
	comp=E,466µm,1.3s						
ATMI				AML	AML		
	comp=N,522µm,1.6s						
ATMI				AML	AML		
	comp=E,466µm,1.3s						
ATMI				AML	AML		
	comp=N,522µm,1.6s						
ATMI				AML	AML		
	comp=E,466µm,1.3s						
ATMI				AML	AML		
	comp=N,522µm,1.6s						
SEI	**Scarperia**	**0.55**	**296**	P	**Pg**	**03 00 20.1**	**-0.6**
SEI				AML	AML		
	comp=E,982µm,0.4s						
SEI				AML	AML		
	comp=N,1140µm,1.1s						
SEI				AML	AML		
	comp=E,982µm,0.4s						
SEI				AML	AML		
	comp=N,1140µm,1.1s						
SEI				AML	AML		
	comp=N,1140µm,1.1s						
SEI				AML	AML		
	comp=E,982µm,0.4s						
SEI				AML	AML		
	comp=N,1140µm,1.1s						
SEI				AML	AML		
	comp=E,982µm,0.4s						
MPAG	**Monte Paganucc**	**0.56**	**110**	P	**Pg**	**03 00 20.0**	**-0.8**
MPAG				S	**Sb**	**03 00 29.1**	**-0.5**
FRON	**Frontone**	**0.58**	**121**	P	**Pg**	**03 00 20.5**	**-0.9**
FRON				S	**Sb**	**03 00 30.1**	**-0.3**
FRON				AML	AML		
	comp=E,104µm,0.8s						
FRON				AML	AML		
	comp=N,128µm,0.7s						
FRON				AML	AML		
	comp=E,104µm,0.8s						
FRON				AML	AML		
	comp=N,128µm,0.7s						
FRON				AML	AML		
	comp=E,104µm,0.8s						
FRON				AML	AML		
	comp=N,128µm,0.7s						
FRON				AML	AML		
	comp=E,104µm,0.8s						
FRON				AML	AML		
	comp=N,128µm,0.7s						
PESA	**Pesaro**	**0.59**	**78**	P	**Pg**	**03 00 21.3**	**-0.3**
PESA				S	**Sb**	**03 00 30.5**	**-0.1**
PESA				AML	AML		
	comp=E,279µm,0.9s						
PESA				AML	AML		
	comp=N,293µm,0.5s						
PESA				AML	AML		
	comp=E,279µm,0.9s						
PESA				AML	AML		
	comp=N,293µm,0.5s						
PESA				AML	AML		
	comp=E,279µm,0.9s						
PESA				AML	AML		
	comp=N,293µm,0.5s						
PESA				AML	AML		
	comp=E,279µm,0.9s						
PESA				AML	AML		
	comp=N,293µm,0.5s						
ATFO	**Monte Foce - G**	**0.59**	**139**	P	**Pg**	**03 00 21.0**	**-0.6**
ATFO				S	**Sb**	**03 00 30.7**	**-0.1**
ATFO				AML	AML		
	comp=E,152µm,0.6s						
ATFO				AML	AML		
	comp=N,156µm,0.7s						
ATFO				AML	AML		
	comp=E,152µm,0.6s						
ATFO				AML	AML		
	comp=N,156µm,0.7s						
ATFO				AML	AML		
	comp=E,152µm,0.6s						
ATFO				AML	AML		
	comp=N,156µm,0.7s						
ATFO				AML	AML		
	comp=E,152µm,0.6s						
ATFO				AML	AML		
	comp=N,156µm,0.7s						
CSNT	**Castellina Chi**	**0.65**	**238**	P	**Pb**	**03 00 22.6**	**-0.7**
CSNT				AML	AML		
	comp=E,126µm,1.2s						
CSNT				AML	AML		
	comp=N,138µm,1.5s						
CSNT				AML	AML		
	comp=E,126µm,1.2s						
CSNT				AML	AML		
	comp=N,138µm,1.5s						
CSNT				AML	AML		
	comp=N,138µm,1.5s						
CSNT				AML	AML		
	comp=E,126µm,1.2s						
CSNT				AML	AML		
	comp=N,138µm,1.5s						
CSNT				AML	AML		
	comp=E,126µm,1.2s						
OSSC	**Osservatorio P**	**0.65**	**243**	P	**Pg**	**03 00 22.3**	**-0.3**
OSSC				AML	AML		
	comp=E,150µm,1.5s						

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OSSC                                AML   AML
       comp=N,187µm,0.5s
OSSC                                AML   AML
       comp=E,150µm,1.5s
OSSC                                AML   AML
       comp=N,186µm,0.5s
OSSC                                AML   AML
       comp=N,186µm,0.5s
OSSC                                AML   AML
       comp=E,150µm,1.5s
OSSC                                AML   AML
       comp=N,186µm,0.5s
OSSC                                AML   AML
       comp=E,150µm,1.5s
MURB   Monte Urbino      0.66 147   P     Pg     03 00 22.2 -0.6
ATTE   AVT- Monte Tez    0.66 160   P     Pg     03 00 22.1 -0.8
ATTE                                S     Sb     03 00 32.2 -0.5
ATTE                                AML   AML
       comp=E,147µm,0.3s
ATTE                                AML   AML
       comp=N,158µm,1.1s
ATTE                                AML   AML
       comp=E,148µm,0.3s
ATTE                                AML   AML
       comp=N,158µm,1.1s
ATTE                                AML   AML
       comp=E,148µm,0.3s
ATTE                                AML   AML
       comp=N,158µm,1.1s
ATTE                                AML   AML
       comp=E,148µm,0.3s
ATTE                                AML   AML
       comp=N,158µm,1.1s
PTF    Prato             0.71 282   P     Pg     03 00 23.1 -0.7
COR1   Corinaldo         0.72 105   P     Pb     03 00 23.9 -0.6
ARVD   Arcevia           0.73 116   P     Pg     03 00 23.1 -1.1
ARVD                                AML   AML
       comp=E,64µm,0.4s
ARVD                                AML   AML
       comp=N,67µm,0.9s
ARVD                                AML   AML
       comp=E,64µm,0.4s
ARVD                                AML   AML
       comp=N,67µm,0.9s
ARVD                                AML   AML
       comp=E,64µm,0.4s
ARVD                                AML   AML
       comp=N,67µm,0.9s
ARVD                                AML   AML
       comp=E,64µm,0.4s
ARVD                                AML   AML
       comp=N,67µm,0.9s
ATCC   AVT- Casa Cast    0.77 145   P     Pg     03 00 24.2 -0.8
ATCC                                AML   AML
       comp=E,196µm,1.1s
ATCC                                AML   AML
       comp=N,144µm,0.5s
ATCC                                AML   AML
       comp=E,197µm,1.1s
ATCC                                AML   AML
       comp=N,144µm,0.5s
ATCC                                AML   AML
       comp=N,144µm,0.5s
ATCC                                AML   AML
       comp=E,197µm,1.1s
ATCC                                AML   AML
       comp=N,144µm,0.5s
ATCC                                AML   AML
       comp=E,197µm,1.1s
MTCR   Monte La Croce    0.78 286   P     Pg     03 00 24.5 -0.7
MTCR                                AML   AML
       comp=E,160µm,0.2s
MTCR                                AML   AML
       comp=N,168µm,0.4s
FROS   Frosini           0.89 227   P     Pb     03 00 27.0 -0.3
FROS                                AML   AML
       comp=E,115µm,0.5s
FROS                                AML   AML
       comp=N,108µm,0.4s
FROS                                AML   AML
       comp=N,108µm,0.4s
FROS                                AML   AML
       comp=E,115µm,0.5s
FROS                                AML   AML
       comp=N,108µm,0.4s
FROS                                AML   AML
       comp=E,115µm,0.5s
POPM   Popiglio          0.95 284   AML   AML
       comp=N,137µm,0.2s
POPM                                AML   AML
       comp=E,81µm,0.7s
POPM                                AML   AML
       comp=N,137µm,0.2s
POPM                                AML   AML
       comp=E,81µm,0.7s
POPM                                AML   AML
       comp=N,137µm,0.2s
POPM                                AML   AML
       comp=E,81µm,0.7s
FDMO   Fiordimonte       1.09 135   AML   AML
       comp=E,48µm,1.2s
FDMO                                AML   AML
       comp=E,48µm,1.2s
FDMO                                AML   AML
       comp=N,48µm,0.5s
FDMO                                AML   AML
       comp=E,48µm,1.2s
FDMO                                AML   AML
       comp=N,48µm,0.5s
FDMO                                AML   AML
       comp=N,48µm,0.5s
FDMO                                AML   AML
       comp=E,48µm,1.2s
FDMO                                AML   AML
       comp=N,48µm,0.5s
ABTA   Abfaltersbach     2.95   6 i Pn    Pg     03 01 04.7 -1.8
       comp=N,3.5nm,0.6s
FETA   Feichten          3.33 344 i Pn    Pn     03 01 03.7 +1.6
       comp=N,2.0nm,0.3s
SQTA   Sankt Quirin      3.45 351 i Pn    Pn     03 01 06.7 +3.0
       comp=N,0.8nm,0.1s
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    ROM 12 03:01:06.2±0.1,43°.833N±0°.005×12°.052E±0°.006,
           h8km,ML1.6/2,Error ellipse: s-maj=0.7km s-min=0.3km
           az=217.0,Central Italy
Code   Station Name        Δ°  AZ°    Phase ID         Time      Res
                                    Op    ISC      h  m  s     ISC
SFI    Santa Sofia       0.17 296   P     Pg     03 01 10.2 +0.6
SFI                                 S     Sg     03 01 13.4 +1.4
ASQU   Asqua             0.19 259   P     Pg     03 01 10.9 +0.8
ASQU                                S     Sg     03 01 14.3 +1.4
ASQU                                AML   AML
       comp=E,436µm,0.8s
ASQU                                AML   AML
       comp=N,722µm,0.5s
PARC   Parchiule         0.23 144   P     Pg     03 01 11.3 +0.5
PARC                                S     Sg     03 01 15.4 +1.5
PARC                                AML   AML
       comp=E,170µm,0.6s
PARC                                AML   AML
       comp=N,236µm,0.9s
PARC                                AML   AML
       comp=E,170µm,0.6s
PARC                                AML   AML
       comp=N,236µm,0.9s
PARC                                AML   AML
       comp=E,170µm,0.6s
PARC                                AML   AML
       comp=N,236µm,0.9s
PARC                                AML   AML
       comp=E,170µm,0.6s
PARC                                AML   AML
       comp=N,236µm,0.9s
SSP9   Sansepolcro       0.27 167   P     Pg     03 01 12.1 +0.7
SSP9                                S     Sb     03 01 17.0 -0.8
PE3    Peglio            0.35 113   P     Pb     03 01 14.0 -0.6
PE3                                 S     Sb     03 01 20.1 -0.2
BADI   Badiali           0.35 157   P     Pg     03 01 13.5 +0.5
BADI                                S     Sb     03 01 19.4 -1.0
BADI                                AML   AML
       comp=E,210µm,0.9s
BADI                                AML   AML
       comp=N,132µm,0.5s
BADI                                AML   AML
       comp=E,211µm,0.9s
BADI                                AML   AML
       comp=N,133µm,0.5s
BADI                                AML   AML
       comp=E,211µm,0.9s
BADI                                AML   AML
       comp=N,133µm,0.5s
BADI                                AML   AML
       comp=E,211µm,0.9s
BADI                                AML   AML
       comp=N,133µm,0.5s
RUFI   Rufina            0.39 271   P     Pg     03 01 14.3 +0.5
RUFI                                S     Sb     03 01 20.8 -0.7
ATPI   Pietralunga -     0.46 146   P     Pg     03 01 15.6 +0.5
ATPI                                S     Sb     03 01 23.0 -0.5
PIEI   Pieia             0.46 130   P     Pg     03 01 15.1 +0.1
PIEI                                S     Sb     03 01 22.9 -0.6
BRIS   BRISIGHELLA       0.50 309   P     Pg     03 01 15.7 -0.3
CAFI   Castiglion Fio    0.51 187   P     Pg     03 01 16.6 +0.6
CAFI                                S     Sb     03 01 24.6 -0.3
ATVO   AVT- Monte Val    0.52 150   P     Pg     03 01 16.6 +0.4
ATVO                                S     Sb     03 01 24.9 -0.3
ATMI   Monte Miggiano    0.52 162   P     Pb     03 01 17.0 -0.6
SEI    Scarperia         0.55 294   P     Pg     03 01 17.2 +0.4
MPAG   Monte Paganucc    0.55 111   P     Pg     03 01 17.2 +0.3
MPAG                                S     Sb     03 01 26.1 -0.1
FRON   Frontone          0.58 123   P     Pg     03 01 17.8 +0.4
ATTE   AVT- Monte Tez    0.67 161   P     Pg     03 01 19.3 +0.2
ATTE                                S     Sb     03 01 29.4 -0.2
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      IDC 12 03:34:06.8±1.3,44°.21N×10°.07E,h0km,mb3.5/3,
             mb1 3.6/8,mb1mx3.5/42,mbtmp3.5/8,ML3.6/5,MS2.6/3,
             Ms1 2.6/3,ms1mx2.2/35,Error ellipse: s-maj=34.0km
             s-min=14.7km az=115.0
    ISCJB 12 03:34:07.0±0.2,44°.20N±0°.01×10°.09E±0°.01,h17km±1km,
             mb3.6/3,Error ellipse: s-maj=2.3km s-min=1.5km az=4.8
      STR 12 03:34:06.8±1.1,44°N±5°×1°0E±°,h0km,MLv3.5/6
      ROM 12 03:34:06.9±0.1,44°.202N±0°.006×10°.107E±0°.007,
             h10km,ML3.5/88,Error ellipse: s-maj=0.7km s-min=0.5km
             az=198.0
      GEN 12 03:34:07.4,44°.22N×10°.12E,h7km±1km,Ml3.4
      LDG 12 03:34:08.3±0.1,44°.14N×10°.14E,h2km,Ml3.7/29
      PRU 12 03:34:08.8±0.0,44°.21N×10°.35E,h0km
      BEO 12 03:34:09.3±0.7,44°.38N×10°.16E,h1km±2km,ML3.6/12
      ISC 12 03:34:07.3±0.7,44°.20N±0°.02×10°.10E±0°.02,h10km±4km,
             n254,σ1§33/298,mb3.6/3,12C-4D,Northern Italy
Code   Station Name        Δ°  AZ°    Phase ID         Time      Res
                                    Op    ISC      h  m  s     ISC
FIVI   Fivizzano         0.05  28   P     Pg     03 34 08.7 -0.6
FIVI                                S     Sg     03 34 09.9 -0.8
EQUI   Equi              0.05 127   P     Pg     03 34 09.3 +0.1
EQUI                                S     Sg     03 34 10.8  0.0
EQUI   Equi              0.05 127 i P     Pg     03 34 09.3 +0.1
EQUI                                S     Sg     03 34 10.7  0.0
EQUI                                AML   AML
EQUI                                AML   AML
       comp=N,85700µm,1.4s
T0912  Minucciano (LU    0.09 109   P     Pg     03 34 09.8 +0.1
T0912                               S     Sg     03 34 11.5  0.0
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
T0912                               AML   AML
FOSD   Fosdinovo         0.12 219   P     Pg     03 34 10.7 +0.7
FOSD                                S     Sg     03 34 13.4 +1.4
VLC    Villacollemand    0.21 100   P     Pg     03 34 11.7  0.0
VLC                                 S     Sg     03 34 14.9 +0.2
VLC                                 AML   AML
       comp=E,10570µm,0.7s
VLC                                 AML   AML
       comp=N,9190µm,0.6s
VLC                                 AML   AML
       comp=E,10700µm,0.6s
VLC                                 AML   AML
       comp=N,9010µm,0.6s
VLC                                 AML   AML
       comp=E,10570µm,0.7s
VLC                                 AML   AML
       comp=N,9190µm,0.6s
VLC                                 AML   AML
       comp=E,10705µm,0.6s
VLC                                 AML   AML
       comp=N,9010µm,0.6s
VLC                                 AML   AML
       comp=E,10565µm,0.7s
VLC                                 AML   AML
       comp=N,9195µm,0.6s
VLC                                 AML   AML
       comp=E,10700µm,0.6s
VLC                                 AML   AML
       comp=N,9010µm,0.6s
VLC                                 AML   AML
       comp=N,9010µm,0.6s
VLC                                 AML   AML
       comp=N,9190µm,0.6s
VLC                                 AML   AML
       comp=E,10705µm,0.6s
VLC                                 AML   AML
       comp=E,10570µm,0.7s
VLC                                 AML   AML
       comp=N,9010µm,0.6s
VLC                                 AML   AML
       comp=N,9195µm,0.6s
VLC                                 AML   AML
       comp=E,10700µm,0.6s
VLC                                 AML   AML
       comp=E,10565µm,0.7s
PLMA   Palmaria, Port    0.23 230   P     Pg     03 34 12.6 +0.7
PLMA                                S     Sg     03 34 16.3 +1.2
PLMA                                AML   AML
       comp=E,14500µm,0.5s
PLMA                                AML   AML
       comp=N,12200µm,0.2s
PLMA                                AML   AML
       comp=E,14500µm,0.5s
PLMA                                AML   AML
       comp=N,12200µm,0.2s
PLMA                                AML   AML
       comp=E,14500µm,0.5s
PLMA                                AML   AML
       comp=N,12200µm,0.2s
PLMA                                AML   AML
       comp=N,12200µm,0.2s
PLMA                                AML   AML
       comp=E,14500µm,0.5s
PLMA                                AML   AML
       comp=N,12200µm,0.2s
PLMA                                AML   AML
       comp=E,14500µm,0.5s
CODM   Codolo            0.26 318   P     Pg     03 34 12.3 -0.3
CODM                                S     Sg     03 34 16.5 +0.3
GRAM   Graiana           0.29 356   P     Pg     03 34 12.9 -0.3
GRAM                                S     Sg     03 34 17.1 -0.1
GRAM   Graiana           0.29 356 i P     Pg     03 34 12.9 -0.3
GRAM                                S     Sg     03 34 17.1 -0.1
GRAM                                AML   AML
       comp=E,58550µm,0.2s
GRAM                                AML   AML
       comp=N,62400µm,1.0s
GRAM                                AML   AML
       comp=E,58550µm,0.2s
GRAM                                AML   AML
       comp=N,62400µm,1.0s
GRAM                                AML   AML
       comp=E,58550µm,0.2s
GRAM                                AML   AML
       comp=N,62400µm,1.0s
GRAM                                AML   AML
       comp=E,58550µm,0.2s
GRAM                                AML   AML
       comp=N,62400µm,1.0s
GRAM                                AML   AML
       comp=E,58550µm,0.2s
GRAM                                AML   AML
       comp=N,62400µm,1.0s
ERBM   Eremo             0.32  46 i P     Pg     03 34 13.5 -0.2
ERBM                                S     Sg     03 34 18.3 +0.4
ERBM                                AML   AML
       comp=E,25850µm,0.9s
ERBM                                AML   AML
       comp=N,26600µm,1.2s
ERBM                                AML   AML
       comp=E,25850µm,0.9s
ERBM                                AML   AML
       comp=N,26600µm,1.2s
ERBM                                AML   AML
       comp=E,25850µm,0.9s
ERBM                                AML   AML
       comp=N,26600µm,1.2s
ERBM                                AML   AML
       comp=E,25850µm,0.9s
ERBM                                AML   AML
       comp=N,26600µm,1.2s
ERBM                                AML   AML
       comp=E,25850µm,0.9s
ERBM                                AML   AML
       comp=N,26600µm,1.2s
CARD   Cardoso           0.33 121   P     Pg     03 34 13.9 +0.1
CARD                                S     Sg     03 34 18.8 +0.7
CARD   Cardoso           0.33 121   P     Pg     03 34 13.8 +0.1
CARD                                S     Sg     03 34 18.5 +0.4
CARD                                AML   AML
       comp=E,18700µm,0.7s
CARD                                AML   AML
       comp=N,12300µm,1.2s
CARD                                AML   AML
       comp=E,18700µm,0.7s
CARD                                AML   AML
       comp=N,12300µm,1.2s
CARD                                AML   AML
       comp=E,18700µm,0.7s
CARD                                AML   AML
       comp=N,12300µm,1.2s
CARD                                AML   AML
       comp=E,18700µm,0.7s
CARD                                AML   AML
       comp=N,12300µm,1.2s
CARD                                AML   AML
       comp=E,18700µm,0.7s
CARD                                AML   AML
       comp=N,12300µm,1.2s
BDI    Bagni Di Lucca    0.39 110   P     Pg     03 34 14.6 -0.2
BDI                                 S     Sg     03 34 20.4 +0.4
BDI                                 AML   AML
       comp=E,6465µm,1.6s
BDI                                 AML   AML
       comp=N,5490µm,0.5s
BDI                                 AML   AML
       comp=E,6510µm,0.2s
BDI                                 AML   AML
       comp=N,5745µm,0.6s
BDI                                 AML   AML
       comp=E,6465µm,1.6s
BDI                                 AML   AML
       comp=N,5490µm,0.5s
BDI                                 AML   AML
       comp=E,6510µm,0.2s
BDI                                 AML   AML
       comp=N,5745µm,0.6s
BDI                                 AML   AML
       comp=N,5745µm,0.6s
BDI                                 AML   AML
       comp=E,6510µm,0.2s
BDI                                 AML   AML
       comp=N,5490µm,0.5s
BDI                                 AML   AML
       comp=E,6465µm,1.6s
BDI                                 AML   AML
       comp=N,5490µm,0.5s
BDI                                 AML   AML
       comp=E,6465µm,1.6s
BDI                                 AML   AML
       comp=N,5745µm,0.6s
BDI                                 AML   AML
       comp=E,6510µm,0.2s
MAIM   Mastiano          0.40 135   P     Pg     03 34 15.3 +0.2
MAIM                                S     Sg     03 34 21.4 +0.9
MAIM   Mastiano          0.40 135   P     Pg     03 34 15.3 +0.2
MAIM                                S     Sg     03 34 20.9 +0.5
MAIM                                AML   AML
       comp=E,12215µm,0.4s
MAIM                                AML   AML
       comp=N,11050µm,0.4s
MAIM                                AML   AML
       comp=E,12215µm,0.4s
MAIM                                AML   AML
       comp=N,11050µm,0.4s
MAIM                                AML   AML
       comp=N,11050µm,0.4s
MAIM                                AML   AML
       comp=E,12215µm,0.4s
MAIM                                AML   AML
       comp=N,11050µm,0.4s
MAIM                                AML   AML
       comp=E,12215µm,0.4s
NEVI   Neviano degli     0.42  22   P     Pg     03 34 15.8 +0.3
MSSA   Maissana          0.43 286   P     Pg     03 34 15.8 +0.1
MSSA                                AML   AML
       comp=E,3675µm,0.7s
MSSA                                AML   AML
       comp=N,3530µm,0.9s
MSSA                                AML   AML
       comp=E,3675µm,0.7s
MSSA                                AML   AML
       comp=N,3530µm,0.9s
MSSA                                AML   AML
       comp=N,3530µm,0.9s
MSSA                                AML   AML
       comp=E,3675µm,0.7s
MSSA                                AML   AML
       comp=N,3530µm,0.9s
MSSA                                AML   AML
       comp=E,3675µm,0.7s
POPM   Popiglio          0.50 108   P     Pg     03 34 16.7 -0.3
POPM                                S     Sg     03 34 24.3 +0.8
POPM   Popiglio          0.50 108   P     Pg     03 34 16.7 -0.3
POPM                                S     Sg     03 34 24.2 +0.6
POPM                                AML   AML
       comp=E,12400µm,0.4s
POPM                                AML   AML
       comp=N,17200µm,1.3s
POPM                                AML   AML
       comp=E,12400µm,0.4s
POPM                                AML   AML
       comp=N,17200µm,1.3s
POPM                                AML   AML
       comp=E,12400µm,0.4s
POPM                                AML   AML
       comp=N,17200µm,1.3s
POPM                                AML   AML
       comp=N,17200µm,1.3s
POPM                                AML   AML
       comp=E,12400µm,0.4s
POPM                                AML   AML
       comp=N,17200µm,1.3s
POPM                                AML   AML
       comp=E,12400µm,0.4s
PRMA   PARMA             0.59  15   P     Pb     03 34 19.5 -0.2
PRMA                                AML   AML
       comp=E,9435µm,0.7s
PRMA                                AML   AML
       comp=N,11170µm,0.6s
PRMA                                AML   AML
       comp=E,9435µm,0.7s
PRMA                                AML   AML
       comp=N,11170µm,0.6s
PRMA                                AML   AML
       comp=N,11170µm,0.6s
PRMA                                AML   AML
       comp=E,9435µm,0.7s
PRMA                                AML   AML
       comp=N,11170µm,0.6s
PRMA                                AML   AML
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	comp=E,9435µm,0.7s						
ZCCA	**Zocca**	**0.65**	**76**	*e*P	**Pb**	**03 34 20.8**	**0.0**
ZCCA				AML	AML		
	comp=E,3555µm,0.6s						
ZCCA				AML	AML		
	comp=N,6040µm,0.5s						
ZCCA				AML	AML		
	comp=E,4165µm,0.5s						
ZCCA				AML	AML		
	comp=N,6050µm,0.5s						
ZCCA				AML	AML		
	comp=E,3555µm,0.6s						
ZCCA				AML	AML		
	comp=N,6045µm,0.5s						
ZCCA				AML	AML		
	comp=E,4165µm,0.5s						
ZCCA				AML	AML		
	comp=N,6050µm,0.5s						
ZCCA				AML	AML		
	comp=E,3555µm,0.6s						
ZCCA				AML	AML		
	comp=N,6050µm,0.5s						
ZCCA				AML	AML		
	comp=N,6040µm,0.5s						
ZCCA				AML	AML		
	comp=E,4165µm,0.5s						
ZCCA				AML	AML		
	comp=E,3555µm,0.6s						
ZCCA				AML	AML		
	comp=N,6050µm,0.5s						
ZCCA				AML	AML		
	comp=N,6045µm,0.5s						
ZCCA				AML	AML		
	comp=E,4165µm,0.5s						
MTCR	**Monte La Croce**	**0.67**	**104**	P	**Pg**	**03 34 20.1**	**-0.2**
MTCR				S	**Sb**	**03 34 30.1**	**-0.5**
MTCR				AML	AML		
	comp=E,4855µm,0.7s						
MTCR				AML	AML		
	comp=N,6835µm,0.3s						
MTCR				AML	AML		
	comp=E,4860µm,0.7s						
MTCR				AML	AML		
	comp=N,6835µm,0.3s						
MTCR				AML	AML		
	comp=E,4855µm,0.7s						
MTCR				AML	AML		
	comp=N,6835µm,0.3s						
MTCR				AML	AML		
	comp=E,4860µm,0.7s						
MTCR				AML	AML		
	comp=N,6835µm,0.3s						
GORR	**Gorreto**	**0.71**	**306**	P	**Pg**	**03 34 20.9**	**0.0**
GORR	**Gorreto**	**0.71**	**306**	P	**Pg**	**03 34 20.9**	**0.0**
GORR				AML	AML		
	comp=E,2855µm,0.4s						
GORR				AML	AML		
	comp=N,3145µm,1.3s						
GORR				AML	AML		
	comp=E,2855µm,0.4s						
GORR				AML	AML		
	comp=N,3145µm,1.3s						
GORR				AML	AML		
	comp=N,3145µm,1.3s						
GORR				AML	AML		
	comp=E,2855µm,0.4s						
GORR				AML	AML		
	comp=N,3145µm,1.3s						
GORR				AML	AML		
	comp=E,2855µm,0.4s						
BOB	**Bobbio (Coli)**	**0.73**	**321**	P	**Pg**	**03 34 21.3**	**-0.2**
BOB				AML	AML		
	comp=E,3885µm,0.6s						
BOB				AML	AML		
	comp=N,2840µm,0.6s						
BOB				AML	AML		
	comp=E,4330µm,0.6s						
BOB				AML	AML		
	comp=N,3395µm,0.6s						
BOB				AML	AML		
	comp=N,3395µm,0.6s						
BOB				AML	AML		
	comp=N,2840µm,0.6s						
BOB				AML	AML		
	comp=E,4330µm,0.6s						
BOB				AML	AML		
	comp=E,3885µm,0.6s						
NOVE	**Novellara**	**0.75**	**36**	P	**Pb**	**03 34 22.6**	**+0.2**
NOVE				AML	AML		
	comp=E,6840µm,0.7s						
NOVE				AML	AML		
	comp=N,9750µm,0.7s						
NOVE				AML	AML		
	comp=E,6730µm,1.3s						
NOVE				AML	AML		
	comp=N,9870µm,0.7s						
NOVE				AML	AML		
	comp=E,6840µm,0.7s						
NOVE				AML	AML		
	comp=N,9750µm,0.7s						
NOVE				AML	AML		
	comp=E,6730µm,1.3s						
NOVE				AML	AML		
	comp=N,9870µm,0.7s						
GROG	**Isola di Gorgo**	**0.79**	**191**	*e*P	**Pb**	**03 34 22.7**	**-0.3**
GROG				AML	AML		
	comp=E,5515µm,1.1s						
GROG				AML	AML		
	comp=N,3780µm,0.3s						
GROG				AML	AML		
	comp=E,5515µm,1.1s						
GROG				AML	AML		
	comp=N,3780µm,0.3s						
GROG				AML	AML		
	comp=N,3780µm,0.3s						
GROG				AML	AML		
	comp=E,5515µm,1.1s						
GROG				AML	AML		
	comp=N,3780µm,0.3s						
GROG				AML	AML		
	comp=E,5515µm,1.1s						
SEI	**Scarperia**	**0.92**	**99**	P	**Pg**	**03 34 24.8**	**-0.1**
SEI				AML	AML		
	comp=E,5055µm,1.5s						
SEI				AML	AML		
	comp=N,8470µm,1.4s						
SEI				AML	AML		
	comp=E,5055µm,1.5s						
SEI				AML	AML		
	comp=N,8465µm,1.4s						
SEI				AML	AML		
	comp=E,5055µm,1.5s						
SEI				AML	AML		
	comp=N,8470µm,1.4s						
SEI				AML	AML		
	comp=E,5055µm,1.5s						
SEI				AML	AML		
	comp=N,8465µm,1.4s						
BRIS	**BRISIGHELLA**	**1.02**	**92**	AML	AML		
	comp=E,2900µm,0.6s						
BRIS				AML	AML		
	comp=N,3420µm,0.4s						
BRIS				AML	AML		
	comp=E,2900µm,0.6s						
BRIS				AML	AML		
	comp=N,3420µm,0.4s						
BRIS				AML	AML		
	comp=N,3420µm,0.4s						
BRIS				AML	AML		
	comp=E,2900µm,0.6s						
BRIS				AML	AML		
	comp=N,3420µm,0.4s						
BRIS				AML	AML		
	comp=E,2900µm,0.6s						
OSSC	**Osservatorio P**	**1.07**	**129**	P	**Pg**	**03 34 27.8**	**0.0**
OSSC				AML	AML		
	comp=E,4040µm,0.5s						
OSSC				AML	AML		
	comp=N,3350µm,0.4s						
OSSC				AML	AML		
	comp=E,3905µm,0.5s						
OSSC				AML	AML		
	comp=N,3300µm,0.4s						
OSSC				AML	AML		
	comp=E,4035µm,0.5s						
OSSC				AML	AML		
	comp=N,3350µm,0.4s						
OSSC				AML	AML		
	comp=E,3905µm,0.5s						
OSSC				AML	AML		
	comp=N,3300µm,0.4s						
OSSC				AML	AML		
	comp=E,4040µm,0.5s						
OSSC				AML	AML		
	comp=N,3350µm,0.4s						
OSSC				AML	AML		
	comp=N,3300µm,0.4s						
OSSC				AML	AML		
	comp=E,3905µm,0.5s						
OSSC				AML	AML		
	comp=E,4035µm,0.5s						
OSSC				AML	AML		
	comp=N,3300µm,0.4s						
OSSC				AML	AML		
	comp=N,3350µm,0.4s						
OSSC				AML	AML		
	comp=E,3905µm,0.5s						
RUFI	**Rufina**	**1.08**	**109**	P	**Pg**	**03 34 27.5**	**-0.5**
RUFI				AML	AML		
	comp=E,1695µm,0.7s						
RUFI				AML	AML		
	comp=N,1460µm,0.6s						
RUFI				AML	AML		
	comp=E,1695µm,0.7s						
RUFI				AML	AML		
	comp=N,1460µm,0.6s						
FIU	**Minerbio Fiu**	**1.09**	**66**	AML	AML		
	comp=E,12350µm,1.5s						
FIU				AML	AML		
	comp=N,10190µm,0.6s						
FIU				AML	AML		
	comp=E,12350µm,1.5s						
FIU				AML	AML		
	comp=N,10170µm,0.6s						
FIU				AML	AML		
	comp=N,10190µm,0.6s						
FIU				AML	AML		
	comp=E,12350µm,1.5s						
FIU				AML	AML		
	comp=N,10170µm,0.6s						
FIU				AML	AML		
	comp=E,12350µm,1.5s						
CSNT	**Castellina Chi**	**1.13**	**130**	P	**Pb**	**03 34 28.4**	**-0.5**
CSNT				AML	AML		
	comp=E,1940µm,1.6s						
CSNT				AML	AML		
	comp=N,1935µm,0.4s						
CSNT				AML	AML		
	comp=E,1940µm,1.6s						
CSNT				AML	AML		
	comp=N,1935µm,0.4s						
CSNT				AML	AML		
	comp=N,1935µm,0.4s						
CSNT				AML	AML		
	comp=E,1940µm,1.6s						
CSNT				AML	AML		
	comp=N,1935µm,0.4s						
CSNT				AML	AML		
	comp=E,1940µm,1.6s						
PCP	**Piancastagn**	**1.16**	**288**	P	**Pb**	**03 34 28.8**	**-0.8**
PCP				AML	AML		
	comp=E,962µm,0.4s						
PCP				AML	AML		
	comp=N,986µm,0.4s						
PCP				AML	AML		
	comp=E,962µm,0.4s						
PCP				AML	AML		
	comp=N,986µm,0.4s						
PCP				AML	AML		
	comp=E,962µm,0.4s						
PCP				AML	AML		
	comp=N,986µm,0.4s						
PCP				AML	AML		
	comp=E,962µm,0.4s						
PCP				AML	AML		
	comp=N,986µm,0.4s						
SERM	**Sermide**	**1.18**	**46**	AML	AML		
	comp=E,4750µm,0.6s						
SERM				AML	AML		
	comp=E,4750µm,0.6s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,8675µm,1.0s						
SERM				AML	AML		
	comp=N,4925µm,0.7s						
SERM				AML	AML		
	comp=E,4750µm,0.6s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,8675µm,1.0s						
SERM				AML	AML		
	comp=N,4935µm,0.7s						
SERM				AML	AML		
	comp=E,4750µm,0.6s						
SERM				AML	AML		
	comp=E,8675µm,1.0s						
SERM				AML	AML		
SERM				AML	AML		
	comp=N,4925µm,0.7s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,8675µm,1.0s						
SERM				AML	AML		
	comp=N,4935µm,0.7s						
TRIF	**Trifonti**	**1.23**	**151**	P	**Pn**	**03 34 30.6**	**0.0**
TRIF				AML	AML		
	comp=E,970µm,0.7s						
TRIF				AML	AML		
	comp=N,1345µm,0.7s						
TRIF				AML	AML		
	comp=E,970µm,0.7s						
TRIF				AML	AML		
	comp=N,1340µm,0.7s						
TRIF				AML	AML		
	comp=N,1345µm,0.7s						
TRIF				AML	AML		
	comp=E,970µm,0.7s						
TRIF				AML	AML		
	comp=E,970µm,0.7s						
TRIF				AML	AML		
	comp=N,1340µm,0.7s						
FROS	**Frosini**	**1.25**	**142**	P	**Pn**	**03 34 30.1**	**-0.8**
FROS				AML	AML		
	comp=E,2070µm,0.3s						
FROS				AML	AML		
	comp=N,2665µm,0.7s						
FROS				AML	AML		
	comp=E,2070µm,0.3s						
FROS				AML	AML		
	comp=N,2665µm,0.7s						
FROS				AML	AML		
	comp=E,2070µm,0.3s						
FROS				AML	AML		
	comp=N,2665µm,0.7s						
FROS				AML	AML		
	comp=N,2665µm,0.7s						
FROS				AML	AML		
	comp=E,2070µm,0.3s						
FINB	**Finale Ligure**	**1.27**	**270**	P	**Pn**	**03 34 30.1**	**-1.0**
FINB				AML	AML		
	comp=E,716µm,0.3s						
FINB				AML	AML		
	comp=N,1032µm,0.3s						
FINB				AML	AML		
	comp=E,716µm,0.3s						
FINB				AML	AML		
	comp=N,1032µm,0.3s						
FINB				AML	AML		
	comp=E,716µm,0.3s						
FINB				AML	AML		
	comp=N,1032µm,0.3s						
FINB				AML	AML		
	comp=E,716µm,0.3s						
FINB				AML	AML		
	comp=N,1032µm,0.3s						
ASQU	**Asqua**	**1.29**	**108**	P	**Pn**	**03 34 30.0**	**-1.3**
ASQU				AML	AML		
	comp=E,1025µm,0.6s						
ASQU				AML	AML		
	comp=N,940µm,0.8s						
ASQU				AML	AML		
	comp=N,940µm,0.8s						
ASQU				AML	AML		
	comp=E,1025µm,0.6s						
SFI	**Santa Sofia**	**1.30**	**102**	P	**Pn**	**03 34 30.7**	**-0.8**
SFI				AML	AML		
	comp=E,1305µm,1.2s						
SFI				AML	AML		
	comp=N,1555µm,1.2s						
SFI				AML	AML		
	comp=E,1695µm,1.3s						
SFI				AML	AML		
	comp=N,1325µm,0.6s						
SFI				AML	AML		
	comp=E,1305µm,1.2s						
SFI				AML	AML		
	comp=N,1555µm,1.2s						
SFI				AML	AML		
	comp=E,1695µm,1.3s						
SFI				AML	AML		
	comp=N,1325µm,0.6s						
ROTM	**Rocchetta Tana**	**1.41**	**298**	AML	AML		
	comp=N,5490µm,0.5s						
ROTM				AML	AML		
	comp=E,5160µm,1.4s						
ROTM				AML	AML		
	comp=N,5490µm,0.5s						
ROTM				AML	AML		
	comp=E,5160µm,1.4s						
RORO	**Rocca Rossa**	**1.46**	**267**	P	**Pn**	**03 34 32.9**	**-0.9**
RORO				AML	AML		
	comp=E,572µm,0.5s						
RORO				AML	AML		
	comp=N,550µm,0.5s						
RORO				AML	AML		
	comp=E,572µm,0.5s						
RORO				AML	AML		
	comp=N,550µm,0.5s						
CASP	**Castiglione de**	**1.51**	**158**	P	**Pn**	**03 34 33.7**	**-0.7**
CASP				AML	AML		
	comp=E,660µm,0.6s						
CASP				AML	AML		
	comp=N,641µm,1.1s						
CASP				AML	AML		
	comp=N,641µm,1.1s						
CASP				AML	AML		
	comp=E,660µm,0.6s						
BALD	**Monte Baldo**	**1.57**	**19**⇑	*e*Pg	**Pn**	**03 34 35.9**	**+0.5**
BALD				*e*Sg	**Sg**	**03 34 57.9**	**+0.1**
MDI	**Monti di Nese**	**1.60**	**350**	P	**Pn**	**03 34 36.4**	**+0.6**
MDI				AML	AML		
	comp=E,1250µm,0.4s						
MDI				AML	AML		
	comp=N,1170µm,0.7s						
MDI				AML	AML		
	comp=E,1285µm,1.0s						
MDI				AML	AML		
	comp=N,1240µm,0.4s						
MDI				AML	AML		
	comp=E,1285µm,1.0s						
MDI				AML	AML		
	comp=E,1250µm,0.4s						
MDI				AML	AML		
	comp=N,1170µm,0.7s						
MDI				AML	AML		
	comp=N,1240µm,0.4s						
ROVR	**Rover Verones**	**1.61**	**25**	P	**Pn**	**03 34 35.7**	**-0.1**
ROVR				AML	AML		
	comp=E,1700µm,0.4s						
ROVR				AML	AML		
	comp=N,2825µm,0.7s						
ROVR				AML	AML		
	comp=E,663µm,0.4s						
ROVR				AML	AML		
	comp=N,1108µm,0.7s						
ROVR				AML	AML		
	comp=N,2825µm,0.7s						
ROVR				AML	AML		
	comp=E,1700µm,0.4s						
ROVR				AML	AML		
	comp=E,663µm,0.4s						
ROVR				AML	AML		
	comp=N,1108µm,0.7s						
CAFI	**Castiglion Fio**	**1.61**	**122**	P	**Pn**	**03 34 35.4**	**-0.4**
CAFI				AML	AML		
	comp=E,426µm,0.5s						
CAFI				AML	AML		
	comp=N,456µm,0.5s						
CAFI				AML	AML		
	comp=E,426µm,0.5s						
CAFI				AML	AML		
	comp=N,456µm,0.5s						
IMI	**Imperia**	**1.61**	**261**	P	**Pn**	**03 34 34.9**	**-1.0**
IMI				AML	AML		
	comp=E,816µm,0.6s						
IMI				AML	AML		
	comp=N,1144µm,0.5s						
IMI				AML	AML		
	comp=N,1144µm,0.5s						
IMI				AML	AML		
	comp=E,816µm,0.6s						
TEOL	**Teolo**	**1.61**	**43**⇓	*e*Pg	**Pn**	**03 34 36.3**	**+0.4**
TEOL				*e*Sg	**Sg**	**03 34 58.6**	**-0.5**
GBOS	**Grotte di Boss**	**1.62**	**272**	AML	AML		
	comp=E,324µm,0.5s						
GBOS				AML	AML		
	comp=N,404µm,0.8s						
GBOS				AML	AML		
	comp=E,324µm,0.5s						
GBOS				AML	AML		
	comp=N,404µm,0.8s						
MAGA	**Magasa**	**1.62**	**13**	P	**Pn**	**03 34 36.2**	**+0.1**
MAGA				AML	AML		
	comp=E,4665µm,0.5s						
MAGA				AML	AML		
	comp=N,2475µm,0.5s						
MAGA				AML	AML		
	comp=N,2475µm,0.5s						
MAGA				AML	AML		
	comp=E,4665µm,0.5s						
PARC	**Parchiule**	**1.64**	**109**	P	**Pn**	**03 34 35.4**	**-0.8**
PARC				AML	AML		
	comp=E,502µm,0.4s						
PARC				AML	AML		
	comp=N,636µm,0.5s						
PARC				AML	AML		
	comp=E,502µm,0.4s						
PARC				AML	AML		
	comp=N,636µm,0.5s						
MARN	**Marana (Italy)**	**1.64**	**28**	*e*Pg	**Pn**	**03 34 36.5**	**+0.2**
MARN				*e*Sg	**Sg**	**03 34 59.5**	**-0.6**
MGRO	**Montegrosso**	**1.66**	**265**	P	**Pn**	**03 34 35.8**	**-0.8**
MGRO				AML	AML		
	comp=E,760µm,0.4s						
MGRO				AML	AML		
	comp=N,684µm,0.5s						
MGRO				AML	AML		
	comp=N,684µm,0.5s						
MGRO				AML	AML		
	comp=E,760µm,0.4s						
NEGI	**Seborga**	**1.76**	**259**	P	**Pn**	**03 34 37.0**	**-0.9**
NEGI				AML	AML		
	comp=E,618µm,0.5s						
NEGI				AML	AML		
	comp=N,1422µm,0.3s						
NEGI				AML	AML		
	comp=E,618µm,0.5s						
NEGI				AML	AML		
	comp=N,1422µm,0.3s						
MONC	**Moncucco Torin**	**1.78**	**300**	AML	AML		
	comp=E,1410µm,0.4s						
MONC				AML	AML		
	comp=E,1410µm,0.4s						
MONC				AML	AML		
	comp=N,1630µm,1.2s						
MONC				AML	AML		
	comp=N,1630µm,1.2s						
ATMI	**Monte Miggiano**	**1.79**	**118**	AML	AML		
	comp=N,1175µm,0.4s						
ATMI				AML	AML		
	comp=E,961µm,0.4s						
ATMI				AML	AML		
	comp=N,1175µm,0.4s						
ATMI				AML	AML		
	comp=E,961µm,0.4s						
RNI	**Roncone**	**1.82**	**12**	*e*Pn	**Pn**	**03 34 39.3**	**+0.4**
ATPI	**Pietralunga -**	**1.83**	**113**	AML	AML		
	comp=E,492µm,0.6s						
ATPI				AML	AML		
	comp=N,438µm,1.0s						
ATPI				AML	AML		
	comp=E,492µm,0.6s						
ATPI				AML	AML		
	comp=N,438µm,1.0s						

PGF	**Pioggiola**	1.83	206	*e*Pn	Pn	03 34 37.9	-1.0
	SNR=1.0						
PGF				*e*Sn	Sn	03 35 00.0	-2.2
	comp=N,231nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	1.83	206	Pn	Pn	03 34 38.4	-0.5
PGF				Sg	Sn	03 35 00.8	-1.5
SAOF	**Saorge**	1.84	264	Pn	Pn	03 34 38.6	-0.4
SAOF				Sg	Sn	03 35 01.5	-0.9
SAOF	**Saorge**	1.84	264	AML	AML		
	comp=E,612µm,0.6s						
SAOF				AML	AML		
	comp=E,612µm,0.6s						
SAOF				AML	AML		
	comp=N,1004µm,0.9s						
SAOF				AML	AML		
	comp=N,1004µm,0.9s						
DOSS	**Dosso del Somm**	1.85	24	*e*Pn	Pn	03 34 39.4	+0.1
ATVO	**AVT- Monte Val**	1.86	115	AML	AML		
	comp=E,658µm,0.5s						
ATVO				AML	AML		
	comp=N,500µm,0.8s						
ATVO				AML	AML		
	comp=N,500µm,0.8s						
ATVO				AML	AML		
	comp=E,658µm,0.5s						
MUGIO	**Muggio**	1.88	337	AML	AML		
	comp=E,788µm,0.5s						
MUGIO				AML	AML		
	comp=N,558µm,0.4s						
MUGIO				AML	AML		
	comp=E,788µm,0.5s						
MUGIO				AML	AML		
	comp=N,558µm,0.4s						
MABI	**Malga Bissina**	1.88	9	P	Pn	03 34 40.2	+0.5
MABI				AML	AML		
	comp=E,440µm,1.0s						
MABI				AML	AML		
	comp=N,294µm,1.4s						
MABI				AML	AML		
	comp=N,294µm,1.4s						
MABI				AML	AML		
	comp=E,440µm,1.0s						
PIEI	**Pieia**	1.88	110	P	Pn	03 34 38.8	-0.8
PIEI				AML	AML		
	comp=E,264µm,0.4s						
PIEI				AML	AML		
	comp=N,238µm,0.4s						
PIEI				AML	AML		
	comp=N,238µm,0.4s						
PIEI				AML	AML		
	comp=E,264µm,0.4s						
ATTE	**AVT- Monte Tez**	1.92	121	AML	AML		
	comp=E,473µm,0.7s						
ATTE				AML	AML		
	comp=N,418µm,0.5s						
ATTE				AML	AML		
	comp=N,418µm,0.5s						
ATTE				AML	AML		
	comp=E,473µm,0.7s						
MAON	**Monte Argentar**	1.92	157	P	Pn	03 34 39.7	-0.4
MAON				AML	AML		
	comp=E,272µm,0.7s						
MAON				AML	AML		
	comp=N,293µm,0.9s						
MAON				AML	AML		
	comp=N,293µm,0.9s						
MAON				AML	AML		
	comp=E,272µm,0.7s						
ENR	**Entracque**	1.93	272	AML	AML		
	comp=N,445µm,0.8s						
ENR				AML	AML		
	comp=E,404µm,0.7s						
ENR				AML	AML		
	comp=N,445µm,0.8s						
ENR				AML	AML		
	comp=E,404µm,0.7s						
SBF	**Sospel**	1.95	261	*e*Pn	Pn	03 34 40.3	-0.2
	SNR=1.0						
SBF				*e*Sn	Sn	03 35 04.9	-0.2
	comp=E,213nm,0.3s,SNR=1.0						
GAGG	**Gaggia**	1.98	18	*e*Pn	Pn	03 34 41.3	+0.3
MON	**Monaco**	1.98	257	Pn	Pn	03 34 41.6	+0.7
STV	**Sant Anna di V**	1.99	272	P	Pn	03 34 40.9	-0.3
STV				AML	AML		
	comp=E,266µm,0.5s						
STV				AML	AML		
	comp=N,372µm,0.9s						
STV				AML	AML		
	comp=N,372µm,0.9s						
STV				AML	AML		
	comp=E,266µm,0.5s						
MURB	**Monte Urbino**	1.99	117	AML	AML		
	comp=N,1525µm,0.4s						
MURB				AML	AML		
	comp=E,1105µm,0.3s						
MURB				AML	AML		
	comp=E,1195µm,0.3s						
MURB				AML	AML		
	comp=N,1570µm,0.3s						
MURB				AML	AML		
	comp=E,1105µm,0.3s						
MURB				AML	AML		
	comp=E,1195µm,0.3s						
MURB				AML	AML		
	comp=N,1525µm,0.4s						
MURB				AML	AML		
	comp=N,1570µm,0.3s						
ESCA	**l'Escarene**	2.00	260	Pn	Pn	03 34 41.0	-0.1
MPAG	**Monte Paganucc**	2.01	106	AML	AML		
	comp=N,515µm,1.2s						
MPAG				AML	AML		
	comp=E,346µm,0.5s						
MPAG				AML	AML		
	comp=E,346µm,0.5s						
MPAG				AML	AML		
	comp=N,515µm,1.2s						
FRON	**Frontone**	2.02	109	P	Pn	03 34 40.9	-0.6
FRON				AML	AML		
	comp=E,349µm,0.9s						
FRON				AML	AML		
	comp=N,461µm,1.1s						
FRON				AML	AML		
	comp=E,349µm,0.9s						
FRON				AML	AML		
	comp=N,461µm,1.1s						
DOI	**San Damiano**	2.07	280	AML	AML		
	comp=N,476µm,0.5s						
DOI				AML	AML		
	comp=E,710µm,0.4s						
DOI				AML	AML		
	comp=N,476µm,0.5s						
DOI				AML	AML		
	comp=E,710µm,0.4s						
CGRP	**Cima Grappa**	2.07	35	AML	AML		
	comp=E,1050µm,1.6s						
CGRP				AML	AML		
	comp=E,1050µm,1.6s						
CGRP				AML	AML		
	comp=N,1405µm,1.5s						
CGRP				AML	AML		
	comp=N,1405µm,1.5s						
TRAV	**Traversella**	2.13	309	AML	AML		
	comp=E,504µm,0.6s						
TRAV				AML	AML		
	comp=N,418µm,0.5s						
TRAV				AML	AML		
	comp=N,418µm,0.5s						
TRAV				AML	AML		
	comp=E,504µm,0.6s						
CTI	**Castel Tesino**	2.15	30	AML	AML		
	comp=E,1156µm,0.8s						
CTI				AML	AML		
	comp=E,1156µm,0.8s						
CTI				AML	AML		
	comp=N,939µm,1.1s						
CTI				AML	AML		
	comp=N,939µm,1.1s						
PZZ	**Stroppo**	2.16	279	P	Pn	03 34 42.7	-0.8
PZZ				AML	AML		
	comp=E,371µm,0.9s						
PZZ				AML	AML		
	comp=N,538µm,0.8s						
PZZ				AML	AML		
	comp=N,538µm,0.8s						
PZZ				AML	AML		
	comp=E,371µm,0.9s						
ARVD	**Arcevia**	2.17	108	AML	AML		
	comp=E,296µm,1.0s						
ARVD				AML	AML		
	comp=E,296µm,1.0s						
ARVD				AML	AML		
	comp=N,188µm,0.5s						
ARVD				AML	AML		
	comp=N,188µm,0.5s						
SMPL	**Sampolo**	2.19	196	Pn	Pn	03 34 44.3	+0.6
SMPL				Sn	Sn	03 35 10.6	-0.1
SMPL	**Sampolo**	2.19	196	AML	AML		
	comp=E,26850µm,0.6s						
SMPL				AML	AML		
	comp=E,26850µm,0.6s						
SMPL				AML	AML		
	comp=N,25800µm,0.6s						
SMPL				AML	AML		
	comp=N,25800µm,0.6s						
ISO	**Isola**	2.19	271	Pn	Pn	03 34 44.3	+0.5
BERNI	**Berninapass**	2.22	359	AML	AML		
	comp=E,298µm,1.2s						
BERNI				AML	AML		
	comp=E,298µm,1.2s						
BERNI				AML	AML		
	comp=N,331µm,0.7s						
BERNI				AML	AML		
	comp=N,331µm,0.7s						
MOMA	**Monte Martano**	2.28	127	AML	AML		
	comp=E,221µm,0.5s						
MOMA				AML	AML		
	comp=N,218µm,1.0s						
MOMA				AML	AML		
	comp=E,221µm,0.5s						
MOMA				AML	AML		
	comp=N,218µm,1.0s						
CALF	**Calern**	2.33	260	Pn	Pn	03 34 45.7	-0.1
CALF				Sg	Sn	03 35 13.5	-1.2
TUE	**Stuetta**	2.34	347	AML	AML		
	comp=N,316µm,0.3s						
TUE				AML	AML		
	comp=E,257µm,0.6s						
TUE				AML	AML		
	comp=N,316µm,0.3s						
TUE				AML	AML		
	comp=E,338µm,0.4s						
TUE				AML	AML		
	comp=N,398µm,0.3s						
TUE				AML	AML		
	comp=E,338µm,0.4s						
TUE				AML	AML		
	comp=E,257µm,0.6s						
TUE				AML	AML		
	comp=N,398µm,0.3s						
SURF	**Saint Ours**	2.37	278	Pn	Pn	03 34 46.3	-0.2
MMK	**Mattmark**	2.39	322	AML	AML		
	comp=E,293µm,1.0s						
MMK				AML	AML		
	comp=N,346µm,1.1s						
MMK				AML	AML		
	comp=N,346µm,1.1s						
MMK				AML	AML		
	comp=E,293µm,1.0s						
APPI	**Appiano**	2.42	19	AML	AML		
	comp=E,1034µm,0.5s						
APPI				AML	AML		
	comp=E,1034µm,0.5s						
APPI				AML	AML		
	comp=N,686µm,0.3s						
APPI				AML	AML		
	comp=N,686µm,0.3s						
FUORN	**Ofenpass-Fuorn**	2.43	3	AML	AML		
	comp=E,370µm,0.7s						
FUORN				AML	AML		
	comp=N,294µm,0.8s						
FUORN				AML	AML		
	comp=N,294µm,0.8s						
FUORN				AML	AML		
	comp=E,370µm,0.7s						
KOSI	**Kohlern**	2.44	21	AML	AML		
	comp=N,711µm,0.9s						
KOSI				AML	AML		
	comp=E,594µm,1.2s						
KOSI				AML	AML		
	comp=N,711µm,0.9s						
KOSI				AML	AML		
	comp=E,594µm,1.2s						
MBDF	**Montbardon**	2.44	284	*e*Pn	Pn	03 34 46.9	-0.4
	SNR=1.0						
MBDF				*e*Sn	Sn	03 35 17.6	+0.3
	comp=E,130nm,0.5s,SNR=1.0						
MOSI	**Grossmontoni**	2.44	7	AML	AML		
	comp=E,748µm,0.6s						
MOSI				AML	AML		
	comp=E,748µm,0.6s						
MOSI				AML	AML		
	comp=N,1220µm,0.7s						
MOSI				AML	AML		
	comp=N,1220µm,0.7s						
FUSIO	**Fusio**	2.47	336	AML	AML		
	comp=E,406µm,0.5s						
FUSIO				AML	AML		
	comp=N,347µm,0.8s						
FUSIO				AML	AML		
	comp=N,347µm,0.8s						
FUSIO				AML	AML		
	comp=E,406µm,0.5s						
TOLF	**Tolfa**	2.55	146	AML	AML		
	comp=E,58µm,0.6s						
TOLF				AML	AML		
	comp=N,75µm,1.1s						
TOLF				AML	AML		
	comp=N,75µm,1.1s						
TOLF				AML	AML		
	comp=E,58µm,0.6s						
FRF	**La Foret Royal**	2.57	257	*e*Pn	Pn	03 34 48.7	-0.3
	SNR=1.0						
FRF				*e*Sn	Sn	03 35 18.9	-1.5
	comp=E,150nm,0.2s,SNR=1.0						
DAVOX	**Davos/Dischmat**	2.59	357	Pn	Pn	03 34 51.4	+2.0
	comp=E,27nm,0.3s,baz=181,slow=6.6,SNR=90						
DAVOX				Sn	Sb	03 35 24.4	-1.4
	comp=E,24nm,0.3s,baz=343,slow=21,SNR=8.8						
DAVOX	**Davos/Dischmat**	2.59	357	AML	AML		
	comp=N,360µm,0.6s						
DAVOX				AML	AML		
	comp=E,293µm,0.4s						
DAVOX				AML	AML		
	comp=N,360µm,0.6s						
DAVOX				AML	AML		
	comp=E,293µm,0.4s						
REMY	**Saint-Rhmy-en**	2.65	309	AML	AML		
	comp=E,502µm,0.7s						
REMY				AML	AML		
	comp=N,1170µm,0.7s						
REMY				AML	AML		
	comp=E,502µm,0.7s						
REMY				AML	AML		
	comp=N,1170µm,0.7s						
ABSI	**Aberstueckl**	2.67	18	AML	AML		
	comp=E,674µm,0.5s						
ABSI				AML	AML		
	comp=E,674µm,0.5s						
ABSI				AML	AML		
	comp=N,886µm,0.8s						
ABSI				AML	AML		
	comp=N,886µm,0.8s						
LPG	**La Plagne**	2.71	300	*e*Pn	Pn	03 34 53.6	+2.4
	SNR=1.0						
LPG				*e*Sn	Sn	03 35 25.7	+1.5
	comp=N,104nm,0.5s						
LPL	**La Plagne**	2.73	300	*e*Pn	Pn	03 34 52.4	+1.0
	SNR=1.0						
LPL				*e*Sn	Sn	03 35 25.3	+0.7
	comp=N,84nm,0.5s,SNR=1.0						
LMR	**La Mourre**	2.74	253	*e*Pn	Pn	03 34 50.7	-0.6
	SNR=1.0						
LMR				*e*Sn	Sn	03 35 22.0	-2.4
	comp=N,139nm,0.3s,SNR=1.0						
STAL	**STALIGIAL**	2.77	41	AML	AML		
	comp=N,595µm,0.3s						
STAL				AML	AML		
	comp=E,674µm,1.4s						
STAL				AML	AML		
	comp=E,674µm,1.4s						
STAL				AML	AML		
	comp=N,595µm,0.3s						
SMA1	**SAN MARTINO**	2.83	122	AML	AML		
	comp=E,241µm,0.5s						
SMA1				AML	AML		
	comp=E,241µm,0.5s						
SMA1				AML	AML		
	comp=N,248µm,0.7s						
SMA1				AML	AML		
	comp=N,248µm,0.7s						
FETA	**Feichten**	2.86	9	*e*Pn	Pn	03 34 55.2	+2.1
	comp=N,40nm,1.3s,SNR=16						
ROSI	**Rosskopf**	2.88	18	AML	AML		
	comp=N,774µm,1.0s						
ROSI				AML	AML		
	comp=E,775µm,0.9s						
ROSI				AML	AML		
	comp=E,775µm,0.9s						
ROSI				AML	AML		
	comp=N,774µm,1.0s						
PLONS	**Plons/SG**	2.90	350	AML	AML		
	comp=N,238µm,0.9s						
PLONS				AML	AML		
	comp=E,292µm,0.7s						
PLONS				AML	AML		
	comp=N,238µm,0.9s						
PLONS				AML	AML		
	comp=E,292µm,0.7s						
BNALP	**Bannalp**	2.92	337	AML	AML		
	comp=N,184µm,0.9s						
BNALP				AML	AML		
	comp=E,206µm,0.7s						
BNALP				AML	AML		
	comp=N,184µm,0.9s						
BNALP				AML	AML		
	comp=E,206µm,0.7s						
TERO	**Teramo**	3.00	120	AML	AML		
	comp=E,57µm,0.4s						
TERO				AML	AML		
	comp=N,71µm,0.6s						
TERO				AML	AML		
	comp=N,71µm,0.6s						
TERO				AML	AML		
	comp=E,57µm,0.4s						
TRI	**Trieste**	3.01	59	AML	AML		
	comp=E,194µm,0.5s						
TRI				AML	AML		
	comp=E,194µm,0.5s						
TRI				AML	AML		
	comp=N,133µm,0.4s						
TRI				AML	AML		
	comp=N,133µm,0.4s						
AQU	**L'Aquila**	3.04	126	*e*Pn	Pb	03 34 58.6	-2.8
SABO	**M.te Sabotino**	3.06	53	AML	AML		
	comp=N,692µm,0.8s						
SABO				AML	AML		
	comp=E,493µm,1.4s						
SABO				AML	AML		
	comp=N,692µm,0.8s						
SABO				AML	AML		
	comp=E,493µm,1.4s						
ABTA	**Abfaltersbach**	3.06	33	*i* Pn	Pn	03 34 57.6	+1.8
	comp=E,13nm,0.5s,SNR=13						
ABTA				*i* Sn	Sn	03 35 36.0	+3.3
	comp=E,50nm,0.6s						
RISI	**Rein**	3.08	26	AML	AML		
	comp=E,899µm,0.5s						
RISI				AML	AML		
	comp=E,899µm,0.5s						
RISI				AML	AML		
	comp=N,912µm,0.4s						
RISI				AML	AML		
	comp=N,912µm,0.4s						
DAVA	**Damuels**	3.09	357	*i* Pn	Pn	03 34 59.1	+2.8
	comp=N,68nm,0.5s,SNR=47						
DAVA				*i* Sn	Sb	03 35 37.7	-2.6
	comp=N,324nm,0.9s						
SKDS	**Skadanscina**	3.10	63	*i* Pn	Pn	03 34 55.6	-0.6
SKDS				*i* Sn	Sn	03 35 31.9	-1.3
	comp=Z,127nm,0.4s						
ORIF	**Oris-en-Rattie**	3.10	285	*e*Pn	Pn	03 34 58.4	+2.1
	SNR=1.0						
ORIF				*e*Sn	Sn	03 35 33.0	-0.5
	comp=Z,170nm,0.7s,SNR=1.0						
SQTA	**Sankt Quirin**	3.12	14	*i* Pn	Pn	03 34 58.8	+2.1
	comp=Z,24nm,0.4s,SNR=28						
SQTA				*i* Sn	Sb	03 35 39.0	-2.1
	comp=Z,55nm,0.4s						
MOTA	**Moosalm**	3.23	12	*i* Pn	Pn	03 35 00.8	+2.7
	SNR=48						
WTTA	**Wattenberg**	3.25	19	*i* Pn	Pn	03 35 00.5	+2.0
	comp=Z,2.5nm,0.4s,SNR=25						
WTTA				*i* Sn	Sn	03 35 41.0	+3.6
	comp=Z,94nm,0.5s						
SMRF	**Simiane la Rot**	3.27	268	*e*Pn	Pn	03 34 59.1	+0.5
	SNR=1.0						
SMRF				*e*Sn	Sn	03 35 36.7	-0.8
	comp=Z,71nm,0.4s,SNR=1.0						
WATA	**Walderalm**	3.31	18	*i* Pn	Pn	03 35 02.0	+2.8
	comp=Z,18nm,0.4s,SNR=33						
RIY	**Rijeka**	3.32	69	*e*Pn	Pn	03 35 01.2	+1.9
RIY				*e*Sn	Sn	03 35 38.7	-0.1
RIY	**Rijeka**	3.32	69	ePn	Pn	03 35 00.7	+1.5
RIY	**Rijeka**	3.32	69	*e*Pn	Pn	03 35 00.3	+1.0
RETA	**Reutte**	3.32	8	*i* Pn	Pn	03 35 01.6	+2.2
	comp=Z,3.1nm,0.5s,SNR=12						
RETA				*i* Sn	Sb	03 35 44.0	-2.9
	comp=Z,13nm,0.4s						
ACOM	**Acomizza, Ital**	3.37	44	AML	AML		
	comp=N,541µm,0.7s						
ACOM				AML	AML		
	comp=E,472µm,0.9s						
ACOM				AML	AML		
	comp=N,541µm,0.7s						
ACOM				AML	AML		
	comp=E,472µm,0.9s						
CEY	**Cerknica**	3.44	62	*e*Pn	Pn	03 35 01.7	+0.8
CEY				*e*Sn	Sn	03 35 42.6	+0.8
CEY	**Cerknica**	3.44	62	*e*Pn	Pn	03 35 01.0	+0.1
NVLJ	**Novalja**	3.44	82	*e*Pn	Pn	03 35 02.2	+1.3
NVLJ				Sn	Sn	03 35 41.5	-0.2
MYKA	**Terra Mystica**	3.49	44	*i* Pn	Pn	03 35 03.9	+2.2
	comp=E,6.2nm,0.4s						
DUGI	**Dugi Otok**	3.58	92	*e*Pn	Pn	03 35 03.9	+1.0
DUGI				Sn	Sn	03 35 43.9	-1.3
LJU	**Ljubljana**	3.64	58	*e*Pn	Pn	03 35 05.2	+1.5
LJU				*e*Sn	Sn	03 35 46.7	0.0
LJU	**Ljubljana**	3.64	58	*e*Pn	Pn	03 35 04.5	+0.8
LJU	**Ljubljana**	3.64	58	AML	AML		
	comp=N,708µm,0.5s						
LJU				AML	AML		
	comp=E,536µm,0.4s						
LJU				AML	AML		
	comp=E,536µm,0.4s						
LJU				AML	AML		
	comp=N,708µm,0.5s						
KBA	**Koelnbreinsper**	3.67	37	*i* Pn	Pn	03 35 06.9	+2.6
	comp=N,13nm,0.8s						
KBA				*i* Sn	Sn	03 35 51.2	+3.4
	comp=N,16nm,0.3s						
CABF	**La Chapelle**	3.71	312	*e*Pn	Pn	03 35 06.1	+1.3
	SNR=1.0						
CABF				*e*Sn	Sn	03 35 48.5	-0.2
	comp=N,32nm,0.4s,SNR=1.0						
BOJS	**Bojanci**	3.89	69	*e*Pn	Pn	03 35 09.1	+2.0
BOJS				*e*Sn	Sn	03 35 53.0	+0.1
BOJS	**Bojanci**	3.89	69	AML	AML		
	comp=E,103µm,0.7s						
BOJS				AML	AML		
	comp=E,103µm,0.7s						
BOJS				AML	AML		
	comp=N,170µm,1.3s						
BOJS				AML	AML		
	comp=N,170µm,1.3s						
OBKA	**Obir**	3.90	52	*i* Pn	Pn	03 35 08.3	+0.9
	comp=N,14nm,0.5s						
OBKA				*i* Sn	Sn	03 35 54.8	+1.6
	comp=N,42nm,0.5s						
VIVF	**Saint-Julien-l**	3.93	282	*e*Pn	Pn	03 35 07.5	-0.3
	SNR=1.0						
VIVF				*e*Sn	Sn	03 35 53.1	-0.9
	comp=N,8.9nm,0.4s						
ZIRJ	**Zirje**	4.04	96	*i* Pn	Pn	03 35 09.8	+0.6
ZIRJ				Sn	Sn	03 35 56.8	+0.2
MORI	**Morici**	4.06	93	*i* Pn	Pn	03 35 11.9	+2.5
MORI				Sn	Sn	03 35 57.9	+0.9
OZLJ	**Ozalj**	4.07	68	*e*Pn	Pn	03 35 10.9	+1.3
UDBI	**Udbina**	4.08	83	*e*Pn	Pn	03 35 11.8	+2.1
UDBI				Sn	Sn	03 35 57.4	-0.2
CRES	**Cresnjev**	4.13	65	*e*Pn	Pn	03 35 12.1	+1.6
HINF	**Hinteralfeld**	4.27	329	*e*Pn	Pn	03 35 13.6	+1.3
	SNR=1.0						
HINF				*e*Sn	Sn	03 36 02.2	0.0

	comp=N,31nm,0.3s,SNR=1.0						
SOKA	**Soboth**	4.27	53	*i* Pn	Pn	03 35 13.1	+0.7
	comp=N,4.6nm,0.4s,SNR=9.3						
SOKA				*i* Sn	Sn	03 36 03.9	+1.6
	comp=N,14nm,0.5s						
LASF	**Ste Croix**	4.49	271	*e*Pn	Pn	03 35 15.4	0.0
	SNR=1.0						
LASF				*e*Sn	Sn	03 36 05.7	-2.1
	comp=N,5.6nm,0.3s,SNR=1.0						
PTJ	**Puntijarka**	4.50	66	ePn	Pn	03 35 16.9	+1.4
HAU	**Haudompre**	4.62	327	*e*Pn	Pn	03 35 18.2	+1.1
	SNR=1.0						
HAU				*e*Sn	Sn	03 36 10.1	-0.7
	comp=N,78nm,0.3s						
CDF	**Champ du Feu**	4.65	336	*e*Pn	Pn	03 35 17.9	+0.3
	SNR=1.0						
CDF				*e*Sn	Sn	03 36 10.3	-1.3
	comp=N,46nm,0.4s						
MOA	**Molln**	4.67	37	*i* Pn	Pn	03 35 19.2	+1.4
	comp=N,12nm,0.3s,SNR=15						
MOA				*i* Sn	Sn	03 36 15.7	+3.6
	comp=N,11nm,0.3s						
HVAR	**Hvar**	4.72	100	*e*Pn	Pn	03 35 18.7	+0.2
HVAR				Sn	Sn	03 36 11.1	-2.2
ARSA	**Arzberg**	4.87	49	*e*Pn	Pn	03 35 21.3	+0.6
ARSA				*e*Sn	Sn	03 36 14.6	-2.5
ARSA	**Arzberg**	4.87	49	*i* Pn	Pn	03 35 21.5	+0.9
	comp=N,7.0nm,0.5s						
ARSA				*i* Sn	Sn	03 36 19.6	+2.4
	comp=N,5.0nm,0.5s						
MGRS	**Mrkonjic Grad**	5.02	85	*e*Pn	Pn	03 35 25.2	+2.5
SMF	**Signal de Mont**	5.04	301	*e*Pn	Pn	03 35 23.9	+1.0
	SNR=1.0						
SMF				*e*Sn	Sn	03 36 20.1	-1.1
	comp=N,38nm,0.3s						
MAKA	**Makarska**	5.10	98	*e*Pn	Pn	03 35 26.0	+2.3
MAKA				Sn	Sn	03 36 21.1	-1.4
BLY	**Banja Luka**	5.10	81	*e*Pn	Pn	03 35 25.0	+1.2
BLY				*e*Sn	Sn	03 36 21.9	-0.8
BLY	**Banja Luka**	5.10	81	⇑*i*P	Pn	03 35 25.5	+1.7
BLY	**Banja Luka**	5.10	81	S	Sn	03 36 22.0	-0.8
BLY	**Banja Luka**	5.10	81	*e*Pn	Pn	03 35 24.8	+1.0
GERES	**GERESS Array B**	5.27	27	Pn	Pn	03 35 25.9	-0.3
	comp=N,2.4nm,0.3s,baz=204,slow=13,SNR=53						
GERES				Sn	Sn	03 36 26.5	-0.5
	comp=N,3.6nm,0.3s,baz=205,slow=21,SNR=8.0						
GERES				LR	LR	03 37 10.9	
	comp=N,30nm,18.2s,baz=217,slow=35						
PAGF	**Fort de Pagny**	5.30	327	*e*Pn	Pn	03 35 27.8	+1.3
	baz=146						
PAGF				*e*Sn	Sn	03 36 26.2	-1.5
	comp=N,39nm,0.6s						
SFTF	**Sexfontaines**	5.33	321	*e*Pn	Pn	03 35 28.3	+1.4
LOR	**Lormes**	5.34	307	*e*Pn	Pn	03 35 27.7	+0.7
	baz=129,SNR=1.0						
LOR				*e*Sn	Sn	03 36 27.3	-1.3
	comp=N,27nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	5.40	301	*e*Pn	Pn	03 35 28.9	+1.0
	SNR=1.0						
AVF				*e*Sn	Sn	03 36 28.7	-1.4
	comp=N,3.6nm,0.3s						
SSF	**Saint Saulge**	5.44	304	*e*Pn	Pn	03 35 29.2	+0.8
	SNR=1.0						
SSF				*e*Sn	Sn	03 36 29.5	-1.5
	comp=N,16nm,0.5s						
CONA	**Conrad Observa**	5.48	45	*i* Pn	Pn	03 35 30.3	+1.3
	comp=N,11nm,0.6s,SNR=9.7						
KHC	**Kasperske Hory**	5.49	25	*e*PN	Pn	03 35 29.1	0.0
KHC				*e*x	x	03 36 00.0	
KHC				*e*SN	Sn	03 36 30.4	-1.8
MEZF	**Maizieres J'vi**	5.54	323	*e*Pn	Pn	03 35 30.8	+1.0
	baz=143,SNR=1.0						
MEZF				*e*Sn	Sn	03 36 32.5	-1.0
	comp=N,34nm,0.6s						
BGF	**Bois d'Agland**	5.63	297	*e*Pn	Pn	03 35 31.8	+0.8
	SNR=1.0						
BGF				*e*Sn	Sn	03 36 33.9	-1.7
	comp=N,40nm,0.4s,SNR=1.0						
STON	**Ston**	5.68	101	*e*Pn	Pn	03 35 33.9	+2.2
STON	**Ston**	5.68	101	*e*Pn	Pn	03 35 32.6	+0.9
STON	**Ston**	5.68	101	*e*Pn	Pn	03 35 32.5	+0.8
SOP	**Sopron**	5.70	50	⇓*e*Pn	Pn	03 35 34.0	+2.1
SOP				⇓Sn	Sn	03 36 37.1	-0.3
MTLF	**Montolieu**	5.77	264	*e*Pn	Pn	03 35 33.1	+0.2
	SNR=1.0						
MTLF				*e*Sn	Sn	03 36 35.5	-3.7
	comp=N,25nm,0.8s,SNR=1.0						
CAF	**Calviac**	5.79	280	*e*Pn	Pn	03 35 34.0	+0.8
	SNR=1.0						
CAF				*e*Sn	Sn	03 36 37.3	-2.3
	comp=N,6.8nm,0.5s,SNR=1.0						
TCF	**Toulx Ste Croi**	5.95	293	*e*Pn	Pn	03 35 36.0	+0.6
TCF				*e*Sn	Sn	03 36 42.3	-1.3
	comp=N,11nm,0.4s,SNR=1.0						
HYF	**Humbligny**	6.05	303	*e*P	Pn	03 35 41.7	+4.8
DBRK	**Dubrovnik**	6.06	102	*e*Pn	Pn	03 35 38.3	+1.4
TREB	**Trebinje**	6.19	101	*e*Pn	Pn	03 35 40.7	+2.0
TREB				*e*Sn	Sn	03 36 50.0	+0.6
TREB	**Trebinje**	6.19	101	*e*Pn	Pn	03 35 39.0	+0.3
RJF	**Les Rejaudoux**	6.21	283	*e*P	Pn	03 35 44.1	+5.1
BRY	**Bratogost**	6.27	99	*e*Pn	Pn	03 35 41.1	+1.2
ZST	**Bratislava**	6.29	48	*e*PN	Pn	03 35 41.9	+1.8
TREC	**Trest**	6.30	34	*e*PN	Pn	03 35 40.3	+0.1
TREC				*e*SN	Sn	03 36 49.8	-2.5
MORH	**Mrgy, Hungar**	6.37	69	*e*Pn	Pn	03 35 42.0	+0.9
MORH				Sn	Sn	03 36 52.0	-1.8
HCY	**Herceg Novi**	6.37	103	*e*Pn	Pn	03 35 42.2	+1.0
HAPS	**Han Pijesak,BI**	6.37	88	*e*Pn	Pn	03 35 40.8	-0.5
UPM	**Unac-Piva**	6.46	96	*e*Pn	Pn	03 35 44.0	+1.4
MODS	**Modra-Piesok**	6.50	47	*e*PN	Pn	03 35 42.8	-0.1
MODS				*e*SN	Sn	03 36 54.9	-2.1
MODS				*e*LG	Lg	03 36 56.5	
KRUC	**Moravsky**	6.52	39	*e*PN	Pn	03 35 43.1	-0.1
KRUC				*e*SN	Sn	03 36 56.2	-1.3
CSKK	**Cskako**	6.53	58	Sn	Sn	03 36 56.0	-1.8
PRU	**Pruhonice**	6.54	26	*e*PN	Pn	03 35 43.8	+0.3
PRU				*e*SN	Sn	03 36 55.9	-2.2
GOPC	**GO Pecny, Ondr**	6.55	28	*e*PN	Pn	03 35 44.4	+0.7
BBLS	**Lazići**	6.72	90	*e*Pn	Pn	03 35 47.9	+1.9
BBLS				*e*Sn	Sn	03 37 01.4	-1.2
BBLS	**Lazići**	6.72	90	*e*Pn	Pn	03 35 47.6	+1.6
RUDO	**Rudo**	6.72	92	*e*Pn	Pn	03 35 45.7	-0.3
VRAC	**Vranov**	6.79	39	*e*PN	Pn	03 35 45.3	-1.6
VRAC				*e*SN	Sn	03 37 02.4	-1.8
VRAC				*e*SG	Sg	03 37 45.0	+0.1
PDG	**Podgorica**	6.91	102	*e*Pn	Pn	03 35 51.2	+2.6
PDG	**Podgorica**	6.91	102	⇓*i*P	Pn	03 35 51.4	+2.8
PDG	**Podgorica**	6.91	102	S	Sn	03 37 05.8	-1.4
PDG	**Podgorica**	6.91	102	*e*Pn	Pn	03 35 50.2	+1.6
DRME	**Dracevica, Mon**	6.94	104	*e*Pn	Pn	03 35 49.4	+0.4
MEM	**Membach**	6.99	338	⇑Pn	Pn	03 35 51.6	+1.9
MEM				⇑Sn	Sn	03 37 09.2	+0.1
DOU	**Dourbes**	6.99	330	⇑Pn	Pn	03 35 54.8	+5.1
DOU				⇑Sn	Sn	03 37 08.9	-0.3
	comp=E,10nm,0.0s						
JAVC	**Velka Javorina**	7.00	46	*e*PN	Pn	03 35 52.0	+2.1
PVCC	**Panska Ves**	7.02	24	*e*PN	Pn	03 35 51.2	+1.1
DIVS	**Divibare**	7.12	87	*e*Pn	Pn	03 35 53.1	+1.6
DIVS				*e*Sn	Sn	03 37 11.6	-0.9
DIVS	**Divibare**	7.12	87	*e*Pn	Pn	03 35 52.1	+0.6
BRG	**Berggiesshubel**	7.17	20	PN	Pn	03 35 53.0	+0.9
BRG				SN	Sn	03 37 12.6	-0.9
BRG				SG	Sg	03 37 57.4	+0.3
	comp=E,14nm,1.1s						
EPF	**Esparros**	7.18	264	*e*P	Pn	03 35 57.4	+5.1
SJES	**Sjenica**	7.22	94	*e*Pn	Pn	03 35 54.2	+1.3
SJES				*e*Sn	Sn	03 37 14.5	-0.5
IVAS	**Ivanjica**	7.29	91	*e*Pn	Pn	03 35 55.3	+1.4
IVAS				*e*Sn	Sn	03 37 15.3	-1.5
CLL	**Collm**	7.38	14	*e*Pn	Pn	03 36 00.0	+5.0
CLL				*e*Sn	Sn	03 37 03.0	-16
CLL				*e*		03 37 19.0	
CLL				*e*		03 37 28.0	
CLL				*e*		03 37 36.0	
CLL				*e*Sg	Sg	03 38 04.0	+0.1
	comp=Z,14nm,1.0s						
TRUS	**Trudelj**	7.41	86	*e*Pn	Pn	03 35 56.3	+0.9
TRUS				*e*Sn	Sn	03 37 17.4	-2.1
VYHS	**Vyhne**	7.42	52	*e*PN	Pn	03 35 55.8	+0.3
VYHS				*e*SN	Sn	03 37 17.2	-2.5
DPC	**Dobruska-Polom**	7.47	32	*e*PN	Pn	03 35 55.6	-0.7
OSTC	**Ostas**	7.59	31	*e*PN	Pn	03 35 57.7	-0.3
MFF	**Saint Martin d**	7.60	292	*e*P	Pn	03 36 03.7	+5.7
GRUS	**Gruza**	7.66	89	*e*Pn	Pn	03 36 00.7	+1.8
TIR	**Tirane**	7.73	108	*e*Pn	Pn	03 36 01.7	+1.9
TIR	**Tirane**	7.73	108	⇑*i*P	Pn	03 36 01.7	+1.9
PSZ	**Piszkesteto**	7.76	58	⇑*i*P	Pn	03 36 02.9	+2.5
PSZ	**Piszkesteto**	7.76	58	*e*Pg	Pn	03 36 02.1	+1.7
PSZ				Sn	Sn	03 37 24.0	-4.3
ETSF	**Etsaut**	7.85	264	*e*P	Pn	03 36 06.8	+5.2
SELS	**Selova**	8.05	93	*e*Pn	Pn	03 36 04.8	+0.6
BZS	**Buzias**	8.30	76	⇑*i*P	Pn	03 36 09.5	+1.8
KUBS	**Kucevo**	8.31	84	*e*Pn	Pn	03 36 09.1	+1.3
KEST	**Kesra**	8.47	184	LR	LR	03 39 36.6	
	comp=Z,43nm,18.9s,baz=72,slow=39						
BARS	**Barje**	8.63	95	*e*Pn	Pn	03 36 14.2	+2.0
GRR	**Gorron**	8.66	303	*e*Pn	Pn	03 36 13.2	+0.6
	SNR=1.0						
HERR	**Herculane**	8.83	81	⇑*i*P	Pn	03 36 16.3	+1.4
ZAPS	**Zavoj**	9.12	91	*e*Pn	Pn	03 36 19.6	+0.6
DRGR		9.23	69	⇑*i*P	Pn	03 36 21.9	+1.4
ROSF	**Rostrenen**	10.14	299	*e*Pn	Pn	03 36 33.2	+0.4
VOIR		10.70	78	⇑*i*P	Pn	03 36 41.2	+0.6
ESDC	**Sonseca Array**	11.40	251	Pn	Pn	03 36 50.7	+0.5
	comp=Z,0.2nm,0.3s,baz=62,slow=14,SNR=4.2						
EKA	**Eskdalemuir Ar**	14.03	327	Pn	Pn	03 37 25.0	-0.9
	baz=141,slow=14,SNR=5.6						
MDT	**Midelt**	16.15	230	LR	LR	03 42 51.4	
	comp=Z,36nm,18.7s,baz=198,slow=32						
FINES	**FINESS Array B**	19.69	23	P	Pn	03 38 38.0	+0.2
	comp=Z,0.1nm,0.3s,baz=194,slow=12,SNR=4.2						
TORD	**Torodi Ar. Bea**	31.77	196	P	P	03 40 32.1	+0.3
	comp=Z,0.3nm,0.7s,baz=359,slow=9.4,SNR=4.6						
MKAR	**Makanchi Array**	49.01	60	P	P	03 42 55.4	+1.3
	comp=Z,0.4nm,0.6s,baz=276,slow=8.4,SNR=3.7						
SONM	**Songino Array**	62.60	49	P	P	03 44 33.7	+2.1
	comp=Z,0.8nm,0.9s,baz=324,slow=9.2,SNR=5.5						

GUC 12 03:35:54.2±0.8, 34°.97S×71°.54W, h43^{km}±4^{km}, ML3.6, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	**Huala**	0.32	263	*e*P	Pn	03 36 02.5	-0.5
GO05				*e*S	Sn	03 36 08.9	-0.3
GO05				IAML		03 36 09.2	
	comp=E,8μm,0.3s						
COCH	**Cobquecura**	1.54	221	⇑*i*P	Pn	03 36 19.9	+0.7
COCH				*e*S	Sn	03 36 40.8	+2.8
LMEL	**Las Melosas**	1.57	45	*e*P	Pn	03 36 21.6	+1.8
LMEL				*e*S	Sn	03 36 41.6	+2.6
LMEL				IAML		03 36 48.1	
	comp=N,1μm,0.2s						
ANTU	**Antumapu**	1.59	28	*e*S	Sn	03 36 41.8	+2.6
ANTU				IAML		03 36 45.0	
	comp=E,2μm,0.4s						
RCDM	**Rinconada Maip**	1.60	23	*e*P	Pn	03 36 21.3	+1.3
RCDM				*e*S	Sn	03 36 41.7	+2.3
STL	**Santa Lucia**	1.70	26	IAML		03 36 47.7	
	comp=N,1μm,0.5s						
CLCH	**Cerro Calan**	1.78	28	⇑*i*P	Pn	03 36 23.5	+1.0
CLCH				*e*S	Sn	03 36 46.3	+2.4
FCH	**Farellones**	1.94	33	⇑*i*P	Pn	03 36 26.2	+1.2
FCH				*e*S	Sn	03 36 51.7	+3.5
FCH				IAML		03 36 54.6	
	comp=N,517nm,0.2s						
PEL	**Peldehue**	1.95	21	⇑*i*P	Pn	03 36 26.1	+1.1
PEL				*e*S	Sn	03 36 51.2	+3.0
PEL				IAML		03 36 56.1	
	comp=N,704nm,0.4s						

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*ISCJB **12** 03:40:10.8±1.2, 5°.7S±0°.2×152°.0E±0°.2, h45^{km}, mb4.0/5, Error ellipse: s-maj=39.3km s-min=12.3km az=41.8*

*IDC **12** 03:40:13.9±6.3, 5°.72S×151°.91E, h58^{km}±53^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.6/29, mbtmp4.1/6, ML2.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/27, Error ellipse: s-maj=57.1km s-min=27.7km az=109.0*

ISC 12 03:40:12.3±1.4, 5°.7S±0°.2×152°.0E±0°.3, h45^{km}, n8, σ1^{s}.06/8, mb4.0/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	6.07	232	P	Pn	03 41 40.8	+1.2
	3.7nm,0.3s,baz=53,slow=7.0,SNR=7.6						
PMG				S	Sn	03 42 47.4	-0.5
	9.0nm,0.3s,baz=87,slow=14,SNR=3.9						
JAY	**Jayapura**	11.73	285	LR	LR	03 47 20.6	
	comp=Z,89nm,18.6s,baz=352,slow=37						
WRA	**Warramunga Arr**	22.28	229	P	P	03 45 04.4	-1.5
	4.7nm,0.7s,baz=54,slow=9.8,SNR=22						
ASAR	**Alice Springs**	24.97	223	P	P	03 45 30.9	-1.1
	6.6nm,0.6s,baz=58,slow=8.7,SNR=64						
STKA	**Stephens Creek**	27.82	199	P	P	03 45 58.1	+0.7
	1.4nm,0.6s,baz=15,slow=13,SNR=5.1						
SONM	**Songino Array**	66.68	328	P	P	03 50 59.0	+0.3
	0.4nm,0.5s,baz=140,slow=7.6,SNR=4.0						
ILAR	**Eielson Array**	83.27	22	P	P	03 52 33.7	-0.2
	1.4nm,0.7s,baz=250,slow=5.4,SNR=12						
TORD	**Torodi Ar. Bea**	149.84	286	PKPbc	PKPbc	03 59 58.4	-0.2
	1.2nm,0.6s,baz=76,slow=2.3,SNR=12						

MEX 12 03:47:04.8±0.8, 14°.44N×92°.82W, h15^{km}±35^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.71	49	*e*P	Pg	03 47 16.8	-2.0
THIG				*e*S	Sg	03 47 26.2	-2.0
PCIG		1.31	343	*e*P	Pn	03 47 25.1	-3.6
PCIG				*e*S	Sb	03 47 40.7	-5.2
CCIG	**Comitan**	1.95	20	*e*P	Pn	03 47 35.1	-2.5
CCIG				*e*S	Sn	03 47 57.6	-4.3
TGIG		2.34	353	*e*P	Pn	03 47 40.8	-2.1
TGIG				*i* S	Sn	03 48 06.9	-4.6

PRU 12 04:20:24.5±0.0, 49°.85N×18°.44E, h0^{km}, Mining Induced Event Karvina, E=2.9e+04, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	0.59	263	*e*PG	Pg	04 20 35.0	-0.7
MORC				*e*SG	Sg	04 20 42.9	-0.4
OJC	**Ojcow**	0.95	67	*e*Pg	Pg	04 20 41.1	-1.6
OJC				*e*Sg	Sg	04 20 53.8	-1.2
LANS	**Liptovska Anna**	0.97	136	*e*PG	Pg	04 20 43.0	-0.1
LANS				*e*SG	Sg	04 20 56.3	+0.7
KRLC	**Kraliky**	1.09	283	*e*PG	Pg	04 20 44.3	-1.2
KRLC				*e*SG	Sg	04 20 59.5	-0.1
	comp=Z,1.5nm,0.3s						
JAVC	**Velka Javorina**	1.11	207	*e*PG	Pg	04 20 46.0	+0.2
NIE	**Niedzica**	1.28	109	*e*Pg	Pg	04 20 48.5	-0.6
NIE				*e*Sg	Sb	04 21 07.0	+0.4
VRAC	**Vranov**	1.32	246	*e*PG	Pg	04 20 48.6	-1.1
VRAC				*e*SG	Sg	04 21 05.6	-1.2
VYHS	**Vyhne**	1.38	169	*e*PG	Pg	04 20 49.7	-1.3
VYHS				*e*SG	Sg	04 21 08.6	-0.2
DPC	**Dobruska-Polom**	1.45	291	*e*PG	Pn	04 20 50.4	-1.7
DPC				*e*SG	Sg	04 21 11.0	-0.1
	comp=Z,3.0nm,0.3s						
KRUC	**Moravsky**	1.55	240	*e*PG	Pn	04 20 52.2	-1.1
KRUC				*e*SG	Sn	04 21 13.2	-0.9
OSTC	**Ostas**	1.59	297	*e*PG	Pn	04 20 53.3	-0.7
OSTC				*e*SG	Sb	04 21 15.6	+0.1
MODS	**Modra-Piesok**	1.66	208	*e*PN	Pn	04 20 53.3	-1.6
MODS				*e*SN	Sn	04 21 14.0	-3.0
UPC	**Upice**	1.69	294	*e*PG	Pn	04 20 54.7	-0.6
CHVC	**Chvalec**	1.70	297	*e*PG	Pn	04 20 55.2	-0.3
CHVC				*e*SG	Sb	04 21 18.4	-0.2
	comp=Z,4.0nm,0.6s						

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*IDC **12** 04:22:22.1±1.0, 20°.05N×121°.89E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/44, mbtmp3.6/6, MS3.2/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=60.1km s-min=19.5km az=69.0*

*ISCJB **12** 04:22:24.2±0.9, 20°.0N±0°.2×121°.9E±0°.4, h27^{km}, mb3.4/6, MS3.2/2, Error ellipse: s-maj=53.5km s-min=16.2km az=158.3*

ISC 12 04:22:26.1±1.1, 20°.0N±0°.2×121°.8E±0°.4, h27^{km}, n11, σ0^{s}.36/6, mb3.6/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	**Kul'dur**	30.19	13	LR	LR	04 40 19.5	
	comp=Z,35nm,18.7s,baz=236,slow=36						
SONM	**Songino Array**	30.43	339	P	P	04 28 36.1	-0.2
	0.4nm,0.5s,baz=159,slow=9.7,SNR=5.3						
WRA	**Warramunga Arr**	41.58	162	P	P	04 30 11.3	-0.4
	1.6nm,0.8s,baz=345,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	41.79	319	P	P	04 30 13.6	+0.2
	0.2nm,0.6s,baz=128,slow=9.3,SNR=3.0						
H11S3	**WAKE ISLAND Hy**	42.27	84	T	T	05 15 35.4	
	baz=280,slow=75,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	42.28	84	T	T	05 15 36.8	
	baz=280,slow=75,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	42.28	84	T	T	05 15 39.2	
	baz=280,slow=75,SNR=4.5						
ZALV	**Zalesovo Beam**	44.08	329	P	P	04 30 31.5	-0.1
	0.5nm,0.4s,baz=142,slow=5.6,SNR=3.6						
ASAR	**Alice Springs**	45.00	164	P	P	04 30 39.7	+0.3
	0.6nm,0.7s,baz=342,slow=6.6,SNR=6.1						
ILAR	**Eielson Array**	72.61	27	P	P	04 33 51.0	+0.2
	0.2nm,0.5s,baz=267,slow=4.5,SNR=5.2						
MMAI	**Mount Meron Ar**	76.48	300	LR	LR	05 13 21.9	
	comp=Z,15nm,18.8s,baz=185,slow=40						

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*NEIC **12** 04:27:07.8±0.0, 15°.34N×93°.56W, h78^{km}, MD4.0(MEX), After MEX.*

MEX 12 04:27:07.8±0.5, 15°.33N×93°.56W, h77^{km}±5^{km}, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.49	42	*e*Pn	Pn	04 27 19.9	-1.3
PCIG				*e*Sn	Sn	04 27 29.5	-1.7
PCIG		0.49	42	*i* P	Pn	04 27 19.9	-1.3
PCIG				*i* S	Sn	04 27 29.5	-1.7
THIG		1.32	108	*e*Pn	Pn	04 27 29.3	-1.3
THIG				*e*Sn	Sn	04 27 46.3	-1.6
THIG		1.32	108	*e*P	Pn	04 27 29.3	-1.3
THIG				*e*S	Sn	04 27 46.3	-1.6
TGIG		1.50	16	*e*Pn	Pn	04 27 31.8	-1.3
TGIG				*e*Sn	Sn	04 27 49.6	-2.6
TGIG		1.50	16	*i* P	Pn	04 27 31.8	-1.3
TGIG				*e*S	Sn	04 27 49.6	-2.6
CCIG	**Comitan**	1.66	55	*e*Pn	Pn	04 27 30.5	-4.8
CCIG				*e*Pn	Pn	04 27 34.2	-1.2
CCIG	**Comitan**	1.66	55	*e*P	Pn	04 27 34.2	-1.2
CCIG				*i* S	Sn	04 27 54.2	-2.0
CMIG	**Matias Romero**	2.16	324	*e*Pn	Pn	04 27 40.9	-1.0
CMIG	**Matias Romero**	2.16	324	*e*P	Pn	04 27 40.9	-1.0
CMIG				*e*S	Sn	04 28 06.1	-1.7
HUIG	**Huatulco**	2.49	280	*e*Pn	Pn	04 27 44.3	-1.9
HUIG	**Huatulco**	2.49	280	*e*P	Pn	04 27 44.3	-1.9
HUIG				*i* S	Sn	04 28 13.4	-2.4
VHO	**Vista Hermosa**	3.50	300	*i* P	Pn	04 27 59.7	-0.4
VHO				*e*S	Sn	04 28 39.3	-1.4
MYIG	**Mrida**	6.67	32	*e*Pn	Pn	04 28 42.6	-0.6
TEIG	**Tepich**	7.00	45	*e*Pn	Pn	04 28 45.5	-2.2

ROM 12 04:48:15.0±0.4, 38°.51N±0°.05×15°.31E±0°.04, h132^{km}±2^{km}, ML2.4/12, Error ellipse: s-maj=5.8km s-min=2.6km az=161.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MILZ	**Milazzo**	0.24	195	P	Pn	04 48 33.1	-0.1
MILZ				S	Sn	04 48 46.2	-0.7
MILZ				AML	AML		
	comp=E,176μm,0.4s						
MILZ				AML	AML		
	comp=N,93μm,0.2s						
MILZ				AML	AML		
	comp=E,176μm,0.4s						
MILZ				AML	AML		
	comp=N,93μm,0.2s						
MILZ				AML	AML		
	comp=N,93μm,0.2s						
MILZ				AML	AML		
	comp=E,176μm,0.4s						
MILZ				AML	AML		
	comp=N,93μm,0.2s						
MILZ				AML	AML		
	comp=E,176μm,0.4s						
VPL	**Vulcano Piano**	0.28	244	P	Pn	04 48 33.7	+0.4
VPL				S	Sn	04 48 48.1	+0.9
MSRU	**Castanea**	0.29	147	P	Pn	04 48 33.1	-0.2
MSRU				S	Sn	04 48 46.4	-0.8
MSRU				AML	AML		
	comp=E,294μm,0.3s						
MSRU				AML	AML		
	comp=N,240μm,1.4s						
MSRU				AML	AML		
	comp=E,294μm,0.3s						
MSRU				AML	AML		
	comp=N,240μm,1.4s						
MSRU				AML	AML		
	comp=N,240μm,1.4s						
MSRU				AML	AML		
	comp=E,294μm,0.3s						
MSRU				AML	AML		
	comp=N,240μm,1.4s						
MSRU				AML	AML		
	comp=E,294μm,0.3s						
MPNC	**Port Mandanici**	0.36	175	P	Pn	04 48 33.6	-0.1
MPNC				S	Sn	04 48 47.1	-0.6
MPNC				AML	AML		
	comp=E,94μm,1.0s						
MPNC				AML	AML		
	comp=N,130μm,1.2s						
MPNC				AML	AML		
	comp=N,130μm,1.2s						
MPNC				AML	AML		
	comp=E,94μm,1.0s						
MPNC				AML	AML		
	comp=N,130μm,1.2s						
MPNC				AML	AML		
	comp=E,94μm,1.0s						
ATN	**Antennamare**	0.37	160	P	Pn	04 48 33.5	-0.4
ATN				S	Sn	04 48 46.9	-1.1
JOPP	**Joppolo**	0.46	77	P	Pn	04 48 34.4	+0.3
JOPP				S	Sn	04 48 48.5	-0.1
JOPP				AML	AML		
	comp=E,71μm,0.5s						
JOPP				AML	AML		
	comp=N,75μm,0.7s						
JOPP				AML	AML		
	comp=E,71μm,0.5s						
JOPP				AML	AML		
	comp=N,75μm,0.7s						
JOPP				AML	AML		
	comp=E,71μm,0.5s						
JOPP				AML	AML		
	comp=N,75μm,0.7s						
JOPP				AML	AML		
	comp=E,71μm,0.5s						
JOPP				AML	AML		
	comp=N,75μm,0.7s						
MSCL	**Scilla**	0.47	126	P	Pn	04 48 34.0	-0.2
MSCL				AML	AML		
	comp=E,172μm,0.7s						
MSCL				AML	AML		
	comp=N,111μm,1.4s						
MSCL				AML	AML		
	comp=E,172μm,0.7s						
MSCL				AML	AML		
	comp=N,162μm,0.6s						
MSCL				AML	AML		
	comp=E,172μm,0.7s						
MSCL				AML	AML		
	comp=N,162μm,0.6s						
MSCL				AML	AML		
	comp=E,172μm,0.7s						
MSCL				AML	AML		
	comp=N,162μm,0.6s						
NOV	**Novara**	0.49	196	P	Pn	04 48 35.2	+0.8
NOV				S	Sn	04 48 50.1	+1.1
NOV				AML	AML		
	comp=E,123μm,0.9s						
NOV				AML	AML		
	comp=N,99μm,0.3s						
NOV				AML	AML		
	comp=E,123μm,0.9s						
NOV				AML	AML		
	comp=N,99μm,0.3s						

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NOV                                     AML     AML
        comp=N,99µm,0.3s
NOV                                     AML     AML
        comp=E,123µm,0.9s
NOV                                     AML     AML
        comp=N,99µm,0.3s
NOV                                     AML     AML
        comp=E,123µm,0.9s
GMB     Gambarie             0.53 129   P       Pn        04 48 34.6  0.0
GMB                                     S       Sn        04 48 49.5  0.0
AIO     Antillo              0.54 186   P       Pn        04 48 35.2 +0.6
AIO                                     S       Sn        04 48 50.0 +0.6
AIO                                     AML     AML
        comp=E,85µm,1.2s
AIO                                     AML     AML
        comp=N,68µm,0.7s
AIO                                     AML     AML
        comp=E,85µm,1.2s
AIO                                     AML     AML
        comp=N,68µm,0.7s
AIO                                     AML     AML
        comp=E,85µm,1.2s
AIO                                     AML     AML
        comp=N,68µm,0.7s
MUCR    Ucria                0.57 217   P       Pn        04 48 34.7 -0.2
MTTG    Motta San Giov       0.59 149   P       Pn        04 48 35.1 +0.2
MTTG                                    AML     AML
        comp=E,68µm,1.4s
MTTG                                    AML     AML
        comp=N,68µm,0.5s
MTTG                                    AML     AML
        comp=E,68µm,1.4s
MTTG                                    AML     AML
        comp=N,68µm,0.5s
MTTG                                    AML     AML
        comp=N,68µm,0.5s
MTTG                                    AML     AML
        comp=E,68µm,1.4s
MTTG                                    AML     AML
        comp=N,68µm,0.5s
MTTG                                    AML     AML
        comp=E,68µm,1.4s
SOI     Samo                 0.73 126   P       Pn        04 48 36.0 +0.1
SOI                                     AML     AML
        comp=E,45µm,0.5s
SOI                                     AML     AML
        comp=N,29µm,0.6s
SOI                                     AML     AML
        comp=E,45µm,0.5s
SOI                                     AML     AML
        comp=N,29µm,0.6s
SOI                                     AML     AML
        comp=N,29µm,0.6s
SOI                                     AML     AML
        comp=E,45µm,0.5s
SOI                                     AML     AML
        comp=N,29µm,0.6s
SOI                                     AML     AML
        comp=E,45µm,0.5s
PLAC    Placanica            0.89  93   P       Pn        04 48 37.8 +0.7
PLAC                                    S       Sn        04 48 54.6 +0.7
PLAC                                    AML     AML
        comp=E,52µm,0.4s
PLAC                                    AML     AML
        comp=N,63µm,1.3s
PLAC                                    AML     AML
        comp=E,52µm,0.4s
PLAC                                    AML     AML
        comp=N,63µm,1.3s
PLAC                                    AML     AML
        comp=E,52µm,0.4s
PLAC                                    AML     AML
        comp=N,63µm,1.3s
CAR1    CAROLEI              1.03  43   AML     AML
        comp=N,896µm,0.7s
CAR1                                    AML     AML
        comp=E,1015µm,0.4s
CAR1                                    AML     AML
        comp=E,1072µm,0.4s
CAR1                                    AML     AML
        comp=N,910µm,0.8s
CAR1                                    AML     AML
        comp=N,910µm,0.8s
CAR1                                    AML     AML
        comp=N,896µm,0.7s
CAR1                                    AML     AML
        comp=E,1072µm,0.4s
CAR1                                    AML     AML
        comp=E,1015µm,0.4s
CAR1                                    AML     AML
        comp=N,910µm,0.8s
CAR1                                    AML     AML
        comp=N,896µm,0.7s
CAR1                                    AML     AML
        comp=E,1072µm,0.4s
CAR1                                    AML     AML
        comp=E,1015µm,0.4s
CET2    Cetraro              1.14  26   AML     AML
        comp=N,1755µm,1.1s
CET2                                    AML     AML
        comp=E,1455µm,0.3s
CET2                                    AML     AML
        comp=N,1755µm,1.1s
CET2                                    AML     AML
        comp=E,1455µm,0.3s
CET2                                    AML     AML
        comp=N,1755µm,1.1s
CET2                                    AML     AML
        comp=E,1455µm,0.3s
PZUN    Potenza              2.17  10   AML     AML
        comp=E,316µm,0.5s
PZUN                                    AML     AML
        comp=E,316µm,0.5s
PZUN                                    AML     AML
        comp=N,396µm,1.0s
PZUN                                    AML     AML
        comp=E,327µm,0.6s
PZUN                                    AML     AML
        comp=N,424µm,1.0s
PZUN                                    AML     AML
        comp=N,396µm,1.0s
PZUN                                    AML     AML
        comp=N,424µm,1.0s
PZUN                                    AML     AML
        comp=E,327µm,0.6s
PZUN                                    AML     AML
        comp=N,396µm,1.0s
PZUN                                    AML     AML
        comp=E,316µm,0.5s
PZUN                                    AML     AML
        comp=N,424µm,1.0s
PZUN                                    AML     AML
        comp=E,327µm,0.6s
```

ROM 12 04:49:07.9±0.1**, 40°.017N**±0°.004×**15°.818E**±0°.007**, h9^{km}, ML2.7**/11**, Error ellipse: s-maj=0.6km s-min=0.3km az=54.0, Southern Italy**

```
Code    Station Name         Δ°   AZ°     Phase ID             Time     Res
                                        Op      ISC        h  m  s      ISC
CUC     Castrocucco          0.02 184   P       Pg        04 49 09.6  0.0
CUC                                     S       Sg        04 49 10.5 -0.3
T0721   Laino Castello       0.15 123   P       Pg        04 49 11.7 +0.6
T0721                                   S       Sg        04 49 14.8 +1.5
SIRI    Monte Sirino -       0.17  13   P       Pg        04 49 12.1 +0.6
SIRI                                    S       Sg        04 49 16.0 +1.9
MMN     Mormanno             0.18 134   P       Pg        04 49 12.3 +0.7
MMN                                     S       Sg        04 49 15.7 +1.4
T0701   Viggianello (P       0.23  98   P       Pg        04 49 13.3 +0.6
T0701                                   S       Sg        04 49 17.4 +1.6
MGR     Morigerati           0.24 301   P       Pg        04 49 13.2 +0.6
MGR                                     S       Sg        04 49 18.3 +2.4
SCHR    S. Chirico Rap       0.27  47   P       Pg        04 49 13.8 +0.4
SCHR                                    S       Sb        04 49 18.5 -1.2
MCEL    Monticello           0.31 358   P       Pg        04 49 14.7 +0.6
BULG    Bulgheria - Ca       0.34 280   P       Pb        04 49 15.5 -0.7
T0702   Acquaformosa (       0.36 145   P       Pg        04 49 15.6 +0.6
SLCN    Sala Consilina       0.40 339   P       Pg        04 49 16.4 +0.7
SALB    San Lorenzo Be       0.43 109   P       Pg        04 49 16.8 +0.5
CMPR    Campora              0.50 307   P       Pg        04 49 17.8 +0.2
CET2    Cetraro              0.50 168   P       Pb        04 49 18.3 -0.5
CET2                                    S       Sb        04 49 25.7 -0.6
CET2                                    AML     AML
        comp=E,1455µm,0.3s
CET2                                    AML     AML
        comp=N,1755µm,1.1s
CET2                                    AML     AML
        comp=N,1755µm,1.1s
CET2                                    AML     AML
        comp=E,1455µm,0.3s
CRAC    Craco                0.59  53   P       Pb        04 49 20.0 -0.3
CDRU    Civita di Ruta       0.61 320   P       Pg        04 49 19.8  0.0
PZUN    Potenza              0.63 359   AML     AML
        comp=N,396µm,1.0s
PZUN                                    AML     AML
        comp=E,316µm,0.5s
PZUN                                    AML     AML
        comp=E,327µm,0.6s
PZUN                                    AML     AML
        comp=N,424µm,1.0s
PZUN                                    AML     AML
        comp=N,396µm,1.0s
PZUN                                    AML     AML
        comp=E,316µm,0.5s
PZUN                                    AML     AML
        comp=N,424µm,1.0s
PZUN                                    AML     AML
        comp=E,327µm,0.6s
MIGL    Miglionico           0.76  39   P       Pg        04 49 22.1 -0.3
CAR1    CAROLEI              0.82 158   P       Pb        04 49 24.4  0.0
CAR1                                    AML     AML
        comp=E,1015µm,0.4s
CAR1                                    AML     AML
        comp=N,896µm,0.7s
CAR1                                    AML     AML
        comp=E,1072µm,0.4s
CAR1                                    AML     AML
        comp=N,910µm,0.8s
CAR1                                    AML     AML
        comp=N,910µm,0.8s
CAR1                                    AML     AML
        comp=N,896µm,0.7s
CAR1                                    AML     AML
        comp=E,1072µm,0.4s
CAR1                                    AML     AML
        comp=E,1015µm,0.4s
JOPP    Joppolo              1.41 178   AML     AML
        comp=N,75µm,0.7s
JOPP                                    AML     AML
        comp=E,71µm,0.5s
JOPP                                    AML     AML
        comp=N,75µm,0.7s
JOPP                                    AML     AML
        comp=E,71µm,0.5s
JOPP                                    AML     AML
        comp=N,75µm,0.7s
JOPP                                    AML     AML
        comp=E,71µm,0.5s
PLAC    Placanica            1.64 163   AML     AML
        comp=E,52µm,0.4s
PLAC                                    AML     AML
        comp=N,63µm,1.3s
PLAC                                    AML     AML
        comp=E,52µm,0.4s
PLAC                                    AML     AML
        comp=N,63µm,1.3s
MSRU    Castanea             1.77 188   AML     AML
        comp=N,240µm,1.4s
MSRU                                    AML     AML
        comp=E,294µm,0.3s
MSRU                                    AML     AML
        comp=N,240µm,1.4s
MSRU                                    AML     AML
        comp=E,294µm,0.3s
MSRU                                    AML     AML
        comp=N,240µm,1.4s
MSRU                                    AML     AML
        comp=E,294µm,0.3s
MSCL    Scilla               1.78 181   AML     AML
        comp=E,172µm,0.7s
MSCL                                    AML     AML
        comp=E,172µm,0.7s
MSCL                                    AML     AML
        comp=N,111µm,1.4s
MSCL                                    AML     AML
        comp=E,172µm,0.7s
MSCL                                    AML     AML
        comp=N,162µm,0.6s
MSCL                                    AML     AML
        comp=N,162µm,0.6s
MILZ    Milazzo              1.80 195   AML     AML
        comp=E,176µm,0.4s
MILZ                                    AML     AML
        comp=E,176µm,0.4s
MILZ                                    AML     AML
        comp=N,93µm,0.2s
MILZ                                    AML     AML
        comp=N,93µm,0.2s
MILZ                                    AML     AML
        comp=N,93µm,0.2s
MILZ                                    AML     AML
        comp=E,176µm,0.4s
MPNC    Port Mandanici       1.90 191   AML     AML
        comp=E,94µm,1.0s
MPNC                                    AML     AML
        comp=N,130µm,1.2s
MPNC                                    AML     AML
        comp=N,130µm,1.2s
MPNC                                    AML     AML
        comp=E,94µm,1.0s
SOI     Samo                 1.95 174   AML     AML
        comp=N,29µm,0.6s
SOI                                     AML     AML
        comp=E,45µm,0.5s
SOI                                     AML     AML
        comp=N,29µm,0.6s
SOI                                     AML     AML
        comp=E,45µm,0.5s
SOI                                     AML     AML
        comp=N,29µm,0.6s
SOI                                     AML     AML
        comp=E,45µm,0.5s
MTTG    Motta San Giov       2.02 183   AML     AML
        comp=N,68µm,0.5s
MTTG                                    AML     AML
        comp=E,68µm,1.4s
MTTG                                    AML     AML
        comp=N,68µm,0.5s
MTTG                                    AML     AML
        comp=E,68µm,1.4s
MTTG                                    AML     AML
        comp=N,68µm,0.5s
MTTG                                    AML     AML
        comp=E,68µm,1.4s
NOV     Novara               2.06 195   AML     AML
        comp=E,123µm,0.9s
NOV                                     AML     AML
        comp=N,99µm,0.3s
NOV                                     AML     AML
        comp=E,123µm,0.9s
NOV                                     AML     AML
        comp=N,99µm,0.3s
NOV                                     AML     AML
        comp=N,99µm,0.3s
NOV                                     AML     AML
        comp=E,123µm,0.9s
AIO     Antillo              2.09 193   AML     AML
        comp=E,85µm,1.2s
AIO                                     AML     AML
        comp=N,68µm,0.7s
AIO                                     AML     AML
        comp=E,85µm,1.2s
AIO                                     AML     AML
        comp=N,68µm,0.7s
```

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*ISCJB **12** 04:58:04.4±0.2, 44°.18N±0°.01×10°.06E±0°.02, h9^{km}±1^{km}, mb3.5/3, MS3.3/1, Error ellipse: s-maj=2.4km s-min=1.8km az=168.6*
*PRU **12** 04:58:04.4±0.0, 44°.18N×10°.23E, h0^{km}*
*ROM **12** 04:58:04.3±0.1, 44°.217N±0°.007×10°.097E±0°.007, h9^{km}, ML3.3/68, Error ellipse: s-maj=0.7km s-min=0.6km az=185.0*
*GEN **12** 04:58:04.9, 44°.23N×10°.12E, h7^{km}, Ml3.2*
*LDG **12** 04:58:05.1±0.1, 44°.22N×10°.15E, h7^{km}, Md3.5/2, Ml3.5/31, Error ellipse: s-maj=1.8km s-min=1.5km az=41.0*
*IDC **12** 04:58:05.5±1.2, 44°.24N×10°.25E, h0^{km}, mb3.4/3, mb1 3.5/7, mb1mx3.3/56, mbtmp3.3/7, ML3.7/4, MS3.0/2, Ms1 3.0/2, ms1mx2.2/35, Error ellipse: s-maj=31.8km s-min=16.9km az=113.0*
*STR **12** 04:58:05.1±1.3, 44°N±12°×1°0E±°, h33^{km}, MLv3.6/6*

ISC 12 04:58:05.1±0.7**, 44°.19N**±0°.02×**10°.04E**±0°.02**, h8**^{km}±4^{km}**, n165, σ1°.80**/198**, mb3.5**/3**, Northern Italy**

```
Code    Station Name         Δ°   AZ°     Phase ID             Time     Res
                                        Op      ISC        h  m  s      ISC
FIVI    Fivizzano            0.08  50 i P       Pg        04 58 06.2 -1.0
FIVI                                    S       Sg        04 58 07.3 -1.5
EQUI    Equi                 0.08 106   P       Pg        04 58 06.8 -0.4
EQUI                                    S       Sg        04 58 08.4 -0.4
EQUI    Equi                 0.08 106   P       Pg        04 58 06.8 -0.4
EQUI                                    S       Sg        04 58 08.3 -0.5
EQUI                                    AML     AML
EQUI                                    AML     AML
        comp=N,62150µm,0.2s
EQUI                                    AML     AML
EQUI                                    AML     AML
        comp=N,62150µm,0.2s
FOSD    Fosdinovo            0.09 202 i P       Pg        04 58 08.2 +0.9
FOSD                                    S       Sg        04 58 10.8 +1.9
T0912   Minucciano (LU       0.12 100   P       Pg        04 58 07.2 -0.6
T0912                                   S       Sg        04 58 09.1 -0.7
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
T0912                                   AML     AML
PLMA    Palmaria, Port       0.20 225 i P       Pg        04 58 10.2 +1.1
PLMA                                    S       Sg        04 58 13.7 +1.9
PLMA                                    AML     AML
        comp=E,21500µm,0.4s
PLMA                                    AML     AML
        comp=N,17600µm,1.0s
PLMA                                    AML     AML
        comp=E,21500µm,0.4s
PLMA                                    AML     AML
        comp=N,17600µm,1.0s
PLMA                                    AML     AML
        comp=E,21500µm,0.4s
PLMA                                    AML     AML
        comp=N,17600µm,1.0s
PLMA                                    AML     AML
        comp=N,17600µm,1.0s
PLMA                                    AML     AML
        comp=E,21500µm,0.4s
PLMA                                    AML     AML
        comp=N,17600µm,1.0s
PLMA                                    AML     AML
        comp=E,21500µm,0.4s
VLC     Villacollemand       0.25  97 eP        Pg        04 58 09.1 -1.0
VLC                                     S       Sg        04 58 12.4 -1.1
VLC                                     AML     AML
        comp=E,7810µm,0.7s
VLC                                     AML     AML
        comp=N,7030µm,0.9s
VLC                                     AML     AML
        comp=E,7770µm,0.7s
VLC                                     AML     AML
        comp=N,7070µm,0.9s
VLC                                     AML     AML
        comp=E,7815µm,0.7s
VLC                                     AML     AML
        comp=N,7030µm,0.9s
VLC                                     AML     AML
        comp=E,7770µm,0.7s
VLC                                     AML     AML
        comp=N,7070µm,0.9s
VLC                                     AML     AML
        comp=E,7810µm,0.7s
VLC                                     AML     AML
        comp=N,7035µm,0.9s
VLC                                     AML     AML
        comp=E,7770µm,0.7s
VLC                                     AML     AML
        comp=N,7070µm,0.9s
VLC                                     AML     AML
        comp=E,7810µm,0.7s
VLC                                     AML     AML
        comp=E,7770µm,0.7s
VLC                                     AML     AML
        comp=N,7070µm,0.9s
VLC                                     AML     AML
        comp=N,7035µm,0.9s
VLC                                     AML     AML
        comp=E,7810µm,0.7s
VLC                                     AML     AML
        comp=E,7770µm,0.7s
VLC                                     AML     AML
        comp=N,7070µm,0.9s
VLC                                     AML     AML
        comp=N,7035µm,0.9s
GRAM    Graiana              0.30   3   P       Pg        04 58 10.3 -0.9
GRAM                                    S       Sg        04 58 14.4 -0.7
GRAM    Graiana              0.30   3 i P       Pg        04 58 10.3 -0.9
GRAM                                    S       Sg        04 58 14.5 -0.7
GRAM                                    AML     AML
        comp=E,33350µm,0.2s
GRAM                                    AML     AML
        comp=N,35400µm,0.2s
GRAM                                    AML     AML
        comp=E,33350µm,0.2s
GRAM                                    AML     AML
        comp=N,35400µm,0.2s
GRAM                                    AML     AML
        comp=E,33350µm,0.2s
GRAM                                    AML     AML
        comp=N,35400µm,0.2s
GRAM                                    AML     AML
        comp=N,35400µm,0.2s
GRAM                                    AML     AML
        comp=E,33350µm,0.2s
GRAM                                    AML     AML
        comp=N,35400µm,0.2s
GRAM                                    AML     AML
        comp=E,33350µm,0.2s
ERBM    Eremo                0.35  49   P       Pg        04 58 10.9 -1.2
ERBM                                    S       Sg        04 58 15.6 -1.1
ERBM                                    AML     AML
        comp=E,10350µm,0.7s
ERBM                                    AML     AML
        comp=N,17350µm,1.3s
ERBM                                    AML     AML
        comp=E,10370µm,0.7s
ERBM                                    AML     AML
        comp=N,17350µm,1.3s
ERBM                                    AML     AML
        comp=E,10375µm,0.7s
ERBM                                    AML     AML
        comp=N,17350µm,1.3s
ERBM                                    AML     AML
        comp=E,10375µm,0.7s
ERBM                                    AML     AML
        comp=N,17350µm,1.3s
ERBM                                    AML     AML
        comp=E,10375µm,0.7s
ERBM                                    AML     AML
        comp=N,17350µm,1.3s
CARD    Cardoso              0.35 117   P       Pg        04 58 11.3 -0.8
CARD                                    S       Sg        04 58 16.4 -0.3
CARD    Cardoso              0.35 117   P       Pg        04 58 11.2 -0.9
CARD                                    AML     AML
        comp=E,8000µm,0.6s
CARD                                    AML     AML
        comp=N,8610µm,1.3s
CARD                                    AML     AML
        comp=E,8005µm,0.6s
CARD                                    AML     AML
        comp=N,8610µm,1.3s
CARD                                    AML     AML
        comp=E,8005µm,0.6s
CARD                                    AML     AML
        comp=N,8610µm,1.3s
```

CARD	comp=E,8005µm,0.6s			AML	AML		
CARD	comp=N,8610µm,1.3s			AML	AML		
CARD	comp=E,8005µm,0.6s			AML	AML		
CARD	comp=N,8610µm,1.3s			AML	AML		
MSSA	**Maissana**	**0.40**	**289**	P	**Pg**	**04 58 13.3**	**+0.3**
MSSA				S	**Sg**	**04 58 18.9**	**+0.7**
BDI	**Bagni Di Lucca**	**0.42**	**107**	P	**Pg**	**04 58 12.1**	**-1.2**
BDI	comp=E,3735µm,0.6s			AML	AML		
BDI	comp=N,3995µm,0.5s			AML	AML		
BDI	comp=E,3810µm,0.4s			AML	AML		
BDI	comp=N,3585µm,0.4s			AML	AML		
BDI	comp=E,3735µm,0.6s			AML	AML		
BDI	comp=N,3995µm,0.5s			AML	AML		
BDI	comp=E,3810µm,0.4s			AML	AML		
BDI	comp=N,3585µm,0.4s			AML	AML		
BDI	comp=N,3585µm,0.4s			AML	AML		
BDI	comp=E,3810µm,0.4s			AML	AML		
BDI	comp=E,3735µm,0.6s			AML	AML		
BDI	comp=N,3995µm,0.5s			AML	AML		
BDI	comp=N,3585µm,0.4s			AML	AML		
BDI	comp=E,3810µm,0.4s			AML	AML		
BDI	comp=E,3735µm,0.6s			AML	AML		
BDI	comp=N,3995µm,0.5s			AML	AML		
MAIM	**Mastiano**	**0.42**	**130**	P	**Pg**	**04 58 12.7**	**-0.7**
MAIM				S	**Sg**	**04 58 18.9**	**0.0**
MAIM	**Mastiano**	**0.42**	**130**	*e*P	**Pg**	**04 58 12.7**	**-0.7**
MAIM				S	**Sg**	**04 58 18.4**	**-0.5**
MAIM	comp=E,10005µm,0.5s			AML	AML		
MAIM	comp=N,6950µm,0.4s			AML	AML		
MAIM	comp=E,10005µm,0.5s			AML	AML		
MAIM	comp=N,6950µm,0.4s			AML	AML		
MAIM	comp=E,10005µm,0.5s			AML	AML		
MAIM	comp=N,6950µm,0.4s			AML	AML		
MAIM	comp=E,10005µm,0.5s			AML	AML		
MAIM	comp=N,6950µm,0.4s			AML	AML		
MAIM	comp=E,10005µm,0.5s			AML	AML		
MAIM	comp=N,6950µm,0.4s			AML	AML		
POPM	**Popiglio**	**0.53**	**105**	P	**Pg**	**04 58 14.2**	**-1.2**
POPM	**Popiglio**	**0.53**	**105**	P	**Pg**	**04 58 14.2**	**-1.2**
POPM	comp=E,4075µm,1.2s			AML	AML		
POPM	comp=N,7640µm,0.5s			AML	AML		
POPM	comp=E,4075µm,1.2s			AML	AML		
POPM	comp=N,7640µm,0.5s			AML	AML		
POPM	comp=N,7640µm,0.5s			AML	AML		
POPM	comp=E,4075µm,1.2s			AML	AML		
POPM	comp=N,7640µm,0.5s			AML	AML		
POPM	comp=E,4075µm,1.2s			AML	AML		
PRMA	**PARMA**	**0.61**	**18**	P	**Pg**	**04 58 16.6**	**-0.2**
PRMA	comp=E,4755µm,0.7s			AML	AML		
PRMA	comp=N,4265µm,1.1s			AML	AML		
PRMA	comp=E,4755µm,0.7s			AML	AML		
PRMA	comp=N,4265µm,1.1s			AML	AML		
PRMA	comp=E,4755µm,0.7s			AML	AML		
PRMA	comp=N,4265µm,1.1s			AML	AML		
PRMA	comp=E,4755µm,0.7s			AML	AML		
PRMA	comp=N,4265µm,1.1s			AML	AML		
GORR	**Gorreto**	**0.68**	**308**	P	**Pg**	**04 58 18.2**	**-0.1**
GORR	**Gorreto**	**0.68**	**308**	P	**Pg**	**04 58 18.1**	**-0.1**
GORR	comp=E,2145µm,0.9s			AML	AML		
GORR	comp=N,2360µm,0.7s			AML	AML		
GORR	comp=E,2145µm,0.9s			AML	AML		
GORR	comp=N,2360µm,0.7s			AML	AML		
GORR	comp=E,2145µm,0.9s			AML	AML		
GORR	comp=N,2360µm,0.7s			AML	AML		
GORR	comp=E,2145µm,0.9s			AML	AML		
GORR	comp=N,2360µm,0.7s			AML	AML		
ZCCA	**Zocca**	**0.69**	**76**	P	**Pg**	**04 58 18.2**	**-0.2**
ZCCA	comp=E,1665µm,1.2s			AML	AML		
ZCCA	comp=N,2000µm,0.4s			AML	AML		
ZCCA	comp=E,1750µm,1.2s			AML	AML		
ZCCA	comp=N,2110µm,0.9s			AML	AML		
ZCCA	comp=E,1665µm,1.2s			AML	AML		
ZCCA	comp=N,2005µm,0.4s			AML	AML		
ZCCA	comp=E,1750µm,1.2s			AML	AML		
ZCCA	comp=N,2110µm,0.9s			AML	AML		
ZCCA	comp=E,1750µm,1.2s			AML	AML		
ZCCA	comp=E,1665µm,1.2s			AML	AML		
ZCCA	comp=N,2005µm,0.4s			AML	AML		
ZCCA	comp=N,2110µm,0.9s			AML	AML		
ZCCA	comp=E,1750µm,1.2s			AML	AML		
ZCCA	comp=E,1665µm,1.2s			AML	AML		
ZCCA	comp=N,2005µm,0.4s			AML	AML		
ZCCA	comp=N,2110µm,0.9s			AML	AML		
MTCR	**Monte La Croce**	**0.71**	**103**	P	**Pg**	**04 58 17.4**	**-1.3**
MTCR	comp=E,1582µm,0.5s			AML	AML		
MTCR	comp=N,2780µm,1.1s			AML	AML		
MTCR	comp=E,1590µm,0.5s			AML	AML		
MTCR	comp=N,2765µm,1.1s			AML	AML		
MTCR	comp=N,2765µm,1.1s			AML	AML		
MTCR	comp=E,1590µm,0.5s			AML	AML		
MTCR	comp=N,2765µm,1.1s			AML	AML		
MTCR	comp=E,1590µm,0.5s			AML	AML		
BOB	**Bobbio (Coli)**	**0.72**	**324**	*e*P	**Pg**	**04 58 18.5**	**-0.4**
BOB				S	**Sb**	**04 58 29.5**	**-0.4**
BOB	comp=E,2005µm,0.5s			AML	AML		
BOB	comp=N,1855µm,1.0s			AML	AML		
BOB	comp=E,2180µm,0.7s			AML	AML		
BOB	comp=N,660µm,0.5s			AML	AML		
BOB	comp=E,2005µm,0.5s			AML	AML		
BOB	comp=N,1855µm,1.0s			AML	AML		
BOB	comp=N,1855µm,1.0s			AML	AML		
BOB	comp=E,2005µm,0.5s			AML	AML		
BOB	comp=N,1855µm,1.0s			AML	AML		
BOB	comp=E,2005µm,0.5s			AML	AML		
GROG	**Isola di Gorgo**	**0.77**	**188**	*e*P	**Pb**	**04 58 20.2**	**-0.5**
GROG	comp=E,2890µm,0.7s			AML	AML		
GROG	comp=N,2275µm,0.3s			AML	AML		
GROG	comp=E,2890µm,0.7s			AML	AML		
GROG	comp=N,2275µm,0.3s			AML	AML		
GROG	comp=E,2890µm,0.7s			AML	AML		
GROG	comp=N,2275µm,0.3s			AML	AML		
GROG	comp=E,2890µm,0.7s			AML	AML		
GROG	comp=N,2275µm,0.3s			AML	AML		
PTF	**Prato**	**0.77**	**107**	P	**Pg**	**04 58 18.9**	**-1.1**
NOVE	**Novellara** comp=N,4430µm,1.6s	**0.78**	**38**	AML	AML		
NOVE	comp=E,5060µm,1.2s			AML	AML		
NOVE	comp=E,5060µm,1.2s			AML	AML		
NOVE	comp=N,4430µm,1.6s			AML	AML		
NOVE	comp=E,5060µm,1.2s			AML	AML		
NOVE	comp=N,4430µm,1.6s			AML	AML		
CRMI	**Carmignano**	**0.78**	**120**	P	**Pg**	**04 58 19.5**	**-0.6**
CRMI	comp=E,1415µm,1.4s			AML	AML		
CRMI	comp=N,2390µm,1.2s			AML	AML		
CRMI	comp=E,586µm,1.3s			AML	AML		
CRMI	comp=N,994µm,1.2s			AML	AML		
CRMI	comp=E,1420µm,1.4s			AML	AML		
CRMI	comp=N,2390µm,1.2s			AML	AML		
CRMI	comp=E,586µm,1.3s			AML	AML		
CRMI	comp=N,994µm,1.2s			AML	AML		
CRMI	comp=E,586µm,1.3s			AML	AML		
CRMI	comp=E,1420µm,1.4s			AML	AML		
CRMI	comp=N,994µm,1.2s			AML	AML		
CRMI	comp=N,2390µm,1.2s			AML	AML		
CRMI	comp=E,586µm,1.3s			AML	AML		
CRMI	comp=E,1420µm,1.4s			AML	AML		
CRMI	comp=N,994µm,1.2s			AML	AML		
CRMI	comp=N,2390µm,1.2s			AML	AML		
SEI	**Scarperia**	**0.95**	**98**	P	**Pg**	**04 58 22.5**	**-1.0**
SEI	comp=E,2450µm,0.5s			AML	AML		
SEI	comp=N,4340µm,0.4s			AML	AML		
SEI	comp=E,2450µm,0.5s			AML	AML		
SEI	comp=N,4340µm,0.4s			AML	AML		
SEI	comp=N,4340µm,0.4s			AML	AML		
SEI	comp=E,2450µm,0.5s			AML	AML		
SEI	comp=N,4340µm,0.4s			AML	AML		
SEI	comp=E,2450µm,0.5s			AML	AML		
BRIS	**BRISIGHELLA** comp=N,1655µm,0.5s	**1.06**	**92**	AML	AML		
BRIS	comp=E,1530µm,0.9s			AML	AML		
BRIS	comp=N,1655µm,0.5s			AML	AML		
BRIS	comp=N,1655µm,0.5s			AML	AML		
BRIS	comp=E,1530µm,0.9s			AML	AML		
BRIS	comp=E,1530µm,0.9s			AML	AML		
OSSC	**Osservatorio P**	**1.09**	**127**	P	**Pg**	**04 58 25.4**	**-0.7**
OSSC	comp=E,1955µm,0.5s			AML	AML		
OSSC	comp=N,2075µm,1.4s			AML	AML		
OSSC	comp=E,1895µm,0.5s			AML	AML		
OSSC	comp=N,2050µm,1.4s			AML	AML		
OSSC	comp=E,1960µm,0.5s			AML	AML		
OSSC	comp=N,2070µm,1.4s			AML	AML		
OSSC	comp=E,1895µm,0.5s			AML	AML		
OSSC	comp=N,2050µm,1.4s			AML	AML		
OSSC	comp=E,1895µm,0.5s			AML	AML		
OSSC	comp=N,2070µm,1.4s			AML	AML		
OSSC	comp=N,2050µm,1.4s			AML	AML		
OSSC	comp=E,1960µm,0.5s			AML	AML		
OSSC	comp=E,1895µm,0.5s			AML	AML		
OSSC	comp=N,2070µm,1.4s			AML	AML		
OSSC	comp=N,2050µm,1.4s			AML	AML		
OSSC	comp=E,1960µm,0.5s			AML	AML		
RUFI	**Rufina**	**1.11**	**108**	P	**Pb**	**04 58 24.8**	**-1.7**
RUFI	comp=E,854µm,0.6s			AML	AML		
RUFI	comp=N,1049µm,0.5s			AML	AML		
PCP	**Piancastagn**	**1.13**	**289**	P	**Pb**	**04 58 26.2**	**-0.7**
PCP	comp=E,1125µm,0.3s			AML	AML		
PCP	comp=N,848µm,1.4s			AML	AML		
PCP	comp=E,1125µm,0.3s			AML	AML		
PCP	comp=N,848µm,1.4s			AML	AML		
PCP	comp=N,848µm,1.4s			AML	AML		
PCP	comp=E,1125µm,0.3s			AML	AML		
PCP	comp=N,848µm,1.4s			AML	AML		
PCP	comp=E,1125µm,0.3s			AML	AML		
CSNT	**Castellina Chi**	**1.15**	**128**	P	**Pb**	**04 58 26.3**	**-1.0**
CSNT	comp=E,1115µm,0.7s			AML	AML		
CSNT	comp=N,1670µm,0.4s			AML	AML		
CSNT	comp=E,1115µm,0.7s			AML	AML		
CSNT	comp=N,1670µm,0.4s			AML	AML		
CSNT	comp=N,1670µm,0.4s			AML	AML		
CSNT	comp=E,1115µm,0.7s			AML	AML		
CSNT	comp=N,1670µm,0.4s			AML	AML		
CSNT	comp=E,1115µm,0.7s			AML	AML		
QLNO	**Quiliano**	**1.23**	**277**	P	**Pn**	**04 58 27.7**	**-0.8**
QLNO	comp=E,713µm,0.8s			AML	AML		
QLNO	comp=N,1270µm,0.8s			AML	AML		
QLNO	comp=E,713µm,0.8s			AML	AML		
QLNO	comp=N,1270µm,0.8s			AML	AML		
QLNO	comp=N,1270µm,0.8s			AML	AML		
QLNO	comp=E,713µm,0.8s			AML	AML		
QLNO	comp=N,1270µm,0.8s			AML	AML		
QLNO	comp=E,713µm,0.8s			AML	AML		
FINB	**Finale Ligure**	**1.24**	**270**	P	**Pn**	**04 58 27.9**	**-0.7**
FINB	comp=E,520µm,0.2s			AML	AML		
FINB	comp=N,908µm,0.7s			AML	AML		
FINB	comp=E,520µm,0.2s			AML	AML		
FINB	comp=N,908µm,0.7s			AML	AML		
FINB	comp=E,520µm,0.2s			AML	AML		
FINB	comp=N,908µm,0.7s			AML	AML		
FINB	comp=E,520µm,0.2s			AML	AML		
FINB	comp=N,908µm,0.7s			AML	AML		
TRIF	**Trifonti**	**1.24**	**150**	P	**Pn**	**04 58 28.2**	**-0.5**
TRIF	comp=E,714µm,0.7s			AML	AML		
TRIF	comp=N,846µm,0.5s			AML	AML		
TRIF	comp=E,714µm,0.7s			AML	AML		
TRIF	comp=N,846µm,0.5s			AML	AML		
TRIF	comp=N,846µm,0.5s			AML	AML		
TRIF	comp=E,714µm,0.7s			AML	AML		
TRIF	comp=N,846µm,0.5s			AML	AML		
TRIF	comp=E,714µm,0.7s			AML	AML		
FROS	**Frosini**	**1.27**	**140**	P	**Pn**	**04 58 28.0**	**-1.0**
FROS	comp=E,1520µm,0.5s			AML	AML		
FROS	comp=N,1425µm,0.6s			AML	AML		
FROS	comp=E,1520µm,0.5s			AML	AML		
FROS	comp=N,1425µm,0.6s			AML	AML		
FROS	comp=E,1520µm,0.5s			AML	AML		
FROS	comp=N,1425µm,0.6s			AML	AML		
FROS	comp=E,1520µm,0.5s			AML	AML		
FROS	comp=N,1425µm,0.6s			AML	AML		
ASQU	**Asqua**	**1.32**	**107**	P	**Pn**	**04 58 28.4**	**-1.4**
ASQU	comp=E,622µm,0.5s			AML	AML		
ASQU	comp=N,540µm,1.0s			AML	AML		
ASQU	comp=E,622µm,0.5s			AML	AML		
ASQU	comp=N,540µm,1.0s			AML	AML		
ASQU	comp=N,540µm,1.0s			AML	AML		
ASQU	comp=E,622µm,0.5s			AML	AML		
ASQU	comp=N,540µm,1.0s			AML	AML		
ASQU	comp=E,622µm,0.5s			AML	AML		
RORO	**Rocca Rossa**	**1.43**	**268**	P	**Pn**	**04 58 30.6**	**-0.6**
RORO	comp=E,442µm,0.7s			AML	AML		
RORO	comp=N,522µm,0.7s			AML	AML		
RORO	comp=N,522µm,0.7s			AML	AML		
RORO	comp=E,442µm,0.7s			AML	AML		
RORO	comp=N,522µm,0.7s			AML	AML		
RORO	comp=E,442µm,0.7s			AML	AML		
CASP	**Castiglione de**	**1.52**	**157**	P	**Pn**	**04 58 31.3**	**-1.3**
CASP	comp=E,447µm,0.5s			AML	AML		
CASP	comp=N,381µm,1.1s			AML	AML		
CASP	comp=N,381µm,1.1s			AML	AML		
CASP	comp=E,447µm,0.5s			AML	AML		
CASP	comp=N,381µm,1.1s			AML	AML		
CASP	comp=E,447µm,0.5s			AML	AML		
IMI	**Imperia**	**1.57**	**261**	P	**Pn**	**04 58 32.5**	**-0.8**
IMI	comp=E,482µm,0.6s			AML	AML		
IMI	comp=N,774µm,1.3s			AML	AML		
IMI	comp=E,483µm,0.6s			AML	AML		
IMI	comp=N,775µm,1.3s			AML	AML		
IMI	comp=E,483µm,0.6s			AML	AML		
IMI	comp=N,775µm,1.3s			AML	AML		
IMI	comp=E,483µm,0.6s			AML	AML		
IMI	comp=N,775µm,1.3s			AML	AML		
GBOS	**Grotte di Boss**	**1.59**	**273**	P	**Pn**	**04 58 32.9**	**-0.6**
GBOS	comp=E,228µm,0.5s			AML	AML		
GBOS	comp=N,249µm,0.5s			AML	AML		
GBOS	comp=E,228µm,0.5s			AML	AML		
GBOS	comp=N,249µm,0.5s			AML	AML		
GBOS	comp=N,249µm,0.5s			AML	AML		
GBOS	comp=E,228µm,0.5s			AML	AML		
GBOS	comp=N,249µm,0.5s			AML	AML		
GBOS	comp=E,228µm,0.5s			AML	AML		
BALD	**Monte Baldo**	**1.59**	**20**	*e*Pg	**Pn**	**04 58 33.8**	**+0.1**
BALD				*e*Sg	**Sg**	**04 58 56.3**	**0.0**
MDI	**Monti di Nese**	**1.61**	**352**	P	**Pn**	**04 58 34.2**	**+0.4**

MDI				AML	AML		
	comp=E,1125µm,0.7s						
MDI				AML	AML		
	comp=N,772µm,0.3s						
MDI				AML	AML		
	comp=N,772µm,0.3s						
MDI				AML	AML		
	comp=E,1125µm,0.7s						
MDI				AML	AML		
	comp=N,772µm,0.3s						
MDI				AML	AML		
	comp=E,1125µm,0.7s						
MGRO	**Montegrosso**	**1.62**	**266**	P	**Pn**	**04 58 33.0**	**-1.0**
MGRO				AML	AML		
	comp=E,560µm,0.6s						
MGRO				AML	AML		
	comp=N,414µm,0.5s						
MGRO				AML	AML		
	comp=E,560µm,0.6s						
MGRO				AML	AML		
	comp=N,414µm,0.5s						
MGRO				AML	AML		
	comp=E,560µm,0.6s						
MGRO				AML	AML		
	comp=N,414µm,0.5s						
ROVR	**Rover Verones**	**1.63**	**26**	P	**Pn**	**04 58 34.0**	**-0.2**
ROVR				AML	AML		
	comp=E,1018µm,0.7s						
ROVR				AML	AML		
	comp=N,1425µm,0.6s						
ROVR				AML	AML		
	comp=E,400µm,0.7s						
ROVR				AML	AML		
	comp=N,564µm,0.6s						
ROVR				AML	AML		
	comp=N,1425µm,0.6s						
ROVR				AML	AML		
	comp=N,564µm,0.6s						
ROVR				AML	AML		
	comp=E,400µm,0.7s						
ROVR				AML	AML		
	comp=E,1018µm,0.7s						
ROVR				AML	AML		
	comp=N,1425µm,0.6s						
ROVR				AML	AML		
	comp=N,564µm,0.6s						
ROVR				AML	AML		
	comp=E,400µm,0.7s						
ROVR				AML	AML		
	comp=E,1018µm,0.7s						
CAFI	**Castiglion Fio**	**1.64**	**121**	P	**Pn**	**04 58 33.4**	**-0.7**
CAFI				AML	AML		
	comp=E,238µm,0.7s						
CAFI				AML	AML		
	comp=N,230µm,1.6s						
CAFI				AML	AML		
	comp=N,230µm,1.6s						
CAFI				AML	AML		
	comp=E,238µm,0.7s						
CAFI				AML	AML		
	comp=N,230µm,1.6s						
CAFI				AML	AML		
	comp=E,238µm,0.7s						
MAGA	**Magasa**	**1.64**	**14**	P	**Pn**	**04 58 34.0**	**-0.3**
MAGA				AML	AML		
	comp=E,3005µm,0.7s						
MAGA				AML	AML		
	comp=N,1308µm,0.7s						
MAGA				AML	AML		
	comp=E,3005µm,0.7s						
MAGA				AML	AML		
	comp=N,1308µm,0.7s						
MAGA				AML	AML		
	comp=E,3005µm,0.7s						
MAGA				AML	AML		
	comp=N,1308µm,0.7s						
TEOL	**Teolo**	**1.65**	**44**	*e*Pg	**Pn**	**04 58 34.2**	**-0.1**
TEOL				*e*Sg	**Sb**	**04 58 56.7**	**+0.1**
MARN	**Marana (Italy)**	**1.67**	**29**	*e*Pg	**Pn**	**04 58 34.9**	**+0.3**
MARN				*e*Sg	**Sb**	**04 58 57.7**	**+0.5**
PARC	**Parchiule**	**1.68**	**108**	P	**Pn**	**04 58 33.3**	**-1.4**
PARC				AML	AML		
	comp=E,281µm,0.7s						
PARC				AML	AML		
	comp=N,391µm,0.9s						
PARC				AML	AML		
	comp=E,281µm,0.7s						
PARC				AML	AML		
	comp=N,391µm,0.9s						
PARC				AML	AML		
	comp=E,281µm,0.7s						
PARC				AML	AML		
	comp=N,391µm,0.9s						
NEGI	**Seborga**	**1.72**	**259**	P	**Pn**	**04 58 34.7**	**-0.6**
NEGI				AML	AML		
	comp=E,423µm,1.5s						
NEGI				AML	AML		
	comp=N,976µm,0.6s						
NEGI				AML	AML		
	comp=N,976µm,0.6s						
NEGI				AML	AML		
	comp=E,423µm,1.5s						
NEGI				AML	AML		
	comp=N,976µm,0.6s						
NEGI				AML	AML		
	comp=E,423µm,1.5s						
SAOF	**Saorge**	**1.80**	**264**	P	**Pn**	**04 58 36.1**	**-0.3**
SAOF				AML	AML		
	comp=E,333µm,1.6s						
SAOF				AML	AML		
	comp=N,672µm,0.8s						
SAOF				AML	AML		
	comp=N,672µm,0.8s						
SAOF				AML	AML		
	comp=E,333µm,1.6s						
SAOF				AML	AML		
	comp=N,672µm,0.8s						
SAOF				AML	AML		
	comp=E,333µm,1.6s						
PGF	**Pioggiola**	**1.81**	**205**	*e*Pn	**Pn**	**04 58 36.0**	**-0.6**
PGF				*e*Sn	**Sn**	**04 58 58.7**	**-1.0**
	comp=E,74nm,0.3s						
RNI	**Roncone**	**1.84**	**13**	*e*Pn	**Pn**	**04 58 37.3**	**+0.2**
PE3	**Peglio**	**1.84**	**105**	AML	AML		
	comp=N,770µm,0.7s						
PE3				AML	AML		
	comp=E,737µm,0.5s						
PE3				AML	AML		
	comp=N,770µm,0.7s						
PE3				AML	AML		
	comp=E,737µm,0.5s						
PE3				AML	AML		
	comp=E,737µm,0.5s						
PE3				AML	AML		
	comp=N,770µm,0.7s						
MUGIO	**Muggio**	**1.87**	**338**	AML	AML		
	comp=E,414µm,0.7s						
MUGIO				AML	AML		
	comp=E,414µm,0.7s						
MUGIO				AML	AML		
	comp=N,404µm,0.8s						
MUGIO				AML	AML		
	comp=N,404µm,0.8s						
MUGIO				AML	AML		
	comp=E,414µm,0.7s						
MUGIO				AML	AML		
	comp=N,404µm,0.8s						
DOSS	**Dosso del Somm**	**1.88**	**25**	*e*Pn	**Pn**	**04 58 37.3**	**-0.3**
ENR	**Entracque**	**1.89**	**272**	AML	AML		
	comp=E,239µm,1.0s						
ENR				AML	AML		
	comp=E,239µm,1.0s						
ENR				AML	AML		
	comp=N,296µm,0.5s						
ENR				AML	AML		
	comp=N,296µm,0.5s						
ENR				AML	AML		
	comp=N,296µm,0.5s						
ENR				AML	AML		
	comp=E,239µm,1.0s						
MABI	**Malga Bissina**	**1.90**	**10**	AML	AML		
	comp=N,162µm,0.6s						
MABI				AML	AML		
	comp=E,272µm,1.1s						
MABI				AML	AML		
	comp=N,162µm,0.6s						
MABI				AML	AML		
	comp=E,272µm,1.1s						
MABI				AML	AML		
	comp=N,162µm,0.6s						
MABI				AML	AML		
	comp=E,272µm,1.1s						
SBF	**Sospel**	**1.91**	**261**	*e*Pn	**Pn**	**04 58 37.9**	**0.0**
SBF				*e*Sn	**Sn**	**04 59 01.5**	**-0.7**
	comp=E,112nm,0.2s						
MAON	**Monte Argentar**	**1.93**	**155**	AML	AML		
	comp=N,214µm,0.5s						
MAON				AML	AML		
	comp=E,158µm,0.5s						
MAON				AML	AML		
	comp=N,214µm,0.5s						
MAON				AML	AML		
	comp=E,158µm,0.5s						
MAON				AML	AML		
	comp=N,214µm,0.5s						
MAON				AML	AML		
	comp=E,158µm,0.5s						
ATTE	**AVT- Monte Tez**	**1.95**	**120**	AML	AML		
	comp=N,236µm,0.8s						
ATTE				AML	AML		
	comp=E,292µm,0.6s						
ATTE				AML	AML		
	comp=N,236µm,0.8s						
ATTE				AML	AML		
	comp=E,292µm,0.6s						
ATTE				AML	AML		
	comp=E,292µm,0.6s						
ATTE				AML	AML		
	comp=N,236µm,0.8s						
STV	**Sant Anna di V**	**1.96**	**273**	AML	AML		
	comp=E,179µm,0.2s						
STV				AML	AML		
	comp=E,179µm,0.2s						
STV				AML	AML		
	comp=N,224µm,0.7s						
STV				AML	AML		
	comp=E,179µm,0.2s						
STV				AML	AML		
	comp=N,224µm,0.7s						
STV				AML	AML		
	comp=N,224µm,0.7s						
ESCA	**l'Escarene**	**1.96**	**260**	Pn	**Pn**	**04 58 38.5**	**-0.1**
ESCA				Sn	**Sn**	**04 59 02.5**	**-0.8**
MURB	**Monte Urbino**	**2.02**	**116**	AML	AML		
	comp=N,631µm,0.4s						
MURB				AML	AML		
	comp=E,462µm,0.3s						
MURB				AML	AML		
	comp=N,631µm,0.4s						
MURB				AML	AML		
	comp=E,462µm,0.3s						
MURB				AML	AML		
	comp=N,631µm,0.4s						
MURB				AML	AML		
	comp=E,462µm,0.3s						
TRAV	**Traversella**	**2.10**	**310**	AML	AML		
	comp=N,326µm,0.3s						
TRAV				AML	AML		
	comp=E,354µm,1.3s						
TRAV				AML	AML		
	comp=E,354µm,1.3s						
TRAV				AML	AML		
	comp=N,326µm,0.3s						
TRAV				AML	AML		
	comp=E,354µm,1.3s						
TRAV				AML	AML		
	comp=N,326µm,0.3s						
PZZ	**Stroppo**	**2.12**	**280**	AML	AML		
	comp=E,299µm,0.6s						
PZZ				AML	AML		
	comp=E,299µm,0.6s						
PZZ				AML	AML		
	comp=N,328µm,0.7s						
PZZ				AML	AML		
	comp=N,328µm,0.7s						
PZZ				AML	AML		
	comp=N,328µm,0.7s						
PZZ				AML	AML		
	comp=E,299µm,0.6s						
ATCC	**AVT- Casa Cast**	**2.13**	**117**	AML	AML		
	comp=E,420µm,0.6s						
ATCC				AML	AML		
	comp=N,316µm,0.8s						
ATCC				AML	AML		
	comp=E,420µm,0.6s						
ATCC				AML	AML		
	comp=N,316µm,0.8s						
ATCC				AML	AML		
	comp=E,420µm,0.6s						
ATCC				AML	AML		
	comp=N,316µm,0.8s						
ISO	**Isola**	**2.15**	**271**	Pn	**Pn**	**04 58 41.8**	**+0.5**
ISO				Sn	**Sn**	**04 59 07.4**	**-0.8**
SMPL	**Sampolo**	**2.17**	**195**	AML	AML		
	comp=N,15650µm,0.6s						
SMPL				AML	AML		
	comp=E,15450µm,0.5s						
SMPL				AML	AML		
	comp=N,15650µm,0.6s						
SMPL				AML	AML		
	comp=E,15450µm,0.5s						
SMPL				AML	AML		
	comp=N,15650µm,0.6s						
SMPL				AML	AML		
	comp=E,15450µm,0.5s						
CTI	**Castel Tesino**	**2.18**	**31**	AML	AML		
	comp=N,517µm,0.7s						
CTI				AML	AML		
	comp=E,533µm,0.9s						
CTI				AML	AML		
	comp=N,517µm,0.7s						
CTI				AML	AML		
	comp=N,517µm,0.7s						
CTI				AML	AML		
	comp=E,533µm,0.9s						
CTI				AML	AML		
	comp=E,533µm,0.9s						
ASSB	**Assisi San Ben**	**2.22**	**120**	AML	AML		
	comp=N,167µm,0.7s						
ASSB				AML	AML		
	comp=E,163µm,1.6s						
ASSB				AML	AML		
	comp=N,167µm,0.7s						
ASSB				AML	AML		
	comp=E,163µm,1.6s						
ASSB				AML	AML		
	comp=N,167µm,0.7s						
ASSB				AML	AML		
	comp=E,163µm,1.6s						
TUE	**Stuetta**	**2.34**	**348**	AML	AML		
	comp=N,214µm,0.9s						
TUE				AML	AML		
	comp=E,164µm,0.4s						
TUE				AML	AML		
	comp=N,214µm,0.9s						
TUE				AML	AML		
	comp=E,231µm,0.5s						
TUE				AML	AML		
	comp=N,259µm,0.8s						
TUE				AML	AML		
	comp=N,259µm,0.8s						
TUE				AML	AML		
	comp=E,164µm,0.4s						
TUE				AML	AML		
	comp=E,231µm,0.5s						
TUE				AML	AML		
	comp=N,214µm,0.9s						
TUE				AML	AML		
	comp=N,259µm,0.8s						
TUE				AML	AML		
	comp=E,164µm,0.4s						
TUE				AML	AML		
	comp=E,231µm,0.5s						
SURF	**Saint Ours**	**2.34**	**278**	Pn	**Pn**	**04 58 43.7**	**-0.2**
MBDF	**Montbardon**	**2.40**	**284**	*e*Pn	**Pn**	**04 58 44.4**	**-0.4**
MBDF	**Montbardon**	**2.40**	**284**	*e*P	**Pb**	**04 58 46.6**	**-2.0**
MBDF	**Montbardon**	**2.40**	**284**	*e*Pg	**Pg**	**04 58 51.4**	**+0.2**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**04 59 12.6**	**-1.9**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**04 59 22.9**	**+0.6**
	comp=E,49nm,0.3s						
KOSI	**Kohlern**	**2.46**	**22**	AML	AML		
	comp=E,318µm,1.1s						
KOSI				AML	AML		
	comp=E,318µm,1.1s						
KOSI				AML	AML		
	comp=N,352µm,0.7s						
KOSI				AML	AML		
	comp=N,352µm,0.7s						
KOSI				AML	AML		
	comp=E,318µm,1.1s						
KOSI				AML	AML		
	comp=N,352µm,0.7s						
FUSIO	**Fusio**	**2.47**	**337**	AML	AML		
	comp=E,287µm,0.7s						
FUSIO				AML	AML		
	comp=E,287µm,0.7s						
FUSIO				AML	AML		
	comp=N,229µm,1.3s						
FUSIO				AML	AML		
	comp=N,229µm,1.3s						
FUSIO				AML	AML		
	comp=E,287µm,0.7s						
FUSIO				AML	AML		
	comp=N,229µm,1.3s						
POLC	**Polcenigo**	**2.53**	**43**	AML	AML		
	comp=E,495µm,0.8s						
POLC				AML	AML		
	comp=E,495µm,0.8s						
POLC				AML	AML		
	comp=N,682µm,0.5s						
POLC				AML	AML		
	comp=N,682µm,0.5s						
POLC				AML	AML		
	comp=N,682µm,0.5s						
POLC				AML	AML		
	comp=E,495µm,0.8s						
FRF	**La Foret Royal**	**2.54**	**257**	*e*Pn	**Pn**	**04 58 46.3**	**-0.2**
FRF				*e*Sn	**Sn**	**04 59 16.5**	**-1.0**
	comp=E,142nm,0.2s						
DAVOX	**Davos/Dischmat**	**2.59**	**358**	Pn	**Pn**	**04 58 48.8**	**+1.3**
	comp=E,8.6nm,0.3s,baz=172,slow=15,SNR=10.0						
DAVOX				Sn	**Sb**	**04 59 22.0**	**-2.0**
	comp=E,4.7nm,0.3s,baz=167,slow=15,SNR=5.4						
DAVOX	**Davos/Dischmat**	**2.59**	**358**	AML	AML		
	comp=E,148µm,0.4s						
DAVOX				AML	AML		
	comp=E,148µm,0.4s						
DAVOX				AML	AML		
	comp=N,186µm,1.2s						
DAVOX				AML	AML		
	comp=N,186µm,1.2s						
DAVOX				AML	AML		
	comp=E,148µm,0.4s						
DAVOX				AML	AML		
	comp=N,186µm,1.2s						
LPG	**La Plagne**	**2.68**	**300**	*e*P	**Pn**	**04 58 50.9**	**+2.1**
LPG				*e*Sn	**Sn**	**04 59 20.4**	**-1.2**
	comp=N,21nm,0.3s						
LMR	**La Mourre**	**2.70**	**253**	*e*Pn	**Pn**	**04 58 48.1**	**-0.6**
LMR				*e*Sn	**Sn**	**04 59 18.8**	**-2.7**
	comp=N,123nm,0.3s						
LPL	**La Plagne**	**2.70**	**301**	*e*P	**Pn**	**04 58 50.9**	**+1.9**
LPL				*e*Sn	**Sn**	**04 59 20.5**	**-1.5**
	comp=N,41nm,0.3s						
FETA	**Feichten**	**2.87**	**9**	*i* Pn	**Pn**	**04 58 53.6**	**+2.3**
	comp=N,13nm,0.6s						
FETA				*i* Sn	**Sn**	**04 59 28.4**	**+2.3**
	comp=N,7.3nm,0.4s						
PLONS	**Plons/SG**	**2.90**	**351**	AML	AML		
	comp=E,156µm,0.7s						
PLONS				AML	AML		
	comp=E,156µm,0.7s						
PLONS				AML	AML		
	comp=N,170µm,1.0s						
PLONS				AML	AML		
	comp=N,170µm,1.0s						
PLONS				AML	AML		
	comp=N,170µm,1.0s						
PLONS				AML	AML		
	comp=E,156µm,0.7s						
ROSI	**Rosskopf**	**2.90**	**19**	AML	AML		
	comp=N,556µm,0.8s						
ROSI				AML	AML		
	comp=E,428µm,0.9s						
ROSI				AML	AML		
	comp=N,556µm,0.8s						
ROSI				AML	AML		
	comp=E,428µm,0.9s						
ROSI				AML	AML		
	comp=N,556µm,0.8s						
ROSI				AML	AML		
	comp=E,428µm,0.9s						
BNALP	**Bannalp**	**2.91**	**338**	AML	AML		
	comp=E,148µm,0.8s						
BNALP				AML	AML		
	comp=N,170µm,0.8s						
BNALP				AML	AML		
	comp=E,148µm,0.8s						
BNALP				AML	AML		
	comp=N,170µm,0.8s						
BNALP				AML	AML		
	comp=E,148µm,0.8s						
BNALP				AML	AML		
	comp=N,170µm,0.8s						
GEPF	**Gemona**	**3.02**	**45**	AML	AML		
	comp=E,190µm,0.7s						
GEPF				AML	AML		
	comp=E,190µm,0.7s						
GEPF				AML	AML		
	comp=N,145µm,1.0s						
GEPF				AML	AML		
	comp=E,190µm,0.7s						
GEPF				AML	AML		
	comp=N,145µm,1.0s						
GEPF				AML	AML		
	comp=N,145µm,1.0s						
TRI	**Trieste**	**3.05**	**59**	AML	AML		
	comp=E,107µm,0.6s						
TRI				AML	AML		
	comp=E,107µm,0.6s						
TRI				AML	AML		
	comp=N,84µm,0.6s						
TRI				AML	AML		
	comp=N,84µm,0.6s						
TRI				AML	AML		
	comp=N,84µm,0.6s						
TRI				AML	AML		
	comp=E,107µm,0.6s						
ORIF	**Oris-en-Rattie**	**3.06**	**285**	*e*P	**Pn**	**04 58 55.8**	**+2.0**
ORIF				*e*Sn	**Sn**	**04 59 29.2**	**-1.5**
	comp=E,57nm,0.6s						
MLYF	**Mely**	**3.09**	**268**	Pn	**Pn**	**04 58 55.1**	**+1.0**
SABO	**M.te Sabotino**	**3.09**	**53**	AML	AML		
	comp=N,368µm,0.7s						
SABO				AML	AML		
	comp=E,252µm,0.8s						
SABO				AML	AML		
	comp=N,368µm,0.7s						
SABO				AML	AML		
	comp=E,252µm,0.8s						
SABO				AML	AML		
	comp=E,252µm,0.8s						
SABO				AML	AML		
	comp=N,368µm,0.7s						
ABTA	**Abfaltersbach**	**3.09**	**33**	*i* Pn	**Pn**	**04 58 56.2**	**+1.9**
	comp=N,2.6nm,0.3s						
ABTA				*i* Sn	**Sn**	**04 59 32.7**	**+1.4**
	comp=N,28nm,0.7s						
DAVA	**Damuels**	**3.10**	**358**	*i* Pn	**Pn**	**04 58 57.2**	**+2.8**
	comp=N,22nm,0.3s						
DAVA				*i* Sn	**Sn**	**04 59 34.8**	**+3.2**
	comp=N,31nm,0.2s						
ARTF	**Artigues**	**3.12**	**260**	Pn	**Pn**	**04 58 55.1**	**+0.5**
SQTA	**Sankt Quirin**	**3.14**	**15**	*i* Pn	**Pn**	**04 58 56.7**	**+1.8**
	comp=N,5.3nm,0.3s						
SQTA				*i* Sn	**Sn**	**04 59 34.3**	**+1.7**
	comp=N,14nm,0.4s						
ASEAF	**Site Antares,**	**3.15**	**245**	Pn	**Pn**	**04 58 54.7**	**+0.1**
ASEAF				Sn	**Sn**	**04 59 29.4**	**-2.7**
SMRF	**Simiane la Rot**	**3.23**	**268**	*e*Pn	**Pn**	**04 58 57.2**	**+1.2**
SMRF				*e*Sn	**Sn**	**04 59 33.2**	**-1.4**
	comp=N,37nm,0.5s						
MOTA	**Moosalm**	**3.24**	**13**	*i* Pn	**Pn**	**04 58 58.6**	**+2.3**
	comp=N,8.1nm,0.2s						
WTTA	**Wattenberg**	**3.27**	**19**	*i* Pn	**Pn**	**04 58 58.3**	**+1.6**
	comp=N,5.9nm,0.3s						
WTTA				*i* Sn	**Sn**	**04 59 38.1**	**+2.2**
	comp=N,1.2nm,0.2s						
WTTA	**Wattenberg**	**3.27**	**19**	AML	AML		
	comp=N,166µm,0.9s						
WTTA				AML	AML		
	comp=E,201µm,0.9s						

WTTA				AML	AML		
	comp=N,166µm,0.9s						
WTTA				AML	AML		
	comp=E,201µm,0.9s						
WTTA				AML	AML		
	comp=N,166µm,0.9s						
WTTA				AML	AML		
	comp=E,201µm,0.9s						
WATA	Walderalm	3.33	18	i Pn	Pn	04 58 59.2	+1.8
	comp=E,6.9nm,0.2s						
RETA	Reutte	3.34	8	i Pn	Pn	04 58 59.9	+2.3
	comp=E,4.4nm,0.2s						
RETA				i Sn	Sn	04 59 39.2	+1.9
	comp=E,7.3nm,0.4s						
ACOM	Acomizza, Ital	3.40	45	AML	AML		
	comp=N,334µm,0.9s						
ACOM				AML	AML		
	comp=E,230µm,1.1s						
ACOM				AML	AML		
	comp=N,334µm,0.9s						
ACOM				AML	AML		
	comp=E,230µm,1.1s						
ACOM				AML	AML		
	comp=N,334µm,0.9s						
ACOM				AML	AML		
	comp=E,230µm,1.1s						
NVLJ	Novalja	3.48	82	ePn	Pn	04 59 00.4	+0.9
MYKA	Terra Mystica	3.52	45	i Pn	Pn	04 59 01.9	+1.8
	comp=E,1.2nm,0.2s						
MYKA				i Sn	Sn	04 59 43.1	+1.3
	comp=E,5.7nm,0.3s						
DUGI	Dugi Otok	3.62	91	ePn	Pn	04 59 02.4	+1.0
LJU	Ljubljana	3.68	58	AML	AML		
	comp=N,378µm,0.6s						
LJU				AML	AML		
	comp=E,282µm,0.7s						
LJU				AML	AML		
	comp=E,282µm,0.7s						
LJU				AML	AML		
	comp=N,378µm,0.6s						
LJU				AML	AML		
	comp=E,282µm,0.7s						
LJU				AML	AML		
	comp=N,378µm,0.6s						
CABF	La Chapelle	3.69	312	eP	Pn	04 59 04.5	+2.0
CABF				eSn	Sn	04 59 42.9	-3.3
	comp=N,45nm,0.7s						
KBA	Koelnbreinsper	3.70	38	i Pn	Pn	04 59 04.1	+1.4
	comp=N,1.6nm,0.2s						
KBA				i Sn	Sn	04 59 48.2	+1.7
	comp=N,19nm,0.7s						
VIVF	Saint-Julien-l	3.90	282	eP	Pn	04 59 06.4	+1.2
VIVF				eSn	Sn	04 59 49.1	-2.1
	comp=N,3.1nm,0.2s						
OBKA	Obir	3.93	52	i Pn	Pn	04 59 06.8	+1.1
	comp=N,2.6nm,0.2s						
OBKA				i Sn	Sn	04 59 53.6	+1.5
	comp=N,13nm,0.4s						
ZIRJ	Zirje	4.08	96	ePn	Pn	04 59 07.7	0.0
ZIRJ				Sn	Sn	04 59 53.8	-1.8
MORI	Morici	4.10	93	i Pn	Pn	04 59 09.5	+1.5
OZLJ	Ozalj	4.11	68	ePn	Pn	04 59 08.2	+0.1
OZLJ				Sn	Sn	04 59 55.1	-1.1
UDBI	Udbina	4.12	83	ePn	Pn	04 59 10.2	+1.9
HINF	Hinteralfeld	4.25	330	eP	Pn	04 59 11.3	+1.2
HINF				eSn	Sn	04 59 55.9	-4.1
	comp=N,24nm,0.3s						
SOKA	Soboth	4.30	53	i Pn	Pn	04 59 11.0	+0.1
	comp=N,1.8nm,0.2s						
SOKA				i Sn	Sn	05 00 01.2	0.0
	comp=N,14nm,0.9s						
LASF	Ste Croix	4.46	271	ePn	Pn	04 59 12.8	-0.1
LASF				eSn	Sn	05 00 02.5	-2.4
	comp=N,5.3nm,0.3s						
PTJ	Puntijarka	4.54	66	ePn		04 59 14.7	
HAU	Haudompre	4.60	327	eP	Pn	04 59 16.4	+1.5
HAU				eSn	Sn	05 00 04.4	-4.1
	comp=N,48nm,0.3s						
CDF	Champ du Feu	4.64	337	eP	Pn	04 59 16.2	+0.7
CDF				eSn	Sn	05 00 04.9	-4.6
	comp=N,36nm,0.6s						
MOA	Molln	4.70	37	i Pn	Pn	04 59 17.1	+0.9
	comp=N,3.2nm,0.3s						
HVAR	Hvar	4.75	100	ePn	Pn	04 59 18.1	+1.1
ARSA	Arzberg	4.91	49	i Pn	Pn	04 59 19.5	+0.4
	comp=N,5.8nm,0.3s						
ARSA				i Sn	Sn	05 00 19.4	+3.3
	comp=N,6.3nm,0.6s						
SMF	Signal de Mont	5.01	302	eP	Pn	04 59 22.3	+1.8
SMF				eSn	Sn	05 00 15.4	-3.1
	comp=N,15nm,0.3s						
MAKA	Makarska	5.13	98	ePn	Pn	04 59 23.2	+1.0
PAGF	Fort de Pagny	5.29	327	eP	Pn	04 59 26.4	+2.1
	baz=147						
PAGF				eSn	Sn	05 00 20.5	-4.9
	comp=N,13nm,0.3s,baz=143						
GERES	GERESS Array B	5.30	27	Pn	Pn	04 59 23.9	-0.6
	comp=N,2.0nm,0.3s,baz=201,slow=14,SNR=21						
SFTF	Sexfontaines	5.31	321	eP	Pn	04 59 26.6	+2.0
	baz=140						
SFTF				eSn	Sn	05 00 21.6	-4.3
	comp=N,8.2nm,0.4s,baz=140						
LOR	Lormes	5.31	308	eP	Pn	04 59 25.8	+1.1
	baz=127						
LOR				eSn	Sn	05 00 21.8	-4.2
	comp=N,21nm,0.3s,baz=125						
AVF	Avril sur Loir	5.38	301	eP	Pn	04 59 27.6	+2.1
AVF				eSn	Sn	05 00 23.2	-4.3
	comp=N,2.8nm,0.3s						
SSF	Saint Saulge	5.41	304	eP	Pn	04 59 27.5	+1.5
SSF				eSn	Sn	05 00 24.1	-4.3
	comp=N,7.6nm,0.4s						
KHC	Kasperske Hory	5.51	25	ePN	Pn	04 59 27.0	-0.4
KHC				eSN	Sn	05 00 28.0	-2.9
CONA	Conrad Observa	5.51	45	i Pn	Pn	04 59 27.5	+0.1
	comp=N,3.0nm,0.3s						
CONA				i Sn	Sn	05 00 31.7	+0.7
	comp=N,2.6nm,0.1s						
MEZF	Maizieres J'vi	5.53	323	eP	Pn	04 59 30.6	+3.0
	baz=142,SNR=1.0						
MEZF				eSn	Sn	05 00 28.1	-3.1
	comp=N,33nm,0.9s						
BGF	Bois d'Agland	5.60	298	eP	Pn	04 59 29.6	+1.1
BGF				eSn	Sn	05 00 28.7	-4.3
	comp=N,25nm,0.4s						
STON	Ston	5.72	101	ePn	Pn	04 59 30.7	+0.5
MTLF	Montolieu	5.73	264	ePn	Pn	04 59 29.6	-0.8
MTLF				eSn	Sn	05 00 32.8	-3.5
	comp=N,5.0nm,0.5s						
CAF	Calviac	5.75	280	ePn	Pn	04 59 30.4	-0.3
TCF	Toulx Ste Croi	5.92	294	eP	Pn	04 59 36.7	+3.7
TCF				eSn	Sn	05 00 38.9	-2.0
	comp=N,2.9nm,0.3s						
HYF	Humbligny	6.03	303	eP	Pn	04 59 37.5	+3.0
HYF				eSn	Sn	05 00 39.2	-4.4
RJF	Les Rejaudoux	6.17	283	ePn	Pn	04 59 35.8	-0.7
ZST	Bratislava	6.33	48	ePN	Pn	04 59 37.9	-0.7
MODS	Modra-Piesok	6.53	48	ePN	Pn	04 59 40.1	-1.2
MODS				eSN	Sn	05 00 51.0	-4.9
MODS	Modra-Piesok	6.53	48	e	Pn	04 59 40.5	-0.8
LFF	La Frestale	6.69	280	ePn	Pn	04 59 42.7	-0.8
EPF	Esparros	7.14	264	eSn	Sn	05 01 06.1	-4.9
	comp=N,2.8nm,0.3s,SNR=1.0						
BRG	Berggiesshubel	7.19	20	SN	Sn	05 01 11.3	-0.8
BRG				SG	Sg	05 01 52.6	-3.1
	comp=N,9.9nm,1.0s						
VYHS	Vyhne	7.45	52	ePN	Pn	04 59 53.7	-0.3
VYHS				e		05 01 10.7	
VYHS	Vyhne	7.45	52	e	Pn	04 59 53.6	-0.4
SJPF	Ste Jean	8.24	266	eSg	Sg	05 02 25.9	-3.6
	comp=N,4.9nm,0.9s,SNR=1.0						
KEST	Kesra	8.46	184	LR	LR	05 03 35.8	
	comp=N,48nm,20.3s,baz=176,slow=39						
GRR	Gorron	8.64	303	eP	Pn	05 00 12.4	+2.2
	SNR=1.0						
ESDC	Sonseca Array	11.36	251	Pn	Pn	05 00 50.3	+2.6
	comp=N,0.2nm,0.3s,baz=53,slow=14,SNR=2.8						
EKA	Eskdalemuir Ar	14.01	327	Pn	Pn	05 01 25.1	+1.4
	baz=136,slow=15,SNR=3.4						
TORD	Torodi Ar. Bea	31.75	196	P	P	05 04 32.1	+2.5
	comp=N,0.2nm,0.5s,baz=12,slow=8.7,SNR=2.9						
BVAR	Borovoye Array	39.77	55	LR	LR	05 25 01.9	
	comp=N,40nm,19.1s,baz=182,slow=41						
MKAR	Makanchi Array	49.05	60	P	P	05 06 52.6	+0.2
	comp=N,0.4nm,0.7s,baz=289,slow=7.0,SNR=3.3						
SONM	Songino Array	62.63	49	P	P	05 08 31.2	+1.3
	comp=N,0.3nm,0.6s,baz=301,slow=12,SNR=3.8						

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*NEIC **12** 05:04:32.3±0.0, 17.°12N×94.°69W, h120^{km}, mb4.2/2, MD4.0(MEX), After MEX.*

MEX 12 05:04:32.5±0.6**, 17.°12N×94.°70W, h120**^{km}±4^{km}**, MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.18	260	ePn	Pn	05 04 47.7	-1.4
CMIG				eSn	Sn	05 04 59.6	-2.1
CMIG	Matias Romero	0.18	260	eP	Pn	05 04 47.7	-1.4
CMIG				i S	Sn	05 04 59.6	-2.1
TGIG		1.55	103	ePn	Pn	05 04 59.2	-1.4
TGIG				eSn	Sn	05 05 19.1	-2.8
TGIG		1.55	103	eP	Pn	05 04 59.2	-1.4
TGIG				i S	Sn	05 05 19.6	-2.3
HUIG	Huatulco	1.91	225	ePn	Pn	05 05 00.4	-4.5
HUIG				eSn	Sn	05 05 25.3	-4.3
HUIG	Huatulco	1.91	225	eP	Pn	05 05 00.8	-4.1
HUIG				i S	Sn	05 05 25.1	-4.4
VHO	Vista Hermosa	1.95	269	ePn	Pn	05 05 04.6	-0.9
VHO				eSn	Sn	05 05 28.4	-2.3
VHO	Vista Hermosa	1.95	269	eP	Pn	05 05 04.6	-0.9
VHO				eS	Sn	05 05 28.4	-2.3
PCIG		2.00	135	ePn	Pn	05 05 04.6	-1.4
PCIG				eSn	Sn	05 05 29.6	-2.0
PCIG		2.00	135	eP	Pn	05 05 04.6	-1.4
PCIG				eS	Sn	05 05 29.6	-2.0
CCIG	Comitan	2.59	108	ePn	Pn	05 05 12.6	-1.1
CCIG				eSn	Sn	05 05 41.8	-3.5
LVIG	Laguna Verde	3.06	328	ePn	Pn	05 05 16.9	-2.7
LVIG				eSn	Sn	05 05 49.8	-6.1
TLIG	Tlapa	3.72	277	ePn	Pn	05 05 27.4	-1.1
TLIG				eSn	Sn	05 06 09.3	-2.5
TLIG	Tlapa	3.72	277	eP	Pn	05 05 27.3	-1.2
TLIG				i S	Sn	05 06 10.0	-1.7
TEIG	Tepich	6.83	62	ePn	Pn	05 06 06.9	-3.2
TEIG				eSn	Sn	05 07 23.1	-3.3
GOGA	Godfrey	19.11	30	eP	P	05 08 46.8	+0.8
	7.8nm,1.3s						

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*KRAR **12** 05:14:49.7±0.2, 53.°63N×87.°90E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*IDC **12** 05:14:52.2±3.0, 53.°57N×87.°86E, h0^{km}, mb1 3.2/2, mb1mx3.0/39, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=26.1km s-min=15.9km az=69.0*

*NNC **12** 05:14:56.3±10.0, 53.°45N×87.°50E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=69.6km s-min=33.7km az=32.0, Suspected Mining explosion.*

ISC 12 05:14:55.3±3.8**, 53.°6N**±0.°1×**87.°4E**±0.°2**, h0**^{km}**, n7, σ1.**^{s}**94**/9**, 4C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.54	284	i		05 26 52.8	
	baz=99,slow=304,SNR=5.7						
ZALV	Zalesovo Beam	1.54	284	Pn	Pn	05 15 24.8	+0.8
	2.5nm,0.3s,baz=98,slow=15,SNR=21						
ZALV				Lg	Lg	05 15 50.7	
	1.8nm,0.3s,baz=103,slow=27,SNR=5.4						
KURK	Kurchatov	6.10	245	⇑Pg	Pg	05 16 49.0	-2.9
	1.5nm,0.7s						
KURK				⇓Sn	Sn	05 17 38.4	+1.5
	3.6nm,0.8s						
KURK				⇑Lg	Lg	05 18 14.0	
	18nm,1.0s						
KURBB	Kurchatov Arra	6.19	245	Pn	Pn	05 16 29.2	+1.4
	0.1nm,0.3s,baz=62,slow=14,SNR=6.8						
KURBB				Lg	Lg	05 18 16.6	
	0.1nm,0.3s,baz=59,slow=31,SNR=9.6						
KURBB	Kurchatov Arra	6.19	245	⇓Sn	Sn	05 17 41.5	+2.1
	7.8nm,0.7s						
KURBB				⇑Lg	Lg	05 18 11.0	
	11nm,0.6s						
MK31	Makanchi Array	7.54	208	Pn	Pn	05 16 47.7	+1.3
	baz=28,slow=12,SNR=8.2						
MK31				⇑Sn	Sn	05 18 14.2	+1.7
	1.4nm,0.7s						
MK31				⇓Lg	Lg	05 18 53.4	
	2.5nm,0.7s,baz=28,slow=29,SNR=4.7						
MKAR	Makanchi Array	7.54	208	Pn	Pn	05 16 46.3	-0.1
	0.3nm,0.3s,baz=26,slow=12,SNR=4.4						
MKAR				Sn	Sn	05 18 12.6	0.0
	0.2nm,0.3s,baz=30,slow=27,SNR=5.9						
MKAR				Lg	Lg	05 18 55.4	
	0.1nm,0.3s,baz=34,slow=29,SNR=8.7						

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*NIED **12** 05:38:00, 37.°30N×139.°00E, h5^{km}, Mw3.5 Best double couple: $M_0$2.32000×10^{14} NP1:φ$_s$237.00000°, δ50.00000°, λ133.00000°. NP2:φ$_s$2.00000°, δ56.00000°, λ52.00000°.*

JMA 12 05:38:38.0, 37.°31N×138.°96E, h9^{km}±1^{km}**, M3.5, 1C-6D Broadband fault plane solution: P waves. NP1:** φ$_s$222.00000°**,** δ49.00000°**,** λ96.00000°. **NP2:** φ$_s$33.00000°**,** δ41.00000°**,** λ83.00000°. **Principal axes:** T Plg84.0000°**,** Azm174.0000°**;** N Plg4.0000°**,** Azm38.0000°**;** P Plg4.0000°**,** Azm308.0000°**; Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	Hiroka	0.08	144	⇓P	Pg	05 38 40.1	-0.1
JHK				S	Sg	05 38 42.0	+0.3
JIZZ	Izumozaki	0.30	318	⇓P	Pg	05 38 44.3	+0.4
JIZZ				S	Sb	05 38 49.6	-1.0
JNS	Sasagawa	0.58	29	⇑P	Pg	05 38 48.8	-0.5
JNS				S	Sg	05 38 56.9	0.0
JKT	Katashina	0.59	157	⇓P	Pg	05 38 49.3	-0.1
JKT				S	Sg	05 38 57.4	+0.2
JFY	Yanaizu	0.60	81	⇓P	Pg	05 38 49.5	-0.1
JFY				i S	Sg	05 38 57.8	+0.3
JSD	Sado	0.91	323	⇓P	Pg	05 38 53.8	-1.8
JSD				S	Sg	05 39 06.4	-1.1
JAG	Ashikaga	0.97	156	⇓P	Pg	05 38 56.4	-0.2
JAG				S	Sg	05 39 09.0	-0.2
MAT	Matsushiro	0.97	218	P	Pg	05 38 55.5	-1.2
MAT				S	Sg	05 39 07.3	-2.1
MAT	Matsushiro	0.97	218	P	Pg	05 38 55.5	-1.2
MAT				S	Sg	05 39 08.2	-1.2

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*IDC **12** 05:38:51.9±1.8, 6.°31S×129.°52E, h0^{km}, mb4.0/1, mb1 4.1/4, mb1mx3.6/42, mbtmp4.0/4, ML3.9/3 Error ellipse: s-maj=64.4km s-min=28.2km az=80.0*

*ISCJB **12** 05:38:58.3±0.6, 6.°26S±0.°04×131.°3E±0.°1, h35^{km}, mb4.9/5, Error ellipse: s-maj=16.6km s-min=5.8km az=2.4*

*NEIC **12** 05:39:00.6±1.9, 6.°36S×131.°26E, h36^{km}±6^{km}, mb4.5/6, Error ellipse: s-maj=16.0km s-min=12.7km az=144.0*

ISC 12 05:38:59.9±0.7**, 6.°29S**±0.°05×**131.°3E**±0.°1**, h35**^{km}**, n17, σ2.**^{s}**75**/20**, mb4.4**/5**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.48	16	ePn	Pn	05 39 54.4	+2.8
FAKI				eSn	Sn	05 40 30.7	-0.9
SIJI	Sorong	5.38	360	Pn	Pn	05 40 17.1	-0.7
	14nm,0.3s,baz=190,slow=23,SNR=23						
SIJI				Sn	Sn	05 41 12.3	-6.3
	11nm,0.3s,baz=279,slow=22,SNR=12						
MTN	Manton Dam	6.51	181	ePn	Pn	05 40 39.3	+6.0
MTN				eSn	Sn	05 41 50.9	+4.4
SOEI	Soe	7.76	243	ePn	Pn	05 40 51.1	+0.5
WRAB	Tennant Creek	13.88	168	ePn	Pn	05 42 14.4	+0.1
WR1	Warramunga Arr	13.89	168	ePn	Pn	05 42 14.2	-0.2
WR1				eSn	Sn	05 44 43.7	-3.8
WRA	Warramunga Arr	13.89	168	Pn	Pn	05 42 14.2	-0.2
	0.3nm,0.3s,baz=339,slow=12,SNR=24						
WRA				Sn	Sn	05 44 43.7	-3.8
	1.1nm,0.3s,baz=340,slow=22,SNR=8.8						
WB2	Warramunga Arr	13.89	168	ePn	Pn	05 42 14.3	-0.1
AS31	Alice Springs	17.46	172	eP	P	05 43 02.1	+0.4
	2.3nm,1.4s						
ASAR	Alice Springs	17.46	172	P	P	05 43 02.1	+0.3
	0.4nm,0.3s,baz=341,slow=8.0,SNR=20						
PSA00	Pilbara Seismi	18.80	215	eP	P	05 43 12.9	-3.6
	12nm,1.3s						
TWG	Pinlang	30.61	341	eP	P	05 45 11.6	+0.8
	211nm,0.7s						
MKAR	Makanchi Array	68.35	326	P	P	05 49 49.3	-8.5
	0.6nm,0.4s,baz=122,slow=6.7,SNR=5.5						
KK31	Karatay Array	73.66	318	eP	P	05 50 31.1	+1.0
	1.9nm,0.4s						
KKAR	Karatay Array	73.66	318	eP	P	05 50 33.8	+3.7
	1.9nm,0.4s						
OPA	Opana	74.59	66	eP	P	05 50 37.3	+1.4
	71nm,1.0s						
MNMC	Minye Minye	147.41	141	ePKPdf	PKPdf	05 58 37.8	-1.1

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*ISCJB **12** 05:53:23.0±0.3, 19.°36S±0.°03×67.°34W±0.°04, h229^{km}±4^{km}, mb4.2/9, Error ellipse: s-maj=6.0km s-min=4.2km az=14.7*

*IDC **12** 05:53:23.0±0.8, 19.°37S×67.°12W, h212^{km}±13^{km}, mb3.8/3, mb1 3.6/8, mb1mx3.3/32, mbtmp4.1/8, Error ellipse: s-maj=27.6km s-min=9.4km az=98.0*

*NEIC **12** 05:53:23.3±2.5, 19.°43S×67.°14W, h214^{km}±8^{km}, mb4.4/8, Error ellipse: s-maj=16.9km s-min=5.3km az=124.0*

*SCB **12** 05:53:27.0±4.5, 19.°47S×67.°28W, h2^{km}±40^{km}, ML3.7/2, Error ellipse: s-maj=4.7km s-min=3.4km az=1.0*

ISC 12 05:53:23.5±0.7**, 19.°38S**±0.°03×**67.°31W**±0.°04**, h216**^{km}±7^{km}**, n53, σ1.**^{s}**42**/71**, mb4.5**/9**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	1.81	260	ePn	Pn	05 54 03.5	+1.6
PB08	IPOC Station P	1.90	246	P	Pn	05 54 00.7	-1.9
MNMC	Minye Minye	2.18	276	ePn	Pn	05 54 06.7	+1.4
MNMC				eS	S	05 54 40.6	+3.0
MNMC	Minye Minye	2.18	276	P	Pn	05 54 04.8	-0.5
MNMCX	Minye Minye	2.18	276	eP	Pn	05 54 05.2	-0.1
PB11	IPOC Station P	2.25	260	ePn	Pn	05 54 06.6	+0.7
PB11				eS	S	05 54 40.2	+1.5
PB11	IPOC Station P	2.25	260	eP	Pn	05 54 06.1	+0.2
PB11	IPOC Station P	2.25	260	P	Pn	05 54 04.1	-1.8
BB01	Montecillos	2.33	56	P	Pn	05 54 06.1	-0.8
BS10	CO. Tuti	2.35	36	P	Pn	05 54 07.6	+0.2
BS10				S	S	05 54 40.3	-1.0
BS05	Cuyupaya	2.38	8	P	Pn	05 54 08.3	+0.7
BS05				S	S	05 54 41.5	-0.2
BS05				AML	AML	05 54 42.3	
	251nm,0.5s						
BBOJ	La Paz, Jacaqu	2.53	340	P	Pn	05 54 11.8	+2.4
BBOJ				S	S	05 54 44.7	-0.2
BBOJ				AML	AML	05 54 46.8	
	495nm,0.7s						
BBOE	La Paz, Chanca	2.63	346	P	Pn	05 54 12.8	+2.3
PB01	IPOC Station P	2.64	231	ePn	Pn	05 54 10.9	+0.9
PB01				eS	S	05 54 46.4	+0.3
PB01	IPOC Station P	2.64	231	P	Pn	05 54 09.4	-0.6
PSGC	Pisagua	2.67	265	P	Pn	05 54 10.2	-0.1
PSGC				S	S	05 54 44.0	-2.6
PSGCX	Pisagua	2.67	265	eP	Pn	05 54 10.0	-0.3
PSGCX				eS	S	05 54 44.8	-1.8
PB12	IPOC Station P	2.96	284	eP	Pn	05 54 13.4	-0.2
PB02	IPOC Station P	3.11	231	eP	Pn	05 54 15.7	+0.4
PB02				eS	S	05 54 54.1	-1.5
BS08	Valle Grande	3.15	74	P	Pn	05 54 16.9	+0.9
LPAZ	La Paz	3.17	346	P	Pn	05 54 17.9	+1.3
	1.9nm,0.3s,baz=154,slow=7.6,SNR=34						
LPAZ				S	S	05 54 58.4	+0.5
	0.9nm,0.3s,baz=332,slow=20,SNR=11						
LPAZ	La Paz	3.17	346	ePn	Pn	05 54 17.4	+0.7
LPAZ				eS	S	05 54 59.4	+1.5
LPAZ	La Paz	3.17	346	P	Pn	05 54 18.0	+1.3
LPAZ				S	S	05 54 59.8	+1.9
YJA	Yavi	3.25	149	eP	Pn	05 54 19.3	+2.0
YJA				IAML		05 55 06.5	
	comp=Z,11nm,0.7s						
YJA	Yavi	3.25	149	P	Pn	05 54 18.7	+1.4
YJA				S	S	05 54 57.1	-2.1
BBOB	La Paz, Bander	3.31	346	P	Pn	05 54 19.5	+1.3
LVC	Limon Verde	3.55	205	P	Pn	05 54 22.3	+1.6
	comp=Z,7.8nm,0.3s,baz=9.8,slow=7.1,SNR=10						
LVC				S	S	05 55 06.2	+0.7
	comp=Z,4.7nm,0.3s,baz=66,slow=23,SNR=8.2						
LVC	Limon Verde	3.55	205	ePn	Pn	05 54 22.2	+1.5
LVC				eS	S	05 55 06.5	+1.0
BS06	Camiri	3.63	101	P	Pn	05 54 22.6	+1.2
PB06	IPOC Station P	3.93	212	P	Pn	05 54 26.5	+1.3
PB06				S	S	05 55 12.5	-1.0
PB04	IPOC Station P	3.97	222	ePn	Pn	05 54 26.3	+0.7
PB04				eS	S	05 55 14.2	-0.1
PB04	IPOC Station P	3.97	222	P	Pn	05 54 26.5	+0.9
HJA	Humahuaca	4.20	155	eP	Pn	05 54 30.8	+2.1
HJA				IAML		05 54 32.1	
	comp=Z,16nm,0.4s						
HJA				eS	S	05 55 20.8	+0.9
AZAP	Zapla	5.25	157	eP	Pn	05 54 43.2	+1.5
AZAP				IAML		05 55 48.4	
	comp=Z,7.2nm,0.5s						
SLA	San Lorenzo	5.58	163	P	Pn	05 54 48.0	+2.3
SLA				S	S	05 55 51.5	+0.8
GO02	Mina Guanaco	6.13	200	ePn	Pn	05 54 52.8	-0.2
SIV	San Ignacio	6.83	61	P	Pn	05 55 00.6	-1.1
	comp=Z,6.9nm,0.3s,baz=266,slow=10.0,SNR=148						
CFA	Coronel Fontan	12.21	184	P	Pn	05 56 11.9	+1.3
	comp=Z,0.1nm,0.3s,baz=17,slow=16,SNR=6.4						
PTGA	Pitinga	19.88	22	P	P	05 57 36.4	-2.2
	comp=Z,0.7nm,0.3s,baz=192,slow=15,SNR=5.2						
PTGA	Pitinga	19.88	22	eP	P	05 57 36.9	-1.7
	comp=Z,5.6nm,1.3s						
RCBR	Riachuelo	33.39	70	eP	P	05 59 42.1	0.0
	comp=Z,15nm,1.1s						
CRPR	Cabo Rojo, PR	37.15	0	eP	P	06 00 19.1	+5.3
	comp=Z,57nm,1.2s						
OBIP	Obispado Ponce	37.19	1	eP	P	06 00 13.7	-0.5
	comp=Z,16nm,1.1s						
CPCT	Cooper Cave	56.92	343	eP	P	06 02 48.9	+2.7
	comp=Z,6.3nm,1.4s						
SNAA	Sanae	63.79	161	eP	P	06 03 33.4	+1.0
	comp=Z,3.2nm,1.2s						
DBIC	Dimbokro	66.69	74	P	P	06 03 50.0	-1.8
	comp=Z,4.2nm,0.7s,baz=222,slow=3.7,SNR=9.1						
DBIC	Dimbokro	66.69	74	eP	P	06 03 50.1	-1.6
	comp=Z,20nm,1.2s						
TOA1	Torodi Ar. Sit	75.22	70	eP	P	06 04 41.2	-1.8
TOA0	Torodi Ar. Sit	75.22	70	eP	P	06 04 41.3	-1.7
	comp=Z,5.7nm,0.6s						
TORD	Torodi Ar. Bea	75.22	70	P	P	06 04 41.2	-1.8
	comp=Z,4.1nm,0.4s,baz=246,slow=5.6,SNR=61						
ESDC	Sonseca Array	83.27	44	P	P	06 05 26.6	+0.5
	comp=Z,0.2nm,0.4s,baz=258,slow=5.1,SNR=3.1						
SONA0	Songino Array	151.15	9	ePKPbc	PKPbc	06 12 51.6	+0.4
SONM	Songino Array	151.15	9	PKPbc	PKPbc	06 12 51.6	+0.4
	comp=Z,0.8nm,0.7s,baz=279,slow=1.6,SNR=6.0						

IDC 12 06:11:05.2±6.1**, 6.°49S×129.°69E, h123**^{km}±78^{km}**, mb3.2**/1**, mb1 3.3**/4**, mb1mx3.1**/33**, mbtmp3.6**/4**, Error ellipse: s-maj=128.1km s-min=20.9km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.80	16	P	Pn	06 12 30.9	+1.9
	2.6nm,0.3s,baz=204,slow=20,SNR=14						
SIJI				S	Sn	06 13 33.7	-0.7
	2.1nm,0.3s,baz=233,slow=22,SNR=5.9						
WRA	Warramunga Arr	14.12	162	P	Pn	06 14 18.4	-1.3
	0.2nm,0.3s,baz=343,slow=13,SNR=11						
WRA				S	Sn	06 16 47.0	-8.7
	0.7nm,0.3s,baz=333,slow=23,SNR=10.0						
ASAR	Alice Springs	17.55	167	P	Pn	06 15 02.0	-0.2
	0.1nm,0.3s,baz=343,slow=10.0,SNR=8.0						
MKAR	Makanchi Array	67.63	327	P	P	06 21 48.7	-0.1
	0.3nm,0.4s,baz=126,slow=6.3,SNR=3.5						

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*ISCJB **12** 06:14:17.2±0.5, 18.°49N±0.°04×146.°9E±0.°1, h52^{km}, mb4.2/21, MS3.4/9, Error ellipse: s-maj=16.3km s-min=5.8km az=7.7*

*NEIC **12** 06:14:21.7±1.0, 18.°36N×146.°80E, h81^{km}±8^{km}, mb4.4/14, Error ellipse: s-maj=23.2km s-min=16.0km az=105.0*

*IDC **12** 06:14:22.3±3.7, 18.°39N×146.°82E, h85^{km}±33^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.7/40, mbtmp4.2/12, MS3.4/9, Ms1 3.4/9, ms1mx3.1/35, Error ellipse: s-maj=38.3km s-min=14.5km az=83.0*

ISC 12 06:14:18.4±0.6**, 18.°45N**±0.°07×**147.°1E**±0.°1**, h52**^{km}**, n44, σ1.**^{s}**24**/37**, mb4.3**/21**, MS3.3**/9**, Mariana Islands region**

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

SARN	Sarigan	2.12	215	ePn	Pn	06 14 52.2	+0.8
ANA2	Anatahan	2.46	212	ePn	Pn	06 14 56.9	+0.9
GUMO	Guam	5.27	204	P	Pn	06 15 35.7	+1.1
	18nm,0.3s,baz=51,slow=2.5,SNR=7.1						
GUMO				S	Sn	06 16 35.6	+1.6
	23nm,0.3s,baz=325,slow=23,SNR=3.5						
GUMO	Guam	5.27	204	ePn	Pn	06 15 37.5	+2.9
PATS	Pohnpei	15.93	135	ePn	Pn	06 17 56.0	-3.1
	70nm,1.0s						
MJAR	Matsushiro Arr	19.64	338	P	Pn	06 18 43.7	-0.8
	0.2nm,0.3s,baz=165,slow=10,SNR=16						
MAJO	Matsushiro	19.64	338	eP	Pn	06 18 44.2	-0.3
	11nm,0.7s						
MJB9	Matsu-Tunnel	19.64	338	eP	Pn	06 18 43.7	-0.9
	11nm,0.7s						
JNU	Nakatsue	20.59	318	LR	LR	06 25 16.5	
	comp=Z,102nm,19.2s,baz=185,slow=32						
JAY	Jayapura	21.75	197	LR	LR	06 27 00.3	
	comp=Z,52nm,19.5s,baz=86,slow=35						
DAV	Davao City (W)	23.77	244	LR	LR	06 30 28.0	
	comp=Z,99nm,18.0s,baz=322,slow=41						
KSRS	Korea Array	25.29	322	P	P	06 19 39.9	0.0
	2.9nm,0.6s,baz=149,slow=8.9,SNR=12						
KSRS				LR	LR	06 29 32.2	
	comp=Z,75nm,19.2s,baz=145,slow=36						
TGY	Tagaytay City	25.43	264	LR	LR	06 27 57.7	
	comp=Z,139nm,19.1s,baz=274,slow=32						
USRK	Ussuriysk Ar.	28.62	337	P	P	06 20 11.2	+1.4
	1.1nm,0.5s,baz=179,slow=11,SNR=5.8						
WB2	Warramunga Arr	40.14	199	eP	P	06 21 49.1	-0.3
	23nm,1.4s						
WR1	Warramunga Arr	40.14	199	eP	P	06 21 49.1	-0.3
WRA	Warramunga Arr	40.14	199	P	P	06 21 49.1	-0.3
	1.9nm,0.5s,baz=23,slow=7.2,SNR=23						
AS31	Alice Springs	43.78	198	eP	P	06 22 18.7	-0.4
	1.2nm,0.5s						
ASAR	Alice Springs	43.78	198	P	P	06 22 18.6	-0.5
	2.0nm,0.7s,baz=16,slow=7.8,SNR=24						
SONA0	Songino Array	44.14	321	eP	P	06 22 21.8	-0.1
SONM	Songino Array	44.14	321	P	P	06 22 21.8	-0.1
	0.8nm,0.5s,baz=135,slow=8.2,SNR=5.5						
CMAR	Chiang Mai Arr	45.52	278	LR	LR	06 42 27.5	
	comp=Z,25nm,18.1s,baz=110,slow=37						
GSI	Gunungsitoli	51.41	256	eP	P	06 23 16.7	-1.8
	22nm,0.6s						
BBOO	Buckleboo	52.04	192	eP	P	06 23 22.1	-0.7
	30nm,1.4s						
SVW2	Sparrevohn	58.43	29	eP	P	06 24 10.0	+1.4
	1.0nm,0.8s						
ZALV	Zalesovo Beam	58.99	322	P	P	06 24 12.2	-0.4
	0.8nm,0.3s,baz=101,slow=7.5,SNR=3.6						
ZAA1	Zalesovo Array	58.99	322	eP	P	06 24 12.2	-0.4
MK31	Makanchi Array	59.56	314	eP	P	06 24 16.8	+0.2
	4.1nm,1.1s						
MK32	Makanchi Array	59.56	314	eP	P	06 24 16.3	-0.4
MKAR	Makanchi Array	59.56	314	P	P	06 24 16.3	-0.4
	1.1nm,0.7s,baz=97,slow=9.0,SNR=6.4						
BPAW	Bear Paw Mtn.	61.41	26	eP	P	06 24 30.5	+1.5
	1.9nm,0.7s						
KURK	Kurchatov	62.31	318	eP	P	06 24 33.5	-1.7
	3.8nm,0.8s						
BRVK	Borovoye	67.55	321	eP	P	06 25 09.2	0.0
	4.2nm,0.8s						
ARU	Arti	74.01	325	eP	P	06 25 48.1	-0.3
	7.0nm,1.1s						
ABKAR	Akbulak array	74.39	317	eP	P	06 25 49.7	-1.1
	1.6nm,0.8s						
NEW	Newport	80.23	42	LR	LR	06 59 14.1	
	comp=Z,19nm,19.0s,baz=286,slow=34						
NV01	Mina Array Sit	82.28	52	eP	P	06 26 36.2	+1.3
NVAR	Mina Array Bea	82.28	52	P	P	06 26 36.2	+1.3
	0.3nm,0.7s,baz=280,slow=5.4,SNR=3.0						
ARA0	ARCESS Array S	83.12	342	eP	P	06 26 39.7	+1.4
ARCES	ARCESS Array B	83.12	342	P	P	06 26 39.7	+1.4
	3.6nm,0.7s,baz=64,slow=8.4,SNR=4.5						
ELK	Elko	83.81	49	LR	LR	06 59 13.3	
	comp=Z,25nm,19.6s,baz=286,slow=32						
FIA0	FINESS Array S	87.64	336	eP	P	06 26 59.5	-1.5
FINES	FINESS Array B	87.64	336	P	P	06 26 59.5	-1.5
	0.8nm,0.3s,baz=61,slow=3.6,SNR=9.9						
BRTR	Keskin Array B	95.20	315	LR	LR	07 13 00.6	
	comp=Z,41nm,21.1s,baz=250,slow=37						

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*DDA **12** 06:14:45.9, 41°.38N×33°.69E, h7^{km}±2^{km}, ML2.9*
*ISK **12** 06:14:45.2, 41°.37N×33°.69E, h10^{km}, ML2.3/8*
*ISCJB **12** 06:14:46.1±0.5, 41°.38N±0°.03×33°.70E±0°.04, h2^{km}±7^{km}, Error ellipse: s-maj=5.4km s-min=4.4km az=166.3*
ISC 12 06:14:46.2±1.0**, 41°.37N**±0°.03×**33°.70E**±0°.03**, h10**^{km}±9^{km}**, n15, σ1^{s}.12**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAST	KASTAMONU	0.21	55	i P	Pg	06 14 50.7	+0.2
KAST				i S	Sg	06 14 54.6	+1.1
KAST				IAML_P			
	comp=Z,27µm,0.1s						
ILGA	Ilgaz	0.32	178	i P	Pb	06 14 53.3	-0.8
ILGA				i S	Sb	06 14 58.2	-1.2
TOS	Tosya	0.41	144	PG	Pg	06 14 53.9	-0.4
TOS				SG	Sg	06 15 00.1	+0.3
KAGI	orum-Kargı	0.63	111	i P	Pg	06 14 58.5	+0.2
KAGI				i S	Sb	06 15 07.8	-0.4
KAGI				IAML_P			
	comp=Z,2µm,0.1s						
BZK	Bozkurt	0.63	21	PG	Pg	06 14 57.9	-0.5
BZK				SG	Sb	06 15 07.4	-0.8
CANT	Cankiri	0.77	185	PG	Pg	06 15 00.3	-0.7
SAFT	Safranbolu	0.78	261	PG	Pg	06 15 00.3	-0.9
KURC	Kurucasile-Bar	0.86	304	PG	Pg	06 15 02.1	-0.7
ELDT	Eldivan	0.91	193	i P	Pb	06 15 04.3	+0.2
ELDT				i S	Sn	06 15 19.2	+0.8
BTIN	Bartın	1.12	284	i P	Pb	06 15 07.5	-0.2
BTIN				i S	Sn	06 15 23.4	-0.1
DIKM	Dikmen	1.20	76	PN	Pb	06 15 08.7	-0.3
CMDR	Camlidere-ANKA	1.28	227	i P	Pb	06 15 10.4	0.0
CMDR				i S	Sn	06 15 31.7	+4.2
CMDR				IAML_P			
	comp=Z,1µm,0.2s						
BCAM	Yenicaga	1.36	246	i P	Pg	06 15 12.2	0.0
BCAM				i S	Sg	06 15 31.0	+1.2
BCAM				IAML_P			
	comp=Z,961nm,0.3s						
DELI	KIRIKKALE	1.38	173	i P	Pb	06 15 11.9	-0.3
DELI				i S	Sg	06 15 30.4	-0.3
DELI				IAML_P			
	comp=Z,621nm,0.1s						
CORM	Corum	1.38	149	PN	Pn	06 15 11.2	-0.5

IDC 12 06:30:19.4±5.1**, 47°.49N**×**152°.18E, h52**^{km}±48^{km}**, mb3.6**/5**, mb1 3.9**/6**, mb1mx3.4**/41**, mbtmp3.9**/6**, ML2.5**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.3**/50**, Error ellipse: s-maj=36.5km s-min=22.0km az=140.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.64	30	P	Pn	06 31 54.3	0.0
	0.5nm,0.3s,baz=182,slow=12,SNR=7.4						
KLR	Kul'dur	13.70	285	LR	LR	06 38 35.3	
	comp=Z,56nm,18.5s,baz=119,slow=36						
H11N2	WAKE ISLAND Hy	30.17	152	T	T	07 07 42.5	
	baz=341,slow=76,SNR=246						
H11N1	WAKE ISLAND Hy	30.19	152	T	T	07 07 58.5	
	baz=341,slow=76,SNR=252						
H11N3	WAKE ISLAND Hy	30.19	152	T	T	07 07 59.2	
	baz=341,slow=76,SNR=180						
H11S1	WAKE ISLAND Hy	31.25	153	T	T	07 09 17.8	
	baz=342,slow=76,SNR=282						
H11S3	WAKE ISLAND Hy	31.26	153	T	T	07 09 26.3	
	baz=342,slow=76,SNR=214						
H11S2	WAKE ISLAND Hy	31.27	153	T	T	07 09 19.3	
	baz=342,slow=76,SNR=171						
MKAR	Makanchi Array	46.04	296	P	P	06 38 37.6	-0.1
	0.6nm,0.8s,baz=69,slow=9.7,SNR=3.3						
NVAR	Mina Array Bea	62.65	62	P	P	06 40 38.9	+0.2
	0.9nm,0.6s,baz=297,slow=7.5,SNR=8.9						
PDAR	Pinedale Array	64.82	54	P	P	06 40 52.7	-0.2
	0.8nm,0.7s,baz=295,slow=1.1,SNR=11						
WRA	Warramunga Arr	69.01	198	P	P	06 41 18.7	-0.7
	1.9nm,0.8s,baz=16,slow=7.2,SNR=6.0						
ASAR	Alice Springs	72.72	198	P	P	06 41 42.4	+0.6
	1.0nm,0.5s,baz=11,slow=5.5,SNR=24						
EQUI	Equi	82.79	333	P	P	06 42 31.7	-6.0
EQUI				S	S	06 42 32.5	-619

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*KRNET **12** 06:50:57.6±0.1, 40°.59N×72°.98E, h23^{km}, mb2.5*
*SOME **12** 06:50:58.2, 40°.68N×73°.10E, h5^{km}*
*NNC **12** 06:51:00.7±3.7, 40°.71N×73°.03E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=29.0km s-min=14.3km az=168.0*
ISC 12 06:50:57.0±1.8**, 40°.62N**±0°.07×**73°.13E**±0°.03**, h11**^{km}±13^{km}**, n21, σ1^{s}.25**/37**, 20C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.72	351	⇑iP	Pb	06 51 11.9	+0.3
	baz=0.0						
ARSB				⇑iS	Sb	06 51 21.8	+0.3
	baz=0.0						
ARLS	Aral	1.54	36	⇓iP	Pg	06 51 27.4	+0.9
	baz=38						
ARLS				⇓iS	Sg	06 51 48.1	+1.7
	baz=38						
BTK	Batken	1.85	253	⇑iP	Pn	06 51 29.3	+0.5
	baz=53						
BTK				⇑iS	Sn	06 51 51.7	-0.6
	baz=53						
UCH	Uchtor	1.92	32	⇑iP	Pg	06 51 33.7	-0.1
	baz=35						
UCH				⇑iS	Sg	06 51 59.8	+1.1
	baz=35						
EKS2	Erkin-Say	2.10	13	⇓iP	Pb	06 51 35.7	+0.5
	baz=16						
EKS2				⇓iS	Sg	06 52 02.7	-1.8
	baz=16						
MRKS	Merke	2.13	2	Pg	Pg	06 51 37.3	-0.5
	7.0nm,0.3s						
MRKS				Lg	Lg	06 52 05.9	
	9.3nm,0.2s						
MRKS	Merke	2.13	2	eP	Pg	06 51 37.3	-0.5
	6.8nm,0.3s						
MRKS				eS	Sg	06 52 05.6	+0.1
	10nm,0.4s						
KZA	Kyzart	2.16	47	⇑iP	Pb	06 51 37.5	+1.0
	baz=48						
KZA				⇑iS	Sg	06 52 06.0	-0.6
	baz=48						
AAK	Ala-Archa	2.27	26	⇑Pn	Pg	06 51 39.7	-0.8
	1.6nm,0.2s						
AAK				⇓Sn	Sg	06 52 09.9	+0.1
	4.7nm,0.4s						
AAK	Ala-Archa	2.27	26	⇑iP	Pb	06 51 38.4	+0.4
	baz=29						
AAK				⇑iS	Sb	06 52 07.6	+1.5
	baz=29						
NRN	Naryn	2.32	68	⇑iP	Pb	06 51 39.4	+0.3
	baz=69						
NRN				⇑iS	Sb	06 52 09.0	+1.1
	baz=69						
KBK	Karagaybulak	2.45	33	⇑iP	Pb	06 51 41.1	-0.1
	baz=35						
KBK				⇑iS	Sb	06 52 12.2	+0.7
	baz=35						
CHMS	Chumysh	2.67	26	⇑iP	Pb	06 51 43.6	-1.3
	baz=28						
CHMS				⇑iS	Sb	06 52 16.7	-1.0
	baz=28						
IUG	Iuzhnay	2.79	304	Pg	Pg	06 51 49.1	-1.3
	0.5nm,0.3s						
IUG				Lg	Lg	06 52 25.7	
	11nm,0.2s						
IUG	Iuzhnay	2.79	304	eP	Pg	06 51 49.1	-1.3
	0.3nm,0.1s						
IUG				eS	Sg	06 52 25.7	-0.9
	15nm,0.4s						
BOOM	Boomskoye usch	2.82	47	⇑iP	Pb	06 51 46.4	-1.1
	baz=48						
BOOM				⇑iS	Sb	06 52 21.7	-0.4
	baz=48						
USP	Ospenovka	2.84	21	⇓iP	Pb	06 51 46.0	-1.7
	baz=22						
USP				⇓iS	Sb	06 52 20.6	-1.9
	baz=22						
SGDS	Sogindy	3.05	21	Pg	Pb	06 51 53.1	+1.8
	2.2nm,0.3s						
SGDS				Lg	Lg	06 52 32.5	
	2.9nm,0.3s						
KK31	Karatay Array	3.16	323	⇑Pg	Pg	06 52 01.4	+3.8
	0.2nm,0.3s,baz=146,slow=18,SNR=4.3						
KK31				⇓Lg	Lg	06 52 36.1	
	2.2nm,0.5s,baz=137,slow=30,SNR=7.5						
KST	Kastek	3.22	40	Pg	Pg	06 51 57.5	-1.2
	1.3nm,0.3s						
KST				Lg	Lg	06 52 40.2	
	3.2nm,0.4s						
KST	Kastek	3.22	40	eP	Pg	06 51 57.5	-1.2
	1.0nm,0.1s						
KST				eS	Sg	06 52 40.2	-0.2
	3.7nm,0.5s						

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*IDC **12** 06:54:34.1±0.8, 12°.55N×143°.75E, h0^{km}, mb4.1/6, mb1 4.4/6, mb1mx3.8/54, mbtmp4.1/6, MS3.6/11, Ms1 3.7/11, ms1mx3.3/37, Error ellipse: s-maj=37.2km s-min=19.1km az=116.0*
*ISCJB **12** 06:54:36.4±0.5, 12°.52N±0°.07×143°.7E±0°.1, h27^{km}, mb4.5/15, MS3.6/8, Error ellipse: s-maj=16.4km s-min=6.6km az=28.6*
*NEIC **12** 06:54:39.0±1.4, 12°.56N×143°.73E, h35^{km}, mb4.7/9, Error ellipse: s-maj=20.8km s-min=5.5km az=288.0*
ISC 12 06:54:37.9±0.6**, 12°.56N**±0°.09×**143°.8E**±0°.1**, h27**^{km}**, n41, σ1^{s}.24**/28**, mb4.7**/15**, MS3.6**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.46	45	Pn	Pn	06 55 01.3	-1.2
	193nm,0.3s,baz=26,slow=3.9,SNR=117						
GUMO				Sn	Sn	06 55 19.9	-0.9
	207nm,0.3s,baz=7.1,slow=22,SNR=24						
GUMO				LR	LR	06 55 45.8	
	comp=Z,3µm,18.7s,baz=244,slow=48						
GUMO	Guam	1.46	45	ePn	Pn	06 55 01.3	-1.2
GUMO				eSn	Sn	06 55 22.0	+1.3
SARN	Sarigan	4.54	25	ePn	Pn	06 55 45.7	+0.8
JAY	Jayapura	15.29	192	LR	LR	07 03 37.8	
	comp=Z,329nm,18.1s,baz=6.5,slow=36						
SIJI	Sorong	18.24	224	LR	LR	07 04 56.7	
	comp=Z,199nm,19.7s,baz=21,slow=34						
DAV	Davao City (W)	18.76	255	LR	LR	07 04 53.0	
	comp=Z,166nm,21.1s,baz=155,slow=33						
H11S3	WAKE ISLAND Hy	22.81	72	T	T	07 23 30.7	
	baz=258,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	22.83	72	T	T	07 23 25.3	
	baz=258,slow=75,SNR=25						
H11S2	WAKE ISLAND Hy	22.83	72	T	T	07 23 24.9	
	baz=258,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	23.27	69	T	T	07 24 01.1	
	baz=255,slow=75,SNR=35						
H11N2	WAKE ISLAND Hy	23.28	69	T	T	07 24 01.0	
	baz=255,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	23.29	69	T	T	07 24 08.8	
	baz=255,slow=75,SNR=46						
MJAR	Matsushiro Arr	24.41	349	LR	LR	07 07 33.2	
	comp=Z,139nm,21.0s,baz=175,slow=32						
COEN	Coen	26.35	181	eP	P	07 00 12.0	0.0
	20nm,1.1s						
ASAJ	Asahikawa	31.46	358	LR	LR	07 13 19.3	
	comp=Z,60nm,20.5s,baz=150,slow=36						
WRAB	Tennant Creek	33.60	196	eP	P	07 01 15.8	-0.4
	5.5nm,0.6s						
WB2	Warramunga Arr	33.61	196	eP	P	07 01 15.9	-0.4
	6.5nm,0.6s						
WR1	Warramunga Arr	33.61	196	eP	P	07 01 15.8	-0.6
WRA	Warramunga Arr	33.61	196	P	P	07 01 15.8	-0.6
	4.3nm,0.4s,baz=12,slow=8.1,SNR=97						
AS31	Alice Springs	37.28	195	eP	P	07 01 48.2	+0.4
	1.4nm,0.4s						
ASAR	Alice Springs	37.28	195	P	P	07 01 47.3	-0.6
	0.8nm,0.4s,baz=16,slow=11,SNR=33						
ASAR				PcP	PcP	07 04 07.8	+0.7
	0.5nm,0.5s,baz=35,slow=2.7,SNR=5.3						
ASAR				LR	LR	07 17 50.8	
	comp=Z,103nm,19.0s,baz=28,slow=38						
KLR	Kul'dur	37.90	347	LR	LR	07 17 57.5	
	comp=Z,72nm,18.5s,baz=187,slow=37						
EIDS	Eidsvold	38.36	169	eP	P	07 01 56.9	+0.1
	19nm,1.4s						
DZM	Mont Dzumac	40.96	147	eP	P	07 02 20.1	+1.4
	20nm,1.2s						
PETK	Petropavlovsk-	41.94	13	LR	LR	07 20 34.1	
	comp=Z,80nm,18.5s,baz=196,slow=37						
CMAR	Chiang Mai Arr	43.54	284	LR	LR	07 20 13.4	
	comp=Z,97nm,20.0s,baz=77,slow=35						
BBOO	Buckleboo	45.72	189	eP	P	07 02 56.4	-0.5
	43nm,1.4s						
SONM	Songino Array	46.98	326	LR	LR	07 22 21.1	
	comp=Z,87nm,19.8s,baz=148,slow=36						
MORW	Morawa	49.31	213	eP	P	07 03 24.6	-0.3
	21nm,1.4s						
TLY	Talaya	50.68	329	LR	LR	07 22 13.5	
	comp=Z,83nm,21.6s,baz=168,slow=33						
MK32	Makanchi Array	61.51	317	eP	P	07 04 53.7	+1.1
MKAR	Makanchi Array	61.51	317	P	P	07 04 53.7	+1.1
	0.3nm,0.5s,baz=104,slow=7.4,SNR=4.2						
LBZ	Lake Benmore	61.54	159	eP	P	07 04 53.4	+0.7
	41nm,1.5s						
NEW	Newport	86.68	41	P	P	07 07 20.6	+1.1
	1.0nm,0.7s,baz=286,slow=7.4,SNR=2.8						
NV01	Mina Array Sit	88.37	51	eP	P	07 07 29.1	+1.1
NVAR	Mina Array Bea	88.37	51	P	P	07 07 29.1	+1.1
	0.8nm,0.5s,baz=262,slow=5.6,SNR=11						
FIA0	FINESS Array S	91.65	335	eP	P	07 07 41.1	-1.4
FINES	FINESS Array B	91.65	335	P	P	07 07 41.1	-1.4
	0.5nm,0.4s,baz=68,slow=5.9,SNR=7.1						
451A	Vernon	115.89	47	ePKPdf	PKiKP	07 13 14.7	-4.2
SNAA	Sanae	117.58	191	ePKPdf	PKiKP	07 13 20.9	-0.1
LPAZ	La Paz	148.87	101	PKPbc	PKiKP	07 14 25.8	-0.5
	1.0nm,0.5s,baz=0.6,slow=3.5,SNR=12						

ISC 12 06:57:53.3±1.2**, 49°.15N**±0°.06×**18°.87E**±0°.04**, h10**^{km}±13^{km}**, n7, σ0^{s}.40**/13**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	Liptovska Anna	0.40	90	ePG	Pg	06 58 01.1	0.0
LANS				eSG	Sg	06 58 06.5	+0.1
KOLL	Kolacno	0.65	208	ePG	Pg	06 58 05.4	-0.5
KOLL				eSG	Sb	06 58 16.4	+0.5
VYHS	Vyhne	0.66	182	ePG	Pg	06 58 06.0	-0.1
JAVC	Velka Javorina	0.84	250	ePG	Pn	06 58 10.7	-0.5
JAVC				eSG	Sn	06 58 23.6	-0.1
MORC	Moravsky Berou	1.06	306	ePG	Pn	06 58 14.1	-0.2
MORC				eSG	Sb	06 58 28.2	+0.4
MODS	Modra-Piesok	1.31	234	ePG	Pg	06 58 18.5	+0.1
MODS				eSG	Sg	06 58 36.0	+0.6
VRAC	Vranov	1.50	277	ePG	Pn	06 58 20.3	+0.1
VRAC				eSG	Sg	06 58 41.3	-0.1

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*IDC **12** 07:01:26.4±1.1, 26°.34N×90°.95E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/49, mbtmp3.7/6, MS4.5/1, Ms1 4.5/1, ms1mx2.7/45, Error ellipse: s-maj=41.9km s-min=21.0km az=63.0*
*NDI **12** 07:01:29.8±2.3, 26°.34N×90°.77E, h11^{km}±6^{km}, ML3.7*
*ISCJB **12** 07:01:31.5±0.4, 26°.28N±0°.03×90°.77E±0°.03, h61^{km}±5^{km}, mb4.1/12, Error ellipse: s-maj=5.6km s-min=4.7km az=3.3*
*NEIC **12** 07:01:32.2±1.3, 26°.27N×90°.70E, h48^{km}±13^{km}, mb4.1/8, Error ellipse: s-maj=25.5km s-min=15.2km az=201.0*
ISC 12 07:01:32.1±1.1**, 26°.31N**±0°.04×**90°.77E**±0°.03**, h45**^{km}±12^{km}**, n31, σ1^{s}.51**/41**, mb3.8**/12**, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUWA	GUWAHATI	0.83	98	eP	Pn	07 01 46.8	-0.7
GUWA				eS	Sn	07 01 58.5	-0.2
GUWA				IAML		07 01 59.8	
	comp=N,2µm,0.1s						
GUWA				IAML		07 01 59.8	
	comp=E,2µm,0.1s						
TURI	Tura	0.86	208	eP	Pn	07 01 48.5	+0.7
TURI				eS	Sn	07 02 00.9	+1.7
TURI				IAML		07 02 02.6	
	comp=N,3µm,0.2s						
TURI				IAML		07 02 02.6	
	comp=E,7µm,0.2s						
SHL	Shillong	1.25	126	eP	Pn	07 01 53.2	0.0
SHL				eS	Sn	07 02 10.0	+1.0
SHL				IAML		07 02 11.3	
	comp=E,3µm,0.2s						
SHL				IAML		07 02 11.5	
	comp=N,2µm,0.2s						
TAWA	Tawang	1.61	37	eP	Pn	07 01 58.5	+0.1
TAWA				eS	Sn	07 02 18.3	+0.2
TAWA				IAML		07 02 22.2	
	comp=E,2µm,0.2s						
TAWA				IAML		07 02 22.4	
	comp=N,2µm,0.2s						
TEZP	TEZPUR	1.84	80	eP	Pn	07 02 01.7	+0.5
TEZP				eS	Sn	07 02 23.4	+0.1
TEZP				IAML		07 02 28.7	
	comp=E,1µm,0.1s						
TEZP				IAML		07 02 28.9	
	comp=N,2µm,0.1s						
GTK	Tadong	2.18	298	eP	Pn	07 02 05.9	-0.2
GTK				eS	Sn	07 02 33.2	+1.3
GTK				IAML		07 02 36.9	
	comp=E,421nm,0.2s						
GTK				IAML		07 02 36.9	
	comp=N,236nm,0.2s						
SILR	SILCHAR	2.39	129	eP	Pn	07 02 08.0	-0.7
SILR				eS	Sn	07 02 37.6	+0.9
ZIRO	ZIRO	3.00	66	eP	Pn	07 02 16.5	-0.9
ZIRO				eS	Sn	07 02 54.4	+2.3
ZIRO				IAML		07 03 15.8	
	comp=E,1µm,0.4s						
ZIRO				IAML		07 03 15.9	
	comp=N,2µm,0.4s						
MOKO	MOKOCHONG	3.36	89	eP	Pn	07 02 22.9	+0.7
MOKO				eS	Sn	07 02 59.9	-1.1
MOKO				IAML		07 03 03.6	
	comp=E,230nm,0.2s						
MOKO				IAML		07 03 03.8	
	comp=N,260nm,0.3s						
LSA	Lhasa	3.39	6	ePn	Pn	07 02 23.9	+1.0
SAIH	SAIHA	4.31	152	eP	Pn	07 02 36.6	+1.4
SAIH				eS	Sn	07 03 23.5	-0.8
SAIH				IAML		07 03 27.6	
	comp=N,38nm,0.3s						
SAIH				IAML		07 03 27.7	
	comp=E,64nm,0.3s						
BOK	Bokaro	5.09	242	eP	Pn	07 02 45.3	-0.5
BOK				eS	Sn	07 03 42.4	-1.0
BOOM	Boomskoye usch	20.20	327	eP	P	07 05 58.3	-4.9
	comp=E,2.2nm,0.8s						
KBL	Kabul	20.42	299	eP	P	07 06 01.8	-4.0
	comp=E,3.5nm,0.8s						
MK31	Makanchi Array	21.52	344	eP	P	07 06 19.4	+2.2
	comp=E,1.2nm,0.5s						
MK32	Makanchi Array	21.52	344	eP	P	07 06 16.2	-1.0
MKAR	Makanchi Array	21.52	344	P	P	07 06 16.2	-1.0
	comp=E,1.1nm,0.5s,baz=157,slow=9.9,SNR=9.2						
BTK	Batken	21.54	314	eP	P	07 06 17.4	-0.1
	comp=E,5.0nm,0.8s						
SONA0	Songino Array	24.74	26	eP	P	07 06 50.0	+0.6
SONM	Songino Array	24.74	26	P	P	07 06 50.0	+0.6
	comp=E,1.7nm,0.6s,baz=210,slow=9.9,SNR=12						
KURBB	Kurchatov Arra	26.02	342	P	P	07 07 00.6	-0.2
	comp=E,0.6nm,0.5s,baz=163,slow=9.0,SNR=6.0						
TWG	Pinlang	27.75	91	eP	P	07 07 15.3	-1.3
	comp=E,338nm,0.9s						
ABKAR	Akbulak array	33.06	322	eP	P	07 08 03.3	0.0
	comp=E,1.0nm,0.6s						
JNU	Nakatsue	35.33	69	LR	LR	07 23 21.1	
	comp=E,665nm,19.9s,baz=208,slow=37						
WR1	Warramunga Arr	62.46	133	eP	P	07 11 50.8	-0.2
WRA	Warramunga Arr	62.46	133	P	P	07 11 50.8	-0.2
	comp=E,0.8nm,0.8s,baz=309,slow=7.7,SNR=5.7						
WB2	Warramunga Arr	62.47	133	eP	P	07 11 51.0	0.0
	comp=E,7.7nm,1.2s						
ASAR	Alice Springs	64.88	136	P	P	07 12 07.0	+0.1
	comp=E,0.6nm,0.7s,baz=314,slow=6.6,SNR=6.1						
CHIA	Chirikof Islan	80.74	32	eP	P	07 13 39.9	-0.6
	comp=E,46nm,1.5s						
TOA1	Torodi Ar. Sit	83.47	281	eP	P	07 13 58.2	+2.7
TORD	Torodi Ar. Bea	83.47	281	P	P	07 13 58.2	+2.7
	comp=E,0.3nm,0.6s,baz=58,slow=4.6,SNR=3.1						

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*ISK **12** 07:17:41.6, 38°.40N×38°.13E, h14^{km}, ML1.7/3*
*DDA **12** 07:17:42.4, 38°.28N×38°.18E, h7^{km}±3^{km}, ML2.6*
ISC 12 07:17:42.1±1.4**, 38°.27N**±0°.06×**38°.11E**±0°.04**, h4**^{km}±12^{km}**, n8, σ0^{s}.66**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.58**	**302**	PG	**Pg**	**07 17 52.6**	**-0.6**
DARE				SG	**Sg**	**07 18 00.6**	**-0.1**
HEKM	**Malatya_Hekimh**	**0.62**	**349**	*i* P	**Pg**	**07 17 54.5**	**+0.5**
HEKM				*i* S	**Sb**	**07 18 05.4**	**+0.6**
ELZG	**Elazig**	**0.72**	**71**	*i* P	**Pg**	**07 17 56.2**	**+0.2**
ELZG				*i* S	**Sb**	**07 18 07.7**	**0.0**
ELZG				IAML_P			
	comp=Z,932nm,0.1s						
SVRC	**Sivrice-ELAZID**	**0.95**	**83**	PG	**Pg**	**07 17 59.8**	**-0.5**
SVRC				SG	**Sg**	**07 18 13.1**	**+0.5**
URFA	**Urfa**	**1.00**	**146**	PN	**Pn**	**07 18 03.1**	**+0.1**
KEMA	**Kemaliye**	**1.04**	**17**	*i* P	**Pg**	**07 18 01.3**	**-0.8**
KEMA				*i* S	**Sn**	**07 18 17.4**	**-1.3**
CUKAN	**kangal_SIVAS**	**1.16**	**335**	*i* P	**Pn**	**07 18 05.6**	**+0.3**
CUKAN				*i* S	**Sn**	**07 18 22.1**	**+0.4**
GAZ	**Gaziantep**	**1.31**	**213**	PN	**Pn**	**07 18 07.6**	**+0.4**

NEIC ***12*** *07:24:07.1±2.3, 4.°93S×148.°92E, h10^{km}±4^{km}, mb4.7/18, Error ellipse: s-maj=15.1km s-min=12.0km az=75.0*

IDC ***12*** *07:24:07.5±0.8, 4.°86S×148.°62E, h0^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.2/30, mbtmp4.2/14, ML2.0/1, MS4.0/20, Ms1 4.0/20, ms1mx3.9/27, Error ellipse: s-maj=28.4km s-min=14.7km az=86.0*

BJI ***12*** *07:24:08.0±0.0, 5.°05S×149.°06E, h29^{km}, mb4.8/23, mB5.2/16, Ms4.8/7, Ms7 4.5/6*

ISCJB ***12*** *07:24:09.5±0.4, 4.°95S±0.°04×148.°88E±0.°08, h33^{km}, mb4.6/34, MS4.0/21, Error ellipse: s-maj=11.1km s-min=5.7km az=2.7*

DJA ***12*** *07:24:11.5±0.5, 5°S±6°×14°9E±°, h58^{km}±10^{km}, M4.7/7, mb4.6/7, MLv4.8/3*

GCMT ***12*** *07:24:12.1±0.2, 4.°94S±0.°01×148.°95E±0.°02, h16^{km}±1^{km}, MW5.0/88, Moment Tensor Solution. s27,c34; s88,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49±.11; $M_{\theta\theta}$2.23±.11; $M_{\phi\phi}$-1.73±.10; $M_{r\theta}$-0.57±.29; $M_{\theta\phi}$2.51±.09; $M_{\phi r}$1.42±.30; Best double couple: $M_0$3.56500×10^{16} NP1:ϕ_s202.00000°, δ73.00000°, λ-160.00000°. NP2: ϕ_s106.00000°, δ71.00000°, λ-18.00000°. Principal axes: T 3.4500, Plg2.0000°, Azm334.0000°; N 0.2350, Plg64.0000°, Azm240.0000°; P -3.6800, Plg26.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 07:24:11.3±0.5**, 4.°90S**±0.°05×**149.°03E**±0.°08**, h35**^{km}**, n76, σ1^{s}49**/53**, mb4.6**/34**, MS4.2**/22**, 1C, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.20**	**77**	*e*Pn	**Pn**	**07 24 57.3**	**-1.8**
MANU	**Manus Island**	**3.29**	**330**	*e*Pn	**Pn**	**07 24 59.5**	**-0.8**
PMG	**Port Moresby**	**4.85**	**202**	Pn	**Pn**	**07 25 22.1**	**+0.3**
	4.3nm,0.3s,baz=38,slow=10,SNR=7.9						
PMG				Sn	**Sn**	**07 26 17.6**	**+0.8**
	11nm,0.3s,baz=10,slow=19,SNR=10.0						
HNR	**Honiara**	**11.73**	**113**	LR	LR	07 30 54.4	
	comp=Z,1μm,19.7s,baz=280,slow=34						
SIJI	**Sorong**	**18.18**	**282**	LR	LR	07 36 40.2	
	comp=Z,492nm,18.4s,baz=89,slow=42						
GUMO	**Guam**	**18.83**	**347**	LR	LR	07 35 43.2	
	comp=Z,421nm,18.7s,baz=183,slow=37						
MTN	**Manton Dam**	**19.35**	**245**	*e*P	**P**	**07 28 31.7**	**-2.3**
	21nm,0.8s						
EIDS	**Eidsvold**	**20.45**	**175**	*e*P	**P**	**07 28 46.3**	**+0.4**
	14nm,1.0s						
WRAB	**Tennant Creek**	**20.68**	**222**	*e*P	**P**	**07 28 46.4**	**-2.0**
	34nm,0.8s						
WB2	**Warramunga Arr**	**20.68**	**222**	*e*P	**P**	**07 28 46.5**	**-1.9**
	29nm,0.6s						
WR1	**Warramunga Arr**	**20.69**	**222**	*e*P	**P**	**07 28 46.2**	**-2.3**
WRA	**Warramunga Arr**	**20.69**	**222**	P	**P**	**07 28 46.2**	**-2.3**
	25nm,0.6s,baz=49,slow=10,SNR=149						
AS31	**Alice Springs**	**23.68**	**217**	*e*P	**P**	**07 29 18.4**	**-1.5**
	3.9nm,0.6s						
ASAR	**Alice Springs**	**23.68**	**217**	P	**P**	**07 29 18.0**	**-2.0**
	11nm,0.6s,baz=51,slow=9.0,SNR=176						
ASAR				LR	LR	07 39 59.0	
	comp=Z,794nm,18.2s,baz=52,slow=40						
DZM	**Mont Dzumac**	**24.00**	**137**	*e*P	**P**	**07 29 22.6**	**-0.4**
	17nm,0.7s						
DZM				*e*LR	LR	07 35 18.4	
	comp=Z,2μm,23.3s						
DZM	**Mont Dzumac**	**24.00**	**137**	P	**P**	**07 29 27.9**	**+4.9**
	24nm,1.0s,baz=324,slow=7.9,SNR=6.8						
DZM				LR	LR	07 37 25.7	
	comp=Z,1μm,20.9s,baz=303,slow=33						
DZM	**Mont Dzumac**	**24.00**	**137**	*e*P	**P**	**07 29 20.8**	**-2.1**
	77nm,1.4s						
ARMA	**Armidale**	**25.50**	**175**	*e*P	**P**	**07 29 37.6**	**+1.0**
BATI	**Baumata**	**25.68**	**257**	LR	LR	07 42 07.4	
	comp=Z,756nm,18.1s,baz=110,slow=43						
DAV	**Davao City (W)**	**26.25**	**297**	LR	LR	07 40 42.1	
	comp=Z,151nm,18.6s,baz=113,slow=38						
STKA	**Stephens Creek**	**27.73**	**194**	LR	LR	07 41 23.7	
	comp=Z,380nm,20.0s,baz=15,slow=37						
H11S3	**WAKE ISLAND Hy**	**29.04**	**36**	T	T	08 00 21.5	
	baz=220,slow=74,SNR=14						
H11S2	**WAKE ISLAND Hy**	**29.05**	**36**	T	T	07 59 49.6	
	baz=220,slow=74,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**29.06**	**36**	T	T	08 00 05.5	
	baz=220,slow=74,SNR=4.7						
KAPI	**Kappang**	**29.17**	**268**	LR	LR	07 43 52.7	
	comp=Z,125nm,20.2s,baz=112,slow=41						
FORT	**Forrest**	**32.44**	**215**	*e*P	**P**	**07 30 36.2**	**-2.1**
	13nm,0.8s						
TOO	**Toolangi**	**32.68**	**185**	*e*P	**P**	**07 30 39.6**	**-0.7**
	9.7nm,1.2s						
JHJ	**Hachijo jima 2**	**38.81**	**348**	LR	LR	07 46 28.4	
	comp=Z,342nm,18.1s,baz=68,slow=35						
JNU	**Nakatsue**	**41.55**	**337**	P	**P**	**07 31 55.1**	**-0.5**
	9.4nm,0.9s,baz=91,slow=5.9,SNR=4.3						
JNU				LR	LR	07 47 19.5	
	comp=Z,237nm,19.8s,baz=172,slow=34						
JNU	**Nakatsue**	**41.55**	**337**	*e*P	**P**	**07 31 54.3**	**-1.3**
MJAR	**Matsushiro Arr**	**42.45**	**347**	LR	LR	07 47 50.2	
	comp=Z,84nm,18.3s,baz=160,slow=34						
QIZ	**Qiongzhong**	**45.32**	**303**	P	**P**	**07 32 26.6**	**+0.3**
QIZ				S	**S**	**07 39 05.5**	**+0.6**
QIZ				LR	LR		
	comp=E,340nm,7.1s						
QIZ				LR	LR		
	comp=Z,300nm,18.6s						
KSRS	**Korea Array**	**46.50**	**337**	P	**P**	**07 32 34.9**	**-0.3**
	2.1nm,0.9s,baz=165,slow=9.6,SNR=6.4						
KSRS				LR	LR	07 50 19.0	
	comp=Z,161nm,20.5s,baz=149,slow=34						
NJ2	**Nanjing**	**46.63**	**324**	*e*P	**P**	**07 32 37.7**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
SKNT	**Sakolnakorn**	**49.53**	**297**	P	P	07 33 06.9	+7.9
	8.4nm,1.2s						
NONG	**Nongkai**	**50.68**	**298**	P	P	07 33 15.1	+7.4
	0.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**51.23**	**344**	P	**P**	**07 33 11.9**	**+0.6**
	2.7nm,0.8s,baz=174,slow=9.0,SNR=7.3						
UTTA	**Uttaradit**	**52.86**	**296**	P	P	07 33 32.0	+8.0
	6μm,0.7s,225μm						
KMI	**Kunming**	**53.96**	**306**	P	**P**	**07 33 33.5**	**+1.2**
KMI				pP	pP	07 33 40.1	-2.2
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
PAYA	**Payao**	**54.04**	**298**	P	P	07 33 42.8	+10
	10μm,0.8s						
XAN	**Xi'an**	**54.16**	**319**	*e*P	**P**	**07 33 32.3**	**-1.0**
	16nm,1.3s						
CM31	**Chiang Mai Arr**	**54.54**	**297**	*e*P	**P**	**07 33 34.6**	**-1.8**
	10nm,1.0s						
CMAR	**Chiang Mai Arr**	**54.54**	**297**	P	**P**	**07 33 35.4**	**-1.0**
	0.6nm,0.3s,baz=115,slow=5.3,SNR=4.3						
CMAR				LR	LR	07 58 07.8	
	comp=Z,35nm,18.3s,baz=117,slow=38						
CMMT	**Chiang Mai**	**54.66**	**297**	P	P	07 33 44.3	+7.1
	2.9nm,1.3s						
CHTO	**Chiang Mai**	**54.66**	**297**	*e*P	**P**	**07 33 37.5**	**+0.3**
	12nm,1.4s						
KLR	**Kul'dur**	**55.97**	**346**	P	**P**	**07 33 47.3**	**+1.3**
	2.4nm,1.0s,baz=134,slow=9.9,SNR=4.9						
CD2	**Chengdu**	**55.99**	**313**	*e*P	**P**	**07 33 46.2**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**57.00**	**327**	P	**P**	**07 33 56.8**	**+3.1**
PETK	**Petropavlovsk-**	**58.25**	**6**	LR	LR	07 56 50.1	
	comp=Z,47nm,20.8s,baz=186,slow=34						
LZH	**Lanzhou**	**58.73**	**318**	*e*P	**P**	**07 34 07.0**	**+1.0**
LZH				pP	pwP	07 34 18.5	+0.1
LZH				sP	sP	07 34 22.4	+2.4
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,82nm,5.5s						
LZH				LR	LR		
	comp=N,290nm,15.9s						
LZH				LR	LR		
	comp=E,300nm,16.2s						
LZH				LR	LR		
	comp=Z,390nm,17.3s						
PPT	**Papeete**	**61.28**	**107**	LR	LR	07 57 15.1	
	comp=Z,43nm,20.6s,baz=280,slow=32						
PPT2	**Papeete2**	**61.28**	**107**	*e*LQ	LQ	07 49 40.9	
	348nm,30.0s						
PPT2				*e*LR	LR	07 52 30.6	
	comp=Z,126nm,26.2s						
TBI	**Tubuai**	**61.95**	**114**	*e*LQ	LQ	07 50 14.6	
	283nm,34.2s						
TBI				*e*LR	LR	07 52 54.0	
	comp=Z,353nm,34.8s						
GTA	**Gaotai**	**63.22**	**319**	*e*P	P	07 34 41.6	+5.2
GTA				pP	sP	07 34 51.0	+0.5
GTA				sP	pwP	07 34 56.0	+7.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONA0	**Songino Array**	**64.46**	**330**	*e*P	**P**	**07 34 44.9**	**+0.5**
SONM	**Songino Array**	**64.46**	**330**	P	**P**	**07 34 44.9**	**+0.5**
	3.0nm,0.8s,baz=146,slow=5.1,SNR=16						
VNDA	**Vanda**	**72.89**	**177**	P	**P**	**07 35 38.5**	**+2.1**
	1.1nm,0.8s,baz=329,slow=6.5,SNR=7.7						
VNDA				LR	LR	08 03 48.9	
	comp=Z,130nm,20.2s,baz=346,slow=33						
VNDA	**Vanda**	**72.89**	**177**	*e*P	**P**	**07 35 38.3**	**+1.9**
WMQ	**Urumqi**	**73.30**	**318**	*e*P	**P**	**07 35 40.3**	**+0.9**
WMQ				LR	LR		
	comp=E,340nm,21.7s						
MK31	**Makanchi Array**	**77.95**	**320**	*e*P	**P**	**07 36 05.8**	**-0.2**
	3.3nm,1.1s						
MKAR	**Makanchi Array**	**77.95**	**320**	P	**P**	**07 36 06.2**	**+0.3**
	0.5nm,0.6s,baz=100,slow=6.7,SNR=5.7						
ZALV	**Zalesovo Beam**	**79.17**	**327**	P	**P**	**07 36 12.0**	**-0.5**
	1.1nm,0.7s,baz=64,slow=3.4,SNR=3.7						
ZALV				LR	LR	08 11 06.1	
	comp=Z,138nm,19.6s,baz=70,slow=36						
ZAA1	**Zalesovo Array**	**79.18**	**327**	*e*P	**P**	**07 36 12.0**	**-0.5**
CNPM	**China Poot**	**79.46**	**27**	*e*P	**P**	**07 36 14.1**	**+0.2**
	7.5nm,0.8s						
NIL	**Nilore**	**80.94**	**305**	*e*P	**P**	**07 36 22.2**	**-0.3**
	8.9nm,0.8s						
MAW	**Mawson**	**84.03**	**203**	LR	LR	08 11 40.1	
	comp=Z,135nm,21.2s,baz=79,slow=34						
KK31	**Karatay Array**	**84.98**	**314**	*e*P	**P**	**07 36 42.4**	**-0.8**
	8.3nm,1.2s						
KKAR	**Karatay Array**	**84.98**	**314**	*e*P	**P**	**07 36 42.7**	**-0.5**
	8.3nm,1.2s						
QSPA	**South Pole Qui**	**85.06**	**180**	*e*P	**P**	**07 36 42.2**	**-1.1**
	6.5nm,1.3s						
SYO	**Syowa Base**	**92.31**	**200⇑**	*e*X	P	07 37 23.0	+5.4
ARU	**Arti**	**94.30**	**326**	LR	LR	08 19 04.5	
	comp=Z,218nm,21.9s,baz=91,slow=35						
NV01	**Mina Array Sit**	**95.10**	**52**	*e*P	**P**	**07 37 33.0**	**+1.6**
NVAR	**Mina Array Bea**	**95.10**	**52**	P	**P**	**07 37 33.0**	**+1.6**
	0.4nm,0.8s,baz=287,slow=7.3,SNR=2.9						
TOA0	**Torodi Ar. Sit**	**146.75**	**286**	*e*PKPdf	**PKPbc**	**07 43 50.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**146.75**	**286**	PKPbc	**PKPbc**	**07 43 50.5**	**-0.2**
	1.6nm,0.7s,baz=81,slow=4.1,SNR=8.9						
TOA1	**Torodi Ar. Sit**	**146.75**	**287**	*e*PKPdf	**PKPbc**	**07 43 50.5**	**-0.2**

IDC 12 07:24:26.0±3.2**, 30.°08S**×**177.°43W, h0**^{km}**, mb4.0**/3**, mb1 4.2**/4**, mb1mx3.8**/33**, mbtmp4.0**/4**, ML3.3**/1**, Error ellipse: s-maj=74.6km s-min=45.6km az=120.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.32**	**208**	Pn	Pn	07 26 40.7	-0.9
	0.3nm,0.3s,baz=54,slow=18,SNR=3.9						
URZ				Sn	Sn	07 28 18.5	-8.7
	1.2nm,0.3s,baz=220,slow=22,SNR=13						
STKA	**Stephens Creek**	**35.03**	**256**	P	P	07 31 21.7	+1.3
	1.3nm,0.4s,baz=95,slow=16,SNR=4.6						
ASAR	**Alice Springs**	**43.62**	**266**	P	P	07 32 31.4	-1.0
	0.6nm,0.5s,baz=104,slow=7.6,SNR=6.0						
WRA	**Warramunga Arr**	**44.58**	**272**	P	P	07 32 39.8	-0.2
	1.0nm,0.3s,baz=104,slow=9.2,SNR=16						
FINES	**FINESS Array B**	**145.01**	**340**	PKPbc	PKPbc	07 44 03.1	-0.8
	2.0nm,0.7s,baz=42,slow=3.1,SNR=4.5						

BJI ***12*** *07:39:44.2±0.0, 52.°41N×160.°63E, h21^{km}, mb4.5/27, mB4.9/20, Ms4.5/9, Ms7 4.2/7*

KRSC ***12*** *07:39:45.8±1.9, 52.°12N×160.°75E, h43^{km}±27^{km}, ML4.9*

IDC ***12*** *07:39:46.1±0.9, 52.°40N×160.°23E, h0^{km}, mb4.1/19, mb1 4.3/21, mb1mx4.2/35, mbtmp4.1/21, ML3.7/2, MS3.8/2, Ms1 3.7/2, ms1mx3.0/26, Error ellipse: s-maj=23.5km s-min=15.8km az=137.0*

NEIC ***12*** *07:39:47.9±2.6, 52.°37N×160.°35E, h13^{km}±3^{km}, mb4.5/34, Error ellipse: s-maj=13.6km s-min=12.1km az=194.0*

MOS ***12*** *07:39:49.1±1.0, 52.°21N×160.°52E, h48^{km}, mb4.7/31, Error ellipse: s-maj=7.6km s-min=4.2km az=103.2*

ISC 12 07:39:46.8±2.0**, 52.°14N**±0.°04×**160.°60E**±0.°03**, h17**^{km}±12^{km}**, n190, σ1^{s}54**/238**, mb4.5**/58**, 7C-8D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.03**	**340**	*i* P	**Pb**	**07 40 05.8**	**-0.4**
SPN				*e*S	**Sb**	**07 40 18.5**	**-0.9**
SPN	**Mys Shipunski**	**1.03**	**340**	PN	**Pb**	**07 40 05.8**	**-0.4**
SPN				S	**Sb**	**07 40 18.5**	**-0.9**
NLC	**Nalytchevo**	**1.29**	**324**	*e*P	**Pn**	**07 40 09.9**	**-0.2**
NLC				*e*S	**Sn**	**07 40 27.3**	**+0.4**
NLC	**Nalytchevo**	**1.29**	**324**	PN	**Pn**	**07 40 09.9**	**-0.2**
NLC				S	**Sn**	**07 40 27.3**	**+0.4**
RUS	**Russkaya**	**1.32**	**284**	*i* P	**Pn**	**07 40 10.4**	**0.0**
RUS				*e*S	**Sb**	**07 40 26.6**	**-1.1**
RUS	**Russkaya**	**1.32**	**284**	PN	**Pn**	**07 40 10.4**	**0.0**
RUS				S	**Sb**	**07 40 26.6**	**-1.1**
DALK	**Dalny**	**1.44**	**309**	*e*P	**Pn**	**07 40 12.1**	**0.0**
DALK				*e*S	**Sn**	**07 40 30.9**	**+0.2**
DALK	**Dalny**	**1.44**	**309**	PN	**Pn**	**07 40 12.1**	**0.0**
DALK				S	**Sn**	**07 40 30.9**	**+0.2**
PET	**Petropavlovsk**	**1.49**	**308**	*e*Pn	**Pn**	**07 40 12.7**	**-0.1**
PET	**Petropavlovsk**	**1.49**	**308**	*e*P	**Pn**	**07 40 12.8**	**0.0**
PET				*e*S	**Sn**	**07 40 30.9**	**-0.9**
PET	**Petropavlovsk**	**1.49**	**308α**	*i*PN	**Pn**	**07 40 12.8**	**0.0**
PET				*e*S	**Sn**	**07 40 32.1**	**+0.3**
PET				pmax	pmax		
	comp=Z,2μm,0.5s						
PET				smax	smax		
	comp=E,1μm,1.7s						
PET				smax	smax		
	comp=N,500nm,1.6s						
PET				smax	smax		
	comp=E,3μm,1.3s						
PET				smax	smax		
	comp=N,4μm,1.5s						
PET				smax	smax		
	comp=E,4μm,0.6s						
PET				smax	smax		
	comp=N,4μm,0.5s						
MTVR	**Mutnovka**	**1.53**	**284**	*e*P	**Pn**	**07 40 13.8**	**+0.3**
MTVR				*e*S	**Sn**	**07 40 32.8**	**-0.2**
MTVR	**Mutnovka**	**1.53**	**284**	PN	**Pn**	**07 40 13.8**	**+0.3**
MTVR				S	**Sn**	**07 40 32.8**	**-0.2**
UGLR	**Uglovaya**	**1.53**	**315**	*i* P	**Pn**	**07 40 14.0**	**+0.6**
UGLR				*e*S	**Sb**	**07 40 34.3**	**+0.5**
UGLR	**Uglovaya**	**1.53**	**315**	PN	**Pn**	**07 40 14.0**	**+0.6**
UGLR				S	**Sb**	**07 40 34.3**	**+0.5**
SDLR	**Sedlovina**	**1.55**	**318**	*i* P	**Pn**	**07 40 14.0**	**+0.2**
SDLR				*e*S	**Sb**	**07 40 34.5**	**0.0**
SDLR	**Sedlovina**	**1.55**	**318**	PN	**Pn**	**07 40 14.0**	**+0.2**
SDLR				S	**Sb**	**07 40 34.5**	**0.0**
SMAR	**Somma**	**1.57**	**317**	*i* P	**Pn**	**07 40 14.4**	**+0.2**
SMAR				*e*S	**Sn**	**07 40 35.1**	**+0.8**
SMAR	**Somma**	**1.57**	**317**	PN	**Pn**	**07 40 14.4**	**+0.2**
SMAR				S	**Sn**	**07 40 35.1**	**+0.8**
KDTR	**Khodutka, Kamc**	**1.60**	**259**	*e*P	**Pn**	**07 40 14.3**	**0.0**
KDTR				*e*S	**Sn**	**07 40 33.1**	**-1.4**
KDTR	**Khodutka, Kamc**	**1.60**	**259**	PN	**Pn**	**07 40 14.3**	**0.0**
KDTR				S	**Sn**	**07 40 33.1**	**-1.4**
AVH	**Avacha**	**1.60**	**316**	*i* P	**Pn**	**07 40 15.1**	**+0.6**
AVH				*e*S	**Sb**	**07 40 36.3**	**+0.3**
AVH	**Avacha**	**1.60**	**316**	PN	**Pn**	**07 40 15.1**	**+0.6**
AVH				S	**Sb**	**07 40 36.3**	**+0.3**
KRER	**Koryakskii**	**1.63**	**317**	*i* P	**Pn**	**07 40 15.7**	**+0.8**
KRER				*e*S	**Sb**	**07 40 37.6**	**+0.8**
KRER	**Koryakskii**	**1.63**	**317**	PN	**Pn**	**07 40 15.7**	**+0.8**
KRER				S	**Sb**	**07 40 37.6**	**+0.8**
KRMR	**Karymshinskiy**	**1.67**	**296**	*e*P	**Pn**	**07 40 15.6**	**+0.4**
KRMR				*e*S	**Sn**	**07 40 35.7**	**-0.5**
KRMR	**Karymshinskiy**	**1.67**	**296**	PN	**Pn**	**07 40 15.6**	**+0.4**
KRMR				S	**Sn**	**07 40 35.7**	**-0.5**
ASAK	**Asacha**	**1.68**	**280**	*i* P	**Pn**	**07 40 16.3**	**+0.8**
ASAK				*e*S	**Sb**	**07 40 39.1**	**+0.9**
ASAK	**Asacha**	**1.68**	**280**	PN	**Pn**	**07 40 16.3**	**+0.8**
ASAK				S	**Sb**	**07 40 39.1**	**+0.9**
KRX	**Arik**	**1.71**	**317**	*i* P	**Pn**	**07 40 16.5**	**+0.6**
KRX	**Arik**	**1.71**	**317**	PN	**Pn**	**07 40 16.5**	**+0.6**
PEA0B	**Petropavlovsk-**	**2.02**	**300**	*e*Pn	**Pn**	**07 40 20.4**	**+0.3**
PETK	**Petropavlovsk-**	**2.02**	**300**	Pn	**Pn**	**07 40 20.9**	**+0.7**
	comp=N,50nm,0.3s,baz=104,slow=18,SNR=428						
PETK				Sn	**Sb**	**07 40 47.5**	**-0.4**
	comp=N,173nm,0.3s,baz=90,slow=25,SNR=14						
PETK				LR	LR	07 41 17.8	
	comp=N,1μm,18.4s,baz=38,slow=54						
PEA1	**Petropavlovsk-**	**2.02**	**300**	*e*Pn	**Pn**	**07 40 20.9**	**+0.7**
PEA1				*e*Sn	**Sb**	**07 40 47.5**	**-0.5**
GNL	**Ganaly**	**2.25**	**315**	*i* P	**Pn**	**07 40 24.5**	**+1.2**
GNL				*e*S	**Sn**	**07 40 52.9**	**+2.2**
GNL	**Ganaly**	**2.25**	**315**	PN	**Pn**	**07 40 24.5**	**+1.2**
GNL				S	**Sn**	**07 40 52.9**	**+2.2**
APC	**Apacha**	**2.25**	**292**	*e*P	**Pn**	**07 40 24.6**	**+1.4**
APC				*e*S	**Sn**	**07 40 52.6**	**+2.1**
APC	**Apacha**	**2.25**	**292**	PN	**Pn**	**07 40 24.6**	**+1.4**
APC				S	**Sn**	**07 40 52.6**	**+2.1**
PAU	**Pauzhetka**	**2.45**	**256**	*e*P	**Pn**	**07 40 26.6**	**+0.6**
PAU	**Pauzhetka**	**2.45**	**256**	PN	**Pn**	**07 40 26.6**	**+0.6**
MKZ	**Mys Kozlova**	**2.52**	**15**	*i* P	**Pn**	**07 40 27.1**	**+0.2**
MKZ				*e*S	**Sn**	**07 40 54.9**	**-2.3**
MKZ	**Mys Kozlova**	**2.52**	**15**	PN	**Pn**	**07 40 27.1**	**+0.2**
MKZ				S	**Sn**	**07 40 54.9**	**-2.3**
KZV	**Kizimen**	**2.99**	**357**	*e*P	**Pn**	**07 40 34.8**	**+1.2**
KZV				*e*S	**Sn**	**07 41 08.8**	**-0.3**
KZV	**Kizimen**	**2.99**	**357**	PN	**Pn**	**07 40 34.8**	**+1.2**
KZV				S	**Sn**	**07 41 08.8**	**-0.3**
TUMD	**Tumrok D**	**3.08**	**358**	P	**Pn**	**07 40 34.4**	**-0.2**
TUMD				*e*S	**Sn**	**07 41 10.1**	**-0.9**
SKR	**Severo-Kuril's**	**3.16**	**244⇓**	*e*PN	**Pn**	**07 40 36.7**	**+0.9**
TUMR	**Tumrok**	**3.17**	**355**	*e*P	**Pn**	**07 40 37.6**	**+1.6**
TUMR	**Tumrok**	**3.17**	**355**	PN	**Pn**	**07 40 34.4**	**-1.6**
TUMR				S	**Sn**	**07 41 10.1**	**-3.3**
KIRR	**Kirishev**	**3.83**	**358**	*e*P	**Pb**	**07 40 50.5**	**-3.5**
KIRR	**Kirishev**	**3.83**	**358**	PN	**Pb**	**07 40 50.5**	**-3.5**
KOZ	**Kozyrevsk**	**3.96**	**354**	*e*P	**Pn**	**07 40 47.3**	**+0.6**
KOZ	**Kozyrevsk**	**3.96**	**354**	PN	**Pn**	**07 40 47.3**	**+0.6**
LGNR	**Loginova**	**3.96**	**1**	*e*P	**Pn**	**07 40 49.3**	**+2.3**
LGNR				*e*S	**Sn**	**07 41 34.5**	**+1.4**
LGNR	**Loginova**	**3.96**	**1**	PN	**Pn**	**07 40 49.3**	**+2.3**
LGNR				S	**Sn**	**07 41 34.5**	**+1.4**
ESO	**Esso**	**3.96**	**344**	*e*P	**Pn**	**07 40 48.1**	**+1.3**
ESO	**Esso**	**3.96**	**344**	PN	**Pn**	**07 40 48.1**	**+1.3**
KRSR	**Krestovskiy**	**4.09**	**360**	*e*P	**Pn**	**07 40 49.7**	**+1.1**
KRSR	**Krestovskiy**	**4.09**	**360**	PN	**Pn**	**07 40 49.7**	**+1.1**
SRDR	**Sredinnyy**	**4.22**	**353**	*e*P	**Pn**	**07 40 52.6**	**+2.2**
SRDR	**Sredinnyy**	**4.22**	**353**	PN	**Pn**	**07 40 52.6**	**+2.2**
KBTR	**Krutoberegovo**	**4.28**	**17**	*e*P	**Pn**	**07 40 52.5**	**+1.3**
KBTR				S	**Sn**	**07 41 41.3**	**+0.6**
KBTR	**Krutoberegovo**	**4.28**	**17**	PN	**Pn**	**07 40 52.5**	**+1.3**
KBTR				S	**Sn**	**07 41 41.3**	**+0.6**
BKI	**Bering**	**4.43**	**44**	*e*P	**Pn**	**07 40 51.8**	**-1.4**
BKI				*e*S	**Sn**	**07 41 40.5**	**-3.8**
BKI	**Bering**	**4.43**	**44**	PN	**Pn**	**07 40 51.8**	**-1.4**
BDR	**Baidarnaya**	**4.46**	**4**	*e*P	**Pn**	**07 40 56.5**	**+2.9**
BDR				*e*S	**Sn**	**07 41 46.4**	**+1.3**
BDR	**Baidarnaya**	**4.46**	**4**	PN	**Pn**	**07 40 56.5**	**+2.9**
BDR				S	**Sn**	**07 41 46.4**	**+1.3**
SMKR	**Semkarok**	**4.49**	**6**	*e*P	**Pn**	**07 40 56.0**	**+2.0**
SMKR				*e*S	**Sn**	**07 41 45.7**	**-0.1**
SMKR	**Semkarok**	**4.49**	**6**	PN	**Pn**	**07 40 56.0**	**+2.0**
SMKR				S	**Sn**	**07 41 45.7**	**-0.1**
SRKR	**Sorokina**	**4.54**	**4**	*e*P	**Pn**	**07 40 57.6**	**+2.8**
SRKR				*e*S	**Sn**	**07 41 48.9**	**+1.7**
SRKR	**Sorokina**	**4.54**	**4**	PN	**Pn**	**07 40 57.6**	**+2.8**
SRKR				S	**Sn**	**07 41 48.9**	**+1.7**
SMY	**Shemya**	**8.27**	**81**	*e*Pn	**Pn**	**07 41 49.2**	**+3.3**
SMY	**Shemya**	**8.27**	**81**	*e*PN	**Pn**	**07 41 49.2**	**+3.3**
MA2	**Magadan**	**9.27**	**327**	LR	LR	07 46 07.6	
	comp=N,331nm,18.7s,baz=162,slow=43						
NKL	**Nikolayevsk**	**12.14**	**283⇓**	*i*PN	**Pn**	**07 42 37.2**	**-1.7**
NKL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,4.0nm,1.3s						
NKL				pmax	pmax		
	comp=E,6.0nm,1.3s						
NKL				MLR	MLR		
	comp=Z,530nm,15.0s						
NKL				MLR	MLR		
	comp=E,405nm,24.0s						
NKL				MLR	MLR		
	comp=N,113nm,14.0s						
ASAJ	**Asahikawa**	**14.43**	**243**	Pn	**Pn**	**07 43 11.1**	**+1.0**
	comp=N,0.7nm,0.3s,baz=43,slow=4.3,SNR=4.8						
GRNR	**Gornyy**	**15.12**	**274**	*e*P	**P**	**07 43 25.4**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,14nm,0.8s						
ERM	**Erimo**	**15.57**	**236**	*e*Pn	**Pn**	**07 43 22.9**	**-2.5**
	comp=Z,11nm,0.9s						
ERM	**Erimo**	**15.57**	**236**	*e*P	**Pn**	**07 43 22.9**	**-2.5**
ERM				pmax	pmax		
	comp=Z,11nm,0.9s						
BILL	**Bilibino**	**16.19**	**8**	*e*Pn	**P**	**07 43 38.5**	**+2.2**
	comp=Z,14nm,0.7s						
BILL	**Bilibino**	**16.19**	**8**	*e*P	**P**	**07 43 37.3**	**+1.0**
BILL				pmax	pmax		
	comp=Z,15nm,0.8s						
BILL				MLR	MLR		
	comp=Z,215nm,17.0s						
TEY	**Ternei**	**17.34**	**255**	*e*P	**P**	**07 43 49.6**	**+0.4**
KLR	**Kul'dur**	**18.46**	**272**	P	**Pn**	**07 44 02.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=55,slow=11,SNR=13						
KLR	**Kul'dur**	**18.46**	**272⇑**	*e*P	**Pn**	**07 44 01.8**	**+0.2**
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK	**Yakutsk**	**19.31**	**313**	*e*P	**P**	**07 44 08.6**	**-2.1**
	comp=Z,43nm,0.8s						
YAK	**Yakutsk**	**19.31**	**313**	*e*P	**P**	**07 44 08.8**	**-1.9**
YAK				pmax	pmax		
	comp=Z,44nm,0.9s						
YAK				pmax	pmax		
	comp=E,21nm,1.1s						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
USRK	**Ussuriysk Ar.**	**20.57**	**259**	P	**P**	**07 44 22.5**	**-2.0**
	comp=N,6.1nm,1.0s,baz=55,slow=9.9,SNR=8.8						
MDJ	**Mudanjiang**	**21.80**	**262**	*e*P	**P**	**07 44 38.9**	**+1.0**
	comp=N,11nm,1.1s						
MDJ	**Mudanjiang**	**21.80**	**262**	P	**P**	**07 44 39.1**	**+1.3**
MDJ				pmax	pmax		
	comp=N,7.0nm,0.5s						
MDJ				pmax	pmax		
	comp=N,290nm,6.7s						
MJB9	**Matsu-Tunnel**	**22.21**	**234**	*e*P	**P**	**07 44 43.7**	**+1.3**
	comp=N,11nm,0.8s						
MAJO	**Matsushiro**	**22.21**	**234**	*e*P	**P**	**07 44 45.0**	**+2.7**
	comp=N,11nm,0.8s						
MAJO	**Matsushiro**	**22.21**	**234⇑**	*e*P	**P**	**07 44 44.1**	**+1.7**
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s						
MJAR	**Matsushiro Arr**	**22.21**	**234**	P	**P**	**07 44 44.2**	**+1.8**
	comp=Z,2.6nm,0.4s,baz=18,slow=10.0,SNR=14						
TIXI	**Tiksi**	**24.08**	**336**	P	**P**	**07 44 59.6**	**-1.3**
	comp=Z,14nm,0.7s,baz=125,slow=8.2,SNR=19						
TIXI	**Tiksi**	**24.08**	**336**	*e*P	**P**	**07 44 59.6**	**-1.3**
	comp=Z,13nm,0.7s						
TIXI	**Tiksi**	**24.08**	**336*d***	*i*P	**P**	**07 44 59.7**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,13nm,0.7s						
HIA	**Hailar**	**25.80**	**280**	*e*P	**P**	**07 45 14.6**	**-2.2**
	comp=Z,15nm,0.7s						

HIA	Hailar	25.80	280	eP	P	07 45 14.6	-2.2
HIA				pmax	pmax		
	comp=Z,15nm,0.7s						
KSRS	Korea Array	27.16	250	P	P	07 45 31.9	+2.8
	comp=Z,1.9nm,0.8s,baz=53,slow=11,SNR=5.8						
KS15	Wonju Array Si	27.19	250	eP	P	07 45 29.6	+0.2
	comp=Z,15nm,1.3s						
SML	Sawmill	28.72	50	eP	P	07 45 44.9	+2.0
	comp=Z,2.5nm,0.6s						
SML	Sawmill	28.72	50	eP	P	07 45 44.9	+2.0
SML				pmax	pmax		
	comp=Z,3.0nm,0.6s						
COLA	College	28.87	44	⇓eP	P	07 45 46.0	+1.9
COLA				pmax	pmax		
	comp=Z,10.0nm,3.1s						
EGAK	Eagle	31.73	44	eP	P	07 46 09.3	-0.1
	comp=Z,1.0nm,0.7s						
H11N2	WAKE ISLAND Hy	32.71	169	T	T	08 22 17.1	
	baz=352,slow=76,SNR=259						
H11N3	WAKE ISLAND Hy	32.73	169	T	T	08 22 17.3	
	baz=352,slow=76,SNR=161						
H11N1	WAKE ISLAND Hy	32.73	169	T	T	08 22 17.2	
	baz=352,slow=76,SNR=252						
H11S1	WAKE ISLAND Hy	33.90	170	T	T	08 24 09.2	
	baz=352,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	33.91	170	T	T	08 24 00.9	
	baz=352,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	33.91	170	T	T	08 23 46.0	
	baz=352,slow=76,SNR=8.8						
SONA0	Songino Array	34.44	285	eP	P	07 46 32.4	-1.0
SONM	Songino Array	34.44	285	P	P	07 46 32.3	-1.0
	comp=Z,0.7nm,0.8s,baz=67,slow=7.9,SNR=4.3						
HHC	Hu-ho-hao-te	34.96	271	eP	P	07 46 38.3	+0.4
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.3s						
NJ2	Nanjing	36.26	253	eP	P	07 46 48.0	-1.0
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
WHN	Wuhan	40.01	256	P	P	07 47 28.4	+7.8
LZH	Lanzhou	42.65	271	eP	P	07 47 39.8	-2.7
LZH				pP	sP	07 47 46.3	-1.7
LZH				sP	pwP	07 47 50.2	-1.1
LZH				ePP	PP	07 49 21.0	-0.3
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,56nm,5.6s						
LZH				LR	LR		
	comp=Z,190nm,13.5s						
LZH				LR	LR		
	comp=Z,200nm,13.2s						
LZH				LR	LR		
	comp=Z,280nm,16.8s						
GTA	Gaotai	43.03	278	eP	P	07 47 44.2	-1.3
GTA				pP	pwP	07 47 51.9	-2.4
GTA				sP	sP	07 47 55.2	+4.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DGZ	Jazzator, Alta	44.38	297	d iP	P	07 47 55.3	-0.9
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CD2	Chengdu	46.19	266	eP	P	07 48 08.7	-2.0
WMQ	Urumqi	47.59	290	eP	P	07 48 22.5	+1.0
WMQ				LR	LR		
	comp=Z,380nm,20.3s						
WMQ				LR	LR		
	comp=Z,310nm,19.7s						
WMQ				LR	LR		
	comp=Z,140nm,17.9s						
KURK	Kurchatov	48.51	303	eP	P	07 48 25.9	-2.4
	comp=Z,14nm,1.1s						
KURK	Kurchatov	48.51	303	⇑eP	P	07 48 26.2	-2.2
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
MK31	Makanchi Array	48.86	297	eP	P	07 48 29.1	-2.1
	comp=Z,1.6nm,0.6s						
MK31	Makanchi Array	48.86	297	eP	P	07 48 29.1	-2.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	48.86	297	P	P	07 48 29.2	-2.0
	comp=Z,1.5nm,0.5s,baz=51,slow=6.9,SNR=16						
MAKZ	Makanchi	49.02	297	eP	P	07 48 30.5	-1.9
	comp=Z,3.3nm,0.9s						
MAKZ	Makanchi	49.02	297	eP	P	07 48 30.5	-1.9
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	51.26	309	eP	P	07 48 47.9	-1.5
	comp=Z,6.9nm,0.8s						
BRVK	Borovoye	51.26	309	deP	P	07 48 47.8	-1.5
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARA0	ARCESS Array S	54.30	342	eP	P	07 49 11.2	-0.2
ARCES	ARCESS Array B	54.30	342	P	P	07 49 11.2	-0.2
	comp=Z,6.0nm,0.8s,baz=33,slow=14,SNR=4.8						
ARU	Arti	54.32	318	eP	P	07 49 10.9	-0.9
	comp=Z,7.2nm,0.9s						
ARU	Arti	54.32	318	c iP	P	07 49 11.1	-0.7
ARU						07 51 09.3	
ARU				S	S	07 56 44.9	-3.6
ARU				SS	SKiKP	08 00 19.5	-1.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KDJ	Kajisay	54.63	295	eP	P	07 49 12.9	-1.7
	comp=Z,3.6nm,0.8s						
KDJ	Kajisay	54.63	295	eP	P	07 49 12.9	-1.7
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOOM	Boomskoye usch	55.09	296	eP	P	07 49 17.3	-0.5
	comp=Z,6.3nm,1.2s						
BOOM	Boomskoye usch	55.09	296	eP	P	07 49 17.3	-0.5
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PRGR	Permogore	55.42	328	eP	P	07 49 18.8	-0.9
PRGR				pmax	pmax		
	comp=Z,16nm,0.8s						
NV01	Mina Array Sit	55.78	70	eP	P	07 49 26.3	+3.4
NVAR	Mina Array Bea	55.78	70	P	P	07 49 26.3	+3.4
	comp=Z,0.4nm,0.8s,baz=297,slow=6.5,SNR=3.5						
AAK	Ala-Archa	55.78	297	eP	P	07 49 21.5	-1.4
	comp=Z,4.1nm,0.9s						
AAK	Ala-Archa	55.78	297	⇓eP	P	07 49 21.9	-0.9
AAK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KSH	Kashi	57.07	293	P	P	07 49 35.2	+3.2
KSH				sP	pwP	07 49 44.2	+2.6
KSH				PcP	PcP	07 50 30.4	+3.6
KSH				PP	PP	07 51 44.0	+5.6
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,130nm,4.2s						
KSH				LR	LR		
	comp=Z,130nm,8.9s						
KSH				LR	LR		
	comp=Z,170nm,12.6s						
KKAR	Karatay Array	57.63	300	eP	P	07 49 34.5	-1.2
	comp=Z,2.9nm,1.0s						
KKAR	Karatay Array	57.63	300	eP	P	07 49 34.5	-1.2
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PD31	Pinedale Array	57.72	61	eP	P	07 49 39.1	+2.5
PDAR	Pinedale Array	57.72	61	P	P	07 49 39.1	+2.5
	comp=Z,0.5nm,0.8s,baz=321,slow=3.8,SNR=5.3						
CMMT	Chiang Mai	58.02	259	P	P	07 49 40.6	+1.8
	comp=Z,4.5nm,1.0s						
CHTO	Chiang Mai	58.02	259	eP	P	07 49 39.4	+0.6
	comp=Z,6.1nm,0.8s						
CHTO	Chiang Mai	58.02	259	eP	P	07 49 39.4	+0.6
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CM31	Chiang Mai Arr	58.30	259	eP	P	07 49 42.7	+2.0
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	58.30	259	P	P	07 49 42.0	+1.3
	comp=Z,2.1nm,0.6s,baz=28,slow=7.8,SNR=10						
CMAR	Chiang Mai Arr	58.30	259	P	P	07 49 42.0	+1.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	58.66	311	eP	P	07 49 41.8	-1.0
	comp=Z,3.8nm,0.8s						
GAR	Garm	60.58	297	eP	P	07 49 54.6	-1.8
	comp=Z,12nm,1.1s						
GAR	Garm	60.58	297	eP	P	07 49 54.6	-1.8
GAR				pmax	pmax		
	comp=Z,12nm,1.1s						
FIA1	FINESS Array S	61.12	337	eP	P	07 50 00.1	+0.5
	comp=Z,16nm,1.0s						
FINES	FINESS Array B	61.12	337	P	P	07 49 59.9	+0.3
	comp=Z,8.1nm,0.7s,baz=30,slow=9.0,SNR=35						
NIL	Nilore	62.74	290	eP	P	07 50 10.7	-0.2
	comp=Z,7.6nm,0.9s						
NIL	Nilore	62.74	290	eP	P	07 50 10.7	-0.2
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN	Obninsk	63.49	328	eP	P	07 50 15.7	+0.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,72nm,20.0s						
VSU	Vasula	63.55	335	⇑eP	P	07 50 14.9	-0.9
VSU				pmax	pmax		
	comp=Z,22nm,0.7s						
NC204	NORSAR Array S	64.40	344	eP	P	07 50 22.4	+0.9
	comp=Z,12nm,0.9s						
NB2	NORSAR Subarra	64.55	344	P	P	07 50 22.2	-0.2
	comp=Z,2.1nm,0.7s,baz=22,slow=6.5						
NOA	NORSAR Array B	64.55	344	P	P	07 50 22.4	0.0
	comp=Z,2.1nm,0.6s,baz=21,slow=6.6,SNR=17						
GEYT	Alibeck	67.87	304	P	P	07 50 44.2	+0.1
	comp=Z,1.3nm,0.6s,baz=355,slow=3.6,SNR=3.7						
AKASG	Malin Array Be	69.60	329	P	P	07 50 53.8	-0.8
	comp=Z,1.9nm,0.5s,baz=30,slow=6.1,SNR=9.8						
AKASG	Malin Array Be	69.60	329	i P	P	07 50 54.0	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	69.60	329	eP	P	07 50 53.6	-0.9
	comp=Z,8.8nm,1.1s						
AKBB	Malin Array Si	69.60	329	eP	P	07 50 53.6	-0.9
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV	Kislovodsk	70.35	317	eP	P	07 50 57.5	-2.0
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KBZ	Khabaz	70.45	317	P	P	07 51 00.0	+0.2
	comp=Z,3.0nm,0.8s,baz=84,slow=3.7,SNR=5.0						
KBZ				LR	LR	08 28 08.5	
	comp=Z,84nm,18.8s,baz=48,slow=41						
KOLS	Kolonicke sedl	73.24	333	eP	P	07 51 18.8	+2.2
KOLS	Kolonicke sedl	73.24	333	eP	P	07 51 18.8	+2.2
CLL	Collm	73.36	339	i P	P	07 51 18.2	+0.9
	comp=Z,6.0nm,0.8s						
CLL				LmV		08 36 00.0	
	comp=Z,200nm,21.6s						
VYHS	Vyhne	74.58	335	eP	P	07 51 25.9	+1.4
VYHS	Vyhne	74.58	335	eP	P	07 51 25.9	+1.4
MLR	Muntele Rosu	75.23	329	eP	P	07 51 29.4	+1.0
	comp=Z,4.1nm,0.7s						
MLR	Muntele Rosu	75.23	329	eP	P	07 51 29.4	+1.0
MLR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MEM	Membach	75.39	344	⇓P	P	07 51 30.3	+1.2
GEC2	GERESS Array S	75.52	338	eP	P	07 51 30.6	+0.6
	comp=Z,3.3nm,1.1s						
GEC2	GERESS Array S	75.52	338	eP	P	07 51 30.6	+0.6
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GERES	GERESS Array B	75.52	338	P	P	07 51 30.4	+0.4
	comp=Z,1.7nm,0.2s,baz=59,slow=2.5,SNR=7.1						
BR131	Keskin Array S	77.56	321	eP	P	07 51 42.3	+0.6
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	77.56	321	P	P	07 51 42.1	+0.4
	comp=Z,1.7nm,0.9s,baz=52,slow=5.0,SNR=7.3						
TUE	Stuetta	78.72	340	eP	P	07 51 49.2	+1.0
	comp=Z,3.7nm,0.6s						
AS31	Alice Springs	79.01	205	eP	P	07 51 53.6	+4.0
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	79.01	205	P	P	07 51 51.5	+1.8
	comp=Z,0.5nm,0.7s,baz=16,slow=4.9,SNR=6.5						
TTG	Podgorica	80.04	332	eP	P	07 51 55.4	+0.3
	comp=Z,9.4nm,1.1s						
TTG	Podgorica	80.04	332	eP	P	07 51 55.4	+0.3
TTG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ESDC	Sonseca Array	87.58	348	P	P	07 52 33.9	0.0
	comp=Z,0.3nm,0.3s,baz=1.6,slow=4.5,SNR=4.4						

ROM 12 07:45:35.7±0.1, 43°.480N±0°.004×12°.727E±0°.004, h14km, ML1.0/4, Error ellipse: s-maj=0.4km s-min=0.2km az=33.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRON	Frontone	0.04	358	P	Pg	07 45 38.6	+0.3
FRON				S	Sg	07 45 40.6	+0.4
FRON				AML	AML		
	comp=E,88μm,0.3s						
FRON				AML	AML		
	comp=N,126μm,0.1s						
FRON				AML	AML		
	comp=E,88μm,0.3s						
FRON				AML	AML		
	comp=N,126μm,0.1s						
FRON				AML	AML		
	comp=E,88μm,0.3s						
FRON				AML	AML		
	comp=N,126μm,0.1s						
FRON				AML	AML		
	comp=E,88μm,0.3s						
FRON				AML	AML		
	comp=N,126μm,0.1s						
SSFR	Montelago di S	0.06	138	AML	AML		
	comp=N,610μm,0.2s						
SSFR				AML	AML		
	comp=E,582μm,0.2s						
SSFR				AML	AML		
	comp=N,610μm,0.2s						
SSFR				AML	AML		
	comp=E,192μm,0.2s						
SSFR				AML	AML		
	comp=N,285μm,0.3s						
SSFR				AML	AML		
	comp=E,582μm,0.2s						
SSFR				AML	AML		
	comp=N,610μm,0.2s						
SSFR				AML	AML		
	comp=E,192μm,0.2s						
SSFR				AML	AML		
	comp=N,286μm,0.3s						
SSFR				AML	AML		
	comp=E,582μm,0.2s						
SSFR				AML	AML		
	comp=N,610μm,0.2s						
SSFR				AML	AML		
	comp=N,286μm,0.3s						
SSFR				AML	AML		
	comp=E,192μm,0.2s						
SSFR				AML	AML		
	comp=E,582μm,0.2s						
SSFR				AML	AML		
	comp=N,286μm,0.3s						
SSFR				AML	AML		
	comp=E,192μm,0.2s						
MPAG	Monte Paganucc	0.15	9	P	Pg	07 45 39.9	+0.3
MPAG				S	Sg	07 45 42.8	+0.5
PIEI	Pieia	0.15	292	P	Pg	07 45 39.8	+0.2
PIEI				S	Sg	07 45 42.8	+0.6
PIEI				AML	AML		
	comp=E,58μm,0.1s						
PIEI				AML	AML		
	comp=N,34μm,0.4s						
PIEI				AML	AML		
	comp=E,58μm,0.1s						
PIEI				AML	AML		
	comp=N,34μm,0.4s						
PIEI				AML	AML		
	comp=E,58μm,0.1s						
PIEI				AML	AML		
	comp=N,34μm,0.4s						
PIEI				AML	AML		
	comp=E,58μm,0.1s						
PIEI				AML	AML		
	comp=N,34μm,0.4s						
ARVD	Arcevia	0.16	83	P	Pg	07 45 39.9	+0.2
ARVD				S	Sg	07 45 42.9	+0.6
NARO	Abbazia di Nar	0.17	321	P	Pg	07 45 40.1	+0.3
NARO				S	Sb	07 45 43.4	-0.5
NARO				AML	AML		
	comp=E,48μm,0.1s						
NARO				AML	AML		
	comp=N,47μm,0.8s						
NARO				AML	AML		
	comp=E,48μm,0.1s						
NARO				AML	AML		
	comp=N,47μm,0.8s						
NARO				AML	AML		
	comp=N,47μm,0.8s						
NARO				AML	AML		
	comp=E,48μm,0.1s						
NARO				AML	AML		
	comp=N,47μm,0.8s						
NARO				AML	AML		
	comp=E,48μm,0.1s						
SNTG	Esanatoglia	0.27	145	P	Pg	07 45 41.7	+0.2
SNTG				S	Sb	07 45 46.5	-0.5

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*ISCJB **12** 07:47:30.1±1.0, 79°.2N±0°.1×3°.2E±0°.3, h10km, Error ellipse: s-maj=15.0km s-min=7.1km az=176.1*
*BER **12** 07:47:35.6±3.2, 79°.17N×3°.49E, h11km±66km, ML2.5, Confirmed Earthquake*
*IEPN **12** 07:47:38.3, 79°.28N×4°.63E, h15km*
*NAO **12** 07:47:40.2±2.6, 79°.01N×5°.76E, ML3.2*
ISC 12 07:47:32.0±1.9, 79°.26N±0°.09×3°.77E±0°.10, h10km, n17, σ2.01/24, 3D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.59	98	Pg	Pb	07 48 01.8	+0.3
KBS				Lg	Lg	07 48 20.2	
KBS	Kingsbay	1.59	98	⇓iP	Pb	07 48 01.8	+0.3
KBS				i S	Sn	07 48 19.8	-0.9
KBS	Kingsbay	1.59	98	⇓iP	Pb	07 48 01.7	+0.3
KBS				eS	Sn	07 48 20.3	-0.4
KBS				IAML		07 48 22.0	
	comp=Z,92nm,0.2s						
BRBA	Barentsburg A	2.39	115	Pn	Pn	07 48 13.8	+2.7
BRBA				Lg	Lg	07 48 42.2	
BRBA	Barentsburg A	2.39	115	Pn	Pn	07 48 13.8	+2.7
BRBA				Sn	Sn	07 48 42.2	+1.8
SPA0	Spitsbergen Ar	2.70	108	Pn	Pn	07 48 17.9	+2.4
	baz=300,slow=7.4						
SPA0				Lg	Lg	07 48 51.2	
SPA0	Spitsbergen Ar	2.70	108	⇓iP	Pn	07 48 17.9	+2.4
SPA0				eS	Sn	07 48 48.5	+0.4
SPA0	Spitsbergen Ar	2.70	108	Pn	Pn	07 48 17.9	+2.4
	baz=300,slow=7.4						
SPA0				Sn	Sb	07 48 51.2	-2.3
HSPB	Hornsund (broa	3.32	127	Pn	Pn	07 48 24.7	+0.8
HSPB				Sn	Sn	07 49 02.2	-1.1
HSPB	Hornsund (broa	3.32	127	eP	Pn	07 48 25.0	+1.1
HSPB				eS	Sn	07 49 00.6	-2.8
HSPB				IAML		07 49 07.6	
	comp=Z,24nm,0.4s						
HOPEN	Hopen	5.23	111	eP	Pn	07 48 51.6	+1.6
HOPEN				eS	Sn	07 49 47.3	-2.9
HOPEN				IAML		07 49 50.8	
	comp=Z,26nm,0.3s						
DAG	Danmarks Havn	5.27	253	i P	Pn	07 48 48.4	-2.2
DAG	Danmarks Havn	5.27	253	i P	Pn	07 48 48.4	-2.2
DAG				i S	Sn	07 49 42.8	-8.5
ZFI2	Zemlya Franca-	7.60	57	eP	Pn	07 49 25.1	+2.5
ZFI2				eS	Sn	07 50 45.1	-3.4
	comp=Z,3.8nm,1.0s						
JMIC	Jan Mayen	8.87	207	eP	Pn	07 49 39.0	-0.9
ARA0	ARCESS Array S	11.26	138	Pn	Pn	07 50 13.7	+1.0
	baz=345,slow=11						
ARA0	ARCESS Array S	11.26	138	Pn	Pn	07 50 13.7	+1.0
	baz=345,slow=11						

KRSC 12 07:55:26.4±1.6, 52°.17N×160°.63E, h57km±23km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.00	338	eP	Pn	07 55 45.0	+0.7
SPN				eS	Sn	07 55 57.7	+0.1
NLC	Nalytchevo	1.28	323	eP	Pn	07 55 49.0	+1.1
RUS	Russkaya	1.33	282	eP	Pn	07 55 49.8	+1.2
DALK	Dalny	1.44	308	eP	Pn	07 55 51.5	+1.4
DALK				eS	Sn	07 56 10.0	+2.1
PET	Petropavlovsk	1.48	306	eP	Pn	07 55 52.5	+1.8
PET				eS	Sn	07 56 10.3	+1.3
UGLR	Uglovaya	1.52	314	eP	Pn	07 55 53.7	+2.4
UGLR				eS	Sn	07 56 13.0	+2.9
MTVR	Mutnovka	1.54	283	eP	Pn	07 55 53.2	+1.6
MTVR				eS	Sn	07 56 11.9	+1.3
SDLR	Sedlovina	1.54	317	eP	Pn	07 55 53.9	+2.3
SMAR	Somma	1.56	315	eP	Pn	07 55 54.6	+2.5
AVH	Avacha	1.59	314	eP	Pn	07 55 54.7	+2.4
AVH				eS	Sn	07 56 15.5	+3.6
KRER	Koryakskii	1.62	316	eP	Pn	07 55 55.1	+2.4
KDTR	Khodutka, Kamc	1.62	258	eP	Pn	07 55 53.7	+1.1
KDTR				eS	Sn	07 56 12.4	0.0
KOK	Koryaka	1.66	314	eP	Pn	07 55 55.6	+2.4
KOK				eS	Sn	07 56 17.0	+3.6
KRMR	Karymshinskiy	1.67	294	eP	Pn	07 55 55.0	+1.8
KRMR				eS	Sn	07 56 14.9	+1.4
ASAK	Asacha	1.69	278	eP	Pn	07 55 55.6	+1.9
ASAK				eS	Sn	07 56 17.9	+3.6
KRX	Arik	1.70	316	eP	Pn	07 55 56.2	+2.4
GNL	Ganaly	2.24	314	eP	Pn	07 56 04.0	+2.9
APC	Apacha	2.25	291	eP	Pn	07 56 04.0	+2.8
APC				eS	Sn	07 56 31.0	+3.2
MKZ	Mys Kozlova	2.48	15	eP	Pn	07 56 06.3	+2.0
MKZ				eS	Sn	07 56 35.0	+1.6
KZV	Kizimen	2.96	356	eP	Pn	07 56 15.2	+4.2
KZV				eS	Sn	07 56 48.2	+2.9
TUMD	Tumrok D	3.05	357	eS	Sn	07 56 48.5	+1.2
TUMR	Tumrok	3.14	355	eP	Pn	07 56 16.6	+3.2

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*SOME **12** 07:59:01.9, 41°.22N×71°.00E, h0km*
*NNC **12** 07:59:01.4±3.5, 40°.96N×71°.28E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=28.2km s-min=11.3km az=1.0*
*KRNET **12** 07:59:05.5±0.1, 41°.32N×71°.13E, mb2.3*
*ISCJB **12** 07:59:07.7±0.8, 41°.21N±0°.05×71°.05E±0°.06, h10km, Error ellipse: s-maj=7.0km s-min=6.3km az=163.5*
ISC 12 07:59:06.8±1.1, 41°.25N±0°.05×71°.18E±0°.04, h10km, n11, σ1.60/21, 9C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	1.22	193	⇑iP	Pn	07 59 29.9	-0.1
	baz=91						
BTK				⇑iS	Sn	07 59 48.1	+1.6
	baz=91						
IUG	Iuzhnay	1.24	317	P	Pb	07 59 29.3	-1.2
	2.6nm,0.1s						
IUG				S	Sn	07 59 50.4	+3.2
	12nm,0.3s						
ARSB	Arslanbob	1.36	86	⇓iP	Pn	07 59 32.1	+0.1
	baz=89						
ARSB				⇓iS	Sg	07 59 51.3	+0.6
	baz=89						
KK31	Karatay Array	1.92	345	P	Pn	07 59 39.0	-0.6
	5.8nm,0.3s,baz=160,slow=14,SNR=77						
KK31				⇑S	Sg	08 00 06.8	-1.7
	1.4nm,0.2s,baz=166,slow=25,SNR=9.2						
MRKS	Merke	2.14	45	Pg	Pb	07 59 44.0	-1.8
	3.3nm,0.3s						
MRKS				Lg	Lg	08 00 14.9	
	3.8nm,0.4s						
MRKS	Merke	2.14	45	eP	Pb	07 59 45.2	-0.5
	3.4nm,0.1s						
MRKS				eS	Sg	08 00 15.5	-0.1
	4.3nm,0.2s						
EKS2	Erkin-Say	2.40	53	⇑iP	Pn	07 59 47.6	+1.3
	baz=55						
EKS2				⇑iS	Sb	08 00 20.4	+0.5
	baz=55						
ARLS	Aral	2.44	74	⇓iP	Pb	07 59 49.2	-1.7
	baz=76						
ARLS				⇓iS	Sb	08 00 21.4	+0.3
	baz=76						
UCH	Uchtor	2.68	67	⇑iP	Pb	07 59 53.8	-1.4
	baz=69						
UCH				⇑iS	Sg	08 00 30.7	-2.4
	baz=69						
AAK	Ala-Archa	2.84	60	⇓iP	Pn	07 59 54.7	+2.3
	baz=61						
AAK				⇓iS	Sb	08 00 32.5	-0.1
	baz=61						
KZA	Kyzart	3.16	73	⇑iP	Pb	08 00 01.0	-2.4

	baz=75						
KZA				⇑*i*S	Sb	08 00 43.5	+1.4
	baz=75						

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*AEIC **12** 07:59:16.9,65°.09N×148°.77W,h16^{km},ML3.4, MW3.6(NEIC)*
*NEIC **12** 07:59:16.9±0.0,65°.09N×148°.77W,h16^{km},MW3.6, ML3.4(AEIC),Moment Tensor Solution. s21 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.17; M$_{\theta\theta}$-3.13; M$_{\phi\phi}$2.96; M$_{r\theta}$-0.25; M$_{\theta\phi}$-1.44; M$_{\phi r}$0.16; Best double couple: M$_0$3.40000×10^{14} NP1:φ$_s$32.00000°,δ85.00000°, λ0.00000°. NP2:φ$_s$302.00000°,δ90.00000°,λ175.00000°. Principal axes: T 3.2900, Plg4.0000°, Azm257.0000°; N 0.1700, Plg85.0000°, Azm118.0000°; P -3.4700, Plg3.0000°, Azm347.0000°; After AEIC.*
NEIC Felt [II] at Fairbanks and North Pole.
*ANF **12** 07:59:17.7±1.0,65°.10N×148°.66W,h20^{km}±7^{km},ML4.1/5 Error ellipse: s-maj=7.9km s-min=5.8km az=90.0*
ISC 12 07:59:16.9±1.0,**65°.09N**±0°.03×**148°.78W**±0°.03,**h15**^{km}±8^{km}, **n46**,σ**0^{s}.79**/54,**Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDM	**Murphy Dome**	0.27	119	*e*Pg	Pg	07 59 22.8	+0.2
MDM				*e*Sg	Sg	07 59 26.4	-0.1
PS07	**TAPS Pump Stn7**	0.31	43	*e*Pg	Pg	07 59 23.6	+0.3
TCOL	**CIGO, UAF Yank**	0.45	118	P	Pb	07 59 26.3	-0.1
	baz=299						
TCOL				S	Sb	07 59 32.4	-0.5
	baz=299						
COLA	**College**	0.45	118	*e*Pg	Pb	07 59 26.2	-0.2
POKR	**Poker Plat Res**	0.57	86	P	Pg	07 59 28.1	0.0
	baz=268						
POKR				S	Sg	07 59 35.9	+0.2
	baz=268						
CCB	**Clear Creek Bu**	0.61	136	*e*Pg	Pg	07 59 29.0	+0.2
WRH	**Wood River Hil**	0.69	154	*e*Pg	Pg	07 59 30.4	+0.2
WRH				*e*Sg	Sg	07 59 39.6	+0.3
MLY	**Manley**	0.83	267	*e*Pg	Pb	07 59 32.7	-0.3
PS06	**TAPS Pump Stn6**	0.87	333	*e*Pg	Pg	07 59 33.8	+0.1
ILB	**Eielson Array**	0.87	111	*e*Pg	Pb	07 59 33.4	-0.2
BWN	**Browne**	0.96	198	*e*Pg	Pb	07 59 34.8	-0.5
BWN				*e*Pg	Pg	07 59 34.9	-0.6
BWN				*e*Sg	Sb	07 59 48.0	+0.2
PS08	**TAPS Pump Stn8**	1.00	122	*e*Pg	Pb	07 59 35.6	-0.3
HDA	**Harding Lake**	1.04	130	*e*Pg	Pb	07 59 36.1	-0.4
HDA	**Harding Lake**	1.04	130	P	Pb	07 59 36.5	0.0
	baz=312						
HDA				S	Sb	07 59 50.1	+0.1
	baz=312						
MCK	**McKinley**	1.36	183	*e*Pn	Pn	07 59 41.5	+0.1
BPAW	**Bear Paw Mtn.**	1.37	225	*e*Pn	Pn	07 59 40.6	-0.9
PRP	**Porcupine Dome**	1.44	71	*e*Pn	Pn	07 59 41.7	-0.7
RND	**Reindeer**	1.69	181	*e*Pn	Pn	07 59 45.4	-0.5
PS09	**TAPS Pump Stn9**	1.75	130	*e*Pn	Pn	07 59 46.2	-0.4
KTH	**Kantishna Hill**	1.80	212	*e*Pn	Pn	07 59 46.5	-0.9
PS05	**TAPS Pump Stn5**	1.90	337	*e*Pn	Pn	07 59 48.3	-0.3
FYU	**Fort Yukon**	2.08	43	*e*Pn	Pn	07 59 50.4	-0.8
DHY	**Denali Highway**	2.11	162	*e*Pn	Pn	07 59 52.1	+0.3
RIDG	**Independent Ri**	2.18	127	*e*Pn	Pn	07 59 51.4	-1.3
COLD	**Coldfoot**	2.23	346	*e*Pn	Pn	07 59 53.4	+0.2
IM3	**Indian Mountai**	2.25	296	*e*Pn	Pn	07 59 53.0	-0.6
SCRK	**Sand Creek**	2.35	116	*e*Pn	Pn	07 59 54.2	-0.9
DOT	**Dot Lake**	2.51	123	*e*Pn	Pn	07 59 55.7	-1.4
PAX	**Paxson**	2.58	144	*e*Pn	Pn	07 59 58.4	+0.3
PPLA	**Purkeypile**	2.66	216	*e*Pn	Pn	07 59 58.3	-1.0
BM3	**Burnt Mountain**	2.89	34	*e*Pn	Pn	08 00 01.7	-0.6
EGAK	**Eagle**	3.26	92	*e*Pn	Pn	08 00 06.5	-0.9
PMR	**Palmer**	3.51	183	*e*Pn	Pn	08 00 11.3	+0.4
TOLK	**Toolik Lake Re**	3.58	355	*e*Pn	Pn	08 00 13.1	+1.2
TOLK	**Toolik Lake Re**	3.58	355	P	Pn	08 00 11.6	-0.2
	baz=175						
TOLK				S	Sn	08 00 55.1	+1.2
	baz=175						
BCA3	**Beaver Creek A**	3.68	120	*e*Pn	Pn	08 00 11.9	-1.3
TTA	**Tatalina**	3.85	239	*e*Pn	Pn	08 00 14.3	-1.3
RC01	**Rabbit Creek A**	4.04	187	*e*Pn	Pn	08 00 19.9	+1.9
DAWY	**Dawson**	4.18	100	*e*Pn	Pn	08 00 20.2	+0.2
SEW	**Seward**	5.01	184	*e*Pn	Pn	08 00 33.7	+2.3
SVW2	**Sparrevohn**	5.05	221	*e*Pn	Pn	08 00 32.5	+0.5
EPYK	**Eagle Plains**	5.14	70	*e*Pn	Pn	08 00 31.9	-1.3
EPYK	**Eagle Plains**	5.14	70	P	Pn	08 00 32.8	-0.5
	baz=261						
INK	**Inuvik**	6.85	55	*e*Pn	Pn	08 00 57.2	+0.6
KDAK	**Kodiak Island**	7.55	196	*e*Pn	Pn	08 01 06.5	+0.2
OHAK	**Old Harbor**	8.19	197	*e*Pn	Pn	08 01 15.8	+0.9

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*NNC **12** 08:02:35.2±8.0,53°.81N×90°.32E,h0^{km},mb3.7,mpv3.4, Error ellipse: s-maj=62.2km s-min=51.9km az=20.0, Suspected Mining explosion.*
KRAR 12 08:02:29.7±0.3,**53°.71N×91°.04E,M2.3,7C,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	8.20	254	⇑Pn	Pn	08 04 29.5	-0.2
	2.3nm,1.1s						
KURK				⇑Sn	Sn	08 06 00.6	-2.4
	3.9nm,0.8s						
KURK				⇑Lg	Lg	08 06 45.9	
	8.7nm,1.1s						
KURBB	**Kurchatov Arra**	8.29	253	⇑Pn	Pn	08 04 30.0	-1.0
	0.9nm,0.5s,baz=62,slow=14						
KURBB				⇑Sn	Sn	08 06 03.1	-2.2
	12nm,0.8s,baz=67,slow=24						
KURBB				⇑Lg	Lg	08 06 50.4	
	20nm,1.1s,baz=64,slow=32						
MK31	**Makanchi Array**	8.90	222	Pn	Pn	08 04 43.8	+4.2
	1.0nm,0.6s,baz=32,slow=11,SNR=5.8						
MK31				⇑Lg	Lg	08 07 17.1	
	4.0nm,1.1s,baz=28,slow=32						

MEX 12 08:14:43.8±0.5,**17°.10N×91°.62W,h6**^{km}±6^{km}**,MD3.7, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	0.96	212	*i* P	Pg	08 14 59.8	-2.5
CCIG				*e*S	Sg	08 15 12.3	-2.4
TGIG		1.48	258	*e*P	Pn	08 15 07.6	-3.5
TGIG				*e*S	Sn	08 15 26.2	-4.6
SCIG	**Sabancuy**	1.90	12	*e*P	Pn	08 15 13.2	-3.5
SCIG				*e*S	Sn	08 15 36.6	-4.4
PCIG		2.08	228	*e*P	Pn	08 15 16.0	-3.2
PCIG				*i* S	Sn	08 15 41.4	-3.9
THIG		2.27	196	*i* P	Pn	08 15 19.2	-2.7
THIG				*i* S	Sn	08 15 46.1	-4.1
CMIG	**Matias Romero**	3.13	270	*i* P	Pn	08 15 30.9	-2.8
CMIG				*i* S	Sn	08 16 07.3	-4.1
MYIG	**Mrida**	4.22	25	*i* P	Pn	08 15 46.0	-2.7
MYIG				*i* S	Sn	08 16 35.9	-2.5

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*ISK **12** 08:16:28.9,39°.90N×33°.00E,h4^{km},ML2.0/6*
*DDA **12** 08:16:28.5,39°.96N×33°.00E,h7^{km}±3^{km},ML2.5*
*ISCJB **12** 08:16:29.3±0.5,39°.96N±0°.03×33°.00E±0°.03,h6^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.6km az=4.3*
ISC 12 08:16:29.0±0.9,**39°.96N**±0°.03×**32°.97E**±0°.03,**h13**^{km}±7^{km}, **n17**,σ**0^{s}.72**/28,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTO	**Ankara**	0.17	237	PG	Pg	08 16 32.9	-0.1
ANTO				SG	Sg	08 16 35.8	+0.1
LOD	**Lodumlu**	0.18	246	PG	Pg	08 16 33.1	0.0
LOD				SG	Sg	08 16 36.4	+0.4
ELDT	**Eldivan**	0.63	33	*i* P	Pg	08 16 41.8	+0.4
ELDT				*i* S	Sb	08 16 50.9	+0.1
ELDT				IAML_P			
	comp=Z,2μm,0.2s						
CMDR	**Camlidere-ANKA**	0.66	325	*i* P	Pg	08 16 42.1	+0.3
CMDR				IAML_P			
	comp=Z,925nm,0.2s						
DELI	**KIRIKKALE**	0.73	87	*i* P	Pb	08 16 43.5	-0.1
DELI				*i* S	Sg	08 16 52.3	-0.5
DELI				IAML_P			
	comp=Z,489nm,0.1s						
KKUL	**Konya-Kulu**	0.79	183	*i* P	Pn	08 16 45.6	-0.3
KKUL				*i* S	Sn	08 16 57.3	-0.3
KKUL				IAML_P			
	comp=Z,221nm,0.1s						
KULU	**Kulu**	0.92	179	PG	Pb	08 16 47.1	+0.3
KIBS	**BOLU**	0.97	299	*i* P	Pg	08 16 45.6	-2.2
KIBS				*i* S	Sn	08 17 02.7	+0.5
KIBS				IAML_P			
	comp=Z,608nm,0.2s						
BCAM	**Yenicaga**	1.10	321	*i* P	Pb	08 16 50.2	+0.2
BCAM				*i* S	Sn	08 17 06.8	+1.5
BCAM				IAML_P			
	comp=Z,696nm,0.1s						
KIRS	**Kırehir-Merke**	1.10	138	*i* P	Pb	08 16 49.8	-0.1
KIRS				*i* S	Sn	08 17 06.8	+1.6
KIRS				IAML_P			
	comp=Z,312nm,0.2s						
CDAG	**Cicekdag**	1.13	107	*i* P	Pb	08 16 50.4	0.0
CDAG				*i* S	Sn	08 17 05.7	-0.3
CDAG				IAML_P			
	comp=Z,146nm,0.2s						
AUMIH	**MIHALICIK**	1.15	266	*i* P	Pb	08 16 50.2	-0.5
AUMIH				*i* S	Sn	08 17 07.2	+0.7
YAYX	**Yaylak**	1.21	147	PN	Pb	08 16 51.5	-0.2
YAYX				SN	Sn	08 17 07.9	0.0
SVRH	**Sivrihisar-ESK**	1.23	246	PN	Pg	08 16 52.9	+0.2
CORM	**Corum**	1.29	80	PN	Pg	08 16 54.0	+0.2
KIZT	**Kizilcal**	1.37	218	PN	Pb	08 16 54.9	+0.4
YOZ	**Yozgat**	1.84	99	PN	Pb	08 17 01.6	-0.9

NNC 12 08:27:16.2±3.2,**36°.79N×70°.81E,h109**^{km}±66^{km}**,mb3.0, mpv3.5,3C,Error ellipse: s-maj=30.4km s-min=22.8km az=155.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.32	358	P	Pn	08 28 46.9	+0.1
	2.0nm,0.3s,baz=179,slow=13,SNR=16						
KK31				⇑S	Sn	08 29 58.2	+0.7
	0.7nm,0.3s,baz=186,slow=26,SNR=6.3						
TKM2	**Tokmak 2**	7.15	29	⇑P	Pn	08 28 58.2	0.0
	1.6nm,0.6s						
TKM2				⇑S	Sn	08 30 18.6	+0.6
	0.5nm,0.3s						
AB31	**Akbulak array**	14.76	331	P	Pn	08 30 39.4	0.0
	0.5nm,0.4s,baz=139,slow=14,SNR=17						

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*IDC **12** 08:41:48.9±0.7,12°.63S×167°.10E,h208^{km}±5^{km},mb4.4/22, mb1 4.5/25,mb1mx4.5/28,mbtmp4.9/25,Error ellipse: s-maj=11.6km s-min=8.4km az=86.0*
*BJI **12** 08:41:50.6±0.0,12°.37S×167°.28E,h235^{km},mb4.9/50, mB5.0/32*
*ISCJB **12** 08:41:50.6±0.8,12°.68S±0°.03×166°.96E±0°.03,h236^{km}±8^{km}, mb4.8/135,Error ellipse: s-maj=5.2km s-min=5.0km az=35.8*
*MOS **12** 08:41:50.1±0.8,12°.58S×166°.95E,h230^{km},mb5.0/44, Error ellipse: s-maj=9.7km s-min=7.9km az=94.7*
*GCMT **12** 08:41:50.3±0.3,12°.58S±0°.03×166°.95E±0°.02,h211^{km}±2^{km}, MW5.0/81,Moment Tensor Solution. s30,c33; s81,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.66±.16; M$_{\theta\theta}$-0.27±.19; M$_{\phi\phi}$-3.38±.20; M$_{r\theta}$0.84±.15; M$_{\theta\phi}$-1.06±.21; M$_{\phi r}$-2.78±.16; Best double couple: M$_0$4.67800×10^{16} NP1:φ$_s$178.00000°,δ64.00000°,λ73.00000°. NP2: φ$_s$33.00000°,δ31.00000°,λ121.00000°. Principal axes: T 4.8800, Plg66.0000°, Azm57.0000°; N -0.3970, Plg15.0000°, Azm186.0000°; P -4.4750, Plg18.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **12** 08:41:51.3±1.5,12°.67S×167°.00E,h230^{km}±2^{km}, mb4.9/223 Error ellipse: s-maj=14.9km s-min=11.9km az=98.0*
ISC 12 08:41:50.1±0.5,**12°.65S**±0°.05×**167°.04E**±0°.06,**h221**^{km}±4^{km}, **h221**^{km}**:pP-P,n406,**σ**0^{s}.92**/431,**mb4.9**/134,**17C-11D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	7.67	294	P	Pn	08 43 38.6	-0.5
	8.8nm,0.3s,baz=250,slow=1.9,SNR=4.1						
HNR	**Honiara**	7.67	294	*e*Pn	Pn	08 43 38.4	-0.8
HNR	**Honiara**	7.67	294	*e*P	Pn	08 43 38.4	-0.8
MARNC	**Mare, Loyalty**	8.83	174	*e*Pn	Pn	08 43 53.5	-0.4
DZM	**Mont Dzumac**	9.38	183	*e*Pn	Pn	08 44 05.2	+4.0
	35nm,0.3s						
DZM				*e*Sn	S	08 45 45.3	-1.5
	132nm,0.6s						
DZM				*e*LR	LR	08 46 15.8	
	comp=Z,352nm,23.8s						
DZM	**Mont Dzumac**	9.38	183	P	Pn	08 44 02.3	+1.1
	7.0nm,0.3s,baz=351,slow=8.7,SNR=45						
DZM				S	S	08 45 48.0	+1.2
	3.9nm,0.3s,baz=333,slow=22,SNR=3.6						
PINNC	**Pines Island,**	9.91	178	*e*Pn	Pn	08 44 08.9	+1.0
FUNA	**Funafuti**	12.63	72	*e*P	P	08 44 47.1	+1.6
TARA	**Tarawa**	15.09	23	*e*P	Pn	08 45 15.2	+2.5
	230nm,1.4s						
RABL	**Rabaul**	16.94	298	*e*P	P	08 45 33.1	-0.1
	121nm,0.5s						
EIDS	**Eidsvold**	19.66	228	*e*P	P	08 46 04.3	+1.8
	93nm,0.6s						
PMG	**Port Moresby**	19.78	277	P	P	08 46 04.5	+0.7
	3.2nm,0.3s,baz=98,slow=6.9,SNR=11						
PMG	**Port Moresby**	19.78	277	*e*P	P	08 46 04.4	+0.5
	101nm,0.9s						
PMG	**Port Moresby**	19.78	277	*d i*P	P	08 46 04.3	+0.4
PMG				pmax	pmax		
	comp=Z,535nm,1.3s						
LHI	**Lord Howe Isla**	20.16	200	*e*P	P	08 46 10.5	+2.7
	comp=Z,41nm,0.6s						
CTA	**Charters Tower**	21.26	247	P	P	08 46 19.9	+0.4
	comp=Z,69nm,0.7s,baz=78,slow=12,SNR=66						
CTAO	**Charters Tower**	21.26	247	*e*P	P	08 46 19.6	+0.1
	comp=Z,72nm,0.8s						
CTAO	**Charters Tower**	21.26	247	*e*P	P	08 46 19.6	+0.1
CTAO				pmax	pmax		
	comp=Z,72nm,0.8s						
MANU	**Manus Island**	22.16	297	*e*P	P	08 46 28.3	+0.1
	comp=Z,67nm,1.0s						
ARMA	**Armidale**	22.71	216	*e*P	P	08 46 34.8	+1.5
OUZ	**Omahuta**	23.24	166	*e*P	P	08 46 39.8	+2.1
	comp=Z,20nm,0.7s						
COEN	**Coen**	23.26	264	*e*P	P	08 46 39.2	+0.9
	comp=Z,24nm,0.8s						
HIZ	**Hauiti**	26.68	166	*e*P	P	08 47 10.7	+1.9
	comp=Z,99nm,1.3s						
URZ	**Urewera**	27.03	162	P	P	08 47 11.8	-0.1
	comp=Z,7.5nm,0.6s,baz=245,slow=6.5,SNR=12						
URZ	**Urewera**	27.03	162	*e*P	P	08 47 11.9	0.0
	comp=Z,32nm,1.3s						
BKZ	**Black Stump Fm**	27.70	164	*e*P	P	08 47 17.6	-0.3
	comp=Z,32nm,1.2s						
CAN	**Canberra**	27.85	213	*e*P	P	08 47 19.8	+0.5
	comp=Z,4.0nm,0.7s						
CAN				*e*PcP	PcP	08 50 30.6	+1.1
CAN	**Canberra**	27.85	213	*e*P	P	08 47 19.8	+0.5
CAN				*e*		08 50 30.6	
CAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BFZ	**Birch Farm**	29.07	166	*e*P	P	08 47 28.9	-1.0
	comp=Z,106nm,1.2s						
SNZO	**South Karori**	29.32	168	*e*P	P	08 47 31.8	-0.3
	comp=Z,187nm,1.4s						
THZ	**Tophouse**	29.45	171	*e*P	P	08 47 34.4	+1.0
	comp=Z,35nm,0.7s						
KHZ	**Kahutara**	30.18	170	*e*P	P	08 47 39.5	-0.2
	comp=Z,27nm,0.6s						
STKA	**Stephens Creek**	30.21	227	P	P	08 47 41.0	+0.8
	comp=Z,5.7nm,0.4s,baz=56,slow=9.6,SNR=22						
STKA				pP	pP	08 48 22.7	-1.3
	comp=Z,5.7nm,0.7s,baz=25,slow=7.7,SNR=3.4						
STKA				PcP	PcP	08 50 35.7	+0.2
	comp=Z,8.8nm,0.7s,baz=13,slow=2.9,SNR=6.7						
STKA	**Stephens Creek**	30.21	227	*e*P	P	08 47 41.3	+1.1
	comp=Z,7.8nm,1.4s						
STKA				*e*PcP	PcP	08 50 34.5	-0.9
STKA	**Stephens Creek**	30.21	227	*e*P	P	08 47 41.3	+1.1
STKA				*e*		08 50 34.5	
STKA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
LTZ	**Lake Taylor**	30.36	172	*e*P	P	08 47 42.0	+0.6
	comp=Z,78nm,0.7s						
FOZ	**Fox Glacier**	30.86	176	*e*P	P	08 47 47.1	+1.5
	comp=Z,52nm,0.8s						
OXZ	**Oxford**	30.86	173	*e*P	P	08 47 45.8	0.0
	comp=Z,43nm,0.7s						
RPZ	**Rata Peaks**	31.14	174	P	P	08 47 48.2	0.0
	comp=Z,38nm,0.7s,baz=132,slow=3.7,SNR=17						
RPZ	**Rata Peaks**	31.14	174	*e*P	P	08 47 48.2	0.0
	comp=Z,42nm,0.8s						
CRLZ	**Canterbury Las**	31.18	172	*e*P	P	08 47 49.1	+0.7
	comp=Z,89nm,1.3s						
MQZ	**McQueen's Vall**	31.32	172	*e*P	P	08 47 50.0	+0.4
	comp=Z,33nm,0.7s						
TOO	**Toolangi**	31.41	214	*e*P	P	08 47 51.0	+0.3
	comp=Z,7.4nm,0.8s						
TOO	**Toolangi**	31.41	214	*e*P	P	08 47 51.0	+0.3
TOO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LBZ	**Lake Benmore**	31.73	176	*e*P	P	08 47 53.2	-0.1
	comp=Z,20nm,0.8s						
WKZ	**Wanaka**	32.11	177	*e*P	P	08 47 56.6	0.0
	comp=Z,75nm,1.2s						
WB2	**Warramunga Arr**	32.16	253	*e*P	P	08 47 56.4	-1.0
	comp=Z,6.5nm,0.6s						
WRAB	**Tennant Creek**	32.16	253	*e*P	P	08 47 56.5	-1.0
	comp=Z,13nm,1.2s						
WRAB	**Tennant Creek**	32.16	253	⇓*i*P	P	08 47 56.4	-1.0
WRA	**Warramunga Arr**	32.17	253	P	P	08 47 56.7	-0.8
	comp=Z,4.2nm,0.5s,baz=76,slow=10,SNR=47						
WRA				pP	pP	08 48 40.2	-1.2
	comp=Z,4.8nm,0.8s,baz=76,slow=10,SNR=3.4						
AS31	**Alice Springs**	33.26	246	*e*P	P	08 48 06.3	-0.6
	comp=Z,3.3nm,0.5s						
AS31				*e*PcP	PcP	08 50 44.0	0.0
ASAR	**Alice Springs**	33.26	246	P	P	08 48 06.2	-0.7
	comp=Z,8.2nm,0.6s,baz=70,slow=9.4,SNR=143						
ASAR				pP	pP	08 48 50.9	-0.3
	comp=Z,12nm,0.7s,baz=74,slow=9.5,SNR=7.4						
ASAR				PcP	PcP	08 50 42.6	-1.4
	comp=Z,7.3nm,1.1s,baz=79,slow=4.4,SNR=8.0						
ASAR				S	S	08 53 08.7	-2.0
	comp=Z,4.1nm,1.0s,baz=76,slow=16,SNR=10						
ASAR				ScP	ScP	08 54 08.9	+1.5
	comp=Z,7.6nm,1.0s,baz=86,slow=3.4,SNR=18						
ASAR				PKiKP	PKiKP	08 58 08.0	-1.4
	comp=Z,0.3nm,0.6s,baz=60,slow=1.7,SNR=5.4						
TAU	**Tasmania Unive**	34.65	206	*e*P	P	08 48 19.2	+0.7
	comp=Z,53nm,1.4s						
TAU				*e*PcP	PcP	08 50 48.9	+1.4
TAU	**Tasmania Unive**	34.65	206	*e*P	P	08 48 19.2	+0.7
TAU				*e*		08 50 48.9	
TAU				pmax	pmax		
	comp=Z,53nm,1.4s						
BBOO	**Buckleboo**	34.71	230	*e*P	P	08 48 19.3	0.0
	comp=Z,16nm,0.7s						
FORT	**Forrest**	40.20	237	*e*P	P	08 49 05.5	+0.3
	comp=Z,40nm,0.8s						
FORT				*e*PcP	PcP	08 51 05.0	+0.2
PPT2	**Papeete2**	42.10	102	*e*LR	LR	09 01 13.0	
	comp=Z,136nm,31.8s						
TBI	**Tubuai**	42.56	111	*e*LR	LR	09 01 25.9	
	comp=Z,89nm,32.2s						
MLOA	**Mauna Loa Obse**	48.77	50	*e*P	P	08 50 14.5	+0.9
	comp=Z,170nm,1.3s						
NWAO	**Narrogin (SRO)**	49.65	237	*e*P	P	08 50 20.1	+0.5
	comp=Z,49nm,1.4s						
NWAO	**Narrogin (SRO)**	49.65	237	*e*P	P	08 50 20.1	+0.5
NWAO				pmax	pmax		
	comp=Z,49nm,1.4s						
MJAR	**Matsushiro Arr**	55.98	332	P	P	08 51 04.9	-0.8
	comp=Z,19nm,0.9s,baz=169,slow=8.0,SNR=28						
MAJO	**Matsushiro**	55.98	332	*e*P	P	08 51 05.2	-0.5
	comp=Z,32nm,1.0s						
MAJO	**Matsushiro**	55.98	332	*c e*P	P	08 51 05.0	-0.7
MAJO				pmax	pmax		
	comp=Z,30nm,1.1s						
MAT	**Matsushiro**	55.98	332	P	P	08 51 05.1	-0.6
MJB9	**Matsu-Tunnel**	55.98	332	*e*P	P	08 51 05.6	-0.2
	comp=Z,32nm,1.0s						
JNU	**Nakatsue**	57.12	324	*e*P	P	08 51 14.1	+0.2
	comp=Z,35nm,1.0s						
SSLB	**Suanglung**	57.81	309	*e*P	P	08 51 19.7	+0.9
	comp=Z,26nm,1.5s						
ERM	**Erimo**	58.68	339	*e*P	P	08 51 25.4	+1.0
	comp=Z,14nm,0.9s						
ERM	**Erimo**	58.68	339	⇓*e*P	P	08 51 23.6	-0.8
ERM				pmax	pmax		
	comp=Z,17nm,0.9s						
TJN	**Taejon**	61.47	324	⇑*e*P	P	08 51 44.8	+1.4
KSRS	**Korea Array**	61.91	325	P	P	08 51 46.7	+0.3
	comp=Z,6.7nm,0.9s,baz=142,slow=6.9,SNR=18						
KSRS				PcP	PcP	08 52 25.7	+0.8
	comp=Z,2.6nm,1.0s,baz=156,slow=6.7,SNR=5.0						
KS15	**Wonju Array Si**	61.93	325	*e*PcP	PcP	08 52 25.8	+0.7
YSS	**Yuzh-Sakhalins**	63.20	342	*e*P	P	08 51 57.0	+2.3
	comp=Z,46nm,0.9s						
YSS	**Yuzh-Sakhalins**	63.20	342	⇑*e*P	P	08 51 55.4	+0.7
YSS				*e*S	S	09 00 05.4	-2.8
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
TEY	**Ternei**	63.70	336	⇑*e*P	P	08 51 58.3	+0.3
TEY				pmax	pmax		
	comp=Z,20nm,1.5s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.4s						
SKR	**Severo-Kuril's**	63.79	352	⇓*e*P	P	08 51 58.8	+0.4
NJ2	**Nanjing**	64.05	315	*e*P	P	08 52 01.1	+0.5
NJ2				pmax	pmax		
	comp=N,30nm,0.5s						
MSHR	**Mys Shultsa**	64.07	331	⇑*e*P	P	08 51 59.5	-1.0
VNDA	**Vanda**	64.92	181	P	P	08 52 06.2	+0.7
	comp=N,12nm,0.8s,baz=359,slow=7.0,SNR=65						
VNDA				PcP	PcP	08 52 37.4	+0.6
	comp=N,5.2nm,0.8s,baz=332,slow=5.4,SNR=4.8						
VNDA	**Vanda**	64.92	181	*e*P	P	08 52 06.7	+1.2
	comp=N,16nm,0.9s						
VNDA				*e*PcP	PcP	08 52 37.4	+0.6
VNDA	**Vanda**	64.92	181	*e*P	P	08 52 06.7	+1.2
VNDA				*e*		08 52 37.4	
VNDA				pmax	pmax		
	comp=Z,16nm,0.9s						
USA0B	**Ussuriysk Arra**	64.95	333	*e*P	P	08 52 07.2	+1.1
	comp=Z,58nm,1.3s						
USA0B	**Ussuriysk Arra**	64.95	333	*e*P	P	08 52 07.3	+1.1
USA0B				pmax	pmax		
	comp=Z,58nm,1.3s						
USRK	**Ussuriysk Ar.**	64.95	333	P	P	08 52 07.0	+0.8
	comp=Z,21nm,1.0s,baz=140,slow=5.2,SNR=46						
USRK				PcP	PcP	08 52 38.0	+0.7
	comp=Z,6.6nm,0.9s,baz=112,slow=6.0,SNR=4.5						
SBA	**Scott Base**	65.20	180	*e*P	P	08 52 08.8	+1.5
	comp=Z,44nm,0.9s						
SBA	**Scott Base**	65.20	180	*e*P	P	08 52 08.8	+1.5
SBA				pmax	pmax		
	comp=Z,44nm,0.9s						
PEA0B	**Petropavlovsk-**	65.99	354	*e*P	P	08 52 12.6	0.0
	comp=Z,46nm,1.3s						
PEA0B	**Petropavlovsk-**	65.99	354	*e*P	P	08 52 12.6	0.0
PEA0B				pmax	pmax		
	comp=Z,46nm,1.3s						
PETK	**Petropavlovsk-**	65.99	354	P	P	08 52 12.8	+0.2
	comp=Z,14nm,0.8s,baz=138,slow=7.6,SNR=25						
MDJ	**Mudanjiang**	66.36	332	*e*P	P	08 52 16.2	+1.0
	comp=Z,25nm,1.0s						
WHN	**Wuhan**	66.41	312	P	P	08 52 19.7	+4.0
DL2	**Dalian**	66.52	323	P	P	08 52 16.8	+0.5
DL2				pmax	pmax		
	comp=Z,31nm,0.8s						
IPM	**Ipoh**	67.75	280	*e*P	P	08 52 25.0	+0.4
	comp=Z,29nm,0.9s						
CN2	**Changchun**	67.77	329	*e*P	P	08 52 24.4	+0.4
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
NIKH	**Nikolski High**	68.56	15	*e*P	P	08 52 28.6	-0.2
	comp=Z,128nm,1.4s						
GRNR	**Gornyy**	68.58	340	*e*P	P	08 52 30.4	+1.5
GRNR				pmax	pmax		
	comp=Z,46nm,1.0s						
KLR	**Kul'dur**	69.03	336	*c i*P	P	08 52 32.9	+1.2
KLR				pmax	pmax		
	comp=Z,44nm,1.5s						
PSI	**Prapat**	69.35	278	*e*P	P	08 52 33.5	-1.1
	comp=Z,22nm,1.0s						
PSI	**Prapat**	69.35	278	*e*P	P	08 52 33.5	-1.1
PSI				pmax	pmax		

	comp=Z,22nm,1.0s						
ENH	Enshi	69.89	309	eP	P	08 52 37.1	-0.4
	comp=Z,28nm,0.9s						
NONG	Nongkai	70.04	295	P	P	08 52 39.6	+1.1
	comp=Z,0.3nm,1.1s						
BJT	Baijiatuau	70.52	321	eP	P	08 52 41.7	+0.7
	comp=Z,11nm,0.9s						
BJT	Baijiatuau	70.52	321	eP	P	08 52 41.7	+0.7
BJT				pmax	pmax		
	comp=Z,11nm,0.9s						
BJI	Beijing	70.53	321	P	P	08 52 41.7	+0.7
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN	Xi'an	72.14	312	P	P	08 52 51.4	+0.5
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI	Kunming	73.04	301	P	P	08 52 57.8	+1.2
KMI				pmax	pmax		
	comp=Z,29nm,1.3s						
MA2	Magadan	73.17	351	⇓eP	P	08 52 56.3	-0.1
MA2				pmax	pmax		
	comp=Z,32nm,1.6s						
HHC	Hu-ho-hao-te	73.87	319	eP	P	08 53 04.1	+3.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,98nm,3.8s						
HHC				LR	LR		
	comp=Z,46nm,16.2s						
HHC				LR	LR		
	comp=Z,11nm,15.3s						
HHC				LR	LR		
	comp=Z,83nm,11.1s						
CMAR	Chiang Mai Arr	73.92	294	P	P	08 53 02.6	+1.0
	comp=Z,7.3nm,0.6s,baz=117,slow=4.1,SNR=41						
CMAR				pP	pP	08 53 50.9	-1.0
	comp=Z,2.4nm,0.8s,baz=101,slow=4.7,SNR=1.3						
CMAR	Chiang Mai Arr	73.92	294	i P	P	08 53 03.0	+1.4
CMAR				pmax	pmax		
	comp=Z,12nm,0.9s						
CHTO	Chiang Mai	74.03	294	eP	P	08 53 02.7	+0.5
	comp=Z,23nm,1.1s						
CHTO	Chiang Mai	74.03	294	eP	P	08 53 02.7	+0.5
CHTO				pmax	pmax		
	comp=Z,23nm,1.1s						
ZEA	Zeya	74.31	337	eP	P	08 53 04.2	+1.1
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						
HIA	Hailar	74.39	330	eP	P	08 53 03.9	+0.2
	comp=Z,20nm,1.0s						
HIA	Hailar	74.39	330	eP	P	08 53 03.9	+0.2
HIA				pmax	pmax		
	comp=Z,20nm,1.0s						
CHGN	Chignik	74.49	19	eP	P	08 53 02.4	-1.6
	comp=Z,15nm,0.9s						
CD2	Chengdu	74.58	307	⇓iP	P	08 53 06.1	+0.9
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
SII	Sitkinak Islan	76.11	21	eP	P	08 53 13.3	0.0
	comp=Z,59nm,1.2s						
SEY	Seymchan	76.21	353	c iP	P	08 53 14.1	+0.4
LZH	Lanzhou	76.77	312	⇓P	P	08 53 18.5	+0.8
LZH				pP	pwP	08 54 14.7	+2.5
LZH				sP	sP	08 54 36.5	+3.7
LZH				PP	PP	08 56 15.6	+1.8
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,91nm,8.0s						
OHAK	Old Harbor	76.94	21	eP	P	08 53 17.9	+0.1
	comp=Z,54nm,1.0s						
QSPA	South Pole Qui	77.36	180	eP	P	08 53 20.0	-0.4
	comp=Z,17nm,0.7s						
KDAK	Kodiak Island	77.61	21	eP	P	08 53 21.7	+0.1
	comp=Z,29nm,1.0s						
KDAK	Kodiak Island	77.61	21	eP	P	08 53 21.7	+0.1
KDAK				pmax	pmax		
	comp=Z,29nm,1.0s						
YAK	Yakutsk	79.99	343	eP	P	08 53 33.4	-1.0
YAK				pmax	pmax		
	comp=Z,41nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
BILL	Bilibino	80.48	360	deP	P	08 53 37.2	+0.3
BILL				e*PP	pP	08 54 33.1	+3.5
BILL				i		08 56 44.2	
BILL				pmax	pmax		
	comp=Z,52nm,0.9s						
SONM	Songino Array	80.71	323	P	P	08 53 39.0	+0.2
	comp=Z,5.2nm,0.9s,baz=138,slow=5.3,SNR=32						
SONM				PKKPbc	PKKPbc	09 12 16.1	-3.1
	comp=Z,0.6nm,0.9s,baz=225,slow=1.8,SNR=3.9						
GTA	Gaotai	81.08	314	⇑P	P	08 53 42.0	+1.0
GTA				pmax	pmax		
	comp=Z,14nm,1.3s						
PMR	Palmer	81.63	20	eP	P	08 53 42.4	-0.7
	comp=Z,22nm,0.9s						
PMR	Palmer	81.63	20	eP	P	08 53 42.4	-0.7
PMR				pmax	pmax		
	comp=Z,22nm,0.9s						
GLI	Glacier Island	81.80	21	eP	P	08 53 43.9	-0.1
	comp=Z,32nm,0.8s						
SML	Sawmill	82.05	20	eP	P	08 53 45.4	0.0
	comp=Z,94nm,1.5s						
SML	Sawmill	82.05	20	eP	P	08 53 45.4	0.0
SML				pmax	pmax		
	comp=Z,94nm,1.5s						
KTH	Kantishna Hill	82.53	18	eP	P	08 53 46.5	-1.4
	comp=Z,13nm,0.8s						
RND	Reindeer	83.05	18	eP	P	08 53 49.9	-0.6
	comp=Z,37nm,1.1s						
RND	Reindeer	83.05	18	eP	P	08 53 49.9	-0.6
RND				pmax	pmax		
	comp=Z,37nm,1.1s						
MCK	McKinley	83.26	18	eP	P	08 53 51.0	-0.6
	comp=Z,45nm,1.1s						
MCK	McKinley	83.26	18	eP	P	08 53 51.0	-0.6
MCK				pmax	pmax		
	comp=Z,45nm,1.1s						
RDOG	Red Dog Mine	83.35	11	eP	P	08 53 52.6	+0.7
	comp=Z,22nm,0.8s						
O02D	Mt. Diablo Mer	83.46	47	P	P	08 53 53.9	+0.7
	baz=248,SNR=7.2						
L02E	Cave Junction	83.67	44	P	P	08 53 55.0	+0.9
	baz=247						
MAW	Mawson	83.72	202	P	P	08 53 54.4	+0.5
	comp=Z,8.0nm,0.7s,baz=103,slow=5.9,SNR=16						
MAW	Mawson	83.72	202	eP	P	08 53 54.0	+0.1
	comp=Z,7.6nm,1.4s						
MAW	Mawson	83.72	202	eP	P	08 53 54.0	+0.1
MAW				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ZAK	Zakamensk	83.74	325	eP	P	08 53 53.9	-0.5
ZAK				pmax	pmax		
	comp=Z,19nm,1.3s						
PKM	Mcpherson Peak	83.76	52	P	P	08 53 55.5	+0.5
	baz=250						
SMMC	Simmler	83.76	52	P	P	08 53 55.4	+0.6
	baz=250						
WDC	Whiskeytown Da	83.79	46	eP	P	08 53 55.4	+0.7
	comp=Z,28nm,1.4s						
PAX	Paxson	83.82	20	eP	P	08 53 54.1	-0.4
	comp=Z,40nm,1.5s						
PAX	Paxson	83.82	20	eP	P	08 53 54.1	-0.4
PAX				pmax	pmax		
	comp=Z,40nm,1.5s						
N02D	Trinity Center	83.83	46	P	P	08 53 56.1	+1.0
	baz=248						
K02D	Willamette Mer	83.83	44	P	P	08 53 55.3	+0.3
	baz=247,SNR=5.2						
J01E	Myrtle Point	83.84	43	P	P	08 53 55.1	+0.2
	baz=246						
M02C	Callahan	83.88	45	P	P	08 53 56.3	+1.0
	baz=247						
IRK	Irkutsk	84.09	327	eP	P	08 53 55.8	-0.2
IRK				pmax	pmax		
	comp=Z,32nm,1.4s						
SCI2	San Clemente I	84.11	54	P	P	08 53 56.9	+0.3
	baz=251						
YBH	Yreka Blue Hor	84.11	45	eP	P	08 53 57.7	+1.3
	comp=Z,27nm,1.1s						
TLY	Talaya	84.16	326	P	P	08 53 56.9	+0.6
	comp=Z,4.3nm,0.7s,baz=179,slow=3.2,SNR=5.7						
TLY	Talaya	84.16	326	eP	P	08 53 56.6	+0.2
	comp=Z,22nm,1.0s						
TLY	Talaya	84.16	326	c iP	P	08 53 56.5	+0.2
O03E	Paynes Creek	84.21	47	P	P	08 53 56.8	-0.2
	baz=248,SNR=7.9						
HUMO	Hull Mountain	84.28	44	eP	P	08 53 58.2	+1.0
	comp=Z,16nm,0.9s						
HDA	Harding Lake	84.36	18	P	P	08 53 57.1	+0.1
	baz=225						
MDM	Murphy Dome	84.37	18	eP	P	08 53 56.1	-1.0
	comp=Z,35nm,1.0s						
TCOL	CIGO, UAF Yank	84.41	18	P	P	08 53 57.1	-0.2
	baz=224						
CMB	Columbia Colle	84.42	49	eP	P	08 53 58.0	0.0
	comp=Z,15nm,1.1s						
CMB	Columbia Colle	84.42	49	eP	P	08 53 58.0	0.0
CMB				pmax	pmax		
	comp=Z,15nm,1.1s						
COLA	College	84.42	18	eP	P	08 53 56.9	-0.4
	comp=Z,60nm,0.8s						
COLA	College	84.42	18	c iP	P	08 53 56.6	-0.7
COLA				pmax	pmax		
	comp=Z,79nm,1.0s						
FMP	Fort Macarthur	84.55	54	P	P	08 53 58.8	+0.1
	baz=251						
L04D	Klamath Falls	84.58	45	P	P	08 53 59.2	+0.3
	baz=248,SNR=6.0						
ARVC	Arvin	84.60	52	P	P	08 53 59.3	+0.4
	baz=250						
ILB	Eielson Array	84.63	18	eP	P	08 53 57.7	-0.7
	comp=Z,37nm,0.8s						
VES	Vestal, Richgr	84.64	52	P	P	08 53 59.2	+0.1
	baz=250,SNR=5.6						
POKR	Poker Plat Res	84.72	18	P	P	08 53 58.1	-0.7
	baz=224						
M04C	Macdoel	84.73	45	P	P	08 54 00.2	+0.5
	baz=248,SNR=8.0						
ISA	Isabella, Lake	85.05	52	eP	P	08 54 01.8	+0.5
	comp=Z,28nm,1.2s						
ISA	Isabella, Lake	85.05	52	eP	P	08 54 01.8	+0.5
ISA				pmax	pmax		
	comp=Z,28nm,1.2s						
ISA	Isabella, Lake	85.05	52	P	P	08 54 01.4	+0.2
	baz=251,SNR=10						
G03D	McMinnville, O	85.10	42	P	P	08 54 02.0	+0.8
	baz=247						
J04D	Umpqua Nationa	85.10	44	P	P	08 54 02.1	+0.6
	baz=248,SNR=7.4						
I04A	Tendick Farm,	85.11	43	P	P	08 54 01.5	+0.2
	baz=247						
K04D	Chiloquin, OR	85.11	45	P	P	08 54 01.9	+0.4
	baz=248						
EDW2	Edwards Air Fo	85.17	53	P	P	08 54 02.4	+0.5
	baz=251,SNR=16						
BFSC	Mount Baldy Ra	85.22	54	P	P	08 54 01.9	-0.3
	baz=251,SNR=10						
109C	Camp Elliot, M	85.23	55	P	P	08 54 02.0	-0.2
	baz=252						
MDPB	Devils Postpil	85.25	50	eP	P	08 54 02.9	+0.4
	comp=Z,21nm,1.0s						
HYT	Haines Junctio	85.33	24	eP	P	08 54 01.9	-0.2
	comp=Z,16nm,0.9s						
MURC	Murrieta	85.38	54	P	P	08 54 02.7	-0.2
	baz=252						
MLAC	Mammoth, Mammo	85.43	50	P	P	08 54 03.8	+0.5
	baz=250,SNR=5.9						
YERR	Yerington	85.59	49	eP	P	08 54 04.3	+0.3
	comp=Z,9.4nm,1.0s						
LRMC	Laurel Mtn Rad	85.60	52	P	P	08 54 04.1	+0.1
	baz=251,SNR=6.1						
CWC	Cottonwood Cre	85.61	51	P	P	08 54 04.3	+0.1
	baz=251						
TIN	Tinemaha, Big	85.69	51	P	P	08 54 05.0	+0.5
	baz=251						
J05D	Fort Rock, OR	85.71	44	P	P	08 54 05.3	+0.8
	baz=248,SNR=18						
MONP2	Monument Peak	85.78	55	P	P	08 54 05.4	+0.3
	baz=252,SNR=19						
BBRC	Big Bear Solar	85.81	54	P	P	08 54 05.2	-0.1
	baz=252						
DAC	Darwin (Calif)	85.92	52	eP	P	08 54 08.3	+2.6
	comp=Z,16nm,1.1s						
MPMC	Manual Prospec	85.93	52	P	P	08 54 06.4	+0.6
	baz=251,SNR=14						
RRX	Edison Barstow	85.94	53	P	P	08 54 05.9	+0.3
	baz=252						
IKP	In-Ko-Pah, Jac	85.96	55	P	P	08 54 06.5	+0.7
	baz=252,SNR=13						
PFO	Pinyon Flats O	85.97	54	eP	P	08 54 05.7	-0.3
	comp=Z,13nm,1.0s						
PFO	Pinyon Flats O	85.97	54	eP	P	08 54 05.7	-0.3
PFO				pmax	pmax		
	comp=Z,13nm,1.0s						
PFO	Pinyon Flats O	85.97	54	P	P	08 54 05.9	0.0
	baz=252,SNR=11						
I05D	Terrebonne, OR	86.03	43	P	P	08 54 06.2	+0.3
	baz=248						
E04D	Cinebar	86.07	41	P	P	08 54 06.7	+0.7
	baz=247						
NVAR	Mina Array Bea	86.09	49	P	P	08 54 06.7	+0.1
	comp=Z,7.2nm,0.8s,baz=232,slow=7.6,SNR=49						
NVAR				pP	pP	08 54 57.7	-2.0
	comp=Z,2.7nm,1.1s,baz=245,slow=8.4,SNR=1.8						
D03D	Eldon	86.13	40	P	P	08 54 06.9	+0.8
	baz=247						
D04E	Lakebay	86.18	40	P	P	08 54 06.4	0.0
	baz=247						
GSC	Goldstone, Bar	86.22	53	eP	P	08 54 07.0	-0.1
	comp=Z,14nm,1.1s						
GSC	Goldstone, Bar	86.22	53	eP	P	08 54 07.0	-0.1
GSC				pmax	pmax		
	comp=Z,14nm,1.1s						
GSC	Goldstone, Bar	86.22	53	P	P	08 54 07.4	+0.3
	baz=252,SNR=11						
SWSC	Sam W. Stewart	86.30	55	P	P	08 54 08.0	+0.6
	baz=252,SNR=14						
GRAC	Grapevine Rang	86.33	51	P	P	08 54 08.1	+0.6
	baz=251						
G05D	Wamic, OR	86.38	42	P	P	08 54 07.6	+0.1
	baz=248						
HEC	Hector,Ludlow	86.44	53	P	P	08 54 08.2	+0.1
	baz=252,SNR=6.5						
BELC	Belle Mtn. Jos	86.45	54	P	P	08 54 08.6	+0.3
	baz=252,SNR=25						
F05D	White Salmon	86.53	42	P	P	08 54 08.8	+0.6
	baz=248						
FURC	Furnace Creek,	86.54	52	P	P	08 54 08.9	+0.4
	baz=252,SNR=24						
LON	Longmire	86.63	41	eP	P	08 54 09.1	+0.3
	comp=Z,18nm,1.4s						
LON	Longmire	86.63	41	eP	P	08 54 09.1	+0.3
LON				pmax	pmax		
	comp=Z,18nm,1.4s						
TOLK	Toolik Lake Re	86.71	15	P	P	08 54 09.3	+0.7
	baz=222						
BC3	Big Chuckawall	86.78	55	P	P	08 54 10.5	+0.6
	baz=253,SNR=15						
SHOC	Shoshone, Teco	86.82	52	P	P	08 54 09.7	-0.1
	baz=252,SNR=14						
A04D	Lummi Island	86.83	39	P	P	08 54 10.2	+0.7
	baz=247						
TUQ	Turquoise Moun	86.95	53	P	P	08 54 10.9	+0.2
	baz=252,SNR=15						
GMRC	Granite Mounta	86.96	54	P	P	08 54 10.9	+0.2
	baz=252,SNR=18						
B05A	Bryant	87.03	39	P	P	08 54 11.0	+0.5
	baz=247						
GLA	Glamis	87.11	55	P	P	08 54 12.3	+1.0
	baz=253,SNR=12						
TPNV	Topopah Spring	87.16	51	P	P	08 54 12.1	+0.4
	baz=252,SNR=14						
IRM	Iron Mountain	87.18	54	P	P	08 54 12.4	+0.7
	baz=253,SNR=37						
WVOR	Wild Horse Val	87.19	46	eP	P	08 54 12.1	+0.4
	comp=Z,24nm,1.3s						
WVOR	Wild Horse Val	87.19	46	eP	P	08 54 12.1	+0.4
WVOR				pmax	pmax		
	comp=Z,24nm,1.3s						
BMN	Battle Mountai	87.54	48	eP	P	08 54 13.8	+0.5
	comp=Z,26nm,1.3s						
Y12C	Blythe	87.55	55	P	P	08 54 13.8	+0.4
	baz=253,SNR=6.6						
C06D	Leavenworth	87.64	40	P	P	08 54 13.6	+0.1
	baz=248						
NEE2	Needles Airpor	87.77	54	P	P	08 54 14.7	+0.3
	baz=253						
JIRN	Jiri	87.88	299	eP	P	08 54 15.6	+0.1
	comp=Z,89nm,1.1s						
TIXI	Tiksi	87.91	349	P	P	08 54 13.9	-0.2
	comp=Z,6.8nm,0.8s,baz=113,slow=6.2,SNR=13						
TIXI	Tiksi	87.91	349	eP	P	08 54 13.5	-0.7
	comp=Z,11nm,1.0s						
TIXI	Tiksi	87.91	349	c iP	P	08 54 13.6	-0.5
TIXI				pmax	pmax		
	comp=Z,19nm,1.4s						
PDMCI	Parker Dam,Lak	88.02	54	P	P	08 54 15.8	+0.2
	baz=253,SNR=18						
R11A	Troy Canyon, C	88.09	50	P	P	08 54 16.4	+0.3
	baz=252,SNR=27						
GUN	Gumba	88.21	299	eP	P	08 54 17.1	+0.1
	comp=Z,57nm,0.9s						
E08A	Dider Farm, El	88.30	42	eP	P	08 54 16.8	+0.2
	comp=Z,36nm,1.1s						
214A	Organ Pipe Nat	88.43	57	P	P	08 54 18.4	+0.8
	baz=254,SNR=24						
PKI	Pulchoki	88.52	299	eP	P	08 54 18.2	-0.3
	comp=Z,71nm,1.0s						
PKIN	Phulchoki	88.53	299	eP	P	08 54 18.2	-0.3
	comp=Z,48nm,0.9s						
KKN	Kakani	88.69	299	eP	P	08 54 19.2	+0.1
	comp=Z,53nm,0.9s						
DMN	Daman	88.79	298	eP	P	08 54 19.6	-0.1
	comp=Z,86nm,0.8s						
EPYK	Eagle Plains	88.89	20	P	P	08 54 18.5	-0.4
	baz=234						
E09A	Wood Farm, Sta	88.90	42	eP	P	08 54 19.9	+0.5
	comp=Z,19nm,1.0s						
GKN	Gorkha	89.29	299	eP	P	08 54 21.4	-0.5
	comp=Z,71nm,0.9s						
F10A	Beach Ranch, E	89.32	43	eP	P	08 54 21.6	+0.1
	comp=Z,27nm,0.9s						
SZCU	Shurtz Canyon	89.76	51	eP	P	08 54 24.7	+0.7
	comp=Z,18nm,1.0s						
KOLN	Koldanda	90.12	298	eP	P	08 54 25.1	-0.7
	comp=Z,47nm,1.1s						
NEW	Newport	90.13	40	P	P	08 54 25.4	+0.2
	baz=251						
TUC	Tucson	90.18	57	eP	P	08 54 26.9	+1.0
	comp=Z,19nm,0.9s						
TUC	Tucson	90.18	57	eP	P	08 54 26.9	+1.0
TUC				pmax	pmax		
	comp=Z,19nm,0.9s						
TUC	Tucson	90.18	57	P	P	08 54 26.9	+1.0
	baz=255						
HLID	Hailey	90.49	45	P	P	08 54 28.1	+0.9
	baz=253						
WUAZ	Wupatki	90.53	54	P	P	08 54 28.5	+1.0
	baz=255						
SYO	Syowa Base	90.62	197	⇓eP	P	08 54 25.6	-1.4
DUG	Dugway, Tooele	90.68	49	eP	P	08 54 28.4	+0.3
	comp=Z,18nm,1.4s						
DUG	Dugway, Tooele	90.68	49	eP	P	08 54 28.4	+0.3
DUG				pmax	pmax		
	comp=Z,18nm,1.4s						
DUG	Dugway, Tooele	90.68	49	P	P	08 54 28.6	+0.5
	baz=254						
PYUN	Piuthan	90.73	299	eP	P	08 54 27.9	-0.7
WMQ	Urumqi	91.12	315	eP	P	08 54 30.9	+1.0
WMQ				pmax	pmax		
	comp=Z,29nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,71nm,4.7s						
X18A	Snowflake	91.42	55	eP	P	08 54 31.8	+0.1
	comp=Z,18nm,0.9s						
W18A	Petrified Fore	91.73	55	eP	P	08 54 33.5	+0.4
	comp=Z,24nm,1.0s						
W18A	Petrified Fore	91.73	55	P	P	08 54 33.8	+0.7
	baz=256						
MSO	Missoula	91.75	42	P	P	08 54 32.1	-0.7
	baz=253						
P17A	Butcher Ranch,	92.03	50	eP	P	08 54 34.6	+0.2
	comp=Z,3.3nm,0.9s						
121A	Cookes Peak, D	92.70	57	P	P	08 54 38.2	+0.6
	baz=257						
FXWY	Fox Creek	92.88	46	eP	P	08 54 38.5	+0.2
	comp=Z,4.0nm,1.1s						
DGZ	Jazzator, Alta	92.94	320	c iP	P	08 54 38.0	-0.3
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BOZ	Bozeman (W)	92.96	44	P	P	08 54 39.2	+0.7
	baz=255						
IMW	Indian Meadow	93.00	46	eP	P	08 54 39.1	+0.2
	comp=Z,6.0nm,1.1s						
LOHW	Long Hollow	93.17	46	eP	P	08 54 39.6	0.0
	comp=Z,8.1nm,1.4s						
MVCO	Mesa Verde	93.20	53	P	P	08 54 40.0	+0.1
	baz=257						
BW06	Boulder Array	93.70	47	P	P	08 54 41.5	-0.6
	baz=256						
PDAR	Pinedale Array	93.71	47	P	P	08 54 41.4	-0.7
	comp=Z,1.1nm,0.8s,baz=215,slow=2.9,SNR=9.2						
PDAR				PKKPbc	PKKPdf	09 11 45.1	-0.9
	comp=Z,0.5nm,0.7s,baz=76,slow=6.3,SNR=5.7						
LENM	Lemitar	93.72	56	eP	P	08 54 42.6	+0.3
O20A	White River Ci	94.06	50	P	P	08 54 43.7	0.0
	baz=257						
ANMO	Albuquerque	94.31	55	eP	P	08 54 44.6	-0.4
	comp=Z,6.4nm,0.9s						
ANMO	Albuquerque	94.31	55	⇑eP	P	08 54 44.7	-0.3
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	94.31	55	P	P	08 54 45.1	+0.1
	baz=258						
RLMT	Red Lodge	94.46	45	P	P	08 54 46.2	+0.7
	baz=257						
MNTX	Cornudas Mount	94.51	59	P	P	08 54 45.7	-0.1
	baz=258						
S22A	4UR Ranch, Cre	94.61	53	P	P	08 54 46.9	+0.5
	baz=258						
EGMT	Eagleton	94.81	42	P	P	08 54 47.1	+0.3
	baz=256						
MK31	Makanchi Array	95.56	317	eP	P	08 54 50.1	-0.1
	comp=Z,17nm,1.1s						
MKAR	Makanchi Array	95.56	317	P	P	08 54 50.2	0.0
	comp=Z,14nm,1.0s,baz=99,slow=6.5,SNR=31						
MKAR				pP	pP	08 55 40.2	-3.7
	comp=Z,2.3nm,0.8s,baz=111,slow=6.3,SNR=3.1						
MKAR				PKKPbc	PKKPbc	09 11 38.7	-3.6
	comp=Z,1.9nm,0.9s,baz=270,slow=3.6,SNR=11						
MKAR	Makanchi Array	95.56	317	i P	P	08 54 50.7	+0.5
MKAR				pmax	pmax		
	comp=Z,14nm,1.0s						
SNAA	Sanae	95.60	183	P	P	08 54 49.5	-0.5
SNAA	Sanae	95.60	183	eP	P	08 54 49.1	-0.9
	comp=Z,16nm,1.1s						
SNAA	Sanae	95.60	183	c iP	P	08 54 49.4	-0.6
ZALV	Zalesovo Beam	95.60	324	P	P	08 54 49.4	-0.7
	comp=Z,5.8nm,0.8s,baz=114,slow=3.9,SNR=13						
ZALV	Zalesovo Beam	95.60	324	i P	P	08 54 49.5	-0.7
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SDCO	Great Sand Dun	95.64	53	P	P	08 54 50.9	-0.2
	baz=258						
MAKZ	Makanchi	95.77	317	eP	P	08 54 51.1	0.0
	comp=Z,24nm,1.2s						
MAKZ	Makanchi	95.77	317	eP	P	08 54 51.2	0.0
MAKZ				pmax	pmax		
	comp=Z,24nm,1.2s						
YKA	Yellowknife Ar	95.81	27	P	P	08 54 49.7	-1.2
	comp=Z,3.8nm,0.7s,baz=260,slow=4.4,SNR=5.5						
K22A	Casper	95.86	48	P	P	08 54 52.2	+0.3
	baz=258						
N23A	Red Feather La	95.93	50	P	P	08 54 52.6	+0.3
	baz=258						
ISCO	Idaho Springs	95.97	51	P	P	08 54 52.9	+0.3
	baz=259						
Q24A	Divide	96.15	52	P	P	08 54 53.4	0.0
	baz=259						
VNA3	Neumayer Olymp	96.27	181	P	P	08 54 52.4	-0.6
VNA2	Neumayer--Watz	96.53	182	P	P	08 54 53.6	-0.6
	baz=190,slow=4.3						
VNA1	Neumayer--Stat	96.83	182	P	P	08 54 55.0	-0.4
MSTX	Muleshoe	97.10	57	eP	P	08 54 56.6	-1.0
	comp=Z,5.8nm,0.8s						
MSTX	Muleshoe	97.10	57	P	P	08 54 57.0	-0.6
	baz=260						
AMTX	Amarillo	98.15	56	P	P	08 55 01.6	-0.6
	baz=260						
KURK	Kurchatov	98.68	320	⇓eP	Pdif	08 55 01.4	-2.7
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURBB	Kurchatov Arra	98.72	320	P	Pdif	08 55 03.2	-1.1
	comp=Z,1.1nm,0.7s,baz=94,slow=3.9,SNR=5.0						
JCT	Junction City	98.99	61	P	Pdif	08 55 05.1	-1.0
	baz=261						
ABTX	Abilene, Hawle	99.46	59	P	Pdif	08 55 07.1	-1.0
	baz=261						

AAK	Ala-Archa	100.31	311⇑	*e*P	Pdif	08 55 11.1	-0.7
WMOK	Wichita Mounta	100.49	57	P	Pdif	08 55 12.5	-0.1
	baz=262						
FFC	Flin Flon	100.78	36	*i* P	Pdif	08 55 14.1	+0.8
BVAR	Borovoye Array	103.99	322	Pdiff	Pdif	08 55 27.1	-0.6
	comp=Z,0.5nm,0.4s,baz=64,slow=3.4,SNR=4.6						
ARU	Arti	110.66	326⇑	*i*PKIKP	PKiKP	08 59 54.6	-1.6
AKTO	Aktyubinsk	111.77	319	PKKPbc	PKKPbc	09 10 52.2	-1.9
	comp=Z,1.8nm,0.8s,baz=225,slow=3.1,SNR=6.5						
ARCES	ARCESS Array B	118.20	346	PKP	PKPdf	09 00 09.8	-0.5
	comp=Z,10nm,0.7s,baz=100,slow=1.8,SNR=28						
ARCES				PKKPbc	PKKPbc	09 10 29.2	-3.4
	comp=Z,3.1nm,0.7s,baz=240,slow=1.8,SNR=6.7						
LPAZ	La Paz	118.33	116	PKP	PKPdf	09 00 12.8	-0.1
	comp=Z,1.9nm,0.5s,baz=288,slow=1.1,SNR=12						
LPAZ	La Paz	118.33	116	*e*PKPdf	PKPdf	09 00 12.0	-0.9
LPAZ	La Paz	118.33	116	*e*PKIKP	PKPdf	09 00 12.0	-0.9
CPUP	Villa Florida	122.01	132	PKP	PKPdf	09 00 18.3	-0.6
	comp=Z,4.2nm,0.9s,baz=70,slow=0.9,SNR=6.0						
CPUP	Villa Florida	122.01	132	*e*PKPdf	PKPdf	09 00 18.0	-1.0
CPUP	Villa Florida	122.01	132	*e*PKIKP	PKPdf	09 00 18.0	-1.0
OBN	Obninsk	122.83	329	*i* PKIKP	PKPdf	09 00 18.8	-0.8
OBN				*e*		09 01 19.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSR	Storozhevoye	123.10	324	*e*PKIKP	PKPdf	09 00 19.9	-0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIV	Kislovodsk	123.26	315	*e*PKIKP	PKiKP	09 00 21.7	+0.5
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
NEY	Neytrino	123.42	314⇓	*i*PKIKP	PKiKP	09 00 21.6	0.0
RAYN	Ar Rayn	123.71	290	*e*PKPdf	PKiKP	09 00 22.8	+0.2
RAYN	Ar Rayn	123.71	290	*e*PKIKP	PKiKP	09 00 22.8	+0.2
FINES	FINESS Array B	123.72	339	PKP	PKPdf	09 00 20.9	-0.2
	comp=Z,5.4nm,0.8s,baz=114,slow=4.8,SNR=14						
FINES				PKKPbc	PKKPab	09 10 09.3	+0.6
	comp=Z,2.5nm,0.8s,baz=208,slow=5.7,SNR=5.7						
SIV	San Ignacio	124.55	120	PKP	PKPdf	09 00 22.9	-1.2
	comp=Z,4.1nm,0.7s,baz=200,slow=0.8,SNR=8.8						
BOSA	Boshof	124.79	221	PKP	PKPdf	09 00 24.6	+0.2
	comp=Z,7.3nm,0.7s,baz=103,slow=2.7,SNR=14						
BOSA				PKKPbc	PKKPbc	09 10 05.2	-1.7
	comp=Z,2.5nm,1.1s,baz=352,slow=2.0,SNR=3.9						
BOSA	Boshof	124.79	221	*e*PKPdf	PKPdf	09 00 24.0	-0.4
BOSA	Boshof	124.79	221	*e*PKIKP	PKPdf	09 00 24.0	-0.4
VSU	Vasula	125.45	336⇑	*i*PKIKP	PKiKP	09 00 24.9	0.0
LBTB	Lobatse	126.94	225	*e*PKPdf	PKPdf	09 00 28.4	-0.2
LBTB	Lobatse	126.94	225	*e*PKIKP	PKPdf	09 00 28.4	-0.2
NB2	NORSAR Subarra	128.57	345	PKPdf	PKPdf	09 00 30.1	-0.4
	comp=Z,6.3nm,1.1s,baz=31,slow=1.9						
NB2	NORSAR Subarra	128.57	345	PKPdf	PKPdf	09 00 30.1	-0.4
	baz=31,slow=1.9						
NOA	NORSAR Array B	128.57	345	PKP	PKPdf	09 00 30.0	-0.4
	comp=Z,3.4nm,0.8s,baz=31,slow=2.0,SNR=15						
NC602	NORSAR Array S	128.75	345	*e*PKPdf	PKPdf	09 00 29.9	-0.9
AKASG	Malin Array Be	128.90	327	PKP	PKPdf	09 00 31.7	+0.4
	comp=Z,0.9nm,0.6s,baz=50,slow=2.4,SNR=10						
PTGA	Pitinga	131.51	102	PKP	PKPdf	09 00 37.4	-0.1
	comp=Z,3.6nm,0.6s,baz=204,slow=5.2,SNR=7.5						
LVV	L'vov	132.13	328	*e*PKIKP	PKPdf	09 00 35.5	-2.0
BUR08	Bucovina Ar. S	132.79	325	*e*PKPdf	PKiKP	09 00 40.2	+0.1
BDFB	Brasilia	135.35	128	PKP	PKPdf	09 00 44.0	-0.7
	comp=Z,6.7nm,0.8s,baz=188,slow=6.6,SNR=7.5						
BRG	Berggiesshubel	136.05	336	*e*PKP	PKiKP	09 00 47.3	+0.8
	comp=Z,5.7nm,1.1s						
BRG	Berggiesshubel	136.05	336	*e*PKIKP	PKiKP	09 00 47.3	+0.8
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	Collm	136.08	337	*e*PKIKP	PKPdf	09 00 44.0	-0.9
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL	Collm	136.08	337	*e*PKPdf	PKPdf	09 00 44.0	-0.9
	comp=Z,5.0nm,0.7s						
GEC2	GERESS Array S	137.70	334	*e*PKPdf	PKPdf	09 00 48.3	+0.2
GEC2	GERESS Array S	137.70	334	*e*PKIKP	PKPdf	09 00 48.3	+0.2
GERES	GERESS Array B	137.70	334	PKP	PKPdf	09 00 48.4	+0.3
	comp=Z,1.2nm,0.6s,baz=69,slow=7.4,SNR=9.3						
DSB	Dublin	139.17	354	*e*PKPdf	PKPdf	09 00 50.3	-0.2
FUORN	Ofenpass-Fuorn	140.89	334	*e*PKPpre	PKPpre	09 00 48.7	
TUE	Stuetta	141.39	335	*e*PKPpre	PKPpre	09 00 50.1	
SENIN	Lac Senin/Sane	142.29	337	*e*PKPpre	PKPpre	09 00 52.9	
TIP	Timpagrande	142.73	320	*e*PKPdf	PKPdf	09 00 54.9	-2.6
BNI	Bardonecchia	143.62	336	*e*PKPdf	PKPbc	09 00 57.6	+0.6
BNI	Bardonecchia	143.62	336	*e*PKIKP	PKPbc	09 00 57.6	+0.6
SSB	Saint Sauveur	144.23	339	*e*PKPdf	PKPbc	09 00 59.3	+0.6
SSB	Saint Sauveur	144.23	339	*e*PKIKP	PKPbc	09 00 59.3	+0.7
CLTB	Caltabellotta	145.91	321	*e*PKPdf	PKPdf	09 01 03.6	+0.6
KEST	Kesra	149.46	323	PKPbc	PKPbc	09 01 14.2	+0.5
	comp=Z,25nm,1.0s,baz=273,slow=1.4,SNR=4.7						
KEST	Kesra	149.46	323	*e*PKPbc	PKiKP	09 01 14.3	-0.3
PBRG	Braganca	150.46	351	*e*PKPbc	PKPbc	09 01 16.2	+0.4
PBRG	Braganca	150.46	351	*e*PKPab	PKPab	09 01 23.9	+0.9
PGAV	Gavieira, Arco	150.51	353	*e*PKPbc	PKPbc	09 01 16.4	+0.4
ROSA	Rosais	150.70	25	*e*PKPbc	PKiKP	09 01 16.9	-0.1
PCAB	Cabril	150.74	352	*e*PKPbc	PKiKP	09 01 17.0	0.0
POLO	Lamas de Olo	151.03	352	*e*PKPbc	PKiKP	09 01 17.7	0.0
PVRL	Vila Real	151.12	352	*e*PKPbc	PKiKP	09 01 18.1	+0.3
MVO	Moncorvo	151.13	351	*e*PKPbc	PKiKP	09 01 17.9	0.0
PTO	Porto	151.37	353	*e*PKPbc	PKiKP	09 01 18.8	+0.5
PVIS	Viseu	151.69	352	*e*PKPbc	PKiKP	09 01 19.2	+0.1
PVIS	Viseu	151.69	352	*e*PKPab	PKPab	09 01 28.8	+0.6
ESDC	Sonseca Array	151.94	345	PKPbc	PKiKP	09 01 19.6	0.0
	comp=Z,7.7nm,0.8s,baz=11,slow=2.6,SNR=28						
ESDC				PKPab	PKPab	09 01 30.3	+1.1
	comp=Z,11nm,0.8s,baz=12,slow=4.2,SNR=12						
ESLA	Sonseca Array	151.94	345	*e*PKPbc	PKiKP	09 01 19.6	0.0
ESLA				*e*PKPab	PKPab	09 01 30.7	+1.5
MTE	Manteigas	151.96	351	*e*PKPbc	PKiKP	09 01 19.7	+0.1
MTE	Manteigas	151.96	351	*e*PKPbc	PKiKP	09 01 19.8	+0.1
MTE				*e*PKPab	PKPab	09 01 30.3	+1.0
PAB	San Pablo	152.15	346	*e*PKPbc	PKPbc	09 01 19.9	+0.1
PAB				*e*PKPab	PKPab	09 01 30.6	+0.4
COI	Coimbra	152.26	353	*e*PKPbc	PKPbc	09 01 19.1	-0.8
COI				*e*PKPab	PKPab	09 01 31.9	+1.5
COI	Coimbra	152.26	353	*e*PKIKP	PKPbc	09 01 19.1	-0.8
PCBR	Castelo Branco	152.49	351	*e*PKPbc	PKPbc	09 01 20.6	+0.2
PCBR	Castelo Branco	152.49	351	*e*PKPab	PKPab	09 01 32.2	+0.7
PTOM	Tomar	152.84	352	*e*PKPbc	PKiKP	09 01 22.0	+0.6
PTOM	Tomar	152.84	352	*e*PKPab	PKPab	09 01 34.1	+1.1
PMRV	Marv??o	152.88	351	*e*PKPbc	PKiKP	09 01 21.6	+0.1
PMRV	Marv??o	152.88	351	*e*PKPab	PKPab	09 01 34.1	+0.9
PMTG	Montargil	153.36	352	*e*PKPbc	PKPbc	09 01 22.3	-0.1
PMTG	Montargil	153.36	352	*e*PKPab	PKPab	09 01 36.0	+0.8
PBEJ	Beja	154.33	351	*e*PKPab	PKPab	09 01 41.7	+2.4
PNCL	Nicolau / Gran	154.34	352	*e*PKPab	PKPab	09 01 40.7	+1.4
PCVE	Castro Verde	154.74	351	*e*PKPab	PKPab	09 01 42.1	+1.0
PVAQ	Vaqueiros	154.91	350	*e*PKPab	PKPab	09 01 43.6	+1.8
MORF	Marmelete	155.15	352	*e*PKPab	PKPab	09 01 44.4	+1.5
TOA0	Torodi Ar. Sit	165.71	274	*e*PKPdf	PKPdf	09 01 28.4	-0.9
TORD	Torodi Ar. Bea	165.71	274	PKP	PKPdf	09 01 28.5	-0.8
	comp=Z,4.2nm,0.9s,baz=27,slow=1.9,SNR=17						
TORD				PKPab	PKPab	09 02 29.7	-0.1
	comp=Z,6.0nm,1.0s,baz=74,slow=4.2,SNR=12						

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*ISCJB **12** 08:57:30.4±0.6, 34°.73N±0°.02×34°.41E±0°.04, h1*^{km}*±4*^{km}*,*
Error ellipse: s-maj=6.0km s-min=2.7km az=147.7
*NIC **12** 08:57:31.3±0.2, 34°.82N×34°.43E, h5*^{km}*, ML3.0*
*GII **12** 08:57:35.1±0.4, 34°.79N×34°.31E, h31*^{km}*±2*^{km}*, MD2.8/4*
*DDA **12** 08:57:36.6, 35°.03N×34°.02E, h20*^{km}*±3*^{km}*, ML3.4*
*ISK **12** 08:57:38.8, 35°.18N×33°.90E, h12*^{km}*, ML3.2/21*
*NSSC **12** 08:57:42.5±1.4, 34°.64N×35°.43E, h18*^{km}*±12*^{km}*, ML2.3*
ISC 12 08:57:31.1±1.3, **34°.73N**±0°.03×**34°.39E**±0°.04, **h4**^{km}±10^{km},
n62, σ1^{s}**43**/87, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHNC	Paralimni	0.40	313	P	Pg	08 57 39.1	+0.3
	baz=119						
PHNC				S	Sg	08 57 45.4	+1.4
MVOU	Mavrovouni	0.68	295	P	Pg	08 57 44.3	+0.1
	baz=106						
MVOU				S	Sb	08 57 55.0	-0.3
AKIN	Akıncılar- Kıb	0.81	291	PG	Pg	08 57 47.2	+0.6
AKIN				SG	Sg	08 57 53.2	-3.9
EREN	Erenkoy	0.81	347	PG	Pg	08 57 47.6	+0.9
EREN	Erenkoy	0.81	347	*i* P	Pb	08 57 48.4	+0.6
EREN				*i* S	Sn	08 58 04.5	+2.8
EREN				IAML_P			
	comp=Z,11μm,0.2s						
CSS	Mathiatis	0.90	285	PG	Pg	08 57 49.1	+0.8
CSS				SG	Sg	08 57 57.2	-2.8
CSS	Mathiatis	0.90	285	P	Pg	08 57 48.9	+0.6
	baz=98						
CSS				S	Sb	08 58 01.6	+0.1
CSS	Mathiatis	0.90	285	Pg	Pg	08 57 48.8	+0.5
CSS	Mathiatis	0.90	285	P	Pg	08 57 49.1	+0.8
SZAC	Souni	1.24	271	P	Pn	08 57 54.8	-0.4
	baz=86						
SZAC				S	Sn	08 58 12.9	+0.6
LEF	Lefka	1.29	288	PG	Pn	08 57 55.9	+0.1
LEF	Lefka	1.29	288	*i* P	Pn	08 57 56.1	+0.3
LEF				*i* S	Sn	08 58 14.7	+1.2
AKDN	Akdeniz- Kıbrı	1.29	296	PG	Pn	08 57 54.3	-1.6
TISA	Tisan-Mersin	1.54	338	PG	Pn	08 57 58.4	-0.8
AKK2	Akkuyu-Mersin	1.56	334	PG	Pn	08 57 58.4	-1.1
AKK1	Akkuyu-Mersin	1.57	334	PG	Pn	08 57 58.6	-1.0
KARG	Kargicak-Mersi	1.57	340	PG	Pn	08 57 59.1	-0.6
AKKU	Akkuyu-Mersin	1.58	335	PG	Pn	08 57 58.8	-1.0
YESI	Yesilovacik-Me	1.58	338	PG	Pn	08 57 58.9	-0.9
GULN	MERSIN_Gulnar	1.60	335	*i* P	Pn	08 57 59.5	-0.7
GULN				*i* S	Sn	08 58 21.0	-0.3
GULN				IAML_P			
	comp=Z,2μm,0.2s						
IKL	Isikli	1.61	339	PG	Pn	08 57 59.8	-0.4
YORU	Yoruktepe-Mers	1.63	331	PG	Pn	08 57 59.5	-1.0
TEPE	Tepekoy-Mersin	1.63	336	PG	Pn	08 57 59.9	-0.6
OREN	Orenkoy-Mersin	1.66	333	PN	Pn	08 58 00.1	-0.7
SILI	Silifke-Mersin	1.67	347	PN	Pn	08 58 01.1	0.0
PPCY	Paphos	1.69	276	P	Pn	08 58 01.6	+0.3
	baz=91						
SLFK	Silifke-Mersin	1.69	348	PN	Pn	08 58 01.7	+0.3
TEKE	Tekeli-Mersin	1.75	324	PN	Pn	08 58 01.3	-0.8
HNTI	Hanita	1.77	158	Pn	Pn	08 58 03.0	+0.6
HNTI				Sn	Sn	08 58 25.2	-0.2
KEBE	Keben-Mersin	1.80	342	PN	Pn	08 58 02.9	0.0
NATI	Neve Ativ	1.85	142	Pn	Pn	08 58 04.2	+0.8
NATI				Sn	Sn	08 58 27.2	0.0
BRBR	Barbar	1.85	135	*e*P	Pn	08 58 04.8	+1.1
BRBR				*e*S	Sn	08 58 22.8	-4.8
BRBR				AML	AML	08 58 33.0	
	comp=N,53nm,0.6s						
BRBR				AML	AML	08 58 36.1	
	comp=E,30nm,0.5s						
GEM	Giv'at Ha'Em	1.85	145	Pn	Pn	08 58 03.8	+0.3
TEVE	Tevekalti-Mers	1.86	336	PN	Pn	08 58 03.6	-0.2
KSDI	Kefar Szold	1.87	145	Pn	Pn	08 58 04.3	+0.6
KSDI				Sn	Sn	08 58 27.3	-0.4
BERE	Bereket-Mersin	1.87	330	PN	Pn	08 58 03.2	-0.7
MMA0B	Mount Meron ar	1.91	153	Pn	Pn	08 58 04.9	+0.5
MMA0B				Sn	Sn	08 58 28.8	-0.1
QASN	Qassioun	1.97	127	*e*P	Pn	08 58 07.0	+1.7
QASN				*e*S	Sn	08 58 22.0	-8.5
QASN				AML	AML	08 58 24.4	
	comp=N,156nm,0.3s						
QASN				AML	AML	08 58 33.9	
	comp=E,165nm,0.5s						
KSHT	Keshet	2.11	145	Pn	Pn	08 58 08.3	+1.1
OFRI	\`Ofer	2.17	167	Pn	Pn	08 58 08.3	+0.4
OFRI				Sn	Sn	08 58 33.8	-1.3
TOTH	TOTAH	2.18	128	*e*P	Pn	08 58 09.5	+1.4
TOTH				*e*S	Sn	08 58 28.1	-7.4
TOTH				AML	AML	08 58 39.5	
	comp=N,56nm,0.4s						
TOTH				AML	AML	08 58 39.5	
	comp=E,55nm,0.8s						
ERMK	Ermenek	2.25	328	*i* P	Pn	08 58 10.1	+0.9
ERMK				*i* S	Sn	08 58 38.5	+1.0
ERMK				IAML_P			
	comp=Z,2μm,0.2s						
GAZI	Gazipasa	2.26	312	PN	Pn	08 58 08.6	-0.6
GAZI	Gazipasa	2.26	312	*i* P	Pn	08 58 09.4	+0.2
GAZI				*i* S	Sn	08 58 37.0	-0.5
GAZI				IAML_P			
	comp=Z,1μm,0.2s						
MMLI	Mount Malkishu	2.45	159	P	Pn	08 58 12.6	+0.8
	baz=340						
MMLI	Mount Malkishu	2.45	159	Pn	Pn	08 58 12.5	+0.8
MMLI				Sn	Sn	08 58 42.3	+0.2
SLTI	Sal'it	2.54	167	Pn	Pn	08 58 13.5	+0.4
SLTI				Sn	Sn	08 58 44.2	-0.3
HMDT	Nahal Hemdat	2.65	159	Pn	Pn	08 58 15.6	+1.1
HMDT				Sn	Sn	08 58 47.3	+0.2
KERG	Konya-Eregli	2.68	356	*i* P	Pn	08 58 16.1	+0.9
KERG				*i* S	Sb	08 58 51.9	-1.2
KERG				IAML_P			
	comp=Z,534nm,0.2s						
KEPZ	Antalya-Kepez	3.13	315	*i* P	Pn	08 58 22.7	+1.5
AMAZ	Amatzia	3.22	172	Pn	Pn	08 58 23.3	+0.9
AMAZ				Sn	Sn	08 59 01.2	0.0
DSI	Dead Sea	3.26	165	Pn	Pn	08 58 23.8	+0.9
ASF	Jabal al Asfar	3.31	140	P	Pn	08 58 25.9	+2.3
WALJ	Wala	3.38	159	P	Pn	08 58 26.2	+1.6
YTIR	Yattir	3.42	169	Pn	Pn	08 58 26.1	+1.0
YTIR				Sn	Sn	08 59 06.2	+0.1
MZDA	Masada	3.51	166	Pn	Pn	08 58 27.7	+1.4
LISJ	El Lisan	3.60	165	P	Pn	08 58 29.7	+2.1
PRNI	Paran	4.40	173	Pn	Pn	08 58 39.6	+1.0
KRMI	Paran Flat	4.61	176	Pn	Pn	08 58 42.4	+0.9
HRFI	Mount Harif	4.71	173	Pn	Pn	08 58 43.7	+0.7
MBRI	Mt Berech	4.95	175	Pn	Pn	08 58 47.2	+1.0
MBRI				Sn	Sn	08 59 44.3	+0.5
EIL	Elat	5.07	174	Pn	Pn	08 58 48.9	+1.1

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*NIC **12** 08:58:38.5±0.3, 34°.83N×34°.62E, h17*^{km}*, ML3.3*
*DDA **12** 08:58:40.1, 34°.89N×34°.37E, h9*^{km}*±3*^{km}*, ML3.4*
*ISK **12** 08:58:42.4, 34°.72N×34°.24E, h25*^{km}*, ML3.5/20*
*ISCJB **12** 08:58:42.8±0.5, 34°.73N±0°.02×34°.33E±0°.04, h29*^{km}*±5*^{km}*,*
Error ellipse: s-maj=6.6km s-min=2.7km az=152.1
*GII **12** 08:58:45.8±0.9, 34°.53N×34°.46E, h10*^{km}*, MD2.5/4*
*NSSC **12** 08:58:47.9±0.7, 34°.62N×34°.84E, h14*^{km}*±999*^{km}*, ML2.6*
ISC 12 08:58:41.6±1.3, **34°.73N**±0°.03×**34°.35E**±0°.03, **h14**^{km}±10^{km},
n54, σ1^{s}**23**/78, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHNC	Paralimni	0.38	317	P	Pg	08 58 48.6	-0.7
	baz=109						
PHNC				S	Sb	08 58 56.3	+0.4
MVOU	Mavrovouni	0.66	297	P	Pb	08 58 54.5	-0.3
	baz=102						
MVOU				S	Sn	08 59 07.0	+0.4
AKIN	Akıncılar- Kıb	0.78	292	PG	Pb	08 58 56.9	-0.1
AKIN				SG	Sb	08 59 07.5	+0.1
EREN	Erenkoy	0.82	350	PG	Pn	08 58 58.7	0.0
EREN	Erenkoy	0.82	350	*i* P	Pg	08 58 58.1	+0.6
EREN				*i* S	Sn	08 59 15.6	+5.0
EREN				IAML_P			
	comp=Z,9μm,0.2s						
CSS	Mathiatis	0.87	286	PG	Pb	08 58 58.3	-0.2
CSS				SG	Sb	08 59 09.7	-0.3
CSS	Mathiatis	0.87	286	P	Pb	08 58 57.5	-1.0
	baz=96						
CSS				S	Sn	08 59 12.2	+0.3
SZAC	Souni	1.21	272	P	Pn	08 59 03.0	-1.1
	baz=86						
LEF	Lefka	1.26	289	PN	Pn	08 59 04.4	-0.4
LEF				SN	Sb	08 59 20.3	-0.9
LEF	Lefka	1.26	289	*i* P	Pn	08 59 04.3	-0.4
LEF				*i* S	Sg	08 59 23.1	+0.8
LEF				IAML_P			
	comp=Z,2μm,0.3s						
HWQ	Hawqa	1.40	108	*e*P	Pn	08 59 06.8	0.0
TISA	Tisan-Mersin	1.53	339	PN	Pn	08 59 07.7	-0.9
AKK2	Akkuyu-Mersin	1.55	335	PN	Pn	08 59 08.8	0.0
AKK1	Akkuyu-Mersin	1.56	335	PN	Pn	08 59 08.8	-0.1
KARG	Kargicak-Mersi	1.56	341	PN	Pn	08 59 08.9	-0.1
AKKU	Akkuyu-Mersin	1.57	336	PN	Pn	08 59 08.9	-0.2
YESI	Yesilovacik-Me	1.58	339	PN	Pn	08 59 08.4	-0.7
GULN	MERSIN_Gulnar	1.60	336	*i* P	Pn	08 59 08.2	-1.2
GULN				*i* S	Sn	08 59 28.5	-1.3
GULN				IAML_P			
	comp=Z,2μm,0.3s						
IKL	Isikli	1.60	341	PN	Pn	08 59 09.2	-0.3
YORU	Yoruktepe-Mers	1.62	332	PN	Pn	08 59 09.6	-0.2
TEPE	Tepekoy-Mersin	1.62	337	PN	Pn	08 59 09.8	0.0
OREN	Orenkoy-Mersin	1.65	334	PN	Pn	08 59 10.0	-0.1
PPCY	Paphos	1.65	276	P	Pn	08 59 09.3	-0.9
	baz=91						
SILI	Silifke-Mersin	1.67	348	PN	Pn	08 59 10.9	+0.4
SLFK	Silifke-Mersin	1.70	349	PN	Pn	08 59 10.8	0.0
TEKE	Tekeli-Mersin	1.74	325	PN	Pn	08 59 11.1	-0.2
RCY	Rachaya	1.74	134	*e*P	Pn	08 59 10.8	-0.7
HNTI	Hanita	1.78	157	Pn	Pn	08 59 13.2	+1.3
HNTI				Sn	Sn	08 59 33.7	-0.6
KEBE	Keben-Mersin	1.79	343	PN	Pn	08 59 12.4	+0.2
TEVE	Tevekalti-Mers	1.86	337	PN	Pn	08 59 13.2	+0.1
BERE	Bereket-Mersin	1.86	331	PN	Pn	08 59 12.9	-0.3
NATI	Neve Ativ	1.86	141	Pn	Pb	08 59 14.8	-0.6
NATI				Sn	Sn	08 59 35.8	-0.5
GEM	Giv'at Ha'Em	1.86	144	Pn	Pn	08 59 13.8	+0.7
GEM				Sn	Sn	08 59 36.5	0.0
BRBR	Barbar	1.87	134	*e*P	Pn	08 59 14.7	+1.3
BRBR				*e*S	Sn	08 59 34.3	-2.5
BRBR				AML	AML	08 59 41.7	
	comp=N,78nm,0.6s						
BRBR				AML	AML	08 59 42.4	
	comp=E,36nm,0.4s						
MMA0B	Mount Meron ar	1.92	152	Pn	Pn	08 59 15.7	+1.8
MMA0B				Sn	Sn	08 59 37.4	-0.5
QASN	Qassioun	1.99	126	*e*P	Pb	08 59 16.9	-0.9
QASN				*e*S	Sn	08 59 36.4	-3.4
QASN				AML	AML	08 59 44.8	
	comp=E,254nm,0.5s						
QASN				AML	AML	08 59 46.0	
	comp=N,199nm,0.8s						
KRTS	Karatas	2.03	24	PN	Pn	08 59 16.4	+1.1
KSHT	Keshet	2.12	145	Pn	Pn	08 59 18.4	+1.7
MERS	Mersin	2.14	4	PN	Pn	08 59 17.6	+0.6
OFRI	\`Ofer	2.17	166	Pn	Pn	08 59 17.9	+0.6
OFRI				Sn	Sn	08 59 43.5	-0.4
TOTH	TOTAH	2.20	128	*e*P	Pn	08 59 19.1	+1.3
TOTH				*e*S	Sn	08 59 41.0	-3.8
TOTH				AML	AML	08 59 48.4	
	comp=E,89nm,0.5s						
TOTH				AML	AML	08 59 50.4	
	comp=N,88nm,0.9s						
GAZI	Gazipasa	2.24	313	PN	Pn	08 59 18.0	-0.3
GAZI	Gazipasa	2.24	313	*i* P	Pn	08 59 18.1	-0.1
GAZI				*i* S	Sn	08 59 46.0	+0.3
GAZI				IAML_P			
	comp=Z,1μm,0.2s						
ERMK	Ermenek	2.24	329	*i* P	Pn	08 59 19.4	+0.9
ERMK				*i* S	Sb	08 59 48.7	-1.0
ERMK				IAML_P			
	comp=Z,1μm,0.3s						
MMLI	Mount Malkishu	2.45	158	PN	Pn	08 59 22.4	+1.2
MMLI	Mount Malkishu	2.45	158	Pn	Pn	08 59 22.6	+1.4
MMLI				Sn	Sn	08 59 50.9	-0.1
SLTI	Sal'it	2.54	167	Pn	Pn	08 59 24.1	+1.6
SLTI				Sn	Sn	08 59 52.5	-0.7
HMDT	Nahal Hemdat	2.66	158	Pn	Pn	08 59 25.5	+1.5
HMDT				Sn	Sn	08 59 56.8	+0.9
KERG	Konya-Eregli	2.69	356	*i* P	Pn	08 59 25.0	+0.4
KERG				IAML_P			
	comp=Z,670nm,0.2s						
DSI	Dead Sea	3.26	164	Pn	Pn	08 59 33.5	+1.1
YTIR	Yattir	3.41	169	Pn	Pn	08 59 36.2	+1.7
YTIR				Sn	Sn	09 00 15.2	+0.4
MZDA	Masada	3.51	166	Pn	Pn	08 59 37.3	+1.6
MZDA				Sn	Sn	09 00 17.7	+0.7
KRMI	Paran Flat	4.61	176	Pn	Pn	08 59 52.6	+1.8
MBRI	Mt Berech	4.94	174	Pn	Pn	08 59 57.6	+2.1

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*ISCJB **12** 09:17:24.9±0.3, 16°.90N±0°.04×145°.97E±0°.06, h10*^{km}*,*
mb4.2/48, MS3.6/19, Error ellipse: s-maj=8.6km
s-min=3.8km az=25.4
*IDC **12** 09:17:25.2±0.8, 16°.87N×146°.03E, h0*^{km}*, mb3.9/11,*
mb1 4.1/12, mb1mx3.8/56, mbtmp3.9/12, ML4.0/1, MS3.6/20,
Ms1 3.6/20, ms1mx3.4/44, Error ellipse: s-maj=26.1km
s-min=16.2km az=89.0
*NEIC **12** 09:17:26.5±1.7, 16°.88N×145°.95E, h10*^{km}*±1*^{km}*, mb4.4/40,*
Error ellipse: s-maj=15.6km s-min=4.4km az=117.0
ISC 12 09:17:26.5±0.5, **16°.86N**±0°.06×**145°.96E**±0°.09, **h10**^{km}**, n85,**
σ**0**^{s}**95**/67, **mb4.4**/48, **MS3.7**/19, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	Sarigan	0.24	228	*e*Pg	Pg	09 17 31.6	+0.2
SARN				*e*Sg	Sg	09 17 35.4	+0.8
ANA2	Anatahan	0.57	205	*e*Pg	Pg	09 17 38.1	+0.6
ANA2				*e*Sg	Sg	09 17 45.0	0.0
GUMO	Guam	3.42	198	Pn	Pn	09 18 20.6	+0.7
	14nm,0.3s,baz=155,slow=5.4,SNR=7.5						
GUMO				Sn	Sn	09 19 02.1	+1.7
	33nm,0.3s,baz=185,slow=23,SNR=8.6						
GUMO	Guam	3.42	198	*e*Pn	Pn	09 18 20.4	+0.5
GUMO				*e*Sn	Sn	09 18 58.6	-1.8
H11S3	WAKE ISLAND Hy	19.82	82	T	T	09 42 23.2	
	baz=268,slow=75,SNR=722						
H11S1	WAKE ISLAND Hy	19.83	82	T	T	09 42 25.9	
	baz=268,slow=75,SNR=548						
H11S2	WAKE ISLAND Hy	19.83	82	T	T	09 42 26.2	
	baz=268,slow=75,SNR=1424						
JAY	Jayapura	19.94	196	LR	LR	09 28 17.0	
	comp=Z,199nm,22.0s,baz=4.5,slow=33						
H11N1	WAKE ISLAND Hy	20.07	79	T	T	09 42 42.8	
	baz=265,slow=74,SNR=2270						
H11N2	WAKE ISLAND Hy	20.08	79	T	T	09 42 43.4	
	baz=265,slow=74,SNR=1694						
H11N3	WAKE ISLAND Hy	20.09	79	T	T	09 42 43.8	
	baz=265,slow=74,SNR=1920						
MJAR	Matsushiro Arr	20.77	342	P	P	09 22 06.9	-0.8
	1.7nm,0.7s,baz=188,slow=12,SNR=4.2						
MAJO	Matsushiro	20.78	342	*e*P	P	09 22 06.9	-0.8
JNU	Nakatsue	21.15	323	LR	LR	09 29 20.1	
	comp=Z,74nm,18.3s,baz=174,slow=34						
TGY	Tagaytay City	24.27	267	LR	LR	09 30 44.3	
	comp=Z,147nm,21.2s,baz=212,slow=33						
ERM	Erimo	25.19	355	*e*P	P	09 22 49.9	-2.2
	8.2nm,0.9s						
KSRS	Korea Array	25.96	326	P	P	09 22 59.5	+0.4
	2.2nm,0.8s,baz=146,slow=9.2,SNR=9.2						
KSRS				LR	LR	09 32 14.2	
	comp=Z,68nm,21.2s,baz=135,slow=34						
KS15	Wonju Array Si	25.97	326	*e*P	P	09 22 59.5	+0.2
ASAJ	Asahikawa	27.32	355	LR	LR	09 32 51.6	
	comp=Z,94nm,21.7s,baz=179,slow=34						
LUWI	Luwuk	28.97	234	*e*P	P	09 23 26.0	-0.4
	17nm,0.8s						
USRK	Ussuriysk Ar.	29.70	339	LR	LR	09 34 32.8	
	comp=Z,110nm,22.0s,baz=156,slow=35						
PETK	Petropavlovsk-	37.33	12	LR	LR	09 38 44.7	
	comp=Z,104nm,19.5s,baz=198,slow=34						
KSM	Kuching	38.26	250	*e*P	P	09 24 44.3	-3.0
	4.4nm,0.7s						
WRAB	Tennant Creek	38.30	198	*e*P	P	09 24 46.4	-1.0
	5.1nm,1.0s						
WB2	Warramunga Arr	38.31	198	*e*P	P	09 24 47.0	-0.5
	4.5nm,1.1s						
WR1	Warramunga Arr	38.31	198	*e*P	P	09 24 47.5	-0.1
WRA	Warramunga Arr	38.31	198	P	P	09 24 47.5	-0.1
	2.6nm,1.0s,baz=16,slow=6.8,SNR=7.8						
SLVN	Son La	39.91	283	*e*P	P	09 25 02.6	+1.5
	6.3nm,1.0s						
FUNA	Funafuti	41.43	125	*e*P	P	09 25 13.9	+0.3
	52nm,1.0s						
AS31	Alice Springs	41.96	197	*e*P	P	09 25 17.6	-0.2
	0.3nm,0.6s						
ASAR	Alice Springs	41.97	197	P	P	09 25 17.5	-0.3
	0.2nm,0.5s,baz=34,slow=11,SNR=5.5						
ASAR				LR	LR	09 43 12.4	
	comp=Z,108nm,20.4s,baz=22,slow=37						
LEM	Lembang	44.62	241	LR	LR	09 45 30.9	
	comp=Z,53nm,18.3s,baz=62,slow=38						
CM31	Chiang Mai Arr	44.74	279	*e*P	P	09 25 41.8	+1.4
	5.2nm,0.8s						
CMAR	Chiang Mai Arr	44.74	279	P	P	09 25 42.4	+2.0
	1.6nm,0.4s,baz=68,slow=7.1,SNR=16						
CMAR				LR	LR	09 44 20.3	
	comp=Z,25nm,19.1s,baz=145,slow=36						
SONA0	Songino Array	44.74	322	*e*P	P	09 25 40.9	+0.7
SONM	Songino Array	44.74	322	P	P	09 25 40.9	+0.7
	0.4nm,0.6s,baz=124,slow=7.7,SNR=5.1						
IPM	Ipoh	45.72	260	*e*P	P	09 25 48.7	+0.4
	7.5nm,1.1s						
PSI	Prapat	48.26	258	LR	LR	09 49 52.8	
	comp=Z,70nm,18.0s,baz=50,slow=40						
PSI	Prapat	48.26	258	*e*P	P	09 26 08.2	0.0
	11nm,1.1s						
STKA	Stephens Creek	48.64	185	LR	LR	09 48 44.3	
	comp=Z,110nm,18.1s,baz=19,slow=39						
STKA	Stephens Creek	48.64	185	*e*P	P	09 26 09.1	-1.5
	0.6nm,1.0s						
NWAO	Narrogin (SRO)	56.62	209	LR	LR	09 51 27.4	

	comp=Z,71nm,19.1s,baz=344,slow=36						
MK31	Makanchi Array	59.92	315	eP	P	09 27 31.2	-1.6
	0.8nm,0.9s						
MK32	Makanchi Array	59.92	315	eP	P	09 27 33.9	+1.1
MKAR	Makanchi Array	59.92	315	P	P	09 27 33.9	+1.1
	1.0nm,0.8s,baz=92,slow=11,SNR=7.1						
MAKZ	Makanchi	60.13	315	eP	P	09 27 35.0	+0.7
	1.1nm,1.0s						
KURBB	Kurchatov Arra	62.85	319	P	P	09 27 52.8	+0.2
	1.3nm,0.7s,baz=103,slow=7.2,SNR=12						
RC01	Rabbit Creek A	63.02	29	eP	P	09 27 53.6	+0.2
	5.6nm,1.1s						
BPAW	Bear Paw Mtn.	63.28	26	eP	P	09 27 55.7	+0.4
	2.0nm,0.7s						
PMR	Palmer	63.43	29	eP	P	09 27 55.4	-0.7
	2.0nm,0.9s						
MLY	Manley	63.66	25	eP	P	09 27 56.8	-0.9
	2.3nm,0.8s						
SML	Sawmill	63.85	29	eP	P	09 27 58.8	-0.2
	5.3nm,0.8s						
RND	Reindeer	64.01	27	eP	P	09 27 59.8	-0.2
	1.9nm,1.0s						
BOOM	Boomskoye usch	64.15	309	eP	P	09 28 01.1	-0.5
	4.7nm,1.0s						
PALK	Pallekele	64.29	270	LR	LR	09 52 32.6	
	comp=Z,45nm,19.4s,baz=115,slow=33						
SCM	Sheep Creek Mo	64.32	29	eP	P	09 28 02.5	+0.4
	4.4nm,0.8s						
HDA	Harding Lake	65.07	26	eP	P	09 28 06.9	0.0
	1.5nm,0.8s						
ILB	Eielson Array	65.18	26	eP	P	09 28 06.9	-0.7
	2.1nm,1.0s						
TOLK	Toolik Lake Re	65.20	21	eP	P	09 28 08.3	+0.6
	3.2nm,1.1s						
PAX	Paxson	65.40	28	eP	P	09 28 09.6	+0.4
	2.2nm,0.7s						
RIDG	Independent Ri	65.83	27	eP	P	09 28 10.9	-1.0
	2.5nm,1.2s						
DOT	Dot Lake	66.15	27	eP	P	09 28 13.6	-0.4
	2.2nm,0.7s						
BVAR	Borovoye Array	68.05	321	P	P	09 28 26.2	0.0
	0.7nm,0.4s,baz=94,slow=9.1,SNR=4.7						
KKAR	Karatay Array	68.13	310	eP	P	09 28 25.7	-1.2
	2.2nm,0.8s						
EPYK	Eagle Plains	69.60	25	eP	P	09 28 35.4	-0.2
	4.7nm,1.1s						
INK	Inuvik	70.96	23	P	P	09 28 43.3	-0.5
	2.0nm,0.7s,baz=282,slow=7.8,SNR=5.7						
INK	Inuvik	70.96	23	eP	P	09 28 42.9	-0.9
	2.7nm,0.8s						
AKTO	Aktyubinsk	75.90	319	LR	LR	10 02 34.1	
	comp=Z,43nm,20.3s,baz=68,slow=36						
YKA	Yellowknife Ar	79.49	28	LR	LR	10 04 26.3	
	comp=Z,8.5nm,19.8s,baz=280,slow=36						
PINE	Pine Mountain	80.72	47	eP	P	09 29 39.8	-0.6
	4.9nm,0.8s						
SPA0	Spitsbergen Ar	81.01	351	eP	P	09 29 40.9	-0.2
	6.6nm,1.0s						
K05A	Summer Lake	81.02	48	eP	P	09 29 43.5	+1.5
	6.2nm,1.0s						
RYN	Ryan	83.85	52	eP	P	09 29 58.3	+1.4
	3.3nm,1.2s						
KVN	Kaiserville	84.05	51	eP	P	09 29 58.5	+0.6
	1.4nm,0.8s						
NV01	Mina Array Sit	84.07	52	eP	P	09 29 58.9	+0.9
NVAR	Mina Array Bea	84.07	52	P	P	09 29 58.9	+0.9
	1.0nm,0.7s,baz=259,slow=6.2,SNR=10						
NVAR				LR	LR	10 03 17.5	
	comp=Z,39nm,18.3s,baz=327,slow=33						
ELK	Elko	85.63	49	eP	P	09 30 06.3	+0.4
	1.8nm,1.0s						
HRY	Holter Researc	86.00	42	eP	P	09 30 07.9	+0.4
JLU	Jordanelle	88.40	48	eP	P	09 30 20.1	+0.8
	3.0nm,0.8s						
FINES	FINESS Array B	88.65	335	LR	LR	10 12 05.0	
	comp=Z,39nm,18.8s,baz=26,slow=37						
ULM	Lac du Bonnet	93.96	35	LR	LR	10 13 00.7	
	comp=Z,40nm,18.0s,baz=276,slow=36						
Y22D	IRIS PASSCAL I	94.20	53	eP	P	09 30 46.6	+0.4
	31nm,0.4s						
NOA	NORSAR Array B	94.38	340	LR	LR	10 16 51.9	
	comp=Z,33nm,18.6s,baz=30,slow=38						
LPAZ	La Paz	147.34	94	PKPbc	PKPbc	09 37 12.8	+0.7
	1.9nm,0.9s,baz=305,slow=1.7,SNR=5.9						
LPAZ	La Paz	147.34	94	ePKPbc	PKPbc	09 37 12.9	+0.8

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*ISCJB **12** 09:29:31.3±0.4, 16°.81N±0°.04×145°.92E±0°.07, h10^{km}, mb4.3/22, MS3.1/2, Error ellipse: s-maj=10.1km s-min=5.2km az=22.6*

*IDC **12** 09:29:31.5±1.1, 16°.82N×145°.97E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.8/46, mbtmp4.0/8, ML3.6/1, MS3.1/4, Ms1 3.1/4, ms1mx2.7/34, Error ellipse: s-maj=31.3km s-min=21.8km az=79.0*

*NEIC **12** 09:29:32.9±1.1, 16°.78N×145°.89E, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=7.4km s-min=3.1km az=126.0*

ISC 12 09:29:32.9±0.6**, 16°.78N**±0°.06×**145°.91E**±0°.09**, h10^{km}, n42, σ0^{s}.76**/34**, mb4.5**/22**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	Sarigan	0.15	237	ePg	Pg	09 29 35.6	-0.7
SARN				eSg	Sg	09 29 37.8	-0.8
ANA2	Anatahan	0.48	204	ePg	Pg	09 29 42.2	-0.1
ANA2				eSg	Sg	09 29 47.7	-0.8
GUMO	Guam	3.33	198	Pn	Pn	09 30 25.6	+0.6
	5.9nm,0.3s,baz=195,slow=23,SNR=4.5						
GUMO				LR	LR	09 31 29.6	
	comp=Z,109nm,18.4s,baz=356,slow=35						
GUMO	Guam	3.33	198	ePn	Pn	09 30 25.1	0.0
JAY	Jayapura	19.85	195	LR	LR	09 40 31.4	
	comp=Z,71nm,18.1s,baz=354,slow=33						
H11S3	WAKE ISLAND Hy	19.87	82	T	T	09 54 30.4	
	baz=268,slow=75,SNR=121						
H11S1	WAKE ISLAND Hy	19.89	82	T	T	09 54 30.4	
	baz=268,slow=75,SNR=105						
H11S2	WAKE ISLAND Hy	19.89	82	T	T	09 54 30.8	
	baz=268,slow=75,SNR=136						
H11N1	WAKE ISLAND Hy	20.14	78	T	T	09 54 49.1	
	baz=265,slow=74,SNR=107						
H11N2	WAKE ISLAND Hy	20.14	78	T	T	09 54 49.5	
	baz=265,slow=74,SNR=59						
H11N3	WAKE ISLAND Hy	20.16	78	T	T	09 54 50.4	
	baz=265,slow=74,SNR=90						
JNU	Nakatsue	21.18	323	eP	P	09 34 17.0	-1.5
	2.5nm,0.7s						
KSRS	Korea Array	25.99	326	P	P	09 35 05.1	-0.8
	3.7nm,0.9s,baz=154,slow=9.8,SNR=8.3						
PETK	Petropavlovsk-	37.41	12	LR	LR	09 50 29.9	
	comp=Z,34nm,21.4s,baz=197,slow=34						
WR1	Warramunga Arr	38.23	198	eP	P	09 36 53.0	-0.2
WRA	Warramunga Arr	38.23	198	P	P	09 36 53.0	-0.2
	2.0nm,0.8s,baz=17,slow=4.4,SNR=5.6						
JAGI	Jajag, Banyuwa	40.20	234	eP	P	09 37 11.1	+1.2
	29nm,0.9s						
FUNA	Funafuti	41.43	125	eP	P	09 37 19.7	-0.2
	62nm,0.9s						
CHAI	Chaiyaphum	42.09	275	P	P	09 37 19.2	-6.3
EIDS	Eidsvold	42.20	173	eP	P	09 37 26.1	0.0
	3.6nm,0.9s						
MA2	Magadan	42.88	4	LR	LR	09 56 24.2	
	comp=Z,20nm,18.3s,baz=316,slow=38						
CM31	Chiang Mai Arr	44.70	279	eP	P	09 37 46.3	-0.2
	10nm,0.9s						
CMAR	Chiang Mai Arr	44.70	279	P	P	09 37 47.7	+1.2
	6.1nm,0.9s,baz=73,slow=6.3,SNR=21						
SONA0	Songino Array	44.77	323	eP	P	09 37 47.9	+1.0
SONM	Songino Array	44.77	323	P	P	09 37 47.9	+1.0
	0.8nm,0.9s,baz=135,slow=10.0,SNR=5.0						
MK32	Makanchi Array	59.94	315	eP	P	09 39 39.5	+0.1
MKAR	Makanchi Array	59.94	315	P	P	09 39 39.4	+0.1
	1.0nm,0.9s,baz=94,slow=9.7,SNR=6.0						
KURK	Kurchatov	62.83	319	eP	P	09 39 58.0	-0.8
	2.1nm,1.0s						
KDJ	Kajisay	63.24	309	eP	P	09 40 03.1	+1.2
	3.6nm,0.8s						
SML	Sawmill	63.94	29	eP	P	09 40 04.8	-1.2
	2.9nm,0.7s						
NRN	Naryn	64.11	308	eP	P	09 40 09.0	+1.1
	4.5nm,1.1s						
BOOM	Boomskoye usch	64.16	309	eP	P	09 40 09.1	+1.0
	3.0nm,0.9s						
NIL	Nilore	66.64	300	eP	P	09 40 25.0	+0.9
	14nm,1.0s						
BVAR	Borovoye Array	68.08	321	P	P	09 40 32.5	-0.3
	1.2nm,0.7s,baz=98,slow=11,SNR=5.5						
BRVK	Borovoye	68.14	321	eP	P	09 40 33.4	+0.2
	2.7nm,0.9s						
KK31	Karatay Array	68.15	310	eP	P	09 40 34.0	+0.6
	2.8nm,0.8s						
KBL	Kabul	70.02	301	eP	P	09 40 44.8	-0.7
	3.7nm,0.8s						
PINE	Pine Mountain	80.81	47	eP	P	09 41 47.4	+0.1
	3.3nm,0.8s						
K05A	Summer Lake	81.10	48	eP	P	09 41 48.6	-0.3
NV01	Mina Array Sit	84.16	52	eP	P	09 42 04.8	-0.2
NVAR	Mina Array Bea	84.16	52	P	P	09 42 04.8	-0.2
	0.7nm,0.8s,baz=262,slow=7.3,SNR=6.0						
LPAZ	La Paz	147.38	94	PKPbc	PKPbc	09 49 18.8	+0.2
	1.6nm,0.9s,baz=318,slow=6.5,SNR=6.0						

IDC 12 09:40:34.2±5.4**, 2°.12S**×**101°.66E, h0^{km}, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.3**/45**, mbtmp3.6**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/26**, Error ellipse: s-maj=279.9km s-min=29.5km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	29.57	258	T	T	10 15 35.2	
	baz=82,slow=74,SNR=22						
H08S3	Diego Garcia H	29.57	258	T	T	10 15 35.8	
	baz=82,slow=74,SNR=87						
H08S1	Diego Carcia H	29.58	258	T	T	10 15 35.0	
	baz=82,slow=74,SNR=23						
H01W3	Cape Leeuwin H	34.61	162	T	T	10 22 55.5	
	baz=336,slow=76,SNR=5.6						
H01W2	Cape Leeuwin H	34.62	162	T	T	10 22 56.8	
	baz=336,slow=76,SNR=6.6						
H01W1	Cape Leeuwin H	34.62	162	T	T	10 22 51.6	
	baz=336,slow=76,SNR=5.2						
WRA	Warramunga Arr	36.51	121	P	P	09 47 40.7	-1.0
	0.6nm,0.8s,baz=296,slow=9.9,SNR=4.0						
ASAR	Alice Springs	37.85	127	P	P	09 47 54.0	+0.9
	0.4nm,0.6s,baz=297,slow=8.2,SNR=6.9						
MJAR	Matsushiro Arr	51.33	38	LR	LR	10 13 16.8	
	comp=Z,39nm,18.1s,baz=170,slow=38						
MKAR	Makanchi Array	51.61	343	P	P	09 49 42.3	-0.1
	0.5nm,0.5s,baz=137,slow=7.7,SNR=4.0						

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*IDC **12** 09:43:09.1±1.6, 25°.86N×91°.58E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.3/48, mbtmp3.6/3, Error ellipse: s-maj=119.9km s-min=28.0km az=56.0*

*NDI **12** 09:43:14.9±1.9, 26°.22N×92°.02E, h17^{km}±5^{km}, ML3.5*

*ISCJB **12** 09:43:15.2±0.8, 26°.24N±0°.04×92°.04E±0°.05, h12^{km}±6^{km}, mb3.6/3, Error ellipse: s-maj=7.9km s-min=5.3km az=34.0*

ISC 12 09:43:13.2±1.3**, 26°.26N**±0°.04×**92°.08E**±0°.04**, h15^{km}**±10^{km}**, n11, σ1^{s}.31**/16**, mb3.7**/3**, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUWA	GUWAHATI	0.35	259	eP	Pb	09 43 21.8	+0.6
GUWA				eS	Sb	09 43 26.9	+0.2
GUWA				IAML		09 43 27.1	
	comp=Z,2μm,0.1s						
SHL	Shillong	0.71	194	ePG	Pg	09 43 26.0	-1.2
SHL				eSG	Sb	09 43 39.0	+1.8
SHL	Shillong	0.71	194	eP	Pb	09 43 27.8	+0.4
SHL				eS	Sg	09 43 37.2	+0.6
SHL				IAML		09 43 38.2	
	comp=N,2μm,0.2s						
SHL				IAML		09 43 38.3	
	comp=E,1μm,0.1s						
TEZP	TEZPUR	0.74	61	eP	Pn	09 43 30.3	+1.2
TEZP				eS	Sn	09 43 41.6	+1.5
TAWA	Tawang	1.34	352	IAML		09 43 40.2	
	comp=E,1μm,0.2s						
TAWA				eS	Sg	09 43 57.0	+0.4
SILR	SILCHAR	1.61	156	eP	Pg	09 43 53.8	+10
SILR				eS	Sg	09 44 15.1	+10
SILR				IAML		09 44 18.3	
	comp=N,1μm,0.6s						
SILR				IAML		09 44 18.3	
	comp=Z,373nm,0.5s						
TURI	Tura	1.72	246	eP	Pn	09 43 43.7	+1.0
TURI				eS	Sb	09 44 07.6	+1.5
TURI				IAML		09 44 08.8	
	comp=E,1μm,0.3s						
TURI				IAML		09 44 09.0	
	comp=N,796nm,0.4s						
TURI				IAML		09 44 29.5	
	comp=E,516nm,0.2s						
ZIRO	ZIRO	2.02	51	eP	Pb	09 43 50.1	+0.3
ZIRO				eS	Sb	09 44 15.6	+0.7
ZIRO				IAML		09 44 29.4	
	comp=N,1μm,0.2s						
MKAR	Makanchi Array	21.92	342	P	P	09 48 06.6	+0.6
	comp=N,0.5nm,0.4s,baz=162,slow=10,SNR=7.3						
GERES	GERESS Array B	63.26	314	P	P	09 53 39.3	-2.0
	comp=N,0.6nm,0.5s,baz=77,slow=8.5,SNR=3.7						
ASAR	Alice Springs	64.03	137	P	P	09 53 44.9	-1.7
	comp=N,0.3nm,0.6s,baz=319,slow=6.4,SNR=6.4						

IDC 12 10:21:52.5±3.4**, 8°.44S**×**113°.69E, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/26**, mbtmp3.7**/3**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.7**/38**, Error ellipse: s-maj=217.4km s-min=26.0km az=48.0, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.02	122	P	P	10 26 59.0	-0.4
	0.5nm,0.3s,baz=292,slow=12,SNR=7.2						
ASAR	Alice Springs	24.58	130	P	P	10 27 15.0	+0.5
	1.6nm,0.5s,baz=306,slow=8.9,SNR=27						
JHJ	Hachijo jima 2	48.22	30	LR	LR	10 50 06.4	
	comp=Z,194nm,19.7s,baz=76,slow=35						
MKAR	Makanchi Array	61.69	336	P	P	10 32 12.3	-0.2
	0.6nm,0.4s,baz=152,slow=6.9,SNR=6.3						

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*IDC **12** 10:29:37.8±0.9, 5°.91S×75°.24W, h0^{km}, mb3.9/4, mb1 4.2/9, mb1mx4.0/29, mbtmp4.0/9, ML4.0/5, MS3.3/11, Ms1 3.3/11, ms1mx3.1/33, Error ellipse: s-maj=23.0km s-min=17.9km az=166.0*

*ISCJB **12** 10:29:40.0±0.3, 6°.02S±0°.03×75°.20W±0°.05, h27^{km}, mb4.5/47, MS3.4/5, Error ellipse: s-maj=7.1km s-min=4.3km az=166.7*

*ARE **12** 10:29:40.0±0.0, 6°.02S×75°.41W, h36^{km}*

*NEIC **12** 10:29:43.2±1.9, 6°.04S×75°.16W, h40^{km}±7^{km}, mb4.6/54, ML4.5(ARE), Error ellipse: s-maj=14.9km s-min=10.5km az=100.0*

NEIC Felt [II] at Yurimaguas.

ISC 12 10:29:41.8±0.5**, 6°.03S**±0°.05×**75°.19W**±0°.08**, h27^{km}, n92, σ1^{s}.19**/94**, mb4.6**/47**, MS3.1**/5**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	3.37	251	Pn	Pn	10 30 32.3	-0.8
	13nm,0.3s,baz=68,slow=5.7,SNR=83						
ATAH				Lg	Lg	10 31 24.0	
	25nm,0.3s,baz=304,slow=18,SNR=8.2						
ATAH				LR	LR	10 32 03.6	
	comp=Z,453nm,18.2s,baz=73,slow=43						
NNA	Nana	6.14	195	Pn	Pn	10 31 12.0	+1.1
	4.2nm,0.3s,baz=337,slow=9.2,SNR=18						
NNA				Sn	Sn	10 32 18.8	-1.4
	15nm,0.3s,baz=266,slow=24,SNR=7.5						
NNA				LR	LR	10 34 14.7	
	comp=Z,289nm,18.5s,baz=358,slow=44						
NNA	Nana	6.14	195	ePn	Pn	10 31 11.6	+0.8
NNA				eSn	Sn	10 32 19.4	-0.8
PTLC	Puerto Leguiza	6.17	4	eP	Pn	10 31 07.3	-4.1
FLOC	Florencia	7.58	356	eP	Pn	10 31 30.9	+0.3
CRUC	La Cruz	7.75	347	eP	Pn	10 31 33.4	+0.1
SOTA	Rioblanco	8.24	350	eP	Pn	10 31 41.2	+1.1
BBAC	Balboa, Cauca	8.26	346	eP	Pn	10 31 41.5	+1.3
POPC	Popayan, Colom	8.64	350	eP	Pn	10 31 49.8	+4.3
ORTC	Ortega, Tolima	9.88	360	eP	Pn	10 32 04.1	+1.9
ROSC	El Rosal	10.84	5	LR	LR	10 37 14.4	
	comp=Z,124nm,18.3s,baz=214,slow=43						
ROSC	El Rosal	10.84	5	ePn	Pn	10 32 15.4	-0.2
GUY2C	Guyana, Caldas	11.18	359	eP	Pn	10 32 21.3	+0.8
LPAZ	La Paz	12.32	146	Pn	Pn	10 32 37.2	+1.2
	0.4nm,0.3s,baz=336,slow=8.5,SNR=10.0						
ZARC	Zaragoza, Cauc	13.44	1	eP	P	10 33 01.4	+1.5
MNMC	Minye Minye	14.11	158	ePn	Pn	10 33 02.2	+1.8
PB11	IPOC Station P	14.67	159	ePn	Pn	10 33 08.6	+0.8
GO01	Chusmiza	14.75	157	ePn	Pn	10 33 09.6	+0.3
BCIP	Isla Barro Col	15.79	343	ePn	Pn	10 33 23.3	+0.8
	86nm,2.0s						
PB01	IPOC Station P	15.91	160	ePn	Pn	10 33 24.6	+0.5
	56nm,1.9s						
PTGA	Pitinga	16.08	71	Pn	Pn	10 33 25.6	-0.6
	0.9nm,0.3s,baz=291,slow=20,SNR=4.8						
PTGA				LR	LR	10 40 20.7	
	comp=Z,134nm,19.7s,baz=261,slow=40						
PTGA	Pitinga	16.08	71	ePn	Pn	10 33 26.8	+0.6
	8.5nm,0.8s						
PTGA				eSn	Sn	10 36 22.4	-1.4
SIV	San Ignacio	17.01	127	P	Pn	10 33 38.1	0.0
	0.4nm,0.3s,baz=308,slow=13,SNR=14						
SIV				LR	LR	10 40 28.1	
	comp=Z,178nm,18.5s,baz=324,slow=38						
LVC	Limon Verde	17.56	160	LR	LR	10 41 58.0	
	comp=Z,84nm,21.7s,baz=326,slow=42						
LVC	Limon Verde	17.56	160	ePn	Pn	10 33 43.1	-2.1
	8.2nm,0.9s						
JTS	Las Juntas de	18.91	329	LR	LR	10 41 05.3	
	comp=Z,106nm,19.6s,baz=178,slow=37						
MDP	Montagnes des	25.08	64	LR	LR	10 43 56.6	
	comp=Z,37nm,21.4s,baz=338,slow=34						
AOPR	Arecibo Observ	25.61	19	eP	P	10 35 09.9	+0.8
	21nm,0.7s						
APG	El Apazote	25.81	324	LR	LR	10 44 44.6	
	comp=Z,47nm,20.0s,baz=142,slow=35						
CBYP	Canovanas	25.85	21	eP	P	10 35 07.6	-3.7
	30nm,1.5s						
CUPR	Culebra, Puert	26.09	22	eP	P	10 35 12.7	-0.7
	21nm,0.9s						
STVI	Saint Thomas	26.25	22	eP	P	10 35 14.6	-0.2
	23nm,1.0s						
CPUP	Villa Florida	26.42	142	LR	LR	10 47 25.0	
	comp=Z,64nm,21.5s,baz=344,slow=40						
152A	Waverly Hall	39.54	347	eP	P	10 37 11.2	+0.6
	10nm,0.8s						
Z50A	Ashland	40.38	346	eP	P	10 37 17.3	-0.3
	15nm,0.9s						
LRAL	Lakeview Retre	40.44	345	eP	P	10 37 18.1	+0.1
	10nm,1.0s						
Y49A	Blount Mountai	41.07	346	eP	P	10 37 22.7	-0.5
	14nm,1.4s						
W50A	Signal Mountai	42.11	348	eP	P	10 37 32.1	+0.3
	16nm,0.7s						
CPCT	Cooper Cave	42.19	349	eP	P	10 37 32.6	+0.3
	8.9nm,0.9s						
SWET	Sewanee	42.26	347	eP	P	10 37 33.0	0.0
	8.8nm,0.7s						
T59A	Double "B" Far	42.84	357	eP	P	10 37 38.5	+0.9
	9.4nm,0.8s						
V48A	Smith Brothers	42.97	346	eP	P	10 37 38.1	-0.6
	17nm,0.6s						
T57A	Hurt	42.98	355	eP	P	10 37 39.6	+0.9
	7.2nm,0.6s						
TZTN	Tazewell	43.07	350	eP	P	10 37 40.0	+0.4
	23nm,1.5s						
WVT	Waverly	43.59	345	eP	P	10 37 42.0	-1.7
	3.2nm,0.6s						
S57A	Dark Hollow, R	43.71	356	eP	P	10 37 46.1	+1.4
	11nm,0.8s						
T49A	Edmonton	43.99	348	eP	P	10 37 46.9	-0.1
	4.2nm,0.6s						
WHAR	Wooly Hollow	44.15	340	eP	P	10 37 47.6	-0.6
	12nm,1.4s						
R55A	Marlinton	44.33	354	eP	P	10 37 50.8	+1.1
	65nm,2.0s						
FCAR	Ozark Folk Cen	44.63	340	eP	P	10 37 51.2	-0.9
	2.5nm,0.6s						
ABTX	Abilene, Hawle	44.93	330	eP	P	10 37 55.3	+0.7
	7.0nm,0.8s						
O56A	Blue Knob Stat	46.18	356	eP	P	10 38 05.6	+1.3
	27nm,1.5s						
N55A	Marion Center	46.71	356	eP	P	10 38 08.9	+0.4
	12nm,0.8s						
MNTX	Cornudas Mount	47.30	324	eP	P	10 38 13.8	+0.6
	2.0nm,1.0s						
HDIL	Hopedale	48.14	346	eP	P	10 38 18.0	-1.6
	14nm,0.6s						
J47A	Sunmer	49.81	351	eP	P	10 38 31.4	-1.0
	13nm,0.9s						
ANMO	Albuquerque	50.30	326	eP	P	10 38 36.7	+0.2
	3.3nm,0.8s						
JFWS	Jewell Farm	50.60	346	eP	P	10 38 36.8	-1.6
	5.8nm,0.7s						
TUC	Tucson	51.01	321	eP	P	10 38 41.3	-0.4
	11nm,1.9s						
I42A	Draeger Farm,	51.22	347	eP	P	10 38 41.8	-1.1
	4.7nm,0.8s						
SDCO	Great Sand Dun	51.91	329	eP	P	10 38 48.4	-0.2
	7.4nm,1.5s						
X16A	Lo Mia Camp, P	52.82	322	eP	P	10 38 55.1	-0.2
	2.2nm,0.9s						
WUAZ	Wupatki	53.53	323	eP	P	10 39 00.5	0.0
	5.6nm,1.2s						
MSU	Marysvale	56.05	325	eP	P	10 39 19.5	+0.7
TMUT	Trail Mountain	56.06	327	eP	P	10 39 18.3	-0.7
	3.4nm,1.3s						
AGMN	Agassiz Nation	57.07	344	eP	P	10 39 24.2	-1.4
	3.7nm,0.7s						
PD31	Pinedale Array	57.73	331	eP	P	10 39 29.9	-0.8
PD31				ePcP	PcP	10 40 22.9	-0.4
PDAR	Pinedale Array	57.73	331	P	P	10 39 29.9	-0.8
	0.2nm,0.5s,baz=149,slow=6.9,SNR=3.8						
PDAR				PcP	PcP	10 40 22.9	-0.4
	0.4nm,0.6s,baz=125,slow=7.4,SNR=5.2						
HWUT	Hardware Ranch	57.90	328	eP	P	10 39 30.8	-1.0
	3.7nm,0.8s						
NV01	Mina Array Sit	59.63	322	eP	P	10 39 43.4	-0.6
NV01				ePcP	PcP	10 40 30.9	0.0
NVAR	Mina Array Bea	59.63	322	P	P	10 39 43.4	-0.6
	1.3nm,1.0s,baz=127,slow=5.3,SNR=7.1						
NVAR				PcP	PcP	10 40 30.9	0.0
	0.7nm,0.6s,baz=128,slow=4.4,SNR=6.5						
GCMT	Greycliff	60.06	333	eP	P	10 39 46.6	-0.1
QLMT	Earthquake Lak	60.17	331	eP	P	10 39 47.8	+0.2
PINE	Pine Mountain	64.50	325	eP	P	10 40 17.2	+0.7
	12nm,1.4s						
DBIC	Dimbokro	71.31	81	LR	LR	11 10 11.2	
	comp=Z,33nm,19.9s,baz=224,slow=34						
YKA	Yellowknife Ar	74.68	342	P	P	10 41 18.1	-0.6
	1.2nm,0.5s,baz=141,slow=6.7,SNR=4.2						
YKB5	Yellowknife Ar	74.68	342	eP	P	10 41 18.1	-0.6
TOA1	Torodi Ar. Sit	78.68	75	eP	P	10 41 42.6	+0.3
TORD	Torodi Ar. Bea	78.68	75	P	P	10 41 42.6	+0.3
	1.3nm,0.6s,baz=272,slow=4.2,SNR=6.9						
QSPA	South Pole Qui	84.06	180	eP	P	10 42 10.5	+0.5
	17nm,1.8s						
EGAK	Eagle	85.46	337	eP	P	10 42 17.2	+0.4
	3.1nm,0.9s						
KTH	Kantishna Hill	89.06	334	eP	P	10 42 34.5	+0.2
	3.9nm,0.9s						
BPAW	Bear Paw Mtn.	89.23	335	eP	P	10 42 34.5	-0.5
	6.5nm,0.9s						
PPLA	Purkeypile	89.45	333	eP	P	10 42 36.5	+0.2
	5.5nm,0.8s						
MK32	Makanchi Array	135.00	22	ePKPdf	PKPdf	10 48 58.9	+0.1
MKAR	Makanchi Array	135.00	22	PKP	PKPdf	10 48 58.9	+0.1
	0.5nm,0.7s,baz=357,slow=2.4,SNR=5.0						
KSH	Kashi	137.74	34	ePKP	PKPdf	10 49 04.1	-0.1
KSH				PKS	PP	10 51 53.2	+2.8
ASAR	Alice Springs	139.04	223	PKhKP	PKPpre	10 48 57.6	
	0.5nm,0.8s,baz=129,slow=3.4,SNR=5.5						
ASAR				PKP	PKPdf	10 49 06.4	-0.6
	0.8nm,0.9s,baz=113,slow=1.9,SNR=8.0						
WR1	Warramunga Arr	141.14	228	ePKPdf	PKPdf	10 49 10.3	-0.5
WRA	Warramunga Arr	141.14	228	PKP	PKPdf	10 49 10.3	-0.5
	1.2nm,0.5s,baz=163,slow=1.8,SNR=10						
LZH	Lanzhou	150.08	2	ePKPbc	PKPdf	10 49 24.1	-1.7
LZH				pPKP	pPKPdf	10 49 35.7	+0.8
LZH				PKPbc	PKPab	10 49 37.5	+1.0
LZH				sPKP		10 49 40.2	
LZH				LR	LR		
	comp=N,45nm,18.1s						
LZH				LR	LR		
	comp=E,51nm,18.2s						
LZH				LR	LR		
	comp=Z,76nm,20.3s						
CD2	Chengdu	155.23	2	PKP	PKPdf	10 49 30.5	-2.9

NNC 12 10:36:46.4±11.0**, 36°.95N**×**70°.01E, h0^{km}, mb3.9, mpv3.4, 4C-2D, Error ellipse: s-maj=114.8km s-min=62.7km az=157.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.16	3	⇑Pn	Pn	10 38 20.0	+1.3
	1.5nm,0.4s,baz=179,slow=13,SNR=18						
KK31				⇓Sn	Sn	10 39 33.3	+3.4
	1.1nm,0.3s,baz=191,slow=22,SNR=6.5						
AAK	Ala-Archa	6.65	30	⇑Pn	Pn	10 38 24.6	-0.9
	1.2nm,0.4s						
AAK				⇓Sn	Sn	10 39 41.7	-0.3
	5.5nm,0.8s						
AB31	Akbulak array	14.31	332	⇑P	Pn	10 40 09.7	-0.6
	1.8nm,0.3s,baz=158,slow=12,SNR=87						
AKTO	Aktyubinsk	16.00	331	⇑P	Pn	10 40 33.5	+0.7

BER 12 10:44:58.7±0.7**, 60°.81N×10°.13E, h0^{km}, ML0.8, Suspected explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NAO01	NORSAR Array S	0.37	85	eP	Pg	10 45 05.1	-0.6
NAO01				eS	Sg	10 45 09.6	-1.0
NAO01				IAML		10 45 12.4	
	comp=Z,4.5nm,0.2s						
NBO00	NORSAR Array S	0.38	55	eP	Pg	10 45 05.4	-0.6
NBO00				eS	Sg	10 45 10.6	-0.4
NBO00				IAML		10 45 16.9	
	comp=Z,25nm,0.0s						
NC204	NORSAR Array S	0.56	33	eP	Pg	10 45 08.4	-0.9
NC204				eS	Sg	10 45 16.3	-0.3
NC204				IAML		10 45 17.9	
	comp=Z,2.0nm,0.2s						
NB201	NORSAR Array S	0.61	67	eP	Pg	10 45 09.6	-0.9
NB201				eS	Sg	10 45 18.2	-0.2
NB201				IAML		10 45 28.4	
	comp=Z,2.5nm,0.1s						
NC602	NORSAR Array S	0.69	96	eP	Pg	10 45 11.2	-0.8
NC602				eS	Sg	10 45 20.9	-0.1
NC602				IAML		10 45 21.0	
	comp=Z,50nm,0.2s						
NC303	NORSAR Array S	0.73	55	eP	Pg	10 45 11.7	-1.0
NC303				eS	Sg	10 45 21.1	-1.0
NC303				IAML		10 45 30.8	
	comp=Z,1.7nm,0.2s						
DOMB	Dombas	1.34	338	eP	Pg	10 45 23.1	-1.2
DOMB				eS	Sg	10 45 40.7	-0.9
DOMB				IAML		10 45 44.5	
	comp=Z,3.3nm,0.2s						

HEL 12 10:45:38.1±0.3**, 63°.95N×28°.14E, h0^{km}, ML1.4, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUL	Oulu	1.50	320	PN	Pn	10 46 05.5	-0.7
OUL				SN	Sg	10 46 24.8	-1.2
SUF	Sumiainen	1.53	217	PN	Pn	10 46 06.4	-0.2
SUF				MSG		10 46 24.0	
	comp=Z,1.0nm,0.2s						
OUF	Merijarvi	1.55	287	PG	Pn	10 46 06.2	-0.7
	baz=102						
OUF				MSG		10 46 24.5	
	comp=Z,3.1nm,0.2s						
OUF				SN	Sn	10 46 26.4	-1.3
MSF	Maaselka	2.00	11	PG	Pn	10 46 13.9	+0.8
MSF				SG	Sb	10 46 41.4	+0.6
KEF	Keuruu	2.33	221	PG	Pb	10 46 20.1	-0.8
KEF				SG	Sb	10 46 50.7	+0.5
VAF	Ylistaro	2.62	252	PG	Pb	10 46 24.2	-1.6
VAF				MSG		10 46 55.3	
	comp=Z,1.3nm,0.2s						
TOF	Tornio	2.68	325	PB	Pn	10 46 23.5	+1.1
TOF				MSG		10 46 56.9	
	comp=Z,1.5nm,0.2s						
TOF				SG	Sb	10 46 59.9	-0.3
FIA0	FINESS Array S	2.69	202	SG	Sb	10 46 59.4	-1.2
RNF	Rovaniemi	2.81	342	PB	Pb	10 46 27.6	-1.5
RNF				SB	Sb	10 47 02.7	-1.4
SGF	Sodankyl	3.57	350	PN	Pn	10 46 36.6	+2.0
ERTU	Ertsjaerv	3.62	319	PN	Pn	10 46 37.0	+1.7
ERTU				SN	Sn	10 47 19.0	+0.4

KRSC 12 10:46:05.8±1.6**, 52°.11N×160°.73E, h50^{km}**±24^{km}**, ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.08	337	eP	Pn	10 46 26.0	+1.4
SPN				eS	Sn	10 46 38.6	+0.1
NLC	Nalytchevo	1.36	322	eP	Pn	10 46 30.2	+1.9
NLC				eS	Sn	10 46 46.8	+1.6
RUS	Russkaya	1.40	284	eP	Pn	10 46 30.3	+1.5
RUS				eS	Sn	10 46 45.9	-0.2
DALK	Dalny	1.52	308	eP	Pn	10 46 32.2	+1.7
DALK				eS	Sn	10 46 51.0	+1.9
PET	Petropavlovsk	1.56	307	eP	Pn	10 46 33.0	+1.9
PET				eS	Sn	10 46 52.3	+2.1
UGLR	Uglovaya	1.60	314	eP	Pn	10 46 34.5	+2.8
UGLR				eS	Sn	10 46 54.4	+3.1
MTVR	Mutnovka	1.61	285	eP	Pn	10 46 33.8	+2.0
MTVR				eS	Sn	10 46 52.8	+1.3
SDLR	Sedlovina	1.62	317	eP	Pn	10 46 34.4	+2.4
SMAR	Somma	1.65	315	eP	Pn	10 46 35.1	+2.6
KDTR	Khodutka, Kamc	1.67	261	eP	Pn	10 46 34.4	+1.9
KDTR				eS	Sn	10 46 52.8	+0.1
AVH	Avacha	1.68	315	eP	Pn	10 46 35.6	+2.9
AVH				eS	Sn	10 46 56.4	+3.3
KRER	Koryakskii	1.70	316	eP	Pn	10 46 35.8	+2.6
KOK	Koryaka	1.74	314	eP	Pn	10 46 36.4	+2.8
KRMR	Karymshinskiy	1.75	296	eP	Pn	10 46 35.6	+2.0
KRMR				eS	Sn	10 46 56.3	+1.7
ASAK	Asacha	1.76	280	eP	Pn	10 46 36.3	+2.4
ASAK				eS	Sn	10 46 58.2	+3.1
KRX	Arik	1.78	316	eP	Pn	10 46 37.0	+2.8
GNL	Ganaly	2.32	314	eP	Pn	10 46 44.8	+3.3
APC	Apacha	2.33	292	eP	Pn	10 46 44.5	+2.9
MKZ	Mys Kozlova	2.53	13	eP	Pn	10 46 47.4	+3.1
MKZ				eS	Sn	10 47 15.4	+1.6
KZV	Kizimen	3.02	355	eP	Pn	10 46 55.3	+4.1
KZV				eS	Sn	10 47 29.7	+3.5
TUMD	Tumrok D	3.11	357	eP	Pn	10 46 56.7	+4.4
TUMD				eS	Sn	10 47 31.1	+2.9
TUMR	Tumrok	3.20	354	eP	Pn	10 46 57.6	+4.0
BKI	Bering	4.40	43	eS	Sn	10 48 01.1	+1.3

NEIC 12 10:49:06.2±0.0**, 51°.91N×179°.89E, h111^{km}, mb3.5**/20**, ML3.1**(AEIC)**, After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GALAA	Gareloi Lava P	0.84	100	ePn	Pn	10 49 26.6	+0.6
GAEA	Gareloi East	0.85	98	ePn	Pn	10 49 26.6	+0.5
TANO	Tanaga North	1.23	89	ePn	Pn	10 49 30.9	+1.0
TANO				eSn	Sn	10 49 49.9	+1.9
TASE	Tanaga Southea	1.29	93	ePn	Pn	10 49 31.5	+0.9
TASE				eSn	Sn	10 49 49.9	+0.8
TAFP	Tanaga Falls P	1.32	90	ePn	Pn	10 49 31.6	+0.7
TAFP				eSn	Sn	10 49 51.2	+1.5
TAPA	Tanaga Point A	1.43	93	ePn	Pn	10 49 32.9	+0.7
TAPA				eSn	Sn	10 49 53.8	+1.8
KIMD	Kanaga Island	1.79	94	ePn	Pn	10 49 37.5	+0.9
KIMD				eSn	Sn	10 50 01.6	+1.9
KICM	Kanaga Island	1.81	89	ePn	Pn	10 49 37.9	+1.2
KIKV	Kanaga Island	1.82	90	ePn	Pn	10 49 37.9	+0.9
KIWB	Kanaga Island	1.83	91	ePn	Pn	10 49 37.9	+0.8
KIWB				eSn	Sn	10 50 03.1	+2.4
KINC	Kanaga Island	1.85	88	ePn	Pn	10 49 38.4	+1.1
ADK	Adak	2.12	89	ePn	Pn	10 49 41.3	+0.5
ADK				eSn	Sn	10 50 08.7	+1.5
ADAG	Mount Adagdak	2.17	87	ePn	Pn	10 49 42.0	+0.6
ETKA	Kagalaska Isla	2.29	90	ePn	Pn	10 49 43.9	+0.9
GSTD	Great Sitkin T	2.46	85	ePn	Pn	10 49 45.9	+0.7
GSTD				eSn	Sn	10 50 17.1	+2.1
GSMY	Great Sitkin M	2.51	85	ePn	Pn	10 49 46.6	+0.8
GSTR	Great Sitkin T	2.51	84	ePn	Pn	10 49 47.1	+1.3
KOWE	Korovin West	3.64	81	ePn	Pn	10 50 02.8	+2.1
SMY	Shemya	3.65	285	ePn	Pn	10 49 59.0	-1.7
SMY				eSn	Sn	10 50 44.3	+1.3
ATKA	Atka Island	3.66	83	ePn	Pn	10 50 02.5	+1.6
NIKH	Nikolski High	6.96	77	ePn	Pn	10 50 48.9	+3.4
NIKH				eSn	Sn	10 52 03.3	+0.2
OKAK	Okmok	7.33	72	ePn	Pn	10 50 52.5	+2.1
OKTU	Okmok Mt. Tuli	7.49	74	ePn	Pn	10 50 55.5	+2.8
SPIA	Saint Paul Isl	7.79	44	ePn	Pn	10 51 01.2	+4.6
SPIA				eSn	Sn	10 52 21.1	-1.8
MSW	Makushin Switc	8.30	71	ePn	Pn	10 51 06.4	+2.8
MREP	Makushin Rep't	8.31	72	ePn	Pn	10 51 06.5	+2.7
UNV	Unalaska Valle	8.46	71	ePn	Pn	10 51 07.5	+1.8
FALS	False Pass	10.39	67	ePn	Pn	10 51 36.3	+4.3
FALS				eSn	Sn	10 53 26.6	+0.3
SDPT	Sand Point	12.14	66	ePn	Pn	10 51 56.7	+1.4
CHIR	Chirikof Islan	14.93	65	ePn	Pn	10 52 31.5	+0.2
SII	Sitkinak Islan	15.81	63	eP	P	10 52 44.5	+0.6
	7.5nm,1.0s						
SVW2	Sparrevohn	16.27	46	ePn	P	10 52 53.0	+4.1
	1.0nm,0.9s						
OHAK	Old Harbor	16.37	61	ePn	Pn	10 52 48.5	-0.7
	1.9nm,0.6s						
KDAK	Kodiak Island	16.83	59	eP	Pn	10 52 54.7	-0.1
	1.8nm,0.4s						
TTA	Tatalina	16.91	40	eP	Pn	10 52 55.1	-0.8
	1.4nm,0.5s						
CNPM	China Poot	17.84	53	eP	Pn	10 53 07.0	-0.1
	1.8nm,0.8s						
SEW	Seward	18.85	52	eP	P	10 53 17.0	-0.2
	2.4nm,0.9s						
KTH	Kantishna Hill	19.25	41	eP	P	10 53 22.3	+0.6
	2.3nm,0.8s						
BPAW	Bear Paw Mtn.	19.45	40	eP	P	10 53 24.1	+0.3
	2.7nm,0.9s						
SML	Sawmill	19.79	48	eP	P	10 53 27.4	0.0
	1.6nm,0.7s						
SCM	Sheep Creek Mo	20.25	48	eP	Pn	10 53 35.7	+0.2
	1.2nm,1.0s						
DHY	Denali Highway	20.58	44	eP	P	10 53 36.5	+0.4
	3.9nm,0.6s						
CCB	Clear Creek Bu	20.93	40	eP	P	10 53 39.7	0.0
	1.0nm,0.9s						
RIDG	Independent Ri	21.86	44	eP	P	10 53 49.6	0.0
	0.8nm,0.7s						
DOT	Dot Lake	22.17	44	eP	P	10 53 52.9	+0.1
	1.6nm,0.8s						
SCRK	Sand Creek	22.29	43	eP	P	10 53 53.0	-1.2
	3.3nm,1.0s						
EGAK	Eagle	23.69	42	eP	P	10 54 09.9	+2.6
	3.8nm,0.8s						
DAWY	Dawson	24.28	44	eP	P	10 54 16.2	+3.4
	2.5nm,0.8s						
INK	Inuvik	27.49	36	eP	P	10 54 43.7	+2.1
	0.6nm,0.5s						

ISCJB ***12*** *11:01:14.6±0.2, 60°.35N±0°.02×153°.15W±0°.03, h145^{km}±1^{km}, mb4.2/64, Error ellipse: s-maj=3.0km s-min=2.4km az=40.9*

MOS ***12*** *11:01:14.1±0.8, 60°.34N×153°.23W, h146^{km}, mb4.3/11, Error ellipse: s-maj=14.5km s-min=8.6km az=81.5*

NEIC ***12*** *11:01:16.3±0.0, 60°.27N×153°.07W, h147^{km}, mb4.3/51, ML4.1(AEIC), After AEIC.*

NEIC Felt at Anchorage, Chugiak and Eagle River.

AEIC ***12*** *11:01:16.3, 60°.27N×153°.07W, h147^{km}, ML4.1, MB4.3(NEIC)*

IDC ***12*** *11:01:19.0±2.6, 60°.61N×153°.07W, h162^{km}±23^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.6/45, mbtmp4.2/17, Error ellipse: s-maj=20.7km s-min=10.5km az=40.0*

ISC 12 11:01:16.0±0.6**, 60°.29N**±0°.04×**153°.10W**±0°.04**, h142^{km}**±6^{km}**, n503,** σ1ˢ.06/533**, mb4.2**/64**, 6C, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSO	Redoubt South	0.25	44	ePn	Pn	11 01 35.8	+0.2
IVE	Iliamna Volcan	0.27	171	ePn	Pn	11 01 35.8	+0.2
ILS	Iliamna Low So	0.33	177	ePn	Pn	11 01 35.7	0.0
RDJH	Redoubt Jeurge	0.34	25	ePn	Pn	11 01 36.0	+0.2
RDJH				eSn	Sn	11 01 51.3	+0.4
AUL	Augustine Lava	0.92	191	ePn	Pn	11 01 39.5	+0.3
AUL				eSn	Sn	11 01 57.6	+0.7
AUW	Augustine West	0.94	192	ePn	Pn	11 01 39.7	+0.3
AUE	Augustine Isla	0.94	189	ePn	Pn	11 01 39.5	+0.1
AUH	Augustine H	0.94	191	ePn	Pn	11 01 39.8	+0.3
HOM	Homer	0.97	130	ePn	Pn	11 01 40.2	+0.6
HOM				eSn	Sn	11 01 58.7	+1.2
AUI	Augustine Isla	0.97	190	ePn	Pn	11 01 39.8	+0.1
AUI				eSn	Sn	11 01 57.8	+0.1
SPWE	Spurr West	1.03	15	ePn	Pn	11 01 40.8	+0.5
SPU	Mount Spurr	1.04	29	ePn	Pn	11 01 40.5	+0.2
CNPM	China Poot	1.21	128	ePn	Pn	11 01 42.3	+0.4
CNPM				eSn	Sn	11 02 01.9	+0.2
SVW2	Sparrevohn	1.47	305	ePn	Pn	11 01 43.9	-0.6
SVW2				eSn	Sn	11 02 06.0	-0.3
FONW	Fourpeaked Sta	1.51	196	ePn	Pn	11 01 45.0	-0.1
SEW	Seward	1.83	94	ePn	Pn	11 01 48.2	-0.4
SEW				eSn	Sn	11 02 12.6	-0.9
RC01	Rabbit Creek A	1.84	63	ePn	Pn	11 01 48.0	-0.6
RC01				eSn	Sn	11 02 13.4	-0.3
KAHC	Katmai Hardscr	1.91	212	ePn	Pn	11 01 49.1	-0.5
KAHG	Katmai Hook Gl	1.94	203	ePn	Pn	11 01 49.9	-0.1
KARR	Katmai Rainbow	1.97	205	ePn	Pn	11 01 50.2	0.0
KELA	Mount Kelaz	2.29	217	ePn	Pn	11 01 53.7	-0.5
KABU	Katmai Buttres	2.31	210	ePn	Pn	11 01 54.3	-0.1
KABU				eSn	Sn	11 02 23.5	-0.4
PMR	Palmer	2.34	54	ePn	Pn	11 01 53.1	-1.5
PMR	Palmer	2.34	54	eP	Pn	11 01 53.1	-1.5
KDAK	Kodiak Island	2.52	174	ePn	Pn	11 01 55.2	-1.8
KDAK				eSn	Sn	11 02 26.3	-2.1
KDAK	Kodiak Island	2.52	174	eP	Pn	11 01 55.2	-1.8
KDAK				e		11 02 26.3	
KNK	Knik Glacier	2.54	62	ePn	Pn	11 01 55.8	-1.3
KNK				eSn	Sn	11 02 27.2	-1.6
PPLA	Purkeypile	2.66	9	ePn	Pn	11 01 59.1	+0.4
SML	Sawmill	2.78	55	ePn	Pn	11 01 58.8	-1.3
SML	Sawmill	2.78	55	eP	Pn	11 01 58.8	-1.3
TT01	Tatalina	2.98	333	ePn	Pn	11 02 02.0	-0.6
TTA	Tatalina	3.00	334	ePn	Pn	11 02 02.1	-0.8
TTA	Tatalina	3.00	334	eP	Pn	11 02 02.1	-0.8
GLI	Glacier Island	3.02	76	ePn	Pn	11 02 01.0	-2.3
GLI				eSn	Sn	11 02 38.5	-1.3
OHAK	Old Harbor	3.07	182	ePn	Pn	11 02 01.6	-2.3
HUR	Hurricane	3.17	30	ePn	Pn	11 02 04.6	-0.5
CAST	Castle Rocks	3.18	8	ePn	Pn	11 02 05.2	-0.1
SCM	Sheep Creek Mo	3.21	59	ePn	Pn	11 02 04.5	-1.1
SCM	Sheep Creek Mo	3.21	59	eP	Pn	11 02 04.5	-1.1
JPK	Jack Peak	3.29	74	ePn	Pn	11 02 05.1	-1.7
VMT	TAPS Tl Valdez	3.41	73	ePn	Pn	11 02 07.0	-1.2
KTH	Kantishna Hill	3.44	16	ePn	Pn	11 02 08.2	-0.5
EYAK	Cordova Ski Ar	3.66	83	ePn	Pn	11 02 11.1	-0.3
EYAK				eSn	Sn	11 02 52.8	-1.5
RND	Reindeer	3.72	31	ePn	Pn	11 02 11.4	-0.9
RND	Reindeer	3.72	31	eP	Pn	11 02 11.4	-0.9
SII	Sitkinak Islan	3.78	189	ePn	Pn	11 02 10.7	-2.4
SII				eSn	Sn	11 02 53.6	-3.8
DHY	Denali Highway	3.91	42	ePn	Pn	11 02 14.2	-0.7
DHY				eSn	Sn	11 03 00.2	-0.3
SGAM	Sherman Glacie	3.92	83	ePn	Pn	11 02 13.9	-1.0
BPAW	Bear Paw Mtn.	3.96	14	ePn	Pn	11 02 14.7	-0.6
MCK	McKinley	3.98	28	ePn	Pn	11 02 15.5	-0.1
MCK	McKinley	3.98	28	eP	Pn	11 02 15.5	-0.1
PS11	TAPS Pump St11	4.11	61	ePn	Pn	11 02 16.9	-0.4
BWN	Browne	4.25	22	ePn	Pn	11 02 19.0	-0.2
BWN				eSn	Sn	11 03 08.9	+0.5
AZAC	Aniakchak	4.33	221	ePn	Pn	11 02 20.1	-0.3
HMT	Hamilton	4.40	85	ePn	Pn	11 02 21.0	-0.2
HMT				eSn	Sn	11 03 10.3	-1.6
PAX	Paxson	4.53	50	ePn	Pn	11 02 22.6	-0.3
PAX				eSn	Sn	11 03 14.5	-0.6
CHIA	Chirikof Islan	4.65	198	ePn	Pn	11 02 22.2	-2.3
CHIR	Chirikof Islan	4.67	198	ePn	Pn	11 02 22.1	-2.7
PS10	TAPS Pump St10	4.69	45	ePn	Pn	11 02 25.5	+0.5
WRH	Wood River Hil	4.80	27	ePn	Pn	11 02 25.7	-0.8
CHGN	Chignik	4.88	217	ePn	Pn	11 02 26.1	-1.4
MLY	Manley	4.89	12	ePn	Pn	11 02 26.4	-1.2
CCB	Clear Creek Bu	5.02	27	ePn	Pn	11 02 28.3	-1.0
HDA	Harding Lake	5.03	32	ePn	Pn	11 02 28.8	-0.7
HDA				eSn	Sn	11 03 25.6	-1.3
HDA	Harding Lake	5.03	32	P	Pn	11 02 28.8	-0.7
	baz=219,SNR=541						
PS08	TAPS Pump Stn8	5.17	32	ePn	Pn	11 02 30.6	-0.8
MDM	Murphy Dome	5.20	23	ePn	Pn	11 02 31.2	-0.6
MDM				eSn	Sn	11 03 29.8	-1.1
TCOL	CIGO, UAF Yank	5.20	25	P	Pn	11 02 31.0	-0.7
	baz=211,SNR=130						
COLA	College	5.20	26	ePn	Pn	11 02 31.2	-0.5
COLA	College	5.20	26c	iP	Pn	11 02 30.9	-0.9
MENT	Mentasta	5.21	55	ePn	Pn	11 02 31.6	-0.3
RIDG	Independent Ri	5.21	45	ePn	Pn	11 02 32.0	+0.1
RIDG				eSn	Sn	11 03 29.6	-1.5
ILAR	Eielson Array	5.34	30	P	Pn	11 02 32.6	-1.0
	58nm,0.3s,baz=214,slow=13,SNR=2829						
ILAR				S	Sn	11 03 31.9	-2.3
	36nm,0.3s,baz=223,slow=20,SNR=17						
ILB	Eielson Array	5.34	30	ePn	Pn	11 02 32.9	-0.8
ILB				eSn	Sn	11 03 33.6	-0.7
BALM	Baldy	5.34	77	ePn	Pn	11 02 33.9	+0.1
BALM				eSn	Sn	11 03 32.5	-2.0
BALM	Baldy	5.34	77	eP	Pn	11 02 33.9	+0.1
BALM				e		11 03 32.5	
DOT	Dot Lake	5.43	48	ePn	Pn	11 02 34.3	-0.6
POKR	Poker Plat Res	5.50	26	P	Pn	11 02 34.9	-0.9
	baz=212,SNR=92						
PS07	TAPS Pump Stn7	5.51	22	ePn	Pn	11 02 35.3	-0.5
SCRK	Sand Creek	5.65	45	ePn	Pn	11 02 37.1	-0.8
IM3	Indian Mountai	5.73	357	ePn	Pn	11 02 38.4	-0.4
PS06	TAPS Pump Stn6	5.80	14	ePn	Pn	11 02 39.5	-0.1
CHX	Chaix Hills	5.99	87	ePn	Pn	11 02 43.0	+0.7
BCA3	Beaver Creek A	6.06	58	ePn	Pn	11 02 43.0	-0.3
PRP	Porcupine Dome	6.29	30	ePn	Pn	11 02 45.9	-0.5
PRP				eSn	Sn	11 03 55.1	-1.9
SDPT	Sand Point	6.32	222	ePn	Pn	11 02 44.4	-2.4
SDPT				eSn	Sn	11 03 54.7	-3.1
PCA	Pinnacle	6.41	86	ePn	Pn	11 02 48.5	+0.5
PS05	TAPS Pump Stn5	6.64	8	ePn	Pn	11 02 51.0	0.0
BCPM	Bancas Point	6.74	87	ePn	Pn	11 02 53.5	+1.2
PNL	Peninsula	6.91	89	ePn	Pn	11 02 54.4	-0.2
COLD	Coldfoot	7.09	9	ePn	Pn	11 02 57.0	0.0
EGAK	Eagle	7.12	46	ePn	Pn	11 02 56.4	-1.0
FYU	Fort Yukon	7.22	26	ePn	Pn	11 02 57.4	-1.3
DAWY	Dawson	7.45	54	ePn	Pn	11 03 01.8	-0.1
HYT	Haines Junctio	7.71	79	ePn	Pn	11 03 05.3	-0.1
HYT				eSn	Sn	11 04 30.6	-0.6
FALS	False Pass	7.76	230	ePn	Pn	11 03 05.0	-1.1
BM3	Burnt Mountain	8.07	24	ePn	Pn	11 03 08.0	-2.3
TOLK	Toolik Lake Re	8.53	9	ePn	Pn	11 03 16.6	+0.4
TOLK	Toolik Lake Re	8.53	9	P	Pn	11 03 16.5	+0.2
	baz=193,SNR=14						
SKAG	Skagway	8.97	88	ePn	Pn	11 03 22.9	+0.7
WHY	Whitehorse	9.00	80	ePn	Pn	11 03 22.6	-0.1
AKSA	Akutan Strait	9.19	233	ePn	Pn	11 03 23.9	-1.3
AKUT	Akutan	9.22	234	ePn	Pn	11 03 24.2	-1.3
BESE	Bessie Mountai	9.45	92	ePn	Pn	11 03 30.0	+1.3
BESE				eSn	Sn	11 05 11.6	-1.6
EPYK	Eagle Plains	9.54	43	ePn	Pn	11 03 29.5	-0.3
EPYK	Eagle Plains	9.54	43	P	Pn	11 03 29.7	-0.1
	baz=239,SNR=60						
UNV	Unalaska Valle	9.73	234	ePn	Pn	11 03 30.1	-2.2
JIS	Juneau Island	9.78	94	ePn	Pn	11 03 33.5	+0.5
JIS				eSn	Sn	11 05 19.1	-1.9
MSW	Makushin Switc	9.79	235	ePn	Pn	11 03 31.5	-1.7
SIT	Sitka	9.80	101	ePn	Pn	11 03 33.3	+0.1
SIT				eSn	Sn	11 05 20.0	-1.5
MREP	Makushin Rep't	9.85	235	ePn	Pn	11 03 33.2	-0.9
NIKH	Nikolski High	11.33	237	ePn	Pn	11 03 52.5	-1.0
INK	Inuvik	11.64	38	P	Pn	11 03 56.5	-1.0
	1.2nm,0.3s,baz=242,slow=15,SNR=27						
INK	Inuvik	11.64	38	ePn	Pn	11 03 57.3	-0.2
INK	Inuvik	11.64	38	eP	Pn	11 03 57.3	-0.2
DLBC	Dease Lake	11.90	89	P	Pn	11 04 03.2	+2.2
	0.6nm,0.3s,baz=307,slow=9.7,SNR=7.6						
DLBC	Dease Lake	11.90	89	ePn	Pn	11 04 01.2	+0.2
ADK	Adak	15.54	248	ePn	Pn	11 04 47.1	-0.1
	34nm,1.2s						
ADK	Adak	15.54	248	eP	Pn	11 04 47.1	-0.1
ADK				pmax	pmax		
	comp=Z,34nm,1.2s						
YKA	Yellowknife Ar	18.38	66	P	P	11 05 20.2	+0.7
	comp=Z,2.1nm,0.3s,baz=278,slow=9.9,SNR=25						
YKA	Yellowknife Ar	18.38	66	P	P	11 05 20.1	+0.5
YKB5	Yellowknife Ar	18.38	66	eP	P	11 05 20.2	+0.7
BILL	Bilibino	18.98	311	eP	P	11 05 21.7	-4.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
B05A	Bryant	21.50	110	P	P	11 05 55.6	+2.4
	baz=316						
D03D	Eldon	21.57	113	P	P	11 05 56.4	+2.4
	baz=317						
G03D	McMinnville, O	23.25	117	P	P	11 06 10.9	+0.4
	baz=321						
C09A	Chrisman Ranch	23.64	106	eP	P	11 06 13.9	-0.1
	comp=Z,4.0nm,0.4s						
NEW	Newport	23.87	104	P	P	11 06 17.9	+1.8
	comp=Z,5.3nm,0.6s,baz=311,slow=9.9,SNR=14						
NEW	Newport	23.87	104	eP	P	11 06 16.5	+0.4
	comp=Z,5.7nm,0.8s						
NEW	Newport	23.87	104	eP	P	11 06 16.5	+0.4
NEW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NEW	Newport	23.87	104	P	P	11 06 17.6	+1.5
	baz=314,SNR=5.9						
E08A	Dider Farm, El	24.21	109	eP	P	11 06 18.8	-0.3
	comp=Z,9.9nm,1.2s						
I04A	Tendick Farm,	24.74	118	P	P	11 06 25.7	+1.6
	baz=323						
I05D	Terrebonne, OR	24.79	116	P	P	11 06 26.9	+2.4
	baz=321						
WALA	Waterton Lakes	24.90	99	eP	P	11 06 25.3	-0.2
	comp=Z,3.9nm,0.6s						
K02D	Willamette Mer	25.08	121	P	P	11 06 29.8	+2.6
	baz=325						
J04D	Umpqua Nationa	25.32	118	P	P	11 06 31.7	+2.2
	baz=323						
PINE	Pine Mountain	25.39	116	eP	P	11 06 31.0	+0.8
	comp=Z,5.8nm,0.9s						
SEY	Seymchan	25.40	300	⇑eP	P	11 06 28.2	-1.6
F10A	Beach Ranch, E	25.45	108	eP	P	11 06 31.0	+0.5
	comp=Z,7.3nm,1.0s						
BMO	Blue Mountains	26.25	110	eP	P	11 06 38.3	+0.6
	comp=Z,7.3nm,1.3s						
BMO	Blue Mountains	26.25	110	eP	P	11 06 38.3	+0.6
BMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YBH	Yreka Blue Hor	26.28	121	P	P	11 06 41.1	+3.1
	comp=Z,2.3nm,0.8s,baz=20,slow=6.5,SNR=9.4						
M04C	Macdoel	26.61	120	P	P	11 06 43.7	+2.7
	baz=325						
J08A	Circle Bar Ran	26.85	113	eP	P	11 06 44.0	+0.9
	comp=Z,4.9nm,1.0s						
N02D	Trinity Center	26.91	122	P	P	11 06 46.3	+2.7
	baz=326						
PEA1	Petropavlovsk-	27.37	277	eP	P	11 06 47.8	+0.2
PETK	Petropavlovsk-	27.37	277	P	P	11 06 47.7	+0.2
	comp=Z,1.4nm,0.9s,baz=50,slow=15,SNR=2.9						
HRY	Holter Researc	27.52	101	eP	P	11 06 50.0	+0.8
EGMT	Eagleton	27.64	97	P	P	11 06 51.0	+0.9
	baz=313						
O03E	Paynes Creek	27.85	122	P	P	11 06 53.7	+1.6
	baz=326						
BOZ	Bozeman (W)	28.42	102	P	P	11 06 58.5	+1.4
	baz=316						
HLID	Hailey	28.58	108	eP	P	11 06 59.0	+0.4
	comp=Z,2.7nm,0.9s						
HLID	Hailey	28.58	108	P	P	11 07 00.5	+1.8
	baz=320						
BEKR	Beckworth	28.82	120	eP	P	11 07 00.8	+0.1
	comp=Z,3.8nm,0.5s						
YMR	Madison River	29.41	103	eP	P	11 07 06.5	+0.5
	comp=Z,4.1nm,0.7s						
VCNR	Virginia City	29.60	120	eP	P	11 07 07.6	-0.1
	comp=Z,4.4nm,0.8s						
PNTR	Pine Nut	29.80	120	eP	P	11 07 08.9	-0.5
	comp=Z,7.1nm,0.6s						
RLMT	Red Lodge	29.91	101	eP	P	11 07 10.2	-0.2
	comp=Z,8.4nm,0.7s						
RLMT	Red Lodge	29.91	101	P	P	11 07 12.0	+1.6
	baz=316,SNR=11						
IMW	Indian Meadow	30.00	104	eP	P	11 07 10.9	-0.3
	comp=Z,9.1nm,0.8s						
FXWY	Fox Creek	30.15	104	eP	P	11 07 12.8	+0.3
	comp=Z,3.7nm,0.8s						
TPAW	Teton Pass	30.29	104	eP	P	11 07 14.2	+0.4
	comp=Z,7.4nm,0.6s						
ELK	Elko	30.39	113	eP	P	11 07 15.3	+0.6
	comp=Z,3.5nm,0.8s						
ELK	Elko	30.39	113	eP	P	11 07 15.3	+0.6
ELK				pmax	pmax		
	comp=Z,4.0nm,0.8s						

KVN	Kaiserville	30.48	118	*e*P	P	11 07 15.5	+0.1
	comp=Z,6.1nm,1.2s						
KVN	Kaiserville	30.48	118	*e*P	P	11 07 15.5	+0.1
KVN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NVAR	Mina Array Bea	30.91	119	P	P	11 07 21.4	+2.3
	comp=Z,3.3nm,0.7s,baz=314,slow=9.1,SNR=44						
NV11	Mina Array Sit	30.97	119	*e*P	P	11 07 21.7	+2.0
	comp=Z,0.3nm,0.6s						
HWUT	Hardware Ranch	31.43	108	*e*P	P	11 07 24.4	+0.7
	comp=Z,9.1nm,1.4s						
BW06	Boulder Array	31.51	104	P	P	11 07 26.0	+1.5
	baz=319						
PD31	Pinedale Array	31.51	104	*e*P	P	11 07 26.1	+1.6
PDAR	Pinedale Array	31.51	104	P	P	11 07 26.1	+1.6
	comp=Z,1.2nm,0.6s,baz=323,slow=5.5,SNR=17						
DUG	Dugway, Tooele	31.95	111	P	P	11 07 29.9	+1.7
	baz=323						
R11A	Troy Canyon, C	32.17	116	P	P	11 07 32.1	+1.8
	baz=325,SNR=8.2						
CWC	Cottonwood Cre	32.67	121	P	P	11 07 36.1	+1.5
	baz=328						
VES	Vestal, Richgr	32.76	123	P	P	11 07 37.4	+2.3
	baz=329						
PSUT	Pine Spring	32.80	114	*e*P	P	11 07 35.9	+0.1
	comp=Z,4.4nm,0.8s						
MDND	Maddock	32.81	88	P	P	11 07 36.7	+1.2
	baz=312						
TPNV	Topopah Spring	33.04	118	P	P	11 07 39.6	+1.8
	baz=327,SNR=13						
K22A	Casper	33.07	101	P	P	11 07 39.6	+1.5
	baz=319						
ISA	Isabella, Lake	33.16	122	P	P	11 07 39.4	+0.7
	baz=329						
FURC	Furnace Creek,	33.17	119	P	P	11 07 40.3	+1.6
	baz=328						
RSSD	Black Hills	33.21	97	*e*P	P	11 07 39.2	-0.1
	comp=Z,5.2nm,0.6s						
RSSD	Black Hills	33.21	97	*e*P	P	11 07 39.2	-0.1
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RSSD	Black Hills	33.21	97	P	P	11 07 40.9	+1.6
	baz=317						
MPMC	Manual Prospec	33.25	121	P	P	11 07 41.9	+2.2
	baz=328,SNR=5.4						
PKM	Mcpherson Peak	33.27	125	P	P	11 07 40.4	+0.6
	baz=330						
RWWY	Rawlins	33.46	103	*e*P	P	11 07 41.3	-0.3
	comp=Z,8.2nm,0.8s						
LRMC	Laurel Mtn Rad	33.66	121	P	P	11 07 44.5	+1.4
	baz=329						
O20A	White River Ci	34.16	106	P	P	11 07 49.0	+1.5
	baz=321,SNR=5.7						
GSC	Goldstone, Bar	34.18	120	P	P	11 07 49.1	+1.5
	baz=328						
AGMN	Agassiz Nation	34.37	84	*e*P	P	11 07 49.0	0.0
	comp=Z,8.2nm,0.6s						
AGMN	Agassiz Nation	34.37	84	P	P	11 07 49.6	+0.7
	baz=312						
TUQ	Turquoise Moun	34.45	119	P	P	11 07 51.6	+1.6
	baz=328						
BBRC	Big Bear Solar	35.02	122	P	P	11 07 56.0	+1.0
	baz=329						
GMRC	Granite Mounta	35.12	120	P	P	11 07 57.8	+2.1
	baz=328						
U15A	North Rim	35.24	114	*e*P	P	11 07 56.9	0.0
	comp=Z,2.6nm,0.6s						
W13A	Hualapai Mount	35.63	117	*e*P	P	11 08 00.4	+0.2
	comp=Z,1.9nm,0.8s						
BELC	Belle Mtn. Jos	35.64	121	P	P	11 08 01.7	+1.6
	baz=329						
ISCO	Idaho Springs	35.69	103	P	P	11 08 01.7	+0.9
	baz=321						
PFO	Pinyon Flats O	35.77	122	P	P	11 08 02.6	+1.3
	baz=330						
IRM	Iron Mountain	35.87	119	P	P	11 08 04.0	+2.0
	baz=329,SNR=5.1						
BC3	Big Chuckawall	36.17	120	P	P	11 08 04.6	0.0
	baz=329						
PDMCI	Parker Dam,Lak	36.19	118	P	P	11 08 05.7	+1.1
	baz=328						
MVCO	Mesa Verde	36.36	109	P	P	11 08 07.4	+1.0
	baz=324						
MONP2	Monument Peak	36.41	122	P	P	11 08 08.6	+1.8
	baz=330						
WUAZ	Wupatki	36.41	114	P	P	11 08 08.8	+2.0
	baz=326,SNR=9.5						
Y12C	Blythe	36.49	119	P	P	11 08 09.1	+1.9
	baz=329						
OGNE	Ogallala	36.56	98	P	P	11 08 08.7	+0.8
	baz=320						
Q24A	Divide	36.57	104	P	P	11 08 09.5	+1.3
	baz=322						
S22A	4UR Ranch, Cre	36.72	107	P	P	11 08 11.1	+1.6
	baz=323						
IKP	In-Ko-Pah, Jac	36.75	122	P	P	11 08 11.3	+1.8
	baz=330						
EYMN	Ely	36.76	81	*e*P	P	11 08 09.8	+0.5
	comp=Z,8.2nm,0.9s						
EYMN	Ely	36.76	81	P	P	11 08 10.2	+0.8
	baz=313,SNR=5.3						
GLA	Glamis	36.95	120	P	P	11 08 12.6	+1.4
	baz=329						
ECSD	EROS Data Cent	37.18	90	*e*P	P	11 08 12.9	-0.1
	comp=Z,5.6nm,1.1s						
ECSD	EROS Data Cent	37.18	90	P	P	11 08 13.2	+0.2
	baz=317						
SDCO	Great Sand Dun	37.36	105	*e*P	P	11 08 16.1	+1.2
	comp=Z,3.2nm,1.0s						
SDCO	Great Sand Dun	37.36	105	P	P	11 08 16.7	+1.8
	baz=323,SNR=6.8						
E38A	The Farm, Brul	37.66	83	*e*P	P	11 08 17.5	+0.6
	comp=Z,12nm,0.5s						
E38A	The Farm, Brul	37.66	83	P	P	11 08 17.4	+0.4
	baz=314,SNR=7.2						
C40A	Isle Royale Na	37.93	79	P	P	11 08 19.8	+0.6
	baz=314						
SPMN	Marine on St.	38.01	85	P	P	11 08 20.6	+0.7
	baz=316						
BGNE	Belgrade	38.14	94	P	P	11 08 22.3	+1.3
	baz=319						
T25A	Trinidad	38.37	105	P	P	11 08 22.8	-0.4
	baz=323						
214A	Organ Pipe Nat	38.76	119	P	P	11 08 28.3	+1.9
	baz=329						
G39A	Holcombe	38.78	84	P	P	11 08 26.2	-0.1
	baz=316,SNR=6.3						
D41A	Chassel	38.81	80	P	P	11 08 27.6	+1.1
	baz=314						
ANMO	Albuquerque	39.16	109⇑	*e*P	P	11 08 31.9	+2.1
ANMO				pmax	pmax		
	comp=Z,4.0nm,2.0s						
ANMO	Albuquerque	39.16	109	P	P	11 08 31.4	+1.6
	baz=325						
G40A	Rib Lake	39.27	83	P	P	11 08 31.3	+0.9
	baz=316,SNR=8.5						
TUC	Tucson	39.36	116	P	P	11 08 33.2	+1.8
	baz=328						
F42A	Maple Grove Fa	39.94	81	P	P	11 08 36.4	+0.5
	baz=316						
E43A	Lone Tree Farm	40.06	80	P	P	11 08 37.6	+0.7
	baz=315						
I41A	Arkdale	40.30	84	*e*P	P	11 08 39.0	0.0
	comp=Z,10nm,0.6s						
I41A	Arkdale	40.30	84	P	P	11 08 39.5	+0.6
	baz=317						
E44A	Grand Marais A	40.41	79	P	P	11 08 40.3	+0.4
	baz=315						
121A	Cookes Peak, D	40.54	112	P	P	11 08 42.3	+1.1
	baz=327						
KSU1	Kansas State U	40.66	95	P	P	11 08 42.4	+0.5
	baz=321						
I42A	Draeger Farm,	40.90	84	*e*P	P	11 08 43.7	-0.2
	comp=Z,8.0nm,0.6s						
I42A	Draeger Farm,	40.90	84	P	P	11 08 44.5	+0.6
	baz=317						
JFWS	Jewell Farm	40.95	86	P	P	11 08 44.4	+0.1
	baz=318						
H43A	Windswept, Lux	41.04	82	P	P	11 08 45.7	+0.7
	baz=317						
L40A	Anamosa	41.10	88	*e*P	P	11 08 44.9	-0.6
	comp=Z,15nm,0.7s						
L40A	Anamosa	41.10	88	P	P	11 08 45.7	+0.2
	baz=318,SNR=7.5						
D46A	Sault St. Mari	41.14	77	P	P	11 08 46.0	+0.2
	baz=315						
F45A	CMU Biological	41.28	79	P	P	11 08 47.0	+0.1
	baz=316						
E46A	Sault Ste Mari	41.38	78	*e*P	P	11 08 47.4	-0.3
	comp=Z,8.9nm,0.6s						
E46A	Sault Ste Mari	41.38	78	P	P	11 08 48.3	+0.6
	baz=316						
D47A	Chapleau	41.48	76	P	P	11 08 48.7	+0.2
	baz=315						
AMTX	Amarillo	41.49	104	P	P	11 08 50.0	+1.1
	baz=324						
SPA0	Spitsbergen Ar	41.63	3	*e*P	P	11 08 48.2	-1.3
	comp=Z,24nm,1.3s						
SPITS	Spitsbergen Ar	41.63	3	P	P	11 08 48.0	-1.5
	comp=Z,0.7nm,0.3s,baz=30,slow=5.1,SNR=10.0						
G45A	Suttons Bay	41.67	80	P	P	11 08 50.7	+0.6
	baz=316						
MSTX	Muleshoe	41.71	106	P	P	11 08 51.8	+1.2
	baz=325						
E47A	Iron Bridge	41.82	77	P	P	11 08 51.2	-0.1
	baz=316						
G46A	Petoskey	41.86	79	P	P	11 08 52.1	+0.5
	baz=316						
L42A	Oliver, Polo	41.91	86	P	P	11 08 52.2	+0.1
	baz=318						
M41A	Milan	41.95	88	P	P	11 08 52.4	0.0
	baz=319						
D48A	Paudash Townsh	42.02	75	P	P	11 08 53.2	+0.2
	baz=315,SNR=6.4						
K43A	Burlington	42.06	84	P	P	11 08 53.6	+0.3
	baz=318						
I45A	Fountain	42.12	81	P	P	11 08 54.4	+0.6
	baz=317						
D49A	Beulah Townshi	42.16	74	P	P	11 08 54.4	+0.3
	baz=315						
MATQ	Matagami	42.17	69	P	P	11 08 53.8	-0.4
	baz=314						
H46A	Fife Lake	42.26	80	P	P	11 08 55.2	+0.3
	baz=317						
E48A	Lockeyer	42.34	76	P	P	11 08 55.8	+0.3
	baz=316						
MNTX	Cornudas Mount	42.35	111	*e*P	P	11 08 55.9	+0.2
	comp=Z,3.0nm,0.6s						
MNTX	Cornudas Mount	42.35	111	P	P	11 08 57.7	+2.0
	baz=327,SNR=6.9						
F48A	Evansville	42.59	77	P	P	11 08 58.2	+0.7
	baz=316						
M43A	Waltham Townsh	42.69	86	P	P	11 08 58.3	-0.1
	baz=319						
F49A	Sandfield	42.91	77	P	P	11 09 00.2	+0.1
	baz=316						
LSQQ	Lebel-sur-Quev	42.97	70	P	P	11 09 00.4	-0.2
	baz=315						
WMOK	Wichita Mounta	43.02	101	*e*P	P	11 09 00.9	-0.3
	comp=Z,6.1nm,0.9s						
WMOK	Wichita Mounta	43.02	101	*e*P	P	11 09 00.9	-0.3
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMOK	Wichita Mounta	43.02	101	P	P	11 09 02.3	+1.1
	baz=324,SNR=8.8						
E50A	Wahnapitae	43.07	75	P	P	11 09 01.1	-0.3
	baz=316						
HDIL	Hopedale	43.19	87	P	P	11 09 02.5	+0.1
	baz=319						
SCHQ	Schefferville	43.45	57	P	P	11 09 03.8	-0.5
	comp=Z,3.0nm,0.4s,baz=322,slow=8.7,SNR=3.6						
SCHQ	Schefferville	43.45	57	*e*P	P	11 09 03.8	-0.5
	comp=Z,5.6nm,0.6s						
TUL1	Leonard	43.55	97	P	P	11 09 05.4	0.0
	baz=323						
N44A	Piper City	43.58	86	P	P	11 09 06.1	+0.5
	baz=319						
E51A	G1948 Merrick	43.59	74	P	P	11 09 04.8	-0.8
	baz=316						
P43A	Skaggs, Pawnee	43.77	88	P	P	11 09 07.1	0.0
	baz=320						
D52A	ZEK Kipawa Sen	43.78	73	P	P	11 09 06.9	-0.2
	baz=316						
O44A	Mansfield	43.90	87	P	P	11 09 07.8	-0.4
	baz=320						
D53A	Lac Vacive, Po	44.05	72	P	P	11 09 08.9	-0.3
	baz=316						
KLBO	Killbear Provi	44.09	76	P	P	11 09 09.4	-0.1
	baz=317						
CCM	Cathedral Cave	44.13	91	P	P	11 09 09.6	-0.4
	baz=321						
J49A	Marlette	44.13	80	P	P	11 09 10.0	0.0
	baz=318						
L47A	Sherwood	44.15	83	P	P	11 09 09.5	-0.6
	baz=319						
BMRO	Meriville Lake	44.16	77	P	P	11 09 09.6	-0.6
	baz=317						
E52A	Mattawa	44.16	74	P	P	11 09 09.6	-0.5
	baz=317						
HHAR	Hobbs	44.17	95	*e*P	P	11 09 09.8	-0.6
	comp=Z,6.5nm,0.4s						
F52A	Sundridge	44.20	74	P	P	11 09 10.2	-0.3
	baz=317						
ABTX	Abilene, Hawle	44.31	104	P	P	11 09 12.5	+0.9
	baz=325						
BASO	Ashfield	44.37	78	P	P	11 09 12.0	+0.1
	baz=318						
SFIN	Lafayette	44.41	86	*e*P	P	11 09 12.0	-0.2
	comp=Z,8.4nm,0.6s						
SFIN	Lafayette	44.41	86	P	P	11 09 12.5	+0.3
	baz=320						
BUKO	Buck Lake	44.42	75	P	P	11 09 12.3	+0.1
	baz=317						
D54A	Lac Fusel, La	44.49	71	P	P	11 09 12.6	-0.1
	baz=316						
E53A	Dumoine, Ponti	44.57	73	P	P	11 09 13.1	-0.3
	baz=317						
U40A	Yellville	44.66	94	P	P	11 09 14.2	0.0
	baz=322						
ALGO	Algonquin Park	44.69	73	P	P	11 09 14.3	-0.1
	baz=317						
N47A	Urbana	44.73	84	P	P	11 09 14.6	-0.1
	baz=319						
E54A	Lac Daplat, Po	44.76	72	P	P	11 09 14.5	-0.3
	baz=317						
L49A	Milan	44.76	81	P	P	11 09 15.4	+0.5
	baz=319						
I51A	Listowel	44.84	78	P	P	11 09 16.5	+0.9
	baz=318						
O47A	Sheridan	44.98	85	P	P	11 09 16.4	-0.3
	baz=320						
Q45A	Warren Harvey,	45.02	88	P	P	11 09 17.2	+0.2
	baz=320						
G53A	Haliburton	45.03	75	P	P	11 09 17.0	-0.1
	baz=318						
N48A	Decatur	45.08	84	P	P	11 09 17.2	-0.2
	baz=319						
W39A	Magazine	45.11	96	P	P	11 09 18.0	+0.2
	baz=323						
PEMO	Pembroke	45.28	73	P	P	11 09 18.7	-0.3
	baz=317						
FCAR	Ozark Folk Cen	45.39	94	*e*P	P	11 09 19.2	-0.8
	comp=Z,2.7nm,0.7s						
S44A	Carbondale	45.40	90	P	P	11 09 20.1	0.0
	baz=321						
R45A	Skylar, Fairfi	45.42	89	P	P	11 09 20.3	+0.1
	baz=321						
O48A	Farmland	45.47	84	P	P	11 09 19.8	-0.7
	baz=320						
P47A	Martinsville	45.51	86	P	P	11 09 20.8	-0.1
	baz=320						
MIAR	Mount Ida	45.73	97	P	P	11 09 23.1	+0.4
	baz=323						
G55A	Calabogie	45.84	73	P	P	11 09 23.4	-0.1
	baz=318						
Q47A	Bedord North L	45.85	86	P	P	11 09 23.7	+0.2
	baz=321						
WHTX	Lake Whitney,	45.89	102	P	P	11 09 25.0	+1.1
	baz=325						
W41B	Gary Mavity, V	45.89	95	P	P	11 09 24.1	+0.2
	baz=323						
TYNO	Tyneside	45.93	77	P	P	11 09 24.4	+0.2
	baz=319						
O49A	Covington	45.93	84	P	P	11 09 23.8	-0.3
	baz=320						
P48A	Milroy	45.94	85	P	P	11 09 23.8	-0.5
	baz=320						
JCT	Junction City	46.00	106	*e*P	P	11 09 25.7	+0.8
	comp=Z,27nm,0.7s						
JCT	Junction City	46.00	106	*e*P	P	11 09 25.7	+0.8
JCT				pmax	pmax		
	comp=Z,27nm,0.7s						
JCT	Junction City	46.00	106	P	P	11 09 26.2	+1.3
	baz=326,SNR=13						
WLVO	Wesleyville	46.02	76	P	P	11 09 24.8	0.0
	baz=318						
LATQ	La Tuque	46.13	68	P	P	11 09 25.4	-0.2
	baz=317						
S46A	Don Dixon Farm	46.17	89	P	P	11 09 26.1	0.0
	baz=321						
Q48A	North Vernon	46.20	86	P	P	11 09 25.9	-0.4
	baz=321						
R47A	Wooly Knot Far	46.29	87	P	P	11 09 26.6	-0.5
	baz=321						
O50A	Cable	46.31	83	P	P	11 09 26.8	-0.4
	baz=320						
N51A	Ashland	46.34	81	P	P	11 09 27.2	-0.2
	baz=320						
M52A	Chesterland	46.37	80	P	P	11 09 26.7	-0.9
	baz=319						
J54A	Appleton	46.39	76	P	P	11 09 28.0	+0.2
	baz=319						
WCI	Wyandotte Cave	46.46	87	P	P	11 09 27.0	-1.3
H56A	Elgin	46.55	73	P	P	11 09 28.8	-0.1
	baz=318						
Q49A	Aurora	46.56	85	P	P	11 09 28.4	-0.6
	baz=321						
MEDO	Medina	46.56	76	P	P	11 09 28.9	-0.2
	baz=319						
T46A	Princeton	46.59	89	P	P	11 09 29.5	+0.2
	baz=322						
P50A	Jamestown	46.64	84	P	P	11 09 29.5	-0.2
	baz=320						
S47A	Hartford	46.66	88	P	P	11 09 29.7	-0.2
	baz=321						
PECO	Prince Edward	46.69	75	P	P	11 09 29.5	-0.5
	baz=319						
N52A	McGinn’s Farm,	46.76	81	P	P	11 09 31.0	+0.3
	baz=320						
M53A	WI Miller and	46.78	80	P	P	11 09 31.0	+0.2
	baz=320						
O51A	Pataskala	46.81	82	P	P	11 09 30.6	-0.5
	baz=320						
L54A	Sinclairville	46.84	78	P	P	11 09 31.3	0.0
	baz=319						
K54A	Basiliko Farm,	46.87	77	P	P	11 09 31.4	0.0
	baz=319						
T47A	Sharon Grove	47.02	89	P	P	11 09 32.5	-0.2
	baz=322						
S48A	Wiedeman Farm,	47.02	87	P	P	11 09 32.8	0.0
	baz=321,SNR=8.3						
K55A	Perry	47.08	76	P	P	11 09 32.8	-0.3
	baz=319						
X43A	Marvell	47.09	94	P	P	11 09 33.3	+0.1
	baz=323						
N53A	Lisbon	47.18	80	P	P	11 09 33.8	-0.2
	baz=320						
M54A	Oil Creek Stat	47.22	79	P	P	11 09 34.5	+0.3
	baz=320						
T48A	Bowling Green	47.28	88	P	P	11 09 34.6	-0.1
	baz=322						
S49A	Springfield	47.31	87	P	P	11 09 34.9	0.0
	baz=321						
Q51A	Peebles	47.31	84	P	P	11 09 34.8	-0.1
	baz=321						
L55A	Hinsdale	47.31	77	P	P	11 09 35.1	+0.2
	baz=319						
LONY	Lake Ozonia	47.33	72	P	P	11 09 34.8	-0.2
	baz=319						
WVT	Waverly	47.33	90	P	P	11 09 35.5	+0.4
WVT	Waverly	47.33	90	P	P	11 09 35.1	0.0
	baz=322						
U47A	Clarksville	47.36	89	P	P	11 09 35.0	-0.3
	baz=322						
R50A	Paris	47.40	85	P	P	11 09 35.2	-0.4
	baz=321						
P52A	Corning	47.44	82	P	P	11 09 35.1	-0.8
	baz=320						
V46A	Holladay	47.45	91	P	P	11 09 36.2	+0.2
	baz=322						
U48A	Cassie Pea, Po	47.68	89	P	P	11 09 38.2	+0.4
	baz=322						
M55A	Ridgway	47.69	78	P	P	11 09 38.2	+0.3
	baz=320						
T49A	Edmonton	47.71	87	P	P	11 09 38.0	-0.1
	baz=322						
R51A	Hillsboro	47.75	85	P	P	11 09 38.3	0.0
	baz=321						
OXF	Oxford	47.83	93	*e*P	P	11 09 38.5	-0.4
	comp=Z,54nm,1.0s						
OXF	Oxford	47.83	93	*e*P	P	11 09 38.6	-0.4
OXF				pmax	pmax		
	comp=Z,55nm,1.0s						
OXF	Oxford	47.83	93	P	P	11 09 39.5	+0.6
	baz=323,SNR=8.8						
S50A	Richmond	47.83	86	P	P	11 09 38.8	-0.1
	baz=321						
O54A	Avella	47.89	80	P	P	11 09 39.3	0.0
	baz=320						
Q52A	Bidwell	47.89	83	P	P	11 09 39.1	-0.3
	baz=321						
P53A	Whipple	47.92	82	P	P	11 09 39.5	-0.1
	baz=321						
M56A	Emporium	47.97	78	P	P	11 09 40.2	+0.3
	baz=320						
U49A	Red Boiling Sp	48.05	88	P	P	11 09 40.8	+0.1
	baz=322						
N55A	Marion Center	48.11	79	P	P	11 09 41.5	+0.4
	baz=320						
T50A	Nancy	48.13	87	P	P	11 09 41.6	+0.3
	baz=322						
W47A	Westpoint	48.15	91	P	P	11 09 41.6	+0.2
	baz=323						
X46A	Booneville	48.20	92	P	P	11 09 42.2	+0.4
	baz=323,SNR=5.2						
S51A	Beattyville	48.26	85	P	P	11 09 42.0	-0.2
	baz=322						
Q53A	Leroy	48.34	83	P	P	11 09 42.8	-0.1
	baz=321						
N56A	West Decatur	48.34	78	P	P	11 09 41.9	-1.0
	baz=320						
O55A	Ligonier	48.39	80	P	P	11 09 43.1	-0.2
	baz=320						
BINY	Binghamton	48.48	75	P	P	11 09 43.9	0.0
	baz=320						
R53A	Hurricane	48.54	83	P	P	11 09 43.8	-0.5
	baz=321						
MCWV	Mont Chateau	48.55	80	P	P	11 09 44.0	-0.5
	baz=321						
W48A	Pulaski	48.56	90	P	P	11 09 44.6	0.0
	baz=323						
V49A	McMinnville	48.58	89	P	P	11 09 44.7	-0.1
	baz=322						
Q54A	Coxs Mills	48.58	82	P	P	11 09 44.4	-0.3
	baz=321						
U50A	Jamestown	48.60	87	P	P	11 09 44.9	0.0
	baz=322						
T51A	Gray	48.61	86	P	P	11 09 44.9	0.0
	baz=322						
P55A	Reedsville	48.67	81	P	P	11 09 45.4	-0.1
	baz=321						
O56A	Blue Knob Stat	48.71	79	P	P	11 09 45.6	-0.1
	baz=320						
SSPA	Standing Stone	48.76	78	P	P	11 09 46.2	+0.2
	baz=320						
N57A	Milroy	48.83	78	P	P	11 09 46.5	-0.1
	baz=320						
LBNH	Lisbon	48.87	71	P	P	11 09 47.0	+0.1
	baz=319						
W49A	Belvidere	48.91	90	P	P	11 09 47.5	+0.2
	baz=323						
X48A	Hartselle	49.05	91	P	P	11 09 48.2	-0.1
	baz=323						
R54A	Victor	49.13	83	P	P	11 09 48.7	-0.2
	baz=321						
TZTN	Tazewell	49.14	86	P	P	11 09 49.1	+0.1
	baz=322						
P56A	Dayton Farm, R	49.16	80	P	P	11 09 49.1	0.0
	baz=321						
O57A	Amberson	49.21	78	P	P	11 09 49.6	+0.2
	baz=321						
M59A	Waymart	49.25	75	P	P	11 09 49.3	-0.5
	baz=320						
T53A	Wise	49.30	85	P	P	11 09 50.1	-0.1
	baz=322						
V51A	Loudon	49.32	87	P	P	11 09 50.5	+0.2
	baz=322						
Q56A	Snyder Ridge,	49.35	80	P	P	11 09 50.7	+0.1
	baz=321						
Y48A	Jasper	49.42	91	P	P	11 09 50.9	-0.2
	baz=323						
N59A	State Game Lan	49.57	76	P	P	11 09 52.0	-0.3
	baz=320						
P57A	Homestead Farm	49.58	79	P	P	11 09 52.5	+0.2

	baz=321						
O58A	Lewisberry	49.62	78	P	P	11 09 52.9	+0.3
	baz=321						
V52A	Sevierville	49.67	87	P	P	11 09 53.1	+0.1
	baz=322						
S55A	Lewisburg	49.69	83	P	P	11 09 52.9	-0.2
	baz=322						
T54A	Tazewell	49.71	84	P	P	11 09 53.1	-0.3
	baz=322						
Q57A	Strasburg	49.74	80	P	P	11 09 53.1	-0.4
	baz=321						
R56A	Bull Pasture M	49.74	81	P	P	11 09 53.1	-0.4
	baz=321						
X50B	Fort Payne	49.74	90	P	P	11 09 53.6	0.0
	baz=323						
U53A	Fall Branch	49.76	85	P	P	11 09 53.7	0.0
	baz=322						
O59A	Robesonia	49.83	77	P	P	11 09 54.5	+0.3
	baz=321						
Y49A	Blount Mountai	49.84	91	eP	P	11 09 53.8	-0.5
	comp=Z,9.1nm,0.6s						
Y49A	Blount Mountai	49.84	91	P	P	11 09 54.1	-0.2
	baz=323						
N60A	Cedar Hill Far	49.93	76	P	P	11 09 55.0	+0.1
	baz=321						
U54A	Nelsons Funny	50.02	85	P	P	11 09 56.1	+0.4
	baz=322						
W52A	Murphy	50.10	88	P	P	11 09 55.9	-0.3
	baz=323						
Y50A	Piedmont	50.15	90	P	P	11 09 56.9	+0.2
	baz=323						
Q58A	Fox Den Farm,	50.17	79	P	P	11 09 56.8	+0.1
	baz=321						
BLA	Blacksburg	50.17	83	P	P	11 09 56.8	0.0
	baz=322						
V53A	Saluda	50.20	86	P	P	11 09 57.3	+0.3
	baz=323						
O60A	Telford	50.21	76	P	P	11 09 57.4	+0.4
	baz=321						
R57A	Stanardsville	50.26	81	P	P	11 09 57.4	0.0
	baz=322						
Z49A	Columbiana	50.31	91	P	P	11 09 57.7	-0.2
	baz=324						
U55A	TA2, Sparta	50.41	84	P	P	11 09 58.8	+0.1
	baz=322						
Y51A	Rockmart	50.48	89	P	P	11 09 58.9	-0.2
	baz=323						
P60A	Greenville	50.49	77	P	P	11 09 59.0	0.0
	baz=321						
T56A	Rocky Mt	50.50	83	P	P	11 09 59.2	-0.1
	baz=322						
V54A	Nebo	50.54	85	P	P	11 09 59.6	0.0
	baz=323						
Z50A	Ashland	50.57	91	eP	P	11 09 59.0	-0.8
	comp=Z,13nm,1.1s						
Z50A	Ashland	50.57	91	P	P	11 09 59.7	-0.1
	baz=324						
149A	Jones	50.66	92	P	P	11 10 00.4	-0.1
	baz=324,SNR=5.8						
V55A	Taylorsville	50.84	85	P	P	11 10 01.8	0.0
	baz=323						
LNIG	Linares	50.85	109	eP	P	11 10 01.7	-0.4
	comp=Z,3.7nm,0.8s						
U56A	King	50.87	84	P	P	11 10 02.0	0.0
	baz=322						
X53A	Estanollee	50.88	88	P	P	11 10 02.1	0.0
	baz=323						
T57A	Hurt	50.91	82	P	P	11 10 01.9	-0.4
	baz=322						
W54A	Cherokee Point	50.97	86	P	P	11 10 02.2	-0.5
	baz=323						
249A	Camden	51.00	93	P	P	11 10 03.3	+0.2
	baz=324						
Y52A	Lilburn	51.01	89	P	P	11 10 03.3	+0.2
	baz=323						
150A	Eclectic	51.04	91	P	P	11 10 03.4	+0.1
	baz=324						
V56A	Mocksville	51.23	84	P	P	11 10 04.9	+0.1
	baz=323						
Y53A	Monroe	51.25	88	P	P	11 10 04.9	0.0
	baz=323						
X54A	Belton	51.30	87	P	P	11 10 05.3	0.0
	baz=323						
T58A	Grand View Acr	51.31	82	P	P	11 10 05.0	-0.3
	baz=322						
U57A	Blanch	51.32	83	P	P	11 10 05.2	-0.1
	baz=322						
KMSC	Kings Mountain	51.35	85	P	P	11 10 05.1	-0.5
	baz=323						
Z52A	Williamson	51.37	89	P	P	11 10 05.6	-0.2
	baz=324						
152A	Waverly Hall	51.64	90	P	P	11 10 07.1	-0.7
	baz=324						
GOGA	Godfrey	51.67	88	P	P	11 10 07.3	-0.7
GOGA	Godfrey	51.67	88	P	P	11 10 07.6	-0.3
	baz=324						
Y54A	Tignall	51.69	87	P	P	11 10 08.2	0.0
	baz=324						
Z53A	Monticello	51.72	89	P	P	11 10 07.8	-0.5
	baz=324						
X55A	Gracelyn & Ava	51.73	86	P	P	11 10 08.1	-0.4
	baz=323						
251A	Midway	51.76	91	P	P	11 10 08.2	-0.5
	baz=324						
T59A	Double "B" Far	51.77	81	P	P	11 10 08.0	-0.7
	baz=322						
W57A	Gilead	52.00	84	P	P	11 10 10.4	-0.1
	baz=323						
X56A	White Oak	52.01	86	P	P	11 10 10.3	-0.3
	baz=323						
Y55A	Saluda	52.05	87	P	P	11 10 10.8	0.0
	baz=323						
Z54A	Sparta	52.12	88	P	P	11 10 10.5	-0.8
	baz=324						
252A	Lumpkin	52.17	91	P	P	11 10 10.9	-0.8
	baz=324						
V59A	Middlesex	52.39	82	P	P	11 10 13.2	0.0
	baz=323						
W58A	Raeford	52.48	84	P	P	11 10 14.3	+0.3
	baz=323						
X58A	Rowland	52.80	84	P	P	11 10 16.4	+0.1
	baz=323						
254A	Abbeville	52.93	89	P	P	11 10 16.4	-0.9
	baz=324						
SONA0	Songino Array	54.58	306	eP	P	11 10 30.3	+1.0
SONM	Songino Array	54.58	306	P	P	11 10 30.3	+1.0
	comp=Z,1.7nm,0.8s,baz=42,slow=7.9,SNR=11						
757A	Oxford	55.99	90	P	P	11 10 39.1	-0.3
	baz=326						
ZAA1	Zalesovo Array	57.11	323	eP	P	11 10 46.5	-0.5
ZALV	Zalesovo Beam	57.11	323	P	P	11 10 46.5	-0.5
	comp=Z,2.7nm,0.4s,baz=18,slow=6.0,SNR=4.9						
HHC	Hu-ho-hao-te	58.01	297	eP	P	11 10 56.3	+2.7
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,4.6s						
NB200	NORSAR Array S	58.40	9	eP	P	11 10 54.1	-1.8
NOA	NORSAR Array B	58.40	9	P	P	11 10 54.1	-1.8
	comp=Z,0.5nm,0.7s,baz=352,slow=6.3,SNR=3.0						
FIA0	FINESS Array S	58.60	0	eP	P	11 10 55.0	-2.2
FIA0	FINESS Array S	58.60	0	eP	P	11 10 55.0	-2.2
FINES	FINESS Array B	58.60	0	P	P	11 10 55.0	-2.2
	comp=Z,0.5nm,0.5s,baz=353,slow=9.8,SNR=4.0						
DGZ	Jazzator, Alta	59.98	319⇑	eP	P	11 11 04.4	-2.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	61.76	325⇑	eP	P	11 11 18.1	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	61.79	332c	iP	P	11 11 17.9	-1.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVAR	Borovoye Array	61.79	332	P	P	11 11 18.1	-1.0
	comp=Z,3.3nm,0.6s,baz=25,slow=8.2,SNR=18						
MK32	Makanchi Array	64.18	321	eP	P	11 11 33.6	-1.4
MKAR	Makanchi Array	64.18	321	P	P	11 11 33.6	-1.4
	comp=Z,0.3nm,0.4s,baz=49,slow=8.2,SNR=3.9						
WMQ	Urumqi	65.02	316	eP	P	11 11 42.9	+2.3
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WHN	Wuhan	65.21	288	P	P	11 11 47.6	+5.8
OTUK	Ortayu	65.72	329	P	P	11 11 44.0	-0.9
AKTO	Aktyubinsk	66.81	339	P	P	11 11 50.5	-1.3
	comp=Z,0.6nm,0.4s,baz=32,slow=7.0,SNR=3.8						
ABKAR	Akbulak array	67.58	337	eP	P	11 11 55.8	-0.9
	comp=Z,1.5nm,0.6s						
CD2	Chengdu	69.77	297	eP	P	11 12 10.6	0.0
KSH	Kashi	72.72	322	eP	P	11 12 33.7	+5.4
KSH				PcP	PcP	11 12 50.8	+5.9
KSH				pP	pP	11 13 04.3	+1.1
KSH				PP	PP	11 15 18.2	+7.0
CMAR	Chiang Mai Arr	82.70	294	iP	P	11 13 22.3	-1.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						

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*EAF **12** 11:02:49.9±1.9, 26°.25S×24°.20E, h10km, MD3.7*
*BUL **12** 11:02:51.2±1.9, 26°.24S×24°.14E, h10km, MD4.0*
*PRE **12** 11:02:54.4±0.9, 26°.91S×26°.71E, h2km, ML2.7*
ISC 12 11:02:55.4±1.5**, 26°.80S**±0°.04×**26°.69E**±0°.05**, h13**km±12km**,**
n20, σ**1s.64**/40**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WDLM	Western Deep L	0.76	60	eP	Pg	11 03 09.7	-0.4
WDLM				eS	Sb	11 03 20.9	0.0
WDLM				AML	AML	11 03 26.7	
	comp=Z,172nm,0.2s						
KLOF	Kloof	0.94	62	eP	Pb	11 03 13.4	-0.2
KLOF				eS	Sb	11 03 27.2	+1.1
KLOF				AML	AML	11 03 31.9	
	comp=Z,856nm,0.2s						
KSR	Koster	0.96	11	eP	Pn	11 03 15.6	+0.8
KSR				eS	Sb	11 03 29.0	+2.2
KSR				AML	AML	11 03 34.4	
	comp=Z,58nm,0.1s						
SWZ	Schweizer	1.27	252	eP	Pn	11 03 18.6	-0.4
SWZ				eS	Sn	11 03 36.3	+0.3
SWZ				AML	AML	11 03 40.4	
	comp=Z,279nm,0.3s						
ERPM	east rand prop	1.46	72	eP	Pg	11 03 23.4	-0.1
ERPM				eS	Sg	11 03 44.0	+1.4
ERPM				AML	AML	11 03 44.8	
	comp=Z,93nm,0.2s						
LBTB	Lobatse	2.03	331	eP	Pb	11 03 32.0	-0.3
LBTB				eS	Sb	11 03 58.7	+1.2
LBTB				AML	AML	11 04 03.6	
	comp=Z,91nm,0.4s						
BOSA	Boshof	2.21	215	iP	Pn	11 03 32.5	+0.7
BOSA				iS	Sn	11 03 59.5	+0.3
BOSA	Boshof	2.21	215	eP	Pn	11 03 31.5	-0.4
BOSA				eS	Sn	11 03 58.7	-0.5
BOSA				AML	AML	11 04 12.9	
	comp=Z,30nm,0.3s						
BOSA	Boshof	2.21	215	iP	Pn	11 03 32.5	+0.7
BOSA				iS	Sn	11 03 59.5	+0.3
BOSA	Boshof	2.21	215	iP	Pn	11 03 32.5	+0.7
BOSA				iS	Sn	11 03 59.5	+0.3
UPI	Upington	5.07	251	eP	Pn	11 04 12.4	+1.2
UPI				eS	Sn	11 05 07.9	-1.8
UPI				AML	AML	11 05 24.4	
	comp=Z,33nm,0.7s						
MSNA	Messina	5.38	35	iP	Pb	11 04 26.3	-2.9
MSNA				iS	Sb	11 05 37.2	+3.5
MSNA	Messina	5.38	35	iP	Pb	11 04 26.3	-2.9
MSNA				iS	Sb	11 05 37.2	+3.5
MSNA	Messina	5.38	35	iP	Pb	11 04 26.3	-2.9
MSNA				iS	Sb	11 05 37.2	+3.5
MATP	Matopo	6.56	15	iP	Pn	11 04 32.1	+0.4
MATP				iS	Sn	11 05 45.7	-0.8
MATP	Matopo	6.56	15	iP	Pn	11 04 32.1	+0.4
MATP				iS	Sn	11 05 45.7	-0.8
MATP	Matopo	6.56	15	iP	Pn	11 04 32.1	+0.4
MATP				iS	Sn	11 05 45.7	-0.8
BLWY	Bulawayo	6.86	15	iP	Pn	11 04 34.5	-1.3
BLWY				iS	Sn	11 05 52.1	-1.9
BLWY	Bulawayo	6.86	15	iP	Pn	11 04 34.5	-1.3
BLWY				iS	Sn	11 05 52.1	-1.9
BLWY	Bulawayo	6.86	15	iP	Pn	11 04 34.5	-1.3
BLWY				iS	Sn	11 05 52.1	-1.9

UCR 12 11:38:03.6±1.2**, 9°.63N×82°.96W, h0**km±4km**, MW3.5, 2C,**
Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK0	Durika	0.46	218⇑	eP	Pb	11 38 14.1	-0.7
DRK0				eS	Sb	11 38 22.0	-0.3
CVTR	Volcan Turrial	0.88	296	eP	Pb	11 38 21.7	-0.4
CVTR				eS	Sb	11 38 35.1	+0.5
LCR2	La Lucha 2	1.04	276⇑	eP	Pg	11 38 24.0	+0.5
LCR2				eS	Sb	11 38 39.0	+0.1
CEDE	Laguna Cedeo	1.92	296	eP	Pn	11 38 38.5	+0.9
CEDE				eS	Sb	11 39 04.5	+0.3
ARE1	Arenal 1	1.92	296	eP	Pb	11 38 39.1	-0.5
JTS	Las Juntas de	2.08	289	eP	Pb	11 38 41.2	-1.0

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*IDC **12** 11:39:15.4±1.6, 11°.45S×165°.04E, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.7/40, mbtmp4.0/6, ML4.2/2, Error ellipse: s-maj=39.1km s-min=30.3km az=126.0*
*ISCJB **12** 11:39:19.2±1.2, 11°.6S±0°.1×164°.9E±0°.1, h34km, mb3.8/4, Error ellipse: s-maj=23.9km s-min=11.8km az=39.7*
ISC 12 11:39:20.8±1.3**, 11°.5S**±0°.1×**165°.0E**±0°.1**, h34**km**, n6,**
σ**0s.73**/7**, mb3.8**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.33	292	Pn	Pn	11 40 38.8	+0.8
	23nm,0.3s,baz=124,slow=7.8,SNR=6.8						
HNR				Sn	Sn	11 41 37.3	-0.9
	9.9nm,0.3s,baz=265,slow=20,SNR=3.3						
DZM	Mont Dzumac	10.63	172	Pn	Pn	11 41 50.8	0.0
	0.8nm,0.3s,baz=302,slow=22,SNR=8.2						
WRA	Warramunga Arr	30.61	250	P	P	11 45 32.1	+0.2
	1.9nm,1.1s,baz=82,slow=9.8,SNR=4.2						
ASAR	Alice Springs	31.91	243	P	P	11 45 43.0	-0.4
	1.2nm,1.0s,baz=64,slow=11,SNR=8.0						
ILAR	Eielson Array	84.17	19	P	P	11 51 47.7	-0.5
	0.4nm,0.5s,baz=236,slow=4.5,SNR=6.4						
MKAR	Makanchi Array	93.31	317	P	P	11 52 32.6	+0.3
	0.7nm,0.9s,baz=98,slow=6.7,SNR=3.9						

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*NIED **12** 11:40:00, 39°.00N×142°.70E, h5km, Mw3.7 Best double couple: $M_0$3.85000×10^{14} NP1:ϕ_s165.00000°, δ50.00000°, λ-31.00000°. NP2:ϕ_s276.00000°, δ67.00000°, λ-136.00000°.*
*IDC **12** 11:40:32.2±0.9, 38°.92N×142°.76E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.6/45, mbtmp3.7/8, ML3.2/2, MS2.7/2, Ms1 2.7/2, ms1mx2.3/50, Error ellipse: s-maj=27.7km s-min=19.8km az=107.0*
*JMA **12** 11:40:33.8±0.1, 39°.02N×142°.65E, h23km±1km, M3.9*
JMA Felt I J1.
ISC 12 11:40:33.9±2.1**, 39°.02N**±0°.05×**142°.59E**±0°.07**, h10**km±12km**,**
n27, σ**1s.55**/27**, mb3.8**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.72	275	P	Pg	11 40 48.3	+0.6
OFUJ				S	Sb	11 40 58.5	+0.2
MIYJ	Miyakonagasawa	0.81	313	P	Pg	11 40 49.5	-0.1
JKMT	Kesennumamotoy	0.89	257	P	Pb	11 40 51.1	-0.3
JKMT				S	Sb	11 41 03.5	+0.1
JMK	Ichinoseki	1.07	267	P	Pb	11 40 54.1	-0.3
JMK				S	Sb	11 41 08.5	+0.1
JTH	Tanohata	1.07	329	P	Pb	11 40 53.7	-0.8
JOM	Ohasama	1.10	295	P	Pb	11 40 54.6	-0.4
JOM				S	Sb	11 41 09.2	-0.2
JIO	Ouri	1.12	240	P	Pb	11 40 54.3	-1.0
JKZ	Kuzumaki	1.37	315	P	Pn	11 40 58.5	-0.6
JRG	Rokugo	1.56	285	P	Pn	11 41 02.2	+0.5
JANG	Nango	1.58	329	P	Pn	11 41 01.6	-0.4
JANG				eS	Sn	11 41 22.6	+0.1
JOU	Okura	1.64	247	P	Pn	11 41 02.7	-0.1
JOU				S	Sb	11 41 24.6	-0.3
MJAR	Matsushiro Arr	4.26	236	Pn	Pn	11 41 40.7	+1.9
	1.1nm,0.3s,baz=34,slow=14,SNR=54						
MJAR				LR	LR	11 43 06.2	
	comp=Z,28nm,20.1s,baz=215,slow=36						
MAT	Matsushiro	4.26	236	P	Pn	11 41 41.9	+3.1
MAT				eS	Sb	11 42 34.6	-5.7
ASAJ	Asahikawa	5.09	0	Pn	Pn	11 41 51.0	+0.8
	0.7nm,0.3s,baz=190,slow=15,SNR=7.5						
H11N2	WAKE ISLAND Hy	28.46	126	T	T	12 16 55.1	
	baz=317,slow=75,SNR=96						
H11N1	WAKE ISLAND Hy	28.47	126	T	T	12 16 55.2	
	baz=317,slow=75,SNR=75						
H11N3	WAKE ISLAND Hy	28.48	126	T	T	12 16 55.8	
	baz=317,slow=75,SNR=93						
H11S1	WAKE ISLAND Hy	29.25	127	T	T	12 18 00.7	
	baz=318,slow=76,SNR=3.0						
H11S3	WAKE ISLAND Hy	29.25	128	T	T	12 17 54.6	
	baz=318,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	29.26	128	T	T	12 17 53.4	
	baz=318,slow=76,SNR=13						
MKAR	Makanchi Array	43.88	301	P	P	11 48 42.0	+1.7
	0.7nm,0.6s,baz=87,slow=9.1,SNR=7.1						
KURBB	Kurchatov Arra	45.54	307	P	P	11 48 53.6	+0.2
	1.5nm,0.7s,baz=82,slow=8.3,SNR=10						
ILAR	Eielson Array	47.33	33	P	P	11 49 07.9	+0.6
	0.4nm,0.8s,baz=267,slow=6.3,SNR=4.1						
WRA	Warramunga Arr	59.16	189	P	P	11 50 33.9	-0.9
	0.8nm,0.4s,baz=0.6,slow=8.3,SNR=9.9						
ASAR	Alice Springs	62.89	189	P	P	11 50 59.4	-0.7
	0.6nm,0.7s,baz=13,slow=6.8,SNR=8.3						
KBZ	Khabaz	70.31	311	LR	LR	12 24 39.3	
	comp=Z,17nm,18.4s,baz=160,slow=38						
PDAR	Pinedale Array	75.62	46	P	P	11 52 19.1	-0.2
	0.2nm,0.4s,baz=336,slow=4.2,SNR=2.4						

MEX 12 11:47:06.0±0.6**, 16°.38N×93°.26W, h172**km±7km**, MD3.5,**
Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		0.42	18	eP	Pn	11 47 28.4	-1.2
TGIG				eS	Sn	11 47 45.2	-2.6
PCIG		0.67	177	eP	Pn	11 47 29.2	-1.5
PCIG				eS	Sn	11 47 47.7	-2.1
CCIG	Comitan	1.08	95	iP	Pn	11 47 33.2	-0.5
CCIG				iS	Sn	11 47 53.4	-1.6

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*NSSP **12** 11:52:19.8, 38°.67N×43°.65E, h7km, Ms3.1*
*DDA **12** 11:52:21.8, 38°.81N×43°.61E, h7km±3km, ML3.0*
*ISK **12** 11:52:21.8, 38°.82N×43°.56E, h5km, ML3.0/12*
*ISCJB **12** 11:52:23.4±0.7, 38°.82N±0°.03×43°.58E±0°.05, h6km±5km, Error ellipse: s-maj=6.1km s-min=3.9km az=20.5*
ISC 12 11:52:24.0±1.0**, 38°.82N**±0°.02×**43°.55E**±0°.04**, h13**km±8km**,**
n25, σ**1s.30**/38**, 1C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.17	7	iP	Pg	11 52 27.1	-1.0
VMUR				iS	Sb	11 52 32.4	0.0
ERCV	ERCIS-VAN	0.25	320	PG	Pg	11 52 28.5	-1.0
ERCV				SG	Sg	11 52 33.2	0.0
VANB	Van	0.26	208	PG	Pg	11 52 29.5	0.0
VANB				SG	Sb	11 52 35.7	+0.7
TVAN	Van	0.32	200	iP	Pg	11 52 29.4	-1.1
TVAN				IAML_P			
	comp=Z,21µm,0.3s						
GEVA	Gevas	0.64	217	iP	Pg	11 52 35.7	-0.8
GEVA				iS	Sb	11 52 47.0	+1.1
GEVA				IAML_P			
	comp=Z,826nm,0.1s						
ADCV	BITLIS_Adilcev	0.64	269	iP	Pg	11 52 35.6	-1.0
ADCV				iS	Sb	11 52 46.5	+0.3
AKDM	Akdamar-Van	0.67	222	PG	Pg	11 52 35.2	-1.8
AKDM				SG	Sg	11 52 46.2	+0.4
DYDN	Diyadin	0.73	9	iP	Pg	11 52 37.8	-0.4
DYDN				iS	Sn	11 52 50.1	-1.1
TUTA	Tutak	0.81	316	iP	Pg	11 52 37.8	-2.0
TUTA				iS	Sb	11 52 51.4	+0.3
MLAZ	Malazgirt-MUS	0.84	292	PG	Pg	11 52 38.9	-1.4
MLAZ				SG	Sb	11 52 52.3	+0.5
AGRB	Hanur-Agry	0.86	330	PG	Pg	11 52 39.1	-1.7
IGDI	IGDIR	1.12	21	iP	Pb	11 52 43.4	-1.9
TASB	TASBURUN-IGDIR	1.28	25	PN	Pb	11 52 47.6	-0.3
EATA	Eleskirt	1.32	322	iP	Pn	11 52 48.1	-0.3
EATA				iS	Sg	11 53 11.2	+4.5
EATA				IAML_P			
	comp=Z,1µm,0.2s						
ARUZ	Aruch	1.52	16	iP	Pb	11 52 51.9	-0.1
ARUZ				⇑iS	Sg	11 53 15.5	+2.6
CUKT	Cukurca	1.57	178	PN	Pb	11 52 52.2	-0.8
MUSM	Mu-Merkez	1.59	267	iP	Pn	11 52 52.0	0.0
MUSM				iS	Sb	11 53 13.7	+0.2
GNI	Garni	1.61	35	⇓iP	Pb	11 52 53.2	-0.5
KOPR	Koprukoy-ERZUR	1.75	312	PN	Pn	11 52 54.8	+0.5
HOMI	Horasan	1.76	314	iP	Pb	11 52 56.0	-0.2
BNGL	BINGOL	1.88	275	iP	Pb	11 52 57.7	-0.5
BNGL				iS	Sg	11 53 25.3	+1.0
SVAN	Silvan-Diyarba	1.96	251	PN	Pn	11 52 57.7	+0.7
KARO	Karliova-Bingo	2.00	285	PN	Pn	11 52 58.5	+0.8
BTMN	Batman	2.02	243	iP	Pb	11 52 59.7	-0.9
MAZI	Mazidag	2.80	242	PN	Pn	11 53 09.7	+1.2

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*ISCJB **12** 11:52:53.6±1.0, 7°.1S±0°.2×156°.2E±0°.1, h52km, mb3.9/7, MS3.3/5, Error ellipse: s-maj=28.5km s-min=11.9km az=152.3*
*IDC **12** 11:52:55.5±1.2, 7°.04S×156°.06E, h52km±6km, mb3.8/7, mb1 4.0/7, mb1mx3.6/30, mbtmp4.1/7, MS3.3/6, Ms1 3.3/6, ms1mx3.0/28, Error ellipse: s-maj=38.7km s-min=19.7km az=117.0*
ISC 12 11:52:55.0±1.0**, 7°.1S**±0°.2×**156°.3E**±0°.2**, h52**km**, n21,**
σ**0s.89**/15**, mb4.2**/7**, MS3.2**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	9.31	255	P	Pn	11 55 10.3	+3.7
	3.4nm,0.3s,baz=49,slow=9.8,SNR=9.2						
PMG				S	Sn	11 56 51.5	+1.5
	0.6nm,0.3s,baz=23,slow=13,SNR=2.9						
PMG				LR	LR	11 58 33.7	
	comp=Z,203nm,18.6s,baz=75,slow=37						
WRA	Warramunga Arr	24.83	237	P	P	11 58 11.7	-1.0
	2.7nm,0.5s,baz=58,slow=11,SNR=46						
WRA				pP	pP	11 58 25.3	-0.1
	3.1nm,0.4s,baz=60,slow=9.6,SNR=6.9						
ASAR	Alice Springs	27.09	230	P	P	11 58 31.6	-1.6
	0.6nm,0.6s,baz=59,slow=9.8,SNR=15						
ASAR				PcP	PcP	12 01 53.5	+0.3
	0.4nm,0.5s,baz=59,slow=2.6,SNR=5.8						
ASAR				LR	LR	12 08 35.4	
	comp=Z,72nm,19.7s,baz=75,slow=35						
H11S3	WAKE ISLAND Hy	27.39	22	T	T	12 27 04.7	
	baz=202,slow=76,SNR=184						
H11S2	WAKE ISLAND Hy	27.39	22	T	T	12 26 52.8	
	baz=202,slow=76,SNR=159						
H11S1	WAKE ISLAND Hy	27.41	22	T	T	12 26 52.0	
	baz=202,slow=76,SNR=78						
STKA	Stephens Creek	28.24	207	LR	LR	12 09 17.0	
	comp=Z,96nm,19.8s,baz=20,slow=35						
H11N1	WAKE ISLAND Hy	28.58	21	T	T	12 28 20.7	
	baz=202,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	28.59	21	T	T	12 28 31.8	
	baz=202,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	28.60	21	T	T	12 28 30.2	
	baz=202,slow=76,SNR=10						
LEM	Lembang	48.27	267	LR	LR	12 22 19.6	
	comp=Z,17nm,21.3s,baz=245,slow=37						
SKNT	Sakolnakorn	56.93	295	P	pP	12 02 50.0	+0.4
PETK	Petropavlovsk-	59.94	1	LR	LR	12 24 39.1	
	comp=Z,18nm,21.2s,baz=171,slow=32						
PAYA	Payao	61.42	296	P	pP	12 03 20.6	-0.1
CMAR	Chiang Mai Arr	61.95	295	P	P	12 03 09.4	-0.6
	0.6nm,0.4s,baz=127,slow=4.7,SNR=4.7						
CMAR				pP	pP	12 03 23.4	-0.9
	4.2nm,0.8s,baz=118,slow=5.1,SNR=8.0						
CMMT	Chiang Mai	62.06	296	P	pP	12 03 25.4	+0.3
SONM	Songino Array	70.07	327	P	P	12 04 01.9	0.0
	3.4nm,0.9s,baz=145,slow=5.7,SNR=18						
SONM				pP	pP	12 04 15.9	-0.5
	0.9nm,0.8s,baz=118,slow=5.0,SNR=3.6						
ILAR	Eielson Array	82.97	21	P	P	12 05 15.2	+0.9
	0.4nm,0.8s,baz=232,slow=6.8,SNR=4.7						
ILAR				pP	pP	12 05 29.4	+0.4
	0.6nm,0.9s,baz=274,slow=5.7,SNR=5.6						
ILAR				LR	LR	12 39 13.6	
	comp=Z,20nm,19.0s,baz=271,slow=34						
MKAR	Makanchi Array	84.28	318	P	P	12 05 21.2	-0.3
	1.2nm,0.5s,baz=97,slow=5.6,SNR=14						
MKAR				pP	pP	12 05 36.9	+0.7
	1.4nm,0.6s,baz=101,slow=5.7,SNR=8.1						
MAW	Mawson	84.83	203	P	P	12 05 24.5	+0.8

	1.1nm,0.7s,baz=122,slow=2.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**154.26**	**286**	PKPbc	**PKPbc**	**12 12 50.1**	**-0.4**
	1.6nm,1.0s,baz=346,slow=5.1,SNR=5.3						

ISCJB ***12*** *12:18:32.9±0.3, 67°.83N±0°.02×20°.23E±0°.04, h0^{km}, Error ellipse: s-maj=2.5km s-min=2.3km az=38.1*
NAO ***12*** *12:18:33.5±0.8, 67°.81N×20°.37E, ML3.0*
UPP ***12*** *12:18:33.6±0.1, 67°.83N×20°.20E, h5^{km}, ML2.9, Confirmed Earthquake*
IDC ***12*** *12:18:34.7±0.8, 67°.80N×20°.48E, h0^{km}, mb1 3.3/5, mb1mx3.1/51, mbtmp3.3/5, ML2.8/5, Error ellipse: s-maj=14.6km s-min=7.3km az=110.0*
HEL ***12*** *12:18:34.2±0.1, 67°.85N×20°.19E, h1^{km}, ML2.6, ML2.4(BER), ML2.9(UPP), Confirmed Induced event*
BER ***12*** *12:18:35.4±3.9, 67°.79N×20°.31E, h0^{km}, ML2.4, ML3.0(NAO), Suspected explosion*
ISC 12 12:18:32.9±0.7**, 67°.80N**±0°.02×**20°.23E**±0°.02**, h0^{km}, n66, σ1^{s}54**/118**, 12D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	**0.24**	**276**	⇓P	**Pg**	**12 18 38.0**	**+0.5**
RATU				S	**Sg**	**12 18 41.3**	**+0.6**
RATU	**Laukkuluspa**	**0.24**	**276**	⇓*i*P	**Pg**	**12 18 38.0**	**+0.5**
RATU				*i* S	**Sg**	**12 18 41.3**	**+0.6**
KOVU	**Salmi**	**0.43**	**357**	⇓P	**Pg**	**12 18 40.9**	**-0.1**
KOVU				S	**Sg**	**12 18 46.1**	**-0.4**
KOVU	**Salmi**	**0.43**	**357**	⇓*i*P	**Pg**	**12 18 40.9**	**-0.1**
KOVU				*i* S	**Sg**	**12 18 46.1**	**-0.4**
NIKU	**Nikkaluokta**	**0.46**	**279**	⇓P	**Pg**	**12 18 41.9**	**+0.3**
NIKU				S	**Sg**	**12 18 48.0**	**+0.5**
NIKU	**Nikkaluokta**	**0.46**	**279**	⇓*i*P	**Pg**	**12 18 41.9**	**+0.3**
NIKU				*i* S	**Sg**	**12 18 48.0**	**+0.5**
DUNU	**Dundret**	**0.69**	**169**	⇓P	**Pg**	**12 18 47.0**	**+0.9**
DUNU				S	**Sg**	**12 18 57.0**	**+1.9**
DUNU	**Dundret**	**0.69**	**169**	⇓*i*P	**Pg**	**12 18 47.0**	**+0.9**
DUNU				*i* S	**Sg**	**12 18 57.0**	**+1.9**
LANU	**Lannavaara**	**0.71**	**69**	⇓P	**Pg**	**12 18 46.7**	**+0.3**
LANU				S	**Sg**	**12 18 56.5**	**+0.9**
LANU	**Lannavaara**	**0.71**	**69**	*e*P	**Pg**	**12 18 46.7**	**+0.3**
LANU				*e*S	**Sg**	**12 18 56.5**	**+0.9**
SALU	**Saltoluokta**	**0.78**	**238**	⇓P	**Pg**	**12 18 48.3**	**+0.4**
SALU				S	**Sg**	**12 18 59.0**	**+1.0**
SALU	**Saltoluokta**	**0.78**	**238**	⇓*i*P	**Pg**	**12 18 48.3**	**+0.4**
SALU				*i* S	**Sg**	**12 18 59.0**	**+1.0**
SALU	**Saltoluokta**	**0.78**	**238**	⇓*i*P	**Pg**	**12 18 48.3**	**+0.4**
SALU				*e*S	**Sg**	**12 18 59.8**	**+1.8**
KIF	**Kilpisjarvi**	**1.23**	**10**	Pg	**Pg**	**12 18 55.8**	**-0.6**
KIF				Lg	Lg	12 19 12.6	
KIF	**Kilpisjarvi**	**1.23**	**10**	*e*P	**Pg**	**12 18 55.7**	**-0.7**
KIF				*e*S	**Sg**	**12 19 11.9**	**-0.4**
KIF	**Kilpisjarvi**	**1.23**	**10**	*e*P	**Pg**	**12 18 55.8**	**-0.6**
KIF				*e*S	**Sg**	**12 19 12.2**	**-0.1**
PAJU	**Pajala**	**1.36**	**124**	P	**Pg**	**12 18 58.8**	**-0.1**
PAJU				S	**Sg**	**12 19 17.2**	**+0.7**
PAJU	**Pajala**	**1.36**	**124**	*e*P	**Pg**	**12 18 58.8**	**-0.1**
PAJU				*e*S	**Sg**	**12 19 17.2**	**+0.7**
HEF	**Hetta**	**1.42**	**63**	Pg	**Pn**	**12 18 59.4**	**-0.6**
HEF				Lg	Lg	12 19 18.1	
HEF	**Hetta**	**1.42**	**63**	*e*P	**Pn**	**12 18 59.3**	**-0.6**
HEF	**Hetta**	**1.42**	**63**	*e*P	**Pn**	**12 18 59.4**	**-0.6**
HEF				Sg	**Sg**	**12 19 18.1**	**-0.4**
ERTU	**Ertsjaerv**	**1.47**	**148**	*e*P	**Pn**	**12 19 00.7**	**+0.1**
ERTU				*e*S	**Sb**	**12 19 21.1**	**+1.0**
KTK1	**Kautokeino**	**1.65**	**41**	*e*P	**Pn**	**12 19 03.0**	**0.0**
KTK1				*e*S	**Sn**	**12 19 24.8**	**-0.2**
KTK1				IAML		12 19 28.3	
	comp=Z,62nm,0.2s						
KTK1	**Kautokeino**	**1.65**	**41**	*e*P	**Pn**	**12 19 03.0**	**0.0**
KTK1				*e*S	**Sn**	**12 19 24.8**	**-0.2**
KTK1				IAML		12 19 28.3	
	comp=Z,62nm,0.2s						
HARU	**Harads**	**1.67**	**170**	P	**Pn**	**12 19 04.1**	**+0.8**
HARU				S	**Sb**	**12 19 27.1**	**+1.2**
HARU	**Harads**	**1.67**	**170**	*e*P	**Pn**	**12 19 04.1**	**+0.8**
HARU				*e*S	**Sb**	**12 19 27.1**	**+1.2**
STEI	**Steigen**	**1.89**	**276**	*e*P	**Pb**	**12 19 07.9**	**-0.3**
STEI				*e*S	**Sb**	**12 19 33.2**	**+0.8**
STEI				IAML		12 19 36.0	
	comp=Z,60nm,0.4s						
STEI	**Steigen**	**1.89**	**276**	*e*P	**Pb**	**12 19 07.9**	**-0.3**
STEI				*e*S	**Sb**	**12 19 33.2**	**+0.8**
STEI				IAML		12 19 36.0	
	comp=Z,60nm,0.4s						
TRO	**Tromso**	**1.90**	**346**	*e*P	**Pn**	**12 19 06.8**	**+0.3**
TRO				*e*S	**Sn**	**12 19 30.4**	**-0.7**
TRO	**Tromso**	**1.90**	**346**	*e*P	**Pn**	**12 19 07.2**	**+0.7**
TRO				*e*S	**Sb**	**12 19 32.4**	**-0.2**
TRO				IAML		12 19 34.0	
	comp=Z,76nm,0.3s						
KALU	**Kalix**	**2.31**	**146**	*e*P	**Pn**	**12 19 14.1**	**+2.1**
KALU				*e*S	**Sn**	**12 19 43.3**	**+2.2**
TOF	**Tornio**	**2.36**	**135**	*e*P	**Pb**	**12 19 15.3**	**-0.9**
TOF				*e*SB	**Sb**	**12 19 47.2**	**+1.4**
TOF				MSG		12 19 48.4	
	comp=Z,30nm,0.2s						
SGF	**Sodankyl**	**2.44**	**96**	*e*P	**Pn**	**12 19 14.9**	**+1.1**
SGF				*e*S	**Sn**	**12 19 46.1**	**+1.8**
SGF				MSG		12 19 49.5	
	comp=Z,25nm,0.2s						
RNF	**Rovaniemi**	**2.55**	**115**	*e*P	**Pn**	**12 19 17.7**	**+2.3**
RNF				*e*SB	**Sb**	**12 19 52.1**	**+0.8**
RNF				MSG		12 19 54.9	
	comp=Z,45nm,0.2s						
ARE0	**ARCESS Array S**	**2.60**	**45**	*e*P	**Pn**	**12 19 16.9**	**+0.8**
ARE0				*e*SB	**Sb**	**12 19 51.2**	**-1.5**
ARE0	**ARCESS Array S**	**2.60**	**45**	*e*P	**Pn**	**12 19 17.0**	**+0.8**
ARA0	**ARCESS Array S**	**2.60**	**45**	Pn	**Pn**	**12 19 16.9**	**+0.8**
	baz=232,slow=14						
ARA0				Sn	**Sn**	**12 19 50.0**	**+1.6**
	baz=220,slow=28						
ARA0	**ARCESS Array S**	**2.60**	**45**	Pn	**Pn**	**12 19 16.9**	**+0.8**
	baz=232,slow=14						
ARA0				Sn	**Sn**	**12 19 50.0**	**+1.6**
	baz=220,slow=28						
ARCES	**ARCESS Array B**	**2.60**	**45**	Pn	**Pn**	**12 19 16.8**	**+0.7**
	comp=Z,4.6nm,0.3s,baz=230,slow=14,SNR=135						
ARCES				Sn	**Sb**	**12 19 51.0**	**-1.8**
	comp=Z,11nm,0.3s,baz=225,slow=24,SNR=19						
KONS	**Konsvik**	**3.07**	**248**	*e*P	**Pn**	**12 19 23.9**	**+1.5**
KONS	**Konsvik**	**3.07**	**248**	*e*P	**Pn**	**12 19 23.9**	**+1.5**
HAMF	**Hammerfest**	**3.11**	**22**	*e*P	**Pn**	**12 19 24.3**	**+1.2**
HAMF	**Hammerfest**	**3.11**	**22**	*e*P	**Pn**	**12 19 24.3**	**+1.2**
BURU	**Burvik**	**3.26**	**171**	*e*P	**Pn**	**12 19 27.3**	**+2.1**
OUL	**Oulu**	**3.55**	**138**	*e*P	**Pn**	**12 19 30.9**	**+1.8**
OBF0	**Syolatti, Pyha**	**3.69**	**152**	*e*P	**Pn**	**12 19 32.9**	**+1.8**
NSS	**Namsos**	**4.69**	**229**	*e*P	**Pn**	**12 19 47.0**	**+2.2**
NSS	**Namsos**	**4.69**	**229**	*e*P	**Pn**	**12 19 47.0**	**+2.2**
APA0	**Apatity Array**	**4.87**	**86**	Pn	**Pn**	**12 19 46.8**	**-0.4**
	baz=281,slow=12						
APA0				Pg	**Pb**	**12 19 59.8**	**+0.9**
APA0				Sn	**Sn**	**12 20 42.2**	**-1.9**
	baz=284,slow=28						
APA0				Lg	Lg	12 21 00.7	
	baz=297,slow=28						
APA0	**Apatity Array**	**4.87**	**86**	*e*P	**Pn**	**12 19 46.8**	**-0.4**
APA0				*e*PG	**Pb**	**12 19 59.8**	**+0.9**
APA0				*e*S	**Sn**	**12 20 42.2**	**-1.9**
APA0	**Apatity Array**	**4.87**	**86**	Pn	**Pn**	**12 19 46.8**	**-0.4**
	baz=281,slow=12						
APA0				Pg	**Pb**	**12 19 59.8**	**+0.9**
APA0				Sn	**Sn**	**12 20 42.2**	**-1.9**
	baz=284,slow=28						
HEMU	**Hemsoen**	**5.23**	**191**	*e*P	**Pn**	**12 19 53.7**	**+1.6**
HEMU				*e*S	**Sn**	**12 20 52.9**	**-0.1**
FIA0	**FINESS Array S**	**6.86**	**156**	Pn	**Pn**	**12 20 16.1**	**+1.5**
	baz=349,slow=14						
FIA0				Sn	**Sn**	**12 21 31.7**	**-1.4**
	baz=344,slow=22						
FIA0				Lg	Lg	12 22 07.8	
	baz=342,slow=28						
FIA0	**FINESS Array S**	**6.86**	**156**	Pn	**Pn**	**12 20 16.1**	**+1.5**
	baz=349,slow=14						
FIA0				Sn	**Sn**	**12 21 31.7**	**-1.4**
	baz=344,slow=22						
FIA0				Sg	**Sg**	**12 22 07.8**	**-5.0**
	baz=342,slow=28						
FINES	**FINESS Array B**	**6.86**	**156**	Pn	**Pn**	**12 20 16.0**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=354,slow=13,SNR=22						
FINES				Sn	**Sn**	**12 21 33.5**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=346,slow=21,SNR=7.4						
FINES				Lg	Lg	12 22 07.8	
	comp=Z,1.4nm,0.3s,baz=345,slow=28,SNR=12						
NB2	**NORSAR Subarra**	**7.82**	**214**	Pn	**Pn**	**12 20 28.4**	**+0.6**
	baz=24,slow=12						
NB2				Lg	Lg	12 22 40.3	
	baz=27,slow=37						
NB2	**NORSAR Subarra**	**7.82**	**214**	Pn	**Pn**	**12 20 28.4**	**+0.6**
	baz=24,slow=12						
NB2				Sg	**Sg**	**12 22 40.3**	**-3.4**
	baz=27,slow=37						
NOA	**NORSAR Array B**	**7.82**	**214**	Pn	**Pn**	**12 20 28.6**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=23,slow=11,SNR=6.9						
NRA0	**NORESS Array S**	**8.03**	**212**	Pn	**Pn**	**12 20 30.4**	**-0.2**
NRA0				Lg	Lg	12 22 43.4	
	baz=28,slow=28						
NRA0	**NORESS Array S**	**8.03**	**212**	Pn	**Pn**	**12 20 30.4**	**-0.2**
NRA0				Sg	**Sg**	**12 22 43.4**	**-6.9**
	baz=28,slow=28						
HFS	**Hagfors**	**8.21**	**204**	Pn	**Pn**	**12 20 33.0**	**-0.1**
	baz=12,slow=14						
HFS				Sn	**Sn**	**12 22 03.5**	**-3.0**
	baz=37,slow=28						
HFS				Lg	Lg	12 22 49.1	
	baz=40,slow=22						
HFS	**Hagfors**	**8.21**	**204**	Pn	**Pn**	**12 20 33.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=17,slow=13,SNR=8.0						
HFS				Sn	**Sn**	**12 22 05.6**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=32,slow=23,SNR=5.4						
HFS				Lg	Lg	12 22 52.0	
	comp=Z,0.7nm,0.3s,baz=20,slow=29,SNR=5.2						
HFS	**Hagfors**	**8.21**	**204**	Pn	**Pn**	**12 20 33.0**	**-0.1**
	baz=12,slow=14						
HFS				Sn	**Sn**	**12 22 03.5**	**-3.0**
	baz=37,slow=28						
HFS				Sg	**Sg**	**12 22 49.1**	**-7.1**
	baz=40,slow=22						
SPA0	**Spitsbergen Ar**	**10.49**	**356**	Pn	**Pn**	**12 21 03.9**	**-0.3**
	baz=157,slow=14						
SPA0	**Spitsbergen Ar**	**10.49**	**356**	Pn	**Pn**	**12 21 03.9**	**-0.3**
	baz=157,slow=14						
SPITS	**Spitsbergen Ar**	**10.49**	**356**	Pn	**Pn**	**12 21 04.1**	**-0.1**
	baz=174,slow=16,SNR=5.3						

CNRM ***12*** *12:25:21.4, 28°.19N×11°.88W, h42^{km}, ml3.0*
ISC 12 12:25:22.2±5.0**, 27°.7N**±0°.3×**11°.0W**±0°.3**, h10^{km}, n5, σ2^{s}36**/7**, Western Sahara**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFNM	**Sidi Ifni**	**1.79**	**23**	P	**Pn**	**12 25 54.6**	**+1.4**
SFNM				S	**Sn**	**12 26 13.2**	**-2.8**
TTIG	**Tnine Tigouga,**	**3.61**	**37**	P	**Pn**	**12 26 16.1**	**-2.2**
TTIG				S	**Sn**	**12 27 02.1**	**+0.9**
OUK	**Oukaimeden**	**4.44**	**37**	P	**Pn**	**12 26 30.7**	**+0.8**
OUK				S	**Sn**	**12 27 24.2**	**+2.4**
OUZM	**OUZ**	**4.89**	**48**	P	Pn	12 26 33.7	-2.2
OUZM				S	**Sn**	**12 27 32.0**	**-0.6**
ZHG	**ZHG**	**6.85**	**32**	P	Pn	12 26 56.0	-6.8

ISCJB ***12*** *12:27:34.0±0.2, 36°.51N±0°.02×70°.27E±0°.03, h204^{km}, mb4.2/68, Error ellipse: s-maj=3.3km s-min=2.7km az=2.4*
BJI ***12*** *12:27:34.3±0.0, 36°.58N×70°.26E, h209^{km}, mb4.5/26, mB4.6/19*
IDC ***12*** *12:27:34.2±2.4, 36°.32N×70°.25E, h202^{km}±22^{km}, mb3.8/18, mb1 3.9/23, mb1mx3.7/48, mbtmp4.4/23, Error ellipse: s-maj=14.4km s-min=9.9km az=8.0*
MOS ***12*** *12:27:34.6±1.0, 36°.47N×70°.37E, h216^{km}, mb4.4/31, Error ellipse: s-maj=7.6km s-min=4.5km az=83.0*
NEIC ***12*** *12:27:35.2±2.2, 36°.51N×70°.32E, h211^{km}±6^{km}, mb4.4/41, Error ellipse: s-maj=11.9km s-min=2.2km az=115.0*
NNC ***12*** *12:27:40.9±3.9, 37°.06N×70°.19E, h215^{km}±37^{km}, mb3.9, mpv4.9, Error ellipse: s-maj=35.2km s-min=22.9km az=17.0*
ISC 12 12:27:34.8±0.3**, 36°.44N**±0°.04×**70°.34E**±0°.04**, h204^{km}, n201, σ1^{s}67**/231**, mb4.4**/68**, 15C-15D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.17**	**210**	*e*Pn	**Pn**	**12 28 16.9**	**+1.2**
KBL				*e*S	**S**	**12 28 48.4**	**+1.4**
KBL	**Kabul**	**2.17**	**210**	*e*PN	**Pn**	**12 28 16.9**	**+1.2**
KBL				*e*S	**S**	**12 28 48.4**	**+1.4**
GAR	**Garm**	**2.55**	**360**	*e*Pn	**Pn**	**12 28 20.4**	**+0.8**
GAR				*e*S	**S**	**12 28 53.4**	**-0.8**
GAR	**Garm**	**2.55**	**360**	*e*PN	**Pn**	**12 28 20.4**	**+0.8**
GAR				*e*S	**S**	**12 28 53.4**	**-0.8**
CEP	**Cherat**	**2.91**	**153**	P	**Pn**	**12 28 26.0**	**+2.1**
CEP				S	**S**	**12 29 04.0**	**+2.5**
BTK	**Batken**	**3.63**	**6**	*e*Pn	**Pn**	**12 28 33.7**	**+1.5**
BTK				*e*S	**S**	**12 29 15.1**	**-1.7**
BTK	**Batken**	**3.63**	**6**	*e*PN	**Pn**	**12 28 33.7**	**+1.5**
BTK				*e*S	**S**	**12 29 15.1**	**-1.7**
CHCP	**Chirah Chowk**	**3.67**	**138**	P	**Pn**	**12 28 35.4**	**+2.6**
NIL	**Nilore**	**3.67**	**139**	*e*Pn	**Pn**	**12 28 35.2**	**+2.4**
NIL	**Nilore**	**3.67**	**139**	*e*PN	**Pn**	**12 28 35.2**	**+2.4**
THW	**Thamme Wali**	**3.82**	**162**	P	**Pn**	**12 28 36.4**	**+1.8**
SARP	**Sargodha**	**4.91**	**156**	P	**Pn**	**12 28 49.3**	**+1.1**
TAS	**Tashkent**	**4.95**	**351**	PN	**Pn**	**12 28 49.1**	**+0.5**
ARSB	**Arslanbob**	**5.29**	**22**	*e*Pn	**Pn**	**12 28 52.9**	**-0.2**
ARSB				*e*S	**S**	**12 29 52.6**	**-1.9**
KSH	**Kashi**	**5.40**	**54**	P	**Pn**	**12 28 50.6**	**-3.9**
KSH				S	S	12 29 45.0	-12
KSH				pmax	pmax		
	comp=Z,270nm,0.6s						
KSH				pmax	pmax		
	comp=Z,170nm,4.4s						
KSH				smax	smax		
	comp=N,3µm,1.0s						
KSH				smax	smax		
	comp=E,2µm,0.6s						
KSH				LR	LR		
	comp=E,560nm,6.6s						
DHRM	**DHARAMSHALA**	**6.46**	**129**	*e*P	**Pn**	**12 29 09.1**	**+0.7**
DHRM				*e*S	**S**	**12 30 20.2**	**-2.0**
DHRM				IAML		12 30 22.8	
	comp=N,404nm,0.7s						
DHRM				IAML		12 30 22.9	
	comp=E,939nm,1.0s						
UCH	**Uchtor**	**6.62**	**28**	P	**Pn**	**12 29 10.6**	**+0.1**
	SNR=430						
KK31	**Karatay Array**	**6.65**	**1**	*e*Pn	**Pn**	**12 29 10.1**	**-0.5**
KK31	**Karatay Array**	**6.65**	**1**	⇑P	**Pn**	**12 29 10.0**	**-0.5**
	comp=E,12nm,0.3s,baz=187,slow=14,SNR=139						
KK31				⇓S	**S**	**12 30 17.4**	**-8.9**
	comp=E,29nm,0.5s,baz=191,slow=18,SNR=6.7						
KK31	**Karatay Array**	**6.65**	**1**	*i* PN	**Pn**	**12 29 10.0**	**-0.5**
KK31				pmax	pmax		
	comp=Z,12nm,0.4s						
KKAR	**Karatay Array**	**6.65**	**1**	*e*Pn	**Pn**	**12 29 10.0**	**-0.5**
KKAR	**Karatay Array**	**6.65**	**1**	*e*PN	**Pn**	**12 29 10.0**	**-0.5**
NRN	**Naryn**	**6.65**	**40**	*e*Pn	**Pn**	**12 29 09.5**	**-1.3**
NRN				*e*S	**S**	**12 30 23.1**	**-3.6**
NRN	**Naryn**	**6.65**	**40**	*e*PN	**Pn**	**12 29 09.5**	**-1.3**
NRN				*e*S	**S**	**12 30 23.1**	**-3.6**
EKS2	**Erkin-Say**	**6.75**	**22**	P	**Pn**	**12 29 12.2**	**+0.4**
	SNR=78						
KZA	**Kyzart**	**6.79**	**33**	P	**Pn**	**12 29 12.6**	**-0.1**
	SNR=127						
AAK	**Ala-Archa**	**6.97**	**26**	P	**Pn**	**12 29 15.0**	**+0.3**
	comp=Z,35nm,0.3s,baz=166,slow=5.3,SNR=114						
AAK				S	**S**	**12 30 31.2**	**-2.8**
	comp=Z,5.9nm,0.3s,baz=163,slow=9.0,SNR=4.7						
AAK	**Ala-Archa**	**6.97**	**26**	*e*Pn	**Pn**	**12 29 14.5**	**-0.2**
AAK				*e*S	**S**	**12 30 31.7**	**-2.3**
AAK	**Ala-Archa**	**6.97**	**26**	⇑P	**Pn**	**12 29 14.9**	**+0.2**
	comp=Z,68nm,0.5s						
AAK				⇓S	**S**	**12 30 31.3**	**-2.6**
	comp=Z,377nm,0.8s						
AAK	**Ala-Archa**	**6.97**	**26**	*d i*PN	**Pn**	**12 29 14.8**	**+0.1**
AAK				pmax	pmax		
	comp=Z,89nm,0.6s						
AAK	**Ala-Archa**	**6.97**	**26**	P	**Pn**	**12 29 15.1**	**+0.3**
	SNR=91						
KBK	**Karagaybulak**	**7.15**	**28**	P	**Pn**	**12 29 17.8**	**+0.7**
	SNR=7.7						
FRU1	**Bishkek**	**7.17**	**26**	*e*Pn	**Pn**	**12 29 17.7**	**+0.5**
FRU1				*e*S	**S**	**12 30 38.4**	**-0.1**
FRU1	**Bishkek**	**7.17**	**26**	*e*PN	**Pn**	**12 29 17.7**	**+0.5**
FRU1				*e*S	**S**	**12 30 38.4**	**-0.1**
CHMS	**Chumysh**	**7.38**	**26**	P	**Pn**	**12 29 19.7**	**-0.2**
	SNR=45						
ULHL	**Ulahol**	**7.38**	**36**	P	**Pn**	**12 29 20.1**	**0.0**
	SNR=39						
BOOM	**Boomskoye usch**	**7.43**	**34**	*e*Pn	**Pn**	**12 29 20.9**	**+0.2**
BOOM	**Boomskoye usch**	**7.43**	**34**	*e*PN	**Pn**	**12 29 20.9**	**+0.2**
USP	**Ospenovka**	**7.53**	**24**	P	**Pn**	**12 29 21.5**	**-0.3**
	SNR=18						
TKM2	**Tokmak 2**	**7.63**	**30**	⇓P	**Pn**	**12 29 23.5**	**+0.1**
	comp=Z,151nm,0.7s						
TKM2				⇑S	**S**	**12 30 47.1**	**-2.7**
	comp=Z,90nm,0.8s						
TKM2	**Tokmak 2**	**7.63**	**30**	PN	**Pn**	**12 29 23.3**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,151nm,0.7s						
TKM2	**Tokmak 2**	**7.63**	**30**	P	**Pn**	**12 29 23.5**	**+0.1**
	SNR=181						
KDJ	**Kajisay**	**7.77**	**41**	*e*Pn	**Pn**	**12 29 24.7**	**-0.4**
KDJ				*e*S	**S**	**12 30 49.2**	**-3.7**
KDJ	**Kajisay**	**7.77**	**41**	*e*PN	**Pn**	**12 29 24.7**	**-0.4**
SMLA	**Simla**	**7.77**	**131**	*e*P	**Pn**	**12 29 25.8**	**+0.8**
SMLA				*e*S	**S**	**12 30 49.0**	**-3.8**
SMLA				IAML		12 30 54.1	
SMLA				IAML		12 30 56.0	
	comp=E,323nm,0.2s						
AAA	**Alma-Ata**	**8.44**	**35**	*e*PN	**Pn**	**12 29 34.9**	**+1.2**
AAA				pmax	pmax		
	comp=Z,113nm,0.4s						
PRZ	**Przheval'sk**	**8.67**	**43**	*e*Pn	**Pn**	**12 29 37.1**	**+0.3**
PRZ				*e*S	**S**	**12 31 13.3**	**-1.1**
PRZ	**Przheval'sk**	**8.67**	**43**	*e*PN	**Pn**	**12 29 37.1**	**+0.3**
PRZ				*e*S	**S**	**12 31 13.3**	**-1.1**
DDI	**Dehra Dun**	**8.88**	**131**	*e*S	**S**	**12 31 14.3**	**-5.0**
DDI				IAML		12 31 18.4	
	comp=E,181nm,0.3s						
DDI				IAML		12 31 18.7	
	comp=N,138nm,0.4s						
NDI	**New Delhi**	**9.67**	**141**	*e*P	**Pn**	**12 29 51.0**	**+1.2**
NDI				*e*S	**S**	**12 31 31.0**	**-7.2**
PDGK	**Podgornoye**	**9.83**	**43**	⇓P	**Pn**	**12 29 51.1**	**-0.7**
	comp=N,44nm,0.9s						
PDGK	**Podgornoye**	**9.83**	**43**	P	**Pn**	**12 29 52.1**	**+0.3**
GEYT	**Alibeck**	**9.87**	**282**	P	**Pn**	**12 29 50.5**	**-1.8**
	comp=N,1.2nm,0.3s,baz=106,slow=11,SNR=9.5						
GYA0B	**ALIBECK ARRAY**	**9.87**	**282**	*e*Pn	**Pn**	**12 29 50.5**	**-1.7**
OTUK	**Ortayu**	**11.88**	**6**	⇑P	**Pn**	**12 30 16.4**	**-1.7**
	comp=N,21nm,0.6s						
OTUK	**Ortayu**	**11.88**	**6**	P	**Pn**	**12 30 16.3**	**-1.7**
OTUK				pmax	pmax		
	comp=Z,21nm,0.6s						
BHJ	**Bhuj**	**13.16**	**183**	*e*P	**Pn**	**12 30 34.8**	**+0.6**
MAKZ	**Makanchi**	**13.51**	**36**	*e*Pn	**Pn**	**12 30 37.9**	**-0.5**
MAKZ	**Makanchi**	**13.51**	**36**	⇑P	**Pn**	**12 30 37.9**	**-0.5**
	comp=Z,58nm,0.5s						
MAKZ	**Makanchi**	**13.51**	**36**	*e*P	**Pn**	**12 30 37.9**	**-0.5**
PYUN	**Piuthan**	**13.54**	**124**	*e*P	**Pn**	**12 30 40.2**	**+1.0**
	comp=Z,20nm,0.4s						
MK07	**Makanchi Array**	**13.63**	**37**	⇓P	**Pn**	**12 30 39.2**	**-0.7**
	comp=Z,24nm,0.8s						
MKAR	**Makanchi Array**	**13.65**	**37**	P	**Pn**	**12 30 39.5**	**-0.7**
	comp=Z,3.7nm,0.3s,baz=230,slow=12,SNR=125						
MKAR	**Makanchi Array**	**13.65**	**37**	*i* P	**Pn**	**12 30 39.7**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,20nm,0.6s						
DANN	**Dangsing**	**13.91**	**122**	*e*P	**P**	**12 30 46.6**	**+0.9**
	comp=Z,25nm,0.4s						
KOLN	**Koldanda**	**14.17**	**124**	*e*P	**Pn**	**12 30 47.3**	**+0.4**
	comp=Z,12nm,0.3s						
BHPL	**Bhopal**	**14.52**	**153**	*e*P	**P**	**12 30 52.2**	**+0.1**
GKN	**Gorkha**	**14.73**	**121**	*e*P	**P**	**12 30 57.0**	**+2.4**
	comp=Z,34nm,0.3s						
AB31	**Akbulak array**	**14.88**	**333**	⇓P	**Pn**	**12 30 53.9**	**-1.4**
	comp=Z,2.5nm,0.4s,baz=162,slow=12,SNR=4.1						
AB31	**Akbulak array**	**14.88**	**333**	*e*P	**Pn**	**12 30 53.3**	**-1.9**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ABKAR	**Akbulak array**	**14.88**	**333**	*e*P	**Pn**	**12 30 54.1**	**-1.1**
WMQ	**Urumqi**	**15.17**	**56**	*e*P	**P**	**12 30 59.2**	**0.0**
WMQ				sP	sP	12 31 54.0	-5.9
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,78nm,3.7s						
DMN	**Daman**	**15.30**	**121**	*e*P	**P**	**12 31 03.6**	**+2.6**
	comp=Z,18nm,0.4s						
KKN	**Kakani**	**15.30**	**120**	*e*P	**P**	**12 31 03.6**	**+2.5**
	comp=Z,32nm,0.4s						
KURBB	**Kurchatov Arra**	**15.35**	**20**	P	**Pn**	**12 30 59.5**	**-1.4**
	comp=Z,0.9nm,0.3s,baz=209,slow=10,SNR=33						
KURBB	**Kurchatov Arra**	**15.35**	**20**	⇑P	**Pn**	**12 30 59.2**	**-1.7**
	comp=Z,15nm,0.6s						
KURK	**Kurchatov**	**15.46**	**20**	*e*P	**Pn**	**12 31 00.8**	**-1.4**
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	**15.46**	**20**	⇓P	**Pn**	**12 31 00.5**	**-1.8**
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**15.46**	**20**	*d i*P	**Pn**	**12 31 00.8**	**-1.4**
KURK				pmax	pmax		
	comp=Z,24nm,0.9s						
PKIN	**Phulchoki**	**15.52**	**120**	*e*P	**P**	**12 31 06.4**	**+2.9**
	comp=Z,26nm,0.5s						
PKI	**Pulchoki**	**15.53**	**120**	*e*P	**P**	**12 31 07.2**	**+3.5**
	comp=Z,27nm,0.6s						
GUN	**Gumba**	**15.65**	**119**	*e*P	**Pn**	**12 31 08.7**	**+3.5**
	comp=Z,30nm,0.5s						
JIRN	**Jiri**	**16.02**	**119**	*e*P	**Pn**	**12 31 13.7**	**+4.1**
	comp=Z,74nm,0.4s						
AKTO	**Aktyubinsk**	**16.57**	**331**	P	**Pn**	**12 31 15.2**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=141,slow=11,SNR=25						
AKTO	**Aktyubinsk**	**16.57**	**331**	⇑P	**Pn**	**12 31 15.0**	**-0.6**
	comp=Z,7.6nm,0.5s						
BVAR	**Borovoye Array**	**16.58**	**0**	P	**P**	**12 31 14.7**	**+0.1**
	comp=Z,3.4nm,0.3s,baz=167,slow=11,SNR=28						
BVA3	**Borovoye Array**	**16.58**	**0**	⇑P	**Pn**	**12 31 15.3**	**-0.4**
	comp=Z,12nm,0.6s						
BRVK	**Borovoye**	**16.61**	**360**	*e*P	**P**	**12 31 15.3**	**+0.3**
	comp=Z,16nm,0.6s						
BRVK	**Borovoye**	**16.61**	**360**	⇑P	**P**	**12 31 14.4**	**-0.6**
	comp=Z,29nm,1.2s						
BRVK	**Borovoye**	**16.61**	**360**	*d i*P	**P**	**12 31 15.4**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,25nm,1.1s						
DGZ	**Jazzator, Alta**	**18.15**	**38**	*d i*P	**Pn**	**12 31 33.6**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,50nm,0.8s						
BOK	**Bokaro**	**18.40**	**129**	*e*P	**P**	**12 31 32.6**	**-2.1**
LSA	**Lhasa**	**18.67**	**105**	*e*P	**P**	**12 31 37.8**	**-0.4**
LSA	**Lhasa**	**18.67**	**105**	*e*P	**P**	**12 31 37.8**	**-0.4**
GROC	**Groznyy**	**19.98**	**297**	*e*P	**P**	**12 31 52.4**	**+0.8**
GROC				*e*S	**S**	**12 35 25.6**	**+0.7**
GROC				pmax	pmax		
	comp=Z,20nm,0.6s						
ZAA0	**Zalesovo Array**	**20.19**	**25**	*e*P	**P**	**12 31 52.9**	**-0.8**
	comp=Z,18nm,0.6s						
ZAA0				*e*S	**S**	**12 35 26.4**	**-2.3**
ZALV	**Zalesovo Beam**	**20.19**	**25**	P	**P**	**12 31 53.8**	**+0.1**
	comp=Z,16nm,0.3s,baz=223,slow=11,SNR=48						
ZALV				S	**S**	**12 35 26.2**	**-2.5**
	comp=Z,3.8nm,0.7s,baz=217,slow=22,SNR=3.6						
TBLG	**Delisi**	**20.53**	**293**	*e*P	**P**	**12 31 58.2**	**+0.7**
	comp=Z,27nm,0.6s						
TBLG	**Delisi**	**20.53**	**293**	*e*P	**P**	**12 31 58.2**	**+0.7**
TBLG				pmax	pmax		
	comp=Z,27nm,0.6s						
ZEI	**Tsey**	**21.28**	**295**	*e*P	**P**	**12 32 05.5**	**-0.1**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AKH	**Akhalkalaki**	**21.43**	**292**	*e*P	**P**	**12 32 08.3**	**+1.2**
	comp=Z,24nm,1.0s						
AKH	**Akhalkalaki**	**21.43**	**292**	*e*P	**P**	**12 32 08.3**	**+1.2**
AKH				pmax	pmax		
	comp=Z,24nm,1.0s						
ARU	**Arti**	**21.52**	**342**	P	**P**	**12 32 08.5**	**+1.0**
	comp=Z,2.9nm,0.5s,baz=168,slow=9.9,SNR=9.4						
ARU	**Arti**	**21.52**	**342**	*e*P	**P**	**12 32 08.4**	**+0.8**
	comp=Z,11nm,0.6s						
ARU	**Arti**	**21.52**	**342**	*c i*P	**P**	**12 32 08.7**	**+1.1**
ARU						12 32 47.1	
ARU				S	**S**	**12 35 55.4**	**+3.1**
ARU				pmax	pmax		
	comp=Z,11nm,0.7s						
NCK	**Nalchik**	**21.62**	**297**	⇑*i*P	**P**	**12 32 09.3**	**+0.5**
NCK				pmax	pmax		
	comp=Z,39nm,0.8s						
KBZ	**Khabaz**	**22.16**	**298**	P	**P**	**12 32 13.5**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=126,slow=7.6,SNR=8.0						
NEY	**Neytrino**	**22.20**	**296**	⇓*e*P	**P**	**12 32 16.2**	**+1.5**
NEY				pmax	pmax		
	comp=Z,7.0nm,2.0s						

KIV	Kislovodsk	22.34	298	*e*P	P	12 32 18.4	+2.5
KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
KIV				MLR	MLR		
	comp=Z,35nm,14.0s						
GTA	Gaotai	23.39	74	P	P	12 32 28.8	+3.4
GTA				pP	pP	12 33 11.3	+7.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RAYN	Ar Rayn	24.99	246	*e*P	P	12 32 39.7	-0.3
	comp=Z,10nm,0.8s						
RAYN	Ar Rayn	24.99	246	*e*P	P	12 32 39.7	-0.3
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIRV	Kirov	26.06	335	P	P	12 32 49.8	+0.7
	comp=Z,24nm,0.4s,baz=154,slow=0.9,SNR=7.6						
ANN	Anapa	26.20	299	*e*P	P	12 32 49.0	-1.5
ANN				*e*S	S	12 37 04.8	-2.3
ANN				pmax	pmax		
	comp=Z,22nm,1.0s						
VSR	Storozhevoye	26.65	313	*e*P	P	12 32 53.5	-1.0
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LZH	Lanzhou	26.94	81	⇓P	P	12 32 59.1	+1.6
LZH				pP	pP	12 33 40.2	+0.1
LZH				PP	PnPn	12 33 55.3	+2.7
LZH				sP	sP	12 34 04.5	+0.1
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,62nm,4.9s						
TLY	Talaya	28.06	47	P	P	12 33 09.5	+2.4
	comp=Z,1.4nm,0.5s,baz=242,slow=5.8,SNR=3.8						
CD2	Chengdu	28.26	91	*e*P	P	12 33 08.8	-0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
SONA0	Songino Array	28.80	55	*e*P	P	12 33 15.6	+1.7
SONM	Songino Array	28.80	55	P	P	12 33 15.6	+1.7
	comp=Z,2.7nm,0.7s,baz=267,slow=9.4,SNR=20						
BR131	Keskin Array S	28.95	288	*e*P	P	12 33 15.4	+0.2
	comp=Z,2.2nm,0.6s						
BRTR	Keskin Array B	28.95	288	P	P	12 33 15.7	+0.5
	comp=Z,1.9nm,0.6s,baz=99,slow=9.4,SNR=11						
BRTR	Keskin Array B	28.95	288	*i* P	P	12 33 15.6	+0.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PRGR	Permogore	29.61	336	*e*P	P	12 33 19.6	-0.9
PRGR				pmax	pmax		
	comp=Z,16nm,0.7s						
KMI	Kunming	29.90	103	P	P	12 33 25.4	+1.5
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	Chiang Mai Arr	30.90	118	P	P	12 33 33.3	+0.9
	comp=Z,0.7nm,0.4s,baz=308,slow=8.6,SNR=7.6						
HHC	Hu-ho-hao-te	32.28	69	*e*P	P	12 33 45.8	+1.4
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
AKASG	Malin Array Be	32.57	309	P	P	12 33 46.4	-0.2
	comp=Z,2.4nm,0.5s,baz=82,slow=7.0,SNR=11						
MLR	Muntele Rosu	34.34	299	P	P	12 34 03.7	+1.5
	comp=Z,2.9nm,0.6s,baz=84,slow=10,SNR=5.4						
MLR	Muntele Rosu	34.34	299	*e*P	P	12 34 02.4	+0.1
	comp=Z,11nm,1.3s						
MLR	Muntele Rosu	34.34	299	*e*P	P	12 34 02.4	+0.1
MLR				pmax	pmax		
	comp=Z,11nm,1.3s						
KOLS	Kolonicke sedl	36.87	305	*e*P	P	12 34 25.0	+1.4
KOLS	Kolonicke sedl	36.87	305	*e*P	P	12 34 25.0	+1.4
KOLS				*e*sP	pP	12 34 31.6	-35
WHN	Wuhan	36.93	86	P	P	12 34 25.3	+1.1
FIA1	FINESS Array S	37.23	326	*e*P	P	12 34 26.1	-0.3
	comp=Z,10.0nm,0.8s						
FINES	FINESS Array B	37.23	326	P	P	12 34 26.4	0.0
	comp=Z,6.9nm,0.6s,baz=109,slow=10,SNR=24						
FINES	FINESS Array B	37.23	326	*i* P	P	12 34 26.7	+0.3
FINES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LVZ	Lovozero	37.32	339	*e*P	P	12 34 27.1	0.0
	comp=Z,39nm,1.3s						
LVZ	Lovozero	37.32	339	*e*P	P	12 34 27.5	+0.5
APA	Apatity	37.49	338	⇑*i*P	P	12 34 32.3	+3.9
APA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
VYHS	Vyhne	39.15	304	*e*P	P	12 34 46.7	+4.1
VYHS	Vyhne	39.15	304	*e*P	P	12 34 46.7	+4.1
VYHS				*e*sP	pP	12 34 53.2	-32
NJ2	Nanjing	40.01	82	*e*P	P	12 34 50.0	+0.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ARCES	ARCESS Array B	40.99	338	P	P	12 34 57.9	+0.5
	comp=Z,8.8nm,0.6s,baz=109,slow=8.2,SNR=38						
ARE0	ARCESS Array S	40.99	338	*e*P	P	12 34 57.7	+0.3
	comp=Z,0.9nm,0.9s						
NC405	NORSAR Array S	43.87	323	*e*P	P	12 35 20.3	-0.3
	comp=Z,18nm,0.9s						
GRFO	Grafenberg	44.07	307	*e*P	P	12 35 23.0	+0.6
	comp=Z,36nm,0.6s						
GRFO	Grafenberg	44.07	307	*e*P	P	12 35 23.0	+0.6
GRFO				pmax	pmax		
	comp=Z,36nm,0.6s						
NB201	NORSAR Array S	44.07	323	*e*P	P	12 35 21.9	-0.3
	comp=Z,14nm,0.9s						
NB2	NORSAR Subarra	44.11	323	P	P	12 35 21.6	-1.0
	comp=Z,9.7nm,1.0s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.11	323	P	P	12 35 21.7	-0.8
	comp=Z,6.3nm,0.9s,baz=97,slow=7.8,SNR=22						
NBO00	NORSAR Array S	44.32	323	*e*P	P	12 35 23.5	-0.7
	comp=Z,13nm,0.8s						
YAK	Yakutsk	44.32	35	⇓*e*P	P	12 35 24.3	+0.1
YAK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NC204	NORSAR Array S	44.35	323	*e*P	P	12 35 23.9	-0.6
	comp=Z,16nm,0.9s						
KLR	Kul'dur	45.60	54	⇓*e*P	P	12 35 34.2	-0.3
KLR				pmax	pmax		
	comp=Z,3.0nm,1.5s						
TIXI	Tiksi	46.02	22	⇑*e*P	P	12 35 38.5	+1.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SPA0	Spitsbergen Ar	47.43	347	*e*P	P	12 35 49.5	+1.2
	comp=Z,24nm,1.4s						
KMBO	Kilima Mbogo	48.40	227	P	P	12 35 57.5	+0.7
	comp=Z,3.5nm,0.5s,baz=36,slow=11,SNR=10						
KMBO	Kilima Mbogo	48.40	227	*e*P	P	12 35 57.1	+0.3
	comp=Z,4.4nm,0.6s						
KMBO	Kilima Mbogo	48.40	227	*e*P	P	12 35 57.1	+0.3
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBS	Kingsbay	48.55	347	*ce*P	P	12 35 58.9	+2.1
KBS				pmax	pmax		
	comp=Z,93nm,1.7s						
MBAR	Mbarara	52.04	234	*e*P	P	12 36 24.2	+0.2
	comp=Z,9.4nm,0.6s						
MBAR	Mbarara	52.04	234	*e*P	P	12 36 24.2	+0.2
MBAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ESDC	Sonseca Array	57.01	298	P	P	12 36 58.8	-0.5
	comp=Z,0.2nm,0.3s,baz=53,slow=7.2,SNR=4.9						
BILL	Bilibino	58.89	26	*e*P	P	12 37 12.0	+0.2
BILL				*e**PP	pP	12 37 59.8	+0.6
BILL				*e*		12 39 25.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TOA0	Torodi Ar. Sit	65.19	268	*e*P	P	12 37 52.8	-1.7
	comp=Z,3.5nm,0.7s						
TORD	Torodi Ar. Bea	65.19	268	P	P	12 37 52.6	-1.9
	comp=Z,2.9nm,0.7s,baz=60,slow=5.7,SNR=20						
TOLK	Toolik Lake Re	71.11	14	*e*P	P	12 38 30.8	+0.3
	comp=Z,3.4nm,0.8s						
COLD	Coldfoot	72.17	15	*e*P	P	12 38 37.2	+0.4
	comp=Z,2.5nm,1.0s						
INK	Inuvik	74.04	9	*e*P	P	12 38 48.0	+0.3
	comp=Z,9.2nm,1.4s						
DBIC	Dimbokro	74.16	267	P	P	12 38 47.6	-1.7
	comp=Z,4.6nm,0.7s,baz=18,slow=5.7,SNR=4.0						
DBIC	Dimbokro	74.16	267	*e*P	P	12 38 47.7	-1.7
	comp=Z,9.5nm,0.9s						
DBIC	Dimbokro	74.16	267	*e*P	P	12 38 47.7	-1.7
DBIC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSAD1	Pilbara Seismi	74.17	133	*e*P	P	12 38 48.3	-0.8
	comp=Z,27nm,1.5s						
LBTB	Lobatse	74.28	222	*e*P	P	12 38 49.7	-0.1
	comp=Z,7.1nm,0.8s						
LBTB	Lobatse	74.28	222	*e*P	P	12 38 49.7	-0.1
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TSUM	Tsumeb	74.47	231	*e*P	P	12 38 50.7	-0.3
	comp=Z,4.0nm,0.6s						
COLA	College	74.68	16	*c i*P	P	12 38 51.1	-0.3
COLA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ILAR	Eielson Array	74.98	16	P	P	12 38 52.8	-0.4
	comp=Z,1.0nm,0.9s,baz=320,slow=5.1,SNR=12						
ILB	Eielson Array	74.98	16	*e*P	P	12 38 52.9	-0.3
	comp=Z,7.1nm,1.6s						
MTN	Manton Dam	75.34	118	*e*P	P	12 38 55.4	-0.5
	comp=Z,24nm,1.6s						
DHY	Denali Highway	76.34	17	*e*P	P	12 39 00.6	-0.5
	comp=Z,3.3nm,0.6s						
PAX	Paxson	76.86	16	*e*P	P	12 39 03.3	-0.7
	comp=Z,3.0nm,0.6s						
PAX	Paxson	76.86	16	*e*P	P	12 39 03.3	-0.7
PAX				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SML	Sawmill	77.20	18	*e*P	P	12 39 05.0	-0.9
	comp=Z,6.9nm,0.7s						
SML	Sawmill	77.20	18	*e*P	P	12 39 05.0	-0.9
SML				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BOSA	Boshof	77.36	220	P	P	12 39 06.6	-0.6
	comp=Z,4.0nm,0.7s,baz=86,slow=5.9,SNR=6.4						
BOSA	Boshof	77.36	220	*e*P	P	12 39 06.8	-0.4
	comp=Z,18nm,1.5s						
BOSA	Boshof	77.36	220	*e*P	P	12 39 06.8	-0.4
BOSA				pmax	pmax		
	comp=Z,19nm,1.5s						
KDAK	Kodiak Island	79.45	22	*e*P	P	12 39 17.6	-0.5
	comp=Z,8.3nm,1.3s						
KDAK	Kodiak Island	79.45	22	*i* P	P	12 39 18.0	-0.1
WRA	Warramunga Arr	82.41	121	P	P	12 39 32.8	-1.6
	comp=Z,2.9nm,0.8s,baz=302,slow=5.2,SNR=19						
WR1	Warramunga Arr	82.41	121	*e*P	P	12 39 32.8	-1.6
WRAB	Tennant Creek	82.42	121	*e*P	P	12 39 32.8	-1.5
	comp=Z,3.8nm,0.9s						
WRAB	Tennant Creek	82.42	121	*e*P	P	12 39 32.8	-1.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WB2	Warramunga Arr	82.42	121	*e*P	P	12 39 32.7	-1.7
	comp=Z,8.4nm,1.3s						
SUR	Sutherland	82.67	220	*e*P	P	12 39 35.7	+0.1
	comp=Z,20nm,1.4s						
AS31	Alice Springs	84.66	124	*e*P	P	12 39 44.4	-1.3
	comp=Z,0.7nm,0.8s						
ASAR	Alice Springs	84.66	124	P	P	12 39 44.1	-1.6
	comp=Z,1.6nm,0.7s,baz=311,slow=4.8,SNR=31						
FFC	Flin Flon	88.96	356	*i* P	P	12 40 06.9	+0.9
PLCA	Paso Flores	149.31	250	PKPbc	PKPbc	12 46 59.2	-0.1
	comp=Z,1.0nm,0.7s,baz=114,slow=3.1,SNR=5.4						

IGQ 12 12:37:07.8±0.4, 4°S±2°×8°0W±°, h10^{km}, MLv4.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCRA	Macar, Loja	0.68	189	P	Pg	12 37 19.7	-1.3
GONZ	Gonzanam	0.70	140	P	Pb	12 37 22.0	-0.4
MORR	Playas El Morr	1.16	335	P	Pb	12 37 28.1	-1.8
MORR				S	Sb	12 37 43.0	-1.9
COHC	Cochancay	1.35	26	P	Pn	12 37 29.2	-3.6
COHC				S	Sb	12 37 43.8	-6.9
ZUMB	Zumba	1.36	149	P	Pg	12 37 34.0	+0.1
ZUMB				S	Sg	12 37 52.6	+1.1
IGUA	Igualata	2.50	29	P	Pn	12 37 49.9	+0.9
BMAS	Trigal station	2.57	32	P	Pn	12 37 50.5	+0.7
BMAS				S	Sn	12 38 21.5	+0.2
PAT1	Patacocha	2.59	33	P	Pn	12 37 50.6	+0.3
BPAT	Tungurahua Vol	2.59	33	P	Pn	12 37 50.8	+0.5
BPAT				S	Sn	12 38 21.3	-0.8
RETU	Refugio	2.63	32	P	Pn	12 37 51.9	+1.1
POND	Pondoa	2.65	32	P	Pn	12 37 51.0	0.0
POND				S	Sn	12 38 23.3	-0.1
BULB	Ulba Tungurahu	2.66	33	P	Pn	12 37 51.5	+0.3
BRUN	Tungurahua Vol	2.67	32	P	Pn	12 37 51.6	+0.4
PISA	Pisayambo	3.00	29	P	Pn	12 37 56.1	+0.2
BNAS	Cotopaxi Volca	3.30	24	P	Pn	12 37 58.5	-1.5
BREF	Cotopaxi Volca	3.32	25	P	Pn	12 37 59.4	-1.0
PITA	Cotopaxi Volc	3.42	24	P	Pn	12 38 04.2	+2.5
ANTS	Antisana-Sarah	3.59	28	P	Pn	12 38 07.2	+3.1

ISC 12 12:39:34.8±1.9, 45°.60N±0°.07×17°.64E±0°.06, h11^{km}±14^{km}, n9, σ0^{s}.53/14, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORH	Mrgy, Hungar	0.94	48	⇑*e*Pg	Pb	12 39 53.0	0.0
MORH				*e*Sg	Sn	12 40 07.1	-0.3
KALN	Kalnik	0.98	303	*e*Pg	Pg	12 39 54.4	+0.7
KALN				Sg	Sn	12 40 08.7	+0.2
PTJ	Puntijarka	1.21	285	ePg	Pg	12 39 57.2	-0.8
PTJ				Sg	Sb	12 40 13.6	+0.2
OZLJ	Ozalj	1.52	271	*e*Pn	Pn	12 40 01.5	-0.5
OZLJ				Sn	Sn	12 40 22.0	+0.3
UDBI	Udbina	1.70	232	Sn	Sn	12 40 25.5	-0.8
MORI	Morici	2.21	219	*e*Pn	Pn	12 40 11.5	+0.1
NVLJ	Novalja	2.21	243	*e*Pn	Pn	12 40 11.6	+0.1
ZIRJ	Zirje	2.41	217	*e*Pn	Pn	12 40 14.4	+0.3
ZIRJ				Sn	Sn	12 40 44.2	+0.6
DUGI	Dugi Otok	2.44	230	*i* Pn	Pn	12 40 14.6	0.0

DJA 12 13:25:12.7±1.0, 3°S±4°×13°0E±°, h26^{km}±14^{km}, M3.5/9, MLv3.5/9, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.04	237	P	Pn	13 25 31.0	-0.7
MSAI				S	Sb	13 25 49.2	+3.8
BNDI	Bandanaira	1.73	177	P	Pn	13 25 41.1	-0.1
AAI	Ambon	1.85	241	P	Pn	13 25 43.1	+0.4
SWI	Sorong	2.39	37	P	Pn	13 25 50.5	+0.3
SWI				S	Sn	13 26 20.3	+1.6
FAKI	Fak Fak	2.44	93	P	Pn	13 25 50.6	-0.3
FAKI				S	Sn	13 26 19.2	-0.7
NLAI	Namlea	2.75	260	P	Pn	13 25 55.6	+0.5
LBMI	Labuha	3.14	313	P	Pn	13 26 01.0	+0.5
SANI	Sanana	3.89	281	P	Pn	13 26 09.6	-1.2

MEX 12 13:32:47.0±0.3, 15°.91N×97°.01W, h33^{km}±4^{km}, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.88	99	*e*P	Pn	13 33 01.2	-1.9
HUIG				*e*S	Sn	13 33 12.0	-2.7
VHO	Vista Hermosa	1.19	13	*e*P	Pn	13 33 05.3	-2.2
VHO				*e*S	Sn	13 33 19.9	-2.8

DJA 12 13:32:58.1±0.3, 8°S±6°×11°6E±°, h10^{km}, M3.8/9, MLv3.8/9, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRBI	Singaraja	0.43	288	P	Pg	13 33 06.6	0.0
SRBI				S	Sb	13 33 13.7	-0.8
DNP	Denpasar	0.61	222	P	Pg	13 33 09.0	-1.1
JAGI	Jajag, Banyuwa	1.48	260	P	Pn	13 33 23.2	-1.7
JAGI				S	Sn	13 33 44.5	+0.2
KMMI	Kalianget	2.02	305	P	Pn	13 33 32.4	+0.2
PLAI	Plampang	2.21	106	P	Pn	13 33 35.3	+0.5
GRJI	Gresik	3.38	292	P	Pn	13 33 50.2	-0.8

IDC ***12*** *13:51:31.0±2.1, 52°.17N×160°.59E, h0^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.6/37, mbtmp3.7/10, ML3.4/1, MS3.2/1, Ms1 3.1/1, ms1mx2.4/43, Error ellipse: s-maj=39.6km s-min=24.5km az=119.0*

KRSC ***12*** *13:51:32.9±1.6, 52°.13N×160°.67E, h54^{km}±23^{km}, ML4.0*

ISC 12 13:51:32.3±2.0, 52°.11N±0°.06×160°.65E±0°.05, h11^{km}±11^{km}, n41, σ1^{s}.31/51, mb3.9/8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.06	339	*e*P	Pg	13 51 52.7	0.0
SPN				*e*S	Sg	13 52 05.1	-1.3
NLC	Nalytchevo	1.33	324	*e*P	Pn	13 51 57.0	+0.3
NLC				*e*S	Sb	13 52 12.8	-1.3
RUS	Russkaya	1.35	285	*e*P	Pn	13 51 57.1	+0.1
RUS				*e*S	Sb	13 52 13.1	-1.7
DALK	Dalny	1.48	309	*e*P	Pn	13 51 59.0	+0.2
DALK				*e*S	Sn	13 52 17.7	-0.4
PET	Petropavlovsk	1.52	308	*e*P	Pn	13 51 59.6	+0.2
PET				*e*S	Sn	13 52 19.0	-0.1
MTVR	Mutnovka	1.56	285	*e*P	Pn	13 52 00.4	+0.4
MTVR				*e*S	Sn	13 52 19.4	-0.9
UGLR	Uglovaya	1.56	315	*e*P	Pn	13 52 01.2	+1.1
UGLR				*e*S	Sb	13 52 21.5	+0.4
SDLR	Sedlovina	1.59	318	*e*P	Pn	13 52 01.2	+0.8
SMAR	Somma	1.61	316	*e*P	Pn	13 52 01.4	+0.6
KDTR	Khodutka, Kamc	1.62	260	*e*P	Pn	13 52 01.1	+0.4
KDTR				*e*S	Sn	13 52 19.8	-1.7
AVH	Avacha	1.64	316	*e*P	Pn	13 52 02.1	+1.0
KRER	Koryakskii	1.66	317	*e*P	Pn	13 52 02.4	+0.9
KRMR	Karymshinskiy	1.70	296	*e*P	Pn	13 52 02.3	+0.5
KRMR				*e*S	Sn	13 52 21.7	-1.8
KOK	Koryaka	1.70	315	*e*P	Pn	13 52 02.8	+0.8
ASAK	Asacha	1.71	280	*e*P	Pn	13 52 03.0	+0.9
ASAK				*e*S	Sn	13 52 24.0	+0.1
KRX	Arik	1.74	317	*e*P	Pn	13 52 03.2	+0.6
PETK	Petropavlovsk-	2.06	300	Pn	Pn	13 52 07.7	+1.0
	12nm,0.3s,baz=105,slow=18,SNR=167						
PETK				Sn	Sn	13 52 34.1	+1.7
	12nm,0.3s,baz=120,slow=18,SNR=9.5						
GNL	Ganaly	2.28	315	*e*P	Pn	13 52 11.5	+1.6
APC	Apacha	2.28	292	*e*P	Pn	13 52 11.5	+1.7
APC				*e*S	Sn	13 52 38.2	+0.3
PAU	Pauzhetka	2.47	256	P	Pn	13 52 12.8	+0.4
MKZ	Mys Kozlova	2.53	14	*e*P	Pn	13 52 14.1	+0.8
MKZ				*e*S	Sn	13 52 42.1	-2.0
KZV	Kizimen	3.02	356	*e*P	Pn	13 52 21.5	+1.4
TUMD	Tumrok D	3.10	357	*e*P	Pn	13 52 22.5	+1.4
TUMD				*e*S	Sn	13 52 57.9	-0.2
TUMR	Tumrok	3.19	355	*e*P	Pn	13 52 23.3	+0.9
ESO	Esso	3.99	344	*e*P	Pn	13 52 36.6	+3.3
KBTR	Krutoberegovo	4.30	16	P	Pn	13 52 40.0	+2.5
BKI	Bering	4.43	44	*e*S	Sn	13 53 27.5	-3.3
ASAJ	Asahikawa	14.44	244	Pn	Pn	13 54 57.8	+1.4
	0.3nm,0.3s,baz=62,slow=14,SNR=4.6						
USRK	Ussuriysk Ar.	20.59	259	P	P	13 56 10.0	-1.0
	1.3nm,0.7s,baz=64,slow=13,SNR=3.3						
MJAR	Matsushiro Arr	22.22	234	P	P	13 56 29.1	+0.4
	1.0nm,0.7s,baz=20,slow=10,SNR=3.6						
TIXI	Tiksi	24.12	336	P	P	13 56 47.0	-0.6
	2.1nm,0.6s,baz=118,slow=9.7,SNR=7.5						
H11N2	WAKE ISLAND Hy	32.68	169	T	T	14 33 08.2	
	baz=352,slow=76,SNR=6.8						
H11N3	WAKE ISLAND Hy	32.70	169	T	T	14 32 45.6	
	baz=352,slow=76,SNR=4.7						
H11N1	WAKE ISLAND Hy	32.70	169	T	T	14 32 52.1	
	baz=352,slow=76,SNR=7.1						
KURBB	Kurchatov Arra	48.65	303	P	P	14 00 14.1	-1.7
	0.7nm,0.7s,baz=58,slow=7.8,SNR=7.2						
MKAR	Makanchi Array	48.89	297	P	P	14 00 16.0	-1.8
	0.3nm,0.5s,baz=56,slow=8.9,SNR=4.2						
BVAR	Borovoye Array	51.27	309	P	P	14 00 34.8	-0.9
	0.8nm,0.4s,baz=35,slow=12,SNR=4.1						
CMAR	Chiang Mai Arr	58.32	259	P	P	14 01 28.8	+1.6
	0.3nm,0.3s,baz=27,slow=8.1,SNR=4.0						
ULM	Lac du Bonnet	59.25	47	LR	LR	14 29 33.3	
	comp=Z,20nm,18.4s,baz=345,slow=38						
FINES	FINESS Array B	61.16	337	P	P	14 01 46.8	+0.6
	2.0nm,0.7s,baz=36,slow=9.3,SNR=9.9						
NOA	NORSAR Array B	64.58	344	P	P	14 02 10.0	+1.0
	0.4nm,0.7s,baz=23,slow=6.7,SNR=3.3						

IDC ***12*** *13:55:51.2±3.0, 52°.06N×160°.70E, h0^{km}, mb3.7/4, mb1 3.7/6, mb1mx3.4/45, mbtmp3.7/6, ML3.1/2, Error ellipse: s-maj=50.9km s-min=39.4km az=157.0*

KRSC ***12*** *13:55:53.8±1.7, 52°.07N×160°.70E, h56^{km}±23^{km}, ML4.1*

ISC 12 13:55:54.6±2.1, 52°.14N±0°.06×160°.51E±0°.07, h14^{km}±10^{km}, n29, σ0^{s}.77/47, mb3.9/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.01	343	*e*P	Pg	13 56 14.1	+0.1
SPN				*e*S	Sg	13 56 26.9	-0.3
NLC	Nalytchevo	1.26	326	*e*P	Pg	13 56 18.5	-0.2
NLC				*e*S	Sg	13 56 35.8	+0.7
RUS	Russkaya	1.26	284	*e*P	Pb	13 56 18.3	+0.2
RUS				*e*S	Sb	13 56 34.3	+0.1
DALK	Dalny	1.40	311	*e*P	Pb	13 56 20.4	0.0
DALK				*e*S	Sg	13 56 39.1	-0.5
PET	Petropavlovsk	1.44	309	*e*P	Pb	13 56 21.1	-0.1
PET				S	Sg	13 56 40.6	-0.4
MTVR	Mutnovka	1.47	285	*e*P	Pb	13 56 21.8	0.0
MTVR				*e*S	Sb	13 56 40.6	+0.2
UGLR	Uglovaya	1.49	317	*e*P	Pg	13 56 22.6	-0.5
UGLR				*e*S	Sg	13 56 42.8	+0.3
SDLR	Sedlovina	1.51	320	*e*P	Pb	13 56 22.5	0.0
SMAR	Somma	1.54	318	*e*P	Pb	13 56 22.9	0.0
KDTR	Khodutka, Kamc	1.54	259	*e*P	Pb	13 56 22.5	-0.3
KDTR				*e*S	Sn	13 56 41.4	0.0
AVH	Avacha	1.56	317	*e*P	Pb	13 56 23.4	+0.1
AVH				*e*S	Sg	13 56 44.9	0.0
KRER	Koryakskii	1.59	318	*e*P	Pb	13 56 23.8	0.0
KRER				*e*S	Sg	13 56 45.4	-0.3
KRMR	Karymshinskiy	1.61	297	*e*P	Pb	13 56 23.7	-0.4
KRMR				*e*S	Sg	13 56 45.6	-0.9
ASAK	Asacha	1.62	280	*e*P	Pb	13 56 24.3	0.0
ASAK				*e*S	Sg	13 56 47.0	+0.2
KOK	Koryaka	1.62	316	*e*P	Pb	13 56 24.2	-0.2
KRX	Arik	1.67	318	*e*P	Pb	13 56 24.8	-0.3
PETK	Petropavlovsk-	1.97	301	Pn	Pb	13 56 29.0	-1.2
	13nm,0.3s,baz=107,slow=20,SNR=59						
PETK				Sn	Sb	13 56 55.5	+0.8
	22nm,0.3s,baz=117,slow=20,SNR=7.0						
APC	Apacha	2.19	292	*e*P	Pb	13 56 32.8	-1.2
APC				*e*S	Sb	13 57 01.3	+0.2
GNL	Ganaly	2.20	316	*e*P	Pb	13 56 32.9	-1.4
GNL				*e*S	Sb	13 57 02.1	+0.6
MKZ	Mys Kozlova	2.53	16	*e*P	Pn	13 56 35.5	+0.3
MKZ				*e*S	Sn	13 57 04.7	-1.2
KZV	Kizimen	2.99	358	*e*P	Pn	13 56 43.2	+1.6
KZV				*e*S	Sn	13 57 17.9	+0.6
TUMD	Tumrok D	3.08	359	*e*P	Pn	13 56 43.9	+1.2
TUMD				*e*S	Sn	13 57 18.6	-0.7
SKR	Severo-Kuril’s	3.11	244	*e*S	Sn	13 57 19.5	-0.6
TUMR	Tumrok	3.16	356	*e*P	Pn	13 56 46.0	+2.0
ASAJ	Asahikawa	14.38	243	Pn	Pn	13 59 18.7	+1.2
	0.2nm,0.3s,baz=112,slow=24,SNR=4.0						
TIXI	Tiksi	24.06	336	P	P	14 01 08.3	-0.6
	2.0nm,0.6s,baz=124,slow=9.0,SNR=9.0						
KURBB	Kurchatov Arra	48.56	303	P	P	14 04 35.4	-1.6
	0.7nm,0.7s,baz=59,slow=8.2,SNR=5.4						
MKAR	Makanchi Array	48.80	297	P	P	14 04 37.8	-1.2
	0.1nm,0.4s,baz=59,slow=6.0,SNR=4.6						
FINES	FINESS Array B	61.10	337	P	P	14 06 08.2	+0.6
	0.7nm,0.4s,baz=28,slow=9.4,SNR=11						

ISCJB ***12*** *14:02:05.8±1.0, 32°.16N±0°.07×140°.4E±0°.1, h94^{km}±7^{km}, mb3.6/9, Error ellipse: s-maj=17.9km s-min=10.6km az=12.9*

IDC ***12*** *14:02:06.2±1.6, 32°.04N×140°.21E, h86^{km}±12^{km}, mb3.4/9, mb1 3.7/10, mb1mx3.4/39, mbtmp3.7/10, Error ellipse: s-maj=29.1km s-min=18.8km az=96.0*

JMA ***12*** *14:02:06.5±0.2, 32°.22N×140°.72E, h66^{km}, M3.6*

ISC 12 14:02:06.3±1.3, 32°.14N±0°.08×140°.5E±0°.1, h85^{km}±10^{km}, n29, σ1^{s}.08/31, mb3.7/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.70	298	P	Pn	14 02 23.0	+0.6
JAOM				S	Sn	14 02 34.9	+0.5
JHCJ	Hachijojimakas	1.10	328	P	Pn	14 02 26.7	-0.2
JHCJ				S	Sn	14 02 42.0	-0.3
JHJ2	Mitsune	1.13	330	P	Pn	14 02 27.1	-0.1
JHJ2				S	Sn	14 02 42.2	-0.7
JHJ	Hachijo jima 2	1.15	329	P	Pn	14 02 27.8	+0.3
	171nm,0.3s,baz=85,slow=22,SNR=58						
JHJ				S	Sn	14 02 42.7	-0.6
	344nm,0.3s,baz=58,slow=21,SNR=22						
JMKN	Mikurajimanish	1.91	337	P	Pn	14 02 37.5	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JMKN				S	Sn	14 03 00.7	+0.1
BSO1	Boso 1	2.54	9	P	Pn	14 02 45.2	+0.1
BSO1				eS	Sn	14 03 14.4	-0.5
JOD2	Odawara 2	3.33	340	P	Pn	14 02 57.1	+0.9
JOD2				S	Sn	14 03 35.2	+0.4
TTO1	TONANKAI O.B.S	3.45	296	P	Pn	14 02 58.7	+1.1
JYN	Shimob	3.72	335	P	Pn	14 03 03.7	+2.1
JRY	Ryogami san	4.09	342	P	Pn	14 03 07.8	+1.3
JAG	Ashikaga	4.36	349	P	Pn	14 03 09.7	-0.5
MJAR	Matsushiro Arr	4.78	337	P	Pn	14 03 16.5	+0.6
	0.2nm,0.3s,baz=151,slow=9.0,SNR=6.9						
MAT	Matsushiro	4.79	337	P	Pn	14 03 17.1	+1.1
MAT				eS	Sn	14 04 07.5	-2.6
H11N2	WAKE ISLAND Hy	26.69	111	T	T	14 36 30.0	
	baz=301,slow=74,SNR=3.3						
H11N1	WAKE ISLAND Hy	26.69	111	T	T	14 36 28.6	
	baz=301,slow=74,SNR=3.3						
H11N3	WAKE ISLAND Hy	26.71	111	T	T	14 36 44.7	
	baz=301						
H11S3	WAKE ISLAND Hy	27.21	114	T	T	14 36 40.4	
	baz=304,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	27.21	114	T	T	14 36 35.1	
	baz=304,slow=75,SNR=7.5						
H11S2	WAKE ISLAND Hy	27.23	114	T	T	14 36 30.8	
	baz=304,slow=75,SNR=7.0						
MKAR	Makanchi Array	46.23	306	P	P	14 10 22.0	-0.8
	0.3nm,0.6s,baz=82,slow=12,SNR=2.8						
WRA	Warramunga Arr	52.12	187	P	P	14 11 06.2	-1.6
	0.4nm,0.3s,baz=358,slow=7.0,SNR=16						
ILAR	Eielson Array	54.06	30	P	P	14 11 22.2	+0.5
	0.7nm,0.9s,baz=255,slow=5.4,SNR=5.6						
ASAR	Alice Springs	55.84	187	P	P	14 11 33.5	-1.5
	0.4nm,0.5s,baz=3.4,slow=6.5,SNR=5.1						
FINES	FINESS Array B	72.80	333	P	P	14 13 24.7	-0.5
	2.9nm,1.1s,baz=57,slow=7.0,SNR=3.8						
NOA	NORSAR Array B	78.40	337	P	P	14 13 56.2	-1.1
	0.5nm,0.7s,baz=41,slow=5.6,SNR=3.5						
NVAR	Mina Array Bea	78.57	52	P	P	14 14 00.3	+1.4
	0.4nm,0.7s,baz=288,slow=5.9,SNR=3.8						
PDAR	Pinedale Array	81.67	44	P	P	14 14 16.0	+0.5
	0.3nm,0.6s,baz=291,slow=0.8,SNR=3.3						
TXAR	Lajitas Array	93.72	52	P	P	14 15 15.4	+1.5
	0.4nm,0.3s,baz=305,slow=3.2,SNR=5.7						
LPAZ	La Paz	149.63	65	PKPbc	PKiKP	14 21 48.9	+0.6
	0.9nm,0.5s,baz=356,slow=5.8,SNR=4.4						

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*DSN **12** 14:03:29.5±2.3, 26°.56N×57°.97E, h10km, ML3.6/9, Error ellipse: s-maj=32.9km s-min=10.1km az=3.0*
*OMAN **12** 14:03:31.6±1.4, 26°.89N×57°.92E, h34km±44km, ml3.8/18, Error ellipse: s-maj=65.7km s-min=12.3km az=22.0*
*THR **12** 14:03:32.3, 26°.86N×57°.51E, h14km, ML3.7*
*IDC **12** 14:03:33.1±3.0, 26°.67N×57°.38E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.4/52, mbtmp3.7/6, MS3.1/3, Ms1 3.1/3, ms1mx2.7/29, Error ellipse: s-maj=65.1km s-min=29.1km az=154.0*
*TEH **12** 14:03:33.8, 26°.91N×57°.76E, h10km, ML3.8*
ISC 12 14:03:30.9±0.7**, 26°.42N**±0°.04×**57°.81E**±0°.03**, h10**km**, n56, σ1ˢ.79**/56**, mb3.7**/6**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	1.43	323	ePg	Pn	14 03 55.1	-1.9
BANOM	Banah	1.45	250	eP	Pb	14 03 58.0	0.0
	SNR=395						
BANOM				S	Sg	14 04 20.4	+2.8
BANOM	Banah	1.45	250	P	Pg	14 03 58.6	-0.2
	SNR=393						
BANOM				S	Sg	14 04 20.7	+3.1
KHNJ	Kahnooj	1.52	356	ePg	Pn	14 03 54.2	-4.1
SHME	Shamm	1.55	257	eP	Pb	14 03 59.8	+0.1
	SNR=110						
SHME				S	Sg	14 04 22.4	+1.8
BNDS	Bandar-Abbas	1.76	304	AML	AML	14 04 26.0	
	comp=N,971nm,0.5s						
BNDS				Pg	Pn	14 03 56.6	-5.1
GENO	Geno	1.76	304	ePn	Pn	14 04 01.2	-0.5
GENO				IAMB	IAmb	14 04 29.9	
	comp=Z,0.0nm,0.6s						
MDH	Madha	1.76	231	eP	Pb	14 04 02.0	-1.3
	SNR=37						
MDH	Madha	1.76	231	P	Pb	14 04 02.1	-1.3
	SNR=10						
MSFE	Esma-Masafi	1.83	235	eP	Pn	14 04 03.0	+0.5
	SNR=16						
UOSS	Minazif	2.06	225	eP	Pn	14 04 06.1	+0.4
	SNR=6.9						
UOSS	Minazif	2.06	225	P	Pn	14 04 06.3	+0.6
UMQ	Umm Al-Quwin	2.13	246	P	Pb	14 04 09.3	-0.4
HATD	Hatta, Dubai	2.20	224	eP	Pn	14 04 08.0	+0.5
	SNR=9.5						
HATD	Hatta, Dubai	2.20	224	P	Pn	14 04 08.4	+0.9
	SNR=9.7						
ASHO	Ashiyiah	2.35	223	eP	Pn	14 04 10.1	+0.5
	SNR=16						
ASHO	Ashiyiah	2.35	223	P	Pg	14 04 14.6	-1.4
	SNR=16						
NAZ	Nazwa, Dubai	2.41	234	eP	Pb	14 04 13.5	-0.9
	SNR=31						
NAZ	Nazwa, Dubai	2.41	234	P	Pb	14 04 14.5	+0.1
	SNR=31						
CHBR	Chabahar	2.54	108	ePn	Pg	14 04 20.7	+1.1
CHBR	Chabahar	2.54	108	Pn	Pg	14 04 20.7	+1.1
FAQ	Al Faqa, Dubai	2.61	231	P	Pb	14 04 17.0	-0.8
FAQ				S	Sg	14 04 54.1	-0.7
HOQ	Hoqain	2.86	189	P	Pb	14 04 21.7	-0.4
	SNR=9.5						
ASUD	Al Ashush, Dub	2.87	232	iP	Pb	14 04 19.1	-3.2
	SNR=6.2						
ASUD	Al Ashush, Dub	2.87	232	P	Pb	14 04 20.6	-1.6
BIDO	Bidbid	2.90	174	P	Pb	14 04 23.0	+0.2
	SNR=7.5						
ALNE	Al Ain	3.00	219	iP	Pb	14 04 21.9	-2.7
	SNR=6.2						
WSAR	Wadi Sarin	3.25	167	P	Pb	14 04 25.6	-3.2
	SNR=14						
ARQ	Araqi	3.29	201	P	Pb	14 04 29.0	-0.4
	SNR=21						
ARQ				S	Sb	14 05 08.9	-0.6
NGRK	Negar Kerman	3.35	344	ePn	Pn	14 04 23.5	-0.2
NGRK				IAMB	IAmb	14 05 17.0	
	comp=Z,0.0nm,0.5s						
SMDO	Samad	3.35	176	P	Pb	14 04 30.0	-0.6
	SNR=21						
SMDO				S	Sb	14 05 08.4	-3.1
CHMN	Cheshme madani	3.44	356	ePn	Pn	14 04 25.3	+0.4
CHMN				IAMB	IAmb	14 05 32.2	
	comp=Z,0.0nm,1.0s						
TVBK	TV Kerman	3.67	346	ePn	Pn	14 04 29.1	+1.0
TVBK				IAMB	IAmb	14 05 31.4	
	comp=Z,0.0nm,0.6s						
BSY	Bisya	3.70	189	P	Pb	14 04 33.9	-2.6
WBK	Wadi Bani Khal	3.94	164	P	Pb	14 04 36.9	-3.6
JMDO	Jabal Madar	4.04	176	P	Pb	14 04 39.4	-2.9
KHGB	Koh Gabri	4.11	344	ePn	Pn	14 04 32.0	-2.1
KHGB				IAMB	IAmb	14 05 45.6	
	comp=Z,0.0nm,0.9s						
ZHSF	Zahedan	4.12	39	ePn	Pn	14 04 34.9	+0.8
ZHSF	Zahedan	4.12	39	P	Pn	14 04 34.9	+0.8
JLN	Jalan Bani Buh	4.49	161	P	Pn	14 04 42.6	+3.5
GHIR	Ghir-Karzin	4.68	294	ePn	Pn	14 04 38.9	-2.9
GHIR	Ghir-Karzin	4.68	294	Pn	Pn	14 04 38.9	-2.9
ISRV	Sarvestan	5.10	306	ePn	Pn	14 04 47.0	-0.7
BSRN	Basiran	5.64	11	ePn	Pn	14 04 53.1	-1.9
BSRN	Basiran	5.64	11	P	Pn	14 04 53.1	-1.9
IKAZ	Kazeroun	6.25	304	ePn	Pn	14 05 02.0	-1.5
IKAZ				IAMB	IAmb	14 06 21.6	
	comp=Z,1μm,0.6s						
IRAM	Ramesheh	7.17	320	ePn	Pn	14 05 14.3	-1.7
GEYT	Alibeck	11.48	1	LR	LR	14 11 26.7	
	comp=Z,31nm,19.9s,baz=160,slow=42						
AAK	Ala-Archa	21.16	36	LR	LR	14 18 10.9	
	comp=Z,29nm,18.1s,baz=224,slow=41						
BRTR	Keskin Array B	24.12	309	P	P	14 08 47.4	+0.3
	comp=Z,1.1nm,0.7s,baz=113,slow=11,SNR=7.9						
KURBB	Kurchatov Arra	28.90	28	P	P	14 09 33.8	+3.9
	comp=Z,0.2nm,0.5s,baz=229,slow=8.6,SNR=4.3						
AKASG	Malin Array Be	32.62	326	P	P	14 10 01.9	-0.7
	comp=Z,0.7nm,0.4s,baz=129,slow=7.6,SNR=4.6						
ZALV	Zalesovo Beam	33.98	29	P	P	14 10 17.8	+3.3
	comp=Z,0.7nm,0.3s,baz=234,slow=9.9,SNR=3.8						
FINES	FINESS Array B	41.01	337	P	P	14 11 14.2	+0.3
	comp=Z,0.4nm,0.4s,baz=127,slow=11,SNR=5.2						
TORD	Torodi Ar. Bea	54.05	267	P	P	14 12 56.8	+0.8
	comp=Z,0.3nm,0.3s,baz=76,slow=7.4,SNR=6.1						
JAY	Jayapura	84.75	95	LR	LR	14 59 29.9	
	comp=Z,40nm,18.0s,baz=137,slow=39						

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*SJA **12** 14:04:06.3±1.1, 21°.29S×69°.90W, h56km±4km, MD2.9, ML2.9, MW3.2*
*GUC **12** 14:04:07.0±0.7, 21°.31S×69°.84W, h57km±2km, ML3.9*
*ISCJB **12** 14:04:08.0±0.5, 21°.29S±0°.02×69°.95W±0°.06, h50km±6km, Error ellipse: s-maj=9.5km s-min=3.5km az=5.0*
ISC 12 14:04:09.0±1.2**, 21°.30S**±0°.02×**69°.85W**±0°.05**, h45**km±6km**, n34, σ1ˢ.49**/55**, 2C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.04	247	eP	Pn	14 04 16.1	-0.2
PB02				eS	Sn	14 04 22.3	+1.0
PB02	IPOC Station P	0.04	247	eP	Pn	14 04 16.1	-0.2
PB02				iS	Sn	14 04 22.4	+1.0
PB02				IAML		14 04 23.0	
	comp=E,47μm,0.1s						
PB07	IPOC Station P	0.42	184	eP	Pn	14 04 18.5	-0.8
PB07				eS	Sn	14 04 26.5	0.0
PB07	IPOC Station P	0.42	184	eP	Pn	14 04 18.5	-0.8
PB07				iS	Sn	14 04 26.6	0.0
PB07				IAML		14 04 27.1	
	comp=E,6μm,0.3s						
PB01	IPOC Station P	0.43	53	iP	Pn	14 04 18.4	-0.8
PB01				eS	Sn	14 04 26.3	-0.1
PB01	IPOC Station P	0.43	53	eP	Pn	14 04 18.4	-0.8
PB01				iS	Sn	14 04 26.3	-0.1
PB01				IAML		14 04 26.5	
	comp=E,20μm,0.2s						
PB03	IPOC Station P	0.75	173	eP	Pn	14 04 22.4	-1.0
PB03				eS	Sn	14 04 33.4	-0.5
PB03	IPOC Station P	0.75	173	eP	Pn	14 04 22.2	-1.2
PB03				iS	Sn	14 04 33.4	-0.5
PB09	IPOC Station P	0.75	131	iP	Pn	14 04 22.9	-0.5
PB09				eS	Sn	14 04 33.5	-0.3
PB09	IPOC Station P	0.75	131	eP	Pn	14 04 22.7	-0.8
PB09				iS	Sn	14 04 33.6	-0.3
PB09				IAML		14 04 34.5	
	comp=E,8μm,0.2s						
PB04	IPOC Station P	1.06	195	eP	Pn	14 04 26.3	-1.5
PB04				eS	Sn	14 04 42.2	+0.7
PB04	IPOC Station P	1.06	195	eP	Pn	14 04 26.2	-1.5
PB04				iS	Sn	14 04 41.5	0.0
PB08	IPOC Station P	1.33	30	eP	Pn	14 04 30.8	-0.7
PB08				eS	Sn	14 04 48.0	-0.2
PB08	IPOC Station P	1.33	30	eP	Pn	14 04 30.6	-0.9
PB08				iS	Sn	14 04 48.1	0.0
PB06	IPOC Station P	1.42	170	eP	Pn	14 04 31.7	-0.9
PB06				iS	Sn	14 04 51.9	+1.7
PB06	IPOC Station P	1.42	170	eP	Pn	14 04 31.0	-1.6
PB11	IPOC Station P	1.54	7	iP	Pn	14 04 33.3	-1.0
PB11				eS	Sn	14 04 53.0	-0.3
PB11	IPOC Station P	1.54	7	⇑iP	Pn	14 04 33.1	-1.2
PB11				eS	Sn	14 04 52.9	-0.3
PB11				IAML		14 04 57.3	
	comp=E,2μm,0.5s						
PB05	IPOC Station P	1.58	192	eP	Pn	14 04 33.3	-1.4
PB05				eS	Sn	14 04 56.4	+2.4
PB05	IPOC Station P	1.58	192	eP	Pn	14 04 33.2	-1.5
PB05				iS	Sn	14 04 53.6	-0.4
PSGC	Pisagua	1.71	351	IAML		14 05 00.7	
	comp=E,796nm,0.3s						
PSGCX	Pisagua	1.71	351	eP	Pn	14 04 34.8	-1.7
GO01	Chusmiza	1.74	21	⇓eP	Pn	14 04 36.6	-0.6
GO01				eS	Sn	14 04 58.6	+0.1
PB15	IPOC Station P	1.93	170	eP	Pn	14 04 39.2	-0.4
PB15				eS	Sn	14 05 05.3	+2.6
MNMC	Minye Minye	2.17	6	⇑iP	Pn	14 04 42.3	-0.7
MNMC				eS	Sn	14 05 09.3	+0.5
MNMC				IAML		14 05 18.3	
	comp=E,1μm,0.5s						
MNMCX	Minye Minye	2.17	6	eP	Pn	14 04 42.3	-0.7
MNMCX				eS	Sn	14 05 11.3	+2.5
PB10	IPOC Station P	2.29	196	eP	Pn	14 04 43.1	-1.3
PB10				eS	Sn	14 05 16.9	+5.5
PB12	IPOC Station P	2.71	350	eP	Pn	14 04 48.4	-1.8
PB16	IPOC Station P	2.97	6	eP	Pn	14 04 54.0	-0.2
PB16				eS	Sn	14 05 33.3	+4.4
PB14	IPOC Station P	3.35	189	eP	Pn	14 04 56.5	-2.6
PB14				eS	Sn	14 05 46.5	+8.7
YJA	Yavi	4.12	103	eP	Pn	14 05 13.0	+3.0
YJA				IAML		14 05 16.5	
	comp=Z,7.8nm,0.7s						
HJA	Humahuaca	4.53	116	eP	Pn	14 05 18.4	+3.0
HJA				IAML		14 05 19.9	
	comp=Z,15nm,0.4s						
LPAZ	La Paz	5.25	18	eP	Pn	14 05 28.2	+2.7
AZAP	Zapla	5.29	124	iP	Pn	14 05 26.5	+0.8
AZAP				IAML		14 05 29.7	
	comp=Z,5.8nm,0.4s						

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*IDC **12** 14:07:19.0±3.1, 51°.62N×160°.35E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.2/54, mbtmp3.6/4, ML2.6/1, MS1.8/1, Ms1 1.8/1, ms1mx1.8/34, Error ellipse: s-maj=92.9km s-min=48.4km az=36.0*
*KRSC **12** 14:07:23.0±1.7, 52°.10N×160°.67E, h60km±24km, ML4.0*
ISC 12 14:07:22.9±2.4**, 52°.14N**±0°.07×**160°.54E**±0°.07**, h13**km±11km**, n30, σ0ˢ.85**/44**, mb3.8**/3**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.01	342	eP	Pn	14 07 42.9	0.0
SPN				eS	Sg	14 07 55.5	-0.2
NLC	Nalytchevo	1.27	325	eP	Pg	14 07 47.3	0.0
NLC				eS	Sg	14 08 03.8	0.0
RUS	Russkaya	1.28	284	eP	Pb	14 07 47.3	+0.4
RUS				eS	Sb	14 08 03.5	+0.2
DALK	Dalny	1.41	310	eP	Pb	14 07 49.1	0.0
DALK				eS	Sg	14 08 08.0	-0.4
PET	Petropavlovsk	1.46	308	eP	Pb	14 07 50.0	+0.1
PET				eS	Sb	14 08 08.6	+0.3
MTVR	Mutnovka	1.49	284	eP	Pb	14 07 50.8	+0.3
MTVR				eS	Sb	14 08 09.8	+0.4
UGLR	Uglovaya	1.50	316	eP	Pg	14 07 51.4	-0.3
UGLR				eS	Sg	14 08 12.0	+0.8
SDLR	Sedlovina	1.52	319	eP	Pb	14 07 51.3	+0.1
SMAR	Somma	1.55	318	eP	Pg	14 07 52.2	-0.5
KDTR	Khodutka, Kamc	1.56	259	eP	Pn	14 07 51.4	+1.0
KDTR				eS	Sn	14 08 10.5	+0.1
AVH	Avacha	1.58	317	eP	Pg	14 07 52.6	-0.6
AVH				eS	Sg	14 08 13.8	+0.2
KRER	Koryakskii	1.60	318	eP	Pb	14 07 52.7	+0.2
KRER				eS	Sg	14 08 15.1	+0.7
KRMR	Karymshinskiy	1.63	296	eP	Pb	14 07 52.6	-0.3
KRMR				eS	Sb	14 08 13.3	0.0
KOK	Koryaka	1.64	316	eP	Pb	14 07 53.4	+0.3
ASAK	Asacha	1.64	280	eP	Pb	14 07 53.3	+0.2
KRX	Arik	1.68	318	eP	Pb	14 07 53.8	0.0
PETK	Petropavlovsk-	1.99	300	Pn	Pb	14 07 57.7	-1.2
	9.6nm,0.3s,baz=103,slow=18,SNR=82						
PETK				Sn	Sb	14 08 24.4	+0.7
	24nm,0.3s,baz=88,slow=22,SNR=12						
PETK				LR	LR	14 08 29.3	
	comp=Z,24nm,21.7s,baz=70,slow=32						
APC	Apacha	2.21	292	eP	Pb	14 08 01.6	-1.2
APC				eS	Sb	14 08 29.0	-1.1
GNL	Ganaly	2.22	316	eP	Pb	14 08 02.0	-0.9
GNL				eS	Sb	14 08 29.4	-1.0
MKZ	Mys Kozlova	2.53	16	eP	Pn	14 08 04.2	+0.5
MKZ				eS	Sn	14 08 32.3	-2.0
KZV	Kizimen	2.99	357	eP	Pn	14 08 12.6	+2.4
KZV				eS	Sn	14 08 46.7	+0.8
TUMD	Tumrok D	3.08	358	eP	Pn	14 08 11.9	+0.7
TUMD				eS	Sn	14 08 48.1	+0.2
SKR	Severo-Kuril’s	3.13	244	eS	Sn	14 08 48.4	-0.7
TUMR	Tumrok	3.16	356	eP	Pn	14 08 14.5	+2.0
H11N2	WAKE ISLAND Hy	32.72	169	T	T	14 48 39.8	
	baz=356						
H11N3	WAKE ISLAND Hy	32.73	169	T	T	14 48 44.0	
	baz=356						
H11N1	WAKE ISLAND Hy	32.74	169	T	T	14 48 42.2	
	baz=356						
MKAR	Makanchi Array	48.82	297	P	P	14 16 06.4	-1.3
	0.2nm,0.4s,baz=56,slow=7.7,SNR=3.3						
BVAR	Borovoye Array	51.20	309	P	P	14 16 25.6	-0.1
	0.6nm,0.5s,baz=52,slow=9.7,SNR=4.0						
FINES	FINESS Array B	61.11	337	P	P	14 17 37.0	+0.8
	0.5nm,0.4s,baz=35,slow=10,SNR=7.5						

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*IDC **12** 14:13:45.7±0.8, 3°.32N×126°.00E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/38, mbtmp3.9/8, ML3.9/1, MS3.1/5, Ms1 3.2/5, ms1mx2.8/29, Error ellipse: s-maj=84.8km s-min=15.2km az=64.0*
*ISCJB **12** 14:13:51.1±0.3, 3°.48N±0°.03×126°.55E±0°.05, h53km, mb4.1/18, MS3.1/2, Error ellipse: s-maj=7.6km s-min=3.1km az=153.4*
*DJA **12** 14:13:51.1±1.1, 3°N±8°×12°7E±°, h18km±19km, M4.1/8, mb4.3/3, MLv4.0/8*
*NEIC **12** 14:13:51.5±2.1, 3°.27N×126°.01E, h44km±9km, mb4.2/12, Error ellipse: s-maj=23.3km s-min=13.6km az=66.0*
*MAN **12** 14:13:53.5, 3°.76N×126°.44E, h5km, MS3.3*
ISC 12 14:13:52.3±0.5**, 3°.42N**±0°.04×**126°.45E**±0°.06**, h53**km**, n49, σ1ˢ.46**/49**, mb4.2**/18**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.96	286	P	Pn	14 14 10.7	+1.1
SGSI				S	Sn	14 14 24.6	+2.3
DDMP	Don Marcelino,	2.77	345	eP	Pn	14 14 34.0	-0.2
DDMP				eS	Sn	14 15 06.0	-0.5
TNTI	Ternate	2.78	161	ePn	Pn	14 14 35.9	+1.4
TNTI	Ternate	2.78	161	P	Pn	14 14 34.0	-0.5
TNTI				S	Sn	14 15 09.5	+2.7
GSPH	General Santos	3.04	331	⇑iP	Pn	14 14 45.9	+7.7
MATI	Mati	3.51	357	eP	Pn	14 14 45.8	+1.4
MATI				eS	Sn	14 15 24.8	0.0
SKMP	Bagumbayan, Su	3.62	328	eP	Pn	14 14 47.8	+1.9
SKMP				eS	Sn	14 15 27.1	-0.4
DAV	Davao City (W)	3.73	347	LR	LR	14 16 28.4	
	comp=Z,143nm,19.1s,baz=152,slow=43						
KCP	Kidapawan	3.82	339	⇓iP	Pn	14 14 52.6	+3.9
KCP				iS	Sn	14 15 22.8	-10
LBMI	Labuha	4.16	165	P	Pn	14 14 54.4	+1.0
CTBH	Cotabato--PC H	4.37	330	⇑iP	Pn	14 14 59.2	+3.0
BUKP	Musuan	4.64	343	eP	Pn	14 15 02.0	+2.0
BUKP				eS	Sn	14 15 52.9	+0.2
PAGZ	Pagadian	5.36	325	eP	Pn	14 15 10.9	+1.2
PAGZ				eS	Sn	14 16 11.9	+1.8
LUWI	Luwuk	5.75	220	P	Pn	14 15 17.7	+2.5
SIJI	Sorong	6.43	131	Pn	Pn	14 15 25.3	+0.8
	2.4nm,0.3s,baz=334,slow=20,SNR=8.5						
SIJI				Sn	Sn	14 16 36.9	+0.3
	0.0nm,0.3s,baz=137,slow=20,SNR=3.4						
APSI	Ampana	6.44	228	P	Pn	14 15 30.6	+5.9
FAKI	Fak Fak	8.56	137	ePn	Pn	14 15 55.7	+2.0
KAPI	Kappang	10.72	219	LR	LR	14 20 51.7	
	comp=Z,105nm,20.9s,baz=324,slow=41						
BSSI	Bau Bau, Buton	11.21	212	P	Pn	14 16 28.8	-1.1
TGY	Tagaytay City	11.93	333	LR	LR	14 21 52.7	
	comp=Z,148nm,18.4s,baz=143,slow=41						
SOEI	Soe	13.26	189	ePn	Pn	14 16 49.5	-8.7
WBSI	Waikabubak, Su	14.76	208	P	P	14 17 21.2	-1.7
GENI	Genyem	14.96	113	P	Pn	14 17 20.8	+0.2
MTN	Manton Dam	16.81	164	ePn	Pn	14 17 42.6	-1.7
	12nm,1.1s						
COEN	Coen	23.94	136	eP	P	14 19 02.5	+0.6
	16nm,1.1s						
WRAB	Tennant Creek	24.47	162	eP	P	14 19 05.3	-1.3
	3.9nm,0.6s						
WR1	Warramunga Arr	24.47	162	eP	P	14 19 06.6	0.0
WRA	Warramunga Arr	24.47	162	P	P	14 19 06.6	0.0
	3.9nm,0.7s,baz=339,slow=12,SNR=29						
WB2	Warramunga Arr	24.48	162	eP	P	14 19 06.3	-0.3
	4.7nm,0.7s						
PSI	Prapat	27.49	270	LR	LR	14 31 03.2	
	comp=Z,58nm,20.2s,baz=142,slow=38						
AS31	Alice Springs	27.88	165	eP	P	14 19 37.9	+0.5
	0.9nm,1.0s						
ASAR	Alice Springs	27.88	165	P	P	14 19 37.9	+0.5
	0.3nm,0.5s,baz=349,slow=7.8,SNR=11						
CMAR	Chiang Mai Arr	30.79	301	LR	LR	14 33 26.9	
	comp=Z,32nm,18.4s,baz=75,slow=39						
MORW	Morawa	33.81	197	eP	P	14 20 26.3	-3.2
	5.3nm,1.0s						
BBOO	Buckleboo	37.16	167	eP	P	14 20 59.2	+0.9
	4.1nm,0.9s						
STKA	Stephens Creek	37.94	159	P	P	14 21 06.1	+1.3
	2.3nm,0.6s,baz=336,slow=12,SNR=7.0						
ERM	Erimo	41.24	19	eP	P	14 21 34.2	+2.0
	14nm,1.0s						
ARMA	Armidale	41.36	146	eP	P	14 21 34.2	+0.7
	5.1nm,1.1s						
SONA0	Songino Array	47.51	342	eP	P	14 22 22.5	+0.2
SONM	Songino Array	47.51	342	P	P	14 22 22.5	+0.2
	0.3nm,0.4s,baz=154,slow=6.5,SNR=3.6						
MK32	Makanchi Array	57.65	325	eP	P	14 23 36.6	-0.7
MKAR	Makanchi Array	57.65	325	P	P	14 23 36.6	-0.7
	0.8nm,0.5s,baz=121,slow=8.3,SNR=11						
MAKZ	Makanchi	57.84	325	eP	P	14 23 38.2	-0.4
	1.6nm,0.6s						
AAK	Ala-Archa	60.40	318	eP	P	14 23 55.1	-1.5
	1.6nm,0.9s						
ZALV	Zalesovo Beam	60.74	333	P	P	14 23 58.4	0.0
	0.6nm,0.5s,baz=132,slow=11,SNR=2.8						
ZAA1	Zalesovo Array	60.74	333	eP	P	14 23 58.5	0.0
KURBB	Kurchatov Arra	61.85	328	P	P	14 24 05.4	-0.6
	1.3nm,0.5s,baz=132,slow=6.2,SNR=24						
KURK	Kurchatov	61.85	328	eP	P	14 24 06.0	0.0
	3.0nm,0.6s						
BWN	Browne	84.36	26	eP	P	14 26 18.1	-0.6

UCR 12 14:17:41.5±2.6**, 9°.78N×85°.43W, h57**km±867km**, MW3.5, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	1.63	108	eP	Pn	14 18 06.4	-1.5
EDDO				eS	Sn	14 18 15.6	-12
EDLM	Las Mercedes	1.88	105	eP	Pn	14 18 13.2	+1.8
EDLM				eS	Sn	14 18 22.0	-12
ESPN	Las Esperanzas	2.65	25	eP	Pn	14 18 22.0	+0.1

IGQ 12 14:30:11.0±1.4**, 4°S**±10°×**7°8W**±1°3**, h6**km**, MLv3.7, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZUMB	Zumba	1.22	236	P	Pg	14 30 33.2	-1.4
ZUMB				S	Sg	14 30 50.4	0.0
GONZ	Gonzanam	1.27	268	P	Pg	14 30 34.3	-1.2
MCRA	Macar, Loja	1.84	264	P	Pn	14 30 39.9	-3.3
MCRA				S	Sn	14 31 05.7	-1.1
COHC	Cochancay	2.05	326	P	Pn	14 30 45.5	-0.5
COHC				S	Sn	14 31 10.8	-1.1
MILO	Milagro-Astudi	2.37	323	P	Pn	14 30 49.8	-0.7
ARRY	Arrayan	2.68	353	P	Pn	14 30 53.0	-2.1
BPAT	Tungurahua Vol	2.68	353	P	Pn	14 30 54.0	-1.1
BULB	Ulba Tungurahu	2.74	354	P	Pn	14 30 54.8	-1.1

JMA 12 14:36:33.8±0.1**, 26°.44N×128°.44E, h21**km±2km**, M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.38	282	P	Pb	14 36 41.6	-0.2
JNTH				eS	Sb	14 36 47.5	+0.3
JOW	Kunigami	0.42	339	P	Pb	14 36 42.4	0.0
JOW				S	Sb	14 36 48.5	+0.3
JYRO	Yoronjima	0.58	1	P	Pb	14 36 45.0	-0.4
JYRO				S	Sb	14 36 52.5	-0.8
JJT3	Tamagusuku3	0.66	244	P	Pb	14 36 46.8	+0.1
JJT3				eS	Sb	14 36 55.8	+0.4
JIH	Iheya	0.73	325	P	Pb	14 36 47.8	0.0
JOKE	Okinoerabujima	0.93	7	P	Pb	14 36 50.6	-0.6
JOKE				S	Sb	14 37 02.4	-0.6
JAGN	Aguni-jima	1.08	278	P	Pn	14 36 53.6	-0.1
JAGN				eS	Sn	14 37 08.5	+0.4
JTK	Tokunoshima	1.42	19	P	Pn	14 36 57.1	-1.2
JMZ	Minamidaito 2	2.58	103	P	Pn	14 37 11.0	-3.3
JMZ				eS	Sn	14 37 37.2	-7.7
JKDJ	Kitadaitoujima	2.61	100	P	Pn	14 37 12.0	-2.8
JKDJ				S	Sn	14 37 39.7	-6.2

IDC 12 14:48:40.3±6.7**,7°.78S×154°.93E,h0^{km},mb3.6**/3**,**
mb1 3.8/3**,mb1mx3.5**/29**,mbtmp3.6**/3**,MS3.1**/2**,Ms1 3.1**/2**,**
ms1mx2.7/18**,Error ellipse: s-maj=202.6km**
s-min=42.3km az=115.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.32	237	P	P	14 53 50.3	0.0
	2.8nm,1.1s,baz=57,slow=9.2,SNR=3.9						
GUMO	Guam	23.46	335	LR	LR	15 02 23.8	
	comp=Z,56nm,18.5s,baz=1.0,slow=35						
ASAR	Alice Springs	25.61	230	P	P	14 54 11.2	-0.4
	0.4nm,0.7s,baz=61,slow=9.4,SNR=5.6						
PETK	Petropavlovsk-	60.70	2	LR	LR	15 20 19.8	
	comp=Z,14nm,21.6s,baz=212,slow=31						
MKAR	Makanchi Array	83.95	319	P	P	15 01 12.9	+0.5
	0.4nm,0.7s,baz=100,slow=6.3,SNR=3.9						

IDC ***12*** *14:53:38.9±1.4, 9°.00S×112°.58E, h0^{km}, mb4.1/7, mb1 4.4/8, mb1mx3.9/34, mbtmp4.3/8, ML4.7/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/29, Error ellipse: s-maj=50.1km s-min=17.3km az=49.0*
ISCJB ***12*** *14:53:47.6±0.3, 8°.97S±0°.05×113°.03E±0°.03, h63^{km}, mb4.2/17, Error ellipse: s-maj=6.9km s-min=4.3km az=26.9*
DJA ***12*** *14:53:49.0±0.5, 9°S±10°×11°3E±°, h58^{km}±12^{km}, M4.4/12, mb4.8/4, mB5.3/2, MLv4.2/12, Mw(mB)4.7/2*
NEIC ***12*** *14:53:50.0±2.1, 8°.80S×113°.03E, h82^{km}±4^{km}, mb4.3/16, Error ellipse: s-maj=12.5km s-min=8.0km az=190.0*
ISC 12 14:53:48.5±0.6**,8°.92S**±0°.07×**113°.01E**±0°.05**,h63^{km},n52,**
σ1^s.37/52**,mb4.2**/17**,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.22	68	ePn	Pn	14 54 10.6	+1.0
JAGI				eSn	Sn	14 54 26.6	+1.4
JAGI	Jajag, Banyuwa	1.22	68	P	Pn	14 54 10.5	+1.0
JAGI				S	Sn	14 54 26.2	+1.0
PWJI	Pagerwojo	1.49	307	P	Pn	14 54 14.4	+1.3
PWJI				S	Sn	14 54 32.8	+1.2
GRJI	Gresik	2.06	345	P	Pn	14 54 23.1	+2.2
KMMI	Kalianget	2.09	27	P	Pn	14 54 23.1	+1.9
NGJI	Ngawi	2.17	315	P	Pn	14 54 24.5	+2.1
WOJI	Wonogiri, Jawa	2.33	297	P	Pn	14 54 26.4	+2.0
SRBI	Singaraja	2.33	69	P	Pn	14 54 25.5	+1.0
UGM	Wanagama	2.65	292	ePn	Pn	14 54 31.0	+2.1
UGM	Wanagama	2.65	292	P	Pn	14 54 31.3	+2.3
PLAI	Plampang	4.71	89	P	Pn	14 54 55.2	-1.9
CISI	Cisompet, Garu	5.32	284	ePn	Pn	14 55 06.1	+0.7
CISI	Cisompet, Garu	5.32	284	P	Pn	14 55 06.6	+1.2
	103nm,0.7s,3µm						
LEM	Lembang	5.73	291	LR	LR	14 57 22.8	
	comp=Z,87nm,19.5s,baz=172,slow=42						
CGJI	Cibinong	7.60	287	P	Pn	14 55 35.7	-1.0
	157nm,0.5s,2µm						
KAPI	Kappang	7.74	60	LR	LR	14 59 51.7	
	comp=Z,33nm,18.9s,baz=175,slow=46						
KAPI	Kappang	7.74	60	ePn	Pn	14 55 39.7	+1.2
EDFI	Ende, Flores	8.58	90	P	Pn	14 55 50.5	+0.3
MMRI	Maumere	9.13	89	ePn	Pn	14 55 57.7	+0.1
BATI	Baumata	10.59	98	Pn	Pn	14 56 18.4	+0.8
	5.7nm,0.3s,baz=304,slow=3.6,SNR=6.5						
MNAI	Manna	10.96	294	ePn	Pn	14 56 24.0	+1.3
GIRL	Giralia	13.69	175	ePn	Pn	14 56 59.1	-0.6
PSA00	Pilbara Seismi	14.20	153	ePn	Pn	14 57 05.2	-1.3
KKM	Kota Kinabalu	15.21	12	ePn	Pn	14 57 18.8	-0.9
	8.4nm,1.0s						
MTN	Manton Dam	18.22	104	eP	Pn	14 57 57.4	+0.3
	10nm,0.5s						
SIJI	Sorong	19.86	67	P	Pn	14 58 16.8	0.0
	11nm,0.7s,baz=294,slow=7.7,SNR=8.6						
FAKI	Fak Fak	20.04	74	eP	P	14 58 15.2	-1.4
	44nm,1.0s						
WR1	Warramunga Arr	23.35	120	eP	P	14 58 50.9	-0.7
WRA	Warramunga Arr	23.35	120	P	P	14 58 50.9	-0.7
	6.8nm,0.7s						
WRAB	Tennant Creek	23.36	120	eP	P	14 58 51.0	-0.6
	8.0nm,0.8s						
WB2	Warramunga Arr	23.36	120	eP	P	14 58 51.4	-0.3
	7.8nm,0.9s						
NWAO	Narrogin (SRO)	24.21	171	LR	LR	15 07 36.1	
	comp=Z,47nm,19.3s,baz=210,slow=35						
ASAR	Alice Springs	24.79	129	P	P	14 59 05.2	+0.4
	5.8nm,0.7s,baz=304,slow=8.7,SNR=60						
AS31	Alice Springs	24.79	129	eP	P	14 59 05.4	+0.6
	1.8nm,0.6s						
FORT	Forrest	25.89	149	eP	P	14 59 16.3	+1.7
	19nm,1.0s						
COEN	Coen	29.97	102	eP	P	14 59 51.3	+0.1
	10nm,1.0s						
BBOO	Buckleboo	31.93	141	eP	P	15 00 08.8	+0.6
	4.2nm,1.0s						
STKA	Stephens Creek	35.01	135	P	P	15 00 36.5	+1.4
	5.8nm,0.5s,baz=317,slow=9.1,SNR=30						
STKA	Stephens Creek	35.01	135	eP	P	15 00 36.5	+1.4
	1.3nm,0.6s						
JOW	Kunigami	38.51	22	eP	P	15 01 04.2	-0.7
	32nm,0.8s						
TOO	Toolangi	40.91	139	eP	P	15 01 26.9	+2.2
	3.6nm,1.0s						
ARMA	Armidale	41.89	126	eP	P	15 01 35.9	+2.9
	2.9nm,1.0s						
CAN	Canberra	42.06	134	eP	P	15 01 35.0	+0.7
	6.9nm,1.1s						
TAU	Tasmania Unive	45.24	144	eP	P	15 02 00.9	+1.3
	17nm,1.1s						
SONA0	Songino Array	56.81	355	eP	P	15 03 25.7	-0.7
SONM	Songino Array	56.81	355	P	P	15 03 25.7	-0.7
	0.5nm,0.6s,baz=178,slow=9.8,SNR=3.3						
MK32	Makanchi Array	61.86	337	eP	P	15 03 59.8	-1.4
MKAR	Makanchi Array	61.86	337	P	P	15 03 59.8	-1.4
	0.3nm,0.5s,baz=153,slow=8.0,SNR=3.8						
ZALV	Zalesovo Beam	67.01	342	P	P	15 04 32.3	-2.3
	0.7nm,0.4s,baz=184,slow=2.5,SNR=3.6						
ZAA1	Zalesovo Array	67.02	342	eP	P	15 04 32.3	-2.4
KOLS	Kolonicke sedl	97.13	318	eP	P	15 07 14.0	0.0
VYHS	Vyhne	99.37	318	ePDIF	Pdif	15 07 24.1	+0.1

SJA ***12*** *15:27:55.6±0.4, 20°.43S×68°.81W, h16^{km}±5^{km}, ML4.1, MW3.2*
ISCJB ***12*** *15:27:57.8±0.2, 20°.39S±0°.02×68°.74W±0°.03, h118^{km}±2^{km}, mb4.3/22, Error ellipse: s-maj=5.4km s-min=3.3km az=149.0*
NEIC ***12*** *15:27:58.5±2.2, 20°.47S×68°.77W, h106^{km}±5^{km}, mb4.4/16, ML4.8(GUC), Error ellipse: s-maj=10.6km s-min=5.4km az=92.0*
NEIC Felt [III] at Mamina, Pica, Pozo Almonte and Tirana; [II] at Alto Hospicio and Iquique.
GUC ***12*** *15:27:59.0±0.7, 20°.42S×68°.93W, h113^{km}±3^{km}, ML4.8*
IDC ***12*** *15:27:59.7±0.4, 20°.43S×68°.63W, h115^{km}±3^{km}, mb3.9/13, mb1 4.2/17, mb1mx4.1/31, mbtmp4.4/17, MS3.0/6, Ms1 3.0/6, ms1mx2.9/21, Error ellipse: s-maj=14.3km s-min=7.7km az=93.0*
VAO ***12*** *15:27:59.7±0.5, 20°.52S×68°.72W, h117^{km}, mb5.2*
ISC 12 15:27:58.9±0.4**,20°.45S**±0°.03×**68°.77W**±0°.05**,h110^{km}**±3^{km}**,**
n265,σ1^s.24/289**,mb4.4**/23**,11C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.47	310	⇑iP	Pn	15 28 16.5	+0.5
PB08				i S	Sn	15 28 29.3	+0.5
PB08				IAML		15 28 29.7	
	comp=N,66µm,0.3s						
GO01	Chusmiza	0.87	333	ePn	Pn	15 28 19.9	+0.5
GO01				eSn	Sn	15 28 34.9	+0.2
GO01	Chusmiza	0.87	333	⇑iP	Pn	15 28 19.8	+0.4
GO01				eS	Sn	15 28 34.9	+0.2
GO01				IAML		15 28 36.5	
	comp=E,54µm,0.5s						
PB01	IPOC Station P	0.89	228	ePn	Pn	15 28 18.8	-0.3
PB01				eSn	Sn	15 28 34.5	+0.1
PB01	IPOC Station P	0.89	228	eP	Pn	15 28 18.1	-1.0
PB01				eS	Sn	15 28 34.6	+0.2
PB01	IPOC Station P	0.89	228	⇑iP	Pn	15 28 19.2	+0.1
PB01				eS	Sn	15 28 34.2	-0.2
PB01				IAML		15 28 35.4	
	comp=N,50µm,0.3s						
PB11	IPOC Station P	1.07	309	ePn	Pn	15 28 21.0	0.0
PB11				eSn	Sn	15 28 37.4	-0.4
PB11	IPOC Station P	1.07	309	⇑iP	Pn	15 28 21.0	0.0
PB11				eS	Sn	15 28 37.3	-0.4
PB11				IAML		15 28 37.9	
	comp=N,36µm,0.2s						
PB02	IPOC Station P	1.36	230	⇑iP	Pn	15 28 24.1	-0.1
PB02				eS	Sn	15 28 43.2	-0.2
PB09	IPOC Station P	1.41	198	eP	Pn	15 28 22.6	-2.2
PB09				eS	Sn	15 28 42.3	-2.2
PB09	IPOC Station P	1.41	198	⇑iP	Pn	15 28 25.7	+0.9
PB09				eS	Sn	15 28 46.0	+1.5
MNMC	Minye Minye	1.52	329	ePn	Pn	15 28 27.1	+0.9
MNMC				eSn	Sn	15 28 47.7	+0.7
MNMC	Minye Minye	1.52	329	⇑iP	Pn	15 28 26.9	+0.6
MNMC				eS	Sn	15 28 46.2	-0.7
PSGC	Pisagua	1.52	303	⇑iP	Pn	15 28 25.5	-0.6
PSGC				eS	Sn	15 28 45.6	-1.1
PSGC				IAML		15 28 48.4	
	comp=N,12µm,0.4s						
PB07	IPOC Station P	1.64	219	⇑iP	Pn	15 28 27.5	-0.2
PB07				eS	Sn	15 28 48.4	-1.0
PB07				IAML		15 28 50.7	
	comp=E,9µm,0.3s						
PB03	IPOC Station P	1.84	210	eP	Pn	15 28 29.1	-0.9
LVC	Limon Verde	2.16	183	P	Pn	15 28 35.8	+1.5
	comp=E,46nm,0.3s,baz=355,slow=10,SNR=161						
LVC				S	Sn	15 29 02.9	+1.6
	comp=E,389nm,0.3s,baz=21,slow=8.9,SNR=26						
LVC				LR	LR	15 29 21.7	
	comp=E,189nm,21.2s,baz=353,slow=37						
LVC	Limon Verde	2.16	183	ePn	Pn	15 28 35.6	+1.4
LVC				eSn	Sn	15 29 03.3	+2.1
PB16	IPOC Station P	2.21	342	⇑iP	Pn	15 28 36.3	+1.2
PB16				eS	Sn	15 29 03.8	+1.1
PB04	IPOC Station P	2.27	214	ePn	Pn	15 28 35.7	+0.2
PB12	IPOC Station P	2.34	321	eP	Pn	15 28 35.4	-0.9
PB12	IPOC Station P	2.34	321	⇑iP	Pn	15 28 35.3	-0.9
PB12				eS	Sn	15 29 04.0	-1.0
PB12				IAML		15 29 09.8	
	comp=N,5µm,0.3s						
PB10	IPOC Station P	3.47	208	ePn	Pn	15 28 49.8	-1.4
YJA	Yavi	3.49	120	eP	Pn	15 28 54.0	+2.1
YJA				IAML		15 28 59.5	
	comp=Z,216nm,0.6s						
HJA	Humahuaca	4.16	132	eP	Pn	15 29 03.1	+2.4
HJA				IAML		15 29 04.8	
	comp=Z,688nm,0.4s						
LPAZ	La Paz	4.18	9	P	Pn	15 29 03.6	+2.4
	comp=Z,16nm,0.3s,baz=192,slow=6.8,SNR=171						
LPAZ				LR	LR	15 31 09.7	
	comp=Z,150nm,21.5s,baz=226,slow=46						
LPAZ	La Paz	4.18	9	ePn	Pn	15 29 03.7	+2.4
LPAZ				eSn	Sn	15 29 49.8	+0.3
LPAZ	La Paz	4.18	9	eP	Pn	15 29 03.7	+2.4
LPAZ				eS	Sn	15 29 50.8	+1.3
GO02	Mina Guanaco	4.75	189	ePn	Pn	15 29 07.8	-0.8
GO02				eSn	Sn	15 30 00.9	-2.0
SLA	San Lorenzo	5.22	145	eP	Pn	15 29 17.6	+2.8
SLA				IAML		15 29 18.6	
	comp=Z,267nm,0.6s						
FSA	Cafayete	6.20	156	eP	Pn	15 29 30.4	+2.4
FSA				IAML		15 29 33.4	
	comp=Z,17nm,0.6s						
GO03	Copiap	7.24	190	ePn	Pn	15 29 38.8	-3.2
SIV	San Ignacio	8.55	60	P	Pn	15 29 58.4	-1.5
	comp=Z,12nm,0.3s,baz=258,slow=11,SNR=166						
SIV				S	Sn	15 31 29.8	-5.0
	baz=324,slow=19,SNR=7.8						
SIV				LR	LR	15 34 07.4	
	comp=Z,133nm,20.1s,baz=283,slow=44						
LCO	Las Campanas	8.71	191	ePn	Pn	15 29 57.9	-4.3
GO04	Tololo Observa	9.86	190	ePn	Pn	15 30 13.5	-4.3
NNA	Nana	11.43	316	LR	LR	15 35 31.0	
	comp=Z,55nm,18.0s,baz=188,slow=39						
CPUP	Villa Florida	12.03	121	P	Pn	15 30 45.8	-0.9
	comp=Z,1.5nm,0.3s,baz=305,slow=12,SNR=65						
CPUP				LR	LR	15 36 14.0	
	comp=Z,77nm,19.0s,baz=310,slow=42						
CPUP	Villa Florida	12.03	121	ePn	Pn	15 30 45.4	-1.3
CPUP	Villa Florida	12.03	121	eP	Pn	15 30 45.4	-1.3
CPUP				eS	Sn	15 32 58.0	-1.0
AQDB	Aquidauana	12.26	92	eP	Pn	15 30 49.2	-0.5
TRCB	Terra Rica	15.19	102	eP	Pn	15 31 27.9	+0.3
PTGB	Pitanga	16.00	108	eP	Pn	15 31 38.0	+0.2
CPSB	Cacapava Do Su	17.02	129	eP	Pn	15 31 48.4	-1.7
FRTB	Fartura	18.06	103	eP	Pn	15 32 03.0	+0.2
FRTB				eS	S	15 35 21.1	-2.3
CNLB	Canela	18.48	122	eP	P	15 32 06.3	-0.1
CNLB				eS	S	15 35 31.7	-0.1
BB19B	Bebedouro	18.95	95	eP	P	15 32 11.1	-0.4
RCLB	Rio Claro- Sao	19.87	100	eP	P	15 32 21.1	-0.5
SPB	Sao Paulo	20.03	103	eP	P	15 32 22.2	-0.9
	comp=Z,36nm,1.0s						
SPB	Sao Paulo	20.03	103	eP	P	15 32 22.4	-0.7
PLCA	Paso Flores	20.28	184	P	P	15 32 26.6	+0.8
	comp=Z,9.7nm,0.9s,baz=34,slow=13,SNR=9.2						
PLCA	Paso Flores	20.28	184	eP	P	15 32 26.8	+1.0
	comp=Z,14nm,1.1s						
PLCA	Paso Flores	20.28	184	eP	P	15 32 24.6	-1.2
BDFB	Brasilia	20.30	80	P	P	15 32 25.8	-0.5
	comp=Z,15nm,0.5s,baz=258,slow=11,SNR=16						
BDFB				LR	LR	15 42 14.0	
	comp=Z,102nm,19.6s,baz=275,slow=42						
BDFB	Brasilia	20.30	80	eP	P	15 32 25.0	-1.3
	comp=Z,16nm,0.7s						
BDFB				eP	Pn	15 32 25.8	-3.5
PMNB	Patos De Minas	21.14	89	eP	P	15 32 34.3	-0.9
PTGA	Pitinga	21.40	25	P	P	15 32 35.7	-2.3
	comp=Z,5.8nm,0.5s,baz=197,slow=16,SNR=17						
PARB	Paraibuna	21.67	102	eP	P	15 32 39.5	-1.4
PARB				eS	S	15 36 34.5	+0.1
BSCB	Bom Sucesso	22.45	96	eP	P	15 32 47.6	-1.4
CRUC	La Cruz	23.30	339	eP	pP	15 33 21.7	+0.9
SOTA	Rioblanco	23.72	340	eP	pP	15 33 27.2	+1.9
BBAC	Balboa, Cauca	23.82	339	eP	pP	15 33 26.5	+0.5
POPC	Popayan, Colom	24.12	340	eP	pP	15 33 30.6	+1.3
ORTC	Ortega, Tolima	25.02	345	eP	P	15 33 13.4	+0.6
YOTC	Yotoco, Valle	25.39	342	eP	pP	15 33 40.6	-0.9
SJMB	Sao Joao De Ma	26.04	91	eP	P	15 33 23.2	+1.2
RUSC	La Rusia	26.51	350	eP	P	15 33 27.2	+0.4
PTBC	PUERTO BERRIO,	27.39	348	eP	P	15 33 28.9	-5.3
ZARC	Zaragoza, Cauc	28.40	347	eP	P	15 33 41.4	-1.6
757A	Oxford	50.75	345	P	P	15 36 47.3	-0.3
	baz=164						
656A	Willston	51.27	345	P	P	15 36 51.2	-0.3
	baz=164						
451A	Vernon	53.33	342	P	P	15 37 07.3	+0.6
	baz=160						
452A	Marianna	53.38	342	P	P	15 37 07.3	+0.2
	baz=161						
Y55A	Saluda	55.50	347	P	P	15 37 21.0	-1.3
	baz=165						
Z50A	Ashland	55.85	343	P	P	15 37 24.2	-0.7
	baz=161						
W56A	Indian Trail	56.40	348	P	P	15 37 28.9	+0.2
	baz=167						
X50B	Fort Payne	56.91	343	P	P	15 37 31.9	-0.5
	baz=161						
W53A	Cullowhee	56.97	346	P	P	15 37 31.8	-1.2
	baz=164						
V57A	Coltrane Farms	56.99	349	P	P	15 37 32.2	-0.7
	baz=168						
V56A	Mocksville	57.04	349	P	P	15 37 32.8	-0.5
	baz=167						
V54A	Nebo	57.29	347	P	P	15 37 34.5	-0.6
	baz=165						
U57A	Blanch	57.44	350	P	P	15 37 35.7	-0.4
	baz=168						
V52A	Sevierville	57.71	346	P	P	15 37 37.4	-0.6
	baz=164						
U55A	TA2, Sparta	57.81	348	P	P	15 37 38.2	-0.6
	baz=166						
V50A	Pikevile	57.92	344	P	P	15 37 38.7	-0.7
	baz=162						
U54A	Nelsons Funny	57.98	348	P	P	15 37 39.8	-0.2
	baz=166						
U53A	Fall Branch	57.99	347	P	P	15 37 39.4	-0.6
	baz=165						
V49A	McMinnville	58.21	344	P	P	15 37 40.6	-0.9
	baz=161						
S60A	Water View	58.31	353	P	P	15 37 40.6	-1.6
	baz=171						
T55A	Pulaski	58.36	349	P	P	15 37 42.3	-0.3
	baz=167						
V48A	Smith Brothers	58.44	343	P	P	15 37 41.8	-1.3
	baz=160						
U50A	Jamestown	58.56	345	P	P	15 37 42.6	-1.4
	baz=162						
T53A	Wise	58.58	347	P	P	15 37 43.3	-0.8
	baz=165						
U49A	Red Boiling Sp	58.89	344	P	P	15 37 44.7	-1.5
	baz=161						
S55A	Lewisburg	58.95	349	P	P	15 37 46.5	-0.1
	baz=167						
U48A	Cassie Pea, Po	59.09	343	P	P	15 37 46.2	-1.4
	baz=161						
WVT	Waverly	59.09	342	P	P	15 37 46.3	-1.3
	baz=159						
S54A	Dingess, Beckl	59.12	348	P	P	15 37 46.2	-1.6
	baz=166						
T50A	Nancy	59.13	345	P	P	15 37 46.7	-1.2
	baz=162						
R57A	Stanardsville	59.14	351	P	P	15 37 47.7	-0.2
	baz=169						
S53A	Williamson	59.17	348	P	P	15 37 48.1	0.0
	baz=165						
U47A	Clarksville	59.23	343	P	P	15 37 47.4	-1.1
	baz=160						
R55A	Marlinton	59.38	350	P	P	15 37 48.5	-1.1
	baz=168						
T49A	Edmonton	59.38	344	P	P	15 37 48.9	-0.7
	baz=162						
R56A	Bull Pasture M	59.38	350	P	P	15 37 49.2	-0.5
	baz=168						
S51A	Beattyville	59.44	346	P	P	15 37 48.2	-1.7
	baz=164						
Q60A	Greensboro	59.50	354	P	P	15 37 50.3	0.0
	baz=172						
MIAR	Mount Ida	59.56	336	P	P	15 37 49.9	-1.0
	baz=153						
W41B	Gary Mavity, V	59.63	338	P	P	15 37 50.4	-1.0
	baz=154						
TXAR	Lajitas Array	59.84	325	P	P	15 37 52.8	-0.2
	comp=Z,0.4nm,0.3s,baz=153,slow=8.1,SNR=3.3						
TXAR				pP	pP	15 38 20.5	-0.5
	comp=Z,1.4nm,0.7s,baz=134,slow=8.9,SNR=3.6						
T46A	Princeton	59.96	342	P	P	15 37 51.8	-1.7
	baz=159						
S48A	Wiedeman Farm,	60.04	344	P	P	15 37 53.0	-1.1
	baz=161						
R51A	Hillsboro	60.07	347	P	P	15 37 53.7	-0.5
	baz=164						
Q54A	Coxs Mills	60.19	349	P	P	15 37 54.3	-0.7
	baz=167						
Q53A	Leroy	60.19	349	P	P	15 37 54.3	-0.8
	baz=166						
W39A	Magazine	60.21	336	P	P	15 37 55.0	-0.3
	baz=153						
Q52A	Bidwell	60.43	348	P	P	15 37 56.2	-0.5
	baz=166						
Q50A	Georgetown	60.67	346	P	P	15 37 57.3	-1.1
	baz=164						
P53A	Whipple	60.77	349	P	P	15 37 58.9	-0.1
	baz=166						
U40A	Yellville	60.91	338	P	P	15 37 58.9	-1.2
	baz=154						
VNA3	Neumayer Olymp	61.03	162	P	P	15 38 01.9	+1.5
Q48A	North Vernon	61.16	345	P	P	15 38 00.6	-1.0
	baz=162						
VNA1	Neumayer--Stat	61.23	161	P	P	15 38 03.8	+2.0
Q47A	Bedord North L	61.34	344	P	P	15 38 02.0	-0.8
	baz=161						
P50A	Jamestown	61.37	347	P	P	15 38 02.5	-0.6
	baz=164						
O52A	Adamsville	61.47	349	P	P	15 38 03.0	-0.7
	baz=166						
O53A	New Philadelph	61.48	349	P	P	15 38 03.3	-0.5
	baz=167						
P48A	Milroy	61.59	345	P	P	15 38 03.4	-1.2
	baz=162						
VNA2	Neumayer--Watz	61.60	161	P	P	15 38 05.8	+1.5
	baz=292,slow=6.7						
O51A	Pataskala	61.64	348	P	P	15 38 04.4	-0.5
	baz=165						
Q45A	Warren Harvey,	61.76	343	P	P	15 38 04.5	-1.2
	baz=159						
ACSO	Alum Creek Sta	61.80	348	P	P	15 38 05.0	-1.0
	baz=165						
WMOK	Wichita Mounta	61.85	332	P	P	15 38 05.4	-1.0
	baz=148						
CCM	Cathedral Cave	61.91	340	P	P	15 38 05.8	-0.8
	baz=156						
N53A	Lisbon	61.96	350	P	P	15 38 07.0	0.0
	baz=167						
O49A	Covington	62.04	347	P	P	15 38 06.9	-0.6
	baz=164						
O48A	Farmland	62.29	346	P	P	15 38 08.4	-0.8
	baz=163						
O47A	Sheridan	62.51	345	P	P	15 38 09.4	-1.2
	baz=162						
MNTX	Cornudas Mount	62.61	325	P	P	15 38 11.2	-0.3
	baz=141						
N49A	Columbus Grove	62.71	347	P	P	15 38 11.5	-0.5
	baz=164						
N48A	Decatur	62.84	346	P	P	15 38 11.8	-1.0
	baz=163						
SFIN	Lafayette	62.87	344	P	P	15 38 11.6	-1.4
	baz=161						
L53A	Girard	62.99	350	P	P	15 38 13.1	-0.7
	baz=168						
MSTX	Muleshoe	63.06	329	P	P	15 38 14.1	-0.5
	baz=144						
ERPA	Erie	63.10	351	P	P	15 38 13.8	-0.8
	baz=168						
SNAA	Sanae	63.23	161	P	P	15 38 16.2	+1.0
SNAA	Sanae	63.23	161	P	P	15 38 15.3	+0.1
	comp=Z,1.6nm,0.7s,baz=277,slow=7.4,SNR=17						
L50A	Kingsville	63.51	348	P	P	15 38 17.6	+0.4
	baz=165						
L47A	Sherwood	63.94	346	P	P	15 38 19.3	-0.8
	baz=163						
N43A	Stutzman Famil	63.95	343	P	P	15 38 19.3	-0.9
	baz=159						
J52A	Paris	64.28	351	P	P	15 38 21.7	-0.5
	baz=168,SNR=5.1						
K48A	Perry	64.50	348	P	P	15 38 22.9	-0.8
	baz=164						
WLVO	Wesleyville	64.66	352	P	P	15 38 24.2	-0.5
	baz=170						
BWLO	Walkerton	65.24	350	P	P	15 38 28.3	-0.2
	baz=167						
K43A	Burlington	65.37	344	P	P	15 38 28.4	-0.9
	baz=160						
BRCO	Bruce Peninsul	65.41	350	P	P	15 38 29.9	+0.3
	baz=167						
L40A	Anamosa	65.57	342	P	P	15 38 30.3	-0.4
	baz=157						
BUKO	Buck Lake	66.28	352	P	P	15 38 34.2	-0.9
	baz=169,SNR=5.8						
KLBO	Killbear Provi	66.31	351	P	P	15 38 34.5	-0.8
	baz=168,SNR=6.5						
H46A	Fife Lake	66.39	347	P	P	15 38 35.5	-0.3
	baz=163						
I42A	Draeger Farm,	66.63	344	P	P	15 38 37.0	-0.5
	baz=160						
F49A	Sandfield	66.98	350	P	P	15 38 39.3	-0.3
	baz=166						
214A	Organ Pipe Nat	67.04	320	P	P	15 38 41.2	+0.9
	baz=135,SNR=5.8						
BGNE	Belgrade	67.30	336	P	P	15 38 41.2	-0.6
	baz=150						
SDCO	Great Sand Dun	67.41	329	eP	P	15 38 43.0	+0.2
	comp=Z,2.3nm,1.0s						
SDCO	Great Sand Dun	67.41	329	P	P	15 38 42.5	-0.3
	baz=143,SNR=5.4						
D53A	Lac Vacive, Po	67.69	353	P	P	15 38 44.9	+0.9
	baz=171,SNR=6.3						
E46A	Sault Ste Mari	67.97	348	P	P	15 38 45.8	0.0
	baz=164						
LIC	Lamto	67.97	74	eP	P	15 38 45.5	-1.1
	comp=Z,28nm,0.7s						
S22A	4UR Ranch, Cre	68.06	328	P	P	15 38 47.1	+0.2
	baz=142						
TIC	Toumodi	68.16	74	eP	P	15 38 46.7	-1.0
Q24A	Divide	68.21	330	P	P	15 38 47.8	-0.2
	baz=143						
G40A	Rib Lake	68.25	344	P	P	15 38 48.0	+0.4
	baz=158						
KIC	Kosan Boka	68.29	74	eP	P	15 38 47.7	-0.8
	comp=Z,30nm,0.6s						
DBIC	Dimbokro	68.32	74	P	P	15 38 48.1	-0.6
	comp=Z,16nm,0.6s,baz=226,slow=6.5,SNR=21						

DBIC	Dimbokro	68.32	74	eP	P	15 38 48.1	-0.6
	comp=Z,21nm,0.8s						
D47A	Chapleau	68.42	350	P	P	15 38 48.7	0.0
	baz=166						
D46A	Sault St. Mari	68.42	349	P	P	15 38 48.0	-0.7
	baz=165						
G39A	Holcombe	68.52	343	P	P	15 38 48.7	-0.6
	baz=158						
WUAZ	Wupatki	68.76	324	P	P	15 38 52.5	+1.3
	baz=137						
ECSD	EROS Data Cent	68.78	339	P	P	15 38 50.6	-0.4
	baz=152						
ISCO	Idaho Springs	69.10	330	P	P	15 38 53.5	+0.1
	baz=143						
Y12C	Blythe	69.32	320	P	P	15 38 56.1	+1.7
	baz=134						
D41A	Chassel	69.52	346	P	P	15 38 55.6	+0.2
	baz=160						
QSPA	South Pole Qui	69.74	180	eP	P	15 38 58.6	+1.7
	comp=Z,3.5nm,0.8s						
BC3	Big Chuckawall	69.81	320	P	P	15 38 59.0	+1.3
	baz=134						
MONP2	Monument Peak	69.89	319	P	P	15 39 00.1	+1.8
	baz=133						
IRM	Iron Mountain	69.97	320	P	P	15 38 59.7	+1.2
	baz=134,SNR=8.0						
N23A	Red Feather La	70.12	331	P	P	15 38 59.6	0.0
	baz=143						
BELC	Belle Mtn. Jos	70.38	320	P	P	15 39 02.5	+1.4
	baz=133						
PFO	Pinyon Flats O	70.40	319	P	P	15 39 02.1	+0.8
	baz=133						
O20A	White River Ci	70.61	329	P	P	15 39 02.9	+0.4
	baz=141						
GMRC	Granite Mounta	70.71	320	P	P	15 39 04.3	+1.2
	baz=134,SNR=7.4						
EYMN	Ely	71.07	344	P	P	15 39 04.4	-0.4
	baz=158						
HEC	Hector,Ludlow	71.15	320	P	P	15 39 07.8	+2.1
	baz=133						
TUQ	Turquoise Moun	71.32	321	P	P	15 39 08.3	+1.5
	baz=134						
BFSC	Mount Baldy Ra	71.56	319	P	P	15 39 10.3	+2.0
	baz=132						
GSC	Goldstone, Bar	71.75	320	P	P	15 39 11.0	+1.7
	baz=133						
RSSD	Black Hills	71.91	334	P	P	15 39 11.3	+1.1
	baz=145						
PSUT	Pine Spring	72.31	324	eP	P	15 39 12.7	-0.1
	comp=Z,3.6nm,0.8s						
LRMC	Laurel Mtn Rad	72.40	320	P	P	15 39 14.8	+1.5
	baz=132						
TPNV	Topopah Spring	72.55	322	P	P	15 39 15.5	+1.3
	baz=134,SNR=8.2						
FURC	Furnace Creek,	72.58	321	P	P	15 39 16.2	+2.1
	baz=133						
SCZ2	Santa Cruz Isl	72.63	318	P	P	15 39 15.5	+1.0
	baz=130						
MPMC	Manual Prospec	72.67	320	P	P	15 39 16.2	+1.2
	baz=133						
DUG	Dugway, Tooele	72.95	326	P	P	15 39 17.9	+1.4
	baz=137						
ISA	Isabella, Lake	73.00	320	P	P	15 39 17.8	+1.1
	baz=132,SNR=7.1						
R11A	Troy Canyon, C	73.14	323	P	P	15 39 19.0	+1.4
	baz=134,SNR=7.9						
GRAC	Grapevine Rang	73.23	321	P	P	15 39 19.3	+1.3
	baz=133						
BW06	Boulder Array	73.27	330	P	P	15 39 19.1	+0.7
	baz=140						
PD31	Pinedale Array	73.27	330	eP	P	15 39 18.5	+0.2
PDAR	Pinedale Array	73.27	330	P	P	15 39 18.5	+0.2
	comp=Z,0.5nm,0.8s,baz=141,slow=3.1,SNR=3.6						
PDAR				pP	pP	15 39 47.3	-0.1
	comp=Z,0.7nm,0.8s,baz=151,slow=3.4,SNR=3.2						
CWC	Cottonwood Cre	73.28	320	P	P	15 39 19.9	+1.4
	baz=132						
PKM	Mcpherson Peak	73.32	318	P	P	15 39 20.4	+1.6
	baz=131						
MDND	Maddock	73.40	339	P	P	15 39 18.9	+0.2
	baz=150						
ULM	Lac du Bonnet	74.36	342	pP	pP	15 39 53.1	-0.3
	comp=Z,4.5nm,0.5s,baz=153,slow=5.4,SNR=4.2						
NV01	Mina Array Sit	74.75	322	eP	P	15 39 28.1	+1.1
NVAR	Mina Array Bea	74.75	322	P	P	15 39 28.1	+1.1
	comp=Z,1.4nm,0.8s,baz=159,slow=7.4,SNR=9.7						
NVAR				pP	pP	15 39 57.0	+0.6
	comp=Z,3.8nm,0.9s,baz=150,slow=6.5,SNR=12						
NVAR				sP	sP	15 40 10.8	+2.0
	comp=Z,1.1nm,0.7s,baz=129,slow=7.1,SNR=3.5						
FLWY	Flagg Ranch	74.81	330	eP	P	15 39 27.9	+0.6
	comp=Z,9.2nm,0.8s						
RLMT	Red Lodge	74.95	332	P	P	15 39 28.9	+0.9
	baz=141						
YHH	Holmes Hill	75.41	330	eP	P	15 39 31.1	+0.3
	comp=Z,5.4nm,0.8s						
YHB	Horse Butte	75.55	330	eP	P	15 39 31.7	+0.2
	comp=Z,5.5nm,0.7s						
HLID	Hailey	76.22	328	P	P	15 39 36.7	+1.4
	baz=136,SNR=6.8						
PAHR	Pah Rah Range	76.22	322	eP	P	15 39 36.0	+0.6
	comp=Z,7.7nm,0.9s						
BOZ	Bozeman (W)	76.39	331	P	P	15 39 37.4	+1.2
	baz=139						
TOA0	Torodi Ar. Sit	76.88	71	eP	P	15 39 38.5	-0.9
	comp=Z,8.5nm,0.9s						
TOA1	Torodi Ar. Sit	76.88	70	eP	P	15 39 38.2	-1.2
TORD	Torodi Ar. Bea	76.88	71	P	P	15 39 38.2	-1.2
	comp=Z,6.0nm,0.5s,baz=257,slow=5.0,SNR=58						
TORD				pP	pP	15 40 08.6	-0.2
	comp=Z,1.9nm,0.4s,baz=252,slow=5.4,SNR=2.6						
TORD				sP	sP	15 40 21.1	0.0
	comp=Z,7.4nm,0.8s,baz=261,slow=5.4,SNR=5.2						
EGMT	Eagleton	77.42	333	P	P	15 39 42.4	+0.6
	baz=141						
VNDA	Vanda	77.91	190	P	P	15 39 46.3	+2.2
	comp=Z,0.7nm,0.7s,baz=116,slow=6.3,SNR=6.6						
VNDA	Vanda	77.91	190	eP	P	15 39 44.4	+0.3
O03E	Paynes Creek	78.01	321	P	P	15 39 46.2	+0.9
	baz=130						
PLID	Pearl Lake	78.11	328	eP	P	15 39 45.4	-0.5
	comp=Z,6.1nm,0.9s						
MSO	Missoula	78.38	330	P	P	15 39 48.0	+0.8
	baz=137						
N02D	Trinity Center	78.98	321	P	P	15 39 51.3	+0.7
	baz=130						
M04C	Macdoel	78.99	322	P	P	15 39 51.9	+1.2
	baz=130						
M02C	Callahan	79.33	322	P	P	15 39 52.9	+0.5
	baz=130						
J04D	Umpqua Nationa	80.09	323	P	P	15 39 57.8	+1.1
	baz=130						
I05D	Terrebonne, OR	80.38	325	P	P	15 39 59.8	+1.8
	baz=131						
G05D	Wamic, OR	80.96	325	P	P	15 40 02.8	+1.8
	baz=131						
D03D	Eldon	83.38	326	P	P	15 40 14.8	+1.2
	baz=130						
BOSA	Boshof	83.83	118	P	P	15 40 17.0	+0.3
	comp=Z,1.5nm,0.5s,baz=279,slow=3.9,SNR=5.8						
ESDC	Sonseca Array	85.00	45	P	P	15 40 22.3	+0.3
	comp=Z,0.9nm,0.8s,baz=243,slow=5.2,SNR=4.6						
YKA	Yellowknife Ar	90.24	341	P	P	15 40 46.7	+0.2
	comp=Z,4.3nm,0.8s,baz=138,slow=4.6,SNR=5.3						
YKA				pP	pP	15 41 16.3	-0.4
	comp=Z,1.7nm,0.5s,baz=132,slow=4.9,SNR=2.4						
YKA				sP	sP	15 41 29.6	+0.8
	comp=Z,1.9nm,0.5s,baz=135,slow=4.7,SNR=3.0						
YKB5	Yellowknife Ar	90.24	341	eP	P	15 40 46.7	+0.2
H11S2	WAKE ISLAND Hy	127.86	278	T	T	18 06 49.1	
	baz=101,slow=75,SNR=192						
H11S1	WAKE ISLAND Hy	127.87	278	T	T	18 06 49.7	
	baz=101,slow=75,SNR=72						
H11S3	WAKE ISLAND Hy	127.88	278	T	T	18 06 50.4	
	baz=101,slow=75,SNR=70						
H11N3	WAKE ISLAND Hy	127.92	279	T	T	18 06 57.2	
	baz=102,slow=75,SNR=56						
H11N2	WAKE ISLAND Hy	127.93	280	T	T	18 06 52.1	
	baz=102,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	127.93	279	T	T	18 07 01.1	
	baz=102,slow=75,SNR=45						
ASAR	Alice Springs	130.90	208	PKP	PKPdf	15 46 57.9	-0.3
	comp=Z,0.5nm,0.4s,baz=123,slow=1.8,SNR=16						
ASAR				pPKP	pPKPdf	15 47 30.3	+0.8
	comp=Z,0.7nm,0.8s,baz=138,slow=1.9,SNR=3.3						
PEA1	Petropavlovsk-	131.79	324	ePKPdf	PKPdf	15 46 59.1	+0.4
PETK	Petropavlovsk-	131.79	324	PKP	PKPdf	15 46 59.1	+0.4
	comp=Z,2.0nm,0.8s,baz=69,slow=8.4,SNR=3.8						
KSH	Kashi	144.34	50	ePKP	PKPbc	15 47 21.4	+0.4
KSH				sPKP		15 48 00.0	
KSH				PP	PP	15 50 43.6	+4.8
KSH				PKS	PKSdf	15 50 57.3	-0.7
MK32	Makanchi Array	144.71	35	ePKPdf	PKPbc	15 47 22.2	+0.4
MKAR	Makanchi Array	144.71	35	PKP	PKPbc	15 47 22.2	+0.4
	comp=Z,0.5nm,0.4s,baz=326,slow=3.7,SNR=9.4						
MKAR				pPKP	pPKPdf	15 47 54.1	+0.1
	comp=Z,1.9nm,0.8s,baz=336,slow=2.7,SNR=6.5						
WMQ	Urumqi	149.53	35	eP	PKPdf	15 47 31.2	+0.4
WMQ				pmax	pmax		
	comp=Z,65nm,4.5s						
USRK	Ussuriysk Ar.	150.69	329	PKPbc	PKiKP	15 47 38.5	-0.2
	comp=Z,3.6nm,0.7s,baz=211,slow=3.6,SNR=8.9						
USRK				pPKPbc	pPKPbc	15 48 08.8	-0.6
	comp=Z,3.2nm,0.7s,baz=54,slow=12,SNR=5.0						
MJAR	Matsushiro Arr	151.51	310	PKPbc	PKiKP	15 47 40.5	-0.2
	comp=Z,1.9nm,0.8s,baz=216,slow=0.6,SNR=5.1						
MAJO	Matsushiro	151.51	310	ePKPbc	PKiKP	15 47 40.5	-0.2
SONA0	Songino Array	152.40	7	ePKPbc	PKiKP	15 47 42.6	+0.2
SONM	Songino Array	152.40	7	PKPbc	PKiKP	15 47 42.6	+0.2
	comp=Z,0.8nm,0.4s,baz=190,slow=0.5,SNR=3.8						
LZH	Lanzhou	163.12	21	ePKP	PKPdf	15 47 47.9	-0.9
LZH				pPKP	pPKPdf	15 48 15.0	-5.4
LZH				sPKP		15 48 25.8	
LZH				PKP	PKPab	15 48 42.5	+3.3
CD2	Chengdu	167.60	31	PKP	PKPdf	15 47 52.2	-0.3
WHN	Wuhan	169.56	345	PKP	PKPdf	15 47 50.8	-2.9

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*KRNET **12** 15:44:49.1±0.1, 41°.19N×69°.79E, mb2.6*

ISC 12 15:44:52.4±4.1, **41°.14N**±0°.09×**69°.6E**±0°.2, **h35**^{km}, **n7**, σ**0ˢ.96**/12, **10C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.44	138	⇑eP	Pn	15 45 14.6	-1.5
	baz=45						
BTK				⇑iS	Sn	15 45 33.7	-0.2
	baz=45						
KK31	Karatay Array	2.08	19	⇓Pg	Pn	15 45 30.9	+6.1
	0.8nm,0.3s,baz=190,slow=16						
KK31				Lg	Lg	15 45 59.0	
	0.7nm,0.3s,baz=193,slow=26,SNR=7.3						
DRK	Karamyk	2.38	134	⇑iP	Pn	15 45 29.9	+0.7
	baz=37						
DRK				⇑iS	Sn	15 45 59.2	+1.9
	baz=37						
ARSB	Arslanbob	2.58	85	⇑iP	Pn	15 45 31.3	-0.5
	baz=86						
ARSB				⇑iS	Sn	15 46 01.9	-0.1
	baz=86						
EKS2	Erkin-Say	3.49	63	⇑iP	Pn	15 45 44.7	+0.5
	baz=62						
EKS2				⇑iS	Sn	15 46 25.2	+0.8
	baz=62						
UCH	Uchtor	3.86	72	⇑iP	Pn	15 45 49.5	-0.1
	baz=72						
UCH				⇑iS	Sn	15 46 33.8	-0.2
	baz=72						
KZA	Kyzart	4.36	76	⇓iP	Pn	15 45 56.5	0.0
	baz=76						
KZA				⇓iS	Sn	15 46 45.3	-1.0
	baz=76						

IDC 12 15:52:01.1±7.0, **30°.60N**×**41°.55W**, **h0**^{km}, **mb3.5**/3, **mb1 3.8**/3, **mb1mx3.4**/34, **mbtmp3.5**/3, **MS3.3**/5, **Ms1 3.3**/5, **ms1mx2.9**/22, **Error ellipse: s-maj=228.4km s-min=39.6km az=5.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	30.21	331	LR	LR	16 09 38.1	
	comp=Z,46nm,19.1s,baz=264,slow=35						
DBIC	Dimbokro	41.82	117	LR	LR	16 14 41.5	
	comp=Z,28nm,20.8s,baz=277,slow=32						
TORD	Torodi Ar. Bea	43.42	104	LR	LR	16 16 44.1	
	comp=Z,24nm,19.0s,baz=295,slow=34						
H10N2	ASCENSION HYDR	46.19	141	T	T	16 49 55.1	
	baz=327,slow=75,SNR=53						
H10N3	ASCENSION HYDR	46.20	141	T	T	16 49 55.4	
	baz=327,slow=75,SNR=49						
H10N1	ASCENSION HYDR	46.21	141	T	T	16 49 56.5	
	baz=327,slow=75,SNR=56						
H10S1	ASCENSION HYDR	47.04	142	T	T	16 50 58.9	
	baz=328,slow=75,SNR=47						
H10S3	ASCENSION HYDR	47.04	142	T	T	16 50 59.1	
	baz=328,slow=75,SNR=53						
H10S2	ASCENSION HYDR	47.05	142	T	T	16 51 00.2	
	baz=328,slow=75,SNR=43						
TXAR	Lajitas Array	53.20	285	LR	LR	16 22 44.2	
	comp=Z,16nm,19.3s,baz=0.0,slow=35						
PDAR	Pinedale Array	54.52	303	P	P	16 01 31.0	-0.1
	0.4nm,0.7s,baz=82,slow=7.4,SNR=5.3						
BRTR	Keskin Array B	60.50	59	P	P	16 02 13.2	0.0
	0.6nm,0.6s,baz=270,slow=5.8,SNR=4.1						
NVAR	Mina Array Bea	62.05	300	LR	LR	16 28 43.3	
	comp=Z,66nm,18.7s,baz=280,slow=36						
ILAR	Eielson Array	68.91	334	P	P	16 03 07.5	0.0
	0.2nm,0.7s,baz=46,slow=3.9,SNR=4.0						

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*ISCJB **12** 16:05:16.8±0.8, 4°.14S±0°.08×135°.17E±0°.08, h20^{km}, mb3.7/2, Error ellipse: s-maj=12.2km s-min=10.4km az=148.7*

*DJA **12** 16:05:20.7±0.8, 4°S±6°×13°5E±°, h26^{km}±8^{km}, M4.2/5, mb4.6/1, mB5.2/1, MLv3.9/5, Mw(mB)4.5/1*

*IDC **12** 16:05:21.8±2.6, 3°.94S×135°.21E, h42^{km}±25^{km}, mb3.5/2, mb1 3.8/5, mb1mx3.4/24, mbtmp3.9/5, ML3.6/3, Error ellipse: s-maj=35.2km s-min=18.5km az=39.0*

ISC 12 16:05:18.6±1.1, **4°.07S**±0°.09×**135°.28E**±0°.08, **h20**^{km}, **n9**, σ**2ˢ.20**/10, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	2.38	24	P	Pn	16 05 56.7	+0.1
BAKI	Biak	2.97	16	P	Pn	16 06 06.4	+1.7
FAKI	Fak Fak	3.24	291	P	Pn	16 06 10.5	+2.2
SIJI	Sorong	5.12	308	P	Pn	16 06 35.8	+1.6
	2.9nm,0.3s,baz=167,slow=22,SNR=44						
SIJI				S	Sn	16 07 30.5	-2.3
	4.1nm,0.3s,baz=293,slow=23,SNR=10.0						
JAY	Jayapura	5.63	74	P	Pn	16 06 43.2	+2.0
	0.6nm,0.3s,baz=208,slow=22,SNR=3.8						
WRA	Warramunga Arr	15.81	183	P	Pn	16 08 57.1	-3.1
	0.1nm,0.3s,baz=0.4,slow=13,SNR=13						
ASAR	Alice Springs	19.53	184	P	P	16 09 46.9	+1.9
	0.4nm,0.3s,baz=6.9,slow=11,SNR=38						
MKAR	Makanchi Array	68.82	324	P	P	16 16 21.8	+0.2
	0.4nm,0.6s,baz=114,slow=7.8,SNR=5.4						
ZALV	Zalesovo Beam	71.43	331	P	P	16 16 36.2	-1.2
	0.7nm,0.6s,baz=116,slow=6.6,SNR=3.1						

IDC 12 16:36:08.6±9.7, **5°.51N**×**94°.49E**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.3**/36, **mbtmp3.5**/3, **MS3.3**/1, **Ms1 3.2**/1, **ms1mx2.6**/19, **Error ellipse: s-maj=495.7km s-min=28.1km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	25.54	239	T	T	17 07 37.3	
	baz=59						
H08S2	Diego Garcia H	25.55	239	T	T	17 07 38.4	
	baz=59						
H08S1	Diego Carcia H	25.56	239	T	T	17 07 34.7	
	baz=59						
MKAR	Makanchi Array	42.45	348	P	P	16 44 05.1	-0.2
	0.4nm,0.4s,baz=166,slow=7.5,SNR=7.0						
WRA	Warramunga Arr	46.63	124	P	P	16 44 39.0	-0.1
	0.6nm,0.7s,baz=307,slow=10,SNR=5.5						
ASAR	Alice Springs	48.16	129	P	P	16 44 50.8	-0.1
	0.3nm,0.8s,baz=300,slow=8.4,SNR=7.5						
KBZ	Khabaz	59.07	319	LR	LR	17 15 17.8	
	comp=Z,25nm,19.2s,baz=277,slow=40						

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*UCR **12** 16:38:23.4±0.9, 10°.04N×86°.11W, h14^{km}±7^{km}, MW4.1*

*ISCJB **12** 16:38:25.5±0.6, 10°.09N±0°.06×85°.98W±0°.04, h24^{km}, mb4.0/10, MS3.1/3, Error ellipse: s-maj=8.8km s-min=5.1km az=4.1*

*IDC **12** 16:38:26.6±0.9, 11°.24N×85°.10W, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.8/33, mbtmp3.8/6, ML3.3/1, MS3.2/3, Ms1 3.1/3, ms1mx2.7/28, Error ellipse: s-maj=36.2km s-min=9.5km az=73.0*

*NEIC **12** 16:38:28.3±2.1, 10°.27N×85°.80W, h25^{km}±9^{km}, mb4.3/7, MD4.0(UCR), Error ellipse: s-maj=11.3km s-min=2.9km az=188.0*

ISC 12 16:38:27.3±0.8, **10°.18N**±0°.06×**85°.88W**±0°.05, **h24**^{km}, **n38**, σ**1ˢ.63**/37, **mb4.0**/10, **MS3.1**/3, **8C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	Buena Vista	0.77	37	⇑eP	Pn	16 38 42.1	-0.7
GB1A	Borinquen Arri	0.79	37	⇑eP	Pn	16 38 42.5	-0.6
CUI	Cuipilapa	0.85	56	⇑eP	Pn	16 38 43.3	-0.5
CUI				eS	Sn	16 38 56.8	+1.3
MESS	Mesas	0.87	51	⇑eP	Pn	16 38 43.6	-0.6
MESS				eS	Sn	16 38 57.7	+1.5
JTS	Las Juntas de	0.92	83	Pg	Pn	16 38 43.7	-1.1
	151nm,0.3s,baz=337,slow=9.3,SNR=212						
JTS				Lg	Lg	16 38 59.3	
	159nm,0.3s,baz=127,slow=21,SNR=18						
JTS	Las Juntas de	0.92	83	⇑eP	Pn	16 38 43.6	-1.2
ARE1	Arenal 1	1.17	76	⇑eP	Pb	16 38 48.4	-0.6
CEDE	Laguna Cedeo	1.20	75	⇑eP	Pb	16 38 48.9	-0.5
CEDE				eS	Sb	16 39 08.2	+3.7
SRA1	San Ramn	1.38	94	eP	Pb	16 38 50.6	-2.0
HDC	Heredia	1.75	96	ePn	Pb	16 38 56.4	-2.5
HDC	Heredia	1.75	96	eP	Pb	16 38 56.2	-2.7
LCR2	La Lucha 2	1.90	103	eP	Pn	16 38 58.0	-0.5
ACON	Acoyapa	1.90	21	ePn	Pb	16 38 58.5	-2.9
ACON	Acoyapa	1.90	21	eP	Pb	16 38 58.4	-3.1
ESPN	Las Esperanzas	2.53	38	ePn	Pn	16 39 07.5	+0.6
ESPN	Las Esperanzas	2.53	38	⇑eP	Pn	16 39 07.2	+0.3
DRK0	Durika	2.75	109	eP	Pn	16 39 09.9	-0.3
ESTN	Estel	2.94	351	ePn	Pn	16 39 13.3	+0.6
CSGN	Cosiguina Volc	3.23	329	ePn	Pn	16 39 18.1	+1.5
TGUH	Tegucigalpa,Un	4.08	341	ePn	Pn	16 39 27.6	-0.7
CMIG	Matias Romero	11.12	309	Pn	Pn	16 41 06.4	+1.4
	0.2nm,0.3s,baz=105,slow=12,SNR=4.0						
Z50A	Ashland	22.96	360	eP	P	16 43 29.3	-0.8
	5.5nm,0.6s						
NNA	Nana	23.79	158	LR	LR	16 51 38.0	
	comp=Z,34nm,18.7s,baz=7.5,slow=32						
MIAR	Mount Ida	25.25	345	eP	P	16 43 50.8	-0.9
	7.1nm,0.8s						
TXAR	Lajitas Array	25.29	321	P	P	16 43 52.8	+0.6
	1.3nm,0.7s,baz=141,slow=9.3,SNR=16						
TX31	Lajitas Ar. Si	25.30	321	eP	P	16 43 52.9	+0.6
	8.0nm,1.5s						
PTGA	Pitinga	27.97	111	P	P	16 44 17.5	+1.1
	1.7nm,0.5s,baz=289,slow=12,SNR=5.0						
PD31	Pinedale Array	38.49	332	eP	P	16 45 46.4	-1.5
PDAR	Pinedale Array	38.49	332	P	P	16 45 46.4	-1.5
	0.4nm,0.6s,baz=119,slow=12,SNR=4.0						
NV01	Mina Array Sit	40.41	319	eP	P	16 46 05.4	+1.4
NVAR	Mina Array Bea	40.41	319	P	P	16 46 05.4	+1.4
	1.8nm,0.6s,baz=131,slow=7.3,SNR=18						
KVN	Kaiserville	40.65	320	eP	P	16 46 06.5	+0.6
	2.3nm,0.7s						
ULM	Lac du Bonnet	40.79	350	LR	LR	17 04 07.8	
	comp=Z,25nm,18.6s,baz=162,slow=39						
LCO	Las Campanas	41.63	160	eP	P	16 46 18.1	+3.9
	28nm,0.7s						
SCHQ	Schefferville	47.03	15	LR	LR	17 06 58.3	
	comp=Z,40nm,18.4s,baz=90,slow=37						
ILAR	Eielson Array	68.70	336	P	P	16 49 27.2	-1.5
	0.5nm,0.6s,baz=112,slow=4.8,SNR=5.6						
ASAR	Alice Springs	139.80	245	PKP	PKiKP	16 57 59.8	+3.1
	0.6nm,1.1s,baz=98,slow=2.1,SNR=4.1						
CMAR	Chiang Mai Arr	151.15	350	PKPbc	PKiKP	16 58 18.6	-1.5
	0.7nm,0.9s,baz=357,slow=3.9,SNR=5.9						

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*ISCJB **12** 16:53:02.9±0.9, 29°.72N±0°.04×35°.0E±0°.1, h25^{km}±4^{km}, Error ellipse: s-maj=16.0km s-min=5.5km az=18.2*

*GII **12** 16:53:02.9±0.3, 29°.75N×35°.05E, h18^{km}±1^{km}, MD2.0/4*

*HLW **12** 16:53:02.7, 29°.74N×35°.04E, h14^{km}±7^{km}, Ml3.1*

ISC 12 16:53:02.7±1.6, **29°.73N**±0°.05×**35°.05E**±0°.07, **h15**^{km}±16^{km}, **n15**, σ**0ˢ.59**/21, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EIL	Elat	0.11	235	Pg	Pb	16 53 07.1	+0.6
MBRI	Mt Berech	0.14	297	Pg	Pb	16 53 07.4	+0.3
MBRI				Sg	Sb	16 53 11.1	+1.1
HRFI	Mount Harif	0.30	357	Pg	Pb	16 53 09.8	-0.1
HRFI				Sg	Sb	16 53 14.7	0.0
KRMI	Paran Flat	0.48	323	Pg	Pb	16 53 12.5	-0.4
HBST	Basata	0.58	209	P	Pg	16 53 14.2	0.0
	baz=208						
HBST				AMP		16 53 01.5	
	baz=208						
HBST				S	Sb	16 53 23.0	+0.3
	baz=208						
PRNI	Paran	0.62	356	Pg	Pb	16 53 15.4	+0.1
PRNI				Sg	Sb	16 53 24.5	+0.7
ZFRI	Zfri	0.83	7	Pg	Pb	16 53 19.0	+0.2
ZFRI				Sg	Sb	16 53 30.7	+1.0
KZIT	Kziot	1.30	334	Pg	Pn	16 53 26.1	-0.3
KZIT				Sg	Sn	16 53 43.4	-0.1
MZDA	Masada	1.59	10	Pn	Pn	16 53 29.7	-0.7
YTIR	Yattir	1.63	2	Pn	Pn	16 53 30.3	-0.6
RSH		1.68	317	P	Pn	16 53 31.0	-0.6
	baz=318						
DSI	Dead Sea	1.85	9	Pn	Pn	16 53 34.1	+0.1
ZNM	Zenema	1.93	260	P	Pn	16 53 34.3	-0.8
	baz=260						
SUZ	Suez	1.93	274	P	Pn	16 53 34.3	-0.8
	baz=274						
SLTI	Sal'it	2.50	360	Pn	Pn	16 53 42.7	-0.2

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*ISCJB **12** 17:24:31.7±0.8, 38°.33N±0°.04×38°.90E±0°.06, h7^{km}±8^{km}, Error ellipse: s-maj=7.7km s-min=6.1km az=178.0*

*DDA **12** 17:24:31.8, 38°.34N×38°.98E, h7^{km}±2^{km}, ML2.8*

*ISK **12** 17:24:31.3, 38°.33N×38°.92E, h9^{km}, ML2.1/5*

ISC 12 17:24:31.8±1.1, **38°.37N**±0°.04×**38°.93E**±0°.05, **h14**^{km}±9^{km}, **n10**, σ**0ˢ.35**/14, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.14	19	i P	Pb	17 24 36.2	-0.1
ELZG				i S	Sg	17 24 38.3	+0.1
SVRC	Sivrice-ELAZID	0.30	87	PG	Pg	17 24 37.6	-0.5
SVRC				SG	Sg	17 24 42.7	+0.4
URFA	Urfa	0.93	185	PG	Pb	17 24 49.5	-0.2
URFA				SG	Sb	17 25 01.5	-0.4
KEMA	Kemaliye	0.96	339	i P	Pb	17 24 50.0	-0.3
DIYA	Diyarbakir	1.04	115	i P	Pn	17 24 52.1	+0.1
DYBB	Diyarbakir	1.04	113	PG	Pb	17 24 51.5	-0.1
DYBB				SG	Sn	17 25 06.3	-0.2
DARE	Darende-Malaty	1.15	281	PN	Pb	17 24 53.8	+0.2
HANI	Diyarbakir_Han	1.16	87	i P	Pg	17 24 54.6	+0.5
HANI				IAML_P			
	comp=Z,1μm,0.2s						
SANL	SANLIURFA_Merk	1.19	178	i P	Pb	17 24 54.2	0.0
SANL				IAML_P			
	comp=Z,905nm,0.2s						
MAZI	Mazidag	1.50	127	PN	Pn	17 24 58.8	+0.3

MEX 12 17:35:51.0±0.4, **17°.33N**×**100°.81W**, **h8**^{km}±6^{km}, **MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.59	119	eP	Pg	17 36 01.6	-0.8
CAIG				eS	Sg	17 36 09.6	-0.4
ZIIG	Zihuatanejo	0.69	294	eP	Pg	17 36 03.1	-1.2
ZIIG				eS	Sg	17 36 12.1	-1.1
ARIG	Puente Sto Nin	1.04	25	eP	Pg	17 36 07.7	-3.3
ARIG				eS	Sg	17 36 21.7	-2.8
MEIG	Mezcala	1.27	62	i P	Pn	17 36 10.8	-4.3
MEIG				i S	Sb	17 36 26.7	-5.2
PLIG	Platanillo	1.63	49	i P	Pn	17 36 16.5	-3.6
PLIG				i S	Sn	17 36 35.7	-5.6

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*ISCJB **12** 17:56:03.8±0.5, 1°.51N±0°.06×125°.00E±0°.05, h154^{km}, mb4.3/16, Error ellipse: s-maj=8.7km s-min=5.8km az=32.0*

*IDC **12** 17:56:03.2±19.0, 1°.62N×125°.16E, h132^{km}±190^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.2/48, mbtmp4.1/4, Error*

ellipse: s-maj=183.7km s-min=30.5km az=62.0

*DJA **12** 17:56:05.6±0.6, 1°N±5°×12°5E±°, h149^{km}±7^{km}, M4.3/11, mb4.6/2, mB5.3/1, MLv4.2/11, Mw(mB)4.7/1*

*NEIC **12** 17:56:07.0±2.1, 1°.41N×124°.89E, h169^{km}±10^{km}, mb4.2/16, Error ellipse: s-maj=16.0km s-min=4.5km az=214.0*

ISC 12 17:56:05.7±0.7**, 1°.34N**±0°.06×**124°.96E**±0°.06**, h154**^{km}**, n32, σ1^{s}.47**/37**, mb4.1**/16**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.40	14	P	Pn	17 56 47.4	+1.5
TNTI	Ternate	2.47	103	ePn	Pn	17 56 48.6	+1.8
TNTI				eSn	Sn	17 57 17.9	-0.4
TNTI	Ternate	2.47	103	P	Pn	17 56 48.5	+1.8
LBMI	Labuha	3.21	128	P	Pn	17 56 57.5	+1.6
LBMI				S	Sn	17 57 35.8	+0.9
LUWI	Luwuk	3.22	223	ePn	Pn	17 56 55.8	-0.2
LUWI				eSn	Sn	17 57 38.1	+3.0
SANI	Sanana	3.52	163	P	Pn	17 56 58.9	-1.0
NLAI	Namlea	5.02	155	P	Pn	17 57 20.1	+0.5
AAI	Ambon	5.95	147	P	Pn	17 57 29.6	-2.2
FAKI	Fak Fak	8.42	120	ePn	Pn	17 58 04.0	-0.8
KKM	Kota Kinabalu	9.90	298	ePn	Pn	17 58 18.1	-6.4
SBUM	Sibu	12.78	275	ePn	Pn	17 59 03.9	+1.8
MTN	Manton Dam	15.36	157	ePn	Pn	17 59 34.5	-0.1
	19nm,1.4s						
DLV	T Lat	19.44	304	eP	Pn	18 00 21.5	-2.1
	6.0nm,0.6s						
MNAI	Manna	22.70	255	eP	P	18 00 54.5	-0.2
	343nm,1.1s						
WRAB	Tennant Creek	23.06	157	eP	P	18 00 58.8	+1.0
	8.5nm,0.8s						
WRA	Warramunga Arr	23.06	157	P	P	18 00 59.0	+1.1
	9.6nm,0.4s,baz=340,slow=13,SNR=190						
WR1	Warramunga Arr	23.06	157	eP	P	18 00 59.0	+1.1
WB2	Warramunga Arr	23.07	157	eP	P	18 00 59.0	+1.1
	9.4nm,0.8s						
AS31	Alice Springs	26.33	161	eP	P	18 01 28.4	+0.9
	1.0nm,0.9s						
ASAR	Alice Springs	26.33	161	P	P	18 01 28.4	+0.9
	1.3nm,0.6s,baz=341,slow=7.8,SNR=37						
FORT	Forrest	32.07	175	eP	P	18 02 17.5	-0.6
	32nm,0.9s						
BBOO	Buckleboo	35.55	164	eP	P	18 02 48.0	-0.2
	16nm,1.4s						
STKA	Stephens Creek	36.60	156	P	P	18 02 58.6	+1.5
	1.9nm,0.4s,baz=338,slow=8.9,SNR=11						
STKA	Stephens Creek	36.60	156	eP	P	18 02 58.5	+1.4
	0.5nm,0.9s						
CAN	Canberra	42.84	151	eP	P	18 03 49.9	+1.2
	4.9nm,1.1s						
TOO	Toolangi	43.13	156	eP	P	18 03 53.9	+2.9
	6.9nm,1.3s						
TARA	Tarawa	47.95	89	eP	P	18 04 26.9	-2.4
	129nm,1.4s						
MK32	Makanchi Array	58.54	327	eP	P	18 05 45.1	-1.0
MK32				ePcP	PcP	18 06 33.9	-0.9
MKAR	Makanchi Array	58.54	327	P	P	18 05 45.1	-1.0
	0.5nm,0.4s,baz=124,slow=7.8,SNR=17						
MKAR				PcP	PcP	18 06 33.9	-0.9
	0.4nm,0.7s,baz=137,slow=4.6,SNR=4.3						
MAKZ	Makanchi	58.72	327	eP	P	18 05 45.4	-1.9
	2.6nm,1.4s						
MAKZ				ePcP	PcP	18 06 34.4	-1.2
KDJ	Kajisay	58.99	320	eP	P	18 05 49.0	-0.5
	2.5nm,1.0s						
KURK	Kurchatov	62.83	329	eP	P	18 06 13.5	-1.5
	1.4nm,0.7s						

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*SIGU **12** 18:02:29.7, 45°.55N×26°.33E, h136^{km}, mb3.9*

*BUC **12** 18:02:30.1±0.3, 45°.52N×26°.37E, h137^{km}±3^{km}, MD4.2/12, Error ellipse: s-maj=3.0km s-min=2.6km az=110.0*

*IDC **12** 18:02:30.7±0.8, 45°.69N×26°.48E, h119^{km}±10^{km}, mb3.3/4, mb1 3.1/10, mb1mx2.9/42, mbtmp3.5/10, Error ellipse: s-maj=22.7km s-min=16.7km az=85.0*

*SOF **12** 18:02:31.0, 45°.39N×26°.25E, h15^{km}*

*BEO **12** 18:02:36.0±1.7, 45°.46N×25°.78E, h45^{km}±4^{km}, ML3.5/4*

ISC 12 18:02:29.8±0.8**, 45°.53N**±0°.03×**26°.32E**±0°.03**, h143**^{km}±5^{km}**, n153, σ1^{s}.59**/196**, mb3.6**/4**, 39C-65D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLR	Muntele Rosu	0.27	262	P	Pn	18 02 49.0	-0.5
	93nm,0.3s,baz=325,slow=1.7,SNR=1070						
MLR				S	Sn	18 03 03.2	-1.3
MLR	Muntele Rosu	0.27	262	⇓iP	Pn	18 02 49.1	-0.5
MLR				i S	Sn	18 03 02.4	-2.2
MLR	Muntele Rosu	0.27	262	⇓iP	Pn	18 02 49.1	-0.5
PLOR	Plostina	0.40	36	⇓iP	Pn	18 02 49.1	-0.8
PLOR				i S	Sn	18 03 03.4	-1.9
PLOR	Plostina	0.40	36	⇓iP	Pn	18 02 49.1	-0.8
VRI	Vrincioaia	0.44	40	⇑iP	Pn	18 02 49.5	-0.6
VRI				i S	Sn	18 03 03.2	-2.4
VRI	Vrincioaia	0.44	40	⇑iP	Pn	18 02 49.5	-0.6
GRER		0.48	108	⇑iP	Pn	18 02 50.5	+0.3
GRER				i S	Sn	18 03 04.8	-1.0
GRER		0.48	108	⇑iP	Pn	18 02 50.5	+0.3
SECR		0.53	200	⇓iP	Pn	18 02 50.5	0.0
SECR				i S	Sn	18 03 05.6	-0.6
SECR		0.53	200	⇓iP	Pn	18 02 50.5	0.0
ODBI	Odobesti	0.57	65	⇓iP	Pn	18 02 50.9	+0.2
ODBI				i S	Sn	18 03 05.4	-1.2
ODBI	Odobesti	0.57	65	⇓iP	Pn	18 02 50.9	+0.2
PLAR	PLOIESTI	0.65	199	⇓iP	Pn	18 02 51.3	+0.1
PLAR	PLOIESTI	0.65	199	⇓iP	Pn	18 02 51.3	+0.1
PETR	Petresti	0.67	73	⇓iP	Pn	18 02 51.1	-0.2
PETR				i S	Sn	18 03 06.3	-1.3
PETR	Petresti	0.67	73	⇓iP	Pn	18 02 51.1	-0.2
PGOR	Pogoanele	0.78	143	⇓iP	Pn	18 02 51.9	-0.2
PGOR				i S	Sn	18 03 07.5	-1.5
PGOR	Pogoanele	0.78	143	⇓iP	Pn	18 02 51.9	-0.2
DOPR	Dopca	0.79	304	⇑iP	Pn	18 02 51.6	-0.6
DOPR				i S	Sn	18 03 07.9	-1.3
DOPR	Dopca	0.79	304	⇑iP	Pn	18 02 51.6	-0.6
VOIR		0.90	265	⇓iP	Pn	18 02 52.8	-0.3
VOIR				i S	Sn	18 03 09.0	-1.9
VOIR		0.90	265	⇓iP	Pn	18 02 52.8	-0.3
MTUR	Matau	0.94	252	⇓iP	Pn	18 02 53.4	-0.1
MTUR	Matau	0.94	252	⇓iP	Pn	18 02 53.4	-0.1
TUDR		0.95	86	⇓iP	Pn	18 02 52.5	-0.9
TUDR				i S	Sn	18 03 09.1	-2.3
TUDR		0.95	86	⇓iP	Pn	18 02 52.5	-0.9
TESR	Tescani	1.01	13	⇑iP	Pn	18 02 53.2	-0.7
TESR				i S	Sn	18 03 09.8	-2.7
TESR	Tescani	1.01	13	⇑iP	Pn	18 02 53.2	-0.7
LEHL	Lehliu	1.11	161	⇓iP	Pn	18 02 54.7	-0.2
LEHL				i S	Sn	18 03 13.0	-1.0
LEHL	Lehliu	1.11	161	⇓iP	Pn	18 02 54.7	-0.2
AMRR	Amara	1.17	142	⇓iP	Pn	18 02 55.1	-0.3
AMRR				i S	Sn	18 03 13.4	-1.5
AMRR	Amara	1.17	142	⇓iP	Pn	18 02 55.1	-0.3
BIR	Birlad	1.17	51	⇓iP	Pn	18 02 55.1	-0.3
BIR				i S	Sn	18 03 13.1	-1.9
BIR	Birlad	1.17	51	⇓iP	Pn	18 02 55.1	-0.3
GOLR		1.18	235	i S	Sn	18 03 14.6	-0.6
GOLR		1.18	235	S	Sn	18 03 14.6	-0.6
CFR	Carcaliu	1.33	105	⇑iP	Pn	18 02 56.0	-0.9
CFR				i S	Sn	18 03 14.9	-2.8
CFR	Carcaliu	1.33	105	⇑iP	Pn	18 02 56.0	-0.9
GIUM	Giurgiulesti	1.33	91	⇑iP	Pn	18 02 56.6	-0.4
GIUM				i S	Sn	18 03 16.0	-1.7
GIUM	Giurgiulesti	1.33	91	⇑iP	Pn	18 02 56.6	-0.4
GIUM	Giurgiulesti	1.33	91	P	Pn	18 02 56.6	-0.4
SGRR	Singureni	1.33	191	⇓iP	Pn	18 02 56.7	-0.3
SGRR				i S	Sn	18 03 16.1	-1.7
SGRR	Singureni	1.33	191	⇓iP	Pn	18 02 56.7	-0.3
HUMR	Humele	1.38	224	⇓iP	Pn	18 02 57.3	-0.2
HUMR				i S	Sn	18 03 17.7	-1.0
HUMR	Humele	1.38	224	⇓iP	Pn	18 02 57.3	-0.2
HARR	Harsova	1.42	126	⇓iP	Pn	18 02 57.3	-0.6
HARR	Harsova	1.42	126	⇓iP	Pn	18 02 57.3	-0.6
BIZ	Bicaz	1.42	354	⇑iP	Pn	18 02 58.6	+0.7
BIZ	Bicaz	1.42	354	⇑iP	Pn	18 02 58.6	+0.7
GIRR	Girov	1.43	5	⇑iP	Pn	18 02 58.1	+0.1
GIRR	Girov	1.43	5	⇑iP	Pn	18 02 58.1	+0.1
RASA	Rasa	1.44	156	⇓iP	Pn	18 02 57.7	-0.5
RASA				i S	Sn	18 03 17.9	-1.9
RASA	Rasa	1.44	156	⇓iP	Pn	18 02 57.7	-0.5
MDB	Medias	1.49	295	⇓iP	Pn	18 02 59.4	+0.7
MDB	Medias	1.49	295	⇓iP	Pn	18 02 59.4	+0.7
TLB	Topalu	1.54	127	⇓iP	Pn	18 02 58.6	-0.6
TLB				i S	Sn	18 03 18.5	-3.2
TLB	Topalu	1.54	127	⇓iP	Pn	18 02 58.6	-0.6
COPA	Copaceanca	1.60	210	⇓iP	Pn	18 02 59.7	-0.2
COPA				i S	Sn	18 03 21.6	-1.3
COPA	Copaceanca	1.60	210	⇓iP	Pn	18 02 59.7	-0.2
CVDA	Cernavoda	1.71	134	⇓iP	Pn	18 03 00.6	-0.5
CVDA				i S	Sn	18 03 22.4	-2.6
CVDA	Cernavoda	1.71	134	⇓iP	Pn	18 03 00.6	-0.5
ICOR	Ion Corvin	1.76	143	⇓iP	Pn	18 03 01.5	-0.2
ICOR				i S	Sn	18 03 24.1	-2.0
ICOR	Ion Corvin	1.76	143	⇓iP	Pn	18 03 01.5	-0.2
TLCR		1.79	100	⇓iP	Pn	18 03 01.6	-0.4
TLCR				i S	Sn	18 03 24.8	-1.9
TLCR		1.79	100	⇓iP	Pn	18 03 01.6	-0.4
LOT	Lotru	1.80	268	⇑iP	Pn	18 03 03.1	+0.9
LOT				i S	Sn	18 03 26.1	-0.9
LOT	Lotru	1.80	268	⇑iP	Pn	18 03 03.1	+0.9
TIRR	Tirgusor	1.83	125	⇓iP	Pn	18 03 01.9	-0.6
TIRR				i S	Sn	18 03 24.2	-3.3
TIRR	Tirgusor	1.83	125	⇓iP	Pn	18 03 01.9	-0.6
IAS	Iasi	1.87	27	⇑iP	Pn	18 03 02.5	-0.4
IAS				i S	Sn	18 03 25.8	-2.6
IAS	Iasi	1.87	27	⇑iP	Pn	18 03 02.5	-0.4
ZIMR		1.99	200	⇓iP	Pn	18 03 04.3	-0.1
ZIMR				i S	Sn	18 03 29.2	-1.7
ZIMR		1.99	200	⇓iP	Pn	18 03 04.3	-0.1
MFTR	Murfatlar	2.02	131	i S	Sn	18 03 28.9	-2.4
MFTR	Murfatlar	2.02	131	S	Sn	18 03 28.9	-2.4
VLAD	Vladila	2.05	222	⇓iP	Pn	18 03 04.8	-0.3
VLAD				i S	Sn	18 03 30.2	-1.9
VLAD	Vladila	2.05	222	⇓iP	Pn	18 03 04.8	-0.3
TSCT	Constanta Port	2.15	129	⇑iP	Pn	18 03 05.9	-0.4
TSCT				i S	Sn	18 03 31.8	-2.5
TSCT	Constanta Port	2.15	129	⇑iP	Pn	18 03 05.9	-0.4
MILM	Milestii Mici	2.22	50	⇓iP	Pn	18 03 06.6	-0.4
MILM				i S	Sn	18 03 32.5	-3.2
MILM	Milestii Mici	2.22	50	⇓iP	Pn	18 03 06.6	-0.4
BURAR	Bucovina Array	2.22	340	⇑iP	Pn	18 03 08.7	+1.5
BURAR	Bucovina Array	2.22	340	⇑iP	Pn	18 03 08.7	+1.5
CJR	Cluj-Napoca	2.23	303	⇑iP	Pn	18 03 07.9	+0.6
CJR	Cluj-Napoca	2.23	303	⇑iP	Pn	18 03 07.9	+0.6
KIS	Kishinev	2.27	49	i S	Sn	18 03 34.0	-2.9
	400nm,0.5s						
MANR	Mangalia	2.36	136	⇑iP	Pn	18 03 08.5	-0.2
MANR	Mangalia	2.36	136	⇑iP	Pn	18 03 08.5	-0.2
SRE	Strehaia	2.37	250	⇑iP	Pn	18 03 09.0	+0.1
SRE				i S	Sn	18 03 37.5	-1.6
SRE	Strehaia	2.37	250	⇑iP	Pn	18 03 09.0	+0.1
PVL	Pavlikeni	2.42	197	P	Pn	18 03 10.8	+1.3
PRD	Provadia	2.46	161	i P	Pn	18 03 10.3	+0.3
GZR	Gura Zlata	2.50	268	⇑iP	Pn	18 03 12.1	+1.5
GZR				i S	Sn	18 03 41.1	-0.9
GZR	Gura Zlata	2.50	268	⇑iP	Pn	18 03 12.1	+1.5
DRGR		2.81	298	ePn	Pn	18 03 14.2	-0.2
DRGR		2.81	298	⇑iP	Pn	18 03 14.4	0.0
DRGR		2.81	298	⇑iP	Pn	18 03 14.4	0.0
HERR	Herculane	2.84	258	⇑iP	Pn	18 03 14.4	-0.3
HERR				i S	Sn	18 03 46.8	-2.6
HERR	Herculane	2.84	258	⇑iP	Pn	18 03 14.4	-0.3
MPEP	Malo Peshtene	2.85	221	P	Pn	18 03 15.1	+0.1
RAKU	Rahkiv	2.90	330	eP	Pn	18 03 14.4	-1.2
NSLU	Nyzhne Selyshc	2.96	335	⇑iP	Pn	18 03 20.6	+4.3
KMPD	K-Podol'skiy	3.04	2	eP	Pn	18 03 16.6	-0.6
KMPD				eS	Sn	18 03 51.5	-2.5
JMB	Yambol	3.07	176	i P	Pn	18 03 17.5	-0.2
NDNU	Novodnistrovsk	3.15	13	⇑iP	Pn	18 03 18.1	-0.6
NDNU				Pm		18 03 20.2	
NDNU				i S	Sn	18 03 53.1	-3.5
NDNU				Sm		18 03 54.7	
BZS	Buzias	3.31	273	ePn	Pn	18 03 20.4	-0.3
BZS	Buzias	3.31	273	⇓iP	Pn	18 03 21.2	+0.5
BZS	Buzias	3.31	273	⇓iP	Pn	18 03 21.2	+0.5
SIRR	Siria	3.34	284	⇓iP	Pn	18 03 21.4	+0.2
SIRR	Siria	3.34	284	⇓iP	Pn	18 03 21.4	+0.2
MDVR	Moldovita	3.34	259	⇓iP	Pn	18 03 21.5	+0.2
MDVR				i S	Sn	18 03 59.1	-2.1
MDVR	Moldovita	3.34	259	⇓iP	Pn	18 03 21.5	+0.2
PGB	Panagyurishte	3.36	208	i P	Pn	18 03 22.3	+0.8
ZAGS	Zajecar	3.38	241	ePn	Pn	18 03 21.0	-0.8
ZAPS	Zavoj	3.47	231	ePn	Pn	18 03 23.2	+0.2
KUBS	Kucevo	3.48	253	ePn	Pn	18 03 21.5	-1.5
KUBS				eSn	Sn	18 03 55.9	-8.4
MEZ	Mezhgor'ye	3.55	328	⇑iP	Pn	18 03 25.0	+1.1
BRIU	Brid	3.61	322	eP	Pn	18 03 23.7	-0.9
VTS	Vitosha	3.66	218	ePn	Pn	18 03 26.3	+0.7
VTS	Vitosha	3.66	218	⇓iP	Pn	18 03 25.8	+0.2
VTS	Vitosha	3.66	218	⇓iP	Pn	18 03 25.8	+0.2
VTS	Vitosha	3.66	218	i P	Pn	18 03 26.2	+0.7
HORU	Horodok	3.69	1	eP	Pn	18 03 25.3	-0.3
BERU	Beregovo	3.70	318	⇓iP	Pn	18 03 25.1	-0.7
BOVS	Bovan	3.80	242	ePn	Pn	18 03 27.1	-0.1
MUKU	Mukachevo	3.84	321	⇓iP	Pn	18 03 28.2	+0.6
BARS	Barje	4.23	232	ePn	Pn	18 03 33.2	+0.4
STZU	Stuzhytsa	4.30	326	⇓iP	Pn	18 03 34.9	+1.2
GRUS	Gruza	4.32	250	ePn	Pn	18 03 34.2	+0.2
GRUS				eSn	Sn	18 04 15.6	-8.3
KKB	Krupnik	4.35	214	P	Pn	18 03 34.7	+0.3
MMB	Musomiste	4.37	206	i P	Pn	18 03 35.0	+0.3
KOLS	Kolonicke sedl	4.38	322	eP	Pn	18 03 36.0	+1.2
SELS	Selova	4.39	240	ePn	Pn	18 03 35.0	+0.1
TRUS	Trudelj	4.40	255	ePn	Pn	18 03 35.0	-0.1
TRUS				eSn	Sn	18 04 18.8	-7.1
DIVS	Divibare	4.72	255	ePn	Pn	18 03 39.1	-0.3
IVAS	Ivanjica	4.82	248	ePn	Pn	18 03 40.2	-0.5
VAY	Valandovo	5.02	214	i Pn	Pn	18 03 45.4	+2.2
SJES	Sjenica	5.08	246	ePn	Pn	18 03 43.4	-0.8
BBLS	Lazići	5.20	254	ePn	Pn	18 03 45.3	-0.5
AKASG	Malin Array Be	5.53	20	P	Pn	18 03 49.3	-0.6
	3.9nm,0.3s,baz=198,slow=11,SNR=12						
AKASG				S	Sn	18 04 48.3	-4.2
	2.5nm,0.3s,baz=202,slow=21,SNR=9.8						
LANS	Liptovska Anna	5.90	310	eP	Pn	18 03 56.4	+1.4
VYHS	Vyhne	5.91	303	eP	Pn	18 03 56.0	+0.8
VRAC	Vranov	7.60	303	P	Pn	18 04 18.9	+1.1
	baz=114,slow=13,SNR=4.5						
BRTR	Keskin Array B	7.92	135	P	Pn	18 04 21.8	-0.4
	0.1nm,0.3s,baz=321,slow=10,SNR=6.5						
FINES	FINESS Array B	15.95	360	P	Pn	18 06 05.0	-0.8
	0.1nm,0.3s,baz=165,slow=12,SNR=6.3						
HFS	Hagfors	16.45	337	P	P	18 06 13.1	+1.0
	0.2nm,0.3s,baz=134,slow=11,SNR=8.4						
NB2	NORSAR Subarra	17.89	336	P	P	18 06 28.6	+0.6
	comp=Z,0.7nm,0.4s,baz=143,slow=11						
NOA	NORSAR Array B	17.89	336	P	P	18 06 28.6	+0.6
	comp=Z,0.0nm,0.3s,baz=143,slow=10,SNR=6.2						
ARU	Arti	22.82	50	P	P	18 07 21.1	+1.0
	comp=Z,0.8nm,0.4s,baz=270,slow=13,SNR=5.4						
ARCES	ARCESS Array B	24.07	359	P	P	18 07 32.9	+1.5
	comp=Z,7.0nm,1.1s,baz=179,slow=8.1,SNR=5.1						
ZALV	Zalesovo Beam	37.74	55	P	P	18 09 33.4	+2.1
	comp=Z,0.6nm,0.3s,baz=281,slow=8.5,SNR=3.1						
MKAR	Makanchi Array	38.09	67	P	P	18 09 36.6	+2.3
	comp=Z,0.2nm,0.4s,baz=271,slow=7.8,SNR=6.2						

SJA 12 18:21:00.9±0.4**, 31°.76S**×**68°.93W, h99**^{km}±2^{km}**, ML3.2, MW3.5, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.32	262	eP	Pn	18 21 17.0	+1.2
RTLS				eS	Sn	18 21 28.5	+1.6
RTLS				IAML		18 21 28.9	
	comp=Z,156nm,0.2s						
RTCV	Cerro Valdivia	0.35	108	eP	Pn	18 21 16.1	+0.5
RTCV				eS	Sn	18 21 27.7	+1.0
AUSP	Uspallata	0.61	220	eP	Pn	18 21 18.9	+1.1
AMOG	MOGNA	0.90	25	eP	Pn	18 21 21.4	+1.1
AMOG				eS	Sn	18 21 35.8	+1.1
ACCO	Cerro Coronel	1.17	354	eP	Pn	18 21 24.9	+1.3
ACCO				IAML		18 21 25.1	
	comp=Z,6µm,0.5s						
ACAN	Cantantal	1.57	110	eP	Pn	18 21 29.0	+1.1
AROD	Rodeo	1.65	343	eP	Pn	18 21 30.9	+1.5
APLL	PUNTA DE LOS L	2.47	57	eP	Pn	18 21 40.7	+1.1
APLL				IAML		18 22 11.5	
	comp=Z,27nm,0.3s						

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*MOS **12** 18:21:04.1±0.5, 50°.37N×158°.09E, h63^{km}, mb4.0/2, Error ellipse: s-maj=20.6km s-min=4.5km az=86.6*

*KRSC **12** 18:21:05.7±1.7, 50°.60N×158°.14E, h48^{km}±24^{km}, ML4.3*

*IDC **12** 18:21:08.3±8.1, 50°.55N×157°.39E, h42^{km}±67^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.0/31, mbtmp3.3/3, ML2.5/1, Error ellipse: s-maj=57.0km s-min=33.8km az=172.0*

ISC 12 18:21:05.5±1.9**, 50°.49N**±0°.08×**158°.00E**±0°.06**, h31**^{km}±14^{km}**, n62, σ1^{s}.48**/92**, 1C-2D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.22	280	eP	Pb	18 21 27.8	-0.2
SKR				eS	Sn	18 21 42.4	+0.6
SKR	Severo-Kuril's	1.22	280	ePN	Pb	18 21 27.7	-0.2
SKR				eS	Sn	18 21 42.3	+0.5
SKR				pmax	pmax		
	comp=Z,548nm,0.4s						
SKR				smax	smax		
	comp=E,2µm,0.3s						
SKR				smax	smax		
	comp=N,3µm,0.2s						
PAU	Pauzhetka	1.23	323	eP	Pn	18 21 27.5	+0.9
PAU				eS	Sn	18 21 41.8	-0.4
PAU	Pauzhetka	1.23	323	PN	Pn	18 21 27.5	+0.9
PAU				S	Sn	18 21 41.8	-0.4
KDTR	Khodutka, Kamc	1.32	2	eP	Pn	18 21 27.8	0.0
KDTR				eS	Sn	18 21 42.4	-1.9
KDTR	Khodutka, Kamc	1.32	2	PN	Pn	18 21 27.8	0.0
KDTR				S	Sn	18 21 42.4	-1.9
ASAK	Asacha	1.90	358	eP	Pn	18 21 36.4	+0.6
ASAK	Asacha	1.90	358	PN	Pn	18 21 36.4	+0.6
RUS	Russkaya	1.97	9	eP	Pn	18 21 37.1	+0.4
RUS				eS	Sn	18 21 58.4	-2.0
RUS	Russkaya	1.97	9	PN	Pn	18 21 37.1	+0.4
RUS				S	Sn	18 21 58.4	-2.0
MTVR	Mutnovka	2.00	3	eP	Pn	18 21 37.8	+0.5
MTVR				eS	Sn	18 22 00.4	-0.9
MTVR	Mutnovka	2.00	3	PN	Pn	18 21 37.8	+0.5
MTVR				S	Sn	18 22 00.4	-0.9
KRMR	Karymshinskiy	2.34	2	eP	Pn	18 21 43.3	+1.4
KRMR				eS	Sn	18 22 10.4	+0.8
KRMR	Karymshinskiy	2.34	2	PN	Pn	18 21 43.3	+1.4
KRMR				S	Sn	18 22 10.4	+0.8
APC	Apacha	2.49	348	eP	Pn	18 21 45.3	+1.4
APC				eS	Sn	18 22 13.2	-0.1
APC	Apacha	2.49	348	PN	Pn	18 21 45.3	+1.4
APC				S	Sn	18 22 13.2	-0.1
PET	Petropavlovsk	2.57	9	eP	Pn	18 21 45.8	+0.8
PET				eS	Sn	18 22 14.1	-1.0
PET	Petropavlovsk	2.57	9	⇑iPN	Pn	18 21 45.6	+0.6
PET				eS	Sn	18 22 14.1	-1.0
PET				pmax	pmax		
	comp=Z,38nm,0.5s						
PET				smax	smax		
	comp=E,378nm,0.6s						
PET				smax	smax		
	comp=N,373nm,0.4s						
DALK	Dalny	2.59	10	eP	Pn	18 21 46.0	+0.8
DALK				eS	Sn	18 22 14.5	-1.0
DALK	Dalny	2.59	10	PN	Pn	18 21 46.0	+0.8
DALK				S	Sn	18 22 14.5	-1.0
PETK	Petropavlovsk-	2.63	356	P	Pn	18 21 47.4	+1.5
	comp=N,4.6nm,0.3s,baz=146,slow=16,SNR=93						
PETK				S	Sn	18 22 17.9	+1.3
	comp=N,8.0nm,0.3s,baz=133,slow=15,SNR=5.2						
UGLR	Uglovaya	2.77	10	eP	Pn	18 21 49.3	+1.5
UGLR				eS	Sn	18 22 19.8	-0.5
UGLR	Uglovaya	2.77	10	PN	Pn	18 21 49.3	+1.5
UGLR				S	Sn	18 22 19.8	-0.5
NLC	Nalytchevo	2.81	17	eS	Sn	18 22 20.7	-0.4
AVH	Avacha	2.81	9	eP	Pn	18 21 50.3	+1.9
AVH				eS	Sn	18 22 23.1	+1.8
AVH	Avacha	2.81	9	PN	Pn	18 21 50.3	+1.9
AVH				S	Sn	18 22 23.1	+1.8
SMAR	Somma	2.82	10	eP	Pn	18 21 49.8	+1.2
SMAR				eS	Sn	18 22 22.7	+1.0
SMAR	Somma	2.82	10	PN	Pn	18 21 49.8	+1.2
SMAR				S	Sn	18 22 22.7	+1.0
KOK	Koryaka	2.83	8	eP	Pn	18 21 50.6	+1.9
KOK				eS	Sn	18 22 23.8	+2.0
KOK	Koryaka	2.83	8	PN	Pn	18 21 50.6	+1.9
KOK				S	Sn	18 22 23.8	+2.0
SDLR	Sedlovina	2.84	11	eP	Pn	18 21 49.6	+0.7
SDLR	Sedlovina	2.84	11	PN	Pn	18 21 49.6	+0.7
KRER	Koryakskii	2.85	9	eP	Pn	18 21 50.9	+1.8
KRER				eS	Sn	18 22 24.2	+1.7
KRER	Koryakskii	2.85	9	PN	Pn	18 21 50.9	+1.8
KRER				S	Sn	18 22 24.2	+1.7
SPN	Mys Shipunski	2.90	25	eP	Pn	18 21 49.9	+0.4
SPN				eS	Sn	18 22 22.4	-0.8
SPN	Mys Shipunski	2.90	25	PN	Pn	18 21 49.9	+0.4
SPN				S	Sn	18 22 22.4	-0.8
KRX	Arik	2.90	8	eP	Pn	18 21 51.7	+2.0
KRX				eS	Sn	18 22 25.0	+1.5
KRX	Arik	2.90	8	PN	Pn	18 21 51.7	+2.0
KRX				S	Sn	18 22 25.0	+1.5
GNL	Ganaly	3.21	359	eP	Pn	18 21 55.6	+1.7
GNL				eS	Sn	18 22 33.0	+1.9
GNL	Ganaly	3.21	359	PN	Pn	18 21 55.6	+1.7
GNL				S	Sn	18 22 33.0	+1.9
MKZ	Mys Kozlova	4.66	28	eP	Pn	18 22 13.7	0.0
MKZ	Mys Kozlova	4.66	28	PN	Pn	18 22 13.7	0.0
KZV	Kizimen	4.83	16	eP	Pn	18 22 19.9	+3.7
KZV	Kizimen	4.83	16	PN	Pn	18 22 19.9	+3.7
TUMD	Tumrok D	4.94	16	eP	Pn	18 22 19.4	+1.9
TUMD				eS	Sn	18 23 12.5	-1.1
TUMR	Tumrok	4.97	14	PN	Pn	18 22 19.4	+1.3
KBTR	Krutoberegovo	6.41	25	eP	Pn	18 22 39.3	+1.6
KBTR	Krutoberegovo	6.41	25	PN	Pn	18 22 39.3	+1.6
ERM	Erimo	13.30	236	⇓ePN	Pn	18 24 11.6	-0.4
ERM				pmax	pmax		
	comp=Z,30nm,1.4s						
BILL	Bilibino	18.07	10	eP	Pn	18 25 13.1	-0.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TIXI	Tiksi	24.97	339	⇓eP	P	18 26 24.0	-1.8
TIXI				pmax	pmax		
	comp=Z,8.0nm,3.6s						
H11N2	WAKE ISLAND Hy	31.50	164	T	T	19 01 03.9	
	baz=349,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	31.51	164	T	T	19 01 20.2	
	baz=349,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	31.51	164	T	T	19 01 23.3	
	baz=349,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	32.66	165	T	T	19 02 37.1	
	baz=349,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	32.67	165	T	T	19 02 40.9	
	baz=349,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	32.67	165	T	T	19 02 44.5	
	baz=349,slow=76,SNR=21						
MKAR	Makanchi Array	48.14	297	P	P	18 29 40.7	-1.6
	comp=Z,0.2nm,0.4s,baz=61,slow=6.9,SNR=7.2						
MKAR	Makanchi Array	48.14	297	eP	P	18 29 40.6	-1.8
FINES	FINESS Array B	61.98	336	eP	P	18 31 20.3	-1.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	72.89	65	P	P	18 32 35.0	+3.3
	comp=Z,0.1nm,0.4s,baz=290,slow=6.4,SNR=3.5						
TXAR	Lajitas Array	72.89	65	P	P	18 32 35.0	+3.3

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*SJA **12** 18:26:51.5±0.3, 21°.57S×68°.39W, h155^{km}±6^{km}, ML2.1, MW2.5*

*ISCJB **12** 18:26:52.9±1.1, 21°.54S±0°.05×68°.41W±0°.08, h143^{km}±15^{km}, Error ellipse: s-maj=13.0km s-min=7.5km az=177.3*

*GUC **12** 18:26:52.9±0.8, 21°.52S×68°.52W, h146^{km}±6^{km}, ML3.0*

ISC 12 18:26:52.9±2.1**, 21°.53S**±0°.05×**68°.41W**±0°.08**, h145**^{km}±20^{km}**, n18, σ0^{s}.40**/30**, 2C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.81	251	eP	Pn	18 27 16.0	+0.1
PB09	IPOC Station P	0.81	251	eP	Pn	18 27 16.1	+0.1
PB09				i S	Sn	18 27 33.5	+0.1
PB09				IAML		18 27 37.0	
	comp=N,159nm,0.3s						
PB01	IPOC Station P	1.11	296	eP	Pn	18 27 17.7	-0.6
PB01				eS	Sn	18 27 37.1	-0.6
PB01	IPOC Station P	1.11	296	eP	Pn	18 27 18.2	-0.2
PB01				i S	Sn	18 27 37.4	-0.3

PB03	IPOC Station P	1.35	247	eP	Pn	18 27 20.7	+0.1
PB03	IPOC Station P	1.35	247	eP	Pn	18 27 20.7	+0.1
PB03				i S	Sn	18 27 41.5	-0.4
PB03				IAML		18 27 42.3	
	comp=E,492nm,0.2s						
PB07	IPOC Station P	1.38	262	eP	Pn	18 27 21.3	+0.2
PB07				eS	Sn	18 27 43.2	+0.6
PB07	IPOC Station P	1.38	262	eP	Pn	18 27 21.2	+0.2
PB07				i S	Sn	18 27 42.2	-0.3
PB02	IPOC Station P	1.40	278	eP	Pn	18 27 21.2	+0.1
PB02				i S	Sn	18 27 42.5	-0.2
PB08	IPOC Station P	1.55	333	eP	Pn	18 27 23.8	+0.7
PB08				i S	Sn	18 27 46.6	+0.6
PB08				IAML		18 27 49.6	
	comp=N,94nm,0.6s						
PB06	IPOC Station P	1.59	222	⇑iP	Pn	18 27 23.4	+0.2
PB06				eS	Sn	18 27 46.3	-0.2
PB06				IAML		18 27 47.6	
	comp=N,140nm,0.1s						
PB04	IPOC Station P	1.80	243	⇓eP	Pn	18 27 25.8	+0.2
PB04				eS	Sn	18 27 50.0	-0.6
PB04				IAML		18 27 56.4	
	comp=N,151nm,0.2s						
PB15	IPOC Station P	1.94	210	eP	Pn	18 27 27.0	-0.2
PB15	IPOC Station P	1.94	210	eP	Pn	18 27 27.9	+0.7
PB15				i S	Sn	18 27 54.1	+0.5
PB11	IPOC Station P	2.11	326	⇑iP	Pn	18 27 29.0	-0.3
PB11				eS	Sn	18 27 57.1	-0.1
PB11				IAML		18 27 58.4	
	comp=N,186nm,0.2s						
YJA	Yavi	2.77	104	eP	Pn	18 27 37.8	+0.2
YJA				IAML		18 27 41.8	
	comp=Z,4.0nm,0.6s						
HJA	Humahuaca	3.24	122	eP	Pn	18 27 43.5	0.0
HJA				IAML		18 27 45.7	
	comp=Z,6.0nm,0.5s						
AZAP	Zapla	4.09	132	eP	Pn	18 27 54.0	-0.4
AZAP				IAML		18 28 00.3	
	comp=Z,1.6nm,0.3s						

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*NIED **12** 18:31:00,38˚40N×142˚20E,h32^{km},Mw4.3 Best double couple: M$_0$2.79000×10^{15} NP1:φ$_s$320.00000°,δ18.00000°, λ-172.00000°. NP2:φ$_s$222.00000°,δ88.00000°, λ-73.00000°.*

*BJI **12** 18:31:19.1±0.0,38˚24N×142˚39E,h22^{km},mb4.7/62, mB5.0/39,Ms4.5/20,Ms7 4.2/18*

*MOS **12** 18:31:22.8±1.0,38˚37N×142˚14E,h29^{km},mb4.8/53,Error ellipse: s-maj=7.4km s-min=4.5km az=111.3*

*NEIC **12** 18:31:23.9±1.3,38˚40N×142˚13E,h24^{km}±4^{km},mb4.8/79, Error ellipse: s-maj=12.1km s-min=8.1km az=116.0*

NEIC Recorded [2 JMA] in Iwate and Miyagi.

*ISCJB **12** 18:31:24.2±0.5,38˚36N±0˚02×142˚12E±0˚04,h39^{km}±3^{km}, mb4.7/123,MS3.9/29,Error ellipse: s-maj=5.0km s-min=3.6km az=28.5*

*JMA **12** 18:31:24.1±0.1,38˚40N×142˚17E,h36^{km}±1^{km},M4.5*

JMA Felt II J1.

*IDC **12** 18:31:26.0±2.4,38˚34N×142˚09E,h40^{km}±20^{km},mb4.2/24, mb1 4.3/29,mb1mx4.3/39,mbtmp4.4/29,ML3.6/5,MS3.6/20, Ms1 3.6/20,ms1mx3.4/49,Error ellipse: s-maj=15.3km s-min=12.2km az=105.0*

ISC 12 18:31:25.0±0.5**,38˚36N**±0˚04×**142˚17E**±0˚04**,h32**^{km}±3^{km}**, h32**^{km}**:pP-P,n290,**σ1§**26**/302**,mb4.7**/127**,MS4.0**/29**, 14C-6D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.56	265	P	Pb	18 31 35.2	-1.2
JIKH				S	Sb	18 31 42.8	-1.4
JIO	Ouri	0.65	279	P	Pb	18 31 36.8	-1.2
JIO				S	Sb	18 31 45.5	-1.3
JKMT	Kesennumamotoy	0.71	310	P	Pn	18 31 37.4	-1.4
JKMT				S	Sb	18 31 46.7	-1.7
OFUJ	Ofunato	0.82	332	P	Pn	18 31 38.8	-1.5
OFUJ				S	Sn	18 31 48.9	-2.5
JMK	Ichinoseki	0.95	309	P	Pn	18 31 41.0	-1.1
JMK				S	Sn	18 31 52.8	-1.8
JOU	Okura	1.18	271	P	Pn	18 31 45.0	-0.3
JOU				S	Sn	18 32 00.2	-0.1
JMM	Marumori	1.19	246	P	Pn	18 31 44.5	-0.9
JMM				S	Sn	18 31 59.5	-1.0
JOM	Ohasama	1.31	329	P	Pn	18 31 46.2	-0.8
JOM				S	Sn	18 32 02.2	-1.2
JFK	Kawauchi	1.43	226	P	Pn	18 31 47.4	-1.2
JFK				eS	Sn	18 32 04.5	-1.8
JYK	Kaneyama	1.52	292	P	Pn	18 31 49.7	-0.3
JRG	Rokugo	1.58	311	P	Pn	18 31 50.5	-0.3
JYS	Shirataka	1.66	266	P	Pn	18 31 51.7	-0.2
JFT	Otama	1.67	241	P	Pn	18 31 52.0	-0.1
JFT				eS	Sn	18 32 12.6	+0.2
MAJO	Matsushiro	3.64	241	ePn	Pn	18 32 20.2	+1.2
MAJO	Matsushiro	3.64	241	ceP	Pn	18 32 20.2	+1.2
MAT	Matsushiro	3.64	241	P	Pn	18 32 20.2	+1.2
MAT				S	Sn	18 33 05.5	+4.6
MJAR	Matsushiro Arr	3.64	241	Pn	Pn	18 32 19.9	+0.9
	0.9nm,0.3s,baz=44,slow=11,SNR=50						
MJB9	Matsu-Tunnel	3.64	241	ePn	Pn	18 32 20.2	+1.2
ERM	Erimo	3.73	11	ePn	Pn	18 32 19.6	-0.6
ERM	Erimo	3.73	11	d iP	Pn	18 32 19.7	-0.6
ERM				pmax	pmax		
	comp=Z,24nm,0.6s						
INU	Inuyama	5.11	236	ePn	Pn	18 32 42.3	+3.0
JHJ2	Mitsune	5.57	201	ePn	Pn	18 32 43.9	-1.7
JHJ2				eSn	Sn	18 33 44.7	-3.8
JHJ	Hachijo jima 2	5.58	201	Pn	Pn	18 32 44.6	-1.1
	comp=Z,35nm,0.3s,baz=308,slow=23,SNR=9.8						
JHJ				Sn	Sn	18 33 45.9	-2.7
	comp=Z,42nm,0.3s,baz=87,slow=23,SNR=6.1						
ASAJ	Asahikawa	5.76	3	Pn	Pn	18 32 48.8	+0.5
	comp=Z,3.3nm,0.3s,baz=205,slow=13,SNR=35						
ASAJ				LR	LR	18 34 48.6	
	comp=Z,197nm,19.2s,baz=185,slow=35						
YUK	Yuzh-Kuril'sk	6.32	25	eP	Pn	18 32 58.5	+2.7
YUK				eS	Sn	18 34 06.0	-0.8
YUK				pmax	pmax		
	comp=Z,67nm,0.2s						
YUK				pmax	pmax		
	comp=N,18nm,0.3s						
YUK				pmax	pmax		
	comp=E,25nm,0.3s						
YUK				smax	smax		
	comp=E,294nm,0.5s						
YUK				smax	smax		
	comp=N,210nm,0.3s						
YUK				MLR	MLR		
	comp=Z,301nm,15.0s						
YUK				MLR	MLR		
	comp=E,692nm,16.0s						
YUK				MLR	MLR		
	comp=N,265nm,15.0s						
TEY	Ternei	7.86	330	⇑eP	Pn	18 33 20.1	+3.1
KUR	Kuril'sk	8.08	30	P	Pn	18 33 19.8	-0.2
KUR				S	Sn	18 34 44.3	-5.8
KUR				pmax	pmax		
	comp=Z,41nm,0.8s						
KUR				pmax	pmax		
	comp=N,12nm,0.3s						
KUR				pmax	pmax		
	comp=E,16nm,0.3s						
KUR				smax	smax		
	comp=E,64nm,0.4s						
KUR				smax	smax		
	comp=N,20nm,0.5s						
YSS	Yuzh-Sakhalins	8.60	3	ePn	Pn	18 33 26.8	-0.4
YSS	Yuzh-Sakhalins	8.60	3	eP	Pn	18 33 27.4	+0.3
YSS				eS	Sn	18 35 01.7	-1.3
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=N,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
VLA	Vladivostok	9.14	305	⇑eP	Pn	18 33 36.4	+1.9
MSHR	Mys Shultsa	9.39	300	⇑eP	Pn	18 33 38.4	+0.4
USA0B	Ussuriysk Arra	9.63	311	ePn	Pn	18 33 41.6	+0.4
USRK	Ussuriysk Ar.	9.63	311	Pn	Pn	18 33 42.0	+0.7
	comp=Z,0.9nm,0.3s,baz=118,slow=15,SNR=29						
USRK				LR	LR	18 37 15.0	
	comp=Z,436nm,19.1s,baz=119,slow=36						
USRK	Ussuriysk Ar.	9.63	311	P	Pn	18 33 42.0	+0.7
JNU	Nakatsue	10.56	244	ePn	Pn	18 33 53.4	-0.6
KSRS	Korea Array	11.29	270	Pn	Pn	18 34 07.5	+3.4
	comp=Z,0.3nm,0.3s,baz=82,slow=13,SNR=15						
KSRS				LR	LR	18 37 56.0	
	comp=Z,210nm,21.6s,baz=86,slow=35						
MDJ	Mudanjiang	11.31	308	ePn	Pn	18 34 05.1	+0.8
MDJ	Mudanjiang	11.31	308	P	Pn	18 34 06.6	+2.3
MDJ				S	Sn	18 36 10.3	+0.8
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,300nm,5.8s						
MDJ				LR	LR		
	comp=Z,440nm,7.1s						
MDJ				LR	LR		
	comp=Z,380nm,9.3s						
MDJ				LR	LR		
	comp=Z,570nm,10.0s						
KS15	Wonju Array Si	11.33	270	ePn	Pn	18 34 03.7	-0.8
GRNR	Gornyy	13.06	344	eP	Pn	18 34 27.5	-0.7
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KLR	Kul'dur	13.20	329	Pn	Pn	18 34 29.9	-0.2
	comp=Z,0.2nm,0.3s,baz=130,slow=15,SNR=5.2						
KLR				LR	LR	18 39 39.8	
	comp=Z,373nm,18.3s,baz=149,slow=37						
KLR	Kul'dur	13.20	329	⇑iP	Pn	18 34 29.6	-0.5
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CN2	Changchun	13.73	299	eP	Pn	18 34 39.4	+2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SKR	Severo-Kuril’s	15.80	34	⇑eP	Pn	18 35 06.3	+1.4
DL2	Dalian	16.06	278	P	Pn	18 35 09.7	+1.3
DL2				eS	Sn	18 38 10.0	+4.6
DL2				pmax	pmax		
	comp=Z,54nm,0.9s						
DL2				pmax	pmax		
	comp=Z,220nm,6.3s						
DL2				LR	LR		
	comp=Z,380nm,14.0s						
DL2				LR	LR		
	comp=Z,320nm,11.4s						
DL2				LR	LR		
	comp=Z,370nm,16.9s						
PETK	Petropavlovsk-	18.24	31	LR	LR	18 41 57.2	
	comp=Z,26nm,20.7s,baz=206,slow=34						
ZEA	Zeya	18.48	331	eP	P	18 35 35.8	-2.3
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=N,31nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,46nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,500nm,15.0s						
ZEA				MLR	MLR		
	comp=N,300nm,14.0s						
ZEA				MLR	MLR		
	comp=E,200nm,14.0s						
NJ2	Nanjing	20.04	259	eP	P	18 35 54.3	-1.0
NJ2				pmax	pmax		
	comp=E,17nm,0.5s						
BJI	Beijing	20.20	283	P	P	18 35 54.8	-2.1
BJI				pP	pP	18 36 03.9	-1.5
BJI				pmax	pmax		
	comp=E,6.0nm,0.9s						
BJT	Baijiatuau	20.20	283	eP	P	18 35 54.5	-2.5
	comp=E,11nm,0.6s						
BJT	Baijiatuau	20.20	283	eP	P	18 35 54.5	-2.5
BJT				pmax	pmax		
	comp=Z,11nm,0.6s						
MA2	Magadan	21.94	12	P	P	18 36 15.6	+0.1
	comp=Z,13nm,0.9s,baz=205,slow=11,SNR=12						
MA2				LR	LR	18 45 11.8	
	comp=Z,57nm,19.0s,baz=204,slow=38						
MA2	Magadan	21.94	12	eP	P	18 36 15.5	0.0
	comp=Z,12nm,0.7s						
MA2	Magadan	21.94	12	eP	P	18 36 15.5	0.0
MA2				pmax	pmax		
	comp=Z,13nm,0.7s						
YULB	Yu-li	23.23	236	eP	P	18 36 26.6	-2.9
	comp=Z,183nm,1.9s						
HHC	Hu-ho-hao-te	23.66	286	eP	P	18 36 31.2	-2.4
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
HHC				LR	LR		
	comp=Z,400nm,7.2s						
WHN	Wuhan	24.16	260	P	P	18 36 37.8	-0.5
GUMO	Guam	24.79	174	LR	LR	18 45 37.9	
	comp=Z,32nm,21.8s,baz=358,slow=34						
YAK	Yakutsk	24.92	346	eP	P	18 36 44.0	-0.8
	comp=Z,22nm,0.7s						
YAK	Yakutsk	24.92	346	eP	P	18 36 42.9	-1.9
YAK				e*PP	pP	18 36 54.4	+0.5
YAK				eS	S	18 41 04.9	-1.0
YAK				e*SS	sS	18 41 21.6	+0.8
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=Z,2.0nm,0.2s						
YAK				smax	smax		
	comp=N,58nm,2.3s						
YAK				smax	smax		
	comp=E,24nm,1.5s						
YAK				MLR	MLR		
	comp=Z,126nm,18.0s						
YAK				MLR	MLR		
	comp=E,88nm,16.0s						
YAK				MLR	MLR		
	comp=N,106nm,16.0s						
SEY	Seymchan	25.38	11	P	P	18 36 50.3	+1.4
	comp=N,13nm,0.8s,baz=198,slow=6.7,SNR=30						
SEY	Seymchan	25.38	11	ceP	P	18 36 49.9	+0.9
XAN	Xi'an	27.09	271	eP	P	18 37 03.5	-1.3
	comp=N,9.9nm,0.6s						
XAN	Xi'an	27.09	271	P	P	18 37 04.1	-0.7
XAN				pP	pP	18 37 10.8	-3.1
XAN				pmax	pmax		
	comp=N,11nm,0.6s						
XAN	Xi'an	27.09	271	eP	P	18 37 03.5	-1.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ULN	Ulaanbaatar	27.14	302	eP	P	18 37 04.7	-0.5
	comp=Z,7.7nm,0.8s						
ULN	Ulaanbaatar	27.14	302	⇓eP	P	18 37 05.7	+0.5
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
SONM	Songino Array	27.57	302	P	P	18 37 08.1	-1.0
	comp=Z,1.5nm,0.5s,baz=109,slow=8.5,SNR=12						
SONM				LR	LR	18 48 21.4	
	comp=Z,168nm,18.6s,baz=79,slow=37						
ENH	Enshi	28.06	263	eP	P	18 37 12.9	-0.7
	comp=Z,102nm,1.3s						
H11N2	WAKE ISLAND Hy	28.35	124	T	T	19 07 31.5	
	baz=316,slow=75,SNR=2351						
H11N1	WAKE ISLAND Hy	28.36	124	T	T	19 07 34.5	
	baz=316,slow=75,SNR=2983						
H11N3	WAKE ISLAND Hy	28.37	124	T	T	19 07 34.1	
	baz=316,slow=75,SNR=2528						
H11S1	WAKE ISLAND Hy	29.11	126	T	T	19 08 35.4	
	baz=318,slow=76,SNR=1173						
H11S3	WAKE ISLAND Hy	29.11	126	T	T	19 08 34.9	
	baz=318,slow=76,SNR=1311						
H11S2	WAKE ISLAND Hy	29.13	126	T	T	19 08 33.3	
	baz=318,slow=76,SNR=929						
IRK	Irkutsk	29.68	310	eP	P	18 37 26.8	-0.8
IRK				pmax	pmax		
	comp=Z,21nm,2.0s						
TLY	Talaya	29.94	309	P	P	18 37 30.2	+0.3
	comp=Z,3.5nm,0.6s,baz=93,slow=4.6,SNR=13						
TLY				LR	LR	18 50 19.2	
	comp=Z,395nm,18.2s,baz=156,slow=38						
TLY	Talaya	29.94	309	eP	P	18 37 29.8	-0.2
	comp=Z,10.0nm,0.7s						
TLY	Talaya	29.94	309	eP	P	18 37 30.4	+0.4
TLY				pmax	pmax		
	comp=Z,33nm,0.9s						
TLY				MLR	MLR		
	comp=Z,381nm,17.0s						
ZAK	Zakamensk	29.94	306	eP	P	18 37 29.6	-0.5
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH	Lanzhou	30.46	278	eP	P	18 37 35.0	+0.1
LZH				pP	pP	18 37 43.1	-1.0
LZH				sP	sP	18 37 46.7	-1.2
LZH				PP	PnPn	18 38 34.6	+0.5
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,93nm,4.8s						
MOY	Mondy	31.57	308	eP	P	18 37 44.3	-0.1
MOY				pmax	pmax		
	comp=Z,23nm,2.2s						
GSTR	Great Sitkin T	31.99	51	eP	P	18 37 49.3	+1.3
GYA	Guiyang	32.05	259	⇓iP	P	18 37 48.3	-0.6
GYA				pP	pP	18 37 57.8	-0.4
GYA				PP	PnPn	18 38 57.5	+2.7
GYA				S	S	18 42 55.4	-3.6
GYA				sS	pS	18 43 07.3	-2.2
GYA				SS	SnSn	18 44 47.2	-2.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,290nm,5.4s						
GYA				LR	LR		
	comp=Z,530nm,14.6s						
GYA				LR	LR		
	comp=Z,530nm,15.8s						
GYA				LR	LR		
	comp=Z,540nm,15.8s						
CD2	Chengdu	32.29	268	⇑iP	P	18 37 50.4	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
BILL	Bilibino	32.59	17	eP	P	18 37 53.8	+0.7
BILL				e		18 38 56.5	
BILL				ePPP	PPP	18 39 12.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,59nm,16.0s						
GTA	Gaotai	32.77	285	P	P	18 37 55.5	+0.4
GTA				pP	pP	18 38 02.6	-1.8
GTA				sP	sP	18 38 06.2	-2.0
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,5.8s						
GTA				LR	LR		
	comp=Z,180nm,15.5s						
GTA				LR	LR		
	comp=Z,290nm,14.8s						
GTA				LR	LR		
	comp=Z,470nm,14.8s						
TIXI	Tiksi	34.05	353	P	P	18 38 05.1	-0.6
	comp=Z,3.3nm,0.7s,baz=155,slow=7.0,SNR=13						
TIXI	Tiksi	34.05	353	eP	P	18 38 04.6	-1.2
	comp=Z,3.8nm,0.8s						
TIXI	Tiksi	34.05	353	⇓iP	P	18 38 05.0	-0.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMI	Kunming	35.77	260	P	P	18 38 21.6	+0.3
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
NONG	Nongkai	39.51	250	P	P	18 38 58.2	+5.4
	comp=Z,0.2nm,1.6s						
DGZ	Jazzator, Alta	40.12	305	c iP	P	18 38 58.6	+0.9
DGZ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ	Urumqi	40.79	296	eP	P	18 39 04.1	+0.8
	comp=Z,35nm,0.8s						
WMQ	Urumqi	40.79	296	eP	P	18 39 04.3	+1.0
WMQ				sP	pP	18 39 14.2	+1.6
WMQ				pmax	pmax		
	comp=Z,40nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,97nm,4.5s						
WMQ				LR	LR		
	comp=Z,270nm,21.5s						
WMQ				LR	LR		
	comp=Z,170nm,19.5s						
WMQ	Urumqi	40.79	296	eP	P	18 39 04.1	+0.8
WMQ				pmax	pmax		
	comp=Z,35nm,0.8s						
ZAA0	Zalesovo Array	41.48	311	eP	P	18 39 08.2	-0.4
	comp=Z,10.0nm,0.6s						
ZALV	Zalesovo Beam	41.48	311	P	P	18 39 08.7	+0.1
	comp=Z,10nm,0.5s,baz=88,slow=7.7,SNR=43						
ZALV				LR	LR	18 57 05.0	
	comp=Z,116nm,18.4s,baz=70,slow=37						
CMMT	Chiang Mai	42.20	255	P	P	18 39 15.4	+0.4
	comp=Z,3.5nm,0.8s						
CHTO	Chiang Mai	42.21	255	eP	P	18 39 14.2	-0.8
	comp=Z,5.0nm,0.8s						
CHTO	Chiang Mai	42.21	255	eP	P	18 39 14.3	-0.8
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CM31	Chiang Mai Arr	42.42	255	eP	P	18 39 16.1	-0.6
	comp=Z,15nm,1.6s						
CMAR	Chiang Mai Arr	42.42	255	P	P	18 39 16.9	+0.2
	comp=Z,1.8nm,0.8s,baz=40,slow=5.7,SNR=15						
CMAR				LR	LR	18 57 44.7	
	comp=Z,64nm,18.9s,baz=80,slow=37						
CMAR	Chiang Mai Arr	42.42	255	P	P	18 39 17.0	+0.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,64nm,18.9s						
LSA	Lhasa	42.70	274	eP	P	18 39 20.4	+0.9
	comp=Z,8.6nm,1.0s						
LSA	Lhasa	42.70	274	eP	P	18 39 20.4	+0.9
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MKAR	Makanchi Array	43.94	301	P	P	18 39 28.6	-0.2
	comp=Z,4.2nm,0.6s,baz=85,slow=9.7,SNR=25						
SVW2	Sparrevohn	44.11	38	eP	P	18 39 31.6	+1.7
	comp=Z,2.2nm,0.9s						
MAKZ	Makanchi	44.15	301	eP	P	18 39 30.0	-0.5
	comp=Z,8.4nm,0.8s						
MAKZ	Makanchi	44.15	301	P	P	18 39 30.6	+0.2
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURK	Kurchatov	45.60	307	eP	P	18 39 41.3	-0.6
	comp=Z,32nm,0.9s						
KURK	Kurchatov	45.60	307	c iP	P	18 39 41.4	-0.5
KURK				pmax	pmax		
	comp=Z,30nm,0.9s						
KDAK	Kodiak Island	45.72	43	eP	P	18 39 43.2	+0.5
	comp=Z,15nm,1.7s						
KDAK	Kodiak Island	45.72	43	eP	P	18 39 43.2	+0.5
KDAK				pmax	pmax		
	comp=Z,15nm,1.7s						
KTH	Kantishna Hill	46.32	35	eP	P	18 39 49.6	+2.2
	comp=Z,3.6nm,0.9s						
MLY	Manley	46.41	33	eP	P	18 39 49.7	+1.5
	comp=Z,4.4nm,1.2s						
PDGK	Podgornoye	46.70	297	P	P	18 39 49.8	-1.0
PDGK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
JIRN	Jiri	47.51	274	eP	P	18 39 57.6	0.0
	comp=Z,23nm,0.4s						
GUN	Gumba	47.63	275	eP	P	18 39 58.8	+0.3
	comp=Z,47nm,0.7s						
KAPI	Kappang	47.91	211	LR	LR	18 58 14.4	
	comp=Z,37nm,21.6s,baz=120,slow=34						
ILAR	Eielson Array	48.06	33	P	P	18 40 01.3	+0.4
	comp=Z,1.0nm,0.8s,baz=275,slow=6.5,SNR=8.4						
KKN	Kakani	48.16	275	eP	P	18 40 02.7	+0.2
	comp=Z,38nm,0.7s						
PKI	Pulchoki	48.16	275	eP	P	18 40 02.4	-0.2
	comp=Z,14nm,0.7s						
PKIN	Phulchoki	48.16	275	eP	P	18 40 02.4	-0.2
	comp=Z,12nm,0.6s						
DMN	Daman	48.38	275	eP	P	18 40 04.3	+0.1
	comp=Z,11nm,0.5s						
GKN	Gorkha	48.56	276	eP	P	18 40 05.6	+0.1
	comp=Z,14nm,0.3s						
PRP	Porcupine Dome	48.60	32	eP	P	18 40 06.4	+1.1
	comp=Z,9.1nm,0.8s						
KDJ	Kajisay	48.68	296	eP	P	18 40 05.3	-1.0
	comp=Z,3.6nm,0.8s						
KDJ	Kajisay	48.68	296	eP	P	18 40 05.3	-1.0
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DANN	Dangsing	49.09	277	eP	P	18 40 10.2	+0.5
	comp=Z,46nm,0.4s						
DOT	Dot Lake	49.37	34	eP	P	18 40 12.3	+1.2
	comp=Z,8.6nm,1.8s						
BOOM	Boomskoye usch	49.44	297	eP	P	18 40 12.1	0.0

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               comp=Z,6.8nm,0.7s
BOOM   Boomskoye usch   49.44 297  eP      P          18 40 12.1   0.0
BOOM                               pmax    pmax
               comp=Z,7.0nm,0.7s
KOLN   Koldanda         49.48 276  eP      P          18 40 12.6   0.0
               comp=Z,57nm,0.7s
TKM2   Tokmak 2         49.54 298  P       P          18 40 13.0  +0.1
TKM2                               pmax    pmax
               comp=Z,6.0nm,0.6s
PYUN   Piuthan          49.80 277  eP      P          18 40 15.3  +0.2
               comp=Z,77nm,0.9s
BRVK   Borovoye         50.19 312  eP      P          18 40 17.0  -0.4
               comp=Z,5.2nm,0.6s
BRVK   Borovoye         50.19 312ceP      P          18 40 16.9  -0.5
BRVK                               pmax    pmax
               comp=Z,4.0nm,0.8s
FRU1   Bishkek          50.25 298  eP      P          18 40 17.6  -0.5
               comp=Z,5.6nm,0.8s
FRU1   Bishkek          50.25 298  eP      P          18 40 17.6  -0.5
FRU1                               pmax    pmax
               comp=Z,6.0nm,0.8s
HNR    Honiara          50.35 157  LR      LR         18 59 12.7
               comp=Z,68nm,20.1s,baz=5.5,slow=33
AAK    Ala-Archa        50.40 298  eP      P          18 40 18.8  -0.5
               comp=Z,2.2nm,0.7s
AAK    Ala-Archa        50.40 298⇑eP      P          18 40 20.0  +0.7
AAK                                pmax    pmax
               comp=Z,2.0nm,0.7s
KSH    Kashi            50.42 293  P       P          18 40 23.8  +4.3
KSH                                sP      sP         18 40 33.8  +0.9
KSH                                PcP     PcP        18 41 40.8  +3.3
KSH                                PP      PP         18 42 20.6  +5.5
KSH                                pmax    pmax
               comp=Z,5.0nm,0.7s
KSH                                pmax    pmax
               comp=Z,120nm,5.8s
KSH                                LR      LR
               comp=Z,88nm,7.4s
KSH                                LR      LR
               comp=Z,85nm,7.7s
ARSB   Arslanbob        51.91 297  eP      P          18 40 30.6   0.0
               comp=Z,9.5nm,0.6s
MTN    Manton Dam       51.97 194  eP      P          18 40 31.0   0.0
               comp=Z,22nm,1.1s
INK    Inuvik           52.94  28  P       P          18 40 38.7  +1.1
               comp=Z,1.7nm,0.3s,baz=322,slow=13,SNR=3.1
KK31   Karatay Array    52.99 299  eP      P          18 40 37.5  -1.0
               comp=Z,4.6nm,0.9s
KK31   Karatay Array    52.99 299  eP      P          18 40 37.5  -1.0
KK31                               pmax    pmax
               comp=Z,5.0nm,0.9s
KKAR   Karatay Array    52.99 299  eP      P          18 40 37.5  -1.0
               comp=Z,4.6nm,0.9s
KKAR   Karatay Array    52.99 299  eP      P          18 40 37.5  -1.0
KKAR                               pmax    pmax
               comp=Z,5.0nm,0.9s
BTK    Batken           53.91 296  eP      P          18 40 46.8  +1.5
               comp=Z,3.4nm,0.5s
BTK    Batken           53.91 296  eP      P          18 40 46.8  +1.5
BTK                                pmax    pmax
               comp=Z,3.0nm,0.5s
SVE    Sverdlovsk       54.56 318⇓eP      P          18 40 49.6  -0.1
SVE                                pmax    pmax
               comp=Z,15nm,0.9s
UGM    Wanagama         54.66 220  eP      P          18 40 50.5  -0.4
               comp=Z,643nm,1.6s
GAR    Garm             54.68 295  eP      P          18 40 51.0  -0.1
               comp=Z,6.5nm,0.6s
GAR    Garm             54.68 295  eP      P          18 40 51.0  -0.1
GAR                                pmax    pmax
               comp=Z,7.0nm,0.6s
NIL    Nilore           54.78 288  eP      P          18 40 52.4  +0.7
               comp=Z,14nm,0.6s
NIL    Nilore           54.78 288  eP      P          18 40 52.4  +0.7
NIL                                pmax    pmax
               comp=Z,14nm,0.6s
KHLH   Kahului Airpor   55.18  90  eP      P          18 40 55.8  +1.1
               comp=Z,380nm,1.8s
ARU    Arti             55.77 318  eP      P          18 40 58.0  -0.5
               comp=Z,9.1nm,0.7s
ARU    Arti             55.77 318c iP      P          18 40 58.2  -0.3
ARU                                *PP     pP         18 41 07.9  -0.2
ARU                                                   18 42 58.9
ARU                                S       S          18 48 42.9   0.0
ARU                                SS      sS         18 49 03.7  +4.9
ARU                                pmax    pmax
               comp=Z,10.0nm,0.8s
ARU                                MLR     MLR
               comp=Z,159nm,17.0s
KBL    Kabul            57.51 291  eP      P          18 41 10.4  -1.0
               comp=Z,6.6nm,0.8s
KBL    Kabul            57.51 291  eP      P          18 41 10.4  -1.0
KBL                                pmax    pmax
               comp=Z,7.0nm,0.8s
AB31   Akbulak array    57.55 310  i P     P          18 41 10.2  -1.0
AB31                               pmax    pmax
               comp=Z,3.0nm,0.6s
ABKAR  Akbulak array    57.55 310  eP      P          18 41 10.5  -0.7
               comp=Z,6.5nm,0.6s
AKTO   Aktyubinsk       58.24 312  P       P          18 41 14.9  -1.2
AKTO                               pmax    pmax
               comp=Z,8.0nm,0.9s
CTAO   Charters Tower   58.26 175  eP      P          18 41 16.1  -0.3
               comp=Z,77nm,1.8s
CTAO   Charters Tower   58.26 175  eP      P          18 41 16.1  -0.3
CTAO                               pmax    pmax
               comp=Z,77nm,1.8s
WRAB   Tennant Creek    58.44 189  eP      P          18 41 17.1  -0.6
               comp=Z,10.0nm,0.9s
WRAB   Tennant Creek    58.44 189⇓iP      P          18 41 17.0  -0.6
WRAB                               pmax    pmax
               comp=Z,8.0nm,1.3s
WB2    Warramunga Arr   58.45 189  eP      P          18 41 17.3  -0.5
               comp=Z,10nm,0.8s
WRA    Warramunga Arr   58.45 189  P       P          18 41 17.0  -0.8
               comp=Z,9.3nm,0.8s,baz=0.6,slow=7.5,SNR=48
WRA    Warramunga Arr   58.45 189  P       P          18 41 17.0  -0.8
WRA                                pmax    pmax
               comp=Z,9.0nm,0.8s
KIRV   Kirov            59.56 323  LR      LR         19 07 12.7
               comp=Z,57nm,18.4s,baz=184,slow=36
ASAR   Alice Springs    62.18 189  P       P          18 41 43.0  -0.2
               comp=Z,5.7nm,0.7s,baz=11,slow=6.5,SNR=65
ASAR   Alice Springs    62.18 189  P       P          18 41 43.0  -0.2
ASAR                               pmax    pmax
               comp=Z,6.0nm,0.7s
ARCES  ARCESS Array B   62.97 339  P       P          18 41 48.0   0.0
               comp=Z,3.3nm,0.8s,baz=54,slow=7.2,SNR=12
GEYT   Alibeck          63.72 299  P       P          18 41 53.4  -0.1
               comp=Z,3.8nm,0.8s,baz=46,slow=6.4,SNR=8.8
EIDS   Eidsvold         63.94 171  eP      P          18 41 55.6  +0.8
               comp=Z,40nm,1.6s
OBN    Obninsk          67.40 323  eP      P          18 42 15.9  -0.9
OBN                                e                  18 42 43.0
OBN                                e                  18 44 44.5
OBN                                ePPP    PPP        18 46 21.8
OBN                                pmax    pmax
               comp=Z,12nm,1.0s
OBN                                MLR     MLR
               comp=Z,86nm,15.0s
FIA1   FINESS Array S   67.92 332  eP      P          18 42 19.9  -0.2
               comp=Z,17nm,0.8s
FINES  FINESS Array B   67.92 332  P       P          18 42 19.8  -0.3
               comp=Z,11nm,0.6s,baz=31,slow=10,SNR=45
FINES                              LR      LR         19 13 17.2
               comp=Z,48nm,21.6s,baz=190,slow=37
VSR    Storozhevoye     68.33 319  eP      P          18 42 22.3  -0.5
VSR                                pmax    pmax
               comp=Z,10.0nm,0.5s
ARMA   Armidale         68.99 171  eP      P          18 42 27.9  +0.7
               comp=Z,26nm,1.5s
PINE   Pine Mountain    69.03  50  eP      P          18 42 28.4  +0.8
               comp=Z,7.7nm,1.0s
SUMG   Summit           69.36   0  eP      P          18 42 29.9  +0.5
               comp=Z,6.9nm,1.0s
SUMG   Summit           69.36   0  eP      P          18 42 29.9  +0.5
SUMG                               pmax    pmax
               comp=Z,7.0nm,1.0s
VSU    Vasula           69.62 330ceP      P          18 42 30.5  -0.2
VSU                                pmax    pmax
               comp=Z,38nm,0.8s
K05A   Summer Lake      69.65  51  eP      P          18 42 32.9  +1.4
               comp=Z,29nm,1.8s
STKA   Stephens Creek   69.88 181  P       P          18 42 32.9  +0.4
               comp=Z,1.5nm,0.5s,baz=0.1,slow=5.6,SNR=4.1
STKA   Stephens Creek   69.88 181  eP      P          18 42 32.1  -0.3
               comp=Z,6.3nm,1.8s
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FORT   Forrest          70.03 193  eP      P          18 42 33.8  +0.4
               comp=Z,60nm,1.4s
KIV    Kislovodsk       70.49 311  eP      P          18 42 37.0  +0.5
               comp=Z,17nm,0.9s
KIV    Kislovodsk       70.49 311  eP      P          18 42 37.4  +0.9
KIV                                pmax    pmax
               comp=Z,58nm,1.0s
KBZ    Khabaz           70.50 311  P       P          18 42 37.0  +0.7
               comp=Z,8.4nm,0.8s,baz=46,slow=5.0,SNR=14
BBOO   Buckleboo        71.03 185  eP      P          18 42 39.6  +0.1
               comp=Z,108nm,1.9s
GNI    Garni            71.40 307  LR      LR         19 17 15.2
               comp=Z,62nm,18.3s,baz=274,slow=38
NC405  NORSAR Array S   72.99 337  eP      P          18 42 51.1  +0.1
               comp=Z,73nm,1.8s
NC303  NORSAR Array S   73.01 337  eP      P          18 42 51.2  +0.1
               comp=Z,44nm,1.6s
ANN    Anapa            73.05 314  eP      P          18 42 44.9  -6.7
ANN                                e*PP    pP         18 42 55.9  -5.6
ANN                                pmax    pmax
               comp=Z,28nm,1.5s
NC204  NORSAR Array S   73.15 338  eP      P          18 42 52.3  +0.2
               comp=Z,24nm,1.0s
NB201  NORSAR Array S   73.17 337  eP      P          18 42 52.1   0.0
               comp=Z,25nm,1.1s
NB2    NORSAR Subarra   73.20 337  P       P          18 42 51.9  -0.4
               comp=Z,2.3nm,0.6s,baz=38,slow=6.2
NOA    NORSAR Array B   73.20 337  P       P          18 42 52.2  -0.2
               comp=Z,4.9nm,0.7s,baz=38,slow=6.0,SNR=26
NOA                                LR      LR         19 17 47.8
               comp=Z,60nm,20.9s,baz=40,slow=38
NBO00  NORSAR Array S   73.34 338  eP      P          18 42 53.2  +0.1
               comp=Z,28nm,1.4s
NC602  NORSAR Array S   73.34 337  eP      P          18 42 52.6  -0.5
               comp=Z,64nm,1.8s
NAO01  NORSAR Array S   73.45 337  eP      P          18 42 53.1  -0.7
               comp=Z,48nm,1.6s
KVN    Kaiserville      73.48  53  eP      P          18 42 55.0  +0.4
               comp=Z,3.0nm,1.0s
AKASG  Malin Array Be   73.62 322  P       P          18 42 54.4  -0.5
               comp=Z,5.3nm,0.4s,baz=47,slow=6.1,SNR=33
AKASG  Malin Array Be   73.62 322  i P     P          18 42 54.5  -0.4
AKASG                              pmax    pmax
               comp=Z,5.0nm,0.4s
AKBB   Malin Array Si   73.62 322  eP      P          18 42 54.4  -0.5
               comp=Z,12nm,0.8s
AKBB   Malin Array Si   73.62 322  eP      P          18 42 54.4  -0.5
AKBB                               pmax    pmax
               comp=Z,12nm,0.8s
NVAR   Mina Array Bea   73.72  54  P       P          18 42 57.1  +1.0
               comp=Z,0.9nm,0.9s,baz=288,slow=5.3,SNR=5.9
TPNV   Topopah Spring   75.91  54  eP      P          18 43 08.5  -0.1
               comp=Z,3.0nm,1.0s
TPNV   Topopah Spring   75.91  54  eP      P          18 43 08.5  -0.1
TPNV                               pmax    pmax
               comp=Z,3.0nm,1.0s
BW06   Boulder Array    76.31  46  eP      P          18 43 10.8  -0.1
               comp=Z,2.1nm,0.7s
PDAR   Pinedale Array   76.31  46  P       P          18 43 11.2  +0.3
               comp=Z,0.9nm,0.7s,baz=246,slow=1.3,SNR=13
KWP    Kalwaria Pacla   77.40 325  eP      P          18 43 17.0  +0.3
               comp=Z,279nm,0.7s
KWP    Kalwaria Pacla   77.40 325  eP      P          18 43 17.0  +0.3
KWP                                pmax    pmax
               comp=Z,279nm,0.7s
BUR08  Bucovina Ar. S   77.63 322  eP      P          18 43 18.2  +0.1
               comp=Z,5.1nm,0.6s
KOLS   Kolonicke sedl   78.10 324  eP      P          18 43 20.8  +0.2
KOLS   Kolonicke sedl   78.10 324  eP      P          18 43 20.8  +0.2
OJC    Ojcow            78.27 326  eP      P          18 43 21.7  +0.2
               comp=Z,12nm,1.1s
OJC    Ojcow            78.27 326  eP      P          18 43 21.7  +0.2
OJC                                pmax    pmax
               comp=Z,12nm,1.1s
BR131  Keskin Array S   78.42 312  eP      P          18 43 22.4  -0.3
               comp=Z,11nm,1.8s
BRTR   Keskin Array B   78.42 312  P       P          18 43 22.4  -0.3
               comp=Z,1.0nm,0.6s,baz=114,slow=3.7,SNR=10.0
BRTR   Keskin Array B   78.42 312  i P     P          18 43 22.8  +0.1
BRTR                               pmax    pmax
               comp=Z,1.0nm,0.6s
LANS   Liptovska Anna   79.21 326  eP      P          18 43 28.2  +1.5
LANS   Liptovska Anna   79.21 326  eP      P          18 43 28.2  +1.5
OSTC   Ostas            79.54 328  AMS     AMS        19 20 10.0
               comp=Z,100nm,16.4s
MORC   Moravsky Berou   79.58 327  eP      P          18 43 28.8  +0.1
               comp=Z,7.1nm,1.1s
MORC   Moravsky Berou   79.58 327  eP      P          18 43 28.8  +0.1
MORC                               pmax    pmax
               comp=Z,7.0nm,1.1s
MORC   Moravsky Berou   79.58 327  eP      P          18 43 29.2  +0.5
MORC                               e                  18 43 39.4
DPC    Dobruska-Polom   79.66 328  eP      P          18 43 29.6  +0.5
DPC                                e                  18 43 40.5
DPC                                MLR     MLR
               comp=Z,100nm,22.1s
DPC    Dobruska-Polom   79.66 328  eP      P          18 43 29.6  +0.5
DPC                                ex      x          18 43 40.5
DPC                                AMS     AMS        19 21 10.0
               comp=Z,100nm,22.1s
VYHS   Vyhne            79.97 326  eP      P          18 43 31.5  +0.7
VYHS   Vyhne            79.97 326  eP      P          18 43 31.5  +0.7
JAVC   Velka Javorina   80.21 326  eP      P          18 43 33.5  +1.3
JAVC                               e                  18 43 43.2
BRG    Berggiesshubel   80.22 330  eP      P          18 43 31.8  -0.3
               comp=Z,3.0nm,0.7s
BRG                                e                  18 43 41.4
               comp=Z,4.2nm,0.8s
BRG    Berggiesshubel   80.22 330  eP      P          18 43 31.8  -0.3
BRG                                e                  18 43 41.4
BRG                                pmax    pmax
               comp=Z,3.0nm,0.7s
BRG                                pmax    pmax
               comp=Z,4.0nm,0.8s
PVCC   Panska Ves       80.23 329  AMS     AMS        19 21 20.0
               comp=Z,100nm,21.5s
CLL    Collm            80.25 330  eP      P          18 43 31.9  -0.2
               comp=Z,7.7nm,1.0s
CLL    Collm            80.25 330  i P     P          18 43 32.0  -0.2
CLL                                i                  18 43 41.3
CLL                                pmax    pmax
               comp=Z,7.0nm,0.9s
CLL    Collm            80.25 330  i P     P          18 43 32.0  -0.2
               comp=Z,7.0nm,0.9s
CLL                                i (PcP) pP         18 43 41.3  -0.9
CLL                                i sP    sP         18 43 42.5  -3.3
               comp=Z,9.0nm,1.0s
VRAC   Vranov           80.33 327  eP      P          18 43 33.3  +0.5
VRAC                               e                  18 43 43.7
KRUC   Moravsky         80.61 327  eP      P          18 43 34.5  +0.3
KRUC                               e                  18 43 44.5
GOPC   GO Pecny, Ondr   80.62 329  eP      P          18 43 34.6  +0.3
GOPC                               MLR     MLR
               comp=Z,100nm,22.0s
GOPC   GO Pecny, Ondr   80.62 329  eP      P          18 43 34.6  +0.3
GOPC                               AMS     AMS        19 21 40.0
               comp=Z,100nm,22.0s
PRU    Pruhonice        80.67 329  eP      P          18 43 35.1  +0.6
PRU                                e                  18 43 45.1
PRU                                MLR     MLR
               comp=Z,100nm,23.2s
PRU    Pruhonice        80.67 329  eP      P          18 43 35.1  +0.6
PRU                                epP     pP         18 43 45.1  +0.6
PRU                                AMS     AMS        19 21 40.0
               comp=Z,100nm,23.2s
TREC   Trest            80.81 328  eP      P          18 43 35.9  +0.6
TREC                               MLR     MLR
               comp=Z,100nm,16.6s
TREC   Trest            80.81 328  eP      P          18 43 35.9  +0.6
TREC                               AMS     AMS        19 21 00.0
               comp=Z,100nm,16.6s
S22A   4UR Ranch, Cre   81.18  48  eP      P          18 43 37.9  +0.1
               comp=Z,3.7nm,1.2s
NKC    Novy Kostel      81.31 330  AMS     AMS        19 22 30.0
               comp=Z,100nm,22.4s
MMAI   Mount Meron Ar   81.69 306  LR      LR         19 22 45.5
               comp=Z,46nm,18.7s,baz=40,slow=38
CONA   Conrad Observa   81.70 327  ePcP    P          18 43 40.7  +0.5
               comp=Z,2.8nm,0.7s
KHC    Kasperske Hory   81.73 329  eP      P          18 43 40.4  +0.2
               comp=Z,2.5nm,1.0s
KHC    Kasperske Hory   81.73 329  eP      P          18 43 40.4  +0.2
KHC                                pmax    pmax
               comp=Z,3.0nm,1.0s
KHC    Kasperske Hory   81.73 329  eP      P          18 43 40.2   0.0
KHC                                ex      x          18 43 50.6
```

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GEC2   GERESS Array S   81.90 329  eP      P          18 43 40.4  -0.8
               comp=Z,3.3nm,1.1s
GEC2   GERESS Array S   81.90 329  eP      P          18 43 40.4  -0.8
GEC2                               pmax    pmax
               comp=Z,3.0nm,1.1s
GERES  GERESS Array B   81.90 329  P       P          18 43 40.9  -0.3
               comp=Z,1.0nm,0.6s,baz=38,slow=5.0,SNR=11
VTS    Vitosha          82.17 319  eP      P          18 43 43.1  +0.3
               comp=Z,5.2nm,0.7s
VTS    Vitosha          82.17 319  eP      P          18 43 43.1  +0.3
VTS                                pmax    pmax
               comp=Z,5.0nm,0.7s
MOA    Molln            82.44 328  eP      P          18 43 43.7  -0.2
               comp=Z,3.5nm,1.0s
GROS   Grobnik          82.99 326  i P     P          18 43 46.6  -0.3
GROS                               i pP    pP         18 43 56.8  -0.1
SOKA   Soboth           83.03 326  ePcP    P          18 43 47.2  +0.1
               comp=Z,4.2nm,0.7s
OBKA   Obir             83.37 327  eP      P          18 43 47.2  -1.7
               comp=Z,4.5nm,1.0s
KBA    Koelnbreinsper   83.44 328  ePcP    P          18 43 49.7  +0.4
               comp=Z,3.5nm,0.8s
MYKA   Terra Mystica    83.67 327  eP      P          18 43 48.6  -1.8
               comp=Z,2.1nm,0.5s
WTTA   Wattenberg       84.00 329  eP      P          18 43 50.4  -1.9
               comp=Z,1.9nm,0.6s
ABTA   Abfaltersbach    84.05 328  eP      P          18 43 50.1  -2.3
               comp=Z,2.2nm,0.9s
PMOR   Pomariorio Ree   84.17 114  eT      T          20 16 41.7
               comp=Z,31nm,0.2s
TTG    Podgorica        84.31 321  eP      P          18 43 52.7  -0.9
               comp=Z,10nm,0.9s
TTG    Podgorica        84.31 321  eP      P          18 43 52.7  -0.9
TTG                                pmax    pmax
               comp=Z,10.0nm,0.9s
LIT    Litokhoron       84.38 318  eP      P          18 43 53.6  -0.5
               comp=Z,8.4nm,0.9s
LIT    Litokhoron       84.38 318  eP      P          18 43 53.6  -0.5
LIT                                pmax    pmax
               comp=Z,8.0nm,0.9s
BFO    Black Forest     84.44 331  eP      P          18 43 54.4  +0.2
               comp=Z,9.9nm,1.2s
BFO    Black Forest     84.44 331  eP      P          18 43 54.4  +0.2
BFO                                pmax    pmax
               comp=Z,10.0nm,1.2s
DAVA   Damuels          84.69 330  i PcP   P          18 43 55.1  -0.6
               comp=Z,2.9nm,0.6s
PPT2   Papeete2         84.71 117  eLR     LR         19 11 00.0
               comp=Z,82nm,25.2s
ECH    Echery           84.98 332  eP      P          18 43 56.7  -0.2
               comp=Z,6.1nm,1.0s
ECH    Echery           84.98 332  eP      P          18 43 56.7  -0.2
ECH                                pmax    pmax
               comp=Z,6.0nm,1.0s
MEH    Mehetia          85.96 116  eT      T          20 18 55.6
               comp=Z,24nm,0.2s
TBI    Tubuai           88.69 121  eT      T          20 22 17.6
               comp=Z,37nm,0.3s
TXAR   Lajitas Array    88.84  53  P       P          18 44 16.4  +0.2
               comp=Z,0.5nm,0.5s,baz=283,slow=3.1,SNR=6.4
ESDC   Sonseca Array    96.36 334  LR      LR         19 33 23.8
               comp=Z,44nm,18.1s,baz=25,slow=39
LPAZ   La Paz          145.50  59  PKPbc   PKPdf      18 51 00.8  -0.2
               comp=Z,1.7nm,0.5s,baz=330,slow=1.2,SNR=7.3
LPAZ   La Paz          145.50  59  ePKPdf  PKPdf      18 51 00.2  -0.7
```

ISCJB ***12*** *18:50:53.2±0.8, 4°.10S±0°.08×142°.0E±0°.1, h109km, mb3.7/5, Error ellipse: s-maj=19.1km s-min=8.3km az=151.7*

IDC ***12*** *18:50:54.7±0.9, 3°.99S×142°.00E, h111km±7km, mb3.6/6, mb1 3.9/8, mb1mx3.4/36, mbtmp4.2/8, Error ellipse: s-maj=22.7km s-min=9.1km az=61.0*

ISC 12 18:50:54.5±0.8, **4°.04S**±0°.09×**142°.0E**±0°.1, **h109**km, **n12**, σ**0s.86**/16, **mb3.8**/6, **New Guinea**

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Code   Station Name       Δ°   AZ°    Phase ID            Time       Res
                                   Op      ISC         h  m  s     ISC
JAY    Jayapura          1.96 321  P       Pn         18 51 27.4  +0.3
               20nm,0.3s,baz=158,slow=7.3,SNR=136
JAY                                S       Sn         18 51 52.2  +0.4
               39nm,0.3s,baz=1.0,slow=11,SNR=17
JAY                                LR      LR         18 52 30.2
               comp=Z,97nm,18.9s,baz=11,slow=49
PMG    Port Moresby      7.43 136  P       Pn         18 52 41.1  +0.8
               3.2nm,0.3s,baz=16,slow=6.4,SNR=13
WRA    Warramunga Arr   17.46 205  P       P          18 54 49.4  -1.6
               3.5nm,0.3s,baz=18,slow=12,SNR=95
BATI   Baumata          19.14 250  P       Pn         18 55 11.6  +0.1
               5.2nm,0.3s,baz=78,slow=1.9,SNR=8.0
ASAR   Alice Springs    21.00 201  P       P          18 55 29.1  -0.3
               7.4nm,0.7s,baz=30,slow=10,SNR=60
ASAR                               pP      pP         18 55 51.1  +0.6
               3.1nm,0.6s,baz=34,slow=10,SNR=3.7
ASAR                               sP      sP         18 56 04.4  -0.1
               11nm,0.8s,baz=28,slow=9.3,SNR=9.1
STKA   Stephens Creek   27.69 181  P       P          18 56 32.4  -0.2
               0.9nm,0.5s,baz=0.0,slow=14,SNR=3.2
MKAR   Makanchi Array   72.82 322  P       P          19 02 11.8  +0.3
               0.5nm,0.7s,baz=108,slow=6.9,SNR=5.8
VNDA   Vanda            74.20 176  P       P          19 02 19.2  +0.3
               0.8nm,0.6s,baz=325,slow=7.5,SNR=12
MAW    Mawson           82.12 202  P       P          19 03 03.4  +0.7
               1.4nm,0.4s,baz=82,slow=6.9,SNR=7.3
ILAR   Eielson Array    85.71  24  P       P          19 03 19.4  -1.6
               0.7nm,0.8s,baz=251,slow=5.4,SNR=5.0
ILAR                               pP      pP         19 03 50.5  +1.1
               1.1nm,0.9s,baz=244,slow=5.4,SNR=4.8
LPAZ   La Paz          144.05 125  PKP     PKPdf      19 10 18.2  -1.0
               2.3nm,0.5s,baz=263,slow=1.9,SNR=10.0
DBIC   Dimbokro        146.85 276  PKPbc   PKPbc      19 10 24.9  -0.4
               3.6nm,0.9s,baz=89,slow=4.9,SNR=4.0
```

IDC ***12*** *19:12:59.3±5.3, 30°.78N×49°.68E, h0km, mb3.6/4, mb1 3.7/7, mb1mx3.3/43, mbtmp3.6/7, ML3.4/3, MS3.4/2, Ms1 3.4/2, ms1mx2.6/43, Error ellipse: s-maj=104.2km s-min=26.7km az=177.0*

THR ***12*** *19:13:08.7, 31°.45N×49°.59E, h14km, ML3.1*

TEH ***12*** *19:13:08.2, 31°.47N×49°.51E, h16km, ML3.2*

ISCJB ***12*** *19:13:09.7±0.7, 31°.58N±0°.06×49°.58E±0°.05, h10km, MS3.3/2, Error ellipse: s-maj=8.5km s-min=5.2km az=23.2*

ISC 12 19:13:06.5±1.1, **31°.42N**±0°.07×**49°.44E**±0°.06, **h10**km, **n44**, σ**2s.04**/39, **Western Iran**

```
Code   Station Name       Δ°   AZ°    Phase ID            Time       Res
                                   Op      ISC         h  m  s     ISC
SHGR   Shooshtar-Gavs    0.87 322  ePg     Pn         19 13 26.2  +1.4
SHGR   Shooshtar-Gavs    0.87 322  AML     AML        19 13 42.5
               comp=E,652nm,0.3s
SHGR   Shooshtar-Gavs    0.87 322  Pg      Pn         19 13 26.2  +1.4
JHBN   Jahan bin         1.32  52  ePg     Pn         19 13 30.7  -0.6
JHBN                               IAMB    IAmb       19 13 54.1
               comp=Z,0.0nm,0.4s
ZNGN   Zangian           1.39  60  ePg     Pb         19 13 33.2  +0.4
ZNGN                               IAMB    IAmb       19 13 35.7
               comp=E,0.0nm,0.5s
IBRJ   Brojen            1.63  72  IAMB    IAmb       19 13 40.3
               comp=Z,3µm,0.4s
ROKH   ROKH              1.64  56  ePg     Pb         19 13 37.7  +0.7
ROKH                               IAMB    IAmb       19 14 03.4
               comp=Z,0.0nm,0.4s
IPIR   Pirpir            1.76  44  ePg     Pb         19 13 39.8  +0.7
IPIR                               IAMB    IAmb       19 13 41.3
               comp=Z,4µm,0.3s
IKMR   Kamar-syah        2.27 337  ePn     Pn         19 13 46.8  +2.7
IKMR                               IAMB    IAmb       19 14 28.8
               comp=Z,0.0nm,0.7s
KHMZ   Khomeyn           2.35  11  ePn     Pb         19 13 48.5  -0.6
KHMZ   Khomeyn           2.35  11  AML     AML        19 14 27.9
               comp=E,105nm,0.6s
KHMZ   Khomeyn           2.35  11  Pn      Pb         19 13 48.5  -0.6
KHMZ                               Sg      Sg         19 14 21.1  -1.0
IGAR   Gharneh           2.42  66  ePn     Pb         19 13 49.0  -1.3
IGAR                               IAMB    IAmb       19 14 29.9
               comp=Z,683nm,0.3s
IKFM   Kafar-mosalman    2.49 328  ePn     Pn         19 13 49.9  +2.9
IKFM                               IAMB    IAmb       19 14 31.0
               comp=Z,0.0nm,0.4s
IRAM   Ramesheh          2.54  81  ePn     Pn         19 13 50.5  +2.5
IRAM                               IAMB    IAmb       19 13 53.4
               comp=Z,678nm,0.2s
IDOB   Doab              2.58 336  ePn     Pn         19 13 50.9  +2.3
IDOB                               IAMB    IAmb       19 14 40.1
               comp=Z,0.0nm,0.5s
```

IKAZ	Kazeroun	2.64	128	ePn	Pn	19 13 51.9	+2.4
IKAZ				IAMB	IAmb	19 14 37.3	
	comp=Z,1μm,0.4s						
IZEF	Zefreh	2.86	58	ePn	Pn	19 13 55.1	+2.7
IZEF				IAMB	IAmb	19 14 04.7	
	comp=Z,365nm,0.4s						
ASAO	Ashtian	3.15	9	ePn	Pn	19 13 59.5	+3.0
ASAO	Ashtian	3.15	9	Pn	Pn	19 13 59.5	+3.0
NASN	Na'in	3.17	64	ePn	Pn	19 13 58.7	+1.9
NASN	Na'in	3.17	64	Pn	Pn	19 13 58.7	+1.9
IKOM	Komasi	3.19	330	ePn	Pn	19 14 00.3	+3.5
IKOM				IAMB	IAmb	19 15 11.9	
	comp=Z,0.0nm,0.4s						
GHVR	GHOM	3.42	27	ePn	Pn	19 14 02.3	+2.2
GHVR	GHOM	3.42	27	Pn	Pn	19 14 02.2	+2.2
ISAD	Sadrabad	3.66	81	IAMB	IAmb	19 14 06.2	
	comp=Z,344nm,0.4s						
ISAD				ePn	Pn	19 14 05.6	+2.2
ISFB	Sefidab	3.75	38	IAMB	IAmb	19 14 16.6	
	comp=Z,201nm,0.4s						
ISFB				ePn	Pn	19 14 06.9	+2.3
IRAZ	Razeghan	3.99	6	ePn	Pn	19 14 10.1	+2.2
IRAZ				IAMB	IAmb	19 15 24.8	
	comp=Z,342nm,0.6s						
ANAR	Anarak	4.04	63	ePn	Pn	19 14 11.0	+2.5
ANAR				IAMB	IAmb	19 14 12.0	
	comp=N,0.0nm,0.3s						
ILIN	Lien	4.05	330	ePn	Pn	19 14 11.4	+2.5
ILIN				IAMB	IAmb	19 15 01.6	
	comp=Z,822nm,0.5s						
IDHR	Dehrash	4.15	323	ePn	Pn	19 14 11.5	+1.4
IDHR				IAMB	IAmb	19 15 04.9	
	comp=Z,0.0nm,0.3s						
IMEH	Mehriz	4.43	89	ePn	Pn	19 14 15.7	+1.7
IMEH				IAMB	IAmb	19 14 17.5	
	comp=Z,119nm,0.3s						
IDMV	Damavand	4.68	27	ePn	Pn	19 14 19.3	+1.9
IDMV				IAMB	IAmb	19 14 39.9	
	comp=Z,132nm,0.4s						
ILAS	Lasjerd	4.93	36	ePn	Pn	19 14 22.8	+2.0
ISHM	Shahmirzad	5.43	35	ePn	Pn	19 14 30.6	+2.9
GEYT	Alibeck	9.65	45	Pn	Pn	19 15 25.8	+0.3
	comp=Z,0.4nm,0.3s,baz=236,slow=10,SNR=5.8						
ASF	Jabal al Asfar	10.70	277	Pn	Pn	19 15 39.4	-0.4
	comp=Z,0.3nm,0.3s,baz=219,slow=6.5,SNR=4.3						
BRTR	Keskin Array B	15.28	307	Pn	P	19 16 48.0	+0.8
	comp=Z,0.1nm,0.3s,baz=127,slow=13,SNR=3.9						
BVAR	Borovoye Array	26.40	29	LR	LR	19 31 10.8	
	comp=Z,94nm,20.6s,baz=181,slow=41						
KURBB	Kurchatov Arra	28.86	40	P	P	19 19 03.3	-1.8
	comp=Z,0.2nm,0.6s,baz=243,slow=8.1,SNR=2.9						
MKAR	Makanchi Array	29.50	49	P	P	19 19 06.9	-3.9
	comp=Z,0.1nm,0.5s,baz=238,slow=12,SNR=2.6						
FINES	FINESS Array B	33.68	340	P	P	19 19 46.2	-1.2
	comp=Z,0.8nm,0.4s,baz=155,slow=9.2,SNR=9.3						
ARCES	ARCESS Array B	40.49	347	P	P	19 20 44.8	-0.3
	comp=Z,6.4nm,1.1s,baz=155,slow=9.0,SNR=3.6						
KSRS	Korea Array	63.26	61	LR	LR	19 56 08.6	
	comp=Z,20nm,18.0s,baz=170,slow=41						

ARE ***12*** *19:27:34.0±0.0, 12°.63S×77°.18W, h38^{km}*
ISCJB ***12*** *19:27:35.2±0.8, 12°.63S±0°.04×76°.89W±0°.07, h49^{km}±7^{km}, mb4.6/36, Error ellipse: s-maj=13.1km s-min=4.3km az=157.7*
NEIC ***12*** *19:27:36.7±2.0, 12°.53S×76°.87W, h46^{km}±5^{km}, mb4.7/37, ML4.2(ARE), Error ellipse: s-maj=15.7km s-min=7.3km az=85.0*
NEIC Felt [III] at Chilca and Lima and [II] at Callao. Also felt at San Juan de Miraflores.
IDC ***12*** *19:27:36.1±0.6, 12°.45S×76°.98W, h42^{km}±5^{km}, mb4.0/10, mb1 4.1/12, mb1mx3.9/30, mbtmp4.2/12, ML3.7/2, MS3.7/5, Ms1 3.7/5, ms1mx3.2/30, Error ellipse: s-maj=18.4km s-min=9.7km az=99.0*
BJI ***12*** *19:27:42.0±0.0, 12°.50S×76°.90W, h33^{km}, Ms4.7/1, Ms7 4.5/1*
ISC 12 19:27:36.4±0.4**, 12°.58S**±0°.06×**76°.8W**±0°.1**, h39**^{km}±3^{km}**, h39**^{km}**:pP-P, n99,** σ1^{s}.**85**/100**, mb4.6**/37**, 1C, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	0.59	354	P	Pn	19 27 48.0	-0.5
	954nm,0.3s,baz=211,slow=11,SNR=1281						
NNA				LR	LR	19 27 55.4	
	comp=Z,278nm,19.5s,baz=124,slow=40						
NNA				S	Sn	19 27 56.3	-0.6
	4μm,0.3s,baz=216,slow=12,SNR=128						
ATAH	Atahualpa	5.64	343	P	Pn	19 28 58.2	+0.1
	9.4nm,0.3s,baz=165,slow=3.2,SNR=24						
ATAH				S	Sn	19 30 05.4	+3.5
	8.0nm,0.3s,baz=247,slow=13,SNR=2.9						
LPAZ	La Paz	9.15	115	P	Pn	19 29 52.8	+6.3
	1.7nm,0.3s,baz=283,slow=11,SNR=17						
LPAZ				LR	LR	19 34 13.1	
	comp=Z,244nm,21.5s,baz=18,slow=42						
LPAZ	La Paz	9.15	115	ePn	Pn	19 29 47.9	+1.4
LPAZ				e		19 29 49.2	
MNMC	Minye Minye	9.49	134	ePn	Pn	19 29 50.9	0.0
PB11	IPOC Station P	9.89	137	ePn	Pn	19 29 56.2	+0.1
PB11				eSn	Sn	19 31 42.5	-3.5
GO01	Chusmiza	10.14	135	ePn	Pn	19 30 00.9	+1.0
PB01	IPOC Station P	10.93	141	ePn	Pn	19 30 10.6	+0.2
PB01				eSn	Sn	19 32 05.4	-6.1
PB04	IPOC Station P	11.58	148	ePn	Pn	19 30 20.4	+1.1
LVC	Limon Verde	12.48	144	P	Pn	19 30 34.7	+2.9
	0.3nm,0.3s,baz=341,slow=3.8,SNR=3.0						
LVC				S	Sn	19 32 50.3	+0.7
	0.8nm,0.3s,baz=77,slow=19,SNR=4.3						
PTLC	Puerto Leguiza	12.82	9	eP	Pn	19 30 32.9	-3.3
CRUC	La Cruz	14.06	359	eP	Pn	19 30 55.7	+2.3
FLOC	Florencia	14.12	5	eP	Pn	19 30 53.1	-0.8
GO02	Mina Guanaco	14.24	153	ePn	Pn	19 30 59.7	+3.9
BBAC	Balboa, Cauca	14.51	358	eP	Pn	19 30 59.9	+0.4
SOTA	Rioblanco	14.62	1	eP	Pn	19 31 03.3	+2.1
POPC	Popayan, Colom	15.02	0	eP	Pn	19 31 07.5	+1.2
BETC	Betania	15.22	5	eP	Pn	19 31 10.0	+1.3
SIV	San Ignacio	15.60	104	P	Pn	19 31 16.2	+2.6
	0.3nm,0.3s,baz=295,slow=14,SNR=4.4						
PRAC	Prado	16.30	7	eP	P	19 31 25.2	+0.1
ORTC	Ortega, Tolima	16.45	5	eP	P	19 31 26.0	-0.8
YOTC	Yotoco, Valle	16.46	2	eP	P	19 31 27.0	0.0
VILC	Villavicencio,	16.86	11	eP	P	19 31 31.1	-0.4
CHIC	Chingaza	17.36	10	eP	P	19 31 37.0	-0.3
ROSC	El Rosal	17.48	8	LR	LR	19 39 38.2	
	comp=Z,307nm,19.1s,baz=222,slow=42						
ROSC	El Rosal	17.48	8	ePn	Pn	19 31 36.6	-1.0
	17nm,1.2s						
GUY2C	Guyana, Caldas	17.74	5	eP	P	19 31 44.6	+3.0
PAYG	Puerto Ayora	17.87	310	eP	P	19 31 43.4	+0.9
	73nm,1.1s						
NORC	Norcasia	18.12	6	eP	Pn	19 31 46.2	+0.9
GO04	Tololo Observa	18.36	163	eP	Pn	19 31 49.5	+1.2
	56nm,1.3s						
RUSC	La Rusia	18.72	12	eP	Pn	19 31 53.0	+0.1
PTBC	PUERTO BERRIO,	19.14	7	eP	P	19 31 55.5	-0.9
BARC	Barichara	19.38	11	eP	Pn	19 32 03.9	+3.3
ZARC	Zaragoza, Cauc	20.03	6	eP	Pn	19 32 07.3	-0.9
PTGA	Pitinga	20.41	56	P	P	19 32 11.2	+0.9
	10.0nm,0.8s,baz=231,slow=11,SNR=17						
PTGA	Pitinga	20.41	56	eP	P	19 32 11.4	+1.1
	15nm,0.6s						
CFA	Coronel Fontan	20.50	159	P	P	19 32 12.8	+1.6
	26nm,0.9s,baz=333,slow=11,SNR=16						
SDV	Santo Domingo	22.18	16	P	P	19 32 29.6	+0.1
	8.5nm,0.6s,baz=205,slow=17,SNR=3.8						
SDV	Santo Domingo	22.18	16	eP	P	19 32 28.2	-1.3
	13nm,0.8s						
SJCC	San Jacinto, C	22.39	4	eP	P	19 32 35.1	+3.5
GO05	Huala	22.76	170	eP	P	19 32 36.0	+0.6
	56nm,1.6s						
CPUP	Villa Florida	22.83	130	eP	P	19 32 38.7	+2.5
VIRV	Villa del Rosa	23.34	11	eP	P	19 32 37.3	-4.1
BDFB	Brasilia	28.05	100	LR	LR	19 45 32.7	
	comp=Z,209nm,19.0s,baz=272,slow=38						
PLCA	Paso Flores	28.57	170	P	P	19 33 28.9	+0.1
	14nm,0.8s,baz=5.5,slow=10,SNR=23						
PLCA				LR	LR	19 42 47.6	
	comp=Z,34nm,19.0s,baz=18,slow=32						
PLCA	Paso Flores	28.57	170	eP	P	19 33 28.9	+0.1
	13nm,0.8s						
WLAR	White Oak Lake	48.57	342	eP	P	19 36 14.5	-1.4
	43nm,0.8s						
TXAR	Lajitas Array	49.09	328	pP	pP	19 36 27.8	-3.7
	1.2nm,0.6s,baz=150,slow=8.0,SNR=10.0						
MIAR	Mount Ida	49.51	342	eP	P	19 36 22.0	-1.2
	7.3nm,0.7s						
X37A	Clayton	50.12	340	eP	P	19 36 27.1	-0.8
	15nm,0.8s						
W39A	Magazine	50.17	342	eP	P	19 36 27.6	-0.6
	10.0nm,1.0s						
TUL1	Leonard	51.47	340	eP	P	19 36 37.2	-0.8
	17nm,0.9s						
MNTX	Cornudas Mount	51.87	329	eP	P	19 36 40.0	-1.0
	7.7nm,1.6s						
PMSA	Palmer Station	52.87	173	eP	P	19 36 47.9	0.0
	23nm,1.0s						
319A	Douglas	53.69	325	eP	P	19 36 54.5	-0.1
	14nm,1.3s						
ANMO	Albuquerque	55.01	330	eP	P	19 37 03.7	-0.6
	2.9nm,1.0s						
SDCO	Great Sand Dun	56.85	333	eP	P	19 37 16.8	-0.8
	2.6nm,0.8s						
SMCO	Snowmass	58.69	333	eP	P	19 37 32.2	+1.7
	6.3nm,1.1s						
KNB	Kanab	59.86	327	eP	P	19 37 37.8	-0.6
	5.7nm,1.2s						
PSUT	Pine Spring	61.53	327	eP	P	19 37 49.0	-0.9
	3.3nm,1.0s						
DUG	Dugway, Tooele	62.25	329	eP	P	19 37 53.1	-1.5
	4.3nm,0.8s						
R11A	Troy Canyon, C	62.32	326	eP	P	19 37 54.6	-0.5
	1.6nm,0.9s						
PDAR	Pinedale Array	62.74	333	P	P	19 37 54.7	-3.1
	0.3nm,0.7s,baz=183,slow=6.1,SNR=3.5						
PDAR				pP	pP	19 38 07.9	-1.5
	0.8nm,0.7s,baz=135,slow=6.6,SNR=6.0						
OMMB	Old Mammoth Mi	63.73	323	eP	P	19 38 03.2	-1.4
	5.6nm,1.1s						
DRLN	Deer Lake	63.88	14	eP	P	19 38 05.1	+0.2
	8.8nm,0.8s						
NVAR	Mina Array Bea	63.89	325	P	P	19 38 04.4	-1.2
	0.9nm,0.8s,baz=138,slow=7.5,SNR=6.2						
NVAR				pP	pP	19 38 17.1	-0.1
	1.4nm,0.8s,baz=133,slow=7.4,SNR=5.3						
ULM	Lac du Bonnet	64.76	347	P	P	19 38 09.0	-1.8
	2.6nm,0.4s,baz=171,slow=10,SNR=4.5						
ULM				pP	pP	19 38 21.6	-0.7
	7.0nm,0.8s,baz=155,slow=6.7,SNR=4.5						
PAHR	Pah Rah Range	65.38	325	eP	P	19 38 14.8	-0.3
	4.3nm,0.9s						
BOZ	Bozeman (W)	65.89	334	eP	P	19 38 16.9	-1.5
	3.3nm,0.9s						
NEW	Newport	70.36	333	LR	LR	20 09 30.9	
	comp=Z,304nm,19.5s,baz=338,slow=36						
SNAA	Sanae	73.10	161	eP	P	19 39 02.1	-0.3
	2.8nm,1.0s						
DBIC	Dimbokro	73.98	79	P	P	19 39 08.5	0.0
	1.4nm,0.6s,baz=180,slow=5.1,SNR=3.7						
QSPA	South Pole Qui	77.56	180	eP	P	19 39 28.5	+0.3
	14nm,1.4s						
NRS	Narsarsuaq	77.59	15	eP	P	19 39 26.6	-1.4
	103nm,1.6s						
TOA1	Torodi Ar. Sit	81.89	75	eP	P	19 39 53.4	+0.9
TOA0	Torodi Ar. Sit	81.89	75	eP	P	19 39 53.2	+0.8
	5.3nm,0.8s						
TORD	Torodi Ar. Bea	81.89	75	P	P	19 39 53.4	+0.9
	2.3nm,0.8s,baz=278,slow=5.3,SNR=14						
TORD				pP	pP	19 40 05.3	+0.9
	4.0nm,0.8s,baz=284,slow=4.9,SNR=13						
ESDC	Sonseca Array	85.12	48	P	P	19 40 08.7	+0.1
	0.2nm,0.5s,baz=246,slow=4.8,SNR=3.1						
SYO	Syowa Base	87.39	161⇑	ePcP	PcP	19 40 20.0	-1.1
SUMG	Summit	88.60	11	eP	P	19 40 25.7	+0.4
	7.9nm,0.8s						
DAWY	Dawson	89.82	337	eP	P	19 40 29.2	-1.5
	3.1nm,0.9s						
INK	Inuvik	90.11	342	eP	P	19 40 30.8	-1.0
	5.3nm,0.9s						
RND	Reindeer	93.33	335	eP	P	19 40 45.5	-1.5
	5.0nm,1.4s						
H11S2	WAKE ISLAND Hy	118.81	284	T	T	21 55 50.8	
	baz=95,slow=75,SNR=244						
H11S1	WAKE ISLAND Hy	118.81	284	T	T	21 55 51.1	
	baz=95,slow=75,SNR=228						
H11S3	WAKE ISLAND Hy	118.82	284	T	T	21 55 52.0	
	baz=95,slow=75,SNR=237						
ASAR	Alice Springs	133.11	220	PKP	PKPdf	19 46 47.1	-1.6
	0.6nm,0.7s,baz=130,slow=2.3,SNR=8.5						
ASAR				pPKP	pPKPdf	19 47 00.7	-0.5
	0.5nm,0.6s,baz=112,slow=2.1,SNR=3.2						
WR1	Warramunga Arr	135.47	224	ePKPdf	PKPdf	19 46 51.5	-1.7
WRA	Warramunga Arr	135.47	224	PKP	PKPdf	19 46 51.5	-1.7
	1.3nm,0.4s,baz=116,slow=1.9,SNR=9.6						
WRA				pPKP	pPKPdf	19 47 06.2	+0.6
	2.9nm,0.9s,baz=113,slow=1.9,SNR=4.1						
ZAA1	Zalesovo Array	136.23	16	ePKPdf	PKPdf	19 46 52.1	-1.4
ZALV	Zalesovo Beam	136.23	16	PKP	PKPdf	19 46 52.1	-1.4
	1.1nm,0.6s,baz=163,slow=1.5,SNR=4.9						
ZALV				pPKP	pPKPdf	19 47 04.5	-1.5
	2.3nm,0.7s,baz=292,slow=2.1,SNR=5.2						
KSH	Kashi	143.96	37	ePKP	PKiKP	19 47 11.8	+0.1
ULN	Ulaanbaatar	144.68	356	ePKPdf	PKPbc	19 47 07.3	-0.7
SONA0	Songino Array	144.75	356	ePKPdf	PKPbc	19 47 07.9	-0.4
SONM	Songino Array	144.75	356	PKP	PKPbc	19 47 07.9	-0.4
	1.7nm,0.6s,baz=341,slow=2.3,SNR=16						
SONM				pPKP	pPKPdf	19 47 20.4	-1.4
	2.0nm,0.6s,baz=330,slow=2.0,SNR=6.6						
WMQ	Urumqi	146.12	20	ePKPbc	PKiKP	19 47 20.1	+4.2
HHC	Hu-ho-hao-te	150.90	347	ePKPbc	PKiKP	19 47 25.1	-0.8
NJ2	Nanjing	155.88	326	ePKP	PKPdf	19 47 35.9	+9.0
LZH	Lanzhou	156.59	359	ePKP	PKPdf	19 47 35.0	+7.0
LZH				pPKP	pPKPdf	19 47 40.8	+0.4
LZH				sPKP		19 47 42.9	
LZH				PKPab	pPKPab	19 48 06.3	-2.6
LZH				LR	LR		
	comp=N,43nm,18.5s						
LZH				LR	LR		
	comp=E,51nm,18.1s						
LZH				LR	LR		
	comp=Z,69nm,20.3s						

IDC ***12*** *19:34:36.7±0.9, 12°.15N×144°.60E, h0^{km}, mb3.8/7, mb1 4.1/7, mb1mx3.8/40, mbtmp3.8/7, MS3.2/4, Ms1 3.2/4, ms1mx2.9/36, Error ellipse: s-maj=32.3km s-min=18.7km az=98.0*
ISCJB ***12*** *19:34:39.4±0.8, 12°.19N±0°.08×144°.5E±0°.2, h29^{km}, mb3.9/7, MS3.1/3, Error ellipse: s-maj=25.7km s-min=9.4km az=17.3*
ISC 12 19:34:40.9±1.0**, 12°.2N**±0°.1×**144°.6E**±0°.2**, h29**^{km}**, n18,** σ1^{s}.**32**/10**, mb3.7**/7**, MS3.0**/3**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.38	10	Pn	Pn	19 35 02.4	-1.8
	38nm,0.3s,baz=180,slow=0.4,SNR=38						
GUMO				Sn	Sn	19 35 21.2	-0.3
	65nm,0.3s,baz=7.3,slow=21,SNR=16						
GUMO				LR	LR	19 35 32.7	
	comp=Z,144nm,19.4s,baz=184,slow=38						
JAY	Jayapura	15.15	195	LR	LR	19 43 55.2	
	comp=Z,74nm,18.5s,baz=235,slow=37						
JHJ	Hachijo jima 2	21.27	349	LR	LR	19 45 56.8	
	comp=Z,124nm,19.4s,baz=110,slow=32						
PMG	Port Moresby	21.63	173	LR	LR	19 45 54.5	
	comp=Z,70nm,21.6s,baz=334,slow=31						
H11S3	WAKE ISLAND Hy	22.15	71	T	T	20 03 20.0	
	baz=258,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	22.17	71	T	T	20 03 23.7	
	baz=258,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	22.17	71	T	T	20 03 22.1	
	baz=258,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	22.64	68	T	T	20 03 58.0	
	baz=255,slow=75,SNR=27						
H11N2	WAKE ISLAND Hy	22.66	68	T	T	20 03 58.6	
	baz=255,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	22.66	68	T	T	20 03 54.7	
	baz=255,slow=75,SNR=18						
MJAR	Matsushiro Arr	24.90	348	LR	LR	19 50 01.2	
	comp=Z,36nm,18.0s,baz=205,slow=37						
WRA	Warramunga Arr	33.53	198	P	P	19 41 16.9	-1.3
	2.7nm,0.6s,baz=5.6,slow=9.4,SNR=13						
ASAR	Alice Springs	37.18	196	P	P	19 41 48.9	-0.7
	1.2nm,1.0s,baz=23,slow=12,SNR=6.4						
ASAR				PcP	PcP	19 44 09.2	-0.3
	0.3nm,0.5s,baz=30,slow=3.4,SNR=5.6						
CMAR	Chiang Mai Arr	44.40	284	P	P	19 42 48.9	-0.5
	0.6nm,0.8s,baz=86,slow=7.7,SNR=5.8						
SONM	Songino Array	47.72	326	P	P	19 43 16.3	+1.1
	0.5nm,0.7s,baz=134,slow=6.2,SNR=2.4						
MKAR	Makanchi Array	62.31	317	P	P	19 45 01.6	+1.0
	0.4nm,0.6s,baz=96,slow=8.9,SNR=3.5						
NVAR	Mina Array Bea	87.95	51	P	P	19 47 30.1	+1.5
	1.1nm,0.8s,baz=260,slow=5.3,SNR=6.3						
ELK	Elko	89.65	48	P	P	19 47 38.0	+1.4
	1.2nm,0.8s,baz=291,slow=3.0,SNR=3.6						

BJI ***12*** *19:59:45.0±0.0, 62°.10N×124°.20W, h5^{km}, mb4.8/44, mB5.3/27, Ms5.0/12, Ms7 4.7/5*
ISCJB ***12*** *19:59:47.5±0.1, 62°.068N±0°.010×124°.30W±0°.02, h11^{km}, mb4.9/487, MS4.0/39, Error ellipse: s-maj=1.5km s-min=1.2km az=43.4*
MOS ***12*** *19:59:47.8±0.8, 62°.07N×124°.34W, h11^{km}, mb5.0/118, MS4.0/17, Error ellipse: s-maj=9.0km s-min=3.3km az=95.6*
NEIC ***12*** *19:59:48.5±0.0, 62°.04N×124°.12W, h1^{km}, mb5.0/482, MW4.5, MW4.7(OTT), Moment Tensor Solution. s18 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.46; $M_{\theta\theta}$0.10; $M_{\phi\phi}$5.36; $M_{r\theta}$-0.64; $M_{\theta\phi}$-0.04; $M_{\phi r}$4.38; Best double couple: $M_0$7.00000×10^{15} NP1:ϕ_s175.00000°, δ65.00000°, λ-94.00000°. NP2:ϕ_s4.00000°, δ26.00000°, λ-81.00000°. Principal axes: T 6.9200, Plg20.0000°, Azm268.0000°; N 0.1400, Plg4.0000°, Azm176.0000°; P -7.0600, Plg70.0000°, Azm76.0000°; After OTT.*
NEIC Felt at Wrigley.
PGC ***12*** *19:59:48.5, 62°.04N×124°.12W, h1^{km}, ML5.5/3, Mw4.7, 153km west of Fort Simpson, Nt Nw Territories - Nunavut, Canada*
IDC ***12*** *19:59:48.2±0.3, 62°.16N×124°.37W, h0^{km}, mb4.6/36, mb1 4.7/41, mb1mx4.7/55, mbtmp4.6/41, ML4.9/5, MS3.8/27, Ms1 3.9/27, ms1mx3.7/57, Error ellipse: s-maj=8.1km s-min=7.4km az=78.0*
GCMT ***12*** *19:59:49.5±0.5, 62°.11N±0°.04×123°.96W±0°.06, h21^{km}±1^{km}, MW4.9/64, Moment Tensor Solution. s21,c24; s64,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.58±.18; $M_{\theta\theta}$-0.92±.10; $M_{\phi\phi}$-1.66±.11; $M_{r\theta}$-0.42±.21; $M_{\theta\phi}$0.85±.06; $M_{\phi r}$0.18±.17; Best double couple: $M_0$2.43700×10^{16} NP1:ϕ_s322.00000°, δ50.00000°, λ84.00000°. NP2: ϕ_s151.00000°, δ41.00000°, λ97.00000°. Principal axes: T 2.6310, Plg83.0000°, Azm190.0000°; N -0.3850, Plg5.0000°, Azm326.0000°; P -2.2440, Plg5.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 12 19:59:48.1±0.5**, 62°.07N**±0°.03×**124°.21W**±0°.03**, h4**^{km}±3^{km}**, h4**^{km}**:pP-P, n1396,** σ1^{s}.**32**/1450**, mb5.0**/490**, MS4.0**/39**, 40C-32D, Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNBB	Fort Nelson	3.24	169	ePn	Pn	20 00 39.7	0.0
FNBB	Fort Nelson	3.24	169	Pn	Pn	20 00 39.7	0.0
FNBB				Sn	Sn	20 01 16.8	-1.9
FNBB				Sg	Sb	20 01 28.3	+2.3
YKW3	Yellowknife Ar	4.50	79	ePn	Pn	20 00 57.5	+0.5
YKW3	Yellowknife Ar	4.50	79	Pn	Pn	20 00 57.5	+0.5
YKA	Yellowknife Ar	4.51	80	Pn	Pn	20 00 57.3	+0.3
	21nm,0.3s,baz=268,slow=13,SNR=78						
YKA				Pg	Pb	20 01 10.7	+3.0
	158nm,0.3s,baz=267,slow=17,SNR=47						
YKA				Lg	Lg	20 02 08.5	
	174nm,0.3s,baz=268,slow=27,SNR=5.1						
YKA				LR	LR	20 03 08.4	
	comp=Z,128nm,18.4s,baz=219,slow=44						
YKB5	Yellowknife Ar	4.51	80	ePn	Pn	20 00 57.4	+0.3
YKB5				eLg	Lg	20 02 08.5	
YKW1	Yellowknife Ar	4.55	80	Pn	Pn	20 00 58.5	+0.8
YKW1				Pg	Pb	20 01 08.1	-0.3
DLBC	Dease Lake	4.65	221	Pn	Pn	20 00 59.4	+0.3
	105nm,0.3s,baz=38,slow=10,SNR=232						
DLBC				Sn	Sn	20 01 50.8	-2.8
	75nm,0.3s,baz=148,slow=27,SNR=6.3						
DLBC				Lg	Lg	20 02 12.1	
	263nm,0.3s,baz=119,slow=20,SNR=5.7						
DLBC				LR	LR	20 03 05.6	
	comp=Z,2μm,18.2s,baz=67,slow=42						
DLBC	Dease Lake	4.65	221	Pn	Pn	20 00 59.4	+0.3
DLBC				Sn	Sn	20 01 52.6	-1.0
DLBC				Sg	Sg	20 02 13.1	-4.3
SKAG	Skagway	6.04	249	ePn	Pn	20 01 17.7	-0.5
SKAG				eSn	Sn	20 02 22.8	-4.8
SKAG				eLg	Lg	20 02 57.4	
BMBC	Bull Mountain	6.13	169	Pn	Pn	20 01 18.2	-1.3
BMBC				Sn	Sn	20 02 25.2	-4.9
BESE	Bessie Mountai	6.34	241	ePn	Pn	20 01 22.2	0.0
BESE				eSn	Sn	20 02 28.8	-6.2
BESE				eLg	Lg	20 03 02.3	
BESE	Bessie Mountai	6.34	241	Pn	Pn	20 01 22.2	0.0
BESE				Sn	Sn	20 02 31.8	-3.2
BESE				Sg	Sg	20 03 04.4	-7.0
JIS	Juneau Island	6.34	238	ePn	Pn	20 01 22.2	0.0
JIS				eSn	Sn	20 02 33.0	-1.9
JIS				eLg	Lg	20 03 04.1	
HYT	Haines Junctio	6.50	265	ePn	Pn	20 01 23.9	-0.6
HYT				eSn	Sn	20 02 34.4	-4.6
HYT				eLg	Lg	20 03 05.5	
PLBC	Pleasant Camp	6.50	252	Pn	Pn	20 01 24.6	+0.1
PLBC				Sn	Sn	20 02 35.5	-3.6
PLBC				Sg	Sg	20 03 10.3	-6.5
KUKN	Kugluktuk,NWT	6.95	30	Pn	Pn	20 01 30.6	0.0
KUKN				Sn	Sn	20 02 44.9	-5.0
KUKN				Sg	Sg	20 03 24.7	-6.3
EPYK	Eagle Plains	6.95	314	ePn	Pn	20 01 29.7	-0.9
EPYK				eSn	Sn	20 02 46.5	-3.5
EPYK	Eagle Plains	6.95	314	P	Pn	20 01 29.8	-0.9
	baz=122,SNR=1000						
WRAK	Wrangell Islan	7.03	220	ePn	Pn	20 01 32.0	+0.4
DAWY	Dawson	7.18	293	ePn	Pn	20 01 32.4	-1.4
DAWY				eSn	Sn	20 02 51.5	-4.2
DAWY	Dawson	7.18	293	Pn	Pn	20 01 33.9	+0.1
DAWY				Sn	Sn	20 02 52.9	-2.8
DAWY				Sg	Sg	20 03 32.5	-5.9
INK	Inuvik	7.38	332	Pn	Pn	20 01 35.0	-1.5
	66nm,0.3s,baz=140,slow=10.0,SNR=322						
INK				Sn	Sn	20 02 53.8	-6.7
	67nm,0.3s,baz=211,slow=31,SNR=3.0						
INK				LR	LR	20 04 48.0	
	comp=Z,937nm,18.7s,baz=134,slow=41						
INK	Inuvik	7.38	332	Pn	Pn	20 01 36.0	-0.4
INK				Sn	Sn	20 02 55.6	-4.9
INK				Sg	Sg	20 03 39.6	-5.2
SIT	Sitka	7.55	233	ePn	Pn	20 01 39.5	+0.7
SIT	Sitka	7.55	233	eP	Pn	20 01 39.5	+0.7
FSB	Fort Saint Jam	7.61	181	Pn	Pn	20 01 40.3	+0.6
BCPM	Bancas Point	7.79	261	ePn	Pn	20 01 42.8	+0.7
PNL	Peninsula	7.79	259	Pn	Pn	20 01 42.5	+0.4
PNL				Sn	Sn	20 03 09.4	-1.3
PNL				Sg	Sb	20 03 45.6	+8.9
YKU2	Yakutat	7.98	258	ePn	Pn	20 01 45.7	+1.0
PCA	Pinnacle	8.02	263	ePn	Pn	20 01 46.0	+0.6
PCA	Pinnacle	8.02	263	Pn	Pn	20 01 46.1	+0.7
PCA				Sn	Sn	20 03 18.2	+1.7
PCA				Sg	Sg	20 03 56.6	-8.9
EGAK	Eagle	8.07	297	ePn	Pn	20 01 44.8	-1.1
CRAG	Craig	8.07	219	ePn	Pn	20 01 46.8	+0.9
SAMH	Samovar Hills	8.26	264	Pn	Pn	20 01 49.7	+1.1
SAMH				Sn	Sn	20 03 21.2	-1.0
SAMH				Sg	Sg	20 04 06.1	-6.8
TABL	Table Mountain	8.32	266	Pn	Pn	20 01 49.9	+0.3
TABL				Sn	Sn	20 03 20.9	-3.1
TABL				Sg	Sg	20 04 04.7	-10
BALM	Baldy	8.72	271	ePn	Pn	20 01 55.3	+0.4
BALM				eSn	Sn	20 03 33.9	+0.3
BALM	Baldy	8.72	271	eP	Pn	20 01 55.3	+0.4
BALM				e		20 03 33.9	
BALM	Baldy	8.72	271	Pn	Pn	20 01 56.0	+1.1
BALM				Sn	Sn	20 03 34.8	+1.2
BALM				Sg	Sg	20 04 23.8	-3.9
PTPK	Patty Peak	8.74	272	Pn	Pn	20 01 56.5	+1.2
PTPK				Sn	Sn	20 03 38.7	+4.6
KIAG	Kiagna River	8.75	271	Pn	Pn	20 01 56.4	+1.0
KIAG				Sn	Sn	20 03 36.8	+2.2
KIAG				Sg	Sg	20 04 23.3	-5.5
MESA	MESA	8.79	265	Pn	Pn	20 01 57.2	+1.2
MESA				Sn	Sn	20 03 35.0	-0.4

MENT	Mentasta	9.06	284	ePn	Pn	20 01 59.3	-0.3
SCRK	Sand Creek	9.18	291	ePn	Pn	20 02 00.8	-0.5
DOT	Dot Lake	9.20	289	ePn	Pn	20 02 01.3	-0.2
DOT	Dot Lake	9.20	289	Pn	Pn	20 02 01.4	-0.1
DOT				Sg	Sn	20 04 31.1	+46
RIDG	Independent Ri	9.55	289	ePn	Pn	20 02 05.8	-0.5
HMT	Hamilton	9.82	269	ePn	Pn	20 02 10.6	+0.6
MOBC	Moresby Island	9.86	208	Pn	Pn	20 02 12.1	+1.6
PAX	Paxson	9.86	285	ePn	Pn	20 02 10.8	+0.2
PAX	Paxson	9.86	285	eP	Pn	20 02 10.8	+0.2
PAX	Paxson	9.86	285	Pn	Pn	20 02 10.9	+0.3
DIB	Dawson Inlet,	9.92	210	ePn	Pn	20 02 12.6	+1.3
DIB	Dawson Inlet,	9.92	210	Pn	Pn	20 02 13.4	+2.1
DIB				Sn	Sn	20 03 59.7	-3.2
DIB				Sg		20 05 01.7	
PRP	Porcupine Dome	10.02	299	ePn	Pn	20 02 12.3	-0.5
BBB	Bella Bella	10.13	194	Pn	Pn	20 02 15.3	+1.2
	0.9nm,0.3s,baz=360,slow=4.2,SNR=13						
BBB				Lg	Lg	20 05 00.8	
	2.2nm,0.3s,baz=274,slow=21,SNR=6.2						
BBB				LR	LR	20 05 38.8	
	comp=Z,289nm,22.0s,baz=14,slow=34						
BBB	Bella Bella	10.13	194	ePn	Pn	20 02 15.2	+1.1
BBB	Bella Bella	10.13	194	Pn	Pn	20 02 15.4	+1.3
BBB				Sg	Sn	20 05 01.7	+54
FYU	Fort Yukon	10.15	305	ePn	Pn	20 02 12.8	-1.5
BNB	Barry Inlet	10.34	207	Pn	Pn	20 02 19.1	+2.0
MNB	Mounoet Dainar	10.38	160	Pn	Pn	20 02 16.8	-1.0
MNB				Sn	Sn	20 04 08.1	-6.5
BLBC	Blue River	10.40	163	Pn	Pn	20 02 17.0	-1.1
EYAK	Cordova Ski Ar	10.46	271	ePn	Pn	20 02 19.2	+0.6
ILB	Eielson Array	10.49	295	ePn	Pn	20 02 18.2	-0.9
HDA	Harding Lake	10.50	293	ePn	Pn	20 02 18.9	-0.3
HDA	Harding Lake	10.50	293	P	Pn	20 02 18.5	-0.7
	baz=93,SNR=34						
DHY	Denali Highway	10.72	286	ePn	Pn	20 02 21.7	-0.6
POKR	Poker Plat Res	10.76	297	P	Pn	20 02 21.4	-1.4
	baz=96,SNR=11						
SCM	Sheep Creek Mo	10.87	279	ePn	Pn	20 02 23.6	-0.8
SCM	Sheep Creek Mo	10.87	279	eP	Pn	20 02 23.6	-0.8
CCB	Clear Creek Bu	10.88	294	ePn	Pn	20 02 23.4	-0.9
COLA	College	10.91	295	ePn	Pn	20 02 25.1	+0.2
COLA	College	10.91	295	d iP	Pn	20 02 25.0	+0.2
TCOL	CIGO, UAF Yank	10.92	295	P	Pn	20 02 25.1	+0.2
	baz=94						
GLI	Glacier Island	10.99	274	ePn	Pn	20 02 24.9	-1.0
WRH	Wood River Hil	11.00	293	ePn	Pn	20 02 25.6	-0.4
MDM	Murphy Dome	11.08	296	ePn	Pn	20 02 26.8	-0.4
SML	Sawmill	11.35	279	ePn	Pn	20 02 31.4	+0.6
SML	Sawmill	11.35	279	eP	Pn	20 02 31.4	+0.6
RND	Reindeer	11.36	288	ePn	Pn	20 02 31.8	+0.8
RND	Reindeer	11.36	288	eP	Pn	20 02 31.8	+0.8
MCK	McKinley	11.37	289	ePn	Pn	20 02 32.0	+0.8
MCK	McKinley	11.37	289	eP	Pn	20 02 32.0	+0.8
SLEB	Sale Mountain	11.42	160	Pn	Pn	20 02 30.8	-1.3
SLEB				Sn	Sn	20 04 35.6	-4.4
KNK	Knik Glacier	11.49	278	ePn	Pn	20 02 32.8	0.0
PHC	Port Hardy	11.52	190	Pn	Pn	20 02 34.8	+1.6
LLLB	Lillooet	11.56	173	Pn	Pn	20 02 34.0	+0.3
LLLB				Sn	Sn	20 04 38.0	-5.2
LLLB				Sg		20 05 29.5	
BWN	Browne	11.59	292	ePn	Pn	20 02 33.3	-0.8
HOLB	Holberg	11.65	192	Pn	Pn	20 02 40.1	+5.0
PMR	Palmer	11.76	279	ePn	Pn	20 02 38.2	+1.8
PMR	Palmer	11.76	279	eP	Pn	20 02 38.2	+1.8
MAYB	Maynard	11.81	189	Pn	Pn	20 02 39.9	+2.7
BPBC	Brooks Peninsu	12.10	191	Pn	Pn	20 02 44.4	+3.2
MLY	Manley	12.15	296	ePn	Pn	20 02 40.1	-1.7
RC01	Rabbit Creek A	12.17	277	ePn	Pn	20 02 42.3	+0.3
COLD	Coldfoot	12.21	306	ePn	Pn	20 02 41.7	-0.9
COLD	Coldfoot	12.21	306	Pn	Pn	20 02 42.0	-0.6
COLD				Sn	Sn	20 04 49.8	-9.2
BPAW	Bear Paw Mtn.	12.26	291	ePn	Pn	20 02 42.6	-0.7
KTH	Kantishna Hill	12.27	289	ePn	Pn	20 02 44.1	+0.6
SEW	Seward	12.34	272	ePn	Pn	20 02 46.0	+1.6
TOLK	Toolik Lake Re	12.38	313	ePn	Pn	20 02 44.8	-0.2
TOLK	Toolik Lake Re	12.38	313	P	Pn	20 02 44.2	-0.8
	baz=110,SNR=58						
TXB	Texada	12.40	181	Pn	Pn	20 02 46.2	+0.9
SHB	Sechelt	12.50	179	Pn	Pn	20 02 52.9	+6.2
SHB				Sg		20 06 16.5	
BTB	Buttle Lake	12.65	184	Pn	Pn	20 02 51.0	+2.2
HOPB	Hope	12.80	172	Pn	Pn	20 02 52.9	+2.2
PPLA	Purkeypile	12.92	286	ePn	Pn	20 02 54.3	+1.9
PNT	Penticton	13.03	167	Pn	Pn	20 02 53.0	-0.9
MGB	Mount Grey	13.10	181	Pn	Pn	20 02 56.8	+2.0
VDB	Vedder Mountai	13.12	174	Pn	Pn	20 02 57.6	+2.5
BRLK	Bradley Lake	13.14	272	ePn	Pn	20 02 57.5	+2.2
SPU	Mount Spurr	13.23	279	ePn	Pn	20 02 57.9	+1.4
B926	Mesachie Lake	13.28	180	Pn	P	20 03 03.9	-3.2
SNB	Saturna Island	13.33	177	Pn	Pn	20 02 59.3	+1.3
MBW	Mount Baker	13.38	173	Pn	Pn	20 03 00.0	+1.3
CNPM	China Poot	13.39	271	ePn	Pn	20 02 59.7	+1.0
A04D	Lummi Island	13.40	176	P	Pn	20 02 59.8	+0.9
	baz=357						
PGC	Sidney	13.45	178	ePn	Pn	20 03 02.3	+2.8
LZB	Mount Lazard	13.49	179	Pn	Pn	20 03 02.0	+1.9
PFB	Port Renfrew	13.53	181	Pn	Pn	20 03 02.3	+1.7
FFC	Flin Flon	13.72	112	ePn	Pn	20 02 59.3	-4.0
FFC	Flin Flon	13.72	112	eP	Pn	20 02 59.3	-4.0
RSO	Redoubt South	13.77	276	ePn	Pn	20 03 05.0	+0.9
B05A	Bryant	13.88	174	P	Pn	20 03 06.4	+0.9
	baz=356						
JCW	Jim Creek	13.96	174	Pn	Pn	20 03 07.7	+1.1
GPW	Glacier Peak	14.09	172	Pn	Pn	20 03 06.9	-1.6
BLN	Blyn Mountain	14.11	177	Pn	Pn	20 03 11.2	+2.7
WALA	Waterton Lakes	14.25	151	ePn	Pn	20 03 07.7	-2.9
WALA	Waterton Lakes	14.25	151	Pn	Pn	20 03 08.2	-2.3
WALA				Sn	Sn	20 05 39.2	-10
NEW	Newport	14.40	161	Pn	Pn	20 03 11.5	-1.1
	1.4nm,0.3s,baz=345,slow=9.9,SNR=8.8						
NEW	Newport	14.40	161	ePn	Pn	20 03 10.4	-2.2
NEW	Newport	14.40	161	P	Pn	20 03 12.7	+0.1
	baz=347						
HDW	Hoodsport	14.46	177	Pn	Pn	20 03 16.8	+3.3
GNW	Green Mountain	14.55	176	Pn	Pn	20 03 15.3	+0.7
D03D	Eldon	14.58	177	P	Pn	20 03 14.3	-0.6
	baz=358						
TTA	Tatalina	14.64	287	ePn	Pn	20 03 14.6	-1.2
TTA	Tatalina	14.64	287	eP	Pn	20 03 14.6	-1.2
C09A	Chrisman Ranch	14.69	164	ePn	Pn	20 03 15.4	-1.0
C09A	Chrisman Ranch	14.69	164	Pn	Pn	20 03 19.4	+3.0
NLWA	Neilton Lookou	14.71	179	ePn	Pn	20 03 16.1	-0.6
KDAK	Kodiak Island	14.79	266	ePn	Pn	20 03 17.6	-0.1
KDAK	Kodiak Island	14.79	266	i P	Pn	20 03 18.2	+0.5
SVW2	Sparrevohn	14.89	280	ePn	Pn	20 03 20.0	+0.8
D04E	Lakebay	14.94	176	P	Pn	20 03 19.9	0.0
	baz=358						
D05A	Enumclaw	14.96	174	ePn	Pn	20 03 22.7	+2.5
LTY	Liberty	14.98	171	ePn	Pn	20 03 20.7	+0.3
LTY	Liberty	14.98	171	Pn	Pn	20 03 21.6	+1.2
FCC	Fort Churchill	15.16	89	ePn	Pn	20 03 19.5	-3.3
	92nm,0.6s						
FCC	Fort Churchill	15.16	89	eP	Pn	20 03 19.5	-3.3
FCC				pmax	pmax		
	comp=Z,93nm,0.6s						
FCC	Fort Churchill	15.16	89	Pn	Pn	20 03 19.4	-3.4
FCC				Sn	Sn	20 05 56.1	-15
BSMT	Bassoo Peak	15.21	155	Pn	Pn	20 03 21.9	-1.8
FMW	Mount Fremont	15.23	173	Pn	Pn	20 03 25.3	+1.3
D08A	Wollman Farm,	15.34	166	ePn	Pn	20 03 23.4	-1.9
	comp=Z,29nm,0.8s						
YBMT	Yellow Bay	15.36	153	Pn	Pn	20 03 24.0	-1.5
OHAK	Old Harbor	15.39	265	ePn	Pn	20 03 25.6	-0.3
	comp=Z,93nm,0.9s						
LON	Longmire	15.41	174	ePn	Pn	20 03 26.8	+0.6
	comp=Z,13nm,0.8s						
LON	Longmire	15.41	174	eP	Pn	20 03 26.8	+0.6
LON				pmax	pmax		
	comp=Z,13nm,0.8s						
LON	Longmire	15.41	174	Pn	Pn	20 03 28.3	+2.1
JTMT	Jette	15.41	154	Pn	Pn	20 03 24.9	-1.4
E04D	Cinebar	15.57	176	P	Pn	20 03 27.2	-1.0
	baz=357,SNR=5.9						
SWMT	Swartz Lake	15.70	154	Pn	Pn	20 03 28.7	-1.3
FBMT	Ferry Basin	15.71	155	Pn	Pn	20 03 29.0	-1.2
E08A	Dider Farm, El	15.88	167	ePn	Pn	20 03 32.1	-0.2
	comp=Z,29nm,1.0s						
HAWA	Hanford	15.93	168	ePn	Pn	20 03 32.3	-0.6
	comp=Z,28nm,0.8s						
E09A	Wood Farm, Sta	15.97	165	ePn	Pn	20 03 33.8	+0.5
	comp=Z,36nm,1.1s						
F04D	Rainier, OR	16.03	177	P	Pn	20 03 34.4	+0.2
	baz=358						
SLMT	Seeley Lake	16.06	153	Pn	Pn	20 03 33.0	-1.8
SII	Sitkinak Islan	16.16	264	ePn	Pn	20 03 34.8	-1.0
	comp=Z,179nm,0.8s						
EGMT	Eagleton	16.26	143	ePn	Pn	20 03 33.5	-3.8
	comp=Z,182nm,0.8s						
EGMT	Eagleton	16.26	143	P	Pn	20 03 33.5	-3.8
	baz=335,SNR=89						
F05D	White Salmon	16.29	173	P	Pn	20 03 38.4	+0.8
	baz=356,SNR=11						
OVMT	Ovando	16.34	152	Pn	Pn	20 03 36.7	-1.6
RES	Resolute Bay	16.35	28	Pn	Pn	20 03 34.4	-3.6
	comp=Z,8.1nm,0.3s,baz=228,slow=11,SNR=62						
RES				Sn	Sn	20 06 23.4	-16
	comp=Z,25nm,0.3s,baz=300,slow=23,SNR=7.5						
RES				Lg	Lg	20 08 15.8	
	comp=Z,3.9nm,0.3s,baz=327,slow=11,SNR=4.2						
RES				LR	LR	20 09 30.4	
	comp=Z,228nm,19.4s,baz=230,slow=36						
RES	Resolute Bay	16.35	28	ePn	Pn	20 03 33.6	-4.4
	comp=Z,163nm,0.8s						
RES	Resolute Bay	16.35	28	Pn	Pn	20 03 34.1	-3.9
RES				Sn	Sn	20 06 24.6	-15
MSO	Missoula	16.36	154	ePn	Pn	20 03 35.6	-2.9
	comp=Z,33nm,0.8s						
MSO	Missoula	16.36	154	P	Pn	20 03 35.6	-2.9
	baz=343,SNR=22						
F07A	Phinny Hill Vi	16.39	169	ePn	Pn	20 03 38.5	-0.3
	comp=Z,17nm,0.6s						
LYMT	Lyon Mountain	16.59	150	Pn	Pn	20 03 39.4	-2.1
F10A	Beach Ranch, E	16.62	163	ePn	Pn	20 03 41.4	-0.4
	comp=Z,49nm,1.1s						
BPMT	Black Pine Rid	16.83	154	Pn	Pn	20 03 41.5	-3.2
G03D	McMinnville, O	16.90	178	P	Pn	20 03 44.4	-0.8
	baz=359						
HRY	Holter Researc	16.94	150	ePn	Pn	20 03 42.4	-3.5
HRY	Holter Researc	16.94	150	Pn	Pn	20 03 42.7	-3.2
ELMT	Elliston	16.96	151	Pn	Pn	20 03 45.7	-0.6
G06A	Carlson Farm,	16.99	171	ePn	Pn	20 03 47.2	+0.7
	comp=Z,30nm,1.0s						
G08A	Pilot Rock	17.08	167	ePn	Pn	20 03 47.1	-0.6
	comp=Z,15nm,0.9s						
RDOG	Red Dog Mine	17.13	307	ePn	Pn	20 03 47.2	-0.8
	comp=Z,78nm,0.8s						
CHIR	Chirikof Islan	17.24	263	ePn	Pn	20 03 50.5	+1.1
	comp=Z,332nm,1.6s						
H04A	Detroit Lake	17.45	175	eP	Pn	20 03 53.0	+0.8
	comp=Z,27nm,0.8s						
COR	Corvallis	17.52	178	eP	P	20 03 54.5	+0.3
	comp=Z,88nm,1.1s						
H04D	Lebanon	17.60	177	P	Pn	20 03 53.5	-0.4
	baz=358,SNR=7.1						
HBMT	Mount Humbug	17.63	152	Pn	Pn	20 03 53.8	-0.9
LRM	Limekiln Ridge	17.63	152	ePn	Pn	20 03 40.4	-14
LRM	Limekiln Ridge	17.63	152	Pn	Pn	20 03 53.5	-1.1
DGMT	Dagmar	17.65	131	ePn	Pn	20 03 53.5	-1.2
	comp=Z,124nm,0.6s						
DGMT	Dagmar	17.65	131	P	Pn	20 03 54.0	-0.7
	baz=328						
PLID	Pearl Lake	17.67	161	ePn	Pn	20 03 53.0	-2.1
	comp=Z,23nm,0.8s						
BMO	Blue Mountains	17.71	164	ePn	Pn	20 03 54.3	-1.2
	comp=Z,22nm,0.9s						
BMO	Blue Mountains	17.71	164	eP	Pn	20 03 54.3	-1.2
BMO				pmax	pmax		
	comp=Z,22nm,0.9s						
I05D	Terrebonne, OR	17.84	173	P	Pn	20 03 57.0	0.0
	baz=356,SNR=7.1						
BOZ	Bozeman (W)	18.03	150	ePn	Pn	20 03 57.4	-2.1
	comp=Z,43nm,0.8s						
BOZ	Bozeman (W)	18.03	150	eP	Pn	20 03 57.4	-2.1
BOZ				pmax	pmax		
	comp=Z,43nm,0.8s						
BOZ	Bozeman (W)	18.03	150	P	Pn	20 03 58.0	-1.5
	baz=341,SNR=75						
DLMT	Dillon	18.04	153	ePn	Pn	20 03 57.9	-1.7
	comp=Z,42nm,1.0s						
I07A	Izee	18.23	169	eP	P	20 04 04.0	+1.8
	comp=Z,34nm,1.3s						
CHGN	Chignik	18.29	267	eP	P	20 04 03.1	+0.6
	comp=Z,42nm,0.9s						
I04A	Tendick Farm,	18.33	176	P	P	20 04 03.4	+0.2
	baz=357,SNR=12						
GCMT	Greycliff	18.34	146	eP	Pn	20 04 01.3	-2.0
PINE	Pine Mountain	18.41	172	eP	Pn	20 04 03.8	-0.3
	comp=Z,45nm,0.9s						
I03D	Drain, OR	18.41	178	P	Pn	20 04 04.1	+0.2
	baz=359						
ANM	Nome	18.42	296	eP	P	20 04 04.3	+0.3
	comp=Z,128nm,1.4s						
ANM	Nome	18.42	296	eP	P	20 04 04.3	+0.3
ANM				pmax	pmax		
	comp=Z,128nm,1.4s						
MCMT	McKenzie Canyo	18.50	154	eP	P	20 04 04.2	-1.0
LAO	LASA Array	18.52	138	eP	P	20 04 03.1	-2.2
	comp=Z,67nm,0.8s						
LAO	LASA Array	18.52	138	P	P	20 04 05.2	-0.1
	baz=333						
QLMT	Earthquake Lak	18.80	151	eP	Pn	20 04 10.7	+1.7
QLMT	Earthquake Lak	18.80	151	Pn	Pn	20 04 12.3	+3.3
J05D	Fort Rock, OR	18.89	173	P	Pn	20 04 10.1	+0.1
	baz=356,SNR=26						
J04D	Umpqua Nationa	18.90	175	P	Pn	20 04 10.2	+0.1
	baz=357,SNR=9.2						
YHB	Horse Butte	18.93	150	eP	Pn	20 04 11.2	+0.6
	comp=Z,42nm,0.8s						
J01E	Myrtle Point	18.94	179	P	P	20 04 10.0	+0.2
	baz=360						
YHH	Holmes Hill	18.98	150	eP	Pn	20 04 11.6	+0.3
	comp=Z,38nm,0.8s						
J08A	Circle Bar Ran	19.04	167	eP	Pn	20 04 12.0	+0.1
	comp=Z,52nm,1.0s						
RLMT	Red Lodge	19.06	146	eP	P	20 04 11.1	-0.3
	comp=Z,35nm,0.6s						
RLMT	Red Lodge	19.06	146	P	P	20 04 11.3	-0.2
	baz=338,SNR=13						
YMR	Madison River	19.07	150	eP	P	20 04 11.8	+0.4
	comp=Z,37nm,0.8s						
YNR	Norris Junctio	19.09	149	eP	Pn	20 04 13.3	+0.8
	comp=Z,29nm,0.9s						
YFT	Old Faithful	19.30	150	eP	P	20 04 14.7	+0.6
	comp=Z,22nm,0.9s						
K02D	Willamette Mer	19.41	179	P	P	20 04 15.5	+0.4
	baz=359						
H17A	Grant Village	19.41	149	eP	P	20 04 15.9	+0.6
	comp=Z,17nm,0.9s						
H17A	Grant Village	19.41	149	P	P	20 04 15.6	+0.3
	baz=341						
HLID	Hailey	19.41	158	eP	P	20 04 15.5	+0.3
	comp=Z,13nm,0.8s						
HLID	Hailey	19.41	158	P	P	20 04 15.9	+0.6
	baz=346,SNR=14						
K05A	Summer Lake	19.47	173	eP	Pn	20 04 17.0	0.0
	comp=Z,33nm,0.8s						
YPP	Pitchstone Pla	19.48	150	eP	Pn	20 04 18.5	+1.3
	comp=Z,23nm,0.9s						
HUMO	Hull Mountain	19.50	177	eP	Pn	20 04 18.2	+0.9
	comp=Z,23nm,0.8s						
ULM	Lac du Bonnet	19.53	114	P	P	20 04 15.3	-0.9
	comp=Z,5.0nm,0.3s,baz=320,slow=12,SNR=25						
ULM				S	Sn	20 07 38.6	-18
	comp=Z,8.2nm,0.3s,baz=81,slow=18,SNR=7.7						
ULM				Lg	Lg	20 09 51.8	
	comp=Z,2.7nm,0.3s,baz=45,slow=20,SNR=2.9						
ULM	Lac du Bonnet	19.53	114	eP	P	20 04 15.0	-1.2
	comp=Z,47nm,0.6s						
ULM	Lac du Bonnet	19.53	114	Pn	P	20 04 15.5	-0.7
ULM				Sn	Sn	20 07 38.6	-18
K04D	Chiloquin, OR	19.53	175	P	P	20 04 17.0	+0.6
	baz=357						
FLWY	Flagg Ranch	19.68	150	eP	Pn	20 04 21.0	+1.5
	comp=Z,34nm,1.0s						
SDPT	Sand Point	19.78	267	eP	P	20 04 18.2	-0.7
	comp=Z,103nm,0.8s						
IMW	Indian Meadow	19.80	151	eP	Pn	20 04 21.2	+0.2
	comp=Z,17nm,0.8s						
MDND	Maddock	19.88	124	eP	P	20 04 20.3	+0.2
	comp=Z,71nm,0.8s						
MDND	Maddock	19.88	124	P	P	20 04 19.7	-0.3
	baz=325,SNR=7.0						
L04D	Klamath Falls	19.91	176	P	Pn	20 04 21.7	-0.5
	baz=358,SNR=9.5						
L02E	Cave Junction	19.94	179	P	P	20 04 21.3	+0.5
	baz=359						
WVOR	Wild Horse Val	19.94	168	eP	Pn	20 04 22.2	-0.4
	comp=Z,30nm,0.9s						
WVOR	Wild Horse Val	19.94	168	eP	Pn	20 04 22.2	-0.4
WVOR				pmax	pmax		
	comp=Z,30nm,0.9s						
MOOW	Moose Ponds	19.99	150	eP	Pn	20 04 22.7	-0.5
	comp=Z,19nm,0.9s						
FXWY	Fox Creek	20.03	151	eP	Pn	20 04 23.3	-0.4
	comp=Z,15nm,0.9s						
LOHW	Long Hollow	20.15	150	eP	Pn	20 04 25.0	-0.1
	comp=Z,26nm,0.8s						
TPAW	Teton Pass	20.18	151	eP	Pn	20 04 25.3	-0.3
	comp=Z,27nm,0.8s						
SNOW	Snow King Moun	20.25	151	eP	Pn	20 04 25.6	-0.8
	comp=Z,33nm,1.0s						
MOD	Modoc Plateau	20.33	172	eP	P	20 04 26.0	+0.8
	comp=Z,19nm,0.8s						
M04C	Macdoel	20.36	175	P	P	20 04 26.5	+1.0
	baz=357,SNR=6.3						
YBH	Yreka Blue Hor	20.39	177	P	P	20 04 25.7	-0.1
	comp=Z,11nm,1.1s,baz=17,slow=9.7,SNR=13						
YBH				LR	LR	20 13 08.7	
	comp=Z,520nm,19.1s,baz=347,slow=39						
YBH	Yreka Blue Hor	20.39	177	eP	Pn	20 04 27.8	0.0
	comp=Z,23nm,1.3s						
YBH	Yreka Blue Hor	20.39	177	eP	Pn	20 04 27.8	0.0
YBH				pmax	pmax		
	comp=Z,23nm,1.3s						
KRMB	Red Mountain	20.57	179	eP	P	20 04 26.0	-1.9
	comp=Z,42nm,1.4s						
M02C	Callahan	20.72	177	P	P	20 04 29.8	+0.4
	baz=358,SNR=16						
AHID	Auburn Hatcher	20.84	152	eP	P	20 04 27.1	-3.7
	comp=Z,32nm,0.8s						
AGMN	Agassiz Nation	21.02	118	eP	P	20 04 32.1	-0.3
	comp=Z,120nm,1.5s						
AGMN	Agassiz Nation	21.02	118	P	P	20 04 32.2	-0.3
	baz=322,SNR=10.0						
PKLO	Pickle Lake	21.09	105	Pn	P	20 04 32.6	-0.5
N02D	Trinity Center	21.14	177	P	P	20 04 33.8	-0.1
	baz=358						
BW06	Boulder Array	21.20	149	eP	P	20 04 34.8	+0.1
	comp=Z,85nm,1.6s						
BW06	Boulder Array	21.20	149	P	P	20 04 35.2	+0.5
	baz=341,SNR=41						
PDAR	Pinedale Array	21.20	149	P	P	20 04 36.0	+1.4
	comp=Z,3.3nm,0.6s,baz=342,slow=8.6,SNR=38						
KHMM	Horse Mountain	21.22	179	eP	P	20 04 36.4	+1.5
	comp=Z,34nm,1.0s						
JCC	Jacoby Creek,	21.28	180	eP	P	20 04 36.8	+1.6
	comp=Z,45nm,1.0s						
GAMB	Gambell	21.30	296	eP	P	20 04 36.2	+0.9
	comp=Z,65nm,1.2s						
SOLO	Sioux Lookout	21.35	110	Pn	P	20 04 35.9	-0.2
HVU	Hansel Valley	21.44	156	eP	P	20 04 38.0	+0.9
	comp=Z,26nm,0.8s						
HVU	Hansel Valley	21.44	156	eP	P	20 04 38.1	+0.9
HVU				pmax	pmax		
	comp=Z,26nm,0.8s						
FALS	False Pass	21.45	268	eP	P	20 04 35.9	-1.1
	comp=Z,158nm,0.6s						
RSSD	Black Hills	21.51	137	eP	P	20 04 38.5	+0.5
	comp=Z,58nm,0.8s						
RSSD	Black Hills	21.51	137	eP	P	20 04 38.5	+0.5
RSSD				pmax	pmax		
	comp=Z,58nm,0.8s						
RSSD	Black Hills	21.51	137	P	P	20 04 38.0	0.0
	baz=334						
WDC	Whiskeytown Da	21.54	177	eP	P	20 04 38.5	+0.4
	comp=Z,24nm,1.0s						
WDC	Whiskeytown Da	21.54	177	eP	P	20 04 38.5	+0.4
WDC				pmax	pmax		
	comp=Z,24nm,1.0s						
HWUT	Hardware Ranch	21.85	154	eP	P	20 04 42.0	+0.4
	comp=Z,43nm,1.1s						
O03E	Paynes Creek	21.85	175	P	P	20 04 42.4	+0.9
	baz=357,SNR=22						
KMRM	Mail Ridge	21.88	179	eP	P	20 04 43.8	+2.0
	comp=Z,44nm,1.1s						
O02D	Mt. Diablo Mer	21.94	177	P	P	20 04 44.3	+1.9
	baz=358,SNR=11						
SPUT	South Promonto	21.96	156	eP	P	20 04 43.8	+1.0
	comp=Z,28nm,1.0s						
ELK	Elko	22.03	162	P	P	20 04 44.9	+1.3
	comp=Z,3.8nm,0.7s,baz=344,slow=13,SNR=12						
ELK				LR	LR	20 14 18.3	
	comp=Z,542nm,19.2s,baz=348,slow=39						
ELK	Elko	22.03	162	eP	P	20 04 44.8	+1.1
	comp=Z,15nm,1.0s						
ELK	Elko	22.03	162	P	P	20 04 44.9	+1.3
ELK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ELK				MLR	MLR		
	comp=Z,542nm,19.2s						
BMN	Battle Mountai	22.07	166	eP	P	20 04 44.0	0.0
	comp=Z,14nm,0.9s						
BMN	Battle Mountai	22.07	166	eP	P	20 04 44.0	0.0
BMN				pmax	pmax		
	comp=Z,14nm,0.9s						
K22A	Casper	22.10	143	eP	P	20 04 44.9	+0.6
	comp=Z,70nm,0.8s						
K22A	Casper	22.10	143	P	P	20 04 45.0	+0.7
	baz=338,SNR=28						
BGU	Big Grassy Mou	22.22	157	eP	P	20 04 44.8	-0.8
	comp=Z,15nm,1.0s						
TCUT	Toone Canyon	22.35	154	eP	P	20 04 48.1	+1.0
	comp=Z,77nm,0.9s						
BEKR	Beckworth	22.35	172	eP	P	20 04 48.5	+1.4
	comp=Z,23nm,1.0s						
ATKO	Atikokan Iron	22.45	111	Pn	P	20 04 49.0	+1.2
ATKO				Sn	S	20 08 53.0	-1.5
PAHR	Pah Rah Range	22.58	170	eP	P	20 04 49.9	+0.5
	comp=Z,27nm,1.0s						
ORV	Oroville	22.60	175	eP	P	20 04 50.1	+0.6
	comp=Z,12nm,1.0s						
ORV	Oroville	22.60	175	eP	P	20 04 50.1	+0.6
ORV				pmax	pmax		
	comp=Z,12nm,1.0s						
CTU	Camp Tracy	22.69	155	eP	P	20 04 52.9	+2.3
	comp=Z,18nm,0.9s						
RWWY	Rawlins	22.81	146	eP	P	20 04 53.2	+1.2
	comp=Z,47nm,0.8s						
JLU	Jordanelle	22.84	154	eP	P	20 04 52.5	+0.2
	comp=Z,32nm,1.1s						
DUG	Dugway, Tooele	22.97	157	eP	P	20 04 53.3	-0.2
	comp=Z,23nm,0.9s						
DUG	Dugway, Tooele	22.97	157	eP	P	20 04 53.3	-0.2
DUG				pmax	pmax		
	comp=Z,23nm,0.9s						
DUG	Dugway, Tooele	22.97	157	P	P	20 04 54.0	+0.5
	baz=346,SNR=7.9						
VCNR	Virginia City	22.97	171	eP	P	20 04 54.2	+0.6
	comp=Z,13nm,0.7s						
SUSD	Miller	22.98	128	P	P	20 04 53.1	-0.3
	baz=329						
AKUT	Akutan	22.98	269	eP	P	20 04 53.2	-0.1
	comp=Z,120nm,1.3s						
TULEG	Thule	23.03	30	eP	P	20 04 54.1	+0.4
	comp=Z,56nm,0.8s						
CLRN	Clyde River	23.04	45	Pn	P	20 04 54.0	+0.1
HOPS	Hopland Field	23.11	178	eP	P	20 04 56.0	+1.2
	comp=Z,68nm,1.4s						
EYMN	Ely	23.16	112	eP	P	20 04 55.6	+0.3
	comp=Z,44nm,0.8s						
EYMN	Ely	23.16	112	P	P	20 04 55.8	+0.6
	baz=320,SNR=22						
PNTR	Pine Nut	23.18	171	eP	P	20 04 54.9	-0.9
	comp=Z,24nm,0.9s						
AFDM	Forest Hills D	23.23	174	eP	P	20 04 55.9	-0.2
	comp=Z,13nm,0.9s						
VIMO	Victor Mine	23.28	95	Pn	P	20 04 56.3	-0.2
GDXM	Geysers	23.30	177	eP	P	20 04 57.2	+0.3
	comp=Z,61nm,1.7s						
YERR	Yerington	23.31	170	eP	P	20 04 57.7	+0.6
	comp=Z,21nm,1.0s						
NLU	North Lily Min	23.34	156	eP	P	20 04 56.7	-0.7
	comp=Z,15nm,1.0s						
KVN	Kaiserville	23.35	168	eP	P	20 04 58.0	+0.6
	comp=Z,18nm,0.9s						
KVN	Kaiserville	23.35	168	eP	P	20 04 58.0	+0.6
KVN				pmax	pmax		
	comp=Z,18nm,0.9s						
MPU	Maple Canyon	23.37	155	eP	P	20 04 58.9	+1.2
	comp=Z,76nm,1.8s						
UNV	Unalaska Valle	23.50	269	eP	P	20 04 59.6	+1.0
	comp=Z,31nm,0.8s						
TBO	Thunder Bay	23.55	109	Pn	P	20 04 59.4	+0.2
PHWY	Pilot Hill	23.65	143	eP	P	20 05 00.5	-0.1
	comp=Z,13nm,0.8s						

RYN	Ryan	23.73	169	*e*P	P	20 05 02.6	+1.5
	comp=Z,16nm,0.9s						
WAKR	Walker	23.77	171	*e*P	P	20 05 02.8	+1.1
	comp=Z,15nm,0.7s						
GTO	Geraldton	23.86	104	Pn	P	20 05 02.2	0.0
N23A	Red Feather La	23.89	144	*e*P	P	20 05 03.9	+1.1
	comp=Z,71nm,1.0s						
N23A	Red Feather La	23.89	144	P	P	20 05 03.9	+1.1
	baz=339,SNR=21						
NV01	Mina Array Sit	23.94	169	*e*PcP	PcP	20 08 46.8	+1.3
NVAR	Mina Array Bea	23.94	169	P	P	20 05 05.1	+1.8
	comp=Z,14nm,0.7s,baz=351,slow=7.4,SNR=39						
NVAR				PcP	PcP	20 08 46.8	+1.3
	comp=Z,5.5nm,0.7s,baz=265,slow=1.7,SNR=9.5						
NV11	Mina Array Sit	23.95	168	*e*P	P	20 05 04.9	+1.5
	comp=Z,2.0nm,1.1s						
NV11				*e*PcP	PcP	20 08 45.9	+0.5
MCCM	Marconi Confer	23.96	177	*e*P	P	20 05 04.2	+1.1
	comp=Z,67nm,1.3s						
O20A	White River Ci	24.00	149	*e*P	P	20 05 05.2	+1.3
	comp=Z,35nm,0.9s						
O20A	White River Ci	24.00	149	P	P	20 05 04.8	+1.0
	baz=342						
P17A	Butcher Ranch,	24.07	154	*e*P	P	20 05 06.1	+1.6
	comp=Z,47nm,1.0s						
TMUT	Trail Mountain	24.14	155	*e*P	P	20 05 06.8	+1.4
	comp=Z,18nm,0.9s						
E38A	The Farm, Brul	24.17	115	*e*P	P	20 05 07.2	+2.1
	comp=Z,38nm,0.9s						
CMB	Columbia Colle	24.17	173	*e*P	P	20 05 05.4	+0.1
	comp=Z,15nm,1.3s						
CMB	Columbia Colle	24.17	173	*e*P	P	20 05 05.4	+0.1
CMB				pmax	pmax		
	comp=Z,15nm,1.3s						
C40A	Isle Royale Na	24.21	110	*e*P	P	20 05 05.5	+0.1
	comp=Z,51nm,0.8s						
R11A	Troy Canyon, C	24.33	163	*e*P	P	20 05 07.8	+0.8
	comp=Z,10nm,1.1s						
R11A	Troy Canyon, C	24.33	163	P	P	20 05 07.7	+0.8
	baz=350,SNR=16						
PSUT	Pine Spring	24.41	160	*e*P	P	20 05 09.3	+1.7
	comp=Z,20nm,1.1s						
ECSD	EROS Data Cent	24.46	126	*e*P	P	20 05 07.8	0.0
	comp=Z,40nm,0.7s						
ECSD	EROS Data Cent	24.46	126	P	P	20 05 08.2	+0.3
	baz=328,SNR=13						
SRU	San Rafael Swe	24.46	154	*e*P	P	20 05 09.5	+1.4
	comp=Z,33nm,0.7s						
SRU	San Rafael Swe	24.46	154	*e*P	P	20 05 09.5	+1.4
SRU				pmax	pmax		
	comp=Z,33nm,0.7s						
Q16A	Castle Valley	24.52	155	*e*P	P	20 05 10.0	+1.4
	comp=Z,20nm,0.9s						
TCRU	Three Creeks R	24.57	157	*e*P	P	20 05 10.9	+1.8
	comp=Z,24nm,1.0s						
MDPB	Devils Postpil	24.67	170	*e*P	P	20 05 10.8	+0.8
	comp=Z,12nm,0.6s						
OMMB	Old Mammoth Mi	24.69	170	*e*P	P	20 05 11.1	+0.7
	comp=Z,31nm,1.5s						
MSU	Marysvale	24.72	157	*e*P	P	20 05 12.1	+1.7
MSU	Marysvale	24.72	157	*e*P	P	20 05 12.1	+1.7
FRB	Frobisher Bay	24.73	61	P	P	20 05 10.9	+0.9
	comp=Z,48nm,0.8s,baz=295,slow=10,SNR=9.6						
FRB				LR	LR	20 15 38.3	
	comp=Z,100nm,18.9s,baz=310,slow=38						
FRB	Frobisher Bay	24.73	61	Pn	P	20 05 12.8	+2.7
SPMN	Marine on St.	24.74	118	*e*P	P	20 05 11.5	+1.2
	comp=Z,33nm,0.7s						
SPMN	Marine on St.	24.74	118	P	P	20 05 11.0	+0.7
	baz=324						
ISCO	Idaho Springs	25.00	144	*e*P	P	20 05 14.8	+1.7
	comp=Z,25nm,1.0s						
ISCO	Idaho Springs	25.00	144	*e*P	P	20 05 14.8	+1.7
ISCO				pmax	pmax		
	comp=Z,25nm,1.0s						
ISCO	Idaho Springs	25.00	144	P	P	20 05 13.7	+0.6
	baz=339,SNR=10						
OGNE	Ogallala	25.01	137	*e*P	P	20 05 14.6	+1.7
	comp=Z,46nm,0.6s						
D41A	Chassel	25.12	110	*e*P	P	20 05 14.6	+0.9
	comp=Z,106nm,0.7s						
D41A	Chassel	25.12	110	P	P	20 05 13.7	0.0
	baz=320						
NIKH	Nikolski High	25.15	269	*e*P	P	20 05 13.8	-0.1
	comp=Z,37nm,0.9s						
MTPU	Mount Pierson	25.17	157	*e*P	P	20 05 16.1	+1.4
	comp=Z,9.3nm,0.9s						
SMCO	Snowmass	25.23	147	*e*P	P	20 05 16.5	+1.2
	comp=Z,57nm,1.8s						
TIN	Tinemaha, Big	25.31	169	P	P	20 05 16.4	+0.8
	baz=354						
G39A	Holcombe	25.38	116	P	P	20 05 16.6	+0.5
	baz=323						
SAO	San Andreas Ge	25.39	175	*e*P	P	20 05 16.9	+0.7
	comp=Z,16nm,0.9s						
SAO	San Andreas Ge	25.39	175	*e*P	P	20 05 16.9	+0.7
SAO				pmax	pmax		
	comp=Z,16nm,0.9s						
CCUT	Cedar City	25.45	160	*e*P	P	20 05 18.1	+1.0
	comp=Z,18nm,1.3s						
SZCU	Shurtz Canyon	25.45	159	*e*P	P	20 05 17.8	+0.8
	comp=Z,9.4nm,1.0s						
GRAC	Grapevine Rang	25.45	167	P	P	20 05 17.9	+1.1
	baz=353						
COWI	Conover	25.61	112	*e*P	P	20 05 18.0	-0.2
	comp=Z,27nm,0.9s						
TPNV	Topopah Spring	25.63	165	*e*P	P	20 05 19.4	+0.8
	comp=Z,9.2nm,0.8s						
TPNV	Topopah Spring	25.63	165	*e*P	P	20 05 19.4	+0.8
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TPNV	Topopah Spring	25.63	165	P	P	20 05 19.5	+0.8
	baz=351,SNR=8.8						
PKCU	Pink Cliffs	25.73	158	*e*P	P	20 05 21.6	+1.9
	comp=Z,20nm,1.0s						
G40A	Rib Lake	25.80	115	*e*P	P	20 05 20.7	+0.8
	comp=Z,22nm,0.8s						
G40A	Rib Lake	25.80	115	P	P	20 05 20.4	+0.4
	baz=323						
BGNE	Belgrade	25.91	131	*e*P	P	20 05 21.0	0.0
	comp=Z,100nm,0.9s						
BGNE	Belgrade	25.91	131	P	P	20 05 21.8	+0.9
	baz=332						
Q24A	Divide	25.91	144	*e*P	P	20 05 22.9	+1.6
	comp=Z,19nm,0.9s						
Q24A	Divide	25.91	144	P	P	20 05 21.7	+0.4
	baz=340						
CWC	Cottonwood Cre	25.93	169	P	P	20 05 22.1	+0.7
	baz=354						
LCMT	Little Creek M	25.99	160	*e*P	P	20 05 22.6	+0.7
	comp=Z,5.5nm,0.8s						
LCMT				*e*PcP	PcP	20 08 51.3	+1.4
FURC	Furnace Creek,	26.03	166	P	P	20 05 22.8	+0.8
	baz=352						
KNB	Kanab	26.06	159	*e*P	P	20 05 23.2	+0.7
	comp=Z,13nm,1.0s						
KNB	Kanab	26.06	159	*e*P	P	20 05 23.2	+0.7
KNB				pmax	pmax		
	comp=Z,13nm,1.0s						
KAPO	Kapuskasing	26.12	100	Pn	P	20 05 23.3	+0.6
DAC	Darwin (Calif)	26.14	168	*e*P	P	20 05 26.1	+2.8
	comp=Z,43nm,1.8s						
DAC				*e*PcP	PcP	20 08 52.8	+2.4
DAC	Darwin (Calif)	26.14	168	*e*P	P	20 05 26.1	+2.8
DAC				*e*		20 08 52.8	
DAC				pmax	pmax		
	comp=Z,43nm,1.8s						
SHPR	Sheep Range	26.20	163	*e*P	P	20 05 25.5	+1.6
	comp=Z,10.0nm,0.9s						
E43A	Lone Tree Farm	26.34	109	*e*P	P	20 05 25.3	+0.5
	comp=Z,48nm,0.8s						
E43A	Lone Tree Farm	26.34	109	P	P	20 05 24.9	+0.1
	baz=320						
MPMC	Manual Prospec	26.37	168	P	P	20 05 26.6	+1.2
	baz=353,SNR=19						
PAGB	Antelope Grade	26.48	173	*e*P	P	20 05 27.2	+1.1
	comp=Z,18nm,1.2s						
KSCO	Kaye Shedlock'	26.59	140	*e*P	P	20 05 28.8	+1.5
	comp=Z,84nm,1.4s						
KSCO	Kaye Shedlock'	26.59	140	P	P	20 05 28.4	+1.1
	baz=337						
S22A	4UR Ranch, Cre	26.62	148	*e*P	P	20 05 28.9	+1.2
	comp=Z,6.1nm,0.9s						
S22A	4UR Ranch, Cre	26.62	148	P	P	20 05 29.0	+1.2
	baz=342,SNR=7.3						
ISA	Isabella, Lake	26.67	170	*e*P	P	20 05 28.7	+0.8
	comp=Z,34nm,1.4s						
ISA	Isabella, Lake	26.67	170	*e*P	P	20 05 28.7	+0.8
ISA				pmax	pmax		
	comp=Z,34nm,1.4s						
ISA	Isabella, Lake	26.67	170	P	P	20 05 29.0	+1.0
	baz=354,SNR=6.0						
U15A	North Rim	26.72	158	*e*P	P	20 05 30.0	+1.4
	comp=Z,6.6nm,0.8s						
MVCO	Mesa Verde	26.73	151	*e*P	P	20 05 29.9	+1.3
	comp=Z,35nm,1.4s						
MVCO	Mesa Verde	26.73	151	P	P	20 05 29.6	+1.0
	baz=344						
I41A	Arkdale	26.92	116	*e*P	P	20 05 30.2	+0.2
	comp=Z,22nm,0.6s						
LRMC	Laurel Mtn Rad	26.93	168	P	P	20 05 31.2	+0.9
	baz=353,SNR=5.7						
SDCO	Great Sand Dun	26.96	146	*e*P	P	20 05 32.1	+1.4
	comp=Z,8.2nm,1.0s						
SDCO	Great Sand Dun	26.96	146	P	P	20 05 31.4	+0.6
	baz=341						
TUQ	Turquoise Moun	27.16	165	P	P	20 05 33.9	+1.5
	baz=352						
GSC	Goldstone, Bar	27.19	167	*e*P	P	20 05 34.1	+1.4
	comp=Z,4.7nm,0.8s						
GSC	Goldstone, Bar	27.19	167	*e*P	P	20 05 34.1	+1.4
GSC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GSC	Goldstone, Bar	27.19	167	P	P	20 05 33.3	+0.7
	baz=352						
SCIA	State Center	27.33	123	*e*P	P	20 05 35.4	+1.6
	comp=Z,26nm,0.9s						
I42A	Draeger Farm,	27.46	115	*e*P	P	20 05 34.4	-0.5
	comp=Z,16nm,0.8s						
I42A	Draeger Farm,	27.46	115	P	P	20 05 34.9	+0.1
	baz=324						
H43A	Windswept, Lux	27.49	113	*e*P	P	20 05 35.2	+0.1
	comp=Z,18nm,0.6s						
H43A	Windswept, Lux	27.49	113	P	P	20 05 35.8	+0.7
	baz=323						
EDW2	Edwards Air Fo	27.49	169	P	P	20 05 36.9	+1.6
	baz=354,SNR=9.3						
F45A	CMU Biological	27.53	109	P	P	20 05 35.7	+0.2
	baz=320						
E46A	Sault Ste Mari	27.55	106	*e*P	P	20 05 35.5	-0.2
	comp=Z,28nm,0.8s						
E46A	Sault Ste Mari	27.55	106	P	P	20 05 35.9	+0.2
	baz=319,SNR=7.1						
D47A	Chapleau	27.58	104	P	P	20 05 36.3	+0.3
	baz=318						
LDFC	Landfair	27.61	164	*e*P	P	20 05 37.8	+1.3
	comp=Z,32nm,1.1s						
CBKS	Cedar Bluff	27.68	136	*e*P	P	20 05 35.0	-2.0
	comp=Z,34nm,1.0s						
CBKS	Cedar Bluff	27.68	136	*e*P	P	20 05 35.0	-2.0
CBKS				pmax	pmax		
	comp=Z,34nm,1.0s						
CBKS	Cedar Bluff	27.68	136	P	P	20 05 37.5	+0.5
	baz=335						
OSI	Osito Audit: C	27.69	170	*e*P	P	20 05 35.7	-1.4
	comp=Z,77nm,0.6s						
JFWS	Jewell Farm	27.69	118	*e*P	P	20 05 36.9	-0.1
	comp=Z,21nm,0.7s						
JFWS	Jewell Farm	27.69	118	*e*P	P	20 05 36.9	-0.1
JFWS				pmax	pmax		
	comp=Z,21nm,0.7s						
JFWS	Jewell Farm	27.69	118	P	P	20 05 37.5	+0.5
	baz=326						
HEC	Hector,Ludlow	27.71	166	P	P	20 05 38.3	+1.0
	baz=352						
W13A	Hualapai Mount	27.77	162	*e*P	P	20 05 38.2	+0.2
	comp=Z,6.0nm,1.1s						
WUAZ	Wupatki	27.77	157	*e*P	P	20 05 39.3	+1.4
	comp=Z,8.6nm,0.8s						
WUAZ	Wupatki	27.77	157	P	P	20 05 38.7	+0.8
	baz=347						
T25A	Trinidad	27.82	145	*e*P	P	20 05 40.8	+2.4
	comp=Z,9.2nm,1.0s						
GMRC	Granite Mounta	27.83	165	P	P	20 05 39.9	+1.4
	baz=352,SNR=8.6						
E47A	Iron Bridge	27.95	105	P	P	20 05 39.5	+0.3
	baz=319						
G45A	Suttons Bay	27.96	110	*e*P	P	20 05 41.8	+2.4
	comp=Z,46nm,0.8s						
L40A	Anamosa	28.00	120	*e*P	P	20 05 40.4	+0.6
	comp=Z,26nm,0.9s						
L40A	Anamosa	28.00	120	P	P	20 05 40.6	+0.9
	baz=327						
D48A	Paudash Townsh	28.09	102	P	P	20 05 41.0	+0.6
	baz=318						
MWC	Mount Wilson	28.14	169	*e*P	P	20 05 42.5	+1.4
	comp=Z,77nm,1.8s						
MWC	Mount Wilson	28.14	169	*e*P	P	20 05 42.6	+1.4
MWC				pmax	pmax		
	comp=Z,77nm,1.8s						
BFSC	Mount Baldy Ra	28.16	168	P	P	20 05 42.8	+1.4
	baz=354,SNR=9.1						
PASC	Pasadena Art C	28.18	169	*e*P	P	20 05 43.2	+1.8
	comp=Z,54nm,1.6s						
MATQ	Matagami	28.18	94	P	P	20 05 41.7	+0.4
	baz=314						
SCZ2	Santa Cruz Isl	28.24	172	P	P	20 05 43.0	+1.0
	baz=356						
BILL	Bilibino	28.43	312	*e*P	P	20 05 42.8	-0.6
	comp=Z,62nm,1.7s						
BILL	Bilibino	28.43	312	*d i*P	P	20 05 44.1	+0.7
BILL				*e*		20 06 32.6	
BILL				*e*PPP	PPP	20 06 41.2	
BILL				*e*		20 09 01.6	
BILL				pmax	pmax		
	comp=Z,27nm,1.3s						
BILL				MLR	MLR		
	comp=Z,1µm,16.0s						
E48A	Lockeyer	28.44	104	P	P	20 05 43.5	-0.1
	baz=319						
W18A	Petrified Fore	28.48	155	*e*P	P	20 05 46.0	+1.7
	comp=Z,13nm,1.1s						
W18A	Petrified Fore	28.48	155	P	P	20 05 45.7	+1.4
	baz=346						
KSU1	Kansas State U	28.50	131	*e*P	P	20 05 42.6	-1.6
I45A	Fountain	28.50	112	*e*P	P	20 05 45.2	+1.0
	comp=Z,57nm,0.8s						
I45A	Fountain	28.50	112	P	P	20 05 44.8	+0.6
	baz=323						
IRM	Iron Mountain	28.52	164	P	P	20 05 45.8	+1.3
	baz=351						
BELC	Belle Mtn. Jos	28.57	166	P	P	20 05 46.1	+1.1
	baz=352,SNR=9.9						
GLMI	Grayling	28.59	109	*e*P	P	20 05 45.2	+0.2
	comp=Z,85nm,0.8s						
G47A	Hillman	28.67	107	P	P	20 05 46.6	+1.0
	baz=321						
K43A	Burlington	28.67	116	*e*P	P	20 05 45.0	-0.7
	comp=Z,22nm,1.0s						
L42A	Oliver, Polo	28.69	118	*e*P	P	20 05 44.4	-1.4
	comp=Z,26nm,0.8s						
F48A	Evansville	28.72	105	P	P	20 05 46.9	+0.7
	baz=320						
X16A	Lo Mia Camp, P	28.83	158	*e*P	P	20 05 48.4	+0.9
	comp=Z,5.7nm,0.8s						
PFO	Pinyon Flats O	28.90	167	LR	LR	20 19 18.4	
	comp=Z,149nm,19.7s,baz=288,slow=40						
PFO	Pinyon Flats O	28.90	167	*e*P	P	20 05 48.8	+0.9
	comp=Z,3.3nm,0.8s						
PFO	Pinyon Flats O	28.90	167	*e*P	P	20 05 48.8	+0.9
PFO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PFO	Pinyon Flats O	28.90	167	P	P	20 05 48.4	+0.4
	baz=353						
CIS	Catalina Islan	28.92	170	P	P	20 05 48.9	+0.9
	baz=354						
BC3	Big Chuckawall	28.97	165	P	P	20 05 49.7	+1.1
	baz=352,SNR=9.9						
LSQQ	Lebel-sur-Quev	28.98	95	P	P	20 05 48.2	-0.2
	baz=314						
SNCC	San Nicolas Is	28.99	172	*e*P	P	20 05 49.8	+1.1
	comp=Z,25nm,0.8s						
SNCC	San Nicolas Is	28.99	172	P	P	20 05 50.1	+1.5
	baz=356						
Y12C	Blythe	29.00	163	*e*P	P	20 05 48.9	+0.2
	comp=Z,14nm,1.6s						
Y12C				*e*PcP	PcP	20 08 58.0	+1.0
Y12C	Blythe	29.00	163	P	P	20 05 50.0	+1.3
	baz=351						
X18A	Snowflake	29.00	155	*e*P	P	20 05 51.0	+2.0
	comp=Z,7.7nm,0.7s						
F49A	Sandfield	29.04	104	P	P	20 05 49.2	+0.3
	baz=319						
Y14A	Wickenburg	29.04	161	*e*P	P	20 05 50.6	+1.5
	comp=Z,4.9nm,0.9s						
E50A	Wahnapitae	29.14	102	P	P	20 05 50.7	+0.9
	baz=318						
H48A	Harrisville	29.27	107	*e*P	P	20 05 50.7	-0.3
	comp=Z,28nm,0.6s						
H48A	Harrisville	29.27	107	P	P	20 05 51.1	+0.1
	baz=321						
I47A	Gladwin	29.27	110	*e*P	P	20 05 52.2	+1.2
	comp=Z,27nm,0.7s						
I47A	Gladwin	29.27	110	P	P	20 05 51.9	+0.9
	baz=322						
L44A	Lake County Fo	29.28	116	P	P	20 05 52.0	+0.9
	baz=325						
N41A	Harden Midland	29.29	121	*e*P	P	20 05 51.3	+0.1
	comp=Z,24nm,0.9s						
N41A	Harden Midland	29.29	121	P	P	20 05 51.9	+0.7
	baz=328						
ANMO	Albuquerque	29.37	149	P	P	20 05 54.1	+1.9
	comp=Z,12nm,0.9s,baz=336,slow=9.2,SNR=23						
ANMO				PcP	PcP	20 08 58.8	+0.5
	comp=Z,3.2nm,0.7s,baz=93,slow=3.5,SNR=5.3						
ANMO				LR	LR	20 18 01.7	
	comp=Z,153nm,21.1s,baz=338,slow=37						
ANMO	Albuquerque	29.37	149	*e*P	P	20 05 54.1	+1.9
	comp=Z,15nm,0.9s						
ANMO				*e*PcP	PcP	20 08 59.2	+1.0
ANMO	Albuquerque	29.37	149	*c i*P	P	20 05 54.6	+2.4
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO	Albuquerque	29.37	149	P	P	20 05 53.8	+1.6
	baz=343						
VLDQ	Val d'Or	29.43	96	*e*P	P	20 05 50.9	-1.5
	comp=Z,21nm,0.8s						
VLDQ	Val d'Or	29.43	96	Pn	P	20 05 51.5	-0.9
CHGQ	Chibougamau	29.61	91	P	P	20 05 53.1	-0.9
	baz=313						
MONP2	Monument Peak	29.61	167	P	P	20 05 55.6	+1.2
	baz=353,SNR=11						
SWSC	Sam W. Stewart	29.63	166	P	P	20 05 56.3	+2.0
	baz=352						
GLA	Glamis	29.65	164	*e*P	P	20 05 54.8	+0.3
	comp=Z,7.2nm,0.8s						
GLA	Glamis	29.65	164	*e*P	P	20 05 54.8	+0.3
GLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TOBO	Tobermory, Bru	29.68	105	P	P	20 05 55.1	+0.5
	baz=320						
LAZ	Ladron	29.73	151	*e*P	P	20 05 56.6	+1.2
N43A	Stutzman Famil	29.78	119	P	P	20 05 56.0	+0.5
	baz=327						
BAR	Barrett	29.80	167	*e*P	P	20 05 57.2	+1.4
	comp=Z,42nm,1.6s						
D52A	ZEK Kipawa Sen	29.80	99	P	P	20 05 56.5	+0.7
	baz=317						
M44A	Midewin, Midew	29.88	117	*e*P	P	20 05 56.5	+0.1
	comp=Z,30nm,0.9s						
M44A	Midewin, Midew	29.88	117	P	P	20 05 57.5	+1.1
	baz=326						
F51A	Arnstein	29.89	102	P	P	20 05 57.0	+0.6
	baz=319						
IKP	In-Ko-Pah, Jac	29.89	166	P	P	20 05 58.2	+1.5
	baz=352						
SCHQ	Schefferville	29.95	77	P	P	20 05 58.8	+1.8
	comp=Z,11nm,0.8s,baz=313,slow=11,SNR=4.3						
SCHQ	Schefferville	29.95	77	*e*P	P	20 05 58.1	+1.1
	comp=Z,24nm,0.7s						
LENM	Lemitar	29.99	151	*e*P	P	20 05 56.7	-1.0
HDIL	Hopedale	30.05	119	*e*P	P	20 05 57.8	-0.2
	comp=Z,27nm,0.6s						
HDIL	Hopedale	30.05	119	P	P	20 05 58.3	+0.3
	baz=328						
D53A	Lac Vacive, Po	30.06	98	P	P	20 05 58.3	+0.3
	baz=317						
113A	Mohawk Valley,	30.07	162	*e*P	P	20 05 57.3	-0.9
	comp=Z,2.9nm,0.8s						
BNM	Barren Site	30.09	150	*e*P	P	20 05 58.6	0.0
BNM				*e*PcP	PcP	20 09 00.5	+0.4
I49A	Point Hope	30.09	108	*e*P	P	20 05 58.3	+0.1
	comp=Z,30nm,0.7s						
I49A	Point Hope	30.09	108	P	P	20 05 58.3	+0.1
	baz=322						
Y22D	IRIS PASSCAL I	30.09	151	*e*P	P	20 06 00.3	+1.7
	comp=Z,37nm,0.9s						
K47A	Vermontville	30.13	112	P	P	20 05 58.8	+0.1
	baz=324						
J48A	Bridge Port	30.17	110	*e*P	P	20 06 02.8	+3.8
	comp=Z,28nm,0.8s						
KLBO	Killbear Provi	30.18	103	P	P	20 05 58.8	-0.2
	baz=320						
E52A	Mattawa	30.20	100	P	P	20 05 59.1	-0.1
	baz=318						
F52A	Sundridge	30.26	102	P	P	20 05 59.7	0.0
	baz=319						
BMRO	Meriville Lake	30.30	105	P	P	20 06 00.4	+0.3
	baz=321						
J49A	Marlette	30.41	109	P	P	20 06 01.4	+0.3
	baz=322						
K48A	Perry	30.41	111	P	P	20 06 00.9	-0.2
	baz=323						
BUKO	Buck Lake	30.49	102	P	P	20 06 01.2	-0.6
	baz=319						
D54A	Lac Fusel, La	30.49	97	P	P	20 06 01.3	-0.6
	baz=317						
BASO	Ashfield	30.55	106	P	P	20 06 02.5	+0.2
	baz=321						
E53A	Dumoine, Ponti	30.59	99	P	P	20 06 03.2	+0.5
	baz=318						
L47A	Sherwood	30.61	113	P	P	20 06 03.3	+0.5
	baz=324,SNR=8.9						
AMTX	Amarillo	30.70	142	*e*P	P	20 06 04.7	+0.9
	comp=Z,18nm,0.6s						
AMTX	Amarillo	30.70	142	P	P	20 06 05.5	+1.7
	baz=339						
BWLO	Walkerton	30.71	106	P	P	20 06 04.4	+0.6
	baz=321						
ALGO	Algonquin Park	30.73	100	P	P	20 06 04.6	+0.8
	baz=318						
P43A	Skaggs, Pawnee	30.73	121	P	P	20 06 04.1	+0.1
	baz=328						
E54A	Lac Daplat, Po	30.77	99	P	P	20 06 04.4	+0.2
	baz=318						
N46A	Monticello	30.84	116	P	P	20 06 05.4	+0.5
	baz=326						
L48A	N Adams	30.97	112	P	P	20 06 07.2	+1.2
	baz=324,SNR=16						
CRLO	Chalk River	30.98	99	Pn	P	20 06 09.8	+3.7
TUC	Tucson	31.00	158	*e*P	P	20 06 08.4	+1.9
	comp=Z,5.4nm,0.9s						
TUC	Tucson	31.00	158	*e*P	P	20 06 08.4	+1.9
TUC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TUC	Tucson	31.00	158	P	P	20 06 07.5	+0.9
	baz=348						
I51A	Listowel	31.01	106	P	P	20 06 06.6	+0.2
	baz=321						
214A	Organ Pipe Nat	31.01	161	P	P	20 06 07.1	+0.6
	baz=350						
G53A	Haliburton	31.09	102	P	P	20 06 07.7	+0.6
	baz=319						
SFIN	Lafayette	31.11	117	*e*P	P	20 06 07.7	+0.4
	comp=Z,20nm,1.0s						
SFIN	Lafayette	31.11	117	P	P	20 06 07.4	+0.1
	baz=327						
SADO	Sadowa	31.12	103	*e*P	P	20 06 07.0	-0.3
	comp=Z,14nm,1.0s						
L49A	Milan	31.13	111	P	P	20 06 08.1	+0.7
	baz=324						
M48A	Edgerton	31.22	113	*e*P	P	20 06 08.9	+0.7
	comp=Z,28nm,0.8s						
M48A	Edgerton	31.22	113	P	P	20 06 08.7	+0.5
	baz=325						
MSTX	Muleshoe	31.25	144	*e*P	P	20 06 09.0	+0.3
	comp=Z,17nm,1.0s						
MSTX	Muleshoe	31.25	144	P	P	20 06 09.9	+1.2
	baz=341						
N47A	Urbana	31.29	115	P	P	20 06 09.5	+0.6
	baz=326						
PEMO	Pembroke	31.31	100	P	P	20 06 09.3	+0.3
	baz=319						
121A	Cookes Peak, D	31.38	153	P	P	20 06 11.3	+1.3
	baz=345,SNR=7.3						
CCM	Cathedral Cave	31.41	124	*e*P	P	20 06 09.9	-0.1
	comp=Z,7.6nm,0.8s						
CCM	Cathedral Cave	31.41	124	*e*P	P	20 06 09.9	-0.1
CCM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CCM	Cathedral Cave	31.41	124	P	P	20 06 10.4	+0.4
	baz=331						
BANO	Bancroft	31.49	101	P	P	20 06 11.3	+0.7

	baz=319						
M49A	**Liberty Center**	**31.55**	**112**	P	**P**	**20 06 11.8**	**+0.7**
	baz=324						
ACTO	**Acton**	**31.59**	**105**	P	**P**	**20 06 12.7**	**+1.1**
	baz=321						
N48A	**Decatur**	**31.59**	**114**	P	**P**	**20 06 11.9**	**+0.4**
	baz=326,SNR=13						
L50A	**Kingsville**	**31.60**	**110**	P	**P**	**20 06 12.0**	**+0.4**
	baz=324						
SUMG	**Summit**	**31.60**	**35**	*e*P	**P**	**20 06 11.4**	**-0.4**
	comp=Z,21nm,1.1s						
SUMG	**Summit**	**31.60**	**35**	*i* P	**P**	**20 06 12.6**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,54nm,1.1s						
SUMG	**Summit**	**31.60**	**35**	*i* P	**P**	**20 06 12.6**	**+0.8**
	comp=Z,54nm,1.1s						
TUL1	**Leonard**	**31.64**	**133**	*e*P	**P**	**20 06 11.8**	**-0.2**
	comp=Z,12nm,0.8s						
J52A	**Paris**	**31.70**	**106**	P	**P**	**20 06 12.4**	**0.0**
	baz=322						
P46A	**Rosedale**	**31.70**	**118**	P	**P**	**20 06 13.3**	**+0.8**
	baz=328						
WMOK	**Wichita Mounta**	**31.72**	**138**	*e*P	**P**	**20 06 13.7**	**+1.0**
	comp=Z,7.8nm,0.8s						
WMOK	**Wichita Mounta**	**31.72**	**138**	*e*P	**P**	**20 06 13.7**	**+1.0**
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMOK	**Wichita Mounta**	**31.72**	**138**	P	**P**	**20 06 13.4**	**+0.7**
	baz=338,SNR=11						
PLVO	**Plevna**	**31.87**	**100**	*e*P	**P**	**20 06 14.6**	**+0.6**
	comp=Z,28nm,1.3s						
PLVO	**Plevna**	**31.87**	**100**	P	**P**	**20 06 14.4**	**+0.5**
	baz=319						
G55A	**Calabogie**	**31.87**	**100**	P	**P**	**20 06 14.7**	**+0.7**
	baz=319						
VABQ	**Val Des Bois**	**31.90**	**98**	Pn	**P**	**20 06 14.5**	**+0.3**
N49A	**Columbus Grove**	**31.91**	**113**	*e*P	**P**	**20 06 15.3**	**+0.9**
	comp=Z,44nm,0.8s						
N49A	**Columbus Grove**	**31.91**	**113**	P	**P**	**20 06 15.2**	**+0.9**
	baz=325						
Q45A	**Warren Harvey,**	**31.92**	**120**	P	**P**	**20 06 15.3**	**+0.8**
	baz=328						
HHAR	**Hobbs**	**31.96**	**130**	*e*P	**P**	**20 06 14.2**	**-0.6**
	comp=Z,8.6nm,0.8s						
DRWO	**Darlington Wes**	**32.00**	**103**	P	**P**	**20 06 15.6**	**+0.6**
	baz=321						
DELO	**Deloro Mine**	**32.01**	**101**	*e*P	**P**	**20 06 15.6**	**+0.3**
	comp=Z,9.9nm,0.9s						
DELO	**Deloro Mine**	**32.01**	**101**	P	**P**	**20 06 14.5**	**-0.7**
	baz=320						
O48A	**Farmland**	**32.04**	**115**	P	**P**	**20 06 15.7**	**+0.2**
	baz=326						
OLIL	**Olney**	**32.08**	**120**	*e*P	**P**	**20 06 16.3**	**+0.4**
	comp=Z,36nm,0.7s						
TYNO	**Tyneside**	**32.08**	**105**	P	**P**	**20 06 16.2**	**+0.3**
	baz=322						
TRQ	**Mont Tremblant**	**32.16**	**96**	*e*P	**P**	**20 06 16.6**	**0.0**
TRQ	**Mont Tremblant**	**32.16**	**96**	Pn	**P**	**20 06 17.3**	**+0.7**
H55A	**Tweed**	**32.19**	**101**	P	**P**	**20 06 16.8**	**+0.1**
	baz=320						
319A	**Douglas**	**32.19**	**156**	*e*P	**P**	**20 06 16.9**	**-0.2**
	comp=Z,6.1nm,0.8s						
P47A	**Martinsville**	**32.21**	**117**	P	**P**	**20 06 17.0**	**0.0**
	baz=327						
I55A	**Frankford**	**32.22**	**102**	P	**P**	**20 06 17.6**	**+0.6**
	baz=320						
ORIO	**Orleans, Innes**	**32.29**	**98**	P	**P**	**20 06 18.1**	**+0.5**
	baz=319						
U40A	**Yellville**	**32.30**	**128**	P	**P**	**20 06 17.4**	**-0.4**
	baz=333,SNR=11						
BLO	**Bloomington**	**32.36**	**117**	*e*P	**P**	**20 06 18.3**	**0.0**
	comp=Z,18nm,0.8s						
BLO	**Bloomington**	**32.36**	**117**	*e*P	**P**	**20 06 18.3**	**0.0**
BLO				pmax	pmax		
	comp=Z,18nm,0.8s						
O49A	**Covington**	**32.45**	**114**	*e*P	**P**	**20 06 20.0**	**+1.0**
	comp=Z,23nm,1.0s						
N50A	**Nevada**	**32.48**	**112**	P	**P**	**20 06 19.7**	**+0.3**
	baz=325,SNR=7.9						
GDL2	**Guadalupe Moun**	**32.50**	**148**	*e*P	**P**	**20 06 20.6**	**+0.8**
S44A	**Carbondale**	**32.51**	**122**	P	**P**	**20 06 19.9**	**+0.3**
	baz=330						
P48A	**Milroy**	**32.58**	**116**	*e*P	**P**	**20 06 20.8**	**+0.5**
	comp=Z,11nm,0.6s						
P48A	**Milroy**	**32.58**	**116**	P	**P**	**20 06 20.5**	**+0.2**
	baz=327						
H56A	**Elgin**	**32.59**	**100**	P	**P**	**20 06 20.6**	**+0.4**
	baz=320						
Q47A	**Bedord North L**	**32.60**	**118**	P	**P**	**20 06 19.9**	**-0.5**
	baz=328						
M52A	**Chesterland**	**32.65**	**109**	*e*P	**P**	**20 06 21.8**	**+0.9**
	comp=Z,100nm,1.8s						
M52A	**Chesterland**	**32.65**	**109**	P	**P**	**20 06 21.8**	**+0.9**
	baz=324						
DPQ	**Saint Jean**	**32.66**	**94**	Pn	**P**	**20 06 22.1**	**+1.3**
MEDO	**Medina**	**32.67**	**104**	*e*P	**P**	**20 06 22.7**	**+1.7**
	comp=Z,18nm,0.8s						
N51A	**Ashland**	**32.70**	**111**	*e*P	**P**	**20 06 22.3**	**+1.0**
	comp=Z,46nm,0.6s						
N51A	**Ashland**	**32.70**	**111**	P	**P**	**20 06 21.9**	**+0.6**
	baz=324						
MNTX	**Cornudas Mount**	**32.73**	**149**	*e*P	**P**	**20 06 22.9**	**+1.3**
	comp=Z,11nm,0.9s						
MNTX				*e*PcP	**PcP**	**20 09 07.9**	**+1.0**
MNTX	**Cornudas Mount**	**32.73**	**149**	P	**P**	**20 06 22.5**	**+0.8**
	baz=344,SNR=17						
PECO	**Prince Edward**	**32.75**	**101**	*e*P	**P**	**20 06 20.9**	**-0.7**
	comp=Z,10nm,0.8s						
PECO	**Prince Edward**	**32.75**	**101**	P	**P**	**20 06 21.7**	**+0.1**
	baz=320						
O50A	**Cable**	**32.79**	**113**	P	**P**	**20 06 22.8**	**+0.8**
	baz=326						
L53A	**Girard**	**32.81**	**107**	P	**P**	**20 06 22.9**	**+0.7**
	baz=323						
P49A	**Miami Univ. Ec**	**32.83**	**115**	P	**P**	**20 06 22.6**	**+0.2**
	baz=327						
PBMO	**Poplar Bluff**	**32.84**	**125**	*e*P	**P**	**20 06 22.4**	**-0.2**
	comp=Z,16nm,0.8s						
J55A	**Hilton**	**32.89**	**103**	*e*P	**P**	**20 06 22.7**	**-0.2**
	comp=Z,16nm,0.8s						
Q48A	**North Vernon**	**32.90**	**117**	P	**P**	**20 06 23.8**	**+0.7**
	baz=327						
USIN	**University of**	**32.92**	**120**	*e*P	**P**	**20 06 22.2**	**-1.0**
	comp=Z,36nm,0.8s						
FCAR	**Ozark Folk Cen**	**32.98**	**128**	*e*P	**P**	**20 06 23.0**	**-0.7**
	comp=Z,8.4nm,0.9s						
X37A	**Clayton**	**32.98**	**133**	*e*P	**P**	**20 06 24.1**	**+0.3**
	comp=Z,14nm,0.8s						
W39A	**Magazine**	**32.99**	**130**	*e*P	**P**	**20 06 23.4**	**-0.5**
	comp=Z,6.2nm,0.8s						
W39A	**Magazine**	**32.99**	**130**	P	**P**	**20 06 23.7**	**-0.2**
	baz=334						
ACSO	**Alum Creek Sta**	**33.00**	**112**	*e*P	**P**	**20 06 24.8**	**+0.9**
	comp=Z,28nm,0.8s						
ACSO	**Alum Creek Sta**	**33.00**	**112**	P	**P**	**20 06 23.8**	**-0.1**
	baz=325,SNR=5.2						
CNQ	**Baie Comeau**	**33.00**	**86**	Pn	**P**	**20 06 27.1**	**+3.3**
K54A	**Basiliko Farm,**	**33.00**	**105**	P	**P**	**20 06 23.9**	**-0.1**
	baz=322						
L54A	**Sinclairville**	**33.01**	**106**	P	**P**	**20 06 23.9**	**-0.2**
	baz=322						
M53A	**WI Miller and**	**33.04**	**108**	P	**P**	**20 06 24.2**	**0.0**
	baz=324,SNR=5.7						
N52A	**McGinn’s Farm,**	**33.09**	**110**	P	**P**	**20 06 24.7**	**0.0**
	baz=324						
R47A	**Wooly Knot Far**	**33.10**	**118**	P	**P**	**20 06 24.8**	**-0.1**
	baz=328						
ALLY	**Alegheny Colle**	**33.11**	**107**	*e*P	**P**	**20 06 25.8**	**+1.0**
	comp=Z,51nm,0.9s						
S46A	**Don Dixon Farm**	**33.14**	**120**	P	**P**	**20 06 25.0**	**-0.1**
	baz=329						
P50A	**Jamestown**	**33.16**	**114**	P	**P**	**20 06 25.6**	**+0.3**
	baz=326,SNR=6.8						
A64	**Saint Simeon**	**33.19**	**90**	Pn	**P**	**20 06 27.4**	**+1.9**
A61	**Sainte Mathild**	**33.19**	**90**	Pn	**P**	**20 06 26.3**	**+0.8**
Q49A	**Aurora**	**33.19**	**116**	P	**P**	**20 06 26.0**	**+0.4**
	baz=327						
K55A	**Perry**	**33.19**	**104**	P	**P**	**20 06 25.6**	**0.0**
	baz=322						
O51A	**Pataskala**	**33.23**	**112**	P	**P**	**20 06 26.0**	**0.0**
	baz=325						
MMNY	**Mt. Morris Dam**	**33.26**	**104**	*e*P	**P**	**20 06 27.0**	**+0.9**
	comp=Z,12nm,0.9s						
LONY	**Lake Ozonia**	**33.34**	**98**	*e*P	**P**	**20 06 27.2**	**+0.3**
	comp=Z,7.6nm,0.6s						
LONY	**Lake Ozonia**	**33.34**	**98**	P	**P**	**20 06 27.1**	**+0.2**
	baz=319						
ABTX	**Abilene, Hawle**	**33.41**	**140**	*e*P	**P**	**20 06 27.3**	**-0.3**
	comp=Z,6.9nm,0.7s						
ABTX	**Abilene, Hawle**	**33.41**	**140**	P	**P**	**20 06 28.5**	**+0.9**
	baz=339						
M54A	**Oil Creek Stat**	**33.44**	**107**	*e*P	**P**	**20 06 28.4**	**+0.7**
	comp=Z,28nm,1.0s						
M54A	**Oil Creek Stat**	**33.44**	**107**	P	**P**	**20 06 27.8**	**0.0**
	baz=323						
WHAR	**Wooly Hollow**	**33.45**	**128**	*e*P	**P**	**20 06 28.5**	**+0.6**
	comp=Z,20nm,1.1s						
L55A	**Hinsdale**	**33.45**	**105**	P	**P**	**20 06 28.0**	**+0.1**
	baz=322						
N53A	**Lisbon**	**33.47**	**109**	*e*P	**P**	**20 06 29.0**	**+1.0**
	comp=Z,57nm,1.4s						
N53A	**Lisbon**	**33.47**	**109**	P	**P**	**20 06 28.3**	**+0.2**
	baz=324						
W41B	**Gary Mavity, V**	**33.57**	**128**	*e*P	**P**	**20 06 28.3**	**-0.6**
	comp=Z,8.7nm,0.8s						
W41B	**Gary Mavity, V**	**33.57**	**128**	P	**P**	**20 06 28.9**	**0.0**
	baz=333						
P51A	**Williamsport**	**33.58**	**113**	*e*P	**P**	**20 06 29.2**	**+0.3**
	comp=Z,47nm,0.7s						
P51A	**Williamsport**	**33.58**	**113**	P	**P**	**20 06 29.4**	**+0.4**
	baz=326						
O52A	**Adamsville**	**33.59**	**111**	*e*P	**P**	**20 06 29.5**	**+0.4**
	comp=Z,29nm,0.8s						
O52A	**Adamsville**	**33.59**	**111**	P	**P**	**20 06 29.1**	**0.0**
	baz=325						
FRNY	**Flat Rock**	**33.65**	**97**	*e*P	**P**	**20 06 29.4**	**-0.1**
	comp=Z,11nm,0.7s						
MIAR	**Mount Ida**	**33.65**	**131**	*e*P	**P**	**20 06 29.7**	**+0.1**
	comp=Z,14nm,1.0s						
MIAR	**Mount Ida**	**33.65**	**131**	*e*P	**P**	**20 06 29.7**	**+0.1**
MIAR				pmax	pmax		
	comp=Z,14nm,1.0s						
MIAR	**Mount Ida**	**33.65**	**131**	P	**P**	**20 06 29.8**	**+0.2**
	baz=334,SNR=8.2						
R49A	**Shelbyville**	**33.67**	**117**	*e*P	**P**	**20 06 29.6**	**-0.1**
	comp=Z,40nm,1.7s						
Q50A	**Georgetown**	**33.72**	**115**	P	**P**	**20 06 30.3**	**+0.2**
	baz=327						
N54A	**Moraine State**	**33.73**	**108**	*e*P	**P**	**20 06 30.8**	**+0.5**
	comp=Z,15nm,0.8s						
N54A	**Moraine State**	**33.73**	**108**	P	**P**	**20 06 29.9**	**-0.3**
	baz=324						
O53A	**New Philadelph**	**33.76**	**110**	P	**P**	**20 06 30.8**	**+0.2**
	baz=325						
Q51A	**Peebles**	**33.84**	**114**	*e*P	**P**	**20 06 31.7**	**+0.5**
	comp=Z,45nm,0.9s						
Q51A	**Peebles**	**33.84**	**114**	P	**P**	**20 06 31.6**	**+0.4**
	baz=326						
S48A	**Wiedeman Farm,**	**33.84**	**118**	P	**P**	**20 06 31.3**	**0.0**
	baz=329						
P52A	**Corning**	**33.86**	**112**	P	**P**	**20 06 31.4**	**0.0**
	baz=326						
M55A	**Ridgway**	**33.87**	**106**	P	**P**	**20 06 31.6**	**+0.1**
	baz=323,SNR=6.9						
UALR	**University of**	**33.89**	**129**	*e*P	**P**	**20 06 30.7**	**-1.0**
	comp=Z,19nm,1.4s						
MOQ	**Mont Orford**	**33.91**	**95**	*e*P	**P**	**20 06 31.3**	**-0.6**
MOQ	**Mont Orford**	**33.91**	**95**	Pn	**P**	**20 06 31.2**	**-0.7**
DAG	**Danmarks Havn**	**33.97**	**23**	*e*P	**P**	**20 06 33.4**	**+1.5**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DAG	**Danmarks Havn**	**33.97**	**23**	*i* P	**P**	**20 06 33.4**	**+1.5**
	comp=Z,7.0nm,0.7s						
X40A	**Basin Creek Fa**	**33.97**	**130**	*e*P	**P**	**20 06 32.2**	**-0.2**
	comp=Z,7.5nm,0.9s						
X40A	**Basin Creek Fa**	**33.97**	**130**	P	**P**	**20 06 32.6**	**+0.2**
	baz=334						
T47A	**Sharon Grove**	**33.98**	**120**	*e*P	**P**	**20 06 33.0**	**+0.5**
	comp=Z,11nm,0.9s						
NCB	**Newcomb**	**34.01**	**99**	*e*P	**P**	**20 06 32.2**	**-0.5**
	comp=Z,15nm,0.8s						
S49A	**Springfield**	**34.05**	**117**	P	**P**	**20 06 32.7**	**-0.4**
	baz=328						
U46A	**Springville**	**34.09**	**122**	P	**P**	**20 06 34.0**	**+0.5**
	baz=330						
M56A	**Emporium**	**34.12**	**105**	P	**P**	**20 06 34.1**	**+0.4**
	baz=323,SNR=7.2						
T48A	**Bowling Green**	**34.17**	**119**	P	**P**	**20 06 34.2**	**+0.1**
	baz=329						
O54A	**Avella**	**34.19**	**109**	P	**P**	**20 06 34.5**	**+0.2**
	baz=325,SNR=8.8						
IVI	**Ivigtut**	**34.22**	**57**	*e*P	**P**	**20 06 34.7**	**+0.4**
	comp=Z,121nm,1.6s						
P53A	**Whipple**	**34.31**	**111**	*e*P	**P**	**20 06 35.8**	**+0.5**
	comp=Z,30nm,0.9s						
P53A	**Whipple**	**34.31**	**111**	P	**P**	**20 06 35.5**	**+0.2**
	baz=326						
N55A	**Marion Center**	**34.32**	**107**	*e*P	**P**	**20 06 36.3**	**+0.9**
	comp=Z,34nm,1.2s						
N55A	**Marion Center**	**34.32**	**107**	P	**P**	**20 06 35.7**	**+0.3**
	baz=324,SNR=6.1						
R51A	**Hillsboro**	**34.34**	**115**	P	**P**	**20 06 36.2**	**+0.7**
	baz=327						
Q52A	**Bidwell**	**34.36**	**113**	P	**P**	**20 06 36.0**	**+0.3**
	baz=326						
WVT	**Waverly**	**34.43**	**122**	*e*P	**P**	**20 06 36.1**	**-0.3**
	comp=Z,22nm,0.8s						
WVT				*e*PcP	**PcP**	**20 09 09.2**	**-2.5**
WVT	**Waverly**	**34.43**	**122**	*e*P	**P**	**20 06 36.1**	**-0.3**
WVT				*e*		20 09 09.2	
WVT				pmax	pmax		
	comp=Z,22nm,0.8s						
WVT	**Waverly**	**34.43**	**122**	P	**P**	**20 06 36.7**	**+0.3**
	baz=330						
S50A	**Richmond**	**34.52**	**116**	P	**P**	**20 06 37.3**	**+0.2**
	baz=328						
N56A	**West Decatur**	**34.53**	**106**	P	**P**	**20 06 37.1**	**-0.1**
	baz=323						
T49A	**Edmonton**	**34.53**	**118**	*e*P	**P**	**20 06 37.2**	**0.0**
	comp=Z,28nm,1.6s						
T49A	**Edmonton**	**34.53**	**118**	P	**P**	**20 06 37.6**	**+0.4**
	baz=329						
WLAR	**White Oak Lake**	**34.59**	**131**	*e*P	**P**	**20 06 37.9**	**+0.1**
	comp=Z,28nm,0.8s						
O55A	**Ligonier**	**34.64**	**108**	P	**P**	**20 06 38.9**	**+0.6**
	baz=324,SNR=7.2						
X43A	**Marvell**	**34.66**	**127**	*e*P	**P**	**20 06 38.4**	**0.0**
	comp=Z,37nm,0.8s						
X43A	**Marvell**	**34.66**	**127**	P	**P**	**20 06 38.7**	**+0.3**
	baz=333						
WHTX	**Lake Whitney,**	**34.67**	**138**	*e*P	**P**	**20 06 39.3**	**+0.7**
	comp=Z,13nm,0.6s						
WHTX	**Lake Whitney,**	**34.67**	**138**	P	**P**	**20 06 39.2**	**+0.7**
	baz=338						
Q53A	**Leroy**	**34.77**	**112**	P	**P**	**20 06 39.9**	**+0.6**
	baz=326						
V47A	**Nunnelly**	**34.82**	**122**	P	**P**	**20 06 39.8**	**0.0**
	baz=331						
MCWV	**Mont Chateau**	**34.85**	**109**	*e*P	**P**	**20 06 40.2**	**+0.2**
	comp=Z,23nm,0.9s						
MCWV	**Mont Chateau**	**34.85**	**109**	P	**P**	**20 06 40.3**	**+0.3**
	baz=325						
LBNH	**Lisbon**	**34.87**	**96**	*e*P	**P**	**20 06 40.4**	**+0.2**
	comp=Z,65nm,1.6s						
LBNH	**Lisbon**	**34.87**	**96**	*e*P	**P**	**20 06 40.4**	**+0.2**
LBNH				pmax	pmax		
	comp=Z,65nm,1.6s						
LBNH	**Lisbon**	**34.87**	**96**	P	**P**	**20 06 40.4**	**+0.2**
	baz=319						
T50A	**Nancy**	**34.89**	**117**	P	**P**	**20 06 40.4**	**+0.1**
	baz=329						
PQI	**Presque Isle**	**34.90**	**90**	*e*P	**P**	**20 06 41.1**	**+0.7**
	comp=Z,48nm,1.5s						
O56A	**Blue Knob Stat**	**34.93**	**107**	*e*P	**P**	**20 06 40.7**	**0.0**
	comp=Z,25nm,0.8s						
O56A	**Blue Knob Stat**	**34.93**	**107**	P	**P**	**20 06 40.7**	**0.0**
	baz=324,SNR=7.3						
SSPA	**Standing Stone**	**34.94**	**106**	*e*P	**P**	**20 06 41.0**	**+0.3**
	comp=Z,20nm,1.0s						
SSPA	**Standing Stone**	**34.94**	**106**	P	**P**	**20 06 40.9**	**+0.2**
	baz=324						
Q54A	**Coxs Mills**	**34.97**	**111**	*e*P	**P**	**20 06 41.4**	**+0.5**
	comp=Z,21nm,0.8s						
Q54A	**Coxs Mills**	**34.97**	**111**	P	**P**	**20 06 41.3**	**+0.3**
	baz=326						
P55A	**Reedsville**	**34.98**	**109**	P	**P**	**20 06 41.2**	**0.0**
	baz=325,SNR=8.7						
N57A	**Milroy**	**34.99**	**106**	P	**P**	**20 06 41.6**	**+0.4**
	baz=323						
R53A	**Hurricane**	**35.02**	**113**	*e*P	**P**	**20 06 41.5**	**+0.1**
	comp=Z,105nm,1.3s						
CLTN	**Cedars of Leba**	**35.07**	**120**	*e*P	**P**	**20 06 43.2**	**+1.3**
	comp=Z,6.4nm,0.8s						
HNH	**Hanover**	**35.11**	**97**	*e*P	**P**	**20 06 43.6**	**+1.4**
	comp=Z,104nm,1.9s						
KSPA	**Keystone Colle**	**35.17**	**103**	*e*P	**P**	**20 06 44.2**	**+1.5**
	comp=Z,17nm,0.9s						
V48A	**Smith Brothers**	**35.17**	**121**	*e*P	**P**	**20 06 42.9**	**+0.1**
	comp=Z,14nm,0.9s						
V48A	**Smith Brothers**	**35.17**	**121**	P	**P**	**20 06 43.1**	**+0.3**
	baz=330						
OXF	**Oxford**	**35.23**	**125**	*e*P	**P**	**20 06 43.9**	**+0.6**
	comp=Z,74nm,1.2s						
OXF	**Oxford**	**35.23**	**125**	*e*P	**P**	**20 06 43.9**	**+0.6**
OXF				pmax	pmax		
	comp=Z,74nm,1.2s						
NRS	**Narsarsuaq**	**35.32**	**55**	*e*P	**P**	**20 06 45.5**	**+1.7**
	comp=Z,179nm,2.0s						
PLAL	**Pickwick Lake**	**35.33**	**123**	*e*P	**P**	**20 06 43.6**	**-0.6**
	comp=Z,38nm,1.4s						
PKME	**Peaks-Kenny Pk**	**35.34**	**92**	*e*P	**P**	**20 06 44.5**	**+0.3**
	comp=Z,14nm,0.8s						
PKME	**Peaks-Kenny Pk**	**35.34**	**92**	P	**P**	**20 06 44.5**	**+0.3**
	baz=318						
JCT	**Junction City**	**35.37**	**142**	*e*P	**P**	**20 06 45.1**	**+0.5**
	comp=Z,12nm,0.9s						
JCT				*e*PcP	**PcP**	**20 09 14.5**	**0.0**
JCT	**Junction City**	**35.37**	**142**	*e*P	**P**	**20 06 45.1**	**+0.5**
JCT				*e*		20 09 14.5	
JCT				pmax	pmax		
	comp=Z,12nm,0.9s						
JCT	**Junction City**	**35.37**	**142**	P	**P**	**20 06 45.2**	**+0.7**
	baz=340,SNR=5.8						
BATG	**Bathurst New B**	**35.38**	**87**	*e*P	**P**	**20 06 44.8**	**+0.3**
	comp=Z,23nm,1.3s						
BATG	**Bathurst New B**	**35.38**	**87**	Pn	**P**	**20 06 45.4**	**+0.9**
O57A	**Amberson**	**35.39**	**106**	P	**P**	**20 06 44.9**	**+0.3**
	baz=324,SNR=14						
TX31	**Lajitas Ar. Si**	**35.41**	**148**	*e*P	**P**	**20 06 45.8**	**+0.8**
	comp=Z,36nm,1.8s						
TXAR	**Lajitas Array**	**35.41**	**148**	P	**P**	**20 06 46.3**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=352,slow=7.6,SNR=28						
TXAR				PcP	**PcP**	**20 09 15.7**	**+0.9**
	comp=Z,3.3nm,0.8s,baz=345,slow=2.2,SNR=7.8						
TXAR				LR	LR	20 21 57.3	
	comp=Z,234nm,18.3s,baz=0.0,slow=37						
P56A	**Dayton Farm, R**	**35.42**	**108**	P	**P**	**20 06 45.0**	**+0.1**
	baz=325						
ANGG	**Ammassalik, Gr**	**35.49**	**46**	*e*P	**P**	**20 06 44.2**	**-1.0**
	comp=Z,71nm,1.4s						
X46A	**Booneville**	**35.51**	**124**	P	**P**	**20 06 46.0**	**+0.4**
	baz=332						
V49A	**McMinnville**	**35.52**	**120**	P	**P**	**20 06 46.1**	**+0.3**
	baz=330						
T52A	**Hallie**	**35.60**	**115**	*e*P	**P**	**20 06 46.5**	**+0.1**
	comp=Z,27nm,0.8s						
T52A	**Hallie**	**35.60**	**115**	P	**P**	**20 06 46.8**	**+0.3**
	baz=328						
Q56A	**Snyder Ridge,**	**35.65**	**109**	P	**P**	**20 06 47.1**	**+0.3**
	baz=325						
W48A	**Pulaski**	**35.65**	**122**	P	**P**	**20 06 47.3**	**+0.4**
	baz=331						
N59A	**State Game Lan**	**35.67**	**104**	*e*P	**P**	**20 06 47.8**	**+0.6**
	comp=Z,39nm,1.4s						
N59A	**State Game Lan**	**35.67**	**104**	P	**P**	**20 06 47.4**	**+0.3**
	baz=323						
WVL	**Waterville**	**35.69**	**94**	*e*P	**P**	**20 06 48.0**	**+0.9**
	comp=Z,13nm,0.9s						
435B	**Jarrell**	**35.75**	**139**	*e*P	**P**	**20 06 48.3**	**+0.5**
	comp=Z,15nm,0.6s						
U51A	**La Follette**	**35.78**	**117**	P	**P**	**20 06 48.5**	**+0.4**
	baz=329						
O58A	**Lewisberry**	**35.78**	**106**	P	**P**	**20 06 48.0**	**0.0**
	baz=324,SNR=5.3						
PAGS	**Pennsylvania G**	**35.79**	**105**	*e*P	**P**	**20 06 48.4**	**+0.3**
	comp=Z,89nm,2.0s						
NATX	**Nacogdoches**	**35.80**	**134**	*e*P	**P**	**20 06 48.7**	**+0.5**
	comp=Z,19nm,0.6s						
P57A	**Homestead Farm**	**35.81**	**107**	P	**P**	**20 06 48.7**	**+0.4**
	baz=325						
TZTN	**Tazewell**	**35.84**	**116**	*e*P	**P**	**20 06 48.9**	**+0.3**
	comp=Z,25nm,0.9s						
TZTN	**Tazewell**	**35.84**	**116**	P	**P**	**20 06 48.8**	**+0.3**
	baz=328						
R55A	**Marlinton**	**35.86**	**111**	*e*P	**P**	**20 06 49.2**	**+0.4**
	comp=Z,47nm,1.0s						
T53A	**Wise**	**35.90**	**115**	P	**P**	**20 06 49.4**	**+0.3**
	baz=328						
V50A	**Pikevile**	**35.94**	**119**	P	**P**	**20 06 49.5**	**+0.1**
	baz=330						
SEY	**Seymchan**	**35.98**	**309**	P	**P**	**20 06 49.5**	**+0.1**
	comp=Z,14nm,0.7s,baz=94,slow=5.9,SNR=30						
SEY	**Seymchan**	**35.98**	**309**	*ce*P	**P**	**20 06 49.9**	**+0.4**
SWET	**Sewanee**	**35.99**	**120**	*e*P	**P**	**20 06 49.4**	**-0.5**
	comp=Z,8.6nm,0.8s						
Q57A	**Strasburg**	**36.00**	**108**	P	**P**	**20 06 50.1**	**+0.2**
	baz=325						
N60A	**Cedar Hill Far**	**36.02**	**103**	P	**P**	**20 06 50.1**	**+0.1**
	baz=323						
U52A	**Thorn Hill**	**36.04**	**116**	P	**P**	**20 06 50.5**	**+0.2**
	baz=328						
R56A	**Bull Pasture M**	**36.07**	**110**	P	**P**	**20 06 50.8**	**+0.2**
	baz=326						
P58A	**Pank, Wackersv**	**36.13**	**107**	P	**P**	**20 06 51.1**	**+0.2**
	baz=324						
MVL	**Millersville**	**36.15**	**105**	*e*P	**P**	**20 06 51.5**	**+0.4**
	comp=Z,13nm,1.0s						
X48A	**Hartselle**	**36.21**	**122**	*e*P	**P**	**20 06 51.4**	**-0.3**
	comp=Z,15nm,0.9s						
X48A	**Hartselle**	**36.21**	**122**	P	**P**	**20 06 52.2**	**+0.6**
	baz=331						
T54A	**Tazewell**	**36.24**	**114**	P	**P**	**20 06 52.4**	**+0.3**
	baz=327						
W50A	**Signal Mountai**	**36.26**	**120**	*e*P	**P**	**20 06 51.9**	**-0.2**
	comp=Z,9.3nm,0.8s						
W50A	**Signal Mountai**	**36.26**	**120**	P	**P**	**20 06 52.7**	**+0.6**
	baz=330						
O60A	**Telford**	**36.32**	**104**	P	**P**	**20 06 52.9**	**+0.4**
	baz=323						
CPCT	**Cooper Cave**	**36.37**	**118**	*e*P	**P**	**20 06 53.1**	**+0.1**
	comp=Z,14nm,1.3s						
SDMD	**Soldier’s Deli**	**36.40**	**106**	*e*P	**P**	**20 06 54.1**	**+0.8**
	comp=Z,6.8nm,1.0s						
U53A	**Fall Branch**	**36.40**	**115**	P	**P**	**20 06 53.7**	**+0.3**
	baz=328,SNR=5.4						
V52A	**Sevierville**	**36.41**	**117**	*e*P	**P**	**20 06 53.8**	**+0.3**
	comp=Z,36nm,1.5s						
V52A	**Sevierville**	**36.41**	**117**	P	**P**	**20 06 53.8**	**+0.3**
	baz=329						
P59A	**Jarrettsville**	**36.42**	**106**	P	**P**	**20 06 53.6**	**+0.2**
	baz=324						
W51A	**Cleveland**	**36.52**	**119**	P	**P**	**20 06 54.5**	**+0.2**
	baz=330						
T55A	**Pulaski**	**36.54**	**113**	P	**P**	**20 06 55.1**	**+0.6**
	baz=327						
R57A	**Stanardsville**	**36.55**	**109**	P	**P**	**20 06 55.0**	**+0.4**
	baz=326						
U54A	**Nelsons Funny**	**36.59**	**114**	P	**P**	**20 06 55.6**	**+0.5**
	baz=328						
GGN	**Saint George**	**36.60**	**90**	*e*P	**P**	**20 06 55.5**	**+0.6**
	comp=Z,27nm,1.0s						
GGN	**Saint George**	**36.60**	**90**	Pn	**P**	**20 06 56.0**	**+1.1**
BLA	**Blacksburg**	**36.62**	**112**	*e*P	**P**	**20 06 55.5**	**+0.3**
	comp=Z,28nm,0.8s						
BLA	**Blacksburg**	**36.62**	**112**	*e*P	**P**	**20 06 55.5**	**+0.3**
BLA				pmax	pmax		
	comp=Z,28nm,0.8s						
BLA	**Blacksburg**	**36.62**	**112**	P	**P**	**20 06 55.6**	**+0.4**
	baz=327						
EMMW	**East Machias**	**36.62**	**91**	*e*P	**P**	**20 06 55.7**	**+0.6**
	comp=Z,69nm,1.8s						
S57A	**Dark Hollow, R**	**36.80**	**110**	*e*P	**P**	**20 06 57.4**	**+0.7**
	comp=Z,11nm,0.6s						
S57A	**Dark Hollow, R**	**36.80**	**110**	P	**P**	**20 06 57.2**	**+0.4**
	baz=326						
VBMS	**Vicksburg**	**36.85**	**128**	*e*P	**P**	**20 06 58.0**	**+0.8**
	comp=Z,24nm,0.8s						
KBS	**Kingsbay**	**36.88**	**13**	*e*P	**P**	**20 06 58.3**	**+1.3**
	comp=Z,12nm,0.8s						
KBS	**Kingsbay**	**36.88**	**13**	⇑*i*P	**P**	**20 06 58.9**	**+1.9**
KBS				pmax	pmax		
	comp=Z,41nm,0.8s						
V53A	**Saluda**	**36.89**	**116**	*e*P	**P**	**20 06 58.3**	**+0.7**
	comp=Z,17nm,1.3s						
V53A	**Saluda**	**36.89**	**116**	P	**P**	**20 06 58.1**	**+0.5**
	baz=329						
W52A	**Murphy**	**36.92**	**118**	*e*P	**P**	**20 06 58.1**	**+0.3**
	comp=Z,24nm,1.1s						
W52A	**Murphy**	**36.92**	**118**	P	**P**	**20 06 58.2**	**+0.4**
	baz=330						
T56A	**Rocky Mt**	**36.94**	**112**	P	**P**	**20 06 58.2**	**+0.3**
	baz=327						
U55A	**TA2, Sparta**	**36.94**	**113**	P	**P**	**20 06 58.2**	**+0.2**
	baz=328						

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Y49A  Blount Mountai   36.98 122  eP     P       20 06 58.5 +0.2
      comp=Z,9.8nm,0.8s
Y49A  Blount Mountai   36.98 122   P     P       20 06 58.4 +0.1
      baz=331
X51A  Calhoun          36.99 120  eP     P       20 06 58.2 -0.2
      comp=Z,14nm,0.9s
X51A  Calhoun          36.99 120   P     P       20 06 58.6 +0.3
      baz=330
LMN   Caledonia Moun   37.02  88  eP     P       20 06 58.9 +0.4
      comp=Z,15nm,1.0s
LMN   Caledonia Moun   37.02  88   Pn    P       20 06 59.2 +0.7
HKT   Hockley          37.08 137  eP     P       20 06 59.8 +0.8
      comp=Z,7.1nm,0.9s
HKT   Hockley          37.08 137  eP     P       20 06 59.8 +0.8
HKT                                pmax  pmax
      comp=Z,7.0nm,0.9s
R58B  Mineral          37.12 109  eP     P       20 07 00.2 +0.8
      comp=Z,24nm,0.9s
R58B  Mineral          37.12 109   P     P       20 06 59.7 +0.3
      baz=326
SCO   Scoresbysund     37.13  33  eP     P       20 07 00.8 +1.6
      comp=Z,18nm,1.4s
SCO   Scoresbysund     37.13  33  eP     P       20 07 00.8 +1.6
SCO                                pmax  pmax
      comp=Z,18nm,1.4s
SCO   Scoresbysund     37.13  33  i P    P       20 07 01.5 +2.3
CBN   Corbin Frederi   37.14 108  eP     P       20 07 01.0 +1.4
      comp=Z,29nm,0.6s
V54A  Nebo             37.17 115   P     P       20 07 00.4 +0.5
      baz=328
W53A  Cullowhee        37.17 117   P     P       20 07 00.5 +0.4
      baz=329
Q60A  Greensboro       37.18 106   P     P       20 07 00.1 +0.2
      baz=324
Y50A  Piedmont         37.22 121   P     P       20 07 00.7 +0.4
      baz=331
HPIG                   37.24 152  eP     P       20 07 01.1 +0.3
      comp=Z,15nm,1.5s
HPIG                              ePcP   PcP     20 09 20.7 +0.3
R59A  King George, V   37.26 108   P     P       20 07 01.3 +0.7
      baz=325
147A  Livingston       37.29 125  eP     P       20 07 01.6 +0.7
      comp=Z,60nm,0.8s
147A  Livingston       37.29 125   P     P       20 07 01.7 +0.8
      baz=333,SNR=8.5
T57A  Hurt             37.31 111  eP     P       20 07 00.7 -0.3
      comp=Z,8.8nm,0.8s
T57A  Hurt             37.31 111   P     P       20 07 01.5 +0.5
      baz=327
S58A  Poland Farm, P   37.33 109  eP     P       20 07 02.0 +0.8
      comp=Z,23nm,0.8s
S58A  Poland Farm, P   37.33 109   P     P       20 07 01.9 +0.7
      baz=326
U56A  King             37.36 113   P     P       20 07 02.1 +0.6
      baz=328
V55A  Taylorsville     37.42 114   P     P       20 07 02.6 +0.6
      baz=328
BG3   Lake Jocassee    37.42 117  eP     P       20 07 02.6 +0.6
      comp=Z,12nm,1.1s
Y51A  Rockmart         37.48 120   P     P       20 07 02.7 +0.2
      baz=331
TIXI  Tiksi            37.50 330   P     P       20 07 02.8 +0.5
      comp=Z,2.0nm,0.6s,baz=82,slow=8.3,SNR=7.9
TIXI  Tiksi            37.50 330  eP     P       20 07 02.5 +0.2
      comp=Z,11nm,1.3s
TIXI  Tiksi            37.50 330c iP     P       20 07 02.6 +0.3
TIXI                               pmax  pmax
      comp=Z,9.0nm,1.3s
TIXI                               MLR   MLR
      comp=Z,129nm,19.0s
Z49A  Columbiana       37.51 123   P     P       20 07 03.0 +0.2
      baz=332
833A  Chaparral WMA,   37.51 143  eP     P       20 07 02.6 -0.2
      comp=Z,12nm,1.0s
148A  Greensboro       37.59 124   P     P       20 07 03.7 +0.3
      baz=333
W54A  Cherokee Point   37.66 116   P     P       20 07 04.1 +0.1
      baz=329
T58A  Grand View Acr   37.67 110   P     P       20 07 04.1  0.0
      baz=327
X53A  Estanollee       37.69 118   P     P       20 07 04.6 +0.4
      baz=330
Z50A  Ashland          37.70 122  eP     P       20 07 04.1 -0.3
      comp=Z,8.0nm,0.9s
Z50A  Ashland          37.70 122   P     P       20 07 04.8 +0.4
      baz=332
V56A  Mocksville       37.76 113  eP     P       20 07 05.3 +0.4
      comp=Z,13nm,1.0s
V56A  Mocksville       37.76 113   P     P       20 07 05.1 +0.2
      baz=328
Y52A  Lilburn          37.92 119  eP     P       20 07 06.9 +0.6
      comp=Z,11nm,1.0s
Y52A  Lilburn          37.92 119   P     P       20 07 06.8 +0.5
      baz=330
149A  Jones            37.93 123   P     P       20 07 07.0 +0.6
      baz=332
Z51A  Franklin         37.95 121   P     P       20 07 07.1 +0.7
      baz=331
DRLN  Deer Lake        37.96  78  eP     P       20 07 07.6 +1.2
      comp=Z,30nm,1.0s
DRLN  Deer Lake        37.96  78   Pn    P       20 07 08.1 +1.7
KMSC  Kings Mountain   37.97 115  eP     P       20 07 05.7 -1.0
      comp=Z,13nm,1.1s
SPA0  Spitsbergen Ar   37.98  12  eP     P       20 07 05.5 -0.8
      comp=Z,67nm,1.5s
V57A  Coltrane Farms   38.01 113   P     P       20 07 07.2 +0.3
      baz=328
X54A  Belton           38.04 117   P     P       20 07 07.7 +0.4
      baz=330
PAULI Pauline          38.04 116  eP     P       20 07 06.9 -0.3
      comp=Z,11nm,0.7s
T59A  Double "B" Far   38.08 109  eP     P       20 07 07.3 -0.3
      comp=Z,11nm,0.7s
T59A  Double "B" Far   38.08 109   P     P       20 07 07.5  0.0
      baz=326
U58A  Oxford           38.12 111   P     P       20 07 08.4 +0.5
      baz=327
Y53A  Monroe           38.13 119   P     P       20 07 08.5 +0.5
      baz=330
150A  Eclectic         38.23 123   P     P       20 07 09.2 +0.4
      baz=332
W56A  Indian Trail     38.30 114   P     P       20 07 09.5 +0.1
      baz=328
T60A  Surry            38.31 108  eP     P       20 07 10.1 +0.7
      comp=Z,94nm,0.8s
T60A  Surry            38.31 108   P     P       20 07 09.5  0.0
      baz=326
S61A  Accomac          38.34 107  eP     P       20 07 10.3 +0.6
      comp=Z,216nm,1.1s
HODGE Hodges           38.36 117  eP     P       20 07 09.6 -0.3
      comp=Z,10nm,0.5s
Z52A  Williamson       38.37 120   P     P       20 07 10.5 +0.5
      baz=331
V58A  Windy Hill, Pi   38.38 112   P     P       20 07 09.6 -0.4
      baz=328
X55A  Gracelyn & Ava   38.42 116   P     P       20 07 10.6 +0.2
      baz=329
U59A  Littleton        38.49 110  eP     P       20 07 10.6 -0.4
      comp=Z,16nm,1.0s
U59A  Littleton        38.49 110   P     P       20 07 11.1 +0.1
      baz=327
HAL   Halifax          38.49  88  eP     P       20 07 10.5 -0.5
      comp=Z,28nm,1.3s
HAL   Halifax          38.49  88  eP     P       20 07 10.5 -0.5
HAL                                pmax  pmax
      comp=Z,28nm,1.3s
Y54A  Tignall          38.50 118   P     P       20 07 11.2 +0.2
      baz=330
W57A  Gilead           38.54 113  eP     P       20 07 11.1 -0.3
      comp=Z,15nm,0.6s
W57A  Gilead           38.54 113   P     P       20 07 11.4  0.0
      baz=328
GOGA  Godfrey          38.56 119  eP     P       20 07 12.0 +0.4
      comp=Z,15nm,0.8s
GOGA  Godfrey          38.56 119  eP     P       20 07 12.0 +0.4
GOGA                               pmax  pmax
      comp=Z,15nm,0.8s
GOGA  Godfrey          38.56 119   P     P       20 07 11.7  0.0
      baz=331,SNR=7.1
Z53A  Monticello       38.63 119   P     P       20 07 12.5 +0.3
      baz=331,SNR=5.9
152A  Waverly Hall     38.70 121  eP     P       20 07 12.8 -0.1
      comp=Z,17nm,0.9s
152A  Waverly Hall     38.70 121   P     P       20 07 13.1 +0.3
      baz=332
MA2   Magadan          38.72 306   P     P       20 07 13.5 +0.8
      comp=Z,3.3nm,0.4s,baz=7.6,slow=15,SNR=2.9
MA2                                LR    LR      20 24 20.8
      comp=Z,171nm,18.9s,baz=70,slow=38
MA2   Magadan          38.72 306  eP     P       20 07 14.0 +1.3
      comp=Z,34nm,1.5s
MA2   Magadan          38.72 306⇓eP     P       20 07 12.8 +0.1
MA2                                pmax  pmax
      comp=Z,7.0nm,1.1s
JSC   Jenkinsville     38.74 116  eP     P       20 07 13.7 +0.6
      comp=Z,16nm,0.7s
JSC   Jenkinsville     38.74 116  eP     P       20 07 13.7 +0.6
JSC                                pmax  pmax
      comp=Z,16nm,0.7s
BIRD  Birdtown, Kers   38.77 114  eP     P       20 07 13.4 +0.1
      comp=Z,19nm,0.8s
Y55A  Saluda           38.78 117   P     P       20 07 13.5  0.0
      baz=330
V59A  Middlesex        38.78 111   P     P       20 07 13.5  0.0
      baz=327
349A  Repton           38.88 125   P     P       20 07 14.8 +0.4
      baz=333
GBN   Guysborough      38.90  86  eP     P       20 07 15.3 +1.0
      comp=Z,105nm,1.7s
251A  Midway           38.93 122   P     P       20 07 15.2 +0.5
      baz=332
Z54A  Sparta           38.97 118   P     P       20 07 15.5 +0.4
      baz=330,SNR=7.3
W58A  Raeford          38.98 113   P     P       20 07 15.6 +0.5
      baz=328
BRAL  Brewton          39.10 125  eP     P       20 07 17.3 +1.2
      comp=Z,54nm,1.2s
U61A  Possum Corner    39.10 109  eP     P       20 07 16.7 +0.5
      comp=Z,124nm,1.6s
V60A  Jim Taylor Roa   39.22 110  eP     P       20 07 18.4 +1.4
      comp=Z,77nm,1.6s
V60A  Jim Taylor Roa   39.22 110   P     P       20 07 17.4 +0.4
      baz=327
Z55A  Blythe           39.28 117   P     P       20 07 18.1 +0.4
      baz=330
X58A  Rowland          39.33 113  eP     P       20 07 19.4 +1.4
      comp=Z,21nm,0.9s
X58A  Rowland          39.33 113   P     P       20 07 18.2 +0.2
      baz=328
CNNC  Cliffs of the    39.38 111  eP     P       20 07 18.9 +0.4
      comp=Z,19nm,0.4s
CNNC                              eS     S       20 13 23.3 +3.2
154A  Montrose         39.41 119  eP     P       20 07 18.7  0.0
      comp=Z,57nm,1.3s
253A  Americus         39.47 121  eP     P       20 07 20.7 +1.4
      comp=Z,78nm,1.5s
450A  Crestview        39.60 125   P     P       20 07 21.1 +0.8
      baz=333
352A  Blakely          39.66 122  eP     P       20 07 20.8  0.0
      comp=Z,36nm,0.9s
352A  Blakely          39.66 122   P     P       20 07 21.3 +0.5
      baz=332
155A  Kite             39.66 118   P     P       20 07 21.1 +0.3
      baz=331
Y58A  Scranton         39.74 114  eP     P       20 07 22.2 +0.8
      comp=Z,94nm,1.3s
Y58A  Scranton         39.74 114   P     P       20 07 21.6 +0.2
      baz=329
Z57A  Bowman           39.82 116   P     P       20 07 22.4 +0.3
      baz=330
254A  Abbeville        39.91 120   P     P       20 07 23.2 +0.3
      baz=331
JMIC  Jan Mayen        39.96  27  LR     LR      20 24 21.3
      comp=Z,136nm,19.0s,baz=330,slow=37
PET   Petropavlovsk    39.97 294  eP     P       20 07 23.8 +0.6
      comp=Z,18nm,1.3s
PET   Petropavlovsk    39.97 294  eP     P       20 07 23.8 +0.6
PET                                pmax  pmax
      comp=Z,18nm,1.3s
353A  Camilla          40.06 121   P     P       20 07 24.5 +0.4
      baz=332
452A  Marianna         40.12 123   P     P       20 07 24.8 +0.2
      baz=333
Z58A  St. Stephen      40.16 115   P     P       20 07 25.5 +0.5
      baz=329
TIGA  Tifton           40.23 121  eP     P       20 07 25.6  0.0
      comp=Z,55nm,0.3s
255A  Hazlehurst       40.26 119  eP     P       20 07 26.9 +1.1
      comp=Z,165nm,1.9s
255A  Hazlehurst       40.26 119   P     P       20 07 25.8  0.0
      baz=331
Y60A  Bolivia          40.28 112  eP     P       20 07 26.6 +0.7
      comp=Z,159nm,1.3s
PEA0B Petropavlovsk-   40.32 294  eP     P       20 07 26.6 +0.4
      comp=Z,58nm,1.5s
PETK  Petropavlovsk-   40.32 294   P     P       20 07 26.5 +0.3
      comp=Z,9.3nm,0.7s,baz=66,slow=11,SNR=22
453A  Whigham          40.45 122  eP     P       20 07 27.5 +0.1
      comp=Z,29nm,0.8s
453A  Whigham          40.45 122   P     P       20 07 27.6 +0.1
      baz=332
552A  Lynn Haven       40.71 123   P     P       20 07 30.2 +0.6
      baz=333
LNIG  Linares          40.73 144  eP     P       20 07 29.8  0.0
      comp=Z,41nm,2.0s
454A  Quitman          40.85 121   P     P       20 07 31.1 +0.4
      baz=332
455A  Stateville       41.07 120   P     P       20 07 32.9 +0.4
      baz=332
BORG  Borgarnes        41.25  39  LR     LR      20 24 11.9
      comp=Z,65nm,20.9s,baz=333,slow=36
554A  Perry            41.39 122   P     P       20 07 35.6 +0.5
      baz=333
555A  McAlpin          41.65 121  eP     P       20 07 38.4 +1.2
      comp=Z,141nm,1.8s
ZAIG  Zacatecas        41.97 149  eP     P       20 07 39.4 -0.9
      comp=Z,4.6nm,0.8s
556A  Lake Butler      41.98 120   P     P       20 07 40.7 +0.8
      baz=332
557A  Orange Park      42.24 119   P     P       20 07 42.4 +0.2
      baz=332
656A  Willston         42.48 121  eP     P       20 07 44.7 +0.6
      comp=Z,46nm,0.9s
656A  Willston         42.48 121   P     P       20 07 44.7 +0.6
      baz=332
SKR   Severo-Kuril's   42.75 293⇑eP     P       20 07 48.3 +2.3
757A  Oxford           43.05 121   P     P       20 07 49.4 +0.7
      baz=333
DWPF  Disney Wildern   44.04 120   P     P       20 07 57.6 +0.9
      baz=333
YAK   Yakutsk          44.24 320  eP     P       20 07 57.8 -0.1
      comp=Z,15nm,0.8s
YAK   Yakutsk          44.24 320  eP     P       20 07 57.8 -0.1
YAK                                pmax  pmax
      comp=Z,15nm,0.8s
LOF   Lofoten          46.58  20  eP     P       20 08 16.0 -0.4
ARA0  ARCESS Array S   46.94  14  ePcP   PcP     20 09 50.9 -0.6
ARCES ARCESS Array B   46.94  14   P     P       20 08 19.1 -0.1
      comp=Z,5.0nm,0.7s,baz=355,slow=8.2,SNR=10
ARCES                              PcP   PcP     20 09 50.9 -0.6
      comp=Z,3.0nm,0.6s,baz=347,slow=5.0,SNR=3.6
ARCES                              LR    LR      20 28 47.6
      comp=Z,148nm,18.5s,baz=336,slow=37
ARE0  ARCESS Array S   46.94  14  eP     P       20 08 19.2  0.0
      comp=Z,5.5nm,1.9s
ARE0  ARCESS Array S   46.94  14  eP     P       20 08 18.2 -1.0
KTK1  Kautokeino       47.16  15  eP     P       20 08 21.2 +0.3
NKL   Nikolayevsk      47.24 305  eP     P       20 08 21.2 -0.5
NKL                                pmax  pmax
      comp=Z,28nm,1.1s
KONS  Konsvik          47.99  21  eP     P       20 08 26.1 -1.2
TYV   Tymovskoe        48.23 302  eP     P       20 08 29.5 +0.1
TYV                                pmax  pmax
      comp=Z,10.0nm,1.1s
TYV                                pmax  pmax
      comp=Z,100nm,3.2s
MOR8  Moi Rana         48.51  21  eP     P       20 08 31.9 +0.5
TEIG  Tepich           48.60 133  eP     P       20 08 33.4 +0.7
      comp=Z,34nm,0.9s
LVZ   Lovozero         49.43  10  eP     P       20 08 38.5  0.0
      comp=Z,70nm,1.4s
LVZ   Lovozero         49.43  10  eP     P       20 08 38.5  0.0
LVZ                                pmax  pmax
      comp=Z,70nm,1.4s
NSS   Namsos           49.57  23  eP     P       20 08 38.2 -1.3
APA   Apatity          49.65  11⇑iP     P       20 08 51.9  +12
APA                                pmax  pmax
      comp=Z,8.0nm,1.0s
APA                                MLR   MLR
      comp=Z,200nm,15.0s
AKN   Aaknes           50.69  27  eP     P       20 08 48.8 +0.7
GRNR  Gornyy           50.74 306  eP     P       20 08 48.1 -0.5
GRNR                               pmax  pmax
      comp=Z,7.0nm,1.0s
CCIG  Comitan          51.02 139  eP     P       20 08 52.0 +0.7
      comp=Z,19nm,1.0s
DOMB  Dombas           51.25  26  eP     P       20 08 52.7 +0.4
YSS   Yuzh-Sakhalins   51.27 299  eP     P       20 08 52.7 +0.1
      comp=Z,24nm,0.7s
YSS   Yuzh-Sakhalins   51.27 299  eP     P       20 08 52.9 +0.3
YSS                               e              20 08 56.0
YSS                               e              20 09 01.3
YSS                                pmax  pmax
      comp=Z,30nm,0.7s
ZEA   Zeya             51.63 314  eP     P       20 09 00.5 +5.2
NC204 NORSAR Array S   52.29  26  eP     P       20 09 00.6 +0.5
      comp=Z,27nm,0.9s
SKAR  Skarslia         52.32  27  eP     P       20 09 00.8 +0.5
NC303 NORSAR Array S   52.46  25  eP     P       20 09 01.9 +0.6
      comp=Z,35nm,0.8s
NBO00 NORSAR Array S   52.52  26  eP     P       20 09 02.3 +0.5
      comp=Z,21nm,0.9s
NB2   NORSAR Subarra   52.60  25   P     P       20 09 02.5 +0.1
      comp=Z,4.1nm,0.7s,baz=331,slow=7.4
NB2   NORSAR Subarra   52.60  25   P     P       20 09 02.5 +0.1
      baz=331,slow=7.4
NOA   NORSAR Array B   52.60  25   P     P       20 09 02.8 +0.4
      comp=Z,8.4nm,0.8s,baz=334,slow=7.6,SNR=24
NB201 NORSAR Array S   52.61  25  eP     P       20 09 02.8 +0.3
      comp=Z,46nm,1.2s
NC405 NORSAR Array S   52.63  25  eP     P       20 09 02.8 +0.2
      comp=Z,77nm,1.3s
ODD1  Odda             52.64  29  eP     P       20 09 03.4 +0.7
NAO01 NORSAR Array S   52.71  26  eP     P       20 09 04.1 +0.9
      comp=Z,36nm,1.3s
NC602 NORSAR Array S   52.94  25  eP     P       20 09 05.5 +0.6
      comp=Z,24nm,1.0s
NC602 NORSAR Array S   52.94  25  eP     P       20 09 05.4 +0.6
BLS5  Blasjo           53.04  29  eP     P       20 09 06.5 +0.9
KONO  Kongsberg        53.53  27  eP     P       20 09 09.2  0.0
      comp=Z,12nm,1.0s
KONO  Kongsberg        53.53  27d iP     P       20 09 10.2 +1.0
KONO                               pmax  pmax
      comp=Z,12nm,1.0s
ASAJ  Asahikawa        53.62 297   P     P       20 09 10.3 +0.2
      comp=Z,3.0nm,0.6s,baz=64,slow=4.7,SNR=7.6
KLR   Kul'dur          53.75 308   P     P       20 09 11.2 +0.2
      comp=Z,4.0nm,0.8s,baz=30,slow=7.5,SNR=12
KLR   Kul'dur          53.75 308c iP     P       20 09 10.5 -0.5
KLR                                pmax  pmax
      comp=Z,8.0nm,1.0s
ESK   Eskdalemuir      54.19  37  eP     P       20 09 14.1  0.0
      comp=Z,9.9nm,0.8s
ESK   Eskdalemuir      54.19  37  i P    P       20 09 15.0 +1.0
FIA1  FINESS Array S   54.75  17  eP     P       20 09 17.9 -0.1
      comp=Z,17nm,0.9s
FINES FINESS Array B   54.75  17   P     P       20 09 18.1 +0.1
      comp=Z,10nm,0.6s,baz=358,slow=7.5,SNR=43
FINES                             LR     LR      20 32 54.5
      comp=Z,126nm,18.2s,baz=262,slow=36
DSB   Dublin           55.04  40  eP     P       20 09 21.0 +0.7
      comp=Z,15nm,1.4s
ERM   Erimo            55.10 295  eP     P       20 09 21.2 +0.4
      comp=Z,16nm,0.8s
ERM   Erimo            55.10 295⇓eP     P       20 09 21.4 +0.5
ERM                                pmax  pmax
      comp=Z,18nm,0.8s
MUD   Monsted U'grnd   56.35  29  i P    P       20 09 31.1 +1.5
MUD                                pmax  pmax
      comp=Z,12nm,0.7s
MUD   Monsted U'grnd   56.35  29  i P    P       20 09 31.1 +1.5
      comp=Z,12nm,0.7s
SDDR  Presa de Saban   56.37 115  eP     P       20 09 31.7 +1.4
      comp=Z,26nm,1.2s
PRGR  Permogore        56.38   6⇑iP     P       20 09 30.3 +0.6
PRGR                              e*PP   sP      20 09 33.6 +1.7
PRGR                               pmax  pmax
      comp=Z,41nm,0.9s
ACON  Acoyapa          57.34 133  eP     P       20 09 37.6 +0.5
      comp=Z,31nm,1.4s
VSU   Vasula           57.72  18  eP     P       20 09 38.9 -0.4
VSU                                IAmb  IAmb    20 09 40.0
      comp=Z,71nm,0.5s
VSU   Vasula           57.72  18c iP     P       20 09 39.4 +0.1
VSU                                pmax  pmax
      comp=Z,50nm,0.6s
SLIT  Slitere, Latvi   57.83  21  eP     P       20 09 39.9 -0.2
SLIT                               IAmb  IAmb    20 09 40.8
      comp=Z,310nm,0.5s
USA0B Ussuriysk Arra   57.85 304  eP     P       20 09 40.4  0.0
      comp=Z,39nm,1.8s
USRK  Ussuriysk Ar.    57.85 304   P     P       20 09 40.4  0.0
      comp=Z,3.7nm,0.7s,baz=37,slow=6.5,SNR=9.2
PCDR  Punta Cana, DR   58.03 112  eP     P       20 09 42.0  0.0
      comp=Z,227nm,1.3s
MDJ   Mudanjiang       58.42 306   P     P       20 09 47.4 +3.0
MDJ                                pmax  pmax
      comp=Z,6.0nm,0.6s
MDJ                                pmax  pmax
      comp=Z,200nm,4.4s
BSD   Bornholm Skovb   58.84  26  i P    P       20 09 47.9 +0.8
BSD                                pmax  pmax
      comp=Z,6.0nm,0.5s
BSD   Bornholm Skovb   58.84  26  i P    P       20 09 47.9 +0.8
      comp=Z,5.9nm,0.5s
MPR   Mayaguez         58.84 111  eP     P       20 09 48.0 +0.4
      comp=Z,92nm,0.4s
SJG   San Juan         59.37 110  eP     P       20 09 51.8 +0.5
      comp=Z,16nm,0.8s
SJG   San Juan         59.37 110  eP     P       20 09 51.8 +0.5
SJG                                pmax  pmax
      comp=Z,16nm,0.8s
HUMP  Col San Antoni   59.47 110  eP     P       20 09 52.7 +0.7
      comp=Z,16nm,0.9s
CUPR  Culebra, Puert   59.58 109  eP     P       20 09 52.7  0.0
      comp=Z,21nm,1.0s
MTP   Monte Pirata     59.65 110  eP     P       20 09 53.8 +0.6
      comp=Z,15nm,1.0s
STVI  Saint Thomas     59.69 109  eP     P       20 09 53.8 +0.4
      comp=Z,20nm,0.9s
ISAL  Salakas          60.42  19  eP     P       20 09 58.9 +0.8
ISAL                               IAmb  IAmb    20 10 05.2
      comp=Z,25nm,1.3s
TLY   Talaya           60.42 328   P     P       20 09 58.4 +0.2
      comp=Z,1.4nm,0.7s,baz=15,slow=8.3,SNR=4.7
TLY   Talaya           60.42 328  eP     P       20 09 57.8 -0.4
      comp=Z,5.2nm,1.0s
TLY   Talaya           60.42 328ceP     P       20 09 58.2  0.0
IIGN  Ignalina         60.65  19  eP     P       20 10 00.5 +0.9
IIGN                               IAmb  IAmb    20 10 04.6
      comp=Z,19nm,0.9s
CN2   Changchun        60.66 309  eP     P       20 09 59.3 -0.6
CN2                                pmax  pmax
      comp=Z,10.0nm,1.0s
SMRT  St. Maarten      60.79 107  eP     P       20 10 01.3 +0.2
      comp=Z,34nm,1.1s
BCLA  Clavier          60.90  34  ⇑P     P       20 10 02.0 +0.7
      comp=Z,8.4nm,1.3s
MEM   Membach          60.91  34  ⇑P     P       20 10 02.5 +1.0
      comp=Z,12nm,0.8s
DOU   Dourbes          61.00  35  ⇓P     P       20 10 02.9 +0.8
MOY   Mondy            61.08 330  eP     P       20 10 02.9 +0.1
MOY                                pmax  pmax
      comp=Z,14nm,2.4s
SEUS  St. Eustatius    61.32 108  eP     P       20 10 05.0 +0.4
      comp=Z,108nm,0.9s
SVE   Sverdlovsk       61.38 357⇑iP     P       20 10 05.6 +1.0
SVE                                pmax  pmax
      comp=Z,24nm,1.1s
SUW   Suwalki          61.44  21  eP     P       20 10 05.0  0.0
SUW   Suwalki          61.44  21  eP     P       20 10 05.1  0.0
      comp=Z,34nm,0.9s
SUW   Suwalki          61.44  21  eP     P       20 10 05.1  0.0
SUW                                pmax  pmax
      comp=Z,34nm,0.9s
MOS   Moscow           61.67  12  eP     P       20 10 06.1 -0.5
MOS                                pmax  pmax
      comp=Z,32nm,0.8s
ZAK   Zakamensk        61.71 328  eP     P       20 10 05.3 -1.7
ZAK                                pmax  pmax
      comp=Z,3.0nm,1.1s
MICGM Minsk            61.72  18  e      P       20 10 07.0 +0.1
MNK   Minsk            61.72  18  eP     P       20 10 07.0 +0.1
MJB9  Matsu-Tunnel     61.77 295  eP     P       20 10 07.5 -0.1
      comp=Z,12nm,0.9s
MAJO  Matsushiro       61.77 295  eP     P       20 10 07.5 -0.1
      comp=Z,11nm,0.8s
MAJO  Matsushiro       61.77 295⇓iP     P       20 10 07.7 +0.1
MAJO                               pmax  pmax
      comp=Z,23nm,1.6s
MAT   Matsushiro       61.77 295   P     P       20 10 07.3 -0.3
```

MJAR	Matsushiro Arr	61.77	295	P	P	20 10 07.3	-0.3
	comp=Z,3.5nm,0.7s,baz=16,slow=5.3,SNR=8.9						
WLF	Walferdange	61.81	34	eP	P	20 10 07.6	0.0
	comp=Z,46nm,1.0s						
WLF	Walferdange	61.81	34	⇑P	P	20 10 07.3	-0.3
	comp=Z,9.7nm,1.2s						
ARU	Arti	61.82	358	LR	LR	20 40 13.2	
	comp=Z,76nm,18.7s,baz=353,slow=39						
ARU	Arti	61.82	358	eP	P	20 10 07.8	+0.2
	comp=Z,45nm,1.3s						
ARU	Arti	61.82	358	c iP	P	20 10 07.9	+0.3
ARU				pmax	pmax		
	comp=Z,21nm,1.3s						
BCIP	Isla Barro Col	61.84	128	eP	P	20 10 07.8	-0.3
	comp=Z,14nm,0.8s						
CLL	Collm	61.98	29	eP	P	20 10 09.1	+0.4
	comp=Z,12nm,0.7s						
CLL	Collm	61.98	29	⇑iP	P	20 10 09.4	+0.7
CLL				eS	S	20 18 38.0	+4.9
CLL				pmax	pmax		
	comp=Z,12nm,0.7s						
CLL	Collm	61.98	29	⇑iP	P	20 10 09.4	+0.7
	comp=Z,12nm,0.7s						
CLL				eS	S	20 18 38.0	+4.9
CLL				eSS	SS	20 23 00.0	+26
CLL				LmH		20 38 00.0	
	comp=N,100nm,20.8s						
CLL				LmH		20 38 00.0	
	comp=E,100nm,18.9s						
CLL				LmV		20 39 00.0	
	comp=Z,100nm,18.0s						
ZAA0	Zalesovo Array	62.09	341	eP	P	20 10 08.7	-0.7
	comp=Z,9.6nm,0.8s						
ZALV	Zalesovo Beam	62.09	341	P	P	20 10 09.1	-0.3
	comp=Z,9.5nm,0.7s,baz=11,slow=7.4,SNR=38						
OBN	Obninsk	62.19	12	eP	P	20 10 09.8	-0.2
	comp=Z,23nm,0.9s						
OBN	Obninsk	62.19	12	deP	P	20 10 10.5	+0.5
OBN				e		20 10 53.3	
OBN				e		20 12 25.0	
OBN				pmax	pmax		
	comp=Z,26nm,1.0s						
OBN				MLR	MLR		
	comp=Z,85nm,17.0s						
CLF	Chambon-Foret	62.23	38	eP	P	20 10 11.2	+0.8
	comp=Z,20nm,1.0s						
BRG	Berggiesshubel	62.60	28	eP	P	20 10 13.6	+0.8
	comp=Z,7.9nm,0.9s						
BRG				e		20 10 17.4	
	comp=Z,13nm,1.0s						
BRG	Berggiesshubel	62.60	28	eP	P	20 10 13.6	+0.8
BRG				e		20 10 17.4	
BRG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,13nm,1.0s						
NKC	Novy Kostel	62.85	30	eP	P	20 10 15.9	+1.3
NKC				e		20 10 19.2	
NKC	Novy Kostel	62.85	30	eP	P	20 10 15.9	+1.3
NKC				epP	sP	20 10 19.2	+2.4
ULN	Ulaanbaatar	63.01	324	eP	P	20 10 15.4	-0.5
	comp=Z,4.9nm,0.8s						
ULN	Ulaanbaatar	63.01	324	c iP	P	20 10 15.9	0.0
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PVCC	Panska Ves	63.06	28	AMS	AMS	20 40 50.0	
	comp=Z,100nm,17.3s						
GRA1	Grafenberg Arr	63.07	31	eP	P	20 10 17.1	+1.1
	comp=Z,18nm,0.7s						
GRF	Grafenberg Arr	63.07	31	eP	P	20 10 17.1	+1.1
GRF				pmax	pmax		
	comp=Z,18nm,0.7s						
GRFO	Grafenberg	63.07	31	eP	P	20 10 17.2	+1.2
	comp=Z,22nm,0.7s						
GRFO	Grafenberg	63.07	31	eP	P	20 10 17.2	+1.2
GRFO				pmax	pmax		
	comp=Z,22nm,0.7s						
KSP	Ksiaz	63.14	27	eP	P	20 10 17.7	+1.2
KSP	Ksiaz	63.14	27	eP	P	20 10 17.7	+1.2
SONM	Songino Array	63.22	324	P	P	20 10 17.0	-0.2
	comp=Z,2.2nm,0.8s,baz=30,slow=4.0,SNR=14						
SONM				PKPPKP	P'P'df	20 39 00.9	-22
	comp=Z,0.9nm,1.1s,baz=163,slow=1.5,SNR=4.5						
INU	Inuyama	63.30	295	eP	P	20 10 18.9	+1.2
	comp=Z,44nm,1.6s						
CHVC	Chvalec	63.33	27	eP	P	20 10 18.4	+0.6
OSTC	Ostas	63.39	27	eP	P	20 10 19.2	+1.0
OSTC				ex	x	20 10 22.6	
OSTC				AMS	AMS	20 39 30.0	
	comp=Z,100nm,15.9s						
UPC	Upice	63.40	27	eP	P	20 10 19.1	+0.9
UPC				MLR	MLR		
	comp=Z,100nm,18.7s						
UPC	Upice	63.40	27	eP	P	20 10 19.1	+0.9
UPC				AMS	AMS	20 41 00.0	
	comp=Z,100nm,18.7s						
ECH	Echery	63.41	34	eP	P	20 10 19.0	+0.7
	comp=Z,11nm,1.1s						
STU	Stuttgart	63.42	33	eP	P	20 10 18.7	+0.4
	comp=Z,15nm,0.9s						
STU	Stuttgart	63.42	33	eP	P	20 10 18.7	+0.4
STU				pmax	pmax		
	comp=Z,15nm,0.9s						
PRU	Pruhonice	63.56	28	eP	P	20 10 20.3	+1.0
PRU				e		20 10 23.8	
PRU				MLR	MLR		
	comp=Z,100nm,18.9s						
PRU	Pruhonice	63.56	28	eP	P	20 10 20.3	+1.0
PRU				epP	sP	20 10 23.8	+2.4
PRU				AMS	AMS	20 40 40.0	
	comp=Z,100nm,18.9s						
BFO	Black Forest	63.61	33	eP	P	20 10 20.5	+0.9
	comp=Z,20nm,1.3s						
BFO	Black Forest	63.61	33	eP	P	20 10 20.5	+0.9
BFO				pmax	pmax		
	comp=Z,21nm,1.3s						
DPC	Dobruska-Polom	63.61	27	eP	P	20 10 20.9	+1.3
DPC				e		20 10 23.5	
DPC				MLR	MLR		
	comp=Z,100nm,16.7s						
DPC	Dobruska-Polom	63.61	27	eP	P	20 10 20.9	+1.3
DPC				epP	sP	20 10 23.5	+1.7
DPC				AMS	AMS	20 39 20.0	
	comp=Z,100nm,16.7s						
GOPC	GO Pecny, Ondr	63.69	28	eP	P	20 10 21.1	+1.0
GOPC				e		20 10 24.3	
GOPC				MLR	MLR		
	comp=Z,100nm,17.8s						
GOPC	GO Pecny, Ondr	63.69	28	eP	P	20 10 21.1	+1.0
GOPC				epP	sP	20 10 24.3	+2.0
GOPC				AMS	AMS	20 40 00.0	
	comp=Z,100nm,17.8s						
KHC	Kasperske Hory	64.15	29	eP	P	20 10 24.3	+1.1
	comp=Z,6.9nm,1.0s						
KHC	Kasperske Hory	64.15	29	eP	P	20 10 24.6	+1.4
KHC	Kasperske Hory	64.15	29	eP	P	20 10 24.6	+1.4
MORC	Moravsky Berou	64.41	26	eP	P	20 10 25.8	+0.9
	comp=Z,5.0nm,0.8s						
MORC	Moravsky Berou	64.41	26	⇓iP	P	20 10 26.2	+1.3
MORC	Moravsky Berou	64.41	26	eP	P	20 10 25.5	+0.6
TREC	Trest	64.42	28	eP	P	20 10 26.0	+1.0
TREC				MLR	MLR		
	comp=Z,100nm,16.5s						
TREC	Trest	64.42	28	eP	P	20 10 26.0	+1.0
TREC				AMS	AMS	20 41 50.0	
	comp=Z,100nm,16.5s						
GEC2	GERESS Array S	64.44	29	eP	P	20 10 25.9	+0.7
	comp=Z,9.4nm,0.9s						
GERES	GERESS Array B	64.44	29	P	P	20 10 26.3	+1.1
	comp=Z,4.8nm,0.7s,baz=341,slow=5.0,SNR=51						
GERES				PKPPKP	P'P'df	20 39 14.6	-6.2
	comp=Z,0.3nm,0.5s,baz=116,slow=3.1,SNR=5.2						
GERES				LR	LR	20 41 17.2	
	comp=Z,80nm,18.3s,baz=34,slow=39						
OJC	Ojcow	64.45	25	eP	P	20 10 25.9	+0.8
OJC	Ojcow	64.45	25	eP	P	20 10 25.5	+0.4
	comp=Z,14nm,0.9s						
OJC	Ojcow	64.45	25	eP	P	20 10 25.9	+0.8
FDF	Fort de France	64.57	107	eP	P	20 10 26.5	+0.2
	comp=Z,84nm,1.3s						
BRVK	Borovoye	64.65	350	eP	P	20 10 26.3	0.0
	comp=Z,16nm,0.8s						
BRVK	Borovoye	64.65	350	c iP	P	20 10 26.5	+0.1
BRVK				pmax	pmax		
	comp=Z,17nm,0.8s						
VRAC	Vranov	64.65	27	⇓iP	P	20 10 28.0	+1.5
VRAC	Vranov	64.65	27	eP	P	20 10 27.6	+1.1
BVAR	Borovoye Array	64.67	350	PKPPKP	P'P'df	20 39 03.1	-18
	comp=Z,0.3nm,0.3s,baz=205,slow=5.7,SNR=5.5						
KRUC	Moravsky	64.84	27	eP	P	20 10 28.6	+0.9
LPSR	Galich'ya Gora	64.90	11	eP	P	20 10 28.0	0.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
POLO	Lamas de Olo	64.96	48	eP	P	20 10 29.2	+0.5
	comp=Z,10nm,1.3s						
DAVA	Damuels	64.97	33	eP	P	20 10 30.0	+1.2
	comp=Z,5.5nm,0.8s						
RETA	Reutte	65.00	32	i P	P	20 10 29.8	+0.9
	comp=Z,5.8nm,1.0s						
SENIN	Lac Senin/Sane	65.15	35	eP	P	20 10 30.7	+0.7
	comp=Z,6.8nm,1.0s						
KSRS	Korea Array	65.22	303	P	P	20 10 30.0	-0.2
	comp=Z,3.6nm,0.8s,baz=27,slow=7.7,SNR=7.6						
MOTA	Moosalm	65.22	32	i P	P	20 10 31.3	+0.9
	comp=Z,3.8nm,0.7s						
KS15	Wonju Array Si	65.24	303	eP	P	20 10 30.2	-0.3
	comp=Z,52nm,1.8s						
ZARC	Zaragoza, Cauc	65.26	124	eP	P	20 10 30.7	-0.1
JAVC	Velka Javorina	65.31	27	eP	P	20 10 32.6	+1.8
NIE	Niedzica	65.31	25	eP	P	20 10 32.0	+1.2
NIE	Niedzica	65.31	25	eP	P	20 10 32.0	+1.2
WATA	Walderalm	65.35	31	i P	P	20 10 32.3	+1.1
	comp=Z,5.5nm,0.6s						
SQTA	Sankt Quirin	65.36	32	i P	P	20 10 32.6	+1.4
	comp=Z,6.5nm,0.7s						
SSB	Saint Sauveur	65.38	37	eP	P	20 10 31.3	0.0
	comp=Z,7.3nm,0.9s						
SSB	Saint Sauveur	65.38	37	eP	P	20 10 31.3	0.0
SSB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LANS	Liptovska Anna	65.40	25	eP	P	20 10 33.4	+2.0
LANS	Liptovska Anna	65.40	25	eP	P	20 10 33.4	+2.0
MVO	Moncorvo	65.42	48	eP	P	20 10 32.4	+0.8
	comp=Z,26nm,1.2s						
WTTA	Wattenberg	65.43	31	i P	P	20 10 33.2	+1.5
	comp=Z,11nm,0.8s,SNR=8.5						
FETA	Feichten	65.43	32	eP	P	20 10 33.3	+1.6
	comp=Z,8.6nm,0.9s,SNR=8.9						
MOA	Molln	65.51	29	eP	P	20 10 32.7	+0.6
	comp=Z,5.7nm,1.4s						
KWP	Kalwaria Pacla	65.56	23	eP	P	20 10 33.5	+1.1
KWP	Kalwaria Pacla	65.56	23	eP	P	20 10 33.2	+0.8
	comp=Z,214nm,1.0s						
KWP	Kalwaria Pacla	65.56	23	eP	P	20 10 33.5	+1.1
TUE	Stuetta	65.59	33	eP	P	20 10 33.3	+0.5
	comp=Z,10nm,0.9s						
AKASG	Malin Array Be	65.61	18	P	P	20 10 32.7	+0.1
	comp=Z,21nm,0.6s,baz=345,slow=6.4,SNR=82						
AKASG				LR	LR	20 38 44.0	
	comp=Z,90nm,18.7s,baz=300,slow=36						
AKBB	Malin Array Si	65.61	18	eP	P	20 10 32.5	-0.1
	comp=Z,33nm,0.7s						
AKBB	Malin Array Si	65.61	18	eP	P	20 10 32.5	-0.1
AKBB				pmax	pmax		
	comp=Z,33nm,0.7s						
LVV	L'vov	65.62	22	eP	P	20 10 33.3	+0.6
MODS	Modra-Piesok	65.68	27	eP	P	20 10 33.7	+0.5
MODS				pmax	pmax		
	comp=Z,25nm,1.1s						
MODS	Modra-Piesok	65.68	27	eP	P	20 10 33.7	+0.5
FUORN	Ofenpass-Fuorn	65.69	33	eP	P	20 10 34.9	+1.4
	comp=Z,17nm,0.9s						
SDV	Santo Domingo	65.69	119	eP	P	20 10 34.1	+0.3
	comp=Z,12nm,0.8s						
DGZ	Jazzator, Alta	65.76	338	c iP	P	20 10 34.0	+0.2
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CONA	Conrad Observa	65.80	28	eP	P	20 10 35.2	+1.2
	comp=Z,7.8nm,0.7s,SNR=9.6						
ZST	Bratislava	65.81	27	eP	P	20 10 34.8	+0.8
ZST	Bratislava	65.81	27	eP	P	20 10 34.8	+0.8
PCAS	Casmilo, Conde	65.88	49	eP	P	20 10 35.1	+0.5
	comp=Z,42nm,1.6s						
VYHS	Vyhne	65.90	26	eP	P	20 10 35.2	+0.6
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	65.90	26	eP	P	20 10 35.2	+0.6
MTE	Manteigas	65.91	48	eP	P	20 10 35.3	+0.5
	comp=Z,25nm,1.3s						
MTE	Manteigas	65.91	48	eP	P	20 10 35.0	+0.2
	comp=Z,12nm,0.9s						
CAPV	Capacho	65.93	121	eP	P	20 10 35.7	+0.3
KBA	Koelnbreinsper	66.02	30	i P	P	20 10 37.0	+1.4
	comp=Z,20nm,0.7s,SNR=21						
BRRC	Barranca, Sant	66.06	123	eP	P	20 10 36.0	0.0
KURK	Kurchatov	66.11	344	eP	P	20 10 35.2	-0.6
	comp=Z,9.1nm,0.8s						
KURK	Kurchatov	66.11	344	eP	P	20 10 35.2	-0.6
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ABTA	Abfaltersbach	66.13	31	i P	P	20 10 37.0	+0.9
	comp=Z,7.1nm,1.1s						
KOLS	Kolonicke sedl	66.16	23	eP	P	20 10 37.5	+1.3
KOLS				pmax	pmax		
	comp=Z,15nm,1.2s						
KOLS	Kolonicke sedl	66.16	23	eP	P	20 10 37.5	+1.3
SOP	Sopron	66.18	28	⇑eP	P	20 10 37.1	+0.7
BNI	Bardonecchia	66.19	36	eP	P	20 10 38.3	+1.7
	comp=Z,12nm,1.4s						
BNI	Bardonecchia	66.19	36	eP	P	20 10 38.3	+1.7
BNI				pmax	pmax		
	comp=Z,12nm,1.4s						
HELC	Santa Helena	66.19	125	eP	P	20 10 38.0	+0.7
PAMC	Pamplona, Colo	66.25	122	eP	P	20 10 38.4	+0.6
PTBC	PUERTO BERRIO,	66.29	124	eP	P	20 10 37.3	-0.1
VSR	Storozhevoye	66.29	11	eP	P	20 10 36.7	-0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARSA	Arzberg	66.36	29	eP	P	20 10 39.0	+1.4
	comp=Z,5.8nm,0.7s						
TJN	Taejon	66.37	303	⇓eP	P	20 10 37.2	-0.5
UZH	Uzhgorod	66.45	24	eP	P	20 10 35.5	-2.5
UZH				i		20 10 38.0	
UZH				i		20 10 43.3	
MYKA	Terra Mystica	66.51	30	eP	P	20 10 38.6	0.0
	comp=Z,9.8nm,0.9s						
PSZ	Piszkesteto	66.66	25	eP	P	20 10 40.6	+1.1
	comp=Z,16nm,0.9s						
PSZ	Piszkesteto	66.66	25	⇓iP	P	20 10 41.3	+1.8
PSZ	Piszkesteto	66.66	25	eP	P	20 10 40.6	+1.1
PSZ				pmax	pmax		
	comp=Z,16nm,0.9s						
PSZ	Piszkesteto	66.66	25	⇑eP	P	20 10 40.1	+0.6
BARC	Barichara	66.74	123	eP	P	20 10 37.1	-3.5
SOKA	Soboth	66.79	29	i P	P	20 10 41.2	+0.8
	comp=Z,7.6nm,0.6s,SNR=12						
OBKA	Obir	66.83	30	i P	P	20 10 41.6	+0.9
	comp=Z,16nm,0.6s,SNR=11						
PMTG	Montargil	66.85	50	eP	P	20 10 40.9	+0.1
	comp=Z,17nm,1.1s						
CSKK	Cskako	66.85	27	eP	P	20 10 49.1	+8.4
BUD	Budapest	66.90	26	⇓eP	P	20 10 49.0	+8.1
NORC	Norcasia	67.02	125	eP	P	20 10 42.1	-0.1
GROS	Grobnik	67.10	29	i P	P	20 10 43.1	+0.7
GUY2C	Guyana, Caldas	67.14	126	eP	P	20 10 43.3	-0.1
CRNS	Crni Vrh	67.17	30	i P	P	20 10 42.8	+0.1
TIH	Tihany	67.21	27	eP	P	20 10 33.1	-10
LJU	Ljubljana	67.27	30	i P	P	20 10 43.7	+0.4
BEHE	Becsehely	67.38	28	eP	P	20 10 48.1	+4.1
RUSC	La Rusia	67.42	123	eP	P	20 10 45.0	-0.2
CEY	Cerknica	67.53	30	eP	P	20 10 45.3	+0.3
PNCL	Nicolau / Gran	67.59	50	eP	P	20 10 45.9	+0.4
	comp=Z,17nm,1.7s						
PAB	San Pablo	67.78	46	eP	P	20 10 46.9	+0.1
	comp=Z,6.7nm,1.0s						
PAB	San Pablo	67.78	46	eP	P	20 10 46.9	+0.1
PAB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JNU	Nakatsue	67.79	299	P	P	20 10 46.0	-0.8
	comp=Z,7.5nm,0.8s,baz=84,slow=2.8,SNR=5.5						
JNU	Nakatsue	67.79	299	eP	P	20 10 45.8	-1.0
	comp=Z,43nm,1.5s						
ESDC	Sonseca Array	67.80	46	P	P	20 10 47.5	+0.7
	comp=Z,4.3nm,0.8s,baz=333,slow=6.7,SNR=21						
ESLA	Sonseca Array	67.80	46	eP	P	20 10 47.4	+0.6
	comp=Z,5.8nm,0.9s						
AKTO	Aktyubinsk	67.83	358	LR	LR	20 45 27.5	
	comp=Z,56nm,18.3s,baz=345,slow=40						
ROSC	El Rosal	67.90	125	P	P	20 10 48.9	+0.8
	comp=Z,10nm,0.8s,baz=131,slow=16,SNR=4.6						
ROSC	El Rosal	67.90	125	eP	P	20 10 48.8	+0.7
	comp=Z,9.7nm,0.9s						
YOTC	Yotoco, Valle	67.91	127	eP	P	20 10 47.6	-0.2
BUR08	Bucovina Ar. S	67.93	22	eP	P	20 10 48.4	+0.8
	comp=Z,19nm,1.4s						
BURAR	Bucovina Array	67.96	22	⇑iP	P	20 10 48.8	+1.0
VLC	Villacollemand	68.01	34	eP	P	20 10 48.5	+0.4
	comp=Z,16nm,0.8s						
MORH	Mrgy, Hungar	68.03	27	eP	P	20 10 48.1	0.0
HHC	Hu-ho-hao-te	68.05	317	P	P	20 10 48.6	+0.1
HHC				S	S	20 19 51.4	+3.1
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.4s						
MORF	Marmelete	68.26	51	eP	P	20 10 50.2	+0.4
MORF				AMb	AMB	20 10 59.9	
	comp=Z,27nm,0.6s						
MORF	Marmelete	68.26	51	eP	P	20 10 50.1	+0.4
CHIC	Chingaza	68.32	124	eP	P	20 10 50.6	-0.2
AMBH	Ambrzfalva	68.33	25	eP	P	20 10 54.1	+4.1
PRAR	RASCA	68.38	21	⇓iP	P	20 10 50.8	+0.5
ORTC	Ortega, Tolima	68.39	126	eP	P	20 10 49.5	-1.3
PVAQ	Vaqueiros	68.51	50	eP	P	20 10 52.1	+0.8
PVAQ	Vaqueiros	68.51	50	eLR	LR	20 36 52.2	
	comp=Z,148nm,20.0s						
IAS	Iasi	68.76	20	⇓iP	P	20 10 53.3	+0.6
BIZ	Bicaz	68.77	21	⇑iP	P	20 10 54.2	+1.5
PMOZ	Porto Moniz, M	68.91	60	eLR	LR	20 36 29.1	
	comp=Z,61nm,18.0s						
ABKAR	Akbulak array	68.98	357	eP	P	20 10 53.8	-0.2
	comp=Z,11nm,1.0s						
BLY	Banja Luka	69.10	28	eP	P	20 10 54.5	-0.4
	comp=Z,5.4nm,0.6s						
BLY	Banja Luka	69.10	28	⇓iP	P	20 10 55.6	+0.8
POPC	Popayan, Colom	69.12	128	eP	P	20 10 55.3	-0.3
BZS	Buzias	69.21	25	⇑iP	P	20 10 56.4	+0.9
MILM	Milestii Mici	69.23	19	⇑iP	P	20 10 55.5	-0.1
OTUK	Ortayu	69.24	348	P	P	20 10 55.5	-0.2
TESR	Tescani	69.27	21	⇑iP	P	20 10 56.5	+0.6
FRGS	Fruska Gora	69.28	26	eP	P	20 10 56.7	+0.7
BBAC	Balboa, Cauca	69.38	129	eP	P	20 10 58.1	+1.0
MKAR	Makanchi Array	69.43	341	P	P	20 10 56.2	-0.7
	comp=Z,1.2nm,0.5s,baz=9.6,slow=5.3,SNR=25						
MKAR				PKPPKP	P'P'df	20 39 01.9	-11
	comp=Z,1.4nm,0.9s,baz=216,slow=1.0,SNR=4.8						
BETC	Betania	69.45	127	eP	P	20 10 57.8	+0.4
MAKZ	Makanchi	69.46	341	eP	P	20 10 56.0	-1.1
	comp=Z,9.2nm,1.0s						
MAKZ	Makanchi	69.46	341	eP	P	20 10 56.0	-1.1
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SOTA	Rioblanco	69.52	128	eP	P	20 10 59.0	+0.7
OZUR		69.53	22	⇓iP	P	20 10 57.1	-0.4
GZR	Gura Zlata	69.65	24	⇑iP	P	20 10 59.3	+1.0
VRI	Vrincioaia	69.91	21	⇑iP	P	20 11 01.2	+1.3
PLOR	Plostina	69.91	21	⇑iP	P	20 11 01.1	+1.2
VOIR		70.03	23	⇓iP	P	20 11 01.6	+0.9
HERR	Herculane	70.07	25	⇑iP	P	20 11 00.4	-0.4
HAPS	Han Pijesak,Bl	70.12	27	eP	P	20 11 01.3	0.0
MLR	Muntele Rosu	70.14	22	eP	P	20 11 01.7	+0.3
	comp=Z,7.6nm,0.9s						
MLR	Muntele Rosu	70.14	22	⇑iP	P	20 11 02.1	+0.7
MLR	Muntele Rosu	70.14	22	eP	P	20 11 01.7	+0.3
MLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DIVS	Divibare	70.33	27	eP	P	20 11 02.9	+0.4
BBLS	Lazići	70.43	27	eP	P	20 11 04.1	+1.0
AQU	L'Aquila	70.47	32	eP	P	20 11 03.7	+0.3
	comp=Z,14nm,0.9s						
AQU	L'Aquila	70.47	32	eP	P	20 11 03.7	+0.3
AQU				pmax	pmax		
	comp=Z,14nm,0.9s						
GIUM	Giurgiulesti	70.53	20	⇑iP	P	20 11 05.2	+1.6
RUDO	Rudo	70.66	27	eP	P	20 11 04.6	+0.1
CFR	Carcaliu	70.82	20	⇑iP	P	20 11 05.9	+0.6
HUMR	Humele	70.90	23	⇓iP	P	20 11 05.9	0.0
TLCR		70.92	20	⇓iP	P	20 11 06.9	+1.0
UPM	Unac-Piva	70.95	28	eP	P	20 11 06.9	+0.4
STON	Ston	71.00	29	eP	P	20 11 06.1	-0.4
BRY	Bratogost	71.16	28	eP	P	20 11 07.8	+0.1
TREB	Trebinje	71.29	28	eP	P	20 11 08.1	-0.2
TLB	Topalu	71.38	21	⇓iP	P	20 11 09.6	+0.9
WMQ	Urumqi	71.38	336	eP	P	20 11 11.3	+2.4
WMQ				LR	LR		
	comp=Z,250nm,17.5s						
WMQ				LR	LR		
	comp=Z,100nm,20.9s						
TIRR	Tirgusor	71.56	20	eP	P	20 11 09.3	-0.6
	comp=Z,20nm,0.7s						
TIRR	Tirgusor	71.56	20	⇑iP	P	20 11 10.4	+0.5
TIRR	Tirgusor	71.56	20	eP	P	20 11 09.3	-0.6
TIRR				pmax	pmax		
	comp=Z,20nm,0.7s						
PDG	Podgorica	71.77	28	⇓iP	P	20 11 11.5	+0.4
PDG	Podgorica	71.77	28	eP	P	20 11 11.5	+0.4
TTG	Podgorica	71.77	28	eP	P	20 11 11.2	+0.1
	comp=Z,15nm,0.7s						
TTG	Podgorica	71.77	28	eP	P	20 11 11.2	+0.1
TTG				pmax	pmax		
	comp=Z,15nm,0.7s						
SIM	Simferopol'	71.92	16	P	P	20 11 12.9	+0.9
SIM				pmax	pmax		
	comp=Z,5.0nm,1.5s						
SIM				MLR	MLR		
	comp=Z,80nm,17.5s						
PLVB	Pleven	71.94	23	⇑iP	P	20 11 12.3	+0.2
DRME	Dracevica, Mon	71.98	28	eP	P	20 11 12.8	+0.3
PTLC	Puerto Leguiza	72.00	127	eP	P	20 11 15.3	+2.4
RAZG	Razgrad	72.11	22	⇓iP	P	20 11 13.3	+0.1
SEVA	Sevastopol	72.27	16	⇓iP	P	20 11 15.1	+1.0
VTS	Vitosha	72.41	25	eP	P	20 11 14.9	-0.3
	comp=Z,6.0nm,0.8s						
VTS	Vitosha	72.41	25	⇓iP	P	20 11 15.9	+0.7
VTS	Vitosha	72.41	25	eP	P	20 11 14.9	-0.3
VTS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANN	Anapa	72.46	14	eP	P	20 11 11.5	-3.8
ANN				e*PP	pP	20 11 16.3	-0.6
ANN				e		20 13 51.3	
ANN				eS	S	20 20 34.2	-5.3
ANN				pmax	pmax		
	comp=Z,43nm,1.2s						
SKO	Skopje	72.67	26	i P	P	20 11 17.8	+1.2
GOF	Gofitskoye	72.74	9	⇑eP	P	20 11 18.0	+1.1
GOF				pmax	pmax		
	comp=Z,30nm,0.9s						
GTA	Gaotai	72.81	326	P	P	20 11 18.0	+0.4
GTA				pP	sP	20 11 21.2	+1.4
GTA				sP	pP	20 11 24.0	+4.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,40nm,4.7s						
GTA				LR	LR		
	comp=Z,220nm,17.9s						
GTA				LR	LR		
	comp=Z,160nm,20.6s						
MATE	Matera	72.88	30	⇓iP	P	20 11 18.9	+1.1
PDGK	Podgornoye	73.23	342	P	P	20 11 19.7	-0.4
NJ2	Nanjing	73.46	308	eP	P	20 11 20.7	-0.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
VAY	Valandovo	73.53	25	i P	P	20 11 22.6	+1.0
KIV	Kislovodsk	73.80	10	eP	P	20 11 23.7	+0.3
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	73.80	10	⇓iP	P	20 11 24.0	+0.7
KIV	Kislovodsk	73.80	10	eP	P	20 11 24.1	+0.7
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
KIV				MLR	MLR		
	comp=Z,178nm,18.0s						
SOC	Sochi	73.91	12	eP	P	20 11 23.3	-0.5
SOC				e		20 14 13.3	
SOC				ePPP	PPP	20 15 49.0	
SOC				eS	S	20 20 55.2	-0.7
SOC				eSSS	SSS	20 28 59.3	
SOC				pmax	pmax		
	comp=Z,29nm,1.1s						
KBZ	Khabaz	74.05	10	P	P	20 11 25.5	+0.9
	comp=Z,8.4nm,0.8s,baz=349,slow=6.8,SNR=19						
TKM2	Tokmak 2	74.15	345	i P	P	20 11 25.8	+0.2
TKM2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PHSR	Pinarhisar	74.16	22	⇓iP	P	20 11 26.8	+1.4

TIP	Timpagrande	74.29	31	*e*P	P	20 11 26.4	+0.2
	comp=Z,7.6nm,0.7s						
TIP	Timpagrande	74.29	31	⇓*i*P	P	20 11 26.9	+0.6
NCK	Nalchik	74.33	9	⇑*e*P	P	20 11 27.1	+0.7
NCK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FRU1	Bishkek	74.38	346	*e*P	P	20 11 27.2	+0.6
	comp=Z,9.5nm,0.9s						
FRU1	Bishkek	74.38	346	*e*P	P	20 11 27.3	+0.6
FRU1				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NEY	Neytrino	74.51	10	⇑*e*P	P	20 11 30.2	+2.6
NEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	74.51	349	*e*P	P	20 11 27.6	+0.2
	comp=Z,3.5nm,0.9s						
KK31	Karatay Array	74.51	349	*e*P	P	20 11 27.6	+0.2
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	74.51	349	*e*P	P	20 11 27.5	+0.1
	comp=Z,3.5nm,0.9s						
KKAR	Karatay Array	74.51	349	*e*P	P	20 11 27.5	+0.1
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOOM	Boomskoye usch	74.53	345	*e*P	P	20 11 27.8	0.0
	comp=Z,6.3nm,0.8s						
BOOM	Boomskoye usch	74.53	345	*e*P	P	20 11 27.8	0.0
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AAK	Ala-Archa	74.56	346	LR	LR	20 47 03.2	
	comp=Z,41nm,20.3s,baz=310,slow=38						
AAK	Ala-Archa	74.56	346	*e*P	P	20 11 27.9	0.0
	comp=Z,5.4nm,0.8s						
AAK	Ala-Archa	74.56	346	*c* *i*P	P	20 11 28.2	+0.3
AAK				pmax	pmax		
	comp=Z,11nm,1.6s						
ALN	Alexandroupoli	74.61	23	*e*P	P	20 11 28.0	0.0
	comp=Z,13nm,0.8s						
ALN	Alexandroupoli	74.61	23	*e*P	P	20 11 28.0	0.0
ALN				pmax	pmax		
	comp=Z,13nm,0.8s						
LIT	Litokhoron	74.69	26	*e*P	P	20 11 29.1	+0.6
	comp=Z,12nm,0.6s						
KDJ	Kajisay	74.73	344	*e*P	P	20 11 29.1	+0.2
	comp=Z,4.7nm,0.8s						
KDJ	Kajisay	74.73	344	*e*P	P	20 11 29.1	+0.2
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GROC	Groznyy	74.77	8	*e*P	P	20 11 25.8	-3.1
GROC				*e*		20 11 40.1	
GROC				*e*S	S	20 21 02.0	-3.7
GROC				pmax	pmax		
	comp=Z,7.0nm,0.4s						
LZH	Lanzhou	74.79	321	*e*P	P	20 11 27.6	-1.7
LZH				*e*PP	PP	20 14 15.8	0.0
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,87nm,8.2s						
LZH				LR	LR		
	comp=Z,230nm,16.2s						
LZH				LR	LR		
	comp=Z,250nm,16.5s						
LZH				LR	LR		
	comp=Z,360nm,18.3s						
ZEI	Tsey	75.06	9	*e*P	P	20 11 30.9	+0.1
NRN	Naryn	75.57	344	*e*P	P	20 11 34.9	+1.0
NRN	Naryn	75.57	344	*e*P	P	20 11 34.9	+1.0
KEST	Kesra	75.59	38	P	P	20 11 34.9	+1.1
	comp=Z,8.6nm,0.8s,baz=311,slow=4.3,SNR=11						
KEST				LR	LR	20 45 06.9	
	comp=Z,128nm,19.1s,baz=292,slow=36						
KEST	Kesra	75.59	38	*e*P	P	20 11 34.5	+0.6
	comp=Z,10nm,0.9s						
ILGA	Ilgaz	75.69	17	*e*P	P	20 11 35.5	+0.9
	comp=Z,13nm,1.1s						
MDUB	Mudurnu	75.90	19	*e*P	P	20 11 36.6	+1.1
	comp=Z,78nm,0.8s						
ARSB	Arslanbob	76.03	347	*e*P	P	20 11 36.6	+0.3
	comp=Z,6.0nm,1.0s						
BALB	Balikesir	76.16	22	*e*P	P	20 11 36.8	-0.1
	comp=Z,66nm,1.1s						
TBLG	Delisi	76.17	8	*e*P	P	20 11 38.3	+1.3
	comp=Z,12nm,0.9s						
TBLG	Delisi	76.17	8	*e*P	P	20 11 38.3	+1.3
TBLG				pmax	pmax		
	comp=Z,12nm,0.9s						
AKH	Akhalkalaki	76.40	9	*e*P	P	20 11 39.1	+0.6
	comp=Z,7.1nm,1.0s						
AKH	Akhalkalaki	76.40	9	⇓*i*P	P	20 11 39.9	+1.4
AKH	Akhalkalaki	76.40	9	*e*P	P	20 11 39.1	+0.6
AKH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WHN	Wuhan	76.46	311	P	P	20 11 38.7	0.0
AKT	Akhty	76.60	6	*e*P	P	20 11 40.4	+0.9
AKT				*e*		20 11 50.2	
AKT				pmax	pmax		
	comp=Z,14nm,1.4s						
ANTO	Ankara	76.72	18	*e*P	P	20 11 41.4	+1.2
	comp=Z,17nm,0.9s						
ANTO	Ankara	76.72	18	*e*P	P	20 11 41.4	+1.2
ANTO				pmax	pmax		
	comp=Z,17nm,0.9s						
BR231	Keskin MP Arra	76.75	18	*e*P	P	20 11 41.4	+1.0
	comp=Z,23nm,1.0s						
MDP	Montagnes des	76.92	104	LR	LR	20 44 49.2	
	comp=Z,71nm,18.2s,baz=27,slow=35						
BR131	Keskin Array S	76.99	17	*e*P	P	20 11 42.3	+0.5
	comp=Z,5.6nm,0.7s						
BRTR	Keskin Array B	76.99	17	P	P	20 11 42.7	+0.9
	comp=Z,5.9nm,0.8s,baz=342,slow=3.2,SNR=29						
BRTR				LR	LR	20 46 51.4	
	comp=Z,62nm,19.4s,baz=256,slow=37						
KARS	Kars	77.14	10	*e*P	P	20 11 43.7	+1.1
KARS	Kars	77.14	10	*e*P	P	20 11 43.7	+1.1
ITM	Ithomi	77.38	27	*e*P	P	20 11 44.4	+0.6
	comp=Z,50nm,1.5s						
KSH	Kashi	77.46	344	P	P	20 11 47.4	+3.0
KSH				PcP	PcP	20 11 58.3	+3.5
KSH				PP	PP	20 14 44.6	+6.5
KSH				ScS	S	20 22 04.4	+29
KSH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH				LR	LR		
	comp=Z,120nm,8.0s						
KSH				LR	LR		
	comp=Z,120nm,7.7s						
BTK	Batken	77.50	348	*e*P	P	20 11 45.2	+0.6
	comp=Z,8.6nm,0.9s						
BTK	Batken	77.50	348	*e*P	P	20 11 45.2	+0.6
BTK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GNI	Garni	77.74	9	*e*P	P	20 11 46.4	+0.4
	comp=Z,15nm,1.0s						
GNI	Garni	77.74	9	*e*P	P	20 11 46.4	+0.4
GNI				pmax	pmax		
	comp=Z,15nm,1.0s						
ISP	Isparta	78.38	20	*e*P	P	20 11 49.5	0.0
	comp=Z,23nm,1.1s						
ISP	Isparta	78.38	20	*e*P	P	20 11 49.5	0.0
ISP				pmax	pmax		
	comp=Z,23nm,1.1s						
ENH	Enshi	78.39	315	*e*P	P	20 11 48.9	-0.7
	comp=Z,13nm,0.9s						
GAR	Garm	78.60	348	*e*P	P	20 11 51.6	+0.8
	comp=Z,32nm,1.0s						
GAR	Garm	78.60	348	*e*P	P	20 11 51.6	+0.8
GAR				pmax	pmax		
	comp=Z,32nm,1.0s						
PTGA	Pitinga	78.85	113	*e*P	P	20 11 52.6	+0.4
	comp=Z,17nm,0.6s						
CHGR	Chuyangaron	79.04	349	*e*P	P	20 11 51.0	-2.1
	comp=Z,16nm,0.7s						
CD2	Chengdu	79.64	320	*e*P	P	20 11 54.9	-1.5
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
GEYT	Alibeck	80.33	358	P	P	20 12 01.2	+1.1
	comp=Z,2.0nm,0.6s,baz=25,slow=3.9,SNR=5.1						
GEYT				LR	LR	20 50 36.6	
	comp=Z,63nm,20.5s,baz=205,slow=38						
GYA0B	ALIBECK ARRAY	80.33	358	*e*P	P	20 12 00.8	+0.7
	comp=Z,5.5nm,0.8s						
KNMB	Chin-men Tao	80.46	305	*e*P	P	20 12 02.0	+1.1
	comp=Z,408nm,1.9s						
CSS	Mathiatis	81.62	18	*e*P	P	20 12 07.5	+0.5
	comp=Z,36nm,1.5s						
PPT	Papeete	81.88	204	LR	LR	20 42 04.8	
	comp=Z,65nm,20.8s,baz=358,slow=31						
GYA	Guiyang	82.85	316	P	P	20 12 11.9	-1.8
GYA				PP	PP	20 15 26.7	+3.6
GYA				S	S	20 22 30.0	-2.6
GYA				SS	SS	20 27 55.5	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.4s						
GYA				LR	LR		
	comp=Z,290nm,18.6s						
GYA				LR	LR		
	comp=Z,330nm,18.8s						
GYA				LR	LR		
	comp=Z,240nm,18.8s						
KBL	Kabul	83.14	349	*e*P	P	20 12 14.3	-0.9
	comp=Z,12nm,1.4s						
KBL	Kabul	83.14	349	*e*P	P	20 12 14.3	-0.9
KBL				pmax	pmax		
	comp=Z,12nm,1.4s						
NIL	Nilore	83.58	345	*e*P	P	20 12 17.0	-0.2
	comp=Z,15nm,0.8s						
NIL	Nilore	83.58	345	*e*P	P	20 12 17.0	-0.2
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
LSA	Lhasa	84.22	330	*e*P	P	20 12 21.2	+0.2
	comp=Z,25nm,1.9s						
LSA	Lhasa	84.22	330	*e*P	P	20 12 21.3	+0.2
LSA				pmax	pmax		
	comp=Z,25nm,1.9s						
KMI	Kunming	85.35	318	P	P	20 12 27.2	+0.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TAM	Tamanrasset	86.44	45	*e*P	P	20 12 32.7	+0.8
	comp=Z,4.7nm,0.9s						
TAM	Tamanrasset	86.44	45	*e*P	P	20 12 32.7	+0.8
TAM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAR	Rarotonga	87.70	213	*e*P	P	20 12 38.2	+0.7
	comp=Z,397nm,1.8s						
RAR	Rarotonga	87.70	213	*e*P	P	20 12 38.2	+0.7
RAR				pmax	pmax		
	comp=Z,397nm,1.8s						
SLVN	Son La	88.51	316	*e*P	P	20 12 42.2	+0.4
	comp=Z,8.9nm,1.0s						
LPAZ	La Paz	89.63	127	P	P	20 12 47.1	-0.4
	comp=Z,5.9nm,0.6s,baz=342,slow=3.9,SNR=22						
LPAZ	La Paz	89.63	127	*e*P	P	20 12 46.6	-1.0
	comp=Z,6.6nm,0.6s						
MNMC	Minye Minye	91.69	130	*e*P	P	20 12 57.0	+0.3
	comp=Z,12nm,0.8s						
CM31	Chiang Mai Arr	92.78	319	*e*P	P	20 13 01.8	+0.2
	comp=Z,7.3nm,0.9s						
CMAR	Chiang Mai Arr	92.78	319	P	P	20 13 02.1	+0.5
	comp=Z,3.2nm,0.8s,baz=356,slow=5.7,SNR=28						
CMAR				LR	LR	20 59 53.7	
	comp=Z,188nm,18.9s,baz=33,slow=39						
TOA0	Torodi Ar. Sit	93.99	52	*e*P	P	20 13 06.9	-0.3
	comp=Z,25nm,1.4s						
TORD	Torodi Ar. Bea	93.99	52	P	P	20 13 06.7	-0.5
	comp=Z,5.1nm,0.5s,baz=330,slow=5.6,SNR=65						
ASAR	Alice Springs	116.17	269	PKP	PKPdf	20 18 31.1	-1.0
	comp=Z,1.0nm,0.7s,baz=62,slow=1.5,SNR=23						
ASAR				PKKPbc	PKKPab	20 29 04.2	-1.4
	comp=Z,0.1nm,0.5s,baz=202,slow=4.0,SNR=4.1						
STKA	Stephens Creek	119.53	257	PKP	PKPdf	20 18 38.0	-0.4
	comp=Z,3.7nm,0.6s,baz=74,slow=2.2,SNR=18						
STKA	Stephens Creek	119.53	257	*e*PKPdf	PKPdf	20 18 37.7	-0.6
STKA	Stephens Creek	119.53	257	*e*PKIKP	PKPdf	20 18 37.7	-0.6
TSUM	Tsumeb	129.65	49	*e*PKPdf	PKPdf	20 18 58.6	+0.3
BOSA	Boshof	140.98	45	PKhKP	PKPpre	20 19 11.3	
	comp=Z,1.7nm,0.5s,baz=357,slow=5.1,SNR=6.6						
BOSA				PKP	PKPdf	20 19 19.2	+0.2
	comp=Z,3.1nm,0.7s,baz=264,slow=1.1,SNR=6.4						
SBA	Scott Base	145.74	201	*e*PKPdf	PKPab	20 19 26.7	+0.1
SBA	Scott Base	145.74	201	*e*PKP2	PKPab	20 19 26.7	+0.1
VNDA	Vanda	146.38	202	PKPbc	PKPab	20 19 29.1	0.0
	comp=Z,7.2nm,0.7s,baz=349,slow=3.0,SNR=54						
QSPA	South Pole Qui	151.91	180	*e*PKPdf	PKPdf	20 19 34.3	-1.7
QSPA				*e*PKPbc	PKPbc	20 19 42.6	+0.1
VNA3	Neumayer Olymp	153.90	138	PKiKP	PKPbc	20 19 46.2	-0.6
VNA1	Neumayer--Stat	154.21	136	PKiKP	PKiKP	20 19 47.8	+0.4
VNA2	Neumayer--Watz	154.55	137	PKiKP	PKPbc	20 19 47.6	-0.5
	baz=296,slow=3.7						
SNAA	Sanae	156.12	138	PKPdf	PKPdf	20 19 46.9	+5.0
SNAA	Sanae	156.12	138	*e*PKPdf	PKPdf	20 19 44.5	+2.6
SNAA				*e*PKPab	PKPab	20 20 08.6	-1.1
SNAA	Sanae	156.12	138	*e*PKIKP	PKPdf	20 19 44.5	+2.6
SNAA				*e*		20 20 08.6	
SYO	Syowa Base	170.35	143	⇓*e*PKPdf	PKPdf	20 19 56.2	+0.9
SYO	Syowa Base	170.35	143	⇓*e*X	PKPab	20 21 10.0	-2.1

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*IDC **12** 20:01:16.4±0.7, 12°.52N×143°.81E, h0^{km}, mb4.1/9, mb1 4.3/10, mb1mx3.9/53, mbtmp4.2/10, ML3.6/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/41, Error ellipse: s-maj=24.6km s-min=16.1km az=105.0*

*ISCJB **12** 20:01:18.9±0.4, 12°.51N±0°.06×143°.79E±0°.09, h27^{km}, mb4.2/16, MS3.4/3, Error ellipse: s-maj=13.6km s-min=6.4km az=30.7*

*NEIC **12** 20:01:21.0±0.6, 12°.53N×143°.91E, h32^{km}±8^{km}, mb4.6/6, Error ellipse: s-maj=21.4km s-min=8.6km az=115.0*

ISC 12 20:01:20.2±0.6**, 12°.53N**±0°.10×**143°.9E**±0°.1**, h27**^{km}**, n33, σ0^{s}.93**/29**, mb4.4**/16**, MS3.4**/3**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.43	42	Pn	Pn	20 01 43.8	-0.5
	72nm,0.3s,baz=218,slow=0.7,SNR=37						
GUMO				Sn	Sn	20 02 01.5	-0.7
	142nm,0.3s,baz=16,slow=20,SNR=33						
GUMO	Guam	1.43	42	*e*Pn	Pn	20 01 43.9	-0.5
GUMO				*e*Sn	Sn	20 02 02.2	0.0
SARN	Sarigan	4.54	24	*e*Pn	Pn	20 02 27.9	+0.7
JAY	Jayapura	15.27	192	Pn	Pn	20 04 55.0	+0.8
	0.2nm,0.3s,baz=335,slow=19,SNR=2.0						
JAY				LR	LR	20 10 20.1	
	comp=Z,264nm,18.7s,baz=32,slow=36						
H11S3	WAKE ISLAND Hy	22.75	72	T	T	20 30 11.0	
	baz=258,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	22.76	72	T	T	20 30 01.4	
	baz=258,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	22.77	72	T	T	20 30 05.2	
	baz=258,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	23.21	69	T	T	20 30 41.8	
	baz=255,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	23.22	69	T	T	20 30 41.5	
	baz=255,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	23.23	69	T	T	20 30 43.8	
	baz=255,slow=75,SNR=33						
MJAR	Matsushiro Arr	24.45	349	P	P	20 06 37.0	+0.2
	0.5nm,0.3s,baz=186,slow=9.8,SNR=3.1						
MJAR				LR	LR	20 15 38.4	
	comp=Z,99nm,18.3s,baz=175,slow=35						
LUWI	Luwuk	24.92	239	*e*P	P	20 06 39.8	-1.5
	31nm,1.0s						
SBUM	Sibu	32.91	255	*e*P	P	20 07 53.2	+0.7
	1.8nm,1.1s						
WRAB	Tennant Creek	33.59	196	*e*P	P	20 07 58.2	-0.2
	6.5nm,0.8s						
WB2	Warramunga Arr	33.60	196	*e*P	P	20 07 58.5	+0.1
	5.4nm,0.7s						
WR1	Warramunga Arr	33.60	196	*e*P	P	20 07 58.7	+0.2
WRA	Warramunga Arr	33.60	196	P	P	20 07 58.7	+0.2
	4.8nm,0.7s,baz=6.7,slow=9.3,SNR=42						
WC3	Warramunga Arr	33.61	196	*e*P	P	20 07 58.6	+0.1
	5.6nm,1.0s						
ASAR	Alice Springs	37.27	195	P	P	20 08 29.1	-1.0
	1.5nm,0.9s,baz=18,slow=11,SNR=12						
ASAR				PcP	PcP	20 10 49.6	+0.3
	1.5nm,1.0s,baz=50,slow=2.5,SNR=5.2						
KLR	Kul'dur	37.95	347	P	P	20 08 35.8	+0.4
	0.6nm,0.6s,baz=298,slow=17,SNR=2.8						
CMAR	Chiang Mai Arr	43.62	284	P	P	20 09 22.6	-0.1
	1.0nm,0.9s,baz=94,slow=5.8,SNR=6.8						
CMAR				LR	LR	20 26 35.1	
	comp=Z,47nm,20.8s,baz=100,slow=35						
SONA0	Songino Array	47.05	326	*e*P	P	20 09 49.8	+0.1
SONM	Songino Array	47.05	326	P	P	20 09 49.8	+0.1
	0.3nm,0.7s,baz=150,slow=7.3,SNR=2.5						
YBH	Yreka Blue Hor	84.29	49	P	P	20 13 50.0	-0.1
	1.4nm,0.7s,baz=166,slow=4.2,SNR=2.8						
NV01	Mina Array Sit	88.33	51	*e*P	P	20 14 12.1	+2.0
NVAR	Mina Array Bea	88.33	51	P	P	20 14 12.1	+2.0
	2.7nm,0.8s,baz=264,slow=5.4,SNR=9.3						
ELK	Elko	89.99	48	P	P	20 14 19.3	+1.4
	2.4nm,0.9s,baz=290,slow=4.7,SNR=3.8						
TPNV	Topopah Spring	90.29	52	*e*P	P	20 14 20.9	+1.7
	4.7nm,0.8s						
FINES	FINESS Array B	91.71	335	P	P	20 14 23.5	-1.5
	0.8nm,0.5s,baz=64,slow=4.9,SNR=4.1						
JMIC	Jan Mayen	94.59	351	LR	LR	20 58 04.7	
	comp=Z,17nm,18.5s,baz=252,slow=36						
TORD	Torodi Ar. Bea	134.65	303	PKP	PKiKP	20 20 38.2	-0.5
	1.1nm,1.1s,baz=12,slow=4.9,SNR=3.6						
CFA	Coronel Fontan	144.89	128	PKP	PKPdf	20 20 55.2	-0.2
	3.8nm,1.0s,baz=272,slow=6.4,SNR=3.5						
LPAZ	La Paz	148.79	101	PKPbc	PKiKP	20 21 07.8	-0.6
	1.5nm,0.7s,baz=10.0,slow=3.3,SNR=3.6						

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*NEIC **12** 20:05:23.0±2.7, 16°.93S×173°.33E, h33^{km}±5^{km}, mb4.6/12, Error ellipse: s-maj=23.2km s-min=17.1km az=124.0*

*ISCJB **12** 20:05:27.1±1.1, 17°.7S±0°.1×173°.0E±0°.1, h33^{km}, mb4.5/13, MS4.0/17, Error ellipse: s-maj=20.8km s-min=16.0km az=10.5*

*IDC **12** 20:05:27.2±1.5, 17°.41S×172°.72E, h0^{km}, mb4.3/4, mb1 4.4/5, mb1mx3.9/37, mbtmp4.3/5, ML3.4/1, MS3.9/16, Ms1 3.9/16, ms1mx3.8/21, Error ellipse: s-maj=44.6km s-min=29.2km az=152.0*

ISC 12 20:05:30.9±0.7**, 17°.8S**±0°.1×**172°.9E**±0°.1**, h35**^{km}**, n47, σ2^{s}.11**/29**, mb4.5**/13**, MS4.0**/17**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	5.82	231	*e*Pn	Pn	20 06 54.9	+0.2
PINNC	Pines Island,	6.96	226	*e*Pn	Pn	20 07 12.2	+1.8
DZM	Mont Dzumac	7.36	234	*e*LR	LR	20 09 02.7	
	comp=Z,437nm,23.4s						
DZM	Mont Dzumac	7.36	234	Pn	Pn	20 07 19.3	+3.4
	0.6nm,0.3s,baz=54,slow=15,SNR=5.3						
DZM				LR	LR	20 09 53.2	
	comp=Z,341nm,21.5s,baz=66,slow=35						
DZM	Mont Dzumac	7.36	234	*e*Pn	Pn	20 07 20.7	+4.8
HNR	Honiara	15.06	302	LR	LR	20 14 07.4	
	comp=Z,153nm,18.7s,baz=135,slow=35						
URZ	Urewera	20.70	170	P	Pn	20 10 12.8	+2.4
	8.7nm,0.7s,baz=40,slow=4.4,SNR=5.5						
URZ				LR	LR	20 16 18.9	
	comp=Z,691nm,18.4s,baz=23,slow=31						
URZ	Urewera	20.70	170	*e*P	P	20 10 07.7	-0.3
	35nm,1.2s						
ARMA	Armidale	23.02	233	*e*P	P	20 10 33.1	+0.1
	23nm,1.3s						
RPZ	Rata Peaks	25.85	183	LR	LR	20 19 11.6	
	comp=Z,530nm,21.9s,baz=6.0,slow=31						
RAR	Rarotonga	26.01	102	LR	LR	20 18 47.2	
	comp=Z,280nm,19.9s,baz=283,slow=30						
PMG	Port Moresby	26.31	285	LR	LR	20 20 27.0	
	comp=Z,350nm,19.1s,baz=118,slow=34						
STKA	Stephens Creek	31.49	238	P	P	20 11 53.4	+3.9
	4.3nm,0.9s,baz=59,slow=8.3,SNR=6.1						
STKA	Stephens Creek	31.49	238	*e*P	P	20 11 53.2	+3.7
	1.0nm,0.9s						
TAU	Tasmania Unive	33.08	215	*e*P	P	20 12 07.8	+4.6
	50nm,1.4s						
TBI	Tubuai	35.63	105	*e*LR	LR	20 22 03.7	
	comp=Z,364nm,31.2s,baz=277						
PPT2	Papeete2	35.75	96	*e*S	S	20 18 04.5	+2.6
	80nm,26.0s						
PPT2				*e*LQ	LQ	20 20 57.7	
	216nm,29.5s						
PPT2				*e*LR	LR	20 22 09.4	
	comp=Z,635nm,29.5s,baz=269						
PPT	Papeete	35.76	95	LR	LR	20 23 44.6	
	comp=Z,112nm,20.1s,baz=260,slow=31						
BBOO	Buckleboo	36.25	239	*e*P	P	20 12 30.8	0.0
	15nm,1.3s						
WB2	Warramunga Arr	36.44	260	*e*P	P	20 12 30.2	-2.4
	4.7nm,0.8s						
WRAB	Tennant Creek	36.44	260	*e*P	P	20 12 30.0	-2.6
	13nm,1.3s						
AS31	Alice Springs	36.80	254	*e*P	P	20 12 35.7	0.0
	2.7nm,0.6s						
ASAR	Alice Springs	36.80	254	P	P	20 12 35.8	+0.1
	3.0nm,0.6s,baz=82,slow=9.1,SNR=47						
ASAR				LR	LR	20 27 05.1	
	comp=Z,364nm,19.3s,baz=86,slow=35						
MTN	Manton Dam	40.48	271	*e*P	P	20 13 03.0	-3.6
	21nm,1.4s						
TAOE	Nuku Hiva Isla	46.48	85	*e*LR	LR	20 27 26.2	
	comp=Z,2µm,34.7s						
CGP	Cagayan de Oro	54.26	295	*e*P	P	20 14 54.7	+0.9
VNDA	Vanda	59.97	183	LR	LR	20 37 13.9	
	comp=Z,210nm,21.4s,baz=5.0,slow=32						
SBA	Scott Base	60.13	181	*e*P	P	20 15 33.2	-1.2
	1.5nm,0.8s						
MJAR	Matsushiro Arr	63.21	329	LR	LR	20 40 05.4	
	comp=Z,59nm,20.2s,baz=25,slow=33						
KSRS	Korea Array	69.36	323	LR	LR	20 41 55.3	
	comp=Z,65nm,21.1s,baz=73,slow=32						
RPN	Rapa Nui	71.50	113	LR	LR	20 42 11.7	
	comp=Z,138nm,20.0s,baz=35,slow=31						
PETK	Petropavlovsk-	71.85	350	LR	LR	20 43 36.4	
	comp=Z,135nm,20.1s,baz=146,slow=32						
QSPA	South Pole Qui	72.22	180	*e*P	P	20 16 50.4	-1.8
	6.8nm,1.0s						
SII	Sitkinak Islan	79.10	18	*e*P	P	20 17 17.5	-14
	18nm,1.0s						
SNAA	Sanae	90.68	181	P	P	20 18 28.5	-1.1
VNA3	Neumayer Olymp	91.14	179	P	P	20 18 30.9	-0.8
VNA2	Neumayer--Watz	91.48	180	P	P	20 18 31.4	-1.9
	baz=180,slow=3.5						
TXAR	Lajitas Array	93.09	60	P	P	20 18 43.3	+1.7
	1.2nm,0.8s,baz=254,slow=6.4,SNR=7.4						
TXAR				LR	LR	20 53 05.1	
	comp=Z,55nm,20.5s,baz=0.0,slow=31						
TIXI	Tiksi	94.10	347	LR	LR	20 57 15.6	
	comp=Z,78nm,19.0s,baz=181,slow=33						
YKA	Yellowknife Ar	97.86	27	LR	LR	20 56 00.5	
	comp=Z,9.2nm,20.1s,baz=248,slow=31						
GERES	GERESS Array B	144.74	336	PKP	PKPdf	20 25 05.0	+0.9
	1.8nm,0.8s,baz=46,slow=4.1,SNR=16						
MOA	Molln	145.31	334	*e*pPKPdf	PKPbc	20 25 04.1	-0.7
	4.4nm,0.8s						
SOKA	Soboth	145.90	332	*e*pPKPdf	PKPab	20 25 07.4	+0.2
	2.2nm,0.9s						
KBA	Koelnbreinsper	146.30	334	*e*pPKPab	PKPab	20 25 09.1	+0.2
	2.7nm,0.9s						
ABTA	Abfaltersbach	146.91	335	*e*pPKPab	PKPab	20 25 10.2	-0.9
	3.6nm,1.0s						
MOTA	Moosalm	146.96	337	*e*P	PKiKP	20 25 11.6	-0.9
	2.5nm,0.8s						
SQTA	Sankt Quirin	147.03	337	*i* P	PKiKP	20 25 11.9	-0.7
	3.7nm,0.8s						

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*IDC **12** 20:13:30.5±2.0, 4°.60N×123°.41E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.4/44, mbtmp3.7/3, Error ellipse: s-maj=212.6km s-min=28.0km az=63.0*

*MAN **12** 20:13:36.0, 5°.46N×124°.94E, h26^{km}, MS3.7*

ISC 12 20:13:32.1±2.1**, 5°.27N**±0°.07×**124°.92E**±0°.07**, h17**^{km}±13^{km}**, n12, σ0^{s}.92**/20**, mb3.6**/3**, 4C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.81	2	⇑*i*P	Pn	20 13 49.9	+1.0
GSPH				*i* S	Sn	20 13 59.9	-0.7
DDMP	Don Marcelino,	1.14	43	*e*P	Pg	20 13 54.0	-0.2
DDMP				*e*S	Sb	20 14 07.8	-0.2
SKMP	Bagumbayan, Su	1.29	343	*e*P	Pb	20 13 56.3	+0.2
SKMP				*e*S	Sb	20 14 11.1	-1.3
KCP	Kidapawan	1.73	6	⇑*e*P	Pb	20 14 03.6	0.0
KCP				*e*S	Sn	20 14 23.3	0.0
DMPH	Davao City--Mi	1.89	18	⇑*e*P	Pg	20 14 13.3	+4.8
DMPH				*e*S	Sb	20 14 30.1	+0.5
CTBH	Cotabato--PC H	2.05	341	⇑*i*P	Pb	20 14 08.2	-0.7
CTBH				*i* S	Sn	20 14 31.5	+0.5
MATI	Mati	2.13	39	*e*P	Pb	20 14 09.4	-0.9
MATI				*e*S	Sn	20 14 33.8	+0.9
BUKP	Musuan	2.59	3	*e*P	Pn	20 14 15.0	+1.6
BUKP				*e*S	Sn	20 14 43.8	-0.7
PAGZ	Pagadian	2.98	329	*e*P	Pn	20 14 20.5	+1.8
PAGZ				*e*S	Sn	20 14 53.9	-0.2
WRA	Warramunga Arr	26.71	160	P	P	20 19 10.9	+0.1
	1.3nm,0.7s,baz=334,slow=10,SNR=5.2						
ASAR	Alice Springs	30.07	163	P	P	20 19 40.7	0.0
	0.4nm,0.5s,baz=341,slow=7.0,SNR=9.2						
MKAR	Makanchi Array	55.27	326	P	P	20 23 03.5	-1.1

0.5nm,0.8s,baz=125,slow=8.0,SNR=3.6

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*ISCJB **12** 20:16:08.1±0.5, 51°.50N±0°.02×16°.13E±0°.03, h0^{km}, Error ellipse: s-maj=3.4km s-min=2.6km az=20.8*

*IDC **12** 20:16:11.7±0.8, 51°.41N×16°.13E, h0^{km}, mb1 3.1/6, mb1mx3.0/42, mbtmp3.0/6, ML2.6/6, Error ellipse: s-maj=13.7km s-min=7.7km az=113.0*

*VIE **12** 20:16:12.0±0.8, 51°.35N×16°.02E, h0^{km}, mb2.4/6, ml2.7/6, Error ellipse: s-maj=6.6km s-min=6.0km az=70.0, Suspected Mining induced.*

ISC 12 20:16:08.5±0.8**, 51°.58N**±0°.03×**16°.12E**±0°.02**, h0^{km}, n37, σ1^{s}.06**/70**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.75**	**172**	*e*Pg	**Pg**	**20 16 23.4**	**+0.5**
KSP				*e*Sg	**Sg**	**20 16 32.5**	**0.0**
CHVC	**Chvalec**	**1.00**	**182**	*e*PG	**Pg**	**20 16 28.2**	**+0.6**
CHVC				*e*SG	**Sg**	**20 16 40.4**	**-0.1**
	comp=Z,77nm,0.5s						
OSTC	**Ostas**	**1.03**	**177**	*e*PG	**Pg**	**20 16 28.8**	**+0.6**
OSTC				*e*SG	**Sg**	**20 16 41.3**	**-0.3**
	comp=Z,64nm,0.6s						
UPC	**Upice**	**1.08**	**184**	*e*PG	**Pg**	**20 16 29.3**	**+0.1**
UPC				*e*SG	**Sg**	**20 16 43.0**	**-0.2**
	comp=Z,63nm,0.4s						
DPC	**Dobruska-Polom**	**1.24**	**174**	*e*PG	**Pg**	**20 16 32.2**	**-0.1**
DPC				*e*SG	**Sg**	**20 16 47.4**	**-1.0**
	comp=Z,49nm,0.6s						
PVCC	**Panska Ves**	**1.44**	**223**	*e*PG	**Pn**	**20 16 36.2**	**+0.4**
PVCC				*e*SG	**Sb**	**20 16 55.5**	**+0.4**
	comp=Z,162nm,0.8s						
BRG	**Berggiesshubel**	**1.54**	**243**	PN	**Pn**	**20 16 37.1**	**-0.1**
BRG				PG	**Pg**	**20 16 38.8**	**+0.7**
BRG				SG	**Sg**	**20 16 58.8**	**+0.7**
	70nm,0.5s						
GOPC	**GO Pecny, Ondr**	**1.88**	**207**	*e*PG	**Pb**	**20 16 43.7**	**+0.1**
GOPC				*e*SG	**Sb**	**20 17 07.5**	**-0.1**
	comp=Z,44nm,0.8s						
PRU	**Pruhonice**	**1.89**	**213**	*e*PG	**Pb**	**20 16 43.8**	**0.0**
PRU				*e*SG	**Sb**	**20 17 07.6**	**-0.3**
	comp=Z,24nm,0.6s						
CLL	**Collm**	**1.97**	**263**	*e*Pn	**Pn**	**20 16 43.0**	**-0.1**
CLL				*e*Pg	**Pb**	**20 16 46.0**	**+0.8**
CLL				*i*		20 16 49.1	
CLL				*e*Sg	**Sg**	**20 17 12.0**	**+0.2**
	comp=Z,21nm,0.5s						
CLL				*i*		20 17 18.9	
CLL				LmV		21 30 00.0	
	comp=Z,100nm,19.9s						
RAC	**Raciborz**	**2.00**	**138**	*e*Pg	**Pg**	**20 16 47.5**	**+0.7**
RAC				*e*Sg	**Sg**	**20 17 13.4**	**+0.8**
MORC	**Moravsky Berou**	**2.02**	**153**	*e*PN	**Pn**	**20 16 43.4**	**-0.5**
MORC				*e*SG	**Sb**	**20 17 12.2**	**+0.3**
OKC	**Ostrava-Krasne**	**2.17**	**143**	*e*SG	**Sg**	**20 17 18.2**	**0.0**
VRAC	**Vranov**	**2.30**	**172**	Pn	**Pn**	**20 16 48.4**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=339,slow=15,SNR=7.6						
VRAC				Lg	Lg	20 17 20.4	
	comp=Z,4.5nm,0.3s,baz=249,slow=21,SNR=13						
VRAC	**Vranov**	**2.30**	**172**	*e*PN	**Pn**	**20 16 48.0**	**+0.3**
VRAC				*e*SG	**Sb**	**20 17 19.4**	**-0.4**
KRUC	**Moravsky**	**2.53**	**176**	*e*PN	**Pn**	**20 16 51.5**	**+0.7**
KRUC				*e*SG	**Sb**	**20 17 27.1**	**+0.6**
NKC	**Novy Kostel**	**2.69**	**241**	*e*PN	**Pn**	**20 16 53.7**	**+0.7**
NKC				*e*PG	**Pg**	**20 16 59.8**	**-0.2**
NKC				*e*SG	**Sg**	**20 17 34.4**	**-0.5**
	comp=Z,62nm,0.4s						
OJC	**Ojcow**	**2.70**	**119**	*e*Pg	**Pg**	**20 17 00.5**	**+0.3**
OJC				*e*Sg	**Sg**	**20 17 35.7**	**+0.5**
KHC	**Kasperske Hory**	**2.95**	**215**	*e*PN	**Pn**	**20 16 57.0**	**+0.4**
KHC				*e*PG	**Pg**	**20 17 05.0**	**+0.1**
KHC				*e*SG	**Sb**	**20 17 41.0**	**+2.6**
GERES	**GERESS Array B**	**3.15**	**210**	Pn	**Pn**	**20 16 59.6**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=34,slow=13,SNR=27						
GERES				Pg	**Pb**	**20 17 06.6**	**+1.2**
	comp=Z,1.8nm,0.3s,baz=27,slow=15,SNR=26						
GERES				Lg	Lg	20 17 49.5	
	comp=Z,2.8nm,0.3s,baz=31,slow=26,SNR=9.2						
LANS	**Liptovska Anna**	**3.25**	**137**	*e*PN	**Pn**	**20 17 01.3**	**+0.6**
LANS				*e*PG	**Pg**	**20 17 12.2**	**+1.5**
LANS				*e*SG	**Sg**	**20 17 51.4**	**-1.3**
MODS	**Modra-Piesok**	**3.30**	**166**	*e*PG	**Pg**	**20 17 10.7**	**-1.0**
MODS				*e*SG	**Sg**	**20 17 53.8**	**-0.7**
MODS				*e*LG	Lg	20 18 01.3	
NIE	**Niedzica**	**3.44**	**127**	*e*P	**Pg**	**20 17 14.1**	**-0.2**
NIE				*e*S	**Sg**	**20 17 59.6**	**+0.7**
ZST	**Bratislava**	**3.45**	**169**	*e*SG	**Sg**	**20 17 57.6**	**-1.7**
VYHS	**Vyhne**	**3.55**	**149**	*e*PG	**Pg**	**20 17 17.9**	**+1.3**
VYHS				*e*SG	**Sg**	**20 18 00.9**	**-1.7**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**20 17 05.9**	**+0.3**
BSD				*i* S	**Sn**	**20 17 47.4**	**-1.5**
CONA	**Conrad Observa**	**3.66**	**183**	*e*Pn	**Pn**	**20 17 07.5**	**+1.0**
	comp=Z,0.7nm,0.1s						
CONA				Sg	**Sg**	**20 18 05.7**	**-0.5**
	comp=Z,24nm,0.7s						
STHS	**Stebnicka Huta**	**3.92**	**122**	*e*SG	**Sg**	**20 18 14.2**	**-0.3**
MOA	**Molln**	**3.93**	**199**	*i* Pn	**Pn**	**20 17 10.6**	**+0.5**
	comp=Z,2.7nm,0.4s						
MOA				Sg	**Sg**	**20 18 13.8**	**-0.8**
	comp=Z,2.4nm,0.2s						
ARSA	**Arzberg**	**4.36**	**185**	*i* Pn	**Pn**	**20 17 17.2**	**+1.2**
	comp=Z,0.4nm,0.2s						
ARSA				Sg	**Sg**	**20 18 27.2**	**-1.2**
	comp=Z,12nm,0.7s						
KOLS	**Kolonicke sedl**	**4.76**	**122**	*e*PG	**Pg**	**20 17 41.1**	**+1.5**
KOLS				*e*SG	**Sg**	**20 18 39.4**	**-1.8**
KBA	**Koelnbreinsper**	**4.86**	**203**	*e*Pn	**Pn**	**20 17 23.8**	**+0.7**
	comp=Z,1.3nm,0.3s						
KBA				Sg	**Sg**	**20 18 45.5**	**+0.9**
	comp=Z,2.7nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.31**	**223**	Pn	**Pn**	**20 17 44.8**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=347,slow=17,SNR=2.6						
DAVOX				Lg	Lg	20 19 30.2	
	comp=Z,0.2nm,0.3s,baz=52,slow=4.9,SNR=3.2						
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**20 18 09.5**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=278,slow=12,SNR=3.4						
HFS	**Hagfors**	**8.68**	**352**	Pn	**Pn**	**20 18 19.4**	**+4.2**
	comp=Z,0.1nm,0.3s,baz=165,slow=13,SNR=2.4						
FINES	**FINESS Array B**	**11.29**	**25**	Pn	**Pn**	**20 18 50.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=211,slow=9.7,SNR=3.2						
EKA	**Eskdalemuir Ar**	**12.08**	**296**	Pn	**Pn**	**20 18 58.8**	**-2.9**
	baz=102,slow=14,SNR=3.6						

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*SJA **12** 20:32:36.3±0.5, 17°.05S×70°.74W, h169^{km}±6^{km}, ML3.6, MW3.3*

*NEIC **12** 20:32:36.9±2.5, 16°.80S×70°.79W, h109^{km}±6^{km}, mb5.0/24, Error ellipse: s-maj=11.4km s-min=10.4km az=89.0*

*VAO **12** 20:32:36.5±0.6, 16°.81S×70°.75W, h109^{km}, mb4.4*

*ISCJB **12** 20:32:37.4±0.4, 16°.88S±0°.03×70°.65W±0°.04, h127^{km}±5^{km}, mb4.7/33, Error ellipse: s-maj=7.1km s-min=4.9km az=159.7*

*IDC **12** 20:32:40.4±0.7, 16°.85S×70°.40W, h127^{km}±5^{km}, mb3.9/12, mb1 4.1/16, mb1mx3.9/36, mbtmp4.4/16, MS2.7/2, Ms1 2.8/2, ms1mx2.5/23, Error ellipse: s-maj=15.8km s-min=13.4km az=65.0*

*GUC **12** 20:32:41.0±0.8, 17°.03S×70°.69W, h110^{km}±72^{km}, ML4.5*

ISC 12 20:32:38.7±0.5**, 16°.98S**±0°.04×**70°.69W**±0°.06**, h126^{km}**±4^{km}**, h127^{km}:pP-P, n150, σ1^{s}.98**/182**, mb4.7**/33**, 2C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**1.66**	**168**	*e*P	**Pn**	**20 33 09.0**	**+0.5**
PB12				*e*S	**Sn**	**20 33 33.5**	**+2.3**
PB12	**IPOC Station P**	**1.66**	**168**	*e*P	**Pn**	**20 33 09.8**	**+1.3**
PB12				*i* S	**Sn**	**20 33 32.1**	**+0.9**
MNMC	**Minye Minye**	**2.38**	**154**	*e*Pn	**Pn**	**20 33 19.0**	**+1.5**
MNMC				*e*Sn	**Sn**	**20 33 46.4**	**-0.9**
MNMC	**Minye Minye**	**2.38**	**154**	*e*P	**Pn**	**20 33 19.7**	**+2.2**
MNMC				*i* S	**Sn**	**20 33 49.0**	**+1.7**
MNMC				IAML		20 33 51.6	
	comp=E,3µm,0.5s						
MNMCX	**Minye Minye**	**2.38**	**154**	*e*S	**Sn**	**20 33 47.8**	**+0.6**
LPAZ	**La Paz**	**2.55**	**75**	P	**Pn**	**20 33 21.2**	**+1.2**
	comp=E,115nm,0.3s,baz=301,slow=7.1,SNR=388						
LPAZ				S	**Sn**	**20 33 52.4**	**+0.8**
	comp=E,25nm,0.3s,baz=164,slow=22,SNR=4.3						
LPAZ				LR	LR	20 34 23.4	
	comp=E,212nm,20.9s,baz=80,slow=46						
LPAZ	**La Paz**	**2.55**	**75**	*e*Pn	**Pn**	**20 33 22.2**	**+2.2**
LPAZ				*e*Sn	**Sn**	**20 33 50.6**	**-1.0**
LPAZ	**La Paz**	**2.55**	**75**	*e*P	**Pn**	**20 33 21.1**	**+1.1**
PSGC	**Pisagua**	**2.66**	**168**⇑	*e*P	**Pn**	**20 33 21.9**	**+1.0**
PSGC				*i* S	**Sn**	**20 33 53.3**	**-0.1**
PSGCX	**Pisagua**	**2.66**	**168**	*e*P	**Pn**	**20 33 20.1**	**-0.7**
PSGCX				*e*S	**Sn**	**20 33 52.8**	**-0.6**
PB11	**IPOC Station P**	**2.94**	**161**	*e*Pn	**Pn**	**20 33 25.1**	**+0.6**
PB11				*e*Sn	**Sn**	**20 33 55.4**	**-4.4**
PB11	**IPOC Station P**	**2.94**	**161**	*e*P	**Pn**	**20 33 25.6**	**+1.1**
PB11				*i* S	**Sn**	**20 33 59.7**	**-0.1**
PB11				IAML		20 34 06.8	
	comp=E,924nm,0.5s						
GO01	**Chusmiza**	**3.03**	**152**	*e*Pn	**Pn**	**20 33 28.9**	**+2.9**
GO01				*e*Sn	**Sn**	**20 33 57.7**	**-4.8**
GO01	**Chusmiza**	**3.03**	**152**	*e*P	**Pn**	**20 33 29.1**	**+3.1**
GO01				*i* S	**Sn**	**20 34 06.0**	**+3.5**
GO01				IAML		20 34 10.2	
	comp=E,1µm,0.1s						
PB08	**IPOC Station P**	**3.47**	**155**	*e*P	**Pn**	**20 33 34.0**	**+2.3**
PB08				*i* S	**Sn**	**20 34 14.2**	**+1.6**
PB08				IAML		20 34 16.1	
	comp=E,729nm,0.2s						
PB01	**IPOC Station P**	**4.20**	**164**	*e*Pn	**Pn**	**20 33 41.8**	**+0.7**
PB01				*e*Sn	**Sn**	**20 34 22.1**	**-7.4**
PB01	**IPOC Station P**	**4.20**	**164**	*e*P	**Pn**	**20 33 44.9**	**+3.7**
PB07	**IPOC Station P**	**4.78**	**171**	*e*P	**Pn**	**20 33 49.7**	**+0.7**
PB07				*i* S	**Sn**	**20 34 40.0**	**-3.6**
PB09	**IPOC Station P**	**4.98**	**164**	*e*P	**Pn**	**20 33 53.2**	**+1.6**
PB09				*i* S	**Sn**	**20 34 48.4**	**0.0**
PB04	**IPOC Station P**	**5.35**	**175**	*e*Pn	**Pn**	**20 33 56.8**	**+0.2**
PB04				*e*Sn	**Sn**	**20 34 51.7**	**-5.5**
LVC	**Limon Verde**	**5.84**	**164**	P	**Pn**	**20 34 05.2**	**+1.7**
	comp=E,8.5nm,0.3s,baz=354,slow=10,SNR=72						
LVC				S	**Sn**	**20 35 08.0**	**-1.5**
	comp=E,49nm,0.3s,baz=186,slow=22,SNR=32						
LVC				LR	LR	20 36 41.0	
	comp=E,65nm,18.7s,baz=330,slow=41						
LVC	**Limon Verde**	**5.84**	**164**	*e*Pn	**Pn**	**20 34 05.0**	**+1.6**
LVC				*e*Sn	**Sn**	**20 35 07.4**	**-2.1**
PB10	**IPOC Station P**	**6.50**	**179**	*e*Pn	**Pn**	**20 34 11.9**	**0.0**
PB10				*e*Sn	**Sn**	**20 35 19.3**	**-5.5**
YJA	**Yavi**	**7.11**	**137**	*e*P	**Pn**	**20 34 19.7**	**-0.8**
YJA				IAML		20 35 45.6	
	comp=Z,3.3nm,0.6s						
NNA	**Nana**	**7.75**	**309**	*e*Pn	Pn	20 34 23.8	-5.2
HJA	**Humahuaca**	**7.94**	**142**	*e*P	**Pn**	**20 34 30.1**	**-1.5**
HJA				IAML		20 36 06.3	
	comp=Z,9.7nm,0.4s						
GO02	**Mina Guanaco**	**8.21**	**173**	*e*Pn	**Pn**	**20 34 35.0**	**-0.2**
GO02				*e*Sn	**Sn**	**20 36 01.7**	**-4.7**
AZAP	**Zapla**	**8.93**	**145**	*e*P	**Pn**	**20 34 42.6**	**-2.3**
AZAP				IAML		20 36 26.2	
	comp=Z,4.8nm,0.5s						
SIV	**San Ignacio**	**9.28**	**85**	P	**Pn**	**20 34 47.6**	**-2.0**
	comp=Z,11nm,0.3s,baz=278,slow=11,SNR=84						
GO03	**Copiap**	**10.57**	**178**	*e*Pn	**Pn**	**20 35 08.5**	**+1.7**
GO03				*e*Sn	**Sn**	**20 37 00.6**	**-2.8**
LCO	**Las Campanas**	**11.97**	**180**	*e*P	**Pn**	**20 35 25.5**	**-0.1**
GO04	**Tololo Observa**	**13.13**	**180**	*e*Pn	**Pn**	**20 35 40.6**	**0.0**
AQDB	**Aquidauana**	**14.62**	**106**	*e*P	**Pn**	**20 35 59.4**	**-0.1**
CFA	**Coronel Fontan**	**14.73**	**172**	P	**P**	**20 36 03.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=347,slow=13,SNR=8.6						
CFA				S	**Sn**	**20 38 35.9**	**-7.9**
	comp=Z,0.5nm,0.3s,baz=166,slow=3.2,SNR=3.2						
CPUP	**Villa Florida**	**15.51**	**129**	*e*P	**Pn**	**20 36 11.4**	**+0.8**
CLDB	**Colider**	**15.68**	**69**	*e*P	**Pn**	**20 36 11.3**	**-1.5**
TRCB	**Terra Rica**	**17.94**	**112**	*e*P	**P**	**20 36 39.3**	**+0.2**
PTGB	**Pitanga**	**19.02**	**117**	*e*P	**P**	**20 36 51.8**	**+0.8**
PTGA	**Pitinga**	**19.30**	**34**	P	**P**	**20 36 53.1**	**-0.9**
	comp=Z,6.9nm,0.3s,baz=324,slow=22,SNR=29						
PTGA	**Pitinga**	**19.30**	**34**	*e*P	**P**	**20 36 52.3**	**-1.7**
	comp=Z,21nm,0.4s						
PTGA	**Pitinga**	**19.30**	**34**	*e*P	**P**	**20 36 51.8**	**-2.2**
CRUC	**La Cruz**	**19.44**	**341**	*e*P	**Pn**	**20 36 58.8**	**+0.5**
ITRB	**Iturama**	**19.49**	**101**	*e*P	**P**	**20 36 56.0**	**-0.1**
SOTA	**Rioblanco**	**19.87**	**342**	*e*P	**Pn**	**20 37 02.2**	**-1.3**
BBAC	**Balboa, Cauca**	**19.96**	**340**	*e*P	**Pn**	**20 37 02.8**	**-1.5**
PCON	**Cinco Dias**	**20.00**	**343**	*e*P	**Pn**	**20 37 03.6**	**-1.4**
CPSB	**Cacapava Do Su**	**20.66**	**133**	*e*P	**P**	**20 37 09.2**	**+0.8**
FRTB	**Fartura**	**20.81**	**111**	*e*P	**P**	**20 37 10.6**	**+0.3**
GRGC	**Isla de Gorgon**	**21.18**	**339**	*e*P	**P**	**20 37 17.2**	**+2.9**
BB19B	**Bebedouro**	**21.34**	**104**	*e*P	**P**	**20 37 16.1**	**+0.1**
PLTB	**Pedras Altas**	**21.38**	**137**	*e*P	**P**	**20 37 17.1**	**+0.8**
YOTC	**Yotoco, Valle**	**21.57**	**344**	*e*P	**P**	**20 37 17.2**	**-1.2**
BDFB	**Brasilia**	**21.81**	**90**	P	**P**	**20 37 19.1**	**-1.9**
	comp=Z,4.2nm,0.4s,baz=258,slow=11,SNR=8.7						
BDFB	**Brasilia**	**21.81**	**90**	*e*P	**P**	**20 37 19.1**	**-1.9**
BDFB				*e*P	**P**	**20 37 20.4**	**-0.6**
CNLB	**Canela**	**21.95**	**128**	*e*P	**P**	**20 37 22.8**	**+0.4**
ROSC	**El Rosal**	**21.98**	**350**	*e*P	**P**	**20 37 19.1**	**-4.0**
	comp=Z,4.1nm,0.6s						
PEXB	**Peixe**	**22.20**	**80**	*e*P	**P**	**20 37 24.4**	**-0.7**
OGAUY	**Aigu**	**22.44**	**143**	*e*P	**P**	**20 37 28.7**	**+1.5**
RCLB	**Rio Claro- Sao**	**22.46**	**108**	*e*P	**P**	**20 37 27.8**	**+0.2**
GUY2C	**Guyana, Caldas**	**22.54**	**348**	*e*P	**P**	**20 37 28.3**	**-0.6**
SPB	**Sao Paulo**	**22.77**	**111**	*e*P	**P**	**20 37 31.1**	**+0.5**
	comp=Z,13nm,0.6s						
SPB	**Sao Paulo**	**22.77**	**111**	*e*P	**P**	**20 37 30.9**	**+0.3**
NORC	**Norcasia**	**22.78**	**349**	*e*P	**P**	**20 37 29.7**	**-1.0**
RUSC	**La Rusia**	**22.85**	**354**	*e*P	**P**	**20 37 29.4**	**-2.4**
PTBC	**PUERTO BERRIO,**	**23.66**	**351**	*e*P	**P**	**20 37 34.9**	**-4.0**
PLCA	**Paso Flores**	**23.67**	**180**	P	**P**	**20 37 41.8**	**+3.0**
	comp=Z,16nm,1.1s,baz=24,slow=9.5,SNR=11						
PLCA	**Paso Flores**	**23.67**	**180**	*e*P	**P**	**20 37 40.4**	**+1.6**
	comp=Z,14nm,1.0s						
PLCA	**Paso Flores**	**23.67**	**180**	*e*P	**P**	**20 37 39.1**	**+0.3**
PARB	**Paraibuna**	**24.35**	**109**	*e*P	**P**	**20 37 45.7**	**+0.6**
ZARC	**Zaragoza, Cauc**	**24.66**	**350**	*e*P	**P**	**20 37 45.4**	**-2.6**
BSCB	**Bom Sucesso**	**24.82**	**103**	*e*P	**P**	**20 37 49.7**	**+0.2**
ESAR	**Angra dos Reis**	**25.37**	**108**	*e*P	**P**	**20 37 54.4**	**+0.1**
SDV	**Santo Domingo**	**25.70**	**0**	P	**P**	**20 37 59.3**	**+1.8**
	comp=Z,2.1nm,0.3s,baz=174,slow=7.5,SNR=3.0						
VAS01	**Vassouras-RJ**	**26.18**	**106**	*e*P	**P**	**20 38 01.7**	**0.0**
DUB01	**Friburgo-RJ**	**27.14**	**105**	*e*P	**P**	**20 38 10.5**	**+0.1**
CAM01	**Campos-RJ**	**27.78**	**105**	*e*P	**P**	**20 38 16.0**	**0.0**
SJMB	**Sao Joao De Ma**	**28.13**	**98**	*e*P	**P**	**20 38 19.0**	**-0.1**
MDP	**Montagnes des**	**28.28**	**41**	P	**P**	**20 38 20.6**	**+0.1**
	comp=Z,6.0nm,0.8s,baz=208,slow=7.7,SNR=5.8						
ALF01	**Guarapari-ES**	**28.58**	**102**	*e*P	**P**	**20 38 23.2**	**+0.1**
GRGR	**Grenville**	**30.28**	**18**	*e*P	**P**	**20 38 36.9**	**-1.1**
	comp=Z,177nm,1.4s						
SVB	**Belmont**	**31.47**	**18**	*e*P	**P**	**20 38 47.1**	**-1.5**
	comp=Z,39nm,0.5s						
FDF	**Fort de France**	**32.89**	**17**	*e*P	**P**	**20 38 56.9**	**-4.1**
	comp=Z,34nm,1.1s						
CRPR	**Cabo Rojo, PR**	**34.95**	**6**	*e*P	**P**	**20 39 17.9**	**-0.8**
	comp=Z,34nm,1.4s						
OBIP	**Obispado Ponce**	**35.04**	**7**	*e*P	**P**	**20 39 17.8**	**-1.7**
	comp=Z,24nm,1.4s						
MTP	**Monte Pirata**	**35.22**	**8**	*e*P	**P**	**20 39 18.8**	**-2.2**
	comp=Z,19nm,1.2s						
AOPR	**Arecibo Observ**	**35.32**	**6**	*e*P	**P**	**20 39 20.6**	**-1.3**
	comp=Z,40nm,1.4s						
AGP	**Aguadilla**	**35.34**	**6**	*e*P	**P**	**20 39 21.2**	**-0.9**
	comp=Z,139nm,1.2s						
CBYP	**Canovanas**	**35.35**	**8**	*e*P	**P**	**20 39 20.0**	**-2.2**
	comp=Z,15nm,0.9s						
CUPR	**Culebra, Puert**	**35.47**	**9**	*e*P	**P**	**20 39 20.4**	**-2.7**
	comp=Z,42nm,1.4s						
ANWB	**Willy Bob**	**35.53**	**15**	*e*P	**P**	**20 39 20.7**	**-3.0**
	comp=Z,37nm,0.8s						
STVI	**Saint Thomas**	**35.56**	**9**	*e*P	**P**	**20 39 21.6**	**-2.4**
	comp=Z,41nm,1.3s						
RCBR	**Riachuelo**	**35.79**	**76**	*e*P	**P**	**20 39 26.5**	**+0.3**
	comp=Z,53nm,1.6s						
RCBR	**Riachuelo**	**35.79**	**76**	*e*P	**P**	**20 39 25.8**	**-0.3**
ABVI	**Anegada Island**	**36.03**	**10**	*e*P	**P**	**20 39 26.7**	**-1.3**
	comp=Z,74nm,1.0s						
154A	**Montrose**	**50.73**	**346**	P	**P**	**20 41 26.3**	**+0.6**
	baz=165						
251A	**Midway**	**50.79**	**344**	P	**P**	**20 41 26.9**	**+0.8**
	baz=162						
152A	**Waverly Hall**	**51.16**	**345**	P	**P**	**20 41 29.1**	**+0.2**
	baz=163						
Y55A	**Saluda**	**51.74**	**348**	P	**P**	**20 41 33.4**	**+0.2**
	baz=166						
Y54A	**Tignall**	**51.84**	**347**	P	**P**	**20 41 33.6**	**-0.3**
	baz=166						
Z50A	**Ashland**	**52.03**	**344**	P	**P**	**20 41 35.0**	**-0.4**
	baz=162						
LRAL	**Lakeview Retre**	**52.12**	**343**	P	**P**	**20 41 36.2**	**+0.2**
	baz=160						
Z49A	**Columbiana**	**52.14**	**343**	P	**P**	**20 41 36.2**	**+0.1**
	baz=161						
Y51A	**Rockmart**	**52.42**	**345**	P	**P**	**20 41 38.0**	**-0.3**
	baz=163						
X54A	**Belton**	**52.43**	**348**	P	**P**	**20 41 38.9**	**+0.5**
	baz=166						
X52A	**Dahlonega**	**52.81**	**346**	P	**P**	**20 41 40.9**	**-0.3**
	baz=164						
W53A	**Cullowhee**	**53.20**	**347**	P	**P**	**20 41 44.3**	**+0.2**
	baz=165						
TXAR	**Lajitas Array**	**55.98**	**325**	P	**P**	**20 42 05.2**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=147,slow=9.9,SNR=3.7						
TXAR				pP	**pP**	**20 42 36.4**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=174,slow=2.4,SNR=2.3						
TXAR				sP	**sP**	**20 42 49.5**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=144,slow=11,SNR=3.0						
SDCO	**Great Sand Dun**	**63.52**	**330**	*e*P	**P**	**20 42 55.9**	**0.0**
	comp=Z,2.3nm,1.0s						
VNA3	**Neumayer Olymp**	**64.87**	**162**	P	**P**	**20 43 07.3**	**+3.3**
VNA1	**Neumayer--Stat**	**65.08**	**161**	P	**P**	**20 43 09.2**	**+3.9**
VNA2	**Neumayer--Watz**	**65.45**	**161**	P	**P**	**20 43 11.2**	**+3.4**
	baz=291,slow=6.8						
SNAA	**Sanae**	**67.08**	**161**	P	**P**	**20 43 21.3**	**+3.2**
SNAA	**Sanae**	**67.08**	**161**	*e*P	**P**	**20 43 20.8**	**+2.6**
	comp=Z,4.1nm,0.7s						
LIC	**Lamto**	**68.85**	**76**	*e*P	**P**	**20 43 29.4**	**-0.8**
	comp=Z,55nm,1.3s						
TIC	**Toumodi**	**69.01**	**76**	*e*P	**P**	**20 43 29.5**	**-1.7**
KIC	**Kosan Boka**	**69.17**	**76**	*e*P	**P**	**20 43 32.3**	**+0.2**
	comp=Z,24nm,0.7s						
DBIC	**Dimbokro**	**69.17**	**76**	P	**P**	**20 43 31.6**	**-0.6**
	comp=Z,4.9nm,0.5s,baz=227,slow=3.1,SNR=19						
DBIC	**Dimbokro**	**69.17**	**76**	*e*P	**P**	**20 43 31.7**	**-0.4**
	comp=Z,11nm,1.0s						
PD31	**Pinedale Array**	**69.37**	**330**	*e*P	**P**	**20 43 33.4**	**+0.3**
PDAR	**Pinedale Array**	**69.37**	**330**	P	**P**	**20 43 33.4**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=128,slow=7.0,SNR=3.1						
ULM	**Lac du Bonnet**	**70.53**	**343**	P	**P**	**20 43 39.9**	**+0.2**
	comp=Z,3.1nm,0.3s,baz=158,slow=4.7,SNR=5.1						
TOA1	**Torodi Ar. Sit**	**77.50**	**72**	*e*P	**P**	**20 44 19.9**	**-1.1**
TOA1				*e*pP	**pP**	**20 44 53.5**	**-0.6**
TOA0	**Torodi Ar. Sit**	**77.50**	**72**	*e*P	**P**	**20 44 21.1**	**+0.1**
	comp=Z,12nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.50**	**72**	P	**P**	**20 44 19.9**	**-1.1**
	comp=Z,8.6nm,0.7s,baz=258,slow=4.5,SNR=52						
TORD				pP	**pP**	**20 44 53.5**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=279,slow=4.2,SNR=2.4						
VNDA	**Vanda**	**80.98**	**190**	P	**P**	**20 44 42.0**	**+3.1**
	comp=Z,1.2nm,0.9s,baz=119,slow=2.1,SNR=5.6						
VNDA	**Vanda**	**80.98**	**190**	*e*P	**P**	**20 44 42.8**	**+4.0**
SYO	**Syowa Base**	**81.30**	**160**⇑	*e*P	**P**	**20 44 41.3**	**+0.7**
ESDC	**Sonseca Array**	**83.85**	**45**	P	**P**	**20 44 54.8**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=255,slow=5.5,SNR=13						
YKA	**Yellowknife Ar**	**86.39**	**341**	P	**P**	**20 45 09.2**	**+2.8**
	comp=Z,1.9nm,0.7s,baz=126,slow=4.9,SNR=3.2						
YKB5	**Yellowknife Ar**	**86.39**	**341**	*e*P	**P**	**20 45 09.2**	**+2.8**
ASAR	**Alice Springs**	**132.99**	**211**	PKP	**PKiKP**	**20 51 42.0**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=130,slow=1.6,SNR=9.2						
WR1	**Warramunga Arr**	**135.83**	**215**	*e*PKPdf	**PKiKP**	**20 51 47.2**	**+0.2**
WRA	**Warramunga Arr**	**135.83**	**215**	PKP	**PKiKP**	**20 51 47.2**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=172,slow=1.8,SNR=19						
ZAA1	**Zalesovo Array**	**138.49**	**22**	*e*PKPdf	**PKiKP**	**20 51 50.2**	**-1.1**
ZALV	**Zalesovo Beam**	**138.50**	**22**	PKP	**PKiKP**	**20 51 50.2**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=270,slow=3.0,SNR=4.7						
MK32	**Makanchi Array**	**142.81**	**31**	*e*PKPdf	**PKPdf**	**20 51 56.5**	**-0.8**
MKAR	**Makanchi Array**	**142.81**	**31**	PKP	**PKPdf**	**20 51 56.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=296,slow=4.2,SNR=5.2						
USRK	**Ussuriysk Ar.**	**146.79**	**330**	PKPbc	**PKiKP**	**20 52 08.3**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=102,slow=0.1,SNR=6.2						
WMQ	**Urumqi**	**147.59**	**30**	*e*PKPbc	**PKPdf**	**20 52 04.2**	**-1.5**
MJAR	**Matsushiro Arr**	**147.86**	**313**	PKPbc	**PKPab**	**20 52 11.7**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=107,slow=1.4,SNR=8.5						
MAJO	**Matsushiro**	**147.86**	**313**	*e*PKPab	**PKPab**	**20 52 11.7**	**-0.5**
SONA0	**Songino Array**	**149.14**	**4**	*e*PKPbc	**PKiKP**	**20 52 14.2**	**+0.6**
SONA0				*e*pPKPab	**pPKPbc**	**20 52 47.4**	**+0.1**
SONM	**Songino Array**	**149.14**	**4**	PKPbc	**PKiKP**	**20 52 14.2**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=315,slow=1.6,SNR=16						
SONM				pPKPbc	**pPKPbc**	**20 52 47.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=217,slow=0.7,SNR=2.8						
HHC	**Hu-ho-hao-te**	**156.13**	**356**	*e*PKP	**PKPdf**	**20 52 18.0**	**-0.6**
HHC				LR	LR		
	comp=Z,57nm,17.3s						
HHC				LR	LR		
	comp=Z,11nm,15.3s						
HHC				LR	LR		
	comp=Z,150nm,11.1s						
LZH	**Lanzhou**	**160.36**	**13**	*e*PKP	**PKPdf**	**20 52 23.3**	**-0.6**
LZH				pPKP	pPKPdf	20 52 51.5	-7.8
LZH				sPKP		20 53 02.7	
LZH				PKPab	**PKPab**	**20 53 06.0**	**+0.9**
LZH				LR	LR		
	comp=Z,110nm,18.0s						
LZH				LR	LR		
	comp=Z,97nm,18.2s						
LZH				LR	LR		
	comp=Z,140nm,20.1s						
NJ2	**Nanjing**	**162.68**	**332**	*e*PKP	**PKPdf**	**20 52 24.0**	**-2.2**
CD2	**Chengdu**	**165.24**	**19**	PKP	**PKPdf**	**20 52 26.3**	**-2.4**
WHN	**Wuhan**	**165.74**	**342**	PKP	**PKPdf**	**20 52 27.8**	**-1.2**
KMI	**Kunming**	**169.84**	**36**	PKP	**PKPdf**	**20 52 29.0**	**-3.3**
GYA	**Guiyang**	**170.25**	**14**	*e*PKP	**PKPdf**	**20 52 30.9**	**-1.5**
GYA				pPKP	pPKPdf	20 52 57.8	-10
GYA				PKPab	**PKPab**	**20 53 50.7**	**+1.9**
GYA				PP	**PP**	**20 57 40.6**	**+2.7**
GYA				AMB	AMB		
	comp=Z,110nm,7.9s						

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*DSN **12** 20:32:49.2±1.0, 28°.55N×54°.88E, h10^{km}, ML4.1/7, Error ellipse: s-maj=20.9km s-min=6.0km az=97.0*

*OMAN **12** 20:32:49.4±7.0, 28°.62N×54°.67E, h129^{km}±44^{km}, ml4.0/8, Error ellipse: s-maj=75.9km s-min=62.9km az=161.0*

*IDC **12** 20:33:02.2±1.4, 27°.28N×54°.94E, h0^{km}, mb3.6/8, mb1 3.7/11, mb1mx3.5/38, mbtmp3.6/11, ML3.5/3, MS3.3/1, Ms1 3.1/1, ms1mx2.4/39, Error ellipse: s-maj=28.0km s-min=22.1km az=172.0*

*THR **12** 20:33:04.7, 27°.37N×55°.16E, h14^{km}, ML3.6*

*ISCJB **12** 20:33:05.8±0.3, 27°.32N±0°.03×55°.01E±0°.05, h20^{km}, mb3.6/8, Error ellipse: s-maj=6.3km s-min=3.2km az=154.4*

*TEH **12** 20:33:06.8, 27°.26N×55°.01E, h28^{km}, ML3.6*

ISC 12 20:33:05.6±0.6**, 27°.35N**±0°.03×**55°.10E**±0°.03**, h20^{km}, n76, σ1^{s}.87**/76**, mb3.6**/8**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.95**	**87**	*e*Pg	**Pb**	**20 33 21.5**	**-2.1**
BNDS	**Bandar-Abbas**	**0.95**	**87**	Pg	**Pb**	**20 33 21.5**	**-2.1**
GENO	**Geno**	**0.96**	**87**	*e*Pg	**Pn**	**20 33 26.1**	**+2.0**
GENO				*e*Sg	**Sn**	**20 33 41.9**	**+4.7**
GENO				IAMB	IAmb	20 33 50.6	
	comp=Z,0.0nm,0.3s						
NIAN	**Nian**	**1.56**	**82**	*e*Pn	**Pb**	**20 33 35.3**	**+1.6**
NIAN				IAMB	IAmb	20 34 03.6	
	comp=Z,0.0nm,0.4s						
SHME	**Shamm**	**1.60**	**144**	P	**Pb**	**20 33 33.4**	**-1.1**
SHME	**Shamm**	**1.60**	**144**	*e*Pn	**Pb**	**20 33 33.3**	**-1.2**
LMD1	**Lamerd**	**1.72**	**270**	*e*Pn	**Pn**	**20 33 35.5**	**+1.1**
JHRM	**Jahrom**	**1.77**	**311**	*e*Pn	**Pb**	**20 33 37.4**	**0.0**
JHRM				IAMB	IAmb	20 34 11.3	
	comp=E,0.0nm,0.4s						
UMQ	**Umm Al-Quwin**	**1.89**	**164**	*e*Pn	**Pb**	**20 33 38.9**	**-0.5**
GHIR	**Ghir-Karzin**	**2.09**	**297**	*e*Pn	**Pb**	**20 33 42.1**	**-0.8**
GHIR	**Ghir-Karzin**	**2.09**	**297**	AML	AML	20 34 18.4	
	comp=N,447nm,0.6s						
GHIR				AML	AML	20 34 20.3	
	comp=E,334nm,0.6s						
GHIR	**Ghir-Karzin**	**2.09**	**297**	Pn	**Pb**	**20 33 42.1**	**-0.8**
GHIR				Sg	**Sb**	**20 34 11.7**	**+3.3**
MSFE	**Esma-Masafi**	**2.20**	**154**	*i* P	**Pn**	**20 33 42.5**	**+1.4**
	SNR=8.8						
MSFE	**Esma-Masafi**	**2.20**	**154**	*e*Pn	**Pb**	**20 33 42.8**	**-2.0**
MDH	**Madha**	**2.31**	**152**	P	**Pn**	**20 33 44.1**	**+1.6**
MDH	**Madha**	**2.31**	**152**	*e*Pn	**Pb**	**20 33 44.4**	**-2.2**
NAZ	**Nazwa, Dubai**	**2.41**	**168**	*i* P	**Pn**	**20 33 45.4**	**+1.5**
	SNR=7.4						
NAZ	**Nazwa, Dubai**	**2.41**	**168**	P	**Pn**	**20 33 45.9**	**+2.0**
NAZ	**Nazwa, Dubai**	**2.41**	**168**	*e*Pn	**Pn**	**20 33 45.4**	**+1.5**
UOSS	**Minazif**	**2.59**	**157**	*i* P	**Pn**	**20 33 47.4**	**+0.9**
	SNR=9.4						
UOSS	**Minazif**	**2.59**	**157**	P	**Pn**	**20 33 47.6**	**+1.2**
UOSS	**Minazif**	**2.59**	**157**	*e*Pn	**Pn**	**20 33 47.7**	**+1.2**
FAQ	**Al Faqa, Dubai**	**2.63**	**170**	P	**Pn**	**20 33 48.3**	**+1.3**
FAQ	**Al Faqa, Dubai**	**2.63**	**170**	P	**Pn**	**20 33 48.8**	**+1.8**
FAQ				S	Sb	20 34 34.8	+11

FAQ	Al Faqa, Dubai	2.63	170	ePn	Pn	20 33 48.6	+1.6
ISRV	Sarvestan	2.67	320	ePn	Pn	20 33 49.6	+1.8
ISRV				IAMB	IAmb	20 34 54.2	
	comp=Z,2µm,0.6s						
HATD	Hatta, Dubai	2.68	160	iP	Pn	20 33 49.0	+1.3
	SNR=6.0						
HATD	Hatta, Dubai	2.68	160	P	Pn	20 33 48.9	+1.3
HATD	Hatta, Dubai	2.68	160	ePn	Pn	20 33 49.0	+1.3
NGRK	Negar Kerman	2.70	32	ePn	Pb	20 33 50.7	-2.7
NGRK				IAMB	IAmb	20 34 45.8	
	comp=Z,0.0nm,0.5s						
ASUD	Al Ashush, Dub	2.72	176	iP	Pn	20 33 50.4	+2.1
	SNR=7.2						
ASUD				S	Sb	20 34 37.1	+11
ASUD	Al Ashush, Dub	2.72	176	P	Pn	20 33 50.4	+2.1
	SNR=7.5						
ASUD	Al Ashush, Dub	2.72	176	ePn	Pn	20 33 50.8	+2.6
ASHO	Ashiyiah	2.79	162	iP	Pn	20 33 50.6	+1.4
	SNR=45						
ASHO	Ashiyiah	2.79	162	P	Pn	20 33 50.7	+1.5
	SNR=45						
ASHO	Ashiyiah	2.79	162	ePn	Pn	20 33 50.5	+1.3
TVBK	TV Kerman	3.00	29	ePn	Pb	20 33 56.3	-2.3
TVBK				IAMB	IAmb	20 34 44.6	
	comp=Z,0.0nm,0.4s						
IPAR	Pars	3.07	324	ePn	Pn	20 33 55.5	+2.3
KHGB	Koh Gabri	3.25	22	ePn	Pb	20 33 59.5	-3.2
KHGB				IAMB	IAmb	20 34 58.9	
	comp=Z,0.0nm,0.5s						
CHMN	Cheshme madani	3.29	40	ePn	Pb	20 34 00.9	-2.7
CHMN				IAMB	IAmb	20 34 01.9	
	comp=Z,0.0nm,0.3s						
ALNE	Al Ain	3.33	170	ePn	Pn	20 33 58.1	+1.4
IKAZ	Kazeroun	3.75	311	ePn	Pn	20 34 03.8	+1.2
IKAZ				IAMB	IAmb	20 34 54.1	
	comp=Z,2µm,0.6s						
IMEH	Mehriz	4.04	354	IAMB	IAmb	20 34 11.1	
	comp=Z,434nm,0.3s						
IMEH				ePn	Pb	20 34 09.9	-6.4
ARQ	Araqi	4.20	162	P	Pn	20 34 11.2	+2.6
IBAF	Bafgh	4.24	5	ePn	Pn	20 34 12.1	+2.9
IBAF				IAMB	IAmb	20 34 12.7	
	comp=Z,673nm,0.3s						
ISAD	Sadrabad	4.71	345	ePn	Pn	20 34 19.2	+3.4
ISAD				IAMB	IAmb	20 34 20.2	
	comp=Z,881nm,0.4s						
BSY	Bisya	4.97	157	P	Pn	20 34 21.4	+2.3
IRAM	Ramesheh	5.03	333	ePn	Pn	20 34 22.1	+1.9
IRAM				IAMB	IAmb	20 34 23.7	
	comp=Z,521nm,0.4s						
YZKH	Yazd	5.04	355	ePn	Pn	20 34 22.7	+2.6
YZKH	Yazd	5.04	355	Pn	Pn	20 34 22.7	+2.6
SMDO	Samad	5.04	147	P	Pn	20 34 22.5	+2.3
CHBR	Chabahar	5.13	109	ePn	Pn	20 34 22.8	+1.5
CHBR	Chabahar	5.13	109	Pn	Pn	20 34 22.8	+1.5
WSAR	Wadi Sarin	5.20	141	Pn	Pn	20 34 23.0	+0.8
	comp=Z,1.2nm,0.3s,baz=326,slow=7.2,SNR=18						
WSAR				Sn	Sn	20 35 21.1	-0.5
	comp=Z,0.8nm,0.3s,baz=18,slow=20,SNR=3.3						
IGAR	Gharneh	5.69	333	ePn	Pn	20 34 31.2	+2.0
NASN	Na'in	5.78	340	ePn	Pn	20 34 32.2	+1.7
NASN	Na'in	5.78	340	Pn	Pn	20 34 32.2	+1.7
WBK	Wadi Bani Khal	5.88	143	P	Pn	20 34 34.1	+2.4
ZNGN	Zangian	6.01	323	ePn	Pn	20 34 35.6	+1.9
IZEF	Zefreh	6.02	337	ePn	Pn	20 34 34.9	+1.1
IZEF				IAMB	IAmb	20 34 35.9	
	comp=Z,287nm,0.5s						
IKOO	Kooshah	6.08	33	ePn	Pn	20 34 38.2	+3.5
ROKH	ROKH	6.10	326	ePn	Pn	20 34 36.6	+1.8
IPIR	Pirpir	6.44	327	ePn	Pn	20 34 40.7	+1.1
IKLH	Kolahrood	6.68	334	ePn	Pn	20 34 43.9	+1.1
IKLH				IAMB	IAmb	20 35 04.3	
	comp=Z,142nm,0.4s						
MHTO	MHTO	6.86	157	P	Pn	20 34 45.7	+0.6
MMAI	Mount Meron Ar	17.93	293	P	Pn	20 37 12.4	-1.5
	comp=Z,0.2nm,0.3s,baz=116,slow=13,SNR=3.3						
KBZ	Khabaz	19.08	332	P	Pn	20 37 28.3	+0.6
	comp=Z,0.1nm,0.3s,baz=116,slow=9.9,SNR=4.6						
KBZ				LR	LR	20 44 43.8	
	comp=Z,76nm,18.5s,baz=306,slow=37						
BRTR	Keskin Array B	21.67	310	P	P	20 37 54.2	-0.8
	comp=Z,2.2nm,1.0s,baz=135,slow=12,SNR=10						
BVAR	Borovoye Array	28.06	20	P	P	20 38 56.5	+1.0
	comp=Z,0.3nm,0.4s,baz=208,slow=10,SNR=4.0						
KURBB	Kurchatov Arra	29.29	31	P	P	20 39 07.5	+1.0
	comp=Z,0.1nm,0.3s,baz=232,slow=9.7,SNR=4.2						
ZALV	Zalesovo Beam	34.39	31	P	P	20 39 51.1	0.0
	comp=Z,0.7nm,0.5s,baz=254,slow=8.7,SNR=3.1						
FINES	FINESS Array B	39.24	338	P	P	20 40 32.3	0.0
	comp=Z,0.7nm,0.4s,baz=143,slow=10,SNR=12						
NB2	NORSAR Subarra	44.66	331	P	P	20 41 14.4	-2.3
	comp=Z,1.2nm,1.1s,baz=113,slow=7.9						
NOA	NORSAR Array B	44.66	331	P	P	20 41 15.8	-0.9
	comp=Z,0.9nm,0.8s,baz=119,slow=8.1,SNR=5.9						
ESDC	Sonseca Array	49.94	300	P	P	20 41 57.3	-0.9
	comp=Z,0.2nm,0.4s,baz=80,slow=7.4,SNR=3.3						
TORD	Torodi Ar. Bea	51.70	265	P	P	20 42 09.7	-1.9
	comp=Z,0.7nm,0.6s,baz=54,slow=9.0,SNR=10						

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*CRAAG **12** 21:19:01.8, 36°.80N×5°.23E, Ml2.8*
*ISCJB **12** 21:19:04.6±0.5, 36°.98N±0°.03×5°.42E±0°.05, h18km, Error ellipse: s-maj=5.9km s-min=3.9km az=147.9*
*LDG **12** 21:19:06.7±0.2, 36°.86N×5°.32E, h2km, Ml3.3/5, Error ellipse: s-maj=7.9km s-min=4.9km az=110.0*
*MDD **12** 21:19:06.1±0.9, 36°.79N×5°.34E, h8km±13km, mb3.5/10, Error ellipse: s-maj=11.7km s-min=7.4km az=152.0, PRXIMO*
ISC 12 21:19:04.8±0.9**, 36°.81N**±0°.04×**5°.38E**±0°.04**, h18**km**, n33, σ1s80**/48**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.48	123	P	Pg	21 19 15.6	+1.1
DFRA	Djebel Bou Aff	0.48	123	Pg	Pg	21 19 15.6	+1.1
SET	Setif	0.61	179	P	Pg	21 19 17.0	+0.1
SET	Setif	0.61	179	Pg	Pg	21 19 17.0	+0.1
CKHR	Kef el Ahmar	0.80	172	P	Pb	21 19 20.7	+0.5
CKHR	Kef el Ahmar	0.80	172	Pg	Pb	21 19 20.7	+0.5
CASM	Ain Smara	1.05	121	P	Pb	21 19 25.1	+0.7
CASM	Ain Smara	1.05	121	Pg	Pb	21 19 25.1	+0.7
CKFL	Kef-Lekhel	1.15	110	P	Pn	21 19 23.6	-2.5
CAEH	'Ain El Ouahch	1.18	91	P	Pg	21 19 28.6	+1.0
CAEH	'Ain El Ouahch	1.18	91	Pg	Pg	21 19 28.6	+1.0
CMAH	Djebel Manchou	1.65	96	P	Pn	21 19 34.5	+1.6
CMAH	Djebel Manchou	1.65	96	Pn	Pn	21 19 34.5	+1.6
ETOS	Mallorca	3.58	326	Pn	Pn	21 20 00.8	+1.4
	4.4nm,0.7s,SNR=10						
ETOS				Sn	Sn	21 20 41.2	0.0
	2.2nm,0.5s,SNR=7.9						
EIBI	Ibiza	3.89	306	Pn	Pn	21 20 04.9	+1.3
	3.3nm,0.3s,SNR=7.9						
EIBI				Sn	Sn	21 20 48.2	-0.6
	4.9nm,0.4s,SNR=7.9						
EBEN2	Beniarda presa	4.79	295	Pn	Pn	21 20 17.5	+1.4
	2.7nm,0.6s,SNR=7.9						
CFON	Fontmartina	5.45	336	Pn	Pn	21 20 26.4	+1.3
	1.1nm,0.6s,SNR=7.9						
CFON				Sn	Sn	21 21 25.4	-2.0
	4.5nm,1.7s,SNR=7.9						
EPOB	Poblet	5.64	325	Pn	Pn	21 20 28.9	+1.1
	1.8nm,1.8s,SNR=7.9						
EPOB				Sn	Sn	21 21 29.8	-2.3
	1.1nm,2.7s,SNR=7.9						
ETOB	Tobarra	5.79	291	Pn	Pn	21 20 31.4	+1.5
	1.9nm,0.4s,SNR=7.9						
ETOB				Sn	Sn	21 21 33.3	-2.6
	0.9nm,3.3s,SNR=7.9						
EMOS	Mosqueruela	5.80	310	Pn	Pn	21 20 31.6	+1.6
	1.4nm,0.5s,SNR=7.9						
CLLI	Llivia	6.24	336	Pn	Pn	21 20 37.6	+1.5
	1.5nm,1.2s,SNR=7.9						
CLLI				Sn	Sn	21 21 45.0	-2.0
	1.5nm,3.0s,SNR=7.9						
PGF	Pioggiola	6.37	25	ePn	Pn	21 20 39.0	+1.1
PGF				eSn	Sn	21 21 47.8	-2.4
	4.3nm,0.3s						
PGF	Pioggiola	6.37	25	Pn	Pn	21 20 39.0	+1.1
PGF				Sn	Sn	21 21 47.8	-2.4
	2.2nm,0.3s						
CSOR	Sort	6.45	331	Pn	Pn	21 20 40.4	+1.4
	1.9nm,0.9s,SNR=7.9						
LMR	La Mourre	6.57	7	ePn	Pn	21 20 41.3	+0.8
LMR				eSn	Sn	21 21 52.2	-2.8
	1.8nm,0.2s						
LMR	La Mourre	6.57	7	Pn	Pn	21 20 41.3	+0.8
LMR				Sn	Sn	21 21 52.2	-2.8
	0.9nm,0.2s						
EQES	Quesada	6.81	281	Pn	Pn	21 20 45.5	+1.7
	1.6nm,0.6s,SNR=7.9						
EQES				Sn	Sn	21 21 57.4	-3.6
	8.7nm,1.2s,SNR=7.9						
FRF	La Foret Royal	6.81	8	ePn	Pn	21 20 44.6	+0.8
FRF				eSn	Sn	21 21 58.0	-2.9
	1.5nm,0.2s						
FRF	La Foret Royal	6.81	8	Pn	Pn	21 20 44.6	+0.8
FRF				Sn	Sn	21 21 58.0	-2.9
	0.8nm,0.2s						
SMRF	Simiane la Rot	7.16	1	ePn	Pn	21 20 49.2	+0.6
SMRF	Simiane la Rot	7.16	1	Pn	Pn	21 20 49.2	+0.6
SBF	Sospel	7.22	12	ePn	Pn	21 20 50.7	+1.3
SBF				eSn	Sn	21 22 07.7	-3.2
	2.1nm,0.2s						
SBF	Sospel	7.22	12	Pn	Pn	21 20 50.7	+1.3
SBF				Sn	Sn	21 22 07.7	-3.2
	1.1nm,0.2s						

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*IDC **12** 21:23:11.0±1.4, 27°.28N×55°.04E, h0km, mb3.5/8, mb1 3.6/11, mb1mx3.4/52, mbtmp3.5/11, ML3.4/3, Error ellipse: s-maj=28.1km s-min=21.4km az=175.0*
*ISCJB **12** 21:23:13.1±0.5, 27°.16N±0°.05×55°.06E±0°.04, h20km, mb3.5/8, Error ellipse: s-maj=7.9km s-min=4.8km az=28.7*
*THR **12** 21:23:13.8, 27°.37N×55°.19E, h14km, ML3.4*
*TEH **12** 21:23:15.3, 27°.41N×55°.02E, h10km, ML3.7*
ISC 12 21:23:14.2±0.7**, 27°.23N**±0°.07×**55°.11E**±0°.03**, h20**km**, n38, σ1s97**/41**, mb3.5**/8**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.96	80	ePg	Pb	21 23 30.5	-1.9
BNDS	Bandar-Abbas	0.96	80	Pg	Pb	21 23 30.5	-1.9
BNDS				Sg	Sb	21 23 42.7	-2.1
GENO	Geno	0.96	80	ePg	Pn	21 23 35.5	+2.7
GENO				eSg	Sn	21 23 51.0	+5.0
GENO				IAMB	IAmb	21 23 55.4	
	comp=N,0.0nm,0.3s						
NIAN	Nian	1.57	78	ePn	Pn	21 23 44.0	+3.0
NIAN				IAMB	IAmb	21 24 11.7	
	comp=N,0.0nm,0.3s						
LMD1	Lamerd	1.73	274	ePn	Pb	21 23 45.6	+0.2
JHRM	Jahrom	1.86	314	ePn	Pb	21 23 47.0	-0.6
JHRM				IAMB	IAmb	21 24 31.1	
	comp=E,0.0nm,0.9s						
GHIR	Ghir-Karzin	2.15	300	ePn	Pb	21 23 51.4	-1.2
GHIR	Ghir-Karzin	2.15	300	AML	AML	21 24 29.6	
	comp=E,254nm,0.6s						
GHIR				AML	AML	21 24 32.2	
	comp=E,254nm,0.5s						
GHIR	Ghir-Karzin	2.15	300	Pn	Pb	21 23 51.4	-1.2
GHIR				Sg	Sb	21 24 21.5	+2.6
ISRV	Sarvestan	2.77	321	ePn	Pn	21 23 59.4	+1.6
ISRV				IAMB	IAmb	21 24 53.5	
	comp=Z,2µm,0.7s						
NGRK	Negar Kerman	2.80	30	ePn	Pn	21 23 59.6	+1.4
NGRK				IAMB	IAmb	21 25 02.1	
	comp=Z,0.0nm,0.9s						
TVBK	TV Kerman	3.11	28	ePn	Pn	21 24 04.9	+2.4
TVBK				IAMB	IAmb	21 24 54.9	
	comp=Z,0.0nm,0.4s						
KHGB	Koh Gabri	3.36	21	IAMB	IAmb	21 24 25.9	
	comp=Z,0.0nm,0.6s						
KHGB				ePn	Pn	21 24 08.2	+2.4
CHMN	Cheshme madani	3.38	39	IAMB	IAmb	21 22 00.3	
	comp=Z,0.0nm,1.0s						
CHMN				ePn	Pn	21 24 10.2	+3.9
IKAZ	Kazeroun	3.83	312	ePn	Pn	21 24 14.3	+1.8
IKAZ				IAMB	IAmb	21 25 05.0	
	comp=N,3µm,0.4s						
IMEH	Mehriz	4.17	354	ePn	Pn	21 24 19.2	+2.3
IMEH				IAMB	IAmb	21 24 22.4	
	comp=Z,275nm,0.2s						
IBAF	Bafgh	4.36	5	ePn	Pn	21 24 21.3	+1.7
ISAD	Sadrabad	4.83	346	ePn	Pn	21 24 28.2	+2.1
ISAD				IAMB	IAmb	21 24 29.2	
	comp=Z,426nm,0.3s						
CHBR	Chabahar	5.09	107	ePn	Pn	21 24 31.4	+2.0
CHBR	Chabahar	5.09	107	Pn	Pn	21 24 31.4	+2.0
WSAR	Wadi Sarin	5.10	140	Pn	Pn	21 24 31.8	+2.2
	comp=Z,1.1nm,0.3s,baz=316,slow=5.7,SNR=20						
WSAR				Sn	Sn	21 25 29.1	+1.3
	comp=Z,0.7nm,0.3s,baz=190,slow=17,SNR=2.5						
IRAM	Ramesheh	5.14	333	ePn	Pn	21 24 31.7	+1.4
IGAR	Gharneh	5.80	333	ePn	Pn	21 24 40.6	+1.2
ZNGN	Zangian	6.12	324	ePn	Pn	21 24 44.9	+1.1
IZEF	Zefreh	6.14	338	ePn	Pn	21 24 44.3	+0.3
IKOO	Kooshah	6.19	32	ePn	Pn	21 24 47.4	+2.7
IPIR	Pirpir	6.55	327	ePn	Pn	21 24 50.5	+0.8
MMAI	Mount Meron Ar	17.98	293	P	P	21 27 23.3	-0.3
	comp=Z,0.2nm,0.3s,baz=120,slow=8.8,SNR=3.2						
KBZ	Khabaz	19.20	332	P	P	21 27 37.3	+0.6
	comp=Z,0.1nm,0.3s,baz=162,slow=9.6,SNR=2.0						
BRTR	Keskin Array B	21.75	310	P	P	21 28 04.8	+0.2
	comp=Z,1.3nm,0.7s,baz=123,slow=14,SNR=8.6						
BVAR	Borovoye Array	28.17	20	P	P	21 29 05.0	-0.1
	comp=Z,0.3nm,0.4s,baz=179,slow=5.8,SNR=3.4						
MKAR	Makanchi Array	28.97	40	P	P	21 29 11.4	-0.9
	comp=Z,0.1nm,0.4s,baz=225,slow=7.9,SNR=2.9						
ZALV	Zalesovo Beam	34.49	31	P	P	21 30 00.3	-0.4
	comp=Z,0.7nm,0.5s,baz=235,slow=11,SNR=4.0						
FINES	FINESS Array B	39.35	338	P	P	21 30 41.2	-0.7
	comp=Z,1.0nm,0.5s,baz=140,slow=7.8,SNR=8.6						
NB2	NORSAR Subarra	44.77	331	P	P	21 31 24.5	-1.8
	comp=Z,0.8nm,0.9s,baz=114,slow=7.9						
NOA	NORSAR Array B	44.77	331	P	P	21 31 25.0	-1.3
	comp=Z,0.7nm,0.8s,baz=121,slow=7.3,SNR=5.4						
ESDC	Sonseca Array	50.01	300	P	P	21 32 05.8	-1.6
	comp=Z,0.1nm,0.4s,baz=69,slow=7.2,SNR=3.2						
TORD	Torodi Ar. Bea	51.69	265	P	P	21 32 19.0	-1.3
	comp=Z,0.8nm,0.9s,baz=66,slow=7.6,SNR=8.6						

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*IDC **12** 21:30:49.3±1.1, 33°.02N×75°.41E, h0km, mb3.5/7, mb1 3.5/10, mb1mx3.3/57, mbtmp3.5/10, ML3.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=26.8km s-min=19.3km az=64.0*
*ISCJB **12** 21:30:50.7±1.0, 33°.32N±0°.04×75°.72E±0°.07, h1km±8km, mb3.4/6, MS3.2/1, Error ellipse: s-maj=10.3km s-min=6.7km az=160.1*
*HYB **12** 21:30:52.3±0.3, 33°.13N×75°.69E, h16km±2km, ML3.4*
ISC 12 21:30:52.5±0.8**, 33°.14N**±0°.04×**75°.68E**±0°.05**, h14**km±5km**, n18, σ1s33**/23**, mb3.5**/6**, 1C-2D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THTRI	Thathri	0.09	84	⇓eP	Pg	21 30 55.4	-0.3
THTRI				eS	Sg	21 30 57.8	-0.1
THTRI				IAML		21 30 58.2	
	comp=Z,6µm,0.1s						
DODA	Doda	0.11	275	⇑eP	Pg	21 30 55.8	-0.1
DODA				eS	Sg	21 30 58.3	+0.1
DODA				IAML		21 30 59.2	
	comp=Z,15µm,0.2s						
BDRWA	Bhadarwah	0.18	169	eP	Pg	21 30 56.6	-0.3
BDRWA				eS	Sg	21 30 59.4	-0.4
BDRWA				IAML		21 31 00.7	
	comp=Z,9µm,0.1s						
KSHWR	Kishtwar	0.19	24	⇓eP	Pg	21 30 56.9	-0.3
KSHWR				IAML		21 31 02.3	
	comp=Z,3µm,0.2s						
GANDO	Gandoh	0.22	118	eP	Pg	21 30 57.1	-0.5
GANDO				eS	Sg	21 31 00.4	-0.5
GANDO				IAML		21 31 01.5	
	comp=Z,3µm,0.1s						
BHK	Bhakra	1.82	160	eP	Pg	21 31 27.0	-0.5
BHK				eS	Sg	21 31 52.0	+0.8
NDI	New Delhi	4.63	163	eP	Pg	21 32 20.0	-1.2
NDI				eS	Sb	21 33 12.0	+2.9
AAK	Ala-Archa	9.53	355	Pn	Pn	21 33 12.1	+2.7
	comp=Z,0.3nm,0.3s,baz=226,slow=17,SNR=2.5						
MKAR	Makanchi Array	14.54	18	Pn	Pn	21 34 16.6	-1.2
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=5.0						
KURBB	Kurchatov Arra	17.60	6	P	Pn	21 34 56.1	-1.0
	comp=Z,0.0nm,0.3s,baz=192,slow=10,SNR=6.2						
BVAR	Borovoye Array	20.24	351	P	P	21 35 26.8	-0.3
	comp=Z,2.2nm,0.5s,baz=170,slow=11,SNR=11						
AKTO	Aktyubinsk	21.64	328	P	P	21 35 41.9	-0.4
	comp=Z,1.8nm,0.5s,baz=100,slow=13,SNR=4.2						
ZALV	Zalesovo Beam	21.80	15	P	P	21 35 44.4	+0.5
	comp=Z,0.8nm,0.4s,baz=194,slow=11,SNR=4.7						
CMAR	Chiang Mai Arr	25.46	119	P	P	21 36 21.9	+1.7
	comp=Z,0.2nm,0.5s,baz=312,slow=9.5,SNR=3.2						
PALK	Pallekele	26.15	169	LR	LR	21 46 45.6	
	comp=Z,67nm,18.7s,baz=295,slow=37						
SONM	Songino Array	27.37	48	P	P	21 36 38.9	+1.5
	comp=Z,0.3nm,0.7s,baz=226,slow=7.8,SNR=3.3						
TORD	Torodi Ar. Bea	69.61	273	P	P	21 41 59.4	-2.2
	comp=Z,0.5nm,1.0s,baz=36,slow=6.6,SNR=3.0						
ASAR	Alice Springs	79.16	127	P	P	21 42 55.8	-1.3
	comp=Z,0.3nm,0.7s,baz=317,slow=6.5,SNR=2.8						

WEL 12 21:52:07.5, 36°S±11°×**17°8E**±°**, h214**km±9km**, M3.5**/34**, ML4.1**/3**, MLv3.5**/34**, Error ellipse: s-maj=0.0km s-min=0.0km az=2.4, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.43	162	P	Pn	21 52 42.6	+0.7
HAZ	Te Kaha	1.56	179	P	Pn	21 52 42.8	-0.1
HAZ				S	S	21 53 09.2	-1.2
WMGZ	Waiomatatini S	1.70	162	P	Pn	21 52 44.2	0.0
WMGZ				S	S	21 53 11.3	-1.4
PKGZ	Pakihiroa	1.71	171	P	Pn	21 52 44.6	+0.3
PKGZ				S	S	21 53 11.2	-1.8
KUZ	Kuaotunu	1.73	251	P	Pn	21 52 44.4	0.0
RUGZ	Raukumara Rang	1.77	182	P	Pn	21 52 44.5	-0.5
GRZ	Great Barrier	1.86	268	P	Pn	21 52 45.6	0.0
PUZ	Puketiti	1.91	168	P	Pn	21 52 46.1	-0.1
PUZ				S	S	21 53 15.0	-1.3
TWGZ	Tauwhareparae	1.98	175	P	Pn	21 52 47.8	+0.8
TWGZ				S	S	21 53 18.5	+0.9
URZ	Urewera	2.12	194	P	Pn	21 52 48.7	+0.4
MWZ	Matawai	2.14	185	P	Pn	21 52 48.9	+0.4
WIAZ	Waiheke Island	2.19	254	P	Pn	21 52 49.8	+0.7
TKGZ	Te Karaka	2.24	178	P	Pn	21 52 49.6	+0.2
MKAZ	Moumakai	2.27	246	P	Pn	21 52 50.8	+1.0
RAGZ	Rawiri	2.31	187	P	Pn	21 52 51.1	+0.8
CNGZ	Carnagh Statio	2.31	171	P	Pn	21 52 50.9	+0.7
TOZ	Tahuroa Road	2.37	229	P	Pn	21 52 52.4	+1.6
MBAZ	Motutapu North	2.37	255	P	Pn	21 52 52.0	+1.1
MUGZ	Murupara	2.41	199	P	Pn	21 52 52.2	+1.0
RTZ	Ruatahuna	2.49	194	P	Pn	21 52 52.7	+0.4
RIGZ	Rimuhau	2.50	180	P	Pn	21 52 52.5	+0.1
SNGZ	Shannon Statio	2.60	187	P	Pn	21 52 53.6	+0.3
ALRZ	Allen Road	2.61	205	P	Pn	21 52 55.0	+1.5
MTHZ	Maungataniwha	2.75	195	P	Pn	21 52 55.8	+0.8
RAHZ	Arahi	2.77	191	P	Pn	21 52 55.6	+0.3
TLZ	Tolley Road	2.77	219	P	Pn	21 52 57.6	+2.3
WCZ	Waipu Caves	2.77	274	P	Pn	21 52 55.7	+0.4
KNZ	Kokohu	2.82	181	P	Pn	21 52 55.6	-0.1
MRHZ	Matea Rd	2.84	202	P	Pn	21 52 56.5	+0.5
WHHZ	Waihua	2.90	188	P	Pn	21 52 57.1	+0.3
ARHZ	Aropaoanui	3.12	191	P	Pn	21 52 59.4	+0.1
BKZ	Black Stump Fm	3.13	198	P	Pn	21 52 59.2	-0.2
HIZ	Hauiti	3.27	224	P	Pn	21 53 03.4	+2.4
MCHZ	McNeill Hill	3.35	194	P	Pn	21 53 02.2	+0.3
WTVZ	West Tongariro	3.38	210	P	Pn	21 53 04.6	+2.2
KWHZ	Kaweka Forest	3.39	198	P	Pn	21 53 02.5	0.0
TWVZ	Taurewa	3.41	212	P	Pn	21 53 03.8	+1.1
TUVZ	Tukino	3.49	208	P	Pn	21 53 04.7	+1.0
FWVZ	Far West T-bar	3.52	209	P	Pn	21 53 05.0	+0.9
WHVZ	Whangaehu Hut	3.52	208	P	Pn	21 53 04.9	+0.7
BHHZ	Black Hill Sta	3.55	202	P	Pn	21 53 04.4	0.0
MOVZ	Moawhango	3.57	206	P	Pn	21 53 04.5	-0.2
KRHZ	Kereru	3.61	197	P	Pn	21 53 04.4	-0.7
KAHZ	Kahuranaki	3.66	191	P	Pn	21 53 05.5	-0.2
PXZ	Pawanui	3.89	190	P	Pn	21 53 07.7	-0.7
PRHZ	Porangahau	4.16	192	P	Pn	21 53 10.9	-0.7

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*IDC **12** 22:39:00.3±2.7, 6°.68S×128°.59E, h0km, mb4.2/1, mb1 4.3/3, mb1mx3.6/26, mbtmp4.1/3, ML4.0/2, Error ellipse: s-maj=302.8km s-min=30.1km az=67.0*
*ISCJB **12** 22:39:11.5±0.4, 6°.65S±0°.04×129°.95E±0°.06, h150km, Error ellipse: s-maj=8.4km s-min=5.6km az=153.1*
*NEIC **12** 22:39:11.6±2.0, 6°.79S×129°.98E, h139km±10km, mb4.5/15, Error ellipse: s-maj=11.4km s-min=6.6km az=185.0*
ISC 12 22:39:12.6±0.5**, 6°.80S**±0°.06×**129°.95E**±0°.07**, h150**km**, n29, σ1s71**/31**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.78	131	ePn	Pn	22 39 43.3	-1.8
FAKI	Fak Fak	4.48	31	ePn	Pn	22 40 18.4	-0.8
MTN	Manton Dam	6.12	169	ePn	Pn	22 40 44.6	+3.7
SOEI	Soe	6.35	242	ePn	Pn	22 40 44.4	+0.3
KAPI	Kappang	10.30	279	ePn	Pn	22 41 35.2	-1.5
WRAB	Tennant Creek	13.74	162	eP	P	22 42 24.6	-0.2
WRAB				eSn	Sn	22 44 53.1	-0.3
WR1	Warramunga Arr	13.74	162	eP	P	22 42 23.2	-1.6
WRA	Warramunga Arr	13.74	162	Pn	P	22 42 23.2	-1.6
	0.7nm,0.3s,baz=334,slow=13,SNR=31						
WRA				Sn	Sn	22 44 48.7	-4.9
	1.1nm,0.3s,baz=338,slow=22,SNR=7.7						
WB2	Warramunga Arr	13.74	162	eP	P	22 42 23.3	-1.7
JAGI	Jajag, Banyuwa	15.75	263	eP	Pn	22 42 46.0	-0.4
	60nm,1.0s						
AS31	Alice Springs	17.19	168	eP	Pn	22 43 04.0	+0.1
	1.4nm,0.7s						
ASAR	Alice Springs	17.20	168	P	Pn	22 43 08.4	+4.6
	0.5nm,0.3s,baz=344,slow=9.7,SNR=29						
PMG	Port Moresby	17.23	100	eP	P	22 43 01.6	-1.9
	53nm,1.3s						
KSM	Kuching	21.26	292	eP	P	22 43 47.0	-0.2
	12nm,1.1s						
CISI	Cisompet, Garu	21.98	267	eP	P	22 43 54.7	-0.1
	71nm,1.3s						
TWG	Pinlang	30.70	344	eP	P	22 45 12.7	-0.7
	439nm,1.4s						
PATS	Pohnpei	31.37	65	eP	P	22 45 19.2	-0.2
	284nm,1.5s						
KULM	Kulim	31.62	292	eP	P	22 45 20.9	-0.7
	15nm,1.4s						
YOJ	Yonaguni jima	31.80	348	eP	P	22 45 22.3	-0.7
	274nm,0.7s						
JOW	Kunigami	33.47	357	eP	P	22 45 36.5	-1.0
	269nm,2.0s						
LHMI	Lhok Sumawe	35.04	289	eP	P	22 45 51.1	-0.2
	55nm,1.1s						
LHI	Lord Howe Isla	36.66	136	eP	P	22 46 04.9	0.0
	59nm,1.1s						
MARNC	Mare, Loyalty	39.57	116	eP	P	22 46 30.2	+0.8
CHTO	Chiang Mai	39.78	310	eP	P	22 46 31.8	+0.7
	13nm,1.8s						
KWAJ	Kwajalein Atol	40.61	68	eP	P	22 46 38.7	+0.7
	196nm,0.8s						
USA0B	Ussuriysk Arra	50.80	2	eP	P	22 47 57.8	+0.4
	2.7nm,0.8s						
MK32	Makanchi Array	68.03	327	eP	P	22 49 56.4	+0.6
MKAR	Makanchi Array	68.03	327	P	P	22 49 56.4	+0.6
	1.2nm,0.5s,baz=116,slow=8.3,SNR=21						
RSO	Redoubt South	89.65	29	eP	P	22 51 54.3	+0.9

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*GUC **12** 23:04:27.0±0.5, 22°.74S×68°.84W, h110km±3km, ML2.9*
SJA 12 23:04:16.9±0.5**, 22°.89S**×**68°.02W, h94**km±6km**, ML1.5, MW2.7, 6C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.87	289	eS	Sn	23 04 51.5	+1.5
PB15	IPOC Station P	1.37	256	eS	Sn	23 05 01.7	+1.7
PB15	IPOC Station P	1.37	256	⇑iP	Pn	23 04 46.1	+4.7
PB15				eS	Sn	23 05 01.5	+1.5
PB06	IPOC Station P	1.44	277	eP	Pn	23 04 43.1	+0.8
PB06	IPOC Station P	1.44	277	⇑iP	Pn	23 04 45.5	+3.2
PB06				eS	Sn	23 05 00.1	-1.4
PB06				IAML		23 05 00.9	
	comp=N,680nm,0.1s						
PB09	IPOC Station P	1.57	314	⇓iP	Pn	23 04 49.0	+5.1
PB09				eS	Sn	23 05 05.8	+1.4
PB09				IAML		23 05 07.4	
	comp=N,200nm,0.5s						
PB03	IPOC Station P	1.81	297	eP	Pn	23 04 48.4	+1.4
PB03	IPOC Station P	1.81	297	⇑iP	Pn	23 04 49.8	+2.9
PB03				eS	Sn	23 05 07.0	-2.7
PB03				IAML		23 05 07.7	
	comp=N,366nm,0.3s						
PB05	IPOC Station P	2.01	271	⇑iP	Pn	23 04 51.6	+2.1

PB05				*e*S	Sn	23 05 10.8	-3.6
PB04	IPOC Station P	2.04	285	⇓*i*P	Pn	23 04 52.1	+2.2
PB04				*e*S	Sn	23 05 10.8	-4.4
PB04				IAML		23 05 19.5	
	comp=N,214nm,0.3s						
PB07	IPOC Station P	2.08	304	⇓*i*P	Pn	23 04 53.7	+3.2
PB07				*e*S	Sn	23 05 13.7	-2.4
PB07				IAML		23 05 14.8	
	comp=E,338nm,0.4s						
PB01	IPOC Station P	2.29	323	⇑*i*P	Pn	23 04 58.2	+5.1
PB01				*e*S	Sn	23 05 21.9	+1.1
PB01				IAML		23 05 22.6	
	comp=E,115nm,0.2s						
PB02	IPOC Station P	2.34	312	⇑*i*P	Pn	23 04 57.5	+3.7
PB02				*e*S	Sn	23 05 20.2	-1.9
PB02				IAML		23 05 23.2	
	comp=E,204nm,0.4s						
YJA	Yavi	2.42	73	*e*P	Pn	23 04 57.4	+2.1
YJA				IAML		23 05 17.2	
	comp=Z,1.2nm,0.6s						
HJA	Humahuaca	2.43	98	*e*P	Pn	23 04 57.2	+1.9
HJA				IAML		23 05 17.1	
	comp=Z,2.9nm,0.7s						
AZAP	Zapla	3.02	117	*e*P	Pn	23 05 04.9	+1.9
AZAP				IAML		23 05 24.4	
	comp=Z,1.7nm,0.3s						

CRAAG ***12*** *23:08:34.1, 36°.34N×3°.26E, Ml3.0*
MDD ***12*** *23:08:35.9±0.7, 36°.37N×3°.56E, h0^{km}, mb3.7/17, Error ellipse: s-maj=8.7km s-min=5.5km az=90.0, PRXIMO*
ISC 12 23:08:35.2±1.0**, 36°.43N**±0°.06×**3°.53E**±0°.06**, h10^{km}, n22, σ1^{s}.88**/32**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.28	195	P	Pg	23 08 40.3	-0.6
ADJB	Djebel Djouab	0.28	195	Pg	Pg	23 08 40.3	-0.6
SET	Setif	1.53	98	P	Pg	23 09 10.0	+5.4
DFRA	Djebel Bou Aff	1.90	86	P	Pb	23 09 09.6	-0.4
DFRA	Djebel Bou Aff	1.90	86	Pg	Pb	23 09 09.6	-0.4
EIBI	Ibiza	3.12	327	Pn	Pn	23 09 26.1	+1.7
	1.4nm,0.1s,SNR=6.3						
EIBI				Sn	Sn	23 10 01.2	-0.4
	2.2nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.38	351	Pn	Pn	23 09 29.6	+1.5
	1.5nm,0.3s,SNR=8.2						
ETOS				Sn	Sn	23 10 08.0	-0.2
	0.7nm,0.1s,SNR=5.3						
EBEN2	Beniarda presa	3.71	308	Pn	Pn	23 09 33.9	+1.4
	13nm,0.8s,SNR=7.9						
EBEN2				Sn	Sn	23 10 16.1	-0.2
	1.1nm,0.2s,SNR=7.9						
EMUR	La Murta	4.06	292	Pn	Pn	23 09 38.9	+1.5
	3.3nm,0.6s,SNR=7.9						
ETOB	Tobarra	4.60	300	Pn	Pn	23 09 46.5	+1.7
	1.3nm,0.3s,SNR=7.2						
ETOB				Sn	Sn	23 10 36.8	-1.6
	1.1nm,0.4s,SNR=5.7						
ECHE	Chera	4.75	313	Pn	Pn	23 09 49.0	+2.1
	1.3nm,0.3s,SNR=7.9						
ECHE				Sn	Sn	23 10 40.7	-1.3
	0.1nm,0.0s,SNR=7.9						
EMOS	Mosqueruela	5.03	323	Pn	Pn	23 09 52.8	+1.9
	2.1nm,0.4s,SNR=7.0						
EMOS				Sn	Sn	23 10 47.5	-1.6
	2.4nm,0.4s,SNR=7.9						
SESP	Santiago Espad	5.13	291	Pn	Pn	23 09 54.3	+2.1
	2.7nm,0.5s,SNR=7.9						
EBER	Berja	5.18	277	Pn	Pn	23 09 55.4	+2.5
	2.3nm,0.6s,SNR=7.9						
CFON	Fontmartina	5.39	351	Pn	Pn	23 09 57.9	+2.2
	2.6nm,0.4s,SNR=5.8						
CFON				Sn	Sn	23 10 56.5	-1.4
	1.2nm,0.2s,SNR=4.0						
EQES	Quesada	5.45	287	Pn	Pn	23 09 58.5	+1.9
	1.0nm,0.6s,SNR=7.9						
EQES				Sn	Sn	23 10 57.8	-1.5
	1.2nm,0.3s,SNR=7.9						
EJON	La Jonquera	6.03	356	Pn	Pn	23 10 06.9	+2.4
	1.3nm,0.7s,SNR=7.9						
SJAF	Saint Jean de	6.07	355	Pn	Pn	23 10 07.4	+2.4
	3.2nm,1.0s,SNR=7.9						
SJAF				Sn	Sn	23 11 12.3	-2.1
	1.7nm,0.8s,SNR=7.9						
CLLI	Llivia	6.16	349	Pn	Pn	23 10 08.2	+1.9
	1.7nm,0.9s,SNR=7.9						
ETOR	Torete	6.19	317	Pn	Pn	23 10 09.0	+2.3
	1.9nm,1.5s,SNR=7.9						
ETOR				Sn	Sn	23 11 14.9	-2.6
	1.7nm,0.9s,SNR=7.9						
CSOR	Sort	6.22	343	Pn	Pn	23 10 09.4	+2.2
	2.8nm,0.5s,SNR=7.9						
CSOR				Sn	Sn	23 11 14.8	-3.5
	1.4nm,1.4s,SNR=7.9						
PAB	San Pablo	6.95	299	Pn	Pn	23 10 18.5	+1.3
	2.1nm,1.2s,SNR=7.9						

NIED ***12*** *23:27:00, 42°.70N×139°.40E, h5^{km}, Mw3.4 Best double couple: $M_0$1.36000×10^{14} NP1:ϕ_s206.00000°, δ31.00000°, λ123.00000°. NP2:ϕ_s350.00000°, δ65.00000°, λ72.00000°.*
JMA 12 23:27:50.3±0.1**, 42°.65N**×**139°.37E, h16^{km}**±2^{km}**, M3.6, 2C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHST	Hiyamasetana	0.44	121	⇓P	Pg	23 27 59.1	0.0
JHST				*e*S	Sg	23 28 04.8	-0.3
JSH	Shimam	0.50	91	⇓P	Pg	23 27 59.8	-0.4
JSH				*e*S	Sg	23 28 06.2	-0.7
JOSM	Okushiri--Mats	0.57	172	P	Pg	23 28 01.2	-0.4
JYM2	Yakumo 2	0.91	125	⇑P	Pb	23 28 07.0	-0.7
JYM2				*e*S	Sb	23 28 19.1	-0.5
JSK	Shakotan	1.07	49	⇑P	Pb	23 28 09.5	-1.0
JSK				*e*S	Sb	23 28 23.5	-0.7
JOMM	Oshimamatsumae	1.22	157	*e*S	Sb	23 28 28.5	0.0
JNB	Noboribetsu	1.25	98	P	Pn	23 28 12.5	-0.5
JNB				*e*S	Sb	23 28 28.8	-0.4

ISCJB ***12*** *23:53:12.5±0.6, 26°.97N±0°.08×140°.7E±0°.1, h450^{km}, mb3.6/17, Error ellipse: s-maj=15.4km s-min=9.9km az=154.0*
JMA ***12*** *23:53:14.0±0.2, 27°.23N×141°.15E, h448^{km}±3^{km}, M4.0*
IDC ***12*** *23:53:14.9±2.1, 26°.95N×140°.36E, h452^{km}±20^{km}, mb3.4/17, mb1 3.5/20, mb1mx3.3/47, mbtmp4.2/20, Error ellipse: s-maj=17.6km s-min=16.4km az=33.0*
ISC 12 23:53:13.8±0.7**, 26°.99N**±0°.10×**140°.7E**±0°.1**, h450^{km}, n29, σ1^{s}.31**/33**, mb3.7**/17**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.36	85	P	P	23 54 10.2	-1.1
CBIJ				*e*S	S	23 54 54.7	-3.2
JHH2	Haha-jima-NKT2	1.40	104	P	P	23 54 10.9	-0.6
JHH2				S	S	23 54 55.5	-2.7
JHJ	Hachijo jima 2	6.15	353	P	P	23 54 50.9	+1.3
	34nm,0.3s,baz=242,slow=20,SNR=8.9						
BSO1	Boso 1	7.64	2	P	P	23 55 04.7	0.0
BSO3	Boso 3	7.79	359	S	S	23 56 35.1	-4.0
JIE	Ise	8.12	336	P	P	23 55 11.7	+1.2
JRY	Ryogami san	9.12	351	P	P	23 55 21.2	-0.1
MJAR	Matsushiro Arr	9.75	348	P	P	23 55 28.2	+0.1
	0.1nm,0.3s,baz=162,slow=8.6,SNR=6.6						
USRK	Ussuriysk Ar.	18.54	340	P	P	23 57 02.0	+0.4
	0.2nm,0.3s,baz=156,slow=11,SNR=8.0						
SONM	Songino Array	33.86	317	P	P	23 59 17.6	+0.3
	0.3nm,0.5s,baz=109,slow=7.8,SNR=3.5						
SEY	Seymchan	36.76	9	P	P	23 59 42.7	+1.5
	1.8nm,0.2s,baz=177,slow=10,SNR=4.1						
WRA	Warramunga Arr	47.06	188	P	P	00 01 03.5	-0.1
	1.4nm,0.8s,baz=3.7,slow=7.3,SNR=7.5						
ZALV	Zalesovo Beam	48.68	319	P	P	00 01 14.6	-0.8
	1.1nm,0.5s,baz=111,slow=6.2,SNR=5.4						
ZALV				PcP	PcP	00 02 32.4	0.0
	1.2nm,0.4s,baz=93,slow=3.8,SNR=5.3						
MKAR	Makanchi Array	49.49	310	P	P	00 01 21.2	-0.4
	0.7nm,0.5s,baz=86,slow=10.0,SNR=10						
MKAR				PcP	PcP	00 02 35.7	+0.1
	0.5nm,0.7s,baz=78,slow=5.6,SNR=4.4						
KURBB	Kurchatov Arra	52.14	315	P	P	00 01 40.5	-0.4
	3.0nm,0.6s,baz=93,slow=7.9,SNR=37						
BVAR	Borovoye Array	57.20	317	P	P	00 02 16.5	0.0
	2.2nm,0.5s,baz=94,slow=7.8,SNR=19						
BVAR				PcP	PcP	00 03 05.4	+0.4
	0.8nm,0.5s,baz=106,slow=3.7,SNR=5.1						
ILAR	Eielson Array	58.45	29	P	P	00 02 26.2	+1.3
	0.8nm,0.6s,baz=248,slow=6.2,SNR=11						
ARU	Arti	63.67	322	P	P	00 02 58.3	-1.3
	0.5nm,0.3s,baz=132,slow=5.4,SNR=3.5						
YKA	Yellowknife Ar	72.87	28	P	P	00 03 57.4	+1.9
	2.9nm,0.8s,baz=301,slow=6.1,SNR=3.2						
ARCES	ARCESS Array B	73.19	341	P	P	00 03 58.6	+1.3
	3.8nm,1.0s,baz=74,slow=8.3,SNR=10						
FINES	FINESS Array B	77.44	333	P	P	00 04 21.4	+0.2
	6.9nm,0.4s,baz=70,slow=5.0,SNR=129						
NVAR	Mina Array Bea	81.64	51	P	P	00 04 47.6	+3.3
	0.8nm,0.6s,baz=294,slow=5.9,SNR=7.5						
AKASG	Malin Array Be	81.89	323	P	P	00 04 44.9	-0.1
	2.1nm,0.5s,baz=51,slow=5.2,SNR=17						
NB2	NORSAR Subarra	83.20	338	P	P	00 04 51.0	-0.5
	comp=Z,1.0nm,0.4s,baz=56,slow=5.1						
NOA	NORSAR Array B	83.20	338	P	P	00 04 51.2	-0.3
	comp=Z,2.1nm,0.6s,baz=45,slow=4.8,SNR=16						
BRTR	Keskin Array B	85.07	312	P	P	00 05 00.7	-0.7
	comp=Z,0.5nm,0.8s,baz=76,slow=5.2,SNR=4.2						
GERES	GERESS Array B	90.89	328	P	P	00 05 27.7	-0.8
	comp=Z,0.6nm,0.6s,baz=47,slow=5.9,SNR=7.6						
TORD	Torodi Ar. Bea	123.62	310	PKP	PKPdf	00 11 20.4	+0.3
	comp=Z,0.3nm,0.5s,baz=10,slow=2.0,SNR=6.8						
LPAZ	La Paz	151.26	74	PKPbc	PKiKP	00 12 18.0	+0.7
	comp=Z,0.9nm,0.6s,baz=346,slow=2.2,SNR=4.5						

ISCJB ***13*** *00:03:54.3±0.1, 21°.36S±0°.02×178°.93W±0°.04, h500^{km}, mb4.4/120, Error ellipse: s-maj=5.7km s-min=2.5km az=17.1*
BJI ***13*** *00:03:55.0±0.0, 21°.40S×178°.90W, h499^{km}, mb4.6/13, mB4.9/8*
NEIC ***13*** *00:03:55.6±1.6, 21°.34S×178°.90W, h508^{km}±7^{km}, mb4.5/144, Error ellipse: s-maj=17.8km s-min=13.3km az=125.0*
IDC ***13*** *00:03:59.9±2.1, 21°.49S×179°.00W, h554^{km}±23^{km}, mb3.7/17, mb1 3.9/18, mb1mx3.8/30, mbtmp4.6/18, Error ellipse: s-maj=13.9km s-min=12.1km az=136.0*
ISC 13 00:03:54.6±0.3**, 21°.46S**±0°.05×**178°.83W**±0°.07**, h500^{km}, n355, σ1^{s}.33**/358**, mb4.4**/120**, 22C-17D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	7.81	174	P	P	00 05 51.8	+2.9
GLKZ				S	S	00 07 20.9	-1.8
NIUE	Niue	8.69	76	*e*P	P	00 06 00.0	+1.9
AFI	Afiamalu	10.07	43	*e*P	P	00 06 12.7	-0.3
PINNC	Pines Island,	12.78	262	*e*P	P	00 06 41.8	+0.4
DZM	Mont Dzumac	13.70	265	P	P	00 06 53.8	+2.6
	0.9nm,0.3s,baz=259,slow=23,SNR=9.3						
OUZ	Omahuta	15.23	204	*e*P	P	00 07 09.6	+2.5
	168nm,1.8s						
OUZ	Omahuta	15.23	204	P	P	00 07 10.5	+3.4
WCZ	Waipu Caves	15.61	201	P	P	00 07 12.0	+1.0
KUZ	Kuaotunu	15.95	196	P	P	00 07 16.9	+2.4
WIAZ	Waiheke Island	16.16	198	P	P	00 07 18.9	+2.2
MBAZ	Motutapu North	16.20	198	P	P	00 07 19.6	+2.4
MXZ	Matakaoa Point	16.24	188	*e*P	P	00 07 19.6	+2.1
	307nm,1.3s						
ETAZ	East Tamaki Re	16.36	198	P	P	00 07 21.5	+2.6
MKAZ	Moumakai	16.44	197	P	P	00 07 21.9	+2.2
WTAZ	Waiatarua	16.45	199	P	P	00 07 21.9	+2.1
WMGZ	Waiomatatini S	16.48	188	P	P	00 07 21.2	+1.2
HAZ	Te Kaha	16.50	189	P	P	00 07 21.3	+1.0
PKGZ	Pakihiroa	16.59	189	P	P	00 07 21.4	+0.1
RUGZ	Raukumara Rang	16.72	190	P	P	00 07 22.4	-0.4
RUGZ				S	S	00 10 10.7	-2.9
PUZ	Puketiti	16.75	188	P	P	00 07 23.8	+0.9
TGRZ	Tauranga	16.76	194	P	P	00 07 26.2	+3.2
TWGZ	Tauwhareparae	16.89	189	P	P	00 07 25.5	+1.2
MARZ	Manawahe	16.92	192	P	P	00 07 26.4	+1.7
TOZ	Tahuroa Road	16.94	196	P	P	00 07 27.9	+3.1
KMRZ	Kaimai	16.94	194	P	P	00 07 27.8	+2.9
KARZ	Kaharoa	17.04	193	P	P	00 07 26.9	+1.1
OMRZ	Omania	17.10	193	P	P	00 07 27.8	+1.4
URZ	Urewera	17.11	191	P	P	00 07 25.7	-0.7
	13nm,0.3s,baz=239,slow=1.1,SNR=49						
URZ				S	S	00 10 12.0	-7.7
	0.4nm,0.3s,baz=210,slow=20,SNR=4.7						
URZ	Urewera	17.11	191	*e*P	P	00 07 25.9	-0.5
	62nm,0.7s						
URZ	Urewera	17.11	191	P	P	00 07 24.8	-1.6
MWZ	Matawai	17.11	190	P	P	00 07 27.3	+0.8
CNGZ	Carnagh Statio	17.16	188	P	P	00 07 28.9	+1.9
TKGZ	Te Karaka	17.16	189	P	P	00 07 27.8	+0.8
TARZ	Mount Tarawera	17.20	193	P	P	00 07 28.8	+1.4
HLRZ	Highlands Stat	17.24	193	P	P	00 07 29.9	+2.0
RAGZ	Rawiri	17.28	190	P	P	00 07 28.6	+0.3
RRRZ	Republican Roa	17.30	192	P	P	00 07 28.8	+0.5
MUGZ	Murupara	17.38	192	P	P	00 07 28.9	-0.1
HRRZ	Handcock Road	17.39	193	P	P	00 07 30.6	+1.4
RIGZ	Rimuhau	17.44	189	P	P	00 07 30.0	+0.3
PRRZ	Plateau Road	17.47	193	P	P	00 07 30.6	+0.6
RTZ	Ruatahuna	17.47	191	P	P	00 07 29.4	-0.7
ALRZ	Allen Road	17.54	193	P	P	00 07 31.7	+1.1
SNGZ	Shannon Statio	17.58	190	P	P	00 07 30.0	-0.9
RAHZ	Arahi	17.75	191	P	P	00 07 32.9	+0.4
MRHZ	Matea Rd	17.79	192	P	P	00 07 31.2	-1.7
WATZ	Wairara	17.82	194	P	P	00 07 33.1	0.0
HIZ	Hauiti	17.84	196	*e*P	P	00 07 34.8	+1.5
	261nm,1.4s						
HIZ	Hauiti	17.84	196	P	P	00 07 36.3	+3.0
WHHZ	Waihua	17.88	190	P	P	00 07 35.3	+1.6
RATZ	Rangitukua	17.96	194	P	P	00 07 35.0	+0.6
RITZ	Rihia Road	18.05	193	P	P	00 07 36.0	+0.7
KATZ	Kakaramea	18.08	194	P	P	00 07 35.7	0.0
BKZ	Black Stump Fm	18.10	192	*e*P	P	00 07 34.3	-1.5
	43nm,1.0s						
BKZ	Black Stump Fm	18.10	192	P	P	00 07 34.5	-1.2
ARHZ	Aropaoanui	18.10	190	P	P	00 07 34.0	-1.7
KRVZ	Karewarewa	18.21	194	P	P	00 07 36.0	-0.8
WTVZ	West Tongariro	18.24	194	P	P	00 07 37.0	-0.1
NGZ	Ngauruhoe	18.29	194	P	P	00 07 38.0	+0.4
MCHZ	McNeill Hill	18.33	191	P	P	00 07 37.6	-0.3
KWHZ	Kaweka Forest	18.36	192	P	P	00 07 37.5	-0.7
TUVZ	Tukino	18.37	194	P	P	00 07 38.2	-0.1
WHVZ	Whangaehu Hut	18.40	194	P	P	00 07 38.6	-0.1
VRZ	Vera Road	18.45	196	P	P	00 07 41.0	+2.2
PKVZ	Pokaka	18.46	194	P	P	00 07 39.5	+0.5
MOVZ	Moawhango	18.48	193	P	P	00 07 38.6	-0.7
MHEZ	Mangahewa	18.52	197	P	P	00 07 53.9	+14
KRHZ	Kereru	18.58	192	P	P	00 07 39.1	-1.0
KAHZ	Kahuranaki	18.64	190	P	P	00 07 42.3	+1.6
PKE	Pukeiti	18.72	198	P	P	00 07 46.7	+5.3
KHEZ	Kahui Hut	18.80	197	P	P	00 07 47.1	+4.8
PREZ	Palmer Road	18.81	197	P	P	00 07 47.1	+4.9
NBEZ	Newall Road No	18.82	198	P	P	00 07 47.9	+5.6
LREZ	Lake Rotokare	18.85	196	P	P	00 07 46.0	+3.4
PXZ	Pawanui	18.87	190	P	P	00 07 42.9	+0.1
NMEZ	Namu Road	18.95	198	P	P	00 07 48.9	+5.4
WAZ	Wanganui	18.99	195	P	P	00 07 46.9	+3.1
PRHZ	Porangahau	19.14	191	P	P	00 07 46.4	+1.2
ANWZ	Angora Road	19.36	191	P	P	00 07 47.1	0.0
POWZ	Post Office Ro	19.42	192	P	P	00 07 48.5	+0.7
PRWZ	Pori Road	19.54	192	P	P	00 07 48.9	0.0
BFZ	Birch Farm	19.61	191	*e*P	P	00 07 48.5	-1.0
	45nm,0.7s						
TIWZ	Tintock	19.77	192	P	P	00 07 51.8	+0.8
DUWZ	D'Urville Isla	20.24	196	P	P	00 07 55.8	+0.6
CAW	Cannon Point	20.26	193	P	P	00 07 56.4	+1.0
PAWZ	Paruwai Farm	20.45	192	P	P	00 07 57.5	+0.3
MSWZ	Moikau Station	20.52	193	P	P	00 07 57.9	+0.2
SNZO	South Karori	20.53	194	*e*P	P	00 07 59.0	+1.2
	124nm,1.3s						
TCW	Tory Channel	20.54	195	P	P	00 07 59.3	+1.4
BHW	Baring Head	20.59	194	P	P	00 08 00.4	+2.0
QRZ	Quartz Range	20.65	199	P	P	00 08 00.1	+1.2
PLWZ	Palliser	20.66	193	P	P	00 07 59.3	+0.2
NNZ	Nelson	20.77	197	P	P	00 08 00.7	+0.6
TUWZ	Tuamarina	20.82	195	P	P	00 08 00.7	+0.2
BSWZ	Blackbirch Sta	21.11	195	P	P	00 08 06.2	+3.1
THZ	Tophouse	21.41	197	*e*P	P	00 08 06.8	+0.9
	39nm,1.2s						
THZ	Tophouse	21.41	197	P	P	00 08 06.6	+0.7
DSZ	Denniston Nort	21.71	199	P	P	00 08 10.0	+1.4
KHZ	Kahutara	21.86	195	*e*P	P	00 08 10.0	+0.2
	124nm,1.4s						
KHZ	Kahutara	21.86	195	P	P	00 08 09.8	0.0
GVZ	Greta Valley S	22.50	196	P	P	00 08 15.0	-0.6
LTZ	Lake Taylor	22.53	197	*e*P	P	00 08 16.8	+0.8
	36nm,0.9s						
LTZ	Lake Taylor	22.53	197	P	P	00 08 15.0	-0.9
INZ	Inchbonnie	22.71	199	P	P	00 08 17.2	-0.4
OXZ	Oxford	23.10	197	*e*P	P	00 08 20.3	-0.6
	35nm,0.5s						
OXZ	Oxford	23.10	197	P	P	00 08 20.7	-0.3
OKCZ	Okains Bay	23.20	195	P	P	00 08 22.8	+0.9
MQZ	McQueen's Vall	23.29	196	P	P	00 08 22.3	-0.3
RPZ	Rata Peaks	23.73	198	P	P	00 08 26.9	+0.2
	16nm,0.6s,baz=14,slow=5.4,SNR=11						
RPZ	Rata Peaks	23.73	198	*e*P	P	00 08 28.1	+1.4
	71nm,1.4s						
RPZ	Rata Peaks	23.73	198	P	P	00 08 29.6	+2.9
FOZ	Fox Glacier	23.96	201	*e*P	P	00 08 29.2	+0.6
	194nm,2.0s						
LBZ	Lake Benmore	24.61	199	*e*P	P	00 08 33.4	-1.1
	95nm,1.7s						
ODZ	Otahua Downs	25.07	198	*e*P	P	00 08 37.6	-0.8
	50nm,1.5s						
MLZ	Mavora Lakes	26.14	201	*e*P	P	00 08 48.8	+0.8
	41nm,1.2s						
DCZ	Deep Cove	26.57	202	*e*P	P	00 08 52.5	+0.9
	114nm,1.8s						
WHZ	Wether Hill Ro	26.66	201	*e*P	P	00 08 53.8	+1.2
	63nm,0.9s						
EIDS	Eidsvold	27.86	256	*e*P	P	00 09 03.8	+0.4
	24nm,1.4s						
ARMA	Armidale	27.96	245	*e*P	P	00 09 04.7	+0.3
	12nm,1.3s						
CAN	Canberra	31.34	237	*e*P	P	00 09 33.2	-0.3
	12nm,1.0s						
CTAO	Charters Tower	32.64	266	*e*P	P	00 09 45.3	+0.5
	60nm,1.7s						
KWAJ	Kwajalein Atol	32.89	335	*e*P	P	00 09 46.7	-0.2
	193nm,0.8s						
TOO	Toolangi	34.71	234	*e*P	P	00 10 03.1	+1.0
	13nm,0.6s						
PMG	Port Moresby	34.82	285	*e*P	P	00 10 03.5	+0.3
	58nm,0.9s						
STKA	Stephens Creek	36.68	245	P	P	00 10 18.8	+0.3
	1.0nm,0.3s,baz=102,slow=21,SNR=3.7						
COEN	Coen	36.88	275	*e*P	P	00 10 20.2	-0.2
	117nm,1.9s						
JOHN	Johnston Islan	39.04	14	*e*P	P	00 10 36.4	-1.4
	326nm,1.3s						
BBOO	Buckleboo	41.43	244	*e*P	P	00 10 57.5	+0.5
	77nm,1.8s						
AS31	Alice Springs	43.55	258	*e*P	P	00 11 14.5	+0.7
	2.2nm,1.2s						
ASAR	Alice Springs	43.55	258	P	P	00 11 14.0	+0.1
	2.4nm,0.4s,baz=90,slow=8.3,SNR=51						
ASAR				PcP	pwP	00 12 50.4	+0.1
	1.3nm,0.8s,baz=101,slow=4.8,SNR=6.7						
ASAR				S	S	00 17 02.2	-4.1
	1.7nm,0.9s,baz=91,slow=16,SNR=7.5						
JAY	Jayapura	43.63	290	P	P	00 11 14.7	+0.1
	31nm,0.6s,baz=156,slow=3.4,SNR=12						
WB2	Warramunga Arr	43.70	263	*e*P	P	00 11 14.7	-0.3
	52nm,2.0s						
WRAB	Tennant Creek	43.70	263	*e*P	P	00 11 14.5	-0.5
	38nm,1.8s						
WRA	Warramunga Arr	43.71	263	P	P	00 11 14.7	-0.4
	3.9nm,0.3s,baz=94,slow=8.6,SNR=123						
KHLU	Kahalu`u	46.56	30	*e*P	P	00 11 37.1	+0.1
	124nm,1.2s						
KKO	Keanakako`i	46.70	31	*e*P	P	00 11 37.7	-0.3
	110nm,0.6s						
SBA	Scott Base	56.87	184	*e*P	P	00 12 53.1	+2.5
	5.3nm,0.7s						
VNDA	Vanda	56.89	185	P	P	00 12 52.7	+2.0
	2.9nm,0.6s,baz=1.7,slow=7.8,SNR=47						
LUWI	Luwuk	60.36	282	*e*P	P	00 13 14.3	-0.9
	73nm,1.5s						
CASY	Casey	62.77	205	*e*P	P	00 13 30.6	+0.5
	3.6nm,0.6s						
QSPA	South Pole Qui	68.61	180	*e*P	P	00 14 08.3	+1.4
	7.2nm,0.6s						
MJAR	Matsushiro Arr	70.53	324	P	P	00 14 18.4	-0.2
	6.9nm,0.6s,baz=160,slow=5.8,SNR=14						
MAJO	Matsushiro	70.53	324	*e*P	P	00 14 18.3	-0.3
	11nm,0.9s						
MAT	Matsushiro	70.53	324	P	P	00 14 18.6	0.0
MJB9	Matsu-Tunnel	70.53	324	*e*P	P	00 14 18.3	-0.3
	12nm,1.0s						
ADK	Adak	73.05	1	*e*P	P	00 14 32.9	0.0
	30nm,1.3s						
NIKH	Nikolski High	74.62	6	*e*P	P	00 14 41.3	-0.5
	31nm,1.0s						
UNV	Unalaska Valle	75.75	7	*e*P	P	00 14 47.5	-0.6
	42nm,1.6s						
AKUT	Akutan	76.12	8	*e*P	P	00 14 49.3	-0.9
	64nm,1.1s						
PETK	Petropavlovsk-	77.00	346	P	P	00 14 55.4	+0.3
	3.3nm,0.8s,baz=112,slow=6.6,SNR=6.2						
SDPT	Sand Point	78.09	11	*e*P	P	00 15 00.9	0.0
	34nm,0.9s						
USA0B	Ussuriysk Arra	79.33	326	*e*P	P	00 15 08.3	+0.5
	16nm,1.2s						
USRK	Ussuriysk Ar.	79.33	326	P	P	00 15 09.2	+1.4
	6.0nm,0.8s,baz=114,slow=3.6,SNR=17						
CHGN	Chignik	79.36	11	*e*P	P	00 15 08.1	+0.5
CHIA	Chirikof Islan	79.49	13	*e*P	P	00 15 08.5	+0.2
	22nm,1.0s						
NJ2	Nanjing	79.90	310	*e*P	P	00 15 12.8	+1.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KHMM	Horse Mountain	80.38	39	*e*P	P	00 15 13.9	+0.3
	42nm,1.5s						
SII	Sitkinak Islan	80.45	14	*e*P	P	00 15 13.9	+0.4
	18nm,0.9s						
CMB	Columbia Colle	80.69	43	*e*P	P	00 15 15.6	+0.5
	15nm,1.5s						
PFO	Pinyon Flats O	80.79	49	*e*P	P	00 15 14.9	-1.0
	8.0nm,1.4s						
MDJ	Mudanjiang	80.86	325	*e*P	P	00 15 15.6	-0.3
	8.6nm,0.8s						
MDJ	Mudanjiang	80.86	325	P	P	00 15 16.5	+0.7
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
AFDM	Forest Hills D	80.87	42	*e*P	P	00 15 15.7	-0.4
	9.8nm,1.4s						
WDC	Whiskeytown Da	80.90	40	*e*P	P	00 15 17.4	+1.3
	18nm,1.4s						
ORV	Oroville	80.91	41	*e*P	P	00 15 15.1	-1.1
	3.8nm,0.8s						
OMMB	Old Mammoth Mi	81.33	44	*e*P	P	00 15 18.7	-0.2
	6.6nm,1.5s						
DAC	Darwin (Calif)	81.49	46	*e*P	P	00 15 19.4	-0.2
	2.1nm,0.7s						
YBH	Yreka Blue Hor	81.52	39	*e*P	P	00 15 21.1	+1.7
	7.5nm,0.8s						
GLA	Glamis	81.63	50	*e*P	P	00 15 20.4	+0.2
	12nm,0.8s						
PNTR	Pine Nut	81.81	42	*e*P	P	00 15 20.6	-0.5
	13nm,0.9s						
HUMO	Hull Mountain	81.92	38	*e*P	P	00 15 22.2	+0.8
	6.4nm,0.7s						
YERR	Yerington	81.97	43	*e*P	P	00 15 23.1	+1.1
	9.3nm,0.6s						
RYN	Ryan	82.22	43	*e*P	P	00 15 24.4	+1.2
	17nm,1.7s						
113A	Mohawk Valley,	82.24	50	*e*P	P	00 15 23.4	+0.2
	5.5nm,1.0s						
NVAR	Mina Array Bea	82.25	44	P	P	00 15 24.5	+1.1
	4.4nm,0.7s,baz=225,slow=7.9,SNR=48						
PAHR	Pah Rah Range	82.31	42	*e*P	P	00 15 23.5	-0.1
	9.2nm,1.2s						
NV11	Mina Array Sit	82.35	44	*e*P	P	00 15 24.6	+0.7
	1.2nm,1.4s						
WHN	Wuhan	82.39	307	*e*P	P	00 15 30.9	+6.9
IPM	Ipoh	82.49	278	*e*P	P	00 15 24.5	-0.4
	15nm,0.9s						
LDFC	Landfair	82.52	48	*e*P	P	00 15 26.2	+1.5
	9.8nm,0.6s						
KVN	Kaiserville	82.74	43	*e*P	P	00 15 26.6	+0.8
	5.8nm,0.6s						
TPNV	Topopah Spring	82.76	46	*e*P	P	00 15 27.1	+1.2
	4.4nm,0.8s						
KLR	Kul'dur	82.96	330	P	P	00 15 27.3	+0.9
	2.8nm,0.9s,baz=296,slow=0.8,SNR=8.0						
MOD	Modoc Plateau	83.05	40	*e*P	P	00 15 27.8	+0.6
	5.9nm,0.7s						
KULM	Kulim	83.14	278	*e*P	P	00 15 27.9	-0.3
	9.4nm,0.9s						
K05A	Summer Lake	83.19	39	*e*P	P	00 15 28.3	+0.2
	18nm,1.0s						

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SHPR  Sheep Range      83.25  47 eP      P       00 15 28.5 +0.1
      6.7nm,1.6s
W13A  Hualapai Mount   83.38  48 eP      P       00 15 30.1 +0.9
      2.3nm,0.8s
Y14A  Wickenburg       83.39  50 eP      P       00 15 30.3 +1.2
      3.1nm,0.8s
H04A  Detroit Lake     83.66  37 eP      P       00 15 30.7 +0.6
      12nm,0.6s
PSI   Prapat           83.81 275  P      P       00 15 31.2 -0.5
      2.3nm,0.4s,baz=41,slow=19,SNR=4.3
PSI   Prapat           83.81 275 eP      P       00 15 31.0 -0.7
      15nm,1.0s
CNPM  China Poot       83.81  14 eP      P       00 15 30.0 -0.5
      52nm,1.8s
PINE  Pine Mountain    83.81  38 eP      P       00 15 32.7 +1.6
      13nm,0.8s
BMN   Battle Mountai   84.08  42 eP      P       00 15 32.9 +0.4
      10.0nm,1.4s
BRLK  Bradley Lake     84.10  14 eP      P       00 15 31.2 -0.7
      9.9nm,0.8s
TUC   Tucson           84.18  52 eP      P       00 15 34.6 +1.5
      13nm,1.4s
WVOR  Wild Horse Val   84.36  40 eP      P       00 15 33.6 -0.1
      6.5nm,1.2s
SVW2  Sparrevohn       84.38  11 eP      P       00 15 32.6 -0.7
      1.8nm,0.5s
NLWA  Neilton Lookou   84.46  34 eP      P       00 15 33.5 -0.5
      9.4nm,0.9s
DIB   Dawson Inlet,    84.48  26 eP      P       00 15 33.6 -0.2
      29nm,1.3s
MA2   Magadan          84.50 345 eP      P       00 15 33.8 -0.1
      22nm,1.6s
GSI   Gunungsitoli     84.51 274 eP      P       00 15 33.8 -1.2
      24nm,0.7s
SKNT  Sakolnakorn      84.72 290  P      P       00 15 36.8 +0.9
      37nm,0.9s
I07A  Izee             84.82  38 eP      P       00 15 36.3 +0.3
      4.4nm,0.8s
319A  Douglas          84.84  54 eP      P       00 15 37.0 +0.6
      23nm,1.5s
G06A  Carlson Farm,    84.86  37 eP      P       00 15 36.5 +0.4
      33nm,1.9s
J08A  Circle Bar Ran   85.00  40 eP      P       00 15 37.8 +0.9
      15nm,1.4s
KNB   Kanab            85.12  47 eP      P       00 15 37.5 -0.1
      10.0nm,1.5s
D05A  Enumclaw         85.32  35 eP      P       00 15 38.9 +0.7
      43nm,1.6s
PGC   Sidney           85.48  33 eP      P       00 15 39.0 +0.1
RC01  Rabbit Creek A   85.55  14 eP      P       00 15 39.1 +0.2
      23nm,1.5s
SYO   Syowa Base       85.62 193⇑eX      P       00 15 37.0 -2.3
GLI   Glacier Island   85.97  15 eP      P       00 15 40.9  0.0
      13nm,0.8s
E08A  Dider Farm, El   86.50  37 eP      P       00 15 45.2 +1.5
      6.0nm,0.8s
SNAA  Sanae            87.07 179  P      P       00 15 45.6 -0.7
VNA3  Neumayer Olymp   87.24 177  P      P       00 15 46.7 -0.3
PLID  Pearl Lake       87.44  39 eP      P       00 15 48.8 +0.1
      22nm,1.7s
HLID  Hailey           87.56  41 eP      P       00 15 50.2 +1.1
      3.6nm,0.9s
MNTX  Cornudas Mount   87.94  55 eP      P       00 15 52.0 +1.0
      4.4nm,1.0s
TX31  Lajitas Ar. Si   88.22  58 eP      P       00 15 53.6 +1.2
      4.4nm,1.0s
TXAR  Lajitas Array    88.22  58  P      P       00 15 54.2 +1.7
      2.5nm,0.9s,baz=221,slow=6.2,SNR=19
ANMO  Albuquerque      88.61  52 eP      P       00 15 54.6 +0.4
      5.2nm,1.3s
DOT   Dot Lake         89.08  15 eP      P       00 15 55.3 -0.3
      4.1nm,0.7s
KMI   Kunming          89.10 297  P      P       00 15 58.5 +1.7
KMI                              pmax    pmax
      comp=Z,10.0nm,1.2s
MCMT  McKenzie Canyo   89.18  41 eP      P       00 15 57.6 +0.9
ILAR  Eielson Array    89.42  13  P      P       00 15 56.2 -0.8
      2.1nm,0.5s,baz=223,slow=5.5,SNR=36
HHC   Hu-ho-hao-te     89.47 315  P      P       00 15 58.4 +0.4
HHC                              pmax    pmax
      comp=Z,21nm,1.1s
HHC                              pmax    pmax
      comp=Z,130nm,6.2s
CMAR  Chiang Mai Arr   89.71 290  P      P       00 16 00.8 +1.4
      5.4nm,0.8s,baz=132,slow=3.4,SNR=27
CHTO  Chiang Mai       89.84 290 eP      P       00 16 01.0 +0.9
      10nm,1.0s
LOHW  Long Hollow      89.94  42 eP      P       00 16 00.7 +0.4
      3.3nm,0.6s
BW06  Boulder Array    90.19  44 eP      P       00 16 01.1 -0.3
      3.8nm,0.8s
PDAR  Pinedale Array   90.19  44  P      P       00 16 01.9 +0.5
      2.6nm,0.6s,baz=214,slow=3.7,SNR=32
BOZ   Bozeman (W)      90.32  40 eP      P       00 16 02.9 +1.0
      2.6nm,0.9s
SDCO  Great Sand Dun   90.56  49 eP      P       00 16 04.1 +0.7
      2.0nm,1.0s
CD2   Chengdu          90.66 303 eP      P       00 16 03.7  0.0
SONM  Songino Array    95.97 319  P      P       00 16 27.5 -0.1
      0.2nm,0.6s,baz=116,slow=5.2,SNR=2.4
ZALV  Zalesovo Beam   110.75 321  PKiKP  PKiKP   00 21 28.4 -1.4
      1.0nm,0.5s,baz=238,slow=8.5,SNR=3.6
MKAR  Makanchi Array  111.29 313  PKiKP  PKiKP   00 21 29.5 -1.7
      0.4nm,0.4s,baz=164,slow=0.7,SNR=9.8
KURBB Kurchatov Arra  114.22 317  PKiKP  PKPdf   00 21 35.1 -1.5
      0.5nm,0.4s,baz=104,slow=1.8,SNR=7.0
KSH   Kashi           114.80 305 ePKP    PKiKP   00 21 40.5 +2.2
BVAR  Borovoye Array  119.31 320  PKP    PKPdf   00 21 45.1 -1.3
      2.3nm,0.4s,baz=112,slow=2.3,SNR=25
BOSA  Boshof          125.06 206  PKP    PKPdf   00 21 57.1 -1.3
      2.2nm,0.8s,baz=180,slow=4.0,SNR=3.2
ARU   Arti            125.54 325  PKP    PKPdf   00 21 57.0 -1.2
      1.7nm,0.4s,baz=96,slow=3.7,SNR=7.7
ARU   Arti            125.54 325 ePKPdf  PKPdf   00 21 56.9 -1.3
GEYT  Alibeck         128.64 302  PKP    PKPdf   00 22 04.7 -0.1
      0.8nm,0.4s,baz=213,slow=11,SNR=4.0
ARCES ARCESS Array B  129.72 349  PKP    PKPdf   00 22 04.9 -0.9
      3.5nm,0.4s,baz=92,slow=1.5,SNR=58
FINES FINESS Array B  136.47 343  PKhKP  PKPpre  00 22 11.2
      1.4nm,0.4s,baz=64,slow=4.4,SNR=5.9
FINES                             PKP    PKPdf   00 22 18.8 +0.1
      1.4nm,0.4s,baz=96,slow=1.4,SNR=20
NB2   NORSAR Subarra139.83 352    PKP    PKPdf   00 22 16.4 -8.5
      comp=Z,0.6nm,0.5s,baz=11,slow=3.2
NOA   NORSAR Array B139.83 352    PKhKP  PKPpre  00 22 15.6
      comp=Z,0.4nm,0.5s,baz=20,slow=1.6,SNR=12
NOA                               PKP    sPdif   00 22 24.5 +0.1
      comp=Z,0.4nm,0.4s,baz=14,slow=3.8,SNR=7.4
AKASG Malin Array Be  143.46 330  PKP    PKPab   00 22 28.8 -1.1
      comp=Z,4.0nm,0.4s,baz=41,slow=4.6,SNR=27
KAC   Achnashellach   143.69   6 eP      PKPab   00 22 29.9 -0.6
MBAR  Mbarara         143.74 237 ePKPbc  PKPbc   00 22 32.4 +0.1
KPL   Plockton        143.82   6 eP      PKPab   00 22 30.3 -0.6
EAB   Aberfoyle       145.08   5 eP      PKPdf   00 22 34.0 -0.3
PGBU  Glenifferbraes  145.44   6 eP      PKPdf   00 22 34.7 -0.1
ESY   Stoneypath      145.47   4 eP      PKPdf   00 22 35.3 +0.3
EBL   Broad Law       145.59   4 eP      PKPdf   00 22 35.9 +0.7
CLGH  Cloghs, Cushen  145.98   7 eP      PKPdf   00 22 36.5 +0.7
ESK   Eskdalemuir     146.03   4 ePKPdf  PKPdf   00 22 36.9 +1.0
ESK   Eskdalemuir     146.03   4 eP      PKPdf   00 22 36.7 +0.8
MILM  Milestii Mici   146.15 325⇓iP      PKPdf   00 22 37.3 +0.9
GAL1  Galloway        146.35   6 eP      PKPbc   00 22 37.8 -0.8
EDMD  Edmundbyers     146.60   3 eP      PKPbc   00 22 38.5 -0.8
KESW  Keswick, Cumbr  146.76   5 eP      PKPbc   00 22 39.0 -0.8
BR131 Keskin Array S  146.89 311 ePKPbc  PKPbc   00 22 40.2 -0.6
BRTR  Keskin Array B  146.89 311  PKPbc  PKPbc   00 22 39.9 -1.0
      comp=Z,1.5nm,0.5s,baz=141,slow=4.7,SNR=13
IOMK  Kirk Michael    146.96   6 eP      PKPbc   00 22 39.6 -0.7
HPK   Haverah Park    147.49   3 eP      PKPbc   00 22 41.1 -0.6
BURAR Bucovina Array  147.50 329⇓iP      PKPbc   00 22 42.4 +0.3
BIZ   Bicaz           147.53 327⇑iP      PKPbc   00 22 42.3 +0.2
TESR  Tescani         147.55 326⇑iP      PKPbc   00 22 41.7 -0.5
CFR   Carcaliu        147.60 323⇑iP      PKPdf   00 22 40.5 +1.7
WPS   Cemaes, Angles  147.82   6 eP      PKPbc   00 22 41.5 -1.1
KOLS  Kolonicke sedl  147.84 334 ePKP    PKPbc   00 22 43.2 +0.4
WME   Myndd Eilian    147.84   6 eP      PKPbc   00 22 41.5 -1.1
VRI   Vrincioaia      147.93 325⇓iP      PKPbc   00 22 42.6 -0.6
WLF1  Llynfaes        147.94   6 eP      PKPbc   00 22 41.9 -1.0
YRC   Rhoscolyn       147.96   7 eP      PKPbc   00 22 41.2 -1.7
TLB   Topalu          148.02 322⇓iP      PKPbc   00 22 43.3 -0.1
LBWR  Ladybower, Pea  148.03   3 eP      PKPbc   00 22 42.5 -0.6
YLL   Llanberis       148.11   6 eP      PKPbc   00 22 41.8 -1.6
MDUB  Mudurnu         148.26 313 ePKPbc  PKPbc   00 22 43.7 -0.6
FOEL  Foel Wylfa      148.44   5 eP      PKPbc   00 22 43.5 -0.7
LLW   Llanuwychllyn   148.44   6 eP      PKPbc   00 22 42.9 -1.3
DOPR  Dopca           148.56 327⇑iP      PKPbc   00 22 45.2 +0.4
MLR   Muntele Rosu    148.59 326⇑iP      PKPbc   00 22 45.6 +0.6
OSTC  Ostas           148.64 341⇑ePKP    PKPbc   00 22 44.9 +0.1
OSTC                             ePKPAB  PKPab   00 22 50.3  0.0
OKC   Ostrava-Krasne  148.66 339⇑ePKP    PKiKP   00 22 45.5 -0.4
OKC                              ePKPAB  PKPab   00 22 50.6 +0.2
CHVC  Chvalec         148.66 342⇑ePKP    PKPbc   00 22 44.8 -0.1
CHVC                             ex      x       00 22 50.0
UPC   Upice           148.75 342⇑ePKP    PKPbc   00 22 45.2 +0.2
UPC                              ePKPAB  PKPab   00 22 50.9 +0.2
LANS  Liptovska Anna  148.76 337 ePKP    PKiKP   00 22 46.1 -0.1
CSS   Mathiatis       148.78 302 ePKPbc  PKPbc   00 22 44.9 -0.8
DPC   Dobruska-Polom  148.79 341⇑ePKP    PKPbc   00 22 45.4 +0.2
CLL   Collm           148.81 346⇓iPKPbc  PKPbc   00 22 44.8 -0.3
      comp=Z,42nm,1.7s
CLL                              ePKPab  PKPab   00 22 49.0 -1.9
HLM1  Long Mynd       148.84   5 eP      PKPbc   00 22 44.1 -1.1
MORC  Moravsky Berou  148.91 339 ePKPbc  PKPbc   00 22 45.0 -0.6
MORC  Moravsky Berou  148.91 339⇑iP      PKPbc   00 22 45.3 -0.2
MORC  Moravsky Berou  148.91 339 ePKIKP  PKPbc   00 22 45.3 -0.2
VOIR                  149.09 326⇑iP      PKPbc   00 22 45.7 -0.5
RSBS  Rosebush, Pemb  149.22   7 eP      PKPbc   00 22 45.0 -1.2
MCH1  Michaelchurch   149.35   5 eP      PKPbc   00 22 45.2 -1.2
MONM  Monmouth        149.52   5 eP      PKPbc   00 22 46.0 -0.8
VYHS  Vyhne           149.54 337 ePKP    PKPbc   00 22 46.7 -0.4
VYHS                             e               00 22 54.6
VRAC  Vranov          149.62 340⇓iP      PKPbc   00 22 47.1 -0.1
VRAC  Vranov          149.62 340 ePKIKP  PKPbc   00 22 47.1 -0.1
GOPC  GO Pecny, Ondr  149.63 342⇑ePKP    PKPbc   00 22 46.8 -0.4
PRU   Pruhonice       149.63 343⇑ePKP    PKPbc   00 22 46.9 -0.3
PRU                              ePKPAB  PKPab   00 22 54.8 +0.4
JAVC  Velka Javorina  149.65 338 ePKIKP  PKiKP   00 22 48.3 +0.2
KRUC  Moravsky        149.90 340 ePKIKP  PKPbc   00 22 47.6 -0.3
NKC   Novy Kostel     149.94 345⇑ePKP    PKPbc   00 22 47.9  0.0
TREC  Trest           149.98 341⇑ePKP    PKPbc   00 22 47.7 -0.4
SIRR  Siria           150.15 331⇓iP      PKPbc   00 22 48.3 -0.3
WOL   Wolverton       150.15   3 eP      PKPbc   00 22 47.4 -0.9
HTL   Hartland        150.19   7 eP      PKPbc   00 22 48.5 +0.1
MODS  Modra-Piesok    150.20 338 ePKP    PKPbc   00 22 47.8 -0.8
MODS                             e               00 22 57.0
GZR   Gura Zlata      150.27 328⇓iP      PKPbc   00 22 48.4 -0.5
ELND  Elena           150.27 322⇑iP      PKPbc   00 22 48.0 -0.9
UCC   Uccle           150.61 356 ⇓PKPbc  PKPbc   00 22 48.9 -0.5
BZS   Buzias          150.66 330⇓iP      PKPbc   00 22 49.1 -0.6
MEM   Membach         150.66 354 ⇓PKPbc  PKPbc   00 22 49.0 -0.6
KHC   Kasperske Hory  150.67 343 ePKPbc  PKPbc   00 22 49.2 -0.5
KHC   Kasperske Hory  150.67 343⇑ePKP    PKPbc   00 22 49.4 -0.3
PLVB  Pleven          150.69 324⇓iP      PKPbc   00 22 49.7 -0.2
HERR  Herculane       150.81 328⇓iP      PKPbc   00 22 49.5 -0.6
GERES GERESS Array B  150.90 343  PKPbc  PKPbc   00 22 49.8 -0.5
      comp=Z,4.2nm,0.6s,baz=30,slow=2.8,SNR=41
SNF   Seneffe         150.91 356 ⇓PKPbc  PKPbc   00 22 49.7 -0.4
SNF                              ⇑PKPab  PKPab   00 22 59.1 -0.6
BCLA  Clavier         150.92 355 ⇑PKPab  PKPab   00 22 59.0 -0.7
CONA  Conrad Observa  151.07 339 i PKiKP PKPbc   00 22 50.6 -0.1
      comp=Z,8.8nm,0.7s
MDVR  Moldovita       151.23 329⇓iP      PKPbc   00 22 50.5 -0.6
DOU   Dourbes         151.29 355 ⇓PKPbc  PKPbc   00 22 50.6 -0.4
WLF   Walferdange     151.58 353 ePKPbc  PKPbc   00 22 50.4 -1.2
WLF   Walferdange     151.58 353 ⇑PKPbc  PKPbc   00 22 51.6 -0.1
MOA   Molln           151.64 341 i PKPbc PKPbc   00 22 51.2 -0.8
      comp=Z,2.7nm,0.5s
VTS   Vitosha         151.96 324⇓iP      PKPbc   00 22 51.8 -1.2
SOKA  Soboth          152.43 339 i PKPbc PKPbc   00 22 52.6 -1.2
      comp=Z,3.2nm,1.0s
PERS  Pernice         152.44 339 i PKPbc PKPbc   00 22 52.5 -1.2
BFO   Black Forest    152.58 350 ePKPbc  PKPbc   00 22 53.2 -0.8
KBA   Koelnbreinsper  152.60 342 i PKPbc PKPbc   00 22 52.8 -1.5
      comp=Z,2.7nm,0.8s
WATA  Walderalm       152.85 344 i PKPbc PKPbc   00 22 53.8 -1.0
      comp=Z,1.8nm,0.4s
WTTA  Wattenberg      152.90 344 i PKiKP PKPbc   00 22 54.1 -0.8
      comp=Z,4.1nm,0.4s,SNR=8.3
RETA  Reutte          152.90 346 i PKPbc PKPbc   00 22 53.9 -0.9
      comp=Z,2.3nm,0.7s
MYKA  Terra Mystica   152.92 341 i PKPbc PKPbc   00 22 53.3 -1.5
      comp=Z,3.0nm,0.6s
MOTA  Moosalm         152.96 345 i PKPbc PKPbc   00 22 53.9 -1.1
      comp=Z,3.8nm,0.9s
SQTA  Sankt Quirin    153.05 345 i PKiKP PKPbc   00 22 54.4 -0.8
      comp=Z,4.3nm,0.8s
VNDS  Vrh nad Dolski  153.05 339 i PKPbc PKPbc   00 22 54.1 -0.9
ABTA  Abfaltersbach   153.14 343 i PKPbc PKPbc   00 22 54.0 -1.3
      comp=Z,4.4nm,0.6s,SNR=6.6
LJU   Ljubljana       153.16 339 i PKPbc PKPbc   00 22 54.6 -0.7
DAVA  Damuels         153.29 347 i PKiKP PKiKP   00 22 55.9 +0.1
      comp=Z,2.3nm,0.6s
FETA  Feichten        153.35 345 i PKiKP PKPbc   00 22 55.2 -0.6
      comp=Z,1.7nm,0.6s
FUORN Ofenpass-Fuorn  153.83 346 ePKPbc  PKPbc   00 22 55.9 -1.1
ESDC  Sonseca Array   161.32  12  PKPab  PKPab   00 23 44.6 -0.3
      comp=Z,0.6nm,0.7s,baz=323,slow=5.9,SNR=4.6
KEST  Kesra           164.08 335  PKPab  PKPab   00 23 57.4 +0.1
      comp=Z,2.5nm,0.9s,baz=318,slow=9.3,SNR=3.5
DBIC  Dimbokro        164.18 158  PKP    PKPdf   00 22 59.6 -1.5
      comp=Z,7.0nm,1.1s,baz=170,slow=3.6,SNR=4.0
TORD  Torodi Ar. Bea  171.72 184  PKP    PKPdf   00 23 04.4 -1.8
      comp=Z,1.8nm,0.9s,baz=3.2,slow=0.7,SNR=8.6
TORD                              PKPab  PKPab   00 24 31.5 +0.2
      comp=Z,0.3nm,0.8s,baz=147,slow=4.8,SNR=3.9
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*ISCJB **13** 00:20:52.4±1.6, 18°.46N±0°.08×147°.3E±0°.3, h35^{km}, mb3.8/8, MS3.2/5, Error ellipse: s-maj=46.3km s-min=8.8km az=8.4*

*IDC **13** 00:20:59.2±6.3, 18°.37N×146°.99E, h73^{km}±44^{km}, mb3.5/8, mb1 3.7/10, mb1mx3.4/43, mbtmp3.9/10, ML3.6/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/31, Error ellipse: s-maj=87.6km s-min=16.8km az=85.0*

ISC 13 00:20:53.8±2.0, **18°.5N**±0°.1×**147°.5E**±0°.4, **h35^{km}, n18,** σ1^{s}**13**/12, **mb4.0**/8, **MS3.1**/5, **Mariana Islands region**

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Code  Station Name      Δ°  AZ°    Phase ID         Time     Res
                                   Op     ISC      h  m  s   ISC
GUMO  Guam             5.46 208    P      Pn      00 22 14.5 +1.8
      6.6nm,0.3s,baz=356,slow=16,SNR=3.3
GUMO                               S      Sn      00 23 13.0 -1.3
      4.6nm,0.3s,baz=0.0,slow=20,SNR=2.6
H11S3 WAKE ISLAND Hy  18.22  87    T      T       00 44 08.6
      baz=273,slow=75,SNR=22
H11S1 WAKE ISLAND Hy  18.23  87    T      T       00 44 08.6
      baz=273,slow=75,SNR=8.3
H11S2 WAKE ISLAND Hy  18.24  87    T      T       00 44 12.0
      baz=273,slow=75,SNR=12
MJAR  Matsushiro Arr  19.78 337    P      P       00 25 22.6 +1.5
      0.1nm,0.3s,baz=173,slow=9.9,SNR=7.0
JNU   Nakatsue        20.85 318    LR     LR      00 32 28.5
      comp=Z,47nm,18.2s,baz=192,slow=34
DAV   Davao City (W)  24.14 245    LR     LR      00 33 20.9
      comp=Z,90nm,21.9s,baz=91,slow=31
KSRS  Korea Array     25.53 322    LR     LR      00 36 20.0
      comp=Z,57nm,18.9s,baz=135,slow=36
WRA   Warramunga Arr  40.28 199    P      P       00 28 27.4 -0.4
      1.2nm,0.7s,baz=20,slow=9.9,SNR=8.4
ASAR  Alice Springs   43.92 198    P      P       00 28 56.9 -0.6
      0.8nm,0.8s,baz=19,slow=8.8,SNR=12
SONM  Songino Array   44.39 321    P      P       00 29 00.7 -0.4
      0.3nm,0.5s,baz=138,slow=7.8,SNR=6.0
CMAR  Chiang Mai Arr  45.93 278    LR     LR      00 47 02.0
      comp=Z,19nm,20.3s,baz=100,slow=34
ZALV  Zalesovo Beam   59.23 322    P      P       00 30 50.5 -1.1
      1.4nm,0.8s,baz=114,slow=7.2,SNR=5.2
MKAR  Makanchi Array  59.85 314    P      P       00 30 55.6 -0.4
      0.2nm,0.6s,baz=53,slow=4.7,SNR=3.5
KURBB Kurchatov Arra  62.63 318    P      P       00 31 14.0 -0.7
      1.0nm,0.6s,baz=96,slow=7.2,SNR=15
KURBB                              PcP    PcP     00 31 54.5 +1.2
      0.8nm,0.8s,baz=98,slow=5.7,SNR=2.2
BVAR  Borovoye Array  67.73 320    P      P       00 31 47.5 -0.3
      1.5nm,0.7s,baz=99,slow=7.4,SNR=7.8
PPT   Papeete         71.49 116    LR     LR      00 58 28.8
      comp=Z,43nm,21.9s,baz=1.0,slow=31
FINES FINESS Array B  87.80 336    P      P       00 33 38.5 -0.7
      1.5nm,0.9s,baz=89,slow=5.8,SNR=2.9
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*DSN **13** 00:52:56.9±2.6, 27°.51N×55°.02E, h10^{km}, ML4.3/8, Error ellipse: s-maj=36.2km s-min=7.9km az=27.0*

*ISCJB **13** 00:52:57.5±0.2, 27°.34N±0°.02×55°.03E±0°.03, h10^{km}, mb4.2/61, MS3.3/6, Error ellipse: s-maj=3.9km s-min=2.4km az=136.3*

*THR **13** 00:52:58.9, 27°.37N×55°.17E, h14^{km}, ML4.1*

*NEIC **13** 00:52:58.9±0.0, 27°.37N×55°.17E, h14^{km}, mb4.3/36, ML4.1(THR), After THR.*

*MOS **13** 00:52:59.1±1.2, 27°.17N×55°.10E, h33^{km}, mb4.4/30, Error ellipse: s-maj=9.1km s-min=5.5km az=99.3*

*TEH **13** 00:52:59.2, 27°.28N×55°.03E, h16^{km}, ML4.2*

*IDC **13** 00:53:03.1±2.0, 27°.25N×55°.02E, h54^{km}±21^{km}, mb3.8/23, mb1 3.9/30, mb1mx3.8/54, mbtmp4.1/30, ML3.9/6, MS3.1/9, Ms1 3.1/9, ms1mx2.9/40, Error ellipse: s-maj=12.9km s-min=10.8km az=36.0*

*OMAN **13** 00:53:06.3±2.0, 27°.08N×55°.39E, h87^{km}±67^{km}, ml3.9/11, Error ellipse: s-maj=86.5km s-min=19.1km az=59.0*

ISC 13 00:52:58.3±0.3, **27°.26N**±0°.03×**55°.04E**±0°.03, **h10^{km}, n229,** σ1^{s}**81**/238, **mb4.2**/65, **MS3.1**/6, **2C-9D, Southern Iran**

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Code  Station Name      Δ°  AZ°    Phase ID         Time     Res
                                   Op     ISC      h  m  s   ISC
BNDS  Bandar-Abbas     1.02  82   ePg     Pg      00 53 15.5 -2.4
BNDS  Bandar-Abbas     1.02  82    AML    AML     00 53 34.8
      comp=N,4µm,0.3s
BNDS  Bandar-Abbas     1.02  82    Pg     Pg      00 53 15.5 -2.4
GENO  Geno             1.02  82   ePg     Pn      00 53 19.5 +0.7
GENO                               IAMB   IAmb    00 53 39.2
      comp=Z,0.0nm,0.3s
SHME  Shamm            1.56 140   eP      Pn      00 53 27.5 +1.3
      SNR=18
SHME                               S      Sg      00 53 50.2 +1.7
SHME  Shamm            1.56 140   ePn     Pn      00 53 27.1 +1.0
NIAN  Nian             1.62  79   ePn     Pb      00 53 29.0 +0.6
NIAN                               IAMB   IAmb    00 53 56.7
      comp=Z,0.0nm,0.2s
LMD1  Lamerd           1.67 273   ePn     Pb      00 53 29.6 +0.4
JHRM  Jahrom           1.79 314   ePn     Pb      00 53 31.2 -0.1
JHRM                              eSg     Sg      00 53 57.1 +1.1
UMQ   Umm Al-Quwin     1.82 162    P      Pg      00 53 33.6 +0.4
UMQ   Umm Al-Quwin     1.82 162   ePn     Pg      00 53 33.8 +0.6
GHIR  Ghir-Karzin      2.09 300   ePn     Pb      00 53 36.1 -0.2
GHIR  Ghir-Karzin      2.09 300    AML    AML     00 54 12.4
      comp=N,2µm,0.6s
GHIR                               AML    AML     00 54 14.3
      comp=E,1µm,0.6s
GHIR  Ghir-Karzin      2.09 300    Pn     Pb      00 53 36.1 -0.2
GHIR                               Sg     Sg      00 54 06.3 +0.9
MSFE  Esma-Masafi      2.14 152   eP      Pn      00 53 36.6 +2.4
      SNR=21
MSFE  Esma-Masafi      2.14 152   ePn     Pn      00 53 36.4 +2.2
MDH   Madha            2.26 150    P      Pn      00 53 37.8 +2.1
      SNR=22
MDH   Madha            2.26 150   ePn     Pn      00 53 38.1 +2.4
NAZ   Nazwa, Dubai     2.33 166   eP      Pn      00 53 39.6 +2.8
      SNR=21
NAZ   Nazwa, Dubai     2.33 166    P      Pb      00 53 40.0 -0.5
      SNR=20
NAZ   Nazwa, Dubai     2.33 166   ePn     Pn      00 53 39.6 +2.8
KHNJ  Kahnooj          2.46  73   ePn     Pn      00 53 40.7 +2.1
UOSS  Minazif          2.53 155   ePn     Pn      00 53 41.6 +2.0
UOSS  Minazif          2.53 155   eP      Pn      00 53 41.5 +2.0
      SNR=62
UOSS  Minazif          2.53 155    P      Pn      00 53 41.6 +2.0
      SNR=15
UOSS  Minazif          2.53 155   ePn     Pb      00 53 43.4 -0.5
FAQ   Al Faqa, Dubai   2.55 169   eP      Pn      00 53 42.7 +2.9
      SNR=11
FAQ   Al Faqa, Dubai   2.55 169    P      Pn      00 53 43.0 +3.2
      SNR=11
FAQ                                P      Pn      00 53 43.0 +3.2
      SNR=10
FAQ   Al Faqa, Dubai   2.55 169   ePn     Pn      00 53 42.8 +3.0
HATD  Hatta, Dubai     2.62 158   eP      Pn      00 53 43.0 +2.3
      SNR=23
HATD  Hatta, Dubai     2.62 158    P      Pn      00 53 44.0 +3.3
      SNR=23
HATD  Hatta, Dubai     2.62 158   ePn     Pn      00 53 43.2 +2.5
ASUD  Al Ashush, Dub   2.64 174   eP      Pn      00 53 44.2 +3.2
      SNR=34
ASUD  Al Ashush, Dub   2.64 174    P      Pb      00 53 44.5 -1.2
      SNR=34
ASUD  Al Ashush, Dub   2.64 174   ePn     Pb      00 53 44.5 -1.2
AJN   Ajban            2.69 181   eP      Pn      00 53 44.7 +3.1
      SNR=7.2
AJN   Ajban            2.69 181   ePn     Pn      00 53 44.8 +3.1
ISRV  Sarvestan        2.71 322   ePn     Pn      00 53 44.1 +1.8
ISRV                               IAMB   IAmb    00 54 48.7
      comp=Z,17µm,1.0s
NGRK  Negar Kerman     2.80  32   ePn     Pn      00 53 44.6 +1.0
NGRK                               IAMB   IAmb    00 54 46.8
      comp=Z,0.0nm,0.8s
TVBK  TV Kerman        3.11  29   ePn     Pn      00 53 49.8 +2.0
TVBK                               IAMB   IAmb    00 54 47.0
      comp=Z,0.0nm,0.8s
IPAR  Pars             3.11 326   ePn     Pn      00 53 49.5 +1.7
IPAR                               IAMB   IAmb    00 54 36.3
      comp=Z,6µm,0.8s
ALNE  Al Ain           3.25 168   i P     Pn      00 53 52.1 +2.6
      SNR=17
ALNE  Al Ain           3.25 168   ePn     Pn      00 53 52.2 +2.7
KHGB  Koh Gabri        3.35  22   ePn     Pn      00 53 53.1 +2.1
KHGB                               IAMB   IAmb    00 55 01.8
      comp=Z,0.0nm,0.7s
CHMN  Cheshme madani   3.40  40   ePn     Pn      00 53 54.1 +2.4
CHMN                               IAMB   IAmb    00 53 58.3
      comp=Z,0.0nm,0.4s
IKAZ  Kazeroun         3.77 312   ePn     Pn      00 53 58.0 +1.1
IKAZ                               IAMB   IAmb    00 55 20.0
      comp=Z,7µm,0.8s
IMEH  Mehriz           4.13 355   ePn     Pn      00 54 03.7 +2.0
HOQ   Hoqain           4.20 150   ePn     Pn      00 54 07.9 +5.4
IBAF  Bafgh            4.34   6    IAMB   IAmb    00 54 09.5
      comp=Z,2µm,0.2s
IBAF                              ePn     Pn      00 54 05.7 +1.2
BIDO  Bidbid           4.65 142    P      Pn      00 54 10.5 +1.8
ISAD  Sadrabad         4.78 346   ePn     Pn      00 54 13.3 +2.6
ISAD                               IAMB   IAmb    00 54 14.4
      comp=Z,2µm,0.6s
SMDO  Samad            4.99 146    P      Pn      00 54 16.1 +2.6
IRAM  Ramesheh         5.09 334   ePn     Pn      00 54 16.0 +1.1
YZKH  Yazd             5.13 356   ePn     Pn      00 54 16.8 +1.5
YZKH  Yazd             5.13 356    Pn     Pn      00 54 16.8 +1.5
CHBR  Chabahar         5.15 108   ePn     Pn      00 54 17.0 +1.5
CHBR  Chabahar         5.15 108    Pn     Pn      00 54 17.0 +1.5
WSAR  Wadi Sarin       5.16 140    P      Pn      00 54 17.6 +2.0
      comp=Z,2.9nm,0.3s,baz=315,slow=8.1,SNR=41
WSAR                               S      Sn      00 55 16.3 +1.0
      comp=Z,5.2nm,0.3s,baz=182,slow=21,SNR=5.7
WSAR                               LR     LR      00 56 58.3
      comp=Z,134nm,18.1s,baz=352,slow=46
WSAR  Wadi Sarin       5.16 140    P      Pn      00 54 17.3 +1.7
      SNR=37
JMDO  Jabal Madar      5.61 150    P      Pn      00 54 23.8 +2.0
IGAR  Gharneh          5.75 334   ePn     Pn      00 54 24.6 +0.7
WBK   Wadi Bani Khal   5.84 142    P      Pn      00 54 26.9 +1.8
NASN  Na'in            5.85 341   ePn     Pn      00 54 26.4 +1.0
NASN  Na'in            5.85 341    Pn     Pn      00 54 26.4 +1.0
ANAR  Anarak           6.02 349   ePn     Pn      00 54 28.6 +1.1
ZNGN  Zangian          6.06 324   ePn     Pn      00 54 28.8 +0.6
IZEF  Zefreh           6.09 338   ePn     Pn      00 54 28.4 -0.2
ROKH  ROKH             6.15 326   ePn     Pn      00 54 29.8 +0.4
IKOO  Kooshah          6.19  33   ePn     Pn      00 54 32.0 +1.9
ITEG  Tejag            6.47  29   ePn     Pn      00 54 35.6 +1.8
IPIR  Pirpir           6.49 327   ePn     Pn      00 54 34.8 +0.6
TKDS  Koohdasht(Taba   6.58  15   ePn     Pn      00 54 37.3 +2.0
IKLH  Kolahrood        6.74 334   ePn     Pn      00 54 37.8 +0.2
MHTO  MHTO             6.79 156    P      Pn      00 54 40.0 +1.9
      SNR=23
IDMV  Damavand         8.68 344   ePn     Pn      00 55 04.9 +0.7
IDOB  Doab             8.79 319   ePn     Pn      00 55 05.9 +0.2
IKFM  Kafar-mosalman   8.80 317   ePn     Pn      00 55 05.7 +0.1
HSAM  Samen            8.87 323   ePn     Pn      00 55 06.1 -0.7
IPRN  Peran            9.24 346   ePn     Pn      00 55 14.2 +2.4
RAYN  Ar Rayn          9.39 249   i P     Pn      00 55 11.5 -2.3
      SNR=14
IKOM  Komasi           9.46 319   ePn     Pn      00 55 13.7 -1.1
IVIS  Veis            10.09 318   ePn     Pn      00 55 24.0 +0.6
IGHG  Ghaleghazi      10.13 316   ePn     Pn      00 55 24.3 +0.2
IDHR  Dehrash         10.49 317   ePn     Pn      00 55 28.0 -1.0
GEYT  Alibeck         10.95  13    P      Pn      00 55 37.8 +2.6
      comp=Z,0.0nm,0.3s,baz=186,slow=10,SNR=4.3
GEYT                               LR     LR      01 00 54.2
      comp=Z,97nm,20.0s,baz=115,slow=43
GYA0B ALIBECK ARRAY   10.95  13   ePn     Pn      00 55 33.2 -1.9
CUKT  Cukurca         13.87 319   i P     Pn      00 56 11.5 -3.6
CUKT                               IAML_P
      comp=Z,586nm,0.3s
HAKT  HAKKARI         14.02 320   i P     Pn      00 56 14.1 -3.2
HAKT                               IAML_P
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          comp=Z,282nm,0.3s
KBL   Kabul            14.04  55 ePn     Pn      00 56 16.9 -0.6
KBL   Kabul            14.04  55 eP      Pn      00 56 16.9 -0.6
SRTM  Siirt_Merkez     15.36 317 i P     Pn      00 56 31.1 -4.3
SRTM                               IAML_P
          comp=Z,193nm,0.4s
AKT   Akhty            15.40 339 eP      P       00 56 41.5 +1.0
AKT                              eS      S       00 59 37.0 -5.8
AKT                                pmax  pmax
          comp=Z,46nm,0.6s
AKT                                smax  smax
          comp=E,3.0nm,0.6s
AKT                                smax  smax
          comp=N,5.0nm,0.4s
GNI   Garni            15.43 329   P     P       00 56 41.3 +0.5
          comp=N,2.6nm,0.3s,baz=22,slow=1.0,SNR=14
GNI                                LR    LR      01 03 56.8
          comp=N,106nm,19.6s,baz=120,slow=42
GNI   Garni            15.43 329 ePn     Pn      00 56 31.8 -4.5
          comp=N,35nm,0.8s
GNI   Garni            15.43 329   P     P       00 56 42.4 +1.6
          SNR=5.8
GNI                                P     P       00 56 44.5 +3.7
          SNR=7.2
MARD  Mardin           15.66 313 i P     P       00 56 42.9 -0.5
MARD                               IAML_P
          comp=Z,928nm,0.5s
DAMY  Dhamar           16.06 220 ePn     Pn      00 56 45.2 +0.5
          comp=Z,38nm,1.2s
EATA  Eleskirt         16.33 324 i P     P       00 56 50.5 -0.5
EATA                               IAML_P
          comp=Z,27nm,0.1s
CHGR  Chuyangaron      16.39  43 ePn     Pn      00 56 46.2 -2.5
          comp=Z,36nm,1.5s
ASF   Jabal al Asfar   16.50 292   P     Pn      00 56 50.9 +0.9
          comp=Z,0.5nm,0.3s,baz=71,slow=9.1,SNR=6.7
ASF                                S     Sn      00 59 41.4  -12
          comp=Z,0.1nm,0.3s,baz=49,slow=19,SNR=2.7
HANI  Diyarbakir_Han   16.56 316 i P     P       00 56 54.5 +1.2
HANI                               IAML_P
          comp=Z,823nm,0.6s
GAR   Garm             17.32  44 eP      Pn      00 56 59.5 -0.8
          comp=Z,8.4nm,0.8s
GAR   Garm             17.32  44 eP      Pn      00 56 59.5 -0.8
GAR                                pmax  pmax
          comp=Z,8.0nm,0.8s
DAGI  Agillar          17.52 325 i P     P       00 57 05.5 +1.6
DAGI                               IAML_P
          comp=Z,279nm,0.7s
DBAD  Bademkaya        17.59 325 i P     Pn      00 57 04.0 +0.4
DBAD                               IAML_P
          comp=Z,93nm,0.4s
GROC  Groznyy          17.59 337 eP      P       00 57 06.0 +1.5
GROC                             eS      Sn      01 00 21.1 +1.7
GROC                               pmax  pmax
          comp=Z,38nm,1.2s
EIL   Elat             17.83 282   P     P       00 57 07.9 +0.6
          comp=Z,0.4nm,0.3s,baz=114,slow=14,SNR=4.7
MMAI  Mount Meron Ar   17.92 293   P     P       00 57 08.8 +0.5
          comp=Z,0.8nm,0.3s,baz=96,slow=16,SNR=7.2
MMAI                               LR    LR      01 05 44.1
          comp=Z,51nm,18.0s,baz=65,slow=42
ZEI   Tsey             17.95 333 eP      P       00 57 10.1 +1.3
ZEI                                pmax  pmax
          comp=Z,20nm,0.8s
KEMA  Kemaliye         18.27 315 i P     P       00 57 14.3 +2.2
KEMA                               IAML_P
          comp=Z,280nm,0.7s
BTK   Batken           18.28  42 eP      Pn      00 57 12.7 +0.6
          comp=Z,7.7nm,1.1s
BTK   Batken           18.28  42 eP      Pn      00 57 12.7 +0.6
BTK                                pmax  pmax
          comp=Z,8.0nm,1.1s
NCK   Nalchik          18.66 333⇓eP      Pn      00 57 18.5 +1.8
NCK                                pmax  pmax
          comp=Z,5.0nm,0.4s
NEY   Neytrino         18.82 331⇓eP      Pn      00 57 21.0 +2.2
NEY                                pmax  pmax
          comp=Z,2.0nm,0.7s
SUSE  Susehri          19.01 317 i P     Pn      00 57 23.9 +2.8
SUSE                               IAML_P
          comp=Z,176nm,0.3s
CUZAR Zara_SIVAS       19.08 316 i P     Pn      00 57 25.5 +3.6
KBZ   Khabaz           19.14 332   P     Pn      00 57 23.1 +0.6
          comp=Z,0.3nm,0.3s,baz=149,slow=9.7,SNR=20
KBZ                                LR    LR      01 06 27.2
          comp=Z,40nm,20.8s,baz=150,slow=42
KVAR  Kislovodsk Arr   19.41 332   P     Pn      00 57 26.5 +0.7
          baz=131,slow=15,SNR=8.7
KIV   Kislovodsk       19.41 332 eP      P       00 57 25.3 +0.6
          comp=Z,15nm,0.8s
KIV   Kislovodsk       19.41 332 eP      Pn      00 57 26.2 +0.3
KIV                                pmax  pmax
          comp=Z,68nm,1.1s
KIV                                MLR   MLR
          comp=Z,55nm,15.0s
CSS   Mathiatis        20.09 298 eP      P       00 57 32.5 +0.5
          comp=Z,12nm,0.9s
GOF   Gofitskoye       20.19 335⇑eP      P       00 57 28.4 -4.7
KK31  Karatay Array    20.19  34 eP      P       00 57 33.5 +0.3
          comp=Z,7.1nm,1.0s
KK31  Karatay Array    20.19  34 i P     P       00 57 34.0 +0.9
KK31                               pmax  pmax
          comp=Z,4.0nm,0.9s
KKAR  Karatay Array    20.19  34 eP      P       00 57 33.8 +0.7
          comp=Z,7.1nm,1.0s
KKAR  Karatay Array    20.19  34 eP      P       00 57 33.8 +0.7
KKAR                               pmax  pmax
          comp=Z,7.0nm,1.0s
KIRS  Kırehir-Merke    21.22 309 i P     P       00 57 45.1 +0.8
KIRS                               IAML_P
          comp=Z,117nm,0.5s
BR101 Keskin Array S   21.69 310 eP      P       00 57 49.4 -0.1
BR131 Keskin Array S   21.69 310 eP      P       00 57 49.5  0.0
          comp=Z,11nm,0.8s
BRTR  Keskin Array B   21.69 310   P     P       00 57 49.4 -0.1
          comp=Z,7.7nm,0.9s,baz=130,slow=13,SNR=43
BRTR  Keskin Array B   21.69 310 eP      P       00 57 51.2 +1.7
BRTR                               pmax  pmax
          comp=Z,8.0nm,0.8s
AAK   Ala-Archa        22.05  41   P     P       00 57 53.8 +0.5
          comp=Z,3.4nm,0.7s,baz=230,slow=6.7,SNR=7.3
AAK   Ala-Archa        22.05  41 eP      P       00 57 53.7 +0.3
          comp=Z,10nm,1.3s
AAK   Ala-Archa        22.05  41⇓eP      P       00 57 54.0 +0.6
AAK                                pmax  pmax
          comp=Z,6.0nm,0.9s
AB31  Akbulak array    22.29   8 i P     P       00 57 54.9 -0.7
AB31                               pmax  pmax
          comp=Z,5.0nm,0.8s
ABKAR Akbulak array    22.29   8 eP      P       00 57 55.1 -0.5
          comp=Z,6.1nm,0.8s
ILGA  Ilgaz            22.30 314 eP      P       00 57 58.9 +2.8
          comp=Z,13nm,0.8s
ANTO  Ankara           22.33 310 eP      P       00 57 58.8 +2.5
          comp=Z,15nm,0.8s
ANTO  Ankara           22.33 310 eP      P       00 57 58.8 +2.5
ANTO                               pmax  pmax
          comp=Z,15nm,0.8s
BR231 Keskin MP Arra   22.33 310 eP      P       00 57 59.1 +2.8
          comp=Z,14nm,0.6s
BOOM  Boomskoye usch   22.82  43 eP      P       00 58 01.9 +0.3
          comp=Z,9.2nm,1.1s
BOOM  Boomskoye usch   22.82  43 eP      P       00 58 01.9 +0.3
BOOM                               pmax  pmax
          comp=Z,9.0nm,1.1s
AKTO  Aktyubinsk       23.25   5   P     P       00 58 05.1 -0.7
          comp=Z,1.6nm,0.5s,baz=133,slow=11,SNR=5.2
AKTO                               LR    LR      01 08 24.2
          comp=Z,68nm,21.6s,baz=167,slow=40
AKTO  Aktyubinsk       23.25   5   P     P       00 58 05.9 +0.1
AKTO                               pmax  pmax
          comp=Z,10.0nm,1.5s
OTUK  Ortayu           24.91  28   P     P       00 58 21.1 -0.3
OTUK                               pmax  pmax
          comp=Z,5.0nm,0.8s
VSR   Storozhevoye     26.78 338 eP      P       00 58 36.9 -1.4
VSR                                pmax  pmax
          comp=Z,6.0nm,0.6s
IDI   Anoyia           26.91 295   P     P       00 58 38.8 -0.9
          comp=Z,12nm,0.8s,baz=242,slow=12,SNR=6.5
LPSR  Galich'ya Gora   28.03 339 eP      P       00 58 49.1 -0.4
LPSR                               pmax  pmax
          comp=Z,10.0nm,0.8s
BRVK  Borovoye         28.16  20⇓eP      P       00 58 50.8 +0.2
BRVK                               pmax  pmax
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          comp=Z,6.0nm,1.8s
BVAR  Borovoye Array   28.16  20   P     P       00 58 50.5 -0.2
          comp=Z,1.1nm,0.4s,baz=211,slow=8.0,SNR=16
MK32  Makanchi Array   28.98  40 eP      P       00 58 57.8 -0.3
MKAR  Makanchi Array   28.98  40   P     P       00 58 57.8 -0.3
          comp=Z,0.6nm,0.7s,baz=230,slow=13,SNR=4.4
ARU   Arti             29.26   4   LR    LR      01 12 39.6
          comp=Z,44nm,18.2s,baz=180,slow=40
ARU   Arti             29.26   4d iP     P       00 59 00.2 -0.1
ARU                                              00 59 51.3
ARU                                S     S       01 03 56.2 +3.2
ARU                                SS    SnSn    01 05 23.5 +5.2
ARU                                pmax  pmax
          comp=Z,3.0nm,1.3s
KURBB Kurchatov Arra   29.40  31   P     P       00 59 00.8 -0.8
          comp=Z,0.9nm,0.9s,baz=231,slow=8.7,SNR=7.3
MLR   Muntele Rosu     29.43 316   P     P       00 59 03.4 +1.3
          comp=Z,1.9nm,0.7s,baz=91,slow=5.0,SNR=6.2
MLR   Muntele Rosu     29.43 316 eP      P       00 59 02.8 +0.6
          comp=Z,3.4nm,0.8s
KURK  Kurchatov        29.50  31⇓eP      P       00 59 01.5 -1.1
KURK                               pmax  pmax
          comp=Z,1.0nm,1.1s
AKASG Malin Array Be   30.55 327   P     P       00 59 09.8 -2.0
          comp=Z,3.4nm,0.9s,baz=128,slow=8.8,SNR=6.6
AKASG Malin Array Be   30.55 327 eP      P       00 59 12.2 +0.4
AKASG                              pmax  pmax
          comp=Z,3.0nm,0.9s
OBN   Obninsk          30.91 339 eP      P       00 59 13.3 -1.6
          comp=Z,21nm,0.5s
OBN   Obninsk          30.91 339⇓iP      P       00 59 17.1 +2.2
OBN                              e               01 00 14.5
OBN                              eS      S       01 04 12.7 -6.2
OBN                                pmax  pmax
          comp=Z,17nm,0.6s
OBN                                MLR   MLR
          comp=Z,36nm,16.0s
WMQ   Urumqi           31.04  49 eP      P       00 59 16.6 +0.2
WMQ                                pP    pP      00 59 19.9 +0.3
WMQ                                pmax  pmax
          comp=Z,19nm,0.7s
WMQ                                pmax  pmax
          comp=Z,78nm,6.7s
KOLS  Kolonicke sedl   33.27 319 eP      P       00 59 36.2 +0.4
KOLS                               pmax  pmax
          comp=Z,6.0nm,0.9s
KOLS  Kolonicke sedl   33.27 319 eP      P       00 59 36.2 +0.4
ZAA0  Zalesovo Array   34.49  31 eP      P       00 59 45.3 -1.0
          comp=Z,3.8nm,0.8s
ZALV  Zalesovo Beam    34.49  31   P     P       00 59 45.9 -0.4
          comp=Z,2.9nm,0.5s,baz=249,slow=9.8,SNR=11
PRGR  Permogore        34.95 352 eP      P       00 59 49.0 -1.2
PRGR                               pmax  pmax
          comp=Z,7.0nm,1.3s
IIGN  Ignalina         34.97 331 eP      P       00 59 50.0 -0.5
IIGN                               IAmb  IAmb    00 59 53.5
          comp=Z,13nm,1.2s
VYHS  Vyhne            35.11 317 eP      P       00 59 53.0 +1.2
VYHS  Vyhne            35.11 317 eP      P       00 59 53.0 +1.2
IZAR  Zarasai          35.23 332 eP      P       00 59 52.0 -0.6
IZAR                               IAmb  IAmb    00 59 55.8
          comp=Z,6.8nm,1.1s
MORC  Moravsky Berou   36.41 318 eP      P       01 00 00.6 -2.4
          comp=Z,4.4nm,0.9s
MORC  Moravsky Berou   36.41 318 eP      P       01 00 00.6 -2.4
MORC                               pmax  pmax
          comp=Z,4.0nm,0.9s
VSU   Vasula           36.91 335 eP      P       01 00 06.5 -0.5
VSU                                IAmb  IAmb    01 00 09.8
          comp=Z,54nm,1.1s
VSU   Vasula           36.91 335⇑eP      P       01 00 05.8 -1.2
VSU                                pmax  pmax
          comp=Z,40nm,0.9s
AQU   L'Aquila         36.97 305 eP      P       01 00 07.6 -0.2
          comp=Z,15nm,1.1s
AQU   L'Aquila         36.97 305 eP      P       01 00 07.6 -0.2
AQU                                pmax  pmax
          comp=Z,15nm,1.1s
MOA   Molln            37.74 314 epP     P       01 00 15.3 +1.1
          comp=Z,2.9nm,0.8s
KBA   Koelnbreinsper   38.10 313 epP     P       01 00 18.8 +1.2
          comp=Z,3.0nm,0.8s
GERES GERESS Array B   38.41 315   P     P       01 00 18.7 -1.3
          comp=Z,0.7nm,0.7s,baz=106,slow=8.5,SNR=7.3
GERES                              LR    LR      01 19 54.6
          comp=Z,33nm,21.5s,baz=120,slow=42
GERES GERESS Array B   38.41 315 eP      P       01 00 21.3 +1.3
GERES                              pmax  pmax
          comp=Z,1.0nm,0.7s
KHC   Kasperske Hory   38.58 316 eP      P       01 00 18.6 -2.8
          comp=Z,1.2nm,0.8s
KHC   Kasperske Hory   38.58 316 eP      P       01 00 20.0 -1.4
KHC   Kasperske Hory   38.58 316 eP      P       01 00 20.0 -1.4
GTA   Gaotai           38.95  60 eP      P       01 00 26.1 +1.3
GTA                                pP    sP      01 00 30.1 +0.8
GTA                                sP    pP      01 00 33.1 +5.1
GTA                                pmax  pmax
          comp=Z,6.0nm,0.9s
WTTA  Wattenberg       39.28 312 i P     P       01 00 27.4  0.0
          comp=Z,3.0nm,0.5s
FIA0  FINESS Array S   39.30 338 eP      P       01 00 26.3 -0.9
FIA0  FINESS Array S   39.30 338 eP      P       01 00 26.3 -0.9
FINES FINESS Array B   39.30 338   P     P       01 00 26.3 -0.9
          comp=Z,5.1nm,0.8s,baz=140,slow=9.8,SNR=28
WATA  Walderalm        39.34 312 i P     P       01 00 25.9 -1.9
          comp=Z,2.4nm,0.5s
SQTA  Sankt Quirin     39.55 312 eP      P       01 00 27.8 -1.8
          comp=Z,4.4nm,0.6s
KEST  Kesra            39.58 294   P     P       01 00 30.5 +0.6
          comp=Z,1.5nm,0.7s,baz=353,slow=1.8,SNR=7.5
MOTA  Moosalm          39.65 312 eP      P       01 00 28.8 -1.6
          comp=Z,4.8nm,0.9s
CLL   Collm            39.67 319 eP      P       01 00 28.9 -1.5
          comp=Z,3.0nm,0.8s
CLL   Collm            39.67 319 i P     P       01 00 31.4 +1.0
CLL                                pmax  pmax
          comp=Z,3.0nm,0.9s
CLL   Collm            39.67 319 i P     P       01 00 31.4 +1.0
          comp=Z,3.0nm,0.9s
CLL                              ePPP    PPP     01 02 22.0
FETA  Feichten         39.82 312 eP      P       01 00 30.2 -1.7
          comp=Z,6.7nm,0.9s
DAVA  Damuels          40.44 312 i P     P       01 00 35.3 -1.7
          comp=Z,12nm,0.5s
TUE   Stuetta          40.62 311 eP      P       01 00 36.5 -2.2
          comp=Z,3.3nm,0.8s
LZH   Lanzhou          42.09  65 eP      P       01 00 50.0 -0.8
LZH                                pP    pP      01 00 53.2 -0.9
LZH                                sP    sP      01 00 54.8 -0.6
LZH                              ePP     PP      01 02 31.3 +3.2
LZH                                pmax  pmax
          comp=Z,18nm,1.0s
LZH                                pmax  pmax
          comp=Z,43nm,5.5s
BNI   Bardonecchia     42.22 308 eP      P       01 00 50.1 -1.5
          comp=Z,4.5nm,0.8s
ECH   Echery           42.44 313 eP      P       01 00 49.9 -3.4
          comp=Z,5.2nm,1.0s
ECH   Echery           42.44 313 eP      P       01 00 49.9 -3.4
ECH                                pmax  pmax
          comp=Z,5.0nm,1.0s
CD2   Chengdu          42.47  73 eP      P       01 00 53.0 -0.8
NC405 NORSAR Array S   44.54 332 eP      P       01 01 08.6 -1.4
          comp=Z,18nm,0.9s
SONA0 Songino Array    44.67  48 eP      P       01 01 11.2 -0.2
SONM  Songino Array    44.67  48   P     P       01 01 11.2 -0.2
          comp=Z,0.4nm,0.8s,baz=262,slow=8.8,SNR=3.8
SONM  Songino Array    44.67  48 eP      P       01 01 13.6 +2.2
NB2   NORSAR Subarra   44.72 331   P     P       01 01 09.5 -2.0
          comp=Z,2.7nm,0.8s,baz=118,slow=8.6
NOA   NORSAR Array B   44.72 331   P     P       01 01 09.8 -1.7
          comp=Z,3.9nm,0.8s,baz=118,slow=8.0,SNR=20
NOA                                LR    LR      01 22 06.9
          comp=Z,15nm,20.0s,baz=60,slow=39
ARA0  ARCESS Array S   45.66 346 eP      P       01 01 18.3 -0.5
ARCES ARCESS Array B   45.66 346   P     P       01 01 18.3 -0.5
          comp=Z,2.9nm,0.9s,baz=139,slow=8.4,SNR=3.3
HHC   Hu-ho-hao-te     47.98  58   P     P       01 01 38.3 +0.8
HHC                                pmax  pmax
          comp=Z,18nm,0.8s
HHC                                pmax  pmax
          comp=Z,120nm,8.6s
ESDC  Sonseca Array    49.94 300   P     P       01 01 51.1 -1.4
          comp=Z,0.7nm,0.4s,baz=70,slow=7.6,SNR=14
QIZ   Qiongzhong       50.72  87   P     P       01 01 58.0 -0.6
QIZ                                S     S       01 09 13.3 -1.0
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QIZ                                LR    LR
          comp=E,360nm,17.7s
QIZ                                LR    LR
          comp=Z,380nm,15.7s
BJI   Beijing          51.55  59   P     P       01 02 05.3 +0.8
BJI                                pmax  pmax
          comp=Z,4.0nm,0.5s
TORD  Torodi Ar. Bea   51.64 265   P     P       01 02 04.1 -1.4
          comp=Z,2.9nm,0.6s,baz=71,slow=7.8,SNR=30
TIXI  Tiksi            59.29  21⇓eP      P       01 02 59.6 -0.2
TIXI                               pmax  pmax
          comp=Z,6.0nm,2.4s
DBIC  Dimbokro         60.26 262   P     P       01 03 05.9 -1.4
          comp=Z,2.3nm,0.6s,baz=21,slow=4.1,SNR=4.8
DBIC  Dimbokro         60.26 262   P     P       01 03 05.9 -1.4
DBIC                               pmax  pmax
          comp=Z,5.0nm,0.9s
BOSA  Boshof           62.47 210   P     P       01 03 20.9 -1.1
          comp=Z,1.7nm,0.7s,baz=28,slow=6.0,SNR=4.2
SEY   Seymchan         69.32  29⇓eP      P       01 04 09.4 +3.7
BPAW  Bear Paw Mtn.    86.67  11 eP      P       01 05 40.1 -1.9
          comp=Z,3.2nm,1.1s
ILAR  Eielson Array    86.69   9   P     P       01 05 40.0 -2.0
          comp=Z,0.2nm,0.5s,baz=311,slow=4.7,SNR=3.0
WR1   Warramunga Arr   89.94 112 eP      P       01 05 59.0 +0.7
WRA   Warramunga Arr   89.94 112   P     P       01 05 59.0 +0.7
          comp=Z,1.2nm,0.9s,baz=293,slow=5.4,SNR=3.3
WRA   Warramunga Arr   89.94 112   P     P       01 05 59.0 +0.7
WRA                                pmax  pmax
          comp=Z,1.0nm,0.9s
ASAR  Alice Springs    91.39 116   P     P       01 06 03.4 -1.6
          comp=Z,0.7nm,0.9s,baz=300,slow=4.6,SNR=3.5
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ISCJB ***13*** *00:54:53.0±0.5, 6°.22S±0°.07×104°.55E±0°.06, h49^{km}, mb4.5/28, Error ellipse: s-maj=12.2km s-min=4.7km az=35.8*

NEIC ***13*** *00:54:56.5±1.2, 6°.18S×104°.67E, h61^{km}±8^{km}, mb4.5/16, Error ellipse: s-maj=21.7km s-min=9.3km az=45.0*

DJA ***13*** *00:54:57.7±0.9, 6°S±6°×10°5E±°, h34^{km}±10^{km}, M4.2/10, MLv4.2/10*

IDC ***13*** *00:54:59.6±3.5, 6°.23S×104°.58E, h88^{km}±29^{km}, mb3.8/15, mb1 3.8/16, mb1mx3.6/41, mbtmp4.1/16, MS2.9/2, Ms1 2.9/2, ms1mx2.6/34, Error ellipse: s-maj=36.7km s-min=15.0km az=49.0*

ISC 13 00:54:55.0±0.7**, 6°.28S**±0°.09×**104°.59E**±0°.07**, h49**^{km}**, n68, σ1^{s}70**/65**, mb4.3**/28**, Sunda Strait**

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Code  Station Name        Δ°  AZ°    Phase ID              Time      Res
                                   Op     ISC          h  m  s      ISC
KASI  Kota Agung        0.76 353   P     Pn      00 55 11.9 +2.3
BLSI  Bandar Lampung    1.12  36   P     Pn      00 55 16.6 +2.2
CGJI  Cibinong          1.15 107   P     Pn      00 55 15.0 +0.3
CGJI                               S     Sn      00 55 28.9 -0.4
LWLI  Liwa              1.36 337   P     Pn      00 55 21.8 +4.0
KLI   Kotabumi          1.44  11   P     Pn      00 55 22.3 +3.6
SBJI  Serang            1.54  84   P     Pn      00 55 21.2 +1.1
MDSI  Maura Dua         1.83 347   P     Pn      00 55 27.8 +3.7
SKJI  Sukabumi          2.08 110   P     Pn      00 55 29.5 +2.0
MNAI  Manna             2.51 320 ePn     Pn      00 55 36.5 +3.1
LHSI  Lahat             2.66 336   P     Pn      00 55 39.9 +4.4
LEM   Lembang           3.06 100   P     Pn      00 55 45.1 +4.0
          30nm,0.3s,baz=28,slow=20,SNR=8.0
LEM                                S     Sn      00 56 23.5 +7.0
          12nm,0.3s,baz=160,slow=22,SNR=6.3
LEM                                LR    LR      00 57 20.1
          comp=Z,168nm,21.1s,baz=316,slow=46
LEM   Lembang           3.06 100   P     Pn      00 55 41.1 +0.1
CISI  Cisompet, Garu    3.44 112 ePn     Pn      00 55 47.4 +1.1
CISI  Cisompet, Garu    3.44 112   P     Pn      00 55 47.1 +0.8
SMRI  Semarang          5.86  98 ePn     Pn      00 56 19.9 +0.4
UGM   Wanagama          6.11 106 ePn     Pn      00 56 24.9 +2.1
KSM   Kuching           9.59  37 ePn     Pn      00 57 10.7 +0.1
JAGI  Jajag, Banyuwa    9.73 103 ePn     Pn      00 57 13.0 +0.5
GSI   Gunungsitoli     10.29 317 ePn     Pn      00 57 20.3 +0.1
PSI   Prapat           10.65 328 ePn     Pn      00 57 23.4 -1.8
SBUM  Sibu             11.55  42 ePn     Pn      00 57 36.2 -1.1
KAPI  Kappang          15.14  86   LR    LR      01 05 55.0
          comp=Z,45nm,19.1s,baz=299,slow=43
BATI  Baumata          19.27 103   P     Pn      00 59 17.4 +0.1
          21nm,0.3s,baz=297,slow=1.6,SNR=4.6
CHTO  Chiang Mai       25.55 348 eP      P       01 00 19.6 +0.1
          3.3nm,1.0s
MTN   Manton Dam       26.96 106 eP      P       01 00 32.2  0.0
          59nm,1.5s
H01W3 Cape Leeuwin H   29.79 164   T     T       01 32 14.7
          baz=341,slow=76,SNR=23
H01W2 Cape Leeuwin H   29.81 164   T     T       01 32 21.5
          baz=341,slow=76,SNR=21
H01W1 Cape Leeuwin H   29.81 164   T     T       01 32 14.6
          baz=341,slow=76,SNR=23
H08S2 Diego Garcia H   31.88 266   T     T       01 35 00.3
          baz=89,slow=75,SNR=64
H08S3 Diego Garcia H   31.89 266   T     T       01 35 00.4
          baz=89,slow=75,SNR=122
H08S1 Diego Carcia H   31.90 266   T     T       01 34 58.2
          baz=89,slow=75,SNR=98
WR1   Warramunga Arr   31.92 118 eP      P       01 01 16.5 +0.2
WRA   Warramunga Arr   31.92 118   P     P       01 01 16.5 +0.2
          1.2nm,0.3s,baz=289,slow=11,SNR=35
WRAB  Tennant Creek    31.93 118 eP      P       01 01 16.3  0.0
          39nm,1.9s
WB2   Warramunga Arr   31.93 118 eP      P       01 01 16.4 +0.1
          13nm,1.4s
FORT  Forrest          32.84 141 eP      P       01 01 23.9 -0.3
          47nm,1.1s
AS31  Alice Springs    33.06 125 eP      P       01 01 25.3 -0.9
          3.7nm,1.7s
ASAR  Alice Springs    33.06 125   P     P       01 01 26.9 +0.7
          0.7nm,0.6s,baz=299,slow=8.0,SNR=6.4
TWG   Pinlang          33.12  29 eP      P       01 01 25.5 -1.1
          591nm,1.5s
WHN   Wuhan            37.80  14   P     P       01 02 06.8 +0.1
JOW   Kunigami         40.13  34 eP      P       01 02 25.7 -0.7
          96nm,1.1s
PMG   Port Moresby     42.27  97 eP      P       01 02 43.0 -1.1
          83nm,1.4s
STKA  Stephens Creek   42.90 131   P     P       01 02 50.1 +1.0
          2.8nm,0.4s,baz=313,slow=7.3,SNR=8.0
STKA  Stephens Creek   42.90 131 eP      P       01 02 49.4 +0.3
          6.0nm,1.9s
SONA0 Songino Array    53.91   2 eP      P       01 04 13.8 +0.2
SONA0                            ePcP    PcP     01 05 19.1 +0.5
SONM  Songino Array    53.91   2   P     P       01 04 13.8 +0.2
          0.4nm,0.4s,baz=182,slow=9.5,SNR=6.2
SONM                               PcP   PcP     01 05 19.1 +0.5
          0.7nm,0.5s,baz=179,slow=3.2,SNR=6.1
KDJ   Kajisay          54.28 335 eP      P       01 04 14.7 -1.8
          7.2nm,1.3s
USA0B Ussuriysk Arra   56.00  24 eP      P       01 04 27.9 -0.6
          2.7nm,0.6s
USRK  Ussuriysk Ar.    56.00  24   P     P       01 04 28.4 -0.1
          0.9nm,0.5s,baz=218,slow=2.5,SNR=4.7
MK32  Makanchi Array   56.43 342 eP      P       01 04 31.4 -0.3
MKAR  Makanchi Array   56.43 342   P     P       01 04 31.4 -0.3
          1.5nm,0.4s,baz=151,slow=8.7,SNR=26
KURBB Kurchatov Arra   60.99 341   P     P       01 05 02.9 -0.3
          0.6nm,0.6s,baz=154,slow=6.3,SNR=6.4
KURBB                              PcP   PcP     01 05 45.3 -0.8
          0.1nm,0.4s,baz=153,slow=3.3,SNR=4.3
GEYT  Alibeck          61.65 319   P     P       01 05 08.2 +0.1
          1.7nm,0.4s,baz=123,slow=5.5,SNR=4.7
ZALV  Zalesovo Beam    62.27 347   P     P       01 05 11.3 -0.5
          2.6nm,0.3s,baz=154,slow=5.8,SNR=14
ZAA1  Zalesovo Array   62.28 347 eP      P       01 05 11.3 -0.5
BVAR  Borovoye Array   65.80 338   P     P       01 05 34.9 -0.1
          1.4nm,0.5s,baz=144,slow=10,SNR=8.3
WAKE  Wake Island      66.16  66 eP      P       01 05 36.8 -1.1
          208nm,1.0s
ABKAR Akbulak array    67.59 330 eP      P       01 05 46.8 +0.3
          6.1nm,0.7s
AKTO  Aktyubinsk       69.30 330   P     P       01 05 56.9 -0.4
          0.7nm,0.5s,baz=211,slow=5.9,SNR=3.7
ARU   Arti             72.96 335   P     P       01 06 19.5 +0.3
          0.6nm,0.4s,baz=74,slow=5.2,SNR=4.0
ARU   Arti             72.96 335 eP      P       01 06 19.5 +0.3
          4.5nm,1.1s
PETK  Petropavlovsk-   74.16  30   P     P       01 06 26.0 -0.3
          0.9nm,0.6s,baz=214,slow=7.0,SNR=2.9
PEA1  Petropavlovsk-   74.16  30 eP      P       01 06 26.1 -0.3
BR101 Keskin Array S   79.57 312 eP      P       01 06 57.8 +0.5
BRTR  Keskin Array B   79.57 312   P     P       01 06 57.8 +0.5
          1.0nm,0.6s,baz=133,slow=7.7,SNR=9.8
FIA0  FINESS Array S   90.01 332 eP      P       01 07 48.6 -0.5
FINES FINESS Array B   90.01 332   P     P       01 07 48.6 -0.5
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.1nm,0.8s,baz=95,slow=4.6,SNR=3.8						
TXAR	Lajitas Array	144.84	46	PKP	PKPbc	01 14 27.9	+1.2
	1.2nm,0.6s,baz=251,slow=1.2,SNR=19						

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*ISCJB **13** 01:10:46.0±0.4, 6°.96S±0°.06×108°.72E±0°.03, h33km, mb4.4/9, MS3.6/16, Error ellipse: s-maj=8.2km s-min=4.1km az=16.1*

*DJA **13** 01:10:45.5±0.2, 7°S±3°×10°9E±°, h10km, M4.6/15, mb4.4/2, mB4.9/1, MLv4.7/15, Mw(mB)4.2/1*

*IDC **13** 01:10:48.5±2.0, 7°.29S×108°.53E, h55km±20km, mb3.7/8, mb1 3.9/8, mb1mx3.5/43, mbtmp4.0/8, MS3.6/16, Ms1 3.6/16, ms1mx3.5/35, Error ellipse: s-maj=35.3km s-min=14.9km az=53.0*

ISC 13 01:10:47.4±0.6, **7°.07S**±0°.06×**108°.71E**±0°.03, **h35**km, **n41**, σ**1ˢ.63**/35, **mb4.0**/9, **MS3.6**/16, **Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJI	Jatiwangi	0.72	323	P	Pn	01 10 56.2	-4.9
JCJI				S	Sn	01 11 06.7	-4.3
CISI	Cisompet, Garu	1.01	241	P	Pn	01 11 03.5	-1.7
CISI				S	Sn	01 11 20.0	+1.8
LEM	Lembang	1.11	282	P	Pn	01 11 06.9	+0.3
	543nm,0.3s,baz=232,slow=7.5,SNR=184						
LEM				S	Sn	01 11 24.8	+3.9
	751nm,0.3s,baz=110,slow=21,SNR=13						
LEM	Lembang	1.11	282	P	Pn	01 11 06.7	+0.1
SMRI	Semarang	1.72	89	P	Pn	01 11 14.0	-0.8
SMRI				S	Sn	01 11 37.2	+1.7
YOGI	Yogyakarta	1.74	115	P	Pn	01 11 14.8	-0.3
UGM	Wanagama	1.98	115	P	Pn	01 11 18.0	-0.5
SKJI	Sukabumi	2.14	272	P	Pn	01 11 21.0	+0.4
WOJI	Wonogiri, Jawa	2.32	109	P	Pn	01 11 23.7	+0.6
WOJI				S	Sn	01 11 53.4	+2.9
NGJI	Ngawi	2.74	96	P	Pn	01 11 29.3	+0.4
CGJI	Cibinong	3.03	278	P	Pn	01 11 33.7	+0.8
PWJI	Pagerwojo	3.21	107	P	Pn	01 11 34.9	-0.4
GRJI	Gresik	3.74	88	P	Pn	01 11 42.6	-0.1
TPI	Tanjungpandan	4.41	346	P	Pn	01 11 53.2	+1.3
MDSI	Maura Dua	5.19	299	P	Pn	01 12 03.0	+0.4
KMMI	Kalianget	5.22	90	P	Pn	01 12 01.6	-1.3
	49nm,1.0s,1µm						
JAGI	Jajag, Banyuwa	5.57	105	P	Pn	01 12 09.4	+1.6
DAV	Davao City (W)	21.92	50	LR	LR	01 24 09.1	
	comp=Z,198nm,21.5s,baz=232,slow=36						
TGY	Tagaytay City	24.28	30	LR	LR	01 26 25.0	
	comp=Z,152nm,18.9s,baz=261,slow=38						
NWAO	Narrogin (SRO)	26.92	164	LR	LR	01 25 59.6	
	comp=Z,90nm,21.7s,baz=316,slow=34						
CMAR	Chiang Mai Arr	27.13	339	P	P	01 16 28.5	+1.1
	0.8nm,0.3s,baz=170,slow=8.4,SNR=13						
CMAR				LR	LR	01 27 07.8	
	comp=Z,70nm,19.3s,baz=177,slow=36						
PAYA	Payao	27.67	342	P	P	01 16 35.9	+3.7
	28µm,1.3s						
WRA	Warramunga Arr	27.96	120	P	P	01 16 33.9	-1.0
	1.8nm,0.7s,baz=286,slow=13,SNR=10						
ASAR	Alice Springs	29.28	127	P	P	01 16 45.5	-1.2
	2.6nm,1.1s,baz=303,slow=8.9,SNR=7.4						
ASAR				PcP	PcP	01 19 52.2	-0.9
	0.5nm,0.6s,baz=336,slow=2.0,SNR=4.0						
STKA	Stephens Creek	39.35	133	P	P	01 18 12.8	-0.7
	3.6nm,0.4s,baz=317,slow=8.0,SNR=10						
STKA				LR	LR	01 37 25.2	
	comp=Z,84nm,18.3s,baz=348,slow=41						
KSRS	Korea Array	47.79	21	LR	LR	01 41 50.0	
	comp=Z,34nm,18.4s,baz=212,slow=39						
MJAR	Matsushiro Arr	51.45	30	LR	LR	01 42 40.4	
	comp=Z,31nm,19.0s,baz=220,slow=37						
SONM	Songino Array	54.70	358	P	P	01 20 13.8	+0.6
	1.6nm,0.7s,baz=172,slow=7.9,SNR=14						
SONM				PcP	PcP	01 21 16.1	+0.5
	0.3nm,0.5s,baz=167,slow=5.0,SNR=2.2						
SONM				LR	LR	01 44 49.7	
	comp=Z,157nm,20.4s,baz=182,slow=37						
USRK	Ussuriysk Ar.	55.19	20	P	P	01 20 17.5	+0.8
	1.2nm,0.8s,baz=224,slow=4.0,SNR=6.5						
USRK				LR	LR	01 46 19.8	
	comp=Z,60nm,18.3s,baz=253,slow=38						
MKAR	Makanchi Array	58.54	339	P	P	01 20 38.9	-1.5
	0.2nm,0.4s,baz=183,slow=7.2,SNR=2.7						
ZALV	Zalesovo Beam	64.04	345	LR	LR	01 51 38.2	
	comp=Z,71nm,18.7s,baz=258,slow=38						
GEYT	Alibeck	64.95	318	LR	LR	01 51 56.4	
	comp=Z,42nm,19.4s,baz=80,slow=38						
MAW	Mawson	67.80	197	LR	LR	01 44 25.3	
	comp=Z,53nm,20.6s,baz=7.5,slow=30						
PETK	Petropavlovsk-	72.83	28	LR	LR	01 58 40.4	
	comp=Z,16nm,18.0s,baz=240,slow=39						
BRTR	Keskin Array B	83.14	311	P	P	01 23 08.5	-1.7
	1.5nm,1.0s,baz=147,slow=3.4,SNR=5.2						
FINES	FINESS Array B	92.64	332	LR	LR	02 09 35.0	
	comp=Z,51nm,18.5s,baz=174,slow=38						
ARCES	ARCESS Array B	94.19	340	LR	LR	02 11 16.0	
	comp=Z,50nm,19.0s,baz=170,slow=38						
NOA	NORSAR Array B	99.78	331	LR	LR	02 15 27.0	
	comp=Z,28nm,18.6s,baz=100,slow=39						
TXAR	Lajitas Array	142.32	50	PKP	PKPdf	01 30 17.3	+0.2
	0.3nm,0.6s,baz=149,slow=1.9,SNR=3.9						
CPUP	Villa Florida	144.14	202	PKP	PKPab	01 30 17.4	-0.5
	1.1nm,0.6s,baz=25,slow=1.9,SNR=3.7						
BDFB	Brasilia	147.74	225	PKPbc	PKPdf	01 30 26.8	-0.1
	1.0nm,0.4s,baz=70,slow=4.0,SNR=2.2						

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*ISK **13** 01:15:21.6, 38°.70N×43°.17E, h5km, ML2.2/6*

*DDA **13** 01:15:22.6, 38°.69N×43°.16E, h7km±1km, ML2.5*

ISC 13 01:15:23.0±1.0, **38°.69N**±0°.03×**43°.16E**±0°.03, **h20**km±3km, **n15**, σ**0ˢ.57**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VANB	Van	0.21	119	PG	Pg	01 15 28.1	-0.2
VANB				SG	Sg	01 15 32.7	+0.8
TVAN	Van	0.26	130	*i* P	Pb	01 15 28.2	-0.7
TVAN				*i* S	Sb	01 15 32.8	-0.1
ERCV	ERCIS-VAN	0.35	23	PG	Pg	01 15 29.8	-0.9
ADCV	BITLIS_Adilcev	0.36	289	*i* P	Pb	01 15 31.1	+0.2
ADCV				*i* S	Sg	01 15 35.4	-0.6
ADCV				IAML_P			
	comp=Z,637nm,0.1s						
GEVA	Gevas	0.39	192	*i* P	Pg	01 15 31.2	-0.1
GEVA				IAML_P			
	comp=Z,4µm,0.1s						
AKDM	Akdamar-Van	0.39	201	PG	Pg	01 15 30.6	-0.7
AKDM				SG	Sb	01 15 37.5	+0.4
VMUR	Van-Muradiye	0.44	47	*i* P	Pg	01 15 32.2	+0.1
VMUR				*i* S	Sg	01 15 38.1	-0.1
MLAZ	Malazgirt-MUS	0.65	313	PG	Pb	01 15 35.1	-0.7
TUTA	Tutak	0.76	339	*i* P	Pb	01 15 37.8	+0.2
BLIS	Bitlis-Merkez	0.86	251	*i* P	Pn	01 15 40.4	+0.2
BLIS				*i* S	Sg	01 15 51.5	+0.1
BLIS				IAML_P			
	comp=Z,1µm,0.2s						
AGRB	Hanur-Agry	0.89	352	PG	Pb	01 15 39.6	-0.3
HAKT	HAKKARI	1.21	159	*e*P	Pg	01 15 46.1	-0.4
HAKT				IAML_P			
	comp=Z,240nm,0.2s						
EATA	Eleskirt	1.28	336	*i* P	Pg	01 15 47.3	-0.4
EATA				*i* S	Sn	01 16 03.7	+0.9
EATA				IAML_P			
	comp=Z,642nm,0.4s						
MUSM	Mu-Merkez	1.29	272	*i* P	Pb	01 15 47.1	+0.5
MUSM				*i* S	Sb	01 16 02.0	-0.8
MUSM				IAML_P			
	comp=Z,115nm,0.1s						
SENK	Senkaya-Erzuru	1.97	342	PN	Pb	01 15 58.8	+0.5

IDC 13 01:18:27.1±1.9, **6°.82S**×**129°.79E**, **h0**km, **mb3.5**/1, **mb1 3.7**/4, **mb1mx3.4**/32, **mbtmp3.5**/4, **ML3.6**/3, **Error ellipse: s-maj=76.4km s-min=29.3km az=80.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.09	14	Pn	Pn	01 19 57.8	-0.7
	2.3nm,0.3s,baz=148,slow=19,SNR=5.2						
SIJI				Sn	Sn	01 20 57.5	-12
	2.6nm,0.3s,baz=233,slow=20,SNR=5.2						
WRA	Warramunga Arr	13.77	162	Pn	Pn	01 21 42.4	-1.4
	0.3nm,0.3s,baz=342,slow=14,SNR=12						
WRA				Sn	Sn	01 24 04.5	-13
	1.1nm,0.3s,baz=345,slow=21,SNR=19						
ASAR	Alice Springs	17.21	167	Pn	P	01 22 30.1	-0.8
	0.1nm,0.3s,baz=342,slow=8.9,SNR=9.6						
ASAR				Sn	Sn	01 25 30.5	-11
	0.2nm,0.3s,baz=356,slow=27,SNR=7.0						
MKAR	Makanchi Array	67.96	327	P	P	01 29 28.3	+0.3
	0.3nm,0.6s,baz=116,slow=6.6,SNR=3.7						

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*NEIC **13** 01:28:31.6±0.0, 14°.01N×92°.03W, h13km, MD4.0(MEX), After MEX.*

*GCG **13** 01:28:32.8±0.4, 14°.33N×91°.77W, h68km±9km, MD3.8*

*SNET **13** 01:28:32.8±1.2, 14°.22N×91°.75W, h48km±309km, ML3.9*

*MEX **13** 01:28:32.2±0.6, 14°.03N×92°.04W, h28km±14km, MD3.9*

ISC 13 01:28:28.6±2.0, **14°.10N**±0°.09×**91°.91W**±0°.06, **h14**km±11km, **n20**, σ**1ˢ.50**/33, **2D**, **Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.47	45	*e*P	Pn	01 28 43.4	+2.5
STG3	Santiaguito 3,	0.69	29	⇓*e*P	Pn	01 28 45.4	+1.3
THIG		0.87	337	*e*Pn	Pb	01 28 46.7	+1.3
THIG				*e*Sg	Sg	01 28 58.4	+1.5
THIG		0.87	337	*e*P	Pb	01 28 46.7	+1.3
THIG				*i* S	Sb	01 28 57.2	+0.2
FUG	Fuego 3	1.09	72	⇓*e*P	Pn	01 28 50.5	+0.9
PCG	Pacaya	1.30	77	*e*P	Pg	01 28 53.8	+0.3
PCG				*e*S	Sg	01 29 10.0	-0.5
NBG	Las Nubes	1.59	72	*e*P	Pg	01 28 59.2	0.0
NBG				*e*S	Sg	01 29 16.8	-3.1
PCIG		2.03	322	*e*Pn	Pn	01 29 02.5	+0.1
PCIG				*e*Sn	Sn	01 29 26.0	-1.6
PCIG		2.03	322	*e*P	Pn	01 29 02.5	+0.1
PCIG				*e*S	Sn	01 29 26.0	-1.6
CCIG	Comitan	2.18	354	*e*Pn	Pb	01 29 07.3	-0.6
CCIG				*e*Pn	Pn	01 29 07.6	+3.0
CCIG				*e*Sn	Sg	01 29 36.6	-2.1
CCIG	Comitan	2.18	354	*e*P	Pn	01 29 06.2	+1.6
CCIG				*i* S	Sn	01 29 31.7	+0.2
RTR	El Retiro	2.21	95	*e*P	Pn	01 29 06.1	+1.1
RTR				*e*S	Sn	01 29 32.0	-0.2
CEVE	Cerro Verde	2.24	97	*e*P	Pn	01 29 05.6	+0.2
CEVE				*e*S	Sn	01 29 32.8	-0.2
CEVE				IAML		01 29 37.7	
	comp=Z,722nm,0.2s						
SBLS	San Blas	2.24	96	*e*P	Pn	01 29 06.1	+0.7
SBLS				*e*S	Sn	01 29 32.8	-0.1
SNJE	San Jose	2.25	96	*e*P	Pn	01 29 06.6	+1.0
MTO3	Montecristo	2.49	83	*e*P	Pn	01 29 09.3	+0.4
LFU	La Fuente	2.74	97	*e*P	Pn	01 29 13.6	+1.4
TGIG		2.91	336	*e*Pn	Pn	01 29 17.3	+2.8
TGIG				*e*Sn	Sb	01 29 53.0	-2.7
TGIG		2.91	336	*e*P	Pn	01 29 15.3	+0.8
TGIG				*e*S	Sn	01 29 47.5	-1.7
TEIG	Tepich	7.01	29	*e*Pn	Pn	01 30 13.1	+2.2

MEX 13 01:29:09.1±1.0, **18°.47N**×**103°.02W**, **h28**km±18km, **MD3.8**, **Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.36	240	*e*P	Pb	01 29 15.0	-2.2
MMIG				*e*S	Sb	01 29 21.7	-1.0
ZIIG	Zihuatanejo	1.71	120	*e*P	Pn	01 29 34.5	-2.5
ZIIG				*e*S	Sn	01 29 55.6	-2.4
CJM	Chamela	2.17	298	*e*P	Pn	01 29 41.1	-2.3
CJM				*e*S	Sn	01 30 07.3	-2.1

MEX 13 01:36:29.2±0.9, **16°.22N**×**98°.47W**, **h6**km±13km, **MD3.9**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.34	356	*e*P	Pn	01 36 50.7	-3.9
TLIG				*e*S	Sb	01 37 08.2	-4.1
VHO	Vista Hermosa	1.87	63	*e*P	Pn	01 36 57.9	-4.0
VHO				*e*S	Sn	01 37 21.6	-4.2
MEIG	Mezcala	2.02	327	*e*P	Pn	01 37 00.5	-3.5
MEIG				*e*S	Sn	01 37 24.8	-4.8
HUIG	Huatulco	2.31	101	*e*P	Pn	01 37 05.1	-2.7
HUIG				*e*S	Sn	01 37 32.3	-4.2
PLIG	Platanillo	2.38	336	*e*P	Pn	01 37 05.4	-3.4
PLIG				*e*S	Sn	01 37 33.3	-5.0
CMIG	Matias Romero	3.54	75	*e*P	Pn	01 37 22.2	-2.5
CMIG				*e*S	Sn	01 38 02.6	-4.3

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*NEIC **13** 01:56:54.2±0.9, 10°.70N×86°.78W, h19km±10km, mb4.1/7, Error ellipse: s-maj=9.4km s-min=6.8km az=176.0*

*ISCJB **13** 01:56:55.4±1.0, 10°.84N±0°.09×86°.77W±0°.09, h31km, mb4.1/5, Error ellipse: s-maj=16.9km s-min=5.8km az=43.1*

*UCR **13** 01:56:55.5±2.1, 10°.88N×86°.74W, h20km±58km, MW4.2*

ISC 13 01:56:56.9±1.3, **10°.86N**±0°.09×**86°.72W**±0°.10, **h31**km, **n28**, σ**0ˢ.95**/28, **mb4.2**/5, **1C**, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MESS	Mesas	1.51	94	*e*P	Pn	01 57 21.3	-0.6
CUI	Cuipilapa	1.54	97	⇑*e*P	Pn	01 57 21.6	-0.8
CNGN	Cerro Negro	1.63	1	*e*P	Pn	01 57 22.9	-0.8
JTS	Las Juntas de	1.83	108	*e*Pn	Pn	01 57 25.2	-1.1
JTS	Las Juntas de	1.83	108	*e*P	Pn	01 57 25.2	-1.1
ACON	Acoyapa	1.88	54	*e*Pn	Pn	01 57 26.6	-0.3
ACON	Acoyapa	1.88	54	*e*P	Pn	01 57 26.2	-0.7
ARE1	Arenal 1	2.01	101	*e*P	Pn	01 57 28.5	-0.2
CEDE	Laguna Cedeo	2.02	100	*e*P	Pn	01 57 28.8	-0.1
MATN	Matagalpa	2.20	21	*e*P	Pn	01 57 30.0	-1.5
ESTN	Estel	2.26	9	*e*Pn	Pn	01 57 33.6	+1.4
ESTN	Estel	2.26	9	*e*P	Pn	01 57 31.5	-0.8
CSGN	Cosiguina Volc	2.26	339	*e*Pn	Pn	01 57 32.2	-0.1
CSGN	Cosiguina Volc	2.26	339	*e*P	Pn	01 57 31.9	-0.4
RCON	San Juan de Ri	2.67	12	*e*P	Pn	01 57 37.7	-0.3
HDC	Heredia	2.70	108	*e*Pn	Pn	01 57 37.1	-1.3
ESPN	Las Esperanzas	2.72	60	*e*Pn	Pn	01 57 38.8	+0.2
ESPN	Las Esperanzas	2.72	60	*e*P	Pn	01 57 39.5	+0.9
LCR2	La Lucha 2	2.90	112	*e*P	Pn	01 57 41.9	+0.8
CVTR	Volcan Turrial	3.03	106	*e*P	Pn	01 57 45.3	+2.1
TGUH	Tegucigalpa,Un	3.23	350	*e*Pn	Pn	01 57 46.2	+0.6
DRK0	Durika	3.77	114	*e*P	Pn	01 57 53.2	0.0
LNIG	Linares	18.48	321	*e*P	P	02 01 09.9	-0.5
	10nm,1.3s						
152A	Waverly Hall	21.79	5	*e*P	P	02 01 48.0	+1.7
	10.0nm,0.9s						
Y49A	Blount Mountai	22.90	1	*e*P	P	02 01 57.4	-0.8
	6.9nm,0.8s						
TX31	Lajitas Ar. Si	24.26	322	*e*P	P	02 02 11.0	-0.5
	2.2nm,0.9s						
CPCT	Cooper Cave	24.57	4	*e*P	P	02 02 13.8	-0.3
	6.3nm,0.7s						
WMOK	Wichita Mounta	26.20	337	*e*P	P	02 02 29.6	+0.7
	6.3nm,1.0s						

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*IDC **13** 02:30:15.8±1.2, 34°.21N×25°.16E, h0km, mb3.8/4, mb1 3.7/8, mb1mx3.4/45, mbtmp3.6/8, ML3.7/4, MS2.8/3, Ms1 2.8/3, ms1mx2.3/36, Error ellipse: s-maj=22.8km s-min=12.7km az=72.0*

*ISCJB **13** 02:30:16.6±1.3, 34°.19N±0°.07×25°.21E±0°.06, h22km±9km, mb3.7/4, Error ellipse: s-maj=12.8km s-min=6.6km az=26.5*

*ATH **13** 02:30:18.6, 34°.29N×25°.03E, h25km±2km, ML3.1/3, Error ellipse: s-maj=5.6km s-min=2.0km az=358.0*

*THE **13** 02:30:19.5, 34°.33N×25°.02E, h4km±2km, ML3.2/3, Error ellipse: s-maj=2.2km s-min=1.0km az=46.0*

ISC 13 02:30:17.1±1.8, **34°.22N**±0°.07×**25°.07E**±0°.04, **h14**km±11km, **n38**, σ**1ˢ.23**/42, **mb3.7**/4, **Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.82	345	P	Pb	02 30 33.1	-0.1
SIVA				S	Sb	02 30 44.1	0.0
	4µm,0.5s						
SIVA	Sivas	0.82	345	P	Pb	02 30 33.3	+0.1
SIVA				S	Sb	02 30 44.4	+0.3
SIVA				AML	AML	02 30 52.5	
	comp=N,7795µm,0.6s						
SIVA				AML	AML	02 30 58.7	
	comp=E,9286µm,0.7s						
TMBK	Timbaki Herakl	0.88	344	P	Pb	02 30 34.6	+0.3
TMBK				S	Sb	02 30 45.8	-0.1
LAST	Lasithi	0.99	20	P	Pb	02 30 36.7	+0.5
LAST	Lasithi	0.99	20	P	Pb	02 30 36.8	+0.5
LAST				AML	AML	02 31 04.3	
	comp=N,834µm,0.8s						
LAST				AML	AML	02 31 05.0	
	comp=E,718µm,0.7s						
GVD	Gavdhos	1.02	307	P	Pb	02 30 37.0	+0.4
GVD				S	Sn	02 30 51.1	0.0
	comp=E,1µm,0.4s						
GVD	Gavdhos	1.02	307	P	Pb	02 30 37.0	+0.4
GVD				AML	AML	02 30 58.4	
	comp=E,2760µm,0.4s						
GVD				AML	AML	02 31 03.7	
	comp=N,2937µm,0.5s						
GVDS	Gavdos	1.02	308	P	Pb	02 30 37.1	+0.5
IDI	Anoyia	1.07	352	Pg	Pb	02 30 37.5	-0.1
	comp=N,24nm,0.3s,baz=188,slow=10.0,SNR=133						
IDI				Lg	Lg	02 30 52.2	
	comp=N,33nm,0.3s,baz=209,slow=19,SNR=12						
IDI				LR	LR	02 31 21.6	
	comp=N,99nm,21.1s,baz=162,slow=60						
IDI	Anoyia	1.07	352	P	Pg	02 30 37.3	-0.5
KSTL	Kastelli Herak	1.08	0	P	Pg	02 30 36.1	-1.9
NPS	Neapolis	1.13	23	P	Pb	02 30 39.0	+0.5
NPS	Neapolis	1.13	23	P	Pb	02 30 39.1	+0.6
PRNS	Prines Rethymn	1.23	338	P	Pb	02 30 40.3	+0.1
ZKR	Zakros	1.30	46	P	Pg	02 30 43.3	+1.2
ZKR	Zakros	1.30	46	P	Pg	02 30 43.3	+1.2
VAM	Vamos	1.38	329	P	Pn	02 30 42.6	+0.6
VAM				S	Sg	02 31 00.1	-1.6
	comp=N,588nm,0.5s						
VAM	Vamos	1.38	329	P	Pb	02 30 42.8	0.0
IMMV	Iera Moni Meta	1.52	324	P	Pn	02 30 44.5	+0.5
IMMV	Iera Moni Meta	1.52	324	P	Pb	02 30 45.3	+0.1
ANKY	Antikythira Is	2.19	319	P	Pb	02 30 55.2	-1.3
KTHA	Kythira Island	2.61	322	P	Pn	02 30 59.9	+1.0
KTHA	Kythira Island	2.61	322	P	Pn	02 31 01.3	+2.4
VLI	Veliai	3.04	326	P	Pn	02 31 05.4	+0.6
VLI	Veliai	3.04	326	P	Pn	02 31 05.1	+0.3
DID	Didima	3.60	336	P	Pn	02 31 12.5	0.0
DION	Dionisos Attik	3.96	347	P	Pn	02 31 17.9	+0.5
MMAI	Mount Meron Ar	8.70	95	Pn	Pn	02 32 23.4	+0.7
	comp=N,0.3nm,0.3s,baz=285,slow=13,SNR=3.9						
MMAI				Sn	Sn	02 33 57.4	-3.3
	comp=N,1.5nm,0.3s,baz=290,slow=22,SNR=7.5						
EIL	Elat	9.54	116	Pn	Pn	02 32 33.2	-0.9
	comp=N,0.3nm,0.3s,baz=140,slow=19,SNR=5.0						
EIL				Sn	Sn	02 34 16.9	-4.3
	comp=N,0.4nm,0.3s,baz=262,slow=7.1,SNR=5.3						
ASF	Jabal al Asfar	10.12	98	LR	LR	02 38 17.4	
	comp=N,112nm,19.1s,baz=190,slow=48						
MLR	Muntele Rosu	11.27	3	LR	LR	02 38 23.8	
	comp=N,27nm,19.6s,baz=124,slow=43						
AKASG	Malin Array Be	16.75	9	Pn	Pn	02 34 11.4	+0.2
	comp=N,0.6nm,0.3s,baz=202,slow=10,SNR=3.0						
GERES	GERESS Array B	16.88	333	Pn	Pn	02 34 14.7	+1.7
	comp=N,0.2nm,0.3s,baz=143,slow=12,SNR=16						
DAVOX	Davos/Dischmat	17.01	322	LR	LR	02 42 12.2	
	comp=N,21nm,18.1s,baz=37,slow=42						
TORD	Torodi Ar. Bea	29.84	231	P	P	02 36 25.4	+1.4
	comp=N,0.6nm,0.5s,baz=31,slow=9.5,SNR=20						
MKAR	Makanchi Array	44.36	56	P	P	02 38 27.9	+1.0
	comp=N,0.4nm,0.5s,baz=275,slow=8.5,SNR=4.2						
ZALV	Zalesovo Beam	45.71	46	P	P	02 38 37.1	-0.4
	comp=N,1.2nm,0.4s,baz=253,slow=9.1,SNR=3.7						
SONM	Songino Array	60.14	50	P	P	02 40 24.2	-0.1
	comp=N,0.2nm,0.3s,baz=283,slow=7.9,SNR=3.5						

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*JMA **13** 02:32:51.3±0.4, 44°.19N×147°.85E, h11km, M4.0*

*SKHL **13** 02:32:52.5±0.4, 44°.31N×148°.03E, h41km±1km, mb4.1/4*

ISC 13 02:32:51.5±2.7, **44°.4N**±0°.1×**147°.9E**±0°.1, **h24**km±19km, **n12**, σ**0ˢ.53**/21, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.88	357	*i* P	Pb	02 33 08.0	-0.1
KUR				AMB	AMB	02 33 08.6	
	80nm,0.4s						
KUR				*e*S	Sb	02 33 19.4	-0.1
KUR				A	A	02 33 20.5	
	490nm,0.3s						
KUR				A	A	02 33 20.5	
	550nm,0.3s						
YUK	Yuzh-Kuril'sk	1.52	259	*e*P	Pn	02 33 18.0	+0.9
YUK				AMB	AMB	02 33 23.3	
	20nm,0.5s						
YUK				AMB	AMB	02 33 23.3	
	50nm,0.5s						
YUK				AMB	AMB	02 33 23.3	
	100nm,0.5s						
YUK				*e*S	Sb	02 33 37.5	-0.3
YUK				A	A	02 33 45.0	
	500nm,0.6s						
YUK				A	A	02 33 45.0	
	870nm,0.6s						
LAGR	Lagunnoye	1.57	260	*e*P	Pb	02 33 20.0	+0.2
LAGR				*e*S	Sn	02 33 37.0	-0.3
LAGR				A	A	02 33 41.0	
	130nm,0.6s						
LAGR				A	A	02 33 41.0	
	980nm,0.6s						
GRPR	Tuman	1.59	258	*e*P	Pn	02 33 18.0	-0.1
GRPR				AMB	AMB	02 33 19.0	
	110nm,0.4s						
GRPR				*e*S	Sn	02 33 37.0	-0.9
GRPR				A	A	02 33 38.0	
	380nm,0.6s						
GRPR				A	A	02 33 38.0	
	700nm,0.6s						
GLVR	Golovnino	1.84	251	*e*P	Pn	02 33 22.0	+0.5
GLVR				AMB	AMB	02 33 23.0	
	50nm,0.3s						
GLVR				AMB	AMB	02 33 23.0	
	60nm,0.3s						
GLVR				*e*S	Sn	02 33 44.0	-0.1
GLVR				A	A	02 33 45.0	
	410nm,0.5s						
GLVR				A	A	02 33 45.0	
	480nm,0.5s						
NEM2	Nemuro 2	1.86	239	P	Pn	02 33 22.0	+0.2
NEM2				*e*S	Sn	02 33 44.2	-0.4
NMR	Nemuro--Hokkai	1.87	239	*e*P	Pn	02 33 21.7	-0.2
NMR				*e*S	Sn	02 33 43.9	-0.9
JKHN	Kushirohamanak	2.38	239	P	Pn	02 33 29.4	+0.5
JKHN				*e*S	Sn	02 33 56.8	-0.4
JNK	Nakash	2.44	253	P	Pn	02 33 30.1	+0.3
JNK				*e*S	Sn	02 33 58.9	0.0
JAR	Ashorobuto	3.19	252	P	Pn	02 33 41.1	+1.0
JOB	Onbets	3.31	245	*e*S	Sn	02 34 20.4	+0.2
JCH	Churui	3.75	244	P	Pn	02 33 47.9	+0.1

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*IDC **13** 03:02:24.9±3.1, 35°.59N×140°.94E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/27, mbtmp3.4/3, ML2.4/1, Error ellipse: s-maj=77.6km s-min=29.3km az=50.0*

*ISCJB **13** 03:02:26.4±1.0, 35°.65N±0°.05×140°.99E±0°.09, h18km±5km, mb3.6/2, Error ellipse: s-maj=12.9km s-min=6.7km az=154.3*

*JMA **13** 03:02:27.6±0.1, 35°.64N×140°.87E, h15km±1km, M3.4*

ISC 13 03:02:27.0±1.1, **35°.64N**±0°.05×**140°.92E**±0°.07, **h15**km±6km, **n19**, σ**0ˢ.74**/19, **3C-1D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.08	325	⇓P	Pg	03 02 30.4	+0.3
CHOJ				S	Sg	03 02 32.4	+0.3
JSMT	Sammumatsuo	0.38	271	P	Pb	03 02 34.9	-0.5
JSMT				S	Sg	03 02 39.8	-0.2
JIHU	Itakohorinouch	0.46	316	P	Pb	03 02 36.7	0.0
JIHU				S	Sb	03 02 43.5	+0.2
JCN	Nagara	0.62	250	⇑P	Pb	03 02 39.8	+0.3
BSO4	Boso 4	0.80	216	P	Pn	03 02 42.9	-0.7
JYT	Yasato	0.83	315	⇑P	Pg	03 02 42.3	-0.9
JYT				S	Sg	03 02 53.0	-1.1
BSO3	Boso 3	0.90	202	⇑P	Pn	03 02 44.6	-0.2
BSO1	Boso 1	0.98	177	P	Pb	03 02 45.0	-0.3
JHO	Hitachi	1.01	344	P	Pg	03 02 45.8	-0.8
MJAR	Matsushiro Arr	2.37	293	Pn	Pn	03 03 04.9	-0.4
	0.9nm,0.3s,baz=110,slow=16,SNR=24						
MJAR				Sn	Sn	03 03 35.9	+1.7

	0.7nm,0.3s,baz=127,slow=8.5,SNR=5.6						
MAT	**Matsushiro**	**2.37**	**293**	P	**Pn**	**03 03 05.8**	**+0.4**
MAT				S	**Sb**	**03 03 38.1**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**27.82**	**118**	T	T	03 37 22.4	
	baz=310,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**27.82**	**118**	T	T	03 37 28.0	
	baz=310,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**27.83**	**118**	T	T	03 37 19.6	
	baz=310,slow=75,SNR=40						
H11S3	**WAKE ISLAND Hy**	**28.47**	**120**	T	T	03 38 06.0	
	baz=312,slow=76,SNR=203						
H11S1	**WAKE ISLAND Hy**	**28.47**	**120**	T	T	03 38 10.9	
	baz=312,slow=76,SNR=197						
H11S2	**WAKE ISLAND Hy**	**28.49**	**120**	T	T	03 38 06.4	
	baz=312,slow=76,SNR=145						
MKAR	**Makanchi Array**	**44.53**	**303**	P	**P**	**03 10 38.8**	**+0.9**
	0.2nm,0.6s,baz=93,slow=9.6,SNR=2.0						
WRA	**Warramunga Arr**	**55.62**	**188**	P	**P**	**03 12 02.0**	**-0.2**
	1.5nm,1.0s,baz=5.5,slow=7.1,SNR=1.9						

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*GCG **13** 03:05:10.5±0.8, 13°.82N×91°.03W, h36km±412km, MD3.4*
*SNET **13** 03:05:10.3±0.7, 13°.66N×90°.73W, h17km±23km, ML2.9*
ISC 13 03:05:03.7±2.8, 13°.5N±0°.1×91°.01W±0°.07, h16km±11km, n8, σ0s.98/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.97**	**10**	*e*P	**Pn**	**03 05 24.0**	**+1.2**
FUG				*e*S	**Sg**	**03 05 34.2**	**-1.1**
PCG	**Pacaya**	**0.98**	**23**	*e*P	**Pn**	**03 05 24.2**	**+1.2**
PCG				*e*S	**Sg**	**03 05 35.6**	**-0.1**
NBG	**Las Nubes**	**1.27**	**30**	*e*P	**Pg**	**03 05 29.0**	**+0.7**
NBG				*e*S	**Sb**	**03 05 43.9**	**+0.3**
STG3	**Santiaguito 3,**	**1.33**	**336**	*e*P	**Pg**	**03 05 29.7**	**+0.3**
STG3				*e*S	**Sb**	**03 05 43.3**	**-2.1**
RTR	**El Retiro**	**1.39**	**73**	*e*P	**Pg**	**03 05 30.6**	**+0.1**
CEVE	**Cerro Verde**	**1.39**	**76**	*e*P	**Pg**	**03 05 30.4**	**-0.1**
CEVE				*e*S	**Sn**	**03 05 46.7**	**-0.1**
CEVE				IAML		03 05 51.8	
	comp=Z,296nm,0.2s						
SBLS	**San Blas**	**1.39**	**75**	*e*P	**Pg**	**03 05 30.3**	**-0.2**
SBLS				*e*S	**Sn**	**03 05 46.2**	**-0.6**
SNJE	**San Jose**	**1.42**	**74**	*e*P	**Pg**	**03 05 30.8**	**-0.2**
SNJE				*e*S	**Sn**	**03 05 46.4**	**-1.0**

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*STR **13** 03:12:26.1±0.5, 48°N±3°×°±°, h22km±4km, MLv0.9/6*
*ZUR **13** 03:12:26.4, 47°.89N×7°.78E, h19km±2km, MLh0.9/10, Error ellipse: s-maj=5.3km s-min=1.1km az=228.0*
LDG 13 03:12:26.4±0.0, 47°.88N×7°.77E, h19km, Md1.5/2, Ml1.4/3, 2D, Error ellipse: s-maj=0.6km s-min=0.6km az=34.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIZ	**Kirchzarten**	**0.12**	**53**	Pg	Pg	03 12 30.6	+0.1
KIZ	**Kirchzarten**	**0.12**	**53**	Pg	Pg	03 12 30.6	+0.1
KIZ				Sg	Sg	03 12 33.5	+0.1
METMA	**Mettma DE**	**0.37**	**117**	⇓Pg	Pg	03 12 34.1	-0.1
METMA				Sg	Sg	03 12 39.3	-0.1
ROTHE	**Rothenfluh**	**0.42**	**166**	Pg	Pg	03 12 35.2	+0.1
SLE	**Schleitheim**	**0.50**	**103**	⇓Pg	Pg	03 12 36.4	-0.2
ECH	**Echery**	**0.53**	**309**	Pg	Pb	03 12 37.0	-0.1
ECH	**Echery**	**0.53**	**309**	Pg	Pb	03 12 37.0	-0.1
ECH				Sg	Sg	03 12 44.2	-0.1
HINF	**Hinteralfeld**	**0.62**	**264**	*e*Pg	Pb	03 12 38.5	-0.1
HINF				*e*Sg	Sb	03 12 47.0	+0.1
	2.2nm,0.2s						
CDF	**Champ du Feu**	**0.63**	**328**	*e*Pg	Pb	03 12 38.8	+0.1
CDF				*e*Sg	Sb	03 12 47.2	+0.1
	1.5nm,0.2s						
OPP	**Oppenau**	**0.68**	**24**	Pg	Pb	03 12 39.6	0.0
OPP				Sg	Sb	03 12 48.2	-0.3
HAU	**Haudompre**	**0.96**	**278**	*e*Pg	Pb	03 12 44.6	+0.1
HAU				*e*Sg	Sb	03 12 57.3	+0.4
	1.0nm,0.2s						
CHMF	**Charmoille**	**0.99**	**231**	Sg	Sg	03 12 58.1	-0.5
SUBF	**Surbourg**	**1.04**	**3**	Sg	Sn	03 12 59.8	-0.1
PAGF	**Fort de Pagny**	**1.52**	**297**	*e*Pn	Pn	03 12 50.9	-1.7
PAGF				*e*Sn	Sn	03 13 08.8	-3.2
	0.7nm,0.2s						
SFTF	**Sexfontaines**	**1.86**	**281**	*e*Pn	Pn	03 12 55.7	-1.6
SFTF				*e*Sn	Sn	03 13 17.1	-3.2
	0.8nm,0.3s						

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*GEN **13** 03:14:27.4, 44°.19N×10°.19E, h5km±1km, Ml1.3*
ROM 13 03:14:26.6±0.1, 44°.181N±0°.007×10°.187E±0°.006, h9km, ML1.4/5, Error ellipse: s-maj=0.8km s-min=0.5km az=191.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.02**	**127**	P	Pg	03 14 28.6	+0.2
T0912				S	Sg	03 14 29.4	-0.2
T0912				AML	AML		
	comp=E,16650µm,0.2s						
T0912				AML	AML		
	comp=N,17450µm,0.2s						
T0912				AML	AML		
	comp=E,16700µm,0.2s						
T0912				AML	AML		
	comp=N,17650µm,0.2s						
T0912				AML	AML		
	comp=E,16700µm,0.2s						
T0912				AML	AML		
	comp=N,17400µm,0.2s						
T0912				AML	AML		
	comp=E,16650µm,0.2s						
T0912				AML	AML		
	comp=N,17650µm,0.2s						
T0912				AML	AML		
	comp=N,17400µm,0.2s						
T0912				AML	AML		
	comp=N,17650µm,0.2s						
T0912				AML	AML		
	comp=E,16700µm,0.2s						
T0912				AML	AML		
	comp=E,16650µm,0.2s						
EQUI	**Equi**	**0.03**	**239**	P	Pg	03 14 28.5	+0.2
EQUI				S	Sg	03 14 29.6	0.0
EQUI	**Equi**	**0.03**	**239**	S	Sg	03 14 29.6	0.0
EQUI	**Equi**	**0.03**	**239**	P	Pg	03 14 28.6	+0.2
EQUI				S	Sg	03 14 29.6	0.0
EQUI				AML	AML		
	comp=E,1009µm,0.3s						
EQUI				AML	AML		
	comp=N,1002µm,0.3s						
EQUI				AML	AML		
	comp=E,1009µm,0.3s						
EQUI				AML	AML		
	comp=N,1002µm,0.3s						
EQUI				AML	AML		
	comp=E,1009µm,0.3s						
EQUI				AML	AML		
	comp=N,1002µm,0.3s						
T0911	**Castelpoggio (**	**0.11**	**230**	S	Sg	03 14 32.1	+1.0
T0911	**Castelpoggio (**	**0.11**	**230**	P	Pg	03 14 30.0	+0.8
T0911				S	Sg	03 14 32.0	+0.9
VLC	**Villacollemand**	**0.14**	**98**	S	Sg	03 14 33.0	+0.9
VLC	**Villacollemand**	**0.14**	**98**	P	Pg	03 14 30.5	+0.6
VLC				S	Sg	03 14 33.0	+0.9
VLC				AML	AML		
	comp=E,236µm,0.1s						
VLC				AML	AML		
	comp=N,260µm,0.4s						
VLC				AML	AML		
	comp=E,256µm,0.1s						
VLC				AML	AML		
	comp=N,266µm,0.4s						
VLC				AML	AML		
	comp=E,237µm,0.1s						
VLC				AML	AML		
	comp=N,260µm,0.4s						
VLC				AML	AML		
	comp=E,256µm,0.1s						
VLC				AML	AML		
	comp=N,266µm,0.4s						
VLC				AML	AML		
	comp=E,256µm,0.1s						
VLC				AML	AML		
	comp=E,237µm,0.1s						
VLC				AML	AML		
	comp=N,266µm,0.4s						
VLC				AML	AML		
	comp=N,260µm,0.4s						
CARD	**Cardoso**	**0.26**	**126**	P	Pg	03 14 32.5	+0.6
CARD				S	Sg	03 14 36.6	+1.2
CARD	**Cardoso**	**0.26**	**126**	S	Sb	03 14 36.8	-1.3
CARD	**Cardoso**	**0.26**	**126**	P	Pg	03 14 32.5	+0.6
CARD				S	Sg	03 14 36.6	+1.2
CARD				AML	AML		
	comp=E,121µm,1.0s						
CARD				AML	AML		
	comp=N,132µm,0.2s						
CARD				AML	AML		
	comp=E,121µm,1.0s						
CARD				AML	AML		
	comp=N,132µm,0.2s						
PLMA	**Palmaria, Port**	**0.28**	**242**	P	Pb	03 14 33.1	-0.6
PLMA				S	Sg	03 14 37.0	+1.2
PLMA				AML	AML		
	comp=E,152µm,0.2s						
PLMA				AML	AML		
	comp=N,166µm,0.5s						
PLMA				AML	AML		
	comp=E,152µm,0.2s						
PLMA				AML	AML		
	comp=N,166µm,0.5s						
ERBM	**Eremo**	**0.29**	**34**	P	Pb	03 14 33.3	-0.6
BDI	**Bagni Di Lucca**	**0.32**	**112**	S	Sg	03 14 38.4	+1.2
BDI	**Bagni Di Lucca**	**0.32**	**112**	P	Pg	03 14 33.4	+0.5
BDI				S	Sb	03 14 38.5	-1.2
BDI				AML	AML		
	comp=E,67µm,0.6s						
BDI				AML	AML		
	comp=N,65µm,0.3s						
BDI				AML	AML		
	comp=E,67µm,0.6s						
BDI				AML	AML		
	comp=N,65µm,0.3s						
CODM	**Codolo**	**0.32**	**311**	P	Pg	03 14 33.5	+0.6
CODM				S	Sg	03 14 37.9	+0.6
GRAM	**Graiana**	**0.32**	**344**	P	Pb	03 14 33.9	-0.7
GRAM				S	Sg	03 14 38.6	+1.3
GRAM	**Graiana**	**0.32**	**344**	P	Pb	03 14 33.9	-0.7
GRAM				S	Sg	03 14 38.6	+1.2
MAIM	**Mastiano**	**0.34**	**140**	P	Pb	03 14 34.2	-0.6
MAIM				S	Sg	03 14 39.1	+1.1
POPM	**Popiglio**	**0.43**	**108**	P	Pg	03 14 35.6	+0.6
POPM				S	Sb	03 14 42.6	-0.3
POPM	**Popiglio**	**0.43**	**108**	S	Sb	03 14 42.6	-0.4
POPM	**Popiglio**	**0.43**	**108**	P	Pg	03 14 35.6	+0.6
POPM				S	Sb	03 14 43.0	0.0
POPM				AML	AML		
	comp=E,104µm,0.2s						
POPM				AML	AML		
	comp=N,100µm,1.4s						
POPM				AML	AML		
	comp=E,104µm,0.2s						
POPM				AML	AML		
	comp=N,100µm,1.4s						
MTCR	**Monte La Croce**	**0.60**	**104**	P	Pb	03 14 38.9	-0.5
MOMA	**Monte Martano**	**2.21**	**128**	AML	AML		
	comp=N,10µm,0.1s						
MOMA				AML	AML		
	comp=E,9µm,0.1s						
MOMA				AML	AML		
	comp=N,10µm,0.1s						
MOMA				AML	AML		
	comp=E,9µm,0.1s						
LPEL	**Lama dei Pelig**	**3.62**	**125**	AML	AML		
	comp=N,45µm,0.3s						
LPEL				AML	AML		
	comp=E,51µm,0.5s						
LPEL				AML	AML		
	comp=N,45µm,0.3s						
LPEL				AML	AML		
	comp=E,51µm,0.5s						

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*ISCJB **13** 03:17:25.2±1.3, 25°.9S±0°.1×179°.8E±0°.2, h475km, mb3.2/3, Error ellipse: s-maj=29.1km s-min=14.7km az=1.2*
*IDC **13** 03:17:28.2±6.3, 26°.00S×179°.82E, h507km±72km, mb2.8/3, mb1 3.2/5, mb1mx3.0/24, mbtmp4.0/5, Error ellipse: s-maj=48.1km s-min=27.3km az=14.0*
ISC 13 03:17:26.2±1.1, 26°.0S±0°.1×179°.8E±0°.2, h475km, n8, σ1s.03/9, mb3.3/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.47**	**190**	P	**P**	**03 20 10.5**	**+0.8**
	2.1nm,0.3s,baz=354,slow=17,SNR=13						
URZ				S	**S**	**03 22 23.7**	**-1.0**
	0.2nm,0.3s,baz=223,slow=20,SNR=1.8						
RPZ	**Rata Peaks**	**19.10**	**200**	P	**P**	**03 21 18.1**	**+0.3**
	1.0nm,0.3s,baz=24,slow=6.8,SNR=4.4						
ASAR	**Alice Springs**	**41.58**	**263**	P	**P**	**03 24 31.9**	**+0.2**
	0.4nm,0.4s,baz=92,slow=7.7,SNR=10						
WRA	**Warramunga Arr**	**42.15**	**268**	P	**P**	**03 24 35.4**	**-0.8**
	1.4nm,0.9s,baz=97,slow=6.8,SNR=4.7						
NVAR	**Mina Array Bea**	**86.34**	**44**	P	**P**	**03 29 16.8**	**-0.6**
	0.2nm,0.5s,baz=210,slow=8.3,SNR=2.7						
NB2	**NORSAR Subarra**	**144.08**	**351**	PKP	**PKPab**	**03 36 05.9**	**0.0**
	comp=Z,0.2nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**144.08**	**351**	PKP	**PKPdf**	**03 36 06.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=22,slow=2.5,SNR=4.6						
BRTR	**Keskin Array B**	**148.65**	**304**	PKPbc	**PKPdf**	**03 36 16.8**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=64,slow=3.4,SNR=2.6						

MEX 13 03:19:12.2±0.5, 17°.15N×98°.26W, h82km±5km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**0.50**	**324**	*e*P	Pn	03 19 25.1	-1.3
TLIG				*e*S	Sn	03 19 35.1	-1.7
MEIG	**Mezcala**	**1.51**	**301**	*e*P	Pn	03 19 35.7	-2.2
MEIG				*e*S	Sn	03 19 55.5	-1.7
PLIG	**Platanillo**	**1.71**	**316**	*e*P	Pn	03 19 39.7	-0.8
PLIG				*i* S	Sn	03 20 00.5	-1.4
YAIG	**Yautepec**	**1.87**	**336**	*i* P	Pn	03 19 41.5	-1.0
YAIG				*i* S	Sn	03 20 04.3	-1.3

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*IDC **13** 03:31:02.6±0.5, 37°.58N×96°.01E, h0km, mb4.1/22, mb1 4.2/29, mb1mx4.1/53, mbtmp4.1/29, ML3.8/7, MS3.2/8, Ms1 3.2/8, ms1mx3.0/32, Error ellipse: s-maj=15.3km s-min=9.0km az=44.0*
*ISCJB **13** 03:31:03.1±0.2, 37°.61N±0°.03×95°.98E±0°.03, h12km, mb4.4/69, MS3.2/5, Error ellipse: s-maj=5.2km s-min=3.3km az=22.3*
*BJI **13** 03:31:04.4±0.0, 37°.58N×95°.87E, h15km, mb4.4/16, mB4.6/6, ML4.1/12, Ms3.9/16, Ms7 3.8/15*
*NEIC **13** 03:31:04.4±1.7, 37°.52N×96°.07E, h12km±4km, mb4.5/51, Error ellipse: s-maj=11.3km s-min=9.5km az=51.0*
*MOS **13** 03:31:05.9±1.2, 37°.60N×96°.00E, h33km, mb4.5/38, Error ellipse: s-maj=8.9km s-min=5.3km az=128.3*
ISC 13 03:31:04.7±0.3, 37°.59N±0°.05×95°.96E±0°.03, h12km, n175, σ1s.39/185, mb4.5/70, MS3.3/5, 4C-7D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.53**	**58**	Pn	**Pn**	**03 32 02.8**	**+3.3**
GTA				Pg	**Pb**	**03 32 07.8**	**+0.6**
GTA				Sn	**Sn**	**03 32 40.5**	**-0.8**
GTA				Sg	**Sb**	**03 32 49.8**	**-0.4**
GTA				smax	smax		
	comp=N,200nm,0.9s						
GTA				smax	smax		
	comp=E,130nm,1.1s						
GTA				LR	LR		
	comp=N,2µm,9.5s						
GTA				LR	LR		
	comp=E,1µm,11.4s						
GTA				LR	LR		
	comp=Z,1µm,9.5s						
LZH	**Lanzhou**	**6.50**	**101**	*e*Pn	**Pn**	**03 32 42.3**	**+2.0**
LZH				Sn	**Sn**	**03 33 57.5**	**+3.0**
LZH				Sg	**Sg**	**03 34 32.8**	**-0.6**
LZH				smax	smax		
	comp=N,260nm,1.0s						
LZH				smax	smax		
	comp=E,230nm,1.0s						
LZH				LR	LR		
	comp=N,970nm,7.0s						
LZH				LR	LR		
	comp=E,780nm,6.5s						
LZH				LR	LR		
	comp=Z,800nm,7.6s						
LSA	**Lhasa**	**8.82**	**208**	*e*Pn	**Pn**	**03 33 09.3**	**-3.2**
LSA	**Lhasa**	**8.82**	**208**	*e*P	**Pn**	**03 33 09.3**	**-3.2**
WMQ	**Urumqi**	**8.84**	**317**	*e*Pn	**Pn**	**03 33 13.0**	**+0.7**
WMQ	**Urumqi**	**8.84**	**317**	*e*P	**Pn**	**03 33 11.3**	**-1.0**
WMQ				pP	Pg	03 33 23.8	-30
WMQ				S	**Sn**	**03 34 52.3**	**+0.5**
WMQ				sS	Sg	03 35 05.8	-42
WMQ				LR	LR		
	comp=N,400nm,11.5s						
WMQ				LR	LR		
	comp=E,540nm,9.9s						
WMQ				LR	LR		
	comp=Z,360nm,10.3s						
WMQ	**Urumqi**	**8.84**	**317**	*e*P	**Pn**	**03 33 13.0**	**+0.7**
XAN	**Xi'an**	**11.11**	**105**	*e*Pn	Pn	03 33 37.0	-6.4
XAN	**Xi'an**	**11.11**	**105**	*e*P	Pn	03 33 37.0	-6.4
SONA0	**Songino Array**	**12.79**	**33**	*e*Pn	**Pn**	**03 34 05.7**	**-0.7**
SONM	**Songino Array**	**12.79**	**33**	Pn	**Pn**	**03 34 05.7**	**-0.7**
	1.4nm,0.3s,baz=218,slow=16,SNR=19						
SONM				Lg	Lg	03 37 49.0	
	0.1nm,0.3s,baz=217,slow=30,SNR=2.7						
ULN	**Ulaanbaatar**	**13.10**	**35**	*e*Pn	**Pn**	**03 34 12.7**	**+2.0**
ULN	**Ulaanbaatar**	**13.10**	**35**	*e*P	**Pn**	**03 34 12.7**	**+2.0**
ENH	**Enshi**	**13.39**	**119**	*e*Pn	**Pn**	**03 34 12.8**	**-1.8**
DGZ	**Jazzator, Alta**	**13.58**	**336**	⇓*e*P	**Pn**	**03 34 19.3**	**+2.1**
MK32	**Makanchi Array**	**13.67**	**317**	*e*Pn	**Pn**	**03 34 14.4**	**-3.9**
MKAR	**Makanchi Array**	**13.67**	**317**	Pn	**Pn**	**03 34 14.4**	**-3.9**
	1.5nm,0.3s,baz=124,slow=14,SNR=37						
MKAR				Sn	Sn	03 36 39.9	-10
	0.3nm,0.3s,baz=131,slow=20,SNR=3.3						
MKAR				Lg	Lg	03 38 17.5	
	baz=131,slow=18,SNR=2.5						
KMI	**Kunming**	**13.70**	**153**	P	**P**	**03 34 26.1**	**-1.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZAK	**Zakamensk**	**13.83**	**20**	*e*P	**P**	**03 34 25.8**	**-3.2**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MAKZ	**Makanchi**	**13.85**	**316**	*e*Pn	**Pn**	**03 34 20.0**	**-0.8**
MAKZ	**Makanchi**	**13.85**	**316**	*e*P	**Pn**	**03 34 20.0**	**-0.8**
PRZ	**Przheval'sk**	**14.31**	**295**	*e*Pn	**Pn**	**03 34 28.6**	**+1.4**
PRZ	**Przheval'sk**	**14.31**	**295**	*e*P	**Pn**	**03 34 28.6**	**+1.4**
GYA	**Guiyang**	**14.32**	**138**	*e*P	**Pn**	**03 34 28.3**	**+0.8**
GYA				S	**Sn**	**03 37 06.6**	**+0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				LR	LR		
	comp=Z,630nm,8.3s						
GYA				LR	LR		
	comp=Z,460nm,8.6s						
GYA				LR	LR		
	comp=Z,640nm,9.8s						
MOY	**Mondy**	**14.52**	**13**	*e*P	**P**	**03 34 40.1**	**+3.4**
MOY				pmax	pmax		
	comp=Z,20nm,1.5s						
TLY	**Talaya**	**15.11**	**19**	Pn	**Pn**	**03 34 36.9**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=180,slow=20,SNR=2.3						
TLY				Lg	Lg	03 38 53.9	
	comp=Z,0.0nm,0.3s,baz=97,slow=22,SNR=1.8						
TLY				LR	LR	03 40 32.7	
	comp=Z,245nm,19.2s,baz=178,slow=38						
TLY	**Talaya**	**15.11**	**19**	*e*Pn	**Pn**	**03 34 37.5**	**-0.3**
	comp=Z,8.0nm,0.6s						
TLY	**Talaya**	**15.11**	**19**	⇓*e*P	**Pn**	**03 34 39.7**	**+1.9**
KDJ	**Kajisay**	**15.11**	**293**	*e*Pn	**Pn**	**03 34 38.7**	**+0.6**
	comp=Z,12nm,1.0s						
KDJ	**Kajisay**	**15.11**	**293**	*e*P	**Pn**	**03 34 38.7**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
KSH	**Kashi**	**15.75**	**283**	P	**P**	**03 34 50.8**	**+0.4**
KSH				sP	sP	03 35 03.3	+6.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,57nm,4.5s						
NRN	**Naryn**	**15.87**	**290**	*e*Pn	**Pn**	**03 34 47.9**	**-0.3**
	comp=Z,5.1nm,0.8s						
NRN	**Naryn**	**15.87**	**290**	*e*P	**Pn**	**03 34 47.9**	**-0.3**
NRN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BJT	**Baijiatuau**	**15.94**	**75**	*e*Pn	**Pn**	**03 34 45.6**	**-3.2**
	comp=Z,44nm,1.8s						
BJT	**Baijiatuau**	**15.94**	**75**	*e*P	**Pn**	**03 34 45.6**	**-3.2**
BJT				pmax	pmax		
	comp=Z,44nm,1.8s						
BJI	**Beijing**	**15.95**	**75**	P	**P**	**03 34 51.3**	**-1.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BOOM	**Boomskoye usch**	**16.08**	**294**	*e*Pn	**Pn**	**03 34 50.6**	**-0.2**
	comp=Z,5.0nm,0.6s						
BOOM	**Boomskoye usch**	**16.08**	**294**	*e*P	**Pn**	**03 34 50.6**	**-0.2**
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WHN	**Wuhan**	**16.77**	**109**	P	**P**	**03 35 02.8**	**+1.2**
AAK	**Ala-Archa**	**17.16**	**294**	P	**Pn**	**03 35 04.2**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=92,slow=7.5,SNR=10.0						
AAK				Lg	Lg	03 40 19.5	
	baz=268,slow=11,SNR=4.0						
AAK				LR	LR	03 42 13.2	
	comp=Z,121nm,19.8s,baz=88,slow=39						
AAK	**Ala-Archa**	**17.16**	**294**	*e*Pn	**Pn**	**03 35 05.2**	**+0.7**
	comp=Z,7.1nm,0.9s						
AAK	**Ala-Archa**	**17.16**	**294**	⇑*e*P	**P**	**03 35 06.6**	**+0.5**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURBB	**Kurchatov Arra**	**18.01**	**322**	P	**Pn**	**03 35 14.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=135,slow=11,SNR=18						
KURBB				S	**S**	**03 38 38.7**	**-2.7**
	comp=Z,0.0nm,0.3s,baz=123,slow=30,SNR=3.4						
KURBB				Lg	Lg	03 40 37.8	
	comp=Z,0.0nm,0.3s,baz=127,slow=21,SNR=3.0						
KURK	**Kurchatov**	**18.02**	**322**	*e*P	**P**	**03 35 15.4**	**0.0**
	comp=Z,9.6nm,0.8s						
KURK	**Kurchatov**	**18.02**	**322**	⇓*e*P	**P**	**03 35 16.7**	**+1.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZAA0	**Zalesovo Array**	**18.08**	**338**	*e*P	**P**	**03 35 15.8**	**-0.1**
	comp=Z,12nm,1.0s						
ZALV	**Zalesovo Beam**	**18.08**	**338**	P	**Pn**	**03 35 14.2**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=151,slow=12,SNR=3.5						
ZALV				Lg	Lg	03 40 23.2	
	comp=Z,0.4nm,0.3s,baz=151,slow=21,SNR=2.7						
ZALV				LR	LR	03 42 15.0	
	comp=Z,65nm,18.2s,baz=238,slow=37						
ZAA1	**Zalesovo Array**	**18.08**	**338**	*e*P	**Pn**	**03 35 14.2**	**-1.4**
ARSB	**Arslanbob**	**18.12**	**289**	*e*P	**P**	**03 35 17.0**	**+0.4**
	comp=Z,16nm,0.8s						
NIL	**Nilore**	**18.86**	**265**	*e*P	**Pn**	**03 35 25.4**	**+0.1**
	comp=Z,9.2nm,0.8s						
NIL	**Nilore**	**18.86**	**265**	*e*P	**Pn**	**03 35 25.4**	**+0.1**
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CM31	**Chiang Mai Arr**	**19.24**	**171**	*e*P	**P**	**03 35 29.1**	**+0.2**
	comp=Z,13nm,0.3s						
CMAR	**Chiang Mai Arr**	**19.24**	**171**	P	**P**	**03 35 29.1**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=344,slow=10.0,SNR=6.8						
CMAR				LR	LR	03 42 58.2	
	comp=Z,76nm,20.3s,baz=2.5,slow=37						
KK31	**Karatay Array**	**20.13**	**294**	*e*P	**P**	**03 35 39.2**	**+0.7**
	comp=Z,16nm,1.2s						
KK31	**Karatay Array**	**20.13**	**294**	*e*P	**P**	**03 35 39.2**	**+0.7**
KK31				pmax	pmax		
	comp=Z,16nm,1.2s						
KKAR	**Karatay Array**	**20.13**	**294**	*e*P	**P**	**03 35 38.9**	**+0.4**
	comp=Z,16nm,1.2s						
KKAR	**Karatay Array**	**20.13**	**294**	*e*P	**P**	**03 35 38.9**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,16nm,1.2s						
GAR	**Garm**	**20.16**	**282**	*e*P	**P**	**03 35 39.8**	**+0.8**
	comp=Z,16nm,1.0s						
GAR	**Garm**	**20.16**	**282**	*e*P	**P**	**03 35 39.8**	**+0.8**
GAR				pmax	pmax		
	comp=Z,16nm,1.0s						
CHGR	**Chuyangaron**	**21.09**	**281**	*e*P	**P**	**03 35 50.8**	**+1.8**
	comp=Z,36nm,1.0s						
SKNT	**Sakolnakorn**	**21.72**	**159**	P	**P**	**03 35 57.0**	**+1.2**
	comp=Z,20nm,1.1s						
PANO	**Nakornpanom**	**21.74**	**157**	P	**P**	**03 36 00.7**	**+4.7**
	comp=Z,0.3nm,1.0s						
KBL	**Kabul**	**21.94**	**270**	*e*P	**P**	**03 36 00.2**	**+1.9**
	comp=Z,44nm,1.8s						
KBL	**Kabul**	**21.94**	**270**	*e*P	**P**	**03 36 00.3**	**+1.9**

KBL				pmax	pmax		
	comp=Z,44nm,1.8s						
CHAI	**Chaiyaphum**	**22.25**	**165**	P	P	03 36 11.9	+10
BVAR	**Borovoye Array**	**23.52**	**319**	P	**P**	**03 36 14.9**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=117,slow=10,SNR=12						
BRVK	**Borovoye**	**23.59**	**319**	*e*P	**P**	**03 36 15.9**	**+0.8**
	comp=Z,19nm,1.6s						
BRVK	**Borovoye**	**23.59**	**319**	⇓*e*P	**P**	**03 36 15.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PHET	**Kaeng Krachan**	**24.79**	**171**	P	P	03 36 34.0	+7.5
TJN	**Taejon**	**25.06**	**83**	⇓*e*P	**P**	**03 36 30.2**	**+1.3**
KS15	**Wonju Array Si**	**25.27**	**80**	*e*P	**P**	**03 36 30.3**	**-0.4**
	comp=Z,9.9nm,0.7s						
KSRS	**Korea Array**	**25.30**	**80**	P	**P**	**03 36 30.8**	**-0.2**
	comp=Z,10nm,0.5s,baz=278,slow=9.7,SNR=38						
KSRS				LR	LR	03 46 56.2	
	comp=Z,15nm,20.1s,baz=290,slow=38						
ABKAR	**Akbulak array**	**28.37**	**306**	*e*P	**P**	**03 37 00.5**	**+1.9**
	comp=Z,3.0nm,1.0s						
GEYT	**Alibeck**	**29.79**	**282**	P	**P**	**03 37 11.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=96,slow=7.4,SNR=2.3						
GYA0B	**ALIBECK ARRAY**	**29.79**	**282**	*e*P	**P**	**03 37 13.1**	**+1.7**
	comp=Z,8.3nm,1.1s						
AKTO	**Aktyubinsk**	**29.82**	**308**	P	**P**	**03 37 11.3**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=95,slow=9.6,SNR=11						
ARU	**Arti**	**31.17**	**319**	*e*P	**P**	**03 37 23.8**	**+0.5**
	comp=Z,10nm,1.0s						
ARU	**Arti**	**31.17**	**319**	*c i*P	**P**	**03 37 23.2**	**-0.1**
ARU						03 38 21.3	
ARU				S	**S**	**03 42 28.1**	**-0.7**
ARU				SS	**SnSn**	**03 44 06.8**	**-3.7**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ASAJ	**Asahikawa**	**35.49**	**64**	P	**P**	**03 38 00.5**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=117,slow=4.7,SNR=6.0						
TIXI	**Tiksi**	**38.06**	**16**	P	**P**	**03 38 21.9**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=228,slow=5.7,SNR=3.8						
KBZ	**Khabaz**	**40.14**	**296**	LR	LR	03 59 53.7	
	comp=Z,19nm,18.7s,baz=192,slow=43						
AKH	**Akhalkalaki**	**40.16**	**292**	*e*P	**P**	**03 38 43.2**	**+2.4**
	comp=Z,7.4nm,1.0s						
AKH	**Akhalkalaki**	**40.16**	**292**	*e*P	**P**	**03 38 43.2**	**+2.4**
AKH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	**Kislovodsk**	**40.25**	**296**	*e*P	**P**	**03 38 44.7**	**+3.3**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,93nm,16.0s						
NEY	**Neytrino**	**40.35**	**295**	⇓*e*P	**P**	**03 38 42.7**	**+0.3**
VSR	**Storozhevoye**	**41.77**	**308**	*e*P	**P**	**03 38 56.3**	**+2.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR	**Galich'ya Gora**	**41.84**	**310**	*e*P	**P**	**03 38 56.7**	**+2.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SEY	**Seymchan**	**42.18**	**35**	⇓*e*P	**P**	**03 38 55.4**	**-1.5**
MOS	**Moscow**	**42.54**	**315**	*e*P	**P**	**03 39 01.7**	**+1.8**
ANN	**Anapa**	**43.79**	**299**	*e*P	**P**	**03 39 09.4**	**-0.8**
ANN				*e*S	**S**	**03 45 35.8**	**-4.7**
ANN				pmax	pmax		
	comp=Z,13nm,0.9s						
PEA1	**Petropavlovsk-**	**44.66**	**49**	*e*P	**P**	**03 39 16.7**	**-0.3**
PETK	**Petropavlovsk-**	**44.66**	**49**	P	**P**	**03 39 16.7**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=258,slow=7.2,SNR=4.1						
KAPI	**Kappang**	**47.82**	**147**	P	**P**	**03 39 41.8**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=32,slow=16,SNR=2.2						
BR101	**Keskin Array S**	**47.84**	**293**	*e*P	**P**	**03 39 42.4**	**0.0**
BR131	**Keskin Array S**	**47.84**	**293**	*e*P	**P**	**03 39 42.9**	**+0.5**
	comp=Z,3.3nm,0.8s						
BRTR	**Keskin Array B**	**47.84**	**293**	P	**P**	**03 39 42.4**	**0.0**
	comp=Z,2.7nm,0.7s,baz=97,slow=6.7,SNR=15						
AKASG	**Malin Array Be**	**48.06**	**308**	P	**P**	**03 39 43.6**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=68,slow=7.2,SNR=4.4						
AKASG	**Malin Array Be**	**48.06**	**308**	*ce*P	**P**	**03 39 43.5**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKBB	**Malin Array Si**	**48.06**	**308**	*e*P	**P**	**03 39 45.6**	**+1.8**
	comp=Z,5.3nm,0.9s						
AKBB	**Malin Array Si**	**48.06**	**308**	*e*P	**P**	**03 39 45.6**	**+1.8**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FIA0	**FINESS Array S**	**48.40**	**323**	*e*P	**P**	**03 39 46.0**	**-0.2**
FIA0	**FINESS Array S**	**48.40**	**323**	*e*P	**P**	**03 39 46.0**	**-0.2**
FINES	**FINESS Array B**	**48.40**	**323**	P	**P**	**03 39 46.0**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=88,slow=12,SNR=8.6						
FINES				LR	LR	04 00 38.2	
	comp=Z,33nm,19.6s,baz=104,slow=37						
FINES	**FINESS Array B**	**48.40**	**323**	P	**P**	**03 39 46.0**	**-0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES				MLR	MLR		
	comp=Z,33nm,19.6s						
ARA0	**ARCESS Array S**	**48.54**	**334**	*e*P	**P**	**03 39 47.1**	**-0.1**
ARA0				*e*PcP	**PcP**	**03 41 12.3**	**-0.6**
ARCES	**ARCESS Array B**	**48.54**	**334**	P	**P**	**03 39 47.2**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=72,slow=7.8,SNR=6.7						
ARCES				PcP	**PcP**	**03 41 12.3**	**-0.6**
	comp=Z,4.0nm,1.1s,baz=108,slow=2.0,SNR=3.9						
BUR08	**Bucovina Ar. S**	**51.35**	**305**	*e*P	**P**	**03 40 09.9**	**+0.9**
	comp=Z,6.1nm,1.5s						
MLR	**Muntele Rosu**	**51.48**	**302**	*e*P	**P**	**03 40 09.7**	**-0.4**
	comp=Z,7.9nm,1.2s						
MLR	**Muntele Rosu**	**51.48**	**302**	*e*P	**P**	**03 40 09.7**	**-0.4**
MLR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KOLS	**Kolonicke sedl**	**52.86**	**307**	*e*P	**P**	**03 40 19.8**	**-0.3**
KOLS	**Kolonicke sedl**	**52.86**	**307**	*e*P	**P**	**03 40 19.8**	**-0.3**
OJC	**Ojcow**	**54.02**	**310**	*e*P	**P**	**03 40 27.5**	**-1.1**
	comp=Z,6.3nm,0.9s						
OJC	**Ojcow**	**54.02**	**310**	*e*P	**P**	**03 40 27.5**	**-1.1**
OJC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VTS	**Vitosha**	**54.27**	**300**	*e*P	**P**	**03 40 31.5**	**+0.7**
	comp=Z,6.0nm,1.2s						
VTS	**Vitosha**	**54.27**	**300**	*e*P	**P**	**03 40 31.5**	**+0.7**
VTS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
VYHS	**Vyhne**	**55.16**	**308**	*e*P	**P**	**03 40 38.0**	**+1.1**
VYHS	**Vyhne**	**55.16**	**308**	*e*P	**P**	**03 40 38.0**	**+1.1**
VYHS				*e*pP	**pP**	**03 40 41.6**	**-0.4**
NC405	**NORSAR Array S**	**55.27**	**324**	*e*P	**P**	**03 40 37.5**	**0.0**
	comp=Z,39nm,1.5s						
NB2	**NORSAR Subarra**	**55.53**	**324**	P	**P**	**03 40 38.6**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=72,slow=7.4						
NB200	**NORSAR Array S**	**55.53**	**324**	*e*P	**P**	**03 40 38.9**	**-0.5**
NOA	**NORSAR Array B**	**55.53**	**324**	P	**P**	**03 40 38.9**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=73,slow=7.1,SNR=8.6						
TTG	**Podgorica**	**57.07**	**301**	*e*P	**P**	**03 40 50.5**	**-0.1**
	comp=Z,6.9nm,1.0s						
TTG	**Podgorica**	**57.07**	**301**	*e*P	**P**	**03 40 50.5**	**-0.1**
TTG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CONA	**Conrad Observa**	**57.22**	**308**	*e*pP	**P**	**03 40 52.7**	**+0.9**
	comp=Z,4.3nm,1.1s						
BRG	**Berggiesshubel**	**57.33**	**312**	*e*P	**P**	**03 40 56.6**	**+4.3**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	**Collm**	**57.73**	**313**	*e*P	**P**	**03 40 55.0**	**-0.1**
CLL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CLL	**Collm**	**57.73**	**313**	*e*P	**P**	**03 40 55.0**	**-0.1**
	comp=Z,2.0nm,0.8s						
CLL				*i* pP	**pP**	**03 40 59.4**	**-0.7**
	comp=Z,8.0nm,1.4s						
SOKA	**Soboth**	**58.21**	**307**	*e*P	**P**	**03 40 59.2**	**+0.4**
	comp=Z,7.1nm,1.2s						
GEC2	**GERESS Array S**	**58.22**	**310**	*e*P	**P**	**03 41 00.2**	**+1.4**
	comp=Z,2.6nm,0.9s						
GEC2	**GERESS Array S**	**58.22**	**310**	*e*P	**P**	**03 41 00.2**	**+1.4**
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	**GERESS Array B**	**58.22**	**310**	P	**P**	**03 40 59.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=81,slow=8.2,SNR=7.3						
OBKA	**Obir**	**58.59**	**307**	*e*P	**P**	**03 41 01.0**	**-0.3**
	comp=Z,3.3nm,1.1s						
SQTA	**Sankt Quirin**	**60.40**	**309**	*e*P	**P**	**03 41 13.7**	**-0.2**
	comp=Z,7.2nm,0.9s						
MOTA	**Moosalm**	**60.41**	**309**	*e*P	**P**	**03 41 14.4**	**+0.4**
	comp=Z,3.0nm,0.7s						
RETA	**Reutte**	**60.56**	**309**	*e*P	**P**	**03 41 15.2**	**+0.3**
	comp=Z,6.5nm,1.5s						
FETA	**Feichten**	**60.78**	**309**	*e*P	**P**	**03 41 15.7**	**-0.9**
	comp=Z,1.4nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**61.24**	**308**	*e*P	**P**	**03 41 20.2**	**+0.4**
	comp=Z,5.0nm,0.8s						
BFO	**Black Forest**	**61.69**	**311**	*e*P	**P**	**03 41 23.9**	**+1.4**
	comp=Z,4.1nm,0.9s						
BFO	**Black Forest**	**61.69**	**311**	*e*P	**P**	**03 41 23.9**	**+1.4**
BFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TUE	**Stuetta**	**61.87**	**309**	*e*P	**P**	**03 41 23.5**	**-0.5**
	comp=Z,12nm,1.5s						
SENIN	**Lac Senin/Sane**	**63.19**	**309**	*e*P	**P**	**03 41 33.4**	**+0.5**
	comp=Z,18nm,1.9s						
TOLK	**Toolik Lake Re**	**63.60**	**22**	*e*P	**P**	**03 41 36.0**	**+1.0**
	comp=Z,4.7nm,0.7s						
MLY	**Manley**	**65.39**	**25**	*e*P	**P**	**03 41 47.2**	**+0.5**
	comp=Z,2.2nm,1.0s						
BPAW	**Bear Paw Mtn.**	**65.86**	**26**	*e*P	**P**	**03 41 50.7**	**+1.0**
	comp=Z,4.4nm,1.0s						
PPLA	**Purkeypile**	**66.14**	**28**	*e*P	**P**	**03 41 52.6**	**+0.9**
	comp=Z,4.2nm,0.8s						
COLA	**College**	**66.45**	**25**	⇑*e*P	**P**	**03 41 54.0**	**+0.5**
COLA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**66.84**	**25**	P	**P**	**03 41 55.6**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=286,slow=5.2,SNR=12						
ILB	**Eielson Array**	**66.84**	**25**	*e*P	**P**	**03 41 55.6**	**-0.3**
	comp=Z,3.9nm,1.1s						
WR1	**Warramunga Arr**	**67.67**	**141**	*e*P	**P**	**03 42 01.5**	**-0.3**
WRA	**Warramunga Arr**	**67.67**	**141**	P	**P**	**03 42 01.5**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=326,slow=7.2,SNR=4.7						
PMR	**Palmer**	**68.08**	**28**	*e*P	**P**	**03 42 03.6**	**-0.2**
	comp=Z,5.5nm,1.2s						
INK	**Inuvik**	**68.17**	**18**	P	**P**	**03 42 03.6**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=2.0,slow=13,SNR=3.6						
INK	**Inuvik**	**68.17**	**18**	*e*P	**P**	**03 42 03.6**	**-0.7**
	comp=Z,4.3nm,0.9s						
INK	**Inuvik**	**68.17**	**18**	*e*P	**P**	**03 42 03.6**	**-0.7**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RC01	**Rabbit Creek A**	**68.17**	**28**	*e*P	**P**	**03 42 04.8**	**+0.4**
	comp=Z,11nm,1.6s						
RIDG	**Independent Ri**	**68.19**	**25**	*e*P	**P**	**03 42 04.5**	**-0.1**
	comp=Z,5.5nm,1.0s						
SCRK	**Sand Creek**	**68.31**	**24**	*e*P	**P**	**03 42 05.4**	**-0.1**
	comp=Z,2.8nm,0.8s						
EGAK	**Eagle**	**68.66**	**23**	*e*P	**P**	**03 42 07.8**	**+0.4**
	comp=Z,4.0nm,1.0s						
KDAK	**Kodiak Island**	**69.07**	**32**	*e*P	**P**	**03 42 09.6**	**-0.5**
	comp=Z,19nm,1.5s						
KDAK	**Kodiak Island**	**69.07**	**32**	*e*P	**P**	**03 42 09.6**	**-0.5**
KDAK				pmax	pmax		
	comp=Z,19nm,1.5s						
AS31	**Alice Springs**	**70.61**	**143**	*e*P	**P**	**03 42 20.5**	**+0.5**
	comp=Z,3.9nm,1.7s						
ASAR	**Alice Springs**	**70.61**	**143**	P	**P**	**03 42 20.5**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=329,slow=5.8,SNR=20						
ASAR				LR	LR	04 15 21.9	
	comp=Z,33nm,19.1s,baz=134,slow=38						
HYT	**Haines Junctio**	**72.68**	**24**	*e*P	**P**	**03 42 33.3**	**+1.1**
	comp=Z,3.9nm,0.7s						
ESDC	**Sonseca Array**	**73.70**	**308**	P	**P**	**03 42 38.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=43,slow=6.0,SNR=11						
TAM	**Tamanrasset**	**76.80**	**289**	*e*P	**P**	**03 42 57.9**	**+1.2**
	comp=Z,3.7nm,1.4s						
TAM	**Tamanrasset**	**76.80**	**289**	*e*P	**P**	**03 42 57.9**	**+1.2**
TAM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
YKA	**Yellowknife Ar**	**77.27**	**14**	P	**P**	**03 42 58.0**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=332,slow=5.1,SNR=3.6						
YKB5	**Yellowknife Ar**	**77.27**	**14**	*e*P	**P**	**03 42 58.0**	**-0.4**
STKA	**Stephens Creek**	**81.18**	**142**	P	**P**	**03 43 19.4**	**-0.8**
	comp=Z,9.6nm,1.2s,baz=339,slow=3.5,SNR=5.1						
STKA	**Stephens Creek**	**81.18**	**142**	*e*P	**P**	**03 43 19.4**	**-0.8**
	comp=Z,8.9nm,1.9s						
STKA	**Stephens Creek**	**81.18**	**142**	*e*P	**P**	**03 43 19.4**	**-0.8**
STKA				pmax	pmax		
	comp=Z,9.0nm,1.9s						
TOA1	**Torodi Ar. Sit**	**85.42**	**283**	*e*P	**P**	**03 43 42.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**85.42**	**283**	P	**P**	**03 43 42.2**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=61,slow=4.4,SNR=9.0						
VNA2	**Neumayer--Watz**	**129.34**	**204**	PKPdf	**PKPdf**	**03 50 11.8**	**-0.1**
	baz=52,slow=3.3						
VNA3	**Neumayer Olymp**	**130.08**	**204**	PKPdf	**PKPdf**	**03 50 13.2**	**-0.2**

IDC 13 03:46:57.6±63.0**, 20°.09S**×**177°.62W, h0**^{km}**, mb4.2**/3**, mb1 4.3**/3**, mb1mx3.7**/25**, mbtmp4.2**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/17**, Error ellipse: s-maj=1149.0km s-min=185.7km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.28**	**244**	P	P	03 54 20.0	0.0
	0.8nm,0.4s,baz=81,slow=10,SNR=3.5						
ASAR	**Alice Springs**	**44.96**	**256**	P	P	03 55 14.7	-0.2
	3.1nm,0.5s,baz=96,slow=8.0,SNR=62						
WRA	**Warramunga Arr**	**45.01**	**262**	P	P	03 55 15.0	-0.2
	1.1nm,0.4s,baz=97,slow=7.3,SNR=3.1						
VNDA	**Vanda**	**58.35**	**185**	LR	LR	04 17 56.1	
	comp=Z,20nm,20.1s,baz=250,slow=32						

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*GUC **13** 03:48:52.8±0.5, 22°.66S×69°.67W, h70^{km}±2^{km}, ML3.7*
*ISCJB **13** 03:48:53.5±0.5, 22°.67S±0°.03×69°.70W±0°.06, h70^{km}, mb3.3/1, Error ellipse: s-maj=8.5km s-min=4.0km az=11.5*
*IDC **13** 03:49:38.2±4.1, 17°.59S×68°.48W, h362^{km}±24^{km}, mb2.8/1, mb1 2.8/1, mb1mx2.5/22, mbtmp3.5/1, Error ellipse: s-maj=138.8km s-min=79.5km az=170.0*
ISC 13 03:48:53.0±1.0**, 22°.68S**±0°.04×**69°.70W**±0°.07**, h70**^{km}**, n14,** σ**0**^{s}**88**/25**, 5C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.12**	**105**	⇑*e*P	**Pn**	**03 49 03.6**	**+0.1**
PB06				*i* S	**Sn**	**03 49 11.4**	**+0.1**
PB06				IAML		03 49 12.0	
	comp=E,7µm,0.2s						
PB05	**IPOC Station P**	**0.50**	**249**	⇓*e*P	**Pn**	**03 49 06.5**	**+0.5**
PB05				*i* S	**Sn**	**03 49 16.4**	**+0.9**
PB05				IAML		03 49 16.9	
	comp=N,4µm,0.3s						
PB04	**IPOC Station P**	**0.54**	**309**	⇑*e*P	**Pn**	**03 49 06.8**	**+0.4**
PB04				*i* S	**Sn**	**03 49 17.5**	**+1.2**
PB04				IAML		03 49 17.9	
	comp=N,6µm,0.2s						
PB15	**IPOC Station P**	**0.57**	**158**	⇑*e*P	**Pn**	**03 49 07.1**	**+0.3**
PB15				*i* S	**Sn**	**03 49 17.8**	**+0.9**
PB03	**IPOC Station P**	**0.63**	**355**	⇑*e*P	**Pn**	**03 49 07.4**	**+0.1**
PB03				*i* S	**Sn**	**03 49 18.2**	**+0.4**
PB03				IAML		03 49 18.7	
	comp=E,9µm,0.5s						
PB07	**IPOC Station P**	**0.96**	**350**	⇑*e*P	**Pn**	**03 49 11.4**	**+0.1**
PB07				*i* S	**Sn**	**03 49 25.1**	**+0.4**
PB07				IAML		03 49 25.6	
	comp=E,3µm,0.5s						
PB09	**IPOC Station P**	**0.97**	**26**	⇓*e*P	**Pn**	**03 49 12.0**	**+0.7**
PB09				*e*S	**Sn**	**03 49 25.9**	**+0.9**
PB09				IAML		03 49 27.4	
	comp=N,3µm,0.4s						
PB10	**IPOC Station P**	**1.15**	**223**	*e*P	**Pn**	**03 49 12.9**	**-0.5**
PB10				*i* S	**Sn**	**03 49 28.5**	**-0.2**
PB02	**IPOC Station P**	**1.36**	**352**	⇓*e*P	**Pn**	**03 49 16.4**	**+0.1**
PB02				*i* S	**Sn**	**03 49 34.2**	**+0.5**
PB02				IAML		03 49 36.8	
	comp=E,2µm,0.1s						
PB01	**IPOC Station P**	**1.64**	**7**	⇓*e*P	**Pn**	**03 49 20.3**	**+0.4**
PB01				*i* S	**Sn**	**03 49 41.0**	**+0.8**
PB01				IAML		03 49 42.4	
	comp=E,1µm,0.2s						
PB14	**IPOC Station P**	**2.05**	**198**	*e*P	**Pn**	**03 49 26.6**	**+0.9**
PB14				*e*S	**Sn**	**03 49 52.5**	**+2.2**
PB14				IAML		03 49 58.1	
	comp=E,381nm,0.1s						
LPAZ	**La Paz**	**6.52**	**13**	P	**Pn**	**03 50 28.4**	**+1.4**
	comp=E,0.4nm,0.3s,baz=193,slow=6.3,SNR=16						
LPAZ				S	Sn	03 51 07.1	-33
	comp=E,0.2nm,0.3s,baz=187,slow=13,SNR=3.6						
TORD	**Torodi Ar. Bea**	**78.44**	**70**	P	**P**	**04 00 45.2**	**-1.5**
	comp=E,0.7nm,1.1s,baz=249,slow=5.8,SNR=6.2						
MKAR	**Makanchi Array**	**147.01**	**36**	PKP	**PKPbc**	**04 08 26.9**	**-0.8**
	comp=E,0.5nm,0.8s,baz=335,slow=2.1,SNR=4.3						

SJA 13 03:52:07.1±0.6**, 31°.33S**×**65°.15W, h11**^{km}±5^{km}**, ML2.4, MW3.7, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCA	**Tanti**	**0.48**	**91**	*e*P	Pb	03 52 17.1	-0.5
TCA				*e*S	Sb	03 52 24.1	-0.6
TCA				IAML		03 52 24.9	
	comp=Z,254nm,0.5s						
MRA	**San Martin**	**1.18**	**204**	*e*P	Pb	03 52 29.5	-0.1
MRA				*e*S	Sn	03 52 46.1	+0.2
MRA				IAML		03 52 48.9	
	comp=Z,86nm,0.2s						
APLL	**PUNTA DE LOS L**	**1.51**	**308**	*e*P	Pb	03 52 35.2	0.0
APLL				*e*S	Sg	03 52 56.2	+0.6
APLL				IAML		03 52 58.0	
	comp=Z,40nm,0.2s						
ACAN	**Cantantal**	**1.97**	**241**	*e*P	Pb	03 52 42.9	-0.2
ACLC	**CERRO LA CRUZ**	**2.46**	**320**	*e*P	Pb	03 52 50.0	-1.4
CYA	**Choya**	**2.94**	**349**	*e*P	Pn	03 52 56.2	+2.4

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*ISCJB **13** 04:15:07.1±0.2, 51°.65N±0°.01×15°.89E±0°.02, h0^{km}, mb3.4/7, Error ellipse: s-maj=2.0km s-min=1.7km az=157.1*
*MOS **13** 04:15:09.2±1.8, 51°.74N×15°.99E, h10^{km}, mb4.1/2, Error ellipse: s-maj=9.2km s-min=4.3km az=91.0*
*IPEC **13** 04:15:09.3±0.4, 51°.73N×16°.11E, h2^{km}±2^{km}, ML3.1/4, Error ellipse: s-maj=2.3km s-min=1.5km az=22.0*
*IDC **13** 04:15:10.9±0.5, 51°.60N×15°.90E, h0^{km}, mb3.5/7, mb1 3.7/15, mb1mx3.6/51, mbtmp3.5/15, ML3.4/8, Error ellipse: s-maj=9.4km s-min=5.5km az=97.0*
*BGR **13** 04:15:11.6±0.5, 51°.60N×16°.06E, h1^{km}, ML3.7/17, Error ellipse: s-maj=6.7km s-min=3.3km az=23.0*
*VIE **13** 04:15:12.7±0.7, 51°.47N×16°.02E, h0^{km}, mb3.1/17, ml3.4/17, ms3.3/2, Error ellipse: s-maj=6.6km s-min=4.0km az=35.0, Suspected Mining induced.*
*LDG **13** 04:15:12.5±0.2, 51°.61N×15°.93E, h1^{km}, Ml3.8/18, Error ellipse: s-maj=5.5km s-min=3.3km az=5.0, Suspected Mining induced.*
*UPP **13** 04:15:12.6±2.9, 51°.70N×15°.25E, h0^{km}, ML1.9, Suspected explosion*
ISC 13 04:15:08.9±0.5**, 51°.66N**±0°.03×**15°.97E**±0°.02**, h0**^{km}**, n198,** σ**1**^{s}**89**/276**, mb3.4**/7**, 6C-7D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.84**	**166**	*i* Pg	**Pb**	**04 15 26.3**	**0.0**
KSP				*e*Sg	**Sg**	**04 15 36.6**	**+0.7**
KSP	**Ksiaz**	**0.84**	**166**	⇓*i*P	**Pb**	**04 15 26.3**	**0.0**
KSP				*e*		04 15 36.6	
KSP	**Ksiaz**	**0.84**	**166**	*e*Pg	**Pb**	**04 15 26.3**	**0.0**
CHVC	**Chvalec**	**1.07**	**177**	*e*PG	**Pb**	**04 15 30.9**	**+0.6**
CHVC				*e*SG	**Sg**	**04 15 43.8**	**+0.5**
OSTC	**Ostas**	**1.11**	**172**	*e*PG	**Pb**	**04 15 31.7**	**+0.7**
OSTC				*e*SG	**Sg**	**04 15 44.5**	**-0.1**
	comp=Z,248nm,0.4s						
UPC	**Upice**	**1.15**	**179**	*e*P	**Pb**	**04 15 32.1**	**+0.4**
UPC				*e*		04 15 45.8	
UPC				smax	smax		
	comp=N,476nm,0.6s						
UPC	**Upice**	**1.15**	**179**	*e*PG	**Pb**	**04 15 32.1**	**+0.4**
UPC				*e*SG	**Sg**	**04 15 45.8**	**0.0**
	comp=N,476nm,0.6s						
DPC	**Dobruska-Polom**	**1.33**	**170**	*e*P	**Pg**	**04 15 35.0**	**+0.7**
DPC				*e*		04 15 51.5	
DPC				smax	smax		
	comp=N,266nm,0.3s						
DPC	**Dobruska-Polom**	**1.33**	**170**	*e*Pg	**Pg**	**04 15 35.0**	**+0.7**
DPC	**Dobruska-Polom**	**1.33**	**170**	*e*PG	**Pg**	**04 15 35.0**	**+0.7**
DPC				*e*SG	**Sg**	**04 15 51.5**	**0.0**
	comp=N,266nm,0.3s						
PVCC	**Panska Ves**	**1.44**	**219**	*e*P	**Pg**	**04 15 37.6**	**+1.2**
PVCC				*e*		04 15 57.2	
PVCC				smax	smax		
	comp=N,822nm,0.3s						
PVCC	**Panska Ves**	**1.44**	**219**	*e*PG	**Pg**	**04 15 37.6**	**+1.2**
PVCC				*e*SG	**Sn**	**04 15 57.2**	**+1.5**
	comp=N,822nm,0.3s						
BRG	**Berggiesshubel**	**1.50**	**239**	P	**Pn**	**04 15 38.5**	**+1.5**
BRG						04 15 59.7	
BRG				smax	smax		
	comp=Z,729nm,0.5s						
BRG	**Berggiesshubel**	**1.50**	**239**	*e*Pn	**Pn**	**04 15 38.0**	**+1.0**
BRG				*e*Sg	**Sn**	**04 15 59.5**	**+2.3**
FBE	**Freiberg**	**1.80**	**247**	*e*Sg	**Sg**	**04 16 09.3**	**+2.6**
ANAC	**Anensky vrch**	**1.82**	**150**	*e*Pn	**Pn**	**04 15 42.1**	**+0.6**
	baz=335						
ANAC				*e*Sg	**Sb**	**04 16 06.9**	**+0.5**
	comp=Z,140nm,0.4s,baz=335						
CLL	**Collm**	**1.89**	**260**	*e*P	**Pn**	**04 15 44.0**	**+1.6**
CLL				*e*		04 16 11.0	
CLL	**Collm**	**1.89**	**260**	*e*Pn	**Pn**	**04 15 44.0**	**+1.6**
CLL				*e*Pg	**Pg**	**04 15 47.0**	**+1.9**
CLL				*i*		04 15 50.8	
CLL				*e*Sg	**Sg**	**04 16 11.0**	**+1.4**
	comp=Z,155nm,0.5s						
CLL				*e*		04 16 19.0	
CLL	**Collm**	**1.89**	**260**	*e*Pn	**Pn**	**04 15 43.8**	**+1.4**
GOPC	**GO Pecny, Ondr**	**1.90**	**204**	*e*P	**Pn**	**04 15 43.2**	**+0.6**
GOPC				*e*		04 16 09.2	
GOPC				smax	smax		
	comp=N,185nm,0.6s						
GOPC	**GO Pecny, Ondr**	**1.90**	**204**	*e*PN	**Pn**	**04 15 43.2**	**+0.6**
GOPC				*e*PG	**Pb**	**04 15 45.3**	**+0.9**
GOPC				*e*SG	**Sb**	**04 16 09.2**	**+0.5**
	comp=N,185nm,0.6s						
PRU	**Pruhonice**	**1.90**	**209**	*e*P	**Pn**	**04 15 43.6**	**+1.0**
PRU				*e*		04 16 09.9	
PRU				smax	smax		
	comp=N,198nm,0.5s						
PRU	**Pruhonice**	**1.90**	**209**	*e*PN	**Pn**	**04 15 43.6**	**+1.0**
PRU				*e*PG	**Pb**	**04 15 45.8**	**+1.4**
PRU				*e*SG	**Sb**	**04 16 09.9**	**+1.2**
	comp=N,198nm,0.5s						
RAC	**Raciborz**	**2.11**	**137**	*e*Pn	**Pn**	**04 15 45.4**	**0.0**
RAC				*e*Pg	**Pg**	**04 15 49.8**	**+0.4**
RAC				*e*Sg	**Sg**	**04 16 16.8**	**+0.1**
RAC	**Raciborz**	**2.11**	**137**	*e*P	**Pg**	**04 15 49.7**	**+0.4**
RAC				*e*		04 16 16.8	
MORC	**Moravsky Berou**	**2.13**	**151**	⇑*i*P	**Pn**	**04 15 46.2**	**+0.5**
MORC	**Moravsky Berou**	**2.13**	**151**	S	**Sg**	**04 16 16.8**	**-0.5**
MORC	**Moravsky Berou**	**2.13**	**151**	*e*PN	**Pn**	**04 15 46.3**	**+0.5**
MORC				*e*SG	**Sg**	**04 16 17.1**	**-0.2**
MORC	**Moravsky Berou**	**2.13**	**151**	*e*Pn	**Pn**	**04 15 46.2**	**+0.5**
	baz=336						
MORC				*e*Sg	**Sg**	**04 16 17.1**	**-0.2**
	comp=N,60nm,0.2s,baz=336						
MORC	**Moravsky Berou**	**2.13**	**151**	*e*Pn	**Pn**	**04 15 46.3**	**+0.5**
MORC				*e*Sg	**Sg**	**04 16 17.1**	**-0.2**
OKC	**Ostrava-Krasne**	**2.29**	**142**	*e*P	**Pn**	**04 15 47.7**	**-0.1**
OKC				*e*		04 16 21.1	
OKC				smax	smax		
	comp=N,224nm,0.6s						
OKC	**Ostrava-Krasne**	**2.29**	**142**	*e*Pn	**Pn**	**04 15 47.8**	**-0.1**
OKC				*e*Sg	**Sg**	**04 16 22.6**	**+0.4**
OKC	**Ostrava-Krasne**	**2.29**	**142**	*e*PN	**Pn**	**04 15 47.7**	**-0.1**
OKC				*e*PG	**Pg**	**04 15 52.6**	**-0.1**
OKC				*e*SG	**Sb**	**04 16 21.1**	**+1.3**
	comp=N,224nm,0.6s						
CHZP	**Chorzow**	**2.35**	**124**	*e*Pn	**Pn**	**04 15 48.4**	**-0.3**
CHZP				*e*Pg	**Pg**	**04 15 55.0**	**+1.1**
CHZP				*e*Sn	**Sn**	**04 16 17.1**	**-1.1**
CHZP				*e*Sg	**Sg**	**04 16 24.5**	**+0.2**
VRAC	**Vranov**	**2.38**	**170**	Pn	**Pn**	**04 15 50.2**	**+0.9**
	comp=N,22nm,0.3s,baz=336,slow=15,SNR=126						
VRAC				Pg	**Pg**	**04 15 54.5**	**0.0**
	comp=N,25nm,0.3s,baz=352,slow=18,SNR=28						
VRAC				Lg	Lg	04 16 25.3	
	comp=N,37nm,0.3s,baz=108,slow=23,SNR=12						
VRAC	**Vranov**	**2.38**	**170**	⇓*i*P	**Pn**	**04 15 50.2**	**+0.9**
VRAC	**Vranov**	**2.38**	**170**	S	**Sb**	**04 16 24.2**	**+1.6**
VRAC	**Vranov**	**2.38**	**170**	*e*PN	**Pn**	**04 15 50.2**	**+0.9**
VRAC				*e*SG	**Sg**	**04 16 25.8**	**+0.3**
VRAC	**Vranov**	**2.38**	**170**	*e*Pn	**Pn**	**04 15 50.1**	**+0.9**
	baz=353						
VRAC				*e*Sg	**Sg**	**04 16 25.7**	**+0.3**
	comp=N,89nm,0.3s,baz=353						
TREC	**Trest**	**2.39**	**188**	*e*P	**Pg**	**04 15 54.8**	**+0.2**
TREC	**Trest**	**2.39**	**188**	*e*PG	**Pg**	**04 15 54.8**	**+0.2**
TANN	**Tannenbergstha**	**2.54**	**242**	*e*Pn	**Pn**	**04 15 53.2**	**+1.8**
KRUC	**Moravsky**	**2.61**	**174**	*e*PN	**Pn**	**04 15 53.3**	**+1.0**
KRUC				*e*SG	**Sg**	**04 16 33.1**	**+0.3**
KRUC	**Moravsky**	**2.61**	**174**	*e*Pn	**Pn**	**04 15 53.3**	**+1.0**
	baz=356						
KRUC				*e*Sg	**Sg**	**04 16 33.0**	**+0.3**

	comp=N,100nm,0.5s,baz=356						
NKC	**Novy Kostel**	**2.65**	**239**	*e*P	**Pn**	**04 15 54.7**	**+1.9**
NKC				*e*		04 16 35.3	
NKC				smax	smax		
	comp=N,326nm,0.4s						
NKC	**Novy Kostel**	**2.65**	**239**	*e*PN	**Pn**	**04 15 54.7**	**+1.9**
NKC				*e*PG	**Pg**	**04 16 01.3**	**+1.7**
NKC				*e*SG	**Sg**	**04 16 35.3**	**+1.4**
	comp=N,326nm,0.4s						
OJC	**Ojcow**	**2.82**	**119**	*e*Pn	**Pn**	**04 15 54.2**	**-0.9**
OJC				*e*Pg	**Pg**	**04 16 03.6**	**+0.8**
OJC				*e*Sg	**Sg**	**04 16 39.4**	**+0.1**
OJC	**Ojcow**	**2.82**	**119**	*e*P	**Pn**	**04 15 54.2**	**-0.9**
OJC				*e*		04 16 39.4	
OJC	**Ojcow**	**2.82**	**119**	*e*Pn	**Pn**	**04 15 54.2**	**-0.9**
MOX	**Moxa**	**2.92**	**251**	*e*Pn	**Pn**	**04 15 58.0**	**+1.3**
KHC	**Kasperske Hory**	**2.96**	**212**	*de*P	**Pn**	**04 15 58.1**	**+1.0**
KHC	**Kasperske Hory**	**2.96**	**212**	*e*PN	**Pn**	**04 15 58.3**	**+1.2**
KHC				*e*PG	**Pb**	**04 16 05.0**	**+2.5**
KHC				*e*SN	**Sn**	**04 16 32.9**	**-0.4**
KHC				*e*SG	**Sg**	**04 16 42.9**	**-0.9**
	comp=N,65nm,0.4s						
MANZ	**Manzenberg**	**2.97**	**237**	*e*Pn	**Pn**	**04 15 58.8**	**+1.6**
JAVC	**Velka Javorina**	**3.01**	**158**	*e*PN	**Pn**	**04 15 59.6**	**+1.8**
JAVC				*e*SG	**Sg**	**04 16 46.8**	**+1.4**
ROTZ	**Rotzenmuhle**	**3.05**	**233**	*e*Pn	**Pn**	**04 16 00.1**	**+1.7**
GEC2	**GERESS Array S**	**3.17**	**208**	*e*Pn	**Pn**	**04 16 01.1**	**+1.0**
GERES	**GERESS Array B**	**3.17**	**208**	Pn	**Pn**	**04 16 01.7**	**+1.6**
	comp=N,5.4nm,0.3s,baz=31,slow=13,SNR=102						
GERES				Sn	**Sn**	**04 16 38.4**	**-0.2**
	comp=N,14nm,0.3s,baz=23,slow=28,SNR=4.9						
GERES				Lg	Lg	04 16 48.8	
	comp=N,23nm,0.3s,baz=31,slow=29,SNR=7.1						
WET	**Wettzell**	**3.20**	**219**	*e*Pn	**Pn**	**04 16 02.0**	**+1.5**
LANS	**Liptovska Anna**	**3.36**	**137**	*e*P	**Pn**	**04 16 03.6**	**+0.9**
LANS	**Liptovska Anna**	**3.36**	**137**	*e*PN	**Pn**	**04 16 03.6**	**+0.9**
LANS				*e*PG	**Pg**	**04 16 12.4**	**-0.9**
LANS				*e*SG	**Sg**	**04 16 55.4**	**-1.4**
MODS	**Modra-Piesok**	**3.39**	**165**	*e*P	**Pn**	**04 16 03.3**	**+0.2**
MODS				*e*		04 16 55.0	
MODS				pmax	pmax		
	comp=N,64nm,0.7s						
MODS	**Modra-Piesok**	**3.39**	**165**	*e*PN	**Pn**	**04 16 03.2**	**+0.2**
MODS				*e*PG	**Pg**	**04 16 13.0**	**-0.9**
MODS				*e*SG	**Sb**	**04 16 55.0**	**+3.3**
MODS				*e*LG	Lg	04 17 02.6	
CLZ	**Clausthal**	**3.49**	**275**	*e*Pn	**Pn**	**04 16 07.4**	**+3.1**
BSD	**Bornholm Skovb**	**3.52**	**350**	*i* P	**Pn**	**04 16 05.8**	**+1.0**
BSD				*i* S	**Sn**	**04 16 45.8**	**-1.3**
BSD	**Bornholm Skovb**	**3.52**	**350**	*i* P	**Pn**	**04 16 05.8**	**+1.0**
BSD				*i* S	**Sn**	**04 16 45.8**	**-1.3**
ZST	**Bratislava**	**3.54**	**168**	*e*P	**Pn**	**04 16 06.1**	**+1.0**
ZST				*e*		04 16 59.8	
ZST	**Bratislava**	**3.54**	**168**	*e*PN	**Pn**	**04 16 06.1**	**+1.0**
ZST				*e*PG	**Pg**	**04 16 15.4**	**-1.3**
ZST				*e*SG	**Sg**	**04 16 59.8**	**-2.8**
NIE	**Niedzica**	**3.56**	**127**	*e*Pn	**Pn**	**04 16 06.6**	**+1.3**
NIE				*e*		04 16 16.9	
NIE				*e*Sg	**Sg**	**04 17 04.6**	**+1.5**
NIE	**Niedzica**	**3.56**	**127**	*e*P	**Pn**	**04 16 06.6**	**+1.3**
GRF	**Grafenberg Arr**	**3.61**	**239**	*e*Pn	**Pn**	**04 16 07.6**	**+1.6**
VYHS	**Vyhne**	**3.66**	**149**	*e*P	**Pn**	**04 16 07.2**	**+0.4**
VYHS	**Vyhne**	**3.66**	**149**	*e*PN	**Pn**	**04 16 07.2**	**+0.4**
VYHS				*e*PG	**Pg**	**04 16 20.7**	**+1.6**
CONA	**Conrad Observa**	**3.73**	**181**	*e*Pn	**Pn**	**04 16 09.5**	**+1.7**
	comp=N,14nm,0.4s,SNR=21						
CONA				*e*Pg	**Pg**	**04 16 19.5**	**-0.9**
	comp=N,50nm,0.3s						
CONA				Sg	**Sg**	**04 17 08.0**	**-0.8**
	comp=N,52nm,0.3s						
MOA	**Molln**	**3.97**	**197**	*i* Pn	**Pn**	**04 16 12.5**	**+1.5**
	comp=N,23nm,0.3s,SNR=56						
MOA				Sg	**Sg**	**04 17 17.2**	**+0.9**
	comp=N,44nm,0.4s						
SOP	**Sopron**	**4.00**	**174**	*e*Pn	**Pn**	**04 16 11.0**	**-0.3**
SOP				Sn	**Sn**	**04 17 01.0**	**+2.2**
SOP				*e*Sg	**Sg**	**04 17 18.0**	**+0.8**
STHS	**Stebnicka Huta**	**4.04**	**122**	*e*P	**Pn**	**04 16 12.5**	**+0.5**
STHS				pmax	pmax		
	comp=N,44nm,0.5s						
STHS	**Stebnicka Huta**	**4.04**	**122**	*e*PN	**Pn**	**04 16 12.5**	**+0.5**
STHS				*e*PG	**Pg**	**04 16 26.2**	**-0.1**
STHS				*e*LG	Lg	04 17 28.5	
SRO	**Srobarova**	**4.14**	**158**	*e*P	**Pn**	**04 16 16.8**	**+3.5**
SRO	**Srobarova**	**4.14**	**158**	*e*PN	**Pn**	**04 16 16.8**	**+3.5**
LUNU	**Lund**	**4.26**	**340**	P	**Pn**	**04 16 15.4**	**+0.5**
LUNU				S	**Sn**	**04 17 03.7**	**-1.5**
ARSA	**Arzberg**	**4.42**	**184**	*e*Pn	**Pn**	**04 16 19.2**	**+1.9**
	comp=N,5.8nm,0.3s,SNR=9.0						
ARSA				Sg	**Sg**	**04 17 31.0**	**+0.2**
	comp=N,21nm,0.5s						
PSZ	**Piszkesteto**	**4.52**	**144**	⇑*i*P	**Pn**	**04 16 19.5**	**+0.8**
PSZ	**Piszkesteto**	**4.52**	**144**	*e*Pn	**Pn**	**04 16 20.1**	**+1.4**
PSZ				*e*Sg	**Sg**	**04 17 35.1**	**+1.0**
CSKK	**Cskako**	**4.55**	**160**	*e*Pn	**Pn**	**04 16 20.1**	**+1.1**
CSKK				Sn	**Sn**	**04 17 14.1**	**+1.6**
BUD	**Budapest**	**4.62**	**153**	*e*Pn	**Pn**	**04 16 20.0**	**+0.1**
BJUU	**Bjuv**	**4.76**	**340**	P	**Pn**	**04 16 22.0**	**+0.3**
BJUU				S	**Sn**	**04 17 15.6**	**-1.9**
KOLS	**Kolonicke sedl**	**4.87**	**122**	*e*P	**Pn**	**04 16 23.9**	**+0.5**
KOLS				pmax	pmax		
	comp=N,91nm,1.7s						
KOLS	**Kolonicke sedl**	**4.87**	**122**	*e*PN	**Pn**	**04 16 23.9**	**+0.5**
KOLS				*e*PG	**Pg**	**04 16 42.8**	**+0.6**
KOLS				*e*SG	**Sg**	**04 17 43.0**	**-2.3**
KOLS				*e*LG	Lg	04 18 07.7	
KBA	**Koelnbreinsper**	**4.89**	**202**	*i* Pn	**Pn**	**04 16 25.7**	**+1.8**
	comp=N,20nm,0.4s,SNR=23						
KBA				Sg	**Sg**	**04 17 45.1**	**-0.9**
	comp=N,31nm,0.5s						
TIH	**Tihany**	**4.92**	**164**	*e*Pn	**Pn**	**04 16 23.1**	**-1.0**
TIH				Sn	**Sn**	**04 17 20.1**	**-1.7**
DEL	**Delary**	**4.98**	**346**	P	**Pn**	**04 16 25.7**	**+0.9**
SOKA	**Soboth**	**5.02**	**187**	*i* Pn	**Pn**	**04 16 27.0**	**+1.4**
	comp=N,1.6nm,0.2s						
SOKA				*e*Pg	**Pg**	**04 16 43.6**	**-1.5**
	comp=N,5.9nm,0.3s						
SOKA				Sg	**Sg**	**04 17 52.1**	**+2.0**
	comp=N,5.5nm,0.3s						
UZH	**Uzhgorod**	**5.07**	**124**	⇓*i*P	**Pn**	**04 16 29.9**	**+3.8**
UZH				*e*S	**Sn**	**04 17 29.3**	**+4.1**
WATA	**Walderalm**	**5.19**	**215**	*e*Pn	**Pn**	**04 16 30.3**	**+2.4**
	comp=N,5.3nm,0.3s						
BEHE	**Becsehely**	**5.22**	**174**	*e*Pn	**Pn**	**04 16 31.1**	**+2.9**
WTTA	**Wattenberg**	**5.23**	**214**	*e*Pn	**Pn**	**04 16 30.9**	**+2.4**
	comp=N,3.2nm,0.3s,SNR=6.1						
OBKA	**Obir**	**5.24**	**191**	*i* Pn	**Pn**	**04 16 30.2**	**+1.7**
	comp=N,1.9nm,0.3s						
OBKA				*e*Pg	**Pg**	**04 16 50.1**	**+0.9**
	comp=N,6.8nm,0.3s						
OBKA				Sg	**Sg**	**04 17 57.1**	**0.0**
	comp=N,57nm,0.8s						
MYKA	**Terra Mystica**	**5.26**	**198**	*i* Pn	**Pn**	**04 16 30.4**	**+1.6**
	comp=N,1.7nm,0.3s						
VXJU	**Vaexsjoe**	**5.31**	**354**	P	**Pn**	**04 16 31.0**	**+1.7**
MOTA	**Moosalm**	**5.36**	**218**	*e*Pn	**Pn**	**04 16 31.8**	**+1.7**
	comp=N,5.5nm,0.4s						
RETA	**Reutte**	**5.38**	**221**	*i* Pn	**Pn**	**04 16 31.6**	**+1.3**
	comp=N,3.3nm,0.3s,SNR=6.7						
ABTA	**Abfaltersbach**	**5.41**	**206**	*i* Pn	**Pn**	**04 16 32.9**	**+2.1**
	comp=N,1.5nm,0.2s,SNR=9.4						
SQTA	**Sankt Quirin**	**5.42**	**217**	*i* Pn	**Pn**	**04 16 33.7**	**+2.7**
	comp=N,3.7nm,0.2s						
KALN	**Kalnik**	**5.54**	**177**	*i* P	**Pn**	**04 16 33.8**	**+1.2**
OSKU	**Oskarshamn**	**5.55**	**1**	P	**Pn**	**04 16 34.5**	**+1.8**
VNDS	**Vrh nad Dolski**	**5.62**	**189**	*i* Pn	**Pn**	**04 16 35.6**	**+1.9**
FABU	**Falkenberg**	**5.68**	**342**	P	**Pn**	**04 16 35.4**	**+0.9**
FABU				S	**Sn**	**04 17 36.8**	**-3.6**
WTSB	**Winterswijk**	**5.70**	**277**	*e*Pn	**Pn**	**04 16 36.8**	**+2.1**
	comp=N,10nm,0.3s						
WTSB				*e*Sn	**Sn**	**04 17 39.7**	**-1.1**
MORH	**Mrgy, Hungar**	**5.72**	**161**	Sn	**Sn**	**04 17 40.1**	**-1.3**
PTJ	**Puntijarka**	**5.75**	**180**	P	**Pn**	**04 16 36.8**	**+1.2**
FETA	**Feichten**	**5.77**	**218**	*e*Pn	**Pn**	**04 16 37.2**	**+1.4**
	comp=N,2.8nm,0.7s						
FETA				Sg	**Sg**	**04 18 15.8**	**+1.7**
	comp=N,10nm,0.8s						
GNOU	**Gnosjoe**	**5.79**	**348**	P	**Pn**	**04 16 37.1**	**+1.2**
CRES	**Cresnjev**	**5.85**	**184**	*i* Pn	**Pn**	**04 16 38.5**	**+1.7**
DAVA	**Damuels**	**5.91**	**225**	*e*Pn	**Pn**	**04 16 38.8**	**+1.0**
	comp=N,3.0nm,0.3s						
DAVA				Sg	**Sg**	**04 18 23.4**	**+4.9**
	comp=N,15nm,0.5s						
EKSU	**Eksjoe**	**5.94**	**357**	P	**Pn**	**04 16 39.7**	**+1.7**
BFO	**Black Forest**	**5.95**	**239**	*i* P	**Pn**	**04 16 36.8**	**-1.4**
OZLJ	**Ozalj**	**6.06**	**183**	*i* P	**Pn**	**04 16 41.6**	**+2.0**
DAVOX	**Davos/Dischmat**	**6.30**	**222**	Pn	**Pn**	**04 16 44.6**	**+1.4**
	comp=N,1.0nm,0.3s,baz=6.6,slow=15,SNR=8.5						
DAVOX				Sn	**Sn**	**04 17 55.9**	**-0.1**
	comp=N,0.6nm,0.3s,baz=162,slow=22,SNR=1.2						
DAVOX				Lg	Lg	04 18 29.4	
	comp=N,1.5nm,0.3s,baz=156,slow=23,SNR=3.3						
CDF	**Champ du Feu**	**6.47**	**243**	*e*Pn	**Pn**	**04 16 44.9**	**-0.6**
CDF	**Champ du Feu**	**6.47**	**243**	*e*Pg	**Pg**	**04 17 10.4**	**-2.5**
CDF				*e*Sg	**Sg**	**04 18 33.8**	**-2.9**
	comp=N,24nm,0.6s						
SIRR	**Siria**	**6.56**	**143**	⇑*i*P	**Pn**	**04 16 47.4**	**+0.8**
DRGR		**6.57**	**135**	⇑*i*P	**Pn**	**04 16 47.3**	**+0.5**
SLIT	**Slitere, Latvi**	**7.01**	**29**	*e*P	**Pn**	**04 16 54.1**	**+1.4**
HINF	**Hinteralfeld**	**7.05**	**241**	*e*Pn	**Pn**	**04 16 52.4**	**-0.9**
HINF	**Hinteralfeld**	**7.05**	**241**	*e*Pg	**Pg**	**04 17 20.7**	**-3.2**
HINF				*e*Sg	**Sg**	**04 18 51.6**	**-3.5**
	comp=N,25nm,0.7s						
BZS	**Buzias**	**7.11**	**146**	⇑*i*P	**Pn**	**04 16 55.4**	**+1.4**
NVLJ	**Novalja**	**7.14**	**186**	*i* P	**Pn**	**04 16 56.2**	**+1.7**
IIGN	**Ignalina**	**7.14**	**55**	*e*P	**Pn**	**04 16 59.1**	**+4.6**
ISAL	**Salakas**	**7.20**	**53**	*e*P	**Pn**	**04 16 57.0**	**+1.8**
HAU	**Haudompre**	**7.22**	**243**	*e*Pn	**Pn**	**04 16 56.0**	**+0.4**
HAU	**Haudompre**	**7.22**	**243**	*e*Pg	**Pg**	**04 17 24.0**	**-3.1**
HAU				*e*Sg	**Sg**	**04 18 57.2**	**-3.3**
GIVF	**Givet**	**7.22**	**262**	*e*Pn	**Pn**	**04 16 55.1**	**-0.6**
GIVF	**Givet**	**7.22**	**262**	*e*Pg	**Pg**	**04 17 24.2**	**-3.0**
GIVF				*e*Sg	**Sg**	**04 18 58.1**	**-2.7**
	comp=N,11nm,0.5s						
BURAR	**Bucovina Array**	**7.24**	**120**	⇓*i*P	**Pn**	**04 16 55.6**	**-0.3**
PAGF	**Fort de Pagny**	**7.28**	**249**	*e*Pn	**Pn**	**04 16 55.3**	**-1.2**
	baz=78						
PAGF	**Fort de Pagny**	**7.28**	**249**	*e*Pg	**Pg**	**04 17 25.7**	**-2.7**
PAGF				*e*Sg	**Sg**	**04 18 59.4**	**-3.3**
	comp=N,34nm,0.7s						
IZAR	**Zarasai**	**7.34**	**52**	*e*P	**Pn**	**04 16 55.8**	**-1.5**
BAIF	**Baives**	**7.62**	**262**	*e*Pn	**Pn**	**04 17 00.4**	**-0.6**
BAIF	**Baives**	**7.62**	**262**	*e*Pg	**Pg**	**04 17 32.2**	**-2.5**
BAIF				*e*Sg	**Sg**	**04 19 10.1**	**-3.2**
	comp=N,12nm,0.7s						
DUGI	**Dugi Otok**	**7.70**	**185**	*i* P	**Pn**	**04 17 03.9**	**+1.8**
MEZF	**Maizieres J'vi**	**7.70**	**250**	*e*Pn	**Pn**	**04 17 01.3**	**-0.9**
	baz=63						
MEZF	**Maizieres J'vi**	**7.70**	**250**	*e*Pg	Pg	04 17 32.5	-3.9
MEZF				*e*Sg	**Sg**	**04 19 12.4**	**-3.7**
	comp=N,13nm,0.7s						
GZR	**Gura Zlata**	**7.72**	**142**	⇓*i*P	**Pn**	**04 17 03.8**	**+1.2**
MORI	**Morici**	**7.80**	**181**	*i* P	**Pn**	**04 17 07.1**	**+3.6**
SFTF	**Sexfontaines**	**7.86**	**248**	*e*Pn	**Pn**	**04 17 03.5**	**-0.8**
SFTF	**Sexfontaines**	**7.86**	**248**	*e*Pg	Pg	04 17 35.5	-3.8
SFTF				*e*Sg	**Sg**	**04 19 17.2**	**-3.8**
MDVR	**Moldovita**	**7.87**	**149**	⇓*i*P	**Pn**	**04 17 05.3**	**+0.7**
CABF	**La Chapelle**	**8.21**	**236**	*e*Pn	**Pn**	**04 17 08.0**	**-1.3**
CABF	**La Chapelle**	**8.21**	**236**	*e*Pg	Pg	04 17 42.6	-3.6
CABF				*e*Sn	**Sn**	**04 18 36.3**	**-6.5**
CABF				*e*Sg	**Sg**	**04 19 28.2**	**-4.3**
	comp=N,43nm,1.0s						
AKASG	**Malin Array Be**	**8.38**	**91**	Pn	**Pn**	**04 17 11.1**	**-0.5**
	comp=N,3.5nm,0.3s,baz=277,slow=12,SNR=15						
AKASG				Sn	**Sn**	**04 18 41.4**	**-5.4**
	comp=N,2.1nm,0.3s,baz=265,slow=25,SNR=4.9						
AKASG				Lg	Lg	04 19 39.7	
	comp=N,0.8nm,0.3s,baz=279,slow=29,SNR=2.9						
HFS	**Hagfors**	**8.59**	**352**	Pn	**Pn**	**04 17 15.3**	**+0.9**
	comp=N,0.5nm,0.3s,baz=168,slow=14,SNR=41						
HFS				Sn	**Sn**	**04 18 49.2**	**-2.7**
	comp=N,0.4nm,0.3s,baz=172,slow=30,SNR=3.2						
HFS				Lg	Lg	04 19 45.6	
	comp=N,0.5nm,0.3s,baz=170,slow=28,SNR=2.7						
LPL	**La Plagne**	**8.67**	**228**	*e*Pn	**Pn**	**04 17 14.1**	**-1.6**
LPL	**La Plagne**	**8.67**	**228**	*e*Pg	Pg	04 17 51.0	-3.9
LPL				*e*Sn	**Sn**	**04 18 47.2**	**-7.1**
LPL				*e*Sg	**Sg**	**04 19 42.3**	**-4.9**
	comp=N,8.3nm,0.7s						
LPG	**La Plagne**	**8.68**	**228**	*e*Pn	**Pn**	**04 17 14.6**	**-1.3**
LPG	**La Plagne**	**8.68**	**228**	*e*Pg	Pg	04 17 51.2	-3.8
LPG				*e*Sn	**Sn**	**04 18 47.6**	**-6.9**
LPG				*e*Sg	**Sg**	**04 19 42.3**	**-5.1**
	comp=N,26nm,1.2s						
LOR	**Lormes**	**9.03**	**246**	*e*Pn	**Pn**	**04 17 19.4**	**-1.0**
	baz=67						
LOR	**Lormes**	**9.03**	**246**	*e*Pg	Pn	04 17 57.4	+37
LOR				*e*Sg	Sn	04 19 53.8	+51
	comp=N,5.3nm,0.5s						
VSU	**Vasula**	**9.19**	**38**	⇑*e*P	**Pn**	**04 17 22.4**	**-0.1**
MBDF	**Montbardon**	**9.26**	**225**	*e*Pn	**Pn**	**04 17 24.1**	**+0.4**
MBDF	**Montbardon**	**9.26**	**225**	*e*Pg	Pn	04 18 00.2	+36
MBDF				*e*Sn	Sn	04 19 00.8	-7.8
MBDF				*e*Sg		04 20 00.3	
	comp=N,4.3nm,0.6s						
SSF	**Saint Saulge**	**9.34**	**245**	*e*Pn	**Pn**	**04 17 23.6**	**-1.1**
SSF	**Saint Saulge**	**9.34**	**245**	*e*Pg	Pn	04 18 04.0	+39
SSF				*e*Sg	Sn	04 20 03.1	+53
	comp=N,6.0nm,0.6s						
SMF	**Signal de Mont**	**9.40**	**242**	*e*Pn	**Pn**	**04 17 25.0**	**-0.5**
SMF				*e*Sg	Sn	04 20 05.2	+53
	comp=N,22nm,0.9s						
ORIF	**Oris-en-Rattie**	**9.52**	**229**	*e*Pn	**Pn**	**04 17 26.7**	**-0.5**
ORIF	**Oris-en-Rattie**	**9.52**	**229**	*e*Pg	Pn	04 18 05.5	+38
ORIF				*e*Sn	Sn	04 19 07.2	-7.7
ORIF				*e*Sg		04 20 08.3	
	comp=N,13nm,0.9s						
AVF	**Avril sur Loir**	**9.58**	**244**	*e*Pn	**Pn**	**04 17 28.0**	**0.0**
AVF				*e*Sg	Sn	04 20 11.0	+55
	comp=N,17nm,1.1s						
SBF	**Sospel**	**9.68**	**220**	*e*Pn	**Pn**	**04 17 27.7**	**-1.7**
HYF	**Humbligny**	**9.73**	**248**	*e*Pn	**Pn**	**04 17 29.8**	**-0.2**
HYF				*e*Sg	Sn	04 20 15.5	+56
NOA	**NORSAR Array B**	**9.77**	**346**	Pn	**Pn**	**04 17 29.4**	**-1.1**
	comp=N,0.0nm,0.3s,baz=211,slow=13,SNR=11						
NOA				Lg	Lg	04 20 17.8	
	comp=N,0.0nm,0.3s,baz=156,slow=21,SNR=4.1						
BGF	**Bois d'Agland**	**10.00**	**244**	*e*Pn	**Pn**	**04 17 31.8**	**-1.9**
BGF	**Bois d'Agland**	**10.00**	**244**	*e*Pg	Pn	04 18 15.1	+41
BGF				*e*Sg	Sn	04 20 24.3	+58
	comp=N,12nm,0.5s						
FRF	**La Foret Royal**	**10.25**	**221**	*e*Pn	**Pn**	**04 17 35.6**	**-1.6**
PGF	**Pioggiola**	**10.27**	**210**	*e*Pn	**Pn**	**04 17 36.0**	**-1.6**
SMRF	**Simiane la Rot**	**10.38**	**226**	*e*Pn	**Pn**	**04 17 37.5**	**-1.5**
LMR	**La Mourre**	**10.50**	**221**	*e*Pn	**Pn**	**04 17 38.5**	**-2.0**
TCF	**Toulx Ste Croi**	**10.52**	**245**	*e*Pn	**Pn**	**04 17 40.1**	**-0.7**
TCF				*e*Sg	Sn	04 20 40.3	+61
	comp=N,8.7nm,0.8s						
LDF	**La Druitiere**	**10.78**	**260**	*e*Pn	**Pn**	**04 17 43.2**	**-1.2**
LDF	**La Druitiere**	**10.78**	**260**	*e*Pg	Pn	04 18 32.3	+48
LDF				*e*Sn	Sn	04 19 38.1	-7.5
LDF				*e*Sg		04 20 48.5	
FINES	**FINESS Array B**	**11.27**	**26**	Pn	**Pn**	**04 17 50.2**	**-0.7**
	comp=N,0.8nm,0.3s,baz=208,slow=12,SNR=38						
FINES				Sn	**Sn**	**04 19 50.0**	**-7.4**
	comp=N,0.7nm,0.3s,baz=209,slow=21,SNR=6.2						
FINES				Lg	Lg	04 21 06.9	
	comp=N,0.2nm,0.3s,baz=218,slow=24,SNR=2.0						
FINES	**FINESS Array B**	**11.27**	**26**	*e*P	**Pn**	**04 17 50.5**	**-0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RJF	**Les Rejaudoux**	**11.50**	**242**	*e*Pn	**Pn**	**04 17 53.0**	**-1.2**
RJF	**Les Rejaudoux**	**11.50**	**242**	*e*Pg	Pn	04 18 42.4	+48
RJF				*e*Sg		04 21 10.7	
MFF	**Saint Martin d**	**11.70**	**251**	*e*Pn	**Pn**	**04 17 56.1**	**-0.9**
EKA	**Eskdalemuir Ar**	**11.96**	**295**	Pn	**Pn**	**04 17 58.8**	**-1.8**
	baz=104,slow=14,SNR=16						
EKA				Sn	Sn	04 20 07.0	-7.6
	baz=103,slow=24,SNR=3.4						
LFF	**La Frestale**	**12.15**	**242**	*e*Pn	**Pn**	**04 18 02.4**	**-0.8**
LFF	**La Frestale**	**12.15**	**242**	*e*Pg	Pn	04 18 55.2	+52
LFF				*e*Sg		04 21 30.8	
	comp=Z,9.8nm,0.8s						
SGMF	**Saint Gilles**	**12.41**	**261**	*e*Pn	**Pn**	**04 18 04.4**	**-2.2**
ROSF	**Rostrenen**	**12.82**	**263**	*e*Pn	**Pn**	**04 18 08.9**	**-3.3**
ARCES	**ARCESS Array B**	**18.49**	**11**	Pn	**P**	**04 19 23.6**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=195,slow=13,SNR=12						
ARCES	**ARCESS Array B**	**18.49**	**11**	*e*P	**P**	**04 19 24.0**	**-2.2**
AKTO	**Aktyubinsk**	**26.20**	**76**	P	**P**	**04 20 46.0**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=299,slow=10,SNR=3.8						
AKTO	**Aktyubinsk**	**26.20**	**76**	P	**P**	**04 20 46.0**	**+1.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**40.10**	**202**	P	**P**	**04 22 46.9**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=3.2,slow=7.7,SNR=2.3						
MKAR	**Makanchi Array**	**42.24**	**69**	P	**P**	**04 23 05.3**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=314,slow=7.2,SNR=3.9						
SONM	**Songino Array**	**54.90**	**55**	P	**P**	**04 24 43.7**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=297,slow=6.3,SNR=2.6						
ILAR	**Eielson Array**	**63.15**	**352**	P	**P**	**04 25 40.4**	**+2.5**
	comp=Z,0.5nm,0.3s,baz=28,slow=9.7,SNR=4.7						
PDAR	**Pinedale Array**	**74.77**	**322**	P	**P**	**04 26 53.2**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=46,slow=6.4,SNR=4.4						
TXAR	**Lajitas Array**	**83.55**	**310**	P	**P**	**04 27 41.7**	**+2.8**
	comp=Z,0.1nm,0.4s,baz=54,slow=4.7,SNR=2.3						

EAF ***13*** *04:21:53.9±1.5, 27°.31S×27°.62E, h0^{km}±22^{km}, MD4.1*

BUL ***13*** *04:21:55.2±1.9, 27°.36S×27°.69E, h0^{km}±23^{km}, MD4.6*

PRE ***13*** *04:21:55.0±1.3, 26°.91S×26°.80E, h2^{km}, ML3.3*

ISCJB ***13*** *04:21:55.6±0.7, 26°.90S±0°.03×26°.77E±0°.04, h15^{km}±7^{km}, mb4.1/7, MS2.9/1, Error ellipse: s-maj=6.4km s-min=4.3km az=43.1*

NEIC ***13*** *04:21:56.9±1.6, 26°.92S×26°.74E, h5^{km}, mb4.4/3, Error ellipse: s-maj=20.4km s-min=6.1km az=273.0*

IDC ***13*** *04:21:56.5±1.0, 26°.87S×26°.68E, h0^{km}, mb3.8/4, mb1 4.0/10, mb1mx3.7/49, mbtmp4.0/10, ML3.7/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/27, Error ellipse: s-maj=20.4km s-min=10.5km az=95.0*

ISC 13 04:21:55.5±1.1, **26°.88S**±0°.03×**26°.77E**±0°.03, **h6^{km}**±8^{km}, **n52, σ1^{s}.84**/84, **mb4.2**/7, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.53**	**95**	*e*P	**Pg**	**04 22 04.9**	**-0.8**
PRYS				*e*S	**Sg**	**04 22 11.5**	**-1.1**
PRYS				AML	AML	04 22 16.9	
	comp=Z,4µm,0.7s						
WDLM	**Western Deep L**	**0.74**	**52**	*e*P	**Pg**	**04 22 09.3**	**-0.3**
WDLM				*e*S	**Sg**	**04 22 19.3**	**+0.1**
WDLM				AML	AML	04 22 19.4	
	comp=Z,4µm,0.2s						
KLOF	**Kloof**	**0.92**	**55**	*e*P	**Pb**	**04 22 13.4**	**-0.5**
KLOF				*e*S	**Sg**	**04 22 25.2**	**+0.2**
KLOF				AML	AML	04 22 30.7	
	comp=Z,6µm,0.2s						
KSR	**Koster**	**1.03**	**6**	*e*P	**Pb**	**04 22 15.4**	**-0.4**
KSR				*e*S	**Sb**	**04 22 29.4**	**-0.1**
KSR				AML	AML	04 22 37.2	
	comp=Z,849nm,0.8s						
SWZ	**Schweizer**	**1.32**	**256**	*e*P	**Pn**	**04 22 19.9**	**-0.7**
SWZ				*e*S	**Sn**	**04 22 39.2**	**+0.7**
SWZ				AML	AML	04 22 48.9	
	comp=Z,629nm,0.7s						
ERPM	**east rand prop**	**1.42**	**68**	*e*P	**Pg**	**04 22 23.5**	**+0.8**
ERPM				*e*S	**Sn**	**04 22 42.2**	**+1.2**
ERPM				AML	AML	04 22 45.9	
	comp=Z,398nm,0.6s						
LBTB	**Lobatse**	**2.13**	**330**	Pn	**Pb**	**04 22 34.2**	**-0.4**
	comp=Z,47nm,0.3s,baz=149,slow=16,SNR=399						
LBTB				Pg	**Pg**	**04 22 35.6**	**-0.8**
	comp=Z,47nm,0.3s,baz=152,slow=14,SNR=398						
LBTB				Lg	Lg	04 23 02.3	
	comp=Z,281nm,0.3s,baz=49,slow=18,SNR=62						
LBTB	**Lobatse**	**2.13**	**330**	*e*Pn	**Pb**	**04 22 33.8**	**-0.8**
LBTB				*e*Lg	Lg	04 23 02.3	
LBTB	**Lobatse**	**2.13**	**330**	*e*P	**Pb**	**04 22 33.8**	**-0.8**
LBTB				*e*S	**Sn**	**04 22 59.5**	**+0.9**
LBTB				AML	AML	04 23 17.5	
	comp=Z,289nm,1.1s						
BOSA	**Boshof**	**2.19**	**217**	*i* P	**Pb**	**04 22 34.1**	**-1.4**
BOSA				*i* S	**Sg**	**04 23 05.6**	**-0.3**
BOSA	**Boshof**	**2.19**	**217**	Pn	**Pn**	**04 22 33.6**	**+1.1**
	comp=Z,10.0nm,0.3s,baz=39,slow=12,SNR=102						
BOSA				Pg	**Pb**	**04 22 36.0**	**+0.4**
	comp=Z,11nm,0.3s,baz=39,slow=15,SNR=68						
BOSA				Lg	Lg	04 23 03.9	
	comp=Z,35nm,0.3s,baz=315,slow=17,SNR=21						
BOSA	**Boshof**	**2.19**	**217**	*e*Pn	**Pn**	**04 22 33.4**	**+0.9**
BOSA	**Boshof**	**2.19**	**217**	*e*P	**Pn**	**04 22 32.8**	**+0.3**
BOSA				*e*S	**Sn**	**04 23 00.2**	**+0.2**
BOSA				AML	AML	04 23 14.4	
	comp=Z,130nm,0.6s						
BOSA	**Boshof**	**2.19**	**217**	*i* P	**Pb**	**04 22 34.1**	**-1.4**
BOSA				*i* S	**Sg**	**04 23 05.6**	**-0.3**
BOSA	**Boshof**	**2.19**	**217**	*i* P	**Pb**	**04 22 34.1**	**-1.4**
BOSA				*i* S	**Sg**	**04 23 05.6**	**-0.3**
UPI	**Upington**	**5.12**	**252**	*e*P	**Pn**	**04 23 14.1**	**+1.4**
UPI				*e*S	**Sn**	**04 24 11.9**	**-0.3**
UPI				AML	AML	04 24 41.6	
	comp=Z,68nm,0.6s						
MSNA	**Messina**	**5.39**	**34**	*i* P	**Pn**	**04 23 15.7**	**-0.9**
MSNA				*i* S	**Sn**	**04 24 14.8**	**-4.2**
MSNA	**Messina**	**5.39**	**34**	*e*P	**Pn**	**04 23 16.5**	**0.0**
MSNA				*e*S	**Sn**	**04 24 16.0**	**-3.0**
MSNA				AML	AML	04 24 26.5	
	comp=Z,37nm,0.5s						
MSNA	**Messina**	**5.39**	**34**	*i* P	**Pn**	**04 23 15.7**	**-0.9**
MSNA				*i* S	**Sn**	**04 24 14.8**	**-4.2**
MSNA	**Messina**	**5.39**	**34**	*i* P	**Pn**	**04 23 15.7**	**-0.9**
MSNA				*i* S	**Sn**	**04 24 14.8**	**-4.2**
KEIM	**Keimoes**	**5.45**	**249**	*e*P	**Pn**	**04 23 19.2**	**+1.8**
KEIM				*e*S	**Sn**	**04 24 19.5**	**-1.0**
KEIM				AML	AML	04 24 52.1	
	comp=Z,53nm,0.5s						
MATP	**Matopo**	**6.61**	**14**	*i* P	**Pn**	**04 23 34.8**	**+1.5**
MATP				*i* S	**Sn**	**04 24 48.6**	**-0.6**
MATP	**Matopo**	**6.61**	**14**	Pn	**Pn**	**04 23 34.5**	**+1.1**
	comp=Z,4.1nm,0.3s,baz=195,slow=13,SNR=78						
MATP				Sn	**Sn**	**04 24 46.6**	**-2.5**
	comp=Z,3.8nm,0.3s,baz=161,slow=5.6,SNR=9.2						
MATP				Lg	Lg	04 25 16.4	
	comp=Z,9.1nm,0.3s,baz=95,slow=15,SNR=4.4						
MATP	**Matopo**	**6.61**	**14**	*i* P	**Pn**	**04 23 34.8**	**+1.5**
MATP				*i* S	**Sn**	**04 24 48.6**	**-0.6**
MATP	**Matopo**	**6.61**	**14**	*i* P	**Pn**	**04 23 34.8**	**+1.5**
MATP				*i* S	**Sn**	**04 24 48.6**	**-0.6**
BLWY	**Bulawayo**	**6.91**	**14**	*i* P	**Pn**	**04 23 38.6**	**+1.1**
BLWY				*i* S	**Sn**	**04 24 56.9**	**+0.3**
BLWY	**Bulawayo**	**6.91**	**14**	*i* P	**Pn**	**04 23 38.6**	**+1.1**
BLWY				*i* S	**Sn**	**04 24 56.9**	**+0.3**
BLWY	**Bulawayo**	**6.91**	**14**	*i* P	**Pn**	**04 23 38.6**	**+1.1**
BLWY				*i* S	**Sn**	**04 24 56.9**	**+0.3**
BUFB	**Buffelsbos**	**7.46**	**193**	*e*P	**Pn**	**04 23 45.5**	**+0.7**
BUFB				*e*S	**Sn**	**04 25 05.5**	**-4.2**
BUFB				AML	AML	04 25 11.6	
	comp=Z,7.6nm,0.6s						
SUR	**Sutherland**	**7.55**	**222**	Pn	**Pn**	**04 23 47.1**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=42,slow=9.4,SNR=14						
SUR				Sn	**Sn**	**04 25 09.8**	**-2.4**
	comp=Z,1.0nm,0.3s,baz=134,slow=23,SNR=2.1						
SUR				Lg	Lg	04 25 48.8	
	comp=Z,2.9nm,0.3s,baz=314,slow=20,SNR=8.6						
SUR	**Sutherland**	**7.55**	**222**	*e*Pn	**Pn**	**04 23 47.1**	**+0.9**
SUR				*e*Sn	**Sn**	**04 25 09.8**	**-2.4**
SUR				*e*Lg	Lg	04 25 50.2	
CVNA	**Calvinia**	**7.66**	**232**	*e*P	**Pn**	**04 23 48.2**	**+0.6**
CVNA				*e*S	**Sn**	**04 25 10.8**	**-3.9**
CVNA				AML	AML	04 25 59.3	
	comp=Z,56nm,0.7s						
KOMG	**Komaggas**	**8.69**	**248**	*e*P	**Pn**	**04 24 02.4**	**+0.7**
KOMG				*e*S	**Sn**	**04 25 36.1**	**-3.8**
KOMG				AML	AML	04 26 38.9	
	comp=Z,17nm,0.7s						
WIN	**Windhoek**	**9.78**	**294**	*e*Pn	**Pn**	**04 24 17.9**	**+1.0**
TSUM	**Tsumeb**	**11.39**	**310**	Pn	**Pn**	**04 24 38.8**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=129,slow=14,SNR=14						
TSUM				Lg	Lg	04 27 50.7	
	comp=Z,0.6nm,0.3s,baz=263,slow=0.5,SNR=6.2						
LSZ	**Lusaka**	**11.62**	**7**	*i* P	**Pn**	**04 24 41.9**	**-0.1**
LSZ	**Lusaka**	**11.62**	**7**	Pn	**Pn**	**04 24 41.8**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=191,slow=12,SNR=39						
LSZ				Sn	**Sn**	**04 26 46.1**	**-6.1**
	comp=Z,0.8nm,0.3s,baz=130,slow=5.3,SNR=3.3						
LSZ				Lg	Lg	04 28 01.7	
	comp=Z,1.7nm,0.3s,baz=283,slow=20,SNR=5.8						
LSZ	**Lusaka**	**11.62**	**7**	*e*Pn	**Pn**	**04 24 41.2**	**-0.8**
LSZ				*e*Sn	**Sn**	**04 26 46.1**	**-6.1**
LSZ	**Lusaka**	**11.62**	**7**	*i* P	**Pn**	**04 24 41.9**	**-0.1**
LSZ	**Lusaka**	**11.62**	**7**	*i* P	**Pn**	**04 24 41.9**	**-0.1**
OPO	**Ambohidratompo**	**20.55**	**71**	LR	LR	04 34 59.3	
	comp=Z,60nm,20.8s,baz=54,slow=38						
TOA0	**Torodi Ar. Sit**	**46.65**	**325**	*e*P	**P**	**04 30 25.5**	**+0.6**
	comp=Z,23nm,2.0s						
TORD	**Torodi Ar. Bea**	**46.65**	**325**	P	**P**	**04 30 25.8**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=152,slow=7.5,SNR=17						
TOA1	**Torodi Ar. Sit**	**46.66**	**325**	*e*P	**P**	**04 30 25.8**	**+0.8**
SNAA	**Sanae**	**47.76**	**192**	*e*P	**P**	**04 30 34.3**	**+1.3**
	comp=Z,15nm,2.0s						
BRTR	**Keskin Array B**	**66.57**	**6**	P	**P**	**04 32 48.6**	**+2.2**

	comp=Z,0.4nm,0.8s,baz=183,slow=5.2,SNR=2.8						
BR101	**Keskin Array S**	**66.57**	**6**	eP	**P**	**04 32 48.6**	**+2.2**
VNDA	**Vanda**	**72.46**	**171**	P	**P**	**04 33 24.2**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=230,slow=3.3,SNR=4.0						
ASAR	**Alice Springs**	**93.54**	**119**	P	**P**	**04 35 15.1**	**+2.2**
	comp=Z,0.5nm,0.9s,baz=224,slow=4.5,SNR=4.5						
AS31	**Alice Springs**	**93.54**	**119**	eP	**P**	**04 35 15.1**	**+2.2**
	comp=Z,2.2nm,1.4s						
NV01	**Mina Array Sit**	**148.60**	**300**	ePKPbc	**PKPab**	**04 41 46.3**	**-1.0**
NVAR	**Mina Array Bea**	**148.60**	**300**	PKPbc	**PKPab**	**04 41 46.3**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=102,slow=3.8,SNR=8.3						

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*SJA **13** 04:24:22.6±1.0, 34°.28S×66°.77W, h5km±7km, ML4.2, MW3.7, Fault plane solution: NP1:φs136.40000°, δ53.30000°, λ131.10000°.*
*NEIC **13** 04:24:26.0±0.0, 34°.35S×66°.63W, h11km, MD4.2(SJA), After SJA.*
NEIC Felt [IV] at Villa Mercedes.
*IDC **13** 04:24:26.9±1.5, 34°.29S×67°.29W, h0km, mb3.5/1, mb1 3.7/7, mb1mx3.6/25, mbtmp3.6/7, ML3.8/6, Error ellipse: s-maj=28.4km s-min=14.9km az=84.0*
ISC 13 04:24:27.2±2.4**, 34°.29S**±0°.06×**66°.81W**±0°.05**, h14**km±21km**, n46, σ1ˢ.19**/57**, 14C-5D, San Luis Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACAN	**Cantantal**	**2.03**	**351**	⇓eP	**Pn**	**04 25 00.4**	**-0.7**
ACAN				i S	**Sb**	**04 25 27.7**	**-1.4**
MRA	**San Martin**	**2.07**	**26**	⇑iP	**Pn**	**04 25 01.0**	**-0.7**
MRA				i S	**Sn**	**04 25 27.3**	**-0.2**
MRA				IAML		04 25 33.5	
	comp=Z,1μm,0.2s						
COIS	**El Sosneado**	**2.44**	**250**	⇑eP	**Pn**	**04 25 06.0**	**-0.7**
PUMA	**Malargue**	**2.48**	**240**	eP	**Pn**	**04 25 06.8**	**-0.4**
RTCV	**Cerro Valdivia**	**2.82**	**329**	⇑iP	**Pn**	**04 25 10.9**	**-1.0**
LMEL	**Las Melosas**	**2.85**	**278**	eP	**Pn**	**04 25 13.6**	**+1.2**
LMEL				i S	**Sb**	**04 25 53.2**	**+0.4**
CFA	**Coronel Fontan**	**2.93**	**335**	Pn	**Pn**	**04 25 12.4**	**-1.1**
	comp=Z,6.1nm,0.3s,baz=164,slow=14,SNR=156						
CFA				Pg	**Pb**	**04 25 18.1**	**-1.2**
	comp=Z,38nm,0.3s,baz=165,slow=17,SNR=104						
CFA				Sn	**Sn**	**04 25 47.8**	**-0.7**
	comp=Z,84nm,0.3s,baz=168,slow=12,SNR=9.7						
CFA				Lg	Lg	04 25 56.5	
	comp=Z,190nm,0.3s,baz=65,slow=22,SNR=16						
CFA	**Coronel Fontan**	**2.93**	**335**	⇓iP	**Pn**	**04 25 12.4**	**-1.1**
CFA				eS	**Sn**	**04 25 48.1**	**-0.4**
AUSP	**Uspallata**	**2.98**	**313**	⇑eP	**Pn**	**04 25 14.4**	**0.0**
FCH	**Farellones**	**3.05**	**287**	eP	**Pn**	**04 25 17.0**	**+1.6**
FCH				i S	**Sb**	**04 25 58.8**	**+0.1**
ZON	**Zonda**	**3.15**	**330**	⇑iP	**Pn**	**04 25 15.7**	**-0.8**
ZON				eS	**Sn**	**04 25 53.9**	**-0.1**
ZON				IAML		04 26 06.1	
	comp=Z,548nm,0.3s						
CLCH	**Cerro Calan**	**3.23**	**285**	eP	**Pb**	**04 25 22.4**	**-2.0**
RTLS	**Leoncito**	**3.24**	**319**	⇓eP	**Pn**	**04 25 17.4**	**-0.5**
RTLS				IAML		04 26 24.4	
	comp=Z,263nm,0.4s						
RTLL	**Cerro Villicun**	**3.27**	**334**	⇑eP	**Pn**	**04 25 17.4**	**-0.7**
RTLL				i S	**Sn**	**04 25 56.9**	**+0.1**
RTLL				AMSN		04 25 57.1	
	comp=Z,826nm,0.3s						
PEL	**Peldehue**	**3.42**	**288**	ePn	**Pn**	**04 25 21.6**	**+1.3**
PEL	**Peldehue**	**3.42**	**288**	eP	**Pn**	**04 25 22.6**	**+2.4**
TCA	**Tanti**	**3.48**	**33**	⇑iP	**Pn**	**04 25 19.8**	**-1.3**
TCA				eSg	**Sb**	**04 26 12.3**	**+1.4**
TCA				IAML		04 26 18.3	
	comp=Z,531nm,0.2s						
AMOG	**MOGNA**	**3.63**	**336**	⇑eP	**Pn**	**04 25 22.8**	**-0.3**
AMOG				ePg	**Pb**	**04 25 31.6**	**+0.4**
AMOG				eSg	**Sb**	**04 26 18.2**	**+3.1**
APLL	**PUNTA DE LOS L**	**3.89**	**4**	eP	**Pn**	**04 25 26.5**	**-0.1**
APLL				IAML		04 26 40.3	
	comp=Z,240nm,0.6s						
ACCO	**Cerro Coronel**	**4.15**	**332**	eP	**Pn**	**04 25 31.3**	**+0.8**
GO05	**Huala**	**4.28**	**259**	ePn	**Pn**	**04 25 31.6**	**-0.4**
GO05	**Huala**	**4.28**	**259**	eP	**Pn**	**04 25 33.3**	**+1.3**
AROD	**Rodeo**	**4.69**	**330**	i P	**Pn**	**04 25 38.4**	**+0.6**
ACLC	**CERRO LA CRUZ**	**4.85**	**359**	⇓eP	**Pn**	**04 25 39.5**	**-0.4**
AGUA	**GUANDACOL**	**4.99**	**343**	eP	**Pn**	**04 25 42.2**	**+0.3**
COCH	**Cobquecura**	**5.23**	**248**	⇑iP	**Pn**	**04 25 48.0**	**+3.0**
GO04	**Tololo Observa**	**5.31**	**319**	ePn	**Pn**	**04 25 46.7**	**+0.3**
GO04	**Tololo Observa**	**5.31**	**319**	⇑eP	**Pn**	**04 25 47.2**	**+0.8**
GO04	**Tololo Observa**	**5.31**	**319**	eP	**Pn**	**04 25 47.1**	**+0.8**
TRQA	**Tornquist**	**5.42**	**135**	⇓iP	**Sg**	**04 27 22.4**	**+1.1**
VCA	**Vinchina**	**5.66**	**347**	⇑iP	**Pn**	**04 25 51.3**	**+0.2**
VCA				IAML		04 27 30.4	
	comp=Z,338nm,0.3s						
CYA	**Choya**	**5.89**	**9**	⇑iP	**Pn**	**04 25 53.0**	**-1.1**
LCO	**Las Campanas**	**6.22**	**327**	ePn	**Pn**	**04 25 58.6**	**-0.2**
PLCA	**Paso Flores**	**7.09**	**204**	Pn	**Pn**	**04 26 10.5**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=28,slow=6.2,SNR=19						
PLCA				Lg	Lg	04 28 05.6	
	comp=Z,4.0nm,0.3s,baz=13,slow=23,SNR=4.7						
PLCA	**Paso Flores**	**7.09**	**204**	ePn	**Pn**	**04 26 09.3**	**-1.2**
PLCA				eLg	Lg	04 28 05.6	
PLCA	**Paso Flores**	**7.09**	**204**	⇑iP	**Pn**	**04 26 10.4**	**-0.2**
GO03	**Copiap**	**7.29**	**335**	ePn	**Pn**	**04 26 11.9**	**-1.5**
AHML	**Horco Molle**	**7.58**	**10**	⇑eP	**Pn**	**04 26 15.7**	**-1.8**
GO02	**Mina Guanaco**	**9.41**	**344**	ePn	**Pn**	**04 26 43.2**	**+0.5**
AZAP	**Zapla**	**10.14**	**9**	eP	**Pn**	**04 26 50.9**	**-1.7**
CPUP	**Villa Florida**	**11.39**	**48**	Pn	Pn	04 27 15.1	+5.5
	comp=Z,0.7nm,0.3s,baz=227,slow=15,SNR=11						
CPUP				Sn	Sn	04 29 25.4	+8.7
	comp=Z,0.4nm,0.3s,baz=187,slow=7.4,SNR=4.2						
CPUP				Lg	Lg	04 30 26.4	
	comp=Z,0.6nm,0.3s,baz=188,slow=15,SNR=1.8						
CPUP	**Villa Florida**	**11.39**	**48**	ePn	**Pn**	**04 27 07.3**	**-2.2**
LVC	**Limon Verde**	**11.78**	**350**	Pn	**Pn**	**04 27 15.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=189,slow=13,SNR=4.0						
LVC				Sn	**Sn**	**04 29 26.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=237,slow=9.0,SNR=3.6						
LPAZ	**La Paz**	**17.96**	**356**	P	**P**	**04 28 38.6**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=175,slow=14,SNR=4.8						
SIV	**San Ignacio**	**18.93**	**17**	P	**Pn**	**04 28 50.3**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=210,slow=8.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**80.28**	**67**	P	P	04 36 42.3	+4.3
	comp=Z,0.2nm,0.4s,baz=222,slow=4.9,SNR=5.5						

JMA 13 04:30:16.3±0.2**, 37°.37N×143°.44E, h46**km**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.82**	**302**	P	Pn	04 30 46.3	+1.1
JIKH				S	Sn	04 31 08.4	+1.3
JIO	**Ouri**	**1.98**	**304**	P	Pn	04 30 48.6	+1.3
JIO				S	Sn	04 31 12.1	+1.3
JFK	**Kawauchi**	**2.04**	**271**	P	Pn	04 30 49.4	+1.2
JFK				eS	Sn	04 31 13.6	+1.0
JMST	**Minamisoumatoc**	**2.06**	**281**	P	Pn	04 30 49.3	+0.9
JKMT	**Kesennumamotoy**	**2.12**	**313**	P	Pn	04 30 50.2	+1.0
JKMT				S	Sn	04 31 15.3	+1.1
ONAJ	**Iwakimizuishiy**	**2.12**	**264**	P	Pn	04 30 50.2	+0.8
ONAJ				S	Sn	04 31 15.3	+0.7
JMK	**Ichinoseki**	**2.36**	**313**	P	Pn	04 30 53.7	+1.2
JMK				eS	Sn	04 31 21.9	+1.7
JFT	**Otama**	**2.47**	**274**	P	Pn	04 30 56.4	+2.3
JFT				S	Sn	04 31 25.5	+2.4
JOM	**Ohasama**	**2.69**	**322**	P	Pn	04 30 58.6	+1.5
JOM				S	Sn	04 31 29.5	+1.0
JYK	**Kaneyama**	**2.88**	**303**	P	Pn	04 31 02.0	+2.3
JYK				eS	Sn	04 31 35.4	+2.3
JAG	**Ashikaga**	**3.33**	**255**	P	Pn	04 31 07.4	+1.5
JAG				S	Sn	04 31 44.8	+0.6
JANG	**Nango**	**3.35**	**334**	P	Pn	04 31 07.8	+1.6
JANG				eS	Sn	04 31 44.1	-0.7
JRY	**Ryogami san**	**3.89**	**251**	P	Pn	04 31 14.9	+1.3
JRY				S	Sn	04 31 57.7	-0.3
JOT	**Ohata**	**4.41**	**336**	eS	Sn	04 32 10.1	-0.7
JCH	**Churui**	**5.24**	**359**	P	Pn	04 31 31.2	-0.8
JCH				eS	Sn	04 32 26.5	-4.6

MAN 13 05:08:02.9, 10°.09N×125°.32E, h97km**, mb4.0, ML2.8, MS2.4, 1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.35**	**151**	⇓iP	Pn	05 08 20.8	+3.4
SCPH				i S	Sn	05 08 30.6	+2.4
MSLP	**Maasin**	**0.45**	**275**	eP	Pn	05 08 19.9	+1.9
MSLP				eS	Sn	05 08 41.5	+12
BESP	**Borongan**	**1.50**	**5**	eP	Pn	05 08 28.8	-0.2
BESP				eS	Sn	05 08 52.0	+3.1
BUKP	**Musuan**	**2.21**	**187**	eP	Pn	05 08 39.2	+0.9
BUKP				eS	Sn	05 09 04.7	-0.6

MAN 13 05:11:54.6, 7°.53N×124°.82E, h5km**, mb4.2, ML3.0, MS2.7, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.58**	**153**	⇓eP	Pg	05 12 05.6	-0.1
KCP				i S	Sn	05 12 20.3	+0.8
CTBH	**Cotabato--PC H**	**0.65**	**242**	⇓iP	Pg	05 12 07.6	+0.6
CTBH				i S	Sg	05 12 16.4	+1.0
SKMP	**Bagumbayan, Su**	**1.04**	**195**	eP	Pg	05 12 14.1	-0.4
SKMP				eS	Sn	05 12 30.6	-0.1

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*DDA **13** 05:25:28.2, 37°.52N×28°.76E, h7km±7km, ML2.7*
*ISK **13** 05:25:35.9, 37°.10N×28°.23E, h21km±2km, ML1.8/3*
ISC 13 05:25:35.7±1.6**, 37°.26N**±0°.07×**28°.49E**±0°.09**, h9**km±12km**, n6, σ0ˢ.52**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.21**	**233**	PG	**Pg**	**05 25 40.4**	**+0.3**
YER				SG	**Sg**	**05 25 42.5**	**-0.5**
TURN	**Turunc**	**0.40**	**167**	PG	**Pg**	**05 25 43.5**	**0.0**
TURN				SG	**Sg**	**05 25 48.7**	**0.0**
TURN	**Turunc**	**0.40**	**167**	i P	**Pg**	**05 25 44.1**	**+0.6**
TURN				i S	**Sg**	**05 25 48.5**	**-0.2**
DALY	**Dalyan (Mula)**	**0.46**	**164**	PG	**Pb**	**05 25 45.5**	**-0.5**
DALY				SG	**Sb**	**05 25 52.4**	**-0.5**
AYDN	**Tasoluk**	**0.63**	**310**	i P	**Pn**	**05 25 51.8**	**+0.8**
AYDN				i S	**Sn**	**05 26 00.9**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.84**	**325**	PG	**Pg**	**05 25 51.7**	**-0.2**
AYDB				SG	**Sn**	**05 26 06.4**	**0.0**

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*NIED **13** 05:31:00, 37°.40N×141°.60E, h8km, Mw4.0 Best double couple: $M_0 1.03000\times10^{15}$ NP1:φs220.00000°, δ45.00000°, λ-81.00000°. NP2:φs27.00000°, δ46.00000°, λ-99.00000°.*
*IDC **13** 05:31:08.5±0.6, 37°.37N×141°.42E, h0km, mb4.2/19, mb1 4.3/23, mb1mx4.2/35, mbtmp4.1/23, ML3.6/3, MS3.0/10, Ms1 3.0/10, ms1mx2.8/44, Error ellipse: s-maj=16.6km s-min=13.3km az=106.0*
*ISCJB **13** 05:31:10.0±0.7, 37°.35N±0°.03×141°.56E±0°.04, h21km±4km, mb4.3/50, MS3.2/8, Error ellipse: s-maj=6.2km s-min=3.8km az=22.9*
*JMA **13** 05:31:10.3±0.1, 37°.37N×141°.55E, h27km±1km, M4.3*
JMA Felt I J1.
*NEIC **13** 05:31:14.7±2.2, 37°.34N×141°.39E, h41km±7km, mb4.4/31, Error ellipse: s-maj=16.7km s-min=11.6km az=127.0*
NEIC Recorded [1 JMA] in Fukushima.
ISC 13 05:31:10.4±1.0**, 37°.34N**±0°.03×**141°.49E**±0°.04**, h11**km±5km**, n103, σ1ˢ.26**/103**, mb4.3**/50**, MS3.2**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.49**	**273**	P	**Pb**	**05 31 21.0**	**0.0**
JFK				S	**Sb**	**05 31 28.3**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.60**	**247**	P	**Pb**	**05 31 22.8**	**-0.1**
ONAJ				S	**Sn**	**05 31 32.0**	**-2.5**
JMST	**Minamisoumatoc**	**0.61**	**309**	P	**Pb**	**05 31 22.4**	**-0.6**
JMST				S	**Sb**	**05 31 31.2**	**-0.4**
JMM	**Marumori**	**0.76**	**314**	P	**Pg**	**05 31 24.7**	**-0.4**
JMM				S	**Sg**	**05 31 35.3**	**+0.3**
JFFD	**Fukushimafurud**	**0.78**	**251**	P	**Pn**	**05 31 25.7**	**-1.6**
JFFD				S	**Sn**	**05 31 36.8**	**-2.1**
JFT	**Otama**	**0.93**	**281**	P	**Pn**	**05 31 28.6**	**-0.8**
JFT				S	**Sn**	**05 31 41.5**	**-1.2**
JHO	**Hitachi**	**1.03**	**225**	P	**Pb**	**05 31 28.8**	**-1.5**
JHO				S	**Sn**	**05 31 43.8**	**-1.4**
JIO	**Ouri**	**1.11**	**355**	P	**Pb**	**05 31 29.7**	**-1.9**
JIO				S	**Sb**	**05 31 43.5**	**-2.7**
JOU	**Okura**	**1.21**	**328**	P	**Pn**	**05 31 32.5**	**-0.7**
JOU				S	**Sb**	**05 31 48.5**	**-0.4**
JYS	**Shirataka**	**1.43**	**308**	P	**Pb**	**05 31 36.7**	**-0.3**
JYS				S	**Sb**	**05 31 55.4**	**+0.3**
MJAR	**Matsushiro Arr**	**2.74**	**254**	Pn	**Pn**	**05 31 54.2**	**-0.1**
	1.4nm,0.3s,baz=82,slow=16,SNR=15						
MJAR				Sn	**Sb**	**05 32 32.4**	**-0.7**
	1.5nm,0.3s,baz=221,slow=43,SNR=1.9						
MAJO	**Matsushiro**	**2.74**	**254**	ePn	**Pb**	**05 31 56.0**	**-3.5**
MAJO				eSn	**Sb**	**05 32 32.4**	**-0.7**
MAT	**Matsushiro**	**2.74**	**254**	P	**Pn**	**05 31 55.8**	**+1.5**
MAT				S	**Sn**	**05 32 28.2**	**+0.7**
MJB9	**Matsu-Tunnel**	**2.75**	**254**	ePn	**Pb**	**05 31 56.0**	**-3.5**
INU	**Inuyama**	**4.12**	**242**	ePn	**Pn**	**05 32 15.4**	**+2.2**
JHJ2	**Mitsune**	**4.44**	**198**	ePn	**Pn**	**05 32 18.1**	**+0.5**
JHJ	**Hachijo jima 2**	**4.44**	**199**	Pn	**Pn**	**05 32 17.3**	**-0.3**
	27nm,0.3s,baz=95,slow=7.1,SNR=7.6						
JHJ				Sn	**Sn**	**05 33 07.3**	**-1.9**
	18nm,0.3s,baz=23,slow=21,SNR=1.9						
ERM	**Erimo**	**4.84**	**15**	ePn	**Pn**	**05 32 21.4**	**-1.7**
ASAJ	**Asahikawa**	**6.82**	**7**	Pn	**Pn**	**05 32 49.2**	**-1.0**
	1.6nm,0.3s,baz=159,slow=17,SNR=4.2						
ASAJ				Sn	**Sn**	**05 34 06.8**	**-1.0**
	0.6nm,0.3s,baz=87,slow=27,SNR=1.3						
ASAJ				LR	LR	05 35 32.7	
	comp=Z,59nm,20.4s,baz=98,slow=39						
USA0B	**Ussuriysk Arra**	**9.93**	**317**	ePn	Pn	05 33 42.7	+10
USRK	**Ussuriysk Ar.**	**9.93**	**317**	Pn	Pn	05 33 37.8	+4.9
	0.4nm,0.3s,baz=139,slow=13,SNR=5.6						
KSRS	**Korea Array**	**10.79**	**275**	LR	LR	05 37 33.0	
	comp=Z,60nm,18.3s,baz=78,slow=36						
MDJ	**Mudanjiang**	**11.55**	**313**	P	**Pn**	**05 33 55.9**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,240nm,3.9s						
KLR	**Kul'dur**	**13.82**	**332**	LR	LR	05 39 05.8	
	comp=Z,47nm,20.4s,baz=111,slow=35						
PETK	**Petropavlovsk-**	**19.39**	**30**	P	**P**	**05 35 36.3**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=227,slow=5.7,SNR=3.3						
PEA1	**Petropavlovsk-**	**19.40**	**30**	eP	**P**	**05 35 36.3**	**+0.1**
YULB	**Yu-li**	**22.22**	**237**	eP	**P**	**05 36 07.7**	**+0.7**
	comp=Z,29nm,1.1s						
HHC	**Hu-ho-hao-te**	**23.43**	**288**	P	**P**	**05 36 20.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,8.8s						
GUMO	**Guam**	**23.85**	**172**	LR	LR	05 45 16.5	
	comp=Z,14nm,21.5s,baz=162,slow=36						
SEY	**Seymchan**	**26.48**	**11**	P	**P**	**05 36 46.8**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=195,slow=10,SNR=8.3						
SONA0	**Songino Array**	**27.66**	**303**	eP	**P**	**05 36 57.7**	**-0.5**
SONM	**Songino Array**	**27.66**	**303**	P	**P**	**05 36 57.7**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=101,slow=8.9,SNR=17						
H11N2	**WAKE ISLAND Hy**	**28.26**	**121**	T	T	06 06 33.7	
	baz=314,slow=75,SNR=858						
H11N1	**WAKE ISLAND Hy**	**28.27**	**121**	T	T	06 06 34.1	
	baz=314,slow=75,SNR=826						
H11N3	**WAKE ISLAND Hy**	**28.28**	**121**	T	T	06 06 34.8	
	baz=314,slow=75,SNR=942						
H11S1	**WAKE ISLAND Hy**	**28.98**	**123**	T	T	06 07 27.4	
	baz=316,slow=76,SNR=548						
H11S3	**WAKE ISLAND Hy**	**28.98**	**123**	T	T	06 07 26.2	
	baz=316,slow=76,SNR=461						
H11S2	**WAKE ISLAND Hy**	**29.00**	**123**	T	T	06 07 30.8	
	baz=316,slow=76,SNR=320						
LZH	**Lanzhou**	**30.07**	**279**	eP	**P**	**05 37 21.5**	**+1.7**
LZH				pP	sP	05 37 32.3	+7.7
LZH				sP	pP	05 37 36.6	+13
LZH				ePP	**PnPn**	**05 38 19.8**	**+3.2**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,53nm,5.2s						
LZH				LR	LR		
	comp=N,200nm,12.9s						
LZH				LR	LR		
	comp=E,220nm,13.2s						
LZH				LR	LR		
	comp=Z,270nm,16.3s						
CD2	**Chengdu**	**31.73**	**270**	eP	**P**	**05 37 33.4**	**-0.9**
GTA	**Gaotai**	**32.53**	**287**	eP	**P**	**05 37 40.8**	**-0.6**
GTA				pP	sP	05 37 50.8	+4.6
GTA				sP	pP	05 37 54.8	+10
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMI	**Kunming**	**35.06**	**261**	P	**P**	**05 38 03.9**	**+0.2**
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ	**Urumqi**	**40.75**	**297**	eP	**P**	**05 38 52.8**	**+1.5**
CM31	**Chiang Mai Arr**	**41.63**	**255**	eP	**P**	**05 38 58.7**	**0.0**
	comp=Z,7.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.63**	**255**	P	**P**	**05 38 58.7**	**0.0**
	comp=Z,0.8nm,0.3s,baz=57,slow=6.6,SNR=3.8						
ZAA0	**Zalesovo Array**	**41.75**	**312**	eP	**P**	**05 38 58.9**	**-0.4**
	comp=Z,3.7nm,0.9s						
ZAA1	**Zalesovo Array**	**41.75**	**312**	eP	**P**	**05 38 58.9**	**-0.4**
ZALV	**Zalesovo Beam**	**41.75**	**312**	P	**P**	**05 38 58.9**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=96,slow=6.8,SNR=9.7						
MKAR	**Makanchi Array**	**44.00**	**302**	P	**P**	**05 39 17.4**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=83,slow=10,SNR=26						
MAKZ	**Makanchi**	**44.21**	**302**	eP	**P**	**05 39 18.9**	**-0.5**
	comp=Z,3.7nm,0.8s						
KURK	**Kurchatov**	**45.79**	**308**	eP	**P**	**05 39 30.4**	**-1.3**
	comp=Z,8.6nm,0.8s						
KDAK	**Kodiak Island**	**46.83**	**42**	eP	**P**	**05 39 39.9**	**0.0**
	comp=Z,5.3nm,0.8s						
PPLA	**Purkeypile**	**46.88**	**35**	eP	**P**	**05 39 42.2**	**+1.7**
	comp=Z,4.9nm,1.2s						
BPAW	**Bear Paw Mtn.**	**47.44**	**33**	eP	**P**	**05 39 46.0**	**+1.4**
	comp=Z,2.7nm,1.2s						
CCB	**Clear Creek Bu**	**48.81**	**33**	eP	**P**	**05 39 57.1**	**+2.0**
	comp=Z,2.6nm,1.3s						
ILAR	**Eielson Array**	**49.20**	**32**	P	**P**	**05 39 58.2**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=270,slow=6.3,SNR=24						
ILB	**Eielson Array**	**49.20**	**32**	eP	**P**	**05 39 58.1**	**0.0**
	comp=Z,2.3nm,0.7s						
AAK	**Ala-Archa**	**50.39**	**298**	LR	LR	06 01 06.7	
	comp=Z,25nm,18.2s,baz=86,slow=36						
DOT	**Dot Lake**	**50.52**	**34**	eP	**P**	**05 40 08.5**	**+0.3**
	comp=Z,1.5nm,0.7s						
SCRK	**Sand Creek**	**50.52**	**33**	eP	**P**	**05 40 08.7**	**+0.3**
	comp=Z,2.3nm,0.9s						
EGAK	**Eagle**	**51.65**	**32**	eP	**P**	**05 40 16.9**	**+0.3**
	comp=Z,5.5nm,1.5s						
KK31	**Karatay Array**	**53.02**	**300**	eP	**P**	**05 40 26.9**	**-0.3**
	comp=Z,2.3nm,1.1s						
EPYK	**Eagle Plains**	**53.23**	**30**	eP	**P**	**05 40 29.9**	**+1.5**
	comp=Z,7.1nm,0.7s						
NDI	**New Delhi**	**53.67**	**281**	eP	P	05 40 24.0	-8.1
HYT	**Haines Junctio**	**54.02**	**37**	eP	**P**	**05 40 36.7**	**+2.4**
	comp=Z,3.8nm,0.9s						
ARU	**Arti**	**56.17**	**318**	LR	LR	06 07 18.1	
	comp=Z,14nm,18.1s,baz=35,slow=39						
WRAB	**Tennant Creek**	**57.36**	**188**	eP	**P**	**05 40 58.4**	**-0.2**
	comp=Z,3.9nm,0.8s						
WB2	**Warramunga Arr**	**57.37**	**188**	eP	**P**	**05 40 58.4**	**-0.2**
	comp=Z,3.7nm,0.8s						
WR1	**Warramunga Arr**	**57.37**	**188**	eP	**P**	**05 40 57.9**	**-0.8**
WRA	**Warramunga Arr**	**57.37**	**188**	P	**P**	**05 40 57.9**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=356,slow=8.2,SNR=18						
ABKAR	**Akbulak array**	**57.78**	**310**	eP	**P**	**05 41 00.8**	**-0.5**
	comp=Z,3.6nm,0.6s						
AS31	**Alice Springs**	**61.10**	**188**	eP	**P**	**05 41 24.4**	**-0.1**
	comp=Z,1.6nm,1.1s						
ASAR	**Alice Springs**	**61.10**	**188**	P	**P**	**05 41 24.4**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=6.4,slow=7.0,SNR=12						
RES	**Resolute Bay**	**62.29**	**14**	eP	**P**	**05 41 31.9**	**0.0**
	comp=Z,12nm,1.2s						
ARCES	**ARCESS Array B**	**63.73**	**339**	P	**P**	**05 41 41.6**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=47,slow=6.6,SNR=3.2						
GEYT	**Alibeck**	**63.74**	**299**	P	**P**	**05 41 41.9**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=311,slow=2.9,SNR=5.7						
FIA1	**FINESS Array S**	**68.57**	**332**	eP	**P**	**05 42 12.6**	**0.0**
	comp=Z,7.4nm,0.8s						
FINES	**FINESS Array B**	**68.57**	**332**	P	**P**	**05 42 12.0**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=62,slow=8.9,SNR=15						
FINES				LR	LR	06 14 25.9	
	comp=Z,14nm,18.4s,baz=356,slow=38						
STKA	**Stephens Creek**	**68.86**	**180**	P	**P**	**05 42 14.9**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=344,slow=15,SNR=3.2						
K05A	**Summer Lake**	**70.70**	**51**	eP	**P**	**05 42 27.8**	**+1.3**
	comp=Z,4.2nm,0.9s						
KBZ	**Khabaz**	**70.75**	**311**	P	**P**	**05 42 26.1**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=43,slow=3.3,SNR=5.9						
WSAR	**Wadi Sarin**	**70.84**	**285**	LR	LR	06 15 41.5	
	comp=Z,17nm,19.6s,baz=72,slow=38						
GNI	**Garni**	**71.57**	**307**	LR	LR	06 16 55.1	
	comp=Z,8.7nm,20.2s,baz=62,slow=38						
NC204	**NORSAR Array S**	**73.88**	**338**	eP	**P**	**05 42 45.2**	**+0.2**
	comp=Z,19nm,1.0s						
NB2	**NORSAR Subarra**	**73.92**	**337**	P	**P**	**05 42 44.6**	**-0.6**
	comp=Z,5.4nm,1.0s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**73.92**	**337**	P	**P**	**05 42 44.4**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=41,slow=5.9,SNR=9.7						
DLMT	**Dillon**	**74.08**	**45**	eP	**P**	**05 42 47.6**	**+1.1**
	comp=Z,3.2nm,0.9s						
AKASG	**Malin Array Be**	**74.09**	**322**	P	**P**	**05 42 45.4**	**-0.9**
	comp=Z,2.4nm,0.5s,baz=44,slow=6.3,SNR=12						
NVAR	**Mina Array Bea**	**74.76**	**53**	P	**P**	**05 42 51.5**	**+0.9**
	comp=Z,1.6nm,0.9s,baz=278,slow=6.9,SNR=8.9						
H17A	**Grant Village**	**75.81**	**45**	eP	**P**	**05 42 58.9**	**+2.2**
	comp=Z,4.2nm,0.9s						
FXWY	**Fox Creek**	**76.03**	**46**	eP	**P**	**05 42 58.7**	**+0.8**
	comp=Z,2.9nm,1.0s						
PDAR	**Pinedale Array**	**77.41**	**46**	P	**P**	**05 43 06.0**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=272,slow=3.6,SNR=7.2						
KOLS	**Kolonicke sedl**	**78.61**	**324**	eP	**P**	**05 43 16.1**	**+4.1**
VYHS	**Vyhne**	**80.50**	**325**	eP	**P**	**05 43 25.7**	**+3.4**
CLL	**Collm**	**80.86**	**330**	eP	**P**	**05 43 23.7**	**-0.4**
	comp=Z,4.5nm,0.8s						
CLL	**Collm**	**80.86**	**330**	eP	**P**	**05 43 23.0**	**-1.1**
	comp=Z,3.0nm,0.6s						
CLL				i PcP	**sP**	**05 43 29.7**	**+0.5**
	comp=Z,5.0nm,1.0s						
MMAI	**Mount Meron Ar**	**81.83**	**305**	LR	LR	06 24 11.9	
	comp=Z,15nm,21.8s,baz=140,slow=39						
GERES	**GERESS Array B**	**82.48**	**328**	P	**P**	**05 43 32.8**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=37,slow=6.7,SNR=4.3						
TXAR	**Lajitas Array**	**89.89**	**52**	P	**P**	**05 44 10.2**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=297,slow=3.0,SNR=11						
LPAZ	**La Paz**	**146.49**	**59**	PKPbc	**PKPbc**	**05 50 52.5**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=329,slow=1.6,SNR=8.8						
LPAZ	**La Paz**	**146.49**	**59**	ePKPdf	**PKPab**	**05 50 52.9**	**-0.8**
MNMC	**Minye Minye**	**147.36**	**65**	ePKPbc	**PKPab**	**05 50 55.7**	**-1.0**
LCO	**Las Campanas**	**151.91**	**82**	ePKPbc	**PKiKP**	**05 51 06.7**	**+0.5**

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*IDC **13** 05:40:57.2±1.4, 37°.20N×142°.00E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/41, mbtmp3.4/5, ML1.9/1, Error ellipse: s-maj=31.9km s-min=29.3km az=93.0*
*ISCJB **13** 05:40:59.3±1.2, 37°.34N±0°.04×141°.93E±0°.07, h17km±7km, mb3.5/4, Error ellipse: s-maj=9.9km s-min=6.0km az=32.9*
*JMA **13** 05:41:01.7±0.1, 37°.37N×141°.82E, h40km±3km, M3.7*
ISC 13 05:40:58.8±1.9**, 37°.32N**±0°.05×**141°.89E**±0°.07**, h11**km±10km**, n24, σ0ˢ.96**/30**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.81**	**273**	P	**Pn**	**05 41 16.1**	**-0.2**
JFK				S	**Sg**	**05 41 25.9**	**+0.9**
JMST	**Minamisoumatoc**	**0.89**	**297**	P	**Pb**	**05 41 17.0**	**+0.7**
JMST				S	**Sg**	**05 41 27.5**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.90**	**256**	P	**Pn**	**05 41 17.4**	**-0.1**
ONAJ				S	**Sg**	**05 41 28.4**	**+0.6**
JMM	**Marumori**	**1.03**	**302**	P	**Pg**	**05 41 19.0**	**+0.4**
JMM				S	**Sg**	**05 41 30.9**	**-1.0**
JIKH	**Ishinomakikobu**	**1.04**	**341**	P	**Pg**	**05 41 19.0**	**+0.1**
JIKH				S	**Sg**	**05 41 31.5**	**-0.9**
JIO	**Ouri**	**1.21**	**339**	P	**Pn**	**05 41 21.5**	**-0.2**
JIO				S	**Sb**	**05 41 35.4**	**-2.0**
JFT	**Otama**	**1.25**	**279**	P	**Pg**	**05 41 23.2**	**+0.3**
JFT				S	**Sb**	**05 41 38.2**	**-0.4**
JHO	**Hitachi**	**1.27**	**236**	P	**Pn**	**05 41 22.6**	**0.0**
JHO				S	**Sb**	**05 41 37.3**	**-1.9**
JOU	**Okura**	**1.42**	**317**	P	**Pb**	**05 41 25.7**	**+0.3**
JYS	**Shirataka**	**1.70**	**302**	P	**Pb**	**05 41 29.9**	**-0.2**
JYS				eS	**Sn**	**05 41 50.5**	**+0.2**
JMK	**Ichinoseki**	**1.71**	**342**	P	**Pn**	**05 41 29.1**	**+0.5**
JFY	**Yanaizu**	**1.74**	**273**	P	**Pb**	**05 41 30.5**	**-0.4**
JFY				S	**Sn**	**05 41 51.6**	**+0.3**
MJAR	**Matsushiro Arr**	**3.05**	**256**	Pn	**Pn**	**05 41 48.1**	**+1.0**
	0.1nm,0.3s,baz=80,slow=15,SNR=3.8						
MJAR				Sn	**Sb**	**05 42 30.8**	**+0.4**
	0.8nm,0.3s,baz=76,slow=30,SNR=5.4						
MAT	**Matsushiro**	**3.05**	**256**	P	**Pb**	**05 41 52.3**	**-0.9**

MAT				S	**Sb**	**05 42 27.9**	**-2.5**
SONM	**Songino Array**	**27.94**	**303**	P	**P**	**05 46 50.7**	**+1.4**
	0.4nm,0.5s,baz=95,slow=10.0,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**27.97**	**122**	T	T	06 16 17.1	
	baz=315,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**27.98**	**122**	T	T	06 16 20.5	
	baz=315,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**27.99**	**122**	T	T	06 16 21.1	
	baz=315,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**28.70**	**124**	T	T	06 17 14.3	
	baz=316,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**28.70**	**124**	T	T	06 17 16.1	
	baz=316,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**28.72**	**124**	T	T	06 17 14.7	
	baz=316,slow=76,SNR=24						
MKAR	**Makanchi Array**	**44.29**	**302**	P	**P**	**05 49 08.8**	**+0.3**
	0.5nm,0.6s,baz=95,slow=7.8,SNR=4.8						
ILAR	**Eielson Array**	**49.05**	**32**	P	**P**	**05 49 46.2**	**+0.6**
	0.4nm,0.7s,baz=261,slow=5.9,SNR=4.8						
WRA	**Warramunga Arr**	**57.40**	**188**	P	**P**	**05 50 46.6**	**-0.8**
	0.7nm,0.7s,baz=354,slow=6.0,SNR=3.9						

*IDC **13** 06:06:34.3±2.6, 36°.52N×71°.30E, h180^{km}±23^{km}, mb3.4/8, mb1 3.6/15, mb1mx3.2/49, mbtmp4.0/15, Error ellipse: s-maj=20.3km s-min=16.3km az=20.0*

*BJI **13** 06:06:36.5±0.0, 36°.88N×71°.16E, h205^{km}, mb4.5/10, mB4.5/10*

*ISCJB **13** 06:06:37.0±0.3, 36°.76N±0°.02×71°.28E±0°.04, h200^{km}, mb3.8/13, Error ellipse: s-maj=4.3km s-min=3.1km az=169.4*

*MOS **13** 06:06:37.3±1.0, 36°.71N×71°.39E, h216^{km}, mb4.0/6, Error ellipse: s-maj=13.4km s-min=6.0km az=85.6*

*NEIC **13** 06:06:38.2±2.8, 36°.77N×71°.27E, h199^{km}±29^{km}, mb4.1/2, Error ellipse: s-maj=33.3km s-min=21.3km az=111.0*

*NNC **13** 06:06:41.9±3.1, 37°.12N×70°.97E, h186^{km}±43^{km}, mb3.2, mpv4.5, Error ellipse: s-maj=29.7km s-min=17.1km az=157.0*

ISC 13 06:06:37.5±0.5**, 36°.77N**±0°.05×**71°.23E**±0°.05**, h200^{km}, n86, σ1^{s}.70**/105**, mb3.8**/13**, 11C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**2.34**	**342**	*e*Pn	**Pn**	**06 07 21.8**	**+2.1**
GAR				*e*Sn	**Sn**	**06 07 53.5**	**+0.8**
GAR	**Garm**	**2.34**	**342**	*e*PN	**Pn**	**06 07 21.8**	**+2.1**
KBL	**Kabul**	**2.85**	**219**	*e*Pn	**Pn**	**06 07 26.6**	**+0.9**
KBL				*e*Sn	**Sn**	**06 08 02.9**	**-0.3**
KBL	**Kabul**	**2.85**	**219**	*e*PN	**Pn**	**06 07 26.6**	**+0.9**
KBL				*e*		06 08 02.9	
CEP	**Cherat**	**3.00**	**169**	P	**Pn**	**06 07 27.9**	**+0.6**
CEP				S	**Sn**	**06 08 05.0**	**-1.2**
BTK	**Batken**	**3.29**	**355**	*e*Pn	**Pn**	**06 07 33.6**	**+2.9**
BTK				*e*Sn	**Sn**	**06 08 13.8**	**+1.2**
BTK	**Batken**	**3.29**	**355**	*e*PN	**Pn**	**06 07 33.6**	**+2.9**
BTK				*e*		06 08 13.8	
CHCP	**Chirah Chowk**	**3.53**	**151**	P	**Pn**	**06 07 34.3**	**+0.7**
NIL	**Nilore**	**3.53**	**151**	*e*Pn	**Pn**	**06 07 34.6**	**+1.0**
NIL	**Nilore**	**3.53**	**151**	*e*PN	**Pn**	**06 07 34.6**	**+1.0**
THW	**Thamme Wali**	**3.99**	**174**	P	**Pn**	**06 07 39.3**	**0.0**
KSH	**Kashi**	**4.63**	**52**	P	**Pn**	**06 07 43.4**	**-4.0**
KSH				sP		06 08 23.1	
KSH				S	Sn	06 08 31.6	-11
KSH				pmax	pmax		
	comp=Z,200nm,0.2s						
KSH				smax	smax		
	comp=N,170nm,0.3s						
KSH				smax	smax		
	comp=E,210nm,0.3s						
ARSB	**Arslanbob**	**4.74**	**16**	*e*Pn	**Pn**	**06 07 49.5**	**+0.8**
ARSB				*e*Sn	**Sn**	**06 08 44.0**	**-0.9**
NRN	**Naryn**	**5.95**	**37**	*e*Pn	**Pn**	**06 08 03.5**	**-0.9**
NRN				*e*Sn	**Sn**	**06 09 11.0**	**-2.1**
NRN	**Naryn**	**5.95**	**37**	*e*PN	**Pn**	**06 08 03.5**	**-0.9**
NRN				*e*		06 09 11.0	
UCH	**Uchtor**	**6.01**	**24**	P	**Pn**	**06 08 06.3**	**+1.0**
	SNR=77						
KZA	**Kyzart**	**6.14**	**29**	P	**Pn**	**06 08 07.1**	**+0.2**
	SNR=31						
EKS2	**Erkin-Say**	**6.20**	**18**	P	**Pn**	**06 08 08.4**	**+1.0**
	SNR=26						
KK31	**Karatay Array**	**6.35**	**355**	*e*Pn	**Pn**	**06 08 10.2**	**+1.0**
KK31				*e*Sn	**Sn**	**06 09 18.5**	**-3.3**
KK31	**Karatay Array**	**6.35**	**355**	⇑P	**Pn**	**06 08 10.3**	**+1.0**
	5.5nm,0.5s,baz=170,slow=12,SNR=117						
KK31				⇑S	**Sn**	**06 09 18.6**	**-3.3**
	42nm,0.4s,baz=180,slow=22,SNR=36						
KK31	**Karatay Array**	**6.35**	**355**	*e*PN	**Pn**	**06 08 10.2**	**+1.0**
KKAR	**Karatay Array**	**6.35**	**355**	*e*Pn	**Pn**	**06 08 10.1**	**+0.9**
KKAR				*e*Sn	**Sn**	**06 09 18.3**	**-3.6**
KKAR	**Karatay Array**	**6.35**	**355**	*e*PN	**Pn**	**06 08 10.1**	**+0.9**
AAK	**Ala-Archa**	**6.37**	**22**	P	**Pn**	**06 08 11.0**	**+1.3**
	17nm,0.3s,baz=194,slow=5.8,SNR=98						
AAK				S	**Sn**	**06 09 21.7**	**-1.1**
	3.6nm,0.3s,baz=336,slow=22,SNR=36						
AAK	**Ala-Archa**	**6.37**	**22**	*e*Pn	**Pn**	**06 08 10.9**	**+1.2**
AAK				*e*Sn	**Sn**	**06 09 22.7**	**0.0**
AAK	**Ala-Archa**	**6.37**	**22**	⇓P	**Pn**	**06 08 10.9**	**+1.2**
	28nm,0.4s						
AAK				⇑S	**Sn**	**06 09 22.0**	**-0.8**
	68nm,0.6s						
AAK	**Ala-Archa**	**6.37**	**22**	*d i*PN	**Pn**	**06 08 10.6**	**+0.9**
AAK	**Ala-Archa**	**6.37**	**22**	P	**Pn**	**06 08 11.1**	**+1.3**
	SNR=43						
KBK	**Karagaybulak**	**6.54**	**25**	P	**Pn**	**06 08 13.2**	**+1.3**
	SNR=46						
FRU1	**Bishkek**	**6.57**	**22**	*e*Pn	**Pn**	**06 08 13.5**	**+1.3**
FRU1	**Bishkek**	**6.57**	**22**	*e*PN	**Pn**	**06 08 13.5**	**+1.3**
ULHL	**Ulahol**	**6.70**	**34**	P	**Pn**	**06 08 14.5**	**+0.5**
	SNR=21						
CHMS	**Chumysh**	**6.78**	**22**	P	**Pn**	**06 08 15.5**	**+0.7**
	SNR=16						
USP	**Ospenovka**	**6.95**	**20**	P	**Pn**	**06 08 17.3**	**+0.1**
	SNR=14						
TKM2	**Tokmak 2**	**7.00**	**27**	⇑P	**Pn**	**06 08 18.4**	**+0.5**
	37nm,0.5s						
TKM2				⇑S	**Sn**	**06 09 35.7**	**-1.8**
	17nm,0.8s						
TKM2	**Tokmak 2**	**7.00**	**27**	P	**Pn**	**06 08 18.8**	**+0.9**
	SNR=94						
KDJ	**Kajisay**	**7.06**	**39**	*e*Pn	**Pn**	**06 08 18.8**	**+0.2**
KDJ	**Kajisay**	**7.06**	**39**	*e*PN	**Pn**	**06 08 18.8**	**+0.2**
GEYT	**Alibeck**	**10.50**	**280**	P	**Pn**	**06 09 01.5**	**-1.8**
	0.6nm,0.3s,baz=105,slow=11,SNR=3.0						
GYA0B	**ALIBECK ARRAY**	**10.50**	**280**	⇑P	**Pn**	**06 09 05.2**	**+2.0**
GYA0B				⇓S	**Sn**	**06 10 57.5**	**-3.0**
MAKZ	**Makanchi**	**12.82**	**35**	*e*Pn	**Pn**	**06 09 31.6**	**-1.1**
MAKZ	**Makanchi**	**12.82**	**35**	*e*P	**Pn**	**06 09 31.6**	**-1.1**
MK31	**Makanchi Array**	**12.96**	**36**	*e*Pn	**Pn**	**06 09 33.0**	**-1.4**
MK31	**Makanchi Array**	**12.96**	**36**	*e*P	**Pn**	**06 09 33.0**	**-1.4**
MKAR	**Makanchi Array**	**12.96**	**36**	P	**Pn**	**06 09 34.4**	**0.0**
	0.9nm,0.3s,baz=208,slow=9.8,SNR=29						
DANN	**Dangsing**	**13.49**	**125**	*e*P	**Pn**	**06 09 42.4**	**+0.9**
	14nm,0.3s						
KOLN	**Koldanda**	**13.78**	**127**	*e*P	**Pn**	**06 09 43.5**	**-1.5**
	8.4nm,0.2s						
GKN	**Gorkha**	**14.30**	**124**	*e*P	**Pn**	**06 09 51.5**	**+0.1**
WMQ	**Urumqi**	**14.39**	**56**	*e*P	**P**	**06 09 53.9**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,81nm,4.5s						
KURBB	**Kurchatov Arra**	**14.80**	**18**	P	**Pn**	**06 09 56.7**	**-0.5**
	0.3nm,0.3s,baz=202,slow=11,SNR=20						
KKN	**Kakani**	**14.87**	**123**	*e*P	**Pn**	**06 09 57.8**	**-0.6**
DMN	**Daman**	**14.87**	**124**	*e*P	**Pn**	**06 09 57.5**	**-1.0**
	6.9nm,0.2s						
KURK	**Kurchatov**	**14.91**	**19**	*e*Pn	**Pn**	**06 09 57.6**	**-0.8**
KURK	**Kurchatov**	**14.91**	**19**	*i* P	**Pn**	**06 09 59.1**	**+0.6**
AB31	**Akbulak array**	**14.94**	**330**	⇑P	**Pn**	**06 09 58.8**	**+0.1**
	0.3nm,0.3s,baz=139,slow=12,SNR=27						
AB31				⇓S	**S**	**06 12 37.5**	**-7.0**
	1.8nm,0.5s,baz=147,slow=24,SNR=7.9						
ABKAR	**Akbulak array**	**14.94**	**330**	*e*Pn	**Pn**	**06 09 58.8**	**0.0**
ABKAR				*e*S	**S**	**06 12 40.8**	**-3.7**
PKIN	**Phulchoki**	**15.09**	**123**	*e*P	**Pn**	**06 09 59.6**	**-1.5**
	7.9nm,0.3s						
PKI	**Pulchoki**	**15.10**	**123**	*e*P	**Pn**	**06 09 59.8**	**-1.5**
GUN	**Gumba**	**15.20**	**121**	*e*P	**Pn**	**06 10 02.9**	**+0.3**
	22nm,0.4s						
JIRN	**Jiri**	**15.57**	**121**	*e*P	**Pn**	**06 10 06.2**	**-0.9**
	25nm,0.3s						
BVAR	**Borovoye Array**	**16.26**	**358**	P	**Pn**	**06 10 15.3**	**+0.5**
	1.4nm,0.3s,baz=156,slow=10,SNR=14						
BRVK	**Borovoye**	**16.30**	**358**	*e*P	**Pn**	**06 10 16.9**	**+1.7**
	4.3nm,0.6s						
BRVK	**Borovoye**	**16.30**	**358**	*d i*P	**Pn**	**06 10 17.2**	**+2.0**
AKTO	**Aktyubinsk**	**16.64**	**329**	P	**Pn**	**06 10 20.1**	**+0.9**
	0.6nm,0.3s,baz=140,slow=7.7,SNR=6.0						
AKTO	**Aktyubinsk**	**16.64**	**329**	⇑P	**P**	**06 10 19.6**	**+1.3**
	1.0nm,0.4s						
AKTO				⇑S	**S**	**06 13 21.0**	**-0.8**
	1.8nm,0.7s						
DGZ	**Jazzator, Alta**	**17.45**	**37**	*d i*P	**Pn**	**06 10 28.8**	**-0.3**
ZAA0	**Zalesovo Array**	**19.59**	**24**	*e*P	**P**	**06 10 50.9**	**+0.6**
	4.7nm,0.6s						
ZALV	**Zalesovo Beam**	**19.59**	**24**	P	**P**	**06 10 50.8**	**+0.5**
	1.5nm,0.3s,baz=220,slow=12,SNR=13						
ARU	**Arti**	**21.43**	**341**	*d i*P	**P**	**06 11 08.5**	**-1.3**
ARU						06 11 46.0	
ARU				S	**S**	**06 14 53.3**	**-1.1**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.9s						
SHA1	**Shidzhatmaz**	**22.81**	**297**	*i* P	**P**	**06 11 23.6**	**+0.3**
KIV	**Kislovodsk**	**22.82**	**297**	*e*P	**P**	**06 11 24.0**	**+0.7**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH	**Lanzhou**	**26.19**	**82**	⇑P	**P**	**06 11 51.6**	**-2.2**
LZH				sP	PP	06 12 54.5	-2.6
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,54nm,4.7s						
CD2	**Chengdu**	**27.56**	**93**	*e*P	**P**	**06 12 06.1**	**+0.1**
OBN	**Obninsk**	**29.85**	**319**	⇑*e*P	**P**	**06 12 29.2**	**+3.4**
OBN				*e**PP	**pP**	**06 13 08.6**	**+1.5**
OBN				*e*		06 13 33.6	
OBN				*e*SS	SS	06 19 11.3	-12
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.43**	**119**	P	**P**	**06 12 29.1**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=317,slow=10,SNR=4.1						
HHC	**Hu-ho-hao-te**	**31.50**	**70**	P	**P**	**06 12 42.9**	**+2.2**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,8.7s						
WHN	**Wuhan**	**36.19**	**87**	⇓P	**P**	**06 13 25.6**	**+4.5**
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**06 13 31.3**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=112,slow=10.0,SNR=5.0						
FINES	**FINESS Array B**	**37.36**	**326**	*e*P	**P**	**06 13 32.1**	**+1.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**40.96**	**337**	P	**P**	**06 14 01.6**	**+1.3**
	comp=Z,3.1nm,0.9s,baz=122,slow=9.7,SNR=6.0						
ARCES	**ARCESS Array B**	**40.96**	**337**	*e*P	**P**	**06 14 01.8**	**+1.6**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**44.27**	**323**	P	**P**	**06 14 27.6**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=106,slow=7.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	**P**	**06 17 00.8**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=45,slow=6.4,SNR=6.0						
INK	**Inuvik**	**73.61**	**9**	P	**P**	**06 17 49.1**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=345,slow=5.8,SNR=4.5						
YKA	**Yellowknife Ar**	**80.96**	**3**	P	**P**	**06 18 29.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=347,slow=5.4,SNR=3.4						
WRA	**Warramunga Arr**	**81.98**	**122**	P	**P**	**06 18 32.9**	**-2.4**
	comp=Z,1.3nm,0.8s,baz=308,slow=4.4,SNR=2.9						

IDC 13 06:07:54.7±8.6**, 27°.33S**×**177°.91W, h0^{km}, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/20**, mbtmp3.5**/2**, Error ellipse: s-maj=487.1km s-min=114.7km az=163.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.44**	**264**	P	P	06 15 58.7	-0.9
	0.3nm,0.6s,baz=102,slow=7.8,SNR=4.1						
WRA	**Warramunga Arr**	**44.14**	**269**	P	P	06 16 06.1	+0.7
	0.9nm,0.6s,baz=105,slow=8.8,SNR=1.9						
FINES	**FINESS Array B**	**142.29**	**341**	PKP	PKPdf	06 27 27.8	-0.7
	0.7nm,0.5s,baz=28,slow=3.3,SNR=6.8						

*NEIC **13** 06:08:32.7±2.4, 18°.45S×69°.61W, h140^{km}±6^{km}, mb4.6/5, ML4.1(GUC), Error ellipse: s-maj=14.4km s-min=8.8km az=93.0*

*ISCJB **13** 06:08:32.4±0.3, 18°.46S±0°.03×69°.45W±0°.05, h142^{km}±3^{km}, mb4.1/1, Error ellipse: s-maj=7.7km s-min=4.8km az=5.5*

*SJA **13** 06:08:33.2±0.4, 18°.42S×69°.46W, h128^{km}±2^{km}, ML3.9, MW3.3*

*GUC **13** 06:08:34.7±0.6, 18°.46S×69°.44W, h117^{km}±3^{km}, ML4.1*

*VAO **13** 06:08:35.8±0.5, 18°.44S×69°.18W, h140^{km}, mb4.3*

*IDC **13** 06:08:35.0±1.1, 18°.51S×69°.12W, h134^{km}±9^{km}, mb3.6/7, mb1 3.8/12, mb1mx3.6/31, mbtmp4.1/12, MS2.4/1, Ms1 2.5/1, ms1mx2.2/17, Error ellipse: s-maj=19.1km s-min=9.0km az=100.0*

ISC 13 06:08:33.2±0.6**, 18°.47S**±0°.04×**69°.44W**±0°.06**, h132^{km}**±5^{km}**, n78, σ1^{s}.62**/102**, 5C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.15**	**334**	*e*P	**Pn**	**06 08 51.8**	**-0.1**
PB16				*e*S	**Sn**	**06 09 05.8**	**-0.2**
PB16	**IPOC Station P**	**0.15**	**334**	⇑*e*P	**Pn**	**06 08 52.4**	**+0.5**
PB16				*i* S	**Sn**	**06 09 05.5**	**-0.4**
PB16				IAML		06 09 06.7	
	comp=E,10μm,0.4s						
MNMC	**Minye Minye**	**0.67**	**193**	*e*Pn	**Pn**	**06 08 54.9**	**+1.0**
MNMC				*e*Sn	**Sn**	**06 09 10.5**	**+0.9**
MNMC	**Minye Minye**	**0.67**	**193**	*e*P	**Pn**	**06 08 54.6**	**+0.7**
MNMC				*e*S	**Sn**	**06 09 09.2**	**-0.3**
MNMC				IAML		06 09 10.8	
	comp=N,14μm,0.3s						
MNMCX	**Minye Minye**	**0.67**	**193**	*e*P	**Pn**	**06 08 54.7**	**+0.8**
MNMCX				*e*S	**Sn**	**06 09 10.5**	**+0.9**
PB12	**IPOC Station P**	**0.85**	**260**	*e*P	**Pn**	**06 08 55.4**	**+0.4**
PB12				*e*S	**Sn**	**06 09 11.7**	**+0.1**
PB12	**IPOC Station P**	**0.85**	**260**	⇑*e*P	**Pn**	**06 08 55.6**	**+0.6**
PB12				*i* S	**Sn**	**06 09 11.8**	**+0.1**
PB12				IAML		06 09 13.5	
	comp=N,11μm,0.3s						
GO01	**Chusmiza**	**1.22**	**169**	*e*Pn	**Pn**	**06 09 00.6**	**+1.7**
GO01				*e*Sn	**Sn**	**06 09 20.3**	**+2.0**
GO01	**Chusmiza**	**1.22**	**169**	⇓*e*P	**Pn**	**06 09 00.7**	**+1.7**
GO01				*i* S	**Sn**	**06 09 20.1**	**+1.7**
GO01				IAML		06 09 28.6	
	comp=N,2μm,0.2s						
PSGC	**Pisagua**	**1.29**	**210**	⇑*e*P	**Pn**	**06 09 00.1**	**+0.9**
PSGC				*i* S	**Sn**	**06 09 19.7**	**+0.5**
PSGC				IAML		06 09 22.1	
	comp=N,3μm,0.4s						
PSGCX	**Pisagua**	**1.29**	**210**	*e*P	**Pn**	**06 09 00.2**	**+0.9**
PSGCX				*e*S	**Sn**	**06 09 19.9**	**+0.8**
PB11	**IPOC Station P**	**1.30**	**189**	*e*Pn	**Pn**	**06 09 00.5**	**+1.1**
PB11				*e*Sn	**Sn**	**06 09 20.4**	**+1.0**
PB11	**IPOC Station P**	**1.30**	**189**	*e*P	**Pn**	**06 09 00.3**	**+0.9**
PB11				*e*S	**Sn**	**06 09 20.4**	**+1.0**
PB11	**IPOC Station P**	**1.30**	**189**	⇓*e*P	**Pn**	**06 09 00.7**	**+1.3**
PB11				*i* S	**Sn**	**06 09 20.3**	**+1.0**
PB11				IAML		06 09 21.5	
	comp=N,4μm,0.5s						
PB08	**IPOC Station P**	**1.68**	**171**	*e*P	**Pn**	**06 09 05.0**	**+1.2**
PB08				*e*S	**Sn**	**06 09 28.9**	**+1.5**
PB08	**IPOC Station P**	**1.68**	**171**	⇑*e*P	**Pn**	**06 09 06.0**	**+2.1**
PB08				*i* S	**Sn**	**06 09 29.4**	**+2.1**
LPAZ	**La Paz**	**2.50**	**30**	P	**Pn**	**06 09 15.7**	**+1.5**
	baz=209,slow=7.0						
LPAZ				S	**Sn**	**06 09 46.1**	**+0.7**
	baz=359,slow=6.3,SNR=1.5						
LPAZ				LR	LR	06 10 06.1	
	comp=N,77nm,20.1s,baz=282,slow=38						
LPAZ	**La Paz**	**2.50**	**30**	*e*P	**Pn**	**06 09 15.7**	**+1.5**
PB01	**IPOC Station P**	**2.56**	**181**	*e*Pn	**Pn**	**06 09 15.9**	**+1.6**
PB01				*e*Sn	**Sn**	**06 09 46.6**	**+0.6**
PB01	**IPOC Station P**	**2.56**	**181**	⇑*e*P	**Pn**	**06 09 16.0**	**+1.7**
PB01				*i* S	**Sn**	**06 09 46.1**	**+0.1**
PB01				IAML		06 09 48.2	
	comp=E,661nm,0.4s						
PB04	**IPOC Station P**	**3.90**	**190**	*e*Pn	**Pn**	**06 09 32.6**	**+0.8**
LVC	**Limon Verde**	**4.15**	**173**	P	**Pn**	**06 09 38.0**	**+2.7**
	comp=E,12nm,0.3s,baz=8.1,slow=8.2,SNR=229						
LVC				S	**Sn**	**06 10 23.3**	**-0.2**
	comp=E,33nm,0.3s,baz=114,slow=19,SNR=18						
LVC	**Limon Verde**	**4.15**	**173**	*e*Pn	**Pn**	**06 09 37.5**	**+2.2**
LVC				*e*Sn	**Sn**	**06 10 24.3**	**+0.8**
LVC	**Limon Verde**	**4.15**	**173**	*e*P	**Pn**	**06 09 38.9**	**+3.6**
PB10	**IPOC Station P**	**5.12**	**192**	*e*Pn	**Pn**	**06 09 47.4**	**-0.6**
PB10				*e*Sn	**Sn**	**06 10 42.9**	**-3.4**
YJA	**Yavi**	**5.21**	**136**	*e*P	**Pn**	**06 09 52.0**	**+2.4**
YJA				IAML		06 09 57.0	
	comp=Z,24nm,0.4s						
HJA	**Humahuaca**	**6.04**	**142**	*e*P	**Pn**	**06 10 02.6**	**+2.1**
HJA				IAML		06 10 05.3	
	comp=Z,48nm,0.4s						
GO02	**Mina Guanaco**	**6.66**	**181**	*e*Pn	**Pn**	**06 10 08.9**	**0.0**
GO02				*e*Sn	**Sn**	**06 11 23.9**	**+0.2**
AZAP	**Zapla**	**7.03**	**145**	IAML		06 10 17.2	
	comp=Z,25nm,0.2s						
SIV	**San Ignacio**	**8.37**	**74**	P	**Pn**	**06 10 30.1**	**-1.5**
	comp=Z,2.9nm,0.3s,baz=277,slow=9.8,SNR=56						
SIV				S	**Sn**	**06 11 57.5**	**-7.1**
	comp=Z,0.4nm,0.3s,baz=343,slow=22,SNR=12						
GO03	**Copiap**	**9.11**	**184**	*e*Pn	**Pn**	**06 10 40.3**	**-1.3**
GO03				*e*Sn	**Sn**	**06 12 18.6**	**-3.9**
NNA	**Nana**	**9.62**	**311**	*e*Pn	**Pn**	**06 10 47.3**	**-1.2**
LCO	**Las Campanas**	**10.56**	**186**	*e*Pn	**Pn**	**06 10 58.1**	**-3.1**
LCO	**Las Campanas**	**10.56**	**186**	*e*P	**Pn**	**06 11 04.1**	**+2.9**
GO04	**Tololo Observa**	**11.72**	**186**	*e*Pn	**Pn**	**06 11 13.7**	**-2.8**
AQDB	**Aquidauana**	**13.11**	**101**	*e*P	**Pn**	**06 11 32.8**	**-1.8**
CPUP	**Villa Florida**	**13.65**	**127**	P	**Pn**	**06 11 40.1**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=310,slow=11,SNR=9.4						
CPUP	**Villa Florida**	**13.65**	**127**	*e*Pn	**Pn**	**06 11 40.6**	**-0.9**
CPUP	**Villa Florida**	**13.65**	**127**	*e*P	**Pn**	**06 11 40.6**	**-0.9**
CLDB	**Colider**	**15.20**	**62**	*e*P	**Pn**	**06 12 00.9**	**-0.1**
TRCB	**Terra Rica**	**16.31**	**108**	*e*P	**Pn**	**06 12 14.9**	**+0.2**
PTGB	**Pitanga**	**17.30**	**114**	*e*P	**Pn**	**06 12 26.8**	**-0.1**
ITRB	**Iturama**	**18.08**	**97**	*e*P	**P**	**06 12 34.5**	**-0.2**
CPSB	**Cacapava Do Su**	**18.77**	**132**	*e*P	**P**	**06 12 41.8**	**-0.4**
FRTB	**Fartura**	**19.19**	**108**	*e*P	**P**	**06 12 46.7**	**-0.1**
PLTB	**Pedras Altas**	**19.48**	**136**	*e*P	**P**	**06 12 49.7**	**-0.2**
BB19B	**Bebedouro**	**19.85**	**101**	*e*P	**P**	**06 12 53.8**	**-0.2**
PTGA	**Pitinga**	**19.93**	**29**	P	**P**	**06 12 54.1**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=38,slow=20,SNR=17						
PTGA	**Pitinga**	**19.93**	**29**	*e*P	**P**	**06 12 54.3**	**-0.6**
	comp=Z,3.8nm,0.6s						
PTGA	**Pitinga**	**19.93**	**29**	*e*P	**P**	**06 12 53.6**	**-1.3**
CNLB	**Canela**	**20.11**	**126**	*e*P	**P**	**06 12 56.5**	**-0.2**
OGAUY	**Aigu**	**20.54**	**143**	*e*P	**P**	**06 13 01.7**	**+0.4**
TRQA	**Tornquist**	**20.58**	**163**	*e*P	**P**	**06 13 03.4**	**+1.7**
BDFB	**Brasilia**	**20.68**	**85**	P	**P**	**06 13 02.1**	**-0.9**
	comp=Z,12nm,0.5s,baz=262,slow=8.4,SNR=29						
BDFB	**Brasilia**	**20.68**	**85**	*e*P	**P**	**06 13 02.3**	**-0.7**
	comp=Z,13nm,0.5s						
RCLB	**Rio Claro- Sao**	**20.90**	**105**	*e*P	**P**	**06 13 04.3**	**-1.0**
SPB	**Sao Paulo**	**21.16**	**108**	*e*P	**P**	**06 13 07.4**	**-0.6**
PEXB	**Peixe**	**21.34**	**76**	*e*P	**P**	**06 13 10.2**	**+0.1**
PMNB	**Patos De Minas**	**21.81**	**94**	*e*P	**P**	**06 13 14.3**	**-0.9**
PLCA	**Paso Flores**	**22.21**	**182**	P	**P**	**06 13 20.4**	**+1.5**
	comp=Z,3.6nm,1.0s,baz=5.5,slow=11,SNR=3.6						
PLCA	**Paso Flores**	**22.21**	**182**	*e*P	**P**	**06 13 22.3**	**+3.4**
	comp=Z,22nm,1.4s						
BSCB	**Bom Sucesso**	**23.35**	**100**	*e*P	**P**	**06 13 29.7**	**-0.4**
VAS01	**Vassouras-RJ**	**24.65**	**103**	*e*P	**P**	**06 13 41.9**	**0.0**
SDV	**Santo Domingo**	**27.21**	**357**	*e*P	**P**	**06 14 06.2**	**+1.2**
RIB01	**Linhares ES**	**27.48**	**96**	*e*P	**P**	**06 14 07.4**	**+0.1**
BCIP	**Isla Barro Col**	**29.32**	**339**	*e*P	**P**	**06 14 22.2**	**-1.3**
	comp=Z,34nm,1.4s						
PMSA	**Palmer Station**	**46.41**	**177**	*e*P	**P**	**06 16 45.3**	**-0.8**
	comp=Z,26nm,1.4s						
TXAR	**Lajitas Array**	**57.88**	**325**	P	**P**	**06 18 13.6**	**+2.1**
	comp=Z,0.1nm,0.4s,baz=143,slow=7.9,SNR=2.7						
DBIC	**Dimbokro**	**68.39**	**75**	P	**P**	**06 19 21.1**	**-0.1**
	comp=Z,6.5nm,0.8s,baz=236,slow=3.5,SNR=8.3						
PDAR	**Pinedale Array**	**71.25**	**330**	P	**P**	**06 19 40.7**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=140,slow=9.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	**76.83**	**71**	P	**P**	**06 20 11.2**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=256,slow=5.3,SNR=36						
ESDC	**Sonseca Array**	**84.04**	**45**	P	**P**	**06 20 49.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=250,slow=5.2,SNR=5.2						
MKAR	**Makanchi Array**	**143.43**	**33**	PKP	**PKPdf**	**06 27 52.5**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=348,slow=0.8,SNR=2.5						
WMQ	**Urumqi**	**148.24**	**32**	*e*P	**PKPdf**	**06 27 59.0**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,38nm,5.3s						
SONM	**Songino Array**	**150.51**	**6**	PKPbc	**PKiKP**	**06 28 11.8**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=298,slow=3.9,SNR=3.6						
LZH	**Lanzhou**	**161.47**	**17**	*e*PKP	**PKPdf**	**06 28 16.3**	**-2.6**
LZH				pPKP	pPKPdf	06 28 54.0	-1.8
LZH				PKP	**PKPab**	**06 29 04.5**	**+0.7**
LZH				sPKP		06 29 09.3	
CD2	**Chengdu**	**166.16**	**25**	PKP	**PKPdf**	**06 28 20.8**	**-2.4**
WHN	**Wuhan**	**167.50**	**345**	PKP	PKPdf	06 28 35.6	+12

*ISCJB **13** 06:14:58.9±0.7, 30°.29S±0°.06×138°.35E±0°.09, h10^{km}, Error ellipse: s-maj=13.3km s-min=5.9km az=143.3*

*IDC **13** 06:14:59.3±3.1, 30°.35S×138°.37E, h0^{km}, mb1 3.2/3, mb1mx3.1/17, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=66.6km s-min=13.8km az=44.0*

*AUST **13** 06:15:00.8±0.0, 30°.40S×138°.38E, h10^{km}, Error ellipse: s-maj=0.5km s-min=0.2km az=343.0*

ISC 13 06:15:00.9±1.0**, 30°.36S**±0°.08×**138°.35E**±0°.07**, h10^{km}, n7, σ0^{s}.99**/11**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTT	**Hallett**	**3.10**	**171**	P	**Pn**	**06 15 49.3**	**-0.7**
	baz=3.1						
BBOO	**Buckleboo**	**3.13**	**218**	P	**Pn**	**06 15 50.2**	**-0.2**
	baz=3.1						
STKA	**Stephens Creek**	**3.17**	**119**	Pn	**Pn**	**06 15 50.7**	**-0.2**
	0.2nm,0.3s,baz=301,slow=12,SNR=6.7						
STKA				Pg	**Pb**	**06 15 57.1**	**-0.2**
	0.8nm,0.3s,baz=297,slow=16,SNR=12						
STKA				Sn	**Sn**	**06 16 30.2**	**+1.6**
	1.5nm,0.3s,baz=3.3,slow=16,SNR=6.8						
STKA				Lg	Lg	06 16 38.9	
	1.8nm,0.3s,baz=27,slow=16,SNR=7.2						
STKA	**Stephens Creek**	**3.17**	**119**	P	**Pn**	**06 15 50.6**	**-0.2**
	baz=3.1						
CMSA	**Cobar Meteorol**	**6.41**	**102**	P	**Pn**	**06 16 34.7**	**-0.8**
	baz=6.4						
ASAR	**Alice Springs**	**7.76**	**328**	Pn	**Pn**	**06 16 53.5**	**-0.4**
	0.1nm,0.3s,baz=149,slow=12,SNR=7.7						
ASAR				Sn	**Sn**	**06 18 23.8**	**+1.9**
	0.2nm,0.3s,baz=153,slow=22,SNR=5.5						
ASAR				Lg	Lg	06 19 05.2	
	0.0nm,0.3s,baz=148,slow=24,SNR=3.1						
WRA	**Warramunga Arr**	**10.99**	**340**	Pn	**Pn**	**06 17 38.1**	**-0.3**
	0.1nm,0.3s,baz=163,slow=12,SNR=1.5						
WRA				Sn	**Sn**	**06 19 40.7**	**-0.7**
	0.1nm,0.3s,baz=162,slow=22,SNR=2.1						

MEX 13 06:19:14.9±0.8**, 18°.18N**×**100°.37W, h59^{km}**±7^{km}**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.10**	**12**	*e*P	Pn	06 19 22.6	-1.3
ARIG				*e*S	Sn	06 19 28.5	-1.9
MEIG	**Mezcala**	**0.76**	**109**	*e*P	Pn	06 19 28.0	-1.9
MEIG				*e*S	Sn	06 19 38.2	-2.6
PLIG	**Platanillo**	**0.85**	**75**	*e*P	Pn	06 19 30.1	-1.0
PLIG				*e*S	Sn	06 19 41.6	-1.4
CAIG	**El Cayaco**	**1.13**	**175**	*e*P	Pn	06 19 32.8	-1.8
CAIG				*e*S	Sn	06 19 47.8	-1.5
ZIIG	**Zihuatanejo**	**1.19**	**242**	*i* P	Pn	06 19 33.2	-2.2
ZIIG				*i* S	Sn	06 19 48.7	-1.9
TLIG	**Tlapa**	**1.82**	**109**	*e*P	Pn	06 19 43.3	-0.8
TLIG				*e*S	Sn	06 20 05.0	-1.2

MEX 13 06:31:24.5±0.5**, 15°.77N**×**92°.81W, h158^{km}**±4^{km}**, MD3.9, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.40**	**260**	*e*P	Pn	06 31 44.8	-1.5
PCIG				*e*S	Sn	06 32 00.9	-1.9
CCIG	**Comitan**	**0.82**	**52**	*i* P	Pn	06 31 47.6	-1.3
CCIG				*e*S	Sn	06 32 05.9	-1.6
THIG		**1.01**	**149**	*e*P	Pn	06 31 48.7	-1.4
THIG				*e*S	Sn	06 32 07.8	-1.8
TGIG		**1.04**	**343**	*e*P	Pn	06 31 48.9	-1.5
TGIG				*e*S	Sn	06 32 07.5	-2.9

SOME 13 06:38:27.0, 44°.73N×81°.88E, h10km
NNC 13 06:38:27.1±0.9, 44°.78N×81°.90E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=10.0km s-min=3.0km az=120.0
ISC 13 06:38:27.4±1.8, **44°.71N**±0°.04×**81°.84E**±0°.07, **h16km**±13km, **n34**, σ1s.**73**/54, **10C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.52	256	P	Pg	06 38 56.2	-0.3
	17nm,0.2s						
DJR				S	Sg	06 39 18.6	+2.3
	36nm,0.3s						
DJR	Jarkent	1.52	256	eP	Pg	06 38 56.2	-0.3
	17nm,0.2s						
DJR				eS	Sg	06 39 17.6	+1.3
	36nm,0.3s						
KTMS	Ketmen	1.66	221	P	Pg	06 38 58.8	-0.5
	14nm,0.3s						
KTMS				S	Sg	06 39 22.4	+1.7
	107nm,0.3s						
KTMS	Ketmen	1.66	221	eP	Pg	06 38 58.8	-0.5
	14nm,0.3s						
KTMS				eS	Sg	06 39 21.9	+1.2
	107nm,0.3s						
KAPS	Kapalarasan	1.86	289	Pg	Pg	06 39 01.7	-1.4
	7.7nm,0.3s						
KAPS				Lg	Lg	06 39 27.8	
	27nm,0.5s						
KAPS	Kapalarasan	1.86	289	eP	Pg	06 39 01.7	-1.4
	7.7nm,0.3s						
KAPS				eS	Sg	06 39 27.0	-0.2
	27nm,0.5s						
MAKZ	Makanchi	2.11	3	⇓Pn	Pn	06 39 02.0	0.0
	12nm,0.5s						
MAKZ				⇓Sn	Sb	06 39 30.2	-1.0
	33nm,0.5s						
MK31	Makanchi Array	2.11	8	⇑Pn	Pn	06 39 02.0	-0.1
	14nm,0.3s,baz=180,slow=14,SNR=1363						
MK31				⇓Sn	Sb	06 39 30.3	-1.0
	33nm,0.5s,baz=185,slow=28,SNR=19						
PDGK	Podgornoye	2.18	232	Pg	Pb	06 39 07.4	+0.8
	5.6nm,0.3s						
PDGK				Lg	Lg	06 39 37.3	
	34nm,0.5s						
PDGK	Podgornoye	2.18	232	⇑Pn	Pb	06 39 04.9	-1.7
	4.3nm,0.5s						
PDGK				⇑Sn	Sg	06 39 37.3	-0.4
	80nm,0.8s						
TDK	Taldyqorghan	2.46	278	Pg	Pg	06 39 13.3	-1.3
	54nm,0.3s						
TDK				Lg	Lg	06 39 47.4	
	153nm,0.4s						
TDK	Taldyqorghan	2.46	278	eP	Pg	06 39 13.3	-1.3
	54nm,0.3s						
TDK				eS	Sg	06 39 46.6	+0.1
	153nm,0.4s						
MNBS	Baschi	2.54	257	Pg	Pg	06 39 14.7	-1.5
	10nm,0.2s						
MNBS				Lg	Lg	06 39 49.7	
	49nm,0.3s						
MNBS	Baschi	2.54	257	eP	Pg	06 39 14.7	-1.5
	10nm,0.2s						
MNBS				eS	Sg	06 39 48.8	-0.4
	49nm,0.3s						
UZB	Uzynbulak	2.56	234	Pg	Pb	06 39 13.5	+0.4
	8.4nm,0.3s						
UZB				Lg	Lg	06 39 48.1	
	18nm,0.3s						
UZB	Uzynbulak	2.56	234	eP	Pb	06 39 13.5	+0.4
	8.4nm,0.3s						
UZB				eS	Sb	06 39 46.9	+2.5
	18nm,0.3s						
KPKS	Kokpek	2.59	243	eP	Pb	06 39 14.9	+1.3
	17nm,0.2s						
KPKS				eS	Sg	06 39 49.2	-1.5
	104nm,0.3s						
KURS	Kuram	2.91	247	Pg	Pg	06 39 21.1	-2.2
	4.4nm,0.3s						
KURS				Lg	Lg	06 40 00.1	
	22nm,0.5s						
KURS	Kuram	2.91	247	eP	Pg	06 39 21.1	-2.2
	4.4nm,0.3s						
KURS				eS	Sg	06 40 00.1	-0.9
	22nm,0.5s						
SATY	Saty	2.98	238	Pg	Pb	06 39 21.7	+1.5
	11nm,0.2s						
SATY				Lg	Lg	06 40 01.2	
	51nm,0.2s						
SATY	Saty	2.98	238	eP	Pb	06 39 21.7	+1.5
	11nm,0.2s						
SATY				eS	Sg	06 40 01.2	-2.0
	51nm,0.2s						
KOTS	Kotyrbulak	3.72	248	Pg	Pb	06 39 35.2	+2.4
	4.3nm,0.3s						
KOTS				Lg	Lg	06 40 24.4	
	36nm,0.3s						
KOTS	Kotyrbulak	3.72	248	eP	Pb	06 39 35.2	+2.4
	4.3nm,0.3s						
KOTS				eS	Sg	06 40 24.4	-2.4
	36nm,0.3s						
KTBS	Karatobe	3.84	257	Pg	Pb	06 39 36.7	+1.8
	2.4nm,0.5s						
KTBS				Lg	Lg	06 40 27.3	
	26nm,0.3s						
KTBS	Karatobe	3.84	257	eP	Pg	06 39 39.2	-1.8
	2.4nm,0.5s						
KTBS				eS	Sg	06 40 30.6	-0.2
	39nm,0.7s						
TNSS	Tian-Shan	3.91	246	Pg	Pg	06 39 41.0	-1.4
	3.9nm,0.4s						
TNSS				Lg	Lg	06 40 34.3	
	9.6nm,0.3s						
TNSS	Tian-Shan	3.91	246	eP	Pg	06 39 41.0	-1.4
	3.9nm,0.4s						
TNSS				eS	Sg	06 40 34.3	+1.2
	9.6nm,0.3s						
KUU	Kurty	4.03	260	Pg	Pb	06 39 41.0	+3.0
	1.9nm,0.3s						
KUU				Lg	Lg	06 40 31.0	
	9.3nm,0.2s						
KUU	Kurty	4.03	260	⇑iP	Pb	06 39 41.0	+3.0
	2.6nm,1.0s						
KUU				eS	Sg	06 40 34.2	-2.7
	14nm,0.5s						
KST	Kastek	4.56	251	Pg	Pg	06 39 52.1	-2.7
	3.8nm,0.7s						
KST				Lg	Lg	06 40 53.1	
	8.2nm,0.6s						
KST	Kastek	4.56	251	eP	Pg	06 39 52.1	-2.7
	3.8nm,0.7s						
KST				eS	Sg	06 40 53.1	-0.8
	8.2nm,0.6s						
TKM2	Tokmak 2	4.86	251	⇓Pg	Pb	06 39 55.2	+2.9
	1.9nm,0.9s						
TKM2				⇑Lg	Lg	06 41 00.4	
	3.7nm,0.6s						
KURBB	Kurchatov Arra	6.33	340	⇑Pg	Pg	06 40 21.7	-6.8
	1.2nm,0.8s						
KURBB				⇓Sn	Sn	06 41 10.8	-1.1
	2.9nm,0.5s						
KURBB				⇑Lg	Lg	06 41 49.4	
	5.2nm,0.6s						
KURK	Kurchatov	6.39	341	⇑Pg	Pb	06 40 21.6	+3.4
	1.0nm,0.7s						
KURK				⇑Sn	Sn	06 41 12.9	-0.6
	1.9nm,0.8s						
KURK				⇑Lg	Lg	06 41 49.4	
	2.0nm,0.7s						

SJA 13 06:39:32.2±0.5, 34°.10S×72°.42W, h2km±4km, ML3.6, MW3.1
GUC 13 06:39:36.5±0.5, 34°.44S×72°.01W, h35km±2km, ML3.6
ISC 13 06:39:33.2±1.6, **34°.40S**±0°.04×**72°.17W**±0°.07, **h10km**±11km, **n17**, σ1s.**76**/26, **1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.64	162	⇓eP	Pn	06 39 47.5	-0.9
GO05				i S	Sb	06 39 55.5	0.0
ANTU	Antumapu	1.52	57	eP	Pb	06 40 00.7	-0.8
ANTU				i S	Sn	06 40 19.1	-1.2
ANTU				IAML		06 40 25.1	
	comp=N,2µm,0.3s						
FSR	Penalolen	1.64	56	eP	Pb	06 40 02.6	-1.0
FSR				i S	Sg	06 40 24.8	-1.2
CLCH	Cerro Calan	1.68	54	eP	Pb	06 40 03.5	-0.8
CLCH				i S	Sn	06 40 23.5	-1.0
CLCH				IAML		06 40 33.5	
	comp=E,999nm,0.6s						
LMEL	Las Melosas	1.72	72	⇑eP	Pb	06 40 03.9	-1.1
LMEL				i S	Sn	06 40 24.2	-1.2
LMEL				IAML		06 40 33.5	
	comp=N,905nm,0.3s						
PEL	Peldehue	1.76	45	eP	Pg	06 40 05.9	-1.0
PEL				eS	Sg	06 40 30.5	+0.8
PEL	Peldehue	1.76	45	eP	Pb	06 40 04.8	-0.7
PEL				i S	Sn	06 40 25.7	-0.6
PEL				IAML		06 40 30.6	
	comp=E,903nm,0.5s						
COCH	Cobquecura	1.80	196	eP	Pg	06 40 07.0	-0.7
COCH				i S	Sb	06 40 29.5	+0.6
FCH	Farellones	1.89	56	eP	Pb	06 40 06.6	-1.4
FCH				i S	Sn	06 40 29.6	-0.3
CCHI	Chillan	2.20	178	IAML		06 40 48.4	
	comp=E,731nm,0.4s						
EDS3	Malargue	2.65	122	eP	Pg	06 40 23.5	-0.5
EDS3				eS	Sg	06 41 01.9	+3.6
AUSP	Uspallata	3.18	48	eP	Pn	06 40 26.4	+2.8
AUSP				eS	Sb	06 41 06.7	-2.2
RTCV	Cerro Valdivia	3.96	51	eP	Pn	06 40 37.2	+3.1
AMOG	MOGNA	4.64	43	eP	Pn	06 40 46.4	+3.0
ACAN	Cantantal	4.67	64	eP	Pn	06 40 48.4	+4.6
AROD	Rodeo	4.80	29	eP	Pn	06 40 48.2	+2.4
VCA	Vinchina	6.58	32	eP	Pn	06 41 11.9	+1.7
VCA				IAML		06 41 41.2	
	comp=Z,14nm,0.6s						

MEX 13 06:59:23.9±0.3, **15°.70N**×**96°.09W**, **h16km**±5km, **MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PANG	Puerto Angel	0.37	265	i P	Pg	06 59 30.5	-1.0
PANG				i S	Sg	06 59 35.4	-1.4
CMIG	Matias Romero	1.80	40	eP	Pn	06 59 51.0	-3.3
CMIG				i S	Sn	07 00 11.8	-5.1

ISCJB 13 07:40:00.1±0.3, 13°.08S±0°.04×167°.11E±0°.06, h180km, mb4.5/54, Error ellipse: s-maj=8.7km s-min=5.8km az=175.4
IDC 13 07:40:03.6±3.0, 13°.18S×167°.19E, h201km±26km, mb3.8/16, mb1 3.9/16, mb1mx3.7/41, mbtmp4.3/16, Error ellipse: s-maj=19.5km s-min=13.1km az=97.0
NEIC 13 07:40:07.3±1.5, 13°.12S×167°.07E, h233km±5km, mb4.5/44, Error ellipse: s-maj=17.2km s-min=14.5km az=109.0
ISC 13 07:40:01.8±0.4, **13°.04S**±0°.06×**167°.04E**±0°.09, **h180km**, **n93**, σ1s.**03**/99, **mb4.4**/54, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.83	297	ePn	Pn	07 41 51.8	-1.1
DZM	Mont Dzumac	9.00	184	P	Pn	07 42 12.7	+4.4
	0.9nm,0.3s,baz=342,slow=20,SNR=8.0						
DZM				S	Sn	07 43 51.6	+2.7
	0.2nm,0.3s,baz=343,slow=19,SNR=2.0						
DZM	Mont Dzumac	9.00	184	ePn	Pn	07 42 14.7	+6.3
FUNA	Funafuti	12.76	71	eP	P	07 43 03.8	+2.6
EIDS	Eidsvold	19.40	228	eP	Pn	07 44 16.7	-0.8
	20nm,1.2s						
CTA	Charters Tower	21.11	248	P	P	07 44 34.1	+1.5
	4.9nm,0.7s,baz=68,slow=13,SNR=4.9						
CTAO	Charters Tower	21.11	248	eP	P	07 44 33.6	+1.0
	28nm,1.3s						
ARMA	Armidale	22.40	217	eP	P	07 44 47.2	+1.5
	13nm,1.4s						
OUZ	Omahuta	22.86	166	eP	P	07 44 51.1	+1.4
	31nm,1.4s						
HIZ	Hauiti	26.30	166	eP	P	07 45 22.1	+1.3
	102nm,1.5s						
URZ	Urewera	26.67	162	P	P	07 45 22.0	-2.0
	7.2nm,0.8s,baz=347,slow=14,SNR=7.6						
URZ	Urewera	26.67	162	eP	P	07 45 22.0	-2.0
	53nm,1.3s						
BKZ	Black Stump Fm	27.33	164	eP	P	07 45 29.2	-0.8
	30nm,1.5s						
CAN	Canberra	27.53	213	eP	P	07 45 32.5	+0.7
	6.1nm,1.1s						
BFZ	Birch Farm	28.70	165	eP	P	07 45 40.8	-1.3
	98nm,1.3s						
THZ	Tophouse	29.07	171	eP	P	07 45 45.7	+0.3
	30nm,1.4s						
KHZ	Kahutara	29.81	170	eP	P	07 45 51.3	-0.4
	49nm,1.4s						
STKA	Stephens Creek	29.94	227	P	P	07 45 53.4	+0.2
	1.2nm,0.3s,baz=54,slow=11,SNR=5.7						
STKA				PcP	PcP	07 48 50.2	-1.2
	1.5nm,0.4s,baz=101,slow=5.2,SNR=6.7						
STKA	Stephens Creek	29.94	227	eP	P	07 45 54.3	+1.1
	0.7nm,1.0s						
STKA				ePcP	PcP	07 48 50.7	-0.6
LTZ	Lake Taylor	29.98	172	eP	P	07 45 53.1	-0.2
	41nm,1.5s						
FOZ	Fox Glacier	30.48	176	eP	P	07 45 58.5	+0.8
	117nm,1.5s						
OXZ	Oxford	30.48	173	eP	P	07 45 59.0	+1.2
	15nm,0.8s						
RPZ	Rata Peaks	30.76	174	eP	P	07 46 00.1	-0.1
	17nm,1.1s						
MQZ	McQueen's Vall	30.94	172	eP	P	07 46 01.0	-0.7
	22nm,1.2s						
TOO	Toolangi	31.09	214	eP	P	07 46 03.9	+0.7
	5.1nm,1.0s						
LBZ	Lake Benmore	31.35	176	eP	P	07 46 04.9	-0.5
	24nm,1.4s						
ODZ	Otahua Downs	32.04	175	eP	P	07 46 11.9	+0.5
	1.0nm,0.5s						
WRAB	Tennant Creek	32.05	253	eP	P	07 46 12.6	+0.8
	6.3nm,1.3s						
WB2	Warramunga Arr	32.05	253	eP	P	07 46 12.4	+0.6
	12nm,1.4s						
WR1	Warramunga Arr	32.06	253	eP	P	07 46 12.1	+0.2
WRA	Warramunga Arr	32.06	253	P	P	07 46 12.1	+0.2
	1.2nm,0.5s,baz=85,slow=8.3,SNR=12						
WHZ	Wether Hill Ro	32.75	179	eP	P	07 46 16.4	-1.2
	22nm,1.4s						
AS31	Alice Springs	33.10	247	eP	P	07 46 21.1	+0.2
	1.2nm,0.9s						
AS31				ePcP	PcP	07 48 59.6	-0.5
ASAR	Alice Springs	33.10	247	P	P	07 46 21.1	+0.1
	1.7nm,0.5s,baz=72,slow=9.3,SNR=33						
ASAR				PcP	PcP	07 48 58.8	-1.3
	0.7nm,0.6s,baz=72,slow=2.3,SNR=7.5						
ASAR				ScP	ScP	07 52 24.8	-2.7
	1.0nm,0.8s,baz=90,slow=3.2,SNR=5.7						
BBOO	Buckleboo	34.46	230	eP	P	07 46 32.7	+0.1
	17nm,1.4s						
PSA00	Pilbara Seismi	45.70	253	eP	P	07 48 06.1	+0.9
	9.6nm,1.0s						
NWAO	Narrogin (SRO)	49.44	238	eP	P	07 48 33.4	-0.4
	35nm,1.3s						
MORW	Morawa	49.81	243	eP	P	07 48 36.2	-0.5
	24nm,1.5s						
GIRL	Giralia	50.94	251	eP	P	07 48 44.1	-1.2
	152nm,1.4s						
UGM	Wanagama	55.72	269	eP	P	07 49 21.9	+1.7
	300nm,1.5s						
MJAR	Matsushiro Arr	56.31	332	P	P	07 49 24.1	+0.2
	1.2nm,0.6s,baz=174,slow=8.1,SNR=4.2						
MAJO	Matsushiro	56.32	332	eP	P	07 49 24.1	+0.2
JNU	Nakatsue	57.43	324	eP	P	07 49 33.1	+1.3
	5.4nm,0.7s						
ASAJ	Asahikawa	61.09	340	P	P	07 49 57.4	+0.7
	2.3nm,0.7s,baz=198,slow=6.4,SNR=4.4						
VNDA	Vanda	64.53	181	P	P	07 50 18.4	-0.6
	0.7nm,0.6s,baz=346,slow=7.5,SNR=7.2						
VNDA	Vanda	64.53	181	eP	P	07 50 18.4	-0.6
VNDA				e		07 50 18.6	
SBA	Scott Base	64.81	180	eP	P	07 50 21.0	+0.2
	2.1nm,0.8s						
CASY	Casey	65.00	202	eP	P	07 50 21.2	-0.9
	3.2nm,0.5s						
USRK	Ussuriysk Ar.	65.29	333	P	P	07 50 25.6	+1.3
	1.2nm,0.6s,baz=97,slow=9.0,SNR=4.8						
PETK	Petropavlovsk-	66.37	354	P	P	07 50 32.4	+1.3
	2.6nm,0.7s,baz=134,slow=6.7,SNR=5.4						
PEA1	Petropavlovsk-	66.37	354	eP	P	07 50 32.4	+1.3
NIKH	Nikolski High	68.93	15	eP	P	07 50 46.7	-0.4
	39nm,1.3s						
UNV	Unalaska Valle	70.34	16	eP	P	07 50 55.8	+0.1
	33nm,1.4s						
SPIA	Saint Paul Isl	72.45	13	eP	P	07 51 08.5	+0.3
	53nm,1.3s						
CMAR	Chiang Mai Arr	74.07	294	P	P	07 51 20.2	+1.6
	1.2nm,0.5s,baz=138,slow=5.0,SNR=6.2						
SEY	Seymchan	76.59	353	P	P	07 51 32.6	+0.6
	3.1nm,0.7s,baz=146,slow=7.0,SNR=8.9						
QSPA	South Pole Qui	76.98	180	eP	P	07 51 33.5	-0.9
	6.1nm,0.8s						
SONA0	Songino Array	81.01	324	eP	P	07 51 57.2	+0.6
SONM	Songino Array	81.01	324	P	P	07 51 57.2	+0.6
	0.6nm,0.5s,baz=129,slow=3.9,SNR=5.2						
RND	Reindeer	83.41	18	eP	P	07 52 08.8	+0.1
	7.0nm,0.6s						
DIB	Dawson Inlet,	83.70	32	eP	P	07 52 10.2	0.0
	12nm,1.1s						
MLY	Manley	84.07	17	eP	P	07 52 12.0	0.0
	2.6nm,0.4s						
WRH	Wood River Hil	84.42	18	eP	P	07 52 13.1	-0.6
	4.6nm,1.1s						
ILAR	Eielson Array	85.00	18	P	P	07 52 15.2	-1.4
	2.5nm,0.4s,baz=238,slow=5.3,SNR=37						
ILB	Eielson Array	85.00	18	eP	P	07 52 16.1	-0.5
	4.4nm,0.8s						
EGAK	Eagle	86.81	20	eP	P	07 52 25.9	+0.5
	1.9nm,0.8s						
MK32	Makanchi Array	95.83	317	eP	P	07 53 07.9	+0.1
MKAR	Makanchi Array	95.83	317	P	P	07 53 07.9	+0.1
	1.4nm,0.6s,baz=88,slow=6.7,SNR=13						
ZALV	Zalesovo Beam	95.90	324	P	P	07 53 06.7	-1.2
	0.7nm,0.4s,baz=88,slow=4.9,SNR=3.2						
ARA0	ARCESS Array S	118.57	346	ePKPdf	PKPdf	07 58 26.6	-1.1
ARCES	ARCESS Array B	118.57	346	PKP	PKPdf	07 58 26.6	-1.1
	2.3nm,0.3s,baz=80,slow=2.1,SNR=66						
ARE0	ARCESS Array S	118.57	346	ePKPdf	PKPdf	07 58 26.8	-0.8
PQI	Presque Isle	123.16	42	ePKPdf	PKPdf	07 58 34.6	-2.5
FIA1	FINESS Array S	124.08	339	ePKPdf	PKPdf	07 58 38.0	-0.5
FIA0	FINESS Array S	124.08	339	ePKPdf	PKPdf	07 58 37.5	-0.9
FINES	FINESS Array B	124.08	339	PKP	PKPdf	07 58 37.5	-0.9
	1.2nm,0.4s,baz=52,slow=1.6,SNR=22						
LMN	Caledonia Moun	125.53	42	ePKPdf	PKPdf	07 58 39.8	-1.9
NB2	NORSAR Subarra	128.94	345	PKPdf	PKPdf	07 58 47.2	-0.6
	comp=Z,0.3nm,0.3s,baz=31,slow=1.9						
NOA	NORSAR Array B	128.94	345	PKP	PKPdf	07 58 47.1	-0.7
	comp=Z,0.3nm,0.7s,baz=52,slow=2.3,SNR=5.5						
HFS	Hagfors	129.05	343	PKP	PKPdf	07 58 47.1	-0.9
	comp=Z,0.7nm,0.4s,baz=116,slow=6.8,SNR=6.6						
NC602	NORSAR Array S	129.12	345	ePKPdf	PKPdf	07 58 47.8	-0.3
AKASG	Malin Array Be	129.22	327	PKP	PKPdf	07 58 47.6	-1.0
	comp=Z,0.8nm,0.6s,baz=43,slow=2.0,SNR=3.4						
BR101	Keskin Array S	131.23	312	ePKPdf	PKPdf	07 58 52.1	-0.9
BRTR	Keskin Array B	131.23	312	PKP	PKPdf	07 58 52.1	-0.9
	comp=Z,0.3nm,0.4s,baz=83,slow=1.2,SNR=3.0						
GERES	GERESS Array B	138.04	334	PKP	PKPdf	07 59 05.4	+0.1
	comp=Z,0.2nm,0.3s,baz=207,slow=1.2,SNR=4.2						
BNI	Bardonecchia	143.97	336	ePKPdf	PKPab	07 59 13.9	0.0
KEST	Kesra	149.76	322	PKPbc	PKPbc	07 59 30.9	0.0
	comp=Z,6.1nm,0.7s,baz=174,slow=2.1,SNR=9.9						
KEST	Kesra	149.76	322	ePKPbc	PKPbc	07 59 31.1	+0.1
ESDC	Sonseca Array	152.31	345	PKPbc	PKPbc	07 59 36.4	-0.3
	comp=Z,1.9nm,0.7s,baz=6.6,slow=1.5,SNR=13						
MTE	Manteigas	152.33	351	ePKPbc	PKPbc	07 59 36.5	-0.3
PAB	San Pablo	152.52	345	ePKPbc	PKiKP	07 59 37.3	-0.1
TORD	Torodi Ar. Bea	165.72	272	PKP	PKPdf	07 59 45.1	-0.9
	comp=Z,0.7nm,0.9s,baz=4.5,slow=1.5,SNR=4.3						
TORD				PKPab	PKPab	08 00 45.1	-1.1
	comp=Z,0.4nm,0.8s,baz=82,slow=5.1,SNR=2.3						
TOA1	Torodi Ar. Sit	165.73	272	ePKPdf	PKPdf	07 59 45.1	-0.9
TOA1				ePKPab	PKPab	08 00 45.1	-1.1

IDC 13 07:44:01.9±1.3, 1°.63S×127°.21E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/52, mbtmp3.8/5, ML3.9/1, Error ellipse: s-maj=130.2km s-min=21.4km az=69.0
ISCJB 13 07:44:02.9±0.6, 1°.49S±0°.06×127°.40E±0°.06, h10km, mb3.8/4, Error ellipse: s-maj=9.4km s-min=8.9km az=44.9
DJA 13 07:44:04.4±0.3, 1°S±4°×12°7E±°, h10km, M4.3/8, mb4.9/3, mB4.9/3, MLv4.0/8, Mw(mB)4.2/3
ISC 13 07:44:04.4±0.9, **1°.41S**±0°.08×**127°.34E**±0°.08, **h10km**, **n14**, σ1s.**94**/14, **mb3.9**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	0.78	12	P	Pb	07 44 20.9	+0.8
SANI	Sanana	1.50	245	P	Pn	07 44 30.3	-1.0
NLAI	Namlea	1.84	187	P	Pn	07 44 35.2	-0.8
TNTI	Ternate	2.16	1	P	Pb	07 44 43.1	-0.6
MSAI	Masohi	2.50	141	P	Pn	07 44 44.7	-0.4
SWI	Sorong	3.96	82	P	Pn	07 45 04.7	-0.5
FAKI	Fak Fak	5.13	107	P	Pn	07 45 19.4	-2.0
	173nm,0.8s,2µm						
APSI	Ampana	5.71	275	P	Pn	07 45 30.2	+0.9
SPSI	Sidrap Palu	7.98	251	P	Pn	07 46 04.8	+4.3
WRA	Warramunga Arr	19.65	160	P	P	07 48 30.7	-2.9
	0.4nm,0.3s,baz=338,slow=12,SNR=8.8						
ASAR	Alice Springs	23.02	164	P	P	07 49 07.3	-2.5
	1.0nm,0.5s,baz=346,slow=12,SNR=8.9						
SONM	Songino Array	52.34	342	P	P	07 53 16.7	+0.1
	0.7nm,0.5s,baz=150,slow=6.2,SNR=5.2						
MKAR	Makanchi Array	62.12	327	P	P	07 54 26.0	+0.3
	0.8nm,0.8s,baz=122,slow=7.9,SNR=5.5						
KURBB	Kurchatov Arra	66.39	328	P	P	07 54 53.1	-0.4
	0.5nm,0.5s,baz=129,slow=5.3,SNR=4.7						

DJA 13 07:45:23.7±0.3, **7°S**±5°×**10°9E**±°, **h10km**, **M3.5**/7, **MLv3.5**/7, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJI	Jatiwangi	0.80	317	P	Pg	07 45 35.2	-4.0
JCJI				S	Sg	07 45 45.4	-4.2
CISI	Cisompet, Garu	1.10	245	P	Pb	07 45 42.2	-2.7
CISI				S	Sg	07 45 58.7	-0.6
LEM	Lembang	1.22	282	P	Pb	07 45 45.2	-1.8
LEM				S	Sn	07 46 03.4	-0.2
SMRI	Semarang	1.61	89	P	Pn	07 45 51.7	-0.5
CNJI	Cibinong	1.69	262	P	Pn	07 45 53.1	-0.2
UGM	Wanagama	1.88	116	P	Pn	07 45 56.3	+0.3

IDC 13 07:47:46.4±1.2, 34°.27N×25°.01E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/52, mbtmp3.7/11, ML4.1/3, MS2.5/1, Ms1 2.5/1, ms1mx1.9/43, Error ellipse: s-maj=23.6km s-min=20.2km az=92.0
ISCJB 13 07:47:47.0±1.2, 34°.09N±0°.05×25°.17E±0°.06, h20km±6km, mb3.5/8, Error ellipse: s-maj=9.4km s-min=7.9km az=34.4
ATH 13 07:47:47.4, 34°.16N×25°.09E, h20km±1km, ML2.9/7, Error ellipse: s-maj=3.4km s-min=1.9km az=2.0
THE 13 07:47:48.9, 34°.23N×25°.06E, h0km±1km, ML3.0/4, Error ellipse: s-maj=3.0km s-min=0.8km az=155.0
ISC 13 07:47:49.0±1.7, **34°.22N**±0°.07×**25°.06E**±0°.05, **h18km**±5km, **n29**, σ0s.**81**/41, **mb3.5**/8, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.82	346	P	Pb	07 48 04.4	-0.3
SIVA				S	Sn	07 48 16.7	-0.6
	3µm,0.5s						
SIVA	Sivas	0.82	346	P	Pb	07 48 04.6	-0.1
SIVA				S	Sg	07 48 16.4	+0.5
SIVA				AML	AML	07 48 22.4	
	comp=E,5993µm,0.4s						
SIVA				AML	AML	07 48 25.6	
	comp=N,7020µm,0.6s						
TMBK	Timbaki Herakl	0.88	344	P	Pg	07 48 05.9	-0.3
TMBK				S	Sn	07 48 19.4	+0.6
LAST	Lasithi	1.00	20	P	Pb	07 48 07.9	+0.1
LAST				S	Sn	07 48 22.9	+1.1
	comp=N,312nm,0.6s						
LAST	Lasithi	1.00	20	P	Pb	07 48 07.9	+0.1
LAST				S	Sn	07 48 22.4	+0.5
LAST				AML	AML	07 48 26.1	
	comp=N,680µm,0.6s						
LAST				AML	AML	07 48 32.6	
	comp=E,545µm,0.6s						
GVD	Gavdhos	1.01	308	P	Pn	07 48 07.9	-0.4
GVD				S	Sn	07 48 22.8	+0.8
	comp=E,955nm,0.3s						
GVD	Gavdhos	1.01	308	P	Pn	07 48 07.8	-0.4
GVD				S	Sn	07 48 22.8	+0.8
GVD				AML	AML	07 48 29.7	
	comp=E,1677µm,0.5s						

GVD				AML	AML	07 48 32.2	
	comp=N,2374µm,0.4s						
GVDS	**Gavdos**	**1.01**	**308**	P	**Pg**	**07 48 08.4**	**-0.3**
GVDS				S	**Sn**	**07 48 23.9**	**+1.9**
IDI	**Anoyia**	**1.07**	**353**	Pn	**Pb**	**07 48 08.8**	**-0.3**
	comp=N,22nm,0.3s,baz=170,slow=15,SNR=40						
IDI				Sn	**Sg**	**07 48 24.1**	**+0.2**
	comp=N,41nm,0.3s,baz=294,slow=20,SNR=13						
IDI				LR	LR	07 48 33.6	
	comp=N,85nm,19.8s,baz=234,slow=46						
IDI	**Anoyia**	**1.07**	**353**	P	**Pb**	**07 48 08.6**	**-0.5**
IDI				S	**Sg**	**07 48 24.1**	**+0.2**
IDI				AML	AML	07 48 32.2	
	comp=N,741µm,0.7s						
IDI				AML	AML	07 48 33.4	
	comp=E,633µm,0.5s						
NPS	**Neapolis**	**1.13**	**24**	P	**Pn**	**07 48 09.5**	**-0.4**
NPS				AML	AML	07 48 32.9	
	comp=E,768µm,0.7s						
NPS				AML	AML	07 48 36.0	
	comp=N,548µm,0.4s						
PRNS	**Prines Rethymn**	**1.23**	**338**	P	**Pb**	**07 48 11.8**	**+0.1**
PRNS				S	**Sg**	**07 48 29.9**	**+1.0**
VAM	**Vamos**	**1.38**	**329**	P	**Pb**	**07 48 13.9**	**-0.3**
VAM				S	**Sg**	**07 48 34.0**	**+0.4**
	comp=N,408nm,0.5s						
VAM	**Vamos**	**1.38**	**329**	P	**Pb**	**07 48 14.0**	**-0.2**
VAM				S	**Sg**	**07 48 35.3**	**+1.7**
VAM				AML	AML	07 48 46.6	
	comp=N,856µm,0.5s						
VAM				AML	AML	07 48 54.6	
	comp=E,824µm,0.6s						
IMMV	**Iera Moni Meta**	**1.52**	**325**	P	**Pb**	**07 48 16.2**	**-0.5**
IMMV	**Iera Moni Meta**	**1.52**	**325**	P	**Pb**	**07 48 16.6**	**-0.1**
IMMV				S	**Sg**	**07 48 37.8**	**-0.3**
IMMV				AML	AML	07 48 52.9	
	comp=E,804µm,0.6s						
IMMV				AML	AML	07 48 53.9	
	comp=N,575µm,0.8s						
BRTR	**Keskin Array B**	**8.79**	**49**	Pn	Pn	07 50 01.6	+6.3
	comp=N,0.1nm,0.3s,baz=221,slow=15,SNR=4.0						
MLR	**Muntele Rosu**	**11.28**	**3**	LR	LR	07 55 58.3	
	comp=N,27nm,21.4s,baz=210,slow=44						
AKASG	**Malin Array Be**	**16.75**	**9**	Pn	**Pn**	**07 51 43.0**	**+0.5**
	comp=N,0.8nm,0.3s,baz=200,slow=11,SNR=4.5						
KBZ	**Khabaz**	**16.78**	**50**	Pn	**P**	**07 51 47.0**	**+1.9**
	comp=N,0.2nm,0.3s,baz=222,slow=9.5,SNR=4.5						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**07 51 46.5**	**+0.3**
	comp=N,0.4nm,0.3s,baz=152,slow=12,SNR=8.1						
HFS	**Hagfors**	**26.97**	**347**	P	**P**	**07 53 29.0**	**-0.3**
	comp=N,0.7nm,0.5s,baz=159,slow=9.5,SNR=5.5						
NOA	**NORSAR Array B**	**28.28**	**346**	P	**P**	**07 53 39.5**	**-1.6**
	comp=N,0.2nm,0.5s,baz=147,slow=10,SNR=2.7						
TORD	**Torodi Ar. Bea**	**29.83**	**231**	P	**P**	**07 53 55.8**	**+0.6**
	comp=N,0.4nm,0.5s,baz=35,slow=8.0,SNR=6.7						
ARCES	**ARCESS Array B**	**35.37**	**0**	P	**P**	**07 54 41.1**	**-1.9**
	comp=N,0.5nm,0.5s,baz=182,slow=9.5,SNR=3.8						
KURBB	**Kurchatov Arra**	**41.78**	**50**	P	**P**	**07 55 37.4**	**+0.3**
	comp=N,0.4nm,0.4s,baz=274,slow=8.8,SNR=5.4						
MKAR	**Makanchi Array**	**44.37**	**56**	P	**P**	**07 55 58.8**	**+0.6**
	comp=N,0.9nm,0.6s,baz=274,slow=5.9,SNR=9.7						
ZALV	**Zalesovo Beam**	**45.72**	**46**	P	**P**	**07 56 08.4**	**-0.4**
	comp=N,1.4nm,0.4s,baz=256,slow=9.0,SNR=3.7						
SONM	**Songino Array**	**60.15**	**50**	P	**P**	**07 57 55.6**	**+0.1**
	comp=N,0.2nm,0.5s,baz=300,slow=7.0,SNR=2.8						

NEIC 13 07:50:18.0±0.0, 58°.99N×153°.72W, h103^{km}, ML3.1(AEIC), After AEIC., Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FONW	**Fourpeaked Sta**	**0.19**	**214**	*e*Pn	Pn	07 50 32.2	-0.5
AUI	**Augustine Isla**	**0.38**	**23**	*e*Pn	Pn	07 50 32.9	-0.4
AUI				*e*Sn	Sn	07 50 44.0	-0.9
AUH	**Augustine H**	**0.40**	**21**	*e*Pn	Pn	07 50 33.3	-0.3
AUW	**Augustine West**	**0.40**	**18**	*e*Pn	Pn	07 50 33.2	-0.2
AUL	**Augustine Lava**	**0.42**	**20**	*e*Pn	Pn	07 50 33.3	-0.3
AUL				*e*Sn	Sn	07 50 45.0	-0.3
KAHG	**Katmai Hook Gl**	**0.66**	**221**	*e*Pn	Pn	07 50 35.0	-0.4
KAHC	**Katmai Hardscr**	**0.75**	**244**	*e*Pn	Pn	07 50 35.4	-0.9
KAHC				*e*Sn	Sn	07 50 48.6	-1.4
ILS	**Iliamna Low So**	**1.03**	**19**	*e*Pn	Pn	07 50 38.3	-0.8
IVE	**Iliamna Volcan**	**1.09**	**19**	*e*Pn	Pn	07 50 38.9	-0.8
KELA	**Mount Kelaz**	**1.19**	**243**	*e*Pn	Pn	07 50 39.9	-0.9
HOM	**Homer**	**1.26**	**57**	*e*Pn	Pn	07 50 40.5	-0.9
HOM				*e*Sn	Sn	07 50 59.6	+0.3
KDAK	**Kodiak Island**	**1.35**	**153**	*e*Pn	Pn	07 50 42.2	-0.4
KDAK				*e*		07 51 00.8	
KDAK				*e*Sn	Sn	07 51 01.0	-0.2
CNPM	**China Poot**	**1.38**	**66**	*e*Pn	Pn	07 50 42.5	-0.6
CNPM				*e*Sn	Sn	07 51 01.5	-0.5
RSO	**Redoubt South**	**1.56**	**18**	*e*Pn	Pn	07 50 44.5	-0.8
RSO				*e*Sn	Sn	07 51 04.9	-1.1
BRLK	**Bradley Lake**	**1.65**	**61**	*e*Pn	Pn	07 50 46.4	+0.2
BRLK				*e*Sn	Sn	07 51 05.7	-2.0
RDJH	**Redoubt Jeurge**	**1.67**	**16**	*e*Pn	Pn	07 50 45.6	-1.1
RDJH				*e*Sn	Sn	07 51 07.8	-0.6
BRSE	**Bradley Lake S**	**1.70**	**62**	*e*Pn	Pn	07 50 45.9	-1.0
OHAK	**Old Harbor**	**1.79**	**172**	*e*Pn	Pn	07 50 47.3	-0.6
OHAK				*e*Sn	Sn	07 51 09.7	-1.0
SVW2	**Sparrevohn**	**2.31**	**337**	*e*Pn	Pn	07 50 52.8	-2.0
SVW2				*e*Sn	Sn	07 51 22.1	-0.7
SPU	**Mount Spurr**	**2.35**	**20**	*e*Pn	Pn	07 50 53.7	-1.5
SPU				*e*Sn	Sn	07 51 18.9	-4.9
SPWE	**Spurr West**	**2.37**	**14**	*e*Pn	Pn	07 50 55.1	-0.3
SEW	**Seward**	**2.44**	**61**	*e*Pn	Pn	07 50 56.4	0.0
SEW				*e*Sn	Sn	07 51 24.8	-1.0
SII	**Sitkinak Islan**	**2.45**	**186**	*e*Pn	Pn	07 50 55.9	-0.6
SII				*e*Sn	Sn	07 51 25.5	-0.5
RC01	**Rabbit Creek A**	**2.90**	**42**	*e*Pn	Pn	07 51 01.6	-0.8
RC01				*e*Sn	Sn	07 51 35.5	-1.2
CHIA	**Chirikof Islan**	**3.32**	**198**	*e*Pn	Pn	07 51 06.7	-1.3
CHIA				*e*Sn	Sn	07 51 45.0	-1.6
PMR	**Palmer**	**3.47**	**39**	*e*Pn	Pn	07 51 08.6	-1.4
PMR				*e*Sn	Sn	07 51 48.4	-1.8
GLI	**Glacier Island**	**3.83**	**58**	*e*Pn	Pn	07 51 12.6	-2.3
SML	**Sawmill**	**3.89**	**41**	*e*Pn	Pn	07 51 14.2	-1.5
PPLA	**Purkeypile**	**3.99**	**10**	*e*Pn	Pn	07 51 17.3	+0.2
FID	**Port Fidalgo**	**4.05**	**61**	*e*Pn	Pn	07 51 15.7	-2.2
TTA	**Tatalina**	**4.11**	**345**	*e*Pn	Pn	07 51 17.2	-1.4
RND	**Reindeer**	**5.02**	**26**	*e*Pn	Pn	07 51 29.2	-1.7
BPAW	**Bear Paw Mtn.**	**5.29**	**13**	*e*Pn	Pn	07 51 33.4	-1.2
SNH	**Sunshine Point**	**5.66**	**73**	*e*Pn	Pn	07 51 39.1	-0.4
PAX	**Paxson**	**5.66**	**42**	*e*Pn	Pn	07 51 39.2	-0.5
ILB	**Eielson Array**	**6.64**	**26**	*e*Pn	Pn	07 51 51.1	-1.7
PNL	**Peninsula**	**7.36**	**79**	*e*Pn	Pn	07 52 01.9	-0.8

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*ISCJB **13** 08:32:04.0±0.8, 30°.4N±0°.1×140°.2E±0°.2, h10^{km}, mb3.7/7, MS3.4/1, Error ellipse: s-maj=24.7km s-min=15.3km az=179.8*

*IDC **13** 08:32:04.3±0.9, 30°.41N×140°.33E, h0^{km}, mb3.7/7, mb1 4.0/8, mb1mx3.6/45, mbtmp3.6/8, ML2.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/26, Error ellipse: s-maj=31.7km s-min=22.7km az=112.0*

ISC 13 08:32:05.8±0.9, 30°.4N±0°.1×140°.3E±0°.2, h10^{km}, n15, σ1^{s}15/9, mb3.7/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.35**	**345**	Pn	**Pn**	**08 33 39.7**	**+0.2**
	0.0nm,0.3s,baz=159,slow=14,SNR=2.9						
H11N1	**WAKE ISLAND Hy**	**26.28**	**108**	T	T	09 05 03.9	
	baz=298,slow=74,SNR=154						
H11N3	**WAKE ISLAND Hy**	**26.30**	**108**	T	T	09 05 04.3	
	baz=214,slow=74,SNR=164						
H11S3	**WAKE ISLAND Hy**	**26.73**	**110**	T	T	09 05 37.0	
	baz=302,slow=76,SNR=83						
H11S1	**WAKE ISLAND Hy**	**26.73**	**110**	T	T	09 05 37.3	
	baz=302,slow=76,SNR=112						
H11S2	**WAKE ISLAND Hy**	**26.74**	**110**	T	T	09 05 37.5	
	baz=302,slow=76,SNR=104						
CMAR	**Chiang Mai Arr**	**39.28**	**262**	P	**P**	**08 39 36.5**	**+1.5**
	1.2nm,0.3s,baz=65,slow=6.4,SNR=5.0						
ZALV	**Zalesovo Beam**	**45.91**	**317**	LR	LR	09 01 59.1	
	comp=Z,40nm,18.2s,baz=80,slow=39						
MKAR	**Makanchi Array**	**47.12**	**307**	PcP	**PcP**	**08 42 09.2**	**-0.6**
	0.4nm,0.8s,baz=108,slow=4.7,SNR=3.7						
KURBB	**Kurchatov Arra**	**49.56**	**312**	P	**P**	**08 40 55.5**	**-1.3**
	0.3nm,0.7s,baz=80,slow=7.1,SNR=2.7						
WRA	**Warramunga Arr**	**50.40**	**187**	P	**P**	**08 41 02.3**	**-1.1**
	1.0nm,0.9s,baz=2.9,slow=7.0,SNR=2.6						
ASAR	**Alice Springs**	**54.13**	**187**	P	**P**	**08 41 31.1**	**-0.1**
	0.4nm,0.8s,baz=15,slow=12,SNR=4.6						
ILAR	**Eielson Array**	**55.63**	**30**	P	**P**	**08 41 40.8**	**-0.8**
	0.8nm,1.0s,baz=263,slow=7.2,SNR=8.0						
NVAR	**Mina Array Bea**	**79.76**	**51**	P	**P**	**08 44 15.8**	**+1.2**
	0.2nm,0.6s,baz=242,slow=3.2,SNR=4.4						
TXAR	**Lajitas Array**	**94.91**	**52**	P	**P**	**08 45 29.1**	**+0.3**
	0.6nm,0.8s,baz=290,slow=2.4,SNR=7.2						

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*IDC **13** 08:34:02.5±0.8, 30°.34N×140°.28E, h0^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.8/41, mbtmp3.7/12, ML2.8/3, MS3.2/8, Ms1 3.2/8, ms1mx2.9/27, Error ellipse: s-maj=23.9km s-min=19.4km az=94.0*

*ISCJB **13** 08:34:05.5±0.5, 30°.36N±0°.06×140°.22E±0°.08, h33^{km}, mb4.1/18, MS3.3/5, Error ellipse: s-maj=9.8km s-min=8.3km az=24.3*

*NEIC **13** 08:34:08.9±1.8, 30°.45N×140°.13E, h47^{km}±9^{km}, mb4.3/14, Error ellipse: s-maj=21.7km s-min=13.2km az=131.0*

ISC 13 08:34:07.6±0.7, 30°.3N±0°.1×140°.15E±0°.10, h35^{km}, n42, σ1^{s}46/31, mb4.2/18, MS3.4/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.78**	**354**	*e*Pn	**Pn**	**08 34 51.0**	**+1.3**
JHJ	**Hachijo jima 2**	**2.79**	**354**	Pn	**Pn**	**08 34 50.1**	**+0.3**
	7.7nm,0.3s,baz=94,slow=21,SNR=2.9						
MJAR	**Matsushiro Arr**	**6.40**	**346**	Pn	**Pn**	**08 35 38.5**	**-0.9**
	0.1nm,0.3s,baz=163,slow=13,SNR=6.4						
MJAR				LR	LR	08 37 55.9	
	comp=Z,84nm,21.2s,baz=155,slow=36						
MAJO	**Matsushiro**	**6.40**	**346**	*e*Pn	**Pn**	**08 35 38.5**	**-0.9**
JNU	**Nakatsue**	**8.37**	**292**	LR	LR	08 39 01.5	
	comp=Z,209nm,20.6s,baz=177,slow=35						
JOW	**Kunigami**	**11.00**	**254**	*e*Pn	**Pn**	**08 36 43.3**	**+0.8**
KSRS	**Korea Array**	**12.38**	**308**	Pn	**Pn**	**08 37 03.7**	**+2.3**
	0.1nm,0.3s,baz=117,slow=13,SNR=2.9						
KSRS				LR	LR	08 41 13.9	
	comp=Z,89nm,20.9s,baz=126,slow=34						
USA0B	**Ussuriysk Arra**	**15.28**	**337**	*e*Pn	**Pn**	**08 37 40.2**	**-0.3**
	3.5nm,0.6s						
YOJ	**Yonaguni jima**	**16.30**	**253**	*e*Pn	**Pn**	**08 37 54.6**	**+0.8**
	169nm,1.1s						
TWG	**Pinlang**	**18.61**	**251**	*e*P	**P**	**08 38 17.6**	**-4.5**
	74nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**26.38**	**107**	T	T	09 07 00.9	
	baz=300,slow=75,SNR=271						
H11N1	**WAKE ISLAND Hy**	**26.38**	**107**	T	T	09 07 02.2	
	baz=300,slow=75,SNR=154						
H11N3	**WAKE ISLAND Hy**	**26.39**	**107**	T	T	09 07 03.2	
	baz=300,slow=75,SNR=198						
H11S3	**WAKE ISLAND Hy**	**26.82**	**110**	T	T	09 07 35.3	
	baz=302,slow=75,SNR=74						
H11S1	**WAKE ISLAND Hy**	**26.82**	**110**	T	T	09 07 35.6	
	baz=302,slow=75,SNR=74						
H11S2	**WAKE ISLAND Hy**	**26.84**	**110**	T	T	09 07 36.2	
	baz=302,slow=75,SNR=75						
SONM	**Songino Array**	**31.17**	**314**	LR	LR	08 51 50.0	
	comp=Z,25nm,18.5s,baz=82,slow=34						
CHTO	**Chiang Mai**	**38.99**	**263**	*e*P	**P**	**08 41 32.8**	**+2.0**
	9.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**39.14**	**262**	P	**P**	**08 41 34.5**	**+2.4**
	0.7nm,0.3s,baz=60,slow=6.9,SNR=8.4						
CMAR				LR	LR	08 57 11.1	
	comp=Z,34nm,21.5s,baz=94,slow=35						
MK32	**Makanchi Array**	**47.06**	**307**	*e*P	**P**	**08 42 35.5**	**-0.3**
MKAR	**Makanchi Array**	**47.06**	**307**	P	**P**	**08 42 35.5**	**-0.3**
	0.4nm,0.8s,baz=90,slow=8.6,SNR=4.5						
MKAR				LR	LR	09 03 14.7	
	comp=Z,38nm,18.4s,baz=93,slow=37						
KURBB	**Kurchatov Arra**	**49.52**	**313**	P	**P**	**08 42 54.4**	**-0.3**
	0.2nm,0.3s,baz=91,slow=7.7,SNR=4.1						
WR1	**Warramunga Arr**	**50.30**	**187**	*e*P	**P**	**08 43 01.2**	**+0.3**
WRA	**Warramunga Arr**	**50.30**	**187**	P	**P**	**08 43 01.2**	**+0.3**
	0.8nm,0.8s,baz=359,slow=7.4,SNR=3.9						
ASAR	**Alice Springs**	**54.02**	**187**	P	**P**	**08 43 28.1**	**-0.5**
	0.7nm,0.9s,baz=17,slow=13,SNR=6.2						
MLY	**Manley**	**54.14**	**29**	*e*P	**P**	**08 43 28.5**	**-0.5**
	3.9nm,1.2s						
HDA	**Harding Lake**	**55.73**	**30**	*e*P	**P**	**08 43 39.3**	**-1.1**
	2.3nm,1.0s						
ILAR	**Eielson Array**	**55.77**	**30**	P	**P**	**08 43 39.2**	**-1.5**
	1.8nm,1.1s,baz=262,slow=6.9,SNR=13						
ILB	**Eielson Array**	**55.77**	**30**	*e*P	**P**	**08 43 38.5**	**-2.2**
	3.0nm,1.1s						
DOT	**Dot Lake**	**57.02**	**31**	*e*P	**P**	**08 43 47.8**	**-1.8**
	5.5nm,1.4s						
SCRK	**Sand Creek**	**57.04**	**31**	*e*P	**P**	**08 43 49.9**	**0.0**
	5.5nm,1.4s						
MENT	**Mentasta**	**57.20**	**32**	*e*P	**P**	**08 43 50.8**	**-0.2**
	4.9nm,1.3s						
HPAH	**Hawaii Prepara**	**58.30**	**84**	*e*P	**P**	**08 43 58.9**	**-0.5**
	66nm,1.1s						
EPYK	**Eagle Plains**	**59.90**	**28**	*e*P	**P**	**08 44 08.8**	**-0.9**
	9.3nm,1.4s						
GEYT	**Alibeck**	**66.27**	**301**	LR	LR	09 16 50.9	
	comp=Z,28nm,18.3s,baz=150,slow=39						
KBZ	**Khabaz**	**74.51**	**312**	LR	LR	09 19 41.5	
	comp=Z,19nm,20.8s,baz=121,slow=37						
AKASG	**Malin Array Be**	**78.96**	**323**	P	**P**	**08 46 06.5**	**-1.1**
	0.4nm,0.4s,baz=43,slow=5.2,SNR=2.9						
NV01	**Mina Array Sit**	**79.92**	**51**	*e*P	**P**	**08 46 14.7**	**+1.4**
NVAR	**Mina Array Bea**	**79.92**	**51**	P	**P**	**08 46 14.7**	**+1.4**
	0.6nm,0.7s,baz=279,slow=6.0,SNR=6.4						
KNB	**Kanab**	**84.34**	**50**	*e*P	**P**	**08 46 37.0**	**+0.4**
	4.1nm,1.1s						
TXAR	**Lajitas Array**	**95.06**	**52**	P	**P**	**08 47 28.4**	**+1.0**
	0.7nm,0.8s,baz=298,slow=2.2,SNR=9.7						
PTGA	**Pitinga**	**144.90**	**37**	PKP	PKPbc	08 53 40.1	-0.8
	2.7nm,0.7s,baz=344,slow=3.2,SNR=6.6						

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*NEIC **13** 08:39:55.1±0.0, 17°.49N×94°.94W, h181^{km}, MD4.1(MEX), After MEX.*

MEX 13 08:39:54.6±0.6, 17°.58N×94°.74W, h148^{km}±5^{km}, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.51**	**196**	*e*P	Pn	08 40 14.7	-1.2
CMIG				*e*S	Sn	08 40 29.6	-2.4
VHO	**Vista Hermosa**	**1.97**	**255**	*e*Pn	Pn	08 40 28.5	-1.0
VHO				*e*Sn	Sn	08 40 55.5	-0.7
VHO	**Vista Hermosa**	**1.97**	**255**	*e*P	Pn	08 40 28.4	-1.1
VHO				*e*S	Sn	08 40 55.2	-1.0
LVIG	**Laguna Verde**	**2.66**	**324**	*e*Pn	Pn	08 40 36.0	-1.6
LVIG				*e*Sn	Sn	08 41 07.3	-3.5
CCIG	**Comitan**	**2.81**	**117**	*e*Pn	Pn	08 40 39.4	-0.2
CCIG				*e*Sn	Sn	08 41 13.3	-1.1
TLIG	**Tlapa**	**3.65**	**270**	*e*Pn	Pn	08 40 49.1	-1.3
TLIG				*e*Sn	Sn	08 41 30.2	-3.4
TLIG	**Tlapa**	**3.65**	**270**	*e*P	Pn	08 40 49.0	-1.4
TLIG				*e*S	Sn	08 41 32.5	-1.1
TEIG	**Tepich**	**6.66**	**66**	*e*Pn	Pn	08 41 28.3	-1.9
ACON	**Acoyapa**	**10.80**	**120**	*e*Pn	Pn	08 42 28.5	+3.2
JTS	**Las Juntas de**	**11.95**	**126**	*e*P	P	08 42 44.1	-3.0

MAN 13 08:41:12.7, 13°.79N×120°.57E, h100^{km}, mb3.9, ML2.7, MS2.2, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.32**	**261**	*e*P	Pn	08 41 28.3	+0.9
LUBP				*e*S	Sn	08 41 41.2	+2.9
PGP	**Puerto Galera**	**0.46**	**127**	⇓*e*P	Pn	08 41 30.2	+1.9
PGP				*i* S	Sn	08 41 42.5	+2.6
SJMP	**San Jose**	**1.42**	**158**	*e*P	Pn	08 41 38.9	+0.9
SJMP				*e*S	Sn	08 41 57.9	+0.7

JMA 13 08:44:27.3±0.1, 39°.96N×142°.44E, h37^{km}±1^{km}, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.44**	**267**	P	Pn	08 44 37.1	+0.1
JTH				S	Sn	08 44 44.3	+0.4
JKEN	**Kujiedanarisaw**	**0.61**	**294**	P	Pn	08 44 39.2	-0.4
JKEN				*e*S	Sn	08 44 47.6	-0.6
MIYJ	**Miyakonagasawa**	**0.61**	**232**	P	Pn	08 44 39.3	-0.3
MIYJ				S	Sn	08 44 47.9	-0.3
JANG	**Nango**	**0.82**	**301**	P	Pn	08 44 42.1	-0.2
JANG				S	Sn	08 44 52.5	-0.8
JKZ	**Kuzumaki**	**0.85**	**272**	P	Pn	08 44 43.3	+0.5
JKZ				*e*S	Sn	08 44 54.4	+0.2
JOM	**Ohasama**	**1.01**	**242**	P	Pn	08 44 45.3	+0.4
JOM				*e*S	Sn	08 44 58.6	+0.8
OFUJ	**Ofunato**	**1.06**	**214**	P	Pn	08 44 45.8	+0.2
OFUJ				*e*S	Sn	08 44 59.9	+0.8
JTM	**Tenmabayashi**	**1.33**	**309**	P	Pn	08 44 50.1	+0.8
JTM				S	Sn	08 45 06.7	+0.9
JMK	**Ichinoseki**	**1.38**	**224**	P	Pn	08 44 50.6	+0.6
JAH	**Hinai**	**1.40**	**280**	P	Pn	08 44 51.4	+1.1
MAT	**Matsushiro**	**4.77**	**226**	P	Pn	08 45 39.9	+3.3
MAT				S	Sn	08 46 39.2	+8.6

MEX 13 09:05:43.3±0.6, 14°.37N×92°.97W, h20^{km}±53^{km}, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.87**	**51**	*e*P	Pb	09 05 57.1	-2.5
THIG				*i* S	Sb	09 06 08.0	-2.9
PCIG		**1.35**	**350**	*e*P	Pn	09 06 03.8	-3.3
PCIG				*e*S	Sn	09 06 19.8	-4.6
CCIG	**Comitan**	**2.07**	**23**	*e*P	Pn	09 06 15.1	-1.9
CCIG				*i* S	Sn	09 06 38.0	-4.4
TGIG		**2.40**	**356**	*e*P	Pn	09 06 18.7	-2.9
TGIG				*e*S	Sn	09 06 47.8	-2.7

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*ISCJB **13** 09:09:49.5±0.5, 39°.66N±0°.02×29°.42E±0°.05, h0^{km}, Error ellipse: s-maj=5.5km s-min=3.5km az=170.0*

*DDA **13** 09:09:49.0, 39°.65N×29°.41E, h7^{km}±3^{km}, ML2.5*

*ISK **13** 09:09:49.3, 39°.62N×29°.40E, h10^{km}, ML2.1/10, Suspected Mining explosion.*

ISC 13 09:09:49.1±0.9, 39°.66N±0°.03×29°.47E±0°.05, h0^{km}, n15, σ0^{s}60/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.20**	**183**	PG	**Pg**	**09 09 53.2**	**+0.1**
TVSB				SG	**Sg**	**09 09 56.8**	**+1.1**
ULDT	**Uludag**	**0.55**	**332**	*i* P	**Pg**	**09 09 59.4**	**-0.3**
ULDT				*i* S	**Sg**	**09 10 08.4**	**+1.5**
ULDT				IAML_P			
	comp=Z,621nm,0.1s						
GDZ	**Gediz**	**0.56**	**179**	*i* P	**Pb**	**09 10 01.3**	**-0.7**
DURS	**Dursunbey**	**0.77**	**266**	*i* P	**Pg**	**09 10 03.8**	**-0.2**
DURS				*i* S	**Sg**	**09 10 15.0**	**+1.0**
MDNY	**Mudanya-Bursa**	**0.84**	**328**	PG	**Pb**	**09 10 06.8**	**+0.1**
YLV	**Yalova**	**0.91**	**355**	PG	**Pb**	**09 10 07.8**	**-0.1**
SRCK	**Saricakaya, Es**	**0.97**	**66**	PG	**Pn**	**09 10 09.6**	**-0.4**
ARMT	**Armutlu**	**1.02**	**333**	PG	**Pb**	**09 10 09.3**	**-0.5**
KCTX	**Karacabey (Bur**	**1.05**	**306**	PG	**Pg**	**09 10 09.5**	**+0.2**
GULT	**Gulveren**	**1.11**	**46**	PN	**Pn**	**09 10 12.3**	**+0.2**
BALB	**Balikesir**	**1.23**	**270**	PN	**Pg**	**09 10 12.2**	**-0.5**
BALB				SN	**Sb**	**09 10 29.3**	**-0.4**
KHAL	**Karahalli**	**1.28**	**179**	*i* P	**Pn**	**09 10 14.5**	**+0.1**
KHAL				*i* S	**Sn**	**09 10 32.3**	**-0.1**
KHAL				IAML_P			
	comp=Z,339nm,0.1s						
MANT	**Manisa**	**1.36**	**212**	*i* P	**Pb**	**09 10 15.9**	**+0.3**
MANT				*i* S	**Sg**	**09 10 33.2**	**+0.2**
ISK	**Istanbul-Kandi**	**1.44**	**347**	PN	**Pn**	**09 10 16.1**	**-0.5**
MRMT	**Marmara Adasi**	**1.72**	**304**	PN	**Pn**	**09 10 20.1**	**-0.4**

TEH 13 09:20:03.4, 27°.09N×54°.39E, h15^{km}, ML3.6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**1.12**	**283**	*e*Pg	Pb	09 20 24.6	0.0
JHRM	**Jahrom**	**1.59**	**333**	*e*Pn	Pb	09 20 32.7	+0.1
JHRM				IAMB	IAmb	09 21 01.9	
	comp=Z,0.0nm,0.3s						
GENO	**Geno**	**1.61**	**78**	IAMB	IAmb	09 18 00.3	
	comp=Z,0.0nm,1.0s						
GENO				*e*Pn	Pb	09 20 33.0	0.0
SHME	**Shamm**	**1.88**	**123**	*e*Pn	Pn	09 20 35.6	+0.6
NIAN	**Nian**	**2.22**	**77**	*e*Pn	Pn	09 20 41.5	+1.7
NIAN				IAMB	IAmb	09 21 34.1	
	comp=E,0.0nm,0.4s						
MSFE	**Esma-Masafi**	**2.34**	**137**	*e*Pn	Pn	09 20 42.5	+1.1
NAZ	**Nazwa, Dubai**	**2.38**	**151**	*e*Pn	Pb	09 20 44.3	-1.7
ASUD	**Al Ashush, Dub**	**2.59**	**161**	*e*Pn	Pn	09 20 47.0	+2.2
HATD	**Hatta, Dubai**	**2.74**	**145**	*e*Pn	Pn	09 20 48.5	+1.6
IPAR	**Pars**	**2.99**	**337**	*e*Pn	Pn	09 20 51.1	+0.5
IKAZ	**Kazeroun**	**3.50**	**321**	IAMB	IAmb	09 22 13.1	
	comp=Z,859nm,0.6s						
TVBK	**TV Kerman**	**3.56**	**35**	*e*Pn	Pn	09 21 00.5	+2.0
TVBK				IAMB	IAmb	09 22 03.1	
	comp=Z,0.0nm,0.5s						
KHGB	**Koh Gabri**	**3.75**	**29**	*e*Pn	Pn	09 21 03.5	+2.5
IMEH	**Mehriz**	**4.29**	**3**	*e*Pn	Pn	09 21 10.2	+1.7
IBAF	**Bafgh**	**4.60**	**13**	*e*Pn	Pn	09 21 14.1	+1.4
ISAD	**Sadrabad**	**4.85**	**353**	*e*Pn	Pn	09 21 18.1	+1.9
IRAM	**Ramesheh**	**5.02**	**340**	*e*Pn	Pn	09 21 18.8	+0.3

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*IDC **13** 09:28:31.6±2.5, 37°.42N×72°.36E, h0^{km}, mb3.4/2, mb1 3.5/7, mb1mx3.3/38, mbtmp3.4/7, ML3.1/5, MS3.3/1, Ms1 3.3/1, ms1mx2.2/35, Error ellipse: s-maj=65.6km s-min=23.2km az=131.0*

*NNC **13** 09:28:52.2±3.7, 38°.61N×72°.32E, h219^{km}±54^{km}, mb1.9, mpv3.2, Error ellipse: s-maj=43.0km s-min=20.2km az=13.0*

ISC 13 09:28:48.1±2.3, 38°.3N±0°.2×72°.1E±0°.1, h100^{km}, n17, σ2^{s}19/20, 6C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	**Uchtor**	**4.36**	**24**	P	**Pn**	**09 29 53.1**	**+0.5**
	SNR=13						
KZA	**Kyzart**	**4.50**	**31**	P	**Pn**	**09 29 53.8**	**-0.6**
	SNR=32						
EKS2	**Erkin-Say**	**4.57**	**16**	P	**Pn**	**09 29 56.7**	**+1.7**
	SNR=13						
AAK	**Ala-Archa**	**4.73**	**22**	Pn	**Pn**	**09 29 58.4**	**+1.3**
	3.2nm,0.3s,baz=132,slow=6.9,SNR=11						
AAK				Sn	**Sn**	**09 30 52.5**	**+1.6**
	3.6nm,0.3s,baz=315,slow=22,SNR=22						
AAK	**Ala-Archa**	**4.73**	**22**	⇓P	**Pn**	**09 29 58.3**	**+1.0**
	3.4nm,0.4s						
AAK				⇑S	**Sn**	**09 30 52.2**	**+1.3**
	22nm,0.8s						
AAK	**Ala-Archa**	**4.73**	**22**	P	**Pn**	**09 29 58.5**	**+1.3**
	SNR=6.1						
KK31	**Karatay Array**	**4.97**	**346**	⇑P	**Pn**	**09 30 02.9**	**+2.6**
	1.2nm,0.3s,baz=158,slow=11,SNR=43						
KK31				⇑S	**Sn**	**09 30 59.8**	**+3.2**
	5.8nm,0.5s,baz=152,slow=21,SNR=13						
CHMS	**Chumysh**	**5.13**	**22**	P	**Pn**	**09 30 03.5**	**+0.9**
	SNR=5.6						
TKM2	**Tokmak 2**	**5.35**	**29**	⇑P	**Pn**	**09 30 06.7**	**+1.0**
	0.9nm,0.5s						
TKM2				⇓S	**Sn**	**09 31 06.8**	**+0.7**
	6.0nm,0.6s						
MKAR	**Makanchi Array**	**11.35**	**38**	Pn	**Pn**	**09 31 25.0**	**-2.0**
	0.1nm,0.3s,baz=226,slow=15,SNR=7.0						
KURBB	**Kurchatov Arra**	**13.17**	**18**	Pn	**Pn**	**09 31 47.5**	**-3.5**
	0.0nm,0.3s,baz=204,slow=12,SNR=3.4						
AB31	**Akbulak array**	**14.04**	**325**	⇑P	**Pn**	**09 32 02.8**	**+0.5**
	0.1nm,0.3s,baz=134,slow=13,SNR=7.5						
AB31				⇑S	**Sn**	**09 34 31.0**	**-5.7**
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**14.80**	**356**	Pn	**Pn**	**09 32 11.0**	**-1.1**
	0.1nm,0.3s,baz=169,slow=14,SNR=2.1						
ZALV	**Zalesovo Beam**	**17.94**	**25**	P	**P**	**09 32 49.4**	**-0.6**
	0.3nm,0.3s,baz=213,slow=11,SNR=3.6						
KSRS	**Korea Array**	**43.50**	**73**	LR	LR	09 57 46.9	
	comp=Z,38nm,18.8s,baz=205,slow=40						
TORD	**Torodi Ar. Bea**	**66.63**	**269**	P	P	09 39 25.4	-2.8
	0.2nm,0.3s,baz=49,slow=5.7,SNR=5.3						
ILAR	**Eielson Array**	**72.83**	**16**	P	**P**	**09 40 06.4**	**+0.9**
	0.2nm,0.6s,baz=316,slow=4.6,SNR=3.1						

IDC 13 09:48:40.0±1.9, 1°.16N×125°.98E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.5/37, mbtmp3.8/4, Error ellipse: s-maj=167.6km s-min=25.4km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.52**	**159**	P	P	09 53 42.4	+0.9
	2.3nm,0.5s,baz=337,slow=12,SNR=37						

ASAR	**Alice Springs**	25.86	163	P	P	09 54 14.1	+0.5
	0.4nm,0.5s,baz=342,slow=7.7,SNR=7.5						
STKA	**Stephens Creek**	36.04	157	P	P	09 55 41.8	-1.4
	1.3nm,0.5s,baz=328,slow=9.5,SNR=3.9						
MKAR	**Makanchi Array**	59.24	326	P	P	09 58 43.2	-0.1
	0.2nm,0.4s,baz=128,slow=7.8,SNR=4.3						

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*STR **13** 09:54:56.8±0.4, 49°N±1°×°±°, h14^{km}±1^{km}, MLv1.4/6*

LDG 13 09:54:56.9±0.1, **49°.16N×8°.12E, h4^{km}, Md2.2**/1, **Ml2.2**/10, **Error ellipse: s-maj=1.3km s-min=1.2km az=131.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTD	**Kalmit**	0.17	351	Pg	Pg	09 55 00.3	+0.1
KTD				Sg	Sg	09 55 03.0	+0.5
LANF	**Langenberg**	0.27	230	Pg	Pg	09 55 02.6	+0.4
OPP	**Oppenau**	0.66	176	Pg	Pg	09 55 09.4	-0.1
OPP				Pn	Pb	09 55 10.5	-0.4
OPP				Sg	Sg	09 55 19.2	+1.1
OPP				Sn	Sb	09 55 21.0	+0.5
ABH	**Alteburg**	0.82	333	Pg	Pg	09 55 12.7	+0.1
ABH				Sg	Sg	09 55 23.4	+0.1
WLS	**Welschbruch**	0.90	215	Pg	Pg	09 55 14.5	+0.4
CDF	**Champ du Feu**	0.93	217	ePg	Pg	09 55 14.5	-0.2
CDF				eSg	Sg	09 55 26.9	+0.1
	2.7nm,0.2s						
KIZ	**Kirchzarten**	1.21	187	Sg	Sb	09 55 36.1	-0.1
HINF	**Hinteralfeld**	1.58	213	ePn	Pn	09 55 23.6	-2.2
HINF	**Hinteralfeld**	1.58	213	ePg	Pb	09 55 26.7	0.0
HINF				eSn	Sn	09 55 43.0	-3.7
HINF				eSg	Sb	09 55 47.4	+0.3
	2.9nm,0.2s						
HAU	**Haudompre**	1.65	226	ePn	Pn	09 55 24.5	-2.1
HAU	**Haudompre**	1.65	226	ePg	Pn	09 55 26.5	-0.1
HAU				eSn	Sn	09 55 44.5	-3.7
HAU				eSg	Sb	09 55 49.2	+0.3
	2.7nm,0.2s						
PAGF	**Fort de Pagny**	1.69	250	ePn	Pn	09 55 24.8	-2.4
PAGF	**Fort de Pagny**	1.69	250	ePg	Pb	09 55 28.3	-0.3
PAGF				eSn	Sn	09 55 45.3	-4.1
PAGF				eSg	Sb	09 55 50.6	+0.4
	2.1nm,0.2s						
MEZF	**Maizieres J'vi**	2.13	253	ePn	Pn	09 55 31.0	-2.2
MEZF	**Maizieres J'vi**	2.13	253	ePg	Pb	09 55 36.7	+0.7
MEZF				eSn	Sn	09 55 54.7	-5.4
MEZF				eSg	Sg	09 56 04.3	-1.0
	2.9nm,0.3s						
SFTF	**Sexfontaines**	2.25	246	ePn	Pn	09 55 32.5	-2.5
SFTF				eSn	Sn	09 55 58.9	-4.3
SFTF				eSg	Sg	09 56 08.1	-1.2
	1.8nm,0.2s						
GIVF	**Givet**	2.34	295	ePn	Pn	09 55 34.1	-2.1
GIVF	**Givet**	2.34	295	ePg	Pb	09 55 40.5	+0.8
GIVF				eSn	Sn	09 56 01.0	-4.4
	13nm,0.4s						
GIVF				eSg	Sg	09 56 10.6	-1.6
	6.0nm,0.3s						
BAIF	**Baives**	2.70	291	ePn	Pn	09 55 38.8	-2.3
BAIF	**Baives**	2.70	291	ePg	Pg	09 55 47.4	-1.3
BAIF				eSn	Sn	09 56 09.6	-4.6
	0.3nm,0.2s						
BAIF				eSg	Sg	09 56 22.0	-1.7
	1.1nm,0.2s						

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*SOME **13** 10:20:50.6, 44°.68N×82°.08E, h10^{km}*

*NNC **13** 10:20:53.6±1.1, 44°.67N×81°.96E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=13.3km s-min=3.4km az=120.0*

ISC 13 10:20:50.7±2.1, **44°.5N**±0°.1×**82°.3E**±0°.1, **h5**^{km}±19^{km}, **n19, σ1^{s}.16**/31, **1C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	1.75	235	P	**Pg**	**10 21 23.9**	**-0.4**
	7.6nm,0.2s						
KTMS				S	**Sg**	**10 21 48.1**	**+1.1**
	33nm,0.4s						
KTMS	**Ketmen**	1.75	235	eP	**Pg**	**10 21 23.9**	**-0.4**
	7.6nm,0.2s						
KTMS				eS	**Sg**	**10 21 47.7**	**+0.8**
	33nm,0.4s						
KAPS	**Kapalarasan**	2.25	292	Pg	**Pn**	**10 21 28.5**	**-0.2**
	2.2nm,0.1s						
KAPS				Lg	Lg	10 21 56.1	
	14nm,0.3s						
KAPS	**Kapalarasan**	2.25	292	eP	**Pn**	**10 21 28.5**	**-0.2**
	2.2nm,0.1s						
KAPS				eS	**Sn**	**10 21 55.9**	**-1.1**
	14nm,0.3s						
MK31	**Makanchi Array**	2.32	360	⇓Pn	**Pn**	**10 21 29.9**	**+0.3**
	4.4nm,0.3s,baz=185,slow=15,SNR=128						
MK31				⇑Sn	**Sn**	**10 21 59.0**	**+0.4**
	8.4nm,0.5s,baz=180,slow=26,SNR=22						
PDGK	**Podgornoye**	2.34	242	Pg	**Pb**	**10 21 32.9**	**-0.6**
	3.2nm,0.2s						
PDGK				Lg	Lg	10 22 03.6	
	6.8nm,0.5s						
PDGK	**Podgornoye**	2.34	242	⇓Pn	**Pb**	**10 21 32.5**	**-0.9**
	2.4nm,0.5s						
PDGK				⇓Sn	**Sb**	**10 22 02.9**	**+0.1**
	12nm,0.6s						
MAKZ	**Makanchi**	2.35	354	⇓Pn	**Pn**	**10 21 30.0**	**+0.1**
	5.4nm,0.5s						
MAKZ				⇓Sn	**Sn**	**10 21 59.1**	**-0.1**
	5.4nm,0.3s						
UZB	**Uzynbulak**	2.73	242	Pg	**Pb**	**10 21 39.4**	**-0.7**
	5.5nm,0.2s						
UZB				Lg	Lg	10 22 14.3	
	4.6nm,0.3s						
UZB	**Uzynbulak**	2.73	242	eP	**Pb**	**10 21 39.4**	**-0.7**
	5.5nm,0.2s						
UZB				eS	**Sb**	**10 22 14.3**	**+0.5**
	4.6nm,0.3s						
KPKS	**Kokpek**	2.81	250	eP	**Pb**	**10 21 40.7**	**-0.7**
	13nm,0.2s						
KPKS				eS	**Sb**	**10 22 16.4**	**+0.2**
	22nm,0.4s						
MNBS	**Baschi**	2.84	263	Pg	**Pb**	**10 21 40.0**	**-1.9**
	5.4nm,0.2s						
MNBS				Lg	Lg	10 22 15.9	
	15nm,0.3s						
MNBS	**Baschi**	2.84	263	eP	**Pb**	**10 21 40.0**	**-1.9**
	5.4nm,0.2s						
MNBS				eS	**Sb**	**10 22 15.5**	**-1.6**
	15nm,0.3s						
SATY	**Saty**	3.17	245	Pg	**Pb**	**10 21 46.9**	**-0.7**
	4.8nm,0.3s						
SATY				Lg	Lg	10 22 27.3	
	12nm,0.2s						
SATY	**Saty**	3.17	245	eP	**Pb**	**10 21 46.9**	**-0.7**
	4.8nm,0.3s						
SATY				eS	**Sb**	**10 22 27.3**	**+0.8**
	12nm,0.2s						
CHKK	**Chushkaly**	3.88	263	Pg	**Pb**	**10 21 59.1**	**-0.5**
	2.1nm,0.5s						
CHKK				Lg	Lg	10 22 48.3	
	7.2nm,0.3s						
CHKK	**Chushkaly**	3.88	263	eP	**Pb**	**10 21 59.1**	**-0.5**
	2.1nm,0.5s						
CHKK				eS	**Sb**	**10 22 48.3**	**+1.3**
	7.2nm,0.3s						
KTBS	**Karatobe**	4.13	261	Pg	**Pb**	**10 22 04.7**	**+0.8**
	1.3nm,0.4s						
KTBS				Lg	Lg	10 22 57.9	
	6.5nm,0.5s						
KTBS	**Karatobe**	4.13	261	eP	**Pb**	**10 22 04.7**	**+0.8**
	1.3nm,0.4s						
KTBS				eS	**Sb**	**10 22 57.9**	**+3.8**
	6.5nm,0.5s						

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*IDC **13** 10:40:55.2±1.1, 11°.93N×92°.18E, h0^{km}, mb3.8/12, mb1 3.9/13, mb1mx3.7/45, mbtmp3.8/13, ML4.0/1, MS2.9/2, Ms1 3.0/2, ms1mx2.5/41, Error ellipse: s-maj=33.5km s-min=19.4km az=46.0*

*ISCJB **13** 10:40:57.7±0.8, 12°.1N±0°.1×92°.3E±0°.1, h27^{km}, mb3.7/12, MS3.1/1, Error ellipse: s-maj=20.1km s-min=11.8km az=136.5*

ISC 13 10:40:59.8±1.1, **12°.1N**±0°.2×**92°.2E**±0°.1, **h27**^{km}, **n22, σ1^{s}.45**/19, **mb3.8**/12, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	9.07	45	Pn	**Pn**	**10 43 08.6**	**-0.5**
	0.4nm,0.3s,baz=234,slow=14,SNR=4.4						
CMAR				LR	LR	10 46 52.1	
	comp=Z,36nm,19.2s,baz=90,slow=39						
PKI	**Pulchoki**	16.69	338	eP	**Pn**	**10 44 50.6**	**-1.6**
	7.4nm,0.3s						
PKIN	**Phulchoki**	16.70	338	eP	**Pn**	**10 44 50.6**	**-1.6**
	18nm,0.5s						
DMN	**Daman**	16.84	338	eP	**Pn**	**10 44 53.3**	**-0.6**
	10nm,0.3s						
KKN	**Kakani**	16.94	338	eP	**Pn**	**10 44 51.1**	**-4.1**
KOLN	**Koldanda**	17.58	334	eP	**P**	**10 45 03.8**	**-0.3**
	17nm,0.5s						
H08S3	**Diego Garcia H**	27.72	226	T	T	11 15 43.6	
	baz=44,slow=75,SNR=200						
H08S2	**Diego Garcia H**	27.72	226	T	T	11 15 43.6	
	baz=44,slow=75,SNR=57						
H08S1	**Diego Carcia H**	27.74	226	T	T	11 15 45.0	
	baz=44,slow=75,SNR=70						
MKAR	**Makanchi Array**	35.61	348	P	**P**	**10 47 55.3**	**+0.2**
	1.3nm,0.7s,baz=170,slow=8.6,SNR=8.8						
SONM	**Songino Array**	37.58	16	P	**P**	**10 48 13.7**	**+1.6**
	0.2nm,0.4s,baz=189,slow=8.5,SNR=2.5						
GEYT	**Alibeck**	39.86	316	P	**P**	**10 48 33.1**	**+1.9**
	2.0nm,0.6s,baz=154,slow=7.9,SNR=3.8						
KSRS	**Korea Array**	40.71	45	P	**P**	**10 48 39.6**	**+1.4**
	1.0nm,0.5s,baz=239,slow=9.1,SNR=4.4						
ZALV	**Zalesovo Beam**	42.18	353	P	**P**	**10 48 49.3**	**-0.7**
	0.5nm,0.4s,baz=315,slow=41,SNR=1.7						
ZALV				LR	LR	11 09 14.8	
	comp=Z,27nm,20.8s,baz=71,slow=40						
WRA	**Warramunga Arr**	52.25	127	P	**P**	**10 50 08.4**	**-0.7**
	0.8nm,0.5s,baz=295,slow=9.8,SNR=12						
ASAR	**Alice Springs**	54.06	131	P	**P**	**10 50 21.2**	**-1.1**
	0.2nm,0.6s,baz=310,slow=6.6,SNR=2.8						
BRTR	**Keskin Array B**	58.30	309	P	**P**	**10 50 52.6**	**+0.1**
	0.5nm,0.7s,baz=140,slow=9.2,SNR=3.9						
FINES	**FINESS Array B**	68.14	332	P	**P**	**10 51 57.0**	**-0.2**
	1.5nm,0.9s,baz=126,slow=12,SNR=4.4						
ARCES	**ARCESS Array B**	70.70	340	P	**P**	**10 52 13.4**	**+0.4**
	1.1nm,0.6s,baz=87,slow=8.6,SNR=6.8						
NB2	**NORSAR Subarra**	75.17	330	P	**P**	**10 52 39.5**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=97,slow=5.3						
NOA	**NORSAR Array B**	75.17	330	P	**P**	**10 52 39.6**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=91,slow=5.6,SNR=3.9						
ILAR	**Eielson Array**	91.57	22	P	**P**	**10 54 03.3**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=297,slow=4.0,SNR=3.0						

DJA 13 10:45:02.1±1.2, **0°S**±4°×**12°3E**±°, **h129**^{km}±14^{km}, **M3.5**/4, **MLv3.5**/4, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	1.22	213	P	Pn	10 45 28.6	+1.5
LUWI				S	Sn	10 45 46.9	+0.8
APSI	**Ampana**	1.99	243	P	Pn	10 45 37.3	+1.4
APSI				S	Sn	10 46 02.3	+0.5
SANI	**Sanana**	3.26	128	P	Pn	10 45 52.0	-0.1

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*DDA **13** 10:49:26.9, 40°.87N×28°.32E, h7^{km}±3^{km}, ML2.5*

*ISK **13** 10:49:26.7, 40°.85N×28°.32E, h14^{km}, ML2.1/11*

ISC 13 10:49:27.0±1.2, **40°.87N**±0°.04×**28°.32E**±0°.03, **h15**^{km}±11^{km}, **n17, σ0^{s}.38**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTKS	**Kestanelik-??a**	0.40	21	PG	**Pb**	**10 49 35.6**	**-0.2**
ARMT	**Armutlu**	0.51	126	PG	**Pb**	**10 49 37.5**	**-0.3**
ISK	**Istanbul-Kandi**	0.60	70	PG	**Pg**	**10 49 38.5**	**-0.3**
KAVV	**Kandilli-Istan**	0.60	70	PG	**Pg**	**10 49 38.7**	**-0.1**
KAVV				SG	**Sb**	**10 49 47.6**	**+0.1**
MRMT	**Marmara Adasi**	0.61	245	PG	**Pb**	**10 49 39.2**	**-0.2**
BUY	**Buyukada**	0.61	91	PG	**Pb**	**10 49 39.1**	**-0.3**
BUY				SG	**Sb**	**10 49 47.8**	**0.0**
BUY	**Buyukada**	0.61	91	iP	**Pb**	**10 49 39.6**	**+0.2**
BUY				iS	**Sb**	**10 49 48.9**	**+1.1**
BUY				IAML_P			
	comp=Z,968nm,0.1s						
EDC	**Edincik**	0.62	214	PG	**Pg**	**10 49 39.2**	**0.0**
KLYT	**Kilyos**	0.67	55	PG	**Pb**	**10 49 40.4**	**-0.1**
YLV	**Yalova**	0.86	110	PG	**Pb**	**10 49 43.5**	**-0.2**
SART	**Tekirdag**	0.88	259	iP	**Pn**	**10 49 44.8**	**-0.2**
SART				iS	**Sn**	**10 49 57.9**	**+0.3**
RKY	**Sarkoy-Tekirda**	0.88	259	PG	**Pg**	**10 49 43.9**	**-0.2**
ULDT	**Uludag**	0.96	139	iP	**Pb**	**10 49 45.7**	**+0.2**
ULDT				iS	**Sn**	**10 49 59.1**	**-0.5**
ULDT				IAML_P			
	comp=Z,550nm,0.2s						
SILT	**Sile**	1.04	74	PG	**Pn**	**10 49 47.2**	**0.0**
KESN	**Edirne-Kesan**	1.24	269	iP	**Pn**	**10 49 50.1**	**-0.1**
KIRK	**Kırklareli**	1.30	315	iP	**Pg**	**10 49 52.0**	**0.0**
KIRK				IAML_P			
	comp=Z,235nm,0.2s						
KAND	**Kocaeli-Kandir**	1.44	80	iP	**Pg**	**10 49 54.2**	**-0.5**
KAND				iS	**Sg**	**10 50 14.0**	**+0.5**

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*IDC **13** 10:50:20.7±1.4, 32°.54S×13°.07W, h0^{km}, mb4.2/3, mb1 4.2/3, mb1mx3.7/20, mbtmp4.2/3, MS3.6/13, Ms1 3.6/13, ms1mx3.5/23, Error ellipse: s-maj=52.5km s-min=32.7km az=11.0*

*NEIC **13** 10:50:23.2±1.7, 32°.51S×13°.40W, h10^{km}±2^{km}, mb4.6/3, Error ellipse: s-maj=24.1km s-min=16.5km az=51.0*

ISC 13 10:50:21.1±0.8, **32°.98S**±0°.07×**13°.3W**±0°.2, **h10**^{km}, **n28, σ1^{s}.85**/17, **mb4.3**/6, **MS3.7**/13, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H09N1	**TRISTAN DA CUN**	4.16	169	Pn	**Pb**	**10 51 31.8**	**-2.5**
	SNR=34						
H09N1				T	T	10 56 34.9	
	SNR=35						
TRIS	**Tristan da Cun**	4.16	169	ePn	**Pb**	**10 51 33.0**	**-1.3**
H09W1	**TRISTAN DA CUN**	4.18	170	Pn	**Pb**	**10 51 35.1**	**+0.3**
	SNR=93						
H09W1				Sn	**Sb**	**10 52 26.5**	**+1.1**
	SNR=14						
H09W1				T	T	10 56 35.2	
	SNR=41						
H10S2	**ASCENSION HYDR**	23.93	357	T	T	11 19 33.6	
	baz=178,slow=74,SNR=92						
H10S3	**ASCENSION HYDR**	23.94	357	T	T	11 19 36.2	
	baz=178,slow=74,SNR=90						
H10S1	**ASCENSION HYDR**	23.95	357	T	T	11 19 35.1	
	baz=178,slow=74,SNR=188						
TSUM	**Tsumeb**	30.80	71	eP	**P**	**10 56 39.5**	**+2.2**
	13nm,1.5s						
BOSA	**Boshof**	33.27	93	P	**P**	**10 56 57.5**	**-1.4**
	2.2nm,0.8s,baz=53,slow=3.1,SNR=3.6						
BOSA				LR	LR	11 08 16.1	
	comp=Z,145nm,19.6s,baz=223,slow=32						
BDFB	**Brasilia**	35.83	290	P	**P**	**10 57 21.8**	**+0.6**
	2.9nm,0.6s,baz=110,slow=6.8,SNR=3.2						
BDFB				LR	LR	11 08 58.4	
	comp=Z,165nm,20.0s,baz=114,slow=31						
CPUP	**Villa Florida**	38.63	268	LR	LR	11 10 31.5	
	comp=Z,84nm,21.4s,baz=114,slow=31						
DBIC	**Dimbokro**	40.23	13	P	**P**	**10 58 00.1**	**+2.1**
	2.7nm,0.7s,baz=173,slow=7.3,SNR=3.0						
DBIC				LR	LR	11 10 29.3	
	comp=Z,40nm,18.6s,baz=137,slow=30						
DBIC	**Dimbokro**	40.23	13	eP	**P**	**10 57 56.8**	**-1.3**
	24nm,1.4s						
PLCA	**Paso Flores**	45.77	243	LR	LR	11 16 01.4	
	comp=Z,75nm,19.3s,baz=136,slow=33						
TORD	**Torodi Ar. Bea**	48.05	20	P	**P**	**10 58 57.9**	**-2.8**
	1.3nm,0.8s,baz=183,slow=7.9,SNR=7.2						
TORD				LR	LR	11 14 55.9	
	comp=Z,91nm,21.6s,baz=315,slow=31						
TOA1	**Torodi Ar. Sit**	48.05	20	eP	**P**	**10 58 57.9**	**-2.9**
LPAZ	**La Paz**	51.99	275	LR	LR	11 19 44.0	
	comp=Z,62nm,19.6s,baz=105,slow=34						
MBAR	**Mbarara**	52.41	61	eP	**P**	**10 59 35.1**	**+1.0**
	8.8nm,1.2s						
MAW	**Mawson**	54.73	153	LR	LR	11 18 43.6	
	comp=Z,62nm,19.9s,baz=290,slow=31						
ROSC	**El Rosal**	68.89	291	LR	LR	11 30 04.2	
	comp=Z,100nm,18.1s,baz=60,slow=35						
VNDA	**Vanda**	69.72	179	LR	LR	11 28 32.1	
	comp=Z,32nm,20.9s,baz=245,slow=33						
NOA	**NORSAR Array B**	95.80	12	LR	LR	11 46 02.2	
	comp=Z,13nm,18.7s,baz=170,slow=35						
GEYT	**Alibeck**	96.87	49	LR	LR	11 45 46.3	
	comp=Z,28nm,21.1s,baz=70,slow=34						
SCHQ	**Schefferville**	98.80	332	LR	LR	11 40 06.4	
	comp=Z,28nm,21.3s,baz=266,slow=30						
ASAR	**Alice Springs**	115.56	147	PKP	**PKPdf**	**11 09 05.1**	**+1.1**
	0.8nm,1.1s,baz=207,slow=1.8,SNR=5.0						
AS31	**Alice Springs**	115.57	147	ePKPdf	**PKiKP**	**11 09 03.5**	**-0.5**
ZAA1	**Zalesovo Array**	120.47	43	ePKPdf	**PKiKP**	**11 09 14.8**	**+2.4**
ILAR	**Eielson Array**	137.55	333	PKP	**PKiKP**	**11 09 45.8**	**-0.5**
	0.3nm,0.6s,baz=26,slow=2.3,SNR=3.0						
KSRS	**Korea Array**	148.15	71	PKPbc	**PKiKP**	**11 10 08.6**	**-0.3**
	1.2nm,0.8s,baz=268,slow=3.5,SNR=2.6						

JMA 13 11:10:27.0±0.1, **38°.44N×142°.22E, h28**^{km}±2^{km}, **M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	0.61	258	P	Pb	11 10 38.6	-0.5
JIKH				S	Sb	11 10 46.3	-1.0
JIO	**Ouri**	0.68	271	P	Pb	11 10 40.1	-0.3
JIO				S	Sb	11 10 48.9	-0.6
JKMT	**Kesennumamotoy**	0.69	303	P	Pb	11 10 40.4	-0.1
JKMT				S	Sb	11 10 49.5	-0.2
OFUJ	**Ofunato**	0.77	326	P	Pb	11 10 41.4	-0.5
OFUJ				S	Sb	11 10 51.3	-0.7
JMK	**Ichinoseki**	0.94	303	P	Pn	11 10 44.1	-0.2
JMK				eS	Sb	11 10 56.3	-0.3
JOU	**Okura**	1.23	267	P	Pn	11 10 48.8	+0.5
JOU				eS	Sb	11 11 04.5	-0.4
JOM	**Ohasama**	1.26	325	P	Pn	11 10 49.1	+0.4
JOM				eS	Sb	11 11 05.4	-0.5
JMM	**Marumori**	1.26	243	P	Pn	11 10 48.2	-0.6
JMM				S	Sn	11 11 04.1	-0.7
JFK	**Kawauchi**	1.51	225	P	Pn	11 10 51.1	-1.1
JFK				S	Sn	11 11 08.9	-2.1
JYK	**Kaneyama**	1.53	289	P	Pn	11 10 53.4	+0.9
JRG	**Rokugo**	1.56	308	P	Pb	11 10 54.1	-1.2
JRG				S	Sb	11 11 14.6	0.0

IDC 13 11:31:38.7±9.9, **4°.86S×105°.14W, h0**^{km}, **mb3.3**/3, **mb1 3.7**/3, **mb1mx3.6**/19, **mbtmp3.3**/3, **MS3.5**/6, **Ms1 3.5**/6, **ms1mx3.4**/9, **Error ellipse: s-maj=336.2km s-min=162.6km az=103.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	32.26	73	LR	LR	11 48 27.2	
	comp=Z,51nm,20.8s,baz=5.0,slow=31						
TXAR	**Lajitas Array**	34.03	2	LR	LR	11 49 34.7	
	comp=Z,60nm,21.4s,baz=0.0,slow=32						
LPAZ	**La Paz**	38.03	110	LR	LR	11 51 26.3	
	comp=Z,36nm,21.5s,baz=257,slow=31						
PFO	**Pinyon Flats O**	39.74	345	LR	LR	11 51 35.8	
	comp=Z,110nm,19.0s,baz=152,slow=30						
NVAR	**Mina Array Bea**	44.77	345	P	P	11 39 54.2	-0.2
	0.2nm,0.7s,baz=179,slow=12,SNR=2.4						
NVAR				LR	LR	11 54 53.3	
	comp=Z,80nm,19.6s,baz=180,slow=31						
PPT	**Papeete**	45.25	250	LR	LR	11 53 42.8	
	comp=Z,52nm,19.2s,baz=30,slow=29						
PDAR	**Pinedale Array**	47.58	356	P	P	11 40 16.4	0.0
	0.2nm,0.5s,baz=148,slow=9.1,SNR=2.7						
ILAR	**Eielson Array**	75.97	343	P	P	11 43 27.2	0.0
	0.3nm,0.8s,baz=158,slow=4.7,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	89.70	290	T	T	13 24 08.0	
	baz=96,slow=74,SNR=17						
H11N2	**WAKE ISLAND Hy**	89.71	290	T	T	13 24 10.5	
	baz=96,slow=74,SNR=22						
H11N1	**WAKE ISLAND Hy**	89.71	290	T	T	13 24 05.8	
	baz=96,slow=74,SNR=19						
H11S2	**WAKE ISLAND Hy**	89.78	288	T	T	13 24 11.5	
	baz=95,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	89.78	288	T	T	13 24 11.3	
	baz=95,slow=75,SNR=33						
H11S3	**WAKE ISLAND Hy**	89.80	288	T	T	13 24 13.7	
	baz=95,slow=75,SNR=32						

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*ISCJB **13** 11:35:44.7±0.5, 36°.89N±0°.02×10°.92W±0°.04, h35^{km}, Error ellipse: s-maj=4.3km s-min=3.3km az=178.1*

*IGIL **13** 11:35:48.5, 36°.85N×11°.00W, h31^{km}, ML2.9*

*INMG **13** 11:35:49.1±1.0, 36°.87N×10°.98W, h31^{km}, MD2.8, ML2.7, Error ellipse: s-maj=3.8km s-min=2.6km az=70.0*

*MDD **13** 11:35:50.4±1.2, 37°.04N×10°.65W, h102^{km}±10^{km}, mb2.8/13, Error ellipse: s-maj=9.4km s-min=5.0km az=63.0, PRXIMO*

*CNRM **13** 11:35:52.9, 36°.41N×10°.34W, h31^{km}, ml3.0*

ISC 13 11:35:46.6±2.0, **36°.90N**±0°.06×**10°.97W**±0°.09, **h35**^{km}, **n88, σ1^{s}.33**/146, **8C-4D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	1.73	82	⇑iPn	**Pn**	**11 36 15.7**	**+1.5**
PFVI				eSn	**Sn**	**11 36 35.1**	**+0.1**
PFVI				A	A	11 36 36.6	
	73nm,0.2s						
PFVI	**Vila Bisbo**	1.73	82	⇑P	**Pn**	**11 36 15.7**	**+1.5**
	27nm,0.2s,SNR=18						
PFVI				S	**Sn**	**11 36 35.1**	**+0.1**
	31nm,0.2s,SNR=16						
PFVI	**Vila Bisbo**	1.73	82	P	**Pn**	**11 36 15.1**	**+1.0**
MORF	**Marmelete**	1.90	77	eP	**Pn**	**11 36 18.0**	**+1.5**
MORF				eS	**Sn**	**11 36 39.3**	**+0.1**
MORF				AML	AML	11 36 40.8	
	comp=N,82nm,0.1s						
MORF	**Marmelete**	1.90	77	⇑iPn	**Pn**	**11 36 18.0**	**+1.5**
MORF				eSn	**Sn**	**11 36 39.3**	**+0.1**
MORF				A	A	11 36 40.7	
	comp=N,57nm,0.1s						
MORF	**Marmelete**	1.90	77	P	**Pn**	**11 36 18.0**	**+1.5**
MORF				S	**Sn**	**11 36 39.3**	**+0.1**
	comp=N,57nm,0.1s						
PTEO	**Sao Teotonio**	1.91	69	⇑iPn	**Pn**	**11 36 18.2**	**+1.6**
PTEO				eSn	**Sn**	**11 36 39.9**	**+0.6**
PTEO				A	A	11 36 41.9	
	comp=N,24nm,0.5s						
PTEO	**Sao Teotonio**	1.91	69	P	**Pn**	**11 36 18.2**	**+1.6**
PTEO				S	**Sn**	**11 36 39.9**	**+0.6**
	comp=N,12nm,0.5s						
PNCL	**Nicolau / Gran**	2.29	57	ePn	**Pn**	**11 36 23.5**	**+1.7**
PNCL				eSn	**Sn**	**11 36 49.3**	**+0.5**
PNCL				A	A	11 36 51.9	
	comp=N,27nm,0.4s						
PNCL	**Nicolau / Gran**	2.29	57	P	**Pn**	**11 36 23.5**	**+1.7**
PNCL				S	**Sn**	**11 36 49.3**	**+0.5**
	comp=N,27nm,0.4s						
PMAFR	**Mafra**	2.45	32	⇓iPn	**Pn**	**11 36 25.2**	**+1.1**
PMAFR				eSn	**Sn**	**11 36 52.9**	**+0.1**
PMAFR				A	A	11 36 54.7	
	comp=N,51nm,0.3s						
PMAFR	**Mafra**	2.45	32	⇓P	**Pn**	**11 36 25.2**	**+1.1**
	comp=N,11nm,0.6s,SNR=18						
PMAFR				S	**Sn**	**11 36 53.0**	**+0.2**
	comp=N,34nm,0.3s,SNR=19						
PCVE	**Castro Verde**	2.45	72	ePn	**Pn**	**11 36 25.7**	**+1.6**
PCVE				eSn	**Sn**	**11 36 53.2**	**+0.4**
PCVE				A	A	11 36 54.9	
	comp=N,18nm,0.2s						
PCVE	**Castro Verde**	2.45	72	P	**Pn**	**11 36 25.7**	**+1.6**
PCVE				S	**Sn**	**11 36 53.2**	**+0.4**
	comp=N,18nm,0.2s						
PBDV	**Barranco-do-Ve**	2.45	81	⇑iPn	**Pn**	**11 36 26.0**	**+1.8**
PBDV				eSn	**Sn**	**11 36 53.2**	**+0.3**
PBDV				A	A	11 37 00.8	
	comp=N,12nm,0.2s						
PBDV	**Barranco-do-Ve**	2.45	81	P	**Pn**	**11 36 26.0**	**+1.8**
PBDV				S	**Sn**	**11 36 53.2**	**+0.3**
	comp=N,12nm,0.2s						
PVAQ	**Vaqueiros**	2.65	78	ePn	**Pn**	**11 36 28.7**	**+1.9**
PVAQ				eSn	**Sn**	**11 36 57.4**	**-0.2**
PVAQ				A	A	11 37 05.9	
	comp=N,22nm,0.1s						
PVAQ	**Vaqueiros**	2.65	78	P	**Pn**	**11 36 28.7**	**+1.9**
PVAQ				S	**Sn**	**11 36 57.4**	**-0.2**
	comp=N,22nm,0.1s						
PVAQ	**Vaqueiros**	2.65	78	P	**Pn**	**11 36 28.6**	**+1.9**
PVAQ				S	**Sn**	**11 36 57.6**	**0.0**
EGRO	**El Granado**	2.85	76	⇑P	**Pn**	**11 36 31.2**	**+1.6**
	comp=N,2.5nm,0.6s,SNR=18						
EGRO				S	**Sn**	**11 37 02.7**	**-0.1**
	comp=N,9.2nm,0.3s,SNR=11						
EVO	**Evora**	2.86	54	ePn	**Pn**	**11 36 31.4**	**+1.7**
EVO				eSn	**Sn**	**11 37 02.8**	**0.0**

EVO				A	A	11 37 05.8	
	comp=N,32nm,0.1s						
EVO	**Evora**	**2.86**	**54**	P	**Pn**	**11 36 31.4**	**+1.7**
EVO				S	**Sn**	**11 37 02.8**	**0.0**
	comp=N,32nm,0.1s						
ALMR	**Almeirim**	**2.94**	**39**	*e*S	**Sn**	**11 37 05.0**	**+0.1**
ALMR				AML	AML	11 37 08.1	
	comp=N,45nm,0.3s						
ALMR	**Almeirim**	**2.94**	**39**	*e*Pn	**Pn**	**11 36 32.8**	**+2.0**
ALMR				*e*Sn	**Sn**	**11 37 05.0**	**+0.1**
ALMR				A	A	11 37 08.3	
	comp=N,33nm,0.1s						
ALMR	**Almeirim**	**2.94**	**39**	P	**Pn**	**11 36 32.8**	**+2.0**
ALMR				S	**Sn**	**11 37 05.0**	**+0.1**
	comp=N,17nm,0.1s						
PMTG	**Montargil**	**3.07**	**44**	*e*Pn	**Pn**	**11 36 33.8**	**+1.3**
PMTG				*e*Sn	**Sn**	**11 37 07.4**	**-0.6**
PMTG				A	A	11 37 12.2	
	comp=N,14nm,0.1s						
PMTG	**Montargil**	**3.07**	**44**	P	**Pn**	**11 36 33.8**	**+1.3**
PMTG				S	**Sn**	**11 37 07.4**	**-0.6**
	comp=N,14nm,0.1s						
PBAR	**Barrancos**	**3.37**	**67**	*e*Pn	**Pn**	**11 36 39.2**	**+2.4**
PBAR				*e*Sn	**Sn**	**11 37 14.8**	**-0.8**
PBAR	**Barrancos**	**3.37**	**67**	P	**Pn**	**11 36 39.2**	**+2.4**
PBAR				S	**Sn**	**11 37 14.8**	**-0.8**
PTOM	**Tomar**	**3.38**	**36**	*e*Sn	**Sn**	**11 37 15.8**	**+0.1**
PTOM				A	A	11 37 19.1	
	comp=N,17nm,0.1s						
PTOM	**Tomar**	**3.38**	**36**	S	**Sn**	**11 37 15.8**	**+0.1**
	comp=N,8.6nm,0.1s						
EMIN	**Mina Concepcio**	**3.53**	**74**	⇓P	**Pn**	**11 36 40.4**	**+1.4**
	comp=N,1.9nm,0.3s,SNR=18						
EMIN				S	**Sn**	**11 37 19.1**	**-0.4**
	comp=N,5.4nm,0.3s,SNR=13						
PCAS	**Casmilo, Conde**	**3.70**	**31**	*e*Pn	**Pn**	**11 36 42.5**	**+1.2**
PCAS				*e*Sn	**Sn**	**11 37 23.8**	**+0.2**
PCAS				A	A	11 37 27.5	
	comp=N,7.8nm,0.5s						
PCAS	**Casmilo, Conde**	**3.70**	**31**	P	**Pn**	**11 36 42.5**	**+1.2**
PCAS				S	**Sn**	**11 37 23.8**	**+0.2**
	comp=N,7.8nm,0.5s						
PMRV	**Marv??o**	**3.79**	**47**	*e*Pn	**Pn**	**11 36 43.5**	**+1.0**
PMRV				*e*Sn	**Sn**	**11 37 24.7**	**-1.1**
PMRV				A	A	11 37 26.0	
	comp=N,5.6nm,0.3s						
PMRV	**Marv??o**	**3.79**	**47**	P	**Pn**	**11 36 43.5**	**+1.0**
PMRV				S	**Sn**	**11 37 24.7**	**-1.1**
	comp=N,5.6nm,0.3s						
COI	**Coimbra**	**3.87**	**30**	*e*Sn	**Sn**	**11 37 27.8**	**+0.1**
COI	**Coimbra**	**3.87**	**30**	S	**Sn**	**11 37 27.8**	**+0.1**
PCBR	**Castelo Branco**	**4.02**	**42**	*e*Pn	**Pn**	**11 36 47.0**	**+1.4**
PCBR				*e*Sn	**Sn**	**11 37 30.9**	**-0.6**
PCBR				A	A	11 37 31.2	
	comp=N,6.4nm,0.2s						
PCBR	**Castelo Branco**	**4.02**	**42**	P	**Pn**	**11 36 47.0**	**+1.4**
PCBR				S	**Sn**	**11 37 30.9**	**-0.6**
	comp=N,3.2nm,0.2s						
ESPR	**Espera**	**4.10**	**89**	P	**Pn**	**11 36 48.8**	**+2.1**
	comp=N,12nm,0.3s,SNR=10						
ESPR				S	**Sn**	**11 37 33.3**	**-0.1**
	comp=N,2.8nm,0.3s						
MTE	**Manteigas**	**4.41**	**36**	*e*Sn	**Sn**	**11 37 39.9**	**-1.2**
MTE				A	A	11 37 42.4	
	comp=N,8.0nm,0.4s						
MTE	**Manteigas**	**4.41**	**36**	S	**Sn**	**11 37 39.9**	**-1.2**
	comp=N,4.0nm,0.4s						
PVIS	**Viseu**	**4.50**	**31**	*e*Pn	**Pn**	**11 36 53.6**	**+1.2**
PVIS				*e*Sn	**Sn**	**11 37 42.5**	**-1.1**
PVIS				A	A	11 37 45.5	
	comp=N,13nm,0.5s						
PVIS	**Viseu**	**4.50**	**31**	P	**Pn**	**11 36 53.6**	**+1.2**
PVIS				S	**Sn**	**11 37 42.5**	**-1.1**
	comp=N,6.4nm,0.5s						
ECAB	**El Cabril**	**4.57**	**73**	⇑P	**Pn**	**11 36 54.6**	**+1.4**
	comp=N,4.6nm,0.3s,SNR=18						
ECAB				S	**Sn**	**11 37 43.4**	**-1.6**
	comp=N,6.1nm,0.5s,SNR=8.6						
HORN	**Hornachuelos**	**4.65**	**77**	P	**Pn**	**11 36 55.7**	**+1.4**
HORN				S	**Sn**	**11 37 47.2**	**+0.2**
ZHG	**ZHG**	**4.94**	**133**	P	Pn	11 36 55.8	-2.6
ZHG				S	Sn	11 37 45.2	-9.1
EPLA	**Plasencia**	**4.97**	**49**	P	**Pn**	**11 37 00.2**	**+1.5**
	comp=N,0.9nm,0.3s,SNR=5.8						
EPLA				S	**Sn**	**11 37 53.3**	**-1.7**
	comp=N,3.3nm,0.3s,SNR=11						
EMIJ	**Mijas**	**4.99**	**92**	P	**Pn**	**11 37 00.3**	**+1.3**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**11 37 54.3**	**-1.2**
	comp=N,6.1nm,0.4s,SNR=7.9						
PVRL	**Vila Real**	**5.05**	**29**	*e*Sn	**Sn**	**11 37 55.5**	**-1.5**
PVRL				A	A	11 37 56.4	
	comp=N,7.6nm,0.5s						
PVRL	**Vila Real**	**5.05**	**29**	S	**Sn**	**11 37 55.5**	**-1.5**
	comp=N,3.8nm,0.5s						
SRHM	**Skhour des Reh**	**5.09**	**149**	P	**Pn**	**11 37 00.6**	**+0.2**
SRHM				S	**Sn**	**11 37 54.0**	**-4.0**
POLO	**Lamas de Olo**	**5.11**	**28**	*e*Pn	**Pn**	**11 37 01.7**	**+1.0**
POLO				*e*Sn	**Sn**	**11 37 56.4**	**-2.0**
POLO				A	A	11 37 58.0	
	comp=N,3.3nm,0.4s						
POLO	**Lamas de Olo**	**5.11**	**28**	P	**Pn**	**11 37 01.7**	**+1.0**
POLO				S	**Sn**	**11 37 56.4**	**-2.0**
	comp=N,3.3nm,0.4s						
EADA	**Adamuz**	**5.24**	**74**	P	**Pn**	**11 37 03.6**	**+1.2**
	comp=N,1.3nm,0.2s,SNR=29						
EADA				S	**Sn**	**11 37 59.5**	**-2.1**
	comp=N,4.6nm,0.1s,SNR=12						
MVO	**Moncorvo**	**5.25**	**35**	*e*Pn	**Pn**	**11 37 03.8**	**+1.2**
MVO				*e*Sn	**Sn**	**11 37 59.7**	**-2.2**
MVO				A	A	11 38 01.8	
	comp=N,17nm,0.3s						
MVO	**Moncorvo**	**5.25**	**35**	P	**Pn**	**11 37 04.1**	**+1.5**
	comp=N,0.9nm,0.3s,SNR=5.7						
MVO				S	**Sn**	**11 38 00.6**	**-1.3**
	comp=N,14nm,0.4s,SNR=17						
PCAB	**Cabril**	**5.32**	**24**	*e*Pn	**Pn**	**11 37 04.7**	**+1.2**
PCAB				*e*Sn	**Sn**	**11 38 01.8**	**-1.8**
PCAB				A	A	11 38 04.8	
	comp=N,5.6nm,0.5s						
PCAB	**Cabril**	**5.32**	**24**	P	**Pn**	**11 37 04.7**	**+1.2**
PCAB				S	**Sn**	**11 38 01.8**	**-1.8**
	comp=N,2.8nm,0.5s						
ELOB	**Lobios**	**5.45**	**24**	⇑P	**Pn**	**11 37 06.4**	**+1.0**
	comp=N,1.1nm,0.3s,SNR=18						
ELOB				S	**Sn**	**11 38 05.5**	**-1.4**
	comp=N,15nm,0.6s,SNR=6.3						
PGAV	**Gavieira, Arco**	**5.47**	**22**	*e*Pn	**Pn**	**11 37 06.7**	**+1.0**
PGAV				*e*Sn	**Sn**	**11 38 05.3**	**-2.2**
PGAV				A	A	11 38 07.8	
	comp=N,4.2nm,0.2s						
PGAV	**Gavieira, Arco**	**5.47**	**22**	P	**Pn**	**11 37 06.7**	**+1.0**
PGAV				S	**Sn**	**11 38 05.3**	**-2.2**
	comp=N,4.2nm,0.2s						
EGOR	**Sierra Gorda,**	**5.49**	**86**	P	**Pn**	**11 37 07.2**	**+1.2**
	comp=N,0.3nm,0.1s,SNR=4.0						
EGOR				S	**Sn**	**11 38 06.6**	**-1.4**
	comp=N,5.6nm,0.6s,SNR=7.9						
EZAM	**Zamans**	**5.53**	**18**	P	**Pn**	**11 37 07.9**	**+1.5**
	comp=N,0.7nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**11 38 07.3**	**-1.5**
	comp=N,10nm,0.5s,SNR=7.9						
PMPST	**Porto Santo, M**	**5.82**	**231**	*e*Pn	**Pn**	**11 37 09.6**	**-0.8**
PMPST				*e*Sn	Sn	11 38 07.7	-8.3
PMPST				A	A	11 38 15.1	
	comp=N,19nm,0.8s						
PAB	**San Pablo**	**5.84**	**61**	P	**Pn**	**11 37 12.0**	**+1.2**
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**11 38 14.9**	**-1.7**
	comp=N,5.1nm,0.7s,SNR=7.9						
PBRG	**Braganca**	**5.89**	**32**	*e*Sn	**Sn**	**11 38 15.1**	**-2.7**
PBRG				A	A	11 38 17.2	
	comp=N,5.3nm,0.7s						
PBRG	**Braganca**	**5.89**	**32**	S	**Sn**	**11 38 15.1**	**-2.7**
	comp=N,2.7nm,0.7s						
ECAL	**Calabor**	**6.01**	**32**	P	**Pn**	**11 37 14.5**	**+1.5**
	comp=N,4.9nm,0.5s,SNR=5.2						
ECAL				S	**Sn**	**11 38 19.2**	**-1.4**
	comp=N,19nm,0.4s,SNR=4.5						
ESDC	**Sonseca Array**	**6.17**	**61**	P	**Pn**	**11 37 15.5**	**+0.2**
	comp=N,0.7nm,0.2s,baz=244,slow=13,SNR=12						
ESDC				S	**Sn**	**11 38 22.0**	**-2.5**
	comp=N,1.3nm,0.3s,baz=245,slow=23,SNR=14						
CZD	**Col de Zad**	**6.21**	**127**	P	Pn	11 37 12.5	-3.5
CZD				S	Sn	11 38 15.9	-10
OUK	**Oukaimeden**	**6.23**	**155**	P	**Pn**	**11 37 14.5**	**-1.9**
EMAZ	**Mazaricos**	**6.24**	**14**	P	**Pn**	**11 37 16.6**	**+0.5**
	comp=N,1.1nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**11 38 25.6**	**-0.5**
	comp=N,7.1nm,0.2s,SNR=7.9						
AKLM	**AKL**	**6.25**	**110**	P	Pn	11 37 11.9	-4.5
AKLM				S	Sn	11 38 15.3	-11
EAGO	**Agolada(Pontev**	**6.30**	**20**	P	**Pn**	**11 37 17.2**	**+0.2**
	comp=N,1.8nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**11 38 27.2**	**-0.5**
	comp=N,1.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**6.36**	**79**	P	**Pn**	**11 37 17.9**	**+0.1**
	comp=N,0.6nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**11 38 27.7**	**-1.6**
	comp=N,1.6nm,0.1s,SNR=7.9						
MD31	**MD31**	**6.50**	**126**	P	Pn	11 37 16.5	-3.3
MD31				S	Sn	11 38 23.0	-10
GUD	**Guadarrama**	**6.51**	**53**	P	**Pn**	**11 37 19.9**	**-0.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
GUD				S	**Sn**	**11 38 31.4**	**-1.6**
	comp=N,1.6nm,0.3s,SNR=5.6						
MDT	**Midelt**	**6.63**	**126**	P	Pn	11 37 18.5	-3.1
MDT				S	Sn	11 38 25.2	-11
SESP	**Santiago Espad**	**6.81**	**77**	S	**Sn**	**11 38 39.2**	**-1.2**
	comp=N,5.0nm,0.5s,SNR=7.9						
OUZM	**OUZ**	**6.92**	**148**	P	**Pn**	**11 37 24.0**	**-1.7**
OUZM				S	Sn	11 38 35.7	-7.5
EPON	**Pontenova**	**7.06**	**23**	⇓P	**Pn**	**11 37 27.9**	**+0.6**
	comp=N,4.2nm,0.2s,SNR=18						
EPON				S	**Sn**	**11 38 46.2**	**-0.1**
	comp=N,3.1nm,0.3s,SNR=6.1						
JBK	**JBK**	**7.30**	**108**	P	Pn	11 37 28.1	-2.8
JBK				S	Sn	11 38 42.6	-10
ETOB	**Tobarra**	**7.66**	**74**	P	**Pn**	**11 37 35.7**	**0.0**
	comp=N,6.5nm,5.5s,SNR=7.9						
EARI	**Arriondas**	**7.77**	**33**	P	**Pn**	**11 37 37.6**	**+0.4**
	comp=N,0.9nm,0.2s,SNR=7.9						
EARI				S	**Sn**	**11 39 03.3**	**-0.6**
	comp=N,2.3nm,0.6s,SNR=7.9						
ETOR	**Torete**	**7.98**	**58**	P	**Pn**	**11 37 39.2**	**-0.9**
	comp=N,0.9nm,0.2s,SNR=7.9						
ETOR				S	**Sn**	**11 39 07.4**	**-1.7**
	comp=N,2.4nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**8.91**	**64**	S	**Sn**	**11 39 30.8**	**-1.4**
	comp=N,2.4nm,0.5s,SNR=7.9						

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*ISCJB **13** 11:38:09.0±0.2, 4°.20S±0°.03×128°.85E±0°.03, h32^{km}, mb4.5/61, MS3.3/5, Error ellipse: s-maj=4.7km s-min=4.0km az=160.5*

*DJA **13** 11:38:09.8±0.5, 4°S±5°×12°9E±°, h10^{km}, M4.4/9, MLv4.4/9*

*NEIC **13** 11:38:12.1±1.4, 4°.16S×128°.86E, h43^{km}±6^{km}, mb4.7/43, Error ellipse: s-maj=9.7km s-min=9.3km az=57.0*

*IDC **13** 11:38:13.2±2.1, 4°.14S×128°.79E, h50^{km}±20^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.1/43, mbtmp4.4/27, ML2.9/2, MS3.2/9, Ms1 3.2/9, ms1mx3.0/28, Error ellipse: s-maj=16.7km s-min=10.7km az=75.0*

ISC 13 11:38:10.9±0.3, **4°.19S**±0°.05×**128°.87E**±0°.05, **h32**^{km}**, n109,** σ**1**^{s}**.39**/111**, mb4.6**/60**, MS3.3**/5**, 1C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.84**	**4**	P	**Pn**	**11 38 23.6**	**-2.9**
AAI	**Ambon**	**0.84**	**306**	P	**Pn**	**11 38 22.8**	**-3.7**
BNDI	**Bandanaira**	**1.08**	**108**	P	**Pn**	**11 38 29.4**	**-0.5**
NLAI	**Namlea**	**2.00**	**298**	P	**Pn**	**11 38 42.9**	**+0.4**
SANI	**Sanana**	**3.58**	**306**	P	**Pn**	**11 39 04.1**	**-0.1**
FAKI	**Fak Fak**	**3.60**	**70**	*e*Pn	**Pn**	**11 39 06.3**	**+1.8**
FAKI	**Fak Fak**	**3.60**	**70**	P	**Pn**	**11 39 06.4**	**+1.8**
LBMI	**Labuha**	**3.78**	**339**	P	**Pn**	**11 39 07.6**	**+0.5**
SIJI	**Sorong**	**4.07**	**36**	P	**Pn**	**11 39 11.3**	**+0.3**
	34nm,0.3s,baz=236,slow=23,SNR=75						
SIJI				S	**Sn**	**11 39 56.3**	**-1.4**
	26nm,0.3s,baz=198,slow=19,SNR=10.0						
SIJI				LR	LR	11 41 06.4	
	comp=Z,556nm,21.0s,baz=242,slow=42						
SWI	**Sorong**	**4.08**	**36**	P	**Pn**	**11 39 12.3**	**+1.2**
TNTI	**Ternate**	**5.15**	**343**	*e*Pn	**Pn**	**11 39 25.9**	**+0.1**
LUWI	**Luwuk**	**6.85**	**297**	*e*Pn	**Pn**	**11 39 49.6**	**+0.4**
SOEI	**Soe**	**7.17**	**219**	*e*Pn	**Pn**	**11 39 54.5**	**+0.7**
BATI	**Baumata**	**7.90**	**221**	P	**Pn**	**11 40 07.9**	**+4.2**
	10nm,0.3s,baz=120,slow=1.9,SNR=10						
BATI				LR	LR	11 42 49.3	
	comp=Z,345nm,22.0s,baz=66,slow=35						
MTN	**Manton Dam**	**8.89**	**166**	*e*Pn	**Pn**	**11 40 18.1**	**+1.0**
KAPI	**Kappang**	**9.13**	**264**	P	**Pn**	**11 40 21.2**	**+0.7**
	1.2nm,0.3s,baz=136,slow=8.0,SNR=6.5						
KAPI				S	**Sn**	**11 42 03.2**	**+1.0**
	0.3nm,0.3s,baz=107,slow=19,SNR=2.3						
KAPI				LR	LR	11 43 32.2	
	comp=Z,127nm,20.9s,baz=301,slow=35						
KAPI	**Kappang**	**9.13**	**264**	*e*Pn	**Pn**	**11 40 21.5**	**+1.0**
JAY	**Jayapura**	**11.93**	**82**	LR	LR	11 46 26.0	
	comp=Z,99nm,18.5s,baz=140,slow=41						
WRAB	**Tennant Creek**	**16.54**	**162**	*e*Pn	**Pn**	**11 41 57.8**	**-2.8**
	36nm,0.9s						
WR1	**Warramunga Arr**	**16.54**	**162**	*e*P	**Pn**	**11 41 57.4**	**-3.3**
WRA	**Warramunga Arr**	**16.54**	**162**	P	**Pn**	**11 41 57.4**	**-3.3**
	1.8nm,0.3s,baz=338,slow=13,SNR=79						
WRA				S	**Sn**	**11 44 57.7**	**-5.8**
	0.7nm,0.3s,baz=332,slow=23,SNR=9.3						
WB2	**Warramunga Arr**	**16.55**	**162**	*e*Pn	**Pn**	**11 41 58.6**	**-2.1**
	41nm,0.8s						
COEN	**Coen**	**17.12**	**125**	*e*Pn	**Pn**	**11 42 07.2**	**-0.8**
	46nm,0.9s						
MANU	**Manus Island**	**18.59**	**84**	*e*P	**P**	**11 42 23.8**	**-1.9**
	43nm,0.9s						
PMG	**Port Moresby**	**18.88**	**107**	P	**Pn**	**11 42 30.9**	**+1.4**
	0.3nm,0.3s,baz=293,slow=7.7,SNR=4.2						
PMG	**Port Moresby**	**18.88**	**107**	*e*P	**P**	**11 42 30.0**	**+1.2**
	49nm,1.0s						
PSA00	**Pilbara Seismi**	**19.38**	**206**	*e*P	**P**	**11 42 34.7**	**+0.5**
	22nm,0.8s						
AS31	**Alice Springs**	**19.96**	**166**	*e*P	**P**	**11 42 42.0**	**+1.4**
	21nm,0.6s						
ASAR	**Alice Springs**	**19.96**	**166**	P	Pn	11 42 42.5	0.0
	47nm,0.5s,baz=346,slow=11,SNR=687						
ASAR				PcP	**PcP**	**11 46 56.5**	**-0.2**
	3.7nm,0.5s,baz=350,slow=1.5,SNR=14						
ASAR				LR	LR	11 50 38.7	
	comp=Z,124nm,18.4s,baz=358,slow=37						
CISI	**Cisompet, Garu**	**21.21**	**260**	*e*P	**P**	**11 42 52.6**	**-1.6**
	108nm,1.3s						
LEM	**Lembang**	**21.32**	**262**	P	**P**	**11 42 56.6**	**+1.1**
	14nm,0.6s,baz=127,slow=20,SNR=3.3						
CTA	**Charters Tower**	**23.16**	**134**	P	**P**	**11 43 16.6**	**+1.7**
	10.0nm,0.9s,baz=319,slow=14,SNR=4.0						
CTAO	**Charters Tower**	**23.16**	**134**	*e*P	**P**	**11 43 14.6**	**-0.3**
	29nm,1.3s						
GIRL	**Giralia**	**23.18**	**216**	*e*P	**P**	**11 43 15.5**	**+0.5**
	204nm,1.5s						
FORT	**Forrest**	**26.46**	**182**	*e*P	**P**	**11 43 45.2**	**0.0**
	48nm,0.8s						
MORW	**Morawa**	**27.58**	**205**	*e*P	**P**	**11 43 55.4**	**+0.1**
	45nm,1.6s						
BBOO	**Buckleboo**	**29.26**	**168**	*e*P	**P**	**11 44 10.9**	**+0.8**
	11nm,0.6s						
STKA	**Stephens Creek**	**30.02**	**158**	P	**P**	**11 44 17.9**	**+1.0**
	2.3nm,0.5s,baz=327,slow=12,SNR=6.2						
STKA				LR	LR	11 57 21.2	
	comp=Z,69nm,18.3s,baz=25,slow=38						
STKA	**Stephens Creek**	**30.02**	**158**	*e*P	**P**	**11 44 17.5**	**+0.5**
	1.2nm,0.7s						
NWAO	**Narrogin (SRO)**	**30.59**	**199**	P	**P**	**11 44 22.7**	**+0.7**
	12nm,0.9s,baz=19,slow=9.7,SNR=5.0						
NWAO	**Narrogin (SRO)**	**30.59**	**199**	*e*P	**P**	**11 44 22.2**	**+0.2**
	34nm,1.2s						
CHAI	**Chaiyaphum**	**33.26**	**307**	P	P	11 44 53.1	+7.5
NONG	**Nongkai**	**33.65**	**312**	P	**P**	**11 44 52.3**	**+3.3**
	0.2nm,0.8s						
UTTA	**Uttaradit**	**35.43**	**309**	P	P	11 45 11.6	+7.2
CAN	**Canberra**	**36.14**	**152**	*e*P	**P**	**11 45 11.1**	**+0.7**
	8.6nm,1.0s						
CM31	**Chiang Mai Arr**	**37.10**	**308**	*e*P	**P**	**11 45 17.2**	**-1.5**
	4.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.10**	**308**	P	**P**	**11 45 19.2**	**+0.6**
	2.3nm,0.7s,baz=138,slow=7.2,SNR=15						
CMAR				PcP	**PcP**	**11 47 39.8**	**+0.9**
	1.3nm,0.8s,baz=178,slow=2.9,SNR=4.6						
WHN	**Wuhan**	**37.22**	**339**	P	P	11 45 28.3	+8.8
NJ2	**Nanjing**	**37.28**	**346**	*e*P	**P**	**11 45 20.8**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
CMMT	**Chiang Mai**	**37.29**	**309**	P	**P**	**11 45 21.3**	**+0.9**
	5.5nm,0.9s						
CHTO	**Chiang Mai**	**37.30**	**309**	*e*P	**P**	**11 45 19.3**	**-1.0**
	7.5nm,0.8s						
KSRS	**Korea Array**	**41.44**	**359**	P	**P**	**11 45 55.6**	**+1.0**
	1.8nm,0.8s,baz=174,slow=9.6,SNR=3.1						
KSRS				LR	LR	12 02 34.7	
	comp=Z,13nm,20.3s,baz=205,slow=35						
MAJO	**Matsushiro**	**41.45**	**11**	*e*P	**P**	**11 45 54.8**	**0.0**
MJAR	**Matsushiro Arr**	**41.45**	**11**	P	**P**	**11 45 54.8**	**0.0**
	2.0nm,1.0s,baz=190,slow=11,SNR=3.7						
MJAR				LR	LR	12 02 55.5	
	comp=Z,13nm,20.9s,baz=170,slow=36						
CD2	**Chengdu**	**42.34**	**327**	P	**P**	**11 46 02.8**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC	**Hu-ho-hao-te**	**47.54**	**342**	P	**P**	**11 46 46.1**	**+2.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,7.4s						
USRK	**Ussuriysk Ar.**	**48.25**	**3**	P	**P**	**11 46 49.5**	**+0.8**
	1.3nm,0.6s,baz=190,slow=7.0,SNR=4.4						
ASAJ	**Asahikawa**	**49.65**	**13**	P	**P**	**11 47 00.0**	**+0.5**
	1.8nm,0.6s,baz=212,slow=15,SNR=3.5						
GTA	**Gaotai**	**50.98**	**331**	*e*P	**P**	**11 47 09.9**	**0.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLR	**Kul'dur**	**53.26**	**2**	P	**P**	**11 47 27.1**	**+0.6**
	2.7nm,0.9s,baz=199,slow=10,SNR=3.6						
LBZ	**Lake Benmore**	**54.01**	**144**	*e*P	**P**	**11 47 33.1**	**+1.0**
	31nm,1.3s						
ULN	**Ulaanbaatar**	**55.26**	**342**	*e*P	**P**	**11 47 41.6**	**+0.3**
	5.9nm,1.2s						
BKZ	**Black Stump Fm**	**55.37**	**136**	*e*P	**P**	**11 47 42.7**	**+0.5**
	25nm,1.3s						
SONA0	**Songino Array**	**55.44**	**342**	*e*P	**P**	**11 47 42.5**	**0.0**
SONM	**Songino Array**	**55.44**	**342**	P	**P**	**11 47 42.5**	**0.0**
	2.0nm,0.9s,baz=163,slow=7.1,SNR=9.7						
SONM				PcP	**PcP**	**11 48 42.7**	**+0.3**
	0.7nm,0.6s,baz=141,slow=4.8,SNR=2.7						
WMQ	**Urumqi**	**60.44**	**327**	*e*P	**P**	**11 48 19.6**	**+2.0**
WMQ				LR	LR		
	comp=N,180nm,21.7s						
WMQ				LR	LR		
	comp=E,110nm,21.1s						
WMQ				LR	LR		
	comp=Z,290nm,19.9s						
PETK	**Petropavlovsk-**	**62.04**	**19**	P	**P**	**11 48 29.4**	**+1.2**
	2.1nm,0.7s,baz=160,slow=4.7,SNR=3.8						
PETK				LR	LR	12 11 14.1	
	comp=Z,21nm,21.7s,baz=163,slow=32						
NIL	**Nilore**	**64.55**	**310**	*e*P	**P**	**11 48 44.1**	**-1.1**
	5.3nm,0.7s						
KSH	**Kashi**	**65.20**	**317**	P	**P**	**11 48 52.4**	**+2.9**
MK31	**Makanchi Array**	**65.27**	**327**	*e*P	**P**	**11 48 49.3**	**-0.4**
	4.0nm,0.8s						
MKAR	**Makanchi Array**	**65.27**	**327**	P	**P**	**11 48 49.1**	**-0.6**
	4.1nm,0.7s,baz=127,slow=7.8,SNR=40						
MAKZ	**Makanchi**	**65.45**	**327**	*e*P	**P**	**11 48 50.5**	**-0.4**
	3.4nm,0.6s						
KDJ	**Kajisay**	**65.71**	**320**	*e*P	**P**	**11 48 52.1**	**-0.6**
	4.3nm,0.6s						
YAK	**Yakutsk**	**66.03**	**0**	*e*P	**P**	**11 48 54.4**	**+0.2**
	22nm,0.8s						
ZAA0	**Zalesovo Array**	**68.58**	**334**	*e*P	**P**	**11 49 09.8**	**-0.7**
	4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**68.58**	**334**	P	**P**	**11 49 09.7**	**-0.9**
	5.1nm,0.8s,baz=118,slow=4.6,SNR=13						
GAR	**Garm**	**68.90**	**315**	*e*P	**P**	**11 49 12.3**	**-0.7**
	10nm,0.7s						
KURBB	**Kurchatov Arra**	**69.54**	**328**	P	**P**	**11 49 15.7**	**-0.8**
	5.7nm,0.8s,baz=130,slow=5.7,SNR=46						
KURK	**Kurchatov**	**69.55**	**329**	*e*P	**P**	**11 49 16.2**	**-0.4**
	10nm,0.8s						
KK31	**Karatay Array**	**70.50**	**319**	*e*P	**P**	**11 49 21.7**	**-1.0**
	5.3nm,1.3s						
BVAR	**Borovoye Array**	**75.10**	**328**	P	**P**	**11 49 49.0**	**-0.7**
	2.5nm,0.7s,baz=131,slow=6.7,SNR=18						
BRVK	**Borovoye**	**75.17**	**328**	*e*P	**P**	**11 49 49.9**	**-0.2**
	6.3nm,0.9s						
VNDA	**Vanda**	**75.36**	**173**	P	**P**	**11 49 50.5**	**-0.2**
	1.1nm,0.5s,baz=325,slow=6.5,SNR=18						
VNDA	**Vanda**	**75.36**	**173**	*e*P	**P**	**11 49 50.9**	**+0.1**
	1.6nm,0.8s						
TIXI	**Tiksi**	**75.69**	**360**	*e*P	**P**	**11 49 52.3**	**-0.4**
	4.3nm,0.7s						
SBA	**Scott Base**	**76.25**	**172**	*e*P	**P**	**11 49 56.8**	**+0.9**
	2.7nm,1.0s						
GEYT	**Alibeck**	**77.55**	**310**	P	**P**	**11 50 03.0**	**-1.0**
	2.3nm,0.8s,baz=121,slow=7.2,SNR=4.2						
ABKAR	**Akbulak array**	**79.62**	**322**	*e*P	**P**	**11 50 14.5**	**-0.6**
	5.0nm,0.8s						
ARU	**Arti**	**82.74**	**328**	*e*P	**P**	**11 50 30.7**	**-0.8**
	7.8nm,0.8s						
RAYN	**Ar Rayn**	**85.59**	**294**	*e*P	**P**	**11 50 46.3**	**-0.5**
	11nm,1.1s						
QSPA	**South Pole Qui**	**85.77**	**180**	*e*P	**P**	**11 50 46.3**	**-0.7**
	18nm,1.6s						
SYO	**Syowa Base**	**85.86**	**201**	⇓*e*P	**P**	**11 50 46.0**	**-1.1**
SYO	**Syowa Base**	**85.86**	**201**	⇑*e*PcP	**PcP**	**11 50 51.0**	**+1.1**
OHAK	**Old Harbor**	**86.94**	**32**	*e*P	**P**	**11 50 52.6**	**0.0**
	7.1nm,1.0s						
TTA	**Tatalina**	**86.98**	**26**	*e*P	**P**	**11 50 53.4**	**+0.6**
	1.6nm,0.6s						
KDAK	**Kodiak Island**	**87.43**	**32**	*e*P	**P**	**11 50 55.3**	**+0.4**
	6.3nm,1.0s						
KBZ	**Khabaz**	**89.95**	**314**	P	**P**	**11 51 07.0**	**-0.2**
	2.1nm,0.9s,baz=96,slow=3.0,SNR=4.1						
HDA	**Harding Lake**	**91.23**	**26**	*e*P	**P**	**11 51 11.8**	**-0.9**
	2.1nm,0.8s						
ILAR	**Eielson Array**	**91.30**	**25**	P	**P**	**11 51 11.7**	**-1.4**
	0.5nm,0.6s,baz=232,slow=5.4,SNR=9.7						
DAWY	**Dawson**	**94.50**	**26**	*e*P	**P**	**11 51 27.6**	**-0.3**
	6.0nm,1.4s						
BR101	**Keskin Array S**	**96.68**	**309**	*e*P	**P**	**11 51 37.2**	**-1.3**
BRTR	**Keskin Array B**	**96.68**	**309**	P	**P**	**11 51 37.2**	**-1.3**
	0.2nm,0.3s,baz=108,slow=3.3,SNR=2.4						
ARCES	**ARCESS Array B**	**98.57**	**340**	P	**P**	**11 51 44.8**	**-1.4**
	1.3nm,0.6s,baz=77,slow=5.2,SNR=8.8						
FINES	**FINESS Array B**	**99.77**	**332**	P	**Pdif**	**11 51 49.8**	**-1.9**
	1.5nm,0.8s,baz=66,slow=6.7,SNR=4.2						
TXAR	**Lajitas Array**	**124.41**	**57**	PKP	**PKPdf**	**11 57 07.4**	**-0.2**
	0.3nm,0.8s,baz=252,slow=0.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**127.12**	**283**	PKP	**PKPdf**	**11 57 12.7**	**-0.3**
	1.0nm,0.7s,baz=31,slow=3.2,SNR=7.5						
TOA1	**Torodi Ar. Sit**	**127.12**	**283**	*e*PKPdf	**PKPdf**	**11 57 12.7**	**-0.3**
CPUP	**Villa Florida**	**149.07**	**169**	PKPbc	**PKPbc**	**11 57 56.9**	**+0.2**
	5.0nm,0.8s,baz=187,slow=1.9,SNR=11						
LPAZ	**La Paz**	**153.60**	**141**	PKPbc	**PKiKP**	**11 58 09.3**	**+0.9**
	0.7nm,0.5s,baz=201,slow=2.3,SNR=4.0						
LPAZ				PKPab	**PKPab**	**11 58 21.2**	**+0.5**
	1.8nm,0.7s,baz=191,slow=2.1,SNR=11						

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*ISCJB **13** 11:43:41.1±1.1, 32°.47N±0°.04×116°.93W±0°.07, h13^{km}±4^{km}, Error ellipse: s-maj=10.2km s-min=5.2km az=159.9*

*ECX **13** 11:43:42.2±0.4, 32°.47N×116°.90W, h8^{km}, MD1.9, ML2.1*

*MEX **13** 11:43:42.3±1.4, 32°.54N×116°.88W, h5^{km}, MD3.5*

ISC 13 11:43:41.5±1.4, **32°.47N**±0°.04×**116°.91W**±0°.06, **h14**^{km}±8^{km}**, n10,** σ**0**^{s}**.32**/20**, 3C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TJIG	**Tijuana**	**0.20**	**101**	*e*P	**Pg**	**11 43 45.9**	**-0.1**
TJIG				*e*S	**Sg**	**11 43 49.0**	**-0.1**
CBX	**Cerro Bola**	**0.26**	**127**	*e*P	**Pg**	**11 43 46.6**	**-0.5**
CBX				*e*S	**Sg**	**11 43 51.3**	**+0.4**
CBX	**Cerro Bola**	**0.26**	**127**	⇑*i*P	**Pg**	**11 43 47.0**	**-0.1**
CBX				*e*S	**Sg**	**11 43 51.1**	**+0.2**
CBX				IAML		11 43 51.5	
	comp=E,561nm,0.2s						
CBX				⇓*e*		11 43 51.5	
SDRC	**San Diego Road**	**0.26**	**354**	*e*P	**Pg**	**11 43 47.1**	**0.0**
SDRC				*e*S	**Sg**	**11 43 50.9**	**+0.1**
BAR	**Barrett**	**0.29**	**44**	*e*P	**Pg**	**11 43 47.6**	**0.0**
BAR				*e*S	**Sg**	**11 43 51.9**	**+0.3**
EML	**El Monte Cty P**	**0.42**	**7**	*e*P	**Pg**	**11 43 49.7**	**-0.2**
EML				*e*S	**Sg**	**11 43 55.4**	**-0.2**
MONP2	**Monument Peak**	**0.59**	**44**	⇑*i*P	**Pg**	**11 43 52.7**	**-0.4**
MONP2				*e*S	**Sg**	**11 44 00.7**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**0.70**	**75**	⇑*i*P	**Pg**	**11 43 54.7**	**-0.4**
IKP				*e*S	**Sg**	**11 44 04.0**	**-0.3**
RMX	**La Rumorosa**	**0.71**	**79**	*e*P	**Pg**	**11 43 55.6**	**+0.2**
RMX				*e*S	**Sg**	**11 44 05.4**	**+0.6**
RMX				IAML		11 44 05.9	
	comp=N,73nm,0.1s						

RMX				*e*		11 44 05.9	
SPIG	**San Pedro Mart**	**1.88**	**139**	*e*P	**Pn**	**11 44 13.8**	**+0.3**
SPIG				*i* S	**Sn**	**11 44 37.0**	**-0.3**

IDC 13 11:45:12.7±4.8, 19°.95S×178°.24W, h568^{km}±50^{km}, mb3.1/6, mb1 3.5/7, mb1mx3.1/29, mbtmp4.1/7, Error ellipse: s-maj=98.5km s-min=22.6km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.46**	**259**	P	P	11 48 16.1	-0.4
	0.3nm,0.3s,baz=83,slow=19,SNR=3.8						
ASAR	**Alice Springs**	**44.43**	**256**	P	P	11 52 34.0	0.0
	3.2nm,0.7s,baz=87,slow=8.7,SNR=54						
ASAR				PcP	PcP	11 54 05.3	0.0
	0.3nm,0.5s,baz=90,slow=4.6,SNR=4.6						
WRA	**Warramunga Arr**	**44.45**	**262**	P	P	11 52 34.0	-0.4
	1.7nm,0.3s,baz=94,slow=7.4,SNR=71						
NVAR	**Mina Array Bea**	**80.78**	**44**	P	P	11 56 28.3	+0.3
	0.5nm,0.7s,baz=221,slow=10,SNR=5.6						
TXAR	**Lajitas Array**	**86.95**	**57**	P	P	11 56 58.6	+0.1
	0.3nm,0.6s,baz=219,slow=7.1,SNR=6.7						
ILAR	**Eielson Array**	**87.83**	**13**	P	P	11 57 01.4	-0.2
	0.9nm,0.8s,baz=219,slow=5.9,SNR=7.9						
PDAR	**Pinedale Array**	**88.72**	**43**	P	P	11 57 06.0	-0.6
	0.3nm,0.4s,baz=185,slow=5.5,SNR=3.6						
MKAR	**Makanchi Array**	**110.66**	**314**	PKiKP	PKiKP	12 02 40.7	-0.6
	0.2nm,0.5s,baz=135,slow=2.3,SNR=3.0						
AKASG	**Malin Array Be**	**142.43**	**331**	PKP	PKPdf	12 03 38.1	-2.9
	1.9nm,0.6s,baz=41,slow=4.6,SNR=7.5						
BRTR	**Keskin Array B**	**146.30**	**313**	PKPbc	PKPbc	12 03 50.8	+0.1
	0.6nm,0.5s,baz=139,slow=5.9,SNR=3.7						
GERES	**GERESS Array B**	**149.61**	**344**	PKPbc	PKPbc	12 03 58.8	+0.1
	0.3nm,0.2s,baz=42,slow=2.6,SNR=4.9						

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*ISCJB **13** 11:46:42.4±0.7, 18°.8S±0°.1×178°.0W±0°.2, h450^{km}, mb3.6/9, Error ellipse: s-maj=22.3km s-min=16.0km az=38.6*
*IDC **13** 11:46:42.7±7.0, 18°.81S×177°.93W, h444^{km}±79^{km}, mb3.3/9, mb1 3.5/10, mb1mx3.3/29, mbtmp4.1/10, Error ellipse: s-maj=27.9km s-min=20.3km az=41.0*
ISC 13 11:46:43.3±0.8, 18°.8S±0°.2×178°.0W±0°.2, h450^{km}, n13, σ1^{s}.04/12, mb3.6/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.87**	**191**	P	**P**	**11 50 41.8**	**-1.5**
	1.3nm,0.3s,baz=6.8,slow=5.3,SNR=9.4						
PPT2	**Papeete2**	**26.99**	**92**	*e*LR	LR	11 52 25.6	
	comp=Z,89nm,26.0s						
STKA	**Stephens Creek**	**38.59**	**242**	P	**P**	**11 53 27.4**	**+1.1**
	1.1nm,0.3s,baz=62,slow=7.8,SNR=4.9						
JAY	**Jayapura**	**43.56**	**287**	P	**P**	**11 54 06.5**	**+0.2**
	10.0nm,0.7s,baz=42,slow=15,SNR=3.5						
WRA	**Warramunga Arr**	**44.89**	**260**	P	**P**	**11 54 15.9**	**-0.7**
	0.7nm,0.3s,baz=95,slow=7.5,SNR=14						
ASAR	**Alice Springs**	**44.97**	**255**	P	**P**	**11 54 17.3**	**+0.1**
	3.6nm,0.5s,baz=90,slow=8.4,SNR=47						
VNDA	**Vanda**	**59.61**	**185**	P	**P**	**11 56 02.6**	**+0.7**
	0.3nm,0.5s,baz=354,slow=6.9,SNR=5.2						
PETK	**Petropavlovsk-**	**74.63**	**345**	P	**P**	**11 57 35.4**	**+0.3**
	0.7nm,0.4s,baz=111,slow=7.9,SNR=6.5						
NVAR	**Mina Array Bea**	**79.76**	**44**	P	**P**	**11 58 04.3**	**+0.5**
	0.4nm,0.6s,baz=221,slow=8.3,SNR=6.6						
TXAR	**Lajitas Array**	**86.11**	**57**	P	**P**	**11 58 37.0**	**+1.0**
	0.4nm,0.6s,baz=225,slow=6.6,SNR=6.6						
ILAR	**Eielson Array**	**86.64**	**13**	P	**P**	**11 58 36.6**	**-0.9**
	0.7nm,0.4s,baz=219,slow=5.0,SNR=18						
ARCES	**ARCESS Array B**	**127.25**	**350**	PKP	**PKPdf**	**12 04 53.5**	**-1.5**
	2.6nm,0.8s,baz=14,slow=0.4,SNR=4.2						
GERES	**GERESS Array B**	**148.56**	**345**	PKPbc	**PKPbc**	**12 05 37.8**	**-0.8**
	0.2nm,0.2s,baz=36,slow=4.0,SNR=3.4						

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*DDA **13** 11:52:41.4, 35°.03N×32°.33E, h12^{km}±1^{km}, ML3.2*
*ISCJB **13** 11:52:42.3±1.0, 34°.82N±0°.05×32°.42E±0°.07, h17^{km}±6^{km}, Error ellipse: s-maj=10.8km s-min=7.5km az=138.2*
*ISK **13** 11:52:42.9, 34°.90N×32°.49E, h20^{km}, ML2.9/7*
*NIC **13** 11:52:43.2±0.4, 34°.87N×32°.49E, h12^{km}, ML3.0*
*NSSC **13** 11:52:59.1±0.6, 32°.30N×34°.03E, h5^{km}±999^{km}, ML2.2*
ISC 13 11:52:43.2±1.1, 34°.92N±0°.04×32°.50E±0°.05, h17^{km}±8^{km}, n23, σ0^{s}.84/31, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.13**	**256**	P	**Pg**	**11 52 47.1**	**0.0**
	baz=97						
ALFC	**Alefka**	**0.25**	**19**	P	**Pg**	**11 52 49.2**	**+0.3**
	baz=197						
SZAC	**Souni**	**0.35**	**117**	P	**Pg**	**11 52 50.2**	**-0.4**
	baz=289						
SZAC				S	**Sg**	**11 52 55.7**	**+0.1**
LEF	**Lefka**	**0.38**	**58**	PG	**Pg**	**11 52 50.1**	**-1.0**
LEF	**Lefka**	**0.38**	**58**	*i* P	**Pg**	**11 52 50.0**	**-1.0**
LEF				IAML_P			
	comp=Z,5µm,0.2s						
AKDN	**Akdeniz- Kıbrı**	**0.54**	**45**	PG	**Pb**	**11 52 54.6**	**+0.3**
CSS	**Mathiatis**	**0.69**	**86**	PG	**Pb**	**11 52 56.1**	**-0.7**
CSS				SG	**Sg**	**11 53 06.9**	**+1.1**
CSS	**Mathiatis**	**0.69**	**86**	P	**Pb**	**11 52 56.6**	**-0.2**
	baz=262						
CSS				S	**Sn**	**11 53 07.8**	**-0.7**
EREN	**Erenkoy**	**1.50**	**65**	PN	**Pb**	**11 53 10.1**	**-0.5**
EREN	**Erenkoy**	**1.50**	**65**	*i* P	**Pg**	**11 53 12.2**	**+0.1**
EREN				IAML_P			
	comp=Z,2µm,0.3s						
GULN	**MERSIN_Gulnar**	**1.52**	**34**	*i* P	**Pn**	**11 53 10.1**	**+0.3**
GULN				*i* S	**Sg**	**11 53 32.3**	**-0.2**
GULN				IAML_P			
	comp=Z,977nm,0.1s						
BERE	**Bereket-Mersin**	**1.54**	**22**	PN	**Pn**	**11 53 10.3**	**+0.1**
BERE				SN	**Sb**	**11 53 31.1**	**+0.2**
IKL	**Isikli**	**1.64**	**36**	PN	**Pn**	**11 53 11.3**	**0.0**
IKL				SN	**Sb**	**11 53 33.5**	**+0.1**
TEVE	**Tevekalti-Mers**	**1.70**	**27**	PN	**Pb**	**11 53 13.4**	**-0.7**
KEBE	**Keben-Mersin**	**1.82**	**33**	PN	**Pn**	**11 53 14.6**	**+0.7**
KIZK	**Mersin**	**2.06**	**40**	PN	**Pn**	**11 53 18.4**	**+1.3**
KIZK	**Mersin**	**2.06**	**40**	*i* P	**Pb**	**11 53 19.1**	**-1.1**
KIZK				*i* S	**Sb**	**11 53 46.8**	**+1.3**
KIZK				IAML_P			
	comp=Z,1µm,0.2s						
KEPZ	**Antalya-Kepez**	**2.11**	**340**	*i* P	**Pn**	**11 53 17.9**	**0.0**
MERS	**Mersin**	**2.55**	**40**	PN	**Pn**	**11 53 25.4**	**+1.5**
KERG	**Konya-Eregli**	**2.82**	**27**	*i* P	**Pb**	**11 53 31.9**	**-1.4**
KERG				*i* S	**Sb**	**11 54 08.4**	**+0.8**
BRBR	**Barbar**	**3.23**	**117**	*e*P	**Pn**	**11 53 32.9**	**-0.6**
BRBR				*e*S	Sn	11 53 58.2	-14
BRBR				AML	AML	11 54 11.0	
	comp=N,26nm,0.4s						
BRBR				AML	AML	11 54 11.7	
	comp=E,12nm,0.2s						
QASN	**Qassioun**	**3.42**	**113**	*e*P	**Pn**	**11 53 37.7**	**+1.8**
QASN				AML	AML	11 54 18.6	
	comp=N,98nm,0.4s						
QASN				AML	AML	11 54 19.0	
	comp=E,128nm,0.4s						
TOTH	**TOTAH**	**3.61**	**114**	*e*P	**Pn**	**11 53 38.5**	**+0.1**
TOTH				*e*S	Sn	11 54 05.2	-16
TOTH				AML	AML	11 54 21.7	
	comp=N,19nm,0.4s						
TOTH				AML	AML	11 54 22.4	
	comp=E,17nm,0.5s						

TAP 13 12:29:07.3, 21°.29N×122°.01E, h150^{km}, ML4.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.85**	**330**	*e*P	Pn	12 29 31.1	+0.1
	baz=331						
TSEB	**Hengchuen, Pin**	**1.20**	**301**	*e*P	Pn	12 29 34.2	+0.4
	baz=295						
TSEB				*e*S	Sn	12 29 55.8	+1.7
	baz=295						
TWKBT	**Hengchun**	**1.28**	**300**	*e*P	Pn	12 29 35.5	+0.8
	baz=297						
TWKBT				*e*S	Sn	12 29 55.2	-0.4
	baz=297						
TWK1	**Hengchun**	**1.29**	**300**	*e*P	Pn	12 29 35.4	+0.6
	baz=297						
TWK1				*e*S	Sn	12 29 55.4	-0.4
	baz=297						
HEN	**Hengchun**	**1.38**	**301**	P	Pn	12 29 36.3	+0.7
	baz=301						
HEN				*e*S	Sn	12 29 57.1	-0.1
	baz=301						
TAW	**Tawu**	**1.48**	**316**	P	Pn	12 29 36.5	-0.1
	baz=319						
TAW				*e*S	Sn	12 29 58.2	-1.0
	baz=319						
EAST	**Anshuo**	**1.53**	**315**	*e*P	Pn	12 29 37.3	+0.1
	baz=316						
EAST				*e*S	Sn	12 29 59.5	-0.6
	baz=316						
ECL	**Taimali**	**1.62**	**323**	*e*P	Pn	12 29 37.9	-0.4
	baz=319						
ECL				*e*S	Sn	12 29 59.5	-2.4
	baz=319						
TTN	**Taitung**	**1.66**	**331**	*e*S	Sn	12 30 04.7	+2.1
	baz=326						
SCZT	**Fangliau**	**1.68**	**310**	*e*P	Pn	12 29 38.9	+0.1
	baz=310						
SCZT				*e*S	Sn	12 30 02.2	-0.7
	baz=310						
TWGBT	**Beinan**	**1.74**	**331**	*e*P	Pn	12 29 39.4	-0.1
	baz=325						
TWGBT				*e*S	Sn	12 30 03.7	-0.6
	baz=325						
TWG	**Pinlang**	**1.75**	**330**	*e*P	Pn	12 29 39.6	0.0
	baz=324						
TWG				*e*S	Sn	12 30 02.8	-1.6
	baz=324						
SSPT	**Xinbi**	**1.79**	**312**	*e*P	Pn	12 29 40.5	+0.5
	baz=315						
SSPT				*e*S	Sn	12 30 05.8	+0.8
	baz=315						
MASBT	**Mashibuluo**	**1.83**	**316**	*e*P	Pn	12 29 40.8	+0.3
	baz=316						
MASBT				*e*S	Sn	12 30 05.3	-0.7
	baz=316						
WLCH	**Liuqiu**	**1.84**	**305**	*e*P	Pn	12 29 42.0	+1.4
	baz=305						
WLCH				*e*S	Sn	12 30 08.5	+2.3
	baz=305						
TWP	**Hsiaoliuchiu**	**1.85**	**305**	*e*P	Pn	12 29 42.4	+1.7
	baz=305						
TWP				*e*S	Sn	12 30 07.4	+1.0
	baz=305						
CHKT	**Chengkung**	**1.89**	**342**	*e*P	Pn	12 29 41.0	-0.2
	baz=346						
CHKT				*e*S	Sn	12 30 07.5	+0.2
	baz=346						
SSD	**Sandimen**	**1.93**	**319**	*e*P	Pn	12 29 42.1	+0.4
	baz=319						
SSD				*e*S	Sn	12 30 07.6	-0.4
	baz=319						
SGLT	**Jiouru**	**2.00**	**316**	*e*P	Pn	12 29 43.8	+1.4
	baz=321						
SGLT				*e*S	Sn	12 30 11.4	+1.9
	baz=321						
KAU	**Kaohsiung**	**2.02**	**309**	*e*P	Pn	12 29 44.2	+1.5
	baz=301						
KAU				*e*S	Sn	12 30 12.2	+2.2
	baz=301						
ELDTW	**Lidau**	**2.10**	**334**	*e*P	Pn	12 29 44.9	+1.2
	baz=336						
ELDTW				*e*S	Sn	12 30 10.9	-0.8
	baz=336						
SLGT	**Liugui**	**2.11**	**324**	*e*P	Pn	12 29 44.0	+0.2
	baz=323						
SLGT				*e*S	Sn	12 30 10.9	-0.9
	baz=323						
SNJT	**Kaohsiung City**	**2.13**	**313**	*e*P	Pn	12 29 44.9	+1.0
	baz=304						
TWF1	**Yuli**	**2.15**	**342**	*e*P	Pn	12 29 44.8	+0.5
	baz=346						
TWF1				*e*S	Sn	12 30 11.9	-0.8
	baz=346						
YULB	**Yu-li**	**2.19**	**343**	*e*P	Pn	12 29 44.7	0.0
	baz=335						
YULB				*e*S	Sn	12 30 13.2	-0.3
	baz=335						
STYT	**Tauyuan**	**2.19**	**328**	*e*P	Pn	12 29 46.5	+1.7
	baz=321						
STYT				*e*S	Sn	12 30 13.1	-0.6
	baz=321						
SGST	**Jiashian**	**2.22**	**324**	*e*P	Pn	12 29 46.8	+1.8
	baz=324						
SGST				*e*S	Sn	12 30 13.8	-0.3
	baz=324						
HGSD	**Ruisui**	**2.25**	**346**	*e*P	Pn	12 29 46.0	+0.5
	baz=348						
HGSD				*e*S	Sn	12 30 16.7	+1.9
	baz=348						
EHY	**Hungye**	**2.29**	**344**	*e*P	Pn	12 29 46.1	+0.2
	baz=336						
EHY				*e*S	Sn	12 30 15.0	-0.7
	baz=336						
CHN1	**Nanshi**	**2.33**	**324**	*e*P	Pn	12 29 46.3	-0.1
	baz=324						
CHN1				*e*S	Sn	12 30 15.5	-1.0
	baz=324						
CHN3	**Shinhua**	**2.34**	**320**	*e*P	Pn	12 29 47.7	+1.2
	baz=327						
CHN3				*e*S	Sn	12 30 18.7	+2.1
	baz=327						
SNST	**Tainan City**	**2.37**	**324**	*e*P	Pn	12 29 47.1	+0.2
	baz=324						
SNST				*e*S	Sn	12 30 16.1	-1.4
	baz=324						
YUS	**Yu-Shan**	**2.39**	**336**	*e*S	Sn	12 30 18.7	0.0
	baz=335						
TAI1	**Yung-k'ang**	**2.40**	**317**	*e*S	Sn	12 30 18.5	+0.7
	baz=324						
TWK	**Hsinying**	**2.42**	**325**	*e*P	Pn	12 29 47.3	-0.1
	baz=325						
TWK				*e*S	Sn	12 30 17.5	-1.0
	baz=325						
EGFH	**Guangfu**	**2.42**	**347**	*e*S	Sn	12 30 18.7	+0.1
	baz=350						
SCLT	**Jiali**	**2.52**	**318**	P	Pn	12 29 49.1	+0.5
	baz=324						
SCLT				*e*S	Sn	12 30 20.3	-0.2
	baz=324						
ESL	**Shilin**	**2.56**	**348**	*e*P	Pn	12 29 49.8	+0.6
	baz=341						
ESL				*e*S	Sn	12 30 19.8	-1.9
	baz=341						
VWDT	**VWDT**	**2.58**	**342**	*e*P	Pn	12 29 51.2	+1.9
	baz=345						
VWDT				*e*S	Sn	12 30 22.9	+1.1
	baz=345						
WHYT	**Xinyi Township**	**2.62**	**336**	*e*S	Sn	12 30 22.9	0.0
	baz=327						
CHN8	**Yiju**	**2.63**	**321**	*e*P	Pn	12 29 49.6	-0.4
	baz=327						
CHN8				*e*S	Sn	12 30 21.4	-1.8
	baz=327						
CHY	**Chiayi**	**2.64**	**327**	*e*P	Pn	12 29 50.0	-0.1
	baz=321						
CHY				*e*S	Sn	12 30 21.9	-1.4
	baz=321						
WLGB	**Puzi**	**2.69**	**324**	*e*S	Sn	12 30 23.1	-1.2
	baz=324						
WGK	**Gukeng**	**2.73**	**331**	*e*S	Sn	12 30 24.0	-1.3
	baz=331						
WDLH	**Douliu**	**2.74**	**331**	*e*P	Pn	12 29 51.0	-0.4
	baz=330						
WDLH				*e*S	Sn	12 30 24.0	-1.6
	baz=330						
SMLT	**Sun Moon Lake**	**2.77**	**339**	*e*P	Pn	12 29 52.1	+0.2
	baz=330						
SMLT				*e*S	Sn	12 30 26.8	+0.4
	baz=330						
WJS	**Zhushan**	**2.78**	**335**	*e*S	Sn	12 30 26.6	+0.2
	baz=335						
TWD	**Chiawan**	**2.80**	**352**	*e*S	Sn	12 30 27.7	+0.8
	baz=356						
TYC	**Yuchr**	**2.81**	**338**	*e*P	Pn	12 29 52.6	+0.4
	baz=330						
TYC				*e*S	Sn	12 30 27.0	0.0
	baz=330						
WNT	**Mingjian**	**2.85**	**335**	*e*P	Pn	12 29 53.2	+0.4
	baz=335						
WNT				*e*S	Sn	12 30 27.5	-0.4
	baz=335						
WSF	**Szhu**	**2.86**	**325**	*e*P	Pn	12 29 52.4	-0.4
	baz=325						
WSF				*e*S	Sn	12 30 26.4	-1.7
	baz=325						
CHGB	**Renai**	**2.86**	**345**	*e*P	Pn	12 29 55.1	+2.0
	baz=347						
CHGB				*e*S	Sn	12 30 28.7	+0.2
	baz=347						
WHF	**Hehuan Shan**	**2.92**	**347**	*e*P	Pn	12 29 55.6	+1.5
	baz=353						
WHF				*e*S	Sn	12 30 30.1	-0.1
	baz=353						
WDGT	**Dungji**	**2.92**	**312**	P	Pn	12 29 53.1	-0.6
	baz=312						
WDGT				*e*S	Sn	12 30 27.1	-2.5
	baz=312						
ETLH	**Xiulin Townshi**	**2.94**	**351**	*e*S	Sn	12 30 29.6	-0.5
	baz=344						
RLNB	**Erlin**	**3.00**	**330**	*e*S	Sn	12 30 29.6	-1.7
	baz=330						
WTCT	**Ta-ch'eng**	**3.02**	**328**	*e*S	Sn	12 30 30.9	-0.8
	baz=322						
TDCB	**Techi**	**3.05**	**345**	*e*P	Pn	12 29 57.0	+1.6
	baz=350						
TDCB				*e*S	Sn	12 30 33.8	+1.1
	baz=350						
VCHM	**Qimei**	**3.06**	**309**	*e*P	Pn	12 29 54.6	-0.8
	baz=309						
VCHM				*e*S	Sn	12 30 30.5	-2.1
	baz=309						
WCHH	**Zhanghua**	**3.08**	**334**	*e*P	Pn	12 29 56.3	+0.7
	baz=334						
WCHH				*e*S	Sn	12 30 33.1	0.0
	baz=334						
TCU	**Taichung**	**3.10**	**337**	*e*S	Sn	12 30 33.8	+0.3
	baz=337						
PHUB	**P'eng-hu**	**3.16**	**315**	*e*P	Pn	12 29 55.6	-1.0
	baz=320						
PHUB				*e*S	Sn	12 30 32.5	-2.3
	baz=320						
NNSB	**Datong**	**3.17**	**350**	*e*S	Sn	12 30 35.7	+0.2
	baz=356						
NNS	**Nan Shan**	**3.19**	**350**	*e*S	Sn	12 30 36.7	+0.9
	baz=356						
PNG	**Penghu**	**3.20**	**315**	P	Pn	12 29 56.5	-0.8
	baz=321						
PNG				S	Sn	12 30 33.1	-2.8
	baz=321						
WDJ	**Dajia District**	**3.29**	**338**	*e*S	Sn	12 30 37.5	-0.5
	baz=331						
NDT	**Datong Townshi**	**3.33**	**352**	*e*S	Sn	12 30 39.5	+0.7
	baz=352						
PTSB	**Yuanli**	**3.36**	**339**	*e*S	Sn	12 30 39.1	-0.6
	baz=339						
KNM	**Kinmen**	**4.53**	**314**	*e*P	Pn	12 30 14.9	+0.4
	baz=312						
PTMZ	**Houxiangcun**	**4.58**	**325**	*e*P	Pn	12 30 14.5	-0.7
	baz=325						
PTMZ				*e*S	Sn	12 31 04.9	-3.1
	baz=325						
KNMB	**Chin-men Tao**	**4.59**	**314**	*e*P	Pn	12 30 14.1	-1.2
	baz=314						
KNMB				*e*S	Sn	12 31 05.4	-2.9
	baz=314						
PTTC	**Pingtan**	**4.66**	**334**	P	Pn	12 30 15.9	-0.4
	baz=339						
PTTC				S	Sn	12 31 06.7	-3.3
	baz=339						
MHZQ	**Yeshan**	**5.51**	**331**	*e*P	Pn	12 30 26.9	-0.5
	baz=330						

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*SNET **13** 12:37:56.2±1.1, 14°.24N×91°.30W, h120^{km}±29^{km}, ML2.2*
*GCG **13** 12:37:59.2±0.4, 14°.31N×91°.39W, h61^{km}±5^{km}, MD3.6*
ISC 13 12:37:55.5±3.5, 13°.8N±0°.2×91°.6W±0°.2, h35^{km}, n11, σ0^{s}.74/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.62**	**5**	*e*P	**Pn**	**12 38 08.8**	**+0.9**
ERG				*e*S	**Sn**	**12 38 16.3**	**-0.4**
STG3	**Santiaguito 3,**	**0.89**	**4**	*e*P	**Pn**	**12 38 11.2**	**-0.6**
FUG	**Fuego 3**	**0.99**	**50**	*e*P	**Pn**	**12 38 12.4**	**-0.7**
PCG	**Pacaya**	**1.15**	**60**	*e*P	**Pn**	**12 38 15.0**	**-0.3**
NBG	**Las Nubes**	**1.46**	**58**	*e*P	**Pn**	**12 38 20.1**	**+0.4**
RTR	**El Retiro**	**1.93**	**87**	*e*P	**Pn**	**12 38 26.1**	**+0.1**
RTR				*e*S	**Sn**	**12 38 50.0**	**+0.8**
SBLS	**San Blas**	**1.95**	**89**	*e*P	**Pn**	**12 38 26.4**	**0.0**
SBLS				*e*S	**Sn**	**12 38 50.5**	**+0.8**
SNJE	**San Jose**	**1.97**	**88**	*e*P	**Pn**	**12 38 26.5**	**-0.1**
SNJE				*e*S	**Sn**	**12 38 50.5**	**+0.4**
MTO3	**Montecristo**	**2.28**	**75**	*e*P	**Pn**	**12 38 29.3**	**-1.6**
MTO3				IAML		12 38 49.0	
	comp=Z,14nm,0.5s						
LFU	**La Fuente**	**2.45**	**91**	*e*P	**Pn**	**12 38 33.0**	**0.0**
TECA	**Tecapa**	**3.06**	**96**	*e*P	**Pn**	**12 38 40.7**	**-0.8**

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*ISCJB **13** 12:39:27.6±0.3, 27°.65S±0°.02×67°.52W±0°.03, h137^{km}±3^{km}, mb4.2/28, Error ellipse: s-maj=4.9km s-min=3.9km az=179.1*
*NEIC **13** 12:39:28.0±1.9, 27°.70S×67°.46W, h123^{km}±5^{km}, mb4.4/25, MD4.3(SJA), ML4.7(GUC), Error ellipse: s-maj=11.9km s-min=8.2km az=93.0*
NEIC Felt [III] in the epicentral area.
*VAO **13** 12:39:27.5±0.3, 27°.70S×67°.42W, h123^{km}, mb4.4*
*SJA **13** 12:39:28.5±0.3, 27°.71S×67°.57W, h152^{km}±2^{km}, ML4.3, MW4.2*
*GUC **13** 12:39:28.9±0.8, 27°.60S×67°.66W, h139^{km}±9^{km}, ML4.7*
*IDC **13** 12:39:28.9±1.7, 27°.60S×67°.39W, h128^{km}±15^{km}, mb3.9/10, mb1 4.0/15, mb1mx3.9/27, mbtmp4.3/15, MS3.0/3, Ms1 3.0/3, ms1mx2.8/22, Error ellipse: s-maj=17.2km s-min=13.7km az=86.0*
ISC 13 12:39:28.7±0.6, 27°.67S±0°.04×67°.61W±0°.04, h132^{km}±5^{km}, n114, σ1^{s}.76/137, mb4.3/28, 7C-2D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	**Vinchina**	**1.19**	**206**	*e*P	**Pn**	**12 39 55.7**	**+2.0**
VCA				*e*S	**Sn**	**12 40 15.8**	**+3.1**
VCA				IAML		12 40 19.4	
	comp=Z,5µm,0.6s						
VCA	**Vinchina**	**1.19**	**206**	⇑ *i*P	**Pn**	**12 39 56.2**	**+2.5**
VCA				*i* S	**Sn**	**12 40 16.0**	**+3.2**
VCA				IAML		12 40 18.9	
	comp=E,11µm,0.7s						
CYA	**Choya**	**1.77**	**116**	*e*P	**Pn**	**12 40 01.4**	**+1.4**
CYA				IAML		12 40 02.9	
	comp=Z,3µm,0.5s						
CYA				*e*S	**Sn**	**12 40 25.5**	**+1.6**
CYA	**Choya**	**1.77**	**116**	⇓ *i*P	**Pn**	**12 40 02.0**	**+2.0**
CYA				*i* S	**Sn**	**12 40 25.2**	**+1.3**
CYA				IAML		12 40 26.7	
	comp=N,5µm,0.4s						
FSA	**Cafayete**	**2.13**	**43**	*e*P	**Pn**	**12 40 06.4**	**+1.9**
FSA				IAML		12 40 07.5	
	comp=Z,337nm,0.5s						
AHML	**Horco Molle**	**2.21**	**67**	*e*P	**Pn**	**12 40 06.9**	**+1.6**
AHML	**Horco Molle**	**2.21**	**67**	⇓ *i*P	**Pn**	**12 40 07.0**	**+1.6**
AHML				*i* S	**Sn**	**12 40 35.1**	**+1.7**
GO03	**Copiap**	**2.33**	**271**	*e*Pn	**Pn**	**12 40 07.8**	**+0.9**
GO03				*e*Sn	**Sn**	**12 40 37.2**	**+0.9**
GO03	**Copiap**	**2.33**	**271**	⇑ *i*P	**Pn**	**12 40 07.8**	**+0.9**
GO03				*i* S	**Sn**	**12 40 36.6**	**+0.3**
GO03				IAML		12 40 39.0	
	comp=E,4µm,0.2s						
LCO	**Las Campanas**	**3.04**	**243**	*e*Pn	**Pn**	**12 40 16.9**	**+0.8**
LCO				*e*Sn	**Sn**	**12 40 53.5**	**+0.9**
LCO	**Las Campanas**	**3.04**	**243**	⇑ *i*P	**Pn**	**12 40 16.8**	**+0.8**
LCO				*i* S	**Sn**	**12 40 53.3**	**+0.7**
LCO				IAML		12 40 55.1	
	comp=E,1µm,0.5s						
LCO	**Las Campanas**	**3.04**	**243**	*e*P	**Pn**	**12 40 16.6**	**+0.6**
LCO				*e*S	**Sn**	**12 40 53.7**	**+1.1**
GO02	**Mina Guanaco**	**3.07**	**324**	*e*Pn	**Pn**	**12 40 17.5**	**+1.0**
GO02				*e*Sn	**Sn**	**12 40 53.9**	**+0.5**
GO02	**Mina Guanaco**	**3.07**	**324**	⇑ *i*P	**Pn**	**12 40 17.7**	**+1.1**
GO02				*i* S	**Sn**	**12 40 54.2**	**+0.8**
GO02				IAML		12 40 58.0	
	comp=N,906nm,0.4s						
AMOG	**MOGNA**	**3.35**	**193**	*e*P	**Pn**	**12 40 20.9**	**+1.0**
AMOG				*e*S	**Sn**	**12 40 59.9**	**+0.4**
GO04	**Tololo Observa**	**3.75**	**228**	*e*Pn	**Pn**	**12 40 25.6**	**+0.2**
GO04				*e*Sn	**Sn**	**12 41 10.7**	**+1.5**
GO04	**Tololo Observa**	**3.75**	**228**	⇑ *i*P	**Pn**	**12 40 25.5**	**+0.2**
GO04				*i* S	**Sn**	**12 41 09.8**	**+0.5**
LSCH	**La Serena**	**3.90**	**234**	*e*P	**Pn**	**12 40 26.8**	**-0.2**

LSCH				IAML		12 41 17.0	
	comp=E,339nm,0.5s						
PB14	IPOC Station P	3.94	320	eP	Pn	12 40 28.3	+0.3
PB14				IAML		12 41 17.4	
	comp=E,765nm,0.5s						
CFA	Coronel Fontan	3.96	188	P	Pn	12 40 28.5	+0.6
	comp=E,45nm,0.3s,baz=6.7,slow=17,SNR=866						
CFA				S	Sn	12 41 13.1	-0.8
	comp=E,349nm,0.3s,baz=127,slow=20,SNR=33						
AZAP	Zapla	4.12	34	eP	Pn	12 40 32.3	+1.9
RTCV	Cerro Valdivia	4.25	191	eP	Pn	12 40 32.7	+0.8
RTLS	Leoncito	4.37	199	eP	Pn	12 40 34.8	+1.2
RTLS				IAML		12 41 28.1	
	comp=Z,556nm,0.4s						
TCA	Tanti	4.50	145	eP	Pn	12 40 35.7	+0.6
PB10	IPOC Station P	4.92	327	ePn	Pn	12 40 40.7	-0.1
LVC	Limon Verde	5.18	347	P	Pn	12 40 45.3	+0.7
	comp=Z,42nm,0.3s,baz=180,slow=8.0,SNR=172						
LVC				S	Sn	12 41 42.2	-1.4
	comp=Z,8.5nm,0.3s,baz=223,slow=19,SNR=9.7						
LVC				LR	LR	12 42 37.3	
	comp=Z,160nm,20.3s,baz=178,slow=36						
LVC	Limon Verde	5.18	347	eP	Pn	12 40 44.4	-0.1
LVC				eS	Sn	12 41 43.4	-0.2
PB04	IPOC Station P	5.79	336	ePn	Pn	12 40 51.4	-1.2
PEL	Peldehue	6.07	205	ePn	Pn	12 40 55.5	-0.6
PB01	IPOC Station P	6.82	345	ePn	Pn	12 41 05.3	-1.0
PB11	IPOC Station P	8.10	346	ePn	Pn	12 41 21.4	-2.2
GO01	Chusmiza	8.10	349	ePn	Pn	12 41 23.0	-0.9
GO05	Huala	8.20	206	ePn	Pn	12 41 21.6	-3.2
GO05				eSn	Sn	12 42 51.8	-3.9
MNMC	Minye Minye	8.70	347	ePn	Pn	12 41 30.4	-1.4
CPUP	Villa Florida	9.26	84	P	Pn	12 41 37.2	-1.9
	comp=Z,0.9nm,0.3s,baz=262,slow=10,SNR=11						
CPUP				LR	LR	12 45 30.6	
	comp=Z,90nm,21.6s,baz=240,slow=40						
CPUP	Villa Florida	9.26	84	ePn	Pn	12 41 36.6	-2.5
CPUP	Villa Florida	9.26	84	eP	Pn	12 41 37.0	-2.1
LPAZ	La Paz	11.34	357	P	Pn	12 42 07.4	-0.1
	comp=Z,0.6nm,0.3s,baz=174,slow=12,SNR=12						
LPAZ	La Paz	11.34	357	ePn	Pn	12 42 07.3	-0.2
LPAZ	La Paz	11.34	357	eP	Pn	12 42 05.7	-1.8
TRQA	Tornquist	11.38	157	eP	Pn	12 42 05.0	-2.3
OGAUY	Aigu	12.89	124	eP	Pn	12 42 24.0	-3.0
AQDB	Aquidauana	13.02	59	eP	Pn	12 42 26.4	-2.3
SIV	San Ignacio	13.11	29	P	Pn	12 42 26.8	-3.2
	comp=Z,1.1nm,0.3s,baz=235,slow=8.3,SNR=16						
PTGB	Pitanga	14.26	82	eP	Pn	12 42 42.1	-2.6
TRCB	Terra Rica	14.39	74	eP	Pn	12 42 43.5	-2.8
FRTB	Fartura	16.84	79	eP	P	12 43 13.7	-2.9
BB19B	Bebedouro	18.57	73	eP	P	12 43 33.2	-2.4
SPB	Sao Paulo	18.64	82	eP	P	12 43 33.5	-2.8
RCLB	Rio Claro- Sao	18.92	78	eP	P	12 43 37.0	-2.4
CLDB	Colider	20.06	36	eP	P	12 43 49.9	-1.9
PARB	Paraibuna	20.30	83	eP	P	12 43 51.8	-2.6
BDFB	Brasilia	21.75	61	P	P	12 44 07.5	-2.5
	comp=Z,3.4nm,0.3s,baz=223,slow=7.3,SNR=5.6						
BDFB	Brasilia	21.75	61	eP	P	12 44 07.7	-2.3
	comp=Z,22nm,1.4s						
PEXB	Peixe	23.81	53	eP	P	12 44 28.4	-1.2
GO09	Cerro Castillo	23.84	187	eP	P	12 44 30.0	+0.5
	comp=Z,40nm,1.2s						
EFI	East Falkland	25.03	166	eP	P	12 44 40.4	+0.1
	comp=Z,145nm,1.3s						
PTGA	Pitinga	27.77	17	P	P	12 45 05.2	0.0
	comp=Z,9.4nm,0.3s,baz=205,slow=11,SNR=24						
PTGA	Pitinga	27.77	17	eP	P	12 45 06.0	+0.7
	comp=Z,10nm,0.8s						
PTGA	Pitinga	27.77	17	eP	P	12 45 05.0	-0.3
ROSC	El Rosal	32.97	348	LR	LR	13 00 24.5	
	comp=Z,37nm,20.9s,baz=222,slow=38						
SDV	Santo Domingo	36.46	355	eP	P	12 46 20.2	-1.0
	comp=Z,3.8nm,0.9s						
TEIG	Tepich	51.65	335	eP	P	12 48 21.8	-0.2
	comp=Z,6.9nm,0.5s						
VNA3	Neumayer Olymp	53.88	160	P	P	12 48 38.7	+0.8
VNA1	Neumayer--Stat	54.11	159	P	P	12 48 40.6	+1.2
VNA2	Neumayer--Watz	54.47	159	P	P	12 48 43.0	+0.9
	baz=289,slow=8.1						
SNAA	Sanae	56.09	160	P	P	12 48 54.6	+0.8
SNAA	Sanae	56.09	160	eP	P	12 48 53.2	-0.6
	comp=Z,11nm,1.3s						
QSPA	South Pole Qui	62.55	180	eP	P	12 49 39.0	+0.7
	comp=Z,9.9nm,0.8s						
Z50A	Ashland	63.04	343	eP	P	12 49 41.4	-0.4
	comp=Z,4.1nm,1.1s						
WVT	Waverly	66.26	342	eP	P	12 50 02.4	-0.2
	comp=Z,4.0nm,0.6s						
TXAR	Lajitas Array	66.37	326	P	P	12 50 04.2	+0.7
	comp=Z,0.3nm,0.6s,baz=162,slow=8.6,SNR=6.2						
CCM	Cathedral Cave	69.03	340	eP	P	12 50 20.0	+0.1
	comp=Z,3.4nm,0.6s						
DBIC	Dimbokro	69.51	71	P	P	12 50 23.0	-0.4
	comp=Z,2.5nm,0.5s,baz=214,slow=5.7,SNR=6.9						
DBIC	Dimbokro	69.51	71	eP	P	12 50 22.8	-0.6
	comp=Z,13nm,1.3s						
SYO	Syowa Base	70.34	159	⇑eP	P	12 50 27.0	-0.6
SYO	Syowa Base	70.34	159	⇑eP	P	12 50 32.6	+5.0
VNDA	Vanda	71.00	190	P	P	12 50 33.5	+1.9
	comp=Z,2.0nm,1.0s,baz=133,slow=6.5,SNR=8.2						
VNDA	Vanda	71.00	190	eP	P	12 50 32.8	+1.2
KNB	Kanab	77.11	324	eP	P	12 51 09.0	+1.3
	comp=Z,4.9nm,1.2s						
CCUT	Cedar City	77.79	324	eP	P	12 51 12.8	+1.2
	comp=Z,5.0nm,1.3s						
MAW	Mawson	78.11	163	P	P	12 51 13.6	+1.0
	comp=Z,3.7nm,0.8s,baz=229,slow=7.7,SNR=5.0						
MAW	Mawson	78.11	163	eP	P	12 51 13.7	+1.0
	comp=Z,1.3nm,1.1s						
TOA0	Torodi Ar. Sit	78.41	68	eP	P	12 51 15.5	+0.4
	comp=Z,5.0nm,0.8s						
TORD	Torodi Ar. Bea	78.41	68	P	P	12 51 13.8	-1.3
	comp=Z,3.7nm,0.7s,baz=258,slow=5.2,SNR=22						
BOSA	Boshof	79.56	117	P	P	12 51 22.2	+0.6
	comp=Z,5.5nm,1.1s,baz=241,slow=5.0,SNR=7.1						
BOSA				pP	pP	12 51 55.4	+0.5
	comp=Z,1.5nm,0.6s,baz=245,slow=2.6,SNR=1.8						
BOSA	Boshof	79.56	117	eP	P	12 51 21.9	+0.4
	comp=Z,6.0nm,1.1s						
HWUT	Hardware Ranch	80.03	328	eP	P	12 51 24.4	+0.8
	comp=Z,2.7nm,0.7s						
PDAR	Pinedale Array	80.03	330	P	P	12 51 24.2	+0.5
	comp=Z,0.9nm,0.6s,baz=130,slow=7.7,SNR=14						
NVAR	Mina Array Bea	81.07	322	P	P	12 51 30.4	+1.1
	comp=Z,0.8nm,1.1s,baz=157,slow=5.7,SNR=2.6						
LOHW	Long Hollow	81.16	330	eP	P	12 51 30.6	+0.9
	comp=Z,1.9nm,0.6s						
LBTB	Lobatse	81.41	114	eP	P	12 51 31.4	0.0
	comp=Z,4.2nm,0.8s						
FLWY	Flagg Ranch	81.58	330	eP	P	12 51 33.4	+1.5
	comp=Z,3.6nm,0.6s						
YHH	Holmes Hill	82.20	331	eP	P	12 51 36.6	+1.4
	comp=Z,3.4nm,0.6s						
HLID	Hailey	82.88	328	eP	P	12 51 39.7	+1.1
	comp=Z,2.7nm,0.8s						
MCMT	McKenzie Canyo	83.12	329	eP	P	12 51 41.4	+1.5
MODS	Modra-Piesok	106.95	44	ePDIF	Pdif	12 53 34.7	+5.2
VYHS	Vyhne	107.96	44	ePDIF	Pdif	12 53 42.5	+8.5
AS31	Alice Springs	124.90	204	ePKPdf	PKPdf	12 58 13.5	-0.3
ASAR	Alice Springs	124.90	204	PKP	PKPdf	12 58 13.3	-0.5
	comp=Z,0.9nm,0.5s,baz=130,slow=1.7,SNR=27						
ASAR				pPKP	pPKPdf	12 58 50.5	+0.8
	comp=Z,0.6nm,0.8s,baz=144,slow=1.9,SNR=3.1						
WR1	Warramunga Arr	128.12	207	ePKPdf	PKPdf	12 58 19.9	-0.1
WRA	Warramunga Arr	128.12	207	PKP	PKPdf	12 58 19.9	-0.1
	comp=Z,1.7nm,0.8s,baz=151,slow=2.1,SNR=9.9						
ZAA1	Zalesovo Array	146.85	30	ePKPdf	PKPdf	12 58 53.9	+0.8
ZALV	Zalesovo Beam	146.86	30	PKPbc	PKPdf	12 58 53.9	+0.8
	comp=Z,5.8nm,0.5s,baz=323,slow=2.2,SNR=15						
KSH	Kashi	147.65	59	ePKPbc	PKPbc	12 58 57.1	-0.8
KSH				sPKP		12 59 36.0	
KSH				PP	PP	13 02 30.8	+4.8
MK32	Makanchi Array	149.63	43	ePKPbc	PKiKP	12 59 03.1	-0.5
MKAR	Makanchi Array	149.63	43	PKPbc	PKPbc	12 59 03.1	+0.5
	comp=Z,2.8nm,0.5s,baz=300,slow=2.6,SNR=27						
MJAR	Matsushiro Arr	156.47	299	PKPab	PKPab	12 59 37.4	0.0
	comp=Z,1.3nm,0.6s,baz=81,slow=3.8,SNR=6.6						
MAJO	Matsushiro	156.47	299	ePKPab	PKPab	12 59 37.4	0.0
SONA0	Songino Array	159.33	12	ePKPdf	PKPdf	12 59 12.2	+0.8
SONA0				ePKPab	PKPab	12 59 50.2	+0.8
SONM	Songino Array	159.33	12	PKP	PKPdf	12 59 12.2	+0.8
	comp=Z,0.7nm,0.9s,baz=309,slow=2.6,SNR=3.6						
SONM				PKPab	PKPab	12 59 50.2	+0.8
	comp=Z,0.3nm,0.5s,baz=338,slow=3.1,SNR=2.8						
LZH	Lanzhou	168.91	39	ePKP	PKPdf	12 59 21.3	+0.9
LZH				pPKP	pPKPdf	12 59 54.5	-2.2
LZH				sPKP		13 00 07.3	
LZH				PKP	PKPab	13 00 37.0	+5.0
CD2	Chengdu	171.80	65	PKP	PKPdf	12 59 20.8	-1.2
WHN	Wuhan	176.67	330	PKP	PKPdf	12 59 22.6	-0.9

MAN 13 13:22:56.2, 10.°13N×123.°27E, h1km, mb4.5, ML3.4, MS3.2, 1C-2D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.71	75	⇓eP	Pg	13 23 09.9	0.0
LLP				eS	Sg	13 23 19.7	+0.6
TBP	Tagbilaran	0.73	127	eP	Pg	13 23 10.6	+0.3
SNPH	Sibulan	0.79	182	⇑iP	Pg	13 23 11.7	+0.4
SNPH				i S	Sg	13 23 22.5	+0.9
RCP	Roxas	1.51	340	⇓eP	Pn	13 23 24.2	-0.2
MSLP	Maasin	1.57	90	eP	Pn	13 23 24.7	-0.5
MSLP				eS	Sg	13 23 47.0	+0.4
OCLP	Ormoc	1.60	55	eP	Pn	13 23 24.8	-0.9
OCLP				eS	Sg	13 23 48.4	+0.6

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*ARE **13** 13:27:35.0±0.0, 14.°37S×75.°92W, h43km*

NEIC 13 13:27:36.1±2.6, **14.°49S×76.°11W, h65km**±6km, **mb4.4**/5, **ML4.3**(ARE), **Error ellipse: s-maj=33.0km s-min=12.0km az=64.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.59	344	ePn	Pn	13 28 15.7	0.0
MNMC	Minye Minye	7.76	127	ePn	Pn	13 29 25.5	-1.2
LPAZ	La Paz	7.90	104	ePn	Pn	13 29 30.0	+1.1
PB11	IPOC Station P	8.10	131	ePn	Pn	13 29 30.1	-1.0
GO01	Chusmiza	8.38	129	ePn	Pn	13 29 35.4	0.0
PB01	IPOC Station P	9.07	137	ePn	Pn	13 29 45.0	+0.6
PB04	IPOC Station P	9.63	145	ePn	Pn	13 29 55.1	+2.9
ROSC	El Rosal	19.29	5	eP	P	13 31 54.1	-2.1
	4.1nm,0.5s						
TRQA	Tornquist	26.61	155	eP	P	13 33 07.0	-1.5
	0.1nm,0.8s						
HDIL	Hopedale	56.12	348	eP	P	13 37 08.1	-0.7
	21nm,0.5s						
LMN	Caledonia Moun	60.92	9	eP	P	13 37 42.6	+0.4
	1.6nm,1.0s						
BATG	Bathurst New B	62.14	8	eP	P	13 37 50.4	0.0
	16nm,0.5s						

MAN 13 13:29:52.5, 10.°06N×123.°10E, h27km, mb4.0, ML2.7, MS2.3, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.73	170	⇓iP	Pn	13 30 07.2	+0.1
SNPH				i S	Sn	13 30 18.0	+0.6
GUIM	Jordan	0.75	318	eP	Pb	13 30 06.6	-0.5
GUIM				eS	Sn	13 30 18.9	+0.9
MSLP	Maasin	1.73	88	eP	Pn	13 30 20.3	-0.6
MSLP				eS	Sn	13 30 42.7	+0.6
OCLP	Ormoc	1.78	56	eP	Pn	13 30 22.4	+0.9
OCLP				eS	Sn	13 30 41.8	-1.4

JMA 13 13:34:00.7, 35.°10N×135.°69E, h6km±1km, M2.9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.30	308	P	Pg	13 34 06.8	+0.3
JWT				S	Sg	13 34 10.7	+0.2
JHE	Heguri	0.45	181	P	Pg	13 34 09.4	+0.1
JHE				S	Sg	13 34 15.2	+0.1
JKS	Kasai	0.70	261	P	Pg	13 34 14.1	-0.1
JKS				S	Sg	13 34 23.5	+0.1
JKY	Yasaka	0.71	318	P	Pg	13 34 14.4	0.0
JKY				S	Sg	13 34 23.8	+0.1
TSUJ	Tsu 2	0.71	123	P	Pg	13 34 14.2	-0.2
TSUJ				S	Sg	13 34 23.5	-0.2
JWY	Kouya	0.88	185	P	Pg	13 34 17.4	-0.3
JWY				S	Sg	13 34 28.9	-0.2
JAJ2	Tsuna	0.95	225	P	Pg	13 34 18.5	-0.4
JAJ2				S	Sg	13 34 31.0	-0.2
JKSM	Kasumi	0.97	300	P	Pg	13 34 18.9	-0.4
JKSM				S	Sg	13 34 31.7	-0.2
JKN2	Miekihoku	0.98	151	P	Pg	13 34 19.2	-0.4
JKN2				S	Sg	13 34 31.5	-0.9
JYTA	Yamagatataniai	0.99	60	P	Pg	13 34 19.4	-0.2
JYTA				S	Sg	13 34 32.1	-0.3
MAT	Matsushiro	2.50	54	P	Pn	13 34 43.8	+1.9
MAT				S	Sg	13 35 19.2	-1.9

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*SNET **13** 13:37:27.7±1.0, 14.°32N×90.°87W, h144km±19km, MD3.9*

*ISCJB **13** 13:37:28.8±1.1, 14.°15N±0.°09×90.°98W±0.°05, h133km±9km, Error ellipse: s-maj=15.2km s-min=5.3km az=23.5*

*MEX **13** 13:37:29.8±0.8, 14.°07N×90.°94W, h132km±19km, MD3.9*

*GCG **13** 13:37:30.9±0.7, 14.°25N×90.°94W, h114km±6km, MD3.8*

ISC 13 13:37:29.6±2.0, **14.°1N**±0.°1×**90.°96W**±0.°05, **h128km**±13km, **n15, σ0.s84**/25, **2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.33	21	eP	Pn	13 37 47.0	-0.8
PCG	Pacaya	0.42	54	eP	Pn	13 37 48.0	-0.3
ERG	Entre ros, C	0.66	297	eP	Pn	13 37 49.9	+0.4
ERG				eS	Sn	13 38 03.5	-0.9
NBG	Las Nubes	0.74	53	⇓eP	Pn	13 37 50.6	+0.2
NBG				eS	Sn	13 38 05.7	-0.4
STG3	Santiaguito 3,	0.82	314	⇓eP	Pn	13 37 50.7	-0.2
RTR	El Retiro	1.30	101	eP	Pn	13 37 55.0	-0.5
SBLS	San Blas	1.33	103	eP	Pn	13 37 55.4	-0.5
SBLS				eS	Sn	13 38 17.8	+1.8
SNJE	San Jose	1.34	101	eP	Pn	13 37 55.4	-0.6
SNJE				eS	Sn	13 38 18.1	+2.1
THIG		1.48	301	eP	Pn	13 37 57.4	+0.2
THIG				eS	Sn	13 38 18.9	+0.7
MRL	Marmol	1.55	53	eP	Pn	13 37 58.7	+0.4
MRL				eS	Sn	13 38 20.0	-0.2
MTO3	Montecristo	1.57	80	eP	Pn	13 37 57.6	-1.0
MTO3				eS	Sn	13 38 20.7	0.0
LFU	La Fuente	1.84	102	eP	Pn	13 38 00.6	-0.9
CCIG	Comitan	2.41	332	eP	Pn	13 38 09.2	+0.4
CCIG				eS	Sn	13 38 39.5	+0.6
PCIG		2.68	306	eP	Pn	13 38 12.3	+0.4
PCIG				i S	Sn	13 38 43.7	-0.9
TGIG		3.35	322	i P	Pn	13 38 20.2	-0.5
TGIG				i S	Sn	13 39 00.2	-0.1

IDC 13 13:38:52.7±9.1, **20.°25S×177.°46W, h604km**±117km, **mb2.9**/4, **mb1 3.1**/5, **mb1mx2.8**/36, **mbtmp4.0**/5, **Error ellipse: s-maj=57.3km s-min=41.5km az=34.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	18.56	194	P	P	13 42 32.8	-0.2
	0.5nm,0.3s,baz=356,slow=19,SNR=4.5						
STKA	Stephens Creek	38.36	244	P	P	13 45 24.3	+0.5
	1.7nm,0.9s,baz=83,slow=13,SNR=4.6						
ASAR	Alice Springs	45.07	256	P	P	13 46 16.6	0.0
	2.3nm,0.8s,baz=96,slow=7.6,SNR=29						
WRA	Warramunga Arr	45.14	262	P	P	13 46 16.6	-0.6
	0.6nm,0.3s,baz=96,slow=7.7,SNR=19						
MJAR	Matsushiro Arr	70.31	323	P	P	13 49 07.0	+0.1
	0.6nm,0.6s,baz=142,slow=6.1,SNR=3.7						
AKASG	Malin Array Be	143.04	332	PKP	PKPbc	13 57 17.6	+0.6
	0.2nm,0.3s,baz=52,slow=3.9,SNR=3.4						

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*SOME **13** 13:50:43.5, 40.°92N×69.°35E, h0km*

*KRNET **13** 13:50:46.0±0.1, 41.°09N×69.°58E, mb2.6*

*NNC **13** 13:50:47.9±9.9, 41.°43N×68.°28E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=74.2km s-min=66.7km az=96.0*

ISC 13 13:50:44.3±2.2, **41.°02N**±0.°05×**69.°25E**±0.°09, **h3km**±12km, **n10, σ1.s37**/20, **8C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.27	27	eP	Pb	13 51 09.3	+0.3
	2.8nm,0.0s						
IUG				eS	Sn	13 51 26.4	-0.5
	83nm,0.2s						
BTK	Batken	1.53	128	⇓eP	Pn	13 51 12.3	-0.3
	baz=37						
BTK				⇓iS	Sg	13 51 31.5	-2.0
	baz=37						
BRLS	Borolday	2.06	12	eP	Pn	13 51 19.6	-0.2
	0.9nm,0.1s						
BRLS				eS	Sn	13 51 45.6	-0.5
	28nm,0.2s						
ARK	Arkit	2.19	68	⇑iP	Pn	13 51 21.8	+0.1
	baz=68						
ARK				⇑iS	Sn	13 51 48.1	-1.3
	baz=68						
KK31	Karatay Array	2.29	24	⇓Pn	Pg	13 51 27.7	-0.4
	2.1nm,0.3s,baz=203,slow=16,SNR=36						
KK31				⇓Sn	Sg	13 51 57.9	+0.1
	17nm,0.5s,baz=200,slow=26,SNR=19						
DRK	Karamyk	2.48	127	⇑iP	Pn	13 51 27.7	+1.8
	baz=33						
DRK				⇑iS	Sn	13 51 58.1	+1.2
	baz=33						
ARSB	Arslanbob	2.84	83	⇑eP	Pn	13 51 30.9	+0.3
	baz=84						
ARSB				⇑iS	Sn	13 52 03.3	-2.1
	baz=84						
ARLS	Aral	3.91	76	⇓iP	Pn	13 51 45.9	+0.5
	baz=76						
ARLS				⇓iS	Sn	13 52 29.4	-2.5
	baz=76						
AAK	Ala-Archa	4.24	66	⇓Pn	Pb	13 52 00.2	+0.6
	1.9nm,0.4s						
AAK				⇓Sn	Sg	13 53 02.1	+1.6
	1.5nm,0.5s						
TKM2	Tokmak 2	5.10	66	⇑Pn	Pb	13 52 13.5	-0.8
	1.8nm,0.8s						
TKM2				⇑Sn	Sb	13 53 18.2	+2.1
	1.8nm,0.7s						

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*ISCJB **13** 13:55:29.4±1.1, 19.°9S±0.°1×178.°2W±0.°3, h569km, mb3.4/6, Error ellipse: s-maj=33.2km s-min=19.1km az=5.0*

*IDC **13** 13:55:29.6±3.0, 19.°87S×178.°19W, h553km±33km, mb3.0/6, mb1 3.2/7, mb1mx3.0/24, mbtmp4.0/7, Error ellipse: s-maj=29.4km s-min=19.8km az=94.0*

ISC 13 13:55:30.7±1.2, **19.°9S**±0.°2×**178.°2W**±0.°3, **h569km, n7, σ0.s80**/8, **mb3.6**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	18.75	192	P	P	13 59 13.2	-1.1
	0.6nm,0.3s,baz=319,slow=11,SNR=4.0						
ASAR	Alice Springs	44.47	256	P	P	14 02 52.5	+0.2
	1.5nm,0.7s,baz=83,slow=8.0,SNR=21						
ASAR				ScP	ScP	14 07 22.4	+0.7
	0.9nm,1.1s,baz=107,slow=5.0,SNR=3.3						
WRA	Warramunga Arr	44.49	261	P	P	14 02 52.2	-0.4
	1.1nm,0.5s,baz=92,slow=8.0,SNR=8.1						
VNDA	Vanda	58.49	185	P	P	14 04 33.3	+0.9
	0.3nm,0.5s,baz=352,slow=8.0,SNR=5.7						
MJAR	Matsushiro Arr	69.61	324	P	P	14 05 43.6	0.0
	1.0nm,0.6s,baz=156,slow=6.0,SNR=5.1						
PETK	Petropavlovsk-	75.64	345	P	P	14 06 18.1	+0.4
	1.7nm,0.7s,baz=145,slow=5.3,SNR=2.8						
ILAR	Eielson Array	87.77	13	P	P	14 07 18.6	-0.6
	0.3nm,0.4s,baz=213,slow=5.0,SNR=5.0						

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*ISCJB **13** 13:55:48.7±0.5, 19.°55S±0.°03×69.°45W±0.°06, h107km±4km, Error ellipse: s-maj=9.6km s-min=4.6km az=170.4*

*GUC **13** 13:55:48.6±0.9, 19.°55S×69.°40W, h99km±3km, ML4.1*

*SJA **13** 13:55:48.2±0.4, 19.°53S×69.°45W, h103km±3km, ML3.6, MW3.4*

*IDC **13** 13:55:50.7±1.9, 19.°54S×68.°96W, h117km±16km, mb3.6/4, mb1 3.9/8, mb1mx3.6/33, mbtmp4.1/8, MS2.8/2, Ms1 2.8/2, ms1mx2.5/19, Error ellipse: s-maj=27.0km s-min=19.8km az=98.0*

ISC 13 13:55:48.6±0.7, **19.°54S**±0.°03×**69.°39W**±0.°06, **h100km**±5km, **n36, σ1.s24**/52, **6C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	Chusmiza	0.23	124	⇓iP	Pn	13 56 03.8	+0.4
GO01				eS	Sn	13 56 15.3	+0.8
PB11	IPOC Station P	0.33	228	⇑iP	Pn	13 56 03.9	+0.5
PB11				eS	Sn	13 56 15.2	+0.6
PB11				IAML		13 56 16.0	
	comp=E,23µm,0.6s						
MNMC	Minye Minye	0.45	335	⇓iP	Pn	13 56 05.1	+0.8
MNMC				eS	Sn	13 56 16.8	+0.8
MNMCX	Minye Minye	0.45	335	eP	Pn	13 56 05.0	+0.7
MNMCX				eS	Sn	13 56 16.9	+0.9
PB08	IPOC Station P	0.64	159	eP	Pn	13 56 06.9	+1.0
PB08	IPOC Station P	0.64	159	⇑iP	Pn	13 56 06.6	+0.7
PB08				eS	Sn	13 56 19.5	+0.7
PB08				IAML		13 56 20.7	
	comp=E,11µm,0.2s						
PSGC	Pisagua	0.69	265	⇑iP	Pn	13 56 06.4	+0.4
PSGC				eS	Sn	13 56 19.2	+0.2
PSGC				IAML		13 56 20.5	
	comp=N,5µm,0.3s						
PSGCX	Pisagua	0.69	265	eP	Pn	13 56 06.0	0.0
PSGCX				eS	Sn	13 56 19.7	+0.7
PB16	IPOC Station P	1.20	355	eP	Pn	13 56 12.6	+0.7
PB16				eS	Sn	13 56 30.7	+1.3
PB16	IPOC Station P	1.20	355	⇓iP	Pn	13 56 13.2	+1.3
PB16				eS	Sn	13 56 31.3	+2.0
PB16				IAML		13 56 33.3	
	comp=E,3µm,0.4s						
PB12	IPOC Station P	1.28	316	eP	Pn	13 56 12.4	+0.2
PB12	IPOC Station P	1.28	316	⇓iP	Pn	13 56 12.6	+0.3
PB12				⇓eS	Sn	13 56 30.8	+0.8
PB01	IPOC Station P	1.50	183	⇑iP	Pn	13 56 15.4	+0.5
PB01				eS	Sn	13 56 35.6	+0.8
PB01				IAML		13 56 36.9	
	comp=E,4µm,0.3s						
PB02	IPOC Station P	1.83	195	eP	Pn	13 56 20.0	+0.9
PB02	IPOC Station P	1.83	195	⇑iP	Pn	13 56 19.4	+0.2
PB02				eS	Sn	13 56 43.1	+0.8
PB02				IAML		13 56 51.9	
	comp=E,3µm,0.4s						
PB07	IPOC Station P	2.22	192	⇑iP	Pn	13 56 23.9	-0.4
PB07				eS	Sn	13 56 52.6	+1.2
PB07				IAML		13 57 02.6	
	comp=E,1µm,0.4s						
PB09	IPOC Station P	2.25	176	⇓eP	Pn	13 56 25.7	+1.1
PB09				eS	Sn	13 56 53.9	+1.8
PB09				IAML		13 56 58.5	
	comp=E,1µm,0.4s						
LVC	Limon Verde	3.09	172	P	Pn	13 56 36.9	+1.1
	comp=E,36nm,0.3s,baz=341,slow=8.6,SNR=121						
LVC				S	Sn	13 57 12.6	+0.4
	comp=E,86nm,0.3s,baz=241,slow=19,SNR=20						
LPAZ	La Paz	3.45	21	P	Pn	13 56 43.3	+2.3
	comp=E,3.5nm,0.3s,baz=203,slow=2.2,SNR=83						
LPAZ				LR	LR	13 57 57.7	
	comp=E,30nm,20.6s,baz=166,slow=38						
YJA	Yavi	4.48	127	eP	Pn	13 56 57.0	+2.3
YJA				IAML		13 56 57.9	
	comp=Z,26nm,0.6s						
HJA	Humahuaca	5.21	135	eP	Pn	13 57 06.2	+1.8
HJA				IAML		13 57 08.2	
	comp=Z,57nm,0.5s						
AZAP	Zapla	6.16	140	eP	Pn	13 57 18.6	+1.4
AZAP				IAML		13 57 22.2	
	comp=Z,18nm,0.6s						
SIV	San Ignacio	8.68	67	P	Pn	13 57 48.6	-2.8
	comp=Z,4.5nm,0.3s,baz=267,slow=11,SNR=82						
CPUP	Villa Florida	13.00	124	P	Pn	13 58 47.5	-2.0
	comp=Z,0.7nm,0.3s,baz=308,slow=11,SNR=9.5						
BDFB	Brasilia	20.74	83	P	P	14 00 23.0	+1.4
	comp=Z,6.5nm,0.5s,baz=252,slow=10,SNR=9.2						
PTGA	Pitinga	20.85	27	P	P	14 00 19.7	-2.9
	comp=Z,2.9nm,0.4s,baz=188,slow=17,SNR=12						
NVAR	Mina Array Bea	73.68	322	P	P	14 07 13.6	+1.8
	comp=Z,0.4nm,0.8s,baz=141,slow=6.0,SNR=3.4						
TORD	Torodi Ar. Bea	77.14	71	P	P	14 07 29.8	-2.1
	comp=Z,0.4nm,0.3s,baz=240,slow=5.7,SNR=11						
TORD				pP	pP	14 07 57.5	-1.3
	comp=Z,1.8nm,0.9s,baz=238,slow=4.3,SNR=5.1						
NEW	Newport	79.83	330	LR	LR	14 49 56.2	
	comp=Z,24nm,18.0s,baz=346,slow=41						
YKA	Yellowknife Ar	89.20	341	P	P	14 08 32.3	-0.4
	comp=Z,2.4nm,0.8s,baz=133,slow=5.1,SNR=5.4						

ASAR	**Alice Springs**	**131.41**	**209**	PKP	**PKPdf**	**14 14 50.3**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=132,slow=1.5,SNR=6.9						
WRA	**Warramunga Arr**	**134.39**	**212**	PKP	**PKiKP**	**14 14 56.5**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=153,slow=1.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**140.37**	**24**	PKP	**PKPdf**	**14 15 06.3**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=243,slow=3.2,SNR=3.5						
MKAR	**Makanchi Array**	**144.29**	**34**	PKP	**PKPdf**	**14 15 12.8**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=304,slow=2.2,SNR=3.7						
MJAR	**Matsushiro Arr**	**150.48**	**311**	PKPbc	**PKiKP**	**14 15 29.4**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=89,slow=2.1,SNR=3.5						
SONM	**Songino Array**	**151.57**	**6**	PKPbc	**PKPbc**	**14 15 31.4**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=325,slow=2.2,SNR=11						
SONM				pPKPbc	**pPKPbc**	**14 16 00.3**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=330,slow=1.3,SNR=3.1						

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*IDC **13** 14:13:20.8±6.9, 30°.51S×178°.80W, h0^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.5/16, mbtmp3.6/2, Error ellipse: s-maj=289.6km s-min=55.0km az=156.0*

*WEL **13** 14:13:58.2±0.9, 32°S±9°×17°9W±1°6, h351^{km}±12^{km}, M4.5/13, mB4.7/6, MLv4.9/13, Mw(mB)4.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=112.2*

ISC 13 14:13:56.7±1.0**, 31°.77S**±0°.08×**178°.8W**±0°.1**, h350^{km}, n40, σ2^s.61**/35**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.61**	**17**	P	**Pn**	**14 14 56.9**	**+4.1**
GLKZ				S	**S**	**14 15 29.7**	**-8.2**
HAZ	**Te Kaha**	**6.60**	**204**	P	Pn	14 15 41.8	+7.6
PKGZ	**Pakihiroa**	**6.62**	**202**	P	Pn	14 15 43.4	+8.9
PUZ	**Puketiti**	**6.73**	**200**	P	Pn	14 15 45.2	+9.3
RUGZ	**Raukumara Rang**	**6.82**	**204**	P	Pn	14 15 45.3	+8.3
TWGZ	**Tauwhareparae**	**6.91**	**201**	P	**Pn**	**14 15 36.7**	**-1.3**
WCZ	**Waipu Caves**	**7.05**	**232**	P	**Pn**	**14 15 44.2**	**+4.6**
WIAZ	**Waiheke Island**	**7.08**	**223**	P	Pn	14 15 46.3	+6.3
OPRZ	**Ohinepanea**	**7.16**	**211**	P	**Pn**	**14 15 39.1**	**-1.7**
TKGZ	**Te Karaka**	**7.20**	**201**	P	**Pn**	**14 15 45.8**	**+4.5**
MWZ	**Matawai**	**7.20**	**204**	P	Pn	14 15 47.8	+6.4
MBAZ	**Motutapu North**	**7.21**	**225**	P	Pn	14 15 47.9	+6.5
OUZ	**Omahuta**	**7.21**	**239**	P	**Pn**	**14 15 44.3**	**+2.8**
MKAZ	**Moumakai**	**7.29**	**221**	P	Pn	14 15 48.7	+6.4
URZ	**Urewera**	**7.29**	**206**	P	Pn	14 15 47.4	+5.1
HIZ	**Hauiti**	**8.49**	**216**	P	**P**	**14 16 00.1**	**+0.8**
TWVZ	**Taurewa**	**8.66**	**211**	P	**P**	**14 16 03.0**	**+1.8**
MTVZ	**Mangateitei**	**8.91**	**210**	P	**P**	**14 16 07.6**	**+3.6**
VRZ	**Vera Road**	**9.02**	**214**	P	**P**	**14 16 07.1**	**+2.0**
BFZ	**Birch Farm**	**9.75**	**203**	P	**Pn**	**14 16 13.3**	**+1.8**
TIWZ	**Tintock**	**9.95**	**204**	P	**P**	**14 16 16.8**	**+1.3**
TIWZ				S	**S**	**14 18 05.5**	**-1.1**
MRZ	**Mangatainoka R**	**9.96**	**205**	P	**Pn**	**14 16 13.8**	**-0.2**
HOWZ	**Holdsworth Sta**	**10.19**	**205**	P	**Pn**	**14 16 18.0**	**+1.2**
TMWZ	**Te Maipa**	**10.25**	**203**	P	**P**	**14 16 21.4**	**+2.7**
OGWZ	**Otaki Gorge**	**10.25**	**207**	P	**Pn**	**14 16 19.0**	**+1.6**
OGWZ				S	**S**	**14 18 12.8**	**-0.2**
MTW	**Mount Morrison**	**10.43**	**204**	P	**Pn**	**14 16 20.9**	**+1.3**
MSWZ	**Moikau Station**	**10.74**	**205**	P	**Pn**	**14 16 25.2**	**+1.9**
MSWZ				S	**S**	**14 18 21.9**	**-2.0**
DUWZ	**D'Urville Isla**	**10.75**	**211**	P	**Pn**	**14 16 23.6**	**+0.1**
BHW	**Baring Head**	**10.87**	**206**	P	**P**	**14 16 27.4**	**+1.7**
PLWZ	**Palliser**	**10.88**	**204**	P	**P**	**14 16 27.4**	**+1.6**
TCW	**Tory Channel**	**10.94**	**209**	P	**Pn**	**14 16 27.2**	**+1.6**
TUWZ	**Tuamarina**	**11.26**	**209**	P	**Pn**	**14 16 31.2**	**+1.7**
NNZ	**Nelson**	**11.32**	**211**	P	**P**	**14 16 32.7**	**+2.0**
QRZ	**Quartz Range**	**11.42**	**215**	P	**Pn**	**14 16 31.9**	**+0.5**
BSWZ	**Blackbirch Sta**	**11.52**	**208**	P	**Pn**	**14 16 34.2**	**+1.6**
THZ	**Tophouse**	**11.97**	**211**	P	**Pn**	**14 16 40.2**	**+2.1**
KHZ	**Kahutara**	**12.25**	**208**	P	**Pn**	**14 16 43.8**	**+2.6**
ASAR	**Alice Springs**	**42.36**	**269**	P	**P**	**14 21 16.6**	**-1.4**
	0.2nm,0.6s,baz=103,slow=7.6,SNR=4.2						
WRA	**Warramunga Arr**	**43.47**	**274**	P	**P**	**14 21 25.4**	**-1.4**
	0.5nm,0.2s,baz=108,slow=7.8,SNR=13						
FINES	**FINESS Array B**	**146.18**	**339**	PKPbc	**PKiKP**	**14 32 58.7**	**+0.5**
	0.7nm,0.4s,baz=61,slow=4.2,SNR=19						

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*IDC **13** 14:36:07.5±1.2, 39°.03N×142°.96E, h0^{km}, mb3.5/4, mb1 3.7/7, mb1mx3.5/45, mbtmp3.6/7, ML3.6/3, MS2.2/1, Ms1 2.2/1, ms1mx2.0/23, Error ellipse: s-maj=33.8km s-min=20.0km az=107.0*

*ISCJB **13** 14:36:09.5±1.0, 39°.22N±0°.03×142°.38E±0°.07, h27^{km}±6^{km}, mb3.5/4, Error ellipse: s-maj=9.3km s-min=5.2km az=11.1*

*JMA **13** 14:36:10.8±0.1, 39°.27N×142°.31E, h33^{km}±1^{km}, M3.8*

JMA Felt I J1.

ISC 13 14:36:11.4±1.5**, 39°.23N**±0°.04×**142°.25E**±0°.08**, h31**^{km}±10^{km}**, n23, σ1^s.50**/29**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.47**	**252**	P	**Pb**	**14 36 21.6**	**+0.1**
OFUJ				S	**Sb**	**14 36 28.9**	**+0.5**
MIYJ	**Miyakonagasawa**	**0.48**	**316**	P	**Pb**	**14 36 21.0**	**-0.6**
MIYJ				*e*S	**Sb**	**14 36 28.1**	**-0.4**
JKMT	**Kesennumamotoy**	**0.73**	**235**	P	**Pn**	**14 36 25.4**	**-0.2**
JKMT				S	**Sn**	**14 36 35.6**	**-0.1**
JTH	**Tanohata**	**0.77**	**337**	P	**Pn**	**14 36 24.7**	**-1.4**
JTH				*e*S	**Sn**	**14 36 35.1**	**-1.5**
JOM	**Ohasama**	**0.78**	**288**	P	**Pn**	**14 36 26.1**	**-0.1**
JOM				S	**Sn**	**14 36 37.0**	**+0.2**
JMK	**Ichinoseki**	**0.85**	**251**	P	**Pn**	**14 36 27.2**	**+0.1**
JMK				S	**Sn**	**14 36 38.8**	**+0.3**
JKZ	**Kuzumaki**	**1.03**	**317**	P	**Pn**	**14 36 29.7**	**-0.1**
JKZ				S	**Sn**	**14 36 43.1**	**-0.1**
JIO	**Ouri**	**1.04**	**222**	P	**Pn**	**14 36 29.7**	**-0.2**
JIO				S	**Sn**	**14 36 43.3**	**-0.1**
JRG	**Rokugo**	**1.26**	**278**	P	**Pb**	**14 36 34.1**	**-0.5**
JRG				*e*S	**Sb**	**14 36 51.9**	**+1.4**
JANG	**Nango**	**1.27**	**334**	P	**Pn**	**14 36 32.4**	**-0.6**
JANG				S	**Sn**	**14 36 48.7**	**-0.4**
MJAR	**Matsushiro Arr**	**4.17**	**231**	Pn	**Pn**	**14 37 15.7**	**+2.7**
	0.3nm,0.3s,baz=41,slow=12,SNR=28						
MJAR				Sn	**Sb**	**14 38 12.2**	**-1.9**
	baz=42,slow=24,SNR=2.7						
MJAR				LR	LR	14 39 01.3	
	comp=Z,29nm,19.3s,baz=40,slow=39						
ASAJ	**Asahikawa**	**4.89**	**3**	Pn	**Pn**	**14 37 23.7**	**+0.9**
	3.3nm,0.3s,baz=216,slow=8.1,SNR=34						
ASAJ				Sn	**Sn**	**14 38 22.7**	**+4.5**
	0.8nm,0.3s,baz=299,slow=29,SNR=3.8						
JHJ	**Hachijo jima 2**	**6.42**	**199**	Pn	**Pn**	**14 37 45.0**	**+1.2**
	8.4nm,0.3s,baz=2.4,slow=17,SNR=4.2						
JHJ				Sn	**Sn**	**14 38 52.2**	**-3.7**
	2.5nm,0.3s,baz=73,slow=19,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**28.80**	**125**	T	T	15 12 27.1	
	baz=317,slow=75,SNR=506						
H11N1	**WAKE ISLAND Hy**	**28.80**	**125**	T	T	15 12 27.2	
	baz=317,slow=75,SNR=464						
H11N3	**WAKE ISLAND Hy**	**28.81**	**125**	T	T	15 12 27.9	
	baz=317,slow=75,SNR=248						
H11S1	**WAKE ISLAND Hy**	**29.58**	**127**	T	T	15 13 25.3	
	baz=319,slow=76,SNR=73						
H11S3	**WAKE ISLAND Hy**	**29.59**	**127**	T	T	15 13 27.4	
	baz=319,slow=76,SNR=87						
H11S2	**WAKE ISLAND Hy**	**29.60**	**127**	T	T	15 13 26.7	
	baz=319,slow=76,SNR=56						
MKAR	**Makanchi Array**	**43.54**	**300**	P	P	14 44 17.9	+5.8
	0.3nm,0.7s,baz=71,slow=8.8,SNR=2.8						
ILAR	**Eielson Array**	**47.30**	**33**	P	**P**	**14 44 41.6**	**+0.1**
	0.3nm,0.7s,baz=254,slow=6.1,SNR=4.4						
WRA	**Warramunga Arr**	**59.33**	**189**	P	**P**	**14 46 09.5**	**-0.9**
	1.7nm,1.1s,baz=4.6,slow=7.7,SNR=3.9						
ASAR	**Alice Springs**	**63.05**	**189**	P	**P**	**14 46 36.1**	**+0.5**
	0.3nm,0.8s,baz=2.3,slow=5.9,SNR=3.3						

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*ISCJB **13** 14:51:18.5±0.7, 48°.97N±0°.05×156°.50E±0°.09, h34^{km}, mb3.4/5, Error ellipse: s-maj=10.2km s-min=3.9km az=37.5*

*MOS **13** 14:51:18.3±2.9, 49°.01N×157°.24E, h30^{km}, mb4.0/1, Error ellipse: s-maj=20.1km s-min=4.6km az=82.7*

*KRSC **13** 14:51:18.3±2.7, 49°.02N×157°.24E, h31^{km}±53^{km}, ML4.3*

*SKHL **13** 14:51:20.2±0.1, 49°.01N×156°.64E, h46^{km}±2^{km}, mb4.2/3*

*IDC **13** 14:51:22.6±2.9, 49°.19N×155°.63E, h88^{km}±25^{km}, mb3.1/5, mb1 3.3/8, mb1mx3.1/31, mbtmp3.5/8, Error ellipse: s-maj=32.0km s-min=16.9km az=131.0*

ISC 13 14:51:18.4±0.9**, 48°.86N**±0°.08×**156°.75E**±0°.08**, h34^{km}, n74, σ1^s.84**/103**, mb3.4**/5**, 1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.87**	**348**	*e*P	**Pn**	**14 51 46.5**	**-1.4**
SKR				*e*S	**Sn**	**14 52 06.3**	**-4.0**
SKR	**Severo-Kuril's**	**1.87**	**348**	*e*PN	**Pn**	**14 51 46.6**	**-1.4**
SKR				pmax	pmax		
	comp=Z,56nm,0.2s						
SKR	**Severo-Kuril's**	**1.87**	**348**	*e*P	**Pn**	**14 51 46.4**	**-1.4**
SKR				AMB	AMB	14 51 46.7	
	comp=Z,60nm,0.2s						
SKR				*e*S	**Sn**	**14 52 06.1**	**-4.2**
SKR				A	A	14 52 07.2	
	comp=Z,530nm,0.3s						
SKR				A	A	14 52 07.2	
	comp=Z,400nm,0.3s						
PAU	**Pauzhetka**	**2.61**	**1**	*e*P	**Pn**	**14 51 58.6**	**+0.5**
PAU				*e*S	**Sn**	**14 52 27.3**	**-1.2**
PAU	**Pauzhetka**	**2.61**	**1**	PN	**Pn**	**14 51 58.6**	**+0.5**
PAU				S	**Sn**	**14 52 27.3**	**-1.2**
PAU	**Pauzhetka**	**2.61**	**1**	*e*P	**Pn**	**14 51 58.6**	**+0.5**
PAU				*e*S	**Sn**	**14 52 27.3**	**-1.2**
KDTR	**Khodutka, Kamc**	**3.07**	**16**	*e*P	**Pn**	**14 52 05.6**	**+1.2**
KDTR				*e*S	**Sn**	**14 52 39.9**	**0.0**
KDTR	**Khodutka, Kamc**	**3.07**	**16**	PN	**Pn**	**14 52 05.6**	**+1.2**
KDTR				S	**Sn**	**14 52 39.9**	**0.0**
ASAK	**Asacha**	**3.60**	**11**	*e*P	**Pn**	**14 52 13.2**	**+1.4**
ASAK	**Asacha**	**3.60**	**11**	PN	**Pn**	**14 52 13.2**	**+1.4**
MTVR	**Mutnovka**	**3.74**	**14**	*e*P	**Pn**	**14 52 15.6**	**+1.8**
MTVR				*e*S	**Sn**	**14 52 56.0**	**-0.6**
MTVR	**Mutnovka**	**3.74**	**14**	PN	**Pn**	**14 52 15.6**	**+1.8**
MTVR				S	**Sn**	**14 52 56.0**	**-0.6**
RUS	**Russkaya**	**3.75**	**17**	*e*P	**Pn**	**14 52 14.8**	**+1.1**
RUS				*e*S	**Sn**	**14 52 55.0**	**-1.6**
RUS	**Russkaya**	**3.75**	**17**	PN	**Pn**	**14 52 14.8**	**+1.1**
RUS				S	**Sn**	**14 52 55.0**	**-1.6**
RUS	**Russkaya**	**3.75**	**17**	*e*P	**Pn**	**14 52 14.8**	**+1.1**
RUS				*e*S	**Sn**	**14 52 55.0**	**-1.6**
KRMR	**Karymshinskiy**	**4.07**	**12**	*e*P	**Pn**	**14 52 20.4**	**+2.3**
KRMR				*e*S	**Sn**	**14 53 07.0**	**+2.5**
KRMR	**Karymshinskiy**	**4.07**	**12**	PN	**Pn**	**14 52 20.4**	**+2.3**
KRMR				S	**Sn**	**14 53 07.0**	**+2.5**
APC	**Apacha**	**4.08**	**3**	*e*P	**Pn**	**14 52 19.6**	**+1.4**
APC	**Apacha**	**4.08**	**3**	PN	**Pn**	**14 52 19.6**	**+1.4**
PETK	**Petropavlovsk-**	**4.29**	**8**	P	**Pn**	**14 52 22.8**	**+1.5**
	comp=Z,5.9nm,0.3s,baz=194,slow=12,SNR=147						
PETK				S	**Sn**	**14 53 11.4**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=193,slow=26,SNR=2.4						
PET	**Petropavlovsk**	**4.34**	**15**	*e*P	**Pn**	**14 52 23.5**	**+1.7**
PET				*e*S	**Sn**	**14 53 09.9**	**-1.2**
PET	**Petropavlovsk**	**4.34**	**15**	*e*PN	**Pn**	**14 52 23.3**	**+1.5**
PET				*e*S	**Sn**	**14 53 09.7**	**-1.4**
PET				smax	smax		
	comp=E,94nm,0.6s						
PET				smax	smax		
	comp=N,68nm,0.5s						
PET	**Petropavlovsk**	**4.34**	**15**	*e*P	**Pn**	**14 52 23.3**	**+1.5**
PET				*e*S	**Sn**	**14 53 09.7**	**-1.4**
PET				A	A	14 53 13.6	
	comp=N,70nm,0.5s						
PET				A	A	14 53 13.6	
	comp=N,90nm,0.5s						
DALK	**Dalny**	**4.36**	**16**	*e*P	**Pn**	**14 52 24.0**	**+1.8**
DALK				*e*S	**Sn**	**14 53 11.6**	**-0.1**
DALK	**Dalny**	**4.36**	**16**	PN	**Pn**	**14 52 24.0**	**+1.8**
DALK				S	**Sn**	**14 53 11.6**	**-0.1**
UGLR	**Uglovaya**	**4.54**	**16**	*e*P	**Pn**	**14 52 27.3**	**+2.5**
UGLR				*e*S	**Sn**	**14 53 18.4**	**+2.0**
UGLR	**Uglovaya**	**4.54**	**16**	PN	**Pn**	**14 52 27.3**	**+2.5**
UGLR				S	**Sn**	**14 53 18.4**	**+2.0**
AVH	**Avacha**	**4.58**	**15**	*e*P	**Pn**	**14 52 27.2**	**+1.9**
AVH				*e*S	**Sn**	**14 53 18.9**	**+1.6**
AVH	**Avacha**	**4.58**	**15**	PN	**Pn**	**14 52 27.2**	**+1.9**
AVH				S	**Sn**	**14 53 18.9**	**+1.6**
KOK	**Koryaka**	**4.59**	**14**	*e*P	**Pn**	**14 52 28.1**	**+2.7**
KOK				*e*S	**Sn**	**14 53 20.0**	**+2.4**
KOK	**Koryaka**	**4.59**	**14**	PN	**Pn**	**14 52 28.1**	**+2.7**
KOK				S	**Sn**	**14 53 20.0**	**+2.4**
KOK	**Koryaka**	**4.59**	**14**	*e*P	**Pn**	**14 52 28.2**	**+2.8**
SMAR	**Somma**	**4.59**	**16**	*e*P	**Pn**	**14 52 28.7**	**+3.2**
SMAR				*e*S	**Sn**	**14 53 18.7**	**+0.9**
SMAR	**Somma**	**4.59**	**16**	PN	**Pn**	**14 52 28.7**	**+3.2**
SMAR				S	**Sn**	**14 53 18.7**	**+0.9**
NLC	**Nalytchevo**	**4.61**	**20**	*e*S	**Sn**	**14 53 15.6**	**-2.3**
SDLR	**Sedlovina**	**4.62**	**16**	*e*P	**Pn**	**14 52 27.3**	**+1.4**
SDLR				*e*S	**Sn**	**14 53 17.5**	**-0.8**
SDLR	**Sedlovina**	**4.62**	**16**	PN	**Pn**	**14 52 27.3**	**+1.4**
SDLR				S	**Sn**	**14 53 17.5**	**-0.8**
KRER	**Koryakskii**	**4.62**	**15**	*e*P	**Pn**	**14 52 28.1**	**+2.1**
KRER				*e*S	**Sn**	**14 53 20.0**	**+1.5**
KRER	**Koryakskii**	**4.62**	**15**	PN	**Pn**	**14 52 28.1**	**+2.1**
KRER				S	**Sn**	**14 53 20.0**	**+1.5**
KRX	**Arik**	**4.66**	**14**	*e*P	**Pn**	**14 52 28.7**	**+2.3**
KRX				*e*S	**Sn**	**14 53 21.3**	**+2.0**
KRX	**Arik**	**4.66**	**14**	PN	**Pn**	**14 52 28.7**	**+2.3**
KRX				S	**Sn**	**14 53 21.3**	**+2.0**
SPN	**Mys Shipunski**	**4.72**	**25**	*e*P	**Pn**	**14 52 29.1**	**+2.0**
SPN				*e*S	**Sn**	**14 53 20.0**	**-0.5**
SPN	**Mys Shipunski**	**4.72**	**25**	PN	**Pn**	**14 52 29.1**	**+2.0**
SPN				S	**Sn**	**14 53 20.0**	**-0.5**
SPN	**Mys Shipunski**	**4.72**	**25**	*e*P	**Pn**	**14 52 29.1**	**+2.0**
GNL	**Ganaly**	**4.90**	**8**	*e*P	**Pn**	**14 52 31.5**	**+1.9**
GNL	**Ganaly**	**4.90**	**8**	PN	**Pn**	**14 52 31.5**	**+1.9**
MKZ	**Mys Kozlova**	**6.49**	**27**	*e*P	**Pn**	**14 52 52.0**	**+0.7**
MKZ				*e*S	**Sn**	**14 54 00.7**	**-3.3**
MKZ	**Mys Kozlova**	**6.49**	**27**	PN	**Pn**	**14 52 52.0**	**+0.7**
MKZ	**Mys Kozlova**	**6.49**	**27**	*e*P	**Pn**	**14 52 52.0**	**+0.7**
KUR	**Kuril'sk**	**7.07**	**242**	*d i*PN	**Pn**	**14 52 57.2**	**-2.2**
KUR				pmax	pmax		
	comp=Z,23nm,0.5s						
KUR	**Kuril'sk**	**7.07**	**242**	*e*P	Pn	14 53 04.5	+5.1
KUR				AMB	AMB	14 53 06.5	
	comp=Z,10.0nm,0.5s						
KUR				*e*S	**Sn**	**14 54 19.2**	**+0.7**
KUR				A	A	14 54 21.3	
	comp=Z,20nm,0.6s						
KUR				A	A	14 54 21.3	
	comp=Z,10.0nm,0.6s						
BKI	**Bering**	**8.52**	**38**	*e*P	**Pn**	**14 53 20.1**	**+0.9**
BKI				*e*S	**Sn**	**14 54 49.9**	**-4.1**
BKI	**Bering**	**8.52**	**38**	PN	**Pn**	**14 53 20.1**	**+0.9**
BKI	**Bering**	**8.52**	**38**	*e*P	**Pn**	**14 53 20.1**	**+0.9**
YUK	**Yuzh-Kuril'sk**	**8.93**	**241**	*i* P	**Pn**	**14 53 26.9**	**+2.0**
TYV	**Tymovskoe**	**9.32**	**288**	*e*P	**Pn**	**14 53 31.4**	**+1.2**
OKH	**Okha**	**9.85**	**304**	*e*P	**Pn**	**14 53 38.5**	**+1.0**
ASAJ	**Asahikawa**	**10.85**	**249**	P	Pn	14 53 47.1	-4.1
	comp=Z,0.2nm,0.3s,baz=74,slow=9.1,SNR=6.0						
NKL	**Nikolayevsk**	**10.99**	**299**	*e*P	**Pn**	**14 53 53.3**	**+0.3**
SEY	**Seymchan**	**14.31**	**352**	P	**Pn**	**14 54 36.0**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=237,slow=16,SNR=3.3						
SEY	**Seymchan**	**14.31**	**352**	P	**Pn**	**14 54 36.0**	**-2.3**
SEY	**Seymchan**	**14.31**	**352**	*e*P	**Pn**	**14 54 36.0**	**-2.3**
EKMR	**Ekimchan**	**15.55**	**295**	*e*P	**Pn**	**14 54 52.8**	**-2.1**
EKMR				AMB	AMB	14 54 53.8	
	comp=Z,3.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**30.19**	**161**	T	T	15 29 49.1	
	baz=345,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.21**	**161**	T	T	15 29 52.8	
	baz=345,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.21**	**161**	T	T	15 30 36.9	
	baz=345						
H11S1	**WAKE ISLAND Hy**	**31.34**	**162**	T	T	15 31 29.9	
	baz=345,slow=76,SNR=101						
H11S3	**WAKE ISLAND Hy**	**31.34**	**162**	T	T	15 31 30.7	
	baz=345,slow=76,SNR=138						
H11S2	**WAKE ISLAND Hy**	**31.35**	**162**	T	T	15 31 24.8	
	baz=345,slow=76,SNR=77						
ILAR	**Eielson Array**	**33.36**	**40**	P	**P**	**14 57 53.2**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=257,slow=7.4,SNR=4.8						
MKAR	**Makanchi Array**	**48.15**	**297**	P	P	14 59 47.6	-7.3
	comp=Z,0.4nm,0.7s,baz=64,slow=8.9,SNR=6.4						
FINES	**FINESS Array B**	**63.14**	**336**	P	P	15 01 35.8	-6.4
	comp=Z,0.4nm,0.7s,baz=29,slow=3.2,SNR=3.6						
TXAR	**Lajitas Array**	**74.33**	**63**	P	**P**	**15 02 54.1**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=312,slow=5.1,SNR=3.4						
ASAR	**Alice Springs**	**75.03**	**202**	P	**P**	**15 02 54.6**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=10,slow=5.7,SNR=4.1						

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*SJA **13** 15:20:47.4±0.4, 25°.51S×67°.38W, h92^{km}±54^{km}, ML2.2, MW2.6*

*ISCJB **13** 15:20:48.2±0.6, 23°.13S±0°.06×66°.44W±0°.08, h250^{km}, mb3.4/1, Error ellipse: s-maj=10.7km s-min=7.7km az=168.3*

*IDC **13** 15:20:48.2±1.2, 23°.06S×66°.20W, h200^{km}±18^{km}, mb3.4/1, mb1 3.5/7, mb1mx3.3/29, mbtmp4.0/7, Error ellipse: s-maj=23.7km s-min=13.6km az=119.0*

ISC 13 15:20:48.1±0.8**, 23°.09S**±0°.06×**66°.39W**±0°.08**, h250^{km}, n12, σ2^s.97**/16**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZAP	**Zapla**	**1.66**	**133**	*e*S	**S**	**15 21 57.4**	**-2.0**
AZAP				IAML		15 22 00.6	
	comp=Z,12nm,0.6s						
LVC	**Limon Verde**	**2.37**	**281**	P	**Pn**	**15 21 34.5**	**-0.1**
	comp=Z,14nm,0.3s,baz=101,slow=5.6,SNR=57						
LVC				S	**S**	**15 22 07.7**	**-3.4**
	comp=Z,9.7nm,0.3s,baz=254,slow=20,SNR=21						
PB06	**IPOC Station P**	**2.96**	**277**	*e*P	**Pn**	**15 21 40.6**	**+0.2**
AHML	**Horco Molle**	**3.81**	**166**	*e*S	**Pn**	**15 21 51.3**	**+1.6**
AHML				IAML		15 21 53.1	
	comp=Z,4.2nm,0.6s						
LPAZ	**La Paz**	**6.96**	**346**	P	**Pn**	**15 22 29.7**	**+0.7**
	comp=Z,4.0nm,0.3s,baz=142,slow=7.8,SNR=68						
LPAZ				S	**S**	**15 23 48.5**	**-1.2**
	baz=64,slow=9.3,SNR=1.5						
CFA	**Coronel Fontan**	**8.64**	**191**	P	**Pn**	**15 22 50.5**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=340,slow=8.7,SNR=38						
CFA				S	**S**	**15 24 21.9**	**-5.7**
	comp=Z,1.6nm,0.3s,baz=308,slow=19,SNR=7.9						
SIV	**San Ignacio**	**8.65**	**36**	P	**Pn**	**15 22 49.0**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=229,slow=13,SNR=20						
SIV				S	**S**	**15 24 22.2**	**-5.9**
	comp=Z,0.1nm,0.3s,baz=286,slow=13,SNR=2.2						
PLCA	**Paso Flores**	**17.94**	**190**	P	**Pn**	**15 24 43.5**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=3.6,slow=11,SNR=4.1						
BDFB	**Brasilia**	**18.84**	**70**	P	**Pn**	**15 24 53.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=243,slow=11,SNR=4.0						
TORD	**Torodi Ar. Bea**	**75.72**	**69**	P	**P**	**15 32 10.1**	**+3.4**
	comp=Z,0.4nm,0.4s,baz=250,slow=5.8,SNR=5.3						
ZALV	**Zalesovo Beam**	**142.33**	**28**	PKP	**PKiKP**	**15 39 57.2**	**+3.5**
	comp=Z,0.4nm,0.3s,baz=270,slow=1.3,SNR=2.6						
MKAR	**Makanchi Array**	**145.47**	**39**	PKPbc	**PKiKP**	**15 40 01.9**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=308,slow=2.9,SNR=6.8						

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*DDA **13** 15:29:45.3, 37°.08N×36°.01E, h5^{km}±5^{km}, ML3.5*

*ISK **13** 15:29:45.6, 37°.13N×36°.00E, h4^{km}, ML2.7/15*

ISC 13 15:29:45.6±1.3**, 37°.12N**±0°.04×**36°.01E**±0°.02**, h5**^{km}±13^{km}**, n27, σ0^s.97**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.24**	**243**	PG	**Pg**	**15 29 51.7**	**+1.5**
YURE	**YUREGIR**	**0.42**	**226**	PG	**Pb**	**15 29 54.8**	**-0.8**
KRTD	**Karatas-Adana**	**0.71**	**223**	PG	**Pb**	**15 30 00.0**	**-0.5**
KRTS	**Karatas**	**0.75**	**223**	PG	**Pb**	**15 30 00.5**	**-0.6**
KRTS				SG	**Sb**	**15 30 11.6**	**0.0**
HCB	**Kahramanmara**	**0.75**	**72**	*i* P	**Pb**	**15 30 01.8**	**+0.5**
HCB				IAML_P			
	comp=Z,5μm,0.2s						
KARA	**Karaisali**	**0.78**	**281**	PG	**Pg**	**15 30 00.9**	**+0.3**
KARA				SG	**Sb**	**15 30 12.3**	**-0.3**
KMRS	**Kahramanmaras**	**0.81**	**61**	PG	**Pb**	**15 30 02.3**	**+0.1**
KUZU	**Kuzuini**	**0.92**	**112**	*i* P	**Pg**	**15 30 02.5**	**-0.7**
KUZU				*i* S	**Sg**	**15 30 13.3**	**-1.8**
GAZ	**Gaziantep**	**0.96**	**86**	PG	**Pg**	**15 30 04.1**	**+0.1**
DED	**Mersin**	**0.98**	**261**	*i* P	**Pn**	**15 30 08.0**	**+1.8**
DED				IAML_P			
	comp=Z,2μm,0.2s						
YAYL	**Yayladag**	**1.08**	**176**	*i* P	**Pb**	**15 30 06.8**	**-0.2**
MERS	**Mersin**	**1.22**	**259**	PN	**Pg**	**15 30 08.4**	**-0.6**
GZT	**Gaziantep**	**1.26**	**79**	*i* P	**Pg**	**15 30 09.2**	**-0.6**
GZT				*i* S	**Sn**	**15 30 27.2**	**-0.4**
GZT				IAML_P			
	comp=Z,3μm,0.2s						
KERG	**Konya-Eregli**	**1.54**	**282**	*i* P	**Pg**	**15 30 14.7**	**-0.4**
KIZK	**Mersin**	**1.63**	**248**	PN	**Pb**	**15 30 15.7**	**-0.5**
KIZK	**Mersin**	**1.63**	**248**	*i* P	**Pg**	**15 30 16.5**	**-0.4**
KIZK				*i* S	**Sg**	**15 30 39.2**	**+1.2**
KIZK				IAML_P			
	comp=Z,1μm,0.2s						
ATAB	**Bozova**	**1.85**	**78**	*i* P	**Pg**	**15 30 21.6**	**+0.5**
DARE	**Darende-Malaty**	**1.86**	**38**	PN	**Pb**	**15 30 19.5**	**-0.7**
KEBE	**Keben-Mersin**	**1.96**	**251**	PN	**Pb**	**15 30 20.8**	**-1.1**
IKL	**Isikli**	**2.07**	**246**	PN	**Pn**	**15 30 21.9**	**+0.9**
SURC	**SANLIURFA_SURC**	**2.10**	**96**	*i* P	**Pb**	**15 30 24.6**	**+0.5**
SURC				IAML_P			
	comp=Z,620nm,0.2s						
TEVE	**Tevekalti-Mers**	**2.17**	**252**	PN	**Pb**	**15 30 23.8**	**-1.7**
AKKU	**Akkuyu-Mersin**	**2.20**	**245**	PN	**Pn**	**15 30 23.8**	**+0.9**
URFA	**Urfa**	**2.26**	**81**	PN	**Pb**	**15 30 26.9**	**-0.2**
BERE	**Bereket-Mersin**	**2.37**	**252**	PN	**Pb**	**15 30 26.9**	**-2.0**
TEKE	**Tekeli-Mersin**	**2.53**	**248**	PN	**Pn**	**15 30 28.6**	**+1.2**
YOZ	**Yozgat**	**2.58**	**348**	PN	**Pn**	**15 30 28.7**	**+0.5**

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*IDC **13** 15:29:58.0±2.5, 35°.51N×142°.55E, h0^{km}, mb3.3/3, mb1 3.4/6, mb1mx3.3/42, mbtmp3.4/6, ML2.9/3, MS2.0/1, Ms1 2.0/1, ms1mx1.8/18, Error ellipse: s-maj=48.8km s-min=28.6km az=139.0*

*ISCJB **13** 15:29:59.7±1.1, 35°.57N±0°.05×142°.47E±0°.09, h56^{km}, mb3.3/3, Error ellipse: s-maj=10.3km s-min=7.1km az=21.8*

*JMA **13** 15:30:00.6±0.2, 35°.57N×142°.39E, h67^{km}, M2.9*

ISC 13 15:30:03.9±1.3**, 35°.53N**±0°.06×**142°.36E**±0°.09**, h56^{km}, n19, σ2^s.65**/24**, mb3.2**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.24**	**279**	P	**Pn**	**15 30 22.8**	**-2.2**
CHOJ				*e*S	**Sn**	**15 30 38.8**	**-1.9**
BSO1	**Boso 1**	**1.43**	**233**	P	**Pn**	**15 30 24.8**	**-2.3**
BSO1				S	**Sn**	**15 30 43.6**	**-1.0**
JSMT	**Sammumatsuo**	**1.56**	**275**	S	**Sn**	**15 30 46.5**	**-2.1**
JHYU	**Hitachinakayam**	**1.65**	**300**	P	**Pn**	**15 30 28.0**	**-2.6**
JHYU				S	**Sn**	**15 30 48.0**	**-2.7**
BSO3	**Boso 3**	**1.68**	**245**	P	**Pn**	**15 30 29.4**	**-1.3**
JFK	**Kawauchi**	**2.19**	**327**	P	**Pn**	**15 30 34.7**	**-3.3**
JAG	**Ashikaga**	**2.52**	**292**	P	**Pn**	**15 30 40.2**	**-2.3**
JFT	**Otama**	**2.57**	**321**	P	**Pn**	**15 30 41.1**	**-2.0**
JFT				S	**Sn**	**15 31 10.8**	**-2.4**
JOD2	**Odawara 2**	**2.69**	**265**	P	**Pn**	**15 30 42.8**	**-1.9**
JRY	**Ryogami san**	**2.86**	**281**	P	**Pn**	**15 30 45.7**	**-1.4**
JYN	**Shimob**	**3.12**	**271**	S	**Sn**	**15 31 25.8**	**-0.9**
JHJ	**Hachijo jima 2**	**3.21**	**222**	Pn	**Pn**	**15 30 50.0**	**-2.0**
	5.8nm,0.3s,baz=132,slow=22,SNR=7.3						
JHJ				Sn	**Sn**	**15 31 23.8**	**-5.2**
	18nm,0.3s,baz=121,slow=23,SNR=7.8						
MJAR	**Matsushiro Arr**	**3.52**	**288**	Pn	**Pn**	**15 30 55.2**	**-0.9**
	0.2nm,0.3s,baz=96,slow=8.3,SNR=21						
MJAR				Sn	**Sn**	**15 31 39.2**	**+2.7**
	0.1nm,0.3s,baz=288,slow=25,SNR=1.4						
JMK	**Ichinoseki**	**3.54**	**345**	P	**Pn**	**15 30 53.3**	**-3.0**
ASAJ	**Asahikawa**	**8.58**	**1**	Pn	**Pn**	**15 32 01.6**	**-3.8**
	0.3nm,0.3s,baz=249,slow=27,SNR=1.4						
ASAJ				Sn	Sn	15 33 31.5	-9.2
	0.1nm,0.3s,baz=322,slow=28,SNR=1.7						
KSRS	**Korea Array**	**11.78**	**284**	LR	LR	15 35 59.5	
	comp=Z,7.6nm,21.5s,baz=170,slow=30						
SONM	**Songino Array**	**29.27**	**306**	P	**P**	**15 36 03.6**	**+2.7**
	0.4nm,0.7s,baz=108,slow=9.3,SNR=3.1						
MKAR	**Makanchi Array**	**45.58**	**304**	P	**P**	**15 38 21.4**	**+3.1**
	0.2nm,0.6s,baz=87,slow=8.4,SNR=3.5						
ILAR	**Eielson Array**	**50.36**	**32**	P	**P**	**15 38 56.0**	**+1.1**
	0.2nm,0.6s,baz=280,slow=5.4,SNR=3.6						

DJA 13 15:35:19.7±1.3**, 2°S**±10°×**13°9E**±°**, h20**^{km}±17^{km}**, M4.2**/5**, MLv4.2**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.31**	**108**	P	Pn	15 35 41.9	-1.0
GENI				S	Sb	15 36 00.6	+0.5
JAY	**Jayapura**	**1.81**	**101**	P	Pn	15 35 48.0	-1.9
JAY				S	Sn	15 36 12.9	+0.6
SRPI	**Serui, Papua**	**2.70**	**277**	P	Pn	15 36 01.9	-0.1
SRPI				S	Sn	15 36 35.1	+1.1
BAKI	**Biak**	**2.98**	**289**	P	Pn	15 36 07.4	+1.6

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*DDA **13** 15:35:28.7, 38°.70N×34°.05E, h7^{km}±3^{km}, ML3.0*

*ISK **13** 15:35:29.6, 38°.76N×34°.01E, h9^{km}, ML2.0/4*

ISC 13 15:35:29.2±1.2**, 38°.74N**±0°.04×**34°.05E**±0°.04**, h7**^{km}±10^{km}**, n12, σ0^s.78**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSY	AKSARAY - Alti	0.24	250	i P	Pg	15 35 34.8	+0.7
AKSY				i S	Sg	15 35 37.2	-0.1
AKSY				IAML_P			
	comp=Z,5μm,0.1s						
YAYX	Yaylak	0.28	317	PG	Pg	15 35 34.9	+0.2
YAYX				SG	Sg	15 35 38.8	+0.4
KIRS	Kırehir-Merke	0.41	345	i P	Pb	15 35 38.1	-0.9
KIRS				i S	Sb	15 35 44.2	-1.3
KIRS				IAML_P			
	comp=Z,3μm,0.1s						
SERE	Sereflikochisa	0.43	299	PG	Pg	15 35 37.9	+0.2
SERE				SG	Sg	15 35 43.7	+0.3
AVNS	Nevsehir-Avano	0.63	83	i P	Pg	15 35 41.1	-0.3
AVNS				IAML_P			
	comp=Z,2μm,0.1s						
SULT	Sultanhani-AKS	0.68	218	PG	Pb	15 35 42.9	-0.6
SULT				SG	Sb	15 35 53.1	-0.1
CDAG	Cicekdag	0.92	16	i P	Pg	15 35 47.1	+0.2
KKUL	Konya-Kulu	0.99	297	i P	Pn	15 35 49.2	-0.5
KKUL				i S	Sn	15 36 03.8	-0.1
KKUL				IAML_P			
	comp=Z,259nm,0.1s						
SIRC	Yozgat	1.04	55	i P	Pn	15 35 51.0	+0.5
SIRC				i S	Sn	15 36 06.4	+1.0
SIRC				IAML_P			
	comp=Z,477nm,0.1s						
DELI	KIRIKKALE	1.27	355	i P	Pg	15 35 54.3	+0.8
DELI				i S	Sn	15 36 12.8	+2.0
DELI				IAML_P			
	comp=Z,569nm,0.2s						
YOZ	Yozgat	1.34	47	PN	Pg	15 35 55.0	+0.1
CORM	Corum	1.51	17	PN	Pg	15 35 58.2	0.0

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*ISK **13** 15:36:50.6, 37°.25N×37°.96E, h2^{km}, ML1.9/4*
*DDA **13** 15:36:52.1, 37°.27N×37°.98E, h7^{km}±1^{km}, ML3.0*
ISC 13 15:36:51.9±1.2**, 37°.29N**±0°.06×**37°.96E**±0°.04**, h11**^{km}±11^{km}**,**
n10, σ0^s.45/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	Bozova	0.32	56	i P	Pb	15 36 59.0	-0.6
ATAB				i S	Sb	15 37 04.8	-0.1
GZT	Gaziantep	0.32	282	i P	Pg	15 36 58.3	-0.1
GZT				i S	Sg	15 37 03.4	+0.6
GZT				IAML_P			
	comp=Z,6μm,0.1s						
GAZ	Gaziantep	0.61	259	PG	Pg	15 37 03.2	-0.5
GAZ				SG	Sb	15 37 12.6	-0.6
SURC	SANLIURFA_SURC	0.66	128	i P	Pb	15 37 05.1	-0.4
SURC				i S	Sb	15 37 14.9	+0.2
URFA	Urfa	0.70	77	PG	Pb	15 37 05.5	-0.7
URFA				SG	Sb	15 37 15.9	0.0
SANL	SANLIURFA_Merk	0.83	98	i P	Pb	15 37 08.1	-0.2
SANL				i S	Sb	15 37 19.9	+0.4
SANL				IAML_P			
	comp=Z,3μm,0.1s						
KMRS	Kahramanmaras	0.87	285	PG	Pg	15 37 08.7	0.0
KUZU	Kuzuini	0.88	234	i P	Pn	15 37 10.7	+0.5
KUZU				i S	Sn	15 37 23.0	0.0
KUZU				IAML_P			
	comp=Z,2μm,0.2s						
KAMA	Osmaniye	1.04	265	i P	Pn	15 37 12.7	+0.2
KAMA				i S	Sn	15 37 27.4	+0.4
KAMA				IAML_P			
	comp=Z,2μm,0.1s						
DARE	Darende-Malaty	1.33	344	PN	Pg	15 37 17.6	+0.1

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*NIED **13** 15:37:00, 43°.10N×145°.50E, h50^{km}, Mw4.0 Best double couple: $M_0$1.10000×10^{15} NP1:ϕ_s121.00000°, δ2.00000°, λ-127.00000°. NP2:ϕ_s338.00000°, δ89.00000°, λ-89.00000°.*
*NEIC **13** 15:37:20.6±2.9, 42°.90N×145°.76E, h25^{km}, mb4.1/14, Error ellipse: s-maj=22.5km s-min=9.5km az=141.0*
NEIC Recorded [2 JMA] in eastern Hokkaido.
*ISCJB **13** 15:37:21.5±0.4, 43°.00N±0°.04×145°.52E±0°.04, h56^{km}±3^{km}, mb3.9/28, MS3.0/1, Error ellipse: s-maj=7.1km s-min=3.9km az=142.0*
*MOS **13** 15:37:21.8±1.6, 42°.96N×145°.54E, h68^{km}, mb4.1/15, Error ellipse: s-maj=10.4km s-min=6.6km az=81.5*
*JMA **13** 15:37:22.6±0.1, 43°.05N×145°.48E, h52^{km}±1^{km}, M3.9*
JMA Felt II J1.
*SKHL **13** 15:37:23.0±0.6, 43°.09N×145°.41E, h69^{km}±2^{km}, mb4.3/6*
*IDC **13** 15:37:23.8±2.4, 42°.92N×145°.60E, h62^{km}±19^{km}, mb3.6/12, mb1 3.8/19, mb1mx3.6/46, mbtmp3.8/19, MS2.9/7, Ms1 2.9/7, ms1mx2.7/28, Error ellipse: s-maj=21.5km s-min=14.3km az=168.0*
ISC 13 15:37:22.8±0.7**, 43°.03N**±0°.06×**145°.52E**±0°.04**, h52**^{km}±6^{km}**,**
n89, σ1^s.37/101**, mb3.9**/28**, 3C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	Kushirohamanak	0.27	282	⇑P	Pn	15 37 31.5	-0.2
JKHN				eS	Sn	15 37 38.2	+0.1
NEM2	Nemuro 2	0.38	26	⇓P	Pn	15 37 32.4	-0.3
NEM2				eS	Sn	15 37 39.0	-0.9
NMR	Nemuro--Hokkai	0.38	24	eP	Pn	15 37 32.5	-0.2
NMR				eS	Sn	15 37 40.1	+0.2
GLVR	Golovnino	0.71	0	d iPN	Pn	15 37 36.5	-0.2
GLVR				i S	Sn	15 37 46.4	-0.4
GLVR				pmax	pmax		
	comp=Z,2μm,0.2s						
GLVR				smax	smax		
	comp=N,14μm,0.3s						
GLVR				smax	smax		
	comp=E,8μm,0.3s						
GLVR	Golovnino	0.71	0	i P	Pn	15 37 36.0	-0.7
GLVR				AMB	AMB	15 37 37.0	
	comp=E,210nm,0.2s						
GLVR				i S	Sn	15 37 46.0	-0.8
GLVR				A	A	15 37 47.0	
	comp=E,1μm,0.3s						
GLVR				A	A	15 37 47.0	
	comp=E,840nm,0.3s						
JNK	Nakash	0.81	314	⇓P	Pn	15 37 37.2	-0.7
JNK				eS	Sn	15 37 47.5	-1.5
JNSB	Nemuroshibetsu	0.83	334	P	Pn	15 37 37.8	-0.5
JNSB				eS	Sn	15 37 48.9	-0.8
JRA	Rausu	0.95	343	P	Pn	15 37 39.5	-0.4
JRA				eS	Sn	15 37 51.8	-0.7
GRPR	Tuman	0.98	11	⇑iPN	Pn	15 37 40.1	-0.2
GRPR				i S	Sn	15 37 52.3	-0.9
GRPR				pmax	pmax		
	comp=Z,938nm,0.2s						
GRPR				smax	smax		
	comp=N,6μm,0.2s						
GRPR				smax	smax		
	comp=E,2μm,0.1s						
GRPR	Tuman	0.98	11	i P	Pn	15 37 40.0	-0.2
GRPR				AMB	AMB	15 37 40.0	
	comp=E,100nm,0.2s						
GRPR				i S	Sn	15 37 52.0	-1.2
GRPR				A	A	15 37 54.0	
	comp=E,600nm,0.2s						
GRPR				A	A	15 37 54.0	
	comp=E,190nm,0.2s						
YUK	Yuzh-Kuril'sk	1.04	14	d iPN	Pn	15 37 46.4	+5.4
YUK				i S	Sn	15 37 59.6	+5.1
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				smax	smax		
	comp=N,4μm,0.3s						
YUK				smax	smax		
	comp=E,2μm,0.3s						
YUK	Yuzh-Kuril'sk	1.04	14	eP	Pn	15 37 40.8	-0.2
YUK				AMB	AMB	15 37 41.6	
	comp=E,130nm,0.3s						
YUK				i S	Sn	15 37 53.8	-0.7
YUK				A	A	15 37 56.7	
	comp=E,400nm,0.4s						
YUK				A	A	15 37 56.7	
	comp=E,2μm,0.4s						
LAGR	Lagunnoye	1.05	11	i PN	Pn	15 37 40.9	-0.2
LAGR				i S	Sn	15 37 54.9	+0.2
LAGR				pmax	pmax		
	comp=Z,770nm,0.2s						
LAGR				smax	smax		
	comp=N,6μm,0.2s						
LAGR				smax	smax		
	comp=E,687nm,0.2s						
LAGR	Lagunnoye	1.05	11	i P	Pn	15 37 40.0	-1.1
LAGR				AMB	AMB	15 37 42.0	
	comp=E,80nm,0.2s						
LAGR				i S	Sn	15 37 54.0	-0.7
LAGR				A	A	15 37 55.0	
	comp=E,640nm,0.2s						
LAGR				A	A	15 37 55.0	
	comp=E,690nm,0.2s						
JOB	Onbets	1.24	265	⇑P	Pn	15 37 43.3	-0.4
JOB				eS	Sn	15 37 58.6	-0.8
JAR	Ashorobuto	1.30	282	P	Pn	15 37 44.4	-0.2
JAR				eS	Sn	15 38 00.5	-0.5
JTKR	Abashiri--Toko	1.50	309	⇓P	Pn	15 37 47.4	+0.1
JTKR				eS	Sn	15 38 06.5	+0.8
ERM	Erimo	2.02	241	ePn	Pn	15 37 55.6	+1.3
ERM	Erimo	2.02	241	d iPN	Pn	15 37 55.7	+1.4
JKA	Kamikawa-asahi	2.38	298	eP	Pn	15 38 00.5	+1.2
ASAJ	Asahikawa	2.38	298	P	Pn	15 38 00.5	+1.2
	comp=E,14nm,0.3s,baz=107,slow=9.5,SNR=72						
ASAJ				S	Sn	15 38 32.3	+5.0
	comp=E,17nm,0.3s,baz=35,slow=23,SNR=12						
ASAJ				LR	LR	15 39 06.6	
	comp=E,183nm,19.8s,baz=5.5,slow=41						
KUR	Kuril'sk	2.78	37	d iPN	Pn	15 38 06.2	+1.5
KUR				eS	Sn	15 38 38.4	+1.4
KUR				pmax	pmax		
	comp=Z,194nm,0.6s						
KUR				smax	smax		
	comp=N,806nm,0.5s						
KUR				smax	smax		
	comp=E,323nm,0.4s						
KUR	Kuril'sk	2.78	37	i P	Pn	15 38 06.1	+1.4
KUR				AMB	AMB	15 38 07.6	
	comp=E,80nm,0.5s						
KUR				i S	Sn	15 38 38.4	+1.4
KUR				A	A	15 38 46.9	
	comp=E,420nm,0.5s						
KUR				A	A	15 38 46.9	
	comp=E,300nm,0.5s						
YSS	Yuzh-Sakhalins	4.39	334	ePN	Pn	15 38 29.5	+2.7
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS	Yuzh-Sakhalins	4.39	334	eP	Pn	15 38 27.5	+0.7
YSS				AMB	AMB	15 38 29.9	
	comp=Z,20nm,0.6s						
MJB9	Matsu-Tunnel	8.57	223	ePn	Pn	15 39 24.1	-0.2
MAJO	Matsushiro	8.58	223	ePn	Pn	15 39 24.0	-0.3
MAJO	Matsushiro	8.58	223	i PN	Pn	15 39 24.2	-0.1
MJAR	Matsushiro Arr	8.58	223	P	Pn	15 39 23.7	-0.5
	comp=Z,0.2nm,0.3s,baz=26,slow=14,SNR=24						
MJAR				LR	LR	15 42 40.9	
	comp=Z,50nm,21.0s,baz=30,slow=37						
USA0B	Ussuriysk Arra	9.88	281	ePn	Pn	15 39 45.5	+3.4
USRK	Ussuriysk Ar.	9.88	281	P	Pn	15 39 45.0	+3.0
	comp=Z,0.2nm,0.3s,baz=86,slow=13,SNR=14						
INU	Inuyama	10.11	223	ePn	Pn	15 39 45.5	+0.2
SKR	Severo-Kuril's	10.54	40	i PN	Pn	15 39 51.4	+0.4
SKR	Severo-Kuril's	10.54	40	eP	Pn	15 39 51.4	+0.4
OKH	Okha	10.67	352	eP	Pn	15 39 54.4	+1.7
JHJ2	Mitsune	10.87	206	ePn	Pn	15 39 55.0	-0.6
KLR	Kul'dur	11.38	308	P	Pn	15 40 06.1	+3.6
	comp=Z,0.1nm,0.3s,baz=117,slow=16,SNR=3.6						
KLR				LR	LR	15 44 32.1	
	comp=Z,63nm,20.3s,baz=132,slow=37						
KLR	Kul'dur	11.38	308	i PN	Pn	15 40 05.7	+3.2
PEA0B	Petropavlovsk-	12.95	35	ePn	Pn	15 40 23.8	0.0
PETK	Petropavlovsk-	12.95	35	P	Pn	15 40 24.8	+1.0
	comp=Z,0.2nm,0.3s,baz=215,slow=9.8,SNR=4.9						
PETK				LR	LR	15 45 57.2	
	comp=Z,36nm,18.2s,baz=238,slow=40						
KSRS	Korea Array	14.54	253	P	Pn	15 40 45.7	+0.3
	comp=Z,0.1nm,0.3s,baz=36,slow=6.9,SNR=2.7						
KSRS				LR	LR	15 45 55.6	
	comp=Z,39nm,18.9s,baz=46,slow=35						
JNU	Nakatsue	15.17	234	LR	LR	15 47 18.5	
	comp=Z,54nm,18.3s,baz=6.5,slow=39						
MA2	Magadan	16.88	9	P	P	15 41 17.0	+0.4
	comp=Z,0.5nm,0.3s,baz=190,slow=11,SNR=4.0						
YAK	Yakutsk	21.22	339	i P	P	15 42 01.9	-2.0
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YAK	Yakutsk	21.22	339	eP	P	15 42 01.9	-2.0
ULN	Ulaanbaatar	27.21	294	i P	P	15 43 01.0	-0.7
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ULN	Ulaanbaatar	27.21	294	eP	P	15 43 01.0	-0.7
SONM	Songino Array	27.66	294	P	P	15 43 05.8	+0.1
	comp=Z,2.2nm,0.7s,baz=84,slow=7.9,SNR=15						
SONM				LR	LR	15 53 59.5	
	comp=Z,42nm,18.9s,baz=130,slow=36						
H11N2	WAKE ISLAND Hy	29.38	136	T	T	16 14 19.8	
	baz=328,slow=76,SNR=1019						
H11N1	WAKE ISLAND Hy	29.39	136	T	T	16 14 16.0	
	baz=328,slow=76,SNR=709						
H11N3	WAKE ISLAND Hy	29.39	136	T	T	16 14 20.0	
	baz=328,slow=76,SNR=758						
H11S1	WAKE ISLAND Hy	30.31	137	T	T	16 15 28.4	
	baz=329,slow=76,SNR=1154						
H11S3	WAKE ISLAND Hy	30.31	137	T	T	16 15 30.9	
	baz=329,slow=76,SNR=845						
H11S2	WAKE ISLAND Hy	30.32	137	T	T	16 15 31.8	
	baz=329,slow=76,SNR=550						
TTA	Tatalina	38.74	39	eP	P	15 44 42.4	+0.7
	comp=Z,1.0nm,0.9s						
TTA	Tatalina	38.74	39	eP	P	15 44 42.4	+0.7
TTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV	Zalesovo Beam	40.49	307	P	P	15 44 57.6	+1.4
	comp=Z,0.5nm,0.4s,baz=96,slow=6.4,SNR=2.8						
BPAW	Bear Paw Mtn.	41.02	37	eP	P	15 45 01.3	+0.8
	comp=Z,1.2nm,0.6s						
KTH	Kantishna Hill	41.05	38	eP	P	15 45 00.6	-0.3
	comp=Z,3.8nm,0.8s						
HDA	Harding Lake	42.77	36	eP	P	15 45 14.6	-0.1
	comp=Z,3.3nm,0.5s						
ILAR	Eielson Array	42.77	36	P	P	15 45 14.7	-0.1
	comp=Z,1.4nm,0.6s,baz=255,slow=5.5,SNR=22						
ILB	Eielson Array	42.77	36	eP	P	15 45 15.2	+0.4
	comp=Z,1.2nm,0.8s						
PRP	Porcupine Dome	43.30	35	eP	P	15 45 18.8	-0.4
	comp=Z,4.7nm,0.6s						
FYU	Fort Yukon	43.36	33	eP	P	15 45 20.9	+1.4
	comp=Z,6.3nm,0.6s						
RIDG	Independent Ri	43.75	37	eP	P	15 45 22.7	0.0
	comp=Z,2.1nm,0.6s						
MK31	Makanchi Array	43.86	298	eP	P	15 45 23.4	-0.4
	comp=Z,1.8nm,0.9s						
MK31	Makanchi Array	43.86	298	eP	P	15 45 23.4	-0.4
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	43.86	298	P	P	15 45 23.4	-0.4
	comp=Z,1.1nm,0.6s,baz=80,slow=9.1,SNR=12						
MKAR	Makanchi Array	43.86	298	i P	P	15 45 23.3	-0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	43.86	298	eP	P	15 45 23.3	-0.5
SCRK	Sand Creek	44.10	37	eP	P	15 45 25.4	-0.2
	comp=Z,2.1nm,0.6s						
DOT	Dot Lake	44.10	37	eP	P	15 45 25.2	-0.3
	comp=Z,1.5nm,0.6s						
KURK	Kurchatov	44.95	304	i P	P	15 45 30.2	-2.2
KURK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KURK	Kurchatov	44.95	304	eP	P	15 45 30.2	-2.2
CMAR	Chiang Mai Arr	46.18	253	P	P	15 45 43.1	+0.7
	comp=Z,0.4nm,0.4s,baz=36,slow=6.7,SNR=3.6						
INK	Inuvik	47.62	30	P	P	15 45 53.2	+0.1
	comp=Z,1.8nm,0.5s,baz=297,slow=6.0,SNR=5.6						
INK	Inuvik	47.62	30	eP	P	15 45 52.7	-0.4
	comp=Z,1.9nm,0.7s						
INK	Inuvik	47.62	30	eP	P	15 45 52.7	-0.4
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HYT	Haines Junctio	47.65	40	eP	P	15 45 55.1	+1.5
	comp=Z,8.9nm,0.9s						
BRVK	Borovoye	49.09	309	i P	P	15 46 02.0	-2.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
RES	Resolute Bay	56.00	16	P	P	15 46 54.7	-0.7
	comp=Z,2.8nm,0.7s,baz=303,slow=5.2,SNR=8.1						
ABKAR	Akbulak array	56.58	308	eP	P	15 46 59.6	-0.3
	comp=Z,1.4nm,0.6s						
FINES	FINESS Array B	64.97	332	P	P	15 47 56.9	+0.2
	comp=Z,0.6nm,0.4s,baz=48,slow=7.4,SNR=9.2						
FINES	FINESS Array B	64.97	332	i P	P	15 47 57.2	+0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	Mina Array Bea	68.97	57	P	P	15 48 23.8	+1.0
	comp=Z,0.7nm,0.7s,baz=289,slow=6.0,SNR=8.5						
NOA	NORSAR Array B	69.84	338	P	P	15 48 28.6	+1.0
	comp=Z,0.6nm,0.7s,baz=33,slow=6.4,SNR=2.9						
PDAR	Pinedale Array	71.28	49	P	P	15 48 37.0	+0.1
	comp=Z,0.6nm,0.5s,baz=225,slow=2.0,SNR=9.9						
CLL	Collm	77.39	332	eP	P	15 49 09.0	-3.0
TXAR	Lajitas Array	84.04	55	P	P	15 49 48.5	+0.5
	comp=Z,0.5nm,0.7s,baz=273,slow=2.6,SNR=8.3						

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*KRNET **13** 15:38:52.4±0.1, 40°.77N×78°.78E, mb3.0*
*SOME **13** 15:38:54.4, 40°.78N×78°.63E, h20^{km}*
*NNC **13** 15:38:58.3±2.6, 41°.02N×78°.81E, h0^{km}±12^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=17.6km s-min=10.5km az=152.0*
ISC 13 15:38:56.0±1.9**, 40°.92N**±0°.09×**78°.74E**±0°.04**, h10**^{km}**, n41,**
σ1^s.56/68**, 26C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	1.59	351	⇑iP	Pb	15 39 24.6	-0.9
	baz=51						
PRZ				⇑iS	Sg	15 39 48.0	+1.0
	baz=51						
KDJ	Kajisay	1.69	316	⇑iP	Pb	15 39 26.0	-1.2
	baz=19						
KDJ				⇑iS	Sg	15 39 50.7	+0.5
	baz=19						
NRN	Naryn	2.13	285	⇑iP	Pn	15 39 32.5	+0.6
	baz=88						
NRN				⇑iS	Sb	15 40 01.3	-0.2
	baz=88						
UZB	Uzynbulak	2.24	5	Pg	Pg	15 39 38.0	-0.8
	12nm,0.5s						
UZB				Lg	Lg	15 40 08.4	
	26nm,0.5s						
UZB	Uzynbulak	2.24	5	eP	Pb	15 39 36.9	+0.3
	12nm,0.5s						
UZB				eS	Sg	15 40 07.6	-0.3
	61nm,0.5s						
ULHL	Ulahol	2.30	306	⇓iP	Pn	15 39 35.0	+0.9
	baz=8.0						
ULHL				⇓iS	Sb	15 40 06.0	-0.2
	baz=8.0						
PDGK	Podgornoye	2.47	13	Pg	Pg	15 39 41.9	-1.5
	7.0nm,0.4s						
PDGK				Lg	Lg	15 40 15.0	
	19nm,0.5s						
PDGK	Podgornoye	2.47	13	⇓Pn	Pb	15 39 39.1	-1.5
	8.6nm,0.5s						
PDGK				⇑Lg	Lg	15 40 14.8	
	27nm,0.5s						
PDGK	Podgornoye	2.47	13	⇑iP	Pn	15 39 37.7	+1.2
	baz=11						
PDGK				⇑iS	Sb	15 40 11.1	-0.1
	baz=11						
TNSS	Tian-Shan	2.51	328	Pg	Pb	15 39 41.9	+0.6
	17nm,0.5s						
TNSS				Lg	Lg	15 40 15.9	
	12nm,0.5s						
TNSS	Tian-Shan	2.51	328	eP	Pg	15 39 42.5	-1.5
	19nm,0.6s						
TNSS				eS	Sg	15 40 17.2	+0.7
	26nm,0.4s						
KPKS	Kokpek	2.55	359	eP	Pg	15 39 43.4	-1.4
	17nm,0.2s						
KPKS				eS	Sg	15 40 18.9	+1.1
	139nm,0.6s						
MDOK	Medeo	2.58	331	eP	Pb	15 39 42.3	0.0
	10nm,0.4s						
MDOK				eS	Sg	15 40 16.6	-2.1
	49nm,0.8s						
KURS	Kuram	2.60	351	Pg	Pg	15 39 45.3	-0.6
	5.9nm,0.5s						
KURS				Lg	Lg	15 40 21.3	
	45nm,1.0s						
KURS	Kuram	2.60	351	eP	Pg	15 39 44.6	-1.3
	5.9nm,0.5s						
KURS				eS	Sg	15 40 20.6	+1.0
	45nm,1.0s						
KOTS	Kotyrbulak	2.61	333	Pg	Pg	15 39 45.5	-0.5
	8.8nm,0.6s						
KOTS				Lg	Lg	15 40 21.2	
	53nm,0.5s						
KOTS	Kotyrbulak	2.61	333	eP	Pb	15 39 43.4	+0.4
	13nm,0.4s						
KOTS				eS	Sg	15 40 18.7	-1.2
	79nm,0.6s						
BOOM	Boomskoye usch	2.62	308	⇓iP	Pn	15 39 39.4	+0.9
	baz=10.0						
BOOM				⇓iS	Sb	15 40 14.2	-1.2
	baz=10.0						
KZA	Kyzart	2.87	295	⇓iP	Pn	15 39 43.0	+0.9
	baz=97						
KZA				⇓iS	Sb	15 40 19.5	-3.3
	baz=97						
KST	Kastek	2.97	317	Pg	Pb	15 39 50.0	+1.0
	8.1nm,0.5s						
KST				Lg	Lg	15 40 29.6	
	10nm,1.2s						
KST	Kastek	2.97	317	eP	Pb	15 39 48.4	-0.6
	8.1nm,0.5s						
KST				eS	Sb	15 40 27.5	+2.1
	20nm,1.0s						
TKM2	Tokmak 2	3.08	312	⇑Pn	Pn	15 39 47.1	+2.2
	3.3nm,0.5s						
TKM2				⇑Lg	Lg	15 40 33.4	
	12nm,0.6s						
TKM2	Tokmak 2	3.08	312	⇑iP	Pn	15 39 46.1	+1.2
	baz=13						
TKM2				⇑iS	Sb	15 40 25.4	-3.4
	baz=13						
KTBS	Karatobe	3.18	332	Pg	Pb	15 39 52.4	-0.3
	5.1nm,0.6s						
KTBS				Lg	Lg	15 40 32.9	
	23nm,0.6s						
KTBS	Karatobe	3.18	332	eP	Pb	15 39 53.6	+0.9
	5.1nm,0.6s						
KTBS				eS	Sg	15 40 36.3	-1.9
	41nm,0.3s						
CHKK	Chushkaly	3.21	337	Pg	Pb	15 39 54.5	+1.4
	4.1nm,0.5s						
CHKK				Lg	Lg	15 40 36.9	
	21nm,0.7s						
CHKK	Chushkaly	3.21	337	eP	Pg	15 39 55.4	-2.0
	8.8nm,0.6s						
CHKK				eS	Sg	15 40 39.3	+0.3
	37nm,0.3s						
KBK	Karagaybulak	3.33	303	⇑iP	Pn	15 39 49.0	+0.8
	baz=4.0						
KBK				⇑iS	Sn	15 40 30.5	+2.6
	baz=4.0						
UCH	Uchtor	3.43	294	⇑iP	Pn	15 39 50.6	+0.7
	baz=96						
UCH				⇑iS	Sn	15 40 33.3	+2.4
	baz=96						
ARLS	Aral	3.46	287	⇑eP	Pn	15 39 50.5	+0.5
	baz=90						
ARLS				⇑iS	Sn	15 40 33.1	+2.1
	baz=90						
KUU	Kurty	3.47	330	Pg	Pg	15 40 00.1	-2.3
	3.4nm,0.6s						
KUU				Lg	Lg	15 40 46.2	
	8.1nm,0.4s						
KUU	Kurty	3.47	330	eP	Pb	15 39 59.1	+1.6
	3.4nm,0.6s						
KUU				eS	Sg	15 40 45.7	-1.6
	18nm,0.8s						
DJR	Jarkent	3.50	12	Pg	Pb	15 39 58.8	+0.8
	2.8nm,0.6s						
DJR				Lg	Lg	15 40 44.3	
	8.9nm,0.3s						
DJR	Jarkent	3.50	12	eP	Pb	15 40 00.2	+2.1
	2.7nm,0.5s						
DJR				eS	Sg	15 40 47.7	-0.6
	9.7nm,0.4s						
AAK	Ala-Archa	3.61	300	⇓Pn	Pb	15 39 59.4	-0.6
	3.0nm,0.7s						
AAK				⇑Lg	Lg	15 40 52.1	
	8.6nm,0.7s						
AAK	Ala-Archa	3.61	300	⇑iP	Pn	15 39 53.2	+1.1
	baz=2.0						
AAK				⇑iS	Sn	15 40 37.5	+2.6
	baz=2.0						

CHMS	Chumysh baz=8.0	3.63	306	⇑iP	Pn	15 39 53.4	+1.1
CHMS	 baz=8.0			⇑iS	Sn	15 40 37.9	+2.7
KAPS	Kapalarasan 1.5nm,0.6s	4.39	6	Pg	Pg	15 40 16.8	-3.2
KAPS	 6.1nm,1.0s			Lg	Lg	15 41 15.1	
KAPS	Kapalarasan 1.5nm,0.6s	4.39	6	eP	Pg	15 40 16.4	-3.7
KAPS	 12nm,0.9s			eS	Sg	15 41 15.1	-1.7
MAKZ	Makanchi 1.2nm,1.1s	6.34	21	⇑Pn	Pn	15 40 31.4	+2.0
MAKZ	 0.6nm,0.7s			⇑Sn	Sn	15 41 42.0	+0.2
MAKZ	 0.7nm,0.6s			⇓Lg	Lg	15 42 15.2	
MK31	Makanchi Array 0.1nm,0.3s,baz=201,slow=12,SNR=12	6.41	22	⇓Pn	Pn	15 40 31.2	+0.8
MK31	 0.5nm,0.5s,baz=198,slow=25			⇓Sn	Sn	15 41 44.5	+0.9
MK31	 0.1nm,0.3s,baz=211,slow=34			⇓Lg	Lg	15 42 15.9	

IDC 13 16:06:01.0±2.9, 2°.40N×126°.39E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.5/3, Error ellipse: s-maj=303.0km s-min=26.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.8nm,0.3s,baz=336,slow=9.8,SNR=18	23.54	161	P	P	16 11 12.0	-1.1
ASAR	Alice Springs 0.5nm,0.8s,baz=349,slow=7.2,SNR=4.2	26.92	165	P	P	16 11 44.4	+0.3
MKAR	Makanchi Array 0.3nm,0.5s,baz=124,slow=8.8,SNR=5.0	58.45	326	P	P	16 15 59.3	+0.5

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*ISK **13** 16:13:19.9, 39°.64N×28°.89E, h2^{km}, ML2.2/20*

*ISCJB **13** 16:13:20.7±0.5, 39°.64N±0°.03×28°.90E±0°.03, h1^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=3.6km az=146.3*

*DDA **13** 16:13:20.5, 39°.65N×28°.88E, h7^{km}±3^{km}, ML2.9*

ISC 13 16:13:20.7±1.1, 39°.65N±0°.03×28°.93E±0°.03, h9^{km}±10^{km}, n28, σ0^{s}41/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DURS	Dursunbey	0.35	262	i P	Pg	16 13 27.3	-0.4
DURS				i S	Sg	16 13 31.9	-0.5
DURS	 comp=Z,4µm,0.1s			IAML_P			
ORLT	Orhaneli	0.39	357	PG	Pg	16 13 28.5	0.0
TVSB	Tavsanli	0.46	116	PG	Pg	16 13 30.0	+0.3
TVSB				SG	Sb	16 13 37.5	-0.5
ULDT	Uludag	0.52	18	i P	Pg	16 13 31.4	+0.6
ULDT				i S	Sb	16 13 39.2	-0.6
ULDT	 comp=Z,4µm,0.1s			IAML_P			
GDZ	Gediz	0.71	142	i P	Pg	16 13 34.0	-0.4
GDZ	 comp=Z,4µm,0.2s			IAML_P			
KCTX	Karacabey (Bur	0.75	325	PG	Pg	16 13 35.1	-0.1
BALB	Balikesir	0.81	270	PG	Pg	16 13 36.5	+0.2
GEMT	Gemlik	0.81	14	PG	Pb	16 13 37.2	+0.3
ARMT	Armutlu	0.91	357	PG	Pg	16 13 38.5	+0.2
ARMT				SG	Sn	16 13 52.5	-0.6
STEP	BALIKESIR_Sava	0.97	254	i P	Pg	16 13 38.6	-0.8
STEP				i S	Sg	16 13 52.3	+0.2
STEP	 comp=Z,2µm,0.1s			IAML_P			
YLV	Yalova	0.98	20	PG	Pn	16 13 40.2	-0.5
ADVT	Abdulvahap	1.00	38	PG	Pn	16 13 40.8	-0.1
BALY	Balya	1.01	275	i P	Pb	16 13 40.8	+0.3
BALY				i S	Sg	16 13 53.9	+0.6
BALY	 comp=Z,1µm,0.2s			IAML_P			
EDC	Edincik	1.07	311	PG	Pb	16 13 41.5	+0.1
KULA	Kula-Manisa	1.15	190	PN	Pb	16 13 42.6	-0.3
AKHS	Akhisar	1.16	229	i P	Pg	16 13 43.4	+0.5
AKHS				i S	Sn	16 13 59.8	+0.7
AKHS	 comp=Z,2µm,0.2s			IAML_P			
MANT	Manisa	1.19	194	i P	Pg	16 13 44.0	+0.3
HRT	Hereke	1.30	26	PN	Pg	16 13 45.7	0.0
SRCK	Saricakaya, Es	1.36	73	PN	Pg	16 13 47.3	+0.4
MRMT	Marmara Adasi	1.39	313	PN	Pn	16 13 46.5	+0.1
KAVV	Kandilli-Istan	1.41	4	PN	Pg	16 13 48.0	+0.2
ISK	Istanbul-Kandi	1.42	4	PN	Pg	16 13 48.2	+0.3
SAUV	Serdivan-Sakar	1.53	44	PN	Pb	16 13 49.3	+0.1
ZEDA	zmir-Bergama	1.59	245	i P	Pn	16 13 49.4	+0.4
ZEDA	 comp=Z,670nm,0.1s			IAML_P			
SILT	Sile	1.60	20	PN	Pb	16 13 50.1	-0.3
KLYT	Kilyos	1.60	3	PN	Pb	16 13 50.7	+0.2
CTKS	Kestanelik-??a	1.61	349	PN	Pb	16 13 50.3	-0.4
RKY	Sarkoy-Tekirda	1.69	308	PN	Pn	16 13 50.9	+0.4

ATH 13 16:15:02.3, 38°.23N×22°.09E, h12^{km}±1^{km}, ML1.3/6, Error ellipse: s-maj=1.6km s-min=0.9km az=227.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG2	Aigio	0.02	311	P	Pg	16 15 04.3	0.0
AIG2				S	Sg	16 15 05.6	-0.2
AIG3	Aigion	0.03	20	P	Pg	16 15 04.4	0.0
AIG3				S	Sg	16 15 06.1	+0.2
AIG1	Aigion	0.04	116	P	Pg	16 15 04.5	0.0
AIG1				S	Sg	16 15 05.9	-0.1
LAKA	Lakka	0.09	278	P	Pg	16 15 05.0	0.0
LAKA				S	Sg	16 15 06.7	-0.3
LAKA	 comp=N,399µm,0.3s			AML	AML	16 15 07.0	
LAKA	 comp=E,400µm,0.3s			AML	AML	16 15 07.2	
TRAZ	Trapeza	0.11	122	P	Pg	16 15 05.5	+0.2
TRAZ				S	Sg	16 15 07.5	0.0
TRAZ	 comp=N,708µm,0.1s			AML	AML	16 15 08.2	
TRAZ	 comp=E,511µm,0.2s			AML	AML	16 15 09.4	
TRIZ	Trizonia	0.14	354	P	Pg	16 15 05.6	0.0
TRIZ				S	Sg	16 15 08.2	+0.2
KALE	Kalithea	0.17	13	P	Pg	16 15 06.2	+0.1
KALE				S	Sg	16 15 08.8	-0.1
KALE	 comp=E,227µm,0.1s			AML	AML	16 15 09.5	
KALE	 comp=N,472µm,0.2s			AML	AML	16 15 10.0	
SERG	Sergoula	0.19	351	P	Pg	16 15 06.5	0.0
SERG				S	Sg	16 15 09.2	-0.1
SERG	 comp=N,245µm,0.2s			AML	AML	16 15 12.3	
SERG	 comp=E,160µm,0.3s			AML	AML	16 15 12.5	
KLV	Kalavryta, Ach	0.19	166	P	Pg	16 15 06.4	-0.1
KLV				S	Sg	16 15 09.8	+0.4
KLV	 comp=E,122µm,0.1s			AML	AML	16 15 10.2	
KLV	 comp=N,129µm,0.1s			AML	AML	16 15 10.4	
ANX	Ano Chora	0.39	340	P	Pg	16 15 09.9	-0.2
ANX				S	Sg	16 15 16.0	+0.7
ANX	 comp=N,111µm,0.3s			AML	AML	16 15 19.1	
ANX	 comp=E,150µm,0.2s			AML	AML	16 15 19.4	
DSF	Desfina	0.39	62	P	Pg	16 15 09.6	-0.4
DSF				S	Sg	16 15 15.5	+0.2

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*THE **13** 16:15:35.5, 38°.23N×22°.10E, h9^{km}, ML2.5/20, Error ellipse: s-maj=0.6km s-min=0.3km az=326.0*

ATH 13 16:15:35.3, 38°.23N×22°.10E, h11^{km}±1^{km}, ML2.6/12, Error ellipse: s-maj=1.4km s-min=0.7km az=205.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG3	Aigion	0.03	0	P	Pg	16 15 37.3	0.0
AIG3				S	Sg	16 15 39.0	+0.2
AIG2	Aigio	0.03	300	P	Pg	16 15 37.2	-0.1
AIG2				S	Sg	16 15 38.4	-0.4
AIG1	Aigion	0.03	122	P	Pg	16 15 37.4	+0.1
AIG1				S	Sg	16 15 38.6	-0.2
ALIK	Aliki, Aigiali	0.03	10	P	Pg	16 15 37.4	0.0
ALIK				S	Sg	16 15 38.9	+0.1
LAKA	Lakka	0.10	277	P	Pg	16 15 38.0	-0.1
LAKA	 6µm,0.3s			S	Sg	16 15 39.6	-0.5
LAKA	Lakka	0.10	277	P	Pg	16 15 37.8	-0.3
LAKA				S	Sg	16 15 39.5	-0.6
LAKA	 comp=N,12883µm,0.3s			AML	AML	16 15 39.9	
LAKA	 comp=E,13422µm,0.3s			AML	AML	16 15 40.2	
TRAZ	Trapeza	0.10	125	P	Pg	16 15 38.5	+0.4
TRAZ	 comp=E,8µm,0.2s			S	Sg	16 15 40.8	+0.6
TRAZ	Trapeza	0.10	125	P	Pg	16 15 38.4	+0.3
TRAZ				S	Sg	16 15 40.6	+0.5
TRAZ	 comp=E,13583µm,0.2s			AML	AML	16 15 41.1	
TRAZ	 comp=N,16394µm,0.2s			AML	AML	16 15 41.8	
TRIZ	Trizonia	0.14	350	P	Pg	16 15 38.4	-0.2
TRIZ	 comp=N,4µm,0.3s			S	Sg	16 15 40.6	-0.4
TRIZ	Trizonia	0.14	350	P	Pg	16 15 38.5	-0.1
KALE	Kalithea	0.17	10	P	Pg	16 15 39.2	+0.1
KALE	 comp=N,4µm,0.2s			S	Sg	16 15 42.1	+0.4
KALE	Kalithea	0.17	10	P	Pg	16 15 39.2	+0.1
KALE				S	Sg	16 15 42.1	+0.4
KALE	 comp=N,11452µm,0.3s			AML	AML	16 15 42.9	
KALE	 comp=E,4580µm,0.2s			AML	AML	16 15 44.5	
KLV	Kalavryta, Ach	0.19	169	P	Pg	16 15 39.4	0.0
KLV				S	Sg	16 15 42.3	+0.1
KLV	Kalavryta, Ach	0.19	169	P	Pg	16 15 39.4	0.0
KLV				S	Sg	16 15 42.3	+0.1
KLV	 comp=N,2720µm,0.2s			AML	AML	16 15 42.8	
KLV	 comp=E,2513µm,0.3s			AML	AML	16 15 44.3	
SERG	Sergoula	0.19	349	P	Pg	16 15 39.4	-0.1
SERG	 comp=E,3µm,0.2s			S	Sg	16 15 42.4	+0.1
SERG	Sergoula	0.19	349	P	Pg	16 15 39.4	-0.1
SERG				S	Sg	16 15 42.8	+0.5
SERG	 comp=N,7201µm,0.2s			AML	AML	16 15 43.9	
SERG	 comp=E,5341µm,0.2s			AML	AML	16 15 45.4	
UPR	University Cam	0.26	283	P	Pg	16 15 40.8	+0.2
UPR				S	Sg	16 15 45.0	+0.8
UPR	University Cam	0.26	283	P	Pg	16 15 40.8	+0.2
GUR	Goura	0.35	147	P	Pg	16 15 42.1	-0.2
GUR	 comp=E,3µm,0.3s			S	Sg	16 15 47.4	+0.5
GUR	Goura	0.35	147	P	Pg	16 15 42.1	-0.2
GUR				S	Sg	16 15 47.6	+0.7
GUR	 comp=N,5918µm,0.4s			AML	AML	16 15 48.2	
GUR	 comp=E,4845µm,0.3s			AML	AML	16 15 48.3	
DSF	Desfina	0.38	61	P	Pg	16 15 42.7	-0.2
DSF	 comp=E,1µm,0.2s			S	Sg	16 15 48.3	+0.3
DSF	Desfina	0.38	61	P	Pg	16 15 42.7	-0.2
DSF				S	Sg	16 15 48.2	+0.2
DSF	 comp=N,2024µm,0.2s			AML	AML	16 15 49.6	
DSF	 comp=E,2390µm,0.2s			AML	AML	16 15 49.7	
ANX	Ano Chora	0.39	339	P	Pg	16 15 42.7	-0.5
ANX	 comp=E,2µm,0.3s			S	Sg	16 15 48.5	+0.1
ANX	Ano Chora	0.39	339	P	Pg	16 15 42.8	-0.4
ANX				S	Sg	16 15 48.6	+0.2
ANX	 comp=E,4532µm,0.2s			AML	AML	16 15 52.2	
ANX	 comp=N,3325µm,0.3s			AML	AML	16 15 52.2	
THAL	Thalero	0.48	113	P	Pg	16 15 45.1	+0.4
THAL				S	Sb	16 15 52.1	-0.7
RLS	Riolos of Patr	0.53	252	P	Pg	16 15 45.5	-0.2
RLS	 comp=E,1024µm,0.2s			AML	AML	16 15 56.2	
RLS	 comp=N,883µm,0.1s			AML	AML	16 15 57.1	
PVO	Paravola	0.60	311	P	Pg	16 15 46.6	-0.4
PVO	Paravola	0.60	311	P	Pg	16 15 46.6	-0.4
PVO				S	Sb	16 15 56.3	0.0
PVO	 comp=N,1172µm,0.4s			AML	AML	16 15 59.5	
PVO	 comp=E,1157µm,0.3s			AML	AML	16 15 59.8	
ACOR	Acrocorinthos	0.69	119	P	Pg	16 15 49.0	+0.2
TRIP	Tripoli	0.71	169	P	Pg	16 15 48.6	-0.5
TRIP	 comp=E,418nm,0.5s			S	Sg	16 15 58.5	+0.1
EVR	Evrytania	0.73	341	P	Pg	16 15 48.9	-0.5
EVR	 comp=E,345nm,0.2s			S	Sb	16 16 00.2	+0.1
EVR	Evrytania	0.73	341	P	Pg	16 15 48.9	-0.5
EVR				S	Sb	16 15 59.9	-0.2
EVR	 comp=E,690µm,0.2s			AML	AML	16 16 02.6	
EVR	 comp=N,724µm,0.4s			AML	AML	16 16 05.4	
AMT	Artemida-Makis	0.76	204	P	Pg	16 15 49.7	-0.3
AGG	Agios Georgios	0.81	13	P	Pg	16 15 50.4	-0.7
AGG	 comp=N,220nm,0.3s			S	Sb	16 16 02.5	0.0
AGG	Agios Georgios	0.81	13	P	Pg	16 15 50.3	-0.7
AGG	 comp=N,383µm,0.3s			AML	AML	16 16 04.7	
AGG	 comp=E,480µm,0.2s			AML	AML	16 16 05.0	
LKR	Lokris	0.82	59	P	Pg	16 15 50.6	-0.6
LKR	 comp=E,275nm,0.3s			S	Sb	16 16 03.0	+0.3
ATAL	Atalanti	0.86	57	P	Pg	16 15 51.4	-0.5
ATAL	 comp=E,158nm,0.8s			S	Sb	16 16 04.5	+0.8
ATAL	Atalanti	0.86	57	P	Pg	16 15 50.9	-1.0
VLX	Vlachokerasia	0.88	166	P	Pg	16 15 51.6	-0.8
VLX	 comp=E,628nm,0.4s			S	Sb	16 16 05.0	+0.4
VILL	Villia	0.95	93	P	Pb	16 15 53.9	0.0
VILL	 comp=E,405nm,0.8s			S	Sn	16 16 07.6	-0.7
KFL	Anninata	1.04	264	P	Pb	16 15 55.0	-0.4
ITM	Ithomi	1.05	188	P	Pb	16 15 54.7	-0.9
ITM	 comp=E,158nm,0.3s			S	Sb	16 16 10.1	+0.7
DID	Didima	1.15	128	P	Pb	16 15 56.9	-0.3
DID	 comp=E,195nm,0.4s			S	Sn	16 16 12.9	-0.2
FSK	Fiskardo	1.23	281	P	Pn	16 15 57.9	-0.6
FSK	 comp=E,160nm,0.5s			S	Sn	16 16 16.3	+1.1
MRKA	Markates	1.26	67	P	Pb	16 15 59.2	+0.1
MRKA	 comp=E,88nm,0.4s			S	Sg	16 16 16.3	+0.4
PYL	PYLOS	1.36	192	P	Pn	16 16 00.2	-0.1

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*THE **13** 16:16:17.6, 38°.24N×22°.11E, h11^{km}±1^{km}, ML2.1/9, Error ellipse: s-maj=1.1km s-min=0.4km az=7.0*

ATH 13 16:16:17.4, 38°.23N×22°.10E, h12^{km}±2^{km}, ML2.2/5, Error ellipse: s-maj=2.3km s-min=0.7km az=227.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALIK	Aliki, Aigiali	0.04	20	P	Pg	16 16 19.5	0.0
ALIK				S	Sg	16 16 21.3	+0.3
LAKA	Lakka	0.09	279	P	Pg	16 16 20.1	0.0
LAKA	 2µm,0.3s			S	Sg	16 16 21.7	-0.4
LAKA	Lakka	0.09	279	P	Pg	16 16 20.1	0.0
LAKA				S	Sg	16 16 21.7	-0.4
TRAZ	Trapeza	0.11	122	P	Pg	16 16 20.5	+0.2
TRAZ	 3µm,0.1s			S	Sg	16 16 22.7	+0.2
TRAZ	Trapeza	0.11	122	P	Pg	16 16 20.5	+0.2
TRAZ				S	Sg	16 16 22.7	+0.2
TRAZ	 comp=E,4939µm,0.1s			AML	AML	16 16 23.2	
TRAZ	 comp=N,6393µm,0.1s			AML	AML	16 16 23.3	
TRIZ	Trizonia	0.14	353	P	Pg	16 16 20.7	0.0
TRIZ				S	Sg	16 16 22.8	-0.3
TRIZ	Trizonia	0.14	353	P	Pg	16 16 20.7	0.0
TRIZ				S	Sg	16 16 23.1	0.0
KALE	Kalithea	0.17	12	P	Pg	16 16 21.3	+0.1
KALE	 comp=N,825nm,0.2s			S	Sg	16 16 24.3	+0.3
KALE	Kalithea	0.17	12	P	Pg	16 16 21.3	+0.1
KALE				S	Sg	16 16 24.1	+0.2
KALE	 comp=N,2013µm,0.3s			AML	AML	16 16 25.0	
KALE	 comp=E,1237µm,0.2s			AML	AML	16 16 25.6	
KLV	Kalavryta, Ach	0.19	167	P	Pg	16 16 21.6	+0.1
KLV	 comp=E,462nm,0.1s			S	Sg	16 16 25.0	+0.6
KLV	Kalavryta, Ach	0.19	167	P	Pg	16 16 21.6	+0.1
KLV				S	Sg	16 16 24.4	+0.1
SERG	Sergoula	0.19	351	P	Pg	16 16 21.5	-0.1
SERG	 comp=E,802nm,0.2s			S	Sg	16 16 24.6	+0.1
SERG	Sergoula	0.19	351	P	Pg	16 16 21.4	-0.2
SERG				S	Sg	16 16 24.5	0.0
SERG	 comp=N,1605µm,0.2s			AML	AML	16 16 26.0	
SERG	 comp=E,1572µm,0.2s			AML	AML	16 16 27.5	
UPR	University Cam	0.25	283	P	Pg	16 16 23.1	+0.5
UPR				S	Sg	16 16 26.6	+0.5
UPR	University Cam	0.25	283	P	Pg	16 16 22.8	+0.2
GUR	Goura	0.35	146	P	Pg	16 16 24.3	-0.1
GUR	 comp=E,638nm,0.5s			S	Sg	16 16 29.9	+0.8
GUR	Goura	0.35	146	P	Pg	16 16 24.1	-0.3
GUR				S	Sg	16 16 29.3	+0.2
DSF	Desfina	0.39	61	P	Pg	16 16 24.8	-0.3
DSF	 comp=E,455nm,0.2s			S	Sg	16 16 29.9	-0.4
DSF	Desfina	0.39	61	P	Pg	16 16 24.8	-0.3
DSF				S	Sg	16 16 30.3	+0.1
DSF	 comp=E,1026µm,0.2s			AML	AML	16 16 31.8	
DSF	 comp=N,769µm,0.1s			AML	AML	16 16 32.7	
ANX	Ano Chora	0.39	340	P	Pg	16 16 25.1	-0.1
ANX	 comp=N,515nm,0.2s			S	Sg	16 16 30.9	+0.4
ANX	Ano Chora	0.39	340	P	Pg	16 16 25.0	-0.3
ANX				S	Sg	16 16 30.8	+0.3
ANX	 comp=N,898µm,0.3s			AML	AML	16 16 34.1	
ANX	 comp=E,1167µm,0.2s			AML	AML	16 16 34.4	
PVO	Paravola	0.59	311	P	Pg	16 16 29.2	+0.2
AMT	Artemida-Makis	0.76	204	P	Pg	16 16 32.1	+0.1
AMT	 comp=E,135nm,0.3s			S	Sn	16 16 44.4	-1.0

MEX 13 16:45:20.6±0.7, 15°.52N×96°.53W, h15^{km}±2^{km}, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PANG	Puerto Angel	0.15	22	i P	Pg	16 45 23.2	-1.4
PANG				i S	Sg	16 45 27.1	-0.1
HUIG	Huatulco	0.48	59	eP	Pg	16 45 29.0	-1.1
HUIG				eS	Sg	16 45 35.0	-1.6
VHO	Vista Hermosa	1.55	353	i P	Pn	16 45 45.3	-2.6
VHO				i S	Sn	16 46 02.5	-5.4
CMIG	Matias Romero	2.22	45	eP	Pn	16 45 54.5	-2.5
CMIG				i S	Sn	16 46 20.2	-3.9

MEX 13 17:07:12.1±0.7, 33°.01N×116°.99W, h10^{km}, MD3.5, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TJIG	Tijuana	0.63	155	eP	Pg	17 07 22.6	-1.6
TJIG				eS	Sg	17 07 30.8	-1.7
CBX	Cerro Bola	0.74	158	i P	Pg	17 07 24.7	-1.8
CBX				i S	Sg	17 07 34.9	-1.3
SPIG	San Pedro Mart	2.34	146	eP	Pn	17 07 48.3	-2.6
SPIG				eS	Sn	17 08 16.1	-3.9

MEX 13 17:07:51.4±0.6, 29°.68N×114°.10W, h16^{km}±10^{km}, MD3.6, Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIG	San Pedro Mart	1.81	320	i P	Pn	17 08 18.3	-3.9
SPIG				i S	Sn	17 08 40.4	-4.6

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*IDC **13** 17:15:35.9±3.1, 20°.95S×177°.64W, h529^{km}±33^{km}, mb3.3/12, mb1 3.6/13, mb1mx3.5/21, mbtmp4.2/13, Error ellipse: s-maj=21.0km s-min=13.9km az=149.0*

*ISCJB **13** 17:15:36.9±0.7, 20°.9S±0°.2×177°.7W±0°.1, h550^{km}, mb3.8/13, Error ellipse: s-maj=22.4km s-min=13.8km az=158.7*

ISC 13 17:15:37.6±0.7, 20°.9S±0°.2×177°.7W±0°.1, h550^{km}, n18, σ1^{s}27/20, mb3.8/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac 0.6nm,0.3s,baz=87,slow=18,SNR=6.7	14.82	263	P	P	17 18 44.2	-1.2
ASAR	Alice Springs 2.0nm,0.6s,baz=94,slow=8.2,SNR=30	44.71	257	P	P	17 23 03.0	+0.6
ASAR	 0.5nm,0.6s,baz=104,slow=3.8,SNR=3.5			PcP	PcP	17 24 34.7	+1.8
ASAR	 0.7nm,0.9s,baz=95,slow=14,SNR=4.4			S	S	17 29 01.7	+2.2
WRA	Warramunga Arr 1.2nm,0.3s,baz=96,slow=7.4,SNR=39	44.84	262	P	P	17 23 03.3	-0.1
MJAR	Matsushiro Arr 3.8nm,0.6s,baz=161,slow=6.1,SNR=20	70.74	324	P	P	17 25 57.8	-0.9
MAT	Matsushiro	70.74	324	P	P	17 25 57.5	-1.2
PETK	Petropavlovsk- 3.7nm,0.8s,baz=137,slow=10,SNR=8.0	76.77	345	P	P	17 26 31.8	-0.7
KSRS	Korea Array 1.2nm,0.7s,baz=132,slow=6.0,SNR=6.5	77.42	318	P	P	17 26 37.0	+0.7
USRK	Ussuriysk Ar. 3.9nm,0.8s,baz=143,slow=3.4,SNR=7.8	79.50	326	P	P	17 26 48.6	+1.3
NVAR	Mina Array Bea 1.2nm,1.0s,baz=227,slow=8.7,SNR=5.7	81.14	43	P	P	17 26 58.0	+1.6
MAW	Mawson 20nm,0.5s,baz=124,slow=11,SNR=186	81.25	200	P	P	17 26 55.4	-0.7
TXAR	Lajitas Array 0.4nm,0.7s,baz=214,slow=6.2,SNR=5.4	87.05	57	P	P	17 27 26.8	+1.4
ILAR	Eielson Array 0.6nm,0.6s,baz=220,slow=6.0,SNR=6.5	88.68	13	P	P	17 27 31.1	-1.0
PLCA	Paso Flores 2.6nm,0.9s,baz=278,slow=7.1,SNR=2.6	88.75	133	P	P	17 27 32.4	-0.8
PDAR	Pinedale Array 0.9nm,0.8s,baz=226,slow=3.9,SNR=5.3	89.08	43	P	P	17 27 35.0	+0.3
CMAR	Chiang Mai Arr 1.2nm,0.9s,baz=96,slow=2.7,SNR=5.8	90.54	289	P	P	17 27 41.6	-0.2
BVAR	Borovoye Array 0.5nm,0.6s,baz=98,slow=4.4,SNR=4.1	119.61	320	PKP	PKiKP	17 33 25.7	+0.6
AKASG	Malin Array Be 1.5nm,0.7s,baz=42,slow=4.7,SNR=12	143.54	331	PKP	PKPdf	17 34 07.5	-2.3
GERES	GERESS Array B 0.8nm,0.7s,baz=5.7,slow=2.7,SNR=7.7	150.71	345	PKPbc	PKiKP	17 34 28.8	+0.4

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*DDA **13** 17:31:47.9, 37°.11N×42°.44E, h14^{km}±1^{km}, ML4.0*

*TEH **13** 17:31:48.3, 37°.20N×42°.44E, h10^{km}, ML4.0*

*ISK **13** 17:31:48.1, 37°.08N×42°.42E, h9^{km}, ML4.1/16*

*ISN **13** 17:31:50.9±0.8, 37°.05N×42°.48E, h39^{km}, ML4.0*

*GII **13** 17:31:50.6±0.0, 37°.11N×42°.46E, h2^{km}*

*IDC **13** 17:31:50.0±1.9, 37°.00N×42°.72E, h0^{km}, mb3.6/1, mb1 3.5/8, mb1mx3.2/40, mbtmp3.3/8, ML3.3/5, MS3.0/5, Ms1 2.9/5, ms1mx2.6/42, Error ellipse: s-maj=30.2km s-min=11.1km az=136.0*

ISCJB ***13*** *17:31:50.3±0.5, 37°.11N±0°.02×42°.47E±0°.02, h19^{km}±6^{km}, mb3.7/1, MS2.8/1, Error ellipse: s-maj=3.6km s-min=3.2km az=11.7*

AZER ***13*** *17:31:53.6±2.3, 37°.30N×42°.75E, h10^{km}, ml3.6/5, Error ellipse: s-maj=48.9km s-min=13.1km az=144.0*

ISC 13 17:31:48.7±1.1, **37°.11N**±0°.03×**42°.42E**±0°.02, **h8**^{km}±9^{km}, **n90,** σ1^{s}**80**/100, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	Sırnak	0.39	359	i P	Pg	17 31 54.6	-1.7
SIRN	Sırnak	0.39	359	ePg	Pg	17 31 53.8	-2.6
MSL	Mosul	0.90	142	ePg	Pg	17 32 06.0	0.0
MSL				eSg	Sg	17 32 18.0	+0.3
CUKT	Cukurca	0.96	81	PG	Pg	17 32 06.7	-0.5
CUKT				SG	Sb	17 32 21.1	+0.6
CUKT	Cukurca	0.96	81	i P	Pg	17 32 06.4	-0.8
CUKT	Cukurca	0.96	81	ePg	Pg	17 32 06.1	-1.1
SRTM	Siirt_Merkez	0.96	336	i P	Pg	17 32 06.0	-1.4
SRTM				i S	Sb	17 32 20.9	+0.1
SRTM				IAML_P			
	comp=Z,8µm,0.1s						
SRTM	Siirt_Merkez	0.96	336	ePg	Pg	17 32 05.4	-1.9
HAKT	HAKKARI	1.12	66	i P	Pg	17 32 08.8	-1.5
HAKT				i S	Sn	17 32 28.5	+1.9
HAKT				IAML_P			
	comp=Z,12µm,0.3s						
HAKT	HAKKARI	1.12	66	ePg	Pg	17 32 08.3	-2.0
BTMN	Batman	1.20	311	i P	Pg	17 32 12.1	+0.2
BTMN				i S	Sn	17 32 28.4	-0.1
BTMN				IAML_P			
	comp=Z,5µm,0.3s						
BTMN	Batman	1.20	311	ePg	Pg	17 32 11.5	-0.4
AKDM	Akdamar-Van	1.29	20	PN	Pn	17 32 12.9	-0.4
AKDM	Akdamar-Van	1.29	20	ePg	Pn	17 32 12.9	-0.4
GEVA	Gevas	1.30	23	i P	Pn	17 32 13.1	-0.3
GEVA				i S	Sg	17 32 32.1	+1.4
GEVA	Gevas	1.30	23	ePg	Pn	17 32 12.5	-0.9
BLIS	Bitlis-Merkez	1.32	350	i P	Pb	17 32 13.6	-0.3
BLIS				i S	Sg	17 32 32.8	+1.4
MARD	Mardin	1.33	279	i P	Pg	17 32 13.8	-0.4
MARD				i S	Sg	17 32 34.4	+2.9
MARD				IAML_P			
	comp=Z,18µm,0.2s						
SVAN	Silvan-Diyarba	1.42	317	PN	Pb	17 32 14.9	-0.6
SVAN				SN	Sg	17 32 34.1	-0.4
SVAN	Silvan-Diyarba	1.42	317	i P	Pb	17 32 15.1	-0.5
SVAN				i S	Sg	17 32 34.8	+0.3
SVAN				IAML_P			
	comp=Z,9µm,0.3s						
SVAN	Silvan-Diyarba	1.42	317	ePg	Pb	17 32 14.9	-0.6
YOVA	Hakkari_Yksek	1.56	72	i P	Pn	17 32 17.4	+0.4
YOVA	Hakkari_Yksek	1.56	72	ePn	Pn	17 32 16.6	-0.4
BASK	Baskale_VAN	1.57	53	i P	Pb	17 32 18.3	+0.1
BASK				i S	Sg	17 32 46.0	+6.7
BASK	Baskale_VAN	1.57	53	ePn	Pb	17 32 17.6	-0.6
MAZI	Mazidag	1.61	283	PN	Pn	17 32 17.5	-0.1
MAZI				SN	Sb	17 32 39.1	-0.3
MAZI	Mazidag	1.61	283	ePn	Pn	17 32 17.6	-0.1
VANB	Van	1.67	27	PN	Pn	17 32 17.9	-0.5
VANB	Van	1.67	27	ePn	Pn	17 32 17.5	-0.9
ADCV	BITLIS_Adilcev	1.71	8	i P	Pg	17 32 21.0	-0.6
ADCV				i S	Sg	17 32 44.2	+0.4
ADCV				IAML_P			
	comp=Z,4µm,0.2s						
ADCV	BITLIS_Adilcev	1.71	8	ePn	Pb	17 32 19.9	-0.7
MUSM	Mu-Merkez	1.77	336	i P	Pn	17 32 19.5	-0.2
MUSM				i S	Sb	17 32 43.9	+0.1
MUSM	Mu-Merkez	1.77	336	ePn	Pn	17 32 18.7	-1.0
DYBB	Diyarbakir	2.00	296	PN	Pn	17 32 23.3	+0.4
DIYA	Diyarbakir	2.00	295	i P	Pb	17 32 25.0	-0.4
DIYA				i S	Sg	17 32 52.2	-0.8
MLAZ	Malazgirt-MUS	2.03	3	PN	Pn	17 32 24.3	+0.9
MLAZ	Malazgirt-MUS	2.03	3	ePn	Pn	17 32 23.8	+0.4
VMUR	Van-Muradiye	2.08	25	i P	Pb	17 32 26.6	-0.3
BNGL	BINGOL	2.10	332	i P	Pn	17 32 25.0	+0.7
VRTB	Varto-Mus	2.19	340	PN	Pn	17 32 26.2	+0.7
TUTA	Tutak	2.31	8	i P	Pb	17 32 29.9	-0.9
TUTA				IAML_P			
	comp=Z,4µm,0.2s						
BNGB	Bingl	2.33	324	PN	Pn	17 32 28.3	+0.9
BINT	Bingol	2.33	320	ePn	Pn	17 32 28.4	+0.9
CLDR	Caldiran	2.35	30	PN	Pn	17 32 28.6	+0.8
CLDR	Caldiran	2.35	30	ePn	Pn	17 32 27.9	+0.1
KARO	Karliova-Bingo	2.45	334	PN	Pn	17 32 30.0	+0.8
AGRB	Hanur-Agry	2.50	10	PN	Pn	17 32 30.9	+1.0
AGRB	Hanur-Agry	2.50	10	ePn	Pn	17 32 30.8	+0.9
MAHB	Mahabad	2.65	96	ePn	Pn	17 32 33.3	+1.4
YEDI	Yedisu-Bingol	2.75	328	ePn	Pn	17 32 34.4	+1.1
SVRC	Sivrice-ELAZID	2.77	298	PN	Pn	17 32 34.1	+0.5
ISHB	Shabestar	2.79	64	ePn	Pn	17 32 35.3	+1.4
ISHB				IAMB	IAmb	17 32 54.1	
	comp=Z,2µm,0.6s						
URFA	Urfa	2.89	278	PN	Pn	17 32 35.7	+0.6
IAZR	Azarshahr	2.89	78	ePn	Pn	17 32 36.5	+1.2
IAZR				IAMB	IAmb	17 33 45.4	
	comp=Z,4µm,0.8s						
KOPR	Koprukoy-ERZUR	2.91	351	PN	Pn	17 32 36.7	+1.2
NAX	Nakhchivan	3.18	49	P	Pn	17 32 39.5	+0.4
	SNR=19						
NAX				S	Sn	17 33 15.7	-1.6
ERZN	Erzincan	3.26	320	PN	Pn	17 32 41.3	+1.1
ORD	Ordubad	3.35	56	P	Pn	17 32 41.6	+0.1
	SNR=4.7						
SBZ	Shahbuz	3.36	46	P	Pn	17 32 41.8	+0.2
	SNR=17						
SBZ				S	Sn	17 33 19.2	-2.5
GNI	Garni	3.54	30	Pn	Pn	17 32 47.0	+2.9
	comp=Z,1.8nm,0.3s,baz=220,slow=17,SNR=3.6						
GNI				Pg	Pg	17 32 56.2	-0.3
	comp=Z,2.8nm,0.3s,baz=272,slow=7.7,SNR=7.5						
GNI				Lg	Lg	17 33 41.8	
	baz=190,slow=24,SNR=2.5						
IDHR	Dehrash	4.02	126	ePn	Pn	17 32 52.9	+2.2
BHD	Baghdad	4.15	157	ePn	Pn	17 32 48.0	-4.4
	baz=338						
BHD				eSn	Sn	17 33 36.0	-5.1
ISRB	Sarab	4.23	79	ePn	Pn	17 32 54.8	+1.1
ILIN	Lien	4.28	119	IAMB	IAmb	17 34 21.1	
	comp=Z,1µm,0.7s						
IGHG	Ghaleghazi	4.37	128	ePn	Pn	17 32 58.2	+2.6
IGHG				IAMB	IAmb	17 34 29.9	
	comp=E,4µm,0.6s						
QZX	Qazax, Azerbai	4.56	29	P	Pn	17 32 58.6	+0.6
GANJ	Ganja	4.66	40	P	Pn	17 32 59.6	+0.1
	SNR=8.6						
IKFM	Kafar-mosalman	5.70	127	ePn	Pn	17 33 15.3	+1.7
IDOB	Doab	5.75	124	ePn	Pn	17 33 16.4	+1.8
IDOB				IAMB	IAmb	17 35 35.4	
	comp=Z,0.0nm,1.6s						
KBZ	Khabaz	6.62	3	Pn	Pn	17 33 31.3	+5.0
	comp=Z,0.0nm,0.3s,baz=204,slow=10.0,SNR=2.6						
KBZ				LR	LR	17 36 26.0	
	comp=Z,170nm,18.3s,baz=188,slow=41						
NATI	Neve Ativ	6.68	237	Pn	Pn	17 33 29.5	+2.3
ASF	Jabal al Asfar	6.71	224	Pn	Pn	17 33 32.3	+4.7
	comp=Z,0.3nm,0.3s,baz=344,slow=3.1,SNR=2.9						
ASF				Lg	Lg	17 35 23.8	
	comp=Z,1.7nm,0.3s,baz=53,slow=20,SNR=7.3						
GEM	Giv'at Ha'Em	6.76	237	Pn	Pn	17 33 31.7	+3.4
KSDI	Kefar Szold	6.78	237	Pn	Pn	17 33 31.0	+2.5
KVAR	Kislovodsk Arr	6.84	2	LR	LR	17 36 29.0	
	comp=Z,152nm,19.5s,baz=44,slow=40						
MMA0B	Mount Meron ar	7.05	237	Pn	Pn	17 33 36.0	+3.6
MMAI	Mount Meron Ar	7.05	237	Pn	Pn	17 33 36.8	+4.4
	comp=Z,1.0nm,0.3s,baz=56,slow=13,SNR=6.1						
MMAI				Pg	Pg	17 34 01.5	-2.4
	comp=Z,0.9nm,0.3s,baz=45,slow=16,SNR=3.8						
MMAI				Lg	Lg	17 35 41.8	
	comp=Z,1.7nm,0.3s,baz=55,slow=23,SNR=5.0						
MMAI				LR	LR	17 36 51.1	
	comp=Z,123nm,19.5s,baz=55,slow=42						
BRTR	Keskin Array B	7.37	293	Pn	Pn	17 33 43.9	+7.1
	comp=Z,0.1nm,0.3s,baz=115,slow=13,SNR=3.9						
BRTR				Pg	Pg	17 34 06.7	-3.2
	comp=Z,0.1nm,0.3s,baz=122,slow=18,SNR=8.9						
BRTR				Lg	Lg	17 35 55.1	
	comp=Z,0.0nm,0.3s,baz=126,slow=28,SNR=5.6						
MMLI	Mount Malkishu	7.41	233	Pn	Pn	17 33 40.9	+3.7
HMDT	Nahal Hemdat	7.46	232	Pn	Pn	17 33 41.5	+3.6
SLTI	Sal'it	7.78	234	Pn	Pn	17 33 45.8	+3.6
ZFRI	Zfri	8.89	225	Pn	Pn	17 34 01.1	+3.7
PRNI	Paran	9.14	225	Pn	Pn	17 34 04.5	+3.6
EIL	Elat	9.69	222	Lg	Lg	17 37 06.3	
	comp=Z,0.5nm,0.3s,baz=288,slow=23,SNR=7.4						
GEYT	Alibeck	12.49	81	LR	LR	17 40 12.1	
	comp=Z,28nm,20.1s,baz=315,slow=41						
AKASG	Malin Array Be	16.55	329	Pn	P	17 35 43.9	+0.4
	comp=Z,0.3nm,0.3s,baz=139,slow=11,SNR=12						
AKTO	Aktyubinsk	17.39	35	P	P	17 35 53.8	+0.9
	comp=Z,0.1nm,0.3s,baz=232,slow=13,SNR=3.6						
VYHS	Vyhne	20.62	311	eP	Pn	17 36 31.9	+1.3
HFS	Hagfors	29.43	331	LR	LR	17 51 15.3	
	comp=Z,21nm,18.5s,baz=52,slow=39						
ESDC	Sonseca Array	36.14	289	P	P	17 38 55.7	+4.4
	comp=Z,0.3nm,0.3s,baz=69,slow=8.1,SNR=4.6						

MAN 13 17:34:22.5, 8°.25N×125°.82E, h11^{km}, mb4.5, ML3.4, MS3.2, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.54	97	⇑iP	Pg	17 34 32.0	-1.0
BIPH				i S	Sg	17 34 37.9	-2.2
BUTP	Butuan	0.74	344	eP	Pg	17 34 36.3	-0.7
BUTP				eS	Sn	17 34 50.0	-0.3
BUKP	Musuan	0.84	244	eP	Pg	17 34 38.3	-0.5
BUKP				eS	Sn	17 34 53.9	+1.2
CGP	Cagayan de Oro	1.14	281	⇑iP	Pb	17 34 44.0	-0.2
CGP				i S	Sn	17 35 02.2	+2.2
DMPH	Davao City--Mi	1.20	195	⇑eP	Pn	17 34 43.8	-1.5
DMPH				eS	Sn	17 35 02.0	+0.4
MATI	Mati	1.36	162	eP	Pn	17 34 40.6	-6.9
MATI				eS	Sb	17 35 03.0	-2.5
KCP	Kidapawan	1.43	211	⇓iP	Pn	17 34 47.0	-1.5
KCP				i S	Sn	17 35 07.2	-0.1
CTBH	Cotabato--PC H	1.87	237	⇑iP	Pn	17 34 53.9	-0.5
CTBH				i S	Sn	17 35 18.8	+0.7
MSLP	Maasin	2.10	333	eP	Pn	17 34 56.8	-0.9
MSLP				eS	Sn	17 35 24.3	+0.4
DDMP	Don Marcelino,	2.13	183	eP	Pn	17 34 54.6	-3.5
DDMP				eS	Sb	17 35 27.1	-0.6
SKMP	Bagumbayan, Su	2.13	217	eP	Pb	17 35 02.3	+1.0
SKMP				eS	Sg	17 35 40.6	+9.4
TBP	Tagbilaran	2.41	307	eP	Pn	17 35 01.3	-0.6
TBP				i S	Sb	17 35 36.5	+0.8
PAGZ	Pagadian	2.45	261	eP	Pn	17 35 03.2	+0.7
PAGZ				eS	Sb	17 35 39.1	+2.2
OCLP	Ormoc	3.03	337	eP	Pn	17 35 12.3	+1.8
OCLP				eS	Sn	17 35 47.0	+0.2
BESP	Borongan	3.35	354	eP	Pn	17 35 16.4	+1.5

HYB ***13*** *17:49:31.3±2.0, 32°.29N×76°.72E, h0^{km}±999^{km}, ML3.5*

IDC ***13*** *17:49:32.1±0.6, 32°.30N×76°.48E, h0^{km}, mb4.0/24, mb1 4.1/28, mb1mx4.1/39, mbtmp4.0/28, ML3.8/4, MS3.0/3, Ms1 3.1/3, ms1mx2.6/33, Error ellipse: s-maj=14.1km s-min=11.9km az=25.0*

ISCJB ***13*** *17:49:33.3±0.5, 32°.34N±0°.02×76°.51E±0°.03, h18^{km}±4^{km}, mb4.3/66, MS3.5/7, Error ellipse: s-maj=4.9km s-min=3.1km az=152.4*

NDI ***13*** *17:49:34.1±4.0, 32°.36N×76°.29E, h14^{km}±9^{km}, ML4.4, mb4.4(NEIC)*

MOS ***13*** *17:49:35.2±1.0, 32°.41N×76°.53E, h29^{km}, mb4.4/34, Error ellipse: s-maj=7.9km s-min=5.0km az=99.1*

NEIC ***13*** *17:49:36.6±2.5, 32°.38N×76°.54E, h26^{km}±5^{km}, mb4.4/43, Error ellipse: s-maj=10.6km s-min=7.0km az=140.0*

NEIC Felt at Dharmsala and Palampur.

BJI ***13*** *17:49:37.6±0.0, 32°.59N×76°.93E, h17^{km}, mb4.6/31, mB4.6/24, ML4.0/2, Ms4.0/14, Ms7 3.8/13*

NNC ***13*** *17:49:38.3±3.8, 32°.41N×76°.41E, h43^{km}±30^{km}, mb4.3, Error ellipse: s-maj=28.3km s-min=24.7km az=164.0*

ISC 13 17:49:34.2±0.8, **32°.35N**±0°.03×**76°.38E**±0°.04, **h13**^{km}±5^{km}, **n197,** σ1^{s}**62**/211, **mb4.3**/66, **MS3.5**/7, **18C-8D, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	0.12	215	eP	Pg	17 49 37.2	-0.3
DHRM				eS	Sg	17 49 40.0	0.0
DHRM				eS	Sb	17 49 40.1	-1.1
DHRM				IAML		17 49 41.2	
	comp=E,174µm,0.2s						
DHRM				IAML		17 49 41.4	
	comp=N,108µm,0.3s						
GANDO	Gandoh	0.79	330	eP	Pg	17 49 49.1	-0.5
GANDO				eS	Sb	17 50 00.4	-0.2
GANDO				IAML		17 50 03.5	
	comp=Z,1µm,0.6s						
BDRWA	Bhadarwah	0.83	318	eP	Pg	17 49 49.9	-0.3
BDRWA				eS	Sn	17 50 04.7	+0.7
BDRWA				IAML		17 50 09.6	
	comp=Z,1µm,0.4s						
BHK	Bhakra	0.93	178	eP	Pg	17 49 52.2	+0.1
BHK				ex	Sn	17 50 06.0	-0.2
THTRI	Thathri	0.94	328	eP	Pg	17 49 52.1	-0.3
THTRI				eS	Sn	17 50 05.7	-0.9
THTRI				IAML		17 50 10.3	
	comp=Z,495nm,0.2s						
DODA	Doda	1.06	319	eP	Pb	17 49 54.2	-0.3
DODA				eS	Sn	17 50 11.5	+2.0
DODA				IAML		17 50 19.1	
	comp=Z,4µm,0.3s						
KSHWR	Kishtwar	1.09	332	eP	Pb	17 49 54.8	-0.2
KSHWR				eS	Sn	17 50 11.6	+1.1
KSHWR				IAML		17 50 19.1	
	comp=Z,3µm,0.4s						
SMLA	Simla	1.39	151	eP	Pb	17 49 59.8	-0.1
SMLA				eS	Sg	17 50 21.1	+2.2
SMLA				IAML		17 50 22.4	
	comp=N,17µm,0.5s						
SMLA				IAML		17 50 22.5	
	comp=E,26µm,0.4s						
DDI	Dehra Dun	2.48	144	eP	Pn	17 50 16.2	+1.9
DDI				eS	Sn	17 50 46.7	+2.2
DDI				IAML		17 50 57.1	
DDI				IAML		17 51 00.1	
	comp=N,3µm,0.2s						
CHCP	Chirah Chowk	2.93	297	P	Pb	17 50 24.7	-1.6
NIL	Nilore	2.93	297	ePn	Pb	17 50 24.3	-2.1
NIL	Nilore	2.93	297	eP	Pb	17 50 24.3	-2.1
NDI	New Delhi	3.72	169	eP	Pn	17 50 31.0	-0.4
NDI				eS	Sn	17 51 13.0	-2.1
THW	Thamme Wali	3.94	278	P	Pn	17 50 37.1	+2.7
CEP	Cherat	4.03	293	P	Pn	17 50 38.4	+2.6
PTH	Pithoragarh	4.32	129	ex	Pb	17 50 51.1	+1.0
PTH				eS	Sn	17 51 27.7	-2.4
KBL	Kabul	6.51	292	ePn	Pn	17 51 11.2	+1.3
KBL	Kabul	6.51	292	eP	Pn	17 51 11.2	+1.3
KSH	Kashi	7.16	357	Pn	Pn	17 51 19.0	+0.2
KSH				Sn	Sn	17 52 36.1	-4.0
KSH				smax	smax		
	comp=N,68nm,0.9s						
KSH				smax	smax		
	comp=N,86nm,0.9s						
KSH				LR	LR		
	comp=N,180nm,7.1s						
KSH				LR	LR		
	comp=N,200nm,7.1s						
GAR	Garm	8.27	325	ePn	Pn	17 51 35.3	+1.3
GAR	Garm	8.27	325	eP	Pn	17 51 35.3	+1.3
CHGR	Chuyangaron	8.62	319	eP	Pn	17 51 56.5	+18
BTK	Batken	8.91	331	ePn	Pn	17 51 44.2	+1.5
BTK	Batken	8.91	331	eP	Pn	17 51 44.2	+1.5
NRN	Naryn	9.08	358	ePn	Pn	17 51 47.1	+1.9
NRN	Naryn	9.08	358	eP	Pn	17 51 47.1	+1.9
BHPL	Bhopal	9.12	174	eP	Pn	17 51 44.7	-0.9
BHPL				eS	Sn	17 53 19.4	-8.7
BHPL				IAML		17 53 26.6	
	comp=E,90nm,0.2s						
BHPL				IAML		17 53 27.1	
	comp=N,114nm,0.6s						
ARSB	Arslanbob	9.36	344	ePn	Pn	17 51 49.5	+0.4
KZA	Kyzart	9.76	355	P	Pn	17 51 56.2	+1.5
	SNR=12						
KDJ	Kajisay	9.79	4	ePn	Pn	17 51 56.6	+1.8
KDJ	Kajisay	9.79	4	eP	Pn	17 51 56.6	+1.8
UCH	Uchtor	9.97	352	P	Pn	17 51 59.2	+1.5
	SNR=23						
BOOM	Boomskoye usch	10.13	358	ePn	Pn	17 52 01.5	+1.9
BOOM	Boomskoye usch	10.13	358	eP	Pn	17 52 01.5	+1.9
PRZ	Przheval'sk	10.25	8	ePn	Pn	17 52 03.3	+2.2
PRZ	Przheval'sk	10.25	8	eP	Pn	17 52 03.3	+2.2
KBK	Karagaybulak	10.36	354	P	Pn	17 52 05.6	+3.0
	SNR=8.8						
AAK	Ala-Archa	10.38	352	Pn	Pn	17 52 05.0	+2.0
	comp=N,1.0nm,0.3s,baz=161,slow=6.8,SNR=11						
AAK				Sn	Sn	17 54 00.1	+0.8
	comp=N,0.2nm,0.3s,baz=180,slow=20,SNR=2.4						
AAK				LR	LR	17 56 20.9	
	comp=N,127nm,18.1s,baz=167,slow=39						
AAK	Ala-Archa	10.38	352	ePn	Pn	17 52 04.9	+2.0
AAK	Ala-Archa	10.38	352	⇓P	Pn	17 52 04.9	+1.9
	comp=N,8.3nm,0.8s						
AAK				⇓S	Sn	17 53 59.9	+0.6
	comp=N,6.6nm,0.8s						
AAK	Ala-Archa	10.38	352	ceP	Pn	17 52 05.5	+2.5
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EKS2	Erkin-Say	10.50	349	P	Pn	17 52 06.4	+1.8
	SNR=9.4						
FRU1	Bishkek	10.54	353	ePn	Pn	17 52 10.9	+5.9
FRU1	Bishkek	10.54	353	eP	Pn	17 52 10.9	+5.9
TKM2	Tokmak 2	10.57	357	⇑P	Pn	17 52 07.3	+1.6
	comp=Z,4.4nm,0.6s						
TKM2				⇑S	Sn	17 54 06.6	+2.6
	comp=Z,6.3nm,1.1s						
TKM2	Tokmak 2	10.57	357	P	Pn	17 52 07.4	+1.8
	SNR=13						
CHMS	Chumysh	10.71	354	P	Pn	17 52 09.0	+1.6
	SNR=5.7						
PDGK	Podgornoye	11.24	12	⇑P	Pn	17 52 15.3	+0.7
	comp=Z,45nm,0.8s						
PDGK				⇓S	Sn	17 54 17.8	-2.4
	comp=Z,31nm,0.8s						
NGP	Nagpur	11.40	167	eP	Pn	17 52 15.9	-1.0
NGP				eS	Sn	17 54 14.7	-9.5
NGP				IAML		17 54 20.8	
	comp=E,46nm,0.2s						
NGP				IAML		17 54 22.3	
	comp=N,38nm,0.1s						
KK31	Karatay Array	11.70	338	ePn	Pn	17 52 20.9	+0.1
KK31	Karatay Array	11.70	338	⇓P	Pn	17 52 21.1	+0.3
	comp=N,12nm,0.7s,baz=150,slow=12,SNR=86						
KK31				⇑S	Sn	17 54 27.9	-3.4
	comp=N,19nm,0.6s,baz=151,slow=21,SNR=11						
KK31	Karatay Array	11.70	338	eP	Pn	17 52 20.9	+0.1
KKAR	Karatay Array	11.70	338	ePn	Pn	17 52 20.7	-0.1
KKAR	Karatay Array	11.70	338	eP	Pn	17 52 20.7	-0.1
GTK	Tadong	11.73	112	eP	Pn	17 52 20.2	-1.3
BOK	Bokaro	11.95	133	eP	Pn	17 52 23.7	-0.7
BOK				eS	Sn	17 54 26.9	-11
BOK				IAML		17 54 33.4	
	comp=N,134nm,0.0s						
LSA	Lhasa	12.94	98	ePn	Pn	17 52 36.9	-1.4
LSA	Lhasa	12.94	98	eP	Pn	17 52 36.9	-1.4
POO	Poona	13.95	190	eP	Pn	17 52 51.1	-0.6
TURI	Tura	13.96	115	ex	Pn	17 52 47.2	-4.7
TAWA	Tawang	14.23	105	eP	Pn	17 52 55.9	0.0
WMQ	Urumqi	14.50	35	ePn	Pn	17 52 57.7	-1.4
WMQ	Urumqi	14.50	35	eP	Pn	17 52 59.8	+0.7
WMQ				pP	P	17 53 04.0	-1.8
WMQ				pmax	pmax		
	comp=N,38nm,0.7s						
WMQ				pmax	pmax		
	comp=N,69nm,3.7s						
WMQ	Urumqi	14.50	35	eP	Pn	17 52 57.7	-1.4
MAKZ	Makanchi	15.07	15	ePn	Pn	17 53 05.4	-1.4
MAKZ	Makanchi	15.07	15	⇑P	Pn	17 53 06.0	-0.8
	comp=N,8.8nm,0.7s						
MAKZ	Makanchi	15.07	15	eP	Pn	17 53 05.4	-1.4
ZIRO	ZIRO	15.89	103	eP	Pn	17 53 19.0	+1.3
GEYT	Alibeck	15.94	296	Pn	Pn	17 53 18.2	0.0
	comp=N,0.3nm,0.3s,baz=96,slow=14,SNR=4.6						
GYA0B	ALIBECK ARRAY	15.94	296	ePn	P	17 53 20.2	-1.6
	comp=N,4.7nm,0.9s						
OTUK	Ortayu	16.17	350	⇑P	Pn	17 53 20.2	-1.0
	comp=N,9.5nm,0.6s						
KOHI	KOHIMA	16.84	109	ex	Pn	17 53 26.4	-3.5
WSAR	Wadi Sarin	18.11	244	P	P	17 53 45.8	-0.1
	comp=N,0.2nm,0.3s,baz=38,slow=12,SNR=2.8						
KURBB	Kurchatov Arra	18.33	4	P	Pn	17 53 46.5	-1.5
	comp=N,0.4nm,0.3s,baz=191,slow=11,SNR=31						
KURBB	Kurchatov Arra	18.33	4	⇓P	Pn	17 53 46.2	-1.8
	comp=N,7.6nm,0.7s						
KURK	Kurchatov	18.43	5	eP	P	17 53 46.7	-2.5
	comp=N,12nm,0.7s						
KURK	Kurchatov	18.43	5	⇓P	P	17 53 47.8	-1.5
	comp=N,18nm,1.0s						
KURK	Kurchatov	18.43	5	i P	P	17 53 47.5	-1.7
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
SIMRM	Sittwe	19.13	125	eP	P	17 53 54.8	-2.3
	comp=Z,90nm,1.5s						
UOSS	Minazif	19.16	253	eP	Pn	17 54 00.6	+2.3
	comp=Z,29nm,1.4s						
DGZ	Jazzator, Alta	19.20	22	i P	Pn	17 53 59.1	+0.3
DGZ				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA	Gaotai	20.23	63	⇑P	P	17 54 09.3	+0.2
GTA				pP	pP	17 54 13.8	+0.2
GTA				sP	sP	17 54 16.5	+0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,95nm,6.3s						
GTA				LR	LR		
	comp=Z,100nm,14.9s						
GTA				LR	LR		
	comp=Z,95nm,15.2s						
GTA				LR	LR		
	comp=Z,170nm,12.7s						
AB31	Akbulak array	20.90	329	⇓P	P	17 54 17.0	+0.8
	comp=Z,5.8nm,0.7s,baz=132,slow=10,SNR=65						
ABKAR	Akbulak array	20.90	329	eP	P	17 54 16.6	+0.3
	comp=Z,7.1nm,0.8s						
BVAR	Borovoye Array	21.12	350	P	P	17 54 19.0	+0.5
	comp=Z,16nm,0.8s,baz=163,slow=11,SNR=123						
BVAR	Borovoye Array	21.12	350	P	P	17 54 19.0	+0.5
BVAR				pmax	pmax		
	comp=Z,16nm,0.8s						
BRVK	Borovoye	21.16	350	eP	P	17 54 19.6	+0.6
	comp=Z,32nm,0.8s						
BRVK	Borovoye	21.16	350	⇑P	P	17 54 19.2	+0.1
	comp=Z,27nm,0.7s						
BRVK	Borovoye	21.16	350	i P	P	17 54 19.3	+0.3
BRVK				pmax	pmax		
	comp=Z,25nm,0.8s						
ZAA0	Zalesovo Array	22.42	13	eP	P	17 54 31.0	-1.5
	comp=Z,11nm,1.1s						
ZAA0	Zalesovo Array	22.42	13	⇑P	P	17 54 32.8	+0.3
	comp=Z,0.9nm,0.7s						
ZALV	Zalesovo Beam	22.42	13	P	P	17 54 32.3	-0.2
	comp=Z,6.2nm,0.6s,baz=217,slow=11,SNR=20						
ZAA1	Zalesovo Array	22.43	13	eP	P	17 54 32.2	-0.3
AKTO	Aktyubinsk	22.62	328	P	P	17 54 35.2	+0.6
	comp=Z,8.6nm,0.6s,baz=120,slow=10,SNR=44						
AKTO	Aktyubinsk	22.62	328	⇑P	P	17 54 34.5	-0.1
	comp=Z,17nm,0.9s						
LZH	Lanzhou	22.99	73	eP	P	17 54 37.9	-0.9
LZH				pP	pP	17 54 43.1	-0.2
LZH				sP	sP	17 54 46.8	+1.5
LZH				ePP	PnPn	17 55 06.3	+2.8
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,54nm,4.9s						
LZH				LR	LR		
	comp=Z,220nm,11.7s						
LZH				LR	LR		
	comp=Z,220nm,12.0s						
LZH				LR	LR		
	comp=Z,300nm,13.6s						
CD2	Chengdu	23.34	86	eP	P	17 54 40.3	-2.0
KMI	Kunming	24.17	101	eP	P	17 54 49.0	-1.6
	comp=Z,16nm,0.6s						
KMI	Kunming	24.17	101	P	P	17 54 49.5	-1.1
KMI				pP	sP	17 54 56.8	-0.4
KMI				sP	pP	17 54 57.9	+2.7
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI	Kunming	24.17	101	eP	P	17 54 49.0	-1.6
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
CHTO	Chiang Mai	24.34	118	eP	P	17 54 50.9	-1.1
	comp=Z,6.0nm,0.8s						
CHTO	Chiang Mai	24.34	118	eP	P	17 54 50.9	-1.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						

CMMT	Chiang Mai	24.35	118	P	P	17 54 51.7	-0.3
	comp=Z,5.4nm,1.3s						
CM31	Chiang Mai Arr	24.56	119	*e*P	P	17 54 52.6	-1.3
	comp=Z,17nm,1.0s						
CMAR	Chiang Mai Arr	24.56	119	P	P	17 54 53.6	-0.3
	comp=Z,9.3nm,1.0s,baz=308,slow=8.8,SNR=38						
CMAR				LR	LR	18 06 38.0	
	comp=Z,20nm,19.1s,baz=15,slow=42						
PAYA	Payao	24.71	116	P	P	17 54 56.5	+1.1
	comp=Z,13µm,0.8s						
UTTA	Uttaradit	26.20	118	P	P	17 55 09.2	+0.4
	comp=Z,18µm,0.8s,comp=Z,202µm						
SLVN	Son La	26.82	107	*e*P	P	17 55 15.3	+0.8
	comp=Z,5.3nm,0.9s						
ZAK	Zakamensk	26.84	40	*e*P	P	17 55 14.4	0.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARU	Arti	27.07	338	P	P	17 55 17.4	+1.1
	comp=Z,0.6nm,0.4s,baz=154,slow=6.1,SNR=6.0						
ARU	Arti	27.07	338	*e*P	P	17 55 16.1	-0.2
	comp=Z,8.6nm,1.3s						
ARU	Arti	27.07	338*c*	*i*P	P	17 55 16.4	+0.1
ARU						17 55 56.2	
ARU				S	S	17 59 50.9	-2.9
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU				MLR	MLR		
	comp=Z,90nm,14.0s						
XAN	Xi'an	27.23	78	*e*P	P	17 55 16.8	-1.2
	comp=Z,4.3nm,0.7s						
XAN	Xi'an	27.23	78	*e*P	P	17 55 16.8	-1.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONA0	Songino Array	27.47	47	*e*P	P	17 55 20.5	+0.4
SONM	Songino Array	27.47	47	P	P	17 55 20.5	+0.4
	comp=Z,2.4nm,0.8s,baz=246,slow=8.9,SNR=23						
AKH	Akhalkalaki	27.68	298	*e*P	P	17 55 25.2	+3.0
	comp=Z,7.2nm,0.9s						
AKH	Akhalkalaki	27.68	298	*e*P	P	17 55 25.2	+3.0
AKH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TLY	Talaya	27.73	38	LR	LR	18 07 04.5	
	comp=Z,37nm,19.7s,baz=184,slow=38						
ULN	Ulaanbaatar	27.89	47	*e*P	P	17 55 24.0	+0.1
	comp=Z,4.1nm,1.2s						
ULN	Ulaanbaatar	27.89	47	*e*P	P	17 55 24.0	+0.1
ULN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CHAI	Chaiyaphum	28.42	119	P	P	17 55 36.0	+7.2
HHC	Hu-ho-hao-te	29.34	63	P	P	17 55 37.3	+0.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,7.3s						
WHN	Wuhan	32.34	83	P	P	17 56 08.5	+5.2
BR131	Keskin Array S	35.08	294	*e*P	P	17 56 28.4	+1.2
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	35.08	294	P	P	17 56 28.6	+1.4
	comp=Z,1.4nm,0.7s,baz=108,slow=8.2,SNR=11						
BRTR	Keskin Array B	35.08	294*c*	*e*P	P	17 56 32.2	+5.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BR231	Keskin MP Arra	35.74	295	*e*P	P	17 56 35.1	+2.3
	comp=Z,4.4nm,0.5s						
GSI	Gunungsitoli	36.77	143	*e*P	P	17 56 42.4	+0.6
	comp=Z,18nm,1.0s						
AKASG	Malin Array Be	39.02	312	P	P	17 57 00.4	+0.1
	comp=Z,0.4nm,0.4s,baz=76,slow=6.2,SNR=4.2						
AKBB	Malin Array Si	39.02	312	*e*P	P	17 56 59.8	-0.6
	comp=Z,2.1nm,0.8s						
AKBB	Malin Array Si	39.02	312	*e*P	P	17 56 59.8	-0.6
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PLOR	Plostina	40.25	304⇓	*i*P	P	17 57 20.9	+10
KARP	Karpathos	40.62	288	*e*P	P	17 57 18.1	+4.2
	comp=Z,86nm,1.2s						
MLR	Muntele Rosu	40.74	304	*e*P	P	17 57 17.2	+2.3
	comp=Z,6.3nm,0.9s						
MLR	Muntele Rosu	40.74	304⇑	*i*P	P	17 57 17.1	+2.3
MLR	Muntele Rosu	40.74	304	*e*P	P	17 57 17.2	+2.3
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BURAR	Bucovina Array	41.30	307⇑	*i*P	P	17 57 23.8	+4.3
BUR08	Bucovina Ar. S	41.31	307	*e*P	P	17 57 22.2	+2.6
	comp=Z,1.2nm,0.8s						
VOIR		41.37	304⇑	*i*P	P	17 57 21.0	+1.0
KSRS	Korea Array	42.15	68	P	P	17 57 25.2	-1.3
	comp=Z,1.1nm,0.8s,baz=270,slow=7.5,SNR=6.0						
MDJ	Mudanjiang	42.72	57	*e*P	P	17 57 30.4	-0.6
	comp=Z,7.6nm,1.0s						
MDJ	Mudanjiang	42.72	57	P	P	17 57 31.3	+0.3
MDJ				pP	sP	17 57 38.5	+0.8
MDJ				sP	pP	17 57 40.6	+4.8
MDJ				S	S	18 03 42.4	-12
MDJ				ScS	ScS	18 07 34.8	+2.8
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,89nm,4.1s						
MDJ				LR	LR		
	comp=Z,190nm,5.1s						
MDJ				LR	LR		
	comp=Z,200nm,6.3s						
MDJ				LR	LR		
	comp=Z,130nm,5.7s						
VTS	Vitosha	42.78	300	*e*P	P	17 57 33.7	+2.0
	comp=Z,4.1nm,0.8s						
VTS	Vitosha	42.78	300⇑	*i*P	P	17 57 37.1	+5.4
VTS	Vitosha	42.78	300	*e*P	P	17 57 33.7	+2.0
VTS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FIA1	FINESS Array S	43.38	327	*e*P	P	17 57 36.5	+0.5
	comp=Z,3.4nm,0.8s						
FINES	FINESS Array B	43.38	327	P	P	17 57 36.6	+0.5
	comp=Z,1.5nm,0.6s,baz=115,slow=9.6,SNR=14						
KLR	Kul'dur	44.16	51	*i* P	P	17 57 42.4	-0.1
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
USRK	Ussuriysk Ar.	44.46	58	P	P	17 57 44.9	-0.1
	comp=Z,1.3nm,0.5s,baz=276,slow=5.5,SNR=9.0						
VYHS	Vyhne	45.59	308	*e*P	P	17 57 54.6	+0.6
VYHS	Vyhne	45.59	308	*e*P	P	17 57 54.6	+0.6
ARCES	ARCESS Array B	46.66	338	P	P	17 58 03.2	+1.1
	comp=Z,2.9nm,0.8s,baz=108,slow=8.0,SNR=12						
ARE0	ARCESS Array S	46.66	338	*e*P	P	17 58 03.1	+1.0
	comp=Z,3.2nm,1.9s						
TIXI	Tiksi	48.06	20	*e*P	P	17 58 12.9	-0.1
	comp=Z,2.3nm,0.7s						
TIXI	Tiksi	48.06	20	*i* P	P	17 58 14.8	+1.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	GERESS Array B	48.97	309	P	P	17 58 22.0	+1.6
	comp=Z,0.1nm,0.3s,baz=74,slow=4.5,SNR=2.5						
GERES	GERESS Array B	48.97	309	P	P	17 58 22.0	+1.6
KMBO	Kilima Mbogo	49.75	236	P	P	17 58 27.8	+0.9
	comp=Z,0.7nm,0.3s,baz=13,slow=10,SNR=1.8						
KMBO	Kilima Mbogo	49.75	236	*e*P	P	17 58 29.7	+2.8
	comp=Z,8.7nm,1.3s						
NC405	NORSAR Array S	50.11	325	*e*P	P	17 58 30.0	+1.2
	comp=Z,19nm,1.1s						
NC303	NORSAR Array S	50.28	325	*e*P	P	17 58 30.8	+0.7
	comp=Z,26nm,1.3s						
NB201	NORSAR Array S	50.31	325	*e*P	P	17 58 30.7	+0.4
	comp=Z,56nm,1.7s						
NB2	NORSAR Subarra	50.34	325	P	P	17 58 30.8	+0.2
	comp=Z,2.2nm,0.8s,baz=94,slow=7.9						
NOA	NORSAR Array B	50.34	325	P	P	17 58 31.2	+0.6
	comp=Z,0.3nm,0.5s,baz=103,slow=7.2,SNR=3.8						
NOA	NORSAR Array B	50.34	325	P	P	17 58 31.2	+0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJB9	Matsu-Tunnel	50.39	67	*e*P	P	17 58 30.8	-0.5
	comp=Z,7.3nm,0.8s						
MAJO	Matsushiro	50.40	67	*e*P	P	17 58 30.1	-1.2
	comp=Z,7.1nm,0.8s						
MAJO	Matsushiro	50.40	67	*e*P	P	17 58 30.1	-1.2
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAT	Matsushiro	50.40	67	P	P	17 58 29.2	-2.1
MJAR	Matsushiro Arr	50.40	67	P	P	17 58 30.7	-0.6
	comp=Z,3.8nm,0.8s,baz=285,slow=10,SNR=14						
NC204	NORSAR Array S	50.58	325	*e*P	P	17 58 34.3	+1.9
	comp=Z,106nm,1.9s						
YSS	Yuzh-Sakhalins	51.67	53	*e*P	P	17 58 40.2	-0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
PETK	Petropavlovsk-	59.88	44	P	P	17 59 38.3	-1.2
	comp=Z,1.2nm,0.7s,baz=267,slow=2.8,SNR=3.8						
PETK	Petropavlovsk-	59.88	44	P	P	17 59 38.3	-1.2
PETK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BILL	Bilibino	60.40	26⇑	*e*P	P	17 59 41.7	-1.2
BILL				*e*		18 00 28.5	
BILL				*e*		18 01 54.7	
BILL				*e*SS	SS	18 11 45.9	-8.4
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,46nm,18.0s						
SOEI	Soe	61.97	124	*e*P	P	17 59 55.9	+1.5
	comp=Z,28nm,1.2s						
ESDC	Sonseca Array	63.37	302	P	P	18 00 03.4	0.0
	comp=Z,0.1nm,0.3s,baz=75,slow=5.9,SNR=4.2						
TOA1	Torodi Ar. Sit	70.23	273	*e*P	P	18 00 46.6	-0.8
TORD	Torodi Ar. Bea	70.23	273	P	P	18 00 46.6	-0.8
	comp=Z,1.0nm,0.8s,baz=45,slow=5.3,SNR=5.8						
COLD	Coldfoot	74.69	17	*e*P	P	18 01 13.5	+0.3
	comp=Z,1.7nm,1.0s						
WR1	Warramunga Arr	76.00	125	*e*P	P	18 01 20.9	-0.5
WRA	Warramunga Arr	76.00	125	P	P	18 01 20.9	-0.5
	comp=Z,1.5nm,0.5s,baz=316,slow=5.6,SNR=7.9						
WRH	Wood River Hil	77.40	18	*e*P	P	18 01 28.4	-0.3
	comp=Z,2.6nm,0.9s						
ILAR	Eielson Array	77.47	18	P	P	18 01 29.2	+0.1
	comp=Z,1.2nm,0.7s,baz=308,slow=4.9,SNR=12						
ILAR				PP	PP	18 04 24.1	+1.1
	comp=Z,0.5nm,0.8s,baz=320,slow=7.5,SNR=4.3						
ILB	Eielson Array	77.47	18	*e*P	P	18 01 28.6	-0.5
	comp=Z,1.6nm,0.8s						
BOSA	Boshof	77.67	224	P	P	18 01 31.3	+0.5
	comp=Z,1.6nm,0.8s,baz=68,slow=5.4,SNR=2.7						
ASAR	Alice Springs	78.22	128	P	P	18 01 33.0	-0.8
	comp=Z,1.3nm,0.7s,baz=311,slow=5.7,SNR=13						
ASAR	Alice Springs	78.22	128	P	P	18 01 33.0	-0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DOT	Dot Lake	79.11	17	*e*P	P	18 01 38.5	+0.3
	comp=Z,2.8nm,0.8s						
PAX	Paxson	79.31	18	*e*P	P	18 01 39.7	+0.4
	comp=Z,2.6nm,0.7s						
PAX	Paxson	79.31	18	*e*P	P	18 01 39.7	+0.4
PAX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SML	Sawmill	79.46	20	*e*P	P	18 01 40.3	+0.1
	comp=Z,7.5nm,0.7s						
SML	Sawmill	79.46	20	*e*P	P	18 01 40.3	+0.1
SML				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KDAK	Kodiak Island	81.26	24	*e*P	P	18 01 50.0	+0.3
	comp=Z,6.5nm,0.8s						
KDAK	Kodiak Island	81.26	24	*e*P	P	18 01 50.1	+0.3
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YKA	Yellowknife Ar	85.08	5	P	P	18 02 09.2	-0.2
	comp=Z,1.8nm,0.8s,baz=339,slow=5.4,SNR=4.4						

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*TEH **13** 18:02:35.2, 37°.20N×42°.49E, h4km, ML3.5*
*ISK **13** 18:02:35.5, 37°.21N×42°.46E, h8km, ML3.7/10*
*DDA **13** 18:02:35.1, 37°.20N×42°.46E, h7km±3km, ML3.5*
*ISN **13** 18:02:36.4±0.6, 37°.06N×42°.64E, h5km±2km, ML3.5*
ISC 13 18:02:35.3±1.2, **37°.19N**±0°.03×**42°.47E**±0°.02, **h6**km±10km,
n55, σ1^{s}.**13**/66, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	Sırnak	0.31	352	*i* P	Pg	18 02 40.5	-1.0
SIRN				IAML_P			
	comp=Z,78µm,0.2s						
SIRN	Sırnak	0.31	352	*e*Pg	Pg	18 02 40.2	-1.3
CUKT	Cukurca	0.91	86	PG	Pb	18 02 53.2	-0.5
CUKT				SG	Sb	18 03 06.8	+0.7
CUKT	Cukurca	0.91	86	*i* P	Pb	18 02 53.2	-0.5
CUKT				IAML_P			
	comp=Z,10µm,0.4s						
CUKT	Cukurca	0.91	86	*e*Pg	Pg	18 02 53.0	+0.2
SRTM	Siirt_Merkez	0.91	332	*i* P	Pg	18 02 52.9	+0.1
SRTM				*i* S	Sn	18 03 07.7	-0.7
SRTM				IAML_P			
	comp=Z,5µm,0.2s						
SRTM	Siirt_Merkez	0.91	332	*e*Pg	Pg	18 02 52.4	-0.4
MSL	Mosul	0.94	146	*e*Pg	Pg	18 02 53.4	+0.1
	baz=330						
MSL				AML	AML	18 02 56.0	
	comp=Z,2µm,0.4s						
MSL				*e*Sg	Sg	18 03 05.1	-0.4
HAKT	HAKKARI	1.06	69	*i* P	Pg	18 02 55.6	0.0
HAKT				IAML_P			
	comp=Z,8µm,0.3s						
HAKT	HAKKARI	1.06	69	*e*Pg	Pg	18 02 54.7	-0.9
BTMN	Batman	1.18	307	*i* P	Pg	18 02 58.1	+0.1
BTMN				*i* S	Sn	18 03 14.8	-0.2
BTMN				IAML_P			
	comp=Z,2µm,0.2s						
BTMN	Batman	1.18	307	*e*Pg	Pg	18 02 58.0	0.0
AKDM	Akdamar-Van	1.21	19	PN	Pb	18 02 58.7	-0.1
AKDM				SN	Sn	18 03 15.7	-0.2
AKDM	Akdamar-Van	1.21	19	*e*Pg	Pn	18 02 59.1	+0.1
GEVA	Gevas	1.22	22	*i* P	Pg	18 02 57.7	-1.0
GEVA	Gevas	1.22	22	*e*Pg	Pg	18 02 57.3	-1.4
BLIS	Bitlis-Merkez	1.26	347	*i* P	Pg	18 02 59.1	-0.4
BLIS				*i* S	Sn	18 03 18.3	+1.3
BLIS				IAML_P			
	comp=Z,8µm,0.3s						
BLIS	Bitlis-Merkez	1.26	347	*e*Pg	Pg	18 02 59.0	-0.4
MARD	Mardin	1.35	276	*i* P	Pn	18 03 00.6	-0.3
MARD				*i* S	Sn	18 03 20.8	+1.6
MARD				IAML_P			
	comp=Z,3µm,0.1s						
SVAN	Silvan-Diyarba	1.39	314	PN	Pn	18 03 01.1	-0.3
SVAN				SN	Sg	18 03 20.5	+0.4
SVAN	Silvan-Diyarba	1.39	314	*i* P	Pn	18 03 01.4	0.0
SVAN				*i* S	Sg	18 03 21.7	+1.6
SVAN				IAML_P			
	comp=Z,5µm,0.3s						
SVAN	Silvan-Diyarba	1.39	314	*e*Pn	Pn	18 03 01.7	+0.3
BASK	Baskale_VAN	1.50	54	*i* P	Pg	18 03 04.1	0.0
BASK				IAML_P			
	comp=Z,3µm,0.4s						
BASK	Baskale_VAN	1.50	54	*e*Pn	Pb	18 03 03.5	-0.2
YOVA	Hakkari_Yksek	1.51	74	*i* P	Pn	18 03 03.2	+0.1
YOVA				*i* S	Sg	18 03 26.7	+3.0
YOVA				IAML_P			
	comp=Z,5µm,0.2s						
YOVA	Hakkari_Yksek	1.51	74	*e*Pn	Pn	18 03 03.1	0.0
VANB	Van	1.58	27	PN	Pn	18 03 03.4	-0.7
VANB	Van	1.58	27	*e*Pn	Pb	18 03 04.9	-0.2
ADCV	BITLIS_Adilcev	1.63	7	*i* P	Pg	18 03 06.2	-0.4
ADCV				IAML_P			
	comp=Z,2µm,0.4s						
ADCV	BITLIS_Adilcev	1.63	7	*e*Pn	Pb	18 03 06.1	+0.1
MAZI	Mazidag	1.63	280	PN	Pn	18 03 05.4	+0.7
MAZI	Mazidag	1.63	280	*e*Pn	Pb	18 03 06.0	+0.1
MUSM	Mu-Merkez	1.71	334	*i* P	Pn	18 03 05.8	0.0
MUSM				IAML_P			
	comp=Z,4µm,0.3s						
MUSM	Mu-Merkez	1.71	334	*e*Pn	Pn	18 03 05.4	-0.4
MLAZ	Malazgirt-MUS	1.95	2	PN	Pn	18 03 09.8	+0.6
DYBB	Diyarbakir	2.00	293	PN	Pn	18 03 10.5	+0.7
BNGL	BINGOL	2.05	330	*i* P	Pb	18 03 12.7	-0.4
VRTB	Varto-Mus	2.13	338	PN	Pn	18 03 12.6	+1.0
VRTB	Varto-Mus	2.13	338	*e*Pn	Pb	18 03 13.8	-0.6
CLDR	Caldiran	2.27	30	PN	Pn	18 03 14.2	+0.7
CLDR	Caldiran	2.27	30	*e*Pn	Pb	18 03 15.3	-1.5
BNGB	Bingl	2.29	323	PN	Pn	18 03 14.3	+0.5
BINT	Bingol	2.30	318	*e*Pn	Pb	18 03 16.0	-1.3
AGRB	Hanur-Agry	2.42	10	PN	Pn	18 03 16.6	+0.9
AGRB	Hanur-Agry	2.42	10	*e*Pn	Pb	18 03 17.8	-1.6
MAHB	Mahabad	2.63	98	*e*Pn	Pn	18 03 20.2	+1.8
MAHB				IAMB	IAmb	18 04 11.4	
	comp=Z,0.0nm,0.5s						
YEDI	Yedisu-Bingol	2.71	327	*e*Pn	Pb	18 03 22.0	-2.3
ISHB	Shabestar	2.73	65	*e*Pn	Pb	18 03 23.6	-1.1
ISHB				IAMB	IAmb	18 03 40.9	
	comp=Z,560nm,0.6s						
SVRC	Sivrice-ELAZID	2.77	296	PN	Pn	18 03 20.6	+0.1
URFA	Urfa	2.92	276	PN	Pn	18 03 23.9	+1.5
IMRD	Marand	2.98	58	*e*Pn	Pb	18 03 26.6	-2.3
IMRD				IAMB	IAmb	18 04 28.2	
	comp=Z,947nm,0.6s						
IDHR	Dehrash	4.03	127	*e*Pn	Pn	18 03 39.3	+1.5
IDHR				IAMB	IAmb	18 04 57.6	
	comp=Z,0.0nm,0.6s						
ISRB	Sarab	4.18	80	*e*Pn	Pn	18 03 41.8	+1.9
ISRB				IAMB	IAmb	18 04 01.2	
	comp=Z,299nm,0.4s						
BHD	Baghdad	4.21	158	*e*Pn	Pn	18 03 40.0	0.0
BHD				*e*Sn	Sn	18 04 25.0	-4.5
VYHS	Vyhne	20.60	311	*e*P	P	18 07 15.2	+0.1

JMA 13 18:26:37.7±0.2, **24°.83N**×**123°.21E, h28**km**, M1.6,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.41	206	P	Pb	18 26 46.2	-0.4
YOJ				*e*S	Sb	18 26 52.2	-0.4
JYNG	Yonagunijimaku	0.45	213	P	Pb	18 26 46.9	-0.3
JYNG				*e*S	Sb	18 26 53.2	-0.4
IRIF	Iriomote-Funau	0.68	136	P	Pb	18 26 50.7	-0.4
IRIF				S	Sb	18 27 00.2	0.0
JKRS	Kuro-shima	0.94	129	P	Pn	18 26 54.6	-0.4
JIJ	Ishigaki jima	0.97	118	P	Pn	18 26 55.5	+0.1
JISG	Ishigakijimahi	1.03	103	P	Pn	18 26 55.5	-0.8

TAP 13 18:27:06.2, 25°.02N×**121°.86E, h125**km±1km**, ML2.6, D,**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WFSB	Wu-fen Shan	0.09	305	*e*P	Pn	18 27 23.5	+0.3
	baz=305						
NTC	Toucheng	0.17	191	*e*P	Pn	18 27 23.3	0.0
	baz=190						
TATO	Taipei	0.34	263	*e*P	Pn	18 27 23.6	-0.3
	baz=262						
TATO				S	Sn	18 27 36.6	-0.6
	baz=262						
TWE	Neicheng	0.34	211	P	Pn	18 27 24.1	+0.2
	baz=208						
TWE				S	Sn	18 27 37.3	0.0
	baz=208						
TWY	Chenhua	0.35	317	*e*P	Pn	18 27 22.2	-1.7
	baz=317						
TWC	Suao	0.41	182	*e*P	Pn	18 27 24.4	+0.2
	baz=180						
TWC				S	Sn	18 27 36.9	-0.8
	baz=180						
TWS1	Kuangyinshan	0.41	282	P	Pn	18 27 24.5	+0.3
	baz=281						
TWS1				S	Sn	18 27 37.8	0.0
	baz=281						
ENTT	Nioudou	0.46	216	*e*P	Pn	18 27 24.6	+0.1
	baz=214						
ENTT				*e*S	Sn	18 27 38.1	-0.2
	baz=214						
NDT	Datong Townshi	0.52	218	P	Pn	18 27 24.7	-0.2
	baz=217						
NDT				S	Sn	18 27 38.4	-0.6
	baz=217						
EOS1	EOS1	0.53	153	*e*P	Pn	18 27 25.1	+0.3
	baz=152						
NANB	Nanao	0.60	190	P	Pn	18 27 25.8	+0.5
	baz=189						
NANB				S	Sn	18 27 39.6	-0.2
	baz=189						
ENA	Nanau	0.60	191	*e*P	Pn	18 27 26.1	+0.8
	baz=189						
ENA				*e*S	Sn	18 27 40.6	+0.8
	baz=189						
NCUH	Zhongli	0.62	266	*e*P	Pn	18 27 24.7	-0.7
	baz=265						
NCUH				*e*S	Sn	18 27 39.7	-0.2
	baz=265						
NNS	Nan Shan	0.73	218	P	Pn	18 27 26.5	0.0
	baz=217						
NNS				S	Sn	18 27 41.5	-0.2
	baz=217						
NNSB	Datong	0.73	217	*e*P	Pn	18 27 26.3	-0.2
	baz=216						
NNSB				*e*S	Sn	18 27 41.4	-0.3
	baz=216						
NACB	Ninganchiao	0.88	196	*e*S	Sn	18 27 43.5	-0.2
	baz=196						
ETLH	Xiulin Townshi	0.88	203	*e*P	Pn	18 27 27.5	-0.2
	baz=203						
ETLH				S	Sn	18 27 43.1	-0.8
	baz=203						
TWD	Chiawan	0.96	195	*e*P	Pn	18 27 28.4	0.0
	baz=194						
TWD				*e*S	Sn	18 27 44.5	-0.6
	baz=194						
TDCB	Techi	1.00	220	P	Pn	18 27 28.4	-0.4
	baz=220						
TDCB				S	Sn	18 27 45.5	-0.3
	baz=220						
WHF	Hehuan Shan	1.03	212	*e*S	Sn	18 27 46.9	-0.1
	baz=211						
ENLB	Shoufeng	1.14	192	*e*S	Sn	18 27 47.7	-0.3
	baz=192						
CHGB	Renai	1.14	213	P	Pn	18 27 30.3	-0.1
	baz=213						
CHGB				*e*S	Sn	18 27 48.5	-0.1
	baz=213						
ESL	Shilin	1.26	198	*e*P	Pn	18 27 30.5	-0.9
	baz=197						
ESL				*e*S	Sn	18 27 49.2	-1.2
	baz=197						
EGFH	Guangfu	1.40	197	*e*P	Pn	18 27 32.7	-0.1
	baz=196						
EGFH				*e*S	Sn	18 27 50.9	-2.2
	baz=196						
VWDT	VWDT	1.42	208	P	Pn	18 27 33.6	+0.6
	baz=207						
VWDT				S	Sn	18 27 53.9	+0.4
	baz=207						
SMLT	Sun Moon Lake	1.43	218	*e*S	Sn	18 27 54.0	+0.1
	baz=217						
TYC	Yuchr	1.44	220	*e*S	Sn	18 27 53.8	-0.1
	baz=219						
WNT	Mingjian	1.56	224	*e*S	Sn	18 27 55.9	-0.4
	baz=223						
HGSD	Ruisui	1.57	195	P	Pn	18 27 35.1	+0.3
	baz=194						
HGSD				S	Sn	18 27 56.9	+0.4
	baz=194						
EHY	Hungye	1.58	198	*e*P	Pn	18 27 35.2	+0.2
	baz=197						
EHY				*e*S	Sn	18 27 55.3	-1.6
	baz=197						
YULB	Yu-li	1.70	198	*e*P	Pn	18 27 35.5	-0.9
	baz=197						
YULB				*e*S	Sn	18 27 57.2	-2.0
	baz=197						

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*ISN **13** 18:39:43.4±1.0, 37°.22N×42°.52E, h2km, ML3.5*
*DDA **13** 18:39:48.2, 37°.13N×42°.43E, h10km±3km, ML3.3*
*ISK **13** 18:39:49.5, 37°.12N×42°.49E, h19km, ML3.6/14*
ISC 13 18:39:47.9±1.4, **37°.06N**±0°.03×**42°.45E**±0°.03, **h4**km±11km,
n33, σ1^{s}.**07**/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	Sırnak	0.43	356	*i* P	Pg	18 39 54.2	-2.1
SIRN				IAML_P			
	comp=Z,12µm,0.1s						
MSL	Mosul	0.85	141	*e*Pg	Pb	18 40 05.2	0.0
	baz=330						
MSL				*e*Sg	Sn	18 40 18.5	-0.9
CUKT	Cukurca	0.94	78	PG	Pb	18 40 06.9	0.0
CUKT				SG	Sb	18 40 20.6	+0.8
CUKT	Cukurca	0.94	78	*i* P	Pb	18 40 07.0	+0.2
CUKT				IAML_P			
	comp=Z,8µm,0.4s						
SRTM	Siirt_Merkez	1.02	336	*i* P	Pg	18 40 06.4	-1.0
SRTM				*i* S	Sg	18 40 20.2	-0.5
SRTM				IAML_P			
	comp=Z,2µm,0.1s						
HAKT	HAKKARI	1.12	63	*i* P	Pg	18 40 09.2	-0.1
HAKT				IAML_P			
	comp=Z,7µm,0.4s						
BTMN	Batman	1.25	312	*i* P	Pg	18 40 11.6	-0.3

BTMN				*i* S	Sb	18 40 28.5	-0.2
BTMN				IAML_P			
	comp=Z,1µm,0.3s						
AKDM	Akdamar-Van	1.33	18	PN	Pn	18 40 12.9	-0.6
AKDM				SN	Sb	18 40 29.7	-1.3
GEVA	Gevas	1.34	21	*i* P	Pn	18 40 13.5	0.0
GEVA				IAML_P			
	comp=Z,4µm,0.3s						
MARD	Mardin	1.36	281	*i* P	Pg	18 40 14.3	+0.3
MARD				*i* S	Sn	18 40 34.3	+2.0
BLIS	Bitlis-Merkez	1.38	349	*i* P	Pn	18 40 13.8	-0.2
BLIS				*i* S	Sn	18 40 32.8	0.0
SVAN	Silvan-Diyarba	1.47	318	PN	Pn	18 40 15.1	-0.2
SVAN				SN	Sn	18 40 34.4	-0.6
SVAN	Silvan-Diyarba	1.47	318	*i* P	Pb	18 40 15.5	-0.4
SVAN				*i* S	Sb	18 40 35.1	+0.1
SVAN				IAML_P			
	comp=Z,4µm,0.2s						
YOVA	Hakkari_Yksek	1.56	70	*i* P	Pg	18 40 18.0	+0.2
YOVA				*i* S	Sg	18 40 40.6	+2.7
YOVA				IAML_P			
	comp=Z,2µm,0.4s						
BASK	Baskale_VAN	1.58	51	*i* P	Pn	18 40 17.1	+0.2
BASK				IAML_P			
	comp=Z,2µm,0.3s						
MAZI	Mazidag	1.65	285	PN	Pb	18 40 18.5	-0.4
TVAN	Van	1.65	27	*i* P	Pg	18 40 19.8	+0.3
VANB	Van	1.70	26	PN	Pn	18 40 17.2	-1.3
ADCV	BITLIS_Adilcev	1.76	7	*i* P	Pb	18 40 20.8	0.0
ADCV				IAML_P			
	comp=Z,439nm,0.1s						
MUSM	Mu-Merkez	1.82	336	*i* P	Pn	18 40 19.9	-0.2
MUSM				IAML_P			
	comp=Z,3µm,0.2s						
DYBB	Diyarbakir	2.04	297	PN	Pb	18 40 24.3	-1.3
MLAZ	Malazgirt-MUS	2.08	2	PN	Pn	18 40 24.1	+0.4
BNGL	BINGOL	2.15	332	*i* P	Pb	18 40 26.2	-1.3
BNGL				*i* S	Sb	18 40 54.6	0.0
VRTB	Varto-Mus	2.24	340	PN	Pn	18 40 26.0	+0.1
BNGB	Bingl	2.38	325	PN	Pn	18 40 28.5	+0.7
BGOL	Bingol	2.38	324	*i* P	Pb	18 40 32.0	+0.6
BGOL				IAML_P			
	comp=Z,359nm,0.4s						
KARO	Karliova-Bingo	2.50	334	PN	Pn	18 40 30.0	+0.5
AGRB	Hanur-Agry	2.54	9	PN	Pn	18 40 30.4	+0.3
SVRC	Sivrice-ELAZID	2.82	299	PN	Pn	18 40 35.1	+1.2
URFA	Urfa	2.92	279	PN	Pn	18 40 37.0	+1.8
KOPR	Koprukoy-ERZUR	2.96	351	PN	Pn	18 40 37.9	+2.0
BHD	Baghdad	4.10	157	*e*Pn	Pn	18 40 50.0	-1.3
BHD				*e*Sn	Sn	18 41 37.0	-2.7
LANS	Liptovska Anna	20.59	313	*e*P	P	18 44 28.5	+0.7

PDG ***13*** *18:47:16.6±0.7, 44°.89N×14°.89E, h13^{km}±1^{km}, ML3.9/12, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*
IDC ***13*** *18:47:16.5±1.7, 45°.02N×15°.09E, h0^{km}, mb1 3.6/8, mb1mx3.4/40, mbtmp3.5/8, ML3.9/7, Error ellipse: s-maj=17.1km s-min=14.7km az=52.0*
BGR ***13*** *18:47:17.3±0.9, 44°.84N×15°.24E, h10^{km}, ML3.7/8, Error ellipse: s-maj=13.3km s-min=8.9km az=112.0*
BEO ***13*** *18:47:17.9±0.3, 44°.94N×15°.01E, h5^{km}±2^{km}, ML3.5/9*
ISCJB ***13*** *18:47:17.2±0.3, 44°.92N±0°.01×14°.89E±0°.02, h24^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=1.6km az=41.7*
PRU ***13*** *18:47:17.9±0.0, 45°.03N×15°.04E, h0^{km}*
ROM ***13*** *18:47:17.0, 44°.94N×14°.96E, h5^{km}, ML3.6*
SAR ***13*** *18:47:17.3±0.2, 44°.91N×15°.03E, h4^{km}, ML3.6/1*
LDG ***13*** *18:47:20.3±0.1, 44°.89N×14°.86E, h10^{km}, Md3.6/2, Ml3.6/29, Error ellipse: s-maj=3.8km s-min=2.8km az=173.0*

ISC 13 18:47:17.0±0.9**, 44°.95N**±0°.02×**14°.96E**±0°.02**, h17**^{km}±7^{km}**, n201, σ1^{s}88**/322**, 15C-15D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	0.39	189	*i* Pg	Pg	18 47 24.4	-0.6
NVLJ				Sg	Sg	18 47 30.6	0.0
RIY	Rijeka	0.50	318	*e*Pg	Pg	18 47 27.2	+0.1
RIY				*e*Sg	Sb	18 47 35.9	+1.3
RIY	Rijeka	0.50	318	iPg	Pg	18 47 27.3	+0.2
RIY				Sg	Sb	18 47 35.8	+1.2
RIY	Rijeka	0.50	318	*e*Pg	Pg	18 47 27.1	0.0
RIY				*e*Sg	Sb	18 47 35.8	+1.2
BOJS	Bojanci	0.59	20	*e*Pg	Pg	18 47 28.5	-0.2
BOJS				*e*Sg	Sg	18 47 36.6	0.0
BOJS	Bojanci	0.59	20	⇓*i*Pg	Pg	18 47 28.4	-0.4
BOJS				*i* Sg	Sg	18 47 36.9	+0.2
	comp=Z,1µm,0.2s						
GBRS	Gornja Briga	0.59	350	*i* Pg	Pg	18 47 28.6	-0.1
	comp=Z,669nm,0.1s						
KNDS	Knezji Dol	0.71	325	*i* Pg	Pg	18 47 30.5	-0.5
KNDS				*i* Sg	Sn	18 47 43.0	0.0
	comp=Z,902nm,0.3s						
UDBI	Udbina	0.71	126	*i* Pg	Pg	18 47 30.4	-0.6
UDBI				Sg	Sg	18 47 39.5	-0.9
OZLJ	Ozalj	0.76	28	*i* Pg	Pg	18 47 32.1	+0.3
VISS	Visnje	0.86	354	*i* Pn	Pb	18 47 33.0	-0.5
CEY	Cerknica	0.87	335	*e*Pg	Pb	18 47 34.0	+0.2
CEY				*e*Sg	Sn	18 47 47.1	+0.1
CEY	Cerknica	0.87	335	*i* Pg	Pb	18 47 33.4	-0.4
CEY				*i* Sg	Sn	18 47 47.7	+0.7
	comp=Z,340nm,0.2s						
CEY	Cerknica	0.87	335	*e*Pg	Pb	18 47 33.6	-0.2
CEY				*e*Sg	Sn	18 47 47.2	+0.2
CRES	Cresnjev	0.94	22	*e*Pg	Pb	18 47 34.4	-0.6
CRES				*e*Sg	Sb	18 47 48.0	+0.8
DUGI	Dugi Otok	0.96	176	*i* Pg	Pb	18 47 34.6	-0.6
DUGI				Sg	Sg	18 47 49.0	+0.7
LJU	Ljubljana	1.13	345	*e*Pg	Pn	18 47 39.1	+0.9
LJU				*e*Sg	Sg	18 47 55.5	+1.7
PTJ	Puntijarka	1.19	36	iPg		18 47 39.5	
PTJ				Sg	Sn	18 47 55.6	+0.6
MORI	Morici	1.21	153	*i* Pg	Pn	18 47 39.4	+0.2
MORI				Sg	Sg	18 47 56.2	+0.1
ZIRJ	Zirje	1.39	159	*e*Pn	Pb	18 47 42.7	+0.2
ZIRJ				Sn	Sg	18 48 02.4	+0.6
KALN	Kalnik	1.58	41	*i* Pn	Pn	18 47 45.3	+0.9
KALN				Sn	Sg	18 48 08.5	+0.5
OBKA	Obir	1.58	350	*e*Pn	Pb	18 47 46.7	+0.7
	comp=Z,82nm,0.2s,SNR=349						
OBKA				*e*Sg	Sg	18 48 09.2	+1.1
	comp=Z,1µm,0.5s						
OBKA	Obir	1.58	350	*e*Pn	Pb	18 47 46.8	+0.8
BLY	Banja Luka	1.59	97	*e*Pn	Pn	18 47 45.2	+0.7
BLY				*e*Sn	Sn	18 48 05.9	+1.2
BLY	Banja Luka	1.59	97	⇓*i*P	Pn	18 47 45.5	+1.0
BLY				S	Sb	18 48 06.2	+0.3
BLY	Banja Luka	1.59	97	*e*Pn	Pn	18 47 44.7	+0.2
BLY				*e*Sn	Sn	18 48 05.9	+1.2
MGRS	Mrkonjic Grad	1.61	109	*e*Pn	Pn	18 47 45.6	+0.9
MGRS				*e*Sn	Sb	18 48 06.6	+0.3
SOKA	Soboth	1.73	2	*e*Pn	Pn	18 47 47.8	+1.4
	comp=Z,58nm,0.3s,SNR=158						
SOKA				*e*Sn	Sb	18 48 11.7	+1.8
	comp=Z,104nm,0.3s						
MYKA	Terra Mystica	1.92	332	*e*Pn	Pb	18 47 51.2	-0.4
	comp=Z,86nm,0.4s,SNR=130						
MYKA				*e*Sg	Sg	18 48 19.3	+0.5
	comp=Z,189nm,0.3s						
BEHE	Becsehely	1.98	39	*e*Pn	Pn	18 47 51.5	+1.7
BEHE	Becsehely	1.98	39	*e*Pn	Pg	18 47 55.1	0.0
HVAR	Hvar	2.07	148	*e*Pn	Pn	18 47 52.4	+1.3
HVAR				Sn	Sb	18 48 19.7	+0.1
MAKA	Makarska	2.23	138	*e*Pn	Pb	18 47 55.6	-1.2
MAKA				Sn	Sb	18 48 25.3	+1.2
DOB	Doboj	2.24	94	*e*Pn	Pn	18 47 54.0	+0.6
ARSA	Arzberg	2.33	9	*e*Pn	Pn	18 47 56.1	+1.4
ARSA				*e*Sn	Sn	18 48 25.8	+2.8
ARSA	Arzberg	2.33	9	*e*Pn	Pn	18 47 56.1	+1.4
	comp=Z,28nm,0.3s,SNR=36						
ARSA				*e*Sn	Sn	18 48 25.0	+1.9
	comp=Z,48nm,0.5s						
ARSA	Arzberg	2.33	9	*e*Pn	Pn	18 47 56.0	+1.2
KBA	Koelnbreinsper	2.41	333	*e*Pn	Pn	18 47 58.2	+2.4
	comp=Z,14nm,0.3s,SNR=34						
KBA				Sn	Sb	18 48 28.8	-0.7
	comp=Z,49nm,0.3s						
ABTA	Abfaltersbach	2.48	317	*e*Pn	Pn	18 47 58.7	+1.9
	comp=Z,12nm,0.3s,SNR=32						
ABTA				*e*Sg	Sg	18 48 37.5	+0.7
	comp=Z,184nm,0.6s						
TIH	Tihany	2.83	45	*e*Pn	Pn	18 48 04.1	+2.6
TIH				Sn	Sn	18 48 37.0	+1.9
AQU	L'Aquila	2.83	204	*e*Pn	Pn	18 48 02.6	+1.0
AQU				*e*Sn	Sn	18 48 37.8	+2.4
STON	Ston	2.87	135	*e*Pn	Pn	18 48 03.8	+1.8
STON				*e*Sn	Sn	18 48 38.3	+2.1
STON	Ston	2.87	135	*e*Pn	Pn	18 48 04.1	+2.0
STON	Ston	2.87	135	*e*Pn	Pn	18 48 03.0	+1.0
STON				*e*Sn	Sn	18 48 36.9	+0.7
MORH	Mrgy, Hungar	2.88	63	*e*Pn	Pn	18 48 02.1	-0.1
MORH				Sn	Sb	18 48 41.1	-1.8
MORH				*e*Sg	Sg	18 48 50.1	+0.6
MOA	Molln	2.94	351	*e*Pn	Pn	18 48 05.5	+2.4
	comp=Z,17nm,0.2s,SNR=23						
MOA				*e*Sn	Sn	18 48 41.6	+3.6
	comp=Z,54nm,0.4s						
MOA	Molln	2.94	351	*e*Pn	Pn	18 48 05.4	+2.4
SOP	Sopron	2.95	21	*e*Pn	Pn	18 48 04.1	+0.9
SOP				Sn	Sg	18 48 51.1	-0.7
HAPS	Han Pijesak,Bl	2.98	105	*e*Pn	Pn	18 48 04.3	+0.6
HAPS				*e*Sn	Sn	18 48 41.2	+2.0
HAPS	Han Pijesak,Bl	2.98	105	*e*Pn	Pn	18 48 04.4	+0.7
HAPS				*e*Sn	Sn	18 48 39.6	+0.4
CONA	Conrad Observa	3.04	11	*i* Pn	Pn	18 48 06.2	+1.7
	comp=Z,12nm,0.2s,SNR=26						
CONA				*i* Sn	Sn	18 48 42.7	+2.1
	comp=Z,11nm,0.2s						
POPM	Popiglio	3.14	255	P	Pn	18 48 07.5	+1.7
RJOB	Jochberg	3.16	332	*e*Pn	Pn	18 48 09.0	+2.8
DBRK	Dubrovnik	3.24	134	*e*Pn	Pn	18 48 09.0	+1.8
WTTA	Wattenberg	3.27	316	*i* Pn	Pn	18 48 10.1	+2.4
	comp=Z,34nm,0.3s,SNR=17						
WTTA				Sg	Sg	18 49 04.1	+2.0
	comp=Z,120nm,0.4s						
WTTA	Wattenberg	3.27	316	*e*Pn	Pn	18 48 10.2	+2.4
BRY	Bratogost	3.30	127	⇑*i*Pn	Pn	18 48 10.7	+2.6
BRY				*i* Sn	Sn	18 48 49.7	+2.7
BRY	Bratogost	3.30	127	*e*Pn	Pn	18 48 08.2	+0.1
BRY				*e*Sn	Sn	18 48 47.4	+0.4
TREB	Trebinje	3.32	131	*e*Pn	Pn	18 48 10.7	+2.5
TREB				*e*Sg	Sg	18 49 01.3	-2.3
TREB	Trebinje	3.32	131	*e*Pn	Pn	18 48 09.1	+0.9
TREB				*e*Sn	Sn	18 48 48.1	+0.9
CSKK	Cskako	3.33	42	*e*Pn	Pn	18 48 06.1	-2.3
CSKK				Sn	Sn	18 48 51.1	+3.6
UPM	Unac-Piva	3.34	120	⇑*i*Pn	Pn	18 48 10.0	+1.4
UPM				*i* Sn	Sn	18 48 50.4	+2.4
WATA	Walderalm	3.35	317	*i* Pn	Pn	18 48 11.4	+2.6
	comp=Z,23nm,0.2s,SNR=10						
BBLS	Lazići	3.37	107	*e*Pn	Pn	18 48 10.4	+1.5
BBLS	Lazići	3.37	107	*e*Pn	Pn	18 48 09.7	+0.8
BBLS				*e*Sn	Sn	18 48 49.2	+0.7
RUDO	Rudo	3.44	111	*e*Pn	Pn	18 48 10.2	+0.4
FRGS	Fruska Gora	3.44	85	*e*Pn	Pn	18 48 12.2	+2.2
FRGS				*e*Sg	Sg	18 49 06.9	-0.7
FRGS	Fruska Gora	3.44	85	*e*Pn	Pn	18 48 11.4	+1.4
FRGS				*e*Sn	Sn	18 48 50.7	+0.3
SQTA	Sankt Quirin	3.46	312	*i* Pn	Pn	18 48 13.3	+3.1
	comp=Z,9.2nm,0.1s,SNR=15						
SQTA				Sg	Sg	18 49 09.6	+1.5
	comp=Z,100nm,0.5s						
EQUI	Equi	3.52	259	P	Pn	18 48 12.9	+1.9
ZST	Bratislava	3.57	24	*e*PN	Pn	18 48 12.0	+0.4
ZST				*e*SN	Sn	18 48 51.3	-2.1
ZST				*e*SG	Sg	18 49 12.3	+0.8
PLE	Pljevlja	3.58	115	⇓*i*Pn	Pn	18 48 13.6	+1.7
PLE				*i* Sn	Sn	18 48 56.7	+2.9
HCY	Herceg Novi	3.58	133	⇑*i*Pn	Pn	18 48 13.0	+1.2
HCY				*i* Sn	Sn	18 48 56.1	+2.3
HCY	Herceg Novi	3.58	133	*e*Pn	Pn	18 48 12.2	+0.4
MOTA	Moosalm	3.59	313	*i* Pn	Pn	18 48 15.0	+2.9
	comp=Z,7.7nm,0.1s,SNR=32						
MOTA				Sg	Sg	18 49 13.9	+1.5
	comp=Z,61nm,0.5s						
FETA	Feichten	3.60	307	*i* Pn	Pn	18 48 15.1	+2.8
	comp=Z,7.5nm,0.3s,SNR=9.2						
FETA				Sg	Sg	18 49 14.7	+2.0
	comp=Z,90nm,0.9s						
NKY	Niksic	3.62	125	⇓*i*Pn	Pn	18 48 14.5	+2.1
NKY				*i* Sn	Sn	18 48 57.4	+2.7
NKME	Niksic	3.62	126	⇑*i*Pn	Pn	18 48 13.8	+1.4
NKME				*i* Sn	Sn	18 48 57.4	+2.6
SRO2	Moca	3.68	39	*e*PN	Pn	18 48 14.0	+0.8
SRO2				*e*SN	Sn	18 48 54.6	-1.6
SRO	Srobarova	3.69	38	*e*PN	Pn	18 48 14.6	+1.4
SRO				*e*SN	Sn	18 48 55.2	-1.1
PART	Garmisch-Parte	3.69	315	*e*Pn	Pn	18 48 16.1	+2.7
DIVS	Divibare	3.70	102	*e*Pn	Pn	18 48 14.0	+0.5
DIVS	Divibare	3.70	102	*e*Pn	Pn	18 48 14.6	+1.1
DIVS				*e*Sn	Sn	18 48 57.0	+0.2
CEME	Cevo	3.74	129	⇓*i*Pn	Pn	18 48 15.6	+1.5
CEME				*i* Sn	Sn	18 49 00.4	+2.6
MODS	Modra-Piesok	3.78	24	*e*PN	Pn	18 48 14.8	+0.3
MODS				*e*SN	Sn	18 48 56.9	-1.7
MODS				*e*SG	Sg	18 49 17.9	-0.4
MODS				*e*LG	Lg	18 49 23.8	
RETA	Reutte	3.86	313	*i* Pn	Pn	18 48 18.2	+2.4
	comp=Z,2.9nm,0.2s,SNR=9.5						
RETA				*e*Sn	Sn	18 49 03.8	+3.0
	comp=Z,15nm,0.3s						
BUM	Brajici-Budva	3.90	131	⇑*i*Pn	Pn	18 48 16.9	+0.7
BUM				*i* Sn	Sn	18 49 03.8	+2.2
KOME	Kolasin	3.90	121	⇓*i*Pn	Pn	18 48 17.6	+1.2
KOME				*i* Sn	Sn	18 49 04.5	+2.6
TRUS	Trudelj	3.96	99	*e*Pn	Pn	18 48 18.8	+1.8
IVAS	Ivanjica	3.98	108	*e*Pn	Pn	18 48 18.7	+1.4
SJES	Sjenica	3.99	113	*e*Pn	Pn	18 48 19.3	+1.8
GEC2	GERESS Array S	3.99	348	*e*Pn	Pn	18 48 19.2	+1.7
GERES	GERESS Array B	3.99	348	Pn	Pn	18 48 19.2	+1.7
	comp=Z,4.3nm,0.3s,baz=169,slow=13,SNR=129						
GERES				Sn	Sn	18 49 06.1	+2.1
	comp=Z,16nm,0.3s,baz=168,slow=25,SNR=20						
GERES				Lg	Lg	18 49 23.9	
	comp=Z,5.8nm,0.3s,baz=169,slow=29,SNR=7.0						
DAVOX	Davos/Dischmat	3.99	299	Pn	Pn	18 48 20.5	+2.8
	comp=Z,9.4nm,0.3s,baz=118,slow=8.3,SNR=72						
DAVOX				Sn	Sn	18 49 08.6	+4.5
	comp=Z,4.1nm,0.3s,baz=140,slow=19,SNR=3.4						
DAVOX				Lg	Lg	18 49 23.8	
	comp=Z,7.7nm,0.3s,baz=346,slow=16,SNR=6.2						
PDG	Podgorica	4.01	127	*e*Pn	Pn	18 48 19.9	+2.2
PDG	Podgorica	4.01	127	⇑*i*P	Pn	18 48 19.3	+1.6
PDG	Podgorica	4.01	127	S	Sn	18 49 06.8	+2.5
PDG	Podgorica	4.01	127	*e*Pn	Pn	18 48 18.0	+0.3
PDG				*e*Sn	Sn	18 49 04.2	0.0
TTG	Podgorica	4.01	127	⇑*i*Pn	Pn	18 48 18.9	+1.2
TTG				*i* Sn	Sn	18 49 06.7	+2.5
GORR	Gorreto	4.05	267	P	Pn	18 48 19.9	+1.6
OBER	Oberstdorf	4.07	309	*e*Pn	Pn	18 48 21.9	+3.3
BAI	Bari	4.09	159	*e*Pn	Pn	18 48 18.7	-0.1
FUR	Furstenfeldbru	4.10	323	*e*Pn	Pn	18 48 21.0	+2.0
IVA	Berane	4.13	119	⇓*i*Pn	Pn	18 48 21.1	+1.7
IVA				*i* Sn	Sn	18 49 09.9	+2.6
DRME	Dracevica, Mon	4.13	131	⇑*i*Pn	Pn	18 48 20.4	+1.0
DRME				*i* Sn	Sn	18 49 09.5	+2.2
DRME	Dracevica, Mon	4.13	131	*e*Pn	Pn	18 48 20.1	+0.7
DRME				*e*Sn	Sn	18 49 07.5	+0.2
KRUC	Moravsky	4.23	13	*e*PN	Pn	18 48 21.9	+1.2
KRUC				*e*SN	Sn	18 49 08.6	-1.1
DAVA	Damuels	4.24	305	*i* Pn	Pn	18 48 23.8	+2.9
	comp=Z,3.9nm,0.2s,SNR=6.1						
DAVA				Sg	Sg	18 49 34.8	+1.8
	comp=Z,59nm,0.4s						
DAVA	Damuels	4.24	305	*e*Pn	Pn	18 48 23.9	+2.9
GRUS	Gruza	4.26	102	*e*Pn	Pn	18 48 22.7	+1.6
KHC	Kasperske Hory	4.29	348	*e*PN	Pn	18 48 23.5	+1.9
KHC				*e*x	x	18 48 29.0	
KHC				*e*SN	Sn	18 49 12.5	+1.3
SG1	Sgolgore (BA)	4.30	162	*e*Pn	Pn	18 48 21.2	-0.5
ULC	Ulcinj	4.32	132	⇑*i*Pn	Pn	18 48 23.1	+1.1
ULC				*i* Sn	Sn	18 49 13.9	+1.9
PVY	Plav	4.32	121	⇓*i*Pn	Pn	18 48 23.4	+1.3
PVY				*i* Sn	Sn	18 49 14.3	+2.2
JAVC	Velka Javorina	4.33	24	*e*PN	Pn	18 48 23.8	+1.7
UBR	Ueberruh	4.33	311	*e*Pn	Pn	18 48 24.0	+1.8
WET	Wettzell	4.43	342	*e*Pn	Pn	18 48 25.1	+1.6
VYHS	Vyhne	4.43	36	*e*PN	Pn	18 48 24.5	+0.9
VYHS				*e*SN	Sn	18 49 14.4	-0.4
MATE	Matera	4.49	163	⇓*i*P	Pn	18 48 24.0	-0.2
FASA	Fasano	4.49	156	*e*Pn	Pn	18 48 24.0	-0.3
VRAC	Vranov	4.50	14	Pn	Pn	18 48 26.1	+1.6
	comp=Z,1.0nm,0.3s,baz=198,slow=12,SNR=8.4						
VRAC				Sn	Sn	18 49 15.0	-1.4
	comp=Z,1.8nm,0.3s,baz=250,slow=15,SNR=2.9						
VRAC				Lg	Lg	18 49 36.1	
	comp=Z,0.6nm,0.3s,baz=300,slow=9.8,SNR=3.4						
VRAC	Vranov	4.50	14	*e*PN	Pn	18 48 25.9	+1.4
VRAC				*e*SN	Sn	18 49 14.7	-1.7
PSZ	Piszkesteto	4.52	47	⇓*i*P	Pn	18 48 27.1	+2.3
PSZ	Piszkesteto	4.52	47	S	Sn	18 49 16.1	-0.9
PSZ	Piszkesteto	4.52	47	*e*Pn	Pn	18 48 24.1	-0.7
PSZ				Sn	Sn	18 49 14.0	-3.0
PCP	Piancastagn	4.59	267	P	Pn	18 48 27.1	+1.4
MASS	Massafra	4.61	159	⇑*i*Pn	Pn	18 48 25.5	-0.4
BZS	Buzias	4.75	80	⇓*i*P	Pn	18 48 29.2	+1.4
SELS	Selova	4.76	109	*e*Pn	Pn	18 48 29.3	+1.2
NORI	Noerdlinger Ri	4.80	323	*e*Pn	Pn	18 48 29.7	+1.1
MDVR	Moldovita	4.80	90	⇑*i*P	Pn	18 48 30.6	+1.9
KUBS	Kucevo	4.82	94	*e*Pn	Pn	18 48 29.9	+1.1
PGF	Pioggiola	4.94	243	*e*Pn	Pn	18 48 31.2	+0.6
PGF				*e*Sn	Sn	18 49 24.7	-2.7
	comp=Z,7.1nm,0.3s						
GOPC	GO Pecny, Ondr	4.97	359	*e*PN	Pn	18 48 31.8	+0.9
GOPC				*e*SN	Sn	18 49 27.2	-0.7
BOVS	Bovan	5.02	103	*e*Pn	Pn	18 48 32.9	+1.3
PRU	Pruhonice	5.05	357	*e*PN	Pn	18 48 33.0	+1.0
PRU				*e*SN	Sn	18 49 28.4	-1.5
TIR	Tirane	5.08	133	*e*Pn	Pn	18 48 32.7	+0.2
TIR	Tirane	5.08	133	⇓*i*P	Pn	18 48 31.6	-0.9
MORC	Moravsky Berou	5.14	19	⇑*i*P	Pn	18 48 35.2	+2.0
MORC	Moravsky Berou	5.14	19	*e*PN	Pn	18 48 35.0	+1.8
MORC				*e*SN	Sn	18 49 31.3	-0.8
IMI	Imperia	5.17	261	P	Pn	18 48 33.8	+0.1
ROTZ	Rotzenmuhle	5.17	340	*e*Pn	Pn	18 48 34.6	+1.0
ROTZ				*e*Sn	Sn	18 49 31.6	-1.3
MGRO	Montegrosso	5.20	262	P	Pn	18 48 34.5	+0.3
LANS	Liptovska Anna	5.21	35	*e*PN	Pn	18 48 36.8	+2.6
LANS				*e*SN	Sn	18 49 32.5	-1.4
ZAGS	Zajecar	5.33	100	*e*Pn	Pn	18 48 37.8	+1.9
GRF	Grafenberg Arr	5.38	333	*e*Pn	Pn	18 48 39.2	+2.6
BARS	Barje	5.39	111	*e*Pn	Pn	18 48 33.6	-3.2
BARS	Barje	5.39	111	*e*Pn	Pn	18 48 38.0	+1.2
MANZ	Manzenberg	5.40	340	*e*Pn	Pn	18 48 37.8	+1.1
MANZ				*e*Sn	Sn	18 49 37.2	-1.3
RSP	Reno Superiore	5.46	275	P	Pn	18 48 35.9	-1.8
STU	Stuttgart	5.50	316	*e*Pn	Pn	18 48 39.3	+1.2
SBF	Sospel	5.50	261	*e*Pn	Pn	18 48 39.5	+1.2
SBF				*e*Sn	Sn	18 49 38.3	-2.8
	comp=Z,28nm,0.5s						
GZR	Gura Zlata	5.54	83	⇓*i*P	Pn	18 48 40.1	+1.2
GZR	Gura Zlata	5.54	83	S	Sn	18 49 39.7	-2.5
SKO	Skopje	5.58	120	*i* Pn	Pg	18 49 03.1	-0.7
PZZ	Stroppo	5.61	268	P	Pn	18 48 39.1	-0.7
BFO	Black Forest	5.68	309	*e*Pn	Pn	18 48 41.5	+0.9
LPG	La Plagne	5.82	278	*e*Pn	Pn	18 48 44.3	+1.4
LPG				*e*Sn	Sn	18 49 46.5	-3.0
	comp=Z,29nm,0.7s						
MBDF	Montbardon	5.83	271	*e*Pn	Pn	18 48 42.1	-0.7
MBDF				*e*Sn	Sn	18 49 46.1	-3.2
	comp=Z,23nm,0.5s						
LPL	La Plagne	5.84	278	*e*Pn	Pn	18 48 44.2	+1.2
LPL				*e*Sn	Sn	18 49 46.6	-3.1
	comp=Z,21nm,0.6s						
MOX	Moxa	6.13	340	*e*Pn	Pn	18 48 47.7	+0.9
MOX				*e*Sn	Sn	18 49 54.5	-2.0
FRF	La Foret Royal	6.13	260	*e*Pn	Pn	18 48 47.3	+0.4
FRF				*e*Sn	Sn	18 49 53.1	-3.5
	comp=Z,6.0nm,0.3s						
LMR	La Mourre	6.29	258	*e*Pn	Pn	18 48 49.1	0.0
LMR				*e*Sn	Sn	18 49 56.5	-4.0
	comp=Z,5.5nm,0.2s						
HINF	Hinteralfeld	6.30	300	*e*Pn	Pn	18 48 50.8	+1.6
HINF				*e*Sn	Sn	18 49 58.2	-2.5
	comp=Z,28nm,0.6s						
CDF	Champ du Feu	6.32	306	*e*Pn	Pn	18 48 50.5	+1.0
CDF	Champ du Feu	6.32	306	*e*Pg	Pg	18 49 17.3	-0.6
CDF				*e*Sn	Sn	18 49 59.1	-2.2
CDF				*e*Sg	Sg	18 50 37.6	-2.1
	comp=Z,30nm,0.8s						
KOLS	Kolonicke sedl	6.40	49	*e*SN	Sn	18 50 02.1	-1.0
CABF	La Chapelle	6.42	288	*e*Pn	Pn	18 48 51.9	+0.9
CABF				*e*Sn	Sn	18 50 01.0	-2.9
	comp=Z,15nm,0.6s						
VTS	Vitosha	6.43	108	⇑*i*P	Pn	18 48 52.2	+1.1
ORIF	Oris-en-Rattie	6.45	273	*e*Pn	Pn	18 48 52.4	+1.1
ORIF				*e*Sn	Sn	18 50 01.0	-3.5
	comp=Z,16nm,0.5s						
CLL	Collm	6.49	349	*e*Pn	Pn	18 48 53.0	+1.2
CLL				*e*		18 48 59.0	
CLL				*e*Sn	Sn	18 49 49.0	-16
CLL				*e*		18 50 04.0	
CLL				*e*		18 50 28.0	
CLL				*e*Sg	Sg	18 50 41.0	-4.3
	comp=Z,29nm,1.0s						
HAU	Haudompre	6.69	300	*e*Pn	Pn	18 48 55.5	+1.0
HAU				*e*Sn	Sn	18 50 07.1	-3.1
	comp=Z,3.1nm,0.2s						
SMRF	Simiane la Rot	6.79	265	*e*Pn	Pn	18 48 56.8	+0.9
SMRF				*e*Sn	Sn	18 50 08.8	-4.0
	comp=Z,8.1nm,0.7s						
TNS	Taunus Mts	6.87	322	*e*Pn	Pn	18 48 58.3	+1.3
VOIR		7.15	83	⇑*i*P	Pn	18 49 02.2	+1.3
PAGF	Fort de Pagny	7.29	303	*e*Pn	Pn	18 49 04.9	+2.1
	baz=123						
PAGF				*e*Sn	Sn	18 50 21.8	-3.4
PAGF				*e*Sg	Sg	18 51 07.5	-3.5
	comp=Z,22nm,0.8s						
VIVF	Saint-Julien-l	7.31	273	*e*Pn	Pn	18 49 02.9	-0.1
VIVF				*e*Sn	Sn	18 50 21.4	-4.2
	comp=Z,1.9nm,0.2s						
SFTF	Sexfontaines	7.57	299	*e*Pn	Pn	18 49 07.9	+1.3
	baz=117						
SFTF				*e*Sn	Sn	18 50 28.7	-3.3
SFTF				*e*Sg		18 51 16.3	
	comp=Z,28nm,1.0s						
WLF	Walferdange	7.62	311	⇓Pn	Pn	18 49 10.6	+3.4
WLF	Walferdange	7.62	311	*e*Pn	Pn	18 49 10.4	+3.2
MEZF	Maizieres J'vi	7.68	301	*e*Pn	Pn	18 49 09.4	+1.3
	baz=119						
MEZF				*e*Sn	Sn	18 50 30.6	-4.0
MEZF				*e*Sg		18 51 20.2	
	comp=Z,29nm,1.2s						
SMF	Signal de Mont	7.95	286	*e*Pn	Pn	18 49 12.5	+0.6
SMF				*e*Sn	Sn	18 50 37.3	-4.2
	comp=Z,18nm,0.6s						
LASF	Ste Croix	7.99	268	*e*Pn	Pn	18 49 11.8	-0.5
LASF				*e*Sn	Sn	18 50 37.6	-4.7
	comp=Z,1.6nm,0.3s						
LOR	Lormes	8.05	291	*e*Pn	Pn	18 49 13.9	+0.6
	baz=111						
LOR				*e*Sn	Sn	18 50 39.8	-4.1
	comp=Z,8.8nm,0.4s						
SSF	Saint Saulge	8.25	289	*e*Pn	Pn	18 49 16.8	+0.9
SSF				*e*Sn	Sn	18 50 44.2	-4.5
	comp=Z,5.1nm,0.5s						
MEM	Membach	8.27	316	⇑Pn	Pn	18 49 18.9	+2.8
AVF	Avril sur Loir	8.31	287	*e*Pn	Pn	18 49 17.2	+0.5
AVF				*e*Sn	Sn	18 50 46.2	-3.9
	comp=Z,7.0nm,0.7s						
BCLA	Clavier	8.50	313	⇓Pn	Pn	18 49 21.7	+2.4
GIVF	Givet	8.58	311	*e*Pn	Pn	18 49 22.2	+1.8
BGF	Bois d'Agland	8.62	285	*e*Pn	Pn	18 49 21.7	+0.7
BGF				*e*Sn	Sn	18 50 53.2	-4.7
	comp=Z,11nm,0.4s						
HYF	Humbligny	8.87	290	*e*Pn	Pn	18 49 24.9	+0.5
HYF				*e*Sn	Sn	18 50 59.2	-4.7
BAIF	Baives	8.89	309	*e*Pn	Pn	18 49 26.6	+1.9
BAIF				*e*Sn	Sn	18 51 00.0	-4.4
	comp=Z,8.8nm,0.9s						
TCF	Toulx Ste Croi	9.04	283	*e*Pn	Pn	18 49 27.5	+0.8
TCF				*e*Sn	Sn	18 51 03.5	-4.6
	comp=Z,2.0nm,0.2s						
CAF	Calviac	9.15	274	*e*Pn	Pn	18 49 29.1	+0.8
SGMF	Saint Gilles	12.49	292	*e*Pn	Pn	18 50 16.4	+2.5
QUIF	Quistinic	12.85	290	*e*Pn	Pn	18 50 19.9	+1.1
ESDC	Sonseca Array	14.95	256	Pn	P	18 50 52.0	-1.1
	comp=Z,0.5nm,0.3s,baz=59,slow=11,SNR=4.8						
EKA	Eskdalemuir Ar	15.53	318	Pn	P	18 50 58.5	-0.9
	baz=128,slow=13,SNR=3.2						
FINES	FINESS Array B	17.77	18	P	Pn	18 51 22.7	-0.7
	comp=Z,0.0nm,0.3s,baz=220,slow=13,SNR=2.6						
MMAI	Mount Meron Ar	19.80	120	P	P	18 51 47.3	+0.6
	comp=Z,0.5nm,0.3s,baz=316,slow=10.0,SNR=3.7						
KBZ	Khabaz	19.98	84	P	P	18 51 49.2	+0.7
	comp=Z,0.1nm,0.3s,baz=286,slow=5.3,SNR=2.3						

*DDA **13** 19:09:11.8, 38.°15N×26.°68E, h18km±1km, ML3.3*
*ISCJB **13** 19:09:12.8±0.3, 38.°16N±0.°02×26.°69E±0.°03, h9km±3km, Error ellipse: s-maj=4.4km s-min=2.4km az=148.8*
*ISK **13** 19:09:12.1, 38.°16N×26.°69E, h9km, ML3.2/20*
*ATH **13** 19:09:12.5, 38.°12N×26.°68E, h31km±1km, ML3.1/4, Error ellipse: s-maj=2.9km s-min=1.2km az=247.0*
*THE **13** 19:09:13.7, 38.°13N×26.°63E, h10km±1km, ML3.1/4, Error ellipse: s-maj=3.0km s-min=0.6km az=234.0*
ISC 13 19:09:13.1±0.9**, 38.°15N**±0.°02×**26.°69E**±0.°02**, h19**km±1km**, n64, σ0.°74**/82**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGB	**zmir**	**0.18**	**124**	*i* P	**Pg**	**19 09 17.6**	**-0.3**
DGB				*i* S	**Sg**	**19 09 20.1**	**-1.0**
GMLD	**Gumuldur**	**0.19**	**114**	PG	**Pb**	**19 09 16.9**	**-0.3**
GMLD				SG	**Sb**	**19 09 19.9**	**+0.1**
URLA	**Izmir**	**0.22**	**339**	PG	**Pb**	**19 09 17.2**	**-0.9**
URLA				SG	**Sb**	**19 09 20.5**	**-0.9**
URLA	**Izmir**	**0.22**	**339**	*i* P	**Pb**	**19 09 17.5**	**-0.6**
URLA				*i* S	**Sg**	**19 09 21.9**	**-0.3**
URLA				IAML_P			
	comp=Z,38µm,0.2s						
CESE	**eme**	**0.36**	**300**	PG	**Pg**	**19 09 19.4**	**-1.3**
BLCB	**Balcova**	**0.36**	**50**	PG	**Pg**	**19 09 19.4**	**-1.4**
KRBN	**Karaburun**	**0.45**	**346**	PG	**Pg**	**19 09 21.4**	**-1.0**
SMG	**Samos**	**0.46**	**166**	P	**Pb**	**19 09 22.3**	**-0.4**
SMG				S	**Sb**	**19 09 29.5**	**+0.4**
	comp=Z,5µm,0.2s						
SMG	**Samos**	**0.46**	**166**	P	**Pb**	**19 09 22.3**	**-0.4**
SMG				S	**Sb**	**19 09 29.4**	**+0.4**
SMG				AML	AML	19 09 29.9	
	comp=N,9973µm,0.2s						
SMG				AML	AML	19 09 30.1	
	comp=E,8292µm,0.3s						
CHOS	**Chios island**	**0.55**	**295**	PG	**Pb**	**19 09 23.7**	**-0.5**
CHOS	**Chios island**	**0.55**	**295**	P	**Pb**	**19 09 23.9**	**-0.3**
CHOS				S	**Sb**	**19 09 32.1**	**+0.4**
	comp=E,1µm,0.4s						
CHOS	**Chios island**	**0.55**	**295**	P	**Pg**	**19 09 24.1**	**-0.2**
CHOS				S	**Sb**	**19 09 32.9**	**+1.1**
CHOS				AML	AML	19 09 35.6	
	comp=E,3144µm,0.6s						
CHOS				AML	AML	19 09 36.7	
	comp=N,2697µm,0.4s						
FOCM	**Foa**	**0.56**	**3**	PG	**Pb**	**19 09 22.7**	**-1.5**
FOCM				SG	**Sg**	**19 09 31.4**	**-0.5**
GCAM	**G?zelcaml?**	**0.62**	**137**	PG	**Pg**	**19 09 25.2**	**-0.3**
GCAM	**G?zelcaml?**	**0.62**	**137**	*i* P	**Pg**	**19 09 25.4**	**-0.1**
GCAM				*i* S	**Sg**	**19 09 34.3**	**+0.4**
CAND	**Candarli**	**0.80**	**6**	PG	**Pb**	**19 09 27.9**	**-0.6**
ZEDA	**zmir-Bergama**	**0.86**	**20**	*i* P	**Pb**	**19 09 28.5**	**-1.0**
ZEDA				IAML_P			
	comp=Z,8µm,0.4s						
DKL	**Dikili**	**0.93**	**10**	PG	**Pb**	**19 09 30.2**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**0.97**	**102**	PG	**Pb**	**19 09 31.3**	**-0.1**
PSRA	**Psara**	**0.97**	**294**	P	**Pg**	**19 09 33.2**	**+1.2**
AYDN	**Tasoluk**	**1.06**	**117**	*i* P	**Pn**	**19 09 33.0**	**0.0**
AYDN				*i* S	**Sg**	**19 09 47.9**	**+0.3**
GOMA	**Golmarmara-Man**	**1.11**	**60**	PN	**Pb**	**19 09 33.9**	**+0.2**
AKHS	**Akhisar**	**1.14**	**50**	*i* P	**Pb**	**19 09 34.1**	**-0.1**
AKHS				IAML_P			
	comp=Z,8µm,0.2s						
AKS	**Akhisar**	**1.14**	**50**	PN	**Pg**	**19 09 34.5**	**-0.7**
PRK	**Paraskevi**	**1.14**	**343**	P	**Pg**	**19 09 34.8**	**-0.4**
PRK				S	**Sg**	**19 09 50.6**	**+0.4**
	comp=Z,1µm,0.5s						
PRK	**Paraskevi**	**1.14**	**343**	P	**Pg**	**19 09 34.9**	**-0.3**
PRK				AML	AML	19 09 54.9	
	comp=E,2171µm,0.5s						
PRK				AML	AML	19 09 55.4	
	comp=N,2222µm,0.5s						
AYVA	**Ayvalik**	**1.15**	**360**	*i* P	**Pg**	**19 09 34.9**	**-0.6**
AYVA				*i* S	**Sg**	**19 09 50.9**	**+0.3**
BODT	**Bodrum**	**1.20**	**156**	PN	**Pg**	**19 09 35.5**	**-0.8**
BODT	**Bodrum**	**1.20**	**156**	P	**Pb**	**19 09 35.3**	**+0.1**
BODT				S	**Sg**	**19 09 52.5**	**+0.6**
BDRM	**Kayabasi**	**1.24**	**151**	*i* P	**Pb**	**19 09 36.0**	**+0.1**
BDRM				IAML_P			
	comp=Z,2µm,0.1s						
SIGR	**SIGRI**	**1.24**	**328**	PN	**Pg**	**19 09 36.4**	**-0.8**
SIGR	**SIGRI**	**1.24**	**328**	P	**Pb**	**19 09 35.5**	**-0.5**
SIGR				S	**Sn**	**19 09 52.0**	**+0.3**
	comp=Z,568nm,0.6s						
SIGR	**SIGRI**	**1.24**	**328**	P	**Pb**	**19 09 35.6**	**-0.4**
SIGR				AML	AML	19 09 55.0	
	comp=N,1392µm,0.7s						
SIGR				AML	AML	19 09 56.3	
	comp=E,965µm,0.5s						
APE	**Apeiranthos**	**1.42**	**221**	PN	**Pn**	**19 09 37.9**	**-0.1**
APE	**Apeiranthos**	**1.42**	**221**	P	**Pn**	**19 09 37.8**	**-0.3**
STEP	**BALIKESIR_Sava**	**1.46**	**33**	*i* P	**Pb**	**19 09 40.0**	**+0.3**
AMGA	**Amorgos Island**	**1.47**	**206**	P	**Pn**	**19 09 38.1**	**-0.5**
MANT	**Manisa**	**1.50**	**77**	*i* P	**Pg**	**19 09 41.8**	**-0.4**
MANT				*i* S	**Sb**	**19 09 59.9**	**+0.5**
DAT	**Datca**	**1.59**	**153**	PN	**Pb**	**19 09 41.3**	**-0.6**
DAT	**Datca**	**1.59**	**153**	*i* P	**Pn**	**19 09 40.7**	**+0.4**
KULA	**Kula-Manisa**	**1.59**	**76**	P	**Pb**	**19 09 42.2**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**1.59**	**356**	*i* P	**Pn**	**19 09 40.4**	**+0.1**
BAYC				*i* S	**Sn**	**19 10 00.4**	**+0.1**
BAYC				IAML_P			
	comp=Z,1µm,0.1s						
YER	**Yerkesik**	**1.62**	**128**	PN	**Pn**	**19 09 41.3**	**+0.5**
YER	**Yerkesik**	**1.62**	**128**	P	**Pn**	**19 09 41.2**	**+0.5**
EZN	**Ezine**	**1.69**	**350**	PN	**Pb**	**19 09 42.7**	**-1.0**
BALY	**Balya**	**1.74**	**24**	*i* P	**Pb**	**19 09 45.2**	**+0.7**
BALB	**Balikesir**	**1.75**	**32**	PN	**Pb**	**19 09 44.4**	**-0.2**
BOZC	**Bozcaada**	**1.76**	**344**	PN	**Pn**	**19 09 43.3**	**+0.7**
BOZC	**Bozcaada**	**1.76**	**344**	*i* P	**Pb**	**19 09 44.4**	**-0.3**
BOZC				IAML_P			
	comp=Z,2µm,0.2s						
BBRN	**Bozburun-Marma**	**1.83**	**143**	PN	**Pb**	**19 09 44.7**	**-1.3**
TURN	**Turunc**	**1.98**	**130**	PN	**Pn**	**19 09 44.3**	**-1.4**
TURN	**Turunc**	**1.98**	**130**	*i* P	**Pn**	**19 09 44.6**	**-1.1**
TURN				IAML_P			
	comp=Z,404nm,0.1s						
DURS	**Dursunbey**	**2.00**	**43**	*i* P	**Pn**	**19 09 46.9**	**+0.9**
DURS				*i* S	**Sn**	**19 10 10.8**	**+0.2**
DURS				IAML_P			
	comp=Z,667nm,0.1s						
DALY	**Dalyan (Mula)**	**2.05**	**130**	PN	**Pn**	**19 09 47.7**	**+1.1**
LIA	**Limnos Island**	**2.10**	**326**	P	**Pn**	**19 09 48.0**	**+0.7**
LIA	**Limnos Island**	**2.10**	**326**	P	**Pn**	**19 09 47.8**	**+0.6**
DION	**Dionisos Attik**	**2.18**	**269**	P	**Pn**	**19 09 49.2**	**+0.8**
KHAL	**Karahalli**	**2.21**	**84**	*i* P	**Pg**	**19 09 55.5**	**-0.2**
KHAL				IAML_P			
	comp=Z,702nm,0.2s						
LPK	**Lapseki**	**2.22**	**1**	PN	**Pn**	**19 09 50.0**	**+1.1**
GELI	**Tayfur-Gelibol**	**2.25**	**356**	PN	**Pn**	**19 09 50.6**	**+1.3**
EDC	**Edincik**	**2.37**	**22**	PN	**Pn**	**19 09 52.5**	**+1.5**
FETY	**Fethiye**	**2.43**	**128**	*i* P	**Pb**	**19 09 54.1**	**-2.1**
ALN	**Alexandroupoli**	**2.79**	**350**	P	**Pn**	**19 09 57.2**	**+0.5**
ALN	**Alexandroupoli**	**2.79**	**350**	P	**Pn**	**19 09 57.4**	**+0.7**

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*ISCJB **13** 19:13:12.0±0.7, 36.°56N±0.°03×9.°75W±0.°05, h35km, Error ellipse: s-maj=5.9km s-min=4.0km az=173.3*
*MDD **13** 19:13:14.5±1.5, 36.°62N×9.°84W, h32km±24km, mbLg2.1/21, Error ellipse: s-maj=16.4km s-min=8.8km az=38.0, PRXIMO*
*CNRM **13** 19:13:15.9, 36.°44N×9.°41W, h26km, ml2.7*
*INMG **13** 19:13:15.3±1.0, 36.°67N×9.°75W, h17km±4km, ML1.9, Error ellipse: s-maj=4.3km s-min=2.8km az=47.0*
*IGIL **13** 19:13:15.0, 36.°66N×9.°75W, h17km, ML2.0*
ISC 13 19:13:11.3±1.6**, 36.°54N**±0.°04×**9.°92W**±0.°07**, h35km, n54, σ1.°61**/98**, 5C-2D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.05**	**56**	⇑*i*P	**Pn**	**19 13 30.9**	**+1.4**
PFVI				*e*S	**Sn**	**19 13 42.7**	**-0.3**
PFVI				A	A	19 13 43.7	
	23nm,0.1s						
PFVI	**Vila Bisbo**	**1.05**	**56**	⇑P	**Pn**	**19 13 30.9**	**+1.4**
	3.2nm,0.1s,SNR=18						
PFVI				S	**Sn**	**19 13 42.7**	**-0.3**
	21nm,0.1s,SNR=17						
PFVI	**Vila Bisbo**	**1.05**	**56**	P	**Pn**	**19 13 31.5**	**+2.0**
PFVI				S	**Sn**	**19 13 43.3**	**+0.3**
MORF	**Marmelete**	**1.27**	**53**	*e*P	**Pn**	**19 13 34.0**	**+1.5**
MORF				*e*S	**Sn**	**19 13 47.7**	**-0.6**
MORF				AML	AML	19 13 48.8	
	comp=N,26nm,0.2s						
MORF	**Marmelete**	**1.27**	**53**	⇓*i*P	**Pn**	**19 13 34.0**	**+1.5**
MORF				*e*S	**Sn**	**19 13 48.2**	**-0.2**
MORF				A	A	19 13 49.4	
	comp=N,19nm,0.1s						
MORF	**Marmelete**	**1.27**	**53**	P	**Pn**	**19 13 34.0**	**+1.5**
MORF				S	**Sn**	**19 13 48.2**	**-0.2**
	comp=N,19nm,0.1s						
PTEO	**Sao Teotonio**	**1.38**	**43**	*e*P	**Pn**	**19 13 35.4**	**+1.4**
PTEO				*e*S	**Sn**	**19 13 51.0**	**-0.1**
PTEO				A	A	19 13 51.6	
	comp=N,11nm,0.5s						
PTEO	**Sao Teotonio**	**1.38**	**43**	P	**Pn**	**19 13 35.4**	**+1.4**
PTEO				S	**Sn**	**19 13 51.0**	**-0.1**
	comp=N,5.7nm,0.5s						
PBDV	**Barranco-do-Ve**	**1.74**	**66**	⇑*i*P	**Pn**	**19 13 40.5**	**+1.5**
PBDV				*e*S	**Sn**	**19 13 59.5**	**-0.4**
PBDV				A	A	19 14 13.3	
	comp=N,5.7nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.74**	**66**	P	**Pn**	**19 13 40.5**	**+1.5**
PBDV				S	**Sn**	**19 13 59.5**	**-0.4**
	comp=N,5.7nm,0.4s						
PCVE	**Castro Verde**	**1.85**	**54**	*e*Pn	**Pn**	**19 13 42.7**	**+2.2**
PCVE				*e*Sn	**Sn**	**19 14 02.4**	**-0.3**
PCVE				A	A	19 14 04.3	
	comp=N,8.5nm,0.5s						
PCVE	**Castro Verde**	**1.85**	**54**	P	**Pn**	**19 13 42.7**	**+2.2**
PCVE				S	**Sn**	**19 14 02.4**	**-0.3**
	comp=N,8.5nm,0.5s						
PNCL	**Nicolau / Gran**	**1.92**	**35**	*e*Pn	**Pn**	**19 13 42.7**	**+1.3**
PNCL				*e*Sn	**Sn**	**19 14 03.6**	**-0.7**
PNCL				A	A	19 14 06.2	
	comp=N,6.3nm,0.3s						
PNCL	**Nicolau / Gran**	**1.92**	**35**	P	**Pn**	**19 13 42.7**	**+1.3**
PNCL				S	**Sn**	**19 14 03.6**	**-0.7**
	comp=N,6.3nm,0.3s						
PVAQ	**Vaqueiros**	**1.96**	**63**	⇑*e*Pn	**Pn**	**19 13 43.4**	**+1.4**
PVAQ				*e*Sn	**Sn**	**19 14 04.8**	**-0.5**
PVAQ				A	A	19 14 06.2	
	comp=N,6.8nm,0.1s						
PVAQ	**Vaqueiros**	**1.96**	**63**	P	**Pn**	**19 13 43.4**	**+1.4**
PVAQ				S	**Sn**	**19 14 04.8**	**-0.5**
	comp=N,6.8nm,0.1s						
PVAQ	**Vaqueiros**	**1.96**	**63**	P	**Pn**	**19 13 42.7**	**+0.7**
PVAQ				S	**Sn**	**19 14 04.9**	**-0.4**
EGRO	**El Granado**	**2.18**	**62**	P	**Pn**	**19 13 46.7**	**+1.7**
	comp=N,0.3nm,0.1s,SNR=4.7						
EGRO				S	**Sn**	**19 14 10.3**	**-0.6**
	comp=N,2.0nm,0.1s,SNR=10						
PBEJ	**Beja**	**2.21**	**47**	*e*Sn	**Sn**	**19 14 11.1**	**-0.3**
PBEJ				A	A	19 14 12.1	
	comp=N,3.3nm,0.2s						
PBEJ	**Beja**	**2.21**	**47**	S	**Sn**	**19 14 11.1**	**-0.3**
	comp=N,1.7nm,0.2s						
PMAFR	**Mafra**	**2.46**	**12**	*e*Pn	**Pn**	**19 13 50.4**	**+1.5**
PMAFR				*e*Sn	**Sn**	**19 14 17.0**	**-0.7**
PMAFR				A	A	19 14 20.2	
	comp=N,10nm,0.7s						
PMAFR	**Mafra**	**2.46**	**12**	⇓P	**Pn**	**19 13 50.4**	**+1.5**
	comp=N,4.6nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**19 14 16.8**	**-0.9**
	comp=N,11nm,0.2s,SNR=6.5						
EVO	**Evora**	**2.50**	**37**	⇑*i*Pn	**Pn**	**19 13 50.5**	**+1.1**
EVO				*e*Sn	**Sn**	**19 14 17.3**	**-1.3**
EVO				A	A	19 14 18.1	
	comp=N,9.6nm,0.1s						
EVO	**Evora**	**2.50**	**37**	P	**Pn**	**19 13 50.5**	**+1.1**
EVO				S	**Sn**	**19 14 17.3**	**-1.3**
	comp=N,9.6nm,0.1s						
ALMR	**Almeirim**	**2.81**	**22**	*e*Sn	**Sn**	**19 14 25.8**	**-0.6**
ALMR				A	A	19 14 30.3	
	comp=N,6.0nm,0.6s						
ALMR	**Almeirim**	**2.81**	**22**	S	**Sn**	**19 14 25.8**	**-0.6**
	comp=N,3.0nm,0.6s						
PMTG	**Montargil**	**2.85**	**27**	*e*Pn	**Pn**	**19 13 55.6**	**+1.3**
PMTG				*e*Sn	**Sn**	**19 14 26.3**	**-1.1**
PMTG				A	A	19 14 26.8	
	comp=N,5.5nm,0.5s						
PMTG	**Montargil**	**2.85**	**27**	P	**Pn**	**19 13 55.6**	**+1.3**
PMTG				S	**Sn**	**19 14 26.3**	**-1.1**
	comp=N,5.5nm,0.5s						
EMIN	**Mina Concepcio**	**2.86**	**64**	P	**Pn**	**19 13 55.4**	**+1.0**
	comp=N,0.0nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**19 14 26.6**	**-1.1**
	comp=N,1.4nm,0.1s,SNR=6.2						
ESPR	**Espera**	**3.28**	**83**	P	**Pn**	**19 14 01.8**	**+1.7**
	comp=N,0.6nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**19 14 37.0**	**-0.9**
	comp=N,4.6nm,0.2s,SNR=7.6						
PMRV	**Marv??o**	**3.50**	**34**	*e*Pn	**Pn**	**19 14 04.5**	**+1.3**
PMRV				*e*Sn	**Sn**	**19 14 41.3**	**-2.2**
PMRV				A	A	19 14 44.7	
	comp=N,1.5nm,0.2s						
PMRV	**Marv??o**	**3.50**	**34**	P	**Pn**	**19 14 04.5**	**+1.3**
PMRV				S	**Sn**	**19 14 41.3**	**-2.2**
	comp=N,1.5nm,0.2s						
PCAS	**Casmilo, Conde**	**3.68**	**17**	*e*Pn	**Pn**	**19 14 07.2**	**+1.6**
PCAS				*e*Sn	**Sn**	**19 14 46.6**	**-1.1**
PCAS				A	A	19 14 48.8	
	comp=N,2.0nm,0.7s						
PCAS	**Casmilo, Conde**	**3.68**	**17**	P	**Pn**	**19 14 07.2**	**+1.6**
PCAS				S	**Sn**	**19 14 46.6**	**-1.1**
	comp=N,2.0nm,0.7s						
PCBR	**Castelo Branco**	**3.81**	**30**	*e*Pn	**Pn**	**19 14 09.3**	**+1.9**
PCBR				*e*Sn	**Sn**	**19 14 49.0**	**-2.0**
PCBR				A	A	19 14 50.8	
	comp=N,1.3nm,0.7s						
PCBR	**Castelo Branco**	**3.81**	**30**	P	**Pn**	**19 14 09.3**	**+1.9**
PCBR				S	**Sn**	**19 14 49.0**	**-2.0**
	comp=N,0.6nm,0.7s						
ECAB	**El Cabril**	**3.90**	**66**	P	**Pn**	**19 14 10.1**	**+1.4**
	comp=N,0.1nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**19 14 51.3**	**-1.9**
	comp=N,0.9nm,0.2s,SNR=7.9						
ZHG	**ZHG**	**4.09**	**138**	P	**Pn**	**19 14 13.5**	**+2.0**
ZHG				S	**Sn**	**19 14 56.0**	**-2.1**
EMIJ	**Mijas**	**4.14**	**88**	S	**Sn**	**19 14 58.2**	**-1.0**
	comp=N,12nm,3.3s,SNR=7.9						
EADA	**Adamuz**	**4.55**	**68**	P	**Pn**	**19 14 19.4**	**+1.7**
	comp=N,0.0nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**19 15 06.8**	**-2.5**
	comp=N,0.8nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.63**	**39**	P	**Pn**	**19 14 20.3**	**+1.6**
	comp=N,0.1nm,0.3s,SNR=7.9						
EPLA				S	**Sn**	**19 15 08.9**	**-2.4**
	comp=N,1.7nm,0.1s,SNR=6.4						
EGOR	**Sierra Gorda,**	**4.69**	**81**	S	**Sn**	**19 15 10.5**	**-2.5**
	comp=N,2.6nm,0.5s,SNR=7.9						
POLO	**Lamas de Olo**	**5.10**	**18**	*e*Pn	**Pn**	**19 14 26.6**	**+1.4**
POLO				*e*Sn	**Sn**	**19 15 20.0**	**-2.9**
POLO				A	A	19 15 25.0	
	comp=N,0.8nm,0.6s						
POLO	**Lamas de Olo**	**5.10**	**18**	P	**Pn**	**19 14 26.6**	**+1.4**
POLO				S	**Sn**	**19 15 20.0**	**-2.9**
	comp=N,0.8nm,0.6s						
MVO	**Moncorvo**	**5.13**	**25**	*e*Pn	**Pn**	**19 14 26.8**	**+1.1**
MVO				*e*Sn	**Sn**	**19 15 20.2**	**-3.6**
MVO				A	A	19 15 24.0	
	comp=N,1.4nm,0.2s						
MVO	**Moncorvo**	**5.13**	**25**	P	**Pn**	**19 14 26.8**	**+1.1**
	comp=N,0.5nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**19 15 21.0**	**-2.7**
	comp=N,1.7nm,0.2s,SNR=7.9						
CZD	**Col de Zad**	**5.32**	**130**	P	**Pn**	**19 14 28.5**	**0.0**
CZD				S	**Sn**	**19 15 27.5**	**-1.3**
ELOB	**Lobios**	**5.51**	**15**	P	**Pn**	**19 14 31.9**	**+1.1**
	comp=N,0.1nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**19 15 29.9**	**-3.1**
	comp=N,0.8nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.56**	**13**	*e*Pn	**Pn**	**19 14 33.1**	**+1.5**
PGAV	**Gavieira, Arco**	**5.56**	**13**	P	**Pn**	**19 14 33.1**	**+1.5**
EQES	**Quesada**	**5.61**	**75**	S	**Sn**	**19 15 32.1**	**-3.4**
	comp=N,0.5nm,0.2s,SNR=7.9						
MD31	**MD31**	**5.61**	**129**	P	**Pn**	**19 14 33.1**	**+0.8**
MD31				S	**Sn**	**19 15 33.3**	**-2.2**
MDT	**Midelt**	**5.74**	**129**	P	**Pn**	**19 14 35.1**	**+1.0**
MDT				S	**Sn**	**19 15 34.7**	**-4.1**
OUZM	**OUZ**	**6.20**	**154**	P	**Pn**	**19 14 42.9**	**+2.5**

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*ISN **13** 19:14:04.8±1.5, 35.°79N×44.°87E, h39km±9km, ML3.9*
*TEH **13** 19:14:06.6, 35.°71N×44.°80E, h10km, ML3.8*
*AZER **13** 19:14:18.3±1.0, 35.°40N×45.°29E, h9km±31km, ml3.7/13, Error ellipse: s-maj=33.3km s-min=5.7km az=19.0*
ISC 13 19:14:06.7±0.9**, 35.°65N**±0.°03×**44.°72E**±0.°04**, h10km, n46, σ1.°51**/61**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**1.37**	**35**	*e*Pg	**Pn**	**19 14 30.5**	**-1.6**
MAHB				*e*Sg	**Sn**	**19 14 49.8**	**-0.6**
MAHB				IAMB	IAmb	19 14 55.1	
	comp=Z,0.0nm,0.4s						
MSL	**Mosul**	**1.51**	**300**	*e*Pg	**Pn**	**19 14 33.6**	**-0.2**
	baz=113						
MSL				AML	AML	19 14 36.0	
	comp=Z,3µm,0.4s						
MSL				*e*Sg	**Sn**	**19 14 52.9**	**-0.7**
IDHR	**Dehrash**	**1.66**	**124**	*e*Pg	**Pb**	**19 14 37.3**	**-0.2**
IDHR				IAMB	IAmb	19 15 03.0	
	comp=Z,0.0nm,0.3s						
CUKT	**Cukurca**	**1.83**	**331**	P	**Pb**	**19 14 39.1**	**-1.4**
CUKT	**Cukurca**	**1.83**	**331**	*e*Pn	**Pb**	**19 14 39.2**	**-1.3**
ILIN	**Lien**	**1.97**	**111**	*e*Pn	**Pb**	**19 14 41.8**	**-1.1**
ILIN				IAMB	IAmb	19 15 15.0	
	comp=Z,14µm,0.3s						
IGHG	**Ghaleghazi**	**2.00**	**130**	*e*Pn	**Pb**	**19 14 43.1**	**-0.3**
IGHG				IAMB	IAmb	19 15 17.4	
	comp=Z,24µm,0.6s						
IVIS	**Veis**	**2.07**	**122**	*e*Pn	**Pb**	**19 14 43.4**	**-1.1**
IVIS				IAMB	IAmb	19 15 23.5	
	comp=Z,8µm,0.5s						
IAZR	**Azarshahr**	**2.27**	**26**	*e*Pn	**Pb**	**19 14 45.5**	**-2.4**
IAZR				IAMB	IAmb	19 15 26.6	
	comp=Z,8µm,0.5s						
KCHF	**Cheshme Sefid,**	**2.34**	**125**	*e*Pn	**Pb**	**19 14 47.4**	**-1.8**
KCHF				IAMB	IAmb	19 15 31.1	
	comp=Z,0.0nm,0.6s						
BHD	**Baghdad**	**2.39**	**187**	*e*Pn	**Pn**	**19 14 46.0**	**+0.1**
	baz=9.0						
BHD				AML	AML	19 14 48.3	
	comp=Z,5µm,0.4s						
BHD				*e*Sn	**Sn**	**19 15 14.0**	**-1.2**
IBST	**Bostanabad**	**2.69**	**40**	*e*Pn	**Pn**	**19 14 51.1**	**+0.8**
IBST				IAMB	IAmb	19 15 35.1	
	comp=Z,1µm,0.6s						
IKOM	**Komasi**	**2.72**	**122**	*e*Pn	**Pn**	**19 14 52.6**	**+2.0**
IKOM				IAMB	IAmb	19 15 47.8	
	comp=Z,0.0nm,0.6s						
ISHB	**Shabestar**	**2.73**	**15**	*e*Pn	**Pn**	**19 14 51.4**	**+0.6**
ISHB				IAMB	IAmb	19 15 36.9	
	comp=Z,2µm,0.6s						
IBZA	**Bozab**	**2.83**	**114**	*e*Pn	**Pn**	**19 14 54.1**	**+1.9**
IBZA				IAMB	IAmb	19 15 48.9	
	comp=Z,0.0nm,0.4s						
AKDM	**Akdamar-Van**	**3.02**	**333**	P	**Pn**	**19 14 54.9**	**+0.1**
AKDM	**Akdamar-Van**	**3.02**	**333**	*e*Pn	**Pn**	**19 14 56.4**	**+1.6**
VANB	**Van**	**3.13**	**340**	P	**Pn**	**19 14 57.2**	**+0.9**
VANB	**Van**	**3.13**	**340**	*e*Pn	**Pn**	**19 14 56.9**	**+0.6**
IMRD	**Marand**	**3.16**	**14**	*e*Pn	**Pn**	**19 14 58.5**	**+1.8**
IMRD				IAMB	IAmb	19 15 56.2	
	comp=Z,2µm,0.8s						
ISRB	**Sarab**	**3.21**	**47**	*e*Pn	**Pn**	**19 14 58.7**	**+1.2**
ISRB				IAMB	IAmb	19 15 11.4	
	comp=Z,2µm,0.9s						
IKFM	**Kafar-mosalman**	**3.33**	**129**	*e*Pn	**Pn**	**19 15 00.7**	**+1.8**
IKFM				IAMB	IAmb	19 16 10.4	
	comp=Z,0.0nm,0.7s						
IDOB	**Doab**	**3.40**	**122**	*e*Pn	**Pn**	**19 15 02.0**	**+2.0**
IDOB				IAMB	IAmb	19 16 15.0	
	comp=Z,0.0nm,0.6s						
ORD	**Ordubad**	**3.43**	**17**	P	**Pg**	**19 15 13.0**	**+0.5**
	SNR=7.1						
ORD				S	**Sg**	**19 15 57.1**	**+0.2**
CLDR	**Caldiran**	**3.55**	**350**	*e*Pn	**Pn**	**19 15 04.6**	**+2.5**
NAX	**Nakhchivan**	**3.58**	**10**	P	**Pg**	**19 15 16.3**	**+1.1**
	SNR=6.6						
NAX				S	**Sg**	**19 16 03.0**	**+1.5**
IKMR	**Kamar-syah**	**3.69**	**124**	*e*Pn	**Pn**	**19 15 06.6**	**+2.8**
IKMR				IAMB	IAmb	19 16 23.6	
	comp=Z,0.0nm,0.7s						
SVAN	**Silvan-Diyarba**	**3.77**	**313**	*e*Pn	**Pn**	**19 15 07.1**	**+2.1**
SBZ	**Shahbuz**	**3.80**	**10**	P	**Pg**	**19 15 19.5**	**0.0**
SBZ				S	**Sg**	**19 16 08.2**	**-0.7**
MAZI	**Mazidag**	**3.89**	**299**	*e*Pn	**Pn**	**19 15 08.4**	**+1.7**
HYR	**Heyderabad**	**4.07**	**1**	P	**Pg**	**19 15 24.5**	**-0.1**
HYR				S	**Sg**	**19 16 16.6**	**-0.8**
AGRB	**Hanur-Agry**	**4.16**	**341**	*e*P	**Pn**	**19 15 12.4**	**+2.0**
AGRB	**Hanur-Agry**	**4.16**	**341**	*e*Pn	**Pn**	**19 15 12.9**	**+2.5**
LRK	**Lerik**	**4.16**	**43**	P	**Pb**	**19 15 20.6**	**+0.5**
	SNR=6.0						
LRK				S	**Sb**	**19 16 09.2**	**-1.3**
ASTR	**Astara**	**4.36**	**47**	P	**Pb**	**19 15 23.1**	**-0.4**
	SNR=14						
ASTR				S	**Sb**	**19 16 12.6**	**-3.5**
LKRN	**Lenkeran, Azer**	**4.45**	**45**	P	**Pb**	**19 15 24.7**	**-0.4**
	SNR=4.6						
LKRN				S	**Sb**	**19 16 16.0**	**-2.8**
GLBA	**Clilabad**	**4.63**	**38**	P	**Pb**	**19 15 27.8**	**-0.2**
GLBA				S	**Sb**	**19 16 21.4**	**-2.3**
BRDA	**Brd**	**5.00**	**22**	P	**Pb**	**19 15 34.9**	**+0.6**
BRDA				S	**Sb**	**19 16 34.7**	**+0.2**
SVRC	**Sivrice-ELAZID**	**5.12**	**304**	*e*P	Pn	19 15 18.7	-5.0
SAAT	**Saatly**	**5.13**	**34**	P	**Pb**	**19 15 35.6**	**-0.9**
SAAT				S	**Sb**	**19 16 36.1**	**-2.0**
GDB	**GEDABAY**	**5.13**	**9**	P	**Pb**	**19 15 38.3**	**+1.7**
GDB				S	**Sb**	**19 16 41.0**	**+2.6**
GANJ	**Ganja**	**5.15**	**14**	P	**Pb**	**19 15 38.1**	**+1.2**
GANJ				S	**Sb**	**19 16 40.5**	**+1.7**
ZRD	**Zardab**	**5.18**	**26**	P	**Pb**	**19 15 37.1**	**-0.4**
ZRD				S	**Sb**	**19 16 38.4**	**-1.3**
IPIR	**Pirpir**	**5.91**	**118**	*e*Pn	**Pn**	**19 15 35.7**	**+1.1**
IPIR				IAMB	IAmb	19 16 48.0	
	comp=Z,310nm,0.4s						
ROKH	**ROKH**	**6.19**	**120**	*e*Pn	**Pn**	**19 15 39.5**	**+1.1**
IZEF	**Zefreh**	**6.87**	**111**	*e*Pn	**Pn**	**19 15 49.2**	**+1.4**
IZEF				IAMB	IAmb	19 18 06.0	
	comp=Z,107nm,0.6s						

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*ISN **13** 19:19:24.6±886.0, 37.°18N×42.°54E, h0km±999km, ML3.6*
*DDA **13** 19:19:26.7, 37.°16N×42.°43E, h13km±3km, ML3.2*
*ISK **13** 19:19:26.8, 37.°07N×42.°48E, h18km, ML3.6/9*
*ISCJB **13** 19:19:28.1±0.6, 37.°08N±0.°03×42.°46E±0.°03, h16km±6km, Error ellipse: s-maj=5.7km s-min=3.8km az=37.8*
ISC 13 19:19:27.3±1.1**, 37.°16N**±0.°03×**42.°46E**±0.°02**, h11**km±10km**, n31, σ1.°06**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRN	**Sırnak**	**0.34**	**353**	*i* P	**Pg**	**19 19 33.0**	**-1.2**
SIRN				IAML_P			
	comp=Z,7µm,0.2s						
CUKT	**Cukurca**	**0.92**	**84**	PG	**Pb**	**19 19 44.8**	**-0.6**
CUKT				SG	**Sn**	**19 19 58.3**	**-1.3**
CUKT	**Cukurca**	**0.92**	**84**	*i* P	**Pn**	**19 19 45.3**	**-1.0**
CUKT				*i* S	**Sn**	**19 19 59.8**	**+0.3**
CUKT				IAML_P			
	comp=Z,5µm,0.4s						
MSL	**Mosul**	**0.92**	**145**	*e*Pg	**Pb**	**19 19 45.0**	**-0.3**
	baz=330						
MSL				AML	AML	19 19 47.6	
	comp=Z,2µm,0.4s						
MSL				*e*Sg	**Sg**	**19 19 56.0**	**-1.0**
SRTM	**Siirt_Merkez**	**0.94**	**333**	*i* P	**Pg**	**19 19 44.3**	**-1.1**
SRTM				*i* S	**Sb**	**19 19 58.2**	**0.0**
SRTM				IAML_P			
	comp=Z,4µm,0.3s						
HAKT	**HAKKARI**	**1.07**	**68**	*i* P	**Pb**	**19 19 47.1**	**-0.9**
HAKT				IAML_P			
	comp=Z,3µm,0.1s						
BTMN	**Batman**	**1.20**	**308**	*i* P	**Pb**	**19 19 50.2**	**+0.1**
BTMN				*i* S	**Sn**	**19 20 07.0**	**+0.5**
BTMN				IAML_P			
	comp=Z,2µm,0.3s						
AKDM	**Akdamar-Van**	**1.24**	**19**	PN	**Pg**	**19 19 51.0**	**-0.2**
AKDM				SN	**Sg**	**19 20 08.3**	**+1.0**
BLIS	**Bitlis-Merkez**	**1.28**	**348**	*i* P	**Pn**	**19 19 50.7**	**-0.7**
BLIS				*i* S	**Sg**	**19 20 10.7**	**+1.9**
BLIS				IAML_P			
	comp=Z,3µm,0.3s						
MARD	**Mardin**	**1.35**	**277**	*i* P	**Pn**	**19 19 52.0**	**-0.3**
MARD				*i* S	**Sg**	**19 20 12.8**	**+1.8**
SVAN	**Silvan-Diyarba**	**1.41**	**315**	PN	**Pb**	**19 19 53.4**	**-0.3**
SVAN				SN	**Sg**	**19 20 12.8**	**0.0**
SVAN	**Silvan-Diyarba**	**1.41**	**315**	*i* P	**Pb**	**19 19 53.6**	**-0.1**

SVAN				*i* S	Sg	19 20 13.1	+0.3
BASK	Baskale_VAN	1.51	53	*i* P	Pg	19 19 56.9	+0.5
YOVA	Hakkari_Yksek	1.52	73	*i* P	Pb	19 19 55.1	-0.5
YOVA				*i* S	Sg	19 20 18.8	+2.6
YOVA				IAML_P			
	comp=Z,2μm,0.2s						
TVAN	Van	1.56	28	*i* P	Pg	19 19 57.1	-0.2
TVAN				IAML_P			
	comp=Z,1μm,0.3s						
VANB	Van	1.61	27	PN	Pn	19 19 55.3	-0.5
MAZI	Mazidag	1.64	281	PN	Pn	19 19 55.9	-0.3
ADCV	BITLIS_Adilcev	1.66	7	*i* P	Pg	19 19 58.7	-0.5
ADCV				*i* S	Sg	19 20 22.2	+1.4
MUSM	Mu-Merkez	1.73	335	*i* P	Pn	19 19 57.1	-0.5
MUSM				*i* S	Sb	19 20 21.7	+0.5
MUSM				IAML_P			
	comp=Z,3μm,0.4s						
MLAZ	Malazgirt-MUS	1.98	2	PN	Pn	19 20 01.8	+0.8
DIYA	Diyarbakir	2.01	293	*i* P	Pg	19 20 05.4	-0.5
DIYA				*i* S	Sb	19 20 30.3	+1.2
DIYA				IAML_P			
	comp=Z,2μm,0.2s						
VMUR	Van-Muradiye	2.03	25	*i* P	Pb	19 20 04.1	-0.2
VMUR				IAML_P			
	comp=Z,159nm,0.3s						
HANI	Diyarbakir_Han	2.06	308	*i* P	Pb	19 20 03.9	-1.0
HANI				*i* S	Sb	19 20 31.1	+0.6
HANI				IAML_P			
	comp=Z,438nm,0.2s						
BNGL	BINGOL	2.07	330	*i* P	Pb	19 20 03.6	-1.4
TUTA	Tutak	2.26	7	*i* P	Pb	19 20 07.2	-1.1
TUTA				IAML_P			
	comp=Z,848nm,0.2s						
CLDR	Caldiran	2.29	30	PN	Pn	19 20 06.3	+1.0
BNGB	Bingl	2.31	323	PN	Pn	19 20 06.0	+0.6
AGRB	Hanur-Agry	2.45	10	PN	Pb	19 20 09.5	-2.0
SVRC	Sivrice-ELAZID	2.78	297	PN	Pn	19 20 12.7	+0.7
URFA	Urfa	2.92	277	PN	Pn	19 20 14.4	+0.6
BHD	Baghdad	4.18	157	*e*Pn	Pn	19 20 33.0	+1.9
	baz=335						
BHD				AML	AML	19 20 38.1	
	comp=Z,376nm,0.6s						
BHD				*e*Sn	Sn	19 21 18.0	-2.0

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*NIED **13** 19:20:00, 39°.10N×142°.40E, h35^{km}, Mw3.6 Best double couple: $M_0$2.95000×10^{14} NP1:ϕ_s155.00000°, δ36.00000°, λ-50.00000°. NP2:ϕ_s289.00000°, δ63.00000°, λ-116.00000°.*

JMA 13 19:20:31.8±0.1**, 39°.11N×142°.44E, h30**^{km}±1^{km}**, M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.60	267	P	Pb	19 20 43.7	-0.2
OFUJ				S	Sb	19 20 51.8	-0.3
MIYJ	Miyakonagasawa	0.67	314	P	Pb	19 20 44.5	-0.5
MIYJ				S	Sb	19 20 53.3	-0.7
JKMT	Kesennumamotoy	0.81	249	P	Pn	19 20 46.6	-0.6
JKMT				S	Sb	19 20 57.0	-1.0
JTH	Tanohata	0.94	332	P	Pn	19 20 49.1	+0.1
JTH				S	Sn	19 21 01.1	-0.3
JOM	Ohasama	0.96	293	P	Pn	19 20 49.5	+0.2
JOM				S	Sn	19 21 02.0	+0.1
JMK	Ichinoseki	0.96	261	P	Pn	19 20 49.2	-0.1
JMK				S	Sn	19 21 01.6	-0.3
JIO	Ouri	1.07	233	P	Pn	19 20 50.2	-0.6
JIO				S	Sn	19 21 03.2	-1.5
JKZ	Kuzumaki	1.23	316	P	Pn	19 20 53.4	+0.5
JKZ				S	Sn	19 21 09.1	+0.6
JRG	Rokugo	1.43	282	P	Pb	19 20 57.1	-0.7
JRG				S	Sb	19 21 15.8	+0.1
JANG	Nango	1.45	331	P	Pn	19 20 56.5	+0.5
JANG				*e*S	Sn	19 21 14.8	+0.8
JOU	Okura	1.57	242	P	Pn	19 20 58.3	+0.6
JOU				*e*S	Sn	19 21 18.2	+1.1

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*ISCJB **13** 19:26:58.0±0.8, 28°.51N±0°.04×94°.84E±0°.06, h10^{km}, mb3.6/4, Error ellipse: s-maj=7.2km s-min=6.3km az=163.6*

*IDC **13** 19:26:59.9±1.3, 28°.38N×95°.27E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.3/54, mbtmp3.6/4, Error ellipse: s-maj=47.0km s-min=29.9km az=64.0*

*NDI **13** 19:27:00.4±2.5, 28°.34N×94°.92E, h10^{km}, ML3.5*

ISC 13 19:27:00.7±1.0**, 28°.30N**±0°.05×**94°.92E**±0°.07**, h10**^{km}**, n21, σ1^{s}.60**/29**, mb3.7**/4**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIRO	ZIRO	1.22	231	*e*P	Pn	19 27 23.4	-0.5
ZIRO				*e*S	Sg	19 27 40.4	+0.4
JORH	JORHAT	1.66	201	*e*P	Pb	19 27 30.9	-0.4
JORH				*e*S	Sb	19 27 53.3	+1.1
JORH				IAML		19 27 57.7	
	comp=E,1μm,0.5s						
JORH				IAML		19 27 57.9	
	comp=N,1μm,0.2s						
TEZP	TEZPUR	2.52	229	*e*P	Pn	19 27 41.5	-0.2
TEZP				*e*S	Sn	19 28 15.0	+2.5
TEZP				IAML		19 28 20.3	
	comp=E,584nm,0.2s						
TEZP				IAML		19 28 20.5	
	comp=N,714nm,0.3s						
KOHI	KOHIMA	2.67	196	*e*P	Pn	19 27 44.2	+0.3
KOHI				*e*S	Sn	19 28 14.0	-2.3
KOHI				IAML		19 28 19.9	
	comp=E,185nm,0.3s						
KOHI				IAML		19 28 20.0	
	comp=N,179nm,0.3s						
TAWA	Tawang	2.79	256	*e*P	Pn	19 27 46.7	+1.0
TAWA				*e*x	Sn	19 28 22.8	+3.2
LSA	Lhasa	3.58	294	Pg	Pn	19 27 58.8	+2.1
LSA				Sg	Sg	19 28 52.3	-3.6
LSA				smax	smax		
	comp=N,69nm,0.7s						
LSA				smax	smax		
	comp=E,77nm,0.9s						
SHL	Shillong	3.84	226	*e*P	Pn	19 27 58.8	-1.2
SHL				*e*S	Sn	19 28 43.4	-1.9
SHL				IAML		19 29 02.2	
	comp=E,104nm,0.1s						
SHL				IAML		19 29 02.2	
	comp=N,112nm,0.4s						
TURI	Tura	4.92	237	*e*P	Pn	19 28 15.4	+0.7
TURI				*e*S	Sn	19 29 11.3	-0.5
TURI				IAML		19 29 38.8	
	comp=N,79nm,0.3s						
TURI				IAML		19 29 39.0	
	comp=E,88nm,0.2s						
JIRN	Jiri	7.74	267	*e*P	Pn	19 28 53.7	-0.1
	comp=E,41nm,0.3s						
GUN	Gumba	7.99	269	*e*P	Pn	19 28 56.3	-0.9
	comp=E,18nm,0.3s						
PKI	Pulchoki	8.44	267	*e*P	Pn	19 29 02.1	-1.3
	comp=E,20nm,0.3s						
PKIN	Phulchoki	8.45	267	*e*P	Pn	19 29 02.1	-1.4
	comp=E,23nm,0.3s						
KKN	Kakani	8.53	269	*e*P	Pn	19 29 03.7	-0.8
	comp=E,20nm,0.3s						
DMN	Daman	8.71	268	*e*P	Pn	19 29 06.0	-0.9
	comp=E,12nm,0.3s						
GKN	Gorkha	9.08	271	*e*P	Pn	19 29 10.7	-1.3
	comp=E,13nm,0.2s						
KOLN	Koldanda	10.02	270	*e*P	Pn	19 29 22.8	-2.0
	comp=E,8.7nm,0.2s						
WMQ	Urumqi	16.54	341	*e*P	Pn	19 30 53.0	+0.2
WMQ				LR	LR		
	comp=N,42nm,4.7s						
WMQ				LR	LR		
	comp=E,73nm,4.7s						
WMQ				LR	LR		
	comp=Z,34nm,5.3s						
SONM	Songino Array	21.45	22	P	P	19 31 47.8	-1.3
	comp=Z,1.0nm,0.6s,baz=206,slow=9.2,SNR=7.4						
WRA	Warramunga Arr	61.25	137	P	P	19 37 16.0	-0.3
	comp=Z,0.9nm,0.8s,baz=313,slow=7.5,SNR=5.1						
ASAR	Alice Springs	63.88	140	P	P	19 37 33.8	0.0
	comp=Z,0.3nm,0.5s,baz=322,slow=6.3,SNR=10						
TORD	Torodi Ar. Bea	86.66	283	P	P	19 39 47.5	+2.4
	comp=Z,0.4nm,0.7s,baz=72,slow=4.7,SNR=3.1						

MAN 13 19:44:15.1, 13°.14N×121°.16E, h13^{km}**, mb4.2, ML3.0, MS2.7, 3C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.41	330⇑	*e*P	Pb	19 44 24.3	+0.1
PGP				*i* S	Sb	19 44 31.1	+0.6
SJMP	San Jose	0.68	184	*e*P	Pg	19 44 27.4	-0.9
SJMP				*e*S	Sg	19 44 37.3	+0.1
BOAC	Boac	0.73	64	*e*P	Pb	19 44 29.8	+0.1
BOAC				*e*S	Sn	19 44 41.6	-0.6
TGY	Tagaytay City	0.98	347⇑	*e*P	Pb	19 44 29.1	-4.9
TGY				*e*S	Sn	19 44 53.6	+5.2
LUBP	Lubang	1.07	304	*e*P	Pb	19 44 34.2	-1.2
LUBP				*e*S	Sn	19 44 50.5	0.0
OTRP	Odiongan	1.14	133	*e*P	Pb	19 44 36.4	-0.2
OTRP				*e*S	Sn	19 44 52.6	+0.4
BUSP	Coron	1.47	220	*e*P	Pn	19 44 40.8	-0.5
BUSP				*e*S	Sb	19 45 01.1	+0.1
CUYO	Cuyo Island	2.28	184	*e*P	Pn	19 44 50.8	-1.6
GUIM	Jordan	2.86	151	*e*S	Sg	19 45 54.8	+7.7
SNPH	Sibulan	4.29	151⇑	*i*P	Pg	19 45 39.6	+2.4

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*ISK **13** 19:49:34.1, 38°.71N×43°.11E, h5^{km}±1^{km}, ML2.1/5*

*DDA **13** 19:49:36.2, 38°.68N×43°.20E, h7^{km}±6^{km}, ML3.0*

ISC 13 19:49:35.3±1.4**, 38°.72N**±0°.03×**43°.16E**±0°.03**, h7**^{km}±16^{km}**, n11, σ0^{s}.98**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.21	124	PG	Pg	19 49 40.5	+0.9
TVAN	Van	0.27	134	*i* P	Pg	19 49 40.5	-0.1
TVAN				*i* S	Sb	19 49 45.5	-1.9
TVAN				IAML_P			
	comp=Z,9μm,0.1s						
ADCV	BITLIS_Adilcev	0.36	285	*i* P	Pb	19 49 44.8	+0.7
ADCV				*i* S	Sb	19 49 51.8	+1.8
ADCV				IAML_P			
	comp=Z,1μm,0.1s						
GEVA	Gevas	0.41	192	*i* P	Pg	19 49 43.3	0.0
GEVA				*i* S	Sb	19 49 51.8	+0.3
GEVA				IAML_P			
	comp=Z,5μm,0.2s						
AKDM	Akdamar-Van	0.41	201	PG	Pg	19 49 42.5	-0.9
VMUR	Van-Muradiye	0.42	49	*i* P	Pb	19 49 45.4	+0.1
VMUR				*i* S	Sb	19 49 52.5	+0.7
MLAZ	Malazgirt-MUS	0.64	312	PG	Pg	19 49 46.2	-1.5
CLDR	Caldiran	0.73	54	PG	Pg	19 49 49.4	+0.1
CLDR				SG	Sb	19 50 00.3	-0.4
CLDR	Caldiran	0.73	54	*i* P	Pb	19 49 50.1	-0.3
CLDR				*i* S	Sb	19 50 01.2	+0.5
TUTA	Tutak	0.74	338	*i* P	Pb	19 49 50.9	+0.2
TUTA				IAML_P			
	comp=Z,2μm,0.1s						
AGRB	Hanur-Agry	0.87	351	PG	Pg	19 49 51.7	-0.4

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*IDC **13** 19:59:11.0±2.5, 21°.92S×170°.45E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.9/24, mbtmp4.0/7, ML4.7/1, Error ellipse: s-maj=82.4km s-min=29.1km az=152.0*

*ISCJB **13** 19:59:16.9±0.8, 22°.0S±0°.1×170°.31E±0°.07, h51^{km}, mb3.9/12, Error ellipse: s-maj=17.3km s-min=8.9km az=178.2*

*NEIC **13** 19:59:16.8±0.9, 21°.96S×170°.36E, h35^{km}, mb4.0/8, Error ellipse: s-maj=23.3km s-min=3.8km az=359.0*

ISC 13 19:59:18.8±0.9**, 21°.9S**±0°.1×**170°.27E**±0°.09**, h51**^{km}**, n24, σ0^{s}.86**/28**, mb3.8**/12**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	2.13	282	*e*Pn	Pn	19 59 51.7	-0.2
MARNC				*e*Sn	Sn	20 00 17.9	+0.7
PINNC	Pines Island,	2.70	255	*e*Pn	Pn	19 59 58.8	-0.9
PINNC				*e*Sn	Sn	20 00 31.3	+0.1
DZM	Mont Dzumac	3.55	267	Pn	Pn	20 00 11.6	0.0
	58nm,0.3s,baz=103,slow=22,SNR=1353						
DZM				Sn	Sn	20 00 50.3	-2.0
	10nm,0.3s,baz=210,slow=8.1,SNR=6.2						
DZM	Mont Dzumac	3.55	267	*e*Pn	Pn	20 00 10.6	-0.9
DZM				*e*Sn	Sn	20 00 52.1	-0.2
EIDS	Eidsvold	17.91	255	*e*P	P	20 03 25.7	+1.3
	22nm,1.5s						
ARMA	Armidale	18.73	239	*e*P	Pn	20 03 36.6	+2.3
	12nm,1.2s						
CTA	Charters Tower	22.49	270	P	P	20 04 14.0	-0.2
	2.2nm,0.8s,baz=90,slow=6.1,SNR=1.8						
STKA	Stephens Creek	27.35	243	*e*P	P	20 04 58.2	-0.9
	0.7nm,1.0s						
AS31	Alice Springs	33.51	260	*e*P	P	20 05 54.3	+0.6
	0.8nm,0.9s						
ASAR	Alice Springs	33.51	260	P	P	20 05 53.1	-0.7
	1.6nm,1.0s,baz=90,slow=9.0,SNR=14						
WB2	Warramunga Arr	33.56	267	*e*P	P	20 05 54.0	-0.2
	9.9nm,1.5s						
WR1	Warramunga Arr	33.57	267	*e*P	P	20 05 54.2	0.0
WRA	Warramunga Arr	33.57	267	P	P	20 05 54.2	0.0
	0.9nm,0.5s,baz=87,slow=9.8,SNR=16						
MTN	Manton Dam	38.33	277	*e*P	P	20 06 34.9	-0.2
	10nm,1.0s						
PSAB3	Pilbara Seismi	46.64	261	*e*P	P	20 07 42.5	0.0
	2.7nm,0.6s						
VNDA	Vanda	55.79	182	*e*P	P	20 08 49.7	-0.5
	1.0nm,1.1s						
MJAR	Matsushiro Arr	65.57	332	P	P	20 09 56.2	-1.0
	0.5nm,0.4s,baz=173,slow=6.6,SNR=6.3						
CMAR	Chiang Mai Arr	80.48	294	P	P	20 11 26.8	+1.0
	0.6nm,0.7s,baz=141,slow=4.4,SNR=4.6						
SONA0	Songino Array	89.94	323	*e*P	P	20 12 13.1	+0.5
SONM	Songino Array	89.94	323	P	P	20 12 13.1	+0.5
	0.2nm,0.6s,baz=98,slow=3.7,SNR=5.0						
ARA0	ARCESS Array S	127.90	345	*e*PKPdf	PKPdf	20 18 18.1	-0.1
ARCES	ARCESS Array B	127.90	345	PKP	PKPdf	20 18 18.1	-0.1
	13nm,1.3s,baz=73,slow=3.1,SNR=5.5						
CLL	Collm	145.75	334	*i* PKPbc	PKPbc	20 18 52.2	+0.2
	comp=Z,5.0nm,0.9s						
CLL				LmH		22 36 00.0	
	comp=N,100nm,21.1s						
CLL				LmH		22 36 00.0	
	comp=E,200nm,21.8s						
CLL				LmV		22 38 00.0	
	comp=Z,200nm,19.1s						
GERES	GERESS Array B	147.30	331	PKPbc	PKPbc	20 18 56.0	-0.7
	comp=Z,1.3nm,0.8s,baz=36,slow=3.4,SNR=12						

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*ISCJB **13** 20:02:13.3±0.8, 43°.05N±0°.06×145°.27E±0°.06, h88^{km}±5^{km}, mb3.6/3, Error ellipse: s-maj=10.7km s-min=5.2km az=148.0*

*JMA **13** 20:02:13.5±0.1, 43°.03N×145°.28E, h88^{km}±1^{km}, M2.8*

*SKHL **13** 20:02:13.8±0.2, 43°.45N×144°.73E, h75^{km}±4^{km}, mb3.8/3*

*MOS **13** 20:02:13.6±2.4, 43°.75N×144°.26E, h76^{km}, mb3.9/3, Error ellipse: s-maj=27.9km s-min=17.4km az=57.7*

ISC 13 20:02:12.3±1.1**, 43°.05N**±0°.07×**145°.24E**±0°.05**, h92**^{km}±6^{km}**, n25, σ2^{s}.13**/41**, mb3.6**/3**, 3C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	Kushirohamanak	0.06	299	P	Pn	20 02 26.2	+0.9
JKHN				*e*S	Sn	20 02 35.5	+0.6
NEM2	Nemuro 2	0.48	50	P	Pn	20 02 27.6	+0.4
NEM2				*e*S	Sn	20 02 37.9	-0.3
JNK	Nakash	0.65	325	P	Pn	20 02 29.4	+0.8
JNK				*e*S	Sn	20 02 40.8	0.0
GLVR	Golovnino	0.72	17⇑	*i*PN	Pn	20 02 30.2	+1.0
GLVR				*i* S	Sn	20 02 42.8	+1.0
GLVR				pmax	pmax		
	comp=Z,142nm,0.1s						
GLVR				smax	smax		
	comp=N,399nm,0.1s						
GLVR				smax	smax		
	comp=E,204nm,0.2s						
GLVR	Golovnino	0.72	17	*i* P	Pn	20 02 30.0	+0.8
GLVR				AMB	AMB	20 02 31.0	
	comp=E,80nm,0.3s						
GLVR				*i* S	Sn	20 02 42.0	+0.2
GLVR				A	A	20 02 43.0	
	comp=E,400nm,0.2s						
GLVR				A	A	20 02 43.0	
	comp=E,200nm,0.2s						
JRA	Rausu	0.89	355	P	Pn	20 02 32.1	+1.2
JRA				*e*S	Sn	20 02 45.9	+1.0
GRPR	Tuman	1.02	22	*e*PN	Pn	20 02 33.0	+0.6
GRPR				*e*S	Sn	20 02 47.6	+0.2
GRPR				pmax	pmax		
	comp=Z,92nm,0.1s						
GRPR				smax	smax		
	comp=N,393nm,0.1s						
GRPR				smax	smax		
	comp=E,125nm,0.1s						
GRPR	Tuman	1.02	22	*e*P	Pn	20 02 33.0	+0.6
GRPR				AMB	AMB	20 02 34.0	
	comp=E,50nm,0.4s						
GRPR				*e*S	Sn	20 02 47.0	-0.4
GRPR				A	A	20 02 49.0	
	comp=E,400nm,0.3s						
GRPR				A	A	20 02 49.0	
	comp=E,130nm,0.3s						
JOB	Onbets	1.04	262	P	Pn	20 02 33.9	+1.3
JOB				*e*S	Sn	20 02 49.2	+1.4
LAGR	Lagunnoye	1.08	22	*i* S	Sn	20 02 50.0	+1.3
YUK	Yuzh-Kuril'sk	1.08	25*c*	*i*PN	Pn	20 02 40.1	+7.0
YUK				*i* S	Sn	20 02 55.8	+7.1
YUK				pmax	pmax		
	comp=Z,87nm,0.1s						
YUK				smax	smax		
	comp=E,36nm,0.3s						
YUK				smax	smax		
	comp=E,235nm,0.2s						
YUK	Yuzh-Kuril'sk	1.08	25	*i* P	Pn	20 02 34.2	+1.1
YUK				AMB	AMB	20 02 35.2	
	comp=E,50nm,0.3s						
YUK				*i* S	Sn	20 02 49.6	+0.9
YUK				A	A	20 02 56.3	
	comp=E,360nm,0.2s						
YUK				A	A	20 02 56.3	
	comp=E,260nm,0.2s						
JAR	Ashorobuto	1.10	283	P	Pn	20 02 34.7	+1.4
JAR				*e*S	Sn	20 02 50.2	+1.1
JTKR	Abashiri--Toko	1.33	314	P	Pn	20 02 37.7	+1.6
JTKR				*e*S	Sn	20 02 55.6	+1.6
JCH	Churui	1.45	253	P	Pn	20 02 38.9	+1.4
JCH				*e*S	Sn	20 02 57.4	+0.9
JMP	Maruseppu	1.67	306	P	Pn	20 02 42.0	+1.7
JMP				*e*S	Sn	20 03 03.3	+1.8
ERM	Erimo	1.85	237*c*	*i*PN	Pn	20 02 45.3	+2.6
KUR	Kuril'sk	2.89	40	*i* PN	Pn	20 02 58.6	+2.3
KUR	Kuril'sk	2.89	40	*e*P	Pn	20 02 58.6	+2.3
KUR				*e*S	Sn	20 03 32.2	+2.0
YAK	Yakutsk	21.12	339	*i* P	P	20 06 44.9	-4.4
YAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	Yakutsk	21.12	339	*e*P	P	20 06 44.9	-4.4
BILL	Bilibino	27.43	17	*i* P	P	20 07 49.3	+0.4
BILL				*e*		20 08 41.5	
BILL				*e*S	S	20 12 26.4	+4.2
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BILL				MLR	MLR		
	comp=Z,30nm,17.0s						
BILL	Bilibino	27.43	17	*e*P	P	20 07 49.3	+0.4
TIXI	Tiksi	29.78	350	*i* P	P	20 08 07.7	-2.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.6s						
TIXI	Tiksi	29.78	350	*e*P	P	20 08 07.7	-2.0

SJA 13 20:03:14.4±0.6**, 31°.21S×68°.21W, h96**^{km}±4^{km}**, ML3.7, MW3.9, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMOG	MOGNA	0.36	318	*e*P	Pn	20 03 29.5	+0.6
AMOG				*e*S	Sn	20 03 40.8	+1.0
RTCV	Cerro Valdivia	0.71	203	*e*P	Pn	20 03 32.4	+0.8
RTCV				*e*S	Sn	20 03 45.6	+1.1
ACCO	Cerro Coronel	0.96	310	*e*P	Pn	20 03 36.3	+1.9
ACCO				IAML		20 03 50.3	
	comp=Z,35μm,0.5s						
APLL	PUNTA DE LOS L	1.66	61	*e*P	Pn	20 03 43.7	+1.2
APLL				*e*S	Sn	20 04 05.4	+1.6
APLL				IAML		20 04 07.8	
	comp=Z,107nm,0.3s						
AGUA	GUANDACOL	1.73	352	*e*P	Pn	20 03 44.4	+0.9
VCA	Vinchina	2.47	0	*e*P	Pn	20 03 54.4	+1.3
VCA				IAML		20 04 29.8	
	comp=Z,69nm,0.2s						

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*DDA **13** 20:29:53.2, 42°.33N×41°.10E, h7^{km}±4^{km}, ML3.3*

*ISK **13** 20:29:53.4, 42°.35N×40°.97E, h8^{km}, ML2.7/2*

*TIF **13** 20:29:53.7, 42°.35N×41°.00E, h27^{km}±4^{km}*

*NORS **13** 20:29:56.0±0.0, 42°.70N×41°.29E, h2^{km}, MPVA3.5*

ISC 13 20:29:52.1±1.2**, 42°.38N**±0°.03×**41°.01E**±0°.03**, h6**^{km}±11^{km}**, n29, σ0^{s}.57**/53**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	Batumi	0.93	147	PG	Pn	20 30 11.6	-0.1
BATM				SG	Sn	20 30 24.8	-0.5
BATM	Batumi	0.93	147	P	Pn	20 30 11.6	-0.1
BATM				S	Sn	20 30 24.8	-0.5
BATM	Batumi	0.93	147	*i* P	Pn	20 30 12.2	+0.5
BATM				*i* S	Sn	20 30 25.5	+0.1
BATM	Batumi	0.93	147	*i* Pg	Pn	20 30 11.6	-0.1
BATM				*e*Sg	Sn	20 30 24.8	-0.5
DOMR	Dombai	1.01	26	*e*Pg	Pg	20 30 11.6	0.0
DOMR				*e*Sg	Sg	20 30 24.1	-0.7
BCA	Borcka	1.04	154	PG	Pb	20 30 13.0	+0.4
DBOC	Borcka	1.15	155	*i* P	Pn	20 30 14.9	+0.2
DBOC				*i* S	Sn	20 30 30.3	-0.4
DBOC				IAML_P			
	comp=Z,5μm,0.1s						
ARXR	Arkhyz	1.19	9	*e*Pg	Pg	20 30 14.6	-0.5
ARXR				*e*Sg	Sg	20 30 30.0	-0.6
DBAD	Bademkaya	1.46	159	*i* P	Pn	20 30 19.3	+0.3
DBAD				IAML_P			
	comp=Z,2μm,0.1s						
DAGI	Agillar	1.47	152	*i* P	Pb	20 30 19.8	-0.1
DAGI				*i* S	Sb	20 30 38.9	0.0
DAGI				IAML_P			
	comp=Z,542nm,0.1s						
TKB	Tkibuli	1.47	91	P	Pn	20 30 19.4	+0.2
TKB				S	Sb	20 30 38.8	-0.1
NEY	Neytrino	1.53	55	*i* Pg	Pn	20 30 20.6	+0.5
NEY				*e*Sg	Sn	20 30 39.6	-0.8
SOC	Sochi	1.53	322	*e*Pg	Pb	20 30 21.1	+0.2
SOC				*e*Sg	Sg	20 30 42.2	+0.9
EPOS	Posof	1.55	124	*i* P	Pb	20 30 21.4	+0.1
EPOS				*i* S	Sg	20 30 42.7	+0.7
SHA1	Shidzhatmaz	1.81	41	*e*Pg	Pb	20 30 25.8	0.0
SHA1				*e*Sg	Sn	20 30 48.4	+0.8
ONI	Oni	1.82	83	PN	Pb	20 30 26.3	+0.5
ONI				SN	Sg	20 30 50.2	-0.3
ONI	Oni	1.82	83	P	Pb	20 30 26.2	+0.4
ONI				S	Sg	20 30 50.0	-0.5
ONI	Oni	1.82	83	*e*Pg	Pb	20 30 26.2	+0.4
ONI				*e*Sg	Sg	20 30 50.0	-0.5
LZRR	Lazarevskoye	1.96	323	*e*Pg	Pb	20 30 27.9	-0.2
LZRR				*e*Sg	Sg	20 30 54.7	-0.3
DIGR	Digorskoe uzhe	1.96	74	*e*Pg	Pg	20 30 30.9	+1.1
DIGR				*e*Sg	Sb	20 30 53.4	+0.1
KIV	Kislovodsk	1.99	37	PN	Pb	20 30 29.2	+0.4
KIV	Kislovodsk	1.99	37	*i* Pg	Pb	20 30 29.1	+0.2
KIV				*i* Sg	Sb	20 30 54.4	+0.4
KRIK	Erzurum-spir	2.04	182	*i* P	Pb	20 30 30.3	+0.5
SENK	Senkaya-Erzuru	2.08	151	PN	Pb	20 30 29.6	-0.8
ZEI	Tsey	2.17	78	*e*Pg	Pg	20 30 34.2	+0.4
ZEI				*e*Sg	Sb	20 31 00.0	+0.8
NCK	Nalchik	2.20	59	*e*Pg	Pb	20 30 32.8	+0.5
NCK				*e*Sg	Sn	20 30 55.2	-1.5
LSNR	Lesken	2.25	66	*i* Pg	Pg	20 30 35.5	+0.2
LSNR				*e*Sg	Sg	20 31 03.9	-0.6
KBTC	Kuba-Taba	2.27	50	*e*Pg	Pg	20 30 34.9	-0.6
KBTC				*e*Sg	Sb	20 31 03.0	+1.3
LACR	Lac	2.46	79	*e*Pn	Pg	20 30 38.6	-0.7
LACR				*e*Sn	Sb	20 31 07.1	-0.5

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*ISCJB **13** 20:45:45.4±0.2, 63°.16N±0°.02×150°.83W±0°.05, h139^{km}±2^{km}, mb3.8/31, Error ellipse: s-maj=3.6km s-min=3.1km az=12.5*

*IDC **13** 20:45:46.7±2.1, 63°.32N×151°.00W, h128^{km}±19^{km}, mb3.6/23, mb1 3.7/26, mb1mx3.5/47, mbtmp4.0/26, Error*

ellipse: s-maj=18.3km s-min=11.1km az=29.0

AEIC 13 20:45:46.9, 63°.14N×150°.80W, h134^{km}, ML3.5, MB4.1(NEIC)

NEIC 13 20:45:46.9±0.0, 63°.14N×150°.80W, h134^{km}, mb4.1/10, ML3.5(AEIC), After AEIC.

ISC 13 20:45:46.8±0.6**, 63°.16N**±0°.03×**150°.82W**±0°.04**, h138^{km}**±5^{km}**, n108, σ0^{s}99**/136**, mb3.9**/31**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.40	353	ePn	Pn	20 46 06.2	-0.1
KTH				eSn	Sn	20 46 20.4	-0.7
HUR	Hurricane	0.57	108	ePn	Pn	20 46 06.8	-0.2
HUR				eSn	Sn	20 46 22.3	-0.1
CAST	Castle Rocks	0.63	295	ePn	Pn	20 46 07.1	-0.3
CAST				eSn	Sn	20 46 22.2	-1.0
PPLA	Purkeypile	0.68	248	ePn	Pn	20 46 07.8	-0.2
PPLA				eSn	Sn	20 46 23.5	-0.6
RND	Reindeer	0.92	74	ePn	Pn	20 46 09.6	-0.1
RND				eSn	Sn	20 46 26.4	-0.8
BPAW	Bear Paw Mtn.	0.95	355	ePn	Pn	20 46 09.6	-0.3
BPAW				eSn	Sn	20 46 26.5	-1.0
MCK	McKinley	1.02	55	ePn	Pn	20 46 10.5	0.0
MCK				eSn	Sn	20 46 28.3	-0.4
BWN	Browne	1.18	30	ePn	Pn	20 46 12.5	+0.5
BWN				eSn	Sn	20 46 31.4	+0.1
PMR	Palmer	1.76	153	ePn	Pn	20 46 17.6	-0.7
PMR				eSn	Sn	20 46 41.3	-1.1
WRH	Wood River Hil	1.79	41	ePn	Pn	20 46 18.6	0.0
WRH				eSn	Sn	20 46 42.6	-0.3
MLY	Manley	1.88	1	ePn	Pn	20 46 19.5	-0.2
MLY				eSn	Sn	20 46 44.3	-0.7
CCB	Clear Creek Bu	2.00	40	ePn	Pn	20 46 21.0	-0.1
CCB				eSn	Sn	20 46 45.8	-1.6
SPWE	Spurr West	2.06	204	ePn	Pn	20 46 21.9	-0.1
SPU	Mount Spurr	2.07	197	ePn	Pn	20 46 21.8	-0.3
SPU				eSn	Sn	20 46 48.1	-0.9
KNK	Knik Glacier	2.07	147	ePn	Pn	20 46 21.4	-0.6
KNK				eSn	Sn	20 46 48.3	-0.7
HDA	Harding Lake	2.13	52	ePn	Pn	20 46 22.4	-0.2
HDA				eSn	Sn	20 46 48.9	-1.3
MDM	Murphy Dome	2.13	31	ePn	Pn	20 46 22.7	0.0
MDM				eSn	Sn	20 46 49.0	-1.3
RC01	Rabbit Creek A	2.14	166	ePn	Pn	20 46 22.0	-0.8
RC01				eSn	Sn	20 46 48.4	-2.1
TCOL	CIGO, UAF Yank	2.16	36	P	Pn	20 46 23.1	+0.2
	baz=218						
TCOL				S	Sn	20 46 50.5	-0.2
	baz=218						
COLA	College	2.16	36	ePn	Pn	20 46 23.1	+0.2
PS08	TAPS Pump Stn8	2.25	50	ePn	Pn	20 46 23.7	-0.4
PS08				eSn	Sn	20 46 51.8	-1.0
ILAR	Eielson Array	2.37	45	P	Pn	20 46 24.9	-0.7
	7.3nm,0.3s,baz=227,slow=13,SNR=412						
ILAR				S	Sn	20 46 50.0	-5.6
	3.1nm,0.3s,baz=250,slow=13,SNR=7.9						
ILB	Eielson Array	2.37	45	ePn	Pn	20 46 25.4	-0.2
ILB				eSn	Sn	20 46 54.3	-1.2
TTA	Tatalina	2.38	267	ePn	Pn	20 46 25.4	-0.4
TTA				eSn	Sn	20 46 54.8	-1.0
TT01	Tatalina	2.39	266	ePn	Pn	20 46 25.5	-0.3
PAX	Paxson	2.44	92	ePn	Pn	20 46 26.5	-0.1
PAX				eSn	Sn	20 46 56.5	-0.7
POKR	Poker Plat Res	2.46	36	P	Pn	20 46 27.1	+0.3
	baz=218						
POKR				S	Sn	20 46 56.3	-1.2
	baz=218						
PS11	TAPS Pump St11	2.70	111	ePn	Pn	20 46 29.7	0.0
PS06	TAPS Pump Stn6	2.75	9	ePn	Pn	20 46 30.6	+0.3
RIDG	Independent Ri	2.75	75	ePn	Pn	20 46 30.4	0.0
RIDG				eSn	Sn	20 47 01.9	-2.2
RSO	Redoubt South	2.86	200	ePn	Pn	20 46 32.8	+0.8
GLI	Glacier Island	2.88	141	ePn	Pn	20 46 31.0	-1.1
JPK	Jack Peak	2.90	135	ePn	Pn	20 46 31.1	-1.2
SVW2	Sparrevohn	3.05	229	ePn	Pn	20 46 33.7	-0.5
DOT	Dot Lake	3.08	78	ePn	Pn	20 46 34.1	-0.5
IM3	Indian Mountai	3.10	337	ePn	Pn	20 46 34.7	-0.2
SEW	Seward	3.14	167	ePn	Pn	20 46 34.6	-0.7
SCRK	Sand Creek	3.16	72	ePn	Pn	20 46 35.5	-0.3
FID	Port Fidalgo	3.17	138	ePn	Pn	20 46 34.8	-1.0
MENT	Mentasta	3.24	91	ePn	Pn	20 46 36.4	-0.3
PRP	Porcupine Dome	3.30	42	ePn	Pn	20 46 38.0	+0.4
BRLK	Bradley Lake	3.41	181	ePn	Pn	20 46 38.7	-0.2
EYAK	Cordova Ski Ar	3.55	135	ePn	Pn	20 46 39.8	-0.9
CNPM	China Poot	3.65	183	ePn	Pn	20 46 41.5	-0.6
COLD	Coldfoot	4.09	3	ePn	Pn	20 46 48.2	+0.4
BCA3	Beaver Creek A	4.10	87	ePn	Pn	20 46 47.2	-0.9
FYU	Fort Yukon	4.17	32	ePn	Pn	20 46 48.8	+0.1
HMT	Hamilton	4.21	129	ePn	Pn	20 46 48.4	-1.0
BALM	Baldy	4.51	114	ePn	Pn	20 46 52.8	-0.8
EGAK	Eagle	4.55	65	ePn	Pn	20 46 53.6	-0.3
BM3	Burnt Mountain	5.01	29	ePn	Pn	20 46 59.6	-0.4
DAWY	Dawson	5.18	75	ePn	Pn	20 47 01.8	-0.5
KDAK	Kodiak Island	5.47	190	ePn	Pn	20 47 04.6	-1.5
TOLK	Toolik Lake Re	5.53	5	ePn	Pn	20 47 07.6	+0.7
TOLK	Toolik Lake Re	5.53	5	P	Pn	20 47 08.0	+1.1
	baz=186						
TOLK				S	Sn	20 48 11.5	+2.0
	baz=186						
PCA	Pinnacle	5.90	117	ePn	Pn	20 47 11.6	-0.3
PNL	Peninsula	6.50	117	ePn	Pn	20 47 19.4	-0.6
HYT	Haines Junctio	6.69	104	ePn	Pn	20 47 22.1	-0.5
EPYK	Eagle Plains	6.83	56	ePn	Pn	20 47 24.1	-0.3
EPYK	Eagle Plains	6.83	56	P	Pn	20 47 24.0	-0.3
	baz=248						
RDOG	Red Dog Mine	7.00	320	ePn	Pn	20 47 27.3	+0.7
SKAG	Skagway	8.32	109	ePn	Pn	20 47 44.0	-0.3
INK	Inuvik	8.77	46	P	Pn	20 47 50.0	-0.3
	0.1nm,0.3s,baz=232,slow=9.6,SNR=2.8						
INK	Inuvik	8.77	46	ePn	Pn	20 47 50.4	+0.1
BESE	Bessie Mountai	9.03	113	ePn	Pn	20 47 53.2	-0.7
JIS	Juneau Island	9.41	114	ePn	Pn	20 47 58.1	-0.7
YKA	Yellowknife Ar	16.42	76	P	Pn	20 49 28.6	-0.2
	0.2nm,0.3s,baz=290,slow=9.8,SNR=2.8						
YKB5	Yellowknife Ar	16.42	76	eP	Pn	20 49 28.6	-0.2
RES	Resolute Bay	22.09	36	P	P	20 50 29.0	-1.2
	1.7nm,0.8s,baz=281,slow=9.9,SNR=11						
WALA	Waterton Lakes	24.51	108	eP	P	20 50 53.9	+0.7
	4.0nm,0.8s						
SEY	Seymchan	25.04	295	P	P	20 50 57.0	-0.6
	3.1nm,0.7s,baz=95,slow=11,SNR=10						
PEA1	Petropavlovsk-	28.20	273	eP	P	20 51 24.9	-1.1
PETK	Petropavlovsk-	28.20	273	P	P	20 51 24.9	-1.2
	1.3nm,0.8s,baz=74,slow=12,SNR=3.5						
TIXI	Tiksi	29.62	321	P	P	20 51 37.8	-0.6
	0.8nm,0.7s,baz=29,slow=3.7,SNR=3.9						
PD31	Pinedale Array	31.34	111	eP	P	20 51 56.0	+1.9
PDAR	Pinedale Array	31.34	111	P	P	20 51 56.0	+1.9
	1.1nm,0.8s,baz=323,slow=6.3,SNR=11						
PDAR				pP	pP	20 52 25.6	+1.8
	1.1nm,0.8s,baz=297,slow=6.5,SNR=3.8						
NV01	Mina Array Sit	31.55	126	eP	P	20 51 58.5	+2.5
NVAR	Mina Array Bea	31.55	126	P	P	20 51 58.5	+2.5
	1.7nm,0.7s,baz=317,slow=8.9,SNR=14						
NVAR				pP	pP	20 52 27.5	+1.7
	1.1nm,0.9s,baz=324,slow=7.1,SNR=3.6						
ULM	Lac du Bonnet	31.73	88	P	P	20 51 58.5	+1.4
	1.2nm,0.4s,baz=333,slow=4.5,SNR=3.4						
R11A	Troy Canyon, C	32.64	123	eP	P	20 52 06.0	+0.6
	1.9nm,0.9s						
RSSD	Black Hills	32.64	103	eP	P	20 52 06.4	+0.9
	3.6nm,0.6s						
SRU	San Rafael Swe	33.98	116	eP	P	20 52 17.8	+0.6
	3.0nm,0.9s						
WUAZ	Wupatki	36.74	120	eP	P	20 52 41.4	+0.7
	5.3nm,1.0s						
X16A	Lo Mia Camp, P	37.68	121	eP	P	20 52 49.9	+1.2
	2.6nm,0.9s						
SPITS	Spitsbergen Ar	38.68	4	P	P	20 52 56.7	+0.3
	4.3nm,0.6s,baz=30,slow=8.7,SNR=5.6						
KLR	Kul'dur	42.47	289	P	P	20 53 27.3	-0.4
	0.3nm,0.3s,baz=21,slow=11,SNR=3.8						
WMOK	Wichita Mounta	42.66	107	eP	P	20 53 30.1	+0.7
	2.6nm,0.9s						
TX31	Lajitas Ar. Si	45.26	116	eP	P	20 53 50.9	+0.6
	3.1nm,1.1s						
TXAR	Lajitas Array	45.26	116	P	P	20 53 52.1	+1.8
	1.0nm,0.8s,baz=324,slow=5.4,SNR=9.8						
ARA0	ARCESS Array S	47.56	2	eP	P	20 54 06.4	-1.3
ARCES	ARCESS Array B	47.56	2	P	P	20 54 06.4	-1.3
	1.7nm,0.8s,baz=310,slow=5.7,SNR=5.1						
KSRS	Korea Array	53.53	282	P	P	20 54 52.5	-0.3
	1.1nm,0.6s,baz=32,slow=6.8,SNR=5.2						
SONA0	Songino Array	53.79	305	eP	P	20 54 55.7	+1.0
SONM	Songino Array	53.79	305	P	P	20 54 55.7	+1.0
	1.5nm,0.8s,baz=14,slow=7.4,SNR=5.6						
ZAA1	Zalesovo Array	55.44	324	eP	P	20 55 05.9	-0.4
ZALV	Zalesovo Beam	55.44	324	P	P	20 55 05.9	-0.5
	2.5nm,0.6s,baz=36,slow=7.1,SNR=8.0						
FIA0	FINESS Array S	55.69	2	eP	P	20 55 07.7	-0.3
FINES	FINESS Array B	55.69	2	P	P	20 55 07.7	-0.3
	1.8nm,0.9s,baz=14,slow=17,SNR=3.4						
KIRV	Kirov	57.59	348	P	P	20 55 21.1	-0.4
	3.3nm,0.6s,baz=5.6,slow=16,SNR=3.5						
ARU	Arti	58.59	341	P	P	20 55 28.2	-0.2
	0.9nm,0.5s,baz=36,slow=8.4,SNR=4.8						
ARU	Arti	58.59	341	eP	P	20 55 28.7	+0.2
	3.1nm,0.7s						
BVAR	Borovoye Array	59.75	333	P	P	20 55 36.0	-0.5
	1.4nm,0.6s,baz=42,slow=6.9,SNR=8.2						
KURBB	Kurchatov Arra	60.10	326	P	P	20 55 38.1	-0.7
	1.1nm,0.6s,baz=27,slow=7.1,SNR=5.1						
AKTO	Aktyubinsk	64.49	340	P	P	20 56 08.1	-0.1
	1.3nm,0.5s,baz=27,slow=6.4,SNR=4.6						
AKASG	Malin Array Be	66.48	360	P	P	20 56 20.6	-0.2
	0.3nm,0.3s,baz=4.8,slow=6.2,SNR=4.2						
BR101	Keskin Array S	77.40	356	eP	P	20 57 26.3	0.0
BRTR	Keskin Array B	77.40	356	P	P	20 57 26.3	0.0
	0.4nm,0.6s,baz=0.0,slow=4.9,SNR=3.5						
CMAR	Chiang Mai Arr	82.45	296	P	P	20 57 53.9	+0.3
	0.9nm,0.8s,baz=350,slow=6.5,SNR=4.9						

ISCJB 13 20:46:16.6±0.3, 50°.99N±0°.02×88°.59E±0°.03, h10^{km}, Error ellipse: s-maj=2.6km s-min=2.0km az=43.4

NNC 13 20:46:23.7±1.7, 51°.09N×88°.27E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=13.9km s-min=8.3km az=103.0

ISC 13 20:46:21.4±0.7**, 50°.95N**±0°.03×**88°.49E**±0°.03**, h10^{km}, n34, σ2^{s}24**/51**, 6C-7D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULGR	Ulagan, Altay	0.46	226	Pg	Pg	20 46 27.8	-2.7
ULGR				Sg	Sg	20 46 33.9	-2.7
AKAR	Aktash	0.83	222	Pg	Pg	20 46 35.1	-2.4
AKAR				Sg	Sg	20 46 46.7	-1.7
CUR	Chagan-Uzun	0.85	186	Pg	Pg	20 46 34.7	-3.1
CUR				Sg	Sg	20 46 44.9	-4.0
CHBI	Chibit, Altay	0.89	225	Pg	Pg	20 46 36.9	-1.7
CHBI				Sg	Sg	20 46 48.2	-2.0
TEL	Teeli	1.09	85	Pg	Pn	20 46 38.9	-3.9
TEL				Sg	Sb	20 46 51.5	-5.1
DGZ	Jazzator, Alta	1.42	209	Pg	Pn	20 46 45.6	-1.8
DGZ				Sg	Sn	20 47 03.5	-2.7
TUNR	Tungur	1.58	241	Pg	Pn	20 46 49.8	+0.2
TUNR				Sg	Sn	20 47 10.4	+0.2
TASR	Tashtagol	1.86	349	Pg	Pb	20 46 55.0	-0.5
TASR				Sg	Sg	20 47 20.6	-0.5
GALT	Gorno-Altaysk,	1.89	304	Pg	Pg	20 46 55.7	-1.9
GALT				Sg	Sg	20 47 22.5	+0.5
UKR	Ust'-Kan	2.35	271	Pg	Pb	20 47 04.6	+0.7
UKR				Sg	Sg	20 47 36.9	0.0
DJO	Djoy, Khakassi	2.50	42	Pg	Pn	20 47 03.7	+1.6
DJO				Sg	Sb	20 47 38.4	+1.2
DJOS	Djoyskaya Sosn	2.59	43	Sg	Sb	20 47 41.1	+1.4
CERR	Cheremushki	2.64	42	Pg	Pb	20 47 09.8	+1.1
CERR				Sg	Sb	20 47 41.2	+0.1
ELT	Eltsovka	2.70	330	Pg	Pg	20 47 10.3	-2.9
ELT				Sg	Sg	20 47 45.8	-2.4
LUZB	Luzhba, Kemero	2.73	5	Pg	Pb	20 47 10.7	+0.3
LUZB				Sg	Sg	20 47 45.3	-3.9
ABNR	Abakan	3.32	32	Pg	Pb	20 47 20.2	-0.2
ABNR				Sg	Sb	20 48 04.9	+4.1
ARDR	Aradan	3.48	60	Pg	Pb	20 47 22.8	-0.4
ARDR				Sg	Sb	20 48 08.1	+2.6
ZAA0	Zalesovo Array	3.75	325	⇓Pn	Pn	20 47 20.9	+1.5
	3.8nm,0.6s						
ZAA0				⇓Lg	Lg	20 48 15.9	
	10nm,0.6s						
KZLR	Kyzyl	3.82	76	Pn	Pn	20 47 17.3	-3.0
KZLR				Pg	Pb	20 47 28.0	-0.9
KZLR				Sg	Sb	20 48 19.3	+4.1
SALR	Pechorkino, Sa	3.87	335	Pg	Pb	20 47 29.4	-0.3
SALR				Sg	Sg	20 48 23.6	-2.0
KEM	Kemerovo	4.64	343	Sg	Sg	20 48 48.4	-1.8
KHAR	Kharino, NSO,	4.73	323	Sg	Sg	20 48 55.3	+2.2
NVS	Novosibirsk	5.03	323	Pg	Pg	20 47 52.7	-5.1
NVS				Sg	Sg	20 48 59.7	-3.2
NVSII	Novosibirsk	5.03	323	Pn	Pn	20 47 34.2	-2.7
NVSII				Pg	Pb	20 47 52.1	+2.6
NVSII				Sg	Sg	20 49 02.4	-0.5
BSTK	Bystrovka, Nov	5.07	318	Pg	Pg	20 47 54.0	-4.5
BSTK				Sg	Sg	20 49 04.2	+0.1
NHES	Novosibirsk, N	5.14	322	Sg	Sg	20 49 05.7	-0.7
ASR1	Anjero-Sudjens	5.34	345	Sg	Sg	20 49 13.9	+1.0
ALXA	Alekseevka, NS	5.36	320	Sg	Sg	20 49 15.5	+2.2
MAKZ	Makanchi	5.96	229	⇑Pn	Pn	20 47 51.7	+2.0
	3.6nm,0.5s						
MAKZ				⇓Sn	Sn	20 49 04.9	+6.8
	10nm,0.8s						
MAKZ				⇑Lg	Lg	20 49 30.9	
	21nm,0.8s						
MAKZ	Makanchi	5.96	229	Sg	Sg	20 49 29.7	-3.1
KURK	Kurchatov	6.26	272	⇓Pn	Pn	20 47 54.6	+0.9
	6.5nm,1.0s						
KURK				⇑Sn	Sn	20 49 07.1	+1.9
	12nm,0.6s						
KURK				⇓Lg	Lg	20 49 37.1	
	25nm,0.7s						
KURBB	Kurchatov Arra	6.32	271	⇓Pn	Pn	20 47 55.7	+1.1
	8.1nm,0.7s,baz=82,slow=14						
KURBB				⇑Sn	Sn	20 49 08.9	+2.1
	21nm,0.6s,baz=81,slow=24						
KURBB				⇑Lg	Lg	20 49 39.4	
	115nm,0.7s,baz=83,slow=32						
BRVK	Borovoye	11.42	288	⇓Pn	Pn	20 49 03.8	-0.6
	2.2nm,0.6s						
BRVK				⇑Sn	Sn	20 51 12.6	+0.7
	3.4nm,0.8s						
WHN	Wuhan	28.03	127	P	P	20 52 12.1	-0.5

IDC 13 20:57:08.9±3.3, 1°.09N×86°.29E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/48, mbtmp3.7/5, ML4.9/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/49, Error ellipse: s-maj=70.8km s-min=39.5km az=0.0

ISC 13 20:57:09.7±3.1**, 1°.0N**±0°.4×**86°.3E**±0°.2**, h10^{km}, n7, σ0^{s}96**/7**, mb3.9**/5**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	8.39	318	Pn	Pn	20 59 11.9	+0.4
	13nm,0.3s,baz=116,slow=13,SNR=135						
PALK				Sn	Sn	21 00 35.5	-11
	22nm,0.3s,baz=296,slow=0.5,SNR=12						
PALK				LR	LR	21 02 03.4	
	comp=Z,74nm,21.5s,baz=116,slow=36						
CMAR	Chiang Mai Arr	21.32	35	P	P	21 01 57.3	+0.4
	0.3nm,0.8s,baz=228,slow=9.5,SNR=3.4						
GEYT	Alibeck	44.99	328	P	P	21 05 25.6	+0.2
	2.3nm,0.6s,baz=152,slow=9.6,SNR=8.1						
SONM	Songino Array	49.80	18	P	P	21 06 03.5	+0.6
	0.3nm,0.6s,baz=198,slow=7.6,SNR=3.1						
ZALV	Zalesovo Beam	52.79	359	P	P	21 06 23.5	-1.6
	0.7nm,0.5s,baz=191,slow=6.9,SNR=4.2						
FINES	FINESS Array B	75.32	334	P	P	21 08 52.6	-0.3
	1.4nm,0.8s,baz=72,slow=4.5,SNR=5.8						
TXAR	Lajitas Array	148.36	17	PKPbc	PKPbc	21 16 58.0	+0.7
	0.2nm,0.5s,baz=292,slow=4.8,SNR=5.2						

ISCJB 13 20:59:15.6±0.9, 56°.09S±0°.09×27°.0W±0°.3, h63^{km}, mb4.1/5, Error ellipse: s-maj=24.8km s-min=13.1km az=169.9

IDC 13 20:59:19.5±8.9, 56°.16S×27°.00W, h85^{km}±79^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/26, mbtmp4.0/5, Error ellipse: s-maj=26.4km s-min=23.7km az=154.0

ISC 13 20:59:17.0±0.7**, 56°.1S**±0°.1×**27°.0W**±0°.2**, h63^{km}, n14, σ0^{s}67**/15**, mb4.2**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.68	158	P	P	21 03 08.1	+0.5
VNA3	Neumayer Olymp	16.87	161	P	Pn	21 03 09.2	+0.5
VNA2	Neumayer--Watz	17.07	158	P	P	21 03 11.7	-0.3
	baz=317,slow=14						
SNAA	Sanae	18.62	156	P	P	21 03 28.3	-0.8
VNDA	Vanda	46.49	183	P	P	21 07 37.4	+0.2
	1.9nm,0.6s,baz=187,slow=7.6,SNR=25						
LBTB	Lobatse	48.94	73	P	P	21 07 57.6	+0.8
	1.4nm,0.6s,baz=210,slow=7.0,SNR=4.2						
LPAZ	La Paz	50.51	305	P	P	21 08 09.3	-0.1
	1.4nm,0.4s,baz=139,slow=2.2,SNR=10.0						
LPAZ				pP	pP	21 08 25.9	+0.5
	0.9nm,0.6s,baz=144,slow=5.3,SNR=3.4						
MATP	Matopo	54.21	72	P	P	21 08 35.3	-1.0
	0.6nm,0.4s,baz=227,slow=8.9,SNR=2.9						
LSZ	Lusaka	58.31	69	pP	pP	21 09 24.0	+2.7
	0.8nm,0.5s,baz=214,slow=3.6,SNR=4.7						
TORD	Torodi Ar. Bea	73.08	29	P	P	21 10 41.0	+0.8
	0.5nm,0.4s,baz=204,slow=5.8,SNR=15						
TORD				pP	pwP	21 10 60.0	+0.1
	3.2nm,0.8s,baz=204,slow=5.2,SNR=13						
FINES	FINESS Array B	124.41	28	PKP	PKPdf	21 18 06.7	-0.6
	0.5nm,0.5s,baz=187,slow=2.1,SNR=12						
INK	Inuvik	145.94	320	PKPbc	PKPdf	21 18 47.0	+0.2
	2.7nm,0.6s,baz=85,slow=2.2,SNR=5.0						
ILAR	Eielson Array	150.25	312	PKPbc	PKPbc	21 18 58.6	-0.7
	2.1nm,0.8s,baz=128,slow=1.8,SNR=14						
SONM	Songino Array	150.63	86	PKPbc	PKPbc	21 19 00.1	-0.9
	0.6nm,0.5s,baz=216,slow=3.7,SNR=8.9						

ISCJB 13 21:05:35.1±0.3, 4°.56S±0°.05×152°.94E±0°.06, h55^{km}, mb4.7/35, MS3.0/7, Error ellipse: s-maj=9.6km s-min=5.8km az=38.7

IDC 13 21:05:37.1±4.3, 4°.58S×152°.91E, h54^{km}±38^{km}, mb3.9/10, mb1 4.0/11, mb1mx3.8/34, mbtmp4.2/11, ML2.1/1, MS3.1/9, Ms1 3.1/9, ms1mx2.9/36, Error ellipse: s-maj=26.2km s-min=19.9km az=82.0

NEIC 13 21:05:38.6±1.0, 4°.58S×152°.93E, h71^{km}±6^{km}, mb4.5/29, Error ellipse: s-maj=12.1km s-min=10.7km az=173.0

ISC 13 21:05:36.9±0.5**, 4°.60S**±0°.07×**152°.97E**±0°.07**, h55^{km}, n56, σ0^{s}79**/53**, mb4.6**/35**, MS3.1**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.90	297	ePn	Pn	21 05 55.4	+1.9
PMG	Port Moresby	7.49	230	P	Pn	21 07 25.1	+1.6
	1.8nm,0.3s,baz=146,slow=7.3,SNR=5.0						
PMG				S	Sn	21 08 46.9	-0.2
	2.0nm,0.3s,baz=37,slow=15,SNR=3.4						
PMG				LR	LR	21 10 13.2	
	comp=Z,34nm,19.0s,baz=70,slow=37						
PMG	Port Moresby	7.49	230	ePn	Pn	21 07 25.1	+1.6
PMG				e		21 07 25.4	
PMG				eSn	Sn	21 08 46.9	-0.2
HNR	Honiara	8.43	125	LR	LR	21 10 50.3	
	comp=Z,278nm,21.2s,baz=292,slow=37						
PATS	Pohnpei	12.55	25	ePn	Pn	21 08 33.9	+1.1
FAKI	Fak Fak	20.74	274	eP	P	21 10 14.1	+0.9
	42nm,1.2s						
DZM	Mont Dzumac	21.73	144	P	P	21 10 24.2	+0.4
	11nm,0.9s,baz=338,slow=19,SNR=5.0						
DZM				LR	LR	21 17 22.6	
	comp=Z,115nm,18.9s,baz=67,slow=32						
DZM	Mont Dzumac	21.73	144	eP	P	21 10 24.2	+0.4
	33nm,1.3s						
SAUI	Saumlaki	21.80	260	eP	P	21 10 24.1	-0.5
	551nm,0.9s						
MTN	Manton Dam	23.07	248	eP	P	21 10 38.1	+0.2
	46nm,1.4s						
WRAB	Tennant Creek	23.69	228	eP	P	21 10 43.6	-0.2
	9.9nm,0.7s						
WB2	Warramunga Arr	23.69	228	eP	P	21 10 43.8	-0.1
	42nm,1.5s						
WR1	Warramunga Arr	23.70	228	eP	P	21 10 43.6	-0.3
WRA	Warramunga Arr	23.70	228	P	P	21 10 43.6	-0.3
	7.3nm,0.3s,baz=54,slow=9.4,SNR=97						
FUNA	Funafuti	26.34	100	eP	P	21 11 07.9	-0.1
	268nm,1.7s						
AS31	Alice Springs	26.41	222	eP	P	21 11 09.0	+0.4
	5.5nm,1.8s						
ASAR	Alice Springs	26.41	222	P	P	21 11 07.9	-0.7
	1.0nm,0.3s,baz=51,slow=9.4,SNR=16						
STKA	Stephens Creek	29.16	200	LR	LR	21 22 10.4	
	comp=Z,74nm,18.3s,baz=27,slow=34						
DAV	Davao City (W)	29.69	293	LR	LR	21 21 14.6	
	comp=Z,25nm,21.9s,baz=108,slow=32						
FORT	Forrest	35.05	219	eP	P	21 12 24.6	0.0
	33nm,1.0s						
KNTN	Kanton	35.28	88	eP	P	21 12 26.6	-0.3
	114nm,1.2s						
PSA00	Pilbara Seismi	36.27	239	eP	P	21 12 34.2	-1.1
	28nm,1.6s						
KKM	Kota Kinabalu	38.19	286	eP	P	21 12 50.0	-1.7
	25nm,1.2s						
JOW	Kunigami	39.33	324	eP	P	21 12 59.7	-1.2
	74nm,1.4s						
JHJ2	Mitsune	39.52	343	eP	P	21 13 01.2	-1.2
	682nm,1.6s						
URZ	Urewera	40.08	150	eP	P	21 13 07.0	0.0
	142nm,1.6s						
GIRL	Giralia	41.51	241	eP	P	21 13 18.8	-0.3
	258nm,1.4s						
JOHN	Johnston Islan	42.70	59	eP	P	21 13 28.4	-0.3
	243nm,1.0s						
JNU	Nakatsue	42.96	332	eP	P	21 13 31.3	+0.6
	76nm,1.9s						
MJAR	Matsushiro Arr	43.19	343	LR	LR	21 29 38.5	
	comp=Z,26nm,21.1s,baz=250,slow=33						
KSRS	Korea Array	47.90	333	P	P	21 14 08.6	-1.1
	1.4nm,0.7s,baz=151,slow=7.1,SNR=5.0						
KSRS				LR	LR	21 34 30.6	
	comp=Z,8.3nm,18.1s,baz=330,slow=36						
USRK	Ussuriysk Ar.	52.11	341	P	P	21 14 41.0	-0.4
	1.5nm,0.6s,baz=184,slow=7.1,SNR=5.0						
PEA0B	Petropavlovsk-	57.63	3	eP	P	21 15 21.5	+0.2
	17nm,1.3s						
PETK	Petropavlovsk-	57.63	3	P	P	21 15 21.9	+0.6
	2.9nm,0.9s,baz=176,slow=4.5,SNR=5.6						
PETK				LR	LR	21 36 03.8	
	comp=Z,19nm,21.0s,baz=157,slow=32						
PEA1	Petropavlovsk-	57.63	3	eP	P	21 15 21.9	+0.6
CMAR	Chiang Mai Arr	57.94	295	P	P	21 15 25.0	+0.9
	2.2nm,0.9s,baz=114,slow=4.8,SNR=12						
CMAR				LR	LR	21 40 45.2	
	comp=Z,7.5nm,18.9s,baz=345,slow=36						
SONA0	Songino Array	66.24	328	eP	P	21 16 19.1	-0.2
SONM	Songino Array	66.24	328	P	P	21 16 19.2	-0.2
	0.7nm,0.7s,baz=146,slow=6.5,SNR=6.2						
CHGN	Chignik	72.47	26	eP	P	21 16 57.4	0.0
	21nm,1.2s						
MAKZ	Makanchi	80.49	319	eP	P	21 17 42.9	-0.2
	3.3nm,1.0s						
MLY	Manley	80.64	21	eP	P	21 17 43.5	0.0
	1.6nm,0.9s						
ZALV	Zalesovo Beam	81.08	326	P	P	21 17 44.7	-1.3
	0.9nm,0.5s,baz=95,slow=6.6,SNR=3.9						
ZAA1	Zalesovo Array	81.08	326	eP	P	21 17 44.7	-1.4
FYU	Fort Yukon	83.37	21	eP	P	21 17 57.9	+0.1
	7.6nm,1.1s						
BOOM	Boomskoye usch	83.57	314	eP	P	21 17 59.3	-0.3
	2.5nm,1.1s						
KURK	Kurchatov	83.71	322	eP	P	21 17 59.5	-0.3
	5.0nm,1.3s						
HYT	Haines Junctio	84.18	27	eP	P	21 18 02.2	0.0
	4.0nm,0.9s						
MAW	Mawson	85.82	203	eP	P	21 18 10.2	+0.1
	2.8nm,1.7s						
BVAR	Borovoye Array	89.18	323	P	P	21 18 26.1	-0.5
	3.9nm,0.7s,baz=122,slow=5.6,SNR=17						
GEC2	GERESS Array S	123.97	329	ePKPdf	PKiKP	21 24 30.9	+1.4
GERES	GERESS Array B	123.97	329	PKP	PKiKP	21 24 30.9	+1.4
	0.3nm,0.5s,baz=107,slow=1.8,SNR=4.9						
MDT	Midelt	144.97	326	PKP	PKPbc	21 25 08.2	+0.2
	0.6nm,0.4s,baz=94,slow=5.0,SNR=3.5						
TOA0	Torodi Ar. Sit	150.40	289	ePKPbc	PKPbc	21 25 23.3	-0.1
TORD	Torodi Ar. Bea	150.40	289	PKPbc	PKPbc	21 25 23.1	-0.2
	2.7nm,0.6s,baz=69,slow=2.5,SNR=26						
TOA1	Torodi Ar. Sit	150.40	289	ePKPbc	PKPbc	21 25 23.1	-0.2
BDFB	Brasilia	151.09	134	PKPbc	PKiKP	21 25 25.6	0.0
	1.6nm,0.6s,baz=202,slow=20,SNR=4.1						

ISCJB 13 21:24:07.3±0.3, 50°.02S±0°.06×7°.65W±0°.09, h10^{km}, Error ellipse: s-maj=8.8km s-min=8.5km az=2.4

IDC 13 21:24:07.9±0.6, 50°.02S×7°.59W, h0^{km}, mb4.2/15, mb1 4.2/15, mb1mx4.1/36, mbtmp4.2/15, MS3.8/4, Ms1 3.8/4, ms1mx3.4/27, Error ellipse: s-maj=20.6km s-min=15.9km az=180.0

NEIC 13 21:24:09.0±2.3, 49°.96S×7°.63W, h10^{km}±1^{km}, mb4.8/29,

Error ellipse: s-maj=17.9km s-min=16.1km az=209.0

ISC 13 21:24:09.0±0.4**, 49°.97S**±0°.09×**7°.63W**±0°.09**, h10**^{km}**, n80, σ1^{s}06**/75**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	18.17	245	*e*P	Pn	21 28 20.4	-0.7
	84nm,1.5s						
VNA1	Neumayer--Stat	20.75	181	P	P	21 28 50.0	+0.6
VNA2	Neumayer--Watz	21.02	180	P	P	21 28 52.5	0.0
	baz=1.1,slow=13						
VNA3	Neumayer Olymp	21.36	182	P	P	21 28 55.8	-0.3
SNAA	Sanae	21.88	176	P	P	21 29 01.4	-0.3
SNAA	Sanae	21.88	176	P	P	21 29 01.4	-0.3
	3.3nm,0.8s,baz=338,slow=13,SNR=15						
SNAA				LR	LR	21 35 32.6	
	comp=Z,131nm,19.3s,baz=198,slow=31						
SNAA	Sanae	21.88	176	*e*P	P	21 29 01.8	+0.1
	9.7nm,1.3s						
SUR	Sutherland	27.45	61	LR	LR	21 38 10.7	
	comp=Z,253nm,20.2s,baz=226,slow=31						
BOSA	Boshof	32.80	62	P	P	21 30 42.4	-0.1
	3.0nm,0.9s,baz=234,slow=14,SNR=3.4						
BOSA				LR	LR	21 41 37.0	
	comp=Z,241nm,19.0s,baz=186,slow=32						
LBTB	Lobatse	35.79	58	P	P	21 31 07.7	-0.7
	2.2nm,0.7s,baz=211,slow=8.3,SNR=4.0						
LBTB	Lobatse	35.79	58	*e*P	P	21 31 07.7	-0.7
	30nm,1.8s						
MAW	Mawson	38.01	144	P	P	21 31 27.0	+0.4
	2.2nm,0.8s,baz=276,slow=11,SNR=5.7						
MAW	Mawson	38.01	144	*e*P	P	21 31 27.0	+0.4
	0.8nm,1.0s						
CRZF	Crozet Islands	38.90	108	*e*P	P	21 31 33.3	-1.1
	58nm,0.9s						
QSPA	South Pole Qui	40.28	180	*e*P	P	21 31 48.0	+2.1
	8.2nm,1.3s						
MATP	Matopo	41.05	57	P	P	21 31 53.6	+0.9
	4.1nm,0.8s,baz=217,slow=10,SNR=7.2						
H10S2	ASCENSION HYDR	41.30	349	T	T	22 15 52.1	
	baz=172						
H10S3	ASCENSION HYDR	41.31	349	T	T	22 15 45.8	
	baz=172						
H10S1	ASCENSION HYDR	41.32	349	T	T	22 15 47.6	
	baz=172						
CPUP	Villa Florida	44.63	283	P	P	21 32 22.6	+1.1
	2.5nm,0.8s,baz=122,slow=9.5,SNR=5.8						
CPUP	Villa Florida	44.63	283	*e*P	P	21 32 21.5	0.0
	8.5nm,1.3s						
BDFB	Brasilia	47.28	302	P	P	21 32 42.5	-0.2
	1.5nm,0.5s,baz=159,slow=8.6,SNR=4.0						
BDFB	Brasilia	47.28	302	*e*P	P	21 32 42.2	-0.4
	7.4nm,1.1s						
BDFB				*e*P	P	21 32 42.5	-0.2
SIV	San Ignacio	54.62	289	P	P	21 33 37.9	+0.1
	0.5nm,0.4s,baz=159,slow=8.6						
LVC	Limon Verde	54.65	276	P	P	21 33 40.3	+1.9
	13nm,0.8s,baz=127,slow=5.2,SNR=11						
LVC	Limon Verde	54.65	276	*e*P	P	21 33 39.3	+0.9
	15nm,0.8s						
PB10	IPOC Station P	55.06	274	*e*P	P	21 33 41.1	+0.2
	46nm,1.1s						
LIC	Lamto	56.01	3	*e*P	P	21 33 50.0	+2.3
	90nm,1.7s						
PB01	IPOC Station P	56.15	277	*e*P	P	21 33 49.2	+0.3
	59nm,1.9s						
KIC	Kosan Boka	56.16	3	*e*P	P	21 33 51.0	+2.3
	26nm,1.0s						
TIC	Toumodi	56.43	3	*e*P	P	21 33 47.8	-2.9
DBIC	Dimbokro	56.46	3	P	P	21 33 53.2	+2.4
	6.8nm,0.9s,baz=172,slow=7.1,SNR=4.9						
DBIC	Dimbokro	56.46	3	*e*P	P	21 33 49.5	-1.3
	12nm,1.0s						
GO01	Chusmiza	56.96	279	*e*P	P	21 33 55.9	+0.7
	47nm,2.0s						
PB11	IPOC Station P	57.19	278	*e*P	P	21 33 56.3	0.0
	12nm,0.8s						
LPAZ	La Paz	58.79	282	P	P	21 34 07.9	-0.2
	2.0nm,0.8s,baz=132,slow=3.7,SNR=7.9						
LPAZ	La Paz	58.79	282	*e*P	P	21 34 08.2	0.0
	4.2nm,1.0s						
TORD	Torodi Ar. Bea	63.38	10	P	P	21 34 38.5	+0.2
	1.0nm,0.8s,baz=202,slow=7.2,SNR=4.5						
TOA1	Torodi Ar. Sit	63.38	10	*e*P	P	21 34 38.5	+0.1
STVI	Saint Thomas	84.72	307	*e*P	P	21 36 41.8	-1.2
	24nm,1.1s						
MTP	Monte Pirata	84.82	306	*e*P	P	21 36 43.7	+0.2
	18nm,1.3s						
CUPR	Culebra, Puert	84.85	306	*e*P	P	21 36 43.9	+0.2
	25nm,1.0s						
KEST	Kesra	86.64	14	P	P	21 36 52.4	0.0
	2.8nm,0.8s,baz=193,slow=8.2,SNR=2.8						
KEST	Kesra	86.64	14	*e*P	P	21 36 52.4	0.0
	7.3nm,1.1s						
RAYN	Ar Rayn	86.98	47	*e*P	P	21 36 55.5	+1.3
	5.2nm,1.1s						
SDD	Santo Domingo	87.44	303	*e*P	P	21 36 56.3	-0.2
	240nm,0.9s						
CMLA	Cha da Macela	88.78	346	*e*P	P	21 36 59.9	-2.5
	35nm,0.9s						
ESDC	Sonseca Array	89.33	3	P	P	21 37 05.9	+0.9
	0.7nm,0.8s,baz=192,slow=4.7,SNR=5.5						
ESLA	Sonseca Array	89.33	3	*e*P	P	21 37 05.7	+0.7
	20nm,2.0s						
FORT	Forrest	90.50	143	*e*P	P	21 37 09.8	-1.2
	24nm,0.9s						
MMAI	Mount Meron Ar	91.00	35	LR	LR	22 16 01.0	
	comp=Z,49nm,20.8s,baz=220,slow=34						
BBOO	Buckleboo	91.51	150	*e*P	P	21 37 14.7	-0.9
	46nm,1.4s						
MTDJ	Mount Denham	91.52	297	*e*P	P	21 37 15.3	-0.5
	34nm,1.0s						
CBCY	The Bluff, Cay	94.00	296	*e*P	P	21 37 24.7	-2.3
	104nm,1.0s						
PALK	Pallekele	94.44	84	*e*P	P	21 37 27.8	-1.5
	100nm,1.9s						
FSCY	Frank Sound, G	94.50	295	*e*P	P	21 37 28.8	-0.6
	567nm,1.4s						
BR101	Keskin Array S	96.42	31	*e*P	P	21 37 40.1	+2.2
BRTR	Keskin Array B	96.42	31	P	P	21 37 40.1	+2.2
	0.4nm,0.6s,baz=224,slow=4.0,SNR=3.2						
TXAR	Lajitas Array	115.56	286	PKP	PKiKP	21 42 51.3	+0.3
	0.3nm,0.9s,baz=165,slow=3.7,SNR=3.4						
BVAR	Borovoye Array	121.84	44	PKP	PKiKP	21 43 02.6	+0.2
	0.5nm,0.7s,baz=208,slow=5.9,SNR=3.8						
KURBB	Kurchatov Arra	124.13	50	PKP	PKiKP	21 43 07.6	+0.6
	2.7nm,0.2s,baz=217,slow=1.7,SNR=5.0						
SRU	San Rafael Swe	126.29	290	*e*PKPdf	PKPdf	21 43 10.4	-1.1
PD31	Pinedale Array	127.95	294	*e*PKPdf	PKPdf	21 43 14.0	-0.6
PDAR	Pinedale Array	127.95	294	PKP	PKPdf	21 43 14.0	-0.6
	0.6nm,0.9s,baz=116,slow=4.1,SNR=3.0						
ELK	Elko	130.16	289	*e*PKPdf	PKiKP	21 43 20.8	+1.1
NVAR	Mina Array Bea	130.67	284	PKP	PKiKP	21 43 21.8	+1.0
	0.2nm,0.5s,baz=167,slow=1.6,SNR=2.9						
SONA0	Songino Array	137.85	66	*e*PKPdf	PKiKP	21 43 34.7	-0.2
SONM	Songino Array	137.85	66	PKP	PKiKP	21 43 34.7	-0.2
	0.7nm,0.7s,baz=189,slow=4.3,SNR=4.1						
KSRS	Korea Array	146.02	94	PKPbc	PKPab	21 43 49.0	-0.1
	2.2nm,1.0s,baz=222,slow=3.0,SNR=7.0						
INK	Inuvik	148.17	325	PKPbc	PKiKP	21 43 54.5	-0.7
	8.1nm,1.0s,baz=82,slow=1.4,SNR=8.4						
INK	Inuvik	148.17	325	*e*PKPbc	PKiKP	21 43 54.7	-0.6
EPYK	Eagle Plains	149.65	322	*e*PKPbc	PKiKP	21 43 58.9	+0.5
HYT	Haines Junctio	150.28	311	*e*PKPbc	PKiKP	21 44 00.6	+0.6
MAJO	Matsushiro	152.00	106	*e*PKPbc	PKPbc	21 44 04.0	+0.1
MJAR	Matsushiro Arr	152.00	106	PKPbc	PKPbc	21 44 04.0	+0.1
	1.0nm,0.8s,baz=264,slow=2.4,SNR=5.1						
USRK	Ussuriysk Ar.	152.16	86	PKPbc	PKPbc	21 44 03.0	-1.0
	1.2nm,0.7s,baz=256,slow=5.8,SNR=4.7						
SCRK	Sand Creek	153.05	318	*e*PKPbc	PKiKP	21 44 06.3	+0.7
PRP	Porcupine Dome	153.35	321	*e*PKPdf	PKPdf	21 43 57.7	-0.8
ILAR	Eielson Array	154.10	320	PKPbc	PKiKP	21 44 07.8	+0.2
	0.6nm,0.8s,baz=1.6,slow=1.1,SNR=6.9						
RND	Reindeer	155.29	318	*e*PKPbc	PKPbc	21 44 11.5	

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*IDC **13** 21:32:08.3±1.0, 34°.27N×25°.05E, h0^{km}, mb3.8/9, mb1 3.8/16, mb1mx3.7/50, mbtmp3.7/16, ML3.8/6, MS2.9/2, Ms1 2.9/2, ms1mx2.3/41, Error ellipse: s-maj=18.6km s-min=16.1km az=41.0*

*ISK **13** 21:32:10.9, 34°.22N×24°.94E, h77^{km}, ML3.6/10*

*THE **13** 21:32:12.5, 34°.29N×25°.17E, h0^{km}±1^{km}, ML3.1/5, Error ellipse: s-maj=3.7km s-min=1.0km az=161.0*

*NEIC **13** 21:32:12.5±0.0, 34°.29N×25°.17E, h0^{km}, mb4.0/8, ML3.1(THE), ML3.5(ISK), After THE.*

*ATH **13** 21:32:14.1, 34°.41N×25°.12E, h29^{km}±2^{km}, ML3.1/6, Error ellipse: s-maj=4.0km s-min=1.4km az=352.0*

ISC 13 21:32:11.0±1.6**, 34°.18N**±0°.06×**25°.12E**±0°.03**, h23**^{km}±11^{km}**, n87, σ1^{s}98**/107**, mb3.9**/13**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.87	343	P	Pb	21 32 27.5	0.0
SIVA				S	Sn	21 32 40.4	+0.5
	6μm,0.6s						
SIVA	Sivas	0.87	343	P	Pb	21 32 27.5	0.0
SIVA				S	Sb	21 32 36.9	-1.9
SIVA				AML	AML	21 32 47.6	
	comp=N,8544μm,0.6s						
SIVA				AML	AML	21 32 48.4	
	comp=E,14264μm,0.6s						
TMBK	Timbaki Herakl	0.94	342	P	Pn	21 32 29.0	+0.2
TMBK				S	Sn	21 32 41.7	+0.2
LAST	Lasithi	1.02	17	P	Pb	21 32 30.1	0.0
LAST				S	Sn	21 32 43.9	+0.1
	comp=E,590nm,0.7s						
LAST	Lasithi	1.02	17	P	Pb	21 32 30.1	0.0
LAST				S	Sb	21 32 41.4	-1.8
LAST				AML	AML	21 32 57.3	
	comp=N,1108μm,0.8s						
LAST				AML	AML	21 33 01.3	
	comp=E,1315μm,0.9s						
GVD	Gavdhos	1.07	308	P	Pb	21 32 31.8	+0.9
GVD				S	Sn	21 32 48.5	+3.6
	comp=E,2μm,0.4s						
GVD	Gavdhos	1.07	308	P	Pb	21 32 32.2	+1.2
GVD				S	Sn	21 32 46.3	+1.4
GVD				AML	AML	21 32 54.1	
	comp=E,3470μm,0.4s						
GVD				AML	AML	21 32 54.2	
	comp=N,3045μm,0.4s						
IDI	Anoyia	1.12	350	PG	Pn	21 32 31.5	+0.1
IDI				SG	Sn	21 32 46.3	+0.1
IDI	Anoyia	1.12	350	Pn	Pn	21 32 31.6	+0.1
	comp=N,38nm,0.3s,baz=161,slow=22,SNR=203						
IDI				Sn	Sb	21 32 44.9	-1.1
	comp=N,72nm,0.3s,baz=135,slow=7.1,SNR=12						
IDI	Anoyia	1.12	350	P	Pn	21 32 31.6	+0.1
IDI				S	Sb	21 32 44.6	-1.4
IDI				AML	AML	21 32 51.0	
	comp=E,1555μm,0.4s						
IDI				AML	AML	21 32 51.7	
	comp=N,1474μm,0.4s						
KSTL	Kastelli Herak	1.12	358	P	Pn	21 32 30.6	-0.7
KSTL				S	Sn	21 32 45.1	-1.0
NPS	Neapolis	1.16	21	P	Pb	21 32 32.4	+0.1
NPS				S	Sn	21 32 48.4	+1.5
	comp=N,598nm,0.4s						
NPS	Neapolis	1.16	21	P	Pb	21 32 32.4	+0.1
ZKR	Zakros	1.30	44	PN	Pb	21 32 35.2	+0.4
ZKR				SN	Sb	21 32 53.7	+2.6
ZKR	Zakros	1.30	44	P	Pb	21 32 35.4	+0.6
ZKR				AML	AML	21 33 00.4	
	comp=E,1825μm,0.7s						
ZKR				AML	AML	21 33 09.7	
	comp=N,901μm,0.5s						
VAM	Vamos	1.44	329	P	Pb	21 32 37.4	+0.3
VAM				S	Sb	21 32 57.9	+2.9
	comp=N,838nm,0.4s						
VAM	Vamos	1.44	329	P	Pb	21 32 37.4	+0.3
VAM				AML	AML	21 33 06.9	
	comp=E,1621μm,0.4s						
VAM				AML	AML	21 33 11.8	
	comp=N,1669μm,0.5s						
IMMV	Iera Moni Meta	1.58	324	P	Pb	21 32 40.3	+0.7
IMMV	Iera Moni Meta	1.58	324	P	Pb	21 32 40.2	+0.6
KARP	Karpathos	2.17	50	PN	Pb	21 32 48.8	-0.7
KARP	Karpathos	2.17	50	*e*Pn	Pn	21 32 45.7	0.0
KARP	Karpathos	2.17	50	P	Pb	21 32 49.2	-0.3
ANKY	Antikythira Is	2.25	319	P	Pb	21 32 49.5	-1.5
ANKY	Antikythira Is	2.25	319	P	Pb	21 32 49.4	-1.5
MHLO	Agia Marina, M	2.57	347	P	Pn	21 32 52.0	+0.7
KTHA	Kythira Island	2.67	322	P	Pn	21 32 55.7	+3.1
KTHA	Kythira Island	2.67	322	P	Pn	21 32 55.3	+2.7
APE	Apeiranthos	2.90	7	PN	Pn	21 32 56.7	+0.8
APE	Apeiranthos	2.90	7	P	Pn	21 32 57.1	+1.2
SERI	Serifos	3.02	350	P	Pn	21 32 58.7	+1.2
VLI	Veliai	3.10	326	P	Pn	21 32 59.7	+1.2
ARG	Arkhangelos	3.19	50	PN	Pn	21 33 02.3	+2.5
ARG	Arkhangelos	3.19	50	P	Pn	21 33 02.7	+2.9
DAT	Datca	3.24	38	PN	Pn	21 33 02.1	+1.5
DAT	Datca	3.24	38	*i* P	Pn	21 33 02.6	+2.0
DAT				*i* S	Sn	21 33 40.1	+1.5
DAT				IAML_P			
	comp=Z,201nm,0.2s						
DALY	Dalyan (Mula)	3.91	47	PN	Pn	21 33 11.7	+2.1
DALY	Dalyan (Mula)	3.91	47	*i* P	Pn	21 33 12.4	+2.8
DALY				IAML_P			
	comp=Z,659nm,0.2s						
TURN	Turunc	3.91	46	PN	Pn	21 33 07.8	-1.9
TURN	Turunc	3.91	46	*i* P	Pn	21 33 08.7	-1.0
TURN				*i* S	Sn	21 33 48.6	-6.3
TURN				IAML_P			
	comp=Z,803nm,0.2s						
ITM	Ithomi	3.96	320	*e*Pn	Pn	21 33 10.9	+0.4
DION	Dionisos Attik	4.01	347	P	Pn	21 33 12.2	+1.2
FETY	Fethiye	4.06	52	PN	Pn	21 33 13.6	+1.8
FETY	Fethiye	4.06	52	*i* P	Pn	21 33 14.1	+2.3
FETY				*i* S	Sn	21 33 57.7	-1.0
FETY				IAML_P			
	comp=Z,405nm,0.3s						
AYDN	Tasoluk	4.13	32	*i* P	Pn	21 33 16.1	+3.3
AYDN				IAML_P			
	comp=Z,464nm,0.2s						
AKAS	Kas	4.21	60	PN	Pn	21 33 15.5	+1.6
AKAS	Kas	4.21	60	*i* P	Pn	21 33 16.1	+2.2
AKAS				*i* S	Sn	21 34 04.1	+1.7
AKAS				IAML_P			
	comp=Z,3μm,0.2s						
AYDB	Zeytinkoy-Aydi	4.38	30	PN	Pn	21 33 18.3	+2.1
ELL	Elmali	4.68	55	PN	Pn	21 33 22.4	+2.1
AKUM	Antalya-Kumluc	4.78	62	*i* P	Pn	21 33 23.9	+2.2
AKUM				*i* S	Sn	21 34 17.1	+0.8
AKUM				IAML_P			
	comp=Z,2μm,0.2s						
AGG	Agios Georgios	5.33	336	*e*Pn	Pn	21 33 31.0	+1.8
KHAL	Karahalli	5.48	39	*i* P	Pn	21 33 33.3	+2.0
KHAL				IAML_P			
	comp=Z,128nm,0.2s						
BALB	Balikesir	5.88	21	*e*Pn	Pn	21 33 37.2	+0.5
KEPZ	Antalya-Kepez	5.95	61	*i* P	Pn	21 33 40.1	+2.4
LIT	Litokhoron	6.27	341	*e*Pn	Pn	21 33 41.8	-0.4
CSS	Mathiatis	6.82	81	*e*Pn	Pn	21 33 50.0	+0.3
ERMK	Ermenek	6.82	67	*i* P	Pn	21 33 53.3	+3.4
TIP	Timpagrande	8.36	309	*e*Pn	Pn	21 34 11.2	+0.3
MMAI	Mount Meron Ar	8.66	95	Pn	Pn	21 34 15.1	+0.1
	comp=Z,1.5nm,0.3s,baz=299,slow=12,SNR=12						
MMAI				Sn	Sn	21 35 45.8	-6.2
	comp=Z,0.8nm,0.3s,baz=279,slow=29,SNR=4.8						
BRTR	Keskin Array B	8.78	48	Pn	Pn	21 34 17.1	+0.4
	comp=Z,0.1nm,0.3s,baz=226,slow=8.1,SNR=3.2						
BR101	Keskin Array S	8.78	48	*e*Pn	Pn	21 34 17.1	+0.3
VAE	Valguarnera	9.29	294	Sn	Sn	21 35 59.9	-7.6
	comp=Z,0.4nm,0.3s,baz=270,slow=20,SNR=1.8						
EIL	Elat	9.49	116	Pn	Pn	21 34 25.5	-0.8
	comp=Z,0.6nm,0.3s,baz=351,slow=6.7,SNR=14						
EIL				Sn	Sn	21 36 06.0	-6.3
	comp=Z,0.7nm,0.3s,baz=55,slow=15,SNR=3.1						
ASF	Jabal al Asfar	10.07	98	Pn	Pn	21 34 35.6	+1.2
	comp=Z,0.1nm,0.3s,baz=315,slow=1.4,SNR=1.9						
ASF				Sn	Sn	21 36 21.4	-5.3
	comp=Z,0.2nm,0.3s,baz=351,slow=19,SNR=1.9						
VYHS	Vyhne	15.05	344	*e*PN	Pn	21 35 38.1	-4.1
VYHS	Vyhne	15.05	344	*e*P	P	21 35 49.8	+2.5
KBZ	Khabaz	16.77	50	Pn	P	21 36 07.1	+0.7
	comp=Z,0.2nm,0.3s,baz=244,slow=12,SNR=5.5						
AKASG	Malin Array Be	16.78	9	Pn	Pn	21 36 05.0	+0.6
	comp=Z,1.1nm,0.3s,baz=199,slow=10,SNR=7.0						
GEC2	GERESS Array S	16.93	333	*e*Pn	Pn	21 36 06.6	+0.2
	comp=Z,3.3nm,0.6s						
GERES	GERESS Array B	16.93	333	Pn	Pn	21 36 05.8	-0.7
	comp=Z,0.3nm,0.3s,baz=143,slow=12,SNR=20						
CLL	Collm	19.25	336	*e*P	P	21 36 33.6	-0.1
	comp=Z,3.0nm,1.1s						
SUW	Suwalki	19.88	357	*e*P	P	21 36 39.4	-1.0
	comp=Z,10nm,0.9s						
ESDC	Sonseca Array	23.83	292	P	P	21 37 22.4	0.0
	comp=Z,0.1nm,0.4s,baz=82,slow=10,SNR=4.0						
HFS	Hagfors	27.02	347	P	P	21 37 50.7	-0.4
	comp=Z,1.8nm,0.8s,baz=156,slow=11,SNR=5.7						
FINES	FINESS Array B	27.29	1	P	P	21 37 52.0	-1.5
	comp=Z,0.8nm,0.7s,baz=159,slow=11,SNR=5.9						
FINES				LR	LR	21 49 10.3	
	comp=Z,26nm,19.5s,baz=199,slow=38						
NAO01	NORSAR Array S	28.23	345	*e*P	P	21 38 02.3	+0.4
	comp=Z,12nm,0.9s						
NOA	NORSAR Array B	28.34	346	P	P	21 38 02.7	-0.2
	comp=Z,0.4nm,0.7s,baz=164,slow=12,SNR=3.0						
TOA0	Torodi Ar. Sit	29.84	231	*e*P	P	21 38 17.9	+1.2
	comp=Z,3.0nm,0.6s						
TORD	Torodi Ar. Bea	29.84	231	P	P	21 38 17.5	+0.9
	comp=Z,2.4nm,0.5s,baz=60,slow=8.5,SNR=32						
ARCES	ARCESS Array B	35.41	0	P	P	21 39 03.0	-1.9
	comp=Z,1.2nm,0.8s,baz=169,slow=8.5,SNR=4.8						
KDJ	Kajisay	41.16	63	*e*P	P	21 39 51.3	-2.5
	comp=Z,2.7nm,1.1s						
MAKZ	Makanchi	44.13	56	*e*P	P	21 40 18.9	+1.3
	comp=Z,0.9nm,0.6s						
SPITS	Spitsbergen Ar	44.26	357	LR	LR	21 59 38.8	
	comp=Z,15nm,20.0s,baz=345,slow=37						
ZAA1	Zalesovo Array	45.71	45	*e*P	P	21 40 30.8	+0.7
ZALV	Zalesovo Beam	45.71	45	P	P	21 40 30.8	+0.7
	comp=Z,1.7nm,0.4s,baz=261,slow=8.7,SNR=8.3						
SONA0	Songino Array	60.14	50	*e*P	P	21 42 18.7	+1.9
SONM	Songino Array	60.14	50	P	P	21 42 18.7	+1.9
	comp=Z,0.7nm,0.6s,baz=284,slow=8.5,SNR=9.3						
KSRS	Korea Array	78.91	52	P	P	21 44 14.2	+1.6
	comp=Z,0.6nm,0.7s,baz=316,slow=5.1,SNR=2.8						

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*SJA **13** 21:36:09.3, 26°.87S×67°.00W, h18^{km}, ML4.6, MW4.6*

*ISCJB **13** 21:36:10.0±0.7, 26°.94S±0°.02×66°.85W±0°.02, h11^{km}±4^{km}, mb4.8/154, MS4.5/18, Error ellipse: s-maj=3.5km s-min=2.6km az=170.6*

*VAO **13** 21:36:11.7±0.3, 26°.97S×66°.85W, h10^{km}, mb4.7*

*NEIC **13** 21:36:12.2±1.7, 26°.96S×66°.83W, h10^{km}±1^{km}, mb4.9/190, Error ellipse: s-maj=9.6km s-min=8.6km az=84.0*

*IDC **13** 21:36:13.3±3.2, 26°.95S×66°.84W, h33^{km}±23^{km}, mb4.2/19, mb1 4.4/26, mb1mx4.3/37, mbtmp4.4/26, ML4.3/7, MS4.5/20, Ms1 4.5/20, ms1mx4.4/28, Error ellipse: s-maj=16.9km s-min=12.4km az=61.0*

*GCMT **13** 21:36:15.2±0.2, 26°.96S±0°.01×67°.02W±0°.02, h24^{km}±1^{km}, MW5.2/92, Moment Tensor Solution. s50,c61; s92,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.12±.20; $M_{\theta\theta}$5.66±.16; $M_{\phi\phi}$-5.54±.21; $M_{r\theta}$2.18±.24; $M_{\theta\phi}$2.51±.13; $M_{\phi r}$3.03±.32; Best double couple: $M_0$7.18100×10^{16} NP1:ϕ_s33.00000°, δ90.00000°, λ149.00000°. NP2: ϕ_s123.00000°, δ59.00000°, λ0.00000°. Principal axes: T 7.2970, Plg22.0000°, Azm344.0000°; N -0.2370, Plg59.0000°, Azm213.0000°; P -7.0650, Plg21.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 21:36:12.6±1.0**, 26°.97S**±0°.02×**66°.90W**±0°.03**, h16**^{km}±6^{km}**, n664, σ1^{s}41**/697**, mb5.0**/154**, MS4.5**/19**, 19C-5D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSA	Cafayete	1.19	44	⇓*e*P	Pn	21 36 32.3	-2.5
FSA				*e*S	Sb	21 36 48.1	-2.0
FSA				IAML		21 36 50.1	
	comp=Z,13μm,0.5s						
AHML	Horco Molle	1.41	83	⇓*e*P	Pn	21 36 37.9	+0.1
AHML				IAML		21 36 38.8	
	comp=Z,11μm,0.5s						
AHML				*i* S	Sg	21 36 58.6	+0.5
CYA	Choya	1.76	147	⇑*e*P	Pn	21 36 43.2	+0.7
CYA				AMPN		21 36 43.5	
	comp=Z,4μm,0.3s						
CYA				⇓*i*Pg	Pg	21 36 46.8	+0.3
CYA				*i* S	Sb	21 37 07.5	+0.9
CYA				AMSN		21 37 07.6	
	comp=Z,26μm,0.8s						
CYA				AMSN		21 37 07.8	
	comp=Z,39μm,0.6s						
CYA				IAML		21 37 09.4	
	comp=Z,12μm,0.5s						
VCA	Vinchina	2.11	213	⇑*e*P	Pn	21 36 46.9	-0.6
VCA				*i* S	Sb	21 37 15.2	-1.3
ACLC	CERRO LA CRUZ	2.45	181	⇑*e*P	Pn	21 36 50.5	-1.7
SLA	San Lorenzo	2.57	30	⇑*e*P	Pn	21 36 56.1	+2.3
SLA				*i* Pg	Pb	21 36 59.9	+1.5
AGUA	GUANDACOL	2.88	209	⇑*e*P	Pn	21 36 57.8	-0.1
AGUA				*i* Pg	Pb	21 37 02.9	-0.7
AGUA				*i* Sg	Sb	21 37 38.4	-0.2
GO02	Mina Guanaco	3.02	306	*e*Pn	Pn	21 37 01.1	+1.0
GO02	Mina Guanaco	3.02	306	⇑*e*P	Pn	21 37 01.4	+1.4
GO03	Copiap	3.03	257	*e*Pn	Pn	21 37 01.4	+1.4
GO03	Copiap	3.03	257	*e*P	Pn	21 37 00.5	+0.4
GO03				*i* S	Sb	21 37 40.9	-2.3
AZAP	Zapla	3.19	32	*e*P	Pn	21 37 03.7	+1.2
AZAP				*e*S	Sn	21 37 42.3	+2.0
APLL	PUNTA DE LOS L	3.43	175	*e*P	Pn	21 37 03.6	-1.9
APLL				IAML		21 38 03.9	
	comp=Z,2μm,0.5s						
AROD	Rodeo	3.91	215	*e*P	Pn	21 37 13.0	+0.6
AROD				*e*S	Sb	21 38 09.7	+1.1
PB14	IPOC Station P	3.93	306	*e*P	Pn	21 37 13.4	+0.8
LCO	Las Campanas	3.93	238	*e*Pn	Pn	21 37 12.9	+0.3
LCO	Las Campanas	3.93	238	*e*P	Pn	21 37 12.5	-0.1
LCO	Las Campanas	3.93	238	*e*P	Pn	21 37 13.8	+1.3
LCO				*e*S	Sn	21 38 00.5	+2.0
HJA	Humahuaca	3.98	20	⇑*e*P	Pn	21 37 15.3	+1.9
HJA				IAML		21 38 22.9	
	comp=Z,802nm,0.4s						
ACCO	Cerro Coronel	4.08	207	⇑*i*P	Pn	21 37 16.1	+1.4
ACCO				*e*S	Sn	21 38 07.0	+4.7
AMOG	MOGNA	4.20	199	⇑*e*P	Pn	21 37 15.5	-0.5
AMOG				*i* Sg	Sb	21 38 18.1	+1.5
PB15	IPOC Station P	4.41	328	*i* P	Pn	21 37 19.9	+0.7
RTLL	Cerro Villicun	4.56	197	*e*P	Pn	21 37 20.2	-0.8
RTLL				*i* S	Sn	21 38 06.2	-7.5
GO04	Tololo Observa	4.69	226	*e*Pn	Pn	21 37 22.4	-0.5
GO04	Tololo Observa	4.69	226	⇓*e*P	Pn	21 37 22.5	-0.5
LVC	Limon Verde	4.71	337	Pn	Pn	21 37 24.0	+0.6
	comp=Z,9.6nm,0.3s,baz=176,slow=6.9,SNR=17						
LVC				LR	LR	21 39 22.3	
	comp=Z,11μm,18.7s,baz=163,slow=40						
LVC	Limon Verde	4.71	337	*e*Pn	Pn	21 37 24.4	+1.1
LVC	Limon Verde	4.71	337	*i* P	Pn	21 37 26.2	+2.9
LVC				*i* S	Sn	21 38 24.1	+6.2
LVC	Limon Verde	4.71	337	*e*S	Sn	21 38 18.7	+0.8
CFA	Coronel Fontan	4.77	194	Pn	Pn	21 37 22.9	-1.0
	comp=Z,12nm,0.3s,baz=22,slow=12,SNR=52						
CFA				Lg	Lg	21 38 25.9	
	comp=Z,56nm,0.3s,baz=145,slow=15,SNR=5.6						
CFA				LR	LR	21 39 16.8	
	comp=Z,8μm,20.8s,baz=26,slow=38						
CFA	Coronel Fontan	4.77	194	*e*P	Pn	21 37 23.2	-0.7
CFA				*e*S	Sb	21 38 26.2	-6.8
SJA	San Juan	4.77	197	*e*P	Pn	21 37 24.7	+0.8
PB10	IPOC Station P	4.77	315	*e*Pn	Pn	21 37 23.6	-0.4
PB10	IPOC Station P	4.77	315	*i* P	Pn	21 37 24.0	0.0
TCA	Tanti	4.80	156	⇑*e*P	Pn	21 37 22.7	-1.7
ZON	Zonda	4.82	198	*i* P	Pn	21 37 24.9	+0.3
ZON				*i* Pg	Pb	21 37 36.8	+0.1
ZON				*i* S	Sn	21 38 10.3	-10
PB06	IPOC Station P	4.89	330	*e*P	Pn	21 37 27.0	+1.3
YJA	Yavi	4.94	15	⇑*e*P	Pn	21 37 29.0	+2.4
YJA				*i* Pg	Pb	21 37 34.9	-4.0
YJA				IAML		21 39 10.2	
	comp=Z,167nm,0.5s						
PB05	IPOC Station P	5.08	323	⇑*e*P	Pn	21 37 28.0	-0.2
RTCV	Cerro Valdivia	5.08	196	*e*P	Pn	21 37 28.0	-0.2
RTLS	Leoncito	5.25	203	*e*P	Pn	21 37 30.2	-0.5
ACAN	Cantantal	5.29	183	⇑*e*P	Pn	21 37 29.7	-1.4
PB04	IPOC Station P	5.48	327	*e*Pn	Pn	21 37 32.8	-1.1
PB04	IPOC Station P	5.48	327	⇑*i*P	Pn	21 37 33.1	-0.7
PB04				AMPN		21 37 33.4	
	comp=Z,294nm,0.4s						
PB04				*i* Pg	Pb	21 37 50.2	+2.1
PB04				*e*S	Sn	21 38 28.5	-8.1
PB04				AMSN		21 38 29.7	
	comp=Z,2μm,1.5s						
PB04				AMSN		21 38 29.9	
	comp=Z,2μm,1.5s						
PB04				*i* Sg	Sb	21 38 59.4	+5.7
MRA	San Martin	5.53	170	*e*P	Pn	21 37 32.1	-2.3
PB03	IPOC Station P	5.54	331	⇑*e*P	Pn	21 37 34.4	-0.3
PB03				AMPN		21 37 34.6	

	comp=Z,246nm,0.2s						
PB03				*i* Pg	Pb	21 37 47.0	-2.2
PB03				*i* S	Sn	21 38 34.3	-4.0
PB03				AMSN		21 38 36.2	
	comp=Z,2µm,1.9s						
PB03				AMSN		21 38 36.4	
	comp=Z,2µm,2.5s						
PB03				*i* Sg	Sb	21 38 59.4	+3.8
AUSP	Uspallata	5.67	202	⇑*e*P	Pn	21 37 36.1	-0.4
AUSP				*i* S	Sn	21 38 38.2	-3.2
PB07	IPOC Station P	5.89	332	*i* P	Pn	21 37 39.1	-0.3
PB07				*i* S	Sn	21 38 33.4	-13
PB02	IPOC Station P	6.25	333	*e*P	Pn	21 37 43.9	-0.5
PB02				*e*S	Sn	21 38 49.4	-6.3
PB01	IPOC Station P	6.36	338	*e*Pn	Pn	21 37 44.5	-1.3
PB01	IPOC Station P	6.36	338	*i* P	Pn	21 37 46.0	+0.3
PEL	Peldehue	6.97	207	*e*Pn	Pn	21 37 52.0	-2.2
PEL	Peldehue	6.97	207	*e*P	Pn	21 37 53.6	-0.6
PEL				*i* Pg	Pb	21 38 13.4	-0.1
PB08	IPOC Station P	7.10	343	*e*P	Pn	21 37 57.9	+1.6
GO01	Chusmiza	7.57	343	*e*Pn	Pn	21 38 02.0	-0.8
PB11	IPOC Station P	7.61	340	*e*Pn	Pn	21 38 02.1	-1.0
MNMC	Minye Minye	8.19	342	*e*Pn	Pn	21 38 09.7	-1.4
MNMCX	Minye Minye	8.19	342	*e*P	Pn	21 38 10.2	-0.9
COIS	El Sosneado	8.44	195	*e*P	Pn	21 38 12.1	-2.2
CPUP	Villa Florida	8.59	88	Pn	Pn	21 38 14.7	-1.6
	comp=Z,3.9nm,0.3s,baz=270,slow=12,SNR=33						
CPUP				Lg	Lg	21 40 34.6	
	comp=Z,8.0nm,0.3s,baz=175,slow=14,SNR=2.9						
CPUP				LR	LR	21 42 02.6	
	comp=Z,3µm,19.1s,baz=266,slow=41						
CPUP	Villa Florida	8.59	88	*e*Pn	Pn	21 38 15.0	-1.3
CPUP				*e*		21 38 15.7	
CPUP	Villa Florida	8.59	88	*e*P	Pn	21 38 14.7	-1.6
CPUP				*e*S	Sn	21 40 29.8	+37
EDS3	Malargue	9.03	193	*e*P	Pn	21 38 22.4	-0.1
GO05	Huala	9.10	207	*e*Pn	Pn	21 38 20.4	-3.0
GO05	Huala	9.10	207	*i* P	Pn	21 38 27.1	+3.7
GO05				*e*S	Sn	21 40 05.0	-0.5
LPAZ	La Paz	10.69	354	Pn	Pn	21 38 44.2	-1.6
	comp=Z,0.8nm,0.3s,baz=136,slow=5.2,SNR=20						
LPAZ				LR	LR	21 43 15.6	
	comp=Z,2µm,18.6s,baz=156,slow=40						
LPAZ	La Paz	10.69	354	*e*Pn	Pn	21 38 45.1	-0.6
LPAZ	La Paz	10.69	354	*i* P	Pn	21 38 46.9	+1.2
LPAZ	La Paz	10.69	354	*e*P	Pn	21 38 46.4	+0.7
LPAZ	La Paz	10.69	354	*e*P	Pn	21 38 45.3	-0.5
LPAZ				*e*S	Sn	21 40 46.3	+0.8
LPA	La Plata	11.04	138	c*e*P	Pn	21 38 48.0	-1.8
LPA				*e*PP		21 38 57.0	
LPA				*e*PPP	PPP	21 39 05.0	
LPA				*e*PP		21 39 23.0	
LPA				*e*PPP	PPP	21 39 28.0	
LPA				*e*pPP		21 39 43.0	
LPA				*e*S	Sn	21 40 52.0	-0.9
LPA	La Plata	11.04	138	*e*SN	Sn	21 40 55.0	+2.1
LPA				*e*SS		21 41 06.0	
LPA				*e*SSS	SSS	21 41 18.0	
LPA				*e*SS	SbSb	21 41 44.0	+5.5
LPA				*e*SSS	SSS	21 41 52.0	
LPA				*e*SS	SgSg	21 42 16.0	+8.9
LPA				*e*PCP	PcP	21 44 47.0	-0.5
TRQA	Tornquist	11.81	161	*e*Pn	Pn	21 39 00.0	-0.4
TRQA	Tornquist	11.81	161	*e*P	Pn	21 39 00.5	+0.1
TRQA				*e*S	Sn	21 41 13.0	+1.1
SIV	San Ignacio	12.19	28	Pn	Pn	21 39 03.7	-2.1
	comp=Z,0.7nm,0.3s,baz=235,slow=9.6,SNR=12						
SIV				LR	LR	21 44 47.0	
	comp=Z,4µm,18.5s,baz=205,slow=42						
CPSB	Cacapava Do Su	12.30	109	*e*P	Pn	21 39 08.7	+1.5
CPSB	Cacapava Do Su	12.30	109	*e*P	Pn	21 39 05.7	-1.5
PLTB	Pedras Altas	12.54	116	*e*S	Sn	21 41 29.8	-0.1
PTGB	Pitanga	13.55	84	*e*P	Pn	21 39 23.9	-0.4
TRCB	Terra Rica	13.60	75	*e*P	Pn	21 39 27.6	+2.6
TRCB	Terra Rica	13.60	75	*e*P	Pn	21 39 25.3	+0.4
TRCB				*e*S	Sn	21 41 55.7	-0.1
PLCA	Paso Flores	14.06	191	Pn	Pn	21 39 29.8	-1.4
	comp=Z,0.3nm,0.3s,baz=27,slow=15,SNR=6.2						
PLCA				Lg	Lg	21 43 23.5	
	comp=Z,0.3nm,0.3s,baz=311,slow=19,SNR=1.7						
PLCA				LR	LR	21 45 53.0	
	comp=Z,3µm,19.2s,baz=23,slow=41						
PLCA	Paso Flores	14.06	191	*e*Pn	Pn	21 39 31.3	+0.1
PLCA	Paso Flores	14.06	191	*e*P	Pn	21 39 33.1	+1.9
PLCA	Paso Flores	14.06	191	*e*P	Pn	21 39 29.6	-1.6
CNLB	Canela	14.35	103	*e*P	Pn	21 39 38.6	+3.3
CNLB	Canela	14.35	103	*e*P	Pn	21 39 34.1	-1.1
CNLB				*e*S	Sn	21 42 14.2	+0.1
C2SB	Chapadao do Su	15.30	61	*e*P	Pn	21 39 49.6	+1.5
C2SB	Chapadao do Su	15.30	61	*e*P	P	21 39 50.5	-2.3
NNA	Nana	17.59	326	P	Pn	21 40 16.8	-0.5
	comp=Z,0.7nm,0.3s,baz=132,slow=13,SNR=2.7						
NNA				LR	LR	21 47 13.4	
	comp=Z,679nm,18.4s,baz=151,slow=38						
NNA	Nana	17.59	326	*e*P	Pn	21 40 16.3	-1.0
	comp=Z,35nm,1.0s						
SPB	Sao Paulo	17.92	83	*e*P	Pn	21 40 21.0	-0.3
	comp=Z,24nm,1.2s						
RCLB	Rio Claro- Sao	18.17	80	*e*P	P	21 40 26.6	+2.0
CLDB	Colider	19.13	35	*e*P	P	21 40 34.5	-0.6
CLDB	Colider	19.13	35	*e*P	P	21 40 34.6	-0.6
PARB	Paraibuna	19.59	84	*e*P	Pn	21 40 42.0	+0.3
PARB	Paraibuna	19.59	84	*e*P	P	21 40 39.8	-0.5
PARB				*e*S	S	21 44 21.2	0.0
PMNB	Patos De Minas	20.63	70	*e*S	S	21 44 41.8	-0.1
ESAR	Angra dos Reis	20.73	84	*e*P	P	21 40 51.7	-0.8
ESAR				*e*S	S	21 44 44.2	+0.7
BDFB	Brasilia	20.86	61	P	P	21 40 53.0	-1.2
	comp=Z,48nm,1.0s,baz=234,slow=9.9,SNR=18						
BDFB	Brasilia	20.86	61	*e*P	P	21 40 54.1	-0.1
	comp=Z,47nm,0.9s						
BSCB	Bom Sucesso	21.06	78	*e*P	P	21 40 57.4	+1.1
BSCB	Bom Sucesso	21.06	78	*e*S	S	21 44 50.2	-0.2
VAS01	Vassouras-RJ	21.82	83	*e*P	P	21 41 06.0	+1.7
VAS01	Vassouras-RJ	21.82	83	*e*P	P	21 41 04.1	-0.2
VAS01				*e*S	S	21 45 04.9	-0.3
ATAH	Atahualpa	22.55	329	P	P	21 41 10.8	-1.8
	comp=Z,1.4nm,0.3s,baz=231,slow=17,SNR=2.3						
DUB01	Friburgo-RJ	22.82	83	*e*P	P	21 41 16.3	+1.2
DUB01	Friburgo-RJ	22.82	83	*e*P	P	21 41 14.3	-0.9
PEXB	Peixe	22.88	53	*e*P	P	21 41 16.7	+0.9
PEXB	Peixe	22.88	53	*e*P	P	21 41 14.8	-0.9
PEXB				*e*S	S	21 45 25.5	+0.4
CAM01	Campos-RJ	23.53	83	*e*P	P	21 41 24.6	+2.3
CAM01	Campos-RJ	23.53	83	*e*P	P	21 41 22.0	-0.3
CAM01				*e*S	S	21 45 36.7	+0.9
GO09	Cerro Castillo	24.62	188	*e*P	P	21 41 31.9	-0.3
	comp=Z,183nm,1.8s						
ALF01	Guarapari-ES	24.74	81	*e*S	S	21 45 56.1	+0.9
SJMB	Sao Joao De Ma	25.05	76	*e*P	P	21 41 36.8	+0.4
SJMB	Sao Joao De Ma	25.05	76	*e*P	P	21 41 36.1	-0.2
SJMB				*e*S	S	21 46 01.2	+0.9
RIB01	Linhares ES	25.50	78	*e*P	P	21 41 41.5	+1.0
RIB01	Linhares ES	25.50	78	*e*S	S	21 46 07.8	+0.4
EFI	East Falkland	25.57	167	*e*P	P	21 41 39.7	-1.0
	comp=Z,127nm,0.8s						
PTGA	Pitinga	26.93	15	P	P	21 41 50.5	-2.8
	comp=Z,24nm,0.8s,baz=204,slow=11,SNR=19						
PTGA				LR	LR	21 53 13.0	
	comp=Z,1µm,20.9s,baz=188,slow=38						
PTGA	Pitinga	26.93	15	*e*P	P	21 41 52.3	-1.0
PTGA	Pitinga	26.93	15	*e*P	P	21 41 51.2	-2.1
PTGA				*e*S	S	21 46 31.4	+1.6
USHA	Ushuaia	27.86	182	LR	LR	21 54 31.8	
	comp=Z,2µm,18.8s,baz=360,slow=39						
FLOC	Florencia	29.61	342	*e*P	P	21 42 18.4	+1.0
SOTA	Rioblanco	30.41	341	*e*P	P	21 42 25.3	+0.4
BBAC	Balboa, Cauca	30.50	339	*e*P	P	21 42 24.4	-1.0
POPC	Popayan, Colom	30.82	341	*e*P	P	21 42 26.4	-1.8
PRAC	Prado	31.46	345	*e*P	P	21 42 35.1	+1.4
ORTC	Ortega, Tolima	31.74	344	*e*P	P	21 42 37.7	+1.6
GUY2C	Guyana, Caldas	33.03	344	*e*P	P	21 42 47.8	-0.2
RUSC	La Rusia	33.21	349	*e*P	P	21 42 49.2	-0.3
HELC	Santa Helena	34.01	345	*e*P	P	21 42 51.5	-4.8
SDV	Santo Domingo	35.82	354	LR	LR	21 58 54.8	
	comp=Z,968nm,18.2s,baz=184,slow=38						
SDV	Santo Domingo	35.82	354	*e*P	P	21 43 10.9	-0.9
SMLC	San Martn de	36.23	348	*e*P	P	21 43 09.7	-5.4
PMSA	Palmer Station	37.86	178	*e*P	P	21 43 28.4	0.0
BCIP	Isla Barro Col	38.05	339	*e*P	P	21 43 32.4	+1.9
	comp=Z,141nm,1.9s						
GRGR	Grenville	39.20	8	*e*P	P	21 43 38.8	-1.4
	comp=Z,92nm,0.8s						
JTS	Las Juntas de	40.97	332	*e*P	P	21 43 55.3	+0.4
	comp=Z,24nm,1.1s						
SLBI	Saint Lucia, B	41.15	9	*e*P	P	21 43 57.0	+0.7
BIM	Bigot	41.62	9	*e*P	P	21 43 59.3	-1.0
FDF	Fort de France	41.83	8	*e*P	P	21 44 00.1	-1.8
	comp=Z,116nm,0.9s						
FDF	Fort de France	41.83	8	*e*P	P	21 44 00.9	-1.0
GBMF	Grand Be	41.89	8	*e*P	P	21 44 02.6	+0.1
PCM	Pelee Case Pet	41.90	8	*e*P	P	21 44 03.1	+0.6
CXM	Morne La Croix	41.90	8	*e*P	P	21 44 02.8	+0.1
BAMF	Morne Balai	41.91	8	*e*P	P	21 43 58.6	-4.0
TGUH	Tegucigalpa,Un	45.33	332	*e*P	P	21 44 31.7	+1.5
	comp=Z,42nm,1.0s						
ABVI	Anegada Island	45.49	3	*e*P	P	21 44 31.0	-0.4
	comp=Z,87nm,1.1s						
APG	El Apazote	47.59	328	LR	LR	22 04 07.2	
	comp=Z,281nm,19.1s,baz=147,slow=35						
CCIG	Comitan	49.49	327	*e*P	P	21 45 03.4	+0.7
	comp=Z,22nm,1.2s						
TEIG	Tepich	51.29	334	*e*P	P	21 45 16.4	+0.4
	comp=Z,72nm,1.6s						
VNA3	Neumayer Olymp	54.33	160	P	P	21 45 39.6	+1.6
VNA1	Neumayer--Stat	54.54	160	P	P	21 45 40.2	+0.7
VNA2	Neumayer--Watz	54.91	160	P	P	21 45 42.9	+0.7
	baz=282,slow=7.6						
SNAA	Sanae	56.53	160	P	P	21 45 55.2	+1.3
SNAA	Sanae	56.53	160	*e*P	P	21 45 53.4	-0.5
	comp=Z,62nm,1.4s						
556A	Lake Butler	58.56	344	P	P	21 46 08.4	-0.1
	baz=164						
553A	Crawfordville	59.26	342	P	P	21 46 13.6	+0.2
	baz=162						
454A	Quitman	59.55	343	P	P	21 46 15.5	+0.1
	baz=163						
353A	Camilla	60.30	343	P	P	21 46 20.9	+0.4
	baz=162						
LNIG	Linares	60.38	326	*e*P	P	21 46 21.1	-0.1
	comp=Z,12nm,1.0s						
352A	Blakely	60.61	342	P	P	21 46 22.8	+0.1
	baz=162						
BRAL	Brewton	60.93	340	P	P	21 46 25.4	+0.6
	baz=159						
252A	Lumpkin	61.05	343	P	P	21 46 25.7	0.0
	baz=162						
155A	Kite	61.09	345	P	P	21 46 26.0	+0.2
	baz=164						
349A	Repton	61.14	340	P	P	21 46 26.4	+0.1
	baz=159						
Z58A	St. Stephen	61.21	348	P	P	21 46 27.1	+0.4
	baz=167						
154A	Montrose	61.23	344	*e*P	P	21 46 26.4	-0.5
	comp=Z,44nm,1.1s						
154A	Montrose	61.23	344	P	P	21 46 26.9	+0.1
	baz=164						
251A	Midway	61.33	342	P	P	21 46 27.3	-0.2
	baz=161						
Z57A	Bowman	61.35	347	P	P	21 46 28.0	+0.3
	baz=166						
Y59A	Loris	61.68	349	P	P	21 46 29.2	-0.7
	baz=168						
249A	Camden	61.70	341	P	P	21 46 29.9	-0.1
	baz=160						
Z54A	Sparta	61.76	345	P	P	21 46 30.0	-0.4
	baz=164						
Z53A	Monticello	61.98	344	P	P	21 46 30.9	-1.0
	baz=163						
150A	Eclectic	61.98	342	P	P	21 46 31.3	-0.5
	baz=161,SNR=5.5						
GOGA	Godfrey	62.08	344	*e*P	P	21 46 32.4	-0.1
	comp=Z,25nm,1.5s						
GOGA	Godfrey	62.08	344	P	P	21 46 31.7	-0.8
	baz=163						
Z52A	Williamson	62.10	343	P	P	21 46 32.0	-0.8
	baz=162						
149A	Jones	62.19	341	P	P	21 46 32.8	-0.6
	baz=160						
Y55A	Saluda	62.21	346	P	P	21 46 33.1	-0.4
	baz=165						
148A	Greensboro	62.47	340	P	P	21 46 34.2	-0.9
	baz=159						
Y53A	Monroe	62.53	344	P	P	21 46 34.7	-0.9
	baz=163						
X56A	White Oak	62.58	347	P	P	21 46 35.2	-0.7
	baz=166						
Y52A	Lilburn	62.65	344	P	P	21 46 35.9	-0.5
	baz=163						
LRAL	Lakeview Retre	62.66	341	P	P	21 46 35.8	-0.7
	baz=160						
Z49A	Columbiana	62.67	342	P	P	21 46 35.7	-0.9
	baz=160						
X55A	Gracelyn & Ava	62.68	346	P	P	21 46 35.6	-0.9
	baz=165						
W58A	Raeford	62.75	349	P	P	21 46 36.2	-0.8
	baz=168						
V62A	Hyde County Ai	62.78	352	P	P	21 46 36.5	-0.6
	baz=171						
X54A	Belton	62.91	346	P	P	21 46 37.7	-0.4
	baz=164						
Y51A	Rockmart	62.94	343	P	P	21 46 38.1	-0.2
	baz=162						
HKT	Hockley	63.01	332	*e*P	P	21 46 40.1	+1.4
	comp=Z,22nm,1.5s						
W57A	Gilead	63.01	348	*e*P	P	21 46 38.8	+0.1
	comp=Z,15nm,0.8s						
W57A	Gilead	63.01	348	P	P	21 46 38.4	-0.3
	baz=167						
X53A	Estanollee	63.08	345	P	P	21 46 38.7	-0.5
	baz=164						
W56A	Indian Trail	63.11	347	P	P	21 46 39.0	-0.3
	baz=166						
Y50A	Piedmont	63.11	342	P	P	21 46 39.1	-0.3
	baz=161						
833A	Chaparral WMA,	63.21	328	P	P	21 46 39.6	-0.6
	baz=148						
QSPA	South Pole Qui	63.25	180	*e*P	P	21 46 40.5	+0.3
	comp=Z,12nm,0.8s						
Y49A	Blount Mountai	63.26	342	P	P	21 46 40.4	-0.1
	baz=160						
X52A	Dahlonega	63.32	344	P	P	21 46 40.2	-0.7
	baz=163						
W54A	Cherokee Point	63.39	346	P	P	21 46 41.2	0.0
	baz=165						
V58A	Windy Hill, Pi	63.48	349	P	P	21 46 42.2	+0.4
	baz=168						
X51A	Calhoun	63.52	343	P	P	21 46 42.7	+0.5
	baz=162						
U61A	Possum Corner	63.60	351	P	P	21 46 42.7	+0.1
	baz=170						
X50B	Fort Payne	63.63	343	P	P	21 46 42.7	-0.2
	baz=161						
W53A	Cullowhee	63.69	345	P	P	21 46 43.5	+0.2
	baz=164						
V57A	Coltrane Farms	63.69	348	P	P	21 46 43.6	+0.4
	baz=167						
V56A	Mocksville	63.75	348	P	P	21 46 44.0	+0.3
	baz=166						
W52A	Murphy	63.79	344	P	P	21 46 44.5	+0.5
	baz=163						
X49A	Woodville	63.86	342	P	P	21 46 45.1	+0.7
	baz=161						
V55A	Taylorsville	63.93	347	P	P	21 46 45.0	+0.2
	baz=166						
X48A	Hartselle	64.00	342	P	P	21 46 44.9	-0.4
	baz=160,SNR=7.3						
V54A	Nebo	64.00	346	P	P	21 46 45.5	+0.2
	baz=165						
W51A	Cleveland	64.06	344	P	P	21 46 45.5	-0.2
	baz=162						
V53A	Saluda	64.09	346	P	P	21 46 46.4	+0.5
	baz=164						
NATX	Nacogdoches	64.12	334	*e*P	P	21 46 47.7	+1.5
	comp=Z,21nm,0.8s						
NATX	Nacogdoches	64.12	334	P	P	21 46 46.8	+0.7
	baz=152						
U57A	Blanch	64.14	349	P	P	21 46 46.9	+0.7
	baz=168						
W50A	Signal Mountai	64.24	343	P	P	21 46 46.9	0.0
	baz=162						
CPCT	Cooper Cave	64.28	344	*e*P	P	21 46 47.6	+0.5
	comp=Z,9.6nm,0.9s						
X47A	Russelville	64.30	341	P	P	21 46 46.7	-0.5
	baz=159,SNR=6.0						
T59A	Double "B" Far	64.39	351	P	P	21 46 47.6	-0.2
	baz=169						
W49A	Belvidere	64.41	342	P	P	21 46 47.5	-0.5
	baz=161						
SWET	Sewanee	64.41	343	*e*P	P	21 46 47.9	-0.1
	comp=Z,20nm,1.0s						
V52A	Sevierville	64.43	345	P	P	21 46 47.7	-0.4
	baz=164						
T58A	Grand View Acr	64.51	350	P	P	21 46 48.7	+0.2
	baz=168						
X46A	Booneville	64.55	340	P	P	21 46 48.5	-0.4
	baz=159						
V51A	Loudon	64.57	344	P	P	21 46 48.7	-0.4
	baz=163						
W48A	Pulaski	64.61	342	P	P	21 46 49.2	-0.1
	baz=160						
V50A	Pikevile	64.63	344	P	P	21 46 49.3	-0.2
	baz=162,SNR=5.2						
U54A	Nelsons Funny	64.70	347	*e*P	P	21 46 50.0	+0.1
	comp=Z,19nm,0.8s						
U54A	Nelsons Funny	64.70	347	P	P	21 46 49.8	-0.1
	baz=165						
U53A	Fall Branch	64.70	346	P	P	21 46 49.9	-0.1
	baz=164						
S61A	Accomac	64.83	352	P	P	21 46 50.5	-0.2
	baz=171						
W47A	Westpoint	64.90	341	P	P	21 46 51.3	0.0
	baz=160						
V49A	McMinnville	64.93	343	P	P	21 46 51.2	-0.2
	baz=161						
T55A	Pulaski	65.07	348	P	P	21 46 52.4	+0.1
	baz=166						
S58A	Poland Farm, P	65.09	350	P	P	21 46 53.0	+0.6
	baz=169						
V48A	Smith Brothers	65.15	342	P	P	21 46 52.8	+0.1
	baz=160,SNR=5.0						
JCT	Junction City	65.21	329	*e*P	P	21 46 54.3	+0.9
	comp=Z,18nm,0.8s						
JCT	Junction City	65.21	329	P	P	21 46 53.4	0.0
	baz=148,SNR=5.9						
X43A	Marvell	65.24	338	*e*P	P	21 46 54.2	+0.8
	comp=Z,24nm,0.6s						
WLAR	White Oak Lake	65.25	336	*e*P	P	21 46 54.6	+1.1
	comp=Z,50nm,1.0s						
U50A	Jamestown	65.27	344	P	P	21 46 53.9	+0.3
	baz=162						
S57A	Dark Hollow, R	65.37	350	P	P	21 46 54.2	0.0
	baz=168						
S56A	Natural Bridge	65.39	349	P	P	21 46 54.5	+0.1
	baz=168						
R58B	Mineral	65.41	350	*e*P	P	21 46 55.2	+0.8
	comp=Z,12nm,0.9s						
R58B	Mineral	65.41	350	P	P	21 46 55.1	+0.8
	baz=169						
V47A	Nunnelly	65.42	342	P	P	21 46 54.6	+0.1
	baz=160,SNR=5.5						
WHTX	Lake Whitney,	65.47	332	*e*P	P	21 46 55.5	+0.6
	comp=Z,44nm,1.7s						
WHTX	Lake Whitney,	65.47	332	P	P	21 46 54.9	-0.1
	baz=150						
V46A	Holladay	65.57	341	P	P	21 46 55.4	-0.1
	baz=159						
U49A	Red Boiling Sp	65.60	343	P	P	21 46 55.4	-0.3
	baz=162						
S55A	Lewisburg	65.65	348	P	P	21 46 56.2	+0.1
	baz=167						
R58A	Rapidan	65.75	350	P	P	21 46 56.9	+0.3
	baz=169						
WVT	Waverly	65.79	342	P	P	21 46 57.1	+0.2
	baz=160						
U48A	Cassie Pea, Po	65.80	343	P	P	21 46 56.9	0.0
	baz=161						
S54A	Dingess, Beckl	65.83	348	P	P	21 46 57.5	+0.3
	baz=166						
T50A	Nancy	65.85	344	P	P	21 46 57.3	0.0
	baz=162						
X40A	Basin Creek Fa	65.88	337	*e*P	P	21 46 56.7	-0.8
	comp=Z,4.9nm,1.1s						
U47A	Clarksville	65.93	342	P	P	21 46 57.7	-0.1
	baz=160,SNR=10						
Q61A	Milford	65.98	353	P	P	21 46 58.3	+0.2
	baz=172						
T49A	Edmonton	66.10	344	P	P	21 46 59.0	+0.1
	baz=162,SNR=7.5						
Q59A	Harwood	66.12	352	P	P	21 46 59.3	+0.3
	baz=170						
R54A	Victor	66.14	348	P	P	21 46 59.1	-0.1
	baz=166						
TXAR	Lajitas Array	66.15	325	P	P	21 46 57.5	-2.0
	comp=Z,1.2nm,0.8s,baz=128,slow=7.3,SNR=13						
Q60A	Greensboro	66.16	352	P	P	21 46 59.5	+0.3
	baz=171						
MIAR	Mount Ida	66.19	336	*e*P	P	21 46 59.1	-0.4
	comp=Z,11nm,1.0s						
MIAR	Mount Ida	66.19	336	P	P	21 46 59.6	+0.1
	baz=154						
W41B	Gary Mavity, V	66.29	337	*e*P	P	21 46 59.6	-0.5
	comp=Z,7.7nm,0.9s						
W41B	Gary Mavity, V	66.29	337	P	P	21 47 00.4	+0.2
	baz=155						
T48A	Bowling Green	66.32	343	P	P	21 47 00.5	+0.2
	baz=161						
Q58A	Fox Den Farm,	66.34	351	P	P	21 47 00.9	+0.5
	baz=170						
S50A	Richmond	66.37	345	P	P	21 47 00.9	+0.2
	baz=163						
T47A	Sharon Grove	66.40	342	*e*P	P	21 47 00.4	-0.4
	comp=Z,18nm,0.8s						
T47A	Sharon Grove	66.40	342	P	P	21 47 00.7	-0.1
	baz=160,SNR=7.0						
WHAR	Wooly Hollow	66.41	337	*e*P	P	21 47 01.2	+0.3
	comp=Z,7.2nm,1.0s						
Q57A	Strasburg	66.54	350	P	P	21 47 02.1	+0.4
	baz=169						
Q56A	Snyder Ridge,	66.66	350	P	P	21 47 02.8	+0.3
	baz=168						
T46A	Princeton	66.66	342	P	P	21 47 02.8	+0.3
	baz=160						
S49A	Springfield	66.68	344	P	P	21 47 02.2	-0.5
	baz=162						
S48A	Wiedeman Farm,	66.75	344	P	P	21 47 02.6	-0.5
	baz=161						
Q55A	Buckhannon	66.77	349	P	P	21 47 02.7	-0.5
	baz=167						
R51A	Hillsboro	66.78	346	P	P	21 47 02.9	-0.3
	baz=164						
P58A	Pank, Wackersv	66.82	351	P	P	21 47 03.3	-0.1
	baz=170						
P59A	Jarrettsville	66.83	352	P	P	21 47 03.5	0.0
	baz=171						
W39A	Magazine	66.85	336	*e*P	P	21 47 04.2	+0.5
	comp=Z,11nm,0.9s						
W39A	Magazine	66.85	336	P	P	21 47 03.5	-0.3
	baz=154,SNR=5.2						
PARMO	Parma	66.85	340	*e*P	P	21 47 04.5	+0.8
	comp=Z,106nm,0.7s						
Q54A	Coxs Mills	66.89	348	P	P	21 47 03.7	-0.2
	baz=166						
FCAR	Ozark Folk Cen	66.90	338	*e*P	P	21 47 03.6	-0.4
	comp=Z,17nm,1.6s						
S47A	Hartford	66.91	343	P	P	21 47 03.6	-0.5
	baz=161						
P57A	Homestead Farm	66.92	351	P	P	21 47 04.4	+0.3
	baz=169						
R50A	Paris	66.93	345	P	P	21 47 03.8	-0.4
	baz=163						
ABTX	Abilene, Hawle	66.96	330	*e*P	P	21 47 05.2	+0.6
	comp=Z,19nm,1.1s						
ABTX	Abilene, Hawle	66.96	330	P	P	21 47 04.6	+0.1
	baz=148,SNR=8.4						
R49A	Shelbyville	67.14	344	P	P	21 47 05.4	-0.1
	baz=162						
Q52A	Bidwell	67.14	347	P	P	21 47 05.6	0.0
	baz=165						
MVL	Millersville	67.20	352	*e*P	P	21 47 06.3	+0.4
	comp=Z,20nm,1.3s						
P55A	Reedsville	67.22	349	P	P	21 47 06.3	+0.2
	baz=168						
WCI	Wyandotte Cave	67.36	344	*e*P	P	21 47 06.1	-0.8
	comp=Z,12nm,0.7s						
WCI	Wyandotte Cave	67.36	344	P	P	21 47 06.8	-0.1
	baz=161						
MCWV	Mont Chateau	67.37	349	P	P	21 47 07.1	+0.2
	baz=168						
Q50A	Georgetown	67.39	346	P	P	21 47 07.3	+0.2
	baz=164						
O58A	Lewisberry	67.40	352	P	P	21 47 07.3	+0.2
	baz=170						
O60A	Telford	67.41	353	P	P	21 47 07.4	+0.2
	baz=172						
R48A	Northridge Ran	67.41	344	P	P	21 47 07.8	+0.6
	baz=162						
P54A	Burton	67.43	349	P	P	21 47 07.4	+0.1
	baz=167						

Q51A	**Peebles**	**67.43**	**346**	*e*P	**P**	**21 47 08.3**	**+1.0**
	comp=Z,7.4nm,0.8s						
Q51A	**Peebles**	**67.43**	**346**	P	**P**	**21 47 07.9**	**+0.6**
	baz=164						
R47A	**Wooly Knot Far**	**67.48**	**343**	P	**P**	**21 47 07.7**	**0.0**
	baz=161						
P53A	**Whipple**	**67.48**	**348**	P	**P**	**21 47 07.9**	**+0.3**
	baz=166						
U40A	**Yellville**	**67.57**	**338**	P	**P**	**21 47 08.4**	**+0.1**
	baz=155,SNR=6.3						
O57A	**Amberson**	**67.58**	**351**	P	**P**	**21 47 08.5**	**+0.3**
	baz=170						
S44A	**Carbondale**	**67.66**	**341**	P	**P**	**21 47 08.9**	**+0.1**
	baz=158						
Q49A	**Aurora**	**67.75**	**345**	P	**P**	**21 47 09.3**	**-0.1**
	baz=163						
P52A	**Corning**	**67.77**	**347**	P	**P**	**21 47 09.8**	**+0.4**
	baz=165						
O56A	**Blue Knob Stat**	**67.77**	**350**	P	**P**	**21 47 10.0**	**+0.5**
	baz=169						
P51A	**Williamsport**	**67.81**	**347**	P	**P**	**21 47 09.7**	**0.0**
	baz=164						
O55A	**Ligonier**	**67.82**	**350**	P	**P**	**21 47 10.1**	**+0.3**
	baz=168						
Q48A	**North Vernon**	**67.88**	**344**	P	**P**	**21 47 10.2**	**0.0**
	baz=162						
N60A	**Cedar Hill Far**	**67.92**	**353**	P	**P**	**21 47 10.8**	**+0.4**
	baz=172						
O54A	**Avella**	**67.97**	**349**	P	**P**	**21 47 11.0**	**+0.3**
	baz=167						
SSPA	**Standing Stone**	**68.03**	**351**	*e*P	**P**	**21 47 10.8**	**-0.3**
	comp=Z,33nm,1.6s						
SSPA	**Standing Stone**	**68.03**	**351**	P	**P**	**21 47 11.6**	**+0.5**
	baz=169						
N59A	**State Game Lan**	**68.04**	**353**	*e*P	**P**	**21 47 12.2**	**+1.0**
	comp=Z,18nm,1.1s						
N59A	**State Game Lan**	**68.04**	**353**	P	**P**	**21 47 11.6**	**+0.4**
	baz=171						
Q47A	**Bedord North L**	**68.06**	**344**	P	**P**	**21 47 11.4**	**+0.1**
	baz=161						
N58A	**Sunbury**	**68.08**	**352**	P	**P**	**21 47 11.9**	**+0.5**
	baz=170						
P50A	**Jamestown**	**68.08**	**346**	P	**P**	**21 47 11.7**	**+0.2**
	baz=164						
N57A	**Milroy**	**68.10**	**351**	P	**P**	**21 47 11.7**	**+0.2**
	baz=170						
O52A	**Adamsville**	**68.17**	**348**	*e*P	**P**	**21 47 12.4**	**+0.4**
	comp=Z,9.2nm,0.8s						
O52A	**Adamsville**	**68.17**	**348**	P	**P**	**21 47 11.8**	**-0.2**
	baz=166						
O53A	**New Philadelph**	**68.19**	**348**	P	**P**	**21 47 12.4**	**+0.3**
	baz=166						
P49A	**Miami Univ. Ec**	**68.22**	**345**	P	**P**	**21 47 12.0**	**-0.3**
	baz=163,SNR=5.1						
TUL1	**Leonard**	**68.23**	**335**	*e*P	**P**	**21 47 12.6**	**+0.1**
	comp=Z,10nm,0.8s						
TUL1	**Leonard**	**68.23**	**335**	P	**P**	**21 47 12.4**	**-0.1**
	baz=152						
M61A	**Granite Spring**	**68.23**	**354**	P	**P**	**21 47 12.3**	**0.0**
	baz=173						
P48A	**Milroy**	**68.31**	**345**	P	**P**	**21 47 12.3**	**-0.6**
	baz=162						
N55A	**Marion Center**	**68.33**	**350**	*e*P	**P**	**21 47 13.2**	**+0.2**
	comp=Z,19nm,0.8s						
N55A	**Marion Center**	**68.33**	**350**	P	**P**	**21 47 13.2**	**+0.2**
	baz=168,SNR=7.5						
O51A	**Pataskala**	**68.35**	**347**	P	**P**	**21 47 12.5**	**-0.7**
	baz=165						
N56A	**West Decatur**	**68.36**	**351**	P	**P**	**21 47 13.4**	**+0.1**
	baz=169						
WMOK	**Wichita Mounta**	**68.39**	**332**	P	**P**	**21 47 13.3**	**-0.3**
	baz=150,SNR=6.5						
Q45A	**Warren Harvey,**	**68.47**	**342**	P	**P**	**21 47 13.6**	**-0.2**
	baz=160						
ACSO	**Alum Creek Sta**	**68.51**	**347**	P	**P**	**21 47 13.6**	**-0.5**
	baz=165						
P47A	**Martinsville**	**68.54**	**344**	P	**P**	**21 47 14.1**	**-0.2**
	baz=162						
M58A	**Price's Panora**	**68.57**	**352**	P	**P**	**21 47 14.2**	**-0.3**
	baz=171,SNR=5.5						
CCM	**Cathedral Cave**	**68.59**	**340**	*e*P	**P**	**21 47 14.7**	**0.0**
	comp=Z,23nm,0.8s						
CCM	**Cathedral Cave**	**68.59**	**340**	P	**P**	**21 47 14.8**	**+0.2**
	baz=157						
M59A	**Waymart**	**68.62**	**353**	P	**P**	**21 47 15.5**	**+0.7**
	baz=172,SNR=7.2						
N54A	**Moraine State**	**68.67**	**349**	*e*P	**P**	**21 47 16.1**	**+1.0**
	comp=Z,30nm,1.3s						
N54A	**Moraine State**	**68.67**	**349**	P	**P**	**21 47 15.6**	**+0.5**
	baz=167,SNR=5.4						
KSPA	**Keystone Colle**	**68.67**	**353**	*e*P	**P**	**21 47 14.4**	**-0.7**
	comp=Z,30nm,1.3s						
DBIC	**Dimbokro**	**68.68**	**70**	P	**P**	**21 47 14.1**	**-1.7**
	comp=Z,7.1nm,0.9s,baz=222,slow=9.1,SNR=5.4						
DBIC				LR	LR	22 14 52.0	
	comp=Z,586nm,20.4s,baz=216,slow=34						
DBIC	**Dimbokro**	**68.68**	**70**	*e*P	**P**	**21 47 14.7**	**-1.1**
	comp=Z,18nm,1.4s						
O49A	**Covington**	**68.76**	**346**	*e*P	**P**	**21 47 15.8**	**+0.1**
	comp=Z,25nm,1.2s						
M56A	**Emporium**	**68.90**	**351**	P	**P**	**21 47 16.4**	**-0.2**
	baz=169						
MNTX	**Cornudas Mount**	**68.92**	**325**	*e*P	**P**	**21 47 16.9**	**0.0**
	comp=Z,12nm,1.5s						
MNTX	**Cornudas Mount**	**68.92**	**325**	P	**P**	**21 47 17.2**	**+0.3**
	baz=144,SNR=7.4						
M55A	**Ridgway**	**68.97**	**350**	P	**P**	**21 47 16.6**	**-0.4**
	baz=169,SNR=6.0						
O48A	**Farmland**	**69.01**	**345**	P	**P**	**21 47 16.3**	**-0.9**
	baz=163,SNR=5.6						
M54A	**Oil Creek Stat**	**69.15**	**350**	*e*P	**P**	**21 47 18.2**	**+0.1**
	comp=Z,19nm,0.8s						
M54A	**Oil Creek Stat**	**69.15**	**350**	P	**P**	**21 47 17.9**	**-0.2**
	baz=168,SNR=6.4						
L58A	**Harry Jones Me**	**69.16**	**353**	P	**P**	**21 47 17.9**	**-0.3**
	baz=171						
M53A	**WI Miller and**	**69.25**	**349**	P	**P**	**21 47 18.8**	**+0.1**
	baz=167						
BINY	**Binghamton**	**69.33**	**353**	*e*P	**P**	**21 47 20.2**	**+1.0**
	comp=Z,34nm,1.3s						
BINY	**Binghamton**	**69.33**	**353**	P	**P**	**21 47 19.0**	**-0.2**
	baz=171						
ALLY	**Alegheny Colle**	**69.36**	**349**	*e*P	**P**	**21 47 20.3**	**+0.9**
	comp=Z,20nm,0.9s						
N49A	**Columbus Grove**	**69.42**	**346**	P	**P**	**21 47 19.9**	**+0.2**
	baz=164						
M52A	**Chesterland**	**69.47**	**348**	*e*P	**P**	**21 47 21.1**	**+1.1**
	comp=Z,18nm,0.8s						
MSTX	**Muleshoe**	**69.50**	**329**	P	**P**	**21 47 20.2**	**-0.4**
	baz=146,SNR=7.3						
P43A	**Skaggs, Pawnee**	**69.54**	**342**	P	**P**	**21 47 20.6**	**+0.1**
	baz=158						
N48A	**Decatur**	**69.55**	**345**	P	**P**	**21 47 20.4**	**-0.2**
	baz=163						
L53A	**Girard**	**69.68**	**349**	P	**P**	**21 47 20.7**	**-0.6**
	baz=167						
N47A	**Urbana**	**69.72**	**345**	P	**P**	**21 47 21.3**	**-0.3**
	baz=162						
ERPA	**Erie**	**69.80**	**350**	*e*P	**P**	**21 47 22.7**	**+0.7**
	comp=Z,26nm,0.8s						
ERPA	**Erie**	**69.80**	**350**	P	**P**	**21 47 22.5**	**+0.4**
	baz=168						
L54A	**Sinclairville**	**69.81**	**350**	P	**P**	**21 47 22.4**	**+0.3**
	baz=168,SNR=9.8						
M49A	**Liberty Center**	**69.91**	**346**	P	**P**	**21 47 23.0**	**+0.3**
	baz=164						
K55A	**Perry**	**70.11**	**351**	P	**P**	**21 47 24.0**	**0.0**
	baz=169						
HDIL	**Hopedale**	**70.33**	**342**	P	**P**	**21 47 25.4**	**0.0**
	baz=159						
L48A	**N Adams**	**70.46**	**346**	P	**P**	**21 47 25.6**	**-0.5**
	baz=163						
L47A	**Sherwood**	**70.66**	**346**	P	**P**	**21 47 27.7**	**+0.4**
	baz=163						
N43A	**Stutzman Famil**	**70.66**	**342**	P	**P**	**21 47 27.3**	**0.0**
	baz=159						
J54A	**Appleton**	**70.72**	**351**	*e*P	**P**	**21 47 28.6**	**+0.9**
	comp=Z,15nm,0.6s						
J54A	**Appleton**	**70.72**	**351**	P	**P**	**21 47 28.1**	**+0.4**
	baz=169						
TYNO	**Tyneside**	**70.73**	**350**	P	**P**	**21 47 28.3**	**+0.5**
	baz=168						
SYO	**Syowa Base**	**70.76**	**159**	⇓*e*P	**P**	**21 47 25.4**	**-2.3**
SYO	**Syowa Base**	**70.76**	**159**	⇑*i*pP	**P**	**21 47 28.0**	**+0.3**
SYO	**Syowa Base**	**70.76**	**159**	⇑*e*PcP	**PcP**	**21 47 46.7**	**-1.8**
NCB	**Newcomb**	**70.91**	**354**	*e*P	**P**	**21 47 29.0**	**+0.1**
	comp=Z,13nm,1.4s						
N41A	**Harden Midland**	**70.92**	**341**	*e*P	**P**	**21 47 29.0**	**0.0**
	comp=Z,16nm,0.8s						
N41A	**Harden Midland**	**70.92**	**341**	P	**P**	**21 47 28.8**	**-0.1**
	baz=158						
J52A	**Paris**	**70.97**	**350**	P	**P**	**21 47 29.2**	**0.0**
	baz=167,SNR=6.2						
TAOE	**Nuku Hiva Isla**	**71.14**	**270**	*e*LR	LR	22 09 12.7	
	comp=Z,502nm,25.9s						
PECO	**Prince Edward**	**71.16**	**352**	*e*P	**P**	**21 47 30.7**	**+0.4**
	comp=Z,9.6nm,0.7s						
PECO	**Prince Edward**	**71.16**	**352**	P	**P**	**21 47 30.5**	**+0.2**
	baz=170						
K48A	**Perry**	**71.22**	**347**	P	**P**	**21 47 31.1**	**+0.4**
	baz=164						
N40A	**Mertquake, Sal**	**71.29**	**340**	P	**P**	**21 47 31.6**	**+0.4**
	baz=157						
DRWO	**Darlington Wes**	**71.32**	**351**	P	**P**	**21 47 32.0**	**+0.7**
	baz=169						
DRCO	**St. Marys Ceme**	**71.33**	**351**	P	**P**	**21 47 32.1**	**+0.8**
	baz=169						
KSU1	**Kansas State U**	**71.35**	**336**	P	**P**	**21 47 31.5**	**-0.1**
	baz=152						
M41A	**Milan**	**71.44**	**341**	P	**P**	**21 47 32.2**	**+0.1**
	baz=158						
BNM	**Barren Site**	**71.51**	**326**	*e*P	**P**	**21 47 34.2**	**+1.2**
I55A	**Frankford**	**71.52**	**352**	P	**P**	**21 47 32.7**	**+0.2**
	baz=170						
LONY	**Lake Ozonia**	**71.59**	**354**	*e*P	**P**	**21 47 33.8**	**+0.8**
	comp=Z,7.3nm,1.0s						
LONY	**Lake Ozonia**	**71.59**	**354**	P	**P**	**21 47 32.8**	**-0.2**
	baz=173						
I51A	**Listowel**	**71.61**	**349**	P	**P**	**21 47 32.6**	**-0.5**
	baz=167,SNR=5.8						
J48A	**Bridge Port**	**71.62**	**347**	P	**P**	**21 47 32.5**	**-0.6**
	baz=164						
H56A	**Elgin**	**71.73**	**353**	P	**P**	**21 47 34.4**	**+0.7**
	baz=171						
I52A	**Shelburne**	**71.73**	**350**	P	**P**	**21 47 34.1**	**+0.3**
	baz=168						
GGN	**Saint George**	**71.74**	**0**	*e*P	**P**	**21 47 34.6**	**+0.8**
	comp=Z,22nm,1.4s						
H55A	**Tweed**	**71.79**	**352**	P	**P**	**21 47 34.1**	**0.0**
	baz=170						
VNDA	**Vanda**	**71.80**	**190**	P	**P**	**21 47 33.5**	**-0.4**
	comp=Z,3.0nm,1.0s,baz=163,slow=5.9,SNR=9.8						
VNDA				LR	LR	22 19 30.4	
	comp=Z,388nm,18.1s,baz=137,slow=36						
VNDA	**Vanda**	**71.80**	**190**	*e*P	**P**	**21 47 36.2**	**+2.3**
	comp=Z,23nm,1.8s						
DELO	**Deloro Mine**	**71.81**	**352**	*e*P	**P**	**21 47 35.0**	**+0.7**
	comp=Z,4.9nm,0.8s						
DELO	**Deloro Mine**	**71.81**	**352**	P	**P**	**21 47 34.5**	**+0.2**
	baz=170						
PKME	**Peaks-Kenny Pk**	**71.92**	**358**	P	**P**	**21 47 34.9**	**0.0**
	baz=178						
BWLO	**Walkerton**	**71.93**	**349**	P	**P**	**21 47 35.1**	**+0.1**
	baz=167,SNR=5.4						
I49A	**Point Hope**	**72.06**	**348**	*e*P	**P**	**21 47 35.9**	**+0.1**
	comp=Z,16nm,0.8s						
I49A	**Point Hope**	**72.06**	**348**	P	**P**	**21 47 36.0**	**+0.3**
	baz=165						
ANMO	**Albuquerque**	**72.06**	**327**	P	**P**	**21 47 35.1**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=147,slow=7.8,SNR=5.1						
ANMO	**Albuquerque**	**72.06**	**327**	*e*P	**P**	**21 47 37.4**	**+1.1**
	comp=Z,29nm,2.0s						
ANMO	**Albuquerque**	**72.06**	**327**	P	**P**	**21 47 35.6**	**-0.7**
	baz=143						
BRCO	**Bruce Peninsul**	**72.11**	**349**	P	**P**	**21 47 36.3**	**+0.3**
	baz=166						
TUC	**Tucson**	**72.26**	**322**	*e*P	**P**	**21 47 39.1**	**+1.7**
	comp=Z,14nm,1.7s						
PLVO	**Plevna**	**72.26**	**352**	*e*P	**P**	**21 47 37.3**	**+0.4**
	comp=Z,14nm,1.3s						
PLVO	**Plevna**	**72.26**	**352**	P	**P**	**21 47 36.9**	**0.0**
	baz=170						
SADO	**Sadowa**	**72.26**	**351**	P	**P**	**21 47 34.5**	**-2.4**
	comp=Z,5.5nm,0.6s,baz=239,slow=3.8,SNR=5.6						
SADO	**Sadowa**	**72.26**	**351**	*e*P	**P**	**21 47 36.8**	**-0.1**
	comp=Z,6.1nm,0.8s						
L40A	**Anamosa**	**72.27**	**341**	P	**P**	**21 47 37.3**	**+0.2**
	baz=157						
CBKS	**Cedar Bluff**	**72.29**	**334**	*e*P	**P**	**21 47 38.0**	**+0.7**
	comp=Z,19nm,0.8s						
BANO	**Bancroft**	**72.34**	**352**	P	**P**	**21 47 37.4**	**0.0**
	baz=170						
BMRO	**Meriville Lake**	**72.41**	**349**	P	**P**	**21 47 37.7**	**-0.1**
	baz=167,SNR=6.3						
G55A	**Calabogie**	**72.43**	**353**	P	**P**	**21 47 36.9**	**-1.0**
	baz=171						
I48A	**Sherman Twp**	**72.46**	**347**	P	**P**	**21 47 37.5**	**-0.6**
	baz=164						
G53A	**Haliburton**	**72.54**	**351**	P	**P**	**21 47 38.4**	**-0.2**
	baz=169,SNR=6.9						
T25A	**Trinidad**	**72.87**	**329**	*e*P	**P**	**21 47 41.1**	**+0.1**
	comp=Z,54nm,1.9s						
T25A	**Trinidad**	**72.87**	**329**	P	**P**	**21 47 39.9**	**-1.2**
	baz=145,SNR=8.0						
PEMO	**Pembroke**	**72.91**	**352**	P	**P**	**21 47 40.2**	**-0.6**
	baz=170						
BUKO	**Buck Lake**	**72.96**	**351**	P	**P**	**21 47 40.7**	**-0.4**
	baz=168						
KLBO	**Killbear Provi**	**72.99**	**350**	P	**P**	**21 47 41.0**	**-0.3**
	baz=168,SNR=5.2						
TOBO	**Tobermory, Bru**	**73.07**	**349**	P	**P**	**21 47 41.5**	**-0.3**
	baz=166						
H46A	**Fife Lake**	**73.11**	**346**	P	**P**	**21 47 42.4**	**+0.4**
	baz=163						
214A	**Organ Pipe Nat**	**73.13**	**320**	P	**P**	**21 47 41.8**	**-0.7**
	baz=138						
GLMI	**Grayling**	**73.26**	**347**	P	**P**	**21 47 42.3**	**-0.5**
	baz=164						
ALGO	**Algonquin Park**	**73.28**	**352**	P	**P**	**21 47 42.9**	**0.0**
	baz=170,SNR=5.6						
F52A	**Sundridge**	**73.29**	**351**	P	**P**	**21 47 42.9**	**-0.2**
	baz=168,SNR=6.0						
PQI	**Presque Isle**	**73.30**	**359**	*e*P	**P**	**21 47 44.3**	**+1.3**
	comp=Z,13nm,1.2s						
I42A	**Draeger Farm,**	**73.35**	**344**	*e*P	**P**	**21 47 43.5**	**+0.1**
	comp=Z,10nm,0.8s						
I42A	**Draeger Farm,**	**73.35**	**344**	P	**P**	**21 47 43.2**	**-0.2**
	baz=160						
TBI	**Tubuai**	**73.50**	**252**	*e*LR	LR	22 10 19.0	
	comp=Z,257nm,29.5s						
F51A	**Arnstein**	**73.51**	**351**	P	**P**	**21 47 44.3**	**0.0**
	baz=168						
H43A	**Windswept, Lux**	**73.61**	**345**	*e*P	**P**	**21 47 45.3**	**+0.3**
	comp=Z,15nm,1.0s						
H43A	**Windswept, Lux**	**73.61**	**345**	P	**P**	**21 47 44.9**	**-0.1**
	baz=161						
KSCO	**Kaye Shedlock'**	**73.64**	**332**	*e*P	**P**	**21 47 47.2**	**+1.7**
	comp=Z,42nm,1.5s						
E54A	**Lac Daplat, Po**	**73.65**	**353**	P	**P**	**21 47 45.0**	**-0.1**
	baz=170						
E53A	**Dumoine, Ponti**	**73.65**	**352**	P	**P**	**21 47 45.0**	**-0.2**
	baz=170						
E52A	**Mattawa**	**73.68**	**352**	P	**P**	**21 47 45.3**	**0.0**
	baz=169						
F49A	**Sandfield**	**73.68**	**349**	P	**P**	**21 47 45.4**	**+0.1**
	baz=166,SNR=5.6						
G46A	**Petoskey**	**73.78**	**347**	P	**P**	**21 47 45.6**	**-0.3**
	baz=163						
F48A	**Evansville**	**73.85**	**349**	P	**P**	**21 47 46.6**	**+0.3**
	baz=165						
W18A	**Petrified Fore**	**73.85**	**325**	*e*P	**P**	**21 47 47.6**	**+0.7**
	comp=Z,11nm,0.7s						
SDCO	**Great Sand Dun**	**73.86**	**329**	*e*P	**P**	**21 47 47.8**	**+0.8**
	comp=Z,4.5nm,0.7s						
SDCO	**Great Sand Dun**	**73.86**	**329**	P	**P**	**21 47 46.4**	**-0.6**
	baz=145,SNR=11						
BGNE	**Belgrade**	**73.94**	**336**	*e*P	**P**	**21 47 47.6**	**+0.6**
	comp=Z,52nm,0.8s						
BGNE	**Belgrade**	**73.94**	**336**	P	**P**	**21 47 47.4**	**+0.4**
	baz=151						
E51A	**G1948 Merrick**	**74.04**	**351**	P	**P**	**21 47 47.8**	**+0.4**
	baz=168						
E50A	**Wahnapitae**	**74.11**	**350**	P	**P**	**21 47 48.2**	**+0.3**
	baz=167						
X16A	**Lo Mia Camp, P**	**74.21**	**323**	*e*P	**P**	**21 47 50.6**	**+1.6**
	comp=Z,11nm,1.4s						
F45A	**CMU Biological**	**74.26**	**347**	P	**P**	**21 47 49.0**	**+0.3**
	baz=163						
D54A	**Lac Fusel, La**	**74.30**	**353**	P	**P**	**21 47 49.5**	**+0.5**
	baz=171						
D52A	**ZEK Kipawa Sen**	**74.33**	**352**	P	**P**	**21 47 49.2**	**+0.1**
	baz=169						
D53A	**Lac Vacive, Po**	**74.34**	**352**	*e*P	**P**	**21 47 49.2**	**0.0**
	comp=Z,7.1nm,0.9s						
D53A	**Lac Vacive, Po**	**74.34**	**352**	P	**P**	**21 47 49.4**	**+0.2**
	baz=170						
E48A	**Lockeyer**	**74.40**	**349**	P	**P**	**21 47 49.7**	**+0.2**
	baz=166						
D51A	**Lot 18 Range I**	**74.57**	**351**	P	**P**	**21 47 50.5**	**0.0**
	baz=168						
E47A	**Iron Bridge**	**74.57**	**348**	P	**P**	**21 47 50.9**	**+0.4**
	baz=165,SNR=7.1						
E46A	**Sault Ste Mari**	**74.68**	**348**	P	**P**	**21 47 51.1**	**-0.1**
	baz=164,SNR=5.4						
MVCO	**Mesa Verde**	**74.86**	**327**	P	**P**	**21 47 52.4**	**-0.4**
	baz=142						
G40A	**Rib Lake**	**74.96**	**343**	P	**P**	**21 47 52.9**	**+0.1**
	baz=159						
D48A	**Paudash Townsh**	**75.02**	**350**	P	**P**	**21 47 53.5**	**+0.4**
	baz=166						
D49A	**Beulah Townshi**	**75.04**	**350**	P	**P**	**21 47 53.4**	**+0.2**
	baz=167						
GLA	**Glamis**	**75.08**	**320**	*e*P	**P**	**21 47 54.7**	**+0.8**
	comp=Z,7.1nm,0.8s						
D47A	**Chapleau**	**75.12**	**349**	P	**P**	**21 47 53.6**	**-0.1**
	baz=165						
D46A	**Sault St. Mari**	**75.13**	**348**	P	**P**	**21 47 53.3**	**-0.4**
	baz=164						
G39A	**Holcombe**	**75.23**	**343**	P	**P**	**21 47 53.5**	**-0.9**
	baz=158						
E43A	**Lone Tree Farm**	**75.24**	**346**	*e*P	**P**	**21 47 55.0**	**+0.6**
	comp=Z,8.6nm,0.8s						
VLDQ	**Val d'Or**	**75.33**	**353**	*e*P	**P**	**21 47 55.0**	**+0.1**
	comp=Z,7.2nm,0.9s						
Y12C	**Blythe**	**75.42**	**321**	*e*P	**P**	**21 47 57.4**	**+1.7**
	comp=Z,6.5nm,0.8s						
ECSD	**EROS Data Cent**	**75.46**	**338**	*e*P	**P**	**21 47 54.0**	**-1.7**
	comp=Z,13nm,0.8s						
ECSD	**EROS Data Cent**	**75.46**	**338**	P	**P**	**21 47 55.4**	**-0.4**
	baz=153,SNR=13						
ISCO	**Idaho Springs**	**75.59**	**330**	*e*P	**P**	**21 47 58.3**	**+1.4**
	comp=Z,20nm,1.6s						
ISCO	**Idaho Springs**	**75.59**	**330**	P	**P**	**21 47 56.7**	**-0.3**
	baz=145						
SPMN	**Marine on St.**	**75.63**	**341**	P	**P**	**21 47 57.3**	**+0.6**
	baz=156						
SMCO	**Snowmass**	**75.70**	**329**	*e*P	**P**	**21 47 59.3**	**+1.6**
	comp=Z,8.2nm,0.9s						
PPT2	**Papeete2**	**75.88**	**257**	*e*LR	LR	22 11 29.5	
	comp=Z,190nm,24.2s						
BC3	**Big Chuckawall**	**75.88**	**320**	P	**P**	**21 47 59.9**	**+1.4**
	baz=136,SNR=6.3						
PPT	**Papeete**	**75.89**	**257**	LR	LR	22 12 52.1	
	comp=Z,53nm,21.8s,baz=230,slow=29						
PMOZ	**Porto Moniz, M**	**75.96**	**41**	*e*LR	LR	22 13 37.9	
	comp=Z,255nm,20.0s						
W13A	**Hualapai Mount**	**76.05**	**322**	*e*P	**P**	**21 48 02.2**	**+2.5**
	comp=Z,3.2nm,0.8s						
IRM	**Iron Mountain**	**76.07**	**320**	P	**P**	**21 48 00.5**	**+1.0**
	baz=137						
U15A	**North Rim**	**76.19**	**324**	*e*P	**P**	**21 48 01.8**	**+1.4**
	comp=Z,6.3nm,1.1s						
D41A	**Chassel**	**76.24**	**345**	*e*P	**P**	**21 48 00.9**	**+0.8**
	comp=Z,36nm,0.8s						
D41A	**Chassel**	**76.24**	**345**	P	**P**	**21 48 01.5**	**+1.4**
	baz=160,SNR=9.1						
DRLN	**Deer Lake**	**76.34**	**6**	*e*P	**P**	**21 48 01.9**	**+1.2**
	comp=Z,78nm,1.9s						
PFO	**Pinyon Flats O**	**76.43**	**319**	*e*P	**P**	**21 48 02.8**	**+1.1**
	comp=Z,4.6nm,1.0s						
PFO	**Pinyon Flats O**	**76.43**	**319**	P	**P**	**21 48 02.5**	**+0.8**
	baz=136						
BELC	**Belle Mtn. Jos**	**76.44**	**320**	P	**P**	**21 48 02.6**	**+0.9**
	baz=136						
E38A	**The Farm, Brul**	**76.56**	**343**	P	**P**	**21 48 03.9**	**+2.0**
	baz=158						
N23A	**Red Feather La**	**76.63**	**331**	*e*P	**P**	**21 48 04.0**	**+1.2**
	comp=Z,3.8nm,0.6s						
N23A	**Red Feather La**	**76.63**	**331**	P	**P**	**21 48 04.3**	**+1.5**
	baz=145						
TSUM	**Tsumeb**	**76.79**	**105**	*e*P	**P**	**21 48 04.6**	**+0.4**
	comp=Z,6.7nm,1.0s						
GMRC	**Granite Mounta**	**76.82**	**321**	P	**P**	**21 48 05.0**	**+1.1**
	baz=136,SNR=6.0						
CHGQ	**Chibougamau**	**76.82**	**355**	P	**P**	**21 48 04.1**	**+0.7**
	baz=173						
SUSD	**Miller**	**76.88**	**337**	P	**P**	**21 48 04.3**	**+0.5**
	baz=151						
MATQ	**Matagami**	**76.98**	**353**	P	**P**	**21 48 05.8**	**+1.6**
	baz=170						
O20A	**White River Ci**	**77.05**	**329**	*e*P	**P**	**21 48 06.7**	**+1.6**
	comp=Z,9.4nm,0.8s						
O20A	**White River Ci**	**77.05**	**329**	P	**P**	**21 48 06.8**	**+1.6**
	baz=143,SNR=9.6						
LCMT	**Little Creek M**	**77.13**	**324**	*e*P	**P**	**21 48 07.5**	**+2.0**
	comp=Z,3.8nm,1.1s						
MTPU	**Mount Pierson**	**77.35**	**325**	*e*P	**P**	**21 48 08.7**	**+1.6**
	comp=Z,5.4nm,0.7s						
TOA0	**Torodi Ar. Sit**	**77.56**	**68**	*e*P	**P**	**21 48 08.0**	**-0.3**
	comp=Z,13nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.56**	**68**	P	**P**	**21 48 05.5**	**-2.8**
	comp=Z,8.4nm,0.7s,baz=292,slow=7.8,SNR=40						
TORD				LR	LR	22 20 54.0	
	comp=Z,475nm,19.4s,baz=295,slow=35						
BFSC	**Mount Baldy Ra**	**77.58**	**319**	P	**P**	**21 48 08.9**	**+0.7**
	baz=135						
CCUT	**Cedar City**	**77.59**	**324**	*e*P	**P**	**21 48 10.0**	**+1.7**
	comp=Z,7.6nm,0.9s						
P17A	**Butcher Ranch,**	**77.72**	**327**	*e*P	**P**	**21 48 10.1**	**+1.3**
	comp=Z,7.3nm,1.0s						
EYMN	**Ely**	**77.78**	**343**	P	**P**	**21 48 10.2**	**+1.4**
	baz=158						
SHPR	**Sheep Range**	**77.79**	**322**	*e*P	**P**	**21 48 10.4**	**+1.1**
	comp=Z,4.7nm,1.0s						
TMUT	**Trail Mountain**	**77.82**	**326**	*e*P	**P**	**21 48 10.4**	**+0.8**
	comp=Z,11nm,1.6s						
GSC	**Goldstone, Bar**	**77.84**	**320**	P	**P**	**21 48 10.4**	**+0.8**
	baz=136						
EDW2	**Edwards Air Fo**	**78.23**	**319**	P	**P**	**21 48 12.7**	**+1.1**
	baz=135						
RSSD	**Black Hills**	**78.49**	**334**	*e*P	**P**	**21 48 13.4**	**+0.3**
	comp=Z,3.6nm,0.7s						
RSSD	**Black Hills**	**78.49**	**334**	P	**P**	**21 48 13.8**	**+0.7**
	baz=147						
PSUT	**Pine Spring**	**78.58**	**324**	*e*P	**P**	**21 48 14.9**	**+1.2**
	comp=Z,6.0nm,0.9s						
MAW	**Mawson**	**78.59**	**163**	P	**P**	**21 48 10.6**	**-2.6**
	comp=Z,7.4nm,0.7s,baz=223,slow=7.2,SNR=13						
MAW	**Mawson**	**78.59**	**163**	*e*P	**P**	**21 48 13.2**	**+0.1**
	comp=Z,5.9nm,1.1s						
FURC	**Furnace Creek,**	**78.71**	**321**	P	**P**	**21 48 15.4**	**+1.2**
	baz=136						
TPNV	**Topopah Spring**	**78.71**	**322**	*e*P	**P**	**21 48 17.4**	**+3.0**
	comp=Z,4.7nm,1.0s						
TPNV	**Topopah Spring**	**78.71**	**322**	P	**P**	**21 48 15.1**	**+0.7**
	baz=136						
MPMC	**Manual Prospec**	**78.77**	**320**	P	**P**	**21 48 15.8**	**+1.0**
	baz=135						
JLU	**Jordanelle**	**78.94**	**327**	*e*P	**P**	**21 48 16.3**	**+0.6**
	comp=Z,4.1nm,0.7s						
DAC	**Darwin (Calif)**	**78.98**	**320**	*e*P	**P**	**21 48 17.0**	**+1.0**
	comp=Z,6.3nm,1.0s						
ISA	**Isabella, Lake**	**79.06**	**319**	P	**P**	**21 48 17.7**	**+1.5**
	baz=135						
AGMN	**Agassiz Nation**	**79.30**	**341**	P	**P**	**21 48 18.1**	**+0.9**
	baz=154						
DUG	**Dugway, Tooele**	**79.30**	**326**	*e*P	**P**	**21 48 17.7**	**+0.1**
	comp=Z,4.8nm,0.9s						
DUG	**Dugway, Tooele**	**79.30**	**326**	P	**P**	**21 48 19.2**	**+1.6**
	baz=139						
PKM	**Mcpherson Peak**	**79.31**	**318**	P	**P**	**21 48 18.5**	**+0.7**
	baz=134						
BOSA	**Boshof**	**79.32**	**117**	P	**P**	**21 48 15.6**	**-2.4**
	comp=Z,5.1nm,0.8s,baz=237,slow=3.4,SNR=4.5						
BOSA				LR	LR	22 21 35.5	
	comp=Z,133nm,18.0s,baz=235,slow=34						
R11A	**Troy Canyon, C**	**79.36**	**323**	*e*P	**P**	**21 48 18.4**	**+0.4**
	comp=Z,4.6nm,1.3s						
R11A	**Troy Canyon, C**	**79.36**	**323**	P	**P**	**21 48 19.0**	**+1.0**
	baz=137						
CWC	**Cottonwood Cre**	**79.38**	**320**	P	**P**	**21 48 19.1**	**+1.1**
	baz=135						
BW06	**Boulder Array**	**79.74**	**330**	*e*P	**P**	**21 48 21.0**	**+1.0**
	comp=Z,4.1nm,0.9s						
BW06	**Boulder Array**	**79.74**	**330**	P	**P**	**21 48 21.1**	**+1.1**
	baz=142						
PDAR	**Pinedale Array**	**79.74**	**330**	P	**P**	**21 48 18.1**	**-1.9**
	comp=Z,2.3nm,0.7s,baz=144,slow=6.6,SNR=16						
HWUT	**Hardware Ranch**	**79.77**	**328**	*e*P	**P**	**21 48 21.0**	**+0.9**
	comp=Z,6.9nm,0.8s						
BGU	**Big Grassy Mou**	**79.96**	**326**	*e*P	**P**	**21 48 22.8**	**+1.6**
	comp=Z,4.7nm,1.1s						
AHID	**Auburn Hatcher**	**80.44**	**329**	*e*P	**P**	**21 48 25.2**	**+1.5**
	comp=Z,7.4nm,0.8s						

HVU	Hansel Valley	80.48	327	*e*P	P	21 48 25.6	+1.7
	comp=Z,7.2nm,1.1s						
OMMB	Old Mammoth Mi	80.72	321	*e*P	P	21 48 27.2	+1.7
	comp=Z,6.8nm,1.1s						
NVAR	Mina Array Bea	80.91	322	P	P	21 48 24.6	-1.7
	comp=Z,0.2nm,0.5s,baz=122,slow=3.4,SNR=3.0						
TPAW	Teton Pass	80.94	329	*e*P	P	21 48 27.3	+0.8
	comp=Z,4.7nm,0.9s						
ELK	Elko	80.94	325	P	P	21 48 24.2	-2.3
	comp=Z,3.5nm,1.0s,baz=160,slow=2.2,SNR=11						
ELK	Elko	80.94	325	*e*P	P	21 48 28.0	+1.5
	comp=Z,3.5nm,0.9s						
ULM	Lac du Bonnet	81.06	342	P	P	21 48 24.3	-2.3
	comp=Z,7.8nm,0.6s,baz=145,slow=7.0,SNR=10						
ULM				LR	LR	22 27 16.8	
	comp=Z,186nm,21.4s,baz=152,slow=38						
ULM	Lac du Bonnet	81.06	342	*e*P	P	21 48 26.8	+0.2
	comp=Z,9.7nm,0.7s						
LBTB	Lobatse	81.12	113	*e*P	P	21 48 28.6	+0.8
	comp=Z,13nm,0.9s						
RYN	Ryan	81.17	322	*e*P	P	21 48 27.2	-0.4
	comp=Z,2.5nm,0.8s						
KVN	Kaiserville	81.23	322	*e*P	P	21 48 29.4	+1.4
	comp=Z,4.9nm,1.1s						
IMW	Indian Meadow	81.25	329	*e*P	P	21 48 29.9	+1.8
	comp=Z,5.8nm,0.8s						
SCHQ	Schefferville	81.46	0	LR	LR	22 25 26.2	
	comp=Z,135nm,21.5s,baz=232,slow=36						
RLMT	Red Lodge	81.47	331	P	P	21 48 29.8	+0.6
	baz=143						
YHH	Holmes Hill	81.91	330	*e*P	P	21 48 31.8	+0.2
	comp=Z,7.4nm,0.8s						
GCMT	Greycliff	82.18	331	*e*P	P	21 48 31.2	-1.6
DGMT	Dagmar	82.19	336	P	P	21 48 33.7	+1.1
	baz=147						
PAHR	Pah Rah Range	82.40	322	*e*P	P	21 48 34.9	+0.7
	comp=Z,4.2nm,0.9s						
HLID	Hailey	82.62	327	P	P	21 48 36.4	+1.2
	baz=138						
MCMT	McKenzie Canyo	82.84	329	*e*P	P	21 48 35.7	-0.7
BOZ	Bozeman (W)	82.88	330	P	P	21 48 37.2	+0.7
	baz=141						
LRM	Limekiln Ridge	83.42	330	*e*P	P	21 48 39.4	0.0
MOD	Modoc Plateau	84.43	323	*e*P	P	21 48 45.1	+0.6
	comp=Z,3.8nm,0.8s						
PLID	Pearl Lake	84.52	327	*e*P	P	21 48 44.0	-1.0
	comp=Z,5.8nm,0.8s						
WDC	Whiskeytown Da	84.76	321	*e*P	P	21 48 46.8	+0.8
	comp=Z,29nm,2.0s						
PVAQ	Vaqueiros	84.76	43	*e*LR	LR	22 16 57.1	
	comp=Z,436nm,18.0s						
BMO	Blue Mountains	84.98	327	*e*P	P	21 48 48.3	+1.2
	comp=Z,3.1nm,1.1s						
PMTG	Montargil	85.52	42	*e*P	P	21 48 51.4	+1.5
	comp=Z,34nm,1.4s						
YBH	Yreka Blue Hor	85.63	322	P	P	21 48 48.8	-1.7
	comp=Z,2.1nm,0.8s,baz=90,slow=2.0,SNR=3.7						
F10A	Beach Ranch, E	85.75	327	*e*P	P	21 48 52.2	+1.2
	comp=Z,6.6nm,0.9s						
J05D	Fort Rock, OR	85.88	324	P	P	21 48 51.7	-0.1
	baz=133						
PCAS	Casmilo, Conde	86.00	41	*e*P	P	21 48 53.1	+0.9
	comp=Z,27nm,1.3s						
PINE	Pine Mountain	86.08	324	*e*P	P	21 48 52.8	0.0
	comp=Z,12nm,0.8s						
COI	Coimbra	86.15	41	*e*P	P	21 48 53.7	+0.8
	comp=Z,49nm,1.3s						
PMRV	Marv??o	86.25	42	*e*P	P	21 48 54.7	+1.2
	comp=Z,15nm,1.2s						
PMRV	Marv??o	86.25	42	*e*LR	LR	22 17 17.3	
	comp=Z,308nm,20.0s						
PCBR	Castelo Branco	86.46	42	*e*P	P	21 48 55.6	+1.1
	comp=Z,20nm,1.2s						
WALA	Waterton Lakes	86.53	331	*e*P	P	21 48 55.2	+0.5
	comp=Z,4.0nm,0.8s						
I05D	Terrebonne, OR	86.66	324	P	P	21 48 55.6	+0.1
	baz=133						
MTE	Manteigas	86.78	41	*e*P	P	21 48 57.9	+1.8
	comp=Z,25nm,1.2s						
MTE	Manteigas	86.78	41	*e*LR	LR	22 17 07.2	
	comp=Z,335nm,22.0s						
MTE	Manteigas	86.78	41	*e*P	P	21 48 55.8	-0.3
	comp=Z,18nm,1.1s						
CASY	Casey	87.03	179	*e*P	P	21 48 58.1	+1.1
	comp=Z,59nm,1.8s						
HAWA	Hanford	87.17	327	*e*P	P	21 48 58.6	+0.8
	comp=Z,5.2nm,0.8s						
PGAV	Gavieira, Arco	87.36	40	*e*LR	LR	22 19 49.7	
	comp=Z,260nm,20.0s						
NEW	Newport	87.37	329	P	P	21 48 57.0	-1.8
	comp=Z,0.7nm,0.3s,baz=135,slow=8.6,SNR=3.0						
NEW	Newport	87.37	329	*e*P	P	21 49 00.7	+1.9
	comp=Z,16nm,1.9s						
NEW	Newport	87.37	329	P	P	21 48 58.6	-0.2
	baz=137						
C09A	Chrisman Ranch	87.57	328	*e*P	P	21 49 00.8	+1.0
	comp=Z,14nm,0.6s						
MVO	Moncorvo	87.57	41	*e*P	P	21 49 01.4	+1.4
	comp=Z,21nm,1.6s						
MVO	Moncorvo	87.57	41	*e*LR	LR	22 18 12.8	
	comp=Z,282nm,22.0s						
LSZ	Lusaka	87.61	106	*e*P	P	21 49 01.8	+0.9
	comp=Z,11nm,1.0s						
PAB	San Pablo	88.16	43	*e*P	P	21 49 02.6	-0.2
	comp=Z,12nm,1.1s						
FCC	Fort Churchill	88.35	346	*e*P	P	21 49 04.4	+1.3
	comp=Z,18nm,1.1s						
ESDC	Sonseca Array	88.48	43	P	P	21 49 02.5	-1.8
	comp=Z,0.6nm,0.6s,baz=243,slow=4.8,SNR=5.0						
ESDC				LR	LR	22 26 22.4	
	comp=Z,316nm,19.8s,baz=215,slow=34						
KEST	Kesra	95.14	53	LR	LR	22 32 39.3	
	comp=Z,520nm,20.5s,baz=184,slow=36						
YKA	Yellowknife Ar	96.93	340	P	P	21 49 40.7	-2.0
	comp=Z,1.6nm,0.7s,baz=137,slow=4.7,SNR=2.8						
YKA				LR	LR	22 38 14.0	
	comp=Z,15nm,19.0s,baz=129,slow=38						
VYHS	Vyhne	107.02	44	*e*PDIF	Pdif	21 50 32.3	+4.2
DZM	Mont Dzumac	109.01	232	*e*LR	LR	22 26 49.9	
	comp=Z,173nm,24.1s						
ILAR	Eielson Array	109.94	333	PP	PP	21 55 13.4	-2.4
	comp=Z,0.6nm,0.9s,baz=120,slow=5.3,SNR=3.8						
AKASG	Malin Array Be	114.12	44	PKP	PKPdf	21 54 48.3	-2.6
	comp=Z,0.7nm,0.5s,baz=262,slow=3.4,SNR=3.0						
BRTR	Keskin Array B	114.39	56	PKP	PKPdf	21 54 49.1	-2.8
	comp=Z,0.6nm,0.8s,baz=169,slow=0.7,SNR=2.4						
KBZ	Khabaz	122.00	54	PKP	PKPdf	21 55 05.8	-0.4
	comp=Z,1.6nm,0.8s,baz=168,slow=2.7,SNR=4.3						
ASAR	Alice Springs	125.80	204	PKP	PKPdf	21 55 11.7	-2.7
	comp=Z,3.5nm,0.7s,baz=148,slow=2.1,SNR=29						
WRA	Warramunga Arr	129.02	206	PKP	PKPdf	21 55 18.2	-2.4
	comp=Z,5.8nm,0.8s,baz=191,slow=2.0,SNR=16						
WRAB	Tennant Creek	129.03	206	*e*PKPdf	PKiKP	21 55 21.9	+0.6
ARU	Arti	131.51	37	PKP	PKPdf	21 55 21.0	-3.0
	comp=Z,0.2nm,0.3s,baz=198,slow=1.4,SNR=1.7						
ARU	Arti	131.51	37	*e*PKPdf	PKiKP	21 55 26.8	+1.8
ABKAR	Akbulak array	133.74	47	*e*PKPdf	PKiKP	21 55 30.1	+0.4
SEY	Seymchan	135.82	335	PKP	PKPdf	21 55 29.5	-2.4
	comp=Z,1.6nm,0.6s,baz=25,slow=19,SNR=2.3						
PEA1	Petropavlovsk-	137.99	321	*e*PKPdf	PKPdf	21 55 35.0	-1.3
PETK	Petropavlovsk-	137.99	321	PKP	PKPdf	21 55 35.0	-1.3
	comp=Z,1.4nm,0.7s,baz=103,slow=5.0,SNR=1.6						
BVAR	Borovoye Array	139.08	39	PKP	PKPdf	21 55 37.8	-0.5
	comp=Z,1.1nm,0.5s,baz=255,slow=3.9,SNR=8.8						
KURBB	Kurchatov Arra	144.67	39	PKP	PKPab	21 55 45.9	-1.1
	comp=Z,10nm,0.9s,baz=300,slow=3.7,SNR=54						
KURK	Kurchatov	144.68	38	*e*PKPdf	PKPdf	21 55 48.3	0.0
AAK	Ala-Archa	144.99	53	PKP	PKPbc	21 55 47.3	-1.4
	comp=Z,6.2nm,0.6s,baz=337,slow=2.1,SNR=9.1						
AAK	Ala-Archa	144.99	53	*e*PKPdf	PKPdf	21 55 49.8	+0.5
NIL	Nilore	145.12	69	*e*PKPbc	PKPbc	21 55 48.6	-0.7
ZAA0	Zalesovo Array	145.94	30	*e*PKPdf	PKPab	21 55 51.6	+0.1
ZALV	Zalesovo Beam	145.94	30	PKPbc	PKPdf	21 55 49.4	-0.9
	comp=Z,33nm,0.8s,baz=295,slow=3.9,SNR=50						
KSH	Kashi	146.75	58	*e*PKPbc	PKPab	21 55 55.0	-0.4
KSH				PP	PP	21 59 23.3	+5.0
KSH				PKS	PKSdf	21 59 29.0	+1.2
KSH				SKS	SKSdf	22 03 01.3	+0.5
KSH				SKKS	SKKSac	22 06 13.0	+3.3
KSH				AMB	AMB		
	comp=Z,59nm,6.6s						
KSH				LR	LR		
	comp=Z,67nm,9.0s						
KSH				LR	LR		
	comp=Z,43nm,8.1s						
KAPI	Kappang	147.56	192	*e*PKPbc	PKPab	21 55 58.6	-0.3
MAKZ	Makanchi	148.50	43	*e*PKPbc	PKPbc	21 55 57.6	-1.0
MKAR	Makanchi Array	148.69	43	PKPbc	PKPdf	21 55 56.6	+1.3
GSI	Gunungsitoli	150.45	147	*e*PKPbc	PKiKP	21 56 05.8	+0.7
ASAJ	Asahikawa	150.74	313	PKPbc	PKPbc	21 56 02.1	-2.0
	comp=Z,6.3nm,0.9s,baz=0.0,slow=1.0,SNR=2.3						
PSI	Prapat	152.40	148	PKPbc	PKPdf	21 56 05.3	+3.2
	comp=Z,5.4nm,0.6s,baz=264,slow=18,SNR=2.2						
PSI	Prapat	152.40	148	*e*PKPbc	PKiKP	21 56 09.9	+0.7
WMQ	Urumqi	153.48	44	*e*PKPbc	PKPdf	21 56 02.8	0.0
WMQ				AMB	AMB		
	comp=Z,60nm,4.7s						
WMQ				LR	LR		
	comp=Z,350nm,28.9s						
WMQ				LR	LR		
	comp=Z,210nm,22.1s						
KLR	Kul'dur	153.50	332	PKPbc	PKPdf	21 56 06.0	+3.4
	comp=Z,1.0nm,0.2s,baz=268,slow=14,SNR=3.0						
MJAR	Matsushiro Arr	156.67	300	PKPab	PKPab	21 56 36.0	-0.5
	comp=Z,2.3nm,1.0s,baz=131,slow=2.1,SNR=4.4						
MAJO	Matsushiro	156.67	300	*e*PKPab	PKPab	21 56 36.0	-0.5
SONM	Songino Array	158.52	12	PKP	PKPdf	21 56 05.2	-4.1
	comp=Z,0.1nm,0.3s,baz=281,slow=0.3,SNR=2.2						
SONM				PKPab	PKPab	21 56 42.1	-2.0
	comp=Z,3.3nm,0.8s,baz=326,slow=4.2,SNR=12						
ULN	Ulaanbaatar	158.61	11	*e*PKPdf	PKPdf	21 56 11.7	+2.2
ULN				*e*PKPab	PKPab	21 56 46.6	+2.0
GTA	Gaotai	163.36	38	*e*PKP	PKPdf	21 56 17.5	+2.7
GTA				PKPab	PKPab	21 57 08.0	+2.4
GTA				PP	PP	22 00 57.0	+6.5
GTA				SS	SS	22 21 21.9	+5.7
GTA				AMB	AMB		
	comp=Z,31nm,7.0s						
GTA				LR	LR		
	comp=Z,96nm,21.6s						
GTA				LR	LR		
	comp=Z,110nm,19.7s						
GTA				LR	LR		
	comp=Z,160nm,20.0s						
KSRS	Korea Array	163.69	314	PKPab	PKPab	21 57 04.9	-2.1
	comp=Z,0.6nm,0.8s,baz=46,slow=7.0,SNR=2.8						
CMAR	Chiang Mai Arr	164.44	120	PKP	PKPdf	21 56 12.5	-3.7
	comp=Z,0.7nm,0.3s,baz=230,slow=2.2,SNR=3.3						
CMAR				PKPab	PKPab	21 57 09.2	-1.6
	comp=Z,0.6nm,0.3s,baz=240,slow=5.0,SNR=4.0						
HHC	Hu-ho-hao-te	166.10	5	PKP	PKPdf	21 56 12.8	-4.3
HHC				AMB	AMB		
	comp=Z,140nm,8.8s						
LZH	Lanzhou	167.97	39	*e*PKP	PKPdf	21 56 18.5	-0.3
LZH				pPKP	pPKPdf	21 56 21.8	-3.6
LZH				sPKP		21 56 23.1	
LZH				LR	LR		
	comp=Z,150nm,18.5s						
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,190nm,20.1s						
KMI	Kunming	170.50	99	PKP	PKPdf	21 56 20.6	-0.1
KMI				LR	LR		
	comp=Z,190nm,18.8s						
KMI				LR	LR		
	comp=Z,170nm,19.5s						
KMI				LR	LR		
	comp=Z,280nm,20.4s						
CD2	Chengdu	170.92	62	PKP	PKPdf	21 56 19.9	-0.7
NJ2	Nanjing	172.87	317	*e*PKP	PKPdf	21 56 21.3	0.0
WHN	Wuhan	176.27	343	PKP	PKPdf	21 56 28.0	+5.6

NNC 13 21:55:46.4±11.0, 36°.82N×70°.11E, h206^{km}±199^{km}, mb2.8, mpv3.8, 5C-3D, Error ellipse: s-maj=109.6km s-min=67.5km az=23.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.29	3	⇑P	Pn	21 57 18.9	+1.7
	2.7nm,0.8s,baz=189,slow=13,SNR=6.1						
KK31				⇑S	S	21 58 31.2	+1.9
	1.4nm,0.3s,baz=193,slow=24,SNR=5.3						
AAK	Ala-Archa	6.72	29	⇓P	Pn	21 57 23.2	+0.1
	3.8nm,0.5s						
AAK				⇓S	S	21 58 39.3	-0.5
	9.4nm,0.7s						
TKM2	Tokmak 2	7.41	33	⇑P	Pn	21 57 31.9	-0.2
	9.4nm,0.6s						
TKM2				⇑S	S	21 58 54.8	-1.3
	4.0nm,0.7s						
AB31	Akbulak array	14.47	332	⇓P	Pn	21 58 59.0	-2.6
	1.9nm,0.9s,baz=259,slow=4.0,SNR=6.8						
AB31				⇑S	S	22 01 45.7	+3.9
	0.1nm,0.4s						

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*ISCJB **13** 21:55:57.7±0.3, 59°.51N±0°.03×152°.66W±0°.05, h98^{km}±3^{km}, mb3.9/7, Error ellipse: s-maj=5.8km s-min=3.7km az=145.4*

*IDC **13** 21:55:59.9±3.5, 59°.75N×152°.84W, h86^{km}±33^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.3/67, mbtmp4.0/10, Error ellipse: s-maj=33.3km s-min=22.5km az=156.0*

*NEIC **13** 21:56:00.3±0.0, 59°.52N×152°.70W, h79^{km}, ML3.6(AEIC), After AEIC.*

ISC 13 21:55:58.8±0.7, 59°.52N±0°.05×152°.69W±0°.03, h88^{km}±6^{km}, n72, σ0^{s}.81/81, mb4.0/7, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUE	Augustine Isla	0.39	245	*e*Pn	Pn	21 56 12.7	+0.2
AUL	Augustine Lava	0.41	250	*e*Pn	Pn	21 56 13.0	+0.3
AUL				*e*Sn	Sn	21 56 23.3	+0.4
AUH	Augustine H	0.42	248	*e*Pn	Pn	21 56 13.0	+0.2
AUI	Augustine Isla	0.42	244	*e*Pn	Pn	21 56 12.9	+0.2
AUI				*e*Sn	Sn	21 56 22.2	-0.9
AUW	Augustine West	0.43	250	*e*Pn	Pn	21 56 13.1	+0.3
ILS	Iliamna Low So	0.48	336	*e*Pn	Pn	21 56 13.2	-0.1
IVE	Iliamna Volcan	0.53	342	*e*Pn	Pn	21 56 13.5	-0.1
HOM	Homer	0.55	75	*e*Pn	Pn	21 56 14.6	+0.9
HOM				*e*Sn	Sn	21 56 24.8	0.0
CNPM	China Poot	0.74	89	*e*Pn	Pn	21 56 16.1	+0.5
CNPM				*e*Sn	Sn	21 56 28.2	+0.2
FONW	Fourpeaked Sta	0.94	223	*e*Pn	Pn	21 56 17.8	+0.1
RSO	Redoubt South	0.94	358	*e*Pn	Pn	21 56 18.2	+0.3
BRLK	Bradley Lake	0.95	74	*e*Pn	Pn	21 56 18.1	+0.3
BRLK				*e*Sn	Sn	21 56 32.2	+0.3
BRSE	Bradley Lake S	1.01	77	*e*Pn	Pn	21 56 18.7	+0.3
BRSE				*e*Sn	Sn	21 56 33.4	+0.1
RDJH	Redoubt Jeurge	1.07	357	*e*Pn	Pn	21 56 19.5	+0.2
KAHG	Katmai Hook Gl	1.41	224	*e*Pn	Pn	21 56 23.8	+0.5
KAHC	Katmai Hardscr	1.48	235	*e*Pn	Pn	21 56 24.4	+0.1
SEW	Seward	1.74	69	*e*Pn	Pn	21 56 28.6	+1.2
KDAK	Kodiak Island	1.74	178	*e*Pn	Pn	21 56 27.3	-0.2
KDAK				*e*		21 56 27.4	
SPWE	Spurr West	1.76	2	*e*Pn	Pn	21 56 28.6	+0.7
KABU	Katmai Buttres	1.84	228	*e*Pn	Pn	21 56 29.5	+0.6
KABU				*e*Sn	Sn	21 56 51.0	-0.8
KELA	Mount Kelaz	1.92	237	*e*Pn	Pn	21 56 30.1	+0.3
SVW2	Sparrevohn	2.14	319	*e*Pn	Pn	21 56 32.9	+0.2
RC01	Rabbit Creek A	2.15	42	*e*Pn	Pn	21 56 33.3	+0.4
OHAK	Old Harbor	2.33	188	*e*Pn	Pn	21 56 34.7	-0.5
PMR	Palmer	2.72	39	*e*Pn	Pn	21 56 40.6	+0.2
KNK	Knik Glacier	2.83	46	*e*Pn	Pn	21 56 42.2	+0.3
SII	Sitkinak Islan	3.08	196	*e*Pn	Pn	21 56 44.6	-0.6
GLI	Glacier Island	3.11	62	*e*Pn	Pn	21 56 44.8	-0.8
FID	Port Fidalgo	3.34	66	*e*Pn	Pn	21 56 47.7	-1.1
PPLA	Purkeypile	3.40	4	*e*Pn	Pn	21 56 50.8	+1.2
JPK	Jack Peak	3.40	60	*e*Pn	Pn	21 56 49.3	-0.3
SCM	Sheep Creek Mo	3.51	46	*e*Pn	Pn	21 56 51.3	+0.2
EYAK	Cordova Ski Ar	3.63	71	*e*Pn	Pn	21 56 52.1	-0.6
TT01	Tatalina	3.76	336	*e*Pn	Pn	21 56 54.7	+0.2
HUR	Hurricane	3.77	22	*e*Pn	Pn	21 56 55.7	+1.1
TTA	Tatalina	3.78	336	*e*Pn	Pn	21 56 54.8	+0.1
CAST	Castle Rocks	3.92	4	*e*Pn	Pn	21 56 58.4	+1.8
CHIR	Chirikof Islan	4.03	204	*e*Pn	Pn	21 56 57.1	-1.0
CHIR				*e*Pn	Pn	21 56 57.5	-0.6
KTH	Kantishna Hill	4.13	11	*e*Pn	Pn	21 57 00.7	+1.2
RND	Reindeer	4.31	24	*e*Pn	Pn	21 57 02.5	+0.6
HMT	Hamilton	4.32	75	*e*Pn	Pn	21 57 02.6	+0.6
DHY	Denali Highway	4.39	33	*e*Pn	Pn	21 57 03.4	+0.2
CHGN	Chignik	4.44	226	*e*Pn	Pn	21 57 04.1	+0.4
MCK	McKinley	4.59	21	*e*Pn	Pn	21 57 06.5	+0.8
BPAW	Bear Paw Mtn.	4.67	9	*e*Pn	Pn	21 57 06.5	-0.3
BWN	Browne	4.91	17	*e*Pn	Pn	21 57 11.0	+1.0
BWN				*e*Pn	Pn	21 57 11.1	+1.0
PAX	Paxson	4.91	42	*e*Pn	Pn	21 57 10.6	+0.4
SNH	Sunshine Point	5.01	78	*e*Pn	Pn	21 57 11.9	+0.5
MENT	Mentasta	5.52	48	*e*Pn	Pn	21 57 19.7	+1.4
MLY	Manley	5.61	8	*e*Pn	Pn	21 57 20.1	+0.6
RIDG	Independent Ri	5.65	38	*e*Pn	Pn	21 57 20.8	+0.7
PS08	TAPS Pump Stn8	5.74	26	*e*Pn	Pn	21 57 21.6	+0.3
DOT	Dot Lake	5.84	41	*e*Pn	Pn	21 57 23.6	+0.9
MDM	Murphy Dome	5.84	19	*e*Pn	Pn	21 57 22.8	+0.1
ILAR	Eielson Array	5.93	25	P	Pn	21 57 23.4	-0.5
	6.5nm,0.3s,baz=212,slow=14,SNR=99						
ILAR				S	Sn	21 58 27.6	-2.7
	5.6nm,0.3s,baz=205,slow=23,SNR=10.0						
PCA	Pinnacle	6.30	79	*e*Pn	Pn	21 57 29.5	+0.5
BCA3	Beaver Creek A	6.34	51	*e*Pn	Pn	21 57 29.8	+0.3
PS06	TAPS Pump Stn6	6.50	11	*e*Pn	Pn	21 57 32.2	+0.6
IM3	Indian Mountai	6.51	356	*e*Pn	Pn	21 57 32.0	+0.3
BCPM	Bancas Point	6.61	81	*e*Pn	Pn	21 57 34.2	+1.0
PNL	Peninsula	6.75	83	*e*Pn	Pn	21 57 35.4	+0.3
COLD	Coldfoot	7.82	7	*e*Pn	Pn	21 57 50.1	+0.6
BM3	Burnt Mountain	8.70	21	*e*Pn	Pn	21 58 00.4	-1.3
DLBC	Dease Lake	11.73	85	P	Pn	21 58 44.9	+2.1
	3.4nm,0.3s,baz=261,slow=11,SNR=18						
DLBC				S	Sn	22 00 49.2	-2.4
	0.5nm,0.3s,baz=148,slow=19,SNR=2.7						
YKA	Yellowknife Ar	18.51	64	P	P	22 00 08.7	+1.0
	0.2nm,0.3s,baz=280,slow=10,SNR=2.3						
PETK	Petropavlovsk-	27.69	279	P	P	22 01 37.7	-0.4
	1.2nm,0.7s,baz=71,slow=11,SNR=4.4						
KLR	Kul'dur	42.86	291	P	P	22 03 47.3	-0.5
	1.8nm,0.5s,baz=53,slow=9.5,SNR=5.4						
KSRS	Korea Array	53.44	283	P	P	22 05 10.3	+1.1
	1.3nm,0.5s,baz=37,slow=6.8,SNR=7.7						
SONM	Songino Array	55.20	306	P	P	22 05 22.9	+0.7
	0.5nm,0.4s,baz=45,slow=6.5,SNR=4.5						
ZALV	Zalesovo Beam	57.86	324	P	P	22 05 40.9	+0.3
	0.5nm,0.3s,baz=25,slow=7.6,SNR=2.7						
BVAR	Borovoye Array	62.57	332	P	P	22 06 11.9	-0.9
	0.4nm,0.4s,baz=38,slow=7.3,SNR=4.0						
EKA	Eskdalemuir Ar	62.93	19	P	P	22 06 15.1	-0.1
	1.0nm,0.6s,baz=332,slow=5.3,SNR=5.1						

MEX 13 22:17:56.4±0.5, 17°.76N×93°.77W, h49^{km}±20^{km}, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGIG		1.15	148	*i* P	Pn	22 18 14.4	-1.9
TGIG				*i* S	Sn	22 18 28.9	-2.0
CCIG	Comitan	2.14	133	*e*P	Pn	22 18 28.5	-1.3
CCIG				*i* S	Sn	22 18 53.7	-1.7
SCIG	Sabancuy	2.73	63	*i* P	Pn	22 18 36.6	-1.1
SCIG				*i* S	Sn	22 19 06.9	-2.6
VHO	Vista Hermosa	2.91	257	*i* P	Pn	22 18 40.0	-0.4
VHO				*e*S	Sn	22 19 12.9	-1.4
HUIG	Huatulco	2.99	229	*e*P	Pn	22 18 39.9	-1.5
HUIG				*e*S	Sn	22 19 14.1	-1.9
LVIG	Laguna Verde	3.18	308	*e*P	Pn	22 18 43.5	-0.5
LVIG				*i* S	Sn	22 19 18.0	-2.7

ATH 13 22:30:09.1, 38°.23N×22°.11E, h11^{km}±1^{km}, ML1.2/3, Error ellipse: s-maj=1.7km s-min=0.8km az=5.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG3	Aigion	0.03	345	P	Pg	22 30 11.1	0.0
AIG3				S	Sg	22 30 12.8	+0.3
AIG1	Aigion	0.03	135	P	Pg	22 30 11.2	+0.1
AIG1				S	Sg	22 30 12.3	-0.2
AIG2	Aigio	0.03	288	P	Pg	22 30 11.0	-0.2
AIG2				S	Sg	22 30 12.2	-0.4
TRAZ	Trapeza	0.10	129	P	Pg	22 30 12.1	+0.2
TRAZ				S	Sg	22 30 14.4	+0.5
TRAZ				AML	AML	22 30 14.8	
	comp=N,610µm,0.1s						
TRAZ				AML	AML	22 30 16.0	
	comp=E,427µm,0.1s						
LAKA	Lakka	0.11	275	P	Pg	22 30 11.7	-0.2
LAKA				S	Sg	22 30 13.5	-0.5
LAKA				AML	AML	22 30 13.6	
	comp=N,224µm,0.2s						
LAKA				AML	AML	22 30 13.8	
	comp=E,194µm,0.1s						
TRIZ	Trizonia	0.14	347	P	Pg	22 30 12.3	0.0
TRIZ				S	Sg	22 30 14.6	-0.1
KALE	Kalithea	0.16	8	P	Pg	22 30 12.9	+0.1
KALE				S	Sg	22 30 15.5	+0.2
KALE				AML	AML	22 30 17.6	
	comp=N,376µm,0.2s						
KALE				AML	AML	22 30 17.6	
	comp=E,195µm,0.1s						
SERG	Sergoula	0.19	346	P	Pg	22 30 13.1	0.0
SERG				S	Sg	22 30 16.3	+0.3
KLV	Kalavryta, Ach	0.19	171	P	Pg	22 30 13.2	0.0
UPR	University Cam	0.26	282	P	Pg	22 30 14.7	+0.2
GUR	Goura	0.35	148	P	Pg	22 30 15.9	-0.2
DSF	Desfina	0.37	61	P	Pg	22 30 16.3	-0.2
ANX	Ano Chora	0.39	337	P	Pg	22 30 16.7	-0.2
RLS	Riolos of Patr	0.54	251	P	Pb	22 30 20.2	-0.3
AMT	Artemida-Makis	0.77	205	P	Pg	22 30 23.7	-0.2

ATH 13 22:30:13.4, 38°.22N×22°.11E, h11^{km}±1^{km}, ML1.7/3, Error ellipse: s-maj=1.5km s-min=1.1km az=269.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG1	Aigion	0.03	111	P	Pg	22 30 15.4	+0.1
AIG1				S	Sg	22 30 16.6	-0.1
AIG2	Aigio	0.04	309	P	Pg	22 30 15.3	-0.1
AIG2				S	Sg	22 30 16.7	-0.2
AIG3	Aigion	0.04	356	P	Pg	22 30 15.5	+0.1
AIG3				S	Sg	22 30 17.2	+0.4
LAKA	Lakka	0.10	281	P	Pg	22 30 16.0	-0.2
LAKA				S	Sg	22 30 17.7	-0.5
KLV	Kalavryta, Ach	0.18	169	P	Pg	22 30 16.4	-0.9
KLV				S	Sg	22 30 20.4	+0.4
KLV				AML	AML	22 30 21.0	
	comp=N,421µm,0.1s						
KLV				AML	AML	22 30 21.4	
	comp=E,343µm,0.1s						
KLV	Kalavryta, Ach	0.18	169	S	Pg	22 30 16.6	-0.8
SERG	Sergoula	0.20	348	P	Pg	22 30 17.6	-0.1
SERG				S	Sg	22 30 20.8	+0.2
UPR	University Cam	0.26	284	P	Pg	22 30 19.1	+0.4
UPR				S	Sg	22 30 22.7	+0.4
GUR	Goura	0.34	147	P	Pg	22 30 20.1	-0.1
GUR				S	Sg	22 30 25.5	+0.8
GUR				AML	AML	22 30 26.3	
	comp=N,596µm,0.5s						
GUR				AML	AML	22 30 26.4	
	comp=E,421µm,0.3s						
GUR	Goura	0.34	147	S	Pg	22 30 20.3	+0.1
DSF	Desfina	0.38	60	P	Pg	22 30 20.8	-0.2
DSF				S	Sg	22 30 26.5	+0.4
DSF				AML	AML	22 30 27.7	
	comp=N,278µm,0.1s						
DSF				AML	AML	22 30 27.7	
	comp=E,352µm,0.1s						
DSF	Desfina	0.38	60	S	Pg	22 30 20.8	-0.2

UCR 13 22:41:17.3±1.9, 10°.76N×85°.93W, h39^{km}±32^{km}, MW3.6, 3C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUEV	Buena Vista	0.51	86	⇑*e*P	Pn	22 41 28.0	-0.2
BUEV				*e*S	Sn	22 41 36.4	+0.4
GB1A	Borinquen Arri	0.52	84	⇑*i*P	Pn	22 41 27.9	-0.6
GB1A				*e*S	Sn	22 41 37.0	+0.8
MESS	Mesas	0.72	91	*i* P	Pn	22 41 30.7	-0.4
MESS				*e*S	Sn	22 41 40.6	-0.4
JTS	Las Juntas de	1.07	116	*e*P	Pn	22 41 34.6	-1.2
JTS				*e*S	Sn	22 41 49.0	-0.4
ARE1	Arenal 1	1.23	104	*e*P	Pn	22 41 37.5	-0.4
ARE1				*e*S	Sn	22 41 54.2	+0.9
CEDE	Laguna Cedeo	1.23	103	*e*P	Pn	22 41 39.5	+1.4
ACON	Acoyapa	1.41	32	⇑*i*P	Pn	22 41 41.3	+0.9
ACON				*e*S	Sn	22 41 58.2	+0.4
LCR2	La Lucha 2	2.15	118	*e*P	Pn	22 41 50.8	0.0

MAN 13 22:44:17.1, 13°.71N×120°.52E, h30^{km}, mb3.8, ML2.5, MS2.0, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.27	276	eP	Pn	22 44 25.7	+0.6
LUBP				eS	Sn	22 44 32.2	+2.0
PGP	Puerto Galera	0.46	116	⇓eP	Pn	22 44 28.0	+0.3
PGP				i S	Sn	22 44 36.6	+1.7
SJMP	San Jose	1.37	155	eP	Pn	22 44 39.8	-0.3
SJMP				eS	Sn	22 44 57.9	+0.7

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*ISCJB **13** 22:44:19.0±0.3, 67°.16N±0°.02×20°.70E±0°.05, h0^{km}, Error ellipse: s-maj=2.7km s-min=2.3km az=170.2*
*UPP **13** 22:44:19.7±0.1, 67°.18N×20°.66E, h0^{km}, ML2.7, Explosion*
*HEL **13** 22:44:20.6±0.0, 67°.18N×20°.67E, h1^{km}, ML2.2, ML2.1(BER), ML2.7(UPP), Confirmed Induced event*
*IDC **13** 22:44:20.1±0.8, 67°.18N×20°.92E, h0^{km}, mb1 3.0/4, mb1mx2.8/37, mbtmp3.0/4, ML2.4/4, Error ellipse: s-maj=14.7km s-min=6.2km az=116.0*
*NAO **13** 22:44:20.1±0.8, 67°.15N×20°.96E, ML2.6*
*BER **13** 22:44:22.0±3.1, 67°.08N×20°.95E, h0^{km}, ML2.1, ML2.6(NAO), Suspected explosion*
ISC 13 22:44:19.4±0.7, **67°.17N**±0°.02×**20°.65E**±0°.02, **h0^{km}, n64, σ1ˢ78**/112, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.60	60	P	Pg	22 44 31.0	+0.1
MASU				S	Sg	22 44 38.9	+0.3
MASU	Masugnsbyn	0.60	60	i P	Pg	22 44 31.0	+0.1
MASU				i S	Sg	22 44 38.9	+0.3
RATU	Laukkuluspa	0.78	329	P	Pg	22 44 34.1	-0.2
RATU				S	Sg	22 44 44.4	+0.1
RATU	Laukkuluspa	0.78	329	i P	Pg	22 44 34.1	-0.2
RATU				i S	Sg	22 44 44.4	+0.1
SALU	Saltoluokta	0.86	286	P	Pg	22 44 36.0	+0.2
SALU				S	Sg	22 44 47.5	+0.5
SALU	Saltoluokta	0.86	286	i P	Pg	22 44 36.0	+0.2
SALU				i S	Sg	22 44 47.5	+0.5
ERTU	Ertsjaerv	0.86	135	P	Pg	22 44 35.8	-0.1
ERTU				S	Sg	22 44 47.6	+0.5
ERTU	Ertsjaerv	0.86	135	i P	Pg	22 44 35.8	-0.1
ERTU				i S	Sg	22 44 47.6	+0.5
NIKU	Nikkaluokta	0.94	319	P	Pg	22 44 37.1	-0.3
NIKU				S	Sg	22 44 50.0	+0.4
NIKU	Nikkaluokta	0.94	319	eP	Pg	22 44 37.1	-0.3
NIKU				eS	Sg	22 44 50.0	+0.4
PAJU	Pajala	0.97	97	P	Pg	22 44 37.7	-0.3
PAJU				S	Sg	22 44 51.0	+0.3
PAJU	Pajala	0.97	97	eP	Pg	22 44 37.7	-0.3
PAJU				eS	Sg	22 44 51.0	+0.3
HARU	Harads	1.01	172	P	Pg	22 44 38.8	0.0
HARU				S	Sg	22 44 52.6	+0.7
HARU	Harads	1.01	172	eP	Pg	22 44 38.8	0.0
HARU				eS	Sg	22 44 52.6	+0.7
LANU	Lannavaara	1.03	29	P	Pg	22 44 38.4	-0.7
LANU				S	Sg	22 44 52.2	-0.1
LANU	Lannavaara	1.03	29	eP	Pg	22 44 38.4	-0.7
LANU				eS	Sg	22 44 51.9	-0.4
HEF	Hetta	1.69	41	Pg	Pn	22 44 50.1	-0.2
HEF				Lg	Lg	22 45 11.9	
HEF	Hetta	1.69	41	eP	Pn	22 44 49.9	-0.3
HEF				eS	Sn	22 45 11.9	-0.7
HEF	Hetta	1.69	41	eP	Pn	22 44 50.0	-0.2
HEF				eS	Sn	22 45 12.1	-0.5
KALU	Kalix	1.70	139	eP	Pn	22 44 50.8	+0.5
KALU				eSG	Sn	22 45 13.3	+0.6
SJUU	Sjulsmark	1.71	167	P	Pn	22 44 51.0	+0.7
SJUU				S	Sn	22 45 13.8	+1.0
SJUU	Sjulsmark	1.71	167	eP	Pn	22 44 51.0	+0.7
SJUU				eS	Sn	22 45 13.8	+1.0
KIF	Kilpisjarvi	1.85	2	Pn	Pb	22 44 53.3	-0.7
KIF				Lg	Lg	22 45 19.6	
KIF	Kilpisjarvi	1.85	2	eP	Pn	22 44 53.2	+0.9
KIF				eS	Sg	22 45 17.9	-0.8
KIF				MSG		22 45 20.6	
	comp=Z,15nm,0.2s						
KIF	Kilpisjarvi	1.85	2	eP	Pn	22 44 53.2	+0.9
KIF				eS	Sg	22 45 19.4	+0.7
LILU	Lilltraesk	1.92	190	P	Pn	22 44 54.3	+1.1
LILU	Lilltraesk	1.92	190	eP	Pn	22 44 54.3	+1.1
KTK1	Kautokeino	2.09	26	eP	Pb	22 44 57.1	-1.1
KTK1				eS	Sb	22 45 23.9	-0.8
KTK1				IAML		22 45 26.9	
	comp=Z,24nm,0.5s						
KTK1	Kautokeino	2.09	26	eP	Pb	22 44 57.1	-1.1
KTK1				eS	Sb	22 45 23.9	-0.8
KTK1				IAML		22 45 26.9	
	comp=Z,24nm,0.5s						
RNF	Rovaniemi	2.19	102	eP	Pn	22 44 58.2	+1.2
RNF				eSG	Sb	22 45 27.7	+0.3
STEI	Steigen	2.21	293	eP	Pn	22 44 58.4	+1.2
STEI				eS	Sb	22 45 29.1	+0.9
STEI	Steigen	2.21	293	eP	Pn	22 44 58.4	+1.2
STEI				eS	Sb	22 45 29.1	+0.9
SGF	Sodankyl	2.30	80	ePB	Pb	22 45 00.2	-1.4
SGF				eSB	Sb	22 45 30.1	-0.4
SGF				MSG		22 45 31.9	
	comp=Z,16nm,0.3s						
TRO	Tromso	2.56	346	eP	Pn	22 45 03.5	+1.5
TRO	Tromso	2.56	346	eP	Pn	22 45 03.5	+1.5
BURU	Burvik	2.61	173	eP	Pn	22 45 04.3	+1.6
BURU				eS	Sn	22 45 36.2	+1.2
MOR8	Moi Rana	2.67	251	eP	Pn	22 45 04.8	+1.3
MOR8				IAML		22 45 40.3	
	comp=Z,21nm,0.4s						
MOR8	Moi Rana	2.67	251	eP	Pn	22 45 04.8	+1.3
MOR8				IAML		22 45 40.3	
	comp=Z,21nm,0.4s						
LOF	Lofoten	2.88	293	eP	Pn	22 45 07.5	+1.0
LOF	Lofoten	2.88	293	eP	Pn	22 45 07.5	+1.0
ARA0	ARCESS Array S	2.98	35	Pn	Pn	22 45 08.3	+0.4
	baz=208,slow=16						
ARA0				Sn	Sn	22 45 44.6	+0.3
	baz=212,slow=22						
ARA0	ARCESS Array S	2.98	35	Pn	Pn	22 45 08.3	+0.4
	baz=208,slow=16						
ARA0				Sn	Sn	22 45 44.6	+0.3
	baz=212,slow=22						
ARCES	ARCESS Array B	2.98	35	Pn	Pn	22 45 08.3	+0.4
	comp=Z,1.1nm,0.3s,baz=215,slow=15,SNR=66						
ARCES				Sn	Sn	22 45 44.9	+0.6
	comp=Z,2.1nm,0.3s,baz=214,slow=21,SNR=14						
ARCES				Lg	Lg	22 45 48.9	
	comp=Z,2.1nm,0.3s,baz=209,slow=28,SNR=11						
ARE0	ARCESS Array S	2.98	35	eP	Pn	22 45 08.5	+0.6
ARE0				eS	Sn	22 45 46.0	+1.6
KONS	Konsvik	3.05	261	eP	Pn	22 45 10.8	+2.0
KONS	Konsvik	3.05	261	eP	Pn	22 45 10.8	+2.0
UMAU	Umeaa	3.30	180	eP	Pn	22 45 13.5	+1.3
UMAU				eS	Sn	22 45 51.9	-0.1
VAF	Ylistaro	4.23	167	MSG		22 46 35.8	
	comp=Z,2.9nm,0.2s						
APA0	Apatity Array	4.79	79	Pn	Pn	22 45 32.4	-0.2
	baz=271,slow=11						
APA0				Sn	Sn	22 46 24.6	-4.1
	baz=270,slow=28						
APA0				Lg	Lg	22 46 46.4	
	baz=287,slow=37						
APA0	Apatity Array	4.79	79	eP	Pn	22 45 32.4	-0.2
APA0				eS	Sn	22 46 24.6	-4.1
APA0				eSG	Sb	22 46 46.4	+4.3
APA0	Apatity Array	4.79	79	Pn	Pn	22 45 32.4	-0.2
	baz=271,slow=11						
APA0				Sn	Sn	22 46 24.6	-4.1
	baz=270,slow=28						
APA0				Sg	Sb	22 46 46.4	+4.3
	baz=287,slow=37						
SUF	Sumiainen	5.04	150	MSG		22 46 58.9	
	comp=Z,2.1nm,0.2s						
KEF	Keuruu	5.33	158	MSG		22 47 08.7	
	comp=Z,2.6nm,0.3s						
FIA0	FINESS Array S	6.21	155	Pn	Pn	22 45 53.4	+1.3
	baz=347,slow=16						
FIA0				Sn	Sn	22 47 02.6	-1.1
	baz=346,slow=28						
FIA0				Lg	Lg	22 47 31.6	
	baz=347,slow=37						
FIA0	FINESS Array S	6.21	155	Pn	Pn	22 45 53.4	+1.3
	baz=347,slow=16						
FIA0				Sn	Sn	22 47 02.6	-1.1
	baz=346,slow=28						
FIA0				Sg	Sb	22 47 31.6	+8.7
	baz=347,slow=37						
FINES	FINESS Array B	6.21	155	Pn	Pn	22 45 53.6	+1.5
	comp=Z,0.4nm,0.3s,baz=343,slow=18,SNR=18						
FINES				Sn	Sn	22 47 02.6	-1.1
	comp=Z,0.5nm,0.3s,baz=347,slow=23,SNR=7.5						
FINES				Lg	Lg	22 47 33.1	
	comp=Z,0.9nm,0.3s,baz=345,slow=26,SNR=8.1						
NB2	NORSAR Subarra	7.40	218	Pn	Pn	22 46 09.5	+1.0
NB2				Lg	Lg	22 48 11.2	
	baz=32,slow=37						
NB2	NORSAR Subarra	7.40	218	Pn	Pn	22 46 09.5	+1.0
NB2				Sg	Sg	22 48 11.2	-5.5
	baz=32,slow=37						
NOA	NORSAR Array B	7.40	218	Pn	Pn	22 46 09.3	+0.8
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=5.2						
NOA				Sn	Sn	22 47 29.3	-3.7
	comp=Z,0.0nm,0.3s,baz=358,slow=7.1,SNR=1.1						
NOA				Lg	Lg	22 48 08.2	
	comp=Z,0.1nm,0.3s,baz=116,slow=21,SNR=1.9						
NRA0	NORESS Array S	7.59	216	Pn	Pn	22 46 12.3	+1.2
	baz=32,slow=14						
NRA0				Sn	Sn	22 47 34.3	-3.4
	baz=24,slow=22						
NRA0	NORESS Array S	7.59	216	Pn	Pn	22 46 12.3	+1.2
	baz=32,slow=14						
NRA0				Sn	Sn	22 47 34.3	-3.4
	baz=24,slow=22						
HFS	Hagfors	7.70	207	Pn	Pn	22 46 12.5	-0.1
	baz=13,slow=14						
HFS				Sn	Sn	22 47 36.5	-4.0
	baz=35,slow=22						
HFS	Hagfors	7.70	207	Pn	Pn	22 46 12.7	0.0
	comp=Z,0.2nm,0.3s,baz=19,slow=13,SNR=14						
HFS				Sn	Sn	22 47 36.5	-4.0
	comp=Z,0.2nm,0.3s,baz=27,slow=23,SNR=6.0						
HFS				Lg	Lg	22 48 21.2	
	comp=Z,0.5nm,0.3s,baz=23,slow=28,SNR=4.7						
HFS	Hagfors	7.70	207	Pn	Pn	22 46 12.5	-0.1
	baz=13,slow=14						
HFS				Sn	Sn	22 47 36.5	-4.0
	baz=35,slow=22						

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*UCR **13** 23:38:29.3±4.1, 10°.94N×87°.04W, h20^{km}±117^{km}, MW4.4*
*IDC **13** 23:38:31.5±0.9, 12°.03N×85°.94W, h0^{km}, mb3.8/6, mb1 4.2/7, mb1mx3.7/41, mbtmp3.8/7, ML3.4/1, MS3.2/1, Ms1 3.3/1, ms1mx2.6/26, Error ellipse: s-maj=58.8km s-min=17.6km az=58.0*
*ISCJB **13** 23:38:32.5±0.6, 11°.19N±0°.07×86°.75W±0°.06, h31^{km}, mb4.3/35, MS3.1/1, Error ellipse: s-maj=12.5km s-min=4.6km az=38.6*
*NEIC **13** 23:38:34.0±2.1, 11°.11N×86°.71W, h35^{km}±3^{km}, mb4.4/39, Error ellipse: s-maj=13.0km s-min=7.4km az=225.0*
ISC 13 23:38:34.1±0.7, **11°.16N**±0°.08×**86°.69W**±0°.08, **h31^{km}, n71, σ1ˢ48**/75, **mb4.4**/35, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASN	Masaya	0.98	32	eP	Pn	23 38 51.6	-0.2
BUEV	Buena Vista	1.31	106	eP	Pn	23 38 56.1	-0.2
GB1A	Borinquen Arri	1.31	105	eP	Pn	23 38 56.1	-0.3
MESS	Mesas	1.52	106	eP	Pn	23 38 58.5	-0.9
ACON	Acoyapa	1.69	61	ePn	Pn	23 39 02.3	+0.8
ACON	Acoyapa	1.69	61	eP	Pn	23 39 01.6	+0.1
JTS	Las Juntas de	1.91	117	Pn	Pb	23 39 07.0	-1.3
	9.5nm,0.3s,baz=319,slow=9.3,SNR=34						
JTS				Sn	Sb	23 39 36.9	+5.0
	37nm,0.3s,baz=187,slow=23,SNR=9.1						
JTS	Las Juntas de	1.91	117	ePn	Pn	23 39 04.9	+0.3
JTS	Las Juntas de	1.91	117	eP	Pn	23 39 04.8	+0.3
ESTN	Estel	1.96	9	ePn	Pn	23 39 06.4	+1.0
ESTN	Estel	1.96	9	eP	Pn	23 39 05.8	+0.5
CSGN	Cosiguina Volc	2.00	335	ePn	Pn	23 39 07.2	+1.2
CSGN	Cosiguina Volc	2.00	335	eP	Pn	23 39 06.7	+0.8
ARE1	Arenal 1	2.06	109	eP	Pn	23 39 06.2	-0.4
CEDE	Laguna Cedeo	2.06	109	eP	Pn	23 39 07.5	+0.7
RCON	San Juan de Ri	2.37	13	eP	Pn	23 39 10.7	-0.4
ESPN	Las Esperanzas	2.56	66	ePn	Pn	23 39 15.0	+1.6
ESPN	Las Esperanzas	2.56	66	eP	Pn	23 39 14.7	+1.2
HDC	Heredia	2.78	114	ePn	Pn	23 39 17.3	+0.6
TGUH	Tegucigalpa,Un	2.94	349	ePn	Pn	23 39 20.4	+1.5
LCR2	La Lucha 2	2.99	118	eP	Pn	23 39 20.6	+0.9
CVTR	Volcan Turrial	3.09	111	eP	Pn	23 39 24.9	+3.7
APG	El Apazote	5.31	317	Pn	Pn	23 39 52.0	+0.4
	1.3nm,0.3s,baz=3.1,slow=19,SNR=3.6						
APG				Sn	Sn	23 40 55.5	+3.7
	1.3nm,0.3s,baz=143,slow=5.8,SNR=4.5						
APG				Lg	Lg	23 41 12.2	
	1.1nm,0.3s,baz=338,slow=16,SNR=1.9						
BCIP	Isla Barro Col	7.03	106	ePn	Pn	23 40 14.9	-0.1
CCIG	Comitan	7.35	315	ePn	Pn	23 40 21.2	+1.7
MYIG	Mrida	10.18	344	ePn	Pn	23 40 58.3	+0.1
LNIG	Linares	18.27	320	eP	P	23 42 44.7	-0.6
	7.1nm,1.0s						
HKT	Hockley	20.55	337	eP	P	23 43 10.8	+0.7
	9.8nm,1.3s						
LRAL	Lakeview Retre	21.78	359	eP	P	23 43 23.8	+0.3
	5.6nm,0.8s						
GOGA	Godfrey	22.35	7	eP	P	23 43 30.9	+1.4
	4.8nm,0.8s						
Y49A	Blount Mountai	22.60	1	eP	P	23 43 32.3	+0.1
	7.7nm,0.8s						
SWET	Sewanee	23.96	2	eP	P	23 43 45.1	-0.8
	46nm,1.9s						
W50A	Signal Mountai	23.97	3	eP	P	23 43 45.3	-0.6
	5.9nm,0.7s						
TXAR	Lajitas Array	24.04	321	P	P	23 43 46.7	-0.1
	2.0nm,0.8s,baz=135,slow=10,SNR=23						
TXAR				PcP	PcP	23 47 30.1	+2.0
	0.9nm,0.8s,baz=143,slow=5.3,SNR=8.2						
TX31	Lajitas Ar. Si	24.04	321	eP	P	23 43 46.2	-0.5
	2.1nm,0.8s						
TX31				ePcP	PcP	23 47 30.7	+2.6
MIAR	Mount Ida	24.12	346	eP	P	23 43 46.3	-0.9
	4.9nm,0.8s						
CPCT	Cooper Cave	24.27	4	eP	P	23 43 49.0	+0.4
	6.9nm,0.7s						
WHAR	Wooly Hollow	24.56	349	eP	P	23 43 50.4	-0.8
	6.6nm,0.8s						
X37A	Clayton	24.64	343	eP	P	23 43 51.3	-0.7
	14nm,1.3s						
T47A	Sharon Grove	25.72	359	eP	P	23 44 00.9	-0.9
	8.2nm,0.8s						
WMOK	Wichita Mounta	25.93	337	eP	P	23 44 04.0	+0.2
	5.0nm,0.9s						
WCI	Wyandotte Cave	26.96	1	eP	P	23 44 12.1	-0.9
	6.1nm,0.7s						
Q51A	Peebles	27.91	6	eP	P	23 44 20.4	-1.1
	11nm,0.9s						
Q54A	Coxs Mills	28.20	10	eP	P	23 44 24.4	+0.4
	19nm,1.4s						
P53A	Whipple	28.61	9	eP	P	23 44 26.1	-1.6
	11nm,0.8s						
O52A	Adamsville	29.16	8	eP	P	23 44 32.2	-0.4
	9.0nm,0.8s						
O56A	Blue Knob Stat	29.87	13	eP	P	23 44 38.8	-0.2
	17nm,1.4s						
N53A	Lisbon	29.98	9	eP	P	23 44 39.3	-0.5
	9.9nm,0.8s						
SSPA	Standing Stone	30.38	13	eP	P	23 44 43.1	-0.3
	5.2nm,0.8s						
L42A	Oliver, Polo	30.84	356	eP	P	23 44 45.5	-1.9
	9.2nm,0.6s						
M54A	Oil Creek Stat	30.86	10	eP	P	23 44 47.5	-0.1
	22nm,1.5s						
N59A	State Game Lan	31.17	16	eP	P	23 44 50.2	-0.2
	22nm,1.6s						
JFWS	Jewell Farm	31.79	355	eP	P	23 44 53.9	-1.9
	7.0nm,0.8s						
BINY	Binghamton	32.31	15	eP	P	23 44 59.4	-1.0
	30nm,1.7s						
MEDO	Medina	32.68	11	eP	P	23 45 01.1	-2.5
	11nm,0.9s						
LPAZ	La Paz	32.87	146	LR	LR	23 59 02.0	
	comp=Z,40nm,19.4s,baz=40,slow=37						
COWI	Conover	34.89	357	eP	P	23 45 19.8	-3.0
	7.8nm,0.8s						
E43A	Lone Tree Farm	35.10	360	eP	P	23 45 22.5	-2.1
	7.7nm,0.8s						
PDAR	Pinedale Array	37.26	332	P	P	23 45 42.1	-1.3
	0.3nm,0.5s,baz=127,slow=10,SNR=5.3						
NV01	Mina Array Sit	39.16	319	eP	P	23 46 01.6	+2.1
NV01				ePcP	PcP	23 48 09.8	+1.1
NVAR	Mina Array Bea	39.16	319	P	P	23 46 01.6	+2.1
	0.5nm,0.8s,baz=134,slow=7.6,SNR=5.7						
NVAR				PcP	PcP	23 48 09.8	+1.1
	2.1nm,0.7s,baz=145,slow=3.9,SNR=17						
ULM	Lac du Bonnet	39.71	351	P	P	23 46 00.9	-2.7
	5.5nm,0.7s,baz=186,slow=9.2,SNR=6.1						
PLCA	Paso Flores	53.74	165	P	P	23 48 00.8	+7.3
	4.2nm,1.1s,baz=354,slow=9.2,SNR=2.9						
ILAR	Eielson Array	67.50	336	P	P	23 49 24.5	-2.5
	0.6nm,0.8s,baz=106,slow=4.9,SNR=6.2						
ILB	Eielson Array	67.50	336	eP	P	23 49 24.5	-2.5
	3.7nm,1.4s						
MLY	Manley	69.12	336	eP	P	23 49 36.1	-1.2
	1.6nm,0.7s						
KSRS	Korea Array	121.76	328	PKP	PKiKP	23 57 25.7	0.0
	1.2nm,0.8s,baz=20,slow=1.5,SNR=5.0						
WMQ	Urumqi	125.05	5	eP	PKPdf	23 57 30.9	-0.9
WMQ				pmax	pmax		
	comp=Z,46nm,3.7s						
HHC	Hu-ho-hao-te	125.57	343	P	PKPdf	23 57 32.4	-0.5
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,9.5s						
LZH	Lanzhou	131.97	349	ePKP	PKPdf	23 57 44.0	-1.3
LZH				pPKP	sPKPdf	23 57 57.5	-1.5
LZH				sPKP		23 58 02.3	
CMAR	Chiang Mai Arr	150.06	349	PKPbc	PKPbc	23 58 22.4	-0.2
	comp=Z,0.5nm,0.3s,baz=348,slow=3.8,SNR=4.4						

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*ISCJB **13** 23:39:09.7±0.5, 35°.11N±0°.04×23°.17E±0°.03, h67^{km}±3^{km}, mb4.2/37, Error ellipse: s-maj=7.0km s-min=3.2km az=26.9*
*ATH **13** 23:39:10.2, 35°.06N×23°.19E, h43^{km}±2^{km}, ML3.5/4, Error ellipse: s-maj=4.2km s-min=1.1km az=46.0*
*THE **13** 23:39:10.9, 35°.05N×23°.20E, h64^{km}±4^{km}, ML3.8/4, Error ellipse: s-maj=4.4km s-min=0.9km az=50.0*
*IDC **13** 23:39:12.0±1.4, 35°.12N×23°.27E, h65^{km}±13^{km}, mb3.8/15, mb1 3.8/24, mb1mx3.7/48, mbtmp4.0/24, MS3.3/2, Ms1 3.3/2, ms1mx2.5/52, Error ellipse: s-maj=14.4km s-min=12.1km az=2.0*
*NEIC **13** 23:39:13.6±0.0, 35°.21N×23°.34E, h26^{km}, mb4.4/32, ML3.8(THE), After THE.*
ISC 13 23:39:09.7±1.1, **35°.04N**±0°.06×**23°.17E**±0°.04, **h44^{km}**±10^{km}, **n244, σ1ˢ66**/238, **mb4.2**/37, **9C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.78	105	P	Pn	23 39 25.7	+1.4
GVD	Gavdhos	0.78	105	P	Pn	23 39 25.7	+1.4
GVDS	Gavdos	0.78	104	P	Pn	23 39 25.4	+1.1
IMMV	Iera Moni Meta	0.79	58	P	Pn	23 39 25.2	+0.8
IMMV				S	Sn	23 39 38.2	+3.2
	7μm,0.5s						
IMMV	Iera Moni Meta	0.79	58	P	Pn	23 39 25.6	+1.2
IMMV				AML	AML	23 39 45.2	
	comp=N,16437μm,0.5s						
IMMV				AML	AML	23 39 46.3	
	comp=E,11745μm,1.1s						
ANKY	Antikythira Is	0.83	8	P	Pn	23 39 26.3	+1.4
ANKY				S	Sn	23 39 38.2	+2.1
	comp=E,5μm,0.6s						
ANKY	Antikythira Is	0.83	8	P	Pn	23 39 26.4	+1.4
ANKY				S	Sn	23 39 38.0	+2.0
ANKY				AML	AML	23 39 41.8	
	comp=N,10674μm,0.7s						
ANKY				AML	AML	23 39 43.4	
	comp=E,8371μm,0.5s						
CHAN	Chania	0.86	56	P	Pn	23 39 26.8	+1.5
CHAN				S	Sn	23 39 39.1	+2.3
VAM	Vamos	0.92	66	P	Pn	23 39 27.5	+1.4
VAM				S	Sn	23 39 39.5	+1.2
	comp=E,6μm,0.5s						
VAM	Vamos	0.92	66	P	Pn	23 39 27.6	+1.4
PRNS	Prines Rethymn	1.14	73	P	Pn	23 39 29.9	+0.8
KTHA	Kythira Island	1.22	356	P	Pn	23 39 31.7	+1.5
KTHA				S	Sn	23 39 48.6	+3.1
	comp=E,2μm,0.4s						
KTHA	Kythira Island	1.22	356	P	Pn	23 39 31.9	+1.7
KTHA				AML	AML	23 39 55.4	
	comp=E,4461μm,0.4s						
KTHA				AML	AML	23 39 58.5	
	comp=N,2003μm,0.3s						
KTHR	Kythira	1.22	354	P	Pn	23 39 31.8	+1.5
SIVA	Sivas	1.35	91	P	Pn	23 39 33.6	+1.6
IDI	Anoyia	1.43	80	P	Pn	23 39 34.1	+0.9
IDI	Anoyia	1.43	80	P	Pn	23 39 35.1	+1.8
	comp=N,21nm,0.3s,baz=266,slow=12,SNR=141						
IDI				S	Sn	23 39 55.8	+4.9
	comp=N,56nm,0.3s,baz=259,slow=22,SNR=9.4						
IDI				LR	LR	23 40 25.4	
	comp=N,226nm,20.8s,baz=266,slow=55						
IDI	Anoyia	1.43	80	P	Pn	23 39 34.7	+1.5
IACM	Heraklion	1.58	80	P	Pn	23 39 37.7	+2.5
VLI	Veliai	1.68	354	P	Pn	23 39 38.3	+1.7
VLI	Veliai	1.68	354	P	Pn	23 39 38.0	+1.4
LAST	Lasithi	1.90	86	P	Pn	23 39 41.7	+2.0
LAST	Lasithi	1.90	86	P	Pn	23 39 41.7	+2.0
LAST				AML	AML	23 40 24.3	
	comp=N,1019μm,0.9s						
LAST				AML	AML	23 40 28.5	
	comp=E,847μm,0.9s						
MHLA	Plaka, Milos I	1.98	31	P	Pn	23 39 41.3	+0.6
NPS	Neapolis	2.02	83	P	Pn	23 39 43.3	+2.1
PYL	PYLOS	2.18	328	P	Pn	23 39 44.0	+0.5
PYL	PYLOS	2.18	328	P	Pn	23 39 43.7	+0.2
SAP1	Santorini-Akro	2.24	53	P	Pn	23 39 44.8	+0.6
SAP1	Santorini-Akro	2.24	53	P	Pn	23 39 44.8	+0.6
THR5	Thira Island,	2.24	52	P	Pn	23 39 44.7	+0.4
SAP3	Santorini-Thir	2.25	51	P	Pn	23 39 44.9	+0.5
SAP3	Santorini-Thir	2.25	51	P	Pn	23 39 44.8	+0.3
THR3	Thira Island,	2.27	52	P	Pn	23 39 45.2	+0.5
CMBO	Columbo, Santo	2.31	51	P	Pn	23 39 46.0	+0.8
CMBO	Columbo, Santo	2.31	51	P	Pn	23 39 45.9	+0.6
KRND	KRANIDI	2.34	360	P	Pn	23 39 47.2	+1.6
KRND	KRANIDI	2.34	360	P	Pn	23 39 47.1	+1.5
ITM	Ithomi	2.36	335	ePn	Pn	23 39 46.4	+0.5
ITM	Ithomi	2.36	335	P	Pn	23 39 46.8	+0.9
ITM	Ithomi	2.36	335	P	Pn	23 39 47.0	+1.1
SERI	Serifos	2.37	26	P	Pn	23 39 46.1	0.0
VLX	Vlachokerasia	2.41	345	P	Pn	23 39 48.9	+2.2
VLX	Vlachokerasia	2.41	345	P	Pn	23 39 49.2	+2.6
DID	Didima	2.46	1	P	Pn	23 39 47.7	+0.4
ZKR	Zakros	2.50	87	P	Pn	23 39 49.7	+1.8
EPID	Epidavros	2.57	359	P	Pn	23 39 50.1	+1.3
TRIP	Tripoli	2.58	344	P	Pn	23 39 51.3	+2.2
AMT	Artemida-Makis	2.75	335	P	Pn	23 39 53.0	+1.7
APE	Apeiranthos	2.79	43	P	Pn	23 39 51.6	-0.2
APE	Apeiranthos	2.79	43	⇑i P	Pn	23 39 51.7	-0.1
VLY	Voula,Athens	2.85	10	P	Pn	23 39 53.4	+0.8
ATH	Athens Observa	2.96	8	P	Pn	23 39 55.2	+1.1
ATHU	Athens Univers	2.96	9	P	Pn	23 39 55.0	+0.8
PTL	Penteli	3.05	10	P	Pn	23 39 56.3	+0.8
DION	Dionisos Attik	3.09	11	P	Pn	23 39 56.3	+0.3
VILL	Villia	3.12	2	P	Pn	23 39 56.8	+0.4
TRAZ	Trapeza	3.21	346	P	Pn	23 39 59.1	+1.4
KARP	Karpathos	3.31	80	P	Pn	23 40 00.7	+1.8
KARP	Karpathos	3.31	80	ePn	Pn	23 39 57.9	-1.1
DSF	Desfina	3.40	351	P	Pn	23 40 01.2	+0.9
ATAL	Atalanti	3.65	358	P	Pn	23 40 04.4	+0.8
MRKA	Markates	3.67	5	P	Pn	23 40 04.5	+0.5
ANX	Ano Chora	3.68	345	P	Pn	23 40 05.5	+1.3
VLS	Valsamata	3.75	327	P	Pn	23 40 05.0	-0.1
SMIA	Simia	3.83	0	P	Pn	23 40 07.3	+1.2
BODT	Bodrum	3.92	58	eP	Pn	23 40 07.4	+0.1
DAT	Datca	3.96	64	eP	Pn	23 40 07.8	-0.1
DAT	Datca	3.96	64	i P	Pn	23 40 08.1	+0.2
EVR	Evrytania	4.02	345	P	Pn	23 40 11.4	+2.6
AGG	Agios Georgios	4.03	351	ePn	Pn	23 40 09.7	+0.9
AGG	Agios Georgios	4.03	351	P	Pn	23 40 09.7	+0.9
CHOS	Chios island	4.07	34	eP	Pn	23 40 09.8	+0.4
ARG	Arkhangelos	4.21	72	eP	Pn	23 40 12.4	+1.2
GCAM	G?zelcaml?	4.22	50	eP	Pn	23 40 11.9	+0.5
LKD2	Lefkada island	4.25	332	P	Pn	23 40 12.6	+0.8
TSLK	Tsoukalades, L	4.28	333	P	Pn	23 40 13.5	+1.3
BBRN	Bozburun-Marma	4.29	66	eP	Pn	23 40 13.4	+0.9
URLA	Izmir	4.31	39	eP	Pn	23 40 12.8	+0.1
XOR	Xorichti	4.32	0	P	Pn	23 40 13.8	+1.0
THL	Klokotos Trika	4.61	349	P	Pn	23 40 18.2	+1.5
AYDN	Tasoluk	4.61	54	i P	Pn	23 40 18.1	+1.2
YER	Yerkesik	4.64	62	eP	Pn	23 40 18.9	+1.6

SIGR	SIGRI	4.68	27	eP	Pn	23 40 17.9	+0.1
TURN	Turunc	4.77	66	eP	Pn	23 40 15.7	-3.3
TURN	Turunc	4.77	66	iP	Pn	23 40 16.9	-2.1
AYDB	Zeytinkoy-Aydi	4.78	51	eP	Pn	23 40 20.0	+0.7
DALY	Dalyan (Mula)	4.79	67	eP	Pn	23 40 20.9	+1.6
DALY	Dalyan (Mula)	4.79	67	iP	Pn	23 40 21.3	+2.1
FETY	Fethiye	5.06	70	eP	Pn	23 40 23.5	+0.5
FETY	Fethiye	5.06	70	iP	Pn	23 40 23.6	+0.5
LIT	Litokhoron	5.08	354	ePn	Pn	23 40 22.7	-0.6
LIT	Litokhoron	5.08	354	P	Pn	23 40 23.4	+0.1
AKAS	Kas	5.38	75	iP	Pn	23 40 28.1	+0.6
AKAS				iS	Sn	23 41 27.4	-0.7
KULA	Kula-Manisa	5.61	50	eP	Pn	23 40 31.4	+0.8
BALB	Balikesir	5.93	38	ePn	Pn	23 40 31.0	-3.9
AKUM	Antalya-Kumluc	5.98	76	iP	Pn	23 40 36.2	+0.7
AKUM				iS	Sn	23 41 42.5	-0.3
KHAL	Karahalli	6.07	55	iP	Pn	23 40 39.1	+2.2
KORT	Korkueli	6.14	69	eP	Pn	23 40 39.2	+1.3
KORT	Korkueli	6.14	69	iP	Pn	23 40 39.2	+1.3
BRDR	BURDUR-Merkez	6.16	63	iP	Pn	23 40 39.0	+0.8
ALN	Alexandroupoli	6.27	20	ePn	Pn	23 40 36.4	-3.2
VAY	Valandovo	6.29	356	iPn	Pn	23 40 40.4	+0.6
ANTB	Antalya	6.35	71	eP	Pn	23 40 42.4	+1.8
BCK	Bucak	6.46	66	eP	Pn	23 40 43.1	+0.8
ISP	Isparta	6.54	63	ePn	Pn	23 40 40.0	-3.4
MMB	Musomiste	6.55	4	iP	Pn	23 40 40.0	-3.5
TIP	Timpagrande	6.58	311	ePn	Pn	23 40 43.0	-0.8
TIP	Timpagrande	6.58	311	⇑iP	Pn	23 40 43.7	-0.2
TIP	Timpagrande	6.58	311	S	Sn	23 41 48.2	-9.4
CEL	Celeste	6.67	301	eP	Pn	23 40 43.9	-1.2
TVSB	Tavsanli	6.67	47	eP	Pn	23 40 46.8	+1.6
RZN	Rozhen	6.75	10	iP	Pn	23 40 47.0	+0.7
TIR	Tirane	6.81	339	ePn	Pn	23 40 45.9	-1.1
TIR	Tirane	6.81	339	⇑iP	Pn	23 40 45.3	-1.7
KKB	Krupnik	6.81	359	iP	Pn	23 40 47.0	-0.1
KEPZ	Antalya-Kepez	7.09	72	iP	Pn	23 40 52.5	+1.6
WDD	Wied Dalam	7.10	279	eP	Pn	23 40 50.7	-0.2
PLD	Plovdiv	7.15	9	iP	Pn	23 40 52.6	+0.9
VAE	Valguarnera	7.48	292	P	Pn	23 41 00.7	+4.4
	comp=E,0.4nm,0.3s,baz=81,slow=13,SNR=3.3						
VAE				S	Sn	23 42 15.2	-4.5
	comp=E,1.7nm,0.3s,baz=210,slow=6.8,SNR=5.7						
VTS	Vitosha	7.56	0	eP	Pn	23 40 53.1	-4.4
VTS	Vitosha	7.56	0	⇓iP	Pn	23 40 56.7	-0.8
VTS	Vitosha	7.56	0	S	Sn	23 42 23.8	+1.8
MATE	Matera	7.58	320	⇑iP	Pn	23 40 56.7	-0.8
MATE	Matera	7.58	320	S	Sn	23 42 14.2	-7.9
DRME	Dracevica, Mon	7.78	338	ePn	Pn	23 40 58.0	-2.3
PDG	Podgorica	7.98	339	⇑iP	Pn	23 41 01.0	-2.1
PDG	Podgorica	7.98	339	S	Sn	23 42 25.8	-6.2
PDG	Podgorica	7.98	339	ePn	Pn	23 41 00.9	-2.1
TTG	Podgorica	7.98	339	ePn	Pn	23 41 01.0	-2.1
ELND	Elena	8.15	14	⇑iP	Pn	23 41 04.4	-1.0
HCY	Herceg Novi	8.24	335	ePn	Pn	23 41 03.7	-3.0
CSS	Mathiatis	8.34	88	eP	Pn	23 41 04.9	-3.1
TREB	Trebinje	8.53	335	ePn	Pn	23 41 07.1	-3.5
DBRK	Dubrovnik	8.56	334	ePn	Pn	23 41 08.1	-2.9
DBRK				Sn	Sn	23 42 36.6	-10
BRY	Bratogost	8.63	337	ePn	Pn	23 41 08.3	-3.8
UPM	Unac-Piva	8.79	339	ePn	Pn	23 41 12.0	-2.4
STON	Ston	8.90	333	iPn	Pn	23 41 12.3	-3.3
STON				Sn	Sn	23 42 43.4	-11
STON	Ston	8.90	333	ePn	Pn	23 41 12.2	-3.3
RUDO	Rudo	9.05	342	ePn	Pn	23 41 14.7	-3.0
BBLS	Lazići	9.28	343	ePn	Pn	23 41 18.3	-2.6
DIVS	Divibare	9.37	346	ePn	Pn	23 41 19.2	-2.9
MAKA	Makarska	9.51	332	ePn	Pn	23 41 21.9	-2.1
BR131	Keskin Array S	9.55	58	ePn	Pn	23 41 22.3	-2.4
BRTR	Keskin Array B	9.55	58	P	Pn	23 41 25.4	+0.7
	comp=E,0.2nm,0.3s,baz=233,slow=12,SNR=13						
BR101	Keskin Array S	9.55	58	ePn	Pn	23 41 25.4	+0.7
HAPS	Han Pijesak,BI	9.60	341	ePn	Pn	23 41 21.4	-3.9
HVAR	Hvar	9.65	329	ePn	Pn	23 41 22.7	-3.2
TIRR	Tirgusor	10.23	22	ePn	Pn	23 41 30.3	-3.5
KZIT	Kziot	10.29	110	P	Pn	23 41 32.8	-2.0
MMAI	Mount Meron Ar	10.35	98	P	Pn	23 41 34.9	-0.7
	comp=E,1.9nm,0.3s,baz=292,slow=11,SNR=7.4						
MMAI				S	Sn	23 43 21.3	-9.1
	comp=E,1.1nm,0.3s,baz=293,slow=22,SNR=2.7						
ZIRJ	Zirje	10.38	328	iPn	Pn	23 41 32.5	-3.4
ZIRJ				Sn	Sn	23 43 20.1	-11
FRGS	Fruska Gora	10.43	347	ePn	Pn	23 41 33.6	-2.9
AMAZ	Amatzia	10.44	106	P	Pn	23 41 35.6	-1.1
MGRS	Mrkonjic Grad	10.46	335	ePn	Pn	23 41 36.2	-0.9
VOIR		10.48	7	⇑iP	Pn	23 41 35.7	-1.6
KSDI	Kefar Szold	10.52	97	P	Pn	23 41 36.8	-1.0
MORI	Morici	10.53	329	iPn	Pn	23 41 35.1	-2.8
MORI				Sn	Sn	23 43 23.0	-11
MLR	Muntele Rosu	10.65	11	P	Pn	23 41 39.5	-0.2
	comp=E,0.3nm,0.3s,baz=209,slow=10,SNR=9.6						
MLR				LR	LR	23 46 48.0	
	comp=E,71nm,18.1s,baz=354,slow=43						
MLR	Muntele Rosu	10.65	11	ePn	Pn	23 41 37.0	-2.7
MLR	Muntele Rosu	10.65	11	⇑iP	Pn	23 41 39.0	-0.7
SHMJ	Saham	10.72	99	P	Pn	23 41 40.6	0.0
BLY	Banja Luka	10.72	336	ePn	Pn	23 41 38.0	-2.6
BLY	Banja Luka	10.72	336	⇓iP	Pn	23 41 37.4	-3.2
BLY	Banja Luka	10.72	336	ePn	Pn	23 41 38.0	-2.6
DUGI	Dugi Otok	10.91	327	ePn	Pn	23 41 40.7	-2.4
DUGI				Sn	Sn	23 43 33.3	-10
LISJ	El Lisan	10.99	107	P	Pn	23 41 42.2	-2.1
UDBI	Udbina	11.05	331	ePn	Pn	23 41 42.8	-2.3
UDBI				Sn	Sn	23 43 39.3	-7.9
VRI	Vrincioaia	11.15	13	⇑iP	Pn	23 41 46.3	-0.1
HRFI	Mount Harif	11.19	113	P	Pn	23 41 46.2	-0.8
EIL	Elat	11.31	115	P	Pn	23 41 48.8	+0.1
	comp=E,0.9nm,0.3s,baz=340,slow=5.1,SNR=11						
EIL	Elat	11.31	115	P	Pn	23 42 08.9	+20
JDRJ	Daraweish	11.35	109	P	Pn	23 41 46.6	-2.8
NVLJ	Novalja	11.44	329	iPn	Pn	23 41 48.4	-2.0
ASF	Jabal al Asfar	11.80	100	P	Pn	23 41 51.8	-3.6
OZLJ	Ozalj	12.08	333	ePn	Pn	23 41 56.1	-3.0
PTJ	Puntijarka	12.15	335	ePn	Pn	23 41 57.0	-3.2
KALN	Kalnik	12.19	337	ePn	Pn	23 41 57.4	-3.2
RIY	Rijeka	12.22	330	ePn	Pn	23 41 58.1	-2.9
CRES	Cresnjev	12.26	334	ePn	Pn	23 41 58.9	-2.7
CEY	Cerknica	12.58	331	ePn	Pn	23 42 03.4	-2.6
PSZ	Piszkesteto	13.10	350	ePn	Pn	23 42 11.2	-1.8
SOKA	Soboth	13.14	335	iPn	Pn	23 42 10.5	-3.2
	comp=E,0.4nm,0.2s						
OBKA	Obir	13.18	333	iPn	Pn	23 42 12.1	-2.0
	comp=E,0.9nm,0.2s						
VYHS	Vyhne	13.82	348	ePN	Pn	23 42 21.9	-1.0
VYHS				epPN		23 42 30.4	
MODS	Modra-Piesok	14.02	344	ePN	P	23 42 32.6	+0.1
VRAC	Vranov	15.06	343	P	Pn	23 42 41.2	+1.8
	comp=E,0.5nm,0.3s,baz=158,slow=10,SNR=8.9						
SQTA	Sankt Quirin	15.12	327	ePn	Pn	23 42 38.9	-1.4
	comp=E,0.6nm,0.2s						
FETA	Feichten	15.19	326	ePn	Pn	23 42 42.4	+1.2
	comp=E,0.2nm,0.2s						
MOTA	Moosalm	15.26	327	iPn	Pn	23 42 42.9	+0.8
	comp=E,0.4nm,0.3s						
MORC	Moravsky Berou	15.29	346	ePn	Pn	23 42 40.9	-1.5
	comp=E,2.6nm,0.6s						
OJC	Ojcow	15.37	352	ePn	Pn	23 42 42.4	-1.0
	comp=E,5.2nm,1.2s						
DAVOX	Davos/Dischmat	15.41	324	P	P	23 42 47.3	-0.9
	comp=E,0.1nm,0.3s,baz=56,slow=7.3,SNR=2.4						
TUE	Stuetta	15.47	322	ePn	Pn	23 42 42.9	-2.0
	comp=E,3.2nm,0.8s						
GEC2	GERESS Array S	15.47	336	ePn	Pn	23 42 44.3	-0.5
	comp=E,4.6nm,1.3s						
GERES	GERESS Array B	15.47	336	P	Pn	23 42 46.0	+1.2
	comp=E,0.4nm,0.3s,baz=149,slow=12,SNR=14						
RETA	Reutte	15.52	327	eP	Pn	23 42 47.1	+1.7
KHC	Kasperske Hory	15.76	336	eP	P	23 42 53.0	+1.2
AKASG	Malin Array Be	16.26	14	P	Pn	23 42 55.4	+0.7
	comp=E,6.2nm,0.3s,baz=202,slow=10,SNR=14						
KIV	Kislovodsk	17.46	54	ePn	Pn	23 43 07.5	-2.5
	comp=E,3.5nm,0.8s						
ECH	Echery	17.74	323	ePn	Pn	23 43 13.1	-0.2
	comp=E,2.2nm,1.0s						
CLL	Collm	17.84	339	iP	Pn	23 43 15.6	+1.2
BSD	Bornholm Skovb	20.87	347	iP	P	23 43 46.2	-1.6
	comp=E,2.9nm,0.5s						
ESDC	Sonseca Array	22.02	290	P	P	23 44 02.7	+2.4
	comp=E,0.3nm,0.6s,baz=88,slow=11,SNR=3.2						
HFS	Hagfors	25.85	349	P	P	23 44 36.0	-0.8
	comp=E,4.1nm,0.4s,baz=146,slow=11,SNR=40						
FINES	FINESS Array B	26.49	3	P	P	23 44 40.6	-1.9
	comp=E,1.1nm,0.3s,baz=169,slow=9.9,SNR=18						
NC602	NORSAR Array S	26.78	347	eP	P	23 44 45.8	+0.6
	comp=E,87nm,1.7s						
NAO01	NORSAR Array S	27.00	347	eP	P	23 44 47.8	+0.5
	comp=E,139nm,1.9s						
NC405	NORSAR Array S	27.10	348	eP	P	23 44 48.1	-0.1
	comp=E,80nm,1.8s						
NB2	NORSAR Subarra	27.12	347	P	P	23 44 47.5	-0.9
	comp=Z,0.3nm,0.3s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.12	347	P	P	23 44 48.6	+0.3
	comp=Z,0.3nm,0.3s,baz=156,slow=10,SNR=29						
NBO00	NORSAR Array S	27.20	347	eP	P	23 44 49.2	+0.2
	comp=Z,96nm,1.8s						
EKA	Eskdalemuir Ar	27.21	326	P	P	23 44 49.2	0.0
	comp=Z,0.3nm,0.3s,baz=124,slow=9.4,SNR=5.6						
NC303	NORSAR Array S	27.27	348	eP	P	23 44 50.4	+0.8
	comp=Z,64nm,1.6s						
NC204	NORSAR Array S	27.43	347	eP	P	23 44 51.3	+0.2
	comp=Z,64nm,1.8s						
GEYT	Alibeck	28.15	74	P	P	23 44 58.0	+0.3
	comp=Z,1.9nm,0.3s,baz=273,slow=8.4,SNR=12						
GYA0B	ALIBECK ARRAY	28.15	74	eP	P	23 44 57.1	-0.7
	comp=Z,3.4nm,1.0s						
TORD	Torodi Ar. Bea	29.19	227	P	P	23 45 08.0	+0.8
	comp=Z,0.3nm,0.3s,baz=30,slow=8.9,SNR=19						
ARCES	ARCESS Array B	34.57	1	P	P	23 45 52.3	-1.5
	comp=Z,2.8nm,0.8s,baz=172,slow=8.7,SNR=18						
ARCES				PcP	PcP	23 48 27.5	0.0
	comp=Z,0.6nm,0.4s,baz=189,slow=1.8,SNR=7.0						
DBIC	Dimbokro	38.24	229	P	P	23 46 26.6	+1.0
	comp=Z,8.0nm,1.1s,baz=10,slow=8.7,SNR=7.1						
CMLA	Cha da Macela	38.94	289	eP	P	23 46 32.8	+1.4
	comp=Z,56nm,1.2s						
ARSB	Arslanbob	39.22	66	eP	P	23 46 33.4	-0.4
	comp=Z,15nm,1.8s						
NIL	Nilore	41.02	77	eP	P	23 46 48.2	-0.6
	comp=Z,6.1nm,1.0s						
BOOM	Boomskoye usch	41.25	63	eP	P	23 46 49.6	-1.1
	comp=Z,1.5nm,0.8s						
NRN	Naryn	41.45	65	eP	P	23 46 51.1	-1.3
	comp=Z,1.9nm,0.5s						
KDJ	Kajisay	42.21	64	eP	P	23 46 58.2	-0.3
	comp=Z,1.8nm,0.8s						
KURK	Kurchatov	42.52	51	eP	P	23 46 59.5	-1.2
	comp=Z,1.9nm,0.9s						
SPITS	Spitsbergen Ar	43.34	358	P	P	23 47 06.8	-0.2
	comp=Z,0.7nm,0.3s,baz=138,slow=12,SNR=22						
MAKZ	Makanchi	44.98	56	eP	P	23 47 19.6	-1.0
	comp=Z,7.4nm,1.8s						
MKAR	Makanchi Array	45.20	56	P	P	23 47 21.8	-0.6
	comp=Z,1.0nm,0.3s,baz=268,slow=7.6,SNR=37						
ZAA0	Zalesovo Array	46.26	46	eP	P	23 47 29.1	-1.4
	comp=Z,3.0nm,0.5s						
ZALV	Zalesovo Beam	46.26	46	P	P	23 47 29.3	-1.2
	comp=Z,3.2nm,0.3s,baz=270,slow=8.0,SNR=12						
ILULI	Ilulissat	52.17	334	eP	P	23 48 15.5	+0.1
	comp=Z,15nm,1.0s						
SONM	Songino Array	60.82	50	P	P	23 49 17.1	-0.3
	comp=Z,0.7nm,0.4s,baz=283,slow=7.0,SNR=11						
ULN	Ulaanbaatar	61.22	50	eP	P	23 49 19.4	-0.8
	comp=Z,1.5nm,0.5s						
SCHQ	Schefferville	62.21	319	eP	P	23 49 27.6	+1.0
	comp=Z,22nm,1.6s						
YKA	Yellowknife Ar	77.05	341	P	P	23 50 57.8	+0.1
	comp=Z,0.7nm,0.6s,baz=29,slow=5.1,SNR=2.7						
USRK	Ussuriysk Ar.	78.07	44	P	P	23 51 03.4	-0.4
	comp=Z,0.8nm,0.3s,baz=292,slow=4.4,SNR=6.3						
PRP	Porcupine Dome	79.38	355	eP	P	23 51 11.5	+0.7
	comp=Z,1.9nm,0.8s						
KSRS	Korea Array	79.64	51	P	P	23 51 12.4	-0.1
	comp=Z,0.7nm,0.4s,baz=310,slow=4.5,SNR=4.1						
BBB	Bella Bella	89.58	343	eP	P	23 52 03.8	+1.4
	comp=Z,15nm,1.0s						
NEW	Newport	89.80	335	LR	LR	00 36 22.1	
	comp=Z,33nm,18.3s,baz=102,slow=38						
YHB	Horse Butte	90.44	329	eP	P	23 52 06.6	-0.3
WRA	Warramunga Arr	118.20	95	PKP	PKiKP	23 57 52.4	-0.1
	comp=Z,1.0nm,0.8s,baz=318,slow=1.3,SNR=5.2						
ASAR	Alice Springs	119.64	99	PKP	PKPdf	23 57 53.3	-1.9
	comp=Z,0.3nm,0.7s,baz=358,slow=1.4,SNR=2.9						

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*ATH **13** 23:45:12.6, 35°.03N×23°.14E, h43^{km}±3^{km}, ML3.3/7, Error ellipse: s-maj=6.2km s-min=1.1km az=213.0*

*ISCJB **13** 23:45:13.2±0.6, 35°.09N±0°.05×23°.24E±0°.05, h78^{km}±4^{km}, mb3.7/11, Error ellipse: s-maj=9.4km s-min=4.4km az=31.8*

*THE **13** 23:45:13.9, 35°.03N×23°.12E, h23^{km}±2^{km}, ML3.5/4, Error ellipse: s-maj=2.7km s-min=0.9km az=192.0*

*IDC **13** 23:45:14.2±1.6, 35°.26N×23°.23E, h55^{km}±16^{km}, mb3.6/11, mb1 3.5/16, mb1mx3.4/46, mbtmp3.7/16, ML3.7/4, MS2.7/1, Ms1 2.6/1, ms1mx2.2/36, Error ellipse: s-maj=17.5km s-min=12.7km az=169.0*

ISC 13 23:45:13.0±0.9**, 35°.04N**±0°.06×**23°.19E**±0°.05**, h56**^{km}±9^{km}**, n91, σ1°.79**/103**, mb3.9**/11**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.77	105	P	Pn	23 45 28.6	+0.7
GVD				S	Sn	23 45 41.9	+3.2
	4µm,0.4s						
GVD	Gavdhos	0.77	105	P	Pn	23 45 28.5	+0.7
GVD				AML	AML	23 45 43.5	
	comp=E,7564µm,0.4s						
GVD				AML	AML	23 45 45.7	
	comp=N,10149µm,0.3s						
GVDS	Gavdos	0.77	104	P	Pn	23 45 28.4	+0.6
IMMV	Iera Moni Meta	0.78	57	P	Pn	23 45 28.5	+0.5
IMMV				S	Sn	23 45 40.5	+1.6
	comp=N,4µm,0.5s						
IMMV	Iera Moni Meta	0.78	57	P	Pn	23 45 28.6	+0.6
IMMV				S	Sn	23 45 41.2	+2.3
IMMV				AML	AML	23 45 44.5	
	comp=E,8358µm,0.5s						
IMMV				AML	AML	23 45 46.3	
	comp=N,9134µm,0.6s						
ANKY	Antikythira Is	0.83	6	P	Pn	23 45 29.3	+0.6
ANKY				S	Sn	23 45 42.3	+2.1
	comp=N,2µm,0.7s						
ANKY	Antikythira Is	0.83	6	P	Pn	23 45 29.3	+0.6
ANKY				AML	AML	23 45 44.9	
	comp=N,4112µm,0.9s						
ANKY				AML	AML	23 45 45.2	
	comp=E,4191µm,0.5s						
CHAN	Chania	0.85	55	P	Pn	23 45 29.8	+0.9
CHAN				S	Sn	23 45 42.5	+1.9
VAM	Vamos	0.91	66	P	Pn	23 45 30.5	+0.8
VAM				S	Sn	23 45 43.8	+1.8
	comp=E,3µm,0.7s						
VAM	Vamos	0.91	66	P	Pn	23 45 30.5	+0.8
VAM				AML	AML	23 45 48.0	
	comp=N,7279µm,0.5s						
VAM				AML	AML	23 45 48.1	
	comp=E,4705µm,0.8s						
KTHA	Kythira Island	1.22	355	P	Pn	23 45 35.0	+1.1
KTHA	Kythira Island	1.22	355	P	Pn	23 45 35.0	+1.1
KTHA				AML	AML	23 45 57.7	
	comp=E,2526µm,0.5s						
KTHA				AML	AML	23 46 04.5	
	comp=N,869µm,0.9s						
KTHR	Kythira	1.23	353	P	Pn	23 45 34.8	+0.8
SIVA	Sivas	1.33	90	P	Pn	23 45 36.7	+1.4
SIVA	Sivas	1.33	90	P	Pn	23 45 36.7	+1.4
IDI	Anoyia	1.42	79	P	Pn	23 45 37.7	+1.1
	comp=N,14nm,0.3s,baz=241,slow=12,SNR=101						
IDI				S	Sn	23 45 53.8	-0.5
	comp=N,30nm,0.3s,baz=32,slow=17,SNR=8.3						
IDI	Anoyia	1.42	79	P	Pn	23 45 37.6	+1.1
VLI	Veliai	1.69	353	P	Pn	23 45 41.3	+1.1
VLI	Veliai	1.69	353	P	Pn	23 45 41.1	+0.9
VLI				AML	AML	23 46 15.4	
	comp=N,787µm,0.9s						
VLI				AML	AML	23 46 19.4	
	comp=E,614µm,0.6s						
LAST	Lasithi	1.89	86	P	Pn	23 45 44.7	+1.8
LAST				AML	AML	23 46 28.7	
	comp=N,552µm,0.6s						
LAST				AML	AML	23 46 32.5	
	comp=E,425µm,0.9s						
MHLO	Agia Marina, M	1.92	31	P	Pn	23 45 43.5	+0.2
MHLA	Plaka, Milos I	1.98	30	P	Pn	23 45 44.5	+0.4
NPS	Neapolis	2.00	83	P	Pn	23 45 46.5	+2.1
PYL	PYLOS	2.19	328	P	Pn	23 45 47.5	+0.5
PYL	PYLOS	2.19	328	P	Pn	23 45 47.2	+0.2
SAP1	Santorini-Akro	2.23	53	P	Pn	23 45 48.0	+0.4
SAP3	Santorini-Thir	2.24	51	P	Pn	23 45 47.9	+0.2
SERI	Serifos	2.37	26	P	Pn	23 45 49.0	-0.4
ITM	Ithomi	2.37	335	P	Pn	23 45 49.6	+0.2
ITM	Ithomi	2.37	335	P	Pn	23 45 50.6	+1.1
DID	Didima	2.46	1	P	Pn	23 45 52.0	+1.2
DID	Didima	2.46	1	P	Pn	23 45 51.2	+0.5
ZKR	Zakros	2.49	87	P	Pn	23 45 53.2	+2.1
EPID	Epidavros	2.57	359	P	Pn	23 45 53.3	+1.1
VLY	Voula,Athens	2.85	10	P	Pn	23 45 56.5	+0.5
VLY	Voula,Athens	2.85	10	P	Pn	23 45 56.6	+0.6
ACOR	Acrocorinthos	2.86	355	P	Pn	23 45 58.7	+2.6
GUR	Goura	2.97	347	P	Pn	23 45 59.7	+1.9
PTL	Penteli	3.06	10	P	Pn	23 45 59.5	+0.6
PTL	Penteli	3.06	10	P	Pn	23 45 59.4	+0.6
DION	Dionisos Attik	3.09	11	P	Pn	23 46 00.0	+0.7
DION	Dionisos Attik	3.09	11	P	Pn	23 46 00.1	+0.7
KLV	Kalavryta, Ach	3.12	345	P	Pn	23 46 01.1	+1.4
VILL	Villia	3.12	2	P	Pn	23 46 00.9	+1.1
VIL2	Platees	3.17	1	P	Pn	23 46 00.6	+0.2
DSF	Desfina	3.41	351	P	Pn	23 46 04.5	+0.8
EREA	Eretria	3.43	10	P	Pn	23 46 04.7	+0.8
LKR	Lokris	3.61	358	P	Pn	23 46 07.7	+1.3
ATAL	Atalanti	3.65	358	P	Pn	23 46 08.1	+1.1
MRKA	Markates	3.68	5	P	Pn	23 46 08.2	+0.9
ANX	Ano Chora	3.69	344	P	Pn	23 46 09.5	+1.9
AGG	Agios Georgios	4.04	350	P	Pn	23 46 13.3	+1.0
AYDN	Tasoluk	4.61	54	iP	Pn	23 46 21.9	+1.8
AYDN				IAML_P			
	comp=Z,266nm,0.3s						
TURN	Turunc	4.76	66	iP	Pn	23 46 19.0	-3.1
TURN				IAML_P			
	comp=Z,1µm,0.2s						
DALY	Dalyan (Mula)	4.78	67	iP	Pn	23 46 24.1	+1.7
DALY				IAML_P			
	comp=Z,512nm,0.2s						
FETY	Fethiye	5.05	70	iP	Pn	23 46 27.0	+0.8
FETY				IAML_P			
	comp=Z,650nm,0.3s						
AKAS	Kas	5.36	75	iP	Pn	23 46 31.7	+1.2
AKAS				iS	Sn	23 47 30.6	-0.5
AKAS				IAML_P			
	comp=Z,1µm,0.2s						
AKUM	Antalya-Kumluc	5.96	76	iP	Pn	23 46 39.4	+0.8
AKUM				iS	Sn	23 47 45.4	-0.2
AKUM				IAML_P			
	comp=Z,486nm,0.3s						
KHAL	Karahalli	6.06	55	iP	Pn	23 46 41.8	+1.8
KHAL				IAML_P			
	comp=Z,142nm,0.4s						
KORT	Korkueli	6.13	69	iP	Pn	23 46 42.4	+1.4
KORT				IAML_P			
	comp=Z,387nm,0.2s						
KEPZ	Antalya-Kepez	7.08	72	iP	Pn	23 46 54.4	+0.5
KEPZ				IAML_P			
	comp=Z,226nm,0.2s						
VAE	Valguarnera	7.50	292	P	Pn	23 47 00.7	+1.0
	comp=Z,0.3nm,0.3s,baz=85,slow=11,SNR=1.8						
VAE				S	Sn	23 48 20.6	-2.7
	comp=Z,0.7nm,0.3s,baz=180,slow=8.2,SNR=3.0						
DBRK	Dubrovnik	8.57	334	iPn	Pn	23 47 10.8	-3.6
DBRK				Sn	Sn	23 48 39.9	-10
STON	Ston	8.91	333	ePn	Pn	23 47 15.0	-4.0
STON				Sn	Sn	23 48 47.9	-10
MAKA	Makarska	9.53	332	ePn	Pn	23 47 24.0	-3.4
BRTR	Keskin Array B	9.54	58	P	Pn	23 47 28.2	+0.4
	comp=Z,0.1nm,0.3s,baz=237,slow=16,SNR=5.4						
HVAR	Hvar	9.66	329	ePn	Pn	23 47 26.6	-2.6
MMAI	Mount Meron Ar	10.34	98	P	Pn	23 47 38.0	-0.7
	comp=Z,1.3nm,0.3s,baz=289,slow=10,SNR=4.1						
MMAI				S	Sn	23 49 26.2	-6.8
	comp=Z,1.5nm,0.3s,baz=232,slow=24,SNR=4.6						
ZIRJ	Zirje	10.39	328	ePn	Pn	23 47 36.4	-2.8
ZIRJ				Sn	Sn	23 49 23.6	-10
MORI	Morici	10.54	329	ePn	Pn	23 47 38.9	-2.3
MORI				Sn	Sn	23 49 26.6	-11
MLR	Muntele Rosu	10.65	11	P	Pn	23 47 44.1	+1.3
	comp=Z,0.1nm,0.3s,baz=245,slow=5.1,SNR=4.6						
DUGI	Dugi Otok	10.92	327	ePn	Pn	23 47 43.7	-2.7
DUGI				Sn	Sn	23 49 36.9	-10
UDBI	Udbina	11.06	331	ePn	Pn	23 47 46.5	-1.9
EIL	Elat	11.29	115	P	Pn	23 47 50.7	-0.9
	comp=Z,0.8nm,0.3s,baz=69,slow=2.4,SNR=7.1						
EIL				S	Sn	23 49 50.0	-6.3
	comp=Z,0.4nm,0.3s,baz=108,slow=18,SNR=3.5						
NVLJ	Novalja	11.46	329	iPn	Pn	23 47 51.8	-1.9
VYHS	Vyhne	13.83	348	ePN	Pn	23 48 26.4	+0.3
VYHS				e		23 48 38.2	
GERES	GERESS Array B	15.48	336	P	Pn	23 48 45.8	-1.9
	comp=Z,0.1nm,0.3s,baz=164,slow=15,SNR=2.5						
AKASG	Malin Array Be	16.26	14	P	Pn	23 48 56.8	-0.6
	comp=Z,1.3nm,0.3s,baz=208,slow=9.8,SNR=2.1						
KBZ	Khabaz	17.51	54	LR	LR	23 57 34.1	
	comp=Z,26nm,20.8s,slow=43						
HFS	Hagfors	25.86	349	P	P	23 50 38.4	-0.6
	comp=Z,1.3nm,0.4s,baz=146,slow=11,SNR=17						
FINES	FINESS Array B	26.49	3	P	P	23 50 43.7	-0.9
	comp=Z,0.4nm,0.3s,baz=164,slow=11,SNR=7.7						
NB2	NORSAR Subarra	27.13	347	P	P	23 50 53.3	+2.7
	comp=Z,1.1nm,0.7s,baz=156,slow=9.3						
NOA	NORSAR Array B	27.13	347	P	P	23 50 50.0	-0.5
	comp=Z,0.4nm,0.5s,baz=156,slow=10,SNR=9.5						
GEYT	Alibeck	28.14	74	P	P	23 51 00.1	+0.3
	comp=Z,0.9nm,0.3s,baz=267,slow=8.8,SNR=5.6						
TORD	Torodi Ar. Bea	29.20	227	P	P	23 51 12.2	+2.9
	comp=Z,0.2nm,0.3s,baz=30,slow=9.2,SNR=13						
ARCES	ARCESS Array B	34.58	1	P	P	23 51 55.0	-0.9
	comp=Z,3.3nm,1.1s,baz=170,slow=8.6,SNR=5.8						
ARCES				PcP	PcP	23 54 30.9	+1.6
	comp=Z,1.4nm,0.9s,baz=191,slow=1.4,SNR=3.0						
DBIC	Dimbokro	38.24	229	P	P	23 52 30.4	+2.7
	comp=Z,1.5nm,0.7s,baz=37,slow=15,SNR=2.7						
MKAR	Makanchi Array	45.19	56	P	P	23 53 24.7	+0.5
	comp=Z,0.5nm,0.3s,baz=266,slow=7.5,SNR=15						
ZALV	Zalesovo Beam	46.26	46	P	P	23 53 32.2	-0.3
	comp=Z,1.5nm,0.3s,baz=270,slow=8.9,SNR=7.6						
SONM	Songino Array	60.81	50	P	P	23 55 18.7	-0.6
	comp=Z,0.4nm,0.4s,baz=285,slow=8.1,SNR=5.0						
USRK	Ussuriysk Ar.	78.06	44	P	P	23 57 06.1	+0.5
	comp=Z,0.6nm,0.4s,baz=311,slow=4.4,SNR=3.6						

IDC 13 23:45:25.2±2.5**, 22°.46S**×**148°.30E, h0**^{km}**, mb1 3.7**/4**, mb1mx3.5**/22**, mbtmp3.6**/4**, ML3.5**/4**, Error ellipse: s-maj=34.8km s-min=28.7km az=66.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	3.03	321	Pn	Pn	23 46 15.1	+0.6
	6.8nm,0.3s,baz=138,slow=15,SNR=65						
CTA				Pg	Pb	23 46 20.7	+0.6
	12nm,0.3s,baz=139,slow=16,SNR=27						
CTA				Lg	Lg	23 46 58.9	
	13nm,0.3s,baz=56,slow=23,SNR=12						
STKA	Stephens Creek	11.11	211	Pn	Pn	23 48 04.2	-1.3
	0.2nm,0.3s,baz=29,slow=13,SNR=3.0						
WRA	Warramunga Arr	13.26	278	Pn	Pn	23 48 33.1	-1.7
	0.2nm,0.3s,baz=99,slow=12,SNR=9.1						
WRA				Lg	Lg	23 52 26.3	
	0.2nm,0.3s,baz=98,slow=29,SNR=6.8						
ASAR	Alice Springs	13.30	262	Pn	Pn	23 48 34.8	-0.7
	0.2nm,0.3s,baz=90,slow=14,SNR=6.6						
ASAR				Lg	Lg	23 52 30.0	
	0.1nm,0.3s,baz=82,slow=30,SNR=5.2						
TORD	Torodi Ar. Bea	146.95	259	PKPbc	PKPbc	00 05 10.2	-0.4
	1.1nm,0.9s,baz=133,slow=4.3,SNR=6.2						

SIGU 13 23:45:32.9±0.2**, 49°N**±2°×**27°.4E**±0°.8**, h2**^{km}±2^{km}**, mb1.9**/3**, 4C-4D, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDNU	Novodnistrovsk	0.05	219	⇓iPg	Pg	23 45 33.7	-0.1
NDNU				iSg	Sg	23 45 34.5	+0.1
NDNU				m		23 45 36.2	
KMPD	K-Podol'skiy	0.63	264	ePg	Pg	23 45 44.5	-0.5
KMPD				iSg	Sg	23 45 53.0	-0.3
HORU	Horodok	0.87	312	Sg	Sg	23 46 01.0	+0.1
IAS	Iasi	1.44	176	⇓iP	Pg	23 46 06.1	+5.6
IAS	Iasi	1.44	176	S	Sg	23 46 18.4	-0.8
GIRR	Girov	1.79	200	⇑iP	Pb	23 46 05.8	-0.5
BURAR	Bucovina Array	1.79	236	⇑iP	Pb	23 46 06.1	-0.3
BURAR	Bucovina Array	1.79	236	S	Sg	23 46 30.0	-0.3
BIZ	Bicaz	1.91	208	⇑iP	Pb	23 46 07.5	-0.9
BIZ	Bicaz	1.91	208	S	Sn	23 46 31.3	+0.3
MILM	Milestii Mici	1.96	151	S	Sb	23 46 33.4	-0.6

TESR	Tescani	2.18	194	⇑*i*P	Pb	23 46 11.7	-1.4
TESR	Tescani	2.18	194	S	Sb	23 46 39.5	-1.0
VRI	Vrincioaia	2.80	190	⇓*i*P	Pn	23 46 21.1	+2.3
VRI	Vrincioaia	2.80	190	S	Sn	23 46 54.8	+1.7
PLOR	Plostina	2.83	191	⇓*i*P	Pn	23 46 20.8	+1.7
PLOR	Plostina	2.83	191	S	Sn	23 46 53.7	-0.1
ODBI	Odobesti	2.88	185	S	Sn	23 46 55.0	+0.1

IDC ***13*** *23:59:59.8±0.6, 11°.69N×86°.14W, h0^{km}, mb3.9/8, mb1 4.1/11, mb1mx3.8/39, mbtmp3.8/11, ML3.0/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/38, Error ellipse: s-maj=35.9km s-min=13.1km az=52.0*

ISCJB ***14*** *00:00:00.8±0.5, 11°.09N±0°.05×86°.80W±0°.04, h31^{km}, mb4.4/68, MS3.6/3, Error ellipse: s-maj=8.5km s-min=3.8km az=37.1*

UCR ***14*** *00:00:00.3±3.4, 10°.98N×86°.96W, h13^{km}±49^{km}, MW4.6*

NEIC ***14*** *00:00:03.7±1.9, 11°.15N×86°.63W, h35^{km}±3^{km}, mb4.5/92, Error ellipse: s-maj=15.1km s-min=7.5km az=213.0*

ISC 14 00:00:02.8±0.5**, 11°.04N**±0°.05×**86°.71W**±0°.05**, h31**^{km}**, n318,** σ**1**^{s}**.24**/318**, mb4.5**/68**, MS3.4**/3**, 2C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASN	Masaya	1.09	30	*e*P	Pn	00 00 20.9	-1.1
BUEV	Buena Vista	1.30	101	*e*P	Pb	00 00 25.9	-0.9
MESS	Mesas	1.52	101	*e*P	Pn	00 00 28.6	+0.6
CRIN	San Cristobal	1.68	349	⇑*e*P	Pn	00 00 30.2	0.0
ACON	Acoyapa	1.76	58	*e*Pn	Pn	00 00 32.1	+0.8
ACON	Acoyapa	1.76	58	*e*P	Pb	00 00 34.9	+0.4
ACON				*e*S	Sb	00 01 00.4	+4.1
JTS	Las Juntas de	1.88	113	Pn	Pn	00 00 34.0	+1.1
	23nm,0.3s,baz=19,slow=11,SNR=68						
JTS				Sn	Sb	00 00 59.0	-0.7
	60nm,0.3s,baz=6.2,slow=18,SNR=7.6						
JTS				LR	LR	00 01 05.1	
	comp=Z,203nm,18.4s,baz=7.5,slow=36						
JTS	Las Juntas de	1.88	113	*e*Pn	Pb	00 00 34.7	-1.8
JTS				*e*Pg	Pn	00 00 35.1	+2.2
JTS	Las Juntas de	1.88	113	*e*P	Pb	00 00 36.8	+0.2
MATN	Matagalpa	2.03	22	*e*P	Pn	00 00 35.2	+0.2
ARE1	Arenal 1	2.04	106	*e*P	Pn	00 00 36.6	+1.5
CEDE	Laguna Cedeo	2.05	105	*e*P	Pn	00 00 36.7	+1.5
ESTN	Estel	2.07	9	*e*Pn	Pn	00 00 36.0	+0.4
ESTN	Estel	2.07	9	*e*P	Pn	00 00 35.5	-0.1
CSGN	Cosiguina Volc	2.09	337	*e*Pn	Pn	00 00 36.5	+0.7
CSGN	Cosiguina Volc	2.09	337	⇑*e*P	Pn	00 00 36.6	+0.7
SRA1	San Ramn	2.39	113	*e*P	Pb	00 00 43.1	-2.1
RCON	San Juan de Ri	2.49	12	*e*P	Pn	00 00 42.1	+0.7
ESPN	Las Esperanzas	2.62	64	*e*Pn	Pn	00 00 44.4	+1.3
ESPN	Las Esperanzas	2.62	64	*e*P	Pn	00 00 45.7	+2.6
HDC	Heredia	2.75	112	*e*Pn	Pb	00 00 48.3	-3.1
HDC	Heredia	2.75	112	*e*P	Pb	00 00 48.5	-3.0
LCR2	La Lucha 2	2.96	116	*e*P	Pn	00 00 50.3	+2.4
TGUH	Tegucigalpa,Un	3.05	350	*e*Pn	Pn	00 00 49.8	+0.7
CVTR	Volcan Turrial	3.07	109	*e*P	Pb	00 00 53.3	-3.8
APG	El Apazote	5.38	317	Pn	Pn	00 01 22.7	+1.5
	0.3nm,0.3s,baz=66,slow=20,SNR=5.1						
BCIP	Isla Barro Col	7.02	105	*e*Pn	Pn	00 01 45.5	+1.9
CMIG	Matias Romero	9.95	308	Pn	Pn	00 02 23.2	-0.6
	0.4nm,0.3s,baz=118,slow=9.2,SNR=7.1						
SDV	Santo Domingo	15.98	96	Pn	Pn	00 03 42.0	-3.7
	0.3nm,0.3s,baz=230,slow=7.9,SNR=2.1						
SDV	Santo Domingo	15.98	96	*e*P	Pn	00 03 45.8	+0.1
	4.9nm,0.8s						
060Z	West Palm Beac	16.35	20	P	Pn	00 03 50.4	+0.3
	baz=202						
058A	Arcadia	16.59	15	P	Pn	00 03 53.9	+0.8
	baz=197						
SDD	Santo Domingo	17.83	64	*e*Pn	Pn	00 04 06.8	-1.8
	421nm,1.1s						
LNIG	Linares	18.34	320	*e*P	Pn	00 04 15.3	+0.3
	10nm,1.2s						
552A	Lynn Haven	19.04	4	P	P	00 04 22.8	+0.4
	baz=184						
ATAH	Atahualpa	19.86	155	LR	LR	00 11 20.8	
	comp=Z,96nm,18.3s,baz=319,slow=34						
353A	Camilla	20.34	6	P	Pn	00 04 39.5	+0.7
	baz=187						
352A	Blakely	20.40	4	P	Pn	00 04 41.1	+1.6
	baz=185						
TIGA	Tifton	20.50	8	P	Pn	00 04 41.2	+0.5
	baz=189						
AOPR	Arecibo Observ	20.61	67	*e*P	P	00 04 38.3	-1.4
	72nm,1.6s						
356A	Blackshear	20.62	11	P	Pn	00 04 42.0	-0.1
	baz=193						
HKT	Hockley	20.64	337	*e*P	P	00 04 39.5	-0.3
	12nm,1.4s						
833A	Chaparral WMA,	20.90	327	*e*P	P	00 04 43.0	+0.2
	11nm,1.0s						
251A	Midway	20.98	3	P	Pn	00 04 45.5	-0.8
	baz=183						
150A	Eclectic	21.47	2	P	P	00 04 50.9	+2.1
	baz=182,SNR=8.3						
148A	Greensboro	21.52	358	P	P	00 04 51.4	+2.1
	baz=178						
147A	Livingston	21.58	356	*e*P	P	00 04 50.0	0.0
	26nm,0.8s						
147A	Livingston	21.58	356	P	P	00 04 52.0	+2.1
	baz=176,SNR=5.0						
152A	Waverly Hall	21.60	5	P	P	00 04 51.9	+1.7
	baz=185						
MTP	Monte Pirata	21.63	69	*e*P	P	00 04 49.8	-0.8
154A	Montrose	21.72	8	P	P	00 04 52.8	+1.3
	baz=189						
NATX	Nacogdoches	21.89	342	*e*P	P	00 04 53.0	-0.3
	14nm,0.6s						
NATX	Nacogdoches	21.89	342	P	P	00 04 55.1	+1.8
	baz=158						
LRAL	Lakeview Retre	21.89	359	*e*P	P	00 04 52.5	-0.8
	5.8nm,0.8s						
LRAL	Lakeview Retre	21.89	359	P	P	00 04 54.9	+1.6
	baz=179						
CUPR	Culebra, Puert	21.93	68	*e*P	P	00 04 53.4	-0.6
	15nm,0.9s						
Z49A	Columbiana	22.05	0	P	P	00 04 56.6	+1.5
	baz=180						
Z52A	Williamson	22.14	5	P	P	00 04 57.7	+1.6
	baz=186						
Z51A	Franklin	22.21	3	P	P	00 04 58.5	+1.7
	baz=184						
Z53A	Monticello	22.32	7	P	P	00 04 59.7	+1.7
	baz=188						
GOGA	Godfrey	22.46	7	*e*P	P	00 05 00.5	+1.0
	24nm,1.5s						
GOGA	Godfrey	22.46	7	P	P	00 05 00.7	+1.3
	baz=188						
CSU	Charleston Sou	22.68	15	*e*P	P	00 04 59.7	-2.1
Y49A	Blount Mountai	22.71	1	*e*P	P	00 05 01.2	-0.9
	13nm,1.1s						
Y49A	Blount Mountai	22.71	1	P	P	00 05 02.6	+0.4
	baz=181						
Y50A	Piedmont	22.76	2	P	P	00 05 03.2	+0.5
	baz=182						
Y48A	Jasper	22.77	359	P	P	00 05 03.6	+0.9
	baz=179						
Y51A	Rockmart	22.80	4	P	P	00 05 03.8	+0.7
	baz=184,SNR=6.6						
Z41A	Richland Creek	22.81	347	P	P	00 05 03.9	+0.8
	baz=164						
Y52A	Lilburn	22.84	6	P	P	00 05 04.4	+0.8
	baz=186						
Y53A	Monroe	22.89	7	P	P	00 05 04.9	+0.9
	baz=188						
Y54A	Tignall	23.01	9	P	P	00 05 06.3	+1.1
	baz=190						
WHTX	Lake Whitney,	23.09	336	*e*P	P	00 05 06.5	+0.4
	6.6nm,0.6s						
WHTX	Lake Whitney,	23.09	336	P	P	00 05 06.4	+0.4
	baz=152						
Y55A	Saluda	23.22	10	P	P	00 05 08.1	+0.8
	baz=192						
WLAR	White Oak Lake	23.29	346	*e*P	P	00 05 04.5	-3.5
	6.6nm,0.7s						
X48A	Hartselle	23.30	359	*e*P	P	00 05 07.5	-0.7
	5.1nm,0.9s						
X48A	Hartselle	23.30	359	P	P	00 05 08.2	0.0
	baz=179						
X50B	Fort Payne	23.33	2	P	P	00 05 08.2	-0.3
	baz=182						
X47A	Russelville	23.39	358	P	P	00 05 08.5	-0.5
	baz=177,SNR=5.7						
HODGE	Hodges	23.44	9	*e*P	P	00 05 09.0	-0.5
	37nm,1.8s						
X46A	Booneville	23.47	356	P	P	00 05 09.5	-0.3
	baz=175						
X51A	Calhoun	23.48	4	*e*P	P	00 05 09.5	-0.4
	51nm,1.8s						
X51A	Calhoun	23.48	4	P	P	00 05 10.1	+0.3
	baz=184						
OXF	Oxford	23.49	354	*e*P	P	00 05 09.6	-0.4
	17nm,0.9s						
OXF	Oxford	23.49	354	P	P	00 05 09.9	-0.1
	baz=173						
Y57A	Sumter	23.59	13	*e*P	P	00 05 10.2	-0.7
	36nm,1.4s						
X43A	Marvell	23.68	351	*e*P	P	00 05 11.9	+0.2
	20nm,0.8s						
X55A	Gracelyn & Ava	23.78	10	P	P	00 05 13.1	+0.4
	baz=192						
W49A	Belvidere	23.97	1	P	P	00 05 15.0	+0.4
	baz=181						
W48A	Pulaski	23.99	360	P	P	00 05 15.4	+0.6
	baz=179						
SKI	Saint Kitts	24.05	72	*e*P	P	00 05 14.8	-0.7
	45nm,1.0s						
W51A	Cleveland	24.07	4	P	P	00 05 15.3	-0.3
	baz=184						
SWET	Sewanee	24.07	2	*e*P	P	00 05 15.6	0.0
	5.5nm,0.6s						
W50A	Signal Mountai	24.08	3	*e*P	P	00 05 14.4	-1.2
	60nm,2.0s						
W50A	Signal Mountai	24.08	3	P	P	00 05 15.1	-0.5
	baz=183						
W47A	Westpoint	24.11	358	P	P	00 05 15.5	-0.4
	baz=178,SNR=6.6						
TXAR	Lajitas Array	24.12	321	P	P	00 05 16.2	0.0
	2.1nm,0.8s,baz=136,slow=10,SNR=25						
TXAR				PcP	PcP	00 09 00.4	+3.5
	1.1nm,0.8s,baz=126,slow=4.4,SNR=8.8						
TX31	Lajitas Ar. Si	24.12	321	*e*P	P	00 05 15.9	-0.2
	2.2nm,0.8s						
UALR	University of	24.18	349	*e*P	P	00 05 15.4	-1.0
	7.1nm,0.6s						
MIAR	Mount Ida	24.22	346	*e*P	P	00 05 15.3	-1.6
	5.1nm,0.8s						
MIAR	Mount Ida	24.22	346	P	P	00 05 16.6	-0.3
	baz=163						
W53A	Cullowhee	24.23	7	P	P	00 05 16.8	-0.3
	baz=188						
W54A	Cherokee Point	24.29	9	P	P	00 05 16.9	-0.6
	baz=191						
CPCT	Cooper Cave	24.38	4	*e*P	P	00 05 18.8	+0.5
	7.8nm,0.7s						
KMSC	Kings Mountain	24.48	11	P	P	00 05 19.1	-0.1
	baz=193						
W41B	Gary Mavity, V	24.55	349	P	P	00 05 19.0	-0.8
	baz=167						
ABTX	Abilene, Hawle	24.56	333	*e*P	P	00 05 20.7	+0.6
	3.4nm,0.7s						
V50A	Pikevile	24.56	3	P	P	00 05 19.4	-0.6
	baz=184						
V48A	Smith Brothers	24.59	360	P	P	00 05 19.8	-0.4
	baz=180						
V49A	McMinnville	24.62	2	P	P	00 05 19.7	-0.9
	baz=182,SNR=5.2						
WHAR	Wooly Hollow	24.67	349	*e*P	P	00 05 19.6	-1.3
	9.3nm,0.9s						
V47A	Nunnelly	24.69	358	P	P	00 05 20.5	-0.6
	baz=178						
X37A	Clayton	24.74	343	*e*P	P	00 05 20.7	-0.9
	15nm,1.2s						
V51A	Loudon	24.74	5	*e*P	P	00 05 20.6	-1.0
	27nm,1.8s						
V53A	Saluda	24.77	8	P	P	00 05 21.7	-0.3
	baz=189						
W39A	Magazine	24.89	346	P	P	00 05 22.6	-0.4
	baz=163						
CLTN	Cedars of Leba	24.94	1	*e*P	P	00 05 23.8	+0.4
	2.7nm,0.8s						
GNAR	Gosnell	24.99	354	*e*P	P	00 05 23.4	-0.5
	68nm,0.7s						
WVT	Waverly	25.00	358	*e*P	P	00 05 22.9	-1.0
	15nm,1.6s						
V54A	Nebo	25.00	9	P	P	00 05 23.9	-0.1
	baz=191						
ANWB	Willy Bob	25.01	72	*e*P	P	00 05 22.1	-2.1
	109nm,1.7s						
U47A	Clarksville	25.29	359	P	P	00 05 26.2	-0.3
	baz=178						
U50A	Jamestown	25.32	4	P	P	00 05 26.5	-0.3
	baz=184						
U51A	La Follette	25.34	5	P	P	00 05 26.6	-0.5
	baz=186						
U49A	Red Boiling Sp	25.37	2	P	P	00 05 27.2	-0.2
	baz=182						
U53A	Fall Branch	25.49	8	P	P	00 05 28.1	-0.3
	baz=189						
V58A	Windy Hill, Pi	25.59	14	P	P	00 05 29.2	0.0
	baz=197						
W61A	Ground Anchor	25.60	19	P	P	00 05 29.3	-0.1
	baz=202						
U54A	Nelsons Funny	25.75	9	*e*P	P	00 05 30.0	-0.9
	26nm,1.4s						
U40A	Yellville	25.81	349	P	P	00 05 30.3	-1.0
	baz=166,SNR=8.5						
T47A	Sharon Grove	25.84	359	P	P	00 05 30.5	-1.0
	baz=179						
T51A	Gray	25.93	5	P	P	00 05 32.2	-0.2
	baz=186						
T49A	Edmonton	25.97	2	P	P	00 05 32.8	+0.1
	baz=182						
WMOK	Wichita Mounta	26.03	337	*e*P	P	00 05 33.7	+0.3
	6.6nm,0.9s						
WMOK	Wichita Mounta	26.03	337	P	P	00 05 33.4	0.0
	baz=152,SNR=8.9						
U57A	Blanch	26.14	14	P	P	00 05 34.2	-0.1
	baz=196						
T54A	Tazewell	26.32	9	P	P	00 05 35.5	-0.5
	baz=191						
S49A	Springfield	26.66	3	P	P	00 05 38.6	-0.4
	baz=183						
U61A	Possum Corner	26.84	19	P	P	00 05 39.9	-0.6
	baz=203						
WCI	Wyandotte Cave	27.07	1	*e*P	P	00 05 41.8	-0.8
	9.1nm,0.8s						
WCI	Wyandotte Cave	27.07	1	P	P	00 05 41.9	-0.8
	baz=181						
R47A	Wooly Knot Far	27.14	0	P	P	00 05 42.4	-0.9
	baz=180						
MSTX	Muleshoe	27.14	330	P	P	00 05 43.1	-0.4
	baz=143						
R49A	Shelbyville	27.17	3	*e*P	P	00 05 42.7	-0.8
	6.0nm,0.8s						
R49A	Shelbyville	27.17	3	P	P	00 05 43.3	-0.3
	baz=183						
S55A	Lewisburg	27.19	11	P	P	00 05 44.2	+0.3
	baz=193						
CCM	Cathedral Cave	27.20	352	*e*P	P	00 05 42.2	-1.6
	5.0nm,0.9s						
CCM	Cathedral Cave	27.20	352	P	P	00 05 42.7	-1.1
	baz=170						
R50A	Paris	27.21	4	*e*P	P	00 05 42.5	-1.4
	6.0nm,0.9s						
R50A	Paris	27.21	4	P	P	00 05 43.3	-0.6
	baz=185						
R54A	Victor	27.50	10	P	P	00 05 46.5	-0.1
	baz=192						
R55A	Marlinton	27.76	11	P	P	00 05 48.4	-0.5
	baz=194						
Q45A	Warren Harvey,	27.77	358	P	P	00 05 48.8	0.0
	baz=177						
Q47A	Bedord North L	27.78	0	P	P	00 05 48.0	-1.0
	baz=180,SNR=5.6						
Q48A	North Vernon	27.79	2	P	P	00 05 48.6	-0.4
	baz=182						
Q51A	Peebles	28.03	6	*e*P	P	00 05 50.8	-0.4
	12nm,0.9s						
Q51A	Peebles	28.03	6	P	P	00 05 50.9	-0.4
	baz=187						
Q53A	Leroy	28.08	9	P	P	00 05 51.7	0.0
	baz=191						
Q52A	Bidwell	28.09	7	P	P	00 05 51.9	+0.1
	baz=189						
R57A	Stanardsville	28.11	14	P	P	00 05 51.8	-0.2
	baz=197						
Q54A	Coxs Mills	28.31	10	*e*P	P	00 05 53.2	-0.6
	60nm,2.0s						
Q54A	Coxs Mills	28.31	10	P	P	00 05 53.4	-0.4
	baz=192						
P48A	Milroy	28.32	2	P	P	00 05 53.2	-0.7
	baz=182						
P47A	Martinsville	28.33	1	P	P	00 05 53.1	-0.8
	baz=181						
P49A	Miami Univ. Ec	28.43	3	P	P	00 05 53.9	-0.9
	baz=184						
Q55A	Buckhannon	28.46	11	P	P	00 05 54.3	-0.8
	baz=194						
P43A	Skaggs, Pawnee	28.59	355	P	P	00 05 55.5	-0.7
	baz=174						
Q56A	Snyder Ridge,	28.68	12	P	P	00 05 56.6	-0.4
	baz=195						
P53A	Whipple	28.72	9	*e*P	P	00 05 57.8	+0.4
	11nm,0.9s						
P53A	Whipple	28.72	9	P	P	00 05 57.0	-0.3
	baz=191						
P52A	Corning	28.76	7	P	P	00 05 57.7	-0.1
	baz=189						
Q58A	Fox Den Farm,	28.93	15	P	P	00 05 58.7	-0.5
	baz=198						
PTGA	Pitinga	29.04	112	LR	LR	00 18 42.4	
	comp=Z,68nm,21.1s,baz=276,slow=39						
319A	Douglas	29.08	318	*e*PcP	PcP	00 09 08.2	-0.3
O49A	Covington	29.10	4	P	P	00 06 00.2	-0.6
	baz=185						
O50A	Cable	29.12	5	P	P	00 05 59.8	-1.1
	baz=186						
O48A	Farmland	29.13	2	P	P	00 05 59.9	-1.1
	baz=183						
MCWV	Mont Chateau	29.14	11	P	P	00 05 60.0	-1.2
	baz=194						
P56A	Dayton Farm, R	29.20	13	P	P	00 06 01.4	-0.2
	baz=196						
SFIN	Lafayette	29.22	359	P	P	00 06 01.2	-0.6
	baz=179						
O52A	Adamsville	29.28	8	*e*P	P	00 06 01.0	-1.3
	12nm,0.8s						
O52A	Adamsville	29.28	8	P	P	00 06 01.9	-0.4
	baz=190						
KSU1	Kansas State U	29.30	344	P	P	00 06 02.2	-0.4
	baz=160						
P57A	Homestead Farm	29.36	14	P	P	00 06 02.5	-0.5
	baz=198						
HDIL	Hopedale	29.48	356	P	P	00 06 03.4	-0.8
	baz=175						
O53A	New Philadelph	29.49	9	P	P	00 06 03.7	-0.6
	baz=191,SNR=5.1						
ANMO	Albuquerque	29.82	326	P	P	00 06 07.3	-0.2
	0.7nm,0.6s,baz=137,slow=14,SNR=3.6						
ANMO	Albuquerque	29.82	326	*e*P	P	00 06 07.3	-0.2
	5.2nm,1.8s						
ANMO	Albuquerque	29.82	326	P	P	00 06 08.1	+0.6
	baz=138						
N49A	Columbus Grove	29.84	4	P	P	00 06 06.3	-1.0
	baz=185						
N52A	McGinn's Farm,	29.98	8	P	P	00 06 08.3	-0.3
	baz=190						
O56A	Blue Knob Stat	29.99	13	*e*P	P	00 06 08.0	-0.7
	33nm,1.8s						
O56A	Blue Knob Stat	29.99	13	P	P	00 06 08.7	0.0
	baz=196						
CBKS	Cedar Bluff	30.00	339	P	P	00 06 08.0	-0.8
	baz=154						
N51A	Ashland	30.00	7	P	P	00 06 08.5	-0.3
	baz=188						
N40A	Mertquake, Sal	30.03	353	P	P	00 06 07.9	-1.1
	baz=170						
N53A	Lisbon	30.09	9	P	P	00 06 09.6	0.0
	baz=191						
P60A	Greenville	30.29	17	P	P	00 06 10.6	-0.7
	baz=202						
N54A	Moraine State	30.38	10	P	P	00 06 12.0	-0.1
	baz=193						
M49A	Liberty Center	30.41	4	P	P	00 06 11.9	-0.4
	baz=185						
SSPA	Standing Stone	30.49	13	*e*P	P	00 06 12.6	-0.5
	5.5nm,0.7s						
SSPA	Standing Stone	30.49	13	P	P	00 06 13.0	-0.1
	baz=197						
O59A	Robesonia	30.60	16	P	P	00 06 13.5	-0.6
	baz=200						
N56A	West Decatur	30.67	13	P	P	00 06 14.1	-0.5
	baz=196,SNR=5.0						
N57A	Milroy	30.68	14	P	P	00 06 14.3	-0.4
	baz=198						
M53A	WI Miller and	30.74	9	P	P	00 06 14.9	-0.3
	baz=192						
M52A	Chesterland	30.74	8	P	P	00 06 13.6	-1.7
	baz=190						
L48A	N Adams	30.85	3	P	P	00 06 15.1	-1.1
	baz=184						
L46A	Eue Claire	30.85	1	P	P	00 06 14.6	-1.6
	baz=181						
L42A	Oliver, Polo	30.95	356	*e*P	P	00 06 15.5	-1.6
	13nm,0.7s						
L42A	Oliver, Polo	30.95	356	P	P	00 06 15.4	-1.6
	baz=174						
N58A	Sunbury	30.96	15	P	P	00 06 17.1	-0.1
	baz=199						
M54A	Oil Creek Stat	30.97	10	*e*P	P	00 06 17.2	-0.2
	6.0nm,0.8s						
M54A	Oil Creek Stat	30.97	10	P	P	00 06 16.7	-0.6
	baz=193						
L44A	Lake County Fo	31.03	358	P	P	00 06 16.0	-1.8
	baz=178						
L40A	Anamosa	31.15	353	P	P	00 06 17.7	-1.2
	baz=171						
M56A	Emporium	31.23	12	P	P	00 06 19.0	-0.6
	baz=196						
N59A	State Game Lan	31.28	16	*e*P	P	00 06 19.7	-0.3
	45nm,1.9s						
N59A	State Game Lan	31.28	16	P	P	00 06 19.3	-0.7
	baz=201						
L53A	Girard	31.31	9	P	P	00 06 19.1	-1.1
	baz=192						
ERPA	Erie	31.51	10	P	P	00 06 20.9	-1.1
	baz=192						
K47A	Vermontville	31.54	2	P	P	00 06 21.0	-1.3
	baz=183						
K48A	Perry	31.72	4	P	P	00 06 22.9	-1.0
	baz=185						
L55A	Hinsdale	31.86	12	P	P	00 06 23.6	-1.6
	baz=195						
JFWS	Jewell Farm	31.90	355	*e*P	P	00 06 23.8	-1.7
	6.8nm,0.8s						
JFWS	Jewell Farm	31.90	355	P	P	00 06 24.2	-1.2
	baz=173						
M59A	Waymart	31.95	16	P	P	00 06 25.0	-0.9
	baz=201						
S22A	4UR Ranch, Cre	32.14	329	P	P	00 06 28.4	+0.4
	baz=140						
L58A	Harry Jones Me	32.31	15	P	P	00 06 28.5	-0.6
	baz=200						
BINY	Binghamton	32.42	15	*e*P	P	00 06 29.6	-0.5
	40nm,1.9s						
BINY	Binghamton	32.42	15	P	P	00 06 29.3	-0.8
	baz=200						
MVCO	Mesa Verde	32.61	327	*e*P	P	00 06 31.9	-0.2
	3.2nm,1.1s						
I42A	Draeger Farm,	32.78	357	P	P	00 06 31.9	-1.2
	baz=176						
J54A	Appleton	32.87	11	*e*P	P	00 06 31.1	-2.7
	12nm,0.7s						
I47A	Gladwin	32.91	3	P	P	00 06 32.6	-1.7
	baz=184						
ACTO	Acton	32.95	9	P	P	00 06 33.2	-1.5
	baz=192						
I41A	Arkdale	33.01	356	P	P	00 06 34.3	-0.9
	baz=174						
I51A	Listowel	33.01	8	P	P	00 06 33.8	-1.3
	baz=190						
J55A	Hilton	33.02	12	*e*P	P	00 06 33.7	-1.5
	10nm,0.8s						
BWLO	Walkerton	33.30	7	P	P	00 06 36.3	-1.4
	baz=190						
H43A	Windswept, Lux	33.32	359	*e*P	P	00 06 35.5	-2.3
	7.4nm,0.8s						
I52A	Shelburne	33.39	9	P	P	00 06 37.4	-1.0
	baz=192						
H46A	Fife Lake	33.40	2	P	P	00 06 36.8	-1.8
	baz=182						
DRWO	Darlington Wes	33.43	10	P	P	00 06 37.9	-0.9
	baz=194						
WLVO	Wesleyville	33.54	11	P	P	00 06 38.6	-1.1
	baz=195						
H48A	Harrisville	33.66	4	P	P	00 06 38.9	-1.9
	baz=186						
ECSD	EROS Data Cent	33.68	347	P	P	00 06 39.3	-1.7
	baz=162						
GLMI	Grayling	33.71	3	*e*P	P	00 06 38.8	-2.4

	18nm,0.6s						
GLMI	Grayling	33.71	3	P	P	00 06 39.4	-1.8
	baz=184						
BMRO	Meriville Lake	33.77	7	P	P	00 06 40.5	-1.2
	baz=190						
G45A	Suttons Bay	33.89	1	eP	P	00 06 40.9	-1.9
	17nm,0.8s						
I55A	Frankford	33.96	12	P	P	00 06 42.7	-0.7
	baz=196						
G40A	Rib Lake	34.24	356	P	P	00 06 43.9	-1.9
	baz=174,SNR=5.4						
G39A	Holcombe	34.34	354	P	P	00 06 44.7	-2.0
	baz=172,SNR=6.9						
TOBO	Tobermory, Bru	34.35	6	P	P	00 06 45.5	-1.3
	baz=189						
H55A	Tweed	34.38	12	P	P	00 06 45.0	-2.1
	baz=197						
SPMN	Marine on St.	34.46	352	P	P	00 06 46.0	-1.8
	baz=169						
F45A	CMU Biological	34.54	1	P	P	00 06 47.2	-1.2
	baz=182						
H56A	Elgin	34.62	13	P	P	00 06 48.6	-0.5
	baz=198						
G53A	Haliburton	34.66	10	P	P	00 06 48.8	-0.7
	baz=194						
F49A	Sandfield	34.83	6	P	P	00 06 49.1	-1.9
	baz=188						
F48A	Evansville	34.84	5	P	P	00 06 49.5	-1.5
	baz=187						
BUKO	Buck Lake	34.85	9	P	P	00 06 49.5	-1.6
	baz=192						
PLVO	Plevna	34.87	12	eP	P	00 06 50.7	-0.7
	5.5nm,1.1s						
PLVO	Plevna	34.87	12	P	P	00 06 50.5	-0.8
	baz=197						
LONY	Lake Ozonia	35.05	15	eP	P	00 06 50.9	-2.0
	14nm,1.5s						
LONY	Lake Ozonia	35.05	15	P	P	00 06 51.5	-1.4
	baz=201						
G55A	Calabogie	35.15	12	P	P	00 06 52.3	-1.4
	baz=197						
F52A	Sundridge	35.20	9	P	P	00 06 52.9	-1.3
	baz=192						
E43A	Lone Tree Farm	35.21	360	P	P	00 06 52.4	-1.9
	baz=179,SNR=5.5						
E47A	Iron Bridge	35.41	4	P	P	00 06 54.2	-1.7
	baz=186						
E48A	Lockeyer	35.53	5	P	P	00 06 55.5	-1.4
	baz=188						
ALGO	Algonquin Park	35.57	10	P	P	00 06 56.2	-1.0
	baz=195						
ORIO	Orleans, Innes	35.60	14	P	P	00 06 55.7	-1.9
	baz=199						
E38A	The Farm, Brul	35.68	354	P	P	00 06 56.5	-1.8
	baz=172						
F55A	Otter Lake	35.78	12	P	P	00 06 57.5	-1.6
	baz=197						
E52A	Mattawa	35.78	10	P	P	00 06 57.3	-1.8
	baz=194						
E51A	G1948 Merrick	35.90	9	P	P	00 06 59.5	-0.7
	baz=192						
D47A	Chapleau	36.02	4	P	P	00 06 59.2	-2.0
	baz=186						
E53A	Dumoine, Ponti	36.05	11	P	P	00 07 00.1	-1.3
	baz=195						
E54A	Lac Daplat, Po	36.19	11	P	P	00 07 01.4	-1.2
	baz=196						
D48A	Paudash Townsh	36.25	6	P	P	00 07 01.5	-1.7
	baz=188						
D49A	Beulah Townshi	36.39	6	P	P	00 07 03.0	-1.3
	baz=189						
D52A	ZEK Kipawa Sen	36.50	10	P	P	00 07 04.1	-1.2
	baz=194						
D53A	Lac Vacive, Po	36.72	10	P	P	00 07 05.8	-1.3
	baz=195						
C40A	Isle Royale Na	36.81	357	P	P	00 07 06.3	-1.6
	baz=176						
D54A	Lac Fusel, La	36.98	11	P	P	00 07 07.7	-1.7
	baz=196						
EYMN	Ely	37.00	355	P	P	00 07 07.3	-2.3
	baz=172						
PD31	Pinedale Array	37.35	332	ePcP	PcP	00 09 32.4	+0.8
PDAR	Pinedale Array	37.35	332	P	P	00 07 11.3	-1.6
	0.4nm,0.6s,baz=123,slow=11,SNR=6.2						
PDAR				PcP	PcP	00 09 32.4	+0.8
	0.2nm,0.4s,baz=133,slow=4.0,SNR=4.1						
HWUT	Hardware Ranch	37.45	329	ePcP	PcP	00 09 33.3	+1.4
AGMN	Agassiz Nation	37.92	350	P	P	00 07 15.6	-1.8
	baz=165						
LSQQ	Lebel-sur-Quev	38.76	10	P	P	00 07 22.8	-1.5
	baz=195						
NV01	Mina Array Sit	39.24	319	eP	P	00 07 30.2	+1.4
NV01				ePcP	PcP	00 09 39.8	+2.2
NVAR	Mina Array Bea	39.24	319	P	P	00 07 30.2	+1.4
	0.5nm,0.8s,baz=125,slow=7.4,SNR=4.7						
NVAR				PcP	PcP	00 09 39.8	+2.2
	2.5nm,0.7s,baz=134,slow=3.6,SNR=20						
MATQ	Matagami	39.32	9	P	P	00 07 27.7	-1.4
	baz=194						
ULM	Lac du Bonnet	39.82	351	P	P	00 07 30.2	-2.9
	7.3nm,0.8s,baz=158,slow=6.9,SNR=7.3						
HLID	Hailey	40.31	329	P	P	00 07 38.3	+0.7
	baz=135						
RPN	Rapa Nui	43.84	210	P	P	00 08 14.3	+8.1
	50nm,1.0s,baz=2.4,slow=2.3,SNR=3.6						
BDFB	Brasilia	46.59	124	P	P	00 08 27.7	-0.8
	1.3nm,0.5s,baz=308,slow=11,SNR=4.3						
CPUP	Villa Florida	46.86	143	P	P	00 08 31.4	+1.1
	1.2nm,0.7s,baz=353,slow=7.1,SNR=3.5						
FRB	Frobisher Bay	54.17	10	LR	LR	00 31 20.1	
	comp=Z,31nm,20.3s,baz=206,slow=35						
DOT	Dot Lake	66.01	336	eP	P	00 10 46.3	+0.1
	2.4nm,1.1s						
ILAR	Eielson Array	67.59	336	P	P	00 10 54.5	-1.8
	0.8nm,0.9s,baz=111,slow=5.1,SNR=7.2						
RND	Reindeer	67.89	335	eP	P	00 10 58.5	+0.3
	3.4nm,0.6s						
BPAW	Bear Paw Mtn.	69.02	335	eP	P	00 11 04.8	-0.4
	1.7nm,0.9s						
OJC	Ojcow	91.91	38	eP	P	00 13 08.0	-0.3
	3.9nm,1.1s						
BLY	Banja Luka	91.97	44	eP	P	00 13 07.6	-1.1
	6.5nm,1.2s						
SONA0	Songino Array	120.24	350	ePKPdf	PKiKP	00 18 51.6	+0.3
SONM	Songino Array	120.24	350	PKP	PKiKP	00 18 51.6	+0.3
	0.6nm,0.9s,baz=14,slow=6.4,SNR=3.6						
KSRS	Korea Array	121.84	328	PKP	PKiKP	00 18 55.0	+0.5
	1.7nm,0.7s,baz=4.6,slow=1.4,SNR=7.7						
KSH	Kashi	127.18	17	ePKP	PKiKP	00 19 08.5	+3.2
KSH				PKS	PKSdf	00 22 43.5	+2.0
LZH	Lanzhou	132.08	348	ePKP	PKPdf	00 19 13.4	-0.8
LZH				pPKP	sPKPdf	00 19 29.0	+1.2
LZH				sPKP		00 19 35.3	
LZH				LR	LR		
	comp=N,42nm,17.8s						
LZH				LR	LR		
	comp=E,47nm,18.1s						
LZH				LR	LR		
	comp=Z,56nm,20.0s						
ASAR	Alice Springs	139.40	247	PKhKP	PKPpre	00 19 27.6	
	comp=Z,0.4nm,0.7s,baz=66,slow=2.2,SNR=4.5						
ASAR				PKP	PKiKP	00 19 31.6	+1.4
	comp=Z,0.4nm,0.7s,baz=88,slow=2.1,SNR=4.8						
WR1	Warramunga Arr	139.56	252	ePKPdf	PKiKP	00 19 29.5	-1.2
WRA	Warramunga Arr	139.56	252	PKP	PKiKP	00 19 29.5	-1.2
	comp=Z,0.8nm,0.8s,baz=98,slow=1.7,SNR=5.0						
CMAR	Chiang Mai Arr	150.16	349	PKP	PKPdf	00 19 48.1	+1.5
	comp=Z,1.5nm,0.7s,baz=323,slow=2.8,SNR=3.4						
CMAR				PKPbc	PKiKP	00 19 52.8	+0.3
	comp=Z,0.6nm,0.4s,baz=342,slow=3.5,SNR=6.7						

ISCJB **14** *00:02:00.2±0.2, 36°.41N±0°.02×71°.12E±0°.03, h200^{km}, mb4.2/89, Error ellipse: s-maj=3.6km s-min=2.6km az=44.9*

IDC **14** *00:02:00.4±2.1, 36°.33N×71°.15E, h190^{km}±18^{km}, mb3.6/25, mb1 3.8/31, mb1mx3.6/57, mbtmp4.2/31, Error ellipse: s-maj=13.8km s-min=8.5km az=167.0*

MOS **14** *00:02:01.6±0.8, 36°.45N×71°.16E, h216^{km}, mb4.1/35, Error ellipse: s-maj=7.7km s-min=4.6km az=90.5*

BJI **14** *00:02:02.8±0.0, 36°.66N×71°.13E, h220^{km}, mb4.4/18, mB4.6/14*

NEIC **14** *00:02:02.6±1.5, 36°.48N×71°.15E, h217^{km}±6^{km}, mb4.4/57, Error ellipse: s-maj=12.4km s-min=2.3km az=85.0*

NNC **14** *00:02:06.3±3.8, 36°.87N×71°.05E, h204^{km}±29^{km}, mb3.6, mpv5.0, Error ellipse: s-maj=36.2km s-min=21.1km az=32.0*

ISC 14 00:02:01.4±0.3, **36°.47N**±0°.04×**71°.16E**±0°.04, **h200^{km}, n235,** σ**1^{s}45**/248, **mb4.2**/89, **13C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.59	223	ePn	Pn	00 02 48.2	+1.7
KBL	Kabul	2.59	223	ePN	Pn	00 02 48.3	+1.7
GAR	Garm	2.62	345	ePn	Pn	00 02 48.6	+1.9
GAR	Garm	2.62	345	ePN	Pn	00 02 48.6	+1.9
CEP	Cherat	2.71	167	P	Pn	00 02 49.7	+1.8
CEP				S	Sn	00 03 25.0	+0.9
CHCP	Chirah Chowk	3.29	148	P	Pn	00 02 56.7	+2.1
NIL	Nilore	3.29	148	ePn	Pn	00 02 56.9	+2.3
NIL	Nilore	3.29	148	ePN	Pn	00 02 56.9	+2.3
BTK	Batken	3.59	356	ePn	Pn	00 03 00.9	+2.7
BTK	Batken	3.59	356	ePN	Pn	00 03 00.9	+2.7
THW	Thamme Wali	3.69	172	P	Pn	00 03 01.0	+1.5
SARP	Sargodha	4.70	164	P	Pn	00 03 12.8	+0.7
KSH	Kashi	4.87	50	P	Pn	00 03 10.9	-3.3
KSH				S	Sn	00 04 02.5	-9.1
KSH				smax	smax		
	comp=N,640nm,0.4s						
KSH				smax	smax		
	comp=E,390nm,0.5s						
ARSB	Arslanbob	5.05	16	ePn	Pn	00 03 17.6	+1.0
IUG	Iuzhnay	5.74	352	Pg	Pn	00 03 27.1	+1.8
	75nm,0.4s						
DHRM	DHARAMSHALA	5.98	133	eP	Pn	00 03 29.6	+1.0
DHRM				eS	Sn	00 04 35.3	-2.2
DHRM				IAML		00 04 38.1	
	comp=N,996nm,0.3s						
DHRM				IAML		00 04 38.4	
	comp=E,2µm,0.4s						
NRN	Naryn	6.23	36	ePn	Pn	00 03 31.6	-0.2
NRN	Naryn	6.23	36	ePN	Pn	00 03 31.7	-0.2
UCH	Uchtor	6.31	23	P	Pn	00 03 34.2	+1.2
	SNR=141						
KZA	Kyzart	6.44	28	P	Pn	00 03 35.5	+0.9
	SNR=30						
MRKS	Merke	6.47	14	Lg	Lg	00 04 45.3	
	comp=E,77nm,0.5s						
EKS2	Erkin-Say	6.51	17	P	Pn	00 03 36.7	+1.4
	SNR=106						
KK31	Karatay Array	6.65	356	ePn	Pn	00 03 38.0	+1.0
KK31	Karatay Array	6.65	356	⇑P	Pn	00 03 37.8	+0.8
	comp=E,36nm,0.3s						
KK31				⇑S	Sn	00 04 46.9	-5.9
	comp=E,48nm,0.6s						
KK31	Karatay Array	6.65	356	PN	Pn	00 03 37.8	+0.8
KK31				pmax	pmax		
	comp=Z,36nm,0.3s						
KKAR	Karatay Array	6.65	356	ePn	Pn	00 03 38.0	+1.0
KKAR	Karatay Array	6.65	356	ePN	Pn	00 03 38.0	+1.0
BHK	Bhakra	6.67	138	ex	Pn	00 03 38.0	+0.7
BHK				eS	Sn	00 04 49.8	-3.6
AAK	Ala-Archa	6.68	22	P	Pn	00 03 38.8	+1.3
	comp=Z,46nm,0.3s,baz=193,slow=5.9,SNR=267						
AAK				S	Sn	00 04 54.3	+0.6
	comp=Z,2.7nm,0.3s,baz=143,slow=20,SNR=16						
AAK	Ala-Archa	6.68	22	ePn	Pn	00 03 39.1	+1.6
AAK	Ala-Archa	6.68	22	⇓P	Pn	00 03 38.8	+1.3
	comp=Z,66nm,0.4s						
AAK				⇑S	Sn	00 04 53.6	-0.2
	comp=Z,36nm,0.7s						
AAK	Ala-Archa	6.68	22	PN	Pn	00 03 38.7	+1.2
AAK				S	Sn	00 04 53.5	-0.2
AAK				pmax	pmax		
	comp=Z,66nm,0.4s						
AAK				smax	smax		
	comp=N,36nm,0.7s						
AAK	Ala-Archa	6.68	22	P	Pn	00 03 38.9	+1.3
	SNR=135						
KBK	Karagaybulak	6.84	24	P	Pn	00 03 41.1	+1.5
	SNR=88						
FRU1	Bishkek	6.88	22	ePn	Pn	00 03 41.5	+1.5
FRU1	Bishkek	6.88	22	ePN	Pn	00 03 41.5	+1.5
ULHL	Ulahol	6.98	33	P	Pn	00 03 42.2	+0.7
	SNR=40						
BOOM	Boomskoye usch	7.06	30	ePn	Pn	00 03 43.3	+0.9
BOOM	Boomskoye usch	7.06	30	ePN	Pn	00 03 43.3	+0.9
CHMS	Chumysh	7.08	22	P	Pn	00 03 43.9	+1.3
	SNR=60						
USP	Ospenovka	7.26	20	P	Pn	00 03 46.0	+1.0
	SNR=26						
TKM2	Tokmak 2	7.29	27	⇑P	Pn	00 03 46.9	+1.3
	comp=N,112nm,0.8s						
TKM2	Tokmak 2	7.29	27	P	Pn	00 03 46.7	+1.2
	SNR=194						
SMLA	Simla	7.30	135	eS	Sn	00 05 03.7	-4.6
SMLA				IAML		00 05 08.8	
	comp=N,392nm,0.2s						
SMLA				IAML		00 05 10.2	
	comp=E,327nm,0.4s						
KDJ	Kajisay	7.33	38	ePn	Pn	00 03 46.8	+0.8
KDJ	Kajisay	7.33	38	ePN	Pn	00 03 46.8	+0.8
PRZ	Przheval'sk	8.21	41	ePn	Pn	00 03 58.9	+1.5
PRZ	Przheval'sk	8.21	41	ePN	Pn	00 03 58.9	+1.5
KTBS	Karatobe	8.38	29	P	Pn	00 03 59.5	-0.1
KUU	Kurty	8.41	26	P	Pn	00 03 59.5	-0.4
DDI	Dehra Dun	8.41	135	eP	Pn	00 04 00.5	+0.4
DDI				eS	Sn	00 05 29.7	-5.0
DDI				IAML		00 05 35.9	
	comp=N,410nm,0.2s						
DDI				IAML		00 05 37.1	
	comp=E,272nm,0.4s						
JOSI	Joshimath	9.16	128	eP	Pn	00 04 10.1	+0.1
JOSI				eS	Sn	00 05 49.3	-3.4
JOSI				IAML		00 05 52.0	
	comp=E,212nm,0.5s						
JOSI				IAML		00 05 52.0	
	comp=N,283nm,0.2s						
PDGK	Podgornoye	9.37	40	⇓P	Pn	00 04 12.4	-0.2
	comp=N,10nm,0.7s						
PDGK	Podgornoye	9.37	40	P	Pn	00 04 12.3	-0.2
PDGK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GEYT	Alibeck	10.51	282	P	Pn	00 04 26.0	-1.2
	comp=Z,0.5nm,0.3s,baz=113,slow=11,SNR=6.2						
GEYT				S	Sn	00 06 23.1	-1.5
	comp=Z,0.8nm,0.3s,baz=89,slow=10,SNR=3.6						
GYA0B	ALIBECK ARRAY	10.51	282	ePn	Pn	00 04 28.1	+0.9
OTUK	Ortayu	11.80	4	⇑P	Pn	00 04 43.5	-0.1
	comp=Z,17nm,0.7s						
OTUK	Ortayu	11.80	4	P	Pn	00 04 43.5	-0.1
OTUK				pmax	pmax		
	comp=Z,17nm,0.7s						
PYUN	Piuthan	13.02	127	eP	Pn	00 04 58.2	-1.2
	comp=Z,23nm,0.2s						
MAKZ	Makanchi	13.11	35	ePn	Pn	00 05 00.0	0.0
MAKZ	Makanchi	13.11	35	⇓P	Pn	00 05 00.2	+0.1
	comp=Z,7.0nm,0.5s						
MAKZ	Makanchi	13.11	35	P	Pn	00 05 00.1	0.0
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MKAR	Makanchi Array	13.24	35	P	Pn	00 05 01.6	-0.2
	comp=Z,0.8nm,0.3s,baz=219,slow=14,SNR=35						
DANN	Dangsing	13.36	124	eP	Pn	00 05 04.2	+0.5
	comp=Z,45nm,0.4s						
KOLN	Koldanda	13.64	126	eP	Pn	00 05 06.6	-0.5
	comp=Z,38nm,0.5s						
GKN	Gorkha	14.18	123	eP	Pn	00 05 13.6	-0.1
BHPL	Bhopal	14.25	156	eP	P	00 05 18.4	+2.3
WMQ	Urumqi	14.61	55	eP	P	00 05 19.6	-0.3
WMQ				LR	LR		
	comp=Z,260nm,22.1s						
WMQ				LR	LR		
	comp=Z,65nm,25.5s						
WMQ				LR	LR		
	comp=Z,43nm,23.3s						
DMN	Daman	14.74	123	eP	Pn	00 05 20.8	0.0
	comp=Z,16nm,0.2s						
KKN	Kakani	14.75	122	eP	Pn	00 05 20.8	0.0
	comp=Z,42nm,0.5s						
PKIN	Phulchoki	14.96	122	eP	Pn	00 05 23.4	-0.1
	comp=Z,31nm,0.4s						
PKI	Pulchoki	14.98	122	eP	Pn	00 05 23.4	-0.3
	comp=Z,30nm,0.5s						
GUN	Gumba	15.09	120	eP	Pn	00 05 25.1	0.0
	comp=Z,16nm,0.3s						
KURBB	Kurchatov Arra	15.11	18	P	Pn	00 05 24.5	-0.2
	comp=Z,0.3nm,0.3s,baz=211,slow=11,SNR=12						
KURBB	Kurchatov Arra	15.11	18	⇑P	Pn	00 05 23.8	-0.9
	comp=Z,3.7nm,0.5s						
AB31	Akbulak array	15.18	331	P	Pn	00 05 25.6	0.0
	comp=Z,9.6nm,0.6s,baz=144,slow=11,SNR=184						
AB31				⇑S	S	00 08 05.9	-8.0
	comp=Z,5.4nm,0.8s						
AB31	Akbulak array	15.18	331	eP	Pn	00 05 25.5	0.0
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ABKAR	Akbulak array	15.18	331	eP	P	00 05 25.9	-0.1
	comp=Z,14nm,0.6s						
KURK	Kurchatov	15.22	18	i P	Pn	00 05 25.6	-0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JIRN	Jiri	15.46	120	eP	P	00 05 30.0	+0.2
	comp=Z,56nm,0.4s						
BVAR	Borovoye Array	16.57	358	P	Pn	00 05 42.9	+0.6
	comp=Z,2.3nm,0.3s,baz=167,slow=12,SNR=31						
BRVK	Borovoye	16.60	358	eP	P	00 05 42.2	+0.5
	comp=Z,8.8nm,0.6s						
BRVK	Borovoye	16.60	358	⇑P	Pn	00 05 43.6	+0.9
	comp=Z,5.1nm,0.5s						
BRVK	Borovoye	16.60	358	i P	Pn	00 05 44.9	+2.2
AKTO	Aktyubinsk	16.87	330	P	Pn	00 05 46.7	+0.7
	comp=Z,2.0nm,0.3s,baz=137,slow=10,SNR=33						
AKTO				S	S	00 08 49.1	-1.2
	comp=Z,0.2nm,0.3s,baz=135,slow=19,SNR=3.9						
AKTO	Aktyubinsk	16.87	330	⇓P	Pn	00 05 46.5	+0.5
	comp=Z,6.8nm,0.5s						
AKTO				⇓S	S	00 08 47.2	-3.2
	comp=Z,6.4nm,0.9s						
AKTO	Aktyubinsk	16.87	330	P	Pn	00 05 46.4	+0.5
AKTO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DGZ	Jazzator, Alta	17.73	37	i P	Pn	00 05 56.3	+0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOK	Bokaro	17.91	131	ex	P	00 05 52.6	-3.7
ZAA0	Zalesovo Array	19.89	24	eP	P	00 06 18.0	+0.7
	comp=Z,17nm,1.4s						
ZAA0	Zalesovo Array	19.89	24	⇑P	P	00 06 18.5	+1.2
	comp=Z,0.5nm,0.5s						
ZALV	Zalesovo Beam	19.89	24	P	P	00 06 18.6	+1.3
	comp=Z,4.1nm,0.4s,baz=218,slow=11,SNR=20						
ZALV				S	S	00 09 50.0	0.0
	comp=Z,1.6nm,0.7s,baz=212,slow=21,SNR=3.5						
GNI	Garni	21.03	288	eP	P	00 06 29.2	-0.6
	comp=Z,41nm,1.8s						
GNI	Garni	21.03	288	eP	P	00 06 29.2	-0.6
GNI				pmax	pmax		
	comp=Z,41nm,1.8s						
ARU	Arti	21.71	341	P	P	00 06 37.8	+1.3
	comp=Z,0.8nm,0.3s,baz=148,slow=11,SNR=9.8						
ARU	Arti	21.71	341	eP	P	00 06 36.0	-0.4
	comp=Z,6.6nm,1.0s						
ARU	Arti	21.71	341	c iP	P	00 06 37.7	+1.3
ARU						00 07 19.7	
ARU				S	S	00 10 23.7	+1.1
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	Khabaz	22.73	297	P	P	00 06 46.0	-0.2
	comp=Z,1.7nm,0.7s,baz=115,slow=10.0,SNR=4.3						
GTA	Gaotai	22.75	74	eP	P	00 06 49.4	+2.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,67nm,5.7s						
GTA				LR	LR		
	comp=Z,55nm,16.5s						
GTA				LR	LR		
	comp=Z,82nm,14.3s						
GTA				LR	LR		
	comp=Z,80nm,17.1s						
SHA1	Shidzhatmaz	22.91	297	P	P	00 06 49.1	+1.1
KIV	Kislovodsk	22.92	298	eP	P	00 06 44.6	-3.4
	comp=Z,3.5nm,0.6s						
KIV	Kislovodsk	22.92	298	eP	P	00 06 48.9	+0.9
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,40nm,14.0s						
LZH	Lanzhou	26.28	81	⇓P	P	00 07 19.6	+1.0
LZH				pP	pP	00 08 01.3	+1.1
LZH				PP	PnPn	00 08 13.5	+2.7
LZH				sP	sP	00 08 27.3	+3.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,69nm,4.7s						
TLY	Talaya	27.57	46	i P	P	00 07 29.4	-0.3
SONM	Songino Array	28.25	55	P	P	00 07 37.8	+2.0
	comp=Z,0.9nm,0.5s,baz=265,slow=8.8,SNR=8.1						
KMI	Kunming	29.26	104	P	P	00 07 44.3	-0.9
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MMAI	Mount Meron Ar	29.48	274	P	P	00 07 48.3	+1.4
	comp=Z,0.3nm,0.2s,baz=76,slow=14,SNR=2.6						
MMAI				PcP	PcP	00 10 47.8	+0.6
	comp=Z,0.2nm,0.3s,baz=94,slow=6.2,SNR=3.7						
BR131	Keskin Array S	29.57	288	eP	P	00 07 48.1	+0.5
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	29.57	288	P	P	00 07 48.8	+1.1
	comp=Z,1.6nm,0.7s,baz=107,slow=9.1,SNR=17						
BRTR				PcP	PcP	00 10 47.4	0.0
	comp=Z,0.2nm,0.5s,baz=146,slow=3.2,SNR=2.8						
BRTR	Keskin Array B	29.57	288	c eP	P	00 07 49.2	+1.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OBN	Obninsk	30.05	319	i P	P	00 07 51.2	-0.3
OBN				i		00 08 56.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CSS	Mathiatis	30.63	279	eP	P	00 07 56.4	-0.5
	comp=Z,6.5nm,0.9s						
XAN	Xi'an	30.80	83	P	P	00 08 03.6	+5.1
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,140nm,3.8s						
HHC	Hu-ho-hao-te	31.65	70	P	P	00 08 05.8	-0.1
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,78nm,6.0s						
AKASG	Malin Array Be	33.07	309	P	P	00 08 18.1	+0.1
	comp=Z,1.7nm,0.5s,baz=80,slow=6.8,SNR=11						
MLR	Muntele Rosu	34.91	299	P	P	00 08 33.3	-0.8
	comp=Z,3.4nm,0.9s,baz=130,slow=7.3,SNR=11						
MLR	Muntele Rosu	34.91	299	eP	P	00 08 34.4	+0.4
	comp=Z,4.2nm,0.9s						
MLR	Muntele Rosu	34.91	299	⇓iP	P	00 08 36.8	+2.8
ALN	Alexandroupoli	35.20	291	eP	P	00 08 33.4	-3.0
	comp=Z,4.9nm,1.1s						
ALN	Alexandroupoli	35.20	291	eP	P	00 08 33.4	-3.0
ALN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BURAR	Bucovina Array	35.41	303	⇓iP	P	00 08 36.5	-1.8
VOIR		35.54	299	⇓iP	P	00 08 35.8	-3.6
WHN	Wuhan	36.26	87	P	P	00 08 51.3	+5.8
VSU	Vasula	36.29	322	i P	P	00 08 46.4	+1.0
VSU				pmax	pmax		
	comp=Z,23nm,0.9s						
IDI	Anoyia	37.23	282	P	P	00 08 53.9	+0.1
	comp=Z,3.5nm,0.4s,baz=58,slow=9.5,SNR=12						
KOLS	Kolonicke sedl	37.40	305	eP	P	00 08 56.1	+1.1
KOLS	Kolonicke sedl	37.40	305	eP	P	00 08 56.1	+1.1
LVZ	Lovozero	37.54	338	eP	P	00 08 55.4	-0.5
	comp=Z,53nm,1.5s						
LVZ	Lovozero	37.54	338	eP	P	00 08 55.4	-0.5
LVZ				pmax	pmax		
	comp=Z,53nm,1.5s						
FIA1	FINESS Array S	37.58	326	eP	P	00 08 56.4	+0.2
	comp=Z,53nm,1.8s						
FINES	FINESS Array B	37.58	326	P	P	00 08 57.3	+1.1
	comp=Z,5.0nm,0.6s,baz=121,slow=9.2,SNR=70						
FINES	FINESS Array B	37.58	326	i P	P	00 08 57.5	+1.2
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LIT	Litokhoron	38.00	291	eP	P	00 08 59.7	-0.4
	comp=Z,14nm,1.5s						
LIT	Litokhoron	38.00	291	eP	P	00 08 59.7	-0.4
LIT				pmax	pmax		
	comp=Z,14nm,1.5s						
AGG	Agios Georgios	38.33	289	eP	P	00 09 01.8	-1.1
	comp=Z,15nm,1.5s						
AGG	Agios Georgios	38.33	289	eP	P	00 09 01.8	-1.1
AGG				pmax	pmax		

	comp=Z,15nm,1.5s						
PSZ	Piszkesteto	39.00	304	eP	P	00 09 06.7	-1.7
	comp=Z,3.3nm,1.0s						
PSZ	Piszkesteto	39.00	304	eP	P	00 09 06.7	-1.7
PSZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OJC	Ojcow	39.03	307	eP	P	00 09 07.5	-1.0
	comp=Z,3.4nm,1.0s						
OJC	Ojcow	39.03	307	eP	P	00 09 07.5	-1.0
OJC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	39.25	305	eP	P	00 09 10.7	+0.3
LANS	Liptovska Anna	39.25	305	eP	P	00 09 10.7	+0.3
VYHS	Vyhne	39.69	304	eP	P	00 09 20.6	+6.7
VYHS	Vyhne	39.69	304	e	P	00 09 20.6	+6.7
MORC	Moravsky Berou	40.49	306	eP	P	00 09 19.6	-1.0
	comp=Z,2.2nm,0.7s						
MORC	Moravsky Berou	40.49	306	eP	P	00 09 19.6	-1.0
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	41.23	338	P	P	00 09 27.7	+1.5
	comp=Z,3.5nm,0.4s,baz=116,slow=8.1,SNR=76						
ARE0	ARCESS Array S	41.23	338	eP	P	00 09 27.9	+1.6
KTK1	Kautokeino	41.70	336	eP	P	00 09 31.2	+1.1
CONA	Conrad Observa	41.71	304	eP	P	00 09 32.5	+1.9
	comp=Z,3.2nm,1.0s						
PSI	Prapat	42.17	136	eP	P	00 09 34.5	-0.1
	comp=Z,16nm,1.3s						
PSI	Prapat	42.17	136	eP	P	00 09 34.5	-0.1
PSI				pmax	pmax		
	comp=Z,16nm,1.3s						
HAMF	Hammerfest	42.30	339	eP	P	00 09 36.9	+2.0
SOKA	Soboth	42.40	302	eP	P	00 09 37.7	+1.5
	comp=Z,2.6nm,0.8s						
TIP	Timpagrande	42.52	291	eP	P	00 09 36.4	-0.9
	comp=Z,7.6nm,1.3s						
BRG	Berggiesshubel	42.75	308	eP	P	00 09 40.6	+1.9
	comp=Z,3.6nm,0.9s						
BRG	Berggiesshubel	42.75	308	eP	P	00 09 40.7	+1.9
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MOA	Molln	42.78	304	eP	P	00 09 40.4	+1.2
	comp=Z,2.7nm,0.8s						
GERES	GERESS Array B	43.06	305	P	P	00 09 41.4	0.0
	comp=Z,0.2nm,0.3s,baz=81,slow=8.2,SNR=5.4						
CLL	Collm	43.31	309	eP	P	00 09 44.0	+0.7
CLL	Collm	43.31	309	eP	P	00 09 44.0	+0.7
CLL	Collm	43.31	309	eP	P	00 09 44.0	+0.7
TRO	Tromso	43.35	336	eP	P	00 09 44.9	+1.6
MOR8	Moi Rana	43.91	331	eP	P	00 09 48.6	+0.7
YAK	Yakutsk	43.92	35	i P	P	00 09 47.8	-0.1
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
STEI	Steigen	44.06	333	eP	P	00 09 50.4	+1.4
NC405	NORSAR Array S	44.25	323	eP	P	00 09 50.6	0.0
	comp=Z,158nm,1.9s						
NC602	NORSAR Array S	44.30	323	eP	P	00 09 51.2	+0.1
	comp=Z,108nm,1.8s						
NC303	NORSAR Array S	44.43	323	eP	P	00 09 52.2	+0.1
	comp=Z,108nm,1.7s						
NB201	NORSAR Array S	44.45	323	eP	P	00 09 52.2	0.0
	comp=Z,244nm,2.0s						
NB2	NORSAR Subarra	44.48	323	P	P	00 09 52.8	+0.3
	comp=Z,0.9nm,0.4s,baz=99,slow=7.9						
NOA	NORSAR Array B	44.48	323	P	P	00 09 52.9	+0.3
	comp=Z,3.7nm,0.8s,baz=103,slow=7.1,SNR=19						
GRA1	Grafenberg Arr	44.58	307	eP	P	00 09 52.7	-0.8
	comp=Z,9.5nm,1.3s						
GRF	Grafenberg Arr	44.58	307	eP	P	00 09 52.7	-0.8
GRF				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NAO01	NORSAR Array S	44.63	323	eP	P	00 09 53.5	-0.1
	comp=Z,133nm,2.0s						
NAO01	NORSAR Array S	44.63	323	eP	P	00 09 54.2	+0.6
WATA	Walderalm	44.65	303	eP	P	00 09 56.7	+2.5
	comp=Z,0.8nm,0.4s						
NBO00	NORSAR Array S	44.70	323	eP	P	00 09 53.8	-0.4
	comp=Z,168nm,1.9s						
NC204	NORSAR Array S	44.73	323	eP	P	00 09 54.7	+0.2
	comp=Z,98nm,1.6s						
KSRS	Korea Array	44.77	71	P	P	00 09 55.2	+0.2
	comp=Z,1.0nm,0.7s,baz=266,slow=6.9,SNR=5.8						
MOTA	Moosalm	44.97	304	eP	P	00 09 57.0	+0.3
	comp=Z,2.0nm,0.8s						
KLR	Kul'dur	45.06	54	P	P	00 09 58.0	+0.9
	comp=Z,3.3nm,0.7s,baz=274,slow=9.5,SNR=7.4						
KLR	Kul'dur	45.06	54c	iP	P	00 09 58.2	+1.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FUORN	Ofenpass-Fuorn	45.66	303	eP	P	00 10 01.4	-0.9
	comp=Z,5.3nm,1.3s						
TIXI	Tiksi	45.75	22	P	P	00 10 03.2	+0.9
	comp=Z,2.3nm,0.3s,baz=282,slow=6.5						
TIXI	Tiksi	45.75	22	eP	P	00 10 03.0	+0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DAVA	Damuels	45.80	304	P	P	00 10 03.9	+0.7
	comp=Z,3.3nm,0.5s						
TUE	Stuetta	46.30	303	eP	P	00 10 06.2	-1.1
	comp=Z,14nm,1.7s						
BFO	Black Forest	46.66	305	eP	P	00 10 09.1	-0.7
	comp=Z,9.1nm,1.6s						
BFO	Black Forest	46.66	305	eP	P	00 10 09.1	-0.7
BFO				pmax	pmax		
	comp=Z,9.0nm,1.6s						
SPA0	Spitsbergen Ar	47.55	347	eP	P	00 10 16.8	+0.6
	comp=Z,52nm,1.5s						
SPA0	Spitsbergen Ar	47.55	347	eP	P	00 10 18.6	+2.4
SENIN	Lac Senin/Sane	47.72	303	eP	P	00 10 16.4	-1.7
	comp=Z,2.9nm,0.7s						
KMBO	Kilima Mbogo	48.91	228	P	P	00 10 28.1	+0.5
	comp=Z,1.1nm,0.6s,baz=34,slow=12,SNR=5.5						
SSB	Saint Sauveur	49.84	302	eP	P	00 10 34.2	+0.1
	comp=Z,9.2nm,1.5s						
SSB	Saint Sauveur	49.84	302	eP	P	00 10 34.2	+0.1
SSB				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ESK	Eskdalemuir	52.43	316	i P	P	00 10 53.6	+0.5
ESDC	Sonseca Array	57.59	298	P	P	00 11 30.4	0.0
	comp=Z,1.0nm,0.6s,baz=57,slow=7.3,SNR=13						
BILL	Bilibino	58.58	26⇑	iP	P	00 11 37.0	+0.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SUMG	Summit	61.13	341	eP	P	00 11 54.4	-0.1
	comp=Z,7.1nm,0.8s						
SUMG	Summit	61.13	341	eP	P	00 11 54.4	-0.1
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TOA0	Torodi Ar. Sit	65.85	269	eP	P	00 12 24.4	-1.4
	comp=Z,2.3nm,0.6s						
TORD	Torodi Ar. Bea	65.85	269	P	P	00 12 24.1	-1.6
	comp=Z,2.7nm,0.5s,baz=49,slow=5.8,SNR=44						
INK	Inuvik	73.92	9	P	P	00 13 15.2	+1.2
	comp=Z,2.3nm,0.4s,baz=356,slow=3.6,SNR=8.8						
INK	Inuvik	73.92	9	eP	P	00 13 13.7	-0.3
	comp=Z,2.5nm,0.8s						
BPAW	Bear Paw Mtn.	74.38	18	eP	P	00 13 16.6	-0.3
	comp=Z,1.7nm,0.9s						
BWN	Browne	74.69	17	eP	P	00 13 18.3	-0.3
	comp=Z,11nm,1.0s						
LBTB	Lobatse	74.74	222	eP	P	00 13 19.3	-0.2
	comp=Z,44nm,1.8s						
LBTB	Lobatse	74.74	222	eP	P	00 13 19.3	-0.2
LBTB				pmax	pmax		
	comp=Z,44nm,1.8s						
ILAR	Eielson Array	74.77	16	P	P	00 13 19.4	+0.3
	comp=Z,0.8nm,0.9s,baz=322,slow=4.2,SNR=8.6						
SCRK	Sand Creek	76.09	15	eP	P	00 13 26.6	-0.1
	comp=Z,9.6nm,1.7s						
RIDG	Independent Ri	76.12	16	eP	P	00 13 26.9	+0.1
	comp=Z,9.5nm,1.6s						
DOT	Dot Lake	76.37	15	eP	P	00 13 26.6	-1.5
	comp=Z,4.4nm,1.5s						
PAX	Paxson	76.65	16	eP	P	00 13 29.4	-0.4
	comp=Z,2.5nm,0.7s						
PAX	Paxson	76.65	16	eP	P	00 13 29.4	-0.4
PAX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SCM	Sheep Creek Mo	77.20	18	eP	P	00 13 32.9	0.0
	comp=Z,11nm,1.6s						
SCM	Sheep Creek Mo	77.20	18	eP	P	00 13 32.9	0.0
SCM				pmax	pmax		
	comp=Z,11nm,1.6s						
BOSA	Boshof	77.81	220	P	P	00 13 36.2	-0.5
	comp=Z,1.9nm,0.6s,baz=26,slow=3.9,SNR=7.2						
CNPM	China Poot	78.13	21	eP	P	00 13 36.9	-1.1
	comp=Z,17nm,1.2s						
FID	Port Fidalgo	78.34	18	eP	P	00 13 38.6	-0.5
	comp=Z,11nm,1.3s						
SDPT	Sand Point	78.46	27	eP	P	00 13 39.0	-0.8
	comp=Z,107nm,1.9s						
KDAK	Kodiak Island	79.18	22	eP	P	00 13 43.8	+0.1
	comp=Z,7.4nm,1.1s						
KDAK	Kodiak Island	79.18	22	eP	P	00 13 43.8	+0.1
KDAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YKA	Yellowknife Ar	81.27	3	P	P	00 13 55.2	+0.4
	comp=Z,1.5nm,0.5s,baz=350,slow=5.3,SNR=7.7						
WRA	Warramunga Arr	81.86	122	P	P	00 13 57.7	-0.8
	comp=Z,1.9nm,0.3s,baz=319,slow=5.1,SNR=52						
WRAB	Tennant Creek	81.86	122	eP	P	00 13 57.2	-1.2
	comp=Z,18nm,1.4s						
WRAB	Tennant Creek	81.86	122	eP	P	00 13 57.3	-1.2
WRAB				pmax	pmax		
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	81.87	122	eP	P	00 13 57.7	-0.8
	comp=Z,39nm,2.0s						
SCHQ	Schefferville	82.18	337	eP	P	00 13 58.4	-1.3
	comp=Z,31nm,1.6s						
JIS	Juneau Island	83.22	13	eP	P	00 14 05.6	+0.7
	comp=Z,4.9nm,0.7s						
AS31	Alice Springs	84.13	125	eP	P	00 14 09.2	-0.9
	comp=Z,1.2nm,1.0s						
ASAR	Alice Springs	84.13	125	P	P	00 14 09.1	-1.0
	comp=Z,2.0nm,0.6s,baz=311,slow=4.9,SNR=31						
CRZF	Crozet Islands	84.33	193	eP	P	00 14 09.8	-0.7
	comp=Z,416nm,1.9s						
FORT	Forrest	85.55	134	eP	P	00 14 16.4	-0.5
	comp=Z,39nm,1.2s						
BBB	Bella Bella	90.12	12	eP	P	00 14 38.3	-0.2
	comp=Z,29nm,1.4s						

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*NIED **14** 00:09:00, 42°.40N×144°.90E, h29^{km}, Mw4.0 Best double couple: M$_0$1.32000×10^{15} NP1:φ$_s$103.00000°, δ28.00000°, λ-55.00000°. NP2:φ$_s$244.00000°, δ67.00000°, λ-107.00000°.*

*IDC **14** 00:09:25.6±3.2, 42°.56N×144°.87E, h12^{km}±18^{km}, mb3.8/16, mb1 3.9/20, mb1mx3.8/42, mbtmp3.8/20, ML3.8/3, MS3.2/14, Ms1 3.3/14, ms1mx3.1/39, Error ellipse: s-maj=18.6km s-min=15.3km az=176.0*

*NEIC **14** 00:09:27.6±1.4, 42°.56N×144°.90E, h26^{km}±5^{km}, mb4.5/39, Error ellipse: s-maj=11.2km s-min=7.2km az=131.0*

NEIC Recorded [1 JMA] in southeastern Hokkaido.

*SKHL **14** 00:09:27.5±0.6, 42°.36N×144°.82E, h44^{km}±2^{km}, mb4.3/5*

*MOS **14** 00:09:27.8±1.2, 42°.45N×144°.87E, h45^{km}, mb4.4/20, Error ellipse: s-maj=10.5km s-min=6.8km az=82.3*

*JMA **14** 00:09:28.1, 42°.45N×144°.91E, h42^{km}±1^{km}, M4.1*

JMA Felt I J1.

ISC 14 00:09:25.0±1.2**, 42°.49N**±0°.05×**144°.99E**±0°.04**, h12**^{km}±7^{km}**, n142, σ1ˢ18**/149**, mb4.4**/55**, MS3.5**/10**, 1C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.61	12	P	Pn	00 09 41.4	+1.9
JKHN				eS	Sn	00 09 51.6	+2.3
JOB	Onbets	0.95	296	P	Pn	00 09 45.0	+0.8
JOB				eS	Sn	00 09 57.9	+0.2
NEM2	Nemuro 2	1.03	32	P	Pn	00 09 47.1	+1.7
JNK	Nakash	1.11	350	P	Pn	00 09 47.6	+1.1
JNK				eS	Sn	00 10 02.2	+0.4
JAR	Ashorobuto	1.21	312	P	Pn	00 09 48.4	+0.6
JCH	Churui	1.21	277	P	Pn	00 09 48.8	+1.0
JTHR	Tokachihiroo	1.27	262	P	Pg	00 09 49.7	+0.3
GLVR	Golovnino	1.31	17⇓	iPN	Pg	00 09 51.0	+0.8
GLVR				i S	Sg	00 10 08.7	+1.5
GLVR				pmax	pmax		
	comp=Z,607nm,0.4s						
GLVR				smax	smax		
	comp=N,5μm,0.6s						
GLVR				smax	smax		
	comp=E,6μm,0.6s						
GLVR	Golovnino	1.31	17	i P	Pg	00 09 51.0	+0.8
GLVR				AMB	AMB	00 09 57.0	
	comp=E,160nm,0.4s						
GLVR				i S	Sg	00 10 08.7	+1.5
GLVR				A	A	00 10 09.0	
	comp=E,540nm,0.3s						
GLVR				A	A	00 10 09.0	
	comp=E,580nm,0.3s						
ERM	Erimo	1.44	251	ePn	Pg	00 09 53.2	+0.6
ERM	Erimo	1.44	251	ePN	Pg	00 09 53.3	+0.6
JRA	Rausu	1.45	4	P	Pg	00 09 52.7	-0.2
GRPR	Tuman	1.61	20	ePN	Pg	00 09 55.2	-0.7
GRPR				eS	Sg	00 10 15.3	-1.5
GRPR				smax	smax		
	comp=E,1μm,0.3s						
GRPR				smax	smax		
	comp=N,2μm,0.5s						
GRPR	Tuman	1.61	20	eP	Pb	00 09 55.0	+0.3
GRPR				eS	Sg	00 10 15.3	-1.5
GRPR				A	A	00 10 18.0	
	comp=N,190nm,0.4s						
GRPR				A	A	00 10 18.0	
	comp=N,900nm,0.4s						
LAGR	Lagunnoye	1.67	20	i PN	Pg	00 09 56.8	-0.3
LAGR				i S	Sg	00 10 18.1	-0.7
LAGR				smax	smax		
	comp=N,4μm,0.6s						
LAGR				smax	smax		
	comp=E,3μm,0.7s						
LAGR	Lagunnoye	1.67	20	i P	Pb	00 09 56.0	+0.3
LAGR				i S	Sg	00 10 18.0	-0.7
LAGR				A	A	00 10 21.0	
	comp=E,420nm,0.3s						
LAGR				A	A	00 10 21.0	
	comp=E,280nm,0.3s						
YUK	Yuzh-Kuril'sk	1.67	22c	iPN	Pg	00 10 02.0	+4.9
YUK				i S	Sg	00 10 22.8	+4.0
YUK				pmax	pmax		
	comp=Z,731nm,0.4s						
YUK				smax	smax		
	comp=N,2μm,0.7s						
YUK				smax	smax		
	comp=E,2μm,0.7s						
YUK	Yuzh-Kuril'sk	1.67	22	i P	Pb	00 09 56.2	+0.5
YUK				AMB	AMB	00 09 56.9	
	comp=E,40nm,0.4s						
YUK				AMB	AMB	00 09 56.9	
	comp=E,180nm,0.4s						
YUK				i S	Sg	00 10 17.3	-1.5
YUK				A	A	00 10 18.5	
	comp=E,400nm,0.4s						
YUK				A	A	00 10 18.5	
	comp=E,710nm,0.4s						
JNBK	Urakawa-nobuka	1.67	264	P	Pb	00 09 54.8	-1.0
ASAJ	Asahikawa	2.39	314	Pn	Pn	00 10 02.6	-1.4
	comp=E,62nm,0.3s,baz=114,slow=15,SNR=155						
ASAJ				Pg	Pb	00 10 07.0	-1.0
	comp=E,62nm,0.3s,baz=124,slow=12,SNR=160						
ASAJ				Lg	Lg	00 10 38.2	
	comp=E,50nm,0.3s,baz=134,slow=18,SNR=12						
ASAJ				LR	LR	00 11 15.3	
	comp=E,400nm,20.4s,baz=154,slow=48						
ASAJ	Asahikawa	2.39	314	PN	Pn	00 10 02.6	-1.4
ASAJ				pmax	pmax		
	comp=Z,62nm,0.3s						
ASAJ				pmax	pmax		
	comp=Z,62nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,400nm,20.4s						
KUR	Kuril'sk	3.44	36	ePN	Pb	00 10 22.8	-3.1
KUR				eS	Sb	00 11 04.9	-2.8
KUR				pmax	pmax		
	comp=E,43nm,0.4s						
KUR				pmax	pmax		
	comp=Z,117nm,0.4s						
KUR				pmax	pmax		
	comp=N,35nm,0.3s						
KUR				smax	smax		
	comp=N,185nm,0.6s						
KUR				smax	smax		
	comp=E,87nm,0.5s						
KUR				smax	smax		
	comp=N,976nm,2.8s						
KUR				smax	smax		
	comp=E,811nm,3.4s						
KUR	Kuril'sk	3.44	36	eP	Pb	00 10 22.8	-3.1
KUR				AMB	AMB	00 10 24.1	
	comp=E,40nm,0.5s						
KUR				AMB	AMB	00 10 24.1	
	comp=E,60nm,0.5s						
KUR				eS	Sb	00 11 03.9	-3.8
KUR				A	A	00 11 06.7	
	comp=E,140nm,0.3s						
KUR				A	A	00 11 06.7	
	comp=E,120nm,0.3s						
YSS	Yuzh-Sakhalins	4.74	341	ePn	Pn	00 10 35.5	-0.8
YSS	Yuzh-Sakhalins	4.74	341	ePN	Pn	00 10 38.4	+2.1
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS	Yuzh-Sakhalins	4.74	341	eP	Pn	00 10 38.4	+2.1
YSS				AMB	AMB	00 10 39.8	
	comp=Z,30nm,0.6s						
MJAR	Matsushiro Arr	7.92	224	Pn	Pn	00 11 20.0	0.0
	comp=Z,0.2nm,0.3s,baz=28,slow=14,SNR=25						
MJAR				Sn	Sn	00 12 47.6	-1.9
	comp=Z,0.1nm,0.3s,baz=63,slow=3.3,SNR=3.2						
MJAR				LR	LR	00 15 05.3	
	comp=Z,106nm,18.3s,baz=55,slow=43						
MJB9	Matsu-Tunnel	7.92	224	ePn	Pn	00 11 20.3	+0.3
MAJO	Matsushiro	7.92	224	ePn	Pn	00 11 20.2	+0.2
MAJO				eSn	Sn	00 12 47.6	-2.0
MAJO	Matsushiro	7.92	224	ePN	Pn	00 11 20.2	+0.2
INU	Inuyama	9.45	224	ePn	Pn	00 11 41.1	+0.1
USA0B	Ussuriysk Arra	9.63	285	ePn	Pn	00 11 43.8	+0.4
USRK	Ussuriysk Ar.	9.63	285	LR	LR	00 14 45.0	
	comp=Z,29nm,21.4s,baz=84,slow=34						
JHJ2	Mitsune	10.21	205	ePn	Pn	00 11 53.0	+1.5
KLR	Kul'dur	11.42	311	Pn	Pn	00 12 07.0	-1.0
	comp=Z,0.1nm,0.3s,baz=76,slow=17,SNR=1.7						
KLR				LR	LR	00 17 01.4	
	comp=Z,152nm,20.1s,baz=123,slow=40						
KLR	Kul'dur	11.42	311d	iPN	Pn	00 12 12.2	+4.3
KLR	Kul'dur	11.42	311	eP	Pn	00 12 12.2	+4.3
EKMR	Ekimchan	13.31	327	eP	Pn	00 12 35.0	+1.3
EKMR				AMB	AMB	00 12 40.0	
	comp=Z,4.0nm,0.8s						
PEA0B	Petropavlovsk-	13.61	34	ePn	Pn	00 12 37.5	-0.3
PETK	Petropavlovsk-	13.61	34	Pn	Pn	00 12 37.2	-0.5
	comp=Z,0.1nm,0.3s,baz=184,slow=10,SNR=3.6						
PEA1	Petropavlovsk-	13.61	34	ePn	Pn	00 12 37.2	-0.6
KSRS	Korea Array	14.02	255	LR	LR	00 18 07.9	
	comp=Z,88nm,18.4s,baz=44,slow=37						
JNU	Nakatsue	14.54	235	ePn	Pn	00 12 51.4	+0.8
SEY	Seymchan	20.94	9	P	P	00 14 05.2	-2.1
	comp=Z,0.7nm,0.4s,baz=44,slow=23,SNR=2.5						
YAK	Yakutsk	21.59	340	i P	P	00 14 12.1	-2.3
YAK				pmax	pmax		
	comp=Z,12nm,0.6s						
ULN	Ulaanbaatar	27.09	295	i P	P	00 15 09.7	+2.1
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	27.09	295	eP	P	00 15 09.7	+2.1
SONA0	Songino Array	27.53	295	eP	P	00 15 11.3	-0.3
SONM	Songino Array	27.53	295	P	P	00 15 11.3	-0.3
	comp=Z,3.1nm,0.8s,baz=84,slow=8.4,SNR=16						
SONM				LR	LR	00 27 07.9	
	comp=Z,31nm,18.9s,baz=140,slow=39						
BILL	Bilibino	28.02	17	eP	P	00 15 14.3	-1.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
H11N2	WAKE ISLAND Hy	29.27	134	T	T	00 46 50.2	
	baz=326,slow=75,SNR=222						
H11N1	WAKE ISLAND Hy	29.28	134	T	T	00 46 41.6	
	baz=326,slow=75,SNR=126						
H11N3	WAKE ISLAND Hy	29.29	134	T	T	00 46 48.8	
	baz=326,slow=75,SNR=132						
H11S1	WAKE ISLAND Hy	30.18	136	T	T	00 47 49.7	
	baz=328,slow=76,SNR=240						
H11S3	WAKE ISLAND Hy	30.18	136	T	T	00 47 45.7	
	baz=328,slow=76,SNR=148						
H11S2	WAKE ISLAND Hy	30.20	136	T	T	00 47 47.6	
	baz=328,slow=76,SNR=174						
DGZ	Jazzator, Alta	39.70	301	i P	P	00 16 59.0	+1.9
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZAA1	Zalesovo Array	40.51	308	eP	P	00 17 02.0	-1.6
ZAA1				ePcP	PcP	00 19 06.0	+0.1
ZAA1				eScP	ScP	00 22 54.1	-0.9
ZALV	Zalesovo Beam	40.51	308	P	P	00 17 02.0	-1.6
	comp=Z,0.9nm,0.7s,baz=92,slow=13,SNR=4.5						
ZALV				PcP	PcP	00 19 06.0	+0.1
	comp=Z,1.7nm,0.7s,baz=72,slow=3.5,SNR=4.5						
ZALV				ScP	ScP	00 22 54.1	-0.9
	comp=Z,0.7nm,0.5s,baz=81,slow=4.7,SNR=3.4						
ZALV				LR	LR	00 35 02.4	
	comp=Z,38nm,18.1s,baz=70,slow=38						
MLY	Manley	41.79	35	eP	P	00 17 14.8	+0.7
	comp=Z,2.6nm,1.0s						
ILAR	Eielson Array	43.43	35	P	P	00 17 27.2	-0.1
	comp=Z,3.0nm,1.1s,baz=264,slow=6.6,SNR=16						
ILAR	Eielson Array	43.43	35	eP	P	00 17 29.5	+2.1
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	Makanchi Array	43.78	298	eP	P	00 17 29.4	-1.0
MKAR	Makanchi Array	43.78	298	P	P	00 17 29.4	-1.0
	comp=Z,0.2nm,0.4s,baz=84,slow=11,SNR=4.1						
PRP	Porcupine Dome	43.96	34	eP	P	00 17 33.3	+1.5
	comp=Z,3.7nm,0.7s						
FYU	Fort Yukon	44.02	33	eP	P	00 17 33.4	+1.4
	comp=Z,3.7nm,0.7s						
RIDG	Independent Ri	44.41	37	eP	P	00 17 36.3	+1.0
	comp=Z,12nm,1.7s						
SCRK	Sand Creek	44.76	36	eP	P	00 17 38.8	+0.6
	comp=Z,3.7nm,0.9s						
KURK	Kurchatov	44.93	304	eP	P	00 17 39.8	+0.2
	comp=Z,2.4nm,0.8s						
KURK	Kurchatov	44.93	304	i P	P	00 17 40.1	+0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	44.93	304	eP	P	00 17 40.1	+0.6
KURBB	Kurchatov Arra	45.01	304	P	P	00 17 41.0	+0.8
	comp=Z,1.3nm,0.7s,baz=73,slow=9.2,SNR=8.2						
KURBB				PcP	PcP	00 19 20.9	-0.1
	comp=Z,0.6nm,0.7s,baz=79,slow=3.6,SNR=3.3						
HMT	Hamilton	45.16	41	eP	P	00 17 41.0	-0.2
	comp=Z,14nm,1.4s						
CMAR	Chiang Mai Arr	45.65	253	P	P	00 17 46.5	+0.9
	comp=Z,0.6nm,0.7s,baz=36,slow=8.2,SNR=3.7						
CMAR				LR	LR	00 38 15.9	
	comp=Z,24nm,18.4s,baz=305,slow=38						
INK	Inuvik	48.28	30	eP	P	00 18 05.6	+0.1
	comp=Z,3.3nm,0.9s						
INK	Inuvik	48.28	30	eP	P	00 18 05.6	+0.1
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HYT	Haines Junctio	48.31	40	eP	P	00 18 07.5	+1.4
	comp=Z,4.2nm,0.7s						
BVAR	Borovoye Array	49.09	310	P	P	00 18 11.9	-0.1
	comp=Z,1.1nm,0.4s,baz=80,slow=8.0,SNR=5.7						
BRVK	Borovoye	49.13	310	i P	P	00 18 13.7	+1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	Borovoye	49.13	310	eP	P	00 18 13.7	+1.4
ARU	Arti	54.19	317	P	P	00 18 50.5	+0.5
	comp=Z,0.4nm,0.3s,baz=45,slow=14,SNR=4.6						
ARU				LR	LR	00 44 00.5	
	comp=Z,39nm,20.1s,baz=351,slow=38						
ARU	Arti	54.19	317	eP	P	00 18 50.1	+0.1
	comp=Z,11nm,1.8s						
ARU	Arti	54.19	317	i P	P	00 18 49.9	-0.1
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	Arti	54.19	317	eP	P	00 18 49.9	-0.1
COEN	Coen	56.19	182	eP	P	00 19 05.5	+0.6
	comp=Z,30nm,1.3s						
BBB	Bella Bella	56.29	48	eP	P	00 19 05.8	+0.6
	comp=Z,12nm,0.9s						
ABKAR	Akbulak array	56.62	309	eP	P	00 19 07.0	-0.7
	comp=Z,2.3nm,0.6s						
RES	Resolute Bay	56.62	16	eP	P	00 19 08.2	+0.9
	comp=Z,39nm,1.9s						
RES	Resolute Bay	56.62	16	eP	P	00 19 08.2	+0.9
RES				pmax	pmax		
	comp=Z,39nm,1.9s						
KIRV	Kirov	57.62	322	LR	LR	00 46 49.3	
	comp=Z,32nm,19.6s,baz=167,slow=39						
GEYT	Alibeck	63.65	298	LR	LR	00 49 21.8	
	comp=Z,33nm,19.4s,baz=10.0,slow=38						
PINE	Pine Mountain	64.78	53	eP	P	00 20 04.8	+1.2
	comp=Z,5.0nm,0.9s						
YBH	Yreka Blue Hor	64.91	56	eP	P	00 20 04.9	+0.6
	comp=Z,16nm,1.6s						

YBH	Yreka Blue Hor	64.91	56	eP	P	00 20 04.9	+0.6
YBH				pmax	pmax		
	comp=Z,16nm,1.6s						
SUMG	Summit	65.21	1	eP	P	00 20 07.1	+0.9
	comp=Z,12nm,1.4s						
FIA0	FINESS Array S	65.27	332	eP	P	00 20 05.7	-0.5
FIA0	FINESS Array S	65.27	332	eP	P	00 20 05.7	-0.5
FINES	FINESS Array B	65.27	332	P	P	00 20 05.7	-0.5
	comp=Z,0.8nm,0.4s,baz=46,slow=8.2,SNR=11						
FINES				LR	LR	00 51 45.0	
	comp=Z,31nm,19.4s,baz=42,slow=39						
ASAR	Alice Springs	66.61	191	P	P	00 20 15.2	-0.1
	comp=Z,0.7nm,0.7s,baz=10,slow=5.9,SNR=8.2						
PNTR	Pine Nut	68.39	56	eP	P	00 20 27.8	+1.0
	comp=Z,5.3nm,0.8s						
EGMT	Eagleton	68.40	44	eP	P	00 20 24.5	-2.0
	comp=Z,24nm,1.0s						
CMB	Columbia Colle	68.54	58	eP	P	00 20 28.0	+0.5
	comp=Z,2.3nm,1.0s						
CMB	Columbia Colle	68.54	58	eP	P	00 20 28.0	+0.5
CMB				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SAO	San Andreas Ge	68.64	59	eP	P	00 20 28.4	+0.3
	comp=Z,25nm,1.8s						
SAO	San Andreas Ge	68.64	59	eP	P	00 20 28.4	+0.3
SAO				pmax	pmax		
	comp=Z,25nm,1.8s						
YERR	Yerington	68.67	56	eP	P	00 20 29.1	+0.6
	comp=Z,3.3nm,1.0s						
MCMT	McKenzie Canyo	68.78	48	eP	P	00 20 29.7	+0.6
BOZ	Bozeman (W)	68.96	47	eP	P	00 20 31.2	+1.1
	comp=Z,3.8nm,0.6s						
BOZ	Bozeman (W)	68.96	47	eP	P	00 20 31.2	+1.1
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KVN	Kaiserville	69.33	56	eP	P	00 20 33.2	+0.6
	comp=Z,2.5nm,0.8s						
KVN	Kaiserville	69.33	56	eP	P	00 20 33.2	+0.6
KVN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIV	Kislovodsk	69.41	311	eP	P	00 20 32.6	-0.3
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,111nm,18.0s						
KIV	Kislovodsk	69.41	311	eP	P	00 20 32.6	-0.3
NV01	Mina Array Sit	69.59	56	eP	P	00 20 36.0	+1.8
NVAR	Mina Array Bea	69.59	56	P	P	00 20 36.0	+1.8
	comp=Z,1.2nm,0.7s,baz=289,slow=6.2,SNR=12						
NV11	Mina Array Sit	69.68	56	eP	P	00 20 34.2	-0.5
	comp=Z,0.7nm,1.9s						
NB2	NORSAR Subarra	70.20	338	P	P	00 20 36.9	-0.4
	comp=Z,1.3nm,0.6s,baz=33,slow=6.5						
NB200	NORSAR Array S	70.20	338	eP	P	00 20 37.0	-0.4
NOA	NORSAR Array B	70.20	338	P	P	00 20 37.0	-0.4
	comp=Z,1.0nm,0.8s,baz=35,slow=6.2,SNR=4.2						
NOA	NORSAR Array B	70.20	338	P	P	00 20 37.0	-0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HFS	Hagfors	70.23	336	LR	LR	00 53 56.3	
	comp=Z,25nm,21.3s,baz=340,slow=38						
NBO00	NORSAR Array S	70.32	338	eP	P	00 20 38.3	+0.2
	comp=Z,103nm,1.6s						
HVU	Hansel Valley	70.76	51	eP	P	00 20 41.6	+0.4
	comp=Z,6.3nm,1.0s						
HVU	Hansel Valley	70.76	51	eP	P	00 20 41.7	+0.4
HVU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
R11A	Troy Canyon, C	71.30	55	eP	P	00 20 45.2	+0.6
	comp=Z,1.4nm,1.0s						
AKASG	Malin Array Be	71.65	323	P	P	00 20 45.7	-0.5
	comp=Z,0.4nm,0.4s,baz=41,slow=6.3,SNR=3.0						
DUG	Dugway, Tooele	71.76	52	eP	P	00 20 48.3	+0.9
	comp=Z,12nm,1.8s						
TPNV	Topopah Spring	71.79	56	eP	P	00 20 48.0	+0.4
	comp=Z,12nm,1.9s						
TPNV	Topopah Spring	71.79	56	eP	P	00 20 48.0	+0.4
TPNV				pmax	pmax		
	comp=Z,12nm,1.9s						
BW06	Boulder Array	71.93	48	eP	P	00 20 49.0	+0.5
	comp=Z,6.0nm,1.7s						
PD31	Pinedale Array	71.93	48	eP	P	00 20 49.4	+1.0
PDAR	Pinedale Array	71.93	48	P	P	00 20 49.4	+1.0
	comp=Z,0.8nm,0.6s,baz=282,slow=1.8,SNR=11						
P17A	Butcher Ranch,	73.44	51	eP	P	00 20 58.0	+0.6
	comp=Z,6.9nm,1.5s						
SRU	San Rafael Swe	73.81	52	eP	P	00 20 60.0	+0.4
	comp=Z,2.6nm,1.0s						
SRU	San Rafael Swe	73.81	52	eP	P	00 21 00.0	+0.4
SRU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
W13A	Hualapai Mount	74.44	57	eP	P	00 21 03.2	-0.2
	comp=Z,5.0nm,1.0s						
CLL	Collm	77.69	331	eP	P	00 21 20.0	-1.3
CLL				e		00 21 32.0	
CLL	Collm	77.69	331	eP	P	00 21 20.0	-1.3
CLL				esP	PcP	00 21 32.0	+0.6
GERES	GERESS Array B	79.47	330	LR	LR	00 58 51.8	
	comp=Z,35nm,18.9s,baz=94,slow=37						
TXAR	Lajitas Array	84.67	55	P	P	00 21 60.0	+1.0
	comp=Z,0.4nm,0.7s,baz=300,slow=3.0,SNR=4.2						
TXAR	Lajitas Array	84.67	55	P	P	00 22 00.0	+1.0
O56A	Blue Knob Stat	88.67	32	eP	P	00 22 18.6	+0.4
	comp=Z,19nm,1.5s						

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*ISCJB **14** 00:38:31.9±0.3, 59°.45N±0°.02×153°.88W±0°.05, h137^{km}±3^{km}, mb3.4/2, Error ellipse: s-maj=5.1km s-min=3.2km az=36.8*

*NEIC **14** 00:38:34.1±0.0, 59°.40N×153°.84W, h130^{km}, ML3.3(AEIC), After AEIC.*

*AEIC **14** 00:38:34.1, 59°.40N×153°.84W, h130^{km}, ML3.3*

*IDC **14** 00:38:35.5±7.1, 59°.82N×153°.96W, h142^{km}±65^{km}, mb3.1/2, mb1 3.5/6, mb1mx3.0/56, mbtmp3.7/6, Error ellipse: s-maj=60.3km s-min=23.0km az=30.0*

ISC 14 00:38:33.5±0.7, **59°.44N**±0°.04×**153°.88W**±0°.05, **h132**^{km}±6^{km}, **n91**, σ1^{s}.**18**/107, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUW	Augustine West	0.22	109	ePn	Pn	00 38 51.6	+0.1
AUL	Augustine Lava	0.23	105	ePn	Pn	00 38 51.6	-0.1
AUH	Augustine H	0.23	109	ePn	Pn	00 38 51.7	0.0
AUI	Augustine Isla	0.25	115	ePn	Pn	00 38 51.6	-0.1
AUI				eSn	Sn	00 39 05.0	-0.4
FONW	Fourpeaked Sta	0.61	182	ePn	Pn	00 38 52.9	-0.6
ILS	Iliamna Low So	0.66	38	ePn	Pn	00 38 53.9	0.0
IVE	Iliamna Volcan	0.72	37	ePn	Pn	00 38 54.2	-0.1
IVE				eSn	Sn	00 39 10.0	-0.2
KAHC	Katmai Hardscr	0.99	217	ePn	Pn	00 38 55.8	-0.7
KAHG	Katmai Hook Gl	1.01	200	ePn	Pn	00 38 56.2	-0.5
KARR	Katmai Rainbow	1.04	205	ePn	Pn	00 38 56.6	-0.3
HOM	Homer	1.16	78	ePn	Pn	00 38 58.6	+0.6
HOM				eSn	Sn	00 39 17.1	+0.4
RSO	Redoubt South	1.17	28	ePn	Pn	00 38 58.2	-0.2
RSO				eSn	Sn	00 39 16.6	-0.7
RDJH	Redoubt Jeurge	1.27	25	ePn	Pn	00 38 59.2	-0.2
RDJH				eSn	Sn	00 39 18.8	-0.3
CNPM	China Poot	1.35	85	ePn	Pn	00 38 59.8	-0.3
CNPM				eSn	Sn	00 39 20.4	+0.1
KABU	Katmai Buttres	1.38	213	ePn	Pn	00 39 00.0	-0.5
KABU				eSn	Sn	00 39 20.4	-0.6
KELA	Mount Kelaz	1.39	225	ePn	Pn	00 38 59.9	-0.7
ACHA	Angle Creek He	1.45	212	ePn	Pn	00 39 00.6	-0.5
BRLK	Bradley Lake	1.55	77	ePn	Pn	00 39 01.9	-0.4
BRLK				eSn	Sn	00 39 22.9	-1.4
KDAK	Kodiak Island	1.80	157	ePn	Pn	00 39 03.7	-1.4
KDAK				e		00 39 03.7	
SVW2	Sparrevohn	1.87	334	ePn	Pn	00 39 05.8	-0.1
SVW2				eSn	Sn	00 39 30.7	-0.1
SPWE	Spurr West	1.95	19	ePn	Pn	00 39 07.4	+0.4
SPU	Mount Spurr	1.97	27	ePn	Pn	00 39 07.0	-0.1
OHAK	Old Harbor	2.25	172	ePn	Pn	00 39 09.0	-1.5
OHAK				eSn	Sn	00 39 36.1	-2.8
SEW	Seward	2.33	72	ePn	Pn	00 39 11.7	+0.1
SEW				eSn	Sn	00 39 38.4	-2.5
RC01	Rabbit Creek A	2.64	50	ePn	Pn	00 39 15.1	-0.3
RC01				eSn	Sn	00 39 46.0	-1.8
SII	Sitkinak Islan	2.90	183	ePn	Pn	00 39 17.2	-1.6
PMR	Palmer	3.19	45	ePn	Pn	00 39 21.1	-1.3
KNK	Knik Glacier	3.33	51	ePn	Pn	00 39 23.3	-1.1
ANNW	Aniakchak Nort	3.38	225	ePn	Pn	00 39 25.4	+0.3
PPLA	Purkeypile	3.56	13	ePn	Pn	00 39 28.4	+0.9
TT01	Tatalina	3.63	344	ePn	Pn	00 39 28.1	-0.1
TTA	Tatalina	3.65	344	ePn	Pn	00 39 28.3	-0.3
GLI	Glacier Island	3.68	64	ePn	Pn	00 39 28.2	-0.7
CHIA	Chirikof Islan	3.73	195	ePn	Pn	00 39 27.9	-1.7
CHIR	Chirikof Islan	3.75	195	ePn	Pn	00 39 27.8	-2.1
FID	Port Fidalgo	3.93	67	ePn	Pn	00 39 30.4	-1.8
FID				ePn	Pn	00 39 31.1	-1.1
JPK	Jack Peak	3.97	63	ePn	Pn	00 39 31.8	-1.0
SCM	Sheep Creek Mo	4.02	51	ePn	Pn	00 39 32.5	-0.9
HUR	Hurricane	4.10	28	ePn	Pn	00 39 33.8	-0.6
EYAK	Cordova Ski Ar	4.23	71	ePn	Pn	00 39 35.7	-0.4
KTH	Kantishna Hill	4.36	18	ePn	Pn	00 39 37.9	-0.1
RND	Reindeer	4.65	29	ePn	Pn	00 39 41.0	-0.9
DHY	Denali Highway	4.81	38	ePn	Pn	00 39 43.0	-1.1
BPAW	Bear Paw Mtn.	4.87	15	ePn	Pn	00 39 44.2	-0.5
MCK	McKinley	4.91	27	ePn	Pn	00 39 44.8	-0.4
BWN	Browne	5.19	22	ePn	Pn	00 39 48.6	-0.3
PAX	Paxson	5.39	45	ePn	Pn	00 39 51.0	-0.7
SDPT	Sand Point	5.44	224	ePn	Pn	00 39 50.8	-1.5
MLY	Manley	5.80	13	ePn	Pn	00 39 56.0	-1.1
HDA	Harding Lake	5.96	30	P	Pn	00 39 58.0	-1.2
	baz=216						
HDA				S	Sn	00 41 05.8	-0.5
	baz=216						
RIDG	Independent Ri	6.09	41	ePn	Pn	00 40 00.7	-0.4
MDM	Murphy Dome	6.13	23	ePn	Pn	00 40 00.6	-1.0
TCOL	CIGO, UAF Yank	6.13	25	P	Pn	00 40 00.6	-0.9
	baz=210						
TCOL				S	Sn	00 41 09.7	-0.8
	baz=210						
COLA	College	6.14	25	ePn	Pn	00 40 00.6	-1.0
ILAR	Eielson Array	6.27	29	P	Pn	00 40 01.6	-1.8
	5.6nm,0.3s,baz=217,slow=13,SNR=129						
ILAR				S	Sn	00 41 09.3	-4.5
	0.3nm,0.3s,baz=205,slow=23,SNR=4.6						
ILB	Eielson Array	6.27	29	ePn	Pn	00 40 02.1	-1.3
DOT	Dot Lake	6.31	44	ePn	Pn	00 40 02.9	-1.1
POKR	Poker Plat Res	6.44	25	P	Pn	00 40 04.5	-1.1
	baz=210						
POKR				S	Sn	00 41 18.9	+1.1
	baz=210						
CHX	Chaix Hills	6.48	79	ePn	Pn	00 40 05.9	-0.5
BCA3	Beaver Creek A	6.87	53	ePn	Pn	00 40 10.9	-0.6
FALS	False Pass	6.93	233	ePn	Pn	00 40 11.6	-0.7
BCPM	Bancas Point	7.22	80	ePn	Pn	00 40 17.9	+1.6
YKU2	Yakutat	7.24	83	ePn	Pn	00 40 16.4	0.0
PNL	Peninsula	7.36	82	ePn	Pn	00 40 18.1	-0.1
ANM	Nome	7.46	318	ePn	Pn	00 40 18.8	-0.6
COLD	Coldfoot	7.99	10	ePn	Pn	00 40 26.3	-0.1
EGAK	Eagle	8.00	43	ePn	Pn	00 40 26.2	-0.5
DAWY	Dawson	8.28	50	ePn	Pn	00 40 30.8	+0.3
HYT	Haines Junctio	8.29	73	ePn	Pn	00 40 31.4	+0.7
AKUT	Akutan	8.41	236	ePn	Pn	00 40 32.7	+0.4
UNV	Unalaska Valle	8.93	237	ePn	Pn	00 40 38.1	-1.1
BM3	Burnt Mountain	9.01	23	ePn	Pn	00 40 38.3	-1.9
BESE	Bessie Mountai	9.85	87	ePn	Pn	00 40 52.3	+0.8
JIS	Juneau Island	10.16	88	ePn	Pn	00 40 56.9	+1.3
EPYK	Eagle Plains	10.43	41	ePn	Pn	00 41 00.3	+1.0
EPYK	Eagle Plains	10.43	41	P	Pn	00 40 59.5	+0.2
	baz=236						
CRAG	Craig	11.85	101	ePn	Pn	00 41 18.6	+0.7
DLBC	Dease Lake	12.34	84	P	Pn	00 41 26.8	+2.3
	0.7nm,0.3s,baz=221,slow=9.3,SNR=5.1						
DLBC	Dease Lake	12.34	84	ePn	Pn	00 41 25.0	+0.5
INK	Inuvik	12.55	37	P	Pn	00 41 24.1	-3.0
	0.1nm,0.3s,baz=246,slow=10.0,SNR=3.4						
INK	Inuvik	12.55	37	ePn	Pn	00 41 27.1	+0.1
DIB	Dawson Inlet,	13.38	108	ePn	Pn	00 41 38.7	+0.8
MOBC	Moresby Island	13.66	108	ePn	Pn	00 41 43.4	+1.9
GSTR	Great Sitkin T	14.44	249	ePn	Pn	00 41 51.7	+0.3
ADK	Adak	14.87	249	ePn	Pn	00 41 57.8	+1.0
YKA	Yellowknife Ar	19.09	64	P	P	00 42 44.6	-0.8
	0.2nm,0.3s,baz=276,slow=9.9,SNR=4.2						
YKB5	Yellowknife Ar	19.09	64	eP	P	00 42 44.6	-0.8
PD31	Pinedale Array	31.70	102	eP	P	00 44 47.5	+2.9
PDAR	Pinedale Array	31.70	102	P	P	00 44 47.5	+2.9
	0.2nm,0.4s,baz=341,slow=5.2,SNR=3.8						
SONA0	Songino Array	54.76	306	eP	P	00 47 47.8	-1.2
SONM	Songino Array	54.76	306	P	P	00 47 47.8	-1.2
	0.4nm,0.4s,baz=32,slow=6.3,SNR=4.0						

MEX 14 00:39:16.0±0.6, **16°.35N**×**99°.14W**, **h14**^{km}±13^{km}, **MD3.9**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	1.28	303	eP	Pn	00 39 35.6	-3.9
CAIG				i S	Sb	00 39 51.3	-4.9
TLIG	Tlapa	1.32	25	eP	Pn	00 39 36.5	-3.7
TLIG				i S	Sb	00 39 52.1	-5.5
MEIG	Mezcala	1.63	344	eP	Pn	00 39 40.1	-4.3
MEIG				eS	Sn	00 40 00.2	-5.0
PLIG	Platanillo	2.06	350	eP	Pn	00 39 47.7	-2.6
PLIG				eS	Sn	00 40 11.8	-4.1
ARIG	Puente Sto Nin	2.24	329	eP	Pn	00 39 49.5	-3.2
ARIG				eS	Sn	00 40 16.0	-4.2
YAIG	Yautepec	2.50	2	eP	Pn	00 39 53.7	-2.7
YAIG				i S	Sn	00 40 22.5	-4.3

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*IDC **14** 00:54:41.4±0.4, 5°.62S×134°.10E, h0^{km}, mb4.6/17, mb1 4.7/24, mb1mx4.6/39, mbtmp4.7/24, ML4.4/5, MS3.8/12, Ms1 3.8/12, ms1mx3.5/33, Error ellipse: s-maj=19.7km s-min=11.0km az=75.0*

*BJI **14** 00:54:42.7±0.0, 5°.71S×134°.19E, h27^{km}, mb4.8/40, mB4.9/25, Ms5.0/8, Ms7 4.8/3*

*ISCJB **14** 00:54:44.4±0.1, 5°.59S±0°.02×133°.98E±0°.02, h31^{km}, mb5.1/145, MS3.9/12, Error ellipse: s-maj=3.8km s-min=3.1km az=43.5*

*MOS **14** 00:54:45.1±0.8, 5°.52S×134°.06E, h33^{km}, mb5.2/39, Error ellipse: s-maj=10.9km s-min=7.0km az=118.0*

*NEIC **14** 00:54:46.5±1.7, 5°.50S×134°.07E, h32^{km}±3^{km}, mb5.0/131, Error ellipse: s-maj=9.8km s-min=8.2km az=75.0*

NEIC Felt [III] at Dobo.

*DJA **14** 00:54:48.2±1.0, 6°S±2°×13°4E±°, h32^{km}±10^{km}, M5.1/23, mB5.5/14, mb5.0/23, MLv5.5/10, Mw(mB)4.9/14*

ISC 14 00:54:45.6±1.6, **5°.57S**±0°.04×**134°.02E**±0°.04, **h27**^{km}±11^{km}, **n339**, σ1^{s}.**25**/349, **mb5.0**/146, **MS3.8**/12, **12C-3D**, **Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.17	326	ePn	Pn	00 55 32.8	-0.9
FAKI	Fak Fak	3.17	326	P	Pn	00 55 32.9	-0.9
FAKI				S	Sn	00 56 07.6	-3.1
SAUI	Saumlaki	3.61	228	ePn	Pn	00 55 41.6	+1.8
BNDI	Bandanaira	4.23	284	P	Pn	00 55 48.7	+0.4
BNDI				S	Sn	00 56 36.6	-0.3
SIJI	Sorong	5.42	329	Pn	Pn	00 56 03.9	-0.8
	34nm,0.3s,baz=114,slow=1.2,SNR=134						
SIJI				Sn	Sn	00 57 00.1	-6.1
	40nm,0.3s,baz=80,slow=23,SNR=12						
MSAI	Masohi	5.54	293	P	Pn	00 56 05.9	-0.4
MSAI				S	Sn	00 57 04.5	-4.6
AAI	Ambon	6.10	288	P	Pn	00 56 14.1	0.0
GENI	Genyem	6.81	64	P	Pn	00 56 27.3	+3.6
MMPI	Merauke	6.94	115	P	Pn	00 56 31.5	+5.9
NLAI	Namlea	7.28	288	P	Pn	00 56 31.0	+0.8
JAY	Jayapura	7.32	66	Pn	Pn	00 56 33.3	+2.4
	3.2nm,0.3s,baz=229,slow=13,SNR=19						
JAY	Jayapura	7.32	66	P	Pn	00 56 33.6	+2.7
MTN	Manton Dam	7.77	201	ePn	Pn	00 56 38.7	+1.8
LBMI	Labuha	8.15	307	P	Pn	00 56 42.0	-0.2
	268nm,0.9s,3µm1.0nm						
SANI	Sanana	8.74	293	P	Pn	00 56 48.0	-2.4
TNTI	Ternate	9.16	313	ePn	Pn	00 56 56.5	+0.5
TNTI	Ternate	9.16	313	P	Pn	00 56 59.3	+3.3
SOEI	Soe	10.52	246	ePn	Pn	00 57 13.9	-0.9
SOEI	Soe	10.52	246	P	Pn	00 57 14.0	-0.9
	142nm,0.8s,1µm						
BATI	Baumata	11.24	245	Pn	Pn	00 57 22.6	-2.0
	20nm,0.3s,baz=148,slow=2.0,SNR=12						
BATI				Sn	Sn	00 59 19.5	-10
	7.4nm,0.3s,baz=138,slow=14,SNR=2.8						
BATI	Baumata	11.24	245	P	Pn	00 57 22.9	-1.8
MMRI	Maumere	12.08	255	ePn	Pn	00 57 36.5	+0.4
LUWI	Luwuk	12.10	291	ePn	Pn	00 57 34.8	-1.5
LUWI	Luwuk	12.10	291	P	Pn	00 57 36.1	-0.2
COEN	Coen	12.28	133	ePn	Pn	00 57 38.1	-0.7
EDFI	Ende, Flores	12.64	255	P	Pn	00 57 43.0	-0.8
	26nm,0.8s,808nm						
APSI	Ampana	13.19	290	P	Pn	00 57 49.5	-1.7
	38nm,0.5s,759nm						
PMG	Port Moresby	13.57	107	Pn	Pn	00 57 52.5	-3.9
	0.8nm,0.3s,baz=270,slow=14,SNR=2.1						
PMG				Sn	Sn	01 00 17.1	-9.4
	2.9nm,0.3s,baz=264,slow=17,SNR=3.1						
PMG				LR	LR	01 04 06.7	
	comp=Z,717nm,18.6s,baz=286,slow=42						
PMG	Port Moresby	13.57	107	ePn	Pn	00 57 57.1	+0.6
PMG	Port Moresby	13.57	107	eP	Pn	00 57 57.1	+0.6
BKSI	Bulukumba	13.84	270	P	P	00 58 06.8	-1.4
BNSI	Bone	13.91	274	P	P	00 58 11.2	+2.2
KAPI	Kappang	14.22	272	Pn	Pn	00 58 03.9	-1.5
	0.5nm,0.3s,baz=72,slow=20,SNR=3.4						
KAPI				LR	LR	01 04 53.6	
	comp=Z,572nm,19.5s,baz=300,slow=43						
KAPI	Kappang	14.22	272	ePn	Pn	00 58 04.5	-0.9
WRAB	Tennant Creek	14.28	179	ePn	Pn	00 58 03.7	-2.5
WRAB	Tennant Creek	14.28	179	ceP	Pn	00 58 03.7	-2.5
WRAB				pmax	pmax		
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	14.29	179	Pn	Pn	00 58 02.5	-3.8
	comp=Z,3.4nm,0.3s,baz=358,slow=14,SNR=154						
WRA				Sn	Sn	01 00 30.0	-14
	comp=Z,8.1nm,0.3s,baz=358,slow=24,SNR=7.0						
WB2	Warramunga Arr	14.29	179	ePn	Pn	00 58 03.6	-2.7
SPSI	Sidrap Palu	14.29	276	P	Pn	00 58 06.9	+0.6
	comp=Z,23nm,0.8s						
TTSI	Tana Toraja	14.38	279	P	P	00 58 19.7	+5.5
DAV	Davao City (W)	15.12	326	LR	LR	01 05 04.3	
	comp=Z,190nm,20.1s,baz=149,slow=41						
KCP	Kidapawan	15.35	324⇓	eP	Pn	00 58 19.7	-0.8
PLAI	Plampang	16.44	258	P	Pn	00 58 32.3	-2.2
AS31	Alice Springs	17.99	180	ePn	Pn	00 58 52.6	-1.3
	comp=Z,29nm,0.6s						
ASAR	Alice Springs	17.99	180	Pn	Pn	00 58 51.5	-2.4
	comp=Z,1.9nm,0.3s,baz=0.6,slow=7.7,SNR=84						
ASAR				Sn	Sn	01 02 01.8	-12
	comp=Z,2.7nm,0.3s,baz=0.1,slow=28,SNR=4.5						
ASAR				LR	LR	01 06 32.4	
	comp=Z,386nm,18.4s,baz=0.5,slow=40						
RABL	Rabaul	18.13	86	ePn	Pn	00 58 52.6	-3.1
	comp=Z,73nm,0.9s						
CTA	Charters Tower	18.70	142	P	P	00 59 00.3	-1.8
	comp=Z,0.3nm,0.3s,baz=302,slow=13,SNR=2.7						
CTA				S	Sn	01 02 23.4	-7.7
	comp=Z,0.6nm,0.3s,baz=294,slow=5.6,SNR=2.6						
CTAO	Charters Tower	18.70	142	eP	Pn	00 59 02.8	+0.2
	comp=Z,49nm,1.1s						
CTAO	Charters Tower	18.70	142	eP	Pn	00 59 02.8	+0.2
CTAO				pmax	pmax		
	comp=Z,49nm,1.1s						
JAGI	Jajag, Banyuwa	19.93	261	P	P	00 59 09.0	-6.6
KMMI	Kalianget	19.99	265	P	Pn	00 59 18.6	+0.6
PSA00	Pilbara Seismi	21.02	219	eP	P	00 59 27.8	+0.5
	comp=Z,54nm,0.9s						
KKM	Kota Kinabalu	21.19	303	eP	P	00 59 30.1	+0.7
	comp=Z,48nm,1.1s						
GUMO	Guam	21.87	29	LR	LR	01 08 46.6	
	comp=Z,106nm,19.0s,baz=156,slow=39						
GUMO	Guam	21.87	29	eP	P	00 59 35.2	-1.2
	comp=Z,240nm,1.4s						
GUMO	Guam	21.87	29	eP	P	00 59 35.3	-1.2
GUMO				pmax	pmax		
	comp=Z,240nm,1.4s						
UGM	Wanagama	23.45	263	eP	P	00 59 52.9	-0.3
	comp=Z,639nm,1.8s						
KSM	Kuching	24.70	286	eP	P	01 00 04.3	-0.4
	comp=Z,62nm,1.2s						
SARN	Sarigan	25.00	28	eP	P	01 00 07.3	-0.1
	comp=Z,213nm,1.8s						
GIRL	Giralia	25.56	226	eP	P	01 00 12.5	+0.1
	comp=Z,332nm,1.5s						
EIDS	Eidsvold	25.59	142	eP	P	01 00 14.1	+1.4
	comp=Z,40nm,0.9s						
FORT	Forrest	25.70	192	eP	P	01 00 14.1	+0.5
	comp=Z,144nm,0.6s						
HNR	Honiara	25.98	100	LR	LR	01 11 14.3	
	comp=Z,249nm,19.7s,baz=284,slow=38						
HNR	Honiara	25.98	100	eP	P	01 00 16.2	-0.2
	comp=Z,298nm,1.2s						
HNR	Honiara	25.98	100	eP	P	01 00 16.2	-0.2
HNR				pmax	pmax		
	comp=Z,298nm,1.2s						
STKA	Stephens Creek	27.12	166	P	P	01 00 25.6	-0.9
	comp=Z,6.7nm,0.9s,baz=349,slow=8.8,SNR=7.6						
STKA				LR	LR	01 12 18.3	
	comp=Z,625nm,18.2s,baz=358,slow=39						
STKA	Stephens Creek	27.12	166	eP	P	01 00 26.7	+0.3
	comp=Z,3.8nm,0.9s						
STKA	Stephens Creek	27.12	166	eP	P	01 00 26.7	+0.3
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BBOO	Buckleboo	27.17	176	eP	P	01 00 27.0	+0.1
	comp=Z,106nm,1.7s						
PATS	Pohnpei	27.20	63	eP	P	01 00 26.8	-0.5
	comp=Z,126nm,1.3s						
MORW	Morawa	28.91	214	eP	P	01 00 42.4	-0.1
	comp=Z,67nm,1.8s						
ARMA	Armidale	29.76	148	eP	P	01 00 51.2	+1.1
	comp=Z,13nm,1.1s						
TWG	Pinlang	30.93	336	eP	P	01 01 00.5	+0.1
	comp=Z,294nm,1.4s						
MNAI	Manna	30.97	271	eP	P	01 01 01.1	+0.1
	comp=Z,745nm,1.5s						
MYKOM	Kota Tinggi	31.01	283	eP	P	01 01 01.8	+0.6
	comp=Z,21nm,1.1s						
YULB	Yu-li	31.35	337	eP	P	01 01 03.5	-0.6
	comp=Z,107nm,1.8s						
CAN	Canberra	32.67	157	eP	P	01 01 16.4	+0.8
	comp=Z,11nm,1.1s						
CAN	Canberra	32.67	157	eP	P	01 01 16.4	+0.8
CAN				pmax	pmax		
	comp=Z,11nm,1.1s						
KNMB	Chin-men Tao	33.51	334	eP	P	01 01 23.2	+0.2
	comp=Z,271nm,1.9s						
TOO	Toolangi	33.53	163	eP	P	01 01 24.1	+1.0
	comp=Z,32nm,1.4s						
TOO	Toolangi	33.53	163	eP	P	01 01 24.1	+1.0
TOO				pmax	pmax		
	comp=Z,32nm,1.4s						
HKPS	Hong Kong Po S	33.83	326	eP	P	01 01 26.6	+0.7
	comp=Z,78nm,1.1s						
IPM	Ipoh	34.43	286	eP	P	01 01 31.5	+0.3
	comp=Z,28nm,1.2s						
LHI	Lord Howe Isla	34.89	141	eP	P	01 01 36.6	+1.7
	comp=Z,60nm,1.4s						
DZM	Mont Dzumac	35.38	121	P	P	01 01 38.6	-0.8
	comp=Z,4.0nm,0.6s,baz=304,slow=15,SNR=4.3						
DZM	Mont Dzumac	35.38	121	eP	P	01 01 38.6	-0.8
	comp=Z,22nm,1.2s						
PSI	Prapat	36.03	282	eP	P	01 01 45.0	-0.1
	comp=Z,14nm,1.0s						
PSI	Prapat	36.03	282	eP	P	01 01 45.0	-0.1
PSI				pmax	pmax		
	comp=Z,14nm,1.0s						
KWAJ	Kwajalein Atol	36.41	67	eP	P	01 01 48.3	+0.1
	comp=Z,150nm,1.1s						
KWAJ	Kwajalein Atol	36.41	67	eP	P	01 01 48.3	+0.1
KWAJ				pmax	pmax		
	comp=Z,150nm,1.1s						
PINNC	Pines Island,	36.44	121	eP	P	01 01 47.5	-0.8
	comp=Z,239nm,1.8s						
GSI	Gunungsitoli	37.03	280	eP	P	01 01 53.6	+0.1
	comp=Z,53nm,1.5s						
LHMI	Lhok Sumawe	38.54	286	eP	P	01 02 06.4	+0.2
	comp=Z,137nm,1.2s						
JNU	Nakatsue	38.59	356	P	P	01 02 07.2	+0.8
	comp=Z,38nm,1.0s,baz=176,slow=6.4,SNR=13						
JNU	Nakatsue	38.59	356	eP	P	01 02 06.4	-0.1
	comp=Z,49nm,1.0s						
TAU	Tasmania Unive	39.01	164	eP	P	01 02 09.8	0.0
	comp=Z,122nm,1.5s						
TAU	Tasmania Unive	39.01	164	eP	P	01 02 09.8	0.0
TAU				pmax	pmax		
	comp=Z,122nm,1.5s						
NJ2	Nanjing	40.11	340	eP	P	01 02 20.8	+1.8
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
WHN	Wuhan	40.55	333	P	P	01 02 25.1	+2.4
INU	Inuyama	40.80	4	eP	P	01 02 24.2	-0.6
	comp=Z,14nm,1.2s						
GYA	Guiyang	41.43	321	eP	P	01 02 29.3	-0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	42.03	305	P	P	01 02 35.6	+0.6

	comp=Z,2.6nm,0.6s,baz=137,slow=7.0,SNR=15						
CMAR				PcP	PcP	01 04 31.9	+2.0
	comp=Z,1.3nm,0.3s,baz=159,slow=3.4,SNR=6.8						
CMAR	Chiang Mai Arr	42.03	305	ceP	P	01 02 35.7	+0.6
CMAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAJO	Matsushiro	42.07	5	eP	P	01 02 33.8	-1.4
	comp=Z,14nm,0.8s						
MAJO	Matsushiro	42.07	5	eP	P	01 02 33.8	-1.4
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
MAT	Matsushiro	42.07	5	P	P	01 02 34.5	-0.7
MAT				S	S	01 08 51.2	-1.8
MJAR	Matsushiro Arr	42.07	5	P	P	01 02 34.0	-1.2
	comp=Z,7.4nm,0.8s,baz=193,slow=10.0,SNR=26						
MJAR				PcP	PcP	01 04 30.3	+0.5
	comp=Z,3.7nm,0.9s,baz=180,slow=3.5,SNR=8.4						
MJAR				LR	LR	01 18 19.9	
	comp=Z,82nm,19.8s,baz=170,slow=34						
MJB9	Matsu-Tunnel	42.08	5	eP	P	01 02 34.5	-0.7
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	42.21	306	eP	P	01 02 36.8	+0.2
	comp=Z,8.3nm,1.0s						
CHTO	Chiang Mai	42.21	306	eP	P	01 02 36.8	+0.2
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI	Kunming	43.08	316	P	P	01 02 44.4	+0.6
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KS15	Wonju Array Si	43.17	353	eP	P	01 02 44.2	+0.1
	comp=Z,32nm,1.4s						
KSRS	Korea Array	43.18	353	P	P	01 02 44.2	+0.1
	comp=Z,3.6nm,0.7s,baz=176,slow=10,SNR=12						
KSRS				PcP	PcP	01 04 34.5	+1.1
	comp=Z,1.5nm,0.8s,baz=224,slow=3.5,SNR=4.2						
KSRS				LR	LR	01 23 11.5	
	comp=Z,72nm,18.0s,baz=172,slow=40						
XAN	Xi'an	45.99	331	P	P	01 03 06.9	+0.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,96nm,3.7s						
ERM	Erimo	48.09	9	eP	P	01 03 23.1	+0.3
	comp=Z,45nm,1.6s						
ERM	Erimo	48.09	9	eP	P	01 03 23.1	+0.3
ERM				pmax	pmax		
	comp=Z,45nm,1.6s						
DCZ	Deep Cove	49.08	149	eP	P	01 03 31.4	+1.0
	comp=Z,86nm,1.3s						
HIZ	Hauiti	49.41	138	eP	P	01 03 33.6	+0.4
	comp=Z,249nm,1.4s						
MLZ	Mavora Lakes	49.50	149	eP	P	01 03 34.7	+0.9
	comp=Z,281nm,2.0s						
USA0B	Ussuriysk Arra	49.57	358	eP	P	01 03 34.2	0.0
	comp=Z,8.0nm,1.0s						
USRK	Ussuriysk Ar.	49.57	358	P	P	01 03 35.0	+0.7
	comp=Z,3.8nm,0.7s,baz=174,slow=7.5,SNR=11						
USRK				PcP	PcP	01 04 56.8	+1.1
	comp=Z,2.2nm,0.8s,baz=174,slow=4.3,SNR=2.8						
WHZ	Wether Hill Ro	49.77	149	eP	P	01 03 35.8	-0.1
	comp=Z,204nm,1.8s						
ASAJ	Asahikawa	50.06	8	P	P	01 03 38.2	+0.3
	comp=Z,6.9nm,0.6s,baz=219,slow=8.7,SNR=6.5						
LZH	Lanzhou	50.18	328	eP	P	01 03 40.6	+1.4
LZH				pP	sP	01 03 49.3	-0.1
LZH				sP	pwP	01 03 53.1	+2.3
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,92nm,6.2s						
LZH				LR	LR		
	comp=Z,350nm,14.5s						
LZH				LR	LR		
	comp=Z,360nm,15.0s						
LZH				LR	LR		
	comp=Z,440nm,17.6s						
OXZ	Oxford	50.34	144	eP	P	01 03 41.8	+1.6
	comp=Z,178nm,1.7s						
HHC	Hu-ho-hao-te	50.58	338	P	P	01 03 44.4	+2.3
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.0s						
ODZ	Otahua Downs	50.63	147	eP	P	01 03 43.0	+0.6
	comp=Z,111nm,1.7s						
KHZ	Kahutara	50.70	142	eP	P	01 03 43.2	+0.3
	comp=Z,229nm,1.4s						
SNZO	South Karori	50.80	141	eP	P	01 03 44.8	+1.1
	comp=Z,230nm,1.3s						
BKZ	Black Stump Fm	50.85	137	eP	P	01 03 44.6	+0.4
	comp=Z,236nm,2.0s						
MQZ	McQueen’s Vall	50.93	144	eP	P	01 03 44.5	-0.1
	comp=Z,571nm,1.9s						
YSS	Yuzh-Sakhalins	52.87	7	eP	P	01 03 59.5	+0.6
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
KLR	Kul'dur	54.61	358	P	P	01 04 12.5	+0.9
	comp=Z,5.3nm,0.8s,baz=227,slow=3.0,SNR=17						
KLR	Kul'dur	54.61	358	i P	P	01 04 11.3	-0.3
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PALK	Pallekele	54.71	283	eP	P	01 04 12.9	-0.2
	comp=Z,34nm,1.4s						
PALK	Pallekele	54.71	283	eP	P	01 04 12.9	-0.2
PALK				pmax	pmax		
	comp=Z,34nm,1.4s						
GTA	Gaotai	54.78	328	⇑P	P	01 04 14.8	+1.5
GTA				pP	sP	01 04 24.3	+0.9
GTA				sP	pwP	01 04 28.3	+3.4
GTA				PcP	PcP	01 05 16.1	+0.6
GTA				S	S	01 11 54.6	+2.0
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,7.6s						
GTA				LR	LR		
	comp=Z,76nm,14.9s						
GTA				LR	LR		
	comp=Z,71nm,14.3s						
MIDW	Midway	57.63	52	eP	P	01 04 33.0	-0.6
	comp=Z,62nm,0.7s						
ULN	Ulaanbaatar	58.26	339	ceP	P	01 04 38.7	+0.8
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONA0	Songino Array	58.47	338	eP	P	01 04 40.1	+0.8
SONA0				ePcP	PcP	01 05 29.8	+0.1
SONM	Songino Array	58.47	338	P	P	01 04 40.1	+0.8
	comp=Z,0.6nm,0.5s,baz=156,slow=6.2,SNR=5.2						
SONM				PcP	PcP	01 05 29.8	+0.1
	comp=Z,0.8nm,0.7s,baz=143,slow=3.6,SNR=2.8						
SONM				LR	LR	01 33 20.3	
	comp=Z,50nm,18.1s,baz=114,slow=40						
ZEA	Zeya	59.36	355	eP	P	01 04 46.2	+1.0
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
JOHN	Johnston Islan	60.03	67	eP	P	01 04 48.6	-1.9
	comp=Z,275nm,1.1s						
PEA0B	Petropavlovsk-	61.79	16	eP	P	01 05 01.8	-0.1
	comp=Z,15nm,1.3s						
PETK	Petropavlovsk-	61.79	16	P	P	01 05 02.7	+0.8
	comp=Z,3.2nm,0.6s,baz=182,slow=6.7,SNR=10						
PETK				PcP	PcP	01 05 42.9	+0.1
	comp=Z,3.0nm,0.9s,baz=180,slow=0.9,SNR=4.3						
PEA1	Petropavlovsk-	61.80	16	ePcP	PcP	01 05 42.9	+0.1
TLY	Talaya	62.67	339	LR	LR	01 35 46.5	
	comp=Z,59nm,18.1s,baz=178,slow=39						
CASY	Casey	62.78	190	eP	P	01 05 08.5	+0.3
	comp=Z,7.0nm,0.8s						
WMQ	Urumqi	64.47	325	eP	P	01 05 21.6	+1.7
WMQ				pP	pwP	01 05 31.8	+0.1
WMQ				pmax	pmax		
	comp=Z,39nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,26nm,4.7s						
WMQ				LR	LR		
	comp=Z,500nm,28.8s						
WMQ				LR	LR		
	comp=Z,220nm,29.9s						
MA2	Magadan	66.29	9	eP	P	01 05 31.8	+0.5
	comp=Z,69nm,1.9s						
MA2	Magadan	66.29	9	eP	P	01 05 31.8	+0.5
MA2				pmax	pmax		
	comp=Z,69nm,1.9s						
YAK	Yakutsk	67.49	358	eP	P	01 05 39.0	+0.2
	comp=Z,43nm,0.7s						
YAK	Yakutsk	67.49	358	eP	P	01 05 39.6	+0.8
YAK				pmax	pmax		
	comp=Z,21nm,0.6s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
DGZ	Jazzator, Alta	68.23	329	d iP	P	01 05 44.7	+0.7
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PDGK	Podgornoye	69.17	321	P	P	01 05 49.9	-0.1
PDGK				pmax	pmax		
	comp=Z,16nm,1.2s						
MKAR	Makanchi Array	69.30	325	P	P	01 05 51.5	+0.9
	comp=Z,15nm,0.6s,baz=117,slow=8.1,SNR=160						
NIL	Nilore	69.37	309	eP	P	01 05 52.0	+0.7
	comp=Z,7.6nm,0.9s						
NIL	Nilore	69.37	309	eP	P	01 05 52.0	+0.7
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAKZ	Makanchi	69.49	325	eP	P	01 05 52.5	+0.7
	comp=Z,21nm,0.8s						
MAKZ	Makanchi	69.49	325	P	P	01 05 52.4	+0.7
MAKZ				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH	Kashi	69.74	316	P	P	01 05 55.5	+2.0
KSH				pP	pwP	01 06 05.1	+0.1
KSH				sP	PcP	01 06 10.8	-5.4
KSH				PcP	sP	01 06 18.4	+15
KSH				PP	PP	01 08 33.3	+5.2
KSH				S	S	01 15 00.3	-0.8
KSH				pmax	pmax		
	comp=Z,11nm,1.0s						
KSH				pmax	pmax		
	comp=Z,89nm,5.5s						
KSH				LR	LR		
	comp=Z,110nm,5.2s						
KSH				LR	LR		
	comp=Z,170nm,5.9s						
KSH				LR	LR		
	comp=Z,180nm,7.0s						
KDJ	Kajisay	70.09	319	eP	P	01 05 56.5	+0.7
	comp=Z,9.6nm,1.0s						
KDJ	Kajisay	70.09	319	eP	P	01 05 56.5	+0.7
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NRN	Naryn	70.56	317	eP	P	01 05 59.4	+0.6
	comp=Z,4.9nm,0.9s						
NRN	Naryn	70.56	317	eP	P	01 05 59.4	+0.6
NRN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ADK	Adak	70.93	30	eP	P	01 06 00.7	+0.3
	comp=Z,44nm,1.3s						
ADK	Adak	70.93	30	eP	P	01 06 00.7	+0.3
ADK				pmax	pmax		
	comp=Z,44nm,1.3s						
BOOM	Boomskoye usch	71.07	318	eP	P	01 06 02.6	+0.9
	comp=Z,11nm,1.0s						
BOOM	Boomskoye usch	71.07	318	eP	P	01 06 02.6	+0.9
BOOM				pmax	pmax		
	comp=Z,11nm,1.0s						
HON	Honolulu	71.75	66	eP	P	01 06 04.6	-1.4
	comp=Z,152nm,0.9s						
HON	Honolulu	71.75	66	eP	P	01 06 04.6	-1.4
HON				pmax	pmax		
	comp=Z,152nm,0.9s						
AAK	Ala-Archa	72.10	318	eP	P	01 06 08.8	+0.9
	comp=Z,8.8nm,1.1s						
AAK	Ala-Archa	72.10	318	ceP	P	01 06 09.3	+1.4
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZALV	Zalesovo Beam	72.14	332	P	P	01 06 07.2	-0.4
	comp=Z,5.0nm,0.7s,baz=100,slow=4.2,SNR=18						
ARSB	Arslanbob	72.57	316	eP	P	01 06 11.4	+0.7
	comp=Z,14nm,0.9s						
VNDA	Vanda	73.41	174	P	P	01 06 14.9	+0.1
	comp=Z,14nm,0.8s,baz=323,slow=6.4,SNR=94						
VNDA				LR	LR	01 37 13.9	
	comp=Z,55nm,19.7s,baz=342,slow=35						
VNDA	Vanda	73.41	174	eP	P	01 06 15.3	+0.5
VNDA				epP	P	01 06 15.5	+0.6
VNDA	Vanda	73.41	174	eP	P	01 06 15.3	+0.5
KURK	Kurchatov	73.45	327	eP	P	01 06 15.5	0.0
	comp=Z,20nm,0.9s						
KURK	Kurchatov	73.45	327	ceP	P	01 06 15.8	+0.3
KURK				pmax	pmax		
	comp=Z,31nm,1.3s						
GAR	Garm	73.55	313	eP	P	01 06 16.4	-0.1
	comp=Z,11nm,0.9s						
GAR	Garm	73.55	313	eP	P	01 06 16.4	-0.1
GAR				pmax	pmax		
	comp=Z,11nm,0.9s						
HATHI	Halema‘uma‘u T	73.84	68	eP	P	01 06 16.4	-2.1
	comp=Z,397nm,1.2s						
PUH	Pauahi	73.87	68	eP	P	01 06 17.9	-0.8
	comp=Z,83nm,1.0s						
SBA	Scott Base	74.24	173	eP	P	01 06 21.5	+1.8
	comp=Z,15nm,0.9s						
SBA	Scott Base	74.24	173	eP	P	01 06 21.5	+1.8
SBA				pmax	pmax		
	comp=Z,15nm,0.9s						
CHGR	Chuyangaron	74.27	313	eP	P	01 06 20.3	-0.4
	comp=Z,64nm,1.7s						
PPT	Papeete	75.39	107	eP	P	01 06 27.2	-0.3
PPT	Papeete	75.39	107	eP	P	01 06 27.3	-0.3
MRIV	Mauritius Mete	75.47	251	eP	P	01 06 28.8	+0.9
	comp=Z,59nm,1.4s						
OTUK	Ortayu	75.88	323	P	P	01 06 30.0	+0.3
OTUK				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL	Bilibino	76.86	12	eP	P	01 06 35.9	+1.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TIXI	Tiksi	77.14	358	eP	P	01 06 36.0	-0.2
	comp=Z,11nm,0.7s						
TIXI	Tiksi	77.14	358	eP	P	01 06 36.0	-0.2
TIXI				pmax	pmax		
	comp=Z,11nm,0.9s						
MAW	Mawson	77.74	202	P	P	01 06 40.6	+0.8
	comp=Z,15nm,1.2s,baz=86,slow=8.9,SNR=20						
MAW	Mawson	77.74	202	eP	P	01 06 41.1	+1.3
MAW	Mawson	77.74	202	eP	P	01 06 41.1	+1.3
BRVK	Borovoye	79.11	327	eP	P	01 06 47.8	+0.2
	comp=Z,19nm,0.8s						
BRVK	Borovoye	79.11	327	ceP	P	01 06 48.0	+0.4
BRVK				pmax	pmax		
	comp=Z,19nm,0.7s						
CRZF	Crozet Islands	80.59	224	eP	P	01 06 55.1	-0.7
	comp=Z,91nm,1.1s						
SDPT	Sand Point	80.99	32	eP	P	01 06 56.2	-1.4
	comp=Z,30nm,0.8s						
GEYT	Alibeck	82.38	309	P	P	01 07 06.3	+0.8
	comp=Z,4.4nm,0.8s,baz=150,slow=3.3,SNR=11						
GYA0B	ALIBECK ARRAY	82.38	309	eP	P	01 07 06.4	+0.9
	comp=Z,26nm,1.7s						
AB31	Akbulak array	83.91	321	i P	P	01 07 12.7	-0.4
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
QSPA	South Pole Qui	84.40	180	eP	P	01 07 15.7	+0.2
	comp=Z,23nm,0.9s						
SII	Sitkinak Islan	84.73	32	eP	P	01 07 17.5	+0.4
	comp=Z,47nm,1.3s						
OHAK	Old Harbor	85.40	31	eP	P	01 07 21.3	+0.9
	comp=Z,18nm,0.9s						
AKTO	Aktyubinsk	85.42	322	P	P	01 07 20.2	-0.5
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SVW2	Sparrevohn	85.53	27	eP	P	01 07 21.9	+0.9
	comp=Z,4.2nm,0.9s						
SVE	Sverdlovsk	85.64	328	eP	P	01 07 21.4	-0.3
SVE				pmax	pmax		
	comp=Z,11nm,0.9s						
KDAK	Kodiak Island	85.93	31	eP	P	01 07 23.5	+0.5
	comp=Z,13nm,0.9s						
KDAK	Kodiak Island	85.93	31	ceP	P	01 07 23.9	+0.9
SYO	Syowa Base	86.43	201	⇓eP	P	01 07 24.8	-0.5
SYO	Syowa Base	86.43	201	⇑ePcP	P	01 07 26.0	+0.7
SYO	Syowa Base	86.43	201	⇑epP	pP	01 07 34.0	+1.0
ARU	Arti	86.64	327	eP	P	01 07 27.0	+0.4
	comp=Z,4.6nm,0.7s						
ARU	Arti	86.64	327	c iP	P	01 07 26.5	-0.1
ARU						01 10 48.0	
ARU				S	S	01 17 50.0	-12
ARU				SS	SS	01 23 39.9	-3.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRLK	Bradley Lake	87.34	29	eP	P	01 07 30.5	+0.5
	comp=Z,10nm,1.0s						
PPLA	Purkeypile	87.62	26	eP	P	01 07 31.7	+0.3
	comp=Z,20nm,1.6s						
SEW	Seward	88.12	29	eP	P	01 07 32.6	-1.0
	comp=Z,23nm,1.0s						
RC01	Rabbit Creek A	88.24	28	eP	P	01 07 33.6	-0.5
	comp=Z,15nm,0.8s						
KTH	Kantishna Hill	88.35	26	eP	P	01 07 34.2	-0.6
	comp=Z,6.5nm,1.0s						
BPAW	Bear Paw Mtn.	88.48	25	eP	P	01 07 35.1	-0.2
	comp=Z,5.0nm,1.4s						
SML	Sawmill	89.07	28	eP	P	01 07 38.6	+0.5
	comp=Z,12nm,1.0s						
SML	Sawmill	89.07	28	eP	P	01 07 38.6	+0.5
SML				pmax	pmax		
	comp=Z,12nm,1.0s						
GLI	Glacier Island	89.44	29	eP	P	01 07 40.4	+0.5
	comp=Z,9.3nm,1.0s						
SCM	Sheep Creek Mo	89.54	28	eP	P	01 07 41.1	+0.7
	comp=Z,11nm,1.2s						
SCM	Sheep Creek Mo	89.54	28	eP	P	01 07 41.1	+0.7
SCM				pmax	pmax		
	comp=Z,11nm,1.2s						
COLD	Coldfoot	89.63	22	eP	P	01 07 42.3	+1.7
	comp=Z,3.3nm,1.4s						
FID	Port Fidalgo	89.71	29	eP	P	01 07 42.4	+1.2
	comp=Z,6.6nm,0.9s						
MDM	Murphy Dome	89.85	25	eP	P	01 07 40.4	-1.3
	comp=Z,7.7nm,0.6s						
COLA	College	89.99	25	eP	P	01 07 41.9	-0.4
	comp=Z,22nm,0.3s						
COLA	College	89.99	25	eP	P	01 07 41.9	-0.4
COLA				pmax	pmax		
	comp=Z,22nm,0.3s						
EYAK	Cordova Ski Ar	90.02	29	eP	P	01 07 42.8	+0.3
	comp=Z,3.3nm,0.7s						
TOLK	Toolik Lake Re	90.23	21	eP	P	01 07 43.4	-0.1
	comp=Z,11nm,0.3s						
ILAR	Eielson Array	90.37	25	P	P	01 07 43.1	-1.0
	comp=Z,0.9nm,0.7s,baz=266,slow=4.4,SNR=8.7						
ILB	Eielson Array	90.37	25	eP	P	01 07 43.3	-0.8
	comp=Z,13nm,1.9s						
HMT	Hamilton	90.71	29	eP	P	01 07 45.4	-0.4
	comp=Z,6.0nm,0.8s						
RAYN	Ar Rayn	90.84	293	eP	P	01 07 46.8	-0.5
	comp=Z,8.0nm,1.1s						
RAYN	Ar Rayn	90.84	293	eP	P	01 07 46.8	-0.5
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RIDG	Independent Ri	91.04	26	eP	P	01 07 47.6	+0.3
	comp=Z,5.7nm,1.3s						
DOT	Dot Lake	91.36	26	eP	P	01 07 48.9	+0.1
	comp=Z,2.7nm,1.0s						
FYU	Fort Yukon	91.39	23	eP	P	01 07 49.3	+0.5
	comp=Z,21nm,1.8s						
SCRK	Sand Creek	91.45	26	eP	P	01 07 50.1	+0.8
	comp=Z,2.1nm,1.0s						
BALM	Baldy	91.75	29	eP	P	01 07 51.4	+0.6
	comp=Z,3.7nm,0.8s						
BALM	Baldy	91.75	29	eP	P	01 07 51.4	+0.6
BALM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YKU2	Yakutat	92.88	31	eP	P	01 07 56.1	+0.3
	comp=Z,202nm,0.8s						
GNI	Garni	93.00	310	eP	P	01 07 56.8	-0.3
	comp=Z,8.8nm,1.0s						
GNI	Garni	93.00	310	eP	P	01 07 56.8	-0.3
GNI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TBLG	Delisi	93.13	311	eP	P	01 07 57.3	-0.1
	comp=Z,5.3nm,0.7s						
TBLG	Delisi	93.13	311	eP	P	01 07 57.3	-0.1
TBLG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DAWY	Dawson	93.47	26	eP	P	01 07 58.8	+0.3
	comp=Z,2.4nm,0.8s						
HYT	Haines Junctio	94.08	29	eP	P	01 08 01.5	0.0
	comp=Z,5.8nm,1.3s						
VSR	Storozhevoye	97.35	321	eP	P	01 08 13.5	-3.0
VSR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SNAA	Sanae	97.95	193	P	Pdif	01 08 19.7	+0.8
SNAA	Sanae	97.95	193	i P	Pdif	01 08 19.6	+0.7
OBN	Obninsk	98.81	325	i P	P	01 08 20.8	-2.1
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VNA2	Neumayer--Watz	99.48	192	P	Pdif	01 08 25.7	0.0
VNA1	Neumayer--Stat	99.88	192	P	Pdif	01 08 27.3	-0.1
ARA0	ARCESS Array S	101.62	340	ePdif	Pdif	01 08 34.5	-0.7
ARCES	ARCESS Array B	101.62	340	P	Pdif	01 08 34.5	-0.7
	comp=Z,4.1nm,1.0s,baz=93,slow=5.5,SNR=4.1						
KOLS	Kolonicke sedl	108.40	320	eP	Pdif	01 09 06.9	+1.1
KOLS	Kolonicke sedl	108.40	320	ePDIF	Pdif	01 09 06.9	+1.1
VYHS	Vyhne	110.72	320	eP	Pdif	01 09 15.5	-0.6
VYHS	Vyhne	110.72	320	ePDIF	Pdif	01 09 15.5	-0.6
GERES	GERESS Array B	113.85	321	PKiKP	PKiKP	01 13 20.9	-1.3
	comp=Z,0.5nm,0.6s,baz=99,slow=1.8,SNR=6.9						
O20A	White River Ci	114.65	48	P	PKiKP	01 13 25.2	+1.1
	baz=284						
ANMO	Albuquerque	117.25	54	c iPKIKP	PKPdf	01 13 28.6	-0.7
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
ANMO	Albuquerque	117.25	54	P	PKiKP	01 13 30.6	+1.3
	baz=283						
SDCO	Great Sand Dun	117.32	50	P	PKPdf	01 13 28.8	-0.6
	baz=285						
MNTX	Cornudas Mount	118.83	57	ePKPdf	PKPdf	01 13 32.1	0.0
MNTX	Cornudas Mount	118.83	57	P	PKiKP	01 13 33.0	+0.8
	baz=282						
MSTX	Muleshoe	120.44	54	P	PKPdf	01 13 35.4	+0.1
	baz=285						
TX31	Lajitas Ar. Si	120.77	59	ePKPdf	PKiKP	01 13 36.7	+0.6
TXAR	Lajitas Array	120.77	59	PKP	PKPdf	01 13 36.0	-0.1
	comp=Z,1.0nm,0.9s,baz=259,slow=1.3,SNR=5.7						
KEST	Kesra	121.12	309	PKP	PKPdf	01 13 36.4	-0.1
	comp=Z,5.2nm,0.9s,baz=202,slow=5.0,SNR=4.5						
ECSD	EROS Data Cent	121.60	41	P	PKPdf	01 13 36.5	-0.6
	baz=296						
EYMN	Ely	122.70	35	P	PKiKP	01 13 39.4	+0.1
	baz=302						
ABTX	Abilene, Hawle	123.33	54	P	PKiKP	01 13 42.0	+0.9
	baz=286						
E38A	The Farm, Brul	123.38	36	P	PKPdf	01 13 39.6	-0.8
	baz=302						
WMOK	Wichita Mounta	123.39	52	P	PKiKP	01 13 41.4	+0.4
	baz=288						
JCT	Junction City	123.77	57	ePKPdf	PKiKP	01 13 42.3	+0.3
JCT	Junction City	123.77	57	ePKIKP	PKiKP	01 13 42.3	+0.3
JCT	Junction City	123.77	57	P	PKiKP	01 13 42.4	+0.4
	baz=285						
C40A	Isle Royale Na	124.03	34	P	PKPdf	01 13 41.3	-0.3
	baz=305						
G39A	Holcombe	124.30	37	P	PKPdf	01 13 42.3	+0.1
	baz=301						
G40A	Rib Lake	124.89	37	P	PKPdf	01 13 43.2	-0.2
	baz=302						
L42A	Oliver, Polo	126.92	40	P	PKPdf	01 13 47.3	-0.1
	baz=301						
U40A	Yellville	127.31	48	P	PKPdf	01 13 48.5	+0.2
	baz=294						
D47A	Chapleau	127.80	31	P	PKiKP	01 13 49.7	+0.2
	baz=311						
P43A	Skaggs, Pawnee	128.20	43	P	PKiKP	01 13 50.9	+0.5
	baz=299						
D48A	Paudash Townsh	128.39	31	P	PKiKP	01 13 50.8	+0.2
	baz=312						
D49A	Beulah Townshi	128.55	30	P	PKiKP	01 13 50.9	0.0
	baz=313						
PLCA	Paso Flores	128.70	156	PKP	PKiKP	01 13 52.1	+0.5
	comp=Z,4.6nm,0.9s,baz=197,slow=6.8,SNR=6.6						
LSQQ	Lebel-sur-Quev	129.33	26	P	PKPdf	01 13 50.9	-0.8
	baz=319						
Q45A	Warren Harvey,	129.49	43	P	PKiKP	01 13 53.2	+0.1
	baz=300						
D52A	ZEK Kipawa Sen	130.20	29	P	PKPdf	01 13 53.2	-0.3
	baz=316						
L48A	N Adams	130.22	37	P	PKiKP	01 13 54.7	+0.3
	baz=306						
KLBO	Killbear Provi	130.43	31	P	PKPdf	01 13 54.3	+0.3
	baz=313						
D53A	Lac Vacive, Po	130.47	28	P	PKPdf	01 13 53.9	-0.1
	baz=317						
T46A	Princeton	130.58	45	P	PKPdf	01 13 54.8	+0.4
	baz=299						
E52A	Mattawa	130.58	30	P	PKPdf	01 13 54.5	+0.4
	baz=315						

O48A	**Farmland**	130.73	40	P	PKPdf	01 13 55.1	+0.4
	baz=304						
R47A	**Wooly Knot Far**	130.89	43	P	PKiKP	01 13 56.0	+0.1
	baz=301						
E53A	**Dumoine, Ponti**	130.99	29	P	PKiKP	01 13 55.7	-0.2
	baz=316						
V46A	**Holladay**	131.00	46	P	PKPdf	01 13 54.2	-1.1
	baz=298						
WVT	**Waverly**	131.06	46	P	PKPdf	01 13 55.5	+0.1
	baz=298						
Q48A	**North Vernon**	131.09	41	P	PKPdf	01 13 56.0	+0.6
	baz=302						
L50A	**Kingsville**	131.13	36	P	PKiKP	01 13 57.5	+1.2
	baz=308						
BANO	**Bancroft**	131.83	30	P	PKiKP	01 13 58.1	+0.5
	baz=315						
P50A	**Jamestown**	131.96	40	P	PKPdf	01 13 57.6	+0.6
	baz=305						
ACSO	**Alum Creek Sta**	132.11	38	P	PKiKP	01 13 58.9	+0.6
	baz=306						
T49A	**Edmonton**	132.18	43	P	PKiKP	01 13 58.2	-0.3
	baz=301						
G55A	**Calabogie**	132.26	29	P	PKiKP	01 13 58.7	+0.3
	baz=317						
TOA0	**Torodi Ar. Sit**	132.43	283	*e*PKPdf	PKiKP	01 13 59.6	0.0
TORD	**Torodi Ar. Bea**	132.43	283	PKP	PKPdf	01 13 57.6	-0.9
	comp=Z,4.5nm,0.8s,baz=28,slow=3.6,SNR=25						
TOA1	**Torodi Ar. Sit**	132.43	283	*e*PKPdf	PKPdf	01 13 57.6	-0.9
P52A	**Corning**	132.99	39	P	PKiKP	01 13 59.9	-0.2
	baz=307						
O53A	**New Philadelph**	133.18	37	P	PKiKP	01 14 00.7	+0.2
	baz=308						
V50A	**Pikevile**	133.21	45	P	PKiKP	01 14 00.6	-0.1
	baz=301						
M54A	**Oil Creek Stat**	133.29	35	P	PKiKP	01 14 00.5	-0.2
	baz=311						
Z49A	**Columbiana**	133.37	49	P	PKiKP	01 14 00.9	-0.2
	baz=297						
X50B	**Fort Payne**	133.42	47	P	PKPdf	01 14 00.6	+0.6
	baz=299						
P53A	**Whipple**	133.54	38	P	PKiKP	01 14 01.6	+0.3
	baz=307						
LONY	**Lake Ozonia**	133.75	28	P	PKiKP	01 14 01.7	+0.2
	baz=319						
Q53A	**Leroy**	133.83	39	P	PKiKP	01 14 01.9	+0.1
	baz=307						
M56A	**Emporium**	134.14	34	P	PKPdf	01 14 01.4	+0.3
	baz=312						
U53A	**Fall Branch**	134.58	43	P	PKiKP	01 14 03.3	-0.2
	baz=304						
W53A	**Cullowhee**	134.82	44	P	PKiKP	01 14 04.2	+0.1
	baz=302						
Z52A	**Williamson**	134.93	47	P	PKiKP	01 14 04.2	0.0
	baz=299						
P56A	**Dayton Farm, R**	135.07	36	P	PKPdf	01 14 02.5	-0.3
	baz=310						
451A	**Vernon**	135.11	51	P	PKPdf	01 14 02.7	-0.5
	baz=296						
PB11	**IPOC Station P**	145.70	138	*e*PKPdf	PKPab	01 14 23.7	+0.2
GO01	**Chusmiza**	146.07	138	*e*PKPab	PKPab	01 14 25.7	+0.5
CPUP	**Villa Florida**	146.43	161	PKPbc	PKPab	01 14 25.9	+0.1
	comp=Z,20nm,0.8s,baz=214,slow=2.7,SNR=49						
CPUP	**Villa Florida**	146.43	161	*e*PKPbc	PKPbc	01 14 25.3	+0.4
CPUP	**Villa Florida**	146.43	161	*e*PKP2	PKPbc	01 14 25.3	+0.4
LPAZ	**La Paz**	149.15	135	PKPbc	PKPdf	01 14 30.7	+1.5
	comp=Z,6.9nm,0.7s,baz=319,slow=1.9,SNR=24						
SDV	**Santo Domingo**	155.32	81	*e*PKPdf	PKPdf	01 14 38.5	+0.6

IDC 14 01:05:15.2±2.4, **17°.00S×174°.43W, h0^{km}, mb3.6**/4, **mb1 4.0**/4, **mb1mx3.6**/25, **mbtmp3.6**/4, **Error ellipse: s-maj=143.4km s-min=29.8km az=151.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	48.54	258	P	P	01 14 00.6	0.0
	0.6nm,0.3s,baz=94,slow=7.1,SNR=9.5						
ASAR	**Alice Springs**	48.70	253	P	P	01 14 01.5	-0.3
	0.8nm,0.6s,baz=87,slow=7.9,SNR=11						
TXAR	**Lajitas Array**	82.31	56	P	P	01 17 39.2	0.0
	0.5nm,1.0s,baz=243,slow=6.0,SNR=2.8						
ILAR	**Eielson Array**	84.19	11	P	P	01 17 48.1	0.0
	0.2nm,0.7s,baz=210,slow=5.2,SNR=4.0						

IDC 14 01:29:52.4±1.6, **16°.46S×174°.28W, h0^{km}, mb3.8**/4, **mb1 4.0**/4, **mb1mx3.6**/20, **mbtmp3.8**/4, **Error ellipse: s-maj=49.2km s-min=32.2km az=97.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	48.78	258	P	P	01 38 39.8	+0.1
	1.2nm,0.8s,baz=95,slow=9.0,SNR=3.4						
ASAR	**Alice Springs**	48.98	253	P	P	01 38 40.9	-0.3
	0.9nm,0.7s,baz=88,slow=8.1,SNR=9.7						
VNDA	**Vanda**	62.24	186	P	P	01 40 15.6	+0.1
	0.4nm,0.7s,baz=357,slow=7.6,SNR=4.4						
PETK	**Petropavlovsk-**	73.38	343	P	P	01 41 26.1	+0.1
	1.0nm,0.7s,baz=101,slow=7.5,SNR=3.0						
BRTR	**Keskin Array B**	146.42	319	PKPbc	PKPdf	01 49 34.6	0.0
	0.9nm,0.9s,baz=55,slow=3.8,SNR=4.8						

ATH 14 01:40:27.8, 38°.23N×22°.11E, h11^{km}±1^{km}, **ML1.7**/3, **Error ellipse: s-maj=1.9km s-min=0.9km az=231.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG3	**Aigion**	0.02	359	P	Pg	01 40 29.7	0.0
AIG2	**Aigio**	0.03	286	P	Pg	01 40 29.7	-0.1
AIG2				S	Sg	01 40 31.0	-0.1
AIG1	**Aigion**	0.04	131	P	Pg	01 40 29.8	0.0
AIG1				S	Sg	01 40 31.3	+0.1
LAKA	**Lakka**	0.10	273	P	Pg	01 40 30.3	-0.2
LAKA				S	Sg	01 40 32.2	-0.3
TRAZ	**Trapeza**	0.11	128	P	Pg	01 40 30.7	+0.1
TRAZ				S	Sg	01 40 32.8	+0.2
TRAZ				AML	AML	01 40 33.5	
	comp=E,1011μm,0.2s						
TRAZ				AML	AML	01 40 33.7	
	comp=N,1169μm,0.1s						
TRIZ	**Trizonia**	0.13	349	P	Pg	01 40 30.9	0.0
TRIZ				S	Sg	01 40 32.9	-0.3
KALE	**Kalithea**	0.16	10	P	Pg	01 40 31.5	+0.1
KALE				S	Sg	01 40 34.1	+0.2
KALE				AML	AML	01 40 34.8	
	comp=N,980μm,0.3s						
KALE				AML	AML	01 40 35.1	
	comp=E,635μm,0.2s						
SERG	**Sergoula**	0.18	348	P	Pg	01 40 31.8	0.0
SERG				S	Sg	01 40 34.8	+0.2
SERG				AML	AML	01 40 35.1	
	comp=E,684μm,0.3s						
SERG				AML	AML	01 40 35.3	
	comp=N,708μm,0.3s						
KLV	**Kalavryta, Ach**	0.19	169	P	Pg	01 40 31.8	-0.2
KLV				S	Sg	01 40 35.2	+0.3
UPR	**University Cam**	0.26	281	P	Pg	01 40 33.4	+0.4
GUR	**Goura**	0.35	148	P	Pg	01 40 34.5	-0.3
GUR				S	Sg	01 40 40.4	+0.8
DSF	**Desfina**	0.38	62	P	Pg	01 40 35.1	-0.2
DSF				S	Sg	01 40 40.6	+0.3
ANX	**Ano Chora**	0.39	338	P	Pg	01 40 35.4	-0.1

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*IDC **14** 01:45:42.9±0.8, 55°.21N×162°.98E, h0^{km}, mb3.7/15, mb1 3.9/16, mb1mx3.8/33, mbtmp3.7/16, ML2.8/1, MS3.1/4, Ms1 3.1/4, ms1mx2.7/41, Error ellipse: s-maj=23.8km s-min=14.1km az=157.0*

*KRSC **14** 01:45:44.4±1.1, 55°.02N×163°.20E, h33^{km}±22^{km}, ML4.5*

*MOS **14** 01:45:46.5±0.8, 55°.09N×163°.18E, h39^{km}, mb4.2/7, Error ellipse: s-maj=7.2km s-min=5.3km az=84.4*

*NEIC **14** 01:45:52.0±1.5, 54°.72N×162°.38E, h139^{km}±23^{km}, mb4.1/14, Error ellipse: s-maj=36.0km s-min=22.7km az=203.0*

ISC 14 01:45:43.6±1.3, **55°.08N**±0°.03×**163°.22E**±0°.03, **h9^{km}**±8^{km}, **n116, σ1^{s}.37**/164, **mb3.9**/27, **MS3.0**/3, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	1.01	239	*e*P	Pg	01 46 02.4	-0.5
MKZ				*e*S	Sg	01 46 15.5	-0.4
MKZ	**Mys Kozlova**	1.01	239	PN	Pg	01 46 02.4	-0.5
MKZ				S	Sg	01 46 15.5	-0.4
KBTR	**Krutoberegovo**	1.16	349	*e*P	Pg	01 46 05.3	-0.5
KBTR				*e*S	Sg	01 46 20.9	+0.1
KBTR	**Krutoberegovo**	1.16	349	PN	Pg	01 46 05.3	-0.5
KBTR				S	Sg	01 46 20.9	+0.1
KBG	**Krutoberegovo**	1.22	346	*e*P	Pg	01 46 06.6	-0.3
KBG				*e*S	Sg	01 46 23.1	+0.4
KBG	**Krutoberegovo**	1.22	346	PN	Pg	01 46 06.6	-0.3
KBG				S	Sg	01 46 23.1	+0.4
BKI	**Bering**	1.59	84	*e*P	Pn	01 46 12.1	+0.3
BKI				*e*S	Sn	01 46 31.6	-0.8
BKI	**Bering**	1.59	84	PN	Pn	01 46 12.1	+0.3
BKI				S	Sn	01 46 31.6	-0.8
TUMD	**Tumrok D**	1.62	276	*e*P	Pn	01 46 12.0	-0.4
TUMD				*e*S	Sn	01 46 31.8	-1.6
KZV	**Kizimen**	1.68	272	*e*P	Pn	01 46 13.1	-0.2
KZV				*e*S	Sn	01 46 34.1	-0.9
KZV	**Kizimen**	1.68	272	PN	Pn	01 46 13.1	-0.2
KZV				S	Sn	01 46 34.1	-0.9
CIRR	**Tsirk**	1.75	308	*e*P	Pn	01 46 15.3	+1.1
CIRR				*e*S	Sn	01 46 37.3	+0.6
CIRR	**Tsirk**	1.75	308	PN	Pn	01 46 15.3	+1.1
CIRR				S	Sn	01 46 37.3	+0.6
LGNR	**Loginova**	1.75	306	*e*P	Pn	01 46 15.2	+0.8
LGNR				*e*S	Sn	01 46 38.2	+1.1
LGNR	**Loginova**	1.75	306	PN	Pn	01 46 15.2	+0.8
LGNR				S	Sn	01 46 38.2	+1.1
TUMR	**Tumrok**	1.77	278	*e*P	Pn	01 46 14.7	+0.2
TUMR				*e*S	Sn	01 46 37.0	-0.3
TUMR	**Tumrok**	1.77	278	PN	Pn	01 46 14.7	+0.2
TUMR				S	Sn	01 46 37.0	-0.3
BZMR	**Bezymyannaya**	1.77	300	P	Pn	01 46 15.4	+0.8
BZMR				*e*S	Sn	01 46 38.1	+0.7
BZMR	**Bezymyannaya**	1.77	300	PN	Pn	01 46 15.4	+0.8
BZMR				S	Sn	01 46 38.1	+0.7
BZWR	**Bezymyannyi-We**	1.79	301	*e*P	Pn	01 46 15.2	+0.5
BZWR				*e*S	Sn	01 46 38.2	+0.6
BZWR	**Bezymyannyi-We**	1.79	301	PN	Pn	01 46 15.2	+0.5
BZWR				S	Sn	01 46 38.2	+0.6
SMKR	**Semkarok**	1.81	328	*e*P	Pn	01 46 15.7	+0.8
SMKR				*e*S	Sn	01 46 39.0	+1.0
SMKR	**Semkarok**	1.81	328	PN	Pn	01 46 15.7	+0.8
SMKR				S	Sn	01 46 39.0	+1.0
KMNR	**Kamenistaya**	1.83	293	*e*P	Pn	01 46 16.3	+1.0
KMNR				*e*S	Sn	01 46 38.6	-0.1
KMNR	**Kamenistaya**	1.83	293	PN	Pn	01 46 16.3	+1.0
KMNR				S	Sn	01 46 38.6	-0.1
KIRR	**Kirishev**	1.86	299	*e*P	Pn	01 46 15.8	+0.1
KIRR				*e*S	Sn	01 46 38.5	-0.9
KIRR	**Kirishev**	1.86	299	PN	Pn	01 46 15.8	+0.1
KIRR				S	Sn	01 46 38.5	-0.9
BDR	**Baidarnaya**	1.88	324	*e*P	Pn	01 46 16.6	+0.7
BDR	**Baidarnaya**	1.88	324	PN	Pn	01 46 16.6	+0.7
KRSR	**Krestovskiy**	1.89	308	*e*P	Pn	01 46 16.0	-0.1
KRSR				*e*S	Sn	01 46 39.4	-0.7
KRSR	**Krestovskiy**	1.89	308	PN	Pn	01 46 16.0	-0.1
KRSR				S	Sn	01 46 39.4	-0.7
KLY	**Klyuchi**	1.91	312	*e*P	Pn	01 46 15.1	-1.2
KLY				*e*S	Sn	01 46 37.5	-2.9
KLY	**Klyuchi**	1.91	312	PN	Pn	01 46 15.1	-1.2
KLY				S	Sn	01 46 37.5	-2.9
KPT	**Kopyto**	1.92	299	*e*P	Pn	01 46 17.7	+1.1
KPT				*e*S	Sn	01 46 42.5	+1.6
KPT	**Kopyto**	1.92	299	PN	Pn	01 46 17.7	+1.1
KPT				S	Sn	01 46 42.5	+1.6
SRKR	**Sorokina**	1.96	325	*e*P	Pn	01 46 17.8	+0.8
SRKR	**Sorokina**	1.96	325	PN	Pn	01 46 17.8	+0.8
KOZ	**Kozyrevsk**	2.14	299	*e*P	Pn	01 46 21.3	+1.8
KOZ				*e*S	Sn	01 46 46.7	+0.5
KOZ	**Kozyrevsk**	2.14	299	PN	Pn	01 46 21.3	+1.8
KOZ				S	Sn	01 46 46.7	+0.5
SRDR	**Sredinnyy**	2.34	304	*e*P	Pn	01 46 23.1	+0.8
SRDR	**Sredinnyy**	2.34	304	PN	Pn	01 46 23.1	+0.8
ESO	**Esso**	2.71	290	*e*P	Pn	01 46 27.7	+0.4
ESO				*e*S	Sn	01 46 59.4	-0.8
ESO	**Esso**	2.71	290	PN	Pn	01 46 27.7	+0.4
ESO				S	Sn	01 46 59.4	-0.8
SPN	**Mys Shipunski**	2.73	225	*e*P	Pn	01 46 27.0	-0.6
SPN				*e*S	Sn	01 46 56.8	-3.9
SPN	**Mys Shipunski**	2.73	225	PN	Pn	01 46 27.0	-0.6
NLC	**Nalytchevo**	2.97	232	*e*S	Sn	01 47 07.5	+0.9
SDLR	**Sedlovina**	3.12	237	*e*P	Pn	01 46 34.0	+1.0
SDLR				*e*S	Sn	01 47 08.6	-1.8
SDLR	**Sedlovina**	3.12	237	PN	Pn	01 46 34.0	+1.0
SDLR				S	Sn	01 47 08.6	-1.8
SMAR	**Somma**	3.17	237	*e*P	Pn	01 46 36.0	+2.2
SMAR				*e*S	Sn	01 47 11.9	+0.1
SMAR	**Somma**	3.17	237	PN	Pn	01 46 36.0	+2.2
SMAR				S	Sn	01 47 11.9	+0.1
KRER	**Koryakskii**	3.17	238	*e*P	Pn	01 46 35.6	+1.8
KRER				*e*S	Sn	01 47 11.0	-0.8
KRER	**Koryakskii**	3.17	238	PN	Pn	01 46 35.6	+1.8
KRER				S	Sn	01 47 11.0	-0.8
KRX	**Arik**	3.19	239	*e*P	Pn	01 46 35.5	+1.5
KRX	**Arik**	3.19	239	PN	Pn	01 46 35.5	+1.5
UGLR	**Uglovaya**	3.19	236	*e*P	Pn	01 46 35.2	+1.2
UGLR				*e*S	Sn	01 47 11.6	-0.6
UGLR	**Uglovaya**	3.19	236	PN	Pn	01 46 35.2	+1.2
UGLR				S	Sn	01 47 11.6	-0.6
AVH	**Avacha**	3.20	237	*e*P	Pn	01 46 35.4	+1.3
AVH				*e*S	Sn	01 47 12.9	+0.6
AVH	**Avacha**	3.20	237	PN	Pn	01 46 35.4	+1.3
AVH				S	Sn	01 47 12.9	+0.6
KOK	**Koryaka**	3.23	238	*e*P	Pn	01 46 36.0	+1.5
KOK	**Koryaka**	3.23	238	PN	Pn	01 46 36.0	+1.5
DALK	**Dalny**	3.33	234	*e*P	Pn	01 46 36.3	+0.5
DALK				*e*S	Sn	01 47 14.3	-1.2
DALK	**Dalny**	3.33	234	PN	Pn	01 46 36.3	+0.5
DALK				S	Sn	01 47 14.3	-1.2
GNL	**Ganaly**	3.38	248	*e*P	Pn	01 46 37.9	+1.3
GNL	**Ganaly**	3.38	248	PN	Pn	01 46 37.9	+1.3
PET	**Petropavlovsk**	3.39	234	*e*Pn	Pn	01 46 36.5	-0.1
PET	**Petropavlovsk**	3.39	234	*e*P	Pn	01 46 37.8	+1.3
PET				*e*S	Sn	01 47 15.7	-1.1
PET	**Petropavlovsk**	3.39	234	*e*PN	Pn	01 46 38.2	+1.7
PET				*e*S	Sn	01 47 14.8	-2.0
PET				pmax	pmax		
	comp=Z,62nm,0.5s						
PET				smax	smax		
	comp=N,528nm,0.7s						
PET				smax	smax		
	comp=E,391nm,0.6s						
PET				MLR	MLR		
	comp=Z,300nm,14.0s						
KRMR	**Karymshinskiy**	3.75	235	*e*S	Sn	01 47 28.1	+2.2
PEA0B	**Petropavlovsk-**	3.80	241	*e*Pn	Pn	01 46 40.3	-1.9
PETK	**Petropavlovsk-**	3.80	241	Pn	Pn	01 46 43.1	+0.8
	comp=Z,3.4nm,0.3s,baz=68,slow=18,SNR=41						
PETK				Sn	Sn	01 47 28.6	+1.5
	comp=Z,2.0nm,0.3s,baz=80,slow=18,SNR=7.5						
RUS	**Russkaya**	3.85	228	P	Pn	01 46 46.6	+3.7
RUS	**Russkaya**	3.85	228	PN	Pn	01 46 46.6	+3.7
MTVR	**Mutnovka**	3.96	231	*e*P	Pn	01 46 47.7	+3.1
MTVR	**Mutnovka**	3.96	231	PN	Pn	01 46 47.7	+3.1
APC	**Apacha**	4.17	241	*e*P	Pn	01 46 50.3	+2.9
APC	**Apacha**	4.17	241	PN	Pn	01 46 50.3	+2.9
PALN	**Palana**	4.40	338	*e*P	Pn	01 46 55.5	+5.1
PALN	**Palana**	4.40	338	PN	Pn	01 46 55.5	+5.1
KDTR	**Khodutka, Kamc**	4.49	225	*e*P	Pn	01 46 54.6	+2.9
KDTR	**Khodutka, Kamc**	4.49	225	PN	Pn	01 46 54.6	+2.9
MA2	**Magadan**	8.10	309	LR	LR	01 51 12.8	
	comp=Z,102nm,18.1s,baz=126,slow=42						
KLR	**Kul'dur**	20.06	266	LR	LR	01 58 53.5	
	comp=Z,37nm,18.8s,baz=60,slow=40						
TTA	**Tatalina**	22.07	53	*e*P	P	01 50 41.5	+2.9
	comp=Z,8.1nm,1.6s						
TTA	**Tatalina**	22.07	53	*e*P	P	01 50 41.5	+2.9
TTA				pmax	pmax		
	comp=Z,8.0nm,1.6s						
TIXI	**Tiksi**	22.13	332	P	P	01 50 38.4	-0.5
	comp=Z,1.2nm,0.5s,baz=132,slow=11,SNR=5.0						
TIXI	**Tiksi**	22.13	332	*e*P	P	01 50 36.7	-2.2
	comp=Z,6.3nm,0.8s						
MLY	**Manley**	24.47	48	*e*P	P	01 51 04.2	+1.6
	comp=Z,3.6nm,1.3s						
MJAR	**Matsushiro Arr**	25.22	233	P	P	01 51 09.6	+0.1
	comp=Z,2.2nm,0.7s,baz=19,slow=8.5,SNR=8.2						
MJAR				LR	LR	02 01 41.9	
	comp=Z,43nm,18.2s,baz=90,slow=38						
MCK	**McKinley**	25.26	51	*e*P	P	01 51 11.0	+1.3
	comp=Z,4.1nm,0.4s						
MCK	**McKinley**	25.26	51	*e*P	P	01 51 11.0	+1.3
MCK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
WRH	**Wood River Hil**	25.61	49	*e*P	P	01 51 13.1	+0.4
	comp=Z,5.6nm,0.8s						
CCB	**Clear Creek Bu**	25.72	48	*e*P	P	01 51 14.4	+0.6
	comp=Z,4.4nm,1.2s						
ILAR	**Eielson Array**	26.11	48	P	P	01 51 17.8	+0.4
	comp=Z,2.0nm,0.8s,baz=264,slow=8.4,SNR=23						
ILB	**Eielson Array**	26.11	48	*e*P	P	01 51 18.1	+0.8
	comp=Z,2.3nm,0.8s						
SCM	**Sheep Creek Mo**	26.17	55	*e*P	P	01 51 18.5	+0.5
	comp=Z,4.8nm,0.8s						
SCM	**Sheep Creek Mo**	26.17	55	*e*P	P	01 51 18.5	+0.5
SCM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PRP	**Porcupine Dome**	26.66	46	*e*P	P	01 51 23.1	+0.6
	comp=Z,4.0nm,0.8s						
SCRK	**Sand Creek**	27.43	50	*e*P	P	01 51 28.2	-1.1
	comp=Z,3.0nm,0.8s						
MENT	**Mentasta**	27.68	52	*e*P	P	01 51 30.5	-1.0
	comp=Z,6.4nm,0.9s						
EGAK	**Eagle**	28.56	48	*e*P	P	01 51 38.6	-0.7
	comp=Z,2.7nm,0.7s						
HYT	**Haines Junctio**	31.01	55	*e*P	P	01 52 02.1	+1.0
	comp=Z,2.4nm,0.8s						
INK	**Inuvik**	31.17	40	P	P	01 52 03.0	+0.8
	comp=Z,2.3nm,0.6s,baz=285,slow=3.2,SNR=3.2						
SONM	**Songino Array**	35.26	282	P	P	01 52 39.4	+1.0
	comp=Z,0.2nm,0.4s,baz=56,slow=5.6,SNR=2.2						
YKA	**Yellowknife Ar**	40.45	45	P	P	01 53 22.9	+1.0
	comp=Z,1.5nm,0.6s,baz=299,slow=7.7,SNR=3.7						
MKAR	**Makanchi Array**	48.95	296	P	P	01 54 28.7	-1.2
	comp=Z,0.2nm,0.4s,baz=57,slow=10,SNR=2.7						
BMO	**Blue Mountains**	49.48	67	*e*P	P	01 54 31.4	-2.6
	comp=Z,15nm,1.7s						
BMO	**Blue Mountains**	49.48	67	*e*P	P	01 54 31.4	-2.6
BMO				pmax	pmax		
	comp=Z,15nm,1.7s						
ARU	**Arti**	53.17	318	LR	LR	02 20 30.1	
	comp=Z,37nm,19.7s,baz=303,slow=39						
NVAR	**Mina Array Bea**	53.37	74	P	P	01 55 04.5	+1.1
	comp=Z,0.7nm,0.8s,baz=295,slow=6.8,SNR=3.5						
PDAR	**Pinedale Array**	54.97	64	P	P	01 55 16.8	+1.8
	comp=Z,0.4nm,0.7s,baz=345,slow=2.8,SNR=5.3						
FINES	**FINESS Array B**	59.01	338	P	P	01 55 42.5	-0.5
	comp=Z,0.4nm,0.4s,baz=36,slow=6.8,SNR=8.2						
AKASG	**Malin Array Be**	67.83	330	P	P	01 56 40.2	-1.3
	comp=Z,0.4nm,0.3s,baz=29,slow=7.0,SNR=3.1						
TXAR	**Lajitas Array**	68.19	70	P	P	01 56 45.8	+1.5
	comp=Z,0.3nm,0.6s,baz=305,slow=5.4,SNR=3.3						
BRTR	**Keskin Array B**	76.22	322	P	P	01 57 30.4	-1.8
	comp=Z,0.4nm,0.8s,baz=20,slow=4.6,SNR=3.3						
ASAR	**Alice Springs**	82.34	207	P	P	01 58 06.0	+0.5
	comp=Z,0.4nm,0.7s,baz=14,slow=5.1,SNR=4.8						
ESDC	**Sonseca Array**	84.98	350	P	P	01 58 19.2	+0.2
	comp=Z,0.4nm,0.6s,baz=5.6,slow=4.6,SNR=6.4						

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*MDD **14** 01:46:07.8±2.5, 37°.14N×13°.39W, h30^{km}, mb3.9/7, Error ellipse: s-maj=22.3km s-min=16.5km az=32.0, PRXIMO*

*INMG **14** 01:46:08.1±0.6, 36°.97N×13°.55W, h10^{km}, ML2.0, Error ellipse: s-maj=7.5km s-min=5.2km az=41.0*

ISC 14 01:46:08.2±3.7, **37°.3N**±0°.1×**13°.1W**±0°.2, **h10^{km}, n30, σ1^{s}.21**/43, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	3.37	92	*e*Sn	Sn	01 47 40.0	-1.0
PFVI	**Vila Bisbo**	3.37	92	P	Pn	01 47 01.9	+1.0
	4.5nm,0.4s,SNR=7.9						
PFVI				S	Sn	01 47 40.7	-0.4
	4.5nm,0.4s,SNR=7.9						
PMAFR	**Mafra**	3.39	60	*e*Sn	Sn	01 47 43.1	+1.7
PMAFR				A	A	01 47 44.0	
	5.0nm,0.7s						
PMAFR	**Mafra**	3.39	60	P	Pn	01 47 02.0	+0.9
	7.1nm,0.6s,SNR=7.9						
PMAFR				S	Sn	01 47 41.9	+0.5
	7.8nm,0.5s,SNR=7.9						
PTEO	**Sao Teotonio**	3.45	85	*e*Sn	Sn	01 47 42.1	-0.8
PTEO				A	A	01 47 46.4	
	3.6nm,0.9s						
PTEO	**Sao Teotonio**	3.45	85	S	Sn	01 47 42.1	-0.8
	1.8nm,0.9s						
PNCL	**Nicolau / Gran**	3.67	76	*e*Sn	Sn	01 47 48.6	+0.3
PNCL				A	A	01 47 51.8	
	1.3nm,0.3s						
PNCL	**Nicolau / Gran**	3.67	76	S	Sn	01 47 48.6	+0.3
	1.3nm,0.3s						
PCVE	**Castro Verde**	4.00	84	*e*Sn	Sn	01 47 55.4	-1.0
PCVE				A	A	01 47 56.8	
	2.0nm,0.4s						
PCVE	**Castro Verde**	4.00	84	S	Sn	01 47 55.4	-1.0
	2.0nm,0.4s						
PBDV	**Barranco-do-Ve**	4.08	90	*e*Sn	Sn	01 47 57.0	-1.5
PBDV				A	A	01 48 02.5	
	2.3nm,0.6s						
PBDV	**Barranco-do-Ve**	4.08	90	S	Sn	01 47 57.0	-1.5
	2.3nm,0.6s						
EVO	**Evora**	4.16	72	*e*Sn	Sn	01 48 00.6	+0.2
EVO				A	A	01 48 05.1	
	2.0nm,0.6s						
EVO	**Evora**	4.16	72	S	Sn	01 48 00.6	+0.2
	2.0nm,0.6s						
PMTG	**Montargil**	4.18	64	*e*Pn	Pn	01 47 13.1	+1.1
PMTG				*e*Sn	Sn	01 48 01.4	+0.5
PMTG	**Montargil**	4.18	64	P	Pn	01 47 13.1	+1.1
PMTG				S	Sn	01 48 01.4	+0.5
PVAQ	**Vaqueiros**	4.25	87	*e*Sn	Sn	01 48 00.9	-1.7
PVAQ				A	A	01 48 11.1	
	2.2nm,0.9s						
PVAQ	**Vaqueiros**	4.25	87	S	Sn	01 48 00.9	-1.7
	2.2nm,0.9s						
EGRO	**El Granado**	4.43	86	P	Pn	01 47 15.7	+0.2
	2.4nm,0.5s,SNR=7.9						
EGRO				S	Sn	01 48 06.8	-0.4
	6.6nm,0.8s,SNR=7.9						
PMRV	**Marv??o**	4.92	63	*e*Pn	Pn	01 47 23.1	+0.9
PMRV				*e*Sn	Sn	01 48 19.4	+0.3
PMRV				A	A	01 48 22.3	
	0.8nm,0.3s						
PMRV	**Marv??o**	4.92	63	P	Pn	01 47 23.1	+0.9
PMRV				S	Sn	01 48 19.4	+0.3
	0.8nm,0.3s						
EMIN	**Mina Concepcio**	5.09	83	P	Pn	01 47 24.9	+0.4
	4.3nm,1.0s,SNR=7.9						
EMIN				S	Sn	01 48 22.5	-0.8
	2.9nm,0.8s,SNR=7.9						
ELOB	**Lobios**	5.96	39	P	Pn	01 47 37.6	+1.2
	1.0nm,0.5s,SNR=7.9						
ELOB				S	Sn	01 48 43.7	-1.1
	11nm,1.2s,SNR=7.9						
MVO	**Moncorvo**	6.05	49	*e*Pn	Pn	01 47 38.4	+0.7
MVO	**Moncorvo**	6.05	49	P	Pn	01 47 38.5	+0.7
	2.0nm,0.6s,SNR=7.9						
MVO				S	Sn	01 48 45.7	-1.4
	2.6nm,0.6s,SNR=7.9						
ECAB	**El Cabril**	6.10	81	P	Pn	01 47 40.1	+1.7
	0.6nm,0.8s,SNR=7.9						
ECAB				S	Sn	01 48 46.5	-1.7
	1.5nm,0.5s,SNR=7.9						
EPLA	**Plasencia**	6.10	61	S	Sn	01 48 46.3	-2.0
	8.4nm,1.0s,SNR=7.9						
EMAZ	**Mazaricos**	6.43	28	P	Pn	01 47 43.3	+0.3
	3.2nm,0.6s,SNR=7.9						
EMAZ				S	Sn	01 48 53.6	-2.7
	5.3nm,0.6s,SNR=7.9						
ECAL	**Calabor**	6.71	45	P	Pn	01 47 47.8	+1.0
	1.8nm,0.5s,SNR=7.9						
ECAL				S	Sn	01 49 01.4	-2.0
	6.0nm,0.9s,SNR=7.9						
EADA	**Adamuz**	6.77	80	S	Sn	01 49 02.3	-2.4
	4.2nm,0.9s,SNR=7.9						

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*ISCJB **14** 02:06:26.7±0.2, 38°.23N±0°.01×22°.08E±0°.02, h11^{km}±1^{km}, mb3.2/4, Error ellipse: s-maj=2.7km s-min=2.4km az=136.0*

*ATH **14** 02:06:26.2, 38°.23N×22°.09E, h15^{km}±1^{km}, ML2.9/26, Error ellipse: s-maj=1.2km s-min=0.6km az=322.0*

*THE **14** 02:06:26.9, 38°.23N×22°.10E, h7^{km}, ML2.9/25, Error ellipse: s-maj=0.8km s-min=0.4km az=12.0*

*IDC **14** 02:06:31.7±2.5, 38°.04N×22°.14E, h56^{km}±29^{km}, mb3.0/5, mb1 3.3/9, mb1mx3.1/44, mbtmp3.3/9, ML3.3/4, Error ellipse: s-maj=25.6km s-min=18.0km az=47.0*

ISC 14 02:06:26.8±0.7, **38°.23N**±0°.01×**22°.09E**±0°.01, **h11**^{km}±3^{km}, **n97**, σ**0^{s}.76**/146, **mb3.4**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG2	Aigio	0.02	319	P	Pg	02 06 28.6	-0.2
AIG2				S	Sg	02 06 29.9	-0.4
AIG3	Aigion	0.03	18	P	Pg	02 06 28.7	-0.2
AIG3				S	Sg	02 06 30.5	+0.1
ALIK	Aliki, Aigiali	0.04	24	P	Pg	02 06 28.7	-0.2
ALIK				S	Sg	02 06 30.2	-0.2
AIG1	Aigion	0.04	111	P	Pg	02 06 28.8	-0.1
AIG1				S	Sg	02 06 30.3	-0.2
LAKA	Lakka	0.09	280	P	Pg	02 06 29.3	-0.2
LAKA				S	Sg	02 06 31.0	-0.5
	9µm,0.4s						
LAKA	Lakka	0.09	280	P	Pg	02 06 29.3	-0.2
LAKA				S	Sg	02 06 30.9	-0.5
LAKA				AML	AML	02 06 31.3	
	comp=E,13431µm,0.2s						
LAKA				AML	AML	02 06 31.4	
	comp=N,23223µm,0.5s						
TRAZ	Trapeza	0.11	121	P	Pg	02 06 29.8	+0.1
TRAZ				S	Sg	02 06 32.1	+0.2
	comp=N,44µm,0.2s						
TRAZ	Trapeza	0.11	121	P	Pg	02 06 29.8	+0.1
TRAZ				S	Sg	02 06 32.0	+0.2
TRAZ				AML	AML	02 06 32.5	
	comp=E,70103µm,0.2s						
TRAZ				AML	AML	02 06 32.8	
	comp=N,85920µm,0.2s						
TRIZ	Trizonia	0.14	354	P	Pg	02 06 29.9	-0.2
TRIZ				S	Sg	02 06 32.4	-0.1
	comp=N,10µm,0.4s						
TRIZ	Trizonia	0.14	354	P	Pg	02 06 29.8	-0.4
TRIZ				S	Sg	02 06 32.5	-0.1
KALE	Kalithea	0.17	13	P	Pg	02 06 30.5	-0.2
KALE				S	Sg	02 06 33.5	+0.1
	comp=N,9µm,0.2s						
KALE	Kalithea	0.17	13	P	Pg	02 06 30.4	-0.2
KALE				S	Sg	02 06 33.6	+0.2
KALE				AML	AML	02 06 34.1	
	comp=E,12176µm,0.2s						
KALE				AML	AML	02 06 34.2	
	comp=N,24765µm,0.3s						
KLV	Kalavryta, Ach	0.19	166	P	Pg	02 06 30.8	-0.1
KLV				S	Sg	02 06 33.9	+0.2
	comp=N,5µm,0.4s						
KLV	Kalavryta, Ach	0.19	166	P	Pg	02 06 30.8	-0.1
KLV				S	Sg	02 06 34.1	+0.4
KLV				AML	AML	02 06 34.7	
	comp=E,9210µm,0.2s						
KLV				AML	AML	02 06 35.2	
	comp=N,10313µm,0.5s						
SERG	Sergoula	0.19	352	P	Pg	02 06 30.6	-0.3
SERG				S	Sg	02 06 33.8	0.0
	comp=N,5µm,0.2s						
SERG	Sergoula	0.19	352	P	Pg	02 06 30.6	-0.3
SERG				S	Sg	02 06 33.8	0.0
SERG				AML	AML	02 06 34.2	
	comp=E,9145µm,0.2s						
SERG				AML	AML	02 06 36.2	
	comp=N,10295µm,0.4s						
UPR	University Cam	0.25	284	P	Pg	02 06 32.1	+0.1
UPR				S	Sg	02 06 35.4	0.0
UPR	University Cam	0.25	284	P	Pg	02 06 32.0	+0.1
UPR				S	Sg	02 06 36.2	+0.8
GUR	Goura	0.35	145	P	Pg	02 06 33.3	-0.5
GUR				S	Sg	02 06 39.0	+0.5
	comp=N,10µm,0.5s						
GUR	Goura	0.35	145	P	Pg	02 06 33.4	-0.5
GUR				S	Sg	02 06 39.1	+0.6
GUR				AML	AML	02 06 39.7	
	comp=N,21356µm,0.5s						
GUR				AML	AML	02 06 39.7	
	comp=E,17745µm,0.5s						
DSF	Desfina	0.39	61	P	Pg	02 06 34.1	-0.5
DSF				S	Sg	02 06 39.8	0.0
	comp=E,4µm,0.2s						
DSF	Desfina	0.39	61	P	Pg	02 06 34.1	-0.5
DSF				S	Sg	02 06 39.4	-0.3
DSF				AML	AML	02 06 40.3	
	comp=N,7534µm,0.2s						
DSF				AML	AML	02 06 40.8	
	comp=E,8646µm,0.3s						
ANX	Ano Chora	0.39	340	P	Pg	02 06 34.0	-0.6
ANX				S	Sg	02 06 40.3	+0.4
	comp=E,3µm,0.3s						
ANX	Ano Chora	0.39	340	P	Pg	02 06 33.9	-0.6
ANX				S	Sg	02 06 40.0	+0.2
ANX				AML	AML	02 06 43.6	
	comp=E,6172µm,0.2s						
ANX				AML	AML	02 06 45.5	
	comp=N,5295µm,0.4s						
THAL	Thalero	0.49	112	P	Pg	02 06 36.2	-0.1
THAL				S	Sg	02 06 42.5	-0.3
	comp=N,2µm,0.2s						
THAL	Thalero	0.49	112	P	Pg	02 06 36.2	-0.1
RLS	Riolos of Patr	0.52	251	P	Pg	02 06 36.6	-0.4
RLS				S	Sb	02 06 44.8	-0.6
	comp=N,512nm,0.3s						
RLS	Riolos of Patr	0.52	251	P	Pg	02 06 36.6	-0.4
RLS				S	Sb	02 06 44.8	-0.6
RLS				AML	AML	02 06 47.6	
	comp=N,910µm,0.2s						
RLS				AML	AML	02 06 48.0	
	comp=E,1241µm,0.3s						
PVO	Paravola	0.59	312	P	Pg	02 06 37.9	-0.4
PVO	Paravola	0.59	312	P	Pg	02 06 38.0	-0.4
PVO				AML	AML	02 06 50.3	
	comp=N,1755µm,0.6s						
PVO				AML	AML	02 06 50.7	
	comp=E,1449µm,0.4s						
PROD	Prodromos	0.64	87	P	Pg	02 06 39.2	0.0
PROD				S	Sg	02 06 47.3	-0.3
PROD	Prodromos	0.64	87	P	Pg	02 06 39.2	0.0
ACOR	Acrocorinthos	0.70	118	P	Pg	02 06 40.0	-0.4
TRIP	Tripoli	0.71	168	P	Pg	02 06 39.9	-0.6
TRIP				S	Sb	02 06 51.4	+0.4
	comp=E,1µm,0.4s						
TRIP	Tripoli	0.71	168	P	Pg	02 06 39.9	-0.6
TRIP				S	Sg	02 06 50.1	+0.2
TRIP				AML	AML	02 06 54.5	
	comp=E,2399µm,0.4s						
TRIP				AML	AML	02 06 56.3	
	comp=N,2115µm,0.5s						
EVR	Evrytania	0.72	342	P	Pg	02 06 40.3	-0.6
EVR	Evrytania	0.72	342	P	Pg	02 06 40.2	-0.6
EVR				AML	AML	02 06 56.6	
	comp=N,1773µm,0.8s						
EVR				AML	AML	02 07 00.0	
	comp=E,1332µm,0.7s						
LOUT	Loutraki	0.74	108	P	Pg	02 06 41.0	0.0
AMT	Artemida-Makis	0.76	204	P	Pg	02 06 41.0	-0.3
AMT	Artemida-Makis	0.76	204	P	Pg	02 06 41.1	-0.3
AMT				AML	AML	02 06 55.9	
	comp=E,2369µm,0.6s						
AMT				AML	AML	02 06 57.9	
	comp=N,2159µm,0.3s						
VTN	Vitineika	0.78	247	P	Pg	02 06 42.0	+0.2
AGG	Agios Georgios	0.82	13	P	Pg	02 06 41.3	-1.3
AGG	Agios Georgios	0.82	13	P	Pg	02 06 41.2	-1.4
AGG				AML	AML	02 06 57.5	
	comp=N,1229µm,0.7s						
AGG				AML	AML	02 06 58.1	
	comp=E,992µm,0.5s						
LKR	Lokris	0.83	59	P	Pg	02 06 41.5	-1.3
LKR				S	Sb	02 06 54.2	-0.2
	comp=E,905nm,0.2s						
LKR	Lokris	0.83	59	P	Pg	02 06 41.5	-1.3
LKR				S	Sg	02 06 53.6	0.0
LKR				AML	AML	02 06 57.0	
	comp=N,1804µm,0.2s						
LKR				AML	AML	02 06 59.5	
	comp=E,1975µm,0.3s						
ATAL	Atalanti	0.87	57	P	Pg	02 06 42.1	-1.4
ATAL				S	Sb	02 06 55.6	+0.2
	comp=E,368nm,0.3s						
ATAL	Atalanti	0.87	57	P	Pg	02 06 42.2	-1.3
ATAL				S	Sg	02 06 54.1	-0.7
ATAL				AML	AML	02 06 58.6	
	comp=N,852µm,0.6s						
ATAL				AML	AML	02 07 01.3	
	comp=E,543µm,0.4s						
VLX	Vlachokerasia	0.88	165	P	Pg	02 06 42.7	-1.1
VLX				S	Sb	02 06 56.5	+0.5
	comp=E,2µm,0.4s						
VLX	Vlachokerasia	0.88	165	P	Pg	02 06 42.8	-1.1
VLX				S	Sb	02 06 55.9	-0.1
VLX				AML	AML	02 06 58.7	
	comp=E,4622µm,0.3s						
VLX				AML	AML	02 07 03.0	
	comp=N,3799µm,0.4s						
VIL2	Platees	0.93	90	P	Pn	02 06 45.4	-0.3
VIL2				AML	AML	02 07 01.7	
	comp=N,1549µm,0.3s						
VIL2				AML	AML	02 07 02.0	
	comp=E,3133µm,0.8s						
VILL	Villia	0.96	93	P	Pn	02 06 45.8	-0.5
VILL				S	Sn	02 06 59.8	-0.2
	comp=E,1µm,0.6s						
EPID	Epidavros	1.02	127	P	Pg	02 06 45.7	-0.6
KFL	Anninata	1.03	264	P	Pg	02 06 46.2	-0.5
KFL	Anninata	1.03	264	P	Pg	02 06 46.7	0.0
ITM	Ithomi	1.05	187	P	Pg	02 06 45.9	-1.1
ITM				S	Sn	02 07 02.7	+0.6
	comp=E,348nm,0.5s						
ITM	Ithomi	1.05	187	P	Pg	02 06 46.0	-1.1
SMIA	Simia	1.09	53	P	Pb	02 06 46.8	-0.9
SMIA				S	Sb	02 07 02.2	+0.2
	comp=E,880nm,0.5s						
SMIA	Simia	1.09	53	P	Pb	02 06 46.6	-1.1
DID	Didima	1.16	128	P	Pb	02 06 48.1	-0.7
DID				S	Sn	02 07 05.0	+0.3
	comp=E,782nm,0.3s						
DID	Didima	1.16	128	P	Pb	02 06 48.0	-0.8
DID				S	Sg	02 07 04.1	0.0
DID				AML	AML	02 07 08.8	
	comp=N,1483µm,0.4s						
DID				AML	AML	02 07 10.6	
	comp=E,930µm,0.4s						
VLS	Valsamata	1.18	268	P	Pb	02 06 48.4	-0.8
VLS				S	Sn	02 07 07.3	+2.0
	comp=E,222nm,0.2s						
VLS	Valsamata	1.18	268	P	Pb	02 06 48.1	-1.1
VLS				AML	AML	02 07 08.1	
	comp=E,444µm,0.2s						
VLS				AML	AML	02 07 11.1	
	comp=N,442µm,0.2s						
KRND	KRANIDI	1.19	135	P	Pb	02 06 48.7	-0.6
KRND				S	Sn	02 07 06.6	+1.2
	comp=N,982nm,0.4s						
KRND	KRANIDI	1.19	135	P	Pb	02 06 48.8	-0.4
KRND				S	Sg	02 07 05.0	-0.1
KRND				AML	AML	02 07 10.1	
	comp=E,2237µm,0.5s						
KRND				AML	AML	02 07 11.6	
	comp=N,1774µm,0.3s						
EVGI	Lefkada island	1.20	290	P	Pn	02 06 48.3	-1.1
EVGI	Lefkada island	1.20	290	P	Pn	02 06 48.3	-1.1
FSK	Fiskardo	1.23	281	P	Pn	02 06 48.8	-1.0
LKD2	Lefkada island	1.26	297	P	Pn	02 06 49.6	-0.7
LKD2	Lefkada island	1.26	297	P	Pn	02 06 49.5	-0.8
MRKA	Markates	1.27	67	P	Pn	02 06 50.1	-0.4
ATH	Athens Observa	1.31	101	P	Pg	02 06 51.7	-0.1
ATH				S	Sg	02 07 10.1	+1.2
ATH				AML	AML	02 07 10.6	
	comp=N,447µm,0.5s						
ATH				AML	AML	02 07 13.2	
	comp=E,545µm,0.3s						
THL	Klokotos Trika	1.34	357	P	Pb	02 06 51.9	+0.1
THL				S	Sg	02 07 11.0	+1.1
	comp=E,145nm,0.7s						
THL	Klokotos Trika	1.34	357	P	Pb	02 06 52.0	+0.1
THL				S	Sg	02 07 10.5	+0.6
THL				AML	AML	02 07 16.4	
	comp=E,290µm,0.7s						
THL				AML	AML	02 07 17.4	
	comp=N,237µm,0.6s						
FYTO	Fytoko, Volos	1.35	29	P	Pn	02 06 51.7	+0.1
PYL	PYLOS	1.36	192	P	Pn	02 06 51.4	-0.2
PYL	PYLOS	1.36	192	P	Pn	02 06 51.4	-0.2
VLY	Voula,Athens	1.40	105	P	Pn	02 06 52.3	+0.2
VLY	Voula,Athens	1.40	105	P	Pn	02 06 51.8	-0.3
VLY				AML	AML	02 07 14.2	
	comp=E,497µm,0.3s						
VLY				AML	AML	02 07 16.2	
	comp=N,282µm,0.5s						
XOR	Xorichti	1.43	37	P	Pb	02 06 53.1	-0.3
DION	Dionisos Attik	1.46	95	P	Pn	02 06 52.9	-0.1
EREA	Eretria	1.46	82	P	Pn	02 06 53.2	+0.2
EREA				S	Sg	02 07 13.9	+0.1
	comp=N,282nm,0.4s						
EREA	Eretria	1.46	82	P	Pn	02 06 53.3	+0.2
EREA				S	Sg	02 07 13.9	+0.1
EREA				AML	AML	02 07 17.9	
	comp=N,540µm,0.4s						
EREA				AML	AML	02 07 18.9	
	comp=E,572µm,0.5s						
VLI	Veliai	1.65	156	P	Pn	02 06 56.1	+0.5
VLI	Veliai	1.65	156	P	Pn	02 06 56.2	+0.5
VLI				AML	AML	02 07 25.0	
	comp=N,951µm,0.7s						
VLI				AML	AML	02 07 25.4	
	comp=E,790µm,0.5s						
LIT	Litokhoron	1.90	9	P	Pn	02 06 59.3	+0.2
KZN	Kozani	2.09	353	P	Pb	02 07 03.3	-1.5
KTHA	Kythira Island	2.11	158	P	Pn	02 07 03.3	+1.3
VAY	Valandovo	3.11	7	*e*Pn	Pn	02 07 15.7	-0.1
IDI	Anoyia	3.69	142	P	Pn	02 07 23.7	-0.1
	comp=E,0.5nm,0.3s,baz=247,slow=15,SNR=11						
IDI				S	Sn	02 08 05.3	-2.1
	comp=E,1.5nm,0.3s,baz=2.3,slow=18,SNR=4.4						
MLR	Muntele Rosu	7.81	20	P	Pn	02 08 24.6	+4.3
	comp=E,0.2nm,0.3s,baz=191,slow=16,SNR=3.8						
BRTR	Keskin Array B	9.12	77	P	Pn	02 08 41.0	+2.7
	comp=E,0.1nm,0.3s,baz=261,slow=13,SNR=6.1						
KVAR	Kislovodsk Arr	16.54	63	P	P	02 10 21.9	+0.6
	baz=243,slow=6.8,SNR=3.6						
ESDC	Sonseca Array	20.30	282	P	Pn	02 11 04.1	-0.5
	comp=E,0.3nm,0.6s,baz=80,slow=11,SNR=5.0						
EKA	Eskdalemuir Ar	24.12	323	P	P	02 11 43.4	+1.2
	comp=E,0.2nm,0.4s,baz=126,slow=9.7,SNR=3.1						
KURBB	Kurchatov Arra	41.21	54	P	P	02 14 11.2	-0.1
	comp=E,0.4nm,0.5s,baz=281,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	44.22	59	P	P	02 14 35.3	-0.5
	comp=E,0.5nm,0.5s,baz=276,slow=6.8,SNR=7.3						
SONM	Songino Array	59.47	51	P	P	02 16 29.9	+0.2
	comp=E,0.1nm,0.3s,baz=284,slow=5.8,SNR=2.5						

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*ISCJB **14** 02:09:13.6±0.9, 37°.10N±0°.04×42°.46E±0°.05, h4^{km}±9^{km}, Error ellipse: s-maj=7.0km s-min=6.3km az=178.0*
*DDA **14** 02:09:13.5, 37°.15N×42°.47E, h7^{km}±3^{km}, ML2.7*
*ISK **14** 02:09:14.3, 37°.02N×42°.50E, h24^{km}, ML2.6/8*
*ISN **14** 02:09:20.6±1.1, 36°.90N×42°.60E, h19^{km}, ML2.4*
ISC 14 02:09:13.4±1.4, **37°.02N**±0°.04×**42°.46E**±0°.03, **h12**^{km}±11^{km}, **n19**, σ**1^{s}.38**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	Sırnak	0.48	356	*i* P	Pg	02 09 20.9	-2.0
SIRN				IAML_P			
	comp=Z,7µm,0.2s						
MSL	Mosul	0.81	139	*e*Pg	Pn	02 09 32.1	+1.6
	baz=320						
MSL				AML	AML	02 09 34.2	
	comp=Z,195nm,0.4s						
MSL				*e*Sg	Sn	02 09 42.1	-0.4
CUKT	Cukurca	0.95	76	PG	Pb	02 09 31.7	-0.1
CUKT				SG	Sn	02 09 45.2	-0.9
CUKT	Cukurca	0.95	76	*i* P	Pb	02 09 31.9	+0.2
CUKT				*i* S	Sn	02 09 49.4	+3.3
CUKT				IAML_P			
	comp=Z,765nm,0.1s						
SRTM	Siirt_Merkez	1.06	336	*i* P	Pb	02 09 32.4	-1.3
SRTM				*i* S	Sb	02 09 47.8	+0.2
SRTM				IAML_P			
	comp=Z,414nm,0.1s						
HAKT	HAKKARI	1.13	61	*i* P	Pb	02 09 34.2	-0.8
HAKT				*i* S	Sg	02 09 53.2	+3.2
HAKT				IAML_P			
	comp=Z,1µm,0.1s						
MARD	Mardin	1.38	283	*i* P	Pb	02 09 39.8	+0.8
MARD				*i* S	Sg	02 09 59.4	+1.7
MARD				IAML_P			
	comp=Z,890nm,0.2s						
GEVA	Gevas	1.38	20	*i* P	Pn	02 09 38.9	+0.3
GEVA				IAML_P			
	comp=Z,415nm,0.3s						
BLIS	Bitlis-Merkez	1.42	349	*i* P	Pn	02 09 38.6	-0.6
BLIS				*i* S	Sn	02 09 56.9	-1.0
BLIS				IAML_P			
	comp=Z,617nm,0.3s						
SVAN	Silvan-Diyarba	1.51	319	PN	Pn	02 09 40.8	+0.5
SVAN				SN	Sn	02 09 59.8	-0.1
YOVA	Hakkari_Yksek	1.57	68	*i* P	Pb	02 09 42.5	+0.1
YOVA				IAML_P			
	comp=Z,1µm,0.2s						
MAZI	Mazidag	1.67	286	PN	Pn	02 09 43.6	+1.1
MAZI				SN	Sn	02 10 04.1	+0.3
VANB	Van	1.74	25	PN	Pn	02 09 43.1	-0.4
MUSM	Mu-Merkez	1.86	337	*i* P	Pn	02 09 44.1	-1.1
MUSM				*i* S	Sn	02 10 08.9	+0.2
MUSM				IAML_P			
	comp=Z,268nm,0.3s						
DYBB	Diyarbakir	2.07	298	PN	Pn	02 09 48.9	+0.9
MLAZ	Malazgirt-MUS	2.12	2	PN	Pn	02 09 49.5	+0.7
AGRB	Hanur-Agry	2.59	9	PN	Pn	02 09 55.9	+0.7
SVRC	Sivrice-ELAZID	2.85	299	PN	Pn	02 09 59.9	+1.1
BHD	Baghdad	4.06	157	*e*Pn	Pn	02 10 13.0	-2.2
BHD				*e*Sn	Sn	02 11 01.0	-1.6

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*IDC **14** 02:12:07.4±0.7, 35°.58S×72°.66W, h0^{km}, mb4.1/12, mb1 4.2/14, mb1mx4.1/25, mbtmp4.0/14, ML3.6/2, MS3.2/3, Ms1 3.2/3, ms1mx3.0/17, Error ellipse: s-maj=27.9km s-min=15.7km az=85.0*
*ISCJB **14** 02:12:09.0±1.0, 35°.62S±0°.04×72°.87W±0°.09, h23^{km}±7^{km}, mb4.2/14, Error ellipse: s-maj=13.3km s-min=4.5km az=17.6*
*NEIC **14** 02:12:10.0±0.0, 35°.64S×72°.87W, h28^{km}, mb4.3/7, ML4.0(GUC), After GUC.*
NEIC Felt [III] at Chanco and Pelluhue.
*GUC **14** 02:12:10.1±0.5, 35°.64S×72°.87W, h28^{km}±5^{km}, ML4.0*
ISC 14 02:12:08.6±1.4, **35°.60S**±0°.03×**72°.87W**±0°.07, **h10**^{km}±9^{km}, **n50**, σ**1^{s}.42**/57, **mb4.2**/14, **1C-1D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCH	Cobquecura	0.53	173⇓	*e*P	Pg	02 12 19.7	+0.7
COCH				*i* S	Sg	02 12 26.4	+0.4
COCH				IAML		02 12 27.5	
	comp=N,10µm,0.3s						
GO05	Huala	0.97	53	*e*Pn	Pg	02 12 27.5	+0.3
GO05	Huala	0.97	53⇑	*e*P	Pb	02 12 27.0	-0.5
GO05				*i* S	Sn	02 12 40.1	-2.0
GO05				IAML		02 12 43.6	
	comp=N,5µm,0.4s						
CCHI	Chillan	1.19	148	*e*P	Pn	02 12 30.6	-0.6
CCHI				*i* S	Sb	02 12 45.4	-1.2
CCHI				IAML		02 12 55.5	
	comp=N,11µm,0.3s						
CCSP	San Pedro de C	1.26	189	*e*P	Pn	02 12 30.5	-1.6
CCSP				*i* S	Sb	02 12 46.0	-2.5
CCSP				IAML		02 12 51.7	
	comp=N,12µm,0.3s						
EDS3	Malargue	2.83	94	*e*P	Pb	02 13 00.0	+0.7
EDS3				*e*S	Sg	02 13 40.7	+1.2
PEL	Peldehue	3.04	37	*e*Pn	Pn	02 12 57.8	+0.9
PEL	Peldehue	3.04	37	*e*P	Pn	02 12 58.6	+1.8
PEL				*e*S	Sg	02 13 45.8	-0.6
AUSP	Uspallata	4.44	42	*e*P	Pn	02 13 17.5	+1.2
AUSP				*e*S	Sg	02 14 28.9	-2.3
RTLS	Leoncito	4.82	39	*e*P	Pn	02 13 23.6	+2.2
RTLS				*e*S	Sg	02 14 38.2	-5.2
RTCV	Cerro Valdivia	5.19	45	*e*P	Pn	02 13 28.0	+1.7
RTCV				IAML		02 13 52.3	
	comp=Z,36nm,0.6s						
CFA	Coronel Fontan	5.55	45	Pn	Pn	02 13 29.2	-2.1
	comp=Z,0.5nm,0.3s,baz=211,slow=12,SNR=3.3						
CFA				Sn	Sb	02 14 52.5	+0.3
	comp=Z,6.6nm,0.3s,baz=156,slow=20,SNR=5.9						
CFA				LR	LR	02 15 46.8	
	comp=Z,264nm,19.2s,baz=249,slow=40						
GO04	Tololo Observa	5.69	18	*e*Pn	Pn	02 13 32.5	-0.8
ACAN	Cantantal	5.77	57	*e*P	Pn	02 13 36.3	+2.0
ACAN				IAML		02 14 06.7	
	comp=Z,18nm,0.9s						
AMOG	MOGNA	5.92	39	*e*P	Pn	02 13 37.0	+0.6
ACCO	Cerro Coronel	5.93	34	*e*P	Pn	02 13 37.7	+0.9
AROD	Rodeo	6.12	29	*e*P	Pn	02 13 41.1	+1.7
AROD				IAML		02 15 35.2	
	comp=Z,0.8nm,0.6s						
AGUA	GUANDACOL	7.13	32	*e*P	Pn	02 13 54.4	+1.4
VCA	Vinchina	7.90	31	*e*P	Pn	02 14 07.4	+3.7
TCA	Tanti	8.11	61	*e*P	Pn	02 14 07.7	+1.2
LVC	Limon Verde	13.40	16	LR	LR	02 20 02.8	
	comp=Z,92nm,20.9s,baz=220,slow=36						
CPUP	Villa Florida	16.20	60	LR	LR	02 22 24.6	
	comp=Z,77nm,20.2s,baz=224,slow=38						
LPAZ	La Paz	19.69	14	P	P	02 16 38.8	+0.1
	comp=Z,0.2nm,0.3s,baz=189,slow=5.0,SNR=11						
LPAZ	La Paz	19.69	14	*e*P	Pn	02 16 40.9	+0.8
	comp=Z,4.6nm,0.9s						
SIV	San Ignacio	22.19	31	P	P	02 17 04.5	-0.6
	comp=Z,5.7nm,0.8s,baz=218,slow=7.8,SNR=26						
PTGA	Pitinga	36.71	22	*e*P	P	02 19 14.5	-1.4
	comp=Z,11nm,1.4s						
SDV	Santo Domingo	44.30	3	P	P	02 20 18.6	-0.2
	comp=Z,1.7nm,0.4s,baz=162,slow=20,SNR=3.5						
JTS	Las Juntas de	47.05	344	P	P	02 20 42.0	+1.6
	comp=Z,3.4nm,0.8s,baz=229,slow=19,SNR=2.9						
JTS	Las Juntas de	47.05	344	*e*P	P	02 20 42.0	+1.6
	comp=Z,57nm,2.0s						
VNA3	Neumayer Olymp	48.15	157	P	P	02 20 48.9	+0.5
VNA2	Neumayer--Watz	48.81	157	P	P	02 20 53.9	+0.4
	baz=288,slow=8.9						
SNAA	Sanae	50.37	157	P	P	02 21 05.7	+0.2
SNAA	Sanae	50.37	157	P	P	02 21 05.6	+0.2
	comp=Z,2.9nm,0.8s,baz=272,slow=8.0,SNR=12						
SNAA	Sanae	50.37	157	*e*P	P	02 21 05.7	+0.2
	comp=Z,6.4nm,1.1s						
QSPA	South Pole Qui	54.64	180	*e*P	P	02 21 37.1	-0.1
	comp=Z,6.9nm,1.1s						
VNDA	Vanda	62.40	192	P	P	02 22 32.3	+1.3
	comp=Z,0.6nm,0.8s,baz=153,slow=2.3,SNR=2.6						
TXAR	Lajitas Array	70.81	332	P	P	02 23 25.6	+0.3
	comp=Z,0.5nm,0.6s,baz=157,slow=8.9,SNR=4.6						
MAW	Mawson	71.84	164	P	P	02 23 31.1	+0.1
	comp=Z,3.6nm,0.9s,baz=186,slow=6.1,SNR=9.8						
MAW	Mawson	71.84	164	*e*P	P	02 23 31.5	+0.5
	comp=Z,0.9nm,0.9s						
DBIC	Dimbokro	76.34	71	P	P	02 23 57.9	-0.3
	comp=Z,2.5nm,0.6s,baz=210,slow=7.2,SNR=4.4						
DBIC	Dimbokro	76.34	71	*e*P	P	02 23 57.9	-0.3
	comp=Z,31nm,1.5s						
BOSA	Boshof	79.93	118	P	P	02 24 17.5	-0.6
	comp=Z,2.9nm,0.9s,baz=225,slow=3.5,SNR=5.8						
NV01	Mina Array Sit	84.81	326	*e*P	P	02 24 44.1	+0.8
NVAR	Mina Array Bea	84.81	326	P	P	02 24 44.1	+0.8
	comp=Z,0.9nm,0.8s,baz=161,slow=5.7,SNR=5.6						
PD31	Pinedale Array	84.89	334	*e*P	P	02 24 43.5	-0.1
PDAR	Pinedale Array	84.89	334	P	P	02 24 43.5	-0.1
	comp=Z,0.4nm,0.7s,baz=123,slow=6.6,SNR=3.1						
TORD	Torodi Ar. Bea	85.39	70	P	P	02 24 45.8	-0.7
	comp=Z,0.8nm,0.8s,baz=272,slow=8.2,SNR=5.4						
TOA1	Torodi Ar. Sit	85.39	70	*e*P	P	02 24 45.8	-0.7
ZAA1	Zalesovo Array	155.94	33	*e*PKPab	PKPab	02 32 29.6	+0.1
ZALV	Zalesovo Beam	155.94	33	PKPab	PKPab	02 32 29.6	+0.1
	comp=Z,1.2nm,0.4s,baz=305,slow=5.2,SNR=4.2						

BJI 14 02:21:31.2±0.0, **32°.62N**×**105°.25E**, **h24**^{km}, **ML3.6**/13, **Ms3.5**/4, **Ms7 3.5**/4, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	Xi'an	3.38	64	Pn	Pn	02 22 24.3	+1.7
XAN				Sn	Sb	02 23 06.8	-4.4
XAN				Sg	Sn	02 23 21.6	+20
XAN				smax	smax		
	comp=N,150nm,0.4s						
XAN				smax	smax		
	comp=E,190nm,0.8s						
LZH	Lanzhou	3.65	342	Pn	Pn	02 22 30.6	+4.3
LZH				Pg	Pb	02 22 40.6	+5.5
LZH				Sg	Sb	02 23 27.3	+8.3
LZH				smax	smax		
	comp=N,340nm,0.9s						
LZH				smax	smax		
	comp=E,370nm,1.0s						

LZH				LR	LR		
	comp=N,340nm,4.9s						
LZH				LR	LR		
	comp=E,500nm,4.1s						
LZH				LR	LR		
	comp=Z,400nm,5.0s						
GYA	Guiyang	6.26	168	*e*Pn	Pn	02 23 02.4	+0.2
GYA				Sn	Sn	02 24 10.8	-2.3
GYA				smax	smax		
	comp=N,40nm,0.7s						
GYA				smax	smax		
	comp=E,40nm,0.7s						
GTA	Gaotai	8.08	329	*e*P	Pn	02 23 34.3	+7.2
GTA				pP	Pb	02 23 39.3	-11
GTA				sP		02 23 42.3	
GTA				smax	smax		
	comp=N,6.0nm,1.0s						
GTA				smax	smax		
	comp=E,8.0nm,1.0s						
WMQ	Urumqi	17.72	314	*e*P	Pn	02 25 36.1	-0.2
WMQ				pP	pP	02 25 41.4	-2.7
WMQ				LR	LR		
	comp=N,65nm,5.9s						
WMQ				LR	LR		
	comp=E,77nm,6.3s						
WMQ				LR	LR		
	comp=Z,250nm,8.9s						

IDC 14 02:22:58.9±6.8**, 9°.07S×128°.38E, h0**km**, mb3.9**/1**, mb1 3.7**/3**, mb1mx3.3**/27**, mbtmp3.5**/3**, ML3.3**/2**, Error ellipse: s-maj=153.2km s-min=85.1km az=64.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.25	153	Pn	Pn	02 25 53.1	-1.7
	0.2nm,0.3s,baz=327,slow=14,SNR=6.8						
WRA				Sn	Sn	02 28 15.7	+3.6
	0.4nm,0.3s,baz=333,slow=22,SNR=8.9						
ASAR	Alice Springs	15.45	161	Pn	Pn	02 26 37.9	-0.4
	0.2nm,0.3s,baz=344,slow=9.6,SNR=7.5						
STKA	Stephens Creek	25.80	153	P	P	02 28 32.1	+0.3
	0.6nm,0.3s,baz=311,slow=9.3,SNR=2.5						

NIED **14** *02:33:00, 37°.40N×144°.80E, h8km, Mw4.3 Best double couple: M₀3.27000×10^15 NP1:φs1.00000°, δ34.00000°, λ-91.00000°. NP2:φs183.00000°, δ56.00000°, λ-89.00000°.*

IDC **14** *02:33:08.5±0.6, 37°.34N×145°.10E, h0km, mb4.2/21, mb1 4.4/29, mb1mx4.3/45, mbtmp4.2/29, ML3.9/6, MS3.1/14, Ms1 3.1/14, ms1mx2.9/44, Error ellipse: s-maj=15.4km s-min=13.5km az=119.0*

ISCJB **14** *02:33:10.1±1.1, 37°.35N±0°.03×144°.87E±0°.03, h15km±7km, mb4.4/62, MS3.5/11, Error ellipse: s-maj=5.5km s-min=4.2km az=157.7*

MOS **14** *02:33:12.7±1.3, 37°.27N×144°.97E, h39km, mb4.5/31, Error ellipse: s-maj=10.7km s-min=5.9km az=114.3*

JMA **14** *02:33:13.3±0.2, 37°.45N×144°.77E, h63km, M4.9*

BJI **14** *02:33:13.2±0.0, 37°.50N×145°.12E, h45km, mb4.6/31, mB4.8/23, Ms4.2/10, Ms7 3.9/9*

NEIC **14** *02:33:13.8±1.9, 37°.35N×144°.97E, h32km±4km, mb4.5/53, Error ellipse: s-maj=15.1km s-min=5.9km az=121.0*

ISC 14 02:33:11.4±1.0**, 37°.44N**±0°.05**×144°.99E**±0°.05**, h15**km±5km**, n180, σ1ˢ.95**/199**, mb4.5**/62**, MS3.4**/11**, 10C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.92	288	P	Pn	02 33 56.5	-0.8
JIKH				S	Sn	02 34 28.2	-4.0
JIO	Ouri	3.05	290	P	Pn	02 33 58.3	-0.8
JIO				S	Sn	02 34 31.7	-3.7
OFUJ	Ofunato	3.09	303	P	Pn	02 33 58.7	-0.9
OFUJ				*e*S	Sn	02 34 33.2	-3.0
JKMT	Kesennumamotoy	3.09	297	P	Pn	02 33 58.8	-0.9
JKMT				S	Sn	02 34 32.9	-3.5
JMK	Ichinoseki	3.33	298	P	Pn	02 34 02.3	-0.7
JMK				*e*S	Sn	02 34 39.3	-3.0
BSO1	Boso 1	4.28	231	P	Pn	02 34 13.3	-2.2
BSO1				*e*S	Sn	02 35 02.4	-2.5
ERM	Erimo	4.78	343	*e*Pn	Pn	02 34 23.8	+0.9
ERM	Erimo	4.78	343	*ce*P	Pn	02 34 22.4	-0.4
ERM				pmax	pmax		
	comp=Z,68nm,1.3s						
JOT	Ohata	4.98	323	P	Pn	02 34 25.5	-0.1
JOT				*e*S	Sn	02 35 18.2	-4.7
JRY	Ryogami san	5.10	256	P	Pn	02 34 25.8	-1.4
JRY				S	Sn	02 35 19.9	-5.9
JOD2	Odawara 2	5.24	247	P	Pn	02 34 27.8	-1.4
JOD2				*e*S	Sn	02 35 23.3	-6.0
JCH	Churui	5.32	347	P	Pn	02 34 28.8	-1.4
JCH				S	Sn	02 35 25.9	-5.2
JKB	Kayabe	5.39	327	P	Pn	02 34 31.4	+0.2
JKB				*e*S	Sn	02 35 27.5	-5.4
MJAR	Matsushiro Arr	5.50	263	Pn	Pn	02 34 32.8	0.0
	comp=Z,4.3nm,0.3s,baz=88,slow=15,SNR=240						
MJAR				Sn	Sn	02 35 33.4	-2.5
	comp=Z,2.2nm,0.3s,baz=29,slow=9.5,SNR=6.6						
MJAR				LR	LR	02 36 43.3	
	comp=Z,255nm,21.5s,baz=95,slow=39						
MAJO	Matsushiro	5.51	263	*e*Pn	Pn	02 34 33.0	+0.1
MAJO				*e*Sn	Sn	02 35 33.4	-2.5
MAJO	Matsushiro	5.51	263	*c i*P	Pn	02 34 33.3	+0.4
MAT	Matsushiro	5.51	263	P	Pn	02 34 33.4	+0.5
MAT				*e*S	Sn	02 35 29.1	-6.8
MJB9	Matsu-Tunnel	5.51	263	*e*Pn	Pn	02 34 33.2	+0.3
NEM2	Nemuro 2	5.94	5	P	Pn	02 34 35.6	-3.2
NEM2				*e*S	Sn	02 35 38.6	-8.0
JHJ2	Mitsune	6.05	226	*e*Pn	Pn	02 34 37.9	-2.4
JHJ2				*e*Sn	Sn	02 35 43.4	-5.8
JHJ2	Mitsune	6.05	226	P	Pn	02 34 37.4	-2.9
JHJ2				*e*S	Sn	02 35 40.8	-8.4
JHJ	Hachijo jima 2	6.06	226	Pn	Pn	02 34 37.5	-3.0
	comp=Z,33nm,0.3s,baz=349,slow=19,SNR=18						
JHJ				Sn	Sn	02 35 40.1	-9.5
	comp=Z,211nm,0.3s,baz=354,slow=19,SNR=15						
JOSM	Okushiri--Mats	6.29	319	P	Pn	02 34 43.7	+0.2
JOSM				*e*S	Sn	02 35 52.2	-2.9
GLVR	Golovnino	6.30	3	*i* P	Pn	02 34 41.0	-2.7
GRPR	Tuman	6.57	5	*i* P	Pn	02 34 44.5	-2.9
GRPR				pmax	pmax		
	comp=Z,210nm,0.4s						
GRPR				pmax	pmax		
	comp=N,86nm,0.2s						
GRPR				pmax	pmax		
	comp=E,52nm,0.1s						
JTKR	Abashiri--Toko	6.57	353	P	Pn	02 34 46.3	-1.1
JTKR				*e*S	Sn	02 35 56.5	-5.6
YUK	Yuzh-Kuril'sk	6.62	5	*i* P	Pn	02 34 45.8	-2.3
YUK				*i* S	Sn	02 36 02.6	-0.6
YUK				pmax	pmax		
	comp=Z,330nm,0.2s						
INU	Inuyama	6.76	254	*e*Pn	Pn	02 34 50.0	-0.1
JHR	Hokuryu	6.77	339	P	Pn	02 34 51.0	+0.9
JHR				*e*S	Sn	02 36 03.5	-3.4
ASAJ	Asahikawa	6.91	346	Pn	Pn	02 34 51.8	-0.3
	comp=Z,6.0nm,0.3s,baz=190,slow=12,SNR=47						
ASAJ				Sn	Sn	02 36 06.5	-4.0
	comp=Z,2.2nm,0.3s,baz=156,slow=20,SNR=2.6						
ASAJ				LR	LR	02 37 42.7	
	comp=Z,48nm,20.4s,baz=154,slow=39						
KUR	Kuril'sk	8.08	15	*e*P	Pn	02 35 05.5	-2.6
KUR				pmax	pmax		
	comp=Z,55nm,0.7s						
KUR				pmax	pmax		
	comp=N,35nm,0.6s						
KUR				pmax	pmax		
	comp=E,40nm,0.7s						
JTNC	Tanabenakahech	8.45	247	P	Pn	02 35 13.0	-0.3
YSS	Yuzh-Sakhalins	9.65	351	*e*P	Pn	02 35 35.2	+5.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
TEY	Ternei	9.87	323	⇑*e*P	Pn	02 35 36.7	+4.1
TEY				pmax	pmax		
	comp=E,20nm,0.7s						
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.3s						
JHS	Saijyo	9.90	259	P	Pn	02 35 33.8	+0.6
USA0B	Ussuriysk Arra	11.94	308	*e*Pn	Pn	02 36 01.6	+0.6
USRK	Ussuriysk Ar.	11.94	308	Pn	Pn	02 36 01.7	+0.8
	comp=Z,0.4nm,0.3s,baz=117,slow=14,SNR=13						
USRK				LR	LR	02 40 15.5	
	comp=Z,115nm,19.7s,baz=135,slow=35						
JNU	Nakatsue	12.31	254	Pn	Pn	02 36 07.0	+0.9
	comp=Z,0.3nm,0.3s,baz=46,slow=13,SNR=4.3						
JNU				LR	LR	02 41 07.0	
	comp=Z,36nm,20.8s,baz=182,slow=39						
JNU	Nakatsue	12.31	254	*e*Pn	Pn	02 36 06.8	+0.6
KSRS	Korea Array	13.57	275	Pn	Pn	02 36 23.7	+0.5
	comp=Z,0.3nm,0.3s,baz=79,slow=14,SNR=7.7						
KSRS				LR	LR	02 41 09.1	
	comp=Z,88nm,20.4s,baz=121,slow=35						
KS15	Wonju Array Si	13.60	275	*e*Pn	Pn	02 36 23.7	0.0
MDJ	Mudanjiang	13.65	306	P	Pn	02 36 25.4	+1.1
MDJ				pmax	pmax		
	comp=Z,14nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.7s						
GRNR	Gornyy	14.66	338	*e*P	P	02 36 43.6	-0.8
KLR	Kul'dur	15.19	325	Pn	Pn	02 36 44.1	-1.1
	comp=Z,0.1nm,0.3s,baz=138,slow=16,SNR=3.0						
KLR				LR	LR	02 42 11.1	
	comp=Z,56nm,20.6s,baz=135,slow=35						
KLR	Kul'dur	15.19	325	*i* P	Pn	02 36 46.9	+1.6
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PETK	Petropavlovsk-	17.99	25	P	P	02 37 21.2	-0.1
	comp=Z,0.1nm,0.3s,baz=227,slow=23,SNR=4.4						
PETK				LR	LR	02 46 01.5	
	comp=Z,20nm,18.6s,baz=153,slow=43						
PEA1	Petropavlovsk-	18.00	25	*e*P	P	02 37 21.2	-0.1
ZEA	Zeya	20.39	329	*e*P	P	02 37 48.8	+1.3
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
NJ2	Nanjing	22.11	264	*e*P	P	02 38 04.4	-1.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
MA2	Magadan	22.46	8	LR	LR	02 45 18.3	
	comp=Z,22nm,20.3s,baz=229,slow=32						
SEY	Seymchan	25.92	8	P	P	02 38 42.2	-0.4
	comp=Z,4.4nm,0.8s,baz=183,slow=9.0,SNR=7.9						
SEY	Seymchan	25.92	8	*i* P	P	02 38 44.0	+1.4
H11N2	WAKE ISLAND Hy	26.00	127	T	T	03 05 38.0	
	baz=318,slow=74,SNR=296						
H11N1	WAKE ISLAND Hy	26.01	127	T	T	03 05 37.4	
	baz=318,slow=74,SNR=208						
H11N3	WAKE ISLAND Hy	26.02	127	T	T	03 05 35.0	
	baz=318,slow=74,SNR=285						
HHC	Hu-ho-hao-te	26.06	288	P	P	02 38 44.4	+0.1
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,76nm,5.1s						
WHN	Wuhan	26.25	264	P	P	02 38 46.1	+0.2
YAK	Yakutsk	26.39	344	*e*P	P	02 38 47.6	+0.8
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
H11S1	WAKE ISLAND Hy	26.78	129	T	T	03 06 41.5	
	baz=319,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	26.78	129	T	T	03 06 46.7	
	baz=319,slow=76,SNR=32						
H11S2	WAKE ISLAND Hy	26.80	129	T	T	03 06 40.5	
	baz=319,slow=76,SNR=29						
XAN	Xi'an	29.36	274	P	P	02 39 20.8	+6.9
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,150nm,4.0s						
ULN	Ulaanbaatar	29.51	303	*ce*P	P	02 39 16.2	+1.0
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SONA0	Songino Array	29.95	303	*e*P	P	02 39 20.5	+1.5
SONM	Songino Array	29.95	303	P	P	02 39 20.5	+1.5
	comp=Z,1.8nm,0.9s,baz=105,slow=7.9,SNR=5.4						
SONM				LR	LR	02 51 47.3	
	comp=Z,46nm,18.2s,baz=66,slow=37						
TLY	Talaya	32.25	310	LR	LR	02 53 11.6	
	comp=Z,106nm,18.1s,baz=165,slow=37						
LZH	Lanzhou	32.81	280	*e*P	P	02 39 42.8	-1.6
LZH				pP	pwP	02 39 54.1	-0.6
LZH				sP	sP	02 39 59.3	+11
LZH				*e*PP	PnPn	02 40 53.0	+0.2
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,57nm,5.2s						
LZH				LR	LR		
	comp=Z,220nm,12.8s						
LZH				LR	LR		
	comp=Z,220nm,13.0s						
LZH				LR	LR		
	comp=Z,350nm,16.5s						
BILL	Bilibino	32.87	15	*e*P	P	02 39 47.3	+3.0
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA	Gaotai	35.17	287	*e*P	P	02 40 09.0	+4.2
GTA				pP	pwP	02 40 20.3	+5.2
GTA				sP	sP	02 40 24.8	+16
GTA				S	S	02 45 39.4	+1.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,79nm,7.8s						
GTA				LR	LR		
	comp=Z,140nm,17.5s						
GTA				LR	LR		
	comp=Z,91nm,17.8s						
GTA				LR	LR		
	comp=Z,120nm,16.5s						
TIXI	Tiksi	35.27	351	*i* P	P	02 40 05.9	+0.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.3s						
KMI	Kunming	37.85	263	P	P	02 40 27.5	-0.4
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
DGZ	Jazzator, Alta	42.47	306	*i* P	P	02 41 07.4	+1.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	Urumqi	43.20	297	*e*P	P	02 41 13.1	+1.3
WMQ				sP	pwP	02 41 29.3	+7.2
WMQ				pmax	pmax		
	comp=Z,44nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,21nm,3.6s						
WMQ				LR	LR		
	comp=Z,410nm,26.7s						
WMQ				LR	LR		
	comp=Z,310nm,29.1s						
WMQ				LR	LR		
	comp=Z,210nm,25.3s						
ZAA0	Zalesovo Array	43.76	312	*e*P	P	02 41 16.9	+0.9
	comp=Z,3.6nm,0.9s						
ZAA1	Zalesovo Array	43.76	312	*e*P	P	02 41 16.4	+0.4
ZAA1				*e*PcP	PcP	02 43 02.8	+0.2
ZALV	Zalesovo Beam	43.76	312	P	P	02 41 16.4	+0.4
	comp=Z,3.4nm,1.1s,baz=76,slow=6.3,SNR=4.7						
ZALV				PcP	PcP	02 43 02.8	+0.2
	comp=Z,6.5nm,0.6s,baz=102,slow=2.9,SNR=16						
ZALV				LR	LR	03 00 04.0	
	comp=Z,34nm,19.5s,baz=68,slow=37						
ZALV	Zalesovo Beam	43.76	312	P	P	02 41 16.4	+0.4
ZALV						02 43 02.8	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZALV				MLR	MLR		
	comp=Z,34nm,19.5s						
CMAR	Chiang Mai Arr	44.37	258	LR	LR	03 02 39.7	
	comp=Z,45nm,18.3s,baz=166,slow=40						
KDAK	Kodiak Island	44.88	42	*e*P	P	02 41 25.9	+1.0
	comp=Z,6.8nm,0.9s						
KDAK	Kodiak Island	44.88	42	*ce*P	P	02 41 24.9	0.0
MLY	Manley	45.99	32	*e*P	P	02 41 35.1	+1.4
	comp=Z,5.3nm,1.1s						
MK31	Makanchi Array	46.32	302	*e*P	P	02 41 37.4	+0.8
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	46.32	302	*e*P	P	02 41 37.4	+0.8
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK32	Makanchi Array	46.32	302	*e*P	P	02 41 36.3	-0.2
MK32				*e*PcP	PcP	02 43 11.6	0.0
MKAR	Makanchi Array	46.32	302	P	P	02 41 36.3	-0.2
	comp=Z,2.2nm,0.9s,baz=83,slow=10,SNR=12						
MKAR				PcP	PcP	02 43 11.6	0.0
	comp=Z,1.2nm,0.8s,baz=66,slow=5.2,SNR=3.1						
BWN	Browne	46.48	33	*e*P	P	02 41 39.7	+2.2
	comp=Z,13nm,0.9s						
WRH	Wood River Hil	47.09	33	*e*P	P	02 41 43.4	+1.1
WRH				*e*PcP	PcP	02 43 14.1	+0.2
CCB	Clear Creek Bu	47.22	33	*e*P	P	02 41 44.6	+1.3
	comp=Z,3.7nm,1.3s						
ILAR	Eielson Array	47.62	33	P	P	02 41 46.2	-0.1
	comp=Z,3.3nm,1.1s,baz=266,slow=6.0,SNR=15						
ILAR				PcP	PcP	02 43 15.3	-0.5
	comp=Z,0.4nm,0.6s,baz=298,slow=5.8,SNR=3.3						
ILB	Eielson Array	47.62	33	*e*P	P	02 41 46.2	-0.1
	comp=Z,5.6nm,1.1s						
ILB				*e*PcP	PcP	02 43 15.3	-0.5
KURK	Kurchatov	47.93	308	*e*P	P	02 41 48.9	-0.1
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	47.93	308	*ce*P	P	02 41 49.8	+0.9
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURBB	Kurchatov Arra	48.00	308	P	P	02 41 49.9	+0.4
	comp=Z,3.2nm,0.7s,baz=82,slow=7.8,SNR=33						
DOT	Dot Lake	48.87	34	*e*P	P	02 41 56.5	+0.3
	comp=Z,9.9nm,1.9s						
BRVK	Borovoye	52.46	313	*ce*P	P	02 42 25.1	+1.8
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
INK	Inuvik	52.71	28	P	P	02 42 24.1	-0.7
	comp=Z,2.4nm,0.8s,baz=322,slow=6.6,SNR=4.4						
INK				PcP	PcP	02 43 35.6	+1.2
	comp=Z,1.9nm,0.2s,baz=332,slow=9.7,SNR=48						
INK	Inuvik	52.71	28	*e*P	P	02 42 24.1	-0.7
	comp=Z,3.2nm,0.8s						
INK				*e*PcP	PcP	02 43 35.6	+1.2
AAK	Ala-Archa	52.80	299	*ce*P	P	02 42 28.0	+1.8
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KSH	Kashi	52.84	295	P	P	02 42 31.9	+5.4
KSH				pP	pwP	02 42 43.9	+7.0
KSH				sP	sP	02 42 50.3	+20
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,120nm,4.5s						
KKAR	Karatay Array	55.38	301	*e*P	P	02 42 45.0	+0.2
	comp=Z,9.2nm,1.4s						
KKAR	Karatay Array	55.38	301	*e*P	P	02 42 45.0	+0.2
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ARU	Arti	57.94	319	*e*P	P	02 43 03.0	+0.3
	comp=Z,15nm,1.1s						
ARU	Arti	57.94	319	*d i*P	P	02 43 03.6	+0.9
ARU				S	S	02 51 03.2	+1.2
ARU				SS	SS	02 54 52.8	+0.4
ARU				pmax	pmax		
	comp=Z,17nm,1.2s						
WRAB	Tennant Creek	57.94	192	*e*P	P	02 43 01.3	-1.8
	comp=Z,17nm,0.9s						
WRAB	Tennant Creek	57.94	192	*e*P	P	02 43 01.3	-1.8
WRAB				pmax	pmax		
	comp=Z,17nm,0.9s						
WB2	Warramunga Arr	57.95	192	*e*P	P	02 43 01.7	-1.5
	comp=Z,18nm,0.8s						
WR1	Warramunga Arr	57.95	192	*e*P	P	02 43 01.6	-1.6
WRA	Warramunga Arr	57.95	192	P	P	02 43 01.6	-1.6
	comp=Z,12nm,0.6s,baz=7.0,slow=7.6,SNR=53						
ABKAR	Akbulak array	59.85	311	*e*P	P	02 43 16.0	-0.1
	comp=Z,3.4nm,1.0s						
RES	Resolute Bay	61.48	15	P	P	02 43 26.4	-0.4
	comp=Z,4.3nm,0.9s,baz=287,slow=8.3,SNR=4.3						
RES	Resolute Bay	61.48	15	*e*P	P	02 43 26.4	-0.4
	comp=Z,8.2nm,1.1s						
AS31	Alice Springs	61.67	192	*e*P	P	02 43 27.3	-1.5
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	61.67	192	P	P	02 43 27.6	-1.2
	comp=Z,3.4nm,0.8s,baz=12,slow=14,SNR=27						
PRGR	Permogore	61.96	328	*e*P	P	02 43 29.2	-1.1
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GEYT	Alibeck	66.12	300	P	P	02 43 57.8	-0.3
	comp=Z,2.2nm,0.8s,baz=9.8,slow=19,SNR=6.2						
STKA	Stephens Creek	69.03	183	P	P	02 44 15.4	-0.8
	comp=Z,0.7nm,0.3s,baz=44,slow=4.0,SNR=3.5						
STKA	Stephens Creek	69.03	183	*e*P	P	02 44 15.4	-0.8
	comp=Z,8.4nm,1.9s						
OBN	Obninsk	69.45	324	*i* P	P	02 44 18.6	-0.1
OBN				*i*		02 44 43.4	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FINES	FINESS Array B	69.76	333	P	P	02 44 20.8	+0.3
	comp=Z,4.9nm,0.7s,baz=57,slow=7.0,SNR=17						
LRM	Limekiln Ridge	71.83	46	*e*P	P	02 44 32.0	-1.7
NVAR	Mina Array Bea	72.44	55	P	P	02 44 37.5	+0.1
	comp=Z,0.5nm,0.6s,baz=289,slow=6.2,SNR=5.5						
ZEI	Tsey	72.72	311	*e*P	P	02 44 37.3	-1.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KIV	Kislovodsk	72.77	312	*e*P	P	02 44 40.3	+1.1
	comp=Z,20nm,0.9s						
KIV	Kislovodsk	72.77	312	*e*P	P	02 44 40.8	+1.6
KIV				pmax	pmax		
	comp=Z,72nm,1.0s						
KIV				MLR	MLR		
	comp=Z,59nm,18.0s						
KBZ	Khabaz	72.78	312	P	P	02 44 40.0	+1.0
	comp=Z,11nm,0.8s,baz=52,slow=2.4,SNR=25						
SHA1	Shidzhatmaz	72.91	312	*i* P	P	02 44 41.7	+1.5
GNI	Garni	73.73	308	*ce*P	P	02 44 47.4	+2.4
GNI				pmax	pmax		
	comp=Z,62nm,1.3s						
HFS	Hagfors	74.86	337	LR	LR	03 21 36.0	
	comp=Z,17nm,18.9s,baz=350,slow=39						
NB2	NORSAR Subarra	74.88	339	P	P	02 44 51.1	-0.1
	comp=Z,1.1nm,0.7s,baz=36,slow=5.9						
NOA	NORSAR Array B	74.88	339	P	P	02 44 51.2	+0.1
	comp=Z,2.1nm,0.8s,baz=37,slow=5.8,SNR=6.4						
NOA				LR	LR	03 22 28.3	
	comp=Z,5.2nm,18.5s,baz=80,slow=40						
TCUT	Toone Canyon	75.21	49	*e*P	P	02 44 54.0	+0.3
	comp=Z,12nm,0.5s						
PDAR	Pinedale Array	75.32	47	P	P	02 44 53.2	-1.0
	comp=Z,0.4nm,0.6s,baz=298,slow=3.2,SNR=4.9						
AKASG	Malin Array Be	75.69	324	P	P	02 44 56.2	+0.3
	comp=Z,2.3nm,0.6s,baz=47,slow=6.4,SNR=13						
AKASG	Malin Array Be	75.69	324	P	P	02 44 56.2	+0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BEL	Belsk	78.63	328	*e*P	P	02 45 14.1	+1.7
BEL	Belsk	78.63	328	*e*P	P	02 45 14.1	+1.7
KWP	Kalwaria Pacla	79.43	326	*e*P	P	02 45 18.5	+1.6
KWP	Kalwaria Pacla	79.43	326	*e*P	P	02 45 18.5	+1.6
BUR08	Bucovina Ar. S	79.71	323	*e*P	P	02 45 19.4	+0.8
	comp=Z,5.7nm,1.2s						
KOLS	Kolonicke sedl	80.13	326	*e*P	P	02 45 24.9	+4.2
KOLS	Kolonicke sedl	80.13	326	*e*P	P	02 45 24.9	+4.2
OJC	Ojcow	80.25	328	*e*P	P	02 45 21.5	+0.1
OJC	Ojcow	80.25	328	*e*P	P	02 45 21.5	+0.1
NIE	Niedzica	80.64	327	*e*P	P	02 45 25.7	+2.2
NIE	Niedzica	80.64	327	*e*P	P	02 45 25.7	+2.2
BR101	Keskin Array S	80.69	313	*e*P	P	02 45 24.9	+0.9
BR131	Keskin Array S	80.69	313	*e*P	P	02 45 24.9	+0.8
	comp=Z,5.3nm,1.3s						
BRTR	Keskin Array B	80.69	313	P	P	02 45 24.9	+0.8
	comp=Z,2.4nm,1.0s,baz=97,slow=5.1,SNR=14						
BRTR	Keskin Array B	80.69	313	*i* P	P	02 45 24.8	+0.8
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHVC	Chvalec	81.51	330	*e*P	P	02 45 29.4	+1.3
UPC	Upice	81.59	330	*e*P	P	02 45 30.0	+1.5
UPC	Upice	81.59	330	*e*P	P	02 45 30.0	+1.5
ECSD	EROS Data Cent	81.80	40	*e*P	P	02 45 29.8	+0.1
	comp=Z,5.4nm,1.1s						
VYHS	Vyhne	81.97	327	*e*P	P	02 45 31.4	+0.9
VYHS	Vyhne	81.97	327	*e*P	P	02 45 31.4	+0.9
ANMO	Albuquerque	82.11	52	*e*P	P	02 45 32.6	+0.8
	comp=Z,6.0nm,1.4s						
ANMO	Albuquerque	82.11	52	*ce*P	P	02 45 33.4	+1.6
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
BRG	Berggiesshubel	82.11	331	*e*P	P	02 45 31.9	+0.7
	comp=Z,3.4nm,0.8s						
BRG	Berggiesshubel	82.11	331	*e*P	P	02 45 31.9	+0.7

	comp=Z,3.4nm,0.8s						
BRG	**Berggiesshubel**	**82.11**	**331**	*e*P	**P**	**02 45 31.9**	**+0.7**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	**Collm**	**82.12**	**332**	*e*P	**P**	**02 45 31.5**	**+0.3**
	comp=Z,4.4nm,0.8s						
CLL	**Collm**	**82.12**	**332**	*i* P	**P**	**02 45 31.0**	**-0.2**
CLL				*i*		02 45 42.2	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CLL	**Collm**	**82.12**	**332**	*i* P	**P**	**02 45 31.0**	**-0.2**
	comp=Z,7.0nm,1.2s						
CLL				*i* pP	**pwP**	**02 45 42.2**	**+0.4**
GOPC	**GO Pecny, Ondr**	**82.55**	**330**	*e*P	**P**	**02 45 34.0**	**+0.5**
GOPC	**GO Pecny, Ondr**	**82.55**	**330**	*e*P	**P**	**02 45 34.0**	**+0.5**
PRU	**Pruhonice**	**82.58**	**330**	*e*P	**P**	**02 45 34.6**	**+0.9**
PRU				*e*		02 45 43.5	
PRU	**Pruhonice**	**82.58**	**330**	*e*P	**P**	**02 45 34.6**	**+0.9**
PRU				*e*pP	**pwP**	**02 45 43.5**	**-0.8**
KHC	**Kasperske Hory**	**83.65**	**330**	*e*P	**P**	**02 45 39.9**	**+0.7**
KHC				*e*		02 45 50.6	
KHC	**Kasperske Hory**	**83.65**	**330**	*e*P	**P**	**02 45 39.9**	**+0.7**
KHC				*e*pP	**pwP**	**02 45 50.6**	**+0.7**
GERES	**GERESS Array B**	**83.83**	**330**	P	**P**	**02 45 39.5**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=44,slow=5.9,SNR=6.0						
VTS	**Vitosha**	**84.31**	**321**	*e*P	**P**	**02 45 43.3**	**+0.4**
	comp=Z,3.2nm,1.0s						
VTS	**Vitosha**	**84.31**	**321**	*e*P	**P**	**02 45 43.3**	**+0.4**
VTS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BFO	**Black Forest**	**86.30**	**333**	*e*P	**P**	**02 45 53.1**	**+0.5**
	comp=Z,4.3nm,1.0s						
BFO	**Black Forest**	**86.30**	**333**	*e*P	**P**	**02 45 53.1**	**+0.5**
BFO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TXAR	**Lajitas Array**	**87.58**	**54**	P	**P**	**02 45 58.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=298,slow=2.3,SNR=8.1						
VNA2	**Neumayer--Watz**	**143.48**	**195**	PKPdf	PKPab	02 52 41.1	+0.5
VNA3	**Neumayer Olymp**	**143.66**	**194**	PKPdf	PKPab	02 52 40.5	-0.8
LPAZ	**La Paz**	**143.99**	**63**	PKP	PKPab	02 52 45.0	+0.2
	comp=Z,1.8nm,0.8s,baz=336,slow=4.7,SNR=6.5						
LPAZ	**La Paz**	**143.99**	**63**	*e*PKPdf	PKPbc	02 52 46.6	+1.2
LPAZ	**La Paz**	**143.99**	**63**	PKIKP	PKPab	02 52 45.0	+0.2
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						

IDC ***14*** *02:37:09.8±2.0, 33°.75N×135°.27E, h0^{km}, mb3.6/1, mb1 3.6/5, mb1mx3.3/42, mbtmp3.7/5, ML3.2/4, MS3.4/2, Ms1 3.4/2, ms1mx2.7/35, Error ellipse: s-maj=32.4km s-min=17.6km az=161.0*

ISCJB ***14*** *02:37:13.3±0.5, 33°.82N±0°.04×135°.32E±0°.03, h58^{km}±5^{km}, mb3.4/1, MS3.5/2, Error ellipse: s-maj=7.2km s-min=4.0km az=171.8*

JMA ***14*** *02:37:14.6, 33°.86N×135°.35E, h53^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: φs1.00000°, δ86.00000°, λ-48.00000°. NP2:φs95.00000°, δ42.00000°, λ-174.00000°. Principal axes: T Plg28.0000°, Azm58.0000°; N Plg42.0000°, Azm177.0000°; P Plg35.0000°, Azm306.0000°;*

JMA Felt I J1.

ISC 14 02:37:14.5±1.1**, 33°.83N**±0°.05×**135°.32E**±0°.03**, h52**^{km}±7^{km}**, n27, σ0^{s}.71**/35**, 4C-8D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.04**	**49**	⇓P	**Pn**	**02 37 22.6**	**+0.2**
JWM				S	**Sn**	**02 37 28.0**	**0.0**
JTNC	**Tanabenakahech**	**0.24**	**92**	⇓P	**Pn**	**02 37 23.4**	**+0.1**
JTNC				S	**Sn**	**02 37 29.5**	**-0.1**
JWY	**Kouya**	**0.45**	**30**	⇓P	**Pn**	**02 37 25.4**	**0.0**
JWY				S	**Sn**	**02 37 32.7**	**-0.6**
JAJ2	**Tsuna**	**0.69**	**329**	⇓P	**Pn**	**02 37 28.4**	**+0.1**
JAJ2				S	**Sn**	**02 37 38.3**	**+0.1**
JAI	**Aioi**	**0.73**	**268**	⇑P	**Pn**	**02 37 28.7**	**0.0**
JAI				S	**Sn**	**02 37 38.7**	**-0.2**
JHE	**Heguri**	**0.88**	**20**	⇑P	**Pn**	**02 37 30.3**	**-0.4**
JHE				S	**Sn**	**02 37 41.7**	**-0.9**
JKN2	**Miekihoku**	**0.89**	**62**	⇓P	**Pn**	**02 37 30.4**	**-0.4**
JKN2				*e*S	**Sn**	**02 37 42.0**	**-0.8**
JMN	**Monobe**	**1.21**	**266**	⇑P	**Pn**	**02 37 34.9**	**-0.2**
JMN				S	**Sn**	**02 37 49.6**	**-0.8**
JKS	**Kasai**	**1.22**	**341**	⇓P	**Pn**	**02 37 35.0**	**-0.3**
JKS				S	**Sn**	**02 37 49.8**	**-0.9**
TTO1	**TONANKAI O.B.S**	**1.24**	**99**	⇓P	**Pn**	**02 37 35.2**	**0.0**
TTO1				X		02 37 51.6	
TSUJ	**Tsu 2**	**1.27**	**46**	P	**Pn**	**02 37 35.2**	**-0.7**
TSUJ				*e*S	**Sn**	**02 37 50.9**	**-0.9**
JJS	**Sakaide**	**1.28**	**296**	⇓P	**Pn**	**02 37 35.7**	**-0.3**
JIE	**Ise**	**1.28**	**63**	⇑P	**Pn**	**02 37 35.9**	**-0.2**
JIE				S	**Sn**	**02 37 51.0**	**-1.1**
TTO2	**TONANKAI O.B.S**	**1.42**	**93**	P	**Pn**	**02 37 37.7**	**0.0**
TTO2				X		02 37 56.0	
MAT	**Matsushiro**	**3.60**	**40**	P	**Pn**	**02 38 07.9**	**+0.1**
MAT				*e*S	**Sn**	**02 38 51.1**	**+2.1**
MJAR	**Matsushiro Arr**	**3.60**	**40**	Pn	**Pn**	**02 38 08.2**	**+0.4**
	0.3nm,0.3s,baz=221,slow=13,SNR=17						
MJAR				Pg		02 38 17.7	
	0.5nm,0.3s,baz=219,slow=16,SNR=6.7						
MJAR				Lg	Lg	02 39 07.2	
	0.3nm,0.3s,baz=223,slow=44,SNR=5.8						
JNU	**Nakatsue**	**3.78**	**261**	Pn	**Pn**	**02 38 10.4**	**+0.1**
	2.5nm,0.3s,baz=78,slow=5.5,SNR=27						
JNU				Sn	**Sn**	**02 38 52.3**	**-1.3**
	2.2nm,0.3s,baz=80,slow=17,SNR=7.7						
JHJ	**Hachijo jima 2**	**3.79**	**99**	Pn	**Pn**	**02 38 10.4**	**-0.1**
	35nm,0.3s,baz=107,slow=19,SNR=9.4						
JHJ				Sn	**Sn**	**02 38 52.7**	**-1.1**
	35nm,0.3s,baz=240,slow=20,SNR=5.4						
KSRS	**Korea Array**	**7.03**	**303**	Pn	**Pn**	**02 38 55.5**	**+0.8**
	0.5nm,0.3s,baz=126,slow=14,SNR=5.2						
KSRS				Sn	**Sn**	**02 40 12.5**	**-0.8**
	0.6nm,0.3s,baz=121,slow=23,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	**31.35**	**109**	T	T	03 15 58.0	
	baz=303,slow=75,SNR=7.0						
H11N1	**WAKE ISLAND Hy**	**31.35**	**109**	T	T	03 15 57.7	
	baz=303,slow=75,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**31.36**	**109**	T	T	03 15 58.7	
	baz=303,slow=75,SNR=5.1						
H11S3	**WAKE ISLAND Hy**	**31.87**	**111**	T	T	03 16 41.9	
	baz=305						
H11S1	**WAKE ISLAND Hy**	**31.87**	**111**	T	T	03 16 41.1	
	baz=305						
H11S2	**WAKE ISLAND Hy**	**31.89**	**111**	T	T	03 16 40.4	
	baz=305						
MKAR	**Makanchi Array**	**41.71**	**304**	P	**P**	**02 44 59.0**	**+0.7**
	0.6nm,0.6s,baz=96,slow=9.6,SNR=5.6						
MKAR				LR	LR	03 01 00.5	
	comp=Z,15nm,19.8s,baz=71,slow=34						
KEST	**Kesra**	**94.34**	**319**	LR	LR	03 38 52.3	
	comp=Z,55nm,18.4s,baz=278,slow=39						

IDC ***14*** *03:22:51.8±0.8, 2°.87S×127°.98E, h0^{km}, mb3.9/6, mb1 4.2/9, mb1mx3.8/45, mbtmp4.0/9, ML4.2/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/36, Error ellipse: s-maj=30.9km s-min=18.4km az=71.0*

ISCJB ***14*** *03:22:56.4±0.4, 2°.95S±0°.04×128°.16E±0°.05, h38^{km}, mb5.7/1, MS3.7/1, Error ellipse: s-maj=7.1km s-min=4.6km az=152.0*

DJA ***14*** *03:22:58.0±0.5, 3°S±3°×12°8E±°, h12^{km}±5^{km}, M4.4/10, mb4.8/2, mB5.1/1, MLv4.2/10, Mw(mB)4.5/1*

NEIC ***14*** *03:22:59.2±1.1, 2°.88S×128°.21E, h56^{km}±10^{km}, mb4.2/5, Error ellipse: s-maj=19.7km s-min=10.3km az=73.0*

ISC 14 03:22:57.6±0.6**, 2°.89S**±0°.04×**128°.08E**±0°.05**, h38**^{km}**, n29, σ2^{s}.65**/38**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.80**	**172**	P	**Pn**	**03 23 13.9**	**+1.5**
MSAI	**Masohi**	**0.96**	**118**	P	**Pn**	**03 23 15.7**	**+1.1**
MSAI				S	**Sn**	**03 23 32.7**	**+5.6**
NLAI	**Namlea**	**1.04**	**250**	P	**Pn**	**03 23 19.2**	**+3.6**
SANI	**Sanana**	**2.25**	**292**	P	**Pn**	**03 23 33.5**	**+1.2**
SANI				S	**Sn**	**03 23 59.8**	**+1.0**
LBMI	**Labuha**	**2.31**	**346**	P	**Pn**	**03 23 35.8**	**+2.7**
LBMI				S	**Sn**	**03 24 03.8**	**+3.5**
BNDI	**Bandanaira**	**2.44**	**132**	P	**Pn**	**03 23 38.8**	**+3.9**
BNDI				S	**Sn**	**03 24 09.9**	**+6.4**
TNTI	**Ternate**	**3.71**	**349**	*e*Pn	**Pn**	**03 23 54.3**	**+1.9**
SWI	**Sorong**	**3.76**	**58**	P	**Pn**	**03 23 53.0**	**-0.1**
SIJI	**Sorong**	**3.77**	**58**	Pn	**Pn**	**03 23 53.0**	**-0.1**
	14nm,0.3s,baz=233,slow=11,SNR=16						
SIJI				Sn	**Sn**	**03 24 33.8**	**-2.5**
	14nm,0.3s,baz=30,slow=22,SNR=8.8						
FAKI	**Fak Fak**	**4.17**	**91**	*e*Pn	**Pn**	**03 23 58.5**	**-0.1**
FAKI	**Fak Fak**	**4.17**	**91**	P	**Pn**	**03 23 59.2**	**+0.6**
APSI	**Ampana**	**6.72**	**287**	P	**Pn**	**03 24 37.4**	**+3.7**
KAPI	**Kappang**	**8.57**	**255**	Pn	**Pn**	**03 24 56.8**	**-2.4**
	0.3nm,0.3s,baz=78,slow=19,SNR=1.9						
KAPI				LR	LR	03 28 32.8	
	comp=Z,109nm,18.5s,baz=303,slow=40						
WRAB	**Tennant Creek**	**18.01**	**161**	*e*P	**P**	**03 27 05.4**	**+0.1**
	50nm,1.9s						
WR1	**Warramunga Arr**	**18.02**	**161**	*e*P	**Pn**	**03 27 04.6**	**-0.6**
WR1				*e*S	**Sn**	**03 30 19.4**	**-5.9**
WRA	**Warramunga Arr**	**18.02**	**161**	P	**Pn**	**03 27 04.6**	**-0.6**
	2.0nm,0.3s,baz=340,slow=13,SNR=141						
WRA				S	**Sn**	**03 30 19.4**	**-5.9**
	0.0nm,0.3s,baz=334,slow=20,SNR=2.0						
WB2	**Warramunga Arr**	**18.02**	**161**	*e*P	**Pn**	**03 27 05.3**	**+0.1**
	7.2nm,0.7s						
AS31	**Alice Springs**	**21.41**	**165**	*e*P	**P**	**03 27 43.4**	**+1.0**
	8.8nm,0.3s						
AS31				*e*S	**S**	**03 31 37.0**	**-1.0**
ASAR	**Alice Springs**	**21.41**	**165**	P	**P**	**03 27 43.5**	**+1.2**
	14nm,0.6s,baz=345,slow=11,SNR=135						
ASAR				S	**S**	**03 31 35.2**	**-2.8**
	1.7nm,0.8s,baz=348,slow=19,SNR=6.8						
ASAR				PcP	**PcP**	**03 31 46.8**	**+1.6**
	0.7nm,0.6s,baz=356,slow=1.5,SNR=8.8						
CTA	**Charters Tower**	**24.64**	**135**	LR	LR	03 39 37.2	
	comp=Z,242nm,21.2s,baz=118,slow=41						
STKA	**Stephens Creek**	**31.52**	**158**	P	**P**	**03 29 15.8**	**-0.3**
	0.6nm,0.3s,baz=340,slow=15,SNR=2.2						
STKA	**Stephens Creek**	**31.52**	**158**	*e*P	**P**	**03 29 15.8**	**-0.3**
	7.4nm,1.9s						
MK32	**Makanchi Array**	**63.76**	**327**	*e*P	**P**	**03 33 24.8**	**-0.9**
MKAR	**Makanchi Array**	**63.76**	**327**	P	**P**	**03 33 24.8**	**-0.9**
	0.3nm,0.6s,baz=132,slow=6.9,SNR=2.2						
KURBB	**Kurchatov Arra**	**68.03**	**328**	P	**P**	**03 33 53.1**	**+0.1**
	0.3nm,0.8s,baz=127,slow=6.0,SNR=2.6						
VNDA	**Vanda**	**76.73**	**173**	P	**P**	**03 34 43.7**	**-0.8**
	0.4nm,0.8s,baz=332,slow=5.3,SNR=2.6						
ILAR	**Eielson Array**	**90.47**	**25**	P	**P**	**03 35 54.9**	**-0.2**
	0.4nm,0.6s,baz=250,slow=4.1,SNR=4.5						
ILB	**Eielson Array**	**90.47**	**25**	*e*P	**P**	**03 35 54.9**	**-0.2**
	13nm,0.3s						
CPUP	**Villa Florida**	**150.48**	**170**	PKPbc	**PKPbc**	**03 42 44.8**	**-1.2**
	0.8nm,0.6s,baz=114,slow=2.8,SNR=3.2						

ISCJB ***14*** *03:26:34.8±0.7, 13°.54N±0°.03×120°.60E±0°.03, h9^{km}±5^{km}, mb3.7/3, MS3.4/2, Error ellipse: s-maj=5.2km s-min=4.5km az=179.9*

MAN ***14*** *03:26:34.5, 13°.49N×120°.61E, h2^{km}, ML3.0, MS3.1*

MAN INTENSITY III- ABRA DE ILOG OCCIDENTAL MINDORO; INTENSITY II - PUERTO GALERA ORIENTAL MINDORO.

IDC ***14*** *03:26:34.3±1.4, 13°.73N×121°.61E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.4/41, mbtmp3.7/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/31, Error ellipse: s-maj=41.0km s-min=10.0km az=38.0*

ISC 14 03:26:34.8±1.2**, 13°.52N**±0°.03×**120°.65E**±0°.03**, h6**^{km}±9^{km}**, n18, σ0^{s}.87**/28**, mb3.6**/3**, 2C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.29**	**93**	⇑*e*P	**Pg**	**03 26 40.3**	**-0.3**
PGP				*i* S	**Sg**	**03 26 44.9**	**+0.4**
LUBP	**Lubang**	**0.45**	**299**	*e*P	**Pg**	**03 26 43.8**	**+0.2**
LUBP				*e*S	**Sg**	**03 26 50.3**	**+0.9**
TGY	**Tagaytay City**	**0.64**	**25**	Pg	**Pb**	**03 26 47.7**	**-0.8**
	315nm,0.3s,baz=337,slow=1.0,SNR=29						
TGY				Lg	Lg	03 26 60.0	
	668nm,0.3s,baz=3.9,slow=19,SNR=18						
TGY				LR	LR	03 27 10.1	
	comp=Z,255nm,21.9s,baz=78,slow=48						
TGY	**Tagaytay City**	**0.64**	**25**	⇑*e*P	**Pb**	**03 26 48.4**	**-0.1**
TGY				*e*S	**Sn**	**03 27 02.0**	**+0.9**
SJMP	**San Jose**	**1.15**	**157**	*e*P	**Pn**	**03 26 57.1**	**-0.2**
SJMP				*e*S	**Sn**	**03 27 14.8**	**+1.5**
BOAC	**Boac**	**1.16**	**93**	*e*P	**Pn**	**03 26 57.3**	**-0.3**
BOAC				*e*S	**Sn**	**03 27 15.2**	**+1.5**
BUSP	**Coron**	**1.57**	**196**	*e*P	**Pn**	**03 27 03.2**	**0.0**
BUSP				*e*S	**Sn**	**03 27 24.0**	**+0.2**
OTRP	**Odiongan**	**1.76**	**131**	*e*P	**Pb**	**03 27 07.0**	**-0.6**
OTRP				*e*S	**Sg**	**03 27 31.3**	**-0.2**
GQP	**Guinayangan**	**1.79**	**77**	⇓*e*P	**Pb**	**03 27 07.2**	**-0.8**
GQP				*i* S	**Sg**	**03 27 32.9**	**+0.6**
BALP	**Baler**	**2.38**	**22**	*e*P	**Pn**	**03 27 15.2**	**+0.8**
BALP				*e*S	**Sn**	**03 27 43.7**	**-0.3**
ENPP	**El Nido**	**2.59**	**208**	*e*P	**Pn**	**03 27 17.1**	**-0.1**
ENPP				*e*S	**Sn**	**03 27 47.7**	**-1.4**
SMPP	**San Manuel, Pa**	**2.62**	**1**	*e*P	**Pn**	**03 27 16.9**	**-0.8**
SMPP				*e*S	**Sn**	**03 27 48.1**	**-1.7**
CUYO	**Cuyo Island**	**2.68**	**172**	*e*P	**Pn**	**03 27 18.6**	**+0.2**
CUYO				*e*S	**Sn**	**03 27 52.1**	**+0.9**
WRA	**Warramunga Arr**	**35.88**	**158**	P	**P**	**03 33 34.6**	**-1.2**
	0.6nm,0.3s,baz=340,slow=12,SNR=9.2						
SONM	**Songino Array**	**36.22**	**344**	P	**P**	**03 33 39.8**	**+1.2**
	0.3nm,0.6s,baz=166,slow=9.2,SNR=2.9						
ASAR	**Alice Springs**	**39.16**	**161**	P	**P**	**03 34 03.5**	**-0.1**
	0.9nm,0.5s,baz=341,slow=7.3,SNR=12						
GNI	**Garni**	**70.69**	**308**	LR	LR	04 11 26.0	
	comp=Z,20nm,20.0s,baz=314,slow=38						
FINES	**FINESS Array B**	**80.42**	**331**	LR	LR	04 16 46.1	
	comp=Z,19nm,18.3s,baz=210,slow=37						

NIED ***14*** *03:27:00, 38°.50N×144°.60E, h5^{km}, Mw3.7 Best double couple: M₀3.38000×10^{14} NP1:φs27.00000°, δ24.00000°, λ-95.00000°. NP2:φs212.00000°, δ66.00000°, λ-88.00000°.*

IDC ***14*** *03:27:22.0±1.6, 38°.25N×144°.93E, h0^{km}, mb3.7/3, mb1 3.7/6, mb1mx3.5/37, mbtmp3.6/6, ML3.1/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/40, Error ellipse: s-maj=34.4km s-min=24.5km az=96.0*

ISCJB ***14*** *03:27:26.5±0.9, 38°.61N±0°.04×144°.68E±0°.06, h29^{km}, mb3.5/3, MS3.4/3, Error ellipse: s-maj=7.8km s-min=4.7km az=40.3*

JMA ***14*** *03:27:27.3±0.1, 38°.49N×144°.64E, h39^{km}, M3.8*

ISC 14 03:27:26.2±1.3**, 38°.47N**±0°.06×**144°.80E**±0°.09**, h29**^{km}**, n31, σ2^{s}.11**/38**, mb3.5**/3**, MS3.2**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.52**	**285**	P	**Pn**	**03 28 05.6**	**+0.5**
OFUJ				*e*S	**Sn**	**03 28 33.4**	**-1.5**
MIYJ	**Miyakonagasawa**	**2.57**	**296**	P	**Pn**	**03 28 06.1**	**+0.3**
MIYJ				*e*S	**Sn**	**03 28 35.0**	**-1.1**
JIKH	**Ishinomakikobu**	**2.62**	**268**	P	**Pn**	**03 28 06.7**	**+0.2**
JIKH				S	**Sn**	**03 28 35.7**	**-1.7**
JKMT	**Kesennumamotoy**	**2.62**	**279**	P	**Pn**	**03 28 06.9**	**+0.3**
JKMT				*e*S	**Sn**	**03 28 36.2**	**-1.2**
JMK	**Ichinoseki**	**2.84**	**281**	P	**Pn**	**03 28 10.3**	**+0.8**
JMK				*e*S	**Sn**	**03 28 42.1**	**-0.6**
JOM	**Ohasama**	**2.91**	**291**	P	**Pn**	**03 28 11.3**	**+0.8**
JOM				S	**Sn**	**03 28 44.1**	**-0.4**
JANG	**Nango**	**3.18**	**308**	P	**Pn**	**03 28 14.2**	**0.0**
JANG				*e*S	**Sn**	**03 28 50.1**	**-1.0**
JYK	**Kaneyama**	**3.50**	**279**	P	**Pn**	**03 28 20.0**	**+1.4**
JYK				S	**Sn**	**03 28 59.5**	**+0.4**
JFT	**Otama**	**3.65**	**256**	P	**Pn**	**03 28 21.9**	**+1.2**
JFT				S	**Sn**	**03 29 02.3**	**-0.4**
JOT	**Ohata**	**4.10**	**316**	*e*S	**Sn**	**03 29 11.5**	**-2.2**
JCH	**Churui**	**4.29**	**346**	P	**Pn**	**03 28 29.3**	**-0.1**
JCH				*e*S	**Sn**	**03 29 16.5**	**-1.9**
JKB	**Kayabe**	**4.47**	**321**	P	**Pn**	**03 28 33.5**	**+1.6**
JKB				*e*S	**Sn**	**03 29 20.8**	**-2.1**
NEM2	**Nemuro 2**	**4.95**	**8**	P	**Pn**	**03 28 37.7**	**-0.7**
NEM2				*e*S	**Sn**	**03 29 29.0**	**-5.6**
JRY	**Ryogami san**	**5.30**	**244**	P	**Pn**	**03 28 43.8**	**+0.4**
JRY				*e*S	**Sn**	**03 29 39.7**	**-3.8**
JTKR	**Abashiri--Toko**	**5.54**	**353**	P	**Pn**	**03 28 46.6**	**0.0**
JTKR				*e*S	**Sn**	**03 29 46.4**	**-2.9**
MJAR	**Matsushiro Arr**	**5.58**	**252**	Pn	**Pn**	**03 28 48.4**	**+1.2**
	0.2nm,0.3s,baz=64,slow=7.7,SNR=11						
MJAR				Sn	**Sn**	**03 29 50.9**	**+0.6**
	0.1nm,0.3s,baz=79,slow=14,SNR=4.4						
MJAR				LR	LR	03 31 24.8	
	comp=Z,30nm,18.9s,baz=235,slow=44						
ASAJ	**Asahikawa**	**5.88**	**344**	Pn	**Pn**	**03 28 52.5**	**+1.2**
	1.4nm,0.3s,baz=209,slow=9.4,SNR=9.6						
ASAJ				Sn	**Sn**	**03 29 56.1**	**-1.7**
	0.7nm,0.3s,baz=84,slow=19,SNR=2.5						
JHJ	**Hachijo jima 2**	**6.71**	**219**	Sn	**Sn**	**03 30 11.1**	**-7.1**
	4.4nm,0.3s,baz=94,slow=19,SNR=2.5						
USRK	**Ussuriysk Ar.**	**11.20**	**305**	Pn	**Pn**	**03 30 05.4**	**+1.2**
	0.2nm,0.3s,baz=118,slow=15,SNR=3.6						
SEY	**Seymchan**	**24.93**	**8**	P	**P**	**03 32 49.1**	**+2.6**
	0.7nm,0.5s,baz=170,slow=18,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	**26.74**	**128**	T	T	04 00 49.0	
	baz=319,slow=74,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**26.75**	**128**	T	T	04 00 50.5	
	baz=319,slow=74,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**26.76**	**128**	T	T	04 00 50.2	
	baz=319,slow=74,SNR=5.2						
H11S1	**WAKE ISLAND Hy**	**27.55**	**130**	T	T	04 01 54.7	
	baz=320						
H11S3	**WAKE ISLAND Hy**	**27.55**	**130**	T	T	04 01 55.3	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**27.57**	**130**	T	T	04 01 53.5	
	baz=320						
MKAR	**Makanchi Array**	**45.65**	**302**	P	**P**	**03 35 45.6**	**+1.7**
	0.2nm,0.6s,baz=79,slow=7.8,SNR=2.3						
AAK	**Ala-Archa**	**52.17**	**298**	LR	LR	03 58 02.7	
	comp=Z,19nm,21.1s,baz=114,slow=35						
PSI	**Prapat**	**54.83**	**241**	LR	LR	04 02 29.7	
	comp=Z,70nm,18.1s,baz=50,slow=38						
WRA	**Warramunga Arr**	**58.92**	**192**	P	**P**	**03 37 21.2**	**-1.4**
	1.4nm,0.8s,baz=9.7,slow=7.3,SNR=4.5						
HFS	**Hagfors**	**73.86**	**337**	LR	LR	04 14 23.7	
	comp=Z,14nm,19.8s,baz=328,slow=38						

IDC ***14*** *04:43:38.3±1.3, 34°.64N×82°.21E, h0^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.6/48, mbtmp3.8/9, ML3.3/2, MS3.3/5, Ms1 3.4/5, ms1mx2.9/30, Error ellipse: s-maj=29.5km s-min=23.7km az=63.0*

ISCJB ***14*** *04:43:39.4±0.5, 34°.77N±0°.04×82°.3E±0°.2, h15^{km}, mb3.6/5, MS3.6/3, Error ellipse: s-maj=19.9km s-min=5.3km az=169.7*

ISC 14 04:43:41.5±0.8**, 34°.79N**±0°.07×**82°.2E**±0°.2**, h15**^{km}**, n19, σ1^{s}.11**/18**, mb3.6**/5**, MS3.5**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYUN	**Piuthan**	**6.70**	**174**	*e*P	**Pn**	**04 45 19.5**	**-0.1**
	35nm,0.8s						
PYUN				*e*S	**Sn**	**04 46 36.2**	**+0.5**
KOLN	**Koldanda**	**7.09**	**170**	*e*P	**Pn**	**04 45 25.0**	**0.0**
KOLN				*e*S	**Sn**	**04 46 48.1**	**+2.6**
KKN	**Kakani**	**7.45**	**159**	*e*P	**Pn**	**04 45 29.5**	**-0.4**
	14nm,0.5s						
GUN	**Gumba**	**7.53**	**155**	*e*P	**Pn**	**04 45 30.9**	**-0.3**
	13nm,0.3s						
PKIN	**Phulchoki**	**7.68**	**158**	*e*P	**Pn**	**04 45 32.3**	**-0.8**
	18nm,0.6s						
PKI	**Pulchoki**	**7.69**	**158**	*e*P	**Pn**	**04 45 32.4**	**-0.9**
	14nm,0.4s						
JIRN	**Jiri**	**7.87**	**153**	*e*P	**Pn**	**04 45 35.5**	**-0.4**
	19nm,0.4s						
AAK	**Ala-Archa**	**9.89**	**325**	LR	LR	04 50 19.5	
	comp=Z,47nm,18.7s,baz=128,slow=40						
MKAR	**Makanchi Array**	**11.99**	**0**	Pn	**Pn**	**04 46 34.2**	**+2.3**
	0.4nm,0.3s,baz=184,slow=13,SNR=20						
MKAR				LR	LR	04 52 15.3	
	comp=Z,106nm,18.6s,baz=147,slow=43						
KURBB	**Kurchatov Arra**	**16.05**	**351**	Pn	**Pn**	**04 47 26.4**	**-0.2**
	baz=172,slow=12,SNR=6.5						
ZALV	**Zalesovo Beam**	**19.25**	**5**	P	**P**	**04 48 05.1**	**0.0**
	0.3nm,0.3s,baz=193,slow=12,SNR=25						
BVAR	**Borovoye Array**	**20.08**	**339**	P	**Pn**	**04 48 16.3**	**+0.3**
	3.1nm,0.7s,baz=150,slow=12,SNR=20						
CMAR	**Chiang Mai Arr**	**22.04**	**133**	P	**P**	**04 48 35.1**	**-0.5**
	1.9nm,0.7s,baz=299,slow=12,SNR=7.7						
SONM	**Songino Array**	**22.24**	**47**	P	**P**	**04 48 37.9**	**+0.1**
	0.8nm,0.7s,baz=251,slow=9.2,SNR=5.2						
JNU	**Nakatsue**	**40.08**	**78**	LR	LR	05 11 01.4	
	comp=Z,68nm,18.1s,baz=93,slow=41						
FINES	**FINESS Array B**	**44.08**	**325**	P	**P**	**04 51 48.7**	**+0.1**
	2.2nm,0.9s,baz=120,slow=11,SNR=4.4						
ARCES	**ARCESS Array B**	**46.33**	**336**	LR	LR	05 13 06.7	
	comp=Z,38nm,20.7s,baz=174,slow=38						
ILAR	**Eielson Array**	**73.61**	**20**	P	**P**	**04 55 12.1**	**-1.6**
	0.5nm,0.8s,baz=308,slow=4.6,SNR=6.9						
ILAR				LR	LR	05 30 33.2	
	comp=Z,48nm,18.3s,baz=220,slow=38						
TORD	**Torodi Ar. Bea**	**74.91**	**276**	P	**P**	**04 55 21.2**	**-1.0**
	0.5nm,0.7s,baz=54,slow=3.7,SNR=3.6						

ISCJB ***14*** *04:43:47.5±0.2, 3°.62S±0°.03×135°.96E±0°.03, h71^{km}, mb4.5/30, Error ellipse: s-maj=4.6km s-min=3.8km az=171.6*

NEIC ***14*** *04:43:48.0±2.3, 3°.60S×136°.01E, h64^{km}±5^{km}, mb4.5/19, Error ellipse: s-maj=14.0km s-min=11.2km az=206.0*

NEIC Felt [III] at Nabire.

IDC ***14*** *04:43:49.3±1.9, 3°.52S×135°.99E, h71^{km}±18^{km}, mb4.1/14, mb1 4.3/18, mb1mx4.2/30, mbtmp4.5/18, MS3.2/9, Ms1 3.2/9, ms1mx2.9/38, Error ellipse: s-maj=15.1km s-min=10.9km az=76.0*

DJA ***14*** *04:43:50.2±0.3, 4°S±3°×13°6E±°, h72^{km}±5^{km}, M5.0/7, mB5.4/6, mb5.2/6, MLv5.1/7, Mw(mB)4.8/6*

ISC 14 04:43:49.1±0.4**, 3°.64S**±0°.05×**135°.99E**±0°.04**, h71**^{km}**, n95, σ1^{s}.82**/101**, mb4.5**/30**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.77**	**8**	P	**Pn**	**04 44 16.8**	**-0.9**
SRPI				S	**Sn**	**04 44 36.5**	**-2.9**
KMPI	**Kaimana, Papua**	**2.28**	**269**	P	**Pn**	**04 44 26.4**	**+1.9**
KMPI				S	**Sn**	**04 44 53.6**	**+2.0**
BAKI	**Biak**	**2.43**	**3**	P	**Pn**	**04 44 26.5**	**-0.1**
FAKI	**Fak Fak**	**3.80**	**281**	*e*Pn	**Pn**	**04 44 45.3**	**+0.1**
FAKI	**Fak Fak**	**3.80**	**281**	P	**Pn**	**04 44 45.7**	**+0.5**
FAKI				S	**Sn**	**04 45 26.2**	**-2.6**
GENI	**Genyem**	**4.30**	**76**	P	**Pn**	**04 44 54.0**	**+1.9**
JAY	**Jayapura**	**4.84**	**77**	P	**Pn**	**04 45 00.8**	**+1.2**
	11nm,0.3s,baz=233,slow=9.6,SNR=46						
JAY				S	**Sn**	**04 45 54.3**	**0.0**
	14nm,0.3s,baz=273,slow=17,SNR=5.3						
JAY				LR	LR	04 46 59.7	
	comp=Z,83nm,19.6s,baz=176,slow=40						
JAY	**Jayapura**	**4.84**	**77**	P	**Pn**	**04 45 00.6**	**+1.1**
SIJI	**Sorong**	**5.46**	**300**	P	**Pn**	**04 45 07.6**	**-0.4**
	90nm,0.3s,baz=118,slow=8.8,SNR=213						
SIJI				S	**Sn**	**04 46 03.8**	**-5.7**
	67nm,0.3s,baz=192,slow=4.9,SNR=13						
SIJI				LR	LR	04 47 42.2	
	comp=Z,196nm,18.8s,baz=63,slow=43						
SWI	**Sorong**	**5.47**	**300**	P	**Pn**	**04 45 07.6**	**-0.4**
AAI	**Ambon**	**7.78**	**269**	P	**Pn**	**04 45 39.3**	**-0.4**
LBMI	**Labuha**	**8.99**	**289**	P	Pn	04 45 51.0	-5.2
KDU	**Kakadu**	**9.64**	**201**	P	**Pn**	**04 46 05.3**	**+0.2**
	baz=9.6,SNR=268						
SANI	**Sanana**	**10.11**	**279**	P	**Pn**	**04 46 10.1**	**-1.4**
	101nm,0.7s,825nm						
MTN	**Manton Dam**	**10.33**	**207**	*e*Pn	**Pn**	**04 46 15.2**	**+0.7**
MTN	**Manton Dam**	**10.33**	**207**	P	**Pn**	**04 46 14.2**	**-0.4**
	baz=10,SNR=92						
COEN	**Coen**	**12.47**	**146**	*e*Pn	**Pn**	**04 46 43.3**	**-0.4**
COEN	**Coen**	**12.47**	**146**	P	**Pn**	**04 46 43.5**	**-0.3**
	baz=12,SNR=54						
PMG	**Port Moresby**	**12.49**	**118**	P	**Pn**	**04 46 44.4**	**+0.4**
	2.2nm,0.3s,baz=278,slow=14,SNR=3.8						
PMG				S	**Sn**	**04 48 56.5**	**-4.9**
	2.3nm,0.3s,baz=216,slow=20,SNR=5.6						
PMG				LR	LR	04 52 22.0	
	comp=Z,106nm,19.8s,baz=262,slow=41						
SOEI	**Soe**	**13.13**	**242**	*e*Pn	**Pn**	**04 46 51.8**	**-1.0**
SOEI	**Soe**	**13.13**	**242**	P	**P**	**04 47 04.5**	**+4.1**
BATI	**Baumata**	**13.86**	**241**	P	**Pn**	**04 47 02.2**	**-0.3**
	4.5nm,0.3s,baz=90,slow=1.0,SNR=2.4						
BATI				S	**Sn**	**04 49 29.4**	**-5.5**
	2.4nm,0.3s,baz=29,slow=10,SNR=2.3						
KNRA	**Kununurra**	**13.92**	**210**	P	**Pn**	**04 47 02.5**	**-0.6**
	baz=14,SNR=25						
APSI	**Ampana**	**14.58**	**280**	P	**Pn**	**04 47 12.7**	**+0.9**
KAPI	**Kappang**	**16.25**	**265**	LR	LR	04 53 52.1	
	comp=Z,36nm,18.9s,baz=114,slow=37						
WRAB	**Tennant Creek**	**16.28**	**186**	*e*Pn	**Pn**	**04 47 32.4**	**-1.0**
	126nm,0.8s						
WB2	**Warramunga Arr**	**16.29**	**185**	*e*Pn	**Pn**	**04 47 31.6**	**-1.9**

	127nm,0.8s						
WR1	Warramunga Arr	16.29	186	*e*P	Pn	04 47 31.6	-1.9
WR1				*e*Sn	Sn	04 50 22.3	-11
WRA	Warramunga Arr	16.29	186	P	Pn	04 47 31.6	-1.9
	2.8nm,0.3s,baz=4.6,slow=15,SNR=121						
WRA				S	Sn	04 50 22.3	-11
	11nm,0.3s,baz=4.9,slow=24,SNR=16						
MTSU	Mount Surprise	16.56	151	P	Pn	04 47 37.2	+0.3
	baz=17,SNR=15						
QIS	Mount Isa	17.18	168	P	Pn	04 47 43.8	-0.8
	baz=17,SNR=25						
CTA	Charters Tower	19.17	149	P	P	04 48 09.1	+2.0
	1.3nm,0.3s,baz=333,slow=12,SNR=16						
CTAO	Charters Tower	19.17	149	*e*P	P	04 48 05.5	-1.6
	98nm,1.0s						
GUMO	Guam	19.25	27	LR	LR	04 55 38.0	
	comp=Z,24nm,20.2s,baz=170,slow=37						
AS31	Alice Springs	20.01	186	*e*P	P	04 48 17.8	+1.5
	39nm,0.6s						
AS31				*e*S	S	04 51 52.9	-4.7
ASAR	Alice Springs	20.02	186	P	P	04 48 18.8	+2.5
	99nm,0.7s,baz=7.9,slow=11,SNR=652						
ASAR				S	S	04 51 52.9	-4.7
	42nm,0.8s,baz=18,slow=29,SNR=16						
WRKA	Warakurna	22.53	198	P	P	04 48 43.5	+0.2
	baz=23,SNR=84						
PSA00	Pilbara Seismi	23.75	220	*e*P	P	04 48 55.8	+0.7
	26nm,0.6s						
EIDS	Eidsvold	26.03	148	P	P	04 49 17.6	+1.8
	baz=26,SNR=3.6						
FORT	Forrest	28.02	195	*e*P	P	04 49 34.2	+0.7
	34nm,0.7s						
FORT	Forrest	28.02	195	P	P	04 49 34.5	+0.9
	baz=28,SNR=11						
STKA	Stephens Creek	28.58	170	P	P	04 49 38.0	-0.5
	4.1nm,0.5s,baz=333,slow=6.5,SNR=10						
STKA				LR	LR	05 00 59.6	
	comp=Z,110nm,19.1s,baz=23,slow=36						
STKA	Stephens Creek	28.58	170	*e*P	P	04 49 38.6	0.0
STKA	Stephens Creek	28.58	170	P	P	04 49 40.2	+1.6
	baz=29,SNR=6.6						
BBOO	Buckleboo	29.02	180	*e*P	P	04 49 41.0	-1.5
	76nm,1.5s						
BBOO	Buckleboo	29.02	180	P	P	04 49 43.3	+0.8
	baz=29,SNR=6.7						
HTT	Hallett	29.77	175	P	P	04 49 51.9	+2.7
	baz=30,SNR=3.2						
ARPS	Mount Arapiles	33.41	171	P	P	04 50 23.3	+2.3
	baz=34,SNR=5.4						
JNU	Nakatsue	36.88	353	P	P	04 50 49.9	-1.0
	11nm,1.0s,baz=254,slow=2.7,SNR=6.7						
JNU	Nakatsue	36.88	353	*e*P	P	04 50 49.9	-1.0
	80nm,1.9s						
WHN	Wuhan	39.78	330	P	P	04 51 16.6	+1.3
MJAR	Matsushiro Arr	40.02	3	P	P	04 51 15.9	-1.3
	1.4nm,0.7s,baz=183,slow=6.6,SNR=8.9						
MJAR				LR	LR	05 05 14.8	
	comp=Z,21nm,19.5s,baz=225,slow=32						
MAJO	Matsushiro	40.02	3	*e*P	P	04 51 15.9	-1.3
KS15	Wonju Array Si	41.56	350	*e*P	P	04 51 29.5	-0.3
KSRS	Korea Array	41.56	350	P	P	04 51 29.5	-0.3
	2.0nm,0.7s,baz=170,slow=6.8,SNR=7.2						
CM31	Chiang Mai Arr	42.58	302	*e*P	P	04 51 39.0	+0.4
	9.3nm,1.0s						
CMAR	Chiang Mai Arr	42.58	302	P	P	04 51 39.0	+0.4
	2.4nm,0.7s,baz=128,slow=6.7,SNR=9.7						
KMI	Kunming	43.11	313	P	P	04 51 45.1	+2.1
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
XAN	Xi'an	45.34	328	P	P	04 52 00.0	-0.4
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,62nm,3.6s						
USRK	Ussuriysk Ar.	47.75	356	P	P	04 52 18.1	-0.9
	comp=Z,4.3nm,0.7s,baz=173,slow=6.1,SNR=10						
ASAJ	Asahikawa	47.91	6	P	P	04 52 19.2	-1.0
	comp=Z,4.5nm,0.6s,baz=235,slow=10,SNR=7.8						
HHC	Hu-ho-hao-te	49.59	336	P	P	04 52 36.0	+2.7
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,64nm,6.0s						
LZH	Lanzhou	49.64	326	*e*P	P	04 52 35.1	+1.2
LZH				pP	pP	04 52 41.5	-10
LZH				sP	sP	04 52 55.8	-4.1
LZH				*e*PP	PP	04 54 31.3	+2.3
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,46nm,6.1s						
LZH				LR	LR		
	comp=N,75nm,14.7s						
LZH				LR	LR		
	comp=E,81nm,15.1s						
LZH				LR	LR		
	comp=Z,130nm,17.5s						
GTA	Gaotai	54.25	326	*e*P	P	04 53 08.8	+0.8
GTA				pP	pP	04 53 27.6	+1.3
GTA				sP	sP	04 53 36.3	+1.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,93nm,7.1s						
GTA				LR	LR		
	comp=N,61nm,14.6s						
GTA				LR	LR		
	comp=E,73nm,14.6s						
GTA				LR	LR		
	comp=Z,78nm,15.9s						
SONA0	Songino Array	57.44	337	*e*P	P	04 53 30.6	-0.2
SONM	Songino Array	57.44	337	P	P	04 53 30.6	-0.2
	comp=Z,0.7nm,0.6s,baz=158,slow=9.0,SNR=4.0						
TLY	Talaya	61.60	338	LR	LR	05 21 57.4	
	comp=Z,39nm,19.6s,baz=179,slow=37						
WMQ	Urumqi	64.08	323	*e*P	P	04 54 17.8	+2.0
WMQ				pP	pP	04 54 32.0	-2.5
WMQ				sP	sP	04 54 40.1	-2.4
WMQ				S	S	05 02 22.5	-25
WMQ				ScS	ScS	05 04 05.0	+1.4
WMQ	Urumqi	64.08	323	SS	SS	05 06 48.1	-9.4
WMQ				pmax	pmax		
	comp=Z,85nm,0.7s						
WMQ				LR	LR		
	comp=N,500nm,28.7s						
WMQ				LR	LR		
	comp=E,280nm,28.9s						
WMQ				LR	LR		
	comp=Z,85nm,28.7s						
MK32	Makanchi Array	68.89	324	*e*P	P	04 54 46.7	+0.3
MKAR	Makanchi Array	68.89	324	P	P	04 54 46.7	+0.3
	comp=Z,2.6nm,0.7s,baz=112,slow=7.9,SNR=28						
MAKZ	Makanchi	69.08	323	*e*P	P	04 54 47.3	-0.3
	comp=Z,4.9nm,0.6s						
ZAA0	Zalesovo Array	71.39	331	*e*P	P	04 55 00.6	-1.0
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	71.39	331	P	P	04 54 59.9	-1.7
	comp=Z,3.4nm,0.7s,baz=103,slow=6.6,SNR=10						
ZAA1	Zalesovo Array	71.39	331	*e*P	P	04 54 59.9	-1.7
KURK	Kurchatov	72.93	326	*e*P	P	04 55 10.7	-0.1
	comp=Z,2.8nm,0.9s						
VNDA	Vanda	75.12	174	P	P	04 55 23.3	+0.2
	comp=Z,1.5nm,0.6s,baz=327,slow=6.6,SNR=24						
VNDA	Vanda	75.12	174	*e*P	P	04 55 23.4	+0.4
	comp=Z,5.4nm,1.4s						
MAW	Mawson	80.26	202	P	P	04 55 52.8	+1.0
	comp=Z,2.9nm,0.7s,baz=95,slow=6.8,SNR=12						
MAW				LR	LR	05 28 49.0	
	comp=Z,55nm,19.0s,baz=34,slow=34						
MAW	Mawson	80.26	202	*e*P	P	04 55 52.8	+1.0
	comp=Z,4.5nm,1.8s						
MAW	Mawson	80.26	202	P	P	04 55 53.1	+1.3
	baz=80,SNR=7.5						
ABKAR	Akbulak array	83.68	320	*e*P	P	04 56 09.6	-0.5
	comp=Z,4.4nm,1.4s						
MLY	Manley	86.28	24	*e*P	P	04 56 23.3	+0.4
	comp=Z,3.3nm,0.7s						
QSPA	South Pole Qui	86.32	180	*e*P	P	04 56 23.0	-0.2
	comp=Z,7.7nm,0.6s						
ILAR	Eielson Array	87.80	25	P	P	04 56 28.7	-1.5
	comp=Z,1.0nm,0.6s,baz=269,slow=4.2,SNR=14						
ILB	Eielson Array	87.80	25	*e*P	P	04 56 28.7	-1.5
	comp=Z,2.3nm,0.5s						
PCA	Pinnacle	90.01	30	*e*P	P	04 56 42.4	+1.6
	comp=Z,20nm,0.4s						
ARA0	ARCESS Array S	100.47	340	*e*Pdif	Pdif	04 57 24.4	-3.8
ARCES	ARCESS Array B	100.47	340	P	Pdif	04 57 24.4	-3.8
	comp=Z,2.8nm,1.1s,baz=71,slow=7.8,SNR=4.7						
TORD	Torodi Ar. Bea	133.88	285	PKP	PKPdf	05 02 58.3	-0.9
	comp=Z,0.4nm,0.6s,baz=83,slow=1.4,SNR=3.8						
TOA1	Torodi Ar. Sit	133.88	285	*e*PKPdf	PKPdf	05 02 58.3	-0.9
DBIC	Dimbokro	140.89	276	PKP	PKPdf	05 03 10.8	-1.3
	comp=Z,1.8nm,0.7s,baz=113,slow=7.7,SNR=2.2						
CPUP	Villa Florida	147.54	157	PKPbc	PKPbc	05 03 27.1	+1.1
	comp=Z,8.7nm,0.8s,baz=224,slow=2.2,SNR=17						
LPAZ	La Paz	149.01	130	PKPbc	PKiKP	05 03 32.7	+0.5
	comp=Z,5.5nm,0.8s,baz=248,slow=1.1,SNR=4.8						
LPAZ	La Paz	149.01	130	*e*PKPbc	PKiKP	05 03 33.1	+0.9

IDC 14 05:16:08.0±2.4, 5°.19S×132°.14E, h0^{km}, mb3.7/2, mb1 4.0/4, mb1mx3.5/33, mbtmp3.8/4, ML4.0/2, MS3.3/1, Ms1 3.2/1, ms1mx2.5/24, Error ellipse: s-maj=188.2km s-min=25.1km az=70.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.82	172	Pn	Pn	05 19 37.5	-1.6
	0.6nm,0.3s,baz=349,slow=14,SNR=42						
WRA				Sn	Sn	05 22 11.7	-12
	0.3nm,0.3s,baz=345,slow=25,SNR=3.4						
ASAR	Alice Springs	18.45	175	P	P	05 20 25.9	+0.5
	0.6nm,0.3s,baz=359,slow=11,SNR=23						
ASAR				S	Sn	05 23 38.7	-14
	0.1nm,0.3s,baz=350,slow=26,SNR=3.8						
STKA	Stephens Creek	27.99	163	P	P	05 22 00.6	0.0
	0.7nm,0.4s,baz=353,slow=8.1,SNR=2.5						
STKA				LR	LR	05 32 48.0	
	comp=Z,57nm,19.2s,baz=205,slow=36						
MKAR	Makanchi Array	67.92	325	P	P	05 27 08.6	0.0
	0.1nm,0.4s,baz=117,slow=7.7,SNR=2.8						

TRN 14 05:23:26.4, 17°.13N×62°.46W, h151^{km}, MD3.7, 2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEV	Hard Times	0.11	274	*e*P	Pn	05 23 48.0	+1.4
NEV				*e*S	Sn	05 24 03.2	+1.2
NVRH	Round Hill, Ne	0.15	292	*e*P	Pn	05 23 48.5	+1.8
NVRH				*e*S	Sn	05 24 04.3	+2.1
NVBH	Bath Hotel, Ne	0.15	266	*e*P	Pn	05 23 48.4	+1.7
NVBH				*e*S	Sn	05 24 04.1	+2.0
SKI	Saint Kitts	0.34	307	*e*P	Pn	05 23 47.2	+0.1
SKI				*e*S	Sn	05 24 03.5	+0.4
BSK	Brimstone Hill	0.42	301	*e*P	Pn	05 23 49.1	+1.6
BSK				*e*S	Sn	05 24 04.8	+1.2
SKDB	Saint Kitts 2	0.43	308	*e*P	Pn	05 23 48.9	+1.4
SKDB				*e*S	Sn	05 24 04.3	+0.7
MLYT	Lee's Yard	0.48	148	⇓*i*P	Pn	05 23 48.3	+0.5
MLYT				*e*S	Sn	05 24 04.9	+0.8
BPA	Boggy Peak	0.58	98	*e*P	Pn	05 23 50.0	+1.7
BPA				*e*S	Sn	05 24 05.4	+0.4
SEUS	St. Eustatius	0.62	306	*e*P	Pn	05 23 48.9	+0.5
SEUS				*e*S	Sn	05 24 06.4	+1.1
ANWB	Willy Bob	0.84	50	*e*P	Pn	05 23 51.5	+1.6
ANWB				*e*S	Sn	05 24 08.8	+0.9
SABA	Saba	0.90	303	*e*P	Pn	05 23 50.6	+0.2
SABA				*e*S	Sn	05 24 09.8	+1.0
SMRT	St. Maarten	1.09	327	*e*P	Pn	05 23 52.3	+0.3
SMRT				*e*S	Sn	05 24 09.4	-2.3
ABD	La Joyeuse, An	1.13	125	⇓*e*P	Pn	05 23 53.5	+1.0
CBE	Ff, Capester	1.33	142	*e*P	Pn	05 23 55.6	+1.3
TDBA	Terre de Bas,	1.50	148	*e*P	Pn	05 23 57.0	+1.0
MAGL	Barre de l'ile	1.63	136	*e*P	Pn	05 23 58.8	+1.4
MDPO	Dominica; Chan	1.82	148	*e*P	Pn	05 24 00.3	+0.8
MDPO				*e*S	Sn	05 24 25.3	+0.3
DWS	Wesley	1.90	145	*e*P	Pn	05 24 02.1	+1.7
DWS				*e*S	Sn	05 24 26.5	-0.2
MDN	Morne-Daniel	2.07	150	*e*P	Pn	05 24 04.2	+1.8
DLPL	La Plaine	2.13	147	*e*P	Pn	05 24 03.9	+0.7
DLPL				*e*S	Sn	05 24 32.1	+0.6
PCM	Pelee Case Pet	2.59	152	*e*P	Pn	05 24 10.8	+2.0
CXM	Morne La Croix	2.62	152	*e*P	Pn	05 24 12.5	+3.4
BAMF	Morne Balai	2.62	151	*e*P	Pn	05 24 12.4	+3.2
GBMF	Grand Be	2.63	152	*e*P	Pn	05 24 12.9	+3.6
PML	Morne Lenard	2.64	152	*e*P	Pn	05 24 13.4	+4.2
FDF	Fort de France	2.69	152	*e*P	Pn	05 24 10.7	+0.7
FDF				*e*S	Sn	05 24 43.8	+0.1
ILAM	Ilet Lapin Mar	2.79	147	*e*P	Pn	05 24 12.7	+1.5
TRMF	Trois Ilets	2.91	152	*e*P	Pn	05 24 16.8	+4.1
MPOM	Morne Pois Mar	3.08	150	*e*P	Pn	05 24 16.4	+1.5
SLBI	Saint Lucia, B	3.40	155	*e*S	Sn	05 24 58.5	-1.2
SLW	Petit Monier	3.42	154	*e*S	Sn	05 24 59.6	-0.6
SLB	Belfond	3.56	157	*e*S	Sn	05 25 02.0	-1.3
MCLT	Moule a Chique	3.70	157	*e*P	Pn	05 24 24.4	+1.6
MCLT				*e*S	Sn	05 25 06.1	-0.5
SSV	Crater Summit	3.97	162	*e*P	Pn	05 24 27.3	+0.9
SVV	Soufriere Volc	3.97	162	*e*P	Pn	05 24 26.8	+0.4
SVV	Soufriere Volc	3.97	162	*e*S	Sn	05 25 12.6	-0.4
SVB	Belmont	4.01	163	*e*P	Pn	05 24 27.7	+0.8
SVB	Belmont	4.01	163	*e*S	Sn	05 25 13.0	-0.8
SVCV	St. Vincent, C	4.04	162	*e*P	Pn	05 24 28.7	+1.5
SVCV	St. Vincent, C	4.04	162	*e*S	Sn	05 25 13.8	-0.7
FCV	Fort Charlotte	4.12	163	*e*P	Pn	05 24 28.3	0.0
FCV	Fort Charlotte	4.12	163	*e*S	Sn	05 25 14.6	-1.8
BBGH	Gun Hill	4.85	144	*e*P	Pn	05 24 38.5	+0.6
BBGH	Gun Hill	4.85	144	*e*S	Sn	05 25 31.5	-2.1
BBSP	Saint Philip	4.94	144	*e*P	Pn	05 24 39.5	+0.5
BBSP	Saint Philip	4.94	144	*e*S	Sn	05 25 33.4	-2.3

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*ISCJB **14** 05:24:20.6±0.7, 32°.25N±0°.05×115°.31W±0°.04, h10^{km}, Error ellipse: s-maj=7.1km s-min=4.2km az=163.7*

*PAS **14** 05:24:20.8±0.0, 32°.19N×115°.31W, h21^{km}*

*ECX **14** 05:24:22.8±0.6, 32°.26N×115°.34W, h6^{km}, MD2.3, ML2.5*

*NEIC **14** 05:24:22.8±0.0, 32°.26N×115°.34W, h6^{km}, MD2.5(ECX), ML2.4(PAS), After ECX.*

ISC 14 05:24:20.5±1.1, 32°.20N±0°.06×115°.32W±0°.03, h10^{km}, n13, σ1^{s}12/20, 1C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.22	3	*e*P	Pg	05 24 26.0	+1.0
CPBX				*e*S	Sg	05 24 28.6	+0.5
CPBX				IAML		05 24 35.2	
	comp=E,4µm,0.2s						
CPBX				⇑*e*		05 24 35.2	
RMX	La Rumorosa	0.76	302	*e*P	Pg	05 24 34.3	-0.8
RMX				*e*S	Sg	05 24 43.1	-2.0
RMX				IAML		05 24 43.2	
	comp=E,207nm,0.1s						
RMX				⇓*e*		05 24 43.2	
IKP	In-Ko-Pah, Jac	0.81	304	*e*P	Pg	05 24 36.0	0.0
GLA	Glamis	0.95	26	*e*Pg	Pg	05 24 37.8	-0.9
GLA				*e*Sg	Sg	05 24 50.2	-0.8
CBX	Cerro Bola	1.15	276	*e*P	Pb	05 24 42.7	+0.2
CBX				*e*S	Sg	05 24 57.8	+0.4
CBX				IAML		05 25 01.4	
	comp=E,95nm,0.2s						
SPIG	San Pedro Mart	1.16	186	*e*P	Pb	05 24 43.5	+0.7
BAR	Barrett	1.24	293	*e*Pg	Pb	05 24 43.7	-0.3
BAR				*e*Sg	Sb	05 24 59.5	-0.6
113A	Mohawk Valley,	1.43	66	*e*Pn	Pn	05 24 45.6	-0.8
113A				*e*Sn	Sn	05 25 03.3	-1.9
EML	El Monte Cty P	1.46	299	*e*P	Pn	05 24 47.4	+0.4
CPE	Camp Elliot	1.66	295	*e*Pn	Pn	05 24 50.6	+1.0
CPE				*e*Sn	Sn	05 25 12.2	+1.3
Y12C	Blythe	1.69	23	*e*Pn	Pn	05 24 52.0	+2.0
PFO	Pinyon Flats O	1.71	326	*e*Pn	Pn	05 24 50.0	-0.4
Y14A	Wickenburg	2.60	48	*e*Pn	Pb	05 25 08.4	+1.1

GUC 14 05:32:48.3±0.5, 23°.07S×67°.02W, h270^{km}±13^{km}, ML3.8, 6C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	2.26	266	⇓*i*P	Pn	05 33 36.8	+1.8
PB15				*i* S	S	05 34 14.2	+2.3
PB06	IPOC Station P	2.38	278	⇓*i*P	Pn	05 33 38.3	+2.3
PB06				*i* S	S	05 34 16.2	+2.4
PB06				IAML		05 34 19.9	
	comp=N,77nm,0.2s						
PB09	IPOC Station P	2.41	301	⇑*i*P	Pn	05 33 38.9	+2.6
PB03	IPOC Station P	2.72	291	⇑*i*P	Pn	05 33 41.6	+2.3
PB03				*i* S	S	05 34 22.3	+2.4
PB03				IAML		05 34 25.9	
	comp=E,56nm,0.1s						
PB05	IPOC Station P	2.94	274	⇑*i*P	Pn	05 33 44.0	+2.5
PB05				*i* S	S	05 34 26.6	+2.8
PB07	IPOC Station P	2.97	296	⇑*i*P	Pn	05 33 44.6	+2.6
PB07				*i* S	S	05 34 26.9	+2.4
PB07				IAML		05 34 28.7	
	comp=E,40nm,0.1s						
PB04	IPOC Station P	2.98	284	⇓*i*P	Pn	05 33 44.8	+2.8
PB04				IAML		05 34 32.0	
	comp=N,60nm,0.7s						
PB01	IPOC Station P	3.05	311	⇑*i*P	Pn	05 33 44.9	+2.2
PB01				*i* S	S	05 34 28.3	+2.4
PB01				IAML		05 34 31.1	
	comp=N,36nm,0.2s						
GO02	Mina Guanaco	3.14	228	*e*P	Pn	05 33 44.2	+0.4
GO02				*i* S	S	05 34 28.0	+0.1
GO02				IAML		05 34 30.7	
	comp=N,118nm,0.2s						
PB02	IPOC Station P	3.18	303	*e*P	Pn	05 33 46.5	+2.5
PB02				*i* S	S	05 34 30.8	+2.4
PB14	IPOC Station P	3.47	243	*e*P	Pn	05 33 49.2	+1.9
PB14				IAML		05 34 37.0	
	comp=E,59nm,0.5s						
PB08	IPOC Station P	3.52	325	⇑*i*P	Pn	05 33 51.0	+2.9
GO01	Chusmiza	3.94	329	*e*P	Pn	05 33 55.7	+2.8
GO01				*e*S	S	05 34 47.9	+3.6
GO01				IAML		05 34 53.9	
	comp=E,72nm,0.1s						
PB11	IPOC Station P	4.10	323	⇓*i*P	Pn	05 33 56.3	+1.8
PB11				*i* S	S	05 34 49.4	+2.3
PB11				IAML		05 34 52.0	
	comp=E,41nm,0.2s						

MEX 14 05:46:33.5±0.3, 15°.90N×98°.64W, h11^{km}±7^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.66	2	*e*P	Pn	05 46 58.9	-3.7
TLIG				*e*S	Sn	05 47 19.4	-4.6
CAIG	El Cayaco	1.93	306	*i* P	Pn	05 47 03.2	-3.1
CAIG				*i* S	Sn	05 47 25.6	-5.1
MEIG	Mezcala	2.22	335	*i* P	Pn	05 47 07.9	-2.5
MEIG				*i* S	Sn	05 47 33.9	-4.1

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*IDC **14** 05:47:55.0±1.7, 61°.46N×141°.28W, h0^{km}, mb3.6/2, mb1 3.6/5, mb1mx3.3/42, mbtmp3.4/5, ML2.9/3, MS2.3/1, Ms1 2.4/1, ms1mx2.1/34, Error ellipse: s-maj=41.3km s-min=11.7km az=37.0*

*PGC **14** 05:47:57.5, 61°.57N×141°.07W, h4^{km}, ML3.4/11, 210km Wnw of Haines Jct., Yt Southern Alaska*

*NEIC **14** 05:47:57.0±0.0, 61°.55N×141°.09W, h1^{km}, ML3.3(AEIC), After AEIC.*

ISC 14 05:47:56.8±1.0, 61°.57N±0°.02×141°.05W±0°.02, h7^{km}±8^{km}, n96, σ1^{s}61/128, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	24	P	Pg	05 48 01.8	+0.3
YUK2				S	Sg	05 48 05.4	+0.7
YUK3	Moose Creek	0.35	54	P	Pg	05 48 03.9	+0.2
YUK3				S	Sg	05 48 08.5	+0.3
YUK1	Sand Pete Hill	0.63	23	P	Pg	05 48 08.8	-0.2
YUK1				S	Sg	05 48 17.1	-0.2
PTPK	Patty Peak	0.79	241	P	Pg	05 48 11.4	-0.5
PTPK				S	Sg	05 48 21.7	-0.5
BALM	Baldy	0.83	230	*e*Pg	Pg	05 48 11.8	-0.9
BALM				*e*Sg	Sg	05 48 22.7	-0.7
BALM	Baldy	0.83	230	P	Pg	05 48 11.7	-0.9
BALM				S	Sg	05 48 22.4	-1.0
BVCY	Beaver Creek	0.85	6	P	Pg	05 48 12.9	-0.2
BVCY				Sg	Sn	05 48 29.5	+1.7
KIAG	Kiagna River	0.91	225	P	Pg	05 48 13.1	-1.2
KIAG				S	Sg	05 48 25.4	-0.7
TABL	Table Mountain	1.14	182	P	Pg	05 48 17.8	-0.9
TABL				S	Sg	05 48 33.3	-0.1
YUK4	Talbot Arm	1.18	100	P	Pg	05 48 19.2	-0.2
YUK4				S	Sg	05 48 35.8	+1.2
YUK6	Outpost Mounta	1.44	115	Pn	Pn	05 48 23.4	-0.1
YUK6				Sg	Sb	05 48 43.9	+1.2
SAMH	Samovar Hills	1.46	175	Pn	Pn	05 48 24.0	+0.5
SAMH				Sg	Sn	05 48 44.1	+1.3
MESA	MESA	1.47	198	Pn	Pn	05 48 24.4	+0.6
MESA				Sg	Sn	05 48 44.8	+1.5
CHX	Chaix Hills	1.52	181	*e*Pn	Pn	05 48 24.5	+0.1
PCA	Pinnacle	1.53	165	*e*Pn	Pn	05 48 25.6	+1.0
PCA				*e*Sn	Sn	05 48 46.5	+1.8
PCA	Pinnacle	1.53	165	Pn	Pn	05 48 25.3	+0.7
PCA				Sg	Sn	05 48 46.6	+1.8
BCA3	Beaver Creek A	1.54	347	*e*Pn	Pn	05 48 24.9	+0.2
YUK5	Granite Creek	1.60	105	Pn	Pn	05 48 25.9	+0.3
YUK5				Sg	Sn	05 48 47.0	+0.5
SNH	Sunshine Point	1.65	213	*e*Pn	Pn	05 48 27.0	+0.9
YUK7	Dusty Glacier	1.76	125	Pn	Pn	05 48 29.4	+1.5
YUK7				Sg	Sb	05 48 53.0	+1.3
BCPM	Bancas Point	1.77	156	*e*Pn	Pb	05 48 29.6	+0.1
BCPM				*e*Sn	Sn	05 48 51.9	+1.5
MENT	Mentasta	1.85	319	*e*Pn	Pn	05 48 30.7	+1.8
MENT				*e*Sn	Sb	05 48 56.0	+1.7
HYT	Haines Junctio	1.87	112	*e*Pn	Pn	05 48 30.2	+0.9
HYT	Haines Junctio	1.87	112	Pn	Pn	05 48 30.1	+0.9
HYT				Sg	Sb	05 48 55.8	+0.8
HMT	Hamilton	2.00	233	*e*Pn	Pb	05 48 33.8	+0.3
PNL	Peninsula	2.08	156	*e*Pn	Pn	05 48 33.7	+1.7
PNL	Peninsula	2.08	156	Pn	Pn	05 48 33.5	+1.5
PNL				Sg	Sg	05 49 02.4	-1.1
YKU2	Yakutat	2.18	161	*e*Pn	Pb	05 48 36.8	+0.4
PAX	Paxson	2.50	306	*e*Pn	Pn	05 48 40.5	+2.7
PAX	Paxson	2.50	306	Pn	Pn	05 48 40.3	+2.5
PAX				Sg	Sb	05 49 12.6	-0.3
DOT	Dot Lake	2.51	328	*e*Pn	Pn	05 48 38.4	+0.5
DOT	Dot Lake	2.51	328	Pn	Pn	05 48 38.0	+0.1
DOT				Sg	Sb	05 49 14.5	+1.4
EYAK	Cordova Ski Ar	2.51	248	*e*Pn	Pb	05 48 40.6	-1.4
DAWY	Dawson	2.61	16	*e*Pn	Pn	05 48 40.2	+0.8
DAWY	Dawson	2.61	16	Pn	Pn	05 48 39.9	+0.5
DAWY				Sg	Sb	05 49 17.5	+1.3
JPK	Jack Peak	2.73	261	*e*Pn	Pn	05 48 43.2	+2.3
FID	Port Fidalgo	2.76	255	*e*Pn	Pb	05 48 44.7	-1.7
FID				*e*Pn	Pb	05 48 44.7	-1.7
SCRK	Sand Creek	2.77	332	*e*Pn	Pn	05 48 41.8	+0.2
RIDG	Independent Ri	2.79	323	*e*Pn	Pn	05 48 42.6	+0.7
SCM	Sheep Creek Mo	3.00	278	*e*Pn	Pn	05 48 47.8	+3.0
GLI	Glacier Island	3.01	259	*e*Pn	Pn	05 48 46.9	+2.1
PLBC	Pleasant Camp	3.14	130	Pn	Pn	05 48 48.1	+1.5
PLBC				Pg	Pb	05 48 53.7	+0.9
PLBC				Sg	Sg	05 49 35.3	-2.3
EGAK	Eagle	3.22	359	*e*Pn	Pn	05 48 49.0	+1.3
SKAG	Skagway	3.53	124	*e*Pn	Pn	05 48 53.1	+1.1
KNK	Knik Glacier	3.56	271	*e*Pn	Pn	05 48 52.8	+0.4
PMR	Palmer	3.87	274	*e*Pn	Pn	05 48 59.0	+2.5
HDA	Harding Lake	3.92	319	*e*Pn	Pn	05 48 57.7	+0.4
RND	Reindeer	4.06	300	*e*Pn	Pn	05 49 01.9	+2.6
ILAR	Eielson Array	4.16	323	Pn	Pn	05 48 59.5	-1.1
	0.9nm,0.3s,baz=144,slow=13,SNR=26						
ILAR				Lg	Lg	05 50 05.2	
	7.7nm,0.3s,baz=137,slow=31,SNR=9.7						
ILAR				LR	LR	05 50 57.0	
	comp=Z,40nm,21.3s,baz=211,slow=43						
ILB	Eielson Array	4.16	323	*e*Pn	Pn	05 49 00.1	-0.5
ILB				*e*Lg	Lg	05 50 05.2	
RC01	Rabbit Creek A	4.21	267	*e*Pn	Pn	05 49 05.0	+3.6
MCK	McKinley	4.23	304	*e*Pn	Pn	05 49 05.9	+4.2
BESE	Bessie Mountai	4.32	131	*e*Pn	Pn	05 49 03.8	+1.0
BESE	Bessie Mountai	4.32	131	Pn	Pn	05 49 03.8	+1.0
BESE				Sg	Sg	05 50 13.0	-2.3
WRH	Wood River Hil	4.33	315	*e*Pn	Pn	05 49 06.2	+3.2
CCB	Clear Creek Bu	4.35	318	*e*Pn	Pn	05 49 03.5	+0.3
SEW	Seward	4.37	254	*e*Pn	Pn	05 49 04.1	+0.7
PRP	Porcupine Dome	4.44	335	*e*Pn	Pn	05 49 05.6	+1.1
COLA	College	4.52	320	*e*Pn	Pn	05 49 05.9	+0.4
BWN	Browne	4.65	308	*e*Pn	Pn	05 49 10.0	+2.7
MDM	Murphy Dome	4.70	319	*e*Sn	Sg	05 50 26.7	-0.8
JIS	Juneau Island	4.71	132	*e*Pn	Pn	05 49 09.0	+0.9
KTH	Kantishna Hill	4.98	298	*e*Pn	Pn	05 49 14.9	+3.0
BRLK	Bradley Lake	5.17	254	*e*Pn	Pn	05 49 16.2	+1.7
EPYK	Eagle Plains	5.18	20	*e*Pn	Pn	05 49 15.6	+1.0
BPAW	Bear Paw Mtn.	5.21	303	*e*Pn	Pn	05 49 17.8	+2.7

FYU	Fort Yukon	5.34	342	ePn	Pn	05 49 18.3	+1.6
PPLA	Purkeypile	5.38	289	ePn	Pn	05 49 18.2	+0.7
SIT	Sitka	5.39	145	ePn	Pn	05 49 18.9	+1.4
CNPM	China Poot	5.43	252	ePn	Pn	05 49 18.2	+0.2
MLY	Manley	5.58	313	ePn	Pn	05 49 21.2	+1.2
BM3	Burnt Mountain	6.07	347	ePn	Pn	05 49 28.2	+1.4
DLBC	Dease Lake	6.36	115	Pn	Pn	05 49 31.1	+0.3
	0.1nm,0.3s,baz=312,slow=12,SNR=2.2						
DLBC				Pg	Pb	05 49 44.6	-3.1
	0.2nm,0.3s,baz=294,slow=18,SNR=3.4						
DLBC				Lg	Lg	05 51 11.8	
	0.8nm,0.3s,baz=263,slow=18,SNR=4.4						
DLBC	Dease Lake	6.36	115	ePn	Pn	05 49 31.8	+0.9
DLBC				eLg	Lg	05 51 11.8	
DLBC	Dease Lake	6.36	115	Pg	Pb	05 49 50.4	+2.7
DLBC				Sg	Sg	05 51 18.4	-2.3
WRAK	Wrangell Islan	6.85	135	ePn	Pn	05 49 38.8	+1.3
COLD	Coldfoot	6.92	329	ePn	Pn	05 49 40.1	+1.7
COLD	Coldfoot	6.92	329	Pn	Pn	05 49 38.8	+0.4
KDAK	Kodiak Island	6.97	242	ePn	Pn	05 49 41.0	+1.9
SVW2	Sparrevohn	7.01	272	ePn	Pn	05 49 41.6	+1.9
TTA	Tatalina	7.12	288	ePn	Pn	05 49 42.1	+0.9
TT01	Tatalina	7.12	287	ePn	Pn	05 49 41.9	+0.7
IM3	Indian Mountai	7.15	314	ePn	Pn	05 49 42.9	+1.3
INK	Inuvik	7.47	22	Lg	Lg	05 51 54.1	
	0.4nm,0.3s,baz=229,slow=13,SNR=2.1						
INK	Inuvik	7.47	22	ePn	Pn	05 49 46.5	+0.6
INK	Inuvik	7.47	22	Pn	Pn	05 49 44.3	-1.6
INK				Sn	Sn	05 51 06.2	-4.6
OHAK	Old Harbor	7.62	240	ePn	Pn	05 49 49.2	+1.3
TOLK	Toolik Lake Re	7.95	337	ePn	Pn	05 49 55.3	+2.8
SII	Sitkinak Islan	8.42	239	ePn	Pn	05 50 00.1	+1.0
FNBB	Fort Nelson	9.36	99	Pn	Pn	05 50 11.7	-0.3
FNBB				Sn	Sn	05 51 55.3	-2.0
DHRN	Dharma Camp	10.79	50	Pn	Pn	05 50 30.9	-0.5
DHRN				Sn	Sn	05 52 26.3	-5.9
YKA	Yellowknife Ar	12.41	74	Pn	Pn	05 50 52.7	-0.8
	0.1nm,0.3s,baz=270,slow=13,SNR=3.6						
YKB5	Yellowknife Ar	12.41	74	ePn	Pn	05 50 52.7	-0.8
PD31	Pinedale Array	26.55	121	eP	P	05 53 35.0	-0.1
PDAR	Pinedale Array	26.55	121	P	P	05 53 35.0	-0.1
	0.3nm,0.6s,baz=316,slow=6.3,SNR=2.9						
AKASG	Malin Array Be	67.81	7	P	P	05 58 55.6	+0.9
	0.7nm,0.4s,baz=357,slow=5.8,SNR=4.1						

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*SOME **14** 06:08:27.5, 39°.63N×77°.18E, h10^{km}*

*KRNET **14** 06:08:30.7±0.1, 39°.69N×76°.92E, mb2.9*

*NNC **14** 06:08:31.7±1.8, 39°.83N×77°.42E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=12.4km s-min=10.6km az=18.0*

ISC 14 06:08:33.1±2.1**, 39°.71N**±0°.09×**77°.08E**±0°.04**, h10^{km}, n42, σ2^s.15**/68**, 12C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	1.91	335	⇑iP	Pn	06 09 05.7	-0.2
	baz=38						
NRN				⇑iS	Sb	06 09 31.2	-0.9
	baz=38						
KDJ	Kajisay	2.42	2	⇓iP	Pb	06 09 13.8	-3.0
	baz=5.0						
KDJ				⇓iS	Sb	06 09 46.0	-0.7
	baz=5.0						
ULHL	Ulahol	2.61	346	⇓iP	Pn	06 09 16.6	+1.1
	baz=49						
ULHL				⇓iS	Sb	06 09 49.9	-2.3
	baz=49						
KZA	Kyzart	2.74	330	⇓iP	Pn	06 09 17.9	+0.4
	baz=33						
KZA				⇓iS	Sn	06 09 52.0	+1.1
	baz=33						
BOOM	Boomskoye usch	2.91	343	⇑iP	Pn	06 09 20.3	+0.8
	baz=46						
BOOM				⇑iS	Sn	06 09 57.1	+2.5
	baz=46						
ARLS	Aral	3.00	317	⇓iP	Pn	06 09 20.4	-0.4
	baz=19						
ARLS				⇓iS	Sn	06 09 57.5	+0.6
	baz=19						
UCH	Uchtor	3.18	323	⇑eP	Pn	06 09 23.7	+0.2
	baz=25						
UCH				⇑iS	Sn	06 10 02.1	+0.4
	baz=25						
IZV	Izvestkoviy	3.34	354	Pg	Pb	06 09 30.9	-1.6
	3.7nm,0.2s						
IZV				Lg	Lg	06 10 16.3	
	7.6nm,0.5s						
IZV	Izvestkoviy	3.34	354	eP	Pb	06 09 30.9	-1.6
	3.7nm,0.2s						
IZV				eS	Sb	06 10 16.3	+3.1
	7.6nm,0.5s						
KBK	Karagaybulak	3.35	332	⇓iP	Pn	06 09 26.2	+0.5
	baz=34						
KBK				⇓iS	Sn	06 10 06.5	+0.9
	baz=34						
TKM2	Tokmak 2	3.40	341	⇑Pn	Pn	06 09 27.5	+1.2
	1.6nm,0.3s						
TKM2				⇓Lg	Lg	06 10 18.7	
	5.5nm,0.6s						
TKM2	Tokmak 2	3.40	341	⇑iP	Pn	06 09 27.3	+1.0
	baz=43						
TKM2				⇑iS	Sn	06 10 08.2	+1.5
	baz=43						
KST	Kastek	3.43	346	Pg	Pb	06 09 33.7	-0.3
	4.7nm,0.6s						
KST				Lg	Lg	06 10 20.8	
	9.9nm,0.3s						
KST	Kastek	3.43	346	eP	Pb	06 09 33.4	-0.6
	5.0nm,0.6s						
KST				eS	Sg	06 10 20.8	-2.5
	11nm,0.3s						
MDOK	Medeo	3.45	360	Pg	Pb	06 09 32.9	-1.4
	5.6nm,0.3s						
MDOK				Lg	Lg	06 10 19.2	
	6.7nm,0.5s						
MDOK	Medeo	3.45	360	eP	Pb	06 09 33.0	-1.4
	5.6nm,0.4s						
MDOK				eS	Sb	06 10 19.2	+2.9
	6.7nm,0.5s						
SATY	Saty	3.49	16	Pg	Pb	06 09 32.3	-2.7
	9.4nm,0.3s						
SATY				Lg	Lg	06 10 18.2	
	5.1nm,0.3s						
SATY	Saty	3.49	16	eP	Pb	06 09 32.3	-2.7
	9.4nm,0.3s						
SATY				eS	Sb	06 10 18.2	+0.7
	5.1nm,0.3s						
ARSB	Arslanbob	3.51	299	⇓eP	Pn	06 09 28.0	+0.1
	baz=0.0						
ARSB				⇓eS	Sn	06 10 09.7	+0.2
	baz=0.0						
AAK	Ala-Archa	3.51	327	⇓Pn	Pb	06 09 34.9	-0.5
	1.9nm,0.6s						
AAK				⇑Lg	Lg	06 10 22.7	
KOTS	Kotyrbulak	3.52	0	Pg	Pb	06 09 33.6	-1.9
	5.6nm,0.3s						
KOTS				Lg	Lg	06 10 20.4	
	10nm,0.6s						
KOTS	Kotyrbulak	3.52	0	eP	Pb	06 09 33.6	-1.9
	5.6nm,0.3s						
KOTS				eS	Sb	06 10 20.4	+2.0
	10nm,0.6s						
DGS	Degeres	3.66	345	Pg	Pb	06 09 37.8	-0.1
	11nm,0.4s						
DGS				Lg	Lg	06 10 28.1	
	8.7nm,0.6s						
DGS	Degeres	3.66	345	eP	Pb	06 09 37.8	-0.1
	11nm,0.4s						
DGS				eS	Sg	06 10 28.1	-2.5
	8.7nm,0.6s						
UZB	Uzynbulak	3.73	22	eP	Pb	06 09 37.0	-2.1
	2.3nm,0.3s						
UZB				eS	Sb	06 10 26.7	+2.3
	3.6nm,0.6s						
KPKS	Kokpek	3.94	17	eP	Pb	06 09 41.6	-1.0
	12nm,0.3s						
KPKS				eS	Sg	06 10 34.4	-5.1
	9.7nm,0.3s						
KTBS	Karatobe	4.01	356	Pg	Pb	06 09 42.7	-1.1
	2.0nm,0.3s						
KTBS				Lg	Lg	06 10 36.3	
	15nm,0.7s						
KTBS	Karatobe	4.01	356	eP	Pb	06 09 42.7	-1.1
	2.0nm,0.3s						
KTBS				eS	Sb	06 10 36.2	+3.9
	15nm,0.7s						
PDGK	Podgornoye	4.04	26	Pg	Pb	06 09 41.4	-3.0
	3.1nm,0.3s						
PDGK				Lg	Lg	06 10 33.8	
	2.4nm,0.4s						
PDGK	Podgornoye	4.04	26	⇑Pg	Pn	06 09 38.1	+3.0
	3.4nm,0.4s						
PDGK				⇑Lg	Lg	06 10 34.0	
	12nm,1.2s						
PDGK	Podgornoye	4.04	26	⇓iP	Pn	06 09 37.2	+2.1
	baz=27						
PDGK				⇓iS	Sn	06 10 26.4	+3.8
	baz=27						
CHKK	Chushkaly	4.14	359	Pg	Pb	06 09 44.5	-1.5
	2.2nm,0.4s						
CHKK				Lg	Lg	06 10 40.5	
	7.1nm,0.2s						
CHKK	Chushkaly	4.14	359	eP	Pb	06 09 44.5	-1.5
	2.2nm,0.4s						
CHKK				eS	Sb	06 10 40.5	+4.4
	7.1nm,0.2s						
MRKS	Merke	4.20	317	eP	Pb	06 09 47.4	+0.4
	2.0nm,0.3s						
MRKS				eS	Sg	06 10 44.7	-3.2
	4.4nm,0.4s						
KUU	Kurty	4.21	353	Pg	Pb	06 09 45.7	-1.5
	1.7nm,0.5s						
KUU				Lg	Lg	06 10 41.2	
	7.1nm,0.6s						
KUU	Kurty	4.21	353	eP	Pb	06 09 45.7	-1.5
	1.7nm,0.5s						
KUU				eS	Sb	06 10 41.2	+3.0
	7.1nm,0.6s						
KTMS	Ketmen	4.47	32	Pg	Pb	06 09 49.0	-2.6
	2.4nm,0.3s						
KTMS				Lg	Lg	06 10 47.0	
	3.7nm,0.4s						
KTMS	Ketmen	4.47	32	eP	Pb	06 09 49.0	-2.6
	2.4nm,0.3s						
KTMS				eS	Sb	06 10 47.0	+1.4
	3.7nm,0.4s						
MNBS	Baschi	4.47	12	Pg	Pb	06 09 50.8	-1.0
	2.1nm,0.2s						
MNBS				Lg	Lg	06 10 49.9	
	4.5nm,0.3s						
MNBS	Baschi	4.47	12	eP	Pb	06 09 50.8	-1.0
	2.1nm,0.2s						
MNBS				eS	Sb	06 10 49.9	+4.1
	4.5nm,0.3s						
BTLS	Baital	5.78	338	Pg	Pb	06 10 15.6	+1.7
	1.4nm,0.2s						
BTLS				Lg	Lg	06 11 33.2	
	2.3nm,0.6s						
BTLS	Baital	5.78	338	eP	Pb	06 10 16.5	+2.6
	1.4nm,0.2s						
BTLS				eS	Sg	06 11 34.1	-4.4
	2.3nm,0.6s						

ROM 14 06:11:45.1±0.1**, 43°.828N**±0°.006×**12°.039E**±0°.009**, h7^{km}, ML1.2**/7**, Error ellipse: s-maj=0.9km s-min=0.3km az=227.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFI	Santa Sofia	0.16	299	P	Pg	06 11 48.7	+0.3
SFI				S	Sg	06 11 51.7	+1.1
SFI				AML	AML		
	comp=E,158µm,0.1s						
SFI				AML	AML		
	comp=N,198µm,1.0s						
SFI				AML	AML		
	comp=E,158µm,0.1s						
SFI				AML	AML		
	comp=N,198µm,1.0s						
SFI				AML	AML		
	comp=E,158µm,0.1s						
SFI				AML	AML		
	comp=N,198µm,1.0s						
SFI				AML	AML		
	comp=E,158µm,0.1s						
SFI				AML	AML		
	comp=N,198µm,1.0s						
ASQU	Asqua	0.18	260	P	Pg	06 11 49.4	+0.6
ASQU				S	Sg	06 11 52.7	+1.3
ASQU				AML	AML		
	comp=E,123µm,0.7s						
ASQU				AML	AML		
	comp=N,222µm,0.4s						
ASQU				AML	AML		
	comp=E,123µm,0.7s						
ASQU				AML	AML		
	comp=N,222µm,0.4s						
ASQU				AML	AML		
	comp=N,222µm,0.4s						
ASQU				AML	AML		
	comp=E,123µm,0.7s						
ASQU				AML	AML		
	comp=N,222µm,0.4s						
ASQU				AML	AML		
	comp=E,123µm,0.7s						
CPGN	Carpegna, Ital	0.21	97	P	Pg	06 11 50.2	+0.9
PARC	Parchiule	0.23	141	P	Pg	06 11 50.3	+0.6
PARC				S	Sg	06 11 54.7	+1.9
PARC				AML	AML		
	comp=E,145µm,0.2s						
PARC				AML	AML		
	comp=N,100µm,0.3s						
PARC				AML	AML		
	comp=E,145µm,0.2s						
PARC				AML	AML		
	comp=N,100µm,0.3s						
PARC				AML	AML		
	comp=N,100µm,0.3s						
PARC				AML	AML		
	comp=E,145µm,0.2s						
PARC				AML	AML		
	comp=N,100µm,0.3s						
PARC				AML	AML		
	comp=E,145µm,0.2s						
SSP9	Sansepolcro	0.26	165	P	Pg	06 11 50.8	+0.5
SSP9				S	Sb	06 11 55.7	-1.1
NARO	Abbazia di Nar	0.45	119	P	Pg	06 11 54.0	+0.2
NARO				S	Sb	06 12 01.7	-0.5
NARO				AML	AML		
	comp=E,18µm,1.4s						
NARO				AML	AML		
	comp=N,24µm,1.5s						
NARO				AML	AML		
	comp=E,18µm,1.4s						
NARO				AML	AML		
	comp=N,24µm,1.5s						
NARO				AML	AML		
	comp=N,24µm,1.5s						
NARO				AML	AML		
	comp=E,18µm,1.4s						
NARO				AML	AML		
	comp=N,24µm,1.5s						
NARO				AML	AML		
	comp=E,18µm,1.4s						
ATPI	Pietralunga -	0.46	145	P	Pg	06 11 54.5	+0.4
ATPI				S	Sb	06 12 02.1	-0.4
BRIS	BRISIGHELLA	0.50	310	P	Pg	06 11 54.2	-0.5
BRIS				S	Sg	06 12 02.2	+1.0
BRIS				AML	AML		
	comp=E,69µm,0.2s						
BRIS				AML	AML		
	comp=N,59µm,0.4s						
BRIS				AML	AML		
	comp=N,59µm,0.4s						
BRIS				AML	AML		
	comp=E,69µm,0.2s						
BRIS				AML	AML		
	comp=N,59µm,0.4s						
BRIS				AML	AML		
	comp=E,69µm,0.2s						
CAFI	Castiglion Fio	0.50	186	P	Pg	06 11 55.5	+0.7
CAFI				S	Sb	06 12 03.2	-0.5
CAFI				AML	AML		
	comp=E,24µm,0.6s						
CAFI				AML	AML		
	comp=N,19µm,0.4s						
CAFI				AML	AML		
	comp=N,19µm,0.4s						
CAFI				AML	AML		
	comp=E,24µm,0.6s						
CAFI				AML	AML		
	comp=N,19µm,0.4s						
CAFI				AML	AML		
	comp=E,24µm,0.6s						
ATVO	AVT- Monte Val	0.52	149	P	Pg	06 11 55.6	+0.4
ATVO				S	Sb	06 12 04.4	+0.1
ATVO				AML	AML		
	comp=E,37µm,0.2s						
ATVO				AML	AML		
	comp=N,42µm,0.2s						
ATVO				AML	AML		
	comp=E,37µm,0.2s						
ATVO				AML	AML		
	comp=N,42µm,0.2s						
ATVO				AML	AML		
	comp=N,42µm,0.2s						
ATVO				AML	AML		
	comp=E,37µm,0.2s						
ATVO				AML	AML		
	comp=N,42µm,0.2s						
ATVO				AML	AML		
	comp=E,37µm,0.2s						

GEN 14 06:12:03.6, 44°.19N×10°.16E, h3^{km}, Ml0.4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	Equi	0.02	183	P	Pg	06 12 04.5	+0.2
EQUI				S	Sg	06 12 05.1	+0.2
GRAM	Graiana	0.31	348	P	Pg	06 12 00.0	-10
GRAM				S	Sg	06 12 15.1	+1.5

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*ISCJB **14** 06:22:33.8±0.4, 38°.18N±0°.02×26°.74E±0°.03, h2^{km}±4^{km}, Error ellipse: s-maj=4.7km s-min=2.7km az=150.6*

*DDA **14** 06:22:33.4, 38°.20N×26°.77E, h7^{km}±2^{km}, ML2.7*

*ATH **14** 06:22:33.3, 38°.12N×26°.73E, h30^{km}±4^{km}, ML2.7/3, Error ellipse: s-maj=8.7km s-min=1.4km az=228.0*

*ISK **14** 06:22:33.5, 38°.20N×26°.75E, h5^{km}, ML2.7/7*

*THE **14** 06:22:34.2, 38°.17N×26°.73E, h6^{km}±2^{km}, ML2.6/4, Error ellipse: s-maj=3.8km s-min=0.9km az=243.0*

ISC 14 06:22:34.0±0.9**, 38°.19N**±0°.02×**26°.75E**±0°.03**, h11^{km}**±6^{km}**, n30, σ0^s.48**/50**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMLD	Gumuldur	0.17	132	PG	Pg	06 22 37.9	+0.1
GMLD				SG	Sg	06 22 40.7	+0.3
DGB	zmir	0.17	144	i P	Pg	06 22 37.8	0.0
DGB				i S	Sg	06 22 40.1	-0.3
URLA	Izmir	0.21	323	PG	Pg	06 22 37.9	-0.5
URLA				SG	Sg	06 22 41.3	-0.2
URLA	Izmir	0.21	323	i P	Pg	06 22 38.5	+0.1
URLA				i S	Sg	06 22 41.8	+0.3
URLA				IAML_P			
	comp=Z,22µm,0.2s						
BLCB	Balcova	0.30	50	PG	Pg	06 22 39.9	-0.1
BLCB				SG	Sg	06 22 44.5	+0.5
KRBN	Karaburun	0.43	339	PG	Pg	06 22 41.8	-0.7
SMG	Samos	0.49	172	P	Pg	06 22 42.8	-0.7
SMG				S	Sg	06 22 50.1	+0.1
	comp=Z,1µm,0.3s						
SMG	Samos	0.49	172	P	Pg	06 22 42.8	-0.7
SMG				S	Sg	06 22 49.5	-0.4
SMG				AML	AML	06 22 50.4	
	comp=N,2607µm,0.2s						
SMG				AML	AML	06 22 50.6	
	comp=E,2120µm,0.3s						
FOCM	Foa	0.52	358	PG	Pg	06 22 43.2	-0.9
CHOS	Chios island	0.58	290	PG	Pg	06 22 45.5	+0.1
CHOS	Chios island	0.58	290	P	Pg	06 22 45.1	-0.2
CHOS				S	Sb	06 22 54.8	+0.2
	comp=E,530nm,0.3s						
CHOS	Chios island	0.58	290	P	Pg	06 22 45.1	-0.2
CHOS				S	Sb	06 22 54.9	+0.3
CHOS				AML	AML	06 22 56.5	
	comp=E,1309µm,0.3s						
CHOS				AML	AML	06 22 57.1	
	comp=N,811µm,0.3s						
GCAM	G?zelcaml?	0.62	142	PG	Pg	06 22 45.9	-0.1
GCAM	G?zelcaml?	0.62	142	i P	Pb	06 22 46.8	-0.1
GCAM				i S	Sg	06 22 54.7	+0.5
ZEDA	zmir-Bergama	0.81	18	i P	Pg	06 22 48.6	-1.1
ZEDA				i S	Sn	06 23 02.4	-1.1
DKL	Dikili	0.89	8	PG	Pg	06 22 50.9	-0.2
AYDB	Zeytinkoy-Aydi	0.93	105	PG	Pg	06 22 51.9	0.0
PSRA	Psara	1.00	291	P	Pg	06 22 53.1	-0.1
AYDN	Tasoluk	1.04	121	i P	Pn	06 22 54.4	-0.2
AYDN				i S	Sg	06 23 07.3	-0.2
AKHS	Akhisar	1.08	50	i P	Pb	06 22 54.3	-0.4
AKHS				i S	Sn	06 23 10.8	+0.8
AKHS				IAML_P			
	comp=Z,926nm,0.1s						
AYVA	Ayvalik	1.11	357	i P	Pn	06 22 55.5	-0.1
AYVA				i S	Sn	06 23 11.5	+0.6
PRK	Paraskevi	1.12	340	P	Pn	06 22 56.1	+0.5
PRK				S	Sn	06 23 11.3	+0.3
	comp=Z,375nm,0.5s						
PRK	Paraskevi	1.12	340	P	Pn	06 22 56.1	+0.5
PRK				S	Sn	06 23 11.0	0.0
PRK				AML	AML	06 23 15.4	
	comp=E,711µm,0.5s						
PRK				AML	AML	06 23 15.9	
	comp=N,780µm,0.5s						
BODT	Bodrum	1.21	158	PN	Pg	06 22 57.5	+0.2
BODT	Bodrum	1.21	158	P	Pn	06 22 56.2	-0.7
BODT				S	Sn	06 23 13.9	+0.5
SIGR	SIGRI	1.24	326	PN	Pb	06 22 57.4	0.0
SIGR	SIGRI	1.24	326	P	Pn	06 22 57.0	-0.2
SIGR				S	Sg	06 23 13.7	-0.1
	comp=N,198nm,0.6s						
SIGR	SIGRI	1.24	326	P	Pn	06 22 56.8	-0.4
SIGR				S	Sn	06 23 14.9	+1.0
STEP	BALIKESIR_Sava	1.40	32	i P	Pb	06 23 00.2	0.0
STEP				i S	Sg	06 23 19.9	+0.8
KULA	Kula-Manisa	1.53	77	PN	Pb	06 23 02.5	0.0

IDC 14 06:42:47.9±4.3**, 24°.26S×177°.20W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/33**, mbtmp3.9**/3**, Error ellipse: s-maj=216.8km s-min=44.7km az=156.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	34.04	270	P	P	06 49 35.3	+1.4
	2.8nm,0.5s,baz=99,slow=11,SNR=5.3						
ASAR	Alice Springs	44.50	260	P	P	06 51 00.5	-0.9
	0.3nm,0.4s,baz=98,slow=7.6,SNR=6.8						
WRA	Warramunga Arr	44.94	266	P	P	06 51 04.1	-0.8
	0.6nm,0.3s,baz=102,slow=7.6,SNR=11						
AKASG	Malin Array Be	146.63	329	PKPbc	PKPbc	07 02 30.5	-0.7
	0.4nm,0.3s,baz=49,slow=4.9,SNR=3.5						
BRTR	Keskin Array B	149.83	308	PKPbc	PKPbc	07 02 39.9	-0.4
	0.3nm,0.4s,baz=64,slow=3.4,SNR=2.5						

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*PAS **14** 06:50:42.7±0.0, 32°.16N×115°.17W, h21^{km}*

*NEIC **14** 06:50:44.5±0.0, 32°.18N×115°.28W, h6^{km}, MD2.7(ECX), ML2.8(PAS), ML2.7(PAS), After ECX.*

ECX 14 06:50:44.5±0.5**, 32°.18N×115°.28W, h6^{km}, MD2.5, ML2.7, 1C, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.24	355	eP	Pg	06 50 49.0	-0.2
CPBX				eS	Sg	06 50 52.4	0.0
CPBX				IAML		06 50 54.0	
	comp=N,4µm,0.1s						
RMX	La Rumorosa	0.80	302	eP	Pg	06 50 57.6	-2.2
RMX				eS	Sg	06 51 07.5	-2.7
RMX				⇑e		06 51 08.6	
RMX				IAML		06 51 08.6	
	comp=E,315nm,0.2s						
IKP	In-Ko-Pah, Jac	0.84	304	i P	Pg	06 50 59.4	-1.3
GLA	Glamis	0.95	24	ePg	Pg	06 50 59.3	-3.4
GLA				eSg	Sg	06 51 11.5	-3.6
SPIG	San Pedro Mart	1.14	188	eP	Pg	06 51 04.6	-1.8
CBX	Cerro Bola	1.18	277	eP	Pg	06 51 04.8	-2.4
CBX				eS	Sg	06 51 21.0	-1.5
BAR	Barrett	1.28	293	ePg	Pn	06 51 06.1	-2.8
BAR				eSg	Sg	06 51 23.8	-1.8
113A	Mohawk Valley,	1.41	65	ePn	Pn	06 51 08.2	-2.5
113A				eSn	Sb	06 51 23.0	-6.4

EML	El Monte Cty P	1.50	299	*e*P	Pn	06 51 10.6	-1.4
Y12C	Blythe	1.69	22	*e*Pn	Pn	06 51 13.8	-0.7
Y12C				*e*Sn	Sn	06 51 35.9	-0.7
CPE	Camp Elliot	1.70	295	*e*Pn	Pn	06 51 12.5	-2.2
CPE				*e*Sn	Sn	06 51 36.6	-0.1
PFO	Pinyon Flats O	1.74	325	*e*Pn	Pn	06 51 11.2	-4.2
Y14A	Wickenburg	2.59	47	*e*Pn	Pn	06 51 27.0	0.0
W13A	Hualapai Mount	3.13	21	*e*Sn	Sb	06 52 21.6	+2.2
TUC	Tucson	3.81	87	*e*Pn	Pn	06 51 42.8	-1.0
SHPR	Sheep Range	4.32	1	*e*Lg	Lg	06 53 01.8	
WUAZ	Wupatki	4.65	43	*e*Pn	Pn	06 51 55.0	-0.5
U15A	North Rim	4.91	29	*e*Pn	Pn	06 51 57.9	-1.2
LCMT	Little Creek M	5.10	19	*e*Pn	Pn	06 52 00.1	-1.6
KNB	Kanab	5.23	22	*e*Pn	Pn	06 52 02.2	-1.2

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*ISCJB **14** 06:52:39.0±1.7, 18°.48N±0°.06×146°.6E±0°.4, h64^{km}, mb3.8/8, Error ellipse: s-maj=55.5km s-min=8.3km az=3.2*

*IDC **14** 06:52:43.4±5.8, 18°.43N×146°.33E, h84^{km}±39^{km}, mb3.6/8, mb1 3.7/10, mb1mx3.4/52, mbtmp3.9/10, MS3.0/1, Ms1 3.0/1, ms1mx2.4/31, Error ellipse: s-maj=99.7km s-min=15.3km az=84.0*

ISC 14 06:52:40.4±2.3**, 18°.51N**±0°.08×**146°.6E**±0°.5**, h64**^{km}**, n17, σ0^{s}.83**/11**, mb3.9**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.18**	**199**	P	**Pn**	**06 53 55.9**	**+0.5**
	3.8nm,0.3s,baz=11,slow=17,SNR=3.6						
GUMO				S	**Sn**	**06 54 53.4**	**-0.4**
	2.8nm,0.3s,baz=12,slow=9.3,SNR=2.4						
H11S3	**WAKE ISLAND Hy**	**19.01**	**87**	T	T	07 15 44.5	
	baz=273,slow=74,SNR=17						
H11S1	**WAKE ISLAND Hy**	**19.02**	**87**	T	T	07 15 50.1	
	baz=273,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hy**	**19.03**	**87**	T	T	07 15 47.2	
	baz=273,slow=74,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**19.17**	**83**	T	T	07 16 03.6	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**19.18**	**83**	T	T	07 16 03.5	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**19.19**	**83**	T	T	07 16 06.2	
	baz=274						
MJAR	**Matsushiro Arr**	**19.44**	**339**	P	**Pn**	**06 57 03.1**	**-0.4**
	0.1nm,0.3s,baz=162,slow=10,SNR=8.4						
DAV	**Davao City (W)**	**23.44**	**244**	LR	LR	07 07 38.1	
	comp=Z,32nm,18.2s,baz=102,slow=39						
KSRS	**Korea Array**	**25.01**	**323**	P	**P**	**06 57 58.7**	**+0.5**
	1.2nm,0.7s,baz=150,slow=8.8,SNR=3.9						
WRA	**Warramunga Arr**	**40.07**	**198**	P	**P**	**07 00 09.4**	**-0.3**
	0.7nm,0.5s,baz=18,slow=6.8,SNR=18						
ASAR	**Alice Springs**	**43.72**	**197**	P	**P**	**07 00 39.4**	**-0.1**
	0.7nm,0.5s,baz=15,slow=8.3,SNR=18						
SONM	**Songino Array**	**43.85**	**321**	P	**P**	**07 00 40.7**	**+0.2**
	0.4nm,0.4s,baz=103,slow=6.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**58.71**	**322**	P	**P**	**07 02 32.2**	**+0.8**
	0.4nm,0.4s,baz=151,slow=3.4,SNR=3.6						
KURBB	**Kurchatov Arra**	**62.06**	**318**	P	**P**	**07 02 52.5**	**-1.8**
	1.0nm,0.6s,baz=98,slow=7.3,SNR=10						
BVAR	**Borovoye Array**	**67.19**	**320**	P	**P**	**07 03 28.5**	**+0.8**
	1.2nm,0.5s,baz=96,slow=7.1,SNR=8.5						
FINES	**FINESS Array B**	**87.43**	**336**	P	**P**	**07 05 20.2**	**-0.3**
	0.6nm,0.5s,baz=66,slow=5.2,SNR=6.1						

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*NNC **14** 06:54:23.8±0.5, 44°.33N×75°.58E, h1^{km}±4^{km}, mb3.6, mpv3.6, Error ellipse: s-maj=3.6km s-min=2.8km az=40.0*

*SOME **14** 06:54:25.7, 44°.32N×75°.60E, h20^{km}*

*KNET **14** 06:54:26.8±0.3, 44°.17N×75°.52E, h18^{km}±2^{km}, ml2.7, Error ellipse: s-maj=2.1km s-min=1.8km az=67.0*

ISC 14 06:54:24.5±1.1**, 44°.28N**±0°.02×**75°.54E**±0°.02**, h10**^{km}±9^{km}**, n63, σ0^{s}.89**/110**, 37C-17D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUU	**Kurty**	**0.69**	**124**	P	**Pg**	**06 54 38.2**	**+0.3**
	61nm,0.1s						
KUU				S	**Sg**	**06 54 47.3**	**+0.4**
	906nm,0.1s						
KUU	**Kurty**	**0.69**	**124**	⇑*i*P	**Pg**	**06 54 38.2**	**+0.3**
	59nm,0.1s						
KUU				⇑*i*S	**Sg**	**06 54 47.4**	**+0.4**
	919nm,0.2s						
KTBS	**Karatobe**	**1.00**	**124**	P	**Pb**	**06 54 43.6**	**-0.3**
	63nm,0.1s						
KTBS				S	**Sg**	**06 54 56.5**	**-0.3**
	238nm,0.3s						
KTBS	**Karatobe**	**1.00**	**124**	⇑*i*P	**Pb**	**06 54 43.6**	**-0.3**
	103nm,0.2s						
KTBS				⇑*i*S	**Sg**	**06 54 56.9**	**+0.2**
	540nm,0.3s						
DGS	**Degeres**	**1.05**	**171**	P	**Pb**	**06 54 44.6**	**-0.3**
	66nm,0.2s						
DGS				S	**Sb**	**06 54 58.1**	**-0.7**
	160nm,0.2s						
DGS	**Degeres**	**1.05**	**171**	⇓*i*P	**Pb**	**06 54 44.6**	**-0.3**
	66nm,0.2s						
DGS				⇑*i*S	**Sb**	**06 54 58.5**	**-0.3**
	160nm,0.2s						
CHKK	**Chushkaly**	**1.13**	**112**	P	**Pb**	**06 54 45.7**	**-0.3**
	128nm,0.1s						
CHKK				S	**Sb**	**06 55 00.5**	**-0.2**
	119nm,0.2s						
CHKK	**Chushkaly**	**1.13**	**112**	⇑*i*P	**Pb**	**06 54 45.8**	**-0.3**
	128nm,0.1s						
CHKK				⇑*i*S	**Sb**	**06 55 00.6**	**-0.2**
	230nm,0.2s						
USP	**Ospenovka**	**1.27**	**217**	⇓P	**Pn**	**06 54 48.6**	**+0.4**
	20nm,0.1s,SNR=37						
USP				⇑S	**Sb**	**06 55 05.1**	**+0.3**
	168nm,0.2s						
KST	**Kastek**	**1.28**	**166**	P	**Pn**	**06 54 48.8**	**+0.3**
	65nm,0.3s						
KST				S	**Sb**	**06 55 05.3**	**+0.1**
	166nm,0.1s						
KST	**Kastek**	**1.28**	**166**	⇓*i*P	**Pn**	**06 54 48.8**	**+0.3**
	74nm,0.3s						
KST				⇑*i*S	**Sn**	**06 55 05.6**	**-0.1**
	166nm,0.1s						
BTLS	**Baital**	**1.31**	**306**	P	**Pn**	**06 54 49.0**	**+0.2**
	16nm,0.1s						
BTLS				S	**Sb**	**06 55 05.6**	**-0.3**
	62nm,0.3s						
BTLS	**Baital**	**1.31**	**306**	⇑*i*P	**Pn**	**06 54 49.0**	**+0.2**
	27nm,0.2s						
BTLS				⇓*i*S	**Sb**	**06 55 05.7**	**-0.3**
	62nm,0.3s						
MTBS	**Maitube**	**1.32**	**151**	P	**Pb**	**06 54 49.6**	**+0.2**
	15nm,0.2s						
MTBS				S	**Sn**	**06 55 06.6**	**-0.1**
	225nm,0.3s						
MTBS	**Maitube**	**1.32**	**151**	⇑*i*P	**Pb**	**06 54 49.6**	**+0.2**
	15nm,0.1s						
MTBS				⇑*i*S	**Sn**	**06 55 06.9**	**+0.2**
	225nm,0.3s						
TKM2	**Tokmak 2**	**1.36**	**178**	⇓P	**Pn**	**06 54 50.0**	**+0.3**
	16nm,0.4s						
TKM2				⇓S	**Sb**	**06 55 08.0**	**+0.2**
	18nm,0.2s						
TKM2	**Tokmak 2**	**1.36**	**178**	⇓P	**Pn**	**06 54 50.2**	**+0.4**
	31nm,0.1s,SNR=203						
TKM2				⇓S	**Sn**	**06 55 08.3**	**+0.4**
	106nm,0.1s						
CHMS	**Chumysh**	**1.41**	**204**	⇓P	**Pb**	**06 54 51.2**	**+0.3**
	18nm,0.2s,SNR=30						
CHMS				⇑S	**Sb**	**06 55 09.3**	**+0.5**
	27nm,0.1s						
AAA	**Alma-Ata**	**1.46**	**137**	P	**Pb**	**06 54 52.1**	**+0.3**
	28nm,0.1s						
AAA				S	**Sg**	**06 55 11.2**	**-0.4**
	141nm,0.2s						
AAA	**Alma-Ata**	**1.46**	**137**	*e*P	**Pb**	**06 54 52.1**	**+0.3**
	28nm,0.1s						
AAA				*e*S	**Sg**	**06 55 11.2**	**-0.4**
	141nm,0.2s						
IZV	**Izvestkoviy**	**1.47**	**148**	P	**Pb**	**06 54 52.3**	**+0.3**
	48nm,0.1s						
IZV				S	**Sb**	**06 55 11.4**	**+0.6**
	276nm,0.2s						
IZV	**Izvestkoviy**	**1.47**	**148**	⇓*i*P	**Pb**	**06 54 52.3**	**+0.3**
	48nm,0.1s						
IZV				⇑*i*S	**Sg**	**06 55 11.5**	**-0.2**
	276nm,0.2s						
KNDC	**Almaty**	**1.48**	**135**	⇑P	**Pb**	**06 54 52.6**	**+0.5**
	17nm,0.5s						
KNDC				⇑S	**Sg**	**06 55 11.8**	**-0.4**
	173nm,0.5s						
KOTS	**Kotyrbulak**	**1.55**	**132**	P	**Pb**	**06 54 53.3**	**0.0**
	24nm,0.2s						
KOTS				S	**Sg**	**06 55 13.9**	**-0.4**
	206nm,0.4s						
KOTS	**Kotyrbulak**	**1.55**	**132**	⇑*e*P	**Pb**	**06 54 53.3**	**0.0**
	24nm,0.2s						
KOTS				⇑*i*S	**Sg**	**06 55 14.0**	**-0.2**
	365nm,0.3s						
MDOK	**Medeo**	**1.56**	**135**	Pg	**Pb**	**06 54 53.6**	**0.0**
	33nm,0.2s						
MDOK				Lg	Lg	06 55 12.8	
	113nm,0.3s						
MDOK	**Medeo**	**1.56**	**135**	⇓*i*P	**Pb**	**06 54 53.5**	**0.0**
	33nm,0.2s						
MDOK				⇑*i*S	**Sb**	**06 55 14.0**	**+0.6**
	113nm,0.3s						
TNSS	**Tian-Shan**	**1.61**	**140**	P	**Pb**	**06 54 54.5**	**0.0**
	19nm,0.3s						
TNSS				S	**Sb**	**06 55 15.5**	**+0.4**
	110nm,0.6s						
TNSS	**Tian-Shan**	**1.61**	**140**	⇑*i*P	**Pb**	**06 54 54.4**	**-0.1**
	19nm,0.3s						
TNSS				⇑*i*S	**Sg**	**06 55 15.9**	**-0.3**
	105nm,0.5s						
KBK	**Karagaybulak**	**1.68**	**195**	⇑P	**Pb**	**06 54 56.0**	**+0.4**
	34nm,0.1s,SNR=18						
KBK				⇑S	**Sg**	**06 55 18.6**	**+0.1**
	118nm,0.2s						
AAK	**Ala-Archa**	**1.81**	**205**	⇑P	**Pb**	**06 54 58.0**	**+0.2**
	9.4nm,0.3s						
AAK				⇑S	**Sg**	**06 55 22.7**	**-0.1**
	28nm,0.3s						
AAK	**Ala-Archa**	**1.81**	**205**	⇑P	**Pb**	**06 54 58.1**	**+0.2**
	18nm,0.2s,SNR=17						
AAK				⇓S	**Sb**	**06 55 22.4**	**+1.7**
	69nm,0.3s						
KURS	**Kuram**	**2.06**	**112**	Pg	**Pb**	**06 55 01.4**	**-0.5**
	22nm,0.4s						
KURS				Lg	Lg	06 55 27.3	
	28nm,0.3s						
KURS	**Kuram**	**2.06**	**112**	*e*P	**Pb**	**06 55 01.4**	**-0.5**
	22nm,0.4s						
KURS				*e*S	**Sb**	**06 55 27.3**	**-0.3**
	28nm,0.3s						
MNBS	**Baschi**	**2.07**	**95**	Pg	**Pb**	**06 55 01.5**	**-0.6**
	16nm,0.2s						
MNBS				Lg	Lg	06 55 27.7	
	92nm,0.2s						
MNBS	**Baschi**	**2.07**	**95**	*e*P	**Pb**	**06 55 01.5**	**-0.6**
	16nm,0.2s						
MNBS				*e*S	**Sb**	**06 55 27.7**	**-0.2**
	92nm,0.2s						
EKS2	**Erkin-Say**	**2.07**	**219**	⇑P	**Pb**	**06 55 02.3**	**+0.2**
	7.8nm,0.2s,SNR=11						
ULHL	**Ulahol**	**2.10**	**166**	⇓P	**Pb**	**06 55 02.7**	**0.0**
	8.7nm,0.2s,SNR=7.3						
UCH	**Uchtor**	**2.19**	**200**	⇑P	**Pb**	**06 55 04.8**	**+0.4**
	21nm,0.2s,SNR=44						
KZA	**Kyzart**	**2.22**	**186**	⇑P	**Pb**	**06 55 04.4**	**-0.4**
	30nm,0.2s,SNR=37						
MRKS	**Merke**	**2.28**	**228**	Pg	**Pb**	**06 55 06.0**	**+0.3**
	3.8nm,0.1s						
MRKS				Lg	Lg	06 55 34.8	
	44nm,0.3s						
MRKS	**Merke**	**2.28**	**228**	*e*P	**Pb**	**06 55 06.1**	**+0.3**
	3.8nm,0.1s						
MRKS				*e*S	**Sb**	**06 55 35.2**	**+1.1**
	44nm,0.3s						
SATY	**Saty**	**2.41**	**120**	Pg	**Pb**	**06 55 08.4**	**+0.4**
	12nm,0.1s						
SATY				Lg	Lg	06 55 38.8	
	123nm,0.1s						
SATY	**Saty**	**2.41**	**120**	*e*P	**Pb**	**06 55 08.4**	**+0.4**
	12nm,0.1s						
SATY				*e*S	**Sb**	**06 55 38.8**	**+1.0**
	123nm,0.1s						
KPKS	**Kokpek**	**2.42**	**109**	*e*P	**Pb**	**06 55 08.3**	**+0.3**
	17nm,0.1s						
KPKS				*e*S	**Sb**	**06 55 38.8**	**+1.0**
	52nm,0.2s						
UZB	**Uzynbulak**	**2.77**	**113**	Pg	**Pb**	**06 55 14.3**	**+0.3**
	6.8nm,0.3s						
UZB				Lg	Lg	06 55 49.0	
	15nm,0.2s						
UZB	**Uzynbulak**	**2.77**	**113**	*e*P	**Pb**	**06 55 14.3**	**+0.3**
	6.8nm,0.3s						
UZB				*e*S	**Sb**	**06 55 49.0**	**+1.0**
	15nm,0.2s						
KAPS	**Kapalarasan**	**2.90**	**68**	Pg	**Pb**	**06 55 16.3**	**+0.1**
	6.9nm,0.2s						
KAPS				Lg	Lg	06 55 52.5	
	35nm,0.2s						
KAPS	**Kapalarasan**	**2.90**	**68**	*e*P	**Pb**	**06 55 16.3**	**+0.1**
	6.9nm,0.2s						
KAPS				*e*S	**Sb**	**06 55 52.5**	**+0.9**
	35nm,0.2s						
PDGK	**Podgornoye**	**3.01**	**107**	Pg	**Pb**	**06 55 18.1**	**-0.2**
	4.5nm,0.3s						
PDGK				Lg	Lg	06 55 55.5	
	6.9nm,0.3s						
PDGK	**Podgornoye**	**3.01**	**107**	⇑Pn	**Pn**	**06 55 12.9**	**+0.6**
	2.2nm,0.5s						
PDGK				⇑Pg	**Pb**	**06 55 19.3**	**+1.0**
	3.8nm,0.4s						
PDGK				⇓Lg	Lg	06 55 55.9	
	11nm,0.6s						
DJR	**Jarkent**	**3.05**	**88**	Pg	**Pb**	**06 55 19.0**	**+0.1**
	17nm,0.3s						
DJR				Lg	Lg	06 55 57.1	
	8.2nm,0.4s						
DJR	**Jarkent**	**3.05**	**88**	*e*P	**Pb**	**06 55 19.0**	**+0.1**
	17nm,0.3s						
DJR				*e*S	**Sb**	**06 55 57.1**	**+1.0**
	8.2nm,0.4s						
KTMS	**Ketmen**	**3.58**	**102**	Pg	**Pb**	**06 55 28.7**	**+0.8**
	8.7nm,0.2s						
KTMS				Lg	Lg	06 56 13.8	
	14nm,0.4s						
KTMS	**Ketmen**	**3.58**	**102**	*e*P	**Pb**	**06 55 28.7**	**+0.8**
	8.7nm,0.2s						
KTMS				*e*S	**Sb**	**06 56 13.8**	**+2.4**
	14nm,0.4s						
KK31	**Karatay Array**	**3.83**	**254**	⇓Pn	**Pn**	**06 55 24.9**	**+1.4**
	0.4nm,0.5s,baz=71,slow=14,SNR=8.7						
KK31				Pg	**Pb**	**06 55 35.1**	**+2.9**
	0.8nm,0.3s,baz=68,slow=16,SNR=20						
KK31				⇑Lg	Lg	06 56 24.0	
	6.8nm,0.4s						
BRLS	**Borolday**	**4.33**	**255**	Lg	Lg	06 56 45.5	
	11nm,0.2s						
BRLS	**Borolday**	**4.33**	**255**	*e*P	**Pg**	**06 55 47.1**	**-0.2**
	0.5nm,0.2s						
BRLS				*e*S	**Sg**	**06 56 45.5**	**+2.1**
	11nm,0.2s						
OTUK	**Ortayu**	**4.54**	**332**	⇑Pn	**Pn**	**06 55 32.2**	**-1.0**
	0.9nm,0.7s						
OTUK				⇑Pg	**Pb**	**06 55 47.5**	**+3.3**
	0.9nm,0.4s						
OTUK				⇑Sn	**Sn**	**06 56 24.2**	**-1.9**
	2.0nm,0.3s						
OTUK				⇑Lg	Lg	06 56 45.1	
	15nm,0.6s						
IUG	**Iuzhnay**	**4.56**	**244**	Pg	**Pg**	**06 55 49.0**	**-2.8**
	0.8nm,0.2s						
IUG				Lg	Lg	06 56 48.4	
	28nm,0.5s						
IUG	**Iuzhnay**	**4.56**	**244**	*e*P	**Pg**	**06 55 49.0**	**-2.8**
	0.8nm,0.2s						
IUG				*e*S	**Sg**	**06 56 48.4**	**-2.4**
	28nm,0.5s						
MK31	**Makanchi Array**	**5.36**	**60**	Pn	**Pn**	**06 55 45.1**	**+0.5**
	0.1nm,0.1s,baz=112,slow=8.8,SNR=19						
MK31				Pg	Pb	06 55 52.9	-5.4
	0.5nm,0.3s,baz=235,slow=14,SNR=6.9						
MK31				Sn	**Sn**	**06 56 46.6**	**+0.3**
	1.8nm,0.8s,baz=243,slow=22,SNR=6.2						
KURBB	**Kurchatov Arra**	**6.66**	**17**	⇓Pn	**Pn**	**06 56 01.6**	**-0.6**
	0.4nm,0.3s						
KURBB				⇑Sn	**Sn**	**06 57 15.7**	**-2.3**
	2.5nm,0.6s						
KURBB				⇓Lg	Lg	06 57 51.1	
	13nm,0.7s						

DJA 14 07:15:44.4±0.8**, 10°S**±6°×**11°9E**±°**, h10**^{km}**, M3.9**/7**, mb4.0**/1**, MLv3.8**/7**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.70**	**55**	P	Pg	07 15 56.6	-1.4
WBSI				S	Sg	07 16 07.4	+0.2
WSI	**Waingapu**	**1.51**	**76**	P	Pn	07 16 11.7	+0.1
WSI				S	Sb	07 16 32.0	+0.1
PLAI	**Plampang**	**1.59**	**320**	P	Pn	07 16 10.3	-2.3
PLAI				S	Sn	07 16 32.7	-0.5
BASI	**Baing, Sumba**	**1.75**	**96**	S	Sb	07 16 39.0	+0.4
EDFI	**Ende, Flores**	**3.12**	**66**	P	Pn	07 16 33.1	-0.7
EDFI				S	Sn	07 17 08.3	-3.0
BKSI	**Bulukumba**	**4.87**	**16**	P	Pn	07 16 57.4	-0.4

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*ISCJB **14** 07:24:50.1±0.3, 19°.45N±0°.03×109°.09W±0°.02, h10^{km}, mb4.0/39, MS4.2/19, Error ellipse: s-maj=4.4km s-min=3.1km az=5.6*

*IDC **14** 07:24:50.8±0.8, 19°.46N×109°.22W, h0^{km}, mb3.7/8, mb1 4.0/14, mb1mx3.9/33, mbtmp3.8/14, ML3.6/6, MS4.1/21, Ms1 4.1/21, ms1mx4.0/36, Error ellipse: s-maj=19.3km s-min=14.3km az=59.0*

*MEX **14** 07:24:51.3±0.9, 19°.72N×109°.01W, h10^{km}, MD4.0*

*NEIC **14** 07:24:52.6±1.3, 19°.46N×109°.09W, h10^{km}±3^{km}, mb4.0/76, MD4.1(MEX), Error ellipse: s-maj=16.8km s-min=7.7km az=218.0*

*GCMT **14** 07:24:53.6±0.2, 19°.71N±0°.01×109°.05W±0°.01, h20^{km}, MW5.1/108, Moment Tensor Solution. s56,c71; s108,c165; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29±.14; $M_{\theta\theta}$-5.20±.13; $M_{\phi\phi}$5.49±.13; $M_{r\theta}$-0.05±.22; $M_{\theta\phi}$-1.67±.10; $M_{\phi r}$0.65±.21; Best double couple: $M_0$5.63500×10^{16} NP1:ϕ_s36.00000°, δ86.00000°, λ5.00000°. NP2:ϕ_s306.00000°, δ85.00000°, λ176.00000°. Principal axes: T 5.8150, Plg6.0000°, Azm261.0000°; N -0.3580, Plg84.0000°, Azm76.0000°; P -5.4550, Plg1.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 07:24:52.1±0.6**, 19°.51N**±0°.06×**109°.04W**±0°.04**, h10**^{km}**, n234, σ1^{s}.44**/225**, mb4.0**/37**, MS4.2**/19**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**1.92**	**248**	Pn	**Pn**	**07 25 21.9**	**-3.0**
H06E1				Sn	**Sn**	**07 25 44.8**	**-4.4**
H06E1				T	T	07 27 37.8	
	SNR=28						
H06N1	**SOCORRO T-PHAS**	**1.95**	**251**	Pn	**Pn**	**07 25 22.2**	**-3.0**
H06N1				Sn	**Sn**	**07 25 45.1**	**-4.6**
H06N1				T	T	07 27 38.1	
	SNR=293						
H06N	**Isla Socorro**	**1.95**	**251**	*e*P	**Pn**	**07 25 23.6**	**-1.6**
H06N				*i* S	**Sn**	**07 25 46.4**	**-3.4**
CJM	**Chamela**	**3.77**	**89**	*e*Pn	**Pn**	**07 25 47.9**	**-2.5**
CJM				*e*Sn	**Sn**	**07 26 28.3**	**-6.5**
CJM	**Chamela**	**3.77**	**89**	*e*P	**Pn**	**07 25 47.4**	**-2.9**
CJM				*e*S	**Sn**	**07 26 28.9**	**-5.9**
MAIG	**Mazatlaan**	**4.40**	**33**	*i* P	Pn	07 25 52.3	-6.6
MAIG				*i* S	Sn	07 26 40.9	-9.4
ANIG	**Ahuacatlan**	**4.51**	**69**	*e*Pn	**Pn**	**07 25 59.3**	**-1.4**
ANIG				*e*Sn	**Sn**	**07 26 50.8**	**-2.5**
ANIG	**Ahuacatlan**	**4.51**	**69**	*e*P	**Pn**	**07 25 57.7**	**-3.0**
ANIG				*i* S	**Sn**	**07 26 47.1**	**-6.3**
LPIG	**La Paz**	**4.72**	**346**	Pn	**Pn**	**07 26 01.7**	**-1.7**
	6.9nm,0.3s,baz=355,slow=1.8,SNR=12						
LPIG				LR	LR	07 27 31.1	
	comp=Z,3μm,21.1s,baz=114,slow=34						
ZAIG	**Zacatecas**	**6.86**	**61**	*e*Pn	**Pn**	**07 26 34.1**	**+1.1**
HPIG		**8.02**	**22**	*e*Pn	**Pn**	**07 26 50.6**	**+1.8**
SRIG	**Santa Rosalia**	**8.31**	**340**	*e*Pn	**Pn**	**07 26 52.8**	**+0.1**
HSIG		**9.63**	**350**	*e*Pn	**Pn**	**07 27 10.8**	**0.0**
TLIG	**Tlapa**	**10.12**	**99**	*e*Pn	**Pn**	**07 27 21.0**	**+3.2**
LNIG	**Linares**	**10.37**	**57**	*e*Pn	**Pn**	**07 27 23.4**	**+2.4**
TX31	**Lajitas Ar. Si**	**10.94**	**26**	*e*Pn	**Pn**	**07 27 30.8**	**+2.0**
TXAR	**Lajitas Array**	**10.94**	**26**	Pn	**Pn**	**07 27 29.9**	**+1.1**
	0.2nm,0.3s,baz=202,slow=12,SNR=14						
TXAR				LR	LR	07 31 14.4	
	comp=Z,1μm,19.8s,baz=0.0,slow=35						
319A	**Douglas**	**11.82**	**359**	*e*Pn	**Pn**	**07 27 43.4**	**+2.5**
833A	**Chaparral WMA,**	**12.44**	**43**	P	**Pn**	**07 27 48.8**	**-0.5**
	baz=227						
MNTX	**Cornudas Mount**	**12.58**	**14**	*e*Pn	**Pn**	**07 27 53.9**	**+2.6**
MNTX	**Cornudas Mount**	**12.58**	**14**	P	**Pn**	**07 27 50.4**	**-0.8**
	baz=196						
TUC	**Tucson**	**12.84**	**353**	*e*Pn	**Pn**	**07 27 56.9**	**+2.0**
TUC	**Tucson**	**12.84**	**353**	P	**Pn**	**07 27 54.8**	**-0.1**
	baz=173						
214A	**Organ Pipe Nat**	**12.85**	**345**	P	**Pn**	**07 27 54.4**	**-0.5**
	baz=164						
121A	**Cookes Peak, D**	**13.02**	**5**	P	**Pn**	**07 27 56.4**	**-0.9**
	baz=185,SNR=9.7						
CMIG	**Matias Romero**	**13.66**	**98**	Pn	**Pn**	**07 28 07.6**	**+1.6**
	1.1nm,0.3s,baz=263,slow=9.5,SNR=21						
CMIG				LR	LR	07 33 08.0	
	comp=Z,838nm,19.5s,baz=272,slow=36						
JCT	**Junction City**	**13.76**	**36**	P	**Pn**	**07 28 07.1**	**-0.2**
	baz=219						
113A	**Mohawk Valley,**	**13.87**	**343**	*e*Pn	**Pn**	**07 28 07.5**	**-1.3**
GLA	**Glamis**	**14.45**	**340**	P	**Pn**	**07 28 16.7**	**0.0**
	baz=158						
IKP	**In-Ko-Pah, Jac**	**14.54**	**336**	P	**Pn**	**07 28 17.8**	**-0.2**
	baz=153						
Y22D	**IRIS PASSCAL I**	**14.63**	**7**	P	**Pn**	**07 28 19.8**	**+0.5**
	baz=188						
SWSC	**Sam W. Stewart**	**14.68**	**337**	P	**Pn**	**07 28 19.7**	**-0.2**
	baz=154						
LENM	**Lemitar**	**14.71**	**7**	*e*Pn	**Pn**	**07 28 22.5**	**+1.9**
BNM	**Barren Site**	**14.74**	**8**	*e*Pn	**Pn**	**07 28 23.1**	**+2.2**
Y14A	**Wickenburg**	**14.80**	**347**	*e*Pn	**Pn**	**07 28 23.0**	**+1.4**
MONP2	**Monument Peak**	**14.87**	**335**	P	**Pn**	**07 28 21.2**	**-1.6**
	baz=152						
LAZ	**Ladron**	**14.93**	**6**	*e*Pn	**Pn**	**07 28 23.8**	**+0.3**
X18A	**Snowflake**	**14.98**	**357**	*e*Pn	**Pn**	**07 28 25.3**	**+1.1**
	42nm,1.5s						
Y12C	**Blythe**	**15.00**	**342**	P	**Pn**	**07 28 23.1**	**-1.2**
	baz=160						
X16A	**Lo Mia Camp, P**	**15.00**	**352**	*e*Pn	**Pn**	**07 28 25.6**	**+1.1**
	14nm,1.4s						
109C	**Camp Elliot, M**	**15.15**	**333**	P	**Pn**	**07 28 25.1**	**-1.2**
	baz=150						
BC3	**Big Chuckawall**	**15.20**	**339**	P	**Pn**	**07 28 27.7**	**+0.6**
	baz=157,SNR=5.5						
435B	**Jarrell**	**15.27**	**40**	P	**Pn**	**07 28 28.3**	**+0.4**
	baz=225						
PDMCI	**Parker Dam,Lak**	**15.42**	**344**	P	**Pn**	**07 28 30.4**	**+0.7**
	baz=162						
MSTX	**Muleshoe**	**15.45**	**20**	*e*Pn	**Pn**	**07 28 31.6**	**+1.4**
	7.8nm,1.0s						
MSTX	**Muleshoe**	**15.45**	**20**	P	**Pn**	**07 28 30.3**	**+0.1**
	baz=203						
PFO	**Pinyon Flats O**	**15.52**	**336**	Pn	**Pn**	**07 28 31.1**	**-0.2**
	0.1nm,0.3s,baz=162,slow=12,SNR=3.0						
PFO				LR	LR	07 34 08.2	
	comp=Z,1μm,18.0s,baz=154,slow=36						
PFO	**Pinyon Flats O**	**15.52**	**336**	*e*Pn	**Pn**	**07 28 32.3**	**+1.0**
	11nm,1.1s						
PFO	**Pinyon Flats O**	**15.52**	**336**	P	**Pn**	**07 28 31.7**	**+0.4**
	baz=153						
ABTX	**Abilene, Hawle**	**15.54**	**31**	P	**Pn**	**07 28 32.3**	**+0.9**
	baz=215						
ANMO	**Albuquerque**	**15.55**	**8**	Pn	**Pn**	**07 28 32.2**	**+0.6**
	0.0nm,0.3s,baz=198,slow=20,SNR=4.5						
ANMO				LR	LR	07 34 01.6	
	comp=Z,667nm,21.9s,baz=190,slow=35						
ANMO	**Albuquerque**	**15.55**	**8**	*e*Pn	**Pn**	**07 28 33.7**	**+2.1**
	9.8nm,1.4s						
ANMO	**Albuquerque**	**15.55**	**8**	P	**Pn**	**07 28 32.9**	**+1.3**
	baz=189						
W18A	**Petrified Fore**	**15.56**	**358**	P	**Pn**	**07 28 31.8**	**-0.1**
	baz=178						
IRM	**Iron Mountain**	**15.57**	**341**	P	**Pn**	**07 28 30.9**	**-0.9**
	baz=158						
BELC	**Belle Mtn. Jos**	**15.71**	**338**	P	**Pn**	**07 28 33.7**	**0.0**
	baz=155,SNR=9.8						
MURC	**Murrieta**	**15.80**	**334**	P	**Pn**	**07 28 35.4**	**+0.6**
	baz=151						
SCI2	**San Clemente I**	**15.88**	**330**	P	**Pn**	**07 28 33.7**	**-2.1**
	baz=146						
NEE2	**Needles Airpor**	**15.98**	**343**	P	**Pn**	**07 28 35.3**	**-1.8**
	baz=161						
WUAZ	**Wupatki**	**16.08**	**353**	*e*Pn	**Pn**	**07 28 39.2**	**+0.7**
	16nm,1.4s						

WUAZ	Wupatki baz=172	16.08	353	P	Pn	07 28 38.2	-0.4
CIS	Catalina Islan baz=147	16.17	331	P	Pn	07 28 39.8	+0.3
WHTX	Lake Whitney, 17nm,1.3s	16.21	38	ePn	Pn	07 28 40.7	+0.6
WHTX	Lake Whitney, baz=223	16.21	38	P	Pn	07 28 40.1	0.0
BBRC	Big Bear Solar baz=153	16.28	336	P	Pn	07 28 41.2	+0.1
GMRC	Granite Mounta baz=158	16.31	340	P	Pn	07 28 41.0	-0.4
CCIG	Comitan 29nm,1.5s	16.41	99	eP	Pn	07 28 44.9	+2.1
LDFC	Landfair 20nm,1.1s	16.41	342	ePn	Pn	07 28 44.1	+1.3
BFSC	Mount Baldy Ra baz=151	16.55	334	P	Pn	07 28 44.3	-0.2
HEC	Hector,Ludlow baz=156	16.57	339	P	Pn	07 28 43.8	-0.9
SNCC	San Nicolas Is baz=143	16.58	328	P	Pn	07 28 43.6	-1.1
AMTX	Amarillo baz=205	16.64	22	P	Pn	07 28 45.0	-0.6
DECC	Green Verdugo baz=149	16.85	333	P	Pn	07 28 48.3	+0.1
TUQ	Turquoise Moun baz=158,SNR=8.6	16.99	340	P	Pn	07 28 49.0	-1.0
BLG	Laguna Peak, P baz=146	17.05	331	P	Pn	07 28 50.7	-0.1
U15A	North Rim 13nm,1.3s	17.10	351	eP	Pn	07 28 52.8	+1.2
GSC	Goldstone, Bar 6.6nm,1.1s	17.16	338	eP	Pn	07 28 52.3	+0.1
GSC				eSn	Sn	07 32 04.0	+0.8
GSC	Goldstone, Bar baz=155	17.16	338	P	Pn	07 28 52.5	+0.3
SCZ2	Santa Cruz Isl baz=144	17.23	329	P	Pn	07 28 52.5	-0.5
EDW2	Edwards Air Fo baz=151	17.24	334	P	Pn	07 28 53.2	0.0
OSI	Osito Audit: C baz=148	17.32	332	P	Pn	07 28 53.5	-0.6
SHOC	Shoshone, Teco baz=157	17.53	340	P	Pn	07 28 56.6	0.0
SBC	Santa Barbara baz=145	17.63	330	P	Pn	07 28 56.6	-1.3
LRMC	Laurel Mtn Rad baz=152	17.64	336	P	Pn	07 28 57.8	-0.4
MVCO	Mesa Verde 18nm,1.1s	17.64	1	eP	P	07 29 00.0	+0.7
MVCO	Mesa Verde baz=182,SNR=5.9	17.64	1	P	Pn	07 28 58.4	+0.1
WMOK	Wichita Mounta 3.7nm,0.8s	17.69	29	eP	Pn	07 28 59.4	+0.7
WMOK	Wichita Mounta baz=214	17.69	29	P	Pn	07 28 59.1	+0.4
KNB	Kanab 16nm,1.1s	17.75	350	eP	P	07 29 01.4	+0.9
SHPR	Sheep Range 6.9nm,1.0s	17.77	344	eP	P	07 29 01.2	+0.7
NATX	Nacogdoches baz=230	17.78	44	P	Pn	07 28 59.7	-0.1
ARVC	Arvin baz=149	17.80	333	P	Pn	07 28 59.6	-0.5
LCMT	Little Creek M 18nm,1.4s	17.82	349	eP	Pn	07 29 01.4	+0.9
T25A	Trinidad 6.9nm,1.3s	18.03	12	eP	Pn	07 29 04.3	+1.3
T25A	Trinidad baz=194	18.03	12	P	Pn	07 29 02.9	-0.1
PKM	Mcpherson Peak baz=146	18.05	330	P	Pn	07 29 02.4	-0.9
MPMC	Manual Prospec baz=154,SNR=5.6	18.09	337	P	Pn	07 29 03.8	+0.1
PKCU	Pink Cliffs 8.6nm,1.0s	18.10	352	eP	P	07 29 05.6	+1.2
ISA	Isabella, Lake baz=150	18.11	335	P	Pn	07 29 03.9	-0.1
FURC	Furnace Creek, baz=156	18.24	339	P	Pn	07 29 04.9	-0.5
S22A	4UR Ranch, Cre 12nm,1.4s	18.27	6	eP	P	07 29 08.2	+1.9
S22A	4UR Ranch, Cre baz=187	18.27	6	P	Pn	07 29 05.9	-0.2
APG	El Apazote 0.1nm,0.3s,baz=277,slow=13,SNR=4.1	18.30	101	P	P	07 29 07.7	+1.0
APG	comp=Z,744nm,21.9s,baz=290,slow=33			LR	LR	07 35 00.6	
DAC	Darwin (Calif)	18.32	338	eP	P	07 29 08.8	+2.1
SZCU	Shurtz Canyon 5.5nm,1.0s	18.36	350	eP	P	07 29 09.5	+2.3
CCUT	Cedar City 25nm,1.5s	18.37	349	eP	Pn	07 29 09.6	+2.3
SDCO	Great Sand Dun 11nm,1.4s	18.43	9	eP	Pn	07 29 09.4	+1.3
SDCO	Great Sand Dun baz=191,SNR=10	18.43	9	P	P	07 29 08.2	+0.2
SMMC	Simmler baz=146	18.48	331	P	P	07 29 07.5	-0.8
TPNV	Topopah Spring 9.9nm,1.1s	18.49	342	eP	P	07 29 09.4	+0.8
TPNV	Topopah Spring baz=158,SNR=8.9	18.49	342	P	P	07 29 08.9	+0.4
VES	Vestal, Richgr baz=149	18.52	334	P	P	07 29 08.8	+0.1
CWC	Cottonwood Cre baz=153	18.64	337	P	P	07 29 10.1	-0.1
MTPU	Mount Pierson 6.3nm,1.0s	18.67	352	eP	Pn	07 29 12.0	+1.0
GRAC	Grapevine Rang baz=155	18.89	339	P	P	07 29 12.8	0.0
MSU	Marysvale	19.13	352	eP	P	07 29 16.0	+0.4
TCRU	Three Creeks R 6.5nm,1.1s	19.26	352	eP	P	07 29 16.5	-0.6
PSUT	Pine Spring 19nm,1.0s	19.41	349	eP	P	07 29 18.9	+0.2
Q16A	Castle Valley 5.2nm,1.3s	19.43	355	eP	P	07 29 19.3	+0.4
SRU	San Rafael Swe 5.0nm,1.0s	19.58	357	eP	P	07 29 21.2	+0.7
R11A	Troy Canyon, C baz=162	19.61	345	P	P	07 29 20.7	-0.2
Q24A	Divide baz=191	19.68	9	P	P	07 29 21.3	-0.4
SMCO	Snowmass 14nm,1.1s	19.68	5	eP	P	07 29 23.1	+1.2
P17A	Butcher Ranch, 7.1nm,1.1s	19.95	356	eP	P	07 29 26.3	+1.8
MLAC	Mammoth, Mammo baz=152	19.98	337	P	P	07 29 24.6	-0.3
MDPB	Devils Postpil 8.2nm,1.0s	20.07	336	eP	P	07 29 25.2	-0.7
TUL1	Leonard 8.8nm,0.9s	20.08	33	eP	P	07 29 25.2	-0.6
TUL1	Leonard baz=219	20.08	33	P	P	07 29 26.0	+0.3
ISCO	Idaho Springs 7.3nm,1.3s	20.44	8	eP	P	07 29 30.5	+0.5
ISCO	Idaho Springs baz=189	20.44	8	P	P	07 29 29.7	-0.3
NV11	Mina Array Sit 1.0nm,1.3s	20.45	339	eP	P	07 29 30.2	+0.3
NV01	Mina Array Sit	20.50	339	eP	P	07 29 31.4	+0.8
NVAR	Mina Array Bea 3.9nm,0.9s,baz=163,slow=12,SNR=19	20.50	339	P	P	07 29 31.4	+0.8
NVAR	comp=Z,790nm,21.7s,baz=151,slow=34			LR	LR	07 36 34.5	
MPU	Maple Canyon 5.7nm,1.1s	20.56	354	eP	P	07 29 29.7	-1.5
O20A	White River Ci 11nm,0.9s	20.57	2	eP	P	07 29 32.2	+0.9
O20A	White River Ci baz=182	20.57	2	P	P	07 29 31.0	-0.2
W39A	Magazine 14nm,1.2s	20.64	38	eP	P	07 29 33.1	+1.2
W39A	Magazine baz=225	20.64	38	P	P	07 29 31.6	-0.3
X40A	Basin Creek Fa baz=228	20.72	41	P	P	07 29 32.7	-0.1
RYN	Ryan 10.0nm,1.2s	20.75	339	eP	Pn	07 29 35.4	-0.2
CBKS	Cedar Bluff baz=205	20.86	21	P	P	07 29 33.8	-0.5
DUG	Dugway, Tooele 14nm,1.3s	20.87	352	eP	P	07 29 35.9	+1.4
DUG	Dugway, Tooele baz=170,SNR=6.0	20.87	352	P	P	07 29 34.0	-0.5
VBMS	Vicksburg baz=237	20.89	49	P	P	07 29 34.1	-0.5
CMB	Columbia Colle 3.1nm,0.9s	20.93	334	eP	P	07 29 35.5	+0.4
WAKR	Walker 9.2nm,1.2s	20.97	337	eP	P	07 29 36.9	+1.3
KVN	Kaiserville 12nm,1.2s	20.99	340	eP	P	07 29 36.9	+1.0
JLU	Jordanelle 3.4nm,0.9s	21.12	355	eP	P	07 29 38.4	+1.0
YERR	Yerington 13nm,1.1s	21.32	338	eP	P	07 29 40.3	+0.9
HHAR	Hobbs 6.5nm,1.1s	21.34	35	eP	P	07 29 41.2	+1.7
N23A	Red Feather La 10.0nm,1.1s	21.48	6	eP	P	07 29 41.4	+0.2
N23A	Red Feather La baz=188	21.48	6	P	P	07 29 40.4	-0.7
TGUH	Tegucigalpa,Un 59nm,1.4s	21.53	101	eP	P	07 29 42.4	+0.6
W41B	Gary Mavity, V 11nm,1.0s	21.54	40	eP	P	07 29 42.6	+1.0
W41B	Gary Mavity, V baz=228	21.54	40	P	P	07 29 40.5	-1.0
PNTR	Pine Nut 11nm,0.9s	21.54	337	eP	P	07 29 43.5	+1.7
WHAR	Wooly Hollow 16nm,1.2s	21.59	40	eP	P	07 29 42.9	+0.7
BGU	Big Grassy Mou 8.8nm,1.2s	21.62	352	eP	P	07 29 43.9	+1.3
TCUT	Toone Canyon 25nm,1.2s	21.63	355	eP	P	07 29 43.6	+0.8
VCNR	Virginia City 7.7nm,0.9s	21.74	337	eP	P	07 29 44.5	+0.6
ELK	Elko 2.8nm,1.0s,baz=169,slow=8.5,SNR=8.4	21.82	347	P	P	07 29 45.7	+0.9
ELK	comp=Z,304nm,18.6s,baz=162,slow=36			LR	LR	07 37 50.7	
ELK	Elko 3.9nm,1.0s	21.82	347	eP	P	07 29 45.6	+0.9
X43A	Marvell baz=232	21.98	43	P	P	07 29 45.4	-0.8
U40A	Yellville baz=224	22.00	37	P	P	07 29 46.2	-0.3
BMN	Battle Mountai 5.5nm,1.3s	22.00	343	eP	P	07 29 47.8	+1.1
PAHR	Pah Rah Range 6.5nm,1.2s	22.01	338	eP	P	07 29 46.7	-0.1
HWUT	Hardware Ranch 5.7nm,1.0s	22.13	355	eP	P	07 29 47.4	-0.7
KSU1	Kansas State U baz=212	22.29	26	P	P	07 29 48.7	-0.9
BEKR	Beckworth 10nm,1.3s	22.51	337	eP	P	07 29 53.1	+1.0
147A	Livingston baz=240	22.75	51	P	P	07 29 53.4	-1.2
349A	Repton baz=244	22.94	55	P	P	07 29 55.6	-0.9
OXF	Oxford baz=234	22.94	45	P	P	07 29 55.9	-0.6
BRAL	Brewton baz=245	22.97	55	P	P	07 29 56.0	-0.9
K22A	Casper 9.8nm,1.0s	23.17	5	eP	P	07 30 00.0	+1.0
K22A	Casper baz=186	23.17	5	P	P	07 29 58.1	-0.9
BW06	Boulder Array 2.4nm,0.9s	23.19	359	eP	P	07 30 00.1	+0.8
BW06	Boulder Array baz=179	23.19	359	P	P	07 29 58.6	-0.8
PD31	Pinedale Array	23.19	359	eP	P	07 30 00.1	+0.8
PDAR	Pinedale Array 0.8nm,0.7s,baz=159,slow=10,SNR=11	23.19	359	P	P	07 30 00.1	+0.8
148A	Greensboro baz=241	23.25	51	P	P	07 29 57.4	-2.3
249A	Camden baz=243	23.27	53	P	P	07 29 59.6	-0.3
X46A	Booneville baz=236	23.53	46	P	P	07 30 02.3	-0.2
451A	Vernon baz=248	23.78	58	P	P	07 30 04.1	-0.9
149A	Jones baz=242	23.80	52	P	P	07 30 04.3	-0.9
LRAL	Lakeview Retre baz=241	23.86	51	P	P	07 30 05.1	-0.7
250A	Grady baz=244	23.92	54	P	P	07 30 05.0	-1.3
SNOW	Snow King Moun 3.8nm,0.8s	23.93	357	eP	P	07 30 07.8	+1.2
W46A	Michie baz=235	23.99	45	P	P	07 30 06.0	-1.0
X47A	Russelville baz=237	24.00	47	P	P	07 30 05.8	-1.3
LOHW	Long Hollow 2.7nm,0.9s	24.07	357	eP	P	07 30 08.7	+0.8
CCM	Cathedral Cave baz=225	24.11	36	P	P	07 30 07.8	-0.2
FXWY	Fox Creek 4.5nm,1.1s	24.11	356	eP	P	07 30 09.2	+0.9
Y48A	Jasper baz=239	24.17	49	P	P	07 30 08.3	-0.4
MOOW	Moose Ponds 3.9nm,1.0s	24.21	357	eP	P	07 30 10.1	+0.9
MOD	Modoc Plateau 8.0nm,0.9s	24.29	339	eP	P	07 30 11.2	+1.3
IMW	Indian Meadow 3.0nm,0.8s	24.37	357	eP	P	07 30 11.4	+0.7
150A	Eclectic baz=243	24.39	53	P	P	07 30 10.2	-0.4
HLID	Hailey 3.7nm,0.8s	24.40	351	eP	P	07 30 11.7	+0.8
HLID	Hailey baz=168	24.40	351	P	P	07 30 11.2	+0.3
X48A	Hartselle baz=238	24.54	48	P	P	07 30 11.1	-0.9
FLWY	Flagg Ranch 3.3nm,0.9s	24.54	357	eP	P	07 30 12.7	+0.5
V47A	Nunnelly baz=235	24.96	45	P	P	07 30 16.3	+0.4
YBH	Yreka Blue Hor comp=Z,440nm,20.9s,baz=158,slow=36	25.02	335	LR	LR	07 39 37.1	
J08A	Circle Bar Ran 3.8nm,0.8s	25.07	344	eP	P	07 30 17.8	+1.0
YHH	Holmes Hill 4.9nm,1.2s	25.25	357	eP	P	07 30 21.6	+2.9
W49A	Belvidere baz=238	25.43	48	P	P	07 30 21.1	+1.0
T49A	Edmonton baz=236	27.01	45	P	P	07 30 35.0	+0.7
LAO	LASA Array 6.2nm,1.0s	27.21	4	eP	P	07 30 37.1	+1.0
HRY	Holter Researc	27.23	356	eP	P	07 30 36.5	+0.1
NEW	Newport 1.0nm,0.6s,baz=158,slow=5.4,SNR=3.2	29.42	349	P	P	07 30 56.7	+0.8
COWI	Conover 3.2nm,0.8s	31.18	27	eP	P	07 31 10.5	-0.9
ULM	Lac du Bonnet comp=Z,355nm,19.0s,baz=202,slow=37	32.42	16	LR	LR	07 44 59.6	
SDV	Santo Domingo 6.4nm,1.0s	38.62	100	eP	P	07 32 18.3	+2.2
TAOE	Nuku Hiva Isla comp=Z,512nm,24.3s	41.63	230	eLR	LR	07 44 14.4	
YKA	Yellowknife Ar comp=Z,37nm,19.4s,baz=182,slow=37	43.12	356	LR	LR	07 51 21.7	
NNA	Nana comp=Z,276nm,19.8s,baz=322,slow=31	44.56	132	LR	LR	07 47 54.3	
SCHQ	Schefferville comp=Z,170nm,19.2s,baz=268,slow=38	47.55	32	LR	LR	07 54 46.2	
RKT	Rikitea 6.1nm,0.3s	49.35	212	eT	T	08 26 36.8	
ILAR	Eielson Array 1.1nm,1.0s,baz=152,slow=6.3,SNR=8.4	51.74	340	P	P	07 34 00.1	+0.6
ILAR	comp=Z,118nm,21.5s,baz=142,slow=34			LR	LR	07 54 17.0	
ILB	Eielson Array 3.4nm,1.3s	51.74	340	eP	P	07 33 59.4	-0.1
LPAZ	La Paz 1.1nm,1.1s,baz=342,slow=6.4,SNR=2.6	53.70	129	P	P	07 34 14.8	-0.5
LPAZ	comp=Z,363nm,22.0s,baz=314,slow=33			LR	LR	07 54 01.8	
LPAZ	La Paz	53.70	129	eP	P	07 34 14.4	-0.9
PPT	Papeete comp=Z,283nm,18.3s,baz=32,slow=29	54.25	230	LR	LR	07 51 02.9	
PPT2	Papeete2 146nm,28.2s	54.26	230	eS	S	07 41 57.6	+1.0
PPT2	comp=Z,626nm,27.0s			eLR	LR	07 49 58.4	
TBI	Tubuai 572nm,33.0s	58.05	225	eS	S	07 42 48.2	+1.6
TBI	comp=Z,341nm,28.5s			eLR	LR	07 51 37.3	
SIV	San Ignacio 1.1nm,0.9s,baz=348,slow=4.0,SNR=6.3	58.90	123	P	P	07 34 52.3	+0.6
CPUP	Villa Florida 1.0nm,0.8s,baz=333,slow=11,SNR=2.2	67.79	130	P	P	07 35 53.2	+2.7
BDFB	Brasilia comp=Z,182nm,20.7s,baz=305,slow=34	69.44	116	LR	LR	08 04 52.4	
ARCES	ARCESS Array B comp=Z,135nm,21.5s,baz=310,slow=36	85.53	15	LR	LR	08 16 19.5	
NOA	NORSAR Array B comp=Z,68nm,18.6s,baz=310,slow=36	86.64	25	LR	LR	08 16 26.6	
DZM	Mont Dzumac 96nm,27.5s	92.31	248	eSP	SP	07 50 24.2	+6.8
DZM	Mont Dzumac comp=Z,685nm,30.7s	92.31	248	eLR	LR	08 07 47.7	
GERES	GERESS Array B comp=Z,156nm,19.7s,baz=308,slow=34	95.04	34	LR	LR	08 19 34.4	
MJAR	Matsushiro Arr comp=Z,60nm,21.5s,baz=235,slow=31	95.56	312	LR	LR	08 13 43.8	

IDC 14 07:46:34.7±52.0**, 21°.13S×174°.82W, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/25**, mbtmp3.8**/3**, Error ellipse: s-maj=979.6km s-min=173.1km az=85.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 2.4nm,0.7s,baz=88,slow=11,SNR=5.9	40.21	245	P	P	07 54 13.4	+0.3
ASAR	Alice Springs 1.0nm,0.7s,baz=105,slow=7.5,SNR=11	47.27	257	P	P	07 55 10.1	-0.1
WRA	Warramunga Arr 0.3nm,0.4s,baz=99,slow=8.1,SNR=8.0	47.46	262	P	P	07 55 11.1	-0.6

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*IDC **14** 07:46:58.0±1.1, 38°.24N×22°.35E, h0^{km}, mb3.7/9, mb1 3.7/11, mb1mx3.5/47, mbtmp3.7/11, ML3.2/2, Error ellipse: s-maj=25.3km s-min=18.2km az=152.0*

*ISCJB **14** 07:46:58.6±0.2, 38°.25N±0°.01×22°.08E±0°.02, h11^{km}±1^{km}, mb3.6/8, Error ellipse: s-maj=2.6km s-min=2.3km az=141.3*

*ATH **14** 07:46:58.6, 38°.24N×22°.10E, h12^{km}±1^{km}, ML3.3/18, Error ellipse: s-maj=1.2km s-min=0.7km az=282.0*

*THE **14** 07:46:58.9, 38°.24N×22°.10E, h9^{km}, ML3.3/23, Error ellipse: s-maj=0.7km s-min=0.4km az=324.0*

ISC 14 07:46:59.0±0.7**, 38°.23N**±0°.02×**22°.10E**±0°.02**, h12^{km}**±3^{km}**, n75, σ0^{s}.94**/119**, mb3.7**/8**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIG2	Aigio	0.02	293	P	Pg	07 47 00.7	-0.4
AIG2				S	Sg	07 47 02.0	-0.6
AIG3	Aigion	0.02	12	P	Pg	07 47 00.8	-0.3
AIG3				S	Sg	07 47 02.3	-0.3
ALIK	Aliki, Aigiali	0.03	21	P	Pg	07 47 00.8	-0.3
ALIK				S	Sg	07 47 02.4	-0.2
AIG1	Aigion	0.04	125	P	Pg	07 47 00.9	-0.2
AIG1				S	Sg	07 47 02.2	-0.5
LAKA	Lakka	0.09	274	P	Pg	07 47 01.4	-0.4
LAKA	20µm,0.4s			S	Sg	07 47 03.1	-0.7
LAKA	Lakka	0.09	274	P	Pg	07 47 01.3	-0.4
LAKA				S	Sg	07 47 03.1	-0.7
LAKA	comp=E,42271µm,0.4s			AML	AML	07 47 03.4	
LAKA	comp=N,43965µm,0.4s			AML	AML	07 47 03.6	
TRAZ	Trapeza	0.11	126	P	Pg	07 47 01.9	-0.1
TRAZ	comp=N,96µm,0.2s			S	Sg	07 47 04.2	+0.1
TRAZ	Trapeza	0.11	126	P	Pg	07 47 01.8	-0.1
TRAZ				S	Sg	07 47 04.1	-0.1
TRAZ				AML	AML	07 47 04.5	
TRAZ				AML	AML	07 47 05.9	
TRIZ	Trizonia	0.13	351	P	Pg	07 47 01.9	-0.3
TRIZ	comp=N,17µm,0.5s			S	Sg	07 47 04.5	-0.1
TRIZ	Trizonia	0.13	351	P	Pg	07 47 02.0	-0.3
KALE	Kalithea	0.16	12	P	Pg	07 47 02.5	-0.2
KALE	comp=N,20µm,0.2s			S	Sg	07 47 05.5	+0.1
KALE	Kalithea	0.16	12	P	Pg	07 47 02.5	-0.2
KALE				S	Sg	07 47 05.3	-0.1
KALE	comp=E,18626µm,0.2s			AML	AML	07 47 05.4	
KALE	comp=N,59113µm,0.2s			AML	AML	07 47 06.3	
SERG	Sergoula	0.18	350	P	Pg	07 47 02.7	-0.3
SERG	comp=N,12µm,0.3s			S	Sg	07 47 06.0	+0.1
SERG	Sergoula	0.18	350	P	Pg	07 47 02.7	-0.3
SERG				S	Sg	07 47 05.9	+0.1
SERG	comp=E,20849µm,0.2s			AML	AML	07 47 07.3	
SERG	comp=N,25523µm,0.3s			AML	AML	07 47 08.2	
KLV	Kalavryta, Ach	0.19	168	P	Pg	07 47 02.9	-0.3
KLV	comp=N,14µm,0.2s			S	Sg	07 47 05.8	-0.4
KLV	Kalavryta, Ach	0.19	168	P	Pg	07 47 02.9	-0.3
KLV				S	Sg	07 47 05.9	-0.3
KLV	comp=E,28358µm,0.2s			AML	AML	07 47 06.8	
KLV	comp=N,27832µm,0.5s			AML	AML	07 47 08.6	
UPR	University Cam	0.25	282	P	Pg	07 47 04.3	+0.1
UPR				S	Sg	07 47 07.4	-0.3
UPR	University Cam	0.25	282	P	Pg	07 47 04.1	-0.1
GUR	Goura	0.35	147	P	Pg	07 47 05.4	-0.7
GUR	comp=N,32µm,0.5s			S	Sg	07 47 11.1	+0.2
GUR	Goura	0.35	147	P	Pg	07 47 05.4	-0.7
GUR				S	Sg	07 47 10.5	-0.3
GUR	comp=N,65279µm,0.5s			AML	AML	07 47 11.8	
GUR	comp=E,59845µm,0.5s			AML	AML	07 47 11.8	
DSF	Desfina	0.38	62	P	Pg	07 47 06.1	-0.5
DSF	comp=E,6µm,0.1s			S	Sg	07 47 11.8	+0.1
DSF	Desfina	0.38	62	P	Pg	07 47 06.2	-0.5
DSF				S	Sg	07 47 11.1	-0.6
DSF	comp=N,10196µm,0.2s			AML	AML	07 47 12.4	
DSF	comp=E,11236µm,0.2s			AML	AML	07 47 13.1	
ANX	Ano Chora	0.39	339	P	Pg	07 47 06.1	-0.6
ANX	comp=E,6µm,0.3s			S	Sg	07 47 11.8	-0.1
ANX	Ano Chora	0.39	339	P	Pg	07 47 06.1	-0.6
ANX				S	Sg	07 47 12.5	+0.6
ANX	comp=N,11844µm,0.3s			AML	AML	07 47 14.3	
ANX	comp=E,13564µm,0.2s			AML	AML	07 47 15.3	
THAL	Thalero	0.49	114	P	Pg	07 47 08.3	-0.2
THAL				S	Sb	07 47 15.6	-1.0
THAL	comp=E,12008µm,0.4s			AML	AML	07 47 21.6	
THAL	comp=N,11277µm,0.4s			AML	AML	07 47 21.9	
RLS	Riolos of Patr	0.53	251	P	Pg	07 47 08.7	-0.6
RLS	comp=N,1µm,0.3s			S	Sg	07 47 16.7	+0.4
RLS	Riolos of Patr	0.53	251	P	Pg	07 47 08.6	-0.6
RLS				S	Sb	07 47 17.0	-0.7
RLS	comp=E,3162µm,0.3s			AML	AML	07 47 20.2	
RLS	comp=N,3359µm,0.5s			AML	AML	07 47 30.9	
PVO	Paravola	0.59	311	P	Pg	07 47 09.9	-0.6
PVO	Paravola	0.59	311	P	Pg	07 47 10.0	-0.5
PVO				S	Sg	07 47 18.0	-0.3
PVO	comp=E,3632µm,0.5s			AML	AML	07 47 23.1	
PVO	comp=N,3810µm,0.5s			AML	AML	07 47 23.2	
PROD	Prodromos	0.63	87	P	Pg	07 47 11.1	-0.2
PROD				S	Sb	07 47 20.4	-0.4
PROD	Prodromos	0.63	87	P	Pb	07 47 11.6	-0.4
PROD	comp=E,3179µm,0.3s			AML	AML	07 47 24.7	

PROD				AML	AML	07 47 25.3	
	comp=N,4426µm,0.3s						
TRIP	Tripoli	0.72	169	P	Pg	07 47 11.8	-1.1
TRIP				S	Sb	07 47 23.1	-0.2
	comp=N,4µm,0.5s						
TRIP	Tripoli	0.72	169	P	Pg	07 47 11.9	-1.0
TRIP				S	Sb	07 47 23.3	0.0
TRIP				AML	AML	07 47 28.4	
	comp=N,7040µm,0.5s						
TRIP				AML	AML	07 47 28.4	
	comp=E,7462µm,0.5s						
EVR	Evrytania	0.72	342	P	Pg	07 47 12.0	-0.9
EVR	Evrytania	0.72	342	P	Pg	07 47 12.1	-0.9
EVR				S	Sg	07 47 22.0	-0.4
EVR				AML	AML	07 47 29.0	
	comp=E,2419µm,0.6s						
EVR				AML	AML	07 47 29.6	
	comp=N,3589µm,0.8s						
AMT	Artemida-Makis	0.76	204	P	Pg	07 47 13.2	-0.6
AMT				S	Sb	07 47 24.4	-0.2
	comp=N,4µm,0.5s						
AMT	Artemida-Makis	0.76	204	P	Pg	07 47 13.1	-0.6
AGG	Agios Georgios	0.81	13	P	Pg	07 47 13.2	-1.4
AGG				S	Sg	07 47 24.8	-0.4
	comp=N,1µm,1.0s						
AGG	Agios Georgios	0.81	13	P	Pg	07 47 13.6	-1.0
AGG				AML	AML	07 47 30.6	
	comp=N,1828µm,0.8s						
AGG				AML	AML	07 47 32.2	
	comp=E,2199µm,1.0s						
LKR	Lokris	0.82	59	P	Pg	07 47 13.9	-1.0
LKR				S	Sg	07 47 25.6	+0.1
LKR				AML	AML	07 47 30.7	
	comp=N,3073µm,0.4s						
LKR				AML	AML	07 47 31.6	
	comp=E,3914µm,0.3s						
ATAL	Atalanti	0.86	57	P	Pg	07 47 14.1	-1.4
ATAL				S	Sb	07 47 27.2	-0.1
	comp=E,1µm,0.8s						
VLX	Vlachokerasia	0.89	165	P	Pg	07 47 14.7	-1.4
VLX				S	Sb	07 47 28.4	+0.1
	comp=E,7µm,0.4s						
VLX	Vlachokerasia	0.89	165	P	Pg	07 47 15.1	-1.1
VIL2	Platees	0.92	91	P	Pn	07 47 17.4	-0.4
VIL2				S	Sn	07 47 30.9	-0.1
VIL2				AML	AML	07 47 33.2	
	comp=N,4410µm,0.8s						
VIL2				AML	AML	07 47 34.1	
	comp=E,8142µm,0.9s						
VILL	Villia	0.96	94	P	Pb	07 47 17.8	+0.2
VILL				S	Sn	07 47 31.4	-0.5
	comp=E,3µm,0.8s						
ITM	Ithomi	1.06	187	P	Pg	07 47 17.8	-1.6
ITM				S	Sn	07 47 34.7	+0.3
	comp=E,1µm,0.4s						
DID	Didima	1.16	128	P	Pb	07 47 19.7	-1.2
DID				S	Sb	07 47 36.4	+0.5
	comp=E,2µm,0.5s						
DID	Didima	1.16	128	P	Pb	07 47 20.0	-0.9
DID				S	Sg	07 47 35.6	-0.7
DID				AML	AML	07 47 37.3	
	comp=N,4021µm,0.7s						
DID				AML	AML	07 47 38.3	
	comp=E,4763µm,0.3s						
KRND	KRANIDI	1.19	135	P	Pb	07 47 20.8	-0.7
KRND				S	Sn	07 47 38.5	+1.0
	comp=E,3µm,0.4s						
VLS	Valsamata	1.19	268	P	Pb	07 47 20.1	-1.4
VLS				S	Sn	07 47 39.0	+1.4
	comp=E,518nm,0.2s						
PYL	PYLOS	1.36	192	P	Pn	07 47 23.5	-0.4
VLY	Voula,Athens	1.39	105	P	Pn	07 47 24.0	-0.2
VLY				S	Sg	07 47 43.4	-0.4
	comp=E,550nm,0.4s						
PTL	Penteli	1.41	97	P	Pn	07 47 24.5	+0.1
PTL				S	Sn	07 47 43.0	+0.1
	comp=E,448nm,0.7s						
DION	Dionisos Attik	1.46	96	P	Pn	07 47 25.1	0.0
VLI	Veliai	1.65	156	P	Pn	07 47 28.0	+0.2
VLI				S	Sn	07 47 49.5	+0.5
	comp=E,1µm,0.6s						
VAY	Valandovo	3.10	7	*i* Pn	Pn	07 47 43.4	-4.3
IDI	Anoyia	3.70	142	Lg	Lg	07 48 39.7	
	baz=19,slow=18						
SKO	Skopje	3.77	353	*i* Pn	Pn	07 47 59.9	+3.0
DBRK	Dubrovnik	5.36	327	*e*Pn	Pn	07 48 19.8	+1.1
STON	Ston	5.72	326	*e*Pn	Pn	07 48 26.7	+3.1
STON				Sn	Sn	07 49 28.4	-0.8
MAKA	Makarska	6.35	324	Sn	Sn	07 49 42.4	-2.4
ZIRJ	Zirje	7.29	320	*e*Pn	Pn	07 48 46.0	+0.7
MLR	Muntele Rosu	7.80	20	Pn	Pn	07 48 52.2	-0.1
	comp=E,0.2nm,0.3s,baz=194,slow=8.3,SNR=2.7						
DUGI	Dugi Otok	7.83	320	*e*Pn	Pn	07 48 53.0	+0.3
UDBI	Udbina	7.89	325	*i* Pn	Pn	07 48 56.3	+2.8
BRTR	Keskin Array B	9.11	77	Pn	Pn	07 49 10.1	-0.4
	comp=E,0.1nm,0.3s,baz=260,slow=12,SNR=3.2						
ESDC	Sonseca Array	20.30	282	P	Pn	07 51 36.8	0.0
	comp=E,0.7nm,0.5s,baz=78,slow=11,SNR=7.9						
HFS	Hagfors	22.56	349	P	P	07 52 00.8	+2.1
	comp=E,1.5nm,0.7s,baz=159,slow=14,SNR=5.5						
FINES	FINESS Array B	23.37	5	P	P	07 52 07.6	+0.5
	comp=E,2.6nm,1.0s,baz=175,slow=18,SNR=2.8						
EKA	Eskdalemuir Ar	24.11	323	P	P	07 52 16.0	+1.6
	comp=E,0.9nm,0.8s,baz=126,slow=10,SNR=5.3						
TORD	Torodi Ar. Bea	30.87	221	P	P	07 53 17.4	+2.1
	comp=E,0.5nm,0.7s,baz=54,slow=7.3,SNR=2.6						
KURBB	Kurchatov Arra	41.20	54	P	P	07 54 42.2	-1.0
	comp=E,0.9nm,0.8s,baz=281,slow=8.7,SNR=5.8						
MKAR	Makanchi Array	44.21	59	P	P	07 55 07.4	-0.5
	comp=E,1.3nm,0.5s,baz=279,slow=6.7,SNR=14						
ZALV	Zalesovo Beam	44.73	48	P	P	07 55 11.4	-0.5
	comp=E,1.6nm,0.5s,baz=264,slow=6.8,SNR=2.7						
SONM	Songino Array	59.46	51	P	P	07 57 01.8	+0.1
	comp=E,0.4nm,0.4s,baz=287,slow=9.9,SNR=3.1						

NORS ***14*** *07:50:01.2±0.0, 42°.59N×45°.44E, h15km, MPVA4.0*
DDA ***14*** *07:50:02.4, 42°.63N×45°.28E, h7km±3km, ML2.8*
DRS ***14*** *07:50:03.4±0.0, 42°.55N×45°.45E, h15km, ML3.0/2*
ISC 14 07:50:02.2±1.0**, 42°.58N**±0°.02×**45°.41E**±0°.02**, h9**km±9km**,**
n37, σ**0s.97**/67**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	Botlikh	0.60	82	*e*Pg	Pg	07 50 14.1	+0.2
	53nm,0.1s						
BTLR				*e*Sg	Sb	07 50 23.1	-0.5
	461nm,0.6s						
KMGR	Komgaron	0.62	320	*e*Pg	Pg	07 50 14.6	+0.3
KMGR				*e*Sg	Sb	07 50 24.7	+0.6
DVE	Vedeno	0.64	54	*i* Pg	Pg	07 50 14.6	-0.1
DVE				*e*Sg	Sb	07 50 23.8	-1.0
GROC	Groznyy	0.68	24	*e*Pg	Pb	07 50 16.3	+0.1
GROC				*e*Sg	Sn	07 50 27.0	-1.8
GUDG	Gudauri	0.70	261	P	Pg	07 50 15.4	-0.4
GUDG				S	Sg	07 50 24.3	-0.7
VLKR	Vladikavkaz	0.71	311	*e*Pg	Pb	07 50 16.7	-0.2
VLKR				*e*Pg	Pn	07 50 26.8	+8.3
LACR	Lac	0.86	287	*e*Pg	Pg	07 50 17.3	-1.4
LACR				*e*Sg	Sg	07 50 27.6	-2.4
XNZR	Khunzakh	0.95	92	*e*Pg	Pb	07 50 20.8	-0.2
XNZR				*e*Sg	Sb	07 50 33.5	-0.4
LGD	Lagodekhi	0.97	140	P	Pb	07 50 21.1	-0.1
LGD				S	Sb	07 50 34.2	+0.2
TBLG	Delisi	0.99	211	P	Pn	07 50 21.9	-0.4
TBLG				S	Sb	07 50 34.8	+0.2
TBLG	Delisi	0.99	211	*i* P	Pn	07 50 22.6	+0.3
TBLG				*i* S	Sn	07 50 35.9	-0.5
TBLG				IAML_P			
	comp=Z,3µm,0.2s						
BTNK	Botanikuri	1.01	207	P	Pn	07 50 22.2	-0.4
BTNK				S	Sn	07 50 36.9	+0.1
BTNK	Botanikuri	1.01	207	*i* P	Pn	07 50 22.3	-0.3
BTNK				*i* S	Sn	07 50 37.8	+1.0
BTNK				IAML_P			
	comp=Z,5µm,0.1s						
DLMR	Dylym	1.02	61	*e*Pg	Pn	07 50 22.5	-0.2
	comp=Z,53nm,0.2s						
DLMR				*e*Sg	Sn	07 50 37.0	-0.1
	comp=Z,217nm,0.3s						
ARNR	Ardon	1.02	306	*e*Pg	Pg	07 50 22.3	+0.4
ARNR				*e*Sg	Sn	07 50 37.8	+0.6
UNCR	Uncukul	1.03	82	*e*Pg	Pg	07 50 22.0	0.0
	comp=Z,36nm,0.2s						
UNCR				*e*Sg	Sg	07 50 35.0	-0.3
	comp=Z,190nm,0.4s						
KORR	Kora	1.11	297	*e*Pg	Pn	07 50 24.3	+0.3
KORR				*e*Sg	Sn	07 50 40.2	+0.8
KRNR	Karanay	1.13	77	*i* Pg	Pb	07 50 23.7	-0.2
	comp=Z,31nm,0.2s						
KRNR				*i* Sg	Sn	07 50 40.3	+0.4
	comp=Z,64nm,0.3s						
DBC	Dubki	1.13	67	*e*Pg	Pb	07 50 23.6	-0.4
	comp=Z,131nm,0.0s						
DBC				*e*Sg	Sn	07 50 40.4	+0.5
	comp=Z,200nm,0.0s						
GNBR	Gunib	1.16	99	*e*Pg	Pg	07 50 24.6	0.0
GNBR				*e*Sg	Sg	07 50 39.7	0.0
DDFL	Dedoflistskaro	1.25	155	P	Pn	07 50 24.9	-1.0
DDFL	Dedoflistskaro	1.25	155	*i* P	Pn	07 50 25.8	-0.1
DDFL				*i* S	Sg	07 50 47.2	+4.7
STDR	Stavd-Durt	1.27	309	*e*Pg	Pg	07 50 26.9	+0.4
STDR				*e*Sg	Sg	07 50 45.9	+2.9
KMKR	Kumukh	1.33	109	*e*Pg	Pn	07 50 27.0	-0.1
	comp=Z,22nm,0.3s						
KMKR				*i* Sg	Sg	07 50 45.0	0.0
	comp=Z,125nm,0.3s						
LSNR	Lesken	1.36	301	*e*Pg	Pg	07 50 28.2	-0.1
LSNR				*e*Sg	Sg	07 50 47.2	+1.3
DIGR	Digorskoe uzhe	1.39	284	*i* Pg	Pn	07 50 27.5	-0.4
DIGR				*e*Sg	Sb	07 50 45.6	-0.7
KZRT	Kazreti	1.42	213	P	Pb	07 50 28.7	-0.1
KZRT	Kazreti	1.42	213	*i* P	Pg	07 50 29.8	+0.4
ONI	Oni	1.45	271	P	Pb	07 50 29.8	+0.4
AKH	Akhalkalaki	1.85	231	P	Pb	07 50 35.7	-0.6
BGD	Bogdanovka	1.89	226	P	Pb	07 50 36.7	-0.3
BGD				S	Sg	07 51 02.6	-0.3
NEY	Neytrino	2.09	290	*e*Pg	Pb	07 50 39.4	-0.9
NEY				*e*Sg	Sb	07 51 05.7	-0.7
PYA1	Pyatigorsk	2.25	312	*e*Pn	Pn	07 50 38.8	-0.8
PYA1				*e*Pn	Sn	07 51 08.2	+0.7
SHA1	Shidzhatmaz	2.32	301	*e*Pn	Pn	07 50 42.1	+1.3
SHA1				*e*Sn	Sb	07 51 13.8	+0.5
KIV0	Kislovodsk Arr	2.41	306	*e*Pn	Pn	07 50 41.8	-0.2
KIV0				*e*Pn	Sn	07 51 12.7	+1.0
GNI	Garni	2.48	192	*e*Pn	Pb	07 50 46.4	-0.7
GNI				*e*Sn	Sg	07 51 21.2	-0.8
DBAD	Bademkaya	3.19	242	*i* P	Pn	07 50 52.6	0.0

ISCJB ***14*** *08:10:10.3±0.5, 3°.32N±0°.08×98°.50E±0°.07, h150km, mb3.7/6, Error ellipse: s-maj=11.6km s-min=8.8km az=29.0*
IDC ***14*** *08:10:10.8±1.2, 3°.25N×98°.53E, h151km±6km, mb3.5/6, mb1 3.6/6, mb1mx3.2/39, mbtmp3.9/6, MS3.6/1, Ms1 3.6/1, ms1mx2.7/31, Error ellipse: s-maj=77.2km s-min=16.3km az=57.0*
DJA ***14*** *08:10:11.8±0.6, 3°N±4°×9°8E±°, h139km±5km, M3.1/9, MLv3.1/9*
ISC 14 08:10:10.9±0.8**, 3°.22N**±0°.08×**98°.43E**±0°.07**, h150**km**, n15,**
σ**1s.09**/18**, mb3.7**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSI	Tuntungan	0.31	26	P	Pn	08 10 32.9	+1.4
TSI				S	Sn	08 10 48.9	+1.7
PSI	Prapat	0.65	130	P	Pn	08 10 34.7	+1.4
	14nm,0.3s,baz=334,slow=7.1,SNR=62						
PSI				S	Sn	08 10 51.5	+1.3
	6.3nm,0.3s,baz=76,slow=20,SNR=24						
KCSI	Kotacane, Aceh	0.72	294	P	Pn	08 10 34.6	+1.0
KCSI				S	Sn	08 10 51.4	+0.6
TPTI		1.25	272	P	Pn	08 10 39.0	+1.1
TPTI				S	Sn	08 10 58.8	+0.3
GSI	Gunungsitoli	2.09	204	P	Pn	08 10 47.5	+0.4
SNSI	Sinabang, Aceh	2.25	249	P	Pn	08 10 50.7	+1.7
MLSI	Meulaboh, Aceh	2.27	297	P	Pn	08 10 49.7	+0.4
MNSI	Mandailing Nat	2.67	154	P	Pn	08 10 54.8	+0.6
WRA	Warramunga Arr	42.11	125	P	P	08 17 47.5	-1.1
	1.1nm,0.5s,baz=294,slow=10,SNR=14						
ASAR	Alice Springs	43.68	130	P	P	08 18 00.4	-0.8
	0.3nm,0.4s,baz=301,slow=7.8,SNR=10						
SONM	Songino Array	44.97	8	P	P	08 18 10.9	-0.3
	0.4nm,0.5s,baz=211,slow=5.0,SNR=2.5						
MKAR	Makanchi Array	45.61	344	P	P	08 18 15.6	-0.6
	0.6nm,0.4s,baz=149,slow=9.2,SNR=12						
ZALV	Zalesovo Beam	51.78	350	P	P	08 19 02.2	-0.8
	1.5nm,0.3s,baz=168,slow=7.4,SNR=3.6						
STKA	Stephens Creek	53.83	134	LR	LR	08 43 27.1	
	comp=Z,59nm,19.1s,baz=202,slow=37						
FINES	FINESS Array B	78.79	332	P	P	08 21 56.5	-0.3
	2.9nm,1.0s,baz=107,slow=4.8,SNR=4.1						

NEIC ***14*** *08:10:44.9±0.0, 61°.56N×141°.09W, h1km, ML3.3(OTT), ML3.3(AEIC), After AEIC.*
IDC ***14*** *08:10:45.0±1.3, 61°.69N×141°.06W, h0km, mb3.7/2, mb1 3.6/6, mb1mx3.3/45, mbtmp3.4/6, ML3.0/4, Error ellipse: s-maj=22.6km s-min=11.2km az=38.0*
PGC ***14*** *08:10:45.4, 61°.57N×141°.07W, h2km, ML3.3/11, 210km Wnw of Haines Jct., Yt Southern Alaska*
ISC 14 08:10:44.7±1.0**, 61°.58N**±0°.02×**141°.06W**±0°.02**, h6**km±8km**,**
n99, σ**1s.65**/133**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	27	P	Pg	08 10 49.6	+0.4
YUK2				S	Sg	08 10 53.0	+0.7
YUK3	Moose Creek	0.34	56	P	Pg	08 10 51.6	+0.1
YUK3				S	Sg	08 10 56.3	+0.2
YUK1	Sand Pete Hill	0.62	24	P	Pg	08 10 56.5	-0.2
YUK1				S	Sg	08 11 04.9	+0.1
PTPK	Patty Peak	0.79	240	P	Pg	08 10 59.2	-0.6
PTPK				S	Sg	08 11 09.6	-0.3
BALM	Baldy	0.83	229	*e*Pg	Pg	08 10 59.5	-1.1
BALM	Baldy	0.83	229	P	Pg	08 10 59.5	-1.1
BALM				S	Sg	08 11 10.3	-1.1
BVCY	Beaver Creek	0.84	6	P	Pg	08 11 00.7	-0.1
BVCY				S	Sn	08 11 17.1	+1.4
KIAG	Kiagna River	0.91	224	P	Pg	08 11 00.9	-1.3
KIAG				S	Sg	08 11 13.4	-0.6
TABL	Table Mountain	1.15	182	P	Pg	08 11 05.5	-1.2
TABL				S	Sg	08 11 20.9	-0.7
YUK4	Talbot Arm	1.18	101	P	Pg	08 11 07.0	-0.4
YUK4				S	Sg	08 11 23.4	+0.7
YUK6	Outpost Mounta	1.45	115	Pn	Pn	08 11 11.0	-0.7
YUK6				Sg	Sg	08 11 31.6	+0.2
SAMH	Samovar Hills	1.47	175	Pn	Pn	08 11 11.9	+0.2
SAMH				Sg	Sb	08 11 31.9	+0.6
MESA	MESA	1.48	198	Pn	Pn	08 11 12.1	+0.2
MESA				Sn	Sn	08 11 32.5	+0.8
BCA3	Beaver Creek A	1.52	347	*e*Pn	Pn	08 11 12.7	+0.2
CHX	Chaix Hills	1.53	181	*e*Pn	Pn	08 11 13.1	+0.5
PCA	Pinnacle	1.54	165	*e*Pn	Pn	08 11 13.4	+0.6
PCA				*e*Sn	Sg	08 11 34.7	+0.5
PCA	Pinnacle	1.54	165	Pn	Pn	08 11 13.0	+0.2
PCA				Sg	Sg	08 11 34.1	-0.1
YUK5	Granite Creek	1.61	105	Pn	Pn	08 11 13.6	-0.1
YUK5				Sg	Sn	08 11 35.5	+0.7
SNH	Sunshine Point	1.66	212	*e*Pn	Pn	08 11 15.0	+0.7
YUK7	Dusty Glacier	1.77	125	Pn	Pn	08 11 17.0	+1.0
YUK7				Sn	Sn	08 11 40.4	+1.5
BCPM	Bancas Point	1.78	156	*e*Pn	Pn	08 11 17.4	+1.4
BCPM				*e*Sn	Sb	08 11 40.6	+0.4
MENT	Mentasta	1.84	319	*e*Pn	Pn	08 11 18.4	+1.5
MENT				*e*Sn	Sg	08 11 44.0	+0.1
HYT	Haines Junctio	1.88	112	*e*Pn	Pn	08 11 17.9	+0.5
HYT				*e*Sn	Sn	08 11 41.7	+0.1
HYT	Haines Junctio	1.88	112	Pn	Pn	08 11 17.9	+0.5
HYT				Sg	Sb	08 11 43.8	+0.5
PS12	TAPS Pump St12	1.96	269	*e*Pn	Pn	08 11 19.9	+1.5
HMT	Hamilton	2.00	233	*e*Pn	Pb	08 11 21.6	+0.1
HMT				*e*Sn	Sg	08 11 49.9	+1.0
PNL	Peninsula	2.09	156	*e*Pn	Pn	08 11 21.4	+1.2
PNL	Peninsula	2.09	156	Pn	Pn	08 11 21.3	+1.1
PNL				Sg	Sg	08 11 50.9	-0.9
YKU2	Yakutat	2.19	161	*e*Pn	Pn	08 11 23.1	+1.6
SGAM	Sherman Glacie	2.29	244	*e*Pn	Pn	08 11 23.3	+0.3
PAX	Paxson	2.49	306	*e*Pn	Pn	08 11 28.2	+2.5
PAX	Paxson	2.49	306	Pn	Pn	08 11 28.1	+2.3
PAX				Sg	Sb	08 12 01.2	+0.6
DOT	Dot Lake	2.49	328	*e*Pn	Pn	08 11 26.1	+0.3
DOT	Dot Lake	2.49	328	Pn	Pn	08 11 25.9	+0.1
DOT				Sg	Sb	08 12 02.1	+1.3
EYAK	Cordova Ski Ar	2.51	248	*e*Pn	Pn	08 11 28.5	+2.6
DAWY	Dawson	2.61	16	*e*Pn	Pn	08 11 28.0	+0.7
DAWY	Dawson	2.61	16	Pn	Pn	08 11 27.8	+0.4
DAWY				Sg	Sb	08 12 05.5	+1.5
JPK	Jack Peak	2.72	261	*e*Pn	Pn	08 11 30.1	+1.1
SCRK	Sand Creek	2.75	332	*e*Pn	Pn	08 11 29.7	+0.3
FID	Port Fidalgo	2.76	255	*e*Pn	Pn	08 11 32.5	+3.1
FID				*e*Pn	Pn	08 11 32.5	+3.1
RIDG	Independent Ri	2.78	323	*e*Pn	Pn	08 11 30.2	+0.5
SCM	Sheep Creek Mo	3.00	278	*e*Pn	Pn	08 11 35.3	+2.6
GLI	Glacier Island	3.00	259	*e*Pn	Pn	08 11 34.8	+2.1
PLBC	Pleasant Camp	3.15	131	Pn	Pn	08 11 35.8	+1.0
PLBC				Pg	Pb	08 11 41.2	+0.1
PLBC				Sg	Sg	08 12 25.1	-0.8
EGAK	Eagle	3.21	359	*e*Pn	Pn	08 11 36.7	+1.2
SML	Sawmill	3.47	277	*e*Pn	Pn	08 11 42.1	+2.9
SKAG	Skagway	3.54	124	*e*Pn	Pn	08 11 42.1	+2.0
KNK	Knik Glacier	3.55	270	*e*Pn	Pn	08 11 42.6	+2.3
PMR	Palmer	3.86	274	*e*Pn	Pn	08 11 46.0	+1.6
HDA	Harding Lake	3.90	319	*e*Pn	Pn	08 11 44.6	-0.6
RND	Reindeer	4.05	300	*e*Pn	Pn	08 11 51.2	+4.0
IL1	Eielson Array	4.15	323	*e*Pn	Pn	08 11 48.0	-0.4
ILAR	Eielson Array	4.15	323	Pn	Pn	08 11 47.8	-0.7
	0.7nm,0.3s,baz=144,slow=13,SNR=28						
ILAR				Lg	Lg	08 12 53.7	
	5.1nm,0.3s,baz=130,slow=27,SNR=9.2						
ILB	Eielson Array	4.15	323	*e*Pn	Pn	08 11 48.5	0.0
RC01	Rabbit Creek A	4.21	267	*e*Pn	Pn	08 11 49.8	+0.4
MCK	McKinley	4.22	304	*e*Pn	Pn	08 11 53.4	+3.8
WRH	Wood River Hil	4.32	315	*e*Pn	Pn	08 11 53.3	+2.5
BESE	Bessie Mountai	4.33	131	*e*Pn	Pn	08 11 51.9	+0.9
BESE	Bessie Mountai	4.33	131	Pn	Pn	08 11 51.2	+0.2
BESE				Sg	Sg	08 13 00.8	-2.8
CCB	Clear Creek Bu	4.34	318	*e*Pn	Pn	08 11 51.5	+0.4
SEW	Seward	4.37	254	*e*Pn	Pn	08 11 52.9	+1.5
PRP	Porcupine Dome	4.42	335	*e*Pn	Pn	08 11 53.9	+1.5
BWN	Browne	4.64	308	*e*Pn	Pn	08 11 58.5	+3.3
JIS	Juneau Island	4.72	132	*e*Pn	Pn	08 11 56.8	+0.5
KTH	Kantishna Hill	4.97	298	*e*Pn	Pn	08 12 03.7	+3.9
BRSE	Bradley Lake S	5.11	253	*e*Pn	Pn	08 12 02.0	+0.3
BRLK	Bradley Lake	5.17	254	*e*Pn	Pn	08 12 03.8	+1.4
EPYK	Eagle Plains	5.17	20	*e*Pn	Pn	08 12 04.0	+1.5
BPAW	Bear Paw Mtn.	5.20	303	*e*Pn	Pn	08 12 05.1	+2.2
FYU	Fort Yukon	5.33	342	*e*Pn	Pn	08 12 05.9	+1.3
PPLA	Purkeypile	5.37	289	*e*Pn	Pn	08 12 07.2	+1.9
SIT	Sitka	5.41	145	*e*Pn	Pn	08 12 09.2	+3.5
CNPM	China Poot	5.43	252	*e*Pn	Pn	08 12 07.4	+1.3
MLY	Manley	5.56	313	*e*Pn	Pn	08 12 09.3	+1.3
RSO	Redoubt South	5.80	264	*e*Pn	Pn	08 12 13.3	+2.0
BM3	Burnt Mountain	6.05	347	*e*Pn	Pn	08 12 15.8	+1.1
DLBC	Dease Lake	6.37	115	Pn	Pn	08 12 21.0	+2.0
	0.2nm,0.3s,baz=316,slow=8.5,SNR=3.2						
DLBC				Lg	Lg	08 14 07.1	
	1.9nm,0.3s,baz=51,slow=25,SNR=7.5						
DLBC	Dease Lake	6.37	115	*e*Pn	Pn	08 12 19.9	+0.9
DLBC	Dease Lake	6.37	115	Pg	Pb	08 12 41.6	+5.8
DLBC				Sg	Sg	08 14 07.0	-1.9
WRAK	Wrangell Islan	6.86	135	*e*Pn	Pn	08 12 23.4	-2.3
COLD	Coldfoot	6.90	329	*e*Pn	Pn	08 12 27.5	+1.2
COLD	Coldfoot	6.90	329	Pn	Pn	08 12 27.0	+0.7
COLD				Sn	Sn	08 13 43.5	-1.5
COLD				Sg	Sg	08 14 19.5	-6.6
KDAK	Kodiak Island	6.97	242	*e*Pn	Pn	08 12 28.7	+1.6
SVW2	Sparrevohn	7.00	272	*e*Pn	Pn	08 12 28.6	+0.9
TTA	Tatalina	7.11	287	*e*Pn	Pn	08 12 29.6	+0.4
TT01	Tatalina	7.11	287	*e*Pn	Pn	08 12 30.2	+1.0
IM3	Indian Mountai	7.14	314	*e*Pn	Pn	08 12 31.2	+1.7
INK	Inuvik	7.46	22	Pn	Pn	08 12 33.8	-0.1
	0.3nm,0.3s,baz=216,slow=19,SNR=6.5						
INK				Sn	Sn	08 13 54.9	-3.8
	0.9nm,0.3s,baz=230,slow=16,SNR=3.7						
INK				Lg	Lg	08 14 38.7	
	0.7nm,0.3s,baz=277,slow=14,SNR=3.6						
INK	Inuvik	7.46	22	*e*Pn	Pn	08 12 32.7	-1.2
INK				*e*Lg	Lg	08 14 38.7	
INK	Inuvik	7.46	22	Pn	Pn	08 12 34.9	+1.0
INK				Sn	Sn	08 13 54.4	-4.3
OHAK	Old Harbor	7.62	240	*e*Pn	Pn	08 12 37.0	+1.0
TOLK	Toolik Lake Re	7.93	337	*e*Pn	Pn	08 12 42.9	+2.5
SII	Sitkinak Islan	8.42	239	*e*Pn	Pn	08 12 48.4	+1.2
FNBB	Fort Nelson	9.37	99	Pn	Pn	08 12 59.9	-0.2
FNBB				Sn	Sn	08 14 42.9	-2.7
FNBB				Sg		08 15 37.6	
YKA	Yellowknife Ar	12.41	74	Pn	Pn	08 13 41.5	-0.2
	0.1nm,0.3s,baz=276,slow=12,SNR=3.6						
YKB5	Yellowknife Ar	12.41	74	*e*Pn	Pn	08 13 41.5	-0.2
PD31	Pinedale Array	26.56	121	*e*P	P	08 16 25.2	+1.9
PDAR	Pinedale Array	26.56	121	P	P	08 16 25.2	+1.9
	0.4nm,0.8s,baz=316,slow=6.2,SNR=3.6						
AKASG	Malin Array Be	67.80	7	P	P	08 21 42.4	-0.4
	0.8nm,0.5s,baz=355,slow=6.7,SNR=4.2						

ISCJB ***14*** *08:15:15.1±0.4, 61°.61N±0°.01×140°.99W±0°.02, h3km±2km, mb4.4/62, MS3.7/17, Error ellipse: s-maj=2.3km s-min=1.8km az=35.0*
IDC ***14*** *08:15:16.1±0.5, 61°.73N×140°.96W, h0km, mb4.2/23, mb1 4.3/29, mb1mx4.2/52, mbtmp4.1/29, ML3.7/6, MS3.5/14, Ms1 3.5/14, ms1mx3.3/32, Error ellipse: s-maj=14.2km s-min=7.5km az=42.0*
NEIC ***14*** *08:15:16.0±0.0, 61°.57N×141°.08W, h1km, mb4.4/92, MW4.4, ML4.4(AEIC), MW4.5(OTT), Moment Tensor Solution. s38 Moment tensor: Scale 10^{15}Nm; M_{rr}4.05; $M_{\theta\theta}$-4.20; $M_{\phi\phi}$0.15; $M_{r\theta}$0.24; $M_{\theta\phi}$0.80; $M_{\phi r}$-0.56; Best double couple: $M_0$4.30000×10^{15} NP1:ϕ_s273.00000°, δ43.00000°, λ79.00000°. NP2:ϕ_s108.00000°, δ48.00000°, λ100.00000°. Principal axes: T 4.1300, Plg82.0000°, Azm84.0000°; N 0.2200, Plg8.0000°, Azm281.0000°; P -4.3500, Plg2.0000°, Azm190.0000°; After AEIC.*
AEIC ***14*** *08:15:16.0, 61°.57N×141°.08W, h1km, MB4.4(NEIC), MW4.4(NEIC), MW4.5(OTT)*
PGC ***14*** *08:15:16.6, 61°.57N×141°.09W, h1km, mb4.4, ML4.4/11, Mw4.5, 211km Wnw of Haines Jct., Yt Southern Alaska*
MOS ***14*** *08:15:16.6±1.0, 61°.67N×140°.95W, h13km, mb4.8/20, Error ellipse: s-maj=13.4km s-min=5.7km az=101.5*
ISC 14 08:15:17.1±0.5**, 61°.61N**±0°.02×**141°.11W**±0°.02**, h7**km±3km**,**
n566, σ**1s.35**/598**, mb4.5**/62**, MS3.5**/17**, 19C-21D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.22	35	P	Pg	08 15 20.8	-0.7
YUK2				S	Sg	08 15 24.4	-0.2
YUK3	Moose Creek	0.35	61	P	Pg	08 15 22.8	-1.3
YUK3				S	Sg	08 15 27.9	-0.8
YUK1	Sand Pete Hill	0.61	26	P	Pg	08 15 27.7	-1.2
YUK1				S	Sg	08 15 36.7	-0.2
PTPK	Patty Peak	0.78	238	P	Pg	08 15 30.4	-1.6
PTPK				S	Sg	08 15 40.8	-1.3
BVCY	Beaver Creek	0.82	8	P	Pg	08 15 31.9	-0.9
BVCY				S	Sg	08 15 44.0	+0.6
BALM	Baldy	0.83	227	P	Pg	08 15 30.6	-2.3
BALM				S	Sg	08 15 41.9	-1.8
KIAG	Kiagna River	0.91	222	P	Pg	08 15 32.0	-2.5
KIAG				S	Sg	08 15 45.2	-1.2
TABL	Table Mountain	1.17	181	P	Pg	08 15 36.7	-2.8
TABL				S	Sg	08 15 52.5	-2.2
YUK4	Talbot Arm	1.21	101	P	Pg	08 15 38.2	-2.1
YUK4				S	Sg	08 15 54.6	-1.4
YUK6	Outpost Mounta	1.48	115	Pn	Pn	08 15 42.2	-2.1
YUK6				Sg	Sb	08 16 02.7	-1.5
MESA	MESA	1.49	196	Pn	Pn	08 15 43.2	-1.2
MESA				Sg	Sg	08 16 04.2	-0.7
SAMH	Samovar Hills	1.49	174	Pn	Pn	08 15 42.7	-1.6
SAMH				Sg	Sn	08 16 02.5	-1.5
BCA3	Beaver Creek A	1.50	348	*e*Pn	Pn	08 15 43.9	-0.5
CHX	Chaix Hills	1.55	180	*e*Pn	Pn	08 15 44.4	-0.7
PCA	Pinnacle	1.57	164	*e*Pn	Pn	08 15 44.6	-0.7
PCA	Pinnacle	1.57	164	Pn	Pn	08 15 44.4	-1.0
PCA				Sg	Sn	08 16 05.4	-0.6
YUK5	Granite Creek	1.64	106	Pn	Pn	08 15 44.7	-1.6
YUK5				Sg	Sn	08 16 05.9	-1.7
SNH	Sunshine Point	1.66	211	*e*Pn	Pn	08 15 46.1	-0.5
YUK7	Dusty Glacier	1.80	125	Pn	Pn	08 15 48.2	-0.4
YUK7				Sg	Sn	08 16 11.5	-0.3
BCPM	Bancas Point	1.81	156	*e*Pn	Pn	08 15 48.4	-0.2
MENT	Mentasta	1.81	319	*e*Pn	Pb	08 15 50.0	-0.5
MENT				*e*Sn	Sg	08 16 15.8	+0.6

HYT	**Haines Junctio**	**1.91**	**113**	*e*Pn	**Pn**	**08 15 49.3**	**-0.8**
HYT	**Haines Junctio**	**1.91**	**113**	Pn	**Pn**	**08 15 49.1**	**-1.0**
HYT				Sg	**Sn**	**08 16 14.7**	**+0.2**
PS12	**TAPS Pump St12**	**1.94**	**268**	*e*Pn	**Pn**	**08 15 51.0**	**+0.7**
HMT	**Hamilton**	**2.00**	**232**	*e*Pn	**Pb**	**08 15 52.5**	**-1.2**
PNL	**Peninsula**	**2.12**	**156**	*e*Pn	**Pn**	**08 15 52.7**	**-0.2**
PNL	**Peninsula**	**2.12**	**156**	Pn	**Pn**	**08 15 52.6**	**-0.2**
PNL				Sg	**Sb**	**08 16 21.9**	**-0.3**
YKU2	**Yakutat**	**2.22**	**161**	*e*Pn	**Pb**	**08 15 55.5**	**-1.9**
SGAM	**Sherman Glacie**	**2.28**	**243**	*e*Pn	**Pn**	**08 15 56.5**	**+1.5**
PAX	**Paxson**	**2.46**	**306**	*e*Pn	**Pb**	**08 15 59.8**	**-1.7**
PAX	**Paxson**	**2.46**	**306**	*e*P	**Pb**	**08 15 59.8**	**-1.7**
PAX	**Paxson**	**2.46**	**306**	Pn	**Pn**	**08 15 56.9**	**-0.7**
PAX				Pg	**Pb**	**08 15 59.8**	**-1.7**
PAX				Sg	**Sb**	**08 16 33.0**	**+1.0**
DOT	**Dot Lake**	**2.46**	**328**	*e*Pn	**Pn**	**08 15 57.2**	**-0.4**
DOT	**Dot Lake**	**2.46**	**328**	Pn	**Pn**	**08 15 57.4**	**-0.2**
DOT				Sg	**Sb**	**08 16 34.1**	**+2.0**
EYAK	**Cordova Ski Ar**	**2.49**	**247**	*e*Pn	**Pn**	**08 15 60.0**	**+2.0**
DAWY	**Dawson**	**2.59**	**17**	*e*Pn	**Pn**	**08 15 59.5**	**+0.1**
DAWY	**Dawson**	**2.59**	**17**	Pn	**Pn**	**08 15 59.3**	**-0.1**
DAWY				Sg	**Sb**	**08 16 36.9**	**+1.0**
SCRK	**Sand Creek**	**2.72**	**332**	*e*Pn	**Pn**	**08 16 01.1**	**-0.2**
FID	**Port Fidalgo**	**2.74**	**254**	*e*Pn	**Pb**	**08 16 03.9**	**-2.4**
RIDG	**Independent Ri**	**2.75**	**323**	*e*Pn	**Pn**	**08 16 01.8**	**+0.3**
PS10	**TAPS Pump St10**	**2.83**	**312**	*e*Pn	**Pn**	**08 16 04.8**	**+2.1**
SCM	**Sheep Creek Mo**	**2.97**	**277**	*e*Pn	**Pn**	**08 16 06.7**	**+2.1**
SCM	**Sheep Creek Mo**	**2.97**	**277**	*e*P	**Pn**	**08 16 06.7**	**+2.1**
GLI	**Glacier Island**	**2.98**	**258**	*e*Pn	**Pn**	**08 16 06.1**	**+1.4**
EGAK	**Eagle**	**3.18**	**360**	*e*Pn	**Pn**	**08 16 08.0**	**+0.6**
PLBC	**Pleasant Camp**	**3.19**	**131**	Pn	**Pn**	**08 16 06.8**	**-0.7**
PLBC				Pg	**Pb**	**08 16 12.6**	**-1.3**
PLBC				Sg	**Sb**	**08 16 55.1**	**+2.3**
DHY	**Denali Highway**	**3.27**	**300**	*e*Pn	**Pn**	**08 16 11.2**	**+2.4**
KNK	**Knik Glacier**	**3.53**	**270**	*e*Pn	**Pn**	**08 16 14.3**	**+2.1**
SKAG	**Skagway**	**3.58**	**124**	*e*Pn	**Pn**	**08 16 12.9**	**+0.1**
PMR	**Palmer**	**3.83**	**273**	*e*Pn	**Pn**	**08 16 17.9**	**+1.5**
PMR	**Palmer**	**3.83**	**273**	*e*P	**Pn**	**08 16 17.9**	**+1.5**
HDA	**Harding Lake**	**3.87**	**319**	*e*Pn	**Pn**	**08 16 16.3**	**-0.6**
PS08	**TAPS Pump Stn8**	**3.93**	**321**	*e*Pn	**Pn**	**08 16 16.8**	**-0.9**
RND	**Reindeer**	**4.02**	**300**	*e*Pn	**Pn**	**08 16 22.3**	**+3.3**
RND	**Reindeer**	**4.02**	**300**	*e*P	**Pn**	**08 16 22.3**	**+3.3**
IL1	**Eielson Array**	**4.12**	**323**	*e*Pn	**Pn**	**08 16 19.2**	**-1.1**
ILAR	**Eielson Array**	**4.12**	**323**	Pn	**Pn**	**08 16 18.9**	**-1.4**
	2.6nm,0.3s,baz=146,slow=13,SNR=16						
ILAR				Lg	Lg	08 17 26.2	
	30nm,0.3s,baz=134,slow=28,SNR=5.1						
ILB	**Eielson Array**	**4.12**	**323**	*e*Pn	**Pn**	**08 16 19.3**	**-1.0**
RC01	**Rabbit Creek A**	**4.19**	**267**	*e*Pn	**Pn**	**08 16 22.8**	**+1.5**
MCK	**McKinley**	**4.19**	**304**	*e*Pn	**Pn**	**08 16 24.7**	**+3.4**
MCK	**McKinley**	**4.19**	**304**	*e*P	**Pn**	**08 16 24.7**	**+3.4**
WRH	**Wood River Hil**	**4.29**	**315**	*e*Pn	**Pn**	**08 16 25.1**	**+2.5**
CCB	**Clear Creek Bu**	**4.31**	**318**	*e*Pn	**Pn**	**08 16 21.9**	**-1.0**
SEW	**Seward**	**4.35**	**253**	*e*Pn	**Pn**	**08 16 24.0**	**+0.5**
BESE	**Bessie Mountai**	**4.36**	**131**	*e*Pn	**Pn**	**08 16 22.6**	**-1.0**
BESE	**Bessie Mountai**	**4.36**	**131**	Pn	**Pn**	**08 16 22.7**	**-1.0**
BESE				Pg	**Pb**	**08 16 33.2**	**-0.7**
BESE				Sg	**Sb**	**08 17 30.6**	**+3.9**
PRP	**Porcupine Dome**	**4.39**	**335**	*e*Pn	**Pn**	**08 16 24.4**	**+0.2**
COLA	**College**	**4.48**	**320**	*e*Pn	**Pn**	**08 16 27.3**	**+2.1**
COLA	**College**	**4.48**	**320**	*de*P	**Pn**	**08 16 25.0**	**-0.2**
TCOL	**CIGO, UAF Yank**	**4.48**	**320**	P	**Pn**	**08 16 24.3**	**-0.9**
	baz=134						
I53US	**FAIRBANKS INFR**	**4.48**	**320**	Lg	Lg	08 17 34.8	
	baz=128,slow=31,SNR=2.3						
I53US				*i*		08 38 30.0	
	baz=140,slow=322,SNR=1.0						
POKR	**Poker Plat Res**	**4.53**	**324**	P	**Pn**	**08 16 25.5**	**-0.4**
	baz=138,SNR=10						
BWN	**Browne**	**4.61**	**308**	*e*Pn	**Pn**	**08 16 28.2**	**+1.2**
MDM	**Murphy Dome**	**4.65**	**319**	*e*Pn	**Pn**	**08 16 29.3**	**+1.7**
JIS	**Juneau Island**	**4.75**	**132**	*e*Pn	**Pn**	**08 16 28.4**	**-0.6**
KTH	**Kantishna Hill**	**4.94**	**298**	*e*Pn	**Pn**	**08 16 35.0**	**+3.4**
BRSE	**Bradley Lake S**	**5.09**	**253**	*e*Pn	**Pn**	**08 16 34.4**	**+0.8**
BRLK	**Bradley Lake**	**5.15**	**253**	*e*Pn	**Pn**	**08 16 35.4**	**+0.9**
EPYK	**Eagle Plains**	**5.16**	**20**	*e*Pn	**Pn**	**08 16 34.9**	**+0.3**
EPYK	**Eagle Plains**	**5.16**	**20**	P	**Pn**	**08 16 34.9**	**+0.3**
	baz=204,SNR=22						
BPAW	**Bear Paw Mtn.**	**5.17**	**303**	*e*Pn	**Pn**	**08 16 37.2**	**+2.5**
SPU	**Mount Spurr**	**5.28**	**270**	*e*Pn	**Pn**	**08 16 38.6**	**+2.3**
FYU	**Fort Yukon**	**5.30**	**342**	*e*Pn	**Pn**	**08 16 37.4**	**+0.9**
PPLA	**Purkeypile**	**5.34**	**289**	*e*Pn	**Pn**	**08 16 39.5**	**+2.3**
CNPM	**China Poot**	**5.41**	**252**	*e*Pn	**Pn**	**08 16 38.3**	**+0.2**
SIT	**Sitka**	**5.44**	**144**	*e*Pn	**Pn**	**08 16 38.8**	**+0.4**
SIT	**Sitka**	**5.44**	**144**	*e*P	**Pn**	**08 16 38.8**	**+0.4**
MLY	**Manley**	**5.53**	**313**	*e*Pn	**Pn**	**08 16 39.9**	**+0.1**
PS06	**TAPS Pump Stn6**	**5.73**	**322**	*e*Pn	**Pn**	**08 16 42.7**	**+0.3**
RSO	**Redoubt South**	**5.78**	**264**	*e*Pn	**Pn**	**08 16 44.8**	**+1.6**
BM3	**Burnt Mountain**	**6.03**	**347**	*e*Pn	**Pn**	**08 16 47.2**	**+0.7**
DLBC	**Dease Lake**	**6.40**	**115**	Pn	**Pn**	**08 16 50.2**	**-1.4**
	0.8nm,0.3s,baz=280,slow=13,SNR=3.6						
DLBC				Lg	Lg	08 18 38.0	
	11nm,0.3s,baz=268,slow=26,SNR=6.6						
DLBC	**Dease Lake**	**6.40**	**115**	*e*Pn	**Pn**	**08 16 51.5**	**-0.2**
DLBC	**Dease Lake**	**6.40**	**115**	Pn	**Pn**	**08 16 50.4**	**-1.2**
DLBC				Pg	**Pb**	**08 17 12.0**	**+3.4**
DLBC				Sg	**Sb**	**08 18 32.8**	**+7.6**
PS05	**TAPS Pump Stn5**	**6.68**	**326**	*e*Pn	**Pn**	**08 16 55.3**	**-0.1**
COLD	**Coldfoot**	**6.87**	**329**	*e*Pn	**Pn**	**08 16 58.5**	**+0.4**
COLD	**Coldfoot**	**6.87**	**329**	Pn	**Pn**	**08 16 58.0**	**-0.1**
COLD				Sn	**Sn**	**08 18 15.6**	**-0.8**
COLD				Sg	**Sg**	**08 18 50.4**	**-7.0**
WRAK	**Wrangell Islan**	**6.89**	**135**	*e*Pn	**Pn**	**08 16 57.4**	**-0.9**
KDAK	**Kodiak Island**	**6.96**	**242**	*e*Pn	**Pn**	**08 16 59.9**	**+0.7**
KDAK	**Kodiak Island**	**6.96**	**242**	*e*P	**Pn**	**08 16 59.9**	**+0.7**
SVW2	**Sparrevohn**	**6.98**	**272**	*e*Pn	**Pn**	**08 17 01.0**	**+1.4**
TTA	**Tatalina**	**7.08**	**287**	*e*Pn	**Pn**	**08 17 01.8**	**+0.8**
TTA	**Tatalina**	**7.08**	**287**	*e*P	**Pn**	**08 17 01.8**	**+0.8**
CRAG	**Craig**	**7.43**	**142**	*e*Pn	**Pn**	**08 17 06.1**	**+0.3**
INK	**Inuvik**	**7.45**	**22**	Pn	**Pn**	**08 17 03.4**	**-2.5**
	0.6nm,0.3s,baz=224,slow=17,SNR=19						
INK				Sn	**Sn**	**08 18 25.7**	**-4.9**
	2.7nm,0.3s,baz=182,slow=9.4,SNR=4.3						
INK				Lg	Lg	08 19 07.7	
	3.0nm,0.3s,baz=57,slow=13,SNR=3.4						
INK	**Inuvik**	**7.45**	**22**	*e*Pn	**Pn**	**08 17 06.8**	**+0.9**
INK				*e*Sn	**Sn**	**08 18 25.7**	**-4.9**
INK	**Inuvik**	**7.45**	**22**	*e*P	**Pn**	**08 17 06.8**	**+0.9**
INK				*e*		08 18 25.7	
INK	**Inuvik**	**7.45**	**22**	Pn	**Pn**	**08 17 05.0**	**-0.9**
INK				Sn	**Sn**	**08 18 23.1**	**-7.4**
INK				Sg	**Sg**	**08 19 10.5**	**-5.4**
OHAK	**Old Harbor**	**7.61**	**240**	*e*Pn	**Pn**	**08 17 08.4**	**+0.3**
PS04	**TAPS Pump Stn4**	**7.67**	**337**	*e*Pn	**Pn**	**08 17 10.6**	**+1.5**
TOLK	**Toolik Lake Re**	**7.90**	**337**	*e*Pn	**Pn**	**08 17 14.5**	**+2.2**
TOLK	**Toolik Lake Re**	**7.90**	**337**	P	**Pn**	**08 17 14.0**	**+1.7**
	baz=149,SNR=122						
KELA	**Mount Kelaz**	**7.98**	**253**	*e*Pn	**Pn**	**08 17 14.8**	**+1.4**
SII	**Sitkinak Islan**	**8.41**	**239**	*e*Pn	**Pn**	**08 17 19.3**	**0.0**
NDB	**Naden**	**8.82**	**147**	Pn	**Pn**	**08 17 26.6**	**+1.8**
RUBB	**Prince Rupert**	**9.29**	**137**	Pn	**Pn**	**08 17 29.3**	**-1.9**
RUBB				Sg	Sn	08 20 10.7	+55
FNBB	**Fort Nelson**	**9.39**	**99**	Pn	**Pn**	**08 17 31.1**	**-1.6**
FNBB				Sn	**Sn**	**08 19 13.6**	**-4.8**
FNBB				Sg		08 20 08.4	
CHIR	**Chirikof Islan**	**9.51**	**239**	*e*Pn	**Pn**	**08 17 34.8**	**+0.7**
DIB	**Dawson Inlet,**	**9.62**	**147**	*e*Pn	**Pn**	**08 17 36.6**	**+0.9**
DIB	**Dawson Inlet,**	**9.62**	**147**	Pn	**Pn**	**08 17 35.9**	**+0.2**
MOBC	**Moresby Island**	**9.80**	**146**	*e*Pn	**Pn**	**08 17 39.0**	**+0.7**
MOBC	**Moresby Island**	**9.80**	**146**	Pn	Pn	08 17 43.4	+5.1
BNB	**Barry Inlet**	**10.37**	**147**	Pn	Pn	08 17 51.2	+5.1
HG4B	**Hotspring**	**10.78**	**146**	Pn	**Pn**	**08 17 53.2**	**+1.6**
DHRN	**Dharma Camp**	**10.79**	**50**	Pn	**Pn**	**08 17 49.3**	**-2.4**
DHRN				Sn	**Sn**	**08 19 44.6**	**-8.0**
RDOG	**Red Dog Mine**	**11.25**	**314**	*e*Pn	**Pn**	**08 17 59.9**	**+1.8**
BMBC	**Bull Mountain**	**11.28**	**111**	Pn	**Pn**	**08 18 01.2**	**+2.6**
BMBC				Sg		08 21 14.7	
FSB	**Fort Saint Jam**	**11.38**	**121**	Pn	**Pn**	**08 18 01.5**	**+1.7**
BBB	**Bella Bella**	**11.79**	**137**	Pn	**Pn**	**08 18 06.7**	**+1.3**
	0.4nm,0.3s,baz=285,slow=6.5,SNR=9.8						
BBB				Lg	Lg	08 21 32.8	
	0.1nm,0.3s,baz=96,slow=6.4,SNR=5.2						
BBB				LR	LR	08 21 56.8	
	comp=Z,172nm,21.6s,baz=9.5,slow=34						
BBB	**Bella Bella**	**11.79**	**137**	Pn	**Pn**	**08 18 06.1**	**+0.7**
SDPT	**Sand Point**	**11.89**	**247**	*e*Pn	**Pn**	**08 18 08.7**	**+2.0**
HILA	**High Level**	**12.38**	**94**	Pn	**Pn**	**08 18 12.6**	**-0.8**
HILA				Sg		08 21 45.9	
YKW3	**Yellowknife Ar**	**12.42**	**74**	Pn	**Pn**	**08 18 12.8**	**-1.1**
YKA	**Yellowknife Ar**	**12.43**	**74**	Pn	**Pn**	**08 18 11.4**	**-2.7**
	0.3nm,0.3s,baz=277,slow=14,SNR=14						
YKA				Lg	Lg	08 21 45.0	
	0.1nm,0.3s,baz=275,slow=28,SNR=5.9						
YKA				LR	LR	08 23 49.3	
	comp=Z,8.7nm,20.1s,baz=270,slow=42						
YKW1	**Yellowknife Ar**	**12.47**	**74**	Pn	**Pn**	**08 18 13.1**	**-1.6**
UBRB	**Upper Baezaeko**	**12.66**	**126**	Pn	**Pn**	**08 18 19.4**	**+2.1**
KUKN	**Kugluktuk,NWT**	**12.66**	**49**	Pn	**Pn**	**08 18 18.1**	**+0.8**
KUKN				Sn	**Sn**	**08 20 30.0**	**-8.3**
BLBC	**Blue River**	**15.25**	**119**	P	**P**	**08 18 57.9**	**+0.1**
LLLB	**Lillooet**	**15.30**	**127**	P	**P**	**08 18 57.0**	**-1.2**
WSLR	**Whistler**	**15.31**	**130**	P	**P**	**08 19 00.0**	**+1.8**
SHB	**Sechelt**	**15.41**	**133**	P	**P**	**08 19 00.4**	**+1.0**
MNB	**Mounoet Dainar**	**15.50**	**117**	P	**Pn**	**08 18 57.6**	**+1.6**
WPB	**Watts Point**	**15.59**	**132**	P	**P**	**08 19 02.7**	**+1.4**
BIB	**Bowen Island**	**15.77**	**133**	P	**P**	**08 19 04.0**	**+0.8**
YOUB	**Youbou, Lake C**	**15.87**	**136**	P	**P**	**08 19 05.8**	**+1.2**
SLEB	**Sale Mountain**	**16.36**	**119**	P	**Pn**	**08 19 08.2**	**+1.1**
VDB	**Vedder Mountai**	**16.52**	**131**	P	**P**	**08 19 12.5**	**+0.9**
PNT	**Penticton**	**17.21**	**126**	P	**P**	**08 19 19.4**	**+0.1**
JCW	**Jim Creek**	**17.28**	**132**	P	**P**	**08 19 21.5**	**+1.4**
GPW	**Glacier Peak**	**17.63**	**131**	P	**P**	**08 19 25.9**	**+1.7**
FMW	**Mount Fremont**	**18.45**	**134**	P	**P**	**08 19 34.9**	**+1.7**
LTY	**Liberty**	**18.53**	**132**	*e*P	**Pn**	**08 19 34.9**	**+0.9**
	12nm,1.2s						
LTY	**Liberty**	**18.53**	**132**	P	**Pn**	**08 19 34.6**	**+0.6**
LON	**Longmire**	**18.57**	**134**	P	**Pn**	**08 19 35.0**	**+0.6**
NEW	**Newport**	**19.04**	**124**	P	**Pn**	**08 19 39.9**	**-0.2**
	0.2nm,0.3s,baz=332,slow=10,SNR=24						
NEW	**Newport**	**19.04**	**124**	P	**Pn**	**08 19 40.6**	**+0.4**
	baz=323,SNR=20						
WALA	**Waterton Lakes**	**19.74**	**117**	P	**Pn**	**08 19 47.8**	**-0.8**
BSMT	**Bassoo Peak**	**20.31**	**121**	P	Pn	08 19 55.1	-0.4
JTMT	**Jette**	**20.60**	**120**	P	Pn	08 19 58.1	-0.7
YBMT	**Yellow Bay**	**20.62**	**119**	P	Pn	08 19 58.7	-0.3
FBMT	**Ferry Basin**	**20.82**	**121**	P	Pn	08 20 01.5	+0.2
RES	**Resolute Bay**	**20.82**	**33**	P	Pn	08 20 01.6	+0.6
SWMT	**Swartz Lake**	**20.91**	**120**	P	Pn	08 20 01.7	-0.7
I04A	**Tendick Farm,**	**20.99**	**140**	P	**P**	**08 20 00.5**	**-0.2**
	baz=335						
J01E	**Myrtle Point**	**21.11**	**143**	P	**P**	**08 20 01.9**	**-0.1**
	baz=337						
SLMT	**Seeley Lake**	**21.33**	**120**	P	**P**	**08 20 05.4**	**+0.9**
MSO	**Missoula**	**21.48**	**121**	P	**P**	**08 20 06.4**	**+0.4**
	baz=323,SNR=17						
FFC	**Flin Flon**	**21.48**	**91**	*i* P	**P**	**08 20 06.3**	**+0.5**
J04D	**Umpqua Nationa**	**21.59**	**140**	P	**P**	**08 20 07.7**	**+0.4**
	baz=335						
K02D	**Willamette Mer**	**21.62**	**143**	P	**P**	**08 20 08.1**	**+0.6**
	baz=337						
OVMT	**Ovando**	**21.68**	**119**	P	**P**	**08 20 08.8**	**+0.6**
J05D	**Fort Rock, OR**	**21.82**	**138**	P	**P**	**08 20 10.2**	**+0.5**
	baz=334,SNR=7.4						
BPMT	**Black Pine Rid**	**21.99**	**121**	P	**P**	**08 20 12.1**	**+0.4**
LYMT	**Lyon Mountain**	**22.05**	**118**	P	**P**	**08 20 12.5**	**+0.3**
L02E	**Cave Junction**	**22.13**	**144**	P	**P**	**08 20 13.8**	**+0.9**
	baz=338						
ELMT	**Elliston**	**22.32**	**119**	P	**P**	**08 20 15.6**	**+0.5**
EGMT	**Eagleton**	**22.32**	**113**	P	**P**	**08 20 14.9**	**-0.1**
	baz=319,SNR=17						
HRY	**Holter Researc**	**22.45**	**118**	P	**P**	**08 20 16.9**	**+0.6**
L04D	**Klamath Falls**	**22.46**	**141**	P	**P**	**08 20 16.4**	**-0.2**
	baz=336						
BILL	**Bilibino**	**22.63**	**309**	⇓*e*P	**P**	**08 20 19.4**	**+1.4**
BILL				*e*		08 20 23.8	
BILL				*e*		08 20 42.3	
BILL				pmax	pmax		
	comp=Z,27nm,1.7s						
BILL				MLR	MLR		
	comp=Z,114nm,15.0s						
YBH	**Yreka Blue Hor**	**22.78**	**142**	P	**P**	**08 20 20.0**	**0.0**
	comp=Z,6.1nm,1.0s,baz=183,slow=4.0,SNR=6.0						
HBMT	**Mount Humbug**	**22.86**	**121**	P	**P**	**08 20 21.7**	**+0.8**
LRM	**Limekiln Ridge**	**22.90**	**120**	P	**P**	**08 20 21.3**	**0.0**
M04C	**Macdoel**	**23.00**	**141**	P	**P**	**08 20 22.3**	**+0.1**
	baz=336						
BOZ	**Bozeman (W)**	**23.42**	**120**	P	**P**	**08 20 26.4**	**-0.1**
	baz=324,SNR=16						
N02D	**Trinity Center**	**23.48**	**143**	P	**P**	**08 20 27.5**	**+0.3**
	baz=338						
HLID	**Hailey**	**23.99**	**127**	P	**P**	**08 20 32.3**	**+0.2**
	baz=328,SNR=20						
EUNU	**Eureka**	**24.07**	**20**	P	**P**	**08 20 34.5**	**+2.0**
O03E	**Paynes Creek**	**24.37**	**142**	P	**P**	**08 20 36.0**	**+0.4**
	baz=338,SNR=6.6						
RLMT	**Red Lodge**	**24.80**	**117**	P	**P**	**08 20 39.7**	**+0.1**
	baz=323,SNR=30						
LAO	**LASA Array**	**24.90**	**111**	P	**P**	**08 20 40.6**	**+0.3**
	baz=320						
ELK	**Elko**	**26.12**	**131**	P	**P**	**08 20 52.7**	**+1.1**
	comp=Z,3.4nm,1.0s,baz=320,slow=8.0,SNR=7.9						
BW06	**Boulder Array**	**26.59**	**121**	P	**P**	**08 20 56.1**	**+0.3**
	baz=326,SNR=16						
PDAR	**Pinedale Array**	**26.59**	**121**	P	**P**	**08 20 57.0**	**+1.1**
	comp=Z,5.9nm,0.9s,baz=325,slow=7.3,SNR=42						
NVAR	**Mina Array Bea**	**27.16**	**138**	P	**P**	**08 21 02.6**	**+1.7**
	comp=Z,2.5nm,0.9s,baz=318,slow=7.4,SNR=12						
NVAR				LR	LR	08 30 30.7	
	comp=Z,86nm,21.7s,baz=286,slow=34						
ULM	**Lac du Bonnet**	**27.18**	**94**	LR	LR	08 32 12.8	
	comp=Z,245nm,19.9s,baz=336,slow=38						
RSSD	**Black Hills**	**27.86**	**112**	P	**P**	**08 21 07.1**	**-0.1**
	baz=322						
K22A	**Casper**	**27.96**	**117**	P	**P**	**08 21 08.0**	**0.0**
	baz=325						
R11A	**Troy Canyon, C**	**28.13**	**134**	P	**P**	**08 21 09.7**	**+0.1**
	baz=334						
AGMN	**Agassiz Nation**	**28.53**	**97**	P	**P**	**08 21 13.0**	**+0.2**
	baz=315						
PKLO	**Pickle Lake**	**29.00**	**87**	P	**P**	**08 21 16.0**	**-1.0**
CWC	**Cottonwood Cre**	**29.05**	**139**	P	**P**	**08 21 18.4**	**+0.6**
	baz=337						
TPNV	**Topopah Spring**	**29.17**	**136**	P	**P**	**08 21 19.4**	**+0.5**
	baz=336						
VES	**Vestal, Richgr**	**29.30**	**141**	P	**P**	**08 21 20.5**	**+0.8**
	baz=339						
O20A	**White River Ci**	**29.34**	**122**	P	**P**	**08 21 20.7**	**+0.3**
	baz=328						
FURC	**Furnace Creek,**	**29.41**	**138**	P	**P**	**08 21 21.0**	**+0.3**
	baz=336						
MPMC	**Manual Prospec**	**29.59**	**139**	P	**P**	**08 21 23.3**	**+0.7**
	baz=337						
ISA	**Isabella, Lake**	**29.65**	**141**	P	**P**	**08 21 23.6**	**+0.7**
	baz=338						
N23A	**Red Feather La**	**29.65**	**118**	P	**P**	**08 21 23.5**	**+0.3**
	baz=326						
SEY	**Seymchan**	**29.75**	**302**	P	**P**	**08 21 22.8**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=74,slow=19,SNR=3.0						
SEY	**Seymchan**	**29.75**	**302**	⇑*i*P	**P**	**08 21 24.1**	**+0.6**
LRMC	**Laurel Mtn Rad**	**30.06**	**140**	P	**P**	**08 21 27.5**	**+0.8**
	baz=338						
SHOC	**Shoshone, Teco**	**30.12**	**137**	P	**P**	**08 21 28.2**	**+1.1**
	baz=336						
TUQ	**Turquoise Moun**	**30.66**	**137**	P	**P**	**08 21 33.1**	**+1.1**
	baz=337						
ISCO	**Idaho Springs**	**30.70**	**119**	P	**P**	**08 21 32.6**	**+0.1**
	baz=327						
EYMN	**Ely**	**30.86**	**93**	P	**P**	**08 21 33.4**	**-0.1**
	baz=315						
BLG	**Laguna Peak, P**	**30.92**	**143**	P	**P**	**08 21 35.1**	**+1.0**
	baz=340						
DECC	**Green Verdugo**	**31.00**	**141**	P	**P**	**08 21 35.9**	**+1.1**
	baz=339						
HEC	**Hector,Ludlow**	**31.08**	**138**	P	**P**	**08 21 36.6**	**+1.0**
	baz=337						
BFSC	**Mount Baldy Ra**	**31.21**	**140**	P	**P**	**08 21 38.1**	**+1.2**
	baz=338						
VIMO	**Victor Mine**	**31.29**	**80**	P	**P**	**08 21 36.1**	**-1.1**
OGNE	**Ogallala**	**31.29**	**113**	P	**P**	**08 21 37.4**	**-0.1**
	baz=325						
ECSD	**EROS Data Cent**	**31.54**	**104**	P	**P**	**08 21 39.3**	**-0.3**
	baz=320						
MVCO	**Mesa Verde**	**31.75**	**125**	P	**P**	**08 21 42.2**	**+0.5**
	baz=331						
CIS	**Catalina Islan**	**31.77**	**142**	P	**P**	**08 21 41.9**	**+0.3**
	baz=340						
GTO	**Geraldton**	**31.78**	**87**	P	**P**	**08 21 41.3**	**-0.3**
E38A	**The Farm, Brul**	**31.79**	**95**	P	**P**	**08 21 41.2**	**-0.5**
	baz=316						
S22A	**4UR Ranch, Cre**	**31.95**	**122**	P	**P**	**08 21 44.4**	**+0.9**
	baz=330						
BELC	**Belle Mtn. Jos**	**31.95**	**138**	P	**P**	**08 21 44.1**	**+0.7**
	baz=338						
IRM	**Iron Mountain**	**32.08**	**137**	P	**P**	**08 21 45.5**	**+1.1**
	baz=337						
WUAZ	**Wupatki**	**32.16**	**131**	P	**P**	**08 21 46.1**	**+0.9**
	baz=334						
SPMN	**Marine on St.**	**32.20**	**98**	P	**P**	**08 21 45.9**	**+0.6**
	baz=318						
PDMCI	**Parker Dam,Lak**	**32.28**	**135**	P	**P**	**08 21 47.0**	**+1.0**
	baz=336						
BC3	**Big Chuckawall**	**32.45**	**138**	P	**P**	**08 21 48.5**	**+0.8**
	baz=337						
SDCO	**Great Sand Dun**	**32.49**	**121**	P	**P**	**08 21 48.9**	**+0.7**
	baz=329						
KSCO	**Kaye Shedlock'**	**32.63**	**116**	P	**P**	**08 21 50.2**	**+0.9**
	baz=327						
BGNE	**Belgrade**	**32.66**	**108**	P	**P**	**08 21 49.9**	**+0.5**
	baz=323						
MONP2	**Monument Peak**	**32.84**	**140**	P	**P**	**08 21 51.7**	**+0.4**
	baz=338						
PETK	**Petropavlovsk-**	**32.90**	**283**	P	**P**	**08 21 51.2**	**-0.1**
	comp=Z,4.0nm,0.9s,baz=63,slow=13,SNR=6.0						
G39A	**Holcombe**	**32.93**	**96**	P	**P**	**08 21 51.9**	**+0.2**
	baz=318						
SWSC	**Sam W. Stewart**	**32.99**	**139**	P	**P**	**08 21 52.9**	**+0.6**
	baz=338						
G40A	**Rib Lake**	**33.41**	**95**	P	**P**	**08 21 55.7**	**-0.2**
	baz=318						
T25A	**Trinidad**	**33.45**	**120**	P	**P**	**08 21 56.4**	**-0.2**
	baz=329						
TIXI	**Tiksi**	**33.59**	**325**	⇓*i*P	**P**	**08 21 59.0**	**+1.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
F42A	**Maple Grove Fa**	**34.03**	**93**	P	**P**	**08 22 01.0**	**-0.3**
	baz=317						
CBKS	**Cedar Bluff**	**34.05**	**113**	P	**P**	**08 22 01.6**	**0.0**
	baz=326						
KAPO	**Kapuskasing**	**34.10**	**83**	P	**P**	**08 22 02.1**	**+0.2**
E43A	**Lone Tree Farm**	**34.13**	**91**	P	**P**	**08 22 02.4**	**+0.2**
	baz=316						
I41A	**Arkdale**	**34.47**	**97**	P	**P**	**08 22 05.0**	**-0.1**
	baz=319						
ANMO	**Albuquerque**	**34.52**	**124**	*d i*P	**P**	**08 22 07.7**	**+1.8**
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	**Albuquerque**	**34.52**	**124**	P	**P**	**08 22 06.6**	**+0.7**
	baz=331						
214A	**Organ Pipe Nat**	**34.87**	**135**	P	**P**	**08 22 09.5**	**+0.8**
	baz=337						
JFWS	**Jewell Farm**	**35.16**	**98**	P	**P**	**08 22 11.0**	**-0.1**
	baz=320						
H43A	**Windswept, Lux**	**35.16**	**94**	P	**P**	**08 22 10.8**	**-0.2**
	baz=318						
D46A	**Sault St. Mari**	**35.17**	**88**	P	**P**	**08 22 10.4**	**-0.7**
	baz=316						
KSU1	**Kansas State U**	**35.21**	**109**	P	**P**	**08 22 11.1**	**-0.4**
	baz=324						
SKR	**Severo-Kuril's**	**35.23**	**281**	⇑*e*P	**P**	**08 22 10.0**	**-1.6**
LG4Q	**La Grande 4**	**35.24**	**72**	P	**P**	**08 22 10.3**	**-1.3**
TUC	**Tucson**	**35.25**	**132**	P	**P**	**08 22 12.6**	**+0.6**
	baz=335						
L40A	**Anamosa**	**35.35**	**100**	P	**P**	**08 22 12.5**	**-0.2**
	baz=321,SNR=7.5						
D47A	**Chapleau**	**35.50**	**87**	P	**P**	**08 22 13.4**	**-0.5**
	baz=316						
E47A	**Iron Bridge**	**35.85**	**88**	P	**P**	**08 22 16.5**	**-0.4**
	baz=316						
D48A	**Paudash Townsh**	**36.03**	**86**	P	**P**	**08 22 17.9**	**-0.7**
	baz=316						
KILO	**Kirkland Lake**	**36.09**	**82**	P	**P**	**08 22 19.0**	**+0.1**
L42A	**Oliver, Polo**	**36.13**	**99**	P	**P**	**08 22 19.0**	**-0.4**
	baz=321						
MATQ	**Matagami**	**36.19**	**79**	P	**P**	**08 22 19.2**	**-0.7**
	baz=314						
M41A	**Milan**	**36.21**	**100**	P	**P**	**08 22 19.7**	**-0.4**
	baz=321						
K43A	**Burlington**	**36.23**	**97**	P	**P**	**08 22 19.8**	**-0.4**
	baz=320						
SUMG	**Summit**	**36.29**	**30**	*i* P	**P**	**08 22 24.8**	**+3.9**
SUMG				pmax	pmax		
	comp=Z,150nm,2.5s						
SUMG	**Summit**	**36.29**	**30**	*i* P	**P**	**08 22 24.8**	**+3.9**
	comp=Z,151nm,2.5s						
E48A	**Lockeyer**	**36.36**	**87**	P	**P**	**08 22 20.7**	**-0.6**
	baz=316						
GLMI	**Grayling**	**36.40**	**91**	P	**P**	**08 22 21.1**	**-0.6**
	baz=318						
G47A	**Hillman**	**36.51**	**90**	P	**P**	**08 22 22.1**	**-0.5**
	baz=318						
AMTX	**Amarillo**	**36.52**	**119**	P	**P**	**08 22 23.0**	**0.0**
	baz=329						
N41A	**Harden Midland**	**36.58**	**101**	P	**P**	**08 22 22.5**	**-0.8**
	baz=322,SNR=5.1						
F48A	**Evansville**	**36.62**	**88**	P	**P**	**08 22 22.9**	**-0.6**
	baz=317						
L44A	**Lake County Fo**	**36.83**	**97**	P	**P**	**08 22 24.8**	**-0.5**
	baz=320						
MSTX	**Muleshoe**	**36.86**	**121**	P	**P**	**08 22 25.5**	**-0.3**
	baz=330,SNR=6.4						
F49A	**Sandfield**	**36.94**	**88**	P	**P**	**08 22 26.1**	**-0.2**
	baz=317						
LSQQ	**Lebel-sur-Quev**	**36.99**	**80**	P	**P**	**08 22 26.5**	**-0.1**
	baz=314						
I47A	**Gladwin**	**37.05**	**92**	P	**P**	**08 22 26.9**	**-0.4**
	baz=319						
N43A	**Stutzman Famil**	**37.19**	**99**	P	**P**	**08 22 28.0**	**-0.4**
	baz=322						
D51A	**Lot 18 Range I**	**37.25**	**84**	P	**P**	**08 22 28.1**	**-0.8**
	baz=316						
DAG	**Danmarks Havn**	**37.28**	**19**	*e*P	**P**	**08 22 29.3**	**+0.5**
DAG	**Danmarks Havn**	**37.28**	**19**	*i* P	**P**	**08 22 29.3**	**+0.5**
VLDQ	**Val d'Or**	**37.43**	**81**	P	**P**	**08 22 28.4**	**-2.0**
HDIL	**Hopedale**	**37.44**	**100**	P	**P**	**08 22 29.6**	**-0.9**
	baz=322,SNR=5.2						
TOBO	**Tobermory, Bru**	**37.58**	**88**	P	**P**	**08 22 31.0**	**-0.7**
	baz=318						
E51A	**G1948 Merrick**	**37.60**	**85**	P	**P**	**08 22 31.0**	**-0.8**
	baz=316						
CHGQ	**Chibougamau**	**37.61**	**77**	P	**P**	**08 22 31.1**	**-0.9**
	baz=314						
EEO	**Eldee**	**37.72**	**84**	P	**P**	**08 22 31.5**	**-1.3**
D52A	**ZEK Kipawa Sen**	**37.79**	**83**	P	**P**	**08 22 33.1**	**-0.4**
	baz=316						
MNTX	**Cornudas Mount**	**37.81**	**126**	P	**P**	**08 22 34.5**	**+0.7**
	baz=333						
F51A	**Arnstein**	**37.84**	**86**	P	**P**	**08 22 33.1**	**-0.8**
	baz=317						
K47A	**Vermontville**	**37.84**	**94**	P	**P**	**08 22 33.8**	**-0.1**
	baz=320						
WMOK	**Wichita Mounta**	**37.88**	**115**	P	**P**	**08 22 34.1**	**-0.3**
	baz=328						
P43A	**Skaggs, Pawnee**	**38.05**	**101**	P	**P**	**08 22 35.4**	**-0.3**
	baz=323						
D53A	**Lac Vacive, Po**	**38.05**	**83**	P	**P**	**08 22 35.0**	**-0.7**
	baz=316						
KLBO	**Killbear Provi**	**38.11**	**86**	P	**P**	**08 22 35.9**	**-0.3**
	baz=317						
O44A	**Mansfield**	**38.14**	**99**	P	**P**	**08 22 36.3**	**-0.2**
	baz=322						
E52A	**Mattawa**	**38.17**	**84**	P	**P**	**08 22 36.5**	**-0.2**
	baz=317						
BMRO	**Meriville Lake**	**38.20**	**88**	P	**P**	**08 22 36.9**	**0.0**
	baz=318						
J49A	**Marlette**	**38.20**	**91**	P	**P**	**08 22 36.9**	**-0.1**
	baz=319						
TUL1	**Leonard**	**38.21**	**111**	P	**P**	**08 22 36.8**	**-0.3**
	baz=327						
F52A	**Sundridge**	**38.22**	**85**	P	**P**	**08 22 36.6**	**-0.5**
	baz=317						
L47A	**Sherwood**	**38.27**	**95**	P	**P**	**08 22 37.3**	**-0.3**
	baz=320						
BASO	**Ashfield**	**38.42**	**89**	P	**P**	**08 22 38.9**	**+0.2**
	baz=319						
BUKO	**Buck Lake**	**38.44**	**86**	P	**P**	**08 22 38.2**	**-0.8**
	baz=317,SNR=6.1						
K49A	**Clarkson**	**38.49**	**92**	P	**P**	**08 22 38.4**	**-1.0**
	baz=320						
D54A	**Lac Fusel, La**	**38.49**	**82**	P	**P**	**08 22 38.2**	**-1.2**
	baz=316,SNR=6.2						
CCM	**Cathedral Cave**	**38.52**	**104**	P	**P**	**08 22 39.1**	**-0.6**
	baz=324						
E53A	**Dumoine, Ponti**	**38.58**	**83**	P	**P**	**08 22 39.3**	**-0.8**
	baz=317,SNR=5.3						
BWLO	**Walkerton**	**38.59**	**89**	P	**P**	**08 22 40.0**	**-0.2**
	baz=318						
ALGO	**Algonquin Park**	**38.70**	**84**	P	**P**	**08 22 40.9**	**-0.2**
	baz=317						
E54A	**Lac Daplat, Po**	**38.76**	**83**	P	**P**	**08 22 40.8**	**-0.8**
	baz=317,SNR=8.1						
H52A	**Wyevale**	**38.80**	**87**	P	**P**	**08 22 41.6**	**-0.3**
	baz=318						
L49A	**Milan**	**38.85**	**93**	P	**P**	**08 22 42.1**	**-0.4**
	baz=320						
I51A	**Listowel**	**38.88**	**89**	P	**P**	**08 22 42.1**	**-0.6**

	baz=319						
N47A	Urbana	38.89	96	P	P	08 22 42.1	-0.7
	baz=321						
CRLO	Chalk River	38.96	83	P	P	08 22 42.8	-0.5
G53A	Haliburton	39.04	85	P	P	08 22 42.8	-1.3
	baz=318						
P46A	Rosedale	39.16	99	P	P	08 22 43.9	-1.1
	baz=322						
U40A	Yellville	39.16	108	P	P	08 22 43.7	-1.5
	baz=326,SNR=5.5						
N48A	Decatur	39.22	95	P	P	08 22 44.7	-0.8
	baz=321						
Q45A	Warren Harvey,	39.28	100	P	P	08 22 45.6	-0.5
	baz=323						
PEMO	Pembroke	39.29	84	P	P	08 22 45.1	-0.9
	baz=317						
ABTX	Abilene, Hawle	39.33	118	P	P	08 22 46.0	-0.6
	baz=330						
BANO	Bancroft	39.45	85	P	P	08 22 46.6	-0.8
	baz=318						
ACTO	Acton	39.49	88	P	P	08 22 47.0	-0.8
	baz=319						
I53A	Kortright Cn E	39.55	88	P	P	08 22 47.8	-0.4
	baz=319						
F55A	Otter Lake	39.60	83	P	P	08 22 47.7	-0.9
	baz=317						
PKRO	Pickering	39.69	87	P	P	08 22 48.3	-1.1
	baz=319						
W39A	Magazine	39.70	110	P	P	08 22 48.8	-0.8
	baz=327						
P47A	Martinsville	39.71	98	P	P	08 22 48.6	-1.0
	baz=322						
S44A	Carbondale	39.73	103	P	P	08 22 48.8	-1.0
	baz=324,SNR=5.7						
PLVO	Plevna	39.84	84	P	P	08 22 49.9	-0.8
	baz=318						
G55A	Calabogie	39.85	84	P	P	08 22 50.1	-0.7
	baz=318						
VABQ	Val Des Bois	39.90	82	P	P	08 22 50.7	-0.5
DELO	Deloro Mine	39.97	85	P	P	08 22 50.8	-0.9
	baz=318						
WLVO	Wesleyville	40.04	86	P	P	08 22 51.8	-0.5
	baz=319						
Q47A	Bedord North L	40.07	99	P	P	08 22 52.2	-0.4
	baz=323						
GAC	Glen Almond	40.11	82	P	P	08 22 52.5	-0.4
LATQ	La Tuque	40.15	78	P	P	08 22 52.3	-0.8
	baz=316						
H55A	Tweed	40.15	85	P	P	08 22 52.5	-0.8
	baz=318						
TRQ	Mont Tremblant	40.16	81	P	P	08 22 53.1	-0.4
I55A	Frankford	40.17	86	P	P	08 22 52.8	-0.6
	baz=318						
ORIO	Orleans, Innes	40.28	83	P	P	08 22 53.2	-1.0
	baz=318						
MIAR	Mount Ida	40.34	110	P	P	08 22 54.0	-0.9
	baz=327,SNR=8.3						
Q48A	North Vernon	40.40	98	P	P	08 22 54.9	-0.4
	baz=323						
W41B	Gary Mavity, V	40.42	108	P	P	08 22 55.0	-0.5
	baz=326						
J54A	Appleton	40.42	87	P	P	08 22 54.9	-0.5
	baz=319						
N51A	Ashland	40.44	93	P	P	08 22 55.2	-0.5
	baz=321						
O50A	Cable	40.45	95	P	P	08 22 55.0	-0.7
	baz=322						
S46A	Don Dixon Farm	40.46	101	P	P	08 22 55.0	-0.8
	baz=324						
H56A	Elgin	40.56	84	P	P	08 22 56.2	-0.5
	baz=318						
T45A	Paducah	40.56	103	P	P	08 22 56.7	0.0
	baz=324						
TXAR	Lajitas Array	40.58	125	P	P	08 22 57.6	+0.5
	comp=Z,1.7nm,1.0s,baz=335,slow=5.5,SNR=16						
TXAR				PcP	PcP	08 24 58.7	-0.4
	comp=Z,1.2nm,0.8s,baz=295,slow=2.3,SNR=7.3						
TXAR				LR	LR	08 41 17.5	
	comp=Z,125nm,18.1s,baz=0.0,slow=38						
MEDO	Medina	40.59	87	P	P	08 22 56.3	-0.6
	baz=319						
L53A	Girard	40.65	90	P	P	08 22 57.3	-0.1
	baz=320						
DPQ	Saint Jean	40.66	79	P	P	08 22 57.0	-0.4
ACSO	Alum Creek Sta	40.68	94	P	P	08 22 57.0	-0.7
	baz=322						
PECO	Prince Edward	40.70	85	P	P	08 22 57.3	-0.6
	baz=319						
J55A	Hilton	40.82	87	P	P	08 22 57.9	-0.9
	baz=319						
L54A	Sinclairville	40.89	89	P	P	08 22 59.0	-0.3
	baz=320						
T46A	Princeton	40.90	102	P	P	08 22 59.4	0.0
	baz=324						
K54A	Basiliko Farm,	40.90	88	P	P	08 22 59.2	-0.2
	baz=320						
S47A	Hartford	40.93	100	P	P	08 22 59.3	-0.4
	baz=324						
O51A	Pataskala	40.93	94	P	P	08 22 59.5	-0.3
	baz=322						
CNQ	Baie Comeau	40.95	73	P	P	08 23 00.1	+0.4
JCT	Junction City	41.12	120	P	P	08 23 01.3	-0.2
	baz=331						
A64	Saint Simeon	41.17	76	P	P	08 23 01.4	-0.3
A61	Sainte Mathild	41.18	76	P	P	08 23 01.5	-0.2
N53A	Lisbon	41.26	92	P	P	08 23 01.8	-0.7
	baz=321						
S48A	Wiedeman Farm,	41.26	99	P	P	08 23 02.2	-0.3
	baz=324						
TYV	Tymovskoe	41.28	291	*e*P	P	08 23 05.2	+2.8
TYV				pmax	pmax		
	comp=Z,15nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,6.7s						
M54A	Oil Creek Stat	41.28	90	P	P	08 23 02.1	-0.5
	baz=320						
QCQ	Quebec	41.30	78	P	P	08 23 03.0	+0.3
O52A	Adamsville	41.32	93	P	P	08 23 02.6	-0.4
	baz=322						
L55A	Hinsdale	41.34	88	P	P	08 23 02.1	-1.1
	baz=320						
A21	Saint Andre	41.36	76	P	P	08 23 03.0	-0.1
Q51A	Peebles	41.46	96	P	P	08 23 03.3	-0.8
	baz=322						
O53A	New Philadelph	41.51	93	P	P	08 23 03.9	-0.6
	baz=321						
T48A	Bowling Green	41.55	100	P	P	08 23 03.7	-1.1
	baz=324						
R50A	Paris	41.58	97	P	P	08 23 04.2	-0.9
	baz=323						
U47A	Clarksville	41.67	102	P	P	08 23 05.4	-0.4
	baz=325						
WVT	Waverly	41.67	103	P	P	08 23 05.2	-0.6
	baz=325						
M55A	Ridgway	41.74	89	P	P	08 23 05.8	-0.6
	baz=321						
V46A	Holladay	41.80	103	P	P	08 23 06.7	-0.2
	baz=325						
R51A	Hillsboro	41.92	97	P	P	08 23 07.0	-0.9
	baz=323						
U48A	Cassie Pea, Po	41.96	101	P	P	08 23 07.5	-0.7
	baz=324						
O54A	Avella	41.97	92	P	P	08 23 08.0	-0.2
	baz=322						
M56A	Emporium	42.00	89	P	P	08 23 07.7	-0.8
	baz=321						
V47A	Nunnelly	42.06	103	P	P	08 23 08.7	-0.4
	baz=325						
N55A	Marion Center	42.16	90	P	P	08 23 09.5	-0.4
	baz=321						
OXF	Oxford	42.27	106	P	P	08 23 10.5	-0.2
	baz=326						
U49A	Red Boiling Sp	42.32	100	P	P	08 23 10.6	-0.5
	baz=324						
T50A	Nancy	42.35	99	P	P	08 23 11.1	-0.3
	baz=324						
P54A	Burton	42.37	92	P	P	08 23 10.8	-0.8
	baz=322						
N56A	West Decatur	42.39	89	P	P	08 23 11.0	-0.7
	baz=321						
V48A	Smith Brothers	42.46	102	P	P	08 23 12.0	-0.3
	baz=325						
O55A	Ligonier	42.46	91	P	P	08 23 11.9	-0.3
	baz=321						
W47A	Westpoint	42.50	103	P	P	08 23 12.0	-0.6
	baz=325						
BINY	Binghamton	42.50	86	P	P	08 23 12.3	-0.3
	baz=320						
X46A	Booneville	42.61	105	P	P	08 23 13.1	-0.4
	baz=326						
P55A	Reedsville	42.76	92	P	P	08 23 13.5	-1.2
	baz=322						
SSPA	Standing Stone	42.80	89	P	P	08 23 14.5	-0.6
	baz=321						
T51A	Gray	42.82	98	P	P	08 23 14.7	-0.6
	baz=324						
U50A	Jamestown	42.84	99	P	P	08 23 15.4	0.0
	baz=324						
V49A	McMinnville	42.87	101	P	P	08 23 15.7	0.0
	baz=325						
LBNH	Lisbon	42.88	81	P	P	08 23 15.2	-0.4
	baz=319						
W48A	Pulaski	42.90	103	P	P	08 23 15.9	+0.1
	baz=325						
M58A	Price’s Panora	42.91	87	P	P	08 23 15.0	-1.0
	baz=321						
X47A	Russelville	42.98	104	P	P	08 23 16.7	+0.2
	baz=326						
T52A	Hallie	43.16	97	P	P	08 23 17.3	-0.7
	baz=324						
N58A	Sunbury	43.20	88	P	P	08 23 17.8	-0.4
	baz=321						
W49A	Belvidere	43.23	102	P	P	08 23 18.4	-0.2
	baz=325						
O57A	Amberson	43.25	89	P	P	08 23 18.4	-0.3
	baz=321						
HKT	Hockley	43.26	116	⇓*i*P	P	08 23 19.1	+0.4
HKT				pmax	pmax		
	comp=Z,10.0nm,1.5s						
V50A	Pikevile	43.32	100	P	P	08 23 19.0	-0.3
	baz=325						
BATG	Bathurst New B	43.34	73	P	P	08 23 18.9	-0.4
TZTN	Tazewell	43.34	98	P	P	08 23 19.2	-0.3
	baz=324						
PKME	Peaks-Kenny Pk	43.35	78	P	P	08 23 18.8	-0.5
	baz=319						
X48A	Hartselle	43.41	103	P	P	08 23 19.4	-0.6
	baz=326						
W50A	Signal Mountai	43.61	101	P	P	08 23 21.1	-0.6
	baz=325						
P57A	Homestead Farm	43.64	90	P	P	08 23 21.3	-0.5
	baz=322						
O58A	Lewisberry	43.66	89	P	P	08 23 21.3	-0.7
	baz=322						
Y48A	Jasper	43.80	104	P	P	08 23 23.1	0.0
	baz=326						
V52A	Sevierville	43.89	99	P	P	08 23 23.7	-0.2
	baz=324						
W51A	Cleveland	43.90	100	P	P	08 23 23.4	-0.5
	baz=325						
N60A	Cedar Hill Far	43.95	87	P	P	08 23 23.7	-0.6
	baz=321						
YSS	Yuzh-Sakhalins	44.08	287	*e*P	P	08 23 28.5	+3.3
YSS				*e*S	S	08 29 59.8	+2.1
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
S56A	Natural Bridge	44.33	93	P	P	08 23 26.5	-0.9
	baz=323						
R57A	Stanardsville	44.34	92	P	P	08 23 26.3	-1.1
	baz=323						
Y50A	Piedmont	44.48	102	P	P	08 23 28.7	+0.1
	baz=326						
GGN	Saint George	44.60	76	P	P	08 23 28.4	-1.0
LRAL	Lakeview Retre	44.60	104	P	P	08 23 29.5	-0.1
	baz=327						
Z49A	Columbiana	44.69	104	P	P	08 23 30.6	+0.4
	baz=326						
Z50A	Ashland	44.92	103	P	P	08 23 32.4	+0.2
	baz=326						
LMN	Caledonia Moun	44.98	74	P	P	08 23 30.8	-1.7
149A	Jones	45.06	104	P	P	08 23 33.7	+0.4
	baz=327						
X53A	Estanollee	45.12	100	P	P	08 23 33.8	+0.1
	baz=325						
Y52A	Lilburn	45.29	101	P	P	08 23 35.3	+0.2
	baz=326						
V56A	Mocksville	45.39	96	P	P	08 23 35.3	-0.6
	baz=324						
249A	Camden	45.43	105	P	P	08 23 36.4	+0.2
	baz=327						
Y53A	Monroe	45.52	100	P	P	08 23 36.7	-0.1
	baz=326						
Z52A	Williamson	45.68	102	P	P	08 23 38.5	+0.3
	baz=326						
151A	Opelika	45.80	103	P	P	08 23 38.8	-0.3
	baz=327						
U58A	Oxford	45.84	94	P	P	08 23 38.7	-0.7
	baz=324						
Y54A	Tignall	45.94	99	P	P	08 23 40.4	+0.2
	baz=326						
GOGA	Godfrey	45.94	101	P	P	08 23 40.3	+0.1
	baz=326						
152A	Waverly Hall	45.97	102	P	P	08 23 40.6	+0.1
	baz=326						
251A	Midway	46.13	103	P	P	08 23 41.6	-0.1
	baz=327						
Y55A	Saluda	46.27	99	P	P	08 23 42.8	+0.1
	baz=325						
Z54A	Sparta	46.38	100	P	P	08 23 43.8	+0.1
	baz=326						
252A	Lumpkin	46.52	103	P	P	08 23 44.4	-0.4
	baz=327						
Z55A	Blythe	46.73	99	P	P	08 23 46.0	-0.4
	baz=326						
253A	Americus	46.75	102	P	P	08 23 46.7	+0.1
	baz=327						
154A	Montrose	46.77	101	P	P	08 23 46.2	-0.6
	baz=326						
GBN	Guysborough	46.82	72	P	P	08 23 47.4	+0.4
352A	Blakely	46.86	103	P	P	08 23 46.7	-0.7
	baz=327						
U61A	Possum Corner	46.90	92	P	P	08 23 46.9	-0.8
	baz=324						
KLR	Kul'dur	47.24	297	P	P	08 23 51.4	+1.1
	comp=Z,1.9nm,1.0s,baz=28,slow=7.1,SNR=5.5						
KLR	Kul'dur	47.24	297	⇓*e*P	P	08 23 52.4	+2.2
KLR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MAJO	Matsushiro	54.34	282	⇓*e*P	P	08 24 45.9	+2.0
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAT	Matsushiro	54.34	282	P	P	08 24 45.5	+1.6
MJAR	Matsushiro Arr	54.34	282	P	P	08 24 44.5	+0.6
	comp=Z,3.1nm,1.0s,baz=1.2,slow=5.5,SNR=6.5						
NB2	NORSAR Subarra	55.85	16	P	P	08 24 54.3	-0.2
	comp=Z,1.3nm,0.9s,baz=345,slow=7.4						
NOA	NORSAR Array B	55.85	16	P	P	08 24 52.5	-2.0
	comp=Z,2.1nm,0.9s,baz=343,slow=6.5,SNR=5.6						
NOA				LR	LR	08 49 48.5	
	comp=Z,24nm,21.2s,baz=350,slow=37						
TLY	Talaya	55.92	317	*e*P	P	08 24 55.4	+0.3
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FINES	FINESS Array B	56.88	7	P	P	08 25 00.1	-1.6
	comp=Z,2.2nm,0.8s,baz=353,slow=4.4,SNR=6.2						
FINES				LR	LR	08 53 11.0	
	comp=Z,21nm,18.0s,baz=164,slow=40						
PRGR	Permogore	56.97	356	*e*P	P	08 25 01.3	-1.1
PRGR				*e**PP	sP	08 25 06.8	+0.6
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KONO	Kongsberg	56.98	17	⇓*e*P	P	08 25 02.4	-0.1
KONO				pmax	pmax		
	comp=Z,15nm,1.3s						
ULN	Ulaanbaatar	58.02	313	⇓*e*P	P	08 25 12.6	+2.4
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
SONM	Songino Array	58.27	313	P	P	08 25 12.9	+0.9
	comp=Z,1.3nm,1.1s,baz=30,slow=6.7,SNR=5.2						
SONM				LR	LR	08 54 03.8	
	comp=Z,52nm,18.3s,baz=79,slow=40						
KSRS	Korea Array	58.30	291	P	P	08 25 12.7	+0.6
	comp=Z,2.0nm,0.9s,baz=39,slow=5.8,SNR=5.4						
KSRS				LR	LR	08 51 14.9	
	comp=Z,27nm,19.3s,baz=60,slow=37						
ZALV	Zalesovo Beam	59.21	330	P	P	08 25 17.9	-0.3
	comp=Z,1.1nm,0.4s,baz=32,slow=5.8,SNR=6.2						
ZALV				LR	LR	08 54 03.5	
	comp=Z,29nm,19.0s,baz=73,slow=39						
VSU	Vasula	59.89	7	⇓*e*P	P	08 25 22.9	+0.1
VSU				pmax	pmax		
	comp=Z,77nm,2.5s						
ARU	Arti	61.30	348*c*	*i*P	P	08 25 32.4	0.0
ARU				S	S	08 33 54.3	+1.9
ARU				SS	SS	08 37 50.0	-1.6
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC	Hu-ho-hao-te	62.34	305	P	P	08 25 40.9	+1.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,69nm,6.0s						
DGZ	Jazzator, Alta	62.45	327	⇓*e*P	P	08 25 41.2	+0.7
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.4s						
BRVK	Borovoye	63.00	339*c*	*i*P	P	08 25 43.5	-0.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OBN	Obninsk	63.61	1	*i* P	P	08 25 47.8	-0.1
OBN				*i*		08 26 27.6	
OBN				*i*		08 28 05.8	
OBN				pmax	pmax		
	comp=Z,11nm,0.9s						
KURK	Kurchatov	63.62	333*c*	*e*P	P	08 25 47.2	-0.8
KURK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
CLL	Collm	65.55	18	⇓*i*P	P	08 26 00.9	+0.2
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	65.55	18	⇓*i*P	P	08 26 00.9	+0.2
	comp=Z,5.0nm,0.9s						
BRG	Berggiesshubel	66.11	17	*i* P	P	08 26 04.6	+0.3
	comp=Z,3.3nm,0.6s						
BRG				*e*		08 28 10.3	
	comp=Z,2.5nm,0.8s						
BRG	Berggiesshubel	66.11	17	*i* P	P	08 26 04.6	+0.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	66.45	329	P	P	08 26 05.4	-1.2
	comp=Z,1.1nm,0.8s,baz=42,slow=6.3,SNR=11						
MKAR				LR	LR	08 57 43.4	
	comp=Z,30nm,19.0s,baz=11,slow=38						
NKC	Novy Kostel	66.52	18	*e*P	P	08 26 07.4	+0.5
NKC	Novy Kostel	66.52	18	*e*P	P	08 26 07.4	+0.5
CHVC	Chvalec	66.67	16	*e*P	P	08 26 08.4	+0.5
CHVC				*e*x	x	08 26 13.3	
OSTC	Ostas	66.72	16	*e*P	P	08 26 08.3	0.0
OSTC				*e*x	x	08 26 12.2	
DPC	Dobruska-Polom	66.94	15	*e*P	P	08 26 09.6	-0.1
DPC				*e*		08 26 13.8	
DPC	Dobruska-Polom	66.94	15	*e*P	P	08 26 09.6	-0.1
DPC				*e*pP	sP	08 26 13.8	+0.3
PRU	Pruhonice	67.06	17	*e*P	P	08 26 10.9	+0.6
PRU				*e*		08 26 14.8	
PRU	Pruhonice	67.06	17	*e*P	P	08 26 10.9	+0.6
PRU				*e*pP	sP	08 26 14.8	+0.6
MORC	Moravsky Berou	67.66	15	⇓*i*P	P	08 26 14.8	+0.6
MORC	Moravsky Berou	67.66	15	⇓P	P	08 26 14.8	+0.6
MORC	Moravsky Berou	67.66	15	*e*P	P	08 26 14.2	0.0
OKC	Ostrava-Krasne	67.67	14	*e*P	P	08 26 14.3	+0.1
OKC	Ostrava-Krasne	67.67	14	*e*P	P	08 26 14.3	+0.1
BFO	Black Forest	67.70	22	*i* P	P	08 26 15.4	+0.9
KHC	Kasperske Hory	67.76	18	*e*P	P	08 26 15.4	+0.5
KHC				*e*		08 26 19.2	
KHC				*e*		08 26 46.5	
KHC	Kasperske Hory	67.76	18	*e*P	P	08 26 15.4	+0.5
KHC				*e*pP	sP	08 26 19.2	+0.5
KHC				*e*x	x	08 26 46.5	
AKASG	Malin Array Be	67.78	7	P	P	08 26 13.7	-1.1
	comp=Z,7.7nm,0.6s,baz=357,slow=6.3,SNR=48						
WMQ	Urumqi	67.78	324	*e*P	P	08 26 17.0	+1.9
WMQ				pP	sP	08 26 21.0	+2.1
WMQ				LR	LR		
	comp=N,1µm,29.1s						
WMQ				LR	LR		
	comp=E,760nm,29.2s						
WMQ				LR	LR		
	comp=Z,150nm,23.9s						
TREC	Trest	67.87	16	*e*P	P	08 26 20.0	+4.5
TREC	Trest	67.87	16	*e*P	P	08 26 20.0	+4.5
GTA	Gaotai	67.95	313	*e*P	P	08 26 17.8	+1.5
GTA				pP	sP	08 26 21.9	+1.8
GTA				sP	pP	08 26 24.9	+5.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VRAC	Vranov	68.00	16	⇑*i*P	P	08 26 17.0	+0.7
VRAC	Vranov	68.00	16	⇑P	P	08 26 17.0	+0.7
VRAC	Vranov	68.00	16	*e*P	P	08 26 16.7	+0.4
GERES	GERESS Array B	68.06	18	P	P	08 26 16.2	-0.6
	comp=Z,0.7nm,0.7s,baz=353,slow=3.1,SNR=7.8						
KRUC	Moravsky	68.22	16	*e*P	P	08 26 17.8	+0.1
LANS	Liptovska Anna	68.50	14	*e*P	P	08 26 21.0	+1.5
LANS	Liptovska Anna	68.50	14	*e*P	P	08 26 21.0	+1.5
JAVC	Velka Javorina	68.58	15	*e*P	P	08 26 21.2	+1.2
MODS	Modra-Piesok	69.00	15	*e*P	P	08 26 22.8	+0.2
MODS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MODS	Modra-Piesok	69.00	15	*e*P	P	08 26 22.8	+0.2
VYHS	Vyhne	69.07	14	*e*P	P	08 26 23.4	+0.3
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VYHS	Vyhne	69.07	14	*e*P	P	08 26 23.4	+0.3
MOA	Molln	69.11	17	*e*P	P	08 26 24.1	+0.8
	comp=Z,3.8nm,1.4s						
MOTA	Moosalm	69.12	20	*e*P	P	08 26 24.1	+0.5
	comp=Z,0.9nm,0.8s						
WATA	Walderalm	69.20	20	*e*P	P	08 26 24.7	+0.6
	comp=Z,2.9nm,0.8s						
CONA	Conrad Observa	69.26	16	*e*P	P	08 26 25.2	+0.9
	comp=Z,5.3nm,0.8s						
SQTA	Sankt Quirin	69.26	20	*e*P	P	08 26 25.3	+0.9
	comp=Z,6.0nm,1.1s						
WTTA	Wattenberg	69.28	19	*e*P	P	08 26 25.0	+0.4
	comp=Z,12nm,1.1s						
UZH	Uzhgorod	69.31	12	*e*P	P	08 26 18.9	-5.5
UZH				*e*		08 26 24.7	
FETA	Feichten	69.37	20	*e*P	P	08 26 26.2	+1.1
	comp=Z,4.1nm,1.1s						
LZH	Lanzhou	69.44	308	*e*P	P	08 26 23.6	-2.1
LZH				pP	pP	08 26 25.3	-3.2
LZH				sP	sP	08 26 26.1	-3.5
LZH				*e*PP	PP	08 28 58.8	+0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,53nm,7.8s						
LZH				LR	LR		
	comp=N,78nm,15.4s						
LZH				LR	LR		
	comp=E,82nm,15.1s						
LZH				LR	LR		
	comp=Z,110nm,17.6s						
KBA	Koelnbreinsper	69.73	18	*e*P	P	08 26 28.4	+1.1
	comp=Z,11nm,0.9s						
PSZ	Piszkesteto	69.76	13	⇑*i*P	P	08 26 28.3	+0.9
PSZ	Piszkesteto	69.76	13	⇑P	P	08 26 28.3	+0.9
ARSA	Arzberg	69.87	17	*e*P	P	08 26 29.1	+1.0
	comp=Z,7.4nm,1.2s						
WHN	Wuhan	70.09	297	P	P	08 26 27.3	-2.2
SOKA	Soboth	70.37	17	*e*P	P	08 26 31.9	+0.7
	comp=Z,6.8nm,1.3s						
OBKA	Obir	70.46	18	*e*P	P	08 26 32.4	+0.6
	comp=Z,11nm,0.8s						
BURAR	Bucovina Array	70.58	10	⇑*i*P	P	08 26 32.7	+0.3
BURAR	Bucovina Array	70.58	10	⇑P	P	08 26 32.7	+0.3
BIZ	Bicaz	71.32	9	⇑*i*P	P	08 26 37.3	+0.5
AAK	Ala-Archa	72.18	333	⇑*e*P	P	08 26 43.1	+0.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BZS	Buzias	72.22	13	⇑*i*P	P	08 26 41.7	-0.6
BZS	Buzias	72.22	13	⇑P	P	08 26 41.7	-0.6
DOPR	Dopca	72.23	10	⇓*i*P	P	08 26 42.7	+0.4
VRI	Vrincioaia	72.43	9	⇓*i*P	P	08 26 43.7	+0.2
VRI	Vrincioaia	72.43	9	⇓P	P	08 26 43.7	+0.2
GZR	Gura Zlata	72.56	12	⇓*i*P	P	08 26 43.8	-0.6
GZR	Gura Zlata	72.56	12	⇓P	P	08 26 43.8	-0.6
CFR	Carcaliu	73.21	8	⇑*i*P	P	08 26 47.4	-0.7
CFR	Carcaliu	73.21	8	⇑P	P	08 26 47.4	-0.7
ESDC	Sonseca Array	73.26	33	P	P	08 26 48.5	-0.1
	comp=Z,0.5nm,0.5s,baz=328,slow=6.8,SNR=5.9						
ESDC				LR	LR	08 59 14.8	
	comp=Z,24nm,21.4s,baz=95,slow=36						
TLB	Topalu	73.80	8	⇑*i*P	P	08 26 51.5	-0.1
TLB	Topalu	73.80	8	⇑P	P	08 26 51.5	-0.1
KIV	Kislovodsk	74.75	357	*e*P	P	08 26 56.7	-0.6

KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
KSH	**Kashi**	**74.83**	**331**	P	**P**	**08 26 59.9**	**+2.0**
KSH				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KBZ	**Khabaz**	**74.97**	**357**	P	**P**	**08 26 58.2**	**-0.2**
	comp=Z,5.2nm,0.9s,baz=294,slow=3.3,SNR=9.2						
KBZ				LR	LR	09 06 14.0	
	comp=Z,14nm,18.0s,baz=28,slow=41						
PDG	**Podgorica**	**75.10**	**15**	⇓*i*P	**P**	**08 26 58.2**	**-1.0**
BRTR	**Keskin Array B**	**78.93**	**4**	P	**P**	**08 27 21.2**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=357,slow=2.5,SNR=10						
GEYT	**Alibeck**	**79.59**	**345**	P	**P**	**08 27 24.1**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=343,slow=1.5,SNR=5.7						
KMI	**Kunming**	**79.64**	**304**	P	**P**	**08 27 23.8**	**-1.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KEST	**Kesra**	**80.08**	**24**	P	**P**	**08 27 26.7**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=2.9,slow=5.6,SNR=6.3						
RAR	**Rarotonga**	**83.88**	**197**	LR	LR	08 54 56.9	
	comp=Z,63nm,21.8s,baz=356,slow=28						
CMAR	**Chiang Mai Arr**	**87.14**	**305**	P	**P**	**08 28 04.1**	**+0.5**
	comp=Z,2.9nm,1.0s,baz=358,slow=5.4,SNR=9.3						
LPAZ	**La Paz**	**96.34**	**112**	LR	LR	09 17 26.6	
	comp=Z,15nm,18.0s,baz=347,slow=39						
VNDA	**Vanda**	**143.20**	**198**	PKhKP	PKPpre	08 34 46.5	
	comp=Z,1.4nm,1.0s,baz=77,slow=3.1,SNR=3.7						
BOSA	**Boshof**	**145.78**	**22**	PKPbc	**PKPdf**	**08 34 54.6**	**-1.3**
	comp=Z,8.3nm,0.9s,baz=333,slow=5.1,SNR=8.9						

NEIC 14 08:16:20.4±0.0, 61°.56N×141°.08W, h1^{km}, ML3.5(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALM	**Baldy**	**0.81**	**230**	*e*Pg	Pg	08 16 35.3	-0.4
BALM				*e*Sg	Sg	08 16 46.4	+0.2
BCA3	**Beaver Creek A**	**1.55**	**348**	*e*Pn	Pn	08 16 48.7	-0.4
PMR	**Palmer**	**3.85**	**274**	*e*Pn	Pn	08 17 17.1	-3.6
HDA	**Harding Lake**	**3.92**	**319**	*e*Pn	Pn	08 17 20.9	-0.7
RND	**Reindeer**	**4.06**	**301**	*e*Pn	Pn	08 17 23.5	-0.1
ILB	**Eielson Array**	**4.16**	**323**	*e*Pn	Pn	08 17 27.4	+2.4
RC01	**Rabbit Creek A**	**4.20**	**267**	*e*Pn	Pn	08 17 24.0	-1.5
BRLK	**Bradley Lake**	**5.15**	**254**	*e*Pn	Pn	08 17 38.0	-0.5
957A	**Wimauma**	**51.30**	**103**	*e*P	P	08 25 25.1	-0.7
KIV	**Kislovodsk**	**74.80**	**357**	*e*P	P	08 28 02.5	+0.6

*JMA **14** 08:24:03.4±0.3, 32°.67N×137°.96E, h388^{km}, M3.2*
*ISCJB **14** 08:24:05.0±0.5, 32°.63N±0°.07×137°.78E±0°.08, h376^{km}, mb3.5/16, Error ellipse: s-maj=10.0km s-min=8.6km az=3.7*
*IDC **14** 08:24:05.6±0.6, 32°.58N×137°.75E, h365^{km}±6^{km}, mb3.3/16, mb1 3.4/22, mb1mx3.2/60, mbtmp4.0/22, Error ellipse: s-maj=14.1km s-min=11.5km az=50.0*

ISC 14 08:24:06.5±0.7, 32°.69N±0°.10×137°.85E±0°.07, h376^{km}, n38, σ1^{s}.44/43, mb3.6/16, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK01	**Tokai 1**	**1.10**	**349**	*e*S	**S**	**08 25 33.2**	**-0.9**
TTO3	**TONANKAI O.B.S**	**1.23**	**342**	P	**Pn**	**08 24 55.0**	**-0.7**
TTO2	**TONANKAI O.B.S**	**1.25**	**327**	P	**Pn**	**08 24 54.8**	**-0.8**
TTO2				S	**S**	**08 25 35.5**	**+0.2**
TTO1	**TONANKAI O.B.S**	**1.29**	**317**	P	**Pn**	**08 24 54.6**	**-1.2**
TTO4	**TONANKAI O.B.S**	**1.34**	**349**	P	**Pn**	**08 24 55.2**	**-0.9**
JHJ	**Hachijo jima 2**	**1.69**	**75**	P	**Pn**	**08 24 56.9**	**-1.4**
	55nm,0.3s,baz=138,slow=23,SNR=21						
JHJ				S	**S**	**08 25 38.9**	**-1.1**
	39nm,0.3s,baz=45,slow=23,SNR=11						
JHJ2	**Mitsune**	**1.71**	**75**	P	**Pn**	**08 24 56.6**	**-1.8**
JIE	**Ise**	**1.95**	**331**	P	**Pn**	**08 24 58.7**	**-1.1**
JTNC	**Tanabenakahech**	**2.19**	**302**	P	**Pn**	**08 24 59.6**	**-1.9**
JWY	**Kouya**	**2.43**	**310**	P	**Pn**	**08 25 02.1**	**-1.1**
JWY				*e*S	**S**	**08 25 46.5**	**-2.5**
JAI	**Aioi**	**3.05**	**292**	P	**Pn**	**08 25 06.5**	**-1.7**
BSO1	**Boso 1**	**3.27**	**52**	*e*S	**S**	**08 25 55.5**	**-5.0**
JWT	**Wachi**	**3.29**	**323**	P	**Pn**	**08 25 09.6**	**-0.7**
JRY	**Ryogami san**	**3.44**	**14**	P	**Pn**	**08 25 11.2**	**-0.4**
JMN	**Monobe**	**3.49**	**288**	P	**Pn**	**08 25 10.7**	**-1.5**
MJAR	**Matsushiro Arr**	**3.86**	**4**	P	**Pn**	**08 25 14.9**	**-0.8**
	0.2nm,0.3s,baz=187,slow=11,SNR=20						
MAT	**Matsushiro**	**3.86**	**4**	P	**Pn**	**08 25 15.1**	**-0.5**
MAT				S	**S**	**08 26 08.7**	**-2.9**
JNU	**Nakatsue**	**5.88**	**276**	P	**Pn**	**08 25 35.3**	**-1.6**
	1.3nm,0.3s,baz=76,slow=3.3,SNR=13						
KSRS	**Korea Array**	**9.42**	**303**	P	**Pn**	**08 26 17.0**	**-0.5**
	0.7nm,0.3s,baz=116,slow=12,SNR=15						
ASAJ	**Asahikawa**	**12.00**	**17**	P	**Pn**	**08 26 48.7**	**+1.0**
	0.5nm,0.3s,baz=223,slow=11,SNR=5.5						
USRK	**Ussuriysk Ar.**	**12.38**	**340**	P	**Pn**	**08 26 52.0**	**-0.1**
	0.9nm,0.3s,baz=162,slow=12,SNR=16						
KLR	**Kul'dur**	**17.15**	**346**	P	**P**	**08 27 43.0**	**+0.2**
	1.2nm,0.3s,baz=167,slow=9.5,SNR=23						
SONM	**Songino Array**	**28.13**	**312**	P	**P**	**08 29 25.7**	**+0.2**
	1.1nm,0.5s,baz=113,slow=9.5,SNR=7.9						
ZALV	**Zalesovo Beam**	**42.84**	**316**	P	**P**	**08 31 28.3**	**-0.5**
	1.5nm,0.3s,baz=90,slow=6.9,SNR=4.6						
MKAR	**Makanchi Array**	**44.09**	**305**	P	**P**	**08 31 39.3**	**+0.4**
	2.6nm,0.5s,baz=86,slow=9.9,SNR=42						
MKAR				ScP	**ScP**	**08 36 33.0**	**+1.2**
	0.2nm,0.6s,baz=87,slow=5.1,SNR=3.6						
KURBB	**Kurchatov Arra**	**46.49**	**311**	P	**P**	**08 31 56.5**	**-0.9**
	2.5nm,0.4s,baz=91,slow=9.3,SNR=59						
WRA	**Warramunga Arr**	**52.44**	**184**	P	**P**	**08 32 40.2**	**-1.9**
	0.8nm,0.7s,baz=353,slow=6.1,SNR=8.2						
ILAR	**Eielson Array**	**54.72**	**31**	P	**P**	**08 32 59.0**	**+1.1**
	0.5nm,0.5s,baz=270,slow=6.0,SNR=11						
ASAR	**Alice Springs**	**56.16**	**184**	P	**P**	**08 33 08.6**	**0.0**
	0.2nm,0.6s,baz=19,slow=12,SNR=3.9						
ARCES	**ARCESS Array B**	**67.02**	**339**	P	**P**	**08 34 18.5**	**-1.2**
	3.1nm,0.8s,baz=70,slow=7.8,SNR=3.7						
FINES	**FINESS Array B**	**71.27**	**332**	P	**P**	**08 34 46.4**	**+0.7**
	1.2nm,0.4s,baz=62,slow=5.8,SNR=21						
KBZ	**Khabaz**	**71.49**	**310**	P	**P**	**08 34 48.8**	**+1.5**
	2.3nm,0.6s,baz=77,slow=2.9,SNR=6.6						
AKASG	**Malin Array Be**	**75.91**	**322**	P	**P**	**08 35 13.0**	**+0.5**
	1.0nm,0.4s,baz=50,slow=5.9,SNR=6.1						
NOA	**NORSAR Array B**	**77.02**	**336**	P	**P**	**08 35 18.9**	**+0.3**
	0.7nm,0.7s,baz=46,slow=5.5,SNR=3.2						
BRTR	**Keskin Array B**	**79.48**	**310**	P	**P**	**08 35 33.5**	**+0.9**
	0.8nm,0.6s,baz=110,slow=5.5,SNR=5.0						
NVAR	**Mina Array Bea**	**79.97**	**51**	P	**P**	**08 35 36.0**	**+0.8**
	0.4nm,0.6s,baz=289,slow=5.4,SNR=2.8						
PDAR	**Pinedale Array**	**82.82**	**43**	P	**P**	**08 35 51.0**	**+1.0**
	0.3nm,0.7s,baz=180,slow=1.5,SNR=3.7						
TXAR	**Lajitas Array**	**95.12**	**50**	P	**P**	**08 36 49.6**	**+1.4**
	0.3nm,0.6s,baz=301,slow=4.2,SNR=5.6						

ATH 14 08:24:07.6, 38°.23N×22°.09E, h12^{km}±1^{km}, ML1.2/7, Error ellipse: s-maj=1.7km s-min=0.9km az=255.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG2	**Aigio**	**0.02**	**320**	P	Pg	08 24 09.6	-0.1
AIG2				S	Sg	08 24 10.8	-0.3
AIG3	**Aigion**	**0.03**	**23**	P	Pg	08 24 09.7	0.0
AIG3				S	Sg	08 24 11.3	+0.1
AIG1	**Aigion**	**0.04**	**112**	P	Pg	08 24 09.8	0.0
LAKA	**Lakka**	**0.09**	**279**	P	Pg	08 24 10.3	0.0
LAKA				S	Sg	08 24 11.9	-0.3
LAKA				AML	AML	08 24 12.3	
	comp=N,308µm,0.2s						
LAKA				AML	AML	08 24 12.5	
	comp=E,341µm,0.3s						
TRAZ	**Trapeza**	**0.11**	**121**	P	Pg	08 24 10.8	+0.2
TRAZ				S	Sg	08 24 13.0	+0.2
TRAZ				AML	AML	08 24 13.5	
	comp=N,568µm,0.2s						
TRAZ				AML	AML	08 24 13.8	
	comp=E,482µm,0.1s						
TRIZ	**Trizonia**	**0.14**	**355**	P	Pg	08 24 11.0	+0.1
TRIZ				S	Sg	08 24 13.5	+0.2
KALE	**Kalithea**	**0.17**	**14**	P	Pg	08 24 11.6	+0.1
KALE				S	Sg	08 24 14.3	+0.1
KALE				AML	AML	08 24 14.9	
	comp=E,271µm,0.2s						
KALE				AML	AML	08 24 15.3	
	comp=N,451µm,0.3s						
KLV	**Kalavryta, Ach**	**0.19**	**165**	P	Pg	08 24 11.8	0.0
KLV				S	Sg	08 24 14.8	+0.2
KLV				AML	AML	08 24 15.4	
	comp=E,130µm,0.1s						
KLV				AML	AML	08 24 15.7	
	comp=N,155µm,0.1s						
SERG	**Sergoula**	**0.19**	**352**	P	Pg	08 24 11.8	+0.1
SERG				S	Sg	08 24 14.9	+0.2
SERG				AML	AML	08 24 16.0	
	comp=E,132µm,0.1s						
SERG				AML	AML	08 24 17.7	
	comp=N,234µm,0.2s						
GUR	**Goura**	**0.35**	**145**	P	Pg	08 24 14.5	-0.2
ANX	**Ano Chora**	**0.39**	**340**	P	Pg	08 24 15.1	-0.3
ANX				AML	AML	08 24 24.4	
	comp=N,67µm,0.2s						
ANX				AML	AML	08 24 24.7	
	comp=E,134µm,0.2s						
DSF	**Desfina**	**0.39**	**62**	P	Pg	08 24 15.1	-0.3
DSF				S	Sg	08 24 20.7	+0.1
DSF				AML	AML	08 24 21.4	
	comp=N,92µm,0.1s						
DSF				AML	AML	08 24 22.1	
	comp=E,81µm,0.1s						

*GEN **14** 08:24:48.7, 44°.22N×10°.24E, h7^{km}±1^{km}, Ml0.9*

ROM 14 08:24:47.9±0.1, 44°.204N±0°.004×10°.230E±0°.004, h11^{km}, ML1.1/7, Error ellipse: s-maj=0.5km s-min=0.3km az=20.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T0912	**Minucciano (LU**	**0.04**	**202**	P	Pg	08 24 50.4	+0.3
T0912				S	Sg	08 24 51.9	+0.4
T0912				AML	AML		
	comp=E,1190µm,0.3s						
T0912				AML	AML		
	comp=N,2040µm,1.4s						
T0912				AML	AML		
	comp=E,1219µm,0.3s						
T0912				AML	AML		
	comp=N,2040µm,1.4s						
T0912				AML	AML		
	comp=E,1190µm,0.3s						
T0912				AML	AML		
	comp=N,2040µm,1.4s						
T0912				AML	AML		
	comp=E,1218µm,0.3s						
T0912				AML	AML		
	comp=N,2046µm,1.4s						
T0912				AML	AML		
	comp=N,2040µm,1.4s						
T0912				AML	AML		
	comp=N,2046µm,1.4s						
T0912				AML	AML		
	comp=E,1190µm,0.3s						
T0912				AML	AML		
	comp=E,1218µm,0.3s						
T0912				AML	AML		
	comp=N,2040µm,1.4s						
T0912				AML	AML		
	comp=N,2046µm,1.4s						
T0912				AML	AML		
	comp=E,1190µm,0.3s						
T0912				AML	AML		
	comp=E,1218µm,0.3s						
EQUI	**Equi**	**0.07**	**235**	P	Pg	08 24 50.6	+0.4
EQUI				S	Sg	08 24 52.1	+0.2
VLC	**Villacollemand**	**0.12**	**112**	P	Pg	08 24 51.4	+0.5
VLC				S	Sg	08 24 53.7	+0.6
VLC				AML	AML		
	comp=E,71µm,1.0s						
VLC				AML	AML		
	comp=N,111µm,0.7s						
VLC				AML	AML		
	comp=E,64µm,0.2s						
VLC				AML	AML		
	comp=N,101µm,0.8s						
VLC				AML	AML		
	comp=E,71µm,1.0s						
VLC				AML	AML		
	comp=N,111µm,0.7s						
VLC				AML	AML		
	comp=E,64µm,0.2s						
VLC				AML	AML		
	comp=N,101µm,0.8s						
VLC				AML	AML		
	comp=E,64µm,0.2s						
VLC				AML	AML		
	comp=E,71µm,1.0s						
VLC				AML	AML		
	comp=N,101µm,0.8s						
VLC				AML	AML		
	comp=N,111µm,0.7s						
VLC				AML	AML		
	comp=E,64µm,0.2s						
VLC				AML	AML		
	comp=E,71µm,1.0s						
VLC				AML	AML		
	comp=N,101µm,0.8s						
VLC				AML	AML		
	comp=N,111µm,0.7s						
T0911	**Castelpoggio (**	**0.14**	**231**	P	Pb	08 24 52.0	-0.6
T0911				S	Sg	08 24 54.7	+1.0
ERBM	**Eremo**	**0.25**	**31**	P	Pg	08 24 53.6	+0.5
ERBM				AML	AML		
	comp=E,36µm,1.2s						
ERBM				AML	AML		
	comp=N,41µm,1.5s						
ERBM				AML	AML		
	comp=E,36µm,1.2s						
ERBM				AML	AML		
	comp=N,41µm,1.5s						
ERBM				AML	AML		
	comp=E,36µm,1.2s						
ERBM				AML	AML		
	comp=N,41µm,1.5s						
CARD	**Cardoso**	**0.25**	**134**	P	Pg	08 24 53.5	+0.4
CARD				S	Sg	08 24 57.6	+0.9
BDI	**Bagni Di Lucca**	**0.30**	**118**	P	Pg	08 24 54.5	+0.6
BDI				S	Sg	08 24 59.1	+1.0
BDI				AML	AML		
	comp=E,31µm,0.6s						
BDI				AML	AML		
	comp=N,25µm,0.3s						
BDI				AML	AML		
	comp=E,31µm,0.6s						
BDI				AML	AML		
	comp=N,25µm,0.3s						
BDI				AML	AML		
	comp=E,31µm,0.6s						
BDI				AML	AML		
	comp=N,25µm,0.3s						
GRAM	**Graiana**	**0.31**	**338**	P	Pg	08 24 54.7	+0.5
GRAM				S	Sg	08 24 59.4	+1.0
GRAM	**Graiana**	**0.31**	**338**	P	Pg	08 24 54.7	+0.5
GRAM				S	Sg	08 24 59.4	+1.0
GRAM				AML	AML		
	comp=E,182µm,1.2s						
GRAM				AML	AML		
	comp=N,234µm,0.2s						
GRAM				AML	AML		
	comp=E,182µm,1.2s						
GRAM				AML	AML		
	comp=N,234µm,0.2s						
GRAM				AML	AML		
	comp=E,182µm,1.2s						
GRAM				AML	AML		
	comp=N,234µm,0.2s						
GRAM				AML	AML		
	comp=E,182µm,1.2s						
GRAM				AML	AML		
	comp=N,234µm,0.2s						
PLMA	**Palmaria, Port**	**0.31**	**241**	P	Pb	08 24 55.0	-0.4
PLMA				S	Sg	08 24 59.2	+0.8
MAIM	**Mastiano**	**0.35**	**147**	P	Pg	08 24 55.3	+0.5
MAIM				S	Sb	08 25 00.7	-0.9
MAIM				AML	AML		
	comp=E,29µm,1.5s						
MAIM				AML	AML		
	comp=N,25µm,0.7s						
MAIM				AML	AML		
	comp=N,25µm,0.7s						
MAIM				AML	AML		
	comp=E,29µm,1.5s						
MAIM				AML	AML		
	comp=N,25µm,0.7s						
MAIM				AML	AML		
	comp=E,29µm,1.5s						
POPM	**Popiglio**	**0.41**	**113**	P	Pg	08 24 56.4	+0.4
POPM				S	Sb	08 25 02.8	-0.7
POPM				AML	AML		
	comp=E,46µm,0.1s						
POPM				AML	AML		
	comp=N,49µm,0.1s						
POPM				AML	AML		
	comp=E,46µm,0.1s						
POPM				AML	AML		
	comp=N,49µm,0.1s						
POPM				AML	AML		
	comp=N,49µm,0.1s						
POPM				AML	AML		
	comp=E,46µm,0.1s						
POPM				AML	AML		
	comp=N,49µm,0.1s						
POPM				AML	AML		
	comp=E,46µm,0.1s						
MSSA	**Maissana**	**0.52**	**283**	P	Pg	08 24 57.9	-0.2
MNTV	**Mantova**	**1.03**	**23**	P	Pn	08 25 08.3	+0.1

PGC 14 08:37:13.8, 61°.58N×141°.04W, h12^{km}, ML2.0/12, 210km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.23**	**25**	P	Pg	08 37 18.1	-0.6
YUK2				S	Sg	08 37 21.8	-0.2
YUK3	**Moose Creek**	**0.34**	**55**	P	Pg	08 37 20.1	-0.7
YUK3				S	Sg	08 37 25.1	-0.2
YUK1	**Sand Pete Hill**	**0.62**	**23**	P	Pg	08 37 24.9	-1.0
YUK1				S	Sg	08 37 34.0	-0.2
PTPK	**Patty Peak**	**0.79**	**241**	P	Pg	08 37 27.7	-1.5
PTPK				S	Sg	08 37 38.2	-1.4
BALM	**Baldy**	**0.83**	**229**	P	Pg	08 37 27.9	-2.1
BALM				S	Sg	08 37 39.2	-1.6
BVCY	**Beaver Creek**	**0.84**	**6**	P	Pg	08 37 29.2	-0.9
BVCY				Sg	Sn	08 37 46.0	+2.2
KIAG	**Kiagna River**	**0.92**	**224**	P	Pg	08 37 29.4	-2.2
KIAG				S	Sg	08 37 41.8	-1.7
TABL	**Table Mountain**	**1.15**	**183**	P	Pb	08 37 34.0	-1.7
TABL				S	Sb	08 37 49.6	-1.0
YUK4	**Talbot Arm**	**1.17**	**101**	P	Pb	08 37 35.3	-0.8
YUK4				S	Sn	08 37 52.0	-0.3
YUK6	**Outpost Mounta**	**1.45**	**115**	Pn	Pn	08 37 39.5	-0.5
YUK6				Sg	Sg	08 38 00.3	0.0
SAMH	**Samovar Hills**	**1.46**	**175**	Pn	Pn	08 37 40.1	0.0
SAMH				Sg	Sg	08 38 00.4	-0.5
MESA	**MESA**	**1.48**	**198**	Pn	Pn	08 37 40.6	+0.2
MESA				Sg	Sg	08 38 01.2	-0.2
PCA	**Pinnacle**	**1.54**	**165**	Pn	Pn	08 37 41.4	+0.3
PCA				Sg	Sb	08 38 02.4	+0.7
YUK5	**Granite Creek**	**1.60**	**105**	Pn	Pn	08 37 41.9	-0.1
YUK5				Sg	Sn	08 38 02.8	+0.2
YUK7	**Dusty Glacier**	**1.76**	**126**	Pn	Pb	08 37 45.5	-0.6
YUK7				Sg	Sg	08 38 09.8	-0.6
HYT	**Haines Junctio**	**1.87**	**112**	Pn	Pn	08 37 46.3	+0.5
HYT				Sg	Sb	08 38 12.4	+1.1
PNL	**Peninsula**	**2.08**	**156**	Pn	Pn	08 37 49.8	+1.3
PNL				Sg	Sg	08 38 19.3	-1.4
DOT	**Dot Lake**	**2.50**	**327**	Pn	Pn	08 37 54.6	+0.3
DOT				Sg	Sb	08 38 31.6	+2.2
DAWY	**Dawson**	**2.60**	**16**	Pn	Pn	08 37 56.1	+0.4
DAWY				Sg	Sb	08 38 33.9	+1.6
WHY	**Whitehorse**	**3.13**	**105**	Sg	Sg	08 38 50.9	-3.3
PLBC	**Pleasant Camp**	**3.15**	**131**	Pn	Pb	08 38 06.8	-2.8
PLBC				Sg	Sg	08 38 53.1	-1.6

*IDC **14** 08:49:13.0±8.3, 18°.83S×177°.75W, h405^{km}±79^{km}, mb3.3/8, mb1 3.6/8, mb1mx3.3/21, mbtmp4.1/8, Error ellipse: s-maj=48.9km s-min=26.0km az=126.0*
*ISCJB **14** 08:49:23.4±1.4, 18°.9S±0°.3×178°.1W±0°.3, h532^{km}, mb3.6/8, Error ellipse: s-maj=50.0km s-min=19.6km az=143.0*

ISC 14 08:49:24.6±1.4, 18°.9S±0°.3×178°.0W±0°.3, h532^{km}, n10, σ1^{s}.32/12, mb3.8/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.52**	**242**	P	**P**	**08 56 00.7**	**-0.8**
	2.1nm,0.7s,baz=85,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	**44.86**	**260**	P	**P**	**08 56 50.3**	**-1.5**
	0.8nm,0.3s,baz=89,slow=8.3,SNR=27						
WRA				PcP	**PcP**	**08 58 23.5**	**+1.3**
	0.7nm,0.8s,baz=87,slow=4.7,SNR=4.0						
ASAR	**Alice Springs**	**44.92**	**255**	P	**P**	**08 56 51.9**	**-0.3**
	5.8nm,0.6s,baz=89,slow=8.4,SNR=85						
ASAR				PcP	**PcP**	**08 58 23.4**	**+1.1**
	0.4nm,0.5s,baz=113,slow=4.0,SNR=5.3						
MJAR	**Matsushiro Arr**	**68.94**	**323**	P	**P**	**08 59 36.4**	**-0.1**
	2.5nm,0.8s,baz=159,slow=6.2,SNR=9.9						
PETK	**Petropavlovsk-**	**74.74**	**345**	P	**P**	**09 00 09.8**	**0.0**
	0.7nm,0.5s,baz=112,slow=9.8,SNR=4.8						
TXAR	**Lajitas Array**	**86.18**	**57**	P	**P**	**09 01 10.2**	**+0.3**
	0.2nm,0.7s,baz=212,slow=8.6,SNR=3.8						
ILAR	**Eielson Array**	**86.76**	**13**	P	**P**	**09 01 10.3**	**-1.4**
	0.2nm,0.4s,baz=213,slow=5.6,SNR=5.2						
CMAR	**Chiang Mai Arr**	**89.60**	**290**	P	**P**	**09 01 28.8**	**+2.7**
	0.5nm,0.4s,baz=101,slow=2.8,SNR=4.6						
BRTR	**Keskin Array B**	**145.77**	**314**	PKPbc	**PKPab**	**09 08 05.8**	**-0.5**
	1.1nm,0.5s,baz=132,slow=3.6,SNR=6.4						
GERES	**GERESS Array B**	**148.67**	**345**	PKPbc	**PKiKP**	**09 08 12.3**	**-0.6**
	0.4nm,0.6s,baz=46,slow=2.8,SNR=4.1						

MEX 14 09:03:20.4±0.6, 15°.69N×96°.80W, h15^{km}±10^{km}, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.68**	**83**	*e*P	Pg	09 03 31.4	-2.2
HUIG				*e*S	Sg	09 03 40.1	-2.5
VHO	**Vista Hermosa**	**1.38**	**3**	*e*P	Pn	09 03 41.6	-3.8
VHO				*e*S	Sn	09 03 58.1	-5.3

*NEIC **14** 09:05:30.6±2.1, 18°.26N×68°.73W, h138^{km}±12^{km}, MD3.4(RSPR), Error ellipse: s-maj=50.5km s-min=7.7km az=192.0*
*OSPL **14** 09:05:31.4±1.7, 18°.11N×68°.82W, h132^{km}±14^{km}, ML3.2*
*RSPR **14** 09:05:37.3, 17°.65N×68°.28W, h117^{km}±2^{km}, MD3.5/11, MD3.4/11*

ISC 14 09:05:30.3±1.6, 18°.2N±0°.2×68°.76W±0°.05, h133^{km}±10^{km}, n35, σ1^{s}.60/50, 8C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HGY1	**Higuey**	**0.36**	**7**	*i* P	**Pn**	**09 05 48.7**	**-0.3**
HGY1				*e*S	**Sn**	**09 06 02.7**	**-0.6**
HGY1				IAML		09 06 03.3	
	comp=N,483µm,0.1s						
PCDR	**Punta Cana, DR**	**0.46**	**52**	*e*Pn	**Pn**	**09 05 49.0**	**-0.5**
PCDR				*e*Sn	**Sn**	**09 06 05.9**	**+1.9**
SDD	**Santo Domingo**	**1.11**	**282**	*i* P	**Pn**	**09 05 53.9**	**-0.6**
SDD				*e*S	**Sn**	**09 06 12.0**	**-1.0**
SDD				IAML		09 06 15.4	
	comp=Z,11nm,0.2s						
MPR	**Mayaguez**	**1.54**	**90**	*e*Pn	**Pn**	**09 06 00.0**	**+1.0**
MPR				*e*Sn	**Sn**	**09 06 22.7**	**+1.7**
AGP	**Aguadilla**	**1.55**	**83**	*e*Pn	**Pn**	**09 05 59.9**	**+0.7**
AGP				*e*Sn	**Sn**	**09 06 22.1**	**+0.9**
AGPR	**Aguadilla, PR**	**1.59**	**81**	*i* P	**Pn**	**09 05 59.7**	**+0.1**
AGPR				*e*S	**Sn**	**09 06 22.4**	**+0.5**
AGPR				IAML		09 06 26.2	
	comp=Z,23nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.59**	**98**	⇓*e*P	**Pn**	**09 06 00.1**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.59**	**98**	*e*S	**Sn**	**09 06 18.6**	**-3.3**
CRPR	**Cabo Rojo, PR**	**1.59**	**98**	*e*Pn	**Pn**	**09 06 00.1**	**+0.6**
CRPR				*e*Sn	**Sn**	**09 06 23.4**	**+1.5**
LSP	**Las Mesas**	**1.60**	**92**	⇓*e*P	**Pn**	**09 06 01.1**	**+1.4**
MLPR	**Magueyes Islan**	**1.66**	**99**	⇑*e*P	**Pn**	**09 06 01.0**	**+0.7**
AOPR	**Arecibo Observ**	**1.91**	**86**	*e*S	**Sn**	**09 06 27.8**	**-1.0**
AOPR	**Arecibo Observ**	**1.91**	**86**	⇑*e*P	**Pn**	**09 06 05.2**	**+1.8**
AOPR	**Arecibo Observ**	**1.91**	**86**	*e*Pn	**Pn**	**09 06 04.3**	**+0.9**
AOPR				*e*Sn	**Sn**	**09 06 28.7**	**0.0**
OBIP	**Obispado Ponce**	**2.06**	**95**	⇓*e*P	**Pn**	**09 06 06.4**	**+1.2**
OBIP	**Obispado Ponce**	**2.06**	**95**	*e*Pn	**Pn**	**09 06 05.4**	**+0.3**
OBIP				*e*Sn	**Sn**	**09 06 33.5**	**+1.7**
EMPR	**Esperanza - Ma**	**2.14**	**83**	*e*S	**Sn**	**09 06 33.1**	**-0.4**
SC01	**Santiago de lo**	**2.21**	**303**	*i* P	**Pn**	**09 06 07.3**	**+0.4**
SC01				*e*S	**Sn**	**09 06 33.1**	**-2.1**
SC01				IAML		09 06 42.9	

	comp=Z,23nm,0.4s						
SJG	San Juan	2.49	92	eS	Sn	09 06 37.7	-3.6
SJG	San Juan	2.49	92	ePn	Pn	09 06 11.9	+1.5
SJG				eSn	Sn	09 06 40.1	-1.2
SDDR	Presa de Saban	2.51	288	ePn	Pn	09 06 11.4	+0.7
SDDR				eSn	Sn	09 06 43.9	+2.0
PDPR	Patillas Dam,	2.62	94⇑	eP	Pn	09 06 13.1	+1.0
CBYP	Canovanas	2.76	89⇑	eP	Pn	09 06 15.8	+1.7
CBYP	Canovanas	2.76	89	eS	Sn	09 06 45.1	-2.6
CBYP	Canovanas	2.76	89	ePn	Pn	09 06 14.2	+0.2
CBYP				eSn	Sn	09 06 46.6	-1.0
HUMP	Col San Antoni	2.77	91⇑	eP	Pn	09 06 15.1	+1.1
HUMP	Col San Antoni	2.77	91	eS	Sn	09 06 44.9	-2.8
HUMP	Col San Antoni	2.77	91	ePn	Pn	09 06 14.3	+0.2
HUMP				eSn	Sn	09 06 46.2	-1.6
MTP	Monte Pirata	3.06	92⇑	eP	Pn	09 06 18.3	+0.6
MTP	Monte Pirata	3.06	92	eS	Sn	09 06 50.7	-3.6
MTP	Monte Pirata	3.06	92	ePn	Pn	09 06 18.8	+1.0
MTP				eSn	Sn	09 06 53.5	-0.8
CUPR	Culebra, Puert	3.31	88⇑	eP	Pn	09 06 22.5	+1.5
CUPR	Culebra, Puert	3.31	88	eSn	Sn	09 06 57.8	-2.4
VGBI	Virgin Gorda,	4.15	86⇑	eP	Pn	09 06 34.3	+2.2
VGBI	Virgin Gorda,	4.15	86	eS	Sn	09 07 18.3	-1.8

ISCJB ***14*** *09:16:55.2±0.2, 60°44N±0°02×151°44W±0°03, h71^{km}±1^{km}, mb4.3/83, Error ellipse: s-maj=2.6km s-min=2.4km az=36.8*

MOS ***14*** *09:16:55.2±1.0, 60°47N×151°55W, h73^{km}, mb4.7/20, Error ellipse: s-maj=11.8km s-min=5.6km az=89.6*

NEIC ***14*** *09:16:57.0±0.0, 60°36N×151°39W, h58^{km}, mb4.6/216, MW4.4, ML4.5(AEIC), Moment Tensor Solution. s16 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.13; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$3.57; $M_{r\theta}$0.33; $M_{\theta\phi}$0.02; $M_{\phi r}$4.20; Best double couple: $M_0$5.40000×10^{15} NP1:ϕ_s184.00000°, δ71.00000°, λ-87.00000°. NP2:ϕ_s356.00000°, δ19.00000°, λ-97.00000°. Principal axes: T 5.6000, Plg26.0000°, Azm272.0000°; N -0.4300, Plg2.0000°, Azm3.0000°; P -5.1700, Plg64.0000°, Azm98.0000°; After AEIC.*

NEIC Felt [IV] at Soldotna and Sterling; [II] at Kenai. Also felt at Anchorage, Chugiak, Cooper Landing, Homer, Kasilof and Willow.

IDC ***14*** *09:16:57.2±0.6, 60°59N×151°44W, h72^{km}±3^{km}, mb3.9/26, mb1 4.1/31, mb1mx4.1/37, mbtmp4.3/31, MS3.3/18, Ms1 3.3/18, ms1mx3.1/37 Error ellipse: s-maj=15.2km s-min=8.9km az=27.0*

AEIC ***14*** *09:16:57.0, 60°36N×151°39W, h58^{km}, ML4.5, MB4.6(NEIC), MW4.4(NEIC)*

ISC 14 09:16:56.3±0.4**, 60°38N**±0°03×**151°39W**±0°03**, h68**^{km}±3^{km}**, h68**^{km}**:pP-P, n704,** σ**1**^{s}**07**/731**, mb4.4**/83**, 21C-15D, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRLK	Bradley Lake	0.66	158	ePn	Pn	09 17 10.3	-0.4
BRLK				eSn	Sn	09 17 20.6	-0.6
RSO	Redoubt South	0.68	278	ePn	Pn	09 17 10.0	-1.1
BRSE	Bradley Lake S	0.71	153	ePn	Pn	09 17 10.9	-0.4
BRSE				eSn	Sn	09 17 22.2	-0.1
HOM	Homer	0.73	190	ePn	Pn	09 17 11.1	-0.3
HOM				eSn	Sn	09 17 22.9	+0.4
RDJH	Redoubt Jeurge	0.73	288	ePn	Pn	09 17 10.6	-0.9
RDJH				eSn	Sn	09 17 22.0	-0.8
CNPM	China Poot	0.86	175	ePn	Pn	09 17 12.3	-0.6
CNPM				eSn	Sn	09 17 25.2	0.0
SPU	Mount Spurr	0.87	338	ePn	Pn	09 17 12.4	-0.7
IVE	Iliamna Volcan	0.89	247	ePn	Pn	09 17 12.4	-1.0
ILS	Iliamna Low So	0.94	244	ePn	Pn	09 17 13.2	-0.8
SEW	Seward	1.00	105	ePn	Pn	09 17 14.1	-0.6
SEW				eSn	Sn	09 17 28.7	+0.4
SPWE	Spurr West	1.07	328	ePn	Pn	09 17 15.5	-0.1
RC01	Rabbit Creek A	1.08	48	ePn	Pn	09 17 15.5	-0.2
RC01				eSn	Sn	09 17 30.8	+0.6
AUE	Augustine Isla	1.43	225	ePn	Pn	09 17 19.8	-0.4
AUL	Augustine Lava	1.44	227	ePn	Pn	09 17 20.2	-0.1
AUH	Augustine H	1.45	227	ePn	Pn	09 17 20.5	-0.1
AUW	Augustine West	1.46	227	ePn	Pn	09 17 20.6	0.0
SKT	Skwentna	1.61	358	ePn	Pn	09 17 23.4	+0.7
SKT				eSn	Sn	09 17 45.0	+2.4
PMR	Palmer	1.64	41	ePn	Pn	09 17 23.0	0.0
PMR				eSn	Sn	09 17 42.9	-0.4
PMR	Palmer	1.64	41	eP	Pn	09 17 23.0	0.0
PMR				e		09 17 42.9	
KNK	Knik Glacier	1.77	53	ePn	Pn	09 17 24.9	+0.1
KNK				eSn	Sn	09 17 45.9	-0.5
FONW	Fourpeaked Sta	2.01	221	ePn	Pn	09 17 28.2	+0.1
GLI	Glacier Island	2.17	75	ePn	Pn	09 17 28.9	-1.3
GLI				eSn	Sn	09 17 54.5	-1.6
SVW2	Sparrevohn	2.18	291	ePn	Pn	09 17 29.0	-1.3
JPK	Jack Peak	2.45	72	ePn	Pn	09 17 32.9	-1.1
FID	Port Fidalgo	2.45	79	ePn	Pn	09 17 32.0	-2.0
FID				ePn	Pn	09 17 32.0	-1.9
KAHG	Katmai Hook Gl	2.48	222	ePn	Pn	09 17 34.8	+0.3
KAHC	Katmai Hardscr	2.53	228	ePn	Pn	09 17 34.6	-0.5
PPLA	Purkeypile	2.56	352	ePn	Pn	09 17 36.1	+0.6
VMT	TAPS Tl Valdez	2.57	72	ePn	Pn	09 17 34.6	-0.8
KDAK	Kodiak Island	2.67	194	ePn	Pn	09 17 35.6	-1.3
KDAK	Kodiak Island	2.67	194	eP	Pn	09 17 35.7	-1.3
HUR	Hurricane	2.74	17	ePn	Pn	09 17 39.5	+1.6
EYAK	Cordova Ski Ar	2.80	84	ePn	Pn	09 17 36.9	-1.7
KABU	Katmai Buttres	2.91	225	ePn	Pn	09 17 40.6	+0.4
KELA	Mount Kelaz	2.95	231	ePn	Pn	09 17 40.6	-0.3
CAST	Castle Rocks	3.07	354	ePn	Pn	09 17 44.0	+1.6
KTH	Kantishna Hill	3.20	4	ePn	Pn	09 17 44.9	+0.8
PS12	TAPS Pump St12	3.24	67	ePn	Pn	09 17 44.5	-0.2
RND	Reindeer	3.27	20	ePn	Pn	09 17 46.6	+1.5
DHY	Denali Highway	3.31	33	ePn	Pn	09 17 46.6	+0.8
OHAK	Old Harbor	3.31	198	ePn	Pn	09 17 44.0	-1.6
PS11	TAPS Pump St11	3.33	57	ePn	Pn	09 17 46.3	+0.4
TT01	Tatalina	3.37	321	ePn	Pn	09 17 46.4	0.0
TTA	Tatalina	3.38	321	ePn	Pn	09 17 46.6	-0.1
TTA	Tatalina	3.38	321	eP	Pn	09 17 46.6	-0.1
HMT	Hamilton	3.54	88	ePn	Pn	09 17 46.5	-2.3
MCK	McKinley	3.56	18	ePn	Pn	09 17 51.2	+2.2
MCK	McKinley	3.56	18	eP	Pn	09 17 51.2	+2.2
BPAW	Bear Paw Mtn.	3.74	3	ePn	Pn	09 17 52.2	+0.7
PAX	Paxson	3.84	45	ePn	Pn	09 17 53.5	+0.6
PAX	Paxson	3.84	45	eP	Pn	09 17 53.5	+0.6
BWN	Browne	3.91	12	ePn	Pn	09 17 54.9	+1.0
PS10	TAPS Pump St10	4.05	39	ePn	Pn	09 17 57.4	+1.6
SII	Sitkinak Islan	4.10	202	ePn	Pn	09 17 54.9	-1.5
MENT	Mentasta	4.47	52	ePn	Pn	09 18 01.1	-0.3
BALM	Baldy	4.49	78	ePn	Pn	09 18 00.3	-1.5
BALM	Baldy	4.49	78	eP	Pn	09 18 00.3	-1.5
RIDG	Independent Ri	4.57	40	ePn	Pn	09 18 03.8	+1.0
MLY	Manley	4.68	3	ePn	Pn	09 18 04.9	+0.5
PS08	TAPS Pump Stn8	4.69	25	ePn	Pn	09 18 05.3	+0.9
DOT	Dot Lake	4.76	43	ePn	Pn	09 18 05.5	+0.1
TCOL	CIGO, UAF Yank	4.80	18	P	Pn	09 18 06.6	+0.8
	baz=201,SNR=94						
COLA	College	4.80	18	ePn	Pn	09 18 06.4	+0.5
COLA	College	4.80	18	eP	Pn	09 18 06.4	+0.5
MDM	Murphy Dome	4.83	16	ePn	Pn	09 18 07.0	+0.7
ILAR	Eielson Array	4.88	23	P	Pn	09 18 07.1	+0.1
	13nm,0.3s,baz=205,slow=14,SNR=538						
ILAR				S	Sn	09 18 59.5	-2.5
	26nm,0.3s,baz=205,slow=15,SNR=7.6						
AZAC	Aniakchak	5.00	229	ePn	Pn	09 18 09.8	+1.1
CHIR	Chirikof Islan	5.09	208	ePn	Pn	09 18 09.7	-0.2
POKR	Poker Plat Res	5.09	19	P	Pn	09 18 10.7	+0.8
	baz=203,SNR=37						
CHX	Chaix Hills	5.13	89	ePn	Pn	09 18 10.5	0.0
PS07	TAPS Pump Stn7	5.15	15	ePn	Pn	09 18 11.8	+1.1
BCA3	Beaver Creek A	5.30	55	ePn	Pn	09 18 12.7	-0.1
CHGN	Chignik	5.51	225	ePn	Pn	09 18 16.5	+0.9
PS06	TAPS Pump Stn6	5.55	7	ePn	Pn	09 18 17.3	+1.1
PCA	Pinnacle	5.55	88	ePn	Pn	09 18 15.7	-0.6
IM3	Indian Mountai	5.73	350	ePn	Pn	09 18 17.9	-0.8
PNL	Peninsula	6.05	92	ePn	Pn	09 18 22.5	-0.6
EGAK	Eagle	6.46	43	ePn	Pn	09 18 28.6	0.0
PS05	TAPS Pump Stn5	6.47	3	ePn	Pn	09 18 30.0	+1.3
DAWY	Dawson	6.71	51	ePn	Pn	09 18 32.1	0.0
FYU	Fort Yukon	6.79	21	ePn	Pn	09 18 34.1	+1.0
HYT	Haines Junctio	6.85	80	ePn	Pn	09 18 33.5	-0.6
COLD	Coldfoot	6.90	4	ePn	Pn	09 18 35.6	+1.1
SDPT	Sand Point	6.99	228	ePn	Pn	09 18 36.1	+0.3
BM3	Burnt Mountain	7.67	20	ePn	Pn	09 18 45.0	-0.1
ANM	Nome	7.71	309	ePn	Pn	09 18 46.0	+0.4
ANM	Nome	7.71	309	eP	Pn	09 18 46.1	+0.4
TOLK	Toolik Lake Re	8.34	5	P	Pn	09 18 55.8	+1.5
	baz=186,SNR=69						
EPYK	Eagle Plains	8.90	41	P	Pn	09 19 01.5	-0.4
	baz=234						
SIT	Sitka	8.99	105	ePn	Pn	09 19 01.6	-1.5
SIT	Sitka	8.99	105	eP	Pn	09 19 01.6	-1.5
UNV	Unalaska Valle	10.49	238	ePn	Pn	09 19 23.2	-0.4
CRAG	Craig	10.87	109	ePn	Pn	09 19 27.2	-1.6
DLBC	Dease Lake	11.05	91	P	Pn	09 19 31.3	0.0
	0.6nm,0.3s,baz=287,slow=13,SNR=12						
DLBC				S	Sn	09 21 26.4	-6.6
	0.6nm,0.3s,baz=90,slow=20,SNR=4.7						
DLBC				LR	LR	09 24 14.1	
	comp=Z,173nm,21.0s,baz=308,slow=40						
DLBC	Dease Lake	11.05	91	ePn	Pn	09 19 30.5	-0.7
INK	Inuvik	11.05	37	P	Pn	09 19 30.4	-0.7
	0.5nm,0.3s,baz=225,slow=16,SNR=22						
INK				LR	LR	09 24 02.2	
	comp=Z,157nm,21.6s,baz=182,slow=39						
INK	Inuvik	11.05	37	ePn	Pn	09 19 29.6	-1.5
BBB	Bella Bella	15.23	112	P	Pn	09 20 27.8	+0.7
	0.1nm,0.3s,baz=310,slow=9.8,SNR=3.9						
BBB				S	Sn	09 23 12.0	-2.6
	0.4nm,0.3s,baz=134,slow=20,SNR=6.0						
BBB				LR	LR	09 25 33.6	
	comp=Z,96nm,19.3s,baz=291,slow=34						
ADK	Adak	16.37	250	ePn	Pn	09 20 42.3	+0.9
	51nm,1.3s						
ADK	Adak	16.37	250	eP	Pn	09 20 42.3	+0.9
ADK				pmax	pmax		
	comp=Z,51nm,1.3s						
YKW3	Yellowknife Ar	17.55	67	ePn	Pn	09 20 54.7	-1.2
	comp=Z,13nm,0.9s						
YKA	Yellowknife Ar	17.56	67	P	Pn	09 20 55.2	-0.9
	comp=Z,0.5nm,0.3s,baz=277,slow=9.9,SNR=21						
YKA				PcP	PcP	09 25 31.8	+0.1
	comp=Z,0.2nm,0.3s,baz=268,slow=1.2,SNR=8.7						
YKA				LR	LR	09 28 09.8	
	comp=Z,6.8nm,21.8s,baz=272,slow=38						
LLLB	Lillooet	19.20	107	eP	Pn	09 21 18.6	+2.7
	comp=Z,12nm,1.0s						
BILL	Bilibino	19.57	311	deP	P	09 21 15.8	-2.3
BILL				eS	S	09 24 51.4	-3.7
BILL				pmax	pmax		
	comp=Z,7.0nm,0.3s						
BILL				MLR	MLR		
	comp=Z,110nm,18.0s						
A04D	Lummi Island	20.13	113	P	Pn	09 21 26.5	-0.2
	baz=316						
B05A	Bryant	20.74	113	P	Pn	09 21 33.5	-0.5
	baz=317,SNR=11						
D03D	Eldon	20.83	115	P	Pn	09 21 34.4	-0.6
	baz=319,SNR=6.3						
D04E	Lakebay	21.24	116	P	P	09 21 36.2	-0.1
	baz=319						
E04D	Cinebar	21.80	116	P	P	09 21 44.5	+2.2
	baz=320						
G03D	McMinnville, O	22.54	120	P	P	09 21 50.8	+0.4
	baz=322						
F05D	White Salmon	22.81	116	P	P	09 21 54.5	+1.3
	baz=320						
NEW	Newport	23.07	106	P	P	09 21 57.3	+1.5
	comp=Z,9.4nm,0.8s,baz=318,slow=8.1,SNR=26						
NEW	Newport	23.07	106	P	P	09 21 57.3	+1.5
	baz=314,SNR=13						
D08A	Wollman Farm,	23.09	111	eP	P	09 21 57.2	+1.3
	comp=Z,8.2nm,0.8s						
I02D	Swisshome	23.18	122	P	P	09 21 56.8	+0.1
	baz=324						
H04D	Lebanon	23.32	120	P	P	09 21 59.4	+1.3
	baz=323						
G05D	Wamic, OR	23.37	117	P	P	09 21 59.7	+1.1
	baz=321						
H04A	Detroit Lake	23.43	119	eP	P	09 22 00.8	+1.6
	comp=Z,25nm,1.3s						
I03D	Drain, OR	23.72	122	P	P	09 22 03.4	+1.7
	baz=325						
J01E	Myrtle Point	23.92	124	P	P	09 22 04.6	+1.1
	baz=326						
I04A	Tendick Farm,	24.04	121	P	P	09 22 06.1	+1.4
	baz=324						
I05D	Terrebonne, OR	24.07	118	P	P	09 22 06.0	+1.0
	baz=322,SNR=6.3						
G08A	Pilot Rock	24.39	114	eP	P	09 22 09.6	+1.6
	comp=Z,6.9nm,1.1s						
K02D	Willamette Mer	24.41	124	P	P	09 22 09.5	+1.4
	baz=326						
RES	Resolute Bay	24.56	32	P	P	09 22 08.7	-0.4
	comp=Z,3.2nm,0.6s,baz=272,slow=8.4,SNR=9.0						
J04D	Umpqua Nationa	24.62	121	P	P	09 22 12.1	+2.0
	baz=324,SNR=6.5						
HUMO	Hull Mountain	24.78	123	eP	P	09 22 14.2	+2.8
	comp=Z,8.6nm,0.8s						
J05D	Fort Rock, OR	24.96	120	P	P	09 22 15.8	+2.6
	baz=324,SNR=8.3						
I07A	Izee	25.08	116	eP	P	09 22 18.0	+3.7
	comp=Z,8.3nm,0.8s						
K04D	Chiloquin, OR	25.27	121	P	P	09 22 18.6	+2.7
	baz=325						
L04D	Klamath Falls	25.37	123	P	P	09 22 17.8	+0.9
	baz=326						
MSO	Missoula	25.61	105	P	P	09 22 20.1	+1.1
	baz=316,SNR=8.5						
YBH	Yreka Blue Hor	25.61	124	P	P	09 22 20.9	+1.9
	comp=Z,4.4nm,0.9s,baz=38,slow=7.3,SNR=8.2						
YBH	Yreka Blue Hor	25.61	124	eP	P	09 22 21.7	+2.7
	comp=Z,9.1nm,1.1s						
YBH	Yreka Blue Hor	25.61	124	eP	P	09 22 21.7	+2.7
YBH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
M02C	Callahan	25.83	124	P	P	09 22 23.8	+2.7
	baz=327						
M04C	Macdoel	25.93	122	P	P	09 22 24.4	+2.4
	baz=326						
SEY	Seymchan	26.10	300	P	P	09 22 23.7	+0.6
	comp=Z,1.9nm,0.5s,baz=69,slow=7.5,SNR=5.9						
SEY	Seymchan	26.10	300⇑	eP	P	09 22 21.9	-1.2
J08A	Circle Bar Ran	26.11	116	eP	P	09 22 25.8	+2.2
	comp=Z,5.8nm,0.9s						
N02D	Trinity Center	26.25	125	P	P	09 22 26.9	+2.2
	baz=327						
FFC	Flin Flon	26.56	80	eP	P	09 22 27.9	+0.5
	comp=Z,86nm,1.2s						
FFC	Flin Flon	26.56	80	i P	P	09 22 28.9	+1.5
EGMT	Eagleton	26.81	99	P	P	09 22 30.6	+0.8
	baz=313						
O03E	Paynes Creek	27.19	124	P	P	09 22 35.0	+1.8
	baz=328						
DLMT	Dillon	27.32	106	eP	P	09 22 35.6	+1.2
	comp=Z,7.6nm,1.4s						
BOZ	Bozeman (W)	27.61	104	P	P	09 22 38.4	+1.4
	baz=317,SNR=7.9						
HLID	Hailey	27.81	110	P	P	09 22 40.3	+1.4
	baz=320						
MA2	Magadan	28.16	294	LR	LR	09 35 16.0	
	comp=Z,23nm,18.3s,baz=92,slow=39						
PEA1	Petropavlovsk-	28.20	278	eP	P	09 22 42.1	0.0
PEA1				eScP	ScP	09 29 28.4	0.0
PETK	Petropavlovsk-	28.21	278	P	P	09 22 42.1	0.0
	comp=Z,1.8nm,0.7s,baz=61,slow=12,SNR=5.0						
PETK				ScP	ScP	09 29 28.4	0.0
	comp=Z,3.6nm,1.0s,baz=64,slow=6.8,SNR=4.5						
PETK				LR	LR	09 33 53.5	
	comp=Z,58nm,21.0s,baz=70,slow=36						
YHH	Holmes Hill	28.58	105	eP	P	09 22 46.9	+1.1
	comp=Z,9.4nm,1.3s						
YMR	Madison River	28.61	105	eP	P	09 22 47.8	+1.8
	comp=Z,8.8nm,0.9s						
RLMT	Red Lodge	29.10	102	P	P	09 22 52.4	+2.0
	baz=317,SNR=10						
PNTR	Pine Nut	29.12	123	eP	P	09 22 52.5	+2.0
	comp=Z,5.8nm,0.8s						
DGMT	Dagmar	29.26	93	P	P	09 22 52.4	+1.0
	baz=312						
LAO	LASA Array	29.47	97	P	P	09 22 54.6	+1.2
	baz=314						
ELK	Elko	29.65	115	P	P	09 22 56.9	+1.6
	comp=Z,7.0nm,0.5s,baz=320,slow=9.5,SNR=47						
CMB	Columbia Colle	29.68	125	eP	P	09 22 57.9	+2.5
	comp=Z,4.1nm,1.1s						
CMB	Columbia Colle	29.68	125	eP	P	09 22 57.9	+2.5
CMB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NV01	Mina Array Sit	30.22	122	ePcP	PcP	09 26 00.1	+0.6
NVAR	Mina Array Bea	30.22	122	P	P	09 23 02.6	+2.3
	comp=Z,3.2nm,0.7s,baz=313,slow=8.8,SNR=34						
NVAR				PcP	PcP	09 26 00.1	+0.6
	comp=Z,1.6nm,0.7s,baz=291,slow=2.4,SNR=9.4						
NVAR				LR	LR	09 33 58.7	
	comp=Z,63nm,18.1s,baz=322,slow=34						
MLAC	Mammoth, Mammo	30.67	123	P	P	09 23 06.2	+1.9
	baz=328						
BW06	Boulder Array	30.71	106	P	P	09 23 06.3	+1.7
	baz=320,SNR=7.5						
PDAR	Pinedale Array	30.71	106	P	P	09 23 06.1	+1.5
	comp=Z,2.5nm,0.8s,baz=317,slow=6.3,SNR=22						
DUG	Dugway, Tooele	31.19	113	P	P	09 23 10.9	+2.1
	baz=323,SNR=6.7						
R11A	Troy Canyon, C	31.45	118	P	P	09 23 13.1	+1.9
	baz=326,SNR=18						
TIXI	Tiksi	31.66	324	PcP	PcP	09 26 01.1	-1.3
	comp=Z,0.9nm,0.4s,baz=83,slow=2.5,SNR=4.5						
TIXI	Tiksi	31.66	324⇑	eP	P	09 23 11.0	-1.4
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GRAC	Grapevine Rang	31.82	122	P	P	09 23 16.6	+2.3
	baz=328						
MDND	Maddock	31.95	89	P	P	09 23 16.1	+0.8
	baz=312						
CWC	Cottonwood Cre	32.00	123	P	P	09 23 17.7	+1.8
	baz=329						
VES	Vestal, Richgr	32.10	125	P	P	09 23 18.7	+2.1
	baz=330						
SMMC	Simmler	32.19	127	P	P	09 23 19.1	+1.7
	baz=331						
ULM	Lac du Bonnet	32.22	83	P	P	09 23 18.4	+0.9
	comp=Z,7.2nm,0.5s,baz=306,slow=8.0,SNR=8.1						
ULM				LR	LR	09 37 22.5	
	comp=Z,113nm,19.1s,baz=294,slow=38						
K22A	Casper	32.26	103	P	P	09 23 19.3	+1.2
	baz=319						
TPNV	Topopah Spring	32.34	120	P	P	09 23 20.9	+2.0
	baz=328,SNR=10.0						
RSSD	Black Hills	32.38	98	eP	P	09 23 20.4	+1.1
	comp=Z,7.4nm,0.6s						
RSSD	Black Hills	32.38	98	eP	P	09 23 20.4	+1.1
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RSSD	Black Hills	32.38	98	P	P	09 23 20.6	+1.4
	baz=317						
FURC	Furnace Creek,	32.48	122	P	P	09 23 22.5	+2.5
	baz=328,SNR=5.3						
ISA	Isabella, Lake	32.50	125	P	P	09 23 22.0	+1.7
	baz=330						
MPMC	Manual Prospec	32.57	123	P	P	09 23 23.3	+2.3
	baz=329,SNR=7.0						
PKM	Mcpherson Peak	32.64	127	P	P	09 23 24.3	+2.7
	baz=331,SNR=7.5						
ARVC	Arvin	32.82	126	P	P	09 23 24.6	+1.7
	baz=330						
LRMC	Laurel Mtn Rad	32.99	124	P	P	09 23 26.5	+1.9
	baz=330,SNR=7.5						
SHOC	Shoshone, Teco	33.22	122	P	P	09 23 28.5	+2.1
	baz=329						
O20A	White River Ci	33.37	108	P	P	09 23 29.2	+1.2
	baz=322,SNR=8.5						
EDW2	Edwards Air Fo	33.38	125	P	P	09 23 29.1	+1.3
	baz=330						
GSC	Goldstone, Bar	33.50	123	P	P	09 23 31.0	+2.0
	baz=329,SNR=5.1						
AGMN	Agassiz Nation	33.51	86	P	P	09 23 29.4	+0.6
	baz=312,SNR=11						
BLG	Laguna Peak, P	33.62	127	P	P	09 23 31.7	+1.8
	baz=331						
TUQ	Turquoise Moun	33.76	122	P	P	09 23 33.4	+2.1
	baz=329						
DECC	Green Verdugo	33.78	126	P	P	09 23 33.3	+1.9
	baz=331						
RRX	Edison Barstow	33.79	123	P	P	09 23 33.4	+2.0
	baz=330						
N23A	Red Feather La	33.88	104	P	P	09 23 33.7	+1.3
	baz=321						
BFSC	Mount Baldy Ra	34.07	125	P	P	09 23 36.3	+2.3
	baz=331,SNR=5.8						
HEC	Hector,Ludlow	34.11	123	P	P	09 23 36.1	+1.9
	baz=330						
BBRC	Big Bear Solar	34.35	124	P	P	09 23 38.3	+1.8
	baz=330						
GMRC	Granite Mounta	34.43	122	P	P	09 23 39.3	+2.3
	baz=329,SNR=6.3						
CIS	Catalina Islan	34.49	126	P	P	09 23 38.1	+0.7
	baz=332						
SCI2	San Clemente I	34.81	127	P	P	09 23 41.9	+1.7
	baz=332						
ISCO	Idaho Springs	34.89	105	P	P	09 23 42.8	+1.7
	baz=322						
BELC	Belle Mtn. Jos	34.96	123	P	P	09 23 43.6	+2.0
	baz=330,SNR=6.6						
PFO	Pinyon Flats O	35.10	124	eP	P	09 23 44.2	+1.3
	comp=Z,5.5nm,1.0s						
PFO	Pinyon Flats O	35.10	124	eP	P	09 23 44.2	+1.3
PFO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PFO	Pinyon Flats O	35.10	124	P	P	09 23 44.8	+1.9
	baz=330						
IRM	Iron Mountain	35.18	122	P	P	09 23 45.6	+2.1
	baz=329,SNR=5.5						
109C	Camp Elliot, M	35.47	125	P	P	09 23 48.3	+2.4
	baz=331						
MVCO	Mesa Verde	35.59	111	P	P	09 23 48.6	+1.5
	baz=325,SNR=12						
WUAZ	Wupatki	35.67	116	P	P	09 23 50.1	+2.3
	baz=327,SNR=28						
OGNE	Ogallala	35.74	100	P	P	09 23 49.3	+1.1
	baz=320						
MONP2	Monument Peak	35.75	124	P	P	09 23 50.9	+2.4
	baz=331,SNR=6.9						
Q24A	Divide	35.77	106	P	P	09 23 50.2	+1.5
	baz=322						
Y12C	Blythe	35.80	121	P	P	09 23 50.5	+1.9
	baz=330						
EYMN	Ely	35.90	83	eP	P	09 23 50.1	+0.7
	comp=Z,13nm,0.7s						
EYMN	Ely	35.90	83	P	P	09 23 50.2	+0.8
	baz=313,SNR=15						
S22A	4UR Ranch, Cre	35.94	109	P	P	09 23 52.2	+2.0
	baz=324,SNR=7.8						
IKP	In-Ko-Pah, Jac	36.09	124	P	P	09 23 53.5	+2.2
	baz=331,SNR=6.9						
GLA	Glamis	36.27	122	P	P	09 23 54.7	+2.0
	baz=330						
ECSD	EROS Data Cent	36.33	92	P	P	09 23 54.3	+1.1
	baz=317						
SDCO	Great Sand Dun	36.56	107	P	P	09 23 57.6	+2.1
	baz=323,SNR=17						
W18A	Petrified Fore	36.74	114	P	P	09 23 59.0	+2.1
	baz=327,SNR=7.5						
E38A	The Farm, Brul	36.80	84	P	P	09 23 57.5	+0.4
	baz=314,SNR=9.8						
KSCO	Kaye Shedlock'	36.94	103	eP	P	09 24 00.3	+1.7
	comp=Z,13nm,0.6s						
KSCO	Kaye Shedlock'	36.94	103	P	P	09 24 00.0	+1.5
	baz=322,SNR=5.1						
C40A	Isle Royale Na	37.08	81	P	P	09 24 00.3	+0.9
	baz=313						
SPMN	Marine on St.	37.15	87	P	P	09 24 01.0	+0.9
	baz=316						
BGNE	Belgrade	37.30	96	P	P	09 24 01.9	+0.6
	baz=319						
T25A	Trinidad	37.57	107	P	P	09 24 05.7	+1.7
	baz=324						
G39A	Holcombe	37.92	86	P	P	09 24 07.0	+0.4
	baz=316,SNR=7.2						
D41A	Chassel	37.95	81	P	P	09 24 07.8	+1.0
	baz=314						
214A	Organ Pipe Nat	38.07	121	P	P	09 24 10.0	+2.0
	baz=330,SNR=6.0						
ANMO	Albuquerque	38.39	111	eP	P	09 24 12.2	+1.3
	comp=Z,2.0nm,0.6s						
ANMO	Albuquerque	38.39	111	d iP	P	09 24 12.5	+1.7
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	38.39	111	P	P	09 24 12.4	+1.5
	baz=326						
G40A	Rib Lake	38.41	85	P	P	09 24 11.3	+0.6
	baz=316,SNR=18						
CBKS	Cedar Bluff	38.50	100	P	P	09 24 13.0	+1.4
	baz=321						
TUC	Tucson	38.64	118	eP	P	09 24 15.2	+2.3
	comp=Z,3.8nm,0.8s						
TUC	Tucson	38.64	118	eP	P	09 24 15.2	+2.3
TUC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TUC	Tucson	38.64	118	P	P	09 24 14.9	+2.1

	baz=329						
Y22D	IRIS PASSCAL I	38.90	112	P	P	09 24 17.5	+2.5
	baz=326						
F42A	Maple Grove Fa	39.08	83	P	P	09 24 17.5	+1.2
	baz=315						
E43A	Lone Tree Farm	39.21	81	P	P	09 24 18.0	+0.7
	baz=315,SNR=14						
I41A	Arkdale	39.45	86	P	P	09 24 20.2	+0.9
	baz=317,SNR=5.5						
E44A	Grand Marais A	39.56	80	P	P	09 24 21.2	+0.9
	baz=315						
SUMG	Summit	39.72	26	eP	P	09 24 21.8	+0.1
	comp=Z,10.0nm,0.6s						
SUMG	Summit	39.72	26	i P	P	09 24 22.1	+0.4
SUMG				i		09 24 40.9	
SUMG				pmax	pmax		
	comp=Z,25nm,0.6s						
SUMG	Summit	39.72	26	i P	P	09 24 22.1	+0.4
	comp=Z,25nm,0.6s						
SUMG				i		09 24 40.9	
121A	Cookes Peak, D	39.79	114	P	P	09 24 25.0	+2.5
	baz=328,SNR=12						
KSU1	Kansas State U	39.82	97	P	P	09 24 23.0	+0.5
	baz=321						
DAG	Danmarks Havn	39.92	15	i P	P	09 24 22.1	-0.8
DAG				i		09 24 41.1	
DAG	Danmarks Havn	39.92	15	i P	P	09 24 22.1	-0.8
DAG				i		09 24 41.1	
I42A	Draeger Farm,	40.04	85	P	P	09 24 25.1	+0.8
	baz=317,SNR=5.2						
JFWS	Jewell Farm	40.10	87	eP	P	09 24 24.8	0.0
	comp=Z,12nm,0.6s						
JFWS	Jewell Farm	40.10	87	eP	P	09 24 24.8	0.0
JFWS				pmax	pmax		
	comp=Z,12nm,0.6s						
JFWS	Jewell Farm	40.10	87	P	P	09 24 24.9	+0.1
	baz=318,SNR=5.4						
H43A	Windswept, Lux	40.19	84	P	P	09 24 26.2	+0.8
	baz=316,SNR=5.4						
L40A	Anamosa	40.24	89	P	P	09 24 26.1	+0.1
	baz=318,SNR=7.5						
D46A	Sault St. Mari	40.29	78	P	P	09 24 26.8	+0.5
	baz=315						
F45A	CMU Biological	40.42	81	P	P	09 24 28.0	+0.6
	baz=316						
E46A	Sault Ste Mari	40.53	79	P	P	09 24 28.9	+0.6
	baz=315,SNR=6.5						
D47A	Chapleau	40.62	77	P	P	09 24 29.3	+0.2
	baz=315,SNR=8.9						
G45A	Suttons Bay	40.82	81	P	P	09 24 31.2	+0.6
	baz=316						
MSTX	Muleshoe	40.92	108	eP	P	09 24 33.0	+1.2
	comp=Z,13nm,0.9s						
MSTX	Muleshoe	40.92	108	P	P	09 24 33.1	+1.4
	baz=325,SNR=9.0						
H45A	Beulah	40.93	82	P	P	09 24 32.1	+0.6
	baz=316						
E47A	Iron Bridge	40.97	78	P	P	09 24 32.1	+0.3
	baz=315						
G46A	Petoskey	41.01	81	P	P	09 24 33.0	+0.8
	baz=316,SNR=8.2						
L42A	Oliver, Polo	41.06	88	P	P	09 24 32.7	0.0
	baz=318						
M41A	Milan	41.09	89	P	P	09 24 33.0	0.0
	baz=319						
D48A	Paudash Townsh	41.17	76	P	P	09 24 33.8	+0.3
	baz=315,SNR=7.4						
K43A	Burlington	41.20	86	P	P	09 24 34.2	+0.3
	baz=318						
D49A	Beulah Townshi	41.32	76	P	P	09 24 35.3	+0.5
	baz=315,SNR=6.0						
MATQ	Matagami	41.34	70	P	P	09 24 35.1	+0.2
	baz=314						
H46A	Fife Lake	41.40	82	P	P	09 24 36.1	+0.6
	baz=317						
HSIG		41.41	121	eP	P	09 24 37.7	+2.0
	comp=Z,7.5nm,0.9s						
GLMI	Grayling	41.48	81	P	P	09 24 37.0	+0.8
	baz=316						
E48A	Lockeyer	41.49	77	P	P	09 24 36.4	+0.3
	baz=316,SNR=8.8						
MNTX	Cornudas Mount	41.59	113	eP	P	09 24 38.9	+1.8
	comp=Z,7.2nm,0.8s						
MNTX	Cornudas Mount	41.59	113	P	P	09 24 39.2	+2.1
	baz=328,SNR=14						
I46A	Reed City	41.72	82	P	P	09 24 38.6	+0.5
	baz=317						
F48A	Evansville	41.73	78	P	P	09 24 38.9	+0.7
	baz=316						
F49A	Sandfield	42.06	78	P	P	09 24 41.2	+0.4
	baz=316						
I47A	Gladwin	42.12	82	P	P	09 24 42.1	+0.8
	baz=317						
LSQQ	Lebel-sur-Quev	42.14	71	P	P	09 24 41.8	+0.3
	baz=315						
WMOK	Wichita Mounta	42.20	103	eP	P	09 24 42.8	+0.7
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	42.20	103	eP	P	09 24 42.8	+0.7
WMOK				pmax	pmax		
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	42.20	103	P	P	09 24 43.2	+1.0
	baz=324,SNR=16						
H48A	Harrisville	42.20	80	P	P	09 24 42.2	+0.2
	baz=317						
E50A	Wahnapitae	42.22	76	P	P	09 24 42.4	+0.3
	baz=316,SNR=5.3						
I48A	Sherman Twp	42.40	81	P	P	09 24 44.6	+1.1
	baz=317						
D51A	Lot 18 Range I	42.40	75	P	P	09 24 43.9	+0.4
	baz=316						
K46A	Dorr	42.48	84	P	P	09 24 44.6	+0.4
	baz=318						
J47A	Sunmer	42.54	83	P	P	09 24 45.5	+0.7
	baz=318						
VLDQ	Val d'Or	42.58	72	eP	P	09 24 43.7	-1.3
	comp=Z,11nm,0.8s						
TOBO	Tobermory, Bru	42.70	78	P	P	09 24 46.4	+0.4
	baz=317,SNR=5.1						
M45A	Boilermakers S	42.72	86	P	P	09 24 45.4	-0.8
	baz=319						
TUL1	Leonard	42.72	99	P	P	09 24 46.5	+0.2
	baz=323,SNR=5.8						
L46A	Eue Claire	42.72	85	P	P	09 24 46.5	+0.3
	baz=318						
N44A	Piper City	42.73	88	P	P	09 24 46.4	+0.1
	baz=319						
E51A	G1948 Merrick	42.74	75	P	P	09 24 46.0	-0.3
	baz=316						
CHGQ	Chibougamau	42.75	68	P	P	09 24 46.1	-0.3
	baz=315,SNR=11						
K47A	Vermontville	42.88	83	P	P	09 24 48.1	+0.6
	baz=318						
P43A	Skaggs, Pawnee	42.92	90	P	P	09 24 47.9	0.0
	baz=320						
D52A	ZEK Kipawa Sen	42.94	74	P	P	09 24 47.9	0.0
	baz=316						
F51A	Arnstein	42.97	76	P	P	09 24 48.0	-0.2
	baz=316						
I49A	Point Hope	43.01	80	P	P	09 24 49.0	+0.5
	baz=317						
KLR	Kul'dur	43.16	291⇑	eP	P	09 24 48.0	-1.7
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
D53A	Lac Vacive, Po	43.20	73	P	P	09 24 50.5	+0.5
	baz=316,SNR=8.6						
K48A	Perry	43.21	82	P	P	09 24 51.0	+0.9
	baz=318						
KLBO	Killbear Provi	43.24	77	P	P	09 24 50.9	+0.5
	baz=317,SNR=5.1						
J49A	Marlette	43.28	81	P	P	09 24 51.3	+0.6
	baz=318						
CCM	Cathedral Cave	43.28	93	P	P	09 24 50.2	-0.6
	baz=321						
L47A	Sherwood	43.29	84	P	P	09 24 50.9	+0.1
	baz=319						
BMRO	Meriville Lake	43.31	78	P	P	09 24 51.6	+0.7
	baz=317,SNR=7.7						
E52A	Mattawa	43.32	75	P	P	09 24 51.1	+0.1
	baz=316,SNR=8.0						
HHAR	Hobbs	43.34	97	eP	P	09 24 50.8	-0.5
	comp=Z,6.7nm,0.7s						
F52A	Sundridge	43.35	76	P	P	09 24 51.6	+0.3
	baz=317,SNR=7.8						
ABTX	Abilene, Hawle	43.51	106	P	P	09 24 53.4	+0.7
	baz=326						
BASO	Ashfield	43.52	79	P	P	09 24 53.7	+1.1
	baz=318						
K49A	Clarkson	43.55	82	P	P	09 24 53.6	+0.7
	baz=318						
SFIN	Lafayette	43.56	87	P	P	09 24 53.3	+0.4
	baz=320						
BUKO	Buck Lake	43.57	76	P	P	09 24 53.3	+0.3
	baz=317,SNR=11						
D54A	Lac Fusel, La	43.65	73	P	P	09 24 53.8	+0.2
	baz=316,SNR=6.1						
L48A	N Adams	43.70	84	P	P	09 24 54.7	+0.6
	baz=319						
BWLO	Walkerton	43.70	79	P	P	09 24 54.9	+0.8
	baz=318						
E53A	Dumoine, Ponti	43.73	74	P	P	09 24 54.6	+0.3
	baz=316,SNR=8.8						
AAM	Ann Arbor	43.81	83	P	P	09 24 55.7	+0.8
	baz=318						
U40A	Yellville	43.81	96	P	P	09 24 54.6	-0.5
	baz=322						
ALGO	Algonquin Park	43.85	75	P	P	09 24 55.4	+0.1
	baz=317,SNR=6.1						
N47A	Urbana	43.87	86	P	P	09 24 55.3	-0.2
	baz=319,SNR=6.7						
L49A	Milan	43.90	83	P	P	09 24 56.5	+0.8
	baz=319						
E54A	Lac Daplat, Po	43.91	74	P	P	09 24 55.9	+0.1
	baz=316,SNR=12						
H52A	Wyevale	43.92	77	P	P	09 24 56.1	+0.3
	baz=317						
I51A	Listowel	43.99	79	P	P	09 24 57.6	+1.2
	baz=318,SNR=5.8						
Q45A	Warren Harvey,	44.17	90	P	P	09 24 58.1	+0.2
	baz=321						
G53A	Haliburton	44.18	76	P	P	09 24 58.3	+0.4
	baz=317,SNR=11						
I52A	Shelburne	44.20	78	P	P	09 24 58.5	+0.4
	baz=318						
N48A	Decatur	44.22	85	P	P	09 24 58.1	-0.2
	baz=319,SNR=6.4						
M49A	Liberty Center	44.27	84	P	P	09 24 59.2	+0.5
	baz=319						
W39A	Magazine	44.28	98	P	P	09 24 58.7	-0.1
	baz=323						
TXAR	Lajitas Array	44.37	113	P	P	09 25 01.6	+1.8
	comp=Z,5.3nm,0.7s,baz=328,slow=6.4,SNR=75						
TXAR				PcP	PcP	09 26 41.9	-0.6
	comp=Z,0.4nm,0.6s,baz=242,slow=1.9,SNR=3.7						
TXAR				ScP	ScP	09 30 28.7	+0.6
	comp=Z,0.0nm,0.4s,baz=336,slow=2.7,SNR=3.5						
TXAR				LR	LR	09 42 54.6	
	comp=Z,38nm,19.7s,baz=0.0,slow=35						
PEMO	Pembroke	44.44	74	P	P	09 24 59.9	0.0
	baz=317,SNR=12						
S44A	Carbondale	44.55	92	P	P	09 25 00.7	-0.2
	baz=321						
N49A	Columbus Grove	44.59	84	P	P	09 25 01.3	0.0
	baz=319						
BANO	Bancroft	44.59	76	P	P	09 25 01.5	+0.3
	baz=317,SNR=7.2						
ACTO	Acton	44.60	79	P	P	09 25 02.2	+0.9
	baz=318,SNR=5.3						
O48A	Farmland	44.61	86	P	P	09 25 00.9	-0.5
	baz=320,SNR=6.1						
P47A	Martinsville	44.65	87	P	P	09 25 01.6	-0.2
	baz=320,SNR=7.0						
I53A	Kortright Cn E	44.67	78	P	P	09 25 01.9	+0.1
	baz=318						
J52A	Paris	44.67	79	P	P	09 25 02.7	+0.8
	baz=318						
PLIO	Pelee Island,	44.73	82	P	P	09 25 02.7	+0.4
	baz=319						
F55A	Otter Lake	44.75	74	P	P	09 25 02.2	-0.2
	baz=317						
M50A	Fremont	44.79	83	P	P	09 25 03.5	+0.7
	baz=319						
PKRO	Pickering	44.82	77	P	P	09 25 03.6	+0.6
	baz=318						
K52A	Tillsonburg	44.90	80	P	P	09 25 04.4	+0.7
	baz=318						
MIAR	Mount Ida	44.90	98	P	P	09 25 04.0	+0.3
	baz=324,SNR=10						
PLVO	Plevna	44.99	75	P	P	09 25 04.6	+0.2
	baz=318						
Q47A	Bedord North L	44.99	88	P	P	09 25 04.6	+0.1
	baz=321,SNR=7.2						
G55A	Calabogie	45.00	74	P	P	09 25 04.5	+0.1
	baz=317,SNR=12						
DRWO	Darlington Wes	45.05	77	P	P	09 25 05.4	+0.6
	baz=318						
O49A	Covington	45.07	85	P	P	09 25 05.0	-0.1
	baz=320						
TYNO	Tyneside	45.08	79	P	P	09 25 05.9	+0.9
	baz=318						
WHTX	Lake Whitney,	45.08	104	P	P	09 25 06.1	+0.9
	baz=326,SNR=5.2						
P48A	Milroy	45.09	87	P	P	09 25 04.5	-0.7
	baz=320						
DELO	Deloro Mine	45.11	76	P	P	09 25 05.6	+0.3
	baz=318						
WLVO	Wesleyville	45.17	77	P	P	09 25 06.4	+0.6
	baz=318,SNR=6.9						
JCT	Junction City	45.21	108	P	P	09 25 07.6	+1.3
	baz=327,SNR=32						
N50A	Nevada	45.22	84	P	P	09 25 06.3	+0.1
	baz=320						
M51A	Elyria	45.27	82	P	P	09 25 06.6	0.0
	baz=319						
H55A	Tweed	45.30	75	P	P	09 25 07.1	+0.3
	baz=318,SNR=5.9						
LATQ	La Tuque	45.30	70	P	P	09 25 06.9	+0.1
	baz=317,SNR=8.3						
I55A	Frankford	45.30	76	P	P	09 25 07.2	+0.3
	baz=318						
X40A	Basin Creek Fa	45.31	98	P	P	09 25 07.1	0.0
	baz=324						
S46A	Don Dixon Farm	45.32	90	P	P	09 25 07.2	+0.1
	baz=321						
Q48A	North Vernon	45.34	87	P	P	09 25 07.1	-0.1
	baz=321						
ORIO	Orleans, Innes	45.43	73	P	P	09 25 07.3	-0.5
	baz=318						
R47A	Wooly Knot Far	45.44	89	P	P	09 25 07.8	-0.2
	baz=321						
O50A	Cable	45.46	85	P	P	09 25 08.3	+0.2
	baz=320,SNR=15						
N51A	Ashland	45.48	83	P	P	09 25 08.6	+0.2
	baz=320						
M52A	Chesterland	45.52	81	P	P	09 25 09.1	+0.5
	baz=319						
J54A	Appleton	45.54	78	P	P	09 25 09.3	+0.6
	baz=318						
WCI	Wyandotte Cave	45.61	89	P	P	09 25 09.9	+0.6
	baz=321						
ACSO	Alum Creek Sta	45.71	84	P	P	09 25 10.4	+0.3
	baz=320						
H56A	Elgin	45.71	75	P	P	09 25 10.2	+0.2
	baz=318,SNR=5.3						
MEDO	Medina	45.71	78	P	P	09 25 10.7	+0.6
	baz=318						
L53A	Girard	45.74	80	P	P	09 25 11.0	+0.6
	baz=319						
ERPA	Erie	45.75	80	P	P	09 25 11.2	+0.8
	baz=319						
P50A	Jamestown	45.78	85	P	P	09 25 10.5	-0.2
	baz=320,SNR=5.7						
S47A	Hartford	45.81	90	P	P	09 25 11.1	+0.2
	baz=321						
PECO	Prince Edward	45.84	76	P	P	09 25 11.4	+0.3
	baz=318						
N52A	McGinn's Farm,	45.90	82	P	P	09 25 11.7	+0.1
	baz=320						
M53A	WI Miller and	45.93	81	P	P	09 25 12.4	+0.6
	baz=319,SNR=9.0						
J55A	Hilton	45.95	77	P	P	09 25 12.3	+0.3
	baz=318						
O51A	Pataskala	45.96	84	P	P	09 25 12.3	+0.2
	baz=320						
L54A	Sinclairville	45.99	79	P	P	09 25 12.9	+0.6
	baz=319,SNR=8.3						
K54A	Basiliko Farm,	46.01	78	P	P	09 25 13.0	+0.5
	baz=319						
435B	Jarrell	46.02	105	P	P	09 25 13.8	+1.2
	baz=326,SNR=6.1						
R49A	Shelbyville	46.12	88	P	P	09 25 13.2	-0.1
	baz=321						
S48A	Wiedeman Farm,	46.17	89	P	P	09 25 14.0	+0.3
	baz=321,SNR=16						
K55A	Perry	46.23	78	P	P	09 25 14.6	+0.4
	baz=319,SNR=5.7						
P51A	Williamsport	46.24	85	P	P	09 25 14.3	0.0
	baz=320						
X43A	Marvell	46.25	96	P	P	09 25 14.4	0.0
	baz=323						
Q50A	Georgetown	46.28	86	P	P	09 25 14.6	0.0
	baz=321						
Z41A	Richland Creek	46.31	99	P	P	09 25 14.9	-0.1
	baz=324						
N53A	Lisbon	46.33	82	P	P	09 25 15.3	+0.4
	baz=320						
O52A	Adamsville	46.36	83	P	P	09 25 15.1	-0.1
	baz=320						
M54A	Oil Creek Stat	46.37	80	P	P	09 25 15.9	+0.6
	baz=319,SNR=5.2						
T48A	Bowling Green	46.43	90	P	P	09 25 16.1	+0.3
	baz=322						
S49A	Springfield	46.45	88	P	P	09 25 16.0	0.0
	baz=321						
Q51A	Peebles	46.45	85	P	P	09 25 16.1	+0.1
	baz=321,SNR=5.4						
L55A	Hinsdale	46.46	79	P	P	09 25 16.6	+0.6
	baz=319,SNR=7.4						
WVT	Waverly	46.48	92	eP	P	09 25 16.6	+0.3
	comp=Z,5.5nm,1.0s						
WVT	Waverly	46.48	92	eP	P	09 25 16.6	+0.3
WVT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WVT	Waverly	46.48	92	P	P	09 25 16.5	+0.3
	baz=322						
LONY	Lake Ozonia	46.49	73	P	P	09 25 15.9	-0.3
	baz=318						
U47A	Clarksville	46.51	91	P	P	09 25 16.6	+0.2
	baz=322						
R50A	Paris	46.54	87	P	P	09 25 16.7	0.0
	baz=321,SNR=5.0						
O53A	New Philadelph	46.57	83	P	P	09 25 16.7	-0.1
	baz=320						
P52A	Corning	46.59	84	P	P	09 25 16.8	-0.2
	baz=320						
V46A	Holladay	46.60	92	P	P	09 25 17.3	+0.1
	baz=322,SNR=5.6						
NATX	Nacogdoches	46.62	102	P	P	09 25 17.8	+0.4
	baz=325						
N54A	Moraine State	46.62	81	P	P	09 25 17.7	+0.3
	baz=320						
U48A	Cassie Pea, Po	46.82	90	P	P	09 25 19.4	+0.5
	baz=322						
M55A	Ridgway	46.84	79	P	P	09 25 19.6	+0.6
	baz=320,SNR=7.9						
T49A	Edmonton	46.86	89	P	P	09 25 19.4	+0.2
	baz=322						
V47A	Nunnelly	46.88	92	P	P	09 25 19.6	+0.3
	baz=322						
R51A	Hillsboro	46.90	86	P	P	09 25 19.5	+0.1
	baz=321						
S50A	Richmond	46.97	87	P	P	09 25 20.3	+0.2
	baz=321,SNR=5.8						
OXF	Oxford	46.98	94	P	P	09 25 20.6	+0.5
	baz=323,SNR=15						
O54A	Avella	47.03	82	P	P	09 25 20.5	0.0
	baz=320,SNR=8.0						
Q52A	Bidwell	47.04	85	P	P	09 25 20.4	-0.2
	baz=321						
P53A	Whipple	47.06	83	P	P	09 25 20.8	+0.1
	baz=320,SNR=5.3						
M56A	Emporium	47.11	79	P	P	09 25 21.6	+0.5
	baz=320,SNR=6.3						
U49A	Red Boiling Sp	47.20	90	P	P	09 25 22.1	+0.3
	baz=322						
833A	Chaparral WMA,	47.21	109	P	P	09 25 23.2	+1.3
	baz=328						
N55A	Marion Center	47.26	80	P	P	09 25 22.8	+0.6
	baz=320,SNR=5.7						
T50A	Nancy	47.27	88	P	P	09 25 22.9	+0.6
	baz=322,SNR=7.0						
V48A	Smith Brothers	47.29	91	P	P	09 25 23.1	+0.6
	baz=322						
W47A	Westpoint	47.30	92	P	P	09 25 22.9	+0.3
	baz=323						
R52A	Catlettsburg	47.33	85	P	P	09 25 23.4	+0.6
	baz=321						
X46A	Booneville	47.36	94	P	P	09 25 23.8	+0.8
	baz=323,SNR=36						
S51A	Beattyville	47.41	87	P	P	09 25 23.6	+0.2
	baz=321						
P54A	Burton	47.42	82	P	P	09 25 23.7	+0.2
	baz=320						
Q53A	Leroy	47.48	84	P	P	09 25 23.8	-0.2
	baz=321						
N56A	West Decatur	47.49	80	P	P	09 25 24.7	+0.7
	baz=320,SNR=5.0						
O55A	Ligonier	47.54	81	P	P	09 25 24.6	+0.1
	baz=320						
HKT	Hockley	47.55	104	eP	P	09 25 25.9	+1.4
HKT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
S52A	Salyersville	47.63	86	P	P	09 25 25.4	+0.3
	baz=321						
BINY	Binghamton	47.63	77	P	P	09 25 25.7	+0.5
	baz=320,SNR=7.5						
R53A	Hurricane	47.68	85	P	P	09 25 25.7	+0.1
	baz=321						
MCWV	Mont Chateau	47.69	82	P	P	09 25 25.7	+0.1
	baz=320						
W48A	Pulaski	47.71	92	P	P	09 25 26.2	+0.4
	baz=323,SNR=6.0						
Q54A	Coxs Mills	47.73	83	P	P	09 25 26.0	+0.1
	baz=321						
V49A	McMinnville	47.73	90	P	P	09 25 26.1	+0.2
	baz=322,SNR=5.1						
U50A	Jamestown	47.74	89	P	P	09 25 26.4	+0.3
	baz=322						
X47A	Russelville	47.75	93	P	P	09 25 26.4	+0.3
	baz=323,SNR=9.5						
T51A	Gray	47.76	88	P	P	09 25 26.4	+0.2
	baz=322,SNR=6.8						
L58A	Harry Jones Me	47.82	77	P	P	09 25 27.2	+0.6
	baz=320,SNR=7.0						
P55A	Reedsville	47.82	82	P	P	09 25 27.0	+0.4
	baz=321						
O56A	Blue Knob Stat	47.85	80	P	P	09 25 27.1	+0.2
	baz=320						
SSPA	Standing Stone	47.90	80	eP	P	09 25 27.6	+0.4
	comp=Z,6.6nm,0.7s						
SSPA	Standing Stone	47.90	80	P	P	09 25 27.6	+0.4
	baz=320						
N57A	Milroy	47.98	79	P	P	09 25 28.2	+0.4
	baz=320						
LBNH	Lisbon	48.03	72	P	P	09 25 28.2	0.0
	baz=319						
M58A	Price's Panora	48.03	78	P	P	09 25 28.6	+0.3
	baz=320						
W49A	Belvidere	48.06	91	P	P	09 25 28.8	+0.3
	baz=323,SNR=7.2						
Q55A	Buckhannon	48.09	83	P	P	09 25 28.9	+0.2
	baz=321						
S53A	Williamson	48.10	85	P	P	09 25 29.0	+0.2
	baz=322						
T52A	Hallie	48.12	87	P	P	09 25 29.5	+0.5
	baz=322						
U51A	La Follette	48.18	88	P	P	09 25 29.5	0.0
	baz=322						
V50A	Pikevile	48.20	90	P	P	09 25 29.7	+0.2
	baz=322						
X48A	Hartselle	48.20	92	P	P	09 25 29.8	+0.2
	baz=323,SNR=8.2						
R54A	Victor	48.27	84	P	P	09 25 30.1	0.0
	baz=321						
VBMS	Vicksburg	48.28	97	P	P	09 25 31.4	+1.2
	baz=325,SNR=7.4						
TZTN	Tazewell	48.28	88	P	P	09 25 30.8	+0.5
	baz=322						
P56A	Dayton Farm, R	48.31	81	P	P	09 25 30.7	+0.4
	baz=321						
N58A	Sunbury	48.32	78	P	P	09 25 30.8	+0.4
	baz=320						
O57A	Amberson	48.35	80	P	P	09 25 31.3	+0.6
	baz=320,SNR=8.2						
M59A	Waymart	48.40	77	P	P	09 25 31.5	+0.4
	baz=320						
S54A	Dingess, Beckl	48.41	85	P	P	09 25 31.3	+0.1
	baz=321						
T53A	Wise	48.44	86	P	P	09 25 32.0	+0.5
	baz=322						
V51A	Loudon	48.47	89	P	P	09 25 32.2	+0.5
	baz=322						
W50A	Signal Mountai	48.47	90	P	P	09 25 31.9	+0.2
	baz=323						
U52A	Thorn Hill	48.49	88	P	P	09 25 32.1	+0.2
	baz=322						

Q56A	Snyder Ridge,	48.49	82	P	P	09 25 31.8	0.0
	baz=321						
PKME	Peaks-Kenny Pk	48.49	69	P	P	09 25 31.6	-0.1
	baz=319						
X49A	Woodville	48.51	92	P	P	09 25 32.2	+0.2
	baz=323						
Y48A	Jasper	48.57	93	P	P	09 25 32.6	+0.2
	baz=324,SNR=8.8						
R55A	Marlinton	48.62	83	P	P	09 25 33.0	+0.1
	baz=321						
N59A	State Game Lan	48.72	78	P	P	09 25 33.5	0.0
	baz=320						
P57A	Homestead Farm	48.73	81	P	P	09 25 34.1	+0.5
	baz=321,SNR=5.4						
O58A	Lewisberry	48.77	79	P	P	09 25 34.4	+0.6
	baz=321,SNR=8.3						
W51A	Cleveland	48.77	90	P	P	09 25 34.2	+0.2
	baz=323						
V52A	Sevierville	48.81	88	P	P	09 25 34.8	+0.5
	baz=322						
S55A	Lewisburg	48.83	84	P	P	09 25 35.0	+0.5
	baz=322						
T54A	Tazewell	48.86	86	P	P	09 25 34.8	+0.2
	baz=322						
R56A	Bull Pasture M	48.88	83	P	P	09 25 34.8	0.0
	baz=321						
Q57A	Strasburg	48.88	81	P	P	09 25 35.0	+0.2
	baz=321						
X50B	Fort Payne	48.89	91	P	P	09 25 35.2	+0.3
	baz=323,SNR=8.9						
U53A	Fall Branch	48.91	87	P	P	09 25 35.3	+0.3
	baz=322						
O59A	Robesonia	48.98	78	P	P	09 25 36.1	+0.6
	baz=321,SNR=5.1						
Y49A	Blount Mountai	48.99	92	P	P	09 25 36.1	+0.4
	baz=324,SNR=9.3						
147A	Livingston	49.02	95	P	P	09 25 36.5	+0.6
	baz=324,SNR=7.4						
P58A	Pank, Wackersv	49.07	80	P	P	09 25 36.4	+0.2
	baz=321						
N60A	Cedar Hill Far	49.08	77	P	P	09 25 36.1	-0.1
	baz=320						
U54A	Nelsons Funny	49.16	86	P	P	09 25 37.3	+0.3
	baz=322						
X51A	Calhoun	49.20	90	P	P	09 25 37.8	+0.6
	baz=323						
T55A	Pulaski	49.20	85	P	P	09 25 37.8	+0.5
	baz=322						
W52A	Murphy	49.24	89	P	P	09 25 38.0	+0.4
	baz=323						
Y50A	Piedmont	49.30	92	P	P	09 25 38.6	+0.5
	baz=323,SNR=5.9						
Q58A	Fox Den Farm,	49.31	81	P	P	09 25 38.3	+0.2
	baz=321,SNR=7.4						
BLA	Blacksburg	49.31	84	P	P	09 25 38.4	+0.3
	baz=322						
V53A	Saluda	49.34	88	P	P	09 25 39.1	+0.7
	baz=322,SNR=6.6						
O60A	Telford	49.36	78	P	P	09 25 38.9	+0.5
	baz=321						
LRAL	Lakeview Retre	49.36	93	P	P	09 25 38.5	0.0
	baz=324,SNR=5.7						
S56A	Natural Bridge	49.37	83	P	P	09 25 39.1	+0.6
	baz=322						
148A	Greensboro	49.39	94	P	P	09 25 38.9	+0.2
	baz=324						
R57A	Stanardsville	49.40	82	P	P	09 25 38.8	+0.1
	baz=321						
Z49A	Columbiana	49.47	93	P	P	09 25 39.6	+0.4
	baz=324,SNR=9.2						
HRV	Adam Dziewonsk	49.52	73	P	P	09 25 39.7	+0.1
	baz=320						
PAL	Palisades	49.55	76	P	P	09 25 39.4	-0.4
	baz=320						
U55A	TA2, Sparta	49.56	86	P	P	09 25 40.6	+0.6
	baz=322,SNR=7.0						
MAJO	Matsushiro	49.56	275	*e*P	P	09 25 40.2	+0.2
MAJO	Matsushiro	49.56	275	*d i*P	P	09 25 39.4	-0.6
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MJAR	Matsushiro Arr	49.56	275	P	P	09 25 40.2	+0.2
	comp=Z,2.9nm,1.0s,baz=20,slow=6.6,SNR=7.3						
MJAR				ScP	ScP	09 30 49.0	-0.7
	comp=Z,0.3nm,0.4s,baz=327,slow=2.1,SNR=4.1						
MJB9	Matsu-Tunnel	49.56	275	*e*P	P	09 25 40.7	+0.7
	comp=Z,6.6nm,1.0s						
W53A	Cullowhee	49.56	88	P	P	09 25 40.6	+0.5
	baz=323						
Y51A	Rockmart	49.63	91	P	P	09 25 40.7	+0.1
	baz=323						
T56A	Rocky Mt	49.65	84	P	P	09 25 40.9	+0.2
	baz=322						
X52A	Dahlonega	49.65	89	P	P	09 25 41.3	+0.6
	baz=323,SNR=6.6						
R58A	Rapidan	49.65	82	P	P	09 25 41.0	+0.4
	baz=321						
V54A	Nebo	49.68	87	P	P	09 25 41.6	+0.6
	baz=322						
Z50A	Ashland	49.72	92	P	P	09 25 41.8	+0.6
	baz=324						
149A	Jones	49.82	94	P	P	09 25 42.4	+0.5
	baz=324,SNR=34						
R58B	Mineral	49.98	82	P	P	09 25 43.8	+0.7
	baz=322						
V55A	Taylorsville	49.99	86	P	P	09 25 44.0	+0.8
	baz=322						
U56A	King	50.01	85	P	P	09 25 43.7	+0.3
	baz=322						
X53A	Estanollee	50.02	89	P	P	09 25 44.1	+0.6
	baz=323						
CBN	Corbin Frederi	50.04	81	P	P	09 25 44.0	+0.5
	baz=322						
Z51A	Franklin	50.04	92	P	P	09 25 43.8	+0.2
	baz=324,SNR=8.4						
T57A	Hurt	50.05	84	P	P	09 25 43.7	0.0
	baz=322						
CN2	Changchun	50.10	290	*e*P	P	09 25 43.4	-0.6
W54A	Cherokee Point	50.11	88	P	P	09 25 44.6	+0.4
	baz=323						
Y52A	Lilburn	50.15	90	P	P	09 25 45.0	+0.5
	baz=323,SNR=9.9						
249A	Camden	50.16	94	P	P	09 25 45.2	+0.7
	baz=324,SNR=19						
R59A	King George, V	50.16	81	P	P	09 25 44.7	+0.2
	baz=322						
S58A	Poland Farm, P	50.16	82	P	P	09 25 44.8	+0.3
	baz=322						
150A	Eclectic	50.19	93	P	P	09 25 44.7	-0.1
	baz=324,SNR=5.5						
ARA0	ARCESS Array S	50.36	1	*e*P	P	09 25 43.4	-2.2
ARCES	ARCESS Array B	50.36	1	P	P	09 25 43.4	-2.2
	comp=Z,3.2nm,0.9s,baz=10,slow=7.4,SNR=4.0						
ARCES				pP	pP	09 26 03.1	+0.1
	comp=Z,1.5nm,0.4s,baz=9.8,slow=7.9,SNR=2.8						
V56A	Mocksville	50.38	86	P	P	09 25 46.4	+0.2
	baz=323						
Y53A	Monroe	50.40	90	P	P	09 25 46.9	+0.5
	baz=323,SNR=5.2						
X54A	Belton	50.45	88	P	P	09 25 47.4	+0.7
	baz=323,SNR=5.1						
T58A	Grand View Acr	50.45	83	P	P	09 25 46.8	+0.1
	baz=322						
U57A	Blanch	50.46	84	P	P	09 25 46.9	+0.1
	baz=322						
KMSC	Kings Mountain	50.49	87	P	P	09 25 47.3	+0.3
	baz=323						
Q61A	Milford	50.51	79	P	P	09 25 46.7	-0.4
	baz=321						
Z52A	Williamson	50.52	91	P	P	09 25 47.6	+0.3
	baz=324,SNR=11						
250A	Grady	50.58	94	P	P	09 25 47.8	+0.1
	baz=324,SNR=5.0						
151A	Opelika	50.60	92	P	P	09 25 47.5	-0.4
	baz=324,SNR=6.5						
349A	Repton	50.63	95	P	P	09 25 48.6	+0.5
	baz=325						
152A	Waverly Hall	50.79	92	P	P	09 25 49.0	-0.3
	baz=324						
GOGA	Godfrey	50.81	90	P	P	09 25 49.4	-0.1
	baz=324						
Y54A	Tignall	50.84	89	P	P	09 25 49.9	+0.2
	baz=323						
BRAL	Brewton	50.85	95	P	P	09 25 49.5	-0.2
	baz=325						
Z53A	Monticello	50.87	90	P	P	09 25 49.8	0.0
	baz=324,SNR=5.1						
W56A	Indian Trail	50.87	86	P	P	09 25 50.1	+0.2
	baz=323						
X55A	Gracelyn & Ava	50.88	88	P	P	09 25 50.0	0.0
	baz=323						
U58A	Oxford	50.88	84	P	P	09 25 50.0	0.0
	baz=322						
251A	Midway	50.91	93	P	P	09 25 49.7	-0.5
	baz=324,SNR=5.2						
350A	Dozier	51.00	94	P	P	09 25 50.9	+0.1
	baz=325						
449A	Pace	51.10	95	P	P	09 25 52.0	+0.4
	baz=325						
W57A	Gilead	51.15	86	P	P	09 25 52.0	+0.1
	baz=323						
X56A	White Oak	51.16	87	P	P	09 25 51.9	-0.1
	baz=323						
T60A	Surry	51.18	82	P	P	09 25 52.6	+0.5
	baz=322						
Y55A	Saluda	51.19	88	P	P	09 25 52.2	-0.1
	baz=323						
153A	Fort Valley	51.24	91	P	P	09 25 52.6	-0.1
	baz=324,SNR=5.8						
Z54A	Sparta	51.26	90	P	P	09 25 53.0	+0.2
	baz=324						
U59A	Littleton	51.28	83	P	P	09 25 53.5	+0.6
	baz=322						
252A	Lumpkin	51.32	92	P	P	09 25 52.8	-0.5
	baz=324,SNR=8.3						
U60A	Pendleton	51.50	82	P	P	09 25 55.1	+0.6
	baz=322						
253A	Americus	51.57	92	P	P	09 25 54.8	-0.3
	baz=324						
Z55A	Blythe	51.63	89	P	P	09 25 56.0	+0.5
	baz=324						
W58A	Raeford	51.63	85	P	P	09 25 56.1	+0.6
	baz=323						
154A	Montrose	51.63	90	P	P	09 25 55.9	+0.3
	baz=324						
X57A	Johnson Farm,	51.65	86	P	P	09 25 56.3	+0.6
	baz=323						
352A	Blakely	51.65	93	P	P	09 25 55.7	0.0
	baz=325						
Z56A	Williston	51.92	88	P	P	09 25 58.1	+0.3
	baz=324						
V60A	Jim Taylor Roa	52.01	83	P	P	09 25 57.3	-1.0
	baz=323						
254A	Abbeville	52.08	91	P	P	09 25 58.7	-0.2
	baz=324						
353A	Camilla	52.11	92	P	P	09 25 58.6	-0.5
	baz=325						
Z57A	Bowman	52.28	88	P	P	09 26 00.8	+0.5
	baz=324						
X59A	McDuffie Farm,	52.30	85	P	P	09 26 01.1	+0.6
	baz=323						
Y58A	Scranton	52.30	86	P	P	09 26 01.2	+0.7
	baz=324						
TIGA	Tifton	52.34	92	P	P	09 26 00.7	-0.2
	baz=325						
156A	Sylvania	52.40	89	P	P	09 26 01.8	+0.5
	baz=324						
255A	Hazlehurst	52.50	90	P	P	09 26 02.0	0.0
	baz=324						
TLY	Talaya	53.19	311	LR	LR	09 49 21.5	
	comp=Z,64nm,18.6s,baz=0.0,slow=37						
TLY	Talaya	53.19	311	⇑*e*P	P	09 26 07.3	+0.4
KSRS	Korea Array	53.88	284	P	P	09 26 12.6	+0.5
	comp=Z,2.3nm,0.8s,baz=36,slow=6.0,SNR=6.5						
KSRS				LR	LR	09 50 27.4	
	comp=Z,23nm,19.1s,baz=72,slow=37						
ULN	Ulaanbaatar	54.93	306	*e*P	P	09 26 21.8	+2.0
	comp=Z,6.0nm,0.6s						
ULN	Ulaanbaatar	54.93	306	*ce*P	P	09 26 19.5	-0.3
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	55.22	307	P	P	09 26 22.7	+0.8
	comp=Z,4.0nm,0.8s,baz=35,slow=7.6,SNR=20						
SONM				pP	pP	09 26 40.6	+1.2
	comp=Z,10nm,0.8s,baz=47,slow=5.4,SNR=14						
SONM				LR	LR	09 51 41.2	
	comp=Z,55nm,18.9s,baz=62,slow=38						
ZAA1	Zalesovo Array	57.54	324	*e*P	P	09 26 36.5	-1.6
ZALV	Zalesovo Beam	57.54	324	P	P	09 26 36.5	-1.6
	comp=Z,1.0nm,0.5s,baz=56,slow=5.4,SNR=3.0						
ZALV				LR	LR	09 53 28.6	
	comp=Z,21nm,18.1s,baz=68,slow=38						
ZALV	Zalesovo Beam	57.54	324	*i* P	P	09 26 42.0	+3.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	NORSAR Subarra	58.17	10	P	P	09 26 40.8	-1.6
	comp=Z,0.7nm,0.7s,baz=349,slow=6.9						
NOA	NORSAR Array B	58.17	10	P	P	09 26 41.4	-1.0
	comp=Z,0.9nm,0.7s,baz=350,slow=7.0,SNR=4.2						
NOA				pP	pP	09 26 59.2	-1.0
	comp=Z,2.7nm,0.8s,baz=351,slow=6.9,SNR=7.9						
FIA0	FINESS Array S	58.49	1	*e*P	P	09 26 43.6	-1.0
FINES	FINESS Array B	58.49	1	P	P	09 26 43.6	-1.0
	comp=Z,4.0nm,0.7s,baz=5.6,slow=7.7,SNR=19						
FINES				pP	pP	09 27 01.9	-0.4
	comp=Z,4.4nm,0.7s,baz=4.7,slow=7.4,SNR=5.4						
FINES				ScP	ScP	09 31 28.1	-0.2
	comp=Z,1.3nm,0.7s,baz=15,slow=5.8,SNR=5.4						
HHC	Hu-ho-hao-te	58.72	298	P	P	09 26 48.3	+1.6
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,98nm,5.1s						
KIRV	Kirov	60.26	348	LR	LR	09 53 33.9	
	comp=Z,19nm,20.4s,baz=143,slow=37						
VSU	Vasula	61.49	1	⇓*i*P	P	09 27 05.0	-0.1
VSU				pmax	pmax		
	comp=Z,19nm,0.9s						
BVAR	Borovoye Array	62.11	333	LR	LR	09 56 26.9	
	comp=Z,40nm,21.5s,baz=2.0,slow=38						
KURK	Kurchatov	62.16	327	⇓*e*P	P	09 27 09.3	-0.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	64.64	322	P	P	09 27 25.3	-0.9
	comp=Z,0.4nm,0.5s,baz=28,slow=6.4,SNR=5.6						
OBN	Obninsk	64.68	355	*i* P	P	09 27 24.3	-2.0
OBN				*i*		09 27 44.4	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,23nm,18.0s						
GTA	Gaotai	64.87	306	*e*P	P	09 27 30.3	+2.3
GTA				pP	pP	09 27 47.8	+1.8
GTA				sP	sP	09 27 54.8	+1.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,39nm,5.7s						
GTA				LR	LR		
	comp=N,58nm,16.8s						
GTA				LR	LR		
	comp=E,69nm,17.5s						
GTA				LR	LR		
	comp=Z,58nm,19.4s						
GUMO	Guam	65.40	254	LR	LR	09 52 47.8	
	comp=Z,16nm,19.0s,baz=12,slow=33						
WMQ	Urumqi	65.54	317	*e*P	P	09 27 36.3	+4.1
WMQ				pP	pP	09 27 51.3	+1.1
WMQ				sP	sP	09 27 58.6	+0.7
WMQ				LR	LR		
	comp=N,710nm,28.7s						
WMQ				LR	LR		
	comp=E,700nm,29.3s						
WMQ				LR	LR		
	comp=Z,210nm,24.3s						
WHN	Wuhan	65.98	290	P	P	09 27 34.5	-0.6
LZH	Lanzhou	66.03	301	*e*P	P	09 27 35.3	-0.2
LZH				pP	pP	09 27 54.0	+0.4
LZH				sP	sP	09 27 57.5	-3.7
LZH				*e*PP	PP	09 30 02.3	+1.3
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,54nm,8.0s						
CLL	Collm	67.96	10	*e*pP	pP	09 28 06.0	+0.5
CHVC	Chvalec	68.93	9	*e*P	P	09 27 53.1	-0.3
CHVC				*e*x	x	09 28 13.2	
OSTC	Ostas	68.97	8	*e*P	P	09 27 54.5	+0.8
OSTC				*e*pP	pP	09 28 13.4	+1.5
DPC	Dobruska-Polom	69.18	8	*e*P	P	09 27 55.5	+0.5
DPC				*e*		09 28 14.8	
DPC	Dobruska-Polom	69.18	8	*e*P	P	09 27 55.5	+0.5
DPC				*e*pP	pP	09 28 14.8	+1.6
AKASG	Malin Array Be	69.28	360	P	P	09 27 54.6	-0.9
	comp=Z,4.4nm,0.6s,baz=4.9,slow=6.3,SNR=18						
AKASG				pP	pP	09 28 13.8	0.0
	comp=Z,9.0nm,0.7s,baz=3.1,slow=6.3,SNR=11						
AKBB	Malin Array Si	69.28	360	*e*P	P	09 27 54.6	-0.9
	comp=Z,7.4nm,0.8s						
AKBB	Malin Array Si	69.28	360	*e*P	P	09 27 54.6	-0.9
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MORC	Moravsky Berou	69.84	8	*e*P	P	09 27 58.9	-0.2
MORC				*e*		09 28 18.8	
KHC	Kasperske Hory	70.17	10	⇑*e*P	P	09 28 01.7	+0.6
KHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KHC	Kasperske Hory	70.17	10	*e*P	P	09 28 01.5	+0.4
KHC				*e*pP	PcP	09 28 21.1	-1.5
VRAC	Vranov	70.24	8	⇑*i*P	P	09 28 01.0	-0.5
VRAC	Vranov	70.24	8	⇑P	P	09 28 01.0	-0.5
VRAC	Vranov	70.24	8	*e*P	P	09 28 01.6	+0.1
VRAC				*e*		09 28 20.9	
GERES	GERESS Array B	70.47	10	P	P	09 28 02.2	-0.8
	comp=Z,0.9nm,0.7s,baz=358,slow=4.3,SNR=7.9						
GERES				pP	pP	09 28 21.4	+0.2
	comp=Z,1.4nm,0.8s,baz=23,slow=4.4,SNR=5.6						
KRUC	Moravsky	70.47	8	*e*P	P	09 28 02.8	-0.1
KRUC				*e*		09 28 22.8	
LANS	Liptovska Anna	70.58	6	*e*pP	pP	09 28 23.6	+1.7
KOLS	Kolonicke sedl	70.93	4	*e*P	P	09 28 06.1	+0.4
KOLS				*e*		09 28 27.9	
KOLS	Kolonicke sedl	70.93	4	*e*P	P	09 28 06.1	+0.4
KOLS				*e*pP	PcP	09 28 27.9	+2.1
VYHS	Vyhne	71.20	7	*e*P	P	09 28 07.6	+0.3
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.6s						
VYHS	Vyhne	71.20	7	*e*P	P	09 28 07.6	+0.3
VYHS				*e*pP	PcP	09 28 26.7	-0.3
MODS	Modra-Piesok	71.22	8	*e*P	P	09 28 07.0	-0.5
MODS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MODS	Modra-Piesok	71.22	8	*e*P	P	09 28 07.0	-0.5
MODS				*e*pP	PcP	09 28 26.9	-0.2
ZST	Bratislava	71.38	8	*e*pP	pP	09 28 27.6	+0.9
MOA	Molln	71.50	10	*e*P	P	09 28 09.7	+0.5
	comp=Z,2.9nm,1.1s						
CONA	Conrad Observa	71.56	9	*e*P	P	09 28 10.1	+0.5
	comp=Z,2.8nm,0.8s						
TRPA	Tarpa	71.74	4	⇑*i*P	P	09 28 10.9	+0.4
WATA	Walderalm	71.75	12	*e*P	P	09 28 11.3	+0.5
	comp=Z,2.5nm,0.7s						
SQTA	Sankt Quirin	71.83	12	*e*P	P	09 28 11.6	+0.3
	comp=Z,4.9nm,0.8s						
WTTA	Wattenberg	71.83	12	*e*P	P	09 28 12.1	+0.7
	comp=Z,6.4nm,0.8s						
FETA	Feichten	71.97	13	P	P	09 28 12.7	+0.5
	comp=Z,3.2nm,0.9s						
KBA	Koelnbreinsper	72.18	11	*e*P	P	09 28 14.2	+0.7
	comp=Z,8.9nm,1.0s						
ARSA	Arzberg	72.20	9	*e*P	P	09 28 13.7	+0.3
	comp=Z,1.3nm,0.7s						
BUR08	Bucovina Ar. S	72.30	2	*e*P	P	09 28 13.9	-0.2
	comp=Z,2.9nm,0.6s						
BURAR	Bucovina Array	72.33	2	⇓*i*P	P	09 28 13.6	-0.7
BURAR	Bucovina Array	72.33	2	⇓P	P	09 28 13.6	-0.7
OBKA	Obir	72.86	10	*e*P	P	09 28 17.8	+0.4
	comp=Z,12nm,0.7s						
BIZ	Bicaz	73.02	2	⇑*i*P	P	09 28 17.8	-0.4
DOPR	Dopca	73.98	2	⇑*i*P	P	09 28 23.5	-0.4
VRI	Vrincioaia	74.11	1	⇓*i*P	P	09 28 23.7	-0.9
VRI	Vrincioaia	74.11	1	⇓P	P	09 28 23.7	-0.9
BZS	Buzias	74.21	5	⇓*i*P	P	09 28 24.8	-0.4
BZS	Buzias	74.21	5	⇓P	P	09 28 24.8	-0.4
MLR	Muntele Rosu	74.47	2	⇓*i*P	P	09 28 27.1	+0.2
MLR	Muntele Rosu	74.47	2	⇓P	P	09 28 27.1	+0.2
GZR	Gura Zlata	74.48	4	⇑*i*P	P	09 28 26.1	-0.8
GZR	Gura Zlata	74.48	4	⇑P	P	09 28 26.1	-0.8
VOIR		74.50	3	⇓*i*P	P	09 28 26.5	-0.5
VOIR		74.50	3	⇓P	P	09 28 26.5	-0.5
CFR	Carcaliu	74.80	0	⇑*i*P	P	09 28 28.3	-0.3
CFR	Carcaliu	74.80	0	⇑P	P	09 28 28.3	-0.3
MDVR	Moldovita	75.05	5	⇑*i*P	P	09 28 29.3	-0.8
KBZ	Khabaz	75.60	349	P	P	09 28 32.1	-1.0
	comp=Z,1.2nm,0.6s,baz=315,slow=1.4,SNR=3.5						
KBZ				pP	pP	09 28 51.2	-0.4
	comp=Z,2.4nm,0.7s,baz=327,slow=2.7,SNR=3.8						
KMI	Kunming	75.92	296	P	P	09 28 37.8	+2.2
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
ESDC	Sonseca Array	76.78	25	P	P	09 28 40.2	+0.1
	comp=Z,1.2nm,0.7s,baz=343,slow=5.8,SNR=8.9						
PDG	Podgorica	77.26	7	⇑*i*P	P	09 28 40.7	-1.9
VTS	Vitosha	77.27	4	⇑*i*P	P	09 28 41.8	-1.1
VTS	Vitosha	77.27	4	⇑P	P	09 28 41.8	-1.1
DIKM	Dikmen	78.19	355	⇑*i*P	P	09 28 48.2	+0.4
GEYT	Alibeck	79.09	337	P	P	09 28 51.9	-1.0
	comp=Z,1.2nm,0.7s,baz=116,slow=3.4,SNR=3.0						
GEYT				pP	pP	09 29 11.7	+0.2
	comp=Z,2.3nm,0.6s,baz=350,slow=3.3,SNR=4.0						
GEYT				LR	LR	10 07 46.8	
	comp=Z,19nm,20.6s,baz=170,slow=39						
BRTR	Keskin Array B	80.17	356	P	P	09 28 58.0	-0.9
	comp=Z,0.4nm,0.4s,baz=343,slow=1.3,SNR=4.5						
BRTR				pP	pP	09 29 16.8	-0.7
	comp=Z,1.1nm,0.6s,baz=353,slow=5.0,SNR=5.4						
BRTR				LR	LR	10 08 37.8	
	comp=Z,7.4nm,18.0s,baz=274,slow=39						
BRTR	Keskin Array B	80.17	356	*ce*P	P	09 28 59.0	+0.1
KEST	Kesra	82.94	16	P	P	09 29 13.5	+0.1
	comp=Z,5.8nm,0.7s,baz=336,slow=6.8,SNR=9.8						
KEST	Kesra	82.94	16	*e*P	P	09 29 13.3	-0.1
	comp=Z,6.1nm,0.6s						
CM31	Chiang Mai Arr	83.43	296	*e*P	P	09 29 14.2	-1.9
	comp=Z,11nm,1.4s						
CMAR	Chiang Mai Arr	83.43	296	P	P	09 29 14.2	-1.9
	comp=Z,0.6nm,0.3s,baz=8.8,slow=6.5,SNR=2.5						
CMAR				pP	pP	09 29 35.5	+0.7
	comp=Z,1.0nm,0.3s,baz=15,slow=5.8,SNR=2.5						
CMAR				LR	LR	10 09 06.4	
	comp=Z,17nm,18.9s,baz=65,slow=38						
PTGA	Pitinga	91.34	89	*e*P	P	09 29 53.8	-0.5
	comp=Z,3.6nm,0.7s						
ASCN	Ascension	118.62	50	*e*PKPdf	PKiKP	09 35 36.3	0.0
ABPO	Ambohimpanom	136.60	334	*i* PKIKP	PKiKP	09 36 14.1	+1.9
TSUM	Tsumeb	138.12	16	*e*PKPdf	PKiKP	09 36 14.8	-0.4
LBTB	Lobatse	144.59	5	*e*PKPdf	PKPbc	09 36 23.5	0.0
LBTB	Lobatse	144.59	5	*e*PKIKP	PKPbc	09 36 23.5	+0.1
CASY	Casey	145.28	225	*e*PKPbc	PKPbc	09 36 23.9	-0.3
BOSA	Boshof	148.16	6	PKPbc	PKPbc	09 36 33.3	-0.5
	comp=Z,6.2nm,0.6s,baz=7.7,slow=2.3,SNR=20						
BOSA	Boshof	148.16	6	*e*PKPdf	PKPbc	09 36 33.2	-0.6
BOSA	Boshof	148.16	6	*e*PKP2	PKPbc	09 36 33.2	-0.6
QSPA	South Pole Qui	150.18	180	*e*PKPbc	PKPbc	09 36 37.6	0.0
SUR	Sutherland	151.53	14	*e*PKPbc	PKiKP	09 36 42.5	+0.1
SNAA	Sanae	163.21	145	*e*PKPab	PKPab	09 37 38.7	-1.2
SNAA	Sanae	163.21	145	*e*PKP2	PKPab	09 37 38.7	-1.2

PGC 14 09:41:13.1, 61°.57N × 141°.06W, h4km, ML2.4/11, 210km
Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.24	25	P	Pg	09 41 17.3	-0.6
YUK2				S	Sg	09 41 20.7	-0.4
YUK3	Moose Creek	0.35	54	P	Pg	09 41 19.3	-0.7
YUK3				S	Sg	09 41 23.5	-1.1
YUK1	Sand Pete Hill	0.64	23	P	Pg	09 41 24.1	-1.2
YUK1				S	Sg	09 41 33.2	-0.4
PTPK	Patty Peak	0.78	241	P	Pg	09 41 27.0	-1.0
PTPK				S	Sg	09 41 37.7	-0.3
BALM	Baldy	0.82	230	P	Pg	09 41 27.3	-1.5
BALM				S	Sg	09 41 38.5	-0.9
BVCY	Beaver Creek	0.85	6	P	Pg	09 41 28.4	-1.1
BVCY				Sg	Sn	09 41 45.3	+0.4
KIAG	Kiagna River	0.90	225	P	Pg	09 41 28.6	-1.8
KIAG				S	Sg	09 41 41.1	-1.0
TABL	Table Mountain	1.13	182	P	Pg	09 41 33.3	-1.5
TABL				S	Sg	09 41 48.6	-0.9
YUK4	Talbot Arm	1.18	100	P	Pg	09 41 34.6	-1.1
YUK4				S	Sg	09 41 51.0	0.0
YUK6	Outpost Mounta	1.45	115	Pn	Pn	09 41 38.7	-1.5
YUK6				Sg	Sb	09 41 58.4	-1.1
SAMH	Samovar Hills	1.45	174	Pn	Pn	09 41 39.7	-0.4
SAMH				Sg	Sb	09 41 59.4	-0.1
MESA	MESA	1.46	198	Pn	Pn	09 41 39.9	-0.5
MESA				Sg	Sn	09 42 00.3	+0.2
PCA	Pinnacle	1.53	165	Pn	Pn	09 41 40.6	-0.6

PCA				Sg	Sn	09 42 01.6	+0.1
YUK5	**Granite Creek**	1.60	104	Pn	Pn	09 41 41.2	-1.1
YUK5				Sg	Sn	09 42 02.7	-0.8
YUK7	**Dusty Glacier**	1.76	125	Pn	Pn	09 41 44.6	0.0
YUK7				Sg	Sg	09 42 09.2	-0.4
HYT	**Haines Junctio**	1.88	112	Pn	Pn	09 41 45.5	-0.5
HYT				Sg	Sb	09 42 11.2	-0.6
PNL	**Peninsula**	2.08	156	Pn	Pn	09 41 49.1	+0.4
PNL				Sg	Sb	09 42 18.4	+1.0
PAX	**Paxson**	2.50	306	Pn	Pn	09 41 55.4	+0.8
PAX				Sg	Sb	09 42 29.1	-0.4
DOT	**Dot Lake**	2.51	328	Pn	Pn	09 41 53.5	-1.1
DOT				Pg	Pb	09 41 58.6	-0.1
DOT				Sg	Sb	09 42 31.6	+1.8
DAWY	**Dawson**	2.62	16	Pn	Pn	09 41 55.3	-0.9
DAWY				Sg	Sb	09 42 33.3	+0.2
PLBC	**Pleasant Camp**	3.14	130	Pg	Pb	09 42 08.7	-0.8
PLBC				Sg	Sg	09 42 51.4	-2.6

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*NNC **14** 10:14:22.5±2.4, 44°.33N×88°.34E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=20.0km s-min=12.0km az=114.0*

*BJI **14** 10:14:24.9±0.0, 45°.76N×90°.27E, h10^{km}, mb3.8/2, ML3.4/4*

ISC 14 10:14:30.0±0.9, **45°.82N**±0°.04×**90°.07E**±0°.05, **h10^{km}, n28, σ3^{s}.84**/59, **6C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	2.62	221	*e*Pn	Pn	10 15 13.8	+1.4
WMQ				Sn	Sb	10 15 48.5	-0.8
WMQ				smax	smax		
	comp=N,130nm,0.9s						
WMQ				smax	smax		
	comp=E,120nm,0.7s						
ZSN	**Zaisan**	3.94	296	Pg	Pb	10 15 37.8	-1.7
	comp=E,3.9nm,0.5s						
ZSN				Lg	Lg	10 16 35.1	
	comp=E,16nm,0.4s						
DGZ	**Jazzator, Alta**	4.27	336	Pn	Pn	10 15 36.4	+1.3
DGZ				Pg	Pb	10 15 47.4	+2.2
DGZ				S	Sn	10 16 19.6	-5.4
DGZ				Sg	Sb	10 16 42.7	+6.0
CUR	**Chagan-Uzun**	4.43	346	Pn	Pn	10 15 37.7	+0.3
CUR				Pg	Pb	10 15 50.8	+2.8
CUR				S	Sn	10 16 25.9	-3.2
CUR				Sg	Sb	10 16 48.2	+6.7
AKAR	**Aktash**	4.79	341	Pn	Pn	10 15 41.9	-0.4
AKAR				Pg	Pg	10 15 60.0	-1.7
AKAR				Sg	Sb	10 16 58.6	+6.8
CHBI	**Chibit, Altay**	4.81	340	Pn	Pn	10 15 41.9	-0.7
CHBI				Pg	Pb	10 15 57.2	+2.8
CHBI				Sg	Sb	10 16 58.1	+5.8
ULGR	**Ulagan, Altay**	5.01	344	Pn	Pn	10 15 49.2	+4.0
ULGR				Pg	Pg	10 16 04.4	-1.4
ULGR				Sg	Sb	10 17 03.2	+5.3
TUNR	**Tungur**	5.01	331	Pn	Pn	10 15 46.0	+0.7
TUNR				Pg	Pb	10 16 00.7	+2.9
TUNR				Sg	Sg	10 17 07.0	-3.9
TEL	**Teeli**	5.20	1	Pn	Pn	10 15 51.3	+3.4
TEL				Pg	Pb	10 16 03.7	+2.7
TEL				Sg	Sb	10 17 11.1	+7.6
MK31	**Makanchi Array**	5.48	283	Pn	Pn	10 15 48.9	-2.8
	comp=E,0.3nm,0.2s,baz=96,slow=15,SNR=21						
MK31				Pg	Pb	10 16 08.1	+2.3
	comp=E,1.9nm,0.4s,baz=96,slow=17,SNR=14						
MK31				⇓Lg	Lg	10 17 21.4	
	comp=E,6.7nm,0.5s						
MKAR	**Makanchi Array**	5.48	283	Pn	Pn	10 15 49.6	-2.1
MKAR				Pg	Pb	10 16 09.2	+3.5
MKAR				S	Sn	10 16 55.0	+0.3
MKAR				Sg	Sg	10 17 28.6	+2.8
MAKZ	**Makanchi**	5.69	283	⇑Pn	Pn	10 15 51.0	-3.6
	comp=E,1.3nm,0.7s						
MAKZ				⇑Pg	Pg	10 16 16.1	-2.9
	comp=E,2.8nm,0.6s						
MAKZ				⇑Lg	Lg	10 17 30.7	
	comp=E,8.2nm,0.6s						
MAKZ	**Makanchi**	5.69	283	Pn	Pn	10 15 52.2	-2.4
MAKZ				Pg	Pg	10 16 18.4	-0.6
MAKZ				S	Sn	10 16 59.1	-0.9
MAKZ				Sg	Sg	10 17 37.6	+4.9
UKR	**Ust'-Kan**	6.21	327	Pn	Pn	10 16 03.8	+2.0
UKR				Pg	Pg	10 16 27.7	-1.3
UKR				S	Sn	10 17 12.2	-0.7
UKR				Sg	Sg	10 17 43.1	-6.2
ARTR	**Artybash**	6.26	344	Pg	Pb	10 16 23.2	+4.3
ARTR				Sg	Sg	10 17 45.9	-4.7
KZLR	**Kyzyl**	6.56	25	Sg	Sb	10 17 49.7	+7.2
GALT	**Gorno-Altaysk,**	6.71	338	Pg	Pg	10 16 35.9	-2.6
GALT				S	Sn	10 17 21.3	-3.8
GALT				Sg	Sg	10 18 01.8	-3.5
TASR	**Tashtagol**	7.09	349	Sg	Sg	10 18 14.2	-3.2
CERR	**Cheremushki**	7.09	7	Sg	Sg	10 18 14.3	-3.1
ARDR	**Aradan**	7.11	17	Pn	Pn	10 16 16.8	+2.8
ARDR				Pg	Pg	10 16 43.9	-2.2
ARDR				Sg	Sb	10 18 04.6	+6.2
DJR	**Jarkent**	7.43	262	Pg	Pn	10 16 15.0	-3.5
	comp=E,3.7nm,0.2s						
DJR				Lg	Lg	10 17 38.6	
	comp=E,4.1nm,0.3s						
ELT	**Eltsovka**	7.85	343	Sg	Sg	10 18 35.2	-6.5
LUZB	**Luzhba, Kemero**	7.88	355	Sg	Sg	10 18 36.1	-6.7
PDGK	**Podgornoye**	7.96	256	Pg	Pn	10 16 22.3	-3.5
	comp=E,1.1nm,0.2s						
SATY	**Saty**	8.79	256	Pg	Pn	10 16 35.2	-2.0
	comp=E,3.4nm,0.1s						
SATY				Lg	Lg	10 18 12.6	
	comp=E,10nm,0.2s						
KURK	**Kurchatov**	9.07	307	⇑Pn	Pn	10 16 36.1	-4.7
	comp=E,0.6nm,0.3s						
KURK				⇑Lg	Lg	10 19 12.2	
	comp=E,12nm,0.8s						
KURBB	**Kurchatov Arra**	9.07	306	⇑Pn	Pn	10 16 35.9	-5.0
	comp=E,1.2nm,0.3s,baz=115,slow=13						
KURBB				⇓Lg	Lg	10 19 15.7	
	comp=E,19nm,0.6s						
GTA	**Gaotai**	9.62	128	*e*P	Pn	10 16 47.0	-1.6
GTA				pP		10 16 51.3	
GTA				sP		10 16 53.9	
GTA				pmax	pmax		
	comp=E,3.0nm,1.2s						
GTA				smax	smax		
	comp=E,4.0nm,1.2s						
GTA				smax	smax		
	comp=E,7.0nm,0.9s						

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*ISCJB **14** 10:17:46.6±0.7, 76°.80N±0°.04×22°.3E±0°.2, h10^{km}, Error ellipse: s-maj=7.3km s-min=4.2km az=152.3*

*NAO **14** 10:17:49.8±0.9, 76°.80N×22°.18E, h19^{km}±10^{km}, ML3.0*

*BER **14** 10:17:50.5±2.4, 76°.81N×22°.27E, h12^{km}, ML2.5, MW3.5, ML3.0(NAO), Confirmed Earthquake*

*IEPN **14** 10:17:53.0, 77°.16N×22°.65E, h10^{km}*

ISC 14 10:17:48.1±0.9, **76°.84N**±0°.04×**22°.90E**±0°.04, **h10^{km}, n19, σ2^{s}.48**/37, **1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPEN	**Hopen**	0.59	124	Pg	Pn	10 18 03.8	+1.2
HOPEN				Lg	Lg	10 18 12.7	
HOPEN	**Hopen**	0.59	124	*e*P	Pn	10 18 03.7	+1.2
HOPEN				*e*S	Sn	10 18 12.6	+0.4
HOPEN				*e*		10 18 15.2	
HOPEN				IAML		10 18 16.1	
	comp=Z,281nm,0.1s						
HSPB	**Hornsund (broa**	1.68	279	Pg	Pn	10 18 18.9	+1.4
HSPB				Lg	Lg	10 18 37.5	
HSPB	**Hornsund (broa**	1.68	279	*e*P	Pn	10 18 17.0	-0.5
HSPB				*e*Pg	Pb	10 18 19.3	+0.2
HSPB				*e*Sg	Sn	10 18 39.5	+0.4
HSPB				IAML		10 18 43.3	
	comp=Z,41nm,0.1s						
SPA0	**Spitsbergen Ar**	1.95	316	Pn	Pn	10 18 21.1	-0.2
	baz=135,slow=16						
SPA0				Pg	Pb	10 18 25.3	+1.6
	baz=135,slow=18						
SPA0				Lg	Lg	10 18 48.5	
	baz=135,slow=37						
SPA0	**Spitsbergen Ar**	1.95	316	⇑*i*P	Pn	10 18 21.2	-0.1
SPA0				*e*S	Sn	10 18 42.6	-3.1
SPA0	**Spitsbergen Ar**	1.95	316	Pn	Pn	10 18 21.1	-0.2
	baz=135,slow=16						
SPA0				Pg	Pb	10 18 25.3	+1.6
	baz=135,slow=18						
SPA0				Sg	Sn	10 18 48.5	+2.8
	baz=135,slow=37						
BRBA	**Barentsburg A**	2.25	307	Pn	Pn	10 18 25.1	-0.2
BRBA				Pg	Pb	10 18 30.2	+1.4
BRBA				Lg	Lg	10 18 56.8	
BRBA	**Barentsburg A**	2.25	307	Pn	Pn	10 18 25.1	-0.2
BRBA				Pg	Pb	10 18 30.2	+1.4
BRBA				Sg	Sn	10 18 56.8	+3.6
BJO1	**Bjornoya**	2.55	204	Pg	Pb	10 18 36.0	+2.2
BJO1				Lg	Lg	10 19 08.2	
BJO1	**Bjornoya**	2.55	204	*e*Pg	Pb	10 18 36.1	+2.6
BJO1				*e*Sg	Sb	10 19 06.2	+1.7
BJO1				IAML		10 19 08.8	
	comp=Z,47nm,0.2s						
KBS	**Kingsbay**	3.11	317	Pn	Pn	10 18 36.7	-0.5
KBS				Sn	Sn	10 19 10.8	-3.5
KBS				Lg	Lg	10 19 23.6	
KBS	**Kingsbay**	3.11	317	*e*P	Pn	10 18 36.7	-0.5
KBS				*e*S	Sn	10 19 10.1	-4.2
KBS	**Kingsbay**	3.11	317	*e*P	Pn	10 18 36.6	-0.5
KBS				*e*S	Sn	10 19 09.8	-4.5
KBS				*e*Sg	Sb	10 19 23.6	+2.2
KBS				IAML		10 19 28.5	
	comp=Z,78nm,0.3s						
ZFI2	**Zemlya Franca-**	6.18	39	*e*P	Pn	10 19 20.2	+1.1
ZFI2				*e*S	Sn	10 20 25.8	-3.9
	comp=Z,16nm,1.3s						
ARA0	**ARCESS Array S**	7.39	173	Pn	Pn	10 19 35.4	-0.4
	baz=360,slow=14						
ARA0				Sn	Sn	10 20 52.4	-7.1
	baz=2.6,slow=22						
ARA0	**ARCESS Array S**	7.39	173	Pn	Pn	10 19 35.4	-0.4
	baz=360,slow=14						
ARA0				Sn	Sn	10 20 52.4	-7.1
	baz=2.6,slow=22						
KIF	**Kilpisjarvi**	7.91	186	Pn	Pn	10 19 42.9	0.0
KIF				Sn	Sn	10 21 06.0	-6.2
KIF	**Kilpisjarvi**	7.91	186	Pn	Pn	10 19 42.9	0.0
KIF				Sn	Sn	10 21 06.0	-6.2

SVSA 14 10:35:16.2±0.7, **38°.55N×29°.71W, h10^{km}, MD3.5, ML2.6, Error ellipse: s-maj=15.1km s-min=6.8km az=176.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	0.80	84	*e*P	Pg	10 35 28.9	-2.7
PCED				*e*S	Sg	10 35 37.9	-4.1
PCED				A	A	10 35 39.4	
	96nm,0.1s						
HOR	**Horta**	0.85	91	*e*S	Sg	10 35 39.6	-4.1
HOR				A	A	10 35 41.9	
	238nm,0.2s						
PCAN	**Candelaria**	0.97	95	*e*P	Pg	10 35 31.0	-3.8
PCAN				*e*S	Sg	10 35 42.3	-5.1
PCAN				A	A	10 35 45.4	
	94nm,0.1s						
ROSA	**Rosais**	1.17	81	*e*P	Pb	10 35 33.9	-4.5
ROSA				*e*S	Sb	10 35 46.9	-6.7
ROSA				A	A	10 35 49.1	
	68nm,0.3s						
PMAN	**Manadas**	1.28	86	*e*S	Sb	10 35 49.9	-6.9
PMAN				A	A	10 35 51.9	
	29nm,0.2s						
ADH	**Angra Heroismo**	1.94	86	*e*S	Sn	10 36 06.5	-7.2
ADH				A	A	10 36 08.6	
	24nm,0.2s						
PSCM	**Serra do Cume**	2.04	85	*e*S	Sn	10 36 08.6	-7.5
PSCM				A	A	10 36 11.1	
	23nm,0.1s						

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*ISK **14** 10:44:03.1, 35°.91N×32°.79E, h24^{km}, ML2.5/7*

*DDA **14** 10:44:04.8, 36°.38N×32°.78E, h7^{km}±2^{km}, ML1.8*

ISC 14 10:44:03.2±2.3, **36°.0N**±0°.2×**32°.70E**±0°.06, **h29^{km}**±9^{km}, **n14, σ0^{s}.26**/20, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZY	**Bozyazi-Mersin**	0.26	59	PG	Pb	10 44 09.7	-0.2
BOZY				SG	Sb	10 44 14.7	+0.1
TEKE	**Tekeli-Mersin**	0.38	63	PG	Pb	10 44 11.5	-0.1
TEKE				SG	Sb	10 44 17.6	+0.3
BERE	**Bereket-Mersin**	0.56	48	PG	Pb	10 44 14.8	+0.1
BERE				SG	Sn	10 44 23.3	-0.6
YORU	**Yoruktepe-Mers**	0.60	72	PG	Pb	10 44 14.9	-0.3
OREN	**Orenkoy-Mersin**	0.66	69	PG	Pb	10 44 15.9	-0.2
ERMK	**Ermenek**	0.69	14	*i* P	Pn	10 44 17.1	-0.2
GULN	**MERSIN_Gulnar**	0.71	73	*i* P	Pb	10 44 17.3	+0.2
GULN				*i* S	Sn	10 44 27.4	0.0
GULN				IAML_P			
	comp=Z,473nm,0.2s						
TEVE	**Tevekalti-Mers**	0.76	52	PG	Pn	10 44 18.3	+0.3
TISA	**Tisan-Mersin**	0.81	76	PG	Pb	10 44 18.3	-0.5
IKL	**Isikli**	0.84	71	PG	Pb	10 44 19.2	0.0
IKL				SG	Sn	10 44 30.7	+0.2
KEBE	**Keben-Mersin**	0.95	60	PG	Pn	10 44 20.7	+0.1
KIZK	**Mersin**	1.27	66	*i* P	Pb	10 44 26.5	0.0
KIZK				IAML_P			
	comp=Z,196nm,0.3s						
KEPZ	**Antalya-Kepez**	1.28	317	*i* P	Pb	10 44 26.7	0.0
KEPZ				*i* S	Sn	10 44 41.3	-0.1
KEPZ				IAML_P			
	comp=Z,16nm,0.1s						
KERG	**Konya-Eregli**	1.84	38	*i* P	Pb	10 44 36.1	-0.1

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*SOME **14** 10:50:55.6, 48°.60N×85°.48E, h0^{km}*

NNC 14 10:51:05.2±3.8, **48°.08N×85°.56E, h0^{km}, mb2.9, mpv2.6, 2C-3D, Error ellipse: s-maj=28.4km s-min=23.2km az=88.0, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	**Zaisan**	0.79	217	*e*P	Pb	10 51 21.6	-0.2
	1.8nm,0.2s						
ZSN				*e*S	Sn	10 51 43.3	+7.2
	6.0nm,0.4s						
MK31	**Makanchi Array**	2.57	241	⇓Pn	Pn	10 51 48.1	0.0
	baz=57,slow=13						
MK31				⇑Pg	Pb	10 51 50.8	-1.3
	0.4nm,0.3s						
MK31				⇑Lg	Lg	10 52 25.6	
	0.8nm,0.3s,baz=60,slow=36						
MAKZ	**Makanchi**	2.75	244	⇓Pn	Pn	10 51 51.2	+0.7
	0.5nm,0.3s						
MAKZ				⇓Lg	Lg	10 52 30.0	
	1.0nm,0.3s						
SEM	**Semipalatinsk**	4.19	306	*e*P	Pn	10 52 07.8	-2.8
	2.5nm,0.1s						
SEM				*e*S	Sn	10 53 01.8	+1.5
	25nm,0.1s						

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*IDC **14** 10:56:10.8±2.8, 27°.07N×144°.51E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.6/29, mbtmp3.7/6, ML3.4/2, Error ellipse: s-maj=109.3km s-min=20.9km az=76.0*

*ISCJB **14** 10:56:15.0±1.0, 27°.20N±0°.05×143°.82E±0°.09, h33^{km}, mb3.6/4, Error ellipse: s-maj=11.7km s-min=6.5km az=19.3*

*JMA **14** 10:56:16.9±0.2, 27°.17N×143°.71E, h49^{km}, M4.0*

ISC 14 10:56:18.0±1.4, **27°.11N**±0°.07×**143°.8E**±0°.1, **h35^{km}, n13, σ1^{s}.52**/17, **mb3.4**/4, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	1.40	270	P	Pn	10 56 40.2	-0.8
CBIJ				S	Sn	10 56 57.2	-1.1
JHH2	**Haha-jima-NKT2**	1.49	252	P	Pn	10 56 41.4	-0.8
JHH2				S	Sn	10 56 59.9	-0.6
BSO1	**Boso 1**	7.89	343	P	Pn	10 58 10.0	+0.3
BSO1				S	Sn	10 59 35.0	-2.5
BSO3	**Boso 3**	8.16	341	P	Pn	10 58 14.0	+0.4
BSO3				S	Sn	10 59 43.8	-0.7
BSO4	**Boso 4**	8.38	340	S	Sn	10 59 48.1	-2.1
JHU	**Hanno**	9.52	337	P	Pn	10 58 32.7	+0.2
JRY	**Ryogami san**	9.80	336	P	Pn	10 58 36.9	+0.5
MJAR	**Matsushiro Arr**	10.52	335	Pn	Pn	10 58 45.5	-0.7
	0.3nm,0.3s,baz=164,slow=12,SNR=30						
KSRS	**Korea Array**	16.88	312	P	P	11 00 14.0	+0.8
	0.1nm,0.3s,baz=122,slow=10,SNR=7.9						
KLR	**Kul'dur**	23.96	340	P	P	11 01 28.9	0.0
	0.4nm,0.4s,baz=174,slow=3.8,SNR=2.3						
WRA	**Warramunga Arr**	47.66	192	P	P	11 04 49.5	-1.5
	2.2nm,0.6s,baz=6.6,slow=8.2,SNR=21						
ASAR	**Alice Springs**	51.37	192	P	P	11 05 17.8	-1.5
	0.4nm,0.7s,baz=6.0,slow=5.3,SNR=7.1						
MKAR	**Makanchi Array**	51.55	310	P	P	11 05 23.9	+3.5
	0.3nm,0.7s,baz=76,slow=9.1,SNR=2.5						

SVSA 14 10:59:09.8±0.7, **38°.55N×29°.70W, h10^{km}, MD3.6, ML3.2, Error ellipse: s-maj=4.4km s-min=4.0km az=135.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	0.79	84	*e*P	Pg	10 59 22.0	-3.0
PCED				*e*S	Sg	10 59 31.4	-3.8
PCED				A	A	10 59 34.0	
	454nm,0.6s						
HOR	**Horta**	0.84	91	*e*P	Pg	10 59 22.9	-3.1
HOR				*e*S	Sg	10 59 32.6	-4.3
HOR				A	A	10 59 36.5	
	890nm,0.3s						
PCAN	**Candelaria**	0.96	94	*e*P	Pg	10 59 24.4	-3.8
PCAN				*e*S	Sg	10 59 35.9	-4.7
PCAN				A	A	10 59 45.9	
	323nm,0.5s						
PPNO	**Prainha do Nor**	1.13	93	*e*P	Pb	10 59 27.1	-4.3
PPNO				*e*S	Sg	10 59 40.2	-6.0
PPNO				A	A	10 59 45.1	
	401nm,0.3s						
ROSA	**Rosais**	1.16	81	*e*P	Pb	10 59 27.4	-4.5
ROSA				*e*S	Sb	10 59 40.4	-6.5
ROSA				A	A	10 59 43.2	
	246nm,0.6s						
PMAN	**Manadas**	1.27	86	*e*P	Pn	10 59 29.1	-4.4
PMAN				*e*S	Sb	10 59 43.3	-6.8
PMAN				A	A	10 59 56.3	
	159nm,0.3s						
PGRA	**Graciosa**	1.43	70	*e*S	Sn	10 59 46.7	-7.9
PGRA				A	A	10 59 49.9	
	32nm,0.3s						
ADH	**Angra Heroismo**	1.93	86	*e*P	Pn	10 59 38.5	-4.2
ADH				*e*S	Sn	10 59 59.8	-7.3
ADH				A	A	11 00 01.7	
	116nm,0.3s						
PSCM	**Serra do Cume**	2.03	85	*e*P	Pn	10 59 39.7	-4.3
PSCM				*e*S	Sn	11 00 01.8	-7.7
PSCM				A	A	11 00 05.4	
	86nm,0.5s						
BART	**Pico Bartolome**	3.65	101	*e*P	Pn	11 00 02.3	-4.1
BART				*e*S	Sn	11 00 41.1	-8.5
BART				A	A	11 00 45.9	
	29nm,0.7s						
PSMA	**Santa Maria**	3.94	112	*e*P	Pn	11 00 05.9	-4.4
PSMA				*e*S	Sn	11 00 48.2	-8.3
PSMA				A	A	11 00 50.5	
	4.4nm,0.1s						
PSMN	**Pico do Norte,**	3.98	111	*e*P	Pn	11 00 06.5	-4.4
PSMN				*e*S	Sn	11 00 49.1	-8.5
PSMN				A	A	11 00 54.4	
	7.7nm,0.5s						

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*ISCJB **14** 11:18:59.4±0.3, 52°.38N±0°.05×179°.32E±0°.03, h196^{km}±2^{km}, mb4.1/87, Error ellipse: s-maj=7.7km s-min=3.0km az=178.1*

*AEIC **14** 11:19:00.1, 53°.06N×179°.40E, h131^{km}, ML3.9, MB4.4(NEIC)*

*NEIC **14** 11:19:00.1±0.0, 53°.06N×179°.40E, h131^{km}, mb4.4/144, ML3.9(AEIC), After AEIC.*

*IDC **14** 11:19:03.5±1.5, 52°.50N×179°.23E, h217^{km}±13^{km}, mb3.7/36, mb1 3.9/37, mb1mx3.7/69, mbtmp4.3/37, Error ellipse: s-maj=12.9km s-min=5.9km az=167.0*

ISC 14 11:19:00.4±0.6, **52°.36N**±0°.08×**179°.27E**±0°.03, **h190^{km}**±4^{km}, **n393, σ0^{s}.93**/413, **mb4.2**/87, **2C, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAEA	**Gareloi East**	1.35	115	*e*Pn	Pn	11 19 31.6	-0.4
TANO	**Tanaga North**	1.67	104	*e*Pn	Pn	11 19 34.7	-0.2
TASE	**Tanaga Southea**	1.74	107	*e*Pn	Pn	11 19 35.1	-0.5
TAFP	**Tanaga Falls P**	1.76	104	*e*Pn	Pn	11 19 35.1	-0.6
TAFP				*e*Sn	Sn	11 20 02.3	-0.8
KICM	**Kanaga Island**	2.22	100	*e*Pn	Pn	11 19 40.2	-0.3
KIMD	**Kanaga Island**	2.24	104	*e*Pn	Pn	11 19 39.8	-1.0
KIKV	**Kanaga Island**	2.25	101	*e*Pn	Pn	11 19 40.5	-0.4
KIKV				*e*Sn	Sn	11 20 11.7	-0.6
KIWB	**Kanaga Island**	2.27	102	*e*Pn	Pn	11 19 40.4	-0.7
KIWB				*e*Sn	Sn	11 20 11.6	-1.1
ADK	**Adak**	2.54	99	*e*Pn	Pn	11 19 43.0	-1.1
ADK				*e*Sn	Sn	11 20 16.5	-1.6
ADAG	**Mount Adagdak**	2.57	97	*e*Pn	Pn	11 19 43.7	-0.8
ADAG				*e*Sn	Sn	11 20 17.8	-1.1
ETKA	**Kagalaska Isla**	2.71	99	*e*Pn	Pn	11 19 45.5	-0.6
GSTD	**Great Sitkin T**	2.84	94	*e*Pn	Pn	11 19 46.7	-0.9
GSTD				*e*Sn	Sn	11 20 23.4	-1.2
GSTR	**Great Sitkin T**	2.89	93	*e*Pn	Pn	11 19 47.5	-0.7
GSTR				*e*Sn	Sn	11 20 24.0	-1.4
GSMY	**Great Sitkin M**	2.89	94	*e*Pn	Pn	11 19 47.5	-0.8
SMY	**Shemya**	3.18	279	*e*Pn	Pn	11 19 49.8	-1.8
SMY				*e*Sn	Sn	11 20 30.1	-1.6
KOKL	**Mount Kliuchef**	4.01	88	*e*Pn	Pn	11 20 01.4	-0.5
KOFP	**Korovin Flat P**	4.07	89	*e*Pn	Pn	11 20 02.5	-0.2
KOFP				*e*Sn	Sn	11 20 50.1	-1.5
NIKH	**Nikolski High**	7.25	80	*e*Pn	Pn	11 20 44.3	+0.5
SPIA	**Saint Paul Isl**	7.74	47	*e*Pn	Pn	11 20 52.0	+1.9
OKTU	**Okmok Mt. Tuli**	7.75	77	*e*Pn	Pn	11 20 51.4	+1.1
MSW	**Makushin Switc**	8.53	74	*e*Pn	Pn	11 21 01.6	+1.1
MREP	**Makushin Rep't**	8.54	75	*e*Pn	Pn	11 21 01.9	+1.1
UNV	**Unalaska Valle**	8.69	75	*e*Pn	Pn	11 21 04.0	+1.4
AKUT	**Akutan**	9.14	73	*e*Pn	Pn	11 21 10.5	+2.0
SDPT	**Sand Point**	12.32	68	*e*Pn	Pn	11 21 48.0	-1.4
PET	**Petropavlovsk**	12.52	281	*e*Pn	Pn	11 21 52.4	+0.4
PEA0B	**Petropavlovsk-**	13.09	282	*e*Pn	Pn	11 21 59.4	+0.3
PEA0B				*e*Sn	Sn	11 24 21.1	-3.6
PETK	**Petropavlovsk-**	13.09	282	P	Pn	11 21 59.3	+0.1
	1.4nm,0.3s,baz=90,slow=16,SNR=20						
PETK				S	Sn	11 24 18.7	-6.1
	1.0nm,0.3s,baz=110,slow=16,SNR=8.2						
CHGN	**Chignik**	13.59	64	*e*P	Pn	11 22 06.3	+1.0
CHIA	**Chirikof Islan**	15.13	67	*e*Pn	Pn	11 22 22.9	-1.4
SII	**Sitkinak Islan**	15.95	64	*e*Pn	P	11 22 32.6	-1.6
	53nm,1.0s						
SVW2	**Sparrevohn**	16.24	48	*e*Pn	Pn	11 22 38.5	+0.7
	17nm,0.8s						
OHAK	**Old Harbor**	16.49	62	*e*Pn	P	11 22 39.1	-1.0
	34nm,0.4s						
TTA	**Tatalina**	16.82	41	*e*Pn	Pn	11 22 45.3	+0.6
	58nm,1.1s						
KDAK	**Kodiak Island**	16.93	60	*e*Pn	P	11 22 43.0	-1.9
	59nm,0.9s						
RSO	**Redoubt South**	17.36	51	*e*P	Pn	11 22 51.1	-0.2
HOM	**Homer**	17.71	54	*e*P	Pn	11 22 55.2	-0.1
	238nm,1.0s						
SPU	**Mount Spurr**	17.89	49	*e*P	Pn	11 22 57.2	-0.2
CNPM	**China Poot**	17.89	55	*e*P	Pn	11 22 56.6	-0.8
	74nm,0.6s						
RDOG	**Red Dog Mine**	17.93	22	*e*P	Pn	11 22 57.4	-0.4
	14nm,0.6s						
BRLK	**Bradley Lake**	18.11	54	*e*P	P	11 22 57.9	0.0
	78nm,0.8s						
PMR	**Palmer**	19.35	49	*e*P	Pn	11 23 13.1	-1.4
	7.8nm,0.7s						
MLY	**Manley**	19.84	39	*e*P	P	11 23 18.0	+1.6
	12nm,0.8s						
WRH	**Wood River Hil**	20.67	41	*e*P	P	11 23 24.8	-0.4
	8.7nm,0.8s						
TCOL	**CIGO, UAF Yank**	20.90	41	P	P	11 23 28.5	+0.8
	baz=250,SNR=8.6						
COLA	**College**	20.91	41	*e*P	P	11 23 27.9	+0.2
	23nm,1.0s						
COLD	**Coldfoot**	21.06	33	*e*P	P	11 23 29.8	+0.5
	4.6nm,1.2s						
POKR	**Poker Plat Res**	21.16	40	P	P	11 23 31.2	+0.8
	baz=250,SNR=8.8						
ILAR	**Eielson Array**	21.26	41	P	P	11 23 29.9	-1.6
	4.7nm,0.6s,baz=248,slow=8.9,SNR=46						
ILAR				ScP	ScP	11 30 42.5	-3.8
	0.6nm,0.8s,baz=284,slow=3.8,SNR=5.6						
TOLK	**Toolik Lake Re**	21.99	30	P	P	11 23 39.6	+0.7

	baz=239,SNR=18						
FYU	Fort Yukon	22.54	37	*e*P	P	11 23 44.5	+0.5
	22nm,0.9s						
ASAJ	Asahikawa	25.55	266	P	P	11 24 12.3	+0.9
	3.0nm,0.7s,baz=90,slow=8.7,SNR=5.4						
EPYK	Eagle Plains	25.76	40	*e*P	P	11 24 12.8	-0.4
	14nm,0.8s						
EPYK	Eagle Plains	25.76	40	P	P	11 24 13.2	0.0
	baz=260,SNR=20						
INK	Inuvik	27.36	36	P	P	11 24 27.1	-0.2
	2.7nm,0.8s,baz=230,slow=9.1,SNR=12						
INK	Inuvik	27.36	36	*e*P	P	11 24 27.8	+0.4
	3.9nm,0.8s						
DLBC	Dease Lake	28.83	58	P	P	11 24 42.5	+1.9
	3.7nm,0.5s,baz=280,slow=8.9,SNR=12						
TIXI	Tiksi	29.19	330	ScP	ScP	11 31 04.9	-3.9
	1.0nm,0.3s,baz=101,slow=3.2,SNR=4.6						
KLR	Kul'dur	29.77	283	P	P	11 24 48.9	-0.1
	4.0nm,0.6s,baz=62,slow=7.7,SNR=19						
BBB	Bella Bella	31.61	69	P	P	11 25 03.9	-1.1
	4.5nm,0.9s,baz=51,slow=9.3,SNR=3.1						
USRK	Ussuriysk Ar.	32.00	274	P	P	11 25 07.9	-0.6
	1.2nm,0.6s,baz=91,slow=10,SNR=3.8						
MAT	Matsushiro	32.79	258	P	P	11 25 16.3	+0.8
MJAR	Matsushiro Arr	32.79	258	P	P	11 25 16.3	+0.8
	2.1nm,0.6s,baz=36,slow=6.2,SNR=12						
YKW3	Yellowknife Ar	35.41	47	*e*P	P	11 25 38.2	+0.6
	7.9nm,0.8s						
YKA	Yellowknife Ar	35.43	47	P	P	11 25 38.8	+0.9
	3.8nm,0.6s,baz=282,slow=8.2,SNR=15						
NLWA	Neilton Lookou	36.16	75	*e*P	P	11 25 45.3	+1.0
	12nm,1.1s						
D03D	Eldon	36.55	74	P	P	11 25 47.7	+0.1
	baz=301						
B05A	Bryant	36.78	72	P	P	11 25 49.5	0.0
	baz=300						
E04D	Cinebar	37.35	75	P	P	11 25 55.0	+0.7
	baz=302						
LON	Longmire	37.70	74	*e*P	P	11 25 58.1	+0.7
	7.1nm,1.5s						
COR	Corvallis	37.95	78	*e*P	P	11 26 00.8	+1.5
	68nm,1.4s						
LTY	Liberty	38.11	73	*e*P	P	11 26 00.9	+0.1
	7.7nm,1.4s						
KSRS	Korea Array	38.45	268	P	P	11 26 04.7	+1.1
	3.9nm,0.8s,baz=55,slow=8.4,SNR=16						
H04A	Detroit Lake	38.57	77	*e*P	P	11 26 06.1	+1.5
	10nm,1.0s						
HAWA	Hanford	39.23	74	*e*P	P	11 26 10.4	+0.4
	4.9nm,0.9s						
I05D	Terrebonne, OR	39.27	77	P	P	11 26 10.8	+0.4
	baz=305						
RES	Resolute Bay	39.35	25	P	P	11 26 11.9	+1.4
	4.4nm,1.1s,baz=241,slow=2.7,SNR=5.9						
J04D	Umpqua Nationa	39.42	79	P	P	11 26 11.5	-0.4
	baz=306						
JNU	Nakatsue	39.53	260	P	P	11 26 13.7	+1.0
	7.9nm,0.8s,baz=22,slow=2.9,SNR=6.7						
NEW	Newport	39.66	70	P	P	11 26 13.6	0.0
	4.9nm,0.6s,baz=293,slow=7.6,SNR=18						
NEW	Newport	39.66	70	P	P	11 26 13.0	-0.6
	baz=302,SNR=8.8						
J05D	Fort Rock, OR	39.92	79	P	P	11 26 16.9	+1.0
	baz=306						
YBH	Yreka Blue Hor	39.92	82	P	P	11 26 17.4	+1.5
	3.5nm,0.8s,baz=338,slow=7.1,SNR=12						
YBH	Yreka Blue Hor	39.92	82	*e*P	P	11 26 17.5	+1.6
	13nm,1.4s						
M02C	Callahan	40.03	82	P	P	11 26 17.9	+1.1
	baz=307						
M04C	Macdoel	40.42	81	P	P	11 26 20.8	+0.8
	baz=307						
O03E	Paynes Creek	41.33	83	P	P	11 26 27.3	-0.1
	baz=308,SNR=5.4						
HOPS	Hopland Field	41.35	85	*e*P	P	11 26 29.1	+1.6
	27nm,1.3s						
BMO	Blue Mountains	41.38	74	*e*P	P	11 26 27.9	+0.1
	2.5nm,0.7s						
J08A	Circle Bar Ran	41.53	77	*e*P	P	11 26 29.8	+0.7
	3.5nm,1.1s						
WVOR	Wild Horse Val	41.97	78	*e*P	P	11 26 33.3	+0.6
	3.8nm,0.9s						
MSO	Missoula	42.25	70	P	P	11 26 34.2	-0.6
	baz=304						
PNTR	Pine Nut	43.41	83	*e*P	P	11 26 45.1	+0.8
	9.5nm,0.9s						
CMB	Columbia Colle	43.59	84	*e*P	P	11 26 46.8	+1.1
	1.9nm,0.8s						
HLID	Hailey	43.82	74	*e*P	P	11 26 47.8	+0.2
	3.3nm,1.0s						
HLID	Hailey	43.82	74	P	P	11 26 47.0	-0.5
	baz=307,SNR=7.5						
WAKR	Walker	43.88	83	*e*P	P	11 26 49.2	+1.2
	11nm,1.3s						
MCMT	McKenzie Canyo	44.01	72	*e*P	P	11 26 49.0	-0.1
BOZ	Bozeman (W)	44.27	70	P	P	11 26 50.2	-0.8
	baz=306,SNR=11						
TLY	Talaya	44.53	301	P	P	11 26 53.6	+0.7
	1.4nm,0.6s,baz=42,slow=6.0,SNR=7.4						
TLY	Talaya	44.53	301	*e*P	P	11 26 53.8	+1.0
	3.2nm,0.7s						
NVAR	Mina Array Bea	44.61	82	P	P	11 26 54.7	+0.7
	0.7nm,0.5s,baz=194,slow=29,SNR=3.9						
NVAR				ScP	ScP	11 32 04.8	-2.3
	0.2nm,0.6s,baz=314,slow=3.4,SNR=3.4						
ULN	Ulaanbaatar	44.76	294	*e*P	P	11 26 55.2	+0.4
	6.0nm,0.7s						
YHB	Horse Butte	45.01	71	*e*P	P	11 26 56.4	-0.6
	6.6nm,0.8s						
ELK	Elko	45.02	78	P	P	11 26 57.7	+0.6
	3.0nm,0.7s,baz=312,slow=8.7,SNR=21						
SONM	Songino Array	45.14	295	P	P	11 26 58.5	+0.6
	5.3nm,0.6s,baz=55,slow=9.3,SNR=25						
SONM				ScP	ScP	11 32 05.3	-3.6
	0.7nm,0.7s,baz=29,slow=3.3,SNR=3.0						
YHH	Holmes Hill	45.19	70	*e*P	P	11 26 58.2	-0.3
	4.1nm,0.8s						
VOG	Valley Oaks Go	45.31	85	P	P	11 26 59.4	+0.2
	baz=312						
H17A	Grant Village	45.58	71	*e*P	P	11 27 02.1	+0.6
	5.3nm,1.1s						
H17A	Grant Village	45.58	71	P	P	11 27 02.1	+0.6
	baz=307						
IMW	Indian Meadow	45.66	72	*e*P	P	11 27 02.2	0.0
	3.0nm,1.0s						
VES	Vestal, Richgr	45.80	86	P	P	11 27 02.8	-0.3
	baz=312,SNR=6.5						
HVU	Hansel Valley	45.86	75	*e*P	P	11 27 03.5	0.0
	4.3nm,0.8s						
RLMT	Red Lodge	45.90	69	P	P	11 27 03.9	-0.1
	baz=307						
PKM	Mcpherson Peak	45.99	87	P	P	11 27 05.3	+0.6
	baz=313						
CWC	Cottonwood Cre	46.03	84	P	P	11 27 05.2	+0.3
	baz=312						
GRAC	Grapevine Rang	46.10	83	P	P	11 27 05.8	+0.4
	baz=312						
HHC	Hu-ho-hao-te	46.28	284	P	P	11 27 06.8	0.0
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,6.0s						
ISA	Isabella, Lake	46.30	86	P	P	11 27 06.8	-0.1
	baz=312						
R11A	Troy Canyon, C	46.31	81	P	P	11 27 07.2	0.0
	baz=311,SNR=11						
MPMC	Manual Prospec	46.64	84	P	P	11 27 10.0	+0.3
	baz=312,SNR=5.7						
SCZ2	Santa Cruz Isl	46.70	88	P	P	11 27 10.9	+0.8
	baz=314						
LAO	LASA Array	46.71	66	P	P	11 27 10.0	0.0
	baz=307						
FURC	Furnace Creek,	46.75	83	P	P	11 27 10.2	-0.1
	baz=312,SNR=7.9						
DGMT	Dagmar	46.80	63	P	P	11 27 10.0	-0.6
	baz=306						
TPNV	Topopah Spring	46.81	83	P	P	11 27 11.1	+0.1
	baz=312,SNR=16						
DUG	Dugway, Tooele	46.81	77	*e*P	P	11 27 10.8	-0.2
	comp=Z,3.7nm,0.8s						
DUG	Dugway, Tooele	46.81	77	P	P	11 27 10.4	-0.6
	baz=310						
LRMC	Laurel Mtn Rad	46.90	85	P	P	11 27 11.5	-0.2
	baz=313,SNR=5.4						
EDW2	Edwards Air Fo	47.11	86	P	P	11 27 13.6	+0.4
	baz=313						
BW06	Boulder Array	47.15	72	*e*P	P	11 27 13.0	-0.7
	comp=Z,4.1nm,0.9s						
BW06	Boulder Array	47.15	72	P	P	11 27 12.8	-0.9
	baz=309,SNR=7.3						
PDAR	Pinedale Array	47.15	72	P	P	11 27 13.3	-0.3
	comp=Z,2.9nm,0.8s,baz=308,slow=3.7,SNR=23						
PDAR				ScP	ScP	11 32 13.8	-3.8
	comp=Z,0.1nm,0.3s,baz=358,slow=2.8,SNR=3.8						
SHOC	Shoshone, Teco	47.48	84	P	P	11 27 15.3	-0.8
	baz=312,SNR=8.0						
GSC	Goldstone, Bar	47.55	85	P	P	11 27 16.4	-0.3
	baz=313,SNR=11						
TUQ	Turquoise Moun	48.00	84	P	P	11 27 20.0	-0.2
	baz=313						
HEC	Hector,Ludlow	48.16	85	P	P	11 27 21.6	+0.2
	baz=313						
BBRC	Big Bear Solar	48.18	86	P	P	11 27 21.6	-0.1
	baz=314						
GMRC	Granite Mounta	48.60	84	P	P	11 27 24.7	-0.1
	baz=313,SNR=6.5						
PFO	Pinyon Flats O	48.90	86	P	P	11 27 26.6	-0.4
	baz=314						
BELC	Belle Mtn. Jos	48.92	85	P	P	11 27 26.4	-0.8
	baz=314,SNR=6.5						
K22A	Casper	48.98	70	P	P	11 27 27.3	-0.3
	baz=310						
109C	Camp Elliot, M	49.00	87	P	P	11 27 27.8	+0.1
	baz=314						
IRM	Iron Mountain	49.33	85	P	P	11 27 30.2	-0.1
	baz=314						
MONP2	Monument Peak	49.41	87	P	P	11 27 30.9	-0.1
	baz=314						
BC3	Big Chuckawall	49.48	85	P	P	11 27 31.1	-0.4
	baz=314						
O20A	White River Ci	49.56	74	P	P	11 27 31.6	-0.5
	baz=311						
IKP	In-Ko-Pah, Jac	49.77	87	P	P	11 27 33.6	0.0
	baz=314						
PDMCI	Parker Dam,Lak	49.85	84	P	P	11 27 34.0	0.0
	baz=314						
Y12C	Blythe	49.99	84	P	P	11 27 35.5	+0.4
	baz=314						
ULM	Lac du Bonnet	50.14	56	P	P	11 27 35.6	-0.4
	comp=Z,3.6nm,0.5s,baz=316,slow=7.4,SNR=4.5						
GLA	Glamis	50.28	85	P	P	11 27 37.6	+0.2
	baz=314						
N23A	Red Feather La	50.42	72	P	P	11 27 38.3	-0.3
	baz=311						
WUAZ	Wupatki	50.71	81	P	P	11 27 41.3	+0.5
	baz=313						
MVCO	Mesa Verde	51.31	77	P	P	11 27 45.4	+0.1
	baz=312						
ISCO	Idaho Springs	51.32	73	P	P	11 27 45.6	+0.2
	baz=312						
WHN	Wuhan	51.41	272	P	P	11 27 47.4	+1.6
S22A	4UR Ranch, Cre	51.95	75	P	P	11 27 50.7	+0.6
	baz=312						
214A	Organ Pipe Nat	52.27	85	P	P	11 27 52.5	+0.3
	baz=315						
XAN	Xi'an	52.31	279	P	P	11 27 52.3	-0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,50nm,3.8s						
SDCO	Great Sand Dun	52.74	74	P	P	11 27 55.6	-0.2
	baz=313,SNR=5.9						
TUC	Tucson	53.26	83	P	P	11 27 59.7	+0.3
	baz=315						
KSCO	Kaye Shedlock'	53.58	71	P	P	11 28 02.0	+0.2
	baz=313						
T25A	Trinidad	53.79	74	P	P	11 28 03.3	-0.1
	baz=313						
EYMN	Ely	53.83	56	P	P	11 28 03.0	-0.3
	baz=311						
ECSD	EROS Data Cent	53.86	63	P	P	11 28 03.0	-0.7
	baz=312						
LZH	Lanzhou	53.97	284	⇑P	P	11 28 05.3	+0.6
LZH				pP	pP	11 28 47.5	+1.4
LZH				sP	PcP	11 29 07.6	+0.2
LZH				PP	PP	11 30 10.4	+2.7
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,53nm,7.9s						
ANMO	Albuquerque	54.06	78	P	P	11 28 05.2	-0.2
	comp=Z,0.4nm,0.5s,baz=294,slow=9.0,SNR=5.4						
ANMO	Albuquerque	54.06	78	P	P	11 28 05.3	0.0
	baz=314						
GTA	Gaotai	54.10	290	⇑P	P	11 28 06.4	+0.9
GTA				pP	pP	11 28 49.0	+2.0
GTA				sP	PcP	11 29 11.3	+3.5
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
E38A	The Farm, Brul	54.67	58	P	P	11 28 08.8	-0.6
	baz=312						
121A	Cookes Peak, D	54.92	81	P	P	11 28 11.9	+0.3
	baz=315						
CBKS	Cedar Bluff	55.38	70	P	P	11 28 15.1	+0.5
	baz=314						
G39A	Holcombe	55.75	59	P	P	11 28 16.6	-0.5
	baz=313						
D41A	Chassel	55.90	56	P	P	11 28 18.4	+0.3
	baz=313						
G40A	Rib Lake	56.27	58	P	P	11 28 20.9	+0.1
	baz=313						
MNTX	Cornudas Mount	56.96	80	P	P	11 28 25.9	+0.1
	baz=316,SNR=8.2						
F42A	Maple Grove Fa	57.00	56	P	P	11 28 25.6	-0.4
	baz=314						
E43A	Lone Tree Farm	57.16	55	P	P	11 28 27.0	0.0
	baz=314						
KURBB	Kurchatov Arra	57.58	312	P	P	11 28 29.6	-0.3
	comp=Z,1.6nm,0.5s,baz=42,slow=6.6,SNR=22						
KURBB				PcP	pwP	11 29 17.5	+0.5
	comp=Z,1.4nm,0.6s,baz=40,slow=6.6,SNR=8.2						
WMQ	Urumqi	57.80	301	*e*P	P	11 28 33.8	+2.1
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				LR	LR		
	comp=N,720nm,28.5s						
WMQ				LR	LR		
	comp=E,650nm,29.3s						
WMQ				LR	LR		
	comp=Z,130nm,19.5s						
JFWS	Jewell Farm	57.85	60	P	P	11 28 31.0	-0.9
	baz=314						
I42A	Draeger Farm,	57.88	59	P	P	11 28 31.7	-0.4
	baz=314						
L40A	Anamosa	57.92	62	P	P	11 28 31.8	-0.6
	baz=314						
H43A	Windswept, Lux	58.08	57	P	P	11 28 32.8	-0.6
	baz=315						
D46A	Sault St. Mari	58.28	53	P	P	11 28 34.4	-0.4
	baz=315						
F45A	CMU Biological	58.38	55	P	P	11 28 35.2	-0.4
	baz=315						
MKAR	Makanchi Array	58.48	307	P	P	11 28 35.4	-0.9
	comp=Z,0.8nm,0.5s,baz=50,slow=6.9,SNR=8.7						
MKAR				PcP	pwP	11 29 22.8	-0.8
	comp=Z,0.4nm,0.6s,baz=56,slow=5.7,SNR=4.1						
E46A	Sault Ste Mari	58.51	54	P	P	11 28 36.4	0.0
	baz=315						
N40A	Mertquake, Sal	58.54	63	P	P	11 28 36.5	-0.2
	baz=315						
D47A	Chapleau	58.62	53	P	P	11 28 37.0	-0.2
	baz=315						
WMOK	Wichita Mounta	58.75	73	P	P	11 28 38.1	-0.2
	baz=316						
E47A	Iron Bridge	58.95	53	P	P	11 28 39.5	0.0
	baz=316						
G46A	Petoskey	58.97	55	P	P	11 28 39.5	-0.1
	baz=315						
D48A	Paudash Townsh	59.16	52	P	P	11 28 40.6	-0.3
	baz=316						
MATQ	Matagami	59.26	47	P	P	11 28 40.5	-1.0
	baz=317						
D49A	Beulah Townshi	59.31	51	P	P	11 28 41.1	-0.8
	baz=316						
H46A	Fife Lake	59.34	56	P	P	11 28 41.9	-0.3
	baz=316						
BVAR	Borovoye Array	59.36	318	P	P	11 28 41.6	-0.5
	comp=Z,0.7nm,0.4s,baz=54,slow=7.5,SNR=6.1						
BVAR				PcP	pwP	11 29 30.4	+0.9
	comp=Z,3.1nm,0.8s,baz=48,slow=6.8,SNR=9.0						
E48A	Lockeyer	59.48	52	P	P	11 28 42.9	-0.1
	baz=316						
I46A	Reed City	59.64	56	P	P	11 28 44.3	+0.1
	baz=316						
TXAR	Lajitas Array	59.68	80	P	P	11 28 44.8	0.0
	comp=Z,2.7nm,0.7s,baz=299,slow=4.7,SNR=48						
TXAR				PcP	PcP	11 29 29.9	+0.1
	comp=Z,0.3nm,0.6s,baz=298,slow=1.9,SNR=2.2						
F48A	Evansville	59.72	53	P	P	11 28 45.0	+0.3
	baz=316						
ABTX	Abilene, Hawle	59.74	75	P	P	11 28 45.3	+0.2
	baz=316						
HDIL	Hopedale	60.01	62	P	P	11 28 45.9	-0.9
	baz=316						
F49A	Sandfield	60.05	53	P	P	11 28 46.8	-0.1
	baz=316						
LSQQ	Lebel-sur-Quev	60.06	48	P	P	11 28 46.4	-0.6
	baz=317						
D51A	Lot 18 Range I	60.38	50	P	P	11 28 48.4	-0.8
	baz=317						
CHGQ	Chibougamau	60.60	45	P	P	11 28 49.7	-0.9
	baz=318						
TOBO	Tobermory, Bru	60.69	53	P	P	11 28 50.9	-0.3
	baz=317,SNR=6.0						
E51A	G1948 Merrick	60.73	51	P	P	11 28 50.9	-0.7
	baz=317						
K47A	Vermontville	60.77	57	P	P	11 28 51.4	-0.5
	baz=316						
D52A	ZEK Kipawa Sen	60.92	50	P	P	11 28 52.2	-0.7
	baz=317						
J48A	Bridge Port	60.95	56	P	P	11 28 56.3	+3.3
	baz=317						
F51A	Arnstein	60.97	52	P	P	11 28 52.1	-1.0
	baz=317						
U40A	Yellville	61.02	67	P	P	11 28 52.8	-0.8
	baz=316						
K48A	Perry	61.13	57	P	P	11 28 53.2	-1.1
	baz=317						
L47A	Sherwood	61.17	58	P	P	11 28 53.9	-0.6
	baz=317						
D53A	Lac Vacive, Po	61.18	49	P	P	11 28 53.6	-0.9
	baz=318						
KLBO	Killbear Provi	61.24	52	P	P	11 28 54.6	-0.4
	baz=317						
BMRO	Meriville Lake	61.30	53	P	P	11 28 55.4	0.0
	baz=317						
E52A	Mattawa	61.31	51	P	P	11 28 54.3	-1.1
	baz=318						
W39A	Magazine	61.32	69	P	P	11 28 55.0	-0.7
	baz=317						
F52A	Sundridge	61.35	51	P	P	11 28 55.5	-0.3
	baz=317						
BRCO	Bruce Peninsul	61.44	54	P	P	11 28 56.4	0.0
	baz=317						
WHTX	Lake Whitney,	61.48	74	P	P	11 28 56.8	0.0
	baz=317						
K49A	Clarkson	61.48	56	P	P	11 28 57.1	+0.4
	baz=317						
BASO	Ashfield	61.50	54	P	P	11 28 56.9	+0.1
	baz=317						
BUKO	Buck Lake	61.57	52	P	P	11 28 56.9	-0.3
	baz=318						
D54A	Lac Fusel, La	61.61	49	P	P	11 28 56.4	-1.0
	baz=318						
BWLO	Walkerton	61.68	54	P	P	11 28 57.9	-0.1
	baz=317						
P46A	Rosedale	61.80	61	P	P	11 28 57.7	-1.1
	baz=317						
Q45A	Warren Harvey,	61.81	62	P	P	11 28 58.3	-0.6
	baz=317						
E54A	Lac Daplat, Po	61.89	50	P	P	11 28 58.4	-0.9
	baz=318						
MIAR	Mount Ida	61.90	69	*e*P	P	11 28 59.1	-0.5
	comp=Z,8.0nm,1.1s						
MIAR	Mount Ida	61.90	69	P	P	11 28 59.6	0.0
	baz=317						
I51A	Listowel	61.97	54	P	P	11 29 00.7	+0.8
	baz=318						
M49A	Liberty Center	62.16	58	P	P	11 29 01.3	0.0
	baz=317						
G53A	Haliburton	62.17	52	P	P	11 29 01.1	-0.1
	baz=318						
SADO	Sadowa	62.18	52	P	P	11 29 00.2	-1.1
	comp=Z,3.2nm,0.8s,baz=298,slow=3.5,SNR=6.5						
SADO	Sadowa	62.18	52	*e*P	P	11 29 00.8	-0.5
	comp=Z,5.7nm,1.0s						
I52A	Shelburne	62.19	53	P	P	11 29 01.4	0.0
	baz=318						
W41B	Gary Mavity, V	62.21	68	*e*P	P	11 29 01.2	-0.3
	comp=Z,2.9nm,1.0s						
W41B	Gary Mavity, V	62.21	68	P	P	11 29 00.9	-0.7
	baz=317						
435B	Jarrell	62.27	75	P	P	11 29 02.4	+0.3
	baz=317						
P47A	Martinsville	62.40	61	P	P	11 29 02.1	-0.7
	baz=317						
KMI	Kunming	62.42	276	P	P	11 29 04.4	+1.0
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PEMO	Pembroke	62.42	50	P	P	11 29 01.6	-1.3
	baz=318						
O48A	Farmland	62.43	59	P	P	11 29 02.0	-1.0
	baz=317						
N49A	Columbus Grove	62.46	58	P	P	11 29 02.7	-0.5
	baz=317						
BANO	Bancroft	62.58	51	P	P	11 29 03.6	-0.4
	baz=318						
ACTO	Acton	62.59	54	P	P	11 29 04.0	0.0
	baz=318						
Q47A	Bedord North L	62.71	61	P	P	11 29 04.0	-0.8
	baz=317						
P48A	Milroy	62.86	60	*e*P	P	11 29 05.3	-0.6
	comp=Z,9.9nm,1.3s						
P48A	Milroy	62.86	60	P	P	11 29 05.3	-0.6
	baz=317						
PLVO	Plevna	62.97	51	P	P	11 29 05.8	-0.8
	baz=319						
G55A	Calabogie	62.98	50	P	P	11 29 05.8	-0.8
	baz=319						
TYNO	Tyneside	63.06	54	P	P	11 29 06.5	-0.6
	baz=318						
Q48A	North Vernon	63.09	61	P	P	11 29 06.7	-0.7
	baz=318						
DELO	Deloro Mine	63.10	51	*e*P	P	11 29 07.2	-0.2
	comp=Z,2.2nm,0.5s						
DELO	Deloro Mine	63.10	51	P	P	11 29 07.0	-0.4
	baz=319						
WLVO	Wesleyville	63.17	52	P	P	11 29 07.6	-0.2
	baz=318						
LATQ	La Tuque	63.19	46	P	P	11 29 07.1	-0.7
	baz=320						
H55A	Tweed	63.29	51	P	P	11 29 08.0	-0.6
	baz=319						
T46A	Princeton	63.29	63	P	P	11 29 08.2	-0.6
	baz=318						
I55A	Frankford	63.30	52	P	P	11 29 08.0	-0.6
	baz=319						
O50A	Cable	63.31	58	P	P	11 29 08.0	-0.9
	baz=318						
P50A	Jamestown	63.62	59	P	P	11 29 10.2	-0.6
	baz=318						
H56A	Elgin	63.69	51	P	P	11 29 10.4	-0.9
	baz=319						
L53A	Girard	63.71	55	P	P	11 29 11.0	-0.4
	baz=318						
T47A	Sharon Grove	63.76	63	P	P	11 29 11.2	-0.6
	baz=318						
PECO	Prince Edward	63.84	51	*e*P	P	11 29 12.5	+0.3
	comp=Z,4.9nm,1.0s						
PECO	Prince Edward	63.84	51	P	P	11 29 11.7	-0.5
	baz=319						
S48A	Wiedeman Farm,	63.84	62	P	P	11 29 11.9	-0.4
	baz=318						
O51A	Pataskala	63.84	58	P	P	11 29 11.6	-0.7
	baz=318						
J55A	Hilton	63.94	52	P	P	11 29 12.1	-0.7
	baz=319						
WVT	Waverly	63.99	64	P	P	11 29 12.8	-0.5
	baz=318						
K54A	Basiliko Farm,	64.00	53	P	P	11 29 13.1	-0.3
	baz=319						
U47A	Clarksville	64.06	64	P	P	11 29 13.5	-0.3
	baz=318						
S49A	Springfield	64.16	61	P	P	11 29 13.7	-0.7
	baz=318						
K55A	Perry	64.22	53	P	P	11 29 14.1	-0.7
	baz=319						
O52A	Adamsville	64.26	57	P	P	11 29 14.7	-0.4
	baz=318						
Q51A	Peebles	64.28	59	*e*P	P	11 29 15.0	-0.2
	comp=Z,5.8nm,0.6s						
Q51A	Peebles	64.28	59	P	P	11 29 14.8	-0.4
	baz=318						
OXF	Oxford	64.29	66	P	P	11 29 14.9	-0.4

	baz=318						
R50A	Paris	64.31	60	P	P	11 29 15.4	+0.1
	baz=318						
V47A	Nunnelly	64.38	64	P	P	11 29 15.2	-0.7
	baz=318						
U48A	Cassie Pea, Po	64.42	63	P	P	11 29 15.7	-0.4
	baz=318						
L55A	Hinsdale	64.44	54	P	P	11 29 16.2	0.0
	baz=319						
T49A	Edmonton	64.53	62	P	P	11 29 16.6	-0.2
	baz=318						
N54A	Moraine State	64.58	55	*e*P	P	11 29 16.6	-0.5
	comp=Z,5.8nm,1.0s						
R51A	Hillsboro	64.69	60	P	P	11 29 17.8	-0.1
	baz=318						
M55A	Ridgway	64.81	54	P	P	11 29 18.2	-0.4
	baz=319						
U49A	Red Boiling Sp	64.83	62	P	P	11 29 18.3	-0.4
	baz=318						
T50A	Nancy	64.97	61	P	P	11 29 18.9	-0.7
	baz=318						
MOQ	Mont Orford	65.00	48	*e*P	P	11 29 19.2	-0.6
M56A	Emporium	65.09	54	P	P	11 29 19.8	-0.6
	baz=319						
R52A	Catlettsburg	65.16	59	P	P	11 29 20.5	-0.3
	baz=319						
S51A	Beattyville	65.17	60	P	P	11 29 20.5	-0.5
	baz=319						
W48A	Pulaski	65.21	64	P	P	11 29 20.6	-0.7
	baz=318						
V49A	McMinnville	65.31	63	P	P	11 29 21.5	-0.4
	baz=318						
Q53A	Leroy	65.36	58	P	P	11 29 21.9	-0.2
	baz=319						
U50A	Jamestown	65.41	62	P	P	11 29 22.1	-0.5
	baz=319						
N56A	West Decatur	65.46	54	P	P	11 29 22.7	-0.1
	baz=320						
R53A	Hurricane	65.53	59	P	P	11 29 22.8	-0.5
	baz=319						
Q54A	Coxs Mills	65.62	57	P	P	11 29 22.7	-1.1
	baz=319						
BINY	Binghamton	65.63	52	*e*P	P	11 29 23.8	-0.1
	comp=Z,19nm,1.4s						
BINY	Binghamton	65.63	52	P	P	11 29 23.3	-0.5
	baz=320						
P55A	Reedsville	65.75	56	P	P	11 29 24.0	-0.6
	baz=319						
L58A	Harry Jones Me	65.81	52	P	P	11 29 24.2	-0.8
	baz=320						
V50A	Pikevile	65.82	63	P	P	11 29 24.5	-0.7
	baz=319						
SSPA	Standing Stone	65.88	54	P	P	11 29 24.6	-0.9
	baz=320						
N57A	Milroy	65.95	54	P	P	11 29 25.4	-0.5
	baz=320						
LBNH	Lisbon	65.98	48	*e*P	P	11 29 25.4	-0.6
	comp=Z,7.6nm,1.3s						
LBNH	Lisbon	65.98	48	P	P	11 29 25.1	-0.9
	baz=321						
LSA	Lhasa	65.99	288	*e*P	P	11 29 28.9	+2.1
	comp=Z,13nm,0.6s						
Q55A	Buckhannon	66.00	57	P	P	11 29 25.4	-0.9
	baz=319						
X49A	Woodville	66.01	64	P	P	11 29 25.3	-1.0
	baz=319						
M58A	Price's Panora	66.03	53	P	P	11 29 25.9	-0.5
	baz=320						
W50A	Signal Mountai	66.06	63	P	P	11 29 26.2	-0.5
	baz=319						
V51A	Loudon	66.13	62	P	P	11 29 26.6	-0.6
	baz=319						
R54A	Victor	66.14	58	P	P	11 29 26.2	-1.0
	baz=319						
N58A	Sunbury	66.31	54	P	P	11 29 27.9	-0.2
	baz=320						
O57A	Amberson	66.33	55	P	P	11 29 28.1	-0.2
	baz=320						
NC204	NORSAR Array S	66.34	354	*e*P	P	11 29 28.5	+0.4
	comp=Z,14nm,1.2s						
W51A	Cleveland	66.39	63	P	P	11 29 28.1	-0.7
	baz=319						
M59A	Waymart	66.40	52	P	P	11 29 28.0	-0.8
	baz=320						
X50B	Fort Payne	66.42	64	P	P	11 29 28.3	-0.7
	baz=319						
SIJI	Sorong	66.52	234	P	P	11 29 30.1	+0.3
	comp=Z,15nm,0.7s,baz=7.1,slow=9.1,SNR=9.1						
NB201	NORSAR Array S	66.53	354	*e*P	P	11 29 29.5	+0.2
	comp=Z,52nm,1.4s						
NB2	NORSAR Subarra	66.55	354	P	P	11 29 29.1	-0.3
	comp=Z,1.2nm,0.6s,baz=6.7,slow=6.2						
NOA	NORSAR Array B	66.55	354	P	P	11 29 29.3	-0.1
	comp=Z,2.0nm,0.7s,baz=7.2,slow=6.1,SNR=7.3						
T54A	Tazewell	66.67	59	P	P	11 29 30.2	-0.4
	baz=320						
S55A	Lewisburg	66.70	58	P	P	11 29 30.4	-0.4
	baz=320						
N59A	State Game Lan	66.71	53	P	P	11 29 30.5	-0.3
	baz=320						
Z49A	Columbiana	66.87	65	P	P	11 29 31.0	-0.9
	baz=319						
U54A	Nelsons Funny	66.95	60	P	P	11 29 32.1	-0.3
	baz=320						
KSH	Kashi	66.95	305	*e*P	P	11 29 36.1	+3.7
O59A	Robesonia	66.97	54	P	P	11 29 32.0	-0.4
	baz=320						
N60A	Cedar Hill Far	67.07	52	P	P	11 29 32.6	-0.3
	baz=321						
MVL	Millersville	67.12	54	*e*P	P	11 29 33.6	+0.3
	comp=Z,4.6nm,1.0s						
Z50A	Ashland	67.17	65	P	P	11 29 32.6	-1.2
	baz=319						
W53A	Cullowhee	67.25	62	P	P	11 29 33.8	-0.6
	baz=320						
S56A	Natural Bridge	67.26	58	P	P	11 29 34.0	-0.2
	baz=320						
Q58A	Fox Den Farm,	67.27	55	P	P	11 29 34.0	-0.2
	baz=320						
R57A	Stanardsville	67.33	56	P	P	11 29 34.4	-0.2
	baz=320						
O60A	Telford	67.35	53	P	P	11 29 34.0	-0.7
	baz=321						
U55A	TA2, Sparta	67.37	59	P	P	11 29 34.0	-1.0
	baz=320						
P59A	Jarrettsville	67.38	54	P	P	11 29 34.2	-0.7
	baz=321						
V54A	Nebo	67.44	60	P	P	11 29 34.3	-1.1
	baz=320						
HRV	Adam Dziewonsk	67.49	49	P	P	11 29 34.5	-1.1
	baz=322						
PAL	Palisades	67.55	52	P	P	11 29 35.0	-1.0
	baz=321						
150A	Eclectic	67.60	65	P	P	11 29 35.5	-0.9
	baz=319						
EMMW	East Machias	67.60	45	*e*P	P	11 29 36.0	-0.2
	comp=Z,6.0nm,0.6s						
LMN	Caledonia Moun	67.82	43	*e*P	P	11 29 37.2	-0.3
	comp=Z,13nm,1.5s						
R58B	Mineral	67.91	56	P	P	11 29 37.7	-0.6
	baz=320						
KONO	Kongsberg	68.03	354	*e*P	P	11 29 39.0	+0.4
	comp=Z,35nm,1.5s						
S58A	Poland Farm, P	68.09	57	P	P	11 29 39.0	-0.4
	baz=320						
X54A	Belton	68.14	62	P	P	11 29 39.4	-0.4
	baz=320						
KMSC	Kings Mountain	68.25	61	P	P	11 29 39.9	-0.5
	baz=320						
T58A	Grand View Acr	68.35	57	P	P	11 29 40.2	-0.8
	baz=321						
GOGA	Godfrey	68.41	63	P	P	11 29 40.9	-0.5
	baz=320						
Z53A	Monticello	68.45	63	P	P	11 29 40.8	-0.9
	baz=320						
Y54A	Tignall	68.49	62	P	P	11 29 41.2	-0.8
	baz=320						
X55A	Gracelyn & Ava	68.60	61	P	P	11 29 41.7	-0.9
	baz=320						
X56A	White Oak	68.90	61	P	P	11 29 43.8	-0.6
	baz=320						
CMAR	Chiang Mai Arr	69.73	274	P	P	11 29 49.8	0.0
	comp=Z,3.1nm,0.8s,baz=26,slow=7.0,SNR=9.5						
GUN	Gumba	70.38	290	*e*P	P	11 29 54.8	+0.7
	comp=Z,51nm,0.4s						
JIRN	Jiri	70.39	290	*e*P	P	11 29 55.0	+0.8
	comp=Z,54nm,0.6s						
KKN	Kakani	70.82	291	*e*P	P	11 29 57.1	+0.6
	comp=Z,15nm,0.5s						
PKI	Pulchoki	70.91	290	*e*P	P	11 29 57.5	+0.3
	comp=Z,15nm,0.5s						
PKIN	Phulchoki	70.91	290	*e*P	P	11 29 57.4	+0.2
	comp=Z,13nm,0.5s						
DMN	Daman	71.06	291	*e*P	P	11 29 58.6	+0.6
	comp=Z,16nm,0.9s						
KOLN	Koldanda	71.80	292	*e*P	P	11 30 02.5	+0.1
	comp=Z,11nm,0.7s						
PYUN	Piuthan	71.89	292	*e*P	P	11 30 03.2	+0.3
	comp=Z,17nm,0.9s						
557A	Orange Park	71.94	64	P	P	11 30 01.7	-1.2
	baz=321						
AKASG	Malin Array Be	74.23	341	P	P	11 30 14.6	-1.4
	comp=Z,0.6nm,0.3s,baz=22,slow=7.1,SNR=3.9						
KAPI	Kappang	76.03	242	P	P	11 30 27.9	+1.2
	comp=Z,13nm,0.8s,baz=15,slow=12,SNR=3.4						
KOLS	Kolonicke sedl	77.20	345	*e*P	P	11 30 35.1	+2.2
BUR08	Bucovina Ar. S	77.94	342	*e*P	P	11 30 37.3	+0.2
	comp=Z,2.2nm,0.9s						
VYHS	Vyhne	78.15	347	*e*P	P	11 30 39.3	+1.2
GERES	GERESS Array B	78.42	350	P	P	11 30 39.2	-0.6
	comp=Z,0.3nm,0.6s,baz=26,slow=4.7,SNR=3.2						
WRAB	Tennant Creek	81.90	222	*e*P	P	11 30 58.1	-0.4
	comp=Z,7.1nm,0.9s						
WB2	Warramunga Arr	81.91	222	*e*P	P	11 30 58.2	-0.3
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	81.92	222	P	P	11 30 58.1	-0.4
	comp=Z,3.8nm,0.8s,baz=39,slow=6.8,SNR=11						
BRTR	Keskin Array B	83.55	334	P	P	11 31 07.0	-0.1
	comp=Z,0.4nm,0.6s,baz=50,slow=2.3,SNR=3.3						
ASAR	Alice Springs	85.42	221	P	P	11 31 16.6	+0.2
	comp=Z,1.7nm,0.6s,baz=23,slow=5.1,SNR=19						
STKA	Stephens Creek	90.12	211	P	P	11 31 39.6	+1.2
	comp=Z,2.9nm,0.6s,baz=1.0,slow=6.2,SNR=7.7						
TORD	Torodi Ar. Bea	114.73	357	PKP	PKiKP	11 37 17.0	-1.3
	comp=Z,0.4nm,0.9s,baz=65,slow=2.7,SNR=3.0						
LBTB	Lobatse	146.19	314	*e*PKPdf	PKPbc	11 38 18.0	-0.2
MAW	Mawson	146.52	218	PKPbc	PKPbc	11 38 18.0	+0.3
	comp=Z,10nm,0.7s,baz=93,slow=3.7,SNR=34						
BOSA	Boshof	149.43	311	PKPbc	PKPbc	11 38 26.0	-0.8
	comp=Z,1.6nm,0.5s,baz=7.2,slow=1.7,SNR=4.8						
SNAA	Sanae	160.60	178	*e*pPKPdf	PKPab	11 39 18.3	-0.3

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*DJA **14** 11:23:08.6±0.4, 3°N±3°×12°7E±°, h10^{km}, M4.0/6, MLv4.0/6*
*ISCJB **14** 11:23:09.6±0.5, 2°.56N±0°.06×126°.95E±0°.10, h55^{km}, mb3.8/9, MS3.7/2, Error ellipse: s-maj=15.1km s-min=5.7km az=157.0*
*IDC **14** 11:23:11.5±5.3, 2°.39N×126°.72E, h65^{km}±49^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.4/41, mbtmp3.8/10, ML3.3/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/31, Error ellipse: s-maj=55.1km s-min=15.7km az=84.0*
ISC 14 11:23:11.0±0.7**, 2°.47N**±0°.08×**126°.8E**±0°.1**, h55**^{km}**, n15,** σ**1^{s}.55**/17**, mb3.9**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.73	314	P	Pn	11 23 38.6	-0.1
SGSI				S	Sn	11 24 02.4	+2.8
TNTI	Ternate	1.79	160	P	Pn	11 23 38.1	-1.4
TNTI				S	Sn	11 24 03.7	+2.6
LBMI	Labuha	3.17	167	P	Pn	11 23 58.8	+0.4
LBMI				S	Sn	11 24 37.8	+2.7
SIJI	Sorong	5.59	126	P	Pn	11 24 32.6	+1.0
	0.8nm,0.3s,baz=353,slow=10,SNR=4.0						
SIJI				LR	LR	11 26 53.0	
	comp=Z,176nm,20.2s,baz=294,slow=40						
LEM	Lembang	21.23	244	LR	LR	11 37 15.9	
	comp=Z,87nm,20.2s,baz=332,slow=40						
WRA	Warramunga Arr	23.48	162	P	P	11 28 14.0	-1.9
	1.3nm,0.3s,baz=341,slow=12,SNR=42						
ASAR	Alice Springs	26.89	165	P	P	11 28 45.8	-1.1
	0.9nm,0.8s,baz=349,slow=12,SNR=12						
ASAR				PcP	PcP	11 32 08.4	+0.2
	0.3nm,0.8s,baz=357,slow=2.0,SNR=4.1						
KSRS	Korea Array	34.83	2	P	P	11 29 57.5	+0.9
	0.5nm,0.4s,baz=174,slow=10,SNR=4.1						
MJAR	Matsushiro Arr	35.52	16	P	P	11 30 02.0	-0.6
	1.3nm,0.8s,baz=196,slow=9.3,SNR=4.3						
STKA	Stephens Creek	36.95	159	P	P	11 30 14.4	-0.5
	1.4nm,0.4s,baz=337,slow=11,SNR=4.4						
ASAJ	Asahikawa	43.78	16	P	P	11 31 12.1	+0.9
	1.7nm,0.7s,baz=135,slow=11,SNR=2.4						
MKAR	Makanchi Array	58.61	326	P	P	11 33 01.9	-0.4
	0.5nm,0.5s,baz=116,slow=7.9,SNR=6.3						
TIXI	Tiksi	69.09	1	P	P	11 34 10.5	-0.3
	0.9nm,0.3s,baz=177,slow=5.2,SNR=4.3						
RAR	Rarotonga	75.53	113	LR	LR	12 08 27.0	
	comp=Z,144nm,18.1s,baz=20,slow=36						
ILAR	Eielson Array	86.22	25	P	P	11 35 45.2	-1.1
	0.1nm,0.4s,baz=262,slow=4.5,SNR=3.0						

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*IDC **14** 11:26:08.3±1.0, 7°.06N×33°.92W, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.8/39, mbtmp3.9/8, ML4.7/1, MS3.4/16, Ms1 3.4/16, ms1mx3.2/39, Error ellipse: s-maj=36.1km s-min=21.4km az=154.0*
*ISCJB **14** 11:26:09.8±0.5, 7°.0N±0°.1×33°.72W±0°.08, h15^{km}, mb4.2/21, MS3.4/16, Error ellipse: s-maj=15.2km s-min=10.7km az=158.1*
*NEIC **14** 11:26:11.7±2.3, 7°.20N×33°.77W, h10^{km}, mb4.5/16, Error ellipse: s-maj=28.6km s-min=19.5km az=145.0*
ISC 14 11:26:11.5±0.6**, 7°.0N**±0°.1×**33°.8W**±0°.1**, h15**^{km}**, n50,** σ**1^{s}.17**/30**, mb4.3**/21**, MS3.5**/16**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACV	Santiago Islan	12.73	51	*e*Pn	Pn	11 29 05.7	-6.5
RCBR	Riachuelo	12.95	189	Pn	Pn	11 29 15.7	+0.5
	3.7nm,0.3s,baz=2.7,slow=1.7,SNR=7.3						
RCBR	Riachuelo	12.95	189	*e*Pn	Pn	11 29 15.4	+0.1
H10N3	ASCENSION HYDR	24.26	127	T	T	11 56 37.9	
	baz=307,slow=75,SNR=104						
H10N2	ASCENSION HYDR	24.26	127	T	T	11 56 38.2	
	baz=307,slow=75,SNR=115						
H10N1	ASCENSION HYDR	24.28	127	T	T	11 56 41.4	
	baz=307,slow=75,SNR=160						
H10S3	ASCENSION HYDR	24.81	130	T	T	11 57 20.2	
	baz=309,slow=75,SNR=123						
H10S1	ASCENSION HYDR	24.82	129	T	T	11 57 20.5	
	baz=309,slow=75,SNR=50						
H10S2	ASCENSION HYDR	24.83	130	T	T	11 57 21.5	
	baz=309,slow=75,SNR=88						
BDFB	Brasilia	26.57	212	LR	LR	11 41 33.5	
	comp=Z,145nm,18.2s,baz=80,slow=35						
H05S1	Guadeloupe/Mar	27.55	288	T	T	12 00 45.0	
	SNR=8.1						
H05N1	Guadeloupe/Mar	28.21	291	T	T	12 01 30.6	
	SNR=3.2						
DBIC	Dimbokro	28.73	89	LR	LR	11 40 49.5	
	comp=Z,60nm,21.0s,baz=224,slow=30						
TOA0	Torodi Ar. Sit	35.43	77	*e*P	P	11 33 06.8	-0.7
	5.8nm,0.9s						
TORD	Torodi Ar. Bea	35.43	77	P	P	11 33 06.6	-0.9
	4.1nm,0.8s,baz=281,slow=8.3,SNR=14						
TORD				LR	LR	11 45 42.2	
	comp=Z,87nm,21.8s,baz=315,slow=33						
COI	Coimbra	40.09	31	*e*P	P	11 33 48.0	+1.4
	9.3nm,0.6s						
CPUP	Villa Florida	40.27	214	LR	LR	11 49 57.7	
	comp=Z,84nm,19.1s,slow=36						
LPAZ	La Paz	41.13	235	P	P	11 33 53.9	-2.3
	1.0nm,0.8s,baz=54,slow=9.6,SNR=3.8						
LPAZ				LR	LR	11 49 46.7	
	comp=Z,57nm,21.3s,baz=26,slow=35						
LPAZ	La Paz	41.13	235	*e*P	P	11 33 57.9	+1.7
	2.6nm,1.2s						
KEST	Kesra	48.70	48	LR	LR	11 55 40.7	
	comp=Z,44nm,18.8s,baz=272,slow=36						
S57A	Dark Hollow, R	51.03	314	*e*P	P	11 35 13.6	+0.3
	15nm,1.4s						
CLTB	Caltabellotta	52.29	47	*e*P	P	11 35 22.8	0.0
	10nm,1.2s						
VAE	Valguarnera	53.13	48	LR	LR	11 58 54.5	
	comp=Z,68nm,18.1s,baz=181,slow=37						
DAVOX	Davos/Dischmat	54.42	36	LR	LR	11 57 41.3	
	comp=Z,38nm,18.1s,baz=268,slow=35						
GERES	GERESS Array B	57.70	35	P	P	11 36 01.1	-0.7
	0.4nm,0.6s,baz=233,slow=5.8,SNR=3.6						
GERES				LR	LR	11 57 41.1	
	comp=Z,37nm,21.1s,baz=305,slow=33						
TTG	Podgorica	58.43	44	*e*P	P	11 36 07.7	+0.9
	11nm,1.4s						
VRAC	Vranov	59.59	36	LR	LR	11 58 49.4	
	comp=Z,24nm,20.4s,baz=180,slow=33						
IDI	Anoyia	60.52	53	LR	LR	12 02 53.0	
	comp=Z,44nm,20.4s,baz=307,slow=36						
NOA	NORSAR Array B	63.39	23	LR	LR	12 00 19.8	
	comp=Z,26nm,20.7s,baz=240,slow=32						
HFS	Hagfors	63.83	24	LR	LR	12 01 05.9	
	comp=Z,24nm,19.2s,baz=240,slow=33						
MLR	Muntele Rosu	64.00	43	*e*P	P	11 36 44.9	+0.2
	14nm,1.3s						
AKASG	Malin Array Be	67.65	38	P	P	11 37 07.5	-0.5
	1.2nm,0.7s,baz=247,slow=6.8,SNR=3.2						
ZAIG	Zacatecas	67.76	292	*e*P	P	11 37 09.1	-0.5
	3.2nm,1.0s						
BR101	Keskin Array S	68.21	50	*e*P	P	11 37 12.4	+0.6
BR131	Keskin Array S	68.21	50	*e*P	P	11 37 13.1	+1.2
	2.1nm,0.8s						
BRTR	Keskin Array B	68.21	50	P	P	11 37 12.4	+0.6
	1.5nm,0.7s,baz=257,slow=4.8,SNR=8.2						
BRTR				LR	LR	12 07 24.0	
	comp=Z,13nm,20.9s,baz=268,slow=36						
LTX	Lajitas	69.05	299	*e*P	P	11 37 15.4	-1.9
TXAR	Lajitas Array	69.05	299	P	P	11 37 15.4	-1.9
	0.5nm,1.0s,baz=104,slow=6.6,SNR=3.7						
FIA0	FINESS Array S	69.75	26	*e*P	P	11 37 20.8	0.0
FINES	FINESS Array B	69.75	26	P	P	11 37 20.8	0.0
	2.6nm,1.0s,baz=248,slow=15,SNR=2.7						
FINES				LR	LR	12 06 04.5	
	comp=Z,28nm,19.2s,baz=295,slow=34						
LAZ	Ladron	72.32	304	*e*P	P	11 37 38.2	+0.9
OBN	Obninsk	73.07	34	LR	LR	12 06 38.0	
	comp=Z,6.2nm,21.5s,baz=297,slow=33						
O20A	White River Ci	73.61	310	*e*P	P	11 37 46.0	+1.1
	5.5nm,0.9s						
PD31	Pinedale Array	74.81	312	*e*P	P	11 37 50.7	-1.1
PDAR	Pinedale Array	74.81	312	P	P	11 37 50.7	-1.1
	0.3nm,0.3s,baz=92,slow=10,SNR=5.8						
WUAZ	Wupatki	75.85	305	*e*P	P	11 37 59.2	+1.4
	5.5nm,1.4s						
IMW	Indian Meadow	75.89	313	*e*P	P	11 37 58.5	+0.4
	3.3nm,1.1s						
YMR	Madison River	75.97	314	*e*P	P	11 37 59.0	+0.6
	4.9nm,1.1s						
MTPU	Mount Pierson	76.56	307	*e*P	P	11 38 03.3	+1.2
	2.6nm,1.0s						
CCUT	Cedar City	77.49	307	*e*P	P	11 38 09.4	+2.3
	2.1nm,1.0s						

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*JMA **14** 11:27:35.4±0.1, 23°.45N×122°.17E, h52^{km}, M2.7*
*ISCJB **14** 11:27:41.8±0.7, 24°.69N±0°.04×122°.62E±0°.03, h101^{km}±6^{km}, Error ellipse: s-maj=7.1km s-min=4.4km az=173.1*
*TAP **14** 11:27:41.1, 24°.80N×122°.65E, h103^{km}, ML3.5, D*
ISC 14 11:27:41.4±1.8**, 24°.71N**±0°.06×**122°.64E**±0°.04**, h103**^{km}±11^{km}**, n36,** σ**1^{s}.17**/62**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.38	132	P	Pn	11 27 56.5	-0.3
JYNG				*e*S	Sn	11 28 08.7	+0.5
YOJ	Yonaguni jima	0.42	126	P	Pn	11 27 57.2	+0.2
	baz=143						
YOJ				S	Sn	11 28 09.3	+0.6
	baz=143						
EOS1	EOS1	0.49	251	P	Pn	11 27 57.5	+0.1
	baz=237						
EOS1				S	Sn	11 28 09.6	+0.2
	baz=237						
EGS		0.66	282	*e*P	Pn	11 27 59.3	+0.6
	baz=265						
EGS				*e*S	Sn	11 28 12.0	+0.2
	baz=265						
TIPB	Shuangxi	0.79	290	*e*P	Pn	11 27 59.8	-0.1
	baz=277						
TIPB				*e*S	Sn	11 28 12.6	-1.3
	baz=277						
NDT	Datong Townshi	1.03	264	*e*P	Pn	11 28 03.0	+0.6
	baz=258						
NDT				*e*S	Sn	11 28 18.8	+0.5
	baz=258						
IRIF	Iriomote-Funau	1.06	110	P	Pn	11 28 03.3	+0.6
NACB	Ninganchiao	1.09	241	*e*S	Sn	11 28 18.9	-0.5
	baz=236						
YM03	YM03	1.10	295	*e*P	Pn	11 28 01.7	-1.6
	baz=290						
YM03				*e*S	Sn	11 28 20.7	+0.9
	baz=290						
YHNB	Yeheng	1.15	268	*e*S	Sn	11 28 19.9	-0.8
	baz=267						
NNS	Nan Shan	1.18	257	*e*S	Sn	11 28 21.2	-0.3
	baz=245						
HATJ	Hateruma jima	1.25	121	P	Pn	11 28 02.0	-2.8
HATJ				*e*S	Sn	11 28 20.1	-2.4
JKRS	Kuro-shima	1.33	110	P	Pn	11 28 07.0	+1.2
WHF	Hehuan Shan	1.37	246	*e*P	Pn	11 28 07.2	+0.5
	baz=236						
WHF				*e*S	Sn	11 28 25.0	-0.8
	baz=236						
TWT	Tachien	1.41	252	*e*S	Sn	11 28 26.0	-0.2
	baz=240						
JIJ	Ishigaki jima	1.41	104	P	Pn	11 28 07.7	+1.0
ESL	Shilin	1.42	231	*e*P	Pn	11 28 08.9	+2.0
	baz=222						
ESL				*e*S	Sn	11 28 24.1	-2.0
	baz=222						
CHGB	Renai	1.48	245	*e*P	Pn	11 28 07.5	-0.3
	baz=235						
CHGB				*e*S	Sn	11 28 27.8	-0.1
	baz=235						
NSTT	Nanjuang	1.49	267	*e*P	Pn	11 28 05.4	-2.3
	baz=263						
NSTT				*e*S	Sn	11 28 27.0	-0.7
	baz=263						
EGFH	Guangfu	1.51	227	*e*P	Pn	11 28 08.0	0.0
	baz=219						
EGFH				*e*S	Sn	11 28 28.0	-0.2
	baz=219						
JISG	Ishigakijimahi	1.53	94	P	Pn	11 28 10.5	+2.4
HGSD	Ruisui	1.64	223	*e*P	Pn	11 28 09.9	+0.3
	baz=220						
HGSD				*e*S	Sn	11 28 32.5	+1.5
	baz=220						
VWDT	VWDT	1.67	236	*e*P	Pn	11 28 09.1	-0.8
	baz=232						
VWDT				*e*S	Sn	11 28 31.5	0.0
	baz=232						
NMLH	Miaoli	1.69	265	P	Pn	11 28 10.7	+0.5
	baz=260						
NMLH				S	Sn	11 28 31.8	-0.3
	baz=260						
NSY	Sanyi	1.73	261	*e*P	Pn	11 28 11.4	+0.6
	baz=256						
NSY				*e*S	Sn	11 28 32.9	-0.2
	baz=256						
TWQ1	Liyutan	1.74	258	*e*P	Pn	11 28 11.2	+0.4
	baz=254						
TWQ1				*e*S	Sn	11 28 32.9	-0.2
	baz=254						
SMLT	Sun Moon Lake	1.79	243	P	Pn	11 28 13.1	+1.6
	baz=234						
SMLT				S	Sn	11 28 36.2	+1.8
	baz=234						
YULB	Yu-li	1.79	223	*e*P	Pn	11 28 13.4	+1.9
	baz=227						
YULB				*e*S	Sn	11 28 34.1	-0.3
	baz=227						
TYC	Yuchr	1.81	244	*e*P	Pn	11 28 12.9	+1.2
	baz=240						
TYC				*e*S	Sn	11 28 36.5	+1.7
	baz=240						
TWF1	Yuli	1.82	223	*e*P	Pn	11 28 12.4	+0.5
	baz=227						
TWF1				*e*S	Sn	11 28 34.9	-0.2
	baz=227						
WHYT	Xinyi Township	1.92	239	*e*P	Pn	11 28 13.6	+0.5
	baz=230						
WHYT				*e*S	Sn	11 28 39.4	+2.1
	baz=230						
ELDTW	Lidau	2.12	225	*e*P	Pn	11 28 16.9	+1.1
	baz=220						
ELDTW				*e*S	Sn	11 28 41.0	-1.0
	baz=220						
TWG	Pinlang	2.36	218	*e*P	Pn	11 28 19.2	+0.4
	baz=220						
TWG				*e*S	Sn	11 28 46.8	-0.7
	baz=220						

TWG	**Pinlang**	**2.36**	**218**	*e*S	**Pn**	**11 28 18.8**	**-0.1**
	baz=199						
LAY	**Lan-yu**	**2.84**	**201**	*e*P	**Pn**	**11 28 25.3**	**+0.2**
	baz=193						
LAY				*e*S	**Sn**	**11 28 56.5**	**-2.3**
	baz=193						
PHUB	**P'eng-hu**	**3.04**	**248**	*e*S	**Sn**	**11 29 01.7**	**-1.9**
	baz=245						

TAP 14 11:27:43.5, 23°.87N×121°.65E, h40^{km}, ML3.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.06**	**311**	*e*P	Pn	11 27 50.2	+0.3
	baz=311						
ENLB				*e*S	Sn	11 27 56.0	+1.5
	baz=311						
HWA	**Hwalien**	**0.12**	**340**	*e*P	Pn	11 27 49.9	-0.5
	baz=341						
HWA				*e*S	Sn	11 27 56.7	+1.4
	baz=341						
ESL	**Shilin**	**0.20**	**255**	P	Pn	11 27 50.7	-0.2
	baz=265						
ESL				*e*S	Sn	11 27 55.4	-0.7
	baz=265						
TWD	**Chiawan**	**0.22**	**347**	*i* P	Pn	11 27 51.0	0.0
	baz=342						
TWD				S	Sn	11 27 56.7	+0.4
	baz=342						
EGFH	**Guangfu**	**0.28**	**226**	*e*P	Pn	11 27 51.6	0.0
	baz=235						
EGFH				*e*S	Sn	11 27 57.2	0.0
	baz=235						
NACB	**Ninganchiao**	**0.31**	**351**	P	Pn	11 27 51.8	-0.1
	baz=339						
NACB				S	Sn	11 27 57.6	-0.2
	baz=339						
ETLH	**Xiulin Townshi**	**0.37**	**336**	P	Pn	11 27 52.5	-0.2
	baz=334						
ETLH				S	Sn	11 27 58.6	-0.6
	baz=334						
HGSD	**Ruisui**	**0.42**	**209**	*e*P	Pn	11 27 53.9	+0.7
	baz=223						
HGSD				*e*S	Sn	11 28 01.9	+1.8
	baz=223						
WHF	**Hehuan Shan**	**0.45**	**308**	P	Pn	11 27 53.7	-0.3
	baz=302						
WHF				S	Sn	11 28 00.8	-0.4
	baz=302						
EHY	**Hungye**	**0.47**	**220**	*e*P	Pn	11 27 53.2	-0.6
	baz=219						
EHY				*e*S	Sn	11 28 00.0	-1.0
	baz=219						
CHGB	**Renai**	**0.47**	**294**	*i* P	Pn	11 27 54.2	+0.1
	baz=297						
CHGB				S	Sn	11 28 02.6	+1.0
	baz=297						
VWDT	**VWDT**	**0.48**	**257**	*e*P	Pn	11 27 54.4	+0.5
	baz=251						
VWDT				*e*S	Sn	11 28 01.4	+0.2
	baz=251						
ENA	**Nanau**	**0.57**	**9**	*e*P	Pn	11 27 55.4	+0.2
	baz=15						
ENA				*e*S	Sn	11 28 05.1	+1.7
	baz=15						
NANB	**Nanao**	**0.57**	**9**	*e*P	Pn	11 27 55.2	+0.1
	baz=15						
NANB				S	Sn	11 28 03.5	+0.1
	baz=15						
YULB	**Yu-li**	**0.57**	**214**	*e*P	Pn	11 27 54.5	-0.7
	baz=224						
YULB				*e*S	Sn	11 28 02.2	-1.3
	baz=224						
TWT	**Tachien**	**0.58**	**312**	P	Pn	11 27 56.0	+0.6
	baz=316						
TWT				S	Sn	11 28 04.3	+0.4
	baz=316						
TDCB	**Techi**	**0.59**	**311**	P	Pn	11 27 56.0	+0.3
	baz=316						
TDCB				S	Sn	11 28 04.1	-0.1
	baz=316						
TWF1	**Yuli**	**0.60**	**212**	*e*P	Pn	11 27 55.2	-0.5
	baz=222						
TWF1				*e*S	Sn	11 28 03.3	-1.0
	baz=222						
NNSB	**Datong**	**0.61**	**337**	*e*P	Pn	11 27 55.9	0.0
	baz=336						
NNSB				S	Sn	11 28 04.3	-0.3
	baz=336						
NNS	**Nan Shan**	**0.62**	**336**	*e*P	Pn	11 27 56.1	0.0
	baz=336						
NNS				S	Sn	11 28 04.8	-0.2
	baz=336						
SMLT	**Sun Moon Lake**	**0.69**	**272**	*e*P	Pn	11 27 57.1	+0.3
	baz=272						
SMLT				*e*S	Sn	11 28 06.5	+0.1
	baz=272						
TYC	**Yuchr**	**0.72**	**273**	*e*P	Pn	11 27 57.5	+0.2
	baz=278						
TYC				*e*S	Sn	11 28 07.4	+0.3
	baz=278						
YUS	**Yu-Shan**	**0.74**	**240**	*e*P	Pn	11 27 58.6	+0.7
	baz=241						
YUS				*e*S	Sn	11 28 07.9	-0.3
	baz=241						
NDT	**Datong Townshi**	**0.74**	**350**	*e*P	Pn	11 27 58.1	+0.5
	baz=340						
NDT				*e*S	Sn	11 28 07.8	+0.1
	baz=340						
WHYT	**Xinyi Township**	**0.75**	**257**	*e*P	Pn	11 27 58.6	+1.0
	baz=254						
WHYT				*e*S	Sn	11 28 09.4	+1.6
	baz=254						
TWC	**Suao**	**0.76**	**14**	*e*P	Pn	11 27 58.9	+1.1
	baz=19						
TWC				*e*S	Sn	11 28 09.2	+1.1
	baz=19						
ENTT	**Nioudou**	**0.77**	**354**	*e*P	Pn	11 27 58.7	+0.7
	baz=353						
ENTT				*e*S	Sn	11 28 08.3	-0.2
	baz=353						
CHKT	**Chengkung**	**0.81**	**199**	*e*P	Pn	11 27 58.6	+0.2
	baz=189						
CHKT				*e*S	Sn	11 28 09.6	+0.4
	baz=189						
YHNB	**Yeheng**	**0.84**	**343**	*e*P	Pn	11 27 59.2	+0.2
	baz=341						
YHNB				*e*S	Sn	11 28 09.4	-0.7
	baz=341						
WJS	**Zhushan**	**0.84**	**267**	*e*P	Pn	11 28 01.2	+2.3
	baz=268						
WJS				*e*S	Sn	11 28 13.5	+3.4
	baz=268						
TWE	**Neicheng**	**0.85**	**1**	*e*P	Pn	11 27 59.6	+0.6
	baz=352						
TWE				*e*S	Sn	11 28 13.0	+2.7
	baz=352						
WNT	**Mingjian**	**0.88**	**271**	*e*P	Pn	11 28 00.9	+1.5
	baz=271						
WNT				*e*S	Sn	11 28 13.2	+2.1
	baz=271						
ELDTW	**Lidau**	**0.89**	**221**	*e*P	Pn	11 27 59.4	-0.2
	baz=217						
ELDTW				*e*S	Sn	11 28 10.8	-0.5
	baz=217						
CHN5	**Tsauling**	**0.93**	**253**	*e*P	Pn	11 28 01.5	+1.3
	baz=255						
CHN5				*e*S	Sn	11 28 14.2	+1.8
	baz=255						
TCU	**Taichung**	**0.93**	**288**	*e*P	Pn	11 28 01.4	+1.3
	baz=288						
TCU				*e*S	Sn	11 28 15.1	+2.8
	baz=288						
TWQ1	**Liyutan**	**0.93**	**301**	P	Pn	11 28 01.5	+1.3
	baz=301						
TWQ1				S	Sn	11 28 14.9	+2.6
	baz=301						
NSTT	**Nanjuang**	**0.96**	**322**	P	Pn	11 28 02.2	+1.6
	baz=321						
NSTT				S	Sn	11 28 14.2	+1.1
	baz=321						
NSY	**Sanyi**	**0.98**	**304**	P	Pn	11 28 02.2	+1.5
	baz=304						
NSY				*e*S	Sn	11 28 16.4	+2.9
	baz=304						
WCHH	**Zhanghua**	**1.02**	**282**	*e*P	Pn	11 28 03.2	+1.9
	baz=282						
WCHH				*e*S	Sn	11 28 17.7	+3.3
	baz=282						
NMLH	**Miaoli**	**1.03**	**311**	*e*P	Pn	11 28 02.8	+1.3
	baz=309						
NMLH				*e*S	Sn	11 28 18.2	+3.5
	baz=309						
PTSB	**Yuanli**	**1.04**	**304**	*e*P	Pn	11 28 02.9	+1.3
	baz=303						
PTSB				*e*S	Sn	11 28 18.3	+3.4
	baz=303						
WLTB	**Daxi**	**1.05**	**340**	*e*P	Pn	11 28 03.4	+1.8
	baz=340						
WLTB				*e*S	Sn	11 28 17.3	+2.2
	baz=340						
STYT	**Tauyuan**	**1.08**	**230**	*e*P	Pn	11 28 03.6	+1.4
	baz=228						
STYT				*e*S	Sn	11 28 18.2	+2.3
	baz=228						
TPUB	**Ta-pu**	**1.09**	**239**	*e*P	Pn	11 28 04.5	+2.2
	baz=241						
TPUB				*e*S	Sn	11 28 18.6	+2.4
	baz=241						
TWA	**Mucha**	**1.11**	**357**	*e*P	Pn	11 28 02.1	-0.5
	baz=354						
TWA				*e*S	Sn	11 28 16.6	-0.1
	baz=354						
TWG	**Pinlang**	**1.17**	**207**	*e*P	Pn	11 28 02.3	-1.0
	baz=199						
TWGBT	**Beinan**	**1.17**	**207**	*e*P	Pn	11 28 02.0	-1.3
	baz=199						
TWGBT				*e*S	Sn	11 28 19.1	+1.0
	baz=199						
RLNB	**Erlin**	**1.18**	**271**	*e*P	Pn	11 28 05.0	+1.5
	baz=283						
RLNB				*e*S	Sn	11 28 21.1	+2.8
	baz=283						
TWK	**Hsinying**	**1.22**	**241**	*e*P	Pn	11 28 06.0	+1.9
	baz=243						
TWK				*e*S	Sn	11 28 21.6	+2.1
	baz=243						
CHN1	**Nanshi**	**1.23**	**237**	*e*P	Pn	11 28 06.5	+2.3
	baz=239						
CHN1				*e*S	Sn	11 28 22.2	+2.5
	baz=239						
SNST	**Tainan City**	**1.24**	**239**	*e*P	Pn	11 28 07.9	+3.6
	baz=241						
SNST				*e*S	Sn	11 28 22.1	+2.3
	baz=241						
SGST	**Jiashian**	**1.25**	**232**	*e*P	Pn	11 28 03.9	-0.6
	baz=234						
SGST				*e*S	Sn	11 28 22.9	+2.8
	baz=234						
YM05	**YM05**	**1.29**	**357**	*e*P	Pn	11 28 02.8	-2.4
	baz=352						
YM05				*e*S	Sn	11 28 22.5	+1.2
	baz=352						
SSD	**Sandimen**	**1.45**	**220**	*e*P	Pn	11 28 08.8	+1.6
	baz=223						
SSD				*e*S	Sn	11 28 27.8	+2.7
	baz=223						
MASBT	**Mashibuluo**	**1.56**	**217**	*e*P	Pn	11 28 09.7	+1.0
	baz=220						
MASBT				*e*S	Sn	11 28 30.2	+2.5
	baz=220						

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*IDC **14** 11:32:57.9±1.2, 19°.56N×77°.99W, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.7/37, mbtmp3.8/6, ML3.6/2, MS2.9/3, Ms1 2.9/3, ms1mx2.5/28, Error ellipse: s-maj=52.0km s-min=25.2km az=41.0*

*ISCJB **14** 11:32:58.3±0.7, 19°.68N±0°.10×77°.8W±0°.1, h11^{km}, mb3.5/4, MS2.6/1, Error ellipse: s-maj=20.8km s-min=7.2km az=143.1*

*JSN **14** 11:33:04.7±0.4, 19°.42N×77°.63W, h15^{km}±12^{km}, MD3.9*

ISC 14 11:33:00.2±0.9**, 19°.7N**±0°.1×**77°.7W**±0°.1**, h11**^{km}**, n23, σ1^{s}.96**/23**, mb3.5**/4**, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBJ	**Bamboo Saint A**	**1.34**	**163**	*i* P	**Pn**	**11 33 23.8**	**-1.1**
STH	**Stony Hill**	**1.79**	**153**	*i* P	**Pn**	**11 33 30.5**	**-0.6**
GWJ	**Greenwich**	**1.82**	**151**	*i* P	**Pn**	**11 33 30.9**	**-0.8**
HOJ	**Hope**	**1.88**	**152**	*i* P	**Pn**	**11 33 31.8**	**-0.5**
PCJ	**Portland Cotta**	**1.98**	**166**	*i* P	**Pn**	**11 33 33.0**	**-0.8**
PCJ				*i* S	**Sn**	**11 33 54.2**	**-4.3**
SMRC	**Santa Marta, M**	**9.09**	**158**	*e*P	**Pn**	**11 35 12.1**	**+0.6**
SJCC	**San Jacinto, C**	**10.01**	**166**	*e*P	**Pn**	**11 35 25.5**	**+1.3**
VIRV	**Villa del Rosa**	**10.44**	**150**	*e*P	**Pn**	**11 35 30.5**	**+0.6**
CODC	**Agustn Codazz**	**10.51**	**157**	*e*P	**Pn**	**11 35 30.8**	**0.0**
SJG	**San Juan**	**11.01**	**96**	LR	LR	11 40 40.4	
	comp=Z,70nm,18.1s,baz=276,slow=41						
SMLC	**San Martn de**	**11.36**	**162**	*e*P	**Pn**	**11 35 44.7**	**+2.2**
SDV	**Santo Domingo**	**12.70**	**147**	Pn	**Pn**	**11 36 02.4**	**+1.3**
	0.9nm,0.3s,baz=331,slow=11,SNR=6.0						
PTBC	**PUERTO BERRIO,**	**13.42**	**166**	*e*P	**Pn**	**11 36 12.3**	**+1.5**
GUY2C	**Guyana, Caldas**	**14.54**	**171**	*e*P	**Pn**	**11 36 30.6**	**+4.1**
CHIC	**Chingaza**	**15.44**	**165**	*e*P	**P**	**11 36 44.6**	**+1.5**
PCRV	**Puerto La Cruz**	**15.73**	**125**	Pn	**P**	**11 36 45.5**	**-0.4**
	0.9nm,0.3s,baz=324,slow=8.7,SNR=4.3						
CMIG	**Matias Romero**	**16.54**	**264**	Pn	**Pn**	**11 36 52.6**	**+0.3**
	0.2nm,0.3s,baz=74,slow=12,SNR=7.0						
CMIG				LR	LR	11 42 28.0	
	comp=Z,35nm,19.2s,baz=96,slow=35						
TXAR	**Lajitas Array**	**25.49**	**297**	P	**P**	**11 38 26.9**	**-1.8**
	0.5nm,0.8s,baz=118,slow=10.0,SNR=6.9						
TXAR				LR	LR	11 48 22.7	
	comp=Z,20nm,21.0s,baz=0.0,slow=37						
PDAR	**Pinedale Array**	**35.35**	**318**	P	**P**	**11 39 53.9**	**-2.1**
	0.2nm,0.5s,baz=122,slow=9.6,SNR=3.1						
NVAR	**Mina Array Bea**	**39.75**	**307**	P	**P**	**11 40 32.0**	**-1.3**
	1.7nm,1.1s,baz=104,slow=7.7,SNR=4.6						
ARCES	**ARCESS Array B**	**76.25**	**21**	P	**P**	**11 44 49.1**	**+0.6**
	1.7nm,0.8s,baz=298,slow=1.9,SNR=3.6						
WRA	**Warramunga Arr**	**149.91**	**264**	PKPbc	**PKPdf**	**11 52 49.1**	**+2.6**
	0.9nm,0.7s,baz=61,slow=3.8,SNR=8.5						
ASAR	**Alice Springs**	**150.43**	**257**	PKPbc	**PKPdf**	**11 52 50.0**	**+2.7**
	0.6nm,0.8s,baz=89,slow=2.6,SNR=7.0						

IDC 14 11:40:18.9±1.8**, 17°.19S**×**178°.11W, h0**^{km}**, mb4.0**/6**, mb1 4.3**/6**, mb1mx3.9**/29**, mbtmp4.0**/6**, Error ellipse: s-maj=170.5km s-min=21.9km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.23**	**240**	P	P	11 47 48.7	-0.5
	1.4nm,0.5s,baz=67,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**45.04**	**259**	P	P	11 48 37.1	+0.2
	2.0nm,0.8s,baz=84,slow=8.5,SNR=15						
ASAR	**Alice Springs**	**45.26**	**254**	P	P	11 48 38.4	-0.2
	9.5nm,0.6s,baz=91,slow=8.5,SNR=205						
NVAR	**Mina Array Bea**	**78.71**	**44**	P	P	11 52 23.1	-0.4
	0.3nm,0.7s,baz=219,slow=7.0,SNR=2.3						
TXAR	**Lajitas Array**	**85.37**	**58**	P	P	11 52 59.1	+0.5
	0.6nm,0.7s,baz=218,slow=6.7,SNR=10						
PDAR	**Pinedale Array**	**86.64**	**43**	P	P	11 53 04.5	-0.3
	0.1nm,0.5s,baz=242,slow=1.9,SNR=3.9						

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*ISCJB **14** 11:48:09.1±0.4, 24°.35S±0°.07×176°.23W±0°.08, h10^{km}, mb4.3/19, MS3.5/3, Error ellipse: s-maj=11.6km s-min=9.1km az=136.5*

*IDC **14** 11:48:10.1±0.9, 24°.54S×176°.42W, h0^{km}, mb4.3/11, mb1 4.4/12, mb1mx4.2/32, mbtmp4.3/12, ML3.8/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/22, Error ellipse: s-maj=29.2km s-min=22.6km az=151.0*

*NEIC **14** 11:48:12.0±3.0, 24°.37S×176°.31W, h14^{km}±4^{km}, mb4.7/16, Error ellipse: s-maj=22.1km s-min=15.7km az=115.0*

ISC 14 11:48:11.2±0.5**, 24°.49S**±0°.09×**176°.11W**±0°.09**, h10**^{km}**, n49, σ1^{s}.53**/48**, mb4.5**/19**, MS3.4**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.88**	**48**	*e*Pn	**Pn**	**11 50 04.2**	**-1.7**
NIUE				*e*Sn	Sn	11 51 22.9	-12
URZ	**Urewera**	**14.88**	**201**	Pn	**Pn**	**11 51 40.0**	**-1.7**
	0.5nm,0.3s,baz=322,slow=19,SNR=2.6						
URZ				Sn	Sn	11 54 10.8	-16
	0.6nm,0.3s,baz=114,slow=20,SNR=3.3						
URZ	**Urewera**	**14.88**	**201**	*e*Pn	**P**	**11 51 47.2**	**-0.3**
RAR	**Rarotonga**	**15.41**	**81**	Pn	**Pn**	**11 51 47.4**	**-1.5**
	1.4nm,0.3s,baz=220,slow=14,SNR=5.8						
RAR				Sn	Sn	11 54 21.4	-18
	2.2nm,0.3s,baz=80,slow=17,SNR=3.8						
RAR				LR	LR	11 56 22.8	
	comp=Z,109nm,21.4s,baz=254,slow=31						
RAR	**Rarotonga**	**15.41**	**81**	*e*Pn	**Pn**	**11 51 47.1**	**-1.7**
	58nm,1.0s						
BKZ	**Black Stump Fm**	**15.91**	**201**	*e*Pn	**Pn**	**11 51 57.1**	**+1.9**
	73nm,1.5s						
HIZ	**Hauiti**	**15.94**	**207**	*e*Pn	**P**	**11 52 00.2**	**+0.9**
	111nm,1.2s						
DZM	**Mont Dzumac**	**16.21**	**275**	Pn	**P**	**11 52 06.8**	**+4.4**
	0.6nm,0.3s,baz=100,slow=17,SNR=8.0						
DZM				LR	LR	11 55 56.8	
	comp=Z,59nm,19.2s,baz=22,slow=29						
THZ	**Tophouse**	**19.49**	**205**	*e*P	**P**	**11 52 39.2**	**+0.8**
	40nm,1.3s						
KHZ	**Kahutara**	**19.82**	**203**	*e*P	**Pn**	**11 52 45.2**	**+1.7**
	146nm,1.5s						
PPT	**Papeete**	**25.68**	**80**	LR	LR	12 02 52.8	
	comp=Z,96nm,18.7s,baz=300,slow=34						
HNR	**Honiara**	**27.29**	**299**	LR	LR	12 03 03.3	
	comp=Z,90nm,19.4s,baz=174,slow=33						
CTA	**Charters Tower**	**35.02**	**270**	P	**P**	**11 55 03.4**	**-0.9**
	5.6nm,0.3s,baz=96,slow=11,SNR=20						
CTAO	**Charters Tower**	**35.02**	**270**	*e*P	**P**	**11 55 03.6**	**-0.7**
	30nm,1.4s						
STKA	**Stephens Creek**	**37.81**	**249**	LR	LR	12 09 35.2	
	comp=Z,138nm,19.2s,baz=181,slow=34						
AS31	**Alice Springs**	**45.44**	**260**	*e*P	**P**	**11 56 29.5**	**-1.1**
	1.0nm,1.0s						
ASAR	**Alice Springs**	**45.44**	**260**	P	**P**	**11 56 28.6**	**-2.0**
	1.3nm,0.3s,baz=93,slow=6.4,SNR=42						
WB2	**Warramunga Arr**	**45.89**	**265**	*e*P	**P**	**11 56 31.9**	**-2.4**
	10nm,1.3s						
WRAB	**Tennant Creek**	**45.89**	**265**	*e*P	**P**	**11 56 31.9**	**-2.4**
	4.1nm,0.8s						
WR1	**Warramunga Arr**	**45.90**	**265**	*e*P	**P**	**11 56 31.9**	**-2.4**
WRA	**Warramunga Arr**	**45.90**	**265**	P	**P**	**11 56 31.9**	**-2.4**
	3.8nm,0.5s,baz=95,slow=9.3,SNR=33						
FORT	**Forrest**	**49.43**	**250**	*e*P	**P**	**11 57 02.2**	**+0.6**
	30nm,1.3s						
SIJI	**Sorong**	**56.00**	**287**	P	**P**	**11 57 48.0**	**-2.4**
	6.7nm,0.6s,baz=63,slow=8.5,SNR=5.7						
MORW	**Morawa**	**60.00**	**249**	*e*P	**P**	**11 58 16.6**	**-1.7**
	20nm,1.4s						
CASY	**Casey**	**61.14**	**206**	*e*P	**P**	**11 58 24.9**	**-0.6**
	3.0nm,0.9s						
QSPA	**South Pole Qui**	**65.59**	**180**	*e*P	**P**	**11 58 56.0**	**+0.9**
	13nm,1.5s						
MJAR	**Matsushiro Arr**	**74.44**	**323**	P	**P**	**11 59 48.4**	**-1.2**
	0.8nm,0.7s,baz=148,slow=4.8,SNR=4.0						
MAJO	**Matsushiro**	**74.44**	**323**	*e*P	**P**	**11 59 48.4**	**-1.2**
MAW	**Mawson**	**78.41**	**200**	P	**P**	**12 00 11.8**	**+0.1**
	0.5nm,0.4s,baz=95,slow=11,SNR=3.7						
MAW	**Mawson**	**78.41**	**200**	*e*P	**P**	**12 00 12.4**	**+0.7**
	1.6nm,1.4s						
PETK	**Petropavlovsk-**	**80.56**	**344**	P	**P**	**12 00 24.4**	**+1.0**
	2.5nm,0.7s,baz=130,slow=7.5,SNR=5.7						
PEA1	**Petropavlovsk-**	**80.57**	**344**	*e*P	**P**	**12 00 24.4**	**+0.9**
NV01	**Mina Array Sit**	**82.76**	**42**	*e*P	**P**	**12 00 38.0**	**+2.2**
NVAR	**Mina Array Bea**	**82.76**	**42**	P	**P**	**12 00 38.0**	**+2.2**
	0.3nm,0.6s,baz=219,slow=6.7,SNR=3.8						
USRK	**Ussuriysk Ar.**	**83.23**	**325**	P	**P**	**12 00 38.7**	**+1.0**
	1.7nm,0.9s,baz=222,slow=2.6,SNR=4.4						
SNAA	**Sanae**	**83.98**	**178**	P	**P**	**12 00 41.0**	**-0.4**
SNAA	**Sanae**	**83.98**	**178**	*e*P	**P**	**12 00 41.4**	**0.0**
	3.8nm,0.9s						
VNA3	**Neumayer Olymp**	**84.05**	**176**	P	**P**	**12 00 41.3**	**-0.5**
VNA2	**Neumayer--Watz**	**84.51**	**176**	P	**P**	**12 00 44.0**	**0.0**
VNA1	**Neumayer--Stat**	**84.73**	**176**	P	**P**	**12 00 45.1**	**0.0**
TXAR	**Lajitas Array**	**87.77**	**56**	P	**P**	**12 01 02.6**	**+1.7**
	0.4nm,0.9s,baz=234,slow=4.2,SNR=4.4						
LTX	**Lajitas**	**87.77**	**56**	*e*P	**P**	**12 01 02.6**	**+1.7**
CMAR	**Chiang Mai Arr**	**93.07**	**289**	P	**P**	**12 01 26.6**	**+0.9**
	0.7nm,0.3s,baz=128,slow=2.9,SNR=4.9						
AKASG	**Malin Array Be**	**147.33**	**330**	PKPbc	**PKPdf**	**12 07 53.4**	**+1.0**
	1.1nm,0.3s,baz=42,slow=4.0,SNR=7.1						
AKBB	**Malin Array Si**	**147.33**	**330**	*e*PKPbc	**PKPbc**	**12 07 55.4**	**+0.6**
BR101	**Keskin Array S**	**150.74**	**308**	*e*pPKPdf	**pPKPdf**	**12 08 02.9**	**+1.3**
BR101				*e*PKPab	**PKPab**	**12 08 10.6**	**-0.5**
BRTR	**Keskin Array B**	**150.74**	**308**	PKPbc	**PKPbc**	**12 08 02.9**	**-1.2**
	0.3nm,0.7s,baz=321,slow=50,SNR=2.5						
BRTR				PKPab	**PKPab**	**12 08 10.6**	**-0.5**
	0.7nm,0.6s,baz=120,slow=4.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**168.53**	**169**	PKPab	**PKPab**	**12 09 28.3**	**+0.1**
	1.3nm,0.9s,baz=187,slow=4.3,SNR=5.9						
TOA1	**Torodi Ar. Sit**	**168.53**	**169**	*e*PKPab	**PKPab**	**12 09 28.3**	**+0.1**

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*IDC **14** 11:50:41.5±1.0, 38°.23N×22°.16E, h0^{km}, mb3.6/8, mb1 3.7/11, mb1mx3.6/43, mbtmp3.7/11, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/38, Error ellipse: s-maj=19.8km s-min=19.2km az=102.0*

*ISCJB **14** 11:50:42.7±0.2, 38°.25N±0°.01×22°.09E±0°.02, h11^{km}±1^{km}, mb3.6/7, MS2.7/1, Error ellipse: s-maj=2.3km s-min=1.9km az=140.4*

*ATH **14** 11:50:42.3, 38°.24N×22°.10E, h14^{km}, ML3.5/28, Error ellipse: s-maj=0.9km s-min=0.5km az=302.0*

*THE **14** 11:50:43.0, 38°.24N×22°.11E, h8^{km}, ML3.4/28, Error ellipse: s-maj=0.7km s-min=0.4km az=280.0*

ISC 14 11:50:42.9±0.6**, 38°.24N**±0°.01×**22°.10E**±0°.01**, h12**^{km}±3^{km}**, n140, σ1^{s}.09**/194**, mb3.7**/7**, 10C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIG3	**Aigion**	**0.02**	**4**	P	**Pg**	**11 50 44.6**	**-0.3**
AIG3				S	**Sg**	**11 50 46.4**	**0.0**
AIG2	**Aigio**	**0.03**	**282**	P	**Pg**	**11 50 44.5**	**-0.5**
AIG2				S	**Sg**	**11 50 46.1**	**-0.3**
ALIK	**Aliki, Aigiali**	**0.03**	**16**	P	**Pg**	**11 50 44.7**	**-0.3**
ALIK				S	**Sg**	**11 50 46.3**	**-0.1**
AIG1	**Aigion**	**0.04**	**132**	P	**Pg**	**11 50 45.0**	**-0.1**
AIG1				S	**Sg**	**11 50 46.0**	**-0.6**
LAKA	**Lakka**	**0.10**	**272**	P	**Pg**	**11 50 45.3**	**-0.4**
LAKA				S	**Sg**	**11 50 47.2**	**-0.5**
	26µm,0.4s						
LAKA	**Lakka**	**0.10**	**272**	P	**Pg**	**11 50 45.3**	**-0.4**
LAKA				S	**Sg**	**11 50 47.1**	**-0.7**
LAKA				AML	AML	11 50 47.7	
	comp=E,45937µm,0.3s						
LAKA				AML	AML	11 50 47.8	
	comp=N,65632µm,0.6s						
TRAZ	**Trapeza**	**0.11**	**128**	P	**Pg**	**11 50 45.8**	**-0.1**
TRAZ				S	**Sg**	**11 50 47.8**	**-0.2**
	comp=N,105µm,0.1s						
TRAZ	**Trapeza**	**0.11**	**128**	P	**Pg**	**11 50 45.8**	**-0.1**
TRAZ				S	**Sg**	**11 50 48.1**	**+0.1**
TRAZ				AML	AML	11 50 48.1	
TRAZ				AML	AML	11 50 48.6	
TRIZ	**Trizonia**	**0.13**	**350**	P	**Pg**	**11 50 45.8**	**-0.3**
TRIZ				S	**Sg**	**11 50 48.1**	**-0.3**
	comp=N,34µm,0.5s						
TRIZ	**Trizonia**	**0.13**	**350**	P	**Pg**	**11 50 45.8**	**-0.3**
TRIZ				S	**Sg**	**11 50 48.1**	**-0.3**
KALE	**Kalithea**	**0.16**	**11**	P	**Pg**	**11 50 46.5**	**-0.1**
KALE				S	**Sg**	**11 50 49.3**	**+0.1**
	comp=N,56µm,0.5s						
KALE	**Kalithea**	**0.16**	**11**	P	**Pg**	**11 50 46.4**	**-0.1**
KALE				S	**Sg**	**11 50 49.0**	**-0.2**
KALE				AML	AML	11 50 49.6	
KALE				AML	AML	11 50 50.8	
	comp=E,69187µm,0.5s						
SERG	**Sergoula**	**0.18**	**348**	P	**Pg**	**11 50 46.6**	**-0.3**
SERG				S	**Sg**	**11 50 49.8**	**+0.1**
	comp=E,31µm,0.4s						
SERG	**Sergoula**	**0.18**	**348**	P	**Pg**	**11 50 46.6**	**-0.3**
SERG				S	**Sg**	**11 50 49.6**	**-0.1**
SERG				AML	AML	11 50 50.2	
	comp=N,63015µm,0.4s						
SERG				AML	AML	11 50 50.5	
	comp=E,60311µm,0.3s						
KLV	**Kalavryta, Ach**	**0.20**	**169**	P	**Pg**	**11 50 46.8**	**-0.4**
KLV				S	**Sg**	**11 50 49.9**	**-0.3**
	comp=E,21µm,0.3s						
KLV	**Kalavryta, Ach**	**0.20**	**169**	P	**Pg**	**11 50 46.8**	**-0.4**
KLV				S	**Sg**	**11 50 49.8**	**-0.3**
KLV				AML	AML	11 50 50.3	
	comp=N,34122µm,0.3s						
KLV				AML	AML	11 50 51.2	
	comp=E,49020µm,0.3s						
UPR	**University Cam**	**0.25**	**281**	P	**Pg**	**11 50 48.1**	**0.0**
UPR				S	**Sb**	**11 50 52.6**	**-1.2**
UPR	**University Cam**	**0.25**	**281**	P	**Pg**	**11 50 48.1**	**0.0**
UPR				S	**Sg**	**11 50 52.3**	**+0.6**
GUR	**Goura**	**0.35**	**148**	P	**Pg**	**11 50 49.5**	**-0.5**
GUR				S	**Sg**	**11 50 55.1**	**+0.3**
	comp=E,19µm,0.5s						

GUR	Goura	0.35	148	P	Pg	11 50 49.4	-0.5
GUR				S	Sg	11 50 55.0	+0.3
GUR				AML	AML	11 50 55.6	
	comp=N,39627μm,0.5s						
GUR				AML	AML	11 50 55.7	
	comp=E,36456μm,0.5s						
DSF	Desfina	0.38	62	P	Pg	11 50 50.0	-0.4
DSF				S	Sg	11 50 55.7	+0.2
	comp=E,11μm,0.2s						
DSF	Desfina	0.38	62	P	Pg	11 50 50.0	-0.4
DSF				S	Sg	11 50 55.7	+0.2
DSF				AML	AML	11 50 56.3	
	comp=N,14795μm,0.2s						
DSF				AML	AML	11 50 56.8	
	comp=E,26096μm,0.2s						
ANX	Ano Chora	0.38	338	P	Pg	11 50 50.0	-0.5
ANX				S	Sg	11 50 55.9	+0.2
	comp=E,5μm,0.5s						
ANX	Ano Chora	0.38	338	P	Pg	11 50 50.0	-0.5
DLFA	Delphi	0.39	52	P	Pg	11 50 50.2	-0.4
DLFA				S	Sg	11 50 56.1	+0.1
DLFA				AML	AML	11 50 56.4	
	comp=E,12392μm,0.4s						
DLFA				AML	AML	11 50 56.7	
	comp=N,18234μm,0.4s						
THAL	Thalero	0.48	114	P	Pb	11 50 52.6	-0.7
THAL				S	Sb	11 50 59.9	-0.5
	comp=N,12μm,0.3s						
THAL	Thalero	0.48	114	P	Pb	11 50 52.5	-0.8
THAL				S	Sb	11 50 59.3	-1.1
THAL				AML	AML	11 51 00.0	
	comp=E,24013μm,0.3s						
THAL				AML	AML	11 51 05.1	
	comp=N,22249μm,0.2s						
RLS	Riolos of Patr	0.53	251	P	Pg	11 50 52.6	-0.6
RLS	Riolos of Patr	0.53	251	P	Pg	11 50 52.6	-0.6
RLS				AML	AML	11 51 05.6	
	comp=N,3484μm,0.4s						
RLS				AML	AML	11 51 05.6	
	comp=E,4549μm,0.7s						
PVO	Paravola	0.59	310	P	Pg	11 50 53.9	-0.5
PVO				S	Sb	11 51 02.9	-0.6
	comp=E,1μm,0.5s						
PVO	Paravola	0.59	310	P	Pg	11 50 54.0	-0.5
PVO				AML	AML	11 51 10.6	
	comp=N,2602μm,0.5s						
PVO				AML	AML	11 51 12.7	
	comp=E,2623μm,0.6s						
PROD	Prodromos	0.63	88	P	Pg	11 50 54.6	-0.5
PROD				S	Sb	11 51 04.3	-0.3
PROD	Prodromos	0.63	88	P	Pg	11 50 54.8	-0.3
PROD				S	Sb	11 51 03.8	-0.8
PROD				AML	AML	11 51 05.4	
	comp=E,13254μm,0.2s						
PROD				AML	AML	11 51 05.7	
	comp=N,9614μm,0.2s						
ACOR	Acrocorinthos	0.70	120	P	Pg	11 50 55.8	-0.5
ACOR				S	Sb	11 51 06.0	-0.5
ACOR				AML	AML	11 51 09.4	
	comp=N,2469μm,0.2s						
ACOR				AML	AML	11 51 12.6	
	comp=E,2025μm,0.3s						
EVR	Evrytania	0.72	341	P	Pg	11 50 55.8	-1.0
EVR				S	Sb	11 51 06.5	-0.8
	comp=E,2μm,0.8s						
EVR	Evrytania	0.72	341	P	Pg	11 50 56.2	-0.6
EVR				S	Sg	11 51 06.1	-0.1
EVR				AML	AML	11 51 13.6	
	comp=N,4597μm,0.9s						
EVR				AML	AML	11 51 14.6	
	comp=E,3430μm,0.7s						
TRIP	Tripoli	0.72	169	P	Pg	11 50 55.8	-1.0
TRIP				S	Sb	11 51 07.4	+0.1
	comp=E,4μm,0.5s						
TRIP	Tripoli	0.72	169	P	Pg	11 50 56.2	-0.6
TRIP				S	Sb	11 51 06.6	-0.7
TRIP				AML	AML	11 51 09.0	
	comp=N,5799μm,0.5s						
TRIP				AML	AML	11 51 10.8	
	comp=E,8312μm,0.6s						
LOUT	Loutraki	0.73	110	P	Pg	11 50 56.8	-0.2
LOUT				S	Sg	11 51 06.5	0.0
AMT	Artemida-Makis	0.77	204	P	Pg	11 50 57.2	-0.5
AMT				S	Sb	11 51 09.9	+1.3
	comp=E,8μm,0.4s						
AMT	Artemida-Makis	0.77	204	P	Pg	11 50 57.3	-0.5
AMT				AML	AML	11 51 11.6	
	comp=N,17969μm,0.4s						
AMT				AML	AML	11 51 14.6	
	comp=E,11312μm,0.4s						
VTN	Vitineika	0.79	246	P	Pb	11 50 58.4	-0.1
AGG	Agios Georgios	0.80	13	P	Pg	11 50 57.1	-1.3
AGG				S	Sg	11 51 08.6	-0.4
	comp=E,2μm,0.6s						
AGG	Agios Georgios	0.80	13	P	Pg	11 50 57.3	-1.1
AGG				S	Sg	11 51 08.5	-0.5
AGG				AML	AML	11 51 10.9	
	comp=E,2967μm,0.5s						
AGG				AML	AML	11 51 14.6	
	comp=N,5606μm,0.6s						
LKR	Lokris	0.82	59	P	Pg	11 50 57.4	-1.2
LKR				S	Sb	11 51 10.1	+0.1
	comp=N,2μm,0.3s						
LKR	Lokris	0.82	59	P	Pg	11 50 57.5	-1.1
LKR				AML	AML	11 51 11.1	
	comp=N,3927μm,0.3s						
LKR				AML	AML	11 51 14.9	
	comp=E,5647μm,0.2s						
ATAL	Atalanti	0.85	57	P	Pg	11 50 57.9	-1.4
ATAL				S	Sb	11 51 10.7	-0.4
	comp=E,2μm,0.6s						
ATAL	Atalanti	0.85	57	P	Pg	11 50 58.1	-1.3
ATAL				S	Sg	11 51 10.0	-0.4
ATAL				AML	AML	11 51 15.5	
	comp=N,2788μm,0.5s						
ATAL				AML	AML	11 51 16.6	
	comp=E,3440μm,0.7s						
VLX	Vlachokerasia	0.89	166	P	Pg	11 50 59.0	-1.1
VLX				S	Sb	11 51 13.2	+0.9
	comp=E,7μm,0.4s						
VLX	Vlachokerasia	0.89	166	P	Pg	11 50 59.1	-1.0
VLX				S	Sb	11 51 12.1	-0.1
VLX				AML	AML	11 51 14.5	
	comp=N,10627μm,0.4s						
VLX				AML	AML	11 51 18.7	
	comp=E,17350μm,0.5s						
VIL2	Platees	0.92	91	P	Pn	11 51 01.1	-0.5
VIL2				AML	AML	11 51 17.1	
	comp=N,11018μm,0.6s						
VIL2				AML	AML	11 51 20.2	
	comp=E,14352μm,0.8s						
VILL	Villia	0.96	94	P	Pg	11 51 00.7	-0.6
VILL				S	Sn	11 51 15.2	-0.6
	comp=E,7μm,0.7s						
EPID	Epidavros	1.02	127	P	Pg	11 51 01.7	-0.7
KFL	Anninata	1.04	263	P	Pb	11 51 02.7	-0.2
ITM	Ithomi	1.06	188	P	Pg	11 51 02.1	-1.2
ITM				S	Sn	11 51 18.6	+0.2
	comp=E,2μm,0.4s						
ITM	Ithomi	1.06	188	P	Pg	11 51 02.2	-1.2
ITM				AML	AML	11 51 22.5	
	comp=N,4065μm,0.4s						
ITM				AML	AML	11 51 25.2	
	comp=E,3295μm,0.3s						
SMIA	Simia	1.08	53	P	Pg	11 51 02.8	-0.8
SMIA				S	Sn	11 51 18.2	-0.6
	comp=E,3μm,0.6s						
SMIA	Simia	1.08	53	P	Pb	11 51 03.2	-0.3
DID	Didima	1.16	129	P	Pg	11 51 04.2	-0.9
DID				AML	AML	11 51 23.1	
	comp=E,6550μm,0.5s						
DID				AML	AML	11 51 23.9	
	comp=N,5070μm,0.3s						
KRND	KRANIDI	1.19	135	P	Pg	11 51 04.9	-0.8
KRND				S	Sn	11 51 22.5	+1.1
	comp=N,3μm,0.5s						
KRND	KRANIDI	1.19	135	P	Pg	11 51 04.8	-0.9
KRND				S	Sb	11 51 20.7	0.0
KRND				AML	AML	11 51 25.0	
	comp=N,4690μm,0.4s						
KRND				AML	AML	11 51 26.0	
	comp=E,6981μm,0.5s						
VLS	Valsamata	1.19	268	P	Pg	11 51 04.3	-1.5
EVGI	Lefkada island	1.20	289	P	Pb	11 51 05.3	-0.3
FSK	Fiskardo	1.23	281	P	Pn	11 51 05.1	-0.8
MRKA	Markates	1.26	68	P	Pb	11 51 06.2	-0.3
MRKA				S	Sn	11 51 23.4	+0.2
	comp=E,958nm,0.7s						
MRKA	Markates	1.26	68	P	Pb	11 51 06.3	-0.3
LKD2	Lefkada island	1.26	296	P	Pn	11 51 06.0	-0.4
TSLK	Tsoukalades, L	1.28	298	P	Pg	11 51 06.9	-0.5
ATH	Athens Observa	1.30	101	P	Pb	11 51 07.0	-0.3
ATH				AML	AML	11 51 29.5	
	comp=E,3336μm,0.7s						
ATH				AML	AML	11 51 32.5	
	comp=N,2481μm,0.5s						
THL	Klokotos Trika	1.33	357	P	Pg	11 51 08.0	-0.4
THL				S	Sn	11 51 26.5	+1.6
	comp=N,548nm,0.9s						
THL	Klokotos Trika	1.33	357	P	Pg	11 51 07.9	-0.5
FYTO	Fytoko, Volos	1.34	29	P	Pn	11 51 07.2	-0.2
ATHU	Athens Univers	1.35	101	P	Pn	11 51 07.4	-0.2
PYL	PYLOS	1.37	192	P	Pn	11 51 07.4	-0.4
PYL				S	Sg	11 51 27.8	+0.9
	comp=N,1μm,0.6s						
PYL	PYLOS	1.37	192	P	Pn	11 51 07.6	-0.2
NEO	Neokhori	1.38	39	P	Pn	11 51 08.0	-0.1
VLY	Voula,Athens	1.39	106	P	Pn	11 51 08.1	0.0
PTL	Penteli	1.40	97	P	Pn	11 51 08.1	-0.2
PTL				S	Sg	11 51 27.4	-0.6
	comp=N,1μm,0.7s						
PTL	Penteli	1.40	97	P	Pn	11 51 08.3	0.0
PTL				AML	AML	11 51 30.1	
	comp=E,2558μm,0.7s						
PTL				AML	AML	11 51 33.0	
	comp=N,1812μm,0.8s						
XOR	Xorichti	1.41	37	P	Pn	11 51 08.4	-0.1
XOR	Xorichti	1.41	37	P	Pn	11 51 08.4	-0.1
SKIA	Skiathos	1.41	49	P	Pn	11 51 08.3	-0.1
EREA	Eretria	1.45	82	P	Pn	11 51 09.1	+0.1
EREA				S	Sg	11 51 28.8	-0.7
	comp=N,1μm,0.4s						
EREA	Eretria	1.45	82	P	Pb	11 51 09.2	-0.6
EREA				AML	AML	11 51 33.2	
	comp=N,2156μm,0.4s						
EREA				AML	AML	11 51 34.8	
	comp=E,2881μm,0.4s						
DION	Dionisos Attik	1.45	96	P	Pb	11 51 09.3	-0.5
DION				S	Sg	11 51 29.0	-0.6
	comp=E,808nm,0.5s						
DION	Dionisos Attik	1.45	96	P	Pb	11 51 09.4	-0.5
DION				AML	AML	11 51 30.8	
	comp=N,1209μm,0.7s						
DION				AML	AML	11 51 34.2	
	comp=E,2008μm,0.3s						
VLI	Veliai	1.66	156	P	Pn	11 51 11.9	+0.2
VLI	Veliai	1.66	156	P	Pn	11 51 12.1	+0.3
MEV	Metsovon	1.69	337	P	Pg	11 51 14.5	-0.8
KARY	Karystos	1.85	96	P	Pb	11 51 16.0	-0.6
LIT	Litokhoron	1.89	9	P	Pn	11 51 15.3	+0.4
IGT	Igoumenitsa	1.89	314	P	Pb	11 51 17.8	+0.4
KTHA	Kythira Island	2.12	159	P	Pn	11 51 19.2	+1.1
KEK	Kerkira	2.32	310	P	Pb	11 51 23.1	-1.6
ANKY	Antikythira Is	2.55	158	P	Pn	11 51 25.0	+1.0
APE	Apeiranthos	2.96	112	⇑iP	Pn	11 51 32.3	+2.6
APE	Apeiranthos	2.96	112	S	Sn	11 52 05.3	+0.1
OHR	Ohrid	3.04	341	i Pn	Pb	11 51 38.3	+1.3
VAY	Valandovo	3.10	7	i Pn	Pn	11 51 32.3	+0.7
IMMV	Iera Moni Meta	3.15	151	P	Pn	11 51 33.9	+1.6
VAM	Vamos	3.29	149	P	Pn	11 51 34.6	+0.4
TIR	Tirane	3.55	332	⇑iP	Pb	11 51 42.6	-3.1
MMB	Musomiste	3.57	20	eP	Pn	11 51 39.1	+0.9
IDI	Anoyia	3.70	142	Pn	Pn	11 51 40.7	+0.8
	comp=E,1.9nm,0.3s,baz=315,slow=16,SNR=13						
IDI				Sn	Sn	11 52 23.4	-0.1
	comp=E,5.2nm,0.3s,baz=82,slow=23,SNR=7.2						
KKB	Krupnik	3.70	11	eP	Pb	11 51 44.6	-3.6
SKO	Skopje	3.77	352	i Pn	Pn	11 51 44.4	+3.6
RZN	Rozhen	3.99	29	eP	Pn	11 51 44.5	+0.5
KDZ	Kurdzhali	4.25	36	eP	Pn	11 51 46.3	-1.2
TIP	Timpagrande	4.29	284	⇓iP	Pb	11 51 54.5	-3.7
TIP	Timpagrande	4.29	284	S	Sb	11 52 47.1	-2.8
VTS	Vitosha	4.46	11	⇑iP	Pn	11 51 51.7	+1.2
VTS	Vitosha	4.46	11	S	Sn	11 52 41.7	-0.7
VTS	Vitosha	4.46	11	eP	Pn	11 51 54.0	+3.5
PDG	Podgorica	4.72	333	⇑iP	Pn	11 51 57.3	+3.4
PDG	Podgorica	4.72	333	S	Sn	11 52 53.3	+4.8
MATE	Matera	4.82	302	⇑iP	Pn	11 52 00.9	+5.6
DBRK	Dubrovnik	5.36	327	Sn	Sn	11 53 05.4	+1.1
BLKB	Belogradchik	5.40	4	⇑iP	Pn	11 52 05.8	+2.6
BLKB	Belogradchik	5.40	4	S	Sn	11 53 05.1	-0.2
ELND	Elena	5.50	30	⇑iP	Pn	11 51 59.1	-5.5
STON	Ston	5.72	325	Sn	Sn	11 53 12.2	-0.8
GZR	Gura Zlata	7.17	4	⇑iP	Pn	11 52 29.5	+1.9
ZIRJ	Zirje	7.29	320	ePn	Pn	11 52 31.1	+1.9
ZIRJ				Sn	Sn	11 53 51.4	-0.4
MORI	Morici	7.41	321	ePn	Pn	11 52 32.5	+1.7
MORI				Sn	Sn	11 53 55.5	+0.6
VOIR		7.52	16	⇑iP	Pn	11 52 34.5	+2.1
MLR	Muntele Rosu	7.79	20	Pn	Pn	11 52 37.6	+1.4
	comp=E,0.2nm,0.3s,baz=208,slow=23,SNR=3.1						
MLR	Muntele Rosu	7.79	20	⇑iP	Pn	11 52 38.5	+2.3
DUGI	Dugi Otok	7.83	319	i Pn	Pn	11 52 39.0	+2.4
DUGI				Sn	Sn	11 54 05.1	-0.1
BRTR	Keskin Array B	9.11	77	Pn	Pn	11 52 57.0	+2.8
	comp=E,0.6nm,0.3s,baz=260,slow=12,SNR=23						
VYHS	Vyhne	10.52	348	ePN	Pn	11 53 04.9	-8.6
ESDC	Sonseca Array	20.30	282	P	P	11 55 19.3	+0.6
	comp=E,1.1nm,0.8s,baz=81,slow=14,SNR=7.9						
FINES	FINESS Array B	23.36	5	P	P	11 55 52.3	+1.4
	comp=E,2.4nm,1.0s,baz=306,slow=6.4,SNR=2.5						
NOA	NORSAR Array B	23.82	347	P	P	11 55 55.9	+0.4
	comp=E,0.7nm,0.8s,baz=161,slow=8.5,SNR=2.9						
EKA	Eskdalemuir Ar	24.11	323	P	P	11 55 58.7	+0.4
	comp=E,0.9nm,0.8s,baz=125,slow=9.6,SNR=3.4						
KIRV	Kirov	26.94	32	LR	LR	12 08 50.4	
	comp=E,24nm,20.3s,baz=197,slow=40						
TORD	Torodi Ar. Bea	30.88	221	P	P	11 57 00.2	+0.9
	comp=E,0.9nm,0.9s,baz=10,slow=11,SNR=4.4						
MKAR	Makanchi Array	44.21	59	P	P	11 58 51.5	-0.2
	comp=E,1.4nm,0.5s,baz=280,slow=7.0,SNR=15						
ZALV	Zalesovo Beam	44.72	48	P	P	11 58 55.4	-0.3
	comp=E,1.8nm,0.5s,baz=270,slow=11,SNR=6.1						
SONM	Songino Array	59.45	51	P	P	12 00 45.1	-0.5
	comp=E,0.5nm,0.6s,baz=266,slow=5.8,SNR=2.7						
ASAR	Alice Springs	120.94	97	PKP	PKPdf	12 09 35.3	-0.2
	comp=E,0.1nm,0.3s,baz=339,slow=2.3,SNR=2.6						

IDC 14 11:50:47.9±999.0**,2°.88S**×**77°.54W,h0^{km},Error ellipse: s-maj=1342.0km s-min=267.1km az=139.0, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I08BO	LAS PENAS INFR	15.98	147	i		13 31 00.0	
	baz=325,slow=324,SNR=21						
I41PY	VILLA FLORIDA	30.35	142	i		14 57 20.0	
	baz=316,slow=300,SNR=4.3						
I09BR	BRASILIA INFRA	31.72	115	i		15 03 55.0	
	baz=290,slow=320,SNR=8.9						

WEL 14 12:00:53.6,42°.7S±1°.0×**17°3E**±°**,h35^{km}**±1^{km}**,M3.6**/24**, ML3.8**/18**,MLv3.6**/24**,Error ellipse: s-maj=0.0km s-min=0.0km az=80.8,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTZ	Lake Taylor	0.27	259	P	Pb	12 01 01.5	+0.3
LTZ				S	Sb	12 01 07.9	+1.6
GVZ	Greta Valley S	0.38	128	P	Pn	12 01 02.9	+0.2
GVZ				S	Sb	12 01 10.5	+1.6
AMCZ	Amberley	0.45	177	P	Pn	12 01 04.0	+0.5
AMCZ				S	Sn	12 01 12.5	+2.2
EYCZ	Eyrewell	0.72	196	P	Pn	12 01 07.2	-0.1
OXZ	Oxford	0.73	216	P	Pn	12 01 07.2	-0.3
OXZ				S	Sb	12 01 18.3	+0.4
KHZ	Kahutara	0.74	65	P	Pb	12 01 08.2	0.0
CRLZ	Canterbury Las	0.84	180	P	Pb	12 01 09.6	-0.4
INZ	Inchbonnie	0.87	270	P	Pb	12 01 11.0	+0.7
MQZ	McQueen's Vall	0.98	179	P	Pn	12 01 10.3	-0.5
THZ	Tophouse	0.99	12	P	Pn	12 01 11.5	+0.4
OKCZ	Okains Bay	1.04	162	P	Pn	12 01 11.7	-0.1
DSZ	Denniston Nort	1.16	328	P	Pb	12 01 15.4	+0.2
AKCZ	Akaroa Harbour	1.16	170	P	Pn	12 01 14.2	+0.8
BSWZ	Blackbirch Sta	1.38	43	P	Pb	12 01 18.2	-0.6
WVZ	Waitaha Valley	1.43	255	P	Pn	12 01 18.0	+1.0
RPZ	Rata Peaks	1.51	229	P	Pn	12 01 18.4	+0.2
NNZ	Nelson	1.61	21	P	Pn	12 01 21.0	+1.5
TUWZ	Tuamarina	1.63	38	P	Pb	12 01 21.7	-1.3
QRZ	Quartz Range	1.90	358	P	Pn	12 01 25.4	+1.8
TCW	Tory Channel	1.96	40	P	Pn	12 01 25.7	+1.4
DUWZ	D'Urville Isla	2.16	27	P	Pb	12 01 29.6	-2.4
FOZ	Fox Glacier	2.21	248	P	Pn	12 01 29.8	+2.1
LBZ	Lake Benmore	2.42	226	P	Pn	12 01 31.7	+1.0
CAW	Cannon Point	2.44	49	P	Pn	12 01 31.5	+0.5
MTW	Mount Morrison	2.66	55	P	Pn	12 01 34.5	+0.5
OGWZ	Otaki Gorge	2.70	46	P	Pn	12 01 35.2	+0.7
ODZ	Otahua Downs	2.72	211	P	Pn	12 01 34.2	-0.6
HOWZ	Holdsworth Sta	2.83	51	P	Pn	12 01 36.7	+0.3
MRZ	Mangatainoka R	3.03	48	P	Pn	12 01 39.1	0.0
JCZ	Jackson Bay	3.10	243	P	Pn	12 01 41.3	+1.1
POWZ	Post Office Ro	3.32	46	P	Pn	12 01 43.6	+0.5
WKZ	Wanaka	3.35	230	P	Pn	12 01 43.7	+0.2
EAZ	Earnscleugh	3.46	223	P	Pn	12 01 45.1	+0.1
PKE	Pukeiti	3.68	17	P	Pn	12 01 51.1	+3.1
TUZ	Tuapeka	3.87	213	P	Pn	12 01 51.2	+0.6
MSZ	Milford Sound	3.92	239	P	Pn	12 01 51.2	0.0
VRZ	Vera Road	3.95	25	P	Pn	12 01 54.4	+2.7
BHHZ	Black Hill Sta	4.15	40	P	Pn	12 01 55.3	+0.8
MLZ	Mavora Lakes	4.18	229	P	Pn	12 01 54.8	-0.1
HIZ	Hauiti	4.54	23	P	Pn	12 02 01.5	+1.7
SYZ	Scrubby Hill	4.55	212	P	Pn	12 02 00.6	+0.8
WHZ	Wether Hill Ro	4.61	225	P	Pn	12 02 00.3	-0.5
TOZ	Tahuroa Road	5.46	25	P	Pn	12 02 13.6	+1.2
MKAZ	Moumakai	5.95	20	P	Pn	12 02 21.1	+2.0
ETAZ	East Tamaki Re	6.04	18	P	Pn	12 02 22.8	+2.4

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*ISCJB **14** 12:03:19.6±0.3, 14°.27N±0°.03×93°.35W±0°.03, h10^{km}, mb4.1/45, MS3.1/4, Error ellipse: s-maj=5.4km s-min=3.0km az=26.6*

*GCG **14** 12:03:20.3±0.3, 14°.27N×93°.47W, h38^{km}, MD4.4*

*NEIC **14** 12:03:20.4±0.0, 14°.11N×93°.42W, h7^{km}, mb4.1/51, MD4.1(MEX), After MEX.*

*IDC **14** 12:03:20.9±2.4, 14°.75N×92°.89W, h0^{km}, mb3.9/9, mb1 4.2/11, mb1mx4.0/31, mbtmp3.9/11, ML3.5/2, MS3.1/5, Ms1 3.2/5, ms1mx2.9/25, Error ellipse: s-maj=90.5km s-min=16.1km az=37.0*

*MEX **14** 12:03:20.7±0.4, 14°.15N×93°.49W, h14^{km}±8^{km}, MD4.2*

ISC 14 12:03:19.5±0.6**,14°.38N**±0°.05×**93°.41W**±0°.03**,h10^{km},n109,** σ**2^{s}.62**/101**,mb4.1**/46**,MS3.0**/4**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.22	65	ePn	Pg	12 03 42.4	-0.5
THIG				eSn	Sn	12 03 59.0	-0.1
THIG		1.22	65	i P	Pg	12 03 42.5	-0.5
THIG				eS	Sn	12 03 59.1	-0.1
PCIG		1.33	8	ePn	Pg	12 03 44.7	-0.3
PCIG				e		12 04 00.5	
PCIG		1.33	8	eP	Pg	12 03 44.7	-0.3
PCIG				eS	Sg	12 04 03.3	+1.1
STG3	Santiaguito 3,	1.81	79	eP	Pb	12 03 50.8	-1.9
CCIG	Comitan	2.25	33	ePn	Pg	12 04 00.2	-2.5
CCIG				eSn	Sg	12 04 33.1	+1.3
TGIG		2.40	6	ePn	Pb	12 04 01.8	-1.0
TGIG				eSn	Sg	12 04 33.5	-3.1
TGIG		2.40	6	eP	Pb	12 04 00.5	-2.3
TGIG				i S	Sb	12 04 30.3	-2.2
FUG	Fuego 3	2.48	88	eP	Pn	12 03 59.9	-0.3
FUG				eS	Sb	12 04 30.8	-4.2
PCG	Pacaya	2.71	89	eP	Pn	12 04 03.5	+0.1
APG	El Apazote	2.91	77	Pn	Pn	12 04 06.9	+0.8
	13nm,0.3s,baz=282,slow=8.4,SNR=68						
APG				Sn	Sb	12 04 42.5	-5.0
	25nm,0.3s,baz=321,slow=17,SNR=4.1						
HUIG	Huatulco	2.95	298	eP	Pn	12 04 00.9	-5.5
HUIG				eSn	Sn	12 04 38.9	-3.1
HUIG	Huatulco	2.95	298	eP	Pn	12 04 04.8	-1.6
HUIG				eS	Sn	12 04 40.4	-1.6
NBG	Las Nubes	2.97	86	eP	Pb	12 04 09.5	-3.2
CMIG	Matias Romero	3.05	332	Pn	Pb	12 04 09.7	-4.1
	4.5nm,0.3s,baz=157,slow=13,SNR=66						
CMIG				Sn	Sb	12 04 46.9	-4.2
	18nm,0.3s,baz=108,slow=7.6,SNR=6.5						
CMIG	Matias Romero	3.05	332	ePn	Pb	12 04 09.8	-4.0
CMIG				eSn	Sb	12 04 47.6	-3.5
CMIG	Matias Romero	3.05	332	eP	Pn	12 04 09.2	+1.5
CMIG				i S	Sn	12 04 46.0	+1.7
CSGN	Cosiguina Volc	5.85	103	ePn	Pn	12 04 46.9	+0.5
CSGN				eSn	Sn	12 05 52.8	-0.9
TLIG	Tlapa	5.88	303	ePn	Pn	12 04 50.8	+3.9
TLIG				eSn	Sb	12 06 08.9	-4.0
TGUH	Tegucigalpa,Un	5.96	92	ePn	Pn	12 04 47.6	-0.3
LVIG	Laguna Verde	6.04	332	ePn	Pn	12 04 53.6	+4.6
LVIG				eSn	Sb	12 06 10.4	-6.9
ESTN	Estel	6.95	100	ePn	Pn	12 05 01.9	+0.3
ESTN				eSg	Sb	12 06 36.3	-7.4
MYIG	Mrida	7.41	28	ePn	Pn	12 05 11.2	+3.4
TEIG	Tepich	7.60	39	ePn	Pn	12 05 10.9	+0.6
ACON	Acoyapa	8.37	106	ePn	Pn	12 05 18.1	-2.9
JTS	Las Juntas de	9.21	115	Pn	Pn	12 05 34.2	+1.7
	0.4nm,0.3s,baz=12,slow=18,SNR=2.8						
JTS	Las Juntas de	9.21	115	ePn	Pn	12 05 35.8	+3.4
LNIG	Linares	11.91	332	ePn	Pn	12 06 15.9	+6.3
833A	Chaparral WMA,	14.95	339	eP	P	12 06 56.5	0.0
	13nm,0.6s						
HKT	Hockley	15.65	352	eP	P	12 07 03.6	-0.7
	13nm,1.5s						
435B	Jarrell	16.77	347	eP	P	12 07 16.8	0.0
	10nm,1.0s						
JCT	Junction City	17.07	341	eP	P	12 07 21.6	+1.5
	9.5nm,1.1s						
H06E1	SOCORRO T-PHAS	17.35	287	T	T	12 25 26.3	
LTX	Lajitas	17.65	329	eP	P	12 07 29.5	+2.9
TXAR	Lajitas Array	17.65	329	Pn	P	12 07 29.5	+2.9
	0.1nm,0.3s,baz=153,slow=14,SNR=16						
TXAR				LR	LR	12 14 58.0	
	comp=Z,58nm,18.4s,baz=0.0,slow=40						
TX31	Lajitas Ar. Si	17.65	329	eP	P	12 07 30.4	+3.8
	6.9nm,1.2s						
WLAR	White Oak Lake	19.22	1	eP	Pn	12 07 48.4	+3.6
	9.5nm,0.9s						
SMLC	San Martn de	19.73	104	eP	Pn	12 07 53.7	+2.7
GUY2C	Guyana, Caldas	19.95	115	eP	Pn	12 07 54.8	+0.7
MIAR	Mount Ida	20.07	360	eP	Pn	12 07 58.5	+3.5
	7.1nm,0.8s						
X37A	Clayton	20.20	355	eP	Pn	12 08 00.3	+4.0
	7.4nm,0.8s						
NORC	Norcasia	20.23	114	eP	P	12 07 50.6	-4.5
POPC	Popayan, Colom	20.28	124	eP	Pn	12 07 55.7	-2.1
MNTX	Cornudas Mount	20.43	330	eP	Pn	12 08 02.5	+3.4
ROSC	El Rosal	21.05	115	P	P	12 08 07.2	+2.9
	4.0nm,0.6s,baz=281,slow=19,SNR=3.9						
ROSC	El Rosal	21.05	115	eP	P	12 08 05.7	+1.4
	14nm,1.4s						
PRAC	Prado	21.11	118	eP	P	12 08 07.4	+2.8
MSTX	Muleshoe	21.27	338	eP	P	12 08 09.9	+3.7
	6.7nm,1.0s						
BARC	Barichara	21.32	109	eP	P	12 08 10.1	+3.0
FCAR	Ozark Folk Cen	21.45	3	eP	P	12 08 11.6	+3.6
	6.8nm,0.8s						
CHIC	Chingaza	21.67	115	eP	P	12 08 11.6	+0.7
RUSC	La Rusia	21.69	111	eP	P	12 08 11.6	+0.3
AMTX	Amarillo	21.73	341	eP	P	12 08 12.8	+1.7
	14nm,0.6s						
HHAR	Hobbs	21.81	359	eP	P	12 08 14.5	+2.6
	4.6nm,0.9s						
319A	Douglas	22.31	322	eP	P	12 08 20.8	+3.3
	4.6nm,0.9s						
PBMO	Poplar Bluff	22.46	6	eP	P	12 08 19.7	+0.9
	8.6nm,0.8s						
SDV	Santo Domingo	22.95	101	P	P	12 08 24.4	-0.1
	5.0nm,0.6s,baz=303,slow=6.9,SNR=7.7						
SDV	Santo Domingo	22.95	101	eP	P	12 08 24.9	+0.4
	6.8nm,0.8s						
BNM	Barren Site	23.03	331	eP	P	12 08 28.8	+3.6
LENM	Lemitar	23.21	330	eP	P	12 08 31.7	+4.8
LAZ	Ladron	23.48	330	eP	P	12 08 30.8	+1.1
ANMO	Albuquerque	23.61	332	P	P	12 08 33.5	+2.6
	1.6nm,0.8s,baz=143,slow=11,SNR=9.2						
ANMO				LR	LR	12 18 47.7	
	comp=Z,43nm,19.4s,baz=160,slow=39						
ANMO	Albuquerque	23.61	332	eP	P	12 08 33.2	+2.2
	3.7nm,0.9s						
CCM	Cathedral Cave	23.66	4	eP	P	12 08 31.0	-0.1
	6.6nm,0.8s						
TUC	Tucson	23.88	321	eP	P	12 08 37.5	+4.1

	6.2nm,1.0s						
T25A	Trinidad	24.70	339	*e*P	P	12 08 44.8	+3.7
	6.7nm,0.9s						
SDCO	Great Sand Dun	25.63	337	*e*P	P	12 08 52.5	+2.9
	6.0nm,1.1s						
Y14A	Wickenburg	26.34	321	*e*P	P	12 09 02.1	+6.2
	2.9nm,1.0s						
MVCO	Mesa Verde	26.41	332	*e*P	P	12 08 59.6	+3.0
	4.8nm,0.9s						
SJG	San Juan	26.42	78	LR	LR	12 18 41.5	
	comp=Z,39nm,21.6s,baz=246,slow=36						
WUAZ	Wupatki	26.52	326	*e*P	P	12 09 00.4	+2.8
	3.0nm,0.8s						
SZCU	Shurtz Canyon	28.99	326	*e*P	P	12 09 22.4	+2.7
	3.7nm,1.2s						
CCUT	Cedar City	29.10	326	*e*P	P	12 09 24.6	+3.9
	2.7nm,1.1s						
PDAR	Pinedale Array	31.52	337	P	P	12 09 42.9	+0.8
	0.3nm,0.5s,baz=141,slow=7.3,SNR=4.3						
NV11	Mina Array Sit	32.44	322	*e*P	P	12 09 54.0	+3.9
	0.2nm,0.9s						
ELK	Elko	32.44	328	P	P	12 09 53.9	+3.7
	1.1nm,0.7s,baz=95,slow=4.4,SNR=6.8						
ELK	Elko	32.44	328	*e*P	P	12 09 53.7	+3.5
	1.6nm,0.8s						
NVAR	Mina Array Bea	32.53	322	P	P	12 09 54.9	+4.0
	1.8nm,0.8s,baz=142,slow=8.3,SNR=17						
SNOW	Snow King Moun	32.58	336	*e*P	P	12 09 54.1	+2.8
	7.8nm,0.9s						
LOHW	Long Hollow	32.64	337	*e*P	P	12 09 54.5	+2.6
	2.7nm,0.8s						
TPAW	Teton Pass	32.67	336	*e*P	P	12 09 55.8	+3.6
	3.8nm,1.0s						
MOOW	Moose Ponds	32.81	337	*e*P	P	12 09 56.1	+2.7
	2.3nm,1.1s						
KVN	Kaiserville	32.81	323	*e*P	P	12 09 57.8	+4.4
	5.8nm,1.5s						
FXWY	Fox Creek	32.83	336	*e*P	P	12 09 56.0	+2.4
	2.1nm,1.0s						
IMW	Indian Meadow	33.01	336	*e*P	P	12 09 58.7	+3.5
	1.6nm,0.8s						
RLMT	Red Lodge	33.46	339	*e*P	P	12 10 00.7	+1.7
	1.5nm,0.6s						
GCMT	Greycliff	34.18	340	*e*P	P	12 10 05.7	+0.5
HLID	Hailey	34.20	332	*e*P	P	12 10 08.1	+2.7
	2.4nm,0.9s						
MCMT	McKenzie Canyo	34.55	335	*e*P	P	12 10 12.0	+3.5
DLMT	Dillon	34.89	336	*e*P	P	12 10 15.0	+3.7
	2.8nm,0.8s						
HRY	Holter Researc	35.73	338	*e*P	P	12 10 20.9	+2.4
J08A	Circle Bar Ran	35.99	328	*e*P	P	12 10 23.5	+2.7
	3.9nm,0.8s						
PLID	Pearl Lake	36.10	332	*e*P	P	12 10 24.3	+2.5
	3.3nm,0.9s						
PTGA	Pitinga	36.34	112	P	P	12 10 24.3	+0.3
	2.3nm,0.5s,baz=293,slow=6.1,SNR=6.2						
MSO	Missoula	36.63	336	*e*P	P	12 10 28.8	+2.7
	2.8nm,1.0s						
F10A	Beach Ranch, E	37.33	332	*e*P	P	12 10 34.1	+2.0
	5.2nm,0.8s						
COR	Corvallis	39.38	326	*e*P	P	12 10 51.9	+2.6
	51nm,1.3s						
LPAZ	La Paz	39.40	140	LR	LR	12 26 20.5	
	comp=Z,20nm,18.1s,baz=252,slow=35						
LPAZ	La Paz	39.40	140	*e*P	P	12 10 48.3	-2.1
	1.2nm,1.0s						
YKA	Yellowknife Ar	50.35	347	P	P	12 12 17.4	+1.0
	4.0nm,0.7s,baz=154,slow=7.2,SNR=13						
YKB5	Yellowknife Ar	50.35	347	*e*P	P	12 12 17.4	+1.0
DLBC	Dease Lake	51.76	336	*e*P	P	12 12 30.4	+3.3
	6.3nm,1.3s						
DOT	Dot Lake	60.33	337	*e*P	P	12 13 30.2	+1.8
	3.2nm,1.0s						
ILAR	Eielson Array	61.95	337	P	P	12 13 40.9	+1.6
	1.3nm,1.0s,baz=143,slow=4.6,SNR=12						
RND	Reindeer	62.11	335	*e*P	P	12 13 42.6	+2.1
	5.5nm,0.9s						
MLY	Manley	63.54	336	*e*P	P	12 13 50.8	+0.8
	1.9nm,0.8s						
ESDC	Sonseca Array	80.55	51	P	P	12 15 30.6	-1.8
	0.4nm,0.6s,baz=286,slow=5.7,SNR=6.0						
NOA	NORSAR Array B	84.46	28	LR	LR	12 53 00.3	
	comp=Z,15nm,18.1s,baz=85,slow=36						
CMAR	Chiang Mai Arr	145.17	339	PKPbc	PKPdf	12 22 58.5	+0.1
	1.6nm,0.7s,baz=333,slow=3.8,SNR=8.3						

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*NEIC **14** 12:14:42.4±0.0, 16°.19N×97°.32W, h14^{km}, MD4.0(MEX), After MEX.*

MEX 14 12:14:42.2±0.8**, 16°.19N×97°.32W, h24**^{km}±19^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	Vista Hermosa	1.04	32	*e*Pn	Pn	12 14 58.4	-3.1
VHO				*e*Sg	Sb	12 15 11.9	-3.2
VHO	Vista Hermosa	1.04	32	*e*P	Pn	12 14 58.3	-3.2
VHO				*e*S	Sb	12 15 11.9	-3.2
TLIG	Tlapa	1.82	319	*e*Pn	Pn	12 15 12.6	+0.5
TLIG				*e*Sn	Sn	12 15 35.5	+1.0
TLIG	Tlapa	1.82	319	*e*P	Pn	12 15 10.4	-1.7
TLIG				*e*S	Sn	12 15 30.9	-3.6
LVIG	Laguna Verde	3.62	14	*e*Pn	Pn	12 15 39.9	+3.1
CCIG	Comitan	4.98	88	*e*Pn	Pn	12 15 56.3	+0.7
TEIG	Tepich	9.48	64	*e*Pn	Pn	12 16 54.9	-2.4
HDC	Heredia	14.25	114	*e*Pn	Pn	12 18 05.9	+3.2
BNM	Barren Site	19.75	337	*e*P	Pn	12 19 13.2	+0.9

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*ISCJB **14** 12:40:15.9±0.5, 40°.73N±0°.03×34°.09E±0°.04, h5^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=4.5km az=11.6*

*DDA **14** 12:40:15.1, 40°.71N×34°.14E, h7^{km}±2^{km}, ML2.5*

*ISK **14** 12:40:15.3, 40°.74N×34°.06E, h6^{km}, ML2.4/7*

ISC 14 12:40:15.4±1.1**, 40°.73N**±0°.03×**34°.09E**±0°.03**, h9**^{km}±12^{km}**, n15, σ0^{s}.50**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOS	Tosya	0.31	350	PG	Pg	12 40 21.9	+0.3
TOS				SG	Sg	12 40 26.3	+0.6
CANT	Cankiri	0.38	251	PG	Pg	12 40 22.4	-0.5
ILGA	Ilgaz	0.43	319	*i* P	Pb	12 40 25.0	-0.2
ILGA				*i* S	Sb	12 40 31.2	-0.7
ILGA				IAML_P			
	comp=Z,943nm,0.1s						
KAGI	orum-Kargı	0.50	36	*i* P	Pb	12 40 26.0	-0.4
KAGI				*i* S	Sb	12 40 32.8	-1.0
KAGI				IAML_P			
	comp=Z,1μm,0.1s						
ELDT	Eldivan	0.56	245	*i* P	Pb	12 40 27.5	+0.1
ELDT				*i* S	Sb	12 40 35.1	-0.5
ELDT				IAML_P			
	comp=Z,2μm,0.2s						
CORM	Corum	0.69	143	PG	Pb	12 40 29.4	-0.2
CORM				SG	Sb	12 40 39.8	+0.6
DELI	KIRIKKALE	0.74	190	*i* P	Pg	12 40 29.9	+0.1
DELI				*i* S	Sg	12 40 39.5	0.0
CDAG	Cicekdag	1.13	169	*i* P	Pg	12 40 36.8	-0.2
CDAG				*i* S	Sb	12 40 52.2	+0.4
CDAG				IAML_P			
	comp=Z,300nm,0.1s						
HAVZ	Havza	1.28	74	*i* P	Pb	12 40 39.6	0.0
HAVZ				IAML_P			
	comp=Z,496nm,0.2s						
ANTO	Ankara	1.31	229	PN	Pg	12 40 40.8	+0.2
YOZ	Yozgat	1.44	139	PN	Pg	12 40 42.5	-0.5
KIRS	Kırehir-Merke	1.60	185	*i* P	Pg	12 40 45.8	-0.3
KIRS				*i* S	Sg	12 41 06.7	-0.2
KIRS				IAML_P			
	comp=Z,178nm,0.2s						
SIRC	Yozgat	1.61	149	*i* P	Pb	12 40 45.0	-0.3
SIRC				*i* S	Sg	12 41 06.8	-0.4
SIRC				IAML_P			
	comp=Z,204nm,0.2s						
YAYX	Yaylak	1.80	187	PN	Pn	12 40 47.6	+0.9
KULU	Kulu	1.88	207	PN	Pb	12 40 49.3	-0.7

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*IDC **14** 12:44:54.6±0.8, 34°.54N×90°.95E, h0^{km}, mb3.9/9, mb1 3.9/12, mb1mx3.7/37, mbtmp3.7/12, ML3.1/3, MS3.0/6, Ms1 3.0/6, ms1mx2.7/32, Error ellipse: s-maj=28.1km s-min=17.6km az=48.0*

*NEIC **14** 12:44:59.0±1.4, 34°.64N×91°.08E, h24^{km}±6^{km}, mb4.0/3, Error ellipse: s-maj=23.9km s-min=12.2km az=73.0*

ISC 14 12:44:55.6±0.6**, 34°.47N**±0°.07×**90°.8E**±0°.1**, h10**^{km}**, n32, σ2^{s}.26**/28**, mb3.9**/12**, MS3.1**/3**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	4.76	176	*e*Pn	Pb	12 46 21.7	+2.1
LSA				*e*Pg	Pg	12 46 23.2	-3.7
MK32	Makanchi Array	13.89	335	*e*Pn	Pn	12 48 07.9	-4.6
MKAR	Makanchi Array	13.89	335	Pn	Pn	12 48 07.9	-4.6
	0.1nm,0.3s,baz=122,slow=14,SNR=2.7						
MKAR				LR	LR	12 54 35.4	
	comp=Z,39nm,18.1s,baz=119,slow=42						
AAK	Ala-Archa	15.13	307	LR	LR	12 55 04.8	
	comp=Z,72nm,19.7s,baz=118,slow=40						
CMAR	Chiang Mai Arr	17.52	153	LR	LR	12 56 23.3	
	comp=Z,17nm,20.9s,baz=100,slow=39						
SONA0	Songino Array	17.73	36	*e*Pn	P	12 49 05.2	+1.7
SONM	Songino Array	17.73	36	P	P	12 49 05.2	+1.7
	0.2nm,0.3s,baz=230,slow=11,SNR=2.7						
KURBB	Kurchatov Arra	18.46	335	P	P	12 49 09.9	-1.5
	0.0nm,0.3s,baz=146,slow=12,SNR=4.2						
ZAA0	Zalesovo Array	19.93	350	*e*P	Pn	12 49 27.0	-2.0
	2.7nm,0.8s						
ZALV	Zalesovo Beam	19.93	350	P	Pn	12 49 27.5	-1.6
	0.3nm,0.3s,baz=172,slow=11,SNR=9.5						
ZAA1	Zalesovo Array	19.93	350	*e*P	Pn	12 49 27.5	-1.6
BVAR	Borovoye Array	23.55	328	P	P	12 50 08.0	+1.9
	0.4nm,0.5s,baz=138,slow=9.3,SNR=4.1						
GEYT	Alibeck	26.53	287	LR	LR	13 03 13.4	
	comp=Z,58nm,19.5s,baz=230,slow=41						
AKTO	Aktyubinsk	28.68	314	LR	LR	13 03 07.0	
	comp=Z,28nm,19.8s,baz=86,slow=38						
KSRS	Korea Array	30.07	73	P	P	12 51 03.9	-1.1
	1.1nm,0.7s,baz=275,slow=9.1,SNR=4.4						
BR101	Keskin Array S	45.24	294	*e*P	P	12 53 15.8	+2.5
BRTR	Keskin Array B	45.24	294	P	P	12 53 15.8	+2.5
	0.3nm,0.4s,baz=86,slow=4.5,SNR=3.6						
MA2	Magadan	45.94	38	P	P	12 53 17.6	-0.7
	3.6nm,0.6s,baz=234,slow=19,SNR=3.9						
AKASG	Malin Array Be	46.78	310	LR	LR	13 14 09.4	
	comp=Z,23nm,21.2s,baz=225,slow=38						
FIA0	FINESS Array S	48.43	324	*e*P	P	12 53 38.8	+1.1
FINES	FINESS Array B	48.43	324	P	P	12 53 38.8	+1.1
	3.4nm,1.0s,baz=91,slow=11,SNR=3.6						
NB200	NORSAR Array S	55.61	325	*e*P	P	12 54 34.8	+3.5
NOA	NORSAR Array B	55.61	325	P	P	12 54 34.8	+3.5
	1.0nm,0.9s,baz=82,slow=7.1,SNR=2.9						
WR1	Warramunga Arr	68.13	136	*e*P	P	12 55 56.6	+0.5
WRA	Warramunga Arr	68.13	136	P	P	12 55 56.6	+0.5
	0.4nm,0.4s,baz=292,slow=7.6,SNR=6.4						
WB2	Warramunga Arr	68.14	136	*e*P	P	12 55 57.4	+1.3
	5.4nm,1.2s						
AS31	Alice Springs	70.84	138	*e*P	P	12 56 13.8	+1.0
	1.0nm,1.0s						
ASAR	Alice Springs	70.84	138	P	P	12 56 13.6	+0.8
	0.9nm,0.8s,baz=331,slow=6.5,SNR=10						
ILAR	Eielson Array	71.35	22	P	P	12 56 15.0	-0.3
	1.0nm,0.9s,baz=299,slow=4.4,SNR=8.4						
TOA1	Torodi Ar. Sit	81.96	280	*e*P	P	12 57 15.6	-0.6
TORD	Torodi Ar. Bea	81.96	280	P	P	12 57 15.6	-0.6
	0.9nm,0.8s,baz=45,slow=4.9,SNR=4.6						
CPUP	Villa Florida	151.43	278	PKPbc	PKiKP	13 04 50.0	-0.5
	2.1nm,0.8s,baz=81,slow=5.3,SNR=3.5						

DJA 14 12:52:18.0±0.7**, 10°S**±4°×**11°4E**±°**, h13**^{km}±5^{km}**, M3.8**/13**, MLv3.8**/13**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.12	5	P	Pb	12 52 36.9	-2.3
JAGI				S	Sb	12 52 52.9	-0.8
IGBI	Denpasar	1.33	55	P	Pn	12 52 41.5	-0.7
IGBI				S	Sb	12 52 59.1	-0.6
DNP	Denpasar	1.46	52	P	Pn	12 52 42.3	-1.8
DNP				S	Sn	12 53 02.5	-0.6
SRBI	Singaraja	1.89	38	P	Pn	12 52 50.2	+0.3
SRBI				S	Sb	12 53 14.9	-0.9
KMMI	Kalianget	2.52	358	P	Pn	12 52 58.1	-0.6
KMMI				S	Sn	12 53 30.9	+1.5
PWJI	Pagerwojo	2.71	305	P	Pn	12 53 00.4	-0.9
PWJI				S	Sn	12 53 32.7	-1.3
GRJI	Gresik	3.08	330	P	Pn	12 53 06.3	-0.1
GRJI				S	Sn	12 53 44.3	+1.2
NGJI	Ngawi	3.38	311	P	Pn	12 53 10.7	+0.2
NGJI				S	Sn	12 53 52.1	+1.6
WOJI	Wonogiri, Jawa	3.55	299	P	Pn	12 53 13.4	+0.6
WOJI				S	Sn	12 53 56.5	+1.9
PLAI	Plampang	3.76	79	P	Pn	12 53 15.8	+0.1
PLAI				S	Sn	12 54 01.4	+1.6
SMRI	Semarang	4.37	305	P	Pn	12 53 24.2	0.0

DJA 14 13:06:12.5±1.8**, 0°N**±5°×**12°5E**±°**, h12**^{km}±15^{km}**, M3.7**/7**, MLv3.7**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	2.44	232	P	Pn	13 06 53.1	+0.9
LUWI				S	Sn	13 07 23.1	+1.1
SANI	Sanana	2.83	153	P	Pn	13 06 58.3	+0.8
SANI				S	Sn	13 07 32.7	+1.1
LBMI	Labuha	3.02	112	P	Pn	13 06 59.6	-0.6
SGSI	Sangihe	3.29	15	P	Pn	13 07 04.3	+0.4
APSI	Ampana	3.34	246	P	Pn	13 07 02.5	-2.1

ARO 14 13:07:29.2, 12°N±170°×**4°5E**±1°4**, h15**^{km}±99^{km}**, Ml3.8, Western Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBO	Obock	1.74	275	*e*P	Pn	13 07 57.5	-1.3
MCAD	Moucha	1.81	267	*e*P	Pn	13 07 58.4	-1.5
ATA	Atar	1.86	259	*e*P	Pn	13 07 58.8	-1.6
TDD	Tadjoura Ara	2.11	270	*e*P	Pn	13 08 02.3	-1.7
ATD	Arta Tunnel	2.19	262	*e*P	Pn	13 08 03.5	-1.6
ATD				*e*S	Sn	13 08 32.0	0.0
ATD	Arta Tunnel	2.19	262	*e*P	Pn	13 08 03.5	-1.7
SGH	Sud-Ghoubbet	2.41	261	*e*P	Pn	13 08 07.0	-1.2
KSDD	Koussour	2.58	264	*e*P	Pn	13 08 09.3	-1.2
GBR	Grand-Bara	2.63	256	*e*P	Pn	13 08 10.8	-0.4
MAOD	Malaho	2.79	276	*e*P	Pn	13 08 12.3	-1.0

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*ISCJB **14** 13:09:38.3±1.3, 19°.9S±0°.3×177°.8W±0°.2, h550^{km}, mb3.8/10, Error ellipse: s-maj=47.9km s-min=13.5km az=158.0*

*IDC **14** 13:09:39.9±3.0, 19°.97S×177°.70W, h559^{km}±31^{km}, mb3.3/10, mb1 3.6/10, mb1mx3.4/21, mbtmp4.2/10, Error ellipse: s-maj=37.9km s-min=11.9km az=157.0*

ISC 14 13:09:39.4±1.4**, 19°.9S**±0°.4×**177°.7W**±0°.2**, h550**^{km}**, n13, σ0^{s}.82**/14**, mb3.7**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	44.10	288	P	P	13 17 00.2	+0.6
	13nm,0.6s,baz=91,slow=4.2,SNR=9.9						
ASAR	Alice Springs	44.91	256	P	P	13 17 05.3	-0.4
	9.0nm,0.8s,baz=88,slow=8.0,SNR=174						
ASAR				S	S	13 23 03.9	-0.2
	1.1nm,0.8s,baz=94,slow=16,SNR=7.6						
WRA	Warramunga Arr	44.95	261	P	P	13 17 05.2	-0.8
	5.9nm,0.5s,baz=92,slow=7.5,SNR=104						
WRA				S	S	13 23 04.3	-0.3
	1.8nm,1.0s,baz=100,slow=13,SNR=2.8						
MJAR	Matsushiro Arr	69.88	323	P	P	13 19 55.5	+0.1
	2.6nm,0.6s,baz=162,slow=5.8,SNR=19						
PETK	Petropavlovsk-	75.76	345	P	P	13 20 28.5	-0.2
	1.5nm,0.7s,baz=148,slow=8.5,SNR=3.3						
NVAR	Mina Array Bea	80.41	43	P	P	13 20 54.6	+0.3
	0.8nm,0.8s,baz=221,slow=11,SNR=6.5						
TXAR	Lajitas Array	86.51	57	P	P	13 21 25.1	+0.5
	0.7nm,0.7s,baz=221,slow=7.3,SNR=13						
ILAR	Eielson Array	87.67	13	P	P	13 21 28.4	-0.7
	0.2nm,0.6s,baz=256,slow=3.6,SNR=3.1						
PDAR	Pinedale Array	88.34	43	P	P	13 21 32.0	-1.1
	0.5nm,0.6s,baz=249,slow=4.1,SNR=5.6						
CMAR	Chiang Mai Arr	90.16	289	P	P	13 21 42.5	+0.7
	0.4nm,0.3s,baz=149,slow=4.0,SNR=3.0						
AKASG	Malin Array Be	142.61	332	PKhKP	PKPpre	13 28 05.8	
	0.7nm,0.3s,baz=44,slow=4.6,SNR=7.0						
BRTR	Keskin Array B	146.62	313	PKPbc	PKPdf	13 28 19.1	+1.7
	0.7nm,0.5s,baz=108,slow=4.0,SNR=4.5						
GERES	GERESS Array B	149.69	345	PKPbc	PKPbc	13 28 26.4	-0.9
	0.1nm,0.3s,baz=64,slow=3.1,SNR=5.6						

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*IDC **14** 13:28:59.5±0.9, 2°.50N×128°.12E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.6/36, mbtmp3.8/7, MS2.9/1, Ms1 2.9/1, ms1mx2.3/29, Error ellipse: s-maj=74.1km s-min=17.1km az=71.0*

*ISCJB **14** 13:29:02.7±0.6, 2°.72N±0°.04×128°.61E±0°.05, h33^{km}, mb3.8/6, MS2.8/1, Error ellipse: s-maj=7.5km s-min=5.5km az=142.4*

*DJA **14** 13:29:04.6±0.9, 3°N±3°×12°8E±°, h26^{km}±9^{km}, M4.2/8, mb4.3/2, MLv4.2/8*

ISC 14 13:29:04.8±0.8**, 2°.70N**±0°.06×**128°.55E**±0°.06**, h35**^{km}**, n19, σ1^{s}.18**/19**, mb3.9**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.25	212	P	Pn	13 29 38.8	-0.8
TNTI				S	Sn	13 30 07.8	+1.6
SGSI	Sangihe	3.17	288	P	Pn	13 29 52.0	-0.3
SGSI				S	Sn	13 30 29.6	+0.6
LBMI	Labuha	3.48	198	P	Pn	13 29 55.9	-0.6
LBMI				S	Sn	13 30 37.7	+1.2
SWI	Sorong	4.46	143	P	Pn	13 30 10.6	+0.7
SWI				S	Sn	13 31 00.4	-0.2
SIJI	Sorong	4.46	143	Pn	Pn	13 30 12.1	+2.0
	baz=156,slow=20						
SIJI				Sn	Sn	13 31 00.3	-0.5
	3.4nm,0.3s,baz=157,slow=22,SNR=6.2						
SANI	Sanana	5.37	209	P	Pn	13 30 23.1	+0.6
SANI				S	Sn	13 31 25.1	+1.9
WRA	Warramunga Arr	23.21	166	P	P	13 34 08.4	-0.4
	1.1nm,0.4s,baz=341,slow=12,SNR=11						
ASAR	Alice Springs	26.72	169	P	P	13 34 39.8	-1.4
	0.3nm,0.5s,baz=350,slow=8.0,SNR=7.6						
ASAR				PcP	PcP	13 38 02.8	-1.4
	0.3nm,0.4s,baz=354,slow=2.0,SNR=8.1						
JHJ	Hachijo jima 2	32.04	18	LR	LR	13 50 41.2	
	comp=Z,18nm,18.3s,baz=70,slow=40						
KSRS	Korea Array	34.59	359	P	P	13 35 51.0	+0.7
	1.2nm,0.5s,baz=177,slow=10,SNR=5.6						
STKA	Stephens Creek	36.55	161	P	P	13 36 05.9	-1.4
	1.8nm,0.7s,baz=323,slow=9.8,SNR=4.6						
H11S3	WAKE ISLAND Hy	40.50	64	T	T	14 20 02.8	
	baz=252,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	40.52	64	T	T	14 19 54.1	
	baz=252,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	40.52	64	T	T	14 19 54.2	
	baz=252,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	41.07	63	T	T	14 20 34.8	
	baz=250,slow=75,SNR=109						
H11N2	WAKE ISLAND Hy	41.09	63	T	T	14 20 35.9	
	baz=250,slow=75,SNR=41						
H11N3	WAKE ISLAND Hy	41.09	63	T	T	14 20 36.2	
	baz=250,slow=75,SNR=113						
SONM	Songino Array	48.86	340	P	P	13 37 48.2	+1.1
	0.5nm,0.4s,baz=153,slow=10,SNR=2.6						
MKAR	Makanchi Array	59.44	325	P	P	13 39 04.2	0.0
	0.5nm,0.5s,baz=125,slow=8.3,SNR=5.8						

MEX 14 13:54:05.6±0.5**, 16°.27N×94°.65W, h90**^{km}±7^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.84	344	*i* P	Pn	13 54 22.3	-1.4
CMIG				*e*S	Sn	13 54 35.5	-1.6
PCIG		1.48	112	*e*P	Pn	13 54 30.0	-1.1
PCIG				*e*S	Sn	13 54 49.3	-1.2
HUIG	Huatulco	1.49	251	*e*P	Pn	13 54 29.4	-1.9
HUIG				*e*S	Sn	13 54 48.8	-1.9
VHO	Vista Hermosa	2.15	292	*i* P	Pn	13 54 39.3	-0.8
VHO				*i* S	Sn	13 55 05.2	-1.1

SJA 14 14:01:42.3±0.5**, 30°.60S×71°.19W, h80**^{km}±7^{km}**, ML4.0, MW4.4, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AROD	Rodeo	1.55	74	*e*P	Pn	14 02 10.4	+1.9
AROD				*e*S	Sn	14 02 31.2	+3.0
ACCO	Cerro Coronel	1.83	90	*e*P	Pn	14 02 14.5	+2.2
RTLS	Leoncito	2.01	127	*e*P	Pn	14 02 16.8	+2.1
RTLS				IAML		14 03 01.1	
	comp=Z,22nm,0.4s						
AMOG	MOGNA	2.34	99	*e*P	Pn	14 02 20.2	+1.4
VCA	Vinchina	3.19	55	*e*P	Pn	14 02 32.1	+1.6
VCA				IAML		14 02 34.9	
	comp=Z,49nm,0.2s						
ACLC	CERRO LA CRUZ	3.86	73	*e*P	Pn	14 02 41.3	+1.9
ACLC				IAML		14 03 35.1	
	comp=Z,54μm,0.5s						

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*IDC **14** 14:19:04.1±7.8, 25°.89N×127°.30E, h0^{km}, mb4.0/4, mb1 4.0/4, mb1mx3.6/36, mbtmp4.0/4, Error ellipse: s-maj=253.4km s-min=119.8km az=20.0*

*ISCJB **14** 14:19:13.4±1.1, 26°.1N±0°.1×126°.84E±0°.07, h60^{km}±6^{km}, mb3.9/4, Error ellipse: s-maj=21.0km s-min=9.9km az=1.6*

*JMA **14** 14:19:13.9±0.3, 26°.01N×126°.90E, h45^{km}±3^{km}, M3.1*

ISC 14 14:19:14.0±1.4**, 26°.1N**±0°.1×**126°.85E**±0°.07**, h53**^{km}±8^{km}**, n11, σ0^{s}.27**/16**, mb4.0**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	Kume jima 2	0.25	348	P	Pn	14 19 22.7	-0.3
JKE				S	Sn	14 19 29.6	+0.2
JAGN	Aguni-jima	0.62	35	P	Pn	14 19 26.8	0.0
JAGN				S	Sn	14 19 36.4	+0.3
JJT3	Tamagusuku3	0.85	86	P	Pn	14 19 29.7	-0.1
JJT3				S	Sn	14 19 41.5	+0.2
JNTH	Nagotoyohara	1.14	68	P	Pn	14 19 33.6	-0.1
JIH	Iheya	1.38	46	P	Pn	14 19 36.9	0.0
JIH				S	Sn	14 19 53.8	-0.3
JOW	Kunigami	1.48	60	P	Pn	14 19 38.6	+0.3
JOW				*e*S	Sn	14 19 56.2	-0.4
JYRO	Yoronjima	1.72	57	P	Pn	14 19 41.6	+0.1
MKAR	Makanchi Array	40.71	312	P	P	14 26 49.9	+0.4
	1.0nm,0.4s,baz=98,slow=9.9,SNR=18						
ZALV	Zalesovo Beam	41.62	323	P	P	14 26 57.0	+0.2
	1.0nm,0.3s,baz=120,slow=9.2,SNR=4.2						
FINES	FINESS Array B	72.37	330	P	P	14 30 33.9	-0.3
	0.7nm,0.4s,baz=72,slow=6.2,SNR=12						
AKASG	Malin Array Be	74.83	319	P	P	14 30 48.7	-0.1
	0.7nm,0.5s,baz=57,slow=7.0,SNR=3.8						

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*ISCJB **14** 14:19:48.8±0.5, 15°.1S±0°.1×173°.80W±0°.10, h10^{km}, mb4.0/11, MS3.7/8, Error ellipse: s-maj=18.0km s-min=13.0km az=160.0*

*IDC **14** 14:19:49.3±1.7, 14°.97S×173°.87W, h0^{km}, mb3.9/6, mb1 4.3/6, mb1mx3.9/29, mbtmp3.9/6, MS3.7/6, Ms1 3.7/6, ms1mx3.3/25, Error ellipse: s-maj=109.5km s-min=22.5km az=151.0*

*NEIC **14** 14:19:50.6±0.4, 15°.09S×173°.76W, h10^{km}, mb4.2/5, Error ellipse: s-maj=16.6km s-min=11.8km az=159.0*

ISC 14 14:19:50.5±0.8**, 15°.1S**±0°.2×**173°.8W**±0°.2**, h10**^{km}**, n34, σ0^{s}.91**/20**, mb4.2**/11**, MS3.8**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.38	138	*e*Pn	Pn	14 21 10.8	-0.1
KNTN	Kanton	12.42	10	*e*Pn	Pn	14 22 38.7	-8.9
PPT2	Papeete2	23.33	99	*e*S	S	14 28 57.9	-14
	63nm,24.5s						
PPT2				*e*LQ	LQ	14 29 30.5	
	450nm,25.0s						
PPT2				*e*LR	LR	14 30 16.8	
	comp=Z,344nm,27.2s						
TBI	Tubuai	24.34	113	*e*LR	LR	14 31 04.5	
	comp=Z,427nm,26.5s						
URZ	Urewera	24.43	198	LR	LR	14 33 52.0	
	comp=Z,369nm,18.0s,baz=14,slow=34						
HNR	Honiara	26.29	279	LR	LR	14 34 14.7	
	comp=Z,91nm,19.1s,baz=74,slow=33						
H11S2	WAKE ISLAND Hy	38.54	329	T	T	15 08 20.5	
	baz=149,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	38.55	329	T	T	15 08 09.3	
	baz=149,slow=76,SNR=9.1						
H11S1	WAKE ISLAND Hy	38.56	329	T	T	15 08 17.5	
	baz=149,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	39.49	331	T	T	15 09 29.4	
	baz=150,slow=76,SNR=4.7						

H11N1	WAKE ISLAND Hy	39.50	331	T	T	15 09 16.4	
	baz=150,slow=76,SNR=6.4						
H11N2	WAKE ISLAND Hy	39.51	331	T	T	15 09 22.8	
	baz=150,slow=76,SNR=5.4						
WR1	Warramunga Arr	49.57	257	eP	P	14 28 42.8	+0.6
WRA	Warramunga Arr	49.57	257	P	P	14 28 42.8	+0.5
	1.8nm,0.8s,baz=91,slow=8.5,SNR=4.1						
AS31	Alice Springs	49.87	252	eP	P	14 28 44.6	+0.1
	2.7nm,1.0s						
ASAR	Alice Springs	49.87	252	P	P	14 28 43.0	-1.5
	4.0nm,0.7s,baz=86,slow=8.1,SNR=47						
MJAR	Matsushiro Arr	68.50	320	LR	LR	14 55 46.9	
	comp=Z,27nm,21.9s,baz=155,slow=32						
TGY	Tagaytay City	70.80	291	LR	LR	14 56 57.5	
	comp=Z,70nm,20.3s,baz=170,slow=32						
NV01	Mina Array Sit	74.35	42	eP	P	14 31 28.4	-0.4
NVAR	Mina Array Bea	74.35	42	P	P	14 31 28.4	-0.4
	0.9nm,0.8s,baz=231,slow=12,SNR=6.3						
NVAR				LR	LR	14 59 37.1	
	comp=Z,51nm,18.8s,baz=202,slow=32						
X16A	Lo Mia Camp, P	76.99	49	eP	P	14 31 43.5	-0.5
	3.2nm,1.1s						
PSUT	Pine Spring	77.35	44	eP	P	14 31 46.1	+0.2
	2.5nm,1.0s						
TMUT	Trail Mountain	79.51	44	eP	P	14 31 58.4	+0.4
	6.3nm,0.9s						
LTX	Lajitas	80.74	56	eP	P	14 32 06.1	+1.5
TXAR	Lajitas Array	80.74	56	P	P	14 32 06.1	+1.5
	0.6nm,0.9s,baz=219,slow=7.0,SNR=6.3						
CCB	Clear Creek Bu	81.95	11	eP	P	14 32 09.3	-0.8
	1.9nm,0.9s						
ILAR	Eielson Array	82.23	11	P	P	14 32 10.8	-0.8
	0.3nm,0.5s,baz=226,slow=6.1,SNR=6.0						
PD31	Pinedale Array	82.29	42	eP	P	14 32 11.8	-0.8
PDAR	Pinedale Array	82.29	42	P	P	14 32 11.8	-0.8
	0.6nm,0.8s,baz=189,slow=5.1,SNR=3.8						
MAW	Mawson	87.95	199	LR	LR	15 11 29.0	
	comp=Z,58nm,18.0s,baz=136,slow=35						
BR101	Keskin Array S	145.72	321	ePKPdf	PKPab	14 39 31.6	+1.1
BRTR	Keskin Array B	145.72	321	PKPbc	PKPab	14 39 31.6	+1.1
	1.2nm,0.8s,baz=135,slow=1.6,SNR=6.7						
GERES	GERESS Array B	145.81	351	PKPbc	PKPdf	14 39 28.6	-1.1
	0.3nm,0.5s,baz=350,slow=4.1,SNR=3.4						
ESDC	Sonseca Array	153.95	18	PKPbc	PKiKP	14 39 51.4	+0.6
	0.2nm,0.6s,baz=285,slow=0.5,SNR=5.0						

SJA 14 14:20:36.7±0.6, 31°.26S×68°.47W, h104^{km}±7^{km}, ML3.2, MW3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.60	186	eP	Pn	14 20 54.5	+0.7
RTCV				eS	Sn	14 21 07.8	+1.2
RTLS	Leoncito	0.89	233	eP	Pn	14 20 58.1	+1.4
RTLS				eS	Sn	14 21 13.5	+1.9
RTLS				IAML		14 21 14.9	
	comp=Z,379nm,0.2s						
AROD	Rodeo	1.39	321	eP	Pn	14 21 03.7	+1.4
AROD				eS	Sn	14 21 23.3	+1.8
ACAN	Cantantal	1.48	133	eP	Pn	14 21 04.1	+1.1
AGUA	GUANDACOL	1.77	359	eP	Pn	14 21 07.7	+1.1
APLL	PUNTA DE LOS L	1.88	63	eP	Pn	14 21 09.2	+1.2
ACLC	CERRO LA CRUZ	2.25	36	eP	Pn	14 21 14.1	+1.3
VCA	Vinchina	2.53	5	eP	Pn	14 21 18.3	+1.9
VCA				IAML		14 21 51.6	
	comp=Z,131nm,0.2s						
MRA	San Martin	2.61	117	eP	Pn	14 21 18.6	+1.1
MRA				IAML		14 21 49.8	
	comp=Z,67nm,0.2s						
TCA	Tanti	3.31	92	eP	Pn	14 21 27.9	+1.1

ISCJB 14 14:21:47.6±0.5, 1°.43S±0°.04×119°.79E±0°.04, h10^{km}, mb3.7/4, Error ellipse: s-maj=6.4km s-min=4.9km az=35.6

IDC 14 14:21:49.5±1.4, 1°.65S×120°.24E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.5/32, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=69.6km s-min=23.0km az=63.0

DJA 14 14:21:49.4±1.2, 1°S±2°×12°0E±°, h16^{km}±14^{km}, M4.3/13, mb4.5/1, mB4.8/1, MLv4.2/13, Mw(mB)4.0/1

ISC 14 14:21:47.9±1.0, 1°.44S±0°.05×119°.78E±0°.04, h10^{km}, n15, σ1^{s}.31/21, mb3.8/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.59	179	P	Pn	14 22 16.2	0.0
TTSI				S	Sn	14 22 38.6	+1.8
APSI	Ampana	1.94	74	P	Pn	14 22 21.9	+1.0
APSI				S	Sn	14 22 47.4	+2.1
SGKI	Sangatta, Kali	2.36	293	P	Pn	14 22 27.2	+0.5
SGKI				S	Sn	14 22 57.0	+1.2
SPSI	Sidrap Palu	2.51	180	P	Pn	14 22 29.7	+1.0
SPSI				S	Sn	14 23 01.4	+2.0
SMKI	Samarinda	2.76	291	P	Pn	14 22 32.1	-0.1
BKB	Balikpapan	2.89	274	P	Pn	14 22 34.4	+0.4
BKB				S	Sn	14 23 10.5	+1.6
BNSI	Bone	2.96	174	P	Pn	14 22 36.1	+1.2
BNSI				S	Sn	14 23 11.9	+1.4
LUWI	Luwuk	3.01	82	P	Pn	14 22 35.6	-0.1
KAPI	Kappang	3.55	181	Pn	Pn	14 22 44.5	+1.4
	3.5nm,0.3s,baz=347,slow=11,SNR=12						
KAPI				Sn	Sb	14 23 32.2	-1.8
	2.9nm,0.3s,baz=60,slow=20,SNR=2.4						
BKSI	Bulukumba	3.87	175	P	Pn	14 22 47.6	+0.1
MTKI	Muara Teweh, K	4.91	276	P	Pn	14 23 02.6	+0.8
WRA	Warramunga Arr	23.25	143	P	P	14 26 54.6	-1.1
	2.2nm,0.6s,baz=316,slow=10,SNR=12						
ASAR	Alice Springs	25.99	149	P	P	14 27 20.1	-1.1
	0.6nm,0.6s,baz=322,slow=8.0,SNR=11						
STKA	Stephens Creek	36.61	148	P	P	14 28 53.3	-1.1
	1.3nm,0.7s,baz=328,slow=15,SNR=2.8						
MKAR	Makanchi Array	58.21	331	P	P	14 31 48.6	+6.3
	0.6nm,0.6s,baz=136,slow=8.1,SNR=6.4						

ISCJB 14 14:25:10.8±0.5, 15°.5S±0°.1×173°.81W±0°.09, h10^{km}, mb4.1/12, MS3.6/3, Error ellipse: s-maj=17.0km s-min=13.0km az=168.5

IDC 14 14:25:10.5±1.5, 15°.58S×173°.59W, h0^{km}, mb3.9/7, mb1 4.3/7, mb1mx4.0/24, mbtmp3.9/7, MS3.4/1, Ms1 3.4/1, ms1mx3.0/18, Error ellipse: s-maj=69.8km s-min=22.7km az=150.0

NEIC 14 14:25:12.3±1.0, 15°.39S×173°.82W, h10^{km}, mb4.5/5, Error ellipse: s-maj=28.2km s-min=11.4km az=154.0

ISC 14 14:25:12.7±0.7, 15°.4S±0°.2×173°.8W±0°.2, h10^{km}, n34, σ0^{s}.88/25, mb4.2/12, MS3.7/3, 2C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.18	135	ePn	Pn	14 26 30.6	+0.4
PPT	Papeete	23.30	99	LR	LR	14 37 07.8	
	comp=Z,102nm,19.4s,baz=298,slow=31						
PPT2	Papeete2	23.30	99	eLQ	LQ	14 34 52.5	
	510nm,28.5s						
PPT2				eLR	LR	14 35 53.0	
	comp=Z,382nm,26.2s						
TBI	Tubuai	24.23	113	eLR	LR	14 36 11.5	
	comp=Z,454nm,30.0s						
H11S2	WAKE ISLAND Hy	38.79	330	T	T	15 13 37.5	
	baz=149,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	38.80	330	T	T	15 13 39.6	
	baz=149,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	38.80	330	T	T	15 13 35.1	
	baz=149,slow=76,SNR=11						
H11N3	WAKE ISLAND Hy	39.74	331	T	T	15 14 50.5	
	baz=150,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	39.75	331	T	T	15 14 50.9	
	baz=150,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	39.76	331	T	T	15 14 51.9	
	baz=150,slow=76,SNR=14						
WR1	Warramunga Arr	49.49	257	eP	P	14 34 02.3	-1.5
WRA	Warramunga Arr	49.49	257	P	P	14 34 02.3	-1.5
	1.5nm,0.9s,baz=88,slow=7.6,SNR=3.7						
AS31	Alice Springs	49.76	252	eP	P	14 34 05.5	-0.3
	3.3nm,1.0s						
ASAR	Alice Springs	49.76	252	P	P	14 34 07.3	+1.5
	7.5nm,0.8s,baz=86,slow=8.2,SNR=39						
PETK	Petropavlovsk-	72.53	342	P	P	14 36 40.5	+0.9
	1.3nm,0.8s,baz=134,slow=6.2,SNR=2.7						
PEA1	Petropavlovsk-	72.53	342	eP	P	14 36 40.5	+0.9
NV01	Mina Array Sit	74.58	42	eP	P	14 36 52.0	-0.3
NVAR	Mina Array Bea	74.58	42	P	P	14 36 52.0	-0.3
	0.6nm,0.8s,baz=228,slow=11,SNR=4.6						
TMUT	Trail Mountain	79.73	44	eP	P	14 37 21.1	-0.3
	3.2nm,0.7s						
LTX	Lajitas	80.92	56	eP	P	14 37 27.2	-0.6
TXAR	Lajitas Array	80.92	56	P	P	14 37 27.2	-0.6
	1.2nm,1.1s,baz=210,slow=7.2,SNR=4.2						
CCB	Clear Creek Bu	82.24	11	eP	P	14 37 34.4	+0.6
	3.1nm,1.0s						
PD31	Pinedale Array	82.52	42	eP	P	14 37 34.6	-1.4
PDAR	Pinedale Array	82.52	42	P	P	14 37 34.6	-1.4
	0.8nm,0.8s,baz=233,slow=4.1,SNR=5.3						
ILAR	Eielson Array	82.53	11	P	P	14 37 35.5	+0.3
	0.2nm,0.5s,baz=224,slow=6.1,SNR=5.4						
LNIG	Linares	82.75	62	eP	P	14 37 36.9	-0.5
	4.7nm,0.9s						
ABTX	Abilene, Hawle	85.36	55	eP	P	14 37 50.3	-0.2
	14nm,1.1s						
VYHS	Vyhne	145.41	345	ePKP	PKPdf	14 44 52.0	+1.0
VYHS				e		14 44 59.7	
KHC	Kasperske Hory	145.84	351	ePKP	PKPab	14 44 53.0	+0.3
GEC2	GERESS Array S	146.10	351	ePKPdf	PKPdf	14 44 51.2	-1.1
GERES	GERESS Array B	146.10	351	PKPbc	PKPbc	14 44 52.9	-0.3
	0.5nm,0.7s,baz=36,slow=2.5,SNR=5.4						
VOIR		146.13	336	⇑iP	PKPab	14 44 54.0	0.0
BZS	Buzias	147.22	340	⇓iP	PKiKP	14 44 59.6	+0.8
ELND	Elena	147.82	332	⇑iP	PKPab	14 45 00.7	+0.2

IDC 14 14:26:19.4±2.2, 16°.71S×178°.52W, h0^{km}, mb3.6/5, mb1 4.0/5, mb1mx3.7/26, mbtmp3.6/5, Error ellipse: s-maj=138.7km s-min=28.3km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.76	258	P	P	14 34 35.4	+0.4
	0.5nm,0.7s,baz=97,slow=6.6,SNR=0.9						
ASAR	Alice Springs	45.02	253	P	P	14 34 36.8	-0.4
	1.3nm,0.6s,baz=89,slow=7.8,SNR=6.4						
ILAR	Eielson Array	84.75	13	P	P	14 38 54.4	-0.7
	0.2nm,0.4s,baz=223,slow=4.8,SNR=4.5						
TXAR	Lajitas Array	85.45	58	P	P	14 39 00.1	+0.6
	0.2nm,0.5s,baz=236,slow=6.4,SNR=2.3						
PDAR	Pinedale Array	86.56	44	P	P	14 39 05.0	+0.1
	0.2nm,0.5s,baz=193,slow=3.7,SNR=2.0						

IDC 14 14:38:30.6±0.6, 35°.96N×68°.75E, h0^{km}, mb4.2/26, mb1 4.4/32, mb1mx4.2/53, mbtmp4.3/32, ML4.5/5, MS3.4/19, Ms1 3.4/19, ms1mx3.3/36, Error ellipse: s-maj=13.6km s-min=10.7km az=171.0

BJI 14 14:38:31.2±0.0, 36°.35N×68°.57E, h13^{km}, mb4.6/35, mB4.7/26, Ms4.1/16, Ms7 3.8/15

NEIC 14 14:38:33.4±2.2, 36°.06N×68°.75E, h16^{km}±14^{km}, mb4.5/35, Error ellipse: s-maj=6.3km s-min=4.6km az=182.0

MOS 14 14:38:34.3±1.4, 36°.19N×68°.87E, h27^{km}, mb4.6/38, Error ellipse: s-maj=5.7km s-min=4.3km az=86.4

ISCJB 14 14:38:34.1±0.2, 36°.13N±0°.02×68°.83E±0°.03, h30^{km}, mb4.4/72, MS3.4/19, Error ellipse: s-maj=3.6km s-min=2.8km az=31.9

NNC 14 14:38:35.0±2.5, 36°.12N×68°.51E, h50^{km}±28^{km}, mb4.7, mpv4.5, Error ellipse: s-maj=28.9km s-min=12.0km az=159.0

ISC 14 14:38:35.3±0.3, 36°.08N±0°.04×68°.70E±0°.03, h30^{km}, n246, σ2^{s}.20/267, mb4.5/72, MS3.3/19, 25C-16D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	1.56	170	ePn	Pn	14 39 02.0	+0.8
KBL	Kabul	1.56	170	ePN	Pn	14 39 02.0	+0.8
GAR	Garm	3.18	23	ePn	Pn	14 39 24.3	+0.8
GAR	Garm	3.18	23	ePN	Pn	14 39 24.3	+0.8
CEP	Cherat	3.46	130	P	Pb	14 39 31.9	-4.2
CEP				S	Sb	14 40 16.0	-1.7
THW	Thamme Wali	4.13	142	P	Pn	14 39 39.7	+3.3
NIL	Nilore	4.46	122	ePn	Pn	14 39 44.5	+3.6
NIL	Nilore	4.46	122	ePN	Pn	14 39 44.5	+3.6
CHCP	Chirah Chowk	4.46	121	P	Pn	14 39 44.9	+4.0
TAS	Tashkent	5.26	5	PN	Pn	14 39 52.4	+0.5
SARP	Sargodha	5.30	140	P	Pn	14 39 54.4	+2.0
ARSB	Arslanbob	6.21	31	ePn	Pn	14 40 05.1	0.0
KSH	Kashi	6.70	57	P	Pn	14 40 09.5	-2.3
KSH				pP	Pb	14 41 12.8	+42
KSH				S	Sn	14 41 21.8	-5.3
KSH				pmax	pmax		
	comp=Z,300nm,0.8s						
KSH				pmax	pmax		
	comp=Z,370nm,2.5s						
KSH				smax	smax		
	comp=N,210nm,0.8s						
KSH				smax	smax		
	comp=E,310nm,1.2s						
KSH				LR	LR		
	comp=N,1μm,6.1s						
KSH				LR	LR		
	comp=E,960nm,5.0s						
BRLS	Borolday	7.00	7	Pg	Pn	14 40 11.9	-3.9
	comp=E,0.8nm,0.2s						
BRLS				Lg	Lg	14 41 25.6	
	comp=E,16nm,0.5s						
KK31	Karatay Array	7.15	11	ePn	Pn	14 40 17.6	-0.3
KK31	Karatay Array	7.15	11	P	Pn	14 40 18.1	+0.2
	comp=E,10nm,0.6s,baz=200,slow=14,SNR=143						
KK31				⇓S	Sn	14 41 36.4	-1.7
	comp=E,48nm,0.6s						
KK31	Karatay Array	7.15	11	ePN	Pn	14 40 17.6	-0.3
KKAR	Karatay Array	7.15	11	ePn	Pn	14 40 17.5	-0.4
KKAR	Karatay Array	7.15	11	ePN	Pn	14 40 17.5	-0.4
DHRM	DHARAMSHALA	7.36	119	eP	Pn	14 40 18.7	-2.3
DHRM				eS	Sn	14 41 37.2	-6.4
DHRM				IAML		14 41 51.6	
	comp=N,250nm,0.5s						
DHRM				IAML		14 41 52.5	
	comp=E,256nm,0.5s						
MRKS	Merke	7.52	26	Pg	Pn	14 40 23.4	+0.4
	comp=E,49nm,0.8s						
MRKS				Lg	Lg	14 41 45.0	
	comp=E,29nm,0.8s						
UCH	Uchtor	7.62	35	P	Pn	14 40 25.5	+0.8
	SNR=232						
EKS2	Erkin-Say	7.66	29	P	Pn	14 40 25.3	+0.4
	SNR=13						
NRN	Naryn	7.81	45	ePn	Pn	14 40 26.1	-1.1
NRN	Naryn	7.81	45	eP	Pn	14 40 26.1	-1.1
KZA	Kyzart	7.86	38	P	Pn	14 40 28.9	+0.9
	SNR=81						
BHK	Bhakra	7.93	124	ex	Pb	14 40 53.0	+1.0
BHK				ex	Sn	14 42 02.2	+4.9
AAK	Ala-Archa	7.94	33	Pn	Pn	14 40 29.7	+0.9
	comp=E,14nm,0.3s,baz=200,slow=9.5,SNR=69						
AAK				Sn	Sn	14 42 00.5	+2.9
	comp=E,1.2nm,0.3s,baz=288,slow=20,SNR=4.4						
AAK				Lg	Lg	14 42 49.4	
	comp=E,0.4nm,0.3s,baz=342,slow=19,SNR=1.8						
AAK				LR	LR	14 44 18.9	
	comp=E,176nm,20.2s,baz=206,slow=44						
AAK	Ala-Archa	7.94	33	ePn	Pn	14 40 28.8	0.0
AAK				Sn	Sn	14 42 00.5	+2.9
AAK				Lg	Lg	14 42 49.4	
AAK	Ala-Archa	7.94	33	⇑P	Pn	14 40 29.3	+0.5
	comp=E,63nm,0.7s						
AAK				⇑S	Sn	14 42 00.3	+2.7
	comp=E,96nm,0.9s						
AAK	Ala-Archa	7.94	33	c iP	Pn	14 40 29.3	+0.5
AAK	Ala-Archa	7.94	33	P	Pn	14 40 29.6	+0.9
	SNR=62						
FRU1	Bishkek	8.13	32	ePn	Pn	14 40 32.0	+0.7
FRU1	Bishkek	8.13	32	eP	Pn	14 40 32.1	+0.7
KBK	Karagaybulak	8.15	34	P	Pn	14 40 33.1	+1.3
	SNR=94						
CHMS	Chumysh	8.34	32	P	Pn	14 40 35.2	+1.1
	SNR=10						
ULHL	Ulahol	8.49	41	P	Pn	14 40 37.6	+1.2
	SNR=9.9						
BOOM	Boomskoye usch	8.51	39	ePn	Pn	14 40 36.2	-0.4
BOOM	Boomskoye usch	8.51	39	eP	Pn	14 40 36.3	-0.4
SMLA	Simla	8.61	123	eP	Pn	14 40 38.7	+0.7
SMLA				eS	Sn	14 42 07.2	-6.8
SMLA				IAML		14 42 46.8	
	comp=N,138nm,0.2s						
SMLA				IAML		14 42 47.8	
	comp=E,116nm,1.2s						
TKM2	Tokmak 2	8.66	36	⇓P	Pn	14 40 38.5	-0.3
	comp=E,38nm,0.7s						
TKM2	Tokmak 2	8.66	36	P	Pn	14 40 39.5	+0.8
	SNR=7.1						
GEYT	Alibeck	8.67	285	Pn	Pn	14 40 36.2	-2.5
	comp=E,5.3nm,0.3s,baz=123,slow=10,SNR=35						
GEYT				Sn	Sn	14 42 12.4	-3.0
	comp=E,5.4nm,0.3s,baz=127,slow=18,SNR=6.9						
GEYT				Lg	Lg	14 43 20.2	
	baz=110,slow=23,SNR=2.0						
GEYT				LR	LR	14 44 55.5	
	comp=E,393nm,20.3s,baz=135,slow=44						
GYA0B	ALIBECK ARRAY	8.67	285	ePn	Pn	14 40 35.8	-2.9
GYA0B	ALIBECK ARRAY	8.67	285	⇓P	Pn	14 40 36.4	-2.3
GYA0B				⇓S	Sn	14 42 10.4	-5.1
KDJ	Kajisay	8.94	45	ePn	Pn	14 40 42.1	-0.3
KDJ	Kajisay	8.94	45	eP	Pn	14 40 42.2	-0.3
DDI	Dehra Dun	9.71	124	eP	Pn	14 40 51.2	-1.8
DDI				eS	Sn	14 42 32.8	-8.3
DDI				IAML		14 43 28.0	
	comp=E,116nm,0.0s						
DDI				IAML		14 43 35.5	
	comp=N,3μm,1.2s						
PRZ	Przheval'sk	9.86	47	ePn	Pn	14 40 54.9	-0.3
PRZ	Przheval'sk	9.86	47	eP	Pn	14 40 54.9	-0.3
PDGK	Podgornoye	11.01	46	⇓P	Pn	14 41 09.3	-1.6
	comp=N,14nm,0.6s						
PDGK	Podgornoye	11.01	46	P	Pn	14 41 10.1	-0.8
OTUK	Ortayu	12.45	11	⇓P	Pn	14 41 29.3	-1.1
	comp=N,18nm,0.9s						
OTUK	Ortayu	12.45	11	P	Pn	14 41 28.7	-1.7
BHJ	Bhuj	12.81	176	eP	Pn	14 41 35.6	+0.2
PYUN	Piuthan	14.48	119	eP	Pn	14 41 56.3	-2.1
	comp=N,43nm,0.5s						
PYUN				eS	Sn	14 44 33.5	-4.5
MAKZ	Makanchi	14.61	39	ePn	Pn	14 41 57.1	-2.8
MAKZ	Makanchi	14.61	39	⇓P	Pn	14 41 57.0	-2.8
	comp=N,19nm,0.8s						
MAKZ	Makanchi	14.61	39	eP	Pn	14 41 57.1	-2.8
AB31	Akbulak array	14.64	337	⇓P	Pn	14 41 56.6	-3.7
	comp=N,9.7nm,0.5s						
ABKAR	Akbulak array	14.64	337	ePn	Pn	14 41 56.3	-4.0
MK31	Makanchi Array	14.76	39	ePn	Pn	14 41 59.1	-2.8
MK31	Makanchi Array	14.76	39	P	Pn	14 41 59.5	-2.4
	comp=N,11nm,0.7s,baz=227,slow=12,SNR=77						
MK31	Makanchi Array	14.76	39	eP	Pn	14 41 59.1	-2.8
MK32	Makanchi Array	14.76	39	ePn	Pn	14 41 59.8	-2.0
MKAR	Makanchi Array	14.76	39	Pn	Pn	14 41 59.8	-2.0
	comp=N,0.7nm,0.3s,baz=228,slow=13,SNR=56						
MKAR				Lg	Lg	14 46 29.9	
	comp=N,0.1nm,0.3s,baz=252,slow=24,SNR=2.7						
MKAR	Makanchi Array	14.76	39	i P	Pn	14 42 00.2	-1.7
MKAR				pmax	pmax		
	comp=Z,14nm,0.8s						
BHPL	Bhopal	14.86	147	eP	Pn	14 42 01.2	-2.2
DANN	Dangsing	14.88	117	eP	Pn	14 42 02.3	-1.6
	comp=Z,147nm,1.0s						
KOLN	Koldanda	15.11	119	eP	Pn	14 42 05.2	-1.6
	comp=Z,49nm,0.7s						
KOLN				eS	Sn	14 44 48.4	-4.9
GKN	Gorkha	15.71	116	eP	Pn	14 42 13.4	-1.3
LKRN	Lenkeran, Azer	16.05	285	P	P	14 42 24.4	+2.5
KURBB	Kurchatov Arra	16.18	23	Pn	Pn	14 42 16.2	-4.0
	comp=Z,0.1nm,0.3s,baz=213,slow=12,SNR=23						
KURBB				Sn	S	14 45 31.9	+0.8
	comp=Z,0.0nm,0.3s,baz=220,slow=27,SNR=4.1						
KURBB				Lg	Lg	14 47 11.4	
	comp=Z,0.0nm,0.3s,baz=217,slow=28,SNR=4.7						
KURBB	Kurchatov Arra	16.18	23	⇓P	Pn	14 42 16.4	-3.9
	comp=Z,17nm,0.8s						
DMN	Daman	16.28	117	eP	Pn	14 42 20.4	-1.7
	comp=Z,40nm,0.6s						
KURK	Kurchatov	16.28	23	ePn	Pn	14 42 17.1	-4.6
	comp=Z,10nm,0.8s						
KURK	Kurchatov	16.28	23	⇑P	Pn	14 42 16.7	-4.9
	comp=Z,22nm,1.5s						
KURK	Kurchatov	16.28	23	c iP	Pn	14 42 16.8	-4.9
KURK				pmax	pmax		
	comp=Z,12nm,1.7s						
AKTO	Aktyubinsk	16.30	335	Pn	Pn	14 42 19.4	-2.5
	comp=Z,1.7nm,0.3s,baz=150,slow=14,SNR=21						
AKTO				Sn	Sn	14 45 17.7	-4.0
	comp=Z,0.6nm,0.3s,baz=69,slow=23,SNR=5.6						
AKTO				Lg	Lg	14 47 12.6	
	baz=73,slow=19,SNR=2.5						
AKTO				LR	LR	14 49 39.8	
	comp=Z,103nm,19.7s,baz=148,slow=41						
AKTO	Aktyubinsk	16.30	335	⇑P	Pn	14 42 19.8	-2.1
	comp=Z,29nm,1.1s						
KKN	Kakani	16.30	116	eP	Pn	14 42 21.3	-1.0
	comp=Z,78nm,0.6s						
WMQ	Urumqi	16.46	56	eP	P	14 42 26.0	-0.6
WMQ				pP	Pn	14 42 28.6	+4.5
WMQ				PP	sP	14 42 38.8	+0.1
WMQ				LR	LR		
	comp=Z,270nm,10.7s						
WMQ				LR	LR		
	comp=Z,140nm,10.7s						
WMQ				LR	LR		
	comp=Z,94nm,12.5s						
PKIN	Phulchoki	16.51	116	eP	Pn	14 42 23.6	-1.4
	comp=Z,34nm,0.5s						
PKI	Pulchoki	16.52	116	eP	Pn	14 42 23.7	-1.5
	comp=Z,88nm,0.7s						
GUN	Gumba	16.68	114	eP	Pn	14 42 26.3	-0.9
	comp=Z,73nm,0.7s						
BVAR	Borovoye Array	16.98	3	Pn	Pn	14 42 27.3	-3.2
	comp=Z,1.3nm,0.3s,baz=173,slow=13,SNR=46						
BVAR				Sn	Sn	14 45 29.5	-8.8
	comp=Z,0.3nm,0.3s,baz=176,slow=25,SNR=3.2						
BRVK	Borovoye	17.01	3	ePn	Pn	14 42 26.9	-4.0
	comp=Z,20nm,0.9s						
BRVK	Borovoye	17.01	3	⇑P	Pn	14 42 27.1	-3.8
	comp=Z,20nm,0.9s						
BRVK	Borovoye	17.01	3	c iP	Pn	14 42 27.7	-3.2
JIRN	Jiri	17.04	115	eP	Pn	14 42 30.5	-1.3
	comp=Z,111nm,0.5s						
AKT	Akhty	17.21	295	eP	P	14 42 37.2	+2.3
AKT				eS	S	14 45 49.6	-2.9
AKT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKT				smax	smax		
	comp=E,10.0nm,0.7s						
AKT				smax	smax		
	comp=N,22nm,0.5s						
SEKA	Sheki	17.55	293	P	P	14 42 40.8	+2.2
MNGR	Mingechevir, A	17.57	292	P	P	14 42 42.0	+3.3
MAK	Makhachkala	17.72	299	eP	P	14 42 40.3	0.0
MAK				eS	Sn	14 45 54.6	-1.5
MAK				pmax	pmax		
	comp=Z,89nm,1.2s						
MAK				MLR	MLR		
	comp=Z,125nm,11.0s						
GANJ	Ganja	18.12	291	P	P	14 42 48.5	+3.6
NAX	Nakhchivan	18.63	287	P	Pn	14 42 55.1	+4.1
GTK	Tadong	19.02	112	eP	Pn	14 42 57.2	+1.3
BOK	Bokaro	19.24	125	eP	Pn	14 42 58.2	-0.2
DGZ	Jazzator, Alta	19.25	39	d iP	P	14 42 56.3	-1.1
GNI	Garni	19.27	289	P	Pn	14 43 00.8	+2.0
	comp=Z,0.7nm,0.3s,baz=352,slow=8.6,SNR=5.7						
GNI				LR	LR	14 52 34.5	
	comp=Z,96nm,18.9s,baz=71,slow=44						
GNI	Garni	19.27	289	eP	P	14 42 56.8	-0.9
	comp=Z,35nm,1.0s						
GNI	Garni	19.27	289	d iP	Pn	14 43 01.8	+3.0
GNI				pmax	pmax		
	comp=Z,194nm,1.3s						
TBLG	Delisi	19.46	294	eP	P	14 42 59.0	-0.6
	comp=Z,16nm,0.8s						
TBLG	Delisi	19.46	294	eP	P	14 42 59.0	-0.6
TBLG				pmax	pmax		
	comp=Z,16nm,0.8s						
LSA	Lhasa	19.87	102	eP	P	14 43 04.1	-0.5
	comp=Z,11nm,0.7s						
LSA	Lhasa	19.87	102	eP	P	14 43 04.1	-0.5
LSA				pmax	pmax		
	comp=Z,11nm,0.7s						
ZEI	Tsey	20.25	297	eP	Pn	14 43 11.8	+1.3
AKH	Akhalkalaki	20.34	293	eP	P	14 43 08.9	-0.4
	comp=Z,15nm,0.8s						
AKH	Akhalkalaki	20.34	293	⇑iP	Pn	14 43 13.1	+1.6
AKH	Akhalkalaki	20.34	293	eP	P	14 43 08.9	-0.4
AKH				pmax	pmax		
	comp=Z,15nm,0.8s						
HYB	Hyderabad	20.54	152	i P	Pn	14 43 14.0	+0.2
NCK	Nalchik	20.62	299	⇑iP	Pn	14 43 16.9	+2.4
NCK				pmax	pmax		
	comp=Z,14nm,0.9s						

ZAA0	Zalesovo Array	21.10	27	eP	P	14 43 16.3	-0.9
	comp=Z,31nm,0.7s						
ZAA0	Zalesovo Array	21.10	27	⇓P	P	14 43 16.2	-0.9
	comp=Z,4.2nm,0.7s						
ZALV	Zalesovo Beam	21.10	27	P	P	14 43 16.6	-0.6
	comp=Z,26nm,0.5s,baz=221,slow=11,SNR=84						
ZALV				S	Sn	14 47 16.2	-1.3
	comp=Z,0.5nm,0.4s,baz=225,slow=16,SNR=2.2						
ZALV				LR	LR	14 51 52.6	
	comp=Z,52nm,19.9s,baz=250,slow=38						
ZAA1	Zalesovo Array	21.10	27	eP	P	14 43 16.6	-0.7
KBZ	Khabaz	21.16	299	P	P	14 43 16.1	-1.9
	comp=Z,2.0nm,0.6s,baz=142,slow=7.0,SNR=5.8						
KBZ				S	S	14 47 09.1	-2.6
	comp=Z,3.1nm,0.9s,baz=72,slow=20,SNR=2.3						
KBZ				LR	LR	14 54 05.6	
	comp=Z,95nm,19.1s,baz=64,slow=44						
NEY	Neytrino	21.19	298	⇓iP	P	14 43 22.1	+3.6
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TURI	Tura	21.29	114	eP	P	14 43 19.9	+0.4
KVAR	Kislovodsk Arr	21.36	300	P	P	14 43 21.0	+0.8
	comp=Z,1.9nm,0.3s,baz=73,slow=19,SNR=3.4						
KVAR				S	S	14 47 13.9	-1.9
	comp=Z,6.0nm,0.7s,baz=78,slow=14,SNR=3.2						
KIV	Kislovodsk	21.36	300	eP	P	14 43 21.0	+0.8
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	21.36	300	eP	P	14 43 22.8	+2.6
KIV				eS	S	14 47 17.7	+1.9
KIV				pmax	pmax		
	comp=Z,42nm,1.0s						
KIV				MLR	MLR		
	comp=Z,332nm,14.0s						
TAWA	Tawang	21.38	107	eP	P	14 43 19.8	-1.0
SVE	Sverdlovsk	21.45	348	eP	P	14 43 24.1	+3.1
SVE				eS	S	14 47 20.0	+2.7
SVE				pmax	pmax		
	comp=Z,16nm,1.1s						
ARU	Arti	21.48	345	P	P	14 43 21.2	-0.1
	comp=Z,7.7nm,0.9s,baz=164,slow=8.5,SNR=18						
ARU				S	S	14 47 15.0	-2.8
	comp=Z,0.4nm,0.3s,baz=165,slow=20,SNR=1.9						
ARU				Lg	Lg	14 49 58.6	
	comp=Z,0.7nm,0.5s,baz=322,slow=19,SNR=1.9						
ARU	Arti	21.48	345	eP	P	14 43 21.1	-0.2
	comp=Z,23nm,0.9s						
ARU				S	S	14 47 15.0	-2.8
ARU				Lg	Lg	14 49 58.6	
ARU	Arti	21.48	345	d iP	P	14 43 21.4	+0.1
ARU				pmax	pmax		
	comp=Z,26nm,1.0s						
BATM	Batumi	21.70	293	⇑iP	P	14 43 23.4	-0.4
SHL	Shillong	22.44	111	eP	P	14 43 32.3	+0.3
TEZP	TEZPUR	22.59	108	eP	P	14 43 33.0	-0.4
ZIRO	ZIRO	22.96	105	eP	P	14 43 37.1	-0.5
RAYN	Ar Rayn	23.64	244	eP	P	14 43 44.2	+0.2
	comp=Z,4.7nm,0.9s						
RAYN	Ar Rayn	23.64	244	eP	P	14 43 44.3	+0.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOKO	MOKOCHONG	24.07	107	eP	P	14 43 48.3	0.0
GTA	Gaotai	24.76	73	⇑P	P	14 43 57.0	+2.5
GTA				pP	pP	14 44 01.5	-2.0
GTA				sP	sP	14 44 04.3	-3.0
GTA				S	S	14 48 17.3	+2.4
GTA				sS	pS	14 48 24.9	0.0
GTA				pmax	pmax		
	comp=Z,14nm,1.1s						
GTA				pmax	pmax		
	comp=Z,61nm,6.0s						
GTA				LR	LR		
	comp=Z,94nm,18.7s						
GTA				LR	LR		
	comp=Z,210nm,17.1s						
GTA				LR	LR		
	comp=Z,240nm,15.5s						
KIRV	Kirov	25.85	337	P	P	14 44 06.2	+2.3
	comp=Z,13nm,0.5s,baz=125,slow=4.9,SNR=7.1						
KIRV				LR	LR	14 55 21.2	
	comp=Z,57nm,18.6s,baz=40,slow=39						
VSR	Storozhevoye	25.96	315	eP	P	14 44 05.8	+0.8
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPSR	Galich'ya Gora	26.68	318	eP	P	14 44 12.5	+1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MMAI	Mount Meron Ar	27.52	273	LR	LR	14 57 25.9	
	comp=Z,51nm,18.1s,baz=100,slow=41						
BR131	Keskin Array S	27.80	288	eP	P	14 44 22.8	+0.9
	comp=Z,7.4nm,1.3s						
BRTR	Keskin Array B	27.80	288	P	P	14 44 24.9	+3.0
	comp=Z,2.1nm,0.9s,baz=80,slow=8.9,SNR=12						
BRTR				LR	LR	14 58 31.5	
	comp=Z,28nm,18.1s,baz=96,slow=43						
LZH	Lanzhou	28.31	79	eP	P	14 44 27.5	+1.0
LZH				pP	pP	14 44 30.8	-4.7
LZH				sP	sP	14 44 32.8	-6.5
LZH				ePP	PnPn	14 45 18.6	+3.1
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
LZH				LR	LR		
	comp=Z,220nm,12.5s						
LZH				LR	LR		
	comp=Z,230nm,13.0s						
LZH				LR	LR		
	comp=Z,360nm,16.3s						
OBN	Obninsk	29.07	321	LR	LR	14 58 15.1	
	comp=Z,38nm,20.1s,baz=170,slow=41						
OBN	Obninsk	29.07	321	⇑eP	P	14 44 36.2	+3.4
OBN				pmax	pmax		
	comp=Z,19nm,1.3s						
TLY	Talaya	29.28	47	LR	LR	14 56 59.4	
	comp=Z,50nm,20.9s,baz=266,slow=38						
TLY	Talaya	29.28	47	⇑eP	P	14 44 35.0	+0.2
SONA0	Songino Array	30.10	55	eP	P	14 44 43.3	+1.1
SONM	Songino Array	30.10	55	P	P	14 44 43.3	+1.1
	comp=Z,2.8nm,0.9s,baz=259,slow=9.5,SNR=13						
SONM				LR	LR	14 58 36.0	
	comp=Z,94nm,20.5s,baz=262,slow=40						
ULN	Ulaanbaatar	30.54	55	eP	P	14 44 46.8	+0.6
	comp=Z,5.1nm,1.0s						
ULN	Ulaanbaatar	30.54	55	d eP	P	14 44 48.0	+1.8
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
PALK	Pallekele	30.70	156	LR	LR	14 57 38.5	
	comp=Z,109nm,21.4s,baz=294,slow=38						
KMI	Kunming	31.12	101	P	P	14 44 53.8	+2.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	31.78	310	P	P	14 44 57.5	+0.7
	comp=Z,3.7nm,0.7s,baz=88,slow=7.3,SNR=18						
AKASG				LR	LR	15 00 05.5	
	comp=Z,119nm,21.1s,baz=90,slow=41						
AKBB	Malin Array Si	31.78	310	eP	P	14 44 57.3	+0.5
	comp=Z,5.7nm,1.0s						
AKBB	Malin Array Si	31.78	310	eP	P	14 44 57.3	+0.5
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CM31	Chiang Mai Arr	31.92	115	eP	P	14 44 59.2	+0.9
	comp=Z,8.6nm,1.3s						
CMAR	Chiang Mai Arr	31.92	115	P	P	14 44 59.2	+0.9
	comp=Z,1.4nm,0.6s,baz=289,slow=7.9,SNR=6.8						
CMAR				LR	LR	14 59 08.3	
	comp=Z,63nm,19.1s,baz=294,slow=39						
XAN	Xi'an	32.82	82	P	P	14 45 09.3	+3.1
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,77nm,5.7s						
VRI	Vrincioaia	32.83	300	⇑iP	P	14 45 05.3	-0.9
VRI	Vrincioaia	32.83	300	⇑P	P	14 45 05.3	-0.9
PLOR	Plostina	32.89	300	⇑iP	P	14 45 09.7	+3.0
PLOR	Plostina	32.89	300	⇑P	P	14 45 09.7	+3.0
MLR	Muntele Rosu	33.37	300	P	P	14 45 13.6	+2.6
	comp=Z,11nm,0.8s,baz=120,slow=4.7,SNR=11						
MLR	Muntele Rosu	33.37	300	eP	P	14 45 12.1	+1.1
	comp=Z,11nm,0.9s						
MLR	Muntele Rosu	33.37	300	⇑iP	P	14 45 14.6	+3.6
MLR	Muntele Rosu	33.37	300	eP	P	14 45 12.1	+1.1
MLR				pmax	pmax		
	comp=Z,11nm,0.9s						
UTTA	Uttaradit	33.55	115	P	P	14 45 14.6	+2.0
	comp=Z,10µm,0.6s						
HHC	Hu-ho-hao-te	33.65	69	P	P	14 45 14.9	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,38nm,5.1s						
DOPR	Dopca	33.77	301	⇑iP	P	14 45 11.2	-3.1
BURAR	Bucovina Array	33.96	304	⇑iP	P	14 45 15.0	-1.1
BURAR	Bucovina Array	33.96	304	⇑P	P	14 45 15.0	-1.1
PBKT	Sadao Pong	34.61	116	P	P	14 45 24.4	+2.6
	comp=Z,3.4nm,1.3s						
NONG	Nongkai	35.29	111	P	P	14 45 28.9	+1.2
	comp=Z,0.2nm,1.0s						
VSU	Vasula	35.38	323	⇑eP	P	14 45 28.9	+0.9
VSU				pmax	pmax		
	comp=Z,28nm,0.8s						
SKNT	Sakolnakorn	36.58	112	P	P	14 45 39.8	+1.0
	comp=Z,7.7nm,0.9s						
FIA1	FINESS Array S	36.81	327	eP	P	14 45 41.8	+1.6
	comp=Z,14nm,1.1s						
FIA0	FINESS Array S	36.81	327	eP	P	14 45 40.8	+0.5
FIA0	FINESS Array S	36.81	327	eP	P	14 45 40.8	+0.5
FINES	FINESS Array B	36.81	327	P	P	14 45 40.8	+0.5
	comp=Z,4.2nm,0.7s,baz=116,slow=9.3,SNR=14						
FINES	FINESS Array B	36.81	327	i P	P	14 45 42.2	+2.0
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PANO	Nakornpanom	36.95	111	P	P	14 45 43.0	+1.1
	comp=Z,0.3nm,1.3s						
VYHS	Vyhne	38.27	305	eP	P	14 45 55.8	+3.0
VYHS	Vyhne	38.27	305	eP	P	14 45 55.8	+3.0
WHN	Wuhan	38.27	85	P	P	14 45 53.6	+0.6
ARA0	ARCESS Array S	40.84	338	eP	P	14 46 13.0	-0.9
ARCES	ARCESS Array B	40.84	338	P	P	14 46 13.0	-0.9
	comp=Z,3.5nm,0.8s,baz=116,slow=8.2,SNR=9.3						
NJ2	Nanjing	41.37	81	eP	P	14 46 19.5	+0.8
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
GEC2	GERESS Array S	41.66	306	eP	P	14 46 22.6	+1.6
	comp=Z,1.8nm,1.1s						
GEC2	GERESS Array S	41.66	306	eP	P	14 46 22.6	+1.6
GEC2				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GERES	GERESS Array B	41.66	306	P	P	14 46 22.6	+1.6
	comp=Z,0.2nm,0.4s,baz=115,slow=7.0,SNR=2.2						
GERES				PP	PP	14 48 01.0	+3.6
	comp=Z,0.2nm,0.3s,baz=91,slow=9.5,SNR=4.1						
GERES				LR	LR	15 06 04.9	
	comp=Z,40nm,20.2s,baz=90,slow=40						
CLL	Collm	42.02	309	esP	sP	14 46 32.0	-4.8
NB2	NORSAR Subarra	43.61	323	P	P	14 46 36.5	-0.1
	comp=Z,1.6nm,0.6s,baz=98,slow=8.6						
NB200	NORSAR Array S	43.61	323	eP	P	14 46 35.9	-0.7
NOA	NORSAR Array B	43.61	323	P	P	14 46 35.9	-0.7
	comp=Z,1.2nm,0.6s,baz=100,slow=8.1,SNR=6.3						
ZEA	Zeya	43.72	47	eP	P	14 46 39.0	+1.5
ZEA				pmax	pmax		
	comp=Z,11nm,1.2s						
YAK	Yakutsk	45.38	35	eP	P	14 46 50.1	-0.5
	comp=Z,11nm,0.6s						
YAK	Yakutsk	45.38	35	eP	P	14 46 50.3	-0.4
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
KS15	Wonju Array Si	46.74	70	eP	P	14 47 01.2	-0.5
	comp=N,7.5nm,1.0s						
KSAR	Wonju Array Be	46.74	70	P	P	14 47 01.2	-0.5
KSAR	Wonju Array Be	46.74	70	P	P	14 47 01.2	-0.5
KSRS	Korea Array	46.77	70	P	P	14 47 01.2	-0.7
	comp=N,0.8nm,0.5s,baz=285,slow=6.0,SNR=4.4						
KSRS				LR	LR	15 09 10.4	
	comp=N,116nm,18.1s,baz=100,slow=39						
TIXI	Tiksi	46.86	22	eP	P	14 47 02.0	-0.2
	comp=N,17nm,0.7s						
TIXI	Tiksi	46.86	22	c iP	P	14 47 02.6	+0.5
TIXI				i *PP	sP	14 47 16.6	+1.6
TIXI				pmax	pmax		
	comp=Z,20nm,0.8s						
KLR	Kul'dur	46.88	53	P	P	14 47 03.1	+0.4
	comp=Z,2.9nm,0.8s,baz=290,slow=7.1,SNR=8.7						
KLR	Kul'dur	46.88	53	ceP	P	14 47 03.3	+0.6
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KEST	Kesra	47.41	288	P	P	14 47 08.2	+1.1
	comp=Z,9.6nm,1.0s,baz=309,slow=6.2,SNR=8.5						
KEST	Kesra	47.41	288	eP	P	14 47 07.3	+0.2
	comp=Z,12nm,1.0s						
USRK	Ussuriysk Ar.	47.99	60	P	P	14 47 11.4	+0.1
	comp=Z,1.8nm,0.8s,baz=292,slow=9.0,SNR=3.5						
GRNR	Gornyy	49.61	50	eP	P	14 47 25.0	+1.3
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
JNU	Nakatsue	50.49	74	P	P	14 47 35.2	+4.5
	comp=Z,5.1nm,0.9s,baz=284,slow=8.3,SNR=3.0						
JNU	Nakatsue	50.49	74	eP	P	14 47 35.2	+4.5
	comp=Z,30nm,1.5s						
YSS	Yuzh-Sakhalins	54.58	54	eP	P	14 48 01.9	+1.2
YSS				MLR	MLR		
	comp=Z,200nm,11.0s						
MAJO	Matsushiro	54.83	67	eP	P	14 48 02.9	+0.2
MJAR	Matsushiro Arr	54.83	67	P	P	14 48 02.9	+0.2
	comp=Z,1.4nm,0.9s,baz=295,slow=11,SNR=4.4						
SEY	Seymchan	55.79	33	P	P	14 48 09.9	+0.7
	comp=Z,2.3nm,0.7s,baz=292,slow=6.9,SNR=5.9						
ESDC	Sonseca Array	56.01	297	P	P	14 48 12.4	+1.2
	comp=Z,2.0nm,0.8s,baz=64,slow=7.0,SNR=16						
ESDC				LR	LR	15 16 45.0	
	comp=Z,20nm,19.9s,baz=305,slow=41						
BILL	Bilibino	59.79	26	eP	P	14 48 38.3	+1.1
BILL				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SUMG	Summit	60.85	341	eP	P	14 48 45.3	+0.4
	comp=Z,9.1nm,1.1s						
SUMG	Summit	60.85	341	eP	P	14 48 45.3	+0.4
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PETK	Petropavlovsk-	61.55	43	LR	LR	15 15 58.9	
	comp=Z,37nm,18.8s,baz=173,slow=36						
TOA1	Torodi Ar. Sit	63.85	267	eP	P	14 49 05.4	+0.1
TOA0	Torodi Ar. Sit	63.85	267	eP	P	14 49 05.0	-0.3
	comp=Z,5.5nm,1.1s						
TORD	Torodi Ar. Bea	63.85	267	P	P	14 49 05.4	+0.1
	comp=Z,3.1nm,0.9s,baz=63,slow=4.8,SNR=17						
TOLK	Toolik Lake Re	71.78	14	eP	P	14 49 55.0	+0.5
	comp=Z,4.4nm,0.6s						
DBIC	Dimbokro	72.82	266	P	P	14 50 01.0	-0.5
	comp=Z,4.2nm,0.8s,baz=345,slow=7.2,SNR=4.7						
FYU	Fort Yukon	74.42	13	eP	P	14 50 11.8	+1.8
	comp=Z,16nm,1.5s						
INK	Inuvik	74.60	8	P	P	14 50 12.3	+1.3
	comp=Z,3.7nm,0.6s,baz=355,slow=11,SNR=11						
INK	Inuvik	74.60	8	eP	P	14 50 11.8	+0.8
	comp=Z,5.0nm,0.8s						
INK	Inuvik	74.60	8	eP	P	14 50 11.8	+0.8
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
COLA	College	75.38	15	d iP	P	14 50 16.5	+0.9
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	75.67	15	P	P	14 50 17.2	-0.2
	comp=Z,1.8nm,1.0s,baz=322,slow=4.2,SNR=14						
ILAR				PP	PP	14 53 08.1	+1.6
	comp=Z,0.4nm,0.9s,baz=320,slow=7.4,SNR=5.7						
ILB	Eielson Array	75.67	15	eP	P	14 50 17.1	-0.2
	comp=Z,2.7nm,1.0s						
BOSA	Boshof	76.25	218	P	P	14 50 20.9	-0.2
	comp=Z,4.2nm,0.9s,baz=91,slow=16,SNR=4.1						
SCRK	Sand Creek	76.97	14	eP	P	14 50 25.5	+0.7
	comp=Z,5.4nm,1.3s						
DAWY	Dawson	77.74	12	eP	P	14 50 29.2	+0.1
	comp=Z,3.7nm,1.0s						
SCM	Sheep Creek Mo	78.16	17	eP	P	14 50 31.8	+0.4
	comp=Z,4.7nm,0.8s						
SCM	Sheep Creek Mo	78.16	17	eP	P	14 50 31.8	+0.4
SCM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YKA	Yellowknife Ar	81.73	2	P	P	14 50 51.4	+0.8
	comp=Z,2.2nm,0.6s,baz=349,slow=5.4,SNR=8.1						
YKB5	Yellowknife Ar	81.73	2	eP	P	14 50 51.4	+0.8
WRA	Warramunga Arr	83.36	120	P	P	14 50 57.9	-1.8
	comp=Z,1.6nm,0.7s,baz=298,slow=5.3,SNR=6.6						
WRAB	Tennant Creek	83.36	120	eP	P	14 50 58.1	-1.7
	comp=Z,5.2nm,1.0s						
WRAB	Tennant Creek	83.36	120	eP	P	14 50 58.1	-1.7
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WB2	Warramunga Arr	83.37	120	eP	P	14 50 58.2	-1.6
	comp=Z,6.5nm,1.2s						
AS31	Alice Springs	85.55	123	eP	P	14 51 09.3	-1.5
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	85.55	123	P	P	14 51 09.3	-1.5
	comp=Z,1.2nm,0.7s,baz=313,slow=5.0,SNR=15						
FORT	Forrest	86.74	132	eP	P	14 51 16.0	-0.5
	comp=Z,18nm,1.0s						

ISCJB **14** *14:42:37.0±0.5, 35°.57N±0°.04×140°.07E±0°.05, h81^{km}±4^{km}, mb3.8/6, Error ellipse: s-maj=7.8km s-min=5.0km az=142.7*
IDC **14** *14:42:37.8±2.0, 35°.55N×140°.10E, h69^{km}±16^{km}, mb3.6/6, mb1 3.7/8, mb1mx3.3/53, mbtmp3.9/8, Error ellipse: s-maj=29.5km s-min=6.9km az=67.0*
JMA **14** *14:42:38.1±0.2, 35°.64N×140°.03E, h68^{km}±2^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s358.00000°, δ72.00000°, λ80.00000°. NP2: ϕ_s207.00000°, δ21.00000°, λ117.00000°. Principal axes: T Plg62.0000°, Azm254.0000°; N Plg9.0000°, Azm2.0000°; P Plg26.0000°, Azm96.0000°;*
JMA Felt I J1.
ISC 14 14:42:38.0±0.8**, 35°.64N**±0°.05×**140°.08E**±0°.05**, h71**^{km}±7^{km}**, n25,** σ**1^{s}.33**/34**, mb3.9**/6**, 3C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.25	156	⇑P	Pn	14 42 49.5	+0.6
JCN				S	Sn	14 42 58.6	+1.7
TOK	Tokyo	0.27	279	S	Sn	14 42 58.9	+1.9
JSMT	Sammumatsuo	0.30	90	⇑P	Pn	14 42 49.8	+0.5
JOD2	Odawara 2	0.89	245	⇓P	Pn	14 42 54.8	-0.5
JOD2				S	Sn	14 43 06.7	-1.4
BSO3	Boso 3	0.91	157	⇑P	Pn	14 42 54.9	-0.3
BSO3				S	Sn	14 43 08.2	+0.3
JAG	Ashikaga	0.93	327	⇓P	Pn	14 42 55.9	+0.2
JAG				S	Sn	14 43 08.6	-0.2
JRY	Ryogami san	1.03	292	⇓P	Pn	14 42 57.5	+0.6
JIM2	Oshima 3	1.07	210	P	Pn	14 42 56.3	-1.1
JIM2				S	Sn	14 43 10.0	-1.8
JFNN	Fujinakano	1.22	249	⇓P	Pn	14 42 59.3	-0.1
JFNN				S	Sn	14 43 14.8	-0.6
BSO1	Boso 1	1.23	143	P	Pn	14 42 58.5	-0.5
BSO1				S	Sn	14 43 14.6	-0.1
JYN	Shimob	1.26	264	⇓P	Pn	14 42 59.9	0.0
JYN				S	Sn	14 43 16.0	-0.3
JKT	Katashina	1.31	329	P	Pn	14 43 00.7	+0.2
MJAR	Matsushiro Arr	1.76	301	P	Pn	14 43 07.2	+0.7
	4.0nm,0.3s,baz=157,slow=14,SNR=189						
MJAR				S	Sn	14 43 28.6	+0.5
	2.8nm,0.3s,baz=148,slow=12,SNR=8.4						
MJAR				LR	LR	14 43 38.8	
	comp=Z,37nm,18.3s,baz=170,slow=34						
MAT	Matsushiro	1.76	301	P	Pn	14 43 07.4	+0.9
MAT				S	Sn	14 43 30.1	+2.0
JHJ	Hachijo jima 2	2.53	186	P	Pn	14 43 16.8	-0.1
	32nm,0.3s,baz=341,slow=19,SNR=14						
JHJ				S	Sn	14 43 44.7	-1.9
	46nm,0.3s,baz=64,slow=23,SNR=9.1						
ASAJ	Asahikawa	8.68	12	P	Pn	14 44 40.7	-0.1
	0.2nm,0.3s,baz=100,slow=17,SNR=4.8						
ASAJ				S	Sn	14 46 11.9	-5.0
	0.1nm,0.3s,baz=282,slow=14,SNR=2.5						
H11N2	WAKE ISLAND Hy	28.42	117	T	T	15 18 24.6	
	baz=310						
H11N1	WAKE ISLAND Hy	28.43	117	T	T	15 18 14.2	
	baz=310						
H11N3	WAKE ISLAND Hy	28.44	117	T	T	15 18 10.2	
	baz=310						
MKAR	Makanchi Array	43.96	303	P	P	14 50 38.6	+0.6
	0.8nm,0.7s,baz=88,slow=9.1,SNR=4.3						
KURBB	Kurchatov Arra	46.02	309	P	P	14 50 54.5	+0.3
	0.4nm,0.3s,baz=80,slow=7.4,SNR=5.8						
WRA	Warramunga Arr	55.55	187	P	P	14 52 04.8	-1.2
	0.7nm,0.3s,baz=356,slow=6.7,SNR=10						
ASAR	Alice Springs	59.28	187	P	P	14 52 31.6	-0.7
	0.6nm,0.8s,baz=18,slow=11,SNR=6.6						
ARCES	ARCESS Array B	64.92	339	P	P	14 53 10.2	+0.7
	3.2nm,0.9s,baz=67,slow=6.9,SNR=2.6						
FINES	FINESS Array B	69.54	332	P	P	14 53 39.5	+0.7
	1.2nm,0.6s,baz=76,slow=5.9,SNR=5.4						

ISN **14** *15:15:47.3±4.1, 32°.03N×47°.72E, h15^{km}, ML3.7*
ISCJB **14** *15:15:51.8±0.5, 31°.85N±0°.05×47°.48E±0°.04, h10^{km}, mb3.9/13, MS2.6/1, Error ellipse: s-maj=7.5km s-min=3.9km az=23.0*
IDC **14** *15:15:51.1±2.0, 31°.92N×47°.71E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.6/39, mbtmp3.9/8, ML3.6/1, MS2.5/4, Ms1 2.5/4, ms1mx2.2/42, Error ellipse: s-maj=44.2km s-min=19.2km az=162.0*
TEH **14** *15:15:53.8, 32°.00N×47°.62E, h16^{km}, ML3.6*
THR **14** *15:15:55.5, 32°.10N×47°.67E, h18^{km}, ML3.4*
ISC 14 15:15:53.2±0.7**, 31°.95N**±0°.06×**47°.53E**±0°.05**, h10**^{km}**, n55,** σ**1^{s}.41**/54**, mb4.0**/13**, 5C-3D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.09	82	AML	AML	15 16 34.7	
	comp=N,1µm,0.9s						
SHGR				Pg	Pb	15 16 13.5	-0.7
AHWZ	Ahwaz	1.14	123	ePg	Pb	15 16 14.9	0.0
AHWZ				eSg	Sb	15 16 29.9	+0.1
IKFM	Kafar-mosalman	1.59	10	ePn	Pn	15 16 21.2	-0.2
IKMR	Kamar-syah	1.72	25	ePn	Pn	15 16 23.5	+0.4
IKMR				IAMB	IAmb	15 16 53.3	
	comp=Z,0.0nm,0.8s						
IDOB	Doab	1.91	17	ePn	Pn	15 16 26.3	+0.3
IDOB				IAMB	IAmb	15 17 04.8	
	comp=Z,0.0nm,1.0s						
IKOM	Komasi	2.22	360	ePn	Pn	15 16 31.3	+1.1
IKOM				IAMB	IAmb	15 17 10.0	
	comp=Z,0.0nm,0.6s						
KCHF	Cheshme Sefid,	2.35	350	ePn	Pn	15 16 33.6	+1.5
HSAM	Samen	2.43	22	ePn	Pn	15 16 33.4	+0.2
HSAM				IAMB	IAmb	15 17 09.7	
	comp=Z,0.0nm,0.5s						
IGHG	Ghaleghazi	2.50	342	ePn	Pn	15 16 35.7	+1.5
IGHG				IAMB	IAmb	15 17 17.6	
	comp=Z,5µm,0.4s						
IBZA	Bozab	2.53	6	ePn	Pn	15 16 35.0	+0.5
IBZA				IAMB	IAmb	15 17 16.8	
	comp=Z,0.0nm,0.9s						
IVIS	Veis	2.63	348	ePn	Pn	15 16 36.7	+0.9
IVIS				IAMB	IAmb	15 17 20.6	
	comp=Z,3µm,0.6s						
JHBN	Jahan bin	2.68	83	ePn	Pn	15 16 36.6	-0.1
JHBN				IAMB	IAmb	15 17 21.0	
	comp=Z,0.0nm,0.8s						
KHMZ	Khomeyn	2.71	48	ePn	Pn	15 16 37.7	+0.6
KHMZ	Khomeyn	2.71	48	Pn	Pn	15 16 37.7	+0.6
KHMZ				Sg	Sb	15 17 14.8	-0.7
ZNGN	Zangian	2.83	86	ePn	Pn	15 16 39.1	+0.3
ZNGN				IAMB	IAmb	15 17 34.9	
	comp=Z,0.0nm,0.8s						
IDHR	Dehrash	2.90	341	ePn	Pn	15 16 41.1	+1.5
IDHR				IAMB	IAmb	15 17 31.7	
	comp=Z,0.0nm,0.4s						
BHD	Baghdad	2.96	297	ePn	Pn	15 16 40.0	-0.2
	baz=113						
BHD				eSn	Sn	15 17 11.0	-4.8
ILIN	Lien	3.00	351	ePn	Pn	15 16 42.2	+1.2
ILIN				IAMB	IAmb	15 17 22.3	
	comp=Z,2µm,0.3s						
ROKH	ROKH	3.00	82	ePn	Pn	15 16 41.1	+0.1
ROKH				IAMB	IAmb	15 17 25.5	
	comp=Z,0.0nm,1.2s						
SNGE	Sanandaj	3.13	357	ePn	Pn	15 16 44.4	+1.6
SNGE	Sanandaj	3.13	357	Pn	Pn	15 16 44.4	+1.6
HAGD	Aghdareh	3.16	25	ePn	Pn	15 16 45.5	+2.2
ASAO	Ashtian	3.33	38	ePn	Pn	15 16 46.4	+0.8
ASAO	Ashtian	3.33	38	Pn	Pn	15 16 46.4	+0.8
IKLH	Kolahrood	3.68	67	ePn	Pn	15 16 51.6	+1.2
IKLH				IAMB	IAmb	15 17 56.0	
	comp=Z,621nm,0.7s						
IGAR	Gharneh	3.86	82	ePn	Pn	15 16 52.9	+0.1
IRAM	Ramesheh	4.13	91	ePn	Pn	15 16 58.4	+1.8
IRAM				IAMB	IAmb	15 18 18.4	
	comp=Z,407nm,1.0s						
IZEF	Zefreh	4.17	76	ePn	Pn	15 16 57.3	+0.2
IKAZ	Kazeroun	4.29	119	ePn	Pn	15 16 59.5	+0.6

IKAZ				IAMB	IAmb	15 17 51.1	
	comp=Z,1µm,0.7s						
GNI	Garni	8.48	345	LR	LR	15 21 18.8	
	comp=Z,13nm,20.6s,baz=140,slow=38						
ASF	Jabal al Asfar	9.02	274	Pn	Pn	15 18 04.7	+1.1
	comp=Z,0.6nm,0.3s,baz=40,slow=12,SNR=5.7						
ASF				Lg	Lg	15 20 46.2	
	comp=Z,0.4nm,0.3s,baz=75,slow=23,SNR=2.4						
GEYT	Alibeck	10.54	53	LR	LR	15 22 19.4	
	comp=Z,28nm,19.9s,baz=235,slow=37						
WSAR	Wadi Sarin	13.12	129	LR	LR	15 25 41.2	
	comp=Z,18nm,20.5s,baz=106,slow=46						
ATD	Arta Tunnel	20.78	193	LR	LR	15 29 10.1	
	comp=Z,26nm,21.1s,baz=188,slow=38						
VRI	Vrincioaia	21.25	317	⇑iP	P	15 20 41.0	+1.6
PLOR	Plostina	21.28	317	⇑iP	P	15 20 41.7	+1.9
MLR	Muntele Rosu	21.51	315	P	P	15 20 46.0	+3.7
	comp=Z,4.5nm,0.8s,baz=122,slow=11,SNR=7.0						
MLR	Muntele Rosu	21.51	315	⇓iP	P	15 20 44.4	+2.1
TESR	Tescani	21.65	318	⇑iP	P	15 20 44.2	+0.5
VOIR		22.02	314	⇑iP	P	15 20 49.8	+2.0
DOPR	Dopca	22.09	316	⇓iP	P	15 20 50.2	+1.8
BIZ	Bicaz	22.20	319	⇑iP	P	15 20 50.3	+0.7
AKASG	Malin Array Be	23.12	329	P	P	15 20 58.3	-0.9
	comp=Z,0.8nm,0.5s,baz=136,slow=9.7,SNR=7.1						
GZR	Gura Zlata	23.41	312	⇓iP	P	15 21 00.0	-2.3
BVAR	Borovoye Array	26.76	31	P	P	15 21 32.2	-0.8
	comp=Z,1.8nm,0.7s,baz=226,slow=7.7,SNR=12						
KURBB	Kurchatov Arra	29.53	42	P	P	15 21 56.5	-1.2
	comp=Z,1.0nm,0.7s,baz=246,slow=9.4,SNR=5.6						
MKAR	Makanchi Array	30.41	51	P	P	15 22 04.1	-1.4
	comp=Z,0.7nm,0.7s,baz=244,slow=9.4,SNR=5.9						
WTTA	Wattenberg	31.28	310	eP	P	15 22 14.0	+0.6
	comp=Z,1.5nm,0.5s						
WATA	Walderalm	31.34	310	eP	P	15 22 14.3	+0.5
	comp=Z,0.7nm,0.4s						
SQTA	Sankt Quirin	31.54	309	eP	P	15 22 15.7	0.0
	comp=Z,3.0nm,0.6s						
MOTA	Moosalm	31.65	310	eP	P	15 22 16.6	0.0
	comp=Z,1.0nm,0.5s						
DAVA	Damuels	32.44	309	eP	P	15 22 23.6	+0.1
	comp=Z,1.9nm,0.7s						
FINES	FINESS Array B	32.64	341	P	P	15 22 23.9	-1.0
	comp=Z,2.0nm,0.9s,baz=142,slow=7.0,SNR=3.1						
ARCES	ARCESS Array B	39.63	348	P	P	15 23 26.2	+1.6
	comp=Z,6.2nm,1.0s,baz=157,slow=6.5,SNR=4.4						
TORD	Torodi Ar. Bea	45.89	257	P	P	15 24 16.4	+0.3
	comp=Z,1.5nm,0.9s,baz=42,slow=8.6,SNR=7.3						

RSNC 14 15:40:54.8±1.3**,5°.25N×74°.49W,h3**^{km}±3^{km}**,ML3.2,Mw3.5, 2C-8D,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAB	Cerro Tablazo,	0.37	129	i P	Pg	15 41 01.9	-0.2
CTAB				eS	Sg	15 41 08.1	+1.1
CROSA	EL ROSAL, CUND	0.43	157	eP	Pg	15 41 02.6	-0.6
CROSA				eS	Sg	15 41 09.2	+0.3
ROSC	El Rosal	0.44	157	⇓iP	Pg	15 41 03.0	-0.3
ROSC				eS	Sg	15 41 10.1	+1.0
CTAU	Tausa, Cundina	0.45	96	ePg	Pg	15 41 04.6	+1.1
	comp=Z,721nm,0.6s						
CTAU				eS	Sg	15 41 10.1	+0.7
CTAU				i		15 41 12.8	
	comp=Z,721nm,0.6s						
NORC	Norcasia	0.49	310	⇓iP	Pg	15 41 04.0	-0.3
NORC				eS	Sg	15 41 11.3	+0.6
NORC				i		15 41 11.5	
	comp=N,3µm,0.2s						
SPBC	San Pablo de B	0.58	46	⇑iP	Pg	15 41 05.2	-0.8
SPBC				eS	Sg	15 41 14.0	+0.5
GUY2C	Guyana, Caldas	0.87	269	⇓iP	Pg	15 41 11.3	-0.2
GUY2C				eS	Sg	15 41 22.7	-0.1
GUY2C				i		15 41 25.1	
	comp=Z,402nm,0.2s						
RREF	El Recreo	0.92	248	⇓iP	Pg	15 41 11.5	-1.0
RREF				eS	Sg	15 41 23.9	-0.6
RREF				i		15 41 25.8	
	comp=Z,668nm,0.3s						
CHIC	Chingaza	0.97	129	⇓iP	Pg	15 41 13.5	0.0
CHIC				i		15 41 37.0	
	comp=Z,129nm,0.4s						
CHIC				i		15 41 41.8	
	comp=E,398nm,0.2s						
PTBC	PUERTO BERRIO,	1.28	2	⇓iP	Pg	15 41 17.3	-2.1
PTBC				eS	Sg	15 41 34.6	-1.5
PTBC				i		15 41 42.2	
	comp=N,450nm,0.2s						
VILC	Villavicencio,	1.38	145	eP	Pn	15 41 19.9	-1.2
VILC				i		15 41 49.0	
	comp=N,1µm,0.4s						
HELC	Santa Helena	1.39	312	⇓iP	Pn	15 41 19.6	-1.9
HELC				eS	Sg	15 41 38.2	-1.5
HELC				i		15 41 40.0	
	comp=N,304nm,0.3s						
ORTC	Ortega, Tolima	1.53	210	⇓eP	Pn	15 41 21.6	-1.4
ORTC				eS	Sn	15 41 42.0	-1.5
ORTC				i		15 41 50.8	
	comp=N,1µm,0.2s						
RUSC	La Rusia	1.54	65	eP	Pn	15 41 22.3	-1.3
PRAC	Prado	1.57	194	⇑iP	Pn	15 41 22.6	-1.0
PRAC				eS	Sn	15 41 44.3	-0.3
PRAC				i		15 41 46.2	
	comp=E,870nm,0.4s						
PLMC	San Jos del P	1.82	259	eP	Pn	15 41 27.6	+0.6
BARC	Barichara	1.87	44	eP	Pn	15 41 28.2	+0.4
BRRC	Barranca, Sant	2.00	23	eP	Pn	15 41 28.4	-1.2
BRRC				eS	Sn	15 41 54.5	-0.7
BRRC				i		15 41 59.2	
	comp=Z,123nm,0.2s						
YOPC	Yopal, Colombi	2.06	87	eP	Pb	15 41 32.7	-0.3
YOTC	Yotoco, Valle	2.23	236	eP	Pn	15 41 33.7	+0.9
YOTC				eS	Sn	15 42 01.2	+0.2
YOTC				i		15 42 03.8	
	comp=Z,28nm,0.5s						
ZARC	Zaragoza, Cauc	2.26	351	eP	Pn	15 41 33.7	+0.6
ZARC				eS	Sn	15 42 02.2	+0.7
ZARC				i		15 42 07.0	
	comp=Z,323nm,0.4s						
DBBC	Dabeiba	2.45	316	eP	Pn	15 41 37.6	+1.8
DBBC				i		15 42 14.0	
	comp=Z,80nm,0.5s						
PAMC	Pamplona, Colo	2.74	41	eP	Pn	15 41 40.3	+0.2
PAMC				eS	Sb	15 42 18.0	-0.9
MACC	Macarena, Meta	3.15	168	eP	Pn	15 41 48.3	+3.0
MACC				eS	Sb	15 42 29.0	-1.3
MACC				i		15 42 34.0	
	comp=Z,119nm,0.6s						

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*NEIC **14** 15:42:02.2±0.0, 15°.88N×97°.16W, h5^{km}, MD4.0(MEX), After MEX.*

MEX 14 15:42:02.3±0.8**,15°.89N×97°.14W,h5**^{km}±5^{km}**,MD3.7,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.00	97	ePg	Pg	15 42 19.1	-2.4
HUIG				eSg	Sg	15 42 32.9	-1.6
HUIG	Huatulco	1.00	97	eP	Pg	15 42 19.1	-2.4
HUIG				eS	Sg	15 42 32.9	-1.6
VHO	Vista Hermosa	1.24	18	ePn	Pg	15 42 21.6	-4.5
VHO				eSg	Sg	15 42 38.0	-4.1
VHO	Vista Hermosa	1.24	18	eP	Pg	15 42 21.7	-4.4
VHO				eS	Sg	15 42 38.0	-4.1
TLIG	Tlapa	2.15	321	ePn	Pn	15 42 35.6	-3.4
TLIG	Tlapa	2.15	321	eP	Pn	15 42 36.0	-3.0
TLIG				eS	Sn	15 43 02.2	-4.0
CMIG	Matias Romero	2.47	61	ePn	Pn	15 42 43.0	-0.2
CMIG				eSg	Sb	15 43 19.3	+1.4
CMIG	Matias Romero	2.47	61	i P	Pn	15 42 40.5	-2.8
CMIG				i S	Sn	15 43 09.1	-4.7

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*ISCJB **14** 16:04:51.1±0.4, 61°.58N±0°.02×141°.05W±0°.03, h3^{km}±3^{km}, mb3.7/7, Error ellipse: s-maj=2.6km s-min=2.6km az=145.4*

*IDC **14** 16:04:52.1±1.1, 61°.60N×141°.26W, h0^{km}, mb3.7/7, mb1 3.8/12, mb1mx3.5/57, mbtmp3.6/12, ML3.3/5, MS2.1/1, Ms1 2.2/1, ms1mx2.0/48, Error ellipse: s-maj=24.5km s-min=9.7km az=43.0*

*NEIC **14** 16:04:52.4±0.0, 61°.57N×141°.08W, h1^{km}, ML3.5(AEIC), ML3.7(OTT), MW3.6(SLM), After AEIC.*

*PGC **14** 16:04:53.0, 61°.58N×141°.07W, h1^{km}, ML3.6, ML3.7/11, 211km Wnw of Haines Jct., Yt Southern Alaska*

ISC 14 16:04:52.0±1.1**,61°.59N**±0°.02×**141°.07W**±0°.02**,h2**^{km}±8^{km}**, n109,**σ**1§23**/141**,mb4.1**/7**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	29	P	Pg	16 04 57.2	+0.8
YUK2				S	Sg	16 05 00.8	+1.5
YUK3	Moose Creek	0.35	57	P	Pg	16 04 59.2	+0.5
YUK3				S	Sg	16 05 03.4	+0.2
YUK1	Sand Pete Hill	0.62	24	P	Pg	16 05 04.1	+0.2
YUK1				S	Sg	16 05 12.9	+0.9
PTPK	Patty Peak	0.78	240	P	Pg	16 05 06.9	0.0
PTPK				S	Sg	16 05 17.7	+0.6
BALM	Baldy	0.83	229	ePg	Pg	16 05 07.1	-0.7
BALM	Baldy	0.83	229	P	Pg	16 05 07.2	-0.5
BALM				S	Sg	16 05 18.4	-0.1
BVCY	Beaver Creek	0.84	7	P	Pg	16 05 08.3	+0.4
BVCY				Sg	Sn	16 05 24.7	+0.9
KIAG	Kiagna River	0.91	224	P	Pg	16 05 08.6	-0.8
KIAG				S	Sg	16 05 20.9	-0.3
TABL	Table Mountain	1.15	182	P	Pg	16 05 13.2	-0.8
TABL				S	Sg	16 05 28.9	0.0
YUK4	Talbot Arm	1.19	101	ePg	Pg	16 05 14.6	-0.1
YUK4	Talbot Arm	1.19	101	P	Pg	16 05 14.6	-0.1
YUK4				S	Sg	16 05 30.8	+0.6
YUK6	Outpost Mounta	1.46	115	ePn	Pn	16 05 18.8	-0.8
YUK6	Outpost Mounta	1.46	115	Pn	Pn	16 05 18.8	-0.8
YUK6				Sg	Sb	16 05 38.4	-0.7
SAMH	Samovar Hills	1.47	174	Pn	Pn	16 05 19.1	-0.5
SAMH				Sg	Sb	16 05 39.2	0.0
MESA	MESA	1.48	197	Pn	Pn	16 05 19.8	0.0
MESA				Sg	Sg	16 05 40.3	+1.0
BCA3	Beaver Creek A	1.52	348	ePn	Pn	16 05 20.1	-0.2
CHX	Chaix Hills	1.53	181	ePn	Pb	16 05 21.0	-0.1
PCA	Pinnacle	1.55	165	ePn	Pn	16 05 20.6	0.0
PCA	Pinnacle	1.55	165	Pn	Pn	16 05 20.6	0.0
PCA				Sg	Sg	16 05 41.9	+0.3
YUK5	Granite Creek	1.61	105	ePn	Pn	16 05 21.1	-0.5
YUK5	Granite Creek	1.61	105	Pn	Pn	16 05 21.2	-0.4
YUK5				Sg	Sn	16 05 42.5	-0.6
SNH	Sunshine Point	1.66	212	ePn	Pb	16 05 22.9	-0.3
YUK7	Dusty Glacier	1.78	125	ePn	Pn	16 05 24.3	+0.4
YUK7	Dusty Glacier	1.78	125	Pn	Pb	16 05 24.9	-0.5
YUK7				Sg	Sb	16 05 48.7	+0.5
BCPM	Bancas Point	1.79	156	ePn	Pn	16 05 23.8	-0.1
MENT	Mentasta	1.84	319	ePn	Pn	16 05 25.0	+0.4
HYT	Haines Junctio	1.89	112	ePn	Pn	16 05 25.4	0.0
HYT	Haines Junctio	1.89	112	Pn	Pn	16 05 25.6	+0.2
HYT				Sg	Sb	16 05 52.0	+0.7
NICHA	Nichawak Mount	1.96	227	ePn	Pb	16 05 28.0	-0.4
HMT	Hamilton	2.00	232	ePn	Pb	16 05 28.7	-0.4
PNL	Peninsula	2.10	156	ePn	Pn	16 05 28.9	+0.8
PNL	Peninsula	2.10	156	Pn	Pn	16 05 28.9	+0.8
PNL				Sg	Sb	16 05 57.7	+0.5
YKU2	Yakutat	2.19	161	ePn	Pn	16 05 30.5	+1.1
PAX	Paxson	2.48	306	ePn	Pn	16 05 35.5	+2.1
PAX	Paxson	2.48	306	Pn	Pb	16 05 35.8	-1.5
PAX				Sg	Sb	16 06 08.2	-0.1
DOT	Dot Lake	2.49	328	ePn	Pn	16 05 33.5	0.0
DOT	Dot Lake	2.49	328	Pn	Pn	16 05 33.5	0.0
DOT				Sg	Sb	16 06 09.7	+1.2
EYAK	Cordova Ski Ar	2.50	247	ePn	Pn	16 05 35.7	+2.0
DAWY	Dawson	2.60	16	ePn	Pn	16 05 35.3	+0.2
DAWY	Dawson	2.60	16	Pn	Pn	16 05 35.4	+0.2
DAWY				Sg	Sb	16 06 11.1	-0.7
JPK	Jack Peak	2.72	261	ePn	Pn	16 05 38.5	+1.9
SCRK	Sand Creek	2.75	332	ePn	Pn	16 05 37.0	-0.2
FID	Port Fidalgo	2.75	255	ePn	Pn	16 05 38.2	+1.1
FID				ePn	Pb	16 05 40.3	-1.6
RIDG	Independent Ri	2.77	323	ePn	Pn	16 05 37.7	+0.2
GLI	Glacier Island	3.00	259	ePn	Pn	16 05 42.6	+2.1
PLBC	Pleasant Camp	3.16	130	Pn	Pn	16 05 43.4	+0.7
PLBC				Pg	Pb	16 05 48.8	0.0
PLBC				Sg	Sg	16 06 31.6	-1.8
EGAK	Eagle	3.20	359	ePn	Pn	16 05 43.7	+0.4
DHY	Denali Highway	3.30	300	ePn	Pn	16 05 44.7	-0.1
SML	Sawmill	3.47	277	ePn	Pn	16 05 48.3	+1.4
KNK	Knik Glacier	3.54	270	ePn	Pn	16 05 47.6	-0.4
SKAG	Skagway	3.55	124	ePn	Pn	16 05 47.6	-0.5
HDA	Harding Lake	3.90	319	ePn	Pn	16 05 52.4	-0.5
ILAR	Eielson Array	4.14	323	Pn	Pn	16 05 55.1	-1.1
	1.6nm,0.3s,baz=144,slow=13,SNR=55						
ILAR				Lg	Lg	16 07 02.4	
	4.6nm,0.3s,baz=132,slow=28,SNR=6.4						
ILAR				LR	LR	16 07 06.4	
	comp=Z,24nm,20.0s,baz=130,slow=33						
ILB	Eielson Array	4.14	323	ePn	Pn	16 05 55.5	-0.7
RC01	Rabbit Creek A	4.20	267	ePn	Pn	16 05 59.4	+2.4
MCK	McKinley	4.22	304	ePn	Pn	16 05 58.0	+0.8
WRH	Wood River Hil	4.31	315	ePn	Pn	16 05 57.6	-0.9
CCB	Clear Creek Bu	4.33	318	ePn	Pn	16 05 58.7	-0.1
BESE	Bessie Mountai	4.33	131	ePn	Pn	16 05 58.6	-0.3
BESE	Bessie Mountai	4.33	131	Pn	Pn	16 05 59.1	+0.2
BESE				Sg	Sg	16 07 08.1	-2.9
SEW	Seward	4.36	254	ePn	Pn	16 05 59.6	+0.5
PRP	Porcupine Dome	4.42	335	ePn	Pn	16 06 00.7	+0.6
COLA	College	4.50	320	ePn	Pn	16 06 02.1	+1.0
BWN	Browne	4.63	308	ePn	Pn	16 05 59.9	-3.0
MDM	Murphy Dome	4.68	319	ePn	Pn	16 06 04.4	+0.8
JIS	Juneau Island	4.73	132	ePn	Pn	16 06 03.9	-0.2
KTH	Kantishna Hill	4.96	298	ePn	Pn	16 06 08.1	+0.6
BRSE	Bradley Lake S	5.10	253	ePn	Pn	16 06 10.7	+1.3
BRLK	Bradley Lake	5.16	254	ePn	Pn	16 06 10.1	-0.1
BPAW	Bear Paw Mtn.	5.19	303	ePn	Pn	16 06 12.2	+1.6
FYU	Fort Yukon	5.32	342	ePn	Pn	16 06 12.9	+0.6
PPLA	Purkeypile	5.36	289	ePn	Pn	16 06 13.1	+0.1
CNPM	China Poot	5.42	252	ePn	Pn	16 06 14.8	+1.0
MLY	Manley	5.56	313	ePn	Pn	16 06 16.0	+0.3
RSO	Redoubt South	5.79	264	ePn	Pn	16 06 18.9	-0.1
BM3	Burnt Mountain	6.05	347	ePn	Pn	16 06 23.2	+0.8
DLBC	Dease Lake	6.37	115	Pn	Pn	16 06 28.5	+1.6
	0.2nm,0.3s,baz=309,slow=14,SNR=2.4						
DLBC				Pg	Pb	16 06 42.3	-1.2
	0.9nm,0.3s,baz=265,slow=7.5,SNR=6.8						
DLBC				Lg	Lg	16 08 12.2	
	4.8nm,0.3s,baz=229,slow=20,SNR=4.8						
DLBC	Dease Lake	6.37	115	ePn	Pn	16 06 27.2	+0.3
DLBC	Dease Lake	6.37	115	Pn	Pn	16 06 28.9	+2.0
DLBC				Sg	Sg	16 08 12.7	-3.8
WRAK	Wrangell Islan	6.86	135	ePn	Pn	16 06 33.5	0.0
COLD	Coldfoot	6.90	329	ePn	Pn	16 06 34.5	+0.5
COLD	Coldfoot	6.90	329	Pn	Pn	16 06 34.4	+0.4
COLD				Sg	Sg	16 08 29.1	-4.1
SVW2	Sparrevohn	7.00	272	ePn	Pn	16 06 36.5	+1.1
TT01	Tatalina	7.10	287	ePn	Pn	16 06 37.9	+1.0
TT01				ePn	Pn	16 06 37.9	+1.0
IM3	Indian Mountai	7.13	314	ePn	Pn	16 06 38.0	+0.8
INK	Inuvik	7.46	22	Pn	Pn	16 06 42.2	+0.5
	0.5nm,0.3s,baz=225,slow=14,SNR=7.2						
INK				Sn	Sn	16 08 03.4	-3.4
	1.8nm,0.3s,baz=253,slow=17,SNR=4.4						
INK				Lg	Lg	16 08 50.0	
	1.0nm,0.3s,baz=101,slow=17,SNR=7.1						
INK	Inuvik	7.46	22	ePn	Pn	16 06 41.5	-0.2
INK				eSn	Sn	16 08 03.4	-3.4
INK	Inuvik	7.46	22	Pn	Pn	16 06 41.8	+0.1
INK				Sn	Sn	16 08 02.9	-3.9
OHAK	Old Harbor	7.61	240	ePn	Pn	16 06 43.7	-0.1
TOLK	Toolik Lake Re	7.93	337	ePn	Pn	16 06 49.3	+1.1
SII	Sitkinak Islan	8.42	239	ePn	Pn	16 06 54.5	-0.4
FNBB	Fort Nelson	9.37	99	Pn	Pn	16 07 07.0	-1.0
FNBB				Sn	Sn	16 08 50.4	-3.5
CHIR	Chirikof Islan	9.51	239	ePn	Pn	16 07 10.3	+0.5
DIB	Dawson Inlet,	9.59	147	ePn	Pn	16 07 11.9	+1.0
DIB	Dawson Inlet,	9.59	147	Pn	Pn	16 07 14.1	+3.2
DHRN	Dharma Camp	10.79	50	P	Pn	16 07 25.7	-1.6
YKA	Yellowknife Ar	12.42	74	Pn	Pn	16 07 49.1	-0.5
	0.2nm,0.3s,baz=279,slow=12,SNR=3.0						
YKB5	Yellowknife Ar	12.42	74	ePn	Pn	16 07 49.0	-0.5
NEW	Newport	19.01	124	P	Pn	16 09 17.4	+1.9
	0.1nm,0.3s,baz=312,slow=11,SNR=4.1						
PD31	Pinedale Array	26.57	121	eP	P	16 10 33.3	+1.9
PDAR	Pinedale Array	26.57	121	P	P	16 10 33.3	+1.9
	0.4nm,0.6s,baz=343,slow=4.6,SNR=4.2						
TXAR	Lajitas Array	40.55	125	P	P	16 12 34.6	+1.9
	0.3nm,0.8s,baz=332,slow=5.1,SNR=3.4						
FIA0	FINESS Array S	56.90	7	eP	P	16 14 37.5	-0.2
FINES	FINESS Array B	56.90	7	P	P	16 14 37.5	-0.2
	2.3nm,0.9s,baz=343,slow=8.9,SNR=3.2						
HFS	Hagfors	57.06	15	P	P	16 14 39.3	+0.5
	1.6nm,0.8s,baz=342,slow=9.1,SNR=2.8						
EKA	Eskdalemuir Ar	58.81	27	P	P	16 14 51.9	+0.7
	1.2nm,0.8s,baz=343,slow=5.5,SNR=4.1						
KURBB	Kurchatov Arra	63.75	333	P	P	16 15 23.9	-0.8
	0.4nm,0.8s,baz=28,slow=6.3,SNR=3.8						
AKASG	Malin Array Be	67.79	7	P	P	16 15 51.0	+0.2
	0.9nm,0.5s,baz=356,slow=6.2,SNR=5.9						
AKBB	Malin Array Si	67.79	7	eP	P	16 15 51.0	+0.2

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*NIED **14** 16:07:00, 34°.90N×140°.00E, h65^{km}, Mw3.9 Best double couple: M₀8.98000×10^{14} NP1:φs223.00000°, δ36.00000°, λ112.00000°. NP2:φs16.00000°, δ57.00000°, λ75.00000°.*

*ISCJB **14** 16:07:33.2±0.4, 34°.96N±0°.03×139°.98E±0°.04, h66^{km}±3^{km}, mb3.8/10, Error ellipse: s-maj=6.0km s-min=5.5km az=136.2*

*JMA **14** 16:07:33.5±0.2, 34°.96N×139°.97E, h63^{km}±2^{km}, M3.8*

JMA Felt II J1.

*IDC **14** 16:07:34.9±1.3, 34°.91N×139°.90E, h66^{km}±12^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.5/49, mbtmp3.9/12, MS3.0/4, Ms1 3.0/4, ms1mx2.6/36, Error ellipse: s-maj=23.8km s-min=5.7km az=71.0*

ISC 14 16:07:33.8±0.7**,34°.98N**±0°.04×**139°.99E**±0°.04**,h58**^{km}±6^{km}**, n35,**σ**1§13**/39**,mb3.9**/10**,4C-6D,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATJ	Tateyama 2	0.10	306	⇑P	Pn	16 07 43.4	+0.8
JKUC	kamogawauchiur	0.25	43	⇑P	Pn	16 07 43.8	+0.4
JKUC				S	Sn	16 07 51.2	+0.9
BSO4	Boso 4	0.29	87	⇑P	Pn	16 07 44.6	+1.1
KTR	Katsuura	0.32	57	⇑P	Pn	16 07 44.5	+0.6
KTR				S	Sn	16 07 52.1	+0.9
BSO3	Boso 3	0.46	112	⇓P	Pn	16 07 45.7	+0.7
JIM2	Oshima 3	0.52	241	⇓P	Pn	16 07 45.9	0.0
JIM2				S	Sn	16 07 54.5	-0.2
JOD2	Odawara 2	0.79	292	⇓P	Pn	16 07 48.8	-0.3
JOD2				S	Sn	16 07 59.8	-0.5
BSO1	Boso 1	0.88	111	⇓P	Pn	16 07 49.7	0.0
BSO1				X		16 08 01.9	
JIZS	Izushimoda	0.95	255	⇓P	Pn	16 07 51.2	+0.1
JIZS				S	Sn	16 08 03.7	-0.1
JFNN	Fujinakano	1.09	282	⇓P	Pn	16 07 53.1	+0.1
JFNN				S	Sn	16 08 07.7	+0.5
JMKN	Mikurajimanish	1.13	197	P	Pn	16 07 54.2	+0.7
JMKN				S	Sn	16 08 08.1	0.0
JHJ	Hachijo jima 2	1.86	185	P	Pn	16 08 04.0	+0.6
	234nm,0.3s,baz=279,slow=2.9,SNR=30						
JHJ				S	Sn	16 08 25.7	-0.1
	474nm,0.3s,baz=1.0,slow=21,SNR=39						
MJAR	Matsushiro Arr	2.13	318	P	Pn	16 08 08.0	+1.0
	23nm,0.3s,baz=210,slow=31,SNR=1662						
MJAR				S	Sn	16 08 33.2	+0.8
	8.5nm,0.3s,baz=132,slow=20,SNR=7.2						
MJAR				LR	LR	16 08 52.1	
	comp=Z,62nm,20.8s,baz=135,slow=37						
MAT	Matsushiro	2.13	318	P	Pn	16 08 08.0	+0.9
MAT				S	Sn	16 08 33.6	+1.2
JNU	Nakatsue	7.78	259	P	Pn	16 09 25.9	+1.5
	0.6nm,0.3s,baz=144,slow=0.8,SNR=8.7						
JNU				LR	LR	16 12 43.2	
	comp=Z,88nm,19.2s,baz=2.5,slow=40						
ASAJ	Asahikawa	9.35	12	P	Pn	16 09 45.1	-0.6
	0.5nm,0.3s,baz=206,slow=10,SNR=10						
ASAJ				S	Sn	16 11 24.6	-4.8
	0.1nm,0.3s,baz=120,slow=20,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.20	116	T	T	16 43 02.9	
	baz=308,slow=75,SNR=199						
H11N1	WAKE ISLAND Hy	28.20	116	T	T	16 43 02.8	
	baz=308,slow=75,SNR=208						
H11N3	WAKE ISLAND Hy	28.22	116	T	T	16 43 05.0	
	baz=308,slow=75,SNR=283						
H11S3	WAKE ISLAND Hy	28.82	118	T	T	16 43 46.0	
	baz=310,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	28.82	118	T	T	16 43 46.1	
	baz=310,slow=76,SNR=70						
H11S2	WAKE ISLAND Hy	28.84	118	T	T	16 43 47.2	
	baz=310,slow=76,SNR=27						
CMAR	Chiang Mai Arr	39.87	256	LR	LR	16 31 41.0	
	comp=Z,13nm,18.6s,baz=205,slow=36						
ZALV	Zalesovo Beam	42.48	314	P	P	16 15 24.0	+1.0
	1.0nm,0.4s,baz=110,slow=7.3,SNR=3.8						
ZALV				PcP	PcP	16 17 14.7	-0.1
	0.9nm,0.5s,baz=106,slow=3.1,SNR=3.9						
MKAR	Makanchi Array	44.26	304	P	P	16 15 38.2	+0.7
	0.8nm,0.5s,baz=85,slow=9.6,SNR=12						
KURBB	Kurchatov Arra	46.38	309	P	P	16 15 54.7	+0.5
	0.9nm,0.4s,baz=79,slow=7.7,SNR=18						
BATI	Baumata	47.52	202	LR	LR	16 36 58.1	
	comp=Z,114nm,18.6s,baz=44,slow=37						
ILAR	Eielson Array	51.85	31	P	P	16 16 36.4	+0.6
	0.3nm,0.8s,baz=283,slow=8.0,SNR=4.7						
WRA	Warramunga Arr	54.88	186	P	P	16 16 57.3	-1.1
	5.2nm,0.7s,baz=0.5,slow=9.2,SNR=14						
ASAR	Alice Springs	58.60	187	P	P	16 17 24.2	-0.6
	0.7nm,0.4s,baz=15,slow=11,SNR=18						
FINES	FINESS Array B	70.09	332	P	P	16 18 38.9	-0.5
	4.4nm,1.1s,baz=46,slow=6.4,SNR=9.1						
AKASG	Malin Array Be	75.21	322	P	P	16 19 09.7	-0.3
	0.3nm,0.3s,baz=50,slow=5.7,SNR=4.4						
NVAR	Mina Array Bea	77.16	52	P	P	16 19 23.6	+2.0
	0.4nm,0.6s,baz=295,slow=5.1,SNR=4.9						
TXAR	Lajitas Array	92.30	52	P	P	16 20 38.0	-0.1
	0.1nm,0.6s,baz=316,slow=3.8,SNR=2.5						
LPAZ	La Paz	148.72	61	PKPbc	PKiKP	16 27 16.3	-0.9
	0.8nm,0.6s,baz=270,slow=2.0,SNR=4.7						

SJA 14 16:22:13.2±0.5**,31°.24S×68°.61W,h98**^{km}±3^{km}**,ML2.3, MW3.5,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMOG	MOGNA	0.32	18	eP	Pn	16 22 28.5	+0.7
AMOG				eS	Sn	16 22 39.7	+1.1
RTCV	Cerro Valdivia	0.62	175	eP	Pn	16 22 30.4	+0.6
RTCV				eS	Sn	16 22 43.3	+1.1
ACCO	Cerro Coronel	0.76	329	eP	Pn	16 22 33.0	+1.6
ACCO				eS	Sn	16 22 46.7	+1.7
RTLS	Leoncito	0.81	227	eP	Pn	16 22 33.0	+1.2
RTLS				IAML		16 22 49.5	
	comp=Z,83nm,0.1s						
AROD	Rodeo	1.31	325	eP	Pn	16 22 38.9	+1.6
AGUA	GUANDACOL	1.75	3	eP	Pn	16 22 43.7	+1.1
APLL	PUNTA DE LOS L	1.98	65	eP	Pn	16 22 46.6	+1.2
APLL				IAML		16 23 13.6	
	comp=Z,17nm,0.2s						
ACLC	CERRO LA CRUZ	2.31	39	eP	Pn	16 22 51.1	+1.2

PGC 14 16:23:38.1±0.0**,61°.59N×141°.06W,h11**^{km}**,ML2.0**/10**, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.22	28	P	Pg	16 23 42.3	-0.5
YUK2				S	Sg	16 23 46.0	0.0
YUK3	Moose Creek	0.34	57	P	Pg	16 23 44.3	-0.6
YUK3				S	Sg	16 23 49.2	-0.3
YUK1	Sand Pete Hill	0.62	24	P	Pg	16 23 49.2	-0.9
YUK1				S	Sg	16 23 57.9	-0.3
PTPK	Patty Peak	0.79	240	P	Pg	16 23 51.9	-1.4
PTPK				S	Sg	16 24 02.7	-0.8
BVCY	Beaver Creek	0.83	7	P	Pg	16 23 52.8	-1.3
BVCY				S	Sg	16 24 05.0	+0.1
BVCY				Sg	Sn	16 24 10.1	+2.0
BALM	Baldy	0.83	229	P	Pg	16 23 52.3	-1.8
BALM				S	Sg	16 24 02.9	-2.1
KIAG	Kiagna River	0.92	224	P	Pg	16 23 53.7	-2.0
KIAG				S	Sg	16 24 07.0	-0.7
TABL	Table Mountain	1.16	182	P	Pb	16 23 58.4	-1.8
TABL				S	Sb	16 24 13.9	-1.4
YUK4	Talbot Arm	1.19	101	P	Pb	16 23 59.7	-1.0
YUK4				S	Sb	16 24 15.9	-0.2
YUK6	Outpost Mounta	1.46	115	Pn	Pn	16 24 04.1	-0.5
YUK6				Sg	Sg	16 24 24.6	-0.3
SAMH	Samovar Hills	1.47	174	Pn	Pn	16 24 04.3	-0.3
SAMH				Sg	Sb	16 24 24.7	+0.4
MESA	MESA	1.48	197	Pn	Pn	16 24 05.0	+0.1

MESA				Sg	Sb	16 24 25.1	+0.4
PCA	**Pinnacle**	**1.55**	**165**	Pn	Pn	16 24 05.7	0.0
PCA				Sg	Sb	16 24 27.1	+0.6
YUK5	**Granite Creek**	**1.61**	**105**	Pn	Pn	16 24 06.2	-0.4
YUK5				Sg	Sn	16 24 26.9	-0.5
YUK7	**Dusty Glacier**	**1.78**	**126**	Pn	Pn	16 24 09.8	+0.9
YUK7				Sg	Sg	16 24 35.1	-0.1
HYT	**Haines Junctio**	**1.89**	**112**	Pn	Pn	16 24 10.6	+0.3
HYT				Sg	Sb	16 24 36.4	+0.2
PNL	**Peninsula**	**2.10**	**156**	Pn	Pn	16 24 14.3	+1.2
PNL				Sg	Sg	16 24 44.0	-1.4
DOT	**Dot Lake**	**2.49**	**327**	Pn	Pn	16 24 18.5	0.0
DOT				Sg	Sb	16 24 55.5	+2.1
DAWY	**Dawson**	**2.60**	**16**	Pn	Pn	16 24 20.4	+0.3
DAWY				Sg	Sb	16 24 58.0	+1.4

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*NEIC **14** 16:24:33.0±0.0, 15°.81N×97°.16W, h4^{km}, MD4.0(MEX), After MEX.*

MEX 14 16:24:33.3±0.9**, 15°.84N×97°.18W, h12**^{km}±3^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**1.30**	**19**	*e*Pg	Pn	16 24 54.0	-3.5
VHO				*e*Sn	Sb	16 25 09.7	-5.0
VHO	**Vista Hermosa**	**1.30**	**19**	*e*P	Pn	16 24 54.1	-3.5
VHO				*e*S	Sb	16 25 09.7	-5.0
TLIG	**Tlapa**	**2.17**	**322**	*e*Pn	Pn	16 25 07.7	-1.7
CMIG	**Matias Romero**	**2.53**	**60**	*e*Pg	Pb	16 25 19.4	+0.7
CMIG				*e*Lg	Lg	16 25 53.6	
CMIG	**Matias Romero**	**2.53**	**60**	*i* P	Pn	16 25 11.0	-3.3
CMIG				*e*S	Sn	16 25 40.6	-4.4
TUIG	**Tuzandepetl**	**3.42**	**50**	*e*P	Pn	16 25 16.1	-10
LVIG	**Laguna Verde**	**3.93**	**10**	*e*Pn	Pn	16 25 30.7	-2.9

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*ECX **14** 16:29:37.0±0.5, 31°.95N×115°.09W, h6^{km}, MD2.5, ML2.7*
*MEX **14** 16:29:37.6±0.4, 30°.89N×116°.66W, h10^{km}, MD3.7*

ISC 14 16:29:37.3±1.6**, 31°.96N**±0°.04×**115°.27W**±0°.09**, h3**^{km}±17^{km}**, n10, σ1^{s}02**/16**, 1D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	**0.46**	**356**	*e*P	**Pg**	**16 29 45.9**	**-0.3**
CPBX				*e*S	**Sg**	**16 29 53.0**	**+0.8**
CPBX				IAML		16 29 56.7	
	comp=E,2μm,0.2s						
CPBX				⇓*e*		16 29 56.7	
SPIG	**San Pedro Mart**	**0.92**	**191**	*e*P	**Pg**	**16 29 54.6**	**-0.4**
SPIG				*e*S	**Sg**	**16 30 07.8**	**+0.8**
RMX	**La Rumorosa**	**0.94**	**313**	*e*P	**Pg**	**16 29 54.3**	**-1.1**
RMX				*e*S	**Sg**	**16 30 07.9**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**0.99**	**314**	*e*P	**Pg**	**16 29 56.2**	**-0.1**
CBX	**Cerro Bola**	**1.24**	**287**	*e*P	**Pn**	**16 30 00.1**	**-1.5**
CBX				*e*S	**Sb**	**16 30 17.2**	**-0.6**
CBX	**Cerro Bola**	**1.24**	**287**	*e*P	**Pn**	**16 30 01.5**	**-0.1**
CBX				*e*S	**Sb**	**16 30 19.8**	**+2.0**
TJIG	**Tijuana**	**1.28**	**292**	*e*P	**Pn**	**16 30 01.2**	**-1.0**
TJIG				*e*S	**Sb**	**16 30 20.2**	**+1.1**
MONP2	**Monument Peak**	**1.35**	**314**	*e*P	**Pn**	**16 30 02.4**	**-0.9**
BAR	**Barrett**	**1.39**	**302**	*e*P	**Pn**	**16 30 03.6**	**-0.1**
EML	**El Monte Cty P**	**1.63**	**305**	*e*P	**Pn**	**16 30 07.1**	**+0.2**

PGC 14 16:29:45.1±0.0**, 61°.57N×141°.07W, h5**^{km}**, ML2.1**/11**, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.24**	**27**	P	Pg	16 29 49.5	-0.4
YUK2				S	Sg	16 29 53.3	+0.2
YUK3	**Moose Creek**	**0.35**	**55**	P	Pg	16 29 51.5	-0.6
YUK3				S	Sg	16 29 56.5	-0.2
YUK1	**Sand Pete Hill**	**0.64**	**24**	P	Pg	16 29 56.4	-1.0
YUK1				S	Sg	16 30 05.3	-0.3
PTPK	**Patty Peak**	**0.78**	**241**	P	Pg	16 29 59.0	-0.9
PTPK				S	Sg	16 30 09.4	-0.6
BALM	**Baldy**	**0.82**	**229**	P	Pg	16 29 59.4	-1.4
BALM				S	Sg	16 30 10.3	-1.1
BVCY	**Beaver Creek**	**0.85**	**7**	P	Pg	16 30 00.6	-0.8
BVCY				S	Sg	16 30 12.4	-0.1
KIAG	**Kiagna River**	**0.90**	**224**	P	Pg	16 30 00.5	-1.9
KIAG				S	Sg	16 30 13.2	-0.9
TABL	**Table Mountain**	**1.14**	**182**	P	Pg	16 30 05.2	-1.7
TABL				S	Sg	16 30 20.9	-0.8
YUK4	**Talbot Arm**	**1.19**	**100**	P	Pg	16 30 06.6	-1.3
YUK6	**Outpost Mounta**	**1.45**	**115**	Pn	Pn	16 30 11.0	-1.2
YUK6				Sg	Sb	16 30 30.6	-1.0
SAMH	**Samovar Hills**	**1.46**	**174**	Pn	Pn	16 30 11.6	-0.5
SAMH				Sg	Sg	16 30 31.7	-0.1
MESA	**MESA**	**1.47**	**197**	Pn	Pn	16 30 11.8	-0.5
MESA				Sg	Sg	16 30 32.1	0.0
PCA	**Pinnacle**	**1.54**	**165**	Pn	Pn	16 30 12.7	-0.5
PCA				Sg	Sn	16 30 33.4	-0.1
YUK5	**Granite Creek**	**1.61**	**105**	Pn	Pn	16 30 13.3	-1.0
YUK5				Sg	Sn	16 30 34.2	-1.3
YUK7	**Dusty Glacier**	**1.77**	**125**	Pn	Pn	16 30 16.8	+0.3
YUK7				Sg	Sb	16 30 40.9	+0.3
HYT	**Haines Junctio**	**1.88**	**112**	Pn	Pn	16 30 17.5	-0.5
HYT				Sg	Sb	16 30 43.1	-0.8
PNL	**Peninsula**	**2.08**	**156**	Pn	Pn	16 30 20.6	0.0
PNL				Sg	Sb	16 30 49.8	+0.4
DOT	**Dot Lake**	**2.50**	**328**	Pn	Pn	16 30 26.2	-0.2
DOT				Pg	Pb	16 30 30.6	+0.2
DOT				Sg	Sb	16 31 03.2	+1.7
DAWY	**Dawson**	**2.62**	**16**	Pn	Pn	16 30 28.1	+0.1
DAWY				Pg	Pb	16 30 31.8	-0.7
DAWY				Sg	Sb	16 31 05.8	+1.0
PLBC	**Pleasant Camp**	**3.15**	**130**	Sg	Sg	16 31 24.4	-1.8

IDC 14 16:31:41.1±2.2**, 6°.57S×130°.07E, h152**^{km}±24^{km}**, mb3.9**/1**, mb1 3.6**/5**, mb1mx3.2**/30**, mbtmp4.1**/5**, Error ellipse: s-maj=38.7km s-min=21.4km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.79**	**12**	P	Pn	16 33 05.5	+0.4
	1.9nm,0.3s,baz=87,slow=5.2,SNR=35						
SIJI				S	Sn	16 34 08.2	-2.6
	5.7nm,0.3s,baz=242,slow=22,SNR=14						
BATI	**Baumata**	**7.30**	**240**	P	Pn	16 33 25.0	-0.2
	5.6nm,0.3s,baz=101,slow=4.7,SNR=9.1						
BATI				S	Sn	16 34 43.5	-3.5
	5.8nm,0.3s,baz=235,slow=19,SNR=8.9						
WRA	**Warramunga Arr**	**13.92**	**163**	P	Pn	16 34 50.2	-1.8
	0.6nm,0.3s,baz=350,slow=14,SNR=29						
WRA				S	Sn	16 37 17.4	-9.1
	0.9nm,0.3s,baz=336,slow=22,SNR=8.3						
ASAR	**Alice Springs**	**17.39**	**168**	P	Pn	16 35 35.5	+0.7
	0.2nm,0.3s,baz=348,slow=10.0,SNR=19						
ASAR				S	S	16 38 40.8	-6.4
	0.1nm,0.3s,baz=350,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**67.91**	**327**	P	P	16 42 23.3	-0.1
	1.8nm,0.5s,baz=121,slow=7.3,SNR=25						

PGC 14 16:52:49.3±0.6**, 61°.58N×141°.07W, h10**^{km}**, ML2.1**/11**, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.23**	**28**	P	Pg	16 52 53.7	-0.5
YUK2				S	Sg	16 52 57.0	-0.5
YUK3	**Moose Creek**	**0.35**	**56**	P	Pg	16 52 55.7	-0.7
YUK3				S	Sg	16 53 00.2	-0.8
YUK1	**Sand Pete Hill**	**0.63**	**24**	P	Pg	16 53 00.6	-0.9
YUK1				S	Sg	16 53 09.5	-0.3
PTPK	**Patty Peak**	**0.78**	**240**	P	Pg	16 53 03.3	-0.9
PTPK				S	Sg	16 53 13.8	-0.6
BALM	**Baldy**	**0.82**	**229**	P	Pg	16 53 03.7	-1.4
BALM				S	Sg	16 53 15.1	-0.7
BVCY	**Beaver Creek**	**0.84**	**7**	P	Pg	16 53 04.8	-0.7
BVCY				Sg	Sn	16 53 21.4	+1.6
KIAG	**Kiagna River**	**0.91**	**224**	P	Pg	16 53 05.2	-1.5
KIAG				S	Sg	16 53 17.5	-1.0
TABL	**Table Mountain**	**1.14**	**182**	P	Pg	16 53 09.8	-1.5
TABL				S	Sg	16 53 25.2	-0.8
YUK4	**Talbot Arm**	**1.19**	**100**	P	Pb	16 53 10.9	-1.1
YUK4				S	Sg	16 53 27.5	-0.1
YUK6	**Outpost Mounta**	**1.46**	**115**	Pn	Pn	16 53 15.2	-0.7
YUK6				Sg	Sg	16 53 35.7	-0.4
SAMH	**Samovar Hills**	**1.46**	**174**	Pn	Pn	16 53 16.2	+0.4
SAMH				Sg	Sb	16 53 35.6	+0.4
MESA	**MESA**	**1.47**	**197**	Pn	Pn	16 53 15.9	-0.1
MESA				Sg	Sg	16 53 36.7	+0.2
PCA	**Pinnacle**	**1.54**	**165**	Pn	Pn	16 53 16.6	-0.3
PCA				Sg	Sb	16 53 37.6	+0.1
YUK5	**Granite Creek**	**1.61**	**105**	Pn	Pn	16 53 17.7	-0.3
YUK5				Sg	Sb	16 53 39.4	-0.3
YUK7	**Dusty Glacier**	**1.77**	**125**	Pn	Pb	16 53 21.3	-0.6
YUK7				Sg	Sb	16 53 45.2	+0.9
HYT	**Haines Junctio**	**1.89**	**112**	Pn	Pn	16 53 21.8	+0.1
HYT				Sg	Sb	16 53 48.1	+0.6
PNL	**Peninsula**	**2.09**	**156**	Pn	Pn	16 53 25.1	+0.8
PNL				Sg	Sb	16 53 54.4	+1.2
DOT	**Dot Lake**	**2.50**	**328**	Pn	Pn	16 53 30.0	+0.1
DOT				Sg	Sg	16 54 08.1	-1.3
DAWY	**Dawson**	**2.61**	**16**	Pn	Pn	16 53 32.1	+0.5
DAWY				Sg	Sb	16 54 09.4	+1.1
PLBC	**Pleasant Camp**	**3.15**	**130**	Sg	Sg	16 54 28.2	-2.3

IDC 14 17:03:43.2±2.1**, 14°.86N×144°.54E, h0**^{km}**, mb3.7**/6**, mb1 3.9**/6**, mb1mx3.6**/40**, mbtmp3.7**/6**, MS3.1**/9**, Ms1 3.1**/9**, ms1mx2.9**/29**, Error ellipse: s-maj=73.1km s-min=17.6km az=71.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.30**	**166**	Pn	Pg	17 04 08.1	-0.1
	215nm,0.3s,baz=285,slow=2.3,SNR=154						
GUMO				Sn	Sg	17 04 23.2	-1.9
	68nm,0.3s,baz=87,slow=21,SNR=6.3						
DAV	**Davao City (W)**	**20.15**	**249**	LR	LR	17 14 29.3	
	comp=Z,32nm,21.8s,baz=85,slow=32						
JNU	**Nakatsue**	**22.01**	**328**	LR	LR	17 16 35.3	
	comp=Z,26nm,18.3s,baz=182,slow=35						
MJAR	**Matsushiro Arr**	**22.32**	**346**	LR	LR	17 16 51.9	
	comp=Z,40nm,18.0s,baz=190,slow=35						
TGY	**Tagaytay City**	**22.87**	**271**	LR	LR	17 15 29.2	
	comp=Z,71nm,20.0s,baz=228,slow=31						
KSRS	**Korea Array**	**26.91**	**330**	LR	LR	17 19 13.1	
	comp=Z,24nm,19.3s,baz=169,slow=34						
HNR	**Honiara**	**28.56**	**147**	LR	LR	17 20 19.8	
	comp=Z,50nm,21.7s,baz=45,slow=35						
WRA	**Warramunga Arr**	**36.01**	**196**	P	P	17 10 46.7	+0.4
	1.5nm,0.7s,baz=13,slow=12,SNR=11						
ASAR	**Alice Springs**	**39.68**	**195**	P	P	17 11 17.4	+0.1
	0.3nm,0.6s,baz=18,slow=12,SNR=7.2						
CMAR	**Chiang Mai Arr**	**43.75**	**281**	P	P	17 11 50.0	-0.8
	0.8nm,0.3s,baz=82,slow=7.5,SNR=5.7						
CMAR				LR	LR	17 27 03.7	
	comp=Z,20nm,21.5s,baz=169,slow=32						
SONM	**Songino Array**	**45.52**	**324**	P	P	17 12 04.9	+0.2
	0.5nm,0.8s,baz=120,slow=8.7,SNR=3.3						
SONM				LR	LR	17 31 01.7	
	comp=Z,38nm,18.5s,baz=94,slow=36						
MKAR	**Makanchi Array**	**60.36**	**316**	P	P	17 13 54.6	+0.3
	1.4nm,0.8s,baz=101,slow=10.0,SNR=8.2						
ZALV	**Zalesovo Beam**	**60.41**	**324**	P	P	17 13 53.9	-0.5
	0.6nm,0.6s,baz=93,slow=5.8,SNR=3.3						
AKASG	**Malin Array Be**	**93.80**	**325**	LR	LR	18 00 31.8	
	comp=Z,16nm,20.6s,baz=55,slow=36						

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*NIED **14** 17:35:00, 39°.10N×143°.00E, h23^{km}, Mw3.9 Best double couple: M$_0$8.00000×10^{14} NP1:φ$_s$166.00000°, δ17.00000°, λ51.00000°. NP2:φ$_s$26.00000°, δ77.00000°, λ101.00000°.*
*IDC **14** 17:35:36.8±1.1, 39°.18N×142°.84E, h0^{km}, mb3.8/10, mb1 3.8/14, mb1mx3.7/44, mbtmp3.8/14, ML3.5/4, MS3.1/7, Ms1 3.1/7, ms1mx2.8/47, Error ellipse: s-maj=27.1km s-min=17.9km az=100.0*
*ISCJB **14** 17:35:37.8±1.0, 39°.18N±0°.03×143°.05E±0°.04, h23^{km}±6^{km}, mb4.0/19, MS3.3/3, Error ellipse: s-maj=5.9km s-min=4.6km az=34.6*
*JMA **14** 17:35:39.1±0.1, 39°.13N×142°.95E, h25^{km}±2^{km}, M4.1*
*NEIC **14** 17:35:41.1±2.6, 39°.24N×143°.04E, h34^{km}±4^{km}, mb4.1/14, Error ellipse: s-maj=13.3km s-min=6.2km az=132.0*

ISC 14 17:35:37.9±3.2**, 39°.17N**±0°.04×**142°.96E**±0°.06**, h11**^{km}±20^{km}**, n61, σ1^{s}85**/74**, mb4.0**/20**, MS3.3**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.97**	**295**	P	**Pb**	**17 35 56.9**	**+0.1**
MIYJ				*e*S	**Sb**	**17 36 10.1**	**+0.5**
OFUJ	**Ofunato**	**1.01**	**265**	P	**Pb**	**17 35 57.4**	**0.0**
OFUJ				*e*S	**Sb**	**17 36 10.2**	**-0.5**
JTH	**Tanohata**	**1.14**	**312**	P	**Pn**	**17 35 59.5**	**-0.4**
JKMT	**Kesennumamotoy**	**1.21**	**253**	P	**Pn**	**17 36 00.4**	**-0.4**
JKMT				*e*S	**Sb**	**17 36 15.8**	**-0.8**
JOM	**Ohasama**	**1.33**	**284**	P	**Pn**	**17 36 02.6**	**+0.2**
JOM				S	**Sn**	**17 36 19.2**	**-0.9**
JMK	**Ichinoseki**	**1.37**	**261**	P	**Pn**	**17 36 03.1**	**+0.1**
JMK				S	**Sn**	**17 36 20.4**	**-0.8**
JIO	**Ouri**	**1.45**	**241**	P	**Pn**	**17 36 03.7**	**-0.4**
JIO				*e*S	**Sn**	**17 36 20.6**	**-2.5**
JANG	**Nango**	**1.64**	**318**	P	**Pn**	**17 36 07.0**	**+0.3**
JANG				*e*S	**Sn**	**17 36 28.0**	**+0.3**
JRG	**Rokugo**	**1.82**	**278**	P	**Pn**	**17 36 10.2**	**+1.0**
JRG				*e*S	**Sn**	**17 36 33.7**	**+1.5**
JOU	**Okura**	**1.97**	**247**	P	**Pn**	**17 36 12.2**	**+1.0**
JOU				S	**Sn**	**17 36 36.4**	**+0.5**
JYK	**Kaneyama**	**2.04**	**264**	P	**Pn**	**17 36 13.4**	**+1.2**
JYK				*e*S	**Sn**	**17 36 38.8**	**+1.1**
JAH	**Hinai**	**2.06**	**300**	P	**Pn**	**17 36 13.8**	**+1.3**
JAH				*e*S	**Sn**	**17 36 39.8**	**+1.6**
JMM	**Marumori**	**2.14**	**233**	P	**Pn**	**17 36 13.8**	**+0.2**
JMM				*e*S	**Sn**	**17 36 39.3**	**-0.9**
JTM	**Tenmabayashi**	**2.17**	**319**	P	**Pn**	**17 36 14.6**	**+0.6**
ERM	**Erimo**	**2.84**	**3**	*e*Pn	**Pn**	**17 36 23.7**	**+0.5**
MAJO	**Matsushiro**	**4.59**	**237**	*e*Pn	**Pn**	**17 36 50.2**	**+3.0**
MAJO				*e*Sn	**Sn**	**17 37 46.2**	**+5.6**
MAT	**Matsushiro**	**4.59**	**237**	P	**Pn**	**17 36 49.9**	**+2.6**
MAT				S	**Sn**	**17 37 43.0**	**+2.4**
MJAR	**Matsushiro Arr**	**4.59**	**237**	Pn	**Pn**	**17 36 49.4**	**+2.2**
	1.2nm,0.3s,baz=35,slow=14,SNR=174						
MJAR				Sn	**Sn**	**17 37 46.2**	**+5.7**
	baz=315,slow=29,SNR=2.8						
MJAR				LR	LR	17 38 41.6	
	comp=Z,145nm,19.2s,baz=55,slow=41						
MJB9	**Matsu-Tunnel**	**4.59**	**237**	*e*Pn	**Pn**	**17 36 50.2**	**+3.0**
ASAJ	**Asahikawa**	**4.95**	**357**	Pn	**Pn**	**17 36 53.0**	**+0.8**
	1.8nm,0.3s,baz=215,slow=12,SNR=27						
ASAJ				Sn	**Sn**	**17 37 47.0**	**-2.3**
	1.9nm,0.3s,baz=18,slow=20,SNR=2.4						
INU	**Inuyama**	**6.08**	**233**	*e*Pn	**Pn**	**17 37 10.5**	**+2.6**
JHJ2	**Mitsune**	**6.56**	**204**	*e*Pn	**Pn**	**17 37 14.9**	**+0.5**
JHJ	**Hachijo jima 2**	**6.56**	**204**	Pn	**Pn**	**17 37 13.4**	**-1.0**
	13nm,0.3s,baz=337,slow=23,SNR=6.9						
JHJ				Sn	**Sn**	**17 38 22.1**	**-7.2**
	18nm,0.3s,baz=195,slow=23,SNR=5.6						
USRK	**Ussuriysk Ar.**	**9.62**	**305**	Pn	**Pn**	**17 37 58.1**	**+1.8**
	0.2nm,0.3s,baz=121,slow=15,SNR=3.0						
USRK				LR	LR	17 41 20.9	
	comp=Z,121nm,21.3s,baz=74,slow=36						
KSRS	**Korea Array**	**11.94**	**266**	Pn	**Pn**	**17 38 27.7**	**-0.3**
	0.1nm,0.3s,baz=70,slow=14,SNR=2.6						
KSRS				LR	LR	17 42 37.6	
	comp=Z,67nm,19.7s,baz=90,slow=35						
KS15	**Wonju Array Si**	**11.97**	**266**	*e*Pn	**Pn**	**17 38 27.8**	**-0.7**
KLR	**Kul'dur**	**12.86**	**325**	Pn	**Pn**	**17 38 41.4**	**+0.9**
	0.1nm,0.3s,baz=163,slow=11,SNR=2.1						
KLR				LR	LR	17 43 35.5	
	comp=Z,63nm,19.0s,baz=138,slow=37						
JOW	**Kunigami**	**17.38**	**229**	*e*Pn	**P**	**17 39 41.3**	**-0.5**
	7.4nm,0.6s						
PET	**Petropavlovsk**	**17.56**	**33**	*e*Pn	**Pn**	**17 39 38.6**	**-3.8**
	14nm,0.9s						
MA2	**Magadan**	**21.02**	**11**	P	**P**	**17 40 22.5**	**+1.2**
	5.4nm,0.8s,baz=188,slow=11,SNR=3.3						
YOJ	**Yonaguni jima**	**22.35**	**235**	*e*P	**P**	**17 40 35.8**	**-0.1**
	107nm,1.1s						
SARN	**Sarigan**	**22.53**	**173**	*e*P	**P**	**17 40 39.7**	**+1.9**
	40nm,1.1s						
TATO	**Taipei**	**22.98**	**238**	*e*P	**P**	**17 40 42.5**	**-0.1**
SEY	**Seymchan**	**24.46**	**10**	P	**P**	**17 40 58.0**	**+1.3**
	1.3nm,0.5s,baz=171,slow=13,SNR=5.3						
SONA0	**Songino Array**	**27.68**	**300**	*e*P	**P**	**17 41 26.3**	**+0.3**
SONM	**Songino Array**	**27.68**	**300**	P	**P**	**17 41 26.3**	**+0.3**
	0.7nm,0.6s,baz=100,slow=7.9,SNR=4.8						
SONM				LR	LR	17 52 53.2	
	comp=Z,56nm,20.1s,baz=90,slow=38						
H11S1	**WAKE ISLAND Hy**	**29.11**	**128**	T	T	18 12 18.9	
	baz=320						
H11S3	**WAKE ISLAND Hy**	**29.11**	**128**	T	T	18 12 30.4	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**29.13**	**128**	T	T	18 12 19.2	
	baz=320						
TLY	**Talaya**	**29.92**	**308**	LR	LR	17 53 31.4	
	comp=Z,86nm,19.8s,baz=158,slow=36						
ZAA1	**Zalesovo Array**	**41.41**	**311**	*e*P	**P**	**17 43 23.8**	**-0.3**
ZALV	**Zalesovo Beam**	**41.41**	**311**	P	**P**	**17 43 23.8**	**-0.3**
	1.6nm,0.4s,baz=94,slow=7.6,SNR=8.0						
TTA	**Tatalina**	**42.97**	**36**	*e*P	**P**	**17 43 34.3**	**-2.6**
	1.6nm,1.0s						
SVW2	**Sparrevohn**	**43.09**	**39**	*e*P	**P**	**17 43 35.6**	**-2.1**
	2.9nm,1.1s						
MK32	**Makanchi Array**	**44.05**	**301**	*e*P	**P**	**17 43 45.8**	**+0.1**
MKAR	**Makanchi Array**	**44.05**	**301**	P	**P**	**17 43 45.8**	**+0.1**
	2.1nm,0.8s,baz=84,slow=9.7,SNR=18						
MKAR				LR	LR	18 03 53.2	
	comp=Z,33nm,18.9s,baz=98,slow=39						
MAKZ	**Makanchi**	**44.26**	**301**	*e*P	**P**	**17 43 47.7**	**+0.4**
	2.3nm,0.9s						
KURK	**Kurchatov**	**45.60**	**307**	*e*P	**P**	**17 43 57.8**	**-0.1**
	5.2nm,0.7s						
ILAR	**Eielson Array**	**47.04**	**33**	P	**P**	**17 44 09.7**	**+0.7**
	0.4nm,0.6s,baz=264,slow=6.3,SNR=6.1						
ILB	**Eielson Array**	**47.04**	**33**	*e*P	**P**	**17 44 09.7**	**+0.7**
	1.9nm,1.1s						
MTN	**Manton Dam**	**52.91**	**195**	*e*P	**P**	**17 44 55.2**	**+1.1**
	13nm,1.0s						
KK31	**Karatay Array**	**53.13**	**299**	*e*P	**P**	**17 44 54.6**	**-1.0**
	1.8nm,0.9s						
KKAR	**Karatay Array**	**53.13**	**299**	*e*P	**P**	**17 44 54.6**	**-1.0**
	1.8nm,0.9s						
WR1	**Warramunga Arr**	**59.36**	**189**	*e*P	**P**	**17 45 39.8**	**-0.4**
WRA	**Warramunga Arr**	**59.36**	**189**	P	**P**	**17 45 39.8**	**-0.4**
	0.8nm,0.7s,baz=2.5,slow=7.7,SNR=2.5						
AS31	**Alice Springs**	**63.08**	**189**	*e*P	**P**	**17 46 07.4**	**+2.0**
	0.8nm,1.1s						
ASAR	**Alice Springs**	**63.08**	**189**	P	**P**	**17 46 07.4**	**+2.0**
	0.5nm,0.9s,baz=7.6,slow=7.6,SNR=3.0						
FIA0	**FINESS Array S**	**67.49**	**332**	*e*P	**P**	**17 46 32.6**	**-0.9**
FINES	**FINESS Array B**	**67.49**	**332**	P	**P**	**17 46 32.6**	**-0.9**
	0.4nm,0.5s,baz=46,slow=11,SNR=4.3						
NB200	**NORSAR Array S**	**72.68**	**338**	*e*P	**P**	**17 47 05.0**	**-0.4**
NOA	**NORSAR Array B**	**72.68**	**338**	P	**P**	**17 47 05.0**	**-0.4**
	1.0nm,1.0s,baz=32,slow=6.9,SNR=2.9						

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*IDC **14** 17:37:59.1±1.1, 38°.95N×143°.57E, h0^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.6/45, mbtmp3.7/10, ML3.3/3, Error ellipse: s-maj=28.6km s-min=17.1km az=96.0*
*ISCJB **14** 17:38:00.3±1.3, 39°.00N±0°.04×143°.39E±0°.05, h13^{km}±9^{km}, mb3.6/7, Error ellipse: s-maj=6.9km s-min=5.6km az=25.9*
*NIED **14** 17:38:00, 39°.00N×143°.20E, h8^{km}, Mw3.7 Best double couple: M$_0$3.70000×10^{14} NP1:φ$_s$168.00000°, δ76.00000°, λ-5.00000°. NP2:φ$_s$259.00000°, δ86.00000°, λ-166.00000°.*
*JMA **14** 17:38:01.6±0.2, 39°.04N×143°.22E, h7^{km}±2^{km}, M4.0*

ISC 14 17:38:00.2±2.1**, 38°.98N**±0°.04×**143°.20E**±0°.07**, h4**^{km}±11^{km}**, n33, σ1^{s}80**/43**, mb3.7**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**1.19**	**275**	P	**Pn**	**17 38 24.2**	**+0.5**
OFUJ				S	**Sn**	**17 38 40.5**	**+0.2**
MIYJ	**Miyakonagasawa**	**1.22**	**300**	P	**Pg**	**17 38 24.1**	**+0.4**
MIYJ				*e*S	**Sg**	**17 38 39.5**	**-0.1**
JKMT	**Kesennumamotoy**	**1.35**	**264**	P	**Pg**	**17 38 26.7**	**+0.6**
JKMT				*e*S	**Sg**	**17 38 45.2**	**+1.5**
JTH	**Tanohata**	**1.41**	**313**	P	**Pg**	**17 38 26.7**	**-0.5**
JTH				S	**Sg**	**17 38 45.1**	**-0.4**
JIO	**Ouri**	**1.54**	**251**	P	**Pg**	**17 38 29.8**	**+0.2**
JIO				*e*S	**Sg**	**17 38 50.3**	**+0.8**
JMK	**Ichinoseki**	**1.54**	**270**	P	**Pg**	**17 38 29.7**	**0.0**
JMK				*e*S	**Sg**	**17 38 50.5**	**+0.8**
JOM	**Ohasama**	**1.56**	**289**	P	**Pg**	**17 38 30.0**	**-0.1**
JOM				S	**Sg**	**17 38 50.5**	**+0.2**
JANG	**Nango**	**1.91**	**318**	P	**Pb**	**17 38 34.0**	**-1.5**
JRG	**Rokugo**	**2.03**	**283**	P	**Pb**	**17 38 37.6**	**-0.1**
JRG				*e*S	**Sb**	**17 39 03.6**	**+0.2**
JOU	**Okura**	**2.07**	**254**	P	**Pb**	**17 38 38.4**	**0.0**
JOU				*e*S	**Sg**	**17 39 05.6**	**-1.2**
JMM	**Marumori**	**2.19**	**240**	P	**Pb**	**17 38 39.9**	**-0.4**
JMM				*e*S	**Sb**	**17 39 08.2**	**+0.4**
JYK	**Kaneyama**	**2.21**	**269**	P	**Pb**	**17 38 41.0**	**+0.2**
JYK				*e*S	**Sg**	**17 39 09.8**	**-1.5**
JAH	**Hinai**	**2.32**	**302**	P	**Pb**	**17 38 42.3**	**-0.3**
JAH				*e*S	**Sb**	**17 39 10.8**	**-0.8**
JFK	**Kawauchi**	**2.43**	**229**	P	**Pn**	**17 38 42.1**	**+1.3**
JFK				*e*S	**Sb**	**17 39 13.2**	**-1.7**
JTM	**Tenmabayashi**	**2.44**	**319**	P	**Pb**	**17 38 42.9**	**-1.7**
JTM				S	**Sb**	**17 39 13.2**	**-1.8**
MJAR	**Matsushiro Arr**	**4.64**	**240**	Pn	**Pn**	**17 39 15.1**	**+4.0**
	0.5nm,0.3s,baz=49,slow=10,SNR=7.4						
MAT	**Matsushiro**	**4.64**	**240**	P	**Pn**	**17 39 15.2**	**+4.1**
MAT				*e*S	**Sb**	**17 40 12.5**	**-5.9**
ASAJ	**Asahikawa**	**5.16**	**355**	Pn	**Pn**	**17 39 16.8**	**-1.3**
	1.1nm,0.3s,baz=204,slow=12,SNR=7.6						
ASAJ				Sn	**Sn**	**17 40 21.5**	**+3.4**
	0.6nm,0.3s,baz=53,slow=20,SNR=3.0						
JHJ	**Hachijo jima 2**	**6.46**	**206**	Pn	**Pn**	**17 39 36.7**	**+0.6**
	4.7nm,0.3s,baz=45,slow=13,SNR=2.4						
JHJ				Sn	**Sn**	**17 40 46.8**	**-3.5**
	9.3nm,0.3s,baz=90,slow=20,SNR=2.4						
USRK	**Ussuriysk Ar.**	**9.88**	**305**	Pn	Pn	17 40 29.8	+6.8
	0.1nm,0.3s,baz=119,slow=16,SNR=2.7						
SEY	**Seymchan**	**24.62**	**10**	P	**P**	**17 43 20.2**	**-1.2**
	2.1nm,1.0s,baz=249,slow=10,SNR=4.2						
SONM	**Songino Array**	**27.94**	**301**	P	**P**	**17 43 53.3**	**+1.7**
	0.5nm,0.6s,baz=82,slow=7.6,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**28.05**	**126**	T	T	18 12 17.0	
	baz=318,slow=75,SNR=187						
H11N1	**WAKE ISLAND Hy**	**28.06**	**126**	T	T	18 12 22.0	
	baz=318,slow=75,SNR=162						
H11N3	**WAKE ISLAND Hy**	**28.07**	**126**	T	T	18 12 09.7	
	baz=318,slow=75,SNR=186						
H11S1	**WAKE ISLAND Hy**	**28.84**	**128**	T	T	18 13 08.3	
	baz=319,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**28.85**	**128**	T	T	18 13 07.6	
	baz=319,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**28.86**	**128**	T	T	18 13 18.7	
	baz=319,slow=76,SNR=17						
ZALV	**Zalesovo Beam**	**41.68**	**311**	P	**P**	**17 45 51.4**	**+1.8**
	0.8nm,0.6s,baz=95,slow=9.1,SNR=3.1						
MKAR	**Makanchi Array**	**44.31**	**301**	P	**P**	**17 46 12.3**	**+1.2**
	0.4nm,0.8s,baz=90,slow=7.8,SNR=2.5						
ILAR	**Eielson Array**	**47.10**	**33**	P	**P**	**17 46 32.0**	**-0.9**
	0.4nm,0.4s,baz=268,slow=7.0,SNR=5.9						
WRA	**Warramunga Arr**	**59.19**	**190**	P	**P**	**17 48 01.7**	**-0.7**
	1.7nm,0.9s,baz=358,slow=8.8,SNR=6.4						
ASAR	**Alice Springs**	**62.92**	**190**	P	**P**	**17 48 27.4**	**-0.3**
	0.4nm,0.8s,baz=9.9,slow=5.4,SNR=4.5						

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*IDC **14** 17:48:47.9±3.9, 6°.73S×145°.33E, h52^{km}±40^{km}, mb3.8/3, mb1 4.3/7, mb1mx3.7/31, mbtmp4.3/7, ML3.9/2, Error ellipse: s-maj=44.5km s-min=29.6km az=74.0*
*ISCJB **14** 17:48:48.8±0.7, 6°.75S±0°.07×145°.6E±0°.1, h95^{km}, mb4.2/6, Error ellipse: s-maj=16.8km s-min=9.7km az=8.9*
*NEIC **14** 17:48:51.3±2.5, 6°.88S×145°.69E, h113^{km}±10^{km}, mb4.4/9, Error ellipse: s-maj=23.5km s-min=13.6km az=53.0*

ISC 14 17:48:50.3±0.8**, 6°.68S**±0°.09×**145°.4E**±0°.1**, h95**^{km}**, n18, σ2^{s}15**/18**, mb4.4**/6**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.22**	**147**	P	**Pn**	**17 49 36.0**	**-2.8**
	5.8nm,0.3s,baz=291,slow=14,SNR=44						
PMG				S	**Sn**	**17 50 21.0**	**+4.6**
	11nm,0.3s,baz=121,slow=8.4,SNR=9.6						
PMG	**Port Moresby**	**3.22**	**147**	*e*Pn	**Pn**	**17 49 36.1**	**-2.8**
PMG				*e*Sn	Sn	17 50 05.2	-11
CTA	**Charters Tower**	**13.35**	**177**	P	**Pn**	**17 51 54.8**	**-1.3**
	0.4nm,0.3s,baz=350,slow=13,SNR=6.6						
SIJI	**Sorong**	**15.23**	**292**	P	**Pn**	**17 52 18.6**	**-1.7**
	0.5nm,0.3s,baz=192,slow=17,SNR=4.8						
WRAB	**Tennant Creek**	**16.99**	**218**	*e*P	**Pn**	**17 52 43.2**	**+1.1**
	16nm,0.6s						
WB2	**Warramunga Arr**	**16.99**	**218**	*e*P	**Pn**	**17 52 43.3**	**+1.1**
	16nm,0.6s						
WR1	**Warramunga Arr**	**17.00**	**218**	*e*P	**Pn**	**17 52 43.2**	**+0.9**

WRA	**Warramunga Arr**	**17.00**	**218**	P	**Pn**	**17 52 43.2**	**+0.9**
	6.3nm,0.3s,baz=41,slow=10.0,SNR=369						
AS31	**Alice Springs**	**20.18**	**212**	*e*P	**P**	**17 53 16.1**	**-1.3**
	5.8nm,0.4s						
ASAR	**Alice Springs**	**20.18**	**212**	P	**P**	**17 53 16.2**	**-1.2**
	9.4nm,0.6s,baz=44,slow=8.2,SNR=278						
STKA	**Stephens Creek**	**25.32**	**188**	P	**P**	**17 54 09.5**	**+1.4**
	4.2nm,0.7s,baz=352,slow=9.1,SNR=11						
STKA	**Stephens Creek**	**25.32**	**188**	*e*P	**P**	**17 54 09.5**	**+1.4**
	0.9nm,0.8s						
FORT	**Forrest**	**28.97**	**212**	*e*P	P	17 54 34.6	-6.3
	12nm,1.0s						
MAJO	**Matsushiro**	**43.52**	**352**	*e*P	**P**	**17 56 44.8**	**+0.3**
	7.1nm,1.1s						
MJB9	**Matsu-Tunnel**	**43.53**	**352**	*e*P	**P**	**17 56 44.9**	**+0.3**
	7.1nm,1.1s						
MK32	**Makanchi Array**	**77.02**	**321**	*e*P	**P**	**18 00 35.5**	**+2.7**
MKAR	**Makanchi Array**	**77.02**	**321**	P	**P**	**18 00 35.5**	**+2.6**
	0.6nm,0.8s,baz=101,slow=6.2,SNR=5.8						
PAHR	**Pah Rah Range**	**98.24**	**51**	*e*P	**P**	**18 02 15.9**	**-1.4**
	2.3nm,0.5s						

NNC ***14*** *17:51:08.7±3.8, 44°.79N×80°.43E, h0^{km}, mb2.2, mpv2.2, Error ellipse: s-maj=35.3km s-min=23.7km az=107.0*

SOME 14 17:51:09.0, 42°.23N×81°.12E, h10^{km}, 2C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.34**	**335**	P	Pn	17 51 33.4	-0.5
	0.5nm,0.2s						
KTMS				S	Sb	17 51 51.6	+0.1
	1.1nm,0.1s						
KTMS	**Ketmen**	**1.34**	**335**	*e*P	Pn	17 51 33.5	-0.4
	0.5nm,0.2s						
KTMS				*e*S	Sb	17 51 51.6	+0.1
	1.3nm,0.3s						
PDGK	**Podgornoye**	**1.62**	**313**	P	Pb	17 51 39.1	0.0
	0.4nm,0.3s						
PDGK				S	Sg	17 52 01.4	+0.2
	1.3nm,0.5s						
PDGK	**Podgornoye**	**1.62**	**313**	⇑P	Pn	17 51 38.2	+0.4
	2.4nm,1.1s						
PDGK				⇑S	Sb	17 51 59.9	+0.2
	1.3nm,0.4s						
UZB	**Uzynbulak**	**1.79**	**301**	*e*P	Pb	17 51 41.5	-0.6
	0.7nm,0.3s						
UZB				*e*S	Sb	17 52 04.6	0.0
	1.6nm,0.2s						
SATY	**Saty**	**2.16**	**293**	Pg	Pb	17 51 48.3	0.0
SATY				Lg	Lg	17 52 16.9	
SATY	**Saty**	**2.16**	**293**	*e*P	Pb	17 51 48.3	0.0
	1.1nm,0.2s						
SATY				*e*S	Sb	17 52 16.4	+1.1
	3.1nm,0.2s						
DJR	**Jarkent**	**2.31**	**336**	*e*P	Pb	17 51 50.3	-0.5
	0.7nm,0.3s						
DJR				*e*S	Sb	17 52 20.0	+0.5
	0.8nm,0.2s						
MNBS	**Baschi**	**2.71**	**314**	Pg	Pb	17 51 56.8	-0.9
	0.8nm,0.2s						
MNBS	**Baschi**	**2.71**	**314**	*e*P	Pb	17 51 56.8	-0.9
	0.8nm,0.2s						
MNBS				*e*S	Sb	17 52 31.0	0.0
	3.5nm,0.3s						

DJA ***14*** *18:04:51.4±1.2, 2°S±7°×13°9E±°, h23^{km}±16^{km}, M4.7/6, mb4.6/3, mB5.4/1, MLv4.7/6, Mw(mB)4.8/1*

ISCJB ***14*** *18:04:52.0±0.4, 2°.75S±0°.05×138°.98E±0°.03, h46^{km}, mb4.0/12, MS3.6/7, Error ellipse: s-maj=7.1km s-min=4.3km az=2.3*

IDC ***14*** *18:04:53.2±2.3, 2°.72S×139°.11E, h42^{km}±23^{km}, mb3.6/6, mb1 4.0/8, mb1mx3.7/32, mbtmp4.0/8, ML4.1/2, MS3.5/11, Ms1 3.5/11, ms1mx3.2/38, Error ellipse: s-maj=23.6km s-min=19.4km az=86.0*

NEIC ***14*** *18:04:54.5±2.2, 2°.86S×139°.06E, h54^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=20.0km s-min=14.7km az=97.0*

ISC 14 18:04:53.7±0.6**, 2°.73S**±0°.08×**139°.04E**±0°.04**, h46^{km}, n40,** σ**1^{s}40**/37**, mb4.0**/12**, MS3.6**/7**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.14**	**83**	P	**Pn**	**18 05 11.9**	**-1.4**
GENI				S	**Sn**	**18 05 28.3**	**+0.6**
JAY	**Jayapura**	**1.68**	**83**	P	**Pn**	**18 05 18.9**	**-1.8**
	24nm,0.3s,baz=227,slow=11,SNR=51						
JAY				S	**Sn**	**18 05 42.8**	**+1.7**
	53nm,0.3s,baz=69,slow=16,SNR=12						
JAY	**Jayapura**	**1.68**	**83**	P	**Pn**	**18 05 18.9**	**-1.8**
JAY				S	**Sn**	**18 05 40.4**	**-0.7**
SRPI	**Serui, Papua**	**2.92**	**287**	P	**Pn**	**18 05 35.7**	**-2.1**
SRPI				S	**Sn**	**18 06 11.7**	**0.0**
BAKI	**Biak**	**3.31**	**298**	P	**Pn**	**18 05 39.4**	**-3.6**
MMPI	**Merauke**	**5.85**	**167**	P	Pn	18 06 26.4	+8.4
FAKI	**Fak Fak**	**6.78**	**268**	*e*Pn	**Pn**	**18 06 30.5**	**-0.3**
FAKI	**Fak Fak**	**6.78**	**268**	P	**Pn**	**18 06 30.5**	**-0.3**
FAKI				S	**Sn**	**18 07 44.7**	**-2.1**
SIJI	**Sorong**	**7.99**	**283**	P	**Pn**	**18 06 48.5**	**+1.2**
	2.6nm,0.3s,baz=94,slow=12,SNR=12						
SIJI				S	**Sn**	**18 08 16.4**	**0.0**
	2.1nm,0.3s,baz=82,slow=24,SNR=7.2						
SIJI				LR	LR	18 10 28.4	
	comp=Z,287nm,19.8s,baz=122,slow=42						
PMG	**Port Moresby**	**10.45**	**130**	LR	LR	18 12 01.4	
	comp=Z,98nm,20.4s,baz=264,slow=41						
MTN	**Manton Dam**	**12.73**	**217**	*e*Pn	Pn	18 07 44.9	-7.3
SOEI	**Soe**	**16.25**	**244**	*e*Pn	**Pn**	**18 08 39.0**	**-0.1**
	40nm,0.7s						
DAV	**Davao City (W)**	**16.59**	**306**	LR	LR	18 16 03.6	
	comp=Z,31nm,18.8s,baz=139,slow=40						
BATI	**Baumata**	**16.98**	**243**	P	**P**	**18 08 52.3**	**+2.8**
	6.2nm,0.3s,baz=105,slow=2.3,SNR=15						
GUMO	**Guam**	**17.22**	**19**	LR	LR	18 15 17.5	
	comp=Z,98nm,18.4s,baz=206,slow=36						
WRAB	**Tennant Creek**	**17.70**	**195**	*e*P	**P**	**18 08 58.3**	**+0.8**
	7.8nm,0.8s						
WB2	**Warramunga Arr**	**17.71**	**195**	*e*P	**P**	**18 08 58.6**	**+1.1**
	7.5nm,0.8s						
WR1	**Warramunga Arr**	**17.71**	**195**	*e*P	**Pn**	**18 08 56.3**	**-0.9**
WRA	**Warramunga Arr**	**17.71**	**195**	P	**Pn**	**18 08 56.3**	**-0.9**
	0.7nm,0.3s,baz=9.6,slow=11,SNR=33						
CTAO	**Charters Tower**	**18.63**	**158**	*e*P	**P**	**18 09 06.0**	**-1.7**
	7.6nm,0.9s						
AS31	**Alice Springs**	**21.39**	**193**	*e*P	**P**	**18 09 37.3**	**-0.4**
	2.6nm,0.6s						
ASAR	**Alice Springs**	**21.39**	**193**	P	**P**	**18 09 37.3**	**-0.4**
	1.7nm,0.5s,baz=16,slow=10.0,SNR=32						
ASAR				LR	LR	18 18 59.5	
	comp=Z,210nm,19.2s,baz=1.5,slow=40						
PSA00	**Pilbara Seismi**	**26.44**	**223**	*e*P	**P**	**18 10 26.1**	**-0.4**
	4.5nm,0.9s						
STKA	**Stephens Creek**	**29.09**	**176**	LR	LR	18 23 46.8	
	comp=Z,220nm,19.9s,baz=8.7,slow=39						
MJAR	**Matsushiro Arr**	**39.08**	**359**	LR	LR	18 26 11.8	
	comp=Z,81nm,20.1s,baz=200,slow=33						
MAJO	**Matsushiro**	**39.08**	**359**	*e*P	**P**	**18 12 18.5**	**+2.0**
	15nm,0.8s						
MJB9	**Matsu-Tunnel**	**39.09**	**359**	*e*P	**P**	**18 12 18.6**	**+2.0**
	15nm,0.8s						
PETK	**Petropavlovsk-**	**57.81**	**13**	LR	LR	18 35 02.0	
	comp=Z,23nm,21.1s,baz=216,slow=31						
SONA0	**Songino Array**	**57.88**	**335**	*e*P	**P**	**18 14 41.3**	**+0.1**
SONM	**Songino Array**	**57.88**	**335**	P	**P**	**18 14 41.3**	**+0.1**
	0.4nm,0.5s,baz=130,slow=5.8,SNR=3.4						
SONM				LR	LR	18 39 39.9	
	comp=Z,42nm,18.9s,baz=82,slow=36						
TLY	**Talaya**	**61.97**	**336**	LR	LR	18 42 00.3	
	comp=Z,75nm,18.1s,baz=176,slow=36						
MK31	**Makanchi Array**	**70.01**	**322**	*e*P	**P**	**18 16 01.5**	**+0.7**
	1.0nm,0.7s						
MK32	**Makanchi Array**	**70.01**	**322**	*e*P	**P**	**18 16 01.3**	**+0.6**
MKAR	**Makanchi Array**	**70.01**	**322**	P	**P**	**18 16 01.3**	**+0.6**
	1.4nm,0.6s,baz=112,slow=7.9,SNR=20						
MAKZ	**Makanchi**	**70.21**	**322**	*e*P	**P**	**18 16 02.5**	**+0.6**
	3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**72.12**	**330**	P	**P**	**18 16 11.7**	**-1.7**
	1.2nm,0.7s,baz=120,slow=5.8,SNR=4.1						
ZAA1	**Zalesovo Array**	**72.12**	**330**	*e*P	**P**	**18 16 11.7**	**-1.7**
VNDA	**Vanda**	**75.73**	**175**	P	**P**	**18 16 34.6**	**+0.6**
	0.8nm,0.7s,baz=328,slow=7.1,SNR=9.1						
VNDA				LR	LR	18 48 35.7	
	comp=Z,50nm,19.9s,slow=35						
ILAR	**Eielson Array**	**85.72**	**24**	P	**P**	**18 17 27.4**	**-0.3**
	0.9nm,0.9s,baz=256,slow=4.9,SNR=7.5						
ILB	**Eielson Array**	**85.72**	**24**	*e*P	**P**	**18 17 27.4**	**-0.3**
	1.2nm,0.8s						

ISCJB ***14*** *18:13:06.4±0.4, 43°.75N±0°.03×105°.29W±0°.05, h0^{km}, mb4.0/6, MS3.2/1, Error ellipse: s-maj=5.5km s-min=4.2km az=27.7*

IDC ***14*** *18:13:07.2±0.7, 43°.86N×105°.57W, h0^{km}, mb3.9/6, mb1 3.9/11, mb1mx3.6/44, mbtmp3.7/11, ML3.2/4, MS3.0/3, Ms1 3.0/3, ms1mx2.6/39, Error ellipse: s-maj=18.5km s-min=7.2km az=146.0*

ANF ***14*** *18:13:07.5±0.7, 43°.67N×105°.32W, ML3.9/11, Error ellipse: s-maj=11.9km s-min=6.1km az=131.0*

NEIC ***14*** *18:13:08.2±0.4, 43°.67N×105°.30W, h0^{km}, ML3.7, Error ellipse: s-maj=5.9km s-min=5.4km az=146.0, Suspected Mining explosion.*

NEIC 71 km [44 miles] SSE of Gillette.

ISC 14 18:13:06.8±0.7**, 43°.73N**±0°.04×**105°.28W**±0°.06**, h0^{km}, n47,** σ**1^{s}37**/48**, mb3.9**/6**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**66**	*e*Pg	**Pb**	**18 13 26.6**	**-0.2**
RSSD	**Black Hills**	**0.98**	**66**	P	**Pb**	**18 13 26.9**	**+0.1**
	baz=244						
K22A	**Casper**	**1.41**	**221**	*e*Pn	**Pn**	**18 13 32.7**	**-1.2**
K22A	**Casper**	**1.41**	**221**	P	**Pn**	**18 13 32.7**	**-1.2**
	baz=41						
K22A				S	**Sg**	**18 13 52.9**	**+0.9**
	baz=41						
RWWY	**Rawlins**	**2.48**	**216**	*e*Pn	**Pn**	**18 13 50.2**	**+1.5**
N23A	**Red Feather La**	**2.87**	**190**	P	**Pn**	**18 13 55.4**	**+1.3**
	baz=9.6						
N23A				Sb	**Sb**	**18 14 35.3**	**+0.5**
	baz=9.6						
LAO	**LASA Array**	**3.04**	**348**	*e*Pn	**Pn**	**18 13 58.2**	**+2.0**
LAO	**LASA Array**	**3.04**	**348**	P	**Pn**	**18 13 58.1**	**+2.0**
	baz=168						
LAO				Sb	**Sg**	**18 14 44.3**	**-0.1**
	baz=168						
RLMT	**Red Lodge**	**3.18**	**297**	*e*Pn	**Pn**	**18 13 59.2**	**+0.9**
RLMT	**Red Lodge**	**3.18**	**297**	P	**Pn**	**18 13 59.3**	**+1.0**
	baz=116						
BW06	**Boulder Array**	**3.27**	**254**	*e*Pn	**Pn**	**18 14 00.4**	**+0.9**
BW06	**Boulder Array**	**3.27**	**254**	P	**Pn**	**18 14 00.3**	**+0.7**
	baz=72						
PD31	**Pinedale Array**	**3.27**	**254**	*e*Pn	**Pn**	**18 14 00.3**	**+0.8**
PD31				*e*Lg	Lg	18 14 45.0	
PDAR	**Pinedale Array**	**3.27**	**254**	Pn	**Pn**	**18 14 00.3**	**+0.8**
	11nm,0.3s,baz=70,slow=16,SNR=88						
PDAR				Lg	Lg	18 14 45.0	
	31nm,0.3s,baz=75,slow=30,SNR=16						
OGNE	**Ogallala**	**3.67**	**138**	*e*Pn	**Pn**	**18 14 06.4**	**+1.4**
OGNE	**Ogallala**	**3.67**	**138**	P	**Pn**	**18 14 06.2**	**+1.3**
	baz=320						
GCMT	**Greycliff**	**3.75**	**305**	*e*Pn	**Pn**	**18 14 07.1**	**+1.1**
H17A	**Grant Village**	**3.88**	**282**	P	**Pn**	**18 14 10.0**	**+2.1**
	baz=99						
ISCO	**Idaho Springs**	**3.93**	**184**	*e*Pn	**Pn**	**18 14 10.2**	**+1.6**
ISCO	**Idaho Springs**	**3.93**	**184**	P	**Pn**	**18 14 09.9**	**+1.3**
	baz=3.4						
ISCO				Sb	**Sb**	**18 15 08.1**	**+2.7**
	baz=3.4						
SNOW	**Snow King Moun**	**3.99**	**268**	*e*Pn	**Pn**	**18 14 10.1**	**+0.7**
YPP	**Pitchstone Pla**	**4.02**	**280**	*e*Pn	**Pn**	**18 14 11.4**	**+1.4**
YHH	**Holmes Hill**	**4.14**	**287**	*e*Pn	**Pn**	**18 14 14.6**	**+3.0**
O20A	**White River Ci**	**4.21**	**213**	*e*Pn	**Pn**	**18 14 13.8**	**+1.4**
O20A	**White River Ci**	**4.21**	**213**	P	**Pn**	**18 14 13.3**	**+0.9**
	baz=31						
Q24A	**Divide**	**4.76**	**179**	P	**Pn**	**18 14 20.8**	**+0.7**
	baz=359						
DGMT	**Dagmar**	**4.80**	**9**	*e*Pn	**Pn**	**18 14 23.9**	**+3.5**
CTU	**Camp Tracy**	**5.68**	**240**	*e*Pn	**Pn**	**18 14 33.1**	**+0.5**
HVU	**Hansel Valley**	**5.85**	**253**	*e*Pn	**Pn**	**18 14 35.8**	**+0.9**
P17A	**Butcher Ranch,**	**5.90**	**226**	*e*Pn	**Pn**	**18 14 36.2**	**+0.6**
SRU	**San Rafael Swe**	**6.07**	**222**	*e*Pn	**Pn**	**18 14 38.2**	**+0.3**
NLU	**North Lily Min**	**6.32**	**236**	*e*Pn	**Pn**	**18 14 42.0**	**+0.5**
BGU	**Big Grassy Mou**	**6.39**	**247**	*e*Pn	**Pn**	**18 14 42.1**	**-0.2**
CBKS	**Cedar Bluff**	**6.44**	**138**	*e*Pn	**Pn**	**18 14 43.3**	**+0.3**
ELK	**Elko**	**7.97**	**251**	Pn	**Pn**	**18 15 04.3**	**+0.3**
	0.2nm,0.3s,baz=75,slow=11,SNR=6.4						
ELK				Lg	Lg	18 17 10.3	
	0.1nm,0.3s,baz=15,slow=4.2,SNR=4.4						
ELK				LR	LR	18 17 55.0	
	comp=Z,60nm,18.2s,baz=124,slow=37						
ANMO	**Albuquerque**	**8.81**	**186**	Pg	Pg	18 15 48.5	-7.1
	0.2nm,0.3s,baz=6.7,slow=17,SNR=3.2						
ANMO				Lg	Lg	18 17 46.7	
	0.1nm,0.3s,baz=90,slow=20,SNR=4.2						
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**18 15 19.2**	**-0.8**
	3.2nm,0.3s,baz=227,slow=10,SNR=11						
ULM				Lg	Lg	18 17 51.2	
	0.5nm,0.3s,baz=313,slow=19,SNR=3.2						
NEW	**Newport**	**9.41**	**303**	LR	LR	18 19 34.5	
	comp=Z,80nm,18.6s,baz=119,slow=42						
I56US	**NEWPORT INFRAS**	**9.41**	**303**	*i*		19 08 50.0	
	baz=117,slow=315,SNR=2.2						
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn	**Pn**	**18 15 49.9**	**+2.2**
	0.2nm,0.3s,baz=52,slow=11,SNR=5.6						
TXAR	**Lajitas Array**	**14.42**	**174**	Pn	**P**	**18 16 36.5**	**-2.9**
	0.0nm,0.3s,baz=354,slow=16,SNR=3.4						
TXAR				Pg		18 17 34.5	
	0.1nm,0.3s,baz=8.0,slow=14,SNR=6.8						
TXAR				Lg	Lg	18 20 43.1	
	0.0nm,0.3s,baz=358,slow=28,SNR=6.5						
ARCES	**ARCESS Array B**	**61.43**	**18**	P	**P**	**18 23 23.8**	**-0.6**
	1.5nm,0.6s,baz=327,slow=6.4,SNR=11						
FINES	**FINESS Array B**	**68.05**	**23**	P	**P**	**18 24 07.2**	**-0.3**
	2.0nm,1.0s,baz=335,slow=8.4,SNR=3.5						
AKASG	**Malin Array Be**	**77.97**	**28**	P	**P**	**18 25 06.1**	**-0.4**
	0.2nm,0.3s,baz=332,slow=5.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**82.32**	**354**	P	**P**	**18 25 29.2**	**-0.8**
	0.8nm,0.6s,baz=360,slow=6.1,SNR=3.5						
SONM	**Songino Array**	**84.65**	**339**	P	**P**	**18 25 42.6**	**+0.3**
	0.3nm,0.5s,baz=27,slow=3.9,SNR=2.2						
SONM				LR	LR	19 12 10.8	
	comp=Z,10nm,18.1s,baz=76,slow=42						
MKAR	**Makanchi Array**	**89.62**	**355**	P	**P**	**18 26 06.0**	**-0.2**
	0.4nm,0.7s,baz=355,slow=3.1,SNR=4.5						

NEIC ***14*** *18:18:22.7±2.1, 19°.02S×173°.20W, h10^{km}±2^{km}, mb4.7/26, Error ellipse: s-maj=16.4km s-min=13.5km az=201.0*

IDC ***14*** *18:18:23.6±0.9, 18°.68S×173°.62W, h0^{km}, mb4.3/11, mb1 4.5/11, mb1mx4.3/28, mbtmp4.3/11, MS3.6/7, Ms1 3.6/7, ms1mx3.4/24, Error ellipse: s-maj=36.6km s-min=18.6km az=137.0*

ISCJB ***14*** *18:18:26.4±0.5, 18°.70S±0°.08×173°.59W±0°.10, h31^{km}, mb4.5/30, MS3.7/5, Error ellipse: s-maj=15.5km s-min=8.2km az=39.9*

ISC 14 18:18:28.1±0.7**, 18°.8S**±0°.1×**173°.5W**±0°.1**, h31^{km}, n77,** σ**1^{s}13**/73**, mb4.6**/30**, MS3.7**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.38**	**96**	*e*Pn	Pn	18 19 08.5	-10
AFI	**Afiamalu**	**5.12**	**19**	*e*Pn	Pn	18 19 36.5	-6.2
RAR	**Rarotonga**	**13.12**	**103**	Pn	Pn	18 21 22.1	-10
	4.5nm,0.3s,baz=272,slow=8.0,SNR=11						
RAR				LR	LR	18 25 33.2	
	comp=Z,109nm,21.0s,baz=287,slow=32						
MARNC	**Mare, Loyalty**	**17.56**	**258**	*e*P	**P**	**18 22 31.8**	**+0.3**
PINNC	**Pines Island,**	**18.24**	**255**	*e*P	**P**	**18 22 41.7**	**+2.7**
	42nm,0.6s						
DZM	**Mont Dzumac**	**19.09**	**257**	P	**Pn**	**18 22 51.1**	**+1.7**
	0.8nm,0.3s,baz=79,slow=18,SNR=7.5						
DZM				LR	LR	18 29 26.1	
	comp=Z,278nm,18.8s,baz=44,slow=35						
DZM	**Mont Dzumac**	**19.09**	**257**	*e*P	**Pn**	**18 22 51.3**	**+1.9**
	27nm,1.0s						
URZ	**Urewera**	**21.07**	**201**	P	**P**	**18 23 10.9**	**+1.2**
	10nm,0.4s,baz=262,slow=3.3,SNR=12						
URZ				S	**S**	**18 27 00.2**	**-2.4**
	12nm,1.1s,baz=300,slow=20,SNR=3.2						
URZ	**Urewera**	**21.07**	**201**	*e*P	**P**	**18 23 11.1**	**+1.4**
	20nm,0.6s						
BKZ	**Black Stump Fm**	**22.09**	**201**	*e*P	**P**	**18 23 21.3**	**+0.6**
	5.8nm,0.8s						
HIZ	**Hauiti**	**22.12**	**205**	*e*P	**P**	**18 23 24.3**	**+3.2**
	54nm,1.0s						
PPT	**Papeete**	**22.75**	**91**	LR	LR	18 29 57.1	
	comp=Z,120nm,18.6s,baz=291,slow=30						
HNR	**Honiara**	**27.36**	**286**	LR	LR	18 33 33.5	
	comp=Z,262nm,18.1s,baz=92,slow=33						
RPZ	**Rata Peaks**	**28.05**	**204**	P	P	18 24 22.0	+5.4
	14nm,0.5s,baz=39,slow=2.4,SNR=12						
EIDS	**Eidsvold**	**33.41**	**252**	*e*P	**P**	**18 25 02.6**	**-1.5**
	6.6nm,1.0s						
ARMA	**Armidale**	**33.64**	**243**	*e*P	**P**	**18 25 05.7**	**-0.5**
	6.3nm,1.1s						
CTAO	**Charters Tower**	**37.93**	**261**	*e*P	**P**	**18 25 42.1**	**-0.9**
	11nm,0.9s						
TOO	**Toolangi**	**40.34**	**234**	*e*P	**P**	**18 26 02.5**	**-0.5**
	8.1nm,1.1s						
COEN	**Coen**	**41.78**	**270**	*e*P	**P**	**18 26 15.0**	**0.0**
STKA	**Stephens Creek**	**42.36**	**243**	P	**P**	**18 26 17.9**	**-1.7**
	2.2nm,0.5s,baz=97,slow=13,SNR=9.7						
STKA				LR	LR	18 43 25.9	
	comp=Z,143nm,18.0s,baz=203,slow=36						
STKA	**Stephens Creek**	**42.36**	**243**	*e*P	**P**	**18 26 17.9**	**-1.7**
	0.8nm,0.8s						
BBOO	**Buckleboo**	**47.11**	**242**	*e*P	**P**	**18 26 56.1**	**-1.4**
	5.5nm,0.9s						
AS31	**Alice Springs**	**49.06**	**255**	*e*P	**P**	**18 27 11.9**	**-0.8**
	3.8nm,0.6s						
WB2	**Warramunga Arr**	**49.06**	**260**	*e*P	**P**	**18 27 11.8**	**-1.0**
	6.3nm,0.6s						
ASAR	**Alice Springs**	**49.06**	**255**	P	**P**	**18 27 11.8**	**-0.9**
	18nm,0.7s,baz=90,slow=7.9,SNR=264						
ASAR				PcP	**PcP**	**18 28 37.0**	**+0.8**
	1.7nm,0.7s,baz=100,slow=4.6,SNR=4.6						
WRAB	**Tennant Creek**	**49.06**	**260**	*e*P	**P**	**18 27 11.8**	**-1.0**
	7.1nm,1.0s						
WR1	**Warramunga Arr**	**49.07**	**260**	*e*P	**P**	**18 27 11.4**	**-1.4**
WRA	**Warramunga Arr**	**49.07**	**260**	P	**P**	**18 27 11.4**	**-1.4**
	4.6nm,0.3s,baz=94,slow=6.8,SNR=131						
MTN	**Manton Dam**	**53.44**	**268**	*e*P	**P**	**18 27 44.1**	**-1.5**
	11nm,0.7s						
FORT	**Forrest**	**53.88**	**245**	*e*P	**P**	**18 27 47.8**	**-0.8**
	20nm,1.0s						
SOEI	**Soe**	**60.74**	**269**	*e*P	**P**	**18 28 39.5**	**+2.0**
	20nm,0.6s						
PSA00	**Pilbara Seismi**	**62.21**	**255**	*e*P	**P**	**18 28 46.4**	**-0.8**
	6.0nm,0.8s						
MJAR	**Matsushiro Arr**	**71.47**	**321**	P	**P**	**18 29 45.7**	**-0.1**
	0.3nm,0.5s,baz=151,slow=3.1,SNR=5.1						
MJAR				LR	LR	18 56 03.0	
	comp=Z,28nm,21.8s,baz=145,slow=32						
MAJO	**Matsushiro**	**71.47**	**321**	*e*P	**P**	**18 29 45.7**	**-0.1**
MAJO				*e*pP	**P**	**18 29 46.0**	**+0.2**
MJB9	**Matsu-Tunnel**	**71.48**	**321**	*e*P	**P**	**18 29 45.9**	**0.0**
	8.8nm,1.1s						
JNU	**Nakatsue**	**74.06**	**314**	P	**P**	**18 30 00.3**	**-0.9**
	4.9nm,1.0s,baz=90,slow=10,SNR=3.1						
JNU	**Nakatsue**	**74.06**	**314**	*e*P	**P**	**18 30 00.3**	**-0.9**
	3.7nm,1.0s						
PETK	**Petropavlovsk-**	**75.81**	**343**	P	**P**	**18 30 11.0**	**+0.1**
	2.0nm,0.7s,baz=108,slow=8.0,SNR=5.6						
PEA1	**Petropavlovsk-**	**75.82**	**343**	*e*P	**P**	**18 30 11.0**	**+0.1**
NV01	**Mina Array Sit**	**76.89**	**41**	*e*P	**P**	**18 30 17.1**	**-0.5**
NVAR	**Mina Array Bea**	**76.89**	**41**	P	**P**	**18 30 17.1**	**-0.5**
	0.5nm,0.8s,baz=225,slow=8.9,SNR=3.7						
NVAR				LR	LR	18 58 50.6	
	comp=Z,37nm,19.2s,baz=288,slow=32						
TXAR	**Lajitas Array**	**82.56**	**56**	P	**P**	**18 30 50.5**	**+2.1**
	0.2nm,0.7s,baz=218,slow=5.7,SNR=2.7						
SCM	**Sheep Creek Mo**	**83.00**	**12**	*e*P	**P**	**18 30 49.7**	**-0.2**
	5.4nm,1.0s						
PD31	**Pinedale Array**	**84.83**	**42**	*e*P	**P**	**18 30 59.4**	**-0.6**
PDAR	**Pinedale Array**	**84.83**	**42**	P	**P**	**18 30 59.4**	**-0.6**
	0.3nm,0.6s,baz=202,slow=7.5,SNR=3.7						
CCB	**Clear Creek Bu**	**85.48**	**11**	*e*P	**P**	**18 31 01.2**	**-1.1**
	5.2nm,0.8s						
ILAR	**Eielson Array**	**85.76**	**11**	P	**P**	**18 31 03.2**	**-0.6**
	1.3nm,0.7s,baz=229,slow=5.8,SNR=15						
ILB	**Eielson Array**	**85.76**	**11**	*e*P	**P**	**18 31 03.2**	**-0.6**
	2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**93.59**	**288**	P	**P**	**18 31 43.2**	**+1.5**
	0.9nm,0.9s,baz=98,slow=3.7,SNR=5.2						
KURBB	**Kurchatov Arra**	**115.66**	**318**	PKP	**PKiKP**	**18 37 06.6**	**-0.5**
	0.3nm,0.8s,baz=95,slow=2.2,SNR=4.2						
BVAR	**Borovoye Array**	**120.47**	**321**	PKP	**PKiKP**	**18 37 16.6**	**+0.2**
	0.4nm,0.5s,baz=75,slow=6.3,SNR=5.6						
AKASG	**Malin Array Be**	**143.39**	**336**	PKP	PKPbc	18 37 56.9	+0.4
	1.2nm,0.5s,baz=40,slow=4.4,SNR=7.6						
CLL	**Collm**	**147.14**	**352**	*i* PKPbc	**PKPab**	**18 38 08.5**	**-1.0**
	comp=Z,6.0nm,0.8s						
CLL				*i*		18 38 24.0	
CLL				LmV		20 17 00.0	
	comp=Z,100nm,18.1s						
OSTC	**Ostas**	**147.37**	**349**	*e*PKPAB	**PKPab**	**18 38 09.9**	**-0.6**
OSTC				*e*x	x	18 38 25.5	
BRG	**Berggiesshubel**	**147.44**	**351**	*e*PKP	**PKPab**	**18 38 09.9**	**-0.9**
	comp=Z,1.0nm,0.2s						
BRG				*e*		18 38 24.9	
	comp=Z,5.0nm,0.9s						
UPC	**Upice**	**147.45**	**349**	*e*PKPAB	**PKPab**	**18 38 10.0**	**-0.8**
UPC				*e*x	x	18 38 25.4	
DPC	**Dobruska-Polom**	**147.54**	**348**	*e*PKPAB	**PKPab**	**18 38 10.5**	**-0.7**
DPC				*e*x	x	18 38 25.8	
PRU	**Pruhonice**	**148.21**	**350**	*e*PKPAB	**PKiKP**	**18 38 12.0**	**-0.6**
PRU				*e*x	x	18 38 27.3	
BR101	**Keskin Array S**	**148.65**	**317**	*e*PKPbc	**PKiKP**	**18 38 13.4**	**-0.6**
BRTR	**Keskin Array B**	**148.65**	**317**	PKPbc	**PKiKP**	**18 38 13.4**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=134,slow=2.0,SNR=17						
KHC	**Kasperske Hory**	**149.19**	**351**	*e*PKPAB	**PKiKP**	**18 38 14.6**	**-0.1**
KHC				*e*x	x	18 38 29.0	
GEC2	**GERESS Array S**	**149.45**	**351**	*e*PKPbc	**PKPbc**	**18 38 14.3**	**+0.1**
GERES	**GERESS Array B**	**149.45**	**351**	PKPbc	**PKPbc**	**18 38 14.3**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=29,slow=3.0,SNR=10						
CONA	**Conrad Observa**	**149.95**	**347**	*e*pPKiKP	**PKiKP**	**18 38 17.3**	**+1.0**
	comp=Z,2.1nm,1.0s						
MOA	**Molln**	**150.33**	**349**	*e*sPKiKP	**PKiKP**	**18 38 19.3**	**+2.3**
	comp=Z,1.5nm,0.8s						
ARSA	**Arzberg**	**150.66**	**347**	*e*sPKiKP	**PKiKP**	**18 38 19.9**	**+2.1**
	comp=Z,0.5nm,0.5s						
WATA	**Walderalm**	**151.22**	**353**	*e*pPKPbc	**PKiKP**	**18 38 18.8**	**-0.3**
	comp=Z,1.0nm,0.6s						
KBA	**Koelnbreinsper**	**151.23**	**350**	*e*pPKPbc	**PKiKP**	**18 38 19.2**	**0.0**
	comp=Z,1.3nm,0.5s						
MOTA	**Moosalm**	**151.27**	**354**	*e*pPKPbc	**PKiKP**	**18 38 19.3**	**+0.1**
	comp=Z,0.5nm,0.5s						
WTTA	**Wattenberg**	**151.28**	**353**	*e*pPKPbc	**PKiKP**	**18 38 19.3**	**+0.1**
	comp=Z,3.3nm,0.5s						
SOKA	**Soboth**	**151.31**	**348**	*e*pPKPbc	**PKiKP**	**18 38 18.9**	**-0.3**
	comp=Z,1.7nm,0.9s						
SQTA	**Sankt Quirin**	**151.38**	**353**	*e*pPKPbc	**PKiKP**	**18 38 19.6**	**+0.2**
	comp=Z,2.1nm,0.7s						
DAVA	**Damuels**	**151.44**	**355**	pPKiKP	**PKiKP**	**18 38 20.3**	**+0.7**
	comp=Z,2.0nm,0.7s						
OBKA	**Obir**	**151.57**	**348**	*e*pPKiKP	**PKiKP**	**18 38 20.5**	**+0.7**
	comp=Z,1.2nm,0.6s						
MYKA	**Terra Mystica**	**151.61**	**350**	*e*pPKPbc	**PKPbc**	**18 38 19.3**	**-0.1**
	comp=Z,2.6nm,0.9s						
FETA	**Feichten**	**151.62**	**354**	*e*pPKPbc	**PKiKP**	**18 38 20.3**	**+0.3**
	comp=Z,1.4nm,0.6s						
ABTA	**Abfaltersbach**	**151.68**	**351**	*e*pPKPbc	**PKPbc**	**18 38 19.4**	**-0.1**
	comp=Z,5.1nm,0.7s						

ISCJB ***14*** *18:21:08.6±0.3, 24°.50N±0°.02×122°.31E±0°.01, h69^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=2.1km az=168.9*

JMA ***14*** *18:21:08.4±0.1, 24°.46N×122°.30E, h70^{km}±2^{km}, M2.8*

TAP ***14*** *18:21:08.7, 24°.47N×122°.30E, h70^{km}, ML3.5, B*

ISC 14 18:21:09.2±1.2**, 24°.48N**±0°.03×**122°.31E**±0°.02**, h65^{km}**±6^{km}**, n109,** σ**0^{s}94**/195**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.18**	**292**	*e*P	**Pn**	**18 21 19.5**	**+0.4**
	baz=297						
EOS1				*e*S	**Sn**	**18 21 27.4**	**+1.2**
	baz=297						
TWC	**Suao**	**0.44**	**287**	*i* P	**Pn**	**18 21 20.8**	**-0.1**
	baz=292						
TWC				S	**Sn**	**18 21 29.4**	**-0.2**
	baz=292						
EGS		**0.50**	**317**	P	**Pn**	**18 21 21.6**	**+0.1**
	baz=319						
EGS				*e*S	**Sn**	**18 21 30.6**	**+0.1**
	baz=319						
NANB	**Nanao**	**0.51**	**264**	P	**Pn**	**18 21 21.8**	**+0.1**
	baz=262						
NANB				S	**Sn**	**18 21 31.1**	**+0.3**
	baz=262						
ENA	**Nanau**	**0.52**	**264**	P	**Pn**	**18 21 21.8**	**+0.1**
	baz=262						
ENA				S	**Sn**	**18 21 31.3**	**+0.3**

	baz=262						
NTC	Toucheng	0.57	311	P	Pn	18 21 22.3	0.0
	baz=318						
NTC				*e*S	Sn	18 21 31.8	-0.2
	baz=318						
JYNG	Yonagunijimaku	0.58	93	P	Pn	18 21 22.4	0.0
JYNG				S	Sn	18 21 32.0	-0.1
ILA	Ilan	0.58	299	*i* P	Pn	18 21 22.6	+0.2
	baz=305						
ILA				*i* S	Sn	18 21 32.7	+0.6
	baz=305						
TWE	Neicheng	0.63	292	P	Pn	18 21 23.1	+0.2
	baz=296						
TWE				S	Sn	18 21 33.4	+0.3
	baz=296						
YOJ	Yonaguni jima	0.64	92	P	Pn	18 21 22.9	-0.1
	baz=90						
YOJ				*e*S	Sn	18 21 32.9	-0.3
	baz=90						
YOJ	Yonaguni jima	0.64	92	P	Pn	18 21 23.0	-0.1
YOJ				*e*S	Sn	18 21 33.0	-0.3
TIPB	Shuangxi	0.66	318	P	Pn	18 21 23.0	-0.3
	baz=319						
TIPB				*e*S	Sn	18 21 33.5	-0.2
	baz=319						
ENTT	Nioudou	0.69	283	P	Pn	18 21 24.1	+0.5
	baz=288						
ENTT				*e*S	Sn	18 21 35.5	+1.1
	baz=288						
NACB	Ninganchiao	0.72	245	P	Pn	18 21 23.6	-0.4
	baz=239						
NACB				*e*S	Sn	18 21 34.3	-0.6
	baz=239						
NDT	Datong Townshi	0.73	280	P	Pn	18 21 24.6	+0.4
	baz=284						
NDT				*e*S	Sn	18 21 36.0	+0.8
	baz=284						
NWF	Wu-fen Shan	0.76	321	P	Pn	18 21 24.4	-0.1
	baz=314						
NWF				*i* S	Sn	18 21 35.8	0.0
	baz=314						
WFSB	Wu-fen Shan	0.76	321	P	Pn	18 21 24.4	0.0
	baz=314						
WFSB				*e*S	Sn	18 21 35.8	+0.1
	baz=314						
TWD	Chiawan	0.76	239	P	Pn	18 21 23.9	-0.5
	baz=231						
TWD				S	Sn	18 21 35.2	-0.6
	baz=231						
ETLH	Xiulin Townshi	0.80	250	*e*P	Pn	18 21 24.6	-0.4
	baz=250						
ETLH				*e*S	Sn	18 21 36.5	-0.3
	baz=250						
HWA	Hwalien	0.81	232	*e*P	Pn	18 21 25.1	0.0
	baz=225						
HWA				*e*S	Sn	18 21 37.0	+0.2
	baz=225						
TWA	Mucha	0.82	307	P	Pn	18 21 25.2	-0.1
	baz=316						
TWA				S	Sn	18 21 36.9	-0.2
	baz=316						
NNSB	Datong	0.84	267	*e*P	Pn	18 21 25.6	0.0
	baz=260						
NNSB				*e*S	Sn	18 21 37.5	-0.2
	baz=260						
NNS	Nan Shan	0.85	267	P	Pn	18 21 25.6	-0.1
	baz=260						
NNS				*i* S	Sn	18 21 38.0	0.0
	baz=260						
ENLB	Shoufeng	0.86	228	*e*P	Pn	18 21 25.0	-0.7
	baz=223						
ENLB				*e*S	Sn	18 21 37.8	-0.2
	baz=223						
YHNB	Yeheng	0.87	283	*e*P	Pn	18 21 26.2	+0.3
	baz=283						
YHNB				*e*S	Sn	18 21 38.6	+0.4
	baz=283						
NSK	Sanguang	0.89	283	P	Pn	18 21 26.3	+0.3
	baz=283						
NSK				S	Sn	18 21 38.9	+0.4
	baz=283						
TATO	Taipei	0.89	304	*e*P	Pn	18 21 26.0	0.0
	baz=313						
TATO				S	Sn	18 21 38.2	-0.4
	baz=313						
TAP	Taipei	0.92	307	P	Pn	18 21 26.2	-0.1
	baz=308						
TAP				S	Sn	18 21 38.8	-0.3
	baz=308						
YM01	YM01	0.94	315	P	Pn	18 21 26.4	-0.3
	baz=315						
YM01				*e*S	Sn	18 21 39.7	0.0
	baz=315						
YM10	YM10	0.95	315	P	Pn	18 21 26.7	-0.2
	baz=315						
YM10				S	Sn	18 21 39.6	-0.5
	baz=315						
YM05	YM05	0.96	315	P	Pn	18 21 26.6	-0.3
	baz=316						
YM05				*e*S	Sn	18 21 39.2	-0.9
	baz=316						
YM03	YM03	0.98	315	P	Pn	18 21 27.0	-0.3
	baz=315						
YM03				*e*S	Sn	18 21 40.2	-0.5
	baz=315						
ANP	Anpu	1.00	315	P	Pn	18 21 27.1	-0.5
	baz=315						
ANP				*e*S	Sn	18 21 40.6	-0.6
	baz=315						
WHF	Hehuan Shan	1.01	251	*i* P	Pn	18 21 27.8	-0.1
	baz=251						
WHF				S	Sn	18 21 41.3	-0.6
	baz=251						
TWS1	Kuangyinshan	1.02	307	*i* P	Pn	18 21 27.7	+0.1
	baz=315						
TWS1				*e*S	Sn	18 21 41.6	+0.3
	baz=315						
TWY	Chenhua	1.02	321	P	Pn	18 21 27.9	+0.3
	baz=312						
TWY				S	Sn	18 21 41.8	+0.4
	baz=312						
WLTB	Daxi	1.03	291	P	Pn	18 21 28.5	+0.7
	baz=282						
WLTB				*e*S	Sn	18 21 43.1	+1.5
	baz=282						
NTST	Danshui	1.03	311	*e*P	Pn	18 21 27.9	0.0
	baz=311						
NTST				S	Sn	18 21 41.8	0.0
	baz=311						
ESL	Shilin	1.04	230	P	Pn	18 21 27.1	-0.8
	baz=240						
ESL				*e*S	Sn	18 21 41.0	-0.9
	baz=240						
TDCB	Techi	1.07	258	*e*P	Pn	18 21 28.9	+0.5
	baz=254						
TDCB				*e*S	Sn	18 21 42.8	-0.1
	baz=254						
CHGB	Renai	1.12	248	*e*P	Pn	18 21 29.3	+0.1
	baz=241						
CHGB				*e*S	Sn	18 21 44.0	0.0
	baz=241						
NCU	National Centr	1.13	296	P	Pn	18 21 29.6	+0.5
	baz=296						
NCU				*e*S	Sn	18 21 45.0	+1.1
	baz=296						
NCUH	Zhongli	1.13	296	*i* P	Pn	18 21 29.6	+0.5
	baz=296						
NCUH				*e*S	Sn	18 21 44.7	+0.7
	baz=296						
EGFH	Guangfu	1.14	225	*e*P	Pn	18 21 28.5	-0.8
	baz=218						
EGFH				*e*S	Sn	18 21 43.3	-0.9
	baz=218						
NSTT	Nanjuang	1.20	277	P	Pn	18 21 30.5	+0.5
	baz=277						
NSTT				*i* S	Sn	18 21 46.2	+0.6
	baz=277						
SBCB	Hsinchu	1.24	285	*e*P	Pn	18 21 31.2	+0.7
	baz=285						
SBCB				*e*S	Sn	18 21 47.3	+0.7
	baz=285						
HGSD	Ruisui	1.27	220	*e*P	Pn	18 21 30.3	-0.7
	baz=212						
VWDT	VWDT	1.29	236	*e*P	Pn	18 21 31.2	0.0
	baz=229						
VWDT				*e*S	Sn	18 21 47.0	-0.7
	baz=229						
IRIF	Iriomote-Funau	1.30	96	P	Pn	18 21 31.0	-0.4
IRIF				*e*S	Sn	18 21 47.8	-0.2
EHY	Hungye	1.32	223	P	Pn	18 21 30.6	-1.1
	baz=231						
NMLH	Miaoli	1.38	273	P	Pn	18 21 33.2	+0.8
	baz=272						
NMLH				*e*S	Sn	18 21 50.5	+0.6
	baz=272						
TWQ1	Liyutan	1.41	265	P	Pn	18 21 33.3	+0.5
	baz=264						
TWQ1				*e*S	Sn	18 21 51.6	+1.1
	baz=264						
NSY	Sanyi	1.41	268	*e*P	Pn	18 21 33.6	+0.8
	baz=268						
SMLT	Sun Moon Lake	1.42	245	*e*P	Pn	18 21 33.6	+0.7
	baz=240						
SMLT				*e*S	Sn	18 21 51.3	+0.5
	baz=240						
SSLB	Suanglung	1.42	241	*e*P	Pn	18 21 33.8	+0.8
	baz=236						
SSLB				*e*S	Sn	18 21 50.5	-0.2
	baz=236						
YULB	Yu-li	1.43	221	*e*P	Pn	18 21 31.9	-1.1
	baz=229						
HATJ	Hateruma jima	1.43	107	P	Pn	18 21 33.2	+0.2
HATJ				*e*S	Sn	18 21 51.5	+0.5
TYC	Yuchr	1.44	247	*e*P	Pn	18 21 34.0	+0.8
	baz=241						
TYC				*e*S	Sn	18 21 52.0	+0.7
	baz=241						
TWF1	Yuli	1.46	220	P	Pn	18 21 32.4	-1.0
	baz=227						
PTSB	Yuanli	1.46	269	*e*P	Pn	18 21 34.1	+0.6
	baz=269						
TCU	Taichung	1.53	258	P	Pn	18 21 35.0	+0.7
	baz=269						
TCU				*e*S	Sn	18 21 54.8	+1.5
	baz=269						
WDJ	Dajia District	1.53	265	*e*P	Pn	18 21 35.2	+0.9
	baz=265						
WHYT	Xinyi Township	1.54	240	*e*P	Pn	18 21 35.5	+0.9
	baz=236						
WHYT				*e*S	Sn	18 21 54.2	+0.4
	baz=236						
JKRS	Kuro-shima	1.57	99	P	Pn	18 21 35.1	+0.2
JKRS				S	Sn	18 21 54.6	+0.2
WJS	Zhushan	1.59	246	*i* P	Pn	18 21 36.6	+1.4
	baz=258						
WJS				*e*S	Sn	18 21 57.0	+2.3
	baz=258						
YUS	Yu-Shan	1.59	232	P	Pn	18 21 35.7	+0.1
	baz=225						
YUS				*e*S	Sn	18 21 55.2	-0.3
	baz=225						
WNT	Mingjian	1.60	248	*e*P	Pn	18 21 36.8	+1.5
	baz=259						
CHKT	Chengkung	1.62	212	*e*P	Pn	18 21 34.3	-1.3
	baz=204						
CHKT				*e*S	Sn	18 21 52.6	-3.1
	baz=204						
WCHH	Zhanghua	1.65	256	*e*P	Pn	18 21 36.6	+0.6
	baz=256						
JIJ	Ishigaki jima	1.68	94	P	Pn	18 21 35.9	-0.4
JIJ				S	Sn	18 21 56.4	-0.5
ALS	Alishan	1.68	235	*e*P	Pn	18 21 37.6	+0.9
	baz=228						
ALS				*e*S	Sn	18 21 58.3	+0.8
	baz=228						
ELDTW	Lidau	1.75	223	*e*P	Pn	18 21 36.7	-0.8
	baz=222						
WGK	Gukeng	1.78	244	*e*P	Pn	18 21 39.2	+1.5
	baz=257						
WGK				*e*S	Sn	18 22 02.1	+2.6
	baz=257						
WDLH	Douliu	1.80	244	*e*P	Pn	18 21 39.3	+1.3
	baz=257						
WDLH				*e*S	Sn	18 22 02.4	+2.6
	baz=257						
JISG	Ishigakijimahi	1.83	86	P	Pn	18 21 38.0	-0.4
JISG				*e*S	Sn	18 22 00.9	+0.4
RLNB	Erlin	1.87	252	*e*P	Pn	18 21 39.5	+0.5
	baz=263						
RLNB				*e*S	Sn	18 22 02.5	+0.8
	baz=263						
CHN2	Minshiung	1.92	241	*e*S	Sn	18 22 06.3	+3.4
	baz=253						
STYT	Tauyuan	1.93	228	*e*P	Pn	18 21 41.6	+1.7
	baz=220						
TPUB	Ta-pu	1.94	233	*e*P	Pn	18 21 41.0	+1.1
	baz=225						
TPUB				*e*S	Sn	18 22 04.6	+1.4
	baz=225						
CHY	Chiayi	1.98	241	*e*P	Pn	18 21 41.6	+1.2
	baz=253						
CHY				*e*S	Sn	18 22 06.0	+1.7
	baz=253						
TWGBT	Beinan	2.00	214	*e*P	Pn	18 21 39.7	-1.1
	baz=214						
TWG	Pinlang	2.00	215	*e*P	Pn	18 21 40.0	-0.8
	baz=220						
TWG				*e*S	Sn	18 22 02.1	-2.7
	baz=220						
TWK	Hsinying	2.06	234	*e*P	Pn	18 21 42.6	+1.0
	baz=234						
TWK				*e*S	Sn	18 22 07.3	+1.1
	baz=234						
CHN1	Nanshi	2.08	232	*e*P	Pn	18 21 43.3	+1.5
	baz=231						
WSF	Szhu	2.08	247	*e*P	Pn	18 21 42.3	+0.5
	baz=256						
WSF				*e*S	Sn	18 22 08.1	+1.3
	baz=256						
WLGB	Puzi	2.09	242	*e*P	Pn	18 21 42.8	+0.8
	baz=241						
WLGB				*e*S	Sn	18 22 09.4	+2.4
	baz=241						
SLGT	Liugui	2.12	226	*e*P	Pn	18 21 43.9	+1.4
	baz=225						
SLGT				*e*S	Sn	18 22 09.0	+1.2
	baz=225						
JTJ	Tarama	2.19	85	P	Pn	18 21 43.6	+0.4
JTJ				S	Sn	18 22 10.3	+1.1
CHN8	Yiju	2.23	240	*e*S	Sn	18 22 12.2	+2.0
	baz=239						
CHN3	Shinhua	2.26	232	*e*P	Pn	18 21 44.4	+0.1
	baz=242						
SSD	Sandimen	2.31	222	*e*P	Pn	18 21 46.2	+1.2
	baz=212						
SSD				*e*S	Sn	18 22 14.4	+2.1
	baz=212						
MASBT	Mashibuluo	2.41	220	*e*P	Pn	18 21 46.9	+0.6
	baz=219						
MASBT				*e*S	Sn	18 22 15.3	+0.4
	baz=219						
PTTC	Pingtan	2.52	294	*e*P	Pn	18 21 47.2	-0.5
	baz=293						
PTTC				*e*S	Sn	18 22 15.7	-1.5
	baz=293						
LAY	Lan-yu	2.53	196	*e*P	Pn	18 21 46.2	-1.8
	baz=189						
SCZT	Fangliau	2.61	217	*e*P	Pn	18 21 50.4	+1.4
	baz=216						
JIRB	Irabujima	2.63	82	P	Pn	18 21 50.0	+0.8
JIRB				*e*S	Sn	18 22 20.7	+0.7
PNG	Penghu	2.68	251	P	Pn	18 21 49.1	-0.8
	baz=250						
PNG				*e*S	Sn	18 22 20.3	-0.9
	baz=250						
PHUB	P'eng-hu	2.68	249	*e*P	Pn	18 21 49.2	-0.8
	baz=249						
PHUB				*e*S	Sn	18 22 20.6	-0.7
	baz=249						
WDGT	Dungji	2.71	244	*e*P	Pn	18 21 50.5	+0.1
	baz=243						
WDGT				*e*S	Sn	18 22 21.8	-0.3
	baz=243						
JMJ	Miyako jima 2	2.74	82	*e*P	Pn	18 21 52.0	+1.3
	baz=75						
JMJ2	Miyako jima3	2.76	84	P	Pn	18 21 51.9	+0.9
JMJ2				*e*S	Sn	18 22 24.2	+0.9
HEN	Hengchun	2.86	211	*e*S	Sn	18 22 24.6	-1.0
	baz=222						
VCHM	Qimei	2.92	245	*e*P	Pn	18 21 53.2	-0.1
	baz=244						
VCHM				*e*S	Sn	18 22 26.6	-0.7
	baz=244						
PTMZ	Houxiangcun	2.95	282	*e*P	Pn	18 21 53.1	-0.5
	baz=280						
PTMZ				*e*S	Sn	18 22 25.1	-2.8
	baz=280						
LYJJ	Jianjiangzhen	3.09	312	*e*P	Pn	18 21 55.3	-0.2
	baz=311						
LYJJ				*e*S	Sn	18 22 30.2	-1.1
	baz=311						
XPSS	Dashiqiu	3.10	322	*e*P	Pn	18 21 55.1	-0.5
	baz=321						
MHZQ	Yeshan	3.38	299	*e*P	Pn	18 21 58.7	-0.7
	baz=298						
MHZQ				*e*S	Sn	18 22 36.5	-1.8
	baz=298						
KNMB	Chin-men Tao	3.57	271	*e*P	Pn	18 22 00.9	-1.2
	baz=269						
AXDP	Jialang	3.97	277	*e*P	Pn	18 22 07.1	-0.4
	baz=275						

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*ISCJB **14** 18:24:48.7±1.3, 20°.4S±0°.6×178°.6W±0°.3, h587^{km}, mb3.3/7,*
Error ellipse: s-maj=80.2km s-min=13.4km az=155.0
*IDC **14** 18:24:49.7±2.9, 20°.49S×178°.55W, h590^{km}±34^{km}, mb2.8/7, mb1 3.2/8, mb1mx2.9/29, mbtmp3.8/8, Error ellipse: s-maj=91.3km s-min=14.9km az=156.0*
ISC 14 18:24:49.4±1.4**, 20°.3S**±0°.5×**178°.6W**±0°.3**, h587**^{km}**, n14,** σ**0ˢ.85**/14**, mb3.4**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.02	260	*e*LR	LR	18 27 49.6	
	comp=Z,276nm,23.1s						
DZM	Mont Dzumac	14.02	260	P	P	18 27 48.1	-0.7
	0.2nm,0.3s,baz=108,slow=16,SNR=2.7						
TBI	Tubuai	27.23	102	*e*LR	LR	18 28 41.1	
	comp=Z,175nm,25.5s						
STKA	Stephens Creek	37.32	244	P	P	18 31 13.0	0.0
	1.4nm,0.8s,baz=102,slow=13,SNR=3.2						
ASAR	Alice Springs	43.97	257	P	P	18 32 06.5	+0.6
	1.1nm,0.5s,baz=91,slow=8.3,SNR=28						
ASAR				PcP	PcP	18 33 38.0	-0.6
	0.2nm,0.6s,baz=99,slow=4.7,SNR=4.2						
ASAR				S	S	18 37 57.3	+1.0
	0.6nm,1.0s,baz=87,slow=17,SNR=3.1						
WRA	Warramunga Arr	44.03	262	P	P	18 32 07.1	+0.7
	0.4nm,0.3s						
NVAR	Mina Array Bea	81.32	44	P	P	18 36 06.3	+0.6
	0.3nm,0.6s,baz=220,slow=9.9,SNR=3.8						
TXAR	Lajitas Array	87.48	58	P	P	18 36 36.4	+0.5
	0.2nm,0.7s,baz=243,slow=6.0,SNR=3.0						
ILAR	Eielson Array	88.29	13	P	P	18 36 38.6	-0.1
	0.2nm,0.4s,baz=233,slow=4.1,SNR=2.9						
PDAR	Pinedale Array	89.26	43	P	P	18 36 44.2	+0.2
	0.4nm,0.6s,baz=211,slow=2.6,SNR=4.4						
BVAR	Borovoye Array	118.57	320	PKP	PKPdf	18 42 31.0	-0.1
	0.4nm,0.3s,baz=106,slow=2.7,SNR=4.5						
AKASG	Malin Array Be	142.58	331	PKP	PKPdf	18 43 13.9	-2.2
	1.5nm,0.5s,baz=41,slow=4.2,SNR=11						
BRTR	Keskin Array B	146.29	312	PKPbc	PKPbc	18 43 25.5	0.0
	0.3nm,0.5s,baz=122,slow=4.5,SNR=3.2						
GERES	GERESS Array B	149.88	344	PKPbc	PKiKP	18 43 34.9	+0.2
	0.3nm,0.5s,baz=329,slow=1.6,SNR=5.7						

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*ISCJB **14** 19:05:42.9±1.0, 23°.92N±0°.02×122°.51E±0°.02, h13^{km}±8^{km},*
Error ellipse: s-maj=3.5km s-min=2.4km az=167.8
*TAP **14** 19:05:43.0, 23°.92N×122°.45E, h16^{km}, ML2.5, D*
*JMA **14** 19:05:43.0±0.2, 23°.95N×122°.47E, h19^{km}±4^{km}, M1.9*
ISC 14 19:05:42.6±1.1**, 23°.93N**±0°.03×**122°.48E**±0°.02**, h17**^{km}±8^{km}**,**
n59, σ**0ˢ.40**/92**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.68	39	P	Pb	19 05 55.6	-0.4
JYNG				*e*S	Sg	19 06 03.8	-1.1
EOS1	EOS1	0.70	333	*e*P	Pg	19 05 56.7	+0.4
	baz=334						
EOS1				*e*S	Sg	19 06 06.6	+1.0
	baz=334						
YOJ	Yonaguni jima	0.72	42	*e*P	Pb	19 05 56.6	-0.2
	baz=42						
YOJ	Yonaguni jima	0.72	42	P	Pb	19 05 56.6	-0.2
YOJ				*e*S	Sb	19 06 05.2	-1.2
TWD	Chiawan	0.82	281	*e*P	Pg	19 05 59.1	+0.4
	baz=281						
TWD				*e*S	Sg	19 06 09.9	+0.4
	baz=281						
NANB	Nanao	0.83	307	P	Pg	19 05 59.0	+0.2
	baz=308						
NANB				*e*S	Sn	19 06 11.3	-0.1
	baz=308						
ENA	Nanau	0.84	307	P	Pg	19 05 59.0	+0.1
	baz=308						
ENA				*e*S	Sg	19 06 10.5	+0.5
	baz=308						
NACB	Ninganchiao	0.84	287	*e*P	Pn	19 05 59.6	-0.1
	baz=287						
NACB				*e*S	Sg	19 06 10.5	+0.3
	baz=287						
TWC	Suao	0.89	320	P	Pb	19 05 59.5	0.0
	baz=321						
TWC				*e*S	Sb	19 06 11.1	-0.1
	baz=321						
ETLH	Xiulin Townshi	0.95	287	*e*P	Pb	19 06 00.8	0.0
	baz=287						
ETLH				*e*S	Sg	19 06 13.6	-0.1
	baz=287						
ESL	Shilin	0.96	264	*e*P	Pn	19 06 01.5	+0.2
	baz=263						
ESL				*e*S	Sg	19 06 13.6	-0.3
	baz=263						
EGFH	Guangfu	0.99	255	*e*P	Pg	19 06 02.3	+0.4
	baz=254						
EGFH				*e*S	Sn	19 06 15.3	-0.1
	baz=254						
EGS		1.04	332	*e*P	Pg	19 06 02.9	+0.1
	baz=333						
EGS				*e*S	Sg	19 06 16.2	-0.3
	baz=333						
HGSD	Ruisui	1.06	246	*e*P	Pn	19 06 02.8	+0.1
	baz=245						
TWE	Neicheng	1.08	317	P	Pg	19 06 03.6	0.0
	baz=318						
TWE				*e*S	Sg	19 06 18.0	+0.2
	baz=318						
ENTT	Nioudou	1.09	311	P	Pn	19 06 03.4	+0.2
	baz=311						
ENTT				*e*S	Sg	19 06 18.1	-0.1
	baz=311						
NTC	Toucheng	1.10	328	*e*P	Pg	19 06 03.7	-0.2
	baz=328						
NDT	Datong Townshi	1.11	308	P	Pg	19 06 04.0	-0.1
	baz=308						
NDT				*e*S	Sg	19 06 18.9	+0.2
	baz=308						
NNSB	Datong	1.12	297	*e*P	Pb	19 06 03.5	0.0
	baz=297						
NNSB				*e*S	Sn	19 06 18.5	-0.2
	baz=297						
WHF	Hehuan Shan	1.13	281	*e*P	Pn	19 06 04.1	+0.1
	baz=281						
WHF				*e*S	Sb	19 06 18.3	-0.2
	baz=281						
NNS	Nan Shan	1.13	297	P	Pn	19 06 03.9	+0.1
	baz=297						
NNS				*e*S	Sg	19 06 19.1	-0.3
	baz=297						
EHY	Hungye	1.14	249	P	Pn	19 06 03.8	0.0
	baz=247						
EHY				*e*S	Sn	19 06 19.0	0.0
	baz=247						
CHGB	Renai	1.20	277	*e*P	Pn	19 06 04.9	+0.1
	baz=276						
CHGB				*e*S	Sn	19 06 20.9	+0.1
	baz=276						
TIPB	Shuangxi	1.20	330	*e*P	Pg	19 06 05.5	-0.3
	baz=331						
TIPB				*e*S	Sn	19 06 20.3	-0.2
	baz=331						
YULB	Yu-li	1.21	244	*e*P	Pn	19 06 04.8	+0.1
	baz=243						
YULB				*e*S	Sb	19 06 20.4	+0.1
	baz=243						
IRIF	Iriomote-Funau	1.22	70	P	Pb	19 06 05.5	+0.4
IRIF				*e*S	Sb	19 06 21.0	+0.4
HATJ	Hateruma jima	1.22	84	*e*S	Sb	19 06 20.6	-0.1
TWF1	Yuli	1.22	242	*e*P	Pn	19 06 05.2	+0.2
	baz=241						
VWDT	VWDT	1.23	262	*e*P	Pg	19 06 06.5	0.0
	baz=262						

VWDT				*e*S	**Sn**	**19 06 21.3**	**0.0**
	baz=262						
TDCB	**Techi**	**1.25**	**285**	*e*P	**Pg**	**19 06 07.2**	**+0.5**
	baz=285						
YHNB	**Yeheng**	**1.25**	**307**	*e*P	**Pb**	**19 06 05.8**	**0.0**
	baz=307						
NSK	**Sanguang**	**1.27**	**306**	*e*P	**Pb**	**19 06 05.9**	**-0.2**
	baz=307						
NWF	**Wu-fen Shan**	**1.30**	**331**	*e*P	**Pb**	**19 06 06.7**	**-0.1**
	baz=332						
NWF				*e*S	**Sn**	**19 06 23.9**	**+0.7**
	baz=332						
WFSB	**Wu-fen Shan**	**1.30**	**331**	*e*P	**Pb**	**19 06 06.6**	**-0.1**
	baz=331						
WFSB				*e*S	**Sg**	**19 06 24.1**	**-0.8**
	baz=331						
TATO	**Taipei**	**1.38**	**319**	*e*P	**Pb**	**19 06 07.7**	**-0.2**
	baz=320						
TATO				*e*S	**Sg**	**19 06 26.6**	**-0.6**
	baz=320						
JKRS	**Kuro-shima**	**1.44**	**77**	P	**Pn**	**19 06 08.4**	**+0.6**
JKRS				*e*S	**Sn**	**19 06 26.9**	**+0.6**
YUS	**Yu-Shan**	**1.46**	**253**	*e*P	**Pn**	**19 06 08.9**	**+0.3**
	baz=252						
YUS				*e*S	**Sn**	**19 06 27.4**	**-0.3**
	baz=252						
YM01	**YM01**	**1.47**	**326**	*e*P	**Pb**	**19 06 09.1**	**-0.5**
	baz=326						
YM01				*e*S	**Sb**	**19 06 28.1**	**+0.1**
	baz=326						
TYC	**Yuchr**	**1.48**	**270**	*e*P	**Pb**	**19 06 10.0**	**+0.3**
	baz=269						
YM10	**YM10**	**1.48**	**326**	*e*P	**Pn**	**19 06 08.7**	**+0.1**
	baz=326						
YM05	**YM05**	**1.49**	**326**	*e*P	**Pb**	**19 06 09.6**	**-0.2**
	baz=326						
YM05				*e*S	**Sb**	**19 06 28.6**	**+0.1**
	baz=326						
WHYT	**Xinyi Township**	**1.50**	**262**	*e*P	**Pg**	**19 06 11.6**	**0.0**
	baz=261						
ELDTW	**Lidau**	**1.53**	**242**	*e*P	**Pn**	**19 06 09.0**	**-0.2**
	baz=240						
JIJ	**Ishigaki jima**	**1.58**	**74**	P	**Pn**	**19 06 09.6**	**-0.3**
JIJ				S	**Sn**	**19 06 30.0**	**0.0**
WNT	**Mingjian**	**1.64**	**269**	*e*P	**Pg**	**19 06 13.9**	**-0.3**
	baz=268						
TCU	**Taichung**	**1.66**	**278**	*e*P	**Pb**	**19 06 12.5**	**-0.2**
	baz=277						
TWGBT	**Beinan**	**1.69**	**230**	*e*P	**Pn**	**19 06 11.2**	**-0.2**
	baz=228						
TWG	**Pinlang**	**1.70**	**230**	*e*P	**Pn**	**19 06 11.9**	**+0.4**
	baz=228						
WDLH	**Douliu**	**1.79**	**263**	*e*P	**Pb**	**19 06 15.3**	**+0.3**
	baz=262						
JISG	**Ishigakijimahi**	**1.80**	**68**	P	**Pn**	**19 06 13.3**	**+0.5**
JISG				S	**Sn**	**19 06 35.9**	**+0.6**
TPUB	**Ta-pu**	**1.81**	**250**	*e*P	**Pb**	**19 06 15.3**	**0.0**
	baz=249						
SLGT	**Liugui**	**1.92**	**241**	*e*P	**Pb**	**19 06 17.2**	**0.0**
	baz=240						
CHN1	**Nanshi**	**1.93**	**248**	*e*P	**Pb**	**19 06 17.7**	**+0.3**
	baz=247						
RLNB	**Erlin**	**1.94**	**269**	*e*P	**Pb**	**19 06 17.0**	**-0.5**
	baz=269						
TWK	**Hsinying**	**1.94**	**251**	*e*P	**Pb**	**19 06 17.4**	**-0.1**
	baz=249						
SSD	**Sandimen**	**2.06**	**236**	*e*P	**Pb**	**19 06 19.0**	**-0.6**
	baz=234						
WSF	**Szhu**	**2.08**	**263**	*e*P	**Pb**	**19 06 19.2**	**-0.8**
	baz=262						
MASBT	**Mashibuluo**	**2.14**	**233**	*e*P	**Pn**	**19 06 18.5**	**+0.9**
	baz=232						
EAST	**Anshuo**	**2.15**	**225**	*e*P	**Pb**	**19 06 19.8**	**-1.3**
	baz=223						

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*IDC **14** 19:10:16.9±3.0, 30.°24S×177.°17W, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.6/31, mbtmp3.8/4, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/27, Error ellipse: s-maj=73.0km s-min=42.0km az=127.0*

*ISCJB **14** 19:10:17.9±1.0, 30.°35S±0.°08×177.°2W±0.°1, h24^{km}, mb4.1/9, Error ellipse: s-maj=17.5km s-min=11.6km az=178.7*

*NEIC **14** 19:10:18.6±1.9, 30.°27S×177.°09W, h16^{km}±5^{km}, mb4.3/10, Error ellipse: s-maj=16.6km s-min=7.9km az=174.0*

ISC 14 19:10:19.5±1.1, 30.°35S±0.°09×177.°2W±0.°1, h24^{km}, n20, σ1.^{s}49/20, mb4.1/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.27**	**329**	*e*Pn	**Pn**	**19 10 41.0**	**-0.6**
URZ	**Urewera**	**9.20**	**209**	Pn	**Pn**	**19 12 30.3**	**-0.2**
	0.4nm,0.3s,baz=0.0,slow=20,SNR=2.2						
URZ				Sn	**Sn**	**19 14 11.2**	**-2.1**
	0.5nm,0.3s,baz=99,slow=19,SNR=3.3						
LTZ	**Lake Taylor**	**15.01**	**211**	*e*Pn	**Pn**	**19 13 50.4**	**+0.3**
MARNC	**Mare, Loyalty**	**15.96**	**300**	*e*Pn	**Pn**	**19 14 00.9**	**-1.6**
ONTNC	**Ouen Toro**	**16.70**	**295**	*e*Pn	**Pn**	**19 14 11.0**	**-0.9**
	32nm,1.1s						
DZM	**Mont Dzumac**	**16.84**	**295**	LR	LR	19 19 03.6	
	comp=Z,64nm,21.2s,baz=34,slow=31						
WHZ	**Wether Hill Ro**	**19.39**	**213**	*e*P	**Pn**	**19 14 45.5**	**+0.7**
	15nm,1.1s						
CAN	**Canberra**	**28.76**	**251**	*e*P	**P**	**19 16 17.5**	**+2.1**
	9.8nm,1.1s						
STKA	**Stephens Creek**	**35.18**	**257**	P	**P**	**19 17 14.6**	**+2.9**
	1.7nm,0.8s,baz=98,slow=7.1,SNR=3.0						
STKA	**Stephens Creek**	**35.18**	**257**	*e*P	**P**	**19 17 14.6**	**+2.9**
	1.0nm,1.0s						
TAOE	**Nuku Hiva Isla**	**40.64**	**66**	*e*P	**P**	**19 17 57.5**	**-0.5**
	73nm,1.0s						
AS31	**Alice Springs**	**43.82**	**267**	*e*P	**P**	**19 18 23.9**	**+0.2**
	0.7nm,1.1s						
ASAR	**Alice Springs**	**43.82**	**267**	P	**P**	**19 18 23.9**	**+0.2**
	0.4nm,0.5s,baz=106,slow=7.6,SNR=11						
WB2	**Warramunga Arr**	**44.79**	**272**	*e*P	**P**	**19 18 32.8**	**+1.2**
	3.8nm,1.0s						
WRAB	**Tennant Creek**	**44.80**	**272**	*e*P	**P**	**19 18 32.7**	**+1.0**
	2.6nm,1.0s						
WR1	**Warramunga Arr**	**44.80**	**272**	*e*P	**P**	**19 18 32.4**	**+0.7**
WRA	**Warramunga Arr**	**44.80**	**272**	P	**P**	**19 18 32.4**	**+0.7**
	1.4nm,0.6s,baz=108,slow=7.6,SNR=14						
PSA00	**Pilbara Seismi**	**56.68**	**263**	*e*P	**P**	**19 19 59.4**	**-1.8**
	3.3nm,0.8s						
FIA0	**FINESS Array S**	**145.34**	**341**	*e*PKPbc	**PKPab**	**19 29 54.8**	**+0.3**
FINES	**FINESS Array B**	**145.34**	**341**	PKPbc	**PKPab**	**19 29 54.8**	**+0.3**
	1.0nm,0.5s,baz=56,slow=3.5,SNR=11						

PGC 14 19:17:57.8±0.8, 61.°58N×141.°05W, h9^{km}, ML2.1/10, 210km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	**White River**	**0.23**	**25**	P	Pg	19 18 02.1	-0.5
YUK2				S	Sg	19 18 05.6	-0.2
YUK3	**Moose Creek**	**0.34**	**55**	P	Pg	19 18 04.1	-0.6
YUK3				S	Sg	19 18 08.8	-0.5
YUK1	**Sand Pete Hill**	**0.63**	**23**	P	Pg	19 18 09.0	-1.0
YUK1				S	Sg	19 18 17.9	-0.4
PTPK	**Patty Peak**	**0.79**	**241**	P	Pg	19 18 11.9	-1.1
PTPK				S	Sg	19 18 22.8	-0.5
BALM	**Baldy**	**0.83**	**229**	P	Pg	19 18 12.2	-1.6
BALM				S	Sg	19 18 23.4	-1.2
BVCY	**Beaver Creek**	**0.84**	**6**	P	Pg	19 18 13.2	-0.9
BVCY				Sg	Sn	19 18 29.8	+1.4
KIAG	**Kiagna River**	**0.91**	**224**	P	Pg	19 18 13.6	-1.9
KIAG				S	Sg	19 18 25.6	-1.7
TABL	**Table Mountain**	**1.14**	**182**	P	Pg	19 18 18.2	-1.6
TABL				S	Sg	19 18 33.4	-1.3
YUK4	**Talbot Arm**	**1.18**	**100**	P	Pg	19 18 19.5	-0.9
YUK4				S	Sg	19 18 35.7	-0.1
YUK6	**Outpost Mounta**	**1.45**	**115**	Sg	Sb	19 18 43.9	+0.3
SAMH	**Samovar Hills**	**1.46**	**175**	Pn	Pn	19 18 24.4	-0.1
SAMH				Sg	Sg	19 18 44.6	-0.1
MESA	**MESA**	**1.47**	**198**	Pn	Pn	19 18 24.8	+0.1
MESA				Sg	Sg	19 18 45.1	-0.1
PCA	**Pinnacle**	**1.54**	**165**	Pn	Pn	19 18 25.5	0.0
PCA				Sg	Sb	19 18 46.2	+0.2
YUK5	**Granite Creek**	**1.60**	**105**	Pn	Pn	19 18 26.1	-0.3
YUK5				Sg	Sn	19 18 46.1	-1.2
YUK7	**Dusty Glacier**	**1.76**	**125**	Pn	Pb	19 18 29.8	-0.6
HYT	**Haines Junctio**	**1.88**	**112**	Sg	Sb	19 18 55.6	-0.2
PNL	**Peninsula**	**2.08**	**156**	Pn	Pn	19 18 33.8	+0.9
PNL				Sg	Sg	19 19 04.2	-0.5
DOT	**Dot Lake**	**2.50**	**327**	Pn	Pn	19 18 38.5	-0.2
DOT				Pg	Pb	19 18 43.3	+0.4
DOT				Sg	Sb	19 19 15.6	+1.8
DAWY	**Dawson**	**2.61**	**16**	Pn	Pn	19 18 40.3	+0.1
DAWY				Sg	Sb	19 19 17.6	+0.7

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*NEIC **14** 19:19:00.6±0.0, 61.°57N×141.°11W, h1^{km}, ML3.3(AEIC), After AEIC.*

*PGC **14** 19:19:01.4±0.0, 61.°56N×141.°03W, h1^{km}, ML3.1/9, 208km Wnw of Haines Jct., Yt Southern Alaska*

*IDC **14** 19:19:01.4±1.2, 61.°74N×141.°01W, h0^{km}, mb3.6/2, mb1 3.6/5, mb1mx3.2/56, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=23.6km s-min=10.1km az=44.0*

ISC 14 19:19:00.3±1.1, 61.°59N±0.°02×141.°10W±0.°02, h4^{km}±9^{km}, n65, σ1.^{s}39/92, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	**White River**	**0.23**	**32**	P	**Pg**	**19 19 05.5**	**+0.7**
YUK2				S	**Sg**	**19 19 08.9**	**+1.1**
YUK3	**Moose Creek**	**0.35**	**58**	P	**Pg**	**19 19 07.5**	**+0.3**
YUK3				S	**Sg**	**19 19 12.2**	**+0.3**
YUK1	**Sand Pete Hill**	**0.62**	**25**	P	**Pg**	**19 19 12.4**	**+0.1**
PTPK	**Patty Peak**	**0.77**	**239**	P	**Pg**	**19 19 15.3**	**+0.1**
PTPK				S	**Sg**	**19 19 25.5**	**+0.3**
BALM	**Baldy**	**0.82**	**228**	*e*Pg	**Pg**	**19 19 15.6**	**-0.4**
BALM				*e*Sg	**Sg**	**19 19 26.9**	**+0.2**
BALM	**Baldy**	**0.82**	**228**	P	**Pg**	**19 19 15.6**	**-0.4**
BALM				S	**Sg**	**19 19 26.7**	**+0.1**
BVCY	**Beaver Creek**	**0.83**	**8**	P	**Pg**	**19 19 16.7**	**+0.4**
BVCY				Sg	**Sn**	**19 19 32.9**	**+1.3**
KIAG	**Kiagna River**	**0.91**	**223**	P	**Pg**	**19 19 17.0**	**-0.7**
KIAG				S	**Sg**	**19 19 29.2**	**-0.2**
TABL	**Table Mountain**	**1.16**	**181**	P	**Pg**	**19 19 21.5**	**-1.0**
TABL				S	**Sg**	**19 19 36.6**	**-0.8**
YUK6	**Outpost Mounta**	**1.47**	**115**	Sg	**Sb**	**19 19 46.6**	**-0.9**
SAMH	**Samovar Hills**	**1.48**	**174**	Pn	**Pn**	**19 19 27.8**	**+0.1**
SAMH				Sg	**Sg**	**19 19 47.7**	**+0.1**
MESA	**MESA**	**1.48**	**197**	Pn	**Pn**	**19 19 28.1**	**+0.3**
MESA				Sg	**Sn**	**19 19 47.9**	**+0.2**
BCA3	**Beaver Creek A**	**1.51**	**348**	*e*Pn	**Pn**	**19 19 28.6**	**+0.4**
CHX	**Chaix Hills**	**1.53**	**180**	*e*Pn	**Pb**	**19 19 29.1**	**-0.2**
PCA	**Pinnacle**	**1.56**	**164**	*e*Pn	**Pn**	**19 19 28.8**	**0.0**
PCA				*e*Sn	**Sg**	**19 19 50.2**	**0.0**
PCA	**Pinnacle**	**1.56**	**164**	Pn	**Pn**	**19 19 29.0**	**+0.2**
PCA				Sg	**Sg**	**19 19 50.2**	**0.0**
YUK5	**Granite Creek**	**1.63**	**105**	Sg	**Sn**	**19 19 51.3**	**0.0**
SNH	**Sunshine Point**	**1.65**	**212**	*e*Pn	**Pb**	**19 19 31.2**	**-0.1**
YUK7	**Dusty Glacier**	**1.79**	**125**	Pn	**Pb**	**19 19 33.1**	**-0.7**
YUK7				Sg	**Sb**	**19 19 56.6**	**0.0**
BCPM	**Bancas Point**	**1.79**	**156**	*e*Pn	**Pb**	**19 19 33.6**	**-0.1**
BCPM				*e*Sn	**Sn**	**19 19 54.6**	**-0.6**
MENT	**Mentasta**	**1.82**	**319**	*e*Pn	**Pn**	**19 19 32.9**	**+0.4**
HYT	**Haines Junctio**	**1.90**	**112**	Pn	**Pn**	**19 19 33.7**	**+0.1**
PNL	**Peninsula**	**2.10**	**156**	*e*Pn	**Pn**	**19 19 37.2**	**+0.9**
PNL	**Peninsula**	**2.10**	**156**	Pn	**Pn**	**19 19 37.2**	**+0.9**
PNL				Sg	**Sg**	**19 20 06.8**	**-1.0**
YKU2	**Yakutat**	**2.20**	**161**	*e*Pn	**Pn**	**19 19 39.0**	**+1.5**
PAX	**Paxson**	**2.47**	**306**	*e*Pn	**Pb**	**19 19 44.6**	**-0.6**
PAX	**Paxson**	**2.47**	**306**	Pn	**Pb**	**19 19 44.5**	**-0.8**
PAX				Sg	**Sb**	**19 20 17.1**	**+1.1**
DOT	**Dot Lake**	**2.48**	**328**	*e*Pn	**Pn**	**19 19 42.0**	**+0.6**
DOT	**Dot Lake**	**2.48**	**328**	Pn	**Pn**	**19 19 42.0**	**+0.6**
DOT				Pg	**Pg**	**19 19 46.9**	**-0.9**
DOT				Sg	**Sg**	**19 20 18.6**	**-1.2**
EYAK	**Cordova Ski Ar**	**2.49**	**247**	*e*Pn	**Pn**	**19 19 43.2**	**+1.6**
DAWY	**Dawson**	**2.60**	**17**	*e*Pn	**Pn**	**19 19 43.9**	**+0.7**
DAWY	**Dawson**	**2.60**	**17**	Pn	**Pn**	**19 19 43.9**	**+0.7**
DAWY				Sg	**Sb**	**19 20 21.3**	**+1.5**
SCRK	**Sand Creek**	**2.74**	**332**	*e*Pn	**Pn**	**19 19 45.9**	**+0.8**
FID	**Port Fidalgo**	**2.74**	**254**	*e*Pn	**Pb**	**19 19 48.6**	**-1.2**
RIDG	**Independent Ri**	**2.77**	**323**	*e*Pn	**Pn**	**19 19 46.1**	**+0.7**
SCM	**Sheep Creek Mo**	**2.98**	**277**	*e*Pn	**Pb**	**19 19 51.8**	**-2.1**
GLI	**Glacier Island**	**2.99**	**259**	*e*Pn	**Pn**	**19 19 51.1**	**+2.6**
PLBC	**Pleasant Camp**	**3.17**	**130**	Pn	**Pn**	**19 19 51.4**	**+0.5**
PLBC				Pg	**Pb**	**19 19 57.3**	**+0.2**
PLBC				Sg	**Sg**	**19 20 40.5**	**-1.5**
EGAK	**Eagle**	**3.20**	**360**	*e*Pn	**Pn**	**19 19 52.5**	**+1.2**
DHY	**Denali Highway**	**3.29**	**300**	*e*Pn	**Pn**	**19 19 53.5**	**+0.8**
SML	**Sawmill**	**3.45**	**277**	*e*Pn	**Pn**	**19 19 56.8**	**+2.0**
SKAG	**Skagway**	**3.56**	**124**	*e*Pn	**Pn**	**19 19 57.1**	**+0.9**
IL1	**Eielson Array**	**4.13**	**323**	*e*Pn	**Pn**	**19 20 05.0**	**+0.9**
ILAR	**Eielson Array**	**4.13**	**323**	Pn	**Pn**	**19 20 03.6**	**-0.4**
	1.1nm,0.3s,baz=142,slow=12,SNR=19						
ILAR				Sn	**Sn**	**19 20 50.2**	**-2.6**
	2.7nm,0.3s,baz=135,slow=19,SNR=6.1						
ILAR				Lg	Lg	19 21 10.8	
	9.1nm,0.3s,baz=133,slow=27,SNR=10.0						
CCB	**Clear Creek Bu**	**4.32**	**318**	*e*Pn	**Pn**	**19 20 07.1**	**+0.4**
BESE	**Bessie Mountai**	**4.35**	**131**	*e*Pn	**Pn**	**19 20 07.5**	**+0.4**
BESE	**Bessie Mountai**	**4.35**	**131**	Pn	**Pn**	**19 20 07.2**	**+0.1**
BESE				Sg	**Sg**	**19 21 16.8**	**-3.0**
SEW	**Seward**	**4.35**	**254**	*e*Pn	**Pn**	**19 20 08.8**	**+1.7**
PPLA	**Purkeypile**	**5.35**	**289**	*e*Pn	**Pn**	**19 20 24.4**	**+3.4**
CNPM	**China Poot**	**5.42**	**252**	*e*Pn	**Pn**	**19 20 23.2**	**+1.5**
BM3	**Burnt Mountain**	**6.04**	**347**	*e*Pn	**Pn**	**19 20 31.7**	**+1.3**
DLBC	**Dease Lake**	**6.39**	**115**	Pn	**Pn**	**19 20 38.1**	**+3.0**
	0.2nm,0.3s,baz=302,slow=13,SNR=2.8						
DLBC				Lg	Lg	19 22 21.8	
	1.5nm,0.3s,baz=41,slow=9.9,SNR=5.2						
DLBC	**Dease Lake**	**6.39**	**115**	Pn	**Pn**	**19 20 34.3**	**-0.8**
DLBC				Sg	**Sg**	**19 22 22.6**	**-2.5**
COLD	**Coldfoot**	**6.89**	**329**	*e*Pn	**Pn**	**19 20 43.6**	**+1.7**
COLD	**Coldfoot**	**6.89**	**329**	Pn	**Pn**	**19 20 43.0**	**+1.1**
COLD				Sn	**Sn**	**19 21 59.7**	**-0.9**
KDAK	**Kodiak Island**	**6.95**	**242**	*e*Pn	**Pn**	**19 20 44.0**	**+1.2**
INK	**Inuvik**	**7.46**	**22**	Pn	**Pn**	**19 20 50.5**	**+0.8**
	0.2nm,0.3s,baz=203,slow=15,SNR=6.5						
INK				Sn	**Sn**	**19 22 10.8**	**-3.8**
	1.7nm,0.3s,baz=261,slow=31,SNR=6.4						
INK				Lg	Lg	19 22 53.6	
	0.7nm,0.3s,baz=153,slow=18,SNR=4.1						
INK	**Inuvik**	**7.46**	**22**	Pn	**Pn**	**19 20 50.3**	**+0.6**
INK				Sn	**Sn**	**19 22 10.1**	**-4.5**
OHAK	**Old Harbor**	**7.60**	**240**	*e*Pn	**Pn**	**19 20 52.2**	**+0.5**
SII	**Sitkinak Islan**	**8.41**	**239**	*e*Pn	**Pn**	**19 21 04.2**	**+1.4**
NDB	**Naden**	**8.80**	**147**	Pn	**Pn**	**19 21 12.0**	**+3.8**
DHRN	**Dharma Camp**	**10.80**	**50**	P	**Pn**	**19 21 34.1**	**-1.3**
PD31	**Pinedale Array**	**26.58**	**121**	*e*P	**P**	**19 24 41.8**	**+2.3**
PDAR	**Pinedale Array**	**26.58**	**121**	P	**P**	**19 24 41.8**	**+2.3**
	0.1nm,0.4s,baz=316,slow=6.3,SNR=2.9						
AKASG	**Malin Array Be**	**67.79**	**7**	P	**P**	**19 29 58.7**	**0.0**
	0.9nm,0.5s,baz=356,slow=6.1,SNR=5.2						

GCG 14 19:20:30.7±0.4, 13.°92N×92.°46W, h24^{km}±442^{km}, MD3.7, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.17**	**48**	*e*P	Pb	19 20 52.1	-0.3
FUG	**Fuego 3**	**1.66**	**71**	*e*P	Pn	19 20 58.7	+0.2
PCG	**Pacaya**	**1.86**	**75**	*e*P	Pn	19 21 02.0	+0.6
PCG				*e*S	Sb	19 21 26.3	-0.8

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*ISN **14** 19:24:02.9±39.0, 35.°73N×46.°05E, h0^{km}±367^{km}, ML2.9*

*ISCJB **14** 19:24:09.6±1.9, 35.°58N±0.°06×46.°0E±0.°2, h33^{km}, Error ellipse: s-maj=21.0km s-min=8.3km az=172.7*

ISC 14 19:24:13.2±2.6, 35.°53N±0.°06×45.°7E±0.°2, h35^{km}, n5, σ3.^{s}11/9, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL	**Mosul**	**2.28**	**293**	*e*Pn	**Pn**	**19 24 45.0**	**-3.4**
	baz=105						
MSL				AML	AML	19 24 50.6	
	comp=Z,124nm,0.4s						
MSL				*e*Sn	**Sn**	**19 25 15.5**	**+0.2**
YOVA	**Hakkari_Yksek**	**2.35**	**331**	*i* P	**Pn**	**19 24 47.1**	**-2.4**
YOVA				IAML_P			
	comp=Z,505nm,0.4s						
CUKT	**Cukurca**	**2.41**	**316**	*i* P	**Pn**	**19 24 50.0**	**-0.3**
CUKT				*i* S	**Sn**	**19 25 21.5**	**+2.8**
CUKT				IAML_P			
	comp=Z,593nm,0.1s						
BHD	**Baghdad**	**2.51**	**206**	*e*Pn	**Pn**	**19 24 50.0**	**-1.5**
	baz=29						
BHD				*e*Sn	**Sn**	**19 25 24.0**	**+3.1**
HAKT	**HAKKARI**	**2.59**	**322**	*i* P	**Pn**	**19 24 51.0**	**-1.8**
HAKT				*i* S	**Sn**	**19 25 27.4**	**+4.2**
HAKT				IAML_P			
	comp=Z,504nm,0.3s						

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*NIED **14** 19:24:00, 22.°80N×121.°30E, h8^{km}, Mw4.4 Best double couple: M$_0$4.57000×10^{15} NP1:φ$_s$122.00000°, δ36.00000°, λ-91.00000°. NP2:φ$_s$304.00000°, δ54.00000°, λ-89.00000°.*

*JMA **14** 19:24:28.2±0.2, 22.°84N×121.°34E, h0^{km}, M4.1*

*TAP **14** 19:24:28.9, 22.°98N×120.°91E, h7^{km}, ML4.6, C*

*IDC **14** 19:24:28.5±0.6, 22.°90N×121.°08E, h0^{km}, mb3.9/20, mb1 4.0/20, mb1mx3.9/54, mbtmp3.9/20, ML2.6/1, MS3.5/12, Ms1 3.6/12, ms1mx3.3/36, Error ellipse: s-maj=21.6km s-min=14.4km az=64.0*

*BJI **14** 19:24:28.9±0.0, 22.°94N×120.°96E, h5^{km}, mb4.0/26, mB4.5/17, ML4.0/5, Ms4.2/17, Ms7 4.0/20*

*ISCJB **14** 19:24:29.2±0.2, 22.°91N±0.°01×120.°96E±0.°01, h10^{km}±1^{km}, mb4.0/34, MS3.6/10, Error ellipse: s-maj=2.0km s-min=1.8km az=18.9*

*NEIC **14** 19:24:29.5±2.0, 22.°91N×121.°06E, h10^{km}, mb4.4/17, ML4.5(TAP), Error ellipse: s-maj=10.3km s-min=8.4km az=282.0*

NEIC Recorded [3 TAP] in Taitung and [1 TAP] in Chiayi, Hualien, Pingtung and Tainan.

*ASIES **14** 19:24:29.5, 22.°98N×120.°92E, h13^{km}, MW4.1*

ISC 14 19:24:30.0±0.7, 22.°95N±0.°01×120.°96E±0.°01, h10^{km}±4^{km}, n210, σ1.^{s}33/284, mb4.1/34, MS3.6/10, 28C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	**Pinlang**	**0.16**	**141**	*e*Pg	**Pg**	**19 24 33.9**	**+0.2**
TWG	**Pinlang**	**0.16**	**141**	⇓*i*P	**Pg**	**19 24 34.1**	**+0.4**
	baz=137						
TWG				*i* S	**Sb**	**19 24 37.5**	**+1.3**
	baz=137						
TWGBT	**Beinan**	**0.17**	**140**	⇓P	**Pg**	**19 24 34.0**	**+0.3**
	baz=137						
TWGBT				S	**Sb**	**19 24 37.5**	**+1.1**
	baz=137						
ELDTW	**Lidau**	**0.24**	**12**	⇑*i*P	**Pg**	**19 24 33.9**	**-1.2**
	baz=25						
ELDTW				*i* S	**Sg**	**19 24 37.6**	**-1.0**
	baz=25						
TTN	**Taitung**	**0.26**	**138**	⇓*i*P	**Pb**	**19 24 36.6**	**-0.1**
	baz=136						
TTN				S	**Sb**	**19 24 42.1**	**+0.8**
	baz=136						
SLGT	**Liugui**	**0.29**	**279**	P	**Pg**	**19 24 34.2**	**-1.8**
	baz=267						
SLGT				S	**Sg**	**19 24 37.5**	**-2.5**
	baz=267						
ECL	**Taimali**	**0.35**	**181**	P	**Pg**	**19 24 36.6**	**-0.4**
	baz=175						
ECL				*e*S	**Sg**	**19 24 41.8**	**+0.1**
	baz=175						
SSD	**Sandimen**	**0.36**	**236**	⇑*i*P	**Pg**	**19 24 35.5**	**-1.7**
	baz=223						
SSD				S	**Sg**	**19 24 40.0**	**-2.2**
	baz=223						
SGST	**Jiashian**	**0.37**	**291**	⇑*i*P	**Pg**	**19 24 36.2**	**-1.2**
	baz=288						
SGST				*i* S	**Sg**	**19 24 41.3**	**-1.1**
	baz=288						
CHKT	**Chengkung**	**0.40**	**68**	⇑P	**Pb**	**19 24 38.9**	**-0.3**
	baz=65						
CHKT				S	**Sb**	**19 24 46.6**	**+1.2**
	baz=65						
MASBT	**Mashibuluo**	**0.45**	**222**	⇑P	**Pg**	**19 24 37.3**	**-1.6**
	baz=213						
MASBT				*e*S	**Sg**	**19 24 43.2**	**-1.7**
	baz=213						
CHN1	**Nanshi**	**0.46**	**301**	*e*P	**Pg**	**19 24 38.8**	**-0.3**
	baz=303						
CHN1				*e*S	**Sg**	**19 24 45.5**	**+0.2**
	baz=303						
TPUB	**Ta-pu**	**0.46**	**319**	*e*Pg	**Pg**	**19 24 38.4**	**-0.8**
TPUB	**Ta-pu**	**0.46**	**319**	*e*P	**Pg**	**19 24 38.1**	**-1.0**
	baz=321						
TPUB				S	**Sg**	**19 24 44.6**	**-0.7**
	baz=321						
SGLT	**Jiouru**	**0.49**	**243**	⇑P	**Pg**	**19 24 39.0**	**-0.5**
	baz=233						
SNST	**Tainan City**	**0.50**	**302**	*e*P	**Pg**	**19 24 39.5**	**-0.4**
	baz=305						
SNST				S	**Sg**	**19 24 47.2**	**+0.6**
	baz=305						
TWF1	**Yuli**	**0.51**	**38**	⇑*i*P	**Pg**	**19 24 39.3**	**-0.7**
	baz=53						
TWF1				*i* S	**Sg**	**19 24 46.1**	**-0.6**
	baz=53						
TWK	**Hsinying**	**0.54**	**306**	P	**Pg**	**19 24 40.0**	**-0.6**
	baz=306						
TWK				S	**Sg**	**19 24 47.9**	**+0.2**
	baz=306						
YUS	**Yu-Shan**	**0.54**	**359**	⇑*i*P	**Pg**	**19 24 39.2**	**-1.4**
	baz=4.0						
YUS				*e*S	**Sg**	**19 24 46.1**	**-1.8**
	baz=4.0						
YULB	**Yu-li**	**0.54**	**35**	*e*Pg	**Pg**	**19 24 39.5**	**-1.1**
YULB	**Yu-li**	**0.54**	**35**	⇑P	**Pg**	**19 24 39.5**	**-1.1**
	baz=49						
YULB				*e*S	**Sg**	**19 24 46.5**	**-1.2**
	baz=49						
CHN3	**Shinhua**	**0.56**	**283**	⇑*e*P	**Pg**	**19 24 41.7**	**+0.7**
	baz=279						
CHN3				*e*S	**Sb**	**19 24 51.4**	**+1.4**
	baz=279						
EAST	**Anshuo**	**0.57**	**190**	⇑*i*P	**Pg**	**19 24 40.7**	**-0.5**
	baz=186						
EAST				S	**Sg**	**19 24 48.8**	**0.0**
	baz=186						
ALS	**Alishan**	**0.58**	**346**	⇑P	**Pg**	**19 24 40.1**	**-1.3**
	baz=349						
ALS				S	**Sg**	**19 24 48.0**	**-1.1**
	baz=349						
TAW	**Tawu**	**0.59**	**186**	⇑P	**Pg**	**19 24 41.1**	**-0.4**
	baz=182						
TAW				S	**Sg**	**19 24 49.1**	**-0.2**
	baz=182						
SNJT	**Kaohsiung City**	**0.61**	**251**	⇑*e*P	**Pb**	**19 24 43.2**	**+0.5**
	baz=247						
EHY	**Hungye**	**0.65**	**31**	⇑*i*P	**Pg**	**19 24 41.4**	**-1.2**
	baz=36						
EHY				S	**Sg**	**19 24 49.9**	**-1.2**
	baz=36						
SCZT	**Fangliau**	**0.65**	**209**	⇑*i*P	**Pg**	**19 24 41.6**	**-1.2**
	baz=198						
SCZT				*e*S	**Sg**	**19 24 50.5**	**-0.8**
	baz=198						
TAI1	**Yung-k'ang**	**0.68**	**278**	*e*P	**Pb**	**19 24 44.7**	**+0.7**
	baz=291						
TAI1				*e*S	**Sn**	**19 24 56.0**	**-0.2**
	baz=291						
HGSD	**Ruisui**	**0.69**	**38**	⇑P	**Pg**	**19 24 43.1**	**-0.3**
	baz=33						
HGSD				S	**Sb**	**19 24 53.6**	**-0.1**
	baz=33						
CHN5	**Tsauling**	**0.69**	**338**	P	**Pg**	**19 24 42.5**	**-1.0**
	baz=350						
CHN5				S	**Sg**	**19 24 52.6**	**-0.1**
	baz=350						
KAU	**Kaohsiung**	**0.71**	**238**	*e*P	**Pb**	**19 24 45.2**	**+0.7**
	baz=224						
CHN2	**Minshiung**	**0.73**	**323**	*e*P	**Pg**	**19 24 44.4**	**+0.2**
	baz=324						
CHN2				S	**Sb**	**19 24 55.2**	**+0.3**
	baz=324						
CHY	**Chiayi**	**0.74**	**318**	*e*P	**Pg**	**19 24 44.0**	**-0.3**
	baz=319						
CHY				S	**Sg**	**19 24 55.0**	**+1.1**
	baz=319						
WHYT	**Xinyi Township**	**0.75**	**353**	⇑P	**Pg**	**19 24 43.2**	**-1.3**
	baz=5.0						
CHN8	**Yiju**	**0.79**	**300**	⇓P	**Pg**	**19 24 45.1**	**-0.3**
	baz=299						
CHN8				S	**Sb**	**19 24 57.3**	**+0.6**
	baz=299						
WLCH	**Liuqiu**	**0.80**	**222**	*e*P	**Pn**	**19 24 46.7**	**-0.6**
	baz=212						
WLGB	**Puzi**	**0.80**	**311**	P	**Pg**	**19 24 45.5**	**0.0**
	baz=312						
TWP	**Hsiaoliuchiu**	**0.81**	**223**	*e*P	**Pn**	**19 24 47.1**	**-0.4**
	baz=219						

VWDT	**VWDT**	**0.82**	**12**	P	**Pg**	**19 24 44.0**	**-1.8**
	baz=8.0						
WGK	**Gukeng**	**0.82**	**334**	⇑*i*P	**Pg**	**19 24 45.8**	**-0.1**
	baz=335						
WGK				S	**Sb**	**19 24 58.3**	**+0.9**
	baz=335						
WDLH	**Douliu**	**0.83**	**332**	*e*P	**Pg**	**19 24 46.1**	**0.0**
	baz=334						
WDLH				S	**Sb**	**19 24 59.0**	**+1.2**
	baz=334						
SSLB	**Suanglung**	**0.83**	**360**	*e*Pg	**Pg**	**19 24 44.2**	**-2.0**
SSLB	**Suanglung**	**0.83**	**360**	⇑P	**Pg**	**19 24 44.2**	**-2.0**
	baz=2.0						
SSLB				*e*S	**Sb**	**19 24 58.2**	**+0.2**
	baz=2.0						
EGFH	**Guangfu**	**0.84**	**31**	⇓P	**Pg**	**19 24 45.1**	**-1.1**
	baz=35						
EGFH				*e*S	**Sg**	**19 24 56.2**	**-0.9**
	baz=35						
WJS	**Zhushan**	**0.90**	**346**	*e*P	**Pg**	**19 24 46.7**	**-0.6**
	baz=355						
WJS				S	**Sb**	**19 25 00.6**	**+1.0**
	baz=355						
SMLT	**Sun Moon Lake**	**0.93**	**357**	P	**Pg**	**19 24 46.6**	**-1.4**
	baz=8.0						
SMLT				*e*S	**Sn**	**19 25 02.2**	**-0.5**
	baz=8.0						
TYC	**Yuchr**	**0.95**	**354**	P	**Pb**	**19 24 47.2**	**-1.5**
	baz=4.0						
TYC				*e*S	**Sn**	**19 25 02.6**	**-0.5**
	baz=4.0						
WNT	**Mingjian**	**0.96**	**345**	P	**Pb**	**19 24 48.3**	**-0.4**
	baz=331						
WNT				S	**Sg**	**19 25 02.1**	**+1.1**
	baz=331						
HEN	**Hengchun**	**0.96**	**192**	*e*P	**Pg**	**19 24 49.0**	**+0.4**
	baz=198						
ESL	**Shilin**	**0.96**	**27**	⇑P	**Pb**	**19 24 46.9**	**-1.9**
	baz=42						
WSF	**Szhu**	**0.96**	**315**	⇑P	**Pb**	**19 24 47.6**	**-1.2**
	baz=316						
WSF				*e*S	**Sb**	**19 25 01.4**	**-0.2**
	baz=316						
TWK1	**Hengchun**	**1.01**	**188**	*e*P	**Pb**	**19 24 49.6**	**0.0**
	baz=193						
TWKBT	**Hengchun**	**1.01**	**188**	*e*P	**Pb**	**19 24 48.9**	**-0.7**
	baz=193						
TSEB	**Hengchuen, Pin**	**1.04**	**183**	*e*P	**Pb**	**19 24 50.1**	**-0.1**
	baz=191						
LAY	**Lan-yu**	**1.06**	**149**	*e*P	**Pb**	**19 24 47.9**	**-2.5**
	baz=147						
RLNB	**Erlin**	**1.09**	**330**	*e*P	**Pb**	**19 24 50.3**	**-0.6**
	baz=333						
WMLT	**Mailiao**	**1.09**	**322**	*e*P	**Pb**	**19 24 50.4**	**-0.5**
	baz=324						
WTCT	**Ta-ch'eng**	**1.10**	**326**	*e*P	**Pb**	**19 24 49.9**	**-1.3**
	baz=327						
WTCT				S	**Sb**	**19 25 05.7**	**+0.1**
	baz=327						
ENLB	**Shoufeng**	**1.12**	**32**	P	**Pb**	**19 24 50.0**	**-1.5**
	baz=35						
ENLB				S	**Sn**	**19 25 07.5**	**+0.3**
	baz=35						
CHGB	**Renai**	**1.12**	**10**	*e*P	**Pb**	**19 24 49.3**	**-2.4**
	baz=12						
CHGB				S	**Sn**	**19 25 07.8**	**+0.3**
	baz=12						
HWA	**Hwalien**	**1.18**	**30**	P	**Pn**	**19 24 51.4**	**-1.2**
	baz=44						
HWA				*e*S	**Sg**	**19 25 09.9**	**+1.7**
	baz=44						
WCHH	**Zhanghua**	**1.18**	**342**	*e*P	**Pn**	**19 24 52.6**	**0.0**
	baz=345						
TCU	**Taichung**	**1.22**	**348**	⇓P	**Pn**	**19 24 53.3**	**+0.1**
	baz=350						
TCU				*e*S	**Sg**	**19 25 10.4**	**+1.0**
	baz=350						
WHF	**Hehuan Shan**	**1.22**	**13**	*e*P	**Pn**	**19 24 51.3**	**-2.3**
	baz=16						
WDGT	**Dungji**	**1.24**	**285**	⇑*i*P	**Pn**	**19 24 51.8**	**-1.6**
	baz=283						
WDGT				*e*S	**Sb**	**19 25 07.5**	**-1.9**
	baz=283						
TWD	**Chiawan**	**1.27**	**27**	P	**Pn**	**19 24 52.8**	**-0.9**
	baz=40						
TWD				S	**Sb**	**19 25 10.2**	**-0.2**
	baz=40						
TDCB	**Techi**	**1.31**	**8**	*e*P	**Pn**	**19 24 53.6**	**-0.9**
	baz=9.0						
TDCB				*e*S	**Sg**	**19 25 13.5**	**+1.2**
	baz=9.0						
ETLH	**Xiulin Townshi**	**1.34**	**21**	⇑*e*P	**Pn**	**19 24 53.6**	**-1.3**
	baz=36						
ETLH				*e*S	**Sb**	**19 25 12.4**	**-0.1**
	baz=36						
NACB	**Ninganchiao**	**1.35**	**25**	*e*Pn	**Pn**	**19 24 53.6**	**-1.3**
NACB	**Ninganchiao**	**1.35**	**25**	⇑P	**Pn**	**19 24 53.6**	**-1.3**
	baz=30						
NACB				S	**Sn**	**19 25 12.3**	**-0.6**
	baz=30						
PHUB	**P'eng-hu**	**1.40**	**294**	*e*P	**Pn**	**19 24 53.5**	**-2.0**
	baz=294						
PHUB				*e*S	**Sn**	**19 25 11.6**	**-2.4**
	baz=294						
WDJ	**Dajia District**	**1.42**	**348**	P	**Pb**	**19 24 56.6**	**0.0**
	baz=351						
WDJ				S	**Sg**	**19 25 16.9**	**+1.0**
	baz=351						
PNG	**Penghu**	**1.43**	**296**	⇑P	**Pn**	**19 24 54.3**	**-1.7**
	baz=296						
PNG				*e*S	**Sn**	**19 25 12.3**	**-2.5**
	baz=296						
VCHM	**Qimei**	**1.43**	**281**	*e*P	**Pn**	**19 24 53.9**	**-2.1**
	baz=296						
NSY	**Sanyi**	**1.47**	**353**	*e*P	**Pn**	**19 24 57.2**	**+0.6**
	baz=356						
NSY				S	**Sg**	**19 25 18.7**	**+1.3**
	baz=356						
PTSB	**Yuanli**	**1.51**	**351**	P	**Pb**	**19 24 58.2**	**+0.1**
	baz=355						
PTSB				*e*S	**Sg**	**19 25 18.9**	**+0.2**
	baz=355						
NNSB	**Datong**	**1.52**	**15**	⇑*e*P	**Pn**	**19 24 57.0**	**-0.4**
	baz=33						
NNSB				*e*S	**Sb**	**19 25 17.8**	**-0.1**
	baz=33						
NNS	**Nan Shan**	**1.53**	**14**	*e*P	**Pn**	**19 24 57.3**	**-0.2**
	baz=19						
NNS				*e*S	**Sb**	**19 25 18.6**	**+0.5**
	baz=19						
NMLH	**Miaoli**	**1.59**	**354**	*e*P	**Pn**	**19 24 59.0**	**+0.8**
	baz=1.0						
ENA	**Nanau**	**1.64**	**26**	*e*P	**Pn**	**19 24 57.7**	**-1.2**
	baz=28						
NANB	**Nanao**	**1.64**	**26**	*e*P	**Pn**	**19 24 58.5**	**-0.4**
	baz=30						
NANB				*e*S	**Sn**	**19 25 19.4**	**-0.6**
	baz=30						
NSTT	**Nanjuang**	**1.68**	**1**	*e*P	**Pb**	**19 25 01.7**	**+0.7**
	baz=5.0						
NSTT				S	**Sb**	**19 25 23.3**	**+1.2**
	baz=5.0						
NDT	**Datong Townshi**	**1.72**	**17**	*e*P	**Pb**	**19 25 01.2**	**-0.6**
	baz=19						
YHNB	**Yeheng**	**1.75**	**12**	*e*Pn	**Pn**	**19 25 01.4**	**+0.8**
YHNB	**Yeheng**	**1.75**	**12**	*e*P	**Pn**	**19 25 01.5**	**+1.0**
	baz=18						
YHNB				*e*S	**Sb**	**19 25 24.9**	**+0.5**
	baz=18						
NSK	**Sanguang**	**1.76**	**12**	*e*P	**Pn**	**19 25 01.2**	**+0.6**
	baz=17						
NSK				*e*S	**Sb**	**19 25 25.6**	**+1.0**
	baz=17						
ENTT	**Nioudou**	**1.77**	**18**	P	**Pb**	**19 25 02.2**	**-0.4**
	baz=36						
ENTT				*e*S	**Sb**	**19 25 24.9**	**0.0**
	baz=36						
SBCB	**Hsinchu**	**1.83**	**1**	*e*P	**Pb**	**19 25 04.1**	**+0.4**
	baz=5.0						
SBCB				*e*S	**Sb**	**19 25 27.6**	**+0.9**
	baz=5.0						
TWC	**Suao**	**1.84**	**26**	*e*P	**Pn**	**19 25 02.7**	**+1.0**
	baz=31						
TWC				S	**Sb**	**19 25 26.6**	**-0.2**
	baz=31						
HSN	**Hsinchu**	**1.84**	**0**	*e*P	**Pb**	**19 25 04.5**	**+0.7**
	baz=6.0						
HSN				*e*S	**Sg**	**19 25 28.8**	**-0.6**
	baz=6.0						
TWE	**Neicheng**	**1.88**	**20**	⇓*e*P	**Pb**	**19 25 03.9**	**-0.5**
	baz=37						
TWE				*e*S	**Sg**	**19 25 29.6**	**-0.9**
	baz=37						
WLTB	**Daxi**	**1.91**	**8**	*e*P	**Pb**	**19 25 05.5**	**+0.4**
	baz=7.0						
WLTB				*e*S	**Sg**	**19 25 30.8**	**-0.8**
	baz=7.0						
EOS1	**EOS1**	**1.92**	**34**	*e*P	**Pn**	**19 25 03.1**	**+0.4**
	baz=51						
ILA	**Ilan**	**1.95**	**22**	*e*P	**Pb**	**19 25 05.2**	**-0.4**
	baz=37						
NCUH	**Zhongli**	**2.02**	**6**	*e*P	**Pb**	**19 25 06.8**	**-0.1**
	baz=13						
NCU	**National Centr**	**2.02**	**6**	*e*P	**Pb**	**19 25 06.5**	**-0.3**
	baz=12						
NTC	**Toucheng**	**2.06**	**23**	*e*P	**Pb**	**19 25 07.2**	**-0.2**
	baz=38						
TATO	**Taipei**	**2.07**	**13**	*e*Pn	**Pb**	**19 25 06.6**	**-1.1**
TATO	**Taipei**	**2.07**	**13**	P	**Pb**	**19 25 07.1**	**-0.7**
	baz=18						
TATO				*e*S	**Sg**	**19 25 36.4**	**-0.3**
	baz=18						
EGS		**2.09**	**25**	*e*P	**Pb**	**19 25 07.8**	**-0.1**
	baz=27						
TWA	**Mucha**	**2.10**	**16**	*e*P	**Pn**	**19 25 06.3**	**+1.1**
	baz=20						
TWA				*e*S	**Sb**	**19 25 35.9**	**+1.5**
	baz=20						
TIPB	**Shuangxi**	**2.16**	**21**	*e*P	**Pn**	**19 25 07.3**	**+1.1**
	baz=39						
TIPB				*e*S	**Sb**	**19 25 35.5**	**-0.7**
	baz=39						
TWS1	**Kuangyinshan**	**2.18**	**11**	*e*P	**Pb**	**19 25 09.2**	**-0.4**
	baz=16						
NWF	**Wu-fen Shan**	**2.24**	**19**	*e*P	**Pn**	**19 25 08.0**	**+0.7**
	baz=38						
WFSB	**Wu-fen Shan**	**2.24**	**19**	*e*P	**Pb**	**19 25 09.0**	**-1.6**
	baz=40						
WFSB				*e*S	**Sb**	**19 25 39.4**	**+1.0**
	baz=40						
YM01	**YM01**	**2.26**	**14**	*e*P	**Pn**	**19 25 08.7**	**+1.3**
	baz=5.0						
YM10	**YM10**	**2.26**	**14**	*e*P	**Pn**	**19 25 08.4**	**+0.9**
	baz=5.0						
YM05	**YM05**	**2.27**	**14**	*e*P	**Pn**	**19 25 08.2**	**+0.5**
	baz=5.0						
YM03	**YM03**	**2.28**	**13**	*e*P	**Pb**	**19 25 10.1**	**-1.3**
	baz=359						
YM03				*e*S	**Sb**	**19 25 39.6**	**0.0**
	baz=359						
ANP	**Anpu**	**2.29**	**13**	*e*P	**Pb**	**19 25 10.7**	**-0.7**
	baz=5.0						
JYNG	**Yonagunijimaku**	**2.35**	**50**	P	**Pn**	**19 25 08.3**	**-0.4**
JYNG				S	**Sn**	**19 25 37.4**	**-0.3**
TWY	**Chenhua**	**2.39**	**14**	*e*P	**Pb**	**19 25 12.7**	**-0.4**
	baz=6.0						
YOJ	**Yonaguni jima**	**2.41**	**51**	*e*Pn	**Pn**	**19 25 09.5**	**+0.1**
YOJ	**Yonaguni jima**	**2.41**	**51**	*e*P	**Pn**	**19 25 09.7**	**+0.2**
	baz=70						
YOJ				*e*S	**Sn**	**19 25 38.5**	**-0.5**
	baz=70						
YOJ	**Yonaguni jima**	**2.41**	**51**	P	**Pn**	**19 25 09.4**	**0.0**
YOJ				*e*S	**Sn**	**19 25 38.3**	**-0.7**
PTMZ	**Houxiangcun**	**2.68**	**321**	*e*P	**Pn**	**19 25 12.6**	**-0.6**
	baz=327						
PTTC	**Pingtan**	**2.76**	**337**	*e*P	**Pn**	**19 25 14.4**	**+0.1**
	baz=345						
KNMB	**Chin-men Tao**	**2.80**	**303**	*e*Pn	**Pn**	**19 25 13.4**	**-1.4**
KNMB	**Chin-men Tao**	**2.80**	**303**	*e*P	**Pn**	**19 25 13.9**	**-0.9**
	baz=308						
HATJ	**Hateruma jima**	**2.83**	**67**	P	**Pn**	**19 25 13.5**	**-1.8**
HATJ				*e*S	**Sn**	**19 25 46.7**	**-2.8**
IRIF	**Iriomote-Funau**	**2.89**	**61**	P	**Pn**	**19 25 15.7**	**-0.4**
IRIF				*e*S	**Sn**	**19 25 49.7**	**-1.2**
QZH	**Quanzhou**	**2.94**	**313**	Pn	**Pn**	**19 25 17.8**	**+1.1**
QZH				Sn	**Sn**	**19 25 49.4**	**-2.7**
JKRS	**Kuro-shima**	**3.08**	**65**	P	**Pn**	**19 25 18.5**	**-0.1**
JKRS				*e*S	**Sn**	**19 25 55.2**	**-0.3**
ZPLA	**Ao Xicun**	**3.10**	**289**	*e*P	**Pn**	**19 25 17.6**	**-1.4**
	baz=292						
JIJ	**Ishigaki jima**	**3.24**	**64**	P	**Pn**	**19 25 20.2**	**-0.7**
JIJ				S	**Sn**	**19 25 57.4**	**-2.1**
AXDP	**Jialang**	**3.35**	**306**	*e*P	**Pn**	**19 25 21.8**	**-0.6**
	baz=310						
ZZJH	**Jiuhuzhen**	**3.41**	**297**	*e*P	**Pn**	**19 25 22.1**	**-1.1**
	baz=301						
JISG	**Ishigakijimahi**	**3.48**	**61**	P	**Pn**	**19 25 23.4**	**-0.7**
JISG				*e*S	**Sn**	**19 26 01.2**	**-4.1**
MHZQ	**Yeshan**	**3.60**	**331**	*e*P	**Pn**	**19 25 25.6**	**-0.2**
	baz=339						
LYJJ	**Jianjiangzhen**	**3.75**	**343**	*e*P	**Pn**	**19 25 27.3**	**-0.6**
	baz=353						
JTJ	**Tarama**	**3.82**	**63**	P	**Pn**	**19 25 28.1**	**-0.7**
JTJ				S	**Sn**	**19 26 12.9**	**-0.9**
XPSS	**Dashiqiu**	**4.03**	**350**	*e*P	**Pn**	**19 25 31.0**	**-0.7**
	baz=360						
JIRB	**Irabujima**	**4.29**	**63**	P	**Pn**	**19 25 32.5**	**-2.8**
JIRB				*e*S	**Sn**	**19 26 22.3**	**-3.0**
JMJ2	**Miyako jima3**	**4.38**	**65**	P	**Pn**	**19 25 36.6**	**+0.1**
JMJ2				*e*S	**Sn**	**19 26 26.5**	**-1.1**
JMJ	**Miyako jima 2**	**4.38**	**64**	*e*P	**Pn**	**19 25 36.5**	**-0.1**
	baz=69						
JIKM	**Ikemajima**	**4.39**	**63**	P	**Pn**	**19 25 36.3**	**-0.4**
JIKM				*e*S	**Sn**	**19 26 25.5**	**-2.3**
JOGS	**Gusukube**	**4.45**	**65**	P	**Pn**	**19 25 37.2**	**-0.4**
VDOS	**Pratas Island**	**4.52**	**241**	*e*P	**Pn**	**19 25 39.4**	**+0.9**
	baz=227						
HKPS	**Hong Kong Po S**	**6.33**	**265**	*e*Pn	**Pn**	**19 26 04.5**	**+1.1**
JOW	**Kunigami**	**7.68**	**58**	Pn	**Pn**	**19 26 19.6**	**-2.3**
	0.2nm,0.3s,baz=176,slow=13,SNR=7.0						
TGY	**Tagaytay City**	**8.80**	**180**	LR	LR	19 30 41.6	
	comp=Z,286nm,20.6s,baz=263,slow=43						
NJ2	**Nanjing**	**9.26**	**349**	*e*P	**Pn**	**19 26 44.4**	**+0.9**
NJ2				pP		19 26 47.8	
NJ2				S	**Sn**	**19 28 30.1**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NJ2				smax	smax		
	comp=N,140nm,1.0s						
NJ2				smax	smax		
	comp=E,99nm,1.0s						
NJ2				LR	LR		
	comp=E,620nm,6.2s						
NJ2				LR	LR		
	comp=Z,1µm,8.5s						
WHN	**Wuhan**	**9.60**	**323**	P	Pn	19 26 39.8	-8.4
WHN				S	**Sn**	**19 28 27.8**	**-8.2**
WHN				LR	LR		
	comp=N,2µm,11.0s						
WHN				LR	LR		
	comp=E,1µm,9.1s						
WHN				LR	LR		
	comp=Z,2µm,7.7s						
QIZ	**Qiongzhong**	**11.09**	**251**	*e*Pn	**Pn**	**19 27 09.8**	**+1.0**
JNU	**Nakatsue**	**13.38**	**39**	LR	LR	19 33 53.9	
	comp=Z,213nm,20.1s,baz=197,slow=42						
XAN	**Xi'an**	**15.29**	**319**	P	**Pn**	**19 28 05.3**	**-0.6**
XAN				S	**Sn**	**19 30 50.3**	**-5.0**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
XAN				LR	LR		
	comp=Z,420nm,8.1s						
XAN				LR	LR		
	comp=Z,340nm,11.4s						
XAN				LR	LR		
	comp=Z,360nm,11.1s						
KS15	**Wonju Array Si**	**15.63**	**21**	*e*P	**P**	**19 28 14.8**	**+0.3**
KSRS	**Korea Array**	**15.65**	**21**	Pn	**P**	**19 28 14.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=199,slow=10.0,SNR=6.4						
KSRS				LR	LR	19 35 48.6	
	comp=Z,94nm,18.1s,baz=190,slow=44						
JHJ	**Hachijo jima 2**	**19.43**	**54**	LR	LR	19 36 47.8	
	comp=Z,86nm,19.0s,baz=11,slow=38						
HHC	**Hu-ho-hao-te**	**19.53**	**338**	P	**Pn**	**19 29 00.8**	**+1.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,86nm,4.4s						
HHC				LR	LR		
	comp=Z,420nm,14.3s						
BTO	**Baotou**	**19.88**	**335**	*e*P	**Pn**	**19 29 06.8**	**+3.7**
MAJO	**Matsushiro**	**20.15**	**44**	*e*P	**P**	**19 29 03.2**	**-1.2**
	comp=Z,16nm,1.3s						
MAT	**Matsushiro**	**20.15**	**44**	P	Pn	19 29 08.6	+2.3
MJAR	**Matsushiro Arr**	**20.15**	**44**	P	Pn	19 29 07.1	+0.9
	comp=Z,4.8nm,0.9s,baz=232,slow=8.8,SNR=13						
MJAR				LR	LR	19 37 28.4	
	comp=Z,106nm,19.8s,baz=230,slow=39						
MJB9	**Matsu-Tunnel**	**20.15**	**44**	*e*P	**P**	**19 29 03.0**	**-1.4**
	comp=Z,17nm,1.3s						
CM31	**Chiang Mai Arr**	**21.07**	**262**	*e*P	**P**	**19 29 13.5**	**-1.0**
	comp=Z,4.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**21.07**	**262**	P	**P**	**19 29 16.5**	**+2.0**
	comp=Z,1.6nm,0.8s,baz=68,slow=8.5,SNR=4.9						
CMAR				LR	LR	19 39 03.0	
	comp=Z,133nm,18.7s,baz=79,slow=41						
USRK	**Ussuriysk Ar.**	**23.06**	**21**	P	**P**	**19 29 39.7**	**+4.2**
	comp=Z,2.1nm,0.7s,baz=203,slow=10,SNR=4.3						
USRK				LR	LR	19 39 23.6	
	comp=Z,77nm,19.5s,baz=196,slow=39						
LUWI	**Luwuk**	**23.91**	**176**	*e*P	**P**	**19 29 43.1**	**-1.0**
	comp=Z,29nm,0.9s						
GTA	**Gaotai**	**24.33**	**317**	⇑P	**P**	**19 29 48.8**	**+0.7**
GTA				pP	sP	19 29 59.6	+6.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,91nm,6.8s						
GTA				LR	LR		
	comp=Z,140nm,11.1s						
GTA				LR	LR		
	comp=Z,160nm,11.1s						
GTA				LR	LR		
	comp=Z,170nm,14.0s						
SONA0	**Songino Array**	**27.43**	**338**	*e*P	**P**	**19 30 17.5**	**+1.5**
SONM	**Songino Array**	**27.43**	**338**	P	**P**	**19 30 17.5**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=155,slow=9.9,SNR=8.5						
SONM				LR	LR	19 42 25.7	
	comp=Z,257nm,18.5s,baz=121,slow=39						
KLR	**Kul'dur**	**27.58**	**15**	LR	LR	19 42 05.0	
	comp=Z,87nm,19.5s,baz=205,slow=38						
ASAJ	**Asahikawa**	**27.61**	**35**	P	**P**	**19 30 19.0**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=253,slow=14,SNR=5.1						
ASAJ				LR	LR	19 41 35.6	
	comp=Z,173nm,20.6s,baz=238,slow=37						
WMQ	**Urumqi**	**34.37**	**315**	*e*P	**P**	**19 31 19.0**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,49nm,4.9s						
WMQ				LR	LR		
	comp=Z,210nm,28.9s						
WMQ				LR	LR		
	comp=Z,260nm,28.9s						
WMQ				LR	LR		
	comp=Z,91nm,19.5s						
MTN	**Manton Dam**	**36.94**	**163**	*e*P	**P**	**19 31 37.2**	**-2.2**
	comp=Z,32nm,1.4s						
MK31	**Makanchi Array**	**39.09**	**317**	*e*P	**P**	**19 31 58.1**	**+0.8**
	comp=Z,3.7nm,1.1s						
MK32	**Makanchi Array**	**39.09**	**317**	*e*P	**P**	**19 31 57.6**	**+0.3**
MKAR	**Makanchi Array**	**39.09**	**317**	P	**P**	**19 31 57.6**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=101,slow=11,SNR=10						
MKAR				PcP	**PcP**	**19 34 07.5**	**+0.4**
	comp=Z,1.1nm,1.0s,baz=113,slow=1.7,SNR=4.1						
MAKZ	**Makanchi**	**39.29**	**317**	*e*P	**P**	**19 31 60.0**	**+1.0**
	comp=Z,5.8nm,1.1s						
YAK	**Yakutsk**	**39.52**	**6**	*e*P	**P**	**19 32 00.9**	**+0.3**
	comp=Z,4.8nm,0.7s						
PETK	**Petropavlovsk-**	**41.00**	**33**	P	**P**	**19 32 13.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=191,slow=4.4,SNR=2.7						
PEA1	**Petropavlovsk-**	**41.01**	**33**	*e*P	**P**	**19 32 13.7**	**+0.6**
ZALV	**Zalesovo Beam**	**41.17**	**328**	P	**P**	**19 32 14.5**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=116,slow=6.8,SNR=7.9						
ZAA1	**Zalesovo Array**	**41.17**	**328**	*e*P	**P**	**19 32 14.5**	**0.0**
COEN	**Coen**	**42.65**	**147**	*e*P	**P**	**19 32 26.0**	**-0.8**
H11N1	**WAKE ISLAND Hy**	**42.78**	**85**	T	T	20 17 41.4	
	baz=283,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	**42.78**	**85**	T	T	20 17 40.0	
	baz=283,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**42.79**	**85**	T	T	20 17 42.3	
	baz=283,slow=75,SNR=31						
H11S3	**WAKE ISLAND Hy**	**42.87**	**87**	T	T	20 17 49.9	
	baz=284,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy**	**42.88**	**87**	T	T	20 17 50.6	
	baz=284,slow=75,SNR=21						
H11S2	**WAKE ISLAND Hy**	**42.89**	**87**	T	T	20 17 51.1	
	baz=284,slow=75,SNR=18						
KURK	**Kurchatov**	**42.91**	**321**	*e*P	**P**	**19 32 29.9**	**+1.3**
	comp=Z,7.8nm,1.4s						
KURBB	**Kurchatov Arra**	**42.92**	**321**	P	**P**	**19 32 30.1**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=122,slow=7.0,SNR=11						
PSA00	**Pilbara Seismi**	**44.27**	**181**	*e*P	**P**	**19 32 38.6**	**-1.3**
	comp=Z,28nm,1.7s						
WRAB	**Tennant Creek**	**44.58**	**162**	*e*P	**P**	**19 32 39.7**	**-2.7**
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**44.59**	**162**	P	**P**	**19 32 40.5**	**-1.9**
	comp=Z,1.5nm,0.5s,baz=342,slow=11,SNR=22						
WB2	**Warramunga Arr**	**44.59**	**162**	*e*P	**P**	**19 32 40.4**	**-2.0**
	comp=Z,11nm,1.3s						
ASAR	**Alice Springs**	**48.01**	**164**	P	**P**	**19 33 08.6**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=333,slow=6.8,SNR=30						
BVAR	**Borovoye Array**	**48.50**	**321**	P	**P**	**19 33 13.3**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=114,slow=8.9,SNR=5.5						
ABKAR	**Akbulak array**	**54.16**	**315**	*e*P	**P**	**19 33 56.1**	**+0.8**
	comp=Z,11nm,1.8s						
ARU	**Arti**	**55.97**	**324**	P	**P**	**19 34 11.0**	**+2.7**
	comp=Z,0.9nm,0.5s,baz=110,slow=11,SNR=4.9						
ARU	**Arti**	**55.97**	**324**	*e*P	**P**	**19 34 08.9**	**+0.6**
	comp=Z,7.4nm,1.1s						
STKA	**Stephens Creek**	**57.98**	**159**	P	**P**	**19 34 23.9**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=339,slow=5.9,SNR=6.7						
STKA	**Stephens Creek**	**57.98**	**159**	*e*P	**P**	**19 34 21.8**	**-1.0**
	comp=Z,4.7nm,1.8s						
ARA0	**ARCESS Array S**	**70.60**	**338**	*e*P	**P**	**19 35 45.8**	**+0.7**
ARCES	**ARCESS Array B**	**70.60**	**338**	P	**P**	**19 35 45.8**	**+0.7**
	comp=Z,5.0nm,0.9s,baz=66,slow=9.0,SNR=5.7						
FIA0	**FINESS Array S**	**72.40**	**330**	*e*P	**P**	**19 35 55.9**	**-0.2**
FINES	**FINESS Array B**	**72.40**	**330**	P	**P**	**19 35 55.9**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=42,slow=6.4,SNR=5.9						
FINES				LR	LR	20 10 13.3	
	comp=Z,51nm,21.6s,baz=77,slow=38						
AKASG	**Malin Array Be**	**73.65**	**319**	P	**P**	**19 36 04.8**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=66,slow=5.6,SNR=4.2						
BR101	**Keskin Array S**	**73.74**	**307**	*e*P	**P**	**19 36 07.5**	**+2.9**
BRTR	**Keskin Array B**	**73.74**	**307**	P	**P**	**19 36 07.5**	**+2.9**
	comp=Z,0.7nm,0.9s,baz=90,slow=10,SNR=4.7						
HFS	**Hagfors**	**78.54**	**331**	P	**P**	**19 36 31.8**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=78,slow=5.0,SNR=3.6						
NB2	**NORSAR Subarra**	**79.22**	**332**	P	**P**	**19 36 34.5**	**-0.7**
	comp=Z,4.0nm,1.2s,baz=57,slow=5.9						
NB200	**NORSAR Array S**	**79.22**	**332**	*e*P	**P**	**19 36 34.4**	**-0.7**
NOA	**NORSAR Array B**	**79.22**	**332**	P	**P**	**19 36 34.4**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=60,slow=5.3,SNR=4.7						
NOA				LR	LR	20 14 46.4	
	comp=Z,47nm,20.2s,baz=60,slow=38						
GERES	**GERESS Array B**	**83.66**	**321**	P	**P**	**19 36 58.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=70,slow=4.4,SNR=4.4						
YKA	**Yellowknife Ar**	**84.18**	**23**	P	**P**	**19 37 00.5**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=309,slow=4.7,SNR=4.3						
YKB5	**Yellowknife Ar**	**84.18**	**23**	*e*P	**P**	**19 37 00.6**	**-0.7**

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*ISCJB **14** 19:25:21.3±0.2, 61°.58N±0°.02×141°.06W±0°.04, h10^{km}, mb3.4/4, Error ellipse: s-maj=3.0km s-min=2.4km az=3.6*

*PGC **14** 19:25:21.9, 61°.59N×141°.10W, h9^{km}, ML2.9/8, 213km Wnw of Haines Jct., Yt Southern Alaska*

*NEIC **14** 19:25:21.3±0.0, 61°.58N×141°.11W, h1^{km}, ML3.3(AEIC), After AEIC.*

*IDC **14** 19:25:23.7±1.4, 61°.81N×141°.11W, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/56, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=46.9km s-min=14.2km az=43.0*

ISC 14 19:25:21.9±0.6**, 61°.58N**±0°.02×**141°.10W**±0°.02**, h10^{km}, n63,** σ**1°.78**/85**, mb3.7**/4**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.24**	**31**	P	**Pg**	**19 25 26.0**	**-1.0**
YUK2				S	**Sg**	**19 25 29.2**	**-1.1**
YUK3	**Moose Creek**	**0.36**	**57**	S	**Sg**	**19 25 33.2**	**-0.9**
PTPK	**Patty Peak**	**0.77**	**240**	P	**Pb**	**19 25 35.8**	**-1.7**
PTPK				S	**Sb**	**19 25 46.6**	**-1.4**
BALM	**Baldy**	**0.81**	**228**	*e*Pg	**Pg**	**19 25 36.0**	**-1.6**
BALM	**Baldy**	**0.81**	**228**	P	**Pg**	**19 25 36.1**	**-1.6**
BALM				S	**Sg**	**19 25 47.0**	**-1.1**
BVCY	**Beaver Creek**	**0.84**	**8**	P	**Pg**	**19 25 37.1**	**-1.1**
BVCY				Sg	**Sn**	**19 25 53.7**	**+1.3**
KIAG	**Kiagna River**	**0.90**	**223**	P	**Pg**	**19 25 37.7**	**-1.5**
KIAG				S	**Sb**	**19 25 50.4**	**-1.3**
TABL	**Table Mountain**	**1.15**	**181**	P	**Pg**	**19 25 42.3**	**-1.7**

TABL				S	Sb	19 25 58.0	-0.9
YUK4	Talbot Arm	1.20	100	P	Pb	19 25 43.3	-1.6
SAMH	Samovar Hills	1.47	174	Pn	Pb	19 25 48.4	-0.9
SAMH				Sg	Sg	19 26 08.2	-0.8
MESA	MESA	1.47	197	Pn	Pg	19 25 48.7	-1.4
MESA				Sg	Sg	19 26 09.2	+0.1
YUK6	Outpost Mounta	1.47	115	Pn	Pg	19 25 49.5	-0.6
CHX	Chaix Hills	1.52	180	*e*Pn	Pg	19 25 49.9	-1.2
BCA3	Beaver Creek A	1.52	348	*e*Pn	Pb	19 25 49.3	-1.0
PCA	Pinnacle	1.55	164	*e*Pn	Pb	19 25 49.6	-1.1
PCA				*e*Sn	Sg	19 26 11.6	0.0
PCA	Pinnacle	1.55	164	Pn	Pb	19 25 49.7	-0.9
PCA				Sg	Sg	19 26 10.9	-0.7
YUK5	Granite Creek	1.63	105	Pn	Pn	19 25 50.1	-0.6
SNH	Sunshine Point	1.64	212	*e*Pn	Pg	19 25 51.7	-1.7
BCPM	Bancas Point	1.79	156	*e*Pn	Pb	19 25 53.5	-1.2
BCPM				*e*Sn	Sn	19 26 14.9	-0.6
MENT	Mentasta	1.83	319	*e*Pn	Pn	19 25 52.8	-0.7
HYT	Haines Junctio	1.90	112	*e*Pn	Pn	19 25 54.4	-0.1
HYT	Haines Junctio	1.90	112	Pn	Pn	19 25 54.5	-0.1
HYT				Sg	Sg	19 26 21.7	-1.2
HMT	Hamilton	1.98	232	*e*Pn	Pb	19 25 57.6	-0.5
PNL	Peninsula	2.10	156	*e*Pn	Pb	19 25 58.0	-1.9
PNL	Peninsula	2.10	156	Pn	Pb	19 25 57.9	-2.1
PNL				Sg	Sg	19 26 27.6	-1.6
YKU2	Yakutat	2.19	161	*e*Pn	Pb	19 26 01.4	-0.2
PAX	Paxson	2.47	306	*e*Pn	Pb	19 26 04.8	-1.7
PAX	Paxson	2.47	306	Pn	Pb	19 26 04.8	-1.7
PAX				Sg	Sb	19 26 36.9	-0.1
DOT	Dot Lake	2.49	328	*e*Pn	Pn	19 26 02.5	0.0
DOT	Dot Lake	2.49	328	Pn	Pn	19 26 02.5	0.0
DOT				Pg	Pg	19 26 07.3	-2.2
DOT				Sg	Sg	19 26 39.9	-1.8
EYAK	Cordova Ski Ar	2.49	247	*e*Pn	Pb	19 26 05.4	-1.3
DAWY	Dawson	2.62	17	*e*Pn	Pn	19 26 04.2	0.0
DAWY	Dawson	2.62	17	Pn	Pn	19 26 04.3	+0.1
DAWY				Sg	Sb	19 26 41.7	+0.6
JPK	Jack Peak	2.70	261	*e*Pn	Pn	19 26 06.0	+0.6
FID	Port Fidalgo	2.74	255	*e*Pn	Pb	19 26 08.9	-2.0
FID				*e*Pn	Pg	19 26 09.2	-5.1
SCRK	Sand Creek	2.75	332	*e*Pn	Pn	19 26 06.1	0.0
RIDG	Independent Ri	2.77	323	*e*Pn	Pn	19 26 06.4	0.0
GLI	Glacier Island	2.98	259	*e*Pn	Pn	19 26 09.6	+0.4
PLBC	Pleasant Camp	3.17	130	Pn	Pn	19 26 12.3	+0.5
PLBC				Pg	Pb	19 26 18.0	-0.2
PLBC				Sg	Sg	19 27 01.7	-1.8
EGAK	Eagle	3.21	360	*e*Pn	Pn	19 26 13.1	+0.8
KNK	Knik Glacier	3.53	270	*e*Pn	Pn	19 26 18.0	+1.2
SKAG	Skagway	3.56	124	*e*Pn	Pn	19 26 18.3	+1.1
PMR	Palmer	3.84	274	*e*Pn	Pn	19 26 21.1	+0.1
RND	Reindeer	4.04	300	*e*Pn	Pn	19 26 23.4	-0.4
ILAR	Eielson Array	4.14	323	Pn	Pn	19 26 24.4	-0.8
	0.7nm,0.3s,baz=140,slow=12,SNR=16						
ILAR				Sn	Sn	19 27 11.8	-1.7
	1.7nm,0.3s,baz=139,slow=23,SNR=5.9						
ILAR				Lg	Lg	19 27 30.8	
	5.6nm,0.3s,baz=135,slow=31,SNR=8.7						
RC01	Rabbit Creek A	4.19	267	*e*Pn	Pn	19 26 29.2	+3.4
BESE	Bessie Mountai	4.34	131	*e*Pn	Pn	19 26 28.1	+0.1
BESE	Bessie Mountai	4.34	131	Pn	Pn	19 26 27.8	-0.1
BESE				Sg	Sg	19 27 36.8	-4.4
JIS	Juneau Island	4.73	131	*e*Pn	Pn	19 26 33.8	+0.6
EPYK	Eagle Plains	5.18	20	*e*Pn	Pn	19 26 40.3	+0.9
BPAW	Bear Paw Mtn.	5.19	303	*e*Pn	Pn	19 26 41.9	+2.4
PPLA	Purkeypile	5.35	289	*e*Pn	Pn	19 26 42.3	+0.4
CNPM	China Poot	5.41	252	*e*Pn	Pn	19 26 44.4	+1.8
MLY	Manley	5.55	313	*e*Pn	Pn	19 26 47.3	+2.8
BM3	Burnt Mountain	6.05	347	*e*Pn	Pn	19 26 52.3	+0.9
DLBC	Dease Lake	6.38	115	Sg	Sg	19 28 41.5	-5.1
INK	Inuvik	7.47	22	Pn	Pn	19 27 11.6	+0.8
INK				Sn	Sn	19 28 30.1	-5.3
PD31	Pinedale Array	26.58	121	*e*P	P	19 31 05.3	+5.2
PDAR	Pinedale Array	26.58	121	P	P	19 31 05.3	+5.2
	0.1nm,0.3s,baz=325,slow=5.7,SNR=3.4						
KURBB	Kurchatov Arra	63.75	333	P	P	19 35 56.2	+2.8
	0.2nm,0.3s,baz=24,slow=4.9,SNR=3.5						
MK32	Makanchi Array	66.47	329	*e*P	P	19 36 13.4	+2.2
MKAR	Makanchi Array	66.47	329	P	P	19 36 13.4	+2.2
	0.3nm,0.7s,baz=20,slow=4.6,SNR=2.8						
AKASG	Malin Array Be	67.80	7	P	P	19 36 19.9	+0.5
	0.3nm,0.3s,baz=357,slow=6.2,SNR=5.1						

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*NIED **14** 19:32:00, 37°.60N×142°.80E, h20^{km}, Mw3.5 Best double couple: $M_0$1.86000×10^{14} NP1:ϕ_s348.00000°, δ57.00000°, λ-143.00000°. NP2:ϕ_s236.00000°, δ60.00000°, λ-39.00000°.*

*IDC **14** 19:32:22.6±1.7, 37°.48N×143°.09E, h0^{km}, mb3.5/3, mb1 3.6/6, mb1mx3.3/56, mbtmp3.5/6, ML3.0/3, Error ellipse: s-maj=37.5km s-min=24.1km az=82.0*

*ISCJB **14** 19:32:25.0±0.8, 37°.57N±0°.03×142°.86E±0°.06, h24^{km}, mb3.7/3, Error ellipse: s-maj=6.7km s-min=4.9km az=3.8*

*JMA **14** 19:32:26.6±0.1, 37°.59N×142°.81E, h45^{km}, M3.5*

ISC 14 19:32:26.4±1.4**, 37°.59N**±0°.05×**142°.85E**±0°.10**, h24^{km}, n27, σ1^{s}79**/38**, mb3.8**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.31	304	P	Pn	19 32 48.8	-0.3
JIKH				S	Sn	19 33 05.2	-0.6
JIO	Ouri	1.47	307	P	Pn	19 32 51.3	0.0
JIO				S	Sn	19 33 08.8	-0.9
JMST	Minamisoumatoc	1.56	276	P	Pn	19 32 51.9	-0.7
JMST				S	Sn	19 33 10.6	-1.5
JFK	Kawauchi	1.58	263	P	Pn	19 32 52.4	-0.6
JFK				*e*S	Sn	19 33 11.4	-1.3
JKMT	Kesennumamotoy	1.63	319	P	Pn	19 32 53.4	-0.1
JKMT				S	Sn	19 33 12.9	-0.9
JMM	Marumori	1.65	280	P	Pn	19 32 53.4	-0.4
JMM				S	Sn	19 33 12.7	-1.6
JMK	Ichinoseki	1.87	317	P	Pn	19 32 56.9	+0.1
JMK				*e*S	Sn	19 33 19.0	-0.6
JOU	Okura	1.89	295	P	Pn	19 32 57.8	+0.6
JOU				*e*S	Sn	19 33 20.4	+0.1
JFT	Otama	2.00	269	P	Pn	19 32 59.1	+0.5
JFT				*e*S	Sn	19 33 22.4	-0.4
JOM	Ohasama	2.24	328	P	Pn	19 33 02.2	+0.2
JOM				*e*S	Sn	19 33 28.8	-0.1
JYK	Kaneyama	2.37	305	P	Pn	19 33 04.4	+0.7
JYK				*e*S	Sn	19 33 32.4	+0.5
JAG	Ashikaga	2.96	248	P	Pn	19 33 12.3	+0.5
JAG				S	Sn	19 33 46.2	-0.3
JANG	Nango	2.97	340	*e*S	Sn	19 33 45.3	-1.5
JRY	Ryogami san	3.53	245	P	Pn	19 33 20.4	+0.6
JRY				*e*S	Sn	19 33 58.5	-2.3
MJAR	Matsushiro Arr	3.85	256	Pn	Pn	19 33 25.4	+1.2
	0.1nm,0.3s,baz=79,slow=14,SNR=12						
MJAR				Sn	Sn	19 34 13.4	+4.7
	0.1nm,0.3s,baz=75,slow=20,SNR=4.2						
MAT	Matsushiro	3.85	256	P	Pn	19 33 26.2	+2.0
MAT				S	Sn	19 34 09.9	+1.2
JHJ	Hachijo jima 2	5.11	210	Pn	Pn	19 33 40.8	-0.7
	4.1nm,0.3s,baz=343,slow=19,SNR=6.9						
JHJ				Sn	Sn	19 34 33.4	-6.4
	8.8nm,0.3s,baz=65,slow=19,SNR=3.7						
ASAJ	Asahikawa	6.52	358	Pn	Pn	19 34 01.4	+0.7
	0.4nm,0.3s,baz=179,slow=12,SNR=6.4						
ASAJ				Sn	Sn	19 35 10.1	-4.3
	0.1nm,0.3s,baz=108,slow=20,SNR=3.3						
H11N2	WAKE ISLAND Hy	27.48	124	T	T	20 07 18.6	
	baz=316,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	27.48	124	T	T	20 07 18.3	
	baz=316,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	27.49	124	T	T	20 07 14.2	
	baz=316,slow=75,SNR=9.4						
H11S1	WAKE ISLAND Hy	28.23	126	T	T	20 07 59.3	
	baz=317,slow=76,SNR=6.6						
H11S3	WAKE ISLAND Hy	28.23	126	T	T	20 08 09.7	
	baz=317,slow=76,SNR=6.2						
H11S2	WAKE ISLAND Hy	28.24	126	T	T	20 08 02.1	
	baz=317,slow=76,SNR=7.6						
KURBB	Kurchatov Arra	46.56	308	P	P	19 40 53.4	+1.5
	0.2nm,0.4s,baz=81,slow=7.8,SNR=2.4						
WRA	Warramunga Arr	57.78	189	P	P	19 42 15.2	-0.4
	0.9nm,0.9s,baz=5.2,slow=6.8,SNR=2.7						
ASAR	Alice Springs	61.51	189	P	P	19 42 40.5	-0.7
	0.9nm,1.1s,baz=1.7,slow=6.5,SNR=4.1						

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*ISCJB **14** 19:32:56.5±0.2, 55°.39N±0°.02×111°.32E±0°.03, h10^{km}, mb4.0/35, MS3.2/10, Error ellipse: s-maj=3.0km s-min=1.9km az=42.2*

*IDC **14** 19:32:56.8±0.6, 55°.51N×111°.28E, h0^{km}, mb3.8/20, mb1 3.9/24, mb1mx3.8/62, mbtmp3.8/24, ML3.4/4, MS3.3/9, Ms1 3.3/9, ms1mx3.0/40, Error ellipse: s-maj=15.2km s-min=11.1km az=168.0*

*MOS **14** 19:32:56.9±0.9, 55°.47N×111°.31E, h9^{km}, mb4.3/18, MS3.2/7, Error ellipse: s-maj=8.2km s-min=5.4km az=73.6*

*NEIC **14** 19:32:58.2±1.7, 55°.53N×111°.29E, h10^{km}±1^{km}, mb4.2/17, Error ellipse: s-maj=12.5km s-min=4.0km az=177.0*

*BYKL **14** 19:32:59.9±0.1, 55°.49N×111°.36E, h21^{km}±2^{km}, FELT I=III-IV MSK at Kumora.*

ISC 14 19:32:57.7±0.3**, 55°.48N**±0°.02×**111°.33E**±0°.02**, h10^{km}, n143, σ2^{s}11**/201**, mb4.2**/35**, MS3.2**/10**, 22C-14D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMO	Kumora	0.42	350	⇑*i*Pg	Pb	19 33 07.7	+0.6
KMO				Pmax		19 33 08.1	
	9μm,0.3s						
KMO				*e*Sg	Sb	19 33 13.7	+0.2
KMO				Smax		19 33 14.4	
	45μm,1.2s						
KMO	Kumora	0.42	350	⇑*i*PG	Pb	19 33 07.7	+0.6
KMO				*e*		19 33 13.7	
KMO				pmax	pmax		
	comp=Z,9μm,0.3s						
KMO				smax	smax		
	comp=N,5μm,0.7s						
YLYR	Ulyunkhan	0.61	189	⇑*i*Pg	Pb	19 33 11.7	+1.3
YLYR				Pmax		19 33 12.9	
	comp=N,14μm,0.1s						
YLYR				*e*Sg	Sb	19 33 20.7	+1.6
YLYR				Smax		19 33 21.3	
	comp=N,8μm,0.2s						
YLYR	Ulyunkhan	0.61	189	⇑*i*PG	Pb	19 33 11.7	+1.3
YLYR				*e*		19 33 17.3	
YLYR				pmax	pmax		
	comp=Z,509nm,0.1s						
YLYR				smax	smax		
	comp=E,8μm,0.2s						
YOA	Uoyan	0.69	18	⇑*i*Pg	Pn	19 33 12.7	-0.8
YOA				Pmax		19 33 14.1	
	comp=E,2μm,0.2s						
YOA				*e*Sg	Sn	19 33 22.5	-1.9
YOA				Smax		19 33 23.3	
	comp=E,24μm,0.6s						
YOA	Uoyan	0.69	18	⇑*i*PG	Pn	19 33 12.7	-0.8
YOA				*i*		19 33 22.6	
YOA				pmax	pmax		
	comp=Z,2μm,0.2s						
YOA				smax	smax		
	comp=N,22μm,0.3s						
NIZ	Nizh Angarsk	1.06	287	⇑*i*Pg	Pn	19 33 19.1	+0.5
NIZ				*e*Pb	Pb	19 33 21.2	+3.1
NIZ				max		19 33 21.5	
	comp=N,2μm,0.4s						
NIZ				*e*Sg	Sn	19 33 33.8	+0.4
NIZ				*e*Sb	Sb	19 33 36.9	+4.9
NIZ				max		19 33 38.4	
	comp=N,9μm,0.6s						
NIZ	Nizh Angarsk	1.06	287	⇑*i*PG	Pn	19 33 19.1	+0.5
NIZ				*e*		19 33 33.7	
NIZ				pmax	pmax		
	comp=Z,2μm,0.4s						
NIZ				smax	smax		
	comp=N,10.0nm,0.8s						
SVKR	Severomuysk	1.41	62	⇓*i*Pg	Pg	19 33 25.1	+0.3
SVKR				Pmax		19 33 25.8	
	comp=N,2μm,0.4s						
SVKR				*e*Sg	Sg	19 33 44.7	+1.7
SVKR				Smax		19 33 47.0	
	comp=N,19μm,0.4s						
SVKR	Severomuysk	1.41	62	*e*PG	Pg	19 33 25.0	+0.3
SVKR				*e*		19 33 44.0	
SVKR				pmax	pmax		
	comp=Z,2μm,0.5s						
SVKR				smax	smax		
	comp=N,8μm,0.5s						
SYVR	Suvo	1.98	204	⇓*i*Pn	Pn	19 33 33.4	+2.2
SYVR				*e*Pg	Pb	19 33 35.3	+1.5
SYVR				*e*		19 33 41.5	
SYVR				max		19 33 42.0	
	comp=N,573nm,0.5s						
SYVR				*e*Sg	Sg	19 34 02.6	+1.3
SYVR				Smax		19 34 11.5	
	comp=N,2μm,1.6s						
SYVR	Suvo	1.98	204	*e*PN	Pn	19 33 32.3	+1.1
SYVR				*e*		19 33 35.1	
SYVR				*e*		19 34 02.3	
SYVR				pmax	pmax		
	comp=Z,575nm,0.5s						
SYVR				smax	smax		
	comp=N,2μm,0.7s						
NLYR	Nelyaty	2.66	66	⇓*i*Pn	Pn	19 33 42.2	+1.7
NLYR				*e*Pg	Pb	19 33 47.5	+2.2
NLYR				Pmax		19 34 04.3	
	comp=N,405nm,0.7s						
NLYR				*e*Sg	Sg	19 34 21.7	-1.2
NLYR				Smax		19 34 26.4	
	comp=N,3μm,1.1s						
NLYR	Nelyaty	2.66	66	⇓*i*PN	Pn	19 33 42.2	+1.7
NLYR				*e*		19 33 46.6	
NLYR				*e*		19 34 19.4	
NLYR				pmax	pmax		
	comp=Z,381nm,1.1s						
NLYR				smax	smax		
	comp=N,3μm,1.1s						
MXMB	Maximikha	2.69	215	*e*Pn	Pn	19 33 43.3	+2.4
MXMB				*e*Pg	Pb	19 33 48.3	+2.5
MXMB				*e*		19 33 53.8	
MXMB				*e*Sg	Sg	19 34 24.4	+0.5
BOD	Bodaibo	2.77	31	⇓*i*Pn	Pn	19 33 43.1	+1.0
BOD				*e*Pg	Pb	19 33 48.5	+1.3
BOD				Pmax		19 33 54.0	
	comp=N,203nm,0.6s						
BOD				*e*Sn	Sn	19 34 15.3	-0.3
BOD				*e*Sg	Sg	19 34 24.3	-2.3
BOD				Smax		19 34 35.3	
	comp=N,1μm,0.4s						
BOD	Bodaibo	2.77	31	⇓*i*PN	Pn	19 33 43.0	+1.0
BOD				*e*		19 33 47.5	
BOD				*e*		19 34 25.3	
BOD				pmax	pmax		
	comp=Z,203nm,0.6s						
BOD				smax	smax		
	comp=E,1μm,0.3s						
OGRR	Ongureny	2.85	231	⇑*i*Pn	Pb	19 33 46.8	-1.8
OGRR				*e*Pg	Pg	19 33 51.5	-0.7
OGRR				*e*PgPg	PbPb	19 33 54.5	+2.8
OGRR				max		19 33 58.6	
	comp=E,193nm,0.4s						
OGRR				*e*		19 34 21.0	
OGRR				*e*Sg	Sg	19 34 29.2	+0.1
OGRR				Smax		19 34 33.5	
	comp=E,1μm,0.4s						
OGRR	Ongureny	2.85	231	*e*PN	Pb	19 33 46.8	-1.8
OGRR				*e*		19 34 29.6	
OGRR				pmax	pmax		
	comp=Z,194nm,0.6s						
OGRR				smax	smax		
	comp=E,1μm,1.0s						
KELR	Kotokel	3.33	216	*e*Pn	Pn	19 33 51.6	+1.9
KELR				*e*		19 33 56.2	
KELR				*e*Pg	Pb	19 33 59.8	+3.1
KELR				*e*Sg	Sg	19 34 43.7	-0.8
CIT	Chita	3.71	158	*e*	Pb	19 34 03.8	+0.6
CIT				*e*Pg	Pg	19 34 06.3	-2.3
CIT				Pmax		19 34 07.2	
	comp=E,441nm,0.6s						
CIT				*e*Sg	Sb	19 34 54.1	+6.0
CIT				Smax		19 34 58.9	
	comp=E,2μm,0.8s						
CIT	Chita	3.71	158	*e*PN	Pn	19 33 54.5	-0.5
CIT				*e*		19 34 03.6	
CIT				*e*S	Sn	19 34 38.3	-0.4
CIT				*e*		19 34 52.7	
CIT				pmax	pmax		
	comp=Z,441nm,0.6s						
CIT				smax	smax		
	comp=E,2μm,1.0s						
ZRHB	Zarechye	3.83	222	*e*Pn	Pn	19 33 58.4	+1.8
ZRHB				*e*Pg	Pg	19 34 09.1	-1.8
ZRHB				Pmax		19 34 21.8	
	comp=E,258nm,0.6s						
ZRHB				*e*Sn	Sn	19 34 41.7	+0.1
ZRHB				*e*Sg	Sg	19 35 00.1	-0.4
ZRHB				Smax		19 35 16.9	
	comp=E,3μm,1.1s						
TRTB	Turuntaevo	3.92	215	⇓*i*Pn	Pn	19 34 00.7	+2.8
TRTB				*e*		19 34 08.2	
TRTB				Pg	Pb	19 34 10.5	+3.6
TRTB				*e*		19 34 31.4	
TRTB				*e*Sg	Sg	19 35 01.9	-1.6
TRTB				*e*		19 35 05.7	
TRG	Tyrgan	4.00	229	⇑*i*Pn	Pn	19 34 01.3	+2.3
TRG				*e*		19 34 05.9	
TRG				*e*		19 34 19.2	
TRG				max		19 34 22.6	
	comp=E,105nm,0.6s						
TRG				*e*Sn	Sn	19 34 47.4	+1.4
TRG				*e*Sg	Sg	19 35 03.7	-2.3
TRG				Smax		19 35 14.8	
	comp=E,616nm,0.6s						
TRG	Tyrgan	4.00	229	⇑*i*PN	Pn	19 34 01.4	+2.4
TRG				*e*		19 34 11.3	
TRG				*e*S	Sn	19 34 47.8	+1.8
TRG				*e*		19 35 03.3	
TRG				pmax	pmax		
	comp=Z,110nm,0.5s						
TRG				smax	smax		
	comp=N,616nm,0.6s						
VTMR	Vitim	4.03	9	*e*Pn	Pn	19 33 59.0	-0.3
VTMR				*e*		19 34 14.2	
VTMR				*e*		19 34 24.9	
VTMR				*e*Sn	Sn	19 34 46.6	+0.1
VTMR				*e*Sg	Sg	19 35 04.6	-2.2
VTMR				*e*		19 35 08.6	
CRS	Chara	4.13	67	⇓*i*Pn	Pn	19 34 02.5	+1.7
CRS				*e*		19 34 12.3	
CRS				*e*		19 34 21.7	
CRS				max		19 34 22.4	
	comp=N,584nm,1.2s						
CRS				*e*Sg	Sg	19 35 07.0	-3.1
CRS				Smax		19 35 14.2	
	comp=N,2μm,1.5s						
CRS	Chara	4.13	67	*e*PN	Pn	19 34 02.2	+1.4
CRS				*e*		19 34 14.6	
CRS				*e*		19 35 07.3	
CRS				pmax	pmax		
	comp=Z,587nm,1.2s						
CRS				smax	smax		
	comp=E,2μm,1.4s						
UUDB	Ulan-Yde	4.22	213	*e*Pn	Pn	19 34 04.6	+2.5
UUDB				*e*Pg	Pb	19 34 16.3	+4.3
UUDB				Pmax		19 34 23.4	
	comp=E,176nm,0.8s						
UUDB				*e*		19 35 10.0	
UUDB				*e*Sg	Sg	19 35 12.3	-0.9
UUDB				Smax		19 35 28.2	
	comp=E,865nm,1.4s						
KAB	Kabansk	4.42	221	*e*	Pb	19 34 15.0	-0.2
KAB				*e*		19 34 21.9	
KAB				max		19 34 39.8	
	comp=E,162nm,0.9s						
KAB				*e*Sg	Sg	19 35 18.6	-0.7
KAB				Smax		19 35 30.8	
	comp=E,2μm,1.2s						
STDB	Stepnoy Dvoret	4.43	224	*e*Pn	Pn	19 34 07.6	+2.7
STDB				*e*Pg	Pb	19 34 19.3	+3.8
STDB				*e*Sg	Sg	19 35 16.8	-3.0
HRMR	Khuramsha	4.66	216	*e*Pn	Pn	19 34 10.4	+2.4
HRMR				*e*		19 34 18.0	
HRMR				*e*Pg	Pg	19 34 24.5	-2.3
HRMR				Pmax		19 34 40.1	
	comp=E,175nm,0.6s						
HRMR				*e*		19 35 21.3	
HRMR				*e*Sg	Sg	19 35 26.1	-0.9
HRMR				Smax		19 35 40.3	
	comp=E,2μm,0.6s						
BGT	Bolshoye Golou	4.92	228	*e*Pn	Pn	19 34 14.2	+2.6
BGT				*e*Pg	Pb	19 34 27.8	+4.0
BGT				Pmax		19 34 44.8	
	comp=E,192nm,1.6s						
BGT				*e*		19 35 12.1	
BGT				*e*Sg	Sg	19 35 33.1	-2.3
BGT				Smax		19 35 53.2	
	comp=E,372nm,0.9s						
KHNR	Khani	5.04	70	*e*Pn	Pn	19 34 15.5	+2.2
KHNR				*e*		19 34 21.7	
KHNR				*e*Pg	Pb	19 34 28.8	+2.9
KHNR				*e*Sn	Sn	19 35 10.0	-1.5
KHNR				*e*Sg	Sg	19 35 35.7	-3.6
TUP	Tupik	5.08	98	⇓*i*Pn	Pn	19 34 14.8	+1.0
TUP				*e*		19 34 19.6	
TUP				*e*Pg	Pb	19 34 30.7	+4.1
TUP				Pmax		19 34 36.2	
	comp=E,142nm,0.7s						
TUP				*e*Sn	Sn	19 35 10.2	-2.3
TUP				*e*		19 35 22.8	
TUP				*e*Sg	Sg	19 35 38.0	-2.6
TUP				Smax		19 35 39.6	
	comp=E,3μm,0.9s						
TUP	Tupik	5.08	98	*e*PN	Pn	19 34 14.8	+1.0
TUP				*e*		19 34 29.7	
TUP				*e*		19 35 36.9	
TUP				pmax	pmax		
	comp=Z,142nm,0.7s						
TUP				smax	smax		
	comp=N,3μm,0.9s						
IRK	Irkutsk	5.29	235	*e*	Pn	19 34 10.8	-5.8
IRK				Pg	Pb	19 34 33.8	+3.7
IRK				Pmax		19 34 47.5	
	comp=N,92nm,0.3s						
IRK				*e*Sg	Sg	19 35 43.6	-3.7
IRK				Smax		19 35 56.2	
	comp=N,1μm,0.4s						
IRK	Irkutsk	5.29	235	*e*PN	Pn	19 34 17.7	+1.1
IRK				*e*		19 34 34.0	
IRK				*e*S	Sn	19 35 17.6	0.0
IRK				*e*		19 35 42.8	
IRK				pmax	pmax		
	comp=Z,96nm,0.3s						
IRK				smax	smax		
	comp=E,1μm,0.4s						
IVK	Ivanovka	5.52	231	*e*Pn	Pn	19 34 21.7	+1.8
IVK				*e*		19 34 25.8	
IVK				*e*Pg	Pb	19 34 39.4	+5.3
IVK				*e*		19 34 55.4	
IVK				max		19 34 57.6	
	comp=E,54nm,0.8s						
IVK				*e*Sg	Sg	19 35 50.9	-3.9
IVK				Smax		19 35 53.4	
	comp=E,418nm,0.9s						
IVK				*e*		19 35 57.0	
KPC	Khapcheranga	5.82	173	⇑*i*Pn	Pn	19 34 24.8	+0.8
KPC				*e*		19 34 41.3	
KPC				*e*Pg	Pb	19 34 45.2	+6.0
KPC				*e*		19 34 50.5	
KPC				max		19 35 00.2	
	comp=E,39nm,0.8s						
KPC				*e*Sg	Sg	19 36 00.4	-3.9
KPC				Smax		19 36 06.4	
	comp=E,1μm,1.9s						
YKLR	Yuktali	5.89	75	*e*Pn	Pn	19 34 26.8	+1.9
YKLR				*e*Pg	Pg	19 34 46.2	-4.2
YKLR				*e*Sg	Sg	19 36 01.4	-5.3
YKLR				*e*		19 36 09.9	
TLY	Talaya	5.95	233	Pn	Pn	19 34 26.4	+0.6
	comp=E,0.0nm,0.3s,baz=8.4,slow=5.4,SNR=10						
TLY				Lg	Lg	19 36 01.0	
	comp=E,0.1nm,0.3s,baz=90,slow=20,SNR=12						
TLY	Talaya	5.95	233	*e*Pn	Pn	19 34 26.2	+0.4
TLY	Talaya	5.95	233	*e*Pn	Pn	19 34 26.6	+0.8
TLY				*e*Pg	Pb	19 34 46.5	+5.1
TLY				Pmax		19 35 16.2	
	comp=E,39nm,0.7s						
TLY				*e*		19 35 27.7	
TLY				*e*Sg	Sg	19 36 04.6	-4.0
TLY				Smax		19 36 19.1	
	comp=E,301nm,1.1s						
TLY	Talaya	5.95	233	*e*PN	Pn	19 34 26.7	+0.9
TLY				*e*		19 34 46.5	
TLY				*e*		19 36 02.8	
TLY				pmax	pmax		
	comp=Z,67nm,0.4s						

TLY				smax	smax		
	comp=N,371nm,0.4s						
ARS	Arshan	6.38	240⇑	iPn	Pn	19 34 32.6	+0.9
ARS				ePg	Pb	19 34 54.0	+5.3
ARS				Pmax		19 35 05.5	
	comp=N,112nm,0.6s						
ARS				eSg	Sg	19 36 17.4	-4.8
ARS				Smax		19 36 28.5	
	comp=N,1µm,0.9s						
ZAK	Zakamensk	7.05	227	ePn	Pn	19 34 44.0	+3.1
ZAK				e		19 34 48.2	
ZAK				e		19 35 14.9	
ZAK				max		19 35 21.0	
	comp=N,19nm,0.6s						
ZAK				eSg	Sg	19 36 38.8	-5.0
ZAK				Smax		19 36 47.4	
	comp=N,138nm,1.0s						
ZAK	Zakamensk	7.05	227	ePN	Pn	19 34 43.2	+2.3
ZAK				e		19 36 33.5	
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZAK				smax	smax		
	comp=E,138nm,1.0s						
MOY	Mondy	7.24	242⇓	iPn	Pn	19 34 46.0	+2.4
MOY				max		19 34 46.8	
	comp=E,79nm,0.5s						
MOY				e		19 34 59.5	
MOY				e		19 35 10.8	
MOY				eSn	Sn	19 36 05.0	-0.8
MOY				eSg	Sg	19 36 44.9	-5.0
MOY				Smax		19 36 49.2	
	comp=E,794nm,1.3s						
MOY	Mondy	7.24	242	ePN	Pn	19 34 45.9	+2.4
MOY				e		19 35 07.8	
MOY				e		19 36 44.6	
MOY				pmax	pmax		
	comp=Z,72nm,0.7s						
MOY				smax	smax		
	comp=N,797nm,1.4s						
ORL	Orlik	7.40	251⇓	iPn	Pn	19 34 47.9	+2.2
ORL				e		19 34 55.7	
ORL				max		19 35 01.4	
	comp=N,51nm,0.8s						
ORL				e		19 35 10.0	
ORL				eSn	Sn	19 36 07.7	-2.0
ORL				eSg	Sg	19 36 50.3	-4.7
ORL				e		19 36 56.7	
ORL				max		19 36 58.8	
	comp=N,518nm,1.2s						
ORL	Orlik	7.40	251	ePN	Pn	19 34 47.8	+2.1
ORL				e		19 35 11.7	
ORL				eS	Sn	19 36 07.8	-2.0
ORL				e		19 36 47.6	
ORL				pmax	pmax		
	comp=Z,49nm,0.5s						
ORL				smax	smax		
	comp=N,518nm,1.4s						
TNDR	Tynda	7.65	87	e		19 36 41.0	
TNDR				eSg	Sg	19 36 55.7	-7.2
TNDR				e		19 36 58.3	
IENR	Iengra	7.65	79	ePn	Pn	19 34 50.0	+0.9
IENR				eSg	Sg	19 36 56.1	-6.9
CLNS	Chul'man	7.70	74	e	Pn	19 34 58.7	+9.0
CLNS				e		19 35 06.0	
CLNS				e		19 36 14.9	
CLNS				eSg	Sg	19 36 56.3	-8.1
CLNS				e		19 37 22.5	
HIA	Hailar	8.07	137	e		19 36 56.6	
HIA				e		19 36 58.3	
HIA				eSg	Sg	19 37 09.6	-6.8
HIA	Hailar	8.07	137⇑	ePN	Pn	19 34 56.3	+1.5
ULN	Ulaanbaatar	8.07	201	ePn	Pn	19 34 56.2	+1.2
ULN	Ulaanbaatar	8.07	201⇑	ePN	Pn	19 34 55.5	+0.5
SONA0	Songino Array	8.24	204	ePn	Pn	19 34 59.6	+2.3
SONM	Songino Array	8.24	204	Pn	Pn	19 34 59.6	+2.3
	comp=N,1.1nm,0.3s,baz=13,slow=15,SNR=14						
SONM				Lg	Lg	19 37 17.1	
	comp=N,2.8nm,0.3s,baz=24,slow=30,SNR=3.7						
ZEA	Zeya	9.40	94	eP	Pn	19 35 14.2	+1.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,400nm,12.0s						
YAK	Yakutsk	11.54	48	ePn	Pn	19 35 40.7	-1.5
YAK	Yakutsk	11.54	48	eP	Pn	19 35 40.1	-2.1
YAK				eS	Sn	19 37 49.7	-1.3
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.5s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.3s						
YAK				smax	smax		
	comp=N,27nm,1.0s						
YAK				smax	smax		
	comp=E,19nm,0.7s						
YAK				MLR	MLR		
	comp=Z,83nm,16.0s						
YAK				MLR	MLR		
	comp=E,23nm,10.0s						
YAK				MLR	MLR		
	comp=N,36nm,13.0s						
KLR	Kul'dur	13.93	108	Pn	Pn	19 36 16.3	+1.4
	comp=N,1.2nm,0.3s,baz=302,slow=15,SNR=16						
KLR				Sn	Sn	19 38 40.3	-9.1
	comp=N,0.2nm,0.3s,baz=340,slow=15,SNR=3.5						
KLR				Lg	Lg	19 40 14.2	
	comp=N,0.4nm,0.3s,baz=270,slow=20,SNR=4.0						
ZAA1	Zalesovo Array	15.37	275	ePn	Pn	19 36 34.6	+0.3
ZAA0	Zalesovo Array	15.37	275	eP	Pn	19 36 35.2	+0.8
	comp=N,12nm,0.9s						
ZALV	Zalesovo Beam	15.37	275	Pn	Pn	19 36 34.6	+0.3
	comp=N,0.5nm,0.3s,baz=81,slow=9.2,SNR=11						
ZALV				Lg	Lg	19 41 00.5	
	baz=93,slow=26,SNR=3.8						
DGZ	Jazzator, Alta	15.59	258⇑	eP	Pn	19 36 39.6	+2.1
NKL	Nikolayevsk	17.22	86	i P	P	19 37 00.8	+1.2
NKL				pmax	pmax		
	comp=Z,13nm,1.3s						
NKL				pmax	pmax		
	comp=N,6.0nm,1.6s						
NKL				pmax	pmax		
	comp=E,12nm,1.4s						
NKL				MLR	MLR		
	comp=N,29nm,8.0s						
NKL				MLR	MLR		
	comp=Z,70nm,8.0s						
USRK	Ussuriysk Ar.	17.38	122	Lg	Lg	19 42 05.5	
	comp=Z,0.1nm,0.3s,baz=322,slow=28,SNR=6.8						
GTA	Gaotai	17.82	210	eP	P	19 37 20.4	+14
GTA				pP	sP	19 37 25.1	+14
GTA				sP	pP	19 37 27.8	+18
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				smax	smax		
	comp=N,4.0nm,1.7s						
GTA				smax	smax		
	comp=E,4.0nm,1.7s						
TIXI	Tiksi	17.87	18	P	Pn	19 37 01.9	-4.1
	comp=E,0.8nm,0.3s,baz=204,slow=8.9,SNR=11						
TIXI				S	Sn	19 40 08.5	-16
	comp=E,0.5nm,0.3s,baz=259,slow=16,SNR=3.0						
TIXI				Lg	Lg	19 42 11.3	
	comp=E,0.2nm,0.3s,baz=282,slow=14,SNR=5.5						
TIXI	Tiksi	17.87	18	eP	Pn	19 37 02.1	-3.8
	comp=E,5.5nm,0.5s						
MK31	Makanchi Array	20.06	256	eP	P	19 37 31.6	+0.7
	comp=E,2.8nm,0.8s						
MK32	Makanchi Array	20.06	256	eP	P	19 37 31.6	+0.7
MKAR	Makanchi Array	20.06	256	P	P	19 37 31.6	+0.7
	comp=E,1.1nm,0.4s,baz=48,slow=8.6,SNR=18						
MKAR				Lg	Lg	19 43 25.6	
	comp=E,0.3nm,0.6s,baz=43,slow=34,SNR=2.3						
MKAR				LR	LR	19 45 31.5	
	comp=E,123nm,21.2s,baz=38,slow=38						
KURK	Kurchatov	20.09	270	eP	P	19 37 31.4	+0.2
	comp=E,6.8nm,0.8s						
KURK	Kurchatov	20.09	270⇑	iP	P	19 37 32.1	+1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURBB	Kurchatov Arra	20.19	270	P	P	19 37 32.7	+0.6
	comp=Z,2.0nm,0.5s,baz=63,slow=11,SNR=18						
KURBB				Lg	Lg	19 43 30.6	
	comp=Z,1.2nm,1.0s,baz=74,slow=30,SNR=4.2						
MAKZ	Makanchi	20.23	257	eP	P	19 37 33.2	+0.5
	comp=Z,3.7nm,0.8s						
MAKZ	Makanchi	20.23	257	eP	P	19 37 33.2	+0.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSRS	Korea Array	21.25	141	LR	LR	19 45 42.1	
	comp=Z,26nm,22.0s,baz=145,slow=36						
YSS	Yuzh-Sakhalins	21.29	100⇓	eP	P	19 37 46.3	+2.2
YSS				pmax	pmax		
	comp=Z,16nm,1.4s						
MA2	Magadan	21.34	63⇓	eP	P	19 37 46.6	+2.1
MA2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SEY	Seymchan	21.96	53	P	P	19 37 52.5	+1.3
	comp=Z,1.8nm,0.6s,baz=302,slow=14,SNR=4.4						
SEY				Lg	Lg	19 44 24.8	
	comp=Z,4.2nm,1.0s,baz=190,slow=23,SNR=3.8						
SEY	Seymchan	21.96	53⇓	eP	P	19 37 52.6	+1.5
ASAJ	Asahikawa	22.95	107	P	P	19 38 03.4	+1.5
	comp=Z,1.0nm,0.7s,baz=278,slow=15,SNR=2.5						
BVAR	Borovoye Array	23.80	281	P	P	19 38 10.0	-0.3
	comp=Z,1.9nm,0.4s,baz=80,slow=8.1,SNR=18						
BRVK	Borovoye	23.85	281	eP	P	19 38 11.2	+0.4
	comp=Z,6.5nm,0.9s						
BRVK	Borovoye	23.85	281c	eP	P	19 38 10.6	-0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PEA1	Petropavlovsk-	26.78	76	eP	P	19 38 38.9	+1.5
PEA0B	Petropavlovsk-	26.78	76	eP	P	19 38 39.5	+2.1
	comp=Z,12nm,1.0s						
PETK	Petropavlovsk-	26.78	76	P	P	19 38 38.9	+1.5
	comp=Z,3.8nm,0.7s,baz=303,slow=6.0,SNR=8.8						
AAK	Ala-Archa	26.99	257	LR	LR	19 49 51.5	
	comp=Z,108nm,19.1s,baz=95,slow=38						
AAK	Ala-Archa	26.99	257⇑	eP	P	19 38 42.2	+2.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL	Bilibino	27.78	41⇑	eP	P	19 38 48.6	+2.4
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	Arti	28.96	294	P	P	19 38 56.9	+0.1
	comp=Z,0.7nm,0.5s,baz=3.0,slow=19,SNR=3.1						
ARU				LR	LR	19 52 17.1	
	comp=Z,72nm,21.8s,baz=66,slow=40						
ARU	Arti	28.96	294	eP	P	19 38 56.9	+0.1
	comp=Z,4.3nm,1.1s						
ARU	Arti	28.96	294c	i P	P	19 38 56.3	-0.6
ARU				S	S	19 43 47.3	0.0
ARU				pmax	pmax		
	comp=Z,11nm,2.1s						
ABKAR	Akbulak array	31.37	280	eP	P	19 39 18.4	+0.2
	comp=Z,2.4nm,0.7s						
AKTO	Aktyubinsk	31.84	284	P	P	19 39 22.5	+0.2
	comp=Z,0.9nm,0.6s,baz=80,slow=11,SNR=3.5						
AKTO				LR	LR	19 53 17.1	
	comp=Z,52nm,19.1s,baz=73,slow=38						
TPUB	Ta-pu	32.87	164	eP	P	19 39 31.6	0.0
	comp=Z,9.7nm,0.6s						
SPA0	Spitsbergen Ar	37.41	340	eP	P	19 40 09.7	-0.5
	comp=Z,20nm,1.2s						
ARA0	ARCESS Array S	38.36	326	eP	P	19 40 18.2	0.0
ARCES	ARCESS Array B	38.36	326	P	P	19 40 18.3	0.0
	comp=Z,4.0nm,0.9s,baz=70,slow=8.7,SNR=3.6						
ARCES				LR	LR	20 00 32.7	
	comp=Z,41nm,19.8s,baz=325,slow=43						
ARCES	ARCESS Array B	38.36	326	P	P	19 40 18.3	0.0
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARCES				MLR	MLR		
	comp=Z,41nm,19.8s						
ARE0	ARCESS Array S	38.36	326	eP	P	19 40 18.5	+0.3
	comp=Z,0.2nm,0.8s						
GEYT	Alibeck	39.39	266	LR	LR	19 58 17.6	
	comp=Z,34nm,20.0s,baz=60,slow=39						
OBN	Obninsk	40.64	302	i P	P	19 40 38.3	+1.0
OBN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FIA1	FINESS Array S	41.96	314	eP	P	19 40 46.8	-1.4
	comp=Z,5.8nm,1.0s						
FIA0	FINESS Array S	41.96	314	eP	P	19 40 48.2	+0.1
FIA0	FINESS Array S	41.96	314	eP	P	19 40 48.2	+0.1
FINES	FINESS Array B	41.96	314	P	P	19 40 48.2	+0.1
	comp=Z,2.9nm,0.6s,baz=66,slow=8.7,SNR=13						
FINES	FINESS Array B	41.96	314	i P	P	19 40 48.5	+0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KIV	Kislovodsk	44.08	285	eP	P	19 41 06.3	+0.6
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
KIV				MLR	MLR		
	comp=Z,66nm,16.0s						
KBZ	Khabaz	44.11	284	LR	LR	20 04 09.6	
	comp=Z,32nm,19.2s,baz=42,slow=42						
COLA	College	45.75	36⇑	eP	P	19 41 20.1	+1.6
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR	Eielson Array	46.13	36	P	P	19 41 22.7	+1.1
	comp=Z,4.2nm,0.9s,baz=302,slow=6.5,SNR=17						
ILAR	Eielson Array	46.13	36	eP	P	19 41 23.0	+1.4
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ILB	Eielson Array	46.13	36	eP	P	19 41 22.7	+1.1
	comp=Z,4.3nm,0.8s						
AKASG	Malin Array Be	46.83	300	P	P	19 41 27.0	-0.2
	comp=Z,1.7nm,0.6s,baz=44,slow=9.0,SNR=5.9						
AKASG	Malin Array Be	46.83	300	eP	P	19 41 28.7	+1.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	46.83	300	eP	P	19 41 27.0	-0.2
	comp=Z,2.6nm,1.0s						
AKBB	Malin Array Si	46.83	300	eP	P	19 41 27.0	-0.2
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HFS	Hagfors	47.63	318	P	P	19 41 33.4	0.0
	comp=Z,1.4nm,0.5s,baz=60,slow=8.8,SNR=11						
HFS	Hagfors	47.63	318	P	P	19 41 33.4	0.0
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NB2	NORSAR Subarra	47.97	320	P	P	19 41 36.2	+0.2
	comp=Z,2.8nm,0.8s,baz=48,slow=7.4						
NOA	NORSAR Array B	47.97	320	P	P	19 41 35.5	-0.5
	comp=Z,0.7nm,0.7s,baz=52,slow=7.9,SNR=3.9						
BALM	Baldy	50.19	37	eP	P	19 41 55.3	+2.2
	comp=Z,5.6nm,1.0s						
BALM	Baldy	50.19	37	eP	P	19 41 55.3	+2.2
BALM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BR101	Keskin Array S	51.91	287	eP	P	19 42 08.0	+1.7
BRTR	Keskin Array B	51.91	287	P	P	19 42 08.0	+1.7
	comp=Z,0.3nm,0.5s,baz=64,slow=7.2,SNR=2.8						
BRTR				LR	LR	20 09 11.8	
	comp=Z,24nm,18.3s,baz=86,slow=42						
GERES	GERESS Array B	55.44	307	P	P	19 42 33.2	+1.2
	comp=Z,0.2nm,0.5s,baz=30,slow=8.0,SNR=2.9						
PD31	Pinedale Array	76.16	30	eP	P	19 44 46.0	+0.2
PDAR	Pinedale Array	76.16	30	P	P	19 44 46.0	+0.2
	comp=Z,0.2nm,0.4s,baz=318,slow=6.6,SNR=3.3						
NV01	Mina Array Sit	77.33	38	eP	P	19 44 53.5	+1.0
NVAR	Mina Array Bea	77.33	38	P	P	19 44 53.5	+1.0
	comp=Z,0.5nm,0.6s,baz=307,slow=4.5,SNR=6.1						
WR1	Warramunga Arr	77.63	158	eP	P	19 44 53.9	0.0
WRA	Warramunga Arr	77.63	158	P	P	19 44 53.9	0.0
	comp=Z,0.7nm,0.8s,baz=347,slow=7.0,SNR=4.5						
AS31	Alice Springs	81.15	159	eP	P	19 45 13.3	+0.3
	comp=Z,0.8nm,1.0s						
ASAR	Alice Springs	81.15	159	P	P	19 45 13.3	+0.3
	comp=Z,0.3nm,0.6s,baz=355,slow=5.0,SNR=5.4						

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*NEIC **14** 19:34:35.7±0.0, 61°.57N×141°.11W, h1^{km}, ML2.9(OTT), ML2.9(AEIC), After AEIC.*

PGC 14 19:34:36.5, 61°.59N×141°.07W, h1^{km}, ML2.9/6, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK3	Moose Creek	0.35	57	P	Pg	19 34 42.7	-0.5
YUK3				S	Sg	19 34 47.6	-0.2
YUK1	Sand Pete Hill	0.63	24	S	Sg	19 34 55.8	-0.8
PTPK	Patty Peak	0.78	240	P	Pg	19 34 50.4	-1.0
PTPK				S	Sg	19 35 00.9	-0.6
BALM	Baldy	0.82	229	ePg	Pg	19 34 50.8	-1.5
BALM	Baldy	0.82	229	P	Pg	19 34 50.8	-1.5
BALM				S	Sg	19 35 02.0	-0.9
BVCY	Beaver Creek	0.84	7	P	Pg	19 34 51.7	-0.8
BVCY				Sg	Sn	19 35 08.3	-0.1
KIAG	Kiagna River	0.91	224	P	Pg	19 34 52.1	-1.8
KIAG				S	Sg	19 35 04.7	-0.9
TABL	Table Mountain	1.15	182	P	Pg	19 34 56.8	-1.7
TABL				S	Sg	19 35 12.3	-1.1
YUK6	Outpost Mounta	1.46	115	Pn	Pn	19 35 02.1	-2.1
YUK6				Sg	Sg	19 35 23.0	-0.3
SAMH	Samovar Hills	1.47	174	Pn	Pn	19 35 03.1	-1.0
SAMH				Sg	Sg	19 35 23.5	0.0
MESA	MESA	1.48	197	Pn	Pn	19 35 03.3	-1.0
MESA				Sg	Sg	19 35 23.3	-0.5
BCA3	Beaver Creek A	1.52	348	ePn	Pn	19 35 03.8	-1.1
CHX	Chaix Hills	1.53	181	ePn	Pn	19 35 04.3	-0.7
PCA	Pinnacle	1.55	165	ePn	Pn	19 35 04.5	-0.7
PCA				eSn	Sg	19 35 26.3	+0.2
PCA	Pinnacle	1.55	165	Pn	Pn	19 35 04.4	-0.7
PCA				Sg	Sn	19 35 25.7	-0.2
YUK5	Granite Creek	1.61	105	Pn	Pn	19 35 04.7	-1.5
YUK5				Sg	Sn	19 35 26.4	-1.3
SNH	Sunshine Point	1.65	212	ePn	Pn	19 35 06.2	-0.4
BCPM	Bancas Point	1.78	156	ePn	Pn	19 35 08.8	+0.4
BCPM				eSg	Sg	19 35 34.0	+0.4
MENT	Mentasta	1.84	319	ePn	Pn	19 35 09.4	+0.2
HYT	Haines Junctio	1.89	112	Pn	Pn	19 35 09.2	-0.8
HYT				Sg	Sn	19 35 34.6	+0.2
HMT	Hamilton	2.00	233	ePn	Pn	19 35 12.3	+1.0
HMT				eSg	Sg	19 35 42.3	+1.8
PNL	Peninsula	2.09	156	ePn	Pn	19 35 11.9	-0.8
PNL	Peninsula	2.09	156	Pn	Pn	19 35 12.4	-0.3
PNL				Sg	Sb	19 35 42.2	+0.5
PAX	Paxson	2.48	306	ePn	Pn	19 35 19.7	+1.6
PAX	Paxson	2.48	306	Pn	Pn	19 35 19.6	+1.5
PAX				Sg	Sb	19 35 51.2	-1.7
DOT	Dot Lake	2.49	328	ePn	Pn	19 35 16.9	-1.2
DOT	Dot Lake	2.49	328	Pn	Pn	19 35 16.9	-1.2
DOT				Pg	Pb	19 35 21.9	-0.1
DOT				Sg	Sb	19 35 54.6	+1.5
EYAK	Cordova Ski Ar	2.50	247	ePg	Pb	19 35 20.9	-1.2
DAWY	Dawson	2.61	16	ePn	Pn	19 35 18.8	-1.0
DAWY	Dawson	2.61	16	Pn	Pn	19 35 19.0	-0.8
DAWY				Sg	Sb	19 35 57.6	+1.1
JPK	Jack Peak	2.72	261	ePn	Pn	19 35 21.2	-0.1
SCRK	Sand Creek	2.75	332	ePn	Pn	19 35 20.6	-1.1
FID	Port Fidalgo	2.75	255	ePn	Pn	19 35 22.5	+0.9
FID				ePn	Pb	19 35 23.8	-2.5
RIDG	Independent Ri	2.78	323	ePn	Pn	19 35 21.2	-0.9
SCM	Sheep Creek Mo	2.99	278	ePn	Pn	19 35 26.7	+1.7
GLI	Glacier Island	3.00	259	ePn	Pn	19 35 26.0	+1.0
PLBC	Pleasant Camp	3.16	130	Pn	Pn	19 35 27.3	0.0
PLBC				Pg	Pb	19 35 32.2	-1.1
PLBC				Sg	Sg	19 36 15.8	-2.0
EGAK	Eagle	3.21	359	ePn	Pn	19 35 27.4	-0.5
SML	Sawmill	3.46	277	ePn	Pn	19 35 32.2	+0.7
KNK	Knik Glacier	3.54	270	ePn	Pn	19 35 32.8	+0.2
RND	Reindeer	4.04	300	ePn	Pn	19 35 39.4	-0.1
BESE	Bessie Mountai	4.33	131	ePn	Pn	19 35 43.0	-0.4
BESE	Bessie Mountai	4.33	131	Pn	Pn	19 35 42.3	-1.1
BESE				Sg	Sg	19 36 52.8	-2.8
FYU	Fort Yukon	5.32	342	ePn	Pn	19 35 56.8	-0.1
BM3	Burnt Mountain	6.05	347	ePn	Pn	19 36 07.0	-0.1
DLBC	Dease Lake	6.37	115	Sg	Sg	19 37 56.7	-4.3
COLD	Coldfoot	6.90	329	Pn	Pn	19 36 18.0	-0.6

PGC 14 19:38:25.9, 61°.58N×141°.04W, h1^{km}, ML2.4/3, 209km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK3	Moose Creek	0.34	54	P	Pg	19 38 31.9	-0.5
YUK3				S	Sg	19 38 36.9	+0.1
PTPK	Patty Peak	0.79	241	P	Pg	19 38 39.7	-1.3
PTPK				S	Sg	19 38 50.5	-0.7
BALM	Baldy	0.83	230	P	Pg	19 38 40.1	-1.8
BALM				S	Sg	19 38 51.4	-1.3
BVCY	Beaver Creek	0.84	6	P	Pg	19 38 41.0	-1.0
BVCY				Sg	Sn	19 38 57.6	-0.5
KIAG	Kiagna River	0.92	225	P	Pg	19 38 41.4	-2.1
KIAG				S	Sg	19 38 53.9	-1.4
TABL	Table Mountain	1.15	183	P	Pg	19 38 46.0	-1.8
TABL				S	Sg	19 39 01.7	-1.0
SAMH	Samovar Hills	1.46	175	Pn	Pn	19 38 52.4	-1.2
SAMH				Sg	Sg	19 39 12.8	+0.1
MESA	MESA	1.48	198	Pn	Pn	19 38 52.6	-1.2
MESA				Sg	Sg	19 39 12.7	-0.5
PCA	Pinnacle	1.54	165	Pn	Pn	19 38 53.6	-0.9
PCA				Sg	Sn	19 39 14.6	-0.6
HYT	Haines Junctio	1.87	112	Pn	Pn	19 38 58.3	-0.9
PNL	Peninsula	2.08	156	Pn	Pn	19 39 01.9	0.0
PNL				Sg	Sb	19 39 30.9	+0.1
PAX	Paxson	2.50	306	Pn	Pn	19 39 07.5	-0.2
PAX				Sg	Sb	19 39 42.1	-0.8
DOT	Dot Lake	2.50	327	Pn	Pn	19 39 06.3	-1.4
DOT				Pg	Pb	19 39 11.2	-0.4
DOT				Sg	Sb	19 39 43.2	+0.3
DAWY	Dawson	2.61	16	Pn	Pn	19 39 07.4	-1.8
DAWY				Sg	Sb	19 39 45.6	-0.3

KRSC 14 19:43:42.1±1.7, 49°.59N×156°.22E, h98^{km}±25^{km}, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.10	356	eP	Pn	19 44 04.5	+1.1
SKR				eS	Sn	19 44 20.2	+0.7
PAU	Pauzhetka	1.92	11	eS	Sn	19 44 40.6	+3.2
KDTR	Khodutka, Kamc	2.52	27	eP	Pn	19 44 23.8	+2.5
KDTR				eS	Sn	19 44 53.7	+2.3
MTVR	Mutnovka	3.15	22	eP	Pn	19 44 32.7	+2.8
MTVR				eS	Sn	19 45 10.3	+3.5
RUS	Russkaya	3.19	26	eS	Sn	19 45 09.1	+1.6
NLC	Nalytchevo	4.08	27	eS	Sn	19 45 30.0	+1.0
SPN	Mys Shipunski	4.24	33	eS	Sn	19 45 34.9	+2.0

GUC 14 19:44:04.6±0.8, 33°.20S×70°.06W, h100^{km}±6^{km}, ML3.5, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	0.23	237	eP	Pn	19 44 19.0	-0.3
FCH				i S	Sn	19 44 30.5	+0.2
CLCH	Cerro Calan	0.45	244	eP	Pn	19 44 19.7	-0.4
CLCH				i S	Sn	19 44 31.3	-0.4
CLCH				IAML		19 44 32.5	
	comp=E,3µm,0.3s						
PEL	Peldehue	0.53	276	eP	Pn	19 44 19.8	-0.8
PEL				i S	Sn	19 44 32.2	-0.5
PEL				IAML		19 44 32.7	
	comp=N,2µm,0.3s						
ANTU	Antumapu	0.60	233⇑	iP	Pn	19 44 21.3	0.0
ANTU				eS	Sn	19 44 33.4	-0.4
ANTU				IAML		19 44 34.2	
	comp=E,3µm,0.2s						
LMEL	Las Melosas	0.65	191	eP	Pn	19 44 21.2	-0.6
LMEL				eS	Sn	19 44 34.0	-0.7
LMEL				IAML		19 44 38.2	
	comp=N,1µm,0.2s						
CO02	Combarbal	2.15	338⇑	iP	Pn	19 44 39.5	+0.3
CO02				eS	Sn	19 45 05.3	-0.3

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*ISCJB **14** 20:03:13.9±0.5, 20°.3S±0°.1×173°.31W±0°.09, h25^{km}, mb4.5/22, MS3.3/5, Error ellipse: s-maj=17.0km s-min=8.6km az=148.3*

*NEIC **14** 20:03:13.5±1.7, 20°.24S×173°.30W, h10^{km}±2^{km}, mb4.6/16, Error ellipse: s-maj=23.9km s-min=12.8km az=156.0*

*IDC **14** 20:03:14.2±1.5, 20°.03S×173°.65W, h0^{km}, mb4.0/8, mb1 4.1/8, mb1mx3.9/31, mbtmp4.0/8, MS3.3/4, Ms1 3.4/4, ms1mx3.0/25, Error ellipse: s-maj=56.7km s-min=23.5km az=139.0*

ISC 14 20:03:16.0±0.6, 20°.2S±0°.2×173°.3W±0°.1, h25^{km}, n45, σ1^{s}24/39, mb4.4/22, MS3.2/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.38	71	ePn	Pn	20 04 05.3	-2.0
RAR	Rarotonga	12.70	97	LR	LR	20 10 56.1	
	comp=Z,96nm,19.2s,baz=106,slow=35						
DZM	Mont Dzumac	18.98	261	eLR	LR	20 12 30.5	

	comp=Z,80nm,21.4s						
TBI	**Tubuai**	**22.35**	**102**	*e*LR	LR	20 13 17.5	
	comp=Z,141nm,34.2s						
PPT2	**Papeete2**	**22.59**	**87**	*e*LR	LR	20 13 19.0	
	comp=Z,131nm,29.8s						
PPT	**Papeete**	**22.60**	**87**	LR	LR	20 14 50.8	
	comp=Z,26nm,20.6s,baz=305,slow=30						
LTZ	**Lake Taylor**	**25.55**	**205**	*e*P	**P**	**20 08 41.7**	**-1.1**
MQZ	**McQueen's Vall**	**26.18**	**204**	*e*P	**P**	**20 08 47.7**	**-0.7**
	15nm,0.9s						
ARMA	**Armidale**	**33.16**	**245**	*e*P	**P**	**20 09 51.8**	**+1.0**
	3.7nm,0.8s						
TAOE	**Nuku Hiva Isla**	**33.95**	**75**	*e*P	**P**	**20 09 57.5**	**-0.3**
	86nm,1.0s						
CAN	**Canberra**	**36.34**	**238**	*e*P	**P**	**20 10 19.3**	**+1.2**
	4.1nm,0.8s						
RABL	**Rabaul**	**37.21**	**291**	*e*P	**P**	**20 10 22.9**	**-2.7**
	50nm,0.5s						
CTAO	**Charters Tower**	**37.90**	**263**	*e*P	**P**	**20 10 31.3**	**-0.1**
	12nm,1.1s						
STKA	**Stephens Creek**	**41.87**	**245**	P	**P**	**20 11 04.7**	**+0.3**
	1.7nm,0.7s,baz=121,slow=9.3,SNR=3.9						
STKA	**Stephens Creek**	**41.87**	**245**	*e*P	**P**	**20 11 04.7**	**+0.3**
	1.4nm,1.1s						
COEN	**Coen**	**41.97**	**271**	*e*P	**P**	**20 11 04.0**	**-1.4**
	8.6nm,0.9s						
KHU	**Kahuku**	**42.90**	**25**	*e*P	**P**	**20 11 12.6**	**-0.4**
	59nm,0.9s						
AS31	**Alice Springs**	**48.86**	**256**	*e*P	**P**	**20 11 59.3**	**-0.6**
	0.5nm,0.7s						
ASAR	**Alice Springs**	**48.86**	**256**	P	**P**	**20 11 59.3**	**-0.6**
	1.4nm,0.6s,baz=97,slow=7.5,SNR=20						
ASAR				PcP	**PcP**	**20 13 26.7**	**+2.3**
	0.6nm,0.5s,baz=107,slow=3.7,SNR=5.5						
WB2	**Warramunga Arr**	**48.99**	**261**	*e*P	**P**	**20 12 01.0**	**+0.1**
	5.5nm,1.0s						
WRAB	**Tennant Creek**	**48.99**	**261**	*e*P	**P**	**20 12 00.7**	**-0.2**
	3.9nm,0.9s						
WR1	**Warramunga Arr**	**49.00**	**261**	*e*P	**P**	**20 12 00.1**	**-0.9**
WRA	**Warramunga Arr**	**49.00**	**261**	P	**P**	**20 12 00.1**	**-0.9**
	1.9nm,0.9s,baz=91,slow=7.2,SNR=14						
GUMO	**Guam**	**53.13**	**306**	LR	LR	20 29 48.8	
	comp=Z,32nm,21.7s,baz=207,slow=30						
FORT	**Forrest**	**53.44**	**246**	*e*P	**P**	**20 12 33.9**	**-0.2**
	12nm,0.9s						
MTN	**Manton Dam**	**53.57**	**269**	*e*P	**P**	**20 12 34.6**	**-0.7**
	9.2nm,1.1s						
MJAR	**Matsushiro Arr**	**72.70**	**321**	P	**P**	**20 14 41.4**	**-0.5**
	1.2nm,0.6s,baz=167,slow=6.6,SNR=7.3						
MAJO	**Matsushiro**	**72.71**	**321**	*e*P	**P**	**20 14 41.4**	**-0.5**
ASAJ	**Asahikawa**	**75.69**	**329**	P	**P**	**20 15 00.6**	**+1.4**
	3.4nm,1.0s,baz=141,slow=14,SNR=3.2						
PETK	**Petropavlovsk-**	**77.25**	**343**	P	**P**	**20 15 08.2**	**+0.5**
	2.2nm,1.0s,baz=104,slow=9.1,SNR=2.6						
PEA1	**Petropavlovsk-**	**77.25**	**343**	*e*P	**P**	**20 15 08.2**	**+0.5**
NV01	**Mina Array Sit**	**77.87**	**41**	*e*P	**P**	**20 15 14.3**	**+2.4**
NVAR	**Mina Array Bea**	**77.87**	**41**	P	**P**	**20 15 14.3**	**+2.4**
	0.3nm,0.6s,baz=213,slow=6.5,SNR=4.1						
LKWY	**Lake**	**86.26**	**40**	*e*P	**P**	**20 15 53.9**	**-1.9**
	83nm,1.0s						
ILAR	**Eielson Array**	**87.15**	**11**	P	**P**	**20 15 59.9**	**+0.5**
	0.3nm,0.7s,baz=225,slow=3.4,SNR=4.0						
ILB	**Eielson Array**	**87.15**	**11**	*e*P	**P**	**20 15 59.9**	**+0.5**
	0.9nm,0.8s						
LPAZ	**La Paz**	**98.06**	**111**	LR	LR	20 53 06.1	
	comp=Z,75nm,20.4s,baz=152,slow=30						
MK32	**Makanchi Array**	**114.23**	**313**	*e*PKiKP	**PKiKP**	**20 21 54.8**	**+1.4**
MKAR	**Makanchi Array**	**114.23**	**313**	PKiKP	**PKiKP**	**20 21 54.8**	**+1.4**
	0.1nm,0.6s,baz=64,slow=3.4,SNR=2.6						
AKASG	**Malin Array Be**	**144.78**	**335**	PKP	**PKPdf**	**20 22 50.2**	**-0.3**
	0.2nm,0.4s,baz=36,slow=4.4,SNR=5.2						
AKBB	**Malin Array Si**	**144.78**	**335**	*e*PKPdf	**PKPdf**	**20 22 50.2**	**-0.3**
BR101	**Keskin Array S**	**149.83**	**316**	*e*PKPbc	**PKiKP**	**20 23 06.5**	**+1.2**
BRTR	**Keskin Array B**	**149.83**	**316**	PKPbc	**PKiKP**	**20 23 06.5**	**+1.2**
	0.8nm,0.8s,baz=145,slow=4.5,SNR=6.1						
GEC2	**GERESS Array S**	**150.91**	**350**	*e*PKPbc	**PKiKP**	**20 23 08.3**	**+1.2**
GERES	**GERESS Array B**	**150.91**	**350**	PKPbc	**PKiKP**	**20 23 08.3**	**+1.2**
	0.2nm,0.4s,baz=7.4,slow=2.3,SNR=4.2						

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*ISK **14** 20:16:43.4, 40°.89N×31°.77E, h4^{km}, ML2.3/14*

*ISCJB **14** 20:16:44.8±0.4, 40°.88N±0°.03×31°.71E±0°.02, h4^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.0km az=178.4*

*DDA **14** 20:16:44.9, 40°.85N×31°.69E, h11^{km}±1^{km}, ML2.6*

ISC 14 20:16:44.5±1.0**, 40°.89N**±0°.03×**31°.73E**±0°.02**, h11**^{km}±9^{km}**, n33, σ0^{s}.67**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YIGI	**Dzce**	**0.23**	**289**	*i* P	**Pb**	**20 16 50.1**	**-0.6**
YIGI				*i* S	**Sg**	**20 16 53.5**	**+0.9**
YIGI				IAML_P			
	comp=Z,8µm,0.2s						
BCAM	**Yenicaga**	**0.26**	**106**	*i* P	**Pb**	**20 16 51.5**	**+0.1**
BCAM				*i* S	**Sb**	**20 16 55.2**	**-0.7**
BCAM				IAML_P			
	comp=Z,3µm,0.1s						
KIBS	**BOLU**	**0.48**	**169**	*i* P	**Pb**	**20 16 54.8**	**-0.2**
KIBS				IAML_P			
	comp=Z,2µm,0.2s						
MDUB	**Mudurnu**	**0.58**	**225**	PG	**Pg**	**20 16 55.5**	**-0.4**
MDUB				SG	**Sb**	**20 17 04.9**	**-0.2**
BTAS	**Taskesti**	**0.64**	**241**	*i* P	**Pg**	**20 16 56.8**	**-0.2**
BTAS				*i* S	**Sg**	**20 17 04.4**	**-1.1**
SAHE	**Sakarya_HENDEK**	**0.67**	**267**	*i* P	**Pg**	**20 16 57.4**	**-0.1**
SAHE				*i* S	**Sg**	**20 17 05.5**	**-0.8**
SAHE				IAML_P			
	comp=Z,324nm,0.2s						
CMDR	**Camlidere-ANKA**	**0.69**	**125**	*i* P	**Pb**	**20 16 58.6**	**0.0**
CMDR				*i* S	**Sg**	**20 17 07.2**	**+0.3**
CMDR				IAML_P			
	comp=Z,1µm,0.1s						
SAFT	**Safranbolu**	**0.80**	**64**	PG	**Pg**	**20 16 59.0**	**-1.0**
BTIN	**Bartın**	**0.84**	**27**	*i* P	**Pn**	**20 17 02.4**	**0.0**
BTIN				*i* S	**Sb**	**20 17 13.2**	**+0.6**
GULT	**Gulveren**	**1.03**	**244**	PG	**Pb**	**20 17 03.9**	**-0.6**
GULT				SG	**Sn**	**20 17 19.3**	**-0.3**
AUMIH	**MIHALICIK**	**1.04**	**191**	*i* P	**Pb**	**20 17 04.4**	**-0.2**
AUMIH				*i* S	**Sb**	**20 17 17.9**	**-0.4**
SAUV	**Serdivan-Sakar**	**1.08**	**263**	PN	**Pg**	**20 17 05.4**	**+0.1**
SAUV				SN	**Sn**	**20 17 20.6**	**+0.1**
SPNC	**Sapanca-Adapaz**	**1.10**	**260**	PN	**Pb**	**20 17 05.6**	**0.0**
GEYV	**SAKARYA_Geyve**	**1.17**	**250**	*i* P	**Pn**	**20 17 06.6**	**-0.2**
GEYV				*i* S	**Sn**	**20 17 22.5**	**-0.2**
KAND	**Kocaeli-Kandir**	**1.19**	**281**	*i* P	**Pg**	**20 17 07.6**	**+0.3**
KAND				*i* S	**Sg**	**20 17 22.8**	**+0.1**
KAND				IAML_P			
	comp=Z,161nm,0.2s						
KURC	**Kurucasile-Bar**	**1.22**	**38**	PN	**Pn**	**20 17 06.7**	**-0.9**
LOD	**Lodumlu**	**1.27**	**141**	PN	**Pn**	**20 17 08.1**	**-0.2**
ANTO	**Ankara**	**1.30**	**141**	PN	**Pn**	**20 17 08.3**	**-0.4**
BORA	**Eskisehir**	**1.40**	**225**	*i* P	**Pg**	**20 17 11.8**	**+0.3**
BORA				*i* S	**Sg**	**20 17 30.2**	**+0.5**
BORA				IAML_P			
	comp=Z,650nm,0.1s						
SVRH	**Sivrihisar-ESK**	**1.45**	**186**	PN	**Pb**	**20 17 11.1**	**-0.5**
ILGA	**Ilgaz**	**1.51**	**83**	*i* P	**Pg**	**20 17 15.0**	**+1.5**
HRT	**Hereke**	**1.57**	**268**	PN	**Pb**	**20 17 13.5**	**-0.1**
ADVT	**Abdulvahap**	**1.58**	**254**	PN	**Pb**	**20 17 13.9**	**+0.1**
SILT	**Sile**	**1.60**	**280**	PN	**Pb**	**20 17 13.9**	**-0.3**
YLV	**Yalova**	**1.82**	**261**	PN	**Pn**	**20 17 16.7**	**+0.8**
DELI	**KIRIKKALE**	**1.89**	**117**	*i* P	**Pg**	**20 17 20.7**	**-0.1**
DELI				*i* S	**Sb**	**20 17 43.7**	**+0.9**
DELI				IAML_P			
	comp=Z,123nm,0.2s						
BUY	**Buyukada**	**1.98**	**270**	PN	**Pb**	**20 17 19.3**	**-1.3**
BUY	**Buyukada**	**1.98**	**270**	*i* P	**Pb**	**20 17 21.4**	**+0.8**
BUY				IAML_P			
	comp=Z,425nm,0.2s						
ISK	**Istanbul-Kandi**	**2.03**	**276**	PN	**Pn**	**20 17 19.8**	**+1.1**
KLYT	**Kilyos**	**2.07**	**281**	PN	**Pb**	**20 17 20.7**	**-1.4**
ULDT	**Uludag**	**2.12**	**250**	*i* P	**Pb**	**20 17 23.2**	**+0.2**
ULDT				IAML_P			
	comp=Z,80nm,0.1s						
TVSB	**Tavsanli**	**2.26**	**231**	PN	**Pn**	**20 17 22.9**	**+1.0**
CTKS	**Kestanelik-??a**	**2.46**	**279**	PN	**Pn**	**20 17 25.8**	**+1.2**

IDC 14 20:31:39.0±1.2**, 3°.44N**×**126°.26E, h0**^{km}**, mb3.4**/4**, mb1 3.6**/5**, mb1mx3.4**/25**, mbtmp3.4**/5**, ML3.4**/1**, Error ellipse: s-maj=84.6km s-min=19.9km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.58**	**130**	Pn	Pn	20 33 16.6	-0.5
	0.8nm,0.3s,baz=282,slow=19,SNR=4.1						
WRA	**Warramunga Arr**	**24.55**	**161**	P	P	20 37 00.4	-0.3
	1.1nm,0.6s,baz=339,slow=10,SNR=12						
ASAR	**Alice Springs**	**27.95**	**165**	P	P	20 37 31.9	+0.6
	0.2nm,0.6s,baz=340,slow=11,SNR=3.1						
SONM	**Songino Array**	**47.43**	**342**	P	P	20 40 15.0	-0.4
	0.2nm,0.5s,baz=154,slow=7.9,SNR=2.0						
MKAR	**Makanchi Array**	**57.53**	**326**	P	P	20 41 30.3	+0.1
	0.3nm,0.4s,baz=112,slow=7.8,SNR=7.4						

SJA 14 20:45:25.7±0.6**, 27°.03S**×**66°.95W, h3**^{km}±4^{km}**, ML3.9, MW4.4, 3C-1D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSA	**Cafayete**	**1.26**	**44**	*e*P	Pg	20 45 49.0	-0.8
FSA				*i* S	Sg	20 46 05.8	-0.5
FSA				IAML		20 46 06.8	
	comp=Z,793nm,0.3s						
AHML	**Horco Molle**	**1.46**	**81**	⇓*e*P	Pg	20 45 54.5	+0.7
AHML				*i* S	Sn	20 46 14.9	+2.1
CYA	**Choya**	**1.74**	**144**	*e*P	Pg	20 45 59.0	0.0
CYA				*i* S	Sg	20 46 23.5	+1.9
CYA				IAML		20 46 25.8	
	comp=Z,1µm,0.3s						
VCA	**Vinchina**	**2.03**	**213**	⇑*e*P	Pb	20 46 03.3	-0.1
VCA				*i* S	Sg	20 46 31.6	+0.5
VCA				IAML		20 46 35.7	
	comp=Z,2µm,0.5s						
SLA	**San Lorenzo**	**2.64**	**30**	*e*P	Pb	20 46 12.5	-1.2
SLA				*i* S	Sg	20 46 49.2	-1.4
AGUA	**GUANDACOL**	**2.80**	**209**	*e*P	Pb	20 46 15.4	-1.1
AGUA				*i* S	Sg	20 46 54.1	-1.7
GO03	**Copiap**	**2.98**	**258**	*i* P	Pb	20 46 17.9	-1.5
GO03				*i* S	Sb	20 46 56.3	+0.1
GO02	**Mina Guanaco**	**3.01**	**307**	*i* P	Pb	20 46 18.9	-1.3
AZAP	**Zapla**	**3.27**	**32**	*e*P	Pn	20 46 21.0	+3.0
LCO	**Las Campanas**	**3.86**	**238**	*i* P	Pn	20 46 29.6	+3.4
ACCO	**Cerro Coronel**	**4.00**	**207**	*e*P	Pn	20 46 31.9	+3.7
ACCO				*i* S	Sb	20 47 22.4	-3.6
AMOG	**MOGNA**	**4.12**	**199**	*e*P	Pn	20 46 32.1	+2.4
AMOG				*i* S	Sn	20 47 23.6	+5.1
GO04	**Tololo Observa**	**4.61**	**226**	⇑*i*P	Pn	20 46 39.4	+2.8
CFA	**Coronel Fontan**	**4.70**	**194**	*i* P	Pn	20 46 39.9	+2.4
ACAN	**Cantantal**	**5.23**	**182**	*i* P	Pn	20 46 47.3	+2.4
AUSP	**Uspallata**	**5.60**	**202**	⇑*i*P	Pn	20 46 53.4	+3.3
ARCO	**CERRO ARCO**	**6.04**	**196**	*e*P	Pn	20 46 58.3	+2.2
AAGR	**Agrelo**	**6.25**	**195**	*i* P	Pn	20 47 00.8	+1.8

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*BJI **14** 20:54:21.7±0.0, 10°.19N×126°.90E, h37^{km}, mb4.7/52, mB4.9/37, Ms4.3/21, Ms7 4.0/15*

*IDC **14** 20:54:21.1±0.5, 10°.64N×126°.78E, h0^{km}, mb4.3/29, mb1 4.5/32, mb1mx4.4/45, mbtmp4.4/32, ML4.1/3, MS3.3/16, Ms1 3.3/16, ms1mx3.2/42, Error ellipse: s-maj=19.2km s-min=10.7km az=82.0*

*ISCJB **14** 20:54:22.4±1.1, 10°.74N±0°.02×126°.90E±0°.02, h17^{km}±7^{km}, mb4.6/85, MS3.5/16, Error ellipse: s-maj=4.2km s-min=3.3km az=156.8*

*MAN **14** 20:54:24.8, 10°.77N×126°.81E, h53^{km}, MS4.5*

*NEIC **14** 20:54:26.0±1.9, 10°.65N×126°.78E, h32^{km}±5^{km}, mb4.7/48, Error ellipse: s-maj=17.7km s-min=11.6km az=86.0*

*DJA **14** 20:54:28.3±0.5, 11°N±3°×12°7E±°, h41^{km}±5^{km}, M5.0/61, mB5.5/13, mb4.9/61, MLv5.0/2, Mw(mB)5.0/13*

ISC 14 20:54:26.1±0.5**, 10°.75N**±0°.04×**126°.93E**±0°.07**, h36**^{km}±2^{km}**, n179, σ1^{s}.78**/169**, mb4.6**/82**, MS3.4**/17**, 5C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.69**	**300**	*e*P	**Pn**	**20 54 50.4**	**-2.7**
BESP				*e*S	**Sn**	**20 55 12.4**	**-1.1**
SCPH	**Surigao**	**1.71**	**236**	*e*P	Pn	20 54 59.3	+5.9
SCPH				*i* S	**Sn**	**20 55 15.8**	**+1.8**
PLP	**Palo**	**1.96**	**282**	⇓*e*P	**Pn**	**20 54 54.9**	**-1.9**
PLP				*e*S	**Sn**	**20 55 17.7**	**-2.4**
MSLP	**Maasin**	**2.12**	**254**	*e*P	**Pn**	**20 54 57.2**	**-1.9**
MSLP				*e*S	**Sn**	**20 55 24.3**	**+0.1**
BUTP	**Butuan**	**2.18**	**216**	*e*P	**Pn**	**20 54 58.4**	**-1.5**
BUTP				*e*S	**Sn**	**20 55 25.2**	**-0.6**
OCLP	**Ormoc**	**2.29**	**278**	*e*P	**Pn**	**20 55 00.8**	**-0.6**
OCLP				*e*S	**Sn**	**20 55 27.2**	**-1.3**
CNP	**Catarman**	**2.83**	**309**	*e*P	**Pn**	**20 55 06.4**	**-2.4**
CNP				*e*S	**Sn**	**20 55 40.1**	**-1.5**
LLP	**Lapu-Lapu**	**2.94**	**262**	⇑*e*P	**Pn**	**20 55 09.2**	**-1.1**
LLP				*e*S	**Sn**	**20 55 41.6**	**-2.9**
CGP	**Cagayan de Oro**	**3.17**	**224**	⇓*e*P	**Pn**	**20 55 12.2**	**-1.3**
BUKP	**Musuan**	**3.39**	**213**	*e*P	**Pn**	**20 55 16.2**	**-0.4**
BUKP				*e*S	**Sn**	**20 55 56.0**	**+0.4**
DAV	**Davao City (W)**	**3.89**	**200**	Pn	**Pn**	**20 55 22.7**	**-0.7**
	59nm,0.3s,baz=67,slow=7.7,SNR=2.4						
DAV				LR	LR	20 56 56.3	
	comp=Z,780nm,20.6s,baz=38,slow=42						
PVCP	**Virac**	**3.92**	**317**	*e*P	**Pn**	**20 55 22.1**	**-1.8**
PVCP				*e*S	**Sn**	**20 56 08.5**	**-0.1**
DCPH	**Dipolog City**	**4.13**	**239**	⇑*e*P	**Pn**	**20 55 26.3**	**-0.3**
DCPH				*e*S	**Sn**	**20 56 11.3**	**-2.4**
KCP	**Kidapawan**	**4.13**	**206**	⇑*e*P	**Pn**	**20 55 26.5**	**-0.3**
KCP				*i* S	**Sn**	**20 56 15.1**	**+1.2**
RCP	**Roxas**	**4.18**	**282**	⇑*e*P	**Pn**	**20 55 25.4**	**-2.0**
GUIM	**Jordan**	**4.26**	**269**	*e*P	**Pn**	**20 55 28.2**	**-0.3**
GUIM				*e*S	**Sn**	**20 56 17.6**	**+0.6**
CTBH	**Cotabato--PC H**	**4.39**	**217**	⇓*i*P	**Pn**	**20 55 31.4**	**+1.1**
PAGZ	**Pagadian**	**4.53**	**231**	*e*P	**Pn**	**20 55 32.2**	**0.0**
DDMP	**Don Marcelino,**	**4.77**	**195**	*e*P	**Pn**	**20 55 35.5**	**+0.1**
DDMP				*e*S	**Sn**	**20 56 30.2**	**+0.7**
TGY	**Tagaytay City**	**6.73**	**300**	Pn	**Pn**	**20 56 01.3**	**-1.3**
	19nm,0.3s,baz=198,slow=13,SNR=2.1						
TGY				LR	LR	20 58 10.1	
	comp=Z,87nm,20.7s,baz=246,slow=34						
SGSI	**Sangihe**	**7.15**	**191**	P	**Pn**	**20 56 08.6**	**+0.4**
TNTI	**Ternate**	**9.92**	**177**	*e*Pn	**Pn**	**20 56 45.2**	**-1.0**
TNTI	**Ternate**	**9.92**	**177**	P	**Pn**	**20 56 46.4**	**+0.2**
LBMI	**Labuha**	**11.32**	**177**	P	**Pn**	**20 57 07.1**	**+1.6**
SIJI	**Sorong**	**12.32**	**159**	Pn	**Pn**	**20 57 18.1**	**-1.1**
	0.7nm,0.3s,baz=276,slow=20,SNR=4.5						
LUWI	**Luwuk**	**12.42**	**200**	P	**Pn**	**20 57 22.6**	**+2.1**
APSI	**Ampana**	**12.71**	**205**	P	**Pn**	**20 57 26.1**	**+1.6**
SMKI	**Samarinda**	**14.73**	**222**	P	P	20 57 52.0	-5.6
TTSI	**Tana Toraja**	**15.42**	**208**	P	**P**	**20 58 00.7**	**-4.6**
	66nm,1.5s,855nm						
BNDI	**Bandanaira**	**15.46**	**169**	P	**Pn**	**20 58 00.6**	**-1.0**
SRPI	**Serui, Papua**	**15.59**	**143**	P	**Pn**	**20 58 02.8**	**-0.5**
SPSI	**Sidrap Palu**	**16.26**	**206**	P	**P**	**20 58 12.1**	**-2.5**
	32nm,0.8s,484nm						
BNSI	**Bone**	**16.51**	**205**	P	**P**	**20 58 15.4**	**-2.0**
MTKI	**Muara Teweh, K**	**16.67**	**227**	P	**P**	**20 58 21.1**	**+1.9**
SBUM	**Sibu**	**16.76**	**242**	*e*P	**P**	**20 58 18.2**	**-2.0**
	9.8nm,0.9s						
KAPI	**Kappang**	**17.21**	**205**	Pn	**P**	**20 58 22.7**	**-2.4**
	0.3nm,0.3s,baz=33,slow=8.4,SNR=2.9						
KAPI				LR	LR	21 05 12.0	
	comp=Z,147nm,21.0s,baz=111,slow=38						
BKSI	**Bulukumba**	**17.34**	**203**	P	**P**	**20 58 27.3**	**+0.7**
GUMO	**Guam**	**17.77**	**79**	LR	LR	21 05 06.5	
	comp=Z,74nm,18.6s,baz=188,slow=36						
QIZ	**Qiongzhong**	**18.44**	**299**	P	**Pn**	**20 58 37.9**	**-1.1**
QIZ				S	**Sn**	**21 02 00.4**	**-3.6**
QIZ				LR	LR		
	comp=N,170nm,13.7s						
QIZ				LR	LR		
	comp=E,150nm,10.8s						
STKI	**Sintang**	**18.67**	**236**	P	**Pn**	**20 58 43.7**	**+1.9**
GENI	**Genyem**	**18.69**	**134**	P	**Pn**	**20 58 42.1**	**0.0**
KSM	**Kuching**	**18.90**	**242**	*e*P	**Pn**	**20 58 43.8**	**-0.9**
	42nm,1.1s						
JAY	**Jayapura**	**19.02**	**133**	LR	LR	21 05 50.0	
	comp=Z,115nm,20.5s,baz=359,slow=36						
JAY	**Jayapura**	**19.02**	**133**	P	**Pn**	**20 58 46.4**	**+0.3**
SAUI	**Saumlaki**	**19.11**	**167**	P	**P**	**20 58 44.5**	**-1.6**
MMRI	**Maumere**	**19.81**	**194**	P	**Pn**	**20 58 55.9**	**+0.4**
EDFI	**Ende, Flores**	**20.06**	**195**	P	Pn	20 58 58.9	+0.4
	25nm,0.8s						
PBKI	**Pangkalan Bun**	**20.23**	**229**	P	Pn	20 58 58.8	-1.6
SOEI	**Soe**	**20.54**	**187**	P	Pn	20 59 04.1	0.0
	71nm,1.3s						
BATI	**Baumata**	**21.07**	**189**	P	**P**	**20 59 06.3**	**-1.0**
	39nm,0.6s,baz=90,slow=4.0,SNR=7.8						
BATI	**Baumata**	**21.07**	**189**	P	**P**	**20 59 09.1**	**+1.7**
NJ2	**Nanjing**	**22.48**	**342**	*e*P	P	20 59 27.4	+5.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
DNP	**Denpasar**	**22.54**	**212**	P	**P**	**20 59 23.9**	**+0.7**
JNU	**Nakatsue**	**22.56**	**9**	P	**P**	**20 59 23.2**	**-0.1**
	8.1nm,0.9s,baz=220,slow=14,SNR=10						
JNU				LR	LR	21 09 57.1	
	comp=Z,46nm,18.5s,baz=146,slow=41						
JNU	**Nakatsue**	**22.56**	**9**	*e*P	**P**	**20 59 23.2**	**-0.1**
	20nm,1.0s						
WHN	**Wuhan**	**22.91**	**331**	P	**P**	**20 59 28.3**	**+1.4**
JAGI	**Jajag, Banyuwa**	**22.93**	**214**	P	**P**	**20 59 27.7**	**+0.4**
TPI	**Tanjungpandan**	**23.41**	**236**	P	**P**	**20 59 31.2**	**-0.9**
	29nm,1.1s						
MTN	**Manton Dam**	**23.81**	**170**	*e*P	**P**	**20 59 36.0**	**+0.2**
	36nm,0.8s						
TPRI	**Tanjung Pinang**	**24.30**	**248**	P	**P**	**20 59 41.6**	**+1.1**
PPBI	**Pangkal Pinang**	**24.34**	**239**	P	**P**	**20 59 41.4**	**+0.6**
WOJI	**Wonogiri, Jawa**	**24.38**	**221**	P	**P**	**20 59 41.3**	**+0.1**
SLVN	**Son La**	**24.46**	**298**	*e*P	**P**	**20 59 37.9**	**-4.1**
	8.3nm,1.1s						
MYKOM	**Kota Tinggi**	**24.58**	**250**	*e*P	**P**	**20 59 41.0**	**-2.1**
	22nm,1.1s						
GYA	**Guiyang**	**24.70**	**312**	P	**P**	**20 59 45.8**	**+1.6**
GYA				PP	**PnPn**	**21 00 23.8**	**+6.9**
GYA				S	**S**	**21 04 07.4**	**+3.6**
GYA				sS	sS	21 04 21.8	+4.0
GYA				SS	**SnSn**	**21 05 01.8**	**+10**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=N,110nm,10.2s						
GYA				LR	LR		
	comp=E,100nm,11.5s						
CHAI	**Chaiyaphum**	**24.79**	**285**	P	**P**	**20 59 46.6**	**+1.7**
	20µm,0.9s						
JHJ	**Hachijo jima 2**	**25.21**	**26**	LR	LR	21 07 50.0	
	comp=Z,101nm,21.5s,baz=338,slow=32						
PBKT	**Sadao Pong**	**25.86**	**286**	P	P	21 00 01.1	+6.5
	3.4nm,1.1s						
PMBI	**Palembang**	**25.90**	**240**	P	**P**	**20 59 57.0**	**+2.0**
LEM	**Lembang**	**25.96**	**229**	LR	LR	21 11 36.1	
	comp=Z,143nm,18.1s,baz=47,slow=40						
LEM	**Lembang**	**25.96**	**229**	P	**P**	**20 59 56.4**	**+0.6**
CMJI	**Cimerak**	**26.02**	**226**	P	**P**	**20 59 57.3**	**+1.2**
JMBI	**JAMBI**	**26.23**	**243**	P	**P**	**20 59 59.5**	**+1.5**
CISI	**Cisompet, Garu**	**26.31**	**227**	P	**P**	**20 59 59.6**	**+0.8**
IPM	**Ipoh**	**26.40**	**258**	*e*P	**P**	**20 59 57.8**	**-1.8**
	21nm,1.1s						
KS15	**Wonju Array Si**	**26.59**	**2**	*e*P	**P**	**21 00 02.8**	**+1.8**
KSRS	**Korea Array**	**26.61**	**2**	P	**P**	**21 00 02.8**	**+1.7**
	1.3nm,0.8s,baz=170,slow=8.7,SNR=3.8						
KSRS				LR	LR	21 11 47.5	
	comp=Z,96nm,19.1s,baz=175,slow=39						
SBJI	**Serang**	**26.63**	**232**	P	**P**	**21 00 01.4**	**-0.2**
	126nm,1.3s,2µm						
RGRI	**Rengat**	**26.82**	**247**	P	**P**	**21 00 02.7**	**-0.6**
SKJI	**Sukabumi**	**26.87**	**230**	P	**P**	**21 00 05.8**	**+2.0**
BLSI	**Bandar Lampung**	**26.87**	**234**	P	**P**	**21 00 04.9**	**+1.1**
KLI	**Kotabumi**	**26.89**	**236**	P	**P**	**21 00 05.4**	**+1.4**
KLSI		**26.90**	**236**	P	**P**	**21 00 05.7**	**+1.7**
	33nm,1.7s						
SURA	**Surathani**	**26.93**	**269**	P	P	21 00 20.5	+16
KMI	**Kunming**	**27.02**	**305**	P	**P**	**21 00 05.3**	**0.0**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDSI	**Maura Dua**	**27.24**	**237**	P	**P**	**21 00 08.8**	**+1.7**
CGJI	**Cibinong**	**27.28**	**232**	P	**P**	**21 00 08.0**	**+0.6**
	28nm,1.2s						
LHSI	**Lahat**	**27.43**	**239**	P	**P**	**21 00 10.1**	**+1.3**
PAYA	**Payao**	**27.46**	**291**	P	**P**	**21 00 08.7**	**-0.4**
	18µm,0.8s,607µm						
KASI	**Kota Agung**	**27.57**	**235**	P	**P**	**21 00 11.2**	**+1.2**
MJAR	**Matsushiro Arr**	**27.64**	**20**	P	**P**	**21 00 11.3**	**+0.9**
	2.8nm,1.0s,baz=193,slow=8.8,SNR=5.7						
MJAR				LR	LR	21 09 37.5	
	comp=Z,78nm,21.5s,baz=195,slow=33						
MAJO	**Matsushiro**	**27.64**	**20**	*e*P	**P**	**21 00 11.3**	**+0.9**
CM31	**Chiang Mai Arr**	**28.11**	**289**	*e*P	**P**	**21 00 12.8**	**-2.1**
	4.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.11**	**289**	P	**P**	**21 00 12.8**	**-2.1**
	2.5nm,0.8s,baz=102,slow=7.1,SNR=13						
CMAR				LR	LR	21 12 07.7	
	comp=Z,51nm,18.1s,baz=145,slow=38						
XAN	**Xi'an**	**28.44**	**327**	P	**P**	**21 00 18.3**	**+0.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,94nm,3.7s						
PSI	**Prapat**	**28.88**	**256**	P	**P**	**21 00 21.6**	**-0.3**
	2.9nm,0.5s,baz=58,slow=15,SNR=3.7						
PSI	**Prapat**	**28.88**	**256**	*e*P	**P**	**21 00 19.0**	**-2.9**
	8.9nm,1.0s						
MNSI	**Mandailing Nat**	**28.91**	**252**	P	**P**	**21 00 22.4**	**+0.3**
COEN	**Coen**	**29.36**	**146**	*e*P	**P**	**21 00 24.0**	**-1.9**
	9.9nm,0.9s						
CD2	**Chengdu**	**29.40**	**316**	P	**P**	**21 00 26.5**	**+0.2**
CD2				S	S	21 05 21.8	+3.9
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,90nm,4.4s						
CD2				LR	LR		
	comp=E,240nm,16.4s						
CD2				LR	LR		
	comp=Z,310nm,17.8s						
GSI	**Gunungsitoli**	**30.62**	**254**	*e*P	**P**	**21 00 35.9**	**-1.4**
	15nm,0.8s						
WR1	**Warramunga Arr**	**31.36**	**167**	*e*P	**P**	**21 00 42.1**	**-1.5**
WR1				*e*PcP	**PcP**	**21 03 37.7**	**+0.7**
WRA	**Warramunga Arr**	**31.36**	**167**	P	**P**	**21 00 42.1**	**-1.5**
	1.5nm,0.6s,baz=356,slow=10,SNR=6.9						
WRA				PcP	**PcP**	**21 03 37.7**	**+0.7**
	1.5nm,0.5s,baz=331,slow=2.6,SNR=6.9						
WB2	**Warramunga Arr**	**31.36**	**166**	*e*P	**P**	**21 00 42.3**	**-1.3**
	6.6nm,1.0s						
LZH	**Lanzhou**	**32.76**	**324**	*e*P	P	21 00 58.3	+2.3
LZH				pP	sP	21 01 10.1	+2.7
LZH				sP	pwP	21 01 15.5	+2.7
LZH				*e*PP	**PP**	**21 02 05.6**	**-4.9**
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
LZH				pmax	pmax		
	comp=Z,95nm,4.1s						
LZH				LR	LR		
	comp=N,180nm,14.1s						
LZH				LR	LR		
	comp=E,160nm,14.1s						
LZH				LR	LR		
	comp=Z,180nm,16.3s						
HHC	**Hu-ho-hao-te**	**32.91**	**338**	P	P	21 01 01.8	+4.7
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,46nm,6.0s						
USRK	**Ussuriysk Ar.**	**33.62**	**7**	P	P	21 01 05.1	+2.0
	3.7nm,0.7s,baz=198,slow=9.5,SNR=9.0						
USRK				LR	LR	21 13 35.2	
	comp=Z,44nm,19.3s,baz=192,slow=34						
AS31	**Alice Springs**	**34.88**	**169**	*e*P	**P**	**21 01 13.6**	**-0.7**
	0.9nm,0.6s						
AS31				*e*PcP	**PcP**	**21 03 47.5**	**+0.7**
ASAR	**Alice Springs**	**34.88**	**169**	P	**P**	**21 01 13.4**	**-0.9**
	1.8nm,0.6s,baz=351,slow=6.8,SNR=30						
ASAR				PcP	**PcP**	**21 03 47.5**	**+0.7**
	1.4nm,0.6s,baz=352,slow=2.4,SNR=12						
ASAR				LR	LR	21 18 38.1	
	comp=Z,29nm,20.1s,baz=123,slow=42						
GIRL	**Giralia**	**35.44**	**200**	*e*P	**P**	**21 01 17.9**	**-1.1**
	37nm,1.1s						
ASAJ	**Asahikawa**	**35.91**	**19**	P	P	21 01 26.6	+3.8
	2.4nm,0.8s,baz=155,slow=19,SNR=3.2						
SHL	**Shillong**	**36.27**	**299**	*e*P	**P**	**21 01 24.0**	**-2.5**
GTA	**Gaotai**	**37.36**	**324**	⇑P	P	21 01 37.5	+1.9
GTA				pP	sP	21 01 48.0	+0.9
GTA				sP	pwP	21 01 52.3	-0.2
GTA				PcP	**PcP**	**21 03 56.3**	**+2.1**
GTA				S	**S**	**21 07 22.8**	**+1.5**
GTA				pmax	pmax		
	comp=Z,17nm,1.1s						
GTA				pmax	pmax		
	comp=Z,68nm,6.8s						
GTA				LR	LR		
	comp=N,64nm,15.9s						

GTA				LR	LR		
	comp=E,84nm,14.3s						
KLR	**Kul'dur**	38.57	5	P	P	21 01 47.2	+1.7
	3.0nm,0.6s,baz=227,slow=4.1,SNR=11						
SONM	**Songino Array**	40.80	339	P	P	21 02 04.9	+0.7
	1.4nm,0.7s,baz=156,slow=9.1,SNR=12						
FORT	**Forrest**	41.30	179	eP	P	21 02 08.2	-0.1
	19nm,1.1s						
BBOO	**Buckleboo**	44.18	169	eP	P	21 02 32.2	+0.5
	21nm,0.9s						
NWAO	**Narrogin (SRO)**	44.40	192	eP	P	21 02 33.1	-0.3
	23nm,1.0s						
STKA	**Stephens Creek**	44.65	162	P	P	21 02 35.0	-0.4
	2.3nm,0.5s,baz=339,slow=8.3,SNR=9.8						
STKA	**Stephens Creek**	44.65	162	eP	P	21 02 35.0	-0.4
	1.4nm,0.9s						
WMQ	**Urumqi**	47.25	321	eP	P	21 02 57.5	+1.6
WMQ				pP	sP	21 03 09.5	+2.0
WMQ				pmax	pmax		
	comp=Z,35nm,3.7s						
WMQ				LR	LR		
	comp=N,150nm,24.5s						
WMQ				LR	LR		
	comp=E,260nm,26.5s						
WMQ				LR	LR		
	comp=Z,79nm,20.9s						
ARMA	**Armidale**	47.32	151	eP	P	21 02 55.4	-1.3
	3.8nm,1.0s						
PETK	**Petropavlovsk-**	48.94	24	P	P	21 03 11.2	+2.5
	4.3nm,0.7s,baz=187,slow=5.1,SNR=7.9						
PETK				LR	LR	21 24 48.2	
	comp=Z,39nm,18.9s,baz=214,slow=37						
PEA1	**Petropavlovsk-**	48.95	24	eP	P	21 03 11.2	+2.5
TOO	**Toolangi**	51.12	161	eP	P	21 03 26.3	+0.8
	6.5nm,1.0s						
MK31	**Makanchi Array**	52.04	322	eP	P	21 03 33.8	+1.5
	13nm,0.9s						
MKAR	**Makanchi Array**	52.04	322	P	P	21 03 33.7	+1.4
	12nm,0.8s,baz=120,slow=8.2,SNR=104						
MAKZ	**Makanchi**	52.24	322	eP	P	21 03 34.7	+1.0
	23nm,1.0s						
KSH	**Kashi**	53.40	312	P	P	21 03 45.1	+2.5
KSH				pP	pwP	21 03 59.0	-1.0
KSH				PcP	PcP	21 04 52.8	+3.2
KSH				PP	PP	21 05 48.0	+4.9
KSH				S	S	21 11 11.8	-0.7
KSH				ScS	ScS	21 13 28.3	-1.4
KSH				SS	SKiKP	21 14 49.9	-6.6
KSH				pmax	pmax		
	comp=Z,19nm,1.2s						
KSH				pmax	pmax		
	comp=Z,90nm,5.6s						
KSH				LR	LR		
	comp=N,310nm,15.9s						
KSH				LR	LR		
	comp=E,130nm,8.5s						
KSH				LR	LR		
	comp=Z,130nm,6.2s						
KDJ	**Kajisay**	53.40	315	eP	P	21 03 43.7	+1.1
	12nm,0.9s						
NRN	**Naryn**	53.99	314	eP	P	21 03 46.7	-0.4
	10nm,0.9s						
ZAA0	**Zalesovo Array**	54.52	331	eP	P	21 03 51.1	+0.8
	6.8nm,1.0s						
ZALV	**Zalesovo Beam**	54.52	331	P	P	21 03 50.5	+0.2
	4.0nm,0.7s,baz=112,slow=7.7,SNR=12						
KURK	**Kurchatov**	56.05	325	eP	P	21 04 02.4	+1.0
	30nm,1.1s						
ARSB	**Arslanbob**	56.12	313	eP	P	21 04 03.0	+0.7
	19nm,1.1s						
KBL	**Kabul**	57.60	304	eP	P	21 04 12.8	-0.2
	3.9nm,0.8s						
TIXI	**Tiksi**	60.87	1	eP	P	21 04 36.1	+1.5
	5.6nm,0.9s						
BRVK	**Borovoye**	61.72	325	eP	P	21 04 41.7	+0.9
	11nm,0.8s						
GEYT	**Alibeck**	66.78	307	P	P	21 05 14.7	+0.5
	2.6nm,0.9s,baz=151,slow=3.4,SNR=6.5						
GEYT				LR	LR	21 36 37.2	
	comp=Z,21nm,21.1s,baz=125,slow=38						
ARU	**Arti**	69.19	326	eP	P	21 05 28.9	0.0
	6.5nm,0.6s						
CASY	**Casey**	77.76	187	eP	P	21 06 19.6	+0.6
	9.9nm,0.8s						
RAYN	**Ar Rayn**	77.99	292	eP	P	21 06 21.0	-0.4
	3.8nm,1.0s						
KBZ	**Khabaz**	78.36	313	P	P	21 06 23.1	+0.1
	3.2nm,0.9s,baz=68,slow=9.2,SNR=7.1						
ILAR	**Eielson Array**	78.73	26	P	P	21 06 25.4	+0.8
	0.6nm,0.8s,baz=241,slow=5.6,SNR=5.8						
HMT	**Hamilton**	80.16	30	eP	P	21 06 38.0	+5.5
	5.5nm,0.7s						
MENT	**Mentasta**	80.22	28	eP	P	21 06 35.3	+2.5
	4.2nm,0.7s						
DAWY	**Dawson**	82.03	26	eP	P	21 06 47.0	+4.6
	4.3nm,1.1s						
ARCES	**ARCESS Array B**	83.97	340	P	P	21 06 52.9	+0.5
	4.5nm,0.9s,baz=59,slow=4.7,SNR=9.6						
ASF	**Jabal al Asfar**	84.39	302	P	P	21 06 56.5	+1.1
	1.3nm,0.5s,baz=212,slow=3.0,SNR=4.3						
MMAI	**Mount Meron Ar**	85.50	303	P	P	21 07 01.7	+0.8
	2.0nm,0.7s,baz=68,slow=7.6,SNR=9.5						
BRTR	**Keskin Array B**	85.73	309	P	P	21 07 01.8	-0.2
	2.7nm,0.7s,baz=112,slow=4.5,SNR=25						
FINES	**FINESS Array B**	85.78	332	P	P	21 07 02.0	+0.5
	2.5nm,0.4s,baz=81,slow=4.3,SNR=30						
AKASG	**Malin Array Be**	86.60	321	P	P	21 07 05.8	-0.1
	3.4nm,0.9s,baz=64,slow=4.8,SNR=18						
CSS	**Mathiatis**	86.84	305	eP	P	21 07 07.2	-0.2
	8.4nm,0.8s						
BUR08	**Bucovina Ar. S**	89.92	319	eP	P	21 07 22.6	+0.8
	4.7nm,0.8s						
VNDA	**Vanda**	90.32	173	P	P	21 07 23.1	+0.3
	2.6nm,1.1s,baz=322,slow=5.3,SNR=7.6						
MAW	**Mawson**	90.36	200	P	P	21 07 22.7	-0.4
	2.1nm,0.6s,baz=79,slow=6.2,SNR=4.1						
MAW	**Mawson**	90.36	200	eP	P	21 07 22.7	-0.4
	0.7nm,0.8s						
KOLS	**Kolonicke sedl**	91.41	320	eP	P	21 07 29.7	+1.1
NB2	**NORSAR Subarra**	92.62	334	P	P	21 07 33.3	-0.7
	comp=Z,0.6nm,0.7s,baz=68,slow=5.3						
NOA	**NORSAR Array B**	92.62	334	P	P	21 07 33.4	-0.7
	comp=Z,0.9nm,0.7s,baz=67,slow=6.7,SNR=4.7						
NOA				LR	LR	21 56 22.1	
	comp=Z,15nm,18.2s,baz=300,slow=40						
VYHS	**Vyhne**	93.71	321	eP	P	21 07 40.1	+0.9
CONA	**Conrad Observa**	95.76	321	ePcP	P	21 07 49.8	+1.0
	comp=Z,3.9nm,1.1s						
ARSA	**Arzberg**	96.24	320	ePcP	P	21 07 51.7	+0.8
	comp=Z,2.5nm,0.9s						
GEC2	**GERESS Array S**	96.71	322	eP	P	21 07 53.1	0.0
	comp=Z,1.8nm,1.1s						
GERES	**GERESS Array B**	96.71	322	P	P	21 07 53.1	0.0
	comp=Z,0.5nm,0.8s,baz=46,slow=3.9,SNR=5.9						
SOKA	**Soboth**	96.77	320	ePcP	P	21 07 53.7	+0.3
	comp=Z,2.5nm,0.8s						
MOA	**Molln**	96.78	321	ePcP	P	21 07 54.6	+1.2
	comp=Z,3.3nm,1.1s						
KBA	**Koelnbreinsper**	97.67	321	eP	Pdif	21 07 55.5	-2.0
	comp=Z,0.9nm,0.5s						
MYKA	**Terra Mystica**	97.67	320	PcP	Pdif	21 07 58.2	+0.7
	comp=Z,3.8nm,0.9s						
ABTA	**Abfaltersbach**	98.33	321	ePcP	Pdif	21 08 01.4	+1.0
	comp=Z,2.8nm,1.1s						
WTTA	**Wattenberg**	98.64	321	ePdiff	Pdif	21 08 02.5	+0.6
	comp=Z,3.3nm,0.9s						
WATA	**Walderalm**	98.65	322	ePdiff	Pdif	21 08 02.6	+0.7
	comp=Z,1.7nm,0.9s						
SQTA	**Sankt Quirin**	98.92	322	Pdiff	Pdif	21 08 02.2	-0.9
	comp=Z,1.7nm,1.0s						
MOTA	**Moosalm**	98.93	322	ePdiff	Pdif	21 08 04.5	+1.3
	comp=Z,1.0nm,0.8s						
DAVA	**Damuels**	99.70	322	Pdiff	Pdif	21 08 07.8	+1.2
	comp=Z,4.7nm,1.3s						
DAVOX	**Davos/Dischmat**	99.93	322	P	Pdif	21 08 08.4	+0.7
	comp=Z,0.5nm,0.4s,baz=16,slow=8.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	120.69	292	PKP	PKiKP	21 13 15.4	0.0
	comp=Z,0.9nm,0.8s,baz=79,slow=1.8,SNR=4.7						
TOA1	**Torodi Ar. Sit**	120.69	292	ePKPdf	PKiKP	21 13 15.4	0.0

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*ISCJB **14** 21:08:27.4±0.3, 38.°99N±0.°01×26.°02E±0.°02, h11^{km}±2^{km}, mb3.3/3, MS3.1/5, Error ellipse: s-maj=2.3km s-min=2.1km az=6.7*

*IDC **14** 21:08:27.4±1.1, 38.°90N×26.°19E, h0^{km}, mb3.5/3, mb1 3.6/9, mb1mx3.4/43, mbtmp3.5/9, ML3.5/6, MS3.0/10, Ms1 3.0/10, ms1mx2.7/45, Error ellipse: s-maj=15.9km s-min=14.3km az=82.0*

*ATH **14** 21:08:27.2, 38.°97N×26.°06E, h26^{km}, ML3.7/5, Error ellipse: s-maj=1.5km s-min=0.8km az=96.0*

*DDA **14** 21:08:27.2, 38.°98N×26.°10E, h27^{km}, ML3.7*

*ISK **14** 21:08:27.6, 38.°99N×26.°07E, h8^{km}, ML3.8/32*

*THE **14** 21:08:28.1, 38.°98N×26.°05E, h7^{km}, ML3.4/9, Error ellipse: s-maj=1.0km s-min=0.4km az=67.0*

*BEO **14** 21:08:28.9±0.6, 39.°10N×26.°33E, h10^{km}, ML3.8/5*

ISC 14 21:08:28.1±0.9**, 38.°98N**±0.°01×**26.°07E**±0.°02**, h11**^{km}±7^{km}**, n214, σ0.^{s}98**/238**, mb3.5**/3**, MS3.0**/5**, 32C-7D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	0.29	324	PG	Pg	21 08 33.8	-0.2
SIGR				SG	Sg	21 08 38.4	+0.5
SIGR	**SIGRI**	0.29	324	P	Pg	21 08 33.7	-0.2
SIGR				S	Sg	21 08 38.3	+0.4
	22μm,0.3s						
SIGR	**SIGRI**	0.29	324	P	Pg	21 08 33.7	-0.2
SIGR				S	Sg	21 08 38.6	+0.7
SIGR				AML	AML	21 08 39.0	
	comp=E,56329μm,0.4s						
SIGR				AML	AML	21 08 39.2	
	comp=N,32807μm,0.3s						
PRK	**Paraskevi**	0.31	30	P	Pb	21 08 35.0	-0.6
PRK				S	Sb	21 08 39.2	-1.5
	comp=N,26μm,0.4s						
PRK	**Paraskevi**	0.31	30	P	Pb	21 08 35.0	-0.6
PRK				S	Sb	21 08 40.2	-0.5
PRK				AML	AML	21 08 40.6	
	comp=E,49058μm,0.4s						
PRK				AML	AML	21 08 40.7	
	comp=N,57076μm,0.4s						
KRBN	**Karaburun**	0.54	135	PG	Pb	21 08 38.8	-0.7
FOCM	**Foa**	0.58	117	PG	Pb	21 08 39.7	-0.5
AYVA	**Ayvalik**	0.58	55	i P	Pb	21 08 40.0	-0.3
AYVA				i S	Sb	21 08 47.6	-1.0
AYVA				IAML_P			
	comp=Z,14μm,0.1s						
CHOS	**Chios island**	0.59	181	PG	Pg	21 08 39.4	-0.2
CHOS	**Chios island**	0.59	181	P	Pg	21 08 39.0	-0.6
CHOS				S	Sb	21 08 48.0	-0.8
	comp=Z,4μm,0.5s						
CHOS	**Chios island**	0.59	181	P	Pg	21 08 39.1	-0.4
CHOS				S	Sb	21 08 47.8	-1.0
CHOS				AML	AML	21 08 52.9	
	comp=E,10789μm,0.4s						
CHOS				AML	AML	21 08 54.4	
	comp=N,6610μm,0.6s						
PSRA	**Psara**	0.59	223	P	Pb	21 08 40.1	-0.3
PSRA				S	Sg	21 08 48.0	+0.7
PSRA				AML	AML	21 08 53.1	
	comp=N,10751μm,0.3s						
PSRA				AML	AML	21 08 54.2	
	comp=E,13937μm,0.4s						
DKL	**Dikili**	0.66	82	PG	Pb	21 08 40.6	-0.9
CESE	**eme**	0.67	165	PG	Pb	21 08 41.5	-0.2
URLA	**Izmir**	0.74	146	PG	Pg	21 08 41.9	-0.5
URLA	**Izmir**	0.74	146	i P	Pg	21 08 42.0	-0.5
URLA				i S	Sn	21 08 55.2	-0.5
ZEDA	**zmir-Bergama**	0.78	90	i P	Pb	21 08 43.4	-0.3
ZEDA				IAML_P			
	comp=Z,35μm,0.2s						
BAYC	**CANAKKALE_Bayr**	0.85	26	i P	Pb	21 08 44.3	-0.5
BAYC				i S	Sn	21 08 59.0	+0.6
BAYC				IAML_P			
	comp=Z,13μm,0.1s						
BOZC	**Bozcaada**	0.86	359	PG	Pg	21 08 44.1	-0.7
BOZC	**Bozcaada**	0.86	359	i P	Pb	21 08 45.0	-0.1
BOZC				i S	Sb	21 08 56.8	+0.1
BOZC				IAML_P			
	comp=Z,11μm,0.2s						
EZN	**Ezine**	0.87	13	PG	Pg	21 08 44.2	-0.6
EZN	**Ezine**	0.87	13	P	Pg	21 08 44.0	-0.9
EZN				S	Sb	21 08 56.6	-0.2
EZN	**Ezine**	0.87	13	⇑iP	Pg	21 08 44.3	-0.6
EZN				S	Sb	21 08 56.8	0.0
BLCB	**Balcova**	0.96	128	PG	Pn	21 08 46.7	-0.8
GMLD	**Gumuldur**	1.12	143	PN	Pn	21 08 49.5	-0.1
DGB	**zmir**	1.12	145	i P	Pb	21 08 48.7	-0.7
DGB				i S	Sb	21 09 03.4	-0.6
DGB				IAML_P			
	comp=Z,2μm,0.2s						
LIA	**Limnos Island**	1.15	323	P	Pb	21 08 49.4	-0.5
LIA				S	Sg	21 09 05.2	+0.1
	comp=Z,3μm,0.7s						
LIA	**Limnos Island**	1.15	323	P	Pb	21 08 49.5	-0.4
LIA				S	Sn	21 09 05.4	-0.3
LIA				AML	AML	21 09 11.3	
	comp=E,5612μm,0.6s						
LIA				AML	AML	21 09 12.3	
	comp=N,6373μm,0.7s						
SKY	**Skiros Island**	1.19	266	P	Pn	21 08 48.8	-1.9
STEP	**BALIKESIR_Sava**	1.34	72	i P	Pb	21 08 52.5	-0.7
STEP				i S	Sg	21 09 11.9	+0.7
STEP				IAML_P			
	comp=Z,3μm,0.1s						
AKS	**Akhisar**	1.36	94	PN	Pg	21 08 53.4	-0.8
AKHS	**Akhisar**	1.36	94	i P	Pg	21 08 53.2	-1.0
AKHS				i S	Sg	21 09 13.2	+1.4
AKHS				IAML_P			
	comp=Z,5μm,0.3s						
SMG	**Samos**	1.40	154	P	Pn	21 08 53.3	-0.3
SMG				S	Sg	21 09 12.9	-0.3
	comp=Z,1μm,0.4s						
SMG	**Samos**	1.40	154	P	Pn	21 08 53.2	-0.4
GELI	**Tayfur-Gelibol**	1.45	12	PN	Pb	21 08 54.4	-0.7
GOMA	**Golmarmara-Man**	1.47	100	PN	Pb	21 08 54.9	-0.4
LPK	**Lapseki**	1.49	21	PN	Pb	21 08 55.1	-0.7
SMTH	**Samothraki Isl**	1.55	344	P	Pn	21 08 54.8	-0.8
SMTH				S	Sb	21 09 16.4	0.0
	comp=Z,598nm,0.6s						
SMTH	**Samothraki Isl**	1.55	344	P	Pn	21 08 55.2	-0.4
BALB	**Balikesir**	1.55	64	PN	Pn	21 08 55.5	-0.1
GCAM	**G?zelcaml?**	1.57	144	PN	Pb	21 08 56.2	-0.9
GCAM	**G?zelcaml?**	1.57	144	i P	Pg	21 08 57.7	-0.5
KARY	**Karystos**	1.59	234	P	Pn	21 08 55.3	-0.9
TNSA	**Tinos**	1.60	207	P	Pn	21 08 55.4	-0.9
GONE	**Gonen-Balikesi**	1.64	49	PN	Pb	21 08 57.3	-1.0
ENEZ	**Enez**	1.76	2	PN	Pn	21 08 58.7	+0.3
AYDB	**Zeytinkoy-Aydi**	1.76	125	PN	Pb	21 08 59.3	-1.1
EREA	**Eretria**	1.77	252	P	Pn	21 08 57.9	-0.7
EREA				S	Sn	21 09 20.2	-0.9
	comp=Z,512nm,1.2s						
EREA	**Eretria**	1.77	252	P	Pn	21 08 57.9	-0.7
DION	**Dionisos Attik**	1.90	243	P	Pn	21 08 59.5	-0.9
DION	**Dionisos Attik**	1.90	243	P	Pn	21 08 59.6	-0.9
KESN	**Edirne-Kesan**	1.90	14	i P	Pb	21 09 01.9	-1.2
KESN				i S	Sn	21 09 25.0	0.0
KESN				IAML_P			
	comp=Z,925nm,0.1s						
RKY	**Sarkoy-Tekirda**	1.91	26	PN	Pn	21 09 01.0	+0.4
SART	**Tekirdag**	1.91	26	i P	Pb	21 09 01.6	-1.4
SART				i S	Sg	21 09 28.6	-0.9
SART				IAML_P			
	comp=Z,4μm,0.3s						
ALN	**Alexandroupoli**	1.92	359	PN	Pn	21 09 00.9	+0.3
ALN	**Alexandroupoli**	1.92	359	P	Pn	21 09 00.7	+0.1
ALN				S	Sn	21 09 24.1	-0.6
	comp=Z,332nm,0.5s						
ALN	**Alexandroupoli**	1.92	359	P	Pn	21 09 00.6	-0.1
THAS	**Thassos island**	1.93	328	P	Pn	21 09 00.4	-0.5
THAS	**Thassos island**	1.93	328	P	Pn	21 09 00.4	-0.5
AYDN	**Tasoluk**	1.94	132	i P	Pn	21 09 01.5	+0.6
EDC	**Edincik**	1.94	45	PN	Pn	21 09 01.4	+0.4
APE	**Apeiranthos**	1.95	193	P	Pn	21 08 59.7	-1.5
APE	**Apeiranthos**	1.95	193	⇓iP	Pn	21 09 00.2	-1.0
APE	**Apeiranthos**	1.95	193	P	Pn	21 08 59.7	-1.5
MRKA	**Markates**	1.96	263	P	Pn	21 09 00.6	-0.6
MRKA	**Markates**	1.96	263	P	Pn	21 09 00.7	-0.6
DURS	**Dursunbey**	1.96	71	i P	Pn	21 09 01.7	+0.3
DURS				i S	Sb	21 09 27.1	-1.3
DURS				IAML_P			
	comp=Z,3μm,0.4s						
PTL	**Penteli**	1.96	243	P	Pn	21 09 00.5	-0.8
PTL	**Penteli**	1.96	243	P	Pn	21 09 00.5	-0.8
MANT	**Manisa**	2.00	103	i P	Pb	21 09 02.8	-1.9
SKIA	**Skiathos**	2.04	276	P	Pn	21 09 02.0	-0.3
SKIA	**Skiathos**	2.04	276	P	Pn	21 09 01.8	-0.5
KULA	**Kula-Manisa**	2.08	102	PN	Pb	21 09 03.8	-2.0
OUR	**Ouranopolis**	2.11	311	PN	Pn	21 09 03.6	+0.4
OUR	**Ouranopolis**	2.11	311	P	Pn	21 09 03.2	0.0
OUR	**Ouranopolis**	2.11	311	P	Pn	21 09 03.3	0.0
VLY	**Voula,Athens**	2.11	239	P	Pn	21 09 02.2	-1.1
VLY				S	Sn	21 09 30.5	+0.9
	comp=Z,415nm,0.8s						
VLY	**Voula,Athens**	2.11	239	P	Pn	21 09 02.3	-1.1
AMGA	**Amorgos Island**	2.15	184	P	Pn	21 09 02.6	-1.2
KCTX	**Karacabey (Bur**	2.18	53	PN	Pn	21 09 04.8	+0.5
RDO	**Rodhopi**	2.21	349	PN	Pn	21 09 05.0	+0.4
RDO	**Rodhopi**	2.21	349	P	Pn	21 09 04.3	-0.3
RDO	**Rodhopi**	2.21	349	P	Pn	21 09 04.9	+0.4
SERI	**Serifos**	2.21	215	P	Pn	21 09 04.2	-0.4
SERI	**Serifos**	2.21	215	P	Pn	21 09 04.3	-0.3
NEO	**Neokhori**	2.24	279	P	Pn	21 09 04.7	-0.4
XOR	**Xorichti**	2.27	281	P	Pn	21 09 05.0	-0.6
TKR	**Tekirdag**	2.30	29	PN	Pn	21 09 06.3	+0.4
VIL2	**Platees**	2.33	252	P	Pn	21 09 05.6	-0.7
KAVA	**Kavala**	2.35	330	P	Pn	21 09 06.1	-0.4
KVLA	**Kavala**	2.35	327	P	Pn	21 09 06.5	-0.1
ATAL	**Atalanti**	2.40	264	P	Pn	21 09 06.8	-0.5
ORLT	**Orhaneli**	2.43	63	PN	Pn	21 09 08.3	+0.6
CRLT	**Corlu**	2.50	30	PN	Pn	21 09 09.4	+0.8
YER	**Yerkesik**	2.54	136	P	Pn	21 09 09.3	+0.1
DAT	**Datca**	2.54	152	i P	Pn	21 09 09.7	+0.4
MDNY	**Mudanya-Bursa**	2.58	56	PN	Pn	21 09 10.6	+0.9
MHLA	**Plaka, Milos I**	2.58	211	P	Pn	21 09 09.9	+0.1
ULDT	**Uludag**	2.64	63	i P	Pn	21 09 11.3	+0.6
MHLO	**Agia Marina, M**	2.64	211	P	Pn	21 09 09.2	-1.4
GDZ	**Gediz**	2.66	87	i P	Pn	21 09 12.4	+1.5
DID	**Didima**	2.67	238	P	Pn	21 09 10.0	-1.0
TVSB	**Tavsanli**	2.67	79	PN	Pn	21 09 12.3	+1.2
EPID	**Epidavros**	2.69	241	P	Pn	21 09 10.7	-0.6
KDZ	**Kurdzhali**	2.72	350	PN	Pn	21 09 12.5	+0.8
KHAL	**Karahalli**	2.74	102	i P	Pg	21 09 19.6	-1.1
HORT	**Hortiatis**	2.81	306	PN	Pn	21 09 13.7	+0.8
HORT	**Hortiatis**	2.81	306	P	Pn	21 09 13.4	+0.5
ELBA	**Catalca**	2.82	39	i P	Pn	21 09 13.9	+0.8
ELBA				IAML_P			
	comp=Z,2μm,0.1s						
DSF	**Desfina**	2.83	260	P	Pn	21 09 12.6	-0.7
SRS	**Serrai**	2.86	319	P	Pn	21 09 13.7	0.0
SRS	**Serrai**	2.86	319	P	Pn	21 09 13.6	0.0
PHSR	**Pinarhisar**	2.87	22	PN	Pn	21 09 14.6	+0.8
PHSR	**Pinarhisar**	2.87	22	⇓iP	Pn	21 09 14.2	+0.4
KIRK	**Kırklareli**	2.91	15	i P	Pn	21 09 14.9	+0.6
KIRK				IAML_P			
	comp=Z,549nm,0.1s						
EDRB	**Edirne**	2.91	10	PN	Pn	21 09 14.6	+0.3
EDRB	**Edirne**	2.91	10	P	Pn	21 09 14.1	-0.2
NVR	**Nevrokopi**	2.91	325	P	Pn	21 09 14.5	+0.1
NVR	**Nevrokopi**	2.91	325	P	Pn	21 09 14.5	+0.1
CTKS	**Kestanelik-??a**	2.93	39	PN	Pn	21 09 15.3	+0.8
DALY	**Dalyan (Mula)**	2.97	136	i P	Pg	21 09 25.9	+0.9
DALY				i S	Sg	21 10 06.0	+2.6
LIT	**Litokhoron**	2.99	293	P	Pn	21 09 16.0	+0.6
YLV	**Yalova**	3.00	57	PN	Pn	21 09 16.6	+1.0
YLV	**Yalova**	3.00	57	⇑iP	Pn	21 09 16.0	+0.4
BUY	**Buyukada**	3.00	50	PN	Pn	21 09 16.3	+0.8
BUY	**Buyukada**	3.00	50	i P	Pg	21 09 24.2	-1.4
CTYL	**Yalikoy Yolu**	3.02	34	PN	Pn	21 09 16.6	+0.9
CTYL	**Yalikoy Yolu**	3.02	34	⇑iP	Pn	21 09 15.1	-0.6
KAVV	**Kandilli-Istan**	3.10	47	PN	Pn	21 09 17.9	+1.0
ISK	**Istanbul-Kandi**	3.10	47	PN	Pn	21 09 18.1	+1.2
KALE	**Kalithea**	3.13	260	P	Pn	21 09 17.6	+0.2
THL	**Klokotos Trika**	3.21	282	P	Pn	21 09 19.6	+1.2
KLV	**Kalavryta, Ach**	3.22	254	P	Pn	21 09 18.4	-0.2
KLYT	**Kilyos**	3.22	44	PN	Pn	21 09 19.3	+0.8
KLYT	**Kilyos**	3.22	44	⇑iP	Pn	21 09 18.0	-0.5
KNT	**Kendrikon**	3.27	313	P	Pn	21 09 20.0	+0.7
KNT	**Kendrikon**	3.27	313	P	Pn	21 09 20.2	+0.9
PLD	**Plovdiv**	3.29	342	PN	Pn	21 09 20.2	+0.6
VLX	**Vlachokerasia**	3.32	242	P	Pn	21 09 20.3	+0.2
VLI	**Veliai**	3.35	229	P	Pn	21 09 19.8	-0.6
BRDR	**BURDUR-Merkez**	3.39	111	i P	Pn	21 09 21.2	+0.3
BRDR				IAML_P			
	comp=Z,282nm,0.2s						
SILT	**Sile**	3.50	50	⇑iP	Pn	21 09 23.3	+1.0
BORA	**Eskisehir**	3.51	74	i P	Pg	21 09 34.2	-1.1
VAY	**Valandovo**	3.56	312	i Pn	Pb	21 09 29.4	-1.7
GEYV	**SAKARYA_Geyve**	3.59	64	i P	Pn	21 09 24.6	+1.0
IDI	**Anoyia**	3.80	195	Pn	Pn	21 09 25.2	-1.5
	comp=Z,2.4nm,0.3s,baz=10,slow=11,SNR=15						
IDI				Lg	Lg	21 10 27.6	
	comp=Z,1.3nm,0.3s,baz=323,slow=20,SNR=1.8						
KAND	**Kocaeli-Kandir**	3.80	55	i P	Pn	21 09 26.3	-0.3
KAND				IAML_P			
	comp=Z,173nm,0.3s						
AKAS	**Kas**	3.92	133	i P	Pn	21 09 32.0	+3.7
ELND	**Elena**	3.95	358	⇑iP	Pn	21 09 29.0	+0.4
SAHE	**Sakarya_HENDEK**	4.12	61	i P	Pg	21 09 44.7	-2.4
VTS	**Vitosha**	4.23	330	⇑iP	Pn	21 09 33.8	+1.3
PLVB	**Pleven**	4.54	346	⇓iP	Pn	21 09 37.6	+0.9
YIGI	**Dzce**	4.58	63	i P	Pn	21 09 37.3	0.0
YIGI				IAML_P			
	comp=Z,217nm,0.5s						
RAZG	**Razgrad**	4.60	4	⇑iP	Pn	21 09 37.8	+0.3
KDHN	**Kadinhani**	4.75	94	i P	Pb	21 09 45.2	-6.1
BCAM	**Yenicaga**	4.96	66	i P	Pn	21 09 44.4	+1.9
BARS	**Barje**	5.01	321	ePn	Pb	21 09 55.9	+0.1
ZAPS	**Zavoj**	5.02	330	ePn	Pn	21 09 45.2	+1.9
CMDR	**Camlidere-ANKA**	5.16	71	i P	Pn	21 09 46.8	+1.4
CMDR				IAML_P			
	comp=Z,270nm,0.2s						
COPA	**Copaceanca**	5.19	353	⇑iP	Pn	21 09 32.1	-14
SGRR	**Singureni**	5.24	359	⇓iP	Pn	21 09 45.0	-1.3
RASA	**Rasa**	5.29	8	⇑iP	Pn	21 09 47.9	+0.9
ICOR	**Ion Corvin**	5.30	14	⇓iP	Pn	21 09 47.6	+0.5
MFTR	**Murfatlar**	5.49	18	⇑iP	Pn	21 09 49.5	-0.2
HUMR	**Humele**	5.61	352	⇑iP	Pn	21 09 52.3	+1.0
ZAGS	**Zajecar**	5.63	330	ePn	Pn	21 09 53.4	+1.8
SELS	**Selova**	5.65	320	ePn	Pn	21 09 52.5	+0.5
BOVS	**Bovan**	5.70	326	ePn	Pn	21 09 54.1	+1.5
BOVS				eSg	Sg	21 11 31.2	+0.3
TIRR	**Tirgusor**	5.75	17	⇑iP	Pn	21 09 53.7	+0.4
TLB	**Topalu**	5.79	14	⇑iP	Pn	21 09 54.1	+0.2
HARR	**Harsova**	5.87	13	⇑iP	Pn	21 09 55.3	+0.3
BRTR	**Keskin Array B**	5.91	80	Pn	Pn	21 09 56.6	+1.0
	comp=Z,0.5nm,0.3s,baz=258,slow=14,SNR=20						
BRTR				Lg	Lg	21 11 33.7	
	comp=Z,0.0nm,0.3s,baz=282,slow=28,SNR=2.2						
SRE	**Strehaia**	6.07	340	⇑iP	Pn	21 09 58.8	+1.1
DELI	**KIRIKKALE**	6.16	78	i P	Pn	21 10 00.6	+1.6
DELI				IAML_P			
	comp=Z,187nm,0.3s						
PDG	**Podgorica**	6.22	306	⇓iP	Pn	21 10 01.4	+1.6
GRUS	**Gruza**	6.35	322	ePn	Pn	21 10 02.3	+0.8
GRUS				eSg	Sg	21 11 52.5	+0.8
KUBS	**Kucevo**	6.35	330	ePn	Pn	21 10 01.2	-0.4
CFR	**Carcaliu**	6.38	13	⇑iP	Pn	21 10 01.8	-0.2
IVAS	**Ivanjica**	6.40	318	ePn	Pn	21 10 03.0	+0.7
IVAS				eSg	Sg	21 11 53.9	+0.4
HERR	**Herculane**	6.50	336	⇑iP	Pn	21 10 04.0	+0.4
VOIR		6.50	354	⇑iP	Pn	21 10 04.3	+0.6
MLR	**Muntele Rosu**	6.51	359	Pn	Pn	21 10 06.4	+2.5
	comp=Z,1.2nm,0.3s,baz=264,slow=4.8,SNR=14						
MLR				Lg	Lg	21 11 56.1	
	comp=Z,0.1nm,0.3s,baz=112,slow=19,SNR=2.3						
MLR				LR	LR	21 13 02.8	
	comp=Z,161nm,18.6s,baz=124,slow=42						
MLR	**Muntele Rosu**	6.51	359	⇑iP	Pn	21 10 03.3	-0.6
TLCR		6.53	17	⇑iP	Pn	21 10 04.7	+0.7
MDVR	**Moldovita**	6.65	332	⇑iP	Pn	21 10 06.1	+0.4
LOT	**Lotru**	6.69	346	⇑iP	Pn	21 10 06.3	0.0
TRUS	**Trudelj**	6.75	323	ePn	Pn	21 10 06.8	-0.2
DIVS	**Divibare**	6.85	320	ePn	Pn	21 10 08.8	+0.3
GZR	**Gura Zlata**	6.86	340	⇑iP	Pn	21 10 08.4	-0.2
PLOR	**Plostina**	6.88	3	⇑iP	Pn	21 10 09.9	+1.0
VRI	**Vrincioaia**	6.90	4	⇑iP	Pn	21 10 10.5	+1.4
BBLS	**Lazići**	7.00	316	ePn	Pn	21 10 10.2	-0.3
BBLS				eSg	Sg	21 12 12.1	-0.5
DOPR	**Dopca**	7.00	356	⇑iP	Pn	21 10 11.5	+1.0
BZS	**Buzias**	7.41	335	ePn	Pn	21 10 15.8	-0.3
BZS				eSg	Sg	21 12 22.3	-3.5
BZS	**Buzias**	7.41	335	⇑iP	Pn	21 10 16.1	0.0
TESR	**Tescani**	7.54	3	⇑iP	Pn	21 10 19.1	+1.2
BIZ	**Bicaz**	7.96	0	⇑iP	Pn	21 10 25.8	+2.2
DRGR		8.19	344	⇓iP	Pn	21 10 28.5	+1.6
ARCR	**ARCALIA**	8.20	352	⇑iP	Pn	21 10 28.6	+1.6
BLY	**Banja Luka**	8.79	314	⇑iP	Pn	21 10 36.6	+1.6
MMAI	**Mount Meron Ar**	9.62	125	Pn	Pn	21 10 46.3	-0.2
	comp=Z,0.6nm,0.3s,baz=324,slow=9.0,SNR=2.0						

MMAI				LR	LR	21 15 20.4	
	comp=Z,38nm,21.2s,baz=280,slow=44						
VYHS	**Vyhne**	**10.85**	**334**	*e*PN	**Pn**	**21 11 04.2**	**+0.9**
VRAC	**Vranov**	**12.36**	**330**	LR	LR	21 16 31.1	
	comp=Z,48nm,18.1s,baz=140,slow=39						
GERES	**GERESS Array B**	**13.28**	**322**	Pn	**Pn**	**21 11 39.9**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=138,slow=12,SNR=2.9						
DAVOX	**Davos/Dischmat**	**14.19**	**309**	Pn	**P**	**21 11 53.3**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=144,slow=19,SNR=3.8						
DAVOX				LR	LR	21 18 09.2	
	comp=Z,69nm,18.8s,baz=87,slow=41						
GNI	**Garni**	**14.45**	**79**	LR	LR	21 18 34.6	
	comp=Z,22nm,21.3s,baz=282,slow=42						
FINES	**FINESS Array B**	**22.49**	**0**	LR	LR	21 22 33.0	
	comp=Z,42nm,18.5s,baz=90,slow=38						
HFS	**Hagfors**	**22.57**	**344**	LR	LR	21 23 49.9	
	comp=Z,58nm,20.6s,baz=172,slow=41						
ESDC	**Sonseca Array**	**23.20**	**281**	P	**P**	**21 13 36.7**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=79,slow=11,SNR=8.3						
NOA	**NORSAR Array B**	**23.95**	**342**	LR	LR	21 24 40.4	
	comp=Z,47nm,18.5s,baz=320,slow=40						
EKA	**Eskdalemuir Ar**	**25.48**	**320**	P	**P**	**21 13 57.9**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=110,slow=9.8,SNR=4.7						
ARU	**Arti**	**27.61**	**40**	LR	LR	21 25 17.6	
	comp=Z,18nm,18.1s,baz=212,slow=37						
MKAR	**Makanchi Array**	**41.15**	**60**	P	**P**	**21 16 12.8**	**+0.5**
	comp=Z,1.2nm,1.0s,baz=287,slow=7.4,SNR=5.9						
ULM	**Lac du Bonnet**	**77.55**	**326**	LR	LR	21 55 43.2	
	comp=Z,38nm,18.7s,baz=7.5,slow=36						

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*NEIC **14** 21:26:53.7±0.0, 61°.58N×141°.13W, h1km, ML3.1(AEIC), After AEIC.*

PGC 14 21:26:54.4±0.0**, 61°.58N×141°.07W, h3km, ML3.2**/11**, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.24**	**27**	P	Pg	21 26 58.6	-0.5
YUK2				S	Sg	21 27 02.2	0.0
YUK3	**Moose Creek**	**0.35**	**55**	P	Pg	21 27 00.7	-0.6
YUK3				S	Sg	21 27 05.7	-0.2
YUK1	**Sand Pete Hill**	**0.63**	**24**	P	Pg	21 27 05.5	-1.1
YUK1				S	Sg	21 27 14.5	-0.3
PTPK	**Patty Peak**	**0.78**	**240**	P	Pg	21 27 08.3	-1.0
PTPK				S	Sg	21 27 19.0	-0.3
BALM	**Baldy**	**0.82**	**229**	*e*Pg	Pg	21 27 08.7	-1.4
BALM				*e*Sg	Sg	21 27 18.9	-1.8
BALM	**Baldy**	**0.82**	**229**	P	Pg	21 27 08.6	-1.5
BALM				S	Sg	21 27 19.9	-0.8
BVCY	**Beaver Creek**	**0.85**	**7**	P	Pg	21 27 09.7	-1.0
BVCY				S	Sg	21 27 21.0	-0.6
BVCY				Sg	Sn	21 27 26.4	+0.2
KIAG	**Kiagna River**	**0.90**	**224**	P	Pg	21 27 10.0	-1.7
KIAG				S	Sg	21 27 22.5	-0.9
TABL	**Table Mountain**	**1.14**	**182**	P	Pg	21 27 14.7	-1.5
TABL				S	Sg	21 27 30.1	-0.9
YUK4	**Talbot Arm**	**1.19**	**100**	P	Pg	21 27 16.1	-1.0
YUK4				S	Sg	21 27 32.9	+0.4
YUK6	**Outpost Mounta**	**1.46**	**115**	Pn	Pn	21 27 20.1	-1.6
YUK6				Sg	Sg	21 27 40.9	-0.2
SAMH	**Samovar Hills**	**1.46**	**174**	Pn	Pn	21 27 20.9	-0.7
SAMH				Sg	Sb	21 27 40.9	-0.2
MESA	**MESA**	**1.47**	**197**	Pn	Pn	21 27 21.1	-0.8
MESA				Sg	Sg	21 27 41.3	-0.2
CHX	**Chaix Hills**	**1.52**	**181**	*e*Pn	Pn	21 27 22.1	-0.4
BCA3	**Beaver Creek A**	**1.53**	**348**	*e*Pn	Pn	21 27 21.6	-1.1
PCA	**Pinnacle**	**1.54**	**165**	*e*Pn	Pn	21 27 22.4	-0.3
PCA				*e*Sn	Sn	21 27 42.8	-0.4
PCA	**Pinnacle**	**1.54**	**165**	Pn	Pn	21 27 22.3	-0.5
PCA				Sg	Sb	21 27 43.5	+0.1
YUK5	**Granite Creek**	**1.61**	**105**	Pn	Pn	21 27 22.8	-1.0
YUK5				Sg	Sn	21 27 43.9	-1.2
YUK7	**Dusty Glacier**	**1.77**	**125**	Pn	Pn	21 27 26.5	+0.5
YUK7				Sg	Sg	21 27 50.8	-0.4
BCPM	**Bancas Point**	**1.77**	**156**	*e*Pn	Pn	21 27 26.6	+0.7
BCPM				*e*Sn	Sn	21 27 48.6	-0.3
MENT	**Mentasta**	**1.85**	**319**	*e*Pn	Pn	21 27 26.8	-0.2
MENT				*e*Sn	Sn	21 27 49.5	-1.3
HYT	**Haines Junctio**	**1.88**	**112**	*e*Pn	Pn	21 27 27.1	-0.5
HYT				*e*Sn	Sn	21 27 51.0	-0.8
HYT	**Haines Junctio**	**1.88**	**112**	Pn	Pn	21 27 27.0	-0.5
HYT				Sg	Sn	21 27 52.4	+0.5
HMT	**Hamilton**	**1.99**	**233**	*e*Pn	Pb	21 27 30.5	-0.7
HMT				*e*Sn	Sn	21 27 53.8	-0.5
PNL	**Peninsula**	**2.08**	**156**	*e*Pn	Pn	21 27 30.3	+0.1
PNL	**Peninsula**	**2.08**	**156**	Pn	Pn	21 27 30.2	0.0
PNL				Sg	Sg	21 28 00.2	-1.1
RAGM	**Ragged Mountai**	**2.12**	**237**	*e*Pn	Pn	21 27 29.3	-1.5
RAGM				*e*Sn	Sn	21 27 56.4	-1.2
YKU2	**Yakutat**	**2.18**	**161**	*e*Pg	Pb	21 27 34.0	-0.4
PAX	**Paxson**	**2.49**	**306**	*e*Pn	Pn	21 27 37.4	+1.5
PAX				*e*Sn	Sn	21 28 02.0	-4.7
PAX	**Paxson**	**2.49**	**306**	Pn	Pn	21 27 37.3	+1.5
PAX				Sg	Sb	21 28 10.4	-0.3
EYAK	**Cordova Ski Ar**	**2.50**	**248**	*e*Pn	Pn	21 27 34.3	-1.5
EYAK				*e*Sn	Sn	21 28 04.5	-2.2
DOT	**Dot Lake**	**2.50**	**328**	*e*Pn	Pn	21 27 34.8	-1.1
DOT				*e*Sn	Sn	21 28 05.1	-1.8
DOT	**Dot Lake**	**2.50**	**328**	Pn	Pn	21 27 34.9	-1.1
DOT				Pg	Pb	21 27 39.9	0.0
DOT				Sg	Sb	21 28 12.6	+1.6
DAWY	**Dawson**	**2.62**	**16**	*e*Pn	Pn	21 27 36.7	-0.8
DAWY	**Dawson**	**2.62**	**16**	Pn	Pn	21 27 36.7	-0.8
DAWY				Sg	Sb	21 28 13.9	-0.5
SCRK	**Sand Creek**	**2.76**	**332**	*e*Pn	Pn	21 27 38.7	-0.9
SCRK				*e*Sn	Sn	21 28 10.9	-2.4
SCM	**Sheep Creek Mo**	**2.99**	**278**	*e*Pn	Pn	21 27 44.7	+2.0
GLI	**Glacier Island**	**3.00**	**259**	*e*Pn	Pn	21 27 44.0	+1.3
GLI				*e*Sn	Sn	21 28 17.9	-1.1
PLBC	**Pleasant Camp**	**3.15**	**130**	Pn	Pn	21 27 44.3	-0.5
PLBC				Pg	Pb	21 27 50.5	-0.5
PLBC				Sg	Sg	21 28 33.2	-2.3
EGAK	**Eagle**	**3.21**	**359**	*e*Pn	Pn	21 27 45.3	-0.4
DHY	**Denali Highway**	**3.30**	**300**	*e*Pg	Pb	21 27 53.4	-0.3
SML	**Sawmill**	**3.47**	**277**	*e*Pg	Pb	21 27 54.4	-2.0
SKAG	**Skagway**	**3.54**	**124**	*e*Pg	Pb	21 27 59.8	+2.1
KNK	**Knik Glacier**	**3.55**	**271**	*e*Pg	Pb	21 27 55.8	-1.9
PMR	**Palmer**	**3.85**	**274**	*e*Pg	Pb	21 28 03.4	+0.5
HDA	**Harding Lake**	**3.91**	**319**	*e*Pn	Pn	21 27 55.1	-0.2
RND	**Reindeer**	**4.05**	**300**	*e*Pn	Pn	21 28 00.5	+3.2
ILB	**Eielson Array**	**4.15**	**323**	*e*Pn	Pn	21 27 57.9	-0.7
RC01	**Rabbit Creek A**	**4.20**	**267**	*e*Pg	Pb	21 28 08.4	-0.5
MCK	**McKinley**	**4.22**	**304**	*e*Pg	Pb	21 28 05.5	-3.7
WRH	**Wood River Hil**	**4.32**	**315**	*e*Pg	Pb	21 28 11.8	+0.9
BESE	**Bessie Mountai**	**4.33**	**131**	Sg	Sg	21 29 09.2	-4.0
CCB	**Clear Creek Bu**	**4.34**	**318**	*e*Pg	Pb	21 28 08.2	-3.0
PRP	**Porcupine Dome**	**4.43**	**335**	*e*Pn	Pn	21 28 04.2	+1.6
COLA	**College**	**4.51**	**320**	*e*Pg	Pg	21 28 22.6	+1.9
BWN	**Browne**	**4.64**	**308**	*e*Pg	Pg	21 28 19.9	-3.3
KTH	**Kantishna Hill**	**4.97**	**298**	*e*Pn	Pn	21 28 14.3	+4.4
EPYK	**Eagle Plains**	**5.18**	**20**	*e*Pn	Pn	21 28 18.4	+5.7
BPAW	**Bear Paw Mtn.**	**5.20**	**303**	*e*Pn	Pn	21 28 14.9	+1.9
FYU	**Fort Yukon**	**5.33**	**342**	*e*Pn	Pn	21 28 15.0	+0.2
DLBC	**Dease Lake**	**6.37**	**115**	Sg	Sg	21 30 13.9	-4.8
COLD	**Coldfoot**	**6.91**	**329**	Pn	Pn	21 28 35.8	-0.6
INK	**Inuvik**	**7.47**	**22**	Pn	Pn	21 28 44.0	0.0

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*MOS **14** 21:37:11.8±1.1, 52°.95N×167°.73W, h38km, mb4.5/26, Error ellipse: s-maj=13.5km s-min=7.4km az=81.8*

*NEIC **14** 21:37:12.0±0.0, 52°.77N×167°.60W, h26km, mb4.2/51, ML3.9(AEIC), After AEIC.*

*ISCJB **14** 21:37:12.8±0.4, 52°.88N±0°.04×167°.64W±0°.03, h48km±3km, mb4.3/83, MS3.4/14, Error ellipse: s-maj=7.2km s-min=2.8km az=161.8*

*IDC **14** 21:37:14.1±3.6, 53°.02N×167°.72W, h42km±32km, mb3.9/27, mb1 4.1/28, mb1mx4.0/50, mbtmp4.1/28, ML3.4/1, MS3.3/13, Ms1 3.3/13, ms1mx3.1/37, Error ellipse: s-maj=18.9km s-min=10.8km az=6.0*

ISC 14 21:37:14.2±0.9**, 52°.94N**±0°.07×**167°.68W**±0°.04**, h45**km±7km**, n227,** σ1°.**07**/242**, mb4.4**/83**, MS3.4**/14**, 7C-8D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKTU	**Okmok Mt. Tuli**	**0.49**	**334**	*e*Pn	**Pn**	**21 37 25.2**	**0.0**
OKER	**Okmok East Rim**	**0.56**	**337**	*e*Pn	**Pn**	**21 37 26.3**	**+0.2**
NIKH	**Nikolski High**	**0.71**	**273**	*e*Pn	**Pn**	**21 37 26.3**	**-1.6**
NIKH				*e*Sg	**Sn**	**21 37 37.0**	**-0.8**
OKAK	**Okmok**	**0.76**	**328**	*e*Pn	**Pn**	**21 37 26.6**	**-1.9**
MREP	**Makushin Rep't**	**1.04**	**32**	*e*Pn	**Pn**	**21 37 31.8**	**-0.6**
MSW	**Makushin Switc**	**1.11**	**29**	*e*Pn	**Pn**	**21 37 33.1**	**-0.3**
MCIR	**Makushin Cirqu**	**1.12**	**25**	*e*Pn	**Pn**	**21 37 34.0**	**+0.5**
UNV	**Unalaska Valle**	**1.15**	**37**	*e*Pn	**Pn**	**21 37 32.9**	**-0.9**
UNV				*e*Sg	**Sn**	**21 37 51.1**	**+2.8**
AKRB	**Akutan Reef Bi**	**1.53**	**38**	*e*Pn	**Pn**	**21 37 39.5**	**+0.4**
AKUT	**Akutan**	**1.65**	**43**	*e*Pn	**Pn**	**21 37 40.5**	**-0.2**
AKUT				*e*Sn	**Sn**	**21 38 01.2**	**+0.5**
AKSA	**Akutan Strait**	**1.69**	**44**	*e*Pn	**Pn**	**21 37 41.6**	**+0.5**
WESP	**Westdahl Peak**	**2.35**	**47**	*e*Pn	**Pn**	**21 37 50.9**	**+0.6**
WEBT	**Westdahl Beart**	**2.40**	**45**	*e*Pn	**Pn**	**21 37 52.0**	**+1.0**
FALS	**False Pass**	**3.17**	**51**	*e*Pn	**Pn**	**21 38 02.5**	**+1.0**
FALS				*e*Sn	**Sn**	**21 38 38.4**	**+0.3**
KOSE	**Korovin Southe**	**3.92**	**264**	*e*Pn	**Pn**	**21 38 12.6**	**+0.7**
KOFP	**Korovin Flat P**	**3.97**	**263**	*e*Pn	**Pn**	**21 38 13.7**	**+1.2**
KOKL	**Mount Kliuchef**	**4.02**	**264**	*e*Pn	**Pn**	**21 38 13.9**	**+0.7**
KOWE	**Korovin West**	**4.04**	**264**	*e*Pn	**Pn**	**21 38 14.8**	**+1.3**
SPIA	**Saint Paul Isl**	**4.49**	**342**	*e*Pn	**Pn**	**21 38 20.4**	**+0.7**
SPIA				*e*Sn	**Sn**	**21 39 09.2**	**-1.3**
SDPT	**Sand Point**	**4.88**	**57**	*e*Pn	**Pn**	**21 38 26.2**	**+1.3**
SDPT				*e*Sn	**Sn**	**21 39 20.2**	**+0.2**
GSTR	**Great Sitkin T**	**5.18**	**264**	*e*Pn	**Pn**	**21 38 30.8**	**+1.6**
GSTR				*e*Sn	**Sn**	**21 39 25.0**	**-2.7**
GSMY	**Great Sitkin M**	**5.19**	**263**	*e*Pn	**Pn**	**21 38 30.2**	**+0.9**
GSTD	**Great Sitkin T**	**5.25**	**264**	*e*Pn	**Pn**	**21 38 31.0**	**+0.9**
ETKA	**Kagalaska Isla**	**5.45**	**262**	*e*Pn	**Pn**	**21 38 33.2**	**+0.5**
ADAG	**Mount Adagdak**	**5.54**	**264**	*e*Pn	**Pn**	**21 38 35.6**	**+1.6**
ADK	**Adak**	**5.61**	**263**	*e*Pn	**Pn**	**21 38 35.5**	**+0.5**
ADK				*e*Sn	**Sn**	**21 39 37.0**	**-1.1**
ADK	**Adak**	**5.61**	**263**	*e*P	**Pn**	**21 38 35.5**	**+0.5**
ADK				*e*		21 39 37.0	
KICM	**Kanaga Island**	**5.91**	**264**	*e*Pn	**Pn**	**21 38 40.3**	**+1.2**
KIMD	**Kanaga Island**	**5.97**	**262**	*e*Pn	**Pn**	**21 38 41.6**	**+1.6**
CHGN	**Chignik**	**6.35**	**54**	*e*Pn	**Pn**	**21 38 45.1**	**0.0**
CHGN				*e*Sn	**Sn**	**21 39 56.9**	**+0.7**
TAFP	**Tanaga Falls P**	**6.39**	**265**	*e*Pn	**Pn**	**21 38 47.7**	**+2.1**
TASE	**Tanaga Southea**	**6.43**	**264**	*e*Pn	**Pn**	**21 38 47.9**	**+1.5**
GAEA	**Gareloi East**	**6.88**	**265**	*e*Pn	**Pn**	**21 38 54.2**	**+1.8**
CHIA	**Chirikof Islan**	**7.64**	**63**	*e*Pn	**Pn**	**21 39 01.2**	**-1.6**
CHIA				*e*Sn	**Sn**	**21 40 30.5**	**+2.6**
SII	**Sitkinak Islan**	**8.61**	**60**	*e*Pn	**Pn**	**21 39 16.2**	**+0.1**
OHAK	**Old Harbor**	**9.30**	**57**	*e*Pn	**Pn**	**21 39 26.6**	**+1.1**
KDAK	**Kodiak Island**	**9.86**	**55**	*e*Pn	**Pn**	**21 39 31.5**	**-1.7**
KDAK	**Kodiak Island**	**9.86**	**55**	*e*P	**Pn**	**21 39 31.5**	**-1.7**
SVW2	**Sparrevohn**	**10.49**	**34**	*e*Pn	**Pn**	**21 39 44.1**	**+2.3**
TTA	**Tatalina**	**11.76**	**27**	*e*Pn	**Pn**	**21 39 59.7**	**+0.6**
TTA	**Tatalina**	**11.76**	**27**	*e*P	**Pn**	**21 39 59.7**	**+0.6**
PPLA	**Purkeypile**	**12.89**	**33**	*e*Pn	**Pn**	**21 40 16.4**	**+1.7**
KTH	**Kantishna Hill**	**13.77**	**33**	*e*Pn	**Pn**	**21 40 28.1**	**+1.6**
FID	**Port Fidalgo**	**13.94**	**48**	*e*Pn	**Pn**	**21 40 27.6**	**-1.3**
BPAW	**Bear Paw Mtn.**	**14.12**	**31**	*e*Pn	**Pn**	**21 40 31.2**	**-0.1**
RND	**Reindeer**	**14.38**	**36**	*e*Pn	**Pn**	**21 40 36.4**	**+1.7**
RND	**Reindeer**	**14.38**	**36**	*e*P	**Pn**	**21 40 36.4**	**+1.7**
HMT	**Hamilton**	**14.80**	**51**	*e*Pn	**Pn**	**21 40 38.3**	**-2.0**
MLY	**Manley**	**14.87**	**29**	*e*Pn	**Pn**	**21 40 43.7**	**+2.5**
CCB	**Clear Creek Bu**	**15.52**	**33**	*e*Pn	**Pn**	**21 40 49.5**	**-0.1**
	3.1nm,1.0s						
COLA	**College**	**15.65**	**32**	⇑*e*P	**Pn**	**21 40 52.8**	**+1.5**
ILAR	**Eielson Array**	**15.90**	**34**	P	**Pn**	**21 40 54.6**	**0.0**
	0.1nm,0.3s,baz=237,slow=10,SNR=7.4						
ILAR				LR	LR	21 47 31.2	
	comp=Z,83nm,19.6s,baz=222,slow=39						
BALM	**Baldy**	**15.92**	**49**	*e*P	**Pn**	**21 40 55.5**	**+0.6**
	4.4nm,0.6s						
BALM	**Baldy**	**15.92**	**49**	*e*P	**Pn**	**21 40 55.5**	**+0.6**
BALM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RIDG	**Independent Ri**	**16.04**	**39**	*e*Pn	**Pn**	**21 40 53.7**	**-2.6**
	comp=Z,11nm,1.2s						
MENT	**Mentasta**	**16.08**	**42**	*e*Pn	**Pn**	**21 40 53.6**	**-3.3**
	comp=Z,3.3nm,0.5s						
DOT	**Dot Lake**	**16.29**	**40**	*e*Pn	**Pn**	**21 40 59.6**	**+0.1**
	comp=Z,2.6nm,0.8s						
SCRK	**Sand Creek**	**16.49**	**39**	*e*Pn	**Pn**	**21 41 01.4**	**-0.7**
	comp=Z,3.8nm,0.9s						
PCA	**Pinnacle**	**16.65**	**54**	*e*P	**P**	**21 41 05.5**	**-0.4**
	comp=Z,19nm,0.9s						
COLD	**Coldfoot**	**16.67**	**24**	*e*Pn	**Pn**	**21 41 05.0**	**+0.8**
	comp=Z,4.9nm,1.1s						
TOLK	**Toolik Lake Re**	**17.93**	**22**	*e*Pn	**Pn**	**21 41 16.4**	**-3.5**
	comp=Z,7.9nm,0.4s						
EGAK	**Eagle**	**17.95**	**38**	*e*P	**P**	**21 41 21.0**	**+0.8**
	comp=Z,15nm,1.5s						
HYT	**Haines Junctio**	**18.14**	**52**	*e*P	**Pn**	**21 41 24.2**	**+1.7**
	comp=Z,36nm,0.7s						
DAWY	**Dawson**	**18.32**	**42**	*e*P	**Pn**	**21 41 24.6**	**-0.1**
	comp=Z,6.9nm,1.0s						
SKAG	**Skagway**	**19.00**	**57**	*e*P	**Pn**	**21 41 32.3**	**-0.4**
	comp=Z,15nm,0.7s						
BESE	**Bessie Mountai**	**19.18**	**60**	*e*P	**P**	**21 41 33.7**	**-0.1**
	comp=Z,22nm,1.1s						
JIS	**Juneau Island**	**19.41**	**61**	*e*P	**P**	**21 41 35.1**	**-1.1**
	comp=Z,16nm,1.0s						
BILL	**Bilibino**	**19.59**	**330**	⇑*e*P	**P**	**21 41 36.8**	**-1.3**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.9s						
EPYK	**Eagle Plains**	**20.33**	**37**	*e*P	**P**	**21 41 45.6**	**-0.6**
	comp=Z,29nm,1.0s						
PEA1	**Petropavlovsk-**	**20.71**	**284**	*e*P	**P**	**21 41 50.0**	**-0.3**
PEA0B	**Petropavlovsk-**	**20.71**	**284**	*e*P	**P**	**21 41 49.0**	**-1.3**
	comp=Z,7.7nm,1.0s						
PEA0B	**Petropavlovsk-**	**20.71**	**284**	*e*P	**P**	**21 41 49.0**	**-1.3**
PEA0B				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PETK	**Petropavlovsk-**	**20.71**	**284**	P	**P**	**21 41 50.0**	**-0.4**
	comp=Z,3.8nm,0.4s,baz=80,slow=12,SNR=22						
PETK				LR	LR	21 49 40.8	
	comp=Z,49nm,21.9s,baz=81,slow=36						
DLBC	**Dease Lake**	**21.71**	**60**	P	**P**	**21 42 03.7**	**+2.6**
	comp=Z,2.3nm,0.7s,baz=263,slow=11,SNR=5.6						
DLBC	**Dease Lake**	**21.71**	**60**	*e*P	**P**	**21 42 01.3**	**+0.2**
	comp=Z,5.5nm,0.9s						
INK	**Inuvik**	**22.30**	**33**	P	**P**	**21 42 06.1**	**-1.2**
	comp=Z,13nm,0.8s,baz=227,slow=8.7,SNR=15						
INK	**Inuvik**	**22.30**	**33**	*e*P	**P**	**21 42 06.5**	**-0.8**
	comp=Z,11nm,0.7s						
INK	**Inuvik**	**22.30**	**33**	*e*P	**P**	**21 42 06.5**	**-0.8**
INK				pmax	pmax		
	comp=Z,11nm,0.7s						
SEY	**Seymchan**	**23.05**	**311**	P	**P**	**21 42 14.9**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=95,slow=7.9,SNR=8.3						
SEY	**Seymchan**	**23.05**	**311**	⇓*e*P	**P**	**21 42 15.5**	**+0.3**
MA2	**Magadan**	**23.68**	**303**	P	**P**	**21 42 20.7**	**-0.7**
	comp=Z,4.6nm,0.4s,baz=91,slow=18,SNR=3.3						
MA2				LR	LR	21 50 51.2	
	comp=Z,33nm,20.4s,baz=92,slow=35						
YKA	**Yellowknife Ar**	**29.09**	**50**	P	**P**	**21 43 10.2**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=277,slow=7.9,SNR=6.5						
YKA				PcP	**PcP**	**21 46 16.9**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=279,slow=2.9,SNR=4.6						
YKA	**Yellowknife Ar**	**29.09**	**50**	⇑*e*P	**P**	**21 43 11.0**	**+1.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKB5	**Yellowknife Ar**	**29.09**	**50**	*e*P	**P**	**21 43 10.2**	**+0.2**
YKB5				*e*PcP	**PcP**	**21 46 16.9**	**+0.2**
NEW	**Newport**	**31.88**	**78**	P	**P**	**21 43 35.3**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=317,slow=7.0,SNR=3.8						
KCPM	**Cahto Peak**	**32.68**	**96**	*e*P	**P**	**21 43 39.4**	**-2.6**
	comp=Z,43nm,1.4s						
TIXI	**Tiksi**	**32.78**	**328**	P	**P**	**21 43 42.9**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=88,slow=6.7,SNR=3.1						
TIXI				PcP	**PcP**	**21 46 27.9**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=359,slow=4.1,SNR=5.0						
TIXI	**Tiksi**	**32.78**	**328**	⇑*e*P	**P**	**21 43 43.0**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
RES	**Resolute Bay**	**35.41**	**26**	P	**P**	**21 44 04.7**	**-0.4**
	comp=Z,5.1nm,0.9s,baz=261,slow=4.2,SNR=3.3						
RES	**Resolute Bay**	**35.41**	**26**	*e*P	**P**	**21 44 04.7**	**-0.4**
	comp=Z,16nm,1.4s						
RES	**Resolute Bay**	**35.41**	**26**	*e*P	**P**	**21 44 04.7**	**-0.4**
RES				pmax	pmax		
	comp=Z,17nm,1.4s						
PNTR	**Pine Nut**	**35.46**	**93**	*e*P	**P**	**21 44 05.7**	**-0.5**
	comp=Z,4.9nm,0.8s						
WAKR	**Walker**	**35.93**	**94**	*e*P	**P**	**21 44 09.5**	**-0.7**
	comp=Z,3.2nm,1.0s						
BOZ	**Bozeman (W)**	**36.47**	**78**	*e*P	**P**	**21 44 14.7**	**-0.1**
	comp=Z,2.5nm,1.1s						
BOZ	**Bozeman (W)**	**36.47**	**78**	*e*P	**P**	**21 44 14.7**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NV01	**Mina Array Sit**	**36.66**	**93**	*e*P	**P**	**21 44 17.8**	**+1.3**
NV01				*e*PcP	**PcP**	**21 46 38.1**	**-0.4**
NVAR	**Mina Array Bea**	**36.66**	**93**	P	**P**	**21 44 17.8**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=299,slow=8.5,SNR=5.7						
NVAR				PcP	**PcP**	**21 46 38.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=317,slow=3.2,SNR=4.0						
ELK	**Elko**	**37.07**	**88**	LR	LR	21 57 20.2	
	comp=Z,59nm,18.4s,baz=308,slow=32						
YHH	**Holmes Hill**	**37.38**	**79**	*e*P	**P**	**21 44 22.7**	**+0.1**
	comp=Z,7.2nm,1.3s						
IMW	**Indian Meadow**	**37.82**	**80**	*e*P	**P**	**21 44 27.5**	**+1.1**
	comp=Z,2.4nm,1.0s						
RLMT	**Red Lodge**	**38.13**	**78**	*e*P	**P**	**21 44 29.2**	**+0.3**
	comp=Z,2.5nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**38.55**	**220**	T	T	22 25 35.2	
	baz=24,slow=76,SNR=902						
H11N3	**WAKE ISLAND Hy**	**38.55**	**220**	T	T	22 25 35.7	
	baz=24,slow=76,SNR=525						
H11N1	**WAKE ISLAND Hy**	**38.57**	**220**	T	T	22 25 23.3	
	baz=24,slow=76,SNR=533						
TPNV	**Topopah Spring**	**38.86**	**93**	*e*P	**P**	**21 44 35.8**	**+0.8**
	comp=Z,4.7nm,1.3s						
DUG	**Dugway, Tooele**	**38.88**	**87**	*e*P	**P**	**21 44 34.2**	**-0.9**
	comp=Z,3.3nm,1.0s						
DUG	**Dugway, Tooele**	**38.88**	**87**	*e*P	**P**	**21 44 34.2**	**-0.9**
DUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BW06	**Boulder Array**	**39.29**	**81**	*e*P	**P**	**21 44 36.8**	**-1.9**
	comp=Z,3.7nm,1.2s						
PD31	**Pinedale Array**	**39.29**	**81**	*e*P	**P**	**21 44 38.5**	**-0.1**
PDAR	**Pinedale Array**	**39.29**	**81**	P	**P**	**21 44 38.5**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=301,slow=6.3,SNR=9.5						
H11S1	**WAKE ISLAND Hy**	**39.73**	**220**	T	T	22 26 53.9	
	baz=24,slow=76,SNR=1259						
H11S2	**WAKE ISLAND Hy**	**39.75**	**220**	T	T	22 26 52.8	
	baz=24,slow=76,SNR=779						
H11S3	**WAKE ISLAND Hy**	**39.75**	**220**	T	T	22 27 13.9	
	baz=24,slow=76,SNR=637						
TMUT	**Trail Mountain**	**40.40**	**86**	*e*P	**P**	**21 44 46.7**	**-1.3**
	comp=Z,3.3nm,1.0s						
LCMT	**Little Creek M**	**40.63**	**91**	*e*P	**P**	**21 44 48.8**	**-0.9**
	comp=Z,3.7nm,1.3s						
Q16A	**Castle Valley**	**40.66**	**87**	*e*P	**P**	**21 44 47.5**	**-2.5**
	comp=Z,7.4nm,1.4s						
MJAR	**Matsushiro Arr**	**40.74**	**269**	P	**P**	**21 44 50.5**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=34,slow=6.2,SNR=8.6						
MJAR				LR	LR	21 59 48.1	
	comp=Z,32nm,21.6s,baz=40,slow=33						
MAJO	**Matsushiro**	**40.74**	**269**	*e*P	**P**	**21 44 50.5**	**+0.1**
MAJO	**Matsushiro**	**40.74**	**269**	*d* *e*P	**P**	**21 44 50.7**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PFO	**Pinyon Flats O**	**40.98**	**97**	LR	LR	21 58 01.4	
	comp=Z,86nm,19.0s,baz=134,slow=30						
U15A	**North Rim**	**41.59**	**91**	*e*P	**P**	**21 44 55.0**	**-2.8**
	comp=Z,3.3nm,1.1s						
O20A	**White River Ci**	**41.67**	**83**	*e*P	**P**	**21 44 57.8**	**-0.5**
	comp=Z,6.5nm,0.9s						
WUAZ	**Wupatki**	**42.75**	**91**	*e*P	**P**	**21 45 06.6**	**-0.5**
	comp=Z,3.3nm,0.8s						
T25A	**Trinidad**	**45.89**	**84**	*e*P	**P**	**21 45 31.1**	**-1.1**
	comp=Z,9.2nm,1.3s						
ANMO	**Albuquerque**	**46.11**	**88**	P	**P**	**21 45 34.2**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=332,slow=9.7,SNR=2.8						
ANMO				PcP	**PcP**	**21 47 10.1**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=278,slow=5.5,SNR=5.0						
ANMO	**Albuquerque**	**46.11**	**88**	*e*P	**P**	**21 45 34.2**	**+0.2**
	comp=Z,4.2nm,1.5s						
ANMO	**Albuquerque**	**46.11**	**88**	⇓*e*P	**P**	**21 45 34.6**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KSRS	**Korea Array**	**46.35**	**277**	LR	LR	22 04 45.5	
	comp=Z,16nm,20.8s,baz=40,slow=36						
BNM	**Barren Site**	**46.55**	**89**	*e*P	**P**	**21 45 37.5**	**+0.1**
FRB	**Frobisher Bay**	**47.91**	**36**	P	**P**	**21 45 46.9**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=306,slow=8.3,SNR=4.4						
MNTX	**Cornudas Mount**	**49.00**	**90**	*e*P	**P**	**21 45 56.2**	**0.0**
	comp=Z,2.7nm,0.8s						
SUMG	**Summit**	**49.93**	**18**	*e*P	**P**	**21 46 02.0**	**-1.2**
	comp=Z,5.2nm,0.6s						
SUMG	**Summit**	**49.93**	**18**	*e*P	**P**	**21 46 02.0**	**-1.2**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WMOK	**Wichita Mounta**	**50.88**	**82**	*e*P	**P**	**21 46 10.4**	**0.0**
	comp=Z,3.0nm,0.9s						
WMOK	**Wichita Mounta**	**50.88**	**82**	*e*P	**P**	**21 46 10.4**	**0.0**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SFJD	**Kangerlussuaq**	**51.41**	**27**	*e*P	**P**	**21 46 13.9**	**0.0**
	comp=Z,13nm,0.6s						
SFJD	**Kangerlussuaq**	**51.41**	**27**	*e*P	**P**	**21 46 13.9**	**0.0**
SFJD				pmax	pmax		
	comp=Z,13nm,0.6s						
ULN	**Ulaanbaatar**	**51.52**	**301**	⇓*e*P	**P**	**21 46 14.7**	**-0.5**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TX31	**Lajitas Ar. Si**	**51.72**	**91**	*e*P	**P**	**21 46 16.6**	**-0.3**
	comp=Z,7.0nm,1.3s						
TXAR	**Lajitas Array**	**51.72**	**91**	P	**P**	**21 46 16.9**	**0.0**
	comp=Z,3.1nm,0.8s,baz=300,slow=5.6,SNR=25						
TXAR				LR	LR	22 06 53.4	
	comp=Z,27nm,18.8s,baz=0.0,slow=34						
SONA0	**Songino Array**	**51.88**	**301**	*e*P	**P**	**21 46 17.5**	**-0.4**
SONA0				*e*PcP	**PcP**	**21 47 30.2**	**+0.1**
SONM	**Songino Array**	**51.88**	**301**	P	**P**	**21 46 17.5**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=42,slow=9.7,SNR=4.8						
SONM				PcP	**PcP**	**21 47 30.2**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=48,slow=1.6,SNR=5.7						
HHC	**Hu-ho-hao-te**	**53.67**	**292**	P	**P**	**21 46 32.1**	**+1.0**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,33nm,5.1s						
SCHQ	**Schefferville**	**54.31**	**44**	*e*P	**P**	**21 46 35.1**	**-0.4**
	comp=Z,6.4nm,0.6s						
WLAR	**White Oak Lake**	**54.99**	**79**	*e*P	**P**	**21 46 40.2**	**-0.4**
	comp=Z,14nm,0.8s						
HKT	**Hockley**	**56.01**	**84**	⇑*i*P	**P**	**21 46 48.9**	**+0.9**
HKT				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARA0	**ARCESS Array S**	**57.45**	**355**	*e*P	**P**	**21 46 57.6**	**-0.2**
ARA0				*e*PcP	**PcP**	**21 47 50.5**	**-0.5**
ARCES	**ARCESS Array B**	**57.45**	**355**	P	**P**	**21 46 57.6**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=16,slow=6.8,SNR=8.2						
ARCES				PcP	**PcP**	**21 47 50.5**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=20,slow=3.9,SNR=8.5						
ZAA1	**Zalesovo Array**	**57.68**	**318**	*e*P	**P**	**21 46 59.8**	**+0.3**
ZAA1				*e*PcP	**PcP**	**21 47 52.3**	**+0.2**
ZALV	**Zalesovo Beam**	**57.69**	**318**	P	**P**	**21 46 59.8**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=36,slow=8.0,SNR=2.8						
ZALV				PcP	**PcP**	**21 47 52.3**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=22,slow=5.3,SNR=3.7						
ZALV				LR	LR	22 14 39.8	
	comp=Z,27nm,18.4s,baz=70,slow=39						
DGZ	**Jazzator, Alta**	**59.70**	**313**	*d* *i*P	**P**	**21 47 13.9**	**0.0**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
XAN	**Xi'an**	**59.91**	**288**	P	**P**	**21 47 14.9**	**-0.5**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,47nm,4.6s						
LZH	**Lanzhou**	**61.32**	**293**	*e*P	**P**	**21 47 25.6**	**+0.5**
LZH				pP	pP	21 47 38.3	+0.3
LZH				sP	sP	21 47 43.1	-0.1
LZH				*e*PP	**PP**	**21 49 42.5**	**+2.4**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,46nm,7.9s						
KURK	**Kurchatov**	**62.62**	**319**	*e*P	**P**	**21 47 32.5**	**-0.9**
	comp=Z,2.3nm,0.7s						
KURK	**Kurchatov**	**62.62**	**319**	*d* *i*P	**P**	**21 47 32.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
WMQ	**Urumqi**	**63.98**	**309**	*e*P	**P**	**21 47 45.3**	**+2.7**
MK32	**Makanchi Array**	**64.15**	**314**	*e*P	**P**	**21 47 42.3**	**-1.3**
MKAR	**Makanchi Array**	**64.15**	**314**	P	**P**	**21 47 42.3**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=55,slow=5.4,SNR=13						
MKAR	**Makanchi Array**	**64.15**	**314**	*i* P	**P**	**21 47 42.5**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARU	**Arti**	**64.57**	**334**	*c* *i*P	**P**	**21 47 45.9**	**-0.2**
ARU				S	**S**	**21 56 24.5**	**+2.6**
ARU				pmax	pmax		
	comp=Z,13nm,2.6s						
FIA0	**FINESS Array S**	**65.44**	**353**	*e*P	**P**	**21 47 51.1**	**-0.6**
FIA0	**FINESS Array S**	**65.44**	**353**	*e*P	**P**	**21 47 51.1**	**-0.6**

FINES	FINESS Array B	65.44	353	P	P	21 47 51.1	-0.6
	comp=Z,1.9nm,0.5s,baz=20,slow=6.4,SNR=41						
FINES				LR	LR	22 19 03.0	
	comp=Z,20nm,18.0s,baz=36,slow=38						
FINES	FINESS Array B	65.44	353	*i* P	P	21 47 51.2	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NB200	NORSAR Array S	66.36	1	*e*P	P	21 47 57.3	-0.4
NOA	NORSAR Array B	66.36	1	P	P	21 47 57.3	-0.4
	comp=Z,0.6nm,0.8s,baz=8.5,slow=6.4,SNR=3.1						
KMI	Kunming	70.11	285	P	P	21 48 22.0	0.0
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OBN	Obninsk	70.46	345	*i* P	P	21 48 21.7	-1.6
OBN				*i*		21 48 43.3	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,34nm,20.0s						
ABKAR	Akbulak array	70.48	329	*e*P	P	21 48 23.3	-0.2
	comp=Z,1.9nm,0.8s						
AAK	Ala-Archa	70.80	316	⇓*e*P	P	21 48 26.2	+0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
PPT	Papeete	71.94	162	LR	LR	22 13 50.6	
	comp=Z,56nm,21.2s,baz=2.0,slow=30						
AKASG	Malin Array Be	75.75	349	P	P	21 48 53.6	-1.0
	comp=Z,3.8nm,0.5s,baz=15,slow=5.9,SNR=23						
AKASG				LR	LR	22 26 59.8	
	comp=Z,16nm,18.6s,baz=290,slow=40						
AKBB	Malin Array Si	75.75	349	*e*P	P	21 48 53.6	-1.0
AKBB	Malin Array Si	75.75	349	*e*P	P	21 48 53.6	-1.0
CLL	Collm	76.12	360	*e*P	P	21 48 56.0	-0.7
CLL	Collm	76.12	360	*e*P	P	21 48 56.0	-0.7
OSTC	Ostas	76.82	357	*e*P	P	21 49 01.5	+0.7
UPC	Upice	76.88	358	*e*P	P	21 49 01.5	+0.4
UPC	Upice	76.88	358	*e*P	P	21 49 01.5	+0.4
DPC	Dobruska-Polom	77.03	357	*e*P	P	21 49 02.6	+0.6
DPC	Dobruska-Polom	77.03	357	*e*P	P	21 49 02.6	+0.6
CM31	Chiang Mai Arr	77.48	284	*e*P	P	21 49 05.2	+0.3
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	77.48	284	P	P	21 49 05.2	+0.3
	comp=Z,1.4nm,0.4s,baz=25,slow=5.6,SNR=12						
MORC	Moravsky Berou	77.56	357	*e*P	P	21 49 05.3	+0.3
VRAC	Vranov	78.06	357	*e*P	P	21 49 08.4	+0.7
LANS	Liptovska Anna	78.10	355	*e*P	P	21 49 09.4	+1.4
LANS	Liptovska Anna	78.10	355	*e*P	P	21 49 09.4	+1.4
KHC	Kasperske Hory	78.30	359	*e*P	P	21 49 09.9	+0.8
KHC	Kasperske Hory	78.30	359	*e*P	P	21 49 09.9	+0.8
KRUC	Moravsky	78.31	357	*e*P	P	21 49 09.6	+0.5
JAVC	Velka Javorina	78.47	356	*e*P	P	21 49 11.7	+1.7
GEC2	GERESS Array S	78.58	359	*e*P	P	21 49 10.4	-0.3
	comp=Z,1.9nm,0.8s						
GEC2	GERESS Array S	78.58	359	*e*P	P	21 49 10.4	-0.3
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	78.58	359	P	P	21 49 10.4	-0.3
	comp=Z,1.4nm,0.7s,baz=4.3,slow=5.4,SNR=17						
VYHS	Vyhne	78.79	356	*e*P	P	21 49 12.1	+0.4
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VYHS	Vyhne	78.79	356	*e*P	P	21 49 12.1	+0.4
VYHS				*e*		21 49 39.8	
MODS	Modra-Piesok	78.97	357	*e*P	P	21 49 13.0	+0.2
MODS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MODS	Modra-Piesok	78.97	357	*e*P	P	21 49 13.0	+0.2
ZST	Bratislava	79.16	357	*e*P	P	21 49 14.3	+0.6
ZST	Bratislava	79.16	357	*e*P	P	21 49 14.3	+0.6
CONA	Conrad Observa	79.46	358	*e*P	P	21 49 16.6	+1.1
	comp=Z,4.5nm,0.8s						
RETA	Reutte	79.94	1	*e*P	P	21 49 18.9	+0.9
	comp=Z,3.5nm,0.9s						
KIV	Kislovodsk	80.01	338	*e*P	P	21 49 18.7	+0.2
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				MLR	MLR		
	comp=Z,42nm,19.0s						
MOTA	Moosalm	80.09	1	*i* P	P	21 49 19.6	+0.6
	comp=Z,2.2nm,0.6s						
WATA	Walderalm	80.10	1	*i* P	P	21 49 19.8	+0.7
	comp=Z,3.3nm,0.4s						
DAVA	Damuels	80.13	2	*e*P	P	21 49 20.4	+1.2
	comp=Z,3.6nm,0.9s						
ARSA	Arzberg	80.15	358	*e*P	P	21 49 20.4	+1.2
	comp=Z,2.0nm,0.6s						
WTTA	Wattenberg	80.17	0	*e*P	P	21 49 20.3	+0.9
	comp=Z,5.0nm,0.6s,SNR=6.9						
KBZ	Khabaz	80.18	338	LR	LR	22 29 33.1	
	comp=Z,40nm,18.2s,baz=53,slow=39						
SQTA	Sankt Quirin	80.21	1	*e*P	P	21 49 20.5	+0.9
	comp=Z,6.6nm,0.8s,SNR=5.9						
NCK	Nalchik	80.24	337	⇓*i*P	P	21 49 20.8	+1.1
NCK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBA	Koelnbreinsper	80.35	359	*e*P	P	21 49 21.8	+1.4
	comp=Z,8.4nm,0.6s,SNR=10.0						
FETA	Feichten	80.41	1	*e*P	P	21 49 21.6	+0.9
	comp=Z,5.4nm,0.8s,SNR=6.3						
ABTA	Abfaltersbach	80.69	360	*e*P	P	21 49 23.0	+0.9
	comp=Z,6.3nm,1.3s,SNR=4.4						
SOKA	Soboth	80.73	358	*i* P	P	21 49 23.4	+1.0
	comp=Z,7.5nm,1.1s,SNR=5.6						
MYKA	Terra Mystica	80.80	359	*i* P	P	21 49 24.1	+1.3
OBKA	Obir	80.91	358	*e*P	P	21 49 24.4	+1.1
	comp=Z,5.6nm,0.6s,SNR=7.1						
GEYT	Alibeck	81.16	325	P	P	21 49 25.1	+0.3
	comp=Z,2.5nm,0.8s,baz=332,slow=5.0,SNR=9.1						
BR101	Keskin Array S	85.87	344	*e*P	P	21 49 49.7	+0.7
BRTR	Keskin Array B	85.88	344	P	P	21 49 49.7	+0.7
	comp=Z,4.2nm,0.8s,baz=50,slow=1.9,SNR=24						
BRTR	Keskin Array B	85.88	344	*ce*P	P	21 49 50.0	+1.0
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ESDC	Sonseca Array	86.69	13	P	P	21 49 52.9	0.0
	comp=Z,1.3nm,0.7s,baz=346,slow=5.1,SNR=12						
AS31	Alice Springs	91.55	231	*e*P	P	21 50 15.3	-0.5
	comp=Z,1.1nm,1.1s						
ASAR	Alice Springs	91.55	231	P	P	21 50 15.3	-0.5
	comp=Z,1.0nm,0.7s,baz=35,slow=4.4,SNR=8.1						
TORD	Torodi Ar. Bea	113.55	11	PKiKP	PKiKP	21 55 46.9	-0.5
	comp=Z,0.2nm,0.5s,baz=341,slow=1.0,SNR=5.1						
MAW	Mawson	151.96	219	PKPbc	PKiKP	21 57 02.7	-0.2
	comp=Z,1.2nm,0.5s,baz=51,slow=5.4,SNR=5.4						
MAW				PKPab	PKPab	21 57 12.2	+0.1
	comp=Z,0.8nm,0.3s,baz=80,slow=7.7,SNR=4.5						
BOSA	Boshof	153.88	333	PKPbc	PKPbc	21 57 08.1	-0.1
	comp=Z,2.5nm,1.0s,baz=0.0,slow=0.0,SNR=2.5						
BOSA				PKPab	pPKPbc	21 57 21.7	-0.1
	comp=Z,1.6nm,0.6s,baz=20,slow=1.7,SNR=4.4						

*IDC **14** 21:38:00.5±1.3, 38°.13N×22°.19E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/46, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=54.8km s-min=21.8km az=153.0*

*ISCJB **14** 21:38:01.6±0.2, 38°.23N±0°.01×22°.08E±0°.02, h9^{km}±1^{km}, mb3.6/3, Error ellipse: s-maj=2.5km s-min=2.2km az=39.0*

*ATH **14** 21:38:01.1, 38°.24N×22°.07E, h12^{km}±1^{km}, ML3.0/22, Error ellipse: s-maj=1.3km s-min=0.6km az=283.0*

*THE **14** 21:38:02.1, 38°.23N×22°.11E, h8^{km}, ML3.0/26, Error ellipse: s-maj=0.6km s-min=0.4km az=351.0*

ISC 14 21:38:01.6±0.7, **38°.23N**±0°.01×**22°.10E**±0°.01, **h12**^{km}±3^{km}, **n102, σ0^{s}.87**/151, **mb3.8**/3, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIG2	Aigio	0.02	294	P	Pg	21 38 02.6	-1.1
AIG3	Aigion	0.02	12	P	Pg	21 38 02.7	-1.1
ALIK	Aliki, Aigiali	0.03	21	P	Pg	21 38 04.0	+0.2
ALIK				S	Sg	21 38 05.5	+0.2
AIG1	Aigion	0.04	124	P	Pg	21 38 02.8	-1.0
LAKA	Lakka	0.09	274	P	Pg	21 38 04.5	+0.1
LAKA				S	Sg	21 38 06.2	-0.3
	8μm,0.6s						
LAKA	Lakka	0.09	274	P	Pg	21 38 03.3	-1.2
LAKA				AML	AML	21 38 06.5	
	comp=E,32519μm,0.5s						
LAKA				S	S	21 38 06.5	0.0
LAKA				AML	AML	21 38 06.6	
	comp=N,30610μm,0.6s						
TRAZ	Trapeza	0.11	126	P	Pg	21 38 05.0	+0.4
TRAZ				S	Sg	21 38 07.0	+0.2
	comp=N,59μm,0.2s						
TRAZ	Trapeza	0.11	126	P	Pg	21 38 04.9	+0.3
TRAZ				S	Sg	21 38 07.3	+0.5
TRAZ				AML	AML	21 38 07.7	
	comp=E,90898μm,0.2s						
TRAZ				AML	AML	21 38 08.0	
TRIZ	Trizonia	0.13	351	P	Pg	21 38 05.0	+0.1
TRIZ				S	Sg	21 38 07.5	+0.2
	comp=E,14μm,0.5s						
TRIZ	Trizonia	0.13	351	P	Pg	21 38 03.9	-1.0
TRIZ				S	Sg	21 38 07.4	+0.2
KALE	Kalithea	0.16	12	P	Pg	21 38 05.6	+0.2
KALE				S	Sg	21 38 08.7	+0.6
	comp=E,13μm,0.3s						
KALE	Kalithea	0.16	12	P	Pg	21 38 04.5	-0.9
KALE				S	Sg	21 38 08.5	+0.4
KALE				AML	AML	21 38 09.3	
	comp=E,14055μm,0.2s						
KALE				AML	AML	21 38 09.4	
	comp=N,35919μm,0.3s						
SERG	Sergoula	0.18	350	P	Pg	21 38 05.8	+0.1
SERG				S	Sg	21 38 08.9	+0.3
	comp=N,8μm,0.3s						
SERG	Sergoula	0.18	350	P	Pg	21 38 04.7	-1.0
SERG				S	Sg	21 38 08.4	-0.2
SERG				AML	AML	21 38 09.2	
	comp=E,16195μm,0.3s						
SERG				AML	AML	21 38 09.4	
	comp=N,17272μm,0.3s						
KLV	Kalavryta, Ach	0.19	168	P	Pg	21 38 06.0	+0.1
KLV				S	Sg	21 38 09.3	+0.5
	comp=N,7μm,0.4s						
KLV	Kalavryta, Ach	0.19	168	P	Pg	21 38 04.8	-1.1
KLV				S	Sg	21 38 09.4	+0.6
KLV				AML	AML	21 38 10.2	
	comp=E,10716μm,0.3s						
KLV				AML	AML	21 38 10.4	
	comp=N,14988μm,0.5s						
UPR	University Cam	0.25	282	P	Pb	21 38 07.4	-0.7
UPR	University Cam	0.25	282	P	Pg	21 38 05.9	-1.0
UPR				S	Sg	21 38 10.2	-0.1
GUR	Goura	0.35	147	P	Pg	21 38 08.6	-0.1
GUR				S	Sb	21 38 14.2	-1.2
	comp=N,15μm,0.5s						
GUR	Goura	0.35	147	P	Pg	21 38 07.5	-1.2
GUR				S	Sb	21 38 14.3	-1.2
GUR				AML	AML	21 38 14.6	
	comp=E,26233μm,0.5s						
GUR				AML	AML	21 38 14.6	
	comp=N,31700μm,0.5s						
DSF	Desfina	0.38	62	P	Pb	21 38 09.3	-1.1
DSF				S	Sb	21 38 14.8	-1.5
	comp=N,4μm,0.2s						
DSF	Desfina	0.38	62	P	Pg	21 38 08.1	-1.1
DSF				S	Sb	21 38 14.8	-1.5
DSF				AML	AML	21 38 16.0	
	comp=E,9023μm,0.2s						
DSF				AML	AML	21 38 16.1	
	comp=N,7323μm,0.2s						
ANX	Ano Chora	0.39	339	P	Pg	21 38 09.3	-0.1
ANX				S	Sb	21 38 15.9	-0.6
	comp=N,3μm,0.6s						
ANX	Ano Chora	0.39	339	P	Pg	21 38 08.2	-1.2
ANX				S	Sg	21 38 14.6	+0.1
ANX				AML	AML	21 38 18.8	
	comp=E,5853μm,0.3s						
ANX				AML	AML	21 38 20.7	
	comp=N,5386μm,0.6s						
DLFA	Delphi	0.40	52	P	Pg	21 38 09.4	-0.1
DLFA				AML	AML	21 38 15.6	
	comp=E,7386μm,0.3s						
DLFA				S	Sb	21 38 15.6	-1.1
DLFA				AML	AML	21 38 15.7	
	comp=N,6598μm,0.5s						
THAL	Thalero	0.49	113	P	Pb	21 38 11.5	-0.6
THAL				S	Sb	21 38 17.7	-1.5
	comp=N,2μm,0.4s						
THAL	Thalero	0.49	113	P	Pb	21 38 11.4	-0.6
THAL				S	Sb	21 38 17.9	-1.3
THAL				AML	AML	21 38 24.3	
	comp=N,6201μm,0.2s						
THAL				AML	AML	21 38 24.6	
	comp=E,7337μm,0.5s						
RLS	Riolos of Patr	0.53	251	P	Pg	21 38 10.9	-1.0
RLS				S	Sg	21 38 19.1	+0.2
RLS				AML	AML	21 38 24.2	
	comp=E,1712μm,0.5s						
RLS				AML	AML	21 38 34.0	
	comp=N,1619μm,0.5s						
PVO	Paravola	0.59	311	P	Pg	21 38 13.1	0.0
PVO	Paravola	0.59	311	P	Pg	21 38 12.1	-1.0
PVO				S	Sg	21 38 20.9	-0.1
PVO				AML	AML	21 38 25.6	
	comp=N,2778μm,0.6s						
PVO				AML	AML	21 38 25.9	
	comp=E,1791μm,0.6s						
PROD	Prodromos	0.63	87	P	Pb	21 38 14.2	-0.4
PROD				S	Sb	21 38 23.2	-0.2
PROD	Prodromos	0.63	87	P	Pb	21 38 14.2	-0.4
PROD				S	Sg	21 38 21.9	-0.4
PROD				AML	AML	21 38 27.8	
	comp=E,2022μm,0.3s						
PROD				AML	AML	21 38 28.4	
	comp=N,2623μm,0.3s						
ACOR	Acrocorinthos	0.70	119	P	Pb	21 38 15.1	-0.7
ACOR				S	Sb	21 38 25.2	-0.1
ACOR				AML	AML	21 38 33.7	
	comp=N,917μm,0.3s						
ACOR				AML	AML	21 38 35.8	
	comp=E,746μm,0.6s						
TRIP	Tripoli	0.72	169	P	Pg	21 38 15.0	-0.5
TRIP				S	Sb	21 38 26.1	+0.2
	comp=E,2μm,0.5s						
TRIP	Tripoli	0.72	169	P	Pb	21 38 15.4	-0.7
TRIP				S	Sb	21 38 25.6	-0.3
TRIP				AML	AML	21 38 29.7	
	comp=E,3510μm,0.4s						
TRIP				AML	AML	21 38 31.5	
	comp=N,3317μm,0.6s						
EVR	Evrytania	0.72	342	P	Pg	21 38 14.3	-1.3
EVR				AML	AML	21 38 31.8	
	comp=N,2048μm,0.8s						
EVR				AML	AML	21 38 34.9	
	comp=E,1790μm,0.7s						
LOUT	Loutraki	0.73	109	P	Pb	21 38 16.0	-0.3
LOUT				S	Sb	21 38 26.2	-0.2
LOUT				AML	AML	21 38 30.9	
	comp=N,214μm,0.5s						
LOUT				AML	AML	21 38 35.3	
	comp=E,250μm,0.5s						
AMT	Artemida-Makis	0.76	204	P	Pg	21 38 16.1	-0.3
AMT	Artemida-Makis	0.76	204	P	Pg	21 38 15.2	-1.2
AMT				AML	AML	21 38 31.1	
	comp=E,4411μm,0.6s						
AMT				AML	AML	21 38 33.2	
	comp=N,3698μm,0.5s						
VTN	Vitineika	0.79	247	P	Pb	21 38 17.0	-0.2
AGG	Agios Georgios	0.81	13	P	Pg	21 38 16.5	-0.8
AGG	Agios Georgios	0.81	13	P	Pg	21 38 15.9	-1.4
LKR	Lokris	0.82	59	P	Pg	21 38 17.0	-0.5
LKR				S	Sb	21 38 29.1	+0.2
	comp=N,915nm,0.2s						
LKR	Lokris	0.82	59	P	Pg	21 38 16.9	-0.6
LKR				S	Sb	21 38 28.1	-0.8
LKR				AML	AML	21 38 32.2	
	comp=N,1798μm,0.2s						
LKR				AML	AML	21 38 32.8	
	comp=E,1916μm,0.2s						
ATAL	Atalanti	0.86	57	P	Pg	21 38 17.6	-0.6
ATAL				S	Sb	21 38 30.7	+0.8
	comp=E,158nm,0.9s						
ATAL	Atalanti	0.86	57	P	Pg	21 38 16.9	-1.3
ATAL				S	Sb	21 38 29.9	-0.1
ATAL				AML	AML	21 38 33.7	
	comp=N,1315μm,0.7s						
ATAL				AML	AML	21 38 36.5	
	comp=E,1065μm,0.7s						
VLX	Vlachokerasia	0.89	165	P	Pg	21 38 17.9	-0.9
VLX				S	Sb	21 38 31.6	+0.7
	comp=E,3μm,0.5s						
VLX	Vlachokerasia	0.89	165	P	Pg	21 38 17.2	-1.6
VIL2	Platees	0.92	91	P	Pn	21 38 20.2	-0.3
VIL2				S	Sn	21 38 33.6	0.0
VIL2				AML	AML	21 38 36.3	
	comp=N,1946μm,0.8s						
VIL2				AML	AML	21 38 37.2	
	comp=E,3927μm,0.9s						
EPID	Epidavros	1.02	127	P	Pb	21 38 20.8	-0.3
EPID				S	Sn	21 38 35.2	-0.7
ITM	Ithomi	1.06	187	P	Pg	21 38 21.2	-0.8
ITM	Ithomi	1.06	187	P	Pg	21 38 21.2	-0.8
SMIA	Simia	1.08	53	P	Pb	21 38 22.0	-0.3
SMIA				S	Sn	21 38 37.6	0.0
	comp=E,1μm,0.5s						
SMIA	Simia	1.08	53	P	Pg	21 38 21.8	-0.7
SMIA				S	Sn	21 38 37.8	+0.1
DID	Didima	1.16	128	P	Pg	21 38 23.0	-0.9
DID				S	Sn	21 38 39.6	+0.2
	comp=E,1μm,0.5s						
DID	Didima	1.16	128	P	Pb	21 38 23.2	-0.4
KRND	KRANIDI	1.19	135	P	Pb	21 38 23.5	-0.6
KRND				S	Sn	21 38 41.8	+1.6
	comp=E,2μm,0.4s						
KRND	KRANIDI	1.19	135	P	Pn	21 38 23.9	-0.1
VLS	Valsamata	1.19	268	P	Pb	21 38 23.6	-0.5
VLS				S	Sn	21 38 42.4	+2.2
	comp=E,322nm,0.6s						
VLS	Valsamata	1.19	268	P	Pb	21 38 23.6	-0.5
EVGI	Lefkada island	1.20	289	P	Pn	21 38 24.2	0.0
FSK	Fiskardo	1.23	281	P	Pn	21 38 24.3	-0.3
FSK				S	Sn	21 38 43.3	+2.2
	comp=E,448nm,0.7s						
FSK	Fiskardo	1.23	281	P	Pn	21 38 24.4	-0.2
MRKA	Markates	1.26	68	P	Pg	21 38 25.8	-0.1
MRKA				S	Sn	21 38 42.3	+0.3
	comp=E,340nm,0.6s						
MRKA	Markates	1.26	68	P	Pn	21 38 24.6	-0.4
MRKA				S	Sn	21 38 43.3	+1.3
MRKA				AML	AML	21 38 45.9	
	comp=N,772μm,0.7s						
MRKA				AML	AML	21 38 46.6	
	comp=E,515μm,0.8s						
TSLK	Tsoukalades, L	1.28	298	P	Pb	21 38 25.6	+0.1
ATH	Athens Observa	1.30	101	P	Pn	21 38 25.3	-0.4
THL	Klokotos Trika	1.33	357	P	Pg	21 38 27.0	-0.2
THL				S	Sg	21 38 45.7	+1.2
	comp=E,195nm,0.7s						
THL	Klokotos Trika	1.33	357	P	Pg	21 38 26.7	-0.5
FYTO	Fytoko, Volos	1.35	29	P	Pb	21 38 26.5	-0.3
ATHU	Athens Univers	1.36	101	P	Pg	21 38 26.8	-0.9
ATHU				S	Sg	21 38 46.9	+1.5
PYL	PYLOS	1.36	192	P	Pn	21 38 26.6	+0.1
PYL	PYLOS	1.36	192	P	Pn	21 38 26.5	+0.1
NEO	Neokhori	1.39	39	P	Pn	21 38 26.9	0.0
VLY	Voula,Athens	1.39	105	P	Pb	21 38 27.2	-0.4
PTL	Penteli	1.41	97	P	Pg	21 38 27.7	-0.9
PTL				S	Sg	21 38 46.6	-0.3
	comp=E,200nm,0.7s						
PTL	Penteli	1.41	97	P	Pg	21 38 27.7	-0.9
XOR	Xorichti	1.42	37	P	Pb	21 38 27.5	-0.6
SKIA	Skiathos	1.42	49	P	Pb	21 38 27.7	-0.3
EREA	Eretria	1.45	82	P	Pg	21 38 28.5	-1.0
DION	Dionisos Attik	1.46	96	P	Pb	21 38 28.3	-0.3
DION				S	Sb	21 38 46.9	-0.2
	comp=E,225nm,0.5s						
DION	Dionisos Attik	1.46	96	P	Pb	21 38 28.1	-0.6
VLI	Veliai	1.65	156	P	Pb	21 38 31.3	-0.7
VLI				S	Sb	21 38 52.4	-0.4
	comp=E,660nm,0.5s						
VLI	Veliai	1.65	156	P	Pb	21 38 31.2	-0.8
KPRO	Kipourio	1.81	342	P	Pb	21 38 34.8	0.0
KARY	Karystos	1.85	95	P	Pb	21 38 35.1	-0.3
LIT	Litokhoron	1.89	9	P	Pn	21 38 34.1	+0.3
KTHA	Kythira Island	2.12	158	P	Pb	21 38 38.6	-1.3
SERI	Serifos	2.17	119	P	Pn	21 38 38.8	+1.1
ANKY	Antikythira Is	2.55	157	P	Pn	21 38 44.3	+1.5
OHR	Ohrid	3.04	341	*i* Pn	Pb	21 38 53.7	-2.1
VAY	Valandovo	3.11	7	*i* Pn	Pn	21 38 52.8	+2.3
MMB	Musomiste	3.58	20	*e*P	Pn	21 38 57.9	+0.9
KKB	Krupnik	3.71	11	*e*P	Pg	21 39 11.8	-0.8
SKO	Skopje	3.77	353	*i* Pn	Pg	21 39 11.9	-1.9
RZN	Rozhen	3.99	29	*e*P	Pn	21 39 01.1	-1.7
VTS	Vitosha	4.46	11	*e*P	Pn	21 38 58.2	-11
BRTR	Keskin Array B	9.11	77	Pn	Pn	21 40 16.2	+3.2
	comp=E,0.1nm,0.3s,baz=261,slow=12,SNR=4.5						
ESDC	Sonseca Array	20.30	282	P	Pn	21 42 39.3	-0.1
	comp=E,0.5nm,0.6s,baz=77,slow=11,SNR=5.3						
TORD	Torodi Ar. Bea	30.87	221	P	P	21 44 18.3	+0.4
	comp=E,0.4nm,0.8s,baz=31,slow=9.1,SNR=2.3						
MKAR	Makanchi Array	44.21	59	P	P	21 46 10.7	+0.2
	comp=E,0.8nm,0.5s,baz=274,slow=6.5,SNR=8.1						
ZALV	Zalesovo Beam	44.73	48	P	P	21 46 15.1	+0.6
	comp=E,0.9nm,0.5s,baz=274,slow=9.0,SNR=3.5						

*SJA **14** 21:56:06.5±0.5, 28°.67S×71°.90W, h66^{km}±7^{km}, ML4.1, MW3.4*

*GUC **14** 21:56:08.4±0.6, 28°.65S×71°.28W, h38^{km}±5^{km}, ML4.1*

*IDC **14** 21:56:32.2±13.0, 29°.10S×70°.71W, h217^{km}±112^{km}, mb3.5/1, mb1 3.4/2, mb1mx3.0/17, mbtmp3.9/2, MS2.5/1, Ms1 2.5/1, ms1mx2.3/16, Error ellipse: s-maj=160.0km s-min=73.7km az=141.0*

ISC 14 21:56:05.7±1.9, **28°.60S**±0°.04×**71°.45W**±0°.07, **h6**^{km}±11^{km}, **n19, σ1^{s}.53**/25, **2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.77	122	⇓*i*P	Pn	21 56 22.4	-0.9
LCO				*e*S	Sb	21 56 32.2	-0.3
LSCH	La Serena	1.31	172	*e*P	Pg	21 56 31.1	+0.3
LSCH				*e*S	Sg	21 56 48.0	+0.1
GO03	Copiap	1.47	47	⇑*i*P	Pb	21 56 33.4	0.0
GO03				*e*S	Sg	21 56 52.7	-0.2
GO03				IAML		21 56 56.6	
	comp=E,3μm,0.3s						
GO04	Tololo Observa	1.66	160	⇑*i*P	Pb	21 56 36.6	-0.3
GO04				*e*S	Sb	21 56 58.4	+0.2
GO04				IAML		21 57 10.1	
	comp=N,5μm,0.5s						
AROD	Rodeo	2.32	133	*e*P	Pb	21 56 48.7	+0.5
AROD				*e*S	Sg	21 57 20.0	-0.4
CO02	Combarbal	2.62	172	*e*P	Pn	21 56 49.4	+0.7
CO02				*e*S	Sn	21 57 21.3	+0.4
CO02				IAML		21 57 33.8	
	comp=E,2μm,0.1s						
AGUA	GUANDACOL	2.73	110	*e*P	Pb	21 56 55.2	+0.2
VCA	Vinchina	2.85	93	*e*P	Pb	21 56 57.8	+0.7
VCA				*e*S	Sg	21 57 35.3	-2.0
VCA				IAML		21 57 45.5	
	comp=Z,420nm,0.3s						
ACCO	Cerro Coronel	2.87	134	*e*P	Pb	21 56 56.5	-0.9
ACCO				*e*S	Sb	21 57 33.6	+0.7
AMOG	MOGNA	3.47	133	*e*P	Pb	21 57 04.1	-3.4
RTLS	Leoncito	3.69	150	*e*P	Pn	21 57 06.1	+2.6
RTLS				IAML		21 58 05.6	
	comp=Z,171nm,0.4s						
RTCV	Cerro Valdivia	4.11	143	*e*P	Pn	21 57 11.7	+2.6
CYA	Choya	4.97	89	IAML		21 57 27.3	
	comp=Z,115nm,0.3s						
TCA	Tanti	6.54	116	*e*P	Pn	21 57 46.1	+3.6
CPUP	Villa Florida	12.74	83	P	Pn	21 59 18.8	+11
	comp=Z,0.3nm,0.3s,baz=256,slow=15,SNR=5.5						
CPUP				LR	LR	22 04 21.4	
	comp=Z,23nm,19.4s,baz=226,slow=38						
TORD	Torodi Ar. Bea	81.91	70	P	P	22 08 25.6	-0.9
	comp=Z,1.0nm,0.7s,baz=244,slow=5.6,SNR=5.2						
WRA	Warramunga Arr	125.69	210	PKP	PKPdf	22 15 07.9	-0.9
	comp=Z,0.7nm,0.6s,baz=144,slow=0.7,SNR=3.9						
ZALV	Zalesovo Beam	149.31	28	PKPbc	PKPbc	22 15 54.7	-0.2
	comp=Z,1.4nm,0.5s,baz=297,slow=3.7,SNR=6.7						
MKAR	Makanchi Array	152.60	41	PKPbc	PKPbc	22 16 02.2	-0.8
	comp=Z,0.5nm,0.7s,baz=318,slow=2.4,SNR=4.5						

MAN 14 22:04:10.3, 3°.81N×126°.22E, h1^{km}, MS3.7, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.34	348	*e*P	Pn	22 04 50.5	+0.5
DDMP				*e*S	Sn	22 05 12.3	-7.0
MATI	Mati	3.12	1	*e*P	Pb	22 05 04.7	-2.0
MATI				*e*S	Sn	22 05 35.0	-3.6
SKMP	Bagumbayan, Su	3.17	328	*e*P	Pn	22 05 03.1	+1.7
SKMP				*e*S	Sn	22 05 31.9	-8.0
KCP	Kidapawan	3.38	341	⇓*e*P	Pb	22 05 07.7	-3.4
KCP				*e*S	Sb	22 05 51.4	-1.3
PAGZ	Pagadian	4.91	325	*e*P	Pn	22 05 26.8	+1.6
PAGZ				*e*S	Sn	22 06 15.2	-7.6

*IDC **14** 22:22:20.1±2.2, 53°.36N×167°.26W, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/37, mbtmp3.7/7, MS2.6/1, Ms1 2.6/1, ms1mx2.2/52, Error ellipse: s-maj=68.9km s-min=29.6km az=13.0*

*ISCJB **14** 22:22:22.7±0.6, 52°.79N±0°.06×167°.62W±0°.06, h42km, mb3.7/6, MS2.6/1, Error ellipse: s-maj=10.2km s-min=3.4km az=154.0*

*NEIC **14** 22:22:23.5±0.0, 52°.84N×167°.61W, h27km, ML3.3(AEIC), After AEIC.*

ISC 14 22:22:24.4±0.9, **52°.9N**±0°.1×**167°.71W**±0°.06, **h42km, n40, σ1s.16**/39, **mb3.7**/6, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKTU	Okmok Mt. Tuli	0.51	337	ePn	Pn	22 22 36.1	+0.7
OKER	Okmok East Rim	0.57	339	ePn	Pn	22 22 37.2	+0.9
NIKH	Nikolski High	0.70	275	ePn	Pn	22 22 37.3	-0.6
NIKH				eSg	Sn	22 22 48.1	+0.6
OKAK	Okmok	0.77	330	ePn	Pn	22 22 37.5	-1.3
MREP	Makushin Rep't	1.06	32	ePn	Pn	22 22 42.8	-0.1
MSW	Makushin Switc	1.14	29	ePn	Pn	22 22 44.0	+0.1
MSW				eSn	Sn	22 23 00.2	+1.8
MCIR	Makushin Cirqu	1.14	25	ePn	Pn	22 22 44.9	+0.9
UNV	Unalaska Valle	1.18	37	ePn	Pn	22 22 43.7	-0.6
UNV				eSn	Sn	22 22 59.7	+0.5
AKRB	Akutan Reef Bi	1.56	38	ePn	Pn	22 22 50.4	+0.8
AKUT	Akutan	1.68	43	ePn	Pn	22 22 51.3	0.0
AKUT				eSn	Sn	22 23 12.4	+0.9
AKSA	Akutan Strait	1.71	44	ePn	Pn	22 22 52.5	+0.8
WESP	Westdahl Peak	2.37	47	ePn	Pn	22 23 01.9	+1.0
FALS	False Pass	3.19	51	ePn	Pn	22 23 13.5	+1.5
KOFP	Korovin Flat P	3.95	263	ePn	Pn	22 23 24.8	+2.3
KOWE	Korovin West	4.03	265	ePn	Pn	22 23 25.8	+2.3
SPIA	Saint Paul Isl	4.51	342	ePn	Pn	22 23 29.7	-0.4
SDPT	Sand Point	4.90	57	ePn	Pn	22 23 36.5	+1.0
GSTR	Great Sitkin T	5.17	264	ePn	Pn	22 23 39.5	+0.2
GSTR				eSn	Sn	22 24 38.4	+0.9
GSMY	Great Sitkin M	5.18	264	ePn	Pn	22 23 41.3	+1.9
GSTD	Great Sitkin T	5.23	264	ePn	Pn	22 23 42.2	+2.1
ADAG	Mount Adagdak	5.52	264	ePn	Pn	22 23 46.4	+2.4
ADK	Adak	5.59	263	ePn	Pn	22 23 46.3	+1.3
ADK				eSn	Sn	22 24 48.3	+0.3
KIWB	Kanaga Island	5.88	263	ePn	Pn	22 23 49.2	+0.2
CHIR	Chirikof Islan	7.63	63	ePn	Pn	22 24 12.5	-0.4
CHIR				eSn	Sn	22 25 37.3	-0.7
OHAK	Old Harbor	9.32	57	ePn	Pn	22 24 36.8	+0.8
PMR	Palmer	13.24	42	ePn	Pn	22 25 27.3	-2.2
PETK	Petropavlovsk-	20.70	284	P	Pn	22 27 04.4	+1.0
	0.7nm,0.4s,baz=79,slow=12,SNR=6.9						
H11N2	WAKE ISLAND Hy	38.52	220	T	T	23 10 52.1	
	baz=24,slow=76,SNR=260						
H11N3	WAKE ISLAND Hy	38.53	220	T	T	23 10 52.6	
	baz=24,slow=76,SNR=272						
H11N1	WAKE ISLAND Hy	38.54	220	T	T	23 10 56.9	
	baz=24,slow=76,SNR=208						
H11S1	WAKE ISLAND Hy	39.71	220	T	T	23 12 23.4	
	baz=24,slow=76,SNR=335						
H11S2	WAKE ISLAND Hy	39.72	220	T	T	23 12 19.7	
	baz=24,slow=76,SNR=209						
H11S3	WAKE ISLAND Hy	39.73	220	T	T	23 12 24.7	
	baz=24,slow=76,SNR=157						
KSRS	Korea Array	46.34	277	LR	LR	22 50 32.7	
	comp=Z,6.2nm,19.6s,baz=90,slow=36						
TXAR	Lajitas Array	51.73	91	P	P	22 31 27.1	-0.4
	0.3nm,0.6s,baz=304,slow=7.1,SNR=4.6						
MKAR	Makanchi Array	64.16	314	P	P	22 32 54.1	-0.1
	0.2nm,0.3s,baz=40,slow=6.3,SNR=5.6						
FINES	FINESS Array B	65.46	353	P	P	22 33 02.0	-0.4
	0.6nm,0.3s,baz=14,slow=6.3,SNR=15						
AKASG	Malin Array Be	75.77	349	P	P	22 34 04.9	-0.4
	0.4nm,0.3s,baz=13,slow=6.1,SNR=6.0						
GERES	GERESS Array B	78.61	359	P	P	22 34 21.5	0.0
	0.3nm,0.6s,baz=17,slow=7.2,SNR=3.8						
BRTR	Keskin Array B	85.89	344	P	P	22 35 00.1	+0.4
	0.5nm,0.6s,baz=25,slow=3.5,SNR=5.6						

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*NEIC **14** 22:40:37.6±0.0, 38°.81N×122°.80W, h4km, MW3.7(BRK), After NCEDC.*

NEIC Felt at Middletown.

*IDC **14** 22:40:38.7±2.4, 38°.78N×122°.85W, h0km, mb1 3.5/5, mb1mx3.2/38, mbtmp3.0/5, ML3.2/5, Error ellipse: s-maj=29.8km s-min=12.0km az=37.0*

ISC 14 22:40:37.5±1.0, **38°.81N**±0°.03×**122°.78W**±0°.04, **h3km**±7km, **n39, σ1s.13**/50, **Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDXM	Geysers	0.01	289	ePg	Pg	22 40 38.3	+0.1
HOPS	Hopland Field	0.29	310	ePg	Pg	22 40 43.7	+0.5
MCCM	Marconi Confer	0.66	187	ePg	Pb	22 40 51.5	-0.2
MCCM				eSg	Sg	22 40 57.6	-1.2
KCPM	Cahto Peak	1.08	325	ePn	Pb	22 40 59.0	+0.1
J061	Lakeshore Driv	1.09	168	ePg	Pg	22 40 58.5	0.0
J061				eSg	Sg	22 41 12.6	-0.1
ORV	Oroville	1.25	53	ePg	Pg	22 40 59.5	-1.9
ORV				eSg	Sg	22 41 17.2	-0.3
AFDM	Forest Hills D	1.42	84	ePn	Pn	22 41 02.3	-2.0
AFDM				eSn	Sb	22 41 22.3	-1.0
KMRM	Mail Ridge	1.59	333	ePn	Pn	22 41 06.1	-0.6
WDC	Whiskeytown Da	1.78	6	ePn	Pn	22 41 09.1	-0.2
CMB	Columbia Colle	2.03	111	ePn	Pn	22 41 12.0	-0.8
CMB				eSn	Sn	22 41 36.8	-1.9
RUBR	Rubicon Trail	2.06	82	ePn	Pn	22 41 13.1	-0.3
RUBR				eSn	Sn	22 41 39.7	0.0
BEKR	Beckworth	2.16	60	ePn	Pn	22 41 15.2	+0.6
BEKR				eSn	Sn	22 41 41.3	-0.7
KHMM	Horse Mountain	2.19	341	eSn	Sn	22 41 24.7	-18
SAO	San Andreas Ge	2.29	152	ePn	Pn	22 41 14.3	-2.0
SAO				eSn	Sn	22 41 45.7	+0.7
VCNR	Virginia City	2.49	78	ePn	Pn	22 41 20.4	+1.3
PNTR	Pine Nut	2.50	82	ePn	Pn	22 41 20.3	+1.0
PNTR				eSn	Sn	22 41 50.2	-0.3
WAKR	Walker	2.64	95	ePn	Pn	22 41 22.5	+1.3
WAKR				eSn	Sn	22 41 53.3	-0.5
YERR	Yerington	2.77	85	ePn	Pn	22 41 23.6	+0.6
PAHR	Pah Rah Range	2.79	70	ePn	Pn	22 41 23.7	+0.5
YBH	Yreka Blue Hor	2.92	1	Pn	Pb	22 41 29.0	-1.4
	1.3nm,0.3s,baz=177,slow=12,SNR=18						
YBH				Lg	Lg	22 42 15.9	
	baz=89,slow=12,SNR=2.3						
YBH	Yreka Blue Hor	2.92	1	ePg	Pb	22 41 29.5	-0.8
MDPB	Devils Postpil	3.14	111	ePn	Pn	22 41 30.1	+1.9
MDPB				eSn	Sn	22 42 06.1	-0.3
OMMB	Old Mammoth Mi	3.21	111	ePn	Pn	22 41 30.5	+1.4
RYN	Ryan	3.34	92	ePn	Pn	22 41 31.2	+0.4
NV01	Mina Array Sit	3.53	95	ePn	Pn	22 41 34.5	+1.0
NV01				ePg	Pb	22 41 42.1	+1.4
NV01				eLg	Lg	22 42 32.0	
NVAR	Mina Array Bea	3.53	95	Pn	Pn	22 41 34.5	+1.0
	1.4nm,0.3s,baz=270,slow=14,SNR=28						
NVAR				Pg	Pb	22 41 42.1	+1.4
	4.6nm,0.3s,baz=266,slow=17,SNR=37						
NVAR				Lg	Lg	22 42 32.0	
	3.0nm,0.3s,baz=289,slow=35,SNR=4.5						
MOD	Modoc Plateau	3.63	31	ePn	Pn	22 41 34.9	+0.1
NV11	Mina Array Sit	3.64	94	ePn	Pn	22 41 35.8	+0.8
KVN	Kaiserville	3.66	85	ePn	Pn	22 41 35.3	+0.1
PAGB	Antelope Grade	3.67	146	ePn	Pn	22 41 35.4	+0.1
HUMO	Hull Mountain	3.80	358	ePn	Pn	22 41 38.1	+1.1
ISA	Isabella, Lake	4.65	131	ePn	Pn	22 41 47.4	-1.4
WVOR	Wild Horse Val	4.80	40	ePn	Pn	22 41 50.8	-0.1
DAC	Darwin (Calif)	4.83	120	ePn	Pn	22 41 50.9	-0.5
TPNV	Topopah Spring	5.49	108	ePn	Pn	22 41 58.4	-1.9
R11A	Troy Canyon, C	5.66	92	ePn	Pn	22 42 02.9	+0.2
ELK	Elko	6.13	69	Pn	Pn	22 42 10.6	+1.4
	0.2nm,0.3s,baz=256,slow=12,SNR=7.5						
ELK				Lg	Lg	22 43 52.7	
	0.1nm,0.3s,baz=145,slow=9.7,SNR=2.7						
PDAR	Pinedale Array	10.78	64	Pn	Pn	22 43 19.2	+6.2
	0.1nm,0.3s,baz=236,slow=9.7,SNR=4.8						
TXAR	Lajitas Array	18.41	115	P	P	22 44 57.0	+3.0
	0.0nm,0.3s,baz=302,slow=12,SNR=9.4						

MEX 14 22:45:30.5±1.3, **16°.43N**×**97°.81W, h50km**±26km, **MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.34	327	eP	Pn	22 45 50.8	-2.1
TLIG				i S	Sn	22 46 08.0	-1.7

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*DDA **14** 22:46:15.8, 42°.06N×46°.16E, h12km±4km, ML3.0*

*TIF **14** 22:46:16.8, 41°.98N×46°.18E, h19km±2km*

*NORS **14** 22:46:18.3±0.0, 41°.98N×46°.30E, h20km, MPVA3.4*

*DRS **14** 22:46:18.2±0.0, 41°.96N×46°.16E, h12km, ML2.8/3*

ISC 14 22:46:17.0±0.9, **41°.97N**±0°.02×**46°.13E**±0°.02, **h12km**±8km, **n41, σ1s.26**/76, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.16	150	P	Pb	22 46 21.6	-0.4
LGD				S	Sg	22 46 24.5	+1.2
DDFL	Dedoflistskaro	0.53	181	P	Pg	22 46 26.0	-1.4
DDFL	Dedoflistskaro	0.53	181	i P	Pg	22 46 26.3	-1.0
DDFL				i S	Sb	22 46 37.4	+1.6
BTLR	Botlikh	0.69	5	i Pg	Pn	22 46 32.1	-0.7
	49nm,0.5s						
BTLR				eSg	Sn	22 46 42.3	-1.3
	307nm,0.4s						
XNZR	Khunzakh	0.71	36	ePg	Pn	22 46 32.3	-0.8
XNZR				eSg	Sn	22 46 42.4	-1.7
KMKR	Kumukh	0.74	77	ePg	Pn	22 46 32.0	-1.5
	41nm,0.2s						
KMKR				i Sg	Sn	22 46 42.5	-2.2
	522nm,0.2s						
GNBR	Gunib	0.74	56	ePg	Pn	22 46 32.5	-0.9
	45nm,0.4s						
GNBR				eSg	Sn	22 46 42.9	-1.9
	384nm,0.3s						
UNCR	Uncukul	0.89	33	ePg	Pn	22 46 35.8	+0.4
	36nm,0.2s						
UNCR				eSg	Sn	22 46 47.7	-0.6
	190nm,0.4s						
ARKR	Arakani	0.90	45	ePg	Pn	22 46 36.0	+0.4
ARKR				i Sg	Sn	22 46 49.0	+0.5
	151nm,0.3s						
DVE	Vedeno	0.98	360	ePg	Pn	22 46 37.5	+0.7
DVE				eSg	Sn	22 46 51.7	+1.0
SEAG	Tbilisi Sea	1.02	259	P	Pn	22 46 37.6	+0.4
SEAG				S	Sn	22 46 52.2	+0.8
KRNR	Karanay	1.03	34	ePg	Pn	22 46 38.5	+1.1
KRNR				eSg	Sn	22 46 52.0	+0.2
	60nm,0.3s						
BTNK	Botanikuri	1.04	254	i P	Pn	22 46 37.1	-0.3
BTNK				i S	Sn	22 46 52.3	+0.3
BTNK				IAML_P			
	comp=Z,8μm,0.1s						
TBLG	Delisi	1.07	257	P	Pn	22 46 37.8	-0.2
TBLG				S	Sn	22 46 52.9	+0.2
TBLG	Delisi	1.07	257	i P	Pn	22 46 38.7	+0.8
TBLG				i S	Sn	22 46 53.9	+1.1
TBLG				IAML_P			
	comp=Z,6μm,0.2s						
URKR	Urkarakh	1.13	80	ePg	Pn	22 46 39.6	+0.7
URKR				eSg	Sn	22 46 53.8	-0.6
DLMR	Dylym	1.16	18	ePg	Pn	22 46 41.0	+1.9
	comp=Z,43nm,0.2s						
DLMR				i Sg	Sn	22 46 57.5	+2.6
	comp=Z,246nm,0.5s						
DBC	Dubki	1.17	26	ePg	Pn	22 46 40.5	+1.2
	comp=Z,37nm,0.3s						
DBC				eSg	Sn	22 46 56.6	+1.4
	comp=Z,112nm,0.8s						
GROC	Groznyy	1.25	349	ePg	Pg	22 46 43.3	+2.1
GROC				eSg	Sn	22 47 01.6	+4.4
AKT	Akhty	1.29	112	ePg	Pg	22 46 41.2	-0.7
AKT				eSg	Sg	22 46 58.6	0.0
GUDG	Gudauri	1.33	292	P	Pg	22 46 42.3	-0.2
GUDG				S	Sg	22 47 00.6	+0.8
KZRT	Kazreti	1.43	246	P	Pn	22 46 42.4	-0.4
KZRT				S	Sn	22 47 01.7	+0.2
KZRT	Kazreti	1.43	246	i P	Pb	22 46 43.0	-0.5
KZRT				i S	Sn	22 47 01.8	+0.2
KSMR	Kasumkent	1.54	103	ePg	Pg	22 46 47.5	+1.0
KSMR				eSg	Sg	22 47 09.5	+3.1
	comp=Z,86nm,0.5s						
LACR	Lac	1.61	303	ePg	Pg	22 46 48.2	+0.3
LACR				eSg	Sg	22 47 08.8	+0.1
DRN	Derbent	1.64	87	ePg	Pg	22 46 48.4	-0.1
DRN				eSg	Sg	22 47 09.8	+0.1
BTKR	Batakoyurt	1.83	321	ePg	Pg	22 46 52.7	+0.6
BTKR				eSg	Sg	22 47 18.2	+2.4
KORR	Kora	1.89	307	ePg	Pg	22 46 52.5	-0.8
KORR				eSg	Sg	22 47 19.8	+2.0
TRKR	Terskaya	2.03	330	ePg	Pg	22 46 55.2	-0.8
TRKR				eSg	Sg	22 47 22.3	-0.1
AKH	Akhalkalaki	2.06	255	P	Pb	22 46 53.6	-0.8
AKH				S	Sb	22 47 20.8	+0.8
ONI	Oni	2.08	288	P	Sg	22 47 23.6	-0.4
GNI	Garni	2.10	211	ePg	Pn	22 46 53.6	+1.4
GNI				eSg	Sg	22 47 24.8	+0.1
LSNR	Lesken	2.15	308	ePg	Pg	22 46 57.6	-0.5
LSNR				eSg	Sg	22 47 25.4	-0.6
EAK	Akyaka	2.30	237	i P	Pb	22 46 57.7	-0.8
EAK				i S	Sg	22 47 29.7	-1.1
EAK				IAML_P			
	comp=Z,197nm,0.2s						
TKB	Tkibuli	2.37	280	P	Pb	22 46 57.5	-2.1
TKB				S	Sb	22 47 28.0	-0.8
EPOS	Posof	2.59	261	i P	Pb	22 47 02.9	-0.7
EPOS				i S	Sb	22 47 36.5	+1.1
IGDI	IGDIR	2.62	217	i P	Pb	22 47 02.9	-1.0
IGDI				i S	Sb	22 47 36.5	+0.5
IGDI				IAML_P			
	comp=Z,40nm,0.1s						
SHA1	Shidzhatmaz	3.11	306	ePn	Pb	22 47 09.9	-2.4
SHA1				eSn	Sb	22 47 48.4	-1.9
DAGI	Agillar	3.29	256	i P	Pb	22 47 15.1	-0.3
DBOC	Borcka	3.41	261	i P	Pb	22 47 15.9	-1.4
DBAD	Bademkaya	3.47	256	i P	Pb	22 47 19.5	+1.1

MEX 14 22:56:57.8±0.8, **16°.75N**×**99°.94W, h8km**±6km, **MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.43	313	eP	Pg	22 57 06.0	-0.2
CAIG				eS	Sg	22 57 12.1	+0.1
MEIG	Mezcala	1.21	14	eP	Pb	22 57 16.4	-4.5
MEIG				i S	Sg	22 57 31.8	-4.8
TLIG	Tlapa	1.54	58	eP	Pn	22 57 22.1	-3.5
TLIG				i S	Sn	22 57 41.4	-4.4
ARIG	Puente Sto Nin	1.57	346	eP	Pn	22 57 22.8	-3.2
ARIG				eS	Sn	22 57 42.2	-4.3
PLIG	Platanillo	1.68	14	eP	Pn	22 57 24.4	-3.2
PLIG				eS	Sn	22 57 45.2	-4.1
ZIIG	Zihuatanejo	1.69	300	i P	Pn	22 57 24.0	-3.6
ZIIG				i S	Sn	22 57 44.2	-5.3
YAIG	Yautepec	2.25	21	eP	Pn	22 57 31.8	-3.8
YAIG				eS	Sn	22 57 59.3	-4.3

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*ISCJB **14** 23:01:22.4±0.3, 14°.21N±0°.03×93°.28W±0°.03, h10km, mb4.2/32, MS3.7/4, Error ellipse: s-maj=4.9km s-min=3.4km az=21.1*

*MEX **14** 23:01:23.8±0.7, 14°.10N×93°.43W, h32km±42km, MD4.2*

*NEIC **14** 23:01:24.6±0.0, 14°.23N×93°.42W, h10km, mb4.3/53, MD4.3(MEX), After MEX.*

*IDC **14** 23:01:31.8±2.4, 14°.69N×93°.01W, h69km±16km, mb3.7/10, mb1 4.0/14, mb1mx3.7/47, mbtmp4.0/14, MS3.5/6, Ms1 3.5/6, ms1mx3.1/22, Error ellipse: s-maj=34.3km s-min=8.2km az=28.0*

*GCG **14** 23:01:45.4±0.5, 14°.61N×91°.73W, h36km±187km, MD4.4*

ISC 14 23:01:23.2±0.6, **14°.23N**±0°.06×**93°.36W**±0°.04, **h10km, n173, σ2s.02**/171, **mb4.2**/32, **MS3.7**/4, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.26	57	ePn	Pn	23 01 44.9	-1.9
THIG				eSg	Sb	23 02 02.6	-0.6
THIG		1.26	57	eP	Pn	23 01 44.6	-2.2
THIG				eS	Sb	23 02 01.9	-1.4
PCIG		1.48	5	ePn	Pn	23 01 48.3	-1.5
PCIG				e		23 02 04.2	
PCIG		1.48	5	eP	Pn	23 01 48.2	-1.6
PCIG				i S	Sn	23 02 06.6	-2.6
ERG	Entre ros, C	1.75	83	eP	Pn	23 01 52.6	-0.9
STG3	Santiaguito 3,	1.80	74	eP	Pn	23 01 52.8	-1.7
CCIG	Comitan	2.36	30	ePn	Pn	23 02 00.6	-1.5
CCIG				ePn	Pb	23 02 03.7	-2.3
CCIG				eSn	Sn	23 02 27.6	-3.7
CCIG	Comitan	2.36	30	eP	Pn	23 02 00.6	-1.5
CCIG				i S	Sn	23 02 30.3	-1.0
FUG	Fuego 3	2.45	85	eP	Pn	23 02 01.8	-1.6
PCG	Pacaya	2.67	86	eP	Pn	23 02 05.2	-1.4
APG	El Apazote	2.91	74	P	Pn	23 02 09.1	-0.7
	9.3nm,0.3s,baz=270,slow=7.4,SNR=106						
APG				S	Sn	23 02 41.1	-3.7
	30nm,0.3s,baz=321,slow=14,SNR=5.1						
APG				LR	LR	23 03 12.8	
	comp=Z,550nm,18.6s,baz=244,slow=41						
NBG	Las Nubes	2.94	83	eP	Pn	23 02 08.9	-1.4
NBG				e		23 02 08.9	
HUIG	Huatulco	3.07	300	ePn	Pn	23 02 09.8	-1.9
HUIG				eSn	Sn	23 02 45.1	-3.4
HUIG	Huatulco	3.07	300	eP	Pn	23 02 09.5	-2.3
HUIG				i S	Sn	23 02 43.1	-5.4
CMIG	Matias Romero	3.20	333	P	Pn	23 02 15.0	+1.4
	3.9nm,0.3s,baz=144,slow=11,SNR=41						
CMIG				S	Sn	23 02 51.6	-0.3
	35nm,0.3s,baz=122,slow=20,SNR=6.4						
CMIG	Matias Romero	3.20	333	ePn	Pn	23 02 11.3	-2.4
CMIG				eSn	Sn	23 02 48.6	-3.3
CMIG	Matias Romero	3.20	333	eP	Pn	23 02 11.3	-2.4
CMIG				eS	Sn	23 02 48.6	-3.3
CSGN	Cosiguina Volc	5.78	102	ePn	Pn	23 02 48.4	-0.7
TGUH	Tegucigalpa,Un	5.91	91	ePn	Pn	23 02 53.6	+2.7
TLIG	Tlapa	6.01	304	ePn	Pn	23 02 55.6	+3.3
LVIG	Laguna Verde	6.20	332	ePn	Pn	23 02 57.6	+2.8
ESTN	Estel	6.89	99	ePn	Pn	23 03 08.4	+4.1
MYIG	Mrida	7.53	27	ePn	Pn	23 03 19.9	+6.8
TEIG	Tepich	7.69	38	ePn	Pn	23 03 14.1	-1.3
ACON	Acoyapa	8.28	105	ePn	Pn	23 03 25.2	+1.7
JTS	Las Juntas de	9.10	115	P	Pn	23 03 40.3	+5.7
	0.6nm,0.3s,baz=16,slow=20,SNR=3.0						
JTS	Las Juntas de	9.10	115	ePn	Pn	23 03 40.6	+5.9
LNIG	Linares	12.07	332	ePn	Pn	23 04 19.5	+4.1
833A	Chaparral WMA,	15.11	339	eP	Pn	23 04 59.0	+2.3
	23nm,1.0s						
833A	Chaparral WMA,	15.11	339	P	Pn	23 05 00.4	+3.6
	baz=157						
HKT	Hockley	15.81	352	ePn	Pn	23 05 07.1	+1.1
	11nm,1.2s						
JCT	Junction City	17.23	341	P	P	23 05 28.0	+2.4
	baz=159						
TXAR	Lajitas Array	17.80	329	P	P	23 05 34.2	+2.2
	0.1nm,0.3s,baz=149,slow=12,SNR=25						
TXAR				LR	LR	23 13 13.6	
	comp=Z,48nm,20.4s,baz=0.0,slow=40						
TX31	Lajitas Ar. Si	17.80	329	eP	P	23 05 34.3	+2.3
	10nm,1.1s						
349A	Repton	17.96	17	P	P	23 05 35.6	+2.0
	baz=200						
757A	Oxford	18.00	34	P	P	23 05 35.8	+1.7
	baz=218						
WHTX	Lake Whitney,	18.08	349	eP	P	23 05 40.0	+5.2
	8.9nm,0.8s						
WHTX	Lake Whitney,	18.08	349	P	P	23 05 38.1	+3.2
	baz=167						
554A	Perry	18.13	28	P	P	23 05 37.6	+2.1
	baz=212						
452A	Marianna	18.17	23	P	P	23 05 38.2	+2.2
	baz=206						
453A	Whigham	18.52	25	P	P	23 05 41.3	+1.6
	baz=209						
249A	Camden	18.57	17	P	Pn	23 05 42.3	+1.8
	baz=199						
658A	Bunnell	18.81	35	P	Pn	23 05 45.3	+1.8
	baz=219						
250A	Grady	18.82	19	P	Pn	23 05 45.1	+1.5
	baz=202						
352A	Blakely	18.83	23	eP	Pn	23 05 47.1	+3.4
	55nm,0.9s						
352A	Blakely	18.83	23	P	Pn	23 05 46.3	+2.6
	baz=206,SNR=6.6						
147A	Livingston	18.94	13	eP	Pn	23 05 49.0	+3.9
	78nm,1.5s						
147A	Livingston	18.94	13	P	P	23 05 46.0	+1.6
	baz=196						
353A	Camilla	18.99	25	P	Pn	23 05 47.4	+1.7
	baz=208						
251A	Midway	19.21	21	P	Pn	23 05 49.6	+1.3
	baz=204,SNR=5.8						
149A	Jones	19.25	17	P	P	23 05 49.8	+2.0
	baz=200						
TIGA	Tifton	19.33	26	P	P	23 05 49.2	+0.5
	baz=210						
252A	Lumpkin	19.37	23	P	P	23 05 50.3	+1.2
	baz=206						
150A	Eclectic	19.48	19	P	P	23 05 52.0	+1.6
	baz=202						
LRAL	Lakeview Retre	19.60	16	P	P	23 05 53.3	+1.7
	baz=199						
151A	Opelika	19.64	21	P	P	23 05 53.6	+1.6
	baz=204						
SMLC	San Martn de	19.65	104	eP	Pn	23 05 55.4	+1.7
GUY2C	Guyana, Caldas	19.85	115	eP	P	23 05 55.8	+0.8
Z49A	Columbiana	19.88	17	P	P	23 05 56.4	+1.8
	baz=200,SNR=7.2						
356A	Blackshear	19.89	29	P	P	23 05 55.9	+1.0
	baz=214						
254A	Abbeville	19.90	26	P	P	23 05 56.3	+1.4
	baz=210						
152A	Waverly Hall	19.98	22	P	P	23 05 57.8	+2.0
	baz=205						
PTBC	PUERTO BERRIO,	20.09	110	eP	P	23 05 56.2	-0.9
Z50A	Ashland	20.11	18	eP	Pn	23 06 01.8	+2.7
	12nm,1.0s						
Z50A	Ashland	20.11	18	P	P	23 05 58.5	+1.3
	baz=202						
NORC	Norcasia	20.13	113	eP	P	23 05 58.2	+0.5
POPC	Popayan, Colom	20.16	124	eP	P	23 05 58.9	+0.8
MIAR	Mount Ida	20.23	359	eP	P	23 05 59.0	+0.5
	26nm,0.9s						
MIAR	Mount Ida	20.23	359	P	P	23 05 59.1	+0.6
	baz=180,SNR=19						
X43A	Marvell	20.33	6	eP	P	23 06 01.7	+2.1
	25nm,0.8s						
X37A	Clayton	20.36	355	eP	Pn	23 06 02.7	+0.8
	8.9nm,0.8s						
UALR	University of	20.48	2	eP	P	23 06 02.9	+1.7
	12nm,0.9s						
OXF	Oxford	20.51	9	P	P	23 06 02.4	+0.9
	baz=191						
256A	Glennville	20.55	29	P	P	23 06 02.8	+0.8
	baz=213						
154A	Montrose	20.55	25	P	P	23 06 03.0	+1.0
	baz=210						
Z52A	Williamson	20.56	22	P	P	23 06 03.5	+1.4
	baz=206						
MNTX	Cornudas Mount	20.58	330	eP	P	23 06 03.3	+0.9
	6.0nm,0.8s						
MNTX	Cornudas Mount	20.58	330	P	Pn	23 06 04.9	+0.3
	baz=145,SNR=13						
ORTC	Ortega, Tolima	20.59	118	eP	P	23 06 04.3	+1.6
X46A	Booneville	20.70	11	P	Pn	23 06 06.6	+0.8
	baz=193						
Y50A	Piedmont	20.76	18	P	P	23 06 07.1	+2.8
	baz=201						
X47A	Russelville	20.81	13	P	P	23 06 07.3	+2.6
	baz=195,SNR=6.3						
155A	Kite	20.83	27	P	P	23 06 07.1	+2.1
	baz=211						
W41B	Gary Mavity, V	20.88	3	P	P	23 06 08.0	+2.5
	baz=183						
W39A	Magazine	20.88	359	P	Pn	23 06 08.2	+0.2
	baz=179						
X48A	Hartselle	20.93	15	eP	Pn	23 06 10.3	+1.7
	9.1nm,0.9s						
X48A	Hartselle	20.93	15	P	Pn	23 06 09.3	+0.7
	baz=197						
ROSC	El Rosal	20.95	115	P	P	23 06 08.1	+1.2
	3.8nm,0.4s,baz=292,slow=14,SNR=5.4						
Z53A	Monticello	20.95	23	P	P	23 06 04.8	-1.5
	baz=208,SNR=5.7						
Y51A	Rockmart	20.98	20	P	P	23 06 06.9	+0.2
	baz=203						
WMOK	Wichita Mounta	21.00	347	P	P	23 06 07.8	+0.9
	baz=165						
GOGA	Godfrey	21.11	24	eP	P	23 06 08.1	0.0
	17nm,0.9s						
GOGA	Godfrey	21.11	24	P	P	23 06 08.3	+0.3
	baz=208,SNR=6.1						
X49A	Woodville	21.18	16	P	P	23 06 10.2	+1.5
	baz=199						

Z54A	Sparta	21.20	25	P	P	23 06 10.4	+1.4
	baz=209						
Y52A	Lilburn	21.29	22	eP	P	23 06 11.1	+1.1
	17nm,0.8s						
Y52A	Lilburn	21.29	22	P	P	23 06 11.1	+1.1
	baz=206						
PAMC	Pamplona, Colo	21.41	106	eP	P	23 06 07.3	-4.6
Y53A	Monroe	21.46	23	P	P	23 06 13.2	+1.4
	baz=207						
CHIC	Chingaza	21.56	114	eP	P	23 06 14.0	+0.5
W47A	Westpoint	21.57	13	P	P	23 06 14.9	+1.9
	baz=195						
RUSC	La Rusia	21.60	111	eP	P	23 06 14.2	+0.2
W48A	Pulaski	21.61	14	P	P	23 06 16.1	+2.7
	baz=197						
Y54A	Tignall	21.81	24	P	P	23 06 18.0	+2.4
	baz=209,SNR=5.4						
AMTX	Amarillo	21.90	341	P	P	23 06 19.1	+2.6
	baz=158						
V46A	Holladay	21.99	11	P	P	23 06 18.3	+0.8
	baz=194						
U40A	Yellville	22.04	1	P	P	23 06 18.5	+0.4
	baz=181,SNR=7.6						
V47A	Nunnelly	22.14	13	P	P	23 06 19.6	+0.5
	baz=195,SNR=6.6						
Z57A	Bowman	22.20	29	P	P	23 06 19.9	+0.2
	baz=214						
NHSC	New Hope	22.30	30	P	P	23 06 20.8	0.0
	baz=216						
HODGE	Hodges	22.31	25	eP	P	23 06 21.6	+0.7
	12nm,1.1s						
WVT	Waverly	22.37	12	eP	P	23 06 27.0	+5.5
	10nm,0.8s						
319A	Douglas	22.46	322	eP	P	23 06 24.5	+1.7
	16nm,1.2s						
121A	Cookes Peak, D	22.48	327	P	P	23 06 25.8	+2.8
	baz=141,SNR=15						
SDV	Santo Domingo	22.88	101	P	P	23 06 26.7	-0.7
	5.8nm,0.7s,baz=298,slow=4.3,SNR=9.3						
X56A	White Oak	23.05	27	P	P	23 06 27.4	-1.3
	baz=212						
BNM	Barren Site	23.19	331	eP	P	23 06 32.4	+1.9
U49A	Red Boiling Sp	23.21	16	P	P	23 06 29.6	-0.7
	baz=199						
T47A	Sharon Grove	23.34	13	eP	P	23 06 34.1	+2.4
	6.6nm,0.8s						
V53A	Saluda	23.36	22	eP	P	23 06 32.9	+0.9
	12nm,0.9s						
LENM	Lemitar	23.37	331	eP	P	23 06 33.6	+1.4
KMSC	Kings Mountain	23.48	25	P	P	23 06 31.4	-1.6
	baz=210						
ANMO	Albuquerque	23.77	332	P	P	23 06 37.0	+0.8
	2.3nm,1.0s,baz=138,slow=12,SNR=5.1						
ANMO	Albuquerque	23.77	332	eP	P	23 06 37.6	+1.4
	3.7nm,1.1s						
ANMO	Albuquerque	23.77	332	P	P	23 06 35.7	-0.5
	baz=147						
CCM	Cathedral Cave	23.81	4	P	P	23 06 34.6	-1.7
	baz=185						
TUC	Tucson	24.02	321	eP	P	23 06 41.1	+2.6
	5.5nm,0.8s						
W58A	Raeford	24.31	29	P	P	23 06 39.2	-1.8
	baz=215						
T52A	Hallie	24.59	20	P	P	23 06 42.1	-1.5
	baz=205						
WCI	Wyandotte Cave	24.71	13	P	P	23 06 43.6	-1.0
	baz=197						
V57A	Coltrane Farms	24.78	27	P	P	23 06 42.7	-2.5
	baz=213						
T25A	Trinidad	24.86	339	P	P	23 06 47.5	+1.3
	baz=154,SNR=7.7						
V58A	Windy Hill, Pi	25.00	28	P	P	23 06 44.7	-2.5
	baz=214						
SDCO	Great Sand Dun	25.79	337	ePcP	PcP	23 10 26.6	+2.1
SDCO	Great Sand Dun	25.79	337	P	P	23 06 55.7	+0.9
	baz=152,SNR=6.9						
X16A	Lo Mia Camp, P	25.91	324	eP	P	23 06 57.5	+1.8
	2.2nm,0.8s						
R54A	Victor	26.26	22	P	P	23 06 59.4	+0.8
	baz=208						
S22A	4UR Ranch, Cre	26.31	335	P	P	23 06 59.8	+0.3
	baz=150						
WUAZ	Wupatki	26.68	326	eP	P	23 07 04.5	+1.8
	8.1nm,1.0s						
T59A	Double "B" Far	26.68	29	P	P	23 06 59.2	-3.2
	baz=216						
SMCO	Snowmass	27.60	337	eP	P	23 07 11.8	+0.7
	5.0nm,1.1s						
L40A	Anamosa	27.80	3	P	P	23 07 10.7	-1.7
	baz=185						
KNB	Kanab	28.57	326	eP	P	23 07 22.2	+2.5
	15nm,1.8s						
MTPU	Mount Pierson	29.01	328	eP	P	23 07 24.6	+0.9
	3.4nm,1.1s						
ECSD	EROS Data Cent	29.54	355	P	P	23 07 26.9	-1.1
	baz=174						
PSUT	Pine Spring	30.24	327	eP	P	23 07 34.2	-0.3
	2.6nm,0.9s						
M58A	Price's Panora	30.78	25	P	P	23 07 36.5	-2.5
	baz=213						
RSSD	Black Hills	31.16	345	eP	P	23 07 41.8	-0.7
	3.5nm,0.9s						
PDAR	Pinedale Array	31.68	337	P	P	23 07 47.1	-0.1
	0.2nm,0.6s,baz=132,slow=11,SNR=4.2						
NV11	Mina Array Sit	32.59	322	eP	P	23 07 56.3	+1.2
	0.4nm,0.9s						
ELK	Elko	32.60	328	eP	P	23 07 56.4	+1.2
	3.7nm,1.3s						
NVAR	Mina Array Bea	32.68	322	P	P	23 07 58.2	+2.3
	2.4nm,0.8s,baz=137,slow=8.4,SNR=16						
NVAR				PcP	PcP	23 10 42.2	+0.4
	0.4nm,0.7s,baz=133,slow=3.8,SNR=3.7						
SNOW	Snow King Moun	32.73	336	eP	P	23 07 57.1	+0.7
	16nm,1.0s						
TPAW	Teton Pass	32.84	336	eP	P	23 07 58.4	+1.1
	7.5nm,1.0s						
KVN	Kaiserville	32.97	323	eP	P	23 08 00.4	+2.0
	5.3nm,1.2s						
MCMT	McKenzie Canyo	34.70	335	eP	P	23 08 15.7	+2.1
WVOR	Wild Horse Val	35.58	327	eP	P	23 08 21.9	+1.0
	7.0nm,1.2s						
ULM	Lac du Bonnet	35.98	357	P	P	23 08 20.1	-4.1
	3.2nm,0.7s,baz=162,slow=10,SNR=4.1						
ULM				LR	LR	23 24 41.8	
	comp=Z,54nm,20.7s,baz=294,slow=39						
J08A	Circle Bar Ran	36.15	328	eP	P	23 08 27.1	+1.3
	18nm,1.4s						
K02D	Willamette Mer	38.54	323	P	P	23 08 44.4	-1.6
	baz=128						
G05D	Wamic, OR	38.92	328	P	P	23 08 46.3	-2.9
	baz=134						
I03D	Drain, OR	38.98	325	P	P	23 08 47.1	-2.6
	baz=130						
SIV	San Ignacio	43.81	132	P	P	23 09 27.3	-2.4
	0.5nm,0.5s,baz=301,slow=12,SNR=6.7						
SCHQ	Schefferville	45.48	21	LR	LR	23 29 52.4	
	comp=Z,126nm,18.3s,baz=232,slow=38						
YKA	Yellowknife Ar	50.51	347	P	P	23 10 20.6	-0.7
	6.2nm,0.8s,baz=151,slow=7.5,SNR=12						
ILAR	Eielson Array	62.12	337	P	P	23 11 43.6	-0.5
	1.6nm,0.9s,baz=132,slow=4.7,SNR=14						
KIWB	Kanaga Island	75.13	320	eP	P	23 13 08.1	+2.5
ESDC	Sonseca Array	80.61	51	P	P	23 13 32.8	-3.6
	1.0nm,0.8s,baz=291,slow=5.4,SNR=3.5						
NOA	NORSAR Array B	84.57	28	LR	LR	23 49 52.9	
	comp=Z,29nm,21.4s,baz=285,slow=34						
ARCES	ARCESS Array B	86.33	18	LR	LR	23 52 53.5	
	comp=Z,40nm,19.9s,baz=217,slow=36						
GERES	GERESS Array B	90.26	39	P	P	23 14 22.6	-1.9
	0.5nm,0.9s,baz=316,slow=4.1,SNR=4.3						
KSH	Kashi	125.62	10	ePKP	PKPdf	23 20 25.3	-0.2
CMAR	Chiang Mai Arr	145.33	339	PKPbc	PKPbc	23 20 59.9	-2.2
	2.1nm,0.6s,baz=350,slow=4.3,SNR=9.2						

IDC ***14*** *23:02:29.0±0.9, 3°.18S×100°.14E, h0^{km}, mb4.2/16, mb1 4.3/18, mb1mx4.0/61, mbtmp4.2/18, ML3.7/2, MS3.2/4, Ms1 3.3/4, ms1mx2.8/36, Error ellipse: s-maj=34.9km s-min=14.1km az=50.0*

ISCJB ***14*** *23:02:30.9±0.3, 3°.22S±0°.03×100°.16E±0°.03, h27^{km}, mb4.7/43, Error ellipse: s-maj=5.7km s-min=2.9km az=44.4*

BJI ***14*** *23:02:30.6±0.0, 3°.51S×100°.03E, h41^{km}, mb4.7/31, mB4.8/23, Ms4.4/16, Ms7 4.1/14*

NEIC ***14*** *23:02:30.4±1.8, 3°.17S×100°.21E, h10^{km}±1^{km}, mb4.7/24, Error ellipse: s-maj=15.9km s-min=8.5km az=52.0*

DJA ***14*** *23:02:33.4±0.4, 3°S±2°×10°0E±°, h30^{km}±4^{km}, M4.8/24, mB5.8/5, mb4.8/18, MLv4.6/24, Mw(mB)5.4/5*

ISC 14 23:02:32.8±0.5**, 3°.25S**±0°.05×**100°.16E**±0°.05**, h27^{km}, n120, σ1^s.35**/121**, mb4.7**/43**, 2C-1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.51	342	P	Pb	23 02 43.2	0.0
PPSI				S	Sn	23 02 51.8	-0.3
KRJI	Kerinci	1.73	48	P	Pn	23 03 00.9	-0.3
KRJI				S	Sb	23 03 27.9	+2.5
SISI	Saibi	2.19	331	P	Pn	23 03 06.7	-0.7
SISI				S	Sn	23 03 34.3	+0.6
PDSI	Padang	2.34	7	P	Pn	23 03 08.6	-0.9
MNAI	Manna	3.00	112	ePn	Pn	23 03 19.2	+0.6
MNAI	Manna	3.00	112	P	Pn	23 03 19.2	+0.6
MNAI				S	Sn	23 03 54.4	+0.8
LHSI	Lahat	3.40	100	P	Pn	23 03 24.5	+0.4
LHSI				S	Sn	23 04 04.2	+0.6
RGRI	Rengat	3.61	37	P	Pn	23 03 26.3	-0.6
RGRI				S	Sn	23 04 07.4	-1.2
BKNI	Bangkinang	3.66	14	ePn	Pn	23 03 27.6	-0.1
BKNI	Bangkinang	3.66	14	P	Pn	23 03 27.4	-0.2
BKNI				S	Sn	23 04 08.7	-1.2
JMBI	JAMBI	3.83	65	P	Pn	23 03 30.1	+0.1
JMBI				S	Sn	23 04 15.4	+1.3
MNSI	Mandailing Nat	4.06	352	P	Pn	23 03 31.8	-1.4
MNSI				S	Sn	23 04 20.5	+0.7
MDSI	Maura Dua	4.19	107	P	Pn	23 03 36.1	+1.2
MDSI				S	Sn	23 04 23.5	+0.4
LWLI	Liwa	4.26	114	P	Pn	23 03 36.6	+0.5
LWLI				S	Sn	23 04 26.2	+1.1
KLSI		4.78	108	P	Pn	23 03 44.8	+1.8
KASI	Kota Agung	4.88	118	P	Pn	23 03 44.8	+0.4
KASI				S	Sn	23 04 36.9	-3.1
GSI	Gunungsitoli	5.21	330	ePn	Pn	23 03 47.3	-1.7
GSI	Gunungsitoli	5.21	330	P	Pn	23 03 48.3	-0.7
BLSI	Bandar Lampung	5.49	113	P	Pn	23 03 51.8	-1.0
TPRI	Tanjung Pinang	6.01	47	P	Pn	23 03 59.5	-0.5
PPBI	Pangkal Pinang	6.06	80	P	Pn	23 04 01.4	+0.7
PSI	Prapat	6.14	348	Pn	Pn	23 03 59.8	-2.1
	0.5nm,0.3s,baz=172,slow=15,SNR=4.7						
PSI				LR	LR	23 05 52.7	
	comp=Z,86nm,19.0s,baz=230,slow=34						
PSI	Prapat	6.14	348	ePn	Pn	23 03 59.9	-2.0
MYKOM	Kota Tinggi	6.21	36	ePn	Pn	23 04 02.8	0.0
CGJI	Cibinong	6.44	121	P	Pn	23 04 04.6	-1.3
TSI	Tuntungan	6.89	347	P	Pn	23 04 11.1	-1.0
IPM	Ipoh	7.72	6	ePn	Pn	23 04 22.8	-0.8
LEM	Lembang	8.23	116	Pn	Pn	23 04 31.0	+0.3
	3.0nm,0.3s,baz=299,slow=19,SNR=2.1						
LEM	Lembang	8.23	116	P	Pn	23 04 31.3	+0.6
KULM	Kulim	8.50	3	ePn	Pn	23 04 33.1	-1.1
CISI	Cisompet, Garu	8.74	120	ePn	Pn	23 04 35.8	-1.7
CISI	Cisompet, Garu	8.74	120	P	Pn	23 04 36.8	-0.7
LHMI	Lhok Sumawe	9.01	339	ePn	Pn	23 04 39.2	-2.0
BKB	Balikpapan	16.84	84	P	Pn	23 06 26.3	-0.5
SMKI	Samarinda	17.26	81	P	Pn	23 06 31.1	-1.0
PLAI	Plampang	18.36	108	P	P	23 06 44.4	-1.2
KKM	Kota Kinabalu	18.50	60	eP	P	23 06 44.9	-2.3
	18nm,1.0s						
KAPI	Kappang	19.61	96	eP	P	23 06 55.5	-3.9
	42nm,1.3s						
BNSI	Bone	19.93	94	P	P	23 07 02.9	+0.1
BKSI	Bulukumba	20.01	97	P	P	23 07 01.7	-1.9
PANO	Nakornpanom	20.74	12	P	P	23 07 12.4	+0.9
	0.3nm,0.8s,75nm						
CMAR	Chiang Mai Arr	21.60	357	P	P	23 07 18.7	-2.1
	4.0nm,0.7s,baz=188,slow=9.1,SNR=20						
CMAR				LR	LR	23 16 44.9	
	comp=Z,74nm,18.4s,baz=184,slow=40						
CHTO	Chiang Mai	21.96	357	eP	P	23 07 24.1	-0.4
	4.3nm,0.9s						
PALK	Pallekele	22.06	298	LR	LR	23 15 08.4	
	comp=Z,54nm,19.1s,baz=117,slow=34						
PAYA	Payao	22.47	359	P	P	23 07 32.1	+2.0
	24μm,0.9s						
SLVN	Son La	24.70	8	eP	P	23 07 51.1	-0.8
	9.2nm,1.3s						
SOEI	Soe	24.79	106	eP	P	23 07 52.2	-0.8
	105nm,1.7s						
PSA00	Pilbara Seismi	26.41	135	eP	P	23 08 08.2	+0.8
	44nm,1.7s						
H08S2	Diego Garcia H	27.88	260	T	T	23 37 26.8	
	baz=82,slow=75						
H08S3	Diego Garcia H	27.89	260	T	T	23 37 26.0	
	baz=82,slow=75						
H08S1	Diego Carcia H	27.90	260	T	T	23 37 27.1	
	baz=82,slow=75						
KMI	Kunming	28.31	5	P	P	23 08 27.3	+2.7
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
JIRN	Jiri	33.55	337	eP	P	23 09 14.6	+3.6
	18nm,0.4s						
PKI	Pulchoki	33.78	336	eP	P	23 09 18.2	+5.3
	8.7nm,0.8s						
PKIN	Phulchoki	33.79	336	eP	P	23 09 17.9	+4.9
	6.2nm,0.5s						
LSA	Lhasa	33.88	346	eP	P	23 09 11.0	-2.9
	7.2nm,0.6s						
GUN	Gumba	33.90	337	eP	P	23 09 17.9	+3.9
	34nm,0.4s						
DMN	Daman	33.94	336	eP	P	23 09 19.4	+5.2
H01W3	Cape Leeuwin H	34.05	159	T	T	23 45 11.0	
	baz=334,slow=76						
H01W2	Cape Leeuwin H	34.06	159	T	T	23 45 15.2	
	baz=334,slow=76						
H01W1	Cape Leeuwin H	34.06	159	T	T	23 45 15.6	
	baz=334,slow=76						
GKN	Gorkha	34.48	335	eP	P	23 09 24.3	+5.5
	21nm,0.3s						
KOLN	Koldanda	34.72	334	eP	P	23 09 27.8	+6.8
	35nm,0.8s						
DANN	Dangsing	35.16	334	eP	P	23 09 30.9	+6.1
	29nm,0.5s						
WRA	Warramunga Arr	37.23	119	P	P	23 09 42.4	0.0
	2.2nm,0.4s,baz=294,slow=10,SNR=33						
WR1	Warramunga Arr	37.23	119	eP	P	23 09 42.4	0.0
WRAB	Tennant Creek	37.24	119	eP	P	23 09 42.8	+0.4
	8.5nm,0.6s						
WB2	Warramunga Arr	37.24	119	eP	P	23 09 43.0	+0.5
	29nm,1.8s						
FORT	Forrest	37.99	139	eP	P	23 09 49.0	+0.4
	31nm,1.3s						
XAN	Xi'an	38.00	12	P	P	23 09 47.3	-1.3
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
XAN				pmax	pmax		
	comp=Z,120nm,5.4s						
ASAR	Alice Springs	38.40	125	P	P	23 09 52.9	+0.6
	1.3nm,0.4s,baz=299,slow=8.2,SNR=14						
LZH	Lanzhou	39.28	5	eP	P	23 10 01.5	+1.9
LZH				pP	sP	23 10 13.0	+2.3
LZH				sP	pP	23 10 16.4	+8.8
LZH				ePP	PnPn	23 11 36.8	+4.0
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,5.4s						
LZH				LR	LR		
	comp=N,280nm,13.0s						
LZH				LR	LR		
	comp=E,180nm,13.2s						
LZH				LR	LR		
	comp=Z,310nm,16.5s						
NJ2	Nanjing	39.34	25	eP	P	23 10 01.1	+1.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
GTA	Gaotai	42.45	360	eP	P	23 10 22.4	-3.2
GTA				pP	pP	23 10 33.3	-0.1
GTA				sP	sP	23 10 37.0	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
HHC	Hu-ho-hao-te	45.11	12	P	P	23 10 49.4	+2.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,58nm,6.0s						
WMQ	Urumqi	48.18	348	eP	P	23 11 10.3	-0.6
	45nm,1.1s						
WMQ	Urumqi	48.18	348	eP	P	23 11 09.9	-1.0
WMQ				pP	sP	23 11 21.1	-0.7
WMQ				sP	pP	23 11 26.5	+7.6
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,46nm,3.8s						
WMQ				LR	LR		
	comp=N,120nm,27.1s						
WMQ				LR	LR		
	comp=E,220nm,28.3s						
STKA	Stephens Creek	48.21	131	P	P	23 11 12.7	+1.4
	1.4nm,0.6s,baz=306,slow=15,SNR=3.1						
STKA	Stephens Creek	48.21	131	eP	P	23 11 12.7	+1.4
	1.9nm,1.1s						
SONA0	Songino Array	51.16	5	eP	P	23 11 34.2	+0.5
SONA0				ePcP	PcP	23 12 48.9	0.0
SONM	Songino Array	51.16	5	P	P	23 11 34.2	+0.5
	4.3nm,0.7s,baz=189,slow=9.1,SNR=30						
SONM				PcP	PcP	23 12 48.8	0.0
	1.3nm,0.7s,baz=198,slow=4.4,SNR=2.9						
ULN	Ulaanbaatar	51.26	6	eP	P	23 11 34.6	+0.2
	16nm,1.5s						
MK31	Makanchi Array	52.27	345	eP	P	23 11 42.1	+0.4
	8.9nm,0.7s						
MK31	Makanchi Array	52.27	345	Pn	P	23 11 41.6	-0.1
	6.2nm,0.7s,baz=152,slow=8.6,SNR=60						
MKAR	Makanchi Array	52.27	345	P	P	23 11 42.1	+0.3
	7.2nm,0.7s,baz=148,slow=7.9,SNR=79						
MAKZ	Makanchi	52.37	344	eP	P	23 11 42.8	+0.3
	7.7nm,0.6s						
MAKZ	Makanchi	52.37	344	⇓Pn	P	23 11 42.3	-0.2
	4.9nm,1.2s						
TLY	Talaya	54.80	3	eP	P	23 12 00.6	+0.3
	3.3nm,0.7s						
USA0B	Ussuriysk Arra	55.18	28	eP	P	23 12 02.3	-0.8
	9.1nm,1.0s						
USRK	Ussuriysk Ar.	55.18	28	P	P	23 12 02.9	-0.2
	6.4nm,0.8s,baz=238,slow=5.4,SNR=12						
GEYT	Alibeck	56.51	321	P	P	23 12 13.0	+0.2
	0.8nm,0.6s,baz=138,slow=9.7,SNR=3.6						
KURBB	Kurchatov Arra	56.79	344	P	P	23 12 14.4	-0.1
	3.0nm,0.8s,baz=164,slow=6.7,SNR=24						
KURBB	Kurchatov Arra	56.79	344	⇑Pn	P	23 12 14.3	-0.1
	5.4nm,1.0s						
KURK	Kurchatov	56.84	344	eP	P	23 12 14.5	-0.4
	6.7nm,0.8s						
KURK	Kurchatov	56.84	344	⇑Pn	P	23 12 14.8	-0.1
	6.3nm,0.8s						
ZAA0	Zalesovo Array	58.42	349	eP	P	23 12 25.1	-0.8
	13nm,0.6s						
ZALV	Zalesovo Beam	58.42	349	P	P	23 12 25.8	-0.1
	5.2nm,0.7s,baz=177,slow=5.6,SNR=17						
KLR	Kul'dur	59.00	24	P	P	23 12 29.3	-0.7
	2.1nm,0.7s,baz=252,slow=7.5,SNR=7.8						
HNR	Honiara	59.67	99	eP	P	23 12 33.4	-1.9
	402nm,1.0s						
BVAR	Borovoye Array	61.41	340	P	P	23 12 46.1	-0.4
	0.9nm,0.4s,baz=138,slow=9.0,SNR=8.4						
KBZ	Khabaz	69.35	319	P	P	23 13 38.7	+0.6
	1.9nm,0.7s,baz=170,slow=6.8,SNR=4.7						
PETK	Petropavlovsk-	73.85	32	LR	LR	23 44 43.9	
	comp=Z,30nm,21.7s,baz=98,slow=34						
BR101	Keskin Array S	74.28	313	eP	P	23 14 07.3	-0.7
BRTR	Keskin Array B	74.28	313	P	P	23 14 07.3	-0.7
	0.9nm,0.8s,baz=143,slow=6.9,SNR=8.7						
BUR08	Bucovina Ar. S	82.32	319	eP	P	23 14 52.4	+0.1
	8.2nm,1.4s						
VTS	Vitosha	82.61	314	eP	P	23 14 53.9	0.0
	11nm,2.0s						
KOLS	Kolonicke sedl	84.50	320	eP	P	23 15 05.3	+1.9
FIA0	FINESS Array S	85.29	332	eP	P	23 15 07.2	+0.3
FINES	FINESS Array B	85.29	332	P	P	23 15 07.2	+0.3
	2.0nm,0.8s,baz=151,slow=4.4,SNR=6.8						
VYHS	Vyhne	86.67	319	eP	P	23 15 17.8	+3.6
ARA0	ARCESS Array S	87.70	340	eP	P	23 15 18.7	0.0
ARCES	ARCESS Array B	87.70	340	P	P	23 15 18.7	0.0
	2.1nm,0.9s,baz=100,slow=3.9,SNR=3.1						
SPA0	Spitsbergen Ar	91.88	348	eP	P	23 15 38.2	0.0
	80nm,1.5s						
R49A	Shelbyville	144.78	7	ePKPdf	PKPab	23 22 05.7	-0.8
R53A	Hurricane	145.03	3	ePKPdf	PKPbc	23 22 07.2	-0.3
TX31	Lajitas Ar. Si	145.58	39	ePKPdf	PKPab	23 22 10.6	+0.7
TXAR	Lajitas Array	145.58	39	PKPbc	PKPab	23 22 10.5	+0.6
	4.3nm,0.7s,baz=297,slow=1.0,SNR=57						
FCAR	Ozark Folk Cen	145.59	18	ePKPdf	PKPdf	23 22 08.9	-0.3
S51A	Beattyville	145.60	5	ePKPdf	PKPdf	23 22 08.0	-1.1
S57A	Dark Hollow, R	145.64	359	ePKPdf	PKPdf	23 22 09.3	+0.1

ATH ***14*** *23:03:31.3, 38°.96N×26°.08E, h23^{km}±1^{km}, ML2.5/7, Error ellipse: s-maj=2.8km s-min=1.2km az=267.0*

ISCJB ***14*** *23:03:31.6±0.4, 38°.97N±0°.02×26°.05E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=2.6km az=164.6*

DDA ***14*** *23:03:31.0, 38°.96N×26°.04E, h21^{km}±1^{km}, ML2.6*

ISK ***14*** *23:03:31.2, 38°.98N×26°.06E, h13^{km}, ML2.8/15*

THE ***14*** *23:03:32.2, 38°.99N×26°.05E, h7^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=2.2km s-min=0.8km az=88.0*

SOF ***14*** *23:03:38.4, 39°.50N×25°.69E, h2^{km}*

ISC 14 23:03:31.5±1.0**, 38°.98N**±0°.02×**26°.04E**±0°.02**, h12^{km}**±8^{km}**, n57, σ0^s.63**/83**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.27	328	PG	Pg	23 03 37.5	+0.4
SIGR				SG	Sb	23 03 42.2	-0.7
SIGR	SIGRI	0.27	328	P	Pg	23 03 37.5	+0.4
SIGR				S	Sb	23 03 41.9	-0.9
	3μm,0.4s						
SIGR	SIGRI	0.27	328	P	Pg	23 03 37.6	+0.4
SIGR				S	Sb	23 03 42.1	-0.7
SIGR				AML	AML	23 03 42.4	
	comp=E,6834μm,0.4s						
SIGR				AML	AML	23 03 42.6	
	comp=N,3088μm,0.3s						
PRK	Paraskevi	0.32	34	P	Pb	23 03 39.0	-0.1
PRK				S	Sb	23 03 43.5	-0.7
	comp=N,1μm,0.6s						
PRK	Paraskevi	0.32	34	P	Pb	23 03 39.0	-0.1
PRK				S	Sb	23 03 43.7	-0.6
PRK				AML	AML	23 03 44.4	
	comp=N,2650μm,0.4s						
PRK				AML	AML	23 03 45.2	
	comp=E,2132μm,0.7s						
KRBN	Karaburun	0.56	134	PG	Pb	23 03 42.5	-0.6
PSRA	Psara	0.58	220	P	Pb	23 03 43.8	+0.4
PSRA				S	Sb	23 03 52.2	+0.6
CHOS	Chios island	0.59	179	PG	Pg	23 03 43.1	0.0
CHOS	Chios island	0.59	179	P	Pg	23 03 43.0	0.0
CHOS				S	Sb	23 03 53.1	+0.9
	comp=E,642nm,0.4s						
CHOS	Chios island	0.59	179	P	Pg	23 03 43.1	0.0
CHOS				S	Sg	23 03 51.1	+0.1
CHOS				AML	AML	23 03 55.5	
	comp=N,1092μm,0.6s						
CHOS				AML	AML	23 03 56.6	
	comp=E,1513μm,0.3s						
AYVA	Ayvalik	0.60	57	i P	Pg	23 03 43.2	0.0
AYVA				i S	Sg	23 03 50.9	-0.3
AYVA				IAML_P			
	comp=Z,1μm,0.1s						
FOCM	Foa	0.60	116	PG	Pb	23 03 43.3	-0.6
DKL	Dikili	0.68	82	PG	Pb	23 03 44.7	-0.5
URLA	Izmir	0.76	145	PG	Pb	23 03 46.1	-0.5
URLA	Izmir	0.76	145	i P	Pb	23 03 46.0	-0.5
URLA				i S	Sb	23 03 56.8	0.0
URLA				IAML_P			
	comp=Z,3μm,0.3s						
ZEDA	zmir-Bergama	0.81	91	i P	Pb	23 03 47.7	+0.3
ZEDA				i S	Sb	23 03 58.4	+0.1
BAYC	CANAKKALE_Bayr	0.85	27	i P	Pn	23 03 49.8	+0.5
BAYC				i S	Sn	23 04 01.4	-0.3
BAYC				IAML_P			
	comp=Z,1μm,0.1s						
BOZC	Bozcaada	0.86	1	PG	Pb	23 03 48.1	-0.2
BOZC				SG	Sn	23 04 00.7	-1.1
BOZC	Bozcaada	0.86	1	i P	Pn	23 03 48.9	-0.5
BOZC				i S	Sb	23 04 00.5	+0.7
BOZC				IAML_P			
	comp=Z,2μm,0.2s						
EZN	Ezine	0.87	15	PG	Pb	23 03 48.4	-0.1
EZN	Ezine	0.87	15	P	Pb	23 03 48.3	-0.2
EZN				S	Sb	23 04 00.3	+0.2
BLCB	Balcova	0.98	127	PG	Pg	23 03 50.2	-0.2
LIA	Limnos Island	1.13	324	P	Pg	23 03 53.3	+0.1
LIA				S	Sn	23 04 09.1	+0.6
	comp=Z,350nm,0.5s						
LIA	Limnos Island	1.13	324	P	Pg	23 03 53.3	+0.1
LIA				S	Sn	23 04 08.6	+0.1

LIA				AML	AML	23 04 10.0	
	comp=E,807µm,0.3s						
LIA				AML	AML	23 04 10.9	
	comp=N,604µm,0.7s						
DGB	zmir	1.14	144	i P	Pb	23 03 52.4	-0.7
DGB				i S	Sg	23 04 07.7	-0.5
DGB				IAML_P			
	comp=Z,280nm,0.1s						
STEP	BALIKESIR_Sava	1.36	73	i P	Pg	23 03 57.5	-0.2
STEP				i S	Sg	23 04 15.9	+0.5
STEP				IAML_P			
	comp=Z,401nm,0.2s						
AKHS	Akhisar	1.39	94	i P	Pg	23 03 59.4	+1.3
SMG	Samos	1.42	154	P	Pn	23 03 56.8	-0.2
SMG	Samos	1.42	154	P	Pn	23 03 56.5	-0.5
SMG				S	Sb	23 04 15.4	-0.4
SMG				AML	AML	23 04 23.1	
	comp=N,254µm,0.4s						
SMG				AML	AML	23 04 28.1	
	comp=E,266µm,0.5s						
BALY	Balya	1.44	58	i P	Pb	23 03 58.0	-0.2
BALY				i S	Sb	23 04 16.8	+0.3
BALY				IAML_P			
	comp=Z,542nm,0.3s						
GELI	Tayfur-Gelibol	1.45	13	PN	Pn	23 03 57.6	+0.1
LPK	Lapseki	1.50	22	PN	Pn	23 03 58.3	+0.2
SMTH	Samothraki Isl	1.54	345	P	Pb	23 03 59.5	-0.4
SMTH				S	Sg	23 04 20.3	-0.7
	comp=Z,72nm,0.4s						
SMTH	Samothraki Isl	1.54	345	P	Pb	23 03 59.9	0.0
SMTH				S	Sg	23 04 20.8	-0.2
SMTH				AML	AML	23 04 22.2	
	comp=E,128µm,0.5s						
SMTH				AML	AML	23 04 23.3	
	comp=N,163µm,0.3s						
BALB	Balikesir	1.57	65	PN	Pn	23 03 59.4	+0.3
GONE	Gonen-Balikesi	1.66	50	PN	Pn	23 04 00.3	0.0
ENEZ	Enez	1.75	3	PN	Pn	23 04 02.4	+0.7
KESN	Edirne-Kesan	1.91	15	i P	Pb	23 04 06.5	+0.1
KESN				i S	Sb	23 04 29.8	-0.5
KESN				IAML_P			
	comp=Z,122nm,0.2s						
ALN	Alexandroupoli	1.91	0	PN	Pn	23 04 04.0	+0.2
ALN	Alexandroupoli	1.91	0	P	Pn	23 04 04.8	+1.0
ALN	Alexandroupoli	1.91	0	P	Pn	23 04 04.9	+1.0
ALN				S	Sb	23 04 30.1	0.0
ALN				AML	AML	23 04 33.8	
	comp=N,76µm,0.5s						
ALN				AML	AML	23 04 34.5	
	comp=E,83µm,0.4s						
RKY	Sarkoy-Tekirda	1.92	27	PN	Pn	23 04 04.4	+0.5
THAS	Thassos island	1.92	328	P	Pn	23 04 04.1	+0.2
SART	Tekirdag	1.92	27	i P	Pb	23 04 06.0	-0.4
SART				IAML_P			
	comp=Z,480nm,0.2s						
EDC	Edincik	1.96	45	PN	Pn	23 04 04.7	+0.2
DURS	Dursunbey	1.99	71	i P	Pb	23 04 07.8	+0.2
DURS				IAML_P			
	comp=Z,17nm,0.2s						
MRMT	Marmara Adasi	2.02	36	PN	Pn	23 04 05.1	-0.2
MANT	Manisa	2.03	103	i P	Pg	23 04 11.6	+1.2
OUR	Ouranopolis	2.09	311	PN	Pn	23 04 06.7	+0.5
RDO	Rodhopi	2.20	350	PN	Pn	23 04 08.2	+0.5
KCTX	Karacabey (Bur	2.20	54	PN	Pn	23 04 08.3	+0.5
ULDT	Uludag	2.66	63	i P	Pg	23 04 23.8	+1.3
KDZ	Kurdzhali	2.71	350	PN	Pn	23 04 15.5	+0.7
KDZ	Kurdzhali	2.71	350	eP	Pn	23 04 16.0	+1.2
RZN	Rozhen	2.89	340	i P	Pn	23 04 18.1	+0.7
KIRK	Kırklareli	2.91	16	i P	Pn	23 04 19.1	+1.6
KIRK				i S	Sg	23 05 02.7	-2.3
KIRK				IAML_P			
	comp=Z,56nm,0.2s						
MMB	Musomiste	3.15	327	i P	Pn	23 04 21.4	+0.5

SOME **14** *23:09:51.0, 39°.58N×72°.57E, h10^{km}, MS3.8*
KRNET **14** *23:09:51.3±0.1, 39°.12N×72°.95E, mb4.8*
ISCJB **14** *23:09:52.5±0.7, 39°.18N±0°.02×73°.02E±0°.02, h17^{km}±5^{km}, mb4.6/112, MS3.3/16, Error ellipse: s-maj=3.3km s-min=2.9km az=154.6*
BJI **14** *23:09:52.4±0.0, 39°.43N×72°.85E, h5^{km}, mb4.6/23, mB4.6/19, ML4.3/4, Ms4.0/18, Ms7 3.7/14*
NEIC **14** *23:09:54.5±1.7, 39°.35N×73°.03E, h16^{km}±4^{km}, mb4.7/87, Error ellipse: s-maj=10.8km s-min=7.2km az=160.0*
MOS **14** *23:09:55.7±1.2, 39°.47N×73°.05E, h29^{km}, mb4.5/37, Error ellipse: s-maj=6.0km s-min=4.7km az=92.4*
MOS Felt (III) at Bardyube, Achyk-Suu, (II-III) at Daraut-Kurgan.
IDC **14** *23:09:59.9±2.4, 39°.39N×73°.03E, h61^{km}±21^{km}, mb3.8/25, mb1 4.0/29, mb1mx3.8/62, mbtmp4.2/29, ML3.6/4, MS3.2/18, Ms1 3.2/18, ms1mx3.1/44, Error ellipse: s-maj=17.4km s-min=10.2km az=175.0*
NNC **14** *23:09:59.2±1.9, 39°.85N×72°.78E, h0^{km}, mb5.0, mpv4.8, Error ellipse: s-maj=16.9km s-min=9.6km az=169.0*
ISC 14 23:09:52.1±0.7**, 39°.21N**±0°.03×**72°.98E**±0°.02**, h5**^{km}±4^{km}**, n331, σ1^{s}.91**/364**, mb4.5**/122**, MS3.2**/16**, 63C-18D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.95	287	⇓iP	Pg	23 10 09.6	-0.7
	baz=93						
DRK				⇓iS	Sg	23 10 22.4	-0.2
	baz=93						
BTK	Batken	1.87	298	ePn	Pn	23 10 24.1	-0.7
BTK	Batken	1.87	298	ePN	Pn	23 10 24.1	-0.7
BTK	Batken	1.87	298	⇓iP	Pn	23 10 24.7	-0.1
	baz=0.0						
BTK				⇓iS	Sn	23 10 49.0	+0.1
	baz=0.0						
GAR	Garm	2.08	265	ePn	Pb	23 10 30.9	+0.5
GAR	Garm	2.08	265	ePN	Pb	23 10 30.9	+0.5
ARSB	Arslanbob	2.11	0	ePn	Pn	23 10 28.4	+0.1
ARSB	Arslanbob	2.11	0	⇑iP	Pn	23 10 28.3	+0.1
	baz=1.0						
ARSB				⇑iS	Sb	23 10 56.8	-0.7
	baz=1.0						
KSH	Kashi	2.34	82	Pn	Pn	23 10 31.0	-0.4
KSH				Sn	Sn	23 10 56.0	-4.7
KSH				smax	smax		
	comp=N,9µm,0.7s						
KSH				smax	smax		
	comp=E,4µm,0.4s						
ARK	Arkit	2.70	344	⇑iP	Pn	23 10 37.0	+0.7
	baz=45						
ARK				⇑iS	Sn	23 11 10.2	+0.8
	baz=45						
ARLS	Aral	2.84	21	⇑iP	Pn	23 10 39.0	+0.7
	baz=20						
ARLS				⇑iS	Sn	23 11 13.7	+0.7
	baz=20						
NRN	Naryn	3.21	45	ePn	Pn	23 10 45.0	+1.6
NRN	Naryn	3.21	45	ePN	Pn	23 10 45.0	+1.6
NRN	Naryn	3.21	45	⇑iP	Pn	23 10 43.6	+0.2
	baz=44						
NRN				⇑iS	Sn	23 11 21.8	-0.4
	baz=44						
UCH	Uchtor	3.23	21	⇑iP	Pn	23 10 45.4	+1.5
	baz=20						
UCH				⇑iS	Sn	23 11 23.9	+0.8
	baz=20						
UCH	Uchtor	3.23	21	P	Pn	23 10 45.5	+1.5
	SNR=494						
KZA	Kyzart	3.34	30	⇑iP	Pn	23 10 47.2	+1.8
	baz=30						
KZA				⇑eS	Sn	23 11 27.1	+1.3
	baz=30						
KZA	Kyzart	3.34	30	P	Pn	23 10 47.4	+2.0
	SNR=418						
EKS2	Erkin-Say	3.50	10	⇑iP	Pn	23 10 47.8	+0.5
	baz=10.0						
EKS2				⇑iS	Sn	23 11 29.8	+0.6
	baz=10.0						
EKS2	Erkin-Say	3.50	10	P	Pn	23 10 49.2	+1.9
	SNR=274						
TAS	Tashkent	3.53	308	PN	Pn	23 10 46.9	-0.7
TAS	Tashkent	3.53	308	⇓iP	Pn	23 10 47.1	-0.5
	baz=10.0						
TAS				⇓iS	Sn	23 11 29.1	-0.6
	baz=10.0						
MRKS	Merke	3.54	3	Pg	Pn	23 10 49.7	+1.9
	145nm,0.3s						
MRKS	Merke	3.54	3	eP	Pn	23 10 50.5	+2.7
	194nm,0.3s						
MRKS				eS	Sn	23 11 33.6	+3.6
	783nm,0.5s						
AAK	Ala-Archa	3.61	18	P	Pn	23 10 50.8	+2.0
	216nm,0.3s,baz=178,slow=5.7,SNR=806						
AAK				S	Sn	23 11 33.7	+1.7
	54nm,0.3s,baz=346,slow=20,SNR=7.8						
AAK				LR	LR	23 12 25.4	
	comp=Z,409nm,20.0s,baz=200,slow=42						
AAK	Ala-Archa	3.61	18	⇑Pn	Pn	23 10 51.2	+2.4
	386nm,0.4s						
AAK				⇑Lg	Lg	23 11 35.3	
	455nm,0.6s						
AAK	Ala-Archa	3.61	18	⇑iP	Pn	23 10 49.3	+0.4
	baz=18						
AAK				⇑iS	Sn	23 11 32.7	+0.7
	baz=18						
AAK	Ala-Archa	3.61	18	P	Pn	23 10 50.9	+2.0
	SNR=594						
IUG	Iuzhnay	3.69	324	Lg	Lg	23 11 33.7	
	1µm,0.4s						
IUG	Iuzhnay	3.69	324	eP	Pn	23 10 50.6	+0.8
	35nm,0.4s						
IUG				eS	Sn	23 11 33.7	-0.1
	1µm,0.4s						
KBK	Karagaybulak	3.75	23	⇓iP	Pn	23 10 51.4	+0.6
	baz=23						
KBK				⇓iS	Sn	23 11 36.1	+0.6
	baz=23						
KBK	Karagaybulak	3.75	23	P	Pn	23 10 53.1	+2.3
	SNR=304						
FRU1	Bishkek	3.81	19	⇑iP	Pn	23 10 52.8	+1.3
	baz=18						
FRU1				⇑iS	Sn	23 11 37.2	+0.5
	baz=18						
DZA	Taraz	3.88	342	eP	Pn	23 10 53.4	+0.9
	318nm,0.4s						
DZA				eS	Sn	23 11 37.9	-0.6
	1µm,0.4s						
ULHL	Ulahol	3.92	38	⇑iP	Pn	23 10 53.6	+0.5
	baz=38						
ULHL				⇑iS	Sn	23 11 39.9	+0.3
	baz=38						
ULHL	Ulahol	3.92	38	P	Pn	23 10 55.7	+2.6
	SNR=55						
BOOM	Boomskoye usch	3.97	34	⇓iP	Pn	23 10 54.0	+0.1
	baz=33						
BOOM				⇓iS	Sn	23 11 41.5	+0.6
	baz=33						
CHMS	Chumysh	4.01	19	⇑iP	Pn	23 10 54.8	+0.5
	baz=19						
CHMS				⇑iS	Sn	23 11 42.0	+0.2
	baz=19						
CHMS	Chumysh	4.01	19	P	Pn	23 10 56.3	+2.0
	SNR=705						
TKM2	Tokmak 2	4.20	27	⇑Pn	Pn	23 10 59.2	+2.2
	180nm,0.5s						
TKM2				⇑Lg	Lg	23 11 59.8	
	192nm,0.6s						
TKM2	Tokmak 2	4.20	27	PN	Pn	23 10 59.0	+2.0
TKM2	Tokmak 2	4.20	27	⇑iP	Pn	23 10 57.4	+0.4
	baz=27						
TKM2				⇑iS	Sn	23 11 47.1	+0.5
	baz=27						
TKM2	Tokmak 2	4.20	27	P	Pn	23 10 59.2	+2.1
	SNR=577						
USP	Ospenovka	4.21	15	⇑iP	Pn	23 10 57.5	+0.5
	baz=15						
USP				⇑iS	Sn	23 11 47.1	+0.5
	baz=15						
USP	Ospenovka	4.21	15	P	Pn	23 10 58.9	+1.9
	SNR=80						
KK31	Karatay Array	4.31	335	ePn	Pn	23 10 59.2	+0.9
KK31	Karatay Array	4.31	335	Pn	Pn	23 10 58.9	+0.5
	24nm,0.3s,baz=146,slow=12,SNR=599						
KK31				⇑Lg	Lg	23 11 48.0	
	228nm,0.4s,baz=151,slow=28						
KK31	Karatay Array	4.31	335	ePN	Pn	23 10 59.2	+0.9
KKAR	Karatay Array	4.31	335	ePn	Pn	23 10 59.3	+0.9
KKAR	Karatay Array	4.31	335	ePN	Pn	23 10 59.3	+0.9
KDJ	Kajisay	4.33	46	ePn	Pn	23 10 58.0	-0.7
KDJ	Kajisay	4.33	46	ePN	Pn	23 10 58.0	-0.7
KDJ	Kajisay	4.33	46	⇑iP	Pn	23 10 59.0	+0.3
	baz=46						
KDJ				⇑iS	Sn	23 11 49.7	0.0
	baz=46						
KST	Kastek	4.44	30	Pg	Pb	23 11 10.7	+0.1
	642nm,0.6s						
KST				Lg	Lg	23 12 08.8	
	465nm,0.7s						
KST	Kastek	4.44	30	eP	Pb	23 11 08.8	-1.9
	190nm,0.5s						
KST				eS	Sb	23 12 05.7	+1.1
	465nm,0.7s						
BRLS	Borolday	4.49	329	eP	Pn	23 11 02.0	+1.2
	3.3nm,0.2s						
BRLS				eS	Sn	23 11 52.4	-1.1
	30nm,0.7s						
DGS	Degeres	4.54	27	Pg	Pb	23 11 13.6	+1.2
	188nm,0.6s						
DGS				Lg	Lg	23 12 11.8	
	344nm,0.5s						
DGS	Degeres	4.54	27	eP	Pb	23 11 13.6	+1.2
	180nm,0.7s						
DGS				eS	Sb	23 12 11.8	+4.3
	530nm,0.7s						
TNSS	Tian-Shan	4.86	37	Pg	Pb	23 11 19.6	+1.7
	164nm,0.4s						
TNSS				Lg	Lg	23 12 23.9	
	322nm,0.6s						
TNSS	Tian-Shan	4.86	37	eP	Pb	23 11 19.6	+1.7
	164nm,0.4s						
TNSS				eS	Sg	23 12 23.9	-4.1
	322nm,0.6s						
AAA	Alma-Ata	4.98	35	Pg	Pb	23 11 21.6	+1.9
	138nm,0.5s						
AAA				Lg	Lg	23 12 26.8	
	249nm,0.7s						
AAA	Alma-Ata	4.98	35	eP	Pb	23 11 21.6	+1.9
	138nm,0.5s						
AAA				eS	Sg	23 12 26.8	-5.1
MDOK	Medeo	5.00	37	Pg	Pb	23 11 22.2	+2.0
	92nm,0.6s						
MDOK				Lg	Lg	23 12 28.2	
	201nm,0.7s						
MDOK	Medeo	5.00	37	eP	Pb	23 11 22.2	+2.0
	92nm,0.6s						
MDOK				eS	Sg	23 12 28.2	-4.5
	201nm,0.7s						
KNDC	Almaty	5.01	36	⇑Pn	Pn	23 11 11.0	+3.1
	100nm,0.6s						
KNDC				⇓Pg	Pb	23 11 21.4	+1.2
	302nm,0.5s						
KNDC				⇑Lg	Lg	23 12 26.3	
	813nm,0.7s						
KOTS	Kotyrbulak	5.09	36	Pg	Pb	23 11 24.0	+2.3
	136nm,0.6s						
KOTS				Lg	Lg	23 12 30.6	
	384nm,0.8s						
KOTS	Kotyrbulak	5.09	36	eP	Pb	23 11 24.0	+2.3
	136nm,0.6s						
KOTS				eS	Sg	23 12 30.6	-4.8
	384nm,0.8s						
PRZ	Przheval'sk	5.25	50	ePn	Pn	23 11 10.5	-1.0
PRZ	Przheval'sk	5.25	50	ePN	Pn	23 11 10.5	-1.0
PRZ	Przheval'sk	5.25	50	⇑iP	Pn	23 11 11.9	+0.4
	baz=49						
PRZ				⇑iS	Sn	23 12 11.7	-0.8
	baz=49						
KUU	Kurty	5.31	27	Pg	Pb	23 11 26.1	+0.7
	61nm,0.5s						
KUU				Lg	Lg	23 12 35.5	
	344nm,0.7s						
KUU	Kurty	5.31	27	eP	Pb	23 11 26.1	+0.7
	61nm,0.5s						
KUU				eS	Sb	23 12 35.5	+6.0
	344nm,0.7s						
CEP	Cherat	5.45	189	P	Pb	23 11 22.3	-5.5
CEP				S	Sb	23 12 30.0	-3.5
CHKK	Chushkaly	5.53	32	Pg	Pb	23 11 30.8	+1.7
	59nm,0.7s						
CHKK				Lg	Lg	23 12 42.1	
	135nm,0.8s						
CHKK	Chushkaly	5.53	32	eP	Pb	23 11 30.8	+1.7
	59nm,0.7s						
CHKK				eS	Sb	23 12 42.1	+6.4
	193nm,0.7s						
CHCP	Chirah Chowk	5.55	178	P	Pb	23 11 24.3	-5.2
NIL	Nilore	5.55	178	ePn	Pb	23 11 23.3	-6.3
NIL	Nilore	5.55	178	ePN	Pb	23 11 23.3	-6.3
SATY	Saty	5.62	45	Pg	Pb	23 11 33.4	+2.7
	107nm,0.6s						
SATY				Lg	Lg	23 12 47.2	
	215nm,1.0s						
SATY	Saty	5.62	45	⇓iP	Pb	23 11 33.4	+2.7
	107nm,0.6s						
SATY				⇓iS	Sg	23 12 47.2	-5.3
	215nm,1.0s						
KBL	Kabul	5.63	215	ePn	Pb	23 11 23.6	-7.3
KBL	Kabul	5.63	215	ePN	Pb	23 11 23.6	-7.3
KURS	Kuram	5.79	41	Pg	Pb	23 11 36.6	+3.0
	104nm,0.9s						
KURS				Lg	Lg	23 12 53.1	
	122nm,1.9s						
KURS	Kuram	5.79	41	eP	Pb	23 11 36.6	+3.0
	104nm,0.9s						
KURS				eS	Sg	23 12 53.1	-4.9
	122nm,1.9s						
BTLS	Baital	5.88	7	Pg	Pb	23 11 34.2	-0.8
	17nm,0.5s						
BTLS				Lg	Lg	23 12 49.5	
	184nm,0.7s						
BTLS	Baital	5.88	7	eP	Pb	23 11 34.2	-0.8
	17nm,0.5s						
BTLS				eS	Sb	23 12 49.5	+3.8
	184nm,0.7s						
UZB	Uzynbulak	6.02	47	Pg	Pb	23 11 40.8	+3.2
	26nm,0.4s						
UZB				Lg	Lg	23 12 59.8	
	66nm,0.6s						
UZB	Uzynbulak	6.02	47	eP	Pb	23 11 40.8	+3.2
	26nm,0.4s						
UZB				eS	Sg	23 12 59.8	-5.6
	66nm,0.6s						
PDGK	Podgornoye	6.40	48	Pg	Pb	23 11 49.2	+5.1
	23nm,0.8s						
PDGK				Lg	Lg	23 13 13.4	
	80nm,0.9s						
PDGK	Podgornoye	6.40	48	⇑Pn	Pn	23 11 26.0	-1.2
	30nm,0.7s						
PDGK				⇑Pg	Pb	23 11 46.3	+2.3
	89nm,0.7s						
PDGK				⇑Lg	Lg	23 13 10.4	
	172nm,0.7s						
PDGK	Podgornoye	6.40	48	PN	Pn	23 11 27.0	-0.2
THW	Thamme Wali	6.48	189	P	Pn	23 11 34.8	+6.6
DJR	Jarkent	7.22	43	Lg	Lg	23 13 37.4	
	33nm,0.9s						
DJR	Jarkent	7.22	43	eP	Pb	23 12 02.0	+4.1
	32nm,0.9s						
DJR				eS	Sg	23 13 37.4	-6.3
	33nm,0.9s						
KAPS	Kapalarasan	7.69	36	Lg	Lg	23 13 50.6	
	26nm,0.5s						
KAPS	Kapalarasan	7.69	36	eP	Pb	23 12 10.7	+4.7
	16nm,0.9s						
KAPS				eS	Sg	23 13 50.6	-8.4
	26nm,0.5s						
OTUK	Ortayu	9.04	357	⇑Pn	Pn	23 12 02.5	-0.8
	5.8nm,0.6s						
OTUK				⇑Lg	Lg	23 14 26.9	
	198nm,0.7s						
OTUK	Ortayu	9.04	357	P	Pn	23 12 02.0	-1.3
MAKZ	Makanchi	10.05	38	ePn	Pn	23 12 17.6	+0.5
MAKZ	Makanchi	10.05	38	eP	Pn	23 12 17.6	+0.5
MAKZ	Makanchi	10.05	38	⇓Pg	Pn	23 12 17.8	+0.7
	6.6nm,0.6s						
MAKZ				⇑Lg	Lg	23 15 03.6	
	31nm,1.0s						
MK31	Makanchi Array	10.19	39	ePn	Pn	23 12 19.9	+0.9
MK31	Makanchi Array	10.19	39	eP	Pn	23 12 19.9	+0.9
MK31	Makanchi Array	10.19	39	⇑Pg	Pn	23 12 20.7	+1.7
	7.9nm,0.6s,baz=228,slow=14,SNR=13						
MK31				Lg	Lg	23 15 12.8	
	8.3nm,0.6s,baz=231,slow=26,SNR=4.5						
MKAR	Makanchi Array	10.19	39	P	Pn	23 12 21.4	+2.5
	0.8nm,0.3s,baz=222,slow=13,SNR=17						
MKAR				Lg	Lg	23 15 12.0	
	0.6nm,0.3s,baz=232,slow=23,SNR=5.8						
MKAR	Makanchi Array	10.19	39	i P	Pn	23 12 21.5	+2.5
MKAR				pmax	pmax		
	comp=Z,12nm,0.8s						
GEYT	Alibeck	11.70	268	P	Pn	23 12 43.0	+3.2
	comp=Z,1.5nm,0.3s,baz=81,slow=9.2,SNR=28						
GEYT				S	Sn	23 14 47.8	-3.1
	comp=Z,2.8nm,0.3s,baz=112,slow=18,SNR=5.7						
GEYT				LR	LR	23 17 34.3	
	comp=Z,73nm,18.9s,baz=90,slow=39						
GYA0B	ALIBECK ARRAY	11.70	268	ePn	Pn	23 12 39.0	-0.8
GYA0B	ALIBECK ARRAY	11.70	268	⇑Pn	Pn	23 12 38.4	-1.3
WMQ	Urumqi	11.95	63	eP	Pn	23 12 44.3	+1.1
WMQ				sS	Sn	23 15 06.5	+10
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,73nm,3.9s						
WMQ				LR	LR		
	comp=Z,180nm,13.3s						
WMQ				LR	LR		
	comp=Z,150nm,10.3s						
KURBB	Kurchatov Arra	12.06	17	P	Pn	23 12 43.0	-1.6
	comp=Z,0.3nm,0.3s,baz=210,slow=13,SNR=13						
KURBB				Lg	Lg	23 16 06.9	
	comp=Z,0.3nm,0.3s,baz=198,slow=29,SNR=6.3						
KURBB	Kurchatov Arra	12.06	17	⇑Pg	Pn	23 12 43.2	-1.4
	comp=Z,5.3nm,0.5s,baz=204,slow=11						
KURBB				⇑Lg	Lg	23 15 59.1	
	comp=Z,116nm,0.9s						
KURK	Kurchatov	12.17	17	ePn	Pn	23 12 43.3	-2.8
KURK	Kurchatov	12.17	17c	eP	Pn	23 12 44.6	-1.5
KURK	Kurchatov	12.17	17	⇑Pg	Pn	23 12 44.5	-1.6
	comp=Z,7.5nm,1.2s						
KURK				⇑Lg	Lg	23 16 08.3	
	comp=Z,104nm,1.4s						
AB31	Akbulak array	13.70	321	Pn	Pn	23 13 03.1	-3.7
	comp=Z,3.8nm,0.4s,baz=129,slow=11,SNR=64						
AB31				Sn	Sn	23 15 27.8	-12
	comp=Z,6.0nm,0.5s,baz=128,slow=24,SNR=6.0						
ABKAR	Akbulak array	13.70	321	ePn	Pn	23 13 03.3	-3.6
BVAR	Borovoye Array	13.93	353	P	Pn	23 13 08.0	-2.1
	comp=Z,0.6nm,0.3s,baz=149,slow=9.7,SNR=7.1						
BVAR				Lg	Lg	23 17 10.2	
	comp=Z,1.2nm,0.3s,baz=161,slow=29,SNR=7.2						
BVAR	Borovoye Array	13.93	353	P	Pn	23 13 08.0	-2.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	13.97	353	ePn	Pn	23 13 08.8	-1.9
BRVK	Borovoye	13.97	353	⇓Pg	Pn	23 13 10.5	-0.1
	comp=Z,17nm,0.6s						
BRVK				⇑Lg	Lg	23 16 25.9	
	comp=Z,61nm,1.2s						
BRVK	Borovoye	13.97	353	⇑eP	Pn	23 13 09.0	-1.6
DANN	Dangsing	14.05	137	eP	Pn	23 13 12.0	-0.1
	comp=Z,29nm,0.4s						
DGZ	Jazzator, Alta	14.69	40c	iP	Pn	23 13 20.8	+0.2
GKN	Gorkha	14.79	136	eP	Pn	23 13 21.4	-0.8
KKN	Kakani	15.31	134	eP	Pn	23 13 28.0	-1.2
	comp=Z,20nm,0.5s						
DMN	Daman	15.36	135	eP	Pn	23 13 29.0	-0.8
	comp=Z,11nm,0.4s						
AKTO	Aktyubinsk	15.41	322	P	Pn	23 13 26.8	-3.4
	comp=Z,0.9nm,0.3s,baz=134,slow=14,SNR=16						
AKTO				S	Sn	23 16 09.4	-12
	comp=Z,1.0nm,0.3s,baz=340,slow=23,SNR=5.9						
AKTO				LR	LR	23 18 50.6	
	comp=Z,41nm,20.8s,baz=137,slow=35						
PKIN	Phulchoki	15.54	135	eP	Pn	23 13 31.2	-1.1
	comp=Z,13nm,0.5s						
PKI	Pulchoki	15.56	135	eP	Pn	23 13 31.3	-1.2
	comp=Z,12nm,0.4s						
GUN	Gumba	15.56	133	eP	Pn	23 13 31.4	-1.1
	comp=Z,16nm,0.4s						
JIRN	Jiri	15.93	132	eP	Pn	23 13 36.5	-0.8
	comp=Z,36nm,0.5s						
ZAA0	Zalesovo Array	16.80	25	ePn	Pn	23 13 46.9	-1.1
	comp=Z,13nm,0.6s						
ZALV	Zalesovo Beam	16.80	25	P	Pn	23 13 47.0	-0.9
	comp=Z,3.2nm,0.3s,baz=212,slow=12,SNR=27						
ZALV				LR	LR	23 20 39.4	
	comp=Z,86nm,21.4s,baz=248,slow=38						
ZALV	Zalesovo Beam	16.80	25	i P	Pn	23 13 47.7	-0.3
ZALV				pmax	pmax		
	comp=Z,11nm,0.5s						
ZAA1	Zalesovo Array	16.81	25	ePn	Pn	23 13 47.0	-1.0
AKT	Akhty	19.36	285	eP	Pn	23 14 20.6	+0.9

AKT				eS	S	23 17 59.7	+1.6
AKT				pmax	pmax		
	comp=Z,15nm,1.0s						
AKT				smax	smax		
	comp=E,13nm,0.8s						
AKT				smax	smax		
	comp=N,18nm,1.1s						
SVE	Sverdlovsk	19.41	339	eP	P	23 14 19.2	+0.3
SVE				eS	Sn	23 17 57.9	+0.1
MAK	Makhachkala	19.54	289	c iP	Pn	23 14 23.1	+1.5
MAK				eS	Sn	23 17 59.9	-1.2
MAK				pmax	pmax		
	comp=Z,38nm,1.0s						
MAK				MLR	MLR		
	comp=Z,76nm,16.0s						
ARU	Arti	19.69	336	P	P	23 14 21.2	-0.8
	comp=Z,0.0nm,0.3s,baz=146,slow=10,SNR=8.9						
ARU				LR	LR	23 22 11.2	
	comp=Z,85nm,20.2s,baz=137,slow=37						
ARU	Arti	19.69	336	eP	P	23 14 20.9	-1.0
	comp=Z,10nm,0.7s						
ARU	Arti	19.69	336	d iP	P	23 14 21.1	-0.8
ARU				S	S	23 18 02.5	-1.7
ARU				pmax	pmax		
	comp=Z,12nm,1.1s						
ARU				MLR	MLR		
	comp=Z,98nm,21.0s						
WSAR	Wadi Sarin	20.06	222	P	Pn	23 14 29.8	+1.8
	comp=Z,3.7nm,0.7s,baz=35,slow=8.9,SNR=4.6						
GTA	Gaotai	20.75	81	⇑P	Pn	23 14 36.3	+0.2
GTA				pP	sP	23 14 40.5	+2.9
GTA				sP	pP	23 14 43.4	+7.0
GTA				S	S	23 18 24.6	-1.3
GTA				pmax	pmax		
	comp=Z,27nm,1.1s						
GTA				pmax	pmax		
	comp=Z,93nm,7.3s						
GTA				LR	LR		
	comp=Z,100nm,14.9s						
GTA				LR	LR		
	comp=Z,120nm,14.3s						
GTA				LR	LR		
	comp=Z,120nm,14.3s						
GROC	Groznyy	20.80	290	eP	Pn	23 14 36.8	+0.3
GROC				e		23 14 58.4	
GROC				eS	Sn	23 18 31.6	+0.1
GROC				pmax	pmax		
	comp=Z,43nm,1.2s						
TBLG	Delisi	21.59	286	eP	P	23 14 42.9	+0.2
	comp=Z,6.1nm,0.7s						
TBLG	Delisi	21.59	286	eP	P	23 14 42.9	+0.2
TBLG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GNI	Garni	21.72	281	P	P	23 14 47.2	+3.0
	comp=Z,4.2nm,0.5s,baz=343,slow=0.5,SNR=7.3						
GNI	Garni	21.72	281	eP	P	23 14 44.7	+0.5
	comp=Z,32nm,1.0s						
GNI	Garni	21.72	281	⇑eP	P	23 14 48.1	+3.8
GNI				pmax	pmax		
	comp=Z,118nm,1.2s						
ZEI	Tsey	22.18	289	eP	P	23 14 51.1	+1.8
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NCK	Nalchik	22.41	291	⇓eP	P	23 14 52.3	+0.8
NCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GOF	Gofitskoye	22.87	295	⇑eP	P	23 15 01.3	+4.9
KBZ	Khabaz	22.92	291	P	P	23 14 59.4	+2.5
	comp=Z,3.1nm,0.8s,baz=133,slow=10.0,SNR=4.8						
KBZ				LR	LR	23 25 41.1	
	comp=Z,49nm,18.4s,baz=82,slow=41						
NEY	Neytrino	23.04	290	⇑eP	P	23 15 00.3	+1.9
NEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KVAR	Kislovodsk Arr	23.07	292	P	P	23 15 00.8	+2.3
	comp=Z,2.0nm,0.7s,baz=270,slow=20,SNR=5.5						
KIV	Kislovodsk	23.07	292	eP	P	23 14 57.7	-0.9
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	23.07	292	eP	P	23 15 00.6	+2.0
KIV				eS	S	23 19 09.6	-0.6
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
KIV				MLR	MLR		
	comp=Z,70nm,14.0s						
ZAK	Zakamensk	24.06	52	eP	P	23 15 08.4	+0.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	Lanzhou	24.58	88	eP	P	23 15 14.6	+1.3
LZH				pP	sP	23 15 25.5	+8.3
LZH				ePP	PnPn	23 15 51.3	+7.2
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,75nm,4.8s						
LZH				LR	LR		
	comp=Z,140nm,12.0s						
LZH				LR	LR		
	comp=Z,160nm,12.3s						
LZH				LR	LR		
	comp=Z,210nm,13.6s						
KIRV	Kirov	24.58	330	LR	LR	23 25 17.4	
	comp=Z,78nm,19.0s,baz=158,slow=38						
SONA0	Songino Array	25.56	59	eP	P	23 15 22.7	+0.8
SONM	Songino Array	25.56	59	P	P	23 15 22.7	+0.8
	comp=Z,2.8nm,0.5s,baz=266,slow=8.7,SNR=17						
SONM				LR	LR	23 26 22.4	
	comp=Z,162nm,21.9s,baz=248,slow=39						
ULN	Ulaanbaatar	26.00	59	eP	P	23 15 25.2	-0.7
	comp=Z,8.7nm,1.0s						
ULN	Ulaanbaatar	26.00	59	c iP	P	23 15 26.5	+0.5
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSR	Storozhevoye	26.43	308	eP	P	23 15 33.0	+3.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RAYN	Ar Rayn	28.05	244	eP	P	23 15 46.1	+1.6
	comp=Z,3.3nm,0.8s						
RAYN	Ar Rayn	28.05	244	eP	P	23 15 46.1	+1.6
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI	Kunming	28.70	110	P	P	23 15 54.1	+3.7
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN	Xi'an	29.18	89	P	P	23 16 03.3	+8.8
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,55nm,3.9s						
HHC	Hu-ho-hao-te	29.44	74	P	P	23 15 59.3	+2.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,79nm,6.8s						
BR131	Keskin Array S	30.21	284	eP	P	23 16 05.1	+1.5
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	30.21	284	P	P	23 16 05.4	+1.7
	comp=Z,1.5nm,0.6s,baz=82,slow=8.9,SNR=9.6						
BRTR	Keskin Array B	30.21	284	c eP	P	23 16 07.0	+3.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	30.56	125	LR	LR	23 30 31.3	
	comp=Z,28nm,19.9s,baz=290,slow=40						
AKASG	Malin Array Be	32.56	305	P	P	23 16 25.6	+1.6
	comp=Z,2.0nm,0.5s,baz=79,slow=7.3,SNR=7.4						
AKASG				LR	LR	23 31 55.1	
	comp=Z,19nm,20.1s,baz=35,slow=40						
AKASG	Malin Array Be	32.56	305	c eP	P	23 16 28.5	+4.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MLR	Muntele Rosu	34.91	296	eP	P	23 16 45.7	+1.0
	comp=Z,5.4nm,0.9s						
MLR	Muntele Rosu	34.91	296	eP	P	23 16 45.7	+1.0
MLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BUR08	Bucovina Ar. S	35.22	300	eP	P	23 16 48.1	+0.7
	comp=Z,8.2nm,1.4s						
FIA1	FINESS Array S	36.17	324	eP	P	23 16 56.0	+0.9
	comp=Z,32nm,1.4s						
FIA0	FINESS Array S	36.17	324	eP	P	23 16 54.7	-0.5
FIA0	FINESS Array S	36.17	324	eP	P	23 16 54.7	-0.5
FINES	FINESS Array B	36.17	324	P	P	23 16 54.7	-0.5
	comp=Z,1.6nm,0.3s,baz=114,slow=9.2,SNR=18						
FINES				LR	LR	23 33 15.5	
	comp=Z,38nm,21.1s,baz=89,slow=39						
KOLS	Kolonicke sedl	37.08	302	eP	P	23 17 06.5	+3.4
KOLS	Kolonicke sedl	37.08	302	eP	P	23 17 06.5	+3.4
OJC	Ojcow	38.59	304	eP	P	23 17 16.2	+0.4
	comp=Z,19nm,1.6s						
OJC	Ojcow	38.59	304	eP	P	23 17 16.2	+0.4
OJC				pmax	pmax		
	comp=Z,19nm,1.6s						
AGG	Agios Georgios	38.87	286	eP	P	23 17 19.5	+1.1
	comp=Z,5.9nm,1.0s						
AGG	Agios Georgios	38.87	286	eP	P	23 17 19.5	+1.1
AGG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LANS	Liptovska Anna	38.90	303	eP	P	23 17 22.0	+3.5
LANS	Liptovska Anna	38.90	303	eP	P	23 17 22.0	+3.5
ARA0	ARCESS Array S	39.27	336	eP	P	23 17 20.8	-0.5
ARCES	ARCESS Array B	39.27	336	P	P	23 17 20.8	-0.5
	comp=Z,3.6nm,0.6s,baz=107,slow=9.1,SNR=10						
ARE0	ARCESS Array S	39.27	336	eP	P	23 17 21.0	-0.3
	comp=Z,6.1nm,1.8s						
VYHS	Vyhne	39.39	302	eP	P	23 17 25.8	+3.2
VYHS	Vyhne	39.39	302	eP	P	23 17 25.8	+3.2
TTG	Podgorica	40.22	292	eP	P	23 17 30.5	+1.0
	comp=Z,18nm,1.4s						
TTG	Podgorica	40.22	292	eP	P	23 17 30.5	+1.0
TTG				pmax	pmax		
	comp=Z,18nm,1.4s						
VRAC	Vranov	40.75	303	LR	LR	23 36 12.8	
	comp=Z,30nm,19.8s,baz=90,slow=39						
DPC	Dobruska-Polom	40.80	305	eP	P	23 17 36.3	+2.0
DPC	Dobruska-Polom	40.80	305	eP	P	23 17 36.3	+2.0
KNMB	Chin-men Tao	40.86	97	eP	P	23 17 34.4	-0.6
	comp=Z,53nm,0.9s						
CHVC	Chvalec	40.94	305	eP	P	23 17 38.2	+2.8
BLY	Banja Luka	41.15	296	eP	P	23 17 37.2	0.0
	comp=Z,4.1nm,1.0s						
CONA	Conrad Observa	41.44	301	epP	P	23 17 42.5	+2.8
	comp=Z,2.3nm,0.8s						
ARSA	Arzberg	41.78	300	epP	P	23 17 46.9	+4.5
	comp=Z,1.5nm,0.6s						
HFS	Hagfors	41.95	320	P	P	23 17 43.0	-0.6
	comp=Z,2.5nm,0.4s,baz=98,slow=11,SNR=17						
HFS				LR	LR	23 35 39.6	
	comp=Z,49nm,19.1s,baz=200,slow=37						
HFS	Hagfors	41.95	320	P	P	23 17 43.0	-0.6
HFS				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HFS				MLR	MLR		
	comp=Z,49nm,19.1s						
SOKA	Soboth	42.22	300	pP	P	23 17 48.6	+2.5
	comp=Z,1.0nm,0.6s						
BRG	Berggiesshubel	42.23	306	eP	P	23 17 48.9	+2.9
	comp=Z,2.2nm,0.5s						
BRG	Berggiesshubel	42.23	306	eP	P	23 17 48.9	+2.9
BRG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KLR	Kul'dur	42.31	56	P	P	23 17 46.9	+0.3
	comp=Z,3.2nm,0.4s,baz=278,slow=7.3,SNR=21						
KLR	Kul'dur	42.31	56	c iP	P	23 17 46.7	0.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MOA	Molln	42.51	302	epP	P	23 17 51.1	+2.8
	comp=Z,1.6nm,0.8s						
KSRS	Korea Array	42.58	74	LR	LR	23 37 26.0	
	comp=Z,50nm,19.9s,baz=125,slow=39						
OBKA	Obir	42.58	300	epP	P	23 17 53.1	+4.0
	comp=Z,0.1nm,0.3s						
TIXI	Tiksi	42.67	23	P	P	23 17 48.7	-0.6
	comp=Z,4.2nm,0.5s,baz=267,slow=5.4,SNR=12						
TIXI	Tiksi	42.67	23	eP	P	23 17 48.6	-0.6
	comp=Z,5.6nm,0.5s						
TIXI	Tiksi	42.67	23	d iP	P	23 17 48.4	-0.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GEC2	GERESS Array S	42.70	303	eP	P	23 17 50.5	+0.5
	comp=Z,8.8nm,1.9s						
GERES	GERESS Array B	42.70	303	P	P	23 17 51.2	+1.2
	comp=Z,1.7nm,0.6s,baz=66,slow=8.0,SNR=18						
GERES				LR	LR	23 40 20.5	
	comp=Z,24nm,18.3s,baz=42,slow=43						
KHC	Kasperske Hory	42.73	304	eP	P	23 17 50.0	-0.1
	comp=Z,1.6nm,0.6s						
KHC	Kasperske Hory	42.73	304	⇑iP	P	23 17 50.3	+0.2
KHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KHC	Kasperske Hory	42.73	304	eP	P	23 17 50.6	+0.5
KHC				epP	sP	23 17 56.2	+2.0
CLL	Collm	42.76	307	eP	P	23 17 50.0	-0.3
CLL				i		23 17 55.0	
CLL	Collm	42.76	307	eP	P	23 17 50.0	-0.3
CLL				i pP	sP	23 17 55.0	+0.6
	comp=Z,4.0nm,0.7s						
NC405	NORSAR Array S	42.96	321	eP	P	23 17 52.8	+1.0
	comp=Z,88nm,1.4s						
NC303	NORSAR Array S	43.13	321	eP	P	23 17 53.8	+0.6
	comp=Z,142nm,1.9s						
NB201	NORSAR Array S	43.16	321	eP	P	23 17 53.5	0.0
	comp=Z,184nm,1.9s						
NB2	NORSAR Subarra	43.20	321	P	P	23 17 52.6	-1.2
	comp=Z,1.6nm,0.7s,baz=92,slow=8.6						
NB200	NORSAR Array S	43.20	321	eP	P	23 17 53.7	-0.1
NOA	NORSAR Array B	43.20	321	P	P	23 17 53.7	-0.1
	comp=Z,3.6nm,0.9s,baz=92,slow=8.1,SNR=7.1						
NOA				LR	LR	23 36 28.7	
	comp=Z,62nm,19.1s,baz=280,slow=37						
NOA	NORSAR Array B	43.20	321	P	P	23 17 53.7	-0.1
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,62nm,19.2s						
KBA	Koelnbreinsper	43.27	301	epP	P	23 17 58.0	+3.3
	comp=Z,1.1nm,0.5s						
NAO01	NORSAR Array S	43.36	321	eP	P	23 17 56.5	+1.5
	comp=Z,206nm,1.9s						
NBO00	NORSAR Array S	43.41	321	eP	P	23 17 56.5	+1.0
	comp=Z,49nm,1.3s						
NC204	NORSAR Array S	43.43	322	eP	P	23 17 55.7	+0.1
	comp=Z,120nm,1.8s						
USA0B	Ussuriysk Arra	43.52	64	eP	P	23 17 57.2	+0.7
	comp=Z,19nm,1.8s						
USRK	Ussuriysk Ar.	43.52	64	P	P	23 17 57.0	+0.5
	comp=Z,0.6nm,0.5s,baz=290,slow=6.2,SNR=3.8						
USRK	Ussuriysk Ar.	43.52	64	P	P	23 17 57.0	+0.5
WTTA	Wattenberg	44.37	301	epP	P	23 18 05.8	+2.2
	comp=Z,1.8nm,0.8s						
WATA	Walderalm	44.40	301	epP	P	23 18 05.8	+2.0
	comp=Z,2.0nm,0.7s						
SQTA	Sankt Quirin	44.67	301	P	P	23 18 06.8	+0.9
	comp=Z,0.1nm,0.2s						
MOTA	Moosalm	44.71	302	epP	P	23 18 08.2	+2.0
	comp=Z,0.8nm,0.6s						
RETA	Reutte	44.90	302	P	P	23 18 07.6	0.0
	comp=Z,0.2nm,0.4s						
FUORN	Ofenpass-Fuorn	45.44	301	eP	P	23 18 12.6	+0.5
	comp=Z,4.1nm,1.0s						
DAVA	Damuels	45.53	302	eP	P	23 18 13.6	+0.9
	comp=Z,4.0nm,0.7s						
DAVOX	Davos/Dischmat	45.65	301	P	P	23 18 12.8	-1.0
	comp=Z,2.8nm,0.5s,baz=118,slow=5.4,SNR=10						
DAVOX				LR	LR	23 39 39.6	
	comp=Z,23nm,19.5s,baz=80,slow=39						
DAVOX	Davos/Dischmat	45.65	301	P	P	23 18 12.8	-1.0
DAVOX				pmax	pmax		
	comp=Z,2.0nm,0.4s						
DAVOX				MLR	MLR		
	comp=Z,23nm,19.5s						
BFO	Black Forest	46.30	303	eP	P	23 18 19.5	+0.9
	comp=Z,2.5nm,0.8s						
BFO	Black Forest	46.30	303	eP	P	23 18 19.5	+0.9
BFO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SENIN	Lac Senin/Sane	47.48	301	eP	P	23 18 29.2	+1.1
	comp=Z,3.1nm,0.7s						
SSB	Saint Sauveur	49.65	300	eP	P	23 18 44.5	-0.1
	comp=Z,8.2nm,1.6s						
SSB	Saint Sauveur	49.65	300	eP	P	23 18 44.6	-0.1
SSB				pmax	pmax		
	comp=Z,8.0nm,1.6s						
MAJO	Matsushiro	50.55	71	eP	P	23 18 51.0	-0.6
MAJO	Matsushiro	50.55	71	eP	P	23 18 51.0	-0.6
MJAR	Matsushiro Arr	50.55	71	P	P	23 18 51.0	-0.6
	comp=Z,1.8nm,0.7s,baz=288,slow=9.4,SNR=5.6						
MJAR	Matsushiro Arr	50.55	71	P	P	23 18 51.0	-0.6
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EKA	Eskdalemuir Ar	51.46	315	P	P	23 18 57.7	-0.4
	comp=Z,1.3nm,0.7s,baz=86,slow=9.1,SNR=5.6						
EKA	Eskdalemuir Ar	51.46	315	P	P	23 18 57.7	-0.4
EKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMBO	Kilima Mbogo	51.81	228	i P	P	23 19 06.8	+5.3
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	Sonseca Array	57.60	297	P	P	23 19 44.0	+0.9
	comp=Z,0.3nm,0.4s,baz=54,slow=7.5,SNR=7.0						
ILULI	Ilulissat	64.36	341	eP	P	23 20 28.9	+0.5
	comp=Z,12nm,0.5s						
ILULI	Ilulissat	64.36	341	eP	P	23 20 28.9	+0.5
ILULI				pmax	pmax		
	comp=Z,12nm,0.5s						
TOA1	Torodi Ar. Sit	67.34	269	eP	P	23 20 48.1	-0.3
TOA0	Torodi Ar. Sit	67.34	269	eP	P	23 20 49.0	+0.5
	comp=Z,25nm,1.8s						
TORD	Torodi Ar. Bea	67.34	269	P	P	23 20 48.1	-0.3
	comp=Z,0.9nm,0.4s,baz=57,slow=5.3,SNR=27						
TORD				LR	LR	23 54 58.7	
	comp=Z,23nm,21.3s,baz=355,slow=40						
COLD	Coldfoot	68.94	17	eP	P	23 20 57.4	-0.3
	comp=Z,3.9nm,1.0s						
IVI	Ivigtut	69.12	334	eP	P	23 20 57.5	-1.4
	comp=Z,111nm,2.0s						
PMOZ	Porto Moniz, M	70.26	297	eP	P	23 21 06.1	-0.5
SPIA	Saint Paul Isl	70.28	31	eP	P	23 21 04.6	-1.5
	comp=Z,203nm,1.2s						
FYU	Fort Yukon	70.55	15	eP	P	23 21 07.3	-0.3
	comp=Z,22nm,1.6s						
MLY	Manley	70.62	18	eP	P	23 21 08.2	0.0
	comp=Z,10nm,1.7s						
INK	Inuvik	70.97	10	P	P	23 21 09.0	-1.1
	comp=Z,3.6nm,0.8s,baz=345,slow=4.7,SNR=7.0						
INK	Inuvik	70.97	10	eP	P	23 21 09.5	-0.6
	comp=Z,3.7nm,0.8s						
INK	Inuvik	70.97	10	eP	P	23 21 09.5	-0.6
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BPAW	Bear Paw Mtn.	71.33	19	eP	P	23 21 11.4	-1.1
	comp=Z,2.7nm,0.9s						
CCB	Clear Creek Bu	71.64	17	eP	P	23 21 13.3	-0.9
	comp=Z,6.7nm,1.7s						
WRH	Wood River Hil	71.72	17	eP	P	23 21 14.2	-0.5
	comp=Z,7.4nm,1.6s						
ILAR	Eielson Array	71.74	17	P	P	23 21 13.4	-1.4
	comp=Z,2.3nm,0.8s,baz=318,slow=5.0,SNR=27						
PPLA	Purkeypile	72.01	20	eP	P	23 21 16.1	-0.6
	comp=Z,11nm,1.3s						
DHY	Denali Highway	73.08	18	eP	P	23 21 21.9	-1.2
	comp=Z,12nm,0.8s						
RIDG	Independent Ri	73.09	17	eP	P	23 21 22.2	-0.8
	comp=Z,5.0nm,0.9s						
DOT	Dot Lake	73.34	16	eP	P	23 21 23.7	-0.8
	comp=Z,8.5nm,1.1s						
PAX	Paxson	73.61	17	eP	P	23 21 25.3	-0.9
	comp=Z,3.4nm,0.9s						
PAX	Paxson	73.61	17	eP	P	23 21 25.3	-0.9
PAX				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DAWY	Dawson	73.92	14	eP	P	23 21 26.0	-1.9
	comp=Z,3.1nm,0.9s						
ROSA	Rosais	74.10	307	eP	P	23 21 28.4	-0.9
	comp=Z,174nm,1.9s						
UNV	Unalaska Valle	74.13	32	eP	P	23 21 29.0	-0.2
	comp=Z,84nm,1.4s						
RC01	Rabbit Creek A	74.16	20	eP	P	23 21 29.3	0.0
	comp=Z,7.9nm,0.7s						
PSAC2	Pilbara Seismi	74.70	135	eP	P	23 21 33.1	+0.2
	comp=Z,31nm,1.4s						
PSAC3	Pilbara Seismi	74.71	135	eP	P	23 21 34.1	+1.1
	comp=Z,55nm,1.9s						
PSAD2	Pilbara Seismi	74.78	135	eP	P	23 21 34.5	+1.1
	comp=Z,32nm,1.5s						
GLI	Glacier Island	75.03	19	eP	P	23 21 33.0	-1.3
	comp=Z,5.4nm,0.7s						
CNPM	China Poot	75.06	22	eP	P	23 21 34.2	-0.3
	comp=Z,12nm,1.0s						
FID	Port Fidalgo	75.29	19	eP	P	23 21 35.5	-0.4
	comp=Z,3.8nm,0.9s						
SDPT	Sand Point	75.37	28	eP	P	23 21 35.6	-0.7
	comp=Z,39nm,1.0s						
CHGN	Chignik	75.37	27	eP	P	23 21 35.0	-1.3
	comp=Z,59nm,1.6s						
BALM	Baldy	76.03	17	eP	P	23 21 39.9	-0.3
	comp=Z,7.3nm,1.4s						
BALM	Baldy	76.03	17	eP	P	23 21 39.9	-0.3
BALM				pmax	pmax		
	comp=Z,7.0nm,1.4s						
RAGM	Ragged Mountai	76.05	18	eP	P	23 21 40.4	+0.1
	comp=Z,20nm,1.7s						
KDAK	Kodiak Island	76.10	23	eP	P	23 21 40.7	+0.2
	comp=Z,15nm,1.4s						
KDAK	Kodiak Island	76.10	23	eP	P	23 21 40.7	+0.2
KDAK				pmax	pmax		
	comp=Z,15nm,1.4s						
HMT	Hamilton	76.20	18	eP	P	23 21 41.3	+0.2
	comp=Z,14nm,1.4s						
OHAK	Old Harbor	76.34	24	eP	P	23 21 42.4	+0.6
	comp=Z,16nm,1.4s						
HYT	Haines Junctio	77.24	15	eP	P	23 21 46.6	-0.5
	comp=Z,5.8nm,0.9s						
YKW3	Yellowknife Ar	78.39	4	eP	P	23 21 52.1	-1.1
	comp=Z,5.9nm,0.9s						
YKA	Yellowknife Ar	78.46	4	P	P	23 21 52.7	-1.0
	comp=Z,0.5nm,0.5s,baz=351,slow=5.6,SNR=3.7						
BESE	Bessie Mountai	79.84	14	eP	P	23 22 00.9	-0.4
	comp=Z,22nm,1.7s						
SCHQ	Schefferville	80.20	338	eP	P	23 22 02.6	-0.7
	comp=Z,19nm,1.6s						
WRA	Warramunga Arr	82.14	124	P	P	23 22 14.4	+0.3
	comp=Z,1.4nm,0.4s,baz=301,slow=5.2,SNR=22						
WR1	Warramunga Arr	82.14	124	eP	P	23 22 14.3	+0.3
WB2	Warramunga Arr	82.15	124	eP	P	23 22 15.2	+1.1
	comp=Z,53nm,2.0s						
WC3	Warramunga Arr	82.17	124	eP	P	23 22 14.9	+0.7
	comp=Z,28nm,1.7s						
ASAR	Alice Springs	84.56	126	P	P	23 22 27.3	+0.8
	comp=Z,0.6nm,0.7s,baz=344,slow=5.8,SNR=5.2						
DIB	Dawson Inlet,	85.36	15	eP	P	23 22 30.1	0.0
	comp=Z,26nm,1.4s						
MOBC	Moresby Island	85.51	15	eP	P	23 22 30.2	-0.7
	comp=Z,29nm,1.1s						
SACV	Santiago Islan	85.67	286	eP	P	23 22 30.5	-1.9
	comp=Z,45nm,1.3s						
FORT	Forrest	86.44	135	eP	P	23 22 36.0	+0.4
	comp=Z,38nm,1.4s						
KWAJ	Kwajalein Atol	88.07	80	eP	P	23 22 42.3	-1.7
	comp=Z,344nm,1.3s						
KWAJ	Kwajalein Atol	88.07	80	eP	P	23 22 42.3	-1.7
KWAJ				pmax	pmax		
	comp=Z,344nm,1.3s						
VLDQ	Val d'Or	89.17	341	eP	P	23 22 46.4	-2.2
	comp=Z,4.4nm,1.0s						
EMMW	East Machias	89.17	333	eP	P	23 22 49.3	+0.5
	comp=Z,29nm,1.7s						
MOQ	Mont Orford	90.24	336	eP	P	23 22 52.0	-1.8
ULM	Lac du Bonnet	90.38	353	eP	P	23 22 54.3	+0.1
	comp=Z,17nm,1.9s						
ULM	Lac du Bonnet	90.38	353	eP	P	23 22 54.3	+0.1
ULM				pmax	pmax		
	comp=Z,17nm,1.9s						
PECO	Prince Edward	92.90	339	eP	P	23 23 06.8	+0.8
	comp=Z,4.2nm,1.0s						
E43A	Lone Tree Farm	92.92	346	eP	P	23 23 06.3	+0.2
	comp=Z,7.8nm,0.9s						
D05A	Enumclaw	92.95	10	eP	P	23 23 07.1	+0.8
	comp=Z,13nm,1.0s						
I49A	Point Hope	94.39	343	eP	P	23 23 12.1	-0.8
	comp=Z,9.3nm,0.9s						

KRSC 14 23:16:21.3±2.4, 50°.41N×157°.77E, h16km±34km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	1.22	331	eP	Pn	23 16 41.9	-1.8
PAU				eS	Sb	23 16 56.8	-2.7
KDTR	Khodutka, Kamc	1.41	8	eP	Pb	23 16 46.9	-0.4
KDTR				eS	Sb	23 17 05.9	+0.8
ASAK	Asacha	1.98	2	eP	Pb	23 16 56.3	-0.7
RUS	Russkaya	2.08	13	P	Pn	23 16 57.0	+1.5
RUS				eS	Sb	23 17 22.7	-1.5
MTVR	Mutnovka	2.09	7	eP	Pb	23 16 57.5	-1.4
MTVR				eS	Sb	23 17 24.0	-0.7
KRMR	Karymshinskiy	2.43	5	eS	Sn	23 17 31.9	+2.1
APC	Apacha	2.55	352	eP	Pn	23 17 02.1	+0.2
PET	Petropavlovsk	2.67	12	eS	Sn	23 17 38.3	+2.6
DALK	Dalny	2.69	13	eP	Pn	23 17 05.9	+1.9
DALK				eS	Sn	23 17 38.3	+2.1

UGLR	Uglovaya	2.88	13	eP	Pb	23 17 09.7	-2.6
AVH	Avacha	2.92	11	eP	Pb	23 17 10.2	-2.8
AVH				eS	Sb	23 17 46.2	-2.3
SMAR	Somma	2.93	12	eP	Pb	23 17 10.7	-2.5
SMAR				eS	Sb	23 17 46.8	-2.0
NLC	Nalytchevo	2.93	19	eS	Sn	23 17 42.0	-0.1
KOK	Koryaka	2.94	10	eP	Pb	23 17 10.5	-2.8
KOK				eS	Sb	23 17 46.5	-2.5
SDLR	Sedlovina	2.95	13	eP	Pn	23 17 10.3	+2.6
SDLR				eS	Sb	23 17 47.1	-2.4
KRER	Koryakskii	2.96	11	eP	Pb	23 17 11.0	-2.8
KRER				eS	Sb	23 17 46.5	-3.3
KRX	Arik	3.00	10	eP	Pb	23 17 11.9	-2.6
KRX				eS	Sb	23 17 48.5	-2.4
SPN	Mys Shipunski	3.03	27	eP	Pn	23 17 10.6	+2.0
SPN				eS	Sn	23 17 47.5	+2.9
GNL	Ganaly	3.29	2	eP	Pb	23 17 16.9	-2.5

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*NEIC **14** 23:29:36.6±0.0, 52°.70N×167°.51W, h0^{km}, mb4.0/18, ML3.8(AEIC), After AEIC.*

*ISCJB **14** 23:29:40.6±0.4, 52°.86N±0°.07×167°.60W±0°.06, h42^{km}, mb4.2/44, MS3.5/2, Error ellipse: s-maj=10.0km s-min=3.1km az=157.3*

*IDC **14** 23:29:43.1±4.1, 52°.91N×167°.83W, h51^{km}±36^{km}, mb3.8/25, mb1 3.9/26, mb1mx3.7/62, mbtmp4.0/26, MS3.2/1, Ms1 3.2/1, ms1mx2.5/39, Error ellipse: s-maj=23.8km s-min=13.7km az=178.0*

ISC 14 23:29:42.3±0.6, 52°.9N±0°.1×167°.71W±0°.06, h42^{km}, n109, σ1^{s}.29/107, mb4.2/44, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKTU	Okmok Mt. Tuli	0.55	339	ePn	Pn	23 29 53.4	-0.4
OKER	Okmok East Rim	0.62	341	ePn	Pn	23 29 54.5	-0.3
NIKH	Nikolski High	0.70	279	ePg	Pn	23 29 54.5	-1.3
OKAK	Okmok	0.81	331	ePg	Pn	23 29 54.8	-2.4
MREP	Makushin Rep't	1.10	31	ePg	Pn	23 30 00.0	-1.3
MSW	Makushin Switc	1.18	28	ePg	Pn	23 30 01.3	-1.1
MSW				eSn	Sn	23 30 20.6	+3.3
MCIR	Makushin Cirqu	1.19	24	ePn	Pn	23 30 02.2	-0.3
UNV	Unalaska Valle	1.22	36	ePg	Pn	23 30 01.1	-1.7
AKRB	Akutan Reef Bi	1.60	37	ePn	Pn	23 30 07.6	-0.5
ZRO	Akutan Zero	1.60	40	ePn	Pn	23 30 07.2	-1.0
AKUT	Akutan	1.71	42	ePn	Pn	23 30 08.1	-1.6
AKSA	Akutan Strait	1.75	43	ePn	Pn	23 30 09.5	-0.6
AKSA				eSg	Sn	23 30 34.0	+2.9
WESP	Westdahl Peak	2.41	46	ePn	Pn	23 30 18.9	-0.3
WEBT	Westdahl Beart	2.46	44	ePn	Pn	23 30 19.4	-0.5
FALS	False Pass	3.23	50	ePn	Pn	23 30 29.5	-0.9
KOSE	Korovin Southe	3.90	265	ePn	Pn	23 30 41.0	+1.3
KOFP	Korovin Flat P	3.94	264	ePn	Pn	23 30 41.5	+1.2
KOKL	Mount Kliuchef	4.00	265	ePn	Pn	23 30 42.4	+1.4
KOWE	Korovin West	4.02	265	ePn	Pn	23 30 43.2	+1.9
SPIA	Saint Paul Isl	4.55	342	ePn	Pn	23 30 50.5	+1.9
SDPT	Sand Point	4.93	57	ePn	Pn	23 30 52.9	-0.9
GSTR	Great Sitkin T	5.16	265	ePn	Pn	23 30 58.6	+1.6
GSMY	Great Sitkin M	5.17	264	ePn	Pn	23 30 58.5	+1.4
GSTD	Great Sitkin T	5.22	264	ePn	Pn	23 30 59.4	+1.5
ETKA	Kagalaska Isla	5.42	263	ePn	Pn	23 31 01.8	+1.3
ADAG	Mount Adagdak	5.51	264	ePn	Pn	23 31 03.3	+1.5
ADK	Adak	5.58	263	ePn	Pn	23 31 04.0	+1.2
ADK				ePg		23 31 04.4	
KIRH	Kanaga Island	5.83	264	ePn	Pn	23 31 08.2	+2.1
KIWB	Kanaga Island	5.87	264	ePn	Pn	23 31 08.1	+1.4
KIKV	Kanaga Island	5.88	264	ePn	Pn	23 31 08.4	+1.5
KIMD	Kanaga Island	5.95	263	ePn	Pn	23 31 09.0	+1.3
CHGN	Chignik	6.40	54	ePn	Pn	23 31 14.5	+0.6
CHIR	Chirikof Islan	7.66	63	ePn	Pn	23 31 30.4	-0.8
CHIR				ePn	Pn	23 31 31.9	+0.7
SII	Sitkinak Islan	8.65	59	ePn	Pn	23 31 44.0	-0.8
OHAK	Old Harbor	9.35	57	ePn	Pn	23 31 52.8	-1.6
KDAK	Kodiak Island	9.92	54	ePn	Pn	23 32 02.7	+0.6
SVW2	Sparrevohn	10.55	34	ePn	Pn	23 32 08.6	-2.2
SMY	Shemya	11.02	277	ePn	Pn	23 32 17.2	+0.1
CNPM	China Poot	11.32	47	ePn	Pn	23 32 20.8	-0.5
SPU	Mount Spurr	11.89	39	ePn	Pn	23 32 28.6	-0.5
SEW	Seward	12.39	47	ePn	Pn	23 32 35.1	-0.7
RC01	Rabbit Creek A	12.76	43	ePn	Pn	23 32 40.0	-0.9
KNK	Knik Glacier	13.46	43	ePn	Pn	23 32 49.7	-0.7
SML	Sawmill	13.71	42	ePn	Pn	23 32 52.1	-1.8
GLI	Glacier Island	13.78	46	ePn	Pn	23 32 53.7	-1.2
KTH	Kantishna Hill	13.83	33	ePn	Pn	23 32 52.5	-3.1
FID	Port Fidalgo	14.00	47	ePn	Pn	23 32 56.2	-1.6
SCM	Sheep Creek Mo	14.14	43	ePn	Pn	23 32 59.4	-0.3
ILAR	Eielson Array	15.97	34	P	P	23 33 25.4	-1.3
	baz=220,slow=10,SNR=2.8						
HYT	Haines Junctio	18.19	52	eP	P	23 33 52.7	+1.3
	11nm,0.8s						
BESE	Bessie Mountai	19.23	60	eP	Pn	23 34 03.5	-0.4
	8.7nm,0.9s						
EPYK	Eagle Plains	20.39	37	eP	P	23 34 13.5	-1.8
	8.8nm,0.6s						
PETK	Petropavlovsk-	20.71	285	P	P	23 34 18.5	-0.2
	1.8nm,0.4s,baz=82,slow=14,SNR=12						
DLBC	Dease Lake	21.76	60	P	P	23 34 31.1	+1.0
	1.8nm,0.8s,baz=277,slow=8.1,SNR=2.1						
INK	Inuvik	22.37	33	P	P	23 34 36.2	-0.2
	6.4nm,0.8s,baz=224,slow=10,SNR=7.4						
INK	Inuvik	22.37	33	eP	P	23 34 34.0	-2.4
	5.8nm,0.8s						
SEY	Seymchan	23.08	312	P	P	23 34 43.8	-0.1
	2.5nm,0.7s,baz=120,slow=14,SNR=5.1						
YKA	Yellowknife Ar	29.15	50	P	P	23 35 38.5	-0.5
	0.7nm,0.6s,baz=215,slow=9.0,SNR=3.1						
YBH	Yreka Blue Hor	31.98	92	LR	LR	23 45 16.2	
	comp=Z,43nm,21.2s,baz=283,slow=29						
EGMT	Eagleton	36.35	74	eP	P	23 36 45.2	+3.1
	14nm,0.9s						
NVAR	Mina Array Bea	36.67	93	P	P	23 36 45.9	+0.8
	0.5nm,0.6s,baz=292,slow=10,SNR=5.6						
H11N2	WAKE ISLAND Hy	38.49	220	T	T	00 18 17.1	
	baz=25,slow=76,SNR=225						
H11N3	WAKE ISLAND Hy	38.49	220	T	T	00 18 17.7	
	baz=25,slow=76,SNR=242						
H11N1	WAKE ISLAND Hy	38.50	220	T	T	00 18 21.2	
	baz=25,slow=76,SNR=188						
H11S1	WAKE ISLAND Hy	39.67	220	T	T	00 19 32.0	
	baz=24,slow=76,SNR=408						
H11S2	WAKE ISLAND Hy	39.68	220	T	T	00 19 45.6	
	baz=24,slow=76,SNR=244						
H11S3	WAKE ISLAND Hy	39.69	220	T	T	00 19 39.7	
	baz=24,slow=76,SNR=234						
MJAR	Matsushiro Arr	40.72	269	P	P	23 37 18.6	-0.2
	2.4nm,0.7s,baz=43,slow=6.0,SNR=5.7						
SUMG	Summit	50.00	18	eP	P	23 38 29.0	-3.1
	4.1nm,0.6s						
SUMG	Summit	50.00	18	iP	P	23 38 21.4	-11
TXAR	Lajitas Array	51.73	91	P	P	23 38 45.3	-0.2
	0.9nm,0.6s,baz=299,slow=5.3,SNR=17						
SONM	Songino Array	51.91	301	P	P	23 38 45.1	-1.4
	0.4nm,0.5s,baz=46,slow=6.2,SNR=3.6						
SONM				PcP	PcP	23 39 58.2	-0.5
	0.9nm,0.9s,baz=26,slow=2.7,SNR=4.1						
HHC	Hu-ho-hao-te	53.68	292	P	P	23 39 00.4	+0.7
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,27nm,5.1s						
ARCES	ARCESS Array B	57.52	355	P	P	23 39 27.3	+0.6
	comp=Z,1.4nm,0.8s,baz=16,slow=7.5,SNR=3.2						
ARCES				PcP	PcP	23 40 19.7	0.0
	comp=Z,4.5nm,1.0s,baz=37,slow=4.9,SNR=6.1						
ZALV	Zalesovo Beam	57.73	318	P	P	23 39 27.4	-1.0
	comp=Z,0.7nm,0.4s,baz=54,slow=7.3,SNR=2.7						
ZALV				PcP	PcP	23 40 20.2	-0.5
	comp=Z,1.0nm,0.5s,baz=84,slow=2.9,SNR=3.5						
LZH	Lanzhou	61.33	293	eP	P	23 39 54.3	+0.6
LZH				pP	pP	23 40 01.0	-4.8
LZH				sP	sP	23 40 03.8	-6.8
LZH				ePP	PP	23 42 10.5	+1.8
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,43nm,7.8s						
KURK	Kurchatov	62.66	319	eP	P	23 39 59.3	-2.8
	comp=Z,2.3nm,0.8s						
KURBB	Kurchatov Arra	62.77	319	P	P	23 40 01.5	-1.3
	comp=Z,0.7nm,0.4s,baz=21,slow=14,SNR=8.0						
BVAR	Borovoye Array	63.87	325	P	P	23 40 09.4	-0.8
	comp=Z,1.0nm,0.5s,baz=38,slow=6.8,SNR=4.8						
WMQ	Urumqi	64.01	309	eP	P	23 40 13.1	+1.8
WMQ				sP	pP	23 40 22.5	-0.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,71nm,3.7s						
WMQ				LR	LR		
	comp=N,140nm,28.5s						
WMQ				LR	LR		
	comp=E,220nm,29.0s						
WMQ				LR	LR		
	comp=Z,63nm,27.5s						
MKAR	Makanchi Array	64.19	314	P	P	23 40 10.8	-1.5
	comp=Z,0.8nm,0.7s,baz=61,slow=9.9,SNR=8.6						
FINES	FINESS Array B	65.50	353	P	P	23 40 19.7	-0.9
	comp=Z,1.1nm,0.4s,baz=27,slow=6.2,SNR=14						
HFS	Hagfors	67.34	359	P	P	23 40 31.3	-1.0
	comp=Z,2.0nm,0.8s,baz=16,slow=3.5,SNR=13						
KMI	Kunming	70.11	285	P	P	23 40 50.8	+0.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKASG	Malin Array Be	75.81	349	P	P	23 41 22.2	-1.3
	comp=Z,2.2nm,0.5s,baz=13,slow=5.5,SNR=9.7						
OSTC	Ostas	76.89	357	eP	P	23 41 30.0	+0.3
DPC	Dobruska-Polom	77.09	357	eP	P	23 41 30.8	0.0
CMAR	Chiang Mai Arr	77.48	284	P	P	23 41 33.1	-0.4
	comp=Z,1.6nm,0.7s,baz=33,slow=5.1,SNR=6.9						
KWP	Kalwaria Pacla	77.49	353	eP	P	23 41 32.6	-0.5
	comp=Z,67nm,0.5s						
VRAC	Vranov	78.13	357	P	P	23 41 36.5	0.0
	comp=Z,1.4nm,0.6s,baz=338,slow=5.3,SNR=5.1						
KHC	Kasperske Hory	78.37	359	eP	P	23 41 38.0	+0.1
GERES	GERESS Array B	78.65	359	P	P	23 41 39.5	-0.1
	comp=Z,0.8nm,0.7s,baz=0.0,slow=5.3,SNR=13						
CONA	Conrad Observa	79.53	358	eP	P	23 41 45.0	+0.6
	comp=Z,1.3nm,0.7s						
RETA	Reutte	80.01	1	eP	P	23 41 47.1	+0.2
	comp=Z,2.5nm,0.9s						
MOTA	Moosalm	80.16	1	eP	P	23 41 48.0	+0.2
	comp=Z,1.3nm,0.7s						
WTTA	Wattenberg	80.24	0	eP	P	23 41 48.7	+0.4
	comp=Z,3.5nm,0.8s						
SQTA	Sankt Quirin	80.28	1	eP	P	23 41 48.5	0.0
	comp=Z,2.8nm,0.8s						
KBA	Koelnbreinsper	80.42	359	iP	P	23 41 50.2	+0.8
	comp=Z,4.8nm,0.7s						
FETA	Feichten	80.47	1	eP	P	23 41 50.1	+0.5
	comp=Z,2.6nm,0.7s,SNR=5.7						
DAVOX	Davos/Dischmat	80.70	2	P	P	23 41 51.4	+0.5
	comp=Z,4.0nm,0.7s,baz=347,slow=9.4,SNR=14						
ABTA	Abfaltersbach	80.76	360	eP	P	23 41 52.0	+1.0
	comp=Z,2.3nm,0.8s						
SOKA	Soboth	80.80	358	eP	P	23 41 52.4	+1.1
	comp=Z,3.8nm,1.0s,SNR=4.2						
FUORN	Ofenpass-Fuorn	80.87	1	eP	P	23 41 52.0	+0.1
	comp=Z,2.9nm,0.8s						
OBKA	Obir	80.98	358	eP	P	23 41 52.6	+0.4
	comp=Z,2.9nm,0.5s,SNR=5.0						
GEYT	Alibeck	81.21	325	P	P	23 41 53.5	0.0
	comp=Z,1.6nm,0.7s,baz=3.9,slow=6.5,SNR=4.7						
BNI	Bardonecchia	82.33	4	eP	P	23 42 00.7	+1.3
	comp=Z,4.5nm,0.9s						
BRTR	Keskin Array B	85.94	344	P	P	23 42 18.5	+0.6
	comp=Z,2.6nm,0.8s,baz=50,slow=2.8,SNR=20						
ESDC	Sonseca Array	86.75	12	P	P	23 42 22.1	+0.3
	comp=Z,0.6nm,0.5s,baz=346,slow=4.8,SNR=9.8						
ASAR	Alice Springs	91.50	231	P	P	23 42 43.0	-1.1
	comp=Z,0.6nm,0.7s,baz=38,slow=5.2,SNR=5.9						

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*DDA **14** 23:32:49.7, 41°.28N×35°.88E, h11^{km}±1^{km}, ML3.0*

*ISK **14** 23:32:49.2, 41°.37N×36°.02E, h8^{km}, ML2.9/8*

ISC 14 23:32:50.6±0.8, 41°.29N±0°.03×35°.91E±0°.02, h16^{km}±7^{km}, n34, σ1^{s}.09/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAMS	Samsun-Alacam	0.22	70	iP	Pg	23 32 56.7	+1.0
SAMS				iS	Sg	23 33 00.5	+1.4
SAMS				IAML_P			
	comp=Z,9µm,0.1s						
KVT	Kavak	0.23	153	PG	Pg	23 32 55.0	-0.9
KVT				SG	Sb	23 33 00.2	-0.1
HAVZ	Havza	0.26	215	iP	Pg	23 32 55.5	-0.7
HAVZ				IAML_P			
	comp=Z,18µm,0.2s						
DIKM	Dikmen	0.61	307	PG	Pg	23 33 01.6	-1.0
DIKM				SG	Sb	23 33 11.5	+0.3
AMSY	Amasya-Merkez	0.65	185	iP	Pb	23 33 03.4	-0.2
AMSY				iS	Sg	23 33 11.0	-1.0
ERBA	Erbaa	0.88	133	iP	Pb	23 33 07.2	-0.3
ERBA				IAML_P			
	comp=Z,8µm,0.2s						
SINO	SINOP_Merkez	0.90	324	iP	Pb	23 33 07.0	-0.9
SINO				iS	Sb	23 33 19.8	+0.1
SINO				IAML_P			
	comp=Z,4µm,0.2s						
TOKA	Tokat	1.05	156	iP	Pn	23 33 10.6	-0.2
TOKA				IAML_P			
	comp=Z,2µm,0.3s						
TOKT	Tokat	1.08	153	PN	Pn	23 33 11.4	+0.3
KAGI	orum-Kargı	1.09	263	iP	Pb	23 33 10.6	-0.4
KAGI				iS	Sg	23 33 25.1	-0.8
KAGI				IAML_P			
	comp=Z,1µm,0.2s						
COAL	Corum-Alaca	1.25	215	iP	Pg	23 33 14.2	-0.4
COAL				IAML_P			
	comp=Z,723nm,0.3s						
CORM	Corum	1.47	222	PN	Pg	23 33 18.3	-0.7
CORM				SN	Sg	23 33 39.5	+1.4
ORDU	Ordu-Boztepe	1.50	101	iP	Pg	23 33 18.7	-0.8
ORDU				iS	Sg	23 33 39.0	0.0
ORDU				IAML_P			
	comp=Z,1µm,0.1s						
BZK	Bozkurt	1.58	296	PN	Pb	23 33 18.8	-0.6
ILGA	Ilgaz	1.67	263	iP	Pg	23 33 21.8	-1.0
ILGA				iS	Sg	23 33 44.0	-0.5
ILGA				IAML_P			
	comp=Z,594nm,0.2s						
SCER	sogukcermik	1.70	146	iP	Pg	23 33 23.7	+0.4
SCER				iS	Sg	23 33 45.4	+0.1
SCER				IAML_P			
	comp=Z,806nm,0.2s						
YOZ	Yozgat	1.70	196	PN	Pb	23 33 21.4	-0.2
CANT	Cankiri	1.86	249	PN	Pb	23 33 23.8	-0.5
CUSAR	Sarkisla-SIVAS	1.88	172	iP	Pn	23 33 20.2	-2.0
CUSAR				iS	Sn	23 33 44.7	-1.0
DELI	KIRIKKALE	1.99	230	iP	Pb	23 33 25.7	-0.7
DELI				iS	Sb	23 33 51.5	+0.5
DELI				IAML_P			
	comp=Z,502nm,0.3s						
CUZAR	Zara_SIVAS	1.99	134	iP	Pb	23 33 26.3	-0.2
CUZAR				iS	Sg	23 33 55.9	+1.3
SIRC	Yozgat	2.03	197	iP	Pb	23 33 26.8	-0.4
SIRC				iS	Sb	23 33 54.1	+1.9
SIRC				IAML_P			
	comp=Z,247nm,0.3s						
CDAG	Cicekdag	2.03	216	iP	Pb	23 33 27.4	+0.2
CDAG				iS	Sb	23 33 54.6	+2.4
CDAG				IAML_P			
	comp=Z,1µm,0.4s						
ELDT	Eldivan	2.04	248	iP	Pb	23 33 27.4	0.0
ELDT				iS	Sb	23 33 53.3	+0.7
ELDT				IAML_P			
	comp=Z,401nm,0.2s						
SUSE	Susehri	2.05	121	iP	Pg	23 33 27.9	-2.0
SUSE				iS	Sg	23 33 56.6	+0.1
SUSE				IAML_P			
	comp=Z,285nm,0.2s						
CUALT	Altinyayla-SIV	2.11	162	iP	Pg	23 33 29.6	-1.6
CUKAN	kangal_SIVAS	2.30	148	iP	Pb	23 33 31.1	-0.7
BNN	Bunyan	2.43	181	PN	Pn	23 33 31.9	+2.2
KURC	Kurucasile-Bar	2.44	284	PN	Pn	23 33 31.5	+1.8
KIRS	Kırehir-Merke	2.64	216	iP	Pb	23 33 37.9	+0.5
KELT	Kelkit	2.79	113	iP	Pg	23 33 41.0	-3.0
KELT				iS	Sg	23 34 16.4	-3.7
KEMA	Kemaliye	2.82	135	iP	Pb	23 33 38.5	-2.1
KEMA				IAML_P			
	comp=Z,470nm,0.4s						
BCAM	Yenicaga	2.94	262	iP	Pg	23 33 48.5	+1.5
KIBS	BOLU	3.20	256	iP	Pb	23 33 49.0	+2.0

MAN 14 23:37:06.5, 7°.33N×124°.80E, h3^{km}, MS3.9, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.43	138	⇑iP	Pg	23 37 14.8	0.0
KCP				iS	Sb	23 37 27.3	+3.6
CTBH	Cotabato--PC H	0.56	259	⇓iP	Pg	23 37 17.9	+0.6
CTBH				iS	Sb	23 37 26.8	-0.6
BUKP	Musuan	0.60	25	eP	Pg	23 37 18.7	+0.7
BUKP				eS	Sb	23 37 28.5	0.0
DMPH	Davao City--Mi	0.74	110	⇑eP	Pb	23 37 22.5	+0.5
DMPH				eS	Sb	23 37 32.2	-0.4
SKMP	Bagumbayan, Su	0.85	198	eP	Pg	23 37 21.6	-1.1
SKMP				eS	Sn	23 37 38.1	-0.2
CGP	Cagayan de Oro	1.12	354	⇑iP	Pg	23 37 27.6	-0.3
CGP				iS	Sg	23 37 42.7	+0.2
PAGZ	Pagadian	1.50	290	eP	Pn	23 37 33.6	-0.7
PAGZ				eS	Sb	23 37 54.5	+0.1
DDMP	Don Marcelino,	1.52	143	eP	Pn	23 37 34.6	0.0
DDMP				eS	Sg	23 37 56.6	+1.3

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*NEIC **15** 00:02:25.0±0.0, 61°.55N×141°.02W, h15^{km}, ML3.2, ML3.2(OTT), ML3.1(AEIC), After AEIC.*

PGC 15 00:02:26.7±0.0, 61°.57N×141°.05W, h1^{km}, ML3.2/11, 209km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.24	25	ePg	Pg	00 02 30.6	-0.7
YUK2				eSg	Sg	00 02 34.1	-0.3
YUK2	White River	0.24	25	P	Pg	00 02 30.6	-0.7
YUK2				S	Sg	00 02 34.1	-0.3
YUK3	Moose Creek	0.35	54	P	Pg	00 02 32.6	-0.8
YUK3				S	Sg	00 02 37.6	-0.3
YUK1	Sand Pete Hill	0.64	23	ePg	Pg	00 02 37.5	-1.3
YUK1	Sand Pete Hill	0.64	23	P	Pg	00 02 37.5	-1.3
YUK1				S	Sg	00 02 46.4	-0.7
PTPK	Patty Peak	0.78	241	P	Pg	00 02 40.5	-1.1
PTPK				S	Sg	00 02 51.5	-0.2
BALM	Baldy	0.82	230	P	Pg	00 02 40.8	-1.6
BALM				S	Sg	00 02 52.3	-0.7
BVCY	Beaver Creek	0.85	6	P	Pg	00 02 41.8	-1.2
BVCY				S	Sg	00 02 53.9	-0.2
KIAG	Kiagna River	0.91	225	P	Pg	00 02 42.2	-1.8
KIAG				S	Sg	00 02 55.0	-0.7
TABL	Table Mountain	1.14	182	P	Pg	00 02 46.7	-1.7
TABL				S	Sg	00 03 01.9	-1.1
YUK4	Talbot Arm	1.18	100	Pn	Pg	00 02 48.0	-1.2
YUK4				S	Sb	00 03 05.2	-0.6
YUK6	Outpost Mounta	1.44	115	Pn	Pn	00 02 52.1	-2.0
YUK6				Sg	Sg	00 03 11.8	-1.2
SAMH	Samovar Hills	1.45	175	Pn	Pn	00 02 53.1	-1.1
SAMH				Sg	Sg	00 03 12.1	-1.1
MESA	MESA	1.46	198	Pn	Pn	00 02 53.4	-1.0
MESA				Sg	Sg	00 03 13.0	-0.6
CHX	Chaix Hills	1.51	181	ePn	Pn	00 02 54.4	-0.6
PCA	Pinnacle	1.53	165	ePn	Pn	00 02 54.1	-1.1
PCA	Pinnacle	1.53	165	Pn	Pn	00 02 54.0	-1.2
PCA				Sg	Sn	00 03 15.2	-0.5
BCA3	Beaver Creek A	1.54	347	ePn	Pn	00 02 53.7	-1.6
YUK5	Granite Creek	1.60	105	Pn	Pn	00 02 54.4	-1.8
YUK5				Sg	Sn	00 03 16.2	-1.4
YUK7	Dusty Glacier	1.76	125	Pn	Pn	00 02 58.4	-0.1
YUK7				Sg	Sn	00 03 21.6	+0.1
BCPM	Bancas Point	1.77	156	ePn	Pn	00 02 58.8	+0.4
MENT	Mentasta	1.85	319	ePn	Pn	00 02 58.1	-1.6
HYT	Haines Junctio	1.87	112	ePn	Pn	00 02 58.9	-1.0
HYT	Haines Junctio	1.87	112	Pn	Pn	00 02 58.9	-1.1
HYT				Sg	Sn	00 03 24.2	-0.1
HMT	Hamilton	2.00	233	ePg	Pn	00 03 02.4	+0.9
PNL	Peninsula	2.08	156	ePn	Pn	00 03 02.3	-0.3
PNL	Peninsula	2.08	156	Pn	Pn	00 03 02.4	-0.2
PNL				Sg	Sb	00 03 31.8	+0.5
RAGM	Ragged Mountai	2.13	238	ePg	Pb	00 03 04.8	-1.2
YKU2	Yakutat	2.17	161	ePg	Pb	00 03 05.9	-0.9
PAX	Paxson	2.50	306	ePg	Pn	00 03 09.8	+1.3
PAX	Paxson	2.50	306	Pn	Pn	00 03 09.6	+1.1
PAX				Sg	Sb	00 03 43.3	-0.3
EYAK	Cordova Ski Ar	2.50	248	ePg	Pn	00 03 09.2	+0.7
DOT	Dot Lake	2.51	328	ePn	Pn	00 03 07.6	-1.0
DOT	Dot Lake	2.51	328	Pn	Pn	00 03 07.1	-1.4
DOT				Sg	Sb	00 03 43.7	-0.1
DAWY	Dawson	2.62	16	ePn	Pn	00 03 08.8	-1.4
DAWY	Dawson	2.62	16	Pn	Pn	00 03 08.9	-1.2
DAWY				Sg	Sb	00 03 47.6	+0.6
JPK	Jack Peak	2.72	262	ePn	Pn	00 03 10.5	-1.1
FID	Port Fidalgo	2.76	255	ePg	Pn	00 03 13.7	+1.8
FID				ePg	Pb	00 03 13.8	-2.9
SCRK	Sand Creek	2.77	332	ePn	Pn	00 03 11.5	-0.7
RIDG	Independent Ri	2.79	323	ePn	Pn	00 03 11.0	-1.5
SCM	Sheep Creek Mo	3.00	278	ePn	Pn	00 03 15.2	-0.2
GLI	Glacier Island	3.00	259	ePn	Pn	00 03 16.1	+0.7
PLBC	Pleasant Camp	3.14	130	Pn	Pn	00 03 16.7	-0.5
PLBC				Pg	Pb	00 03 22.7	-0.5
PLBC				Sg	Sb	00 04 04.6	+2.6
EGAK	Eagle	3.22	359	ePn	Pn	00 03 17.8	-0.6
DHY	Denali Highway	3.31	300	ePn	Pn	00 03 19.1	-0.7
SML	Sawmill	3.48	277	ePn	Pn	00 03 22.2	+0.3
SKAG	Skagway	3.53	124	ePn	Pn	00 03 23.3	+0.7
KNK	Knik Glacier	3.56	271	ePn	Pn	00 03 23.5	+0.5
PMR	Palmer	3.86	274	ePn	Pn	00 03 28.6	+1.5
HDA	Harding Lake	3.92	319	ePn	Pn	00 03 24.2	-3.7
RND	Reindeer	4.06	300	ePn	Pn	00 03 27.8	-2.2
ILB	Eielson Array	4.16	323	ePn	Pn	00 03 28.3	-3.0
RC01	Rabbit Creek A	4.21	267	ePn	Pn	00 03 28.4	-3.6
MCK	McKinley	4.23	304	ePn	Pn	00 03 27.2	-5.0
BESE	Bessie Mountai	4.32	131	ePn	Pn	00 03 32.1	-1.3
BESE	Bessie Mountai	4.32	131	Pn	Pn	00 03 32.6	-0.9
BESE				Sg	Sg	00 04 41.0	-4.1
WRH	Wood River Hil	4.33	315	ePn	Pn	00 03 30.0	-3.5
CCB	Clear Creek Bu	4.35	318	ePn	Pn	00 03 30.8	-3.1
SEW	Seward	4.36	254	ePn	Pn	00 03 25.4	-8.6
PRP	Porcupine Dome	4.44	335	ePn	Pn	00 03 30.5	-4.7
BWN	Browne	4.65	308	ePn	Pn	00 03 36.2	-1.8
MDM	Murphy Dome	4.70	320	ePn	Pn	00 03 37.9	-0.7
KTH	Kantishna Hill	4.98	298	ePn	Pn	00 03 40.2	-2.3
BRLK	Bradley Lake	5.16	254	ePn	Pn	00 03 43.4	-1.7
EPYK	Eagle Plains	5.18	20	ePn	Pn	00 03 42.7	-2.6
BPAW	Bear Paw Mtn.	5.21	303	ePn	Pn	00 03 43.1	-2.6
SPU	Mount Spurr	5.31	271	ePn	Pn	00 03 45.4	-1.6
FYU	Fort Yukon	5.34	342	ePn	Pn	00 03 46.9	-0.5
PPLA	Purkeypile	5.38	289	ePn	Pn	00 03 48.3	+0.3
SIT	Sitka	5.39	145	ePn	Pn	00 03 46.5	-1.6
CNPM	China Poot	5.43	252	ePn	Pn	00 03 48.2	-0.4
RSO	Redoubt South	5.80	264	ePn	Pn	00 03 49.5	-4.4
BM3	Burnt Mountain	6.07	347	ePn	Pn	00 03 57.0	-0.5
DLBC	Dease Lake	6.36	115	Sg	Sg	00 05 44.5	-6.2
COLD	Coldfoot	6.92	329	ePn	Pn	00 04 04.7	-4.4
COLD	Coldfoot	6.92	329	Pn	Pn	00 04 07.5	-1.6
INK	Inuvik	7.47	22	Pn	Pn	00 04 16.3	-0.4
INK				Sn	Sn	00 05 36.1	-5.9

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*IDC **15** 00:12:22.7±2.5, 6°.13S×147°.81E, h0^{km}, mb4.0/3, mb1 4.3/5, mb1mx3.7/33, mbtmp4.1/5, ML4.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/23, Error ellipse: s-maj=80.5km s-min=25.0km az=93.0*

*ISCJB **15** 00:12:26.8±0.6, 6°.22S±0°.07×147°.93E±0°.08, h60^{km}, Error ellipse: s-maj=13.0km s-min=7.6km az=39.0*

*NEIC **15** 00:12:26.6±1.4, 6°.11S×147°.85E, h35^{km}±3^{km}, mb4.4/8, Error ellipse: s-maj=17.8km s-min=4.1km az=131.0*

ISC 15 00:12:28.6±0.8, 6°.22S±0°.09×147°.95E±0°.10, h60^{km}, n21, σ1^{s}.59/22, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.26	194	Pn	Pn	00 13 17.4	+0.1
	13nm,0.3s,baz=10,slow=3.7,SNR=9.0						
PMG				Sn	Sn	00 13 56.3	+1.4
	28nm,0.3s,baz=34,slow=21,SNR=4.4						
PMG	Port Moresby	3.26	194	ePn	Pn	00 13 16.6	-0.8
PMG				eSn	Sn	00 13 56.3	+1.4
RABL	Rabaul	4.66	65	ePn	Pn	00 13 35.1	-1.4
JAY	Jayapura	8.11	297	LR	LR	00 17 55.0	
	comp=Z,139nm,18.5s,baz=242,slow=42						
COEN	Coen	9.01	211	ePn	Pn	00 14 33.5	-2.6
HNR	Honiara	12.31	106	ePn	Pn	00 15 19.8	-1.4
PATS	Pohnpei	16.59	39	eP	P	00 16 18.2	-0.8
	114nm,1.4s						

SAUI	Saumlaki	16.61	263	ePn	Pn	00 16 15.8	-1.9
	1µm,1.5s						
MTN	Manton Dam	17.83	247	ePn	Pn	00 16 29.5	-3.3
	76nm,1.9s						
WRAB	Tennant Creek	18.98	223	eP	P	00 16 44.1	-1.2
	8.7nm,0.6s						
WB2	Warramunga Arr	18.99	223	eP	Pn	00 16 45.6	-1.0
	6.9nm,0.4s						
WR1	Warramunga Arr	19.00	223	eP	P	00 16 45.5	0.0
WRA	Warramunga Arr	19.00	223	P	P	00 16 45.5	0.0
	1.4nm,0.3s,baz=47,slow=11,SNR=8.0						
ASAR	Alice Springs	21.98	216	P	P	00 17 18.4	+0.6
	9.1nm,0.4s,baz=52,slow=9.0,SNR=123						
STKA	Stephens Creek	26.21	192	P	P	00 17 59.5	+1.7
	2.0nm,0.4s,baz=360,slow=9.2,SNR=5.7						
STKA	Stephens Creek	26.21	192	eP	P	00 17 59.5	+1.7
	1.2nm,1.1s						
FORT	Forrest	30.75	215	eP	P	00 18 39.8	+1.4
	83nm,2.0s						
MK32	Makanchi Array	78.27	320	eP	P	00 24 24.0	+1.8
MKAR	Makanchi Array	78.27	320	P	P	00 24 24.0	+1.8
	0.3nm,0.6s,baz=96,slow=7.5,SNR=2.7						
TORD	Torodi Ar. Bea	146.06	284	PKPbc	PKPab	00 32 04.2	+0.6
	0.3nm,0.7s,baz=73,slow=3.0,SNR=6.3						
TOA1	Torodi Ar. Sit	146.06	284	ePKPab	PKPab	00 32 04.2	+0.6

IDC ***15*** *00:15:01.6±3.1, 6°.22S×147°.90E, h0km, mb4.0/2, mb1 4.0/4, mb1mx3.6/30, mbtmp3.9/4, ML1.3/1, Error ellipse: s-maj=81.1km s-min=36.4km az=97.0*
NEIC ***15*** *00:15:12.7±1.2, 6°.79S×147°.42E, h35km±3km, mb4.3/11, Error ellipse: s-maj=13.9km s-min=9.5km az=148.0*
ISCJB ***15*** *00:15:13.2±0.5, 6°.82S±0°.07×147°.55E±0°.07, h65km, Error ellipse: s-maj=11.9km s-min=7.2km az=135.5*
ISC 15 00:15:14.3±0.7, **6°.79S**±0°.08×**147°.50E**±0°.09, **h65km, n20, σ1ˢ.03**/20, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.63	187	Pn	Pn	00 15 55.4	+1.1
	2.5nm,0.3s,baz=0.0,slow=20,SNR=1.3						
PMG				Sn	Sn	00 16 36.0	+11
	14nm,0.3s,baz=230,slow=21,SNR=3.4						
PMG	Port Moresby	2.63	187	ePn	Pn	00 15 52.5	-1.9
RABL	Rabaul	5.31	61	ePn	Pn	00 16 30.8	-0.4
HNR	Honiara	12.61	103	ePn	Pn	00 18 10.7	-0.1
FAKI	Fak Fak	15.67	283	ePn	Pn	00 18 50.0	-1.2
	102nm,1.5s						
SAUI	Saumlaki	16.11	265	eP	P	00 18 59.2	+0.2
	493nm,0.9s						
PATS	Pohnpei	17.31	39	eP	P	00 19 12.9	+0.6
	147nm,1.4s						
WRAB	Tennant Creek	18.27	223	eP	P	00 19 22.6	-0.2
	37nm,1.6s						
WB2	Warramunga Arr	18.27	223	eP	Pn	00 19 23.9	+0.5
	13nm,1.4s						
WR1	Warramunga Arr	18.28	223	eP	Pn	00 19 24.0	+0.4
WRA	Warramunga Arr	18.28	223	P	Pn	00 19 24.0	+0.4
	0.3nm,0.3s,baz=48,slow=11,SNR=2.4						
GUMO	Guam	20.41	353	eP	P	00 19 47.2	+1.1
	140nm,1.4s						
AS31	Alice Springs	21.27	216	eP	P	00 19 56.5	+1.1
	1.5nm,0.6s						
ASAR	Alice Springs	21.27	216	P	P	00 19 56.5	+1.1
	3.7nm,0.6s,baz=53,slow=9.4,SNR=13						
SOEI	Soe	23.17	261	eP	P	00 20 15.7	0.0
	46nm,1.2s						
SARN	Sarigan	23.40	356	eP	P	00 20 18.6	+0.9
	139nm,1.7s						
KWAJ	Kwajalein Atol	25.34	53	eP	P	00 20 35.2	-0.1
	217nm,0.9s						
STKA	Stephens Creek	25.57	192	P	P	00 20 37.6	+0.4
	2.2nm,0.8s,baz=0.0,slow=11,SNR=2.9						
STKA	Stephens Creek	25.57	192	eP	P	00 20 37.6	+0.4
	5.9nm,1.9s						
TORD	Torodi Ar. Bea	145.75	283	PKPbc	PKPdf	00 34 44.1	-2.4
	0.2nm,0.6s,baz=80,slow=3.4,SNR=1.4						

ISCJB ***15*** *00:23:25.1±0.6, 36°.76N±0°.06×54°.50E±0°.05, h30km, Error ellipse: s-maj=9.4km s-min=4.2km az=25.7*
THR ***15*** *00:23:25.8, 36°.75N×54°.97E, h18km, ML3.1*
AZER ***15*** *00:23:32.3±1.9, 36°.81N×53°.96E, h10km, ml3.2/4, Error ellipse: s-maj=19.6km s-min=13.0km az=49.0*
ISC 15 00:23:27.0±1.1, **36°.71N**±0°.08×**54°.56E**±0°.07, **h30km, n23, σ1ˢ.54**/37, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	1.55	52	AML	AML	00 24 09.2	
	comp=E,366nm,0.4s						
MRVT				AML	AML	00 24 09.6	
	comp=N,246nm,0.2s						
DAMV	Damavand	2.35	243	Pn	Pb	00 24 10.1	+1.3
BJRD	Bojnurd	2.48	66	Pn	Pn	00 24 03.0	-2.4
BJRD				Sg	Sn	00 24 34.0	-0.8
THKV	Tehran--Karaj	3.07	256	Pn	Pb	00 24 20.5	-0.6
TABS	Tabas	3.71	145	Pn	Pn	00 24 22.4	+0.1
ASTR	Astara	4.93	294	P	Pn	00 24 39.0	0.0
ASTR				S	Sn	00 25 33.5	-1.5
NDR	Nardaran	5.26	319	P	Pn	00 24 46.0	+2.5
NDR				S	Sn	00 25 44.3	+1.1
LRK	Lerik	5.29	293	P	Pn	00 24 45.8	+1.6
LRK				S	Sn	00 25 41.3	-2.9
GLBA	Clilabad	5.49	299	P	Pn	00 24 47.1	+0.5
GLBA				S	Sn	00 25 47.1	-1.6
ATGJ	Altiaghaj	6.03	315	P	Pn	00 24 55.7	+1.5
ATGJ				S	Sn	00 26 00.9	-1.4
BSRN	Basiran	6.06	140	Pn	Pn	00 24 54.6	-0.1
PQL	Pirkuli	6.19	313	P	Pn	00 24 57.7	+1.3
PQL				S	Sn	00 26 04.4	-1.8
SIZA	Siyzn	6.20	316	P	Pn	00 24 58.8	+2.3
SIZA				S	Sn	00 26 07.8	+1.4
QUBA	Quba, Azerbaij	6.61	316	S	Sn	00 26 16.4	-0.1
XNQ	Khinaliq	6.70	314	P	Pn	00 25 04.6	+1.2
XNQ				S	Sn	00 26 18.2	-0.6
QBL	Gabala	6.74	311	S	Sn	00 26 19.1	-0.4
QSAR	Qusar	6.85	316	S	Sn	00 26 22.2	-0.2
ORD	Ordubad	7.13	291	P	Pn	00 25 10.2	+1.0
ORD				S	Sn	00 26 31.0	+1.7
SEKA	Sheki	7.28	310	P	Pn	00 25 11.2	-0.1
SEKA				S	Sn	00 26 29.7	-3.3
GANJ	Ganja	7.54	304	P	Pn	00 25 15.1	+0.2
GANJ				S	Sn	00 26 37.2	-2.2
SBZ	Shahbuz	7.59	293	P	Pn	00 25 16.6	+0.9
SBZ				S	Sn	00 26 39.7	-1.0
GDB	GEDABAY	7.96	303	P	Pn	00 25 20.6	-0.1
GDB				S	Sn	00 26 48.1	-1.7
QZX	Qazax, Azerbai	8.37	304	P	Pn	00 25 27.8	+1.5
QZX				S	Sn	00 26 58.1	-1.7

ISCJB ***15*** *00:30:22.9±0.4, 38°.98N±0°.02×26°.06E±0°.03, h8km±3km, Error ellipse: s-maj=3.9km s-min=2.8km az=166.6*
DDA ***15*** *00:30:22.0, 38°.96N×26°.02E, h8km±3km, ML2.9*
ISK ***15*** *00:30:22.7, 39°.00N×26°.08E, h10km, ML2.7/14*
ATH ***15*** *00:30:22.6, 39°.00N×26°.06E, h24km±1km, ML2.5/6, Error ellipse: s-maj=2.3km s-min=1.1km az=266.0*
THE ***15*** *00:30:23.1, 38°.96N×26°.06E, h2km±2km, ML2.1/4, Error ellipse: s-maj=2.2km s-min=0.7km az=104.0*
ISC 15 00:30:23.0±1.0, **38°.99N**±0°.02×**26°.07E**±0°.02, **h12km**±9km, **n56, σ0ˢ.72**/79, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.27	323	PG	Pg	00 30 28.6	-0.1
SIGR				SG	Sb	00 30 33.3	-1.2
SIGR	SIGRI	0.27	323	P	Pg	00 30 28.9	+0.2
SIGR				S	Sb	00 30 33.1	-1.3
	1µm,0.4s						
SIGR	SIGRI	0.27	323	P	Pg	00 30 28.8	+0.2
SIGR				S	Sb	00 30 33.2	-1.2
SIGR				AML	AML	00 30 33.9	
	comp=E,3694µm,0.4s						
SIGR				AML	AML	00 30 35.7	
	comp=N,1494µm,0.5s						
PRK	Paraskevi	0.30	32	P	Pb	00 30 30.1	-0.2
PRK				S	Sb	00 30 35.4	+0.3
PRK	Paraskevi	0.30	32	P	Pb	00 30 30.0	-0.2
PRK				S	Sb	00 30 34.6	-0.5
PRK				AML	AML	00 30 35.6	
	comp=E,6373µm,0.4s						
PRK				AML	AML	00 30 35.7	
	comp=N,6411µm,0.3s						
KRBN	Karaburun	0.55	136	PG	Pg	00 30 33.8	0.0
AYVA	Ayvalik	0.58	57	i P	Pg	00 30 34.1	-0.1
AYVA				i S	Sb	00 30 42.5	-0.6
AYVA				IAML_P			
	comp=Z,1µm,0.2s						
FOCM	Foa	0.59	118	PG	Pg	00 30 34.6	+0.1
PSRA	Psara	0.60	221	P	Pb	00 30 35.3	-0.1
PSRA				S	Sb	00 30 44.0	+0.2
PSRA				AML	AML	00 30 48.2	
	comp=E,1847µm,0.3s						
PSRA				AML	AML	00 30 48.3	
	comp=N,1624µm,0.3s						
CHOS	Chios island	0.61	181	PG	Pg	00 30 34.9	0.0
CHOS	Chios island	0.61	181	P	Pg	00 30 34.1	-0.8
CHOS				S	Sg	00 30 43.3	+0.4
CHOS	Chios island	0.61	181	P	Pg	00 30 34.3	-0.6
CHOS				S	Sg	00 30 42.8	-0.1
DKL	Dikili	0.66	83	PG	Pg	00 30 35.8	0.0
URLA	Izmir	0.76	147	PG	Pg	00 30 37.6	0.0
URLA	Izmir	0.76	147	i P	Pg	00 30 37.3	-0.3
URLA				i S	Sb	00 30 48.3	0.0
URLA				IAML_P			
	comp=Z,3µm,0.2s						
ZEDA	zmir-Bergama	0.79	92	i P	Pb	00 30 38.3	-0.3
ZEDA				i S	Sb	00 30 50.1	+1.0
ZEDA				IAML_P			
	comp=Z,4µm,0.2s						
BAYC	CANAKKALE_Bayr	0.83	26	i P	Pn	00 30 40.1	-0.4
BAYC				i S	Sn	00 30 52.9	+0.1
BAYC				IAML_P			
	comp=Z,1µm,0.3s						
BOZC	Bozcaada	0.85	359	PG	Pb	00 30 39.3	-0.3
BOZC	Bozcaada	0.85	359	i P	Pg	00 30 39.1	-0.4
BOZC				i S	Sb	00 30 51.5	+0.6
BOZC				IAML_P			
	comp=Z,1µm,0.1s						
EZN	Ezine	0.85	13	PG	Pb	00 30 39.5	-0.2
EZN	Ezine	0.85	13	P	Pg	00 30 39.2	-0.3
EZN				S	Sb	00 30 52.1	+1.0
BLCB	Balcova	0.97	128	PG	Pb	00 30 41.7	-0.1
LIA	Limnos Island	1.13	323	P	Pn	00 30 44.6	-0.1
LIA				S	Sn	00 31 01.4	+1.3
	comp=Z,92nm,0.5s						
LIA	Limnos Island	1.13	323	P	Pn	00 30 44.5	-0.1
LIA				S	Sn	00 30 59.7	-0.4
LIA				AML	AML	00 31 02.1	
	comp=E,370µm,0.5s						
LIA				AML	AML	00 31 03.8	
	comp=N,237µm,0.4s						
DGB	zmir	1.14	146	i P	Pn	00 30 44.8	+0.2
DGB				IAML_P			
	comp=Z,658nm,0.3s						
STEP	BALIKESIR_Sava	1.34	73	i P	Pn	00 30 47.4	-0.1
STEP				i S	Sg	00 31 06.0	-0.2
STEP				IAML_P			
	comp=Z,2µm,0.2s						
AKHS	Akhisar	1.37	94	i P	Pg	00 30 49.5	+0.2
SMG	Samos	1.42	155	P	Pn	00 30 47.8	-0.8
SMG	Samos	1.42	155	P	Pn	00 30 49.0	+0.4
SMG				S	Sg	00 31 09.2	+0.6
SMG				AML	AML	00 31 12.2	
	comp=E,319µm,0.5s						
SMG				AML	AML	00 31 14.2	
	comp=N,226µm,0.6s						
GELI	Tayfur-Gelibol	1.44	12	PN	Pb	00 30 49.2	-0.5
LPK	Lapseki	1.48	21	PN	Pn	00 30 49.8	+0.4
SMTH	Samothraki Isl	1.53	344	P	Pn	00 30 50.4	+0.2
SMTH				S	Sg	00 31 13.0	+0.6
	comp=N,50nm,0.5s						
SMTH	Samothraki Isl	1.53	344	P	Pn	00 30 50.2	+0.1
SMTH				S	Sb	00 31 11.1	+0.4
SMTH				AML	AML	00 31 14.3	
	comp=N,102µm,0.4s						
SMTH				AML	AML	00 31 15.3	
	comp=E,123µm,0.3s						
BALB	Balikesir	1.55	65	PN	Pn	00 30 50.4	+0.1
GCAM	G?zelcaml?	1.58	144	PN	Pn	00 30 51.3	+0.5
GCAM	G?zelcaml?	1.58	144	i P	Pn	00 30 51.3	+0.5
GONE	Gonen-Balikesi	1.63	49	PN	Pn	00 30 51.7	+0.2
AYDB	Zeytinkoy-Aydi	1.77	126	PN	Pn	00 30 54.0	+0.5
KESN	Edirne-Kesan	1.89	14	i P	Pn	00 30 55.9	+0.5
SART	Tekirdag	1.90	26	i P	Pg	00 30 59.1	-0.3
ALN	Alexandroupoli	1.90	359	P	Pn	00 30 55.5	+0.3
ALN				S	Sb	00 31 21.2	-0.1
	comp=E,32nm,0.4s						
ALN	Alexandroupoli	1.90	359	P	Pn	00 30 55.3	+0.1
ALN				S	Sn	00 31 19.7	+0.7
DION	Dionisos Attik	1.91	242	P	Pn	00 30 56.1	+0.8
THAS	Thassos island	1.92	328	P	Pb	00 30 56.8	-1.1
EDC	Edincik	1.94	45	PN	Pn	00 30 56.1	+0.4
AYDN	Tasoluk	1.95	133	i P	Pn	00 30 53.0	-2.9
DURS	Dursunbey	1.96	71	i P	Pn	00 30 56.4	+0.3
APE	Apeiranthos	1.97	193	PN	Pn	00 30 56.9	+0.7
APE	Apeiranthos	1.97	193	P	Pn	00 30 55.2	-1.0
KULA	Kula-Manisa	2.08	102	PN	Pn	00 30 58.4	+0.6
RDO	Rodhopi	2.19	349	P	Pn	00 30 59.8	+0.7
YER	Yerkesik	2.55	136	PN	Pn	00 31 04.9	+0.7
ULDT	Uludag	2.63	63	i P	Pg	00 31 11.7	-1.8
ULDT				i S	Sg	00 31 47.1	-0.5
SRS	Serrai	2.85	319	P	Pn	00 31 09.1	+0.9
KIRK	Kırklareli	2.89	15	i P	Pn	00 31 11.2	+2.4
KIRK				IAML_P			
	comp=Z,59nm,0.2s						
NVR	Nevrokopi	2.90	325	P	Pn	00 31 09.7	+0.7

SAR ***15*** *00:31:08.0±0.7, 42°.43N×20°.20E, h4km±3km, ML1.9/7*
TIR ***15*** *00:31:08.2, 42°.48N×20°.06E, h7km, Md2.6/4*
PDG ***15*** *00:31:09.4±0.2, 42°.47N×20°.03E, h13km±1km, MD2.2/1, ML2.1/12, Error ellipse: s-maj=0.3km s-min=0.6km az=0.0*
BEO ***15*** *00:31:10.8±0.7, 42°.48N×20°.09E, h5km, ML1.8/10*
SKO ***15*** *00:31:10.4, 42°.48N×20°.00E, h12km, M1.2, ML2.3*
ISC 15 00:31:09.6±0.9, **42°.48N**±0°.02×**20°.08E**±0°.02, **h7km**±7km, **n54, σ1ˢ.11**/98, **7C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCI	Bajram Curri	0.11	184	i PG	Pg	00 31 11.2	-0.8
BCI				i SG	Sg	00 31 13.8	+0.2
PVY	Plav	0.15	324	⇑iPg	Pg	00 31 12.8	+0.1
PVY				i Sg	Sg	00 31 15.8	+0.9
BEY	Berane	0.42	341	i Pg	Pg	00 31 17.4	-0.4
IVA	Berane	0.42	341	⇑iPg	Pg	00 31 17.4	-0.4
IVA				i Sg	Sg	00 31 23.8	+0.5
PUK	Puka	0.45	198	i PG	Pg	00 31 17.5	-0.9
PUK				i SG	Sg	00 31 24.6	+0.3
KOME	Kolasin	0.56	312	⇑iPg	Pg	00 31 19.9	-0.5
KOME				i Sg	Sg	00 31 28.0	+0.3
PDG	Podgorica	0.61	266	i Pg	Pg	00 31 20.2	-1.1
PDG				i Sg	Sg	00 31 29.5	+0.2
PDG	Podgorica	0.61	266	ePg	Pg	00 31 20.2	-1.1
PDG				eSg	Sg	00 31 29.8	+0.5
TTG	Podgorica	0.61	266	⇑iPg	Pg	00 31 20.1	-1.2
TTG				i Sg	Sg	00 31 29.7	+0.5
DRME	Dracevica, Mon	0.72	247	⇓iPg	Pg	00 31 22.0	-1.5
DRME				i Sg	Sb	00 31 33.4	-1.2
DRME	Dracevica, Mon	0.72	247	ePg	Pg	00 31 21.7	-1.8
DRME				eSg	Sb	00 31 33.4	-1.2
SJES	Sjenica	0.79	354	ePg	Pg	00 31 24.3	-0.5
SJES				eSg	Sg	00 31 35.7	+0.6
ULC	Ulcinj	0.80	231	i Pg	Pg	00 31 24.9	-0.2
PHP	Peshkopia	0.83	161	i PG	Pg	00 31 23.9	-1.7
PHP				i SG	Sb	00 31 37.7	-0.3
CEME	Cevo	0.86	275	⇓iPg	Pg	00 31 25.0	-1.1
CEME				i Sg	Sb	00 31 38.0	-0.7
NKME	Niksic	0.88	290	⇓iPg	Pg	00 31 25.0	-1.5
NKME				i Sg	Sb	00 31 38.9	-0.3
BUM	Brajici-Budva	0.89	259	⇑iPg	Pg	00 31 25.6	-1.2
BUM				i Sg	Sb	00 31 39.3	-0.4
PLE	Pljevlja	0.99	330	⇓iPg	Pg	00 31 27.8	-0.9
PLE				i Sg	Sb	00 31 42.7	+0.1
SELS	Selova	1.07	45	ePg	Pg	00 31 29.0	-1.1
SELS				eSg	Sb	00 31 44.4	-0.2
IVAS	Ivanjica	1.10	3	ePg	Pg	00 31 29.4	-1.4
IVAS				eSg	Sb	00 31 45.4	-0.3
UPM	Unac-Piva	1.13	311	⇑iPg	Pg	00 31 30.1	-1.2
UPM				i Sg	Sn	00 31 47.5	-0.4
UPM	Unac-Piva	1.13	311	ePg	Pg	00 31 30.4	-0.9
UPM				eSg	Sn	00 31 46.9	-1.0
SKO	Skopje	1.13	116	i Pg	Pn	00 31 31.9	0.0
SKO				i Sg	Sn	00 31 48.5	+0.8
SKO				eLg	Lg	00 31 48.6	
	comp=N,2.6nm,0.4s						
SKO				eLg	Lg	00 31 48.9	
	comp=E,2.1nm,0.5s						
TIR	Tirane	1.14	188	i Pg	Pg	00 31 31.0	-0.4
TIR	Tirane	1.14	188	i PG	Pn	00 31 34.1	+2.2
TIR				i SG	Sn	00 31 47.4	-0.4
HCY	Herceg Novi	1.17	269	⇑iPg	Pg	00 31 30.8	-1.3
HCY				i Sg	Sn	00 31 48.5	-0.1
HCY	Herceg Novi	1.17	269	ePg	Pg	00 31 31.0	-1.1
HCY				eSg	Sn	00 31 48.6	-0.1
BRY	Bratogost	1.21	291	⇓iPg	Pg	00 31 31.5	-1.3
BRY				i Sg	Sn	00 31 50.0	+0.1
BRY	Bratogost	1.21	291	ePg	Pg	00 31 31.7	-1.1
BRY				eSg	Sn	00 31 49.3	-0.6
RUDO	Rudo	1.25	336	ePg	Pn	00 31 31.4	-2.2
RUDO				eSg	Sn	00 31 50.4	-0.4
TREB	Trebinje	1.30	281	ePg	Pn	00 31 33.5	-0.7
TREB				eSg	Sn	00 31 52.9	+1.1
BARS	Barje	1.33	75	ePg	Pg	00 31 35.1	+0.1
BARS	Barje	1.33	75	ePg	Sb	00 31 49.9	-2.2
BARS				eSg	Sg	00 31 51.8	-0.5
BARS				eSg	Sn	00 32 19.0	+26
DBRK	Dubrovnik	1.44	278	ePn	Pb	00 31 36.2	-0.6
DBRK				Sn	Sg	00 31 59.3	+3.4
OHR	Ohrid	1.47	158	i Pg	Pg	00 31 37.6	-0.1
OHR				i Sg	Sg	00 31 57.0	+0.3
OHR				eLg	Lg	00 31 58.3	
	comp=E,34nm,0.6s						
OHR				eLg	Lg	00 31 59.2	
	comp=N,28nm,0.5s						
BBLS	Lazići	1.47	341	ePg	Pn	00 31 36.4	-0.3
BBLS				eSg	Sg	00 31 57.9	+0.9
BBLS	Lazići	1.47	341	ePg	Pn	00 31 36.2	-0.5
BBLS				eSg	Sg	00 31 57.0	0.0
GRUS	Gruza	1.49	18	ePg	Pb	00 31 37.6	0.0
GRUS				eSg	Sg	00 31 57.1	-0.3
DIVS	Divibare	1.62	358	ePg	Pg	00 31 40.7	0.0
DIVS				eSg	Sg	00 32 03.2	+1.4
DIVS	Divibare	1.62	358	ePn	Pn	00 31 38.1	-0.6
DIVS				eSn	Sn	00 31 59.6	-0.4
BOVS	Bovan	1.66	45	ePg	Pb	00 31 40.1	-0.5
BOVS				eSg	Sg	00 32 03.9	+0.8
TRUS	Trudelj	1.76	8	ePg	Pb	00 31 42.3	0.0
TRUS				eSg	Sg	00 32 07.1	+0.8
STON	Ston	1.80	284	ePn	Pb	00 31 42.4	-0.5
STON				Sn	Sg	00 32 09.3	+2.0
STON	Ston	1.80	284	ePn	Pn	00 31 41.2	+0.2
STON				eSn	Sb	00 32 05.5	-0.1
HAPS	Han Pijesak,Bl	1.81	333	ePn	Pn	00 31 40.8	-0.5
HAPS				eSn	Sb	00 32 05.1	-0.9
ZAPS	Zavoj	2.04	66	ePg	Pb	00 31 47.7	+0.7
ZAPS				eSg	Sg	00 32 14.8	-0.4
ZAGS	Zajecar	2.07	49	eSg	Pg	00 31 48.6	-0.6
ZAGS	Zajecar	2.07	49	ePg	Sb	00 32 15.8	+2.4
MAKA	Makarska	2.39	291	i Pn	Pb	00 31 52.4	-0.5
MAKA				Sn	Sb	00 32 24.0	+1.4
HVAR	Hvar	2.76	286	ePn	Pn	00 31 56.3	+2.0
HVAR				Sn	Sb	00 32 31.6	-1.7
ZIRJ	Zirje	3.46	291	ePn	Pn	00 32 05.3	+1.5
MORI	Morici	3.49	295	i Pn	Pn	00 32 07.6	+3.4
DUGI	Dugi Otok	3.97	294	ePn	Pn	00 32 12.6	+1.7
NVLJ	Novalja	4.32	301	ePn	Pn	00 32 17.8	+2.0

NEIC 15 00:36:43.0±0.0, **53°.92N**×**154°.72W, h10km, ML2.8**(AEIC), **After AEIC., South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIA	Chirikof Islan	1.99	346	ePn	Pn	00 37 12.3	-4.3
SII	Sitkinak Islan	2.66	6	ePn	Pn	00 37 22.1	-3.8
CHGN	Chignik	3.19	320	ePn	Pn	00 37 28.8	-4.4
OHAK	Old Harbor	3.41	13	ePn	Pn	00 37 32.6	-3.5
SDPT	Sand Point	3.64	296	ePn	Pn	00 37 36.5	-2.8
KDAK	Kodiak Island	4.06	16	ePn	Pn	00 37 41.4	-3.6
CNPM	China Poot	5.94	17	ePn	Pn	00 38 09.4	-1.5
EYAK	Cordova Ski Ar	8.23	33	ePn	Pn	00 38 38.5	-3.8
RAGM	Ragged Mountai	8.47	36	ePn	Pn	00 38 42.9	-2.7
BALM	Baldy	9.75	38	ePn	Pn	00 39 00.3	-2.9

MEX 15 00:38:34.0±0.6, **15°.98N**×**98°.81W, h16km**±8km, **MD3.7, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.59	9	eP	Pn	00 38 57.8	-3.8
TLIG				i S	Sn	00 39 16.4	-5.5
CAIG	El Cayaco	1.75	307	i P	Pn	00 39 00.9	-2.8
CAIG				i S	Sn	00 39 21.0	-4.7
MEIG	Mezcala	2.08	338	i P	Pn	00 39 04.8	-3.6
MEIG				i S	Sn	00 39 29.6	-4.4
PLIG	Platanillo	2.49	345	eP	Pn	00 39 11.6	-2.3
PLIG				eS	Sn	00 39 39.1	-4.9

IDC ***15*** *00:44:08.3±5.8, 37°.95N×22°.23E, h0km, mb3.2/3, mb1 3.2/4, mb1mx3.1/28, mbtmp3.2/4, ML2.6/1, Error ellipse: s-maj=214.2km s-min=30.4km az=175.0*
ISCJB ***15*** *00:44:09.9±0.2, 38°.23N±0°.01×22°.10E±0°.02, h9km±1km, mb3.6/2, Error ellipse: s-maj=2.5km s-min=2.1km az=31.7*
ATH ***15*** *00:44:09.3, 38°.22N×22°.10E, h15km±1km, ML2.8/18, Error ellipse: s-maj=1.4km s-min=0.6km az=316.0*
THE ***15*** *00:44:10.2, 38°.22N×22°.11E, h3km, ML2.7/10, Error ellipse: s-maj=0.8km s-min=0.3km az=257.0*
ISC 15 00:44:10.2±0.7, **38°.23N**±0°.01×**22°.10E**±0°.01, **h12km**±4km, **n97, σ0ˢ.89**/153, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIG3	Aigion	0.03	7	P	Pg	00 44 11.8	-0.5
AIG3				S	Sg	00 44 13.4	-0.4
AIG1	Aigion	0.04	116	P	Pg	00 44 11.9	-0.4
AIG1				S	Sg	00 44 12.9	-0.9
ALIK	Aliki, Aigiali	0.04	15	P	Pg	00 44 11.9	-0.4
LAKA	Lakka	0.10	279	P	Pg	00 44 12.4	-0.6
LAKA				S	Sg	00 44 13.9	-1.1
	8µm,0.4s						
LAKA	Lakka	0.10	279	P	Pg	00 44 12.4	-0.6
LAKA				S	Sg	00 44 13.9	-1.1
LAKA				AML	AML	00 44 14.2	
	comp=E,26859µm,0.5s						
LAKA				AML	AML	00 44 14.3	
	comp=N,19977µm,0.3s						
KALE	Kalithea	0.17	11	P	Pg	00 44 13.7	-0.4
KALE				S	Sg	00 44 17.1	+0.3
	comp=N,6µm,0.2s						
KALE	Kalithea	0.17	11	P	Pg	00 44 13.6	-0.4
KALE				S	Sg	00 44 16.2	-0.5
KALE				AML	AML	00 44 17.4	
	comp=N,12629µm,0.3s						
KALE				AML	AML	00 44 18.0	
	comp=E,9990µm,0.2s						
KLV	Kalavryta, Ach	0.19	168	P	Pg	00 44 13.9	-0.5
KLV				S	Sg	00 44 17.2	0.0
KLV	Kalavryta, Ach	0.19	168	P	Pg	00 44 13.8	-0.5
KLV				S	Sg	00 44 17.0	-0.1
KLV				AML	AML	00 44 18.5	
	comp=N,5415µm,0.3s						
KLV				AML	AML	00 44 19.6	
	comp=E,5113µm,0.5s						
SERG	Sergoula	0.19	350	P	Pg	00 44 13.9	-0.5
SERG				S	Sg	00 44 17.7	+0.4
	comp=E,5µm,0.2s						
SERG	Sergoula	0.19	350	P	Pg	00 44 13.8	-0.5
SERG				S	Sg	00 44 17.2	-0.1
SERG				AML	AML	00 44 18.0	
	comp=N,11950µm,0.2s						
SERG				AML	AML	00 44 18.1	
	comp=E,7478µm,0.3s						
UPR	University Cam	0.25	283	P	Pg	00 44 15.3	-0.2
UPR				S	Sg	00 44 19.5	+0.5
UPR	University Cam	0.25	283	P	Pg	00 44 15.3	-0.2
UPR				S	Sg	00 44 18.7	-0.3
GUR	Goura	0.35	146	P	Pg	00 44 16.6	-0.6
GUR				S	Sg	00 44 21.6	-0.3
GUR	Goura	0.35	146	P	Pg	00 44 16.5	-0.7
GUR				S	Sg	00 44 21.6	-0.3

GUR				AML	AML	00 44 22.7	
	comp=E,9760µm,0.5s						
GUR				AML	AML	00 44 22.7	
	comp=N,10908µm,0.5s						
DSF	Desfina	0.38	61	P	Pg	00 44 17.3	-0.6
DSF				S	Sg	00 44 22.3	-0.7
	comp=N,2µm,0.1s						
DSF	Desfina	0.38	61	P	Pg	00 44 17.2	-0.7
DSF				S	Sg	00 44 22.8	-0.2
DSF				AML	AML	00 44 24.1	
	comp=N,4450µm,0.1s						
DSF				AML	AML	00 44 24.2	
	comp=E,4976µm,0.1s						
ANX	Ano Chora	0.39	339	P	Pg	00 44 17.3	-0.8
ANX				S	Sb	00 44 24.2	-1.1
ANX	Ano Chora	0.39	339	P	Pg	00 44 17.3	-0.8
ANX				S	Sg	00 44 23.8	+0.4
ANX				AML	AML	00 44 26.7	
	comp=E,5961µm,0.2s						
ANX				AML	AML	00 44 26.7	
	comp=N,4453µm,0.4s						
DLFA	Delphi	0.40	51	P	Pg	00 44 17.4	-0.8
DLFA				S	Sg	00 44 22.3	-1.2
DLFA				AML	AML	00 44 23.5	
	comp=E,3587µm,0.3s						
DLFA				AML	AML	00 44 24.0	
	comp=N,1997µm,0.3s						
RLS	Riolos of Patr	0.53	252	P	Pg	00 44 19.9	-0.6
RLS				S	Sb	00 44 28.2	-0.8
RLS	Riolos of Patr	0.53	252	P	Pg	00 44 19.8	-0.6
RLS				S	Sg	00 44 26.6	-0.8
RLS				AML	AML	00 44 31.5	
	comp=N,919µm,0.2s						
RLS				AML	AML	00 44 31.7	
	comp=E,1175µm,0.4s						
PVO	Paravola	0.60	311	P	Pg	00 44 21.2	-0.6
PVO				S	Sb	00 44 30.8	-0.2
PVO	Paravola	0.60	311	P	Pg	00 44 21.2	-0.6
PVO				S	Sg	00 44 28.5	-1.2
PVO				AML	AML	00 44 34.0	
	comp=N,1822µm,0.3s						
PVO				AML	AML	00 44 34.7	
	comp=E,2147µm,0.2s						
ACOR	Acrocorinthos	0.69	119	P	Pg	00 44 23.0	-0.7
EVR	Evrytania	0.73	342	P	Pg	00 44 23.3	-1.0
EVR				S	Sb	00 44 34.6	-0.3
	comp=E,440nm,0.3s						
EVR	Evrytania	0.73	342	P	Pg	00 44 23.2	-1.1
EVR				S	Sg	00 44 32.8	-1.1
EVR				AML	AML	00 44 37.1	
	comp=E,850µm,0.3s						
EVR				AML	AML	00 44 39.9	
	comp=N,1461µm,0.5s						
AMT	Artemida-Makis	0.76	204	P	Pg	00 44 24.2	-0.7
AMT				S	Sb	00 44 35.9	+0.2
	comp=N,732nm,0.4s						
AMT	Artemida-Makis	0.76	204	P	Pg	00 44 24.1	-0.7
AMT				S	Sg	00 44 33.8	-1.0
AMT				AML	AML	00 44 39.6	
	comp=E,1804µm,0.3s						
AMT				AML	AML	00 44 42.7	
	comp=N,1854µm,0.3s						
VTN	Vitineika	0.79	247	P	Pb	00 44 25.6	-0.2
AGG	Agios Georgios	0.82	13	P	Pg	00 44 24.7	-1.3
AGG				S	Sb	00 44 36.8	-0.6
	comp=N,262nm,0.3s						
AGG	Agios Georgios	0.82	13	P	Pg	00 44 24.5	-1.4
LKR	Lokris	0.82	59	P	Pg	00 44 24.9	-1.2
LKR				S	Sb	00 44 38.2	+0.6
LKR	Lokris	0.82	59	P	Pg	00 44 24.7	-1.4
LKR				S	Sg	00 44 35.9	-1.0
LKR				AML	AML	00 44 39.6	
	comp=N,878µm,0.2s						
LKR				AML	AML	00 44 40.9	
	comp=E,979µm,0.2s						
ATAL	Atalanti	0.86	57	P	Pg	00 44 25.5	-1.3
ATAL				S	Sb	00 44 39.5	+0.9
ATAL	Atalanti	0.86	57	P	Pg	00 44 25.2	-1.6
ATAL				S	Sg	00 44 37.5	-0.6
ATAL				AML	AML	00 44 42.4	
	comp=N,516µm,0.3s						
ATAL				AML	AML	00 44 44.6	
	comp=E,478µm,0.7s						
VLX	Vlachokerasia	0.88	165	P	Pg	00 44 26.1	-1.1
VLX				S	Sb	00 44 40.0	+0.7
VLX	Vlachokerasia	0.88	165	P	Pg	00 44 26.0	-1.2
VLX				S	Sb	00 44 39.2	-0.1
VLX				AML	AML	00 44 41.4	
	comp=N,1237µm,0.4s						
VLX				AML	AML	00 44 41.7	
	comp=E,2233µm,0.3s						
EPID	Epidavros	1.01	127	P	Pg	00 44 28.5	-1.2
EPID				S	Sb	00 44 42.7	-0.3
KFL	Anninata	1.04	264	P	Pb	00 44 30.3	+0.1
KFL				S	Sb	00 44 44.6	+0.8
KFL	Anninata	1.04	264	P	Pb	00 44 30.0	-0.2
KFL				S	Sb	00 44 43.9	+0.1
ITM	Ithomi	1.05	188	P	Pg	00 44 29.0	-1.5
ITM	Ithomi	1.05	188	P	Pg	00 44 28.9	-1.6
MGNA	Meganis	1.11	293	P	Pg	00 44 30.5	-1.2
MGNA				S	Sb	00 44 46.0	+0.1
DID	Didima	1.15	128	P	Pb	00 44 31.4	-0.7
DID				S	Sb	00 44 47.4	+0.4
	comp=E,240nm,0.3s						
DID	Didima	1.15	128	P	Pg	00 44 31.3	-1.1
DID				S	Sb	00 44 47.3	+0.4
DID				AML	AML	00 44 48.2	
	comp=N,559µm,0.7s						
DID				AML	AML	00 44 49.2	
	comp=E,526µm,0.4s						
KRND	KRANIDI	1.18	135	P	Pg	00 44 31.9	-1.0
KRND				S	Sn	00 44 49.5	+0.8
	comp=E,362nm,0.4s						
KRND	KRANIDI	1.18	135	P	Pg	00 44 31.7	-1.2
KRND				S	Sb	00 44 48.1	+0.2
KRND				AML	AML	00 44 53.1	
	comp=E,914µm,0.5s						
KRND				AML	AML	00 44 54.5	
	comp=N,1116µm,0.5s						
VLS	Valsamata	1.19	268	P	Pg	00 44 31.9	-1.2
VLS				S	Sn	00 44 50.6	+1.7
VLS	Valsamata	1.19	268	P	Pg	00 44 31.4	-1.7
VLS				S	Sg	00 44 47.8	-0.8
EVGI	Lefkada island	1.20	290	P	Pg	00 44 32.2	-1.1
EVGI	Lefkada island	1.20	290	P	Pg	00 44 31.8	-1.4
FSK	Fiskardo	1.23	281	P	Pg	00 44 32.6	-1.3
FSK				S	Sn	00 44 51.3	+1.4
FSK	Fiskardo	1.23	281	P	Pg	00 44 32.1	-1.8
FSK				S	Sg	00 44 49.0	-0.8
LKD2	Lefkada island	1.26	297	P	Pg	00 44 32.8	-1.7
LKD2				S	Sn	00 44 53.9	+3.2
TSLK	Tsoukalades, L	1.28	298	P	Pg	00 44 33.9	-0.9
TSLK				S	Sn	00 44 52.6	+1.5
TSLK	Tsoukalades, L	1.28	298	P	Pb	00 44 34.3	0.0
ATH	Athens Observa	1.30	101	P	Pn	00 44 34.1	-0.1
ATH				S	Sn	00 44 52.9	+1.3
THL	Klokotos Trika	1.34	357	P	Pb	00 44 35.3	0.0
THL				S	Sn	00 44 54.0	+1.5
THL	Klokotos Trika	1.34	357	P	Pb	00 44 35.2	0.0
ATHU	Athens Univers	1.35	100	P	Pn	00 44 34.7	-0.3
ATHU				S	Sn	00 44 53.9	+1.0
ATHU	Athens Univers	1.35	100	P	Pb	00 44 35.7	+0.1
PYL	PYLOS	1.36	192	P	Pn	00 44 34.5	-0.5
PYL	PYLOS	1.36	192	P	Pn	00 44 34.3	-0.7
VLY	Voula,Athens	1.39	105	P	Pn	00 44 35.3	-0.2
VLY				S	Sn	00 44 55.5	+1.7
VLY	Voula,Athens	1.39	105	P	Pn	00 44 35.2	-0.2
VLY				S	Sn	00 44 55.2	+1.5
VLY				AML	AML	00 44 58.1	
	comp=N,180µm,0.3s						
VLY				AML	AML	00 45 01.8	
	comp=E,225µm,0.3s						
NEO	Neokhori	1.39	39	P	Pn	00 44 35.2	-0.3
PTL	Penteli	1.40	97	P	Pn	00 44 35.5	-0.2
PTL	Penteli	1.40	97	P	Pn	00 44 35.4	-0.3
XOR	Xorichti	1.42	37	P	Pn	00 44 36.0	0.0
XOR	Xorichti	1.42	37	P	Pn	00 44 35.9	0.0
DION	Dionisos Attik	1.45	95	P	Pn	00 44 36.1	-0.3
DION				S	Sn	00 44 57.5	+2.1
DION	Dionisos Attik	1.45	95	P	Pn	00 44 36.1	-0.3
EREA	Eretria	1.45	82	P	Pn	00 44 36.5	+0.1
EREA				S	Sn	00 44 56.3	+0.9
EREA	Eretria	1.45	82	P	Pn	00 44 36.4	+0.1
EREA				S	Sn	00 44 55.9	+0.5
VLI	Veliai	1.65	156	P	Pn	00 44 39.3	+0.3
VLI				S	Sb	00 45 01.2	0.0
VLI	Veliai	1.65	156	P	Pn	00 44 39.2	+0.3
JAN	Janina	1.73	326	P	Pb	00 44 41.2	-0.8
KPRO	Kipourio	1.82	342	P	Pn	00 44 42.3	+0.8
LIT	Litokhoron	1.90	9	P	Pn	00 44 42.2	-0.3
IGT	Igoumenitsa	1.90	314	P	Pn	00 44 43.5	+1.0
KTHR	Kythira	2.09	160	P	Pn	00 44 46.0	+0.9
KZN	Kozani	2.09	353	P	Pn	00 44 45.4	+0.2
KTHA	Kythira Island	2.11	158	P	Pn	00 44 46.0	+0.6
SRN	Sarande	2.32	316	P	Pn	00 44 48.2	-0.1
NEST	Nestorio	2.33	340	P	Pn	00 44 48.7	+0.2
PLG	Polygyros	2.39	26	P	Pn	00 44 48.9	-0.3
HORT	Hortiatis	2.49	18	P	Pn	00 44 50.2	-0.5
ANKY	Antikythira Is	2.54	157	P	Pn	00 44 52.1	+0.8
OUR	Ouranopolis	2.56	34	P	Pn	00 44 50.9	-0.7
SOH	Sokhos	2.77	20	P	Pn	00 44 54.7	+0.2
SRS	Serrai	3.11	21	P	Pn	00 44 59.2	+0.1
NVR	Nevrokopi	3.40	23	P	Pn	00 45 03.8	+0.6
BRTR	Keskin Array B	9.11	77	Pn	Pn	00 46 23.9	+2.2
	comp=E,0.1nm,0.3s,baz=261,slow=12,SNR=4.8						
ESDC	Sonseca Array	20.30	282	P	Pn	00 48 47.6	-0.4
	comp=E,0.1nm,0.3s,baz=77,slow=11,SNR=2.3						
MKAR	Makanchi Array	44.22	59	P	P	00 52 18.9	-0.3
	comp=E,0.3nm,0.4s,baz=280,slow=8.2,SNR=5.4						
ZALV	Zalesovo Beam	44.73	48	P	P	00 52 24.1	+0.9
	comp=E,0.6nm,0.4s,baz=276,slow=9.9,SNR=2.7						

MAN 15 00:50:46.1,7°.52N×124°.66E,h47km,mb3.8,ML2.5,MS2.0, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.51	234	⇓iP	Pn	00 50 58.4	+1.1
CTBH				iS	Sn	00 51 07.1	+1.9
BUKP	Musuan	0.54	48	eP	Pn	00 50 59.3	+1.6
BUKP				eS	Sn	00 51 08.9	+2.9
SKMP	Bagumbayan, Su	1.00	187	eP	Pn	00 51 05.2	+1.4
DDMP	Don Marcelino,	1.75	143	eP	Pn	00 51 14.3	+0.3
DDMP				eS	Sn	00 51 36.2	+1.0

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*IDC **15** 01:01:13.2±2.0,52°.63N×172°.37E,h0km,mb3.6/7, mb1 3.8/8,mb1mx3.5/40,mbtmp3.6/8,ML3.2/1,MS2.4/2, Ms1 2.4/2,ms1mx2.2/39,Error ellipse: s-maj=73.5km s-min=18.2km az=173.0*

ISC 15 01:01:17.1±1.9,**52°.8N**±0°.5×**172°.21E**±0°.09,**h22km,n15,** σ1^{s}**27**/9,**mb3.6**/7,**Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	8.77	278	Pn	Pn	01 03 23.4	+0.9
	1.3nm,0.3s,baz=88,slow=19,SNR=8.4						
PETK				Sn	Sn	01 04 58.0	-2.5
	0.3nm,0.3s,baz=98,slow=19,SNR=2.9						
PETK				LR	LR	01 06 15.4	
	comp=Z,32nm,21.9s,baz=88,slow=34						
MA2	Magadan	13.68	308	LR	LR	01 08 39.9	
	comp=Z,16nm,19.8s,baz=106,slow=32						
ILAR	Eielson Array	23.84	44	P	P	01 06 28.4	+0.2
	1.5nm,0.7s,baz=245,slow=8.7,SNR=17						
KLR	Kul'dur	25.46	278	P	P	01 06 43.5	+0.3
	1.3nm,0.8s,baz=37,slow=11,SNR=3.3						
H11N2	WAKE ISLAND Hy	33.29	189	T	T	01 43 11.9	
	baz=6.4,slow=76,SNR=112						
H11N3	WAKE ISLAND Hy	33.30	189	T	T	01 42 56.9	
	baz=6.4,slow=76,SNR=120						
H11N1	WAKE ISLAND Hy	33.31	189	T	T	01 43 13.7	
	baz=6.4,slow=76,SNR=112						
H11S1	WAKE ISLAND Hy	34.52	189	T	T	01 44 27.7	
	baz=6.1,slow=76,SNR=193						
H11S3	WAKE ISLAND Hy	34.53	189	T	T	01 44 45.6	
	baz=6.1,slow=76,SNR=137						
H11S2	WAKE ISLAND Hy	34.53	189	T	T	01 44 45.9	
	baz=6.1,slow=76,SNR=138						
YKA	Yellowknife Ar	38.23	46	P	P	01 08 34.8	-0.1
	0.3nm,0.4s,baz=288,slow=7.7,SNR=2.7						
SONM	Songino Array	40.99	290	P	P	01 08 59.2	+1.0
	0.6nm,0.6s,baz=60,slow=7.5,SNR=4.3						
PDAR	Pinedale Array	51.03	68	P	P	01 10 16.7	-0.8
	0.2nm,0.5s,baz=335,slow=4.0,SNR=2.5						
TXAR	Lajitas Array	63.79	75	P	P	01 11 46.9	-0.6
	0.4nm,0.7s,baz=292,slow=4.0,SNR=5.4						
BRTR	Keskin Array B	81.08	329	P	P	01 13 31.0	+0.5
	0.5nm,0.7s,baz=59,slow=3.2,SNR=4.6						

MAN 15 01:11:30.8,16°.47N×120°.88E,h4km,mb4.7,ML3.6,MS3.4, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.38	211	eP	Pg	01 11 38.7	+0.7
SMPP				eS	Sg	01 11 44.6	+1.6
BOLP	Bolinao	0.94	264	eP	Pb	01 11 49.6	+0.1
BOLP				eS	Sn	01 12 03.5	-1.0
BALP	Baler	0.99	137	eP	Pg	01 11 48.5	-1.2
BALP				eS	Sg	01 12 01.9	-0.7
CAUP	Cauayan	1.02	62	eP	Pg	01 11 50.1	-0.1
CAUP				eS	Sn	01 12 06.5	0.0
SCZP	Santa Cruz	1.16	233	eP	Pg	01 11 53.1	0.0
SCZP				eS	Sn	01 12 16.9	+6.7
ABRA	Dolores	1.18	352	eP	Pg	01 11 52.6	-0.8
ABRA				eS	Sn	01 12 10.8	+0.2
APYP	Conner	1.42	14	eP	Pn	01 11 57.0	-0.4
APYP				eS	Sn	01 12 18.8	+2.2
CVP	Callao Caves	1.52	36	⇓iP	Pn	01 11 57.6	-1.1
CVP				iS	Sg	01 12 24.7	+5.1
PALP	Palanan	1.59	68	eP	Pn	01 11 58.4	-1.4
PALP				eS	Sn	01 12 19.4	-1.3
POLP	Polilio Island	2.01	149	eP	Pn	01 12 06.5	+1.0
POLP				eS	Sg	01 12 34.7	-0.8

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*ISCJB **15** 01:22:26.4±0.8,54°.7N±0°.2×35°.2W±0°.2,h10km,mb3.6/8, MS3.4/11,Error ellipse: s-maj=31.2km s-min=14.0km az=2.0*

*IDC **15** 01:22:26.6±0.9,54°.79N×35°.15W,h0km,mb3.6/8, mb1 3.7/9,mb1mx3.5/48,mbtmp3.6/9,ML3.7/1,MS3.4/13, Ms1 3.4/13,ms1mx3.2/29,Error ellipse: s-maj=38.8km s-min=17.8km az=4.0*

ISC 15 01:22:28.0±0.9,**54°.8N**±0°.3×**35°.2W**±0°.1,**h10km,n22,** σ1^{s}**06**/10,**mb3.7**/8,**MS3.5**/11,**Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	14.33	335	LR	LR	01 30 35.9	
	comp=Z,79nm,18.2s,baz=130,slow=34						
SCHQ	Schefferville	18.19	283	LR	LR	01 32 39.5	
	comp=Z,83nm,19.1s,baz=76,slow=34						
EKA	Eskdalemuir Ar	18.26	75	P	Pn	01 26 41.1	-0.2
	baz=268,slow=9.9,SNR=3.2						
NOA	NORSAR Array B	24.97	57	LR	LR	01 36 00.7	
	comp=Z,48nm,21.3s,baz=275,slow=33						
ESDC	Sonseca Array	25.73	113	P	P	01 27 58.8	+0.4
	0.5nm,0.7s,baz=314,slow=10,SNR=5.5						
DAVOX	Davos/Dischmat	29.14	87	P	P	01 28 29.4	+0.3
	0.6nm,0.4s,baz=294,slow=18,SNR=2.7						
GERES	GERESS Array B	30.27	81	LR	LR	01 40 10.2	
	comp=Z,53nm,18.8s,baz=290,slow=35						
FINES	FINESS Array B	31.93	53	LR	LR	01 40 06.4	
	comp=Z,40nm,19.8s,baz=263,slow=33						
ULM	Lac du Bonnet	36.22	289	LR	LR	01 43 01.7	
	comp=Z,106nm,18.2s,baz=356,slow=34						
AKASG	Malin Array Be	37.98	69	P	P	01 29 47.1	+1.5
	0.3nm,0.3s,baz=303,slow=8.2,SNR=3.2						
INK	Inuvik	43.52	328	LR	LR	01 48 02.6	
	comp=Z,53nm,19.2s,baz=356,slow=35						
SJG	San Juan	43.59	225	LR	LR	01 47 25.8	
	comp=Z,9.3nm,18.9s,baz=58,slow=34						
BRTR	Keskin Array B	47.12	79	P	P	01 31 00.5	+0.3
	1.1nm,0.7s,baz=308,slow=6.6,SNR=4.2						
PDAR	Pinedale Array	48.23	288	P	P	01 31 08.7	-0.3
	0.3nm,0.5s,baz=60,slow=7.5,SNR=2.9						
ILAR	Eielson Array	49.89	329	LR	LR	01 51 18.6	
	comp=Z,45nm,18.0s,baz=304,slow=35						
TORD	Torodi Ar. Bea	50.51	131	P	P	01 31 25.3	-0.9
	1.2nm,1.0s,baz=343,slow=9.7,SNR=4.7						
DBIC	Dimbokro	53.76	142	LR	LR	01 52 19.1	
	comp=Z,52nm,18.6s,baz=343,slow=33						
TXAR	Lajitas Array	54.37	272	P	P	01 31 56.0	+1.1
	0.4nm,0.9s,baz=68,slow=7.2,SNR=2.4						
TXAR				LR	LR	01 54 27.6	
	comp=Z,49nm,18.5s,baz=0.0,slow=35						
NVAR	Mina Array Bea	56.03	290	LR	LR	01 55 10.8	
	comp=Z,76nm,18.7s,baz=4.5,slow=35						
MKAR	Makanchi Array	65.89	42	P	P	01 33 12.4	-1.2
	0.2nm,0.4s,baz=328,slow=5.1,SNR=2.4						
KSRS	Korea Array	87.01	13	LR	LR	02 15 52.7	
	comp=Z,10nm,18.3s,baz=185,slow=37						
ASAR	Alice Springs	147.89	19	PKPbc	PKPbc	01 42 11.8	-1.3
	1.9nm,0.6s,baz=348,slow=2.3,SNR=4.6						

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*BJI **15** 01:28:47.9±0.0,7°.04N×125°.27E,h29km,mb5.0/68, mB4.9/41,Ms4.4/52,Ms7 4.1/46*

*MAN **15** 01:28:50.1,7°.34N×124°.81E,h3km,mb5.8,ML4.8,MS5.2*

*GCMT **15** 01:28:50.9±0.3,7°.31N±0°.02×124°.84E±0°.02,h19km±1km, MW4.9/87,Moment Tensor Solution. s16,c17; s87,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.94±.16; $M_{\theta\theta}$2.01±.10; $M_{\phi\phi}$-2.95±.15; $M_{r\theta}$-0.78±.27; $M_{\theta\phi}$-0.72±.11; $M_{\phi r}$-1.45±.32; Best double couple: $M_0$3.00400×10^{16} NP1:ϕ_s228.00000°,δ84.00000°,λ145.00000°. NP2: ϕ_s322.00000°,δ56.00000°,λ7.00000°. Principal axes: T 2.4210, Plg28.0000°, Azm179.0000°; N 1.1690, Plg55.0000°, Azm39.0000°; P -3.5860, Plg19.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **15** 01:28:51.8±0.4,7°.34N±0°.02×124°.98E±0°.02,h32km±3km, mb4.9/116,MS4.1/45 Error ellipse: s-maj=3.9km s-min=2.5km az=164.7*

*DJA **15** 01:28:52.5±0.1,7°N±2°×12°5E±°,h10km,M5.1/85, mB5.6/26,mb5.1/85,MLv5.3/6,Mw(mB)5.1/26*

*MOS **15** 01:28:52.6±1.1,7°.34N×124°.92E,h41km,mb5.2/45, MS4.1/4,Error ellipse: s-maj=11.7km s-min=5.9km az=114.0*

*IDC **15** 01:28:53.5±1.3,7°.29N×124°.93E,h41km±13km,mb4.3/24, mb1 4.4/28,mb1mx4.4/40,mbtmp4.5/28,ML4.0/4,MS3.8/23, Ms1 3.8/23,ms1mx3.7/36,Error ellipse: s-maj=16.6km s-min=10.3km az=74.0*

*NEIC **15** 01:28:54.9±2.4,7°.40N×125°.06E,h52km±5km,mb5.0/117, Error ellipse: s-maj=10.9km s-min=7.8km az=215.0*

NEIC Felt [V PIVS] at Carmen; [IV PIVS] at Banisilan, Kabacan and Matalam; [III PIVS] at Cagayan de Oro, Davao and Magugpo. Felt as far as Koronadal and Malaybalay.

ISC 15 01:28:52.8±0.4,**7°.31N**±0°.02×**124°.87E**±0°.02,**h28km**±2km, **h28km:pP-P,n345,**σ2^{s}**03**/381,**mb5.0**/118,**MS4.1**/47, **40C-6D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.37	144	⇓iP	Pb	01 28 58.6	-2.6
KCP				iS	Sb	01 29 05.1	-1.8
BUKP	Musuan	0.60	19	eP	Pb	01 29 02.3	-2.5
BUKP				eS	Sb	01 29 11.7	-1.3
CTBH	Cotabato--PC H	0.62	262	⇓eP	Pb	01 29 01.8	-3.5
DMPH	Davao City--Mi	0.67	110	⇑eP	Pb	01 29 04.3	-1.8
DMPH				eS	Sn	01 29 22.2	+6.0
DAV	Davao City (W)	0.74	109	P	Pb	01 29 06.1	-1.1
	3µm,0.3s,baz=295,slow=2.5,SNR=568						
DAV				S	Sn	01 29 17.8	-0.1
	3µm,0.3s,baz=97,slow=22,SNR=8.5						
DAV	Davao City (W)	0.74	109	P	Pb	01 29 06.2	-1.0
	SNR=483						
SKMP	Bagumbayan, Su	0.85	202	eP	Pn	01 29 05.1	-3.8
CGP	Cagayan de Oro	1.15	351	⇑iP	Pn	01 29 11.4	-1.7
CGP				iS	Sn	01 29 26.2	-1.7
GSPH	General Santos	1.22	176	⇑iP	Pb	01 29 16.6	+1.2
MATI	Mati	1.42	105	eP	Pn	01 29 16.6	-0.3
DDMP	Don Marcelino,	1.46	145	eP	Pn	01 29 16.7	-0.7
DDMP				eS	Sb	01 29 40.5	+2.9
PAGZ	Pagadian	1.57	290	eP	Pn	01 29 16.9	-2.0
PAGZ				eS	Sn	01 29 39.5	+1.3
BIPH	Bislig	1.71	59	⇑eP	Pb	01 29 25.7	+1.9
BIPH				iS	Sb	01 29 49.0	+4.1
BUTP	Butuan	1.81	24	eP	Pn	01 29 23.3	+1.2
BUTP				eS	Sb	01 29 52.5	+4.9
DCPH	Dipolog City	1.96	310	⇑eP	Pb	01 29 27.5	-0.4
DCPH				eS	Sb	01 29 53.4	+1.4
IPIL	Ipil	2.33	282	eP	Pn	01 29 29.6	+0.2
IPIL				eS	Sn	01 29 59.0	+1.9
SNPH	Sibulan	2.59	321	⇑iP	Pn	01 29 34.7	+1.8
SNPH				iS	Sb	01 30 13.6	+3.6
ZCP	Zamboanga City	2.80	262	⇑iP	Pn	01 29 35.5	-0.3
ZCP				iS	Sn	01 30 09.3	+0.7
MSLP	Maasin	2.81	360	eP	Pn	01 29 35.1	-0.8
LLP	Lapu-Lapu	3.12	343	⇓eP	Pn	01 29 40.6	+0.4
LLP				eS	Sn	01 30 17.9	+1.3
SGSI	Sangihe	3.66	170	P	Pn	01 29 50.0	+2.3
OCLP	Ormoc	3.73	356	eP	Pn	01 29 50.5	+1.9
PLP	Palo	3.83	2	⇑eP	Pn	01 29 50.1	+0.1
PLP				eS	Sb	01 30 40.1	-5.7
GUIM	Jordan	3.99	326	eP	Pn	01 29 52.6	+0.4
JAP	San Jose, Anti	4.47	320	⇓eP	Pn	01 29 59.2	+0.4
JAP				eS	Sb	01 31 05.5	+1.3
RCP	Roxas	4.71	334	⇓iP	Pn	01 30 03.0	+0.9
CNP	Catarman	5.17	358	eP	Pn	01 30 12.0	+3.5
OTRP	Odiongan	5.75	331	eP	Pn	01 30 17.3	+0.9
TNTI	Ternate	6.96	159	ePn	Pn	01 30 35.2	+2.2
TNTI	Ternate	6.96	159	P	Pn	01 30 34.6	+1.6
TGY	Tagaytay City	7.78	331	P	Pn	01 30 44.4	+0.1
	50nm,0.3s,baz=180,slow=20,SNR=2.9						
LBMI	Labuha	8.32	162	P	Pn	01 30 53.5	+1.8
LUWI	Luwuk	8.56	194	ePn	Pn	01 30 57.4	+2.4
LUWI				eSn	Sn	01 32 32.5	+1.9
LUWI	Luwuk	8.56	194	P	Pn	01 30 56.8	+1.8
KKM	Kota Kinabalu	8.69	262	ePn	Pn	01 31 02.5	+5.6
APSI	Ampana	8.78	202	P	Pn	01 30 59.8	+1.8
SANI	Sanana	9.36	173	P	Pn	01 31 06.0	-0.1
SWI	Sorong	10.32	142	P	Pn	01 31 21.4	+2.2
SIJI	Sorong	10.33	142	P	Pn	01 31 18.3	-1.0
	1.9nm,0.3s,baz=297,slow=22,SNR=2.2						
SIJI				S	Sn	01 33 18.4	+4.1
	0.8nm,0.3s,baz=224,slow=22,SNR=1.3						
SIJI				LR	LR	01 35 43.7	
	comp=Z,541nm,19.6s,baz=302,slow=40						
SGKI	Sangatta, Kali	10.64	223	P	Pn	01 31 27.7	+4.2
NLAI	Namlea	10.71	168	P	Pn	01 31 26.4	+1.9
SMKI	Samarinda	10.85	225	P	Pn	01 31 28.7	+2.3
MSAI	Masohi	11.33	159	P	Pn	01 31 35.8	+2.7
AAI	Ambon	11.42	163	P	Pn	01 31 36.5	+2.3
TTSI	Tana Toraja	11.45	206	P	Pn	01 31 38.0	+3.3
SPSI	Sidrap Palu	12.30	205	P	P	01 32 04.3	+6.1
	21nm,1.0s						
SPSI				pP	Pn	01 31 49.9	+3.6
	21nm,1.0s						
FAKI	Fak Fak	12.55	144	pP	Pn	01 31 51.1	+1.4
BNSI	Bone	12.57	202	P	Pn	01 31 51.8	+1.9
BNDI	Bandanaira	12.78	157	P	Pn	01 31 53.2	+0.3
MTKI	Muara Teweh, K	12.89	231	pP	Pn	01 31 57.3	+2.9
KAPI	Kappang	13.26	203	LR	LR	01 37 13.2	
	comp=Z,780nm,20.6s,baz=302,slow=38						
SBUM	Sibu	13.49	250	ePn	Pn	01 32 07.1	+4.5
SRPI	Serui, Papua	14.56	128	pP	Pn	01 32 18.8	+1.7
KSM	Kuching	15.63	249	eP	P	01 32 43.5	+8.2
	29nm,1.0s						
TWG	Pinlang	15.85	347	ePn	Pn	01 32 33.6	-0.6
	155nm,0.7s						
MMRI	Maumere	16.06	189	pP	P	01 32 40.2	+0.2
EDFI	Ende, Flores	16.27	191	P	P	01 32 41.3	-1.1
YULB	Yu-li	16.36	348	ePn	Pn	01 32 40.1	-0.5
	33nm,1.0s						
TPUB	Ta-pu	16.41	346	eP	Pn	01 32 42.4	+1.1
	90nm,1.1s						
PBKI	Pangkalan Bun	16.51	233	pP	Pn	01 32 42.9	+0.3
DLV	T Lat	16.79	287	ePn	Pn	01 32 45.9	-0.5
	62nm,1.3s						
SSLB	Suanglung	16.81	348	eP	P	01 32 47.5	-0.9
	44nm,1.0s						
SOEI	Soe	16.96	182	ePn	P	01 32 49.5	-0.7
	114nm,1.0s						
SOEI	Soe	16.96	182	P	P	01 32 49.7	-0.5
NACB	Ninganchiao	17.06	350	eP	Pn	01 32 50.2	+0.7
	31nm,0.9s						
BATI	Baumata	17.44	184	P	Pn	01 32 54.2	-0.1
	4.9nm,0.3s,baz=293,slow=23,SNR=1.7						
BATI	Baumata	17.44	184	eP	Pn	01 32 54.2	-0.1
BATI				eP	Pn	01 32 54.2	-0.1
BATI	Baumata	17.44	184	P	pP	01 33 00.0	-2.9
BATI				pP	P	01 32 58.7	+3.3

PLAI	Plampang	17.52	204	pP	P	01 32 58.7	+2.5
YHNB	Yeheng	17.58	349	eP	Pn	01 32 55.7	-0.4
	44nm,0.9s						
WBSI	Waikabubak, Su	17.70	198	pP	P	01 33 01.1	+2.8
	53nm,0.9s						
KMMI	Kalianget	17.94	218	P	sP	01 33 08.5	-3.4
	50nm,1.0s						
KMMI				pP	pP	01 33 05.4	-2.9
	50nm,1.0s						
SRBI	Singaraja	18.07	212	pP	P	01 33 04.4	+2.1
	49nm,1.4s						
KNMB	Chin-men Tao	18.15	341	eP	Pn	01 33 01.4	-1.5
	84nm,1.1s						
GENI	Genyem	18.16	122	P	sP	01 33 12.2	-2.2
GENI				pP	pP	01 33 08.1	-2.8
QZH	Quanzhou	18.53	342	⇑iP	Pn	01 33 09.3	+1.7
QZH				S	S	01 36 36.6	-0.7
QZH				pmax	pmax		
	comp=Z,39nm,0.8s						
QZH				LR	LR		
	comp=E,910nm,26.1s						
QZH				LR	LR		
	comp=Z,460nm,27.9s						
DNP	Denpasar	18.57	211	P	Pn	01 33 10.5	+2.3
JAY	Jayapura	18.57	121	P	P	01 33 06.4	-1.5
	0.6nm,0.3s,baz=10,slow=4.2,SNR=2.0						
JAY				LR	LR	01 39 00.9	
	comp=Z,341nm,21.5s,baz=300,slow=33						
QIZ	Qiongzhong	18.68	310	P	Pn	01 33 10.0	+0.5
QIZ				pP	pP	01 33 16.6	0.0
QIZ				S	S	01 36 41.9	+1.5
QIZ				pmax	pmax		
	comp=Z,310nm,2.8s						
QIZ				LR	LR		
	comp=N,690nm,17.2s						
QIZ				LR	LR		
	comp=E,430nm,15.7s						
QIZ				LR	LR		
	comp=Z,680nm,18.6s						
JAGI	Jajag, Banyuwa	18.97	214	pP	Pn	01 33 16.2	+3.2
JOW	Kunigami	19.68	9	P	P	01 33 20.3	+0.4
	0.2nm,0.3s,baz=172,slow=14,SNR=8.8						
JOW	Kunigami	19.68	9	eP	P	01 33 19.7	-0.2
	49nm,1.0s						
NGJI	Ngawi	19.78	223	P	pP	01 33 29.2	+0.5
	118nm,1.0s						
NGJI				pP	Pn	01 33 25.3	+2.6
	118nm,1.0s						
TPI	Tanjungpandan	19.88	240	P	Pn	01 33 23.7	-0.2
	41nm,1.1s,2µm						
PWJI	Pagerwojo	20.04	221	P	sP	01 33 33.1	-1.9
	46nm,1.1s						
PWJI				pP	pP	01 33 30.0	-1.5
	46nm,1.1s						
SMRI	Semarang	20.26	226	eP	P	01 33 27.1	+0.8
	86nm,1.1s						
SMRI	Semarang	20.26	226	pP	Pn	01 33 29.7	+1.3
WOJI	Wonogiri, Jawa	20.49	223	P	Pn	01 33 35.3	+4.3
GUMO	Guam	20.62	71	LR	LR	01 42 04.0	
	comp=Z,58nm,18.2s,baz=250,slow=38						
YOGI	Yogyakarta	20.90	224	pP	Pn	01 33 38.4	+2.5
	213nm,1.2s						
PPBI	Pangkal Pinang	20.93	244	P	sP	01 33 43.2	-1.5
PPBI				pP	Pn	01 33 38.7	+2.5
MTN	Manton Dam	20.97	163	P	Pn	01 33 35.4	-1.2
	baz=21,SNR=8.0						
KDU	Kakadu	21.25	159	P	P	01 33 35.3	-1.7
	baz=21,SNR=24						
PANO	Nakornpanom	22.06	298	P	P	01 33 47.3	+1.6
	0.7nm,0.9s,113nm						
SARN	Sarigan	22.46	64	eP	P	01 33 45.0	-5.1
	84nm,1.6s						
CISI	Cisompet, Garu	22.52	229	eP	P	01 33 53.1	+2.4
	155nm,1.0s						
CISI	Cisompet, Garu	22.52	229	P	P	01 33 52.1	+1.3
SKNT	Sakolnakorn	22.54	297	P	P	01 33 50.5	-0.4
	44nm,0.8s						
TNG	Tangerang	22.58	234	pP	pP	01 33 55.9	-3.0
JMBI	JAMBI	22.97	248	P	sP	01 34 03.1	-3.5
JMBI				pP	pP	01 33 59.6	-3.4
KNRA	Kununurra	23.16	170	P	P	01 33 57.1	-0.2
	baz=23,SNR=11						
BLSI	Bandar Lampung	23.28	238	P	P	01 34 01.5	+2.9
KLI	Kotabumi	23.35	239	P	pP	01 34 05.0	-2.0
KLI				pP	P	01 34 00.6	+1.4
CGJI	Cibinong	23.61	235	P	P	01 34 03.6	+1.9
NONG	Nongkai	23.70	299	P	P	01 34 03.8	+1.2
	0.2nm,0.8s						
MDSI	Maura Dua	23.74	241	P	P	01 34 04.6	+1.6
CHAI	Chaiyaphum	23.96	293	P	P	01 34 05.6	+0.5
	45µm,0.9s,517µm						
KASI	Kota Agung	23.99	238	P	pP	01 34 15.3	+1.8
	71nm,1.1s,2µm						
KASI				pP	P	01 34 09.3	+3.9
	71nm,1.1s,2µm						
LHSI	Lahat	24.00	243	pP	P	01 34 09.3	+3.8
SKLT	Songkhla	24.06	271	P	P	01 34 12.7	+6.7
	32nm,1.7s						
LWLI	Liwa	24.11	240	P	P	01 34 08.3	+1.7
	126nm,0.7s,9µm						
KULM	Kulim	24.16	267	eP	P	01 34 07.6	+0.7
	53nm,1.1s						
MANU	Manus Island	24.30	112	eP	P	01 34 06.5	-1.7
	177nm,1.8s						
SLVN	Son La	24.59	307	eP	P	01 34 10.6	-0.3
	70nm,1.9s						
MNAI	Manna	24.75	243	pP	P	01 34 15.0	+2.6
BKNI	Bangkinang	24.75	255	eP	P	01 34 13.4	+1.0
	167nm,1.2s						
BKNI	Bangkinang	24.75	255	P	pP	01 34 19.3	-1.3
BKNI				pP	P	01 34 15.0	+2.6
PBKT	Sadao Pong	25.10	294	P	P	01 34 16.8	+1.3
	9.3nm,0.8s,748nm						
WHN	Wuhan	25.13	338	⇑P	P	01 34 18.3	+2.7
WHN				S	S	01 38 33.5	-5.3
WHN				pmax	pmax		
	comp=Z,260nm,1.7s						
WHN				LR	LR		
	comp=Z,850nm,23.6s						
KRJI	Kerinci	25.15	249	P	pP	01 34 24.3	0.0
KRJI				pP	P	01 34 18.4	+2.3
NJ2	Nanjing	25.25	348	eP	P	01 34 17.9	+1.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
PHET	Kaeng Krachan	25.45	285	P	P	01 34 20.3	+1.6
	53µm,0.8s						
PDSI	Padang	25.68	252	P	P	01 34 23.0	+2.2
GYA	Guiyang	25.74	320	⇑iP	P	01 34 23.8	+2.4
GYA				pP	pP	01 34 30.9	+1.4
GYA				PP	PnPn	01 35 04.6	+6.0
GYA				S	S	01 38 51.3	+2.4
GYA				sS	sS	01 39 01.3	-1.2
GYA				SS	SnSn	01 39 53.8	+8.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,670nm,19.6s						
GYA				LR	LR		
	comp=E,420nm,17.1s						
GYA				LR	LR		
	comp=Z,640nm,17.4s						
UTTA	Uttaradit	25.87	296	P	P	01 34 25.9	+3.5
MNSI	Mandailing Nat	26.03	257	P	P	01 34 27.4	+3.4
	20nm,1.3s,4µm						
SRDT	SRDT	26.22	288	P	P	01 34 28.2	+2.5
	19nm,1.3s						
PSI	Prapat	26.22	261	P	P	01 34 25.7	-0.2
	15nm,0.8s,baz=118,slow=4.0,SNR=3.7						
PSI				LR	LR	01 45 34.6	
	comp=Z,169nm,18.9s,baz=92,slow=38						
PSI	Prapat	26.22	261	eP	P	01 34 26.5	+0.6
	38nm,1.1s						
PSI	Prapat	26.22	261	eP	P	01 34 26.5	+0.6
PSI				pmax	pmax		
	comp=Z,38nm,1.1s						
JNU	Nakatsue	26.28	11	P	P	01 34 24.7	-1.4
	comp=Z,16nm,1.0s,baz=193,slow=7.2,SNR=5.2						
JNU				LR	LR	01 43 48.2	
	comp=Z,251nm,21.8s,baz=184,slow=34						
JNU	Nakatsue	26.28	11	eP	P	01 34 23.4	-2.7
PPSI	Pulau Pagai	26.75	249	pP	pP	01 34 36.5	-2.2
UMPA	Umpang Tak	26.93	292	P	P	01 34 40.3	+8.2
ENH	Enshi	27.02	330	eP	P	01 34 33.0	+0.2
	comp=Z,36nm,0.9s						
PAYA	Payao	27.07	299	P	P	01 34 34.2	+0.9
	comp=Z,33µm,1.1s						
SISI	Saibi	27.11	253	pP	P	01 34 36.2	+2.5
	comp=Z,36nm,0.8s						
KCSI	Kotacane, Aceh	27.23	264	P	P	01 34 37.2	+2.4
	comp=Z,38nm,1.1s						
PBSI	Pulau Batu	27.51	256	pP	P	01 34 41.2	+3.9
	comp=Z,52nm,1.1s						
CM31	Chiang Mai Arr	27.55	296	eP	P	01 34 36.3	-1.4
	comp=Z,40nm,1.5s						
CMAR	Chiang Mai Arr	27.55	296	P	P	01 34 37.2	-0.5
	comp=Z,1.8nm,0.3s,baz=128,slow=9.4,SNR=10						
CMAR				LR	LR	01 47 16.6	
	comp=Z,266nm,18.1s,baz=122,slow=40						
CMAR	Chiang Mai Arr	27.55	296	ceP	P	01 34 40.5	+2.9
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KMI	Kunming	27.58	312	eP	P	01 34 39.3	+1.2
	comp=Z,53nm,1.3s						
KMI	Kunming	27.58	312	P	P	01 34 40.1	+2.0
KMI				pP	sP	01 34 48.8	-1.0
KMI				sP	pP	01 34 52.8	+6.5
KMI				S	S	01 39 17.6	-0.6
KMI				sS	sS	01 39 31.5	-0.4
KMI				pmax	pmax		
	comp=Z,32nm,1.0s						
KMI				pmax	pmax		
	comp=Z,200nm,5.4s						
KMI				LR	LR		
	comp=Z,290nm,15.9s						
KMI				LR	LR		
	comp=Z,580nm,17.7s						
KMI				LR	LR		
	comp=Z,600nm,19.6s						
CMMT	Chiang Mai	27.67	297	P	P	01 34 45.5	+6.8
CHTO	Chiang Mai	27.68	297	eP	P	01 34 38.2	-0.6
	comp=Z,12nm,1.1s						
CHTO	Chiang Mai	27.68	297	eP	P	01 34 38.2	-0.6
CHTO				pmax	pmax		
	comp=Z,12nm,1.1s						
PMG	Port Moresby	27.73	126	LR	LR	01 47 09.4	
	comp=Z,133nm,19.2s,baz=296,slow=40						
PMG	Port Moresby	27.73	126	⇑eP	P	01 34 35.9	-3.3
PMG				pmax	pmax		
	comp=Z,65nm,0.9s						
GSI	Gunungsitoli	27.85	259	P	P	01 34 44.5	+4.1
	comp=Z,86nm,0.9s						
COEN	Coen	27.87	139	eP	P	01 34 39.0	-1.5
	comp=Z,43nm,0.8s						
COEN	Coen	27.87	139	P	P	01 34 41.4	+1.0
	baz=28,SNR=8.3						
MLSI	Meulaboh, Aceh	28.48	265	P	P	01 34 48.0	+2.1
WRAB	Tennant Creek	28.64	161	eP	P	01 34 45.5	-1.7
	comp=Z,19nm,1.0s						
WRAB	Tennant Creek	28.64	161	⇑iP	P	01 34 45.3	-1.9
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	28.64	161	P	P	01 34 45.3	-2.0
	comp=Z,12nm,0.8s,baz=337,slow=12,SNR=14						
WB2	Warramunga Arr	28.64	161	eP	P	01 34 46.0	-1.4
	comp=Z,21nm,0.9s						
WC3	Warramunga Arr	28.67	161	P	P	01 34 45.9	-1.6
	baz=29						
JHJ	Hachijo jima 2	29.17	26	LR	LR	01 48 02.2	
	comp=Z,326nm,18.1s,baz=360,slow=39						
KSRS	Korea Array	30.14	5	P	P	01 34 58.9	-1.5
	comp=Z,3.2nm,0.9s,baz=188,slow=11,SNR=8.3						
KSRS				LR	LR	01 47 32.2	
	comp=Z,233nm,20.6s,baz=200,slow=37						
XAN	Xi'an	30.41	333	eP	P	01 35 01.7	-1.2
	comp=Z,30nm,1.1s						
XAN	Xi'an	30.41	333	P	P	01 35 02.3	-0.6
XAN				pP	sP	01 35 14.3	-0.3
XAN				sP	pP	01 35 19.8	+8.6
XAN				S	S	01 39 55.3	-6.8
XAN				sS	sS	01 40 15.3	-0.4
XAN				pmax	pmax		
	comp=Z,22nm,1.0s						
XAN				pmax	pmax		
	comp=Z,91nm,3.9s						
XAN				LR	LR		
	comp=Z,280nm,17.9s						
XAN				LR	LR		
	comp=Z,390nm,18.4s						
XAN				LR	LR		
	comp=Z,390nm,20.9s						
XAN	Xi'an	30.41	333	eP	P	01 35 01.7	-1.2
XAN				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2	Chengdu	30.69	323	P	P	01 35 05.9	+0.5
CD2				S	S	01 40 08.3	+1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,610nm,19.2s						
CD2				LR	LR		
	comp=Z,500nm,16.4s						
CD2				LR	LR		
	comp=Z,590nm,17.1s						
QIS	Mount Isa	31.25	153	P	P	01 35 12.2	+1.7
	baz=31,SNR=7.2						
MAJO	Matsushiro	31.54	21	eP	P	01 35 11.6	-1.2
MAJO	Matsushiro	31.54	21	eP	P	01 35 11.6	-1.2
MJAR	Matsushiro Arr	31.54	21	P	P	01 35 11.6	-1.2
	comp=Z,1.7nm,0.9s,baz=197,slow=8.1,SNR=4.9						
MJAR				LR	LR	01 46 29.9	
	comp=Z,307nm,21.4s,baz=210,slow=34						
DL2	Dalian	31.59	355	P	P	01 35 13.5	+0.3
DL2				S	S	01 40 22.8	+2.4
DL2				pmax	pmax		
	comp=Z,50nm,0.9s						
DL2				LR	LR		
	comp=Z,390nm,17.1s						
DL2				LR	LR		
	comp=Z,370nm,18.0s						
DL2				LR	LR		
	comp=Z,200nm,17.0s						
ASAR	Alice Springs	32.03	164	P	P	01 35 15.8	-1.4
	comp=Z,5.2nm,0.6s,baz=342,slow=7.0,SNR=26						
ASAR				PcP	PcP	01 38 04.8	-2.0
	comp=Z,1.7nm,0.9s,baz=341,slow=2.0,SNR=3.4						
ASAR				LR	LR	01 51 12.2	
	comp=Z,100nm,18.3s,baz=2.5,slow=42						
WRKA	Warakurna	32.32	174	P	P	01 35 19.5	-0.3
	baz=32,SNR=15						
BJI	Beijing	33.51	348	⇑iP	P	01 35 29.8	-0.2
BJI				sP	pP	01 35 39.5	+1.3
BJI				S	S	01 40 52.5	+2.3
BJI				pmax	pmax		
	comp=Z,40nm,0.9s						
BJI				LR	LR		
	comp=Z,63nm,17.0s						
BJI				LR	LR		
	comp=Z,180nm,25.0s						
MEEK	Meekatharra	34.29	190	P	P	01 35 36.5	-0.4
	baz=34,SNR=4.6						
LZH	Lanzhou	34.50	329	⇑P	P	01 35 40.3	+1.4
LZH				pP	sP	01 35 49.1	-1.5
LZH				sP	pP	01 35 52.8	+5.6
LZH				eS	S	01 41 06.5	+0.5
LZH				pmax	pmax		
	comp=Z,63nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,4.6s						
LZH				LR	LR		
	comp=Z,430nm,13.0s						
LZH				LR	LR		
	comp=Z,350nm,12.9s						
LZH				LR	LR		
	comp=Z,540nm,15.2s						
HHC	Hu-ho-hao-te	35.45	342	P	P	01 35 47.6	+0.7
HHC				sP	sP	01 35 57.8	-0.8
HHC				S	S	01 41 28.1	+7.8
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.3s						
HHC				LR	LR		
	comp=Z,520nm,14.8s						
MSHR	Mys Shultsa	35.56	8	ceP	P	01 35 47.7	0.0
MORW	Morawa	37.15	193	P	P	01 36 02.9	+1.5
	baz=37,SNR=4.3						
USA0B	Ussuriysk Arra	37.27	8	eP	P	01 36 02.1	-0.1
	comp=Z,20nm,0.9s						
USRK	Ussuriysk Ar.	37.27	8	P	P	01 36 01.7	-0.6
	comp=Z,16nm,0.8s,baz=193,slow=8.0,SNR=29						
USRK				LR	LR	01 50 13.6	
	comp=Z,172nm,21.6s,baz=179,slow=34						
FORT	Forrest	37.99	176	eP	P	01 36 09.7	+1.2
	comp=Z,81nm,0.8s						
FORT	Forrest	37.99	176	P	P	01 36 07.9	-0.6
	baz=38,SNR=12						
KMBL	Kambalda	38.56	184	P	P	01 36 15.4	+2.1
	baz=39,SNR=5.5						
LSA	Lhasa	38.72	309	eP	P	01 36 15.7	+0.4
	comp=Z,26nm,0.9s						
LSA	Lhasa	38.72	309	eP	P	01 36 15.7	+0.4
LSA				pmax	pmax		
	comp=Z,26nm,0.9s						
TEY	Ternei	38.94	13	⇓eP	P	01 36 16.6	+0.3
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
GTA	Gaotai	39.09	329	⇑P	P	01 36 19.1	+1.2
GTA				pP	pP	01 36 27.5	+1.2
GTA				sP	sP	01 36 30.9	+1.2
GTA				S	S	01 42 20.9	+5.0
GTA				sS	sS	01 42 30.6	+0.8
GTA				SS	SS	01 45 04.6	-4.4
GTA				pmax	pmax		
	comp=Z,27nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,8.3s						
GTA				LR	LR		
	comp=Z,250nm,18.7s						
GTA				LR	LR		
	comp=Z,280nm,18.1s						
GTA				LR	LR		
	comp=Z,420nm,18.1s						
NWAO	Narrogin (SRO)	40.67	190	P	P	01 36 30.2	-0.6
	baz=41,SNR=5.5						
BBOO	Buckleboo	41.30	166	eP	P	01 36 35.7	-0.3
	comp=Z,51nm,0.8s						
BBOO				ePP	PP	01 38 08.7	-3.1
BBOO	Buckleboo	41.30	166	P	P	01 36 35.6	-0.5
	baz=42,SNR=27						
HIA	Hailar	42.04	355	⇑eP	P	01 36 41.8	-0.2
HIA				pmax	pmax		
	comp=Z,55nm,1.0s						
STKA	Stephens Creek	42.11	159	P	P	01 36 42.5	-0.3
	comp=Z,32nm,0.8s,baz=328,slow=8.4,SNR=22						
STKA				LR	LR	01 56 00.8	
	comp=Z,94nm,21.2s,baz=349,slow=39						
STKA	Stephens Creek	42.11	159	eP	P	01 36 42.5	-0.3
	comp=Z,3.5nm,1.6s						
STKA	Stephens Creek	42.11	159	P	P	01 36 42.5	-0.3
	baz=42,SNR=10						
STKA	Stephens Creek	42.11	159	eP	P	01 36 42.5	-0.3
STKA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
KLR	Kul'dur	42.18	7	P	P	01 36 42.5	-0.6
	comp=Z,7.4nm,1.0s,baz=226,slow=5.0,SNR=14						
KLR	Kul'dur	42.18	7	c iP	P	01 36 42.4	-0.6
KLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HTT	Hallett	42.66	163	P	P	01 36 47.3	+0.1
	baz=43,SNR=14						
ULN	Ulaanbaatar	43.17	342	eP	P	01 36 52.1	+0.8
	comp=Z,46nm,1.1s						
ULN	Ulaanbaatar	43.17	342	c iP	P	01 36 51.7	+0.4
ULN				pmax	pmax		
	comp=Z,74nm,1.7s						
ULN	Ulaanbaatar	43.17	342	P	P	01 36 52.3	+1.0
	SNR=24						
ULN				P	P	01 36 52.3	+1.0
	SNR=24						
SONM	Songino Array	43.34	342	P	P	01 36 52.3	-0.4
	comp=Z,21nm,1.0s,baz=162,slow=8.7,SNR=91						
SONM				LR	LR	01 56 33.2	
	comp=Z,337nm,20.2s,baz=158,slow=38						
CMSA	Cobar Meteorol	43.46	154	P	P	01 36 53.8	+0.1
	baz=44,SNR=6.8						
GRNR	Gornyy	44.38	10	eP	P	01 37 01.1	+0.3
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
ARMA	Armidale	45.46	147	P	P	01 37 10.3	+0.5
	baz=46,SNR=7.2						
TYV	Tymovskoe	45.86	16	eP	P	01 37 14.5	+1.9
TYV				e		01 44 00.2	
TYV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.6s						
HYB	Hyderabad	46.23	287	i P	P	01 37 16.0	-0.1
ZEA	Zeya	46.33	2	eP	P	01 37 13.9	-2.3
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
ZAK	Zakamensk	46.56	341	eP	P	01 37 18.1	-0.1
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ARPS	Mount Arapiles	46.65	161	P	P	01 37 19.4	+0.5
	baz=47,SNR=10.0						
YNG	Young	46.99	153	P	P	01 37 22.8	+1.1
	baz=47,SNR=6.3						
NKL	Nikolayevsk	47.49	13	eP	P	01 37 24.0	-1.2
TLY	Talaya	47.58	342	c iP	P	01 37 26.6	+0.6
TLY				pmax	pmax		
	comp=Z,112nm,1.7s						
TLY	Talaya	47.58	342	P	P	01 37 27.1	+1.0
	SNR=15						
TLY				P	P	01 37 27.1	+1.0
	SNR=15						
IRK	Irkutsk	47.88	343	eP	P	01 37 28.9	+0.5
IRK				pmax	pmax		
	comp=Z,58nm,1.6s						
CAN	Canberra	48.12	153	eP	P	01 37 30.5	0.0
	comp=Z,24nm,0.9s						
CAN	Canberra	48.12	153	eP	P	01 37 30.5	0.0
CAN				pmax	pmax		
	comp=Z,24nm,0.9s						
CNB	Canberra Magne	48.28	153	P	P	01 37 32.9	+1.2
	baz=48,SNR=5.5						
MOY	Mondy	48.41	340	eP	P	01 37 33.3	+0.7
MOY				pmax	pmax		
	comp=Z,41nm,2.4s						
TOO	Toolangi	48.63	158	eP	P	01 37 35.8	+1.4
	comp=Z,50nm,1.4s						
TOO	Toolangi	48.63	158	eP	P	01 37 35.8	+1.4
TOO				pmax	pmax		
	comp=Z,50nm,1.4s						
WMQ	Urumqi	48.75	324	eP	P	01 37 37.3	+2.0
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,10.0nm,3.9s						
WMQ				LR	LR		
	comp=Z,610nm,24.1s						
WMQ				LR	LR		
	comp=Z,530nm,29.0s						
WMQ				LR	LR		
	comp=Z,230nm,29.1s						
DZM	Mont Dzumac	50.12	127	eLR	LR	01 52 00.2	
	comp=Z,254nm,33.0s						
DZM	Mont Dzumac	50.12	127	LR	LR	01 57 13.1	
	comp=Z,107nm,21.9s,baz=352,slow=34						
DGZ	Jazzator, Alta	52.59	330	ceP	P	01 38 05.1	+0.8
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PEA0B	Petropavlovsk-	52.89	24	eP	P	01 38 04.4	-1.8
	comp=Z,20nm,0.9s						
PETK	Petropavlovsk-	52.89	24	P	P	01 38 05.7	-0.6
	comp=Z,13nm,0.8s,baz=196,slow=4.6,SNR=19						
PETK				LR	LR	02 00 33.6	
	comp=Z,122nm,19.9s,baz=225,slow=36						
PEA1	Petropavlovsk-	52.89	24	eP	P	01 38 05.7	-0.6
PET	Petropavlovsk	53.22	25	eP	P	01 38 09.1	+0.5
PET				eS	S	01 45 36.6	-1.3
PET				pmax	pmax		
	comp=Z,18nm,1.0s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
PDGK	Podgornoye	53.50	320	P	P	01 38 11.3	+0.2
PDGK				pmax	pmax		
	comp=Z,40nm,1.4s						
MK31	Makanchi Array	53.58	325	i P	P	01 38 12.1	+0.6
MK31				pmax	pmax		
	comp=Z,23nm,1.0s						
MKAR	Makanchi Array	53.58	325	P	P	01 38 11.6	+0.2
	comp=Z,12nm,0.9s,baz=121,slow=8.7,SNR=84						
MKAR	Makanchi Array	53.58	325	ceP	P	01 38 12.1	+0.6
MKAR				pmax	pmax		
	comp=Z,13nm,0.9s						

MAKZ	**Makanchi**	53.77	325	*e*P	P	01 38 13.4	+0.5
	comp=Z,31nm,1.1s						
MAKZ	**Makanchi**	53.77	325	*e*P	P	01 38 13.4	+0.5
MAKZ				pmax	pmax		
	comp=Z,31nm,1.1s						
KSH	**Kashi**	54.23	314	P	P	01 38 18.6	+2.1
KSH				sP	sP	01 38 33.6	+5.1
KSH				PcP	PcP	01 39 22.0	+1.3
KSH				PP	PP	01 40 23.0	+4.6
KSH				S	S	01 45 52.3	0.0
KSH				ScS	ScS	01 48 01.1	-3.2
KSH				SS	SS	01 49 33.5	-1.0
KSH				pmax	pmax		
	comp=Z,35nm,1.6s						
KSH				pmax	pmax		
	comp=Z,110nm,3.5s						
KSH				LR	LR		
	comp=Z,110nm,8.7s						
KSH				LR	LR		
	comp=Z,50nm,11.5s						
NIL	**Nilore**	54.30	306	*e*P	P	01 38 18.1	+1.1
	comp=Z,70nm,0.9s						
NIL	**Nilore**	54.30	306	*e*P	P	01 38 18.1	+1.1
NIL				pmax	pmax		
	comp=Z,70nm,0.9s						
YAK	**Yakutsk**	54.73	3	*e*P	P	01 38 19.0	-0.5
YAK				*e**PP	pP	01 38 27.1	-1.0
YAK				*e*		01 40 19.3	
YAK				*e*PPP	PPP	01 41 32.9	
YAK				*e*S	S	01 45 56.4	-1.5
YAK				*e*SSS	SSS	01 51 40.4	
YAK				pmax	pmax		
	comp=Z,55nm,1.0s						
YAK				pmax	pmax		
	comp=N,29nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax	smax		
	comp=N,43nm,2.8s						
YAK				smax	smax		
	comp=E,35nm,3.2s						
YAK				MLR	MLR		
	comp=Z,108nm,24.0s						
YAK				MLR	MLR		
	comp=N,74nm,22.0s						
YAK				MLR	MLR		
	comp=E,93nm,24.0s						
TKM2	**Tokmak 2**	55.86	318	P	P	01 38 28.4	+0.1
TKM2				pmax	pmax		
	comp=Z,13nm,0.9s						
AAK	**Ala-Archa**	56.49	317	*e*P	P	01 38 33.5	+0.8
	comp=Z,18nm,1.4s						
AAK	**Ala-Archa**	56.49	317	P	P	01 38 33.6	+0.8
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AAK	**Ala-Archa**	56.49	317	P	P	01 38 34.0	+1.2
	SNR=7.7						
AAK				P	P	01 38 34.0	+1.2
	SNR=7.7						
ZALV	**Zalesovo Beam**	56.58	333	P	P	01 38 32.3	-0.7
	comp=Z,2.4nm,0.8s,baz=131,slow=5.9,SNR=7.8						
ZALV				LR	LR	02 04 34.0	
	comp=Z,73nm,18.0s,baz=72,slow=38						
ZALV	**Zalesovo Beam**	56.58	333	*i* P	P	01 38 37.0	+4.1
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	**Kurchatov**	57.75	327	*e*P	P	01 38 41.3	0.0
	comp=Z,20nm,0.9s						
KURK	**Kurchatov**	57.75	327*c*	*i*P	P	01 38 41.0	-0.3
KURK				pmax	pmax		
	comp=Z,17nm,1.0s						
KURK	**Kurchatov**	57.75	327	P	P	01 38 41.7	+0.4
	SNR=19						
KURK				P	P	01 38 41.7	+0.4
	SNR=19						
KBL	**Kabul**	57.91	306	*e*P	P	01 38 43.4	+0.4
	comp=Z,24nm,0.8s						
KBL	**Kabul**	57.91	306	*e*P	P	01 38 43.4	+0.4
KBL				pmax	pmax		
	comp=Z,24nm,0.8s						
SEY	**Seymchan**	59.01	14⇑	*e*P	P	01 38 50.6	+0.7
KK31	**Karatay Array**	59.37	316	*i* P	P	01 38 52.6	-0.2
KK31				pmax	pmax		
	comp=Z,21nm,1.1s						
OTUK	**Ortayu**	60.17	322	P	P	01 38 57.5	-0.7
OTUK				pmax	pmax		
	comp=Z,12nm,0.9s						
BRVK	**Borovoye**	63.40	327	*e*P	P	01 39 19.7	-0.1
	comp=Z,15nm,1.0s						
BRVK	**Borovoye**	63.40	327	*e*P	P	01 39 19.7	-0.1
BRVK				pmax	pmax		
	comp=Z,15nm,1.0s						
BRVK	**Borovoye**	63.40	327	P	P	01 39 19.9	+0.1
	SNR=9.2						
TIXI	**Tiksi**	64.32	1	*e*P	P	01 39 24.7	-0.8
	comp=Z,12nm,1.1s						
TIXI	**Tiksi**	64.32	1⇑	*e*P	P	01 39 26.6	+1.1
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BILL	**Bilibino**	66.61	16*c*	*i*P	P	01 39 39.8	-0.6
BILL				*e**PP	sP	01 39 51.5	-1.0
BILL				*e**SP	pP	01 39 55.0	+5.8
BILL				*e*		01 40 05.3	
BILL				SSS	SSS	01 55 37.0	
BILL				pmax	pmax		
	comp=Z,20nm,1.7s						
BILL				MLR	MLR		
	comp=Z,264nm,18.0s						
GEYT	**Alibeck**	67.23	308	P	P	01 39 45.4	+0.3
	comp=Z,12nm,0.8s,baz=132,slow=4.2,SNR=28						
GEYT				LR	LR	02 11 51.9	
	comp=Z,72nm,19.6s,baz=80,slow=38						
AB31	**Akbulak array**	68.23	320	P	P	01 39 50.1	-0.9
AB31				pmax	pmax		
	comp=Z,13nm,1.3s						
ABKAR	**Akbulak array**	68.23	320	*e*P	P	01 39 50.5	-0.5
	comp=Z,19nm,1.4s						
SVE	**Sverdlovsk**	69.96	328	*e*P	P	01 40 01.3	-0.3
SVE				pmax	pmax		
	comp=Z,19nm,1.1s						
ARU	**Arti**	70.94	327	*e*P	P	01 40 06.0	-1.6
	comp=Z,6.2nm,0.8s						
ARU	**Arti**	70.94	327*c*	*i*P	P	01 40 06.2	-1.4
ARU						01 42 41.0	
ARU				S	S	01 49 21.3	-0.1
ARU				SS	SS	01 53 48.9	-5.5
ARU				pmax	pmax		
	comp=Z,8.0nm,1.5s						
AKT	**Akhty**	75.56	311	*e*P	P	01 40 35.5	+0.1
AKT				*e*		01 40 47.3	
AKT				*e*		01 43 25.2	
AKT				pmax	pmax		
	comp=Z,37nm,1.2s						
GROC	**Groznyy**	77.07	313	*e*P	P	01 40 41.1	-2.6
GROC				*e*		01 40 55.8	
GROC				*e*		01 43 36.2	
GROC				*e*S	S	01 50 28.9	-2.0
GROC				pmax	pmax		
	comp=Z,28nm,0.8s						
RAYN	**Ar Rayn**	77.40	292	*e*P	P	01 40 45.9	-0.1
	comp=Z,23nm,1.3s						
RAYN	**Ar Rayn**	77.40	292	*e*P	P	01 40 45.9	-0.1
RAYN				pmax	pmax		
	comp=Z,23nm,1.3s						
GNI	**Garni**	77.79	309	*e*P	P	01 40 49.0	+1.0
	comp=Z,29nm,1.1s						
GNI	**Garni**	77.79	309*c*	*e*P	P	01 40 48.3	+0.3
GNI				pmax	pmax		
	comp=Z,76nm,1.4s						
GNI	**Garni**	77.79	309	P	P	01 40 49.8	+1.8
	SNR=5.1						
TBLG	**Delisi**	77.81	311	*i* P	P	01 40 49.8	+1.9
TBLG				IAML_P			
	comp=Z,130nm,0.1s						
ZEI	**Tsey**	78.45	312	*e*P	P	01 40 50.9	-0.8
ZEI				pmax	pmax		
	comp=Z,31nm,1.1s						
PRGR	**Permogore**	78.49	331	*e*P	P	01 40 47.9	-3.3
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
EAK	**Akyaka**	78.66	310	*i* P	P	01 40 54.8	+2.0
EAK				IAML_P			
	comp=Z,418nm,0.8s						
NCK	**Nalchik**	78.68	313⇑	*e*P	P	01 40 53.1	+0.4
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GOF	**Gofitskoye**	79.10	314⇑	*e*P	P	01 40 52.6	-2.3
RAR	**Rarotonga**	79.14	113	LR	LR	02 10 43.6	
	comp=Z,48nm,19.2s,baz=266,slow=32						
KBZ	**Khabaz**	79.19	313	P	P	01 40 54.9	-0.6
	comp=Z,7.1nm,1.0s,baz=54,slow=2.4,SNR=11						
EPOS	**Posof**	79.32	311	*i* P	P	01 40 57.3	+0.9
NEY	**Neytrino**	79.32	313⇑	*e*P	P	01 40 57.5	+1.1
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIV	**Kislovodsk**	79.35	313	*e*P	P	01 40 55.9	-0.5
	comp=Z,33nm,1.3s						
KIV	**Kislovodsk**	79.35	313	*e*P	P	01 40 56.0	-0.5
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KIV	**Kislovodsk**	79.35	313	P	P	01 40 57.0	+0.5
	SNR=6.5						
KIV				P	P	01 40 57.0	+0.5
	SNR=6.5						
EATA	**Eleskirt**	79.52	309	*i* P	P	01 40 59.9	+2.1
EATA				IAML_P			
	comp=Z,46nm,0.1s						
KDAK	**Kodiak Island**	79.88	33	*e*P	P	01 40 57.8	-1.1
	comp=Z,13nm,0.8s						
KDAK	**Kodiak Island**	79.88	33	*i* P	P	01 40 59.5	+0.6
DAGI	**Agillar**	79.94	310	*i* P	P	01 41 00.9	+1.1
DAGI				IAML_P			
	comp=Z,133nm,0.7s						
HOMI	**Horasan**	79.96	309	*i* P	P	01 41 01.4	+1.3
HOMI				IAML_P			
	comp=Z,73nm,0.1s						
DBAD	**Bademkaya**	80.11	310	*i* P	P	01 41 01.8	+1.2
DBAD				IAML_P			
	comp=Z,584nm,0.8s						
DBOC	**Borcka**	80.12	311	*i* P	P	01 41 01.1	+0.5
DBOC				IAML_P			
	comp=Z,269nm,0.7s						
MUSM	**Mu-Merkez**	80.30	308	*i* P	P	01 41 03.0	+1.3
MUSM				IAML_P			
	comp=Z,32nm,0.2s						
ABPO	**Ambohimpanom**	80.80	249	*e*P	P	01 41 04.6	-0.2
	comp=Z,18nm,1.0s						
ABPO	**Ambohimpanom**	80.80	249	*e*P	P	01 41 04.6	-0.2
ABPO				pmax	pmax		
	comp=Z,18nm,1.0s						
KOPT	**Kop Dagi**	81.04	309	*i* P	P	01 41 07.9	+2.0
KOPT				IAML_P			
	comp=Z,185nm,0.6s						
TOLK	**Toolik Lake Re**	81.62	22	P	P	01 41 06.0	-2.1
	baz=268						
VSR	**Storozhevoye**	81.66	321	*e*P	P	01 41 07.6	-1.0
VSR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LPSR	**Galich'ya Gora**	81.78	322	*e*P	P	01 41 08.8	-0.3
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KELT	**Kelkit**	81.99	309	*i* P	P	01 41 12.2	+1.3
KELT				IAML_P			
	comp=Z,134nm,0.4s						
TCOL	**CIGO, UAF Yank**	82.27	25	P	P	01 41 11.0	-0.4
	baz=270						
COLA	**College**	82.28	25	*e*P	P	01 41 10.4	-1.1
	comp=Z,8.5nm,0.8s						
COLA	**College**	82.28	25*c*	*i*P	P	01 41 10.7	-0.8
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
POKR	**Poker Plat Res**	82.45	25	P	P	01 41 12.9	+0.4
	baz=271						
HDA	**Harding Lake**	82.67	26	P	P	01 41 11.9	-1.8
	baz=271						
ILAR	**Eielson Array**	82.69	26	P	P	01 41 12.0	-1.8
	comp=Z,3.8nm,0.7s,baz=242,slow=5.4,SNR=45						
OBN	**Obninsk**	83.09	325*c*	*e*P	P	01 41 18.1	+2.2
OBN				*SP	sP	01 41 30.0	+1.9
OBN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
OBN				MLR	MLR		
	comp=Z,78nm,16.0s						
APA	**Apatity**	83.86	337⇑	*i*P	P	01 41 21.2	+1.6
APA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,400nm,18.0s						
BRTR	**Keskin Array B**	86.33	309	P	P	01 41 32.3	-0.6
	comp=Z,3.3nm,1.0s,baz=97,slow=5.0,SNR=10						
BRTR	**Keskin Array B**	86.33	309*c*	*e*P	P	01 41 32.7	-0.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAW	**Mawson**	86.46	200	LR	LR	02 18 33.3	
	comp=Z,42nm,19.7s,baz=78,slow=34						
ARCES	**ARCESS Array B**	86.47	340	P	P	01 41 31.4	-1.4
	comp=Z,6.5nm,1.1s,baz=73,slow=6.8,SNR=4.0						
EPYK	**Eagle Plains**	86.72	24	P	P	01 41 32.4	-1.6
	baz=280						
VNDA	**Vanda**	87.19	172	P	P	01 41 35.0	-0.9
	comp=Z,4.4nm,0.9s,baz=309,slow=4.9,SNR=8.4						
VNDA				PP	PP	01 45 01.8	+1.8
	comp=Z,1.7nm,0.9s,baz=319,slow=6.6,SNR=4.4						
VNDA				LR	LR	02 19 50.6	
	comp=Z,34nm,20.5s,baz=326,slow=35						
KMBO	**Kilima Mbogo**	87.78	269	P	P	01 41 39.8	-0.7
	comp=Z,1.8nm,0.8s,baz=44,slow=9.1,SNR=4.2						
KMBO	**Kilima Mbogo**	87.78	269	*e*P	P	01 41 39.8	-0.7
	comp=Z,7.5nm,1.2s						
KMBO	**Kilima Mbogo**	87.78	269*c*	*e*P	P	01 41 40.0	-0.5
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	87.82	332	P	P	01 41 37.6	-1.8
	comp=Z,1.5nm,0.7s,baz=64,slow=4.4,SNR=9.0						
FINES	**FINESS Array B**	87.82	332	*i* P	P	01 41 37.5	-1.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	87.97	321	P	P	01 41 38.5	-1.8
	comp=Z,0.8nm,0.5s,baz=66,slow=4.9,SNR=4.4						
AKASG	**Malin Array Be**	87.97	321*c*	*e*P	P	01 41 40.0	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PPT	**Papeete**	87.97	108	LR	LR	02 19 03.4	
	comp=Z,46nm,19.0s,baz=305,slow=34						
PPT2	**Papeete2**	87.97	108	*e*LR	LR	02 09 35.0	
	comp=Z,155nm,25.5s						
SBA	**Scott Base**	88.11	172	*e*P	P	01 41 40.5	+0.1
	comp=Z,25nm,1.6s						
SBA	**Scott Base**	88.11	172	*e*P	P	01 41 40.5	+0.1
SBA				pmax	pmax		
	comp=Z,25nm,1.6s						
TBI	**Tubuai**	88.91	114	*e*LR	LR	02 09 59.6	
	comp=Z,151nm,30.8s						
NOA	**NORSAR Array B**	94.78	333	P	P	01 42 09.0	-2.8
	comp=Z,1.3nm,0.8s,baz=66,slow=4.5,SNR=3.0						
OKC	**Ostrava-Krasne**	95.08	321	AMS	AMS	02 27 00.0	
	comp=Z,200nm,17.9s						
OSTC	**Ostas**	96.03	323	AMS	AMS	02 25 40.0	
	comp=Z,200nm,17.0s						
DPC	**Dobruska-Polom**	96.03	322	AMS	AMS	02 29 10.0	
	comp=Z,200nm,17.2s						
TREC	**Trest**	96.89	322	AMS	AMS	02 26 10.0	
	comp=Z,200nm,15.5s						
PVCC	**Panska Ves**	97.03	323	AMS	AMS	02 25 50.0	
	comp=Z,200nm,21.7s						
PRU	**Pruhonice**	97.23	322	AMS	AMS	02 25 40.0	
	comp=Z,200nm,15.6s						
KHC	**Kasperske Hory**	98.12	322	AMS	AMS	02 25 00.0	
	comp=Z,200nm,19.9s						
NKC	**Novy Kostel**	98.40	323	AMS	AMS	02 24 30.0	
	comp=Z,200nm,22.2s						
ESDC	**Sonseca Array**	113.56	319	PP	PP	01 48 19.6	-0.8
	comp=Z,0.5nm,0.8s,baz=46,slow=5.6,SNR=4.2						
ANMO	**Albuquerque**	115.92	45⇑	*i*PKIKP	PKiKP	01 47 30.0	-3.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,2.5s						
TORD	**Torodi Ar. Bea**	120.01	290	PKP	PKPdf	01 47 40.2	-1.7
	comp=Z,1.1nm,0.8s,baz=52,slow=2.0,SNR=5.9						
TOA1	**Torodi Ar. Sit**	120.01	290	*e*PKPdf	PKPdf	01 47 40.2	-1.7
LTX	**Lajitas**	120.79	50	*e*PKPdf	PKPdf	01 47 42.0	-1.3
LTX	**Lajitas**	120.79	50	*e*PKIKP	PKPdf	01 47 42.0	-1.3
TXAR	**Lajitas Array**	120.79	50	PKP	PKPdf	01 47 42.0	-1.2
	comp=Z,0.4nm,0.8s,baz=224,slow=2.5,SNR=6.5						
ESPN	**Las Esperanzas**	145.12	56	*e*PKPbc	PKPbc	01 48 27.8	-0.5
JTS	**Las Juntas de**	145.54	60	*e*PKPbc	PKPdf	01 48 29.4	-0.2
JTS	**Las Juntas de**	145.54	60	*e*PKIKP	PKPdf	01 48 29.4	-0.2
PTGA	**Pitinga**	171.88	37	*e*PKPdf	PKPdf	01 48 57.6	-2.5
PTGA				*e*PKPab	PKPab	01 50 19.8	-2.6

ATH 15 01:30:36.4, 38°.19N×22°.04E, $h9^{km}\pm3^{km}$, ML1.3/3, Error ellipse: s-maj=3.9km s-min=1.2km az=263.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LAKA	**Lakka**	0.07	313	P	Pg	01 30 38.0	-0.5
LAKA				S	Sg	01 30 40.1	0.0
AIG1	**Aigion**	0.08	77	P	Pg	01 30 39.4	+0.8
AIG3	**Aigion**	0.08	37	P	Pg	01 30 38.9	+0.3
AIG3				S	Sg	01 30 41.1	+0.9
AIG3	**Aigion**	0.08	37	P	Pg	01 30 39.1	+0.5
AIG3				S	Sg	01 30 41.0	+0.8
KLV	**Kalavryta, Ach**	0.17	150	P	Pg	01 30 39.4	-0.7
KLV				S	Sg	01 30 43.5	+0.9
KALE	**Kalithea**	0.21	21	P	Pg	01 30 40.8	0.0
KALE				S	Sg	01 30 43.8	0.0
KALE				AML	AML	01 30 44.5	
	comp=E,249μm,0.2s						
KALE				AML	AML	01 30 44.7	
	comp=N,446μm,0.3s						
SERG	**Sergoula**	0.22	3	P	Pg	01 30 41.3	+0.3
SERG				S	Sg	01 30 43.9	-0.1
SERG				AML	AML	01 30 44.6	
	comp=E,327μm,0.3s						
SERG				AML	AML	01 30 44.7	
	comp=N,323μm,0.3s						
SERG	**Sergoula**	0.22	3	P	Pg	01 30 41.0	+0.1
SERG				S	Sg	01 30 44.2	+0.2
SERG				AML	AML	01 30 44.6	
	comp=E,327μm,0.3s						
SERG				AML	AML	01 30 44.7	
	comp=N,323μm,0.3s						
GUR	**Goura**	0.35	137	P	Pg	01 30 44.0	+0.7
GUR				S	Sg	01 30 47.9	0.0
GUR				AML	AML	01 30 51.2	
	comp=E,95μm,0.2s						
GUR				AML	AML	01 30 51.9	
	comp=N,104μm,0.3s						
GUR	**Goura**	0.35	137	P	Pb	01 30 44.1	-0.7
GUR				S	Sb	01 30 49.7	-0.7
ANX	**Ano Chora**	0.41	347	P	Pg	01 30 44.7	+0.2
ANX	**Ano Chora**	0.41	347	P	Pg	01 30 44.7	+0.2
DSF	**Desfina**	0.44	60	P	Pg	01 30 44.6	-0.4
DSF				S	Sg	01 30 50.2	-0.5
DSF	**Desfina**	0.44	60	P	Pg	01 30 44.5	-0.5
DSF				S	Sg	01 30 50.2	-0.6
DSF				AML	AML	01 30 51.0	
	comp=N,57μm,0.1s						
DSF				AML	AML	01 30 51.3	
	comp=E,61μm,0.2s						

*ISCJB **15** 01:35:40.6±0.4, 19°.18S±0°.02×69°.41W±0°.05, $h130^{km}\pm3^{km}$, mb3.5/2, Error ellipse: s-maj=8.2km s-min=4.1km az=175.1*

*SJA **15** 01:35:40.7±0.8, 19°.18S×69°.40W, $h127^{km}\pm3^{km}$, ML3.4, MW4.1*

*GUC **15** 01:35:41.4±0.6, 19°.18S×69°.35W, $h114^{km}\pm2^{km}$, ML4.0*

*IDC **15** 01:35:43.5±1.2, 19°.23S×68°.85W, $h122^{km}\pm10^{km}$, mb3.6/4, mb1 3.6/8, mb1mx3.3/34, mbtmp4.0/8, Error ellipse: s-maj=22.9km s-min=8.9km az=103.0*

ISC 15 01:35:41.1±0.7, **19°.15S**±0°.03×**69°.28W**±0°.06, **$h112^{km}\pm6^{km}$, n45, $\sigma1^{s}.73$/66, 5C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	0.30	273⇑	*e*P	Pn	01 35 58.2	+0.7
MNMC				*i* S	Sn	01 36 10.5	+0.8
MNMC				IAML		01 36 14.2	
	comp=E,10μm,0.2s						
MNMCX	**Minye Minye**	0.30	273	*e*P	Pn	01 35 58.6	+1.2
MNMCX				*e*S	Sn	01 36 12.7	+3.0
GO01	**Chusmiza**	0.52	172	*e*P	Pn	01 36 00.0	+1.1
GO01				*i* S	Sn	01 36 13.8	+1.5
GO01				IAML		01 36 15.2	
	comp=N,3μm,0.2s						
PB11	**IPOC Station P**	0.71	211	*e*P	Pn	01 36 00.8	+0.9
PB11				*e*S	Sn	01 36 16.2	+2.1
PB11	**IPOC Station P**	0.71	211	*e*P	Pn	01 36 00.6	+0.7
PB11				*i* S	Sn	01 36 14.7	+0.6
PB11				IAML		01 36 16.0	
	comp=N,5μm,0.2s						
PB16	**IPOC Station P**	0.84	345⇓	*e*P	Pn	01 36 02.8	+1.3
PB16				*i* S	Sn	01 36 18.2	+1.4
PB16				IAML		01 36 19.5	
	comp=N,12μm,0.5s						
PSGC	**Pisagua**	0.92	241⇑	*i*P	Pn	01 36 02.2	+0.5
PSGC				*i* S	Sn	01 36 17.4	+0.1
PSGC				IAML		01 36 18.4	
	comp=N,3μm,0.6s						
PB08	**IPOC Station P**	0.99	173	*e*P	Pn	01 36 04.5	+1.6
PB08				*e*S	Sn	01 36 21.8	+2.6
PB08	**IPOC Station P**	0.99	173⇓	*e*P	Pn	01 36 04.1	+1.2
PB08				*i* S	Sn	01 36 20.8	+1.6
PB08				IAML		01 36 22.1	
	comp=E,3μm,0.5s						
PB12	**IPOC Station P**	1.13	298⇑	*e*P	Pn	01 36 04.2	+0.3
PB12				*i* S	Sn	01 36 21.7	+0.5
PB12				IAML		01 36 26.3	
	comp=E,2μm,0.3s						
PB01	**IPOC Station P**	1.90	186	*e*P	Pn	01 36 13.7	+0.7
PB01				*i* S	Sn	01 36 38.0	+0.7
PB01				IAML		01 36 40.3	
	comp=E,1μm,0.2s						
PB02	**IPOC Station P**	2.24	195	*e*P	Pn	01 36 17.9	+0.5
PB02	**IPOC Station P**	2.24	195	*e*P	Pn	01 36 17.8	+0.5
PB02				*i* S	Sn	01 36 45.6	+0.5
PB02				IAML		01 36 53.5	
	comp=E,1μm,0.4s						
PB07	**IPOC Station P**	2.63	192	*e*P	Pn	01 36 23.6	+1.1
PB07	**IPOC Station P**	2.63	192	*e*P	Pn	01 36 23.5	+1.1
PB07				*e*S	Sn	01 36 54.2	0.0
PB07				IAML		01 37 04.0	
	comp=N,702nm,0.4s						
PB09	**IPOC Station P**	2.63	179	*e*P	Pn	01 36 23.7	+1.2
PB09				*e*S	Sn	01 36 54.8	+0.4
PB09	**IPOC Station P**	2.63	179	*e*P	Pn	01 36 23.9	+1.4
PB09				*i* S	Sn	01 36 55.8	+1.5
PB09				IAML		01 36 58.9	
	comp=N,390nm,0.3s						
PB03	**IPOC Station P**	2.92	189	*e*P	Pn	01 36 26.8	+0.6
PB03	**IPOC Station P**	2.92	189⇑	*e*P	Pn	01 36 26.9	+0.6
PB03				*i* S	Sn	01 36 59.3	-1.7
PB03				IAML		01 37 08.6	
	comp=E,400nm,0.4s						
LPAZ	**La Paz**	3.05	21	P	Pn	01 36 30.8	+2.4
	comp=E,8.4nm,0.3s,baz=184,slow=3.7,SNR=308						
LPAZ				S	Sn	01 37 08.0	+3.2
	comp=E,2.2nm,0.3s,baz=195,slow=20,SNR=2.0						
LPAZ	**La Paz**	3.05	21	*e*P	Pn	01 36 30.5	+2.1
PB04	**IPOC Station P**	3.27	194	*e*P	Pn	01 36 31.4	+0.5
PB04	**IPOC Station P**	3.27	194⇑	*e*P	Pn	01 36 31.3	+0.4
PB04				*e*S	Sn	01 37 09.8	+0.4
PB04				IAML		01 37 29.4	
	comp=N,246nm,0.3s						
LVC	**Limon Verde**	3.46	174	P	Pn	01 36 35.0	+1.4
	comp=N,10nm,0.3s,baz=349,slow=6.4,SNR=63						
LVC				S	Sn	01 37 14.7	+0.5
	comp=N,35nm,0.3s,baz=330,slow=12,SNR=5.6						
LVC	**Limon Verde**	3.46	174	*e*P	Pn	01 36 35.0	+1.4
LVC				IAML		01 37 15.1	
	comp=Z,64nm,0.2s						
PB06	**IPOC Station P**	3.55	184⇓	*e*P	Pn	01 36 35.2	+0.6
PB05	**IPOC Station P**	3.79	193	*e*P	Pn	01 36 38.0	+0.3
PB15	**IPOC Station P**	4.04	183	*e*P	Pn	01 36 42.0	+0.7
PB10	**IPOC Station P**	4.50	195	*e*P	Pn	01 36 46.5	-0.8
YJA	**Yavi**	4.63	131	*e*P	Pn	01 36 51.9	+2.5
YJA				IAML		01 36 52.6	
	comp=Z,12nm,0.6s						
HJA	**Humahuaca**	5.41	139	*e*P	Pn	01 37 02.2	+2.3
HJA				IAML		01 37 03.3	
	comp=Z,25nm,0.5s						
PB14	**IPOC Station P**	5.55	191	*e*P	Pn	01 37 00.4	-1.3
AZAP	**Zapla**	6.39	143	*e*P	Pn	01 37 14.0	+1.0
AZAP				IAML		01 37 16.2	
	comp=Z,8.8nm,0.3s						
ALOL	**LOMAS DE OLMED**	6.77	134	*e*P	Pn	01 37 19.4	+1.4
SIV	**San Ignacio**	8.43	69	P	Pn	01 37 38.1	-2.4
	comp=Z,1.1nm,0.3s,baz=273,slow=9.7,SNR=31						

SIV				S	Sn	01 39 06.7	-7.3
	baz=172,slow=23,SNR=1.5						
NNA	Nana	10.19	313	P	Pn	01 38 03.2	-1.1
	comp=Z,1.0nm,0.3s,baz=127,slow=15,SNR=3.7						
NNA				S	Sn	01 39 55.5	-1.3
	comp=Z,0.8nm,0.3s,baz=237,slow=16,SNR=2.0						
CFA	Coronel Fontan	12.44	176	P	Pn	01 38 30.8	-3.5
	comp=Z,0.6nm,0.3s,baz=333,slow=11,SNR=8.4						
CFA				S	Sn	01 40 38.4	-13
	comp=Z,0.3nm,0.3s,baz=152,slow=20,SNR=1.6						
CPUP	Villa Florida	13.13	125	P	Pn	01 38 40.8	-2.5
	comp=Z,0.3nm,0.3s,baz=302,slow=11,SNR=5.7						
PTGA	Pitinga	20.45	28	P	P	01 40 08.8	-1.1
	comp=Z,2.3nm,0.5s,baz=200,slow=18,SNR=5.8						
BDFB	Brasilia	20.58	84	P	P	01 40 09.6	-1.8
	comp=Z,4.3nm,0.5s,baz=252,slow=8.9,SNR=14						
TORD	Torodi Ar. Bea	76.90	71	P	P	01 47 21.4	-0.3
	comp=Z,1.4nm,0.6s,baz=252,slow=5.2,SNR=23						
VNDA	Vanda	79.09	190	P	P	01 47 34.4	+1.8
	comp=Z,0.2nm,0.4s,baz=122,slow=9.5,SNR=4.5						
STKA	Stephens Creek	121.26	211	PKP	PKiKP	01 54 22.8	+1.1
	comp=Z,1.6nm,0.5s,baz=254,slow=3.0,SNR=5.4						
WRA	Warramunga Arr	134.78	212	PKP	PKPdf	01 54 48.1	+0.5
	comp=Z,1.1nm,0.9s,baz=157,slow=2.4,SNR=2.5						
SONM	Songino Array	151.17	6	PKPbc	PKPbc	01 55 21.3	-0.1
	comp=Z,0.2nm,0.3s,baz=321,slow=1.8,SNR=2.4						

MAN 15 01:42:02.1, 7°.35N×124°.83E, h9^{km}, mb3.9, ML2.7, MS2.2, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.58	23	eP	Pb	01 42 14.2	-0.2
BUKP				eS	Sb	01 42 23.4	+0.7
CTBH	Cotabato--PC H	0.59	258	⇓iP	Pg	01 42 13.6	0.0
CTBH				i S	Sg	01 42 22.3	+0.9
SKMP	Bagumbayan, Su	0.87	199	eP	Pg	01 42 18.2	-0.7
CGP	Cagayan de Oro	1.11	353	⇑eP	Pg	01 42 23.0	-0.5
CGP				eS	Sb	01 42 38.1	0.0
DDMP	Don Marcelino,	1.51	145	eP	Pn	01 42 28.9	-0.5

DJA 15 01:43:02.1±0.5, 5°S±4°×10°2E±°, h44^{km}±7^{km}, M3.5/10, MLv3.5/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.17	47	P	Pn	01 43 22.4	+0.3
MNAI				S	Sn	01 43 37.4	+0.5
LHSI	Lahat	1.95	47	P	Pn	01 43 31.9	-0.8
LHSI				S	Sn	01 43 56.4	+0.4
LWLI	Liwa	1.97	86	P	Pn	01 43 32.7	-0.4
LWLI				S	Sn	01 43 57.4	+0.8
MDSI	Maura Dua	2.19	72	P	Pn	01 43 35.2	-0.8
KASI	Kota Agung	2.42	99	P	Pn	01 43 40.1	+0.9
KLI	Kotabumi	2.77	84	P	Pn	01 43 44.7	+0.7
KRJI	Kerinci	3.11	348	P	Pn	01 43 49.2	+0.4
KRJI				S	Sn	01 44 25.8	+1.0
PPSI	Pulau Pagai	3.16	319	P	Pn	01 43 48.4	-1.0
CGJI	Cibinong	3.86	112	P	Pn	01 43 58.0	-1.0

MAN 15 01:50:52.2, 7°.54N×124°.94E, h1^{km}, mb4.8, ML3.7, MS3.6, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.36	20	eP	Pn	01 51 07.1	+2.5
BUKP				eS	Sb	01 51 16.8	+9.2
KCP	Kidapawan	0.55	164	⇑eP	Pg	01 51 03.5	+0.7
KCP				eS	Sn	01 51 18.3	+1.1
DMPH	Davao City--Mi	0.73	129	⇑iP	Pg	01 51 06.2	0.0
DMPH				i S	Sn	01 51 20.7	-0.7
CTBH	Cotabato--PC H	0.76	245	⇓iP	Pg	01 51 06.5	-0.3
CTBH				i S	Sg	01 51 15.3	-1.3
CGP	Cagayan de Oro	0.94	345	⇑iP	Pn	01 51 15.8	+3.2
CGP				i S	Sn	01 51 30.9	+4.3
SKMP	Bagumbayan, Su	1.09	201	eP	Pg	01 51 08.8	-4.4
MATI	Mati	1.44	114	eP	Pb	01 51 21.6	+1.8
DDMP	Don Marcelino,	1.62	152	eP	Pn	01 51 21.4	-0.6
DDMP				eS	Sg	01 51 44.7	+0.3
DCPH	Dipolog City	1.88	303	⇑eP	Pg	01 51 33.3	+5.0
DCPH				eS	Sg	01 51 58.4	+5.6
IPIL	Ipil	2.36	276	eP	Pn	01 51 33.4	+1.3
IPIL				eS	Sn	01 52 02.9	+1.1

IDC 15 01:52:18.2±2.0, 17°.42S×177°.34W, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.8/23, mbtmp3.9/5, Error ellipse: s-maj=119.6km s-min=27.5km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.75	241	P	P	01 59 52.0	-0.9
	1.2nm,0.5s,baz=104,slow=4.2,SNR=4.5						
WRA	Warramunga Arr	45.72	259	P	P	02 00 41.5	-0.1
	1.5nm,1.0s,baz=89,slow=7.7,SNR=1.8						
ASAR	Alice Springs	45.90	254	P	P	02 00 43.4	+0.5
	3.4nm,0.5s,baz=89,slow=8.6,SNR=60						
TXAR	Lajitas Array	84.88	57	P	P	02 04 55.9	+0.4
	0.3nm,0.8s,baz=238,slow=5.2,SNR=3.4						
ILAR	Eielson Array	85.19	13	P	P	02 04 55.5	-0.6
	0.2nm,0.5s,baz=225,slow=4.5,SNR=4.3						

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*ISCJB **15** 02:07:41.3±0.8, 54°.5N±0°.2×35°.4W±0°.2, h10^{km}, mb3.4/10, Error ellipse: s-maj=28.7km s-min=14.4km az=1.8*

*IDC **15** 02:07:41.6±0.9, 54°.54N×35°.34W, h0^{km}, mb3.4/10, mb1 3.6/11, mb1mx3.5/39, mbtmp3.4/11, ML3.6/1, Error ellipse: s-maj=32.9km s-min=17.4km az=4.0*

ISC 15 02:07:43.1±0.9, 54°.5N±0°.2×35°.4W±0°.1, h10^{km}, n12, σ0^{s}21/12, mb3.5/10, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	Eskdalemuir Ar	18.43	74	P	Pn	02 11 58.5	+0.1
	baz=277,slow=9.7,SNR=3.3						
ESDC	Sonseca Array	25.75	112	P	P	02 13 13.8	+0.2
	0.1nm,0.3s,baz=314,slow=8.8,SNR=4.6						
GERES	GERESS Array B	30.42	80	P	P	02 13 55.4	0.0
	0.2nm,0.6s,baz=302,slow=9.2,SNR=2.6						
AKASG	Malin Array Be	38.16	68	P	P	02 15 02.1	-0.1
	0.1nm,0.3s,baz=303,slow=8.3,SNR=2.7						
BRTR	Keskin Array B	47.28	79	P	P	02 16 16.5	0.0
	0.7nm,0.7s,baz=314,slow=6.6,SNR=5.6						
PDAR	Pinedale Array	48.20	288	P	P	02 16 23.6	-0.2
	0.2nm,0.5s,baz=68,slow=7.9,SNR=3.1						
KBZ	Khabaz	49.78	68	P	P	02 16 35.4	-0.1
	0.8nm,0.5s,baz=276,slow=4.4,SNR=2.4						
TORD	Torodi Ar. Bea	50.44	130	P	P	02 16 40.8	-0.1
	0.6nm,0.9s,baz=326,slow=8.5,SNR=2.8						
TXAR	Lajitas Array	54.26	272	P	P	02 17 09.3	+0.1
	0.1nm,0.5s,baz=60,slow=6.3,SNR=2.6						
MKAR	Makanchi Array	66.13	42	P	P	02 18 29.9	-0.3
	0.6nm,0.9s,baz=346,slow=4.9,SNR=2.5						
SONM	Songino Array	73.02	26	P	P	02 19 13.3	+0.4
	0.3nm,0.6s,baz=332,slow=4.9,SNR=2.1						
ASAR	Alice Springs	148.15	19	PKPbc	PKPbc	02 27 28.9	0.0
	0.9nm,0.6s,baz=352,slow=2.3,SNR=12						

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*ISCJB **15** 02:08:01.3±0.3, 54°.53N±0°.06×35°.28W±0°.06, h10^{km}, mb4.1/33, MS3.6/5, Error ellipse: s-maj=8.6km s-min=5.0km az=7.9*

*IDC **15** 02:08:02.0±0.7, 54°.57N×35°.28W, h0^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.8/39, mbtmp3.8/15, ML3.8/1, MS3.6/5, Ms1 3.6/5, ms1mx3.3/20, Error ellipse: s-maj=24.7km s-min=14.2km az=4.0*

*NEIC **15** 02:08:03.0±1.9, 54°.52N×35°.22W, h10^{km}±2^{km}, mb4.1/30, Error ellipse: s-maj=17.3km s-min=7.9km az=191.0*

ISC 15 02:08:03.1±0.5, 54°.52N±0°.09×35°.23W±0°.06, h10^{km}, n58, σ1^{s}16/54, mb4.1/33, MS3.5/6, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	8.58	325	ePn	Pn	02 10 00.2	-7.0
NRS				eSn	Sn	02 11 45.7	+1.7
SUMG	Summit	18.18	357	ePn	Pn	02 12 14.3	-1.2
	6.2nm,1.1s						
SCHQ	Schefferville	18.20	284	ePn	Pn	02 12 15.4	-0.3
	4.3nm,0.7s						
EKA	Eskdalemuir Ar	18.36	74	P	P	02 12 18.4	+0.8
	baz=277,slow=8.3,SNR=5.7						
GBN	Guysborough	19.11	252	eP	P	02 12 26.0	+0.2
	16nm,1.1s						
JMIC	Jan Mayen	20.24	25	LR	LR	02 18 13.5	
	comp=Z,182nm,22.0s,baz=227,slow=30						
BATG	Bathurst New B	20.63	262	eP	P	02 12 41.2	-1.2
	12nm,1.1s						
HAL	Halifax	20.75	253	eP	P	02 12 43.8	+0.2
	8.6nm,0.9s						
PQI	Presque Isle	22.08	263	eP	P	02 12 55.4	-2.6
	6.5nm,0.9s						
GGN	Saint George	22.29	258	eP	P	02 13 00.1	-0.2
	17nm,1.0s						
PKME	Peaks-Kenny Pk	23.61	261	eP	P	02 13 13.9	0.0
	12nm,0.9s						
UCC	Uccle	24.07	83	eP	P	02 13 17.6	-0.6
	2.5nm,0.7s						
CLF	Chambon-Foret	24.11	90	eP	P	02 13 17.0	-1.6
	5.2nm,1.1s						
PFVI	Vila Bisbo	25.08	123	eP	P	02 13 26.9	-0.7
	30nm,1.1s						
PAB	San Pablo	25.56	113	eP	P	02 13 30.2	-1.8
	5.3nm,1.1s						
ESDC	Sonseca Array	25.68	112	P	P	02 13 34.3	+1.3
	1.2nm,0.8s,baz=311,slow=8.7,SNR=8.2						
ESLA	Sonseca Array	25.68	112	eP	P	02 13 33.7	+0.7
	3.4nm,1.0s						
TRQ	Mont Tremblant	26.12	268	eP	P	02 13 38.3	+1.2
HFS	Hagfors	26.48	58	LR	LR	02 23 30.4	
	comp=Z,101nm,19.9s,baz=16,slow=35						
GRA1	Grafenberg Arr	28.51	80	eP	P	02 13 56.9	-1.5
	5.2nm,1.0s						
CLL	Collm	28.81	76	e(P)	P	02 14 03.0	+2.1
CLL				LmV		02 31 00.0	
	comp=Z,100nm,20.7s						
CLL				Lm	MLR	04 47 00.0	
	comp=Z,100nm,22.0s						
KBS	Kingsbay	29.10	17	eP	P	02 14 00.2	-3.1
	comp=Z,5.5nm,0.9s						
SADO	Sadowa	29.61	269	P	P	02 14 08.3	+0.2
	comp=Z,1.0nm,0.3s,baz=91,slow=8.8,SNR=3.6						
SADO	Sadowa	29.61	269	eP	P	02 14 08.3	+0.2
	comp=Z,2.6nm,0.8s						
GEC2	GERESS Array S	30.35	80	eP	P	02 14 13.4	-1.4
	comp=Z,1.5nm,1.0s						
GERES	GERESS Array B	30.35	80	P	P	02 14 15.1	+0.3
	comp=Z,0.2nm,0.4s,baz=295,slow=12,SNR=3.6						
MDT	Midelt	30.61	123	P	P	02 14 18.5	+1.3
	comp=Z,2.4nm,0.9s,baz=336,slow=11,SNR=5.0						
MDT				LR	LR	02 25 36.9	
	comp=Z,111nm,18.4s,baz=354,slow=34						
EYMN	Ely	35.00	283	eP	P	02 14 54.1	-1.3
	comp=Z,4.6nm,0.9s						
AKASG	Malin Array Be	38.10	68	P	P	02 15 20.8	-0.9
	comp=Z,0.4nm,0.5s,baz=302,slow=8.5,SNR=5.9						
AKBB	Malin Array Si	38.10	68	eP	P	02 15 20.7	-1.0
	comp=Z,3.7nm,1.0s						
ECSD	EROS Data Cent	40.35	281	eP	P	02 15 41.0	+0.4
	comp=Z,5.6nm,1.1s						
TAM	Tamanrasset	43.90	120	eP	P	02 16 09.8	-0.2
	comp=Z,3.4nm,1.1s						
MIAR	Mount Ida	44.67	268	eP	P	02 16 15.9	+0.1
	comp=Z,9.0nm,1.1s						
BR101	Keskin Array S	47.21	79	eP	P	02 16 37.1	+1.2
BRTR	Keskin Array B	47.21	79	P	P	02 16 37.1	+1.2
	comp=Z,1.7nm,0.9s,baz=317,slow=5.1,SNR=9.3						
WMOK	Wichita Mounta	47.57	273	eP	P	02 16 38.1	-0.5
	comp=Z,3.7nm,1.0s						
PD31	Pinedale Array	48.27	288	eP	P	02 16 43.7	-0.6
PDAR	Pinedale Array	48.27	288	P	P	02 16 43.7	-0.6
	comp=Z,0.3nm,0.5s,baz=63,slow=8.2,SNR=3.1						
KBZ	Khabaz	49.71	68	P	P	02 16 56.1	+1.1
	comp=Z,1.2nm,0.6s,baz=318,slow=5.3,SNR=3.6						
ILAR	Eielson Array	50.07	329	P	P	02 16 57.9	+0.4
	comp=Z,0.6nm,0.9s,baz=56,slow=5.2,SNR=5.0						
ILB	Eielson Array	50.07	329	eP	P	02 16 57.9	+0.4
	comp=Z,2.6nm,1.1s						
TOA1	Torodi Ar. Sit	50.38	131	eP	P	02 17 00.5	+0.2
TORD	Torodi Ar. Bea	50.38	131	P	P	02 17 00.5	+0.1
	comp=Z,2.8nm,1.0s,baz=328,slow=9.9,SNR=8.5						
PAX	Paxson	50.91	326	eP	P	02 17 07.7	+3.8
	comp=Z,9.3nm,0.7s						
SCM	Sheep Creek Mo	52.33	326	eP	P	02 17 14.5	0.0
	comp=Z,14nm,0.7s						
TIXI	Tiksi	53.62	6	eP	P	02 17 23.9	+0.1
	comp=Z,5.9nm,0.8s						
LTX	Lajitas	54.33	272	eP	P	02 17 30.1	+0.4
TXAR	Lajitas Array	54.33	272	P	P	02 17 30.1	+0.4
	comp=Z,0.2nm,0.7s,baz=70,slow=5.2,SNR=3.7						
ROSC	El Rosal	58.74	227	P	P	02 18 01.9	+0.3
	comp=Z,3.1nm,0.7s,baz=83,slow=24,SNR=1.9						
ROSC	El Rosal	58.74	227	eP	P	02 18 00.8	-0.7
	comp=Z,6.2nm,0.9s						
MK32	Makanchi Array	66.09	42	eP	P	02 18 49.9	-0.1
MKAR	Makanchi Array	66.09	42	P	P	02 18 49.9	-0.1
	comp=Z,1.4nm,0.9s,baz=330,slow=7.0,SNR=7.0						
TLY	Talaya	68.75	26	LR	LR	02 49 17.2	
	comp=Z,95nm,21.1s,baz=6.0,slow=36						
PETK	Petropavlovsk-	72.20	352	LR	LR	02 53 20.5	
	comp=Z,33nm,18.2s,baz=0.1,slow=38						
SONA0	Songino Array	72.99	26	eP	P	02 19 33.3	+0.6
SONM	Songino Array	72.99	26	P	P	02 19 33.3	+0.6
	comp=Z,1.4nm,1.0s,baz=339,slow=6.3,SNR=6.5						
AS31	Alice Springs	148.13	19	ePKPbc	PKPbc	02 27 49.1	+0.2
ASAR	Alice Springs	148.13	19	PKPbc	PKPbc	02 27 49.1	+0.2
	comp=Z,2.6nm,0.8s,baz=337,slow=2.0,SNR=17						

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*NEIC **15** 02:16:20.4±0.0, 61°.58N×141°.09W, h11^{km}, ML2.8(OTT), ML2.8(AEIC), After AEIC.*

PGC 15 02:16:21.9±0.0, 61°.58N×141°.07W, h1^{km}, ML2.8/10, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK3	Moose Creek	0.35	55	ePg	Pg	02 16 27.9	-0.8
YUK3				eSg	Sg	02 16 32.9	-0.4
YUK3	Moose Creek	0.35	55	P	Pg	02 16 27.9	-0.8
YUK3				S	Sg	02 16 32.9	-0.4
YUK1	Sand Pete Hill	0.63	24	ePg	Pg	02 16 32.8	-1.3
YUK1				eSg	Sg	02 16 42.2	0.0
YUK1	Sand Pete Hill	0.63	24	P	Pg	02 16 32.8	-1.3
YUK1				S	Sg	02 16 42.2	0.0
PTPK	Patty Peak	0.78	240	ePg	Pg	02 16 35.7	-1.0
PTPK				eSg	Sg	02 16 46.1	-0.6
PTPK	Patty Peak	0.78	240	P	Pg	02 16 35.7	-1.0
PTPK				S	Sg	02 16 46.1	-0.6
BALM	Baldy	0.82	229	ePg	Pg	02 16 36.1	-1.4
BALM				eSg	Sg	02 16 45.6	-2.5
BALM	Baldy	0.82	229	P	Pg	02 16 36.0	-1.5
BALM				S	Sg	02 16 47.3	-0.8
BVCY	Beaver Creek	0.85	7	P	Pg	02 16 36.9	-1.2
BVCY				S	Sg	02 16 48.8	-0.3
KIAG	Kiagna River	0.90	224	P	Pg	02 16 37.4	-1.7
KIAG				S	Sg	02 16 50.0	-0.8
TABL	Table Mountain	1.14	182	P	Pg	02 16 42.0	-1.7
TABL				S	Sg	02 16 57.6	-0.8
YUK4	Talbot Arm	1.19	100	P	Pg	02 16 43.2	-1.4
YUK4				S	Sg	02 16 60.0	0.0
YUK6	Outpost Mounta	1.46	115	Pn	Pn	02 16 47.8	-1.7
YUK6				Sg	Sg	02 17 07.8	-0.8
SAMH	Samovar Hills	1.46	174	Pn	Pn	02 16 48.6	-0.8
SAMH				Sg	Sg	02 17 07.9	-0.8
MESA	MESA	1.47	197	Pn	Pn	02 16 48.6	-1.0
MESA				Sg	Sg	02 17 08.5	-0.5
CHX	Chaix Hills	1.52	181	ePn	Pn	02 16 50.2	-0.1
BCA3	Beaver Creek A	1.53	348	ePn	Pn	02 16 48.9	-1.5
PCA	Pinnacle	1.54	165	ePn	Pn	02 16 49.8	-0.7
PCA				eSn	Sn	02 17 10.7	-0.4
PCA	Pinnacle	1.54	165	Pn	Pn	02 16 49.8	-0.7
PCA				Sg	Sn	02 17 10.8	-0.4
YUK5	Granite Creek	1.61	105	Pn	Pn	02 16 50.2	-1.4
YUK5				Sg	Sn	02 17 11.3	-1.7
YUK7	Dusty Glacier	1.77	125	Pn	Pn	02 16 53.8	-0.1
YUK7				Sg	Sn	02 17 16.5	-0.6
BCPM	Bancas Point	1.77	156	ePn	Pn	02 16 54.1	+0.4
MENT	Mentasta	1.84	319	ePn	Pn	02 16 53.0	-1.6
HYT	Haines Junctio	1.89	112	ePn	Pn	02 16 55.0	-0.3
HYT	Haines Junctio	1.89	112	Pn	Pn	02 16 54.4	-0.9
HYT				Sg	Sn	02 17 19.8	0.0
HMT	Hamilton	1.99	233	ePg	Pb	02 16 57.9	-0.9
PNL	Peninsula	2.08	156	ePn	Pn	02 16 58.0	0.0
PNL	Peninsula	2.08	156	Pn	Pn	02 16 57.8	-0.2
PNL				Sg	Sb	02 17 27.5	+0.6
PAX	Paxson	2.49	306	ePn	Pn	02 17 01.8	-1.7
PAX				eSn	Sn	02 17 25.0	-10
PAX	Paxson	2.49	306	Sg	Sb	02 17 37.8	-0.7
EYAK	Cordova Ski Ar	2.50	248	ePg	Pb	02 17 06.3	-1.1
EYAK				eSn	Sn	02 17 27.6	-7.0
DOT	Dot Lake	2.50	328	ePn	Pn	02 17 02.0	-1.7
DOT	Dot Lake	2.50	328	Pn	Pn	02 17 02.1	-1.6
DOT				Pg	Pb	02 17 07.0	-0.5
DOT				Sg	Sb	02 17 39.6	+0.8
DAWY	Dawson	2.62	16	ePn	Pn	02 17 04.1	-1.2
DAWY	Dawson	2.62	16	Pn	Pn	02 17 04.0	-1.3
DAWY				Sg	Sb	02 17 42.7	+0.6
JPK	Jack Peak	2.71	261	ePn	Pn	02 17 06.7	0.0
FID	Port Fidalgo	2.75	255	ePn	Pn	02 17 08.3	+1.2
SCRK	Sand Creek	2.76	332	ePn	Pn	02 17 05.4	-1.9
GLI	Glacier Island	3.00	259	ePn	Pn	02 17 10.5	0.0
PLBC	Pleasant Camp	3.15	130	Pg	Pb	02 17 18.6	0.0
PLBC				Sg	Sb	02 17 59.5	+1.9
EGAK	Eagle	3.21	359	ePn	Pn	02 17 13.5	0.0
SKAG	Skagway	3.54	124	ePn	Pn	02 17 18.2	+0.2
HDA	Harding Lake	3.91	319	ePn	Pn	02 17 21.1	-1.9
BESE	Bessie Mountai	4.33	131	ePn	Pn	02 17 28.5	-0.3
BESE	Bessie Mountai	4.33	131	Sg	Sg	02 18 36.8	-4.0
SEW	Seward	4.36	254	ePn	Pn	02 17 27.8	-1.3
COLA	College	4.51	320	ePn	Pn	02 17 30.3	-0.9
BWN	Browne	4.64	308	ePn	Pn	02 17 30.1	-3.0
BM3	Burnt Mountain	6.06	347	ePn	Pn	02 17 52.2	-0.4
DLBC	Dease Lake	6.37	115	Sg	Sg	02 19 39.4	-6.9
COLD	Coldfoot	6.91	329	Sn	Sn	02 19 18.7	-4.6
INK	Inuvik	7.47	22	Sn	Sn	02 19 30.3	-6.8

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*NEIC **15** 02:20:56.9±0.0, 41°.45S×172°.70E, h97^{km}, ML4.0(WEL), After WEL.*

WEL 15 02:20:56.7, 41°S±2°×17°3E±°, h106^{km}±4^{km}, M4.3/48, MLv4.3/48, Error ellipse: s-maj=0.0km s-min=0.0km az=80.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	Tophouse	0.28	170	ePn	Pn	02 21 12.1	0.0
THZ				eSn	Sn	02 21 21.5	-2.0
THZ	Tophouse	0.28	170	P	Pn	02 21 12.0	0.0
THZ				S	Sn	02 21 23.0	-0.4
NNZ	Nelson	0.49	56	P	Pn	02 21 13.2	+0.2
NNZ				S	Sn	02 21 25.2	-0.1
QRZ	Quartz Range	0.70	340	P	Pn	02 21 14.0	-0.8
BSWZ	Blackbirch Sta	0.81	107	P	Pn	02 21 16.8	+1.1
DSZ	Denniston Nort	0.82	251	P	Pn	02 21 14.9	-0.9
DSZ				S	Sn	02 21 27.2	-3.0
TUWZ	Tuamarina	0.83	86	P	Pn	02 21 17.0	+1.2
TUWZ				S	Sn	02 21 31.1	+0.8
CMWZ	Cape Campbell	1.06	105	P	Pn	02 21 22.3	+4.1
KHZ	Kahutara	1.06	151	ePn	Pn	02 21 19.1	+0.9
KHZ	Kahutara	1.06	151	P	Pn	02 21 19.1	+0.9
DUWZ	D'Urville Isla	1.07	50	P	Pn	02 21 19.2	+0.9
TCW	Tory Channel	1.12	76	P	Pn	02 21 19.8	+1.0
LTZ	Lake Taylor	1.36	198	ePn	Pn	02 21 21.9	+0.2
LTZ	Lake Taylor	1.36	198	P	Pn	02 21 21.9	+0.2
LTZ				S	Sn	02 21 39.3	-1.3
SNZO	South Karori	1.41	83	ePn	Pn	02 21 22.5	+0.3
SNZO				eSn	Sn	02 21 42.6	+1.0
GVZ	Greta Valley S	1.48	175	P	Pn	02 21 23.6	+0.5
BHW	Baring Head	1.53	88	P	Pn	02 21 23.6	0.0
INZ	Inchbonnie	1.61	220	P	Pn	02 21 24.2	-0.4
AMCZ	Amberley	1.69	185	P	Pn	02 21 25.7	+0.1
CAW	Cannon Point	1.72	78	P	Pn	02 21 26.0	0.0
MSWZ	Moikau Station	1.81	88	P	Pn	02 21 26.8	-0.3
PLWZ	Palliser	1.81	93	P	Pn	02 21 26.8	-0.3
OGWZ	Otaki Gorge	1.88	70	P	Pn	02 21 28.2	+0.2
OXZ	Oxford	1.93	198	ePn	Pn	02 21 27.9	-0.7
OXZ	Oxford	1.93	198	P	Pn	02 21 27.9	-0.7
PAWZ	Paruwai Farm	1.95	88	P	Pn	02 21 28.3	-0.6
MTW	Mount Morrison	2.03	81	P	Pn	02 21 29.3	-0.6
CRLZ	Canterbury Las	2.09	184	ePn	Pn	02 21 30.3	-0.3
CRLZ	Canterbury Las	2.09	184	P	Pn	02 21 30.3	-0.3
HOWZ	Holdsworth Sta	2.10	75	P	Pn	02 21 30.3	-0.5
MQZ	McQueen's Vall	2.22	184	ePn	Pn	02 21 31.5	-0.8
MQZ				eSn	Sn	02 21 56.9	-2.7
MQZ	McQueen's Vall	2.22	184	P	Pn	02 21 31.3	-1.0
WVZ	Waitaha Valley	2.22	224	P	Pn	02 21 31.8	-0.6
MRZ	Mangatainoka R	2.23	69	P	Pn	02 21 31.9	-0.5
OKCZ	Okains Bay	2.24	176	P	Pn	02 21 32.5	-0.1
OHWZ	Ohakea	2.27	56	P	Pn	02 21 34.5	+1.5
LREZ	Lake Rotokare	2.35	31	P	Pn	02 21 35.7	+1.7
NBEZ	Newall Road No	2.35	20	P	Pn	02 21 35.2	+1.1
KHEZ	Kahui Hut	2.37	23	P	Pn	02 21 35.4	+1.0
PREZ	Palmer Road	2.37	26	P	Pn	02 21 35.5	+1.2
WAZ	Wanganui	2.38	44	P	Pn	02 21 36.1	+1.7
AKCZ	Akaroa Harbour	2.38	179	P	Pn	02 21 34.0	-0.4
TIWZ	Tintock	2.41	74	P	Pn	02 21 34.1	-0.7
PKE	Pukeiti	2.46	21	P	Pn	02 21 36.4	+0.9
POWZ	Post Office Ro	2.47	65	P	Pn	02 21 36.3	+0.7
DREZ	Durham Road	2.52	25	P	Pn	02 21 36.9	+0.6
PRWZ	Pori Road	2.54	69	P	Pn	02 21 35.9	-0.7
RPZ	Rata Peaks	2.59	210	ePn	Pn	02 21 36.5	-0.6
RPZ	Rata Peaks	2.59	210	P	Pn	02 21 36.3	-0.9
BFZ	Birch Farm	2.70	74	ePn	Pn	02 21 37.6	-1.0
BFZ	Birch Farm	2.70	74	P	Pn	02 21 37.5	-1.1
VRZ	Vera Road	2.78	32	P	Pn	02 21 40.8	+1.1
DVHZ	Dannevirke	2.79	66	P	Pn	02 21 38.9	-0.9
MTVZ	Mangateitei	2.91	45	P	Pn	02 21 43.2	+1.8
PKVZ	Pokaka	2.91	42	P	Pn	02 21 42.8	+1.2
FOZ	Fox Glacier	3.03	227	ePn	Pn	02 21 42.1	-0.8
FOZ				eSn	Sn	02 22 12.1	-6.4
FOZ	Fox Glacier	3.03	227	P	Pn	02 21 41.8	-1.1
DRZ	Dome Shelter	3.04	44	P	Pn	02 21 45.5	+2.1
WHVZ	Whangaehu Hut	3.04	44	P	Pn	02 21 43.8	+0.4
MOVZ	Moawhango	3.04	48	P	Pn	02 21 42.7	-0.5
FWVZ	Far West T-bar	3.04	44	P	Pn	02 21 43.8	+0.3
TUVZ	Tukino	3.09	45	P	Pn	02 21 44.4	+0.5
TWVZ	Taurewa	3.13	40	P	Pn	02 21 45.0	+0.6
NGZ	Ngauruhoe	3.13	43	P	Pn	02 21 45.9	+1.5
BHHZ	Black Hill Sta	3.17	52	P	Pn	02 21 44.4	-0.5
WTVZ	West Tongariro	3.17	42	P	Pn	02 21 45.1	+0.1
KRVZ	Karewarewa	3.21	43	P	Pn	02 21 45.7	+0.2
KRHZ	Kereru	3.26	57	P	Pn	02 21 45.1	-1.0
KATZ	Kakaramea	3.33	42	P	Pn	02 21 48.6	+1.4
HIZ	Hauiti	3.35	28	ePn	Pn	02 21 47.6	+0.3
HIZ	Hauiti	3.35	28	P	Pn	02 21 47.5	+0.2
KWHZ	Kaweka Forest	3.42	54	P	Pn	02 21 48.1	-0.2
RATZ	Rangitukua	3.45	42	P	Pn	02 21 50.2	+1.6
LBZ	Lake Benmore	3.49	213	ePn	Pn	02 21 47.7	-1.4
LBZ				eSn	Sn	02 22 20.5	-9.1
LBZ	Lake Benmore	3.49	213	P	Pn	02 21 47.1	-2.0
KAHZ	Kahuranaki	3.51	62	P	Pn	02 21 49.1	-0.3
WATZ	Wairara	3.56	40	P	Pn	02 21 51.5	+1.4
BKZ	Black Stump Fm	3.63	51	ePn	Pn	02 21 50.2	-0.9
BKZ	Black Stump Fm	3.63	51	P	Pn	02 21 50.0	-1.1
TLZ	Tolley Road	3.78	34	P	Pn	02 21 53.9	+0.8
ODZ	Otahua Downs	3.90	204	ePn	Pn	02 21 53.6	-1.0
ODZ				eSn	Sn	02 22 32.6	-6.8
ODZ	Otahua Downs	3.90	204	P	Pn	02 21 53.3	-1.3
JCZ	Jackson Bay	3.95	228	P	Pn	02 21 54.0	-1.3
MTHZ	Maungataniwha	4.04	51	P	Pn	02 21 54.7	-1.9
TOZ	Tahuroa Road	4.28	30	P	Pn	02 21 59.8	+0.1
WKZ	Wanaka	4.35	219	ePn	Pn	02 21 58.9	-1.8
WKZ	Wanaka	4.35	219	P	Pn	02 21 58.2	-2.5
EAZ	Earnscleugh	4.54	213	P	Pn	02 22 01.1	-2.1
URZ	Urewera	4.60	47	ePn	Pn	02 22 04.4	+0.3
URZ	Urewera	4.60	47	P	Pn	02 22 01.4	-2.7
AWAZ	Awhitu Peninsu	4.64	18	P	Pn	02 22 05.5	+0.9
HHSZ	Highcliff Hill	4.68	200	P	Pn	02 22 04.7	-0.5
MKAZ	Moumakai	4.74	23	P	Pn	02 22 06.5	+0.6
WTAZ	Waiatarua	4.75	17	P	Pn	02 22 07.3	+1.3
MWZ	Matawai	4.79	50	P	Pn	02 22 05.7	-0.9
ETAZ	East Tamaki Re	4.81	20	P	Pn	02 22 07.2	+0.3
WIAZ	Waiheke Island	5.02	22	P	Pn	02 22 10.5	+0.8
TUZ	Tuapeka	5.03	206	P	Pn	02 22 08.2	-1.6
TWGZ	Tauwhareparae	5.16	52	P	Pn	02 22 10.1	-1.6
MLZ	Mavora Lakes	5.18	220	ePn	Pn	02 22 09.4	-2.5
MLZ	Mavora Lakes	5.18	220	P	Pn	02 22 09.3	-2.6
KUZ	Kuaotunu	5.24	26	P	Pn	02 22 12.7	0.0
HAZ	Te Kaha	5.33	47	P	Pn	02 22 13.7	-0.3
WHZ	Wether Hill Ro	5.65	217	ePn	Pn	02 22 14.9	-3.4
WHZ	Wether Hill Ro	5.65	217	P	Pn	02 22 16.4	-1.8
WCZ	Waipu Caves	5.67	12	P	Pn	02 22 18.9	+0.4
SYZ	Scrubby Hill	5.71	207	P	Pn	02 22 17.4	-1.6
DCZ	Deep Cove	5.74	224	ePn	Pn	02 22 15.3	-4.0

DCZ	**Deep Cove**	**5.74**	**224**	P	Pn	02 22 18.1	-1.3
OUZ	**Omahuta**	**6.29**	**6**	*e*Pn	Pn	02 22 26.2	-0.7
OUZ				*e*Sn	Sn	02 23 32.3	-5.0
OUZ	**Omahuta**	**6.29**	**6**	P	Pn	02 22 27.5	+0.5
APZ	**The Paps**	**6.38**	**212**	P	Pn	02 22 25.8	-2.3

NIED ***15*** *02:29:00, 38°.90N×142°.50E, h38^{km}, Mw3.7 Best double couple: M$_0$4.63000×10^{14} NP1:ϕ_s140.00000°, δ35.00000°, λ-90.00000°. NP2:ϕ_s320.00000°, δ55.00000°, λ-90.00000°.*

IDC ***15*** *02:29:42.1±0.9, 38°.82N×142°.53E, h0^{km}, mb3.6/5, mb1 3.8/8, mb1mx3.6/35, mbtmp3.6/8, ML3.2/3, MS2.5/3, Ms1 2.5/3, ms1mx2.2/45, Error ellipse: s-maj=31.6km s-min=18.8km az=113.0*

ISCJB ***15*** *02:29:44.1±1.1, 38°.93N±0°.04×142°.54E±0°.07, h23^{km}±7^{km}, mb3.7/5, MS2.6/1, Error ellipse: s-maj=9.1km s-min=5.6km az=22.0*

JMA ***15*** *02:29:46.0±0.1, 38°.97N×142°.46E, h30^{km}±2^{km}, M3.7*

JMA Felt I J1.

ISC 15 02:29:43.9±3.6**, 38°.90N**±0°.04×**142°.48E**±0°.07**, h13**^{km}±22^{km}**, n27,** σ**1^{s}.45**/33**, mb3.8**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.66**	**286**	P	**Pn**	**02 29 58.3**	**-0.6**
OFUJ				S	**Sb**	**02 30 06.7**	**+0.4**
JKMT	**Kesennumamotoy**	**0.79**	**264**	P	**Pn**	**02 30 00.5**	**-0.2**
JKMT				S	**Sb**	**02 30 10.4**	**+0.3**
MIYJ	**Miyakonagasawa**	**0.85**	**323**	P	**Pb**	**02 30 00.3**	**-0.2**
MIYJ				S	**Sb**	**02 30 10.2**	**-1.6**
JMK	**Ichinoseki**	**0.98**	**273**	P	**Pn**	**02 30 03.5**	**+0.1**
JMK				S	**Sb**	**02 30 15.8**	**+0.1**
JIO	**Ouri**	**0.99**	**244**	P	**Pn**	**02 30 03.5**	**0.0**
JIO				S	**Sb**	**02 30 15.9**	**0.0**
JOM	**Ohasama**	**1.08**	**302**	P	**Pb**	**02 30 04.7**	**+0.2**
JOM				S	**Sb**	**02 30 17.9**	**-0.7**
JTH	**Tanohata**	**1.14**	**335**	P	**Pn**	**02 30 04.9**	**-0.7**
JKZ	**Kuzumaki**	**1.40**	**321**	P	**Pn**	**02 30 09.5**	**+0.3**
JRG	**Rokugo**	**1.52**	**290**	P	**Pb**	**02 30 11.8**	**-0.1**
JRG				*e*S	**Sn**	**02 30 30.3**	**-0.1**
JOU	**Okura**	**1.52**	**250**	P	**Pb**	**02 30 12.0**	**0.0**
JOU				*e*S	**Sb**	**02 30 31.4**	**+0.3**
JANG	**Nango**	**1.65**	**333**	P	**Pn**	**02 30 12.6**	**0.0**
JANG				*e*S	**Sn**	**02 30 33.1**	**-0.5**
MJAR	**Matsushiro Arr**	**4.12**	**236**	Pn	**Pn**	**02 30 47.7**	**+1.1**
	0.4nm,0.3s,baz=38,slow=12,SNR=16						
MJAR				Sn	**Sb**	**02 31 41.0**	**-5.2**
	0.0nm,0.3s,baz=74,slow=19,SNR=2.5						
MJAR				LR	LR	02 32 09.5	
	comp=Z,22nm,19.9s,baz=70,slow=36						
MAT	**Matsushiro**	**4.12**	**237**	P	**Pn**	**02 30 50.3**	**+3.6**
MAT				*e*S	**Sn**	**02 31 36.2**	**+1.4**
ASAJ	**Asahikawa**	**5.21**	**1**	Pn	**Pn**	**02 31 01.3**	**-0.2**
	0.7nm,0.3s,baz=158,slow=18,SNR=4.3						
ASAJ				Sn	**Sn**	**02 32 01.0**	**-0.5**
	0.6nm,0.3s,baz=194,slow=29,SNR=1.6						
ASAJ				LR	LR	02 33 28.4	
	comp=Z,44nm,18.6s,baz=12,slow=43						
JHJ	**Hachijo jima 2**	**6.17**	**202**	Pn	**Pn**	**02 31 12.5**	**-2.2**
	7.0nm,0.3s,baz=12,slow=20,SNR=2.4						
JHJ				Sn	**Sn**	**02 32 22.9**	**-2.3**
	8.8nm,0.3s,baz=77,slow=23,SNR=1.5						
MA2	**Magadan**	**21.36**	**12**	LR	LR	02 42 02.0	
	comp=Z,25nm,19.6s,baz=212,slow=34						
H11N2	**WAKE ISLAND Hy**	**28.46**	**125**	T	T	03 05 31.0	
	baz=317,slow=75,SNR=171						
H11N1	**WAKE ISLAND Hy**	**28.47**	**125**	T	T	03 05 33.1	
	baz=317,slow=75,SNR=112						
H11N3	**WAKE ISLAND Hy**	**28.48**	**125**	T	T	03 05 35.9	
	baz=317,slow=75,SNR=122						
H11S1	**WAKE ISLAND Hy**	**29.24**	**127**	T	T	03 07 02.4	
	baz=318,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**29.24**	**127**	T	T	03 07 02.7	
	baz=318,slow=76,SNR=37						
H11S2	**WAKE ISLAND Hy**	**29.26**	**127**	T	T	03 07 04.3	
	baz=318,slow=76,SNR=26						
MKAR	**Makanchi Array**	**43.87**	**301**	P	**P**	**02 37 50.3**	**+0.5**
	1.2nm,0.7s,baz=86,slow=9.7,SNR=11						
ILAR	**Eielson Array**	**47.47**	**33**	P	**P**	**02 38 19.4**	**+1.4**
	0.5nm,0.8s,baz=290,slow=4.6,SNR=5.6						
WRA	**Warramunga Arr**	**59.03**	**189**	P	**P**	**02 39 43.2**	**-0.3**
	1.3nm,0.6s,baz=354,slow=7.1,SNR=7.3						
ASAR	**Alice Springs**	**62.76**	**189**	P	**P**	**02 40 08.5**	**-0.4**
	0.5nm,0.6s,baz=1.8,slow=5.1,SNR=7.2						
NVAR	**Mina Array Bea**	**73.20**	**54**	P	**P**	**02 41 15.1**	**+0.3**
	0.1nm,0.3s,baz=291,slow=7.6,SNR=2.3						

NNC 15 02:33:48.0±5.3**, 37°.79N**×**71°.35E, h0**^{km}**, mb3.8, mpv3.3, 4C, Error ellipse: s-maj=36.3km s-min=28.8km az=12.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**4.47**	**347**	Pg	Pg	02 35 11.9	-1.8
	2.2nm,0.3s						
IUG				Lg	Lg	02 36 13.8	
	47nm,0.4s						
MRKS	**Merke**	**5.16**	**16**	Pg	Pg	02 35 23.9	-2.8
	3.9nm,0.3s						
MRKS				Lg	Lg	02 36 35.0	
	13nm,0.3s						
KK31	**Karatay Array**	**5.35**	**353**	Pg	Pb	02 35 24.2	+1.9
	0.5nm,0.1s,baz=181,slow=11,SNR=5.8						
KK31				Lg	Lg	02 36 35.6	
	0.7nm,0.3s,baz=194,slow=17,SNR=7.4						
BRLS	**Borolday**	**5.36**	**348**	Pg	Pb	02 35 19.9	-2.7
	0.7nm,0.4s						
BRLS				Lg	Lg	02 36 27.0	
	5.5nm,0.4s						
AAK	**Ala-Archa**	**5.41**	**25**	⇑Pg	Pb	02 35 26.2	+2.8
	0.9nm,0.5s						
AAK				⇑Lg	Lg	02 36 40.9	
	8.1nm,0.7s						
TKM2	**Tokmak 2**	**6.07**	**31**	⇑Pg	Pb	02 35 38.4	+3.7
	1.0nm,0.4s						
TKM2				⇑Lg	Lg	02 36 59.0	
	1.6nm,0.7s						
SGDS	**Sogindy**	**6.18**	**23**	Pg	Pb	02 35 39.0	+2.5
	1.9nm,0.4s						
SGDS				Lg	Lg	02 37 01.5	
	2.5nm,0.4s						

NEIC ***15*** *02:36:51.0±0.0, 0°.65S×81°.00W, h17^{km}, mb4.3/5, MD4.5(IGQ), After IGQ.*

NEIC Felt in Manabi.

ISCJB ***15*** *02:36:55.4±0.8, 0°.73S±0°.04×80°.55W±0°.06, h10^{km}, Error ellipse: s-maj=8.7km s-min=5.1km az=9.5*

IGQ ***15*** *02:36:56.5±0.4, 1°S±2°×8°0W±°, h10^{km}, MLv4.2*

ISC 15 02:36:54.2±1.2**, 0°.78S**±0°.04×**80°.57W**±0°.07**, h10**^{km}**, n64,** σ**1^{s}.81**/60**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**1.06**	**48**	P	**Pg**	**02 37 15.2**	**+0.6**
AQUE	**Quevedo**	**1.11**	**104**	P	**Pg**	**02 37 15.8**	**+0.3**
AQUE				S	**Sg**	**02 37 29.6**	**-0.3**
SALI	**Salinas**	**1.46**	**197**	P	**Pn**	**02 37 22.6**	**+2.0**
PTGL	**Punta Galera**	**1.64**	**19**	P	**Pn**	**02 37 25.2**	**+2.1**
MILO	**Milagro-Astudi**	**1.80**	**146**	P	**Pn**	**02 37 25.7**	**+0.4**
MILO				S	**Sn**	**02 37 46.9**	**-1.3**
ILLI	**Illinizas Sur**	**1.84**	**88**	P	**Pn**	**02 37 25.7**	**-0.6**
ILLI				S	**Sn**	**02 37 46.0**	**-3.9**
MORR	**Playas El Morr**	**1.86**	**173**	P	**Pn**	**02 37 28.8**	**+2.6**
IGUA	**Igualata**	**2.05**	**110**	P	**Pn**	**02 37 30.6**	**+1.3**
TERV	**Terraza Guagua**	**2.05**	**73**	P	**Pn**	**02 37 29.5**	**+0.2**
PAC1	**Pacto, Paraso**	**2.06**	**60**	P	**Pn**	**02 37 27.4**	**-1.5**
GGPC	**Guagua Pichinc**	**2.06**	**73**	P	**Pn**	**02 37 29.3**	**-0.1**
BNAS	**Cotopaxi Volca**	**2.09**	**87**	P	**Pn**	**02 37 30.9**	**+1.1**
YANA	**Yana**	**2.10**	**72**	P	**Pn**	**02 37 29.4**	**-0.5**
BMOR	**Cotopaxi Volca**	**2.11**	**89**	P	**Pn**	**02 37 31.3**	**+1.3**
BREF	**Cotopaxi Volca**	**2.13**	**87**	P	**Pn**	**02 37 32.3**	**+1.9**
COHC	**Cochancay**	**2.13**	**142**	P	**Pn**	**02 37 30.9**	**+1.1**
PITA	**Cotopaxi Volc**	**2.14**	**84**	P	**Pn**	**02 37 31.9**	**+1.4**
BVC2	**Cotopaxi Volca**	**2.16**	**87**	P	**Pn**	**02 37 32.3**	**+1.5**
VC1	**Cotopaxi 1**	**2.17**	**86**	P	**Pn**	**02 37 32.1**	**+1.2**
BTAM	**Cotopaxi Volca**	**2.17**	**87**	P	**Pn**	**02 37 32.5**	**+1.6**
PIS1	**Pisayambo**	**2.20**	**97**	P	**Pn**	**02 37 34.0**	**+2.8**
PISA	**Pisayambo**	**2.20**	**97**	P	**Pn**	**02 37 33.0**	**+1.7**
BMAS	**Trigal station**	**2.21**	**109**	P	**Pn**	**02 37 33.4**	**+2.1**
POND	**Pondoa**	**2.21**	**107**	P	**Pn**	**02 37 33.1**	**+1.9**
PULU	**Pululahua**	**2.21**	**69**	P	**Pn**	**02 37 31.4**	**0.0**
RETU	**Refugio**	**2.22**	**107**	P	**Pn**	**02 37 33.2**	**+1.6**
COV1	**Cotopaxi Volc**	**2.22**	**87**	P	**Pn**	**02 37 32.5**	**+0.7**
ARRY	**Arrayan**	**2.23**	**109**	P	**Pn**	**02 37 33.7**	**+2.1**
BRUN	**Tungurahua Vol**	**2.25**	**107**	P	**Pn**	**02 37 33.1**	**+1.4**
PAT1	**Patacocha**	**2.25**	**109**	P	**Pn**	**02 37 33.8**	**+1.9**
BPAT	**Tungurahua Vol**	**2.25**	**109**	P	**Pn**	**02 37 34.1**	**+2.1**
BULB	**Ulba Tungurahu**	**2.25**	**107**	P	**Pn**	**02 37 33.8**	**+1.9**
ANTG	**Antisana-Guama**	**2.33**	**83**	P	**Pn**	**02 37 34.6**	**+1.5**
ANTS	**Antisana-Sarah**	**2.41**	**83**	P	**Pn**	**02 37 34.9**	**+0.6**
CUSE	**Cuicocha Este**	**2.42**	**64**	P	**Pn**	**02 37 34.5**	**+0.2**
ANTI	**Antisana**	**2.43**	**82**	P	**Pn**	**02 37 35.5**	**+1.0**
CUIC	**Cuicocha-Domo**	**2.45**	**64**	P	**Pn**	**02 37 34.1**	**-0.6**
CUIC				S	**Sn**	**02 38 02.8**	**-2.1**
CUSW	**Cuicocha Oeste**	**2.45**	**64**	P	**Pn**	**02 37 34.7**	**0.0**
IMBA	**Imbabura, San**	**2.59**	**66**	P	**Pn**	**02 37 38.1**	**+1.5**
URCU	**Urcuqui**	**2.61**	**62**	P	**Pn**	**02 37 37.4**	**+0.6**
YAHU	**Yahuarcocha**	**2.74**	**65**	P	**Pn**	**02 37 40.6**	**+1.9**
ARDO	**Archidona, Ten**	**2.77**	**94**	P	**Pn**	**02 37 41.6**	**+2.8**
MCRA	**Macar, Loja**	**3.62**	**170**	P	**Pn**	**02 37 49.4**	**-1.0**
ZUMB	**Zumba**	**4.30**	**161**	P	Pn	02 38 05.2	+5.4
CRUC	**La Cruz**	**4.30**	**57**	*e*P	**Pn**	**02 38 02.5**	**+2.4**
BBAC	**Balboa, Cauca**	**4.33**	**50**	*e*P	**Pn**	**02 38 00.2**	**-0.1**
BBAC				*e*S	**Sn**	**02 38 54.1**	**+3.0**
SOTA	**Rioblanco**	**4.90**	**54**	*e*P	**Pn**	**02 38 10.1**	**+1.6**
SOTA				*e*S	**Sn**	**02 38 60.0**	**-5.6**
POPC	**Popayan, Colom**	**5.10**	**50**	*e*P	**Pn**	**02 38 12.2**	**+1.2**
PCON	**Cinco Dias**	**5.19**	**53**	*e*P	**Pn**	**02 38 14.1**	**+1.6**
MALC	**Bahia Malaga**	**5.75**	**34**	*e*P	Pn	02 38 25.5	+5.8
YOTC	**Yotoco, Valle**	**6.34**	**42**	*e*P	**Pn**	**02 38 28.8**	**+0.9**
ORTC	**Ortega, Tolima**	**7.07**	**49**	*e*P	Pn	02 38 43.5	+5.6
MACC	**Macarena, Meta**	**7.32**	**67**	*e*P	**Pn**	**02 38 44.1**	**+2.9**
RREF	**El Recreo**	**7.68**	**43**	*e*P	Pn	02 38 53.4	+6.6
GUY2C	**Guyana, Caldas**	**7.91**	**41**	*e*P	Pn	02 38 55.4	+5.7
ROSC	**El Rosal**	**8.37**	**48**	*e*Pn	**Pn**	**02 38 57.3**	**+1.3**
NNA	**Nana**	**11.73**	**162**	*e*Pn	**Pn**	**02 39 40.2**	**-1.7**
NNA				*e*Sn	Sn	02 41 36.3	-17
ESPN	**Las Esperanzas**	**13.41**	**344**	*e*Pn	Pn	02 39 56.3	-8.5
ACON	**Acoyapa**	**13.47**	**340**	*e*Pn	Pn	02 40 02.2	-3.3
LPAZ	**La Paz**	**19.69**	**142**	*e*P	**P**	**02 41 23.4**	**-1.0**
	12nm,1.8s						
CRPR	**Cabo Rojo, PR**	**22.89**	**35**	*e*P	**P**	**02 41 59.9**	**+1.7**
	32nm,1.1s						
CBYP	**Canovanas**	**23.83**	**37**	*e*P	P	02 42 01.8	-5.9
	25nm,1.4s						
PB10	**IPOC Station P**	**24.60**	**157**	*e*P	P	02 42 09.5	-5.3
	82nm,1.4s						
E38A	**The Farm, Brul**	**48.17**	**350**	*e*P	P	02 45 24.6	-10
	77nm,0.1s						

ISCJB ***15*** *03:51:26.1±0.4, 7°.28N±0°.03×124°.84E±0°.03, h28^{km}±4^{km}, mb3.7/7, MS3.0/4, Error ellipse: s-maj=5.5km s-min=5.0km az=25.6*

MAN ***15*** *03:51:26.1, 7°.37N×124°.92E, h21^{km}, mb5.6, ML4.6, MS4.9*

IDC ***15*** *03:51:28.9±2.8, 7°.25N×125°.05E, h41^{km}±26^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.5/33, mbtmp3.9/7, MS3.1/7, Ms1 3.1/7, ms1mx2.8/42, Error ellipse: s-maj=47.3km s-min=16.8km az=76.0*

ISC 15 03:51:26.2±1.0**, 7°.29N**±0°.03×**124°.88E**±0°.03**, h18**^{km}±3^{km}**, n29,** σ**1^{s}.55**/34**, mb3.8**/7**, MS3.0**/4**, 5C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.35**	**143**	⇑*i*P	**Pb**	**03 51 34.2**	**+0.1**
KCP				*i* S	**Sb**	**03 51 40.4**	**+1.1**
BUKP	**Musuan**	**0.61**	**17**	*e*P	**Pg**	**03 51 37.5**	**-1.0**
BUKP				*e*S	**Sg**	**03 51 46.8**	**+0.1**
CTBH	**Cotabato--PC H**	**0.63**	**264**	⇓*i*P	**Pg**	**03 51 37.0**	**-1.8**
CTBH				*i* S	**Sg**	**03 51 45.6**	**-1.6**
DMPH	**Davao City--Mi**	**0.66**	**108**	⇓*i*P	**Pg**	**03 51 39.0**	**-0.3**
DMPH				*e*S	**Sn**	**03 51 50.4**	**-0.3**
DAV	**Davao City (W)**	**0.73**	**107**	P	**Pn**	**03 51 41.4**	**-0.3**
	339nm,0.3s,baz=277,slow=2.8,SNR=20						
DAV				S	**Sg**	**03 51 50.6**	**+0.2**
	464nm,0.3s,baz=102,slow=23,SNR=4.3						
SKMP	**Bagumbayan, Su**	**0.83**	**203**	*e*P	**Pb**	**03 51 40.4**	**-1.8**
SKMP				*e*S	**Sb**	**03 51 52.3**	**-0.8**
CGP	**Cagayan de Oro**	**1.17**	**351**	⇑*i*P	**Pn**	**03 51 46.5**	**-1.3**
CGP				*i* S	**Sb**	**03 52 01.5**	**-1.3**
GSPH	**General Santos**	**1.20**	**177**	⇑*i*P	**Pg**	**03 51 51.9**	**+2.4**
MATI	**Mati**	**1.41**	**104**	*e*P	**Pn**	**03 51 50.8**	**-0.3**
DDMP	**Don Marcelino,**	**1.44**	**145**	*e*P	**Pn**	**03 51 52.0**	**+0.5**
DDMP				*e*S	**Sg**	**03 52 15.4**	**+2.5**
BUTP	**Butuan**	**1.82**	**24**	*e*P	**Pb**	**03 51 59.4**	**+0.3**
BUTP				*e*S	Sg	03 52 41.5	+16
DCPH	**Dipolog City**	**1.98**	**310**	⇑*e*P	**Pg**	**03 52 03.6**	**-0.7**
DCPH				*e*S	**Sg**	**03 52 34.3**	**+4.1**
IPIL	**Ipil**	**2.34**	**282**	*e*P	**Pn**	**03 52 04.6**	**+0.8**
IPIL				*e*S	**Sn**	**03 52 33.9**	**+1.9**
SNPH	**Sibulan**	**2.61**	**322**	*e*P	**Pb**	**03 52 13.2**	**+0.7**
LLP	**Lapu-Lapu**	**3.14**	**343**	⇑*e*P	**Pn**	**03 52 15.5**	**+0.6**
LLP				*e*S	**Sg**	**03 53 09.2**	**+2.0**
RCP	**Roxas**	**4.74**	**334**	⇓*e*P	**Pn**	**03 52 40.2**	**+3.4**
TGY	**Tagaytay City**	**7.80**	**331**	LR	LR	03 56 39.9	
	comp=Z,133nm,20.1s,baz=162,slow=39						
KAPI	**Kappang**	**13.25**	**203**	LR	LR	03 59 38.2	
	comp=Z,128nm,21.6s,baz=111,slow=37						
JAY	**Jayapura**	**18.56**	**121**	LR	LR	04 03 06.4	
	comp=Z,56nm,19.6s,baz=87,slow=38						
GUMO	**Guam**	**20.62**	**71**	LR	LR	04 02 42.1	
	comp=Z,20nm,20.7s,baz=166,slow=33						
CMAR	**Chiang Mai Arr**	**27.57**	**296**	LR	LR	04 09 45.1	
	comp=Z,30nm,19.2s,baz=225,slow=40						
WRA	**Warramunga Arr**	**28.62**	**161**	P	**P**	**03 57 19.8**	**-2.0**
	1.1nm,0.8s,baz=338,slow=12,SNR=4.1						
KSRS	**Korea Array**	**30.15**	**5**	P	**P**	**03 57 35.5**	**+0.3**
	1.6nm,0.7s,baz=201,slow=9.2,SNR=2.3						
MJAR	**Matsushiro Arr**	**31.56**	**21**	LR	LR	04 09 55.7	
	comp=Z,39nm,20.0s,baz=220,slow=35						
ASAR	**Alice Springs**	**32.01**	**164**	P	**P**	**03 57 51.5**	**-0.3**
	0.7nm,0.6s,baz=342,slow=6.9,SNR=12						
STKA	**Stephens Creek**	**42.09**	**159**	P	**P**	**03 59 16.4**	**-0.9**
	1.8nm,0.7s,baz=324,slow=8.7,SNR=3.9						
SONM	**Songino Array**	**43.36**	**342**	P	**P**	**03 59 27.3**	**-0.2**
	0.6nm,0.5s,baz=156,slow=7.5,SNR=4.7						
SONM				LR	LR	04 18 44.7	
	comp=Z,59nm,18.9s,baz=103,slow=38						
MKAR	**Makanchi Array**	**53.60**	**325**	P	**P**	**04 00 47.0**	**+0.6**
	1.2nm,0.9s,baz=128,slow=7.9,SNR=3.7						
ILAR	**Eielson Array**	**82.70**	**26**	P	**P**	**04 03 47.9**	**-0.7**
	0.3nm,0.7s,baz=251,slow=5.6,SNR=3.5						

ISCJB ***15*** *04:09:45.8±0.7, 46°.27N±0°.04×146°.96E±0°.09, h35^{km}, mb3.5/7, Error ellipse: s-maj=9.4km s-min=5.6km az=24.5*

JMA ***15*** *04:09:49.5±0.4, 44°.53N×148°.71E, h114^{km}, M3.5*

SKHL ***15*** *04:09:49.7±0.7, 44°.43N×148°.91E, h46^{km}±2^{km}, mb3.9/3*

IDC ***15*** *04:10:26.6±5.9, 44°.83N×147°.95E, h539^{km}±44^{km}, mb2.7/7, mb1 2.9/8, mb1mx2.6/41, mbtmp3.6/8, Error ellipse: s-maj=90.9km s-min=22.5km az=174.0*

ISC 15 04:09:47.4±0.9**, 46°.21N**±0°.06×**147°.06E**±0°.07**, h35**^{km}**, n26,** σ**3^{s}.59**/27**, mb3.6**/7**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.13**	**150**	*i* P	**Pn**	**04 10 07.3**	**+0.6**
KUR				AMB	AMB	04 10 07.9	
	60nm,0.5s						
KUR				AMB	AMB	04 10 07.9	
	10.0nm,0.5s						
KUR				AMB	AMB	04 10 07.9	
	50nm,0.5s						
KUR				*i* S	**Sn**	**04 10 21.0**	**0.0**
KUR				A	A	04 10 27.6	
	410nm,0.3s						
KUR				A	A	04 10 27.6	
	340nm,0.3s						
LAGR	**Lagunnoye**	**2.34**	**203**	*e*S	**Sn**	**04 10 52.0**	**+1.3**
YUK	**Yuzh-Kuril'sk**	**2.34**	**202**	*i* P	**Pn**	**04 10 24.6**	**+1.3**
YUK				AMB	AMB	04 10 25.0	
	10.0nm,0.4s						
YUK				AMB	AMB	04 10 25.0	
	30nm,0.4s						
YUK				AMB	AMB	04 10 25.0	
	20nm,0.4s						
YUK				*i* S	**Sn**	**04 10 50.5**	**-0.2**
YUK				A	A	04 10 55.0	
	140nm,0.5s						
YUK				A	A	04 10 55.0	
	260nm,0.5s						
GRPR	**Tuman**	**2.40**	**203**	*e*P	**Pn**	**04 10 25.8**	**+1.7**
GRPR				AMB	AMB	04 10 27.0	
	40nm,0.2s						
GRPR				AMB	AMB	04 10 27.0	
	10.0nm,0.2s						
GRPR				*e*S	**Sn**	**04 10 53.1**	**+0.8**
GRPR				A	A	04 10 57.9	
	210nm,0.5s						
GRPR				A	A	04 10 57.9	
	230nm,0.5s						
GLVR	**Golovnino**	**2.70**	**204**	*e*S	**Sn**	**04 11 00.0**	**+0.2**
NEM2	**Nemuro 2**	**3.00**	**199**	P	**Pn**	**04 10 28.8**	**-3.5**
NEM2				*e*S	**Sn**	**04 10 58.7**	**-8.3**
YSS	**Yuzh-Sakhalins**	**3.06**	**286**	*e*P	**Sn**	**04 11 03.3**	**-5.2**
JNK	**Nakash**	**3.11**	**213**	P	**Pn**	**04 10 37.0**	**+3.1**
JAR	**Ashorobuto**	**3.74**	**220**	P	**Pn**	**04 10 47.3**	**+4.7**
JKK2	**Kamakawa 2**	**3.85**	**234**	P	Pn	04 10 54.2	+10
JOB	**Onbets**	**4.03**	**216**	P	**Pn**	**04 10 48.5**	**+1.9**
JOB				*e*S	**Sn**	**04 11 33.8**	**+1.3**
JCH	**Churui**	**4.46**	**218**	P	**Pn**	**04 10 54.1**	**+1.6**
JCH				*e*S	**Sn**	**04 11 41.6**	**-1.6**
JNBK	**Urakawa-nobuka**	**5.00**	**220**	*e*S	**Sn**	**04 11 56.5**	**+0.1**
JKB	**Kayabe**	**6.12**	**227**	*e*S	**Sn**	**04 12 25.8**	**+1.7**
JTM	**Tenmabayashi**	**6.95**	**221**	*e*S	**Sn**	**04 12 38.0**	**-6.5**
OFUJ	**Ofunato**	**8.16**	**211**	*e*S	Sn	04 13 00.1	-14
JRG	**Rokugo**	**8.29**	**217**	*e*S	**Sn**	**04 13 08.7**	**-8.6**
JIO	**Ouri**	**8.83**	**211**	*e*S	Sn	04 13 14.6	-16
PETK	**Petropavlovsk-**	**9.75**	**41**	P	Pn	04 12 50.8	+46
	0.1nm,0.3s,baz=201,slow=7.7,SNR=3.1						
ILAR	**Eielson Array**	**39.56**	**38**	P	**P**	**04 17 14.5**	**-0.1**
	0.2nm,0.6s,baz=265,slow=8.4,SNR=5.1						
MKAR	**Makanchi Array**	**43.43**	**295**	P	**P**	**04 17 50.7**	**+4.1**
	0.8nm,0.7s,baz=86,slow=6.4,SNR=7.4						
KURBB	**Kurchatov Arra**	**44.22**	**302**	P	**P**	**04 17 55.6**	**+2.7**
	0.4nm,0.4s,baz=74,slow=8.7,SNR=3.5						
FINES	**FINESS Array B**	**62.66**	**332**	P	**P**	**04 20 07.8**	**0.0**
	1.9nm,0.8s,baz=48,slow=2.8,SNR=4.1						
NOA	**NORSAR Array B**	**67.28**	**338**	P	**P**	**04 20 37.3**	**-0.8**
	0.5nm,0.8s,baz=31,slow=4.2,SNR=4.8						
GERES	**GERESS Array B**	**76.98**	**330**	P	**P**	**04 21 33.6**	**-2.6**
	0.2nm,0.3s,baz=27,slow=4.7,SNR=2.5						
TXAR	**Lajitas Array**	**81.34**	**56**	P	P	04 21 48.9	-12
	0.1nm,0.5s,baz=278,slow=2.4,SNR=3.6						

ISCJB ***15*** *04:19:12.5±0.8, 39°.81S±0°.06×144°.24E±0°.09, h10^{km}, mb3.8/1, Error ellipse: s-maj=11.3km s-min=6.2km az=145.3*

IDC ***15*** *04:19:13.8±7.2, 39°.38S×144°.98E, h0^{km}, mb3.7/1, mb1 3.7/3, mb1mx3.5/19, mbtmp3.5/3, ML3.2/1, MS3.0/1, Ms1 2.9/1, ms1mx2.6/17, Error ellipse: s-maj=281.9km s-min=52.2km az=74.0*

AUST ***15*** *04:19:14.1±0.0, 39°.75S×144°.43E, h10^{km}, Error ellipse: s-maj=0.8km s-min=0.1km az=246.0*

ISC 15 04:19:14.1±1.1**, 39°.78S**±0°.07×**144°.27E**±0°.09**, h10**^{km}**, n10,** σ**1^{s}.47**/14**, Bass Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOO	**Toolangi**	**2.40**	**24**	P	**Pn**	**04 19 53.2**	**-0.3**
	baz=2.3,SNR=38						
TOO				S	**Sn**	**04 20 23.8**	**+0.8**
	baz=2.3						
MOO	**Moorlands**	**3.46**	**141**	P	**Pn**	**04 20 08.2**	**+0.2**
	baz=3.4,SNR=5.8						
MOO				S	**Sn**	**04 20 49.0**	**0.0**
	baz=3.4						
ARPS	**Mount Arapiles**	**3.56**	**327**	P	**Pn**	**04 20 09.9**	**+0.4**
	baz=3.6,SNR=77						
ARPS				S	**Sn**	**04 20 53.1**	**+1.5**
	baz=3.6						
MILA	**Mila**	**4.70**	**56**	P	**Pn**	**04 20 25.7**	**+0.6**
	baz=4.6,SNR=5.2						
CNB	**Canberra Magne**	**6.01**	**44**	P	**Pn**	**04 20 43.6**	**+0.4**
	baz=5.9						
STKA	**Stephens Creek**	**8.18**	**344**	Pn	**Pn**	**04 21 12.4**	**-0.5**
	baz=155,slow=16,SNR=3.3						
STKA				Sn	**Sn**	**04 22 41.3**	**-4.0**
	0.8nm,0.3s,baz=127,slow=20,SNR=2.9						
STKA				Lg	Lg	04 23 27.7	
	0.9nm,0.3s,baz=90,slow=20,SNR=4.2						
STKA				LR	LR	04 24 31.8	
	comp=Z,119nm,21.0s,baz=338,slow=40						
STKA	**Stephens Creek**	**8.18**	**344**	P	**Pn**	**04 21 14.5**	**+1.6**
	baz=8.2,SNR=4.0						
BBOO	**Buckleboo**	**9.60**	**314**	P	**Pn**	**04 21 32.9**	**+0.4**
	baz=9.7,SNR=17						
ASAR	**Alice Springs**	**18.30**	**328**	P	**Pn**	**04 23 28.9**	**+0.7**
	0.1nm,0.3s,baz=151,slow=12,SNR=4.2						
WRA	**Warramunga Arr**	**21.53**	**334**	P	**P**	**04 24 03.0**	**-0.6**
	2.6nm,0.7s,baz=157,slow=9.9,SNR=6.5						

ISCJB ***15*** *04:34:28.4±0.5, 69°.89N±0°.03×15°.5W±0°.2, h10^{km}, mb3.5/9, MS3.4/23, Error ellipse: s-maj=7.7km s-min=4.4km az=179.2*

IDC ***15*** *04:34:29.5±0.8, 70°.07N×15°.74W, h0^{km}, mb3.6/9, mb1 3.9/11, mb1mx3.7/36, mbtmp3.7/11, ML3.0/2, MS3.4/28, Ms1 3.4/28, ms1mx3.3/40, Error ellipse: s-maj=24.8km s-min=15.8km az=32.0*

REY ***15*** *04:34:29.5, 69°.73N×14°.32W, h10^{km}*

ISC 15 04:34:30.5±0.7**, 69°.96N**±0°.06×**15°.64W**±0°.07**, h10**^{km}**, n51,** σ**1^{s}.81**/44**, mb3.5**/9**, MS3.4**/23**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**2.21**	**287**	*i* P	**Pn**	**04 35 04.6**	**-2.6**
SCO				*i* S	**Sb**	**04 35 36.4**	**-1.5**
IGRI	**Grimsey**	**3.55**	**196**	P	**Pn**	**04 35 24.4**	**-1.1**
	baz=205						
IGRI				S	**Sn**	**04 36 06.7**	**-0.7**
	baz=205						
IFLA	**Flatey**	**3.91**	**193**	P	**Pn**	**04 35 29.4**	**-1.0**
	baz=202						
IFLA				S	**Sn**	**04 36 15.5**	**-0.8**
	baz=202						
IGIL	**Gilhagi**	**3.91**	**184**	P	**Pn**	**04 35 27.7**	**-2.8**
	baz=193						
IGIL				S	**Sn**	**04 36 13.7**	**-2.7**
	baz=193						
IBRE	**Brettingsstaoi**	**3.95**	**194**	P	**Pn**	**04 35 29.8**	**-1.3**
	baz=202						
IBRE				S	**Sn**	**04 36 16.7**	**-0.6**
	baz=202						
IHED	**Heoinshofoi**	**3.95**	**190**	P	**Pn**	**04 35 29.1**	**-1.9**
	baz=199						
IHED				S	**Sn**	**04 36 15.4**	**-1.9**
	baz=199						
ISIG	**Siglufjorour**	**4.04**	**199**	P	**Pn**	**04 35 31.8**	**-0.5**
	baz=208						
IDIM	**Dimmadalss**	**4.05**	**188**	P	**Pn**	**04 35 30.1**	**-2.3**
	baz=196						
IDIM				S	**Sn**	**04 36 17.6**	**-2.1**
	baz=196						
IGRA	**Granastaoir**	**4.13**	**191**	P	**Pn**	**04 35 31.9**	**-1.5**
	baz=199						
IGRA				S	**Sn**	**04 36 20.7**	**-1.0**
	baz=199						
ISKI	**Skildingahlsh**	**4.14**	**188**	P	**Pn**	**04 35 31.8**	**-1.9**
	baz=196						
ISKI				S	**Sn**	**04 36 20.3**	**-1.8**
	baz=196						
IGHA	**Grjothals**	**4.15**	**186**	P	**Pn**	**04 35 31.6**	**-2.3**
	baz=194						
IGHA				S	**Sn**	**04 36 19.9**	**-2.5**
	baz=194						
IHLA	**Hella**	**4.17**	**196**	P	**Pn**	**04 35 33.3**	**-0.7**
	baz=204						
IHRN	**Hraun**	**4.22**	**206**	P	**Pn**	**04 35 34.7**	**0.0**
	baz=214						
IHRN				S	**Sn**	**04 36 25.2**	**+1.3**
	baz=214						
IKVO	**Krokottuvotn**	**4.29**	**187**	P	**Pn**	**04 35 34.0**	**-1.8**
	baz=195						
IGRS	**Grimsstaoir**	**4.35**	**183**	P	**Pn**	**04 35 34.0**	**-2.6**
	baz=190						
IGRS				S	**Sn**	**04 36 24.7**	**-2.5**
	baz=190						
IREN	**Reynihlio**	**4.36**	**187**	P	**Pn**	**04 35 34.9**	**-1.8**
	baz=195						
IMEL	**Melhnausar**	**4.43**	**185**	P	**Pn**	**04 35 35.6**	**-2.0**
	baz=193						
ISVA	**Svartarkot**	**4.69**	**188**	P	**Pn**	**04 35 39.4**	**-1.8**
	baz=196						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IADA	Aoalbol	4.96	180	P	Pn	04 35 42.4	-2.6
	baz=186						
BORG	Borgarnes	5.68	205	Pn	Pn	04 35 55.9	+1.1
	1.5nm,0.3s,baz=357,slow=6.9,SNR=13						
BORG				Sn	Sn	04 37 03.4	+3.6
	baz=312,slow=16,SNR=1.3						
BORG				LR	LR	04 37 44.0	
	comp=Z,334nm,18.2s,baz=12,slow=34						
SPITS	Spitsbergen Ar	11.82	32	LR	LR	04 40 39.7	
	comp=Z,146nm,20.9s,baz=290,slow=32						
ARCES	ARCESS Array B	14.06	72	LR	LR	04 42 08.7	
	comp=Z,148nm,18.4s,baz=326,slow=33						
NOA	NORSAR Array B	14.14	116	LR	LR	04 42 51.0	
	comp=Z,94nm,18.8s,baz=320,slow=35						
HFS	Hagfors	15.62	114	LR	LR	04 43 46.2	
	comp=Z,145nm,19.0s,baz=318,slow=36						
EKA	Eskdalemuir Ar	15.70	153	Pn	P	04 38 17.7	+2.2
	baz=327,slow=10,SNR=3.5						
FINES	FINESS Array B	18.76	96	P	P	04 38 48.3	-1.0
	0.1nm,0.3s,baz=350,slow=7.3,SNR=4.4						
FRB	Frobisher Bay	21.06	279	LR	LR	04 47 23.4	
	comp=Z,181nm,18.6s,baz=34,slow=37						
RES	Resolute Bay	22.78	318	LR	LR	04 48 19.4	
	comp=Z,157nm,18.2s,baz=206,slow=37						
GERES	GERESS Array B	25.41	131	P	P	04 39 59.7	+1.8
	0.6nm,0.3s,baz=333,slow=7.7,SNR=9.0						
GERES				LR	LR	04 50 29.3	
	comp=Z,64nm,19.4s,baz=18,slow=38						
VRAC	Vranov	25.77	127	P	P	04 40 03.1	+2.0
	2.2nm,0.5s,baz=332,slow=10,SNR=5.0						
VRAC				LR	LR	04 50 35.1	
	comp=Z,104nm,18.3s,baz=334,slow=37						
DAVOX	Davos/Dischmat	26.40	138	LR	LR	04 50 43.7	
	comp=Z,83nm,19.5s,baz=278,slow=37						
SCHQ	Schefferville	27.05	263	LR	LR	04 50 00.9	
	comp=Z,115nm,21.7s,baz=64,slow=34						
OBN	Obninsk	27.17	96	LR	LR	04 50 14.8	
	comp=Z,44nm,20.3s,baz=342,slow=35						
AKASG	Malin Array Be	28.38	109	LR	LR	04 51 13.7	
	comp=Z,86nm,21.7s,baz=15,slow=35						
KIRV	Kirov	28.86	80	LR	LR	04 51 13.3	
	comp=Z,96nm,18.3s,baz=45,slow=35						
YKA	Yellowknife Ar	36.25	309	LR	LR	04 56 20.4	
	comp=Z,7.0nm,18.6s,baz=22,slow=36						
KEST	Kesra	36.87	145	LR	LR	04 56 31.4	
	comp=Z,44nm,19.5s,baz=310,slow=36						
KBZ	Khabaz	39.01	101	LR	LR	04 57 41.0	
	comp=Z,83nm,19.6s,baz=352,slow=36						
BRTR	Keskin Array B	39.56	113	P	P	04 42 01.4	-0.1
	0.3nm,0.7s,baz=1.9,slow=4.3,SNR=2.8						
BRTR				LR	LR	04 58 33.1	
	comp=Z,47nm,21.9s,baz=312,slow=36						
ULM	Lac du Bonnet	40.78	284	LR	LR	04 59 41.0	
	comp=Z,55nm,18.1s,baz=245,slow=37						
ILAR	Eielson Array	41.35	331	P	P	04 42 15.2	-0.7
	0.4nm,0.8s,baz=16,slow=5.9,SNR=8.9						
ILAR				LR	LR	05 02 24.9	
	comp=Z,49nm,18.5s,baz=96,slow=41						
ZALV	Zalesovo Beam	43.93	57	LR	LR	05 03 05.5	
	comp=Z,37nm,21.3s,baz=248,slow=39						
GEYT	Alibeck	49.39	90	LR	LR	05 05 51.5	
	comp=Z,87nm,18.4s,baz=325,slow=38						
MKAR	Makanchi Array	49.51	63	P	P	04 43 21.8	+1.1
	0.6nm,0.9s,baz=335,slow=5.5,SNR=4.7						
MKAR				LR	LR	05 06 22.4	
	comp=Z,30nm,20.1s,baz=316,slow=39						
PDAR	Pinedale Array	51.85	291	P	P	04 43 38.4	-0.3
	0.6nm,0.9s,baz=34,slow=3.7,SNR=5.8						
SONM	Songino Array	55.22	44	LR	LR	05 11 43.2	
	comp=Z,36nm,18.9s,baz=72,slow=40						
TORD	Torodi Ar. Bea	57.81	160	P	P	04 44 23.1	+1.3
	0.4nm,0.8s,baz=3.9,slow=5.4,SNR=5.2						
NVAR	Mina Array Bea	58.55	296	P	P	04 44 26.8	-0.3
	0.1nm,0.3s,baz=350,slow=4.5,SNR=4.4						
NVAR				LR	LR	05 10 24.6	
	comp=Z,97nm,18.7s,baz=84,slow=37						
KLR	Kul'dur	58.77	24	LR	LR	05 11 33.6	
	comp=Z,18nm,18.8s,baz=208,slow=38						
TXAR	Lajitas Array	62.10	279	P	P	04 44 51.9	+0.6
	1.0nm,1.1s,baz=76,slow=5.3,SNR=6.1						
TXAR				LR	LR	05 12 02.9	
	comp=Z,123nm,18.6s,baz=0.0,slow=36						
KSRS	Korea Array	69.65	30	LR	LR	05 16 59.8	
	comp=Z,13nm,19.3s,baz=200,slow=37						

MAN 15 04:51:56.8, 17°.53N×120°.79E, h35^{km}, mb3.9, ML2.6, MS2.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.13	328	eP	Pn	04 52 04.3	+1.3
ABRA				eS	Sn	04 52 09.0	+1.6
APYP	Conner	0.54	53	eP	Pn	04 52 09.1	+1.1
APYP				eS	Sn	04 52 17.6	+1.7
SMPP	San Manuel, Pa	1.38	184	eP	Pn	04 52 20.4	+0.8
SMPP				eS	Sn	04 52 36.6	0.0

MAN 15 05:02:20.1, 7°.73N×123°.28E, h78^{km}, mb3.5, ML2.2, MS1.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	1.08	118	⇓iP	Pn	05 02 48.0	+8.0
CTBH				i S	Sn	05 02 56.7	+1.8
CGP	Cagayan de Oro	1.57	63	⇑eP	Pn	05 02 57.5	+11
CGP				eS	Sn	05 03 12.2	+6.1
SKMP	Bagumbayan, Su	1.74	134	eP	Pn	05 02 48.8	+0.3
BUKP	Musuan	1.77	85	eP	Pn	05 02 48.6	-0.3
BUKP				eS	Sn	05 02 58.4	-12
DDMP	Don Marcelino,	2.90	124	eP	Pn	05 03 03.8	-0.4

GCG 15 05:06:07.6±0.5, 15°.68N×92°.04W, h0^{km}±110^{km}, MD3.8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.07	155	eP	Pb	05 06 28.7	-0.4
FUG	Fuego 3	1.69	137	eP	Pn	05 06 39.0	+0.4
FUG				eS	Sg	05 07 03.0	+1.1
PCG	Pacaya	1.89	133	eP	Pn	05 06 41.6	+0.2

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*ISCJB **15** 05:20:12.3±1.6, 13°.3N±0°.2×90°.02W±0°.09, h46^{km}±41^{km}, Error ellipse: s-maj=33.3km s-min=6.7km az=25.3*
*SNET **15** 05:20:12.7±0.9, 13°.42N×90°.02W, h40^{km}±24^{km}, ML3.0*
*GCG **15** 05:20:14.8±0.5, 13°.50N×90°.07W, h53^{km}±49^{km}, MD3.5*

ISC 15 05:20:13.8±2.3, 13°.4N±0°.2×89°.98W±0°.08, h46^{km}±37^{km}, n17, σ0^s.72/26, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.54	40	eP	Pn	05 20 25.1	-0.6
CEVE				eS	Sn	05 20 34.8	+0.8
CEVE				IAML		05 20 37.1	
	comp=Z,3μm,0.2s						
SBLS	San Blas	0.55	39	eP	Pn	05 20 25.1	-0.6
RTR	El Retiro	0.58	34	eP	Pn	05 20 25.5	-0.7
SNJE	San Jose	0.58	39	⇓eP	Pn	05 20 25.5	-0.6
SNJE				eS	Sn	05 20 35.3	+0.4
CEDA	San Andres	0.69	56	eP	Pn	05 20 26.9	-0.5
CEDA				eS	Sn	05 20 38.0	+0.9
CEDA				IAML		05 20 45.0	
	comp=Z,630nm,0.4s						
SNET	Serv Nac Est T	0.78	69	eP	Pn	05 20 27.8	-0.8
SNET				eS	Sn	05 20 39.4	0.0
SNET				IAML		05 20 41.1	
	comp=Z,345nm,0.3s						
UEES	Universidad Ev	0.79	67	eP	Pn	05 20 28.1	-0.6
UEES				eS	Sn	05 20 39.7	+0.3
UEES				IAML		05 20 42.5	
	comp=Z,530nm,0.3s						
OPAM	Oficina de Pla	0.82	68	eS	Sn	05 20 40.8	+0.6
LOMA	Loma Larga	0.82	73	eP	Pn	05 20 28.3	-0.7
LOMA				eS	Sn	05 20 40.8	+0.6
LOMA				IAML		05 20 43.1	
	comp=Z,706nm,0.1s						
CUSC	Alcaldia de Cu	0.84	68	eP	Pn	05 20 28.8	-0.5
CUSC				eS	Sn	05 20 41.3	+0.7
LFU	La Fuente	0.91	68	eP	Pn	05 20 29.9	-0.4
PAVA	Las Pavas	1.06	73	eS	Sn	05 20 47.9	+1.8
PCG	Pacaya	1.15	328	eS	Sn	05 20 48.8	+0.3
MTO3	Montecristo	1.15	32	eP	Pn	05 20 32.6	-1.2
NBG	Las Nubes	1.22	343	eP	Pn	05 20 35.1	+0.3
FUG	Fuego 3	1.33	321	eP	Pn	05 20 36.2	+0.1
FUG				eS	Sn	05 20 52.4	-0.3
STG3	Santiaguito 3,	2.01	310	eP	Pn	05 20 45.3	-0.2
STG3				eS	Sn	05 21 09.5	0.0

SVSA 15 05:32:55.0±0.8, 38°.75N×28°.96W, h5^{km}±4^{km}, MD3.6, ML1.6, Error ellipse: s-maj=7.4km s-min=4.6km az=62.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	Cedros	0.23	121	eP	Pg	05 32 58.9	-0.6
PCED				eS	Sg	05 33 02.5	-0.1
PCED				A	A	05 33 05.0	
	238nm,0.5s						
HOR	Horta	0.34	131	eP	Pg	05 33 01.3	-0.2
HOR				eS	Sg	05 33 05.8	-0.2
HOR				A	A	05 33 08.4	
	87nm,0.3s						
PCAN	Candelaria	0.47	128	eP	Pg	05 33 03.0	-1.0
PCAN				eS	Sg	05 33 09.1	-0.9
PCAN				A	A	05 33 10.2	
	27nm,0.5s						
ROSA	Rosais	0.56	93	eP	Pg	05 33 04.6	-1.2
ROSA				eS	Sg	05 33 11.6	-1.4
ROSA				A	A	05 33 15.7	
	24nm,0.5s						

MAN 15 06:01:27.8, 16°.26N×120°.70E, h45^{km}, mb4.2, ML3.0, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.12	190	eP	Pn	06 01 36.1	+0.9
SMPP				eS	Sn	06 01 42.1	+1.8
BOLP	Bolinao	0.77	279	eP	Pn	06 01 47.3	+5.1
BOLP				eS	Sn	06 02 01.9	+9.2
BALP	Baler	0.99	122	eP	Pn	06 01 45.9	+0.6
BALP				eS	Sn	06 01 59.4	+1.2
APYP	Conner	1.67	18	eP	Pn	06 01 55.3	+0.7
APYP				eS	Sn	06 02 16.0	+1.1

IDC 15 06:06:07.2±6.1, 9°.84N×127°.45E, h0^{km}, mb3.9/3, mb1 3.9/3, mb1mx3.5/36, mbtmp3.9/3, Error ellipse: s-maj=244.5km s-min=150.2km az=59.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	53.07	322	P	P	06 15 26.3	-0.1
	0.9nm,0.6s,baz=118,slow=8.6,SNR=9.6						
BRTR	Keskin Array B	86.69	310	P	P	06 18 53.5	-0.1
	0.5nm,0.7s,baz=63,slow=7.1,SNR=3.1						
FINES	FINESS Array B	86.81	332	P	P	06 18 53.4	0.0
	0.5nm,0.4s,baz=83,slow=4.4,SNR=7.8						

SJA 15 06:10:25.5±0.9, 33°.22S×67°.29W, h199^{km}±4^{km}, ML3.5, 12C-4D, Fault plane solution: NP1:ϕ_s175.68000°, δ72.00000°, λ88.95000°., Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACAN	Cantantal	0.95	5	⇑iP	Pn	06 10 55.7	+0.8
ACAN				eS	Sn	06 11 16.4	-1.2
MRA	San Martin	1.54	59	i P	Pn	06 11 00.3	+0.7
MRA				i S	Sn	06 11 25.6	-0.4
RTCV	Cerro Valdivia	1.72	322	⇑iP	Pn	06 11 01.5	+0.3
RTCV				eS	Sn	06 11 28.4	-0.5
CFA	Coronel Fontan	1.80	333	⇑iP	Pn	06 11 02.2	+0.2
CFA				i S	Sn	06 11 29.5	-0.8
SJA	San Juan	2.00	327	i P	Pn	06 11 04.8	+0.7
SJA				i S	Sn	06 11 33.6	-0.4
ZON	Zonda	2.04	324	⇑eP	Pn	06 11 04.7	+0.2
ZON				IAML		06 11 05.6	
	comp=Z,73nm,0.2s						
ZON				eS	Sn	06 11 34.2	-0.5
RTLL	Cerro Villicun	2.14	332	⇑eP	Pn	06 11 05.7	+0.2
RTLL				eS	Sn	06 11 35.7	-0.9
RTLL				IAML		06 11 37.8	
	comp=Z,188nm,0.3s						
RTLS	Leoncito	2.21	309	⇑eP	Pn	06 11 07.2	+0.7
RTLS				IAML		06 11 08.1	
	comp=Z,61nm,0.2s						
RTLS				eS	Sn	06 11 40.2	+1.9
AMOG	MOGNA	2.49	335	⇑eP	Pn	06 11 10.2	+0.8
AMOG				eS	Sn	06 11 41.8	-1.8
TCA	Tanti	2.95	51	⇓iP	Pn	06 11 14.6	-0.1
TCA				eS	Sn	06 11 52.2	-0.8
ACCO	Cerro Coronel	3.03	330	⇑iP	Pn	06 11 17.1	+1.2
ACCO				eS	Sn	06 11 55.3	+0.3
AROD	Rodeo	3.57	328	⇑eP	Pn	06 11 23.4	+1.1
AROD				eS	Sn	06 12 05.4	-1.3
AGUA	GUANDACOL	3.86	344	⇑eP	Pn	06 11 26.5	+0.8
AGUA				eS	Sn	06 12 11.6	-1.2
AGUA				IAML		06 12 16.5	
	comp=Z,59nm,0.3s						
GO05	Huala	4.25	244	⇓eP	Pn	06 11 27.8	-2.5
GO05				eS	Sn	06 12 15.4	-5.8
GO04	Tololo Observa	4.26	314	⇑eP	Pn	06 11 31.1	+0.2
GO04				eS	Sn	06 12 20.9	-1.2
VCA	Vinchina	4.54	350	⇑eP	Pn	06 11 35.0	+0.8
VCA				eS	Sn	06 12 26.0	-2.2
VCA				IAML		06 12 31.1	
	comp=Z,86nm,0.6s						
CYA	Choya	4.93	15	⇓iP	Pn	06 11 38.2	-0.9
CYA				IAML		06 11 38.3	
	comp=Z,31nm,0.2s						
CYA				eS	Sn	06 12 32.0	-5.1
GO03	Copiap	6.16	335	⇓eP	Pn	06 11 55.2	+0.3
GO03				eS	Sn	06 13 01.9	-3.8

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*IDC **15** 06:27:39.8±0.5, 12°.23N×89°.32W, h0^{km}, mb4.7/38, mb1 4.8/41, mb1mx4.8/49, mbtmp4.7/41, ML4.5/3, MS4.0/27, Ms1 4.0/27, ms1mx3.9/36, Error ellipse: s-maj=18.2km s-min=9.3km az=49.0*
*MOS **15** 06:27:41.0±1.1, 12°.37N×89°.42W, h10^{km}, mb5.3/34, Error ellipse: s-maj=8.8km s-min=4.9km az=105.7*
*NEIC **15** 06:27:42.5±2.4, 12°.31N×89°.40W, h11^{km}±1^{km}, mb5.1/432, MD5.0(SNET), Error ellipse: s-maj=8.9km s-min=6.3km az=204.0*
NEIC Felt [II] at San Salvador.
*SNET **15** 06:27:42.0±1.1, 12°.04N×89°.64W, h30^{km}, ML5.1*
*GCMT **15** 06:27:43.5±0.2, 12°.10N±0°.01×89°.86W±0°.01, h12^{km}, MW5.1/102, Moment Tensor Solution. s67,c99; s102,c183; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.52±.09; $M_{\theta\theta}$5.60±.08; $M_{\phi\phi}$-0.08±.09; $M_{r\theta}$1.10±.26; $M_{\theta\phi}$-0.56±.09; $M_{\phi r}$0.79±.30; Best double couple: $M_0$5.75100×10^{16} NP1:ϕ_s267.00000°, δ51.00000°, λ-101.00000°. NP2:ϕ_s105.00000°, δ41.00000°, λ-76.00000°. Principal axes: T 5.7490, Plg5.0000°, Azm5.0000°; N 0.0010, Plg9.0000°, Azm274.0000°; P -5.7520, Plg80.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*ISCJB **15** 06:27:47.0±0.3, 12°.37N±0°.02×89°.35W±0°.02, h65^{km}±2^{km}, mb5.0/313 Error ellipse: s-maj=3.7km s-min=2.2km az=135.1*
*UCR **15** 06:28:01.9±1.2, 12°.28N×88°.10W, h21^{km}±36^{km}, MW4.5*
*GCG **15** 06:28:03.1±0.3, 13°.68N×90°.25W, h102^{km}±9^{km}, MD4.5*

ISC 15 06:27:42.2±0.8, 12°.21N±0°.03×89°.47W±0°.03, h14^{km}±4^{km}, n1144, σ1^s.38/1164, mb5.1/316, MS4.2/37, 12C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOMA	Loma Larga	1.45	12	eP	Pb	06 28 09.3	+0.1
LOMA				eS	Sg	06 28 30.1	+0.8
LOMA				IAML		06 28 31.7	
	comp=Z,29μm,0.3s						
SNET	Serv Nac Est T	1.48	9	IAML		06 28 11.2	
	comp=Z,14μm,0.3s						
SNET				eS	Sg	06 28 31.2	+1.1
OPAM	Oficina de Pla	1.51	10	IAML		06 28 34.4	
	comp=Z,10μm,0.2s						
CUSC	Alcaldia de Cu	1.53	11	eP	Pb	06 28 10.4	-0.1
CUSC				eS	Sg	06 28 32.7	+0.9
CUSC				IAML		06 28 37.1	
	comp=Z,13μm,0.3s						
LFU	La Fuente	1.57	13	⇑iP	Pb	06 28 11.2	+0.1
PAVA	Las Pavas	1.58	19	eS	Sg	06 28 34.6	+1.5
PAVA				IAML		06 28 35.5	
	comp=Z,24μm,0.4s						
CEDA	San Andres	1.58	3	eP	Pb	06 28 10.8	-0.6
CEDA				IAML		06 28 39.7	
	comp=Z,13μm,0.4s						
TECA	Tecapa	1.59	36	eP	Pb	06 28 11.4	-0.1
SNJE	San Jose	1.65	355	⇑iP	Pb	06 28 11.8	-0.8
LCY	Lacayo	1.66	43	eP	Pb	06 28 12.4	-0.3
PACA	Pacayal	1.68	42	eP	Pb	06 28 12.7	-0.3
RTR	El Retiro	1.68	354	⇑iP	Pb	06 28 12.4	-0.7
CNCH	Conchagua	1.92	56	eS	Sg	06 28 44.0	+0.1
CNCH				IAML		06 28 47.3	
	comp=Z,28μm,0.5s						
LLGN	La Laguna	2.00	15	eP	Pb	06 28 17.6	-1.1
LLGN				eS	Sg	06 28 45.5	-1.5
LLGN				eS	Sb	06 28 45.7	+2.1
CSGN	Cosiguina Volc	2.01	68	ePn	Pb	06 28 17.4	-1.3
CSGN				eSn	Sn	06 28 39.5	-1.5
CSGN	Cosiguina Volc	2.01	68	eP	Pb	06 28 18.0	-0.8
MTO3	Montecristo	2.18	3	eP	Pb	06 28 20.0	-1.6
MTO3				eS	Sb	06 28 48.8	+0.2
PCG	Pacaya	2.43	333	eP	Pn	06 28 22.5	+0.7
FUG	Fuego 3	2.59	329	eP	Pn	06 28 24.0	0.0
CNGN	Cerro Negro	2.72	84	eP	Pn	06 28 26.4	+0.8
TGUH	Tegucigalpa,Un	2.82	49	ePn	Pn	06 28 29.1	+2.1
TGUH				eSn	Sn	06 28 57.8	-3.2
MRL	Marmol	2.86	356	eP	Pb	06 28 30.5	-2.8
APG	El Apazote	2.94	341	Pn	Pn	06 28 30.1	+1.3
	comp=Z,296nm,0.3s,baz=149,slow=7.2,SNR=1288						
APG				Sn	Sn	06 29 05.8	+1.8
	comp=Z,131nm,0.3s,baz=60,slow=17,SNR=8.3						
APG				LR	LR	06 29 23.0	
	comp=Z,3μm,20.0s,baz=112,slow=35						
ERG	Entre ros, C	3.01	318	eP	Pn	06 28 29.5	-0.1
ESTN	Estel	3.15	73	ePn	Pn	06 28 32.9	+1.3
ESTN				eSg	Sb	06 29 13.8	-2.7
ESTN	Estel	3.15	73	⇑eP	Pn	06 28 32.8	+1.1
STG3	Santiaguito 3,	3.22	321	eP	Pn	06 28 32.0	-0.5
MASN	Masaya	3.25	94	eP	Pn	06 28 33.8	+0.9
RCON	San Juan de Ri	3.47	68	⇑eP	Pn	06 28 37.6	+1.5
MATN	Matagalpa	3.53	78	⇑eP	Pn	06 28 37.4	+0.5
ACON	Acoyapa	4.21	93	ePn	Pn	06 28 46.9	+0.9
ACON				eSn	Sn	06 29 33.9	-1.2
ACON	Acoyapa	4.21	93	⇑eP	Pn	06 28 47.1	+1.1
BUEV	Buena Vista	4.22	109	eP	Pn	06 28 49.0	+2.6
GB1A	Borinquen Arri	4.22	109	eP	Pn	06 28 49.5	+3.1
MESS	Mesas	4.44	109	⇑eP	Pn	06 28 52.9	+3.6
CCIG	Comitan	4.80	328	ePn	Pn	06 28 56.4	+2.0
CCIG				eSn	Sn	06 29 52.7	+2.8
JTS	Las Juntas de	4.83	113	ePn	Pn	06 28 57.6	+3.0
JTS				eSn	Sn	06 29 51.0	+0.6
JTS	Las Juntas de	4.83	113	i P	Pn	06 28 57.2	+2.6
JTS	Las Juntas de	4.83	113	eP	Pn	06 28 57.2	+2.6
ARE1	Arenal 1	4.97	110	eP	Pn	06 28 59.5	+2.9
CEDE	Laguna Cedeo	4.98	110	eP	Pn	06 28 59.7	+3.0
ESPN	Las Esperanzas	5.05	90	ePn	Pn	06 28 59.7	+2.0
ESPN				eSn	Sn	06 29 53.4	-2.6
ESPN	Las Esperanzas	5.05	90	eP	Pn	06 28 59.7	+2.0
SRA1	San Ramn	5.33	113	eP	Pn	06 29 05.5	+3.9
HDC	Heredia	5.70	112	ePn	Pn	06 29 09.8	+3.1
HDC				eSn	Sn	06 30 09.7	-2.3
HDC	Heredia	5.70	112	eP	Pn	06 29 10.1	+3.5
SJS	Escuela Geolog	5.78	112	eP	Pn	06 29 13.1	+5.3
LCR2	La Lucha 2	5.90	114	eP	Pn	06 29 12.9	+3.4
CVTR	Volcan Turrial	6.01	111	eP	Pn	06 29 14.0	+2.7
EDLM	Las Mercedes	6.47	116	eP	Pn	06 29 21.7	+4.5
EDPN	Palmar Norte	6.74	118	eP	Pn	06 29 24.9	+4.1
DRK0	Durika	6.78	115	eP	Pn	06 29 24.9	+3.2
EDBA	Buenos Aires	6.80	116	eP	Pn	06 29 26.0	+4.3
ICCO	Coco Island	7.04	160	eP	Pn	06 29 25.8	+0.8
PTJ1	Puerto Jimnez	7.08	120	eP	Pn	06 29 29.9	+4.3
CMIG	Matias Romero	7.14	313	Pn	Pn	06 29 25.7	-0.7
	comp=Z,12nm,0.3s,baz=105,slow=10,SNR=112						
CMIG				Sn	Sn	06 30 43.1	-4.3
	comp=Z,3.4nm,0.3s,baz=60,slow=20,SNR=2.7						
EDSV	San Vito	7.22	117	eP	Pn	06 29 33.2	+5.5
BRU2	Volcan	7.48	116	eP	Pn	06 29 34.8	+3.6
TEIG	Tepich	8.05	8	ePn	Pn	06 29 41.9	+3.1
TEIG				eSn	Sn	06 31 04.5	-5.3
MYIG	Mrida	8.70	358	ePn	Pn	06 29 49.1	+1.4
BCIP	Isla Barro Col	9.94	107	ePn	Pn	06 30 07.5	+2.7
BCIP	Isla Barro Col	9.94	107	eP	Pn	06 30 07.5	+2.7
LVIG	Laguna Verde	10.02	319	ePn	Pn	06 30 04.6	-1.2
LVIG				eSn	Sn	06 31 57.9	-0.3
TLIG	Tlapa	10.28	302	ePn	Pn	06 30 10.6	+1.1
TLIG				eSn	Sn	06 32 03.1	-1.6
CBCY	The Bluff, Cay	11.96	50	ePn	Pn	06 30 30.2	-2.2
MTDJ	Mount Denham	12.97	61	ePn	Pn	06 30 48.2	+1.7
SJCC	San Jacinto, C	14.21	98	eP	P	06 31 12.2	+1.4
PLMC	San Jos del P	14.92	118	eP	P	06 31 16.9	-1.8
HELC	Santa Helena	15.00	112	eP	P	06 31 18.9	-1.0
ARGC	Ariguani, Magd	15.13	97	eP	P	06 31 24.2	+3.3
ZARC	Zaragoza, Cauc	15.14	107	eP	P	06 31 23.5	+2.5
YOTC	Yotoco, Valle	15.34	121	eP	P	06 31 24.2	+0.8
SMLC	San Martn de	15.52	101	eP	P	06 31 26.9	+1.7
GUY2C	Guyana, Caldas	15.57	115	eP	P	06 31 30.9	+4.6
RREF	El Recreo	15.73	116	eP	P	06 31 30.9	+2.6
LNIG	Linares	15.77	325	ePn	Pn	06 31 25.5	+1.5
	comp=Z,374nm,1.2s						
GTBY	Guantanamo Bay	15.78	59	ePn	Pn	06 31 25.4	+1.2
	comp=Z,48nm,0.9s						
BBAC	Balboa, Cauca	15.79	129	eP	P	06 31 30.9	+2.4
061Z	Ochoppi	15.80	30	ePn	Pn	06 31 23.7	-0.7
	comp=Z,182nm,1.1s						
061Z	Ochoppi	15.80	30	P	Pn	06 31 25.8	+1.4
	baz=212						
PTBC	PUERTO BERRIO,	15.85	109	eP	P	06 31 30.9	+2.0
NORC	Norcasia	15.86	113	eP	P	06 31 28.9	-0.2
CODC	Agustn Codazz	15.89	97	eP	P	06 31 29.5	+0.2
059Z	Ave Maria	15.95	27	P	Pn	06 31 27.6	+1.2
	baz=210						
SOTA	Rioblanco	16.21	127	eP	P	06 31 38.2	+4.8
MARP	Paez Belalcaza	16.30	124	eP	P	06 31 38.2	+3.9
ZAIG	Zacatecas	16.30	312	ePn	Pn	06 31 31.2	0.0
	comp=Z,110nm,1.5s						
CRUC	La Cruz	16.31	129	eP	P	06 31 38.2	+3.8
ORTC	Ortega, Tolima	16.31	119	eP	P	06 31 36.8	+2.8
BRRC	Barranca, Sant	16.34	107	eP	P	06 31 34.8	+0.5
OCAC	Ocana	16.38	102	eP	P	06 31 36.2	+1.3
060Z	West Palm Beac	16.42	29	P	Pn	06 31 33.0	+0.6
	baz=212						
058A	Arcadia	16.43	25	P	Pn	06 31 32.7	+0.2
	baz=207						
SPBC	San Pablo de B	16.54	112	eP	P	06 31 38.8	+2.1
059A	Moore Haven	16.63	27	eP	P	06 31 36.4	-1.1
	comp=Z,91nm,0.8s						
059A	Moore Haven	16.63	27	P	Pn	06 31 35.5	+0.4
	baz=209						
ROSC	El Rosal	16.67	115	Pn	P	06 31 38.3	-0.1
	comp=Z,0.6nm,0.3s,baz=350,slow=3.7,SNR=20						
ROSC	El Rosal	16.67	115	ePn	Pn	06 31 35.3	-0.7
	comp=Z,233nm,2.0s						
PRAC	Prado	16.72	119	eP	P	06 31 40.8	+2.2
957A	Wimauma	16.81	23	ePn	Pn	06 31 37.1	-0.2
	comp=Z,210nm,0.8s						
957A	Wimauma	16.81	23	P	Pn	06 31 38.1	+0.8
	baz=205,SNR=6.4						
958A	Wauchula	16.92	24	P	P	06 31 39.5	-1.1
	baz=207						
BARC	Barichara	17.01	108	eP	P	06 31 45.5	+3.5
CVER	Cruz Verde, Cu	17.03	115	eP	P	06 31 46.2	+3.6
060A	Indiantown	17.05	29	ePn	Pn	06 31 39.0	-1.3
	comp=Z,136nm,0.7s						
060A	Indiantown	17.05	29	P	Pn	06 31 40.6	+0.3
	baz=212						
KVTX	Kingsville	17.18	334	eP	Pn	06 31 42.3	+0.4
	comp=Z,132nm,0.6s						
PAMC	Pamplona, Colo	17.22	105	eP	P	06 31 46.8	+2.2
959A	Okeechobee	17.23	27	P	P	06 31 43.4	-0.7
	baz=209						
CHIC	Chingaza	17.29	115	eP	P	06 31 47.5	+2.2
FLOC	Florencia	17.30	127	eP	P	06 31 47.5	+2.5
857A	Zephyrhills	17.35	22	P	P	06 31 44.6	-0.8
	baz=204						
RUSC	La Rusia	17.35	110	eP	P	06 31 48.1	+2.1
JAKH	Jacmel	17.41	68	ePn	Pn	06 31 44.5	-0.5
	comp=Z,134nm,0.8s						

LGNH	Logne	17.42	67	*e*Pn	Pn	06 31 44.5	-0.6
	comp=Z,82nm,1.4s						
DWPF	Disney Wildern	17.51	24	*e*Pn	Pn	06 31 43.6	-2.6
	comp=Z,68nm,0.8s						
DWPF	Disney Wildern	17.51	24	P	P	06 31 46.9	-0.4
	baz=207						
858A	St. Cloud	17.63	24	P	P	06 31 48.3	-0.2
	baz=207						
859A	Kempfer Cattle	17.69	26	P	P	06 31 48.6	-0.6
	baz=208						
757A	Oxford	18.02	21	P	P	06 31 53.1	+0.3
	baz=204,SNR=7.6						
655A	Horseshoe Beac	18.16	18	P	P	06 31 54.9	+0.6
	baz=200,SNR=7.2						
552A	Lynn Haven	18.25	12	P	P	06 31 55.9	+0.6
	baz=193						
656A	Willston	18.25	20	*e*P	P	06 31 57.3	+1.9
	comp=Z,136nm,0.8s						
656A	Willston	18.25	20	P	P	06 31 55.7	+0.3
	baz=202,SNR=5.0						
758A	Lake Helen	18.36	24	P	Pn	06 31 56.2	-0.4
	baz=206						
MACC	Macarena, Meta	18.43	122	*e*P	Pn	06 31 58.8	+1.2
553A	Crawfordville	18.49	14	P	Pn	06 31 58.4	+0.3
	baz=196,SNR=6.1						
833A	Chaparral WMA,	18.52	331	*e*P	Pn	06 31 59.2	+0.7
	comp=Z,133nm,1.3s						
833A	Chaparral WMA,	18.52	331	P	P	06 31 58.2	-0.1
	baz=148,SNR=16						
449A	Pace	18.57	6	P	Pn	06 31 59.7	+0.6
	baz=187						
554A	Perry	18.58	16	P	Pn	06 31 59.5	+0.3
	baz=198						
HKT	Hockley	18.61	342	*e*P	Pn	06 31 59.5	-0.1
	comp=Z,71nm,1.3s						
HKT	Hockley	18.61	342	*e*P	Pn	06 31 59.5	-0.1
HKT				pmax	pmax		
	comp=Z,71nm,1.3s						
451A	Vernon	18.64	10	*e*P	Pn	06 32 02.2	+2.3
	comp=Z,128nm,0.6s						
451A	Vernon	18.64	10	P	Pn	06 32 01.0	+1.1
	baz=191						
657A	Interlachen	18.68	21	P	Pn	06 32 00.9	+0.5
	baz=204						
450A	Crestview	18.69	8	P	Pn	06 32 00.7	+0.1
	baz=189						
658A	Bunnell	18.75	23	*e*P	Pn	06 32 01.6	+0.3
	comp=Z,117nm,0.8s						
658A	Bunnell	18.75	23	P	Pn	06 32 01.5	+0.2
	baz=206						
SDV	Santo Domingo	18.81	98	P	P	06 32 01.5	-0.3
	comp=Z,2.9nm,0.3s,baz=268,slow=6.3,SNR=33						
SDV				PcP	PcP	06 36 28.4	-0.7
	comp=Z,0.4nm,0.3s,baz=250,slow=4.5,SNR=6.2						
SDV	Santo Domingo	18.81	98	*e*P	Pn	06 32 02.3	-0.1
	comp=Z,33nm,0.7s						
SDV				*e*PcP	PcP	06 36 30.8	+1.7
SDV	Santo Domingo	18.81	98	*e*P	P	06 32 01.6	-0.3
555A	McAlpin	18.82	18	*e*P	Pn	06 32 02.5	+0.4
	comp=Z,129nm,1.0s						
555A	McAlpin	18.82	18	P	Pn	06 32 03.0	+0.9
	baz=200						
556A	Lake Butler	18.88	19	P	Pn	06 32 03.7	+0.9
	baz=202,SNR=14						
452A	Marianna	18.97	11	P	Pn	06 32 04.8	+0.9
	baz=193,SNR=10						
BRAL	Brewton	19.00	6	*e*P	Pn	06 32 04.2	-0.1
	comp=Z,199nm,1.4s						
BRAL	Brewton	19.00	6	P	Pn	06 32 05.2	+0.9
	baz=187						
557A	Orange Park	19.12	21	P	Pn	06 32 06.4	+0.6
	baz=204						
453A	Whigham	19.15	14	*e*P	Pn	06 32 07.9	+1.7
	comp=Z,339nm,0.8s						
453A	Whigham	19.15	14	P	Pn	06 32 07.8	+1.6
	baz=195,SNR=37						
349A	Repton	19.16	6	P	Pn	06 32 07.0	+0.8
	baz=187,SNR=12						
454A	Quitman	19.19	15	P	Pn	06 32 08.2	+1.6
	baz=197,SNR=58						
350A	Dozier	19.33	8	P	Pn	06 32 09.0	+0.7
	baz=189,SNR=75						
455A	Stateville	19.38	17	P	Pn	06 32 09.3	+0.4
	baz=199,SNR=12						
352A	Blakely	19.63	12	*e*P	Pn	06 32 12.3	+0.5
	comp=Z,391nm,0.7s						
352A	Blakely	19.63	12	P	Pn	06 32 12.4	+0.5
	baz=193,SNR=49						
353A	Camilla	19.65	13	P	Pn	06 32 12.6	+0.5
	baz=195,SNR=42						
456A	Hilliard	19.67	19	*e*P	Pn	06 32 12.0	-0.4
	comp=Z,116nm,0.6s						
456A	Hilliard	19.67	19	P	Pn	06 32 11.6	-0.7
	baz=202						
457A	Yulee	19.73	21	P	P	06 32 12.1	+0.5
	baz=203						
249A	Camden	19.79	6	P	Pn	06 32 13.5	-0.2
	baz=187,SNR=114						
GRTK	Grand Turk	19.82	60	*e*P	P	06 32 11.8	-0.9
	comp=Z,355nm,1.8s						
SDD	Santo Domingo	19.85	69	*e*P	P	06 32 12.8	-0.2
	comp=Z,133nm,0.7s						
TIGA	Tifton	19.89	15	*e*P	Pn	06 32 15.6	+0.7
	comp=Z,291nm,0.7s						
TIGA	Tifton	19.89	15	P	Pn	06 32 15.1	+0.1
	baz=197,SNR=32						
250A	Grady	19.89	8	*e*P	Pn	06 32 14.8	-0.2
	comp=Z,246nm,1.6s						
250A	Grady	19.89	8	P	Pn	06 32 14.4	-0.6
	baz=189,SNR=21						
VBMS	Vicksburg	19.93	357	P	Pn	06 32 15.5	+0.1
	baz=177,SNR=13						
435B	Jarrell	19.95	339	*e*P	P	06 32 14.3	+0.3
	comp=Z,269nm,0.6s						
435B	Jarrell	19.95	339	P	P	06 32 13.9	-0.1
	baz=156,SNR=69						
355A	Pearson	20.00	17	P	P	06 32 15.2	+0.7
	baz=199,SNR=7.7						
NATX	Nacogdoches	20.03	347	*e*P	Pn	06 32 15.7	-1.0
	comp=Z,177nm,0.6s						
NATX	Nacogdoches	20.03	347	P	P	06 32 15.2	+0.3
	baz=165,SNR=39						
251A	Midway	20.14	10	P	Pn	06 32 17.3	-0.6
	baz=191,SNR=68						
252A	Lumpkin	20.17	12	P	Pn	06 32 17.9	-0.3
	baz=193,SNR=81						
356A	Blackshear	20.19	18	P	Pn	06 32 18.3	-0.2
	baz=201,SNR=26						
253A	Americus	20.36	13	*e*P	Pn	06 32 19.4	-1.1
	comp=Z,589nm,1.8s						
253A	Americus	20.36	13	P	Pn	06 32 19.4	-1.1
	baz=195,SNR=15						
147A	Livingston	20.40	3	*e*P	Pn	06 32 20.7	-0.2
	comp=Z,214nm,0.6s						
147A	Livingston	20.40	3	P	Pn	06 32 20.5	-0.4
	baz=183,SNR=42						
148A	Greensboro	20.41	5	P	Pn	06 32 20.6	-0.6
	baz=185,SNR=71						
149A	Jones	20.44	6	P	Pn	06 32 20.4	-1.1
	baz=187,SNR=206						
254A	Abbeville	20.45	15	P	Pn	06 32 20.5	-1.1
	baz=197,SNR=29						
357A	Townsend	20.49	20	P	P	06 32 20.6	+0.7
	baz=203						
150A	Eclectic	20.54	8	P	Pn	06 32 21.7	-1.0
	baz=189,SNR=225						
JCT	Junction City	20.54	334	*e*P	P	06 32 20.4	-0.1
	comp=Z,74nm,0.6s						
JCT	Junction City	20.54	334	*e*P	P	06 32 20.4	-0.1
JCT				pmax	pmax		
	comp=Z,73nm,0.6s						
JCT	Junction City	20.54	334	P	P	06 32 21.0	+0.4
	baz=150,SNR=47						
151A	Opelika	20.57	10	P	Pn	06 32 22.0	-1.0
	baz=191,SNR=134						
255A	Hazlehurst	20.65	17	*e*P	Pn	06 32 22.9	-1.0
	comp=Z,89nm,0.8s						
255A	Hazlehurst	20.65	17	P	Pn	06 32 22.8	-1.2
	baz=200,SNR=8.9						
152A	Waverly Hall	20.82	11	*e*P	Pn	06 32 24.6	-1.4
	comp=Z,77nm,0.6s						
152A	Waverly Hall	20.82	11	P	P	06 32 24.2	+0.8
	baz=193,SNR=47						
LRAL	Lakeview Retre	20.85	6	*e*P	P	06 32 24.6	+0.8
	comp=Z,51nm,0.6s						
LRAL	Lakeview Retre	20.85	6	P	Pn	06 32 24.9	-1.3
	baz=187,SNR=61						
256A	Glennville	20.88	18	P	Pn	06 32 25.4	-1.1
	baz=201,SNR=18						
153A	Fort Valley	20.99	13	P	P	06 32 25.8	+0.5
	baz=195,SNR=38						
WHTX	Lake Whitney,	21.01	341	*e*P	P	06 32 25.3	-0.3
	comp=Z,217nm,0.7s						
WHTX	Lake Whitney,	21.01	341	P	P	06 32 25.0	-0.6
	baz=158,SNR=193						
Z49A	Columbiana	21.06	7	P	P	06 32 26.7	+0.7
	baz=188,SNR=56						
HPIG		21.11	316	*e*P	P	06 32 28.3	+1.4
	comp=Z,70nm,0.8s						
154A	Montrose	21.13	15	*e*P	P	06 32 28.0	+1.2
	comp=Z,134nm,0.8s						
154A	Montrose	21.13	15	P	P	06 32 27.4	+0.6
	baz=197,SNR=15						
257A	Skidaway Islan	21.15	20	*e*P	P	06 32 29.1	+2.2
	comp=Z,184nm,0.8s						
257A	Skidaway Islan	21.15	20	P	P	06 32 27.1	+0.1
	baz=203						
Z41A	Richland Creek	21.17	352	*e*P	P	06 32 28.6	+1.4
	comp=Z,224nm,0.8s						
Z41A	Richland Creek	21.17	352	P	P	06 32 28.3	+1.1
	baz=171,SNR=39						
Z50A	Ashland	21.20	8	*e*P	P	06 32 27.6	+0.1
	comp=Z,57nm,0.8s						
Z50A	Ashland	21.20	8	P	P	06 32 27.8	+0.3
	baz=189,SNR=39						
155A	Kite	21.31	16	P	P	06 32 29.6	+1.0
	baz=199,SNR=16						
Z51A	Franklin	21.37	10	P	P	06 32 30.3	+0.9
	baz=191,SNR=9.7						
Z52A	Williamson	21.39	12	P	P	06 32 30.0	+0.4
	baz=194,SNR=29						
TXAR	Lajitas Array	21.56	324	P	P	06 32 33.2	+1.7
	comp=Z,54nm,0.7s,baz=147,slow=11,SNR=319						
TXAR				PcP	PcP	06 36 34.4	+0.6
	comp=Z,3.4nm,1.1s,baz=154,slow=4.0,SNR=3.5						
TXAR				ScP	ScP	06 40 11.5	+0.8
	comp=Z,0.2nm,0.8s,baz=146,slow=5.5,SNR=2.3						
TXAR				LR	LR	06 42 18.2	
	comp=Z,290nm,18.5s,baz=0.0,slow=41						
TX31	Lajitas Ar. Si	21.56	324	*e*P	P	06 32 32.8	+1.3
	comp=Z,80nm,0.8s						
156A	Sylvania	21.62	19	P	P	06 32 33.3	+1.3
	baz=201,SNR=5.0						
WLAR	White Oak Lake	21.63	352	*e*P	P	06 32 32.1	-0.1
	comp=Z,186nm,0.7s						
Z53A	Monticello	21.65	13	P	P	06 32 32.7	+0.3
	baz=196,SNR=39						
Y48A	Jasper	21.70	5	P	P	06 32 33.5	+0.5
	baz=186,SNR=140						
CCAR	Cane Creek	21.71	355	*e*P	P	06 32 33.3	+0.3
	comp=Z,139nm,0.8s						
Y49A	Blount Mountai	21.73	7	*e*P	P	06 32 33.5	+0.3
	comp=Z,86nm,0.6s						
Y49A	Blount Mountai	21.73	7	P	P	06 32 33.7	+0.5
	baz=188,SNR=59						
Z54A	Sparta	21.79	15	P	P	06 32 33.9	+0.1
	baz=198						
157A	Early Branch	21.80	20	P	P	06 32 35.5	+1.5
	baz=203,SNR=7.6						
GOGA	Godfrey	21.80	14	*e*P	P	06 32 34.5	+0.5
	comp=Z,55nm,0.6s						
GOGA	Godfrey	21.80	14	*e*P	P	06 32 34.5	+0.5
GOGA				pmax	pmax		
	comp=Z,55nm,0.6s						
GOGA	Godfrey	21.80	14	P	P	06 32 34.3	+0.3
	baz=196,SNR=50						
Y50A	Piedmont	21.85	8	P	P	06 32 34.7	+0.3
	baz=190,SNR=30						
Y51A	Rockmart	21.96	10	P	P	06 32 36.2	+0.4
	baz=191,SNR=86						
Z55A	Blythe	21.96	17	P	P	06 32 36.2	+0.5
	baz=199,SNR=21						
Y52A	Lilburn	22.11	12	*e*P	P	06 32 37.6	+0.2
	comp=Z,73nm,0.7s						
Y52A	Lilburn	22.11	12	P	P	06 32 37.5	+0.2
	baz=194,SNR=56						
158A	Hollywood	22.13	21	P	P	06 32 37.8	+0.3
	baz=205						
ATAH	Atahualpa	22.15	150	P	P	06 32 37.6	-0.8
	comp=Z,30nm,1.2s,baz=342,slow=10,SNR=9.7						
ATAH				LR	LR	06 39 53.1	
	comp=Z,667nm,20.1s,baz=325,slow=33						
OXF	Oxford	22.20	0	*e*P	P	06 32 38.6	+0.4
	comp=Z,283nm,0.8s						
OXF	Oxford	22.20	0	*e*P	P	06 32 38.6	+0.4
OXF				pmax	pmax		
	comp=Z,283nm,0.8s						
OXF	Oxford	22.20	0	P	P	06 32 38.4	+0.1
	baz=180,SNR=70						
Y53A	Monroe	22.20	13	P	P	06 32 38.2	-0.2
	baz=195,SNR=29						
X43A	Marvell	22.24	357	*e*P	P	06 32 38.7	0.0
	comp=Z,416nm,1.5s						
X43A	Marvell	22.24	357	P	P	06 32 39.5	+0.8
	baz=176,SNR=17						
X48A	Hartselle	22.25	5	*e*P	P	06 32 38.9	+0.1
	comp=Z,60nm,0.7s						
X48A	Hartselle	22.25	5	P	P	06 32 38.6	-0.2
	baz=186,SNR=44						
X47A	Russelville	22.25	4	P	P	06 32 39.1	+0.3
	baz=184,SNR=55						
X46A	Booneville	22.26	2	P	P	06 32 39.5	+0.7
	baz=182,SNR=63						
Z56A	Williston	22.28	18	*e*P	P	06 32 39.2	0.0
	comp=Z,249nm,0.6s						
Z56A	Williston	22.28	18	P	P	06 32 40.1	+0.9
	baz=201,SNR=30						
RGRS	Roger Stewart	22.29	21	*e*P	P	06 32 38.9	-0.3
	comp=Z,1μm,0.7s						
CRPR	Cabo Rojo, PR	22.33	72	*e*P	P	06 32 41.7	+1.8
	comp=Z,48nm,1.2s						
ABTX	Abilene, Hawle	22.36	337	*e*P	P	06 32 39.3	-0.8
	comp=Z,81nm,0.6s						
ABTX	Abilene, Hawle	22.36	337	P	P	06 32 39.9	-0.2
	baz=153,SNR=48						
X49A	Woodville	22.38	7	P	P	06 32 40.3	0.0
	baz=188,SNR=29						
X40A	Basin Creek Fa	22.39	353	*e*P	P	06 32 39.6	-0.7
	comp=Z,74nm,0.9s						
X40A	Basin Creek Fa	22.39	353	P	P	06 32 41.5	+1.3
	baz=171,SNR=43						
X50B	Fort Payne	22.42	8	P	P	06 32 40.5	-0.2
	baz=190,SNR=53						
Y54A	Tignall	22.42	15	P	P	06 32 40.6	-0.1
	baz=197,SNR=19						
Z57A	Bowman	22.47	20	P	P	06 32 41.6	+0.4
	baz=203,SNR=12						
NHSC	New Hope	22.47	21	*e*P	P	06 32 42.1	+0.9
	comp=Z,121nm,0.9s						
NHSC	New Hope	22.47	21	P	P	06 32 41.8	+0.6
	baz=204						
MIAR	Mount Ida	22.54	351	*e*P	P	06 32 42.0	+0.1
	comp=Z,116nm,0.8s						
MIAR	Mount Ida	22.54	351	*e*P	P	06 32 42.0	+0.1
MIAR				pmax	pmax		
	comp=Z,116nm,0.8s						
MIAR	Mount Ida	22.54	351	P	P	06 32 41.5	-0.4
	baz=169,SNR=114						
UALR	University of	22.61	354	*e*P	P	06 32 42.8	+0.1
	comp=Z,394nm,1.2s						
X51A	Calhoun	22.64	10	*e*P	P	06 32 42.6	-0.5
	comp=Z,41nm,0.6s						
X51A	Calhoun	22.64	10	P	P	06 32 42.5	-0.5
	baz=192,SNR=9.5						
PLAL	Pickwick Lake	22.70	3	*e*P	P	06 32 43.6	0.0
	comp=Z,98nm,1.5s						
Y55A	Saluda	22.71	17	P	P	06 32 43.5	-0.2
	baz=199,SNR=15						
AOPR	Arecibo Observ	22.73	72	*e*P	P	06 32 44.8	+0.6
	comp=Z,17nm,0.9s						
Y56A	Pelion	22.74	18	P	P	06 32 44.2	+0.2
	baz=201,SNR=13						
Z58A	St. Stephen	22.81	21	P	P	06 32 44.9	+0.2
	baz=205						
OBIP	Obispado Ponce	22.81	72	*e*P	P	06 32 45.7	+0.8
	comp=Z,38nm,1.4s						
W46A	Michie	22.84	2	P	P	06 32 45.3	+0.2
	baz=183,SNR=9.6						
ICMP	Isla Caja de M	22.85	73	*e*P	P	06 32 45.8	+0.4
	comp=Z,35nm,0.7s						
X52A	Dahlonega	22.86	12	P	P	06 32 44.7	-0.6
	baz=194,SNR=19						
HODGE	Hodges	22.88	16	*e*P	P	06 32 45.5	0.0
	comp=Z,40nm,0.7s						
X53A	Estanollee	22.89	13	P	P	06 32 45.2	-0.4
	baz=196,SNR=26						
X37A	Clayton	22.91	347	*e*P	P	06 32 45.6	-0.3
	comp=Z,77nm,0.9s						
W48A	Pulaski	22.94	5	P	P	06 32 46.0	-0.2
	baz=186,SNR=32						
W49A	Belvidere	22.99	7	P	P	06 32 46.1	-0.5
	baz=188,SNR=27						
W41B	Gary Mavity, V	23.00	354	*e*P	P	06 32 46.2	-0.5
	comp=Z,161nm,1.3s						
W41B	Gary Mavity, V	23.00	354	P	P	06 32 46.4	-0.3
	baz=173,SNR=82						
W47A	Westpoint	23.00	4	P	P	06 32 46.5	-0.3
	baz=184,SNR=29						
WHAR	Wooly Hollow	23.12	354	*e*P	P	06 32 47.7	-0.3
	comp=Z,118nm,0.9s						
SWET	Sewanee	23.13	7	*e*P	P	06 32 47.7	-0.4
	comp=Z,64nm,0.6s						
X54A	Belton	23.15	15	P	P	06 32 48.2	-0.1
	baz=198,SNR=32						
W50A	Signal Mountai	23.20	9	*e*P	P	06 32 48.1	-0.7
	comp=Z,33nm,0.6s						
W50A	Signal Mountai	23.20	9	P	P	06 32 48.1	-0.7
	baz=190,SNR=23						
JSC	Jenkinsville	23.21	17	*e*P	P	06 32 49.2	+0.3
	comp=Z,332nm,1.9s						
JSC	Jenkinsville	23.21	17	*e*P	P	06 32 49.2	+0.3
JSC				pmax	pmax		
	comp=Z,332nm,1.9s						
W39A	Magazine	23.21	351	*e*P	P	06 32 48.8	-0.1
	comp=Z,111nm,1.1s						
W39A	Magazine	23.21	351	P	P	06 32 49.4	+0.5
	baz=169,SNR=45						
Y57A	Sumter	23.23	19	*e*P	P	06 32 49.5	+0.4
	comp=Z,94nm,0.6s						
Y57A	Sumter	23.23	19	P	P	06 32 49.2	+0.1
	baz=203,SNR=13						
W51A	Cleveland	23.24	10	P	P	06 32 48.9	-0.4
	baz=192,SNR=29						
SJG	San Juan	23.25	73	P	P	06 32 48.7	-0.7
	comp=Z,16nm,0.7s,baz=302,slow=7.1,SNR=6.1						
SJG	San Juan	23.25	73	*e*P	P	06 32 49.4	-0.1
	comp=Z,16nm,0.6s						
HBAR	Harrisburg	23.27	358	*e*P	P	06 32 50.6	+1.2
	comp=Z,2μm,2.0s						
X55A	Gracelyn & Ava	23.28	17	P	P	06 32 49.7	+0.1
	baz=200,SNR=34						
W52A	Murphy	23.33	12	*e*P	P	06 32 49.9	-0.2
	comp=Z,31nm,0.6s						
W52A	Murphy	23.33	12	P	P	06 32 49.7	-0.4
	baz=194,SNR=9.5						
Y58A	Scranton	23.37	21	*e*P	P	06 32 50.1	-0.4
	comp=Z,66nm,0.6s						
Y58A	Scranton	23.37	21	P	P	06 32 50.2	-0.4
	baz=205,SNR=6.4						
BG3	Lake Jocassee	23.44	14	*e*P	P	06 32 51.4	+0.2
	comp=Z,19nm,0.7s						
X56A	White Oak	23.47	18	P	P	06 32 51.6	+0.1
	baz=201						
V46A	Holladay	23.52	3	P	P	06 32 51.2	-0.7
	baz=183,SNR=29						
HUMP	Col San Antoni	23.53	73	*e*P	P	06 32 51.3	-1.0
	comp=Z,12nm,0.7s						
HUMP				*e*PcP	PcP	06 36 39.0	+1.1
V48A	Smith Brothers	23.55	5	*e*P	P	06 32 52.2	-0.1
	comp=Z,43nm,0.7s						
V48A	Smith Brothers	23.55	5	P	P	06 32 51.8	-0.4
	baz=186,SNR=26						
CBYP	Canovanas	23.55	72	*e*P	P	06 32 52.6	+0.1
	comp=Z,23nm,1.1s						
PAULI	Pauline	23.56	16	*e*P	P	06 32 52.6	+0.2
	comp=Z,131nm,1.4s						
W53A	Cullowhee	23.56	13	P	P	06 32 52.0	-0.5
	baz=195,SNR=7.6						
CPCT	Cooper Cave	23.57	10	*e*P	P	06 32 52.7	+0.2
	comp=Z,37nm,0.7s						
V47A	Nunnelly	23.58	4	P	P	06 32 52.0	-0.5
	baz=185,SNR=38						
HALT	Halls	23.59	0	*e*P	P	06 32 53.0	+0.3
	comp=Z,593nm,1.5s						
GNAR	Gosnell	23.65	359	*e*P	P	06 32 53.6	+0.3
	comp=Z,355nm,0.9s						
V49A	McMinnville	23.67	7	P	P	06 32 52.5	-1.0
	baz=188,SNR=21						
V50A	Pikevile	23.69	9	P	P	06 32 52.6	-1.0
	baz=190,SNR=21						
FCAR	Ozark Folk Cen	23.70	355	*e*P	P	06 32 53.3	-0.4
	comp=Z,73nm,0.8s						
W54A	Cherokee Point	23.71	15	P	P	06 32 54.3	+0.4
	baz=198,SNR=25						
Y59A	Loris	23.73	22	P	P	06 32 54.0	0.0
	baz=206,SNR=7.1						
X57A	Johnson Farm,	23.74	20	P	P	06 32 53.9	-0.2
	baz=203,SNR=14						
BIRD	Birdtown, Kers	23.79	19	*e*P	P	06 32 54.8	+0.2
	comp=Z,70nm,0.7s						
MTP	Monte Pirata	23.80	73	*e*P	P	06 32 54.5	-0.5
	comp=Z,33nm,0.8s						
WVT	Waverly	23.86	3	*e*P	P	06 32 54.8	-0.4
	comp=Z,24nm,0.6s						
WVT	Waverly	23.86	3	P	P	06 32 54.8	-0.4
	baz=184						
TKL	Tuckaleechee C	23.91	12	P	P	06 32 55.4	-0.3
	comp=Z,2.8nm,0.7s,baz=185,slow=11,SNR=42						
TKL				LR	LR	06 42 33.2	
	comp=Z,44nm,20.7s,baz=194,slow=37						
V51A	Loudon	23.94	10	*e*P	P	06 32 55.5	-0.5
	comp=Z,80nm,1.4s						
V51A	Loudon	23.94	10	P	P	06 32 55.5	-0.5
	baz=192,SNR=8.2						
CLTN	Cedars of Leba	23.94	6	*e*P	P	06 32 55.7	-0.3
	comp=Z,31nm,0.6s						
GLAT	Glass	23.95	0	*e*P	P	06 32 56.4	+0.2
	comp=Z,1μm,1.5s						
WMOK	Wichita Mounta	23.97	341	*e*P	P	06 32 54.6	-1.8
	comp=Z,123nm,1.3s						
WMOK	Wichita Mounta	23.97	341	*e*P	P	06 32 54.6	-1.8
WMOK				pmax	pmax		
	comp=Z,123nm,1.3s						
WMOK	Wichita Mounta	23.97	341	P	P	06 32 55.2	-1.2
	baz=157,SNR=152						
KMSC	Kings Mountain	23.99	17	*e*P	P	06 32 56.5	-0.1
	comp=Z,56nm,0.8s						
KMSC	Kings Mountain	23.99	17	P	P	06 32 56.0	-0.5
	baz=200,SNR=32						
Y60A	Bolivia	24.00	23	*e*P	P	06 32 58.0	+1.4
	comp=Z,151nm,0.8s						
Y60A	Bolivia	24.00	23	P	P	06 32 56.8	+0.2
	baz=208						
UTMT	University of	24.03	1	*e*P	P	06 32 56.5	-0.4
	comp=Z,280nm,1.1s						
U46A	Springville	24.07	3	P	P	06 32 56.7	-0.6
	baz=183,SNR=64						
X58A	Rowland	24.07	21	*e*P	P	06 32 57.3	0.0
	comp=Z,88nm,0.6s						
X58A	Rowland	24.07	21	P	P	06 32 56.9	-0.4
	baz=205,SNR=24						
PVMO	Portageville	24.10	360	*e*P	P	06 32 58.2	+0.7
	comp=Z,371nm,1.2s						
V52A	Sevierville	24.12	12	*e*P	P	06 32 57.0	-0.6
	comp=Z,28nm,0.8s						
V52A	Sevierville	24.12	12	P	P	06 32 57.1	-0.6
	baz=194,SNR=14						
V53A	Saluda	24.12	13	*e*P	P	06 32 57.5	-0.3
	comp=Z,56nm,0.7s						
V53A	Saluda	24.12	13	P	P	06 32 58.0	+0.2
	baz=196,SNR=34						
GDL2	Guadalupe Moun	24.15	328	*e*P	P	06 32 59.0	+0.8
W56A	Indian Trail	24.20	18	P	P	06 32 58.1	-0.4
	baz=201,SNR=28						
U47A	Clarksville	24.20	4	P	P	06 32 57.2	-1.3
	baz=185,SNR=33						
U40A	Yellville	24.23	353	P	P	06 32 58.3	-0.5
	baz=172,SNR=82						
TUL1	Leonard	24.28	347	*e*P	P	06 32 57.3	-1.9
	comp=Z,46nm,0.8s						
TUL1	Leonard	24.28	347	P	P	06 32 57.8	-1.3
	baz=165,SNR=21						
HHAR	Hobbs	24.30	351	*e*P	P	06 32 57.8	-1.6
	comp=Z,33nm,0.8s						
MNTX	Cornudas Mount	24.31	325	*e*P	P	06 32 58.7	-0.9
	comp=Z,76nm,1.3s						
MNTX	Cornudas Mount	24.31	325	P	P	06 32 59.9	+0.3
	baz=139,SNR=23						
U48A	Cassie Pea, Po	24.34	6	P	P	06 32 59.2	-0.5
	baz=187,SNR=17						
PARMO	Parma	24.35	359	*e*P	P	06 32 58.5	-1.3
	comp=Z,424nm,0.7s						
X59A	McDuffie Farm,	24.36	22	P	P	06 32 59.9	+0.1
	baz=206,SNR=12						

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W57A Gilead            24.40  19 eP       P        06 32 59.5 -0.8
     comp=Z,107nm,0.6s
W57A Gilead            24.40  19  P       P        06 32 59.5 -0.8
     baz=203,SNR=38
STVI Saint Thomas      24.41  72 eP       P        06 32 59.8 -0.8
     comp=Z,46nm,0.7s
U49A Red Boiling Sp    24.42   7  P       P        06 32 59.3 -1.2
     baz=189,SNR=57
V54A Nebo              24.43  15  P       P        06 33 00.0 -0.6
     baz=198,SNR=38
PCRV Puerto La Cruz    24.44  92  P       P        06 33 01.4 +0.5
     comp=Z,36nm,0.7s,baz=205,slow=5.2,SNR=31
U50A Jamestown         24.46   9  P       P        06 33 00.0 -0.8
     baz=191,SNR=30
PBMO Poplar Bluff      24.48 358 eP       P        06 33 00.6 -0.4
     comp=Z,187nm,0.7s
W58A Raeford           24.53  21  P       P        06 33 00.9 -0.6
     baz=205,SNR=49
U51A La Follette       24.56  11  P       P        06 33 01.3 -0.5
     baz=193,SNR=20
CPRX Cap Rock          24.56 330 eP       P        06 33 03.0 +1.0
X60A Albert Glenn T    24.60  23  P       P        06 33 01.4 -0.6
     baz=208,SNR=17
V55A Taylorsville      24.69  16  P       P        06 33 02.4 -0.6
     baz=200,SNR=17
U52A Thorn Hill        24.70  12  P       P        06 33 02.0 -1.0
     baz=194,SNR=11
T45A Paducah           24.71   2 eP       P        06 33 02.7 -0.4
     comp=Z,294nm,0.6s
T45A Paducah           24.71   2  P       P        06 33 02.5 -0.6
     baz=182,SNR=23
T47A Sharon Grove      24.76   5 eP       P        06 33 02.4 -1.2
     comp=Z,227nm,1.3s
T47A Sharon Grove      24.76   5  P       P        06 33 02.5 -1.1
     baz=185,SNR=62
T46A Princeton         24.76   3  P       P        06 33 02.8 -0.8
     baz=184,SNR=23
TZTN Tazewell          24.81  11 eP       P        06 33 02.9 -1.1
     comp=Z,64nm,1.4s
TZTN Tazewell          24.81  11  P       P        06 33 03.1 -0.9
     baz=194,SNR=15
MSTX Muleshoe          24.82 333 eP       P        06 33 02.9 -1.4
     comp=Z,196nm,1.6s
MSTX Muleshoe          24.82 333  P       P        06 33 03.5 -0.8
     baz=148,SNR=35
U53A Fall Branch       24.84  13  P       P        06 33 04.1 -0.2
     baz=196,SNR=42
V56A Mocksville        24.86  18 eP       P        06 33 04.3 -0.2
     comp=Z,47nm,0.6s
V56A Mocksville        24.86  18  P       P        06 33 03.8 -0.7
     baz=201,SNR=25
T48A Bowling Green     24.95   6  P       P        06 33 05.3 +0.1
     baz=187,SNR=16
W59A Clinton           24.95  22  P       P        06 33 05.0 -0.2
     baz=206
T49A Edmonton          25.04   7 eP       P        06 33 04.5 -1.5
     comp=Z,64nm,0.6s
T49A Edmonton          25.04   7  P       P        06 33 05.1 -1.0
     baz=189,SNR=64
T50A Nancy             25.05   9  P       P        06 33 05.2 -0.9
     baz=191,SNR=31
ABVI Anegada Island    25.06  72 eP       P        06 33 05.2 -1.3
     comp=Z,131nm,0.8s
W60A Pink Hill         25.12  23  P       P        06 33 06.6 -0.1
     baz=208,SNR=10
T51A Gray              25.14  10  P       P        06 33 06.4 -0.7
     baz=193,SNR=21
AMTX Amarillo          25.15 336 eP       P        06 33 06.1 -1.1
     comp=Z,174nm,1.3s
AMTX Amarillo          25.15 336  P       P        06 33 07.0 -0.1
     baz=151
V57A Coltrane Farms    25.15  19  P       P        06 33 06.4 -0.7
     baz=203,SNR=31
U54A Nelsons Funny     25.16  15 eP       P        06 33 04.7 -2.6
     comp=Z,59nm,0.6s
U54A Nelsons Funny     25.16  15  P       P        06 33 06.6 -0.7
     baz=198,SNR=28
CNNC Cliffs of the     25.21  23 eP       P        06 33 06.8 -0.9
     comp=Z,43nm,0.8s
CNNC Cliffs of the     25.21  23  P       P        06 33 07.1 -0.6
     baz=207,SNR=6.9
V58A Windy Hill, Pi    25.28  20  P       P        06 33 07.7 -0.5
     baz=204,SNR=34
U55A TA2, Sparta       25.35  16  P       P        06 33 08.5 -0.5
     baz=199,SNR=21
S44A Carbondale        25.38   0  P       P        06 33 09.1  0.0
     baz=180,SNR=41
S47A Hartford          25.38   5  P       P        06 33 07.6 -1.6
     baz=186,SNR=18
U56A King              25.39  17  P       P        06 33 08.8 -0.4
     baz=201,SNR=11
S46A Don Dixon Farm    25.41   3  P       P        06 33 08.6 -0.9
     baz=184,SNR=27
T53A Wise              25.44  13  P       P        06 33 08.5 -1.3
     baz=196,SNR=14
T52A Hallie            25.46  12 eP       P        06 33 09.3 -0.7
     comp=Z,14nm,0.6s
T52A Hallie            25.46  12  P       P        06 33 09.1 -0.8
     baz=195
W61A Ground Anchor     25.51  24  P       P        06 33 09.2 -1.1
     baz=209,SNR=8.2
S48A Wiedeman Farm,    25.52   6  P       P        06 33 09.1 -1.4
     baz=188,SNR=9.8
V59A Middlesex         25.55  22  P       P        06 33 09.7 -1.0
     baz=206,SNR=14
USIN University of     25.70   3 eP       P        06 33 11.1 -0.9
     comp=Z,64nm,0.7s
T54A Tazewell          25.74  15  P       P        06 33 11.3 -1.2
     baz=198,SNR=7.6
S49A Springfield       25.74   8  P       P        06 33 11.2 -1.2
     baz=189,SNR=22
CCM  Cathedral Cave    25.79 357 eP       P        06 33 11.9 -0.9
     comp=Z,108nm,0.6s
CCM  Cathedral Cave    25.79 357 eP       P        06 33 11.9 -0.9
CCM                               pmax    pmax
     comp=Z,108nm,0.6s
CCM  Cathedral Cave    25.79 357  P       P        06 33 11.8 -1.1
     baz=176
U57A Blanch            25.79  19  P       P        06 33 12.2 -0.6
     baz=203,SNR=36
S51A Beattyville       25.86  11 eP       P        06 33 12.1 -1.4
     comp=Z,22nm,0.6s
S51A Beattyville       25.86  11  P       P        06 33 12.7 -0.9
     baz=193,SNR=11
V60A Jim Taylor Roa    25.92  23 eP       P        06 33 14.5 +0.5
     comp=Z,70nm,0.6s
V60A Jim Taylor Roa    25.92  23  P       P        06 33 13.7 -0.3
     baz=208,SNR=13
T55A Pulaski           26.00  16  P       P        06 33 14.0 -0.8
     baz=200
S52A Salyersville      26.00  12  P       P        06 33 14.1 -0.7
     baz=194
U58A Oxford            26.01  20  P       P        06 33 14.1 -0.8
     baz=205,SNR=13
WCI  Wyandotte Cave    26.06   6 eP       P        06 33 13.5 -1.9
     comp=Z,89nm,0.6s
WCI  Wyandotte Cave    26.06   6 eP       P        06 33 13.5 -1.9
WCI                               pmax    pmax
     comp=Z,89nm,0.6s
WCI  Wyandotte Cave    26.06   6  P       P        06 33 14.4 -0.9
     baz=187
HSIG                   26.07 313 eP       P        06 33 14.7 -0.8
     comp=Z,28nm,1.2s
SRIG Santa Rosalia     26.10 308 eP       P        06 33 15.2 -0.7
     comp=Z,90nm,1.0s
T56A Rocky Mt          26.12  17  P       P        06 33 14.7 -1.2
     baz=201
BLA  Blacksburg        26.18  17 eP       P        06 33 16.6 +0.1
     comp=Z,34nm,0.8s
BLA  Blacksburg        26.18  17 eP       P        06 33 16.6 +0.1
BLA                               pmax    pmax
     comp=Z,34nm,0.8s
BLA  Blacksburg        26.18  17  P       P        06 33 16.0 -0.6
     baz=200
S53A Williamson        26.20  13  P       P        06 33 15.8 -0.8
     baz=196
V61A Roper             26.21  24 eP       P        06 33 18.2 +1.5
     comp=Z,107nm,0.9s
V61A Roper             26.21  24  P       P        06 33 16.1 -0.6
     baz=209
U59A Littleton         26.24  22 eP       P        06 33 16.8 -0.2
     comp=Z,25nm,0.8s
U59A Littleton         26.24  22  P       P        06 33 16.2 -0.8
     baz=206,SNR=12
R49A Shelbyville       26.25   8 eP       P        06 33 15.3 -1.8
     comp=Z,28nm,0.6s
R49A Shelbyville       26.25   8  P       P        06 33 15.6 -1.5
     baz=189,SNR=18
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V62A Hyde County Ai    26.27  26  P       P        06 33 15.5 -1.7
     baz=211
R48A Northridge Ran    26.28   6  P       P        06 33 16.3 -1.0
     baz=188
121A Cookes Peak, D    26.30 323  P       P        06 33 19.6 +1.8
     baz=136,SNR=17
SLM  Saint Louis       26.32 359 eP       P        06 33 18.9 +1.2
     comp=Z,193nm,0.5s
SLM  Saint Louis       26.32 359 eP       P        06 33 18.9 +1.2
SLM                               pmax    pmax
     comp=Z,193nm,0.5s
SKI  Saint Kitts       26.33  76 eP       P        06 33 19.7 +1.7
     comp=Z,70nm,0.7s
SKI  Saint Kitts       26.33  76 eP       P        06 33 19.7 +1.7
SKI                               pmax    pmax
     comp=Z,70nm,0.7s
T57A Hurt              26.33  19 eP       P        06 33 17.4 -0.4
     comp=Z,53nm,1.4s
T57A Hurt              26.33  19  P       P        06 33 17.3 -0.5
     baz=203,SNR=13
R50A Paris             26.36   9 eP       P        06 33 17.1 -1.0
     comp=Z,18nm,0.8s
R50A Paris             26.36   9  P       P        06 33 17.2 -0.8
     baz=191,SNR=6.2
319A Douglas           26.41 319 eP       P        06 33 20.7 +2.0
     comp=Z,69nm,1.3s
OLIL Olney             26.44   2 eP       P        06 33 18.6 -0.2
     comp=Z,56nm,0.6s
R51A Hillsboro         26.50  10  P       P        06 33 18.5 -0.9
     baz=193,SNR=8.8
S54A Dingess, Beckl    26.50  15  P       P        06 33 18.6 -0.8
     baz=198
T58A Grand View Acr    26.52  20  P       P        06 33 18.6 -0.9
     baz=204,SNR=7.5
U60A Pendleton         26.58  23  P       P        06 33 18.5 -1.5
     baz=208,SNR=6.7
Q45A Warren Harvey,    26.60   2  P       P        06 33 19.2 -1.0
     baz=183,SNR=14
S55A Lewisburg         26.69  16  P       P        06 33 20.7 -0.3
     baz=200
R52A Catlettsburg      26.72  12  P       P        06 33 21.2 -0.1
     baz=195
U61A Possum Corner     26.73  24 eP       P        06 33 22.6 +1.3
     comp=Z,176nm,1.8s
U61A Possum Corner     26.73  24  P       P        06 33 20.6 -0.8
     baz=209
Q48A North Vernon      26.82   6  P       P        06 33 20.8 -1.4
     baz=188,SNR=12
BNM  Barren Site       26.86 327 eP       P        06 33 23.9 +1.1
R53A Hurricane         26.86  13 eP       P        06 33 21.6 -1.0
     comp=Z,61nm,1.5s
R53A Hurricane         26.86  13  P       P        06 33 21.4 -1.1
     baz=196
S56A Natural Bridge    26.86  18  P       P        06 33 22.0 -0.7
     baz=202,SNR=9.4
T59A Double "B" Far    26.88  21 eP       P        06 33 22.4 -0.3
     comp=Z,23nm,0.7s
T59A Double "B" Far    26.88  21  P       P        06 33 21.6 -1.1
     baz=206,SNR=9.2
R54A Victor            26.95  15  P       P        06 33 22.4 -1.0
     baz=198
Y22D IRIS PASSCAL I    26.95 327 eP       P        06 33 25.5 +1.9
     comp=Z,44nm,0.9s
Y22D IRIS PASSCAL I    26.95 327  P       P        06 33 22.8 -0.8
     baz=140
Q50A Georgetown        26.97   9  P       P        06 33 22.0 -1.5
     baz=192
BLO  Bloomington       26.98   5 eP       P        06 33 22.5 -1.1
     comp=Z,24nm,0.6s
BLO  Bloomington       26.98   5 eP       P        06 33 22.5 -1.1
BLO                               pmax    pmax
     comp=Z,24nm,0.6s
Q49A Aurora            26.99   8  P       P        06 33 22.3 -1.4
     baz=190,SNR=12
LENM Lemitar           27.05 327 eP       P        06 33 25.3 +0.8
S57A Dark Hollow, R    27.12  18 eP       P        06 33 25.9 +1.0
     comp=Z,68nm,1.8s
Q51A Peebles           27.25  10 eP       P        06 33 25.4 -0.6
     comp=Z,36nm,0.8s
Q51A Peebles           27.25  10  P       P        06 33 25.0 -1.1
     baz=193,SNR=10.0
R55A Marlinton         27.27  16 eP       P        06 33 26.4 +0.1
     comp=Z,32nm,0.9s
R55A Marlinton         27.27  16  P       P        06 33 25.7 -0.7
     baz=200,SNR=8.3
S58A Poland Farm, P    27.28  20 eP       P        06 33 26.0 -0.3
     comp=Z,21nm,1.1s
S58A Poland Farm, P    27.28  20  P       P        06 33 25.5 -0.9
     baz=205,SNR=6.3
P47A Martinsville      27.31   5  P       P        06 33 24.8 -1.8
     baz=187,SNR=20
LAZ  Ladron            27.32 327 eP       P        06 33 28.1 +1.1
P43A Skaggs, Pawnee    27.32 360  P       P        06 33 25.9 -0.7
     baz=180,SNR=12
T60A Surry             27.33  23 eP       P        06 33 26.9 +0.2
     comp=Z,56nm,0.8s
T60A Surry             27.33  23  P       P        06 33 25.9 -0.9
     baz=208,SNR=6.7
P46A Rosedale          27.37   4  P       P        06 33 26.4 -0.7
     baz=185
P48A Milroy            27.37   7 eP       P        06 33 25.7 -1.5
     comp=Z,30nm,0.6s
P48A Milroy            27.37   7  P       P        06 33 25.2 -2.0
     baz=188,SNR=16
ANMO Albuquerque       27.38 329  P       P        06 33 29.4 +1.9
     comp=Z,4.4nm,0.7s,baz=142,slow=13,SNR=27
ANMO Albuquerque       27.38 329 eP       P        06 33 29.6 +2.1
     comp=Z,4.7nm,0.8s
ANMO Albuquerque       27.38 329ceP       P        06 33 27.9 +0.4
ANMO                              pmax    pmax
     comp=Z,11nm,1.3s
ANMO Albuquerque       27.38 329  P       P        06 33 27.5 -0.1
     baz=142
Q52A Bidwell           27.40  12  P       P        06 33 26.3 -1.1
     baz=195
Q53A Leroy             27.46  14  P       P        06 33 27.2 -0.8
     baz=197
KSU1 Kansas State U    27.52 348  P       P        06 33 27.2 -1.3
     baz=165,SNR=25
P49A Miami Univ. Ec    27.54   8  P       P        06 33 26.5 -2.1
     baz=190,SNR=6.0
R56A Bull Pasture M    27.59  17  P       P        06 33 28.2 -1.0
     baz=202,SNR=7.2
R58B Mineral           27.66  20 eP       P        06 33 29.5 -0.2
     comp=Z,17nm,0.6s
R58B Mineral           27.66  20  P       P        06 33 29.3 -0.4
     baz=205,SNR=9.7
P50A Jamestown         27.75   9  P       P        06 33 29.5 -1.0
     baz=192
Q54A Coxs Mills        27.75  15 eP       P        06 33 29.9 -0.5
     comp=Z,43nm,0.8s
Q54A Coxs Mills        27.75  15  P       P        06 33 29.8 -0.7
     baz=198,SNR=19
P51A Williamsport      27.75  11 eP       P        06 33 29.7 -0.8
     comp=Z,28nm,0.5s
P51A Williamsport      27.75  11  P       P        06 33 29.5 -1.0
     baz=193
R57A Stanardsville     27.75  19  P       P        06 33 29.6 -1.0
     baz=203,SNR=12
O44A Mansfield         27.84   2  P       P        06 33 29.7 -1.7
     baz=182,SNR=16
S60A Water View        27.86  22  P       P        06 33 29.1 -2.3
     baz=208
R58A Rapidan           27.92  20  P       P        06 33 31.2 -0.9
     baz=204,SNR=9.7
Q55A Buckhannon        27.95  16  P       P        06 33 31.7 -0.7
     baz=200
TUC  Tucson            27.99 319 eP       P        06 33 34.1 +1.2
     comp=Z,35nm,1.1s
TUC  Tucson            27.99 319 eP       P        06 33 34.1 +1.2
TUC                               pmax    pmax
     comp=Z,35nm,1.1s
CBKS Cedar Bluff       28.02 343 eP       P        06 33 31.8 -1.3
     comp=Z,52nm,0.6s
CBKS Cedar Bluff       28.02 343 eP       P        06 33 31.8 -1.3
CBKS                              pmax    pmax
     comp=Z,52nm,0.6s
CBKS Cedar Bluff       28.02 343  P       P        06 33 32.2 -0.9
     baz=158,SNR=21
CBN  Corbin Frederi    28.05  21 eP       P        06 33 33.0 -0.2
     comp=Z,41nm,0.6s
CBN  Corbin Frederi    28.05  21  P       P        06 33 32.7 -0.4
     baz=206,SNR=8.4
P53A Whipple           28.09  13 eP       P        06 33 33.3 -0.3
     comp=Z,26nm,0.8s
P53A Whipple           28.09  13  P       P        06 33 32.8 -0.8
     baz=197,SNR=7.1
R59A King George, V    28.13  21  P       P        06 33 33.5 -0.4
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     baz=206,SNR=12
SFIN Lafayette         28.13   4 eP       P        06 33 32.6 -1.3
     comp=Z,22nm,0.8s
SFIN Lafayette         28.13   4  P       P        06 33 32.5 -1.4
     baz=185,SNR=9.9
O48A Farmland          28.19   7  P       P        06 33 33.1 -1.4
     baz=189,SNR=5.6
T25A Trinidad          28.21 334 eP       P        06 33 35.2 +0.3
     comp=Z,28nm,0.8s
T25A Trinidad          28.21 334  P       P        06 33 35.5 +0.5
     baz=148,SNR=18
O49A Covington         28.23   8 eP       P        06 33 32.9 -1.9
     comp=Z,15nm,0.6s
O49A Covington         28.23   8  P       P        06 33 33.2 -1.6
     baz=190,SNR=10
HDIL Hopedale          28.23   0 eP       P        06 33 33.8 -1.0
     comp=Z,63nm,0.8s
HDIL Hopedale          28.23   0  P       P        06 33 33.7 -1.0
     baz=180,SNR=28
Q56A Snyder Ridge,     28.24  17  P       P        06 33 34.6 -0.3
     baz=202,SNR=12
O50A Cable             28.30   9  P       P        06 33 34.1 -1.3
     baz=192,SNR=33
N41A Harden Midland    28.41 358 eP       P        06 33 36.3 -0.1
     comp=Z,67nm,0.9s
N41A Harden Midland    28.41 358  P       P        06 33 36.1 -0.3
     baz=177,SNR=6.1
P54A Burton            28.42  15  P       P        06 33 35.2 -1.3
     baz=199,SNR=21
Q57A Strasburg         28.46  18  P       P        06 33 36.5 -0.4
     baz=203,SNR=6.1
O51A Pataskala         28.48  11  P       P        06 33 35.8 -1.2
     baz=194,SNR=11
ACSO Alum Creek Sta    28.49  10 eP       P        06 33 36.0 -1.1
     comp=Z,28nm,0.7s
ACSO Alum Creek Sta    28.49  10  P       P        06 33 35.7 -1.4
     baz=193,SNR=8.1
N44A Piper City        28.50   2  P       P        06 33 35.7 -1.4
     baz=183,SNR=14
P55A Reedsville        28.50  16  P       P        06 33 36.3 -1.0
     baz=200
O52A Adamsville        28.60  12 eP       P        06 33 37.3 -0.8
     comp=Z,52nm,1.3s
O52A Adamsville        28.60  12  P       P        06 33 36.3 -1.8
     baz=196,SNR=15
Q58A Fox Den Farm,     28.61  19  P       P        06 33 37.5 -0.7
     baz=204,SNR=5.3
N40A Mertquake, Sal    28.62 357  P       P        06 33 37.0 -1.3
     baz=176,SNR=14
MCWV Mont Chateau      28.63  16 eP       P        06 33 37.7 -0.7
     comp=Z,7.6nm,0.6s
MCWV Mont Chateau      28.63  16  P       P        06 33 37.5 -0.9
     baz=200
N47A Urbana            28.75   6  P       P        06 33 36.9 -2.5
     baz=188,SNR=8.8
P56A Dayton Farm, R    28.77  17  P       P        06 33 38.1 -1.5
     baz=202
N48A Decatur           28.80   7  P       P        06 33 37.4 -2.5
     baz=189,SNR=8.1
O53A New Philadelph    28.86  13  P       P        06 33 39.2 -1.2
     baz=197,SNR=7.4
N49A Columbus Grove    28.97   8 eP       P        06 33 39.5 -1.9
     comp=Z,20nm,0.9s
N49A Columbus Grove    28.97   8  P       P        06 33 39.5 -1.9
     baz=191,SNR=6.6
X18A Snowflake         28.98 323 eP       P        06 33 44.2 +2.4
     comp=Z,6.7nm,0.7s
N50A Nevada            28.99  10  P       P        06 33 39.9 -1.6
     baz=193,SNR=5.1
O54A Avella            28.99  14  P       P        06 33 40.1 -1.5
     baz=198,SNR=13
P57A Homestead Farm    29.00  18  P       P        06 33 40.3 -1.4
     baz=204,SNR=22
M41A Milan             29.07 358  P       P        06 33 40.8 -1.4
     baz=178,SNR=16
M44A Midewin, Midew    29.09   2 eP       P        06 33 41.4 -1.0
     comp=Z,22nm,0.8s
M44A Midewin, Midew    29.09   2  P       P        06 33 41.5 -1.0
     baz=183
214A Organ Pipe Nat    29.10 316  P       P        06 33 42.7  0.0
     baz=127,SNR=17
KSCO Kaye Shedlock’    29.14 339 eP       P        06 33 42.1 -1.0
     comp=Z,50nm,0.8s
KSCO Kaye Shedlock’    29.14 339  P       P        06 33 42.4 -0.6
     baz=153,SNR=18
SDCO Great Sand Dun    29.19 333 eP       P        06 33 41.7 -2.1
     comp=Z,13nm,1.4s
SDCO Great Sand Dun    29.19 333  P       P        06 33 44.8 +1.0
     baz=146,SNR=9.6
P58A Pank, Wackersv    29.23  20  P       P        06 33 42.5 -1.2
     baz=205,SNR=7.7
M47A Cromwell          29.23   6  P       P        06 33 41.7 -2.0
     baz=188
N51A Ashland           29.27  11 eP       P        06 33 42.5 -1.5
     comp=Z,20nm,0.6s
N51A Ashland           29.27  11  P       P        06 33 42.7 -1.3
     baz=194
W18A Petrified Fore    29.28 325 eP       P        06 33 47.5 +3.1
     comp=Z,14nm,0.9s
O55A Ligonier          29.29  16  P       P        06 33 43.1 -1.1
     baz=200
N52A McGinn’s Farm,    29.30  12  P       P        06 33 42.8 -1.6
     baz=196,SNR=9.6
SDMD Soldier’s Deli    29.31  20 eP       P        06 33 44.3 -0.1
     comp=Z,18nm,0.6s
M48A Edgerton          29.46   7 eP       P        06 33 42.7 -3.0
     comp=Z,21nm,0.6s
N53A Lisbon            29.48  13 eP       P        06 33 43.7 -2.2
     comp=Z,18nm,0.6s
N53A Lisbon            29.48  13  P       P        06 33 44.7 -1.2
     baz=197,SNR=9.5
M49A Liberty Center    29.55   8  P       P        06 33 45.1 -1.4
     baz=191
O56A Blue Knob Stat    29.55  17 eP       P        06 33 46.0 -0.6
     comp=Z,27nm,1.4s
O56A Blue Knob Stat    29.55  17  P       P        06 33 45.5 -1.2
     baz=202
M50A Fremont           29.62  10 eP       P        06 33 45.7 -1.5
     comp=Z,80nm,0.9s
M50A Fremont           29.62  10  P       P        06 33 45.0 -2.2
     baz=193,SNR=12
P59A Jarrettsville     29.63  21  P       P        06 33 45.4 -1.9
     baz=206
L42A Oliver, Polo      29.68 360 eP       P        06 33 45.9 -1.8
     comp=Z,58nm,0.6s
L42A Oliver, Polo      29.68 360  P       P        06 33 45.8 -1.8
     baz=180,SNR=29
M51A Elyria            29.70  11  P       P        06 33 46.3 -1.6
     baz=194
SCIA State Center      29.76 354 eP       P        06 33 47.2 -1.2
     comp=Z,20nm,0.6s
SCIA State Center      29.76 354  P       P        06 33 46.8 -1.6
     baz=172
L40A Anamosa           29.78 357 eP       P        06 33 47.2 -1.4
     comp=Z,58nm,0.9s
L40A Anamosa           29.78 357  P       P        06 33 47.1 -1.4
     baz=176,SNR=11
O57A Amberson          29.78  18  P       P        06 33 46.6 -2.0
     baz=204,SNR=6.6
S22A 4UR Ranch, Cre    29.79 332 eP       P        06 33 49.9 +0.8
     comp=Z,12nm,1.1s
S22A 4UR Ranch, Cre    29.79 332  P       P        06 33 49.2 +0.1
     baz=144,SNR=16
X16A Lo Mia Camp, P    29.80 322 eP       P        06 33 49.5 +0.5
     comp=Z,9.9nm,0.8s
L46A Eue Claire        29.82   5 eP       P        06 33 48.7 -0.2
     comp=Z,20nm,0.6s
L46A Eue Claire        29.82   5  P       P        06 33 47.1 -1.8
     baz=186
N54A Moraine State     29.82  15 eP       P        06 33 48.1 -0.9
     comp=Z,27nm,0.6s
N54A Moraine State     29.82  15  P       P        06 33 47.5 -1.5
     baz=199,SNR=17
L47A Sherwood          29.88   6  P       P        06 33 47.1 -2.4
     baz=188,SNR=19
L44A Lake County Fo    29.89   2  P       P        06 33 47.4 -2.1
     baz=183
N55A Marion Center     29.91  16 eP       P        06 33 48.8 -1.0
     comp=Z,14nm,0.7s
N55A Marion Center     29.91  16  P       P        06 33 47.6 -2.2
     baz=201,SNR=11
O58A Lewisberry        29.93  20  P       P        06 33 48.1 -1.7
     baz=205
L48A N Adams           29.94   8  P       P        06 33 47.6 -2.4
     baz=190,SNR=13
MVL  Millersville      30.00  20 eP       P        06 33 49.7 -0.9
     comp=Z,9.9nm,0.8s
PLIO Pelee Island,     30.03  10  P       P        06 33 49.0 -1.7
     baz=193,SNR=6.4
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BGNE	**Belgrade**	**30.06**	**347**	*e*P	**P**	**06 33 48.8**	**-2.3**
	comp=Z,101nm,0.6s						
BGNE	**Belgrade**	**30.06**	**347**	P	**P**	**06 33 50.3**	**-0.8**
	baz=163,SNR=19						
Q24A	**Divide**	**30.07**	**335**	*e*P	**P**	**06 33 51.1**	**-0.4**
	comp=Z,7.4nm,0.8s						
M52A	**Chesterland**	**30.07**	**12**	*e*P	**P**	**06 33 49.0**	**-2.1**
	comp=Z,12nm,0.8s						
M52A	**Chesterland**	**30.07**	**12**	P	**P**	**06 33 49.5**	**-1.6**
	baz=196						
P60A	**Greenville**	**30.09**	**22**	P	**P**	**06 33 49.5**	**-1.8**
	baz=208						
SSPA	**Standing Stone**	**30.09**	**18**	*e*P	**P**	**06 33 50.4**	**-0.9**
	comp=Z,35nm,1.8s						
SSPA	**Standing Stone**	**30.09**	**18**	P	**P**	**06 33 50.5**	**-0.9**
	baz=203						
M53A	**WI Miller and**	**30.12**	**13**	P	**P**	**06 33 50.3**	**-1.2**
	baz=197,SNR=6.4						
MVCO	**Mesa Verde**	**30.18**	**329**	*e*P	**P**	**06 33 52.8**	**+0.4**
	comp=Z,10nm,0.9s						
MVCO	**Mesa Verde**	**30.18**	**329**	P	**P**	**06 33 53.4**	**+0.9**
	baz=141,SNR=7.2						
N56A	**West Decatur**	**30.23**	**17**	P	**P**	**06 33 51.4**	**-1.2**
	baz=202,SNR=14						
113A	**Mohawk Valley,**	**30.24**	**316**	*e*P	**P**	**06 33 54.0**	**+1.3**
	comp=Z,26nm,1.4s						
PSUB	**Penn St. - Bra**	**30.26**	**22**	*e*P	**P**	**06 33 52.5**	**-0.2**
	comp=Z,8.4nm,0.8s						
L50A	**Kingsville**	**30.28**	**10**	P	**P**	**06 33 51.4**	**-1.6**
	baz=193,SNR=5.9						
N57A	**Milroy**	**30.30**	**18**	P	**P**	**06 33 52.4**	**-0.8**
	baz=203						
BBSR	**BB Station**	**30.33**	**45**	*e*P	**P**	**06 33 54.1**	**+0.7**
	comp=Z,48nm,0.8s						
O59A	**Robesonia**	**30.34**	**20**	P	**P**	**06 33 53.1**	**-0.4**
	baz=206						
K43A	**Burlington**	**30.40**	**2**	*e*P	**P**	**06 33 52.3**	**-1.7**
	comp=Z,48nm,1.0s						
K43A	**Burlington**	**30.40**	**2**	P	**P**	**06 33 52.8**	**-1.2**
	baz=182						
AAM	**Ann Arbor**	**30.40**	**9**	*e*P	**P**	**06 33 54.2**	**+0.1**
	comp=Z,23nm,0.6s						
AAM	**Ann Arbor**	**30.40**	**9**	*e*P	**P**	**06 33 54.2**	**+0.1**
AAM				pmax	pmax		
	comp=Z,23nm,0.6s						
AAM	**Ann Arbor**	**30.40**	**9**	P	**P**	**06 33 52.9**	**-1.1**
	baz=191						
M54A	**Oil Creek Stat**	**30.42**	**15**	*e*P	**P**	**06 33 53.9**	**-0.4**
	comp=Z,17nm,0.8s						
M54A	**Oil Creek Stat**	**30.42**	**15**	P	**P**	**06 33 53.2**	**-1.0**
	baz=199,SNR=11						
ALLY	**Alegheny Colle**	**30.44**	**14**	*e*P	**P**	**06 33 54.5**	**+0.1**
	comp=Z,20nm,1.0s						
Y14A	**Wickenburg**	**30.46**	**319**	*e*P	**P**	**06 33 55.3**	**+0.5**
	comp=Z,11nm,1.1s						
WUAZ	**Wupatki**	**30.51**	**323**	*e*P	**P**	**06 33 55.7**	**+0.3**
	comp=Z,10nm,0.8s						
WUAZ				*e*PcP	**PcP**	**06 36 55.8**	**+1.4**
WUAZ	**Wupatki**	**30.51**	**323**	P	**P**	**06 33 55.3**	**0.0**
	baz=134,SNR=7.7						
K46A	**Dorr**	**30.53**	**5**	P	**P**	**06 33 52.6**	**-2.6**
	baz=187,SNR=9.2						
K47A	**Vermontville**	**30.59**	**6**	P	**P**	**06 33 53.5**	**-2.3**
	baz=188,SNR=21						
JFWS	**Jewell Farm**	**30.60**	**359**	*e*P	**P**	**06 33 54.2**	**-1.6**
	comp=Z,70nm,0.6s						
JFWS	**Jewell Farm**	**30.60**	**359**	*e*P	**P**	**06 33 54.2**	**-1.6**
JFWS				pmax	pmax		
	comp=Z,71nm,0.6s						
JFWS	**Jewell Farm**	**30.60**	**359**	P	**P**	**06 33 54.4**	**-1.4**
	baz=178,SNR=69						
M55A	**Ridgway**	**30.61**	**16**	P	**P**	**06 33 54.8**	**-1.2**
	baz=201,SNR=12						
O60A	**Telford**	**30.62**	**21**	P	**P**	**06 33 54.5**	**-1.5**
	baz=208						
N58A	**Sunbury**	**30.64**	**19**	P	**P**	**06 33 55.4**	**-0.7**
	baz=205						
OGNE	**Ogallala**	**30.68**	**341**	*e*P	**P**	**06 33 56.1**	**-0.5**
	comp=Z,32nm,0.6s						
L53A	**Girard**	**30.70**	**14**	P	**P**	**06 33 55.2**	**-1.5**
	baz=198						
O61A	**Allentown**	**30.73**	**23**	P	**P**	**06 33 55.2**	**-1.8**
	baz=209,SNR=5.3						
M56A	**Emporium**	**30.79**	**17**	P	**P**	**06 33 55.8**	**-1.8**
	baz=202,SNR=11						
K48A	**Perry**	**30.83**	**8**	P	**P**	**06 33 56.6**	**-1.3**
	baz=190,SNR=11						
LUPA	**Lehigh Univers**	**30.88**	**21**	*e*P	**P**	**06 33 58.2**	**-0.1**
	comp=Z,1.8nm,0.6s						
K49A	**Clarkson**	**30.90**	**9**	P	**P**	**06 33 56.4**	**-2.1**
	baz=191,SNR=17						
ERPA	**Erie**	**30.92**	**14**	*e*P	**P**	**06 33 57.6**	**-1.0**
	comp=Z,25nm,0.8s						
ERPA	**Erie**	**30.92**	**14**	P	**P**	**06 33 57.2**	**-1.4**
	baz=198						
ISCO	**Idaho Springs**	**30.96**	**335**	*e*P	**P**	**06 34 00.3**	**+0.8**
	comp=Z,7.1nm,0.6s						
ISCO	**Idaho Springs**	**30.96**	**335**	*e*P	**P**	**06 34 00.3**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ISCO	**Idaho Springs**	**30.96**	**335**	P	**P**	**06 33 59.4**	**-0.1**
	baz=148,SNR=12						
N59A	**State Game Lan**	**31.02**	**20**	*e*P	**P**	**06 33 59.3**	**-0.3**
	comp=Z,16nm,0.6s						
N59A	**State Game Lan**	**31.02**	**20**	P	**P**	**06 33 59.1**	**-0.5**
	baz=207,SNR=12						
SMCO	**Snowmass**	**31.02**	**333**	*e*P	**P**	**06 34 00.6**	**+0.5**
	comp=Z,8.3nm,0.8s						
K50A	**Casco**	**31.02**	**10**	P	**P**	**06 33 58.8**	**-0.7**
	baz=193						
GLA	**Glamis**	**31.12**	**316**	*e*P	**P**	**06 34 01.0**	**+0.4**
	comp=Z,28nm,1.0s						
GLA	**Glamis**	**31.12**	**316**	*e*P	**P**	**06 34 01.0**	**+0.4**
GLA				pmax	pmax		
	comp=Z,28nm,1.0s						
GLA	**Glamis**	**31.12**	**316**	P	**P**	**06 34 01.2**	**+0.6**
	baz=126,SNR=10						
J47A	**Sunmer**	**31.17**	**7**	*e*P	**P**	**06 33 58.6**	**-2.2**
	comp=Z,26nm,0.6s						
J47A	**Sunmer**	**31.17**	**7**	P	**P**	**06 33 58.3**	**-2.6**
	baz=189,SNR=13						
L54A	**Sinclairville**	**31.19**	**15**	P	**P**	**06 33 59.1**	**-1.9**
	baz=199						
M58A	**Price's Panora**	**31.20**	**19**	P	**P**	**06 33 59.6**	**-1.6**
	baz=205,SNR=14						
N60A	**Cedar Hill Far**	**31.21**	**21**	P	**P**	**06 33 59.9**	**-1.3**
	baz=208						
BRNJ	**Basking Ridge**	**31.24**	**22**	*e*P	**P**	**06 34 01.5**	**0.0**
	comp=Z,16nm,0.7s						
J48A	**Bridge Port**	**31.36**	**8**	*e*P	**P**	**06 34 00.7**	**-1.8**
	comp=Z,14nm,0.6s						
J48A	**Bridge Port**	**31.36**	**8**	P	**P**	**06 34 01.1**	**-1.4**
	baz=191						
L55A	**Hinsdale**	**31.37**	**16**	P	**P**	**06 34 01.6**	**-1.1**
	baz=201,SNR=14						
K52A	**Tillsonburg**	**31.39**	**12**	P	**P**	**06 34 01.2**	**-1.5**
	baz=196						
PDMCI	**Parker Dam,Lak**	**31.42**	**318**	P	**P**	**06 34 04.5**	**+1.4**
	baz=128						
J49A	**Marlette**	**31.52**	**9**	P	**P**	**06 34 01.3**	**-2.5**
	baz=192,SNR=18						
I42A	**Draeger Farm,**	**31.57**	**1**	*e*P	**P**	**06 34 03.2**	**-1.1**
	comp=Z,94nm,0.8s						
I42A	**Draeger Farm,**	**31.57**	**1**	P	**P**	**06 34 03.0**	**-1.3**
	baz=181,SNR=96						
ODNJ	**Ogdensburg**	**31.58**	**22**	*e*P	**P**	**06 34 03.8**	**-0.7**
	comp=Z,9.4nm,0.7s						
KSPA	**Keystone Colle**	**31.60**	**20**	*e*P	**P**	**06 34 04.5**	**-0.1**
	comp=Z,13nm,0.6s						
U15A	**North Rim**	**31.68**	**323**	*e*pP	pP	06 34 07.6	-1.0
M59A	**Waymart**	**31.70**	**20**	P	**P**	**06 34 04.4**	**-1.1**
	baz=207,SNR=14						
K54A	**Basiliko Farm,**	**31.70**	**15**	P	**P**	**06 34 03.7**	**-1.9**
	baz=200,SNR=7.1						
SWSC	**Sam W. Stewart**	**31.73**	**315**	P	**P**	**06 34 06.6**	**+0.8**
	baz=124,SNR=5.9						
I41A	**Arkdale**	**31.74**	**359**	*e*P	**P**	**06 34 04.2**	**-1.6**
	comp=Z,191nm,0.6s						
I41A	**Arkdale**	**31.74**	**359**	P	**P**	**06 34 04.5**	**-1.3**
	baz=179,SNR=109						
W13A	**Hualapai Mount**	**31.76**	**320**	*e*P	**P**	**06 34 05.4**	**-1.0**
	comp=Z,13nm,1.0s						
PAL	**Palisades**	**31.77**	**23**	*e*P	**P**	**06 34 05.0**	**-1.1**
	comp=Z,17nm,0.6s						
PAL	**Palisades**	**31.77**	**23**	*e*P	**P**	**06 34 05.0**	**-1.1**
PAL				pmax	pmax		
	comp=Z,17nm,0.6s						
PAL	**Palisades**	**31.77**	**23**	P	**P**	**06 34 04.5**	**-1.6**
	baz=210						
IKP	**In-Ko-Pah, Jac**	**31.78**	**314**	P	**P**	**06 34 07.9**	**+1.5**
	baz=124,SNR=17						
I46A	**Reed City**	**31.80**	**6**	P	**P**	**06 34 04.4**	**-2.0**
	baz=187						
I45A	**Fountain**	**31.83**	**4**	*e*P	**P**	**06 34 04.9**	**-1.8**
	comp=Z,80nm,0.7s						
I45A	**Fountain**	**31.83**	**4**	P	**P**	**06 34 04.5**	**-2.1**
	baz=186,SNR=13						
TYNO	**Tyneside**	**31.88**	**13**	P	**P**	**06 34 05.6**	**-1.4**
	baz=198						
J52A	**Paris**	**31.88**	**12**	P	**P**	**06 34 05.4**	**-1.7**
	baz=197,SNR=15						
BC3	**Big Chuckawall**	**31.90**	**316**	P	**P**	**06 34 08.5**	**+1.0**
	baz=126,SNR=28						
K55A	**Perry**	**31.98**	**16**	P	**P**	**06 34 05.9**	**-2.1**
	baz=201,SNR=14						
I47A	**Gladwin**	**31.98**	**7**	*e*P	**P**	**06 34 05.4**	**-2.5**
	comp=Z,22nm,0.6s						
I47A	**Gladwin**	**31.98**	**7**	P	**P**	**06 34 05.6**	**-2.4**
	baz=189,SNR=11						
PTGA	**Pitinga**	**31.99**	**112**	*e*P	**P**	**06 34 10.2**	**+1.8**
	comp=Z,16nm,0.8s						
PTGA	**Pitinga**	**31.99**	**112**	*e*P	**P**	**06 34 08.8**	**+0.4**
IRM	**Iron Mountain**	**31.99**	**317**	P	**P**	**06 34 09.5**	**+1.3**
	baz=127,SNR=18						
L58A	**Harry Jones Me**	**32.01**	**19**	P	**P**	**06 34 06.9**	**-1.3**
	baz=206,SNR=10						
ECSD	**EROS Data Cent**	**32.01**	**350**	*e*P	**P**	**06 34 06.6**	**-1.7**
	comp=Z,94nm,1.4s						
ECSD	**EROS Data Cent**	**32.01**	**350**	P	**P**	**06 34 06.4**	**-1.8**
	baz=167,SNR=64						
MMNY	**Mt. Morris Dam**	**32.02**	**16**	*e*P	**P**	**06 34 07.6**	**-0.7**
	comp=Z,68nm,1.6s						
N23A	**Red Feather La**	**32.03**	**336**	P	**P**	**06 34 08.7**	**0.0**
	baz=148,SNR=11						
M61A	**Granite Spring**	**32.09**	**23**	P	**P**	**06 34 07.6**	**-1.3**
	baz=210,SNR=12						
BINY	**Binghamton**	**32.10**	**19**	*e*P	**P**	**06 34 07.8**	**-1.3**
	comp=Z,18nm,0.8s						
BINY	**Binghamton**	**32.10**	**19**	P	**P**	**06 34 07.4**	**-1.7**
	baz=205,SNR=11						
I49A	**Point Hope**	**32.13**	**9**	*e*P	**P**	**06 34 07.1**	**-2.2**
	comp=Z,41nm,0.7s						
I49A	**Point Hope**	**32.13**	**9**	P	**P**	**06 34 07.1**	**-2.2**
	baz=192,SNR=12						
MONP2	**Monument Peak**	**32.13**	**314**	P	**P**	**06 34 11.3**	**+1.6**
	baz=124,SNR=16						
H43A	**Windswept, Lux**	**32.18**	**2**	*e*P	**P**	**06 34 07.6**	**-2.0**
	comp=Z,42nm,0.6s						
H43A	**Windswept, Lux**	**32.18**	**2**	P	**P**	**06 34 08.0**	**-1.7**
	baz=183,SNR=29						
PHWY	**Pilot Hill**	**32.19**	**337**	*e*P	**P**	**06 34 11.5**	**+1.3**
	comp=Z,14nm,0.8s						
I48A	**Sherman Twp**	**32.25**	**8**	P	**P**	**06 34 08.2**	**-2.0**
	baz=190						
MEDO	**Medina**	**32.28**	**15**	*e*P	**P**	**06 34 09.3**	**-1.3**
	comp=Z,20nm,0.8s						
MEDO	**Medina**	**32.28**	**15**	P	**P**	**06 34 09.2**	**-1.4**
	baz=200						
I51A	**Listowel**	**32.31**	**11**	P	**P**	**06 34 09.3**	**-1.6**
	baz=195,SNR=20						
ACTO	**Acton**	**32.32**	**13**	P	**P**	**06 34 09.2**	**-1.8**
	baz=197,SNR=11						
J54A	**Appleton**	**32.34**	**15**	*e*P	**P**	**06 34 10.4**	**-0.7**
	comp=Z,35nm,0.6s						
J54A	**Appleton**	**32.34**	**15**	P	**P**	**06 34 09.4**	**-1.7**
	baz=200,SNR=5.9						
O20A	**White River Ci**	**32.37**	**333**	*e*P	**P**	**06 34 12.4**	**+0.8**
	comp=Z,16nm,0.8s						
O20A				*e*PcP	**PcP**	**06 37 00.8**	**+1.4**
O20A	**White River Ci**	**32.37**	**333**	P	**P**	**06 34 12.1**	**+0.4**
	baz=144,SNR=14						
KNB	**Kanab**	**32.39**	**324**	*e*P	**P**	**06 34 13.7**	**+1.8**
	comp=Z,13nm,0.9s						
KNB	**Kanab**	**32.39**	**324**	*e*P	**P**	**06 34 13.7**	**+1.8**
KNB				pmax	pmax		
	comp=Z,13nm,0.9s						
BASO	**Ashfield**	**32.39**	**11**	P	**P**	**06 34 09.6**	**-2.0**
	baz=194,SNR=18						
PKCU	**Pink Cliffs**	**32.40**	**325**	*e*P	**P**	**06 34 15.0**	**+2.9**
	comp=Z,20nm,1.1s						
H46A	**Fife Lake**	**32.42**	**6**	P	**P**	**06 34 09.2**	**-2.6**
	baz=188,SNR=9.3						
H45A	**Beulah**	**32.43**	**5**	P	**P**	**06 34 10.3**	**-1.6**
	baz=186,SNR=9.9						
BELC	**Belle Mtn. Jos**	**32.47**	**316**	P	**P**	**06 34 13.7**	**+1.2**
	baz=126,SNR=7.5						
LDFC	**Landfair**	**32.53**	**319**	*e*P	**P**	**06 34 16.1**	**+3.0**
	comp=Z,34nm,0.7s						
J55A	**Hilton**	**32.54**	**16**	*e*P	**P**	**06 34 11.1**	**-1.8**
	comp=Z,14nm,0.8s						
J55A	**Hilton**	**32.54**	**16**	P	**P**	**06 34 11.7**	**-1.1**
	baz=201						
KSCT	**Kent School, K**	**32.55**	**23**	*e*P	**P**	**06 34 12.3**	**-0.7**
	comp=Z,13nm,0.8s						
PFO	**Pinyon Flats O**	**32.56**	**315**	P	**P**	**06 34 15.5**	**+2.1**
	comp=Z,7.7nm,0.8s,baz=111,slow=7.1,SNR=5.4						
PFO	**Pinyon Flats O**	**32.56**	**315**	*e*P	**P**	**06 34 14.2**	**+0.8**
	comp=Z,10.0nm,0.9s						
PFO	**Pinyon Flats O**	**32.56**	**315**	*e*P	**P**	**06 34 14.2**	**+0.8**
PFO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PFO	**Pinyon Flats O**	**32.56**	**315**	P	**P**	**06 34 15.4**	**+2.1**
	baz=124,SNR=7.4						
H47A	**Mio**	**32.59**	**7**	P	**P**	**06 34 11.3**	**-2.0**
	baz=189						
BWLO	**Walkerton**	**32.59**	**11**	P	**P**	**06 34 11.6**	**-1.7**
	baz=195,SNR=14						
109C	**Camp Elliot, M**	**32.61**	**314**	P	**P**	**06 34 14.5**	**+0.8**
	baz=123,SNR=5.2						
CPE	**Camp Elliot**	**32.61**	**314**	*e*P	**P**	**06 34 14.4**	**+0.8**
	comp=Z,19nm,0.8s						
I53A	**Kortright Cn E**	**32.63**	**13**	P	**P**	**06 34 12.2**	**-1.5**
	baz=198						
LCMT	**Little Creek M**	**32.63**	**323**	*e*P	**P**	**06 34 15.6**	**+1.6**
	comp=Z,7.6nm,1.1s						
BRCO	**Bruce Peninsul**	**32.66**	**11**	P	**P**	**06 34 12.6**	**-1.3**
	baz=194,SNR=12						
SRU	**San Rafael Swe**	**32.66**	**329**	*e*P	**P**	**06 34 14.7**	**+0.5**
	comp=Z,9.2nm,1.0s						
SRU	**San Rafael Swe**	**32.66**	**329**	*e*P	**P**	**06 34 14.7**	**+0.5**
SRU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GMRC	**Granite Mounta**	**32.71**	**318**	P	**P**	**06 34 15.8**	**+1.1**
	baz=127,SNR=19						
I52A	**Shelburne**	**32.74**	**12**	P	**P**	**06 34 13.4**	**-1.3**
	baz=197						
MTPU	**Mount Pierson**	**32.75**	**326**	*e*P	**P**	**06 34 17.0**	**+1.8**
	comp=Z,8.2nm,0.8s						
GLMI	**Grayling**	**32.76**	**6**	*e*P	**P**	**06 34 12.3**	**-2.5**
	comp=Z,35nm,0.6s						
GLMI	**Grayling**	**32.76**	**6**	P	**P**	**06 34 13.1**	**-1.7**
	baz=189						
H48A	**Harrisville**	**32.80**	**8**	*e*P	**P**	**06 34 13.5**	**-1.6**
	comp=Z,65nm,0.6s						
H48A	**Harrisville**	**32.80**	**8**	P	**P**	**06 34 13.5**	**-1.6**
	baz=191,SNR=18						
G45A	**Suttons Bay**	**32.88**	**5**	*e*P	**P**	**06 34 14.0**	**-1.8**
	comp=Z,77nm,0.6s						
G45A	**Suttons Bay**	**32.88**	**5**	P	**P**	**06 34 13.6**	**-2.2**
	baz=187,SNR=25						
DRWO	**Darlington Wes**	**32.88**	**14**	P	**P**	**06 34 14.9**	**-0.9**
	baz=200						
DRCO	**St. Marys Ceme**	**32.89**	**14**	P	**P**	**06 34 14.2**	**-1.7**
	baz=200						
SZCU	**Shurtz Canyon**	**32.94**	**324**	*e*P	**P**	**06 34 15.7**	**-1.0**
	comp=Z,9.5nm,0.8s						
SZCU				*e*PcP	**PcP**	**06 37 02.9**	**+1.9**
G40A	**Rib Lake**	**32.95**	**359**	*e*P	**P**	**06 34 15.2**	**-1.2**
	comp=Z,100nm,1.3s						
G40A	**Rib Lake**	**32.95**	**359**	P	**P**	**06 34 15.3**	**-1.1**
	baz=179,SNR=48						
G39A	**Holcombe**	**32.99**	**358**	P	**P**	**06 34 14.9**	**-1.9**
	baz=177,SNR=80						
WLVO	**Wesleyville**	**33.01**	**15**	P	**P**	**06 34 15.4**	**-1.6**
	baz=200,SNR=38						
SPMN	**Marine on St.**	**33.02**	**356**	*e*P	**P**	**06 34 15.3**	**-1.8**
	comp=Z,93nm,0.6s						
SPMN	**Marine on St.**	**33.02**	**356**	P	**P**	**06 34 15.3**	**-1.8**
	baz=174,SNR=70						
BMRO	**Meriville Lake**	**33.04**	**11**	P	**P**	**06 34 15.2**	**-2.0**
	baz=195,SNR=12						
P17A	**Butcher Ranch,**	**33.04**	**329**	*e*P	**P**	**06 34 17.9**	**+0.4**
	comp=Z,21nm,1.0s						
MURC	**Murrieta**	**33.06**	**315**	P	**P**	**06 34 17.6**	**0.0**
	baz=123,SNR=11						
CCUT	**Cedar City**	**33.07**	**324**	*e*P	**P**	**06 34 20.8**	**+2.9**
	comp=Z,9.1nm,0.9s						
CCUT				*e*PcP	**PcP**	**06 37 03.5**	**+2.2**
MSU	**Marysvale**	**33.08**	**326**	*e*P	**P**	**06 34 19.1**	**+1.1**
MSU	**Marysvale**	**33.08**	**326**	*e*P	**P**	**06 34 19.1**	**+1.1**
SUSD	**Miller**	**33.13**	**348**	P	**P**	**06 34 17.0**	**-1.1**
	baz=163,SNR=28						
TMUT	**Trail Mountain**	**33.15**	**328**	*e*P	**P**	**06 34 19.6**	**+1.0**
	comp=Z,4.7nm,0.8s						
TMUT				*e*PcP	**PcP**	**06 37 02.9**	**+1.3**
G47A	**Hillman**	**33.20**	**7**	P	**P**	**06 34 18.2**	**-0.4**
	baz=190,SNR=12						
RWWY	**Rawlins**	**33.21**	**335**	*e*P	**P**	**06 34 20.2**	**+1.2**
	comp=Z,21nm,0.6s						
G46A	**Petoskey**	**33.23**	**6**	P	**P**	**06 34 18.0**	**-0.8**
	baz=188						
BBRC	**Big Bear Solar**	**33.24**	**316**	P	**P**	**06 34 19.9**	**+0.5**
	baz=125,SNR=6.7						
TUQ	**Turquoise Moun**	**33.27**	**318**	P	**P**	**06 34 20.1**	**+0.6**
	baz=127						
TCRU	**Three Creeks R**	**33.30**	**326**	*e*P	**P**	**06 34 21.4**	**+1.5**
H52A	**Wyevale**	**33.35**	**12**	P	**P**	**06 34 18.1**	**-1.8**
	baz=197,SNR=13						
TRY	**Troy**	**33.36**	**21**	*e*P	**P**	**06 34 19.9**	**-0.2**
	comp=Z,42nm,1.3s						
PECO	**Prince Edward**	**33.39**	**16**	*e*P	**P**	**06 34 18.8**	**-1.5**
	comp=Z,19nm,1.3s						
PECO	**Prince Edward**	**33.39**	**16**	P	**P**	**06 34 18.6**	**-1.6**
	baz=202						
F42A	**Maple Grove Fa**	**33.45**	**2**	P	**P**	**06 34 19.2**	**-1.6**
	baz=182						
SHPR	**Sheep Range**	**33.45**	**321**	*e*P	**P**	**06 34 19.8**	**-1.4**
	comp=Z,8.7nm,1.1s						
SHPR				*e*PcP	**PcP**	**06 37 03.1**	**+0.8**
QUA2	**Belchertown**	**33.46**	**23**	*e*P	**P**	**06 34 20.3**	**-0.6**
	comp=Z,19nm,1.0s						
I55A	**Frankford**	**33.46**	**15**	P	**P**	**06 34 19.0**	**-1.9**
	baz=201,SNR=22						
F45A	**CMU Biological**	**33.53**	**5**	P	**P**	**06 34 19.3**	**-2.2**
	baz=187,SNR=13						
TOBO	**Tobermory, Bru**	**33.59**	**10**	P	**P**	**06 34 20.0**	**-2.0**
	baz=194,SNR=26						
SADO	**Sadowa**	**33.63**	**13**	P	**P**	**06 34 20.9**	**-1.5**
	comp=Z,28nm,0.6s,baz=249,slow=5.9,SNR=46						
SADO				PcP	**PcP**	**06 37 02.8**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=122,slow=1.4,SNR=3.1						
SADO				LR	LR	06 48 23.8	
	comp=Z,273nm,21.5s,baz=188,slow=37						
SADO	**Sadowa**	**33.63**	**13**	*e*P	**P**	**06 34 20.8**	**-1.5**
	comp=Z,30nm,0.6s						
SADO				*e*PcP	**PcP**	**06 37 01.5**	**-0.9**
BFSC	**Mount Baldy Ra**	**33.74**	**315**	P	**P**	**06 34 24.7**	**+1.1**
	baz=124,SNR=5.9						
K22A	**Casper**	**33.75**	**337**	*e*P	**P**	**06 34 23.8**	**+0.1**
	comp=Z,24nm,1.1s						
K22A	**Casper**	**33.75**	**337**	P	**P**	**06 34 23.9**	**+0.1**
	baz=149,SNR=10						
DELO	**Deloro Mine**	**33.76**	**15**	*e*P	**P**	**06 34 22.0**	**-1.5**
	comp=Z,19nm,0.8s						
DELO	**Deloro Mine**	**33.76**	**15**	P	**P**	**06 34 22.1**	**-1.4**
	baz=201,SNR=20						
GSC	**Goldstone, Bar**	**33.77**	**317**	*e*P	**P**	**06 34 25.8**	**+2.0**
	comp=Z,6.8nm,0.9s						
GSC	**Goldstone, Bar**	**33.77**	**317**	P	**P**	**06 34 24.6**	**+0.8**
	baz=126						
COWI	**Conover**	**33.78**	**0**	*e*P	**P**	**06 34 22.0**	**-1.6**
	comp=Z,103nm,0.6s						
SHOC	**Shoshone, Teco**	**33.78**	**319**	P	**P**	**06 34 24.8**	**+0.9**
	baz=128						
CIS	**Catalina Islan**	**33.81**	**313**	P	**P**	**06 34 24.7**	**+0.5**
	baz=122						
MPU	**Maple Canyon**	**33.90**	**329**	*e*P	**P**	**06 34 26.6**	**+1.5**
	comp=Z,17nm,1.2s						
H55A	**Tweed**	**33.91**	**16**	P	**P**	**06 34 22.3**	**-2.4**
	baz=202,SNR=12						
ACCN	**Adirondack Com**	**33.93**	**21**	*e*P	**P**	**06 34 24.3**	**-0.7**
	comp=Z,7.4nm,0.6s						
WES	**Weston**	**33.96**	**24**	*e*P	**P**	**06 34 23.0**	**-2.2**
	comp=Z,32nm,1.6s						
WES	**Weston**	**33.96**	**24**	*e*P	**P**	**06 34 23.0**	**-2.2**
WES				pmax	pmax		
	comp=Z,32nm,1.6s						
HRV	**Adam Dziewonsk**	**33.96**	**24**	*e*P	**P**	**06 34 26.5**	**+1.2**
	comp=Z,13nm,1.0s						
HRV	**Adam Dziewonsk**	**33.96**	**24**	*e*P	**P**	**06 34 26.5**	**+1.2**
HRV				pmax	pmax		
	comp=Z,13nm,1.0s						
KLBO	**Killbear Provi**	**33.96**	**12**	P	**P**	**06 34 23.1**	**-2.1**
	baz=196,SNR=17						
BCX	**Boston College**	**33.98**	**25**	*e*P	**P**	**06 34 26.2**	**+0.8**
	comp=Z,18nm,0.9s						
MWC	**Mount Wilson**	**34.00**	**315**	*e*P	**P**	**06 34 28.0**	**+2.0**
	comp=Z,24nm,0.9s						
F48A	**Evansville**	**34.01**	**9**	P	**P**	**06 34 23.3**	**-2.3**
	baz=192,SNR=33						
PSUT	**Pine Spring**	**34.03**	**325**	*e*P	**P**	**06 34 27.4**	**+1.1**
	comp=Z,14nm,0.9s						
PSUT				*e*PcP	**PcP**	**06 37 05.3**	**+1.3**
F49A	**Sandfield**	**34.03**	**9**	P	**P**	**06 34 23.4**	**-2.5**
	baz=193,SNR=20						
G53A	**Haliburton**	**34.08**	**14**	P	**P**	**06 34 24.1**	**-2.2**
	baz=199,SNR=33						
NLU	**North Lily Min**	**34.09**	**328**	*e*P	**P**	**06 34 23.8**	**-2.9**
	comp=Z,7.7nm,1.1s						
E43A	**Lone Tree Farm**	**34.12**	**3**	*e*P	**P**	**06 34 25.0**	**-1.6**
	comp=Z,47nm,0.7s						
E43A	**Lone Tree Farm**	**34.12**	**3**	P	**P**	**06 34 24.5**	**-2.0**
	baz=184,SNR=55						
BANO	**Bancroft**	**34.15**	**15**	P	**P**	**06 34 25.3**	**-1.6**
	baz=200,SNR=6.4						
RSSD	**Black Hills**	**34.18**	**341**	*e*P	**P**	**06 34 27.7**	**+0.3**
	comp=Z,24nm,0.6s						
RSSD	**Black Hills**	**34.18**	**341**	*e*P	**P**	**06 34 27.7**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,24nm,0.6s						
RSSD	**Black Hills**	**34.18**	**341**	P	**P**	**06 34 27.7**	**+0.3**
	baz=154						
H56A	**Elgin**	**34.20**	**17**	P	**P**	**06 34 25.6**	**-1.8**
	baz=203,SNR=14						
DECC	**Green Verdugo**	**34.21**	**315**	P	**P**	**06 34 27.0**	**-0.6**
	baz=123,SNR=5.3						
BUKO	**Buck Lake**	**34.21**	**13**	P	**P**	**06 34 25.8**	**-1.6**
	baz=198,SNR=46						
JLU	**Jordanelle**	**34.25**	**330**	*e*P	**P**	**06 34 28.2**	**0.0**
	comp=Z,7.5nm,1.1s						
NCB	**Newcomb**	**34.26**	**20**	*e*P	**P**	**06 34 26.7**	**-1.3**
	comp=Z,31nm,1.8s						
E46A	**Sault Ste Mari**	**34.32**	**6**	*e*P	**P**	**06 34 27.4**	**-1.0**
	comp=Z,7.8nm,0.6s						
E46A	**Sault Ste Mari**	**34.32**	**6**	P	**P**	**06 34 27.3**	**-1.0**
	baz=189,SNR=8.2						
EDW2	**Edwards Air Fo**	**34.32**	**316**	P	**P**	**06 34 28.0**	**-0.7**
	baz=124,SNR=6.1						
E38A	**The Farm, Brul**	**34.33**	**357**	*e*P	**P**	**06 34 26.8**	**-1.6**
	comp=Z,44nm,0.6s						
E38A	**The Farm, Brul**	**34.33**	**357**	P	**P**	**06 34 26.5**	**-1.9**
	baz=176,SNR=35						
PLVO	**Plevna**	**34.39**	**16**	*e*P	**P**	**06 34 27.3**	**-1.6**
	comp=Z,13nm,1.0s						
PLVO	**Plevna**	**34.39**	**16**	P	**P**	**06 34 27.4**	**-1.5**
	baz=202,SNR=10						
TPNV	**Topopah Spring**	**34.41**	**320**	*e*P	**P**	**06 34 31.0**	**+1.5**
	comp=Z,10nm,1.0s						
TPNV				*e*PcP	**PcP**	**06 37 05.7**	**+0.7**
TPNV	**Topopah Spring**	**34.41**	**320**	*e*P	**P**	**06 34 31.0**	**+1.5**
TPNV				*e*		06 37 05.7	
TPNV				pmax	pmax		
	comp=Z,11nm,1.0s						
TPNV	**Topopah Spring**	**34.41**	**320**	P	**P**	**06 34 30.4**	**+0.9**
	baz=129,SNR=13						
E44A	**Grand Marais A**	**34.43**	**4**	P	**P**	**06 34 28.7**	**-0.5**
	baz=186						
LRMC	**Laurel Mtn Rad**	**34.45**	**317**	P	**P**	**06 34 30.7**	**+0.8**
	baz=125						
CTU	**Camp Tracy**	**34.47**	**329**	*e*P	**P**	**06 34 29.0**	**-1.0**
	comp=Z,14nm,1.0s						
FURC	**Furnace Creek,**	**34.50**	**319**	P	**P**	**06 34 31.2**	**+1.2**
	baz=127						
E47A	**Iron Bridge**	**34.53**	**8**	P	**P**	**06 34 28.2**	**-2.0**
	baz=191,SNR=24						
F52A	**Sundridge**	**34.56**	**13**	P	**P**	**06 34 28.4**	**-2.1**
	baz=198,SNR=22						
F51A	**Arnstein**	**34.57**	**12**	P	**P**	**06 34 29.2**	**-1.4**
	baz=196,SNR=5.9						
TCUT	**Toone Canyon**	**34.63**	**330**	*e*P	**P**	**06 34 33.0**	**+1.5**
	comp=Z,36nm,1.2s						
DUG	**Dugway, Tooele**	**34.64**	**328**	*e*P	**P**	**06 34 31.6**	**+0.2**
	comp=Z,6.2nm,0.9s						
DUG	**Dugway, Tooele**	**34.64**	**328**	*e*P	**P**	**06 34 31.6**	**+0.2**

DUG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DUG	Dugway, Tooele	34.64	328	P	P	06 34 31.3	-0.1
	baz=137						
MPMC	Manual Prospec	34.66	318	P	P	06 34 33.2	+1.5
	baz=126,SNR=28						
G55A	Calabogie	34.68	16	P	P	06 34 29.6	-1.9
	baz=202,SNR=17						
E48A	Lockeyer	34.71	9	P	P	06 34 29.6	-2.1
	baz=192,SNR=20						
LONY	Lake Ozonia	34.73	19	eP	P	06 34 30.3	-1.6
	comp=Z,12nm,0.8s						
LONY	Lake Ozonia	34.73	19	P	P	06 34 30.2	-1.7
	baz=206,SNR=19						
FFD	Franklin Falls	34.74	23	eP	P	06 34 31.8	-0.2
	comp=Z,16nm,0.6s						
D41A	Chassel	34.74	1	eP	P	06 34 30.8	-1.2
	comp=Z,81nm,0.6s						
D41A	Chassel	34.74	1	P	P	06 34 30.1	-1.9
	baz=181,SNR=55						
DAC	Darwin (Calif)	34.86	318	eP	P	06 34 34.1	+0.8
DAC	Darwin (Calif)	34.86	318	eP	P	06 34 34.2	+0.8
D46A	Sault St. Mari	34.87	7	P	P	06 34 30.7	-2.4
	baz=189,SNR=17						
E50A	Wahnapitae	34.89	11	P	P	06 34 30.9	-2.4
	baz=195,SNR=12						
R11A	Troy Canyon, C	34.91	323	eP	P	06 34 34.9	+1.1
	comp=Z,6.3nm,1.0s						
R11A	Troy Canyon, C	34.91	323	P	P	06 34 34.7	+0.9
	baz=131						
PEMO	Pembroke	34.94	15	P	P	06 34 32.3	-1.4
	baz=201,SNR=8.9						
ALGO	Algonquin Park	35.00	14	P	P	06 34 32.5	-1.7
	baz=200,SNR=26						
ARVC	Arvin	35.03	316	P	P	06 34 34.2	-0.5
	baz=123,SNR=10						
HWUT	Hardware Ranch	35.08	331	eP	P	06 34 35.9	+0.7
	comp=Z,17nm,1.0s						
HWUT				ePcP	PcP	06 37 07.9	+0.9
BW06	Boulder Array	35.08	334	eP	P	06 34 35.6	+0.4
	comp=Z,16nm,1.7s						
BW06	Boulder Array	35.08	334	P	P	06 34 36.4	+1.1
	baz=144,SNR=8.4						
PD31	Pinedale Array	35.08	334	ePcP	PcP	06 37 06.5	-0.4
PDAR	Pinedale Array	35.08	334	P	P	06 34 35.0	-0.3
	comp=Z,2.1nm,0.5s,baz=138,slow=10,SNR=24						
PDAR				PcP	PcP	06 37 06.6	-0.4
	comp=Z,2.9nm,0.8s,baz=134,slow=4.3,SNR=8.4						
PDAR				ScP	ScP	06 40 54.5	+2.0
	comp=Z,0.1nm,0.3s,baz=145,slow=3.3,SNR=2.2						
VT1	Waterbury	35.08	21	eP	P	06 34 35.4	+0.4
	comp=Z,26nm,1.8s						
ISA	Isabella, Lake	35.09	317	eP	P	06 34 35.8	+0.5
	comp=Z,18nm,1.1s						
ISA	Isabella, Lake	35.09	317	eP	P	06 34 35.8	+0.5
ISA				pmax	pmax		
	comp=Z,18nm,1.1s						
ISA	Isabella, Lake	35.09	317	P	P	06 34 36.3	+1.0
	baz=124,SNR=5.6						
D47A	Chapleau	35.14	8	P	P	06 34 33.6	-1.9
	baz=191,SNR=7.5						
GRAC	Grapevine Rang	35.14	319	P	P	06 34 37.3	+1.6
	baz=127,SNR=22						
E52A	Mattawa	35.17	13	P	P	06 34 33.4	-2.3
	baz=198,SNR=8.9						
ORIO	Orleans, Innes	35.20	17	P	P	06 34 33.9	-2.0
	baz=204,SNR=12						
E51A	G1948 Merrick	35.23	12	P	P	06 34 34.5	-1.7
	baz=197,SNR=29						
FRNY	Flat Rock	35.24	20	eP	P	06 34 35.1	-1.3
	comp=Z,31nm,1.5s						
CWC	Cottonwood Cre	35.27	318	P	P	06 34 38.4	+1.5
	baz=126						
BGU	Big Grassy Mou	35.29	328	eP	P	06 34 38.2	+1.2
	comp=Z,10nm,1.1s						
LBNH	Lisbon	35.30	22	P	P	06 34 36.3	-0.5
	baz=210						
F55A	Otter Lake	35.32	16	P	P	06 34 35.2	-1.8
	baz=202,SNR=8.3						
LPAZ	La Paz	35.32	143	P	P	06 34 37.9	-0.1
	comp=Z,6.5nm,0.6s,baz=330,slow=4.9,SNR=52						
LPAZ				LR	LR	06 48 58.9	
	comp=Z,360nm,20.3s,baz=300,slow=36						
LPAZ	La Paz	35.32	143	eP	P	06 34 37.7	-0.3
LPAZ				epP	pP	06 34 38.3	-2.2
LPAZ	La Paz	35.32	143	eP	P	06 34 37.7	-0.3
LPAZ				e*PP	pP	06 34 38.3	-2.2
LPAZ	La Paz	35.32	143	eP	P	06 34 37.7	-0.3
D48A	Paudash Townsh	35.44	9	P	P	06 34 35.9	-2.2
	baz=193,SNR=26						
E53A	Dumoine, Ponti	35.49	14	P	P	06 34 36.7	-1.8
	baz=200,SNR=13						
PKM	Mcpherson Peak	35.58	314	P	P	06 34 43.6	+3.9
	baz=122,SNR=6.8						
C40A	Isle Royale Na	35.59	0	eP	P	06 34 38.0	-1.3
	comp=Z,74nm,0.8s						
C40A	Isle Royale Na	35.59	0	P	P	06 34 38.1	-1.3
	baz=180,SNR=42						
VES	Vestal, Richgr	35.60	316	P	P	06 34 39.9	+0.3
	baz=124,SNR=8.5						
D49A	Beulah Townshi	35.61	10	P	P	06 34 37.7	-1.8
	baz=194,SNR=28						
E54A	Lac Daplat, Po	35.66	15	P	P	06 34 38.4	-1.5
	baz=201,SNR=18						
EYMN	Ely	35.66	358	P	P	06 34 37.8	-2.2
	baz=176,SNR=79						
D51A	Lot 18 Range I	35.79	12	P	P	06 34 39.6	-1.4
	baz=197						
D52A	ZEK Kipawa Sen	35.88	13	P	P	06 34 40.5	-1.3
	baz=198,SNR=18						
SMMC	Simmler	35.93	315	P	P	06 34 42.9	+0.4
	baz=122						
D53A	Lac Vacive, Po	36.14	14	P	P	06 34 42.7	-1.3
	baz=200,SNR=28						
ELK	Elko	36.33	326	P	P	06 34 46.5	+0.5
	comp=Z,2.9nm,0.8s,baz=144,slow=7.3,SNR=10						
ELK				PcP	PcP	06 37 10.9	+0.2
	comp=Z,4.4nm,0.8s,baz=189,slow=2.5,SNR=7.7						
ELK				LR	LR	06 53 19.2	
	comp=Z,321nm,18.2s,baz=122,slow=42						
ELK	Elko	36.33	326	eP	P	06 34 47.6	+1.5
	comp=Z,18nm,1.4s						
ELK				ePcP	PcP	06 37 10.7	0.0
ELK	Elko	36.33	326	eP	P	06 34 47.6	+1.5
ELK				e		06 37 10.7	
ELK				pmax	pmax		
	comp=Z,18nm,1.4s						
AGMN	Agassiz Nation	36.37	353	P	P	06 34 44.6	-1.3
	baz=169,SNR=56						
MOOW	Moose Ponds	36.38	334	eP	P	06 34 46.7	+0.2
	comp=Z,6.7nm,0.6s						
MOOW				ePcP	PcP	06 37 11.3	+0.5
FXWY	Fox Creek	36.42	333	eP	P	06 34 47.0	+0.3
	comp=Z,14nm,1.4s						
FXWY				ePcP	PcP	06 37 12.3	+1.4
D54A	Lac Fusel, La	36.46	15	P	P	06 34 45.1	-1.7
	baz=201,SNR=17						
NV11	Mina Array Sit	36.52	321	eP	P	06 34 49.5	+2.0
	comp=Z,2.2nm,0.9s						
NV11				ePcP	PcP	06 37 11.3	+0.1
MDND	Maddock	36.52	349	P	P	06 34 46.8	-0.6
	baz=163,SNR=41						
OMMB	Old Mammoth Mi	36.56	319	eP	P	06 34 48.9	+0.7
	comp=Z,45nm,1.7s						
NV01	Mina Array Sit	36.60	321	ePcP	PcP	06 37 12.3	+0.7
NV01				eScP	ScP	06 41 01.0	+2.9
NVAR	Mina Array Bea	36.60	321	P	P	06 34 50.4	+2.0
	comp=Z,16nm,0.9s,baz=140,slow=7.8,SNR=73						
NVAR				PcP	PcP	06 37 12.3	+0.7
	comp=Z,3.8nm,0.7s,baz=131,slow=3.9,SNR=7.2						
NVAR				ScP	ScP	06 41 01.0	+2.9
	comp=Z,0.2nm,0.5s,baz=126,slow=4.6,SNR=2.0						
NVAR				LR	LR	06 51 55.1	
	comp=Z,518nm,18.2s,baz=126,slow=40						
MNMC	Minye Minye	36.79	148	eP	P	06 34 48.2	-2.0
	comp=Z,51nm,1.3s						
KVN	Kaiserville	36.86	322	eP	P	06 34 52.3	+1.7
	comp=Z,15nm,1.0s						
KVN				ePcP	PcP	06 37 13.3	+1.0
KVN	Kaiserville	36.86	322	eP	P	06 34 52.3	+1.7
KVN				e		06 37 13.3	
KVN				pmax	pmax		
	comp=Z,15nm,1.0s						
RLMT	Red Lodge	36.90	336	P	P	06 34 51.8	+1.0
	baz=146,SNR=18						
MDP	Montagnes des	37.05	98	LR	LR	06 52 11.0	
	comp=Z,392nm,18.9s,baz=288,slow=40						
LAO	LASA Array	37.16	341	eP	P	06 34 55.8	+3.0
	comp=Z,40nm,0.7s						
LAO	LASA Array	37.16	341	P	P	06 34 53.4	+0.5
	baz=152,SNR=8.5						
PKME	Peaks-Kenny Pk	37.17	24	eP	P	06 34 52.3	-0.4
	comp=Z,42nm,1.6s						
PKME	Peaks-Kenny Pk	37.17	24	P	P	06 34 52.2	-0.6
	baz=214						
VLDQ	Val d'Or	37.17	13	eP	P	06 34 51.2	-1.5
	comp=Z,13nm,0.9s						
YHH	Holmes Hill	37.27	335	eP	P	06 34 56.4	+2.3
	comp=Z,27nm,1.5s						
GO01	Chusmiza	37.45	148	eP	P	06 34 57.4	+1.4
	comp=Z,13nm,1.0s						
GCMT	Greycliff	37.61	337	eP	P	06 34 55.6	-1.1
LATQ	La Tuque	37.76	19	P	P	06 34 56.3	-1.5
	baz=207,SNR=7.9						
HLID	Hailey	37.93	330	eP	P	06 35 00.7	+1.2
	comp=Z,10nm,1.1s						
HLID				ePcP	PcP	06 37 15.9	+0.5
HLID	Hailey	37.93	330	P	P	06 35 00.4	+0.8
	baz=138,SNR=14						
LSQQ	Lebel-sur-Quev	38.17	13	P	P	06 34 59.7	-1.6
	baz=200						
DGMT	Dagmar	38.17	344	P	P	06 35 01.0	-0.3
	baz=156,SNR=107						
BOZ	Bozeman (W)	38.24	335	P	P	06 35 02.5	+0.4
	baz=143,SNR=30						
ULM	Lac du Bonnet	38.29	353	P	P	06 35 00.4	-1.9
	comp=Z,27nm,0.6s,baz=169,slow=9.1,SNR=24						
ULM				LR	LR	06 53 16.4	
	comp=Z,409nm,20.8s,baz=158,slow=40						
AFDM	Forest Hills D	38.59	319	eP	P	06 35 05.1	+0.1
	comp=Z,13nm,1.5s						
MATQ	Matagami	38.69	12	P	P	06 35 03.9	-1.7
	baz=199,SNR=33						
PQI	Presque Isle	38.83	24	eP	P	06 35 05.8	-1.0
	comp=Z,34nm,1.7s						
PQI				ePcP	PcP	06 37 19.2	+1.3
EGMT	Eagleton	39.52	339	P	P	06 35 11.2	-1.5
	baz=148,SNR=7.5						
CHGQ	Chibougamau	39.59	15	P	P	06 35 11.3	-1.9
	baz=203						
SIV	San Ignacio	39.68	134	LR	LR	06 50 25.0	
	comp=Z,374nm,20.7s,baz=316,slow=34						
O03E	Paynes Creek	39.89	320	P	P	06 35 15.2	-0.7
	baz=125						
LVC	Limon Verde	40.05	150	LR	LR	06 49 22.0	
	comp=Z,175nm,21.3s,baz=323,slow=33						
LVC	Limon Verde	40.05	150	eP	P	06 35 18.3	+0.6
MSO	Missoula	40.20	334	P	P	06 35 17.9	-0.5
	baz=141,SNR=11						
O02D	Mt. Diablo Mer	40.45	320	P	P	06 35 20.2	-0.3
	baz=124						
CLDB	Colider	40.55	123	eP	P	06 35 20.7	-0.9
M04C	Macdoel	40.79	322	P	P	06 35 23.6	+0.2
	baz=127						
N02D	Trinity Center	40.84	321	P	P	06 35 23.9	+0.1
	baz=125						
M02C	Callahan	41.18	321	P	P	06 35 27.1	+0.6
	baz=125						
K04D	Chiloquin, OR	41.25	323	P	P	06 35 27.5	+0.3
	baz=128						
YBH	Yreka Blue Hor	41.29	322	P	P	06 35 26.4	-1.1
	comp=Z,4.9nm,1.0s,baz=104,slow=3.1,SNR=7.8						
L04D	Klamath Falls	41.33	322	P	P	06 35 27.6	-0.3
	baz=126						
J05D	Fort Rock, OR	41.36	324	P	P	06 35 28.9	+0.8
	baz=129						
J04D	Umpqua Nationa	41.83	324	P	P	06 35 32.6	+0.6
	baz=128						
L02E	Cave Junction	42.08	321	P	P	06 35 34.3	+0.5
	baz=125						
I05D	Terrebonne, OR	42.08	326	P	P	06 35 34.4	+0.5
	baz=130						
I04A	Tendick Farm,	42.34	324	P	P	06 35 36.6	+0.6
	baz=128						
G05D	Wamic, OR	42.65	327	P	P	06 35 39.4	+0.9
	baz=130						
NEW	Newport	42.69	333	P	P	06 35 38.8	0.0
	comp=Z,2.6nm,0.6s,baz=134,slow=9.0,SNR=10						
NEW				PcP	PcP	06 37 29.8	-0.7
	comp=Z,2.9nm,0.6s,baz=91,slow=2.1,SNR=5.0						
NEW				LR	LR	06 56 07.0	
	comp=Z,313nm,19.8s,baz=140,slow=40						
NEW	Newport	42.69	333	P	P	06 35 39.4	+0.6
	baz=138						
I03D	Drain, OR	42.83	324	P	P	06 35 41.3	+1.5
	baz=127						
J01E	Myrtle Point	42.85	322	P	P	06 35 41.2	+1.2
	baz=126						
H04D	Lebanon	42.98	325	P	P	06 35 42.2	+1.1
	baz=128						
F05D	White Salmon	43.15	327	P	P	06 35 43.6	+1.1
	baz=131						
FFC	Flin Flon	43.54	349	eP	P	06 35 44.6	-0.8
	comp=Z,183nm,0.6s						
FFC	Flin Flon	43.54	349	i P	P	06 35 45.1	-0.4
D04E	Lakebay	44.67	328	P	P	06 35 55.7	+1.0
	baz=130						
LCO	Las Campanas	44.81	156	eP	P	06 35 55.8	-0.5
B05A	Bryant	45.05	329	P	P	06 35 58.1	+0.5
	baz=132						
D03D	Eldon	45.07	328	P	P	06 35 58.2	+0.4
	baz=130						
DRLN	Deer Lake	45.40	29	eP	P	06 35 59.5	-0.9
	comp=Z,44nm,1.1s						
A04D	Lummi Island	45.65	329	P	P	06 36 02.9	+0.5
	baz=131						
SCHQ	Schefferville	46.09	18	P	P	06 36 04.3	-1.5
	comp=Z,15nm,0.5s,baz=224,slow=6.3,SNR=8.8						
SCHQ				PcP	PcP	06 37 40.7	-1.2
	comp=Z,12nm,0.7s,baz=201,slow=3.2,SNR=3.9						
SCHQ				LR	LR	06 56 14.6	
	comp=Z,107nm,18.8s,baz=211,slow=37						
AQDB	Aquidauana	46.46	134	eP	P	06 36 08.9	-0.2
PEXB	Peixe	47.47	119	eP	P	06 36 15.8	-1.4
CFA	Coronel Fontan	48.09	155	LR	LR	06 53 47.6	
	comp=Z,77nm,19.4s,baz=67,slow=33						
CPUP	Villa Florida	49.44	141	P	P	06 36 29.6	-2.6
	comp=Z,7.8nm,1.1s,baz=327,slow=7.2,SNR=6.9						
CPUP				LR	LR	06 58 19.8	
	comp=Z,85nm,18.9s,baz=327,slow=37						
CPUP	Villa Florida	49.44	141	eP	P	06 36 31.8	-0.4
BDFB	Brasilia	49.49	123	P	P	06 36 30.0	-2.8
	comp=Z,2.5nm,0.6s,baz=266,slow=13,SNR=4.3						
BDFB				PcP	PcP	06 37 55.5	+0.6
	comp=Z,3.2nm,0.7s,baz=9.4,slow=17,SNR=3.7						
ITRB	Iturama	49.89	129	eP	P	06 36 36.4	+0.7
TRCB	Terra Rica	50.12	134	eP	P	06 36 37.4	-0.1
NBMO	Morrinhos-CE	51.48	104	eP	P	06 36 47.7	-0.1
BB19B	Bebedouro	52.08	129	eP	P	06 36 52.5	+0.4
PMNB	Patos De Minas	52.30	125	eP	P	06 36 54.2	+0.3
FRTB	Fartura	52.66	132	eP	P	06 36 56.6	+0.1
YKA	Yellowknife Ar	53.34	346	P	P	06 36 59.6	-1.2
	comp=Z,12nm,0.5s,baz=150,slow=7.4,SNR=48						
YKA				PcP	PcP	06 38 08.9	+0.7
	comp=Z,2.3nm,0.7s,baz=145,slow=4.0,SNR=3.2						
YKA				LR	LR	07 04 19.9	
	comp=Z,18nm,18.3s,baz=134,slow=41						
YKB5	Yellowknife Ar	53.34	346	eP	P	06 36 59.6	-1.2
YKB5				ePcP	PcP	06 38 08.9	+0.7
RCLB	Rio Claro- Sao	53.61	130	eP	P	06 37 02.6	-0.9
SPB	Sao Paulo	54.37	131	eP	P	06 37 08.9	-0.1
CPSB	Cacapava Do Su	54.74	142	eP	P	06 37 11.7	+0.1
BSCB	Bom Sucesso	54.94	127	eP	P	06 37 13.7	+0.5
NBPA	Parau_RN	55.03	106	eP	P	06 37 13.5	-0.4
DLBC	Dease Lake	55.29	335	P	P	06 37 15.6	+0.4
	comp=Z,12nm,0.7s,baz=140,slow=6.5,SNR=17						
RCBR	Riachuelo	56.19	106	eP	P	06 37 23.5	+1.1
	comp=Z,68nm,1.1s						
RCBR	Riachuelo	56.19	106	eP	P	06 37 23.5	+1.1
RCBR				pmax	pmax		
	comp=Z,68nm,1.1s						
RCBR	Riachuelo	56.19	106	eP	P	06 37 22.2	-0.1
TRQA	Tornquist	56.25	154	eP	P	06 37 23.0	+0.7
ESAR	Angra dos Reis	56.30	128	eP	P	06 37 22.4	-0.5
SJMB	Sao Joao De Ma	56.66	122	eP	P	06 37 25.6	+0.1
RES	Resolute Bay	62.53	358	P	P	06 38 03.9	-1.3
	comp=Z,10nm,0.6s,baz=183,slow=8.9,SNR=11						
RES	Resolute Bay	62.53	358	eP	P	06 38 03.9	-1.3
	comp=Z,12nm,0.8s						
EPYK	Eagle Plains	62.62	341	P	P	06 38 06.2	+0.2
	baz=126						
INK	Inuvik	62.85	343	P	P	06 38 06.3	-1.0
	comp=Z,8.0nm,0.8s,baz=87,slow=5.1,SNR=12						
ILAR	Eielson Array	65.45	337	P	P	06 38 23.8	-0.8
	comp=Z,11nm,1.1s,baz=129,slow=4.1,SNR=38						
ILAR				PP	PP	06 40 48.0	-0.4
	comp=Z,0.8nm,0.8s,baz=117,slow=5.6,SNR=4.5						
ILAR				LR	LR	07 11 24.8	
	comp=Z,135nm,18.3s,baz=128,slow=40						
ILB	Eielson Array	65.45	337	ePP	PP	06 40 48.0	-0.4
KDAK	Kodiak Island	65.52	328	i P	P	06 38 26.0	+0.9
POKR	Poker Plat Res	65.80	337	P	P	06 38 26.6	-0.2
	baz=115						
COLA	College	65.86	337	i P	P	06 38 27.2	0.0
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TCOL	CIGO, UAF Yank	65.87	337	P	P	06 38 27.3	+0.1
	baz=114						
PPT	Papeete	66.31	245	LR	LR	07 01 16.4	
	comp=Z,137nm,19.4s,baz=88,slow=30						
PPT2	Papeete2	66.32	245	eS	S	06 47 41.4	+21
	comp=Z,116nm,26.2s						
PPT2				eLQ	LQ	06 55 47.7	
	comp=Z,252nm,24.2s						
PPT2				eLR	LR	06 58 01.0	
	comp=Z,280nm,28.8s						
SUMG	Summit	67.31	15	eP	P	06 38 35.8	-1.0
	comp=Z,38nm,1.6s						
SUMG	Summit	67.31	15	eP	P	06 38 35.8	-1.0
SUMG				pmax	pmax		
	comp=Z,38nm,1.6s						
SUMG	Summit	67.31	15	i P	P	06 38 36.0	-0.8
	comp=Z,16nm,0.8s						
TOLK	Toolik Lake Re	68.03	340	P	P	06 38 40.9	-0.1
	baz=114						
TBI	Tubuai	68.50	239	eS	S	06 48 04.5	+18
	comp=Z,175nm,37.2s						
TBI	Tubuai	68.50	239	eLR	LR	06 59 27.1	
	comp=Z,224nm,37.2s						
DAG	Danmarks Havn	73.83	13	i P	P	06 39 14.4	-1.6
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DAG	Danmarks Havn	73.83	13	i P	P	06 39 14.4	-1.6
	comp=Z,5.8nm,0.7s						
PCAS	Casmilo, Conde	75.38	52	eP	P	06 39 26.3	+0.6
	comp=Z,23nm,1.4s						
PGAV	Gavieira, Arco	75.43	50	eLR	LR	07 04 50.3	
	comp=Z,140nm,18.0s						
PMTG	Montargil	75.65	53	eP	P	06 39 25.9	-1.4
	comp=Z,14nm,1.9s						
PVIS	Viseu	75.79	51	eP	P	06 39 29.9	+1.8
PBDV	Barranco-do-Ve	76.03	54	eP	P	06 39 31.3	+1.8
	comp=Z,37nm,1.5s						
MTE	Manteigas	76.08	51	eLR	LR	07 06 17.6	
	comp=Z,95nm,18.0s						
PCBR	Castelo Branco	76.17	52	eP	P	06 39 30.6	+0.3
PVAQ	Vaqueiros	76.18	54	eLR	LR	07 03 26.1	
	comp=Z,157nm,18.0s						
PMRV	Marv??o	76.27	52	eP	P	06 39 32.2	+1.3
	comp=Z,9.8nm,1.8s						
MVO	Moncorvo	76.41	50	eP	P	06 39 33.5	+1.8
	comp=Z,10nm,1.5s						
RAR	Rarotonga	76.59	245	LR	LR	07 04 40.0	
	comp=Z,555nm,21.3s,baz=214,slow=29						
EKA	Eskdalemuir Ar	77.97	36	P	P	06 39 38.0	-2.0
	comp=Z,3.7nm,0.7s,baz=268,slow=6.0,SNR=12						
ADK	Adak	78.79	321	eP	P	06 39 45.6	+1.0
	comp=Z,50nm,1.1s						
ADK	Adak	78.79	321	eP	P	06 39 45.6	+1.0
ADK				pmax	pmax		
	comp=Z,50nm,1.1s						
ESDC	Sonseca Array	78.89	52	P	P	06 39 43.8	-1.7
	comp=Z,2.2nm,0.8s,baz=286,slow=5.7,SNR=11						
ESDC				LR	LR	07 10 31.5	
	comp=Z,73nm,19.4s,baz=310,slow=33						
SPA0	Spitsbergen Ar	81.34	12	eP	P	06 39 58.2	+0.3
	comp=Z,69nm,1.5s						
SPITS	Spitsbergen Ar	81.34	12	P	P	06 39 58.2	+0.3
	comp=Z,3.1nm,0.6s,baz=15,slow=2.2,SNR=7.6						
TIC	Toumodi	83.22	85	eP	P	06 40 10.5	+1.5
LIC	Lamto	83.29	85	eP	P	06 40 11.0	+1.6
	comp=Z,186nm,1.2s						
DBIC	Dimbokro	83.37	85	P	P	06 40 09.8	0.0
	comp=Z,21nm,0.7s,baz=258,slow=3.9,SNR=16						
DBIC				LR	LR	07 13 27.0	
	comp=Z,43nm,20.4s,baz=256,slow=33						
DBIC	Dimbokro	83.37	85	eP	P	06 40 11.3	+1.5
	comp=Z,37nm,0.9s						
KIC	Kosan Boka	83.55	85	eP	P	06 40 12.4	+1.7
	comp=Z,115nm,1.0s						
BILL	Bilibino	84.02	338	deP	P	06 40 13.3	+1.2
BILL						06 40 16.0	
BILL				i *PP	pwP	06 40 22.4	+0.5
BILL				S	S	06 50 28.0	-7.8
BILL				pmax	pmax		
	comp=Z,54nm,1.7s						
BILL				MLR	MLR		
	comp=Z,132nm,23.0s						
NB2	NORSAR Subarra	84.53	29	P	P	06 40 17.8	+3.0
	comp=Z,2.0nm,0.9s,baz=285,slow=4.8						
NB200	NORSAR Array S	84.53	29	eP	P	06 40 15.0	+0.2
NOA	NORSAR Array B	84.53	29	P	P	06 40 15.0	+0.2
	comp=Z,3.2nm,0.8s,baz=287,slow=4.6,SNR=6.8						
NOA				LR	LR	07 17 11.4	
	comp=Z,40nm,18.9s,baz=280,slow=35						
HFS	Hagfors	85.96	29	P	P	06 40 21.3	-0.6
	comp=Z,6.1nm,1.0s,baz=217,slow=0.7,SNR=5.7						
ARA0	ARCESS Array S	87.04	19	eP	P	06 40 26.8	-0.4
ARCES	ARCESS Array B	87.04	19	P	P	06 40 26.8	-0.3
	comp=Z,3.0nm,0.7s,baz=278,slow=3.8,SNR=14						
NKC	Novy Kostel	88.20	39	eP	P	06 40 34.1	+1.0
NKC				MLR	MLR		
	comp=Z,200nm,21.3s						
NKC	Novy Kostel	88.20	39	eP	P	06 40 34.1	+1.0
NKC				AMS	AMS	07 17 20.0	
	comp=Z,200nm,21.3s						
CLL	Collm	88.22	38	eP	P	06 40 35.0	+1.9
TOA1	Torodi Ar. Sit	88.38	77	eP	P	06 40 33.6	-1.0
TOA0	Torodi Ar. Sit	88.39	77	eP	P	06 40 35.1	+0.5
	comp=Z,25nm,1.5s						
TORD	Torodi Ar. Bea	88.39	77	P	P	06 40 33.6	-1.0
	comp=Z,3.8nm,0.7s,baz=294,slow=5.9,SNR=29						
TORD				LR	LR	07 17 18.7	
	comp=Z,110nm,20.2s,baz=305,slow=34						
KHC	Kasperske Hory	89.23	40	i P	P	06 40 35.4	-2.6
KHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KHC	Kasperske Hory	89.23	40	eP	P	06 40 39.0	+1.0
KHC				AMS	AMS	07 25 20.0	
	comp=Z,200nm,21.5s						
GEC2	GERESS Array S	89.39	40	eP	P	06 40 37.3	-1.5
	comp=Z,11nm,1.6s						
GEC2	GERESS Array S	89.39	40	eP	P	06 40 37.3	-1.5
GEC2				pmax	pmax		
	comp=Z,11nm,1.6s						
GERES	GERESS Array B	89.39	40	P	P	06 40 37.3	-1.5
	comp=Z,0.6nm,0.5s,baz=264,slow=2.7,SNR=4.8						
GERES				LR	LR	07 16 22.3	
	comp=Z,85nm,21.3s,baz=291,slow=33						
PRU	Pruhonice	89.56	39	AMS	AMS	07 17 20.0	
	comp=Z,200nm,20.0s						
GOPC	GO Pecny, Ondr	89.73	39	AMS	AMS	07 17 40.0	
	comp=Z,200nm,14.9s						
KEST	Kesra	89.98	54	P	P	06 40 42.8	+0.9
	comp=Z,2.3nm,0.7s,baz=204,slow=1.9,SNR=2.9						
KEST	Kesra	89.98	54	eP	P	06 40 42.8	+0.9
	comp=Z,29nm,1.7s						
TREC	Trest	90.36	39	AMS	AMS	07 18 20.0	
	comp=Z,200nm,22.8s						
FIA0	FINESS Array S	91.05	26	eP	P	06 40 46.6	+0.5
FIA0	FINESS Array S	91.05	26	eP	P	06 40 46.6	+0.5
FINES	FINESS Array B	91.05	26	P	P	06 40 46.6	+0.5
	comp=Z,1.4nm,0.6s,baz=282,slow=3.7,SNR=4.0						
FINES				LR	LR	07 20 15.5	
	comp=Z,69nm,21.5s,baz=308,slow=35						
SEY	Seymchan	91.38	336	P	P	06 40 47.6	0.0
	comp=Z,5.9nm,0.8s,baz=139,slow=4.8,SNR=9.4						
ZST	Bratislava	91.74	40	eP	P	06 40 51.4	+1.8
ZST	Bratislava	91.74	40	eP	P	06 40 51.4	+1.8
MODS	Modra-Piesok	91.79	40	eP	P	06 40 51.4	+1.5
MODS	Modra-Piesok	91.79	40	eP	P	06 40 51.4	+1.5
TIXI	Tiksi	92.50	349	P	P	06 40 52.2	-0.4
	comp=Z,3.2nm,0.3s,baz=25,slow=5.1,SNR=12						
TIXI	Tiksi	92.50	349	eP	P	06 40 52.0	-0.6
	comp=Z,12nm,1.0s						
TIXI	Tiksi	92.50	349	ceP	P	06 40 51.9	-0.7
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
VYHS	Vyhne	92.71	39	eP	P	06 40 56.6	+2.4
VYHS	Vyhne	92.71	39	eP	P	06 40 56.6	+2.4
VSU	Vasula	92.76	28	i P	P	06 40 53.2	-0.9

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VSU                                  pmax      pmax
          comp=Z,27nm,1.0s
PEA1  Petropavlovsk-     93.50 326  eP        P          06 40 58.0 +0.4
PETK  Petropavlovsk-     93.50 326   P        P          06 40 58.0 +0.4
          comp=Z,6.1nm,0.9s,baz=95,slow=11,SNR=9.2
AKASG Malin Array Be     97.83  34   P        P          06 41 17.3 -0.1
          comp=Z,0.2nm,0.3s,baz=297,slow=4.1,SNR=3.0
AKASG                                LR       LR         07 24 25.0
          comp=Z,78nm,19.8s,baz=290,slow=35
AKBB  Malin Array Si     97.83  34  eP        P          06 41 17.4 -0.1
          comp=Z,19nm,1.9s
AKBB  Malin Array Si     97.83  34  eP        P          06 41 17.4 -0.1
AKBB                                 pmax     pmax
          comp=Z,19nm,1.9s
VNA3  Neumayer Olymp     98.22 161   Pdiff    P          06 41 16.8 -1.9
VNA2  Neumayer--Watz     98.87 161   Pdiff    P          06 41 20.5 -1.0
          baz=240,slow=14
SNAA  Sanae             100.44 161   Pdiff    Pdif       06 41 25.2 -3.4
ZAA1  Zalesovo Array    113.92   4  ePKiKP    PKiKP      06 46 19.8 -1.1
ZALV  Zalesovo Beam     113.92   4   PKiKP    PKiKP      06 46 19.8 -1.1
          comp=Z,2.1nm,0.6s,baz=298,slow=2.7,SNR=7.5
SYO   Syowa Base        114.71 162⇑ePdiff    Pdif       06 42 35.0 +3.0
KURK  Kurchatov         116.48   8   PKIKP    PKiKP      06 46 25.3 -0.5
KURBB Kurchatov Arra    116.56   9   PKP      PKiKP      06 46 25.3 -0.7
          comp=Z,2.6nm,0.6s,baz=347,slow=2.0,SNR=26
BOSA  Boshof            117.37 116   PKP      PKPdf      06 46 27.8 -0.5
          comp=Z,1.9nm,0.7s,baz=270,slow=4.0,SNR=3.5
SONA0 Songino Array     118.57 348  ePKPdf    PKPdf      06 46 29.7 -0.4
SONM  Songino Array     118.57 348   PKP      PKPdf      06 46 29.7 -0.4
          comp=Z,1.6nm,0.7s,baz=318,slow=0.6,SNR=8.6
KSRS  Korea Array       119.40 326   PKP      PKPdf      06 46 31.5 -0.4
          comp=Z,3.2nm,0.8s,baz=0.3,slow=2.8,SNR=6.3
KS15  Wonju Array Si    119.43 326  ePKPdf    PKPdf      06 46 31.4 -0.4
MK32  Makanchi Array    120.80   7  ePKPdf    PKPdf      06 46 33.5 -0.9
MKAR  Makanchi Array    120.80   7   PKP      PKPdf      06 46 33.5 -0.9
          comp=Z,1.9nm,0.7s,baz=5.4,slow=3.2,SNR=17
MAW   Mawson            121.73 168   PKP      PKPdf      06 46 34.2 -1.1
          comp=Z,2.5nm,0.6s,baz=327,slow=1.0,SNR=9.7
BJI   Beijing           122.82 337  ePKP      PKiKP      06 46 38.6 +0.1
AAK   Ala-Archa         123.47  14   PKP      PKiKP      06 46 40.1 +0.1
          comp=Z,1.7nm,0.4s,baz=247,slow=7.7,SNR=4.3
AAK   Ala-Archa         123.47  14  i PKIKP   PKPdf      06 46 39.9 +0.1
HHC   Hu-ho-hao-te      123.73 341   PKP      PKiKP      06 46 40.5  0.0
HHC                                  LR       LR
          comp=Z,180nm,15.8s
WMQ   Urumqi            124.18   2  ePKP      PKPdf      06 46 41.0  0.0
NRN   Naryn             124.96  13  ePKPdf    PKiKP      06 46 44.0 +0.8
NRN   Naryn             124.96  13  ePKIKP    PKiKP      06 46 44.0 +0.8
GAR   Garm              125.67  19  ePKPdf    PKiKP      06 46 45.1 +0.7
GAR   Garm              125.67  19  ePKIKP    PKiKP      06 46 45.1 +0.7
KSH   Kashi             126.78  14  ePKP      PKiKP      06 46 47.8 +1.2
KSH                                  sPKP                06 47 02.3
KSH                                  PP       PP         06 48 47.8 +6.0
KSH                                  PKS                 06 50 22.8
KSH                                  SKKS                06 55 35.1
KSH                                  AMB      AMB
          comp=Z,95nm,5.8s
GTA   Gaotai            127.92 351  ePKP      PKiKP      06 46 49.3 +0.4
GTA                                  sPKP                06 47 04.5
GTA                                  PP       PP         06 48 53.8 +4.6
GTA                                  SS       SS         07 06 00.0 -1.1
GTA                                  AMB      AMB
          comp=Z,34nm,6.2s
GTA                                  LR       LR
          comp=Z,100nm,20.3s
GTA                                  LR       LR
          comp=Z,98nm,22.9s
NJ2   Nanjing           128.30 329  ePKP      PKPdf      06 46 48.5 -0.6
STKA  Stephens Creek    129.28 239   PKP      PKPdf      06 46 49.1 -1.8
          comp=Z,4.8nm,0.7s,baz=79,slow=2.1,SNR=11
STKA  Stephens Creek    129.28 239  ePKPdf    PKPdf      06 46 50.2 -0.7
STKA  Stephens Creek    129.28 239  ePKIKP    PKPdf      06 46 50.2 -0.7
LZH   Lanzhou           130.34 346  ePKP      PKPdf      06 46 53.3 +0.2
LZH                                  sPKP                06 47 10.9
LZH                                  LR       LR
          comp=Z,140nm,18.3s
LZH                                  LR       LR
          comp=Z,140nm,18.1s
LZH                                  LR       LR
          comp=Z,190nm,20.0s
XAN   Xi'an             130.79 340   PKP      PKPdf      06 46 54.3 +0.5
WHN   Wuhan             131.71 332  ePKP      PKiKP      06 47 00.9 +4.3
CD2   Chengdu           135.28 344   PKP      PKPdf      06 47 00.8 -1.6
WB2   Warramunga Arr    137.30 254  ePKPdf    PKPdf      06 47 05.7 -0.6
WRAB  Tennant Creek     137.30 254  ePKPdf    PKPdf      06 47 06.7 +0.4
WRAB  Tennant Creek     137.30 254c iPKIKP    PKPdf      06 47 05.9 -0.4
WRAB                                 pmax     pmax
          comp=Z,11nm,1.0s
WRA   Warramunga Arr    137.31 254   PKP      PKPdf      06 47 06.2 -0.1
          comp=Z,8.9nm,0.9s,baz=64,slow=1.9,SNR=22
WRA                                  SKPbc    SKPab      06 50 59.0  +13
          comp=Z,1.2nm,0.8s,baz=116,slow=1.9,SNR=2.8
AS31  Alice Springs     137.35 248  ePKPdf    PKPdf      06 47 04.8 -1.6
ASAR  Alice Springs     137.35 248   PKhKP    PKPpre     06 46 54.5
          comp=Z,0.7nm,0.7s,baz=105,slow=2.9,SNR=5.6
ASAR                                 PKP      PKPdf      06 47 04.9 -1.4
          comp=Z,3.7nm,0.8s,baz=109,slow=2.4,SNR=8.8
ASAR                                 SKPbc    SKPab      06 50 59.0  +12
          comp=Z,0.9nm,0.7s,baz=103,slow=3.2,SNR=6.7
SLVN  Son La            144.17 338  ePKPdf    PKPdf      06 47 18.1 -0.7
MSEY  Mahe Island       144.56  81  i PKIKP   PKiKP      06 47 22.4 -0.9
PAYA  Payao             147.31 344   P        PKPbc      06 47 26.9 +0.5
NONG  Nongkai           147.44 337   P        PKPbc      06 47 27.1 +0.4
PANO  Nakornpanom       147.68 334   P        PKPbc      06 47 28.1 +0.7
CHTO  Chiang Mai        148.07 345  ePKPbc    PKPbc      06 47 28.1 -0.4
CHTO  Chiang Mai        148.07 345  ePKP2     PKPbc      06 47 28.1 -0.4
CMMT  Chiang Mai        148.07 345   P        PKPbc      06 47 28.7 +0.2
          comp=Z,14nm,1.3s,comp=Z,317nm
SKNT  Sakolnakorn       148.10 335   P        PKPbc      06 47 29.1 +0.5
          comp=Z,94nm,0.9s
LAMP  Lampang           148.17 343   P        PKiKP      06 47 31.0 +0.5
          comp=Z,39µm,0.7s,comp=Z,832µm
HYB   Hyderabad         148.27  22  i PKP     PKPbc      06 47 29.0 -0.1
CM31  Chiang Mai Arr    148.41 345  ePKPbc    PKPbc      06 47 29.8 +0.4
CMAR  Chiang Mai Arr    148.41 345   PKPbc    PKPbc      06 47 29.9 +0.6
          comp=Z,17nm,0.7s,baz=338,slow=3.0,SNR=57
CMAR  Chiang Mai Arr    148.41 345   PKP2     PKPbc      06 47 30.0 +0.6
PBKT  Sadao Pong        149.60 340   P        PKiKP      06 47 33.1 -0.4
          comp=Z,18nm,1.4s
CHAI  Chaiyaphum        149.85 338   P        PKiKP      06 47 34.3 +0.3
          comp=Z,33µm,1.1s,comp=Z,989µm
PSA00 Pilbara Seismi    150.49 248  ePKPbc    PKPbc      06 47 33.2 -1.3
UMPA  Umpang Tak        150.59 344   P        PKiKP      06 47 36.6 +1.0
CHBT  CHBT              152.57 334   P        PKPab      06 47 59.3  +10
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MAN 15 06:41:19.9, 7°.35N×124°.82E, h7^{km}, mb4.9, ML3.9, MS3.9, 1C-2D, Mindanao

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Code  Station Name        Δ°   AZ°     Phase ID               Time     Res
                                     Op        ISC          h  m  s    ISC
KCP   Kidapawan          0.43 142⇓iP        Pg           06 41 28.1 -0.2
KCP                               i S       Sb           06 41 44.0 +7.4
BUKP  Musuan             0.57  24  eP       Pb           06 41 32.0 -0.3
BUKP                               eS       Sn           06 41 44.3 +0.1
CTBH  Cotabato--PC H     0.59 257⇓iP        Pg           06 41 31.5 +0.3
CTBH                              i S       Sg           06 41 39.5 +0.6
SKMP  Bagumbayan, Su     0.88 199  eP       Pg           06 41 34.7 -2.0
SKMP                               eS       Sg           06 41 47.3 -0.8
CGP   Cagayan de Oro     1.10 353⇑eP        Pb           06 41 41.4 +0.1
CGP                               i S       Sb           06 41 56.4 +0.5
DDMP  Don Marcelino,     1.52 145  eP       Pn           06 41 46.6 -0.9
DDMP                               eS       Sg           06 42 08.8 -0.1
BUTP  Butuan             1.79  26  eP       Sb           06 42 16.0 +0.3
```

ISCJB ***15*** *06:43:12.0±0.4, 38°.97N±0°.02×26°.08E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=3.9km s-min=3.2km az=165.0*
ATH ***15*** *06:43:11.8, 38°.99N×26°.06E, h24^{km}±1^{km}, ML2.6/8, Error ellipse: s-maj=1.9km s-min=1.0km az=269.0*
ISK ***15*** *06:43:11.2, 39°.00N×26°.10E, h3^{km}, ML2.9/23*
DDA ***15*** *06:43:12.4, 39°.00N×26°.09E, h7^{km}±4^{km}, ML2.9*
THE ***15*** *06:43:12.3, 38°.97N×26°.04E, h0^{km}±1^{km}, ML2.3/5, Error ellipse: s-maj=1.8km s-min=0.6km az=90.0*
ISC 15 06:43:12.5±0.9, **38°.99N**±0°.02×**26°.09E**±0°.02, **h10**^{km}±8^{km}, **n51,** σ**0s.62**/70, **Aegean Sea**

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Code  Station Name        Δ°   AZ°     Phase ID               Time     Res
                                     Op        ISC          h  m  s    ISC
SIGR  SIGRI              0.28 320  PG       Pg           06 43 17.8 -0.4
SIGR                               SG       Sg           06 43 22.6 +0.5
SIGR  SIGRI              0.28 320  P        Pg           06 43 18.1 -0.1
SIGR                               S        Sg           06 43 22.4 +0.3
          2µm,0.5s
SIGR  SIGRI              0.28 320  P        Pg           06 43 18.1 -0.1
SIGR                               S        Sg           06 43 22.9 +0.8
SIGR                               AML      AML          06 43 23.1
          comp=E,5411µm,0.5s
SIGR                               AML      AML          06 43 23.5
          comp=N,3580µm,0.5s
PRK   Paraskevi          0.29  29  P        Pb           06 43 19.3 -0.5
PRK   Paraskevi          0.29  29  P        Pb           06 43 19.2 -0.6
PRK                                S        Sb           06 43 23.8 -0.9
PRK                                AML      AML          06 43 24.7
          comp=E,10250µm,0.4s
PRK                                AML      AML          06 43 24.8
          comp=N,10165µm,0.3s
KRBN  Karaburun          0.54 138  PG       Pg           06 43 22.5 -0.4
CAND  Candarli           0.56  94  PG       Pg           06 43 22.5 -0.8
AYVA  Ayvalik            0.56  56 i P       Pg           06 43 23.7 +0.3
AYVA                              i S       Sb           06 43 31.7 -0.8
AYVA                               IAML_P
          comp=Z,1µm,0.2s
FOCM  Foa                0.57 119  PG       Pg           06 43 23.0 -0.6
CHOS  Chios island       0.61 183  PG       Pg           06 43 23.3 -1.0
CHOS  Chios island       0.61 183  P        Pg           06 43 23.3 -1.0
CHOS                               S        Sg           06 43 32.7 +0.5
          comp=Z,308nm,0.3s
CHOS  Chios island       0.61 183  P        Pg           06 43 23.3 -1.0
CHOS                               S        Sg           06 43 32.8 +0.5
CHOS                               AML      AML          06 43 35.6
          comp=N,821µm,0.5s
CHOS                               AML      AML          06 43 36.1
          comp=E,901µm,0.3s
PSRA  Psara              0.61 223  P        Pg           06 43 24.0 -0.2
PSRA                               S        Sg           06 43 32.4 +0.1
PSRA                               AML      AML          06 43 37.3
          comp=E,2512µm,0.3s
PSRA                               AML      AML          06 43 37.4
          comp=N,1952µm,0.3s
DKL   Dikili             0.64  83  PG       Pg           06 43 24.2 -0.7
URLA  Izmir              0.75 148  PG       Pg           06 43 25.9 -1.0
URLA  Izmir              0.75 148 i P       Pg           06 43 25.7 -1.2
URLA                              i S       Sb           06 43 38.6 +0.8
URLA                               IAML_P
          comp=Z,5µm,0.4s
ZEDA  zmir-Bergama       0.77  92 i P       Pg           06 43 27.0 -0.3
ZEDA                              i S       Sb           06 43 39.1 +0.6
BAYC  CANAKKALE_Bayr     0.83  25 i P       Pb           06 43 29.6 +0.7
BAYC                              i S       Sn           06 43 41.8 -0.7
BAYC                               IAML_P
          comp=Z,3µm,0.2s
BOZC  Bozcaada           0.85 358  PG       Pg           06 43 28.1 -0.7
BOZC  Bozcaada           0.85 358 i P       Pg           06 43 28.9 +0.1
BOZC                              i S       Sb           06 43 41.4 +0.6
BOZC                               IAML_P
          comp=Z,3µm,0.2s
EZN   Ezine              0.85  12  PG       Pg           06 43 28.1 -0.8
EZN   Ezine              0.85  12  P        Pg           06 43 28.9  0.0
EZN                                S        Sn           06 43 42.8 -0.2
BLCB  Balcova            0.96 129  PG       Pg           06 43 30.5 -0.5
LIA   Limnos Island      1.15 322  P        Pg           06 43 33.8 -0.7
LIA                                S        Sn           06 43 50.9 +0.6
          comp=Z,140nm,0.4s
LIA   Limnos Island      1.15 322  P        Pg           06 43 33.7 -0.7
LIA                                S        Sb           06 43 49.4 +0.1
LIA                                AML      AML          06 43 51.3
          comp=E,510µm,0.5s
LIA                                AML      AML          06 43 54.2
          comp=N,418µm,0.6s
STEP  BALIKESIR_Sava     1.32  73 i P       Pn           06 43 37.0  0.0
STEP                              i S       Sn           06 43 56.0 +1.3
SMG   Samos              1.41 155  P        Pn           06 43 38.2 -0.1
SMG   Samos              1.41 155  P        Pn           06 43 38.1 -0.1
SMG                                AML      AML          06 44 01.2
          comp=E,470µm,0.5s
SMG                                AML      AML          06 44 03.4
          comp=N,322µm,0.5s
GELI  Tayfur-Gelibol     1.43  12  PN       Pn           06 43 38.5  0.0
BALB  Balikesir          1.53  64  PN       Pn           06 43 39.6 -0.3
SMTH  Samothraki Isl     1.54 344  P        Pn           06 43 39.3 -0.7
SMTH                               S        Sg           06 44 02.1 +0.1
          comp=N,98nm,0.4s
SMTH  Samothraki Isl     1.54 344  P        Pn           06 43 39.5 -0.5
SMTH                               AML      AML          06 44 03.4
          comp=N,186µm,0.5s
SMTH                               AML      AML          06 44 04.0
          comp=E,219µm,0.6s
GCAM  G?zelcaml?         1.57 145  PN       Pn           06 43 40.6 +0.2
GONE  Gonen-Balikesi     1.62  49  PN       Pn           06 43 41.0 -0.1
ENEZ  Enez               1.74   2  PN       Pn           06 43 42.9 +0.1
AYDB  Zeytinkoy-Aydi     1.76 126  PN       Pn           06 43 43.3 +0.2
RKY   Sarkoy-Tekirda     1.89  26  PN       Pn           06 43 44.9 +0.1
ALN   Alexandroupoli     1.90 359  PN       Pn           06 43 45.2 +0.2
ALN   Alexandroupoli     1.90 359  P        Pb           06 43 46.2 -1.1
ALN                                S        Sb           06 44 11.0 -0.1
          comp=E,45nm,0.4s
ALN   Alexandroupoli     1.90 359  P        Pn           06 43 45.1 +0.2
ALN                                AML      AML          06 44 14.8
          comp=N,86µm,0.4s
ALN                                AML      AML          06 44 17.4
          comp=E,84µm,0.3s
EDC   Edincik            1.92  45  PN       Pn           06 43 45.3  0.0
THAS  Thassos island     1.93 327  P        Pn           06 43 44.9 -0.4
DURS  Dursunbey          1.95  71 i P       Pn           06 43 44.0 -1.7
DURS                              i S       Sg           06 44 15.2 +0.1
DURS                               IAML_P
          comp=Z,596nm,0.3s
MRMT  Marmara Adasi      1.98  35  PN       Pn           06 43 45.9 -0.3
OUR   Ouranopolis        2.11 310  PN       Pn           06 43 48.4 +0.6
BODT  Bodrum             2.15 153  PN       Pn           06 43 49.1 +0.6
KCTX  Karacabey (Bur     2.16  53  PN       Pn           06 43 48.5 -0.1
RDO   Rodhopi            2.19 349  PN       Pn           06 43 49.3 +0.4
ULDT  Uludag             2.62  63 i P       Pb           06 44 00.7 +1.1
ARMT  Armutlu            2.65  53  PN       Pn           06 43 55.7 +0.4
TVSB  Tavsanli           2.66  79  PN       Pn           06 43 55.9 +0.4
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ISCJB ***15*** *06:50:08.2±0.5, 36°.34S±0°.09×99°.6W±0°.1, h10^{km}, mb4.3/40, MS3.7/6, Error ellipse: s-maj=15.6km s-min=11.3km az=146.0*
IDC ***15*** *06:50:08.3±0.8, 36°.29S×99°.61W, h0^{km}, mb4.0/12, mb1 4.2/12, mb1mx4.1/29, mbtmp4.0/12, MS3.7/6, Ms1 3.7/6, ms1mx3.4/19, Error ellipse: s-maj=22.3km s-min=20.4km az=103.0*
NEIC ***15*** *06:50:09.9±1.7, 36°.34S×99°.38W, h10^{km}, mb4.6/33, Error ellipse: s-maj=31.4km s-min=6.2km az=281.0*
ISC 15 06:50:09.8±0.6, **36°.3S**±0°.1×**99°.5W**±0°.1, **h10**^{km}**, n52,** σ**0s.89**/52, **mb4.5**/40, **MS3.6**/6, **Southeast of Easter Island**

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Code  Station Name        Δ°   AZ°     Phase ID               Time     Res
                                     Op        ISC          h  m  s    ISC
CFA   Coronel Fontan    26.32  89  P        P            06 55 46.4 +0.5
          2.9nm,0.9s,baz=247,slow=14,SNR=3.5
MNMC  Minye Minye       31.37  65 eP        P            06 56 28.0 -3.3
          45nm,1.9s
LPAZ  La Paz            34.27  63  P        P            06 56 57.8 +0.8
          3.7nm,1.1s,baz=228,slow=7.1,SNR=6.8
LPAZ                               LR       LR           07 07 06.6
          comp=Z,142nm,22.0s,baz=270,slow=30
LPAZ  La Paz            34.27  63 eP        P            06 56 57.3 +0.4
          14nm,1.6s
ATAH  Atahualpa         34.89  39  P        P            06 57 01.9 -0.1
          2.3nm,0.3s,baz=185,slow=12,SNR=6.5
CPUP  Villa Florida     37.15  87  P        P            06 57 20.9 -0.1
          1.8nm,0.9s,baz=350,slow=13,SNR=2.8
CPUP                               LR       LR           07 10 14.4
          comp=Z,33nm,20.6s,baz=314,slow=32
SIV   San Ignacio       39.67  70  P        P            06 57 42.7 +0.4
          1.4nm,0.6s,baz=253,slow=7.0,SNR=12
ROSC  El Rosal          47.26  35  LR       LR           07 15 17.7
          comp=Z,54nm,19.1s,baz=222,slow=32
BDFB  Brasilia          50.05  80  P        P            06 59 05.7 +0.6
          2.3nm,1.0s,baz=216,slow=9.7,SNR=3.2
BDFB                               LR       LR           07 17 54.5
          comp=Z,65nm,21.3s,baz=144,slow=33
QSPA  South Pole Qui    53.90 180  P        P            06 59 33.3 +0.1
          1.3nm,0.8s,baz=139,slow=4.6,SNR=4.2
QSPA                               PcP      PcP          07 00 38.3 -0.2
          1.5nm,1.0s,baz=48,slow=0.7,SNR=2.8
QSPA  South Pole Qui    53.90 180 eP        P            06 59 32.2 -0.9
          13nm,1.6s
VNDA  Vanda             56.68 195  P        P            06 59 53.5 +0.6
          0.5nm,0.7s,baz=118,slow=7.4,SNR=3.7
VNDA                               LR       LR           07 19 22.4
          comp=Z,108nm,21.9s,baz=104,slow=31
VNDA  Vanda             56.68 195 eP        P            06 59 53.3 +0.4
          6.1nm,1.8s
SNAA  Sanae             58.02 158 eP        P            07 00 02.9 +0.4
          13nm,1.7s
ZAIG  Zacatecas         58.84 357 eP        P            07 00 10.1 +1.1
          7.6nm,1.5s
HPIG                    63.18 354 eP        P            07 00 38.3  0.0
          2.6nm,0.8s
TXAR  Lajitas Array     65.42 356  P        P            07 00 52.9 +0.1
          0.7nm,0.8s,baz=182,slow=8.6,SNR=7.5
TX31  Lajitas Ar. Si    65.42 356 eP        P            07 00 52.5 -0.3
          11nm,1.8s
JCT   Junction City     66.45 360 eP        P            07 00 57.8 -1.5
          17nm,1.9s
319A  Douglas           67.96 351 eP        P            07 01 09.9 +0.9
          3.5nm,0.8s
WHTX  Lake Whitney,     67.98   2 eP        P            07 01 09.0 +0.1
          20nm,1.7s
TUC   Tucson            69.08 350 eP        P            07 01 16.1 +0.2
          1.9nm,0.9s
MSTX  Muleshoe          69.99 357 eP        P            07 01 20.5 -1.1
          4.3nm,1.1s
W13A  Hualapai Mount    72.30 348 eP        P            07 01 36.1 +0.5
          2.9nm,1.1s
LDFC  Landfair          72.50 347 eP        P            07 01 38.4 +1.7
          5.2nm,0.9s
SHPR  Sheep Range       73.90 347 eP        P            07 01 46.1 +1.1
          6.4nm,1.4s
TPNV  Topopah Spring    74.53 346 eP        P            07 01 49.1 +0.4
          2.6nm,1.0s
CCUT  Cedar City        74.61 349 eP        P            07 01 50.1 +0.9
          17nm,2.0s
MAW   Mawson            75.54 173  LR       LR           07 33 58.6
          comp=Z,101nm,18.9s,baz=222,slow=35
R11A  Troy Canyon, C    75.77 347 eP        P            07 01 56.6 +0.8
          12nm,1.9s
TMUT  Trail Mountain    76.01 351 eP        P            07 01 57.4  0.0
          3.1nm,0.8s
NV01  Mina Array Sit    76.38 345 eP        P            07 02 00.1 +0.8
NVAR  Mina Array Bea    76.38 345  P        P            07 02 00.1 +0.8
          1.2nm,0.8s,baz=176,slow=6.9,SNR=11
ELK   Elko              78.04 348 eP        P            07 02 07.4 -1.2
          3.2nm,1.4s
PD31  Pinedale Array    79.24 353 eP        P            07 02 14.9 -0.3
PDAR  Pinedale Array    79.24 353  P        P            07 02 14.9 -0.3
          2.0nm,0.8s,baz=158,slow=6.6,SNR=21
ECSD  EROS Data Cent    79.72   2 eP        P            07 02 17.4 -0.1
          5.2nm,1.1s
RSSD  Black Hills       80.17 357 eP        P            07 02 21.0 +0.8
          13nm,1.8s
HLID  Hailey            80.65 349 eP        P            07 02 23.7 +0.9
          5.8nm,1.2s
FLWY  Flagg Ranch       80.67 352 eP        P            07 02 22.9 +0.1
          12nm,1.4s
YHH   Holmes Hill       81.38 352 eP        P            07 02 27.1 +0.3
SPMN  Marine on St.     81.40   5 eP        P            07 02 26.3 -0.1
          5.2nm,0.6s
RLMT  Red Lodge         81.54 353 eP        P            07 02 28.3 +0.8
          2.6nm,0.8s
J55A  Hilton            81.64  16 eP        P            07 02 29.1 +1.3
          4.5nm,0.6s
G40A  Rib Lake          81.65   7 eP        P            07 02 27.8  0.0
          7.2nm,1.3s
EYMN  Ely               84.20   5 eP        P            07 02 40.5 -0.4
          2.9nm,0.8s
E08A  Dider Farm, El    84.29 347 eP        P            07 02 41.3 -0.1
          15nm,1.8s
NEW   Newport           85.66 348  P        P            07 02 46.8 -1.5
          1.2nm,0.8s,baz=138,slow=7.8,SNR=3.5
KBZ   Khabaz           150.49  64  PKPbc    PKPbc        07 10 01.3 -0.1
          2.2nm,0.8s,baz=349,slow=5.2,SNR=3.5
CD2   Chengdu          159.88 261  PKP      PKPdf        07 10 07.5 -1.8
LZH   Lanzhou          161.14 276 ePKP      PKPdf        07 10 11.0 +0.3
LZH                                pPKP     sPKPdf       07 10 14.3 +0.8
LZH                                sPKP                  07 10 15.6
LZH                                PKP      pPKPab       07 10 56.3 +0.1
LZH                                LR       LR
          comp=N,75nm,18.0s
LZH                                LR       LR
          comp=E,62nm,18.1s
LZH                                LR       LR
          comp=Z,86nm,20.3s
KSH   Kashi            175.22  47 ePKP      PKPdf        07 10 19.1 -0.9
```

ATH ***15*** *06:51:16.7, 38°.98N×26°.07E, h26^{km}±1^{km}, ML2.9/8, Error ellipse: s-maj=2.2km s-min=1.2km az=280.0*
ISK ***15*** *06:51:16.9, 38°.98N×26°.10E, h6^{km}, ML3.2/27*
ISCJB ***15*** *06:51:17.1±0.4, 38°.97N±0°.02×26°.05E±0°.03, h9^{km}±3^{km}, Error ellipse: s-maj=3.4km s-min=2.7km az=163.6*
DDA ***15*** *06:51:17.1, 38°.95N×26°.13E, h8^{km}±4^{km}, ML3.4*
THE ***15*** *06:51:18.2, 38°.98N×26°.03E, h7^{km}±1^{km}, ML2.6/5, Error ellipse: s-maj=1.1km s-min=0.5km az=89.0*
ISC 15 06:51:17.5±1.0, **38°.98N**±0°.02×**26°.08E**±0°.02, **h10**^{km}±8^{km}, **n78,** σ**0s.67**/99, **5C-1D, Aegean Sea**

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Code  Station Name        Δ°   AZ°     Phase ID               Time     Res
                                     Op        ISC          h  m  s    ISC
SIGR  SIGRI              0.29 323  PG       Pg           06 51 23.3 -0.1
SIGR                               SG       Sg           06 51 28.1 +0.8
SIGR  SIGRI              0.29 323  P        Pg           06 51 23.2 -0.1
SIGR                               S        Sg           06 51 27.6 +0.2
SIGR  SIGRI              0.29 323  P        Pg           06 51 23.1 -0.3
SIGR                               S        Sg           06 51 28.2 +0.8
SIGR                               AML      AML          06 51 28.5
          comp=E,18023µm,0.3s
SIGR                               AML      AML          06 51 28.9
          comp=N,11436µm,0.2s
PRK   Paraskevi          0.31  29  P        Pb           06 51 24.4 -0.7
PRK                                S        Sb           06 51 29.6 -0.5
          comp=N,3µm,0.3s
PRK   Paraskevi          0.31  29  P        Pb           06 51 24.3 -0.7
PRK                                S        Sb           06 51 29.0 -1.1
PRK                                AML      AML          06 51 31.9
          comp=E,7676µm,0.5s
PRK                                AML      AML          06 51 34.3
          comp=N,7668µm,0.7s
KRBN  Karaburun          0.53 136  PG       Pg           06 51 27.5 -0.3
KRBN                               SG       Sb           06 51 35.8 -0.8
FOCM  Foa                0.57 117  PG       Pg           06 51 28.2 -0.4
AYVA  Ayvalik            0.58  55 i P       Pb           06 51 29.5 -0.2
AYVA                              i S       Sb           06 51 37.3 -0.6
AYVA                               IAML_P
          comp=Z,4µm,0.1s
CHOS  Chios island       0.59 182  PG       Pg           06 51 28.8 -0.2
CHOS  Chios island       0.59 182  P        Pg           06 51 29.3 +0.3
CHOS                               S        Sb           06 51 39.0 +0.6
          comp=Z,800nm,0.2s
CHOS  Chios island       0.59 182  P        Pg           06 51 28.5 -0.5
CHOS                               AML      AML          06 51 44.6
          comp=N,1516µm,0.6s
CHOS                               AML      AML          06 51 44.8
          comp=E,1785µm,0.4s
PSRA  Psara              0.59 223  P        Pb           06 51 29.5 -0.4
PSRA                               S        Sg           06 51 37.4 +0.6
PSRA                               AML      AML          06 51 42.9
          comp=E,3946µm,0.3s
PSRA                               AML      AML          06 51 43.3
          comp=N,3274µm,0.2s
DKL   Dikili             0.65  81  PG       Pg           06 51 29.9 -0.2
CESE  eme                0.67 165  PG       Pg           06 51 30.1 -0.3
URLA  Izmir              0.74 147  PG       Pg           06 51 31.4 -0.3
URLA  Izmir              0.74 147 i P       Pg           06 51 31.1 -0.6
URLA                              i S       Sn           06 51 45.0 -0.2
URLA                               IAML_P
          comp=Z,7µm,0.3s
ZEDA  zmir-Bergama       0.78  90 i P       Pg           06 51 31.7 -0.8
ZEDA                              i S       Sb           06 51 44.5 +0.8
ZEDA                               IAML_P
          comp=Z,8µm,0.2s
BAYC  CANAKKALE_Bayr     0.84  25 i P       Pn           06 51 34.9 -0.6
BAYC                              i S       Sn           06 51 49.0 +1.1
BAYC                               IAML_P
          comp=Z,6µm,0.2s
BOZC  Bozcaada           0.86 359  PG       Pg           06 51 33.3 -0.8
BOZC  Bozcaada           0.86 359 i P       Pg           06 51 34.1 -0.1
BOZC                              i S       Sb           06 51 46.6 +0.4
BOZC                               IAML_P
          comp=Z,7µm,0.2s
EZN   Ezine              0.87  12  PG       Pg           06 51 33.9 -0.3
EZN   Ezine              0.87  12  P        Pg           06 51 34.2  0.0
EZN                                S        Sn           06 51 48.2 -0.2
BLCB  Balcova            0.96 128  PG       Pg           06 51 35.4 -0.5
LIA   Limnos Island      1.15 323  P        Pb           06 51 39.1 -0.4
LIA                                S        Sn           06 51 55.8 +0.3
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	comp=Z,362nm,0.3s						
LIA	Limnos Island	1.15	323	P	Pb	06 51 38.8	-0.6
LIA				S	Sg	06 51 54.7	+0.1
LIA				AML	AML	06 51 56.7	
	comp=E,1553µm,0.5s						
LIA				AML	AML	06 51 57.0	
	comp=N,958µm,0.6s						
GOKC	Gokceada-Canak	1.23	354	PN	Pg	06 51 40.9	-0.2
STEP	BALIKESIR_Sava	1.33	72	iP	Pn	06 51 42.1	0.0
STEP				iS	Sg	06 52 01.2	+0.8
STEP				IAML_P			
	comp=Z,3µm,0.2s						
AKS	Akhisar	1.35	94	PN	Pb	06 51 42.8	-0.1
SMG	Samos	1.40	155	P	Pb	06 51 43.4	-0.3
SMG	Samos	1.40	155	P	Pn	06 51 42.8	-0.3
SMG				AML	AML	06 52 05.3	
	comp=E,562µm,0.5s						
SMG				AML	AML	06 52 13.5	
	comp=N,439µm,0.6s						
GELI	Tayfur-Gelibol	1.45	12	PN	Pn	06 51 44.0	+0.2
BALB	Balikesir	1.54	64	PN	Pn	06 51 44.6	-0.4
SMTH	Samothraki Isl	1.55	344	P	Pn	06 51 44.7	-0.5
SMTH				S	Sn	06 52 05.5	+0.2
	comp=N,138nm,0.2s						
SMTH	Samothraki Isl	1.55	344	P	Pn	06 51 44.7	-0.5
SMTH				AML	AML	06 52 09.4	
	comp=E,388µm,0.6s						
SMTH				AML	AML	06 52 09.7	
	comp=N,457µm,0.3s						
GCAM	G?zelcaml?	1.56	144	PN	Pn	06 51 45.5	+0.2
GONE	Gonen-Balikesi	1.64	49	PN	Pn	06 51 46.2	-0.1
AYDB	Zeytinkoy-Aydi	1.75	125	PN	Pn	06 51 48.5	+0.5
ENEZ	Enez	1.76	2	PN	Pn	06 51 48.4	+0.4
RKY	Sarkoy-Tekirda	1.91	26	PN	Pn	06 51 50.5	+0.4
ALN	Alexandroupoli	1.92	359	PN	Pn	06 51 50.2	0.0
ALN	Alexandroupoli	1.92	359	P	Pn	06 51 49.8	-0.4
ALN				S	Sn	06 52 15.3	+1.0
	comp=N,68nm,0.3s						
ALN	Alexandroupoli	1.92	359	P	Pn	06 51 49.6	-0.5
ALN				AML	AML	06 52 19.6	
	comp=N,172µm,0.4s						
ALN				AML	AML	06 52 24.5	
	comp=E,200µm,0.7s						
THAS	Thassos island	1.94	328	P	Pn	06 51 50.0	-0.4
THAS				S	Sn	06 52 15.0	+0.2
THAS	Thassos island	1.94	328	P	Pn	06 51 49.9	-0.5
EDC	Edincik	1.94	45	PN	Pn	06 51 50.9	+0.4
APE	Apeiranthos	1.95	193	P	Pn	06 51 49.7	-1.0
APE	Apeiranthos	1.95	193	P	Pn	06 51 49.5	-1.2
DURS	Dursunbey	1.96	71	iP	Pn	06 51 51.3	+0.5
DURS				iS	Sg	06 52 20.0	-0.4
MRMT	Marmara Adasi	2.00	35	PN	Pn	06 51 51.6	+0.2
KULA	Kula-Manisa	2.07	102	PN	Pn	06 51 52.8	+0.5
OUR	Ouranopolis	2.11	311	PN	Pn	06 51 53.7	+0.9
OUR	Ouranopolis	2.11	311	P	Pn	06 51 53.4	+0.6
VLY	Voula,Athens	2.12	239	P	Pn	06 51 53.5	+0.6
BODT	Bodrum	2.14	153	PN	Pn	06 51 53.9	+0.6
KCTX	Karacabey (Bur	2.18	53	PN	Pn	06 51 53.1	-0.7
RDO	Rodhopi	2.21	349	PN	Pn	06 51 54.8	+0.7
RDO	Rodhopi	2.21	349	P	Pn	06 51 54.5	+0.4
RDO				S	Sn	06 52 22.6	+1.2
RDO	Rodhopi	2.21	349	P	Pn	06 51 54.4	+0.2
KAVA	Kavala	2.35	330	P	Pn	06 51 55.8	-0.3
KAVA	Kavala	2.35	330	P	Pn	06 51 55.2	-0.9
ORLT	Orhaneli	2.42	63	PN	Pn	06 51 57.7	+0.5
YER	Yerkesik	2.53	136	PN	Pn	06 51 59.6	+0.9
ULDT	Uludag	2.63	63	iP	Pg	06 52 07.4	-0.6
ARMT	Armutlu	2.67	53	PN	Pn	06 52 01.3	+0.8
TVSB	Tavsanli	2.67	79	PN	Pn	06 52 01.6	+1.0
DID	Didima	2.68	238	P	Pn	06 52 01.0	+0.3
SRS	Serrai	2.87	319	P	Pn	06 52 03.2	0.0
KIRK	Kırklareli	2.91	15	iP	Pn	06 52 06.3	+2.6
KIRK				IAML_P			
	comp=Z,153nm,0.2s						
KLV	Kalavryta, Ach	3.22	254	P	Pn	06 52 08.3	+0.1
FETY	Fethiye	3.33	134	PN	Pn	06 52 11.0	+1.3
VLI	Veliai	3.36	229	P	Pn	06 52 09.9	-0.1
ELND	Elena	3.95	358	⇑iP	Pn	06 52 18.3	+0.2
VTS	Vitosha	4.23	330	⇓iP	Pn	06 52 20.6	-1.5
VOIR		6.50	354	⇑iP	Pn	06 52 54.9	+1.7
MDVR	Moldovita	6.65	332	⇑iP	Pn	06 52 54.1	-1.2
GZR	Gura Zlata	6.86	340	⇑iP	Pn	06 52 59.0	+0.8
VRI	Vrincioaia	6.90	4	⇑iP	Pn	06 52 58.6	-0.1
VYHS	Vyhne	10.86	334	ePN	Pn	06 53 47.6	-5.2

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*KRNET **15** 07:03:44.5±0.1, 43°.07N×78°.34E, h17^{km}, mb2.1*

*NNC **15** 07:03:56.2±1.1, 41°.70N×78°.16E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=8.2km s-min=4.4km az=173.0, Suspected Mining explosion.*

ISC 15 07:03:44.5±2.9**, 41°.2N**±0°.2×**78°.18E**±0°.06**, h0^{km}, n15, σ2$\overset{s}{.}$11**/20**, 10C, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.21	322	⇑iP	Pg	07 04 08.0	+0.3
	baz=22						
KDJ				⇑iS	Sb	07 04 25.2	+0.6
	baz=22						
ULHL	Ulahol	1.80	307	⇑iP	Pn	07 04 16.5	-0.5
	baz=43						
ULHL				⇑iS	Sn	07 04 39.9	-0.7
	baz=43						
SATY	Saty	1.89	5	P	Pg	07 04 21.9	+1.2
	3.6nm,0.1s						
SATY				S	Sn	07 04 41.3	-1.4
	8.9nm,0.1s						
BOOM	Boomskoye usch	2.12	309	⇑iP	Pn	07 04 18.5	-2.9
	baz=53						
BOOM				⇑iS	Sn	07 04 43.6	-5.0
	baz=53						
MDOK	Medeo	2.15	337	Pg	Pg	07 04 27.7	+1.9
	2.2nm,0.2s						
MDOK				Lg	Lg	07 04 51.0	
	5.0nm,0.3s						
IZV	Izvestkoviy	2.19	328	P	Pg	07 04 28.2	+1.7
	3.2nm,0.2s						
IZV				S	Sn	07 04 51.9	+1.6
	4.4nm,0.2s						
PDGK	Podgornoye	2.36	24	⇑Pg	Pg	07 04 32.0	+2.3
	0.6nm,0.2s						
PDGK				⇑Lg	Lg	07 04 56.9	
	2.6nm,0.5s						
KST	Kastek	2.48	319	Pg	Pg	07 04 34.5	+2.3
	5.2nm,0.3s						
KST				Lg	Lg	07 05 02.5	
	5.2nm,0.3s						
TKM2	Tokmak 2	2.59	313	⇑Pg	Pg	07 04 37.7	+3.5
	1.0nm,0.2s						
TKM2				⇑Lg	Lg	07 05 08.1	
	1.8nm,0.4s						
KTBS	Karatobe	2.76	337	Pg	Pg	07 04 37.9	+0.5
	4.0nm,0.3s						
KTBS				Lg	Lg	07 05 08.7	
	7.8nm,0.2s						
KTMS	Ketmen	2.78	35	Pg	Pg	07 04 39.0	+1.2
	1.9nm,0.3s						
KTMS				Lg	Lg	07 05 10.3	
	9.6nm,0.5s						
CHKK	Chushkaly	2.81	342	Pg	Pg	07 04 38.2	-0.3
	8.2nm,0.3s						
CHKK				Lg	Lg	07 05 09.0	
	7.0nm,0.4s						
MNBS	Baschi	2.90	3	Pg	Pb	07 04 38.8	+1.5
	2.1nm,0.1s						
MNBS				Lg	Lg	07 05 10.0	
	5.0nm,0.1s						
KUU	Kurty	3.03	334	Pg	Pg	07 04 42.1	-0.5
	2.2nm,0.2s						
KUU				Lg	Lg	07 05 15.9	
	5.4nm,0.2s						
DJR	Jarkent	3.37	20	Pg	Pg	07 04 47.9	-1.1
	2.4nm,0.2s						
DJR				Lg	Lg	07 05 26.0	
	2.4nm,0.2s						

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*IDC **15** 07:24:20.3±1.0, 14°.19N×93°.19W, h0^{km}, mb4.0/11, mb1 4.1/14, mb1mx4.0/38, mbtmp4.0/14, ML3.9/3, MS3.5/14, Ms1 3.5/14, ms1mx3.4/29, Error ellipse: s-maj=33.0km s-min=13.0km az=49.0*

*SNET **15** 07:24:22.2±1.2, 14°.11N×93°.11W, h127^{km}±237^{km}, ML4.2*

*MEX **15** 07:24:24.5±0.5, 14°.24N×93°.26W, h15^{km}±6^{km}, MD4.1*

*NEIC **15** 07:24:25.2±0.0, 14°.28N×93°.28W, h20^{km}, mb4.3/104, MD4.1(MEX), After MEX.*

*GCG **15** 07:24:31.0±0.3, 14°.70N×92°.53W, h86^{km}±224^{km}, MD4.4*

ISC 15 07:24:20.5±1.8**, 14°.22N**±0°.05×**93°.17W**±0°.04**, h5^{km}**±11^{km}**, n179, σ1$\overset{s}{.}$64**/191**, mb4.4**/78**, MS3.6**/11**, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.11	52	ePn	Pn	07 24 43.0	+0.3
THIG				eSg	Sn	07 24 58.4	-0.1
THIG		1.11	52	eP	Pg	07 24 42.1	+0.3
THIG				eS	Sg	07 24 56.6	+0.3
PCIG		1.47	358	ePn	Pn	07 24 46.6	-1.1
PCIG				eSn	Sn	07 25 03.8	-3.6
PCIG		1.47	358	eP	Pn	07 24 46.6	-1.1
PCIG				eS	Sn	07 25 03.8	-3.6
ERG	Entre ros, C	1.57	82	eP	Pn	07 24 50.1	+1.1
STG3	Santiaguito 3,	1.63	72	⇑iP	Pn	07 24 50.4	+0.4
FUG	Fuego 3	2.27	84	eP	Pn	07 24 59.3	+0.4
CCIG	Comitan	2.28	26	ePn	Pb	07 25 01.7	-0.6
CCIG				ePn	Pg	07 25 02.5	-1.7
CCIG				eSn	Sn	07 25 27.0	-0.5
CCIG				eSg	Sb	07 25 32.7	+1.8
CCIG	Comitan	2.28	26	eP	Pn	07 24 59.3	+0.3
CCIG				eS	Sn	07 25 26.1	-1.5
PCG	Pacaya	2.49	86	eP	Pn	07 25 02.7	+0.7
APG	El Apazote	2.73	73	Pn	Pn	07 25 06.3	+1.0
	25nm,0.3s,baz=330,slow=22,SNR=178						
NBG	Las Nubes	2.76	82	eP	Pn	07 25 08.1	+2.4
HUIG	Huatulco	3.23	299	ePn	Pn	07 25 13.7	+1.8
HUIG				eSn	Sn	07 25 47.1	-3.6
HUIG	Huatulco	3.23	299	eP	Pn	07 25 11.5	-0.4
HUIG				eS	Sn	07 25 47.1	-3.6
CMIG	Matias Romero	3.29	330	Pn	Pn	07 25 14.9	+2.1
	18nm,0.3s,baz=157,slow=12,SNR=285						
CMIG				Sn	Sn	07 25 52.9	+0.5
	27nm,0.3s,baz=281,slow=24,SNR=6.1						
CMIG				LR	LR	07 26 37.9	
	comp=Z,541nm,18.0s,baz=253,slow=42						
CMIG	Matias Romero	3.29	330	ePn	Pn	07 25 14.9	+2.1
CMIG				eSn	Sn	07 25 46.8	-5.6
CMIG				eLg	Lg	07 25 52.9	
CMIG	Matias Romero	3.29	330	eP	Pn	07 25 12.9	+0.1
CMIG				eS	Sn	07 25 48.8	-3.6
RTR	El Retiro	3.44	95	eP	Pn	07 25 15.3	+0.4
CEVE	Cerro Verde	3.47	96	eP	Pn	07 25 15.1	-0.3
CEVE				eS	Sn	07 25 57.0	0.0
CEVE				IAML		07 26 05.8	
	comp=Z,2µm,0.8s						
SBLS	San Blas	3.47	96	eP	Pn	07 25 14.9	-0.5
SNJE	San Jose	3.48	95	eP	Pn	07 25 15.2	-0.4
CEDA	San Andres	3.69	96	eP	Pn	07 25 16.8	-1.5
CEDA				IAML		07 26 13.4	
	comp=Z,428nm,0.7s						
SNET	Serv Nac Est T	3.86	97	eP	Pn	07 25 20.0	-0.7
SNET				eS	Sn	07 26 05.5	-1.1
SNET				IAML		07 26 23.7	
	comp=Z,193nm,0.4s						
CUSC	Alcaldia de Cu	3.91	97	IAML		07 26 30.1	
	comp=Z,276nm,0.6s						
LOMA	Loma Larga	3.93	98	eP	Pn	07 25 21.8	+0.3
LOMA				IAML		07 26 22.8	
	comp=Z,285nm,0.3s						
LFU	La Fuente	3.97	96	eP	Pn	07 25 21.9	-0.3
PACA	Pacayal	4.77	98	eP	Pn	07 25 32.2	-1.0
CSGN	Cosiguina Volc	5.60	102	ePn	Pn	07 25 44.8	+0.3
CSGN				eSn	Sn	07 26 46.7	-2.7
TGUH	Tegucigalpa,Un	5.72	91	eP	Pn	07 25 43.9	-2.4
TLIG	Tlapa	6.16	303	ePn	Pn	07 25 56.9	+4.6
TLIG				eSn	Sn	07 27 04.8	+1.5
LVIG	Laguna Verde	6.29	331	ePn	Pn	07 25 55.4	+1.4
ESTN	Estel	6.71	99	ePn	Pn	07 25 59.6	-0.2
ESTN				eSn	Sn	07 27 15.1	-1.6
MYIG	Mrida	7.46	26	ePn	Pn	07 26 10.8	+0.8
MYIG				eSn	Sn	07 27 30.5	-4.5
TEIG	Tepich	7.58	37	ePn	Pn	07 26 12.9	+1.1
TEIG				eSn	Sn	07 27 35.9	-2.3
ACON	Acoyapa	8.11	105	ePn	Pn	07 26 18.8	-0.2
ACON				eSn	Sn	07 27 48.4	-2.7
ESPN	Las Esperanzas	8.87	102	ePn	Pn	07 26 29.4	0.0
JTS	Las Juntas de	8.93	115	Pn	Pn	07 26 32.6	+2.2
	comp=Z,0.8nm,0.3s,baz=15,slow=20,SNR=6.9						
JTS				Lg	Lg	07 28 50.8	
	comp=Z,0.5nm,0.3s,baz=199,slow=15,SNR=8.0						
JTS	Las Juntas de	8.93	115	ePn	Pn	07 26 32.1	+1.8
HDC	Heredia	9.80	114	eP	Pn	07 26 39.2	-3.2
LNIG	Linares	12.16	332	ePn	Pn	07 27 14.7	+0.2
ZAIG	Zacatecas	12.31	315	ePn	Pn	07 27 15.0	-1.8
833A	Chaparral WMA,	15.18	339	ePn	Pn	07 27 57.2	+1.6
	comp=Z,9.5nm,0.8s						
HKT	Hockley	15.84	352	ePn	Pn	07 28 05.5	+1.1
	comp=Z,32nm,1.8s						
061Z	Ochoppi	16.32	43	ePn	Pn	07 28 10.5	0.0
	comp=Z,268nm,1.3s						
957A	Wimauma	16.82	36	ePn	P	07 28 18.5	-0.5
	comp=Z,139nm,1.4s						
435B	Jarrell	16.98	347	ePn	Pn	07 28 19.2	+0.3
	comp=Z,8.7nm,0.6s						
HPIG		17.21	319	ePn	Pn	07 28 22.6	+0.6
	comp=Z,5.7nm,1.1s						
JCT	Junction City	17.29	340	ePn	P	07 28 24.1	-0.3
	comp=Z,5.3nm,0.8s						
NATX	Nacogdoches	17.51	356	eP	P	07 28 27.7	+1.0
	comp=Z,11nm,0.7s						
TXAR	Lajitas Array	17.90	329	P	P	07 28 33.8	+2.6
	comp=Z,0.1nm,0.3s,baz=148,slow=12,SNR=22						
TXAR				LR	LR	07 36 38.5	
	comp=Z,112nm,18.5s,baz=0.0,slow=41						
TX31	Lajitas Ar. Si	17.90	329	eP	P	07 28 31.7	+0.5
	comp=Z,9.3nm,1.2s						
VBMS	Vicksburg	18.08	7	ePn	Pn	07 28 32.7	+0.2
	comp=Z,37nm,0.3s						
WHTX	Lake Whitney,	18.12	348	ePn	P	07 28 33.5	+0.1
	comp=Z,33nm,1.6s						
352A	Blakely	18.77	22	eP	P	07 28 40.3	-0.3
	comp=Z,43nm,1.0s						
LPIG	La Paz	18.92	304	LR	LR	07 36 08.9	
	comp=Z,89nm,21.6s,baz=160,slow=37						
Z41A	Richland Creek	18.95	1	eP	Pn	07 28 43.8	+0.6
	comp=Z,17nm,0.9s						
ABTX	Abilene, Hawle	19.25	343	eP	P	07 28 46.2	+0.4
	comp=Z,9.2nm,0.6s						
WLAR	White Oak Lake	19.38	0	eP	P	07 28 47.6	+0.4
	comp=Z,15nm,0.9s						
LRAL	Lakeview Retre	19.55	16	eP	Pn	07 28 54.0	+3.6
	comp=Z,9.9nm,1.1s						
152A	Waverly Hall	19.92	21	eP	P	07 28 53.8	+0.7
	comp=Z,23nm,1.3s						
X40A	Basin Creek Fa	20.18	1	eP	P	07 28 56.9	+0.9
	comp=Z,16nm,1.5s						
MIAR	Mount Ida	20.24	359	eP	P	07 28 56.5	-0.1
	comp=Z,12nm,0.8s						
X43A	Marvell	20.31	5	eP	P	07 28 57.6	+0.2
	comp=Z,46nm,1.3s						
X37A	Clayton	20.38	355	eP	P	07 28 58.6	+0.5
	comp=Z,8.3nm,0.9s						
UALR	University of	20.48	2	eP	P	07 28 59.3	+0.1
	comp=Z,7.6nm,0.8s						
154A	Montrose	20.48	25	eP	P	07 29 00.3	+1.0
	comp=Z,175nm,1.9s						
OXF	Oxford	20.49	9	eP	P	07 29 00.5	+1.2
Y49A	Blount Mountai	20.49	16	eP	Pn	07 29 01.4	-0.2
	comp=Z,12nm,1.4s						
GDL2	Guadalupe Moun	20.61	332	eP	P	07 29 00.2	-0.6
MNTX	Cornudas Mount	20.68	329	eP	Pn	07 29 05.7	+1.9
	comp=Z,7.7nm,1.0s						
ROSC	El Rosal	20.78	115	P	P	07 29 04.5	+1.4
	comp=Z,9.6nm,0.8s,baz=0.8,slow=5.8,SNR=12						
ROSC	El Rosal	20.78	115	eP	P	07 29 01.1	-2.0
	comp=Z,15nm,1.0s						
W41B	Gary Mavity, V	20.88	2	eP	P	07 29 01.5	-2.0
	comp=Z,39nm,1.9s						
X48A	Hartselle	20.89	14	eP	P	07 29 04.2	+0.5
	comp=Z,12nm,1.2s						
WHAR	Wooly Hollow	20.99	2	eP	P	07 29 02.6	-2.2
	comp=Z,28nm,1.7s						
GOGA	Godfrey	21.04	23	eP	P	07 29 05.4	0.0
	comp=Z,14nm,1.1s						
WMOK	Wichita Mounta	21.05	347	eP	P	07 29 05.1	-0.4
	comp=Z,3.2nm,0.9s						
Y52A	Lilburn	21.23	21	eP	P	07 29 09.0	+1.7
	comp=Z,32nm,1.4s						
MSTX	Muleshoe	21.50	338	eP	P	07 29 10.7	+0.3
	comp=Z,46nm,1.6s						
FCAR	Ozark Folk Cen	21.60	2	eP	P	07 29 13.4	+2.2
	comp=Z,4.7nm,0.8s						
TUL1	Leonard	21.72	354	eP	P	07 29 13.0	+0.3
	comp=Z,6.8nm,0.8s						
AMTX	Amarillo	21.96	341	eP	P	07 29 16.1	+0.8
	comp=Z,25nm,0.6s						
HHAR	Hobbs	21.98	358	eP	P	07 29 16.2	+0.8
	comp=Z,6.2nm,0.9s						
WVT	Waverly	22.34	11	eP	P	07 29 19.2	0.0
	comp=Z,10.0nm,1.1s						
319A	Douglas	22.58	322	eP	P	07 29 20.4	-1.7
	comp=Z,7.6nm,0.9s						
PBMO	Poplar Bluff	22.60	6	eP	P	07 29 21.3	-0.7
	comp=Z,6.2nm,1.0s						
BG3	Lake Jocassee	22.65	22	eP	P	07 29 21.9	-0.7
	comp=Z,12nm,1.5s						
SDV	Santo Domingo	22.70	101	P	P	07 29 24.3	+0.8
	comp=Z,2.1nm,0.3s,baz=327,slow=7.9,SNR=5.2						
SDV	Santo Domingo	22.70	101	eP	P	07 29 20.8	-2.8
	comp=Z,5.6nm,0.8s						
TKL	Tuckaleechee C	22.96	20	P	P	07 29 27.0	+1.2
	comp=Z,1.5nm,1.3s,baz=190,slow=14,SNR=3.6						
TKL				LR	LR	07 40 03.2	
	comp=Z,15nm,18.3s,baz=192,slow=41						
BNM	Barren Site	23.28	331	eP	P	07 29 28.5	-1.0
BIRD	Birdtown, Kers	23.35	27	eP	P	07 29 28.5	-1.4
	comp=Z,21nm,1.3s						
LENM	Lemitar	23.46	330	eP	P	07 29 31.6	+0.3
LAZ	Ladron	23.73	330	eP	P	07 29 33.7	-0.2
CCM	Cathedral Cave	23.80	4	eP	P	07 29 34.4	+0.1
	comp=Z,4.9nm,0.8s						
ANMO	Albuquerque	23.86	332	P	P	07 29 36.1	+1.0
	comp=Z,1.5nm,0.7s,baz=146,slow=11,SNR=12						
ANMO				LR	LR	07 40 25.0	
	comp=Z,106nm,18.7s,baz=144,slow=40						
ANMO	Albuquerque	23.86	332	eP	P	07 29 36.7	+1.6
	comp=Z,2.7nm,0.8s						
TUC	Tucson	24.14	321	eP	P	07 29 36.9	-0.8
	comp=Z,7.2nm,1.0s						
U54A	Nelsons Funny	24.42	23	eP	P	07 29 38.9	-1.3
	comp=Z,21nm,1.2s						
WCI	Wyandotte Cave	24.68	13	eP	P	07 29 41.9	-0.5
	comp=Z,32nm,1.8s						
T25A	Trinidad	24.93	338	eP	P	07 29 47.0	+2.0
	comp=Z,14nm,0.8s						
ATAH	Atahualpa	25.79	144	LR	LR	07 38 04.1	
	comp=Z,104nm,18.8s,baz=310,slow=32						
SDCO	Great Sand Dun	25.86	337	eP	P	07 29 56.1	+2.6
	comp=Z,14nm,1.4s						
X16A	Lo Mia Camp, P	26.02	324	eP	P	07 29 56.4	+1.5
	comp=Z,4.1nm,1.3s						
P48A	Milroy	26.05	14	eP	P	07 29 56.4	+1.5
	comp=Z,14nm,1.4s						
KSCO	Kaye Shedlock’	26.06	343	eP	P	07 29 55.9	+0.8
	comp=Z,18nm,1.4s						
SJG	San Juan	26.23	78	LR	LR	07 39 49.3	
	comp=Z,171nm,21.8s,baz=264,slow=35						
113A	Mohawk Valley,	26.32	318	eP	P	07 29 55.8	-1.6
	comp=Z,1.6nm,0.6s						
S22A	4UR Ranch, Cre	26.39	335	eP	P	07 29 56.7	-1.6
	comp=Z,6.5nm,0.9s						
N41A	Harden Midland	26.46	4	eP	P	07 29 59.4	+0.8
	comp=Z,11nm,1.3s						
MVCO	Mesa Verde	26.66	332	eP	P	07 30 02.2	+1.6
	comp=Z,8.2nm,0.9s						
ISCO	Idaho Springs	27.72	339	eP	P	07 30 09.7	-0.6
	comp=Z,9.9nm,1.7s						
N49A	Columbus Grove	27.73	15	eP	P	07 30 10.4	+0.5
	comp=Z,5.7nm,0.9s						
L40A	Anamosa	27.79	3	eP	P	07 30 10.2	-0.2
	comp=Z,4.5nm,0.8s						
W13A	Hualapai Mount	27.93	322	eP	P	07 30 11.7	-0.4
	comp=Z,6.0nm,1.4s						
KNB	Kanab	28.68	326	eP	P	07 30 22.6	+3.9
	comp=Z,3.2nm,1.0s						
JFWS	Jewell Farm	28.70	4	eP	P	07 30 19.2	+0.6
	comp=Z,4.1nm,0.7s						
O20A	White River Ci	29.00	336	eP	P	07 30 22.9	+1.4
	comp=Z,25nm,1.8s						
CCUT	Cedar City	29.36	326	eP	P	07 30 27.2	+2.4
	comp=Z,3.6nm,1.2s						
MSU	Marysvale	29.46	329	eP	P	07 30 26.8	+1.1
ECSD	EROS Data Cent	29.56	355	eP	P	07 30 25.8	-0.5
	comp=Z,16nm,1.8s						
TCUT	Toone Canyon	31.15	333	eP	P	07 30 39.8	-0.8
	comp=Z,9.7nm,1.0s						
BW06	Boulder Array	31.76	337	eP	P	07 30 47.6	+1.7
	comp=Z,5.3nm,1.4s						
PD31	Pinedale Array	31.76	337	eP	P	07 30 45.4	-0.5
PDAR	Pinedale Array	31.76	337	P	P	07 30 45.4	-0.5
	comp=Z,0.8nm,0.6s,baz=148,slow=8.7,SNR=9.9						
ELK	Elko	32.70	328	eP	P	07 30 54.8	+0.6
	comp=Z,1.6nm,0.9s						
NV11	Mina Array Sit	32.70	322	eP	P	07 30 56.3	+2.1
	comp=Z,0.7nm,1.4s						
NV01	Mina Array Sit	32.79	322	eP	P	07 30 59.0	+3.9
NVAR	Mina Array Bea	32.79	322	P	P	07 30 59.0	+3.9
	comp=Z,3.1nm,0.7s,baz=133,slow=8.1,SNR=32						
NVAR				LR	LR	07 46 03.2	
	comp=Z,142nm,20.3s,baz=272,slow=40						
KVN	Kaiserville	33.08	323	eP	P	07 30 57.7	+0.2
	comp=Z,2.2nm,0.9s						
H17A	Grant Village	33.53	337	eP	P	07 31 01.3	-0.2
	comp=Z,2.9nm,1.0s						
LKWY	Lake	33.61	338	eP	P	07 31 02.9	+0.7
	comp=Z,5.2nm,1.0s						
RLMT	Red Lodge	33.69	339	eP	P	07 31 04.0	+1.2
	comp=Z,9.3nm,1.4s						
YERR	Yerington	33.71	322	eP	P	07 31 03.6	+0.6
	comp=Z,2.1nm,0.7s						
YMR	Madison River	33.91	337	eP	P	07 31 07.3	+2.5
	comp=Z,8.2nm,0.8s						
MDND	Maddock	33.95	352	eP	P	07 31 05.4	+0.6
	comp=Z,15nm,0.8s						
YHH	Holmes Hill	33.97	337	eP	P	07 31 07.5	+2.2
	comp=Z,7.1nm,1.2s						
PNTR	Pine Nut	33.99	322	eP	P	07 31 07.8	+2.3
	comp=Z,4.2nm,0.8s						
AGMN	Agassiz Nation	34.05	357	eP	P	07 31 05.5	-0.1
	comp=Z,14nm,1.6s						
GCMT	Greycliff	34.41	339	eP	P	07 31 09.3	+0.4
MCMT	McKenzie Canyo	34.78	335	eP	P	07 31 12.4	+0.1
BOZ	Bozeman (W)	34.95	337	eP	P	07 31 15.5	+1.9
	comp=Z,12nm,1.8s						
LRM	Limekiln Ridge	35.45	337	eP	P	07 31 21.6	+3.5
HRY	Holter Researc	35.97	338	eP	P	07 31 22.9	+0.5
ULM	Lac du Bonnet	36.00	357	P	P	07 31 21.8	-0.6
	comp=Z,1.5nm,0.4s,baz=163,slow=11,SNR=3.1						
ULM				LR	LR	07 50 11.9	
	comp=Z,93nm,18.0s,baz=172,slow=43						
PTGA	Pitinga	36.08	112	eP	P	07 31 21.5	-2.0
	comp=Z,7.9nm,0.9s						
J08A	Circle Bar Ran	36.25	328	eP	P	07 31 28.0	+3.2
	comp=Z,20nm,1.5s						
MSO	Missoula	36.86	336	eP	P	07 31 32.3	+2.3
	comp=Z,6.0nm,1.2s						
F10A	Beach Ranch, E	37.58	332	eP	P	07 31 38.8	+2.8
	comp=Z,3.7nm,0.8s						
LPAZ	La Paz	39.13	140	P	P	07 31 49.9	-0.1
	comp=Z,0.6nm,0.7s,baz=346,slow=8.3,SNR=2.9						
LPAZ				LR	LR	07 46 28.1	
	comp=Z,56nm,20.6s,baz=332,slow=34						
LPAZ	La Paz	39.13	140	eP	P	07 31 51.3	+1.3
FFC	Flin Flon	40.99	352	eP	P	07 32 05.5	+1.1
	comp=Z,28nm,1.0s						
SIV	San Ignacio	43.68	132	P	P	07 32 26.1	-0.6
	comp=Z,2.1nm,0.9s,baz=316,slow=11,SNR=12						
SCHQ	Schefferville	45.42	21	LR	LR	07 53 32.3	
	comp=Z,208nm,19.1s,baz=240,slow=38						
YKA	Yellowknife Ar	50.55	347	P	P	07 33 20.8	+1.1
	comp=Z,3.3nm,0.6s,baz=153,slow=7.4,SNR=13						
YKB5	Yellowknife Ar	50.55	347	eP	P	07 33 20.8	+1.1
YKW3	Yellowknife Ar	50.62	347	eP	P	07 33 21.6	+1.3
	comp=Z,6.0nm,0.9s						
DLBC	Dease Lake	51.99	336	eP	P	07 33 32.5	+1.8
	comp=Z,11nm,1.4s						
CPUP	Villa Florida	53.29	139	LR	LR	07 55 13.4	
	comp=Z,49nm,18.1s,baz=338,slow=35						
BDFB	Brasilia	53.60	122	LR	LR	07 56 10.0	
	comp=Z,55nm,18.8s,baz=261,slow=36						
HYT	Haines Junctio	56.45	336	eP	P	07 34 05.9	+2.6
	comp=Z,8.0nm,1.7s						
HATHI	Halemaʻumaʻu T	59.39	284	eP	P	07 34 24.0	-0.6
	comp=Z,358nm,1.1s						
MLH	Mauna Loa	59.51	284	eP	P	07 34 25.1	-0.5
	comp=Z,270nm,1.5s						
INK	Inuvik	59.91	344	eP	P	07 34 28.7	+1.5
	comp=Z,9.9nm,1.3s						

EGAK	**Eagle**	**60.09**	**338**	*e*P	**P**	**07 34 29.1**	**+0.7**
	comp=Z,8.6nm,1.5s						
SCRK	**Sand Creek**	**60.70**	**337**	*e*P	**P**	**07 34 32.7**	**-0.1**
	comp=Z,5.3nm,1.4s						
PAX	**Paxson**	**60.78**	**336**	*e*P	**P**	**07 34 35.3**	**+1.9**
	comp=Z,2.3nm,0.8s						
RIDG	**Independent Ri**	**60.91**	**336**	*e*P	**P**	**07 34 35.9**	**+1.7**
	comp=Z,7.6nm,1.2s						
ILAR	**Eielson Array**	**62.19**	**337**	P	**P**	**07 34 44.6**	**+1.9**
	comp=Z,1.9nm,1.0s,baz=137,slow=4.6,SNR=18						
ILAR				LR	LR	08 04 11.7	
	comp=Z,55nm,18.6s,baz=159,slow=38						
ILB	**Eielson Array**	**62.19**	**337**	*e*P	**P**	**07 34 44.4**	**+1.7**
	comp=Z,4.3nm,1.0s						
RND	**Reindeer**	**62.35**	**335**	*e*P	**P**	**07 34 45.4**	**+1.5**
	comp=Z,10nm,1.0s						
BPAW	**Bear Paw Mtn.**	**63.50**	**335**	*e*P	**P**	**07 34 52.5**	**+0.9**
	comp=Z,7.7nm,1.4s						
ARA0	**ARCESS Array S**	**86.28**	**18**	*e*P	**P**	**07 37 02.1**	**-1.0**
ARCES	**ARCESS Array B**	**86.28**	**18**	P	**P**	**07 37 02.1**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=258,slow=5.9,SNR=3.5						
KSH	**Kashi**	**125.59**	**10**	*e*PKP	**PKPdf**	**07 43 22.8**	**-0.8**
LZH	**Lanzhou**	**127.44**	**343**	*e*PKP	**PKPdf**	**07 43 27.6**	**+0.3**
LZH				pPKP	sPKPdf	07 43 42.3	+14
LZH				sPKP		07 43 47.5	
WR1	**Warramunga Arr**	**134.34**	**256**	*e*PKPdf	**PKiKP**	**07 43 41.6**	**-0.3**
WRA	**Warramunga Arr**	**134.35**	**256**	PKP	**PKiKP**	**07 43 41.6**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=111,slow=0.7,SNR=3.4						
CMAR	**Chiang Mai Arr**	**145.40**	**339**	PKPbc	**PKPbc**	**07 44 00.5**	**0.0**
	comp=Z,1.7nm,0.6s,baz=355,slow=2.6,SNR=9.2						

MEX 15 07:35:46.1±0.5, 16°.13N×96°.78W, h43^{km}±8^{km}, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.74**	**119**	*e*P	Pn	07 35 58.8	-1.4
HUIG				*e*S	Sn	07 36 08.4	-1.8
VHO	**Vista Hermosa**	**0.94**	**2**	*e*P	Pn	07 36 00.9	-2.1
VHO				*e*S	Sn	07 36 13.1	-2.2
CMIG	**Matias Romero**	**2.05**	**62**	*e*P	Pn	07 36 16.0	-2.1
CMIG				*i* S	Sn	07 36 40.6	-1.8

MOS ***15*** *07:49:01.7±1.0, 8°.85S×67°.68E, h10^{km}, mb5.0/41, Error ellipse: s-maj=9.2km s-min=6.8km az=102.9*

ISCJB ***15*** *07:49:02.6±0.2, 8°.83S±0°.04×67°.60E±0°.03, h13^{km}, mb4.8/132, MS4.5/51, Error ellipse: s-maj=5.6km s-min=4.1km az=2.0*

IDC ***15*** *07:49:02.4±0.4, 8°.83S×67°.56E, h0^{km}, mb4.4/27, mb1 4.5/27, mb1mx4.4/35, mbtmp4.4/27, MS4.3/38, Ms1 4.3/38, ms1mx4.3/43, Error ellipse: s-maj=12.6km s-min=8.4km az=153.0*

NEIC ***15*** *07:49:03.4±2.4, 8°.83S×67°.72E, h10^{km}, mb5.0/69, Error ellipse: s-maj=16.1km s-min=11.7km az=170.0*

GCMT ***15*** *07:49:07.4±0.1, 8°.91S±0°.01×67°.46E±0°.01, h19^{km}, MW5.4/128, Moment Tensor Solution. s100,c157; s128,c238; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.02±.02; $M_{\theta\theta}$-1.73±.02; $M_{\phi\phi}$1.75±.02; $M_{r\theta}$-0.08±.05; $M_{\theta\phi}$0.24±.02; $M_{\phi r}$0.16±.05; Best double couple: $M_0$1.76600×10^{17} NP1:ϕ_s319.00000°,δ89.00000°, λ174.00000°. NP2:ϕ_s49.00000°,δ84.00000°,λ1.00000°. Principal axes: T 1.7810, Plg5.0000°, Azm274.0000°; N -0.0300, Plg84.0000°, Azm124.0000°; P -1.7520, Plg3.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 07:49:04.3±0.3, 8°.88S±0°.05×67°.63E±0°.04, h13^{km}, n339, σ1^{s}98/325, mb4.9/137, MS4.4/52, 15C-14D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N3	**Diego Garcia H**	**4.18**	**53**	Pn	Pn	07 50 02.2	-5.3
H08N3				T	T	07 54 27.1	
	baz=230,slow=76,SNR=681						
H08N2	**Diego Garcia H**	**4.20**	**53**	Pn	Pn	07 50 02.2	-5.6
H08N2				T	T	07 54 26.9	
	baz=230,slow=76,SNR=914						
H08N1	**Diego Carcia H**	**4.20**	**53**	Pn	Pn	07 50 02.2	-5.6
H08N1				T	T	07 54 31.0	
	baz=230,slow=76,SNR=596						
H08S1	**Diego Carcia H**	**4.95**	**76**	Pn	**Pn**	**07 50 16.1**	**-2.2**
	baz=275,slow=15,SNR=50						
H08S1				Sn	**Sn**	**07 51 11.0**	**-4.3**
H08S3	**Diego Garcia H**	**4.97**	**76**	Pn	**Pn**	**07 50 16.0**	**-2.5**
	baz=275,slow=15,SNR=3625						
H08S3				Sn	**Sn**	**07 51 11.0**	**-4.6**
H08S2	**Diego Garcia H**	**4.97**	**76**	Pn	**Pn**	**07 50 16.5**	**-2.0**
	baz=275,slow=15,SNR=164						
H08S2				Sn	**Sn**	**07 51 11.0**	**-4.7**
DGAR	**Diego Garcia**	**5.00**	**73**	*e*Pn	**Pn**	**07 50 17.7**	**-1.4**
DGAR				*e*Sn	**Sn**	**07 51 11.6**	**-5.1**
DGAR	**Diego Garcia**	**5.00**	**73**	*i* P	**Pn**	**07 50 18.3**	**-0.8**
DGAR				pmax	pmax		
	comp=Z,200nm,1.1s						
MSEY	**Mahe Island**	**12.76**	**288**	*e*Pn	**Pn**	**07 52 05.7**	**0.0**
MSEY				*e*		07 54 15.2	
MSEY	**Mahe Island**	**12.76**	**288**	*i* P	**Pn**	**07 52 06.8**	**+1.1**
PALK	**Pallekele**	**20.67**	**39**	P	Pn	07 53 45.5	-1.1
	comp=Z,8.7nm,1.0s,baz=112,slow=5.4,SNR=2.0						
PALK				S	Sn	07 57 38.7	-1.1
	comp=Z,4.1nm,0.7s,baz=116,slow=12,SNR=1.9						
PALK				LR	LR	07 59 42.8	
	comp=Z,2μm,21.5s,baz=335,slow=31						
OPO	**Ambohidratompo**	**22.05**	**242**	P	**P**	**07 53 59.1**	**-0.1**
	comp=Z,22nm,1.0s,baz=56,slow=10,SNR=14						
OPO				S	**S**	**07 58 04.0**	**+1.6**
	comp=Z,5.5nm,0.9s,baz=198,slow=7.5,SNR=2.2						
ABPO	**Ambohimpanom**	**22.19**	**241**	*e*P	**P**	**07 54 01.7**	**+1.0**
	comp=Z,290nm,1.4s						
ABPO	**Ambohimpanom**	**22.19**	**241**	*e*P	**P**	**07 54 01.7**	**+1.0**
ABPO				pmax	pmax		
	comp=Z,290nm,1.4s						
HYB	**Hyderabad**	**28.27**	**22**	*i* P	P	07 54 52.0	-5.6
KMBO	**Kilima Mbogo**	**31.20**	**283**	P	**P**	**07 55 23.8**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=70,slow=9.8,SNR=9.2						
KMBO				S	**S**	**08 00 31.7**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=324,slow=19,SNR=1.6						
KMBO				LR	LR	08 05 37.9	
	comp=Z,518nm,20.1s,baz=96,slow=32						
KMBO	**Kilima Mbogo**	**31.20**	**283**	*e*P	**P**	**07 55 24.6**	**+0.7**
	comp=Z,80nm,2.0s						
KMBO	**Kilima Mbogo**	**31.20**	**283**	*i* P	**P**	**07 55 24.8**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GSI	**Gunungsitoli**	**31.51**	**73**	*e*P	**P**	**07 55 22.9**	**-3.5**
	comp=Z,61nm,1.2s						
GSI	**Gunungsitoli**	**31.51**	**73**	P	**P**	**07 55 29.2**	**+2.8**
SISI	**Saibi**	**32.20**	**78**	P	**P**	**07 55 33.0**	**+0.5**
KCSI	**Kotacane, Aceh**	**32.48**	**69**	P	**P**	**07 55 36.8**	**+1.8**
PPSI	**Pulau Pagai**	**32.77**	**81**	P	**P**	**07 55 40.1**	**+2.6**
MNSI	**Mandailing Nat**	**33.25**	**75**	P	**P**	**07 55 42.8**	**+1.1**
FURI	**Furi**	**33.81**	**301**	*e*P	**P**	**07 55 48.8**	**+1.9**
	comp=Z,29nm,0.9s						
KULM	**Kulim**	**35.81**	**68**	*e*P	**P**	**07 56 05.7**	**+1.9**
	comp=Z,23nm,1.0s						
LHSI	**Lahat**	**36.01**	**84**	P	**P**	**07 56 08.8**	**+3.2**
LWLI	**Liwa**	**36.36**	**86**	P	**P**	**07 56 11.1**	**+2.4**
SKLT	**Songkhla**	**36.54**	**65**	P	**P**	**07 56 12.9**	**+2.8**
	comp=Z,15nm,1.7s						
MDSI	**Maura Dua**	**36.55**	**86**	P	**P**	**07 56 11.8**	**+1.6**
KASI	**Kota Agung**	**36.72**	**87**	P	**P**	**07 56 14.0**	**+2.3**
MYKOM	**Kota Tinggi**	**37.62**	**75**	*e*P	**P**	**07 56 18.1**	**-1.3**
	comp=Z,84nm,1.7s						
MBAR	**Mbarara**	**37.63**	**281**	P	**P**	**07 56 19.9**	**+0.3**
	comp=Z,5.7nm,0.2s,baz=133,slow=4.3,SNR=7.3						
MBAR	**Mbarara**	**37.63**	**281**	*e*P	**P**	**07 56 20.2**	**+0.5**
	comp=Z,9.4nm,0.8s						
MBAR	**Mbarara**	**37.63**	**281**	*i* P	**P**	**07 56 20.2**	**+0.5**
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CGJI	**Cibinong**	**37.78**	**89**	P	**P**	**07 56 22.1**	**+1.5**
RAYN	**Ar Rayn**	**38.79**	**327**	*e*P	**P**	**07 56 28.2**	**-0.8**
	comp=Z,16nm,1.4s						
RAYN	**Ar Rayn**	**38.79**	**327**	*e*P	**P**	**07 56 28.2**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,16nm,1.4s						
LSZ	**Lusaka**	**39.04**	**257**	*e*P	**P**	**07 56 31.1**	**-0.3**
	comp=Z,132nm,1.3s						
LSZ	**Lusaka**	**39.04**	**257**	*e*P	**P**	**07 56 31.1**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,132nm,1.3s						
MATP	**Matopo**	**39.45**	**249**	P	**P**	**07 56 34.5**	**-0.3**
	comp=Z,24nm,1.1s,baz=85,slow=8.4,SNR=8.3						
LEM	**Lembang**	**39.66**	**90**	P	**P**	**07 56 37.0**	**+0.4**
	comp=Z,17nm,0.4s,baz=198,slow=7.8,SNR=8.0						
LEM	**Lembang**	**39.66**	**90**	P	**P**	**07 56 39.2**	**+2.6**
CISI	**Cisompet, Garu**	**39.79**	**91**	P	**P**	**07 56 40.1**	**+2.5**
TPI	**Tanjungpandan**	**40.26**	**84**	P	**P**	**07 56 41.7**	**+0.3**
	comp=Z,17nm,1.5s						
CM31	**Chiang Mai Arr**	**41.14**	**49**	*e*P	**P**	**07 56 47.3**	**-1.3**
	comp=Z,11nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.14**	**49**	P	**P**	**07 56 48.6**	**-0.1**
	comp=Z,3.7nm,0.6s,baz=241,slow=9.5,SNR=17						
CMAR				LR	LR	08 11 53.9	
	comp=Z,276nm,18.1s,baz=240,slow=33						
CHTO	**Chiang Mai**	**41.37**	**48**	*e*P	**P**	**07 56 51.4**	**+0.9**
	comp=Z,28nm,1.5s						
CHTO	**Chiang Mai**	**41.37**	**48**	*e*P	**P**	**07 56 51.4**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,28nm,1.5s						
CMMT	**Chiang Mai**	**41.37**	**48**	P	**P**	**07 56 53.8**	**+3.3**
PBKT	**Sadao Pong**	**41.56**	**53**	P	**P**	**07 56 55.9**	**+3.8**
	comp=Z,6.5nm,1.7s						
SHL	**Shillong**	**41.59**	**34**	*e*P	**P**	**07 56 49.0**	**-3.4**
SMRI	**Semarang**	**42.43**	**91**	*e*P	**P**	**07 56 57.7**	**-1.6**
	comp=Z,71nm,1.0s						
NIL	**Nilore**	**42.63**	**7**	*e*P	**P**	**07 56 57.9**	**-2.6**
	comp=Z,6.6nm,1.0s						
NIL	**Nilore**	**42.63**	**7**	*e*P	**P**	**07 56 57.9**	**-2.6**
NIL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WOJI	**Wonogiri, Jawa**	**42.83**	**92**	P	**P**	**07 57 03.2**	**+0.6**
LBTB	**Lobatse**	**43.08**	**243**	*e*P	**P**	**07 57 04.2**	**-0.3**
	comp=Z,34nm,1.1s						
LBTB	**Lobatse**	**43.08**	**243**	*e*P	**P**	**07 57 04.2**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,34nm,1.1s						
KBL	**Kabul**	**43.20**	**2**	*e*P	**P**	**07 57 05.8**	**+0.4**
	comp=Z,20nm,1.4s						
KSM	**Kuching**	**43.76**	**79**	*e*P	**P**	**07 57 09.0**	**-1.0**
	comp=Z,38nm,1.2s						
NONG	**Nongkai**	**44.12**	**53**	P	**P**	**07 57 16.2**	**+3.4**
	comp=Z,0.3nm,1.3s						
SKNT	**Sakolnakorn**	**44.18**	**54**	P	P	07 57 23.7	+10
BOSA	**Boshof**	**44.36**	**238**	P	**P**	**07 57 14.7**	**-0.2**
	comp=Z,13nm,1.0s,baz=71,slow=8.1,SNR=14						
BOSA				LR	LR	08 13 26.0	
	comp=Z,355nm,18.2s,baz=76,slow=33						
BOSA	**Boshof**	**44.36**	**238**	*e*P	**P**	**07 57 15.2**	**+0.3**
	comp=Z,22nm,1.1s						
BOSA	**Boshof**	**44.36**	**238**	*e*P	**P**	**07 57 15.2**	**+0.3**
BOSA				pmax	pmax		
	comp=Z,22nm,1.1s						
LSA	**Lhasa**	**44.54**	**30**	*e*P	**P**	**07 57 17.0**	**+0.4**
	comp=Z,28nm,1.4s						
PANO	**Nakornpanom**	**44.78**	**55**	P	**P**	**07 57 21.8**	**+3.6**
	comp=Z,0.4nm,1.1s						
DLV	**T Lat**	**45.58**	**64**	*e*P	**P**	**07 57 21.4**	**-3.4**
	comp=Z,64nm,1.5s						
SLVN	**Son La**	**46.59**	**49**	*e*P	**P**	**07 57 29.6**	**-2.8**
	comp=Z,16nm,1.2s						
CHGR	**Chuyangaron**	**47.31**	**2**	*e*P	**P**	**07 57 40.3**	**+2.5**
	comp=Z,291nm,1.6s						
GEYT	**Alibeck**	**47.40**	**350**	P	**P**	**07 57 37.8**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=222,slow=20,SNR=7.3						
GEYT				LR	LR	08 16 14.7	
	comp=Z,341nm,20.6s,baz=140,slow=34						
GYA0B	**ALIBECK ARRAY**	**47.40**	**350**	*e*P	**P**	**07 57 39.2**	**+0.7**
	comp=Z,15nm,1.2s						
GAR	**Garm**	**47.69**	**3**	*e*P	**P**	**07 57 40.4**	**-0.5**
	comp=Z,33nm,1.0s						
GAR	**Garm**	**47.69**	**3**	*e*P	**P**	**07 57 40.4**	**-0.5**
GAR				pmax	pmax		
	comp=Z,33nm,1.0s						
KMI	**Kunming**	**48.09**	**44**	P	**P**	**07 57 45.3**	**+1.0**
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
KSH	**Kashi**	**48.76**	**9**	P	**P**	**07 57 46.6**	**-2.5**
KSH				pP	pP	07 57 50.8	-0.8
KSH				sP	sP	07 57 53.9	+1.0
KSH				PcP	**PcP**	**07 59 12.1**	**-1.9**
KSH				PP	**PP**	**07 59 39.8**	**-2.7**
KSH				S	**S**	**08 04 45.9**	**-6.0**
KSH				SS	**SS**	**08 08 13.3**	**-9.4**
KSH				pmax	pmax		
	comp=Z,20nm,0.8s						
KSH				pmax	pmax		
	comp=Z,210nm,5.9s						
KSH				LR	LR		
	comp=Z,370nm,14.2s						
KSH				LR	LR		
	comp=Z,470nm,10.4s						
KSH				LR	LR		
	comp=Z,810nm,18.0s						
BTK	**Batken**	**48.77**	**3**	*e*P	**P**	**07 57 48.1**	**-1.1**
	comp=Z,89nm,1.9s						
BTK	**Batken**	**48.77**	**3**	*e*P	**P**	**07 57 48.1**	**-1.1**
BTK				pmax	pmax		
	comp=Z,89nm,1.9s						
TSUM	**Tsumeb**	**49.47**	**252**	*e*P	**P**	**07 57 55.0**	**0.0**
	comp=Z,9.9nm,1.0s						
H01W3	**Cape Leeuwin H**	**49.73**	**129**	T	T	08 51 32.3	
	baz=290,slow=75,SNR=208						
H01W2	**Cape Leeuwin H**	**49.73**	**129**	T	T	08 51 32.5	
	baz=290,slow=75,SNR=303						
H01W1	**Cape Leeuwin H**	**49.75**	**129**	T	T	08 51 33.5	
	baz=290,slow=75,SNR=246						
QIZ	**Qiongzhong**	**50.01**	**56**	P	**P**	**07 58 02.8**	**+3.9**
QIZ				S	**S**	**08 05 10.1**	**+0.4**
QIZ				LR	LR		
	comp=Z,740nm,15.7s						
QIZ				LR	LR		
	comp=Z,390nm,15.3s						
QIZ				LR	LR		
	comp=Z,310nm,21.1s						
ARSB	**Arslanbob**	**50.19**	**5**	*e*P	**P**	**07 57 57.7**	**-2.4**
	comp=Z,29nm,1.6s						
NRN	**Naryn**	**50.65**	**8**	*e*P	**P**	**07 58 04.2**	**+0.5**
	comp=Z,7.5nm,1.0s						
NRN	**Naryn**	**50.65**	**8**	*e*P	**P**	**07 58 04.2**	**+0.5**
NRN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AAK	**Ala-Archa**	**51.65**	**6**	*e*P	**P**	**07 58 11.8**	**+0.8**
	comp=Z,6.8nm,0.8s						
AAK	**Ala-Archa**	**51.65**	**6**	*e*P	**P**	**07 58 11.8**	**+0.8**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GYA	**Guiyang**	**51.67**	**46**	*e*P	**P**	**07 58 16.0**	**+4.6**
GYA				PP	**PP**	**08 00 14.6**	**+5.4**
GYA				S	**S**	**08 05 37.8**	**+4.9**
GYA				SS	**SS**	**08 09 12.1**	**+2.5**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,5.9s						
GYA				LR	LR		
	comp=Z,270nm,19.6s						
GYA				LR	LR		
	comp=Z,320nm,17.8s						
GYA				LR	LR		
	comp=Z,240nm,17.4s						
KK31	**Karatay Array**	**51.80**	**3**	*e*P	**P**	**07 58 12.4**	**+0.5**
	comp=Z,10nm,1.4s						
KK31	**Karatay Array**	**51.80**	**3**	*e*P	**P**	**07 58 12.4**	**+0.5**
KK31				pmax	pmax		
	comp=Z,11nm,1.4s						
KKAR	**Karatay Array**	**51.80**	**3**	*e*P	**P**	**07 58 12.4**	**+0.5**
	comp=Z,10nm,1.4s						
KKAR	**Karatay Array**	**51.80**	**3**	*e*P	**P**	**07 58 12.4**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,11nm,1.4s						
BKSI	**Bulukumba**	**52.18**	**90**	P	**P**	**07 58 15.5**	**+0.2**
	comp=Z,21nm,1.4s						
CD2	**Chengdu**	**52.58**	**40**	P	**P**	**07 58 17.8**	**-0.2**
CD2				S	**S**	**08 05 46.5**	**+1.4**
CD2				SS	**SS**	**08 09 26.6**	**+2.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,640nm,21.9s						
CD2				LR	LR		
	comp=Z,670nm,19.5s						
CD2				LR	LR		
	comp=Z,520nm,24.3s						
GNI	**Garni**	**53.17**	**338**	*e*P	**P**	**07 58 22.7**	**+0.3**
	comp=Z,32nm,1.1s						
GNI	**Garni**	**53.17**	**338**	*i* P	**P**	**07 58 22.3**	**-0.1**
GNI				pmax	pmax		
	comp=Z,39nm,1.1s						
AKT	**Akhty**	**53.34**	**341**	*e*P	**P**	**07 58 24.0**	**+0.5**
AKT				*e*		07 59 28.8	
AKT				*e*		08 00 21.2	
AKT				pmax	pmax		
	comp=Z,13nm,1.0s						
AKH	**Akhalkalaki**	**54.74**	**338**	*e*P	**P**	**07 58 34.2**	**+0.4**
	comp=Z,20nm,1.5s						
AKH	**Akhalkalaki**	**54.74**	**338**	*e*P	**P**	**07 58 34.2**	**+0.4**
AKH				pmax	pmax		
	comp=Z,20nm,1.5s						
BATI	**Baumata**	**55.22**	**96**	LR	LR	08 19 39.7	
	comp=Z,737nm,19.9s,baz=292,slow=33						
BCA	**Borcka**	**55.48**	**336**	⇓*i*P	**P**	**07 58 39.3**	**+0.3**
GROC	**Groznyy**	**55.51**	**341**	*e*P	**P**	**07 58 36.1**	**-3.0**
GROC				*e*		07 59 33.8	
GROC				*e*S	**S**	**08 06 22.9**	**-1.2**
GROC				pmax	pmax		
	comp=Z,21nm,0.5s						
WMQ	**Urumqi**	**55.52**	**18**	*e*P	**P**	**07 58 41.5**	**+2.2**
WMQ				LR	LR		
	comp=Z,480nm,21.3s						
WMQ				LR	LR		
	comp=Z,830nm,28.3s						
WMQ				LR	LR		
	comp=Z,940nm,29.9s						
ZEI	**Tsey**	**55.79**	**339**	*e*P	**P**	**07 58 40.5**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,25nm,1.4s						
SOEI	**Soe**	**55.85**	**96**	*e*P	**P**	**07 58 42.9**	**+0.6**
	comp=Z,71nm,1.0s						
LZH	**Lanzhou**	**56.23**	**35**	*e*P	**P**	**07 58 46.8**	**+2.2**
LZH				pP	sP	07 58 50.0	+1.7
LZH				sP	pwP	07 58 52.5	-0.9
LZH				*e*S	**S**	**08 06 34.9**	**+0.6**
LZH				sS	sS	08 06 42.4	+3.7
LZH				SS	**SS**	**08 10 24.4**	**+3.1**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,7.1s						
LZH				LR	LR		
	comp=Z,490nm,15.3s						
LZH				LR	LR		
	comp=Z,440nm,15.0s						
LZH				LR	LR		
	comp=Z,600nm,18.2s						
GTA	**Gaotai**	**56.57**	**30**	⇑P	**P**	**07 58 48.3**	**+1.4**
GTA				pP	sP	07 58 52.8	+2.2
GTA				sP	pwP	07 58 55.5	-0.1
GTA				S	**S**	**08 06 39.4**	**+0.8**
GTA				sS	sS	08 06 46.9	+4.0
GTA				SS	**SS**	**08 10 28.5**	**+2.1**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,63nm,7.3s						
GTA				LR	LR		
	comp=Z,330nm,21.6s						
GTA				LR	LR		
	comp=Z,530nm,20.9s						
GTA				LR	LR		
	comp=Z,570nm,21.3s						
NEY	**Neytrino**	**56.61**	**338**	*i* P	**P**	**07 58 46.8**	**-0.5**
NEY				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MAKZ	**Makanchi**	**56.89**	**12**	*e*P	**P**	**07 58 47.0**	**-2.0**
	comp=Z,5.2nm,0.7s						
MK31	**Makanchi Array**	**56.94**	**12**	*e*P	**P**	**07 58 45.6**	**-3.7**
	comp=Z,4.6nm,0.9s						
MK31	**Makanchi Array**	**56.94**	**12**	*e*P	**P**	**07 58 45.6**	**-3.7**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK32	**Makanchi Array**	**56.94**	**12**	*e*P	**P**	**07 58 47.8**	**-1.5**
MKAR	**Makanchi Array**	**56.94**	**12**	P	**P**	**07 58 47.8**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=208,slow=8.5,SNR=14						
MKAR				LR	LR	08 22 47.2	
	comp=Z,350nm,18.4s,baz=191,slow=36						
MKAR	**Makanchi Array**	**56.94**	**12**	*i* P	**P**	**07 58 49.0**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	**Khabaz**	**56.97**	**339**	P	**P**	**07 58 49.2**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=175,slow=7.3,SNR=4.7						
KBZ				LR	LR	08 21 39.3	
	comp=Z,314nm,18.9s,baz=168,slow=34						
KIV	**Kislovodsk**	**57.24**	**339**	*e*P	**P**	**07 58 50.8**	**-0.8**
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
TGY	**Tagaytay City**	**57.61**	**67**	LR	LR	08 20 30.0	
	comp=Z,362nm,21.6s,baz=200,slow=33						
BRTR	**Keskin Array B**	**57.70**	**329**	P	**P**	**07 58 54.0**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=150,slow=10.0,SNR=8.1						
BRTR				LR	LR	08 23 00.5	
	comp=Z,426nm,18.6s,baz=138,slow=35						
BRTR	**Keskin Array B**	**57.70**	**329**	*i* P	**P**	**07 58 54.9**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BR101	**Keskin Array S**	**57.70**	**329**	*e*P	**P**	**07 58 54.0**	**-1.0**
BR131	**Keskin Array S**	**57.70**	**329**	*e*P	**P**	**07 58 53.2**	**-1.7**
	comp=Z,7.9nm,1.0s						
XAN	**Xi'an**	**57.92**	**40**	P	P	07 59 03.6	+7.1
XAN				PP	**PP**	**08 01 08.1**	**+3.0**
XAN				S	**S**	**08 06 53.5**	**-2.9**
XAN				SS	**SS**	**08 10 50.6**	**+2.8**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,110nm,4.5s						
XAN				LR	LR		
	comp=Z,350nm,15.2s						
XAN				LR	LR		
	comp=Z,340nm,14.9s						
XAN				LR	LR		
	comp=Z,320nm,20.1s						
ABKAR	**Akbulak array**	**58.27**	**354**	*e*P	**P**	**07 58 56.6**	**-2.0**
	comp=Z,33nm,1.4s						
ILGA	**Ilgaz**	**58.67**	**330**	*e*P	**P**	**07 59 02.6**	**+0.7**
	comp=Z,17nm,1.3s						
MAW	**Mawson**	**58.74**	**182**	P	**P**	**07 59 02.0**	**+0.4**
	comp=Z,16nm,1.1s,baz=18,slow=8.6,SNR=12						
MAW				LR	LR	08 17 48.1	
	comp=Z,411nm,20.7s,baz=356,slow=29						
MAW	**Mawson**	**58.74**	**182**	*e*P	**P**	**07 59 01.7**	**+0.1**
	comp=Z,5.3nm,1.1s						
MAW	**Mawson**	**58.74**	**182**	*e*P	**P**	**07 59 01.7**	**+0.1**
MAW				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KCP	**Kidapawan**	**59.41**	**76**	⇑*e*P	**P**	**07 59 08.8**	**+1.5**
MDUB	**Mudurnu**	**59.50**	**328**	*e*P	**P**	**07 59 07.1**	**-0.4**
	comp=Z,59nm,0.4s						
AKTO	**Aktyubinsk**	**59.65**	**353**	LR	LR	08 24 23.0	
	comp=Z,128nm,19.4s,baz=161,slow=36						
DAV	**Davao City (W)**	**59.89**	**77**	LR	LR	08 24 27.1	
	comp=Z,247nm,19.0s,baz=230,slow=35						
KURK	**Kurchatov**	**60.11**	**8**	*e*P	**P**	**07 59 10.7**	**-0.6**
	comp=Z,13nm,1.0s						
KURK	**Kurchatov**	**60.11**	**8**	*i* P	**P**	**07 59 10.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,16nm,1.4s						
FORT	**Forrest**	**60.15**	**120**	*e*P	**P**	**07 59 10.6**	**-1.5**
	comp=Z,19nm,1.0s						
LBMI	**Labuha**	**60.16**	**86**	P	**P**	**07 59 11.7**	**-0.7**
TNTI	**Ternate**	**60.27**	**84**	*e*P	**P**	**07 59 11.0**	**-2.2**
	comp=Z,27nm,0.9s						
TNTI	**Ternate**	**60.27**	**84**	P	**P**	**07 59 16.0**	**+2.8**
BVAR	**Borovoye Array**	**61.70**	**2**	LR	LR	08 26 37.1	
	comp=Z,53nm,19.7s,baz=358,slow=37						
BRVK	**Borovoye**	**61.73**	**2**	*e*P	**P**	**07 59 21.0**	**-1.3**
	comp=Z,9.4nm,1.0s						
BRVK	**Borovoye**	**61.73**	**2**	*i* P	**P**	**07 59 21.7**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SYO	**Syowa Base**	**62.79**	**191**	⇓*e*P	**P**	**07 59 28.0**	**-1.2**
SYO	**Syowa Base**	**62.79**	**191**	⇓*e*pP	pP	07 59 34.2	+2.6
NJ2	**Nanjing**	**63.61**	**48**	*e*P	**P**	**07 59 35.4**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIRR	**Tirgusor**	**63.81**	**330**	⇑*i*P	**P**	**07 59 40.8**	**+4.5**
TIRR	**Tirgusor**	**63.81**	**330**	⇑P	**P**	**07 59 40.8**	**+4.5**
SIJI	**Sorong**	**63.83**	**87**	LR	LR	08 24 43.8	
	comp=Z,152nm,21.3s,baz=288,slow=34						
HHC	**Hu-ho-hao-te**	**63.90**	**36**	*e*P	**P**	**07 59 38.4**	**+1.2**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HHC				pmax	pmax		
	comp=Z,130nm,6.0s						
HHC				LR	LR		
	comp=Z,290nm,16.2s						
ZAA0	Zalesovo Array	64.25	11	eP	P	07 59 37.5	-1.5
	comp=Z,23nm,1.5s						
ZALV	Zalesovo Beam	64.25	11	P	P	07 59 37.6	-1.5
	comp=Z,1.1nm,0.4s,baz=232,slow=7.2,SNR=5.2						
ZALV				LR	LR	08 27 57.2	
	comp=Z,320nm,19.3s,baz=252,slow=36						
ZALV	Zalesovo Beam	64.25	11	i P	P	07 59 38.2	-0.8
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAA1	Zalesovo Array	64.26	11	eP	P	07 59 37.6	-1.5
CASY	Casey	64.34	162	eP	P	07 59 39.3	-0.2
	comp=Z,17nm,1.5s						
VORD	Divnogorie	64.45	341	eP	P	07 59 43.8	+3.4
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CFR	Carcaliu	64.47	330	⇑iP	P	07 59 46.4	+5.8
CFR	Carcaliu	64.47	330	⇑P	P	07 59 46.4	+5.8
FAKI	Fak Fak	64.49	89	eP	P	07 59 40.7	-0.7
	comp=Z,75nm,1.3s						
VSR	Storozhevoye	64.71	341	eP	P	07 59 41.3	-0.8
VSR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ASAR	Alice Springs	64.81	112	P	P	07 59 43.5	+0.1
	comp=Z,3.1nm,0.7s,baz=278,slow=6.1,SNR=32						
ASAR				LR	LR	08 24 00.6	
	comp=Z,227nm,20.7s,baz=275,slow=32						
AS31	Alice Springs	64.81	112	eP	P	07 59 43.3	-0.1
	comp=Z,1.9nm,0.8s						
WRA	Warramunga Arr	65.20	108	P	P	07 59 47.2	+1.2
	comp=Z,5.6nm,0.9s						
WR1	Warramunga Arr	65.20	108	eP	P	07 59 47.2	+1.2
WRAB	Tennant Creek	65.21	108	eP	P	07 59 42.9	-3.2
	comp=Z,15nm,1.0s						
WRAB	Tennant Creek	65.21	108	i P	P	07 59 44.2	-1.9
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WB2	Warramunga Arr	65.21	108	eP	P	07 59 42.5	-3.5
	comp=Z,15nm,1.0s						
VTS	Vitosha	65.30	325	eP	P	07 59 44.0	-2.4
	comp=Z,15nm,1.1s						
VTS	Vitosha	65.30	325	⇓iP	P	07 59 52.5	+6.2
VTS	Vitosha	65.30	325	⇓P	P	07 59 52.5	+6.2
ARU	Arti	65.50	354	LR	LR	08 27 21.6	
	comp=Z,244nm,21.5s,baz=152,slow=35						
ARU	Arti	65.50	354	eP	P	07 59 46.5	-0.6
	comp=Z,15nm,1.0s						
ARU	Arti	65.50	354	i P	P	07 59 46.5	-0.6
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VLAD	Vladila	65.57	327	⇑iP	P	07 59 53.0	+5.2
VRI	Vrincioaia	65.65	330	⇓iP	P	07 59 49.7	+1.3
VRI	Vrincioaia	65.65	330	⇓P	P	07 59 49.7	+1.3
PLOR	Plostina	65.68	330	⇓iP	P	07 59 51.9	+3.3
PLOR	Plostina	65.68	330	⇓P	P	07 59 51.9	+3.3
MLR	Muntele Rosu	65.78	329	eP	P	07 59 48.5	-0.8
	comp=Z,39nm,1.6s						
MLR	Muntele Rosu	65.78	329	⇓iP	P	07 59 53.0	+3.7
MLR	Muntele Rosu	65.78	329	eP	P	07 59 48.5	-0.8
MLR				pmax	pmax		
	comp=Z,39nm,1.6s						
LPSR	Galich'ya Gora	65.97	341	eP	P	07 59 51.3	+1.1
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SONA0	Songino Array	66.06	27	eP	P	07 59 51.3	+0.2
SONM	Songino Array	66.06	27	P	P	07 59 51.3	+0.2
	comp=Z,3.4nm,0.9s,baz=223,slow=5.3,SNR=17						
SONM				LR	LR	08 28 04.7	
	comp=Z,548nm,21.6s,baz=222,slow=36						
TESR	Tescani	66.15	330	⇑iP	P	07 59 57.7	+6.2
BJI	Beijing	66.17	39	eP	P	07 59 52.3	+0.5
BJI				S	S	08 08 43.3	+2.9
BJI				SS	SS	08 12 59.0	+2.4
BJI				pmax	pmax		
	comp=Z,2.0nm,1.4s						
BJI				LR	LR		
	comp=Z,120nm,16.6s						
BJI				LR	LR		
	comp=Z,120nm,18.7s						
VOIR		66.20	329	⇑iP	P	07 59 54.5	+2.6
VOIR		66.20	329	⇑P	P	07 59 54.6	+2.6
BIZ	Bicaz	66.71	330	⇑iP	P	08 00 00.4	+5.3
HERR	Herculane	67.22	327	⇑iP	P	08 00 04.9	+6.5
GZR	Gura Zlata	67.36	327	⇓iP	P	08 00 03.1	+3.7
GZR	Gura Zlata	67.36	327	⇓P	P	08 00 03.1	+3.7
PDG	Podgorica	67.48	323	⇑iP	P	08 00 13.5	+13
MDVR	Moldovita	67.54	326	⇑iP	P	08 00 05.7	+5.2
BURAR	Bucovina Array	67.62	330	⇓iP	P	08 00 04.5	+3.5
BURAR	Bucovina Array	67.62	330	⇓P	P	08 00 04.5	+3.5
BUR08	Bucovina Ar. S	67.64	330	eP	P	07 59 59.5	-1.6
	comp=Z,12nm,1.4s						
TLY	Talaya	67.81	23	LR	LR	08 28 47.8	
	comp=Z,575nm,19.9s,baz=212,slow=35						
TLY	Talaya	67.81	23	eP	P	08 00 00.5	-1.5
	comp=Z,10nm,0.6s						
TLY	Talaya	67.81	23	eP	P	08 00 03.7	+1.7
TLY				eS	S	08 09 05.7	+5.9
TLY				eSS	SS	08 13 27.0	+5.3
TLY				pmax	pmax		
	comp=Z,15nm,1.5s						
TLY				MLR	MLR		
	comp=Z,539nm,17.0s						
AKASG	Malin Array Be	68.03	335	P	P	08 00 02.1	-1.2
	comp=Z,2.1nm,0.9s,baz=131,slow=5.4,SNR=4.3						
AKASG				LR	LR	08 28 12.1	
	comp=Z,148nm,21.8s,baz=175,slow=35						
AKASG	Malin Array Be	68.03	335	i P	P	08 00 01.7	-1.6
AKBB	Malin Array Si	68.03	335	eP	P	08 00 01.8	-1.5
	comp=Z,8.8nm,1.0s						
AKBB	Malin Array Si	68.03	335	eP	P	08 00 01.8	-1.5
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TAM	Tamanrasset	68.43	299	eP	P	08 00 06.1	-0.6
	comp=Z,5.2nm,1.2s						
TAM	Tamanrasset	68.43	299	eP	P	08 00 06.1	-0.6
TAM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CLTB	Caltabellotta	68.66	316	eP	P	08 00 07.7	-0.1
	comp=Z,45nm,1.8s						
KIRV	Kirov	68.83	350	LR	LR	08 30 23.8	
	comp=Z,197nm,18.9s,baz=182,slow=36						
OBN	Obninsk	68.84	341	⇑eP	P	08 00 08.4	+0.1
OBN				e		08 00 17.0	
OBN						08 00 35.0	
OBN				eS	S	08 09 10.3	-1.5
OBN				e		08 09 49.3	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,205nm,19.0s						
TOA0	Torodi Ar. Sit	69.03	288	eP	P	08 00 09.5	-0.8
	comp=Z,22nm,1.5s						
TORD	Torodi Ar. Bea	69.03	288	P	P	08 00 09.8	-0.6
	comp=Z,3.5nm,1.1s,baz=140,slow=9.5,SNR=8.6						
TORD				LR	LR	08 27 38.9	
	comp=Z,428nm,21.9s,baz=20,slow=34						
TOA1	Torodi Ar. Sit	69.03	288	eP	P	08 00 09.8	-0.6
MOS	Moscow	69.05	342	eP	P	08 00 09.7	+0.1
MOS				eS	S	08 09 17.1	+2.8
MOS				pmax	pmax		
	comp=Z,50nm,1.2s						
KOLS	Kolonicke sedl	69.96	330	eP	P	08 00 23.6	+8.2
KOLS	Kolonicke sedl	69.96	330	eP	P	08 00 23.6	+8.2
KEST	Kesra	70.51	313	LR	LR	08 29 55.2	
	comp=Z,330nm,19.1s,baz=348,slow=35						
VYHS	Vyhne	71.42	328	eP	P	08 00 28.4	+4.0
VYHS	Vyhne	71.42	328	eP	P	08 00 28.4	+4.0
STKA	Stephens Creek	71.78	121	P	P	08 00 27.7	+0.7
	comp=Z,1.4nm,0.7s,baz=293,slow=7.7,SNR=2.5						
STKA				LR	LR	08 27 28.3	
	comp=Z,403nm,21.4s,baz=247,slow=32						
STKA	Stephens Creek	71.78	121	eP	P	08 00 25.4	-1.6
	comp=Z,4.1nm,1.6s						
STKA	Stephens Creek	71.78	121	eP	P	08 00 25.4	-1.6
STKA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
MODS	Modra-Piesok	72.17	327	eP	P	08 00 32.9	+4.0
MODS	Modra-Piesok	72.17	327	eP	P	08 00 32.9	+4.0
SOKA	Soboth	72.41	325	i P	P	08 00 30.8	+0.3
	comp=Z,5.0nm,1.3s						
ARSA	Arzberg	72.46	326	i pP	P	08 00 33.7	+3.1
	comp=Z,4.8nm,0.9s						
OBKA	Obir	72.59	325	i P	P	08 00 31.8	+0.2
	comp=Z,7.0nm,1.5s						
CONA	Conrad Observa	72.67	326	i P	P	08 00 32.2	+0.2
	comp=Z,14nm,1.5s						
MYKA	Terra Mystica	73.18	324	i pP	P	08 00 40.2	+5.2
	comp=Z,5.8nm,0.8s						
MOA	Molln	73.50	326	i P	P	08 00 37.4	+0.5
	comp=Z,8.6nm,0.8s						
KBA	Koelnbreinsper	73.60	325	epP	P	08 00 39.0	+1.5
	comp=Z,6.5nm,1.1s						
KIC	Kosan Boka	73.70	279	ePKP2	P	08 00 38.3	-0.4
	comp=Z,117nm,1.5s						
DBIC	Dimbokro	73.87	280	LR	LR	08 31 27.7	
	comp=Z,308nm,21.2s,baz=85,slow=34						
ABTA	Abfaltersbach	73.90	324	i P	P	08 00 40.5	+1.3
	comp=Z,14nm,1.2s						
LIC	Lamto	73.95	279	ePKP2	P	08 00 39.6	-0.5
	comp=Z,78nm,1.3s						
TIC	Toumodi	74.03	280	ePKP2	P	08 00 39.1	-1.5
GERES	GERESS Array B	74.38	326	LR	LR	08 33 48.0	
	comp=Z,99nm,20.1s,baz=140,slow=36						
KHC	Kasperske Hory	74.60	327	eP	P	08 00 42.1	-1.1
	comp=Z,9.8nm,1.4s						
KHC	Kasperske Hory	74.60	327	i P	P	08 00 43.9	+0.7
KHC				pmax	pmax		
	comp=Z,11nm,1.2s						
WTTA	Wattenberg	74.68	324	eP	P	08 00 44.2	+0.3
	comp=Z,10nm,0.8s						
WATA	Walderalm	74.75	324	pP	P	08 00 47.8	+3.5
	comp=Z,13nm,1.0s						
VSU	Vasula	74.80	339	i P	P	08 00 44.5	+0.5
VSU				pmax	pmax		
	comp=Z,23nm,1.0s						
SQTA	Sankt Quirin	74.90	324	eP	P	08 00 45.7	+0.6
	comp=Z,11nm,0.9s						
MOTA	Moosalm	75.03	324	eP	P	08 00 45.1	-0.8
	comp=Z,13nm,1.0s						
FETA	Feichten	75.08	324	i P	P	08 00 44.9	-1.3
	comp=Z,9.7nm,1.0s						
FUORN	Ofenpass-Fuorn	75.15	323	eP	P	08 00 47.7	+0.9
	comp=Z,13nm,1.0s						
SNAA	Sanae	75.53	198	P	P	08 00 48.5	+0.2
SNAA	Sanae	75.53	198	eP	P	08 00 48.0	-0.3
	comp=Z,11nm,1.2s						
SNAA	Sanae	75.53	198	eP	P	08 00 48.0	-0.3
SNAA				pmax	pmax		
	comp=Z,11nm,1.2s						
TUE	Stuetta	75.62	323	eP	P	08 00 48.0	-1.4
	comp=Z,8.3nm,0.9s						
DAVA	Damuels	75.71	324	epP	P	08 00 53.5	+3.7
	comp=Z,12nm,0.7s						
CLL	Collm	76.12	328	eP	P	08 00 52.5	+0.6
	comp=Z,40nm,1.1s						
CLL	Collm	76.12	328	eP	P	08 00 52.5	+0.6
CLL				pmax	pmax		
	comp=Z,40nm,1.1s						
CLL	Collm	76.12	328	eS	S	08 10 36.0	+0.7
CLL				eSS	SS	08 15 24.0	-5.0
CLL				eSSS	SSS	08 18 48.0	
CLL				e		08 19 42.0	
CLL				eSSSS		08 20 48.0	
CLL				LmV		08 35 00.0	
	comp=Z,200nm,21.3s						
CTA	Charters Tower	76.38	109	LR	LR	08 30 44.1	
	comp=Z,684nm,21.7s,baz=261,slow=33						
VNA2	Neumayer--Watz	76.78	199	P	P	08 00 55.9	+0.6
VNA1	Neumayer--Stat	77.01	199	P	P	08 00 56.9	+0.3
FIA0	FINESS Array S	77.23	341	eP	P	08 00 57.5	-0.3
FIA0	FINESS Array S	77.23	341	eP	P	08 00 57.6	-0.3
FINES	FINESS Array B	77.23	341	P	P	08 00 57.5	-0.3
	comp=Z,1.4nm,0.9s,baz=162,slow=10,SNR=3.1						
FINES				LR	LR	08 35 49.1	
	comp=Z,214nm,20.7s,baz=144,slow=36						
VNA3	Neumayer Olymp	77.56	199	P	P	08 01 00.5	+0.7
PMG	Port Moresby	78.35	98	LR	LR	08 30 04.3	
	comp=Z,204nm,21.3s,baz=238,slow=31						
USRK	Ussuriysk Ar.	78.40	41	P	P	08 01 06.3	+1.5
	comp=Z,0.9nm,0.6s,baz=254,slow=5.4,SNR=2.3						
USRK				LR	LR	08 34 41.1	
	comp=Z,140nm,21.3s,baz=226,slow=35						
GUMO	Guam	79.84	74	LR	LR	08 34 27.2	
	comp=Z,104nm,20.6s,baz=254,slow=34						
MAJO	Matsushiro	80.00	50	eP	P	08 01 14.1	+0.3
MAJO	Matsushiro	80.00	50	eP	P	08 01 14.1	+0.3
MAT	Matsushiro	80.00	50	P	P	08 01 14.9	+1.1
MAT				S	S	08 11 19.0	+1.2
MJAR	Matsushiro Arr	80.00	50	P	P	08 01 14.1	+0.3
	comp=Z,2.0nm,0.8s,baz=231,slow=6.0,SNR=5.7						
MJAR				LR	LR	08 35 45.7	
	comp=Z,114nm,18.9s,baz=245,slow=35						
ZEA	Zeya	80.01	31	eP	P	08 01 20.5	+7.1
KLR	Kul'dur	80.39	37	i P	P	08 01 14.7	-0.8
QSPA	South Pole Qui	81.17	180	eP	P	08 01 20.5	+0.8
	comp=Z,19nm,1.3s						
ESDC	Sonseca Array	81.75	312	P	P	08 01 23.6	+0.5
	comp=Z,2.1nm,0.8s,baz=83,slow=4.0,SNR=3.6						
ESDC				LR	LR	08 36 58.7	
	comp=Z,98nm,18.3s,baz=120,slow=35						
ESLA	Sonseca Array	81.75	312	eP	P	08 01 20.8	-2.4
	comp=Z,8.1nm,1.1s						
PAB	San Pablo	82.00	312	eP	P	08 01 22.8	-1.6
	comp=Z,9.4nm,1.0s						
PAB	San Pablo	82.00	312	eP	P	08 01 22.8	-1.6
PAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NC405	NORSAR Array S	82.24	336	eP	P	08 01 23.3	-1.9
	comp=Z,185nm,1.9s						
VNDA	Vanda	82.31	167	P	P	08 01 25.4	+0.1
	comp=Z,1.4nm,1.0s,baz=278,slow=7.4,SNR=8.5						
VNDA				LR	LR	08 32 39.0	
	comp=Z,136nm,20.2s,baz=268,slow=32						
VNDA	Vanda	82.31	167	eP	P	08 01 24.7	-0.6
VNDA	Vanda	82.31	167	eP	P	08 01 24.7	-0.6
KONO	Kongsberg	82.32	334	i P	P	08 01 26.5	+1.0
KONO				pmax	pmax		
	comp=Z,17nm,1.1s						
NB200	NORSAR Array S	82.40	336	eP	P	08 01 25.8	-0.2
NOA	NORSAR Array B	82.40	336	P	P	08 01 25.8	-0.2
	comp=Z,0.7nm,0.7s,baz=117,slow=5.4,SNR=2.5						
NOA				LR	LR	08 37 00.4	
	comp=Z,112nm,21.7s,baz=140,slow=35						
ARA0	ARCESS Array S	83.44	346	eP	P	08 01 31.7	+0.5
ARCES	ARCESS Array B	83.44	346	P	P	08 01 31.7	+0.5
	comp=Z,5.7nm,1.1s,baz=120,slow=4.3,SNR=7.4						
ARCES				LR	LR	08 39 09.3	
	comp=Z,183nm,18.6s,baz=128,slow=36						
GRNR	Gornyy	83.77	37	eP	P	08 01 39.7	+6.4
YAK	Yakutsk	85.23	25	i P	P	08 01 40.9	+0.5
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YSS	Yuzh-Sakhalins	86.44	42	i P	P	08 01 46.6	-0.1
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
TYV	Tymovskoe	87.52	38	eP	P	08 02 00.5	+8.6
TYV				pmax	pmax		
	comp=Z,14nm,1.7s						
TYV				pmax	pmax		
	comp=Z,100nm,3.0s						
TIXI	Tiksi	89.70	16	i P	P	08 02 00.6	-1.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DZM	Mont Dzumac	94.78	113	ePS	PS	08 14 56.5	-1.5
	comp=Z,99nm,24.9s						
DZM				eSS	SS	08 20 05.9	+1.4
	comp=Z,213nm,27.5s						
DZM	Mont Dzumac	94.78	113	eLR	LR	08 33 05.5	
	comp=Z,1µm,26.2s						
PETK	Petropavlovsk-	97.07	37	LR	LR	08 47 26.9	
	comp=Z,99nm,21.8s,slow=36						
ILAR	Eielson Array	119.17	16	PKP	PKiKP	08 07 54.6	+1.8
	comp=Z,0.6nm,0.8s,baz=278,slow=2.8,SNR=4.9						
YKA	Yellowknife Ar	126.46	1	PKP	PKPdf	08 08 06.1	-0.7
	comp=Z,0.5nm,0.8s,baz=334,slow=1.5,SNR=3.0						
YKB5	Yellowknife Ar	126.46	1	ePKPdf	PKPdf	08 08 06.1	-0.7
LPAZ	La Paz	129.58	240	PKP	PKPdf	08 08 15.0	+0.1
	comp=Z,1.4nm,0.9s,baz=112,slow=3.5,SNR=5.7						
TBI	Tubuai	131.61	132	eSS	SS	08 27 43.0	-28
	comp=Z,146nm,31.5s						
TBI	Tubuai	131.61	132	eLR	LR	08 50 09.9	
	comp=Z,188nm,33.0s						
PPT2	Papeete2	134.81	126	eSS	SS	08 28 46.2	-4.1
	comp=Z,146nm,26.5s						
PPT2	Papeete2	134.81	126	eLR	LR	08 51 37.8	
	comp=Z,160nm,25.5s						
RKT	Rikitea	141.27	146	eT	T	10 45 45.8	
	comp=Z,3.1nm,0.3s						
J08A	Circle Bar Ran	145.24	8	ePKPbc	PKPbc	08 08 40.1	-1.8
K22A	Casper	145.97	352	ePKPdf	PKPdf	08 08 43.5	-0.2
PD31	Pinedale Array	146.15	356	ePKPdf	PKPdf	08 08 42.7	-1.4
PDAR	Pinedale Array	146.15	356	PKPbc	PKPdf	08 08 42.7	-1.4
	comp=Z,1.3nm,1.1s,baz=15,slow=1.0,SNR=6.3						
HVU	Hansel Valley	147.23	1	ePKPbc	PKPdf	08 08 46.3	+0.5
HVU	Hansel Valley	147.23	1	ePKP2	PKPdf	08 08 46.3	+0.5
HWUT	Hardware Ranch	147.39	359	ePKPbc	PKPbc	08 08 47.5	-1.0
BGU	Big Grassy Mou	148.08	1	ePKPbc	PKPbc	08 08 51.1	+0.7
ELK	Elko	148.16	4	ePKPbc	PKPdf	08 08 49.0	+1.5
ELK	Elko	148.16	4	ePKP2	PKPdf	08 08 49.0	+1.5
BEKR	Beckworth	148.32	12	ePKPbc	PKiKP	08 08 52.4	-0.4
O20A	White River Ci	148.65	354	ePKPbc	PKPbc	08 08 51.8	-0.2
KSCO	Kaye Shedlock’	148.74	345	ePKPbc	PKiKP	08 08 53.0	-0.6
DUG	Dugway, Tooele	148.81	1	ePKPbc	PKPbc	08 08 52.1	-0.2
DUG	Dugway, Tooele	148.81	1	ePKP2	PKPbc	08 08 52.1	-0.2
MPU	Maple Canyon	148.98	359	ePKPbc	PKPbc	08 08 53.0	+0.2
VCNR	Virginia City	149.01	11	ePKPbc	PKiKP	08 08 53.7	-0.5
AFDM	Forest Hills D	149.08	13	ePKPbc	PKPbc	08 08 52.9	+0.1
TUL1	Leonard	149.13	333	ePKPbc	PKPbc	08 08 52.8	-0.2
MIAR	Mount Ida	149.17	329	ePKPbc	PKiKP	08 08 53.8	-0.6
MIAR	Mount Ida	149.17	329	ePKP2	PKiKP	08 08 53.8	-0.6
PNTR	Pine Nut	149.22	11	ePKPbc	PKPbc	08 08 53.1	-0.3
P17A	Butcher Ranch,	149.50	358	ePKPbc	PKPbc	08 08 54.0	-0.1
KVN	Kaiserville	149.52	9	ePKPbc	PKPbc	08 08 54.0	-0.1
KVN	Kaiserville	149.52	9	ePKP2	PKPbc	08 08 54.0	-0.1
WAKR	Walker	149.82	11	ePKPab	PKPab	08 08 59.9	-0.3
RYN	Ryan	149.86	10	ePKPbc	PKPbc	08 08 53.9	-1.1
CMB	Columbia Colle	150.08	13	ePKPbc	PKiKP	08 08 55.8	-0.4
CMB				ePKPab	PKPab	08 09 01.0	-0.1
CMB	Columbia Colle	150.08	13	ePKIKP	PKiKP	08 08 55.8	-0.4
CMB				e		08 09 01.0	
NV01	Mina Array Sit	150.09	9	ePKPbc	PKPbc	08 08 55.6	0.0
NVAR	Mina Array Bea	150.09	9	PKPbc	PKPbc	08 08 55.6	0.0
	comp=Z,5.1nm,0.9s,baz=281,slow=1.2,SNR=20						
MDPB	Devils Postpil	150.74	11	ePKPbc	PKPbc	08 08 56.7	-0.5
MDPB				ePKPab	PKPab	08 09 03.5	-0.6
CCUT	Cedar City	151.44	2	ePKPab	PKPab	08 09 04.7	-2.2
TPNV	Topopah Spring	151.83	7	ePKPab	PKPab	08 09 06.0	-2.5
TPNV	Topopah Spring	151.83	7	ePKIKP	PKPab	08 09 06.0	-2.5
W13A	Hualapai Mount	153.86	3	ePKPdf	PKPdf	08 08 54.4	-1.9
W13A				ePKPab	PKPab	08 09 15.6	-1.6
X16A	Lo Mia Camp, P	154.56	358	ePKPab	PKPab	08 09 17.7	-2.4
JCT	Junction City	155.50	333	ePKPab	PKPab	08 09 21.8	-2.3
JCT	Junction City	155.50	333	ePKP2	PKPab	08 09 21.8	-2.3
MNTX	Cornudas Mount	156.38	345	ePKPab	PKPab	08 09 25.9	-1.8
TXAR	Lajitas Array	158.07	339	PKP	PKPdf	08 09 02.4	+0.4
	comp=Z,0.2nm,0.8s,baz=27,slow=1.0,SNR=2.5						
TXAR				PKPab	PKPab	08 09 36.6	+1.4
	comp=Z,1.6nm,0.8s,baz=122,slow=1.2,SNR=13						

DDA ***15*** *07:59:50.5, 38°.97N×26°.13E, h35^{km}±2^{km}, ML2.7*
ISK ***15*** *07:59:50.9, 39°.00N×26°.10E, h4^{km}, ML3.1/24*
THE ***15*** *07:59:51.8, 38°.97N×26°.02E, h0^{km}±1^{km}, ML2.7/5, Error ellipse: s-maj=1.6km s-min=0.6km az=250.0*
ATH ***15*** *07:59:51.1, 38°.99N×26°.06E, h24^{km}±1^{km}, ML2.8/7, Error ellipse: s-maj=2.2km s-min=1.1km az=267.0*
ISC 15 07:59:51.0±0.9**, 38°.95N**±0°.02×**26°.05E**±0°.02**, h18**^{km}±6^{km}**, n57, σ0^{s}.92**/82**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.30	330	PG	Pg	07 59 57.3	-0.2
SIGR				SG	Sg	08 00 02.0	+0.1
SIGR	SIGRI	0.30	330	P	Pg	07 59 57.3	-0.2
SIGR				S	Sg	08 00 01.6	-0.3
	3µm,0.4s						
SIGR	SIGRI	0.30	330	P	Pg	07 59 57.2	-0.2
SIGR				S	Sg	08 00 01.9	0.0
SIGR				AML	AML	08 00 02.4	
	comp=E,9664µm,0.4s						
SIGR				AML	AML	08 00 02.7	
	comp=N,5570µm,0.3s						
PRK	Paraskevi	0.34	31	P	Pg	07 59 58.5	+0.2
PRK				S	Sg	08 00 03.4	+0.2
PRK	Paraskevi	0.34	31	P	Pg	07 59 58.4	+0.2
PRK				S	Sg	08 00 03.3	+0.1
PRK				AML	AML	08 00 04.0	
	comp=E,14573µm,0.4s						
PRK				AML	AML	08 00 04.0	
	comp=N,14934µm,0.3s						
KRBN	Karaburun	0.54	132	PG	Pg	08 00 01.7	0.0
PSRA	Psara	0.56	223	P	Pn	08 00 03.6	-0.4
PSRA				S	Sn	08 00 11.9	-0.9
CHOS	Chios island	0.56	179	PG	Pn	08 00 03.6	-0.7
CHOS	Chios island	0.56	179	P	Pb	08 00 02.6	+0.1
CHOS				S	Sn	08 00 12.2	-1.0
	comp=N,832nm,0.3s						
CHOS	Chios island	0.56	179	P	Pb	08 00 02.5	+0.1
CHOS				S	Sn	08 00 13.2	0.0
CHOS				AML	AML	08 00 14.8	
	comp=N,1568µm,0.4s						
CHOS				AML	AML	08 00 15.3	
	comp=E,2041µm,0.3s						
FOCM	Foa	0.59	114	PG	Pg	08 00 02.8	+0.2
CAND	Candarli	0.59	90	PG	Pg	08 00 02.5	-0.2
AYVA	Ayvalik	0.61	55	i P	Pg	08 00 00.1	-3.1
AYVA				i S	Sg	08 00 11.1	-0.3
DKL	Dikili	0.68	80	PG	Pb	08 00 03.9	-0.4
URLA	Izmir	0.73	144	PG	Pb	08 00 05.3	0.0
URLA	Izmir	0.73	144	i P	Pb	08 00 05.0	-0.3
URLA				i S	Sg	08 00 15.7	+0.6
URLA				IAML_P			
	comp=Z,7µm,0.3s						
ZEDA	zmir-Bergama	0.81	89	i P	Pb	08 00 06.0	-0.5
ZEDA				i S	Sb	08 00 17.1	+0.1
BAYC	CANAKKALE_Bayr	0.88	26	i P	Pn	08 00 08.7	+0.2
BAYC				i S	Sb	08 00 19.1	-0.1
BOZC	Bozcaada	0.89	0	PG	Pb	08 00 07.4	-0.5
BOZC	Bozcaada	0.89	0	i P	Pb	08 00 08.0	+0.1
EZN	Ezine	0.90	14	PG	Pb	08 00 07.9	-0.2
BLCB	Balcova	0.96	126	PG	Pg	08 00 10.0	+0.3
LIA	Limnos Island	1.16	325	P	Pg	08 00 13.1	-0.3
LIA				S	Sg	08 00 29.7	+1.2
	comp=Z,260nm,0.5s						
LIA	Limnos Island	1.16	325	P	Pg	08 00 13.0	-0.3
LIA				S	Sg	08 00 28.3	-0.2
LIA				AML	AML	08 00 30.6	
	comp=E,780µm,0.5s						
LIA				AML	AML	08 00 32.2	
	comp=N,504µm,0.7s						
STEP	BALIKESIR_Sava	1.37	71	i P	Pn	08 00 15.8	+0.5
STEP				i S	Sg	08 00 36.4	+1.2
SMG	Samos	1.39	153	P	Pg	08 00 17.3	-0.5
SMG				S	Sg	08 00 38.5	+2.6
	comp=N,308nm,0.4s						
SMG	Samos	1.39	153	P	Pg	08 00 17.4	-0.4
SMG				S	Sg	08 00 36.6	+0.7
SMG				AML	AML	08 00 40.5	
	comp=E,835µm,0.4s						
SMG				AML	AML	08 00 41.3	
	comp=N,512µm,0.4s						
GELI	Tayfur-Gelibol	1.48	13	PN	Pb	08 00 18.1	+0.1
GCAM	G?zelcaml?	1.56	143	PN	Pg	08 00 20.3	-0.8
SMTH	Samothraki Isl	1.57	346	P	Pb	08 00 19.1	-0.4
SMTH				S	Sg	08 00 41.4	-0.2
	comp=N,165nm,0.4s						
SMTH	Samothraki Isl	1.57	346	P	Pb	08 00 18.9	-0.6
SMTH				S	Sb	08 00 39.7	+0.7
SMTH				AML	AML	08 00 42.7	
	comp=N,296µm,0.5s						
SMTH				AML	AML	08 00 43.2	
	comp=E,404µm,0.5s						
BALB	Balikesir	1.58	64	PN	Pn	08 00 18.8	+0.7
GONE	Gonen-Balikesi	1.68	49	PN	Pn	08 00 20.4	+1.0
AYDB	Zeytinkoy-Aydi	1.76	124	PN	Pb	08 00 23.1	+0.2
ENEZ	Enez	1.78	3	PN	Pb	08 00 22.8	-0.4
APE	Apeiranthos	1.92	192	P	Pn	08 00 23.5	+0.6
AYDN	Tasoluk	1.94	131	i P	Pn	08 00 23.1	0.0
AYDN				i S	Sg	08 00 54.0	+0.6
AYDN				IAML_P			
	comp=Z,160nm,0.2s						
RKY	Sarkoy-Tekirda	1.94	26	PN	Pn	08 00 24.6	+1.4
ALN	Alexandroupoli	1.94	0	PN	Pb	08 00 25.1	-0.8
ALN	Alexandroupoli	1.94	0	P	Pb	08 00 25.3	-0.6
ALN				S	Sb	08 00 50.6	+0.8
ALN	Alexandroupoli	1.94	0	P	Pn	08 00 24.1	+1.0
ALN				S	Sn	08 00 48.1	+1.0
ALN				AML	AML	08 00 53.0	
	comp=N,131µm,0.4s						
ALN				AML	AML	08 00 53.3	

	comp=E,132μm,0.4s						
THAS	Thassos island	1.94	329	P	Pb	08 00 24.8	-1.1
EDC	Edincik	1.98	45	PN	Pb	08 00 25.3	-1.2
DURS	Dursunbey	1.99	70	*i* P	Pn	08 00 24.2	+0.3
DURS				*i* S	Sb	08 00 51.5	+0.2
MANT	Manisa	2.02	102	*i* P	Pg	08 00 29.4	-0.4
MANT				*i* S	Sg	08 00 55.1	-1.0
MRMT	Marmara Adasi	2.04	35	PN	Pn	08 00 25.3	+0.8
KULA	Kula-Manisa	2.09	101	PN	Pb	08 00 27.2	-1.3
OUR	Ouranopolis	2.11	312	PN	Pb	08 00 28.5	-0.2
BODT	Bodrum	2.14	152	PN	Pb	08 00 28.7	-0.5
KCTX	Karacabey (Bur	2.21	53	PN	Pn	08 00 28.3	+1.4
RDO	Rodhopi	2.23	350	PN	Pb	08 00 29.0	-1.7
RDO	Rodhopi	2.23	350	P	Pb	08 00 28.9	-1.7
YER	Yerkesik	2.53	135	PN	Pb	08 00 33.9	-2.1
ULDT	Uludag	2.67	63	*i* P	Pn	08 00 33.5	+0.2
ULDT				*i* S	Sg	08 01 15.8	-1.1
ULDT				IAML_P			
	comp=Z,137nm,0.3s						
TVSB	Tavsanli	2.70	78	PN	Pn	08 00 35.6	+1.9
ARMT	Armutlu	2.70	53	PN	Pn	08 00 35.7	+2.1
YLV	Yalova	3.03	57	PN	Pn	08 00 40.1	+2.0

ISCJB ***15*** *08:16:08.9±0.8, 22°.73N±0°.05×94°.40E±0°.06, h106^{km}, mb4.0/11, Error ellipse: s-maj=8.8km s-min=6.3km az=35.4*

IDC ***15*** *08:16:09.1±1.6, 22°.18N×94°.29E, h130^{km}±17^{km}, mb3.6/11, mb1 3.6/13, mb1mx3.3/58, mbtmp4.0/13, Error ellipse: s-maj=37.8km s-min=15.5km az=23.0*

NDI ***15*** *08:16:11.2±1.9, 22°.79N×94°.33E, h20^{km}, ML3.6*

ISC 15 08:16:09.0±0.9**, 22°.67N**±0°.07×**94°.45E**±0°.07**, h106**^{km}**, n24,** σ**1^{s}88**/32**, mb4.0**/11**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	SAIHA	1.36	263	*e*P	Pn	08 16 34.0	0.0
SAIH				*e*S	Sn	08 16 52.1	-1.0
SAIH				IAML		08 16 56.2	
	comp=E,595nm,0.4s						
SAIH				IAML		08 16 56.2	
	comp=N,426nm,0.4s						
IMP	Imphal	2.20	348	*e*P	Pn	08 16 44.4	-0.1
IMP				*e*S	Sn	08 17 10.5	-1.0
BRDH	Bariadhala	2.59	271	P	Pn	08 16 49.8	+0.3
	comp=N,10nm,0.3s,baz=90,slow=20,SNR=4.8						
BRDH				S	Sn	08 17 20.7	+0.1
	comp=N,82nm,0.3s,baz=140,slow=23,SNR=16						
BELO	BELONIA	2.83	282	*e*x	x	08 17 21.3	
MOKO	MOKOCHONG	3.63	1	*e*P	Pn	08 17 04.0	+0.5
MOKO				*e*S	Sn	08 17 45.7	+0.1
MOKO				IAML		08 17 59.9	
	comp=N,128nm,0.5s						
MOKO				IAML		08 18 00.4	
	comp=E,147nm,0.1s						
SHL	Shillong	3.71	321	*e*P	Pn	08 17 06.3	+1.7
SHL				*e*S	Sn	08 17 46.2	-1.4
SHL				IAML		08 17 53.1	
	comp=N,273nm,0.2s						
SHL				IAML		08 17 53.2	
	comp=E,326nm,0.1s						
TEZP	TEZPUR	4.20	339	*e*P	Pn	08 17 12.1	+1.1
TEZP				*e*S	Sn	08 17 57.7	-1.4
GUWA	GUWAHATI	4.31	325	*e*P	Pn	08 17 13.5	+1.1
GUWA				*e*S	Sn	08 17 57.3	-4.4
TURI	Tura	4.73	308	*e*P	Pn	08 17 20.1	+2.0
TURI				*e*S	Sn	08 18 10.6	-1.3
TURI				IAML		08 18 15.6	
	comp=N,212nm,0.3s						
TURI				IAML		08 18 15.6	
	comp=E,195nm,0.1s						
ZIRO	ZIRO	4.86	354	*e*P	Pn	08 17 22.2	+2.1
ZIRO				*e*S	Sn	08 18 13.1	-2.3
TAWA	Tawang	5.43	335	*e*S	Sn	08 18 23.9	-5.4
TAWA				IAML		08 18 34.3	
	comp=E,573nm,0.2s						
CMAR	Chiang Mai Arr	5.94	134	P	Pn	08 17 31.4	-3.2
	comp=E,0.3nm,0.3s,baz=301,slow=17,SNR=2.8						
MKAR	Makanchi Array	25.99	341	P	P	08 21 33.9	+2.1
	comp=E,1.8nm,0.5s,baz=139,slow=11,SNR=23						
KURBB	Kurchatov Arra	30.55	340	P	P	08 22 13.8	+1.5
	comp=E,1.9nm,0.6s,baz=148,slow=8.7,SNR=12						
ZALV	Zalesovo Beam	32.07	349	P	P	08 22 26.5	+0.9
	comp=E,1.9nm,0.7s,baz=167,slow=9.1,SNR=6.8						
BVAR	Borovoye Array	35.42	335	P	P	08 22 55.9	+1.2
	comp=E,1.0nm,0.5s,baz=147,slow=8.8,SNR=5.4						
USRK	Ussuriysk Ar.	37.53	46	P	P	08 23 14.5	+1.8
	comp=E,0.8nm,0.5s,baz=252,slow=11,SNR=3.5						
AKTO	Aktyubinsk	39.66	323	P	P	08 23 30.1	-0.3
	comp=E,1.7nm,0.5s,baz=112,slow=9.4,SNR=6.6						
ARU	Arti	42.74	331	P	P	08 23 56.9	+1.3
	comp=E,3.8nm,0.2s,baz=117,slow=18,SNR=2.6						
AKASG	Malin Array Be	57.19	317	P	P	08 25 44.0	-0.8
	comp=E,1.0nm,0.5s,baz=81,slow=6.4,SNR=4.3						
FINES	FINESS Array B	60.02	329	P	P	08 26 03.9	-0.4
	comp=E,0.9nm,0.7s,baz=117,slow=8.0,SNR=4.2						
ARCES	ARCESS Array B	61.61	338	P	P	08 26 15.2	+0.2
	comp=E,0.6nm,0.4s,baz=94,slow=7.6,SNR=9.7						
NOA	NORSAR Array B	67.18	328	P	P	08 26 51.0	-0.5
	comp=E,0.2nm,0.4s,baz=94,slow=5.5,SNR=2.7						
TXAR	Lajitas Array	125.43	19	PKP	PKPdf	08 34 56.7	-1.6
	comp=E,0.4nm,1.1s,baz=335,slow=4.0,SNR=3.2						

ISCJB ***15*** *08:18:26.1±0.6, 7°.00S±0°.05×129°.22E±0°.08, h139^{km}, mb4.0/6, Error ellipse: s-maj=11.4km s-min=6.5km az=5.7*

IDC ***15*** *08:18:33.9±2.1, 6°.79S×129°.02E, h179^{km}±21^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.4/44, mbtmp4.4/9, Error ellipse: s-maj=35.1km s-min=20.5km az=115.0*

ISC 15 08:18:28.8±0.7**, 7°.09S**±0°.06×**129°.36E**±0°.10**, h139**^{km}**, n10,** σ**3^{s}46**/14**, mb4.1**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.42	241	P	Pn	08 20 04.5	+3.4
	36nm,0.3s,baz=140,slow=3.5,SNR=9.8						
BATI				S	Sn	08 21 10.3	-3.0
	25nm,0.3s,baz=49,slow=20,SNR=4.0						
SIJI	Sorong	6.47	17	P	Pn	08 20 05.8	+4.1
	4.9nm,0.3s,baz=119,slow=7.3,SNR=59						
SIJI				S	Sn	08 21 12.0	-2.4
	7.5nm,0.3s,baz=76,slow=22,SNR=14						
WRA	Warramunga Arr	13.66	160	P	P	08 21 41.2	+0.2
	1.0nm,0.3s,baz=324,slow=14,SNR=19						
WRA				S	Sn	08 24 06.8	-1.2
	0.6nm,0.3s,baz=334,slow=22,SNR=3.6						
ASAR	Alice Springs	17.05	166	P	Pn	08 22 24.6	+5.6
	2.5nm,0.3s,baz=338,slow=9.6,SNR=194						
ASAR				S	S	08 25 23.3	-6.0
	0.1nm,0.3s,baz=351,slow=22,SNR=2.8						
MJAR	Matsushiro Arr	44.19	10	P	P	08 26 21.5	-2.4
	0.6nm,0.4s,baz=189,slow=10,SNR=4.6						
KSRS	Korea Array	44.33	358	P	P	08 26 22.4	-2.6
	1.5nm,0.5s,baz=181,slow=8.4,SNR=3.7						
PETK	Petropavlovsk-	64.61	18	P	P	08 28 51.5	+0.2
	1.7nm,0.6s,baz=178,slow=4.6,SNR=5.4						
MKAR	Makanchi Array	67.95	327	P	P	08 29 11.6	-1.1
	0.9nm,0.3s,baz=116,slow=8.1,SNR=9.8						
ZALV	Zalesovo Beam	71.38	334	P	P	08 29 31.2	-2.3
	1.3nm,0.4s,baz=140,slow=3.6,SNR=3.5						
SEY	Seymchan	72.01	11	P	P	08 29 37.1	0.0
	2.5nm,0.5s,baz=240,slow=7.3,SNR=7.6						

NEIC ***15*** *08:19:07.0±0.0, 17°.02N×94°.22W, h148^{km}, MD4.1(MEX), After MEX.*

MEX 15 08:19:06.3±0.8**, 16°.97N**×**94°.25W, h154**^{km}±8^{km}**, MD4.1, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.62	282	*e*Pn	Pn	08 19 27.6	-1.2
CMIG				*e*Sn	Sn	08 19 43.5	-2.4
CMIG	Matias Romero	0.62	282	*e*P	Pn	08 19 27.6	-1.2
CMIG				*e*S	Sn	08 19 43.4	-2.4
PCIG		1.60	142	*e*Pn	Pn	08 19 36.8	-0.5
PCIG				*e*Sn	Sn	08 19 59.4	-1.6
PCIG		1.60	142	*e*P	Pn	08 19 36.8	-0.5
PCIG				*e*S	Sn	08 19 59.4	-1.6
CCIG	Comitan	2.14	108	*e*Pn	Pn	08 19 41.5	-2.0
CCIG				*e*Pn	Pn	08 19 42.3	-1.3
CCIG				*e*Sn	Sn	08 20 09.6	-2.5
CCIG				*e*Sn	Sn	08 20 09.8	-2.3
CCIG	Comitan	2.14	108	*e*P	Pn	08 19 41.5	-2.0
CCIG				*e*S	Sn	08 20 09.8	-2.3
HUIG	Huatulco	2.14	236	*e*Pn	Pn	08 19 41.3	-2.1
HUIG				*e*Sn	Sn	08 20 10.9	-1.0
HUIG	Huatulco	2.14	236	*e*P	Pn	08 19 41.3	-2.1
HUIG				*e*S	Sn	08 20 10.8	-1.1
THIG		2.80	137	*e*Pn	Pn	08 19 52.7	+1.3
THIG				*e*Sn	Sn	08 20 27.3	+1.1
THIG		2.80	137	*i* P	Pn	08 19 50.0	-1.4
THIG				*i* S	Sn	08 20 24.1	-2.2
LVIG	Laguna Verde	3.43	323	*e*Pn	Pn	08 19 56.0	-3.2
LVIG				*e*Sn	Sn	08 20 35.8	-4.6
TLIG	Tlapa	4.16	279	*e*Pn	Pn	08 20 06.2	-2.8
TLIG				*e*Sn	Sn	08 20 55.0	-2.6
TEIG	Tepich	6.53	59	*e*Pn	Pn	08 20 36.2	-3.8
ESPN	Las Esperanzas	10.74	115	*e*Pn	Pn	08 21 33.8	-2.2
ESPN				*e*Sn	Sn	08 23 32.1	-2.9

NNC 15 08:31:31.5±3.9**, 54°.61N**×**86°.07E, h0**^{km}**, mb3.8, mpv2.8, 4C-2D, Error ellipse: s-maj=126.4km s-min=24.9km az=141.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	0.99	228	⇓P	Pg	08 31 50.1	-0.3
	0.4nm,0.7s						
ZAA0				⇑S	Sb	08 32 04.4	-0.6
	1.8nm,0.4s						
KURBB	Kurchatov Arra	6.08	232	⇑Pn	Pn	08 33 05.8	+3.2
	2.0nm,0.5s						
KURBB				⇑Sn	Sn	08 34 14.3	+1.5
	2.2nm,0.5s						
KURBB				⇓Lg	Lg	08 34 43.3	
	5.6nm,0.7s						
MK31	Makanchi Array	8.19	199	⇑Pn	Pn	08 33 32.2	+0.7
	1.2nm,0.6s,baz=24,slow=13,SNR=7.7						

MEX 15 08:38:25.9±0.8**, 16°.73N**×**94°.96W, h110**^{km}±7^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.36	12	*e*P	Pn	08 38 41.1	-0.9
CMIG				*e*S	Sn	08 38 51.9	-2.2
HUIG	Huatulco	1.46	229	*e*P	Pn	08 38 50.5	-1.7
HUIG				*e*S	Sn	08 39 10.6	-1.6
VHO	Vista Hermosa	1.73	282	*e*P	Pn	08 38 55.4	-0.3
VHO				*e*S	Sn	08 39 16.9	-1.5
PCIG		1.96	121	*i* P	Pn	08 38 57.9	-0.5
PCIG				*i* S	Sn	08 39 21.8	-1.4

IDC ***15*** *09:09:30.8±0.8, 2°.23N×84°.45W, h0^{km}, mb3.9/14, mb1 4.1/19, mb1mx4.0/34, mbtmp3.9/19, ML3.4/5, MS3.9/17, Ms1 3.9/17, ms1mx3.7/35, Error ellipse: s-maj=28.9km s-min=13.2km az=46.0*

ISCJB ***15*** *09:09:34.3±0.4, 2°.22N±0°.05×84°.46W±0°.04, h33^{km}, mb4.2/44, MS3.9/11, Error ellipse: s-maj=8.1km s-min=3.8km az=31.5*

GCMT ***15*** *09:09:35.1±0.3, 2°.21N±0°.02×84°.48W±0°.04, h18^{km}±1^{km}, MW4.9/75, Moment Tensor Solution. s31,c33; s75,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.68±.17; M$_{\theta\theta}$2.44±.11; M$_{\phi\phi}$0.24±.11; M$_{r\theta}$0.49±.23; M$_{\theta\phi}$0.20±.07; M$_{\phi r}$0.08±.39; Best double couple: M$_0$2.61600×10^{16} NP1:ϕ_s264.00000°, δ50.00000°, λ-91.00000°. NP2: ϕ_s85.00000°, δ40.00000°, λ-89.00000°. Principal axes: T 2.5050, Plg5.0000°, Azm355.0000°; N 0.2220, Plg1.0000°, Azm265.0000°; P -2.7270, Plg85.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *09:09:37.1±1.6, 2°.37N×84°.26W, h36^{km}±8^{km}, mb4.4/96 Error ellipse: s-maj=20.0km s-min=12.4km az=65.0*

ISC 15 09:09:36.6±0.6**, 2°.31N**±0°.07×**84°.42W**±0°.09**, h35**^{km}**, n100,** σ**1^{s}74**/99**, mb4.2**/44**, MS3.9**/11**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRGC	Isla de Gorgon	6.28	84	*e*P	Pn	09 11 04.9	-2.0
BBAC	Balboa, Cauca	7.17	92	*e*P	Pn	09 11 18.9	-0.4
CRUC	La Cruz	7.50	95	*e*P	Pn	09 11 25.5	+1.6
HDC	Heredia	7.65	2	*e*Pn	Pn	09 11 25.1	-0.6
POPC	Popayan, Colom	7.74	88	*e*P	Pn	09 11 27.5	+0.4
SOTA	Rioblanco	7.81	91	*e*P	Pn	09 11 28.9	+0.6
JTS	Las Juntas de	7.95	356	Pn	Pn	09 11 28.5	-1.3
	2.6nm,0.3s,baz=181,slow=12,SNR=22						
JTS				Sn	Sn	09 12 53.2	-5.4
	baz=24,slow=20,SNR=1.5						
JTS				LR	LR	09 14 01.8	
	comp=Z,2μm,21.3s,baz=235,slow=34						
JTS	Las Juntas de	7.95	356	*e*Pn	Pn	09 11 29.1	-0.6
JTS				*e*Sn	Sn	09 12 53.2	-5.4
SOLC	Bahia Solano	8.00	61	*e*P	Pn	09 11 27.5	-2.9
YOTC	Yotoco, Valle	8.23	78	*e*P	Pn	09 11 34.8	+1.1
MARP	Paez Belalcaza	8.47	86	*e*P	Pn	09 11 38.8	+1.7
FLOC	Florencia	8.79	95	*e*P	Pn	09 11 41.5	+0.2
ORTC	Ortega, Tolima	9.30	80	*e*P	Pn	09 11 50.8	+2.5
RREF	El Recreo	9.41	74	*e*P	Pn	09 11 52.8	+2.4
DBBC	Dabeiba	9.42	60	*e*P	Pn	09 11 53.5	+3.4
GUY2C	Guyana, Caldas	9.49	72	*e*P	Pn	09 11 53.5	+2.2
ACON	Acoyapa	9.63	356	*e*Pn	Pn	09 11 52.7	-0.1
HELC	Santa Helena	9.67	66	*e*P	Pn	09 11 58.1	+4.5
ESPN	Las Esperanzas	9.83	1	*e*Pn	Pn	09 11 57.9	+2.4
PTLC	Puerto Leguiza	9.85	102	*e*P	Pn	09 11 57.5	+1.6
NORC	Norcasia	10.06	71	*e*P	Pn	09 12 02.1	+3.4
ROSC	El Rosal	10.39	76	LR	LR	09 15 22.4	
	comp=Z,238nm,18.9s,baz=203,slow=34						
MACC	Macarena, Meta	10.56	91	*e*P	Pn	09 12 06.1	+0.5
PTBC	PUERTO BERRIO,	10.78	67	*e*P	Pn	09 12 11.4	+2.8
ZARC	Zaragoza, Cauc	10.83	61	*e*P	Pn	09 12 12.8	+3.5
SPBC	San Pablo de B	10.84	72	*e*P	Pn	09 12 12.1	+2.6
ESTN	Estel	10.90	350	*e*Pn	Pn	09 12 11.7	+1.4
CHIC	Chingaza	10.91	78	*e*P	Pn	09 12 14.1	+3.3
CSGN	Cosiguina Volc	11.05	344	*e*Pn	Pn	09 12 15.8	+3.5
ATAH	Atahualpa	11.14	147	Pn	Pn	09 12 11.1	-2.7
	0.2nm,0.3s,baz=66,slow=18,SNR=1.9						
ATAH				Sn	Sn	09 14 17.3	-0.2
	0.3nm,0.3s,baz=34,slow=7.3,SNR=2.2						
ATAH				LR	LR	09 16 04.2	
	comp=Z,809nm,19.0s,baz=319,slow=36						
RUSC	La Rusia	11.85	72	*e*P	Pn	09 12 30.1	+6.4
TGUH	Tegucigalpa,Un	12.01	347	*e*Pn	Pn	09 12 27.9	+2.5
APG	El Apazote	13.96	335	Pn	Pn	09 12 50.9	-1.4
	0.4nm,0.3s,baz=183,slow=16,SNR=3.6						
APG				LR	LR	09 17 22.1	
	comp=Z,992nm,19.2s,baz=126,slow=34						
SDV	Santo Domingo	15.19	64	Pn	Pn	09 13 08.0	-0.8
	0.3nm,0.3s,baz=283,slow=19,SNR=2.1						
SDV				LR	LR	09 18 40.7	
	comp=Z,370nm,20.6s,baz=247,slow=36						
NNA	Nana	16.07	152	LR	LR	09 19 29.6	
	comp=Z,291nm,18.1s,baz=322,slow=37						
CMIG	Matias Romero	17.94	326	P	Pn	09 13 43.5	+0.2
	0.1nm,0.3s,baz=136,slow=11,SNR=3.2						
CMIG				LR	LR	09 19 24.2	
	comp=Z,318nm,19.4s,baz=138,slow=33						
TLIG	Tlapa	20.56	318	*e*P	P	09 14 14.0	+1.4
	7.4nm,1.0s						
PCRV	Puerto La Cruz	21.15	67	P	P	09 14 19.5	+0.6
	11nm,1.0s,baz=251,slow=7.0,SNR=4.8						
SJG	San Juan	23.83	48	P	P	09 14 46.7	+0.1
	6.3nm,0.3s,baz=319,slow=8.5,SNR=3.9						
SJG				LR	LR	09 24 15.7	
	comp=Z,78nm,20.0s,baz=242,slow=37						
LPAZ	La Paz	24.50	139	P	P	09 14 52.7	-0.9
	2.5nm,0.8s,baz=331,slow=10.0,SNR=10						
LPAZ	La Paz	24.50	139	*e*P	P	09 14 53.4	-0.2
	12nm,1.1s						
PTGA	Pitinga	24.63	97	P	P	09 14 54.2	+0.1
	0.9nm,0.3s,baz=314,slow=20,SNR=4.7						
PTGA				LR	LR	09 24 05.2	
	comp=Z,116nm,21.8s,baz=290,slow=36						
LVC	Limon Verde	29.02	149	LR	LR	09 27 55.6	
	comp=Z,240nm,18.8s,baz=318,slow=38						
SIV	San Ignacio	29.38	129	P	P	09 15 35.8	-1.0
	1.1nm,0.9s,baz=315,slow=18,SNR=2.4						
SIV				LR	LR	09 28 04.5	
	comp=Z,476nm,18.1s,baz=320,slow=38						
LRAL	Lakeview Retre	30.66	356	*e*P	P	09 15 47.8	-0.1
	7.5nm,1.1s						
H06E1	SOCORRO T-PHAS	30.69	304	T	T	09 48 00.6	
	SNR=13						
HODGE	Hodges	31.83	3	*e*P	P	09 15 59.4	+1.2
	10nm,1.0s						
TXAR	Lajitas Array	32.52	328	P	P	09 16 05.3	+0.9
	0.4nm,0.9s,baz=152,slow=10,SNR=4.5						
TXAR				PcP	PcP	09 18 51.0	+0.2
	0.3nm,0.9s,baz=189,slow=4.6,SNR=3.3						
KMSC	Kings Mountain	32.80	5	*e*P	P	09 16 06.4	-0.2
	19nm,1.1s						
V48A	Smith Brothers	33.34	356	*e*P	P	09 16 11.7	+0.3
	9.0nm,1.0s						
T52A	Hallie	34.66	2	*e*P	P	09 16 23.0	+0.2
	21nm,1.1s						
BLA	Blacksburg	34.93	6	*e*P	P	09 16 26.1	+0.9
BLA				*e*pP	pP	09 16 32.8	-1.6
WMOK	Wichita Mounta	34.93	339	*e*P	P	09 16 25.5	+0.3
	2.5nm,1.1s						
S51A	Beattyville	35.17	1	*e*P	P	09 16 27.5	+0.3
	16nm,1.1s						
WCI	Wyandotte Cave	35.79	357	*e*P	P	09 16 32.6	0.0
	6.9nm,1.0s						
CCM	Cathedral Cave	36.13	351	*e*P	P	09 16 34.6	-0.8
	10nm,1.1s						
319A	Douglas	37.24	324	*e*P	P	09 16 46.5	+1.4
	7.4nm,1.0s						
MVL	Millersville	38.23	10	*e*P	P	09 16 54.0	+0.8
	13nm,1.2s						
ANMO	Albuquerque	38.40	330	*e*P	P	09 16 56.5	+1.5
	5.7nm,1.1s						
X18A	Snowflake	39.92	326	*e*P	P	09 17 07.5	-0.2
	2.8nm,0.8s						
BDFB	Brasilia	40.17	118	LR	LR	09 36 09.4	
	comp=Z,159nm,18.3s,baz=284,slow=40						
BINY	Binghamton	40.43	10	*e*P	P	09 17 11.2	-0.5
	16nm,1.1s						
W13A	Hualapai Mount	42.59	323	*e*P	P	09 17 30.2	+0.6
	6.6nm,1.1s						
LONY	Lake Ozonia	43.02	10	*e*P	P	09 17 31.8	-1.0
	5.7nm,1.0s						
N23A	Red Feather La	43.05	336	*e*P	P	09 17 34.9	+1.4
	2.6nm,1.0s						
SRU	San Rafael Swe	43.68	330	*e*P	P	09 17 39.5	+1.1
	2.7nm,1.2s						
SHPR	Sheep Range	44.31	324	*e*P	P	09 17 45.4	+1.9
	2.5nm,1.1s						
D53A	Lac Vacive, Po	44.98	6	*e*P	P	09 17 46.8	-1.6
	2.6nm,1.0s						
RSSD	Black Hills	45.12	340	*e*P	P	09 17 51.5	+1.6
	1.9nm,0.6s						
TPNV	Topopah Spring	45.25	323	*e*P	P	09 17 51.2	+0.2
	4.4nm,1.1s						
R11A	Troy Canyon, C	45.82	325	*e*P	P	09 17 56.2	+0.7
	2.9nm,1.1s						
PD31	Pinedale Array	46.12	334	*e*PcP	PcP	09 19 32.9	-0.7
PDAR	Pinedale Array	46.12	334	P	P	09 17 57.3	-0.5
	0.6nm,0.8s,baz=132,slow=6.6,SNR=6.0						
PDAR				PcP	PcP	09 19 32.9	-0.7
	0.3nm,0.8s,baz=147,slow=3.9,SNR=2.8						
BW06	Boulder Array	46.12	334	*e*P	P	09 17 57.8	0.0
	3.0nm,1.1s						
MDND	Maddock	47.23	346	*e*P	P	09 18 06.4	+0.2
	35nm,1.0s						
ELK	Elko	47.32	328	*e*P	P	09 18 08.5	+1.3
NV11	Mina Array Sit	47.37	324	*e*P	P	09 18 08.9	+1.4
	0.4nm,1.1s						
NV01	Mina Array Sit	47.45	324	*e*PcP	PcP	09 19 37.5	-0.9
NVAR	Mina Array Bea	47.45	324	P	P	09 18 08.4	+0.1
	0.9nm,0.8s,baz=125,slow=7.0,SNR=7.6						
NVAR				PcP	PcP	09 19 37.5	-0.9
	0.5nm,0.8s,baz=138,slow=3.1,SNR=3.8						
NVAR				LR	LR	09 37 54.0	
	comp=Z,133nm,19.6s,baz=139,slow=36						
ULM	Lac du Bonnet	48.75	350	P	P	09 18 17.2	-0.6
	5.4nm,0.9s,baz=160,slow=6.3,SNR=5.7						
ULM				LR	LR	09 38 07.9	
	comp=Z,99nm,21.5s,baz=142,slow=35						
ULM	Lac du Bonnet	48.75	350	*e*P	P	09 18 17.7	-0.1
	16nm,1.1s						
HLID	Hailey	48.97	331	*e*P	P	09 18 20.4	+0.6
	2.1nm,1.0s						
MCMT	McKenzie Canyo	49.20	333	*e*P	P	09 18 22.1	+0.3
WALA	Waterton Lakes	52.97	336	*e*P	P	09 18 50.7	+0.9
	6.8nm,1.0s						
SCHQ	Schefferville	54.29	12	LR	LR	09 42 42.6	
	comp=Z,176nm,18.7s,baz=266,slow=37						
YKA	Yellowknife Ar	64.12	345	P	P	09 20 07.1	+0.1
	0.8nm,0.8s,baz=148,slow=5.9,SNR=4.6						
PPT	Papeete	67.14	250	LR	LR	09 41 34.4	
	comp=Z,204nm,18.1s,baz=110,slow=29						
DAWY	Dawson	73.26	338	*e*P	P	09 21 04.3	+0.2
	2.3nm,1.0s						
INK	Inuvik	73.72	343	P	P	09 21 07.1	+0.5
	1.7nm,0.9s,baz=122,slow=4.1,SNR=3.1						
INK	Inuvik	73.72	343	*e*P	P	09 21 07.3	+0.6
	7.8nm,1.1s						
DOT	Dot Lake	74.86	336	*e*P	P	09 21 14.2	+0.7
	5.5nm,1.1s						
ILAR	Eielson Array	76.46	337	P	P	09 21 21.7	-0.9
	0.8nm,0.9s,baz=127,slow=3.8,SNR=7.4						
ESDC	Sonseca Array	81.18	50	P	P	09 21 48.1	-0.9
	0.1nm,0.3s,baz=266,slow=5.9,SNR=4.4						
TOA1	Torodi Ar. Sit	85.69	77	*e*P	P	09 22 11.6	-1.1
TORD	Torodi Ar. Bea	85.70	77	P	P	09 22 11.6	-1.1
	0.6nm,0.9s,baz=280,slow=5.5,SNR=4.0						
VYHS	Vyhne	97.04	41	*e*P	P	09 23 03.3	-1.7
VNDA	Vanda	97.27	192	LR	LR	09 59 50.6	
	comp=Z,42nm,18.6s,baz=132,slow=31						
KSH	Kashi	134.65	21	*e*PKP	PKiKP	09 28 58.0	+4.5
KSH				PKS	PKSdf	09 32 30.9	+2.3
LZH	Lanzhou	141.03	349	*e*PKP	PKPdf	09 29 05.3	+1.3
LZH				pPKP	PKiKP	09 29 10.4	+3.7
LZH				sPKP		09 29 12.1	
LZH				LR	LR		
	comp=N,55nm,18.3s						
LZH				LR	LR		
	comp=E,49nm,18.1s						
LZH				LR	LR		
	comp=Z,76nm,20.0s						
CD2	Chengdu	146.06	347	PKPbc	PKPab	09 29 14.5	+0.3

NNC ***15*** *09:13:29.2±2.4, 53°.45N×87°.69E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=19.6km s-min=11.7km az=61.0, Suspected Mining explosion.*

IDC 15 09:13:29.4±2.9**, 53°.53N**×**87°.70E, h0**^{km}**, mb1 3.5**/2**, mb1mx3.1**/36**, mbtmp3.5**/2**, ML3.0**/2**, 2C-6D, Error ellipse: s-maj=23.8km s-min=14.4km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	1.76	285	⇓Pn	Pn	09 14 00.8	-0.3
	0.6nm,0.3s						
ZAA0				⇑Lg	Lg	09 14 25.9	
	3.2nm,0.7s						
ZALV	Zalesovo Beam	1.76	285	Pg	Pn	09 14 00.8	-0.3
	4.2nm,0.3s,baz=99,slow=14,SNR=25						
ZALV				Lg	Lg	09 14 25.7	
	4.8nm,0.3s,baz=104,slow=25,SNR=16						
ZALV				*i*		09 25 10.1	
	7.7nm,0.3s,baz=106,slow=32,SNR=22						
I46RU	ZALESOVO INFRA	1.76	285	*i*		09 25 08.7	
	baz=100,slow=293,SNR=1.8						
KURBB	Kurchatov Arra	6.36	246	Pn	Pn	09 15 05.2	+0.9
	0.3nm,0.3s,baz=63,slow=14,SNR=6.0						
KURBB				Sn	Sn	09 16 16.1	-1.4
	baz=51,slow=35,SNR=2.5						
KURBB				Lg	Lg	09 16 52.0	
	0.1nm,0.3s,baz=68,slow=38,SNR=6.0						
KURBB	Kurchatov Arra	6.36	246	⇑Pn	Pn	09 15 05.0	+0.7
	2.3nm,0.3s						
KURBB				⇓Sn	Sn	09 16 16.2	-1.3
	6.1nm,0.8s						
KURBB				⇓Lg	Lg	09 16 51.9	
	8.7nm,0.8s						
MK31	Makanchi Array	7.58	209	⇓Pn	Pn	09 15 19.4	-1.7
	3.1nm,1.1s,baz=28,slow=12,SNR=10						
MK31				⇓Sn	Sn	09 16 47.6	-0.1
	0.8nm,0.6s						
MK31				⇓Lg	Lg	09 17 26.7	
	2.6nm,0.8s						
MKAR	Makanchi Array	7.58	209	Pn	Pn	09 15 22.3	+1.2
	0.2nm,0.3s,baz=28,slow=13,SNR=8.2						
MKAR				Sn	Sn	09 16 48.0	+0.3
	0.1nm,0.3s,baz=26,slow=24,SNR=3.5						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MKAR				Lg	Lg	09 17 26.3	
	0.1nm,0.3s,baz=24,slow=28,SNR=2.9						

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*DDA **15** 09:15:47.0, 38°.94N×25°.97E, h7^{km}±4^{km}, ML2.8*

*ISCJB **15** 09:15:48.7±0.5, 38°.95N±0°.02×26°.07E±0°.04, h7^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=3.2km az=161.2*

*ATH **15** 09:15:48.6, 38°.96N×26°.04E, h19^{km}±3^{km}, ML2.4/4, Error ellipse: s-maj=3.1km s-min=0.9km az=51.0*

*ISK **15** 09:15:48.2, 38°.98N×26°.11E, h9^{km}, ML2.5/8*

*THE **15** 09:15:49.7, 38°.97N×26°.03E, h0^{km}±2^{km}, ML2.2/2, Error ellipse: s-maj=2.4km s-min=0.9km az=215.0*

ISC 15 09:15:48.8±1.0**, 38°.98N**±0°.02×**26°.08E**±0°.03**, h12**^{km}±9^{km}**, n31, σ0^{s}63**/50**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.29**	**323**	PG	**Pg**	**09 15 54.8**	**+0.2**
SIGR				SG	**Sb**	**09 15 59.4**	**-1.3**
SIGR	**SIGRI**	**0.29**	**323**	P	**Pg**	**09 15 54.9**	**+0.2**
SIGR				S	**Sb**	**09 15 59.3**	**-1.4**
	930nm,0.3s						
SIGR	**SIGRI**	**0.29**	**323**	P	**Pg**	**09 15 54.8**	**+0.2**
SIGR				S	**Sb**	**09 15 59.6**	**-1.1**
SIGR				AML	AML	09 15 60.0	
	comp=E,2769μm,0.4s						
SIGR				AML	AML	09 16 00.2	
	comp=N,1596μm,0.5s						
PRK	**Paraskevi**	**0.31**	**30**	P	**Pb**	**09 15 56.0**	**-0.2**
PRK				S	**Sb**	**09 16 01.2**	**0.0**
PRK	**Paraskevi**	**0.31**	**30**	P	**Pb**	**09 15 56.0**	**-0.2**
PRK				S	**Sb**	**09 16 00.9**	**-0.3**
PRK				AML	AML	09 16 01.5	
	comp=E,3981μm,0.4s						
PRK				AML	AML	09 16 01.5	
	comp=N,4520μm,0.3s						
AYVA	**Ayvalik**	**0.58**	**56**	*i* P	**Pg**	**09 16 00.1**	**0.0**
AYVA				*i* S	**Sg**	**09 16 08.1**	**+0.3**
CHOS	**Chios island**	**0.59**	**181**	PG	**Pg**	**09 16 00.1**	**-0.3**
CHOS				SG	**Sb**	**09 16 09.4**	**-0.2**
CHOS	**Chios island**	**0.59**	**181**	P	**Pg**	**09 16 00.5**	**+0.1**
CHOS				S	**Sb**	**09 16 10.8**	**+1.2**
	comp=N,280nm,0.3s						
CHOS	**Chios island**	**0.59**	**181**	P	**Pg**	**09 15 59.9**	**-0.5**
CHOS				S	**Sg**	**09 16 08.0**	**-0.2**
CHOS				AML	AML	09 16 12.3	
	comp=N,479μm,0.3s						
CHOS				AML	AML	09 16 13.1	
	comp=E,640μm,0.2s						
DKL	**Dikili**	**0.65**	**82**	PG	**Pg**	**09 16 00.8**	**-0.7**
DKL				SG	**Sg**	**09 16 10.1**	**0.0**
URLA	**Izmir**	**0.74**	**147**	PG	**Pg**	**09 16 02.5**	**-0.7**
URLA	**Izmir**	**0.74**	**147**	*i* P	**Pg**	**09 16 02.5**	**-0.7**
URLA				*i* S	**Sg**	**09 16 13.2**	**+0.3**
URLA				IAML_P			
	comp=Z,2μm,0.3s						
ZEDA	**zmir-Bergama**	**0.78**	**91**	*i* P	**Pg**	**09 16 03.8**	**-0.2**
ZEDA				*i* S	**Sb**	**09 16 16.5**	**+1.6**
ZEDA				IAML_P			
	comp=Z,2μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.84**	**26**	*i* P	**Pb**	**09 16 05.7**	**+0.3**
BAYC				*i* S	**Sn**	**09 16 19.5**	**+0.6**
BOZC	**Bozcaada**	**0.86**	**359**	PG	**Pg**	**09 16 05.1**	**-0.3**
BOZC	**Bozcaada**	**0.86**	**359**	*i* P	**Pg**	**09 16 04.9**	**-0.5**
BOZC				*i* S	**Sb**	**09 16 17.9**	**+0.8**
BOZC				IAML_P			
	comp=Z,2μm,0.2s						
EZN	**Ezine**	**0.86**	**13**	PG	**Pg**	**09 16 05.0**	**-0.5**
EZN	**Ezine**	**0.86**	**13**	P	**Pg**	**09 16 05.8**	**+0.3**
EZN				S	**Sn**	**09 16 20.1**	**+0.7**
BLCB	**Balcova**	**0.96**	**128**	PG	**Pg**	**09 16 06.9**	**-0.5**
LIA	**Limnos Island**	**1.15**	**323**	P	**Pn**	**09 16 10.6**	**-0.1**
LIA	**Limnos Island**	**1.15**	**323**	P	**Pn**	**09 16 10.7**	**0.0**
LIA				S	**Sn**	**09 16 26.5**	**+0.2**
LIA				AML	AML	09 16 28.1	
	comp=E,197μm,0.4s						
LIA				AML	AML	09 16 29.2	
	comp=N,106μm,0.5s						
SMG	**Samos**	**1.41**	**155**	P	**Pb**	**09 16 14.9**	**-0.1**
SMG	**Samos**	**1.41**	**155**	P	**Pb**	**09 16 15.2**	**+0.2**
SMG				S	**Sg**	**09 16 34.2**	**+0.2**
BALY	**Balya**	**1.42**	**57**	*i* P	**Pn**	**09 16 12.9**	**-1.5**
BALY				*i* S	**Sn**	**09 16 33.7**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.45**	**12**	PN	**Pn**	**09 16 14.9**	**+0.1**
SMTH	**Samothraki Isl**	**1.55**	**344**	P	**Pb**	**09 16 17.2**	**-0.1**
SMTH				S	**Sg**	**09 16 39.7**	**+1.1**
SMTH	**Samothraki Isl**	**1.55**	**344**	P	**Pb**	**09 16 17.3**	**-0.1**
GONE	**Gonen-Balikesi**	**1.64**	**49**	PN	**Pn**	**09 16 17.3**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**125**	PN	**Pn**	**09 16 19.1**	**-0.2**
ALN	**Alexandroupoli**	**1.91**	**359**	P	**Pb**	**09 16 22.9**	**-0.7**
XOR	**Xorichti**	**2.27**	**281**	P	**Pn**	**09 16 26.5**	**+0.3**

MAN 15 09:17:48.3, 7°.33N×124°.84E, h9^{km}, mb4.1, ML2.9, MS2.6, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.41**	**142**	⇓*e*P	Pg	09 17 56.2	-0.1
KCP				*i* S	Sb	09 18 11.5	+7.5
BUKP	**Musuan**	**0.59**	**22**	*e*P	Pg	09 18 00.3	+0.5
BUKP				*e*S	Sb	09 18 09.7	+0.5
CTBH	**Cotabato--PC H**	**0.60**	**260**	⇓*i*P	Pg	09 17 59.5	-0.5
CTBH				*i* S	Sg	09 18 08.3	+0.5
SKMP	**Bagumbayan, Su**	**0.86**	**200**	*e*P	Pb	09 18 05.8	+0.4
SKMP				*e*S	Sg	09 18 16.1	+0.1
CGP	**Cagayan de Oro**	**1.13**	**353**	⇑*e*P	Pg	09 18 09.2	-0.8
CGP				*e*S	Sg	09 18 24.3	-0.4
DDMP	**Don Marcelino,**	**1.50**	**145**	*e*P	Pn	09 18 14.7	-0.6
DDMP				*e*S	Sg	09 18 38.6	+2.2

MEX 15 09:27:11.8±0.9**, 16°.76N×98°.94W, h30**^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**0.87**	**24**	*e*P	Pn	09 27 24.9	-3.3
TLIG				*e*S	Sb	09 27 36.6	-3.3
CAIG	**El Cayaco**	**1.30**	**283**	*e*P	Pn	09 27 30.9	-3.0
CAIG				*e*S	Sn	09 27 48.2	-2.2
MEIG	**Mezcala**	**1.33**	**331**	*e*P	Pn	09 27 32.2	-2.2
MEIG				*e*S	Sn	09 27 48.5	-2.6
ARIG	**Puente Sto Nin**	**2.02**	**319**	*e*P	Pn	09 27 42.0	-1.9
ARIG				*e*S	Sn	09 28 05.4	-2.8

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*ISCJB **15** 09:50:57.2±0.5, 70°.25N±0°.07×15°.5W±0°.2, h10^{km}, mb3.8/13, MS3.9/34, Error ellipse: s-maj=10.7km s-min=7.4km az=177.6*

*IDC **15** 09:50:57.9±0.6, 70°.10N×15°.88W, h0^{km}, mb3.7/12, mb1 4.0/17, mb1mx3.8/49, mbtmp3.8/17, ML3.5/4, MS4.0/39, Ms1 4.0/39, ms1mx3.9/52, Error ellipse: s-maj=19.8km s-min=13.5km az=29.0*

*GCMT **15** 09:50:58.0±0.3, 69°.94N±0°.04×15°.54W±0°.05, h12^{km}, MW4.8/78, Moment Tensor Solution. s12,c15; s78,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.76±.06; M$_{\theta\theta}$0.11±.07; M$_{\phi\phi}$1.65±.05; M$_{r\theta}$-0.66±.29; M$_{\theta\phi}$0.34±.05; M$_{\phi r}$-0.69±.22; Best double couple: M$_0$1.97900×10^{16} NP1:φ$_s$26.00000°, δ59.00000°, λ-76.00000°. NP2: φ$_s$180.00000°, δ34.00000°, λ-112.00000°. Principal axes: T 1.9060, Plg13.0000°, Azm105.0000°; N 0.1490, Plg12.0000°, Azm198.0000°; P -2.0520, Plg72.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

*NAO **15** 09:51:04.1±3.1, 70°.42N×14°.06W, ML4.2*

ISC 15 09:50:59.2±0.5**, 70°.22N**±0°.07×**15°.44W**±0°.05**, h10**^{km}**, n64, σ1^{s}89**/38**, mb3.8**/13**, MS3.9**/34**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**2.22**	**280**	*i* P	**Pn**	**09 51 33.6**	**-2.3**
JMI	**Jan Mayen**	**2.35**	**69**	*e*P	**Pn**	**09 51 33.6**	**-4.2**
JMIC	**Jan Mayen**	**2.44**	**68**	Pn	**Pn**	**09 51 36.5**	**-2.5**
JMIC				Lg	Lg	09 52 05.7	
JMIC	**Jan Mayen**	**2.44**	**68**	Pn	**Pn**	**09 51 36.6**	**-2.4**
	4.8nm,0.3s,baz=342,slow=20,SNR=3.4						
JMIC				Sn	**Sn**	**09 52 04.8**	**-4.0**
	4.5nm,0.3s,baz=234,slow=19,SNR=3.6						
JMIC	**Jan Mayen**	**2.44**	**68**	*e*P	**Pn**	**09 51 36.6**	**-2.4**
JNW	**Jan Mayen West**	**2.48**	**67**	*e*P	**Pn**	**09 51 37.0**	**-2.5**
JNE	**Jan Mayen East**	**2.51**	**69**	*e*P	**Pn**	**09 51 36.9**	**-3.0**
BORG	**Borgarnes**	**5.94**	**205**	Pn	**Pn**	**09 52 23.8**	**-3.1**
	3.8nm,0.3s,baz=349,slow=5.4,SNR=16						
KBS	**Kingsbay**	**11.20**	**27**	Pn	**Pn**	**09 53 39.1**	**+0.1**
KBS	**Kingsbay**	**11.20**	**27**	*e*P	Pn	09 53 45.1	+6.1
SPA0	**Spitsbergen Ar**	**11.56**	**33**	Pn	**Pn**	**09 53 46.5**	**+2.5**
	baz=239,slow=16						
SPA0	**Spitsbergen Ar**	**11.56**	**33**	P	**Pn**	**09 53 46.5**	**+2.5**
	baz=239,slow=16						
SPITS	**Spitsbergen Ar**	**11.56**	**33**	Pn	**Pn**	**09 53 45.5**	**+1.6**
	baz=228,slow=12,SNR=9.1						
SPITS				LR	LR	09 57 08.9	
	comp=Z,602nm,21.7s,baz=245,slow=32						
ARCES	**ARCESS Array B**	**13.92**	**73**	LR	LR	09 58 37.9	
	comp=Z,654nm,19.0s,baz=304,slow=33						
NOA	**NORSAR Array B**	**14.19**	**117**	LR	LR	09 59 09.9	
	comp=Z,457nm,21.1s,baz=320,slow=34						
HFS	**Hagfors**	**15.66**	**116**	P	**P**	**09 54 44.6**	**+0.9**
	baz=329,slow=12						
HFS	**Hagfors**	**15.66**	**116**	Pn	**Pn**	**09 54 40.4**	**+0.8**
	0.0nm,0.3s,baz=334,slow=13,SNR=2.4						
HFS				LR	LR	09 59 55.3	
	comp=Z,764nm,21.7s,baz=298,slow=34						
HFS	**Hagfors**	**15.66**	**116**	P	**P**	**09 54 44.6**	**+0.9**
	baz=329,slow=12						
EKA	**Eskdalemuir Ar**	**15.90**	**154**	P	**P**	**09 54 47.6**	**+1.3**
EKA	**Eskdalemuir Ar**	**15.90**	**154**	Pn	**Pn**	**09 54 42.0**	**-0.7**
	baz=343,slow=11,SNR=2.6						
EKA	**Eskdalemuir Ar**	**15.90**	**154**	P	**P**	**09 54 47.6**	**+1.3**
APA0	**Apatity Array**	**17.24**	**75**	P	**Pn**	**09 55 00.3**	**+0.6**
	baz=263,slow=18						
FIA0	**FINESS Array S**	**18.72**	**97**	P	**Pn**	**09 55 18.6**	**+0.8**
	baz=323,slow=10						
FIA0	**FINESS Array S**	**18.72**	**97**	P	**Pn**	**09 55 18.6**	**+0.8**
	baz=323,slow=10						
FINES	**FINESS Array B**	**18.72**	**97**	P	**P**	**09 55 17.4**	**0.0**
	0.2nm,0.3s,baz=324,slow=9.4,SNR=7.5						
FINES				LR	LR	10 01 40.7	
	comp=Z,1μm,20.0s,baz=321,slow=34						
FRB	**Frobisher Bay**	**21.09**	**279**	LR	LR	10 03 42.5	
	comp=Z,835nm,18.6s,baz=46,slow=36						
RES	**Resolute Bay**	**22.63**	**317**	LR	LR	10 04 38.5	
	comp=Z,581nm,21.2s,baz=84,slow=36						
PRGR	**Permogore**	**25.21**	**79**	*e*P	**P**	**09 56 22.5**	**-1.9**
	15nm,0.5s						
GERES	**GERESS Array B**	**25.53**	**132**	P	**P**	**09 56 28.0**	**+0.3**
	1.3nm,0.6s,baz=342,slow=8.4,SNR=4.9						
GERES				LR	LR	10 05 54.3	
	comp=Z,265nm,21.6s,baz=334,slow=35						
VRAC	**Vranov**	**25.87**	**127**	LR	LR	10 07 03.6	
	comp=Z,435nm,18.3s,baz=336,slow=37						
DAVOX	**Davos/Dischmat**	**26.55**	**139**	LR	LR	10 07 23.0	
	comp=Z,358nm,19.7s,baz=263,slow=37						
OBN	**Obninsk**	**27.13**	**97**	LR	LR	10 06 52.7	
	comp=Z,150nm,19.3s,baz=350,slow=35						
SCHQ	**Schefferville**	**27.15**	**262**	LR	LR	10 06 29.7	
	comp=Z,443nm,21.9s,baz=42,slow=34						
AKASG	**Malin Array Be**	**28.40**	**110**	P	**P**	**09 56 53.9**	**+0.6**
	0.7nm,0.5s,baz=329,slow=9.4,SNR=3.1						
AKASG				LR	LR	10 07 43.1	
	comp=Z,410nm,20.5s,baz=325,slow=35						
ESDC	**Sonseca Array**	**31.19**	**163**	P	**P**	**09 57 17.8**	**-0.3**
	0.2nm,0.3s,baz=339,slow=7.3,SNR=3.6						
ESDC				LR	LR	10 09 39.1	
	comp=Z,210nm,18.5s,baz=340,slow=36						
MLR	**Muntele Rosu**	**32.00**	**119**	LR	LR	10 10 44.4	
	comp=Z,234nm,20.3s,baz=298,slow=37						
ARU	**Arti**	**33.49**	**75**	LR	LR	10 10 34.7	
	comp=Z,455nm,18.2s,baz=348,slow=35						
YKA	**Yellowknife Ar**	**36.14**	**309**	P	**P**	**09 58 00.8**	**-0.1**
	1.4nm,0.9s,baz=33,slow=7.4,SNR=3.6						
YKA				LR	LR	10 12 48.7	
	comp=Z,39nm,18.9s,baz=34,slow=36						
TIXI	**Tiksi**	**36.46**	**18**	LR	LR	10 13 31.9	
	comp=Z,57nm,18.1s,baz=352,slow=37						
KEST	**Kesra**	**37.04**	**146**	LR	LR	10 13 29.9	
	comp=Z,162nm,18.4s,baz=292,slow=36						
AKTO	**Aktyubinsk**	**38.29**	**82**	LR	LR	10 13 25.6	
	comp=Z,342nm,18.1s,baz=339,slow=35						
KVAR	**Kislovodsk Arr**	**38.72**	**101**	LR	LR	10 14 35.8	
	comp=Z,233nm,18.1s,baz=280,slow=36						
KBZ	**Khabaz**	**38.99**	**101**	P	**P**	**09 58 27.7**	**+2.6**
	0.9nm,0.4s,baz=330,slow=8.1,SNR=2.1						
KBZ				LR	LR	10 14 09.9	
	comp=Z,399nm,19.6s,baz=322,slow=36						
BRTR	**Keskin Array B**	**39.60**	**114**	P	**P**	**09 58 32.0**	**+1.6**
	1.0nm,0.8s,baz=342,slow=9.1,SNR=3.0						
BRTR				LR	LR	10 15 13.0	
	comp=Z,180nm,21.9s,baz=325,slow=37						
ULM	**Lac du Bonnet**	**40.78**	**284**	LR	LR	10 16 00.2	
	comp=Z,107nm,20.7s,baz=29,slow=37						
IDI	**Anoyia**	**41.14**	**126**	LR	LR	10 17 09.3	
	comp=Z,114nm,19.3s,baz=136,slow=38						
ILAR	**Eielson Array**	**41.16**	**331**	P	**P**	**09 58 43.9**	**+1.0**
	0.9nm,1.1s,baz=20,slow=6.9,SNR=5.6						
ILAR				LR	LR	10 19 37.8	
	comp=Z,143nm,19.2s,baz=58,slow=42						
ZALV	**Zalesovo Beam**	**43.73**	**57**	LR	LR	10 19 11.7	
	comp=Z,131nm,21.9s,baz=258,slow=39						
KURBB	**Kurchatov Arra**	**44.78**	**64**	P	**P**	**09 59 13.8**	**+1.4**
	0.7nm,0.5s,baz=335,slow=7.8						
MMAI	**Mount Meron Ar**	**46.33**	**116**	LR	LR	10 19 18.1	
	comp=Z,80nm,21.8s,baz=30,slow=37						
GEYT	**Alibeck**	**49.32**	**90**	LR	LR	10 22 20.7	
	comp=Z,378nm,18.8s,baz=355,slow=38						
MKAR	**Makanchi Array**	**49.33**	**64**	P	**P**	**09 59 49.0**	**+1.0**
	0.7nm,0.7s,baz=325,slow=7.4,SNR=2.7						
MKAR				LR	LR	10 22 52.0	
	comp=Z,118nm,19.9s,baz=330,slow=39						
AAK	**Ala-Archa**	**50.59**	**73**	LR	LR	10 20 58.5	
	comp=Z,155nm,18.3s,baz=312,slow=36						
PDAR	**Pinedale Array**	**51.82**	**291**	P	**P**	**10 00 05.7**	**-1.4**
	0.3nm,0.7s,baz=56,slow=2.3,SNR=3.2						
PETK	**Petropavlovsk-**	**56.88**	**5**	LR	LR	10 23 00.7	
	comp=Z,50nm,21.5s,slow=34						
TORD	**Torodi Ar. Bea**	**58.03**	**160**	P	**P**	**10 00 51.5**	**-0.5**
	1.5nm,0.9s,baz=354,slow=10.0,SNR=6.3						
TORD				LR	LR	10 26 06.5	
	comp=Z,78nm,18.4s,baz=335,slow=36						
NVAR	**Mina Array Bea**	**58.50**	**296**	LR	LR	10 26 53.1	
	comp=Z,496nm,18.8s,baz=18,slow=37						
TXAR	**Lajitas Array**	**62.13**	**279**	P	**P**	**10 01 20.0**	**-0.1**
	0.7nm,0.8s,baz=44,slow=4.6,SNR=9.0						
TXAR				LR	LR	10 28 31.9	
	comp=Z,507nm,18.6s,baz=0.0,slow=36						
DBIC	**Dimbokro**	**63.83**	**168**	LR	LR	10 28 34.0	
	comp=Z,69nm,19.2s,baz=352,slow=35						
KSRS	**Korea Array**	**69.39**	**30**	LR	LR	10 33 28.2	
	comp=Z,53nm,18.4s,baz=306,slow=37						
CMAR	**Chiang Mai Arr**	**80.65**	**61**	LR	LR	10 43 06.7	
	comp=Z,67nm,20.9s,baz=178,slow=39						
BDFB	**Brasilia**	**88.60**	**211**	LR	LR	10 36 43.9	
	comp=Z,88nm,19.4s,baz=315,slow=31						
ASAR	**Alice Springs**	**130.08**	**38**	PKP	**PKiKP**	**10 10 08.9**	**-0.6**
	1.0nm,1.1s,baz=126,slow=3.2,SNR=4.4						
MAW	**Mawson**	**147.35**	**136**	PKPbc	**PKPbc**	**10 10 41.1**	**+0.1**
	2.5nm,0.9s,baz=279,slow=6.9,SNR=3.2						

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*ISCJB **15** 09:52:29.8±2.4, 6°.60N±0°.09×127°.23E±0°.06, h2^{km}±16^{km}, mb3.7/4, Error ellipse: s-maj=15.4km s-min=8.6km az=22.4*

*MAN **15** 09:52:35.5, 6°.66N×126°.92E, h1^{km}, mb4.8, ML3.7, MS3.6*

*IDC **15** 09:52:39.5±2.4, 5°.97N×125°.91E, h49^{km}±31^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.2/53, mbtmp3.7/4, Error ellipse: s-maj=159.5km s-min=18.6km az=67.0*

ISC 15 09:52:31.4±3.3**, 6°.74N**±0°.09×**127°.19E**±0°.08**, h7**^{km}±19^{km}**, n12, σ1^{s}64**/19**, mb3.9**/4**, 3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.95**	**283**	*e*P	**Pb**	**09 52 49.6**	**-0.6**
MATI				*e*S	**Sb**	**09 53 01.2**	**-1.8**
DDMP	**Don Marcelino,**	**1.60**	**247**	*e*P	**Pn**	**09 53 00.6**	**+0.5**
DDMP				*e*S	**Sn**	**09 53 19.6**	**-1.4**
DAV	**Davao City (W)**	**1.63**	**282**	P	**Pn**	**09 52 58.6**	**-2.0**
	42nm,0.3s,baz=115,slow=14,SNR=2.0						
DAV				S	**Sb**	**09 53 23.4**	**+0.7**
	75nm,0.3s,baz=240,slow=20,SNR=10.0						
DMPH	**Davao City--Mi**	**1.71**	**282**	⇓*i*P	**Pn**	**09 53 02.6**	**+1.1**
DMPH				*i* S	**Sg**	**09 53 26.4**	**+0.1**
KCP	**Kidapawan**	**2.10**	**277**	⇓*i*P	**Pn**	**09 53 08.8**	**+1.7**
KCP				*i* S	**Sn**	**09 53 33.3**	**-0.2**
BUKP	**Musuan**	**2.40**	**298**	*e*P	**Pn**	**09 53 10.9**	**-0.2**
BUKP				*e*S	**Sb**	**09 53 45.6**	**+0.9**
BUTP	**Butuan**	**2.71**	**325**	*e*P	**Sb**	**09 53 51.2**	**-2.4**
CTBH	**Cotabato--PC H**	**2.96**	**279**	⇓*i*P	**Pn**	**09 53 20.7**	**+1.9**
WRA	**Warramunga Arr**	**27.43**	**165**	P	**P**	**09 58 18.5**	**+0.5**
	1.1nm,0.3s,baz=340,slow=12,SNR=16						
ASAR	**Alice Springs**	**30.92**	**168**	P	**P**	**09 58 47.8**	**-1.3**
	0.2nm,0.3s,baz=342,slow=7.1,SNR=9.0						
ASAR				PcP	**PcP**	**10 01 44.2**	**-1.6**
	0.2nm,0.4s,baz=352,slow=2.4,SNR=6.1						
MKAR	**Makanchi Array**	**55.38**	**324**	P	**P**	**10 02 09.6**	**+3.3**
	0.3nm,0.4s,baz=112,slow=8.2,SNR=3.8						
KURBB	**Kurchatov Arra**	**59.49**	**326**	P	**P**	**10 02 36.0**	**+0.9**
	0.8nm,0.5s,baz=124,slow=6.5,SNR=6.6						

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*IDC **15** 10:32:24.6±1.6, 8°.65S×67°.69E, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.5/43, mbtmp3.6/4, MS3.3/1, Ms1 3.5/1, ms1mx2.7/38, Error ellipse: s-maj=40.1km s-min=31.3km az=50.0*

ISC 15 10:32:26.6±1.6**, 8°.3S**±0°.2×**67°.6E**±0°.2**, h10**^{km}**, n15, σ1^{s}33**/12**, mb3.7**/4**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N3	**Diego Garcia H**	**3.87**	**59**	Pn	**Pn**	**10 33 25.0**	**-1.0**
H08N3				T	T	10 37 46.2	
	baz=230,slow=76,SNR=237						
H08N2	**Diego Garcia H**	**3.89**	**59**	Pn	**Pn**	**10 33 25.0**	**-1.2**
H08N2				T	T	10 37 50.9	
	baz=230,slow=76,SNR=222						
H08N1	**Diego Carcia H**	**3.89**	**60**	Pn	**Pn**	**10 33 25.0**	**-1.3**
H08N1				T	T	10 37 49.2	
	baz=230,slow=76,SNR=313						
H08S1	**Diego Carcia H**	**4.84**	**82**	Pn	**Pn**	**10 33 40.2**	**+0.9**
	baz=280,slow=14,SNR=12						
H08S3	**Diego Garcia H**	**4.85**	**82**	Pn	**Pn**	**10 33 39.9**	**+0.4**
	baz=280,slow=14,SNR=120						
H08S2	**Diego Garcia H**	**4.86**	**82**	Pn	**Pn**	**10 33 40.0**	**+0.5**
	baz=280,slow=14,SNR=20						
CMAR	**Chiang Mai Arr**	**40.78**	**49**	P	**P**	**10 40 10.2**	**+1.8**
	1.0nm,0.7s,baz=235,slow=10.0,SNR=4.8						
CMAR				LR	LR	10 56 51.3	
	comp=Z,35nm,18.6s,baz=205,slow=36						
H01W3	**Cape Leeuwin H**	**50.05**	**129**	T	T	11 34 55.9	
	baz=290,slow=75,SNR=19						
H01W2	**Cape Leeuwin H**	**50.05**	**129**	T	T	11 34 52.8	
	baz=290,slow=75,SNR=25						
H01W1	**Cape Leeuwin H**	**50.07**	**129**	T	T	11 34 57.8	
	baz=290,slow=75,SNR=18						
MKAR	**Makanchi Array**	**56.42**	**12**	P	**P**	**10 42 09.2**	**+0.8**
	0.4nm,0.8s,baz=190,slow=7.3,SNR=2.6						
ASAR	**Alice Springs**	**64.99**	**112**	P	**P**	**10 43 06.2**	**-1.2**
	0.3nm,0.5s,baz=280,slow=6.2,SNR=7.2						
WRA	**Warramunga Arr**	**65.35**	**108**	P	**P**	**10 43 07.6**	**-2.1**
	0.8nm,0.9s,baz=270,slow=9.2,SNR=2.7						
PDAR	**Pinedale Array**	**145.62**	**356**	PKPbc	**PKPdf**	**10 52 05.3**	**-0.6**
	0.1nm,0.5s,baz=264,slow=0.9,SNR=2.5						
NVAR	**Mina Array Bea**	**149.57**	**9**	PKPbc	**PKiKP**	**10 52 18.9**	**+0.6**
	0.4nm,0.7s,baz=345,slow=0.8,SNR=3.7						

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*IDC **15** 10:38:56.2±2.0, 39°.64N×140°.58E, h0^{km}, mb3.3/1, mb1 3.2/4, mb1mx3.1/39, mbtmp3.1/4, ML2.3/3, Error ellipse: s-maj=51.5km s-min=25.5km az=102.0*

*ISCJB **15** 10:38:58.0±0.6, 39°.63N±0°.03×140°.45E±0°.05, h18^{km}±6^{km}, mb3.5/1, Error ellipse: s-maj=6.2km s-min=5.3km az=19.1*

*JMA **15** 10:38:58.5, 39°.61N×140°.44E, h7^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1: φ$_s$282.00000°, δ78.00000°, λ62.00000°. NP2: φ$_s$171.00000°, δ30.00000°, λ156.00000°. Principal axes: T Plg49.0000°, Azm162.0000°; N Plg27.0000°, Azm288.0000°; P Plg28.0000°, Azm34.0000°;*

JMA Felt II J1.

ISC 15 10:38:58.0±1.1**, 39°.64N**±0°.04×**140°.50E**±0°.04**, h9**^{km}±8^{km}**, n17, σ0^{s}69**/19**, 2C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYW	**Yuwa**	**0.25**	**246**	⇓P	**Pg**	**10 39 02.8**	**-0.2**
JYW				S	**Sg**	**10 39 06.4**	**0.0**
JRG	**Rokugo**	**0.27**	**158**	⇑P	**Pg**	**10 39 03.8**	**+0.4**
JRG				S	**Sg**	**10 39 08.0**	**+1.0**
JAH	**Hinai**	**0.55**	**11**	⇓P	**Pb**	**10 39 10.3**	**+0.4**
JAH				S	**Sb**	**10 39 18.5**	**+0.5**
JOM	**Ohasama**	**0.63**	**105**	P	**Pb**	**10 39 11.2**	**-0.1**
JOM				S	**Sb**	**10 39 20.2**	**0.0**
JYK	**Kaneyama**	**0.73**	**189**	⇓P	**Pg**	**10 39 11.2**	**-1.0**
JYK				S	**Sg**	**10 39 20.2**	**-1.5**
JMK	**Ichinoseki**	**0.89**	**141**	⇑P	**Pg**	**10 39 14.9**	**-0.2**
JMK				S	**Sg**	**10 39 26.5**	**-0.1**
MAT	**Matsushiro**	**3.59**	**211**	P	**Pn**	**10 39 54.4**	**+0.6**
MAT				S	**Sn**	**10 40 37.2**	**+0.8**
MJAR	**Matsushiro Arr**	**3.59**	**211**	Pn	**Pn**	**10 39 54.3**	**+0.4**
	0.2nm,0.3s,baz=19,slow=15,SNR=12						
MJAR				Sn	**Sn**	**10 40 36.5**	**+0.2**
	0.2nm,0.3s,baz=298,slow=8.9,SNR=4.8						
ASAJ	**Asahikawa**	**4.73**	**19**	Pn	**Pn**	**10 40 08.8**	**-0.7**
	0.2nm,0.3s,baz=235,slow=18,SNR=4.2						
USRK	**Ussuriysk Ar.**	**7.81**	**308**	Pn	**Pn**	**10 40 51.5**	**-0.3**
	0.4nm,0.3s,baz=116,slow=14,SNR=6.7						
H11N2	**WAKE ISLAND Hy**	**30.14**	**123**	T	T	11 15 53.4	
	baz=317,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**30.15**	**124**	T	T	11 15 51.1	
	baz=317,slow=75,SNR=28						
H11N3	**WAKE ISLAND Hy**	**30.16**	**123**	T	T	11 15 49.5	
	baz=317,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**30.91**	**125**	T	T	11 16 48.5	
	baz=322,slow=74						
H11S3	**WAKE ISLAND Hy**	**30.92**	**125**	T	T	11 16 49.9	
	baz=322,slow=74						
H11S2	**WAKE ISLAND Hy**	**30.93**	**125**	T	T	11 16 49.6	
	baz=322						
ASAR	**Alice Springs**	**63.28**	**187**	P	**P**	**10 49 26.6**	**-0.5**
	0.3nm,0.7s,baz=8.8,slow=7.3,SNR=4.5						

IDC 15 10:44:26.4±1.6**, 11°.53S×164°.85E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.6**/25**, mbtmp3.8**/5**, ML3.6**/1**, Error ellipse: s-maj=48.4km s-min=31.0km az=122.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.59**	**172**	Pn	Pn	10 46 58.0	-1.6
	0.4nm,0.3s,baz=303,slow=24,SNR=20						
WRA	**Warramunga Arr**	**30.49**	**250**	P	P	10 50 42.0	+0.6
	0.8nm,0.5s,baz=74,slow=8.5,SNR=6.9						
ASAR	**Alice Springs**	**31.79**	**244**	P	P	10 50 52.6	-0.2
	0.5nm,0.8s,baz=73,slow=9.2,SNR=5.1						
ILAR	**Eielson Array**	**84.25**	**19**	P	P	10 57 00.2	+0.6
	0.2nm,0.6s,baz=227,slow=5.7,SNR=5.3						
MKAR	**Makanchi Array**	**93.27**	**317**	P	P	10 57 42.3	-0.8
	0.4nm,0.5s,baz=93,slow=7.2,SNR=2.9						

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*IDC **15** 10:59:35.4±1.2, 70°.02N×15°.49W, h0^{km}, mb3.4/3, mb1 3.9/8, mb1mx3.5/48, mbtmp3.7/8, ML2.8/5, MS2.9/2, Ms1 2.9/2, ms1mx2.6/37, Error ellipse: s-maj=30.3km s-min=21.3km az=176.0*

*REY **15** 10:59:48.6, 69°.76N×14°.45W, h10^{km}*

ISC 15 10:59:37.1±0.7**, 69°.91N**±0°.05×**14°.80W**±0°.05**, h10**^{km}**, n22, σ1^{s}55**/30**, mb3.3**/3**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**2.38**	**60**	Pn	**Pn**	**11 00 15.6**	**-0.5**
	1.2nm,0.3s,baz=124,slow=16,SNR=2.8						
JMIC				Sn	**Sn**	**11 00 45.5**	**+0.4**
	2.7nm,0.3s,baz=8.1,slow=19,SNR=2.7						
JMIC				LR	LR	11 00 59.4	
	comp=Z,98nm,19.8s,baz=246,slow=33						
SCO	**Scoresbysund**	**2.50**	**287**	*i* P	**Pn**	**11 00 20.1**	**+2.3**
SCO				*e*S	**Sn**	**11 00 48.2**	**-0.1**
IGRI	**Grimsey**	**3.59**	**201**	P	**Pb**	**11 00 43.4**	**+2.9**
	baz=204						
IGIL	**Gilhagi**	**3.90**	**189**	P	**Pb**	**11 00 46.8**	**+1.0**
	baz=192						
IHED	**Heoinshofoi**	**3.96**	**195**	P	**Pb**	**11 00 48.2**	**+1.3**
	baz=198						
IHED				S	**Sb**	**11 01 35.0**	**+0.2**
	baz=198						
IBRE	**Brettingsstaoi**	**3.98**	**199**	P	**Pb**	**11 00 49.0**	**+1.8**
	baz=201						
IBRE				S	**Sb**	**11 01 36.0**	**+0.6**

	baz=201						
IDIM	Dimmadalss	4.05	192	S	Sb	11 01 38.1	+0.8
	baz=195						
IDIM				P	Pb	11 00 49.3	+0.9
	baz=195						
IGHA	Grjothals	4.15	191	P	Pb	11 00 51.3	+1.3
	baz=193						
IGHA				S	Sb	11 01 40.5	+0.4
	baz=193						
IGRA	Granastaoir	4.15	196	P	Pb	11 00 51.2	+1.2
	baz=199						
IGRA				S	Sb	11 01 40.0	-0.1
	baz=199						
ISKI	Skildingahlsh	4.15	193	P	Pb	11 00 51.4	+1.3
	baz=195						
IHLA	Hella	4.21	200	P	Pb	11 00 52.4	+1.3
	baz=203						
IHLA				S	Sb	11 01 41.1	-0.8
	baz=203						
IHRN	Hraun	4.31	210	P	Pb	11 00 54.0	+1.2
	baz=213						
IHRN				S	Sb	11 01 44.0	-0.8
	baz=213						
IREN	Reynihlio	4.36	192	P	Pb	11 00 55.0	+1.3
	baz=194						
IADA	Aoalbol	4.92	184	P	Pb	11 01 01.5	-1.8
	baz=186						
BORG	Borgarnes	5.76	209	Pn	Pn	11 01 01.4	-1.1
	0.8nm,0.3s,baz=337,slow=9.6,SNR=3.7						
SPITS	Spitsbergen Ar	11.70	32	Pn	Pn	11 02 24.9	+1.1
	baz=226,slow=12,SNR=3.9						
HFS	Hagfors	15.33	115	Pn	Pn	11 03 14.8	+1.6
	0.0nm,0.3s,baz=350,slow=16,SNR=2.2						
FINES	FINESS Array B	18.46	97	P	Pn	11 03 56.0	+3.4
	0.1nm,0.3s,baz=329,slow=10,SNR=2.5						
MLR	Muntele Rosu	31.66	119	LR	LR	11 18 48.0	
	comp=Z,46nm,21.3s,baz=295,slow=36						
ILAR	Eielson Array	41.53	331	P	P	11 07 22.2	-1.7
	0.6nm,1.0s,baz=23,slow=7.1,SNR=5.7						
PDAR	Pinedale Array	52.14	292	P	P	11 08 45.5	-1.9
	0.1nm,0.3s,baz=58,slow=3.5,SNR=4.7						
TXAR	Lajitas Array	62.40	280	P	P	11 09 57.5	-2.4
	0.4nm,1.0s,baz=22,slow=6.9,SNR=3.9						

IDC 15 11:02:58.4±1.6**, 69°.96N×15°.76W, h0^{km}, mb3.5**/2**, mb1 3.8**/5**, mb1mx3.4**/51**, mbtmp3.7**/5**, ML3.3**/3**, MS3.2**/3**, Ms1 3.2**/3**, ms1mx2.8**/35**, Error ellipse: s-maj=35.1km s-min=29.4km az=165.0, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	5.65	205	Pn	Pn	11 04 24.3	+0.8
	2.0nm,0.3s,baz=3.8,slow=6.5,SNR=7.8						
BORG				LR	LR	11 06 11.8	
	comp=Z,195nm,18.4s,baz=358,slow=34						
SPITS	Spitsbergen Ar	11.84	32	Pn	Pn	11 05 49.1	+0.9
	baz=256,slow=16,SNR=3.5						
SPITS				LR	LR	11 09 09.7	
	comp=Z,117nm,19.2s,baz=140,slow=31						
FINES	FINESS Array B	18.80	96	P	P	11 07 18.4	-0.5
	0.2nm,0.3s,baz=324,slow=9.4,SNR=4.5						
RES	Resolute Bay	22.75	318	LR	LR	11 15 18.9	
	comp=Z,62nm,21.2s,baz=257,slow=33						
YKA	Yellowknife Ar	36.22	309	P	P	11 10 02.4	+0.1
	1.4nm,0.9s,baz=36,slow=9.2,SNR=2.9						
TXAR	Lajitas Array	62.06	279	P	P	11 13 20.1	-0.4
	0.2nm,0.7s,baz=31,slow=5.6,SNR=3.1						

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*ISCJB **15** 11:03:35.9±0.7, 69°.99N±0°.08×15°.6W±0°.2, h10^{km}, mb3.6/4, Error ellipse: s-maj=12.0km s-min=10.3km az=169.9*

*IDC **15** 11:03:36.6±1.1, 69°.97N×15°.70W, h0^{km}, mb3.6/4, mb1 3.8/11, mb1mx3.6/58, mbtmp3.7/11, ML3.3/6, MS3.3/1, Ms1 3.3/1, ms1mx2.6/37, Error ellipse: s-maj=26.2km s-min=18.1km az=5.0*

ISC 15 11:03:37.8±0.8**, 69°.98N**±0°.09×**15°.54W**±0°.08**, h10^{km}, n11, σ0^{s}.86**/11**, mb3.6**/4**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	2.57	63	Pn	Pn	11 04 18.4	-1.0
	7.4nm,0.3s,baz=207,slow=7.9,SNR=3.5						
BORG	Borgarnes	5.71	206	Pn	Pn	11 05 01.9	-0.5
	0.4nm,0.3s,baz=23,slow=6.9,SNR=1.6						
SPITS	Spitsbergen Ar	11.78	32	Pn	Pn	11 06 26.4	+0.8
	baz=225,slow=9.3,SNR=7.8						
ARCES	ARCESS Array B	14.02	72	Pn	Pn	11 06 56.2	0.0
	baz=308,slow=13,SNR=2.2						
ARCES				LR	LR	11 11 06.5	
	comp=Z,130nm,19.6s,baz=292,slow=32						
HFS	Hagfors	15.59	115	Pn	Pn	11 07 17.0	-0.3
	0.1nm,0.3s,baz=308,slow=7.1,SNR=2.4						
EKA	Eskdalemuir Ar	15.70	153	Pn	Pn	11 07 19.8	+1.1
	baz=331,slow=12,SNR=2.5						
FINES	FINESS Array B	18.73	96	P	Pn	11 07 57.0	+0.5
	0.3nm,0.3s,baz=317,slow=8.7,SNR=7.5						
YKA	Yellowknife Ar	36.27	309	P	P	11 10 41.6	+1.0
	1.8nm,0.9s,baz=39,slow=7.9,SNR=3.4						
ILAR	Eielson Array	41.35	331	P	P	11 11 23.5	+0.3
	0.6nm,1.0s,baz=16,slow=8.1,SNR=5.9						
PDAR	Pinedale Array	51.88	291	P	P	11 12 45.2	-0.9
	0.2nm,0.4s,baz=40,slow=4.8,SNR=5.4						
TXAR	Lajitas Array	62.14	279	P	P	11 13 58.1	-0.7
	0.5nm,0.8s,baz=77,slow=5.6,SNR=4.7						

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*IDC **15** 11:12:58.5±1.0, 23°.50N×143°.61E, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.7/49, mbtmp3.8/8, ML2.4/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/51, Error ellipse: s-maj=57.9km s-min=17.2km az=89.0*

*ISCJB **15** 11:13:01.0±0.9, 23°.50N±0°.09×143°.6E±0°.4, h31^{km}, mb3.8/7, MS2.8/1, Error ellipse: s-maj=50.5km s-min=12.9km az=175.0*

ISC 15 11:13:03.2±1.0**, 23°.5N**±0°.1×**143°.5E**±0°.4**, h31^{km}, n10, σ0^{s}.30**/8**, mb3.8**/7**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	9.95	172	LR	LR	11 18 35.6	
	comp=Z,44nm,19.5s,baz=296,slow=34						
MJAR	Matsushiro Arr	13.78	342	Pn	Pn	11 16 16.2	-0.1
	0.0nm,0.3s,baz=156,slow=9.2,SNR=2.9						
USRK	Ussuriysk Ar.	22.71	338	P	P	11 18 02.0	-0.2
	1.2nm,0.6s,baz=203,slow=9.9,SNR=3.2						
DAV	Davao City (W)	23.76	229	LR	LR	11 26 48.1	
	comp=Z,32nm,21.6s,baz=162,slow=35						
KLR	Kul'dur	27.30	343	P	P	11 18 45.4	+0.5
	1.6nm,0.7s,baz=141,slow=8.6,SNR=6.4						
WRA	Warramunga Arr	44.11	192	P	P	11 21 08.9	+0.1
	1.8nm,0.7s,baz=5.3,slow=8.6,SNR=18						
ASAR	Alice Springs	47.82	192	P	P	11 21 37.6	-0.3
	0.4nm,0.6s,baz=12,slow=9.7,SNR=10.0						
STKA	Stephens Creek	55.10	182	P	P	11 22 32.5	+0.1
	1.0nm,0.8s,baz=334,slow=11,SNR=4.0						
ILAR	Eielson Array	60.29	28	P	P	11 23 08.4	-0.1
	0.5nm,0.8s,baz=262,slow=4.4,SNR=5.0						
FINES	FINESS Array B	81.69	334	P	P	11 25 18.4	+0.1
	3.0nm,0.9s,baz=87,slow=8.5,SNR=6.5						

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*IDC **15** 11:14:09.7±1.1, 34°.26N×25°.14E, h0^{km}, mb3.9/7, mb1 3.9/12, mb1mx3.7/49, mbtmp3.8/12, ML4.0/4, MS3.2/1, Ms1 3.1/1, ms1mx2.3/33, Error ellipse: s-maj=19.3km s-min=18.1km az=153.0*

*ISK **15** 11:14:09.6, 34°.10N×24°.81E, h78^{km}, ML3.6/10*

*ISCJB **15** 11:14:11.3±1.1, 34°.09N±0°.05×25°.17E±0°.04, h23^{km}±7^{km}, mb3.8/7, Error ellipse: s-maj=8.2km s-min=4.8km az=11.5*

*THE **15** 11:14:13.7, 34°.27N×25°.12E, h2^{km}±2^{km}, ML3.4/6, Error ellipse: s-maj=3.4km s-min=1.0km az=165.0*

*ATH **15** 11:14:14.1, 34°.34N×25°.17E, h32^{km}±8^{km}, ML3.2/9, Error ellipse: s-maj=8.6km s-min=1.8km az=149.0*

ISC 15 11:14:12.1±1.1**, 34°.18N**±0°.05×**25°.13E**±0°.04**, h19^{km}**±3^{km}**, n60, σ1^{s}.15**/78**, mb4.0**/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.88	343	P	Pb	11 14 28.8	0.0
SIVA				S	Sg	11 14 40.5	-0.4
	10µm,0.4s						
SIVA	Sivas	0.88	343	P	Pg	11 14 29.0	-0.3
SIVA				S	Sg	11 14 40.0	-0.9
SIVA				AML	AML	11 14 44.1	
	comp=N,11126µm,0.4s						
SIVA				AML	AML	11 14 45.3	
	comp=E,19592µm,0.4s						
LAST	Lasithi	1.03	16	P	Pb	11 14 30.9	-0.4
LAST				S	Sb	11 14 45.8	+1.3
	comp=E,1µm,0.7s						
LAST	Lasithi	1.03	16	P	Pb	11 14 30.9	-0.4
LAST				AML	AML	11 14 58.8	
	comp=E,1822µm,0.7s						
LAST				AML	AML	11 14 59.9	
	comp=N,1811µm,0.7s						
GVD	Gavdhos	1.08	308	P	Pg	11 14 33.5	+0.4
GVD				S	Sn	11 14 47.7	+0.9
	comp=N,2µm,0.4s						
GVD	Gavdhos	1.08	308	P	Pg	11 14 33.5	+0.4
GVD				S	Sn	11 14 47.6	+0.8
GVD				AML	AML	11 14 53.3	
	comp=N,4886µm,0.4s						
GVD				AML	AML	11 15 00.4	
	comp=E,4730µm,0.5s						
GVDS	Gavdos	1.08	308	P	Pg	11 14 33.7	+0.6
GVDS				S	Sn	11 14 47.6	+0.8
IDI	Anoyia	1.13	350	PN	Pn	11 14 31.7	-1.3
IDI				SN	Sb	11 14 47.8	+0.4
IDI	Anoyia	1.13	350	Pn	Pn	11 14 33.0	0.0
	comp=E,35nm,0.3s,baz=165,slow=22,SNR=82						
IDI				Sn	Sb	11 14 47.1	-0.3
	comp=E,90nm,0.3s,baz=230,slow=18,SNR=22						
IDI	Anoyia	1.13	350	P	Pn	11 14 32.6	-0.3
IDI				S	Sb	11 14 46.4	-0.9
IDI				AML	AML	11 14 51.9	
	comp=N,2051µm,0.5s						
IDI				AML	AML	11 14 57.9	
	comp=E,2018µm,0.5s						
NPS	Neapolis	1.16	20	P	Pn	11 14 33.4	+0.1
NPS				S	Sb	11 14 50.0	+1.8
	comp=E,1µm,0.6s						
NPS	Neapolis	1.16	20	P	Pn	11 14 33.5	+0.1
NPS				AML	AML	11 14 56.0	
	comp=E,1717µm,0.4s						
NPS				AML	AML	11 14 58.4	
	comp=N,1963µm,0.7s						
PRNS	Prines Rethymn	1.29	337	P	Pg	11 14 36.4	-0.7
PRNS				S	Sg	11 14 54.5	+0.5
STIA	Sitia Lasithi	1.30	38	P	Pn	11 14 35.7	+0.5
STIA				S	Sb	11 14 54.2	+2.0
ZKR	Zakros	1.30	44	PN	Pn	11 14 36.3	+1.0
ZKR				SN	Sg	11 14 55.9	+1.7
ZKR	Zakros	1.30	44	P	Pn	11 14 36.1	+0.8
ZKR	Zakros	1.30	44	P	Pn	11 14 35.5	+0.2
ZKR				AML	AML	11 14 59.1	
	comp=N,848µm,0.6s						
ZKR				AML	AML	11 15 06.6	
	comp=E,2710µm,0.6s						
VAM	Vamos	1.45	328	P	Pg	11 14 38.8	-1.2
VAM				S	Sb	11 14 57.5	+1.0
	comp=E,2µm,0.7s						
VAM	Vamos	1.45	328	P	Pb	11 14 38.5	0.0
VAM				AML	AML	11 15 09.6	
	comp=E,2558µm,0.9s						
VAM				AML	AML	11 15 11.0	
	comp=N,1701µm,0.4s						
IMMV	Iera Moni Meta	1.59	324	P	Pg	11 14 41.2	-1.6
IMMV				S	Sb	11 15 01.0	+0.3
	comp=N,830nm,0.5s						
IMMV	Iera Moni Meta	1.59	324	P	Pb	11 14 40.6	-0.3
IMMV				S	Sn	11 15 00.0	+0.7
IMMV				AML	AML	11 15 14.3	
	comp=E,1939µm,0.7s						
IMMV				AML	AML	11 15 16.1	
	comp=N,1524µm,1.1s						
ANKY	Antikythira Is	2.26	319	P	Pb	11 14 50.5	-1.7
ANKY	Antikythira Is	2.26	319	P	Pb	11 14 50.6	-1.7
MHLO	Agia Marina, M	2.58	347	P	Pn	11 14 53.0	+0.2
MHLO	Agia Marina, M	2.58	347	P	Pn	11 14 53.8	+0.9
KTHA	Kythira Island	2.68	321	P	Pn	11 14 55.8	+1.5
KTHA	Kythira Island	2.68	321	P	Pn	11 14 55.7	+1.5
KTHA				AML	AML	11 15 45.4	
	comp=N,209µm,0.7s						
KTHA				AML	AML	11 16 03.1	
	comp=E,400µm,0.8s						
APE	Apeiranthos	2.91	6	PN	Pn	11 14 56.9	-0.5
APE	Apeiranthos	2.91	6	P	Pn	11 14 57.7	+0.3
VLI	Veliai	3.10	325	P	Pn	11 15 00.8	+0.7
VLI	Veliai	3.10	325	P	Pn	11 15 00.7	+0.7
ARG	Arkhangelos	3.19	49	PN	Pn	11 15 03.0	+1.7
DAT	Datca	3.24	37	PN	Pn	11 15 03.1	+1.0
DATC	Datca-Mugla	3.31	38	PN	Pn	11 15 03.9	+1.1
BBRN	Bozburun-Marma	3.46	43	PN	Pn	11 15 06.0	+1.0
MRSB	Marmaris-Mugla	3.57	44	PN	Pn	11 15 07.7	+1.3
DALY	Dalyan (Mula)	3.90	47	PN	Pn	11 15 12.4	+1.4
TURN	Turunc	3.91	46	PN	Pn	11 15 08.6	-2.5
YER	Yerkesik	3.92	40	PN	Pn	11 15 12.4	+1.1
YER	Yerkesik	3.92	40	P	Pn	11 15 12.9	+1.6
DION	Dionisos Attik	4.01	346	P	Pn	11 15 13.3	+0.7
FETY	Fethiye	4.06	52	PN	Pn	11 15 13.7	+0.5
AKAS	Kas	4.20	59	PN	Pn	11 15 16.6	+1.3
AYDB	Zeytinkoy-Aydi	4.38	30	PN	Pn	11 15 18.2	+0.5
KLV	Kalavryta, Ach	4.55	329	P	Pn	11 15 20.9	+0.9
ELL	Elmali	4.67	55	PN	Pn	11 15 22.8	+1.0
KORT	Korkueli	5.11	55	PN	Pn	11 15 28.6	+0.9
MMAI	Mount Meron Ar	8.65	95	Pn	Pn	11 16 16.5	+0.1
	comp=E,0.8nm,0.3s,baz=284,slow=12,SNR=2.8						
MMAI				Sn	Sn	11 17 49.7	-3.8
	comp=E,3.9nm,0.3s,baz=289,slow=22,SNR=3.8						
BRTR	Keskin Array B	8.78	48	Pn	Pn	11 16 18.1	-0.1
	comp=E,0.1nm,0.3s,baz=270,slow=8.6,SNR=2.7						
BRTR				Sn	Sn	11 17 55.7	-1.0
	comp=E,0.2nm,0.3s,baz=292,slow=25,SNR=5.6						
EIL	Elat	9.48	116	Sn	Sn	11 18 10.6	-3.1
	comp=E,1.5nm,0.3s,baz=21,slow=17,SNR=6.4						
KBZ	Khabaz	16.77	50	Pn	Pn	11 18 07.0	+1.2
	comp=E,0.2nm,0.3s,baz=236,slow=6.1,SNR=5.6						
KBZ				LR	LR	11 26 38.4	
	comp=E,83nm,19.4s,baz=340,slow=45						
AKASG	Malin Array Be	16.79	9	Pn	Pn	11 18 06.3	+0.4
	comp=E,0.9nm,0.3s,baz=199,slow=10,SNR=6.3						
GERES	GERESS Array B	16.94	333	Pn	Pn	11 18 08.6	+0.5
	comp=E,0.4nm,0.3s,baz=137,slow=12,SNR=2.6						
ESDC	Sonseca Array	23.84	292	P	P	11 19 24.6	+0.5
	comp=E,0.2nm,0.3s,baz=76,slow=8.8,SNR=5.3						
HFS	Hagfors	27.03	347	P	P	11 19 51.2	-1.6
	comp=E,0.6nm,0.4s,baz=102,slow=13,SNR=2.9						
TORD	Torodi Ar. Bea	29.84	231	P	P	11 20 19.2	+0.9
	comp=E,1.2nm,0.4s,baz=33,slow=8.7,SNR=20						
ARCES	ARCESS Array B	35.41	0	P	P	11 21 05.3	-1.2
	comp=E,1.6nm,0.8s,baz=173,slow=8.2,SNR=3.7						
MKAR	Makanchi Array	44.35	56	P	P	11 22 21.2	+0.1
	comp=E,1.0nm,0.5s,baz=267,slow=8.0,SNR=8.7						
ZALV	Zalesovo Beam	45.71	45	P	P	11 22 31.5	-0.2
	comp=E,2.3nm,0.5s,baz=261,slow=8.1,SNR=8.2						
SONM	Songino Array	60.13	50	P	P	11 24 19.3	+0.8
	comp=E,0.8nm,0.4s,baz=273,slow=5.0,SNR=2.6						

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*ISCJB **15** 11:14:14.4±0.7, 69°.91N±0°.10×15°.6W±0°.2, h10^{km}, mb3.7/6, Error ellipse: s-maj=13.8km s-min=10.8km az=169.1*

*IDC **15** 11:14:15.0±1.1, 69°.92N×15°.69W, h0^{km}, mb3.7/6, mb1 4.0/11, mb1mx3.7/54, mbtmp3.8/11, ML3.4/5, Error ellipse: s-maj=28.1km s-min=17.7km az=1.0*

ISC 15 11:14:16.3±0.8**, 69°.9N**±0°.1×**15°.34W**±0°.08**, h10^{km}, n12, σ1^{s}.77**/12**, mb3.8**/6**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	2.32	287	*i* P	Pn	11 14 46.2	-8.2
JMIC	Jan Mayen	2.53	62	Pn	Pn	11 14 56.6	-0.7
	8.6nm,0.3s,baz=203,slow=12,SNR=4.0						
JMIC				Sn	Sn	11 15 24.0	-4.0
	4.4nm,0.3s,baz=323,slow=20,SNR=3.9						
BORG	Borgarnes	5.70	207	Pn	Pn	11 15 40.1	-0.8
	2.2nm,0.3s,baz=6.7,slow=7.8,SNR=8.7						
SPITS	Spitsbergen Ar	11.78	32	Pn	Pn	11 17 05.4	+1.4
	baz=210,slow=9.7,SNR=12						
HFS	Hagfors	15.52	115	Pn	Pn	11 17 55.4	+0.6
	0.1nm,0.3s,baz=316,slow=8.1,SNR=2.5						
FINES	FINESS Array B	18.65	96	P	Pn	11 18 34.8	+0.6
	0.3nm,0.3s,baz=327,slow=9.4,SNR=8.6						
YKA	Yellowknife Ar	36.34	309	P	P	11 21 19.5	-0.2
	2.2nm,0.9s,baz=38,slow=8.8,SNR=6.4						
AKTO	Aktyubinsk	38.30	81	P	P	11 21 38.6	+2.1
	1.0nm,0.7s,baz=307,slow=10,SNR=3.7						
ILAR	Eielson Array	41.41	331	P	P	11 22 03.0	+0.8
	0.7nm,0.9s,baz=19,slow=6.7,SNR=7.4						
PDAR	Pinedale Array	51.95	291	P	P	11 23 24.6	-0.7
	0.2nm,0.5s,baz=64,slow=6.9,SNR=4.5						
TXAR	Lajitas Array	62.21	279	P	P	11 24 36.3	-1.5
	0.6nm,0.9s,baz=84,slow=2.9,SNR=8.1						
MJAR	Matsushiro Arr	72.08	22	P	P	11 25 40.6	+0.4
	1.5nm,0.8s,baz=347,slow=6.0,SNR=4.1						

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*IDC **15** 11:17:30.8±0.7, 69°.90N×15°.93W, h0^{km}, mb4.0/13, mb1 4.2/17, mb1mx4.0/44, mbtmp4.0/17, ML3.1/4, MS3.6/13, Ms1 3.7/13, ms1mx3.4/40, Error ellipse: s-maj=21.0km s-min=13.1km az=18.0*

*REY **15** 11:17:30.8, 69°.64N×14°.45W, h10^{km}*

*ISCJB **15** 11:17:31.3±0.2, 69°.76N±0°.02×15°.89W±0°.08, h10^{km}, mb4.3/73, MS3.7/9, Error ellipse: s-maj=4.1km s-min=3.1km az=173.7*

*NEIC **15** 11:17:33.5±1.0, 69°.95N×15°.69W, h10^{km}, mb4.4/69, Error ellipse: s-maj=13.4km s-min=10.2km az=201.0*

*NAO **15** 11:17:36.8±4.1, 70°.10N×13°.66W, ML4.8*

ISC 15 11:17:32.7±0.4**, 69°.83N**±0°.05×**15°.76W**±0°.05**, h10^{km}, n135, σ1^{s}.66**/132**, mb4.4**/73**, MS3.6**/9**, 1C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	2.21	290	*e*Pn	Pn	11 18 09.1	-0.3
SCO	Scoresbysund	2.21	290	*i* P	Pn	11 18 06.8	-2.6
JMIC	Jan Mayen	2.71	61	Pn	Pn	11 18 10.3	-5.9
JMIC				Lg	Lg	11 18 38.5	
JMIC	Jan Mayen	2.71	61	Pn	Pn	11 18 10.9	-5.3
	3.9nm,0.3s,baz=222,slow=6.3,SNR=3.9						
JMIC				Sn	Sn	11 18 39.7	-9.3
	3.7nm,0.3s,baz=195,slow=20,SNR=4.0						
JMIC	Jan Mayen	2.71	61	P	Pn	11 18 10.3	-5.9
IGRI	Grimsey	3.41	195	P	Pn	11 18 24.3	-1.5
	baz=205						
IGRI				S	Sn	11 19 04.9	-1.3
	baz=205						
IFLA	Flatey	3.77	193	P	Pn	11 18 29.0	-1.8
	baz=202						
IGIL	Gilhagi	3.78	184	P	Pn	11 18 27.7	-3.2
	baz=192						
IHED	Heoinshofoi	3.81	190	P	Pn	11 18 29.0	-2.4
	baz=198						
IHED				S	Sn	11 19 13.9	-2.2
	baz=198						
ISIG	Siglufjorour	3.90	199	P	Pn	11 18 31.6	-1.0
	baz=208						
IDIM	Dimmadalss	3.91	187	P	Pn	11 18 30.1	-2.7
	baz=196						
IDIM				S	Sn	11 19 16.6	-2.0
	baz=196						
IGRA	Granastaoir	3.99	191	P	Pn	11 18 31.8	-2.0
	baz=199						
IGRA				S	Sn	11 19 19.2	-1.3
	baz=199						
IHLA	Hella	4.03	196	P	Pn	11 18 33.3	-1.0
	baz=204						
IHRN	Hraun	4.08	206	P	Pn	11 18 34.7	-0.4
	baz=214						
IHRN				S	Sn	11 19 24.6	+1.8
	baz=214						
IGRS	Grimsstaoir	4.21	182	P	Pn	11 18 33.9	-3.1
	baz=190						
IGRS				S	Sn	11 19 24.1	-2.0
	baz=190						
IREN	Reynihlio	4.22	186	P	Pn	11 18 35.4	-1.7
	baz=194						
ISVA	Svartarkot	4.55	188	P	Pn	11 18 39.4	-2.1
	baz=195						
IADA	Aoalbol	4.83	179	P	Pn	11 18 42.4	-3.0
	baz=186						
BORG	Borgarnes	5.54	206	Pn	Pn	11 18 54.4	-0.7
	1.0nm,0.3s,baz=15,slow=8.5,SNR=7.5						
BORG				LR	LR	11 20 43.8	
	comp=Z,414nm,19.6s,baz=1.1,slow=35						
BORG	Borgarnes	5.54	206	*e*Pn	Pn	11 18 56.8	+1.7
SUMG	Summit	7.80	301	*e*Pn	Pn	11 19 23.8	-2.6
SUMG				*e*Sn	Sn	11 20 51.6	-3.2
KBS	Kingsbay	11.60	27	*e*Pn	Pn	11 20 16.8	-1.1
SPA0	Spitsbergen Ar	11.95	32	Pn	Pn	11 20 20.1	-2.7
	baz=239,slow=10						
SPA0	Spitsbergen Ar	11.95	32	*e*Pn	Pn	11 20 21.5	-1.4
SPA0	Spitsbergen Ar	11.95	32	P	Pn	11 20 20.1	-2.7
	baz=239,slow=10						
SPITS	Spitsbergen Ar	11.95	32	Pn	Pn	11 20 20.5	-2.3
	baz=259,slow=13,SNR=6.0						
SPITS				LR	LR	11 23 52.4	
	comp=Z,163nm,18.8s,baz=240,slow=32						
NOA	NORSAR Array B	14.12	115	LR	LR	11 25 42.7	
	comp=Z,162nm,21.7s,baz=315,slow=35						
ARCES	ARCESS Array B	14.14	72	LR	LR	11 25 11.8	
	comp=Z,257nm,19.2s,baz=288,slow=32						
HFS	Hagfors	15.60	114	P	Pn	11 21 11.0	-1.4
	baz=333,slow=18						
HFS	Hagfors	15.60	114	Pn	Pn	11 21 11.9	-0.5
	0.1nm,0.3s,baz=339,slow=16,SNR=3.4						
HFS				LR	LR	11 26 28.0	
	comp=Z,289nm,21.2s,baz=311,slow=34						
HFS	Hagfors	15.60	114	P	Pn	11 21 11.0	-1.4
	baz=333,slow=18						
EKA	Eskdalemuir Ar	15.60	152	P	P	11 21 16.2	-0.4
EKA	Eskdalemuir Ar	15.60	152	P	P	11 21 16.2	-0.4
IVI	Ivigtut	15.75	253	*e*Pn	Pn	11 21 17.1	+2.8
	18nm,1.0s						
APA0	Apatity Array	17.45	74	P	Pn	11 21 32.8	-3.1
APA0	Apatity Array	17.45	74	P	Pn	11 21 32.8	-3.1
LVZ	Lovozero	17.86	72	*e*Pn	Pn	11 21 39.7	-1.2
	29nm,1.2s						
FIA0	FINESS Array S	18.79	96	P	P	11 21 49.6	-2.2
	baz=331,slow=11						
FIA0	FINESS Array S	18.79	96	P	P	11 21 49.6	-2.2
	baz=331,slow=11						
FIA1	FINESS Array S	18.79	96	*e*P	P	11 21 52.2	+0.5
	13nm,1.0s						
FINES	FINESS Array B	18.79	96	P	P	11 21 50.0	-1.7
	0.1nm,0.3s,baz=326,slow=9.9,SNR=11						
FINES				LR	LR	11 28 13.6	
	comp=Z,447nm,19.4s,baz=327,slow=34						
FRB	Frobisher Bay	21.04	279	LR	LR	11 30 14.8	
	comp=Z,368nm,18.1s,baz=26,slow=36						
MEM	Membach	21.85	141	⇑P	P	11 22 26.3	+1.3
WLF	Walferdange	22.77	141	*e*P	P	11 22 37.2	+2.2
	34nm,0.9s						
RES	Resolute Bay	22.85	318	LR	LR	11 31 20.6	
	comp=Z,263nm,18.4s,baz=58,slow=36						
CLL	Collm	22.93	129	*e*P	P	11 22 38.0	+1.5
	6.0nm,1.0s						
CLL	Collm	22.93	129	*e*P	P	11 22 37.0	+0.5
CLF	Chambon-Foret	23.56	149	*e*P	P	11 22 43.9	+0.9
	20nm,1.5s						
BRG	Berggiesshubel	23.57	128	*e*P	P	11 22 44.1	+1.0
	25nm,2.0s						
SUW	Suwalki	23.60	112	*e*P	P	11 22 42.5	-0.7
	23nm,0.9s						
GRFO	Grafenberg	23.94	133	*e*P	P	11 22 48.1	+1.5
	18nm,0.5s						
ECH	Echery	24.36	141	*e*P	P	11 22 52.0	+1.4
	4.7nm,1.1s						
BFO	Black Forest	24.52	139	*e*P	P	11 22 52.9	+0.9
	4.2nm,0.9s						
KHC	Kasperske Hory	25.06	131	*e*P	P	11 22 58.5	+1.6
	2.4nm,1.2s						
GEC2	GERESS Array S	25.36	131	*e*P	P	11 23 01.0	+1.4
	6.9nm,1.1s						
GERES	GERESS Array B	25.36	131	P	P	11 23 00.3	+0.7
	0.7nm,0.5s,baz=330,slow=5.1,SNR=4.4						
GERES				LR	LR	11 32 36.5	
	comp=Z,104nm,19.4s,baz=350,slow=36						
PRGR	Permogore	25.39	78	*e*P	P	11 23 06.9	+7.2
	26nm,0.5s						
MORC	Moravsky Berou	25.57	124	*e*P	P	11 23 03.1	+1.6
	8.0nm,1.1s						
MORC	Moravsky Berou	25.57	124	*e*P	P	11 23 04.2	+2.7
VRAC	Vranov	25.72	126	LR	LR	11 33 36.3	
	comp=Z,144nm,18.2s,baz=332,slow=37						
OJC	Ojcow	25.83	121	*e*P	P	11 23 05.2	+1.4
	8.6nm,1.1s						
KRUC	Moravsky	25.89	127	*e*P	P	11 23 06.4	+2.0
DAVOX	Davos/Dischmat	26.33	138	LR	LR	11 33 54.9	
	comp=Z,153nm,19.2s,baz=261,slow=37						
TUE	Stuetta	26.50	139	*e*P	P	11 23 11.5	+1.4
	15nm,1.7s						
LANS	Liptovska Anna	26.69	123	*e*P	P	11 23 13.8	+2.2
SCHQ	Schefferville	26.99	263	LR	LR	11 33 11.5	
	comp=Z,137nm,19.5s,baz=78,slow=35						
VYHS	Vyhne	27.09	124	*e*P	P	11 23 15.2	-0.1

AKASG	Malin Array Be	28.37	109	P	P	11 23 26.2	-0.4
	0.2nm,0.3s,baz=328,slow=9.6,SNR=4.1						
AKBB	Malin Array Si	28.37	109	eP	P	11 23 27.9	+1.3
	9.7nm,1.4s						
VLC	Villacollemand	28.93	139	eP	P	11 23 33.2	+1.6
	6.6nm,0.9s						
ESDC	Sonseca Array	30.86	162	LR	LR	11 36 01.2	
	comp=Z,75nm,18.2s,baz=0.0,slow=36						
INK	Inuvik	35.84	326	eP	P	11 24 31.6	-0.3
	8.4nm,1.5s						
YKW3	Yellowknife Ar	36.25	309	eP	P	11 24 35.8	+0.4
	8.1nm,1.3s						
YKA	Yellowknife Ar	36.30	309	P	P	11 24 32.9	-2.9
	3.3nm,0.9s,baz=34,slow=8.6,SNR=11						
YKB5	Yellowknife Ar	36.30	309	eP	P	11 24 32.9	-2.9
TIXI	Tiksi	36.87	18	eP	P	11 24 40.8	+0.3
	7.2nm,1.4s						
PLVO	Plevna	38.79	263	eP	P	11 24 58.1	+1.1
	13nm,1.9s						
FFC	Flin Flon	38.99	293	eP	P	11 24 59.0	+0.4
	56nm,1.0s						
KBZ	Khabaz	39.03	100	P	P	11 25 00.4	+1.3
	2.1nm,0.8s,baz=346,slow=4.2,SNR=2.8						
FYU	Fort Yukon	39.52	331	eP	P	11 25 03.2	+0.3
	24nm,1.2s						
SADO	Sadowa	39.74	265	eP	P	11 25 05.5	+0.5
	10nm,1.4s						
ABKAR	Akbulak array	40.12	80	eP	P	11 25 08.2	+0.1
	5.3nm,1.5s						
EGAK	Eagle	40.42	327	eP	P	11 25 09.8	-0.6
	5.7nm,1.3s						
PRP	Porcupine Dome	40.52	330	eP	P	11 25 11.0	-0.5
	8.2nm,0.6s						
ULM	Lac du Bonnet	40.77	284	P	P	11 25 13.6	+0.1
	1.4nm,0.4s,baz=55,slow=8.8,SNR=3.7						
ILAR	Eielson Array	41.44	331	P	P	11 25 18.1	-0.8
	1.5nm,1.0s,baz=15,slow=6.8,SNR=12						
ILB	Eielson Array	41.44	331	eP	P	11 25 18.8	-0.1
	6.3nm,1.3s						
COLA	College	41.51	331	eP	P	11 25 19.9	+0.5
	5.6nm,0.8s						
CCB	Clear Creek Bu	41.71	331	eP	P	11 25 21.5	+0.4
	5.6nm,1.3s						
DOT	Dot Lake	41.98	328	eP	P	11 25 23.8	+0.5
	3.9nm,1.0s						
RIDG	Independent Ri	42.04	329	eP	P	11 25 24.2	+0.4
	8.9nm,1.4s						
AGMN	Agassiz Nation	42.44	283	eP	P	11 25 27.8	+0.6
	7.3nm,1.2s						
MENT	Mentasta	42.57	328	eP	P	11 25 28.9	+0.8
	9.3nm,1.3s						
BPAW	Bear Paw Mtn.	42.74	333	eP	P	11 25 30.0	+0.5
	9.3nm,1.1s						
MCK	McKinley	42.75	331	eP	P	11 25 30.3	+0.8
	14nm,1.3s						
HYT	Haines Junctio	43.27	323	eP	P	11 25 34.7	+0.8
	5.2nm,1.1s						
ZAA1	Zalesovo Array	44.03	57	eP	P	11 25 40.8	+0.8
ZALV	Zalesovo Beam	44.04	57	P	P	11 25 40.8	+0.7
	0.8nm,0.5s,baz=326,slow=7.0,SNR=2.4						
KURK	Kurchatov	45.00	64	eP	P	11 25 48.8	+1.1
	6.5nm,1.3s						
JFWS	Jewell Farm	45.21	274	eP	P	11 25 50.5	+0.9
	21nm,1.8s						
L40A	Anamosa	46.30	274	eP	P	11 25 59.1	+1.0
	9.1nm,1.1s						
SFIN	Lafayette	46.37	270	eP	P	11 25 59.3	+0.7
	8.9nm,1.2s						
ECSD	EROS Data Cent	46.68	280	eP	P	11 26 02.0	+0.9
	4.7nm,1.1s						
EGMT	Eagleton	47.24	294	eP	P	11 26 05.9	+0.4
	17nm,1.5s						
KK31	Karatay Array	49.07	75	eP	P	11 26 20.1	+0.5
	8.4nm,1.6s						
MK31	Makanchi Array	49.60	63	eP	P	11 26 24.2	+0.5
	2.6nm,1.0s						
MK32	Makanchi Array	49.60	63	eP	P	11 26 23.7	0.0
MKAR	Makanchi Array	49.60	63	P	P	11 26 23.7	0.0
	1.9nm,1.0s,baz=338,slow=5.5,SNR=6.2						
MSO	Missoula	49.61	297	eP	P	11 26 24.0	+0.1
	3.3nm,1.1s						
BG3	Lake Jocassee	49.76	262	eP	P	11 26 26.4	+1.4
	4.6nm,1.1s						
W50A	Signal Mountai	50.40	265	eP	P	11 26 30.9	+1.1
	13nm,1.2s						
BW06	Boulder Array	51.86	291	eP	P	11 26 40.9	-0.1
	3.9nm,1.3s						
PDAR	Pinedale Array	51.86	291	P	P	11 26 40.3	-0.7
	1.2nm,1.0s,baz=46,slow=6.4,SNR=7.9						
FCAR	Ozark Folk Cen	52.13	272	eP	P	11 26 43.6	+0.8
	3.3nm,0.9s						
N23A	Red Feather La	52.35	287	eP	P	11 26 45.5	+0.8
	13nm,1.3s						
KSCO	Kaye Shedlock'	52.93	283	eP	P	11 26 49.9	+1.0
	16nm,1.5s						
147A	Livingston	53.71	266	eP	P	11 26 54.4	-0.1
	55nm,1.6s						
O20A	White River Ci	53.80	288	eP	P	11 26 55.9	+0.6
	13nm,1.3s						
WMQ	Urumqi	53.93	61	eP	P	11 26 59.8	+3.7
WMQ				LR	LR		
	comp=N,690nm,29.1s						
WMQ				LR	LR		
	comp=E,390nm,28.8s						
WMQ				LR	LR		
	comp=Z,160nm,29.2s						
KSH	Kashi	54.11	73	eP	P	11 26 58.9	+1.5
KSH				pP	sP	11 27 03.4	+2.1
KSH				PP	PP	11 29 01.8	+3.2
DUG	Dugway, Tooele	55.23	292	eP	P	11 27 06.4	+0.8
	comp=Z,7.2nm,1.4s						
MVCO	Mesa Verde	56.53	287	eP	P	11 27 15.8	+0.8
	comp=Z,6.5nm,1.3s						
MTPU	Mount Pierson	56.98	291	eP	P	11 27 18.8	+0.4
	comp=Z,4.7nm,1.1s						
PKCU	Pink Cliffs	57.57	290	eP	P	11 27 22.7	+0.2
	comp=Z,18nm,1.6s						
TOA1	Torodi Ar. Sit	57.70	160	eP	P	11 27 22.4	-0.8
TORD	Torodi Ar. Bea	57.70	160	P	P	11 27 22.4	-0.8
	comp=Z,1.0nm,1.0s,baz=27,slow=7.3,SNR=3.8						
NVAR	Mina Array Bea	58.58	296	P	P	11 27 29.2	-0.2
	comp=Z,0.8nm,0.8s,baz=32,slow=5.6,SNR=5.5						
X16A	Lo Mia Camp, P	60.05	288	eP	P	11 27 40.1	+0.5
	comp=Z,2.2nm,0.9s						
TXAR	Lajitas Array	62.08	279	P	P	11 27 52.3	-1.1
	comp=Z,0.9nm,0.8s,baz=44,slow=5.1,SNR=12						
HHC	Hu-ho-hao-te	63.16	43	eP	P	11 28 00.1	-0.3
HHC				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
LZH	Lanzhou	65.72	51	eP	P	11 28 15.6	-1.7
LZH				pP	pP	11 28 18.8	-1.4
LZH				sP	sP	11 28 20.5	-0.7
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,49nm,7.6s						
LZH				LR	LR		
	comp=N,130nm,15.6s						
LZH				LR	LR		
	comp=E,130nm,16.2s						
LZH				LR	LR		
	comp=Z,180nm,18.5s						
LSA	Lhasa	68.00	64	eP	P	11 28 32.3	0.0
	comp=Z,4.9nm,0.8s						
MAJO	Matsushiro	72.24	22	eP	P	11 28 56.1	-1.5
MJAR	Matsushiro Arr	72.24	22	P	P	11 28 56.1	-1.5
	comp=Z,2.8nm,0.8s,baz=347,slow=5.0,SNR=7.9						
KMI	Kunming	75.76	55	P	P	11 29 20.9	+2.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						

*ISCJB **15** 11:22:46.6±0.6, 70°.04N±0°.09×15°.7W±0°.2, h10^{km}, mb3.6/7, Error ellipse: s-maj=12.9km s-min=11.1km az=179.7*

*IDC **15** 11:22:47.6±0.8, 69°.98N×15°.95W, h0^{km}, mb3.7/7, mb1 3.9/11, mb1mx3.7/45, mbtmp3.8/11, ML3.4/4, Error ellipse: s-maj=23.5km s-min=17.4km az=37.0*

ISC 15 11:22:48.6±0.7, **70°.06N**±0°.09×**15°.43W**±0°.08, **h10^{km}, n12, σ2^{s}06**/13, **mb3.7**/7, **Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	Jan Mayen	2.50	65	Pn	Pn	11 23 27.4	-1.9
	4.7nm,0.3s,baz=158,slow=9.7,SNR=2.9						
JMIC				Sn	Sn	11 23 55.4	-4.4
	6.1nm,0.3s,baz=101,slow=16,SNR=3.1						
BORG	Borgarnes	5.79	206	Pn	Pn	11 24 12.3	-2.2
	2.9nm,0.3s,baz=6.0,slow=7.7,SNR=8.5						
SPITS	Spitsbergen Ar	11.70	32	Pn	Pn	11 25 36.5	+1.2
	baz=218,slow=9.3,SNR=8.4						
HFS	Hagfors	15.59	115	Pn	Pn	11 26 29.6	+1.5
	0.1nm,0.3s,baz=324,slow=7.1,SNR=2.6						
FINES	FINESS Array B	18.70	97	P	P	11 27 07.5	+0.9
	0.3nm,0.3s,baz=327,slow=10.0,SNR=7.9						
GERES	GERESS Array B	25.42	131	P	P	11 28 17.6	+1.5
	0.7nm,0.6s,baz=332,slow=8.3,SNR=4.1						
YKA	Yellowknife Ar	36.24	309	P	P	11 29 50.8	-0.4
	1.2nm,0.8s,baz=33,slow=7.7,SNR=4.5						
ILAR	Eielson Array	41.30	331	P	P	11 30 35.1	+1.6
	1.3nm,1.1s,baz=19,slow=7.6,SNR=6.3						
PDAR	Pinedale Array	51.88	291	P	P	11 31 56.0	-1.0
	0.2nm,0.5s,baz=11,slow=3.0,SNR=3.5						
SONM	Songino Array	55.10	44	P	P	11 32 21.9	+1.5
	0.4nm,0.4s,baz=343,slow=4.5,SNR=3.1						
TORD	Torodi Ar. Bea	57.88	160	P	P	11 32 41.1	+0.7
	1.0nm,1.0s,baz=336,slow=5.4,SNR=3.4						
TXAR	Lajitas Array	62.16	279	P	P	11 33 08.5	-1.3
	0.4nm,0.7s,baz=45,slow=5.8,SNR=5.5						

IDC 15 11:26:13.9±6.1, **14°.64S**×**174°.31W, h0^{km}, mb3.9**/3, **mb1 4.1**/3, **mb1mx3.6**/34, **mbtmp3.9**/3, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.8**/19, **Error ellipse: s-maj=240.7km s-min=57.2km az=133.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	15.29	117	LR	LR	11 33 49.7	
	comp=Z,86nm,19.2s,baz=282,slow=30						
STKA	Stephens Creek	43.66	239	P	P	11 34 20.5	-0.1
	0.9nm,0.6s,baz=70,slow=12,SNR=3.2						
WRA	Warramunga Arr	49.16	256	P	P	11 35 04.0	-0.1
	0.9nm,0.6s,baz=85,slow=7.4,SNR=7.8						
ASAR	Alice Springs	49.51	251	P	P	11 35 06.6	-0.2
	1.8nm,0.6s,baz=85,slow=8.1,SNR=34						
BRTR	Keskin Array B	145.02	321	PKPbc	PKPbc	11 45 52.2	-0.8
	0.8nm,0.7s,baz=87,slow=4.9,SNR=5.8						

IDC 15 11:30:47.3±2.2, **5°.19S**×**152°.94E, h0^{km}, mb3.8**/3, **mb1 4.1**/4, **mb1mx3.6**/34, **mbtmp3.9**/4, **ML1.8**/1, **Error ellipse: s-maj=152.3km s-min=25.2km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.10	234	Pn	Pn	11 32 33.4	+0.9
	1.1nm,0.3s,baz=22,slow=10,SNR=3.3						
WRA	Warramunga Arr	23.29	229	P	P	11 35 56.1	-1.0
	1.6nm,0.9s,baz=55,slow=8.9,SNR=7.4						
ASAR	Alice Springs	25.96	223	P	P	11 36 22.4	+0.6
	1.2nm,0.6s,baz=58,slow=9.1,SNR=18						
ILAR	Eielson Array	82.47	22	P	P	11 43 12.4	+1.0
	1.1nm,0.7s,baz=245,slow=5.5,SNR=7.3						
TORD	Torodi Ar. Bea	150.56	288	PKPbc	PKPbc	11 50 40.8	-1.5
	0.4nm,0.7s,baz=53,slow=2.1,SNR=4.0						

*REY **15** 11:34:23.8, 69°.76N×14°.50W, h10^{km}*

*BJI **15** 11:34:23.8±0.0, 70°.00N×16°.00W, h5^{km}, mb4.6/23, mB5.0/15, Ms4.9/11, Ms7 4.8/11*

*ISCJB **15** 11:34:24.9±0.2, 69°.89N±0°.02×16°.09W±0°.06, h10^{km}, mb4.4/91, MS4.5/54, Error ellipse: s-maj=3.3km s-min=2.8km az=145.8*

*GCMT **15** 11:34:25.8±0.1, 69°.93N±0°.01×15°.56W±0°.02, h12^{km}, MW5.2/114, Moment Tensor Solution. s52,c72; s114,c203; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.68±.01; M$_{\theta\theta}$0.06±.01; M$_{\phi\phi}$0.61±.01; M$_{r\theta}$-0.19±.04; M$_{\theta\phi}$0.14±.01; M$_{\phi r}$-0.40±.03; Best double couple: M$_0$0.79600×10^{17} NP1:φ$_s$20.00000°, δ62.00000°, λ-84.00000°. NP2:φ$_s$188.00000°, δ29.00000°, λ-101.00000°. Principal axes: T 0.7780, Plg17.0000°, Azm106.0000°; N 0.0360, Plg5.0000°, Azm197.0000°; P -0.8140, Plg72.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 11:34:26.8±1.6, 70°.07N×15°.99W, h10^{km}, mb4.5/88 Error ellipse: s-maj=13.0km s-min=10.4km az=203.0*

*IDC **15** 11:34:26.2±0.5, 69°.91N×15°.93W, h0^{km}, mb4.1/17, mb1 4.3/24, mb1mx4.1/44, mbtmp4.1/24, ML3.1/6, MS4.5/45, Ms1 4.5/45, ms1mx4.5/47, Error ellipse: s-maj=17.9km s-min=10.7km az=24.0*

*NAO **15** 11:34:33.3±3.3, 70°.15N×13°.69W, ML4.8*

ISC 15 11:34:26.8±0.3, **69°.99N**±0°.03×**15°.71W**±0°.03, **h10^{km}, n221, σ2^{s}11**/195, **mb4.5**/95, **MS4.6**/54, **3C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCO	Scoresbysund	2.18	286	ePn	Pn	11 35 00.0	-3.0
SCO	Scoresbysund	2.18	286	i P	Pn	11 34 57.6	-5.4
JMI	Jan Mayen	2.53	65	eP	Pn	11 35 05.4	-2.5
JMIC	Jan Mayen	2.62	64	Pn	Pn	11 35 05.4	-3.6
JMIC				Lg	Lg	11 35 34.7	
JMIC	Jan Mayen	2.62	64	Pn	Pn	11 35 05.9	-3.1
	8.4nm,0.3s,baz=114,slow=2.1,SNR=8.8						
JMIC				Sn	Sn	11 35 35.0	-5.8
	11nm,0.3s,baz=234,slow=5.2,SNR=4.4						
JMIC	Jan Mayen	2.62	64	eP	Pn	11 35 05.0	-4.1
JMIC				E		11 35 34.7	
JMIC				eS	Sn	11 35 36.0	-4.8
JNW	Jan Mayen West	2.66	63	eP	Pn	11 35 06.4	-3.2
JNE	Jan Mayen East	2.68	64	eP	Pn	11 35 06.2	-3.7
IGRI	Grimsey	3.56	195	P	Pn	11 35 18.4	-3.7
	baz=204						
IFLA	Flatey	3.93	193	P	Pn	11 35 23.9	-3.1
	baz=201						
IGIL	Gilhagi	3.94	184	P	Pn	11 35 22.6	-4.5
	baz=192						
IBRE	Brettingsstaoi	3.97	193	P	Pn	11 35 24.2	-3.4
	baz=201						
IBRE				S	Sn	11 36 10.9	-3.2
	baz=201						
IHED	Heoinshofoi	3.97	189	P	Pn	11 35 23.2	-4.4
	baz=197						
IHED				S	Sn	11 36 10.6	-3.5
	baz=197						
ISIG	Siglufjorour	4.05	199	P	Pn	11 35 26.2	-2.6
	baz=207						
IDIM	Dimmadalss	4.07	187	P	Pn	11 35 24.2	-4.8
	baz=195						
IDIM				S	Sn	11 36 12.3	-4.3
	baz=195						
IGRA	Granastaoir	4.15	191	P	Pn	11 35 26.9	-3.1
	baz=198						
ISKI	Skildingahlsh	4.17	187	P	Pn	11 35 26.4	-4.0
	baz=195						
IGHA	Grjothals	4.18	185	P	Pn	11 35 26.2	-4.3
	baz=193						
IHLA	Hella	4.18	195	P	Pn	11 35 27.3	-3.2
	baz=203						
IHRN	Hraun	4.23	205	P	Pn	11 35 29.1	-2.1
	baz=213						
IHRN				S	Sn	11 36 18.8	-1.7
	baz=213						
IGRS	Grimsstaoir	4.37	182	P	Pn	11 35 28.6	-4.6
	baz=189						
IGRS				S	Sn	11 36 19.8	-4.3
	baz=189						
IREN	Reynihlio	4.38	187	P	Pn	11 35 29.9	-3.4
	baz=194						
IMEL	Melhnausar	4.45	185	P	Pn	11 35 30.2	-4.0
	baz=192						
ISVA	Svartarkot	4.71	188	P	Pn	11 35 33.9	-3.9
	baz=195						
IADA	Aoalbol	4.99	179	P	Pn	11 35 36.7	-5.0
	baz=186						
BORG	Borgarnes	5.69	205	Pn	Pn	11 35 50.3	-0.9
	4.9nm,0.3s,baz=12,slow=6.6,SNR=14						
BORG				LR	LR	11 37 41.6	
	comp=Z,4μm,19.2s,baz=0.1,slow=35						
BORG	Borgarnes	5.69	205	ePn	Pn	11 35 51.2	0.0
DAG	Danmarks Havn	6.87	354	i P	Pn	11 36 05.6	-1.8
	comp=Z,4μm,11.0s						
SUMG	Summit	7.74	300	ePn	Pn	11 36 17.0	-2.6
SUMG	Summit	7.74	300	i P	Pn	11 36 21.0	+1.4
	comp=Z,38μm,14.0s						
HSPB	Hornsund (broa	11.15	37	eP	Pn	11 37 07.8	+1.9
KBS	Kingsbay	11.45	27	Pn	Pn	11 37 11.9	+1.9
KBS	Kingsbay	11.45	27	ePn	Pn	11 37 08.0	-2.0
KBS	Kingsbay	11.45	27	eP	Pn	11 37 15.1	+5.1
SPA0	Spitsbergen Ar	11.81	32	Pn	Pn	11 37 16.7	+1.8
	baz=241,slow=11						
SPA0	Spitsbergen Ar	11.81	32	ePn	Pn	11 37 14.1	-0.9
SPA0	Spitsbergen Ar	11.81	32	P	Pn	11 37 16.7	+1.8
	baz=241,slow=11						
SPA0				eS	Sn	11 39 10.2	-16
SPITS	Spitsbergen Ar	11.81	32	Pn	Pn	11 37 16.8	+1.8
	baz=228,slow=12,SNR=20						
SPITS				LR	LR	11 40 38.0	
	comp=Z,3μm,21.4s,baz=225,slow=31						
ILULI	Ilulissat	12.26	283	ePn	Pn	11 37 20.4	-0.7
SFJD	Kangerlussuaq	13.03	274	LR	LR	11 42 10.7	
	comp=Z,7μm,21.7s,baz=90,slow=36						
HOPEN	Hopen	13.12	42	eP	Pn	11 37 31.7	-1.1
NBO00	NORSAR Array S	14.04	117	ePn	Pn	11 37 46.7	+1.2
ARA0	ARCESS Array S	14.08	72	ePn	Pn	11 37 47.1	+1.2
ARCES	ARCESS Array B	14.08	72	Pn	Pn	11 37 47.1	+1.2
	comp=Z,0.1nm,0.3s,baz=224,slow=33,SNR=3.7						
ARCES				LR	LR	11 42 07.1	
	comp=Z,3μm,19.0s,baz=294,slow=32						
NB200	NORSAR Array S	14.17	116	ePn	Pn	11 37 48.5	+1.2
NOA	NORSAR Array B	14.17	116	Pn	Pn	11 37 48.5	+1.2
	comp=Z,0.0nm,0.3s,baz=308,slow=14,SNR=2.9						
NOA				LR	LR	11 42 39.0	
	comp=Z,2μm,21.2s,baz=320,slow=35						
NB201	NORSAR Array S	14.19	116	ePn	Pn	11 37 48.6	+1.0
HFS	Hagfors	15.65	114	P	Pn	11 38 09.1	+2.1
	baz=310,slow=12						
HFS	Hagfors	15.65	114	Pn	Pn	11 38 07.0	0.0
	comp=Z,0.1nm,0.3s,baz=308,slow=12,SNR=4.5						
HFS				LR	LR	11 43 24.4	
	comp=Z,3μm,21.7s,baz=304,slow=34						
HFS	Hagfors	15.65	114	P	Pn	11 38 09.1	+2.1
	baz=310,slow=12						
EKA	Eskdalemuir Ar	15.73	153	P	P	11 38 13.4	+1.2
EKA	Eskdalemuir Ar	15.73	153	Pn	Pn	11 38 09.4	+1.3
	baz=346,slow=10,SNR=8.1						
EKA				LR	LR	11 43 45.0	
	comp=Z,2μm,18.1s,baz=340,slow=36						
EKA	Eskdalemuir Ar	15.73	153	P	P	11 38 13.4	+1.2
IVI	Ivigtut	15.82	252	ePn	Pn	11 38 08.8	-0.4
	comp=Z,55nm,1.1s						
TULEG	Thule	16.02	317	ePn	Pn	11 38 09.4	-2.3
	comp=Z,43nm,1.0s						
MUD	Monsted U'grnd	17.39	129	i P	Pn	11 38 29.1	-0.1
APA0	Apatity Array	17.39	74	P	Pn	11 38 30.2	+1.0
APA0	Apatity Array	17.39	74	P	Pn	11 38 30.2	+1.0
LVZ	Lovozero	17.79	72	eP	Pn	11 38 34.8	+0.6
	comp=Z,49nm,1.3s						
FIA0	FINESS Array S	18.79	96	P	P	11 38 46.1	+0.4
	baz=333,slow=14						
FIA0	FINESS Array S	18.79	96	P	P	11 38 46.1	+0.4
	baz=333,slow=14						
FIA1	FINESS Array S	18.79	96	eP	P	11 38 45.9	+0.1
	comp=Z,53nm,1.6s						
FINES	FINESS Array B	18.79	96	P	P	11 38 46.2	+0.4
	comp=Z,0.3nm,0.3s,baz=330,slow=11,SNR=8.5						
FINES				LR	LR	11 45 09.8	
	comp=Z,4μm,20.1s,baz=320,slow=34						
COP	Copenhagen	18.96	125	i P	Pn	11 38 49.2	+0.8
	comp=Z,1μm,19.0s						
SLVR	Solovky	19.74	79	eP	P	11 38 55.1	-1.1
	comp=Z,25nm,1.4s						
BSD	Bornholm Skovb	20.17	122	i P	P	11 38 59.4	-1.6
	comp=Z,2μm,16.0s						
FRB	Frobisher Bay	21.03	279	LR	LR	11 47 11.3	
	comp=Z,4μm,18.5s,baz=54,slow=36						
VSU	Vasula	21.21	101	eP	P	11 39 11.7	-0.5
VSU				IAmb	IAmb	11 39 17.2	
	comp=Z,79nm,1.0s						
UCC	Uccle	21.44	143	eP	P	11 39 15.1	+0.5
	comp=Z,12nm,0.7s						
HGN	Heimansgroeve	21.80	141	eP	P	11 39 17.9	-0.7
	comp=Z,39nm,0.8s						
HGN				eS	Sn	11 43 34.1	+5.3
HGN				eL	L	11 46 55.7	
	comp=Z,998nm,22.0s						
MEM	Membach	21.96	141	⇑P	P	11 39 22.2	+1.8
	comp=Z,22nm,1.0s						
BCLA	Clavier	21.99	142	⇑P	P	11 39 22.0	+1.4
DOU	Dourbes	22.15	144	⇑P	P	11 39 24.5	+2.1
RES	Resolute Bay	22.74	318	LR	LR	11 48 07.4	
	comp=Z,2μm,21.4s,baz=71,slow=36						
WLF	Walferdange	22.89	142	eP	P	11 39 31.1	+1.0
	comp=Z,84nm,1.2s						
CLL	Collm	23.01	130	eP	P	11 39 31.4	-0.1
	comp=Z,8.0nm,0.7s						
CLL	Collm	23.01	130	eP	P	11 39 35.0	+3.5
	comp=Z,10.0nm,0.8s						
CLL				eS	S	11 43 46.0	+4.3
CLL				eSSS	SSS	11 44 30.0	
IZAR	Zarasai	23.20	106	eP	P	11 39 33.4	+0.1
IZAR				IAmb	IAmb	11 39 35.7	
	comp=Z,8.7nm,0.7s						
ISAL	Salakas	23.30	107	eP	P	11 39 35.0	+0.6
ISAL				IAmb	IAmb	11 39 41.2	
	comp=Z,8.6nm,0.8s						
IIGN	Ignalina	23.51	107	eP	P	11 39 36.8	+0.3
IIGN				IAmb	IAmb	11 39 39.0	
	comp=Z,4.8nm,0.8s						
SUW	Suwalki	23.64	112	eP	P	11 39 37.4	-0.3
	comp=Z,23nm,0.9s						
BRG	Berggiesshubel	23.66	129	eP	P	11 39 42.2	+4.2
	comp=Z,23nm,1.7s						
BRG				S	S	11 43 56.0	+3.7
	comp=N,1μm,15.3s						
	comp=E,529nm,16.4s						
	comp=Z,2μm,16.8s						
CLF	Chambon-Foret	23.69	149	eP	P	11 39 38.3	0.0
	comp=Z,20nm,1.1s						
NKC	Novy Kostel	23.85	131	AMS	AMS	11 52 10.0	
	comp=Z,1μm,11.7s						
PVCC	Panska Ves	24.14	128	AMS	AMS	11 50 00.0	
	comp=Z,1μm,17.2s						
STU	Stuttgart	24.41	138	eP	P	11 39 45.7	+0.7
	comp=Z,15nm,0.7s						
ECH	Echery	24.47	141	eP	P	11 39 46.6	+1.0
	comp=Z,8.9nm,1.2s						
CHVC	Chvalec	24.50	126	eP	P	11 39 48.4	+2.6
CHVC				AMS	AMS	11 49 40.0	
	comp=Z,2μm,18.0s						
UPC	Upice	24.56	126	AMS	AMS	11 49 30.0	
	comp=Z,2μm,17.1s						
OSTC	Ostas	24.57	126	eP	P	11 39 52.7	+6.2
OSTC				AMS	AMS	11 49 20.0	
	comp=Z,2μm,18.0s						
BFO	Black Forest	24.62	139	eP	P	11 39 47.6	+0.6
	comp=Z,4.8nm,0.9s						
PRU	Pruhonice	24.62	129	eP	P	11 39 48.1	+1.2
PRU				eS	S	11 44 16.1	+8.3
PRU				AMS	AMS	11 50 10.0	
	comp=Z,1μm,16.0s						
GOPC	GO Pecny, Ondr	24.76	128	AMS	AMS	11 50 10.0	
	comp=Z,1μm,16.0s						
DPC	Dobruska-Polom	24.79	126	eP	P	11 39 49.0	+0.5
DPC				eS	S	11 44 16.2	+5.7
DPC				AMS	AMS	11 49 50.0	
	comp=Z,2μm,16.9s						
KHC	Kasperske Hory	25.15	131	eP	P	11 39 51.4	-0.4
	comp=Z,3.8nm,1.4s						
KHC	Kasperske Hory	25.15	131	eP	P	11 39 46.1	-5.7
KHC				eS	S	11 44 22.1	+5.7
KHC				AMS	AMS	11 51 30.0	
	comp=Z,900nm,14.3s						
PRGR	Permogore	25.34	78	eP	P	11 39 48.4	-4.9
	comp=Z,15nm,0.6s						
GEC2	GERESS Array S	25.45	131	eP	P	11 39 54.7	+0.2
	comp=Z,7.1nm,1.0s						
GERES	GERESS Array B	25.45	131	P	P	11 39 55.7	+1.2
	comp=Z,5.1nm,0.9s,baz=330,slow=7.7,SNR=12						
GERES				LR	LR	11 49 23.1	
	comp=Z,1μm,21.4s,baz=341,slow=35						
TREC	Trest	25.51	128	AMS	AMS	11 50 40.0	
	comp=Z,2μm,16.3s						
MORC	Moravsky Berou	25.64	125	eP	P	11 39 56.8	+0.6
	comp=Z,9.4nm,0.9s						
MORC	Moravsky Berou	25.64	125	eP	P	11 39 57.4	+1.2
OKC	Ostrava-Krasne	25.76	124	AMS	AMS	11 50 50.0	
	comp=Z,1μm,16.3s						
VRAC	Vranov	25.80	127	P	P	11 39 57.9	+0.3
	comp=Z,4.6nm,0.7s,baz=333,slow=6.8,SNR=4.1						
VRAC				LR	LR	11 50 32.7	
	comp=Z,2μm,18.2s,baz=336,slow=37						
VRAC	Vranov	25.80	127	eP	P	11 39 58.1	+0.5

OJC	**Ojcow**	**25.90**	**121**	eP	**P**	**11 39 58.6**	**+0.1**
	comp=Z,8.7nm,0.9s						
KRUC	**Moravsky**	**25.97**	**127**	eP	**P**	**11 39 58.8**	**-0.3**
DAVOX	**Davos/Dischmat**	**26.44**	**138**	P	**P**	**11 40 04.1**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=328,slow=7.6,SNR=4.8						
DAVOX				LR	LR	11 50 41.9	
	comp=Z,1µm,20.2s,baz=282,slow=37						
TUE	**Stuetta**	**26.61**	**139**	eP	**P**	**11 40 06.3**	**+1.1**
	comp=Z,11nm,1.1s						
LANS	**Liptovska Anna**	**26.76**	**123**	eP	**P**	**11 40 07.4**	**+1.1**
SCHQ	**Schefferville**	**27.03**	**262**	P	**P**	**11 40 08.2**	**-0.4**
	comp=Z,8.2nm,0.8s,baz=232,slow=16,SNR=3.6						
SCHQ				LR	LR	11 49 58.5	
	comp=Z,2µm,22.0s,baz=60,slow=35						
SCHQ	**Schefferville**	**27.03**	**262**	eP	**P**	**11 40 07.9**	**-0.8**
	comp=Z,9.6nm,0.7s						
VYHS	**Vyhne**	**27.17**	**124**	eP	**P**	**11 40 12.3**	**+2.3**
OBN	**Obninsk**	**27.19**	**96**	LR	LR	11 50 22.1	
	comp=Z,700nm,19.2s,baz=352,slow=35						
BNI	**Bardonecchia**	**27.39**	**144**	eP	**P**	**11 40 14.0**	**+1.9**
	comp=Z,8.0nm,1.4s						
KOLS	**Kolonicke sedl**	**27.78**	**119**	eP	**P**	**11 40 18.7**	**+3.3**
PSZ	**Piszkesteto**	**27.99**	**123**	eP	**P**	**11 40 16.8**	**-0.6**
	comp=Z,4.8nm,0.6s						
AKASG	**Malin Array Be**	**28.41**	**109**	P	**P**	**11 40 21.5**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=332,slow=9.4,SNR=4.2						
AKASG				LR	LR	11 51 12.1	
	comp=Z,2µm,20.8s,baz=320,slow=35						
AKBB	**Malin Array Si**	**28.41**	**109**	eP	**P**	**11 40 21.3**	**+0.3**
	comp=Z,6.5nm,1.1s						
VLC	**Villacollemand**	**29.03**	**139**	eP	**P**	**11 40 26.9**	**+0.2**
	comp=Z,9.1nm,0.9s						
BUR08	**Bucovina Ar. S**	**29.82**	**117**	eP	**P**	**11 40 33.2**	**-0.5**
	comp=Z,15nm,1.8s						
ESDC	**Sonseca Array**	**31.00**	**162**	LR	LR	11 53 07.9	
	comp=Z,735nm,18.3s,baz=350,slow=36						
KIS	**Kishinev**	**31.52**	**113**	eP	**P**	**11 40 50.0**	**+1.5**
KIS				eLR	LR	11 49 00.0	
	comp=Z,2µm,20.0s						
ARU	**Arti**	**33.64**	**75**	eP	**P**	**11 41 07.4**	**+0.4**
	comp=Z,17nm,1.6s						
YKW3	**Yellowknife Ar**	**36.16**	**309**	eP	**P**	**11 41 27.1**	**-1.6**
	comp=Z,8.8nm,1.0s						
YKA	**Yellowknife Ar**	**36.22**	**309**	P	**P**	**11 41 29.7**	**+0.6**
	comp=Z,5.9nm,0.9s,baz=36,slow=8.2,SNR=14						
YKA				LR	LR	11 56 17.7	
	comp=Z,154nm,19.2s,baz=39,slow=36						
YKB5	**Yellowknife Ar**	**36.22**	**309**	eP	**P**	**11 41 29.7**	**+0.6**
TIXI	**Tiksi**	**36.71**	**18**	eP	**P**	**11 41 33.2**	**-0.1**
	comp=Z,18nm,1.8s						
KEST	**Kesra**	**36.91**	**145**	LR	LR	11 56 30.0	
	comp=Z,673nm,19.5s,baz=270,slow=36						
TRQ	**Mont Tremblant**	**36.93**	**261**	eP	**P**	**11 41 34.3**	**-1.2**
MOQ	**Mont Orford**	**36.95**	**258**	eP	**P**	**11 41 34.0**	**-1.6**
EPYK	**Eagle Plains**	**38.03**	**326**	eP	**P**	**11 41 43.2**	**-1.4**
	comp=Z,9.9nm,1.1s						
TOLK	**Toolik Lake Re**	**38.17**	**335**	eP	**P**	**11 41 45.5**	**-0.2**
	comp=Z,13nm,1.1s						
AKTO	**Aktyubinsk**	**38.42**	**81**	LR	LR	11 56 46.0	
	comp=Z,944nm,19.0s,baz=345,slow=35						
KVAR	**Kislovodsk Arr**	**38.77**	**101**	LR	LR	11 57 35.0	
	comp=Z,1µm,20.2s,baz=252,slow=36						
FFC	**Flin Flon**	**38.95**	**293**	eP	**P**	**11 41 51.7**	**-0.7**
	comp=Z,94nm,1.2s						
KBZ	**Khabaz**	**39.04**	**101**	P	**P**	**11 41 55.6**	**+2.4**
	comp=Z,2.2nm,0.8s,baz=350,slow=6.2,SNR=4.0						
KBZ				LR	LR	11 57 39.1	
	comp=Z,2µm,19.8s,baz=313,slow=36						
FYU	**Fort Yukon**	**39.39**	**331**	eP	**P**	**11 41 56.4**	**+0.6**
	comp=Z,50nm,1.4s						
BR131	**Keskin Array S**	**39.59**	**113**	eP	**P**	**11 41 58.5**	**+0.5**
	comp=Z,2.5nm,0.8s						
BRTR	**Keskin Array B**	**39.59**	**113**	P	**P**	**11 41 59.9**	**+1.8**
	comp=Z,1.2nm,0.9s,baz=343,slow=3.9,SNR=5.5						
BRTR				LR	LR	11 58 41.9	
	comp=Z,727nm,21.9s,baz=340,slow=37						
ABKAR	**Akbulak array**	**40.08**	**80**	eP	**P**	**11 42 02.5**	**+0.7**
	comp=Z,2.9nm,0.8s						
BRVK	**Borovoye**	**40.26**	**69**	eP	**P**	**11 42 03.7**	**+0.4**
	comp=Z,7.0nm,1.4s						
EGAK	**Eagle**	**40.29**	**327**	eP	**P**	**11 42 02.2**	**-1.2**
	comp=Z,9.7nm,1.1s						
DAWY	**Dawson**	**40.60**	**326**	eP	**P**	**11 42 05.3**	**-0.8**
	comp=Z,8.2nm,1.4s						
ULM	**Lac du Bonnet**	**40.75**	**284**	P	**P**	**11 42 07.7**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=16,slow=5.6,SNR=4.5						
ULM				LR	LR	11 59 38.1	
	comp=Z,717nm,19.3s,baz=38,slow=37						
ULM	**Lac du Bonnet**	**40.75**	**284**	eP	**P**	**11 42 05.8**	**-1.5**
	comp=Z,4.1nm,0.8s						
IDI	**Anoyia**	**41.08**	**126**	LR	LR	12 00 38.5	
	comp=Z,492nm,19.3s,baz=293,slow=38						
EYMN	**Ely**	**41.25**	**279**	eP	**P**	**11 42 10.7**	**-0.8**
	comp=Z,3.2nm,0.8s						
ILAR	**Eielson Array**	**41.31**	**331**	P	**P**	**11 42 13.9**	**+2.1**
	comp=Z,2.8nm,0.9s,baz=19,slow=7.0,SNR=17						
ILB	**Eielson Array**	**41.31**	**331**	eP	**P**	**11 42 10.2**	**-1.7**
	comp=Z,5.5nm,1.0s						
CCB	**Clear Creek Bu**	**41.58**	**331**	eP	**P**	**11 42 13.4**	**-0.6**
	comp=Z,11nm,1.3s						
HDA	**Harding Lake**	**41.66**	**331**	eP	**P**	**11 42 13.7**	**-1.0**
	comp=Z,8.4nm,0.9s						
MACI	**Morro de la Ar**	**41.77**	**181**	eP	**P**	**11 42 16.3**	**+0.1**
	comp=Z,81nm,1.0s						
DOT	**Dot Lake**	**41.85**	**328**	eP	**P**	**11 42 16.1**	**-0.3**
	comp=Z,5.2nm,1.0s						
MENT	**Mentasta**	**42.44**	**328**	eP	**P**	**11 42 20.0**	**-1.1**
	comp=Z,7.4nm,1.1s						
BPAW	**Bear Paw Mtn.**	**42.60**	**333**	eP	**P**	**11 42 21.9**	**-0.5**
	comp=Z,24nm,1.2s						
MCK	**McKinley**	**42.62**	**331**	eP	**P**	**11 42 22.3**	**-0.2**
	comp=Z,28nm,1.4s						
GNI	**Garni**	**42.85**	**101**	LR	LR	12 00 54.5	
	comp=Z,2µm,18.9s,baz=314,slow=37						
G40A	**Rib Lake**	**43.13**	**276**	eP	**P**	**11 42 25.8**	**-1.1**
	comp=Z,8.8nm,1.3s						
HYT	**Haines Junctio**	**43.15**	**322**	eP	**P**	**11 42 26.7**	**-0.3**
	comp=Z,7.7nm,1.1s						
ZAA0	**Zalesovo Array**	**43.94**	**57**	eP	**P**	**11 42 34.2**	**+1.0**
	comp=Z,3.3nm,0.4s						
ZALV	**Zalesovo Beam**	**43.94**	**57**	P	**P**	**11 42 35.5**	**+2.3**
	comp=Z,2.3nm,0.9s,baz=330,slow=8.6,SNR=4.1						
ZALV				LR	LR	12 02 52.5	
	comp=Z,643nm,21.4s,baz=264,slow=39						
KURK	**Kurchatov**	**44.91**	**64**	eP	**P**	**11 42 41.5**	**+0.4**
	comp=Z,6.3nm,0.8s						
MMAI	**Mount Meron Ar**	**46.31**	**115**	LR	LR	12 03 17.7	
	comp=Z,311nm,19.1s,baz=0.0,slow=37						
EGMT	**Eagleton**	**47.19**	**294**	eP	**P**	**11 42 59.0**	**-0.2**
	comp=Z,17nm,1.4s						
ASF	**Jabal al Asfar**	**47.56**	**114**	LR	LR	12 04 13.6	
	comp=Z,709nm,20.9s,baz=328,slow=38						
TAM	**Tamanrasset**	**48.87**	**154**	eP	**P**	**11 43 13.7**	**+1.2**
	comp=Z,3.5nm,1.1s						
KK31	**Karatay Array**	**49.01**	**75**	eP	**P**	**11 43 14.5**	**+1.3**
	comp=Z,9.0nm,1.4s						
GCMT	**Greycliff**	**49.15**	**293**	eP	**P**	**11 43 13.8**	**-0.6**
EIL	**Elat**	**49.28**	**117**	LR	LR	12 08 22.0	
	comp=Z,119nm,18.1s,baz=250,slow=41						
GEYT	**Alibeck**	**49.42**	**90**	LR	LR	12 05 50.1	
	comp=Z,2µm,18.8s,baz=340,slow=38						
MKAR	**Makanchi Array**	**49.51**	**63**	P	**P**	**11 43 18.6**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=0.9,slow=7.4,SNR=7.8						
MKAR				LR	LR	12 06 10.8	
	comp=Z,724nm,19.6s,baz=316,slow=38						
MSO	**Missoula**	**49.55**	**297**	eP	**P**	**11 43 16.9**	**-0.6**
	comp=Z,5.4nm,0.9s						
AAK	**Ala-Archa**	**50.75**	**72**	LR	LR	12 04 27.5	
	comp=Z,784nm,18.6s,baz=318,slow=35						
K22A	**Casper**	**50.94**	**288**	eP	**P**	**11 43 27.0**	**-1.0**
	comp=Z,8.8nm,1.1s						
BW06	**Boulder Array**	**51.82**	**291**	eP	**P**	**11 43 34.3**	**-0.4**
	comp=Z,5.9nm,1.3s						
PDAR	**Pinedale Array**	**51.82**	**291**	P	**P**	**11 43 35.2**	**+0.5**
	comp=Z,1.8nm,1.0s,baz=51,slow=4.7,SNR=12						
N23A	**Red Feather La**	**52.32**	**287**	eP	**P**	**11 43 38.0**	**-0.6**
	comp=Z,10nm,1.0s						
HLID	**Hailey**	**52.64**	**295**	eP	**P**	**11 43 40.6**	**-0.1**
	comp=Z,6.1nm,1.5s						
ISCO	**Idaho Springs**	**53.20**	**286**	eP	**P**	**11 43 45.0**	**-0.1**
	comp=Z,3.5nm,1.1s						
O20A	**White River Ci**	**53.76**	**288**	eP	**P**	**11 43 49.0**	**-0.1**
	comp=Z,7.9nm,0.9s						
WMQ	**Urumqi**	**53.84**	**61**	eP	**P**	**11 43 52.8**	**+3.4**
WMQ				LR	LR		
	comp=Z,650nm,14.5s						
WMQ				LR	LR		
	comp=Z,530nm,18.3s						
WMQ				LR	LR		
	comp=Z,670nm,19.7s						
KSH	**Kashi**	**54.04**	**73**	eP	**P**	**11 43 52.5**	**+1.5**
KSH				pP	sP	11 43 58.0	+3.1
KSH				pmax	pmax		
	comp=Z,11nm,1.2s						
SMCO	**Snowmass**	**54.21**	**287**	eP	**P**	**11 43 52.1**	**-0.5**
	comp=Z,3.3nm,1.0s						
X37A	**Clayton**	**54.44**	**274**	eP	**P**	**11 43 54.0**	**+0.2**
	comp=Z,4.7nm,0.8s						
DUG	**Dugway, Tooele**	**55.19**	**292**	eP	**P**	**11 43 58.9**	**-0.5**
	comp=Z,10nm,1.3s						
S22A	**4UR Ranch, Cre**	**55.46**	**286**	eP	**P**	**11 44 00.9**	**-0.6**
	comp=Z,8.9nm,1.6s						
WMOK	**Wichita Mounta**	**55.48**	**277**	eP	**P**	**11 44 01.6**	**+0.2**
	comp=Z,17nm,1.8s						
MVCO	**Mesa Verde**	**56.50**	**287**	eP	**P**	**11 44 08.2**	**-0.7**
	comp=Z,12nm,1.4s						
MSU	**Marysvale**	**56.51**	**291**	eP	**P**	**11 44 09.0**	**0.0**
MTPU	**Mount Pierson**	**56.94**	**291**	eP	**P**	**11 44 11.7**	**-0.5**
	comp=Z,19nm,1.9s						
ABTX	**Abilene, Hawle**	**57.69**	**277**	eP	**P**	**11 44 17.2**	**0.0**
	comp=Z,17nm,1.5s						
TOA1	**Torodi Ar. Sit**	**57.84**	**160**	eP	**P**	**11 44 18.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**57.84**	**160**	P	**P**	**11 44 18.1**	**-0.2**
	comp=Z,2.4nm,1.0s,baz=328,slow=8.0,SNR=6.6						
TORD				LR	LR	12 09 34.9	
	comp=Z,235nm,18.9s,baz=345,slow=36						
LCMT	**Little Creek M**	**58.22**	**291**	eP	**P**	**11 44 20.2**	**-0.7**
	comp=Z,4.6nm,1.2s						
NVAR	**Mina Array Bea**	**58.52**	**296**	P	**P**	**11 44 24.1**	**+1.0**
	comp=Z,1.4nm,0.9s,baz=38,slow=4.7,SNR=6.4						
NVAR				LR	LR	12 10 22.0	
	comp=Z,2µm,18.5s,baz=16,slow=37						
GTA	**Gaotai**	**61.40**	**53**	eP	**P**	**11 44 44.0**	**+1.3**
GTA				pP	sP	11 44 48.3	+1.6
GTA				sP	pP	11 44 51.0	+5.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TUC	**Tucson**	**61.73**	**287**	eP	**P**	**11 44 44.3**	**-0.7**
	comp=Z,4.1nm,1.1s						
TXAR	**Lajitas Array**	**62.08**	**279**	P	**P**	**11 44 47.9**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=48,slow=5.9,SNR=15						
TXAR				LR	LR	12 12 00.8	
	comp=Z,2µm,18.8s,baz=0.0,slow=36						
319A	**Douglas**	**62.09**	**285**	eP	**P**	**11 44 47.0**	**-0.5**
	comp=Z,5.2nm,1.0s						
HHC	**Hu-ho-hao-te**	**63.03**	**43**	eP	**P**	**11 44 53.8**	**+0.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,96nm,5.8s						
DBIC	**Dimbokro**	**63.63**	**168**	LR	LR	12 11 53.4	
	comp=Z,172nm,20.2s,baz=354,slow=35						
USRK	**Ussuriysk Ar.**	**63.70**	**25**	LR	LR	12 13 53.7	
	comp=Z,123nm,19.0s,baz=343,slow=37						
LZH	**Lanzhou**	**65.60**	**51**	eP	**P**	**11 45 09.8**	**-0.8**
LZH				pP	pP	11 45 13.1	-0.4
LZH				sP	sP	11 45 14.8	+0.2
LZH				ePP	**PP**	**11 47 36.0**	**+1.6**
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,51nm,7.6s						
LZH				LR	LR		
	comp=Z,130nm,15.8s						
LZH				LR	LR		
	comp=Z,130nm,16.1s						
LZH				LR	LR		
	comp=Z,170nm,18.3s						
LSA	**Lhasa**	**67.92**	**64**	eP	**P**	**11 45 25.9**	**+0.1**
	comp=Z,10nm,1.3s						
XAN	**Xi'an**	**68.86**	**47**	P	P	11 45 47.5	+16
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,77nm,3.6s						
KSRS	**Korea Array**	**69.64**	**30**	LR	LR	12 16 58.7	
	comp=Z,179nm,19.5s,baz=334,slow=37						
MJAR	**Matsushiro Arr**	**72.09**	**22**	P	**P**	**11 45 51.0**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=348,slow=5.4,SNR=8.0						
MJAR				LR	LR	12 19 08.2	
	comp=Z,73nm,19.0s,baz=350,slow=37						
NJ2	**Nanjing**	**73.10**	**39**	eP	**P**	**11 45 56.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
ROSC	**El Rosal**	**75.09**	**242**	LR	LR	12 16 13.1	
	comp=Z,53nm,19.8s,baz=53,slow=33						
KMI	**Kunming**	**75.66**	**55**	P	**P**	**11 46 13.8**	**+1.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMBO	**Kilima Mbogo**	**79.11**	**126**	LR	LR	12 25 04.3	
	comp=Z,101nm,18.2s,baz=144,slow=38						
CMAR	**Chiang Mai Arr**	**80.84**	**61**	LR	LR	12 26 13.7	
	comp=Z,106nm,21.1s,baz=346,slow=38						
QIZ	**Qiongzhong**	**83.40**	**51**	P	**P**	**11 46 53.6**	**-0.4**
QIZ				S	**S**	**11 57 12.9**	**-2.1**
QIZ				pmax	pmax		
	comp=Z,16nm,2.7s						
QIZ				LR	LR		
	comp=Z,350nm,16.7s						
QIZ				LR	LR		
	comp=Z,300nm,15.2s						
QIZ				LR	LR		
	comp=Z,370nm,15.7s						
BDFB	**Brasilia**	**88.35**	**211**	LR	LR	12 20 22.6	
	comp=Z,305nm,19.8s,baz=350,slow=31						
LPAZ	**La Paz**	**93.44**	**230**	LR	LR	12 28 15.5	
	comp=Z,40nm,19.1s,baz=0.0,slow=35						
PPT2	**Papeete2**	**120.64**	**307**	eLR	LR	12 30 24.6	
	comp=Z,221nm,22.8s						
TBI	**Tubuai**	**126.07**	**305**	eLR	LR	12 32 51.0	
	comp=Z,379nm,22.5s						
ASAR	**Alice Springs**	**130.32**	**37**	PKP	**PKiKP**	**11 53 37.9**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=354,slow=2.1,SNR=6.4						
DZM	**Mont Dzumac**	**132.06**	**357**	eLR	LR	12 35 40.2	
	comp=Z,210nm,31.4s						
MAW	**Mawson**	**147.25**	**136**	PKPbc	**PKPab**	**11 54 09.9**	**-0.3**
	comp=Z,4.1nm,0.9s,baz=309,slow=8.8,SNR=6.5						

IDC 15 11:38:14.7±2.0**, 5°.60N**×**125°.76E, h0**km**, mb3.7**/4**,**
mb1 3.9/4**, mb1mx3.4**/33**, mbtmp3.7**/4**, Error ellipse:**
s-maj=180.5km s-min=23.9km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.75**	**162**	P	P	11 43 57.3	+1.0
	0.8nm,0.3s,baz=343,slow=11,SNR=25						
ASAR	**Alice Springs**	**30.16**	**165**	P	P	11 44 25.8	-0.9
	0.3nm,0.3s,baz=335,slow=7.9,SNR=15						
STKA	**Stephens Creek**	**40.21**	**159**	P	P	11 45 53.1	-0.1
	0.5nm,0.5s,baz=348,slow=10,SNR=3.3						
MKAR	**Makanchi Array**	**55.48**	**325**	P	P	11 47 51.3	-0.1
	0.2nm,0.3s,baz=133,slow=7.7,SNR=3.1						

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*NNC **15** 11:55:29.8±3.8, 35°.88N×58°.53E, h0km, mb4.0, Error ellipse: s-maj=53.8km s-min=15.9km az=59.0*

*IDC **15** 11:55:36.0±1.1, 35°.39N×58°.71E, h0km, mb3.8/9, mb1 4.0/14, mb1mx3.8/39, mbtmp4.0/14, ML3.8/5, MS3.6/1, Ms1 3.6/1, ms1mx2.6/43, Error ellipse: s-maj=17.3km s-min=15.9km az=45.0*

*ISCJB **15** 11:55:37.2±0.2, 35°.49N±0°.02×58°.95E±0°.03, h10km, mb4.1/12, MS3.4/2, Error ellipse: s-maj=3.7km s-min=2.6km az=36.1*

*TEH **15** 11:55:37.5, 35°.49N×58°.87E, h10km, ML4.0*

*NEIC **15** 11:55:37.0±0.0, 35°.47N×58°.83E, h7km, mb4.0/10, ML4.0(THR), MN4.0(TEH), After TEH.*

*THR **15** 11:55:39.0, 35°.38N×58°.81E, h15km, ML4.0*

*MOS **15** 11:55:39.9±1.8, 35°.53N×58°.94E, h33km, mb4.0/7, Error ellipse: s-maj=7.3km s-min=6.9km az=104.0*

ISC 15 11:55:38.2±0.5**, 35°.49N**±0°.03×**58°.87E**±0°.04**, h10**km**, n131,**
σ1**s**.**66**/133**, mb4.2**/12**, 10C-4D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOG	**Moghan**	**0.73**	**32**	ePg	**Pb**	**11 55 52.5**	**-0.6**
IMOG				eSg	**Sb**	**11 56 02.8**	**-0.5**
IMOG	**Moghan**	**0.73**	**32**	ePg	**Pb**	**11 55 52.6**	**-0.6**
IMOG				IAMB	IAmb	11 56 05.1	
	comp=Z,48µm,0.6s						
IPAY	**Payeh**	**0.97**	**6**	ePg	**Pb**	**11 55 56.4**	**-0.7**
IPAY				eSg	**Sb**	**11 56 10.4**	**+0.3**
IPAY				IAMB	IAmb	11 56 11.8	
	comp=Z,35µm,0.3s						
IAKL	**Akhelmad**	**1.12**	**355**	ePg	**Pg**	**11 55 58.3**	**-1.3**
IAKL				IAMB	IAmb	11 56 20.1	
	comp=Z,35µm,0.4s						
JRKH	**Jarkhoshk**	**1.28**	**70**	IAMB	IAmb	11 56 06.8	
	comp=Z,0.0nm,0.3s						
JRKH				ePg	**Pg**	**11 56 02.2**	**-0.5**
IMYA	**Miami**	**1.31**	**49**	ePn	**Pg**	**11 56 03.1**	**-0.4**
IMYA	**Miami**	**1.31**	**49**	IAMB	IAmb	11 56 24.3	
	comp=Z,15µm,0.6s						
IMYA				ePg	**Pg**	**11 56 03.0**	**-0.4**
IKRD	**Kardeh**	**1.32**	**348**	IAMB	IAmb	11 56 27.7	
	comp=Z,17µm,0.3s						
IKRD				ePg	**Pg**	**11 56 04.2**	**+0.7**
SBZV	**Sabzevar**	**1.36**	**312**	ePg	**Pn**	**11 56 02.2**	**-1.2**
SBZV				IAMB	IAmb	11 56 31.6	
	comp=Z,0.0nm,0.5s						
ISFR	**Sfrayin**	**1.71**	**336**	ePn	**Pb**	**11 56 09.1**	**-0.9**
ISFR	**Sfrayin**	**1.71**	**336**	IAMB	IAmb	11 56 43.3	
	comp=Z,22µm,0.6s						
ISFR				ePn	**Pb**	**11 56 09.0**	**-0.9**
IEMG	**Emamgholi**	**1.93**	**355**	ePn	**Pb**	**11 56 12.7**	**-0.9**
IEMG	**Emamgholi**	**1.93**	**355**	ePn	**Pb**	**11 56 12.1**	**-1.5**
IEMG				IAMB	IAmb	11 56 44.5	
	comp=Z,14µm,0.4s						
SHRT	**Shahrakht**	**2.18**	**147**	ePn	**Pb**	**11 56 15.8**	**-1.9**
SHRT	**Shahrakht**	**2.18**	**147**	AML	AML	11 56 51.8	
	comp=E,878nm,0.3s						
SHRT				AML	AML	11 56 52.8	
	comp=N,1µm,0.3s						
SHRT	**Shahrakht**	**2.18**	**147**	Pn	**Pb**	**11 56 15.8**	**-1.9**
TABS	**Tabas**	**2.33**	**219**	ePn	**Pn**	**11 56 17.7**	**+1.0**
TABS	**Tabas**	**2.33**	**219**	AML	AML	11 56 55.8	
	comp=E,622nm,0.4s						
TABS				AML	AML	11 56 56.9	
	comp=N,1µm,0.6s						
TABS	**Tabas**	**2.33**	**219**	Pn	**Pn**	**11 56 17.7**	**+1.0**
TKDS	**Koohdasht(Taba**	**2.36**	**218**	ePn	**Pn**	**11 56 17.5**	**+0.4**
TKDS				IAMB	IAmb	11 56 58.1	
	comp=Z,0.0nm,0.4s						
IMON	**Monand**	**2.38**	**164**	ePn	**Pb**	**11 56 19.4**	**-1.9**
IMON				IAMB	IAmb	11 56 56.8	
	comp=E,3µm,0.5s						
BJRD	**Bojnurd**	**2.50**	**332**	ePn	**Pb**	**11 56 23.0**	**-0.2**
BJRD	**Bojnurd**	**2.50**	**332**	Pn	**Pb**	**11 56 23.0**	**-0.2**
GEYT	**Alibeck**	**2.51**	**346**	Pn	**Pb**	**11 56 20.6**	**-2.7**
	comp=E,21nm,0.3s,baz=174,slow=16,SNR=96						
GEYT				Pg	**Pg**	**11 56 23.2**	**-3.1**
	comp=E,53nm,0.3s,baz=168,slow=15,SNR=98						
GEYT				Lg	Lg	11 56 58.8	
	comp=E,25nm,0.3s,baz=174,slow=32,SNR=25						
GYA0B	**ALIBECK ARRAY**	**2.51**	**346**	ePn	**Pb**	**11 56 20.6**	**-2.7**
GYA0B	**ALIBECK ARRAY**	**2.51**	**346**	⇓Pn	**Pn**	**11 56 20.2**	**+1.1**
GYA0B				⇓Pg	**Pb**	**11 56 23.8**	**+0.4**
GYA0B				⇓Sn	**Sg**	**11 56 58.4**	**-0.4**
ITEG	**Tejag**	**2.59**	**182**	ePn	**Pn**	**11 56 21.2**	**+0.9**
ITEG	**Tejag**	**2.59**	**182**	ePn	**Pn**	**11 56 21.2**	**+0.9**
ITEG				IAMB	IAmb	11 56 35.2	
	comp=Z,9µm,0.3s						
IDAH	**Dahanechah**	**2.87**	**163**	ePn	**Pn**	**11 56 24.9**	**+0.8**
IDAH				IAMB	IAmb	11 57 18.8	
	comp=Z,8µm,0.8s						
IKOO	**Kooshah**	**3.06**	**178**	ePn	**Pn**	**11 56 27.5**	**+0.7**
IKOO				IAMB	IAmb	11 56 44.0	
	comp=Z,4µm,0.4s						
MRVT	**Maraveh tapeh**	**3.11**	**315**	ePn	**Pn**	**11 56 29.3**	**+1.9**
MRVT	**Maraveh tapeh**	**3.11**	**315**	Pn	**Pn**	**11 56 29.3**	**+1.9**
IMND	**Minoodasht**	**3.30**	**303**	ePn	**Pn**	**11 56 32.0**	**+2.1**
IMND				IAMB	IAmb	11 57 28.1	
	comp=Z,0.0nm,1.0s						
BSRN	**Basiran**	**3.52**	**176**	ePn	**Pn**	**11 56 33.5**	**+0.4**
BSRN	**Basiran**	**3.52**	**176**	Pn	**Pn**	**11 56 33.5**	**+0.4**
IANJ	**Anjilo**	**4.04**	**271**	ePn	**Pn**	**11 56 43.3**	**+3.0**
IANJ	**Anjilo**	**4.04**	**271**	ePn	**Pn**	**11 56 42.8**	**+2.5**
IANJ				IAMB	IAmb	11 58 17.6	
	comp=Z,1µm,0.7s						
IGLO	**Ghaloghah**	**4.21**	**285**	ePn	**Pn**	**11 56 45.0**	**+2.4**
IGLO				IAMB	IAmb	11 56 48.8	
	comp=Z,5µm,0.8s						
ISHM	**Shahmirzad**	**4.55**	**276**	ePn	**Pn**	**11 56 50.0**	**+2.6**
ISHM				IAMB	IAmb	11 57 17.7	
	comp=Z,1µm,0.4s						
YZKH	**Yazd**	**4.71**	**230**	ePn	**Pn**	**11 56 50.2**	**+0.8**
YZKH	**Yazd**	**4.71**	**230**	Pn	**Pn**	**11 56 50.2**	**+0.8**
IBAF	**Bafgh**	**4.76**	**216**	ePn	**Pn**	**11 56 52.1**	**+1.9**
IBAF				IAMB	IAmb	11 56 57.0	
	comp=Z,2µm,0.4s						
ILAS	**Lasjerd**	**4.83**	**270**	ePn	**Pn**	**11 56 53.6**	**+2.5**
ILAS				IAMB	IAmb	11 57 14.0	
	comp=Z,777nm,0.5s						
ANAR	**Anarak**	**4.83**	**243**	ePn	**Pn**	**11 56 51.6**	**+0.5**
ANAR				IAMB	IAmb	11 58 24.9	
	comp=N,0.0nm,0.5s						
IPRN	**Peran**	**5.36**	**280**	ePn	**Pn**	**11 57 00.6**	**+2.3**
IMEH	**Mehriz**	**5.42**	**222**	ePn	**Pn**	**11 57 00.1**	**+0.9**
IMEH				IAMB	IAmb	11 58 38.6	
	comp=Z,1µm,0.5s						
KHGB	**Koh Gabri**	**5.48**	**202**	ePn	**Pn**	**11 57 01.9**	**+1.8**
IDMV	**Damavand**	**5.58**	**273**	ePn	**Pn**	**11 57 03.1**	**+1.7**
ISAD	**Sadrabad**	**5.60**	**232**	ePn	**Pn**	**11 57 02.5**	**+0.7**
CHMN	**Cheshme madani**	**5.72**	**192**	ePn	**Pn**	**11 57 04.2**	**+0.7**
CHMN				IAMB	IAmb	11 58 51.7	
	comp=Z,0.0nm,0.9s						
KRSH	**Karshahi**	**5.75**	**257**	ePn	**Pn**	**11 57 05.2**	**+1.5**
IZEF	**Zefreh**	**6.00**	**246**	ePn	**Pn**	**11 57 09.0**	**+1.7**
IZEF				IAMB	IAmb	11 59 07.1	
	comp=Z,594nm,1.0s						
NGRK	**Negar Kerman**	**6.10**	**198**	ePn	**Pn**	**11 57 10.1**	**+1.4**
NGRK				IAMB	IAmb	11 57 38.3	
	comp=Z,0.0nm,0.5s						
IGAR	**Gharneh**	**6.45**	**243**	ePn	**Pn**	**11 57 13.8**	**+0.4**
IGAR				IAMB	IAmb	11 57 18.9	
	comp=Z,508nm,0.3s						
IRAM	**Ramesheh**	**6.54**	**238**	ePn	**Pn**	**11 57 15.7**	**+1.1**
KBL	**Kabul**	**8.40**	**94**	ePn	**Pn**	**11 57 39.5**	**-0.7**
KBL	**Kabul**	**8.40**	**94**	eP	**Pn**	**11 57 39.5**	**-0.7**
GAR	**Garm**	**9.78**	**66**	ePn	**Pn**	**11 57 57.8**	**-1.1**
GAR				eSn	**Sn**	**11 59 50.6**	**+1.8**
GAR	**Garm**	**9.78**	**66**	eP	**Pn**	**11 57 57.8**	**-1.1**
GAR				e		11 59 50.6	
BTK	**Batken**	**10.50**	**61**	ePn	**Pn**	**11 58 09.0**	**+0.2**
BTK	**Batken**	**10.50**	**61**	eP	**Pn**	**11 58 09.0**	**+0.2**
UOSS	**Minazif**	**10.76**	**193**	ePn	**Pn**	**11 58 12.2**	**-0.1**
KK31	**Karatay Array**	**11.79**	**46**	ePn	**Pn**	**11 58 26.7**	**+0.3**
KK31				eSn	**Sn**	**12 00 37.3**	**-0.7**
KK31	**Karatay Array**	**11.79**	**46**	⇑Pn	**Pn**	**11 58 26.6**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=226,slow=5.3,SNR=7.1						
KK31	**Karatay Array**	**11.79**	**46**	eP	**Pn**	**11 58 26.7**	**+0.3**
KK31				e		12 00 37.3	
NIL	**Nilore**	**12.00**	**95**	ePn	**Pn**	**11 58 29.1**	**-0.2**
NIL	**Nilore**	**12.00**	**95**	eP	**Pn**	**11 58 29.1**	**-0.2**
GNI	**Garni**	**12.10**	**297**	i P	**Pn**	**11 58 34.9**	**+4.2**
ARSB	**Arslanbob**	**12.51**	**58**	ePn	**Pn**	**11 58 34.9**	**-1.4**
TBLG	**Delisi**	**12.68**	**304**	ePn	**Pn**	**11 58 38.5**	**0.0**
TBLG	**Delisi**	**12.68**	**304**	eP	**Pn**	**11 58 38.6**	**0.0**
AKH	**Akhalkalaki**	**13.42**	**301**	ePn	**Pn**	**11 58 48.7**	**0.0**
AKH	**Akhalkalaki**	**13.42**	**301**	eP	**Pn**	**11 58 48.7**	**0.0**
AB31	**Akbulak array**	**13.78**	**3**	Pn	**Pn**	**11 58 56.3**	**+2.8**
	comp=Z,0.6nm,0.4s,baz=194,slow=14,SNR=10						
AB31				⇑Sn	Sn	12 01 35.0	+8.5
	comp=Z,3.2nm,0.8s,baz=186,slow=11,SNR=10.0						
ABKAR	**Akbulak array**	**13.78**	**3**	ePn	**Pn**	**11 58 52.6**	**-0.9**
ABKAR				eSn	**Sn**	**12 01 27.1**	**+0.6**
AAK	**Ala-Archa**	**14.07**	**55**	Pn	**Pn**	**11 58 58.1**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=234,slow=12,SNR=9.1						
AAK	**Ala-Archa**	**14.07**	**55**	ePn	**Pn**	**11 58 56.7**	**-1.0**
AAK	**Ala-Archa**	**14.07**	**55**	ceP	**Pn**	**11 58 57.2**	**-0.5**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NRN	**Naryn**	**14.67**	**61**	ePn	**Pn**	**11 59 06.1**	**+0.1**
NRN	**Naryn**	**14.67**	**61**	eP	**Pn**	**11 59 06.1**	**+0.1**
NEY	**Neytrino**	**14.68**	**307**	i P	**P**	**11 59 09.0**	**-3.3**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KBZ	**Khabaz**	**14.79**	**309**	Pn	**Pn**	**11 59 06.1**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=171,slow=13,SNR=3.1						
AKTO	**Aktyubinsk**	**14.95**	**358**	Pn	**Pn**	**11 59 10.7**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=178,slow=11,SNR=13						
AKTO	**Aktyubinsk**	**14.95**	**358**	⇑Pn	**Pn**	**11 59 07.7**	**-1.8**
	comp=Z,7.3nm,0.7s						
AKTO				Sn	**S**	**12 02 04.5**	**-8.5**
	comp=Z,7.1nm,1.2s						
BOOM	**Boomskoye usch**	**14.99**	**57**	ePn	**Pn**	**11 59 11.1**	**+0.9**
	comp=Z,8.8nm,0.9s						

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BOOM  Boomskoye usch 14.99  57  eP     Pn     11 59 11.1 +0.9
BOOM                                pmax   pmax
      comp=Z,9.0nm,0.9s
KIV   Kislovodsk     15.03 309  eP     Pn     11 59 11.7 +1.0
KIV                                 pmax   pmax
      comp=Z,18nm,1.0s
RAYN  Ar Rayn        16.64 228  eP     P      11 59 33.0 -1.0
      comp=Z,4.9nm,0.8s
RAYN  Ar Rayn        16.64 228  eP     P      11 59 33.0 -1.0
RAYN                                pmax   pmax
      comp=Z,5.0nm,0.8s
BRVK  Borovoye       19.33  21  eP     Pn     12 00 03.9 -0.6
      comp=Z,3.3nm,0.6s
BRVK  Borovoye       19.33  21   Pn    Pn     12 00 03.8 -0.6
      comp=Z,3.0nm,0.7s
BRVK  Borovoye       19.33  21d iP     Pn     12 00 04.7 +0.2
BRVK                                pmax   pmax
      comp=Z,3.0nm,0.8s
BVAR  Borovoye Array 19.33  21   P     Pn     12 00 04.1 -0.5
      comp=Z,0.3nm,0.3s,baz=188,slow=9.0,SNR=21
BR131 Keskin Array S 20.41 289  eP     P      12 00 15.6 +0.1
      comp=Z,2.7nm,1.1s
BRTR  Keskin Array B 20.41 289   P     P      12 00 15.7 +0.3
      comp=Z,0.9nm,0.8s,baz=155,slow=11,SNR=3.7
BRTR  Keskin Array B 20.41 289ceP      Pn     12 00 19.3 +1.8
BRTR                                pmax   pmax
      comp=Z,1.0nm,0.8s
KURBB Kurchatov Arra 20.77  37   P     Pn     12 00 19.7 -1.7
      comp=Z,5.3nm,0.8s,baz=232,slow=12,SNR=37
KURBB Kurchatov Arra 20.77  37   P     Pn     12 00 20.0 -1.4
      comp=Z,12nm,1.1s
MK31  Makanchi Array 20.86  50  eP     P      12 00 20.7 +0.5
      comp=Z,4.1nm,1.1s
MK31  Makanchi Array 20.86  50   P     P      12 00 20.7 +0.5
      comp=Z,3.1nm,0.8s,baz=245,slow=8.5,SNR=6.3
MK31  Makanchi Array 20.86  50  eP     P      12 00 20.7 +0.5
MK31                                pmax   pmax
      comp=Z,4.0nm,1.1s
MKAR  Makanchi Array 20.86  50   P     P      12 00 20.2  0.0
      comp=Z,1.8nm,0.7s,baz=240,slow=9.7,SNR=6.6
MKAR  Makanchi Array 20.86  50ceP      Pn     12 00 21.3 -1.4
MKAR                                pmax   pmax
      comp=Z,2.0nm,0.7s
KURK  Kurchatov      20.87  37  ePn    Pn     12 00 21.5 -1.2
      comp=Z,9.2nm,0.9s
KURK  Kurchatov      20.87  37ceP      Pn     12 00 21.6 -1.0
KURK                                pmax   pmax
      comp=Z,10.0nm,1.3s
VORD  Divnogorie     20.94 324  eP     P      12 00 19.8 -1.1
VORD                                pmax   pmax
      comp=Z,40nm,0.4s
ARU   Arti           20.95 360   P     P      12 00 20.9 -0.1
      comp=Z,1.9nm,0.3s,baz=177,slow=4.0,SNR=14
ARU   Arti           20.95 360  eP     P      12 00 21.4 +0.4
      comp=Z,13nm,0.9s
ARU   Arti           20.95 360c iP     P      12 00 21.5 +0.5
ARU                                           12 00 35.7
ARU                                 S      S      12 04 15.2 +1.0
ARU                                 SS     SnSn   12 04 32.7 -2.1
ARU                                 pmax   pmax
      comp=Z,12nm,0.8s
VSR   Storozhevoye   21.16 324  eP     P      12 00 22.0 -1.4
VSR                                 pmax   pmax
      comp=Z,10.0nm,0.5s
LPSR  Galich'ya Gora 22.19 327  eP     P      12 00 36.3 +1.9
LPSR                                pmax   pmax
      comp=Z,5.0nm,0.5s
OBN   Obninsk        24.93 329⇑eP      P      12 01 01.9 +0.7
OBN                                 *PP    sP     12 01 10.0 +3.6
OBN                                 *SP    pP     12 01 14.0 +9.1
OBN                                               12 01 32.0
OBN                                 pmax   pmax
      comp=Z,14nm,0.7s
OBN                                 MLR    MLR
      comp=Z,80nm,16.0s
DGZ   Jazzator, Alta 25.19  47  i P    P      12 01 07.2 +3.3
DGZ                                 pmax   pmax
      comp=Z,2.0nm,1.1s
ZAA0  Zalesovo Array 25.85  36  eP     P      12 01 09.9 +0.2
      comp=Z,5.8nm,1.1s
ZALV  Zalesovo Beam  25.85  36   P     P      12 01 10.0 +0.3
      comp=Z,4.1nm,0.9s,baz=269,slow=12,SNR=4.0
ZALV  Zalesovo Beam  25.85  36   P     P      12 01 10.0 +0.3
AKASG Malin Array Be 26.23 315   P     P      12 01 11.2 -1.8
      comp=Z,1.1nm,0.6s,baz=108,slow=8.9,SNR=3.7
AKASG Malin Array Be 26.23 315ceP      P      12 01 16.2 +3.1
AKBB  Malin Array Si 26.23 315  eP     P      12 01 12.6 -0.5
      comp=Z,3.2nm,0.8s
AKBB  Malin Array Si 26.23 315  eP     P      12 01 12.6 -0.5
AKBB                                pmax   pmax
      comp=Z,3.0nm,0.8s
ATD   Arta Tunnel    27.93 215   LR    LR     12 15 06.4
      comp=Z,124nm,21.5s,baz=252,slow=42
VYHS  Vyhne          32.09 306  eP     P      12 02 09.1 +3.8
VYHS  Vyhne          32.09 306  eP     P      12 02 09.1 +3.8
FIA0  FINESS Array S 33.23 332  eP     P      12 02 13.4 -1.6
FIA0  FINESS Array S 33.23 332  eP     P      12 02 13.4 -1.6
FINES FINESS Array B 33.23 332   P     P      12 02 13.4 -1.6
      comp=Z,1.6nm,0.8s,baz=181,slow=17,SNR=3.7
TLY   Talaya         35.62  49  i P    P      12 02 38.7 +2.8
CMAR  Chiang Mai Arr 39.23 105   P     P      12 03 07.3 +0.4
      comp=Z,1.2nm,0.4s,baz=299,slow=8.3,SNR=7.5
DGAR  Diego Garcia   44.55 161  i P    P      12 04 00.4  +10
TOA0  Torodi Ar. Sit 55.84 262  eP     P      12 05 15.0 -1.0
      comp=Z,11nm,1.4s
TORD  Torodi Ar. Bea 55.84 262   P     P      12 05 14.8 -1.2
      comp=Z,2.0nm,0.8s,baz=58,slow=6.3,SNR=9.1
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IDC ***15*** *12:07:57.6±1.6, 17°.86S×178°.56W, h516km±17km, mb3.9/17, mb1 4.1/18, mb1mx4.0/22, mbtmp4.7/18, Error ellipse: s-maj=16.0km s-min=11.3km az=113.0*

BJI ***15*** *12:07:58.2±0.0, 17°.80S×178°.70W, h529km, mb4.5/22, mB4.8/16*

ISCJB ***15*** *12:07:59.8±0.1, 17°.88S±0°.04×178°.73W±0°.04, h550km, mb4.5/114, Error ellipse: s-maj=6.3km s-min=3.5km az=138.1*

NEIC ***15*** *12:07:59.5±1.1, 17°.80S×178°.61W, h536km±6km, mb4.5/102, Error ellipse: s-maj=16.5km s-min=12.9km az=136.0*

ISC 15 12:08:00.4±0.3**, 17°.83S**±0°.07×**178°.64W**±0°.06**, h550**km**,**
n333, σ1^{s}.00/356**, mb4.5**/114**, 20C-8D, Fiji Islands region**

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Code  Station Name     Δ°   AZ°   Phase ID            Time      Res
                                 Op     ISC         h  m  s   ISC
AFI   Afiamalu        7.67  60  eP     P      12 09 52.5 -2.5
AFI                             eS     S      12 11 26.5 -2.4
NIUE  Niue            8.36 100  eP     P      12 10 00.6 -1.1
NIUE                            eS     S      12 11 40.8 -0.4
MARNC Mare, Loyalty  13.07 252  eP     P      12 10 48.7 -1.3
PINNC Pines Island,  13.90 248  eP     P      12 10 57.7 -0.9
DZM   Mont Dzumac    14.65 251   P     P      12 11 03.2 -3.1
      1.2nm,0.3s,baz=108,slow=24,SNR=11
DZM   Mont Dzumac    14.65 251  eP     P      12 11 04.8 -1.6
KNTN  Kanton         16.43  25  eP     P      12 11 23.5 -0.6
      103nm,1.4s
OUZ   Omahuta        18.65 200  eP     P      12 11 44.7 +0.7
      66nm,1.1s
URZ   Urewera        20.69 190   P     P      12 12 00.5 -2.0
      33nm,0.8s,baz=352,slow=7.1,SNR=8.9
URZ   Urewera        20.69 190  eP     P      12 12 00.6 -2.0
      34nm,0.8s
THZ   Tophouse       24.93 195  eP     P      12 12 39.7 -0.7
      20nm,1.1s
KHZ   Kahutara       25.40 194  eP     P      12 12 42.8 -1.6
      90nm,1.3s
LTZ   Lake Taylor    26.05 195  eP     P      12 12 49.0 -1.2
      20nm,0.7s
OXZ   Oxford         26.61 195  eP     P      12 12 53.9 -1.3
      44nm,0.8s
RPZ   Rata Peaks     27.23 196   P     P      12 13 00.5 -0.1
      9.5nm,0.7s,baz=52,slow=19,SNR=4.2
RPZ   Rata Peaks     27.23 196  eP     P      12 13 00.3 -0.3
      29nm,1.0s
FOZ   Fox Glacier    27.42 198  eP     P      12 13 01.1 -1.1
      67nm,1.1s
EIDS  Eidsvold       29.09 250  eP     P      12 13 17.4 +0.3
      22nm,0.8s
MLZ   Mavora Lakes   29.60 199  eP     P      12 13 21.4 +0.1
      50nm,0.8s
ARMA  Armidale       29.79 240  eP     P      12 13 24.1 +0.9
      30nm,0.6s
DCZ   Deep Cove      29.99 200  eP     P      12 13 24.5  0.0
      26nm,1.2s
WHZ   Wether Hill Ro 30.12 199  eP     P      12 13 25.8 +0.1
      44nm,1.0s
CTAO  Charters Tower 33.24 260  eP     P      12 13 52.5 -0.2
      18nm,0.9s
CAN   Canberra       33.58 232  eP     P      12 13 56.0 +0.7
      26nm,0.9s
COEN  Coen           36.89 270  eP     P      12 14 23.0 -0.1
      16nm,0.9s
TOO   Toolangi       37.05 231  eP     P      12 14 24.7 +0.5
      58nm,0.8s
TAU   Tasmania Unive 38.15 222  eP     P      12 14 33.2 +0.3
      16nm,0.9s
STKA  Stephens Creek 38.48 241   P     P      12 14 36.6 +0.8
      27nm,0.8s,baz=94,slow=8.5,SNR=66
STKA  Stephens Creek 38.48 241  eP     P      12 14 36.5 +0.7
      8.9nm,1.0s
BBOO  Buckleboo      43.25 241  eP     P      12 15 14.0 +0.2
      42nm,0.8s
HMH   Humu'ula Sheep 43.60  33  eP     P      12 15 15.8 -1.0
      58nm,0.8s
KEKH  Kekaha         43.69  26  eP     P      12 15 16.4 -0.7
      134nm,1.4s
WB2   Warramunga Arr 44.42 259  eP     P      12 15 22.4 -0.6
      8.4nm,0.8s
WRA   Warramunga Arr 44.43 259   P     P      12 15 22.2 -0.9
      6.3nm,0.7s,baz=88,slow=8.8,SNR=36
AS31  Alice Springs  44.60 254  eP     P      12 15 24.2 -0.2
      14nm,0.6s
ASAR  Alice Springs  44.60 254   P     P      12 15 24.3 -0.1
      52nm,0.6s,baz=90,slow=7.8,SNR=1035
ASAR                             ScP   ScP    12 19 58.2 +2.8
      1.1nm,0.9s,baz=95,slow=4.0,SNR=4.6
ASAR                             S     S      12 21 17.9 -2.9
      3.1nm,0.9s,baz=88,slow=16,SNR=17
FORT  Forrest        49.84 245  eP     P      12 16 03.3 -0.3
      28nm,0.6s
MORW  Morawa         60.31 246  eP     P      12 17 16.4 -0.1
      8.0nm,1.0s
SBA   Scott Base     60.48 184  eP     P      12 17 18.5 +1.7
      16nm,1.4s
VNDA  Vanda          60.50 185   P     P      12 17 16.8 -0.2
      1.6nm,0.8s,baz=1.0,slow=6.6,SNR=9.8
VNDA                             ScP   ScP    12 21 06.2 +2.9
      1.1nm,1.0s,baz=7.1,slow=5.0,SNR=4.6
VNDA  Vanda          60.50 185  eP     P      12 17 17.9 +0.9
      8.7nm,1.4s
JHJ2  Mitsune        64.35 322  eP     P      12 17 42.6 +0.1
      316nm,1.3s
CASY  Casey          66.11 205  eP     P      12 17 53.3 +0.3
      13nm,1.0s
MJAR  Matsushiro Arr 67.72 323   P     P      12 18 03.6 +0.3
      6.9nm,0.6s,baz=163,slow=6.3,SNR=30
MAJO  Matsushiro     67.72 323  eP     P      12 18 03.8 +0.4
      10nm,0.7s
MAT   Matsushiro     67.72 323   P     P      12 18 03.8 +0.4
ADK   Adak           69.44   1  eP     P      12 18 13.4 +0.1
      20nm,0.8s
SMY   Shemya         70.55 355  eP     P      12 18 19.7 -0.2
      27nm,0.8s
UNV   Unalaska Valle 72.14   8  eP     P      12 18 29.1 -0.2
      72nm,1.4s
QSPA  South Pole Qui 72.22 180  eP     P      12 18 30.5 +0.7
      17nm,1.2s
PET   Petropavlovsk  73.25 346  eP     P      12 18 36.1 +0.5
      13nm,1.0s
PEA0B Petropavlovsk- 73.55 345  eP     P      12 18 37.8 +0.5
      65nm,1.5s
PETK  Petropavlovsk- 73.55 345   P     P      12 18 37.6 +0.2
      12nm,0.7s,baz=122,slow=7.8,SNR=25
CHIA  Chirikof Islan 75.93  13  eP     P      12 18 50.7 +0.1
      34nm,1.2s
USRK  Ussuriysk Ar.  76.43 326   P     P      12 18 55.5 +1.8
      2.4nm,0.6s,baz=129,slow=4.3,SNR=7.9
SII   Sitkinak Islan 76.90  14  eP     P      12 18 56.2 +0.3
      36nm,0.8s
VES   Vestal, Richgr 77.60  46   P     P      12 19 01.6 +1.4
      baz=237
O02D  Mt. Diablo Mer 77.64  40   P     P      12 19 01.8 +1.3
      baz=234
OHAK  Old Harbor     77.71  14  eP     P      12 19 00.5 +0.2
      18nm,0.8s
NJ2   Nanjing        77.72 310  eP     P      12 19 02.8 +1.8
NJ2                             pmax   pmax
      comp=Z,15nm,0.7s
MURC  Murrieta       77.74  49   P     P      12 19 02.2 +1.1
      baz=239
BFSC  Mount Baldy Ra 77.74  48   P     P      12 19 02.2 +1.0
      baz=238
EDW2  Edwards Air Fo 77.84  47   P     P      12 19 02.9 +1.3
      baz=238,SNR=7.8
ISA   Isabella, Lake 77.92  46  eP     P      12 19 02.6 +0.5
      19nm,1.0s
ISA   Isabella, Lake 77.92  46   P     P      12 19 03.4 +1.3
      baz=238,SNR=8.3
MONP2 Monument Peak  77.93  50   P     P      12 19 03.7 +1.3
      baz=239,SNR=11
CMB   Columbia Colle 77.93  43  eP     P      12 19 02.6 +0.6
      8.7nm,0.9s
MDJ   Mudanjiang     78.00 325  eP     P      12 19 03.0 +0.8
      15nm,0.8s
IKP   In-Ko-Pah, Jac 78.04  50   P     P      12 19 04.2 +1.4
      baz=240,SNR=5.3
AFDM  Forest Hills D 78.07  42  eP     P      12 19 03.4 +0.6
      7.7nm,0.9s
N02D  Trinity Center 78.16  40   P     P      12 19 04.7 +1.5
      baz=234
PFO   Pinyon Flats O 78.27  49   P     P      12 19 04.2 +0.2
      baz=239
M02C  Callahan       78.31  39   P     P      12 19 05.2 +1.1
      baz=233
O03E  Paynes Creek   78.32  41   P     P      12 19 04.8 +0.7
      baz=234
L02E  Cave Junction  78.33  38   P     P      12 19 05.4 +1.4
      baz=233
LRMC  Laurel Mtn Rad 78.37  47   P     P      12 19 05.4 +0.8
      baz=238
SWSC  Sam W. Stewart 78.41  50   P     P      12 19 05.9 +1.2
      baz=240
MDPB  Devils Postpil 78.57  44  eP     P      12 19 06.0 +0.2
      13nm,0.9s
CWC   Cottonwood Cre 78.61  46   P     P      12 19 06.6 +0.8
      baz=238
K02D  Willamette Mer 78.61  38   P     P      12 19 06.8 +1.2
      baz=233
MLAC  Mammoth, Mammo78.73  44   P     P      12 19 08.0 +1.4
      baz=237
BELC  Belle Mtn. Jos 78.80  49   P     P      12 19 08.3 +1.4
      baz=240
MPMC  Manual Prospec 78.81  46   P     P      12 19 08.2 +1.2
      baz=238,SNR=7.9
WAKR  Walker         78.81  43  eP     P      12 19 07.7 +0.7
      12nm,0.9s
TIN   Tinemaha, Big  78.83  45   P     P      12 19 08.3 +1.3
      baz=238
GSC   Goldstone, Bar 78.89  47   P     P      12 19 08.7 +1.4
      baz=239
HEC   Hector,Ludlow  78.98  48   P     P      12 19 08.5 +0.7
      baz=239
BEKR  Beckworth      78.98  42  eP     P      12 19 07.8 +0.1
      6.0nm,0.8s
BC3   Big Chuckawall 79.02  49   P     P      12 19 09.5 +1.5
      baz=240
PNTR  Pine Nut       79.03  43  eP     P      12 19 09.0 +0.8
      19nm,0.9s
L04D  Klamath Falls  79.13  39   P     P      12 19 09.5 +1.1
      baz=234
M04C  Macdoel        79.16  40   P     P      12 19 10.0 +1.4
      baz=234
GLA   Glamis         79.17  50   P     P      12 19 10.8 +2.0
      baz=240
YERR  Yerington      79.21  43  eP     P      12 19 09.8 +0.7
      11nm,0.8s
GRAC  Grapevine Rang 79.39  46   P     P      12 19 11.3 +1.5
      baz=238,SNR=5.9
GMRC  Granite Mounta 79.43  48   P     P      12 19 11.8 +1.5
      baz=240
FURC  Furnace Creek, 79.45  46   P     P      12 19 11.1 +1.0
      baz=238
IRM   Iron Mountain  79.49  49   P     P      12 19 11.9 +1.5
      baz=240
NVAR  Mina Array Bea 79.52  44   P     P      12 19 11.4 +0.7
      6.7nm,0.8s,baz=224,slow=8.9,SNR=47
SHOC  Shoshone, Teco 79.57  47   P     P      12 19 11.8 +1.0
      baz=239
TUQ   Turquoise Moun 79.58  48   P     P      12 19 12.1 +1.2
      baz=239,SNR=5.2
NV11  Mina Array Sit 79.62  44  eP     P      12 19 11.3 +0.2
      1.2nm,1.1s
Y12C  Blythe         79.73  50   P     P      12 19 13.1 +1.4
      baz=240
CN2   Changchun      79.83 322  eP     P      12 19 12.9 +1.0
CN2                             pmax   pmax
      comp=Z,20nm,1.1s
J04D  Umpqua Nationa 79.85  38   P     P      12 19 13.7 +1.4
      baz=234,SNR=6.1
LDFC  Landfair       79.97  48  eP     P      12 19 13.6 +0.6
      25nm,1.0s
KVN   Kaiserville    79.99  44  eP     P      12 19 13.6 +0.4
      12nm,1.1s
I04A  Tendick Farm,  80.00  38   P     P      12 19 14.0 +1.1
      baz=233
TPNV  Topopah Spring 80.12  46   P     P      12 19 15.0 +1.2
      baz=239,SNR=8.0
214A  Organ Pipe Nat 80.14  52   P     P      12 19 15.5 +1.6
      baz=242
H04D  Lebanon        80.25  37   P     P      12 19 15.5 +1.4
      baz=233
PDMCI Parker Dam,Lak 80.28  49   P     P      12 19 15.5 +1.0
      baz=241
G03D  McMinnville, O 80.37  36   P     P      12 19 16.1 +1.5
      baz=233
J05D  Fort Rock, OR  80.40  39   P     P      12 19 16.6 +1.5
      baz=234,SNR=15
SHPR  Sheep Range    80.65  47  eP     P      12 19 17.3 +0.7
      8.2nm,1.2s
PINE  Pine Mountain  80.87  38  eP     P      12 19 17.4 -0.2
      19nm,0.9s
Y14A  Wickenburg     80.93  50  eP     P      12 19 18.1 +0.1
      5.3nm,1.0s
I05D  Terrebonne, OR 80.95  38   P     P      12 19 19.2 +1.4
      baz=234
R11A  Troy Canyon, C 81.29  45   P     P      12 19 20.9 +1.0
      baz=239,SNR=7.9
BMN   Battle Mountai 81.30  43  eP     P      12 19 20.7 +0.8
      14nm,1.0s
WVOR  Wild Horse Val 81.49  40  eP     P      12 19 21.5 +0.8
      17nm,1.0s
G05D  Wamic, OR      81.49  37   P     P      12 19 21.9 +1.4
      baz=234
E04D  Cinebar        81.57  35   P     P      12 19 22.2 +1.4
      baz=233
F05D  White Salmon   81.79  36   P     P      12 19 23.6 +1.6
      baz=234
TUC   Tucson         81.83  52  eP     P      12 19 23.5 +0.9
      11nm,1.0s
TUC   Tucson         81.83  52   P     P      12 19 24.6 +2.0
      baz=243
D04E  Lakebay        81.83  35   P     P      12 19 24.1 +2.0
      baz=233
D03D  Eldon          81.88  34   P     P      12 19 23.7 +1.3
      baz=232
LCMT  Little Creek M 82.24  47  eP     P      12 19 25.6 +0.9
      7.6nm,0.9s
X16A  Lo Mia Camp, P 82.30  50  eP     P      12 19 25.8 +0.7
      10nm,0.9s
CCUT  Cedar City     82.42  47  eP     P      12 19 26.4 +0.7
      8.2nm,1.0s
GLI   Glacier Island 82.44  15  eP     P      12 19 24.7 -0.2
      27nm,0.8s
PSUT  Pine Spring    82.56  46  eP     P      12 19 26.4 +0.1
      6.1nm,0.8s
PMR   Palmer         82.58  14  eP     P      12 19 25.3 -0.3
      6.8nm,0.8s
U15A  North Rim      82.63  48  eP     P      12 19 27.4 +0.5
      15nm,0.8s
HMT   Hamilton       82.70  16  eP     P      12 19 26.9 +0.6
      6.9nm,0.8s
ELK   Elko           82.75  43  eP     P      12 19 28.1 +0.8
      7.7nm,0.9s
A04D  Lummi Island   82.80  34   P     P      12 19 28.5 +1.6
      baz=233
B05A  Bryant         82.85  34   P     P      12 19 28.4 +1.2
      baz=233
WUAZ  Wupatki        82.86  49  eP     P      12 19 29.1 +1.2
      10nm,1.0s
WUAZ  Wupatki        82.86  49   P     P      12 19 29.6 +1.8
      baz=242
G08A  Pilot Rock     82.88  38  eP     P      12 19 28.3 +0.6
      8.0nm,0.9s
SCM   Sheep Creek Mo 83.21  14  eP     P      12 19 29.1 +0.3
      26nm,0.7s
BJI   Beijing        83.58 315  eP     P      12 19 32.0 +0.9
BJI                             pmax   pmax
      comp=Z,3.0nm,1.3s
BALM  Baldy          83.81  17  eP     P      12 19 32.0 +0.1
      11nm,0.7s
MAW   Mawson         83.86 200   P     P      12 19 32.7 +0.7
      1.5nm,0.5s,baz=112,slow=11,SNR=4.3
D08A  Wollman Farm,  83.90  36  eP     P      12 19 33.4 +0.9
      9.5nm,0.9s
KTH   Kantishna Hill 83.95  12  eP     P      12 19 31.9 -0.6
      13nm,0.9s
ENH   Enshi          84.05 304  eP     P      12 19 34.0 +0.3
      14nm,0.8s
DUG   Dugway, Tooele 84.08  45   P     P      12 19 34.9 +1.1
      baz=241
121A  Cookes Peak, D 84.20  53   P     P      12 19 36.2 +1.6
      baz=245
RND   Reindeer       84.24  13  eP     P      12 19 33.9 -0.1
      27nm,0.9s
F10A  Beach Ranch, E 84.27  38  eP     P      12 19 34.9 +0.3
      14nm,0.9s
MCK   McKinley       84.52  13  eP     P      12 19 35.2 -0.1
      14nm,0.9s
PAX   Paxson         84.63  15  eP     P      12 19 35.4 -0.5
      5.7nm,0.9s
HLID  Hailey         84.72  41  eP     P      12 19 37.3 +0.4
      6.6nm,0.9s
HLID  Hailey         84.72  41   P     P      12 19 38.3 +1.4
      baz=239
MENT  Mentasta       85.03  15  eP     P      12 19 37.8  0.0
      6.1nm,0.9s
HDA   Harding Lake   85.53  13   P     P      12 19 40.1  0.0
      baz=210
DOT   Dot Lake       85.55  15  eP     P      12 19 40.6 +0.4
      8.3nm,0.8s
CCB   Clear Creek Bu 85.56  13  eP     P      12 19 39.9 -0.3
      16nm,1.2s
NEW   Newport        85.58  36   P     P      12 19 41.0 +0.3
      baz=237
MNTX  Cornudas Mount 85.71  55  eP     P      12 19 42.0 +0.3
      4.5nm,1.0s
MNTX  Cornudas Mount 85.71  55   P     P      12 19 42.9 +1.1
      baz=246
TCOL  CIGO, UAF Yank 85.74  13   P     P      12 19 40.4 -0.7
      baz=209
COLA  College        85.75  13  eP     P      12 19 40.7 -0.4
      8.3nm,0.8s
DLBC  Dease Lake     85.85  23  eP     P      12 19 42.3 +0.4
      5.6nm,1.0s
ILAR  Eielson Array  85.86  13   P     P      12 19 41.0 -0.7
      1.9nm,0.5s,baz=229,slow=5.5,SNR=33
ILB   Eielson Array  85.86  13  eP     P      12 19 41.0 -0.7
      7.0nm,0.9s
XAN   Xi'an          86.04 307  eP     P      12 19 43.6 +0.3
      8.1nm,0.7s
XAN   Xi'an          86.04 307   P     P      12 19 44.8 +1.5
XAN                             pmax   pmax
      comp=Z,11nm,1.0s
XAN                             pmax   pmax
      comp=Z,290nm,7.9s
POKR  Poker Plat Res 86.05  13   P     P      12 19 41.8 -0.7
      baz=210
TX31  Lajitas Ar. Si 86.14  58  eP     P      12 19 44.8 +0.9
      13nm,1.1s
TXAR  Lajitas Array  86.14  58   P     P      12 19 44.9 +0.9
      5.8nm,0.8s,baz=220,slow=6.0,SNR=58
ANMO  Albuquerque    86.22  52  eP     P      12 19 45.0 +0.7
      4.1nm,1.0s
ANMO  Albuquerque    86.22  52   P     P      12 19 45.0 +0.7
      baz=245
MCMT  McKenzie Canyo 86.32  41  eP     P      12 19 45.3 +0.7
MSO   Missoula       86.66  38   P     P      12 19 46.7 +0.7
      baz=240
HHC   Hu-ho-hao-te   87.06 315  eP     P      12 19 48.3 +0.2
HHC                             pmax   pmax
      comp=Z,15nm,1.1s
HHC                             pmax   pmax
      comp=Z,110nm,5.5s
DAWY  Dawson         87.08  16  eP     P      12 19 47.8 +0.3
      8.2nm,1.3s
S22A  4UR Ranch, Cre 87.12  49   P     P      12 19 49.6 +1.0
      baz=245
O20A  White River Ci 87.16  46  eP     P      12 19 49.1 +0.4
      6.1nm,1.1s
O20A  White River Ci 87.16  46   P     P      12 19 49.0 +0.4
      baz=244
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BW06  Boulder Array      87.45  44  eP       P        12 19 50.2 +0.2
        10nm,1.3s
BW06  Boulder Array      87.45  44   P       P        12 19 50.7 +0.8
        baz=243
PDAR  Pinedale Array     87.45  44   P       P        12 19 50.4 +0.4
        3.0nm,0.7s,baz=207,slow=3.0,SNR=31
BOZ   Bozeman (W)        87.45  40   P       P        12 19 51.0 +1.2
        baz=241
H17A  Grant Village      87.54  42   P       P        12 19 52.6 +2.2
        baz=242
KMI   Kunming            87.60 297   P       P        12 19 52.3 +1.2
KMI                                  pmax    pmax
        comp=Z,8.0nm,0.5s
HRY   Holter Researc     87.86  39  eP       P        12 19 52.0 +0.3
SDCO  Great Sand Dun     88.08  49   P       P        12 19 54.1 +0.9
        baz=246
MSTX  Muleshoe           88.62  54   P       P        12 19 56.8 +1.2
        baz=247
T25A  Trinidad           88.63  50   P       P        12 19 56.1 +0.5
        baz=246
CMAR  Chiang Mai Arr     88.65 290   P       P        12 19 56.9 +1.1
        1.6nm,0.3s,baz=123,slow=4.7,SNR=9.5
RLMT  Red Lodge          88.70  42  eP       P        12 19 55.9 +0.1
        7.0nm,1.0s
RLMT  Red Lodge          88.70  42   P       P        12 19 57.0 +1.3
        baz=243
TOLK  Toolik Lake Re     88.75  10   P       P        12 19 55.5 +0.3
        baz=208
ISCO  Idaho Springs      88.84  47   P       P        12 19 57.5 +0.9
        baz=246
N23A  Red Feather La     89.06  46   P       P        12 19 58.9 +1.3
        baz=245
EPYK  Eagle Plains       89.59  16  eP       P        12 19 59.4 +0.3
        12nm,1.1s
EPYK  Eagle Plains       89.59  16   P       P        12 19 59.4 +0.3
        baz=220
JCT   Junction City      89.68  58   P       P        12 20 00.1 -0.3
        baz=249
EGMT  Eagleton           89.72  39   P       P        12 20 01.3 +1.1
        baz=243
AMTX  Amarillo           89.80  53   P       P        12 20 01.2 +0.3
        baz=248
ABTX  Abilene, Hawle     90.56  56  eP       P        12 20 04.8 +0.3
        8.3nm,0.8s
ABTX  Abilene, Hawle     90.56  56   P       P        12 20 04.8 +0.3
        baz=249
LZH   Lanzhou            90.67 308 ⇑P       P        12 20 05.1 +0.1
LZH                                  pP      pP       12 22 03.1 -2.7
LZH                                  sP      sP       12 22 55.3 -5.7
LZH                                  PP      PP       12 23 52.3 +1.7
LZH                                  pmax    pmax
        comp=Z,19nm,1.4s
LZH                                  pmax    pmax
        comp=Z,52nm,4.5s
SNAA  Sanae              90.68 179   P       P        12 20 03.8 -0.5
VNA3  Neumayer Olymp     90.83 176   P       P        12 20 05.2 +0.3
VNA2  Neumayer--Watz     91.27 177   P       P        12 20 07.3 +0.3
LAO   LASA Array         91.30  41   P       P        12 20 09.0 +1.5
        baz=245
VNA1  Neumayer--Stat     91.50 177   P       P        12 20 08.0  0.0
RSSD  Black Hills        91.66  44  eP       P        12 20 09.8 +0.3
        4.7nm,0.8s
RSSD  Black Hills        91.66  44   P       P        12 20 10.1 +0.6
        baz=247
INK   Inuvik             91.87  15  eP       P        12 20 09.3 -0.2
        6.8nm,0.9s
WMOK  Wichita Mounta     91.98  54   P       P        12 20 11.2 +0.3
        baz=250
WHTX  Lake Whitney,      92.08  57   P       P        12 20 12.0 +0.6
        baz=250
DGMT  Dagmar             93.28  40   P       P        12 20 17.3 +0.8
        baz=247
SONA0 Songino Array      93.35 319  eP       P        12 20 16.7 -0.4
SONM  Songino Array      93.35 319   P       P        12 20 16.7 -0.3
        0.8nm,0.8s,baz=102,slow=2.1,SNR=5.2
YKA   Yellowknife Ar     94.35  25   P       P        12 20 20.7 -0.3
        1.8nm,0.8s,baz=244,slow=4.4,SNR=9.2
BGNE  Belgrade           94.71  48   P       P        12 20 24.2 +0.9
        baz=250
GTA   Gaotai             94.82 310  eP       P        12 20 23.3 -0.6
GTA                                  pP      pP       12 22 24.8 -0.2
GTA                                  pmax    pmax
        comp=Z,2.0nm,1.0s
KSU1  Kansas State U     95.07  51   P       P        12 20 25.8 +0.9
        baz=251
X40A  Basin Creek Fa     96.54  56   P       P        12 20 31.1 -0.5
        baz=253
N49A  Columbus Grove    104.75  51   P       Pdif     12 21 08.4 +0.4
        baz=259
ZALV  Zalesovo Beam     108.04 322   PKiKP   PKiKP    12 25 24.6 -1.0
        0.6nm,0.5s,baz=85,slow=1.3,SNR=3.7
Y60A  Bolivia           108.21  59   P       PKiKP    12 25 28.0 +1.5
        baz=260
S57A  Dark Hollow, R    108.22  55   P       PKiKP    12 25 27.6 +1.1
        baz=261
Q56A  Snyder Ridge,     108.22  54   P       PKiKP    12 25 27.7 +1.2
        baz=262
MKAR  Makanchi Array    108.93 314   PKiKP   PKiKP    12 25 27.1 -0.5
        0.8nm,0.5s,baz=215,slow=1.3,SNR=7.2
ALGO  Algonquin Park    109.89  47   P       PKiKP    12 25 30.9 +1.6
        baz=265
BVAR  Borovoye Array    116.65 321   PKP     PKiKP    12 25 41.9 -0.2
        1.6nm,0.4s,baz=141,slow=0.9,SNR=9.7
ARU   Arti              122.67 326   PKP     PKiKP    12 25 53.3 -0.5
        1.5nm,0.4s,baz=211,slow=1.6,SNR=6.5
AKTO  Aktyubinsk        124.67 319   PKP     PKiKP    12 25 57.4 -0.5
        1.7nm,0.7s,baz=18,slow=2.8,SNR=7.6
ARA0  ARCESS Array S    126.20 350  ePKPdf   PKiKP    12 26 00.3 -0.2
ARCES ARCESS Array B    126.20 350   PKP     PKiKP    12 26 00.3 -0.2
        4.4nm,0.9s,baz=31,slow=5.0,SNR=7.9
FIA0  FINESS Array S    133.06 344  ePKPdf   PKiKP    12 26 13.1 -1.3
FINES FINESS Array B    133.06 344   PKP     PKiKP    12 26 13.1 -1.3
        1.7nm,0.7s,baz=15,slow=5.8,SNR=5.0
FINES                                SKPbc   SKPab    12 28 53.3 +0.9
        3.3nm,1.1s,baz=116,slow=4.4,SNR=3.8
AKASG Malin Array Be    140.39 332   PKhKP   PKPpre   12 26 19.7
        0.6nm,0.4s,baz=44,slow=4.5,SNR=6.0
AKASG                                PKP     PKiKP    12 26 28.2 -1.5
        1.0nm,0.4s,baz=43,slow=2.3,SNR=4.3
AKBB  Malin Array Si    140.39 332  ePKPdf   PKPdf    12 26 27.4 +0.4
EKA   Eskdalemuir Ar    142.41   4   PKhKP   PKPpre   12 26 26.9
        0.4nm,0.4s,baz=1.9,slow=2.5,SNR=6.0
ILGA  Ilgaz             143.87 317  ePKPbc   PKPdf    12 26 33.5 -0.3
KWP   Kalwaria Pacla    143.91 336  ePKP     PKPdf    12 26 33.0 -0.3
DSB   Dublin            144.15   8  ePKPbc   PKPdf    12 26 33.1 -0.4
BUR08 Bucovina Ar. S    144.43 332  ePKPbc   PKPab    12 26 35.4 +0.5
BURAR Bucovina Array    144.44 332⇑iP       PKiKP    12 26 35.9 -2.4
OJC   Ojcow             144.47 340  ePKP     PKPab    12 26 34.7 -0.1
OJC   Ojcow             144.47 340  ePKPbc   PKPab    12 26 34.0 -0.8
BIZ   Bicaz             144.53 330⇑iP       PKPab    12 26 35.8 +0.6
BR131 Keskin Array S    144.57 315  ePKPdf   PKPab    12 26 34.9 -0.8
BRTR  Keskin Array B    144.57 315   PKP     PKPab    12 26 35.0 -0.8
        6.4nm,0.8s,baz=122,slow=1.9,SNR=29
TESR  Tescani           144.58 329⇓iP       PKPab    12 26 35.7 +0.4
KOLS  Kolonicke sedl    144.65 336  ePKP     PKPab    12 26 36.0 +0.5
ASF   Jabal al Asfar    144.95 301   PKPbc   PKPab    12 26 37.3 -0.1
        5.4nm,0.9s,baz=35,slow=1.7,SNR=6.6
NIE   Niedzica          144.97 338  ePKP     PKPab    12 26 36.3 -0.5
KSP   Ksiaz             144.97 343  ePKP     PKPab    12 26 36.6 -0.1
VRI   Vrincioaia        145.00 329⇓iP       PKPab    12 26 36.9 -0.1
PLOR  Plostina          145.05 329⇑iP       PKPab    12 26 37.4 +0.2
ARCR  ARCALIA           145.23 332⇑iP       PKiKP    12 26 38.0 -1.8
OSTC  Ostas             145.25 343  ePKP     PKiKP    12 26 38.0 -1.8
CHVC  Chvalec           145.27 344  ePKP     PKPab    12 26 37.8 -0.1
CLL   Collm             145.34 347  ePKPdf   PKPbc    12 26 36.2 -0.6
CLL   Collm             145.34 347⇑iPKPbc   PKPab    12 26 37.3 -0.8
        comp=Z,24nm,0.8s
UPC   Upice             145.35 343  ePKP     PKiKP    12 26 38.3 -1.7
DPC   Dobruska-Polom    145.41 343  ePKP     PKPab    12 26 38.1 -0.4
DPC                                 ex       x        12 26 40.1
LANS  Liptovska Anna    145.49 339  ePKP     PKiKP    12 26 39.4 -1.0
BRG   Berggiesshubel    145.54 346  i PKP    PKPab    12 26 38.0 -0.8
        comp=Z,19nm,1.1s
BRG                                 e                 12 26 45.6
        comp=Z,3.8nm,0.6s
MORC  Moravsky Berou    145.57 341  ePKPdf   PKPab    12 26 37.5 -1.6
MORC  Moravsky Berou    145.57 341  ePKP     PKPab    12 26 38.3 -0.8
DOPR  Dopca             145.58 330⇑iP       PKPab    12 26 38.5 -0.8
MLR   Muntele Rosu      145.65 329   PKPbc   PKPab    12 26 38.7 -1.0
        comp=Z,6.1nm,0.8s,baz=160,slow=5.0,SNR=8.2
MLR   Muntele Rosu      145.65 329  ePKPdf   PKPbc    12 26 37.8 -0.3
MLR   Muntele Rosu      145.65 329⇓iP       PKPab    12 26 38.5 -1.2
MMAI  Mount Meron Ar    145.92 303   PKPbc   PKPab    12 26 39.7 -1.4
        comp=Z,7.0nm,0.6s,baz=32,slow=3.9,SNR=7.7
VOIR                    146.13 330⇓iP       PKPab    12 26 40.2 -1.3
DRGR                    146.17 333⇑iP       PKPab    12 26 40.7 -0.9
PRU   Pruhonice         146.21 345  ePKP     PKPab    12 26 40.3 -1.3
GOPC  GO Pecny, Ondr    146.22 344  ePKP     PKPab    12 26 40.0 -1.7
VYHS  Vyhne             146.27 339  ePKP     PKPab    12 26 40.4 -1.5
VRAC  Vranov            146.27 342   PKPbc   PKPab    12 26 40.5 -1.4
        comp=Z,3.2nm,0.3s,baz=76,slow=3.5,SNR=7.9
VRAC  Vranov            146.27 342  ePKP     PKPab    12 26 40.5 -1.4
JAVC  Velka Javorina    146.34 340  ePKP     PKPab    12 26 41.5 -0.7
PSZ   Piszkesteto       146.38 337⇑iP       PKiKP    12 26 41.3 -1.0
KRUC  Moravsky          146.55 342  ePKP     PKiKP    12 26 40.9 -1.6
LOT   Lotru             146.73 331⇓iP       PKPbc    12 26 41.0 -0.1
MODS  Modra-Piesok      146.89 340  ePKP     PKiKP    12 26 41.5 -1.7
SIRR  Siria             147.03 334⇓iP       PKiKP    12 26 42.8 -0.8
MEM   Membach           147.09 355 ⇑PKPbc   PKiKP    12 26 42.1 -1.4
GZR   Gura Zlata        147.23 332⇑iP       PKiKP    12 26 42.8 -1.3
KHC   Kasperske Hory    147.25 345  ePKPdf   PKPdf    12 26 38.9 -0.2
KHC                                 ePKPbc   PKiKP    12 26 43.0 -1.0
KHC                                 ePKPab   PKPab    12 26 46.9 +1.1
KHC   Kasperske Hory    147.25 345  ePKP     PKiKP    12 26 42.5 -1.5
KHC                                 ex       x        12 26 47.1
SNF   Seneffe           147.32 357 ⇑PKPbc   PKiKP    12 26 42.8 -1.2
SNF                                ⇑PKPab   PKPab    12 26 46.2 +0.3
BCLA  Clavier           147.34 355 ⇑PKPbc   PKiKP    12 26 43.4 -0.6
GEC2  GERESS Array S    147.48 345  ePKPdf   PKPdf    12 26 39.3 -0.2
GEC2                                ePKPbc   PKiKP    12 26 43.5 -1.1
GEC2                                ePKPab   PKPab    12 26 47.6 +0.7
GERES GERESS Array B    147.48 345   PKPbc   PKiKP    12 26 43.2 -1.3
        comp=Z,8.4nm,0.6s,baz=29,slow=3.0,SNR=34
BZS   Buzias            147.57 333⇓iP       PKiKP    12 26 43.7 -1.0
DOU   Dourbes           147.71 356 ⇑PKPbc   PKiKP    12 26 43.7 -1.1
CONA  Conrad Observa    147.72 342  i PKiKP  PKiKP    12 26 44.6 -0.5
        comp=Z,11nm,0.6s,SNR=10.0
HERR  Herculane         147.78 331⇑iP       PKiKP    12 26 43.9 -1.2
WLF   Walferdange       148.01 354 ⇑PKPbc   PKiKP    12 26 45.6 +0.2
MDVR  Moldovita         148.18 332⇑iP       PKiKP    12 26 45.0 -1.0
MOA   Molln             148.25 343  i PKPdf  PKPdf    12 26 41.4 +0.7
        comp=Z,0.4nm,0.3s
ARSA  Arzberg           148.43 341  i PKPbc  PKPbc    12 26 42.6 -2.7
        comp=Z,1.2nm,0.5s
BFO   Black Forest      149.05 351  ePKPdf   PKPdf    12 26 41.8 -0.2
BFO                                 ePKPbc   PKiKP    12 26 47.3 -0.4
BFO                                 ePKPab   PKPab    12 26 53.5 +0.3
VTS   Vitosha           149.08 328  ePKPdf   PKPdf    12 26 42.3 -0.1
VTS                                 ePKPbc   PKiKP    12 26 48.1  0.0
VTS                                 ePKPab   PKPab    12 26 54.9 +1.2
SOKA  Soboth            149.09 342  i PKPbc  PKPbc    12 26 46.6 -0.5
        comp=Z,4.5nm,0.6s,SNR=6.5
KBA   Koelnbreinsper    149.21 344  i PKPbc  PKPbc    12 26 46.9 -0.5
        comp=Z,6.0nm,0.5s,SNR=7.0
EZN   Ezine             149.23 321⇑iP       PKiKP    12 26 47.6 -0.7
OBKA  Obir              149.39 342  i PKPbc  PKiKP    12 26 47.5 -1.1
        comp=Z,3.2nm,0.9s
WATA  Walderalm         149.40 346  i PKiKP  PKiKP    12 26 48.1 -0.5
        comp=Z,6.3nm,0.5s
DOBS  Dobrina           149.43 341  i PKPbc  PKiKP    12 26 47.8 -0.8
RETA  Reutte            149.43 347  i PKiKP  PKiKP    12 26 48.0 -0.6
        comp=Z,4.7nm,0.5s
WTTA  Wattenberg        149.45 346  i PKiKP  PKiKP    12 26 48.5 -0.3
        comp=Z,14nm,0.5s,SNR=7.4
MOTA  Moosalm           149.50 347  i PKiKP  PKiKP    12 26 48.1 -0.7
        comp=Z,11nm,0.9s
MYKA  Terra Mystica     149.54 343  i PKPbc  PKPbc    12 26 47.4 -0.6
        comp=Z,7.8nm,0.5s,SNR=7.5
SQTA  Sankt Quirin      149.59 347  i PKiKP  PKiKP    12 26 48.4 -0.6
        comp=Z,12nm,0.6s,SNR=5.4
VNDS  Vrh nad Dolski    149.71 341  i PKPbc  PKiKP    12 26 48.6 -0.5
ABTA  Abfaltersbach     149.73 345  i PKPbc  PKiKP    12 26 48.3 -0.9
        comp=Z,12nm,0.6s,SNR=5.2
DAVA  Damuels           149.80 348  i PKiKP  PKiKP    12 26 49.2 -0.2
        comp=Z,12nm,0.8s,SNR=5.4
LJU   Ljubljana         149.82 342  i PKPbc  PKiKP    12 26 49.1 -0.2
FETA  Feichten          149.88 347  i PKiKP  PKiKP    12 26 49.6 -0.1
        comp=Z,9.5nm,0.8s,SNR=7.3
BLY   Banja Luka        150.06 337⇑iP       PKiKP    12 26 49.3 -0.6
DAVOX Davos/Dischmat    150.29 348   PKPbc   PKiKP    12 26 49.5 -1.0
        comp=Z,18nm,0.6s,baz=50,slow=0.4,SNR=21
FUORN Ofenpass-Fuorn    150.36 348  ePKPdf   PKPdf    12 26 44.5 +0.2
FUORN                               ePKPbc   PKiKP    12 26 50.7  0.0
FUORN                               ePKPab   PKPab    12 26 59.8 +0.7
TUE   Stuetta           150.68 349  ePKPdf   PKPdf    12 26 44.0 -0.8
TUE                                 ePKPbc   PKiKP    12 26 51.6 +0.2
TUE                                 ePKPab   PKPab    12 27 00.8 +0.5
SENIN Lac Senin/Sane    151.13 351  ePKPbc   PKiKP    12 26 52.3  0.0
SENIN                               ePKPab   PKPab    12 27 02.6 +0.5
PDG   Podgorica         151.13 332⇓iP       PKPbc    12 26 50.4 -1.4
BNI   Bardonecchia      152.50 352  ePKPdf   PKPdf    12 26 47.9 +0.5
BNI                                 ePKPbc   PKiKP    12 26 55.5 +0.4
BNI                                 ePKPab   PKPab    12 27 08.9 +1.0
ESDC  Sonseca Array     157.75  11   PKPab   PKPab    12 27 30.1 -0.5
        comp=Z,0.3nm,0.4s,baz=342,slow=3.8,SNR=8.6
MDT   Midelt            164.14  19   PKP     PKPdf    12 27 00.8 -0.7
        comp=Z,1.9nm,0.7s,baz=72,slow=2.1,SNR=4.7
MDT                                  PKPab   PKPab    12 28 00.1 +1.2
        comp=Z,4.4nm,0.9s,baz=6.6,slow=5.8,SNR=7.8
TORD  Torodi Ar. Bea    175.33 184   PKP     PKPdf    12 27 07.0 -1.3
        comp=Z,1.4nm,1.1s,baz=143,slow=5.2,SNR=4.1
TOA1  Torodi Ar. Sit    175.34 184  ePKPdf   PKPdf    12 27 07.0 -1.3
```

MAN 15 12:18:15.0, 7°.31N×124°.80E, h2^{km}, mb4.5, ML3.4, MS3.2, 2D, Mindanao

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
KCP   Kidapawan           0.41 136⇓iP      Pg       12 18 23.8 +0.8
KCP                                iS      Sb       12 18 30.4 -1.5
CTBH  Cotabato--PC H      0.56 261⇓iP      Pb       12 18 26.9 -0.6
CTBH                               iS      Sb       12 18 35.3 -0.7
BUKP  Musuan              0.62  25 eP      Pg       12 18 27.4 +0.4
BUKP                               eS      Sb       12 18 37.1 -0.8
SKMP  Bagumbayan, Su      0.83 198 eP      Pg       12 18 30.2 -0.7
SKMP                               eS      Sb       12 18 42.9 -0.8
CGP   Cagayan de Oro      1.14 355 eP      Pg       12 18 36.3 -0.6
CGP                                eS      Sg       12 18 51.2 -0.6
DDMP  Don Marcelino,      1.50 143 eP      Pn       12 18 41.8 -1.2
DDMP                               eS      Sg       12 19 04.2 +0.9
```

IDC 15 12:33:58.0±69.0**, 22°.03S×178°.45W, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/17**, mbtmp3.7**/3**, Error ellipse: s-maj=1262.0km s-min=161.8km az=85.0, South of Fiji Islands**

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
STKA  Stephens Creek     36.77 246  P       P        12 41 06.8 -0.7
        0.3nm,0.4s,baz=73,slow=11,SNR=2.5
ASAR  Alice Springs      43.78 258  P       P        12 42 05.6 -0.2
        0.3nm,0.4s,baz=95,slow=7.3,SNR=20
WRA   Warramunga Arr     44.00 264  P       P        12 42 08.1 +0.6
        0.8nm,0.4s,baz=95,slow=8.4,SNR=19
```

ISCJB ***15*** *12:54:38.3±0.8, 6°.18S±0°.09×147°.67E±0°.09, h35^{km}, mb4.2/11, MS3.0/1, Error ellipse: s-maj=14.4km s-min=10.7km az=44.9*

NEIC ***15*** *12:54:43.4±1.0, 6°.32S×147°.72E, h63^{km}±5^{km}, mb4.2/14, Error ellipse: s-maj=22.1km s-min=11.1km az=130.0*

IDC ***15*** *12:54:45.7±2.2, 6°.46S×147°.92E, h85^{km}±15^{km}, mb3.8/3, mb1 4.0/7, mb1mx3.6/31, mbtmp4.2/7, MS3.0/4, Ms1 3.0/4, ms1mx2.8/36, Error ellipse: s-maj=28.2km s-min=16.2km az=106.0*

ISC 15 12:54:40.2±1.0**, 6°.2S**±0°.1×**147°.6E**±0°.1**, h35^{km}, n31,** σ**1^{s}45**/31**, mb4.2**/11**, Eastern New Guinea region**

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
PMG   Port Moresby        3.25 187  P       Pn       12 55 29.9 +1.1
        24nm,0.3s,baz=3.7,slow=5.5,SNR=42
PMG                                 S       Sn       12 56 08.0 +1.7
        36nm,0.3s,baz=351,slow=21,SNR=7.6
PMG   Port Moresby        3.25 187 ePn      Pn       12 55 29.7 +0.9
PMG                                eSn      Sn       12 56 06.0 -0.3
RABL  Rabaul              4.97  67 ePn      Pn       12 55 54.3 +2.0
JAY   Jayapura            7.75 298  P       Pn       12 56 42.4  +12
        0.9nm,0.3s,baz=141,slow=11,SNR=5.1
JAY                                 LR      LR       13 00 49.0
        comp=Z,65nm,18.4s,baz=220,slow=44
COEN  Coen                8.88 209 ePn      Pn       12 56 48.5 +2.4
COEN                               eSn      Sn       12 58 23.3 -1.7
CTA   Charters Tower     13.91 185  P       Pn       12 57 56.8 +1.8
        0.2nm,0.3s,baz=9.9,slow=17,SNR=3.1
CTAO  Charters Tower     13.91 185 ePn      Pn       12 57 57.2 +2.3
SIJI  Sorong             17.10 287  LR      LR       13 06 47.4
        comp=Z,74nm,19.1s,baz=0.5,slow=41
MTN   Manton Dam         17.52 247 eP       P        12 58 44.8 +2.1
        18nm,1.2s
WRAB  Tennant Creek      18.78 222 eP       P        12 58 57.3 +0.7
        7.6nm,0.6s
WB2   Warramunga Arr     18.79 222 eP       P        12 58 57.5 +0.8
        6.0nm,0.8s
WR1   Warramunga Arr     18.80 222 eP       P        12 58 57.7 +1.0
WRA   Warramunga Arr     18.80 222  P       P        12 58 57.7 +1.0
        2.1nm,0.3s,baz=49,slow=12,SNR=62
EIDS  Eidsvold           19.40 170 eP       P        12 59 02.3 -1.0
        14nm,1.2s
GUMO  Guam               19.80 352  LR      LR       13 05 35.3
        comp=Z,49nm,20.4s,baz=177,slow=32
AS31  Alice Springs      21.82 216 eP       P        12 59 30.3 +0.8
        5.2nm,0.4s
ASAR  Alice Springs      21.82 216  P       P        12 59 30.4 +0.8
        4.3nm,0.4s,baz=52,slow=9.1,SNR=254
ASAR                                S       S        13 03 27.8 -1.3
        3.5nm,0.9s,baz=32,slow=21,SNR=13
ARMA  Armidale           24.43 172 eP       P        12 59 53.8 -2.0
        9.0nm,0.9s
STKA  Stephens Creek     26.19 192  P       P        13 00 10.0 -1.6
        4.4nm,0.8s,baz=5.5,slow=8.3,SNR=18
STKA  Stephens Creek     26.19 192 eP       P        13 00 11.0 -0.6
        1.3nm,0.9s
BBOO  Buckleboo          28.61 201 eP       P        13 00 33.0 -0.3
        6.1nm,1.3s
PSA00 Pilbara Seismi     30.89 238 eP       P        13 00 54.0 +0.3
        9.5nm,1.0s
MORW  Morawa             37.50 229 eP       P        13 01 51.0 +0.2
        20nm,1.2s
WHZ   Wether Hill Ro     43.34 159 eP       P        13 02 38.4 -0.5
        15nm,1.2s
MJAR  Matsushiro Arr     43.37 349  LR      LR       13 19 31.3
        comp=Z,20nm,21.0s,baz=175,slow=34
VNDA  Vanda              71.72 177  P       P        13 05 56.7 -1.5
        0.6nm,0.5s,baz=335,slow=7.6,SNR=12
SBA   Scott Base         72.36 176 eP       P        13 06 01.5 -0.5
        1.2nm,1.0s
QSPA  South Pole Qui     83.81 180 eP       P        13 07 03.9 -2.0
        1.3nm,0.8s
TORD  Torodi Ar. Bea    145.69 284  PKPbc   PKPdf    13 14 16.8 +0.8
        1.3nm,0.7s,baz=97,slow=4.2,SNR=7.9
TOA1  Torodi Ar. Sit    145.69 284 ePKPdf   PKPdf    13 14 16.8 +0.8
BDFB  Brasilia          153.40 145  PKPbc   PKPbc    13 14 33.6 -2.3
        1.9nm,0.3s,baz=208,slow=9.2,SNR=4.0
```

NIED ***15*** *13:10:00, 47°.10N×153°.00E, h35^{km}, Mw3.9 Best double couple: $M_0$9.43000×10^{14} NP1:ϕ_s217.00000°, δ62.00000°, λ-170.00000°. NP2:ϕ_s123.00000°, δ81.00000°, λ-28.00000°.*

ISCJB ***15*** *13:10:02.2±0.6, 46°.80N±0°.08×153°.0E±0°.1, h56^{km}, mb3.9/14, MS3.1/3, Error ellipse: s-maj=14.7km s-min=4.1km az=140.4*

SKHL ***15*** *13:10:02.1±0.8, 46°.39N×153°.35E, h76^{km}±3^{km}, mb4.2/2*

MOS ***15*** *13:10:05.0±1.1, 47°.11N×152°.79E, h76^{km}, mb4.1/1, Error ellipse: s-maj=15.9km s-min=10.7km az=55.9*

IDC ***15*** *13:10:07.3±2.5, 47°.07N×152°.76E, h82^{km}±23^{km}, mb3.6/15, mb1 3.7/20, mb1mx3.6/52, mbtmp3.9/20, MS2.7/6, Ms1 2.7/6, ms1mx2.6/44, Error ellipse: s-maj=21.0km s-min=13.2km az=151.0*

ISC 15 13:10:03.6±0.8**, 46°.8N**±0°.1×**152°.94E**±0°.09**, h56^{km}, n51,** σ**1^{s}90**/48**, mb3.9**/14**, MS2.7**/3**, 1D, Kuril Islands**

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                      Op      ISC      h  m  s    ISC
KUR   Kuril'sk            3.86 248d iPN     Pn       13 11 02.0 +1.6
KUR                                i                 13 11 46.6
KUR                                 pmax    pmax
        comp=Z,53nm,0.5s
KUR                                 pmax    pmax
        comp=N,15nm,0.3s
KUR                                 pmax    pmax
        comp=E,18nm,0.3s
KUR                                 smax    smax
        comp=N,283nm,0.5s
KUR                                 smax    smax
        comp=E,114nm,0.4s
KUR   Kuril'sk            3.86 248 eP       Pn       13 11 02.0 +1.6
KUR                                 AMB     AMB      13 11 04.0
        comp=E,20nm,0.5s
KUR                                 AMB     AMB      13 11 04.0
        comp=E,50nm,0.5s
KUR                                eS       Sn       13 11 46.3 +1.9
KUR                                 A       A        13 11 55.9
        comp=E,150nm,0.6s
KUR                                 A       A        13 11 55.9
        comp=E,120nm,0.6s
SKR   Severo-Kuril's      4.43  27 ePN      Pn       13 11 07.9 -0.3
SKR                                eS       Sn       13 11 53.3 -5.2
SKR                                 smax    smax
        comp=N,83nm,0.6s
SKR                                 smax    smax
        comp=E,195nm,0.5s
SKR   Severo-Kuril's      4.43  27 eP       Pn       13 11 09.4 +1.2
SKR                                eS       Sn       13 12 01.0 +2.5
SKR                                 A       A        13 12 02.0
        comp=E,80nm,0.6s
SKR                                 A       A        13 12 02.0
        comp=E,200nm,0.6s
NEM2  Nemuro 2            6.13 239  P       Pn       13 11 30.8 -0.7
NEM2                               eS       Sn       13 12 37.7 -2.6
NMR   Nemuro--Hokkai      6.14 239 eP       Pn       13 11 30.8 -0.8
NMR                                eS       Sn       13 12 37.9 -2.5
JRA   Rausu               6.20 245  P       Pn       13 11 34.4 +2.0
JNK   Nakash              6.63 244  P       Pn       13 11 39.6 +1.3
JTKR  Abashiri--Toko      6.95 249  P       Pn       13 11 45.0 +2.3
YSS   Yuzh-Sakhalins      6.98 275 eP       Pn       13 11 47.4 +4.2
YSS                                 AMB     AMB      13 11 48.0
        comp=E,10.0nm,0.9s
PETK  Petropavlovsk-      7.04  24  P       Pn       13 11 43.6 -0.3
        comp=E,0.5nm,0.3s,baz=175,slow=11,SNR=8.7
PETK                                LR      LR       13 13 56.3
        comp=E,23nm,18.6s,baz=196,slow=34
PET   Petropavlovsk       7.25  28 ePN      Pn       13 11 54.1 +7.3
PET                                 pmax    pmax
        comp=Z,11nm,0.5s
PET   Petropavlovsk       7.25  28 eP       Pn       13 11 49.7 +2.9
PET                                eS       Sn       13 13 09.6 +1.9
PET                                 A       A        13 13 15.5
        comp=Z,20nm,0.5s
PET                                 A       A        13 13 15.5
        comp=Z,30nm,0.5s
PET                                 A       A        13 13 15.5
        comp=Z,40nm,0.5s
JMP   Maruseppu           7.29 251  P       Pn       13 11 50.0 +2.6
JAR   Ashorobuto          7.37 245  P       Pn       13 11 49.7 +1.2
JAR                                eS       Sn       13 13 13.8 +3.2
JOB   Onbets              7.54 242  P       Pn       13 11 51.1 +0.3
JOB                                eS       Sn       13 13 12.9 -1.9
JKA   Kamikawa-asahi      7.74 254 eP       Pn       13 11 56.6 +3.0
ASAJ  Asahikawa           7.74 254  P       Pn       13 11 56.5 +2.9
        comp=Z,1.2nm,0.3s,baz=84,slow=21,SNR=15
ASAJ                                LR      LR       13 14 45.7
        comp=Z,73nm,19.4s,baz=359,slow=36
JKK2  Kamakawa 2          7.75 252  P       Pn       13 11 56.2 +2.5
JCH   Churui              7.99 242  P       Pn       13 11 56.8 -0.2
JCH                                eS       Sn       13 13 23.3 -2.6
MA2   Magadan            12.88 355  LR      LR       13 17 26.1
        comp=Z,39nm,20.6s,baz=98,slow=35
KLR   Kul'dur            14.39 288  P       Pn       13 13 25.1 +1.1
        comp=Z,0.1nm,0.3s,baz=101,slow=16,SNR=2.0
KLR                                 LR      LR       13 19 08.4
        comp=Z,51nm,19.7s,baz=74,slow=38
USRK  Ussuriysk Ar.      14.91 268  P       P        13 13 32.7 -2.7
        comp=Z,0.3nm,0.3s,baz=71,slow=13,SNR=5.7
MJAR  Matsushiro Arr     15.00 232  P       P        13 13 37.4 +0.9
        comp=Z,0.1nm,0.3s,baz=41,slow=8.2,SNR=6.3
KSRS  Korea Array        20.69 252  P       Pn       13 14 41.8 +0.1
        comp=Z,1.7nm,0.6s,baz=59,slow=10.0,SNR=3.9
KSRS                                LR      LR       13 21 34.8
        comp=Z,17nm,20.8s,baz=50,slow=33
JNU   Nakatsue           21.63 239  LR      LR       13 23 53.0
        comp=Z,31nm,18.7s,baz=173,slow=38
H11N2 WAKE ISLAND Hy     29.31 152  T       T        13 47 26.7
        baz=340,slow=76,SNR=224
H11N1 WAKE ISLAND Hy     29.32 152  T       T        13 47 34.0
        baz=340,slow=76,SNR=188
H11N3 WAKE ISLAND Hy     29.32 152  T       T        13 47 29.4
        baz=340,slow=76,SNR=150
H11S1 WAKE ISLAND Hy     30.39 153  T       T        13 48 43.9
        baz=341,slow=76,SNR=250
```

H11S3	**WAKE ISLAND Hy**	**30.40**	**154**	T	T	13 48 44.5	
	baz=341,slow=76,SNR=237						
H11S2	**WAKE ISLAND Hy**	**30.41**	**153**	T	T	13 48 45.3	
	baz=341,slow=76,SNR=287						
ILAR	**Eielson Array**	**36.60**	**39**	P	**P**	**13 17 04.0**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=269,slow=7.9,SNR=4.7						
INK	**Inuvik**	**41.69**	**32**	P	**P**	**13 17 46.3**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=293,slow=7.7,SNR=7.2						
MKAR	**Makanchi Array**	**46.82**	**297**	P	**P**	**13 18 26.7**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=70,slow=5.9,SNR=4.4						
KURK	**Kurchatov**	**47.24**	**304**	P	**P**	**13 18 29.5**	**-1.3**
KURK	**Kurchatov**	**47.24**	**304**	*e*P	**P**	**13 18 29.5**	**-1.3**
KURBB	**Kurchatov Arra**	**47.34**	**303**	P	**P**	**13 18 29.5**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=68,slow=8.3,SNR=5.3						
BVAR	**Borovoye Array**	**50.74**	**309**	P	**P**	**13 18 55.6**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=69,slow=3.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	**52.26**	**256**	P	**P**	**13 19 10.2**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=34,slow=7.0,SNR=5.4						
JMIC	**Jan Mayen**	**61.78**	**353**	LR	LR	13 43 57.6	
	comp=Z,189nm,18.5s,baz=234,slow=33						
NVAR	**Mina Array Bea**	**62.53**	**62**	P	**P**	**13 20 21.7**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=289,slow=5.6,SNR=4.2						
FINES	**FINESS Array B**	**63.96**	**335**	P	**P**	**13 20 29.4**	**-1.0**
	comp=Z,2.4nm,0.4s,baz=37,slow=7.1,SNR=22						
PDAR	**Pinedale Array**	**64.83**	**54**	P	**P**	**13 20 37.9**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=294,slow=1.5,SNR=8.2						
NB2	**NORSAR Subarra**	**68.16**	**341**	P	**P**	**13 20 56.7**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.16**	**341**	P	**P**	**13 20 56.6**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=28,slow=6.4,SNR=6.9						
AKASG	**Malin Array Be**	**71.45**	**326**	P	**P**	**13 21 16.9**	**-0.9**
	comp=Z,2.8nm,0.4s,baz=34,slow=6.2,SNR=11						
ASAR	**Alice Springs**	**72.20**	**198**	P	**P**	**13 21 24.3**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=12,slow=6.0,SNR=11						
TXAR	**Lajitas Array**	**77.58**	**60**	P	**P**	**13 21 54.1**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=316,slow=5.0,SNR=2.8						
BRTR	**Keskin Array B**	**78.28**	**317**	P	**P**	**13 21 57.0**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=25,slow=4.1,SNR=5.1						
BRTR	**Keskin Array B**	**78.28**	**317**	P	**P**	**13 21 57.0**	**-0.6**

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*ISCJB **15** 13:16:55.0±0.3, 61°.59N±0°.01×141°.04W±0°.02, h5^{km}±2^{km}, mb4.3/88, MS3.7/11, Error ellipse: s-maj=2.2km s-min=1.8km az=33.3*

*NEIC **15** 13:16:55.3±0.0, 61°.56N×141°.07W, h12^{km}, mb4.4/71, ML4.1(AEIC), ML4.3(OTT), After AEIC.*

*AEIC **15** 13:16:55.3, 61°.56N×141°.07W, h12^{km}, ML4.1, MB4.4(NEIC), ML4.3(OTT)*

*MOS **15** 13:16:56.2±1.2, 61°.63N×141°.07W, h12^{km}, mb4.5/19, Error ellipse: s-maj=12.8km s-min=6.4km az=104.4*

*IDC **15** 13:16:56.7±0.5, 61°.69N×140°.96W, h0^{km}, mb4.1/20, mb1 4.3/27, mb1mx4.1/49, mbtmp4.1/27, ML3.9/7, MS3.4/11, Ms1 3.3/11, ms1mx3.2/54, Error ellipse: s-maj=12.6km s-min=7.4km az=42.0*

*PGC **15** 13:16:57.0, 61°.58N×141°.08W, h1^{km}, ML4.3/11, Mw4.3, 211km Wnw of Haines Jct., Yt Southern Alaska*

ISC 15 13:16:56.5±0.7**, 61°.57N**±0°.02×**141°.04W**±0°.02**, h7**^{km}±4^{km}**, n403,** σ1^{s}**28**/429**, mb4.4**/88**, MS3.4**/11**, 5C-1D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	**White River**	**0.24**	**23**	P	**Pg**	**13 17 01.0**	**-0.2**
YUK2				S	**Sg**	**13 17 04.7**	**+0.2**
YUK3	**Moose Creek**	**0.35**	**53**	P	**Pg**	**13 17 03.1**	**-0.3**
YUK3				S	**Sg**	**13 17 08.2**	**+0.3**
YUK1	**Sand Pete Hill**	**0.64**	**22**	P	**Pg**	**13 17 08.0**	**-0.8**
YUK1				S	**Sg**	**13 17 17.1**	**0.0**
PTPK	**Patty Peak**	**0.79**	**241**	P	**Pg**	**13 17 10.7**	**-1.0**
PTPK				S	**Sg**	**13 17 21.4**	**-0.4**
BALM	**Baldy**	**0.83**	**230**	*e*Pg	**Pg**	**13 17 10.8**	**-1.6**
BALM	**Baldy**	**0.83**	**230**	*e*P	**Pg**	**13 17 10.8**	**-1.6**
BALM	**Baldy**	**0.83**	**230**	P	**Pg**	**13 17 11.0**	**-1.4**
BALM				S	**Sg**	**13 17 22.5**	**-0.6**
BVCY	**Beaver Creek**	**0.85**	**6**	P	**Pg**	**13 17 12.2**	**-0.7**
BVCY				S	**Sg**	**13 17 23.8**	**-0.2**
KIAG	**Kiagna River**	**0.91**	**225**	P	**Pg**	**13 17 12.4**	**-1.6**
KIAG				S	**Sg**	**13 17 25.1**	**-0.6**
TABL	**Table Mountain**	**1.13**	**183**	P	**Pg**	**13 17 17.1**	**-1.2**
TABL				S	**Sg**	**13 17 32.7**	**-0.3**
YUK4	**Talbot Arm**	**1.17**	**100**	P	**Pg**	**13 17 18.4**	**-0.6**
YUK4				S	**Sg**	**13 17 34.4**	**+0.2**
YUK6	**Outpost Mounta**	**1.44**	**115**	Pn	**Pn**	**13 17 22.6**	**-0.7**
YUK6				Sg	**Sg**	**13 17 43.2**	**+0.4**
SAMH	**Samovar Hills**	**1.45**	**175**	Pn	**Pn**	**13 17 23.2**	**-0.1**
SAMH				Sg	**Sn**	**13 17 42.3**	**-0.3**
MESA	**MESA**	**1.47**	**198**	Pn	**Pn**	**13 17 23.6**	**0.0**
MESA				Sg	**Sb**	**13 17 42.9**	**-0.2**
CHX	**Chaix Hills**	**1.51**	**181**	*e*Pn	**Pn**	**13 17 24.6**	**+0.4**
PCA	**Pinnacle**	**1.53**	**165**	*e*Pn	**Pn**	**13 17 24.3**	**0.0**
PCA	**Pinnacle**	**1.53**	**165**	Pn	**Pn**	**13 17 24.5**	**+0.2**
PCA				Sg	**Sg**	**13 17 45.7**	**+0.2**
BCA3	**Beaver Creek A**	**1.54**	**347**	*e*Pn	**Pn**	**13 17 23.9**	**-0.6**
YUK5	**Granite Creek**	**1.59**	**105**	Pn	**Pn**	**13 17 25.1**	**-0.3**
YUK5				Sg	**Sb**	**13 17 47.4**	**+0.6**
SNH	**Sunshine Point**	**1.65**	**213**	*e*Pn	**Pn**	**13 17 26.5**	**+0.6**
YUK7	**Dusty Glacier**	**1.75**	**125**	Pn	**Pb**	**13 17 28.8**	**-0.4**
YUK7				Sg	**Sg**	**13 17 53.3**	**+0.4**
BCPM	**Bancas Point**	**1.76**	**156**	*e*Pn	**Pn**	**13 17 28.6**	**+1.1**
MENT	**Mentasta**	**1.86**	**319**	*e*Pn	**Pn**	**13 17 29.5**	**+0.7**
HYT	**Haines Junctio**	**1.87**	**112**	*e*Pn	**Pn**	**13 17 29.3**	**+0.3**
HYT	**Haines Junctio**	**1.87**	**112**	Pn	**Pn**	**13 17 29.4**	**+0.4**
HYT				Sg	**Sb**	**13 17 55.2**	**+0.6**
HMT	**Hamilton**	**2.00**	**233**	*e*Pn	**Pb**	**13 17 32.5**	**-0.7**
PNL	**Peninsula**	**2.07**	**156**	*e*Pn	**Pn**	**13 17 32.8**	**+1.0**
PNL	**Peninsula**	**2.07**	**156**	Pn	**Pn**	**13 17 32.8**	**+1.0**
PNL				Sg	**Sg**	**13 18 02.5**	**-0.5**
YKU2	**Yakutat**	**2.17**	**161**	*e*Pn	**Pb**	**13 17 35.2**	**-0.9**
PAX	**Paxson**	**2.50**	**306**	*e*Pn	**Pn**	**13 17 39.5**	**+1.7**
PAX	**Paxson**	**2.50**	**306**	*e*P	**Pn**	**13 17 39.5**	**+1.7**
PAX	**Paxson**	**2.50**	**306**	Pn	**Pn**	**13 17 37.8**	**0.0**
PAX				Sg	**Sb**	**13 18 13.0**	**+0.2**
EYAK	**Cordova Ski Ar**	**2.51**	**248**	*e*Pn	**Pn**	**13 17 39.4**	**+1.7**
DOT	**Dot Lake**	**2.51**	**328**	*e*Pn	**Pn**	**13 17 37.2**	**-0.6**
DOT	**Dot Lake**	**2.51**	**328**	Pn	**Pn**	**13 17 37.4**	**-0.4**
DOT				Sg	**Sb**	**13 18 14.7**	**+1.6**
DAWY	**Dawson**	**2.62**	**16**	*e*Pn	**Pn**	**13 17 39.1**	**-0.2**
DAWY	**Dawson**	**2.62**	**16**	Pn	**Pn**	**13 17 39.2**	**-0.2**
DAWY				Pg	**Pb**	**13 17 44.0**	**+0.3**
DAWY				Sg	**Sb**	**13 18 16.1**	**0.0**
FID	**Port Fidalgo**	**2.76**	**255**	*e*Pn	**Pb**	**13 17 43.9**	**-2.3**
SCRK	**Sand Creek**	**2.77**	**332**	*e*Pn	**Pn**	**13 17 40.7**	**-0.7**
RIDG	**Independent Ri**	**2.80**	**323**	*e*Pn	**Pn**	**13 17 41.5**	**-0.3**
PS10	**TAPS Pump St10**	**2.88**	**312**	*e*Pn	**Pn**	**13 17 44.6**	**+1.8**
SCM	**Sheep Creek Mo**	**3.01**	**278**	*e*Pn	**Pn**	**13 17 46.1**	**+1.5**
SCM	**Sheep Creek Mo**	**3.01**	**278**	*e*P	**Pn**	**13 17 46.1**	**+1.5**
GLI	**Glacier Island**	**3.01**	**259**	*e*Pn	**Pn**	**13 17 45.8**	**+1.2**
PLBC	**Pleasant Camp**	**3.14**	**130**	Pn	**Pn**	**13 17 47.2**	**+0.8**
PLBC				Sg	**Sg**	**13 18 37.2**	**0.0**
EGAK	**Eagle**	**3.22**	**359**	*e*Pn	**Pn**	**13 17 47.5**	**0.0**
DHY	**Denali Highway**	**3.32**	**300**	*e*Pn	**Pn**	**13 17 50.5**	**+1.5**
SML	**Sawmill**	**3.48**	**277**	*e*Pn	**Pn**	**13 17 52.4**	**+1.2**
SML	**Sawmill**	**3.48**	**277**	*e*P	**Pn**	**13 17 52.4**	**+1.2**
SKAG	**Skagway**	**3.53**	**124**	*e*Pn	**Pn**	**13 17 52.4**	**+0.7**
KNK	**Knik Glacier**	**3.56**	**271**	*e*Pn	**Pn**	**13 17 52.9**	**+0.7**
PMR	**Palmer**	**3.87**	**274**	*e*Pn	**Pn**	**13 17 57.3**	**+0.9**
PMR	**Palmer**	**3.87**	**274**	*e*P	**Pn**	**13 17 57.3**	**+0.9**
HDA	**Harding Lake**	**3.92**	**319**	*e*Pn	**Pn**	**13 17 56.0**	**-1.2**
HDA	**Harding Lake**	**3.92**	**319**	P	**Pn**	**13 17 55.9**	**-1.2**
	baz=134						
PS08	**TAPS Pump Stn8**	**3.98**	**321**	*e*Pn	**Pn**	**13 17 56.7**	**-1.2**
RND	**Reindeer**	**4.07**	**300**	*e*Pn	**Pn**	**13 18 02.2**	**+3.0**
RND	**Reindeer**	**4.07**	**300**	*e*P	**Pn**	**13 18 02.2**	**+3.0**
ILAR	**Eielson Array**	**4.16**	**323**	Pn	**Pn**	**13 17 59.2**	**-1.2**
	6.5nm,0.3s,baz=145,slow=13,SNR=95						
ILAR				Lg	Lg	13 19 05.9	
	78nm,0.3s,baz=130,slow=28,SNR=12						
ILB	**Eielson Array**	**4.16**	**323**	*e*Pn	**Pn**	**13 17 59.0**	**-1.5**
RC01	**Rabbit Creek A**	**4.22**	**267**	*e*Pn	**Pn**	**13 18 02.7**	**+1.5**
MCK	**McKinley**	**4.24**	**304**	*e*Pn	**Pn**	**13 18 04.6**	**+3.1**
MCK	**McKinley**	**4.24**	**304**	*e*P	**Pn**	**13 18 04.6**	**+3.1**
BESE	**Bessie Mountai**	**4.31**	**131**	*e*Pn	**Pn**	**13 18 02.9**	**+0.4**
BESE	**Bessie Mountai**	**4.31**	**131**	Pn	**Pn**	**13 18 03.0**	**+0.4**
BESE				Sg	**Sg**	**13 19 11.5**	**-3.3**
WRH	**Wood River Hil**	**4.33**	**315**	*e*Pn	**Pn**	**13 18 03.7**	**+1.0**
CCB	**Clear Creek Bu**	**4.36**	**318**	*e*Pn	**Pn**	**13 18 01.9**	**-1.2**
SEW	**Seward**	**4.37**	**254**	*e*Pn	**Pn**	**13 18 03.7**	**+0.5**
PRP	**Porcupine Dome**	**4.44**	**335**	*e*Pn	**Pn**	**13 18 04.2**	**-0.2**
COLA	**College**	**4.53**	**320**	*i* P	**Pn**	**13 18 04.6**	**-0.8**
I53US	**FAIRBANKS INFR**	**4.53**	**320**	*i*		13 41 55.5	
	baz=140,slow=321,SNR=3.6						
POKR	**Poker Plat Res**	**4.58**	**324**	P	**Pn**	**13 18 05.1**	**-1.1**
	baz=138,SNR=18						
BWN	**Browne**	**4.66**	**308**	*e*Pn	**Pn**	**13 18 09.3**	**+2.0**
MDM	**Murphy Dome**	**4.70**	**319**	*e*Pn	**Pn**	**13 18 07.5**	**-0.3**
JIS	**Juneau Island**	**4.70**	**132**	*e*Pn	**Pn**	**13 18 08.0**	**+0.2**
KTH	**Kantishna Hill**	**4.99**	**298**	*e*Pn	**Pn**	**13 18 14.0**	**+2.2**
SKT	**Skwentna**	**5.00**	**279**	*e*Pn	**Pn**	**13 18 10.6**	**-1.3**
BRSE	**Bradley Lake S**	**5.11**	**253**	*e*Pn	**Pn**	**13 18 14.2**	**+0.7**
BRLK	**Bradley Lake**	**5.17**	**254**	*e*Pn	**Pn**	**13 18 14.6**	**+0.3**
EPYK	**Eagle Plains**	**5.18**	**20**	*e*Pn	**Pn**	**13 18 14.2**	**-0.3**
EPYK	**Eagle Plains**	**5.18**	**20**	P	**Pn**	**13 18 14.4**	**-0.1**
	baz=204,SNR=43						
BPAW	**Bear Paw Mtn.**	**5.22**	**303**	*e*Pn	**Pn**	**13 18 16.3**	**+1.4**
SPU	**Mount Spurr**	**5.31**	**271**	*e*Pn	**Pn**	**13 18 19.4**	**+3.2**
FYU	**Fort Yukon**	**5.34**	**342**	*e*Pn	**Pn**	**13 18 16.8**	**+0.2**
PPLA	**Purkeypile**	**5.38**	**289**	*e*Pn	**Pn**	**13 18 18.8**	**+1.5**
CNPM	**China Poot**	**5.43**	**252**	*e*Pn	**Pn**	**13 18 18.6**	**+0.7**
HOM	**Homer**	**5.56**	**255**	*e*Pn	**Pn**	**13 18 21.3**	**+1.7**
MLY	**Manley**	**5.58**	**313**	*e*Pn	**Pn**	**13 18 19.4**	**-0.5**
RSO	**Redoubt South**	**5.80**	**264**	*e*Pn	**Pn**	**13 18 23.8**	**+0.6**
BM3	**Burnt Mountain**	**6.07**	**347**	*e*Pn	**Pn**	**13 18 27.4**	**+0.7**
DLBC	**Dease Lake**	**6.35**	**115**	Pn	**Pn**	**13 18 31.7**	**+1.1**
	0.6nm,0.3s,baz=294,slow=14,SNR=14						
DLBC				Lg	Lg	13 20 16.4	
	4.0nm,0.3s,baz=66,slow=12,SNR=6.7						
DLBC				LR	LR	13 21 19.3	
	comp=Z,174nm,22.0s,baz=335,slow=41						
DLBC	**Dease Lake**	**6.35**	**115**	Pn	**Pn**	**13 18 30.7**	**+0.2**
DLBC				Sg	**Sg**	**13 20 16.1**	**-4.2**
WRAK	**Wrangell Islan**	**6.84**	**135**	*e*Pn	**Pn**	**13 18 37.2**	**0.0**
COLD	**Coldfoot**	**6.92**	**329**	*e*Pn	**Pn**	**13 18 38.0**	**-0.3**
COLD	**Coldfoot**	**6.92**	**329**	Pn	**Pn**	**13 18 38.4**	**+0.1**
KDAK	**Kodiak Island**	**6.97**	**242**	Pn	**Pn**	**13 18 39.7**	**+0.9**
	5.8nm,0.3s,baz=53,slow=6.7,SNR=104						
KDAK				Sn	**Sn**	**13 19 56.6**	**-1.7**
	1.1nm,0.3s,baz=290,slow=18,SNR=6.5						
KDAK				LR	LR	13 21 47.9	
	comp=Z,231nm,18.1s,baz=24,slow=41						
KDAK	**Kodiak Island**	**6.97**	**242**	*e*Pn	**Pn**	**13 18 39.4**	**+0.5**
KDAK				*e*Sn	**Sn**	**13 19 56.6**	**-1.7**
KDAK	**Kodiak Island**	**6.97**	**242**	*i* P	**Pn**	**13 18 39.6**	**+0.7**
FONW	**Fourpeaked Sta**	**6.98**	**253**	*e*Pn	**Pn**	**13 18 40.1**	**+1.0**
SVW2	**Sparrevohn**	**7.01**	**273**	*e*Pn	**Pn**	**13 18 40.2**	**+0.6**
TTA	**Tatalina**	**7.12**	**288**	*e*Pn	**Pn**	**13 18 40.6**	**-0.5**
TTA	**Tatalina**	**7.12**	**288**	*e*P	**Pn**	**13 18 40.6**	**-0.5**
TT01	**Tatalina**	**7.12**	**287**	*e*Pn	**Pn**	**13 18 41.4**	**+0.3**
IM3	**Indian Mountai**	**7.16**	**314**	*e*Pn	**Pn**	**13 18 41.5**	**+0.1**
INK	**Inuvik**	**7.47**	**22**	Pn	**Pn**	**13 18 45.9**	**+0.1**
	2.1nm,0.3s,baz=207,slow=16,SNR=24						
INK				Sn	**Sn**	**13 20 06.0**	**-4.6**
	7.5nm,0.3s,baz=103,slow=26,SNR=4.7						
INK				Lg	Lg	13 20 47.8	
	8.7nm,0.3s,baz=128,slow=22,SNR=5.7						
INK				LR	LR	13 22 05.3	
	comp=Z,220nm,18.1s,baz=203,slow=42						
INK	**Inuvik**	**7.47**	**22**	*e*Pn	**Pn**	**13 18 45.2**	**-0.6**
INK				*e*Sn	**Sn**	**13 20 06.0**	**-4.6**
INK				*e*Lg	Lg	13 20 47.8	
INK	**Inuvik**	**7.47**	**22**	*e*P	**Pn**	**13 18 45.2**	**-0.6**
INK				*e*		13 20 06.0	
INK	**Inuvik**	**7.47**	**22**	Pn	**Pn**	**13 18 45.4**	**-0.4**
INK				Sn	**Sn**	**13 20 06.1**	**-4.6**
OHAK	**Old Harbor**	**7.61**	**241**	*e*Pn	**Pn**	**13 18 48.0**	**+0.2**
PS04	**TAPS Pump Stn4**	**7.72**	**337**	*e*Pn	**Pn**	**13 18 50.3**	**+1.0**
TOLK	**Toolik Lake Re**	**7.95**	**337**	*e*Pn	**Pn**	**13 18 53.6**	**+1.2**
TOLK	**Toolik Lake Re**	**7.95**	**337**	P	**Pn**	**13 18 53.6**	**+1.2**
	baz=149,SNR=189						
SII	**Sitkinak Islan**	**8.42**	**239**	*e*Pn	**Pn**	**13 18 58.8**	**-0.1**
FNBB	**Fort Nelson**	**9.36**	**99**	Pn	**Pn**	**13 19 11.4**	**-0.2**
FNBB				Sn	**Sn**	**13 20 52.0**	**-5.0**
CHIA	**Chirikof Islan**	**9.49**	**239**	*e*Pn	**Pn**	**13 19 13.4**	**0.0**
DIB	**Dawson Inlet,**	**9.57**	**147**	*e*Pn	**Pn**	**13 19 13.4**	**-1.2**
DIB	**Dawson Inlet,**	**9.57**	**147**	Pn	**Pn**	**13 19 17.2**	**+2.6**
CHGN	**Chignik**	**10.40**	**247**	*e*Pn	**Pn**	**13 19 27.4**	**+1.5**
DHRN	**Dharma Camp**	**10.79**	**50**	Pn	**Pn**	**13 19 29.6**	**-1.6**
DHRN				Sn	**Sn**	**13 21 23.5**	**-8.6**
BBB	**Bella Bella**	**11.74**	**137**	Pn	**Pn**	**13 19 46.0**	**+1.8**
	0.4nm,0.3s,baz=306,slow=7.3,SNR=9.1						
BBB	**Bella Bella**	**11.74**	**137**	*e*Pn	**Pn**	**13 19 46.3**	**+2.1**
BBB	**Bella Bella**	**11.74**	**137**	P	**Pn**	**13 19 46.4**	**+2.1**
SDPT	**Sand Point**	**11.90**	**247**	*e*Pn	**Pn**	**13 19 47.4**	**+1.0**
YKW3	**Yellowknife Ar**	**12.40**	**74**	P	**Pn**	**13 19 52.0**	**-1.2**
YKA	**Yellowknife Ar**	**12.41**	**74**	Pn	**Pn**	**13 19 52.7**	**-0.7**
	0.6nm,0.3s,baz=273,slow=13,SNR=8.6						
YKA				Lg	Lg	13 23 26.9	
	0.2nm,0.3s,baz=275,slow=30,SNR=5.0						
YKA				LR	LR	13 24 21.5	
	comp=Z,11nm,22.0s,baz=273,slow=36						
YKA	**Yellowknife Ar**	**12.41**	**74**	P	**Pn**	**13 19 54.1**	**+0.7**
YKB5	**Yellowknife Ar**	**12.41**	**74**	*e*Pn	**Pn**	**13 19 52.7**	**-0.7**
KUKN	**Kugluktuk,NWT**	**12.66**	**49**	P	**Pn**	**13 19 57.0**	**+0.2**
LLLB	**Lillooet**	**15.25**	**127**	*e*Pn	**Pn**	**13 20 32.8**	**+0.7**
	9.3nm,1.1s						
UNV	**Unalaska Valle**	**15.56**	**252**	*e*Pn	**Pn**	**13 20 36.2**	**+0.1**
	132nm,1.6s						
SLEB	**Sale Mountain**	**16.32**	**119**	P	**P**	**13 20 52.3**	**+3.1**
NLWA	**Neilton Lookou**	**17.27**	**137**	*e*P	**Pn**	**13 20 59.0**	**+1.0**
	23nm,1.5s						
C09A	**Chrisman Ranch**	**18.91**	**126**	*e*P	**P**	**13 21 18.0**	**+0.4**
	5.5nm,0.9s						
NEW	**Newport**	**18.99**	**124**	P	**Pn**	**13 21 21.0**	**+1.9**
	0.2nm,0.3s,baz=331,slow=10,SNR=12						
NEW				LR	LR	13 29 18.0	
	comp=Z,100nm,21.7s,baz=318,slow=39						
NEW	**Newport**	**18.99**	**124**	*e*P	**Pn**	**13 21 20.0**	**+0.9**
	11nm,1.0s						
NEW	**Newport**	**18.99**	**124**	*e*P	**Pn**	**13 21 20.0**	**+0.9**
NEW				pmax	pmax		
	comp=Z,11nm,1.0s						
NEW	**Newport**	**18.99**	**124**	P	**P**	**13 21 18.4**	**-0.1**
	baz=323,SNR=7.4						
D08A	**Wollman Farm,**	**19.29**	**129**	*e*Pn	**P**	**13 21 22.1**	**+0.5**
	comp=Z,10.0nm,1.2s						
HAWA	**Hanford**	**19.62**	**131**	*e*P	**Pn**	**13 21 26.3**	**-0.4**
	comp=Z,10.0nm,1.3s						
WALA	**Waterton Lakes**	**19.69**	**117**	*e*P	**P**	**13 21 26.1**	**-0.1**
	comp=Z,23nm,1.3s						
WALA	**Waterton Lakes**	**19.69**	**117**	P	**Pn**	**13 21 28.9**	**+1.2**
F10A	**Beach Ranch, E**	**20.83**	**128**	*e*P	**P**	**13 21 39.7**	**+1.1**
	comp=Z,9.7nm,0.8s						
RES	**Resolute Bay**	**20.84**	**33**	P	Pn	13 21 40.9	+0.2
	comp=Z,5.3nm,0.7s,baz=247,slow=12,SNR=6.9						
RES				LR	LR	13 30 16.9	
	comp=Z,80nm,20.6s,baz=239,slow=39						
RES	**Resolute Bay**	**20.84**	**33**	*e*P	Pn	13 21 40.9	+0.2
	comp=Z,13nm,0.8s						
RES	**Resolute Bay**	**20.84**	**33**	*e*P	Pn	13 21 40.9	+0.2
RES				pmax	pmax		
	comp=Z,13nm,0.8s						
PINE	**Pine Mountain**	**21.41**	**137**	*e*P	**P**	**13 21 45.6**	**+0.7**
	comp=Z,21nm,1.2s						
MSO	**Missoula**	**21.43**	**121**	*e*P	**P**	**13 21 45.9**	**+0.9**
	comp=Z,15nm,1.3s						
MSO	**Missoula**	**21.43**	**121**	P	**P**	**13 21 45.2**	**+0.2**
	baz=323,SNR=7.0						
FFC	**Flin Flon**	**21.45**	**91**	*e*P	**P**	**13 21 45.4**	**+0.4**
	comp=Z,128nm,1.0s						
FFC	**Flin Flon**	**21.45**	**91**	*i* P	**P**	**13 21 46.6**	**+1.6**
J04D	**Umpqua Nationa**	**21.54**	**140**	P	**P**	**13 21 47.1**	**+0.8**
	baz=335						
I07A	**Izee**	**21.64**	**134**	*e*P	**P**	**13 21 47.7**	**+0.4**
	comp=Z,19nm,1.6s						
BMO	**Blue Mountains**	**21.75**	**129**	*e*P	**P**	**13 21 49.2**	**+0.7**
	comp=Z,12nm,1.3s						
BMO	**Blue Mountains**	**21.75**	**129**	*e*P	**P**	**13 21 49.2**	**+0.7**
BMO				pmax	pmax		
	comp=Z,12nm,1.3s						
J05D	**Fort Rock, OR**	**21.77**	**138**	P	**P**	**13 21 49.1**	**+0.4**
	baz=334						
PLID	**Pearl Lake**	**22.05**	**127**	*e*P	**P**	**13 21 52.3**	**+0.6**
	comp=Z,8.2nm,1.1s						
EGMT	**Eagleton**	**22.28**	**113**	*e*P	**P**	**13 21 54.5**	**+0.5**
	comp=Z,59nm,1.5s						
EGMT	**Eagleton**	**22.28**	**113**	P	**P**	**13 21 54.6**	**+0.5**
	baz=319,SNR=15						
HRY	**Holter Researc**	**22.40**	**118**	*e*P	**P**	**13 21 56.5**	**+1.0**
L04D	**Klamath Falls**	**22.41**	**141**	P	**P**	**13 21 55.6**	**0.0**
	baz=336						
BILL	**Bilibino**	**22.68**	**309**	⇓*e*P	**P**	**13 21 57.4**	**-0.7**
BILL				*i*		13 22 01.1	
BILL						13 22 20.0	
BILL				S	**S**	**13 26 02.0**	**-4.3**
BILL				*e*SSS	SSS	13 26 45.9	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,82nm,14.0s						
YBH	**Yreka Blue Hor**	**22.73**	**142**	LR	LR	13 30 04.2	
	comp=Z,62nm,20.7s,baz=327,slow=34						
M04C	**Macdoel**	**22.95**	**141**	P	**P**	**13 22 01.1**	**-0.2**
	baz=336						
M02C	**Callahan**	**23.01**	**143**	P	**P**	**13 22 01.7**	**-0.1**
	baz=338						
DLMT	**Dillon**	**23.16**	**121**	*e*P	**P**	**13 22 04.6**	**+1.1**
	comp=Z,7.5nm,1.1s						
BOZ	**Bozeman (W)**	**23.37**	**120**	*e*P	**P**	**13 22 06.3**	**+0.7**
	comp=Z,4.8nm,0.9s						
BOZ	**Bozeman (W)**	**23.37**	**120**	*e*P	**P**	**13 22 06.4**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOZ	**Bozeman (W)**	**23.37**	**120**	P	**P**	**13 22 06.0**	**+0.4**
	baz=324						
WVOR	**Wild Horse Val**	**23.39**	**135**	*e*P	**P**	**13 22 07.3**	**+1.5**
	comp=Z,4.8nm,1.0s						
WVOR	**Wild Horse Val**	**23.39**	**135**	*e*P	**P**	**13 22 07.3**	**+1.5**
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
N02D	**Trinity Center**	**23.43**	**143**	P	**P**	**13 22 07.0**	**+0.8**
	baz=338						
MCMT	**McKenzie Canyo**	**23.50**	**123**	*e*P	**P**	**13 22 07.9**	**+0.8**
HLID	**Hailey**	**23.94**	**127**	*e*P	**P**	**13 22 12.6**	**+1.4**
	comp=Z,6.6nm,1.0s						
HLID	**Hailey**	**23.94**	**127**	P	**P**	**13 22 11.2**	**0.0**
	baz=328,SNR=15						
O02D	**Mt. Diablo Mer**	**24.15**	**144**	P	**P**	**13 22 13.9**	**+0.8**
	baz=339						
O03E	**Paynes Creek**	**24.32**	**142**	P	**P**	**13 22 14.9**	**+0.2**
	baz=338						
YHH	**Holmes Hill**	**24.35**	**120**	*e*P	**P**	**13 22 16.4**	**+1.2**
	comp=Z,3.0nm,0.9s						
DGMT	**Dagmar**	**24.46**	**105**	P	**P**	**13 22 15.1**	**-0.8**
	baz=316						
RLMT	**Red Lodge**	**24.75**	**117**	*e*P	**P**	**13 22 20.4**	**+1.7**
	comp=Z,16nm,1.0s						
RLMT	**Red Lodge**	**24.75**	**117**	P	**P**	**13 22 18.5**	**-0.2**
	baz=323,SNR=15						
LAO	**LASA Array**	**24.86**	**111**	P	**P**	**13 22 18.3**	**-1.1**
	baz=320						
IMW	**Indian Meadow**	**25.04**	**121**	*e*P	**P**	**13 22 23.5**	**+2.1**
	comp=Z,29nm,1.4s						
FXWY	**Fox Creek**	**25.22**	**122**	*e*P	**P**	**13 22 25.1**	**+2.1**
	comp=Z,30nm,1.5s						
MOOW	**Moose Ponds**	**25.25**	**121**	*e*P	**P**	**13 22 26.0**	**+2.8**
	comp=Z,10nm,1.3s						
TPAW	**Teton Pass**	**25.38**	**122**	*e*P	**P**	**13 22 27.2**	**+2.8**
	comp=Z,24nm,1.3s						
LOHW	**Long Hollow**	**25.42**	**121**	*e*P	**P**	**13 22 26.0**	**+1.3**
	comp=Z,8.1nm,1.1s						
PAHR	**Pah Rah Range**	**25.60**	**139**	*e*P	**P**	**13 22 26.8**	**+0.5**
	comp=Z,5.8nm,1.1s						
BMN	**Battle Mountai**	**25.66**	**135**	*e*P	**P**	**13 22 27.4**	**+0.6**
	comp=Z,3.7nm,1.1s						
BMN	**Battle Mountai**	**25.66**	**135**	*e*P	**P**	**13 22 27.4**	**+0.6**
BMN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AFDM	**Forest Hills D**	**25.81**	**142**	*e*P	**P**	**13 22 29.3**	**+1.2**
	comp=Z,4.7nm,1.1s						
ELK	**Elko**	**26.07**	**131**	P	**P**	**13 22 32.8**	**+2.1**
	comp=Z,1.7nm,0.8s,baz=324,slow=8.7,SNR=5.6						
ELK				LR	LR	13 33 37.6	
	comp=Z,88nm,19.3s,baz=330,slow=38						
ELK	**Elko**	**26.07**	**131**	*e*P	**P**	**13 22 31.4**	**+0.7**
	comp=Z,2.7nm,0.9s						
ELK	**Elko**	**26.07**	**131**	*e*P	**P**	**13 22 31.4**	**+0.7**
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BW06	**Boulder Array**	**26.55**	**121**	*e*P	**P**	**13 22 35.5**	**+0.5**
	comp=Z,8.2nm,1.0s						
BW06	**Boulder Array**	**26.55**	**121**	P	**P**	**13 22 34.6**	**-0.4**
	baz=326,SNR=12						
PD31	**Pinedale Array**	**26.55**	**121**	*e*P	**P**	**13 22 37.2**	**+2.3**
PDAR	**Pinedale Array**	**26.55**	**121**	P	**P**	**13 22 37.2**	**+2.3**
	comp=Z,4.1nm,0.8s,baz=324,slow=7.3,SNR=15						
KVN	**Kaiserville**	**26.61**	**137**	*e*P	**P**	**13 22 36.9**	**+1.4**
	comp=Z,4.0nm,1.0s						
KVN	**Kaiserville**	**26.61**	**137**	*e*P	**P**	**13 22 36.9**	**+1.4**
KVN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HWUT	**Hardware Ranch**	**26.71**	**125**	*e*P	**P**	**13 22 36.7**	**+0.3**
	comp=Z,2.6nm,0.8s						
NV01	**Mina Array Sit**	**27.11**	**138**	*e*P	**P**	**13 22 42.9**	**+2.8**
NVAR	**Mina Array Bea**	**27.11**	**138**	P	**P**	**13 22 42.9**	**+2.8**
	comp=Z,1.2nm,0.8s,baz=320,slow=7.8,SNR=9.6						
NVAR				LR	LR	13 32 56.6	
	comp=Z,59nm,20.6s,baz=330,slow=35						
ULM	**Lac du Bonnet**	**27.15**	**94**	LR	LR	13 33 52.7	
	comp=Z,134nm,19.8s,baz=306,slow=38						
NV11	**Mina Array Sit**	**27.15**	**138**	*e*P	**P**	**13 22 42.4**	**+2.0**
	comp=Z,0.6nm,1.4s						
RSSD	**Black Hills**	**27.82**	**112**	P	**P**	**13 22 46.6**	**+0.2**
	baz=322						
K22A	**Casper**	**27.91**	**117**	P	**P**	**13 22 46.8**	**-0.3**
	baz=325						
R11A	**Troy Canyon, C**	**28.08**	**134**	P	**P**	**13 22 49.1**	**+0.4**
	baz=334						
GRAC	**Grapevine Rang**	**28.72**	**138**	P	**P**	**13 22 54.2**	**-0.1**
	baz=336						
CWC	**Cottonwood Cre**	**29.00**	**140**	P	**P**	**13 22 56.1**	**-0.8**
	baz=337						
TPNV	**Topopah Spring**	**29.12**	**136**	P	**P**	**13 22 58.5**	**+0.6**
	baz=336						
MSU	**Marysvale**	**29.16**	**129**	*e*P	**P**	**13 23 00.3**	**+2.0**
MSU	**Marysvale**	**29.16**	**129**	*e*P	**P**	**13 23 00.3**	**+2.0**
MPMC	**Manual Prospec**	**29.54**	**139**	P	**P**	**13 23 02.1**	**+0.4**
	baz=337						
MTPU	**Mount Pierson**	**29.57**	**129**	*e*P	**P**	**13 23 04.0**	**+1.9**
	comp=Z,13nm,1.6s						
N23A	**Red Feather La**	**29.60**	**118**	P	**P**	**13 23 03.2**	**+0.8**
	baz=326						
SEY	**Seymchan**	**29.79**	**302**	P	**P**	**13 23 05.4**	**+1.9**
	comp=Z,2.5nm,0.5s,baz=61,slow=10,SNR=11						
EYMN	**Ely**	**30.82**	**93**	*e*P	**P**	**13 23 13.7**	**+1.0**
	comp=Z,5.6nm,1.1s						
EYMN	**Ely**	**30.82**	**93**	P	**P**	**13 23 12.5**	**-0.2**
	baz=315						
HEC	**Hector,Ludlow**	**31.03**	**138**	P	**P**	**13 23 15.9**	**+1.1**
	baz=337						
BFSC	**Mount Baldy Ra**	**31.17**	**141**	P	**P**	**13 23 16.5**	**+0.5**
	baz=338						
GMRC	**Granite Mounta**	**31.29**	**137**	P	**P**	**13 23 17.7**	**+0.6**
	baz=337						
ECSD	**EROS Data Cent**	**31.50**	**104**	P	**P**	**13 23 18.9**	**+0.2**
	baz=320						
S22A	**4UR Ranch, Cre**	**31.90**	**122**	P	**P**	**13 23 22.7**	**+0.1**
	baz=330						
C40A	**Isle Royale Na**	**31.96**	**91**	*e*P	**P**	**13 23 23.8**	**+1.1**
	comp=Z,7.6nm,1.1s						
C40A	**Isle Royale Na**	**31.96**	**91**	P	**P**	**13 23 23.1**	**+0.3**
	baz=315						
IRM	**Iron Mountain**	**32.03**	**137**	P	**P**	**13 23 24.4**	**+0.8**
	baz=337						
WUAZ	**Wupatki**	**32.11**	**131**	P	**P**	**13 23 25.2**	**+0.9**
	baz=334						
SDCO	**Great Sand Dun**	**32.44**	**121**	*e*P	**P**	**13 23 28.5**	**+1.1**
	comp=Z,3.7nm,1.4s						
SDCO	**Great Sand Dun**	**32.44**	**121**	P	**P**	**13 23 27.1**	**-0.3**
	baz=329						
MONP2	**Monument Peak**	**32.79**	**140**	P	**P**	**13 23 31.0**	**+0.6**
	baz=338						
G40A	**Rib Lake**	**33.37**	**95**	P	**P**	**13 23 35.2**	**0.0**
	baz=318						
T25A	**Trinidad**	**33.41**	**120**	P	**P**	**13 23 36.0**	**+0.2**
	baz=329						
TIXI	**Tiksi**	**33.63**	**325**	P	**P**	**13 23 38.7**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=78,slow=7.6,SNR=2.1						
E43A	**Lone Tree Farm**	**34.09**	**91**	*e*P	**P**	**13 23 42.2**	**+0.9**
	comp=Z,3.9nm,0.8s						
E43A	**Lone Tree Farm**	**34.09**	**91**	P	**P**	**13 23 42.1**	**+0.7**
	baz=316						
ANMO	**Albuquerque**	**34.48**	**125**	*e*P	**P**	**13 23 44.7**	**-0.4**
	comp=Z,5.4nm,1.2s						
ANMO	**Albuquerque**	**34.48**	**125**	*i* P	**P**	**13 23 48.2**	**+3.2**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ANMO	**Albuquerque**	**34.48**	**125**	P	**P**	**13 23 46.8**	**+1.7**
	baz=331						
LAZ	**Ladron**	**34.69**	**126**	*e*P	**P**	**13 23 49.0**	**+2.2**
LENM	**Lemitar**	**34.96**	**126**	*e*P	**P**	**13 23 49.9**	**+0.7**
D46A	**Sault St. Mari**	**35.14**	**88**	P	**P**	**13 23 50.4**	**0.0**
	baz=316						
TUC	**Tucson**	**35.20**	**132**	*e*P	**P**	**13 23 53.0**	**+1.8**

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             comp=Z,3.4nm,1.1s
TUC   Tucson             35.20 132 eP      P       13 23 53.0 +1.8
TUC                                  pmax    pmax
             comp=Z,3.0nm,1.1s
L40A  Anamosa            35.31 100 eP      P       13 23 53.5 +1.5
             comp=Z,9.0nm,0.8s
D47A  Chapleau           35.47  87  P      P       13 23 53.1 -0.1
             baz=316,SNR=5.5
E47A  Iron Bridge        35.82  88  P      P       13 23 56.5 +0.3
             baz=316
D48A  Paudash Townsh     36.00  86  P      P       13 23 58.6 +0.8
             baz=316
D49A  Beulah Townshi     36.15  85  P      P       13 23 59.9 +0.8
             baz=316
MATQ  Matagami           36.17  79  P      P       13 23 59.5 +0.3
             baz=314
E48A  Lockeyer           36.33  87  P      P       13 24 01.1 +0.4
             baz=316
F48A  Evansville         36.59  88  P      P       13 24 03.0 +0.2
             baz=317
MSTX  Muleshoe           36.81 121  P      P       13 24 06.8 +1.8
             baz=330
F49A  Sandfield          36.91  88  P      P       13 24 05.4 -0.1
             baz=317
E50A  Wahnapitae         37.05  86  P      P       13 24 05.9 -0.9
             baz=316
D51A  Lot 18 Range I     37.22  84  P      P       13 24 08.4 +0.2
             baz=316
M44A  Midewin, Midew     37.34  98  P      P       13 24 08.6 -0.7
             baz=321
VLDQ  Val d'Or           37.40  81 eP      P       13 24 07.7 -2.1
             comp=Z,5.8nm,0.9s
E51A  G1948 Merrick      37.57  85  P      P       13 24 11.0 -0.2
             baz=316
CHGQ  Chibougamau        37.59  77  P      P       13 24 10.8 -0.5
             baz=314
SCHQ  Schefferville      37.67  66  LR     LR      13 39 26.9
             comp=Z,87nm,18.1s,baz=38,slow=36
MNTX  Cornudas Mount     37.76 126  P      P       13 24 13.8 +0.8
             baz=333
D52A  ZEK Kipawa Sen     37.76  83  P      P       13 24 12.8  0.0
             baz=316
F51A  Arnstein           37.81  86  P      P       13 24 12.7 -0.4
             baz=317
WMOK  Wichita Mounta     37.84 115 eP      P       13 24 13.7 +0.1
             comp=Z,3.9nm,1.1s
WMOK  Wichita Mounta     37.84 115 eP      P       13 24 13.7 +0.1
WMOK                                 pmax    pmax
             comp=Z,4.0nm,1.1s
WMOK  Wichita Mounta     37.84 115  P      P       13 24 14.4 +0.8
             baz=328
I49A  Point Hope         37.88  90  P      P       13 24 14.1 +0.3
             baz=319
P43A  Skaggs, Pawnee     38.01 101  P      P       13 24 15.3 +0.4
             baz=323
D53A  Lac Vacive, Po     38.03  83 eP      P       13 24 14.9 -0.1
             comp=Z,7.8nm,1.1s
D53A  Lac Vacive, Po     38.03  83  P      P       13 24 15.4 +0.4
             baz=316
KLBO  Killbear Provi     38.08  87  P      P       13 24 15.7 +0.2
             baz=317
E52A  Mattawa            38.15  84  P      P       13 24 16.0  0.0
             baz=317
BMRO  Meriville Lake     38.16  88  P      P       13 24 16.4 +0.2
             baz=318
F52A  Sundridge          38.19  85  P      P       13 24 16.6 +0.2
             baz=317
BASO  Ashfield           38.38  89  P      P       13 24 18.6 +0.6
             baz=318
BUKO  Buck Lake          38.41  86  P      P       13 24 18.4 +0.1
             baz=317
D54A  Lac Fusel, La      38.47  82  P      P       13 24 18.6 -0.2
             baz=316
CCM   Cathedral Cave     38.48 104  P      P       13 24 18.8  0.0
             baz=324
E53A  Dumoine, Ponti     38.55  83  P      P       13 24 18.4 -1.0
             baz=317
ALGO  Algonquin Park     38.67  84  P      P       13 24 19.0 -1.4
             baz=317
E54A  Lac Daplat, Po     38.74  83  P      P       13 24 20.8 -0.2
             baz=317,SNR=6.4
I51A  Listowel           38.85  89  P      P       13 24 21.9 -0.1
             baz=319
YAK   Yakutsk            39.00 311 i P     P       13 24 21.2 -1.8
YAK                                  pmax    pmax
             comp=Z,3.0nm,0.8s
U40A  Yellville          39.12 108  P      P       13 24 23.7 -0.7
             baz=326
PEMO  Pembroke           39.26  84  P      P       13 24 25.7 +0.3
             baz=317
W39A  Magazine           39.66 110 eP      P       13 24 29.2 +0.4
             comp=Z,4.1nm,0.8s
W39A  Magazine           39.66 110  P      P       13 24 28.9 +0.1
             baz=327
PBMO  Poplar Bluff       39.89 105 eP      P       13 24 30.9 +0.1
             comp=Z,8.8nm,0.7s
DELO  Deloro Mine        39.94  85 eP      P       13 24 31.2 +0.2
             comp=Z,22nm,1.8s
TRQ   Mont Tremblant     40.14  81 eP      P       13 24 32.8  0.0
MIAR  Mount Ida          40.30 110  P      P       13 24 35.1 +0.9
             baz=327
LTX   Lajitas            40.53 125 eP      P       13 24 38.6 +2.4
LTX   Lajitas            40.53 125 eP      P       13 24 38.6 +2.4
TXAR  Lajitas Array      40.53 125  P      P       13 24 38.6 +2.4
             comp=Z,0.9nm,0.7s,baz=357,slow=8.8,SNR=6.4
TXAR                                 PcP     PcP     13 26 41.1 +2.6
             comp=Z,0.7nm,0.8s,baz=270,slow=2.5,SNR=4.3
TXAR                                 LR      LR      13 42 57.7
             comp=Z,48nm,20.1s,baz=0.0,slow=38
H56A  Elgin              40.53  84  P      P       13 24 35.2 -0.8
             baz=318
PECO  Prince Edward      40.68  85  P      P       13 24 36.8 -0.3
             baz=319
P50A  Jamestown          40.75  96  P      P       13 24 37.6 -0.2
             baz=322
MOQ   Mont Orford        41.90  80 eP      P       13 24 47.8 +0.5
M56A  Emporium           41.97  89  P      P       13 24 48.2 +0.3
             baz=320
P53A  Whipple            41.99  93  P      P       13 24 48.7 +0.7
             baz=322
N55A  Marion Center      42.13  90  P      P       13 24 49.3 +0.1
             baz=321
OXF   Oxford             42.23 106  P      P       13 24 51.1 +1.1
             baz=326
U49A  Red Boiling Sp     42.28 100  P      P       13 24 51.2 +0.8
             baz=324
T50A  Nancy              42.31  99  P      P       13 24 51.9 +1.2
             baz=324
Q53A  Leroy              42.42  94  P      P       13 24 53.3 +1.8
             baz=322
T51A  Gray               42.78  98  P      P       13 24 54.8 +0.3
             baz=324
U50A  Jamestown          42.80  99  P      P       13 24 55.2 +0.5
             baz=324
V49A  McMinnville        42.83 101  P      P       13 24 54.8 -0.1
             baz=325
LBNH  Lisbon             42.85  81  P      P       13 24 55.4 +0.5
             baz=319
W48A  Pulaski            42.86 103  P      P       13 24 54.8 -0.3
             baz=325
M58A  Price’s Panora     42.88  87  P      P       13 24 54.0 -1.3
             baz=321
PKME  Peaks-Kenny Pk     43.32  78 eP      P       13 24 59.1 +0.4
             comp=Z,6.6nm,1.0s
PKME  Peaks-Kenny Pk     43.32  78  P      P       13 24 59.4 +0.7
             baz=319
X48A  Hartselle          43.37 103  P      P       13 24 59.2  0.0
             baz=326
V51A  Loudon             43.53  99  P      P       13 25 00.4 -0.1
             baz=325
R55A  Marlinton          43.55  93  P      P       13 24 59.8 -1.0
             baz=323
O58A  Lewisberry         43.63  89  P      P       13 25 00.3 -1.0
             baz=322
X49A  Woodville          43.66 102  P      P       13 25 02.4 +0.8
             baz=326
W51A  Cleveland          43.86 100  P      P       13 25 04.2 +1.0
             baz=325
X50B  Fort Payne         44.02 102  P      P       13 25 05.7 +1.2
             baz=326
YSS   Yuzh-Sakhalins     44.12 287 i P     P       13 25 04.6 -0.5
YSS                                  pmax    pmax
             comp=Z,10.0nm,1.2s
X51A  Calhoun            44.30 101  P      P       13 25 07.3 +0.6
             baz=325
V53A  Saluda             44.37  98  P      P       13 25 08.4 +1.1
             baz=324
PAL   Palisades          44.38  86  P      P       13 25 07.9 +0.6
             baz=321
Y50A  Piedmont           44.44 102  P      P       13 25 09.2 +1.3
             baz=326
U55A  TA2, Sparta        44.53  96  P      P       13 25 09.9 +1.3
             baz=324
Z50A  Ashland            44.88 103  P      P       13 25 12.2 +0.8
             baz=326
LMN   Caledonia Moun     44.96  74 eP      P       13 25 12.3 +0.4
             comp=Z,6.1nm,0.8s
149A  Jones              45.02 104  P      P       13 25 13.6 +1.1
             baz=327
X53A  Estanollee         45.09 100  P      P       13 25 13.8 +0.8
             baz=325
Y52A  Lilburn            45.25 101  P      P       13 25 15.3 +1.0
             baz=326
Z52A  Williamson         45.64 102  P      P       13 25 16.5 -0.9
             baz=326
LNIG  Linares            46.15 123 eP      P       13 25 20.7 -0.8
             comp=Z,7.3nm,1.2s
X56A  White Oak          46.17  97  P      P       13 25 21.9 +0.3
             baz=325
Z54A  Sparta             46.34 100  P      P       13 25 23.3 +0.4
             baz=326
ARA0  ARCESS Array S     48.83   6 eP      P       13 25 43.4 +1.6
ARCES ARCESS Array B     48.83   6  P      P       13 25 43.4 +1.6
             comp=Z,2.3nm,0.8s,baz=8.9,slow=6.4,SNR=4.8
MJAR  Matsushiro Arr     54.37 282  P      P       13 26 24.4 +0.7
             comp=Z,1.3nm,0.9s,baz=27,slow=6.1,SNR=3.1
MAJO  Matsushiro         54.38 282 eP      P       13 26 24.4 +0.7
MAJO  Matsushiro         54.38 282 eP      P       13 26 24.4 +0.7
NB200 NORSAR Array S     55.88  16 eP      P       13 26 32.7 -1.6
NOA   NORSAR Array B     55.88  16  P      P       13 26 32.7 -1.6
             comp=Z,1.4nm,0.9s,baz=344,slow=7.5,SNR=3.0
FIA0  FINESS Array S     56.92   7 eP      P       13 26 41.6 +0.1
FIA0  FINESS Array S     56.92   7 eP      P       13 26 41.6 +0.1
FINES FINESS Array B     56.92   7  P      P       13 26 41.6 +0.1
             comp=Z,1.9nm,0.7s,baz=0.0,slow=7.6,SNR=4.6
SONA0 Songino Array      58.32 313 eP      P       13 26 53.4 +1.5
SONM  Songino Array      58.32 313  P      P       13 26 53.4 +1.5
             comp=Z,0.3nm,0.3s,baz=21,slow=6.2,SNR=3.0
ZAA1  Zalesovo Array     59.25 330 eP      P       13 26 57.5 -0.6
ZAA0  Zalesovo Array     59.25 330 eP      P       13 26 57.5 -0.5
             comp=Z,3.7nm,0.8s
ZALV  Zalesovo Beam      59.25 330  P      P       13 26 57.5 -0.6
             comp=Z,3.7nm,0.7s,baz=358,slow=6.9,SNR=12
VSU   Vasula             59.92   7ceP      P       13 27 02.1 -0.5
VSU                                  pmax    pmax
             comp=Z,65nm,1.7s
SVE   Sverdlovsk         60.73 347 eP      P       13 27 09.1 +1.0
SVE                                  pmax    pmax
             comp=Z,16nm,0.9s
ARU   Arti               61.34 348 eP      P       13 27 12.0 -0.3
             comp=Z,12nm,0.7s
ARU   Arti               61.34 348ceP      P       13 27 11.9 -0.3
ARU                                  pmax    pmax
             comp=Z,17nm,1.0s
HHC   Hu-ho-hao-te       62.38 305  P      P       13 27 21.0 +1.3
HHC                                  pmax    pmax
             comp=Z,18nm,0.9s
HHC                                  pmax    pmax
             comp=Z,36nm,4.6s
DGZ   Jazzator, Alta     62.50 327 i P     P       13 27 21.0 +0.6
DGZ                                  pmax    pmax
             comp=Z,2.0nm,0.9s
BRVK  Borovoye           63.04 339 eP      P       13 27 22.5 -1.2
             comp=Z,6.3nm,0.7s
BRVK  Borovoye           63.04 339 i P     P       13 27 23.1 -0.7
BRVK                                 pmax    pmax
             comp=Z,8.0nm,0.8s
OBN   Obninsk            63.64   2⇑eP      P       13 27 28.7 +1.0
OBN                                  e*PP    sP      13 27 31.1 -0.6
OBN                                  e               13 28 03.2
OBN                                  pmax    pmax
             comp=Z,7.0nm,0.3s
OBN                                  MLR     MLR
             comp=Z,464nm,19.0s
KURK  Kurchatov          63.67 333 eP      P       13 27 27.0 -0.9
             comp=Z,7.2nm,1.3s
KURK  Kurchatov          63.67 333ceP      P       13 27 27.3 -0.6
KURK                                 pmax    pmax
             comp=Z,5.0nm,0.9s
BRG   Berggiesshubel     66.14  17 eP      P       13 27 44.3 +0.3
             comp=Z,4.5nm,0.9s
BRG   Berggiesshubel     66.14  17 eP      P       13 27 44.3 +0.3
BRG                                  pmax    pmax
             comp=Z,5.0nm,1.0s
MK31  Makanchi Array     66.50 329 eP      P       13 27 46.7 +0.3
             comp=Z,2.1nm,0.8s
MK31  Makanchi Array     66.50 329 eP      P       13 27 46.7 +0.3
MK31                                 pmax    pmax
             comp=Z,2.0nm,0.8s
MK32  Makanchi Array     66.50 329 eP      P       13 27 47.5 +1.1
MKAR  Makanchi Array     66.50 329  P      P       13 27 47.5 +1.1
             comp=Z,1.9nm,0.7s,baz=46,slow=6.2,SNR=9.5
MKAR  Makanchi Array     66.50 329ceP      P       13 27 48.9 +2.5
MKAR                                 pmax    pmax
             comp=Z,2.0nm,0.7s
AKASG Malin Array Be     67.81   7  P      P       13 27 54.5 -0.1
             comp=Z,4.1nm,0.5s,baz=356,slow=6.2,SNR=24
AKBB  Malin Array Si     67.81   7 eP      P       13 27 54.4 -0.2
             comp=Z,8.2nm,0.6s
AKBB  Malin Array Si     67.81   7 eP      P       13 27 54.4 -0.2
AKBB                                 pmax    pmax
             comp=Z,8.0nm,0.6s
WMQ   Urumqi             67.83 324 eP      P       13 27 57.6 +2.6
WMQ                                  LR      LR
             comp=N,2μm,29.2s
WMQ                                  LR      LR
             comp=E,2μm,29.2s
WMQ                                  LR      LR
             comp=Z,180nm,28.9s
GTA   Gaotai             68.00 313 eP      P       13 27 41.8  -14
GTA                                  pP      sP      13 28 01.3 +1.0
GTA                                  sP      pP      13 28 10.1  +11
GTA                                  pmax    pmax
             comp=Z,2.0nm,0.9s
GEC2  GERESS Array S     68.08  18 eP      P       13 27 56.8 +0.3
             comp=Z,18nm,1.3s
GEC2  GERESS Array S     68.08  18 eP      P       13 27 56.8 +0.3
GEC2                                 pmax    pmax
             comp=Z,18nm,1.3s
GERES GERESS Array B     68.08  18  P      P       13 27 56.8 +0.3
             comp=Z,1.3nm,0.2s,baz=14,slow=5.5,SNR=4.8
ABKAR Akbulak array      68.25 345 eP      P       13 27 57.5 +0.1
             comp=Z,7.3nm,0.8s
KOLS  Kolonicke sedl     69.04  12 eP      P       13 28 03.7 +1.3
KOLS  Kolonicke sedl     69.04  12 eP      P       13 28 03.7 +1.3
VYHS  Vyhne              69.10  14 eP      P       13 28 03.2 +0.4
VYHS  Vyhne              69.10  14 eP      P       13 28 03.2 +0.4
BUR08 Bucovina Ar. S     70.58  10 eP      P       13 28 11.6 -0.4
             comp=Z,9.0nm,1.5s
KK31  Karatay Array      72.59 336 eP      P       13 28 23.8 -0.3
             comp=Z,3.4nm,0.8s
KK31  Karatay Array      72.59 336 eP      P       13 28 23.8 -0.3
KK31                                 pmax    pmax
             comp=Z,3.0nm,0.8s
KKAR  Karatay Array      72.59 336 eP      P       13 28 23.5 -0.6
             comp=Z,3.4nm,0.8s
KKAR  Karatay Array      72.59 336 eP      P       13 28 23.5 -0.6
KKAR                                 pmax    pmax
             comp=Z,3.0nm,0.8s
ESDC  Sonseca Array      73.27  33  P      P       13 28 28.5 +0.3
             comp=Z,0.1nm,0.3s,baz=329,slow=6.0,SNR=3.1
KIV   Kislovodsk         74.79 357 eP      P       13 28 36.8 -0.3
KIV                                  pmax    pmax
             comp=Z,26nm,1.0s
KIV                                  MLR     MLR
             comp=Z,607nm,18.0s
KBZ   Khabaz             75.01 357  P      P       13 28 38.9 +0.7
             comp=Z,6.8nm,1.1s,baz=320,slow=5.8,SNR=5.7
GAR   Garm               76.59 335 eP      P       13 28 47.2 -0.2
             comp=Z,14nm,1.1s
GAR   Garm               76.59 335 eP      P       13 28 47.3 -0.2
GAR                                  pmax    pmax
             comp=Z,14nm,1.1s
BR101 Keskin Array S     78.96   4 eP      P       13 29 01.4 +0.6
BRTR  Keskin Array B     78.96   4  P      P       13 29 01.4 +0.6
             comp=Z,1.9nm,0.8s,baz=8.5,slow=2.5,SNR=7.1
KMI   Kunming            79.68 304  P      P       13 29 03.8 -1.2
KMI                                  pmax    pmax
             comp=Z,19nm,0.5s
KEST  Kesra              80.10  24  P      P       13 29 08.0 +1.1
             comp=Z,4.0nm,0.8s,baz=228,slow=3.1,SNR=4.9
KEST  Kesra              80.10  24 eP      P       13 29 08.0 +1.1
             comp=Z,7.1nm,1.0s
NIL   Nilore             81.11 332 eP      P       13 29 12.1 -0.2
             comp=Z,5.7nm,0.9s
NIL   Nilore             81.11 332 eP      P       13 29 12.1 -0.2
NIL                                  pmax    pmax
             comp=Z,6.0nm,0.9s
PTGA  Pitinga            86.38  98 eP      P       13 29 39.6 +0.2
             comp=Z,8.6nm,1.3s
CM31  Chiang Mai Arr     87.19 305 eP      P       13 29 44.0 +0.6
             comp=Z,8.4nm,1.1s
CMAR  Chiang Mai Arr     87.19 305  P      P       13 29 44.0 +0.6
             comp=Z,1.1nm,0.7s,baz=358,slow=5.6,SNR=6.1
VNDA  Vanda             143.18 198  PKP    PKPdf   13 36 27.9 -1.4
             comp=Z,0.6nm,0.8s,baz=72,slow=2.0,SNR=3.6
BOSA  Boshof            145.80  22  PKPbc  PKPdf   13 36 35.5  0.0
             comp=Z,4.9nm,0.9s,baz=357,slow=5.1,SNR=4.5
```

IDC 15 13:19:21.4±8.7**, 18°.12S**×**176°.56E, h0km, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.7**/30**, mbtmp4.0**/4**, ML3.9**/1**, Error ellipse: s-maj=168.4km s-min=112.8km az=118.0, Fiji Islands region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
DZM   Mont Dzumac        10.28 246  Pn     Pn      13 21 50.7 +0.4
             1.1nm,0.3s,baz=37,slow=18,SNR=10
STKA  Stephens Creek     34.36 240  P      P       13 26 11.8 +1.7
             1.1nm,0.8s,baz=52,slow=8.4,SNR=3.3
WRA   Warramunga Arr     39.88 260  P      P       13 26 55.9 -1.3
             1.5nm,1.1s,baz=99,slow=8.6,SNR=5.4
ASAR  Alice Springs      40.12 255  P      P       13 26 59.0 -0.3
             1.4nm,0.6s,baz=81,slow=9.0,SNR=36
```

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*ISCJB **15** 13:28:03.5±0.7, 1°.34N±0°.05×126°.12E±0°.09, h54km, Error ellipse: s-maj=12.5km s-min=6.3km az=169.2*

*DJA **15** 13:28:03.4±0.7, 1°N±4°×12°6E±°, h20km±11km, M4.1/7, MLv4.1/7*

ISC 15 13:28:05.3±1.4**, 1°.34N**±0°.06×**126°.17E**±0°.08**, h54km, n9, σ1s.97**/13**, 1D, Northern Molucca Sea**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
TNTI  Ternate             1.33 115  P      Pn      13 28 27.2 -0.3
LBMI  Labuha              2.38 146  P      Pn      13 28 41.2 -0.7
SGSI  Sangihe             2.41 345  P      Pn      13 28 41.8 -0.6
SGSI                                S      Sn      13 29 11.4 +0.6
LUWI  Luwuk               4.14 235  P      Pn      13 29 05.2 -0.9
DDMP  Don Marcelino,      4.75 355 eP      Pn      13 29 11.2 -3.2
DDMP                               eS      Sn      13 30 08.0 -0.3
APSI  Ampana              5.04 244  P      Pn      13 29 18.3 -0.1
SKMP  Bagumbayan, Su      5.39 343 eP      Pn      13 29 21.6 -1.7
SKMP                               eS      Sn      13 30 24.2 +0.2
KCP   Kidapawan           5.73 349⇓eP      Pn      13 29 29.9 +1.9
KCP                                i S     Sn      13 30 36.7 +4.2
IPIL  Ipil                7.34 331 eP      Pn      13 29 48.6 -1.3
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*DRS **15** 13:31:24.7±0.0, 42°.22N×46°.37E, h18km, ML2.9/4*

*ISCJB **15** 13:31:26.3±0.6, 42°.40N±0°.04×46°.67E±0°.04, h62km±5km, Error ellipse: s-maj=6.7km s-min=3.9km az=35.7*

*NORS **15** 13:31:26.1±0.0, 42°.43N×46°.73E, h51km, MPVA4.0*

ISC 15 13:31:27.3±1.3**, 42°.40N**±0°.04×**46°.67E**±0°.03**, h52km**±7km**, n21, σ1s.18**/42**, Eastern Caucasus**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
XNZR  Khunzakh            0.15   9 ePg     Pn      13 31 35.4 -0.3
XNZR                               eSg     Sn      13 31 42.6 +0.9
GNBR  Gunib               0.21  92 ePg     Pn      13 31 35.5 -0.4
             505nm,0.1s
GNBR                               eSg     Sn      13 31 42.5 +0.3
             3μm,0.5s
ARKR  Arakani             0.32  49 i Pg    Pn      13 31 35.8 -1.0
             116nm,0.1s
ARKR                               i Sg    Sn      13 31 43.5  0.0
             521nm,0.1s
UNCR  Uncukul             0.33  16 i Pg    Pn      13 31 36.0 -0.9
             286nm,0.2s
UNCR                               eSg     Sn      13 31 44.0 +0.2
             641nm,0.3s
BTLR  Botlikh             0.43 309 i Pg    Pn      13 31 38.0 +0.1
             125nm,0.7s
BTLR                               eSg     Sn      13 31 47.0 +1.5
             352nm,0.2s
KRNR  Karanay             0.46  22 i Pg    Pn      13 31 37.1 -1.2
             52nm,0.2s
KRNR                               eSg     Sn      13 31 46.1 -0.2
             322nm,0.2s
DBC   Dubki               0.64  10 ePg     Pn      13 31 39.8 -0.5
             60nm,0.1s
DBC                                eSg     Sn      13 31 50.6 +0.8
LGD   Lagodekhi           0.65 210  P      Pn      13 31 40.0 -0.4
LGD                                 S      Sn      13 31 50.8 +0.9
DLMR  Dylym               0.68 357 ePg     Pn      13 31 40.0 -0.8
             64nm,0.2s
DLMR                               i Sg    Sn      13 31 52.0 +1.4
             433nm,0.3s
DVE   Vedeno              0.69 324 ePg     Pn      13 31 41.2 +0.2
DVE                                eSg     Sn      13 31 52.6 +1.6
URKR  Urkarakh            0.75 108 ePg     Pn      13 31 41.0 -0.8
URKR                               eSg     Sn      13 31 52.1 -0.3
MAK   Makhachkala         0.83  47 ePg     Pn      13 31 42.7 -0.1
MAK                                eSg     Sn      13 31 55.1 +0.9
GROC  Groznyy             1.03 322 ePg     Pn      13 31 46.7 +1.3
GROC                               eSg     Sn      13 32 01.1 +2.2
AKT   Akhty               1.21 139 ePg     Pn      13 31 47.5 -0.4
             65nm,0.2s
AKT                                eSg     Sn      13 32 03.7 +0.4
             274nm,0.3s
DRN   Derbent             1.28 106 ePg     Pn      13 31 50.0 +1.2
             31nm,0.4s
DRN                                eSg     Sn      13 32 06.9 +2.0
             114nm,1.0s
KSMR  Kasumkent           1.34 126 ePg     Pn      13 31 49.0 -0.7
             50nm,0.2s
KSMR                               eSg     Sn      13 32 07.0 +0.5
             342nm,0.3s
LACR  Lac                 1.81 285 ePg     Pn      13 31 55.8 -0.3
LACR                               eSg     Sn      13 32 19.3 +1.4
ARNR  Ardon               1.93 295 ePg     Pn      13 31 58.4 +0.8
ARNR                               eSg     Sn      13 32 22.9 +2.2
PYA1  Pyatigorsk          3.10 304 ePn     Pn      13 32 12.4 -1.2
PYA1                               eSn     Sn      13 32 47.2 -2.3
SHA1  Shidzhatmaz         3.23 296 ePn     Pn      13 32 14.6 -1.1
SHA1                               eSn     Sn      13 32 51.0 -2.1
KIV0  Kislovodsk Arr      3.30 300 ePn     Pn      13 32 15.6 -0.9
KIV0                               eSn     Sn      13 32 52.7 -1.9
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*ISK **15** 13:31:26.4, 37°.21N×34°.73E, h5km, ML2.0/11*

*DDA **15** 13:31:27.3, 37°.05N×34°.84E, h4km±1km, ML2.6*

*ISCJB **15** 13:31:28.1±0.4, 37°.06N±0°.03×34°.85E±0°.04, h9km±4km, Error ellipse: s-maj=5.7km s-min=3.8km az=36.7*

ISC 15 13:31:28.1±0.9**, 37°.06N**±0°.03×**34°.88E**±0°.04**, h8km**±8km**, n19, σ0s.83**/27**, Turkey**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s   ISC
DED   Mersin              0.12 212 i P     Pg      13 31 30.2 -0.5
DED                                i S     Sg      13 31 32.5  0.0
DED                                  IAML_P
             comp=Z,15μm,0.1s
GULE  Gulek               0.24 341 i P     Pg      13 31 32.7 -0.2
GULE                               i S     Sg      13 31 37.6 +1.4
GULE                                 IAML_P
             comp=Z,2μm,0.1s
KARA  Karaisali           0.25  35  PG     Pg      13 31 32.3 -0.8
KARA                                SG     Sg      13 31 36.6 +0.2
MERS  Mersin              0.34 236  PG     Pg      13 31 34.5 -0.3
MERS                                SG     Sg      13 31 40.2 +0.9
KRTS  Karatas             0.63 140  PG     Pb      13 31 42.7 +1.3
YURE  YUREGIR             0.65 111  PG     Pb      13 31 42.7 +0.9
YURE  YUREGIR             0.65 111 i P     Pb      13 31 41.6 -0.2
KERG  Konya-Eregli        0.70 301 i P     Pg      13 31 40.9 -0.7
KERG                               i S     Sg      13 31 51.2 +0.6
KERG                                 IAML_P
             comp=Z,104nm,0.1s
CEYT  Ceyhan              0.70  94  PG     Pb      13 31 42.9 +0.3
KIZK  Mersin              0.82 226  PG     Pg      13 31 42.9 -1.0
KIZK  Mersin              0.82 226 i P     Pg      13 31 43.7 -0.3
KIZK                               i S     Sg      13 31 55.8 +1.1
KIZK                                 IAML_P
             comp=Z,1μm,0.1s
YAHY  KAYSERI_Yahyal      1.10  20 i P     Pg      13 31 48.9 -0.5
```

YAHY				*i*S	**Sb**	**13 32 04.3**	**0.0**
YAHY				IAML_P			
	comp=Z,217nm,0.1s						
KEBE	**Keben-Mersin**	**1.11**	**237**	PN	**Pg**	**13 31 48.3**	**-1.2**
IKL	**Isikli**	**1.26**	**230**	PN	**Pn**	**13 31 51.5**	**-0.5**
TEVE	**Tevekalti-Mers**	**1.31**	**242**	PN	**Pn**	**13 31 51.6**	**-1.2**
GULN	**MERSIN_Gulnar**	**1.38**	**231**	*i*P	**Pn**	**13 31 53.7**	**-0.1**
GULN				*i*S	**Sn**	**13 32 12.9**	**+0.7**
GULN				IAML_P			
	comp=Z,399nm,0.2s						
AKKU	**Akkuyu-Mersin**	**1.39**	**230**	PN	**Pn**	**13 31 53.4**	**-0.5**
BERE	**Bereket-Mersin**	**1.51**	**242**	PN	**Pn**	**13 31 54.4**	**-1.2**
TEKE	**Tekeli-Mersin**	**1.69**	**238**	PN	**Pn**	**13 31 57.2**	**-0.7**

MEX 15 13:37:14.1±0.6, 15°.33N×93°.05W, h16^{km}±9^{km}, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.41**	**337**	*e*P	Pg	13 37 20.9	-1.5
PCIG				*e*S	Sg	13 37 26.5	-1.6
CCIG	**Comitan**	**1.29**	**43**	*i* P	Pn	13 37 34.6	-3.1
CCIG				*i* S	Sb	13 37 50.0	-4.6
TGIG		**1.44**	**357**	*e*P	Pn	13 37 36.3	-3.4
TGIG				*i* S	Sn	13 37 52.6	-5.7

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*REY **15** 13:41:27.3, 69°.70N×14°.32W, h10^{km}*

*GCMT **15** 13:41:27.5±0.6, 69°.64N±0°.07×15°.4W±0°.1, h18^{km}±2^{km}, MW4.9/41, Moment Tensor Solution. s30,c38; s41,c63; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.70±.33; $M_{\theta\theta}$-0.45±.24; $M_{\phi\phi}$2.15±.21; $M_{r\theta}$-0.01±.69; $M_{\theta\phi}$-0.39±.15; $M_{\phi r}$-2.06±.52; Best double couple: $M_0$2.84300×10^{16} NP1:ϕ_s359.00000°,δ68.00000°, λ-83.00000°. NP2:ϕ_s161.00000°,δ22.00000°, λ-106.00000°. Principal axes: T 3.0800, Plg23.0000°, Azm84.0000°; N -0.4710, Plg6.0000°, Azm176.0000°; P -2.6060, Plg66.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **15** 13:41:27.2±0.2, 69°.81N±0°.02×15°.40W±0°.09, h10^{km}, mb4.4/46, MS4.0/16 Error ellipse: s-maj=4.6km s-min=2.8km az=5.4*

*IDC **15** 13:41:28.3±0.7, 69°.93N×15°.70W, h0^{km}, mb3.9/10, mb1 4.2/15, mb1mx3.8/64, mbtmp4.0/15, ML3.4/5, MS3.9/21, Ms1 3.9/21, ms1mx3.8/58, Error ellipse: s-maj=21.3km s-min=13.3km az=33.0*

*NEIC **15** 13:41:29.5±2.6, 69°.94N×15°.62W, h7^{km}±17^{km}, mb4.5/32, Error ellipse: s-maj=6.7km s-min=4.2km az=200.0*

*NAO **15** 13:41:33.6±4.2, 70°.14N×13°.94W, ML4.8*

ISC 15 13:41:29.7±0.4, 69°.90N±0°.04×15°.25W±0°.04, h10^{km}, n124, σ2^{s}16/123, mb4.4/46, MS3.9/16, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**2.36**	**288**	*e*Pn	**Pn**	**13 42 06.9**	**-1.5**
JMI	**Jan Mayen**	**2.43**	**62**	*e*P	Pn	13 42 03.2	-6.2
JMIC	**Jan Mayen**	**2.52**	**61**	Pn	**Pn**	**13 42 07.4**	**-3.2**
JMIC				Lg	Lg	13 42 37.6	
JMIC	**Jan Mayen**	**2.52**	**61**	Pn	**Pn**	**13 42 07.8**	**-2.8**
	6.1nm,0.3s,baz=158,slow=0.8,SNR=9.0						
JMIC				Sn	**Sn**	**13 42 37.0**	**-4.3**
	8.0nm,0.3s,baz=65,slow=23,SNR=5.7						
JMIC	**Jan Mayen**	**2.52**	**61**	Pn	**Pn**	**13 42 07.4**	**-3.2**
JMIC				*e*		13 42 37.7	
JNW	**Jan Mayen West**	**2.56**	**60**	*e*P	**Pn**	**13 42 07.8**	**-3.4**
JNE	**Jan Mayen East**	**2.58**	**62**	*e*P	**Pn**	**13 42 07.6**	**-3.9**
IGRI	**Grimsey**	**3.53**	**198**	P	**Pn**	**13 42 21.5**	**-2.9**
	baz=205						
IGIL	**Gilhagi**	**3.86**	**187**	P	**Pn**	**13 42 25.3**	**-3.7**
	baz=193						
IFLA	**Flatey**	**3.88**	**196**	P	**Pn**	**13 42 27.2**	**-2.1**
	baz=202						
IHED	**Heoinshofoi**	**3.91**	**192**	P	**Pn**	**13 42 26.3**	**-3.5**
	baz=199						
IHED				S	**Sn**	**13 43 12.9**	**-2.8**
	baz=199						
IBRE	**Brettingsstaoi**	**3.92**	**196**	P	**Pn**	**13 42 26.9**	**-3.0**
	baz=202						
IBRE				S	**Sn**	**13 43 13.5**	**-2.4**
	baz=202						
IDIM	**Dimmadalss**	**4.01**	**190**	P	**Pn**	**13 42 27.5**	**-3.6**
	baz=196						
IDIM				S	**Sn**	**13 43 15.0**	**-3.0**
	baz=196						
ISIG	**Siglufjorour**	**4.03**	**202**	P	**Pn**	**13 42 29.1**	**-2.2**
	baz=208						
IGRA	**Granastaoir**	**4.09**	**194**	P	**Pn**	**13 42 29.4**	**-2.8**
	baz=200						
IGRA				S	**Sn**	**13 43 17.3**	**-2.8**
	baz=200						
ISKI	**Skildingahlsh**	**4.10**	**190**	P	**Pn**	**13 42 29.1**	**-3.3**
	baz=196						
ISKI				S	**Sn**	**13 43 17.4**	**-3.0**
	baz=196						
IGHA	**Grjothals**	**4.11**	**188**	P	**Pn**	**13 42 28.9**	**-3.5**
	baz=194						
IGHA				S	**Sn**	**13 43 17.2**	**-3.3**
	baz=194						
IHLA	**Hella**	**4.15**	**198**	P	**Pn**	**13 42 30.6**	**-2.3**
	baz=204						
IHRN	**Hraun**	**4.22**	**208**	P	**Pn**	**13 42 32.2**	**-1.8**
	baz=214						
IHRN				S	**Sn**	**13 43 21.9**	**-1.4**
	baz=214						
IKVO	**Krokottuvotn**	**4.25**	**189**	P	**Pn**	**13 42 31.2**	**-3.2**
	baz=195						
IGRS	**Grimsstaoir**	**4.29**	**185**	P	**Pn**	**13 42 31.2**	**-3.8**
	baz=190						
IGRS				S	**Sn**	**13 43 22.1**	**-3.0**
	baz=190						
IREN	**Reynihlio**	**4.32**	**189**	P	**Pn**	**13 42 32.2**	**-3.2**
	baz=195						
IMEL	**Melhnausar**	**4.38**	**188**	P	**Pn**	**13 42 32.8**	**-3.5**
	baz=193						
ISVA	**Svartarkot**	**4.65**	**190**	P	**Pn**	**13 42 37.1**	**-2.8**
	baz=196						
IADA	**Aoalbol**	**4.91**	**182**	P	**Pn**	**13 42 39.7**	**-3.7**
	baz=186						
BORG	**Borgarnes**	**5.68**	**207**	Pn	**Pn**	**13 42 53.3**	**-0.7**
	2.8nm,0.3s,baz=7.7,slow=5.7,SNR=10						
BORG				Sn	**Sn**	**13 43 59.3**	**+0.1**
	baz=119,slow=19,SNR=1.9						
BORG				LR	LR	13 44 31.6	
	comp=Z,388nm,20.4s,baz=2.1,slow=32						
BORG	**Borgarnes**	**5.68**	**207**	*e*Pn	**Pn**	**13 42 53.7**	**-0.3**
BORG				*e*Sn	**Sn**	**13 43 59.3**	**+0.1**
SUMG	**Summit**	**7.92**	**300**	*e*Pn	**Pn**	**13 43 22.4**	**-2.6**
KBS	**Kingsbay**	**11.45**	**26**	*e*Pn	**Pn**	**13 44 16.4**	**+3.5**
KBS	**Kingsbay**	**11.45**	**26**	*e*P	**Pn**	**13 44 17.3**	**+4.3**
SPA0	**Spitsbergen Ar**	**11.80**	**32**	Pn	**Pn**	**13 44 17.6**	**-0.2**
SPA0	**Spitsbergen Ar**	**11.80**	**32**	*e*Pn	**Pn**	**13 44 18.6**	**+0.9**
SPA0				*e*Sn	**Sn**	**13 46 26.7**	**-2.5**
SPA0	**Spitsbergen Ar**	**11.80**	**32**	P	**Pn**	**13 44 17.6**	**-0.2**
SPITS	**Spitsbergen Ar**	**11.80**	**32**	Pn	**Pn**	**13 44 17.9**	**+0.2**
	baz=227,slow=14,SNR=9.2						
SPITS				Sn	**Sn**	**13 46 26.7**	**-2.5**
	baz=35,slow=25,SNR=3.9						
SPITS				LR	LR	13 47 40.7	
	comp=Z,424nm,21.5s,baz=240,slow=31						
SFJD	**Kangerlussuaq**	**13.19**	**274**	LR	LR	13 49 11.2	
	comp=Z,1μm,21.4s,baz=62,slow=36						
ARCES	**ARCESS Array B**	**13.95**	**72**	LR	LR	13 49 09.0	
	comp=Z,495nm,18.7s,baz=282,slow=33						
NOA	**NORSAR Array B**	**13.99**	**116**	LR	LR	13 49 40.1	
	comp=Z,315nm,21.2s,baz=320,slow=35						
HFS	**Hagfors**	**15.47**	**115**	P	**Pn**	**13 45 09.6**	**+2.0**
	baz=329,slow=12						
HFS	**Hagfors**	**15.47**	**115**	Pn	**Pn**	**13 45 08.8**	**+1.1**
	0.1nm,0.3s,baz=322,slow=18,SNR=4.1						
HFS				LR	LR	13 50 25.4	
	comp=Z,524nm,21.8s,baz=302,slow=34						
HFS	**Hagfors**	**15.47**	**115**	P	**Pn**	**13 45 09.6**	**+2.0**
	baz=329,slow=12						
EKA	**Eskdalemuir Ar**	**15.59**	**154**	Pn	**Pn**	**13 45 09.5**	**+0.3**
	baz=354,slow=14,SNR=4.4						
IVI	**Ivigtut**	**15.94**	**253**	*e*Pn	**Pn**	**13 45 14.1**	**+0.4**
	40nm,1.1s						
APA0	**Apatity Array**	**17.26**	**74**	P	**Pn**	**13 45 30.2**	**-0.3**
APA0	**Apatity Array**	**17.26**	**74**	P	**Pn**	**13 45 30.2**	**-0.3**
FIA0	**FINESS Array S**	**18.62**	**96**	P	**Pn**	**13 45 47.4**	**+0.2**
	baz=295,slow=14						
FIA0	**FINESS Array S**	**18.62**	**96**	*e*P	**Pn**	**13 45 47.4**	**+0.2**
FIA0	**FINESS Array S**	**18.62**	**96**	P	**Pn**	**13 45 47.4**	**+0.2**
	baz=295,slow=14						
FIA1	**FINESS Array S**	**18.62**	**96**	*e*P	**Pn**	**13 45 47.8**	**+0.7**
	14nm,0.9s						
FINES	**FINESS Array B**	**18.62**	**96**	P	**Pn**	**13 45 47.4**	**+0.2**
	0.2nm,0.3s,baz=318,slow=11,SNR=13						
FINES				LR	LR	13 52 11.4	
	comp=Z,767nm,20.0s,baz=317,slow=34						
SLVR	**Solovky**	**19.60**	**79**	*e*P	**P**	**13 45 56.3**	**-1.3**
	43nm,3.0s						
FRB	**Frobisher Bay**	**21.20**	**280**	LR	LR	13 54 12.0	
	comp=Z,739nm,18.5s,baz=32,slow=36						
CLL	**Collm**	**22.84**	**130**	*i* P	**P**	**13 46 34.4**	**+1.8**
CLL				*e*(S)	**S**	**13 50 36.0**	**-5.6**
CLL				*e*SSS	SSS	13 51 30.0	
RES	**Resolute Bay**	**22.91**	**318**	LR	LR	13 55 09.2	
	comp=Z,426nm,21.1s,baz=34,slow=36						
BRG	**Berggiesshubel**	**23.48**	**129**	*e*P	**P**	**13 46 43.6**	**+4.5**
	8.1nm,1.4s						
PRGR	**Permogore**	**25.21**	**78**	*e*P	**P**	**13 46 52.1**	**-2.9**
	3.3nm,0.3s						
GEC2	**GERESS Array S**	**25.27**	**131**	*e*P	**P**	**13 46 58.8**	**+3.0**
	17nm,1.5s						
GERES	**GERESS Array B**	**25.27**	**131**	P	**P**	**13 46 58.4**	**+2.5**
	7.9nm,0.2s,baz=339,slow=6.7,SNR=4.9						
GERES				LR	LR	13 57 47.7	
	comp=Z,164nm,18.7s,baz=351,slow=38						
MORC	**Moravsky Berou**	**25.46**	**125**	*e*P	**P**	**13 46 59.1**	**+1.6**
	5.8nm,0.9s						
DAVOX	**Davos/Dischmat**	**26.27**	**139**	LR	LR	13 57 42.6	
	comp=Z,253nm,20.0s,baz=262,slow=37						
OBN	**Obninsk**	**27.03**	**96**	LR	LR	13 57 23.4	
	comp=Z,114nm,19.0s,baz=342,slow=35						
SCHQ	**Schefferville**	**27.17**	**263**	LR	LR	13 56 58.2	
	comp=Z,310nm,21.8s,baz=64,slow=34						
AKASG	**Malin Array Be**	**28.23**	**110**	P	**P**	**13 47 22.8**	**+0.5**
	0.2nm,0.3s,baz=330,slow=9.3,SNR=4.1						
AKASG				LR	LR	13 58 12.7	
	comp=Z,257nm,19.5s,baz=295,slow=35						
AKBB	**Malin Array Si**	**28.23**	**110**	*e*P	**P**	**13 47 22.8**	**+0.5**
	4.6nm,1.2s						
KIRV	**Kirov**	**28.74**	**80**	LR	LR	13 58 04.8	
	comp=Z,350nm,18.5s,baz=214,slow=34						
ESDC	**Sonseca Array**	**30.87**	**163**	LR	LR	14 00 08.0	
	comp=Z,149nm,18.0s,baz=345,slow=36						
ARU	**Arti**	**33.51**	**75**	LR	LR	14 01 06.1	
	comp=Z,352nm,18.5s,baz=338,slow=35						
YKA	**Yellowknife Ar**	**36.39**	**309**	P	**P**	**13 48 33.2**	**-0.4**
	3.7nm,0.9s,baz=35,slow=8.4,SNR=9.1						
YKA				LR	LR	14 03 18.9	
	comp=Z,27nm,18.6s,baz=32,slow=36						
YKB5	**Yellowknife Ar**	**36.39**	**309**	*e*P	**P**	**13 48 33.2**	**-0.4**
TIXI	**Tiksi**	**36.74**	**18**	*e*P	**P**	**13 48 38.0**	**+1.5**
	30nm,2.0s						
EPYK	**Eagle Plains**	**38.19**	**326**	*e*P	**P**	**13 48 48.0**	**-0.9**
	6.1nm,1.3s						
AKTO	**Aktyubinsk**	**38.27**	**81**	LR	LR	14 03 48.0	
	comp=Z,153nm,18.9s,baz=338,slow=35						
KBZ	**Khabaz**	**38.87**	**101**	LR	LR	14 04 40.6	
	comp=Z,282nm,19.9s,baz=340,slow=36						
FFC	**Flin Flon**	**39.12**	**293**	*e*P	**P**	**13 48 55.3**	**-1.4**
	100nm,1.4s						
BR101	**Keskin Array S**	**39.41**	**114**	*e*P	**P**	**13 49 01.9**	**+2.4**
BRTR	**Keskin Array B**	**39.41**	**114**	P	**P**	**13 49 01.9**	**+2.4**
	0.8nm,0.8s,baz=3.4,slow=6.2,SNR=3.9						
FYU	**Fort Yukon**	**39.54**	**331**	*e*P	**P**	**13 49 00.2**	**+0.2**
	29nm,1.4s						
ABKAR	**Akbulak array**	**39.94**	**81**	*e*P	**P**	**13 49 07.3**	**+3.7**
	3.0nm,1.1s						
ULM	**Lac du Bonnet**	**40.92**	**285**	P	**P**	**13 49 10.7**	**-1.0**
	1.7nm,0.6s,baz=35,slow=9.7,SNR=3.5						
ILAR	**Eielson Array**	**41.47**	**331**	P	**P**	**13 49 15.8**	**-0.3**
	1.5nm,1.1s,baz=24,slow=6.6,SNR=7.2						
ILB	**Eielson Array**	**41.47**	**331**	*e*P	**P**	**13 49 15.8**	**-0.3**
	11nm,1.5s						
CCB	**Clear Creek Bu**	**41.73**	**332**	*e*P	**P**	**13 49 18.1**	**-0.1**
	4.7nm,1.2s						
HDA	**Harding Lake**	**41.81**	**331**	*e*P	**P**	**13 49 18.9**	**+0.1**
	6.0nm,1.1s						
DOT	**Dot Lake**	**42.01**	**329**	*e*P	**P**	**13 49 20.6**	**+0.1**
	4.3nm,1.1s						
BILL	**Bilibino**	**42.32**	**359**	*e*P	**P**	**13 49 20.8**	**-2.1**
	9.5nm,0.4s						
BPAW	**Bear Paw Mtn.**	**42.76**	**333**	*e*P	**P**	**13 49 26.7**	**+0.1**
	7.8nm,1.1s						
HYT	**Haines Junctio**	**43.32**	**323**	*e*P	**P**	**13 49 31.9**	**+0.7**
	4.1nm,1.1s						
ECSD	**EROS Data Cent**	**46.84**	**281**	*e*P	**P**	**13 49 58.4**	**-0.9**
EGMT	**Eagleton**	**47.37**	**295**	*e*P	**P**	**13 50 02.7**	**-0.8**
	32nm,1.8s						
MSO	**Missoula**	**49.73**	**297**	*e*P	**P**	**13 50 21.6**	**-0.1**
	8.2nm,1.4s						
BG3	**Lake Jocassee**	**49.95**	**263**	*e*P	**P**	**13 50 24.5**	**+1.1**
	12nm,1.3s						
YPP	**Pitchstone Pla**	**51.05**	**293**	*e*P	**P**	**13 50 32.8**	**+0.9**
	6.7nm,1.3s						
BW06	**Boulder Array**	**52.00**	**291**	*e*P	**P**	**13 50 37.6**	**-1.3**
PD31	**Pinedale Array**	**52.00**	**291**	*e*P	**P**	**13 50 37.2**	**-1.8**
PDAR	**Pinedale Array**	**52.00**	**291**	P	**P**	**13 50 37.2**	**-1.8**
	2.9nm,1.1s,baz=49,slow=4.5,SNR=10.0						
N23A	**Red Feather La**	**52.50**	**287**	*e*P	**P**	**13 50 41.6**	**-1.2**
	11nm,1.0s						
ISCO	**Idaho Springs**	**53.38**	**286**	*e*P	**P**	**13 50 47.8**	**-1.5**
WMQ	**Urumqi**	**53.74**	**61**	*e*P	P	13 50 56.3	+4.6
WMQ				sP	sP	13 51 01.8	+6.3
WMQ				pmax	pmax		
	comp=Z,23nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.9s						
WMQ				LR	LR		
	comp=N,890nm,29.2s						
WMQ				LR	LR		
	comp=E,1μm,29.3s						
WMQ				LR	LR		
	comp=Z,140nm,29.7s						
O20A	**White River Ci**	**53.94**	**289**	*e*P	**P**	**13 50 52.1**	**-1.2**
	comp=Z,10nm,1.1s						
SMCO	**Snowmass**	**54.39**	**287**	*e*P	**P**	**13 50 57.3**	**+0.5**
	comp=Z,6.1nm,1.3s						
X37A	**Clayton**	**54.61**	**274**	*e*P	**P**	**13 50 58.0**	**+0.1**
	comp=Z,8.6nm,1.1s						
SRU	**San Rafael Swe**	**55.61**	**290**	*e*P	**P**	**13 51 04.8**	**-0.6**
	comp=Z,5.7nm,1.1s						
WMOK	**Wichita Mounta**	**55.64**	**278**	*e*P	**P**	**13 51 04.4**	**-1.1**
MVCO	**Mesa Verde**	**56.67**	**287**	*e*P	**P**	**13 51 11.4**	**-1.6**
	comp=Z,8.5nm,1.3s						
MSU	**Marysvale**	**56.69**	**291**	*e*P	**P**	**13 51 12.5**	**-0.7**
MTPU	**Mount Pierson**	**57.12**	**291**	*e*P	**P**	**13 51 14.0**	**-2.4**
	comp=Z,12nm,1.9s						
PSUT	**Pine Spring**	**57.21**	**293**	*e*P	**P**	**13 51 15.8**	**-1.0**
	comp=Z,4.7nm,1.3s						
TOA1	**Torodi Ar. Sit**	**57.70**	**160**	*e*P	**P**	**13 51 20.3**	**0.0**
TORD	**Torodi Ar. Bea**	**57.71**	**160**	P	**P**	**13 51 20.3**	**0.0**
	comp=Z,1.8nm,0.9s,baz=350,slow=6.4,SNR=7.1						
R11A	**Troy Canyon, C**	**57.93**	**294**	*e*P	**P**	**13 51 20.4**	**-1.4**
	comp=Z,2.5nm,1.0s						
KVN	**Kaiserville**	**58.07**	**297**	*e*P	**P**	**13 51 21.8**	**-1.0**
	comp=Z,6.9nm,1.3s						
KNB	**Kanab**	**58.26**	**291**	*e*P	**P**	**13 51 23.2**	**-1.0**
	comp=Z,6.0nm,1.3s						
YERR	**Yerington**	**58.48**	**297**	*e*P	**P**	**13 51 25.4**	**-0.3**
NV01	**Mina Array Sit**	**58.70**	**296**	*e*P	**P**	**13 51 26.1**	**-1.2**
NVAR	**Mina Array Bea**	**58.70**	**296**	P	**P**	**13 51 26.1**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=48,slow=4.4,SNR=3.4						
GTA	**Gaotai**	**61.32**	**53**	*e*P	**P**	**13 51 44.6**	**-0.6**
GTA				pP	sP	13 51 49.0	-0.1
GTA				sP	pP	13 51 51.8	+3.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LTX	**Lajitas**	**62.25**	**279**	*e*P	**P**	**13 51 50.3**	**-1.2**
TXAR	**Lajitas Array**	**62.25**	**279**	P	**P**	**13 51 50.3**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=43,slow=5.8,SNR=4.5						
HHC	**Hu-ho-hao-te**	**62.98**	**43**	*e*P	**P**	**13 51 57.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,430nm,5.3s						
LZH	**Lanzhou**	**65.54**	**51**	*e*P	**P**	**13 52 15.0**	**+1.9**
LZH				pP	sP	13 52 19.5	+2.5
LZH				sP	pP	13 52 21.9	+5.9
LZH				*e*PP	**PP**	**13 54 41.3**	**+4.5**
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,53nm,7.8s						
LZH				LR	LR		
	comp=N,120nm,15.9s						
LZH				LR	LR		
	comp=E,130nm,16.2s						
LZH				LR	LR		
	comp=Z,170nm,18.1s						
MDP	**Montagnes des**	**69.12**	**220**	LR	LR	14 16 25.4	
	comp=Z,3μm,19.5s,baz=43,slow=30						
MAJO	**Matsushiro**	**72.11**	**22**	*e*P	**P**	**13 52 53.7**	**-0.1**
MJAR	**Matsushiro Arr**	**72.11**	**22**	P	**P**	**13 52 53.7**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=1.0,slow=4.1,SNR=4.8						
KMI	**Kunming**	**75.57**	**56**	P	**P**	**13 53 15.8**	**+1.3**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
MAW	**Mawson**	**147.08**	**136**	PKPbc	**PKPbc**	**14 01 10.8**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=280,slow=6.1,SNR=5.3						

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*NIED **15** 13:41:00, 23°.60N×122°.90E, h35^{km}, Mw5.2 Best double couple: $M_0$7.28000×10^{16} NP1:ϕ_s194.00000°,δ22.00000°, λ72.00000°. NP2:ϕ_s34.00000°,δ70.00000°,λ97.00000°.*

*IDC **15** 13:41:34.4±0.4, 23°.92N×122°.93E, h0^{km}, mb4.8/48, mb1 4.8/50, mb1mx4.8/69, mbtmp4.7/50, ML3.7/2, MS4.4/11, Ms1 4.4/11, ms1mx4.2/47, Error ellipse: s-maj=11.4km s-min=10.8km az=54.0*

*BJI **15** 13:41:36.3±0.0, 23°.84N×122°.69E, h7^{km}, mb4.8/63, mB4.9/51, ML4.9/12, Ms4.7/85, Ms7 4.6/79*

*NEIC **15** 13:41:38.5±1.4, 23°.77N×122°.94E, h31^{km}±3^{km}, mb5.3/170, ML5.3(TAP), Error ellipse: s-maj=9.4km s-min=7.3km az=126.0*

NEIC Recorded [2 TAP] in Changhua, Hsinchu, Hualien, Taitung, Yilan and Yunlin; [1 TAP] in Chiayi, Miaoli, Nantou and Taoyuan. Recorded [2 JMA] on Yonaguni-jima, Ryukyu Islands.

*JMA **15** 13:41:38.4±0.1, 23°.70N×122°.85E, h58^{km}±4^{km}, M5.4*

JMA Felt II J1.

*ASIES **15** 13:41:38.6, 23°.66N×122°.69E, h19^{km}, MW4.5*

*ISCJB **15** 13:41:39.3±0.2, 23°.77N±0°.01×122°.89E±0°.01, h47^{km}±1^{km}, mb5.2/244, MS4.6/23, Error ellipse: s-maj=2.3km s-min=1.5km az=158.6*

*MOS **15** 13:41:39.1±0.9, 24°.12N×122°.94E, h37^{km}, mb5.5/86, MS4.6/8, Error ellipse: s-maj=8.2km s-min=4.5km az=120.4*

*TAP **15** 13:41:39.9, 23°.76N×122°.84E, h40^{km}, ML5.7, D*

*GCMT **15** 13:41:40.5±0.3, 23°.71N±0°.02×122°.86E±0°.03, h30^{km}±1^{km}, MW5.1/40, Moment Tensor Solution. s30,c38; s40,c67; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.20±.27; $M_{\theta\theta}$0.66±.18; $M_{\phi\phi}$-4.86±.19; $M_{r\theta}$0.71±.31; $M_{\theta\phi}$-0.57±.14; $M_{\phi r}$4.53±.39; Best double couple: $M_0$6.46700×10^{16} NP1:ϕ_s8.00000°,δ68.00000°,λ92.00000°. NP2: ϕ_s183.00000°,δ22.00000°,λ85.00000°. Principal axes: T 6.1120, Plg67.0000°, Azm282.0000°; N 0.7110, Plg2.0000°, Azm187.0000°; P -6.8220, Plg23.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 13:41:39.8±0.3, 23°.78N±0°.02×122°.89E±0°.02, h40^{km}±3^{km}, h41^{km}:pP-P, n794, σ1^{s}47/948, mb5.2/256, MS4.5/24, 58C-104D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.67**	**4**	⇑P	**Pn**	**13 41 53.1**	**+0.2**
JYNG				S	**Sn**	**13 42 03.9**	**+1.7**
YOJ	**Yonaguni jima**	**0.69**	**9**	*e*Pn	**Pn**	**13 41 53.8**	**+0.7**
YOJ	**Yonaguni jima**	**0.69**	**9**	⇓P	**Pn**	**13 41 53.9**	**+0.7**
	baz=11						
YOJ				S	**Sn**	**13 42 04.0**	**+1.4**
	baz=11						
YOJ	**Yonaguni jima**	**0.69**	**9**	*e*P	**Pn**	**13 41 53.8**	**+0.7**
YOJ	**Yonaguni jima**	**0.69**	**9**	⇑P	**Pn**	**13 41 53.7**	**+0.6**
YOJ				S	**Sn**	**13 42 04.2**	**+1.6**
HATJ	**Hateruma jima**	**0.88**	**72**	⇓P	**Pn**	**13 41 55.8**	**0.0**
HATJ				S	**Sn**	**13 42 08.5**	**+1.1**
IRIF	**Iriomote-Funau**	**0.95**	**54**	⇓P	**Pn**	**13 41 56.8**	**+0.1**
IRIF				*e*S	**Sn**	**13 42 10.8**	**+1.8**
EOS1	**EOS1**	**1.03**	**318**	P	**Pn**	**13 41 58.6**	**+0.8**
	baz=328						
EOS1				*e*S	**Sn**	**13 42 12.4**	**+1.4**
	baz=328						
JKRS	**Kuro-shima**	**1.12**	**66**	⇓P	**Pn**	**13 41 59.4**	**+0.3**
JKRS				S	**Sn**	**13 42 15.2**	**+1.9**
ENLB	**Shoufeng**	**1.18**	**276**	⇓P	**Pn**	**13 41 59.3**	**-0.6**
	baz=267						
ENLB				S	**Sn**	**13 42 13.3**	**-1.6**
	baz=267						
HWA	**Hwalien**	**1.19**	**280**	*e*P	**Pn**	**13 41 59.3**	**-0.7**
	baz=271						
HWA				*e*S	**Sn**	**13 42 14.4**	**-0.6**
	baz=271						
TWD	**Chiawan**	**1.22**	**284**	⇓*i*P	**Pn**	**13 41 59.5**	**-0.9**
	baz=285						
TWD				S	**Sn**	**13 42 13.5**	**-2.2**
	baz=285						
NANB	**Nanao**	**1.22**	**302**	⇓P	**Pn**	**13 42 00.5**	**0.0**
	baz=303						
NANB				*e*S	**Sn**	**13 42 14.9**	**-0.9**
	baz=303						
ENA	**Nanau**	**1.23**	**302**	P	**Pn**	**13 42 00.6**	**0.0**
	baz=303						
ENA				*e*S	**Sn**	**13 42 16.1**	**+0.2**
	baz=303						
NACB	**Ninganchiao**	**1.25**	**289**	*e*Pn	**Pn**	**13 41 59.8**	**-1.0**
NACB	**Ninganchiao**	**1.25**	**289**	⇓P	**Pn**	**13 41 60.0**	**-0.8**
	baz=278						
NACB				*e*S	**Sn**	**13 42 13.0**	**-3.4**
	baz=278						
TWC	**Suao**	**1.26**	**311**	⇓*i*P	**Pn**	**13 42 01.1**	**+0.1**
	baz=302						
TWC				*e*S	**Sn**	**13 42 16.0**	**-0.6**
	baz=302						
JIJ	**Ishigaki jima**	**1.29**	**63**	⇓P	**Pn**	**13 42 01.1**	**-0.2**
JIJ				*e*S	**Sn**	**13 42 18.0**	**+0.7**
ESL	**Shilin**	**1.33**	**272**	⇓*i*P	**Pn**	**13 42 00.6**	**-1.4**
	baz=263						
ESL				S	**Sn**	**13 42 16.0**	**-2.5**
	baz=263						
EGFH	**Guangfu**	**1.34**	**266**	⇓P	**Pn**	**13 42 00.9**	**-1.2**
	baz=266						
ETLH	**Xiulin Townshi**	**1.35**	**289**	⇓P	**Pn**	**13 42 01.7**	**-0.6**
	baz=289						
ETLH				*e*S	**Sn**	**13 42 18.0**	**-1.1**
	baz=289						
HGSD	**Ruisui**	**1.37**	**258**	⇓P	**Pn**	**13 42 01.2**	**-1.3**
	baz=258						
HGSD				*e*S	**Sn**	**13 42 16.2**	**-3.3**
	baz=258						
ILA	**Ilan**	**1.43**	**314**	*e*P	**Pn**	**13 42 04.4**	**+1.1**
	baz=315						
NTC	**Toucheng**	**1.44**	**318**	*e*P	**Pn**	**13 42 04.2**	**+0.7**
	baz=319						
TWE	**Neicheng**	**1.46**	**310**	P	**Pn**	**13 42 04.5**	**+0.9**
	baz=301						
TWE				*e*S	**Sn**	**13 42 22.4**	**+0.9**
	baz=301						
EHY	**Hungye**	**1.46**	**260**	⇓*i*P	**Pn**	**13 42 02.8**	**-0.9**
	baz=259						
EHY				*e*S	**Sn**	**13 42 19.6**	**-2.1**
	baz=259						
SLBB	**Yuanshan**	**1.50**	**311**	⇓P	**Pn**	**13 42 05.6**	**+1.3**
	baz=299						
SLBB				*e*S	**Sn**	**13 42 23.7**	**+1.1**
	baz=299						
YULB	**Yu-li**	**1.51**	**255**	*e*Pn	**Pn**	**13 42 03.2**	**-1.2**
YULB	**Yu-li**	**1.51**	**255**	⇓P	**Pn**	**13 42 03.3**	**-1.1**
	baz=255						
YULB				S	**Sn**	**13 42 20.8**	**-2.0**
	baz=255						
NNSB	**Datong**	**1.52**	**295**	⇓P	**Pn**	**13 42 04.7**	**+0.1**
	baz=286						
NNSB				*e*S	**Sn**	**13 42 21.4**	**-1.8**
	baz=286						
TWF1	**Yuli**	**1.52**	**254**	⇓*i*P	**Pn**	**13 42 03.5**	**-1.1**
	baz=254						
TWF1				*e*S	**Sn**	**13 42 20.6**	**-2.5**
	baz=254						
JISG	**Ishigakijimahi**	**1.53**	**58**	⇓P	**Pn**	**13 42 04.3**	**-0.3**
JISG				S	**Sn**	**13 42 24.0**	**+0.7**
WHF	**Hehuan Shan**	**1.53**	**284**	⇓*i*P	**Pn**	**13 42 04.4**	**-0.6**
	baz=284						
WHF				*e*S	**Sn**	**13 42 21.6**	**-2.4**
	baz=284						

TIPB	Shuangxi	1.53	321	⇑*i*P	Pn	13 42 05.1	+0.4
	baz=334						
TIPB				S	Sn	13 42 23.6	+0.1
	baz=334						
NNS	Nan Shan	1.53	296	⇓*i*P	Pn	13 42 05.0	+0.2
	baz=287						
NNS				S	Sn	13 42 22.7	-0.9
	baz=287						
CHKT	Chengkung	1.55	244	⇓*i*P	Pn	13 42 03.2	-1.8
	baz=235						
CHKT				*e*S	Sn	13 42 19.8	-4.1
	baz=235						
CHGB	Renai	1.59	280	⇓P	Pn	13 42 05.4	-0.4
	baz=273						
CHGB				*e*S	Sn	13 42 21.8	-3.4
	baz=273						
VWDT	VWDT	1.60	269	⇓P	Pn	13 42 05.3	-0.4
	baz=261						
VWDT				S	Sn	13 42 23.5	-1.6
	baz=261						
NWF	Wu-fen Shan	1.63	322	⇑*i*P	Pn	13 42 06.8	+0.6
	baz=322						
NWF				S	Sn	13 42 26.2	+0.2
	baz=322						
WFSB	Wu-fen Shan	1.63	322	⇑P	Pn	13 42 06.8	+0.7
	baz=322						
WFSB				*e*S	Sn	13 42 24.8	-1.2
	baz=322						
TWT	Tachien	1.64	287	⇓*i*P	Pn	13 42 06.7	+0.4
	baz=287						
TWT				S	Sn	13 42 25.4	-0.8
	baz=287						
YHNB	Yeheng	1.64	303	*e*Pn	Pn	13 42 06.8	+0.5
YHNB	Yeheng	1.64	303	⇓P	Pn	13 42 06.9	+0.6
	baz=292						
NSK	Sanguang	1.66	303	⇓*i*P	Pn	13 42 07.1	+0.6
	baz=291						
NSK				*e*S	Sn	13 42 25.9	-0.7
	baz=291						
TWA	Mucha	1.69	315	*e*P	Pn	13 42 07.6	+0.8
	baz=330						
TWA				*e*S	Sn	13 42 27.2	0.0
	baz=330						
TATO	Taipei	1.75	313	*e*Pn	Pn	13 42 08.7	+1.1
TATO	Taipei	1.75	313	P	Pn	13 42 08.5	+0.9
	baz=327						
TATO				*e*S	Sn	13 42 29.9	+1.3
	baz=327						
TATO	Taipei	1.75	313	P	Pn	13 42 10.3	+2.6
	SNR=68						
SSLB	Suanglung	1.77	271	*e*Pn	Pn	13 42 07.5	-0.5
SSLB	Suanglung	1.77	271	⇓P	Pn	13 42 07.6	-0.5
	baz=271						
SSLB				S	Sn	13 42 27.1	-2.3
	baz=271						
TAP	Taipei	1.78	315	*e*P	Pn	13 42 09.1	+1.0
	baz=328						
TAP				*e*S	Sn	13 42 30.5	+1.0
	baz=328						
YUS	Yu-Shan	1.80	261	⇓*i*P	Pn	13 42 08.6	-0.3
	baz=261						
YUS				S	Sn	13 42 28.9	-1.8
	baz=261						
YM01	YM01	1.81	319	⇑*e*P	Pn	13 42 09.0	+0.4
	baz=318						
YM01				*e*S	Sn	13 42 30.8	+0.4
	baz=318						
ELDTW	Lidau	1.82	251	⇓*i*P	Pn	13 42 07.5	-1.2
	baz=251						
ELDTW				*e*S	Sn	13 42 27.3	-3.3
	baz=251						
SMLT	Sun Moon Lake	1.82	274	⇓*i*P	Pn	13 42 08.9	+0.1
	baz=273						
SMLT				S	Sn	13 42 29.8	-1.0
	baz=273						
YM10	YM10	1.83	319	*e*P	Pn	13 42 09.1	+0.3
	baz=318						
YM10				*e*S	Sn	13 42 30.7	-0.1
	baz=318						
YM05	YM05	1.83	319	⇑*i*P	Pn	13 42 09.1	+0.2
	baz=318						
YM05				*e*S	Sn	13 42 29.9	-0.9
	baz=318						
WLTB	Daxi	1.83	306	P	Pn	13 42 10.6	+1.7
	baz=294						
WLTB				S	Sn	13 42 32.5	+1.7
	baz=294						
YM03	YM03	1.86	319	P	Pn	13 42 09.5	+0.3
	baz=319						
TYC	Yuchr	1.86	274	⇓*i*P	Pn	13 42 09.4	+0.2
	baz=274						
TYC				*e*S	Sn	13 42 30.7	-0.8
	baz=274						
JTJ	Tarama	1.86	62	⇓P	Pn	13 42 09.2	-0.1
JTJ				S	Sn	13 42 32.6	+1.0
WHYT	Xinyi Township	1.87	268	⇓P	Pn	13 42 09.4	+0.1
	baz=268						
WHYT				*e*S	Sn	13 42 30.8	-1.0
	baz=268						
ANP	Anpu	1.87	319	*e*P	Pn	13 42 10.9	+1.4
	baz=319						
TWS1	Kuangyinshan	1.88	315	P	Pn	13 42 10.3	+0.8
	baz=327						
TWS1				S	Sn	13 42 33.1	+1.2
	baz=327						
TWY	Chenhua	1.90	322	*e*P	Pn	13 42 10.6	+0.9
	baz=322						
TWY				*e*S	Sn	13 42 32.9	+0.5
	baz=322						
TTN	Taitung	1.90	238	P	Pn	13 42 08.4	-1.3
	baz=237						
TTN				S	Sn	13 42 30.0	-2.4
	baz=237						
NTST	Danshui	1.90	317	*e*P	Pn	13 42 10.6	+0.8
	baz=317						
LIOB	Emei	1.91	297	⇓*i*P	Pn	13 42 11.7	+1.7
	baz=287						
LIOB				S	Sn	13 42 33.6	+0.8
	baz=287						
TWGBT	Beinan	1.92	240	⇓P	Pn	13 42 08.7	-1.3
	baz=232						
TWGBT				S	Sn	13 42 29.9	-3.1
	baz=232						
NSTT	Nanjuang	1.92	297	⇓P	Pn	13 42 11.7	+1.6
	baz=286						
NSTT				S	Sn	13 42 34.2	+1.2
	baz=286						
TWG	Pinlang	1.92	241	*e*Pn	Pn	13 42 08.8	-1.3
TWG	Pinlang	1.92	241	⇓*i*P	Pn	13 42 08.8	-1.3
	baz=232						
TWG				S	Sn	13 42 30.1	-3.0
	baz=232						
ALS	Alishan	1.93	262	⇓*i*P	Pn	13 42 10.8	+0.3
	baz=262						
ALS				*e*S	Sn	13 42 32.7	-0.9
	baz=262						
NCU	National Centr	1.95	308	P	Pn	13 42 11.8	+1.3
	baz=295						
NCU				S	Sn	13 42 35.1	+1.4
	baz=295						
NCUH	Zhongli	1.95	308	*e*P	Pn	13 42 11.8	+1.4
	baz=294						
NCUH				*e*S	Sn	13 42 34.7	+0.9
	baz=294						
WJS	Zhushan	1.98	272	⇓*e*P	Pn	13 42 11.9	+1.1
	baz=264						
WJS				*e*S	Sn	13 42 35.9	+1.5
	baz=264						
SBCB	Hsinchu	2.01	301	P	Pn	13 42 12.8	+1.6
	baz=300						
SBCB				*e*S	Sn	13 42 35.4	+0.3
	baz=300						
TWQ1	Liyutan	2.01	287	⇓*i*P	Pn	13 42 13.1	+1.7
	baz=286						
TWQ1				S	Sn	13 42 37.1	+1.8
	baz=286						
WNT	Mingjian	2.02	273	⇓*i*P	Pn	13 42 12.8	+1.4
	baz=273						
WNT				*e*S	Sn	13 42 36.4	+1.0
	baz=273						
HSN	Hsinchu	2.02	301	*e*P	Pn	13 42 12.4	+1.0
	baz=301						
HSN				S	Sn	13 42 36.8	+1.2
	baz=301						
CHN5	Tsauling	2.03	265	⇓*i*P	Pn	13 42 12.6	+0.9
	baz=265						
CHN5				S	Sn	13 42 36.3	+0.4
	baz=265						
NSY	Sanyi	2.04	288	⇓*i*P	Pn	13 42 13.6	+1.9
	baz=288						
NSY				S	Sn	13 42 37.5	+1.5
	baz=288						
STYT	Tauyuan	2.05	253	⇓*i*P	Pn	13 42 11.7	-0.2
	baz=246						
STYT				S	Sn	13 42 34.8	-1.5
	baz=246						
TCU	Taichung	2.06	281	⇓*i*P	Pn	13 42 13.8	+1.9
	baz=280						
TCU				S	Sn	13 42 38.6	+2.3
	baz=280						
NMLH	Miaoli	2.06	292	⇓P	Pn	13 42 13.8	+1.9
	baz=291						
NMLH				S	Sn	13 42 37.5	+1.2
	baz=291						
PTSB	Yuanli	2.10	289	⇓*i*P	Pn	13 42 14.2	+1.7
	baz=288						
PTSB				S	Sn	13 42 38.4	+1.0
	baz=288						
LAY	Lan-yu	2.13	216	⇓*e*P	Pn	13 42 10.6	-2.3
	baz=224						
TPUB	Ta-pu	2.13	257	*e*Pn	Pn	13 42 13.7	+0.7
TPUB	Ta-pu	2.13	257	⇓P	Pn	13 42 13.8	+0.9
	baz=257						
TPUB				S	Sn	13 42 38.0	-0.2
	baz=257						
WDJ	Dajia District	2.13	286	⇓*i*P	Pn	13 42 14.5	+1.6
	baz=285						
WDJ				S	Sn	13 42 39.8	+1.6
	baz=285						
ECL	Taimali	2.13	237	⇓*i*P	Pn	13 42 11.4	-1.6
	baz=247						
ECL				*e*S	Sn	13 42 34.2	-4.0
	baz=247						
WGK	Gukeng	2.13	268	P	Pn	13 42 14.0	+1.1
	baz=267						
WGK				S	Sn	13 42 39.7	+1.5
	baz=267						
WCHH	Zhanghua	2.15	278	⇓P	Pn	13 42 15.1	+1.8
	baz=278						
WCHH				*e*S	Sn	13 42 40.9	+2.2
	baz=278						
WDLH	Douliu	2.15	268	*e*P	Pn	13 42 14.3	+1.0
	baz=268						
WDLH				*e*S	Sn	13 42 41.2	+2.4
	baz=268						
SLGT	Liugui	2.20	250	P	Pn	13 42 14.2	+0.3
	baz=244						
SLGT				*e*S	Sn	13 42 39.6	-0.4
	baz=244						
CHN2	Minshiung	2.23	264	⇓P	Pn	13 42 16.1	+1.9
	baz=264						
CHN2				*e*S	Sn	13 42 41.9	+1.4
	baz=264						
SGST	Jiashian	2.23	252	⇓P	Pn	13 42 15.2	+0.9
	baz=252						
SGST				*e*S	Sn	13 42 41.4	+0.8
	baz=252						
CHN1	Nanshi	2.25	255	⇓*i*P	Pn	13 42 15.8	+1.2
	baz=255						
CHN1				S	Sn	13 42 42.5	+1.4
	baz=255						
TWK	Hsinying	2.26	257	⇓*i*P	Pn	13 42 15.8	+1.1
	baz=257						
TWK				S	Sn	13 42 42.1	+0.7
	baz=257						
SNST	Tainan City	2.26	256	⇓P	Pn	13 42 15.9	+1.1
	baz=256						
SNST				*e*S	Sn	13 42 43.2	+1.7
	baz=256						
CHY	Chiayi	2.28	263	⇓P	Pn	13 42 16.3	+1.4
	baz=263						
CHY				*e*S	Sn	13 42 43.4	+1.6
	baz=263						
SSD	Sandimen	2.32	244	⇓P	Pn	13 42 14.9	-0.6
	baz=238						
TAW	Tawu	2.32	233	⇓*i*P	Pn	13 42 14.2	-1.3
	baz=232						
TAW				*e*S	Sn	13 42 39.5	-3.2
	baz=232						
RLNB	Erlin	2.32	273	⇓P	Pn	13 42 16.9	+1.5
	baz=273						
RLNB				S	Sn	13 42 45.0	+2.3
	baz=273						
JIRB	Irabujima	2.33	63	⇓P	Pn	13 42 15.6	-0.1
JIRB				S	Sn	13 42 44.0	+0.9
EAST	Anshuo	2.34	234	⇓*i*P	Pn	13 42 14.6	-1.2
	baz=242						
MASBT	Mashibuluo	2.38	241	⇓P	Pn	13 42 16.0	-0.4
	baz=234						
MASBT				*e*S	Sn	13 42 43.5	-0.8
	baz=234						
WLGB	Puzi	2.39	263	⇓P	Pn	13 42 18.0	+1.5
	baz=263						
WLGB				S	Sn	13 42 46.7	+2.1
	baz=263						
CHN3	Shinhua	2.42	254	⇓*i*P	Pn	13 42 19.3	+2.4
	baz=253						
CHN3				S	Sn	13 42 49.1	+3.7
	baz=253						
JMJ2	Miyako jima3	2.42	66	⇓P	Pn	13 42 17.3	+0.4
JMJ2				*e*S	Sn	13 42 46.1	+0.7
JMJ	Miyako jima 2	2.42	64	⇓*e*P	Pn	13 42 17.3	+0.4
	baz=64						
JMJ				*e*S	Sn	13 42 46.4	+1.0
	baz=64						
JIKM	Ikemajima	2.44	62	P	Pn	13 42 17.0	-0.1
JIKM				*e*S	Sn	13 42 45.9	+0.3
WMLT	Mailiao	2.44	271	*e*P	Pn	13 42 18.7	+1.5
	baz=284						
WMLT				S	Sn	13 42 48.6	+2.8
	baz=284						
SGLT	Jiouru	2.44	245	*e*P	Pn	13 42 18.6	+1.4
	baz=242						
SGLT				*e*S	Sn	13 42 47.0	+1.2
	baz=242						
WSF	Szhu	2.45	267	⇓P	Pn	13 42 18.4	+1.1
	baz=267						
WSF				*e*S	Sn	13 42 46.9	+0.9
	baz=267						
CHN8	Yiju	2.49	261	⇓P	Pn	13 42 19.2	+1.3
	baz=260						
CHN8				S	Sn	13 42 48.4	+1.3
	baz=260						
JOGS	Gusukube	2.50	66	P	Pn	13 42 18.3	+0.3
JOGS				*e*S	Sn	13 42 48.7	+1.5
SCZT	Fangliau	2.52	237	P	Pn	13 42 17.9	-0.3
	baz=236						
SCZT				*e*S	Sn	13 42 45.9	-1.7
	baz=236						
SCLT	Jiali	2.55	257	P	Pn	13 42 19.9	+1.3
	baz=256						
SCLT				S	Sn	13 42 49.5	+1.1
	baz=256						
TAI1	Yung-k'ang	2.55	254	*e*P	Pn	13 42 20.6	+1.9
	baz=253						
TAI1				*e*S	Sn	13 42 51.0	+2.5
	baz=253						
SNJT	Kaohsiung City	2.56	247	P	Pn	13 42 21.2	+2.4
	baz=246						
SNJT				*e*S	Sn	13 42 52.4	+3.7
	baz=246						
TSEB	Hengchuen, Pin	2.62	225	P	Pn	13 42 19.8	+0.2
	baz=233						
TSEB				*e*S	Sn	13 42 50.5	+0.3
	baz=233						
TWKBT	Hengchun	2.65	227	⇓P	Pn	13 42 19.4	-0.6
	baz=226						
TWK1	Hengchun	2.65	227	P	Pn	13 42 19.9	-0.2
	baz=227						
TWK1				*e*S	Sn	13 42 48.9	-2.1
	baz=227						
HEN	Hengchun	2.66	229	*e*P	Pn	13 42 20.3	+0.1
	baz=228						
HEN				*e*S	Sn	13 42 49.4	-1.7
	baz=228						
KAU	Kaohsiung	2.66	244	*e*P	Pn	13 42 22.8	+2.5
	baz=255						
KAU				*e*S	Sn	13 42 55.0	+3.7
	baz=255						
WLCH	Liuqiu	2.71	239	*e*P	Pn	13 42 24.3	+3.3
	baz=234						
WLCH				*e*S	Sn	13 42 56.6	+4.0
	baz=234						
TWP	Hsiaoliuchiu	2.73	239	⇓*e*P	Pn	13 42 23.8	+2.7
	baz=238						
TWP				S	Sn	13 42 57.3	+4.4
	baz=238						
WDGT	Dungji	3.01	261	⇓P	Pn	13 42 25.5	+0.5
	baz=260						
WDGT				*e*S	Sn	13 42 58.6	-1.2
	baz=260						
PHUB	P'eng-hu	3.05	266	⇓P	Pn	13 42 26.0	+0.4
	baz=278						
PHUB				*e*S	Sn	13 43 00.9	0.0
	baz=278						
PNG	Penghu	3.06	267	⇓*i*P	Pn	13 42 26.3	+0.6
	baz=279						
PNG				*e*S	Sn	13 43 01.0	-0.1
	baz=279						
VCHM	Qimei	3.23	261	⇓P	Pn	13 42 28.4	+0.4
	baz=259						
VCHM				S	Sn	13 43 03.6	-1.5
	baz=259						
PTTC	Pingtan	3.31	302	*e*P	Pn	13 42 28.9	-0.3
	baz=300						
PTMZ	Houxiangcun	3.66	291	⇓P	Pn	13 42 33.9	0.0
	baz=289						
LYJJ	Jianjiangzhen	3.95	315	*e*P	Pn	13 42 37.9	-0.1
	baz=313						
XPSS	Dashiqiu	3.97	323	*e*P	Pn	13 42 38.3	+0.1
	baz=321						
QZH	Quanzhou	4.08	287	⇓*i*Pn	Pn	13 42 39.6	-0.2
QZH				Sn	Sn	13 43 22.8	-3.6
QZH				smax	smax		
	comp=N,2µm,0.4s						
QZH				smax	smax		
	comp=E,1µm,0.8s						
QZH				LR	LR		
	comp=E,9µm,16.8s						
QZH				LR	LR		
	comp=Z,11µm,17.5s						
KNMB	Chin-men Tao	4.17	280	*e*Pn	Pn	13 42 40.5	-0.4
KNMB	Chin-men Tao	4.17	280	⇓P	Pn	13 42 40.8	-0.2
	baz=280						
MHZQ	Yeshan	4.20	304	*e*P	Pn	13 42 41.0	-0.3
	baz=302						
AXDP	Jialang	4.62	285	⇓*e*P	Pn	13 42 47.1	0.0
	baz=284						
ZPLA	Ao Xicun	4.71	273	⇓P	Pn	13 42 48.3	0.0
	baz=281						
ZZJH	Jiuhuzhen	4.85	279	⇓*e*P	Pn	13 42 50.1	-0.2
	baz=279						
JOW	Kunigami	5.74	57	Pn	Pn	13 43 00.9	-1.7
	6.3nm,0.3s,baz=171,slow=14,SNR=135						
JOW				Sn	Sn	13 44 02.3	-4.9
	2.1nm,0.3s,baz=179,slow=12,SNR=2.1						
JOW	Kunigami	5.74	57	*e*Pn	Pn	13 43 00.3	-2.3
JOW				*e*Sn	Sn	13 44 02.3	-4.9
JOW	Kunigami	5.74	57	*e*P	Pn	13 43 01.1	-1.5
	baz=57						
SSE	Sheshan	7.44	349	*e*Pn	Pn	13 43 25.9	0.0
SSE	Sheshan	7.44	349	Pn	Pn	13 43 26.8	+0.9
SSE				Sn	Sn	13 44 53.4	+4.4
SSE				smax	smax		
	comp=N,80nm,1.3s						
SSE				smax	smax		
	comp=E,100nm,1.1s						
SSE				LR	LR		
	comp=N,1µm,20.2s						
SSE				LR	LR		
	comp=E,2µm,13.3s						
HKPS	Hong Kong Po S	8.19	261	*e*Pn	Pn	13 43 37.3	+1.0
GZH	Guangzhou	8.79	267	P	Pn	13 43 40.8	-3.6
GZH				smax	smax		
	comp=N,720nm,0.8s						
GZH				smax	smax		
	comp=E,530nm,0.8s						
NJ2	Nanjing	8.98	337	*e*P	Pn	13 43 46.8	-0.1
NJ2				S	Sn	13 45 25.4	-1.4
NJ2				pmax	pmax		
	comp=Z,42nm,0.5s						
NJ2				smax	smax		
	comp=N,180nm,1.0s						
NJ2				smax	smax		
	comp=E,130nm,1.2s						
NJ2				LR	LR		
	comp=N,3µm,7.1s						
NJ2				LR	LR		
	comp=E,3µm,6.2s						
NJ2				LR	LR		
	comp=Z,3µm,11.4s						
TGY	Tagaytay City	9.80	191	Pn	Pn	13 44 01.9	+3.5
	19nm,0.3s,baz=328,slow=1.9,SNR=4.6						
TGY				LR	LR	13 47 44.3	
	comp=Z,1µm,21.5s,baz=48,slow=37						
WHN	Wuhan	10.15	313	⇑P	Pn	13 44 03.3	+0.2
WHN				S	Sn	13 45 51.4	-4.2
WHN				LR	LR		
	comp=N,7µm,11.0s						
WHN				LR	LR		
	comp=E,4µm,5.4s						
WHN				LR	LR		
	comp=Z,6µm,16.7s						
JNU	Nakatsue	11.66	35	Pn	Pn	13 44 23.9	+0.3
	0.6nm,0.3s,baz=209,slow=10,SNR=4.8						
JNU				LR	LR	13 49 12.7	
	comp=Z,2µm,21.4s,baz=219,slow=40						
JNU	Nakatsue	11.66	35	*e*Pn	Pn	13 44 24.2	+0.6
QIZ	Qiongzhong	13.04	251	*e*Pn	Pn	13 44 43.2	+0.7
QIZ	Qiongzhong	13.04	251	P	Pn	13 44 42.6	+0.1
QIZ				S	Sn	13 47 07.5	+1.2
QIZ				LR	LR		
	comp=N,2µm,15.2s						
QIZ				LR	LR		
	comp=E,3µm,17.7s						
QIZ				LR	LR		
	comp=Z,3µm,18.1s						
TIA	Tai'an	13.35	339	P	Pn	13 44 45.9	-0.9
TIA				S	Sn	13 47 22.9	+9.0
TIA				LR	LR		
	comp=N,1µm,17.1s						
TIA				LR	LR		
	comp=E,960nm,15.6s						
TIA				LR	LR		
	comp=Z,2µm,15.7s						
KS15	Wonju Array Si	14.28	16	*e*Pn	Pn	13 44 59.5	+0.2
KSRS	Korea Array	14.30	16	Pn	Pn	13 45 00.2	+0.6
	0.7nm,0.3s,baz=198,slow=13,SNR=26						
GYA	Guiyang	14.94	284	⇑*i*P	Pn	13 45 09.6	+1.2
GYA				pP	P	13 45 17.0	+3.6
GYA				S	Sn	13 47 51.9	-0.9
GYA				sS	S	13 48 04.8	-4.6
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,240nm,8.1s						
GYA				LR	LR		
	comp=N,1µm,11.8s						
GYA				LR	LR		
	comp=E,3µm,14.6s						
GYA				LR	LR		
	comp=Z,4µm,16.2s						
DL2	Dalian	15.12	356	P	Pn	13 45 12.5	+1.9
DL2				*e*S	Sn	13 48 02.8	+6.0
DL2				pmax	pmax		
	comp=Z,44nm,1.1s						
DL2				pmax	pmax		
	comp=Z,260nm,4.9s						
DL2				LR	LR		
	comp=N,900nm,20.2s						
DL2				LR	LR		
	comp=E,2µm,14.6s						
DL2				LR	LR		
	comp=Z,1µm,13.1s						
PAGZ	Pagadian	15.85	178	*e*P	P	13 45 22.3	-1.2
XAN	Xi'an	15.92	313	*e*Pn	Pn	13 45 20.7	-0.4
	82nm,1.3s						
XAN	Xi'an	15.92	313	P	Pn	13 45 21.5	+0.4
XAN				pP	P	13 45 25.4	+1.2
XAN				S	S	13 48 24.8	-4.6
XAN				LR	LR		
	comp=N,2µm,13.8s						
XAN				LR	LR		
	comp=E,2µm,11.1s						
XAN				LR	LR		
	comp=Z,2µm,20.3s						
XAN	Xi'an	15.92	313	*e*P	Pn	13 45 20.7	-0.4
XAN				pmax	pmax		
	comp=Z,83nm,1.3s						
BUKP	Musuan	15.95	172	*e*P	P	13 45 24.8	+0.2
CTBH	Cotabato--PC H	16.52	175	⇓*i*P	P	13 45 32.4	+1.5
TIY	Taiyuan	16.52	330	*e*P	P	13 45 33.3	+2.4

TIY				PP	pwP	13 45 44.3	0.0
TIY				S	S	13 48 37.0	-4.6
TIY				pmax	pmax		
	comp=Z,37nm,1.1s						
TIY				pmax	pmax		
	comp=Z,300nm,6.0s						
TIY				LR	LR		
	comp=Z,2µm,11.1s						
TIY				LR	LR		
	comp=Z,550nm,7.4s						
TIY				LR	LR		
	comp=Z,2µm,15.5s						
DAV	**Davao City (W)**	16.82	171	LR	LR	13 52 50.3	
	comp=Z,833nm,18.9s,baz=351,slow=40						
INU	**Inuyama**	16.83	44	*e*Pn	Pn	13 45 31.7	-0.8
	comp=Z,33nm,1.3s						
BJT	**Baijiatuau**	17.16	342	*e*P	Pn	13 45 36.6	+0.2
	comp=Z,39nm,1.0s						
BJT	**Baijiatuau**	17.16	342	*e*P	Pn	13 45 36.7	+0.2
BJT				pmax	pmax		
	comp=Z,39nm,1.0s						
BJI	**Beijing**	17.17	342	⇑*i*P	Pn	13 45 37.3	+0.6
BJI				S	Sn	13 48 48.9	+2.2
BJI				LR	LR		
	comp=Z,450nm,14.9s						
BJI				LR	LR		
	comp=Z,510nm,15.3s						
BJI				LR	LR		
	comp=Z,450nm,24.0s						
JHJ	**Hachijo jima 2**	17.51	54	P	P	13 45 42.8	+1.1
	comp=Z,6.3nm,0.3s,baz=180,slow=4.9,SNR=11						
SLVN	**Son La**	17.70	266	*e*P	P	13 45 44.2	+0.2
	comp=Z,52nm,0.6s						
SNY	**Shenyang**	18.01	2	⇑P	P	13 45 48.9	+1.8
SNY				S	Sn	13 49 05.8	-1.0
SNY				pmax	pmax		
	comp=Z,260nm,5.7s						
SNY				LR	LR		
	comp=Z,880nm,17.6s						
SNY				LR	LR		
	comp=Z,2µm,15.7s						
SNY				LR	LR		
	comp=Z,2µm,17.7s						
MAJO	**Matsushiro**	18.33	43	*e*P	P	13 45 50.3	-0.5
	comp=Z,12nm,0.9s						
MAJO	**Matsushiro**	18.33	43	*e*P	P	13 45 50.3	-0.5
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s						
MAT	**Matsushiro**	18.33	43	P	P	13 45 50.1	-0.7
MAT				S	Sn	13 49 15.4	+0.5
MJAR	**Matsushiro Arr**	18.33	43	P	P	13 45 50.7	-0.1
	comp=Z,0.1nm,0.3s,baz=233,slow=11,SNR=17						
MJAR				LR	LR	13 53 04.7	
	comp=Z,2µm,22.0s,baz=220,slow=38						
MJB9	**Matsu-Tunnel**	18.33	43	*e*P	P	13 45 50.5	-0.3
	comp=Z,12nm,0.9s						
PANO	**Nakornpanom**	18.34	252	P	Pn	13 45 55.2	+3.9
	comp=Z,1.1nm,1.1s,comp=Z,22nm						
KMI	**Kunming**	18.39	278	P	Pn	13 45 55.3	+3.2
KMI				sP	pwP	13 46 04.6	-0.3
KMI				S	Sn	13 49 11.5	-5.3
KMI				pmax	pmax		
	comp=Z,450nm,5.7s						
KMI				LR	LR		
	comp=Z,1µm,12.4s						
KMI				LR	LR		
	comp=Z,1µm,15.9s						
KMI				LR	LR		
	comp=Z,2µm,16.2s						
CD2	**Chengdu**	18.41	297	P	Pn	13 45 54.3	+2.3
CD2				sP	pP	13 46 01.8	+1.2
CD2				PP	pwP	13 46 11.5	+6.1
CD2				S	Sn	13 49 17.8	+1.1
CD2				SS	SnSn	13 49 35.1	+4.4
CD2				pmax	pmax		
	comp=Z,160nm,1.2s						
CD2				pmax	pmax		
	comp=Z,690nm,6.2s						
CD2				LR	LR		
	comp=Z,3µm,11.6s						
CD2				LR	LR		
	comp=Z,5µm,20.1s						
CD2				LR	LR		
	comp=Z,6µm,15.8s						
SKNT	**Sakolnakorn**	18.96	253	P	Pn	13 46 01.5	+2.7
	comp=Z,44nm,1.4s						
NONG	**Nongkai**	19.29	257	P	Pn	13 46 05.4	+2.7
	comp=Z,3.2nm,0.9s						
HHC	**Hu-ho-hao-te**	19.50	333	P	Pn	13 46 05.0	-0.1
HHC				sP	sP	13 46 18.4	+0.7
HHC				S	S	13 49 35.4	-6.4
HHC				pmax	pmax		
	comp=Z,39nm,1.2s						
HHC				pmax	pmax		
	comp=Z,330nm,4.3s						
HHC				LR	LR		
	comp=Z,2µm,15.1s						
BTO	**Baotou**	19.96	330	*e*P	Pn	13 46 11.3	+0.7
MSHR	**Mys Shultsa**	19.97	18	*i* P	P	13 46 08.7	+0.1
CN2	**Changchun**	20.08	5	*e*P	P	13 46 08.6	-1.3
CN2				*e*PP	PnPn	13 46 28.3	+1.3
CN2				*e*S	S	13 49 46.8	-6.5
CN2				pmax	pmax		
	comp=Z,90nm,4.0s						
CN2				LR	LR		
	comp=Z,450nm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
LZH	**Lanzhou**	20.52	311	⇓P	Pn	13 46 16.3	-1.0
LZH				pP	pP	13 46 24.6	+0.8
LZH				sP	pwP	13 46 29.8	+1.2
LZH				PP	sP	13 46 35.5	+7.1
LZH				*e*S	S	13 50 01.4	-1.0
LZH				sS	Sn	13 50 10.9	+3.1
LZH				SS	SnSn	13 50 27.3	+4.5
LZH				pmax	pmax		
	comp=Z,140nm,1.3s						
LZH				pmax	pmax		
	comp=Z,500nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,12.1s						
LZH				LR	LR		
	comp=Z,2µm,12.2s						
LZH				LR	LR		
	comp=Z,3µm,14.5s						
CHAI	**Chaiyaphum**	21.15	252	P	P	13 46 24.1	+2.5
	comp=Z,190µm,0.7s						
MDJ	**Mudanjiang**	21.50	13	*e*P	P	13 46 23.6	-1.5
	comp=Z,38nm,1.1s						
MDJ	**Mudanjiang**	21.50	13	P	P	13 46 24.5	-0.6
MDJ				pP	pP	13 46 32.8	-1.9
MDJ				sP	pwP	13 46 37.0	0.0
MDJ				S	S	13 50 20.8	-0.5
MDJ				sS	Sn	13 50 32.3	+1.5
MDJ				pmax	pmax		
	comp=Z,150nm,6.7s						
MDJ				LR	LR		
	comp=Z,930nm,17.1s						
MDJ				LR	LR		
	comp=Z,3µm,18.9s						
MDJ				LR	LR		
	comp=Z,430nm,19.6s						
USA0B	**Ussuriysk Arra**	21.69	18	*e*P	P	13 46 26.1	-1.2
	comp=Z,15nm,0.9s						
USRK	**Ussuriysk Ar.**	21.69	18	P	P	13 46 26.2	-1.0
	comp=Z,12nm,1.0s,baz=202,slow=9.3,SNR=19						
UTTA	**Uttaradit**	21.72	258	P	P	13 46 32.7	+5.0
	comp=Z,117µm,0.5s						
PBKT	**Sadao Pong**	21.77	255	P	P	13 46 31.5	+3.2
	comp=Z,46nm,1.2s,comp=Z,756nm						
LAMP	**Lampang**	22.30	261	P	P	13 46 36.9	+2.9
	comp=Z,128µm,0.7s						
CMMT	**Chiang Mai**	22.84	262	P	P	13 46 38.9	-0.8
	comp=Z,72nm,0.8s,comp=Z,885nm						
CHTO	**Chiang Mai**	22.84	262	*e*P	P	13 46 36.6	-3.1
	comp=Z,91nm,0.8s						
CHTO	**Chiang Mai**	22.84	262	*e*P	P	13 46 36.6	-3.1
CHTO				pmax	pmax		
	comp=Z,91nm,0.8s						
CHTO	**Chiang Mai**	22.84	262	P	P	13 46 41.5	+1.7
	SNR=30						
CM31	**Chiang Mai Arr**	22.94	261	*e*P	P	13 46 38.3	-2.5
	comp=Z,66nm,0.9s						
CM31				*e*PcP	PcP	13 50 32.4	+2.2
CM31	**Chiang Mai Arr**	22.94	261	P	P	13 46 43.6	+2.8
	SNR=17						
CMAR	**Chiang Mai Arr**	22.94	261	P	P	13 46 42.2	+1.4
	comp=Z,30nm,0.8s,baz=61,slow=8.4,SNR=95						
CMAR				PcP	PcP	13 50 32.4	+2.2
	comp=Z,1.4nm,0.3s,baz=19,slow=0.9,SNR=4.4						
CMAR				LR	LR	13 56 26.9	
	comp=Z,884nm,18.4s,baz=72,slow=39						
GUMO	**Guam**	23.13	112	P	P	13 46 43.3	+0.6
	comp=Z,132nm,1.1s,baz=272,slow=2.4,SNR=9.3						
GUMO	**Guam**	23.13	112	*e*P	P	13 46 41.8	-0.9
	comp=Z,682nm,1.5s						
GUMO	**Guam**	23.13	112	*e*P	P	13 46 41.8	-0.9
GUMO				pmax	pmax		
	comp=Z,682nm,1.5s						
TNTI	**Ternate**	23.28	169	*e*P	P	13 46 43.4	-0.7
	comp=Z,150nm,1.6s						
SBUM	**Sibu**	23.58	208	*e*P	P	13 46 46.3	-0.7
	comp=Z,27nm,0.9s						
UMPA	**Umpang Tak**	23.78	256	P	P	13 46 53.1	+4.1
	comp=Z,162µm,1.1s						
TEY	**Ternei**	23.97	24	*e*P	P	13 46 45.2	-5.2
SRDT	**SRDT**	24.31	252	P	P	13 46 57.5	+3.6
	comp=Z,44nm,1.3s						
PHET	**Kaeng Krachan**	24.54	248	P	P	13 46 59.2	+3.2
	comp=Z,141µm,1.0s						
ERM	**Erimo**	24.80	38	*e*P	P	13 46 55.6	-2.4
	comp=Z,17nm,0.9s						
ERM	**Erimo**	24.80	38	*ce*P	P	13 47 00.2	+2.2
ERM				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA	**Gaotai**	24.98	314	*e*P	P	13 46 59.9	0.0
GTA				S	S	13 51 16.6	-4.5
GTA				SS	SnSn	13 52 19.9	+8.0
GTA				pmax	pmax		
	comp=Z,22nm,1.5s						
GTA				pmax	pmax		
	comp=Z,180nm,7.8s						
GTA				LR	LR		
	comp=Z,730nm,18.1s						
GTA				LR	LR		
	comp=Z,600nm,19.7s						
GTA				LR	LR		
	comp=Z,740nm,16.5s						
KSM	**Kuching**	25.30	211	*e*P	P	13 47 03.5	+0.7
	comp=Z,104nm,1.3s						
ASAJ	**Asahikawa**	25.93	34	P	P	13 47 07.0	-1.4
	comp=Z,9.8nm,0.6s,baz=244,slow=11,SNR=16						
ASAJ				LR	LR	13 58 43.4	
	comp=Z,1µm,19.1s,baz=240,slow=40						
KLR	**Kul'dur**	26.34	13	P	P	13 47 10.6	-1.4
	comp=Z,9.8nm,1.0s,baz=220,slow=7.5,SNR=17						
KLR				LR	LR	13 58 27.2	
	comp=Z,862nm,20.5s,baz=196,slow=39						
KLR	**Kul'dur**	26.34	13	*c i*P	P	13 47 09.6	-2.4
ULN	**Ulaanbaatar**	27.14	336	*e*P	P	13 47 17.9	-1.5
	comp=Z,15nm,0.9s						
ULN	**Ulaanbaatar**	27.14	336	*ce*P	P	13 47 18.3	-1.1
ULN				pmax	pmax		
	comp=Z,27nm,1.7s						
ULN	**Ulaanbaatar**	27.14	336	P	P	13 47 18.5	-0.9
	SNR=12						
SONA0	**Songino Array**	27.36	335	*e*P	P	13 47 20.3	-1.0
SONA0				*e*PcP	PcP	13 50 38.7	-1.0
SONM	**Songino Array**	27.36	335	P	P	13 47 20.3	-1.0
	comp=Z,9.9nm,0.7s,baz=149,slow=9.6,SNR=41						
SONM				PcP	PcP	13 50 38.7	-1.0
	comp=Z,1.7nm,0.6s,baz=165,slow=6.2,SNR=3.6						
YSS	**Yuzh-Sakhalins**	28.08	30	*e*P	P	13 47 26.4	-1.1
	comp=Z,28nm,0.9s						
YSS	**Yuzh-Sakhalins**	28.08	30	*e*P	P	13 47 26.4	-1.1
YSS				pmax	pmax		
	comp=Z,28nm,0.9s						
SHL	**Shillong**	28.20	280	*e*P	P	13 47 31.0	+1.9
KULM	**Kulim**	28.22	233	*e*P	P	13 47 30.4	+1.3
	comp=Z,42nm,1.4s						
IPM	**Ipoh**	28.51	231	*e*P	P	13 47 31.1	-0.6
	comp=Z,29nm,1.0s						
MYKOM	**Kota Tinggi**	28.60	223	*e*P	P	13 47 32.5	0.0
	comp=Z,28nm,0.9s						
LSA	**Lhasa**	28.89	289	*e*P	P	13 47 37.0	+1.4
	comp=Z,28nm,0.8s						
LSA	**Lhasa**	28.89	289	P	P	13 47 37.5	+1.9
LSA				LR	LR		
	comp=Z,8µm,18.8s						
LSA				LR	LR		
	comp=Z,11µm,19.5s						
LSA	**Lhasa**	28.89	289	*i* P	P	13 47 38.2	+2.6
	SNR=7.1						
LSA	**Lhasa**	28.89	289	*e*P	P	13 47 37.0	+1.4
LSA				pmax	pmax		
	comp=Z,27nm,0.8s						
GRNR	**Gornyy**	28.92	18	*e*P	P	13 47 32.0	-3.0
GRNR				*e*		13 50 44.2	
ZEA	**Zeya**	30.10	5	*e*P	P	13 47 44.1	-1.3
ZEA				pmax	pmax		
	comp=Z,42nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,1µm,14.0s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
ZEA				MLR	MLR		
	comp=N,700nm,13.0s						
ZAK	**Zakamensk**	30.63	335	*e*P	P	13 47 48.3	-2.0
ZAK				*e*		13 50 48.6	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TYV	**Tymovskoe**	31.07	25	*e*P	P	13 47 56.5	+2.5
TYV				pmax	pmax		
	comp=Z,3.0nm,1.4s						
PSI	**Prapat**	31.17	232	P	P	13 47 56.6	+1.2
	comp=Z,23nm,0.9s,baz=18,slow=5.5,SNR=13						
PSI				LR	LR	13 59 57.1	
	comp=Z,427nm,19.5s,baz=33,slow=35						
PSI	**Prapat**	31.17	232	*e*P	P	13 47 56.0	+0.6
	comp=Z,45nm,1.1s						
PSI	**Prapat**	31.17	232	*e*P	P	13 47 56.1	+0.6
PSI				pmax	pmax		
	comp=Z,45nm,1.1s						
TLY	**Talaya**	31.54	337	*e*P	P	13 47 57.2	-1.0
TLY				*e*		13 49 05.7	
TLY				pmax	pmax		
	comp=Z,39nm,1.3s						
TLY				MLR	MLR		
	comp=Z,3µm,20.0s						
TLY	**Talaya**	31.54	337	P	P	13 47 57.6	-0.6
	SNR=5.2						
IRK	**Irkutsk**	31.79	338	*e*P	P	13 47 58.1	-2.2
IRK				*e*		13 48 57.4	
IRK				pmax	pmax		
	comp=Z,30nm,2.3s						
NKL	**Nikolayevsk**	32.28	20	*e*P	P	13 48 09.2	+4.6
NKL				*e*		13 51 00.1	
NKL				*e*		13 58 22.5	
NKL				pmax	pmax		
	comp=Z,22nm,1.4s						
NKL				pmax	pmax		
	comp=N,7.0nm,1.2s						
NKL				pmax	pmax		
	comp=E,12nm,1.3s						
NKL				pmax	pmax		
	comp=Z,64nm,1.9s						
NKL				MLR	MLR		
	comp=N,530nm,16.0s						
NKL				MLR	MLR		
	comp=Z,806nm,14.0s						
NKL				MLR	MLR		
	comp=E,184nm,15.0s						
MOY	**Mondy**	32.53	334	*e*P	P	13 48 06.1	-0.9
MOY				pmax	pmax		
	comp=Z,30nm,2.0s						
JIRN	**Jiri**	33.21	285	*e*P	P	13 48 14.7	+1.2
	comp=Z,126nm,0.8s						
GUN	**Gumba**	33.48	285	*e*P	P	13 48 17.6	+1.7
	comp=Z,56nm,0.6s						
PKI	**Pulchoki**	33.91	284	*e*P	P	13 48 20.3	+0.7
PKIN	**Phulchoki**	33.92	284	*e*P	P	13 48 20.3	+0.7
	comp=Z,14nm,0.6s						
KKN	**Kakani**	34.01	285	*e*P	P	13 48 21.2	+0.8
	comp=Z,70nm,0.8s						
DMN	**Daman**	34.17	285	*e*P	P	13 48 22.6	+0.8
GKN	**Gorkha**	34.57	285	*e*P	P	13 48 25.8	+0.7
WMQ	**Urumqi**	35.06	313	*e*P	P	13 48 29.8	+0.8
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,82nm,4.5s						
WMQ				LR	LR		
	comp=Z,780nm,18.7s						
WMQ				LR	LR		
	comp=Z,680nm,24.5s						
WMQ				LR	LR		
	comp=Z,230nm,29.3s						
DANN	**Dangsing**	35.34	286	*e*P	P	13 48 32.8	+0.9
KOLN	**Koldanda**	35.50	285	*e*P	P	13 48 33.9	+0.7
	comp=Z,140nm,1.1s						
PYUN	**Piuthan**	36.02	286	*e*P	P	13 48 38.8	+1.1
	comp=Z,111nm,1.0s						
SKR	**Severo-Kuril's**	37.17	35	*ce*P	P	13 48 47.3	+0.5
DGZ	**Jazzator, Alta**	37.86	322	*i* P	P	13 48 52.2	-0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
YAK	**Yakutsk**	38.51	5	*e*P	P	13 48 55.4	-2.6
	comp=Z,34nm,1.0s						
YAK	**Yakutsk**	38.51	5	*e*P	P	13 48 55.7	-2.3
YAK				*e**PP	pwP	13 49 10.7	-2.0
YAK				*e*PPP	PPP	13 51 06.0	
YAK				*e*S	S	13 54 51.1	+0.4
YAK				*e*SS	SnSn	13 57 31.0	-8.8
YAK				pmax	pmax		
	comp=Z,24nm,1.1s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,1.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,17nm,1.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,2.0s						
YAK				smax	smax		
	comp=N,25nm,2.5s						
YAK				smax	smax		
	comp=E,24nm,3.0s						
YAK				MLR	MLR		
	comp=Z,412nm,17.0s						
YAK				MLR	MLR		
	comp=N,363nm,16.0s						
YAK				MLR	MLR		
	comp=E,149nm,17.0s						
PETK	**Petropavlovsk-**	39.34	33	P	P	13 49 03.2	-2.0
	comp=E,2.3nm,0.7s,baz=183,slow=3.0,SNR=5.3						
PETK				LR	LR	14 06 42.7	
	comp=E,606nm,19.9s,baz=228,slow=38						
PEA1	**Petropavlovsk-**	39.35	33	*e*P	P	13 49 03.2	-2.0
MK31	**Makanchi Array**	39.71	316	*e*P	P	13 49 07.7	-0.7
	comp=E,18nm,1.2s						
MK31	**Makanchi Array**	39.71	316	P	P	13 49 08.4	0.0
MK31				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MK32	**Makanchi Array**	39.71	316	*e*P	P	13 49 08.2	-0.2
MK32				*e*PcP	PcP	13 51 14.7	+0.3
MKAR	**Makanchi Array**	39.71	316	P	P	13 49 08.2	-0.2
	comp=Z,9.2nm,0.6s,baz=100,slow=10,SNR=74						
MKAR				PcP	PcP	13 51 14.7	+0.3
	comp=Z,5.6nm,0.7s,baz=92,slow=4.8,SNR=5.4						
MKAR				LR	LR	14 07 04.8	
	comp=Z,528nm,18.1s,baz=98,slow=39						
PET	**Petropavlovsk**	39.77	33	*e*P	P	13 49 06.9	-1.8
	comp=Z,27nm,1.3s						
PET	**Petropavlovsk**	39.77	33	*e*P	P	13 49 07.6	-1.1
PET				*e*S	S	13 55 08.5	-1.4
PET				pmax	pmax		
	comp=Z,17nm,1.0s						
PET				MLR	MLR		
	comp=Z,500nm,18.0s						
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
MAKZ	**Makanchi**	39.92	315	*e*P	P	13 49 09.7	-0.4
	comp=Z,37nm,1.3s						
MAKZ	**Makanchi**	39.92	315	P	P	13 49 08.9	-1.2
MAKZ				pmax	pmax		
	comp=Z,38nm,1.3s						
PDGK	**Podgornoye**	40.55	310	P	P	13 49 16.1	+0.7
PDGK				pmax	pmax		
	comp=Z,49nm,1.0s						
PMG	**Port Moresby**	40.63	141	*ce*P	P	13 49 20.7	+4.5
PMG				pmax	pmax		
	comp=Z,158nm,1.3s						
H11N1	**WAKE ISLAND Hy**	40.95	87	T	T	14 33 17.7	
	baz=283,slow=74						
H11N2	**WAKE ISLAND Hy**	40.95	87	T	T	14 33 22.3	
	baz=283						
H11N3	**WAKE ISLAND Hy**	40.97	87	T	T	14 33 21.7	
	baz=283,slow=74						
H11S3	**WAKE ISLAND Hy**	41.07	89	T	T	14 33 35.1	
	baz=284,slow=74,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	41.08	89	T	T	14 33 36.4	
	baz=284,slow=74,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	41.09	89	T	T	14 33 24.4	
	baz=284,slow=74,SNR=6.6						
ZALV	**Zalesovo Beam**	41.43	327	P	P	13 49 21.2	-1.1
	comp=Z,6.4nm,0.5s,baz=118,slow=8.3,SNR=21						
ZALV				LR	LR	14 08 02.5	
	comp=Z,960nm,18.4s,baz=76,slow=38						
ZAA1	**Zalesovo Array**	41.44	327	*e*P	P	13 49 21.2	-1.2
KDJ	**Kajisay**	41.94	307	*e*P	P	13 49 28.1	+1.1
	comp=Z,54nm,1.1s						
KDJ	**Kajisay**	41.94	307	*e*P	P	13 49 28.1	+1.1
KDJ				pmax	pmax		
	comp=Z,54nm,1.1s						
KSH	**Kashi**	42.42	303	P	P	13 49 35.0	+4.1
KSH				pP	sP	13 49 43.8	-1.5
KSH				sP	pwP	13 49 48.5	+2.7
KSH				S	S	13 55 56.1	+6.1
KSH				SS	SS	13 59 00.9	+0.9
KSH				ScS	ScS	13 59 32.4	+2.8
KSH				pmax	pmax		
	comp=Z,48nm,0.8s						
KSH				pmax	pmax		
	comp=Z,140nm,3.8s						
KSH				LR	LR		
	comp=Z,590nm,16.9s						
KSH				LR	LR		
	comp=Z,2µm,21.0s						
KSH				LR	LR		
	comp=Z,900nm,16.3s						
ULHL	**Ulahol**	42.65	307	P	P	13 49 34.4	+1.6
	SNR=18						
NRN	**Naryn**	42.68	306	*e*P	P	13 49 34.6	+1.4
	comp=Z,70nm,0.8s						
NRN	**Naryn**	42.68	306	*e*P	P	13 49 34.6	+1.4
NRN				pmax	pmax		
	comp=Z,70nm,0.8s						
BOOM	**Boomskoye usch**	42.91	307	*e*P	P	13 49 35.5	+0.7
	comp=Z,27nm,1.1s						
BOOM	**Boomskoye usch**	42.91	307	*e*P	P	13 49 35.5	+0.7
BOOM				pmax	pmax		
	comp=Z,27nm,1.1s						
TKM2	**Tokmak 2**	43.24	308	P	P	13 49 38.2	+0.6
TKM2				pmax	pmax		
	comp=Z,50nm,1.0s						
TKM2	**Tokmak 2**	43.24	308	P	P	13 49 38.8	+1.2
	SNR=53						
KZA	**Kyzart**	43.34	307	P	P	13 49 40.8	+2.1
	SNR=22						
KURK	**Kurchatov**	43.40	320	*e*P	P	13 49 37.4	-1.0
	comp=Z,20nm,1.0s						
KURK	**Kurchatov**	43.40	320	P	P	13 49 37.5	-1.0
KURK				pmax	pmax		
	comp=Z,25nm,1.2s						
KURK	**Kurchatov**	43.40	320	P	P	13 49 38.2	-0.3
	SNR=9.0						
KURBB	**Kurchatov Arra**	43.42	320	P	P	13 49 38.0	-0.6
	comp=Z,6.6nm,0.8s,baz=118,slow=7.7,SNR=43						
KURBB				PcP	PcP	13 51 25.9	-0.5
	comp=Z,2.7nm,0.7s,baz=113,slow=3.8,SNR=5.1						
KBK	**Karagaybulak**	43.66	308	P	P	13 49 42.6	+1.7
	SNR=16						
CHMS	**Chumysh**	43.86	308	P	P	13 49 43.6	+1.2
	SNR=14						
UCH	**Uchtor**	43.91	307	P	P	13 49 45.4	+2.1
	SNR=61						
AAK	**Ala-Archa**	43.99	307	P	P	13 49 44.0	+0.4
	comp=Z,7.5nm,0.8s,baz=99,slow=6.1,SNR=18						
AAK	**Ala-Archa**	43.99	307	*e*P	P	13 49 43.5	0.0
	comp=Z,19nm,1.0s						
AAK	**Ala-Archa**	43.99	307	*i* P	P	13 49 44.8	+1.3
	SNR=6.9						
AAK	**Ala-Archa**	43.99	307	*e*P	P	13 49 43.5	0.0
AAK				pmax	pmax		

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      comp=Z,19nm,1.0s
AAK   Ala-Archa        43.99 307  P      P      13 49 44.8 +1.3
      SNR=8.2
AAK   Ala-Archa        43.99 307  P      P      13 49 44.9 +1.3
      SNR=6.1
NIL   Nilore           44.27 294 eP      P      13 49 45.6 -0.2
      comp=Z,63nm,1.3s
NIL   Nilore           44.27 294 eP      P      13 49 45.6 -0.2
NIL                               pmax   pmax
      comp=Z,63nm,1.3s
EKS2  Erkin-Say        44.51 307  P      P      13 49 48.9 +1.2
      SNR=9.8
WRAB  Tennant Creek    44.86 165ceP      P      13 49 58.5 +8.0
WRAB                              pmax   pmax
      comp=Z,11nm,1.3s
WR1   Warramunga Arr   44.87 165 eP      P      13 49 51.5 +1.0
WR1                              ePcP    PcP    13 51 31.7  0.0
WRA   Warramunga Arr   44.87 165  P      P      13 49 51.6 +1.0
      comp=Z,4.5nm,0.7s,baz=345,slow=11,SNR=18
WRA                               PcP    PcP    13 51 31.7  0.0
      comp=Z,3.3nm,0.7s,baz=346,slow=3.0,SNR=3.5
ARSB  Arslanbob        44.92 305 eP      P      13 49 51.4 +0.4
      comp=Z,29nm,0.8s
PSA00 Pilbara Seismi   45.18 184 eP      P      13 49 51.9 -1.0
      comp=Z,21nm,0.9s
BTK   Batken           46.43 303 eP      P      13 50 03.1 +0.2
      comp=Z,81nm,1.4s
BTK   Batken           46.43 303 eP      P      13 50 03.1 +0.2
BTK                               pmax   pmax
      comp=Z,81nm,1.4s
OTUK  Ortayu           46.58 315  P      P      13 50 03.5 -0.3
OTUK                              pmax   pmax
      comp=Z,27nm,1.4s
GAR   Garm             46.75 302 eP      P      13 50 06.4 +0.9
      comp=Z,144nm,0.8s
GAR   Garm             46.75 302 eP      P      13 50 06.4 +0.9
GAR                               pmax   pmax
      comp=Z,144nm,0.8s
KK31  Karatay Array    46.95 307 eP      P      13 50 07.3 +0.5
      comp=Z,48nm,1.5s
KK31  Karatay Array    46.95 307 eP      P      13 50 07.1 +0.3
KK31                              pmax   pmax
      comp=Z,4.0nm,0.6s
KKAR  Karatay Array    46.95 307 eP      P      13 50 07.5 +0.7
      comp=Z,48nm,1.5s
KKAR  Karatay Array    46.95 307 eP      P      13 50 07.5 +0.7
KKAR                              pmax   pmax
      comp=Z,49nm,1.5s
KBL   Kabul            47.74 296 eP      P      13 50 13.7 +0.3
      comp=Z,101nm,1.3s
TIXI  Tiksi            48.02   3 eP      P      13 50 12.2 -2.4
      comp=Z,17nm,1.1s
TIXI  Tiksi            48.02   3d iP     P      13 50 13.0 -1.6
TIXI                              pmax   pmax
      comp=Z,24nm,1.4s
AS31  Alice Springs    48.36 166 eP      P      13 50 16.9 -0.9
      comp=Z,1.9nm,0.8s
AS31                             ePcP    PcP    13 51 44.0  0.0
ASAR  Alice Springs    48.36 166  P      P      13 50 18.7 +0.8
      comp=Z,4.9nm,1.1s,baz=220,slow=11,SNR=32
ASAR                              PcP    PcP    13 51 44.0  0.0
      comp=Z,2.3nm,0.8s,baz=343,slow=3.2,SNR=2.9
BVAR  Borovoye Array   48.97 321  P      P      13 50 21.6 -0.6
      comp=Z,2.2nm,0.5s,baz=111,slow=8.6,SNR=26
BVAR                              PcP    PcP    13 51 45.6 -0.3
      comp=Z,5.0nm,0.8s,baz=98,slow=3.0,SNR=6.3
BRVK  Borovoye         49.04 321 eP      P      13 50 21.6 -1.2
      comp=Z,10nm,0.9s
BRVK  Borovoye         49.04 321 eP      P      13 50 21.6 -1.2
BRVK                              pmax   pmax
      comp=Z,10.0nm,0.9s
BILL  Bilibino         51.54  19⇓eP      P      13 50 38.7 -2.7
BILL                             e*PP    pP     13 50 49.6 -2.6
BILL                             eS      S      13 58 00.9 +2.0
BILL                              pmax   pmax
      comp=Z,7.0nm,1.2s
BILL                              MLR    MLR
      comp=Z,824nm,20.0s
ADK   Adak             53.50  42 eP      P      13 50 55.4 -0.8
      comp=Z,37nm,1.1s
ADK   Adak             53.50  42 eP      P      13 50 55.4 -0.8
ADK                               pmax   pmax
      comp=Z,37nm,1.1s
FORT  Forrest          54.48 175 eP      P      13 51 03.4 -0.1
      comp=Z,38nm,1.0s
ABKAR Akbulak array    54.84 314 eP      P      13 51 05.1 -0.9
      comp=Z,35nm,1.4s
SVE   Sverdlovsk       55.29 324 eP      P      13 51 09.0 -0.1
SVE                               pmax   pmax
      comp=Z,15nm,0.9s
AKTO  Aktyubinsk       56.15 316  P      P      13 51 15.3 -0.1
      comp=Z,1.9nm,0.5s,baz=96,slow=8.5,SNR=7.1
GEYT  Alibeck          56.34 301  P      P      13 51 18.9 +1.8
      comp=Z,58nm,0.9s,baz=77,slow=3.2,SNR=80
GYA0B ALIBECK ARRAY    56.34 301 eP      P      13 51 17.3 +0.2
      comp=Z,73nm,0.9s
ARU   Arti             56.37 323  P      P      13 51 16.2 -0.6
      comp=Z,2.7nm,0.5s,baz=76,slow=8.1,SNR=12
ARU   Arti             56.37 323 eP      P      13 51 14.4 -2.4
      comp=Z,8.8nm,0.7s
ARU   Arti             56.37 323c iP     P      13 51 15.9 -0.9
ARU                                             13 52 11.6
ARU                               S      S      13 59 04.1 -0.3
ARU                               SS     SS     14 02 46.5 -4.9
ARU                               pmax   pmax
      comp=Z,9.0nm,0.7s
BBOO  Buckleboo        57.66 167 eP      P      13 51 26.6 +0.4
      comp=Z,32nm,1.3s
STKA  Stephens Creek   58.16 161  P      P      13 51 30.6 +0.8
      comp=Z,4.8nm,0.7s,baz=345,slow=7.7,SNR=13
STKA  Stephens Creek   58.16 161 eP      P      13 51 29.6 -0.1
      comp=Z,3.0nm,1.1s
STKA  Stephens Creek   58.16 161 eP      P      13 51 29.6 -0.1
STKA                              pmax   pmax
      comp=Z,3.0nm,1.1s
WSAR  Wadi Sarin       58.45 284  P      P      13 51 32.1  0.0
      comp=Z,4.7nm,1.0s,baz=118,slow=7.3,SNR=3.6
SHME  Shamm            59.97 287  P      P      13 51 44.9 +2.3
MDH   Madha            60.01 286  P      P      13 51 44.6 +1.8
MSFE  Esma-Masafi      60.12 287  P      P      13 51 45.8 +2.2
UOSS  Minazif          60.18 286  P      P      13 51 45.4 +1.4
HATD  Hatta, Dubai     60.27 286  P      P      13 51 46.7 +2.1
ASHO  Ashiyiah         60.37 286  P      P      13 51 47.5 +2.1
NAZ   Nazwa, Dubai     60.64 286  P      P      13 51 49.0 +1.9
FAQ   Al Faqa, Dubai   60.76 286  P      P      13 51 49.6 +1.6
ALNE  Al Ain           60.80 285  P      P      13 51 50.3 +2.0
ASUD  Al Ashush, Dub   61.02 286  P      P      13 51 51.9 +2.1
KIRV  Kirov            61.44 325  P      P      13 51 51.4 -0.6
      comp=Z,17nm,0.5s,baz=88,slow=7.0,SNR=9.9
PRGR  Permogore        63.34 329 eP      P      13 52 01.2 -3.4
PRGR                              pmax   pmax
      comp=Z,14nm,0.6s
AKT   Akhty            63.84 306 eP      P      13 52 08.8 +0.3
AKT                              e              13 52 42.2
AKT                               pmax   pmax
      comp=Z,53nm,1.4s
GROC  Groznyy          64.97 308 eP      P      13 52 13.7 -1.9
GROC                             e              13 52 46.3
GROC                              pmax   pmax
      comp=Z,62nm,1.1s
SVW2  Sparrevohn       65.42  32 eP      P      13 52 18.8 +0.6
      comp=Z,10nm,1.0s
GNI   Garni            66.31 305  P      P      13 52 25.5 +0.8
      comp=Z,24nm,1.0s,baz=162,slow=2.8,SNR=10
GNI   Garni            66.31 305 eP      P      13 52 25.4 +0.8
      comp=Z,37nm,1.0s
GNI   Garni            66.31 305 i P     P      13 52 26.8 +2.2
      SNR=5.4
GNI   Garni            66.31 305 eP      P      13 52 25.4 +0.8
GNI                               pmax   pmax
      comp=Z,37nm,1.0s
ZEI   Tsey             66.41 308 eP      P      13 52 23.3 -1.9
ZEI                               pmax   pmax
      comp=Z,43nm,1.3s
NCK   Nalchik          66.49 309 i P     P      13 52 26.6 +1.1
NCK                               pmax   pmax
      comp=Z,46nm,1.6s
GOF   Gofitskoye       66.59 311⇑eP      P      13 52 16.4  -10
GOF                               pmax   pmax
      comp=Z,29nm,0.6s
PPLA  Purkeypile       66.82  30 eP      P      13 52 28.1 +0.6
      comp=Z,22nm,1.1s
KBZ   Khabaz           66.94 309  P      P      13 52 28.7 +0.4
      comp=Z,15nm,1.0s,baz=75,slow=6.4,SNR=29
AKH   Akhalkalaki      66.98 307 eP      P      13 52 30.0 +1.1
      comp=Z,76nm,1.2s
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OHAK  Old Harbor       67.04  36 eP      P      13 52 28.2 -0.4
      comp=Z,15nm,0.9s
KIV   Kislovodsk       67.05 309 eP      P      13 52 28.8 -0.4
      comp=Z,78nm,1.2s
KIV   Kislovodsk       67.05 309 i P     P      13 52 30.6 +1.5
      SNR=15
KIV   Kislovodsk       67.05 309 eP      P      13 52 30.4 +1.2
KIV                               pmax   pmax
      comp=Z,167nm,1.1s
KIV                               MLR    MLR
      comp=Z,3µm,17.0s
NEY   Neytrino         67.17 309 i P     P      13 52 30.9 +0.9
NEY                               pmax   pmax
      comp=Z,5.0nm,0.9s
TOLK  Toolik Lake Re   67.20  23 eP      P      13 52 30.2 +0.6
      comp=Z,30nm,1.4s
TOLK  Toolik Lake Re   67.20  23  P      P      13 52 29.9 +0.3
      baz=277
BPAW  Bear Paw Mtn.    67.21  28 eP      P      13 52 30.2 +0.5
      comp=Z,28nm,1.3s
KTH   Kantishna Hill   67.31  29 eP      P      13 52 29.9 -0.5
      comp=Z,13nm,0.8s
KDAK  Kodiak Island    67.33  35 eP      P      13 52 30.0 -0.5
      comp=Z,42nm,1.2s
KDAK  Kodiak Island    67.33  35 eP      P      13 52 30.0 -0.5
KDAK                              pmax   pmax
      comp=Z,42nm,1.2s
LPSR  Galich'ya Gora   67.88 319 eP      P      13 52 34.1  0.0
LPSR                              pmax   pmax
      comp=Z,50nm,0.7s
BRLK  Bradley Lake     67.89  33 eP      P      13 52 34.0 -0.1
      comp=Z,24nm,0.9s
VORD  Divnogorie       67.96 317 eP      P      13 52 34.0 -0.6
VORD                              pmax   pmax
      comp=Z,30nm,1.2s
VSR   Storozhevoye     67.99 318 eP      P      13 52 34.2 -0.6
VSR                               pmax   pmax
      comp=Z,50nm,1.2s
MOS   Moscow           68.07 323 eP      P      13 52 33.2 -2.0
MOS                               pmax   pmax
      comp=Z,53nm,0.7s
APA   Apatity          68.07 336⇑iP      P      13 52 33.6 -1.4
APA                               pmax   pmax
      comp=Z,6.0nm,0.9s
APA                               MLR    MLR
      comp=Z,1µm,24.0s
MCK   McKinley         68.16  29 eP      P      13 52 34.5 -1.2
      comp=Z,19nm,0.8s
MCK   McKinley         68.16  29 eP      P      13 52 34.5 -1.2
MCK                               pmax   pmax
      comp=Z,19nm,0.8s
RC01  Rabbit Creek A   68.23  32 eP      P      13 52 36.0 -0.1
      comp=Z,13nm,0.9s
RND   Reindeer         68.25  29 eP      P      13 52 35.5 -0.8
      comp=Z,44nm,1.0s
RND   Reindeer         68.25  29 eP      P      13 52 35.5 -0.8
RND                               pmax   pmax
      comp=Z,44nm,1.0s
MDM   Murphy Dome      68.26  27 eP      P      13 52 36.8 +0.5
      comp=Z,36nm,1.3s
TCOL  CIGO, UAF Yank   68.43  27  P      P      13 52 38.1 +0.8
      baz=280
COLA  College          68.43  27 eP      P      13 52 36.5 -0.8
      comp=Z,14nm,0.9s
COLA  College          68.43  27c iP     P      13 52 36.5 -0.8
COLA                              pmax   pmax
      comp=Z,12nm,1.0s
PMR   Palmer           68.43  31 eP      P      13 52 36.1 -1.3
      comp=Z,18nm,0.6s
PMR   Palmer           68.43  31 eP      P      13 52 36.1 -1.3
PMR                               pmax   pmax
      comp=Z,18nm,0.6s
CCB   Clear Creek Bu   68.49  28 eP      P      13 52 36.8 -0.9
      comp=Z,4.4nm,0.9s
SEW   Seward           68.55  33 eP      P      13 52 37.1 -1.0
      comp=Z,26nm,1.0s
POKR  Poker Plat Res   68.56  27  P      P      13 52 38.9 +0.7
      baz=280
SML   Sawmill          68.77  31 eP      P      13 52 39.1 -0.5
      comp=Z,28nm,0.8s
SML   Sawmill          68.77  31 eP      P      13 52 39.1 -0.5
SML                               pmax   pmax
      comp=Z,29nm,0.8s
OBN   Obninsk          68.78 322⇑eP      P      13 52 39.0 -0.6
OBN                              *PP     pP     13 52 47.0 -3.4
OBN                              *SP     pwP    13 52 55.0  0.0
OBN                                             13 53 02.0
OBN                               S      S      14 01 42.0 +1.8
OBN                               pmax   pmax
      comp=Z,62nm,1.7s
OBN                               MLR    MLR
      comp=Z,532nm,16.0s
KNK   Knik Glacier     68.78  31 eP      P      13 52 39.4 -0.3
      comp=Z,56nm,0.9s
ILAR  Eielson Array    68.86  27  P      P      13 52 39.1 -0.9
      comp=Z,1.2nm,0.5s,baz=262,slow=5.0,SNR=25
ILB   Eielson Array    68.86  27 eP      P      13 52 38.8 -1.2
      comp=Z,12nm,0.9s
HDA   Harding Lake     68.90  28 eP      P      13 52 39.1 -1.2
      comp=Z,29nm,0.5s
HDA   Harding Lake     68.90  28  P      P      13 52 39.5 -0.7
      baz=281
FYU   Fort Yukon       69.18  25 eP      P      13 52 43.5 +1.6
      comp=Z,22nm,0.6s
SOC   Sochi            69.23 309 eP      P      13 52 40.0 -2.7
SOC                              ePPP    PPP    13 56 55.4
SOC                              eS      S      14 01 42.8 -3.2
SOC                              eSS     SS     14 06 15.6 +2.9
SOC                               pmax   pmax
      comp=Z,18nm,0.6s
SCM   Sheep Creek Mo   69.23  30 eP      P      13 52 42.6 +0.1
      comp=Z,38nm,0.6s
SCM   Sheep Creek Mo   69.23  30 eP      P      13 52 42.6 +0.1
SCM                               pmax   pmax
      comp=Z,38nm,0.6s
GLI   Glacier Island   69.54  31 eP      P      13 52 44.2 -0.1
      comp=Z,45nm,0.8s
PAX   Paxson           69.84  29 eP      P      13 52 46.2  0.0
      comp=Z,51nm,0.8s
PAX   Paxson           69.84  29 eP      P      13 52 46.2  0.0
PAX                               pmax   pmax
      comp=Z,51nm,0.8s
FID   Port Fidalgo     69.86  32 eP      P      13 52 46.6 +0.3
      comp=Z,108nm,0.4s
RAYN  Ar Rayn          69.95 288 eP      P      13 52 47.4 -0.2
      comp=Z,27nm,1.0s
RAYN  Ar Rayn          69.95 288 i P     P      13 52 48.8 +1.2
      SNR=16
RAYN  Ar Rayn          69.95 288 eP      P      13 52 47.4 -0.2
RAYN                              pmax   pmax
      comp=Z,27nm,1.0s
SPA0  Spitsbergen Ar   70.21 348 eP      P      13 52 47.3 -0.9
      comp=Z,130nm,1.8s
SPA0  Spitsbergen Ar   70.21 348 eP      P      13 52 48.0 -0.1
SPITS Spitsbergen Ar   70.21 348  P      P      13 52 47.3 -0.9
      comp=Z,3.0nm,0.5s,baz=85,slow=10,SNR=11
EYAK  Cordova Ski Ar   70.26  32 eP      P      13 52 48.7  0.0
      comp=Z,87nm,0.7s
SCRK  Sand Creek       70.26  28 eP      P      13 52 48.3 -0.5
      comp=Z,174nm,0.5s
DOT   Dot Lake         70.30  28 eP      P      13 52 48.4 -0.6
      comp=Z,355nm,1.2s
ARA0  ARCESS Array S   70.49 338 eP      P      13 52 49.4 -0.6
ARCES ARCESS Array B   70.49 338  P      P      13 52 49.4 -0.6
      comp=Z,3.7nm,0.6s,baz=74,slow=9.7,SNR=20
ARE0  ARCESS Array S   70.49 338 eP      P      13 52 50.0  0.0
ANN   Anapa            70.53 311 eP      P      13 52 50.2 -0.5
ANN                               pmax   pmax
      comp=Z,82nm,1.0s
MENT  Mentasta         70.62  29 eP      P      13 52 51.0  0.0
      comp=Z,728nm,1.2s
KBS   Kingsbay         70.73 349 eP      P      13 52 51.6 +0.3
HAMF  Hammerfest       70.78 340 eP      P      13 52 51.9 +0.2
HSPB  Hornsund (broa   70.81 347 eP      P      13 52 51.8  0.0
HMT   Hamilton         71.02  32 eP      P      13 52 53.5 +0.1
      comp=Z,355nm,0.8s
EGAK  Eagle            71.24  27 eP      P      13 52 54.4 -0.2
      comp=Z,94nm,0.8s
KTK1  Kautokeino       71.42 338 eP      P      13 52 55.5 -0.2
BALM  Baldy            71.75  31 eP      P      13 52 57.6 -0.3
      comp=Z,585nm,0.7s
BALM  Baldy            71.75  31 eP      P      13 52 57.6 -0.3
BALM                              pmax   pmax
      comp=Z,585nm,0.7s
DAWY  Dawson           72.18  27 eP      P      13 53 00.5 +0.1
      comp=Z,440nm,0.8s
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EPYK  Eagle Plains     72.52  25 eP      P      13 53 02.1 -0.2
      comp=Z,33nm,1.1s
EPYK  Eagle Plains     72.52  25  P      P      13 53 02.2 -0.2
      baz=289
FIA1  FINESS Array S   72.57 330 eP      P      13 53 02.1 -0.5
      comp=Z,54nm,1.4s
FIA0  FINESS Array S   72.58 330 eP      P      13 53 02.6 -0.1
FIA0  FINESS Array S   72.58 330 eP      P      13 53 02.6 -0.1
FINES FINESS Array B   72.58 330  P      P      13 53 02.6 -0.1
      comp=Z,9.9nm,0.5s,baz=68,slow=5.9,SNR=66
TRO   Tromso           72.65 339 eP      P      13 53 02.8 -0.1
DIKM  Dikmen           72.91 308⇑iP      P      13 53 06.5 +1.4
INK   Inuvik           73.01  22  P      P      13 53 05.0 -0.2
      comp=Z,18nm,1.0s,baz=283,slow=7.0,SNR=27
INK   Inuvik           73.01  22 eP      P      13 53 04.9 -0.2
      comp=Z,34nm,1.1s
INK   Inuvik           73.01  22 eP      P      13 53 04.9 -0.2
INK                               pmax   pmax
      comp=Z,34nm,1.1s
PCA   Pinnacle         73.01  31 eP      P      13 53 05.5 +0.1
      comp=Z,549nm,0.7s
VSU   Vasula           73.17 327 eP      P      13 53 05.5 -0.7
VSU                               IAmb   IAmb   13 53 07.9
      comp=Z,56nm,0.8s
VSU   Vasula           73.17 327ceP      P      13 53 06.6 +0.4
VSU                               pmax   pmax
      comp=Z,245nm,2.5s
HYT   Haines Junctio   74.06  30 eP      P      13 53 12.1 +0.5
      comp=Z,150nm,0.6s
ILGA  Ilgaz            74.20 308 eP      P      13 53 12.8 -0.2
      comp=Z,52nm,1.3s
AKASG Malin Array Be   74.20 319  P      P      13 53 11.8 -0.6
      comp=Z,16nm,0.8s,baz=58,slow=6.1,SNR=49
AKASG Malin Array Be   74.20 319 i P     P      13 53 11.8 -0.6
AKASG                             pmax   pmax
      comp=Z,15nm,0.7s
AKBB  Malin Array Si   74.20 319 eP      P      13 53 11.3 -1.2
      comp=Z,62nm,1.4s
AKBB  Malin Array Si   74.20 319 eP      P      13 53 11.3 -1.2
AKBB                              pmax   pmax
      comp=Z,62nm,1.4s
IZAR  Zarasai          74.29 324 eP      P      13 53 11.4 -1.4
IZAR                              IAmb   IAmb   13 53 14.6
      comp=Z,14nm,0.7s
STEI  Steigen          74.56 338 eP      P      13 53 13.7 -0.4
BR101 Keskin Array S   74.66 307 eP      P      13 53 15.8 +0.3
BR131 Keskin Array S   74.66 307 eP      P      13 53 15.1 -0.5
      comp=Z,34nm,0.9s
BRTR  Keskin Array B   74.66 307  P      P      13 53 15.8 +0.3
      comp=Z,20nm,0.8s,baz=103,slow=5.5,SNR=97
ANTO  Ankara           75.23 307 eP      P      13 53 18.4 -0.3
      comp=Z,43nm,0.7s
ANTO  Ankara           75.23 307⇓iP      P      13 53 19.2 +0.4
ANTO  Ankara           75.23 307 eP      P      13 53 18.4 -0.3
ANTO                              pmax   pmax
      comp=Z,43nm,0.7s
SKAG  Skagway          75.57  31 eP      P      13 53 21.2 +1.0
      comp=Z,72nm,1.1s
MOR8  Moi Rana         75.60 337 eP      P      13 53 19.5 -0.8
KIS   Kishinev         75.65 315 e       P      13 53 20.0 -0.9
KIS   Kishinev         75.65 315 eP      P      13 53 20.0 -0.9
BESE  Bessie Mountai   76.13  32 eP      P      13 53 23.4 -0.1
      comp=Z,36nm,0.8s
MDUB  Mudurnu          76.19 308 eP      P      13 53 24.0 -0.3
      comp=Z,116nm,0.8s
ATD   Arta Tunnel      76.41 277  P      P      13 53 27.2 +1.4
      comp=Z,20nm,0.8s,baz=51,slow=2.9,SNR=7.9
CSS   Mathiatis        76.44 302 eP      P      13 53 25.6 -0.1
      comp=Z,39nm,0.8s
JIS   Juneau Island    76.48  32 eP      P      13 53 26.1 +0.8
      comp=Z,18nm,0.9s
SIT   Sitka            76.49  33 eP      P      13 53 26.4 +1.0
      comp=Z,34nm,1.1s
SUW   Suwalki          76.55 323 eP      P      13 53 25.6 -0.2
SUW   Suwalki          76.55 323 eP      P      13 53 25.1 -0.8
      comp=Z,100nm,1.0s
SUW   Suwalki          76.55 323 eP      P      13 53 25.1 -0.8
SUW                               pmax   pmax
      comp=Z,100nm,1.0s
CFR   Carcaliu         76.72 314⇓iP      P      13 53 27.5 +0.5
TIRR  Tirgusor         76.78 313 eP      P      13 53 26.7 -0.6
      comp=Z,58nm,1.0s
TIRR  Tirgusor         76.78 313⇑iP      P      13 53 28.4 +1.1
TIRR  Tirgusor         76.78 313 eP      P      13 53 26.7 -0.6
TIRR                              pmax   pmax
      comp=Z,58nm,1.0s
HARR  Harsova          77.02 313⇓iP      P      13 53 29.6 +0.9
TESR  Tescani          77.22 315⇑iP      P      13 53 30.1 +0.3
NSS   Namsos           77.28 336 eP      P      13 53 29.9 +0.2
VRI   Vrincioaia       77.40 315⇓iP      P      13 53 31.9 +1.1
BIZ   Bicaz            77.42 316⇑iP      P      13 53 31.4 +0.5
PLOR  Plostina         77.46 315⇓iP      P      13 53 31.9 +0.7
LVV   L'vov            77.64 319 eP      P      13 53 31.9 -0.2
LVV                              e              13 53 46.9
BUR08 Bucovina Ar. S   77.73 317 eP      P      13 53 32.3 -0.5
      comp=Z,18nm,0.8s
BURAR Bucovina Array   77.73 317⇓iP      P      13 53 32.9 +0.1
OZUR                   77.93 315⇑iP      P      13 53 34.8 +1.0
MLR   Muntele Rosu     78.05 314  P      P      13 53 35.5 +0.9
      comp=Z,20nm,0.6s,baz=57,slow=1.3,SNR=29
MLR   Muntele Rosu     78.05 314 eP      P      13 53 34.4 -0.2
      comp=Z,78nm,1.4s
MLR   Muntele Rosu     78.05 314⇑iP      P      13 53 35.1 +0.5
MLR   Muntele Rosu     78.05 314 eP      P      13 53 34.4 -0.2
MLR                               pmax   pmax
      comp=Z,78nm,1.4s
DOPR  Dopca            78.23 315⇓iP      P      13 53 36.5 +1.0
WRAK  Wrangell Islan   78.25  33 eP      P      13 53 36.0 +0.6
      comp=Z,14nm,0.9s
RAZG  Razgrad          78.38 312⇑iP      P      13 53 37.8 +1.4
ARCR  ARCALIA          78.47 316⇑iP      P      13 53 37.4 +0.6
DLBC  Dease Lake       78.50  31 eP      P      13 53 36.6 -0.2
      comp=Z,20nm,1.1s
KWP   Kalwaria Pacla   78.50 319 eP      P      13 53 37.4 +0.5
KWP   Kalwaria Pacla   78.50 319 eP      P      13 53 36.9  0.0
      comp=Z,654nm,0.7s
KWP   Kalwaria Pacla   78.50 319 eP      P      13 53 36.9  0.0
KWP                               pmax   pmax
      comp=Z,654nm,0.7s
VOIR                   78.65 315⇑iP      P      13 53 38.8 +0.9
HFS   Hagfors          78.67 331  P      P      13 53 37.4 -0.2
      comp=Z,8.8nm,0.6s,baz=96,slow=6.7,SNR=26
BEL   Belsk            78.74 322 eP      P      13 53 38.8 +0.7
BEL   Belsk            78.74 322 eP      P      13 53 38.8 +0.7
RES   Resolute Bay     78.81  10  P      P      13 53 37.5 -0.5
      comp=Z,6.5nm,0.9s,baz=352,slow=10,SNR=4.9
RES   Resolute Bay     78.81  10 eP      P      13 53 37.5 -0.5
      comp=Z,15nm,1.0s
RES   Resolute Bay     78.81  10 eP      P      13 53 37.5 -0.5
RES                               pmax   pmax
      comp=Z,15nm,1.0s
KOLS  Kolonicke sedl   79.04 319 eP      P      13 53 40.3 +0.4
KOLS                              pmax   pmax
      comp=Z,15nm,1.4s
KOLS  Kolonicke sedl   79.04 319 eP      P      13 53 40.3 +0.4
HUMR  Humele           79.04 314⇑iP      P      13 53 40.4 +0.5
ELND  Elena            79.05 312⇑iP      P      13 53 41.5 +1.5
NC405 NORSAR Array S   79.06 333 eP      P      13 53 39.2 -0.5
      comp=Z,88nm,1.0s
CJR   Cluj-Napoca      79.09 316⇑iP      P      13 53 41.8 +1.5
NC303 NORSAR Array S   79.14 333 eP      P      13 53 39.6 -0.5
      comp=Z,91nm,1.3s
UZH   Uzhgorod         79.15 318 eP      P      13 53 40.1 -0.3
UZH                              e              13 53 45.6
UZH                              e              13 53 55.3
NB201 NORSAR Array S   79.27 333 eP      P      13 53 40.1 -0.8
      comp=Z,163nm,1.4s
NB2   NORSAR Subarra   79.30 333  P      P      13 53 40.5 -0.6
      comp=Z,55nm,1.2s,baz=54,slow=6.2
NB2   NORSAR Subarra   79.30 333  P      P      13 53 40.5 -0.6
      baz=54,slow=6.2
NB200 NORSAR Array S   79.30 333 eP      P      13 53 40.5 -0.6
NOA   NORSAR Array B   79.30 333  P      P      13 53 40.5 -0.6
      comp=Z,12nm,0.9s,baz=55,slow=5.7,SNR=20
NC602 NORSAR Array S   79.32 332 eP      P      13 53 40.0 -1.1
      comp=Z,164nm,1.8s
NC602 NORSAR Array S   79.32 332 eP      P      13 53 40.9 -0.2
NC204 NORSAR Array S   79.37 333 eP      P      13 53 40.9 -0.6
      comp=Z,131nm,1.4s
LOT   Lotru            79.48 315⇓iP      P      13 53 43.1 +0.6
DRGR                   79.62 317⇓iP      P      13 53 43.9 +0.7
DOMB  Dombas           79.67 334 eP      P      13 53 40.4 -2.7
ALN   Alexandroupoli   79.70 310 eP      P      13 53 43.0 -0.5
      comp=Z,16nm,1.0s
ALN   Alexandroupoli   79.70 310 eP      P      13 53 43.1 -0.5
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ALN				pmax	pmax		
	comp=Z,16nm,1.0s						
KDZ	Kurdzhali	79.85	311	eP	P	13 53 44.9	+0.5
DEV	Deva	79.86	316	⇑iP	P	13 53 45.8	+1.4
EZN	Ezine	79.91	309	⇑iP	P	13 53 45.0	+0.3
OJC	Ojcow	79.98	321	eP	P	13 53 45.1	+0.2
OJC	Ojcow	79.98	321	eP	P	13 53 45.1	+0.2
	comp=Z,53nm,0.9s						
OJC	Ojcow	79.98	321	eP	P	13 53 45.1	+0.2
MOL	Molde	79.99	335	eP	P	13 53 44.4	-0.3
NIE	Niedzica	80.02	320	eP	P	13 53 45.6	+0.4
NIE	Niedzica	80.02	320	eP	P	13 53 45.6	+0.4
GZR	Gura Zlata	80.14	315	⇑iP	P	13 53 46.0	0.0
PLD	Plovdiv	80.17	312	eP	P	13 53 46.4	+0.3
RZN	Rozhen	80.32	311	eP	P	13 53 47.2	0.0
AKN	Aaknes	80.42	335	eP	P	13 53 47.2	+0.1
HERR	Herculane	80.58	315	⇑iP	P	13 53 48.4	+0.1
LANS	Liptovska Anna	80.63	320	eP	P	13 53 50.2	+1.7
LANS	Liptovska Anna	80.63	320	eP	P	13 53 50.2	+1.7
SKAR	Skarslia	80.71	333	eP	P	13 53 48.8	+0.1
BZS	Buzias	80.80	316	⇑iP	P	13 53 50.2	+0.8
PSZ	Piszkesteto	80.90	318	eP	P	13 53 50.2	+0.2
	comp=Z,64nm,1.3s						
PSZ	Piszkesteto	80.90	318	⇑iP	P	13 53 50.6	+0.6
PSZ	Piszkesteto	80.90	318	eP	P	13 53 50.2	+0.2
PSZ				pmax	pmax		
	comp=Z,64nm,1.3s						
PSZ	Piszkesteto	80.90	318	⇑eP	P	13 53 50.0	0.0
VTS	Vitosha	80.96	313	eP	P	13 53 50.8	+0.2
	comp=Z,36nm,0.8s						
VTS	Vitosha	80.96	313	⇑iP	P	13 53 51.3	+0.7
VTS	Vitosha	80.96	313	eP	P	13 53 50.8	+0.2
VTS				pmax	pmax		
	comp=Z,36nm,0.8s						
VTS	Vitosha	80.96	313	eP	P	13 53 51.2	+0.7
MDVR	Moldovita	81.08	315	⇑iP	P	13 53 51.4	+0.4
OKC	Ostrava-Krasne	81.10	321	eP	P	13 53 51.6	+0.6
OKC	Ostrava-Krasne	81.10	321	eP	P	13 53 51.6	+0.6
VYHS	Vyhne	81.29	319	eP	P	13 53 52.8	+0.8
VYHS				pmax	pmax		
	comp=Z,33nm,0.9s						
VYHS	Vyhne	81.29	319	eP	P	13 53 52.8	+0.8
HYA	Hoyanger	81.31	334	eP	P	13 53 52.0	+0.3
MORC	Moravsky Berou	81.48	321	eP	P	13 53 53.2	+0.2
	comp=Z,27nm,1.1s						
MORC	Moravsky Berou	81.48	321	⇑iP	P	13 53 53.7	+0.7
MORC	Moravsky Berou	81.48	321	eP	P	13 53 53.2	+0.2
MORC				pmax	pmax		
	comp=Z,27nm,1.1s						
MORC	Moravsky Berou	81.48	321	eP	P	13 53 53.5	+0.5
KSP	Ksiaz	81.71	322	eP	P	13 53 54.6	+0.5
KSP	Ksiaz	81.71	322	eP	P	13 53 54.6	+0.5
JAVC	Velka Javorina	81.82	320	eP	P	13 53 56.5	+1.6
ODD1	Odda	81.83	333	eP	P	13 53 54.7	0.0
SRO2	Moca	81.88	319	eP	P	13 53 56.3	+1.2
SRO2	Moca	81.88	319	eP	P	13 53 56.3	+1.2
OSTC	Ostas	81.89	322	eP	P	13 53 55.5	+0.4
OSTC				ex	x	13 54 08.4	
DPC	Dobruska-Polom	81.92	322	eP	P	13 53 56.1	+0.8
DPC	Dobruska-Polom	81.92	322	eP	P	13 53 56.1	+0.8
VAY	Valandovo	81.94	312	i P	P	13 53 55.0	-0.6
CHVC	Chvalec	81.96	322	eP	P	13 53 56.4	+0.9
UPC	Upice	82.02	322	eP	P	13 53 56.3	+0.5
UPC	Upice	82.02	322	eP	P	13 53 56.3	+0.5
CSKK	Cskako	82.14	318	eP	P	13 53 57.0	+0.6
FRGS	Fruska Gora	82.14	316	eP	P	13 53 56.5	-0.1
BLS5	Blasjo	82.18	332	eP	P	13 53 56.4	-0.1
VRAC	Vranov	82.25	321	P	P	13 53 57.9	+0.9
	comp=Z,17nm,0.9s,baz=66,slow=6.1,SNR=29						
VRAC	Vranov	82.25	321	⇓iP	P	13 53 58.3	+1.3
VRAC	Vranov	82.25	321	eP	P	13 53 57.8	+0.8
MODS	Modra-Piesok	82.27	320	eP	P	13 53 57.4	+0.2
MODS				pmax	pmax		
	comp=Z,60nm,1.6s						
MODS	Modra-Piesok	82.27	320	eP	P	13 53 57.4	+0.2
MORH	Mrgy, Hungar	82.41	317	⇑eP	P	13 53 58.0	+0.1
SKO	Skopje	82.44	312	i P	P	13 53 58.7	+0.5
SNART	Snartemo	82.46	331	eP	P	13 53 58.0	+0.1
ZST	Bratislava	82.46	319	eP	P	13 53 58.3	+0.2
ZST	Bratislava	82.46	319	eP	P	13 53 58.3	+0.2
KRUC	Moravsky	82.47	320	eP	P	13 53 58.8	+0.6
DIVS	Divibare	82.49	315	eP	P	13 53 58.3	-0.2
LIT	Litokhoron	82.50	310	eP	P	13 53 57.4	-1.2
	comp=Z,17nm,0.6s						
LIT	Litokhoron	82.50	310	eP	P	13 53 57.4	-1.2
LIT				pmax	pmax		
	comp=Z,17nm,0.6s						
TIH	Tihany	82.57	318	eP	P	13 53 50.0	-8.7
YKW3	Yellowknife Ar	82.68	23	eP	P	13 53 58.2	-0.7
	comp=Z,25nm,0.9s						
YKA	Yellowknife Ar	82.73	23	P	P	13 53 59.2	0.0
	comp=Z,6.7nm,0.7s,baz=312,slow=4.8,SNR=33						
YKB5	Yellowknife Ar	82.73	23	eP	P	13 53 59.2	0.0
TREC	Trest	82.89	321	eP	P	13 54 01.1	+0.7
TREC	Trest	82.89	321	eP	P	13 54 01.1	+0.7
BBLS	Lazići	82.97	315	eP	P	13 54 01.0	0.0
GOPC	GO Pecny, Ondr	83.00	322	eP	P	13 54 01.3	+0.4
GOPC				e		13 54 14.0	
GOPC	GO Pecny, Ondr	83.00	322	eP	P	13 54 01.3	+0.4
GOPC				epP	sP	13 54 14.0	-2.0
BRG	Berggiesshubel	83.00	323	i P	P	13 54 01.3	+0.4
	comp=Z,42nm,1.4s						
BRG				e		13 54 14.7	
	comp=Z,17nm,1.1s comp=N,239nm,16.1s comp=E,129nm,17.2s comp=Z,310nm,15.5s						
BRG	Berggiesshubel	83.00	323	i P	P	13 54 01.3	+0.4
BRG				e		13 54 14.7	
BRG				pmax	pmax		
	comp=Z,42nm,1.4s						
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
BRG				MLR	MLR		
	comp=N,239nm,16.1s						
BRG				MLR	MLR		
	comp=E,129nm,17.2s						
BRG				MLR	MLR		
	comp=Z,310nm,15.5s						
SOP	Sopron	83.02	319	eP	P	13 54 00.1	-1.0
SUMG	Summit	83.06	354	eP	P	13 54 00.5	-0.8
	comp=Z,33nm,1.1s						
AGG	Agios Georgios	83.07	310	eP	P	13 54 00.1	-1.4
	comp=Z,20nm,0.8s						
AGG	Agios Georgios	83.07	310	eP	P	13 54 00.1	-1.4
AGG				pmax	pmax		
	comp=Z,20nm,0.8s						
PRU	Pruhonice	83.10	322	eP	P	13 54 02.2	+0.8
PRU				e		13 54 17.1	
PRU	Pruhonice	83.10	322	eP	P	13 54 02.2	+0.8
PRU				esP	pwP	13 54 17.1	0.0
RUDO	Rudo	83.10	315	eP	P	13 54 01.4	-0.2
HAPS	Han Pijesak,Bl	83.17	315	eP	P	13 54 01.6	-0.4
OHR	Ohrid	83.24	312	i P	P	13 53 55.2	-7.2
CLL	Collm	83.31	324	eP	P	13 54 01.6	-0.9
	comp=Z,22nm,0.7s						
CLL	Collm	83.31	324	⇑iP	P	13 54 02.5	+0.1
CLL				e		13 54 21.0	
CLL				pmax	pmax		
	comp=Z,53nm,1.3s						
CLL	Collm	83.31	324	⇑iP	P	13 54 02.5	+0.1
	comp=Z,53nm,1.3s						
CLL				e		13 54 21.0	
CLL				ePP	PP	13 57 14.0	+0.1
CONA	Conrad Observa	83.32	320	i PcP	P	13 54 03.5	+0.8
	comp=Z,64nm,1.5s,SNR=30						
BEHE	Becsehely	83.45	318	eP	P	13 53 52.0	-11
UPM	Unac-Piva	83.59	314	eP	P	13 54 04.0	-0.3
PDG	Podgorica	83.70	314	⇑iP	P	13 54 05.7	+1.0
PDG	Podgorica	83.70	314	eP	P	13 54 04.3	-0.4
TTG	Podgorica	83.70	314	eP	P	13 54 04.5	-0.2
	comp=Z,49nm,1.5s						
TTG	Podgorica	83.70	314	eP	P	13 54 04.5	-0.2
TTG				pmax	pmax		
	comp=Z,49nm,1.5s						
ARSA	Arzberg	83.84	319	i PcP	P	13 54 05.7	+0.3
	comp=Z,28nm,1.3s,SNR=9.3						
DRME	Dracevica, Mon	83.86	313	eP	P	13 54 05.5	0.0
BRY	Bratogost	83.96	314	eP	P	13 54 05.6	-0.6
BLY	Banja Luka	83.99	316	eP	P	13 54 06.3	+0.1
	comp=Z,60nm,1.1s						
BLY	Banja Luka	83.99	316	⇑iP	P	13 54 07.0	+0.9
BLY	Banja Luka	83.99	316	eP	P	13 54 06.2	+0.1
KHC	Kasperske Hory	84.07	321	eP	P	13 54 06.4	0.0
	comp=Z,12nm,0.9s						
KHC	Kasperske Hory	84.07	321	d iP	P	13 54 07.3	+0.8
KHC				pmax	pmax		
	comp=Z,126nm,1.5s						
KHC	Kasperske Hory	84.07	321	eP	P	13 54 06.8	+0.3
KHC				epP	sP	13 54 19.5	-2.1
ITM	Ithomi	84.14	308	eP	P	13 54 05.7	-1.4
	comp=Z,43nm,0.7s						
GEC2	GERESS Array S	84.14	321	eP	P	13 54 07.0	+0.1
	comp=Z,39nm,0.9s						
GEC2	GERESS Array S	84.14	321	eP	P	13 54 07.0	+0.1
GEC2				pmax	pmax		
	comp=Z,39nm,0.9s						
GERES	GERESS Array B	84.14	321	P	P	13 54 06.7	-0.2
	comp=Z,21nm,0.7s,baz=60,slow=6.3,SNR=56						
NKC	Novy Kostel	84.15	323	eP	P	13 54 07.3	+0.5
NKC	Novy Kostel	84.15	323	eP	P	13 54 07.3	+0.5
TREB	Trebinje	84.17	314	eP	P	13 54 06.1	-1.0
MGRS	Mrkonjic Grad	84.21	316	eP	P	13 54 07.9	+0.6
MOA	Molln	84.30	320	i PcP	P	13 54 08.3	+0.7
	comp=Z,39nm,0.8s,SNR=22						
PERS	Pernice	84.38	319	i P	P	13 54 08.3	+0.2
SOKA	Soboth	84.41	319	i PcP	P	13 54 08.5	+0.2
	comp=Z,37nm,0.9s,SNR=26						
CRES	Cresnjev	84.56	318	eP	P	13 54 09.3	+0.3
CRES	Cresnjev	84.56	318	eP	P	13 54 08.7	-0.3
OBKA	Obir	84.78	319	i PcP	P	13 54 10.3	+0.1
	comp=Z,27nm,0.8s,SNR=13						
OPO	Ambohidratompo	84.97	247	P	P	13 54 12.7	+1.1
	comp=Z,15nm,0.7s,baz=53,slow=4.2,SNR=16						
LJU	Ljubljana	85.03	318	i P	P	13 54 11.6	+0.3
LJU				i pP	pwP	13 54 26.8	-0.3
LJU	Ljubljana	85.03	318	eP	P	13 54 11.2	-0.1
GBRS	Gornja Briga	85.10	318	i P	P	13 54 12.1	+0.3
GRA1	Grafenberg Arr	85.11	323	eP	P	13 54 11.9	+0.2
	comp=Z,40nm,1.0s						
GRF	Grafenberg Arr	85.11	323	eP	P	13 54 11.9	+0.2
GRF				pmax	pmax		
	comp=Z,40nm,1.0s						
GRFO	Grafenberg	85.11	323	eP	P	13 54 10.8	-0.9
	comp=Z,40nm,1.0s						
GRFO	Grafenberg	85.11	323	eP	P	13 54 10.8	-0.9
GRFO				pmax	pmax		
	comp=Z,40nm,1.0s						
ABPO	Ambohimpanom	85.14	247	eP	P	13 54 12.1	-0.4
	comp=Z,31nm,0.9s						
ABPO	Ambohimpanom	85.14	247	eP	P	13 54 12.1	-0.4
ABPO				pmax	pmax		
	comp=Z,31nm,0.9s						
KBA	Koelnbreinsper	85.22	320	i PcP	P	13 54 12.3	-0.2
	comp=Z,16nm,0.8s,SNR=15						
CEY	Cerknica	85.24	318	eP	P	13 54 12.4	0.0
MYKA	Terra Mystica	85.27	319	i P	P	13 54 12.3	-0.3
	comp=Z,10nm,0.6s,SNR=7.2						
JAVS	Javornik	85.38	318	eP	P	13 54 12.8	-0.5
CADS	Cadrg	85.41	319	i P	P	13 54 12.6	-0.7
ABTA	Abfaltersbach	85.88	320	i P	P	13 54 14.9	-0.8
	comp=Z,36nm,1.2s,SNR=6.9						
WATA	Walderalm	86.13	321	i PcP	P	13 54 16.8	-0.2
	comp=Z,8.3nm,0.6s						
WTTA	Wattenberg	86.13	320	i PcP	P	13 54 16.9	-0.2
	comp=Z,29nm,1.0s,SNR=12						
MOTA	Moosalm	86.40	321	i PcP	P	13 54 17.6	-0.7
	comp=Z,13nm,1.1s						
SQTA	Sankt Quirin	86.40	321	i PcP	P	13 54 18.0	-0.3
	comp=Z,35nm,1.2s,SNR=7.9						
KMBO	Kilima Mbogo	86.45	267	P	P	13 54 20.4	+1.1
	comp=Z,11nm,1.0s,baz=44,slow=9.2,SNR=17						
KMBO	Kilima Mbogo	86.45	267	eP	P	13 54 19.5	+0.2
	comp=Z,19nm,1.0s						
KMBO	Kilima Mbogo	86.45	267	i P	P	13 54 21.4	+2.1
	SNR=8.3						
KMBO	Kilima Mbogo	86.45	267	eP	P	13 54 19.5	+0.2
KMBO				pmax	pmax		
	comp=Z,19nm,1.0s						
RETA	Reutte	86.52	321	i PcP	P	13 54 18.5	-0.3
	comp=Z,2.5nm,0.7s						
LLLB	Lillooet	86.55	35	eP	P	13 54 19.5	+0.7
	comp=Z,15nm,1.0s						
FETA	Feichten	86.79	321	i PcP	P	13 54 20.1	-0.2
	comp=Z,26nm,1.5s,SNR=8.7						
TIP	Timpagrande	86.88	312	eP	P	13 54 20.6	-0.1
	comp=Z,27nm,1.2s						
TIP	Timpagrande	86.88	312	⇑iP	P	13 54 22.2	+1.5
DAVA	Damuels	87.14	321	i PcP	P	13 54 21.8	-0.1
	comp=Z,18nm,1.1s,SNR=5.7						
FUORN	Ofenpass-Fuorn	87.27	320	eP	P	13 54 22.3	-0.4
	comp=Z,88nm,1.5s						
DAVOX	Davos/Dischmat	87.41	321	P	P	13 54 23.5	+0.2
	comp=Z,6.8nm,0.5s,baz=65,slow=1.9,SNR=16						
MEM	Membach	87.41	325	⇑P	P	13 54 22.9	-0.1
BFO	Black Forest	87.45	323	eP	P	13 54 21.9	-1.3
	comp=Z,52nm,1.6s						
BFO	Black Forest	87.45	323	eP	P	13 54 21.9	-1.3
BFO				pmax	pmax		
	comp=Z,52nm,1.6s						
BEBN	Eben Emael	87.48	326	⇑P	P	13 54 23.2	0.0
AQU	L'Aquila	87.56	316	eP	P	13 54 24.0	+0.1
D03D	Eldon	87.58	38	P	P	13 54 24.8	+1.0
	baz=303						
B05A	Bryant	87.74	37	P	P	13 54 25.8	+1.3
	baz=304						
WLF	Walferdange	87.88	324	eP	P	13 54 24.5	-0.7
	comp=Z,215nm,0.9s						
WLF	Walferdange	87.88	324	eP	P	13 54 24.5	-0.7
WLF				pmax	pmax		
	comp=Z,215nm,0.9s						
WLF	Walferdange	87.88	324	⇓P	P	13 54 25.8	+0.6
WLF				⇓sP	pwP	13 54 41.1	+0.1
TUE	Stuetta	87.89	321	eP	P	13 54 25.1	-0.5
	comp=Z,19nm,0.9s						
BCLA	Clavier	87.89	325	⇑P	P	13 54 25.1	-0.1
	comp=Z,20nm,1.7s						
BCLA				⇓pP	pP	13 54 36.3	0.0
BCLA				⇑sP	sP	13 54 40.3	-0.1
D04E	Lakebay	87.96	38	P	P	13 54 27.4	+1.8
	baz=303						
UCC	Uccle	88.15	326	⇑P	P	13 54 26.4	-0.1
ECH	Echery	88.16	323	eP	P	13 54 26.2	-0.4
	comp=Z,24nm,1.2s						
ECH	Echery	88.16	323	eP	P	13 54 26.2	-0.4
ECH				pmax	pmax		
	comp=Z,24nm,1.2s						
SNF	Seneffe	88.36	326	⇓P	P	13 54 27.8	+0.4
E04D	Cinebar	88.42	39	P	P	13 54 29.8	+1.9
	baz=304						
DOU	Dourbes	88.45	325	⇑P	P	13 54 28.1	+0.2
	comp=Z,14nm,1.3s						
DOU				⇓pP	pP	13 54 38.9	0.0
DOU				⇑sP	sP	13 54 43.0	0.0
LON	Longmire	88.75	38	eP	P	13 54 28.9	-0.5
	comp=Z,7.1nm,0.9s						
LON	Longmire	88.75	38	eP	P	13 54 29.0	-0.5
LON				pmax	pmax		
	comp=Z,7.0nm,0.9s						
G03D	McMinnville, O	88.75	40	P	P	13 54 30.4	+0.9
	baz=303						
EKA	Eskdalemuir Ar	88.79	332	P	P	13 54 29.5	+0.1
	comp=Z,0.7nm,0.4s,baz=11,slow=5.1,SNR=6.5						
ESK	Eskdalemuir	88.83	332	i P	P	13 54 30.9	+1.3
SENIN	Lac Senin/Sane	89.13	321	eP	P	13 54 30.3	-1.1
	comp=Z,16nm,1.0s						
H04D	Lebanon	89.44	41	P	P	13 54 34.9	+2.2
	baz=304						
J01E	Myrtle Point	89.46	42	P	P	13 54 34.6	+1.8
	baz=303						
H04A	Detroit Lake	89.68	40	eP	P	13 54 33.5	-0.3
	comp=Z,28nm,1.4s						
I04A	Tendick Farm,	90.04	41	P	P	13 54 36.8	+1.3
	baz=304						
C09A	Chrisman Ranch	90.10	36	eP	P	13 54 36.2	+0.5
	comp=Z,17nm,1.0s						
D08A	Wollman Farm,	90.19	37	eP	P	13 54 36.9	+0.7
	comp=Z,16nm,1.1s						
BNI	Bardonecchia	90.23	321	eP	P	13 54 35.5	-1.0
	comp=Z,14nm,0.9s						
BNI	Bardonecchia	90.23	321	eP	P	13 54 35.5	-1.0
BNI				pmax	pmax		
	comp=Z,14nm,0.9s						
HAWA	Hanford	90.24	38	eP	P	13 54 36.9	+0.5
	comp=Z,25nm,1.4s						
CASY	Casey	90.27	185	eP	P	13 54 35.4	-0.3
	comp=Z,10nm,0.9s						
I05D	Terrebonne, OR	90.38	40	P	P	13 54 37.5	+0.4
	baz=304						
NEW	Newport	90.44	35	P	P	13 54 38.3	+1.0
	comp=Z,7.1nm,0.7s,baz=300,slow=4.7,SNR=3.7						
NEW	Newport	90.44	35	eP	P	13 54 37.7	+0.4
	comp=Z,24nm,1.1s						
NEW	Newport	90.44	35	eP	P	13 54 37.7	+0.4
NEW				pmax	pmax		
	comp=Z,24nm,1.1s						
NEW	Newport	90.44	35	P	P	13 54 37.6	+0.2
	baz=308						
E08A	Dider Farm, El	90.44	38	eP	P	13 54 37.1	-0.2
	comp=Z,24nm,1.4s						
J04D	Umpqua Nationa	90.53	41	P	P	13 54 38.8	+0.7
	baz=304						
PINE	Pine Mountain	90.92	41	eP	P	13 54 40.8	+0.9
	comp=Z,24nm,1.1s						
E09A	Wood Farm, Sta	90.94	37	eP	P	13 54 39.7	+0.1
	comp=Z,20nm,1.1s						
L04D	Klamath Falls	90.98	42	P	P	13 54 40.9	+0.8
	baz=304						
YBH	Yreka Blue Hor	91.00	43	P	P	13 54 41.5	+1.4
	comp=Z,2.6nm,1.0s,baz=56,slow=11,SNR=3.0						
J05D	Fort Rock, OR	91.03	41	P	P	13 54 41.1	+0.7
	baz=304						
K04D	Chiloquin, OR	91.09	42	P	P	13 54 42.4	+1.9
	baz=304						
G08A	Pilot Rock	91.21	39	eP	P	13 54 40.8	-0.3
	comp=Z,6.0nm,1.1s						
SSB	Saint Sauveur	91.33	322	eP	P	13 54 41.5	0.0
	comp=Z,25nm,1.1s						
SSB	Saint Sauveur	91.33	322	eP	P	13 54 41.5	0.0
SSB				pmax	pmax		
	comp=Z,25nm,1.1s						
N02D	Trinity Center	91.42	44	P	P	13 54 42.7	+0.7
	baz=304						
M04C	Macdoel	91.51	43	P	P	13 54 43.3	+0.8
	baz=304						
WALA	Waterton Lakes	91.60	33	eP	P	13 54 42.3	-0.5
	comp=Z,38nm,1.4s						
F10A	Beach Ranch, E	91.77	37	eP	P	13 54 43.3	-0.4
	comp=Z,20nm,1.5s						
O03E	Paynes Creek	92.36	44	P	P	13 54 47.8	+1.3
	baz=304						
MOD	Modoc Plateau	92.39	42	eP	P	13 54 46.0	-0.7
	comp=Z,9.5nm,0.9s						
BMO	Blue Mountains	92.41	38	eP	P	13 54 47.0	+0.4
	comp=Z,11nm,1.1s						
BMO	Blue Mountains	92.41	38	eP	P	13 54 47.0	+0.4
BMO				pmax	pmax		
	comp=Z,11nm,1.1s						
FFC	Flin Flon	92.87	24	eP	P	13 54 47.5	-0.9
	comp=Z,276nm,1.2s						
FFC	Flin Flon	92.87	24	eP	P	13 54 47.5	-0.9
FFC				pmax	pmax		
	comp=Z,276nm,1.2s						
MSO	Missoula	93.02	35	eP	P	13 54 49.1	-0.3
	comp=Z,5.3nm,1.0s						
MSO	Missoula	93.02	35	P	P	13 54 50.3	+0.9
	baz=310						
WVOR	Wild Horse Val	93.08	41	eP	P	13 54 49.5	-0.3
	comp=Z,9.7nm,1.1s						
WVOR	Wild Horse Val	93.08	41	eP	P	13 54 49.5	-0.3
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KEST	Kesra	93.70	312	P	P	13 54 53.8	+1.0
	comp=Z,7.2nm,0.9s,baz=279,slow=2.6,SNR=5.6						
KEST	Kesra	93.70	312	eP	P	13 54 53.8	+1.0
	comp=Z,12nm,1.0s						
PAHR	Pah Rah Range	94.22	43	eP	P	13 54 54.5	-0.6
	comp=Z,6.6nm,1.0s						
EGMT	Eagleton	94.36	32	P	P	13 54 55.0	-0.5
	baz=313						
CMB	Columbia Colle	94.55	45	eP	P	13 54 55.9	-0.6
	comp=Z,7.6nm,1.1s						
CMB	Columbia Colle	94.55	45	eP	P	13 54 55.9	-0.6
CMB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HLID	Hailey	94.84	38	eP	P	13 54 57.7	-0.2
	comp=Z,12nm,1.6s						
HLID	Hailey	94.84	38	P	P	13 54 58.1	+0.2
	baz=309						
BOZ	Bozeman (W)	95.04	35	P	P	13 54 59.3	+0.5
	baz=312						
RYN	Ryan	95.40	44	eP	P	13 55 00.1	-0.4
	comp=Z,5.3nm,1.0s						
KVN	Kaiserville	95.42	43	eP	P	13 55 00.8	+0.1
	comp=Z,3.9nm,1.0s						
KVN	Kaiserville	95.42	43	eP	P	13 55 00.8	+0.1
KVN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NV01	Mina Array Sit	95.65	44	eP	P	13 55 03.0	+1.2
NVAR	Mina Array Bea	95.65	44	P	P	13 55 03.0	+1.2
	comp=Z,1.5nm,0.6s,baz=310,slow=5.5,SNR=18						
ELK	Elko	96.13	40	P	P	13 55 05.4	+1.4
	comp=Z,0.3nm,0.3s,baz=348,slow=3.6,SNR=3.5						
H17A	Grant Village	96.40	35	P	P	13 55 07.3	+2.2
	baz=312						
CWC	Cottonwood Cre	96.97	45	P	P	13 55 08.0	+0.3
	baz=306						
R11A	Troy Canyon, C	97.41	43	P	Pdif	13 55 10.5	+0.7
	baz=308						
MPMC	Manual Prospec	97.58	45	P	Pdif	13 55 11.1	+0.5
	baz=307						
FURC	Furnace Creek,	97.74	45	P	Pdif	13 55 11.6	+0.6
	baz=307						
LRMC	Laurel Mtn Rad	97.80	46	P	Pdif	13 55 12.6	+1.1
	baz=306						
TPNV	Topopah Spring	97.84	44	P	Pdif	13 55 13.1	+1.4
	baz=308						
PD31	Pinedale Array	98.04	36	eP	Pdif	13 55 13.2	+0.6
PDAR	Pinedale Array	98.04	36	P	Pdif	13 55 13.2	+0.6
	comp=Z,0.1nm,0.4s,baz=347,slow=3.7,SNR=2.9						
GSC	Goldstone, Bar	98.48	46	P	Pdif	13 55 14.6	+0.1
	baz=307						
ESDC	Sonseca Array	99.73	321	P	Pdif	13 55 19.1	-0.8
	comp=Z,0.2nm,0.4s,baz=45,slow=3.1,SNR=4.1						
TOA1	Torodi Ar. Sit	111.81	296	ePKiKP	PKiKP	14 00 11.2	-0.1
TORD	Torodi Ar. Bea	111.81	296	PKiKP	PKiKP	14 00 11.2	-0.1
	comp=Z,0.6nm,0.6s,baz=43,slow=1.2,SNR=4.3						
SDV	Santo Domingo	144.95	24	PKP	PKPbc	14 01 13.3	+0.3
	comp=Z,19nm,0.9s,baz=335,slow=3.3,SNR=10						
SDV	Santo Domingo	144.95	24	ePKPbc	PKPab	14 01 11.9	-1.2
PCRV	Puerto La Cruz	145.46	13	PKPbc	PKPbc	14 01 13.2	-1.3
	comp=Z,10nm,0.6s,baz=144,slow=1.1,SNR=5.2						
ROSC	El Rosal	146.97	33	PKPbc	PKPbc	14 01 18.8	-0.8
	comp=Z,4.0nm,0.5s,baz=41,slow=6.8,SNR=6.2						
MDP	Montagnes des	150.96	351	PKPbc	PKPbc	14 01 29.4	+0.2
	comp=Z,8.7nm,0.9s,baz=170,slow=1.7,SNR=5.0						
LPAZ	La Paz	167.25	56	PKP	PKPdf	14 01 44.8	+1.8
	comp=Z,1.3nm,1.0s,baz=2.5,slow=3.3,SNR=4.3						
BDFB	Brasilia	168.22	312	PKPab	PKPab	14 02 50.8	-0.6
	comp=Z,1.9nm,0.5s,baz=22,slow=5.4,SNR=3.1						
SIV	San Ignacio	171.40	26	PKP	PKPdf	14 01 45.8	+1.0
	comp=Z,1.1nm,0.8s,baz=201,slow=4.7,SNR=5.0						
SIV				PKPab	PKPab	14 03 05.1	-0.1
	comp=Z,0.8nm,0.7s,baz=16,slow=7.0,SNR=2.4						
CPUP	Villa Florida	177.45	176	PKPab	PKPab	14 03 32.9	+1.2
	comp=Z,3.7nm,0.9s,baz=174,slow=2.7,SNR=4.4						

KRSC 15 13:42:25.1±1.2, 52°.96N×160°.64E, h49^{km}±12^{km}, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.40	291	i P	Pn	13 42 36.4	+1.2
SPN				eS	Sn	13 42 42.4	+0.1
NLC	Nalytchevo	0.81	286	eP	Pn	13 42 41.5	+1.2
NLC				eS	Sn	13 42 51.6	+0.3
SDLR	Sedlovina	1.11	288	i P	Pn	13 42 46.4	+2.0
UGLR	Uglovaya	1.12	284	eP	Pn	13 42 46.5	+1.9
UGLR				eS	Sn	13 43 00.3	+1.3
DALK	Dalny	1.14	275	eP	Pn	13 42 46.1	+1.4
DALK				eS	Sn	13 43 00.0	+0.7
SMAR	Somma	1.15	286	i P	Pn	13 42 46.8	+1.7
SMAR				eS	Sn	13 43 00.6	+0.8
AVH	Avacha	1.19	286	eP	Pn	13 42 47.7	+2.3
AVH				eS	Sn	13 43 02.7	+2.2
KRER	Koryakskii	1.19	288	eP	Pn	13 42 47.8	+2.2
KRER				eS	Sn	13 43 02.6	+1.8
PET	Petropavlovsk	1.20	274	i P	Pn	13 42 47.2	+1.7
KOK	Koryaka	1.25	286	eP	Pn	13 42 48.6	+2.3
KRX	Arik	1.26	289	eP	Pn	13 42 48.3	+1.8
KRX				eS	Sn	13 43 03.1	+0.6
RUS	Russkaya	1.40	249	eP	Pn	13 42 50.1	+1.9
RUS				eS	Sn	13 43 06.8	+1.4
KRMR	Karymshinskiy	1.52	266	eP	Pn	13 42 51.9	+2.0
KRMR				eS	Sn	13 43 09.6	+1.0

MKZ	Mys Kozlova	1.73	22	eP	Pn	13 42 55.5	+2.8
MKZ				eS	Sn	13 43 15.9	+2.3
ASAK	Asacha	1.76	252	eP	Pn	13 42 56.3	+3.0
GNL	Ganaly	1.78	296	eP	Pn	13 42 56.4	+2.9
GNL				eS	Sn	13 43 17.4	+2.4
KDTR	Khodutka, Kamc	1.94	235	eP	Pn	13 42 58.2	+2.5
KDTR				eS	Sn	13 43 20.0	+1.1
APC	Apacha	2.11	271	eP	Pn	13 43 01.5	+3.6
APC				eS	Sn	13 43 26.4	+3.6
KZV	Kizimen	2.17	355	eP	Pn	13 43 02.5	+3.6
KZV				eS	Sn	13 43 27.5	+2.8
TUMD	Tumrok D	2.26	357	eP	Pn	13 43 03.0	+3.0
TUMD				eS	Sn	13 43 28.4	+1.8
TUMR	Tumrok	2.35	353	eP	Pn	13 43 05.3	+4.0
KBTR	Krutoberegovo	3.50	20	eP	Pn	13 43 20.4	+3.5
BKI	Bering	3.87	52	eP	Pn	13 43 25.3	+3.3
BKI				eS	Sn	13 44 06.6	+0.6

MAN 15 13:43:42.4, 14°.54N×122°.68E, h84^{km}, mb4.2, ML3.0, MS2.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAUP	Cauayan	2.53	341	eP	Pn	13 44 21.9	+0.4
SJMP	San Jose	2.56	216	eP	Pn	13 44 22.5	+0.6
MSLP	Maasin	4.87	154	eP	Pn	13 44 55.4	+2.1
KCP	Kidapawan	7.85	162	⇑eP	Pn	13 45 37.0	+3.0
KCP				i S		13 45 51.6	

BJI 15 13:45:35.7±0.0, 22°.08N×100°.84E, h10^{km}, ML3.7/5, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	3.50	30	Pg	Pg	13 46 40.3	-2.4
KMI				Sg	Sg	13 47 27.4	-0.6
KMI				smax	smax		
	comp=N,43nm,1.0s						
KMI				smax	smax		
	comp=E,28nm,0.5s						
PHRA	Phrae	3.61	189	P	Pn	13 46 31.1	-0.6
	15nm,1.2s						

ISCJB ***15*** *13:47:52.3±0.5, 69°.95N±0°.07×15°.4W±0°.2, h10^{km}, mb4.2/6, Error ellipse: s-maj=9.7km s-min=7.7km az=4.4*

IDC ***15*** *13:47:53.2±2.0, 69°.98N×15°.61W, h0^{km}, mb4.0/4, mb1 4.0/8, mb1mx3.6/77, mbtmp4.0/8, ML3.2/4, Error ellipse: s-maj=47.4km s-min=23.7km az=122.0*

NEIC ***15*** *13:47:54.3±0.4, 69°.96N×15°.44W, h10^{km}, mb4.6/6, Error ellipse: s-maj=8.2km s-min=6.7km az=185.0*

ISC 15 13:47:54.2±0.6, 70°.01N±0°.07×15°.28W±0°.06, h10^{km}, n23, σ1^{s}53/25, mb4.4/6, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCO	Scoresbysund	2.32	285	ePn	Pn	13 48 30.7	-1.6
JMIC	Jan Mayen	2.48	63	Pn	Pn	13 48 32.9	-1.6
	6.1nm,0.3s,baz=287,slow=20,SNR=5.6						
JMIC				Sn	Sn	13 49 00.2	-4.6
	2.0nm,0.3s,baz=68,slow=19,SNR=3.7						
BORG	Borgarnes	5.77	207	Pn	Pn	13 49 18.6	-1.1
	4.0nm,0.3s,baz=14,slow=8.8,SNR=12						
BORG	Borgarnes	5.77	207	ePn	Pn	13 49 18.2	-1.5
SUMG	Summit	7.85	300	ePn	Pn	13 49 46.5	-2.1
SPA0	Spitsbergen Ar	11.71	32	ePn	Pn	13 50 42.7	+1.7
SPITS	Spitsbergen Ar	11.71	32	Pn	Pn	13 50 42.9	+1.9
	baz=250,slow=12,SNR=5.1						
NRS	Narsarsuaq	15.10	249	ePn	Pn	13 51 27.5	+0.2
	40nm,0.8s						
HFS	Hagfors	15.53	115	Pn	Pn	13 51 32.6	-0.3
	0.0nm,0.3s,baz=324,slow=16,SNR=2.0						
TULEG	Thule	16.11	317	ePn	Pn	13 51 41.2	+0.9
	69nm,1.8s						
DSB	Dublin	17.31	162	ePn	Pn	13 51 54.6	-0.9
	25nm,1.5s						
FIA0	FINESS Array S	18.64	97	eP	Pn	13 52 12.5	+0.6
FINES	FINESS Array B	18.64	97	P	Pn	13 52 12.5	+0.6
	0.1nm,0.3s,baz=323,slow=11,SNR=5.2						
GEC2	GERESS Array S	25.35	132	eP	P	13 53 20.7	-0.3
	39nm,0.9s						
GEC2				eS	S	13 57 47.7	+0.6
GERES	GERESS Array B	25.35	132	P	P	13 53 22.8	+1.7
	0.8nm,0.3s,baz=334,slow=8.9,SNR=5.5						
KURBB	Kurchatov Arra	44.82	64	P	P	13 56 09.6	+1.9
	1.1nm,0.2s,baz=331,slow=7.4,SNR=7.0						
MK32	Makanchi Array	49.37	64	eP	P	13 56 43.8	+0.4
MKAR	Makanchi Array	49.37	64	P	P	13 56 43.8	+0.4
	1.3nm,0.9s,baz=342,slow=9.1,SNR=3.6						
N23A	Red Feather La	52.46	287	eP	P	13 57 07.0	+0.1
	12nm,1.5s						
TOA1	Torodi Ar. Sit	57.81	160	eP	P	13 57 45.2	-0.3
TORD	Torodi Ar. Bea	57.81	160	P	P	13 57 45.2	-0.3
	0.8nm,0.9s,baz=334,slow=9.9,SNR=3.6						
R11A	Troy Canyon, C	57.87	294	eP	P	13 57 46.1	+0.2
	7.8nm,1.6s						
QSPA	South Pole Qui	159.95	180	PKPab	PKPab	14 08 32.5	+1.1
	2.8nm,1.0s,baz=170,slow=3.8,SNR=4.8						

ISCJB ***15*** *13:53:47.7±0.4, 61°.59N±0°.01×141°.09W±0°.04, h4^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=2.4km az=177.7*

AEIC ***15*** *13:53:48.1, 61°.55N×141°.07W, h11^{km}, ML3.3, ML3.5(OTT)*

NEIC ***15*** *13:53:48.1±0.0, 61°.55N×141°.07W, h11^{km}, ML3.3(AEIC), ML3.5(OTT), After AEIC.*

PGC ***15*** *13:53:49.7, 61°.56N×141°.09W, h1^{km}, ML3.5/11, 211km Wnw of Haines Jct., Yt Southern Alaska*

ISC 15 13:53:48.5±0.9, 61°.56N±0°.02×141°.05W±0°.02, h13^{km}±7^{km}, n82, σ1^{s}71/115, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.25	23	P	Pg	13 53 53.9	-0.1
YUK2				S	Sg	13 53 57.7	+0.2
YUK3	Moose Creek	0.35	52	P	Pg	13 53 55.8	0.0
YUK3				S	Sg	13 54 00.8	0.0
YUK1	Sand Pete Hill	0.65	22	P	Pg	13 54 00.8	-0.4
YUK1				S	Sg	13 54 09.6	-0.1
PTPK	Patty Peak	0.78	242	P	Pg	13 54 03.3	-0.4
PTPK				S	Sg	13 54 13.6	-0.3
BALM	Baldy	0.82	231	ePg	Pg	13 54 03.4	-0.9
BALM	Baldy	0.82	231	P	Pg	13 54 03.5	-0.9
BALM				S	Sg	13 54 14.3	-0.8
BVCY	Beaver Creek	0.86	6	P	Pg	13 54 04.9	-0.3
BVCY				S	Sg	13 54 16.6	0.0
KIAG	Kiagna River	0.90	226	P	Pg	13 54 04.9	-1.0
KIAG				S	Sg	13 54 17.3	-0.4
TABL	Table Mountain	1.12	182	P	Pg	13 54 09.5	-0.7
TABL				S	Sn	13 54 25.1	-0.4
YUK4	Talbot Arm	1.17	99	P	Pn	13 54 11.0	+0.2
YUK4				S	Sn	13 54 27.2	+0.5
YUK6	Outpost Mounta	1.44	114	Pn	Pb	13 54 15.1	-0.2
YUK6				Sg	Sg	13 54 35.6	+0.9
SAMH	Samovar Hills	1.44	175	Pn	Pg	13 54 15.6	-0.5
SAMH				Sg	Sg	13 54 35.8	+1.0
MESA	MESA	1.45	198	Pn	Pg	13 54 16.1	-0.3
MESA				Sg	Sg	13 54 35.9	+0.6
CHX	Chaix Hills	1.50	181	ePn	Pg	13 54 17.3	-0.1
PCA	Pinnacle	1.52	165	ePn	Pg	13 54 16.9	-0.7
PCA	Pinnacle	1.52	165	Pn	Pg	13 54 16.8	-0.9
PCA				Sg	Sg	13 54 37.1	-0.2
BCA3	Beaver Creek A	1.55	347	ePn	Pn	13 54 16.8	+0.9
YUK5	Granite Creek	1.59	104	Pn	Pb	13 54 17.5	-0.4
YUK5				Sg	Sg	13 54 39.0	-0.8
YUK7	Dusty Glacier	1.75	125	Pn	Pg	13 54 21.1	-1.0
YUK7				Sg	Sg	13 54 45.1	+0.3
BCPM	Bancas Point	1.75	156	ePn	Pb	13 54 20.2	-0.3
HYT	Haines Junctio	1.87	112	ePn	Pb	13 54 22.9	+0.3
HYT	Haines Junctio	1.87	112	Pn	Pb	13 54 22.1	-0.4
HYT				Sg	Sg	13 54 47.3	-1.2
MENT	Mentasta	1.87	319	ePn	Pb	13 54 22.3	-0.2
PS12	TAPS Pump St12	1.97	269	ePn	Pb	13 54 24.0	-0.1
HMT	Hamilton	1.99	233	ePn	Pb	13 54 24.9	+0.3
PNL	Peninsula	2.06	156	ePn	Pb	13 54 25.8	0.0
PNL	Peninsula	2.06	156	Pn	Pb	13 54 25.9	+0.1
PNL				Sg	Sg	13 54 53.4	-1.4
YKU2	Yakutat	2.16	161	ePn	Pb	13 54 28.2	+0.7
EYAK	Cordova Ski Ar	2.50	248	ePn	Pb	13 54 32.4	-0.9
PAX	Paxson	2.51	306	ePn	Pb	13 54 32.6	-0.8
PAX	Paxson	2.51	306	Pn	Pb	13 54 32.6	-0.8
DOT	Dot Lake	2.52	328	ePn	Pn	13 54 30.1	+1.0
DOT	Dot Lake	2.52	328	Pn	Pn	13 54 30.0	+0.9
DOT				Pg	Pb	13 54 35.1	+1.5
DOT				Sg	Sg	13 55 07.6	-1.9
DAWY	Dawson	2.63	16	ePn	Pn	13 54 31.8	+1.2
DAWY	Dawson	2.63	16	Pn	Pn	13 54 31.9	+1.3
DAWY				Pg	Pb	13 54 36.7	+1.3
DAWY				Sg	Sb	13 55 10.4	+2.7
FID	Port Fidalgo	2.76	255	ePn	Pb	13 54 36.3	-1.3
FID				ePn	Pn	13 54 36.4	+4.0
RIDG	Independent Ri	2.81	323	ePn	Pn	13 54 34.5	+1.5
GLI	Glacier Island	3.00	260	ePn	Pn	13 54 38.8	+3.0
SCM	Sheep Creek Mo	3.01	278	ePn	Pn	13 54 38.5	+2.7
PLBC	Pleasant Camp	3.13	130	Pn	Pn	13 54 39.4	+1.9
PLBC				Sg	Sg	13 55 28.0	-1.0
EGAK	Eagle	3.23	359	ePn	Pn	13 54 40.3	+1.5
DHY	Denali Highway	3.32	300	ePn	Pn	13 54 40.4	+0.1
SML	Sawmill	3.48	277	ePn	Pn	13 54 45.5	+3.1
SKAG	Skagway	3.52	124	ePn	Pn	13 54 45.4	+2.5
KNK	Knik Glacier	3.56	271	ePn	Pn	13 54 45.6	+2.2
PMR	Palmer	3.87	274	ePn	Pn	13 54 48.6	+1.0
HDA	Harding Lake	3.93	319	ePn	Pn	13 54 48.9	+0.4
HDA	Harding Lake	3.93	319	P	Pn	13 54 49.1	+0.6
	baz=134						
HDA				S	Sn	13 55 35.6	+1.3
	baz=134						
IL1	Eielson Array	4.17	323	ePn	Pn	13 54 52.9	+1.1
ILB	Eielson Array	4.17	323	ePn	Pn	13 54 51.6	-0.1
RC01	Rabbit Creek A	4.21	267	ePn	Pn	13 54 54.9	+2.5
MCK	McKinley	4.24	304	ePn	Pn	13 54 57.0	+4.2
BESE	Bessie Mountai	4.31	131	ePn	Pn	13 54 55.9	+2.2
BESE	Bessie Mountai	4.31	131	Pn	Pn	13 54 55.7	+2.0
BESE				Sg	Sg	13 56 04.2	-2.4
WRH	Wood River Hil	4.34	315	ePn	Pn	13 54 53.8	-0.3
CCB	Clear Creek Bu	4.36	318	ePn	Pn	13 54 53.5	-0.9
SEW	Seward	4.37	254	ePn	Pn	13 54 56.9	+2.4
PRP	Porcupine Dome	4.45	335	ePn	Pn	13 54 56.6	+0.9
COLA	College	4.53	320	ePn	Pn	13 54 58.4	+1.7
TCOL	CIGO, UAF Yank	4.54	320	P	Pn	13 54 56.9	+0.2
	baz=134						
TCOL				S	Sn	13 55 50.0	+0.7
	baz=134						
POKR	Poker Plat Res	4.59	324	P	Pn	13 54 58.2	+0.7
	baz=138						
POKR				S	Sn	13 55 50.5	0.0
	baz=138						
BWN	Browne	4.66	308	ePn	Pn	13 55 00.2	+1.7
KTH	Kantishna Hill	4.99	298	ePn	Pn	13 55 04.1	+1.0
BRSE	Bradley Lake S	5.11	253	ePn	Pn	13 55 06.5	+1.8
EPYK	Eagle Plains	5.19	20	ePn	Pn	13 55 07.4	+1.6
EPYK	Eagle Plains	5.19	20	P	Pn	13 55 07.1	+1.3
	baz=204						
EPYK				S	Sn	13 56 06.2	+0.7
	baz=204						
BPAW	Bear Paw Mtn.	5.22	304	ePn	Pn	13 55 09.3	+3.1
FYU	Fort Yukon	5.35	342	ePn	Pn	13 55 09.9	+2.0
PPLA	Purkeypile	5.38	289	ePn	Pn	13 55 09.4	+0.9
CNPM	China Poot	5.43	252	ePn	Pn	13 55 11.3	+2.3
BM3	Burnt Mountain	6.08	347	ePn	Pn	13 55 20.1	+2.0
DLBC	Dease Lake	6.35	115	Sg	Sg	13 57 08.2	-4.0
COLD	Coldfoot	6.93	329	ePn	Pn	13 55 31.9	+2.2
COLD	Coldfoot	6.93	329	Pn	Pn	13 55 31.4	+1.8
COLD				Sn	Sn	13 56 46.1	-2.1
COLD				Sg	Sg	13 57 23.8	-6.8
KDAK	Kodiak Island	6.96	242	ePn	Pn	13 55 32.3	+2.3
IM3	Indian Mountai	7.16	314	ePn	Pn	13 55 35.1	+2.3
INK	Inuvik	7.49	22	ePn	Pn	13 55 37.9	+0.8
INK	Inuvik	7.49	22	Pn	Pn	13 55 38.0	+0.8
INK				Sn	Sn	13 56 58.1	-3.6
OHAK	Old Harbor	7.61	241	ePn	Pn	13 55 40.8	+1.9
TOLK	Toolik Lake Re	7.96	337	ePn	Pn	13 55 46.4	+2.6
TOLK	Toolik Lake Re	7.96	337	P	Pn	13 55 45.4	+1.6
	baz=149						
TOLK				S	Sn	13 57 14.9	+1.4
	baz=149						
FNBB	Fort Nelson	9.36	99	Pn	Pn	13 56 04.0	+1.0
FNBB				Sn	Sn	13 57 43.8	-4.1

MAN 15 13:58:08.2, 4°.58N×124°.90E, h34^{km}, mb4.3, ML3.1, MS2.8, 2C, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.72	28	eP	Pn	13 58 35.9	+0.2
DDMP				eS	Sn	13 58 57.0	+0.6
SKMP	Bagumbayan, Su	1.96	349	eP	Pn	13 58 40.0	+1.0
SKMP				eS	Sn	13 59 03.1	+0.6
KCP	Kidapawan	2.42	4	⇑iP	Pn	13 58 48.0	+2.5
KCP				i S	Sb	13 59 17.6	-3.1
CTBH	Cotabato--PC H	2.71	346	⇑iP	Pn	13 58 52.0	+2.7
IPIL	Ipil	3.94	324	eP	Pn	13 59 07.4	+1.1

GCG 15 13:58:39.6±1.0, 16°.29N×92°.34W, h35^{km}±700^{km}, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	Santiaguito 3,	1.73	155	eP	Pn	13 59 08.4	+1.0
STG3				eS	Sn	13 59 29.6	+1.2
FUG	Fuego 3	2.33	142	eS	Sn	13 59 45.0	+2.0
NBG	Las Nubes	2.56	131	eP	Pn	13 59 19.3	+0.5

IDC ***15*** *13:59:03.5±0.4, 15°.40S×173°.07W, h0^{km}, mb5.3/29, mb1 5.4/29, mb1mx5.3/42, mbtmp5.3/29, MS5.3/4, Ms1 5.3/4, ms1mx4.8/41, Error ellipse: s-maj=15.8km s-min=11.7km az=142.0*

NEIC ***15*** *13:59:03.0±0.0, 15°.25S×172°.68W, h11^{km}, Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M_{rr}3.69; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-3.60; $M_{r\theta}$-2.75; $M_{\theta\phi}$-2.60; $M_{\phi r}$2.47; Best double couple: $M_0$5.80000×10^{17} NP1:ϕ_s356.00000°, δ61.00000°, λ50.00000°. NP2:ϕ_s237.00000°, δ48.00000°, λ140.00000°. Principal axes: T 6.3200, Plg54.0000°, Azm214.0000°; N -1.2200, Plg34.0000°, Azm18.0000°; P -5.1000, Plg7.0000°, Azm113.0000°;*

NEIC ***15*** *13:59:04.6±1.3, 15°.40S×173°.09W, h15^{km}, mb5.5/241, ME5.0, MW5.8, MW5.8 Error ellipse: s-maj=13.8km s-min=12.3km az=226.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^{17}Nm; M_{rr}2.47; $M_{\theta\theta}$-4.11; $M_{\phi\phi}$1.64; $M_{r\theta}$-0.05; $M_{\theta\phi}$-4.90; $M_{\phi r}$0.65; Best double couple: $M_0$6.10000×10^{17} NP1:ϕ_s284.00000°, δ78.00000°, λ170.00000°. NP2:ϕ_s16.00000°, δ80.00000°, λ12.00000°. Principal axes: T 4.6100, Plg15.0000°, Azm241.0000°; N 2.3100, Plg75.0000°, Azm54.0000°; P -6.9300, Plg2.0000°, Azm150.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

MOS ***15*** *13:59:04.6±1.1, 15°.42S×173°.02W, h22^{km}, mb5.5/60 Error ellipse: s-maj=8.4km s-min=7.2km az=64.3*

ISCJB ***15*** *13:59:05.6±0.1, 15°.37S±0°.02×173°.06W±0°.02, h29^{km}, mb5.4/278, MS6.4/32, Error ellipse: s-maj=4.0km s-min=2.2km az=44.3*

BJI ***15*** *13:59:06.2±0.0, 15°.06S×172°.90W, h23^{km}, mb5.4/42, mB5.8/45, Ms6.5/29, Ms7 6.2/30*

GCMT ***15*** *13:59:11.6±0.3, 15°.23S±0°.02×172°.74W±0°.02, h21^{km}, MW5.8/46, Moment Tensor Solution. s45,c69; s46,c86; Duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}5.44±.16; $M_{\theta\theta}$-2.50±.14; $M_{\phi\phi}$-2.94±.14; $M_{r\theta}$-0.30±.26; $M_{\theta\phi}$-2.91±.10; $M_{\phi r}$1.92±.28; Best double couple: $M_0$5.87000×10^{17} NP1:ϕ_s28.00000°, δ53.00000°, λ72.00000°. NP2:ϕ_s237.00000°, δ41.00000°, λ113.00000°. Principal axes: T 5.9680, Plg74.0000°, Azm244.0000°; N -0.1960, Plg14.0000°, Azm40.0000°; P -5.7720, Plg6.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 15 13:59:06.7±0.2, 15°.55S±0°.05×172°.97W±0°.04, h29^{km}, n972, σ1^{s}42/962, mb5.4/278, MS6.3/32, 69C-15D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.00	35	eP	Pn	13 59 31.5	-7.1
AFI	Afiamalu	2.00	35	eP	Pn	13 59 31.5	-7.1
NIUE	Niue	4.55	141	ePn	Pn	14 00 12.7	-1.0
NIUE	Niue	4.55	141	P	Pn	14 00 12.6	-1.1
	baz=4.6,SNR=257						
FUNA	Funafuti	10.36	311	ePn	Pn	14 01 29.4	-4.1
KNTN	Kanton	12.76	6	ePn	Pn	14 01 58.7	-7.5
RAR	Rarotonga	13.73	116	Pn	Pn	14 02 17.9	-1.6
	9.1nm,0.3s,baz=254,slow=8.0,SNR=44						
RAR				Sn	Sn	14 04 38.7	-12
	1.3nm,0.3s,baz=143,slow=20,SNR=3.3						
RAR				LR	LR	14 06 54.1	
	comp=Z,12μm,20.1s,baz=298,slow=34						
RAR	Rarotonga	13.73	116	ePn	Pn	14 02 15.7	-3.8
RAR				e		14 04 38.7	
MARNC	Mare, Loyalty	18.95	249	ePn	Pn	14 03 26.9	+0.5
	3μm,0.9s						
PINNC	Pines Island,	19.78	246	eP	Pn	14 03 36.1	-0.3
	604nm,0.8s						
DZM	Mont Dzumac	20.53	248	P	P	14 03 43.2	+0.3
	39nm,0.7s,baz=87,slow=16,SNR=16						
DZM				LR	LR	14 10 19.3	
	comp=Z,12μm,21.0s,baz=80,slow=33						
DZM	Mont Dzumac	20.53	248	eP	Pn	14 03 44.1	-1.1
	378nm,0.8s						
ONTNC	Ouen Toro	20.58	248	eP	P	14 03 42.1	-1.3
	604nm,0.8s						
PAE	Paea	22.51	99	eP	P	14 04 04.8	+0.6
	11nm,1.0s						
PAE	Paea	22.51	99	eT	T	14 26 46.2	
	20nm,0.4s						
PPT	Papeete	22.51	98	P	P	14 04 05.9	+1.6
	88nm,0.9s,baz=6.3,slow=9.2,SNR=3.8						
PPT				LR	LR	14 11 30.6	
	comp=Z,6μm,18.0s,baz=270,slow=33						
PPT2	Papeete2	22.51	98	eP	P	14 04 05.2	+0.9
	131nm,1.3s						
PPT2				eS	S	14 08 04.2	-5.6
	4μm,23.8s						
PPT2				eLQ	LQ	14 08 26.0	
	25μm,27.2s						
PPT2				eLR	LR	14 09 23.0	
	comp=Z,15μm,25.0s,baz=265						
PPT2	Papeete2	22.51	98	eT	T	14 26 47.3	
	26nm,0.4s						
TIAR	Tiarei	22.73	98	eP	P	14 04 07.0	+0.4
	21nm,0.8s						
TIAR	Tiarei	22.73	98	eT	T	14 27 02.9	
	15nm,0.4s						
TVO	Taravao	22.83	99	eT	T	14 27 10.7	
	10nm,0.3s						
OUZ	Omahuta	23.00	209	eP	P	14 04 09.9	+0.8
	240nm,1.1s						
OUZ	Omahuta	23.00	209	P	P	14 04 10.5	+1.4
GRZ	Great Barrier	23.05	204	P	P	14 04 12.4	+2.7
MXZ	Matakaoa Point	23.25	198	eP	P	14 04 13.5	+1.8
	592nm,1.8s						
MXZ	Matakaoa Point	23.25	198	P	P	14 04 12.4	+0.7
WCZ	Waipu Caves	23.25	207	P	P	14 04 14.4	+2.7
KUZ	Kuaotunu	23.38	203	P	P	14 04 15.9	+2.9
WMGZ	Waiomatatini S	23.45	197	P	P	14 04 19.0	+5.3
WMGZ				S	S	14 08 25.1	-0.2
TBI	Tubuai	23.46	113	eS	S	14 08 24.2	-1.6
	3μm,26.8s						
TBI				eLQ	LQ	14 08 52.9	
	18μm,27.8s						
TBI				eLR	LR	14 09 52.0	
	comp=Z,15μm,26.8s,baz=286						
TBI	Tubuai	23.46	113	eT	T	14 28 10.3	
	68nm,0.3s						
HAZ	Te Kaha	23.58	199	P	P	14 04 17.2	+2.2
PKGZ	Pakihiroa	23.62	198	P	P	14 04 20.0	+4.6
PKGZ				S	S	14 08 21.7	-6.4
WIAZ	Waiheke Island	23.66	204	P	P	14 04 18.7	+3.1
PUZ	Puketiti	23.73	197	P	P	14 04 20.4	+4.0
RUGZ	Raukumara Rang	23.81	199	P	P	14 04 22.1	+4.8
RUGZ				S	S	14 08 21.3	-10
ETAZ	East Tamaki Re	23.88	205	P	P	14 04 21.4	+3.6
TWGZ	Tauwhareparae	23.91	198	P	P	14 04 22.2	+4.1
MKAZ	Moumakai	23.91	204	P	P	14 04 21.4	+3.3
WTAZ	Waiatarua	24.00	205	P	P	14 04 22.4	+3.4
TGRZ	Tauranga	24.06	201	P	P	14 04 23.7	+4.3
OPRZ	Ohinepanea	24.06	201	P	P	14 04 21.8	+2.4
CNGZ	Carnagh Statio	24.13	197	P	P	14 04 25.4	+5.3
MWZ	Matawai	24.19	198	P	P	14 04 24.0	+3.2
TKGZ	Te Karaka	24.19	198	P	P	14 04 23.4	+2.7
PMOR	Pomariorio Ree	24.20	92	eT	T	14 28 47.9	
	16nm,0.3s						
URZ	Urewera	24.25	199	P	P	14 04 22.6	+1.4
	71nm,0.4s,baz=16,slow=5.2,SNR=34						
URZ	Urewera	24.25	199	eP	P	14 04 22.1	+0.9
	255nm,1.1s						
URZ	Urewera	24.25	199	P	P	14 04 22.8	+1.6
KMRZ	Kaimai	24.28	202	P	P	14 04 25.9	+4.3
TOZ	Tahuroa Road	24.33	203	P	P	14 04 25.0	+3.0
RAGZ	Rawiri	24.38	199	P	P	14 04 26.1	+3.6
NGRZ	Ngongotaha	24.42	201	P	P	14 04 29.0	+6.1
VAH	Vaihoa	24.43	93	eP	P	14 04 22.7	-0.4
	127nm,1.0s						
VAH	Vaihoa	24.43	93	eT	T	14 29 05.4	
	28nm,0.3s						
RIGZ	Rimuhau	24.47	198	P	P	14 04 28.1	+4.9
MUGZ	Murupara	24.56	200	P	P	14 04 27.3	+3.2
SNGZ	Shannon Statio	24.66	198	P	P	14 04 28.1	+3.1
TLZ	Tolley Road	24.85	202	P	P	14 04 30.2	+3.4
RAHZ	Arahi	24.86	199	P	P	14 04 29.9	+3.1
MTHZ	Maungataniwha	24.88	199	P	P	14 04 31.1	+4.1
HIZ	Hauiti	25.26	203	eP	P	14 04 31.0	+0.6
	140nm,0.8s						
HIZ	Hauiti	25.26	203	P	P	14 04 34.4	+4.0
BKZ	Black Stump Fm	25.28	199	eP	P	14 04 31.7	+1.1
	53nm,0.8s						
BKZ	Black Stump Fm	25.28	199	P	P	14 04 31.7	+1.1
MCHZ	McNeill Hill	25.47	199	P	P	14 04 35.2	+3.0
BFZ	Birch Farm	26.74	198	eP	P	14 04 46.8	+3.0
	181nm,0.8s						
HNR	Honiara	27.11	280	P	P	14 04 49.0	+1.6
	190nm,0.8s,baz=207,slow=3.7,SNR=14						
HNR				LR	LR	14 14 06.8	
	comp=Z,8μm,18.1s,baz=124,slow=34						
HNR	Honiara	27.11	280	P	P	14 04 49.0	+1.6
HNR	Honiara	27.11	280	eP	P	14 04 49.0	+1.6
HOWZ	Holdsworth Sta	27.16	199	P	P	14 04 49.1	+1.5
OGWZ	Otaki Gorge	27.20	200	P	P	14 04 49.5	+1.6
DUWZ	D'Urville Isla	27.62	202	P	P	14 04 52.7	+1.0
DUWZ	D'Urville Isla	27.62	202	P	P	14 04 52.6	+1.0
WEL	Wellington	27.75	200	P	P	14 05 00.2	+7.4
SNZO	South Karori	27.80	200	eP	P	14 04 54.0	+0.7
	143nm,0.9s						
TCW	Tory Channel	27.86	201	P	P	14 04 58.5	+4.7
QRZ	Quartz Range	28.16	204	P	P	14 04 59.3	+2.8
TUWZ	Tuamarina	28.16	201	P	P	14 04 58.0	+1.5
NNZ	Nelson	28.18	202	P	P	14 04 57.5	+0.9
CMWZ	Cape Campbell	28.36	200	P	P	14 05 08.7	+10
BSWZ	Blackbirch Sta	28.44	201	P	P	14 05 06.2	+7.2
THZ	Tophouse	28.83	202	eP	P	14 05 04.6	+2.1
	100nm,0.9s						
THZ	Tophouse	28.83	202	P	P	14 05 04.7	+2.2
KHZ	Kahutara	29.18	201	eP	P	14 05 07.0	+1.6
	92nm,0.9s						
KHZ	Kahutara	29.18	201	P	P	14 05 08.0	+2.5
DSZ	Denniston Nort	29.23	204	P	P	14 05 08.0	+2.0
LTZ	Lake Taylor	29.95	202	eP	P	14 05 12.5	+0.1
	182nm,0.8s						
LHI	Lord Howe Isla	30.05	233	P	P	14 05 13.8	+0.5
	baz=30						
AMCZ	Amberley	30.16	201	P	P	14 05 17.1	+2.9
OXZ	Oxford	30.50	202	eP	P	14 05 17.9	+0.7
	155nm,0.8s						
CRLZ	Canterbury Las	30.52	201	eP	P	14 05 18.2	+0.9
	132nm,1.2s						
CRLZ	Canterbury Las	30.52	201	P	P	14 05 19.6	+2.3
MQZ	McQueen's Vall	30.62	201	eP	P	14 05 18.3	0.0
	105nm,1.2s						
RPZ	Rata Peaks	31.20	203	P	P	14 05 24.6	+1.2
	63nm,0.6s,baz=270,slow=1.0,SNR=24						
RPZ	Rata Peaks	31.20	203	eP	P	14 05 22.9	-0.6
	65nm,0.6s						
FOZ	Fox Glacier	31.52	204	eP	P	14 05 26.4	+0.3
	229nm,1.1s						
LBZ	Lake Benmore	32.10	203	eP	P	14 05 31.4	+0.1
	54nm,0.9s						
ODZ	Otahua Downs	32.49	202	eP	P	14 05 36.3	+1.6
	53nm,1.1s						
TAOE	Nuku Hiva Isla	32.73	82	eLR	LR	14 14 07.2	
	comp=Z,10μm,26.3s						
TAOE	Nuku Hiva Isla	32.73	82	eT	T	14 39 20.4	

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      173nm,0.2s
WKZ   Wanaka           32.92 204 eP     P      14 05 38.9 +0.4
      99nm,1.0s
MLZ   Mavora Lakes     33.72 204 eP     P      14 05 45.7 +0.2
      167nm,0.8s
DCZ   Deep Cove        34.19 205 eP     P      14 05 50.7 +1.2
      80nm,0.8s
WHZ   Wether Hill Ro   34.22 204 eP     P      14 05 51.3 +1.4
      342nm,0.8s
EIDS  Eidsvold         34.97 248 eP     P      14 05 56.0  -0.6
      20nm,0.8s
EIDS  Eidsvold         34.97 248  P     P      14 05 56.0  -0.6
      baz=35,SNR=6.5
ARMA  Armidale         35.62 239 eP     P      14 06 01.7  -0.5
      50nm,0.8s
ARMA  Armidale         35.62 239  P     P      14 06 02.0  -0.2
      baz=36,SNR=62
RKT   Rikitea          36.55 108 eLR    LR     14 15 58.5
      comp=Z,8µm,25.8s
RKT   Rikitea          36.55 108 eT     T      14 44 26.1
      35nm,0.4s
MGCD  Mangrove Creek   36.91 235  P     P      14 06 13.6 +0.6
      baz=37,SNR=22
RIV   Riverview        37.08 234  P     P      14 06 15.4 +1.0
      baz=37,SNR=4.3
RMQ   Roma             37.22 247  P     P      14 06 16.2 +0.4
      baz=37,SNR=18
KKO   Keanakako`i      38.85  27 eP     P      14 06 29.9 +0.2
      343nm,0.8s
PUH   Pauahi           38.85  27 eP     P      14 06 28.7  -1.0
      124nm,0.8s
UWE   Uwekahuna        38.86  27 eP     P      14 06 29.1  -0.6
      453nm,1.0s
BYL   Byron's Ledge    38.87  27 eP     P      14 06 28.6  -1.2
      410nm,0.7s
UWB   Uwekahuna B      38.87  27 eP     P      14 06 29.4  -0.4
      714nm,1.4s
SBLHI Steaming Bluff   38.88  27 eP     P      14 06 29.8   0.0
      309nm,0.9s
MLH   Mauna Loa        38.88  27 eP     P      14 06 29.4  -0.6
      170nm,1.2s
MLH   Mauna Loa        38.88  27 eP     P      14 06 29.5  -0.6
MLH                               pmax  pmax
      comp=Z,170nm,1.2s
CTAO  Charters Tower   39.01 257 eP     P      14 06 29.9  -1.1
      comp=Z,21nm,0.8s
CTAO  Charters Tower   39.01 257 eP     P      14 06 29.9  -1.1
CTAO                              pmax  pmax
      comp=Z,21nm,0.8s
POHA  Pohakuloa        39.05  27 eP     P      14 06 31.0  -0.5
      comp=Z,104nm,0.9s
HPAH  Hawaii Prepara   39.22  26 eP     P      14 06 32.3  -0.4
      comp=Z,136nm,0.8s
CAN   Canberra         39.27 233 eP     P      14 06 32.9  -0.1
      comp=Z,54nm,0.9s
CAN   Canberra         39.27 233 eP     P      14 06 32.9  -0.1
CAN                               pmax  pmax
      comp=Z,54nm,0.9s
MHA   Mahukona         39.28  26 eP     P      14 06 33.9 +0.8
H11S2 WAKE ISLAND Hy   39.30 329  T     T      14 48 07.3
      baz=148,slow=76
H11S3 WAKE ISLAND Hy   39.32 329  T     T      14 47 41.6
      baz=148,slow=76
H11S1 WAKE ISLAND Hy   39.32 329  T     T      14 47 45.7
      baz=148,slow=76
PMG   Port Moresby     39.36 274 eP     P      14 06 31.5  -2.5
      comp=Z,79nm,0.8s
PMG   Port Moresby     39.36 274ceP     P      14 06 34.5 +0.6
PMG                               pmax  pmax
      comp=Z,358nm,1.0s
YNG   Young            39.40 235  P     P      14 06 34.7 +0.6
      baz=39,SNR=10
KEKH  Kekaha           39.50  20 eP     P      14 06 33.9  -1.0
      comp=Z,157nm,1.0s
KIP   Kipapa           39.57  22 eP     P      14 06 35.3  -0.2
      comp=Z,246nm,1.1s
KIP   Kipapa           39.57  22 eP     P      14 06 35.3  -0.2
KIP                               pmax  pmax
      comp=Z,246nm,1.1s
HLK   Haleakala        39.64  25 eP     P      14 06 36.1  -0.3
      comp=Z,108nm,0.8s
KHLH  Kahului Airpor   39.70  25 eP     P      14 06 35.5  -1.1
      comp=Z,85nm,0.8s
MILA  Mila             39.78 230  P     P      14 06 38.2 +1.0
      baz=40,SNR=4.8
H11N3 WAKE ISLAND Hy   40.25 330  T     T      14 49 15.0
      baz=150,slow=76
H11N1 WAKE ISLAND Hy   40.25 330  T     T      14 49 07.1
      baz=150,slow=76
H11N2 WAKE ISLAND Hy   40.26 330  T     T      14 49 12.8
      baz=150,slow=76
CMSA  Cobar Meteorol   40.83 240  P     P      14 06 45.2  -0.8
      baz=41,SNR=97
MTSU  Mount Surprise   40.90 260  P     P      14 06 46.2  -0.5
      baz=41,SNR=91
MANU  Manus Island     41.33 285 eP     P      14 06 49.6  -0.7
      comp=Z,156nm,1.6s
COEN  Coen             42.38 266 eP     P      14 06 58.8  -0.1
      comp=Z,133nm,0.8s
COEN  Coen             42.38 266  P     P      14 06 59.0 +0.1
      baz=42,SNR=51
TOO   Toolangi         42.69 231 eP     P      14 07 01.1  -0.1
      comp=Z,56nm,0.9s
TOO   Toolangi         42.69 231  P     P      14 07 01.0  -0.1
      baz=43,SNR=24
TOO   Toolangi         42.69 231 eP     P      14 07 01.1  -0.1
TOO                               pmax  pmax
      comp=Z,56nm,0.9s
MOO   Moorlands        43.37 224  P     P      14 07 07.4 +0.8
      baz=43,SNR=4.3
STKA  Stephens Creek   44.32 240  P     P      14 07 14.4 +0.1
      comp=Z,140nm,0.8s,baz=85,slow=8.8,SNR=135
STKA  Stephens Creek   44.32 240 eP     P      14 07 13.7  -0.6
      comp=Z,29nm,0.8s
STKA  Stephens Creek   44.32 240  P     P      14 07 14.0  -0.4
      baz=44,SNR=159
STKA  Stephens Creek   44.32 240 eP     P      14 07 13.7  -0.6
STKA                              pmax  pmax
      comp=Z,29nm,0.8s
ARPS  Mount Arapiles   45.23 233  P     P      14 07 21.6 +0.1
      baz=45,SNR=9.4
QIS   Mount Isa        45.24 256  P     P      14 07 21.2  -0.7
      baz=45,SNR=8.8
HTT   Hallett          46.82 239  P     P      14 07 33.8  -0.3
      baz=47,SNR=69
JAY   Jayapura         47.42 281  P     P      14 07 38.5  -0.6
      comp=Z,43nm,0.9s,baz=80,slow=3.3,SNR=13
JAY   Jayapura         47.42 281  P     P      14 07 40.3 +1.2
GENI  Genyem           47.91 281  P     P      14 07 44.5 +1.7
BBOO  Buckleboo        49.09 240 eP     P      14 07 50.6  -1.1
      comp=Z,76nm,0.8s
BBOO  Buckleboo        49.09 240  P     P      14 07 51.1  -0.7
      baz=49,SNR=73
WRAB  Tennant Creek    50.20 257ceP     P      14 07 58.1  -2.3
WRAB                              pmax  pmax
      comp=Z,52nm,0.8s
WR1   Warramunga Arr   50.21 257 eP     P      14 07 59.8  -0.6
WRA   Warramunga Arr   50.21 257  P     P      14 07 59.8  -0.6
      comp=Z,41nm,0.7s,baz=86,slow=7.6,SNR=136
AS31  Alice Springs    50.46 252 eP     P      14 08 00.5  -1.7
      comp=Z,51nm,0.8s
ASAR  Alice Springs    50.46 252  P     P      14 08 01.6  -0.7
      comp=Z,189nm,0.8s,baz=88,slow=6.1,SNR=322
GUMO  Guam             50.76 303  P     P      14 08 04.7 +0.1
      comp=Z,81nm,1.0s,baz=158,slow=13,SNR=3.8
SRPI  Serui, Papua     51.86 280  P     P      14 08 12.9 +0.1
BAKI  Biak             52.20 281  P     P      14 08 16.2 +0.8
      comp=Z,56nm,0.9s
KDU   Kakadu           52.87 266  P     P      14 08 19.5  -0.8
      baz=53,SNR=21
MTN   Manton Dam       54.13 265 eP     P      14 08 28.2  -1.5
      comp=Z,96nm,0.8s
MTN   Manton Dam       54.13 265  P     P      14 08 28.9  -0.7
      baz=54,SNR=35
WRKA  Warakurna        55.53 250  P     P      14 08 38.8  -0.9
      baz=56,SNR=244
FORT  Forrest          55.72 243 eP     P      14 08 39.8  -1.1
      comp=Z,114nm,0.8s
FORT  Forrest          55.72 243  P     P      14 08 40.2  -0.7
      baz=56,SNR=28
KNRA  Kununurra        55.95 261  P     P      14 08 42.1  -0.7
      baz=56,SNR=17
SWI   Sorong           56.90 279  P     P      14 08 49.1  -0.4
LBMI  Labuha           60.55 278  P     P      14 09 14.5  -0.5
KMBL  Kambalda         61.02 243  P     P      14 09 17.3  -0.6
      baz=61,SNR=12
TNTI  Ternate          61.10 280 eP     P      14 09 17.6  -1.1
      comp=Z,37nm,0.9s
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TNTI  Ternate          61.10 280  P     P      14 09 21.5 +2.8
      comp=Z,45nm,0.9s,comp=Z,1µm
SOEI  Soe              61.33 267 eP     P      14 09 20.1  -0.3
      comp=Z,184nm,0.9s
SOEI  Soe              61.33 267  P     P      14 09 22.9 +2.5
SBA   Scott Base       63.13 185 eP     P      14 09 35.8 +4.5
      comp=Z,806nm,1.6s
VNDA  Vanda            63.27 186  P     P      14 09 36.2 +4.0
      comp=Z,25nm,0.9s,baz=9.8,slow=6.6,SNR=117
VNDA  Vanda            63.27 186 eP     P      14 09 35.8 +3.6
      comp=Z,195nm,1.0s
VNDA  Vanda            63.27 186 eP     P      14 09 35.8 +3.6
VNDA                              pmax  pmax
      comp=Z,195nm,1.0s
MMRI  Maumere          63.53 268 eP     P      14 09 33.0  -2.0
      comp=Z,118nm,1.0s
MMRI  Maumere          63.53 268  P     P      14 09 35.1 +0.1
      comp=Z,125nm,1.0s
PSA00 Pilbara Seismi   63.56 253 eP     P      14 09 33.4  -1.7
      comp=Z,35nm,0.8s
EDFI  Ende, Flores     64.03 268  P     P      14 09 38.3  -0.1
MEEK  Meekatharra      64.14 248  P     P      14 09 39.0 +0.1
      baz=64,SNR=22
KLBR  Kellerberrin     64.53 242  P     P      14 09 41.6 +0.2
      baz=64,SNR=54
DAV   Davao City (W)   64.87 286⇑iP     P      14 09 43.2  -0.6
NWAO  Narrogin (SRO)   64.91 241 eP     P      14 09 43.9 +0.1
      comp=Z,44nm,1.0s
NWAO  Narrogin (SRO)   64.91 241  P     P      14 09 44.5 +0.8
      baz=65,SNR=3.7
NWAO  Narrogin (SRO)   64.91 241 eP     P      14 09 43.9 +0.1
NWAO                              pmax  pmax
      comp=Z,44nm,1.0s
KCP   Kidapawan        65.31 285⇑eP     P      14 09 47.3 +0.6
BLDU  Ballidu          65.49 243  P     P      14 09 48.0 +0.4
      baz=65,SNR=17
MUN   Mundaring        65.83 242  P     P      14 09 50.9 +1.2
      baz=66,SNR=12
APSI  Ampana           66.06 276  P     P      14 09 52.8 +1.3
JHJ2  Mitsune          66.13 318 eP     P      14 09 51.7 +0.2
      comp=Z,348nm,0.9s
MORW  Morawa           66.19 245 eP     P      14 09 53.0 +0.8
      comp=Z,30nm,0.9s
MORW  Morawa           66.19 245  P     P      14 09 53.1 +0.9
      baz=66,SNR=9.9
BNSI  Bone             66.61 272  P     P      14 09 57.5 +2.5
      comp=Z,44nm,1.0s
KAPI  Kappang          66.79 271 eP     P      14 09 55.4  -0.8
      comp=Z,29nm,0.8s
KAPI  Kappang          66.79 271 eP     P      14 09 55.4  -0.8
KAPI                              pmax  pmax
      comp=Z,29nm,0.8s
SPSI  Sidrap Palu      67.05 272  P     P      14 09 59.6 +1.8
KIWB  Kanaga Island    67.22 357 eP     P      14 09 58.0   0.0
ADK   Adak             67.23 358 eP     P      14 09 57.1  -0.9
      comp=Z,44nm,1.1s
ADK   Adak             67.23 358 eP     P      14 09 57.1  -0.9
ADK                               pmax  pmax
      comp=Z,44nm,1.1s
TTSI  Tana Toraja      67.24 273  P     P      14 10 03.0 +4.0
GSTR  Great Sitkin T   67.41 358 eP     P      14 09 58.7  -0.6
PLAI  Plampang         67.79 267  P     P      14 10 05.0 +2.5
      comp=Z,120nm,0.9s
GIRL  Giralia          68.57 251  P     P      14 10 09.2 +1.9
      baz=68,SNR=7.3
SMY   Shemya           68.91 352 eP     P      14 10 07.8  -0.8
      comp=Z,50nm,0.9s
SMY   Shemya           68.91 352 eP     P      14 10 07.8  -0.8
SMY                               pmax  pmax
      comp=Z,50nm,0.9s
MJAR  Matsushiro Arr   69.32 320  P     P      14 10 11.4  -0.2
      comp=Z,42nm,0.9s,baz=160,slow=6.0,SNR=80
MAJO  Matsushiro       69.32 320 eP     P      14 10 11.2  -0.4
      comp=Z,56nm,0.9s
MAJO  Matsushiro       69.32 320c iP    P      14 10 11.6   0.0
MAJO                              pmax  pmax
      comp=Z,60nm,1.0s
MAT   Matsushiro       69.32 320  P     P      14 10 11.5  -0.1
MAT                               S     S      14 19 17.4 +0.9
MJB9  Matsu-Tunnel     69.33 320 eP     P      14 10 11.3  -0.3
      comp=Z,55nm,0.9s
INU   Inuyama          69.33 318 eP     P      14 10 11.3  -0.3
      comp=Z,35nm,0.9s
ERM   Erimo            70.11 327 eP     P      14 10 17.1 +0.8
      comp=Z,18nm,0.8s
ERM   Erimo            70.11 327ceP     P      14 10 17.5 +1.2
ERM                               pmax  pmax
      comp=Z,25nm,1.3s
KUR   Kuril'sk         70.15 332ceP     P      14 10 16.0  -0.4
KUR                              eS     S      14 19 28.7 +2.9
KUR                               pmax  pmax
      comp=Z,900nm,11.2s
KUR                               pmax  pmax
      comp=Z,101nm,1.2s
KUR                               pmax  pmax
      comp=N,82nm,1.3s
KUR                               pmax  pmax
      comp=E,80nm,1.6s
KUR                               MLR   MLR
      comp=Z,6µm,12.0s
SNCC  San Nicolas Is   70.39  46  P     P      14 10 17.8  -0.5
      baz=235
CASY  Casey            70.44 205 eP     P      14 10 19.3 +1.3
      comp=Z,258nm,0.8s
SCZ2  Santa Cruz Isl   70.74  45  P     P      14 10 20.7 +0.3
      baz=235
SCI2  San Clemente I   70.91  46  P     P      14 10 22.2 +0.8
      baz=236
SBC   Santa Barbara    70.94  44  P     P      14 10 22.5 +1.0
      baz=235
PKM   Mcpherson Peak   71.13  44  P     P      14 10 23.7 +0.7
      baz=235
SAO   San Andreas Ge   71.17  42 eP     P      14 10 23.5 +0.6
      comp=Z,26nm,1.1s
SAO   San Andreas Ge   71.17  42 eP     P      14 10 23.5 +0.6
SAO                               pmax  pmax
      comp=Z,26nm,1.1s
BLG   Laguna Peak, P   71.19  45  P     P      14 10 23.9 +0.8
      baz=235
CIS   Catalina Islan   71.24  46  P     P      14 10 24.5 +1.1
      baz=236
SMMC  Simmler          71.26  44  P     P      14 10 24.2 +0.7
      baz=234
SKR   Severo-Kuril’s   71.31 340 eP     P      14 10 22.1  -1.2
SKR                              eS     S      14 19 41.2 +2.2
SKR                               pmax  pmax
      comp=Z,700nm,8.7s
SKR                               pmax  pmax
      comp=Z,600nm,11.8s
JAGI  Jajag, Banyuwa   71.35 266 eP     P      14 10 22.9  -1.6
      comp=Z,137nm,0.8s
JAGI  Jajag, Banyuwa   71.35 266  P     P      14 10 26.5 +2.0
      comp=Z,184nm,0.9s
SDPT  Sand Point       71.41   7 eP     P      14 10 22.7  -1.2
      comp=Z,70nm,1.2s
FMP   Fort Macarthur   71.50  46  P     P      14 10 25.3 +0.4
      baz=236
OSI   Osito Audit: C   71.71  45  P     P      14 10 25.9  -0.4
      baz=236
DECC  Green Verdugo    71.77  45  P     P      14 10 26.5  -0.1
      baz=236
109C  Camp Elliot, M   71.88  47  P     P      14 10 26.5  -0.7
      baz=237
ASAJ  Asahikawa        71.89 328  P     P      14 10 29.2 +2.2
      comp=Z,34nm,0.8s,baz=219,slow=7.9,SNR=40
ARVC  Arvin            71.93  44  P     P      14 10 28.0 +0.5
      baz=235
VES   Vestal, Richgr   72.17  44  P     P      14 10 29.6 +0.8
      baz=235
MURC  Murrieta         72.20  46  P     P      14 10 29.9 +0.7
      baz=237
JNU   Nakatsue         72.20 313 eP     P      14 10 29.0  -0.3
      comp=Z,34nm,0.9s
BFSC  Mount Baldy Ra   72.23  46  P     P      14 10 29.6 +0.1
      baz=236
VOG   Valley Oaks Go   72.25  43  P     P      14 10 29.4 +0.1
      baz=235
EDW2  Edwards Air Fo   72.36  45  P     P      14 10 30.2 +0.1
      baz=236
MONP2 Monument Peak    72.36  47  P     P      14 10 30.1  -0.3
      baz=238
O02D  Mt. Diablo Mer   72.44  38  P     P      14 10 31.3 +0.8
      baz=231
IKP   In-Ko-Pah, Jac   72.45  48  P     P      14 10 30.7  -0.2
      baz=238
ISA   Isabella, Lake   72.47  44 eP     P      14 10 31.3 +0.5
      comp=Z,24nm,1.1s
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ISA   Isabella, Lake   72.47  44  P     P      14 10 31.6 +0.7
      baz=235
PET   Petropavlovsk    72.55 342 eP     P      14 10 29.9  -0.8
      comp=Z,44nm,1.2s
PET   Petropavlovsk    72.55 342 eP     P      14 10 29.9  -0.8
PET                               pmax  pmax
      comp=Z,44nm,1.2s
CHIR  Chirikof Islan   72.59  10 eP     P      14 10 30.6  -0.3
      comp=Z,47nm,0.9s
CMB   Columbia Colle   72.60  41 eP     P      14 10 30.8  -0.8
      comp=Z,13nm,0.9s
CMB   Columbia Colle   72.60  41 eP     P      14 10 30.8  -0.8
CMB                               pmax  pmax
      comp=Z,13nm,0.9s
CHGN  Chignik          72.61   8 eP     P      14 10 29.7  -1.3
      comp=Z,110nm,1.0s
PFO   Pinyon Flats O   72.72  47ceP     P      14 10 34.2 +1.8
PFO   Pinyon Flats O   72.72  47  P     P      14 10 33.2 +0.7
      baz=237
BBRC  Big Bear Solar   72.75  46  P     P      14 10 33.3 +0.6
      baz=237
AFDM  Forest Hills D   72.79  40 eP     P      14 10 32.9 +0.3
      comp=Z,17nm,1.0s
ORV   Oroville         72.83  39 eP     P      14 10 32.8   0.0
      comp=Z,21nm,1.3s
ORV   Oroville         72.83  39 eP     P      14 10 32.8   0.0
ORV                               pmax  pmax
      comp=Z,21nm,1.3s
SWSC  Sam W. Stewart   72.83  48  P     P      14 10 32.9   0.0
      baz=238
PEA0B Petropavlovsk-   72.90 342 eP     P      14 10 32.6  -0.3
      comp=Z,63nm,0.9s
PETK  Petropavlovsk-   72.90 342  P     P      14 10 32.9   0.0
      comp=Z,32nm,0.8s,baz=123,slow=8.2,SNR=58
LRMC  Laurel Mtn Rad   72.90  45  P     P      14 10 33.8 +0.3
      baz=236
PEA1  Petropavlovsk-   72.90 342 eP     P      14 10 32.9   0.0
N02D  Trinity Center   72.99  38  P     P      14 10 35.0 +1.1
      baz=231
RRX   Edison Barstow   73.03  45  P     P      14 10 34.2 +0.1
      baz=237
O03E  Paynes Creek     73.10  39  P     P      14 10 34.5   0.0
      baz=232
M02C  Callahan         73.17  37  P     P      14 10 35.5 +0.7
      baz=231
CWC   Cottonwood Cre   73.17  44  P     P      14 10 35.9 +0.8
      baz=236
MDPB  Devils Postpil   73.20  42 eP     P      14 10 35.3  -0.1
      comp=Z,18nm,1.0s
L02E  Cave Junction    73.23  36  P     P      14 10 36.1 +1.0
      baz=230
OMMB  Old Mammoth Mi   73.24  42 eP     P      14 10 35.5  -0.2
      comp=Z,31nm,1.4s
BELC  Belle Mtn. Jos   73.25  47  P     P      14 10 35.7 +0.1
      baz=238
MPMC  Manual Prospec   73.36  44  P     P      14 10 36.8 +0.6
      baz=236
MLAC  Mammoth, Mammo73.36  42  P     P      14 10 37.1 +0.8
      baz=235
GSC   Goldstone, Bar   73.40  45 eP     P      14 10 36.4   0.0
      comp=Z,18nm,1.1s
GSC   Goldstone, Bar   73.40  45 eP     P      14 10 36.4   0.0
GSC                               pmax  pmax
      comp=Z,18nm,1.1s
GSC   Goldstone, Bar   73.40  45  P     P      14 10 36.8 +0.5
      baz=237
TIN   Tinemaha, Big    73.42  43  P     P      14 10 37.0 +0.5
      baz=235
BC3   Big Chuckawall   73.45  47  P     P      14 10 37.6 +0.8
      baz=238
HEC   Hector,Ludlow    73.47  46  P     P      14 10 37.0 +0.2
      baz=237
YBH   Yreka Blue Hor   73.47  37 eP     P      14 10 36.6  -0.1
      comp=Z,18nm,0.9s
YBH   Yreka Blue Hor   73.47  37 eP     P      14 10 36.6  -0.1
YBH                               pmax  pmax
      comp=Z,18nm,0.9s
WAKR  Walker           73.48  41 eP     P      14 10 37.2 +0.3
      comp=Z,25nm,1.2s
SII   Sitkinak Islan   73.54  11 eP     P      14 10 36.4  -0.2
      comp=Z,41nm,1.0s
K02D  Willamette Mer   73.54  36  P     P      14 10 36.6  -0.4
      baz=230
GLA   Glamis           73.58  48  P     P      14 10 38.0 +0.6
      baz=239
J01E  Myrtle Point     73.70  35  P     P      14 10 38.3 +0.5
      baz=229
BEKR  Beckworth        73.72  40 eP     P      14 10 38.0  -0.2
      comp=Z,17nm,1.0s
PNTR  Pine Nut         73.73  41 eP     P      14 10 38.5 +0.1
      comp=Z,23nm,1.0s
YSS   Yuzh-Sakhalins   73.82 330 eP     P      14 10 38.0  -0.4
      comp=Z,48nm,1.0s
YSS   Yuzh-Sakhalins   73.82 330 eP     P      14 10 38.0  -0.4
YSS                               pmax  pmax
      comp=Z,48nm,1.0s
HUMO  Hull Mountain    73.89  36 epP    pP     14 10 44.1  -3.5
YERR  Yerington        73.89  41 eP     P      14 10 39.3   0.0
      comp=Z,28nm,1.0s
GMRC  Granite Mounta   73.91  46  P     P      14 10 40.0 +0.6
      baz=238
IRM   Iron Mountain    73.94  47  P     P      14 10 40.3 +0.8
      baz=238
GRAC  Grapevine Rang   73.96  43  P     P      14 10 40.5 +0.9
      baz=236
FURC  Furnace Creek,   74.00  44  P     P      14 10 40.3 +0.5
      baz=236
M04C  Macdoel          74.01  37  P     P      14 10 40.2 +0.4
      baz=231
L04D  Klamath Falls    74.01  37  P     P      14 10 40.4 +0.5
      baz=231
TUQ   Turquoise Moun   74.08  45  P     P      14 10 40.2  -0.2
      baz=237
SHOC  Shoshone, Teco   74.09  45  P     P      14 10 40.5 +0.2
      baz=237
RYN   Ryan             74.14  41 eP     P      14 10 40.8   0.0
      comp=Z,23nm,1.0s
Y12C  Blythe           74.16  48  P     P      14 10 41.2 +0.4
      baz=239
NV01  Mina Array Sit   74.16  42 eP     P      14 10 42.2 +1.2
NVAR  Mina Array Bea   74.16  42  P     P      14 10 42.2 +1.2
      comp=Z,4.7nm,0.7s,baz=229,slow=9.2,SNR=24
113A  Mohawk Valley,   74.20  49 eP     P      14 10 41.2 +0.3
      comp=Z,16nm,0.9s
PAHR  Pah Rah Range    74.23  40 eP     P      14 10 41.2 +0.1
      comp=Z,15nm,1.1s
NV11  Mina Array Sit   74.26  42 eP     P      14 10 41.5   0.0
      comp=Z,3.4nm,1.3s
OHAK  Old Harbor       74.33  11 eP     P      14 10 40.9  -0.3
      comp=Z,26nm,1.0s
I02D  Swisshome        74.36  34  P     P      14 10 42.7 +1.1
      baz=229
214A  Organ Pipe Nat   74.49  50  P     P      14 10 43.3 +0.5
      baz=240
K04D  Chiloquin, OR    74.58  37  P     P      14 10 43.9 +0.7
      baz=231
WOJI  Wonogiri, Jawa   74.61 266  P     P      14 10 44.9 +1.1
      comp=Z,96nm,0.9s
KVN   Kaiserville      74.65  41 eP     P      14 10 44.0 +0.3
      comp=Z,15nm,1.0s
KVN   Kaiserville      74.65  41 eP     P      14 10 44.1 +0.3
KVN                               pmax  pmax
      comp=Z,15nm,1.0s
TPNV  Topopah Spring   74.68  44  P     P      14 10 44.5 +0.6
      baz=237
PDMCI Parker Dam,Lak   74.72  47  P     P      14 10 45.0 +1.0
      baz=239
J04D  Umpqua Nationa   74.77  36  P     P      14 10 45.0 +0.7
      baz=231
I04A  Tendick Farm,    74.95  35  P     P      14 10 45.4 +0.2
      baz=230
MOD   Modoc Plateau    74.98  38 eP     P      14 10 45.6 +0.1
      comp=Z,25nm,1.1s
KDAK  Kodiak Island    74.99  11  P     P      14 10 45.0   0.0
      comp=Z,32nm,0.9s,baz=165,slow=3.1,SNR=22
KDAK  Kodiak Island    74.99  11 eP     P      14 10 45.0   0.0
      comp=Z,45nm,1.1s
KDAK  Kodiak Island    74.99  11  P     P      14 10 45.0   0.0
PBKI  Pangkalan Bun    75.18 271  P     P      14 10 51.0 +3.9
H04D  Lebanon          75.23  35  P     P      14 10 47.9 +1.2
      baz=230
SMRI  Semarang         75.26 267 eP     P      14 10 46.9  -0.8
      comp=Z,64nm,0.7s
SMRI  Semarang         75.26 267  P     P      14 10 51.6 +4.0
J05D  Fort Rock, OR    75.29  36  P     P      14 10 49.0 +1.7
      baz=232
G03D  McMinnville, O   75.39  34  P     P      14 10 48.1 +0.5
      baz=230
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SSLB	Suanglung	75.45	300	*e*P	P	14 10 48.1	-0.4
	comp=Z,17nm,0.9s						
YHNB	Yeheng	75.47	301	*e*P	P	14 10 47.3	-1.3
	comp=Z,114nm,1.5s						
TPUB	Ta-pu	75.52	300	*e*P	P	14 10 47.6	-1.2
	comp=Z,45nm,0.9s						
H04A	Detroit Lake	75.64	35	*e*P	P	14 10 49.4	+0.3
	comp=Z,27nm,0.9s						
TEY	Ternei	75.67	326	*e*P	P	14 10 49.9	+0.7
PINE	Pine Mountain	75.78	36	*e*P	P	14 10 50.6	+0.5
	comp=Z,55nm,1.0s						
R11A	Troy Canyon, C	75.89	43	P	P	14 10 51.4	+0.5
	baz=237						
I05D	Terrebonne, OR	75.89	35	P	P	14 10 51.4	+0.9
	baz=231						
SBUM	Sibu	76.05	277	*e*P	P	14 10 51.2	-0.9
	comp=Z,11nm,1.1s						
F04D	Rainier, OR	76.10	33	P	P	14 10 51.8	+0.2
	baz=230						
STKI	Sintang	76.10	274	P	P	14 10 54.7	+2.3
TUC	Tucson	76.17	50	*e*P	P	14 10 51.9	-0.5
	comp=Z,23nm,1.1s						
TUC	Tucson	76.17	50	*e*P	P	14 10 51.9	-0.5
TUC				pmax	pmax		
	comp=Z,23nm,1.1s						
TUC	Tucson	76.17	50	P	P	14 10 53.0	+0.6
	baz=242						
WVOR	Wild Horse Val	76.29	38	*e*P	P	14 10 52.1	-0.9
	comp=Z,22nm,0.9s						
WVOR	Wild Horse Val	76.29	38	*e*P	P	14 10 52.1	-0.9
WVOR				pmax	pmax		
	comp=Z,22nm,0.9s						
TJN	Taejon	76.38	314	*ce*P	P	14 10 54.7	+1.3
G05D	Wamic, OR	76.47	35	P	P	14 10 54.4	+0.6
	baz=231						
KSRS	Korea Array	76.56	315	P	P	14 10 55.8	+1.4
	comp=Z,24nm,0.8s,baz=130,slow=6.3,SNR=24						
KS15	Wonju Array Si	76.58	315	*e*P	P	14 10 53.2	-1.3
	comp=Z,27nm,0.8s						
E04D	Cinebar	76.64	33	P	P	14 10 55.1	+0.4
	baz=230						
TYV	Tymovskoe	76.67	333	*e*P	P	14 10 55.0	+0.3
TYV				*e*S	S	14 20 41.8	+2.4
TYV				pmax	pmax		
	comp=Z,500nm,8.8s						
TYV				pmax	pmax		
	comp=Z,24nm,0.9s						
TYV				smax	smax		
	comp=N,400nm,9.3s						
LCMT	Little Creek M	76.75	45	*e*P	P	14 10 54.5	-1.2
	comp=N,12nm,0.9s						
I07A	Izee	76.77	37	*e*P	P	14 10 55.3	-0.4
	comp=N,36nm,1.4s						
F05D	White Salmon	76.80	34	P	P	14 10 55.5	-0.1
	baz=231						
DIB	Dawson Inlet,	76.81	24	*e*P	P	14 10 55.5	0.0
	comp=N,40nm,1.2s						
G06A	Carlson Farm,	76.84	35	*e*P	P	14 10 56.0	0.0
	comp=N,46nm,1.5s						
CNPM	China Poot	76.87	11	*e*P	P	14 10 55.2	-0.6
	comp=N,33nm,1.0s						
D04E	Lakebay	76.93	33	P	P	14 10 56.4	+0.1
	baz=230						
CCUT	Cedar City	76.95	45	*e*P	P	14 10 56.7	-0.3
	comp=N,15nm,1.1s						
D03D	Eldon	77.00	32	P	P	14 10 57.3	+0.6
	baz=229						
KNB	Kanab	77.04	45	*e*P	P	14 10 56.8	-0.6
	comp=N,50nm,1.3s						
KNB	Kanab	77.04	45	*e*P	P	14 10 56.8	-0.6
KNB				pmax	pmax		
	comp=Z,50nm,1.3s						
SZCU	Shurtz Canyon	77.16	45	*e*P	P	14 10 57.0	-1.1
	comp=Z,25nm,1.3s						
BRLK	Bradley Lake	77.16	11	*e*P	P	14 10 56.4	-1.0
	comp=Z,40nm,0.9s						
LON	Longmire	77.16	33	*e*P	P	14 10 57.3	-0.4
	comp=Z,15nm,1.1s						
LON	Longmire	77.16	33	*e*P	P	14 10 57.3	-0.4
LON				pmax	pmax		
	comp=Z,15nm,1.1s						
WUAZ	Wupatki	77.30	47	P	P	14 10 60.0	+1.1
	baz=240						
D05A	Enumclaw	77.35	33	*e*P	P	14 10 58.0	-0.6
	comp=Z,78nm,1.2s						
RSO	Redoubt South	77.48	10	*e*P	P	14 10 58.0	-1.3
PGC	Sidney	77.55	31	*e*P	P	14 11 00.2	+0.5
PKCU	Pink Cliffs	77.61	45	*e*P	P	14 11 01.2	+0.5
	comp=Z,64nm,1.1s						
KSM	Kuching	77.61	275	*e*P	P	14 11 00.1	-0.9
	comp=Z,56nm,1.0s						
SVW2	Sparrevohn	77.64	9	*e*P	P	14 10 59.1	-0.9
	comp=Z,16nm,0.9s						
SEW	Seward	77.75	12	*e*P	P	14 11 00.1	-0.5
	comp=Z,35nm,0.9s						
USA0B	Ussuriysk Arra	77.75	323	*e*P	P	14 11 00.8	-0.1
	comp=Z,21nm,1.0s						
USRK	Ussuriysk Ar.	77.75	323	P	P	14 11 01.6	+0.6
	comp=Z,15nm,0.9s,baz=92,slow=5.1,SNR=17						
G08A	Pilot Rock	77.81	36	*e*P	P	14 11 01.2	-0.2
	comp=Z,26nm,1.0s						
BBB	Bella Bella	77.83	26	*e*P	P	14 11 02.8	+1.6
	comp=Z,54nm,1.4s						
QZH	Quanzhou	77.89	300	⇑*i*P	P	14 11 01.9	-0.2
QZH				S	S	14 20 52.5	-1.2
QZH				pmax	pmax		
	comp=Z,760nm,11.0s						
QZH				LR	LR		
	comp=Z,20μm,23.7s						
QZH				LR	LR		
	comp=Z,9μm,20.4s						
QZH				LR	LR		
	comp=Z,31μm,22.3s						
A04D	Lummi Island	77.97	31	P	P	14 11 02.8	+0.7
	baz=229						
B05A	Bryant	77.98	32	P	P	14 11 03.0	+0.8
	baz=230						
LTY	Liberty	78.09	33	*e*P	P	14 11 02.3	-0.6
	comp=Z,31nm,1.5s						
HAWA	Hanford	78.16	35	*e*P	P	14 11 02.4	-0.9
	comp=Z,22nm,1.0s						
W18A	Petrified Fore	78.27	48	P	P	14 11 04.9	+0.6
	baz=242						
SPU	Mount Spurr	78.28	10	*e*P	P	14 11 02.5	-1.1
C06D	Leavenworth	78.39	33	P	P	14 11 05.1	+0.6
	baz=231						
E08A	Dider Farm, El	78.48	35	*e*P	P	14 11 04.5	-0.5
	comp=Z,33nm,1.3s						
121A	Cookes Peak, D	78.52	51	P	P	14 11 06.5	+0.7
	baz=243						
RC01	Rabbit Creek A	78.61	11	*e*P	P	14 11 04.5	-0.9
	comp=Z,32nm,1.0s						
DUG	Dugway, Tooele	78.69	43	P	P	14 11 07.0	+0.5
	baz=239						
ZAIG	Zacatecas	78.70	62	*e*P	P	14 11 06.3	-0.8
	comp=Z,26nm,1.3s						
D08A	Wollman Farm,	78.90	34	*e*P	P	14 11 07.3	0.0
	comp=Z,26nm,1.0s						
EYAK	Cordova Ski Ar	78.93	13	*e*P	P	14 11 06.5	-0.6
	comp=Z,23nm,1.0s						
GLI	Glacier Island	78.94	13	*e*P	P	14 11 06.4	-0.8
	comp=Z,58nm,0.9s						
FID	Port Fidalgo	78.95	13	*e*P	P	14 11 06.6	-0.6
	comp=Z,22nm,1.0s						
HMT	Hamilton	79.08	14	*e*P	P	14 11 07.7	-0.3
	comp=Z,21nm,0.9s						
KNK	Knik Glacier	79.15	12	*e*P	P	14 11 07.7	-0.7
	comp=Z,24nm,0.9s						
PMR	Palmer	79.19	11	*e*P	P	14 11 07.7	-0.8
	comp=Z,35nm,1.0s						
PMR	Palmer	79.19	11	*e*P	P	14 11 07.7	-0.8
PMR				pmax	pmax		
	comp=Z,35nm,1.0s						
WRAK	Wrangell Islan	79.34	22	*e*P	P	14 11 09.8	+0.4
	comp=Z,23nm,0.9s						
TTA	Tatalina	79.34	8	*e*P	P	14 11 09.4	-0.1
	comp=Z,44nm,1.0s						
MDJ	Mudanjiang	79.40	322	*e*P	P	14 11 09.4	-0.7
MDJ	Mudanjiang	79.40	322	P	P	14 11 11.0	+1.0
MDJ				pP	PcP	14 11 17.6	-0.5
MDJ				sP	pwP	14 11 19.9	-0.9
MDJ				S	S	14 21 14.0	+4.9
MDJ				pmax	pmax		
	comp=Z,960nm,8.0s						
MDJ				LR	LR		
	comp=Z,17μm,19.2s						
MDJ				LR	LR		
	comp=Z,23μm,22.8s						
MDJ				LR	LR		
	comp=Z,23μm,19.9s						
GRNR	Gornyy	79.48	330	*e*P	P	14 11 11.8	+1.4
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
HLID	Hailey	79.48	39	P	P	14 11 11.1	+0.3
	baz=237						
SML	Sawmill	79.54	12	*e*P	P	14 11 09.3	-1.2
	comp=Z,32nm,1.1s						
SML	Sawmill	79.54	12	*e*P	P	14 11 09.3	-1.2
SML				pmax	pmax		
	comp=Z,32nm,1.1s						
LLLB	Lillooet	79.61	30	*e*P	P	14 11 11.0	-0.2
	comp=Z,20nm,1.0s						
SCM	Sheep Creek Mo	79.76	12	*e*P	P	14 11 11.3	-0.4
	comp=Z,42nm,0.8s						
SCM	Sheep Creek Mo	79.76	12	*e*P	P	14 11 11.3	-0.4
SCM				pmax	pmax		
	comp=Z,42nm,0.8s						
Y22D	IRIS PASSCAL I	79.85	50	P	P	14 11 13.7	+0.8
	baz=244						
LENM	Lemitar	79.85	50	*e*P	P	14 11 12.8	-0.2
PPLA	Purkeypile	79.87	10	*e*P	P	14 11 11.8	-0.5
	comp=Z,21nm,1.1s						
PCA	Pinnacle	79.88	16	*e*P	P	14 11 12.0	-0.4
	comp=Z,18nm,0.9s						
MNTX	Cornudas Mount	79.98	53	P	P	14 11 14.3	+0.8
	baz=245						
TCUT	Toone Canyon	80.08	42	*e*P	P	14 11 12.8	-1.4
	comp=Z,78nm,1.0s						
JIS	Juneau Island	80.10	20	*e*P	P	14 11 13.7	+0.2
	comp=Z,21nm,1.0s						
MVCO	Mesa Verde	80.14	47	P	P	14 11 15.1	+0.5
	baz=242						
BALM	Baldy	80.16	15	*e*P	P	14 11 13.0	-0.9
	comp=Z,36nm,1.0s						
BALM	Baldy	80.16	15	*e*P	P	14 11 13.0	-0.9
BALM				pmax	pmax		
	comp=Z,36nm,1.0s						
BESE	Bessie Mountai	80.19	19	*e*P	P	14 11 14.1	0.0
	comp=Z,28nm,1.0s						
TXAR	Lajitas Array	80.35	56	P	P	14 11 16.6	+0.9
	comp=Z,7.6nm,1.1s,baz=226,slow=6.5,SNR=10						
LTX	Lajitas	80.35	56	*e*P	P	14 11 16.6	+0.9
LTX	Lajitas	80.35	56	*e*P	P	14 11 16.6	+0.9
ANMO	Albuquerque	80.58	50	*i* P	P	14 11 17.9	+0.9
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	80.58	50	P	P	14 11 17.7	+0.7
	baz=244						
NJ2	Nanjing	80.58	307	*e*P	P	14 11 17.6	+0.9
NJ2				S	S	14 21 25.5	+3.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,1μm,10.0s						
NJ2				LR	LR		
	comp=Z,15μm,24.6s						
NJ2				LR	LR		
	comp=Z,6μm,20.8s						
NJ2				LR	LR		
	comp=Z,14μm,24.4s						
NEW	Newport	80.60	34	P	P	14 11 16.6	0.0
	baz=234						
KTH	Kantishna Hill	80.69	10	*e*P	P	14 11 15.4	-1.3
	comp=Z,43nm,1.0s						
SKAG	Skagway	80.75	18	*e*P	P	14 11 17.3	+0.3
	comp=Z,34nm,1.0s						
KLR	Kul'dur	80.87	327	*c i*P	P	14 11 18.9	+1.0
KLR				pmax	pmax		
	comp=Z,14nm,1.0s						
DHY	Denali Highway	80.88	11	*e*P	P	14 11 17.2	-0.6
	comp=Z,25nm,1.1s						
RND	Reindeer	80.91	11	*e*P	P	14 11 16.9	-1.0
	comp=Z,48nm,1.0s						
RND	Reindeer	80.91	11	*e*P	P	14 11 16.9	-1.0
RND				pmax	pmax		
	comp=Z,48nm,1.0s						
GDL2	Guadalupe Moun	80.98	53	*e*P	P	14 11 18.6	-0.4
PAX	Paxson	81.16	12	*e*P	P	14 11 18.4	-0.9
	comp=Z,17nm,1.0s						
PAX	Paxson	81.16	12	*e*P	P	14 11 18.4	-0.9
PAX				pmax	pmax		
	comp=Z,17nm,1.0s						
BPAW	Bear Paw Mtn.	81.19	10	*e*P	P	14 11 17.4	-1.9
	comp=Z,14nm,0.8s						
MCK	McKinley	81.19	11	*e*P	P	14 11 18.4	-0.9
	comp=Z,115nm,0.9s						
MCK	McKinley	81.19	11	*e*P	P	14 11 18.4	-0.9
MCK				pmax	pmax		
	comp=Z,115nm,0.9s						
HYT	Haines Junctio	81.23	17	*e*P	P	14 11 19.5	-0.3
	comp=Z,40nm,1.0s						
CN2	Changchun	81.47	320	*e*P	P	14 11 21.4	+0.2
CN2				*e*PP	PP	14 14 23.9	-3.9
CN2				*e*S	S	14 21 25.3	-5.5
CN2				pmax	pmax		
	comp=Z,90nm,0.9s						
CN2				pmax	pmax		
	comp=Z,700nm,4.0s						
MENT	Mentasta	81.50	13	*e*P	P	14 11 20.8	-0.2
	comp=Z,32nm,1.1s						
BWN	Browne	81.51	10	*e*P	P	14 11 20.5	-0.5
	comp=Z,132nm,1.1s						
MSO	Missoula	81.56	37	P	P	14 11 21.7	0.0
	baz=237						
S22A	4UR Ranch, Cre	81.57	47	*e*P	P	14 11 22.0	-0.2
	comp=Z,34nm,1.1s						
S22A	4UR Ranch, Cre	81.57	47	P	P	14 11 23.4	+1.1
	baz=243,SNR=9.9						
DL2	Dalian	81.58	314	⇑*i*P	P	14 11 23.4	+1.5
DL2				S	S	14 21 37.6	+5.4
DL2				pmax	pmax		
	comp=Z,78nm,0.8s						
DL2				pmax	pmax		
	comp=Z,960nm,4.8s						
DL2				LR	LR		
	comp=Z,4μm,16.2s						
DL2				LR	LR		
	comp=Z,4μm,14.7s						
DL2				LR	LR		
	comp=Z,9μm,21.2s						
GZH	Guangzhou	81.64	297	P	P	14 11 23.6	+1.1
DLBC	Dease Lake	81.69	21	P	P	14 11 22.6	+0.4
	comp=Z,11nm,1.0s,baz=226,slow=9.5,SNR=18						
DLBC	Dease Lake	81.69	21	*e*P	P	14 11 22.1	-0.1
	comp=Z,15nm,1.0s						
SNOW	Snow King Moun	81.69	41	*e*P	P	14 11 22.2	-0.6
	comp=Z,34nm,1.0s						
O20A	White River Ci	81.70	44	P	P	14 11 23.6	+0.8
	baz=242						
CPRX	Cap Rock	81.71	52	*e*P	P	14 11 22.5	-0.4
QLMT	Earthquake Lak	81.97	39	*e*P	P	14 11 24.3	+0.2
WRH	Wood River Hil	82.02	11	*e*P	P	14 11 23.0	-0.7
	comp=Z,112nm,0.9s						
FLWY	Flagg Ranch	82.04	40	*e*P	P	14 11 24.3	-0.2
	comp=Z,35nm,1.0s						
DOT	Dot Lake	82.06	13	*e*P	P	14 11 23.4	-0.5
	comp=Z,36nm,1.0s						
YPP	Pitchstone Pla	82.07	40	*e*P	P	14 11 24.9	+0.2
	comp=Z,29nm,1.4s						
YHB	Horse Butte	82.08	39	*e*P	P	14 11 24.2	-0.5
	comp=Z,42nm,1.1s						
MLY	Manley	82.10	9	*e*P	P	14 11 22.9	-1.3
	comp=Z,40nm,0.9s						
BW06	Boulder Array	82.10	42	P	P	14 11 25.0	+0.2
	baz=241						
PD31	Pinedale Array	82.10	42	*e*P	P	14 11 25.6	+0.8
PDAR	Pinedale Array	82.10	42	P	P	14 11 25.6	+0.8
	comp=Z,9.0nm,1.1s,baz=205,slow=3.1,SNR=12						
SMCO	Snowmass	82.12	46	*e*P	P	14 11 24.4	-0.8
	comp=Z,20nm,1.0s						
LNIG	Linares	82.13	62	*e*P	P	14 11 24.5	-0.7
	comp=Z,35nm,1.1s						
HDA	Harding Lake	82.17	11	*e*P	P	14 11 23.9	-0.5
	comp=Z,64nm,0.9s						
HDA	Harding Lake	82.17	11	P	P	14 11 24.2	-0.3
	baz=205						
YMR	Madison River	82.17	39	*e*P	P	14 11 25.1	-0.1
	comp=Z,35nm,1.1s						
CCB	Clear Creek Bu	82.23	11	*e*P	P	14 11 24.1	-0.6
	comp=Z,82nm,0.9s						
BOZ	Bozeman (W)	82.25	38	P	P	14 11 26.1	+0.6
	baz=239,SNR=5.3						
H17A	Grant Village	82.27	40	P	P	14 11 26.3	+0.5
	baz=240,SNR=5.3						
SCRK	Sand Creek	82.37	12	*e*P	P	14 11 25.3	-0.3
	comp=Z,31nm,0.9s						
YNR	Norris Junctio	82.37	40	*e*P	P	14 11 25.0	-1.3
	comp=Z,102nm,1.8s						
TCOL	CIGO, UAF Yank	82.43	11	P	P	14 11 25.3	-0.5
	baz=204						
COLA	College	82.43	11	*e*P	P	14 11 25.2	-0.6
	comp=Z,124nm,0.9s						
COLA	College	82.43	11	*c i*P	P	14 11 25.8	+0.1
COLA				pmax	pmax		
	comp=Z,132nm,1.0s						
MDM	Murphy Dome	82.44	10	*e*P	P	14 11 24.8	-1.1
	comp=Z,22nm,0.9s						
LKWY	Lake	82.47	40	*e*P	P	14 11 26.6	-0.1
	comp=Z,32nm,1.0s						
LKWY	Lake	82.47	40	*e*P	P	14 11 26.7	-0.1
LKWY				pmax	pmax		
	comp=Z,32nm,1.0s						
SDCO	Great Sand Dun	82.51	48	P	P	14 11 28.1	+0.8
	baz=244						
ILAR	Eielson Array	82.51	11	P	P	14 11 25.7	-0.5
	comp=Z,16nm,0.9s,baz=206,slow=5.6,SNR=82						
ILB	Eielson Array	82.51	11	*e*P	P	14 11 25.4	-0.8
	comp=Z,25nm,0.9s						
HRY	Holter Researc	82.71	37	*e*P	P	14 11 27.5	-0.3
POKR	Poker Plat Res	82.73	11	P	P	14 11 27.1	-0.2
	baz=205						
SEY	Seymchan	82.77	345	*i* P	P	14 11 27.5	-0.1
WALA	Waterton Lakes	82.80	35	*e*P	P	14 11 28.0	-0.3
	comp=Z,66nm,1.8s						
MSTX	Muleshoe	82.92	52	*e*P	P	14 11 28.5	-0.7
	comp=Z,60nm,1.2s						
MSTX	Muleshoe	82.92	52	P	P	14 11 29.6	+0.4
	baz=246,SNR=9.8						
T25A	Trinidad	83.03	49	*e*P	P	14 11 28.9	-1.0
	comp=Z,23nm,1.0s						
T25A	Trinidad	83.03	49	P	P	14 11 30.5	+0.7
	baz=245,SNR=6.3						
RWWY	Rawlins	83.12	43	*e*P	P	14 11 29.5	-0.8
	comp=Z,64nm,1.3s						
Q24A	Divide	83.29	47	*e*P	P	14 11 31.4	+0.1
	comp=Z,47nm,1.1s						
Q24A	Divide	83.29	47	P	P	14 11 31.9	+0.6
	baz=244,SNR=11						
ISCO	Idaho Springs	83.34	46	*e*P	P	14 11 31.4	-0.1
	comp=Z,20nm,1.1s						
ISCO	Idaho Springs	83.34	46	*e*P	P	14 11 31.4	-0.1
ISCO				pmax	pmax		
	comp=Z,20nm,1.1s						
ISCO	Idaho Springs	83.34	46	P	P	14 11 32.3	+0.9
	baz=244						
QIZ	Qiongzhong	83.34	292	P	P	14 11 31.1	-0.5
QIZ				S	S	14 21 57.0	+5.9
QIZ				pmax	pmax		
	comp=Z,650nm,10.0s						
833A	Chaparral WMA,	83.42	58	P	P	14 11 31.9	+0.2
	baz=249						
PRP	Porcupine Dome	83.44	11	*e*P	P	14 11 30.1	-1.1
	comp=Z,69nm,1.0s						
RLMT	Red Lodge	83.44	40	*e*P	P	14 11 31.9	+0.1
	comp=Z,38nm,1.1s						
RLMT	Red Lodge	83.44	40	P	P	14 11 32.8	+1.0
	baz=240,SNR=9.4						
DAWY	Dawson	83.46	14	*e*P	P	14 11 31.2	0.0
	comp=Z,62nm,1.4s						
GCMT	Greycliff	83.53	39	*e*P	P	14 11 32.4	+0.3
N23A	Red Feather La	83.60	45	*e*P	P	14 11 32.8	+0.1
	comp=Z,36nm,1.0s						
N23A	Red Feather La	83.60	45	P	P	14 11 33.5	+0.7
	baz=243,SNR=9.2						
EGAK	Eagle	83.67	13	*e*P	P	14 11 32.1	-0.1
	comp=Z,22nm,1.0s						
RDOG	Red Dog Mine	83.69	4	*e*P	P	14 11 32.5	+0.2
	comp=Z,36nm,1.0s						
JCT	Junction City	83.89	56	*e*P	P	14 11 32.1	-2.1
	comp=Z,14nm,0.9s						
JCT	Junction City	83.89	56	*e*P	P	14 11 32.1	-2.1
JCT				pmax	pmax		
	comp=Z,14nm,0.9s						
JCT	Junction City	83.89	56	P	P	14 11 34.1	-0.1
	baz=248						
K22A	Casper	84.01	43	*e*P	P	14 11 34.1	-0.6
	comp=Z,74nm,1.4s						
K22A	Casper	84.01	43	P	P	14 11 34.9	+0.2
	baz=243,SNR=5.6						
PHWY	Pilot Hill	84.11	44	*e*P	P	14 11 34.7	-0.7
	comp=Z,24nm,1.0s						
AMTX	Amarillo	84.12	52	*e*P	P	14 11 34.1	-1.2
	comp=Z,46nm,0.9s						
AMTX	Amarillo	84.12	52	P	P	14 11 35.9	+0.6
	baz=247						
COLD	Coldfoot	84.23	9	*e*P	P	14 11 35.1	+0.1
	comp=Z,26nm,1.0s						
FYU	Fort Yukon	84.43	11	*e*P	P	14 11 35.0	-1.0
	comp=Z,21nm,1.0s						
EGMT	Eagleton	84.60	37	*e*P	P	14 11 37.1	-0.4
	comp=Z,37nm,1.0s						
EGMT	Eagleton	84.60	37	P	P	14 11 38.2	+0.8
	baz=240						
BILL	Bilibino	84.71	352	*c i*P	P	14 11 37.4	0.0
BILL				*e*		14 11 44.4	
BILL						14 14 49.0	
BILL				pmax	pmax		
	comp=Z,22nm,1.3s						
ABTX	Abilene, Hawle	84.81	54	P	P	14 11 39.4	+0.6
	baz=248						
KSCO	Kaye Shedlock'	85.09	47	P	P	14 11 41.0	+0.8
	baz=246						
TOLK	Toolik Lake Re	85.63	8	*e*P	P	14 11 41.6	-0.5
	comp=Z,39nm,1.1s						
TOLK	Toolik Lake Re	85.63	8	P	P	14 11 42.9	+0.8
	baz=203						
ZEA	Zeya	85.76	329	*e*P	P	14 11 43.0	0.0
ZEA				*e*S	S	14 22 13.0	-0.7
ZEA				pmax	pmax		
	comp=Z,45nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,800nm,9.0s						
ZEA				smax	smax		
	comp=N,1μm,13.0s						
435B	Jarrell	85.78	57	*e*P	P	14 11 43.6	0.0
	comp=N,40nm,1.1s						
BJT	Baijiatuau	85.87	313	*e*P	P	14 11 43.4	-0.5
	comp=N,27nm,1.1s						
BJT	Baijiatuau	85.87	313	*e*P	P	14 11 43.4	-0.5
BJT				pmax	pmax		
	comp=Z,27nm,1.1s						
BJI	Beijing	85.87	313	⇑*i*P	P	14 11 45.0	+1.2
BJI				PP	PP	14 15 03.6	-0.3
BJI				S	S	14 22 17.1	+1.7
BJI				LR	LR		
	comp=Z,3μm,14.1s						
BJI				LR	LR		
	comp=Z,2μm,18.0s						
BJI				LR	LR		
	comp=Z,3μm,27.5s						
EPYK	Eagle Plains	86.02	14	*e*P	P	14 11 43.8	-0.2
	comp=Z,46nm,1.3s						
EPYK	Eagle Plains	86.02	14	P	P	14 11 44.4	+0.3
	baz=215						
LAO	LASA Array	86.06	39	*e*P	P	14 11 44.2	-0.6
	comp=Z,56nm,1.0s						
LAO	LASA Array	86.06	39	P	P	14 11 46.0	+1.3
	baz=243						
WMOK	Wichita Mounta	86.27	53	*e*P	P	14 11 45.6	-0.3
	comp=Z,14nm,1.1s						
WMOK	Wichita Mounta	86.27	53	*e*P	P	14 11 45.7	-0.3
WMOK				pmax	pmax		
	comp=Z,14nm,1.1s						
WMOK	Wichita Mounta	86.27	53	P	P	14 11 45.7	-0.3
	baz=248						
RSSD	Black Hills	86.29	42	*e*P	P	14 11 45.1	-1.0
	comp=Z,24nm,1.1s						
RSSD	Black Hills	86.29	42	*e*P	P	14 11 45.1	-1.0
RSSD				pmax	pmax		
	comp=Z,24nm,1.1s						
RSSD	Black Hills	86.29	42	P	P	14 11 45.8	-0.4
	baz=244						
OGNE	Ogallala	86.30	46	P	P	14 11 45.2	-0.9
	baz=246						
WHTX	Lake Whitney,	86.31	56	*e*P	P	14 11 45.6	-0.6
	comp=Z,77nm,1.5s						
WHTX	Lake Whitney,	86.31	56	P	P	14 11 46.4	+0.2
	baz=249						
HKT	Hockley	86.91	58	*e*P	P	14 11 49.1	0.0
	comp=Z,34nm,1.6s						
HKT	Hockley	86.91	58	*e*P	P	14 11 49.1	0.0

HKT				pmax	pmax		
	comp=Z,34nm,1.6s						
APG	**El Apazote**	**86.97**	**74**	P	**P**	**14 11 52.0**	**+2.0**
	comp=Z,21nm,0.9s,baz=309,slow=12,SNR=8.7						
CBKS	**Cedar Bluff**	**87.08**	**49**	*e*P	**P**	**14 11 49.7**	**-0.2**
	comp=Z,15nm,0.8s						
CBKS	**Cedar Bluff**	**87.08**	**49**	*e*P	**P**	**14 11 49.7**	**-0.2**
CBKS				pmax	pmax		
	comp=Z,15nm,0.8s						
CBKS	**Cedar Bluff**	**87.08**	**49**	P	**P**	**14 11 49.8**	**-0.1**
	baz=248						
IPM	**Ipoh**	**87.35**	**275**	*e*P	**P**	**14 11 50.7**	**-1.0**
	comp=Z,37nm,0.8s						
PANO	**Nakornpanom**	**87.50**	**288**	P	**P**	**14 11 54.4**	**+2.1**
TIY	**Taiyuan**	**87.66**	**310**	*e*P	**P**	**14 11 54.9**	**+2.1**
TIY				S	**S**	**14 22 26.9**	**-6.2**
TIY				pmax	pmax		
	comp=Z,53nm,1.0s						
TIY				pmax	pmax		
	comp=Z,560nm,10.8s						
SKNT	**Sakolnakorn**	**88.03**	**288**	P	**P**	**14 11 56.4**	**+1.5**
DGMT	**Dagmar**	**88.09**	**38**	*e*P	**P**	**14 11 53.2**	**-1.3**
	comp=Z,61nm,1.0s						
DGMT	**Dagmar**	**88.09**	**38**	P	**P**	**14 11 55.1**	**+0.6**
	baz=244						
INK	**Inuvik**	**88.31**	**14**	P	**P**	**14 11 55.1**	**+0.1**
	comp=Z,22nm,1.0s,baz=196,slow=6.1,SNR=34						
INK	**Inuvik**	**88.31**	**14**	*e*P	**P**	**14 11 54.4**	**-0.6**
	comp=Z,24nm,1.0s						
INK	**Inuvik**	**88.31**	**14**	*e*P	**P**	**14 11 54.4**	**-0.6**
INK				pmax	pmax		
	comp=Z,24nm,1.0s						
SKLT	**Songkhla**	**88.46**	**278**	P	**P**	**14 11 59.7**	**+2.7**
NATX	**Nacogdoches**	**88.46**	**57**	P	**P**	**14 11 57.7**	**+1.1**
	baz=251						
GYA	**Guiyang**	**88.48**	**298**	⇑*i*P	**P**	**14 11 57.0**	**0.0**
GYA				pP	pP	14 12 04.8	-1.1
GYA				PP	**PP**	**14 15 23.3**	**-2.1**
GYA				SKS	**SKSac**	**14 22 20.0**	**-4.5**
GYA				S	**SKKSac**	**14 22 37.0**	**+1.6**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,620nm,9.9s						
GYA				LR	LR		
	comp=Z,3µm,19.8s						
GYA				LR	LR		
	comp=Z,3µm,20.6s						
GYA				LR	LR		
	comp=Z,3µm,20.2s						
PSI	**Prapat**	**88.92**	**273**	*e*P	**P**	**14 11 57.2**	**-2.1**
	comp=Z,19nm,1.0s						
PSI	**Prapat**	**88.92**	**273**	*e*P	**P**	**14 11 57.2**	**-2.1**
PSI				pmax	pmax		
	comp=Z,19nm,1.0s						
TUL1	**Leonard**	**88.97**	**52**	P	**P**	**14 11 59.2**	**+0.3**
	baz=250						
XAN	**Xi'an**	**89.06**	**306**	P	**P**	**14 12 00.4**	**+1.0**
XAN				pP	sP	14 12 13.8	+2.2
XAN				SKS	**SKSac**	**14 22 23.3**	**-4.2**
XAN				S	**SKKSac**	**14 22 38.4**	**-0.8**
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
XAN				pmax	pmax		
	comp=Z,440nm,6.3s						
XAN				LR	LR		
	comp=Z,12µm,23.9s						
XAN				LR	LR		
	comp=Z,11µm,19.5s						
XAN				LR	LR		
	comp=Z,12µm,24.9s						
NONG	**Nongkai**	**89.11**	**289**	P	**P**	**14 12 02.0**	**+2.1**
BGNE	**Belgrade**	**89.18**	**47**	P	**P**	**14 12 00.2**	**+0.4**
	baz=249						
SLVN	**Son La**	**89.36**	**292**	*e*P	**P**	**14 11 59.0**	**-2.2**
	comp=Z,15nm,1.0s						
YAK	**Yakutsk**	**89.41**	**337**	*e*P	**P**	**14 11 58.1**	**-2.2**
	comp=Z,25nm,0.8s						
YAK	**Yakutsk**	**89.41**	**337**	*e*P	**P**	**14 11 59.7**	**-0.6**
YAK				*e**PP	**sP**	**14 12 11.1**	**-0.8**
YAK				*e*S	**SKSac**	**14 22 25.9**	**-2.2**
YAK				*e**SS	sS	14 23 51.3	+48
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,75nm,3.7s						
YAK				pmax	pmax		
	comp=N,51nm,3.3s						
YAK				pmax	pmax		
	comp=E,78nm,4.8s						
YAK				smax	smax		
	comp=N,86nm,3.7s						
YAK				smax	smax		
	comp=E,129nm,4.3s						
HHC	**Hu-ho-hao-te**	**89.43**	**313**	P	**P**	**14 12 03.0**	**+1.9**
HHC				pmax	pmax		
	comp=E,44nm,0.9s						
HHC				pmax	pmax		
	comp=E,750nm,7.0s						
HHC				LR	LR		
	comp=E,8µm,17.1s						
KSU1	**Kansas State U**	**89.46**	**49**	P	**P**	**14 12 00.9**	**-0.2**
	baz=250						
TRTT	**Trang**	**89.53**	**278**	P	**P**	**14 12 05.0**	**+3.0**
CHAI	**Chaiyaphum**	**89.56**	**287**	P	**P**	**14 12 04.7**	**+2.6**
SUSD	**Miller**	**89.76**	**44**	P	**P**	**14 12 02.3**	**-0.1**
	baz=248						
GSI	**Gunungsitoli**	**89.82**	**271**	*e*P	**P**	**14 12 02.4**	**-1.1**
	comp=E,53nm,0.9s						
YKA	**Yellowknife Ar**	**90.07**	**23**	P	**P**	**14 12 04.9**	**+1.6**
	comp=E,18nm,1.0s,baz=236,slow=4.2,SNR=7.2						
YKB5	**Yellowknife Ar**	**90.07**	**23**	*e*P	**P**	**14 12 04.9**	**+1.5**
MIAR	**Mount Ida**	**90.23**	**54**	P	**P**	**14 12 05.6**	**+0.8**
	baz=251						
W39A	**Magazine**	**90.27**	**54**	P	**P**	**14 12 05.8**	**+0.8**
	baz=251						
Z41A	**Richland Creek**	**90.43**	**56**	P	**P**	**14 12 06.6**	**+0.8**
	baz=252						
BTO	**Baotou**	**90.44**	**312**	P	**P**	**14 12 08.0**	**+2.2**
MDND	**Maddock**	**90.64**	**40**	*e*P	**P**	**14 12 06.0**	**-0.4**
	comp=E,39nm,1.0s						
MDND	**Maddock**	**90.64**	**40**	P	**P**	**14 12 06.2**	**-0.3**
	baz=248						
PBKT	**Sadao Pong**	**90.69**	**287**	P	**P**	**14 12 11.5**	**+4.2**
X40A	**Basin Creek Fa**	**90.79**	**54**	P	**P**	**14 12 07.3**	**-0.1**
	baz=252						
JTS	**Las Juntas de**	**90.83**	**80**	P	**P**	**14 12 11.6**	**+3.5**
	comp=E,17nm,0.9s,baz=328,slow=4.5,SNR=8.2						
JTS	**Las Juntas de**	**90.83**	**80**	*e*P	**P**	**14 12 06.7**	**-1.4**
	comp=E,24nm,1.0s						
JTS	**Las Juntas de**	**90.83**	**80**	*e*P	**P**	**14 12 06.7**	**-1.4**
JTS				pmax	pmax		
	comp=Z,24nm,1.0s						
ECSD	**EROS Data Cent**	**91.07**	**45**	P	**P**	**14 12 08.0**	**-0.6**
	baz=250						
UALR	**University of**	**91.26**	**54**	*e*P	**P**	**14 12 09.4**	**-0.2**
	comp=Z,16nm,0.9s						
U40A	**Yellville**	**91.36**	**53**	P	**P**	**14 12 09.2**	**-0.9**
	baz=252						
W41B	**Gary Mavity, V**	**91.46**	**54**	*e*P	**P**	**14 12 10.0**	**-0.6**
	comp=Z,25nm,1.3s						
W41B	**Gary Mavity, V**	**91.46**	**54**	P	**P**	**14 12 10.9**	**+0.4**
	baz=252						
KMI	**Kunming**	**91.46**	**296**	P	**P**	**14 12 10.5**	**-0.6**
KMI				pP	pP	14 12 16.6	-3.4
KMI				PP	**PP**	**14 15 48.3**	**-1.1**
KMI				SKS	**SKSac**	**14 22 42.3**	**+0.1**
KMI				S	**S**	**14 23 08.3**	**-1.0**
KMI				sS	pS	14 23 17.9	-2.8
KMI				SS	**SS**	**14 29 13.4**	**-2.6**
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
KMI				pmax	pmax		
	comp=Z,420nm,11.5s						
KMI				LR	LR		
	comp=Z,8µm,25.3s						
KMI				LR	LR		
	comp=Z,6µm,20.3s						
KMI				LR	LR		
	comp=Z,5µm,27.3s						
WHAR	**Wooly Hollow**	**91.47**	**54**	*e*P	**P**	**14 12 11.0**	**+0.5**
	comp=Z,29nm,1.2s						
PHRA	**Phrae**	**91.89**	**289**	P	**P**	**14 12 15.8**	**+2.9**
VBMS	**Vicksburg**	**91.95**	**57**	P	**P**	**14 12 13.4**	**+0.5**
	baz=253						
FFC	**Flin Flon**	**92.00**	**33**	*e*P	**P**	**14 12 11.5**	**-1.0**
	comp=Z,178nm,1.2s						
FFC	**Flin Flon**	**92.00**	**33**	*ce*P	**P**	**14 12 14.6**	**+2.0**
CIT	**Chita**	**92.30**	**324**	*e*P	**P**	**14 12 16.2**	**+2.1**
CIT				*e*		14 12 21.4	
X43A	**Marvell**	**92.34**	**55**	P	**P**	**14 12 14.6**	**0.0**
	baz=253						
LAMP	**Lampang**	**92.44**	**288**	P	P	14 12 23.3	+7.9
PAYA	**Payao**	**92.45**	**289**	P	**P**	**14 12 18.2**	**+2.7**
UMPA	**Umpang Tak**	**92.54**	**286**	P	**P**	**14 12 19.3**	**+3.3**
SCIA	**State Center**	**92.83**	**47**	P	**P**	**14 12 16.6**	**-0.1**
	baz=252						
CMAR	**Chiang Mai Arr**	**93.05**	**288**	P	**P**	**14 12 20.0**	**+1.7**
	comp=Z,9.5nm,0.9s,baz=88,slow=2.5,SNR=43						
CMAR				PKiKP	**PKiKP**	**14 17 08.2**	**+2.6**
	comp=Z,3.2nm,0.9s,baz=62,slow=0.6,SNR=9.2						
CCM	**Cathedral Cave**	**93.10**	**51**	P	**P**	**14 12 17.7**	**-0.3**
	baz=253						
AGMN	**Agassiz Nation**	**93.14**	**41**	P	**P**	**14 12 17.2**	**-0.8**
	baz=250						
CMMT	**Chiang Mai**	**93.14**	**289**	P	**P**	**14 12 20.9**	**+2.2**
CHTO	**Chiang Mai**	**93.15**	**289**	*e*P	**P**	**14 12 17.3**	**-1.4**
	comp=Z,8.9nm,0.8s						
CHTO	**Chiang Mai**	**93.15**	**289**	*e*P	**P**	**14 12 17.3**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OXF	**Oxford**	**93.50**	**55**	P	**P**	**14 12 19.3**	**-0.6**
	baz=254						
LZH	**Lanzhou**	**93.65**	**306**	*e*P	**P**	**14 12 21.4**	**+0.6**
LZH				pP	pP	14 12 26.5	-3.3
LZH				sP	sP	14 12 28.9	-4.1
LZH				PP	**PP**	**14 16 03.5**	**-2.7**
LZH				SKS	**SKSac**	**14 22 56.1**	**+2.3**
LZH				*e*S	**S**	**14 23 23.6**	**-4.6**
LZH				sS	sS	14 23 46.4	+3.5
LZH				pmax	pmax		
	comp=Z,30nm,1.5s						
LZH				pmax	pmax		
	comp=Z,480nm,9.4s						
LZH				LR	LR		
	comp=Z,6µm,17.3s						
LZH				LR	LR		
	comp=Z,5µm,16.8s						
LZH				LR	LR		
	comp=Z,6µm,20.0s						
N40A	**Mertquake, Sal**	**93.69**	**49**	P	**P**	**14 12 20.1**	**-0.6**
	baz=253						
ULM	**Lac du Bonnet**	**93.79**	**39**	P	**P**	**14 12 20.5**	**-0.4**
	comp=Z,14nm,1.0s,baz=253,slow=4.0,SNR=5.9						
147A	**Livingston**	**93.90**	**57**	P	**P**	**14 12 22.1**	**+0.2**
	baz=254						
N41A	**Harden Midland**	**94.16**	**49**	*e*P	**P**	**14 12 22.4**	**-0.5**
	comp=Z,37nm,1.0s						
N41A	**Harden Midland**	**94.16**	**49**	P	**P**	**14 12 22.8**	**-0.1**
	baz=253						
X46A	**Booneville**	**94.16**	**55**	P	**P**	**14 12 22.1**	**-0.9**
	baz=254						
449A	**Pace**	**94.25**	**59**	P	**P**	**14 12 22.6**	**-1.0**
	baz=255						
L40A	**Anamosa**	**94.29**	**48**	*e*P	**P**	**14 12 23.4**	**-0.1**
	comp=Z,36nm,1.0s						
L40A	**Anamosa**	**94.29**	**48**	P	**P**	**14 12 23.3**	**-0.1**
	baz=253						
349A	**Repton**	**94.43**	**59**	P	**P**	**14 12 24.6**	**+0.3**
	baz=255						
148A	**Greensboro**	**94.46**	**58**	P	**P**	**14 12 25.4**	**+1.0**
	baz=255						
BRAL	**Brewton**	**94.50**	**59**	P	**P**	**14 12 23.9**	**-0.7**
	baz=255						
S44A	**Carbondale**	**94.50**	**52**	P	**P**	**14 12 24.8**	**+0.3**
	baz=254						
M41A	**Milan**	**94.58**	**48**	P	**P**	**14 12 24.6**	**-0.2**
	baz=254						
249A	**Camden**	**94.65**	**58**	P	**P**	**14 12 25.1**	**-0.3**
	baz=255						
X47A	**Russelville**	**94.73**	**56**	P	**P**	**14 12 25.5**	**-0.1**
	baz=255						
450A	**Crestview**	**94.79**	**60**	P	**P**	**14 12 26.5**	**+0.5**
	baz=255						
ULN	**Ulaanbaatar**	**94.82**	**318**	*e*P	**P**	**14 12 25.5**	**-0.4**
	comp=Z,13nm,1.0s						
ULN	**Ulaanbaatar**	**94.82**	**318**	*ce*P	**P**	**14 12 26.5**	**+0.6**
ULN				pmax	pmax		
	comp=Z,11nm,0.9s						
P43A	**Skaggs, Pawnee**	**94.84**	**50**	P	**P**	**14 12 25.8**	**-0.2**
	baz=254						
V46A	**Holladay**	**94.87**	**54**	P	**P**	**14 12 26.3**	**0.0**
	baz=255						
U46A	**Springville**	**94.97**	**54**	P	**P**	**14 12 27.3**	**+0.6**
	baz=255						
LRAL	**Lakeview Retre**	**95.03**	**57**	P	**P**	**14 12 27.6**	**+0.5**
	baz=255						
149A	**Jones**	**95.08**	**58**	P	**P**	**14 12 27.7**	**+0.4**
	baz=255						
Y48A	**Jasper**	**95.12**	**56**	P	**P**	**14 12 28.0**	**+0.5**
	baz=255						
W47A	**Westpoint**	**95.13**	**55**	P	**P**	**14 12 27.5**	**0.0**
	baz=255						
WVT	**Waverly**	**95.18**	**54**	P	**P**	**14 12 27.9**	**+0.2**
	baz=255						
JFWS	**Jewell Farm**	**95.22**	**47**	*e*P	**P**	**14 12 27.1**	**-0.5**
	comp=Z,42nm,1.0s						
JFWS	**Jewell Farm**	**95.22**	**47**	*e*P	**P**	**14 12 27.2**	**-0.5**
JFWS				pmax	pmax		
	comp=Z,42nm,1.0s						
JFWS	**Jewell Farm**	**95.22**	**47**	P	**P**	**14 12 27.2**	**-0.5**
	baz=254						
SONA0	**Songino Array**	**95.23**	**318**	*e*P	**P**	**14 12 27.7**	**-0.1**
SONA0				*e*PP	**PP**	**14 16 20.9**	**+2.7**
SONM	**Songino Array**	**95.23**	**318**	P	**P**	**14 12 27.7**	**-0.1**
	comp=Z,4.0nm,0.9s,baz=118,slow=3.5,SNR=15						
SONM				PP	**PP**	**14 16 20.9**	**+2.7**
	comp=Z,2.3nm,0.8s,baz=131,slow=8.1,SNR=4.4						
G39A	**Holcombe**	**95.26**	**45**	P	**P**	**14 12 27.3**	**-0.5**
	baz=254						
TIXI	**Tiksi**	**95.26**	**344**	*e*P	**P**	**14 12 26.7**	**-0.5**
	comp=Z,6.1nm,0.8s						
TIXI	**Tiksi**	**95.26**	**344**	*i* P	**P**	**14 12 26.4**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HDIL	**Hopedale**	**95.26**	**50**	P	**P**	**14 12 28.1**	**+0.2**
	baz=254						
V47A	**Nunnelly**	**95.34**	**54**	P	**P**	**14 12 28.8**	**+0.3**
	baz=255						
250A	**Grady**	**95.35**	**58**	P	**P**	**14 12 28.9**	**+0.4**
	baz=255						
X48A	**Hartselle**	**95.36**	**56**	P	**P**	**14 12 28.7**	**+0.2**
	baz=255						
T46A	**Princeton**	**95.37**	**53**	P	**P**	**14 12 28.8**	**+0.3**
	baz=255						
E38A	**The Farm, Brul**	**95.38**	**43**	P	**P**	**14 12 28.3**	**0.0**
	baz=253						
L42A	**Oliver, Polo**	**95.39**	**48**	P	**P**	**14 12 27.8**	**-0.7**
	baz=254						
451A	**Vernon**	**95.44**	**60**	P	**P**	**14 12 29.4**	**+0.5**
	baz=255						
Z49A	**Columbiana**	**95.45**	**57**	P	**P**	**14 12 29.5**	**+0.5**
	baz=255						
W48A	**Pulaski**	**95.63**	**55**	P	**P**	**14 12 29.9**	**+0.2**
	baz=255						
S46A	**Don Dixon Farm**	**95.68**	**53**	P	**P**	**14 12 29.7**	**-0.2**
	baz=255						
U47A	**Clarksville**	**95.68**	**54**	P	**P**	**14 12 29.3**	**-0.7**
	baz=255						
150A	**Eclectic**	**95.72**	**58**	P	**P**	**14 12 30.4**	**+0.3**
	baz=255						
Y49A	**Blount Mountai**	**95.72**	**57**	P	**P**	**14 12 28.7**	**-1.5**
	baz=255						
O44A	**Mansfield**	**95.76**	**50**	P	**P**	**14 12 29.8**	**-0.4**
	baz=255						
I41A	**Arkdale**	**95.81**	**46**	P	**P**	**14 12 30.1**	**-0.2**
	baz=254						
EYMN	**Ely**	**95.81**	**42**	*e*P	**P**	**14 12 30.6**	**+0.4**
	comp=Z,16nm,1.3s						
EYMN	**Ely**	**95.81**	**42**	P	**P**	**14 12 29.5**	**-0.8**
	baz=254						
V48A	**Smith Brothers**	**95.87**	**55**	P	**P**	**14 12 31.6**	**+0.8**
	baz=255						
G40A	**Rib Lake**	**95.91**	**45**	*e*P	**P**	**14 12 30.6**	**-0.2**
	comp=Z,16nm,1.1s						
G40A	**Rib Lake**	**95.91**	**45**	P	**P**	**14 12 30.8**	**0.0**
	baz=254						
X49A	**Woodville**	**95.95**	**56**	P	**P**	**14 12 31.5**	**+0.3**
	baz=256						
Z50A	**Ashland**	**95.96**	**57**	P	**P**	**14 12 32.0**	**+0.7**
	baz=256						
452A	**Marianna**	**95.97**	**60**	P	**P**	**14 12 32.0**	**+0.7**
	baz=256						
PB07	**IPOC Station P**	**96.02**	**114**	*e*P	**P**	**14 12 32.6**	**+0.5**
251A	**Midway**	**96.09**	**59**	P	**P**	**14 12 32.6**	**+0.7**
	baz=256						
W49A	**Belvidere**	**96.15**	**55**	P	**P**	**14 12 32.3**	**+0.2**
	baz=256						
N44A	**Piper City**	**96.17**	**50**	P	**P**	**14 12 32.3**	**+0.2**
	baz=255						
151A	**Opelika**	**96.26**	**58**	P	**P**	**14 12 32.6**	**-0.1**
	baz=256						
U48A	**Cassie Pea, Po**	**96.28**	**54**	P	**P**	**14 12 32.8**	**+0.1**
	baz=256						
S47A	**Hartford**	**96.30**	**53**	P	**P**	**14 12 32.8**	**+0.1**
	baz=256						
352A	**Blakely**	**96.33**	**59**	P	**P**	**14 12 32.7**	**-0.4**
	baz=256						
M44A	**Midewin, Midew**	**96.39**	**49**	P	**P**	**14 12 33.1**	**+0.1**
	baz=255						
I42A	**Draeger Farm,**	**96.43**	**46**	*e*P	**P**	**14 12 32.2**	**-0.9**
	comp=Z,19nm,1.0s						
I42A	**Draeger Farm,**	**96.43**	**46**	P	**P**	**14 12 32.9**	**-0.2**
	baz=255						
X50B	**Fort Payne**	**96.48**	**56**	P	**P**	**14 12 33.9**	**+0.2**
	baz=256						
K43A	**Burlington**	**96.53**	**48**	*e*P	**P**	**14 12 32.9**	**-0.8**
	comp=Z,30nm,1.0s						
K43A	**Burlington**	**96.53**	**48**	P	**P**	**14 12 33.6**	**0.0**
	baz=255						
T48A	**Bowling Green**	**96.55**	**53**	P	**P**	**14 12 33.6**	**-0.3**
	baz=256						
P46A	**Rosedale**	**96.56**	**51**	P	**P**	**14 12 33.8**	**-0.1**
	baz=256						
COWI	**Conover**	**96.85**	**44**	*e*P	**P**	**14 12 34.1**	**-1.0**
	comp=Z,25nm,0.9s						
C40A	**Isle Royale Na**	**97.31**	**42**	*e*P	**P**	**14 12 36.2**	**-0.8**
	comp=Z,23nm,1.0s						
C40A	**Isle Royale Na**	**97.31**	**42**	P	Pdif	14 12 37.2	+0.1
	baz=255						
H43A	**Windswept, Lux**	**97.37**	**46**	*e*P	**P**	**14 12 36.6**	**-0.8**
	comp=Z,13nm,0.9s						
H43A	**Windswept, Lux**	**97.37**	**46**	P	**P**	**14 12 37.3**	**-0.1**
	baz=256						
D41A	**Chassel**	**97.48**	**43**	*e*P	**P**	**14 12 37.5**	**-0.3**
	comp=Z,36nm,1.0s						
D41A	**Chassel**	**97.48**	**43**	P	Pdif	14 12 38.3	+0.4
	baz=256						
S49A	**Springfield**	**97.57**	**53**	P	Pdif	14 12 38.5	0.0
	baz=256						
GTA	**Gaotai**	**97.59**	**309**	*e*P	Pdif	14 12 39.6	+0.8
GTA				pP	pP	14 12 44.1	-3.6
GTA				sP	sP	14 12 46.8	-4.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,210nm,7.3s						
GTA				LR	LR		
	comp=Z,10µm,19.7s						
GTA				LR	LR		
	comp=Z,10µm,20.6s						
GTA				LR	LR		
	comp=Z,6µm,21.0s						
ZAK	**Zakamensk**	**97.90**	**320**	*e*P	**P**	**14 12 39.6**	**-0.2**
ZAK				*e*		14 16 35.6	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
TLY	**Talaya**	**98.01**	**321**	*i* P	Pdif	14 12 40.6	+0.4
TLY				pmax	pmax		
	comp=Z,20nm,0.9s						
E43A	**Lone Tree Farm**	**98.36**	**44**	*e*P	**P**	**14 12 41.0**	**-0.8**
	comp=Z,22nm,1.0s						
E43A	**Lone Tree Farm**	**98.36**	**44**	P	Pdif	14 12 41.9	0.0
	baz=256						
E44A	**Grand Marais A**	**99.14**	**44**	P	**Pdif**	**14 12 46.0**	**+0.7**
	baz=257						
F45A	**CMU Biological**	**99.21**	**45**	P	**Pdif**	**14 12 46.1**	**+0.5**
	baz=257						
K48A	**Perry**	**99.56**	**48**	P	**Pdif**	**14 12 47.7**	**+0.4**
	baz=258						
E46A	**Sault Ste Mari**	**100.17**	**45**	*e*Pdif	**Pdif**	**14 12 50.0**	**0.0**
E46A	**Sault Ste Mari**	**100.17**	**45**	P	**Pdif**	**14 12 50.5**	**+0.6**
	baz=258						
G47A	**Hillman**	**100.24**	**46**	P	**Pdif**	**14 12 50.1**	**-0.1**
	baz=258						
D46A	**Sault St. Mari**	**100.46**	**44**	P	**Pdif**	**14 12 51.6**	**+0.4**
	baz=259						
E47A	**Iron Bridge**	**100.89**	**45**	P	**Pdif**	**14 12 53.0**	**-0.1**
	baz=259						
D47A	**Chapleau**	**101.12**	**44**	P	**Pdif**	**14 12 53.5**	**-0.6**
	baz=259						
F48A	**Evansville**	**101.22**	**45**	P	**Pdif**	**14 12 53.9**	**-0.7**
	baz=260						
E48A	**Lockeyer**	**101.65**	**45**	P	**Pdif**	**14 12 56.9**	**+0.4**
	baz=260						
D49A	**Beulah Townshi**	**102.33**	**44**	P	**Pdif**	**14 13 00.3**	**+0.7**
	baz=261						
M54A	**Oil Creek Stat**	**102.57**	**50**	P	**Pdif**	**14 13 00.9**	**+0.2**
	baz=260						
E50A	**Wahnapitae**	**102.61**	**45**	P	**Pdif**	**14 13 01.2**	**+0.4**
	baz=261						
ZAA1	**Zalesovo Array**	**109.60**	**322**	*e*Pdif	**Pdif**	**14 13 33.2**	**+1.6**
ZAA1				*e*PKiKP	**PKiKP**	**14 17 36.1**	**+1.7**
ZALV	**Zalesovo Beam**	**109.60**	**322**	Pdiff	**Pdif**	**14 13 33.2**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=90,slow=4.4,SNR=5.0						
ZALV				PKiKP	**PKiKP**	**14 17 36.1**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=29,slow=3.4,SNR=4.5						
MK32	**Makanchi Array**	**111.23**	**315**	*e*Pdif	**Pdif**	**14 13 40.6**	**+1.5**
MK32				*e*PKiKP	**PKiKP**	**14 17 38.3**	**+0.5**
MKAR	**Makanchi Array**	**111.23**	**315**	Pdiff	**Pdif**	**14 13 40.6**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=103,slow=3.3,SNR=2.6						
MKAR				PKiKP	**PKiKP**	**14 17 38.3**	**+0.5**
	comp=Z,4.1nm,0.9s,baz=68,slow=3.3,SNR=17						
KURK	**Kurchatov**	**113.53**	**319**	*c i*PKIKP	**PKiKP**	**14 17 42.8**	**+0.8**
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
NRN	**Naryn**	**115.83**	**309**	*e*PKPdf	**PKPdf**	**14 17 46.6**	**-0.5**
NRN	**Naryn**	**115.83**	**309**	*e*PKIKP	**PKPdf**	**14 17 46.6**	**-0.5**
KSH	**Kashi**	**115.89**	**307**	PKP	**PKiKP**	**14 17 49.3**	**+2.2**
KSH				PP	PP	14 18 59.5	+8.3
KSH				PKS	**PKSdf**	**14 21 24.6**	**+0.7**
KSH				AMB	AMB		
	comp=Z,200nm,6.2s						
AAK	**Ala-Archa**	**116.90**	**310**	*e*PKPdf	**PKPdf**	**14 17 48.7**	**-0.3**
AAK	**Ala-Archa**	**116.90**	**310**	*c i*PKIKP	**PKiKP**	**14 17 50.5**	**+1.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NIL	**Nilore**	**118.11**	**300**	*e*PKPdf	**PKPdf**	**14 17 51.0**	**-0.4**
BRVK	**Borovoye**	**118.31**	**322**	*e*PKPdf	**PKPdf**	**14 17 50.4**	**-0.7**
BRVK	**Borovoye**	**118.31**	**322**	*c i*PKIKP	**PKiKP**	**14 17 51.7**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KK31	**Karatay Array**	**119.77**	**311**	*e*PKPdf	**PKPdf**	**14 17 54.1**	**-0.2**
KK31	**Karatay Array**	**119.77**	**311**	*e*PKIKP	**PKPdf**	**14 17 54.1**	**-0.2**
KKAR	**Karatay Array**	**119.77**	**311**	*e*PKPdf	**PKiKP**	**14 17 54.4**	**0.0**
KKAR	**Karatay Array**	**119.77**	**311**	*e*PKIKP	**PKiKP**	**14 17 54.4**	**0.0**
GAR	**Garm**	**120.30**	**306**	*e*PKPdf	**PKiKP**	**14 17 55.8**	**+0.1**
GAR	**Garm**	**120.30**	**306**	*e*PKIKP	**PKiKP**	**14 17 55.8**	**+0.1**
KBL	**Kabul**	**121.58**	**301**	*e*PKPdf	**PKPdf**	**14 17 58.2**	**-0.1**
KBL	**Kabul**	**121.58**	**301**	*e*PKIKP	**PKPdf**	**14 17 58.2**	**-0.1**
SVE	**Sverdlovsk**	**122.47**	**328**	*e*PKIKP	**PKiKP**	**14 18 00.4**	**+1.2**
SVE				pmax	pmax		
	comp=Z,16nm,1.3s						
ARU	**Arti**	**123.69**	**328**	*i* PKIKP	**PKiKP**	**14 18 02.7**	**+1.1**
ARU						14 19 42.0	
ARU						14 25 14.3	
ARA0	**ARCESS Array S**	**124.81**	**352**	*e*PKPdf	**PKiKP**	**14 18 03.6**	**+0.1**
ARCES	**ARCESS Array B**	**124.81**	**352**	PKP	**PKiKP**	**14 18 03.6**	**+0.1**
	comp=Z,12nm,0.9s,baz=90,slow=1.2,SNR=16						
ARE0	**ARCESS Array S**	**124.81**	**352**	*e*PKPdf	**PKiKP**	**14 18 03.4**	**-0.1**
APA	**Apatity**	**125.27**	**348**	⇑*i*PKIKP	**PKPdf**	**14 17 57.2**	**-6.9**
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,19µm,29.0s						
ABKAR	**Akbulak array**	**125.60**	**320**	*e*PKPdf	**PKPdf**	**14 18 04.4**	**-0.8**
FIA0	**FINESS Array S**	**132.18**	**348**	*e*PKPdf	**PKiKP**	**14 18 18.0**	**-0.4**
FIA0	**FINESS Array S**	**132.18**	**348**	*e*PKIKP	**PKiKP**	**14 18 18.0**	**-0.4**
FINES	**FINESS Array B**	**132.18**	**348**	PKP	**PKiKP**	**14 18 18.0**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=48,slow=2.8,SNR=7.0						
FINES	**FINESS Array B**	**132.18**	**348**	PKIKP	**PKiKP**	**14 18 18.0**	**-0.4**
OBN	**Obninsk**	**134.41**	**337**	⇓*i*PKIKP	**PKiKP**	**14 18 23.6**	**+0.5**
OBN						14 20 58.0	
OBN				pmax	pmax		
	comp=Z,14nm,0.8s						

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OBN                                      pmax     pmax
         comp=Z,34nm,0.6s
OBN                                      pmax     pmax
         comp=Z,48nm,0.8s
OBN                                      pmax     pmax
         comp=Z,151nm,1.5s
OBN                                      pmax     pmax
         comp=Z,327nm,2.2s
NB2      NORSAR Subarra134.47 357        PKP      PKiKP      14 18 35.6 +12
         comp=Z,1.4nm,0.8s,baz=16,slow=2.3
AKT      Akhty             136.46 315   ePKIKP    PKiKP      14 18 28.7 +0.8
AKT                                     e                    14 21 04.1
AKT                                      pmax     pmax
         comp=Z,19nm,1.0s
GOF      Gofitskoye        137.78 322⇑ePKIKP    PKPdf      14 18 29.2 +0.8
KIV      Kislovodsk        138.58 320   ePKIKP    PKiKP      14 18 31.8 -0.3
KIV                                      pmax     pmax
         comp=Z,28nm,1.0s
SOC      Sochi             140.58 322   ePKIKP    PKPdf      14 18 33.4 -0.1
SOC                                     eSS       SS         14 40 01.9 +6.1
SOC                                      pmax     pmax
         comp=Z,19nm,0.8s
AKASG    Malin Array Be    140.63 338    PKhKP    PKPpre     14 18 28.6
         comp=Z,2.5nm,0.7s,baz=25,slow=3.5,SNR=6.1
ANN      Anapa             141.16 325   ePKIKP    PKiKP      14 18 38.2 +1.0
ANN                                      pmax     pmax
         comp=Z,90nm,1.6s
ANN                                      MLR      MLR
         comp=N,20µm,19.0s
ANN                                      MLR      MLR
         comp=Z,44µm,19.0s
ANN                                      MLR      MLR
         comp=E,16µm,19.0s
BEL      Belsk             142.17 346   ePKPdf    PKiKP      14 18 39.0 -0.1
BEL      Belsk             142.17 346   ePKIKP    PKiKP      14 18 39.0 -0.1
SIM      Simferopol'       142.84 328   ePKIKP    PKPdf      14 18 36.0 -1.5
SIM                                      pmax     pmax
         comp=Z,300nm,9.7s
SIM                                      pmax     pmax
         comp=Z,700nm,10.0s
LVV      L'vov             143.13 342   ePKIKP    PKPbc      14 18 34.8  0.0
LVV                                     e                    14 21 44.9
KWP      Kalwaria Pacla    143.69 343   ePKPdf    PKPab      14 18 34.8 -0.8
KWP      Kalwaria Pacla    143.69 343   ePKIKP    PKPab      14 18 34.8 -0.8
KIS      Kishinev          143.79 335⇑iP        PKPdf      14 18 40.0 +0.9
         comp=Z,1µm,10.0s
KIS      Kishinev          143.79 335   i PPP     PPP        14 25 36.0
KIS      Kishinev          143.79 335c iPKIKP    PKPdf      14 18 40.0 +0.9
KIS                                     i PPP     PPP        14 25 36.0
KIS                                      pmax     pmax
         comp=Z,1µm,10.0s
KIS                                      pmax     pmax
         comp=Z,4µm,12.0s
KIS                                      pmax     pmax
         comp=N,2µm,10.0s
OJC      Ojcow             143.90 346   ePKPdf    PKPab      14 18 36.5 +0.1
OJC      Ojcow             143.90 346   ePKIKP    PKPab      14 18 36.5 +0.1
CLL      Collm             144.01 354   ePKPdf    PKPdf      14 18 38.7 -0.7
CLL      Collm             144.01 354   ePKIKP    PKPdf      14 18 38.7 -0.7
CLL      Collm             144.01 354   ePKPdf    PKPbc      14 18 38.0 +0.7
         comp=Z,22nm,0.9s
CLL                                     e                    14 18 50.0
KSP      Ksiaz             144.01 350   ePKP      PKPdf      14 18 39.0 -0.4
STHS     Stebnicka Huta    144.29 344   ePKIKP    PKiKP      14 18 42.4 -1.2
STHS     Stebnicka Huta    144.29 344   ePKP      PKiKP      14 18 42.4 -1.2
CHVC     Chvalec           144.30 350   ePKP      PKPdf      14 18 41.5 +1.5
CHVC                                    ex        x          14 33 13.3
CHVC                                     AMS      AMS        15 06 20.0
         comp=Z,74µm,21.5s
OSTC     Ostas             144.30 350   ePKP      PKPdf      14 18 40.7 +0.7
OSTC                                     AMS      AMS        15 06 20.0
         comp=Z,80µm,21.3s
DIKM     Dikmen            144.37 323⇑iP        PKPdf      14 18 41.9 +1.6
UPC      Upice             144.38 350   ePKIKP    PKPbc      14 18 38.6 +0.1
UPC                                      MLR      MLR
         comp=Z,84µm,21.1s
UPC      Upice             144.38 350   ePKP      PKPdf      14 18 39.7 -0.4
UPC                                     ex        x          14 23 28.5
UPC                                      AMS      AMS        15 06 20.0
         comp=Z,84µm,21.1s
KOLS     Kolonicke sedl    144.44 343   ePKIKP    PKPdf      14 18 40.2  0.0
KOLS     Kolonicke sedl    144.44 343   ePKP      PKPdf      14 18 40.2  0.0
DPC      Dobruska-Polom    144.48 350   ePKIKP    PKPbc      14 18 39.3 +0.4
DPC                                      MLR      MLR
         comp=Z,75µm,21.9s
DPC      Dobruska-Polom    144.48 350   ePKP      PKPdf      14 18 39.8 -0.5
DPC                                     ex        x          14 33 12.2
DPC                                      AMS      AMS        15 06 10.0
         comp=Z,75µm,21.9s
NIE      Niedzica          144.53 345   ePKPdf    PKPdf      14 18 39.7 -0.7
NIE      Niedzica          144.53 345   ePKIKP    PKPdf      14 18 39.7 -0.7
PVCC     Panska Ves        144.58 352   ePKIKP    PKiKP      14 18 43.5 -0.6
PVCC     Panska Ves        144.58 352   ePKP      PKiKP      14 18 43.5 -0.6
PVCC                                     AMS      AMS        15 08 10.0
         comp=Z,81µm,18.8s
OKC      Ostrava-Krasne    144.63 348   ePKIKP    PKPdf      14 18 40.3 -0.2
OKC                                      MLR      MLR
         comp=Z,23µm,16.9s
OKC      Ostrava-Krasne    144.63 348   ePKP      PKPdf      14 18 40.3 -0.2
OKC                                      AMS      AMS        15 11 20.0
         comp=Z,23µm,16.9s
BUR08    Bucovina Ar. S    144.64 339   ePKPdf    PKPbc      14 18 39.9 +0.4
BURAR    Bucovina Array    144.66 339⇑iP        PKPdf      14 18 40.9 +0.1
BURAR    Bucovina Array    144.66 339  ⇑PKIKP    PKPdf      14 18 40.9 +0.1
UZH      Uzhgorod          144.71 342   ePKIKP    PKPab      14 18 38.3 -1.1
UZH                                     e                    14 18 44.3
UZH                                     e                    14 25 44.8
UCC      Uccle             144.78   3  ⇓PKP      PKPdf      14 18 41.0 +0.3
MORC     Moravsky Berou    144.81 348   ePKPdf    PKPbc      14 18 40.1 +0.2
MORC     Moravsky Berou    144.81 348⇑iP        PKPdf      14 18 41.3 +0.4
MORC     Moravsky Berou    144.81 348   ePKIKP    PKPbc      14 18 40.1 +0.2
MORC     Moravsky Berou    144.81 348   ePKP      PKPbc      14 18 40.3 +0.4
BEBN     Eben Emael        144.83   1  ⇓PKP      PKPdf      14 18 41.2 +0.4
BZK      Bozkurt           144.90 324⇑iP        PKPdf      14 18 42.5 +1.3
BIZ      Bicaz             144.91 337⇓iP        PKPdf      14 18 41.4 +0.3
LANS     Liptovska Anna    144.98 346   ePKIKP    PKPdf      14 18 42.0 +0.8
LANS     Liptovska Anna    144.98 346   ePKP      PKPdf      14 18 42.0 +0.8
MEM      Membach           145.02   1  ⇑PKP      PKPab      14 18 40.8 +0.3
TESR     Tescani           145.06 336⇑iP        PKPdf      14 18 41.8 +0.4
SNF      Seneffe           145.06   3  ⇑PKP      PKPdf      14 18 41.0 -0.2
PRU      Pruhonice         145.11 352   ePKHKP    PKPpre     14 18 37.1
PRU                                      MLR      MLR
         comp=Z,45µm,19.6s
PRU      Pruhonice         145.11 352   ePKP      PKPdf      14 18 41.6 +0.3
PRU                                     ex        x          14 23 18.6
PRU                                      AMS      AMS        15 08 00.0
         comp=Z,45µm,19.6s
NKC      Novy Kostel       145.13 354   ePKHKP    PKPpre     14 18 34.1
NKC                                      MLR      MLR
         comp=Z,62µm,18.9s
NKC      Novy Kostel       145.13 354   ePKP      PKPbc      14 18 39.5 -1.4
NKC                                     ex        x          14 23 15.5
NKC                                     ex        x          14 33 00.0
NKC                                      AMS      AMS        15 07 20.0
         comp=Z,62µm,18.9s
GOPC     GO Pecny, Ondr    145.15 351   ePKHKP    PKPpre     14 18 34.8
GOPC                                     MLR      MLR
         comp=Z,74µm,19.4s
GOPC     GO Pecny, Ondr    145.15 351   ePKP      PKPdf      14 18 41.5  0.0
GOPC                                    ex        x          14 23 17.9
GOPC                                     AMS      AMS        15 08 00.0
         comp=Z,74µm,19.4s
BCLA     Clavier           145.19   2  ⇓PKP      PKPdf      14 18 41.6 +0.1
ARCR     ARCALIA           145.41 339⇓iP        PKPab      14 18 43.3 +1.2
VRAC     Vranov            145.44 349⇑iP        PKPab      14 18 42.8 +0.7
VRAC     Vranov            145.44 349  ⇑PKIKP    PKPab      14 18 42.9 +0.8
VRAC     Vranov            145.44 349   ePKP      PKPab      14 18 42.4 +0.3
DOU      Dourbes           145.49   3  ⇑PKP      PKPab      14 18 42.2 -0.1
CFR      Carcaliu          145.52 333⇑iP        PKPab      14 18 43.7 +1.2
CFR      Carcaliu          145.52 333  ⇑PKIKP    PKPab      14 18 43.7 +1.2
VRI      Vrincioaia        145.55 335⇑iP        PKPab      14 18 43.8 +1.1
VRI      Vrincioaia        145.55 335  ⇑PKIKP    PKPab      14 18 43.8 +1.1
PLOR     Plostina          145.60 335⇑iP        PKPab      14 18 43.1 +0.2
PLOR     Plostina          145.60 335  ⇑PKIKP    PKPab      14 18 43.1 +0.2
TREC     Trest             145.64 350   ePKP      PKPab      14 18 43.3 +0.4
TREC                                    ex        x          14 33 16.1
TREC                                     AMS      AMS        15 05 10.0
         comp=Z,71µm,21.7s
JAVC     Velka Javorina    145.66 348   ePKP      PKPab      14 18 44.2 +1.2
KRUC     Moravsky          145.71 349   ePKP      PKPab      14 18 43.1  0.0
OZUR                       145.73 337⇑iP        PKiKP      14 18 45.2 -1.5
VYHS     Vyhne             145.74 346   ePKP2     PKPab      14 18 44.0 +0.7
VYHS     Vyhne             145.74 346   ePKP      PKPab      14 18 44.0 +0.7
GRA1     Grafenberg Arr    145.78 355   ePKPdf    PKPdf      14 18 42.5 -0.1
GRF      Grafenberg Arr    145.78 355   ePKP2     PKPdf      14 18 42.5 -0.1
GRFO     Grafenberg        145.78 355   ePKPdf    PKPdf      14 18 42.5  0.0
GRFO     Grafenberg        145.78 355   ePKP2     PKPdf      14 18 42.5  0.0
KMBO     Kilima Mbogo      145.84 244    PKPbc    PKPab      14 18 46.4 +1.4
         comp=Z,38nm,1.0s,baz=98,slow=1.0,SNR=5.5
KMBO     Kilima Mbogo      145.84 244   ePKPdf    PKPdf      14 18 44.1 +0.1
TIRR     Tirgusor          145.96 332   ePKPdf    PKPdf      14 18 43.2 +0.2
TIRR     Tirgusor          145.96 332⇑iP        PKPab      14 18 45.4 +1.2
TIRR     Tirgusor          145.96 332  ⇑PKP2     PKPab      14 18 45.4 +1.2
WLF      Walferdange       145.97   1   ePKPdf    PKPdf      14 18 42.8  0.0
WLF      Walferdange       145.97   1   ePKP2     PKPdf      14 18 42.8  0.0
WLF      Walferdange       145.97   1  ⇓PKP      PKPab      14 18 44.6 +0.6
DOPR     Dopca             145.99 337⇓iP        PKPab      14 18 45.5 +1.2
HARR     Harsova           145.99 333⇓iP        PKPab      14 18 44.9 +0.6
HARR     Harsova           145.99 333  ⇓PKP2     PKPab      14 18 44.9 +0.6
PSZ      Piszkesteto       146.02 344   ePKPdf    PKPdf      14 18 43.4 +0.3
PSZ      Piszkesteto       146.02 344⇑iP        PKPab      14 18 45.4 +1.0
PSZ      Piszkesteto       146.02 344  ⇑PKP2     PKPab      14 18 45.4 +1.0
PSZ      Piszkesteto       146.02 344   eP        PKPdf      14 18 40.0 -3.0
PSZ      Piszkesteto       146.02 344   eP        PKPdf      14 18 43.1  0.0
TLB      Topalu            146.03 333⇑iP        PKPab      14 18 45.7 +1.3
TLB      Topalu            146.03 333  ⇑PKP2     PKPab      14 18 45.7 +1.3
KHC      Kasperske Hory    146.08 352   ePKPbc    PKPab      14 18 44.6  0.0
KHC      Kasperske Hory    146.08 352   ePKP2     PKPab      14 18 44.7 +0.1
KHC      Kasperske Hory    146.08 352   ePKP      PKPab      14 18 44.7 +0.1
KHC                                     ex        x          14 33 07.8
KHC                                      AMS      AMS        15 05 00.0
         comp=Z,67µm,20.8s
EFOR     EFORIE            146.16 332⇓iP        PKiKP      14 18 46.9 -0.6
MFTR     Murfatlar         146.18 332⇑iP        PKiKP      14 18 47.1 -0.5
MLR      Muntele Rosu      146.18 336   ePKPdf    PKPdf      14 18 43.1 -0.4
MLR      Muntele Rosu      146.18 336⇓iP        PKPab      14 18 45.2  0.0
MLR      Muntele Rosu      146.18 336   ePKP2     PKPdf      14 18 43.1 -0.4
MODS     Modra-Piesok      146.20 348   ePKP2     PKPab      14 18 44.8 -0.2
MODS     Modra-Piesok      146.20 348   ePKP      PKPab      14 18 44.8 -0.2
GEC2     GERESS Array S    146.35 352   ePKPbc    PKPbc      14 18 45.0 +0.1
GEC2     GERESS Array S    146.35 352   ePKP2     PKPbc      14 18 45.0 +0.1
GERES    GERESS Array B    146.35 352    PKPbc    PKPab      14 18 45.5 -0.2
         comp=Z,22nm,0.8s,baz=27,slow=3.3,SNR=34
MANR     Mangalia          146.38 331⇑iP        PKiKP      14 18 47.3 -0.7
ZST      Bratislava        146.40 348   ePKP2     PKPab      14 18 45.8 +0.1
ZST      Bratislava        146.40 348   ePKP      PKPab      14 18 45.8 +0.1
SECR                       146.50 335⇑iP        PKiKP      14 18 48.1 -0.2
BR101    Keskin Array S    146.53 321   ePKPbc    PKPab      14 18 47.1 +0.3
BRTR     Keskin Array B    146.53 321    PKPbc    PKPab      14 18 47.1 +0.3
         comp=Z,118nm,1.0s,baz=116,slow=1.3,SNR=95
VOIR                       146.57 337⇓iP        PKPab      14 18 47.2 +0.6
VOIR                       146.57 337  ⇓PKP2     PKPab      14 18 47.2 +0.6
PSN      Preselentsi       146.67 332    P        PKiKP      14 18 48.3 -0.3
CONA     Conrad Observa    146.90 349   i PKiKP   PKPab      14 18 47.6 -0.2
         comp=Z,56nm,1.0s,SNR=20
ANTO     Ankara            146.95 322⇑iP        PKPab      14 18 48.2 -0.1
ANTO     Ankara            146.95 322  ⇑PKP2     PKPab      14 18 48.2 -0.1
SIRR     Siria             147.02 341⇓iP        PKPab      14 18 48.3 +0.1
MOA      Molln             147.24 351   i PKiKP   PKPab      14 18 48.3 -0.7
         comp=Z,55nm,1.0s,SNR=19
BFO      Black Forest      147.29 358   ePKPbc    PKPbc      14 18 47.6 +0.1
BFO      Black Forest      147.29 358   ePKP2     PKPbc      14 18 47.6 +0.1
PRD      Provadia          147.40 332    P        PKiKP      14 18 50.9 +0.8
GZR      Gura Zlata        147.43 339⇑iP        PKPdf      14 18 46.0 +0.5
GZR      Gura Zlata        147.43 339  ⇑PKIKP    PKPdf      14 18 46.0 +0.5
BZS      Buzias            147.61 341⇑iP        PKPdf      14 18 46.6 +0.9
BZS      Buzias            147.61 341  ⇑PKP2     PKPdf      14 18 46.6 +0.9
ARSA     Arzberg           147.61 349    PKiKP    PKiKP      14 18 49.5 -1.0
         comp=Z,24nm,1.0s
SILT     Sile              147.84 327⇑iP        PKiKP      14 18 50.4 -0.7
HERR     Herculane         148.00 339⇑iP        PKPbc      14 18 49.9 +0.4
RETA     Reutte            148.00 355   i PKiKP   PKPbc      14 18 50.4 +0.9
         comp=Z,45nm,1.0s,SNR=8.4
WATA     Walderalm         148.08 354   i PKiKP   PKPbc      14 18 49.8  0.0
         comp=Z,17nm,0.7s
MOTA     Moosalm           148.12 355   i PKiKP   PKPbc      14 18 50.1 +0.2
         comp=Z,51nm,1.0s,SNR=10
KBA      Koelnbreinsper    148.13 352   i PKPbc   PKPbc      14 18 48.4 -1.6
         comp=Z,28nm,1.1s,SNR=6.9
WTTA     Wattenberg        148.15 354   i PKPab   PKPbc      14 18 50.8 +0.7
         comp=Z,61nm,1.1s,SNR=5.3
SQTA     Sankt Quirin      148.23 355   i PKPab   PKPbc      14 18 50.7 +0.5
         comp=Z,28nm,0.9s
SOKA     Soboth            148.25 350   i PKPab   PKiKP      14 18 51.3 -0.6
         comp=Z,45nm,1.1s,SNR=6.0
DAVA     Damuels           148.27 356   i PKPab   PKPbc      14 18 51.1 +0.7
         comp=Z,57nm,1.1s,SNR=12
ELND     Elena             148.30 333⇑iP        PKiKP      14 18 51.2 -0.8
MDVR     Moldovita         148.32 340⇑iP        PKiKP      14 18 52.1  0.0
JMB      Yambol            148.35 332    P        PKPab      14 18 52.9 -0.7
PLVB     Pleven            148.45 335⇑iP        PKPab      14 18 53.5 -0.5
FETA     Feichten          148.47 355   i PKPab   PKPbc      14 18 51.5 +0.6
         comp=Z,44nm,1.1s,SNR=7.4
OBKA     Obir              148.50 350   i PKPdf   PKPdf      14 18 43.2 -4.0
         comp=Z,20nm,1.2s
MYKA     Terra Mystica     148.53 351   i PKiKP   PKPbc      14 18 51.3 +0.4
         comp=Z,199nm,0.6s,SNR=59
ABTA     Abfaltersbach     148.56 353   i PKiKP   PKPbc      14 18 51.1 +0.1
         comp=Z,71nm,1.0s,SNR=8.2
KSDI     Kefar Szold       148.71 309    P        PKiKP      14 18 53.8 +0.7
         comp=Z,254nm,1.1s
HSUJ     Al Zarqa          148.78 307    P        PKiKP      14 18 54.0 +0.6
         comp=Z,210nm,0.9s
MPEP     Malo Peshtene     148.83 336    P        PKiKP      14 18 53.8 +0.7
SHMJ     Saham             148.84 308    P        PKPab      14 18 55.1 -0.9
         comp=Z,180nm,0.9s
FUORN    Ofenpass-Fuorn    148.91 356   ePKPbc    PKPdf      14 18 50.0 +1.8
LJU      Ljubljana         148.96 350   i PKPbc   PKPbc      14 18 52.3 +0.4
PHNC     Paralimni         149.00 314    P        PKiKP      14 18 53.7  0.0
MMLI     Mount Malkishu    149.23 308    P        PKiKP      14 18 55.0 +0.7
         comp=Z,125nm,1.0s
WALJ     Wala              149.31 306    P        PKiKP      14 18 55.7 +1.3
         comp=Z,213nm,0.9s
BOJS     Bojanci           149.35 349   ePKPbc    PKiKP      14 18 53.6 -0.5
PLD      Plovdiv           149.47 334    P        PKiKP      14 18 55.1 +0.7
CSS      Mathiatis         149.50 314   ePKPbc    PKPbc      14 18 51.9 -1.8
CSS      Mathiatis         149.50 314    P        PKPbc      14 18 53.9 +0.2
KDZ      Kurdzhali         149.53 332    P        PKiKP      14 18 55.0 +0.4
VTS      Vitosha           149.65 336   ePKPab    PKiKP      14 18 56.7 +1.6
VTS      Vitosha           149.65 336⇑iP        PKiKP      14 18 56.6 +1.6
VTS      Vitosha           149.65 336  ⇑PKP2     PKiKP      14 18 56.6 +1.6
VTS      Vitosha           149.65 336    P        PKiKP      14 18 56.6 +1.6
BLY      Banja Luka        149.65 346   ePKPbc    PKPbc      14 18 53.6 -0.1
BLY      Banja Luka        149.65 346⇑iP        PKPdf      14 18 38.4  -11
LISJ     El Lisan          149.70 306    P        PKiKP      14 18 56.4 +1.2
         comp=Z,77nm,1.1s
LEF      Lefka             149.72 315⇑iP        PKiKP      14 18 55.8 +0.6
JDRJ     Daraweish         149.76 305    P        PKiKP      14 18 56.8 +1.2
         comp=Z,243nm,1.0s
RZN      Rozhen            149.81 333    P        PKPdf      14 18 46.2 -3.5
HSNJ     Maan              149.93 304    P        PKiKP      14 18 57.1 +1.2
         comp=Z,474nm,0.9s
SZAC     Souni             149.93 314    P        PKPbc      14 18 53.4 -1.3
PPCY     Paphos            150.22 315    P        PKPbc      14 18 54.4 -1.0
MMB      Musomiste         150.31 334    P        PKPbc      14 18 54.8 -0.7
MANT     Manisa            150.31 324   ePKPdf    PKPdf      14 18 49.0 -1.6
EZN      Ezine             150.52 329⇑iP        PKiKP      14 18 56.6  0.0
EZN      Ezine             150.52 329  ⇑PKIKP    PKiKP      14 18 56.6  0.0
PGAV     Gavieira, Arco    150.56  24   ePKPbc    PKiKP      14 18 58.5 +1.7
AQBJ     Aqaba             150.64 304    P        PKiKP      14 18 59.1 +1.9
         comp=Z,158nm,0.9s
EIL      Elat              150.74 304    P        PKPdf      14 18 53.2 +2.0
         comp=Z,79nm,0.9s
PCAB     Cabril            150.87  24   ePKPbc    PKiKP      14 18 58.3 +0.9
TTG      Podgorica         151.22 341   ePKPdf    PKPdf      14 18 50.9 -0.6
TTG      Podgorica         151.22 341   ePKIKP    PKPdf      14 18 50.9 -0.6
POLO     Lamas de Olo      151.25  24   ePKPbc    PKiKP      14 18 59.4 +1.1
PBRG     Braganca          151.26  22   ePKPbc    PKiKP      14 18 58.8 +0.6
PVRL     Vila Real         151.36  24   ePKPbc    PKiKP      14 19 00.5 +2.1
MVO      Moncorvo          151.72  23   ePKPbc    PKiKP      14 19 01.1 +1.9
PVIS     Viseu             151.77  24   ePKPbc    PKiKP      14 19 00.6 +1.3
PVIS     Viseu             151.77  24   ePKPab    PKPab      14 19 08.9 +1.1
PCAS     Casmilo, Conde    152.08  26   ePKPbc    PKiKP      14 19 00.9 +1.0
MTE      Manteigas         152.18  24   ePKPdf    PKPdf      14 18 55.8 +2.6
PTOM     Tomar             152.48  26   ePKPbc    PKiKP      14 19 01.8 +1.1
PCBR     Castelo Branco    152.68  25   ePKPdf    PKPdf      14 18 56.6 +2.8
ALMR     Almeirim          152.79  27   ePKPbc    PKiKP      14 19 03.1 +1.7
PMTG     Montargil         153.01  27   ePKPbc    PKiKP      14 19 03.6 +1.8
PNCL     Nicolau / Gran    153.66  28   ePKPbc    PKiKP      14 19 06.3 +3.1
ESDC     Sonseca Array     154.11  20    PKPab    PKPab      14 19 19.0 +1.4
         comp=Z,12nm,1.0s,baz=314,slow=3.1,SNR=7.3
PVAQ     Vaqueiros         154.61  28   ePKPab    PKPab      14 19 20.7 +0.9
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IDC ***15*** *14:02:28.4±0.4, 19°.34N×70°.11W, h0^{km}, mb4.4/28, mb1 4.5/33, mb1mx4.5/44, mbtmp4.4/33, ML4.5/4, MS4.2/1, Ms1 4.2/1, ms1mx3.4/52, Error ellipse: s-maj=14.1km s-min=9.8km az=58.0*

ISCJB ***15*** *14:02:30.1±0.4, 19°.31N±0°.02×70°.17W±0°.01, h25^{km}±3^{km}, mb4.8/227, Error ellipse: s-maj=3.1km s-min=1.6km az=34.6*

MOS ***15*** *14:02:31.2±1.0, 19°.32N×70°.21W, h34^{km}, mb5.1/39, Error ellipse: s-maj=8.8km s-min=4.8km az=130.2*

OSPL ***15*** *14:02:32.8±4.6, 19°.21N×70°.13W, h0^{km}±16^{km}, MD3.9, ML4.6*

NEIC ***15*** *14:02:33.1±1.6, 19°.29N×70°.18W, h38^{km}±5^{km}, mb4.9/247, Error ellipse: s-maj=7.2km s-min=0.8km az=131.0*

NEIC Felt [III] at Santo Domingo and [II] at Santiago. Also felt at Bajos de Haina, Bonao, Cabrera, La Mata, Moca, Moncion, Nagua, Puerto Plata and Sosua.

ISC 15 14:02:31.2±1.0**, 19°.28N**±0°.03×**70°.14W**±0°.02**, h25**^{km}±7^{km}**, n936, σ1°.39**/929**, mb4.8**/229**, 7C-5D, Dominican Republic region**

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Code     Station Name          Δ°  AZ°     Phase ID             Time       Res
                                          Op        ISC        h  m  s     ISC
BON1     Bonao               0.41 216⇑iP        Pb         14 02 39.0 -1.1
BON1                                    eS        Sb         14 02 45.0 -1.0
BON1                                     IAML                14 02 46.8
         comp=Z,45µm,0.5s
SC01     Santiago de lo      0.58 285⇑iP        Pb         14 02 43.0 +0.3
SC01                                    eS        Sn         14 02 53.8 +1.2
SC01                                     IAML                14 03 06.7
         comp=Z,45µm,0.5s
SDD      Santo Domingo       0.84 165   ePn       Pb         14 02 45.2 -2.0
SDD      Santo Domingo       0.84 165⇓iP        Pb         14 02 45.4 -1.9
SDD                                     eS        Sb         14 02 56.5 -1.6
SDD                                      IAML                14 02 56.6
         comp=Z,11µm,0.8s
SDDR     Presa de Saban      1.12 255   ePn       Pn         14 02 51.0 -0.5
SDDR     Presa de Saban      1.12 255⇓iP        Pn         14 02 51.0 -0.5
SDDR                                    eS        Sn         14 03 06.7 +0.5
SDDR                                     IAML                14 03 12.1
         comp=Z,14µm,0.6s
SJM1     San Juan de la      1.12 245⇓iP        Pb         14 02 51.9 -0.1
SJM1                                    eS        Sn         14 03 08.6 +2.4
LONE1    Neyba               1.45 237   i P       Pn         14 02 56.7 +0.8
LONE1                                   eS        Sb         14 03 17.5 +2.0
LONE1                                    IAML                14 03 26.0
         comp=Z,7µm,0.5s
LOBA1    Barahona            1.47 217   i P       Pn         14 02 56.2  0.0
LOBA1                                   eS        Sb         14 03 16.2  0.0
LOBA1                                    IAML                14 03 31.5
         comp=Z,6µm,1.0s
PCDR     Punta Cana, DR      1.83 114   ePn       Pn         14 03 01.2 +0.1
LOPE2    Hotel El Peder      1.96 231   i P       Pn         14 02 53.2  -10
LOPE2                                   eS        Sn         14 03 18.6 -8.2
LOPE2                                    IAML                14 03 29.1
         comp=Z,6µm,0.9s
NQWLB    Fermate             2.20 250   ePn       Pn         14 03 06.6 +0.2
GRTK     Grand Turk          2.41 337   ePn       Pn         14 03 09.7 +0.5
AGP      Aguadilla           2.97 106   ePn       Pn         14 03 18.4 +1.6
AGPR     Aguadilla, PR       2.98 105⇑iP        Pn         14 03 18.6 +1.6
AGPR                                    eS        Sb         14 03 56.1 -3.4
AGPR                                     IAML                14 04 07.6
         comp=Z,6µm,0.8s
MPR      Mayaguez            3.03 110   ePn       Pn         14 03 19.9 +2.2
CRPR     Cabo Rojo, PR       3.14 113   ePn       Pn         14 03 21.1 +2.0
AOPR     Arecibo Observ      3.34 106   ePn       Pn         14 03 23.7 +1.8
EMPR     Esperanza - Ma      3.51 103   ePn       Pn         14 03 25.6 +1.4
OBIP     Obispado Ponce      3.57 110   ePn       Pn         14 03 27.5 +2.5
SJG      San Juan            3.96 106    Pn       Pn         14 03 31.4 +1.0
         comp=Z,68nm,0.3s,baz=292,slow=9.2,SNR=100
SJG                                      Pg       Pb         14 03 36.3 -4.0
         comp=Z,378nm,0.3s,baz=291,slow=13,SNR=149
SJG                                      Sn       Sn         14 04 17.2 +1.2
         comp=Z,200nm,0.3s,baz=241,slow=19,SNR=4.7
SJG                                      Lg       Lg         14 04 24.9
         comp=Z,620nm,0.3s,baz=15,slow=21,SNR=17
SJG                                      LR       LR         14 05 02.5
         comp=Z,3µm,21.3s,baz=292,slow=39
SJG      San Juan            3.96 106   ePn       Pn         14 03 30.9 +0.6
CBYP     Canovanas           4.18 103   ePn       Pn         14 03 33.9 +0.4
HUMP     Col San Antoni      4.22 105   ePn       Pn         14 03 34.5 +0.5
MTP      Monte Pirata        4.50 104   ePn       Pn         14 03 38.4 +0.5
CUPR     Culebra, Puert      4.70 101   ePn       Pn         14 03 40.5 -0.1
GTBY     Guantanamo Bay      4.73 279   ePn       Pn         14 03 40.3 -0.8
GTBY     Guantanamo Bay      4.73 279⇓eP        Pn         14 03 40.3 -0.8
GTBY                                    eS        Sn         14 04 38.6 +3.4
GTBY                                     IAML                14 05 07.9
         comp=Z,542nm,0.7s
STVI     Saint Thomas        5.00 100   ePn       Pn         14 03 44.5 -0.2
ABVI     Anegada Island      5.52  95   ePn       Pn         14 03 51.4 -0.5
STH      Stony Hill          6.43 260   i P       Pn         14 04 06.4 +1.9
SABA     Saba                6.75 103   ePn       Pn         14 04 09.5 +0.7
SABA     Saba                6.75 103   eP        Pn         14 04 08.7 -0.1
SABA     Saba                6.75 103   eS        Sn         14 05 31.2 +6.3
SMRT     St. Maarten         6.81  99   ePn       Pn         14 04 09.1 -0.5
SMRT                                    eSn       Sn         14 05 25.2 -1.2
SMRT     St. Maarten         6.81  99   eP        Pn         14 04 09.4 -0.2
SMRT     St. Maarten         6.81  99   eS        Sn         14 05 25.2 -1.2
BBJ      Bamboo Saint A      6.81 264   i P       Pn         14 04 12.0 +2.3
BBJ                                     i PA                 14 16 43.3
PCJ      Portland Cotta      6.83 258   i PA                 14 04 16.1
PCJ                                     i PA                 14 16 43.6
SEUS     St. Eustatius       7.02 103   ePn       Pn         14 04 12.8 +0.2
SEUS                                    eSn       Sn         14 05 36.2 +4.5
SEUS     St. Eustatius       7.02 103   eP        Pn         14 04 13.3 +0.8
SEUS     St. Eustatius       7.02 103   eS        Sn         14 05 36.2 +4.5
MTDJ     Mount Denham        7.08 263   ePn       Pn         14 04 15.0 +1.5
BSK      Brimstone Hill      7.19 104   ePn       Pn         14 04 19.6 +4.7
BSK      Brimstone Hill      7.19 104   eP        Pn         14 04 19.6 +4.7
BSK      Brimstone Hill      7.19 104   eS        Sn         14 05 45.3 +9.4
SKDB     Saint Kitts 2       7.21 104   ePn       Pn         14 04 20.0 +4.9
SKDB     Saint Kitts 2       7.21 104   eP        Pn         14 04 20.0 +4.9
SKI      Saint Kitts         7.29 104   ePn       Pn         14 04 16.9 +0.6
SKI      Saint Kitts         7.29 104   eP        Pn         14 04 18.3 +2.0
SKI      Saint Kitts         7.29 104   eS        Sn         14 05 41.0 +2.7
SKI      Saint Kitts         7.29 104   eP        Pn         14 04 16.9 +0.6
SKTB     Turtle Beach        7.44 105   eP        Pn         14 04 18.0 -0.3
NVRH     Round Hill, Ne      7.46 105   eP        Pn         14 04 23.9 +5.3
NVRH     Round Hill, Ne      7.46 105   eS        Sn         14 05 40.0 -2.5
NVBH     Bath Hotel, Ne      7.47 106   eP        Pn         14 04 20.6 +2.0
NVBH     Bath Hotel, Ne      7.47 106   eS        Sn         14 05 37.3 -5.3
NEV      Hard Times          7.50 105   ePn       Pn         14 04 23.8 +4.6
NEV                                     eSn       Sn         14 05 41.4 -2.1
NEV      Hard Times          7.50 105   eP        Pn         14 04 23.8 +4.6
NEV      Hard Times          7.50 105   eS        Sn         14 05 41.4 -2.1
ANWB     Willy Bob           8.09 100   ePn       Pn         14 04 26.3 -0.9
ANWB     Willy Bob           8.09 100   eP        Pn         14 04 25.9 -1.3
ANWB     Willy Bob           8.09 100   eP        Pn         14 04 26.7 -0.5
ANWB     Willy Bob           8.09 100   eS        Sn         14 05 54.5 -3.3
BPA      Boggy Peak          8.18 104   ePn       Pn         14 04 32.2 +3.7
BPA                                     eSn       Sn         14 06 00.6 +0.3
BPA      Boggy Peak          8.18 104   eP        Pn         14 04 32.2 +3.7
BPA      Boggy Peak          8.18 104   eS        Sn         14 06 00.6 +0.3
ABD      La Joyeuse, An      8.70 107   eP        Pn         14 04 37.4 +1.9
CBE      Ff, Capester        8.73 110   eP        Pn         14 04 41.0 +4.8
TDBA     Terre de Bas,       8.80 111   eP        Pn         14 04 40.2 +3.3
MAGL     Barre de l'ile      9.07 110   eP        Pn         14 04 44.4 +3.7
MDPO     Dominica; Chan      9.07 113   eP        Pn         14 04 44.5 +3.8
MDPO     Dominica; Chan      9.07 113   eS        Sn         14 06 31.7  +10
DEG      La Desirade         9.14 107   eSn       Sn         14 06 27.6 +3.8
DEG      La Desirade         9.14 107   eP        Pn         14 04 51.6  +10
DEG      La Desirade         9.14 107   eS        Sn         14 06 27.6 +3.8
DWS      Wesley              9.20 112   ePn       Pn         14 04 46.2 +3.8
DWS      Wesley              9.20 112   eP        Pn         14 04 46.2 +3.8
DWS      Wesley              9.20 112   eS        Sn         14 06 06.5  -19
MDN      Morne-Daniel        9.23 114   ePn       Pn         14 04 46.5 +3.5
MDN      Morne-Daniel        9.23 114   eP        Pn         14 04 46.5 +3.5
MDN      Morne-Daniel        9.23 114   eS        Sn         14 06 31.3 +5.2
DBCT     Belle View Cho      9.30 114   ePn       Pn         14 04 48.0 +4.1
DBCT     Belle View Cho      9.30 114   eP        Pn         14 04 48.0 +4.1
DBCT     Belle View Cho      9.30 114   eS        Sn         14 06 20.2 -7.5
DLPL     La Plaine           9.35 113   eP        Pn         14 04 49.9 +5.2
PCM      Pelee Case Pet      9.62 116   eP        Pn         14 04 50.3 +2.0
BAMF     Morne Balai         9.67 116   eP        Pn         14 04 54.8 +5.8
FDF      Fort de France      9.71 116   ePn       Pn         14 04 51.3 +1.7
FDF      Fort de France      9.71 116   eP        Pn         14 04 51.6 +2.0
FDF      Fort de France      9.71 116   eS        Sn         14 06 42.6 +4.6
FDF      Fort de France      9.71 116   eP        Pn         14 04 51.3 +1.7
SLBI     Saint Lucia, B     10.22 119   eP        Pn         14 04 57.8 +1.4
SLBI     Saint Lucia, B     10.22 119   eS        Sn         14 06 50.4 +0.1
SLB      Belfond            10.27 120   eP        Pn         14 05 00.6 +3.5
SLB      Belfond            10.27 120   eS        Sn         14 06 56.2 +4.6
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SDV   Santo Domingo    10.34 183  Pn    Pn       14 05 00.7 +2.4
      comp=Z,5.1nm,0.3s,baz=13,slow=9.5,SNR=6.8
SDV                               Sn    Sn       14 06 52.5  -1.1
      comp=Z,5.8nm,0.3s,baz=280,slow=19,SNR=5.9
SDV   Santo Domingo    10.34 183  ePn   Pn       14 05 00.1 +1.8
SDV                               eSn   Sn       14 06 52.5  -1.1
SVB   Belmont          10.41 124  ePn   Pn       14 04 59.9 +0.8
SVB   Belmont          10.41 124  eP    Pn       14 05 00.8 +1.6
SVB   Belmont          10.41 124  eS    Sn       14 06 57.3 +2.2
MCLT  Moule a Chique   10.41 121  eP    Pn       14 05 01.7 +2.6
MCLT  Moule a Chique   10.41 121  eS    Sn       14 06 54.6  -0.5
SVV   Soufriere Volc   10.41 123  ePn   Pn       14 05 02.7 +3.6
SVV                               eSn   Sn       14 06 53.2  -1.9
SVV   Soufriere Volc   10.41 123  eP    Pn       14 05 02.7 +3.6
SVV   Soufriere Volc   10.41 123  eS    Sn       14 06 53.2  -1.9
SSV   Crater Summit    10.43 123  ePn   Pn       14 04 57.9  -1.5
SSV                               eSn   Sn       14 06 56.6 +1.1
SSV   Crater Summit    10.43 123  eP    Pn       14 04 57.9  -1.5
SSV   Crater Summit    10.43 123  eS    Sn       14 06 56.6 +1.1
FSCY  Frank Sound, G   10.43 272  ePn   Pn       14 04 59.5 +0.2
FCV   Fort Charlotte   10.48 124  ePn   Pn       14 04 55.8  -4.3
FCV   Fort Charlotte   10.48 124  eP    Pn       14 04 55.8  -4.3
FCV   Fort Charlotte   10.48 124  eS    Sn       14 06 53.6  -3.2
PCRV  Puerto La Cruz   10.49 149  Pn    Pn       14 05 02.0 +1.7
      comp=Z,7.9nm,0.3s,baz=1.0,slow=3.0,SNR=23
PCRV                              Sn    Sn       14 06 53.4  -3.8
      comp=Z,5.7nm,0.3s,baz=3.5,slow=19,SNR=4.2
SVCV  St. Vincent, C   10.50 123  eP    Pn       14 05 01.5 +1.2
SVCV  St. Vincent, C   10.50 123  eS    Sn       14 06 54.5  -2.6
GRSS  Sisters          10.74 129  ePn   Pn       14 05 05.8 +2.2
GRSS  Sisters          10.74 129  eP    Pn       14 05 05.8 +2.2
GRHS  Sauteurs         10.77 129  ePn   Pn       14 05 06.0 +2.0
GRHS  Sauteurs         10.77 129  eP    Pn       14 05 06.0 +2.0
GRGR  Grenville        10.82 130  ePn   Pn       14 05 04.8 +0.1
GRGR  Grenville        10.82 130  eP    Pn       14 05 05.9 +1.1
BCHC  Barbados, Cave   11.79 120  eP    Pn       14 05 23.7 +5.7
BCHC  Barbados, Cave   11.79 120  eS    Sn       14 07 34.1 +5.2
BBGH  Gun Hill         11.85 119  ePn   Pn       14 05 23.6 +4.8
BBGH                              eSn   Sn       14 07 32.9 +2.6
BBGH  Gun Hill         11.85 119  eP    Pn       14 05 23.6 +4.8
BBGH  Gun Hill         11.85 119  eS    Sn       14 07 32.9 +2.6
061Z  Ochoppi          11.91 305  ePn   Pn       14 05 16.5  -3.1
BBSP  Saint Philip     11.95 119  ePn   Pn       14 05 22.8 +2.6
BBSP                              eSn   Sn       14 07 30.9  -1.9
BBSP  Saint Philip     11.95 119  eP    Pn       14 05 22.8 +2.6
BBSP  Saint Philip     11.95 119  eS    Sn       14 07 30.9  -1.9
TRN   Trinidad (W)     12.03 134  ePn   Pn       14 05 24.8 +3.6
TRN   Trinidad (W)     12.03 134  eP    Pn       14 05 24.8 +3.6
TRN   Trinidad (W)     12.03 134  eS    Sn       14 07 28.9  -5.8
TRN   Trinidad (W)     12.03 134  eP    Pn       14 05 24.8 +3.6
060A  Indiantown       12.16 311  ePn   Pn       14 05 19.5  -3.5
060A  Indiantown       12.16 311  P     Pn       14 05 20.5  -2.5
      baz=128
TOSP  Speyside         12.19 129  eP    Pn       14 05 29.3 +5.8
TOSP  Speyside         12.19 129  eS    Sn       14 07 33.3  -5.3
TPP   Pointe-a-Pierr   12.24 135  ePn   Pn       14 05 28.1 +4.1
TPP   Pointe-a-Pierr   12.24 135  eP    Pn       14 05 28.1 +4.1
TPP   Pointe-a-Pierr   12.24 135  eP    Pn       14 05 28.2 +4.1
TBH   Brigand Hill     12.38 134  ePn   Pn       14 05 30.1 +4.1
TBH   Brigand Hill     12.38 134  eP    Pn       14 05 30.1 +4.1
TBH   Brigand Hill     12.38 134  eS    Sn       14 07 31.4   -12
TBH   Brigand Hill     12.38 134  eP    Pn       14 05 30.1 +4.1
059Z  Ave Maria        12.57 306  P     Pn       14 05 26.2  -2.4
      baz=122
058A  Arcadia          13.22 308  P     Pn       14 05 33.9  -3.6
      baz=124
DWPF  Disney Wildern   13.57 312  ePn   Pn       14 05 40.1  -2.1
DWPF  Disney Wildern   13.57 312  P     Pn       14 05 39.3  -2.9
      baz=128
BCIP  Isla Barro Col   13.76 224  ePn   Pn       14 05 44.4  -0.4
BCIP  Isla Barro Col   13.76 224  eP    Pn       14 05 44.4  -0.4
BBSR  BB Station       13.93  19  ePn   Pn       14 05 44.8  -2.3
758A  Lake Helen       13.95 316  P     Pn       14 05 44.0  -3.4
      baz=132
857A  Zephyrhills      14.22 311  P     Pn       14 05 47.7  -3.4
      baz=127
757A  Oxford           14.52 314  P     Pn       14 05 51.6  -3.6
      baz=129
657A  Interlachen      14.80 316  P     Pn       14 05 56.2  -2.7
      baz=132
ROSC  El Rosal         14.92 196  Pn    Pn       14 06 03.0 +1.9
      comp=Z,0.8nm,0.3s,baz=198,slow=20,SNR=3.3
ROSC                              Sn    Sn       14 08 46.9 +1.1
      comp=Z,1.8nm,0.3s,baz=18,slow=20,SNR=2.7
ROSC  El Rosal         14.92 196  ePn   Pn       14 06 01.5 +0.5
ROSC                              eSn   Sn       14 08 46.9 +1.1
557A  Orange Park      15.00 318  P     Pn       14 05 58.4  -3.2
      baz=133
656A  Willston         15.11 314  ePn   Pn       14 05 59.9  -3.2
      comp=Z,199nm,1.4s
656A  Willston         15.11 314  P     Pn       14 05 59.8  -3.3
      baz=129
ESPN  Las Esperanzas   15.34 245  eP    P        14 06 08.9  -1.8
      comp=Z,243nm,1.7s
655A  Horseshoe Beac   15.69 313  P     Pn       14 06 07.8  -2.9
      baz=128
555A  McAlpin          15.87 315  P     Pn       14 06 10.4  -2.7
      baz=130
ACON  Acoyapa          16.19 246  eP    P        14 06 19.2  -1.0
      comp=Z,135nm,1.4s
RGRS  Roger Stewart    16.29 328  ePn   Pn       14 06 18.5 +0.1
      comp=Z,1µm,0.3s
CSU   Charleston Sou   16.29 329  ePn   Pn       14 06 18.4   0.0
455A  Stateville       16.32 317  P     Pn       14 06 17.2  -1.5
      baz=132
NHSC  New Hope         16.44 329  epP   pP       14 06 36.0 +6.3
Z58A  St. Stephen      16.45 330  P     Pn       14 06 19.4  -1.1
      baz=146
256A  Glennville       16.48 322  P     Pn       14 06 19.2  -1.6
      baz=138
157A  Early Branch     16.52 326  P     Pn       14 06 19.8  -1.5
      baz=142
454A  Quitman          16.69 316  P     Pn       14 06 22.3  -1.2
      baz=130
X60A  Albert Glenn T   16.75 337  P     Pn       14 06 23.1  -1.2
      baz=154
156A  Sylvania         16.77 325  P     Pn       14 06 22.3  -2.1
      baz=140
JTS   Las Juntas de    16.87 240  Pn    P        14 06 29.4 +1.6
      comp=Z,0.9nm,0.3s,baz=120,slow=13,SNR=14
W61A  Ground Anchor    16.96 340  P     Pn       14 06 26.5  -0.3
      baz=158
V62A  Hyde County Ai   17.02 344  ePn   Pn       14 06 27.7 +0.1
      comp=Z,253nm,0.8s
V62A  Hyde County Ai   17.02 344  P     Pn       14 06 27.1  -0.5
      baz=161
W60A  Pink Hill        17.09 338  P     Pn       14 06 27.3  -1.2
      baz=155
TEIG  Tepich           17.10 276  eP    Pn       14 06 29.1 +0.4
      comp=Z,60nm,1.0s
453A  Whigham          17.24 315  P     Pn       14 06 29.5  -0.9
      baz=129
X58A  Rowland          17.27 334  ePn   Pn       14 06 30.8 +0.1
      comp=Z,68nm,0.6s
X58A  Rowland          17.27 334  P     Pn       14 06 31.2 +0.4
      baz=150
155A  Kite             17.29 323  P     Pn       14 06 29.8  -1.2
      baz=138
254A  Abbeville        17.29 319  P     Pn       14 06 30.8  -0.2
      baz=134
V61A  Roper            17.41 342  ePn   Pn       14 06 31.6  -0.8
      comp=Z,133nm,0.8s
V61A  Roper            17.41 342  P     Pn       14 06 32.4   0.0
      baz=159
353A  Camilla          17.48 316  P     Pn       14 06 33.9 +0.5
      baz=130
X57A  Johnson Farm,    17.52 332  P     Pn       14 06 33.8  -0.1
      baz=147
Z55A  Blythe           17.55 325  P     Pn       14 06 34.2   0.0
      baz=140
V60A  Jim Taylor Roa   17.59 341  ePn   Pn       14 06 34.2  -0.4
      comp=Z,68nm,0.6s
V60A  Jim Taylor Roa   17.59 341  P     Pn       14 06 34.5  -0.1
      baz=157
W58A  Raeford          17.63 335  P     Pn       14 06 35.5 +0.3
      baz=151
154A  Montrose         17.65 321  eP    Pn       14 06 35.4  -0.1
      comp=Z,81nm,0.8s
154A  Montrose         17.65 321  P     Pn       14 06 35.2  -0.3
      baz=136
452A  Marianna         17.82 313  P     Pn       14 06 37.6  -0.1
      baz=127
BIRD  Birdtown, Kers   17.84 331  eP    Pn       14 06 38.0 +0.2
      comp=Z,38nm,0.9s
U61A  Possum Corner    17.87 343  eP    Pn       14 06 38.1  -0.1
      comp=Z,153nm,1.1s
253A  Americus         17.89 318  P     Pn       14 06 38.1  -0.4
      baz=132
V59A  Middlesex        17.91 338  P     Pn       14 06 39.0 +0.3
      baz=155
JSC   Jenkinsville     17.92 329  ePn   Pn       14 06 37.7  -1.1
      comp=Z,25nm,0.7s
JSC   Jenkinsville     17.92 329  eP    Pn       14 06 37.7  -1.1
JSC                                pmax pmax
      comp=Z,25nm,0.7s
Y55A  Saluda           17.95 327  P     Pn       14 06 38.2  -1.0
      baz=142,SNR=6.7
X56A  White Oak        17.98 330  P     Pn       14 06 39.6 +0.1
      baz=145,SNR=10
352A  Blakely          18.04 315  eP    Pn       14 06 40.5 +0.2
      comp=Z,51nm,1.0s
W57A  Gilead           18.06 333  eP    P        14 06 41.2 +0.4
      comp=Z,36nm,0.7s
W57A  Gilead           18.06 333  P     Pn       14 06 40.6 +0.1
      baz=149
252A  Lumpkin          18.24 317  P     Pn       14 06 42.5  -0.2
      baz=131
X55A  Gracelyn & Ava   18.26 328  P     P        14 06 43.4 +0.4
      baz=143
V58A  Windy Hill, Pi   18.26 336  P     P        14 06 43.2 +0.2
      baz=152
W56A  Indian Trail     18.30 332  P     P        14 06 43.4  -0.1
      baz=147
Y54A  Tignall          18.33 325  P     P        14 06 43.1  -0.7
      baz=140
HODGE Hodges           18.39 327  eP    P        14 06 43.3  -1.1
      comp=Z,19nm,0.8s
Z53A  Monticello       18.40 322  P     P        14 06 43.9  -0.6
      baz=136
GOGA  Godfrey          18.43 322  eP    P        14 06 44.0  -0.8
      comp=Z,33nm,1.3s
GOGA  Godfrey          18.43 322  eP    P        14 06 44.1  -0.8
GOGA                               pmax pmax
      comp=Z,33nm,1.3s
GOGA  Godfrey          18.43 322  P     P        14 06 44.8  -0.2
      baz=137
U58A  Oxford           18.59 338  P     P        14 06 46.2  -0.4
      baz=154
V57A  Coltrane Farms   18.60 335  P     P        14 06 46.8 +0.1
      baz=150,SNR=6.8
PAULI Pauline          18.62 329  eP    P        14 06 46.9  -0.1
      comp=Z,28nm,0.8s
KMSC  Kings Mountain   18.65 330  eP    P        14 06 47.5 +0.1
      comp=Z,40nm,0.9s
KMSC  Kings Mountain   18.65 330  P     P        14 06 47.4 +0.1
      baz=145,SNR=5.2
152A  Waverly Hall     18.67 318  eP    Pn       14 06 48.4 +0.4
      comp=Z,66nm,1.5s
152A  Waverly Hall     18.67 318  P     Pn       14 06 48.9 +0.9
      baz=132,SNR=5.4
X54A  Belton           18.69 327  P     P        14 06 47.5  -0.3
      baz=142
251A  Midway           18.74 316  P     Pn       14 06 49.2 +0.4
      baz=129,SNR=7.3
450A  Crestview        18.78 311  P     P        14 06 49.0 +0.2
      baz=124
T59A  Double "B" Far   18.79 341  eP    Pn       14 06 49.5 +0.1
      comp=Z,27nm,0.7s
T59A  Double "B" Far   18.79 341  P     Pn       14 06 49.8 +0.4
      baz=158
Y53A  Monroe           18.82 323  P     Pn       14 06 49.8   0.0
      baz=137
V56A  Mocksville       18.83 333  eP    P        14 06 49.6 +0.3
      comp=Z,31nm,0.8s
V56A  Mocksville       18.83 333  P     Pn       14 06 51.0 +1.0
      baz=148
Z52A  Williamson       18.84 320  P     Pn       14 06 51.1 +1.1
      baz=134,SNR=8.4
U57A  Blanch           18.91 337  P     Pn       14 06 50.8   0.0
      baz=152,SNR=5.7
350A  Dozier           18.96 313  P     P        14 06 51.2 +0.5
      baz=126
151A  Opelika          18.96 317  P     Pn       14 06 51.4  -0.2
      baz=131
W54A  Cherokee Point   19.02 328  P     P        14 06 51.6 +0.3
      baz=143,SNR=5.2
T58A  Grand View Acr   19.08 339  P     Pn       14 06 53.1 +0.2
      baz=155
Y52A  Lilburn          19.10 322  eP    P        14 06 52.4 +0.1
      comp=Z,43nm,1.3s
Y52A  Lilburn          19.10 322  P     P        14 06 52.9 +0.6
      baz=136,SNR=6.2
X53A  Estanollee       19.15 325  P     Pn       14 06 53.6  -0.2
      baz=139,SNR=5.7
V55A  Taylorsville     19.18 332  P     Pn       14 06 54.0  -0.2
      baz=147
449A  Pace             19.21 310  P     P        14 06 53.8 +0.3
      baz=123
U56A  King             19.25 334  P     P        14 06 54.3 +0.5
      baz=150
BG3   Lake Jocassee    19.33 327  eP    P        14 06 54.8   0.0
      comp=Z,25nm,1.1s
T57A  Hurt             19.38 338  P     Pn       14 06 56.7 +0.2
      baz=153
Z51A  Franklin         19.39 319  P     P        14 06 56.1 +0.6
      baz=133
S59A  Mechanicsville   19.45 343  P     P        14 06 53.9  -2.1
      baz=160
V54A  Nebo             19.46 330  P     Pn       14 06 57.2  -0.3
      baz=145,SNR=6.8
150A  Eclectic         19.47 316  P     Pn       14 06 57.3  -0.3
      baz=129,SNR=11
R61A  Willards         19.52 348  P     Pn       14 06 58.3 +0.2
      baz=165
349A  Repton           19.52 311  P     Pn       14 06 57.8  -0.4
      baz=124
S58A  Poland Farm, P   19.53 341  eP    P        14 06 56.8  -0.1
      comp=Z,41nm,0.6s
S58A  Poland Farm, P   19.53 341  P     Pn       14 06 58.5 +0.2
      baz=157
X52A  Dahlonega        19.55 324  P     Pn       14 06 58.5  -0.1
      baz=138
W53A  Cullowhee        19.58 327  P     Pn       14 06 58.7  -0.4
      baz=141,SNR=12
U55A  TA2, Sparta      19.66 333  P     Pn       14 06 59.4  -0.5
      baz=148
T56A  Rocky Mt         19.70 336  P     P        14 06 58.8 +0.1
      baz=151,SNR=8.1
Y51A  Rockmart         19.72 321  P     P        14 06 59.5 +0.4
      baz=134,SNR=11
R60A  Leonardtown, M   19.74 345  P     P        14 06 59.4 +0.2
      baz=162
V53A  Saluda           19.79 328  eP    P        14 07 00.3 +0.4
      comp=Z,29nm,0.9s
V53A  Saluda           19.79 328  P     P        14 07 00.6 +0.7
      baz=142,SNR=9.6
R58B  Mineral          19.80 342  eP    P        14 07 00.3 +0.4
      comp=Z,30nm,0.6s
R58B  Mineral          19.80 342  P     Pn       14 07 00.9  -0.6
      baz=158
R59A  King George, V   19.81 344  P     Pn       14 07 01.0  -0.6
      baz=160
Z50A  Ashland          19.82 318  eP    P        14 07 00.2 +0.1
      comp=Z,60nm,1.4s
Z50A  Ashland          19.82 318  P     P        14 07 00.4 +0.2
      baz=131,SNR=10
249A  Camden           19.82 313  P     P        14 07 00.7 +0.5
      baz=126
APG   El Apazote       19.88 261  P     Pn       14 07 03.4 +0.5
      comp=Z,1.7nm,0.3s,baz=58,slow=10,SNR=9.9
CBN   Corbin Frederi   19.88 343  P     Pn       14 07 01.8  -0.7
      baz=160
W52A  Murphy           19.93 325  P     P        14 07 01.6 +0.3
      baz=139,SNR=6.4
S57A  Dark Hollow, R   19.96 339  eP    Pn       14 07 02.8  -0.6
      comp=Z,98nm,1.5s
S57A  Dark Hollow, R   19.96 339  P     Pn       14 07 02.7  -0.7
      baz=155
149A  Jones            19.97 315  P     P        14 07 02.4 +0.7
      baz=128,SNR=7.0
BLA   Blacksburg       20.01 335  eP    P        14 07 01.9  -0.3
      comp=Z,49nm,0.7s
BLA   Blacksburg       20.01 335  eP    P        14 07 01.9  -0.3
BLA                                pmax pmax
      comp=Z,49nm,0.7s
BLA   Blacksburg       20.01 335  P     Pn       14 07 03.5  -0.5
      baz=151
U54A  Nelsons Funny    20.01 332  eP    P        14 07 02.1  -0.1
      comp=Z,36nm,0.6s
U54A  Nelsons Funny    20.01 332  P     P        14 07 03.2 +1.0
      baz=146
X51A  Calhoun          20.07 322  eP    P        14 07 02.5  -0.2
      comp=Z,29nm,1.1s
X51A  Calhoun          20.07 322  P     P        14 07 03.6 +0.8
      baz=136
T55A  Pulaski          20.07 335  P     P        14 07 03.4 +0.5
      baz=150,SNR=13
S56A  Natural Bridge   20.10 338  P     P        14 07 04.0 +0.9
      baz=153
Y50A  Piedmont         20.12 319  P     P        14 07 04.0 +0.6
      baz=133
R58A  Rapidan          20.15 342  P     P        14 07 04.8 +1.1
      baz=158,SNR=7.4
Z49A  Columbiana       20.17 317  P     P        14 07 04.7 +0.8
      baz=130,SNR=10.0
U53A  Fall Branch      20.23 330  P     P        14 07 05.6 +1.0
      baz=144,SNR=8.5
Q60A  Greensboro       20.27 347  P     Pn       14 07 06.5  -0.5
      baz=164
TKL   Tuckaleechee C   20.28 326  P     Pn       14 07 06.4  -0.8
      comp=Z,4.1nm,1.1s,baz=150,slow=11,SNR=14
TKL                               S     S        14 10 45.4  -6.0
      comp=Z,2.2nm,0.6s,baz=78,slow=15,SNR=6.3
R57A  Stanardsville    20.31 341  P     P        14 07 05.6 +0.2
      baz=157
Q59A  Harwood          20.32 345  P     P        14 07 06.3 +0.9
      baz=162
V52A  Sevierville      20.32 327  eP    P        14 07 05.3  -0.3
      comp=Z,64nm,1.1s
V52A  Sevierville      20.32 327  P     P        14 07 06.3 +0.7
      baz=141,SNR=8.7
T54A  Tazewell         20.35 333  P     P        14 07 06.9 +0.9
      baz=148,SNR=5.4
LRAL  Lakeview Retre   20.37 316  eP    P        14 07 05.5  -0.6
      comp=Z,34nm,1.0s
LRAL  Lakeview Retre   20.37 316  P     P        14 07 06.9 +0.8
      baz=128,SNR=13
W51A  Cleveland        20.44 324  P     P        14 07 07.0 +0.2
      baz=137
X50B  Fort Payne       20.46 321  P     P        14 07 07.6 +0.5
      baz=134,SNR=6.4
CPCT  Cooper Cave      20.52 325  eP    P        14 07 07.8 +0.1
      comp=Z,110nm,1.6s
Y49A  Blount Mountai   20.52 318  eP    P        14 07 07.8   0.0
      comp=Z,43nm,0.9s
Y49A  Blount Mountai   20.52 318  P     P        14 07 08.7 +0.9
      baz=131,SNR=12
148A  Greensboro       20.52 314  P     P        14 07 08.8 +1.0
      baz=126
S55A  Lewisburg        20.53 336  P     P        14 07 08.9 +1.1
      baz=151
U52A  Thorn Hill       20.64 328  P     P        14 07 09.6 +0.6
      baz=142,SNR=11
Q58A  Fox Den Farm,    20.66 343  P     P        14 07 10.4 +1.3
      baz=160
V51A  Loudon           20.69 326  eP    P        14 07 09.7 +0.1
      comp=Z,171nm,1.6s
V51A  Loudon           20.69 326  P     P        14 07 10.2 +0.7
      baz=139,SNR=7.8
R56A  Bull Pasture M   20.69 339  P     P        14 07 10.8 +1.1
      baz=155
T53A  Wise             20.72 331  P     P        14 07 11.0 +1.1
      baz=145,SNR=10
W50A  Signal Mountai   20.78 323  eP    P        14 07 10.2  -0.3
      comp=Z,60nm,1.4s
W50A  Signal Mountai   20.78 323  P     P        14 07 11.9 +1.4
      baz=136
R55A  Marlinton        20.83 337  eP    P        14 07 11.7 +0.5
      comp=Z,91nm,1.2s
R55A  Marlinton        20.83 337  P     P        14 07 12.1 +1.0
      baz=153
TZTN  Tazewell         20.85 328  eP    P        14 07 12.0 +0.7
      comp=Z,167nm,1.4s
TZTN  Tazewell         20.85 328  P     P        14 07 12.3 +1.1
      baz=142,SNR=21
S54A  Dingess, Beckl   20.87 334  P     P        14 07 12.0 +0.5
      baz=149
SDMD  Soldier's Deli   20.88 345  eP    P        14 07 12.0 +0.4
      comp=Z,27nm,0.7s
X49A  Woodville        20.90 320  P     P        14 07 12.5 +0.6
      baz=133,SNR=5.4
Q57A  Strasburg        20.95 342  P     P        14 07 13.3 +0.9
      baz=158
U51A  La Follette      20.95 327  P     P        14 07 13.5 +1.0
      baz=141,SNR=8.7
P59A  Jarrettsville    20.98 346  P     P        14 07 13.5 +0.9
      baz=163
V50A  Pikevile         21.00 324  P     P        14 07 13.1 +0.2
      baz=137,SNR=9.4
P60A  Greenville       21.01 348  P     P        14 07 13.6 +0.7
      baz=166
147A  Livingston       21.02 313  eP    P        14 07 13.5 +0.3
      comp=Z,306nm,1.5s
147A  Livingston       21.02 313  P     P        14 07 14.3 +1.2
      baz=125,SNR=6.3
T52A  Hallie           21.03 330  eP    P        14 07 13.6 +0.4
      comp=Z,80nm,0.9s
T52A  Hallie           21.03 330  P     P        14 07 13.9 +0.6
      baz=144,SNR=7.5
Y48A  Jasper           21.04 317  P     P        14 07 13.8 +0.5
      baz=130,SNR=8.0
P58A  Pank, Wackersv   21.07 344  P     P        14 07 14.3 +0.7
      baz=161
R54A  Victor           21.07 336  P     P        14 07 14.0 +0.3
      baz=151
PSUB  Penn St. - Bra   21.08 349  eP    P        14 07 13.7   0.0
      comp=Z,79nm,1.5s
S53A  Williamson       21.11 333  P     P        14 07 14.8 +0.7
      baz=147
SWET  Sewanee          21.15 322  eP    P        14 07 15.0 +0.4
      comp=Z,77nm,1.5s
CCIG  Comitan          21.16 265  eP    P        14 07 15.9 +0.9
      comp=Z,60nm,0.9s
Q56A  Snyder Ridge,    21.20 340  P     P        14 07 16.0 +1.0
      baz=156,SNR=9.0
P57A  Homestead Farm   21.25 343  P     P        14 07 16.4 +0.8
      baz=159
W49A  Belvidere        21.28 321  P     P        14 07 16.7 +0.8
      baz=134,SNR=9.8
X48A  Hartselle        21.30 319  eP    P        14 07 15.6  -0.6
      comp=Z,25nm,0.8s
X48A  Hartselle        21.30 319  P     P        14 07 16.9 +0.7
      baz=131,SNR=5.5
MVL   Millersville     21.33 347  eP    P        14 07 17.0 +0.5
      comp=Z,52nm,0.9s
T51A  Gray             21.38 328  P     P        14 07 17.8 +0.8
      baz=142,SNR=9.8
U50A  Jamestown        21.41 326  P     P        14 07 18.3 +0.9
      baz=139,SNR=8.9
O60A  Telford          21.45 349  P     P        14 07 19.0 +1.3
      baz=166
Q55A  Buckhannon       21.45 338  P     P        14 07 18.5 +0.7
      baz=154,SNR=10
P56A  Dayton Farm, R   21.51 341  P     P        14 07 19.3 +0.9
      baz=157
V49A  McMinnville      21.52 323  P     P        14 07 19.5 +0.9
      baz=136,SNR=24
O58A  Lewisberry       21.58 346  P     P        14 07 20.2 +1.1
      baz=162
R53A  Hurricane        21.59 334  eP    P        14 07 19.8 +0.6
      comp=Z,56nm,1.0s
R53A  Hurricane        21.59 334  P     P        14 07 19.8 +0.6
      baz=148
O59A  Robesonia        21.60 347  P     P        14 07 20.4 +1.1
      baz=164
BRNJ  Basking Ridge    21.67 351  eP    P        14 07 20.7 +0.7
      comp=Z,81nm,0.6s
W48A  Pulaski          21.69 320  P     P        14 07 21.0 +0.7
      baz=133,SNR=12
Q54A  Coxs Mills       21.71 337  eP    P        14 07 21.6 +1.1
      comp=Z,43nm,0.8s
Q54A  Coxs Mills       21.71 337  P     P        14 07 21.2 +0.7
      baz=152
LUPA  Lehigh Univers   21.72 349  epP   pP       14 07 29.2 +1.6
S51A  Beattyville      21.74 330  eP    P        14 07 20.1  -0.8
      comp=Z,62nm,1.0s
S51A  Beattyville      21.74 330  P     P        14 07 21.2 +0.3
      baz=144,SNR=8.6
P55A  Reedsville       21.83 340  P     P        14 07 22.7 +0.9
      baz=155,SNR=9.0
O57A  Amberson         21.84 344  P     P        14 07 23.0 +1.2
      baz=161
X47A  Russelville      21.86 318  P     P        14 07 22.4 +0.2
      baz=130,SNR=14
Q53A  Leroy            21.87 336  P     P        14 07 23.0 +0.8
      baz=150,SNR=5.4
T50A  Nancy            21.87 327  P     P        14 07 23.1 +0.8
      baz=140,SNR=7.3
R52A  Catlettsburg     21.88 333  P     P        14 07 22.8 +0.4
      baz=147
PAL   Palisades        21.90 352  epP   pP       14 07 31.3 +1.9
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PAL	Palisades	21.90	352	*e*P	P	14 07 31.3	+8.8
PAL	Palisades	21.90	352	P	P	14 07 23.3	+0.8
	baz=171						
N60A	Cedar Hill Far	21.94	350	P	P	14 07 24.4	+1.5
	baz=168,SNR=7.6						
MCWV	Mont Chateau	21.97	340	P	P	14 07 24.5	+1.2
	baz=155						
U49A	Red Boiling Sp	21.99	325	P	P	14 07 24.5	+1.0
	baz=137						
CLTN	Cedars of Leba	22.00	323	*e*P	P	14 07 23.4	-0.2
	comp=Z,8.5nm,0.8s						
V48A	Smith Brothers	22.03	321	*e*P	P	14 07 24.0	-0.1
	comp=Z,178nm,1.9s						
V48A	Smith Brothers	22.03	321	P	P	14 07 25.1	+1.1
	baz=134,SNR=9.0						
ODNJ	Ogdensburg	22.07	351	*e*P	P	14 07 24.7	+0.4
	comp=Z,45nm,0.7s						
N59A	State Game Lan	22.10	349	*e*P	P	14 07 23.9	-0.8
	comp=Z,36nm,0.8s						
N59A	State Game Lan	22.10	349	P	P	14 07 25.5	+0.8
	baz=166						
MDP	Montagnes des	22.12	127	P	P	14 07 27.4	+2.3
	comp=Z,2.6nm,0.5s,baz=298,slow=9.9,SNR=3.6						
O56A	Blue Knob Stat	22.14	343	*e*P	P	14 07 25.2	0.0
	comp=Z,28nm,0.9s						
O56A	Blue Knob Stat	22.14	343	P	P	14 07 25.5	+0.4
	baz=159						
S50A	Richmond	22.16	329	P	P	14 07 26.0	+0.6
	baz=142						
W47A	Westpoint	22.17	319	P	P	14 07 26.0	+0.5
	baz=132						
M61A	Granite Spring	22.18	353	P	P	14 07 26.0	+0.5
	baz=171						
N58A	Sunbury	22.22	347	P	P	14 07 26.3	+0.4
	baz=164						
PTGA	Pitinga	22.25	152	P	P	14 07 26.3	-0.2
	comp=Z,11nm,0.5s,baz=336,slow=13,SNR=16						
PTGA	Pitinga	22.25	152	*e*P	P	14 07 25.2	-1.3
	comp=Z,76nm,1.1s						
Q52A	Bidwell	22.25	334	P	P	14 07 26.8	+0.5
	baz=149,SNR=8.5						
R51A	Hillsboro	22.27	331	P	P	14 07 26.8	+0.3
	baz=145						
PLAL	Pickwick Lake	22.29	318	*e*P	P	14 07 25.9	-0.9
	comp=Z,36nm,0.9s						
T49A	Edmonton	22.30	326	*e*P	P	14 07 26.8	0.0
	comp=Z,35nm,1.0s						
T49A	Edmonton	22.30	326	P	P	14 07 27.6	+0.7
	baz=139,SNR=7.9						
O55A	Ligonier	22.30	341	P	P	14 07 27.3	+0.5
	baz=157						
SSPA	Standing Stone	22.30	344	*e*P	P	14 07 28.3	+1.5
	comp=Z,61nm,0.9s						
SSPA	Standing Stone	22.30	344	P	P	14 07 27.2	+0.3
	baz=161						
N57A	Milroy	22.33	345	P	P	14 07 28.1	+0.9
	baz=161						
X46A	Booneville	22.35	317	P	P	14 07 27.2	-0.3
	baz=128						
P53A	Whipple	22.36	337	*e*P	P	14 07 28.8	+1.3
	comp=Z,44nm,0.8s						
P53A	Whipple	22.36	337	P	P	14 07 28.1	+0.6
	baz=151						
U48A	Cassie Pea, Po	22.41	323	P	P	14 07 29.0	+0.9
	baz=136						
V47A	Nunnelly	22.51	321	P	P	14 07 29.5	+0.4
	baz=133,SNR=7.6						
KSCT	Kent School, K	22.56	353	*e*P	P	14 07 30.0	+0.5
	comp=Z,45nm,1.2s						
W46A	Michie	22.58	318	P	P	14 07 30.3	+0.4
	baz=130						
BRYW	Bryant College	22.60	357	*e*pP	pP	14 07 42.4	+5.5
R50A	Paris	22.60	330	*e*P	P	14 07 31.1	+1.0
	comp=Z,49nm,0.9s						
R50A	Paris	22.60	330	P	P	14 07 30.8	+0.7
	baz=143,SNR=10						
O54A	Avella	22.62	339	P	P	14 07 31.3	+1.0
	baz=154,SNR=6.2						
M59A	Waymart	22.65	350	P	P	14 07 31.1	+0.6
	baz=167						
N56A	West Decatur	22.67	344	P	P	14 07 31.0	+0.1
	baz=160						
M58A	Price's Panora	22.68	348	P	P	14 07 30.6	-0.3
	baz=164						
S49A	Springfield	22.68	328	P	P	14 07 31.4	+0.4
	baz=140						
KSPA	Keystone Colle	22.72	349	*e*P	P	14 07 31.7	+0.4
	comp=Z,41nm,1.2s						
N55A	Marion Center	22.73	342	*e*P	P	14 07 31.1	-0.4
	comp=Z,44nm,1.0s						
N55A	Marion Center	22.73	342	P	P	14 07 32.1	+0.6
	baz=158,SNR=5.9						
Q51A	Peebles	22.76	333	*e*P	P	14 07 32.4	+0.6
	comp=Z,55nm,0.9s						
Q51A				*e*S	S	14 11 39.6	+0.4
Q51A	Peebles	22.76	333	P	P	14 07 32.6	+0.9
	baz=146,SNR=6.3						
T48A	Bowling Green	22.76	325	P	P	14 07 31.7	-0.1
	baz=137						
P52A	Corning	22.77	336	P	P	14 07 32.4	+0.5
	baz=150						
U47A	Clarksville	22.79	322	P	P	14 07 32.3	+0.2
	baz=134						
V46A	Holladay	22.85	320	P	P	14 07 32.6	-0.1
	baz=132,SNR=8.8						
OXF	Oxford	22.86	315	*e*P	P	14 07 32.0	-0.9
	comp=Z,125nm,1.0s						
OXF	Oxford	22.86	315	*e*P	P	14 07 32.0	-0.9
OXF				pmax	pmax		
	comp=Z,125nm,1.0s						
OXF	Oxford	22.86	315	P	P	14 07 33.0	+0.1
	baz=127,SNR=6.4						
Q50A	Georgetown	22.89	331	P	P	14 07 33.4	+0.3
	baz=145						
WVT	Waverly	22.90	321	*e*P	P	14 07 32.7	-0.5
	comp=Z,20nm,0.8s						
WVT	Waverly	22.90	321	*e*P	P	14 07 32.7	-0.5
WVT				pmax	pmax		
	comp=Z,20nm,0.8s						
WVT	Waverly	22.90	321	P	P	14 07 33.0	-0.2
	baz=133						
O53A	New Philadelph	22.97	338	P	P	14 07 34.3	+0.4
	baz=152						
S48A	Wiedeman Farm,	22.99	326	P	P	14 07 34.1	0.0
	baz=139						
R49A	Shelbyville	23.02	329	P	P	14 07 34.2	-0.2
	baz=141						
P51A	Williamsport	23.02	334	*e*P	P	14 07 33.8	-0.6
	comp=Z,32nm,0.8s						
P51A	Williamsport	23.02	334	P	P	14 07 34.9	+0.5
	baz=148						
O52A	Adamsville	23.08	337	*e*P	P	14 07 35.1	+0.1
	comp=Z,96nm,1.1s						
O52A	Adamsville	23.08	337	P	P	14 07 35.9	+0.9
	baz=151,SNR=9.6						
M56A	Emporium	23.17	345	P	P	14 07 37.3	+1.3
	baz=160,SNR=7.0						
HRV	Adam Dziewonsk	23.19	357	*e*P	P	14 07 35.5	-0.6
	comp=Z,52nm,0.8s						
HRV				*e*S	S	14 11 44.0	-2.4
HRV	Adam Dziewonsk	23.19	357	*e*P	P	14 07 35.5	-0.6
HRV				*e*S	S	14 11 44.0	-2.4
HRV				pmax	pmax		
	comp=Z,53nm,0.8s						
HRV	Adam Dziewonsk	23.19	357	P	P	14 07 36.9	+0.8
	baz=177						
N54A	Moraine State	23.20	341	*e*P	P	14 07 35.5	-0.7
N54A	Moraine State	23.20	341	P	P	14 07 37.5	+1.3
	baz=156						
L58A	Harry Jones Me	23.21	349	P	P	14 07 37.5	+1.1
	baz=166						
U46A	Springville	23.26	321	P	P	14 07 36.8	-0.1
	baz=132						
M55A	Ridgway	23.31	343	P	P	14 07 38.4	+1.0
	baz=159						
N53A	Lisbon	23.33	339	*e*P	P	14 07 38.2	+0.7
	comp=Z,75nm,1.3s						
N53A	Lisbon	23.33	339	P	P	14 07 38.6	+1.0
	baz=154						
S47A	Hartford	23.38	325	P	P	14 07 38.3	+0.3
	baz=137						
BINY	Binghamton	23.38	349	*e*P	P	14 07 38.5	+0.4
BINY	Binghamton	23.38	349	P	P	14 07 39.2	+1.1
	baz=166						
O51A	Pataskala	23.40	335	P	P	14 07 39.0	+0.7
	baz=149						
P50A	Jamestown	23.44	333	P	P	14 07 39.6	+1.0
	baz=146						
Q49A	Aurora	23.45	330	P	P	14 07 39.4	+0.7
	baz=143						
R48A	Northridge Ran	23.45	328	P	P	14 07 39.4	+0.6
	baz=140						
WCI	Wyandotte Cave	23.54	327	*e*P	P	14 07 39.1	-0.5
	comp=Z,17nm,0.8s						
WCI	Wyandotte Cave	23.54	327	*e*P	P	14 07 39.1	-0.5
WCI				pmax	pmax		
	comp=Z,17nm,0.8s						
WCI	Wyandotte Cave	23.54	327	P	P	14 07 39.9	+0.3
	baz=139						
T46A	Princeton	23.56	322	P	P	14 07 39.9	+0.1
	baz=134						
M54A	Oil Creek Stat	23.60	342	*e*P	P	14 07 40.2	0.0
	comp=Z,30nm,0.8s						
M54A	Oil Creek Stat	23.60	342	P	P	14 07 41.5	+1.2
	baz=157,SNR=7.6						
CMIG	Matias Romero	23.61	269	P	P	14 07 38.8	-1.7
	comp=Z,1.7nm,0.6s,baz=62,slow=6.5,SNR=4.9						
ACSO	Alum Creek Sta	23.62	335	*e*P	P	14 07 40.6	+0.2
	comp=Z,47nm,0.9s						
ACSO	Alum Creek Sta	23.62	335	P	P	14 07 41.3	+0.9
	baz=149						
P49A	Miami Univ. Ec	23.79	331	P	P	14 07 42.4	+0.4
	baz=144						
Q48A	North Vernon	23.79	329	P	P	14 07 42.7	+0.7
	baz=141						
O50A	Cable	23.81	334	P	P	14 07 42.9	+0.7
	baz=147						
M53A	WI Miller and	23.85	340	P	P	14 07 43.2	+0.7
	baz=155						
X43A	Marvell	23.86	314	P	P	14 07 43.0	+0.2
	baz=124						
L55A	Hinsdale	23.90	345	P	P	14 07 44.0	+0.9
	baz=160						
S46A	Don Dixon Farm	23.91	324	P	P	14 07 43.3	+0.1
	baz=135						
N51A	Ashland	23.98	337	*e*P	P	14 07 44.2	+0.5
	comp=Z,30nm,0.7s						
N51A	Ashland	23.98	337	P	P	14 07 44.6	+0.8
	baz=151						
P48A	Milroy	24.06	330	*e*P	P	14 07 44.0	-0.5
	comp=Z,21nm,0.8s						
P48A	Milroy	24.06	330	P	P	14 07 45.2	+0.6
	baz=142						
N50A	Nevada	24.15	335	P	P	14 07 46.2	+0.9
	baz=149						
O49A	Covington	24.15	333	*e*P	P	14 07 45.3	-0.1
	comp=Z,34nm,0.8s						
O49A	Covington	24.15	333	P	P	14 07 46.1	+0.7
	baz=146,SNR=5.9						
M52A	Chesterland	24.16	339	*e*P	P	14 07 45.6	+0.1
	comp=Z,40nm,0.9s						
M52A	Chesterland	24.16	339	P	P	14 07 46.0	+0.5
	baz=154						
L54A	Sinclairville	24.17	343	P	P	14 07 46.9	+1.3
	baz=159						
L53A	Girard	24.19	341	P	P	14 07 46.6	+0.8
	baz=156						
ACCN	Adirondack Com	24.22	354	*e*pP	pP	14 07 53.6	+0.2
ERPA	Erie	24.26	342	*e*P	P	14 07 46.5	+0.1
	comp=Z,33nm,0.8s						
M51A	Elyria	24.27	338	P	P	14 07 46.9	+0.4
	baz=152						
MMNY	Mt. Morris Dam	24.29	346	*e*P	P	14 07 46.9	+0.2
	comp=Z,39nm,1.1s						
K55A	Perry	24.32	346	P	P	14 07 47.6	+0.7
	baz=162						
K54A	Basiliko Farm,	24.36	345	P	P	14 07 47.9	+0.5
	baz=160						
P47A	Martinsville	24.48	329	P	P	14 07 48.9	+0.4
	baz=141						
Z41A	Richland Creek	24.56	309	P	P	14 07 49.4	+0.2
	baz=119						
O48A	Farmland	24.57	332	P	P	14 07 49.6	+0.3
	baz=144						
M50A	Fremont	24.65	336	*e*P	P	14 07 50.6	+0.7
	comp=Z,57nm,1.0s						
M50A	Fremont	24.65	336	P	P	14 07 51.2	+1.2
	baz=150						
J55A	Hilton	24.78	347	*e*P	P	14 07 52.2	+1.2
	comp=Z,21nm,1.0s						
J55A	Hilton	24.78	347	P	P	14 07 51.9	+0.9
	baz=163						
S44A	Carbondale	24.79	322	P	P	14 07 52.1	+0.8
	baz=133,SNR=8.4						
PLIO	Pelee Island,	24.80	337	P	P	14 07 52.3	+1.0
	baz=151						
MEDO	Medina	24.83	345	P	P	14 07 51.9	+0.4
	baz=161						
NCB	Newcomb	24.86	353	*e*P	P	14 07 52.9	+1.1
	comp=Z,63nm,1.7s						
OLIL	Olney	24.87	325	*e*P	P	14 07 52.4	+0.4
	comp=Z,21nm,0.8s						
PBMO	Poplar Bluff	24.91	319	*e*P	P	14 07 52.8	+0.5
	comp=Z,26nm,1.1s						
LBNH	Lisbon	24.93	357	*e*P	P	14 07 53.8	+1.3
	comp=Z,29nm,0.9s						
LBNH	Lisbon	24.93	357	*e*P	P	14 07 53.8	+1.3
LBNH				pmax	pmax		
	comp=Z,29nm,0.9s						
LBNH	Lisbon	24.93	357	P	P	14 07 53.9	+1.4
	baz=176						
J54A	Appleton	24.97	345	*e*P	P	14 07 52.9	0.0
	comp=Z,28nm,0.9s						
N48A	Decatur	25.00	333	P	P	14 07 54.0	+0.8
	baz=145						
P46A	Rosedale	25.05	328	P	P	14 07 54.3	+0.7
	baz=139,SNR=5.8						
M49A	Liberty Center	25.07	335	P	P	14 07 54.7	+0.9
	baz=148						
L50A	Kingsville	25.12	337	P	P	14 07 55.2	+1.1
	baz=151						
TYNO	Tyneside	25.12	343	P	P	14 07 55.2	+1.0
	baz=158						
W41B	Gary Mavity, V	25.16	314	*e*P	P	14 07 55.0	+0.4
	comp=Z,29nm,1.2s						
W41B	Gary Mavity, V	25.16	314	P	P	14 07 54.3	-0.3
	baz=123,SNR=12						
X40A	Basin Creek Fa	25.20	312	*e*P	P	14 07 55.7	+0.7
	comp=Z,36nm,0.9s						
X40A	Basin Creek Fa	25.20	312	P	P	14 07 56.2	+1.2
	baz=121,SNR=17						
WVL	Waterville	25.22	1	*e*P	P	14 07 55.5	+0.5
	comp=Z,18nm,0.8s						
PECO	Prince Edward	25.25	348	*e*P	P	14 07 55.6	+0.3
	comp=Z,20nm,1.2s						
PECO	Prince Edward	25.25	348	P	P	14 07 56.2	+0.9
	baz=165						
WHAR	Wooly Hollow	25.25	314	*e*P	P	14 07 55.9	+0.5
	comp=Z,55nm,1.3s						
K51A	Iona Station	25.27	340	P	P	14 07 56.8	+1.2
	baz=154						
N47A	Urbana	25.31	332	P	P	14 07 56.8	+0.8
	baz=144						
NATX	Nacogdoches	25.31	304	*e*P	P	14 07 56.3	+0.2
	comp=Z,64nm,0.8s						
NATX	Nacogdoches	25.31	304	P	P	14 07 57.2	+1.1
	baz=114						
M48A	Edgerton	25.39	334	P	P	14 07 57.1	+0.5
	baz=146						
J52A	Paris	25.43	342	P	P	14 07 58.0	+1.0
	baz=157						
EMMW	East Machias	25.46	4	*e*P	P	14 07 57.5	+0.3
	comp=Z,33nm,1.2s						
FCAR	Ozark Folk Cen	25.47	315	*e*P	P	14 07 57.2	-0.2
	comp=Z,25nm,0.8s						
WLVO	Wesleyville	25.53	346	P	P	14 07 58.6	+0.8
	baz=162,SNR=8.5						
LONY	Lake Ozonia	25.54	353	*e*P	P	14 07 58.1	+0.1
	comp=Z,12nm,0.9s						
LONY	Lake Ozonia	25.54	353	P	P	14 07 59.0	+1.0
	baz=170						
DRWO	Darlington Wes	25.56	345	P	P	14 07 58.9	+0.8
	baz=161						
SFIN	Lafayette	25.58	329	*e*P	P	14 07 58.3	-0.1
	comp=Z,34nm,1.0s						
SFIN	Lafayette	25.58	329	P	P	14 07 58.9	+0.6
	baz=140						
HKT	Hockley	25.61	299	*e*P	P	14 07 57.8	-0.9
	comp=Z,53nm,1.5s						
HKT	Hockley	25.61	299	*e*P	P	14 07 57.8	-0.9
HKT				pmax	pmax		
	comp=Z,53nm,1.5s						
FRNY	Flat Rock	25.65	354	*e*P	P	14 07 57.4	-1.5
	comp=Z,7.7nm,0.6s						
ACTO	Acton	25.65	343	P	P	14 07 59.7	+0.7
	baz=158						
L48A	N Adams	25.65	335	P	P	14 07 59.7	+0.6
	baz=148						
I55A	Frankford	25.66	347	P	P	14 07 59.2	+0.2
	baz=164						
M47A	Cromwell	25.67	332	P	P	14 07 59.9	+0.7
	baz=145						
H56A	Elgin	25.75	350	P	P	14 08 00.6	+0.7
	baz=167						
MIAR	Mount Ida	25.76	311	*e*P	P	14 07 58.9	-1.2
	comp=Z,19nm,1.0s						
MIAR	Mount Ida	25.76	311	*e*P	P	14 07 58.9	-1.2
MIAR				pmax	pmax		
	comp=Z,19nm,1.0s						
MIAR	Mount Ida	25.76	311	P	P	14 08 00.2	+0.1
	baz=120,SNR=6.7						
HAL	Halifax	25.87	11	*e*P	P	14 08 00.6	-0.4
	comp=Z,86nm,1.5s						
HAL	Halifax	25.87	11	*e*P	P	14 08 00.6	-0.4
HAL				pmax	pmax		
	comp=Z,86nm,1.5s						
H55A	Tweed	25.88	348	P	P	14 08 02.1	+1.1
	baz=165,SNR=6.5						
GGN	Saint George	25.91	5	*e*P	P	14 08 00.4	-0.9
	comp=Z,24nm,0.8s						
PKME	Peaks-Kenny Pk	25.92	1	P	P	14 08 01.9	+0.5
	baz=182						
DELO	Deloro Mine	25.93	348	*e*P	P	14 08 01.7	+0.2
	comp=Z,17nm,0.8s						
DELO	Deloro Mine	25.93	348	P	P	14 08 02.0	+0.5
	baz=164,SNR=6.1						
L47A	Sherwood	26.00	334	P	P	14 08 02.3	+0.2
	baz=146						
MOQ	Mont Orford	26.02	357	*e*P	P	14 08 01.5	-0.9
O44A	Mansfield	26.09	327	P	P	14 08 03.2	+0.1
	baz=138						
I51A	Listowel	26.11	342	P	P	14 08 03.5	+0.4
	baz=156,SNR=7.0						
CCM	Cathedral Cave	26.22	320	*e*P	P	14 08 03.9	-0.3
	comp=Z,15nm,0.6s						
CCM	Cathedral Cave	26.22	320	*e*P	P	14 08 03.9	-0.3
CCM				pmax	pmax		
	comp=Z,15nm,0.6s						
CCM	Cathedral Cave	26.22	320	P	P	14 08 04.2	0.0
	baz=130						
U40A	Yellville	26.22	315	P	P	14 08 04.0	-0.3
	baz=124,SNR=11						
W39A	Magazine	26.23	312	*e*P	P	14 08 05.5	+1.2
	comp=Z,42nm,1.2s						
W39A	Magazine	26.23	312	P	P	14 08 03.5	-0.9
	baz=121,SNR=13						
K48A	Perry	26.26	336	P	P	14 08 05.1	+0.6
	baz=149						
P43A	Skaggs, Pawnee	26.29	325	P	P	14 08 05.2	+0.4
	baz=135						
PLVO	Plevna	26.33	349	*e*P	P	14 08 05.5	+0.4
	comp=Z,32nm,1.0s						
PLVO	Plevna	26.33	349	P	P	14 08 05.8	+0.6
	baz=165,SNR=13						
J49A	Marlette	26.39	338	P	P	14 08 06.3	+0.6
	baz=152,SNR=6.6						
N44A	Piper City	26.41	328	P	P	14 08 06.1	+0.3
	baz=139						
BWLO	Walkerton	26.43	342	P	P	14 08 06.8	+0.8
	baz=156						
G55A	Calabogie	26.47	350	P	P	14 08 07.3	+0.9
	baz=166						
BANO	Bancroft	26.48	348	P	P	14 08 07.1	+0.6
	baz=163						
BASO	Ashfield	26.49	341	P	P	14 08 07.4	+0.9
	baz=155,SNR=10						
K47A	Vermontville	26.49	335	P	P	14 08 07.0	+0.4
	baz=147						
SADO	Sadowa	26.50	346	P	P	14 08 06.7	0.0
	comp=Z,4.7nm,0.5s,baz=208,slow=3.5,SNR=6.6						
SADO	Sadowa	26.50	346	*e*P	P	14 08 07.0	+0.3
	comp=Z,18nm,1.0s						
J48A	Bridge Port	26.56	337	P	P	14 08 04.5	-2.8
	baz=150						
G53A	Haliburton	26.72	347	P	P	14 08 09.2	+0.5
	baz=162						
I49A	Point Hope	26.79	339	*e*P	P	14 08 09.4	+0.1
	comp=Z,25nm,0.8s						
I49A	Point Hope	26.79	339	P	P	14 08 10.2	+0.9
	baz=153						
M44A	Midewin, Midew	26.81	329	*e*pP	pP	14 08 19.2	+2.3
M44A	Midewin, Midew	26.81	329	P	P	14 08 10.0	+0.5
	baz=140						
HDIL	Hopedale	26.82	326	P	P	14 08 10.1	+0.5
	baz=137						
LMN	Caledonia Moun	26.87	8	*e*P	P	14 08 09.3	-0.7
	comp=Z,19nm,0.8s						
BMRO	Meriville Lake	26.89	342	P	P	14 08 11.3	+1.1
	baz=156						
J47A	Sunmer	26.90	336	P	P	14 08 10.1	-0.2
	baz=148						
HHAR	Hobbs	26.91	314	*e*P	P	14 08 10.2	-0.3
	comp=Z,31nm,1.0s						
PEMO	Pembroke	26.98	349	P	P	14 08 11.5	+0.5
	baz=165						
TLIG	Tlapa	27.01	271	*e*P	P	14 08 11.5	-0.2
	comp=Z,35nm,1.0s						
X37A	Clayton	27.07	309	*e*P	P	14 08 12.6	+0.6
	comp=Z,47nm,1.6s						
TRQ	Mont Tremblant	27.12	353	*e*pP	pP	14 08 23.3	+3.6
BUKO	Buck Lake	27.20	346	P	P	14 08 13.3	+0.4
	baz=161						
435B	Jarrell	27.30	300	*e*P	P	14 08 13.8	-0.3
	comp=Z,35nm,1.0s						
435B	Jarrell	27.30	300	P	P	14 08 13.3	-0.8
	baz=108						
I48A	Sherman Twp	27.31	338	P	P	14 08 14.4	+0.5
	baz=151						
KLBO	Killbear Provi	27.32	344	P	P	14 08 14.7	+0.7
	baz=159						
PQI	Presque Isle	27.38	3	*e*pP	pP	14 08 23.6	+1.7
ALGO	Algonquin Park	27.40	348	P	P	14 08 15.1	+0.4
	baz=164						
TOBO	Tobermory, Bru	27.55	342	P	P	14 08 16.8	+0.7
	baz=156						
WHTX	Lake Whitney,	27.60	303	P	P	14 08 16.7	0.0
	baz=111						
E54A	Lac Daplat, Po	27.70	349	P	P	14 08 18.5	+1.1
	baz=166						
LNIG	Linares	27.71	287	*e*P	P	14 08 17.2	-0.6
	comp=Z,24nm,1.6s						
E53A	Dumoine, Ponti	27.73	349	P	P	14 08 18.1	+0.4
	baz=165						
N41A	Harden Midland	27.76	325	P	P	14 08 18.7	+0.6
	baz=134						
F51A	Arnstein	27.78	345	P	P	14 08 18.9	+0.7
	baz=160						
E52A	Mattawa	27.84	347	P	P	14 08 19.7	+1.1
	baz=163						
K43A	Burlington	27.96	331	*e*P	P	14 08 19.1	-0.7
	comp=Z,25nm,0.9s						
K43A	Burlington	27.96	331	P	P	14 08 20.3	+0.4
	baz=141						
TUL1	Leonard	28.01	312	*e*P	P	14 08 20.0	-0.3
	comp=Z,32nm,0.9s						
TUL1	Leonard	28.01	312	P	P	14 08 20.6	+0.3
	baz=120						
BATG	Bathurst New B	28.13	6	*e*P	P	14 08 22.0	+0.8
	comp=Z,16nm,1.1s						
833A	Chaparral WMA,	28.18	294	P	P	14 08 21.8	-0.2
	baz=102						
F49A	Sandfield	28.19	342	P	P	14 08 22.6	+0.8
	baz=156						
G47A	Hillman	28.23	339	P	P	14 08 23.0	+0.8
	baz=152						
E51A	G1948 Merrick	28.25	346	P	P	14 08 23.3	+0.9
	baz=161						
N40A	Mertquake, Sal	28.29	324	P	P	14 08 22.7	-0.1
	baz=133						
D54A	Lac Fusel, La	28.31	351	P	P	14 08 23.2	+0.3
	baz=167						
D53A	Lac Vacive, Po	28.41	349	*e*P	P	14 08 23.3	-0.5
	comp=Z,9.5nm,0.9s						
D53A	Lac Vacive, Po	28.41	349	P	P	14 08 24.1	+0.3
	baz=165						
F48A	Evansville	28.42	341	P	P	14 08 24.3	+0.4
	baz=155						
E50A	Wahnapitae	28.45	345	P	P	14 08 24.9	+0.8
	baz=159						
D52A	ZEK Kipawa Sen	28.45	348	P	P	14 08 24.6	+0.5
	baz=164						
D51A	Lot 18 Range I	28.75	347	P	P	14 08 27.8	+1.0
	baz=162						
L40A	Anamosa	28.91	326	P	P	14 08 28.4	+0.1

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      baz=136
JFWS  Jewell Farm      29.04 329 eP    P      14 08 29.3 -0.1
      comp=Z,21nm,0.6s
JFWS  Jewell Farm      29.04 329 eP    P      14 08 29.3 -0.1
JFWS                              pmax  pmax
      comp=Z,21nm,0.6s
JFWS  Jewell Farm      29.04 329  P    P      14 08 29.8 +0.4
      baz=138
JCT   Junction City    29.05 298 eP    P      14 08 29.4 -0.3
      comp=Z,19nm,1.3s
JCT   Junction City    29.05 298 eP    P      14 08 29.4 -0.3
JCT                               pmax  pmax
      comp=Z,19nm,1.3s
JCT   Junction City    29.05 298  P    P      14 08 30.2 +0.5
      baz=106
H43A  Windswept, Lux   29.11 334 eP    P      14 08 30.1  0.0
      comp=Z,19nm,0.8s
H43A  Windswept, Lux   29.11 334  P    P      14 08 30.5 +0.5
      baz=144
I42A  Draeger Farm,    29.15 331 eP    P      14 08 30.4  0.0
      comp=Z,18nm,0.8s
I42A  Draeger Farm,    29.15 331  P    P      14 08 31.1 +0.7
      baz=142
E47A  Iron Bridge      29.18 341  P    P      14 08 30.9 +0.3
      baz=154,SNR=5.3
F45A  CMU Biological   29.25 338  P    P      14 08 32.0 +0.8
      baz=149
D49A  Beulah Townshi   29.39 344  P    P      14 08 33.2 +0.7
      baz=158
D48A  Paudash Townsh   29.42 344  P    P      14 08 33.6 +0.9
      baz=157
E46A  Sault Ste Mari   29.43 340 eP    P      14 08 32.9 +0.1
      comp=Z,40nm,1.4s
E46A  Sault Ste Mari   29.43 340  P    P      14 08 33.9 +1.1
      baz=152
ABTX  Abilene, Hawle   29.56 303  P    P      14 08 34.8 +0.6
      baz=110
WMOK  Wichita Mounta   29.67 307 eP    P      14 08 35.2 +0.1
      comp=Z,17nm,0.6s
WMOK  Wichita Mounta   29.67 307 eP    P      14 08 35.2 +0.1
WMOK                              pmax  pmax
      comp=Z,17nm,0.6s
WMOK  Wichita Mounta   29.67 307  P    P      14 08 35.2 +0.1
      baz=114,SNR=30
D47A  Chapleau         29.67 342  P    P      14 08 35.7 +0.7
      baz=155
D46A  Sault St. Mari   29.81 341  P    P      14 08 36.8 +0.6
      baz=153
E44A  Grand Marais A   30.20 338 epP   pP     14 08 49.6 +2.6
E44A  Grand Marais A   30.20 338  P    P      14 08 40.3 +0.7
      baz=149
KSU1  Kansas State U   30.22 316  P    P      14 08 40.1 +0.2
      baz=123
E43A  Lone Tree Farm   30.38 337 eP    P      14 08 41.6 +0.4
      comp=Z,7.1nm,0.8s
E43A  Lone Tree Farm   30.38 337  P    P      14 08 41.8 +0.5
      baz=147
CHGQ  Chibougamau      30.75 355  P    P      14 08 45.5 +1.0
      baz=172
G40A  Rib Lake         30.80 332 eP    P      14 08 45.2 +0.1
      comp=Z,15nm,0.8s
G40A  Rib Lake         30.80 332  P    P      14 08 45.4 +0.4
      baz=141,SNR=6.8
COWI  Conover          31.00 334 eP    P      14 08 47.0 +0.3
      comp=Z,12nm,0.8s
MATQ  Matagami         31.00 351  P    P      14 08 47.1 +0.4
      baz=166
G39A  Holcombe         31.26 331  P    P      14 08 49.3 +0.3
      baz=139,SNR=5.5
D41A  Chassel          31.55 336 eP    P      14 08 52.3 +0.8
      comp=Z,43nm,0.8s
D41A  Chassel          31.55 336  P    P      14 08 52.6 +1.1
      baz=145
DRLN  Deer Lake        31.59  16 eP    P      14 08 51.3 -0.6
      comp=Z,12nm,0.7s
AMTX  Amarillo         31.93 306 eP    P      14 08 54.7 -0.5
      comp=Z,14nm,0.9s
AMTX  Amarillo         31.93 306  P    P      14 08 55.7 +0.5
      baz=111
LTX   Lajitas          32.06 295 eP    P      14 08 58.1 +1.8
TX31  Lajitas Ar. Si   32.06 295 eP    P      14 08 55.2 -1.2
      comp=Z,8.6nm,0.9s
TXAR  Lajitas Array    32.06 295  P    P      14 08 58.1 +1.8
      comp=Z,1.5nm,0.5s,baz=105,slow=8.4,SNR=11
CBKS  Cedar Bluff      32.16 314 eP    P      14 08 57.5 +0.4
      comp=Z,27nm,0.8s
CBKS  Cedar Bluff      32.16 314 eP    P      14 08 57.6 +0.4
CBKS                              pmax  pmax
      comp=Z,27nm,0.8s
CBKS  Cedar Bluff      32.16 314  P    P      14 08 58.0 +0.9
      baz=119
E38A  The Farm, Brul   32.44 332 eP    P      14 08 58.5 -0.8
      comp=Z,20nm,0.8s
E38A  The Farm, Brul   32.44 332  P    P      14 08 59.9 +0.6
      baz=140
MSTX  Muleshoe         32.47 303 eP    P      14 09 00.1 +0.1
      comp=Z,19nm,0.8s
MSTX  Muleshoe         32.47 303  P    P      14 09 00.1 +0.1
      baz=108,SNR=16
C40A  Isle Royale Na   32.48 336 eP    P      14 08 59.7  0.0
      comp=Z,37nm,0.8s
C40A  Isle Royale Na   32.48 336  P    P      14 09 00.6 +0.9
      baz=145,SNR=11
BGNE  Belgrade         32.48 319  P    P      14 08 59.9  0.0
      baz=124
ECSD  EROS Data Cent   32.97 324 eP    P      14 09 03.4 -0.6
      comp=Z,8.5nm,0.8s
ECSD  EROS Data Cent   32.97 324  P    P      14 09 04.0 -0.1
      baz=129,SNR=8.3
EYMN  Ely              33.45 334 eP    P      14 09 08.1 -0.1
      comp=Z,9.8nm,0.9s
MNTX  Cornudas Mount   33.98 298 eP    P      14 09 13.1 +0.1
      comp=Z,20nm,0.9s
MNTX  Cornudas Mount   33.98 298  P    P      14 09 14.0 +0.9
      baz=103,SNR=30
KSCO  Kaye Shedlock'   34.26 312  P    P      14 09 16.0 +0.4
      baz=116
OGNE  Ogallala         34.74 315  P    P      14 09 19.8 +0.2
      baz=119
T25A  Trinidad         34.81 308 eP    P      14 09 20.7 +0.3
      comp=Z,13nm,1.0s
T25A  Trinidad         34.81 308  P    P      14 09 20.6 +0.3
      baz=111,SNR=7.7
LPAZ  La Paz           35.40 177  P    P      14 09 27.4 +1.4
      comp=Z,2.0nm,0.6s,baz=75,slow=3.6,SNR=7.9
LPAZ  La Paz           35.40 177 eP    P      14 09 26.1 +0.1
      comp=Z,8.7nm,0.8s
LPAZ  La Paz           35.40 177 eP    P      14 09 26.1 +0.1
LPAZ                              pmax  pmax
      comp=Z,9.0nm,0.8s
SCHQ  Schefferville    35.58   3  P    P      14 09 26.8 +0.2
      comp=Z,5.3nm,0.6s,baz=193,slow=6.9,SNR=3.8
SCHQ  Schefferville    35.58   3 eP    P      14 09 25.5 -1.0
      comp=Z,10nm,0.9s
BNM   Barren Site      35.59 302 eP    P      14 09 28.0 +0.8
AGMN  Agassiz Nation   35.66 330 eP    P      14 09 26.9 -0.4
      comp=Z,13nm,0.9s
AGMN  Agassiz Nation   35.66 330  P    P      14 09 27.5 +0.2
      baz=135
ANMO  Albuquerque      35.67 303 eP    P      14 09 28.1 +0.2
      comp=Z,10nm,1.1s
ANMO  Albuquerque      35.67 303 eP    P      14 09 28.1 +0.2
ANMO                              pmax  pmax
      comp=Z,11nm,1.1s
ANMO  Albuquerque      35.67 303  P    P      14 09 28.4 +0.6
      baz=106
Y22D  IRIS PASSCAL I   35.81 302  P    P      14 09 29.2 +0.2
      baz=105
SDCO  Great Sand Dun   35.83 308 eP    P      14 09 29.7 +0.3
      comp=Z,7.4nm,0.8s
SDCO  Great Sand Dun   35.83 308  P    P      14 09 29.6 +0.3
      baz=111,SNR=15
LENM  Lemitar          35.87 302 eP    P      14 09 30.1 +0.5
Q24A  Divide           36.03 311  P    P      14 09 31.4 +0.3
      baz=113
LAZ   Ladron           36.06 302 eP    P      14 09 32.0 +0.8
121A  Cookes Peak, D   36.15 299  P    P      14 09 32.4 +0.5
      baz=102
SIV   San Ignacio      36.16 165  P    P      14 09 31.3 -0.6
      comp=Z,3.6nm,0.8s,baz=7.7,slow=6.0,SNR=13
ISCO  Idaho Springs    36.69 312 eP    P      14 09 36.4 -0.2
      comp=Z,13nm,0.8s
ISCO  Idaho Springs    36.69 312 eP    P      14 09 36.4 -0.2
ISCO                              pmax  pmax
      comp=Z,13nm,0.8s
ISCO  Idaho Springs    36.69 312  P    P      14 09 37.6 +0.9
      baz=114,SNR=17
S22A  4UR Ranch, Cre   36.82 308 eP    P      14 09 37.4 -0.4
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      comp=Z,12nm,1.4s
S22A  4UR Ranch, Cre   36.82 308  P    P      14 09 37.4 -0.4
      baz=110,SNR=7.3
ULM   Lac du Bonnet    37.07 332  P    P      14 09 38.6 -0.7
      comp=Z,7.2nm,1.0s,baz=138,slow=7.4,SNR=6.1
ULM   Lac du Bonnet    37.07 332 eP    P      14 09 38.4 -0.9
      comp=Z,17nm,0.9s
ULM   Lac du Bonnet    37.07 332 eP    P      14 09 38.4 -0.9
ULM                               pmax  pmax
      comp=Z,17nm,0.9s
MDND  Maddock          37.20 327 eP    P      14 09 40.4  0.0
      comp=Z,22nm,0.7s
MDND  Maddock          37.20 327  P    P      14 09 40.5  0.0
      baz=130
PHWY  Pilot Hill       37.20 314 eP    P      14 09 41.0  0.0
      comp=Z,21nm,1.3s
N23A  Red Feather La   37.37 313  P    P      14 09 41.7 -0.6
      baz=114
SMCO  Snowmass         37.43 310 eP    P      14 09 42.0 -1.0
      comp=Z,21nm,1.4s
RSSD  Black Hills      37.59 319  P    P      14 09 44.4 +0.3
      baz=120
MVCO  Mesa Verde       37.91 306  P    P      14 09 47.8 +0.8
      baz=108
MNMC  Minye Minye      38.17 179 eP    P      14 09 46.4 -2.8
      comp=Z,24nm,0.8s
W18A  Petrified Fore   38.31 303  P    P      14 09 50.4 +0.1
      baz=104
X18A  Snowflake        38.35 302 eP    P      14 09 50.7 +0.1
      comp=Z,8.2nm,0.8s
K22A  Casper           38.50 315 eP    P      14 09 51.2 -0.5
      comp=Z,9.3nm,0.9s
K22A  Casper           38.50 315  P    P      14 09 52.2 +0.5
      baz=116
RWWY  Rawlins          38.56 314 eP    P      14 09 52.6 +0.3
      comp=Z,13nm,1.0s
TUC   Tucson           38.60 298 eP    P      14 09 51.0 -1.7
      comp=Z,23nm,1.1s
TUC   Tucson           38.60 298 eP    P      14 09 51.0 -1.7
TUC                               pmax  pmax
      comp=Z,23nm,1.1s
TUC   Tucson           38.60 298  P    P      14 09 52.3 -0.3
      baz=100
O20A  White River Ci   38.69 311 eP    P      14 09 51.0 -2.3
      comp=Z,16nm,0.9s
O20A  White River Ci   38.69 311  P    P      14 09 53.9 +0.5
      baz=111,SNR=6.1
GO01  Chusmiza         38.72 179 eP    P      14 09 51.7 -2.3
      comp=Z,40nm,0.9s
PB11  IPOC Station P   38.80 179 eP    P      14 09 52.4 -1.9
      comp=Z,32nm,1.0s
WUAZ  Wupatki          39.71 303 eP    P      14 10 01.0 -0.9
      comp=Z,24nm,1.2s
WUAZ  Wupatki          39.71 303  P    P      14 10 02.1 +0.1
      baz=103,SNR=8.2
SRU   San Rafael Swe   40.01 308 eP    P      14 10 02.5 -1.9
      comp=Z,14nm,0.9s
SRU   San Rafael Swe   40.01 308 eP    P      14 10 02.5 -1.9
SRU                               pmax  pmax
      comp=Z,14nm,0.9s
DGMT  Dagmar           40.02 325 eP    P      14 10 03.4 -0.8
      comp=Z,33nm,0.6s
DGMT  Dagmar           40.02 325  P    P      14 10 04.4 +0.1
      baz=125
PB01  IPOC Station P   40.08 179 eP    P      14 10 04.0 -0.9
      comp=Z,14nm,0.9s
LAO   LASA Array       40.22 321  P    P      14 10 06.2 +0.2
      baz=121
214A  Organ Pipe Nat   40.25 297  P    P      14 10 07.6 +1.3
      baz=98
P17A  Butcher Ranch,   40.28 309 eP    P      14 10 06.8 +0.1
      comp=Z,18nm,0.6s
TMUT  Trail Mountain   40.57 308 eP    P      14 10 08.7 -0.5
      comp=Z,44nm,1.0s
BW06  Boulder Array    40.59 314 eP    P      14 10 08.2 -1.0
      comp=Z,23nm,1.2s
BW06  Boulder Array    40.59 314  P    P      14 10 09.0 -0.3
      baz=113,SNR=7.9
PD31  Pinedale Array   40.59 314 eP    P      14 10 09.6 +0.4
PDAR  Pinedale Array   40.59 314  P    P      14 10 09.6 +0.4
      comp=Z,1.1nm,0.5s,baz=111,slow=8.1,SNR=15
U15A  North Rim        40.64 304 eP    P      14 10 09.1 -0.7
      comp=Z,30nm,1.1s
Y14A  Wickenburg       40.71 300 eP    P      14 10 10.1 -0.1
      comp=Z,12nm,0.8s
MTPU  Mount Pierson    40.95 306 eP    P      14 10 12.0 -0.5
BDFB  Brasilia         40.96 146  P    P      14 10 13.8 +1.4
      comp=Z,7.7nm,0.6s,baz=319,slow=12,SNR=9.1
BDFB  Brasilia         40.96 146 eP    P      14 10 11.9 -0.5
      comp=Z,11nm,1.0s
BDFB                             eP    P      14 10 13.8 +1.4
BDFB  Brasilia         40.96 146 eP    P      14 10 11.9 -0.5
BDFB                              pmax  pmax
      comp=Z,11nm,1.0s
MSU   Marysvale        41.07 307 eP    P      14 10 13.5 +0.2
MSU   Marysvale        41.07 307 eP    P      14 10 13.5 +0.2
MPU   Maple Canyon     41.10 309 eP    P      14 10 13.1 -0.4
      comp=Z,14nm,1.0s
JLU   Jordanelle       41.15 310 eP    P      14 10 14.6 +0.7
      comp=Z,18nm,1.0s
KNB   Kanab            41.19 305 eP    P      14 10 15.3 +1.1
      comp=Z,50nm,1.3s
KNB   Kanab            41.19 305 eP    P      14 10 15.3 +1.1
KNB                               pmax  pmax
      comp=Z,50nm,1.3s
TCUT  Toone Canyon     41.29 311 eP    P      14 10 15.3 +0.3
      comp=Z,78nm,1.0s
RLMT  Red Lodge        41.36 317 eP    P      14 10 15.1 -0.5
      comp=Z,38nm,1.1s
RLMT  Red Lodge        41.36 317  P    P      14 10 15.4 -0.2
      baz=116
CTU   Camp Tracy       41.40 310 eP    P      14 10 16.0 +0.1
      comp=Z,22nm,1.1s
NLU   North Lily Min   41.41 309 eP    P      14 10 14.5 -1.4
      comp=Z,12nm,0.9s
SZCU  Shurtz Canyon    41.53 305 eP    P      14 10 15.8 -1.3
      comp=Z,25nm,1.3s
HWUT  Hardware Ranch   41.56 312 eP    P      14 10 16.6 -0.6
      comp=Z,14nm,1.0s
LOHW  Long Hollow      41.62 315 eP    P      14 10 17.2 -0.5
      comp=Z,23nm,1.1s
W13A  Hualapai Mount   41.63 301 eP    P      14 10 18.9 +0.9
      comp=Z,13nm,1.1s
LVC   Limon Verde      41.65 178  P    P      14 10 20.7 +2.5
      comp=Z,6.1nm,0.5s,baz=21,slow=7.8,SNR=6.6
CCUT  Cedar City       41.73 305 eP    P      14 10 18.5 -0.2
      comp=Z,15nm,1.1s
MOOW  Moose Ponds      41.77 315 eP    P      14 10 18.9  0.0
      comp=Z,14nm,1.0s
TPAW  Teton Pass       41.81 314 eP    P      14 10 19.6 +0.3
      comp=Z,38nm,1.1s
FLWY  Flagg Ranch      41.87 315 eP    P      14 10 20.2 +0.5
      comp=Z,35nm,1.0s
GCMT  Greycliff        41.91 318 eP    P      14 10 20.1 +0.1
H17A  Grant Village    41.91 316 eP    P      14 10 20.4 +0.4
      comp=Z,24nm,1.0s
FXWY  Fox Creek        41.91 315 eP    P      14 10 20.8 +0.6
      comp=Z,19nm,1.0s
Y12C  Blythe           41.93 299  P    P      14 10 20.3 +0.2
      baz=99
IMW   Indian Meadow    41.95 315 eP    P      14 10 21.3 +0.8
      comp=Z,25nm,0.9s
YPP   Pitchstone Pla   42.01 316 eP    P      14 10 21.2 +0.2
      comp=Z,29nm,1.4s
DUG   Dugway, Tooele   42.02 309 eP    P      14 10 21.8 +0.9
      comp=Z,33nm,1.4s
DUG   Dugway, Tooele   42.02 309 eP    P      14 10 21.8 +0.9
DUG                               pmax  pmax
      comp=Z,33nm,1.4s
DUG   Dugway, Tooele   42.02 309  P    P      14 10 20.8 -0.1
      baz=107,SNR=14
GLA   Glamis           42.09 298  P    P      14 10 21.9 +0.5
      baz=98
YHH   Holmes Hill      42.25 316 eP    P      14 10 23.4 +0.5
      comp=Z,54nm,1.5s
PSUT  Pine Spring      42.35 306 eP    P      14 10 24.4 +0.7
      comp=Z,14nm,0.9s
BGU   Big Grassy Mou   42.39 310 eP    P      14 10 24.6 +0.7
      comp=Z,15nm,0.8s
HVU   Hansel Valley    42.47 311 eP    P      14 10 24.3 -0.3
      comp=Z,15nm,0.9s
HVU   Hansel Valley    42.47 311 eP    P      14 10 24.3 -0.3
HVU                               pmax  pmax
      comp=Z,15nm,0.9s
IRM   Iron Mountain    42.50 300  P    P      14 10 24.0 -0.8
      baz=99,SNR=10
LDFC  Landfair         42.62 301 eP    P      14 10 26.4 +0.6
      comp=Z,59nm,1.1s
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BC3   Big Chuckawall   42.69 299  P    P      14 10 26.5 +0.1
      baz=98
FFC   Flin Flon        42.88 333 eP    P      14 10 26.6 -0.9
      comp=Z,103nm,0.8s
FFC   Flin Flon        42.88 333 eP    P      14 10 26.6 -0.9
FFC                               pmax  pmax
      comp=Z,103nm,0.8s
SWSC  Sam W. Stewart   42.88 298  P    P      14 10 27.7 -0.2
      baz=97
SHPR  Sheep Range      42.92 303 eP    P      14 10 27.2 -1.1
      comp=Z,16nm,1.1s
EGMT  Eagleton         42.97 321 eP    P      14 10 27.5 -1.0
      comp=Z,37nm,1.0s
EGMT  Eagleton         42.97 321  P    P      14 10 29.2 +0.7
      baz=118,SNR=7.7
GMRC  Granite Mounta   43.02 301  P    P      14 10 28.0 -1.1
      baz=99
BOZ   Bozeman (W)      43.07 317 eP    P      14 10 29.1 -0.3
      comp=Z,26nm,1.1s
BOZ   Bozeman (W)      43.07 317 eP    P      14 10 29.1 -0.3
BOZ                               pmax  pmax
      comp=Z,26nm,1.1s
BOZ   Bozeman (W)      43.07 317  P    P      14 10 29.6 +0.2
      baz=114,SNR=10
BELC  Belle Mtn. Jos   43.18 299  P    P      14 10 30.5 +0.1
      baz=98
TUQ   Turquoise Moun   43.34 301  P    P      14 10 32.4 +0.7
      baz=100,SNR=6.6
MCMT  McKenzie Canyo   43.57 316 eP    P      14 10 33.6 +0.1
DLMT  Dillon           43.61 316 eP    P      14 10 34.2 +0.4
      comp=Z,40nm,1.4s
R11A  Troy Canyon, C   43.63 306 eP    P      14 10 33.5 -0.5
      comp=Z,14nm,1.2s
R11A  Troy Canyon, C   43.63 306  P    P      14 10 35.2 +1.2
      baz=103,SNR=15
HRY   Holter Researc   43.66 318 eP    P      14 10 34.1 +0.1
LRM   Limekiln Ridge   43.69 317 eP    P      14 10 35.9 +1.4
SHOC  Shoshone, Teco   43.70 302  P    P      14 10 35.3 +0.9
      baz=100
TPNV  Topopah Spring   43.86 304 eP    P      14 10 37.4 +1.5
      comp=Z,17nm,1.0s
TPNV  Topopah Spring   43.86 304  P    P      14 10 37.6 +1.7
      baz=101,SNR=9.5
ELK   Elko             43.95 309 eP    P      14 10 36.6  0.0
      comp=Z,13nm,1.0s
ELK   Elko             43.95 309 eP    P      14 10 36.6  0.0
ELK                               pmax  pmax
      comp=Z,13nm,1.0s
HLID  Hailey           44.19 313 eP    P      14 10 38.6 +0.1
      comp=Z,34nm,1.0s
HLID  Hailey           44.19 313  P    P      14 10 39.4 +0.9
      baz=109,SNR=6.9
MSO   Missoula         45.03 318 eP    P      14 10 45.3 +0.3
      comp=Z,31nm,1.1s
BMN   Battle Mountai   45.33 308 eP    P      14 10 48.0 +0.4
      comp=Z,15nm,0.9s
BMN   Battle Mountai   45.33 308 eP    P      14 10 48.0 +0.4
BMN                               pmax  pmax
      comp=Z,15nm,0.9s
NV01  Mina Array Sit   45.73 305 eP    P      14 10 52.1 +1.2
NVAR  Mina Array Bea   45.73 305  P    P      14 10 52.1 +1.2
      comp=Z,5.6nm,0.8s,baz=102,slow=5.1,SNR=16
PLID  Pearl Lake       45.76 315 eP    P      14 10 50.9 -0.1
      comp=Z,17nm,1.1s
SBC   Santa Barbara    46.29 299  P    P      14 10 54.1 -0.9
      baz=96
BMO   Blue Mountains   46.57 314 eP    P      14 10 56.4 -0.8
      comp=Z,17nm,1.0s
BMO   Blue Mountains   46.57 314 eP    P      14 10 56.4 -0.8
BMO                               pmax  pmax
      comp=Z,17nm,1.0s
SMMC  Simmler          46.62 301  P    P      14 10 57.0 -0.6
      baz=96
F10A  Beach Ranch, E   46.86 316 eP    P      14 10 58.7 -0.8
      comp=Z,20nm,0.9s
J08A  Circle Bar Ran   46.96 312 eP    P      14 10 57.9 -2.4
      comp=Z,26nm,1.0s
NEW   Newport          47.56 319 eP    P      14 11 03.6 -1.3
      comp=Z,22nm,1.0s
NEW   Newport          47.56 319 eP    P      14 11 03.6 -1.3
NEW                               pmax  pmax
      comp=Z,22nm,1.0s
NEW   Newport          47.56 319  P    P      14 11 04.9  0.0
      baz=111,SNR=19
E09A  Wood Farm, Sta   47.64 316 eP    P      14 11 05.3 -0.1
      comp=Z,28nm,1.3s
C09A  Chrisman Ranch   48.13 318 eP    P      14 11 09.2  0.0
      comp=Z,16nm,0.8s
PARB  Paraibuna        48.65 149 eP    P      14 11 14.7 +1.2
ESAR  Angra dos Reis   48.96 148 eP    P      14 11 14.9 -0.9
DUB01 Friburgo-RJ      49.26 145 eP    P      14 11 19.3 +1.2
CAM01 Campos-RJ        49.44 144 eP    P      14 11 19.8 +0.3
J01E  Myrtle Point     50.80 310  P    P      14 11 29.2 -0.4
      baz=100
D04E  Lakebay          50.87 316  P    P      14 11 29.9 -0.1
      baz=105
D03D  Eldon            51.17 316  P    P      14 11 32.0 -0.4
      baz=105
YKA   Yellowknife Ar   52.87 336  P    P      14 11 44.7  0.0
      comp=Z,3.2nm,0.8s,baz=116,slow=7.1,SNR=13
YKB5  Yellowknife Ar   52.87 336 eP    P      14 11 44.7  0.0
YKW3  Yellowknife Ar   52.91 336 eP    P      14 11 45.0 -0.1
BORG  Borgarnes        55.72  23 i P   P      14 12 10.5 +5.1
SUMG  Summit           56.28  11 eP    P      14 12 10.2 +0.3
      comp=Z,24nm,0.8s
SUMG  Summit           56.28  11 eP    P      14 12 10.2 +0.3
SUMG                              pmax  pmax
      comp=Z,25nm,0.8s
SUMG  Summit           56.28  11 i P   P      14 12 11.1 +1.2
PMTG  Montargil        56.48  55 eP    P      14 12 12.7 +1.3
      comp=Z,21nm,1.6s
PGAV  Gavieira, Arco   56.58  52 eP    P      14 12 13.5 +1.4
      comp=Z,16nm,1.4s
POLO  Lamas de Olo     56.90  53 eP    P      14 12 14.9 +0.5
      comp=Z,6.7nm,1.2s
MTE   Manteigas        57.05  54 eP    P      14 12 16.2 +0.7
      comp=Z,14nm,1.4s
PCBR  Castelo Branco   57.08  55 eP    P      14 12 16.4 +0.8
      comp=Z,14nm,1.4s
PMRV  Marv??o          57.14  55 eP    P      14 12 16.8 +0.8
      comp=Z,14nm,1.5s
MVO   Moncorvo         57.47  53 eP    P      14 12 19.1 +0.7
      comp=Z,11nm,1.1s
DLBC  Dease Lake       58.10 328  P    P      14 12 24.2 +1.6
      comp=Z,5.2nm,0.8s,baz=115,slow=1.0,SNR=5.6
DLBC  Dease Lake       58.10 328 eP    P      14 12 24.2 +1.6
      comp=Z,8.3nm,0.8s
PAB   San Pablo        59.49  55 eP    P      14 12 32.3 -0.3
      comp=Z,8.8nm,1.0s
PAB   San Pablo        59.49  55 eP    P      14 12 32.3 -0.3
PAB                               pmax  pmax
      comp=Z,9.0nm,1.0s
ESDC  Sonseca Array    59.79  55  P    P      14 12 35.8 +1.2
      comp=Z,3.4nm,0.7s,baz=274,slow=6.9,SNR=18
ESLA  Sonseca Array    59.79  55 eP    P      14 12 34.5 -0.1
      comp=Z,13nm,1.2s
CLF   Chambon-Foret    64.22  45 eP    P      14 13 03.6 -0.5
      comp=Z,25nm,1.0s
DBIC  Dimbokro         64.52  92  P    P      14 13 07.6 +1.0
      comp=Z,2.3nm,0.6s,baz=275,slow=9.4,SNR=3.8
DBIC  Dimbokro         64.52  92 eP    P      14 13 07.6 +1.0
      comp=Z,1µm,1.8s
DBIC  Dimbokro         64.52  92 eP    P      14 13 07.6 +1.0
DBIC                              pmax  pmax
      comp=Z,1µm,1.8s
ILAR  Eielson Array    67.09 333  P    P      14 13 22.6 +0.3
      comp=Z,4.6nm,1.0s,baz=105,slow=4.9,SNR=5.0
ILB   Eielson Array    67.09 333 eP    P      14 13 22.6 +0.3
      comp=Z,7.7nm,1.0s
POKR  Poker Plat Res   67.34 333  P    P      14 13 23.6 -0.4
      baz=93
BNI   Bardonecchia     67.41  48 eP    P      14 13 25.3 +0.4
      comp=Z,12nm,1.4s
ECH   Echery           67.49  45 eP    P      14 13 24.7 -0.5
      comp=Z,6.9nm,1.0s
ECH   Echery           67.49  45 eP    P      14 13 24.7 -0.5
ECH                               pmax  pmax
      comp=Z,7.0nm,1.0s
TCOL  CIGO, UAF Yank   67.51 333  P    P      14 13 24.5 -0.5
      baz=93
SENIN Lac Senin/Sane   67.73  47 eP    P      14 13 24.8 -2.2
      comp=Z,10nm,1.3s
TOA1  Torodi Ar. Sit   68.83  83 eP    P      14 13 34.4 +0.2
TOA0  Torodi Ar. Sit   68.83  83 eP    P      14 13 33.4 -0.7
      comp=Z,1µm,1.4s
TORD  Torodi Ar. Bea   68.83  83  P    P      14 13 34.4 +0.2
      comp=Z,4.5nm,0.9s,baz=317,slow=9.6,SNR=18
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BPAW	Bear Paw Mtn.	68.85	332	eP	P	14 13 33.1	-0.3
	comp=Z,14nm,0.8s						
CNPM	China Poot	69.09	327	eP	P	14 13 35.2	+0.2
	comp=Z,15nm,0.8s						
NB2	NORSAR Subarra	69.16	31	P	P	14 13 36.7	+1.2
	comp=Z,13nm,1.2s,baz=273,slow=6.5						
NB200	NORSAR Array S	69.16	31	eP	P	14 13 36.7	+1.2
NOA	NORSAR Array B	69.16	31	P	P	14 13 36.7	+1.2
	comp=Z,3.1nm,0.8s,baz=272,slow=6.3,SNR=7.4						
DAVA	Damuels	69.40	46	eP	P	14 13 38.3	+1.0
	comp=Z,6.0nm,1.0s						
KDAK	Kodiak Island	69.90	326	P	P	14 13 40.6	+0.6
	comp=Z,4.6nm,0.6s,baz=129,slow=4.2,SNR=6.8						
KDAK	Kodiak Island	69.90	326	eP	P	14 13 40.6	+0.6
	comp=Z,20nm,1.2s						
KDAK	Kodiak Island	69.90	326	eP	P	14 13 40.6	+0.6
KDAK				pmax	pmax		
	comp=Z,20nm,1.2s						
RETA	Reutte	69.97	45	eP	P	14 13 41.6	+0.9
	comp=Z,5.2nm,0.9s						
FETA	Feichten	70.01	46	eP	P	14 13 41.9	+0.8
	comp=Z,5.7nm,1.0s						
MOTA	Moosalm	70.22	46	eP	P	14 13 43.2	+0.8
	comp=Z,5.6nm,1.0s						
SQTA	Sankt Quirin	70.31	46	eP	P	14 13 43.9	+1.0
	comp=Z,3.3nm,0.5s						
WTTA	Wattenberg	70.59	46	i P	P	14 13 45.0	+0.3
KEST	Kesra	70.67	58	P	P	14 13 46.1	+0.8
	comp=Z,7.7nm,0.8s,baz=257,slow=5.0,SNR=8.4						
KEST	Kesra	70.67	58	eP	P	14 13 44.9	-0.3
	comp=Z,25nm,1.0s						
ABTA	Abfaltersbach	71.26	46	eP	P	14 13 48.5	-0.1
	comp=Z,3.1nm,0.7s						
BRG	Berggiesshubel	71.60	42	ePDIF	P	14 13 51.4	+0.9
	comp=Z,3.8nm,1.2s						
BRG	Berggiesshubel	71.60	42	eP	P	14 13 51.4	+0.9
BRG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KHC	Kasperske Hory	71.62	43	eP	P	14 13 50.7	0.0
	comp=Z,4.7nm,1.3s						
KHC	Kasperske Hory	71.62	43	eP	P	14 13 46.0	-4.7
KHC	Kasperske Hory	71.62	43	eP	P	14 13 46.0	-4.7
GEC2	GERESS Array S	71.74	44	eP	P	14 13 51.6	0.0
	comp=Z,8.2nm,1.2s						
GEC2	GERESS Array S	71.74	44	eP	P	14 13 51.6	0.0
GEC2				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GERES	GERESS Array B	71.74	44	P	P	14 13 52.1	+0.6
	comp=Z,0.7nm,0.3s,baz=315,slow=0.8,SNR=7.9						
KBA	Koelnbreinsper	71.77	46	eP	P	14 13 52.2	+0.3
	comp=Z,4.3nm,0.8s						
MOA	Molln	72.27	45	i P	P	14 13 55.0	+0.4
	comp=Z,7.8nm,1.8s						
OBKA	Obir	72.68	46	eP	P	14 13 57.7	+0.5
	comp=Z,5.7nm,0.9s						
SOKA	Soboth	72.98	46	P	P	14 13 58.9	0.0
	comp=Z,4.8nm,1.3s						
ARSA	Arzberg	73.21	45	i P	P	14 14 00.8	+0.6
	comp=Z,4.1nm,0.9s						
CONA	Conrad Observa	73.31	44	eP	P	14 14 01.7	+0.8
	comp=Z,2.4nm,0.8s						
ARA0	ARCESS Array S	74.07	21	eP	P	14 14 05.2	+0.4
ARCES	ARCESS Array B	74.07	21	P	P	14 14 05.2	+0.4
	comp=Z,3.9nm,0.6s,baz=278,slow=3.6,SNR=23						
MODS	Modra-Piesok	74.16	44	eP	P	14 14 04.6	-1.2
MODS	Modra-Piesok	74.16	44	eP	P	14 14 04.6	-1.2
VYHS	Vyhne	75.15	43	eP	P	14 14 12.6	+1.1
VYHS	Vyhne	75.15	43	eP	P	14 14 12.6	+1.1
MORH	Mrgy, Hungar	75.52	46	eP	P	14 14 15.1	+1.4
PSZ	Piszkesteto	75.97	44	eP	P	14 14 17.1	+0.8
FIA0	FINESS Array S	76.19	29	eP	P	14 14 18.3	+1.1
FIA0	FINESS Array S	76.19	29	eP	P	14 14 18.3	+1.1
FINES	FINESS Array B	76.19	29	P	P	14 14 18.3	+1.1
	comp=Z,3.5nm,0.6s,baz=267,slow=3.3,SNR=12						
BUR08	Bucovina Ar. S	79.50	43	eP	P	14 14 35.3	-0.7
	comp=Z,12nm,1.3s						
BURAR	Bucovina Array	79.51	43	⇑iP	P	14 14 37.5	+1.4
VOIR		80.04	45	⇑iP	P	14 14 40.2	+1.2
BIZ	Bicaz	80.29	44	⇑iP	P	14 14 42.2	+2.0
MLR	Muntele Rosu	80.63	45	eP	P	14 14 42.3	+0.1
	comp=Z,19nm,1.0s						
MLR	Muntele Rosu	80.63	45	⇑iP	P	14 14 42.9	+0.7
MLR	Muntele Rosu	80.63	45	eP	P	14 14 42.3	+0.1
MLR				pmax	pmax		
	comp=Z,19nm,1.0s						
AKASG	Malin Array Be	81.05	39	P	P	14 14 44.5	+0.3
	comp=Z,0.3nm,0.3s,baz=290,slow=4.5,SNR=3.6						
AKBB	Malin Array Si	81.05	39	eP	P	14 14 44.5	+0.3
	comp=Z,11nm,1.4s						
AKBB	Malin Array Si	81.05	39	eP	P	14 14 44.5	+0.3
AKBB				pmax	pmax		
	comp=Z,11nm,1.4s						
OBN	Obninsk	83.54	34	⇓eP	P	14 14 58.3	+1.3
OBN				e		14 15 06.2	
OBN				e		14 15 12.1	
MOS	Moscow	83.82	33	eP	P	14 15 02.5	+4.0
BR101	Keskin Array S	87.97	49	eP	P	14 15 21.2	+1.6
BRTR	Keskin Array B	87.97	49	P	P	14 15 21.2	+1.6
	comp=Z,1.1nm,0.8s,baz=250,slow=3.7,SNR=4.9						
TIXI	Tiksi	88.37	354	eP	P	14 15 20.4	-0.2
	comp=Z,6.1nm,0.8s						
TIXI	Tiksi	88.37	354	eP	P	14 15 20.4	-0.2
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	Khabaz	92.40	42	P	P	14 15 41.9	+1.9
	comp=Z,1.1nm,0.5s,baz=213,slow=2.1,SNR=3.4						
KSH	Kashi	113.49	28	ePKP	PKiKP	14 21 05.6	-2.1
WMQ	Urumqi	114.00	17	ePKP	PKiKP	14 21 08.3	-0.2
HHC	Hu-ho-hao-te	120.16	359	ePKP	PKPdf	14 21 17.6	-2.9
GTA	Gaotai	120.87	9	ePKP	PKPdf	14 21 21.4	-0.5
GTA				sPKP		14 21 35.6	
LZH	Lanzhou	124.64	6	ePKP	PKPdf	14 21 29.3	0.0
LZH				sPKP		14 21 45.8	
NJ2	Nanjing	128.24	350	ePKP	PKPdf	14 21 34.3	-1.8
CD2	Chengdu	129.76	7	PKP	PKPdf	14 21 37.3	-1.8
CTA	Charters Tower	145.76	262	PKPbc	PKPdf	14 22 08.0	-0.5
	comp=Z,25nm,1.0s,baz=118,slow=3.4,SNR=6.8						
STKA	Stephens Creek	148.87	240	PKPbc	PKPbc	14 22 16.6	-0.7
	comp=Z,9.4nm,0.8s,baz=60,slow=2.9,SNR=3.4						
FAKI	Fak Fak	152.74	304	ePKPdf	PKPdf	14 22 19.1	-0.7

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*IDC **15** 14:03:02.2±0.9, 15°.31S×173°.25W, h0^{km}, mb4.3/10, mb1 4.5/10, mb1mx4.2/38, mbtmp4.3/10, Error ellipse: s-maj=38.6km s-min=17.5km az=136.0*

*NEIC **15** 14:03:03.1±2.2, 15°.56S×172°.96W, h10^{km}, mb4.8/7, Error ellipse: s-maj=20.8km s-min=12.1km az=125.0*

*ISCJB **15** 14:03:04.7±0.5, 15°.4S±0°.1×173°.2W±0°.1, h29^{km}, mb4.3/12, Error ellipse: s-maj=20.7km s-min=9.7km az=138.8*

ISC 15 14:03:06.2±0.7**, 15°.6S**±0°.1×**173°.0W**±0°.1**, h29**^{km}**, n25, σ1^{s}29**/24**, mb4.4**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.04	36	eP	Pn	14 03 29.4	-9.3
NIUE	Niue	4.57	140	ePn	Pn	14 04 11.9	-1.6
MARNC	Mare, Loyalty	18.90	249	eP	Pn	14 07 25.7	+0.5
	181nm,1.0s						
PINNC	Pines Island,	19.73	246	ePn	Pn	14 07 35.3	+0.1
	117nm,1.0s						
DZM	Mont Dzumac	20.47	248	P	P	14 07 42.5	+0.7
	24nm,1.2s,baz=176,slow=16,SNR=2.6						
DZM	Mont Dzumac	20.47	248	eP	P	14 07 42.1	+0.2
	188nm,1.8s						
URZ	Urewera	24.22	199	P	P	14 08 20.6	+0.2
	13nm,0.8s,baz=56,slow=3.6,SNR=4.2						
RPZ	Rata Peaks	31.16	203	P	P	14 09 24.4	+1.8
	9.7nm,0.8s,baz=51,slow=6.5,SNR=2.9						
STKA	Stephens Creek	44.27	240	P	P	14 11 13.7	+0.3
	4.2nm,0.6s,baz=72,slow=8.6,SNR=5.6						
STKA	Stephens Creek	44.27	240	eP	P	14 11 13.3	-0.1
	2.1nm,1.1s						
WR1	Warramunga Arr	50.16	257	eP	P	14 11 59.1	-0.4
WRA	Warramunga Arr	50.16	257	P	P	14 11 59.1	-0.4
	baz=93,slow=6.8						
AS31	Alice Springs	50.40	252	eP	P	14 11 59.5	-1.8
	3.8nm,0.6s						
ASAR	Alice Springs	50.40	252	P	P	14 12 00.0	-1.3
	10nm,0.5s,baz=86,slow=8.0,SNR=15						
PETK	Petropavlovsk-	72.90	342	P	P	14 14 30.3	-2.0
	2.1nm,0.8s,baz=134,slow=8.3,SNR=3.7						
PEA1	Petropavlovsk-	72.90	342	eP	P	14 14 30.3	-2.0
NV01	Mina Array Sit	74.21	42	eP	P	14 14 40.2	-0.5
NVAR	Mina Array Bea	74.21	42	P	P	14 14 40.2	-0.5
	0.5nm,0.7s,baz=225,slow=8.8,SNR=2.2						
LTX	Lajitas	80.40	56	eP	P	14 15 17.8	+2.3
TXAR	Lajitas Array	80.40	56	P	P	14 15 17.8	+2.3
	0.6nm,0.8s,baz=222,slow=7.9,SNR=2.9						
BWN	Browne	81.53	10	eP	P	14 15 21.6	+1.1
	44nm,1.0s						
PD31	Pinedale Array	82.15	42	eP	P	14 15 25.3	+0.7
PDAR	Pinedale Array	82.15	42	P	P	14 15 25.3	+0.7
	0.6nm,0.8s,baz=235,slow=3.2,SNR=2.6						
COLA	College	82.46	11	eP	P	14 15 25.3	-0.1
	15nm,0.8s						
ILAR	Eielson Array	82.54	11	P	P	14 15 24.9	-1.0
	2.2nm,1.0s,baz=230,slow=5.4,SNR=4.8						

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*ISCJB **15** 14:03:38.5±0.1, 60°.83S±0°.03×25°.38W±0°.07, h10^{km}, mb6.3/137, MS7.1/752, Error ellipse: s-maj=5.4km s-min=3.8km az=135.5*

*IDC **15** 14:03:38.7±0.3, 60°.72S×25°.13W, h0^{km}, mb5.7/28, mb1 5.7/29, mb1mx5.7/33, mbtmp5.7/29, ML6.1/1, MS7.0/18, Ms1 7.0/18, ms1mx6.9/21, Error ellipse: s-maj=14.6km s-min=10.2km az=52.0*

*NEIC **15** 14:03:39.9±1.8, 60°.86S×25°.07W, h11^{km}, mb6.5/109, ME7.7, MS7.1/751, MW7.1, MW7.3, MW7.3, Error ellipse: s-maj=16.2km s-min=11.7km az=225.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.81; $M_{\theta\theta}$2.40; $M_{\phi\phi}$-0.60; $M_{r\theta}$-0.38; $M_{\theta\phi}$4.69; $M_{\phi r}$-0.92; Best double couple: $M_0$5.30000×10^{19} NP1:ϕ_s10.00000°, δ85.00000°, λ-166.00000°. NP2:ϕ_s279.00000°, δ76.00000°, λ-5.00000°. Principal axes: T 5.9200, Plg6.0000°, Azm144.0000°; N -1.7800, Plg76.0000°, Azm28.0000°; P -4.1400, Plg13.0000°, Azm235.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s95.00000°, δ80.00000°, λ-1.00000°. NP2:ϕ_s185.00000°, δ89.00000°, λ-170.00000°. Principal axes: T Plg6.0000°, Azm319.0000°; N Plg0.0000°, Azm0.0000°; P Plg8.0000°, Azm50.0000°; Complex earthquake, with at least one event occurring about 5 seconds after the onset observed on broadband displacement seismograms. Depth from synthetics of broadband displacement seismograms based on first event. Apparent Stress 0.01 MPa. based on first event. Energy computed from BB mechanism.*

*BJI **15** 14:03:40.0±0.0, 60°.85S×25°.15W, h20^{km}, mB6.8/46, Ms7.2/76, Ms7 7.1/69*

*MOS **15** 14:03:41.7±1.2, 60°.80S×25°.29W, h33^{km}, mb6.6/41, MS7.0/73, Error ellipse: s-maj=22.9km s-min=10.6km az=99.0*

*NEIC **15** 14:03:43.0±0.0, 61°.30S×24°.81W, h30^{km}, Moment Tensor Solution. s102 Moment tensor: Scale 10^{20}Nm; M_{rr}-0.18; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-0.08; $M_{r\theta}$-0.05; $M_{\theta\phi}$1.02; $M_{\phi r}$0.28; Best double couple: $M_0$1.10000×10^{20} NP1:ϕ_s186.00000°, δ83.00000°, λ-163.00000°. NP2:ϕ_s94.00000°, δ74.00000°, λ-7.00000°. Principal axes: T 1.1400, Plg6.0000°, Azm319.0000°; N -0.1300, Plg72.0000°, Azm208.0000°; P -1.0200, Plg16.0000°, Azm50.0000°;*

*GCMT **15** 14:04:06.9±0.1, 61°.05S±0°.01×23°.51W±0°.01, h22^{km}, MW7.3/149, Moment Tensor Solution. s75,c157; s149,c570; Duration: 11^{s}3 Moment tensor: Scale 10^{20} Nm; M_{rr}-0.30±.01; $M_{\theta\theta}$0.24±.00; $M_{\phi\phi}$0.06±.00; $M_{r\theta}$0.35±.03; $M_{\theta\phi}$1.18±.00; $M_{\phi r}$0.00±.03; Best double couple: $M_0$1.23800×10^{20} NP1:ϕ_s271.00000°, δ85.00000°, λ-18.00000°. NP2:ϕ_s3.00000°, δ72.00000°, λ-174.00000°. Principal axes: T 1.3720, Plg9.0000°, Azm318.0000°; N -0.2680, Plg71.0000°, Azm75.0000°; P -1.1050, Plg17.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **15** 14:04:13.7±0.0, 61°.08S×23°.92W, h36^{km}, Moment Tensor Solution. s147 Moment tensor: Scale 10^{20}Nm; M_{rr}-0.30; $M_{\theta\theta}$0.31; $M_{\phi\phi}$-0.01; $M_{r\theta}$0.61; $M_{\theta\phi}$1.16; $M_{\phi r}$0.33; Best double couple: $M_0$1.30000×10^{20} NP1:ϕ_s93.00000°, δ87.00000°, λ25.00000°. NP2:ϕ_s2.00000°, δ65.00000°, λ176.00000°. Principal axes: T 1.5600, Plg20.0000°, Azm320.0000°; N -0.5100, Plg64.0000°, Azm100.0000°; P -1.0600, Plg15.0000°, Azm225.0000°;*

ISC 15 14:03:41.7±0.4**, 61°.05S**±0°.04×**25°.23W**±0°.04**, h20**^{km}±2^{km}**, h20**^{km}**:pP-P, n2187, σ2^{s}07**/1839**, mb6.4**/133**, MS7.1**/767**, 21C-11D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	9.07	313	ePn	Pn	14 05 51.5	+0.2
VNA1	Neumayer--Stat	11.81	152	P	Pn	14 06 27.3	-1.4
VNA1				S	Sn	14 08 42.0	+2.2
I27DE	GEORG VON NEUM	11.84	152	Pn	Pn	14 06 28.4	-0.7
	baz=315,slow=10,SNR=14						
I27DE				Sn	Sn	14 08 34.9	-5.6
	baz=316,slow=20						
VNA3	Neumayer Olymp	11.95	155	P	Pn	14 06 28.8	-1.9
VNA3				S	Sn	14 08 36.2	-7.1
VNA2	Neumayer--Watz	12.21	152	P	Pn	14 06 32.4	-1.9
	baz=312,slow=15						
VNA2				S	Sn	14 08 47.6	-2.0
	baz=313,slow=22						
SNAA	Sanae	13.80	150	P	Pn	14 06 54.4	-1.7
SNAA				S	Sn	14 09 23.5	-5.0
SNAA	Sanae	13.80	150	Pn	Pn	14 06 54.3	-1.7
	248nm,0.3s,baz=304,slow=14,SNR=1610						
SNAA				Sn	Sn	14 09 22.0	-6.5
	92nm,0.3s,baz=317,slow=19,SNR=4.6						
SNAA	Sanae	13.80	150	ePn	Pn	14 06 53.6	-2.4
SNAA				eSn	Sn	14 09 22.0	-6.5
PMSA	Palmer Station	17.86	241	P	P	14 07 52.0	+2.8
	59nm,0.3s,baz=92,slow=8.5,SNR=167						
PMSA				LR	LR	14 14 27.4	
	comp=Z,387µm,18.4s,baz=90,slow=36						
PMSA	Palmer Station	17.86	241	eP	P	14 07 51.7	+2.6
	7µm,1.8s						
PMSA	Palmer Station	17.86	241	eP	P	14 07 52.3	+3.2
EFI	East Falkland	20.25	283	eP	P	14 08 15.5	+0.1
	2µm,1.0s						
EFI				LR	LR		
	comp=Z,160µm,20.0s						
EFI	East Falkland	20.25	283	c iP	P	14 08 15.3	-0.2
EFI				pmax	pmax		
	comp=Z,695nm,0.8s						
EFI				MLR	MLR		
	comp=Z,218µm,15.0s						
USHA	Ushuaia	23.40	266	P	P	14 08 51.0	+2.1
	comp=Z,436nm,1.0s,baz=127,slow=13,SNR=26						
USHA				LR	LR	14 16 14.4	
	comp=Z,294µm,20.3s,baz=120,slow=32						
H09W1	TRISTAN DA CUN	25.32	25	P	P	14 09 08.9	+2.1
	SNR=37						
H09N1	TRISTAN DA CUN	25.36	25	P	P	14 08 58.4	-8.7
	SNR=6.8						
TRIS	Tristan da Cun	25.36	25	eP	P	14 09 06.0	-1.2
	comp=Z,3µm,1.0s						
TRIS				LR	LR		
	comp=Z,613µm,22.0s						
GO10	Punta Arenas	25.62	267	eP	P	14 09 11.1	+1.6
	comp=Z,3µm,1.2s						
GO10				LR	LR		
	comp=Z,266µm,18.0s						
SYO	Syowa Base	27.18	134	⇓iP	P	14 09 21.0	-2.3
GO09	Cerro Castillo	27.41	269	eP	P	14 09 23.1	-2.4
	comp=Z,895nm,1.4s						
GO09				LR	LR		
	comp=Z,263µm,19.0s						
QSPA	South Pole Qui	29.18	180	P	P	14 09 43.8	+2.3
	comp=Z,77nm,0.8s,baz=202,slow=2.2,SNR=364						
QSPA				LR	LR	14 21 09.9	
	comp=Z,221µm,19.2s,baz=197,slow=36						
QSPA	South Pole Qui	29.18	180	eP	P	14 09 43.3	+1.8
	comp=Z,2µm,0.8s						
QSPA				LR	LR		
	comp=Z,228µm,19.0s						
TRQA	Tornquist	32.43	298	PFAKE		14 10 20.0	+10
TRQA				LR	LR		
	comp=Z,226µm,21.0s						
TRQA	Tornquist	32.43	298	eP	P	14 10 09.3	-0.9
OGAUY	Aigu	32.76	311	eP	P	14 10 11.3	-1.7
PLTB	Pedras Altas	34.69	315	eP	P	14 10 28.0	-1.8
MAW	Mawson	35.59	139	P	P	14 10 38.0	+0.8
	comp=Z,222nm,0.9s,baz=235,slow=8.7,SNR=186						
MAW	Mawson	35.59	139	eP	P	14 10 37.7	+0.5
	comp=Z,122nm,0.9s						
MAW				LR	LR		
	comp=Z,75µm,19.0s						
MAW	Mawson	35.59	139	eP	P	14 10 37.7	+0.5
MAW				pmax	pmax		
	comp=Z,122nm,0.9s						
MAW				MLR	MLR		
	comp=Z,75µm,19.0s						
CPSB	Cacapava Do Su	35.87	316	eP	P	14 10 37.5	-2.5
CNLB	Canela	36.03	320	eP	P	14 10 39.3	-2.2
EDS3	Malargue	37.61	292	eP	P	14 10 52.8	-2.1
MRA	San Martin	38.82	299	eP	P	14 11 03.1	-2.1
TCA	Tanti	39.29	301	eP	P	14 11 06.4	-2.7
GO05	Huala	39.39	290	eP	P	14 11 08.1	-1.7
	comp=Z,7µm,2.0s						
GO05				LR	LR		
	comp=Z,122µm,22.0s						
GO05	Huala	39.39	290	eP	P	14 11 07.8	-2.0
ACAN	Cantantal	39.58	297	eP	P	14 11 09.0	-2.4
PEL	Peldehue	40.38	293	eP	P	14 11 16.6	-1.5
	comp=Z,7µm,1.7s						
PEL				LR	LR		
	comp=Z,128µm,20.0s						
PEL	Peldehue	40.38	293	eP	P	14 11 16.6	-1.5
PEL				pmax	pmax		
	comp=Z,7µm,1.7s						
PEL				MLR	MLR		
	comp=Z,128µm,20.0s						
SPB	Sao Paulo	40.45	328	eP	P	14 11 15.8	-2.9
	comp=Z,1µm,1.4s						
SPB				LR	LR		
	comp=Z,175µm,20.0s						
SPB	Sao Paulo	40.45	328	eP	P	14 11 15.9	-2.7
RTCV	Cerro Valdivia	40.52	296	eP	P	14 11 17.1	-2.1
CFA	Coronel Fontan	40.61	297	eP	P	14 11 17.4	-2.5
PTGB	Pitanga	40.70	321	eP	P	14 11 18.4	-2.4
VAS01	Vassouras-RJ	40.77	334	eP	P	14 11 18.3	-3.0
RTLS	Leoncito	40.91	295	eP	P	14 11 21.3	-1.4
RTLL	Cerro Villicun	40.95	297	eP	P	14 11 20.7	-2.1
CPUP	Villa Florida	40.95	313	P	P	14 11 20.6	-2.1
	comp=Z,83nm,0.8s,baz=153,slow=7.2,SNR=25						
CPUP				LR	LR	14 26 57.8	
	comp=Z,286µm,21.9s,baz=159,slow=34						
CPUP	Villa Florida	40.95	313	eP	P	14 11 20.5	-2.2
FRTB	Fartura	41.27	325	eP	P	14 11 22.4	-3.0
SUR	Sutherland	41.29	67	eP	P	14 11 24.5	-1.2
	comp=Z,421nm,0.9s						
SUR				LR	LR		
	comp=Z,328µm,22.0s						
RCLB	Rio Claro- Sao	41.60	328	eP	P	14 11 25.5	-2.7
VNDA	Vanda	41.60	182	P	P	14 11 30.4	+2.8
	comp=Z,42nm,0.7s,baz=179,slow=7.2,SNR=42						
VNDA				LR	LR	14 27 56.5	
	comp=Z,101µm,21.6s,baz=180,slow=35						
ACCO	Cerro Coronel	41.84	296	eP	P	14 11 28.9	-1.6
BSCB	Bom Sucesso	42.30	332	eP	P	14 11 30.7	-3.2
CYA	Choya	42.32	302	eP	P	14 11 31.2	-2.8
AROD	Rodeo	42.38	296	eP	P	14 11 32.5	-2.4
AGUA	GUANDACOL	42.55	298	eP	P	14 11 34.2	-1.7
TRCB	Terra Rica	42.68	321	eP	P	14 11 34.0	-2.9
GO04	Tololo Observa	42.96	295	eP	P	14 11 37.4	-2.0
	comp=Z,3µm,1.8s						
GO04				LR	LR		
	comp=Z,255µm,20.0s						
RIB01	Linhares ES	43.06	339	eP	P	14 11 36.4	-3.5
VCA	Vinchina	43.08	299	eP	P	14 11 38.1	-2.2
BB19B	Bebedouro	43.15	327	eP	P	14 11 37.5	-3.3
AHML	Horco Molle	43.59	303	eP	P	14 11 41.4	-2.9
BSFB	Barra de Sao F	43.61	338	eP	P	14 11 41.9	-2.5
SJMB	Sao Joao De Ma	43.79	338	eP	P	14 11 42.4	-3.5
LCO	Las Campanas	43.92	296	eP	P	14 11 45.5	-1.7
	comp=Z,1µm,1.5s						
LCO				LR	LR		
	comp=Z,167µm,21.0s						
LCO	Las Campanas	43.92	296	eP	P	14 11 44.4	-2.7
LCO	Las Campanas	43.92	296	eP	P	14 11 45.5	-1.7
LCO				pmax	pmax		
	comp=Z,1µm,1.5s						
LCO				MLR	MLR		
	comp=Z,167µm,21.0s						
LCO	Las Campanas	43.92	296	eP	P	14 11 46.3	-0.8
FSA	Cafayete	44.45	303	eP	P	14 11 48.7	-2.7
GO03	Copiap	44.94	297	eP	P	14 11 52.9	-2.2
	comp=Z,3µm,2.0s						
GO03				LR	LR		
	comp=Z,166µm,19.0s						
GO03	Copiap	44.94	297	eP	P	14 11 52.9	-2.2
ITRB	Iturama	44.94	325	eP	P	14 11 52.6	-2.6
PMNB	Patos De Minas	45.06	331	eP	P	14 11 53.2	-2.9
CRZF	Crozet Islands	45.08	108	eP	P	14 11 53.8	-2.1
	comp=Z,524nm,1.1s						
CRZF				LR	LR		
	comp=Z,120µm,20.0s						
SLA	San Lorenzo	45.50	304	eP	P	14 11 57.6	-2.1
AZAP	Zapla	45.77	305	eP	P	14 11 59.5	-2.5
AQDB	Aquidauana	45.82	318	eP	P	14 11 58.5	-3.5
BOSA	Boshof	46.49	69	i P	P	14 12 05.8	-1.7
BOSA	Boshof	46.49	69	P	P	14 12 05.3	-2.1
	comp=Z,250nm,1.0s,baz=203,slow=7.6,SNR=108						
BOSA				LR	LR	14 27 02.4	
	comp=Z,257µm,21.9s,baz=208,slow=30						
BOSA	Boshof	46.49	69	eP	P	14 12 05.5	-2.0
	comp=Z,902nm,1.3s						
BOSA	Boshof	46.49	69	i P	P	14 12 05.8	-1.7
GO02	Mina Guanaco	46.79	300	eP	P	14 12 08.2	-1.8
	comp=Z,1µm,1.1s						
GO02				LR	LR		
	comp=Z,140µm,18.0s						
HJA	Humahuaca	46.82	306	eP	P	14 12 08.1	-2.3
SHEL	Horse Pasture	47.16	26	i P	P	14 12 13.3	+0.7
PB14	IPOC Station P	47.61	299	eP	P	14 12 14.2	-2.3
YJA	Yavi	47.79	306	eP	P	14 12 16.6	-1.4
BDFB	Brasilia	48.22	330	P	P	14 12 18.9	-2.0
	comp=Z,59nm,0.6s,baz=159,slow=5.2,SNR=24						
BDFB				LR	LR	14 30 28.3	
	comp=Z,204µm,21.4s,baz=157,slow=34						
BDFB	Brasilia	48.22	330	eP	P	14 12 18.2	-2.8
	comp=Z,307nm,0.9s						
BDFB				eP	P	14 12 18.9	-2.0
BDFB				LR	LR		
	comp=Z,220µm,21.0s						
BDFB	Brasilia	48.22	330	eP	P	14 12 18.2	-2.8
BDFB				pmax	pmax		
	comp=Z,307nm,0.9s						
BDFB				MLR	MLR		
	comp=Z,220µm,21.0s						
WIN	Windhoek	48.25	57	eP	P	14 12 19.6	-1.7
	comp=Z,1µm,1.5s						
WIN				LR	LR		
	comp=Z,385µm,20.0s						
PB15	IPOC Station P	48.47	301	eP	P	14 12 20.6	-2.4
PB10	IPOC Station P	48.66	300	eP	P	14 12 22.5	-1.6
	comp=Z,2µm,1.4s						
PB10				LR	LR		
	comp=Z,210µm,19.0s						
PB10	IPOC Station P	48.66	300	eP	P	14 12 22.4	-1.7
LVC	Limon Verde	48.77	302	P	P	14 12 24.0	-1.4
	comp=Z,73nm,0.8s,baz=160,slow=2.2,SNR=17						
LVC	Limon Verde	48.77	302	eP	P	14 12 24.1	-1.3
	comp=Z,650nm,1.0s						
LVC				LR	LR		
	comp=Z,166µm,19.0s						
LVC	Limon Verde	48.77	302	eP	P	14 12 24.0	-1.4
LVC	Limon Verde	48.77	302	eP	P	14 12 23.9	-1.6
CASY	Casey	48.85	158	eP	P	14 12 26.3	+1.2
	comp=Z,461nm,0.9s						
CASY				LR	LR		
	comp=Z,691µm,22.0s						
PB06	IPOC Station P	48.96	301	eP	P	14 12 24.4	-2.3
PB05	IPOC Station P	49.09	300	eP	P	14 12 25.6	-2.0
PB04	IPOC Station P	49.53	301	eP	P	14 12 29.3	-1.7
	comp=Z,2µm,1.0s						
PB04				LR	LR		
	comp=Z,212µm,22.0s						
PB04	IPOC Station P	49.53	301	eP	P	14 12 28.6	-2.5
PB03	IPOC Station P	49.62	301	eP	P	14 12 29.4	-2.3
PB09	IPOC Station P	49.63	302	eP	P	14 12 30.4	-1.4
LBTB	Lobatse	49.74	67	eP	P	14 12 30.5	-2.1
	comp=Z,1µm,1.2s						
LBTB	Lobatse	49.74	67	eP	P	14 12 30.5	-2.1
LBTB				pmax	pmax		
	comp=Z,1µm,1.2s						
PB01	IPOC Station P	50.41	302	PFAKE		14 12 50.0	+12
PB01				LR	LR		
	comp=Z,240µm,22.0s						
TSUM	Tsumeb	51.47	55	i P	P	14 12 45.7	0.0
TSUM	Tsumeb	51.47	55	eP	P	14 12 43.6	-2.1

	comp=Z,2µm,1.8s						
TSUM				LR	LR		
	comp=Z,345µm,20.0s						
TSUM	Tsumeb	51.47	55	*i* P	P	14 12 45.7	0.0
GO01	Chusmiza	51.52	303	*e*P	P	14 12 44.7	-1.8
	comp=Z,1µm,1.4s						
GO01				LR	LR		
	comp=Z,107µm,22.0s						
PB11	IPOC Station P	51.62	303	*e*P	P	14 12 45.5	-1.3
	comp=Z,1µm,1.0s						
PB11				LR	LR		
	comp=Z,153µm,21.0s						
PB11	IPOC Station P	51.62	303	*e*P	P	14 12 45.0	-1.8
PEXB	Peixe	51.70	331	*e*P	P	14 12 44.9	-2.4
SIV	San Ignacio	51.79	314	P	P	14 12 45.7	-2.3
	comp=Z,26nm,0.4s,baz=172,slow=8.5,SNR=33						
PSGCX	Pisagua	51.96	302	*e*P	P	14 12 47.6	-1.7
MNMC	Minye Minye	52.16	303	*e*P	P	14 12 49.7	-1.3
	comp=Z,1µm,0.8s						
MNMC				LR	LR		
	comp=Z,100µm,19.0s						
MNMCX	Minye Minye	52.16	303	*e*P	P	14 12 49.7	-1.3
H10S2	ASCENSION HYDR	52.58	13	P	P	14 12 55.2	+1.8
	baz=216,slow=7.2,SNR=5.9						
H10S2				T	T	15 09 58.8	
	baz=186,slow=75,SNR=426						
H10S3	ASCENSION HYDR	52.59	13	P	P	14 12 59.2	+5.6
	baz=216,slow=7.2,SNR=3.3						
H10S3				T	T	15 09 57.7	
	baz=186,slow=75,SNR=424						
H10S1	ASCENSION HYDR	52.60	13	P	P	14 12 57.3	+3.7
	baz=216,slow=7.2,SNR=8.4						
H10S1				T	T	15 09 55.4	
	baz=186,slow=75,SNR=161						
PB16	IPOC Station P	52.84	304	*e*P	P	14 12 54.3	-2.1
PB12	IPOC Station P	52.93	303	*e*P	P	14 12 54.0	-2.5
ASCN	Ascension	53.63	13	*e*P	P	14 12 59.4	-2.1
	comp=Z,1µm,1.4s						
ASCN				LR	LR		
	comp=Z,70µm,20.0s						
H10N1	ASCENSION HYDR	53.70	13	P	P	14 13 04.5	+2.8
	baz=189,slow=8.8,SNR=16						
H10N1				T	T	15 11 28.5	
H10N3	ASCENSION HYDR	53.70	13	P	P	14 13 02.4	+0.7
	baz=189,slow=8.8,SNR=24						
H10N3				T	T	15 11 23.3	
	baz=268,slow=74						
H10N2	ASCENSION HYDR	53.72	13	P	P	14 13 05.8	+4.1
	baz=189,slow=8.8,SNR=19						
H10N2				T	T	15 11 23.8	
	baz=187,slow=74						
MSNA	Messina	54.06	70	*i* P	P	14 13 02.6	-2.1
MSNA	Messina	54.06	70	*i* P	P	14 13 02.6	-2.1
LPAZ	La Paz	54.14	306	P	P	14 13 04.0	-1.9
	comp=Z,64nm,0.8s,baz=131,slow=5.3,SNR=58						
LPAZ				LR	LR	14 38 13.7	
	comp=Z,66µm,18.6s,baz=160,slow=38						
LPAZ				PKPPKP		14 43 19.4	
	comp=Z,12nm,1.2s,baz=326,slow=6.1,SNR=6.6						
LPAZ	La Paz	54.14	306	*e*P	P	14 13 04.7	-1.3
	comp=Z,3µm,1.9s						
LPAZ	La Paz	54.14	306	*e*P	P	14 13 04.5	-1.5
LPAZ	La Paz	54.14	306	*e*P	P	14 13 03.7	-2.3
NBLI	Livramento-PB	54.29	346	*e*P	P	14 13 03.3	-3.1
CLDB	Colider	54.89	322	*e*P	P	14 13 08.0	-2.7
MATP	Matopo	55.04	67	*i* P	P	14 13 10.1	-1.8
MATP	Matopo	55.04	67	*i* P	P	14 13 10.1	-1.8
BLWY	Bulawayo	55.34	67	*i* P	P	14 13 11.7	-2.4
BLWY	Bulawayo	55.34	67	*i* P	P	14 13 11.7	-2.4
RCBR	Riachuelo	55.68	347	*e*P	P	14 13 14.6	-1.9
	comp=Z,596nm,1.1s						
RCBR				LR	LR		
	comp=Z,108µm,21.0s						
RCBR	Riachuelo	55.68	347	*e*P	P	14 13 14.6	-1.9
RCBR				pmax	pmax		
	comp=Z,596nm,1.1s						
RCBR				MLR	MLR		
	comp=Z,108µm,21.0s						
RCBR	Riachuelo	55.68	347	*e*P	P	14 13 14.3	-2.1
ITZ	Itezhi-Tezhi	58.07	62	⇓*i*Pn	P	14 13 31.4	-2.1
ITZ				*i*		14 13 32.1	
	baz=207,slow=9.3						
ITZ				Sn	S	14 21 35.1	+1.8
ITZ				AMSG		14 22 00.7	
	comp=N,132µm,22.6s						
NBMO	Morrinhos-CE	58.69	343	*e*P	P	14 13 35.1	-2.5
LSZ	Lusaka	59.43	64	*i* P	P	14 13 40.0	-3.0
LSZ	Lusaka	59.43	64	*e*P	P	14 13 40.9	-2.0
	comp=N,601nm,0.9s						
LSZ				LR	LR		
	comp=Z,148µm,20.0s						
LSZ	Lusaka	59.43	64	*e*P	P	14 13 40.9	-2.0
LSZ				pmax	pmax		
	comp=Z,601nm,0.9s						
LSZ				MLR	MLR		
	comp=Z,148µm,20.0s						
LSZ	Lusaka	59.43	64	*i* P	P	14 13 40.0	-3.0
NNA	Nana	61.58	299	*e*P	P	14 13 56.2	-1.4
	comp=Z,1µm,1.4s						
NNA				LR	LR		
	comp=Z,139µm,21.0s						
NNA	Nana	61.58	299	*e*P	P	14 13 56.2	-1.4
NNA				pmax	pmax		
	comp=Z,1µm,1.4s						
NNA				MLR	MLR		
	comp=Z,139µm,21.0s						
RPN	Rapa Nui	63.85	261	PFAKE		14 14 20.0	+7.5
RPN				LR	LR		
	comp=Z,47µm,20.0s						
ABPO	Ambohimpanom	65.06	84	*e*P	P	14 14 21.0	+0.3
	comp=Z,876nm,1.9s						
ABPO				LR	LR		
	comp=Z,82µm,20.0s						
ABPO	Ambohimpanom	65.06	84	*e*P	P	14 14 21.0	+0.3
ABPO				pmax	pmax		
	comp=Z,876nm,1.9s						
ABPO				MLR	MLR		
	comp=Z,82µm,20.0s						
PTGA	Pitinga	65.74	321	P	P	14 14 22.4	-2.5
	comp=Z,65nm,0.8s,baz=168,slow=7.2,SNR=16						
PTGA	Pitinga	65.74	321	*e*P	P	14 14 22.4	-2.5
PTGA				LR	LR		
	comp=Z,137µm,19.0s						
PTGA	Pitinga	65.74	321	*e*P	P	14 14 22.5	-2.5
ATAH	Atahualpa	66.59	300	P	P	14 14 31.7	+0.8
	comp=Z,39nm,0.9s,baz=158,slow=5.2,SNR=9.4						
RER	Riviere de l'E	67.37	93	*e*P	P	14 14 36.2	+0.8
	comp=Z,426nm,1.1s						
RER				LR	LR		
	comp=Z,69µm,20.0s						
LIC	Lamto	68.91	22	*e*P	P	14 14 44.0	-0.9
	comp=Z,1µm,1.6s						
MRIV	Mauritius Mete	68.95	94	*e*P	P	14 14 44.9	-0.4
	comp=Z,265nm,1.2s						
KIC	Kosan Boka	69.10	22	*e*P	P	14 14 45.1	-1.0
	comp=Z,2µm,1.5s						
TIC	Toumodi	69.32	22	*e*P	P	14 14 46.5	-1.0
MDP	Montagnes des	69.33	331	P	P	14 14 45.5	-2.0
	comp=Z,38nm,0.9s,baz=170,slow=6.6,SNR=18						
DBIC	Dimbokro	69.38	22	P	P	14 14 46.1	-1.7
	comp=Z,50nm,0.7s,baz=172,slow=7.7,SNR=12						
DBIC				LR	LR	14 37 43.2	
	comp=Z,240µm,21.6s,baz=176,slow=30						
DBIC				PKPPKP	P'P'df	14 42 57.1	+5.7
	comp=Z,9.7nm,1.1s,baz=26,slow=3.4,SNR=2.2						
DBIC	Dimbokro	69.38	22	*e*P	P	14 14 45.3	-2.5
	comp=Z,1µm,1.8s						
DBIC	Dimbokro	69.38	22	*e*P	P	14 14 45.3	-2.5
DBIC				pmax	pmax		
	comp=Z,1µm,1.8s						
PTLC	Puerto Leguiza	71.77	307	*e*P	P	14 14 58.2	-4.2
WHZ	Wether Hill Ro	72.88	190	*e*P	P	14 15 09.6	+0.8
	comp=Z,270nm,1.1s						
GUVC	San Jose del G	73.11	310	*e*P	P	14 15 08.7	-1.8
DCZ	Deep Cove	73.36	189	*e*P	P	14 15 11.6	0.0
	comp=Z,410nm,1.3s						
MLZ	Mavora Lakes	73.38	190	*e*P	P	14 15 12.0	+0.2
	comp=Z,279nm,1.0s						
ODZ	Otahua Downs	73.47	192	*e*P	P	14 15 13.7	+1.4
	comp=Z,311nm,1.5s						
MBAR	Mbarara	73.66	60	*e*P	P	14 15 14.5	+0.6
	comp=Z,1µm,1.5s						
MBAR				LR	LR		
	comp=Z,223µm,22.0s						
MBAR	Mbarara	73.66	60	*d i*P	P	14 15 14.7	+0.8
WKZ	Wanaka	73.84	191	*e*P	P	14 15 15.3	+0.8
	comp=Z,518nm,1.3s						
CRUC	La Cruz	73.89	305	*e*P	P	14 15 17.9	+2.4
LBZ	Lake Benmore	74.17	191	*e*P	P	14 15 16.9	+0.5
	comp=Z,378nm,1.2s						
SOTA	Rioblanco	74.27	306	*e*P	P	14 15 17.8	-0.1
BETC	Betania	74.31	307	*e*P	P	14 15 17.3	-0.3
PCON	Cinco Dias	74.36	306	*e*P	P	14 15 18.7	+0.2
BBAC	Balboa, Cauca	74.42	305	*e*P	P	14 15 17.4	-1.0
MQZ	McQueen's Vall	74.59	193	*e*P	P	14 15 20.1	+1.3
	comp=Z,253nm,1.2s						
MQZ				LR	LR		
	comp=Z,43µm,18.0s						
MARP	Paez Belalcaza	74.66	307	*e*P	P	14 15 19.0	-0.9
POPC	Popayan, Colom	74.67	306	*e*P	P	14 15 19.0	-0.8
RPZ	Rata Peaks	74.75	192	LR	LR	14 46 29.3	
	comp=Z,43µm,19.1s,baz=184,slow=34						
RPZ	Rata Peaks	74.75	192	*e*P	P	14 15 21.1	+1.4
	comp=Z,298nm,1.1s						
RPZ				LR	LR		
	comp=Z,79µm,18.0s						
VILC	Villavicencio,	74.96	309	*e*P	P	14 15 26.8	+5.4
OXZ	Oxford	75.03	193	*e*P	P	14 15 23.2	+1.9
	comp=Z,296nm,1.3s						
OXZ				LR	LR		
	comp=Z,58µm,19.0s						
PRAC	Prado	75.05	308	*e*P	P	14 15 20.3	-1.6
FOZ	Fox Glacier	75.05	191	*e*P	P	14 15 22.2	+0.8
	comp=Z,587nm,1.8s						
CHIC	Chingaza	75.45	310	*e*P	P	14 15 23.1	-1.4
LTZ	Lake Taylor	75.54	193	*e*P	P	14 15 25.8	+1.4
	comp=Z,397nm,1.1s						
LTZ				LR	LR		
	comp=Z,56µm,18.0s						
YOPC	Yopal, Colombi	75.63	311	*e*P	P	14 15 30.2	+5.0
GRGC	Isla de Gorgon	75.68	305	*e*P	P	14 15 28.5	+3.1
KHZ	Kahutara	75.76	194	*e*P	P	14 15 26.5	+0.9
	comp=Z,368nm,1.4s						
KHZ				LR	LR		
	comp=Z,75µm,18.0s						
SACV	Santiago Islan	75.78	2	*e*P	P	14 15 24.1	-1.7
	comp=Z,1µm,1.9s						
SACV				LR	LR		
	comp=Z,57µm,19.0s						
YOTC	Yotoco, Valle	75.86	307	*e*P	P	14 15 22.2	-4.4
ROSC	El Rosal	75.86	309	P	P	14 15 26.8	-0.2
	comp=Z,29nm,0.8s,baz=143,slow=8.2,SNR=9.5						
ROSC				LR	LR	14 49 12.1	
	comp=Z,102µm,21.4s,baz=156,slow=36						
ROSC	El Rosal	75.86	309	*e*P	P	14 15 25.2	-1.7
	comp=Z,146nm,0.8s						
ROSC				LR	LR		
	comp=Z,102µm,21.0s						
ROSC	El Rosal	75.86	309	*e*P	P	14 15 25.5	-1.4
KMBO	Kilima Mbogo	76.01	66	P	P	14 15 28.6	+1.0
	comp=Z,26nm,1.0s,baz=198,slow=6.7,SNR=26						
KMBO				PKPPKP		14 42 46.1	
	comp=Z,1.6nm,0.8s,baz=86,slow=2.7,SNR=3.1						
KMBO	Kilima Mbogo	76.01	66	*e*P	P	14 15 28.8	+1.2
	comp=Z,1µm,2.0s						
KMBO				LR	LR		
	comp=Z,184µm,18.0s						
KMBO	Kilima Mbogo	76.01	66	*i* P	P	14 15 29.6	+2.0
	SNR=25						
KMBO	Kilima Mbogo	76.01	66	*e*P	P	14 15 29.6	+2.0
KMBO				*e*S	S	14 25 26.4	+17
TAU	Tasmania Unive	76.21	174	*e*P	P	14 15 27.9	-0.3
	comp=Z,496nm,1.3s						
TAU				LR	LR		
	comp=Z,167µm,18.0s						
TAU	Tasmania Unive	76.21	174	*e*P	P	14 15 27.9	-0.3
TAU				pmax	pmax		
	comp=Z,496nm,1.3s						
TAU				MLR	MLR		
	comp=Z,167µm,18.0s						
MALC	Bahia Malaga	76.27	306	*e*P	P	14 15 33.4	+4.7
RREF	El Recreo	76.31	308	*e*P	P	14 15 29.1	-0.6
RUSC	La Rusia	76.37	311	*e*P	P	14 15 27.2	-2.7
THZ	Tophouse	76.48	194	*e*P	P	14 15 31.5	+1.8
	comp=Z,353nm,1.1s						
PLMC	San Jos del P	76.67	307	*e*P	P	14 15 29.6	-1.5
SNZO	South Karori	76.70	195	*e*P	P	14 15 33.2	+2.3
	comp=Z,570nm,1.0s						
SNZO				LR	LR		
	comp=Z,88µm,19.0s						
NORC	Norcasia	76.74	309	*e*P	P	14 15 28.0	-3.5
TRN	Trinidad (W)	76.96	323	*e*P	P	14 15 32.8	+0.2
TRN	Trinidad (W)	76.96	323	*e*P	P	14 15 32.8	+0.2
TOC4	Torodi Ar. Sit	76.97	27	PFAKE		14 15 40.0	+7.4
TOC4				LR	LR		
	comp=Z,158µm,22.0s						
TOC5	Torodi Ar. Sit	76.97	27	PFAKE		14 15 40.0	+7.4
TOC5				LR	LR		
	comp=Z,178µm,22.0s						
TOB4	Torodi Ar. Sit	76.98	27	PFAKE		14 15 40.0	+7.3
TOB4				LR	LR		
	comp=Z,150µm,21.0s						
TOB3	Torodi Ar. Sit	76.98	27	PFAKE		14 15 40.0	+7.3
TOB3				LR	LR		
	comp=Z,150µm,21.0s						
TOA3	Torodi Ar. Sit	76.99	27	PFAKE		14 15 40.0	+7.3
TOA3				LR	LR		
	comp=Z,149µm,21.0s						
TOC3	Torodi Ar. Sit	76.99	27	PFAKE		14 15 40.0	+7.3
TOC3				LR	LR		
	comp=Z,153µm,21.0s						
TOA0	Torodi Ar. Sit	76.99	27	*e*P	P	14 15 31.4	-1.4
	comp=Z,1µm,1.4s						
TOA0				LR	LR		
	comp=Z,155µm,22.0s						
TORD	Torodi Ar. Bea	76.99	27	P	P	14 15 32.1	-0.7
	comp=Z,143nm,1.1s,baz=188,slow=2.8,SNR=102						
TORD				LR	LR	14 42 15.4	
	comp=Z,150µm,21.8s,baz=295,slow=30						
TOA2	Torodi Ar. Sit	76.99	27	PFAKE		14 15 40.0	+7.2
TOA2				LR	LR		
	comp=Z,151µm,21.0s						
TOB5	Torodi Ar. Sit	77.00	27	PFAKE		14 15 40.0	+7.2
TOB5				LR	LR		
	comp=Z,161µm,22.0s						
TOA1	Torodi Ar. Sit	77.00	27	*e*P	P	14 15 32.1	-0.7
TOA1				LR	LR		
	comp=Z,154µm,22.0s						
TOB2	Torodi Ar. Sit	77.00	27	PFAKE		14 15 40.0	+7.2
TOB2				LR	LR		
	comp=Z,157µm,22.0s						
TOB1	Torodi Ar. Sit	77.00	27	PFAKE		14 15 40.0	+7.2
TOB1				LR	LR		
	comp=Z,700nm,21.0s						
TOC7	Torodi Ar. Sit	77.00	27	PFAKE		14 15 40.0	+7.2
TOC7				LR	LR		
	comp=Z,155µm,22.0s						
TOC2	Torodi Ar. Sit	77.01	27	PFAKE		14 15 40.0	+7.2
TOC2				LR	LR		
	comp=Z,158µm,22.0s						
TOC1	Torodi Ar. Sit	77.02	27	PFAKE		14 15 40.0	+7.1
TOC1				LR	LR		
	comp=Z,180µm,22.0s						
BARC	Barichara	77.05	311	*e*P	P	14 15 32.4	-1.0
BFZ	Birch Farm	77.11	197	*e*P	P	14 15 34.2	+0.9
	comp=Z,507nm,1.3s						
BFZ				LR	LR		
	comp=Z,78µm,20.0s						
TOSP	Speyside	77.33	324	*e*P	P	14 15 35.0	+0.4
PTBC	PUERTO BERRIO,	77.48	310	*e*P	P	14 15 31.5	-4.1
PCRV	Puerto La Cruz	77.48	320	P	P	14 15 35.2	-0.4
	comp=Z,134nm,0.9s,baz=154,slow=2.2,SNR=15						
PAYG	Puerto Ayora	77.56	292	PFAKE		14 15 50.0	+14
PAYG				LR	LR		
	comp=Z,93µm,19.0s						
PAMC	Pamplona, Colo	77.57	312	*e*P	P	14 15 34.8	-1.8
PAMC				*e*P	sP	14 15 43.5	-0.3
BRRC	Barranca, Sant	77.72	310	*e*P	P	14 15 33.9	-3.0
SDV	Santo Domingo	78.26	314	*e*P	P	14 15 38.2	-1.9
	comp=Z,535nm,1.1s						
SDV				LR	LR		
	comp=Z,246µm,22.0s						
SDV	Santo Domingo	78.26	314	*e*P	P	14 15 38.8	-1.4
SDV	Santo Domingo	78.26	314	*e*P	P	14 15 38.4	-1.7
SOLC	Bahia Solano	78.32	307	*e*P	P	14 15 45.9	+5.7
GRGR	Grenville	78.44	324	*e*P	P	14 15 41.2	+0.4
	comp=Z,783nm,0.9s						
GRGR				LR	LR		
	comp=Z,93µm,20.0s						
GRGR	Grenville	78.44	324	*e*P	P	14 15 41.2	+0.4
BKZ	Black Stump Fm	78.57	197	*e*P	P	14 15 42.6	+1.2
	comp=Z,462nm,1.3s						
BKZ				LR	LR		
	comp=Z,62µm,22.0s						
DBBC	Dabeiba	78.58	308	*e*P	P	14 15 40.7	-1.1
OCAC	Ocana	78.62	311	*e*P	P	14 15 38.1	-4.0
BBSP	Saint Philip	78.75	326	*e*P	P	14 15 58.9	+16
H01W2	Cape Leeuwin H	78.81	147	P	P	14 15 57.3	+15
	baz=188,slow=9.3,SNR=8.1						
H01W1	Cape Leeuwin H	78.81	147	P	P	14 15 48.6	+6.1
	baz=188,slow=9.3,SNR=8.0						
BBGH	Gun Hill	78.82	326	PFAKE		14 15 50.0	+7.1
BBGH				LR	LR		
	comp=Z,156µm,21.0s						
BBGH	Gun Hill	78.82	326	*e*P	P	14 15 41.7	-1.2
BBGH	Gun Hill	78.82	326	*e*P	P	14 16 02.8	+20
H01W3	Cape Leeuwin H	78.82	147	P	P	14 15 48.6	+6.0
	baz=188,slow=9.3,SNR=6.3						
BCHC	Barbados, Cave	78.83	326	*e*P	P	14 15 57.2	+14
RKT	Rikitea	79.06	242	*e*P	P	14 15 53.4	+9.1
	comp=Z,186nm,1.0s						
RKT	Rikitea	79.06	242	*e*S	S	14 25 58.9	+17
	comp=Z,69µm,38.0s						
RKT	Rikitea	79.06	242	*e*LQ	LQ	14 37 31.7	
	comp=Z,102µm,34.0s						
RKT				*e*LR	LR	14 40 52.3	
	comp=Z,160µm,25.2s						
URZ	Urewera	79.37	198	P	P	14 15 48.5	+2.7
	comp=Z,70nm,1.0s,baz=258,slow=7.3,SNR=10.0						
URZ				LR	LR	14 46 02.7	
	comp=Z,47µm,21.6s,baz=184,slow=32						
URZ	Urewera	79.37	198	*e*P	P	14 15 46.4	+0.6
	comp=Z,1µm,1.7s						
URZ				LR	LR		
	comp=Z,57µm,18.0s						
SVCV	St. Vincent, C	79.38	324	*e*P	P	14 15 50.8	+4.9
SVB	Belmont	79.41	324	PFAKE		14 16 00.0	+14
SVB				LR	LR		
	comp=Z,50µm,21.0s						
SVB	Belmont	79.41	324	*e*P	P	14 15 46.7	+0.6
SMLC	San Martn de	79.42	311	*e*P	P	14 15 43.6	-2.6
HIZ	Hauiti	79.44	196	*e*P	P	14 15 46.0	-0.2
	comp=Z,520nm,1.3s						
HIZ				LR	LR		
	comp=Z,60µm,19.0s						
MCLT	Moule a Chique	79.74	325	*e*P	P	14 15 51.7	+3.8
SLB	Belfond	79.88	325	*e*P	P	14 15 58.0	+9.3
SLBI	Saint Lucia, B	80.05	325	*e*P	P	14 15 48.2	-1.4
CODC	Agustn Codazz	80.23	312	*e*P	P	14 15 49.1	-1.6
MPOM	Morne Pois Mar	80.42	325	*e*P	P	14 15 51.5	-0.1
ARGC	Ariguani, Magd	80.46	311	*e*P	P	14 15 51.1	-0.8
BIM	Bigot	80.54	325	*e*P	P	14 15 51.7	-0.6
TRMF	Trois Ilets	80.56	325	*e*P	P	14 15 54.9	+2.6
ILAM	Ilet Lapin Mar	80.73	325	*e*P	P	14 15 52.8	-0.4
FDF	Fort de France	80.77	325	*e*P	P	14 15 52.9	-0.6
	comp=Z,1µm,1.2s						
FDF				LR	LR		
	comp=Z,55µm,22.0s						
FDF	Fort de France	80.77	325	*e*P	P	14 15 53.9	+0.4
FDF	Fort de France	80.77	325	*e*P	P	14 15 55.3	+1.8
FDF	Fort de France	80.77	325	*e*P	P	14 15 52.9	-0.6
FDF				pmax	pmax		
	comp=Z,1µm,1.2s						
FDF				MLR	MLR		
	comp=Z,55µm,22.0s						
GBMF	Grand Be	80.84	325	*e*P	P	14 15 57.9	+4.0
SJCC	San Jacinto, C	80.84	310	*e*P	P	14 15 52.9	-1.1
BAMF	Morne Balai	80.85	325	*e*P	P	14 15 57.0	+3.0
CXM	Morne La Croix	80.85	325	*e*P	P	14 15 56.2	+2.2
AZU	Azuero	80.88	305	*e*P	P	14 15 54.8	+0.7
URIC	Uribia, Colomb	81.35	314	*e*P	P	14 15 55.9	-0.7
DLPL	La Plaine	81.37	325	*e*P	P	14 16 06.5	+10
MDN	Morne-Daniel	81.40	325	*e*P	P	14 15 59.6	+2.8
MDN	Morne-Daniel	81.40	325	*e*P	P	14 15 59.6	+2.8
MSEY	Mahe Island	81.43	84	*e*P	P	14 15 56.8	-0.4
	comp=Z,362nm,1.4s						
MSEY				LR	LR		
	comp=Z,51µm,21.0s						
MSEY	Mahe Island	81.43	84	*i* P	P	14 15 57.2	0.0
	SNR=10						
MSEY	Mahe Island	81.43	84	*e*P	P	14 15 56.8	-0.4
MSEY				pmax	pmax		
	comp=Z,362nm,1.4s						
MSEY				MLR	MLR		
	comp=Z,51µm,21.0s						
TOO	Toolangi	81.43	173	*e*P	P	14 15 57.4	+0.4
	comp=Z,138nm,1.0s						
TOO				LR	LR		
	comp=Z,94µm,18.0s						
TOO	Toolangi	81.43	173	*e*P	P	14 15 57.4	+0.4
TOO				pmax	pmax		
	comp=Z,139nm,1.0s						
TOO				MLR	MLR		
	comp=Z,94µm,18.0s						
NWAO	Narrogin (SRO)	81.48	149	LR	LR	14 49 13.3	
	comp=Z,70µm,19.9s,baz=194,slow=34						
NWAO	Narrogin (SRO)	81.48	149	*e*P	P	14 15 57.0	-0.2
	comp=Z,625nm,1.9s						
NWAO				LR	LR		
	comp=Z,89µm,22.0s						
NWAO	Narrogin (SRO)	81.48	149	*e*P	P	14 15 57.0	-0.2
NWAO				pmax	pmax		
	comp=Z,625nm,1.9s						
NWAO				MLR	MLR		
	comp=Z,89µm,22.0s						
DWS	Wesley	81.61	325	*e*P	P	14 16 00.3	+2.5
DWS	Wesley	81.61	325	*e*P	P	14 16 00.3	+2.5
SMRC	Santa Marta, M	81.65	312	*e*P	P	14 16 02.5	+4.3
MDPO	Dominica; Chan	81.66	325	*e*P	P	14 16 00.7	+2.6
UPA	Univ. de Panam	81.67	306	*e*P	P	14 15 57.1	-1.2
ICCO	Coco Island	81.68	298	*e*P	P	14 16 00.4	+2.0
ZANG	Zanguenga, Cho	81.78	306	*e*P	P	14 15 59.0	+0.1
BCIP	Isla Barro Col	81.96	306	*e*P	P	14 15 59.5	-0.4
BCIP	Isla Barro Col	81.96	306	*e*P	P	14 15 58.5	-1.3
MAGL	Barre de l'ile	81.97	325	*e*P	P	14 16 02.5	+2.7
TDBA	Terre de Bas,	81.97	325	*e*P	P	14 15 59.0	-0.7
CBE	Ff, Capester	82.17	325	*e*P	P	14 16 00.7	-0.1
ABD	La Joyeuse, An	82.52	325	*e*P	P	14 16 01.5	-1.2
BRU2	Volcan	82.77	303	*e*P	P	14 16 04.8	+0.6
OUZ	Omahuta	82.84	195	*e*P	P	14 16 05.0	+0.7
	comp=Z,532nm,1.2s						
OUZ				LR	LR		
	comp=Z,63µm,21.0s						
MLYT	Lee's Yard	82.95	325	*e*P	P	14 16 07.6	+2.6
BPA	Boggy Peak	83.17	325	*e*P	P	14 16 16.6	+11
DRK0	Durika	83.42	303	*e*P	P	14 16 07.3	-0.4
NVBH	Bath Hotel, Ne	83.45	324	*e*P	P	14 16 13.4	+6.0
NVRH	Round Hill, Ne	83.51	324	*e*P	P	14 16 09.7	+1.9
SKI	Saint Kitts	83.69	324	*e*P	P	14 16 08.1	-0.7
	comp=Z,2µm,1.5s						
SKI				LR	LR		
	comp=Z,88µm,22.0s						
SKI	Saint Kitts	83.69	324	*e*P	P	14 16 07.3	-1.4
SKI	Saint Kitts	83.69	324	*e*P	P	14 16 11.2	+2.4
SKI	Saint Kitts	83.69	324	*e*P	P	14 16 08.1	-0.7
SKI				pmax	pmax		
	comp=Z,2µm,1.5s						
SKI				MLR	MLR		
	comp=Z,88µm,22.0s						
BSK	Brimstone Hill	83.73	324	*e*P	P	14 16 22.6	+14
ANWB	Willy Bob	83.74	325	*e*P	P	14 16 08.5	-0.4
	comp=Z,940nm,1.2s						
ANWB				LR	LR		
	comp=Z,71µm,22.0s						
ANWB	Willy Bob	83.74	325	*e*P	P	14 16 10.2	+1.2
CAN	Canberra	83.86	175	*e*P	P	14 16 09.8	+0.1
	comp=Z,268nm,1.1s						
CAN				LR	LR		
	comp=Z,116µm,19.0s						
CAN	Canberra	83.86	175	*e*P	P	14 16 09.8	+0.1
CAN				pmax	pmax		
	comp=Z,268nm,1.1s						
CAN				MLR	MLR		
	comp=Z,116µm,19.0s						
SEUS	St. Eustatius	83.91	324	*e*P	P	14 16 11.7	+1.9
SABA	Saba	84.11	324	*e*P	P	14 16 10.1	-0.8
	comp=Z,1µm,1.3s						
SABA	Saba	84.11	324	*e*P	P	14 16 09.8	-1.1
LCR2	La Lucha 2	84.16	302	*e*P	P	14 16 10.6	-0.9
CVTR	Volcan Turrial	84.31	302	*e*P	P	14 16 12.4	-0.1
HDC	Heredia	84.44	302	PFAKE		14 16 20.0	+7.2
HDC				LR	LR		
	comp=Z,28µm,20.0s						
HDC	Heredia	84.44	302	*e*P	P	14 16 12.7	-0.1
SMRT	St. Maarten	84.47	324	*e*P	P	14 16 11.1	-1.6
	comp=Z,2µm,1.8s						
SMRT	St. Maarten	84.47	324	*e*P	P	14 16 10.5	-2.2

SRA1	San Ramn	84.67	302	eP	P	14 16 17.9	+3.9
TBI	Tubuai	84.68	230	eP	P	14 16 22.4	+8.5
	comp=Z,898nm,1.3s						
TBI	Tubuai	84.68	230	eS	S	14 26 55.3	+15
	comp=Z,109µm,36.5s						
TBI	Tubuai	84.68	230	eLQ	LQ	14 39 36.8	
	comp=Z,114µm,35.0s						
TBI				eLR	LR	14 43 28.2	
	comp=Z,87µm,34.2s,baz=166						
MORW	Morawa	84.83	147	eP	P	14 16 14.3	-0.3
	comp=Z,256nm,1.5s						
MORW				LR	LR		
	comp=Z,47µm,21.0s						
JTS	Las Juntas de	85.05	301	P	P	14 16 15.0	-0.7
	comp=Z,19nm,0.8s,baz=176,slow=2.2,SNR=13						
JTS	Las Juntas de	85.05	301	eP	P	14 16 14.6	-1.1
	comp=Z,944nm,1.5s						
JTS				LR	LR		
	comp=Z,53µm,21.0s						
JTS	Las Juntas de	85.05	301	eP	P	14 16 15.4	-0.4
ARE1	Arenal 1	85.11	302	eP	P	14 16 14.9	-1.2
CEDE	Laguna Cedeo	85.12	302	eP	P	14 16 16.4	+0.3
BBOO	Buckleboo	85.23	164	eP	P	14 16 15.7	-0.9
	comp=Z,92nm,0.8s						
BBOO				LR	LR		
	comp=Z,307µm,22.0s						
MTP	Monte Pirata	85.24	322	eP	P	14 16 14.8	-1.7
	comp=Z,410nm,1.2s						
STVI	Saint Thomas	85.30	322	eP	P	14 16 14.9	-1.9
	comp=Z,1µm,1.3s						
CUPR	Culebra, Puert	85.36	322	eP	P	14 16 15.9	-1.2
	comp=Z,1µm,1.2s						
HUMP	Col San Antoni	85.37	322	eP	P	14 16 15.9	-1.2
	comp=Z,509nm,1.3s						
SJG	San Juan	85.43	321	P	P	14 16 16.2	-1.3
	comp=Z,32nm,0.9s,baz=285,slow=2.7,SNR=4.5						
SJG	San Juan	85.43	321	eP	P	14 16 14.3	-3.2
	comp=Z,306nm,1.3s						
SJG				LR	LR		
	comp=Z,43µm,21.0s						
SJG	San Juan	85.43	321	eP	P	14 16 14.3	-3.2
SJG				pmax	pmax		
	comp=Z,306nm,1.3s						
SJG				MLR	MLR		
	comp=Z,43µm,21.0s						
SJG	San Juan	85.43	321	eP	P	14 16 17.3	-0.2
CBYP	Canovanas	85.49	322	eP	P	14 16 15.9	-2.0
	comp=Z,926nm,1.4s						
OBIP	Obispado Ponce	85.51	321	eP	P	14 16 15.7	-2.2
	comp=Z,284nm,1.4s						
MESS	Mesas	85.56	301	eP	P	14 16 17.3	-1.0
FURI	Furi	85.57	63	PFAKE		14 16 30.0	+11
FURI				LR	LR		
	comp=Z,180µm,18.0s						
FURI	Furi	85.57	63	eP	P	14 16 20.6	+1.9
FURI				eS	S	14 27 12.3	+23
CRPR	Cabo Rojo, PR	85.63	320	eP	P	14 16 18.1	-0.3
	comp=Z,822nm,1.3s						
BUEV	Buena Vista	85.69	301	eP	P	14 16 18.4	-0.7
GB1A	Borinquen Arri	85.71	301	eP	P	14 16 18.0	-1.1
AAE	Adis Abeba	85.73	63	i P	P	14 16 21.2	+1.7
AAE	Adis Abeba	85.73	63	i P	P	14 16 21.2	+1.7
AAE	Adis Abeba	85.73	63	eP	P	14 16 21.6	+2.0
AAE				eS	S	14 27 04.6	+13
MPR	Mayaguez	85.83	320	eP	P	14 16 17.6	-1.8
	comp=Z,133nm,1.0s						
AOPR	Arecibo Observ	85.84	321	eP	P	14 16 16.8	-2.7
	comp=Z,117nm,0.9s						
EMPR	Esperanza - Ma	85.89	321	eP	P	14 16 18.0	-1.7
	comp=Z,384nm,1.2s						
FORT	Forrest	85.94	157	eP	P	14 16 19.6	-0.5
	comp=Z,338nm,0.8s						
FORT				LR	LR		
	comp=Z,126µm,22.0s						
PRVC	Isla de Provid	86.39	306	eP	P	14 16 22.2	-0.1
ESPN	Las Esperanzas	86.50	303	PFAKE		14 16 30.0	+7.1
ESPN				LR	LR		
	comp=Z,33µm,19.0s						
ESPN	Las Esperanzas	86.50	303	eP	P	14 16 23.1	+0.3
ANKE	Ethiopia-Afar	86.65	64	i P	P	14 16 28.8	+4.7
ANKE				i S	S	14 26 55.2	-5.1
ANKE	Ethiopia-Afar	86.65	64	i P	P	14 16 28.8	+4.7
ANKE				i S	S	14 26 55.2	-5.1
ANKE	Ethiopia-Afar	86.65	64	i P	P	14 16 28.8	+4.7
ANKE				i S	S	14 26 55.2	-5.1
ACON	Acoyapa	86.65	302	eP	P	14 16 21.4	-2.2
	comp=Z,1µm,1.5s						
ACON				LR	LR		
	comp=Z,40µm,20.0s						
ACON	Acoyapa	86.65	302	eP	P	14 16 21.9	-1.7
STKA	Stephens Creek	86.78	169	P	P	14 16 24.5	+0.3
	comp=Z,74nm,0.8s,baz=159,slow=5.8,SNR=25						
STKA				PKKPbc	PKKPbc	14 34 14.8	-0.4
	comp=Z,4.9nm,0.9s,baz=135,slow=3.6,SNR=3.2						
STKA				PKPPKP		14 42 22.1	
	comp=Z,4.6nm,1.0s,baz=92,slow=6.3,SNR=4.3						
STKA				LR	LR	14 54 37.0	
	comp=Z,72µm,18.1s,baz=183,slow=35						
STKA	Stephens Creek	86.78	169	eP	P	14 16 24.3	0.0
	comp=Z,72nm,1.4s						
STKA				ePKKPdf	PKKPbc	14 34 14.8	-0.4
STKA				LR	LR		
	comp=Z,30µm,18.0s						
STKA	Stephens Creek	86.78	169	eP	P	14 16 24.3	0.0
STKA				pmax	pmax		
	comp=Z,73nm,1.4s						
STKA				MLR	MLR		
	comp=Z,30µm,18.0s						
SDD	Santo Domingo	86.94	318	PFAKE		14 16 40.0	+15
SDD				LR	LR		
	comp=Z,128µm,20.0s						
H08S1	Diego Carcia H	87.09	100	P	P	14 16 29.2	+3.6
H08S2	Diego Garcia H	87.09	100	P	P	14 16 29.2	+3.6
H08S3	Diego Garcia H	87.11	100	P	P	14 16 29.3	+3.6
	SNR=5.2						
TAM	Tamanrasset	87.17	28	eP	P	14 16 24.6	-1.6
	comp=Z,370nm,1.6s						
TAM				LR	LR		
	comp=Z,155µm,21.0s						
TAM	Tamanrasset	87.17	28	eP	P	14 16 24.6	-1.6
TAM				pmax	pmax		
	comp=Z,370nm,1.6s						
TAM				MLR	MLR		
	comp=Z,155µm,21.0s						
DGAR	Diego Garcia	87.28	100	i P	P	14 16 25.4	-1.4
DGAR				pmax	pmax		
	comp=Z,970nm,1.8s						
DGAR				MLR	MLR		
	comp=Z,31µm,16.0s						
CNGN	Cerro Negro	87.76	301	eP	P	14 16 29.5	+0.4
MATN	Matagalpa	87.83	302	eP	P	14 16 26.9	-2.6
SDDR	Presa de Saban	87.88	317	PFAKE		14 16 40.0	+10
SDDR				LR	LR		
	comp=Z,105µm,22.0s						
DESE	Dese	87.97	63	i P	P	14 16 34.1	+3.7
DESE				eS	SKSac	14 26 42.7	-15
DESE	Dese	87.97	63	i P	P	14 16 34.1	+3.7
DESE				eS	SKSac	14 26 42.7	-15
DESE	Dese	87.97	63	i P	P	14 16 34.1	+3.7
DESE				eS	SKSac	14 26 42.7	-15
ESTN	Estel	88.17	301	eP	P	14 16 30.6	-0.4
	comp=Z,549nm,1.3s						
ESTN				LR	LR		
	comp=Z,26µm,20.0s						
ESTN	Estel	88.17	301	eP	P	14 16 30.9	-0.1
RCON	San Juan de Ri	88.42	302	eP	P	14 16 31.1	-1.2
CSGN	Cosiguina Volc	88.55	300	eP	P	14 16 31.0	-1.8
	comp=Z,1µm,1.0s						
CSGN				LR	LR		
	comp=Z,47µm,21.0s						
CSGN	Cosiguina Volc	88.55	300	eP	P	14 16 31.4	-1.4
PCJ	Portland Cotta	88.78	311	i P	P	14 16 39.4	+5.6
ARMA	Armidale	88.82	177	eP	P	14 16 34.2	+0.1
	comp=Z,227nm,1.4s						
ARMA				LR	LR		
	comp=Z,84µm,22.0s						
HOJ	Hope	88.87	312	i P	P	14 16 39.3	+5.2
HOJ	Hope	88.87	312	i P	P	14 16 36.2	+2.0
STH	Stony Hill	88.96	312	i P	P	14 16 35.5	+0.9
STH	Stony Hill	88.96	312	i P	P	14 16 35.6	+0.9
MCJ	Malvern	89.14	311	i P	P	14 16 37.4	+1.8
MCJ	Malvern	89.14	311	i P	P	14 16 36.7	+1.2
MTDJ	Mount Denham	89.36	311	eP	P	14 16 35.6	-1.0
	comp=Z,496nm,1.4s						
MTDJ				LR	LR		
	comp=Z,109µm,22.0s						
CVJ	Coleyville	89.36	311	i P	P	14 16 47.1	+11
TGUH	Tegucigalpa,Un	89.40	301	eP	P	14 16 35.6	-1.3
	comp=Z,672nm,1.2s						
BBJ	Bamboo Saint A	89.41	312	i P	P	14 16 37.0	+0.3
TVO	Taravao	89.67	232	eP	P	14 16 46.2	+8.0
	comp=Z,51nm,1.2s						
ATD	Arta Tunnel	89.74	65	eP	P	14 16 38.6	+0.1
	comp=Z,951nm,1.4s						
ATD				LR	LR		
	comp=Z,109µm,21.0s						
ATD	Arta Tunnel	89.74	65	eP	P	14 16 39.5	+1.0
ATD				eS	S	14 27 14.7	-14
PPTF	Pamatai, Papee	89.96	232	PFAKE		14 16 50.0	+10
PPTF				LR	LR		
	comp=Z,75µm,19.0s						
PPT2	Papeete2	89.97	232	eP	P	14 16 47.2	+7.6
	comp=Z,112nm,1.3s						
PPT2	Papeete2	89.97	232	ePP	PP	14 20 25.0	+13
	comp=Z,5µm,31.2s						
PPT2				eS	S	14 27 43.1	+12
	comp=Z,29µm,25.5s						
PPT2				eSP	SP	14 28 53.3	+17
	comp=Z,48µm,30.5s						
PPT2	Papeete2	89.97	232	eLQ	LQ	14 41 25.7	
	comp=Z,60µm,29.0s						
PPT2				eLR	LR	14 45 57.2	
	comp=Z,69µm,24.0s,baz=164						
PPT	Papeete	89.98	232	LR	LR	14 51 01.2	
	comp=Z,67µm,18.1s,baz=158,slow=32						
GTBY	Guantanamo Bay	90.06	314	PFAKE		14 16 50.0	+10
GTBY				LR	LR		
	comp=Z,113µm,21.0s						
GRTK	Grand Turk	90.19	318	PFAKE		14 16 50.0	+10
GRTK				LR	LR		
	comp=Z,36µm,22.0s						
RAR	Rarotonga	90.24	222	LR	LR	14 52 56.5	
	comp=Z,20µm,18.3s,baz=170,slow=33						
RAR	Rarotonga	90.24	222	PFAKE		14 16 50.0	+9.3
RAR				LR	LR		
	comp=Z,31µm,18.0s						
GIRL	Giralia	90.41	143	PFAKE		14 16 50.0	+8.5
GIRL				LR	LR		
	comp=Z,102µm,19.0s						
VAH	Vaihoa	91.34	235	eP	P	14 16 53.9	+8.0
	comp=Z,372nm,1.3s						
APG	El Apazote	91.60	299	P	P	14 16 47.1	-0.1
	comp=Z,56nm,0.9s,baz=220,slow=2.0,SNR=17						
PMOR	Pomariorio Ree	91.66	234	eP	P	14 16 55.2	+7.8
	comp=Z,204nm,1.1s						
PSAD3	Pilbara Seismi	92.89	148	PFAKE		14 17 00.0	+6.9
PSAD3				LR	LR		
	comp=Z,109µm,20.0s						
PSAC3	Pilbara Seismi	92.92	148	PFAKE		14 17 00.0	+6.8
PSAC3				LR	LR		
	comp=Z,106µm,20.0s						
PSAB3	Pilbara Seismi	92.96	148	PFAKE		14 17 00.0	+6.6
PSAB3				LR	LR		
	comp=Z,111µm,20.0s						
PSAD2	Pilbara Seismi	92.96	148	PFAKE		14 17 00.0	+6.6
PSAD2				LR	LR		
	comp=Z,112µm,20.0s						
PSAA1	Pilbara Seismi	92.97	148	PFAKE		14 17 00.0	+6.6
PSAA1				LR	LR		
	comp=Z,109µm,20.0s						
PSAA3	Pilbara Seismi	92.97	148	PFAKE		14 17 00.0	+6.5
PSAA3				LR	LR		
	comp=Z,110µm,20.0s						
PSAB1	Pilbara Seismi	92.97	148	PFAKE		14 17 00.0	+6.6
PSAB1				LR	LR		
	comp=Z,108µm,20.0s						
PSA00	Pilbara Seismi	92.97	148	eP	P	14 16 53.0	-0.4
	comp=Z,187nm,1.2s						
PSA00				LR	LR		
	comp=Z,107µm,20.0s						
PSAA2	Pilbara Seismi	92.98	148	PFAKE		14 17 00.0	+6.5
PSAA2				LR	LR		
	comp=Z,108µm,20.0s						
PSAB2	Pilbara Seismi	93.00	148	PFAKE		14 17 00.0	+6.4
PSAB2				LR	LR		
	comp=Z,110µm,20.0s						
PSAC2	Pilbara Seismi	93.00	148	PFAKE		14 17 00.0	+6.4
PSAC2				LR	LR		
	comp=Z,114µm,20.0s						
PSAC1	Pilbara Seismi	93.00	148	PFAKE		14 17 00.0	+6.4
PSAC1				LR	LR		
	comp=Z,111µm,20.0s						
PSAD1	Pilbara Seismi	93.08	148	PFAKE		14 17 10.0	+16
PSAD1				LR	LR		
	comp=Z,106µm,20.0s						
MBWA	Marble Bar	93.34	148	PFAKE		14 17 10.0	+15
MBWA				LR	LR		
	comp=Z,95µm,22.0s						
CCIG	Comitan	93.45	298	eP	P	14 16 53.7	-2.0
	comp=Z,155nm,1.1s						
CCIG				LR	LR		
	comp=Z,37µm,20.0s						
FUL	Funchal	93.61	7	eP	P	14 17 00.4	+4.6
	comp=Z,192nm,1.7s						
PMAR	Madeira	93.69	7	eP	P	14 17 02.2	+5.8
	comp=Z,135nm,1.7s						
PMAR	Madeira	93.69	7	ePP	PP	14 20 44.1	+2.0
PMOZ	Porto Moniz, M	93.77	7	eP	P	14 16 58.6	+1.9
	comp=Z,167nm,1.6s						
PMOZ	Porto Moniz, M	93.77	7	ePP	PP	14 20 48.7	+6.0
EIDS	Eidsvold	93.84	177	eP	P	14 16 57.2	-0.1
	comp=Z,130nm,1.4s						
EIDS				LR	LR		
	comp=Z,83µm,19.0s						
ASAR	Alice Springs	93.90	161	P	P	14 16 57.9	+0.1
	comp=Z,43nm,0.8s,baz=183,slow=4.0,SNR=102						
ASAR				PP	PP	14 20 42.8	+0.1
	comp=Z,9.4nm,1.0s,baz=179,slow=6.1,SNR=4.5						
ASAR				PKKPbc	PKKPdf	14 33 55.8	+0.8
	comp=Z,2.3nm,0.7s,baz=13,slow=1.9,SNR=4.4						
ASAR				LR	LR	14 55 55.0	
	comp=Z,412µm,22.0s,baz=192,slow=33						
AS31	Alice Springs	93.90	161	eP	P	14 16 57.0	-0.7
	comp=Z,22nm,0.8s						
AS31				ePP	PP	14 20 42.8	+0.1
AS31				LR	LR		
	comp=Z,4µm,20.0s						
TAOE	Nuku Hiva Isla	93.95	244	eS	S	14 28 18.4	+11
	comp=Z,26µm,33.4s						
TAOE	Nuku Hiva Isla	93.95	244	eLQ	LQ	14 43 52.7	
	comp=Z,51µm,34.8s						
TAOE				eLR	LR	14 47 44.1	
	comp=Z,133µm,31.2s,baz=168						
TAOE	Nuku Hiva Isla	93.95	244	PFAKE		14 17 10.0	+12
TAOE				LR	LR		
	comp=Z,45µm,22.0s						
PMPS	Porto Santo	94.05	7	eP	P	14 17 03.5	+5.7
	comp=Z,261nm,1.6s						
PMPST	Porto Santo, M	94.08	7	eP	P	14 17 02.5	+4.5
	comp=Z,316nm,1.6s						
NIUE	Niue	95.26	213	PFAKE		14 17 20.0	+16
NIUE				LR	LR		
	comp=Z,36µm,20.0s						
TEIG	Tepich	95.35	303	eP	P	14 17 02.7	-1.4
	comp=Z,184nm,0.9s						
TEIG				LR	LR		
	comp=Z,48µm,22.0s						
CMIG	Matias Romero	95.36	296	P	P	14 17 04.2	0.0
	comp=Z,29nm,1.0s,baz=153,slow=3.5,SNR=14						
RTC	Rabat Centre	95.89	15	PFAKE		14 17 20.0	+14
RTC				LR	LR		
	comp=Z,430µm,20.0s						
PINNC	Pines Island,	96.00	192	PFAKE		14 17 20.0	+13
PINNC				LR	LR		
	comp=Z,51µm,18.0s						
ONTNC	Ouen Toro	96.40	191	eP	P	14 17 09.2	+0.1
	comp=Z,152nm,1.1s						
062Z	Marathon	96.60	311	P	P	14 17 10.6	+0.9
	baz=156						
MYIG	Mrida	96.60	302	PFAKE		14 17 20.0	+10
MYIG				LR	LR		
	comp=Z,51µm,21.0s						
DZM	Mont Dzumac	96.64	191	eP	P	14 17 16.3	+6.0
	comp=Z,134nm,1.4s						
DZM	Mont Dzumac	96.64	191	eS	S	14 28 37.9	+7.5
	comp=Z,60µm,30.6s						
DZM	Mont Dzumac	96.64	191	ePS	PS	14 30 07.9	+16
	comp=Z,9µm,26.4s						
DZM				eSS	SS	14 35 21.8	+19
	comp=Z,68µm,31.9s						
DZM				eLQ	LQ	14 44 44.8	
	comp=Z,294µm,33.0s						
DZM	Mont Dzumac	96.64	191	P	P	14 17 12.9	+2.6
	comp=Z,24nm,1.0s,baz=178,slow=10,SNR=6.0						
DZM	Mont Dzumac	96.64	191	eP	P	14 17 10.3	0.0
	comp=Z,85nm,1.3s						
MARNC	Mare, Loyalty	97.06	192	PFAKE		14 17 20.0	+7.8
MARNC				LR	LR		
	comp=Z,45µm,20.0s						
PVLZ	Peæn de	97.40	17	eP	Pdif	14 17 15.8	+2.8
PVLZ				eS	S	14 28 53.6	+18
TLIG	Tlapa	97.41	293	eP	P	14 17 12.7	-1.0
	comp=Z,126nm,1.3s						
TLIG				LR	LR		
	comp=Z,52µm,21.0s						
061Z	Ochoppi	97.58	311	PFAKE		14 17 20.0	+5.8
061Z				LR	LR		
	comp=Z,45µm,22.0s						
061Z	Ochoppi	97.58	311	P	Pdif	14 17 15.4	+1.3
	baz=156						
WR1	Warramunga Arr	97.62	161	eP	Pdif	14 17 17.2	+2.4
WR1				ePKKPdf	PKKPdf	14 33 48.5	+0.1
WRA	Warramunga Arr	97.62	161	P	Pdif	14 17 17.2	+2.4
	comp=Z,20nm,0.9s,baz=201,slow=4.8,SNR=23						
WRA				PKKPbc	PKKPdf	14 33 48.5	+0.1
	comp=Z,3.5nm,0.8s,baz=19,slow=3.5,SNR=5.4						
WB2	Warramunga Arr	97.62	161	PFAKE		14 17 30.0	+15
WB2				LR	LR		
	comp=Z,344µm,21.0s						
WRAB	Tennant Creek	97.63	161	eP	P	14 17 12.5	-2.2
	comp=Z,218nm,1.8s						
WRAB				LR	LR		
	comp=Z,383µm,22.0s						
WRAB	Tennant Creek	97.63	161	c iP	Pdif	14 17 15.6	+0.8
WRAB				pmax	pmax		
	comp=Z,35nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,55µm,16.0s						
WC1	Warramunga Arr	97.64	161	PFAKE		14 17 30.0	+15
WC1				LR	LR		
	comp=Z,267µm,22.0s						
WC2	Warramunga Arr	97.64	161	PFAKE		14 17 30.0	+15
WC2				LR	LR		
	comp=Z,382µm,22.0s						
MELI	Melilla	97.72	18	eP	Pdif	14 17 19.7	+5.2
MELI				eS	S	14 28 55.9	+17
060Z	West Palm Beac	97.95	312	P	Pdif	14 17 16.7	+0.9
	baz=156						
CEU	Ceuta	97.96	16	eP	Pdif	14 17 20.1	+4.5
CEU				eS	S	14 28 51.5	+11
059Z	Ave Maria	98.21	311	P	Pdif	14 17 18.2	+1.3
	baz=156						
LVIG	Laguna Verde	98.36	296	PFAKE		14 17 30.0	+12
LVIG				LR	LR		
	comp=Z,24µm,21.0s						
SFS	San Fernando	98.41	15	PFAKE		14 17 30.0	+12
SFS				LR	LR		
	comp=Z,51µm,19.0s						
SFS	San Fernando	98.41	15	eP	Pdif	14 17 23.0	+5.4
SFS				eS	S	14 28 55.0	+11
060A	Indiantown	98.45	312	PFAKE		14 17 30.0	+12
060A				LR	LR		
	comp=Z,59µm,20.0s						
060A	Indiantown	98.45	312	P	Pdif	14 17 18.5	+0.5
	baz=156						
CMLA	Cha da Macela	98.47	360	P	PP	14 21 18.5	-0.4
CMLA	Cha da Macela	98.47	360	PFAKE		14 17 30.0	+12
CMLA				LR	LR		
	comp=Z,30µm,19.0s						
BART	Pico Bartolome	98.48	0	P	PP	14 21 18.0	-1.0
BBSR	BB Station	98.50	327	PFAKE		14 17 30.0	+12
BBSR				LR	LR		
	comp=Z,44µm,21.0s						
PSET	Sete Cidades	98.53	360	P	PP	14 21 18.5	-0.8
059A	Moore Haven	98.67	312	PFAKE		14 17 30.0	+11
059A				LR	LR		
	comp=Z,75µm,22.0s						
059A	Moore Haven	98.67	312	P	Pdif	14 17 19.9	+0.9
	baz=156						
PFVI	Vila Bisbo	98.75	13	eP	Pdif	14 17 23.5	+4.4
	comp=Z,153nm,1.7s						
PFVI	Vila Bisbo	98.75	13	ePP	PP	14 21 22.6	+1.6
PFVI	Vila Bisbo	98.75	13	PFAKE		14 17 30.0	+11
PFVI				LR	LR		
	comp=Z,86µm,22.0s						
CTA	Charters Tower	98.85	172	P	Pdif	14 17 22.7	+2.5
	comp=Z,24nm,1.1s,baz=226,slow=4.3,SNR=7.3						
CTAO	Charters Tower	98.85	172	eP	P	14 17 19.5	-0.7
	comp=Z,96nm,1.1s						
CTAO				LR	LR		
	comp=Z,96µm,22.0s						
CTAO	Charters Tower	98.85	172	eP	P	14 17 19.5	-0.7
CTAO				pmax	pmax		
	comp=Z,96nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,96µm,22.0s						
XMIS	Christmas Isla	98.93	131	PFAKE		14 17 30.0	+9.4
XMIS				LR	LR		
	comp=Z,48µm,22.0s						
EMAL	Malaga-Limoner	98.94	17	eP	P	14 17 22.1	+2.2
EMAL				eS	S	14 28 56.4	+7.7
MORF	Marmelete	98.94	13	ePdif	Pdif	14 17 19.4	-0.7
MORF				eSKSac	SKSac	14 27 55.0	-1.5
MORF				AMS	AMS	14 55 45.3	
	comp=Z,49µm,22.7s						
MORF	Marmelete	98.94	13	eP	P	14 17 22.5	+2.5
	comp=Z,83nm,1.9s						
MORF	Marmelete	98.94	13	ePP	PP	14 21 21.7	-0.9
MORF	Marmelete	98.94	13	eP	Pdif	14 17 19.3	-0.7
MORF				e		14 27 54.9	
PBDV	Barranco-do-Ve	98.96	14	eP	P	14 17 21.2	+1.1
	comp=Z,72nm,1.7s						
PBDV	Barranco-do-Ve	98.96	14	ePP	PP	14 21 23.6	+0.9
058A	Arcadia	98.99	311	P	P	14 17 22.1	+1.7
	baz=156						
959A	Okeechobee	99.08	312	P	Pdif	14 17 23.0	+2.2
	baz=156						
PVAQ	Vaqueiros	99.15	14	eP	Pdif	14 17 25.1	+4.3
	comp=Z,70nm,1.6s						
PVAQ	Vaqueiros	99.15	14	ePP	PP	14 21 25.3	+1.3
PVAQ	Vaqueiros	99.15	14	PFAKE		14 17 30.0	+9.2
PVAQ				LR	LR		
	comp=Z,68µm,20.0s						
PTEO	Sao Teotonio	99.17	13	eP	Pdif	14 17 22.6	+1.7
	comp=Z,111nm,1.6s						
PTEO	Sao Teotonio	99.17	13	ePP	PP	14 21 24.5	+0.3
PCAN	Candelaria	99.20	357	P	PP	14 21 23.9	-0.6
PPNO	Prainha do Nor	99.20	358	P	PP	14 21 23.4	-1.1
PCVE	Castro Verde	99.34	14	eP	Pdif	14 17 22.8	+1.1
PCVE	Castro Verde	99.34	14	ePP	PP	14 21 26.4	+0.9
PMAN	Manadas	99.36	358	P	PP	14 21 24.9	-0.8
PCED	Cedros	99.37	357	P	PP	14 21 24.8	-0.9
PSCM	Serra do Cume	99.41	359	P	PP	14 21 25.5	-0.6
ROSA	Rosais	99.45	358	PFAKE		14 17 30.0	+7.8
ROSA				LR	LR		
	comp=Z,40µm,19.0s						
958A	Wauchula	99.46	311	P	Pdif	14 17 23.4	+0.9
	baz=156						
859A	Kempfer Cattle	99.58	312	P	Pdif	14 17 25.6	+2.6
	baz=156						
957A	Wimauma	99.71	311	PFAKE		14 17 30.0	+6.4
957A				LR	LR		
	comp=Z,69µm,21.0s						
957A	Wimauma	99.71	311	P	Pdif	14 17 24.9	+1.3
	baz=156						
PBEJ	Beja	99.75	14	eP	Pdif	14 17 29.2	+5.7
PNCL	Nicolau / Gran	99.75	13	eP	Pdif	14 17 28.6	+5.1
PNCL	Nicolau / Gran	99.75	13	ePP	PP	14 21 29.4	+0.8
PGRA	Graciosa	99.76	358	P	PP	14 21 28.0	-0.7
DWPF	Disney Wildern	99.81	312	PFAKE		14 17 30.0	+6.0
DWPF				LR	LR		
	comp=Z,69µm,22.0s						
DWPF	Disney Wildern	99.81	312	P	Pdif	14 17 25.4	+1.4
	baz=156						
858A	St. Cloud	99.88	312	P	Pdif	14 17 26.5	+2.2
	baz=156						
HMDM	Hanimaadhoo	99.96	94	PFAKE		14 17 40.0	+15
HMDM				LR	LR		
	comp=Z,37µm,22.0s						
857A	Zephyrhills	100.25	311	P	Pdif	14 17 26.9	+0.9
	baz=155						
LIS	Lisbon	100.28	13	ePdif	Pdif	14 17 25.3	-0.6
LIS				AMS	AMS	14 56 32.2	
	comp=Z,77µm,23.6s						
LIS	Lisbon	100.28	13	eP	Pdif	14 17 32.0	+6.2
	comp=Z,112nm,1.1s						
LIS	Lisbon	100.28	13	ePP	PP	14 21 34.5	+1.8

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LIS    Lisbon           100.28  13 eP       Pdif     14 17 25.2  -0.6
KEST   Kesra            100.49  28  P       Pdif     14 17 27.5  +0.5
       comp=Z,12nm,1.0s,baz=197,slow=6.4,SNR=4.7
KEST   Kesra            100.49  28  PFAKE            14 17 40.0   +13
KEST                                LR      LR
       comp=Z,148µm,20.0s
758A   Lake Helen       100.50 312  P       Pdif     14 17 28.9  +1.8
       baz=156
PMAFR  Mafra            100.51  13 eP       Pdif     14 17 31.2  +4.3
DFRA   Djebel Bou Aff   100.52  25  P       Pdif     14 17 34.5  +7.4
ABSA   Djebel Ababsia   100.59  26  P       Pdif     14 17 29.6  +2.2
PMTG   Montargil        100.73  13 eP       Pdif     14 17 32.8  +5.0
PMTG   Montargil        100.73  13 ePP      PP       14 21 38.0  +1.9
ALMR   Almeirim         100.78  13 ePdif    Pdif     14 17 27.4  -0.6
ALMR                               eSKSac   SKSac    14 28 04.0  -1.3
ALMR                                AMS     AMS      14 56 28.2
       comp=Z,71µm,21.2s
ALMR   Almeirim         100.78  13 eP       Pdif     14 17 33.7  +5.7
ALMR   Almeirim         100.78  13 ePP      PP       14 21 14.9   -22
ALMR   Almeirim         100.78  13 eP       Pdif     14 17 27.4  -0.6
ALMR                               e                 14 28 03.9
757A   Oxford           100.80 312  P       Pdif     14 17 28.5  +0.1
       baz=155
CMAH   Djebel Manchou   100.92  26  P       Pdif     14 17 32.5  +3.7
658A   Bunnell          100.94 313  PFAKE            14 17 40.0   +11
658A                                LR      LR
       comp=Z,103µm,21.0s
PMRV   Marv??o          101.19  14 eP       Pdif     14 17 34.6  +4.7
PTOM   Tomar            101.26  13 eP       Pdif     14 17 34.7  +4.5
657A   Interlachen      101.31 312  P       Pdif     14 17 32.0  +1.4
       baz=155
656A   Willston         101.36 311  PFAKE            14 17 40.0  +9.1
656A                                LR      LR
       comp=Z,81µm,22.0s
656A   Willston         101.36 311  P       Pdif     14 17 33.9  +3.1
       baz=155
RAYN   Ar Rayn          101.50  62  PFAKE            14 17 40.0  +8.3
RAYN                                LR      LR
       comp=Z,74µm,19.0s
RAYN   Ar Rayn          101.50  62 i Pdiff  Pdif     14 17 33.1  +1.4
       SNR=7.5
PCBR   Castelo Branco   101.58  14 eP       Pdif     14 17 32.7  +1.1
PCAS   Casmilo, Conde   101.68  13 eP       Pdif     14 17 36.4  +4.4
PAB    San Pablo        101.69  16  PFAKE            14 17 40.0  +7.8
PAB                                 LR      LR
       comp=Z,37µm,18.0s
655A   Horseshoe Beac   101.75 311  P       Pdif     14 17 34.8  +2.2
       baz=155
COI    Coimbra          101.84  13 eP       Pdif     14 17 38.8  +6.1
COI    Coimbra          101.84  13  PFAKE            14 17 40.0  +7.3
COI                                 LR      LR
       comp=Z,80µm,22.0s
WDD    Wied Dalam       101.85  32  PFAKE            14 17 40.0  +7.1
WDD                                 LR      LR
       comp=Z,51µm,20.0s
ESDC   Sonseca Array    101.87  17  P       Pdif     14 17 34.2  +1.3
       comp=Z,3.8nm,1.0s,baz=185,slow=4.5,SNR=9.4
556A   Lake Butler      101.88 312  P       Pdif     14 17 35.0  +1.8
       baz=155
MTE    Manteigas        102.13  14 eP       Pdif     14 17 37.2  +3.1
MTE    Manteigas        102.13  14 ePP      PP       14 21 44.5  -2.2
MTE    Manteigas        102.13  14 eLQ      LQ       14 46 11.8
MTE    Manteigas        102.13  14  PFAKE            14 17 40.0  +5.9
MTE                                 LR      LR
       comp=Z,64µm,21.0s
457A   Yulee            102.14 313  P       Pdif     14 17 35.7  +1.4
       baz=155
555A   McAlpin          102.19 311  PFAKE            14 17 50.0   +15
555A                                LR      LR
       comp=Z,109µm,22.0s
555A   McAlpin          102.19 311  P       Pdif     14 17 35.6  +1.0
       baz=155
456A   Hilliard         102.40 312  PFAKE            14 17 50.0   +15
456A                                LR      LR
       comp=Z,107µm,22.0s
CISI   Cisompet, Garu   102.42 132  PFAKE            14 17 50.0   +14
CISI                                LR      LR
       comp=Z,49µm,22.0s
554A   Perry            102.42 311  P       Pdif     14 17 37.0  +1.4
       baz=155
UCM    Universidad Co   102.59  17 eP       Pdif     14 17 41.2  +5.1
455A   Stateville       102.78 312  P       Pdif     14 17 37.3  +0.2
       baz=155
MVO    Moncorvo         102.94  14 eP       Pdif     14 17 43.3  +5.6
MVO    Moncorvo         102.94  14 ePP      PP       14 21 54.7  +1.9
PVRL   Vila Real        102.97  13 eP       Pdif     14 17 43.5  +5.7
454A   Quitman          102.97 311  P       Pdif     14 17 42.4  +4.3
       baz=155
356A   Blackshear       102.98 313  P       Pdif     14 17 43.7  +5.6
       baz=155
POLO   Lamas de Olo     103.06  13 eP       Pdif     14 17 39.8  +1.5
552A   Lynn Haven       103.07 310  P       Pdif     14 17 38.6  +0.2
       baz=154
CLTB   Caltabellotta    103.17  30  PFAKE            14 17 50.0   +11
CLTB                                LR      LR
       comp=Z,62µm,22.0s
257A   Skidaway Islan   103.18 314  PFAKE            14 17 50.0   +11
257A                                LR      LR
       comp=Z,48µm,21.0s
355A   Pearson          103.26 312  P       Pdif     14 17 39.0  -0.2
       baz=155
453A   Whigham          103.35 311  PFAKE            14 17 50.0   +10
453A                                LR      LR
       comp=Z,74µm,21.0s
453A   Whigham          103.35 311  P       Pdif     14 17 40.3  +0.6
       baz=154
PCAB   Cabril           103.37  13 eP       Pdif     14 17 45.1  +5.6
PCAB   Cabril           103.37  13 ePP      PKiKP    14 21 52.6  -5.8
MAHO   Mahon            103.44  23 eP       Pdif     14 17 43.9  +4.1
256A   Glennville       103.49 313  P       Pdif     14 17 40.9  +0.6
       baz=155
MNAI   Manna            103.53 126  PFAKE            14 17 50.0  +9.0
MNAI                                LR      LR
       comp=Z,26µm,20.0s
158A   Hollywood        103.58 315  P       Pdif     14 17 40.9  +0.2
       baz=156
PGAV   Gavieira, Arco   103.59  13 eP       Pdif     14 17 45.8  +5.2
PGAV   Gavieira, Arco   103.59  13 ePP      PKiKP    14 21 57.5  -1.4
PBRG   Braganca         103.61  14 eP       Pdif     14 17 46.8  +6.2
TIGA   Tifton           103.61 312  PFAKE            14 17 50.0  +9.1
TIGA                                LR      LR
       comp=Z,127µm,21.0s
TIGA   Tifton           103.61 312  P       Pdif     14 17 42.3  +1.4
       baz=155
255A   Hazlehurst       103.65 313  PFAKE            14 17 50.0  +9.0
255A                                LR      LR
       comp=Z,88µm,22.0s
255A   Hazlehurst       103.65 313  P       Pdif     14 17 43.7  +2.7
       baz=155
452A   Marianna         103.67 310  P       Pdif     14 17 43.4  +2.3
       baz=154
451A   Vernon           103.67 309  PFAKE            14 17 50.0  +8.9
451A                                LR      LR
       comp=Z,66µm,21.0s
451A   Vernon           103.67 309  P       Pdif     14 17 43.4  +2.3
       baz=154
JAGI   Jajag, Banyuwa   103.74 138  PFAKE            14 17 50.0  +8.0
JAGI                                LR      LR
       comp=Z,49µm,21.0s
ZAIG   Zacatecas        103.76 292  PFAKE            14 17 50.0  +7.9
ZAIG                                LR      LR
       comp=Z,68µm,21.0s
353A   Camilla          103.76 311  P       Pdif     14 17 41.7  +0.2
       baz=154
157A   Early Branch     103.81 314  P       Pdif     14 17 43.2  +1.5
       baz=155
SMRI   Semarang         103.82 134  PFAKE            14 17 50.0  +7.6
SMRI                                LR      LR
       comp=Z,42µm,20.0s
NHSC   New Hope         103.91 315  PFAKE            14 17 50.0  +7.9
NHSC                                LR      LR
       comp=Z,38µm,20.0s
NHSC   New Hope         103.91 315  P       Pdif     14 17 45.7  +3.6
       baz=156
156A   Sylvania         103.96 314  P       Pdif     14 17 45.5  +3.2
       baz=155
254A   Abbeville        103.96 312  P       Pdif     14 17 45.5  +3.1
       baz=155
MTN    Manton Dam       103.99 156  PFAKE            14 17 50.0  +6.9
MTN                                 LR      LR
       comp=Z,107µm,22.0s
Z58A   St. Stephen      104.00 315  P       Pdif     14 17 44.0  +1.5
       baz=156
SIVA   Sivas            104.04  40  P       PP       14 22 05.9  +5.0
Y60A   Bolivia          104.07 317  PFAKE            14 17 50.0  +7.2
Y60A                                LR      LR
       comp=Z,24µm,21.0s
Y60A   Bolivia          104.07 317  P       Pdif     14 17 45.6  +2.8
       baz=156
352A   Blakely          104.14 310  PFAKE            14 17 50.0  +6.8
352A                                LR      LR
       comp=Z,69µm,21.0s
352A   Blakely          104.14 310  P       Pdif     14 17 46.7  +3.5
       baz=154
VAM    Vamos            104.21  40  P       PKiKP    14 22 07.6  +7.5
LNIG   Linares          104.23 296  PFAKE            14 17 50.0  +6.2
LNIG                                LR      LR
       comp=Z,35µm,19.0s
CHAN   Chania           104.26  40  P       PP       14 22 08.3  +5.7
Z57A   Bowman           104.27 315  P       Pdif     14 17 47.3  +3.6
       baz=156
449A   Pace             104.36 308  P       Pdif     14 17 45.2  +1.0
       baz=154
ANKY   Antikythira Is   104.36  39  P       PP       14 22 04.6  +1.3
253A   Americus         104.37 311  PFAKE            14 17 50.0  +5.8
253A                                LR      LR
       comp=Z,123µm,22.0s
253A   Americus         104.37 311  P       Pdif     14 17 45.5  +1.2
       baz=154
LAST   Lasithi          104.39  41  P       PP       14 22 08.4  +4.8
Y58A   Scranton         104.47 316  PFAKE            14 18 00.0   +15
Y58A                                LR      LR
       comp=Z,42µm,21.0s
Y58A   Scranton         104.47 316  P       Pdif     14 17 46.5  +1.9
       baz=156
CEL    Celeste          104.49  32  PFAKE            14 17 50.0  +5.3
CEL                                 LR      LR
       comp=Z,87µm,21.0s
154A   Montrose         104.50 312  PFAKE            14 18 00.0   +15
154A                                LR      LR
       comp=Z,78µm,22.0s
154A   Montrose         104.50 312  P       Pdif     14 17 46.8  +2.1
       baz=155
X60A   Albert Glenn T   104.51 317  P       Pdif     14 17 46.7  +2.0
       baz=156
NPS    Neapolis         104.52  41  P       PP       14 22 08.2  +3.6
Z56A   Williston        104.53 314  PFAKE            14 18 00.0   +15
Z56A                                LR      LR
       comp=Z,39µm,20.0s
252A   Lumpkin          104.53 311  P       Pdif     14 17 46.4  +1.4
       baz=154
350A   Dozier           104.61 309  P       Pdif     14 17 46.7  +1.4
       baz=154
BRAL   Brewton          104.66 309  PFAKE            14 18 00.0   +14
BRAL                                LR      LR
       comp=Z,45µm,21.0s
BRAL   Brewton          104.66 309  P       Pdif     14 17 47.3  +1.8
       baz=154
COEN   Coen             104.67 168  PFAKE            14 18 00.0   +14
COEN                                LR      LR
       comp=Z,195µm,18.0s
Z55A   Blythe           104.70 313  P       Pdif     14 17 44.2  -1.4
       baz=155
X59A   McDuffie Farm,   104.72 317  P       Pdif     14 17 46.8  +1.2
       baz=156
V62A   Hyde County Ai   104.76 319  PFAKE            14 18 00.0   +14
V62A                                LR      LR
       comp=Z,50µm,21.0s
153A   Fort Valley      104.79 312  P       Pdif     14 17 49.2  +3.1
       baz=154
Y57A   Sumter           104.81 315  PFAKE            14 18 00.0   +14
Y57A                                LR      LR
       comp=Z,28µm,21.0s
PYL    PYLOS            104.84  37  P       PP       14 22 09.9  +3.0
W60A   Pink Hill        104.86 318  P       PKiKP    14 22 03.0  +1.7
       baz=156
251A   Midway           104.87 310  P       PKiKP    14 22 03.0  +1.6
       baz=154
349A   Repton           104.87 309  P       PKiKP    14 22 03.0  +1.6
       baz=154
Y56A   Pelion           104.93 314  P       PKiKP    14 22 03.5  +2.1
       baz=155
X58A   Rowland          104.95 316  PFAKE            14 18 00.0   +13
X58A                                LR      LR
       comp=Z,25µm,21.0s
X58A   Rowland          104.95 316  P       PKiKP    14 22 03.5  +2.1
       baz=156
Z54A   Sparta           104.97 313  P       PKiKP    14 22 01.2  -0.3
       baz=155
250A   Grady            105.09 310  PFAKE            14 22 10.0  +8.2
250A                                LR      LR
       comp=Z,58µm,20.0s
250A   Grady            105.09 310  P       PKiKP    14 22 00.8  -1.0
       baz=154
CNNC   Cliffs of the    105.09 318  PFAKE            14 22 10.0  +8.3
CNNC                                LR      LR
       comp=Z,35µm,22.0s
CNNC   Cliffs of the    105.09 318  P       PKiKP    14 22 01.7  +0.1
       baz=156
X57A   Johnson Farm,    105.12 316  P       PKiKP    14 22 01.1  -0.7
       baz=156
152A   Waverly Hall     105.13 311  PFAKE            14 22 10.0  +8.1
152A                                LR      LR
       comp=Z,126µm,22.0s
152A   Waverly Hall     105.13 311  P       PKiKP    14 22 01.1  -0.8
       baz=154
ITM    Ithomi           105.16  37  PFAKE            14 18 00.0   +12
ITM                                 LR      LR
       comp=Z,54µm,22.0s
ITM    Ithomi           105.16  37  P       PP       14 22 08.4  -0.9
V61A   Roper            105.17 319  PFAKE            14 22 10.0  +8.2
V61A                                LR      LR
       comp=Z,40µm,21.0s
V61A   Roper            105.17 319  P       PKiKP    14 22 02.0  +0.2
       baz=157
W59A   Clinton          105.20 317  P       PKiKP    14 22 03.0  +1.1
       baz=156
151A   Opelika          105.23 311  P       PKiKP    14 22 02.5  +0.4
       baz=154
Y55A   Saluda           105.25 314  P       PKiKP    14 22 02.9  +0.9
       baz=155
Z53A   Monticello       105.27 312  P       PKiKP    14 22 02.5  +0.5
       baz=154
KARP   Karpathos        105.28  42  PFAKE            14 22 10.0  +7.9
KARP                                LR      LR
       comp=Z,64µm,21.0s
ZKS    Zakynthos        105.31  36  P       PP       14 22 12.1  +1.7
W58A   Raeford          105.33 316  P       PKiKP    14 22 01.1  -1.1
       baz=156
GOGA   Godfrey          105.35 312  PFAKE            14 22 10.0  +7.8
GOGA                                LR      LR
       comp=Z,70µm,22.0s
GOGA   Godfrey          105.35 312  P       PKiKP    14 22 02.9  +0.7
       baz=154
JSC    Jenkinsville     105.35 315  PFAKE            14 22 10.0  +7.8
JSC                                 LR      LR
       comp=Z,32µm,19.0s
V60A   Jim Taylor Roa   105.37 318  PFAKE            14 22 10.0  +7.9
V60A                                LR      LR
       comp=Z,40µm,22.0s
V60A   Jim Taylor Roa   105.37 318  P       PKiKP    14 22 03.5  +1.4
       baz=156
249A   Camden           105.41 309  P       PKiKP    14 22 03.8  +1.4
       baz=154
BIRD   Birdtown, Kers   105.41 315  PFAKE            14 22 10.0  +7.7
BIRD                                LR      LR
       comp=Z,27µm,21.0s
SOEI   Soe              105.43 149  PFAKE            14 22 10.0  +6.8
SOEI                                LR      LR
       comp=Z,176µm,21.0s
X56A   White Oak        105.47 315  P       PKiKP    14 22 04.3  +1.9
       baz=155
VLX    Vlachokerasia    105.47  38  P       PP       14 22 10.3  -1.4
Y54A   Tignall          105.47 313  P       PKiKP    14 22 03.9  +1.5
       baz=155
Z52A   Williamson       105.49 312  P       PKiKP    14 22 04.3  +1.8
       baz=154
150A   Eclectic         105.56 310  P       PKiKP    14 22 03.7  +1.0
       baz=154
TIP    Timpagrande      105.58  33  PFAKE            14 22 10.0  +7.4
TIP                                 LR      LR
       comp=Z,98µm,22.0s
TIP    Timpagrande      105.58  33⇑iP       Pdif     14 18 03.3   +14
TIP    Timpagrande      105.58  33⇓iP       PKiKP    14 22 12.4   +10
U61A   Possum Corner    105.62 319  PFAKE            14 22 10.0  +7.4
U61A                                LR      LR
       comp=Z,49µm,20.0s
U61A   Possum Corner    105.62 319  P       PKiKP    14 22 04.2  +1.6
       baz=157
X55A   Gracelyn & Ava   105.65 314  P       PKiKP    14 22 04.2  +1.5
       baz=155
HODGE  Hodges           105.66 314  PFAKE            14 22 10.0  +7.2
HODGE                               LR      LR
       comp=Z,46µm,21.0s
V59A   Middlesex        105.68 318  P       PKiKP    14 22 03.7  +1.0
       baz=156
KFL    Anninata         105.69  36  P       PKiKP    14 22 04.7  +2.0
W57A   Gilead           105.71 316  PFAKE            14 22 10.0  +7.2
W57A                                LR      LR
       comp=Z,35µm,20.0s
W57A   Gilead           105.71 316  P       PKiKP    14 22 04.7  +1.9
       baz=156
KRND   KRANIDI          105.71  38  P       PKiKP    14 22 06.2  +3.4
Y53A   Monroe           105.79 313  P       PKiKP    14 22 02.2  -0.8
       baz=154
149A   Jones            105.84 310  P       PKiKP    14 22 01.0  -2.1
       baz=154
DID    Didima           105.85  38  P       PKiKP    14 22 07.1  +4.0
KVTX   Kingsville       105.86 298  PFAKE            14 22 10.0  +6.7
KVTX                                LR      LR
       comp=Z,50µm,21.0s
Z51A   Franklin         105.88 311  P       PKiKP    14 22 01.5  -1.7
       baz=154
W56A   Indian Trail     105.89 315  P       PKiKP    14 22 01.6  -1.6
       baz=155
Y52A   Lilburn          105.97 312  PFAKE            14 22 10.0  +6.6
Y52A                                LR      LR
       comp=Z,47µm,22.0s
Y52A   Lilburn          105.97 312  P       PKiKP    14 22 02.1  -1.3
       baz=154
MMRI   Maumere          105.98 146  PFAKE            14 22 20.0   +16
MMRI                                LR      LR
       comp=Z,21µm,20.0s
U60A   Pendleton        105.98 319  P       PKiKP    14 22 02.6  -0.7
       baz=156
GUR    Goura            105.98  37  P       PKiKP    14 22 08.8  +5.4
X54A   Belton           105.98 314  P       PKiKP    14 22 02.6  -0.8
       baz=155
V58A   Windy Hill, Pi   106.00 317  P       PKiKP    14 22 04.3  +0.9
       baz=156
PAULI  Pauline          106.03 314  PFAKE            14 22 10.0  +6.6
PAULI                               LR      LR
       comp=Z,34µm,20.0s
AMGA   Amorgos Island   106.05  41  P       PP       14 22 14.7  -1.2
U59A   Littleton        106.08 318  PFAKE            14 22 10.0  +6.5
U59A                                LR      LR
       comp=Z,38µm,22.0s
U59A   Littleton        106.08 318  P       PKiKP    14 22 03.2  -0.3
       baz=156
Z50A   Ashland          106.10 310  PFAKE            14 22 10.0  +6.4
Z50A                                LR      LR
       comp=Z,118µm,22.0s
Z50A   Ashland          106.10 310  P       PKiKP    14 22 03.2  -0.5
       baz=154
APE    Apeiranthos      106.15  40  P       PP       14 22 20.5  +3.8
KMSC   Kings Mountain   106.16 315  PFAKE            14 22 10.0  +6.3
KMSC                                LR      LR
       comp=Z,39µm,21.0s
KMSC   Kings Mountain   106.16 315  P       PKiKP    14 22 04.1  +0.5
       baz=155
148A   Greensboro       106.17 309  P       PKiKP    14 22 02.5  -1.3
       baz=153
ARG    Arkhangelos      106.21  43  P       PP       14 22 25.8  +8.8
Z49A   Columbiana       106.27 310  P       PKiKP    14 22 06.4  +2.5
       baz=154
LKD2   Lefkada island   106.29  36  P       PP       14 22 15.6  -2.0
LRAL   Lakeview Retre   106.30 310  PFAKE            14 22 20.0   +16
LRAL                                LR      LR
       comp=Z,90µm,21.0s
LRAL   Lakeview Retre   106.30 310  P       PKiKP    14 22 06.6  +2.6
       baz=153
V57A   Coltrane Farms   106.31 316  P       PKiKP    14 22 05.7  +1.7
       baz=156
VLY    Voula,Athens     106.34  39  P       PP       14 22 15.4  -2.6
U58A   Oxford           106.36 318  P       PKiKP    14 22 04.5  +0.5
       baz=156
Y51A   Rockmart         106.36 311  P       PKiKP    14 22 06.7  +2.6
       baz=154
W54A   Cherokee Point   106.40 314  P       PKiKP    14 22 04.6  +0.5
       baz=155
ATH    Athens Observa   106.43  38  P       PP       14 22 15.1  -3.5
GSI    Gunungsitoli     106.45 119  PFAKE            14 22 20.0   +15
GSI                                 LR      LR
       comp=Z,60µm,18.0s
T60A   Surry            106.46 319  PFAKE            14 22 20.0   +16
T60A                                LR      LR
       comp=Z,55µm,20.0s
T60A   Surry            106.46 319  P       PKiKP    14 22 03.9  -0.2
       baz=156
147A   Livingston       106.46 308  PFAKE            14 22 20.0   +16
147A                                LR      LR
       comp=Z,36µm,20.0s
147A   Livingston       106.46 308  P       PKiKP    14 22 03.9  -0.3
       baz=153
V56A   Mocksville       106.48 316  PFAKE            14 22 20.0   +16
V56A                                LR      LR
       comp=Z,38µm,19.0s
V56A   Mocksville       106.48 316  P       PKiKP    14 22 04.3  +0.1
       baz=155
T59A   Double "B" Far   106.56 319  PFAKE            14 22 20.0   +16
T59A                                LR      LR
       comp=Z,36µm,22.0s
T59A   Double "B" Far   106.56 319  P       PKiKP    14 22 03.6  -0.7
       baz=156
X52A   Dahlonega        106.57 313  P       PKiKP    14 22 05.7  +1.2
       baz=154
Y50A   Piedmont         106.60 311  P       PKiKP    14 22 03.7  -0.8
       baz=154
S61A   Accomac          106.62 320  PFAKE            14 22 20.0   +16
S61A                                LR      LR
       comp=Z,50µm,22.0s
S61A   Accomac          106.62 320  P       PKiKP    14 22 02.1  -2.3
       baz=157
U57A   Blanch           106.65 317  P       PKiKP    14 22 01.7  -2.8
       baz=156
BODT   Bodrum           106.71  42  P       PKiKP    14 22 12.7  +8.0
V55A   Taylorsville     106.76 315  P       PKiKP    14 22 03.2  -1.6
       baz=155
Y49A   Blount Mountai   106.82 310  PFAKE            14 22 20.0   +15
Y49A                                LR      LR
       comp=Z,112µm,22.0s
Y49A   Blount Mountai   106.82 310  P       PKiKP    14 22 05.0   0.0
       baz=154
W53A   Cullowhee        106.82 314  P       PKiKP    14 22 05.4  +0.3
       baz=154
CSS    Mathiatis        106.86  47  PFAKE            14 22 20.0   +15
CSS                                 LR      LR
       comp=Z,62µm,18.0s
T58A   Grand View Acr   106.86 318  P       PKiKP    14 22 02.5  -2.4
       baz=156
X51A   Calhoun          106.89 312  PFAKE            14 22 20.0   +15
X51A                                LR      LR
       comp=Z,50µm,22.0s
KEK    Kerkira          106.91  35  P       PKiKP    14 22 16.2   +11
FETY   Fethiye          106.91  43  P       PKiKP    14 22 04.0  -1.0
U56A   King             106.93 316  P       PKiKP    14 22 05.6  +0.5
       baz=155
VBMS   Vicksburg        106.93 306  PFAKE            14 22 20.0   +15
VBMS                                LR      LR
       comp=Z,36µm,22.0s
VBMS   Vicksburg        106.93 306  P       PKiKP    14 22 03.9  -1.3
       baz=152
V54A   Nebo             106.94 315  P       PKiKP    14 22 04.8  -0.4
       baz=155
S60A   Water View       106.95 320  P       PKiKP    14 22 02.9  -2.1
       baz=156
AGG    Agios Georgios   106.98  37  PFAKE            14 22 20.0   +15
AGG                                 LR      LR
       comp=Z,50µm,20.0s
BKNI   Bangkinang       107.02 123  PFAKE            14 22 20.0   +14
BKNI                                LR      LR
       comp=Z,46µm,22.0s
W52A   Murphy           107.02 313  PFAKE            14 22 20.0   +15
W52A                                LR      LR
       comp=Z,82µm,22.0s
W52A   Murphy           107.02 313  P       PKiKP    14 22 05.3   0.0
       baz=154
X50B   Fort Payne       107.08 311  P       PKiKP    14 22 07.1  +1.7
       baz=154
HKT    Hockley          107.08 301  PFAKE            14 22 20.0   +15
HKT                                 LR      LR
       comp=Z,37µm,22.0s
R61A   Willards         107.11 321  P       PKiKP    14 22 07.2  +1.9
       baz=157
SRN    Sarande          107.12  35 iP       PKiKP    14 22 18.1   +13
T57A   Hurt             107.14 317  PFAKE            14 22 20.0   +15
T57A                                LR      LR
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	comp=Z,41µm,22.0s						
T57A	Hurt	107.14	317	P	PKiKP	14 22 05.6	+0.1
	baz=156						
V53A	Saluda	107.15	314	PFAKE		14 22 20.0	+14
V53A				LR	LR		
	comp=Z,45µm,22.0s						
V53A	Saluda	107.15	314	P	PKiKP	14 22 05.6	0.0
	baz=154						
Y48A	Jasper	107.15	310	P	PKiKP	14 22 05.6	0.0
	baz=153						
833A	Chaparral WMA,	107.18	297	PFAKE		14 22 20.0	+14
833A				LR	LR		
	comp=Z,27µm,21.0s						
833A	Chaparral WMA,	107.18	297	P	PKiKP	14 22 06.4	+0.7
	baz=151						
S59A	Mechanicsville	107.20	319	P	PKiKP	14 22 04.7	-0.8
	baz=156						
U55A	TA2, Sparta	107.29	316	P	PKiKP	14 22 05.8	0.0
	baz=155						
S58A	Poland Farm, P	107.31	318	PFAKE		14 22 20.0	+14
S58A				LR	LR		
	comp=Z,28µm,22.0s						
S58A	Poland Farm, P	107.31	318	P	PKiKP	14 22 04.2	-1.5
	baz=156						
X49A	Woodville	107.37	311	P	PKiKP	14 22 06.8	+0.9
	baz=153						
W51A	Cleveland	107.38	312	P	PKiKP	14 22 06.8	+0.9
	baz=154						
T56A	Rocky Mt	107.43	317	P	PKiKP	14 22 04.4	-1.6
	baz=155						
R60A	Leonardtown, M	107.44	320	P	PKiKP	14 22 07.4	+1.5
	baz=156						
TKL	Tuckaleechee C	107.48	313	PP	PP	14 22 25.6	-0.7
	comp=Z,1.8nm,1.0s,baz=162,slow=9.9,SNR=4.5						
UOSS	Minazif	107.50	70	PFAKE		14 22 20.0	+14
UOSS				LR	LR		
	comp=Z,72µm,18.0s						
TPE	Tepelena	107.51	35	P	PP	14 22 25.0	-1.5
TPE	Tepelena	107.51	35	*i* P	PP	14 22 25.1	-1.4
VLO	Vlora	107.53	34	*i* P	PP	14 22 26.0	-0.6
R59A	King George, V	107.55	319	P	PKiKP	14 22 05.9	-0.2
	baz=156						
CPCT	Cooper Cave	107.56	313	PFAKE		14 22 20.0	+14
CPCT				LR	LR		
	comp=Z,85µm,22.0s						
XOR	Xorichti	107.56	37	P	PP	14 22 21.3	-5.6
KPRO	Kipourio	107.57	36	P	PP	14 22 26.1	-1.0
U54A	Nelsons Funny	107.57	315	PFAKE		14 22 20.0	+14
U54A				LR	LR		
	comp=Z,26µm,21.0s						
U54A	Nelsons Funny	107.57	315	P	PKiKP	14 22 07.2	+0.8
	baz=155						
R58B	Mineral	107.57	319	PFAKE		14 22 20.0	+14
R58B				LR	LR		
	comp=Z,48µm,20.0s						
R58B	Mineral	107.57	319	P	PKiKP	14 22 07.2	+1.0
	baz=156						
V52A	Sevierville	107.58	313	PFAKE		14 22 20.0	+14
V52A				LR	LR		
	comp=Z,55µm,22.0s						
V52A	Sevierville	107.58	313	P	PKiKP	14 22 07.6	+1.3
	baz=154						
X48A	Hartselle	107.58	310	PFAKE		14 22 20.0	+14
X48A				LR	LR		
	comp=Z,114µm,22.0s						
X48A	Hartselle	107.58	310	P	PKiKP	14 22 08.0	+1.7
	baz=153						
Q61A	Milford	107.61	321	P	PKiKP	14 22 08.1	+1.9
	baz=157						
W50A	Signal Mountai	107.62	312	PFAKE		14 22 20.0	+14
W50A				LR	LR		
	comp=Z,76µm,22.0s						
W50A	Signal Mountai	107.62	312	P	PKiKP	14 22 06.9	+0.4
	baz=154						
CBN	Corbin Frederi	107.63	319	PFAKE		14 22 20.0	+14
CBN				LR	LR		
	comp=Z,47µm,22.0s						
CBN	Corbin Frederi	107.63	319	P	PKiKP	14 22 05.6	-0.6
	baz=156						
U53A	Fall Branch	107.69	314	P	PKiKP	14 22 02.8	-3.7
	baz=154						
BLA	Blacksburg	107.72	317	PFAKE		14 22 20.0	+13
BLA				LR	LR		
	comp=Z,42µm,22.0s						
BLA	Blacksburg	107.72	317	P	PKiKP	14 22 02.5	-4.1
	baz=155						
PENT	Pentalofos	107.73	36	P	PP	14 22 26.6	-1.7
S57A	Dark Hollow, R	107.74	318	PFAKE		14 22 20.0	+13
S57A				LR	LR		
	comp=Z,36µm,20.0s						
S57A	Dark Hollow, R	107.74	318	P	PKiKP	14 22 05.4	-1.1
	baz=156						
AQU	L'Aquila	107.74	29	PFAKE		14 22 20.0	+14
AQU				LR	LR		
	comp=Z,79µm,21.0s						
AQU	L'Aquila	107.74	29	*e*P	Pdif	14 18 02.7	+3.7
T55A	Pulaski	107.76	316	P	PKiKP	14 22 04.6	-2.0
	baz=155						
V51A	Loudon	107.81	313	PFAKE		14 22 20.0	+13
V51A				LR	LR		
	comp=Z,72µm,22.0s						
V51A	Loudon	107.81	313	P	PKiKP	14 22 05.6	-1.2
	baz=154						
SWET	Sewanee	107.86	311	PFAKE		14 22 20.0	+13
SWET				LR	LR		
	comp=Z,46µm,22.0s						
S56A	Natural Bridge	107.86	317	P	PKiKP	14 22 05.6	-1.1
	baz=155						
Q60A	Greensboro	107.88	321	P	PKiKP	14 22 05.3	-1.4
	baz=157						
W49A	Belvidere	107.89	311	P	PKiKP	14 22 06.1	-0.8
	baz=153						
R58A	Rapidan	107.92	319	P	PKiKP	14 22 05.8	-1.1
	baz=156						
X47A	Russelville	107.95	310	P	PKiKP	14 22 05.8	-1.2
	baz=153						
V50A	Pikevile	107.96	312	P	PKiKP	14 22 07.5	+0.5
	baz=154						
T54A	Tazewell	107.98	316	P	PKiKP	14 22 05.4	-1.6
	baz=155						
U52A	Thorn Hill	107.99	314	P	PKiKP	14 22 06.3	-0.8
	baz=154						
Q59A	Harwood	108.01	320	P	PKiKP	14 22 07.2	+0.2
	baz=156						
LIT	Litokhoron	108.03	37	PFAKE		14 22 20.0	+13
LIT				LR	LR		
	comp=Z,49µm,21.0s						
LIT	Litokhoron	108.03	37	P	PP	14 22 28.2	-2.2
R57A	Stanardsville	108.08	318	P	PKiKP	14 22 06.5	-0.7
	baz=156						
W48A	Pulaski	108.16	311	P	PKiKP	14 22 07.9	+0.5
	baz=153						
P61A	Hammonton	108.18	322	P	PKiKP	14 22 07.5	+0.3
	baz=157						
NATX	Nacogdoches	108.18	303	PFAKE		14 22 20.0	+12
NATX				LR	LR		
	comp=Z,21µm,22.0s						
NATX	Nacogdoches	108.18	303	P	PKiKP	14 22 07.1	-0.5
	baz=151						
TZTN	Tazewell	108.19	314	PFAKE		14 22 20.0	+13
TZTN				LR	LR		
	comp=Z,38µm,20.0s						
TZTN	Tazewell	108.19	314	P	PKiKP	14 22 07.9	+0.5
	baz=154						
U51A	La Follette	108.21	313	P	PKiKP	14 22 07.6	+0.1
	baz=154						
T53A	Wise	108.23	315	P	PKiKP	14 22 07.6	0.0
	baz=154						
X46A	Booneville	108.25	309	P	PKiKP	14 22 05.5	-2.0
	baz=153						
S55A	Lewisburg	108.26	317	P	PKiKP	14 22 05.1	-2.4
	baz=155						
V49A	McMinnville	108.34	312	P	PKiKP	14 22 04.9	-2.9
	baz=153						
PSI	Prapat	108.37	119	PFAKE		14 22 20.0	+11
PSI				LR	LR		
	comp=Z,63µm,20.0s						
PRK	Paraskevi	108.38	40	P	PP	14 22 24.2	-8.7
Q58A	Fox Den Farm,	108.40	319	P	PKiKP	14 22 06.7	-1.0
	baz=156						
MANT	Manisa	108.42	42	PFAKE		14 22 20.0	+12
MANT				LR	LR		
	comp=Z,90µm,20.0s						
PLAL	Pickwick Lake	108.44	310	PFAKE		14 22 20.0	+12
PLAL				LR	LR		
	comp=Z,94µm,22.0s						
TIR	Tirane	108.45	34	PFAKE		14 22 20.0	+12
TIR				LR	LR		
	comp=Z,54µm,20.0s						
TIR	Tirane	108.45	34	*i* P	PP	14 22 33.7	+0.4
ISP	Isparta	108.46	44	PFAKE		14 22 20.0	+12
ISP				LR	LR		
	comp=Z,28µm,21.0s						
R56A	Bull Pasture M	108.47	318	P	PKiKP	14 22 06.0	-2.0
	baz=155						
KULA	Kula-Manisa	108.47	42	P	PP	14 22 23.1	-11
O61A	Allentown	108.50	322	P	PKiKP	14 22 07.3	-0.6
	baz=157						
W47A	Westpoint	108.50	310	P	PKiKP	14 22 06.0	-2.0
	baz=153						
T52A	Hallie	108.50	315	PFAKE		14 22 20.0	+12
T52A				LR	LR		
	comp=Z,42µm,22.0s						
T52A	Hallie	108.50	315	P	PKiKP	14 22 05.2	-2.8
	baz=154						
OXF	Oxford	108.53	308	PFAKE		14 22 20.0	+12
OXF				LR	LR		
	comp=Z,36µm,22.0s						
OXF	Oxford	108.53	308	P	PKiKP	14 22 06.1	-2.0
	baz=152						
U50A	Jamestown	108.54	313	P	PKiKP	14 22 06.5	-1.6
	baz=154						
435B	Jarrell	108.54	300	PFAKE		14 22 20.0	+12
435B				LR	LR		
	comp=Z,34µm,22.0s						
435B	Jarrell	108.54	300	P	PKiKP	14 22 09.0	+0.7
	baz=151						
S54A	Dingess, Beckl	108.55	316	P	PKiKP	14 22 08.2	+0.1
	baz=155						
P60A	Greenville	108.56	321	P	PKiKP	14 22 10.3	+2.3
	baz=157						
SDMD	Soldier's Deli	108.57	320	PFAKE		14 22 20.0	+12
SDMD				LR	LR		
	comp=Z,27µm,21.0s						
R55A	Marlinton	108.59	317	PFAKE		14 22 20.0	+12
R55A				LR	LR		
	comp=Z,31µm,22.0s						
R55A	Marlinton	108.59	317	P	PKiKP	14 22 08.3	+0.1
	baz=155						
P59A	Jarrettsville	108.62	321	P	PKiKP	14 22 09.2	+1.1
	baz=156						
V48A	Smith Brothers	108.65	311	PFAKE		14 22 20.0	+12
V48A				LR	LR		
	comp=Z,70µm,22.0s						
V48A	Smith Brothers	108.65	311	P	PKiKP	14 22 08.4	+0.1
	baz=153						
HORT	Hortiatis	108.67	37	P	PP	14 22 33.2	-1.9
W46A	Michie	108.69	309	P	PKiKP	14 22 06.8	-1.6
	baz=153						
SSB	Saint Sauveur	108.70	22	PFAKE		14 22 20.0	+12
SSB				LR	LR		
	comp=Z,84µm,20.0s						
T51A	Gray	108.71	314	P	PKiKP	14 22 05.6	-2.8
	baz=154						
Q57A	Strasburg	108.72	319	P	PKiKP	14 22 06.8	-1.5
	baz=156						
S53A	Williamson	108.72	315	P	PKiKP	14 22 06.8	-1.6
	baz=154						
KAPI	Kappang	108.73	143	PFAKE		14 22 20.0	+11
KAPI				LR	LR		
	comp=Z,30µm,22.0s						
Z41A	Richland Creek	108.75	305	PFAKE		14 22 20.0	+11
Z41A				LR	LR		
	comp=Z,28µm,22.0s						
Z41A	Richland Creek	108.75	305	P	PKiKP	14 22 07.0	-1.5
	baz=152						
SAUI	Saumlaki	108.75	155	PFAKE		14 22 20.0	+11
SAUI				LR	LR		
	comp=Z,146µm,21.0s						
HPIG		108.75	292	PFAKE		14 22 20.0	+11
HPIG				LR	LR		
	comp=Z,49µm,21.0s						
VLC	Villacollemand	108.78	26	PFAKE		14 22 20.0	+12
VLC				LR	LR		
	comp=Z,131µm,21.0s						
P58A	Pank, Wackersv	108.78	320	P	PKiKP	14 22 07.5	-0.9
	baz=156						
CLTN	Cedars of Leba	108.78	311	PFAKE		14 22 20.0	+11
CLTN				LR	LR		
	comp=Z,36µm,22.0s						
R54A	Victor	108.79	317	P	PKiKP	14 22 08.1	-0.4
	baz=155						
BNI	Bardonecchia	108.88	23	PFAKE		14 22 20.0	+11
BNI				LR	LR		
	comp=Z,125µm,19.0s						
PHP	Peshkopia	108.92	34	*i* P	PP	14 22 36.8	-0.1
CCAR	Cane Creek	108.92	306	PFAKE		14 22 20.0	+11
CCAR				LR	LR		
	comp=Z,52µm,20.0s						
MVL	Millersville	108.95	321	PFAKE		14 22 20.0	+11
MVL				LR	LR		
	comp=Z,69µm,22.0s						
O60A	Telford	108.96	322	P	PKiKP	14 22 08.2	-0.5
	baz=157						
U49A	Red Boiling Sp	108.96	312	P	PKiKP	14 22 07.4	-1.4
	baz=153						
CPNY	Central Park	108.96	323	PFAKE		14 22 20.0	+11
CPNY				LR	LR		
	comp=Z,54µm,22.0s						
Q56A	Snyder Ridge,	108.98	318	P	PKiKP	14 22 08.5	-0.4
	baz=155						
V47A	Nunnelly	108.99	310	P	PKiKP	14 22 10.1	+1.1
	baz=153						
P57A	Homestead Farm	109.00	319	P	PKiKP	14 22 08.9	+0.1
	baz=156						
BRNJ	Basking Ridge	109.04	322	PFAKE		14 22 20.0	+11
BRNJ				LR	LR		
	comp=Z,52µm,20.0s						
DRME	Dracevica, Mon	109.04	33	*e*P	Pdif	14 18 08.6	+3.9
S52A	Salyersville	109.05	315	P	PKiKP	14 22 07.6	-1.4
	baz=154						
T50A	Nancy	109.08	313	P	PKiKP	14 22 08.8	-0.2
	baz=154						
X43A	Marvell	109.10	307	PFAKE		14 22 20.0	+11
X43A				LR	LR		
	comp=Z,38µm,20.0s						
X43A	Marvell	109.10	307	P	PKiKP	14 22 08.3	-0.9
	baz=152						
PAL	Palisades	109.14	323	PFAKE		14 22 20.0	+11
PAL				LR	LR		
	comp=Z,56µm,22.0s						
PAL	Palisades	109.14	323	P	PKiKP	14 22 09.6	+0.6
	baz=157						
YLE	Yale	109.15	324	PFAKE		14 22 20.0	+11
YLE				LR	LR		
	comp=Z,78µm,22.0s						
VAY	Valandovo	109.18	36	*i* P	PP	14 22 31.8	-6.9
V46A	Holladay	109.18	310	P	PKiKP	14 22 10.4	+1.2
	baz=153						
O59A	Robesonia	109.19	321	P	PKiKP	14 22 08.7	-0.5
	baz=156						
S51A	Beattyville	109.19	314	PFAKE		14 22 20.0	+11
S51A				LR	LR		
	comp=Z,38µm,19.0s						
S51A	Beattyville	109.19	314	P	PKiKP	14 22 09.3	0.0
	baz=154						
LUPA	Lehigh Univers	109.20	322	PFAKE		14 22 20.0	+11
LUPA				LR	LR		
	comp=Z,4µm,22.0s						
JCT	Junction City	109.22	298	PFAKE		14 22 20.0	+10
JCT				LR	LR		
	comp=Z,26µm,22.0s						
JCT	Junction City	109.22	298	P	PKiKP	14 22 09.1	-0.5
	baz=150						
Q55A	Buckhannon	109.23	318	P	PKiKP	14 22 10.1	+0.8
	baz=155						
U48A	Cassie Pea, Po	109.23	312	P	PKiKP	14 22 09.1	-0.2
	baz=153						
O58A	Lewisberry	109.24	320	P	PKiKP	14 22 09.0	-0.3
	baz=156						
BALB	Balikesir	109.25	41	PFAKE		14 22 20.0	+11
BALB				LR	LR		
	comp=Z,75µm,20.0s						
WLAR	White Oak Lake	109.25	305	PFAKE		14 22 20.0	+11
WLAR				LR	LR		
	comp=Z,25µm,21.0s						
R53A	Hurricane	109.25	316	PFAKE		14 22 20.0	+11
R53A				LR	LR		
	comp=Z,39µm,22.0s						
R53A	Hurricane	109.25	316	P	PKiKP	14 22 08.8	-0.6
	baz=154						
MET	Memphis--Engin	109.27	308	PFAKE		14 22 20.0	+11
MET				LR	LR		
	comp=Z,40µm,22.0s						
PAGS	Pennsylvania G	109.28	321	PFAKE		14 22 20.0	+11
PAGS				LR	LR		
	comp=Z,65µm,22.0s						
P56A	Dayton Farm, R	109.28	319	P	PKiKP	14 22 09.6	+0.3
	baz=155						
PDG	Podgorica	109.29	33	⇑ *i*P	Pdif	14 18 16.4	+11
PDG	Podgorica	109.29	33	*e*P	Pdif	14 18 08.2	+2.4
TTG	Podgorica	109.29	33	PFAKE		14 22 20.0	+11
TTG				LR	LR		
	comp=Z,56µm,21.0s						
STON	Ston	109.29	32	*e*P	Pdif	14 18 11.5	+5.7
BRYW	Bryant College	109.31	325	PFAKE		14 22 20.0	+11
BRYW				LR	LR		
	comp=Z,63µm,22.0s						
TREB	Trebinje	109.32	33	*e*P	Pdif	14 18 17.6	+12
WVT	Waverly	109.37	310	PFAKE		14 22 20.0	+10
WVT				LR	LR		
	comp=Z,81µm,21.0s						
WVT	Waverly	109.37	310	P	PKiKP	14 22 09.8	+0.2
	baz=153						
N60A	Cedar Hill Far	109.37	322	P	PKiKP	14 22 09.8	+0.3
	baz=157						
M61A	Granite Spring	109.39	323	P	PKiKP	14 22 10.4	+1.0
	baz=157						
T49A	Edmonton	109.40	313	PFAKE		14 22 20.0	+10
T49A				LR	LR		
	comp=Z,59µm,22.0s						
T49A	Edmonton	109.40	313	P	PKiKP	14 22 09.6	0.0
	baz=153						
ODNJ	Ogdensburg	109.42	323	PFAKE		14 22 20.0	+10
ODNJ				LR	LR		
	comp=Z,56µm,22.0s						
U47A	Clarksville	109.45	311	P	PKiKP	14 22 10.1	+0.4
	baz=153						
BCI	Bajram Curri	109.45	34	*i* P	PP	14 22 42.0	+1.4
KAVA	Kavala	109.45	38	P	PKiKP	14 22 24.6	+15
SKO	Skopje	109.46	35	*i* P	PP	14 22 35.7	-5.0
Q54A	Coxs Mills	109.46	317	PFAKE		14 22 20.0	+10
Q54A				LR	LR		
	comp=Z,34µm,21.0s						
Q54A	Coxs Mills	109.46	317	P	PKiKP	14 22 10.6	+0.9
	baz=155						
MYKOM	Kota Tinggi	109.49	125	PFAKE		14 22 20.0	+9.4
MYKOM				LR	LR		
	comp=Z,42µm,22.0s						
R52A	Catlettsburg	109.49	315	P	PKiKP	14 22 09.8	0.0
	baz=154						
PMG	Port Moresby	109.51	172	PFAKE		14 22 20.0	+9.3
PMG				LR	LR		
	comp=Z,97µm,20.0s						
S50A	Richmond	109.51	314	P	PKiKP	14 22 09.5	-0.4
	baz=154						
BRY	Bratogost	109.54	33	*e*P	Pdif	14 18 14.6	+7.5
WHTX	Lake Whitney,	109.54	301	PFAKE		14 22 20.0	+10
WHTX				LR	LR		
	comp=Z,29µm,22.0s						
WHTX	Lake Whitney,	109.54	301	P	PKiKP	14 22 08.5	-1.6
	baz=150						
O57A	Amberson	109.55	320	P	PKiKP	14 22 09.1	-0.7
	baz=156						
NVR	Nevrokopi	109.58	37	P	PKiKP	14 22 24.9	+15
Q53A	Leroy	109.58	316	P	PKiKP	14 22 10.4	+0.4
	baz=154						
BCX	Boston College	109.60	326	PFAKE		14 22 20.0	+10
BCX				LR	LR		
	comp=Z,50µm,22.0s						
P55A	Reedsville	109.61	318	P	PKiKP	14 22 09.3	-0.7
	baz=155						
N59A	State Game Lan	109.62	322	PFAKE		14 22 20.0	+10
N59A				LR	LR		
	comp=Z,47µm,21.0s						
N59A	State Game Lan	109.62	322	P	PKiKP	14 22 08.1	-1.9
	baz=156						
WES	Weston	109.69	325	PFAKE		14 22 20.0	+10
WES				LR	LR		
	comp=Z,45µm,20.0s						
KSCT	Kent School, K	109.69	324	PFAKE		14 22 20.0	+10
KSCT				LR	LR		
	comp=Z,66µm,22.0s						
LHMI	Lhok Sumawe	109.70	116	PFAKE		14 22 20.0	+9.0
LHMI				LR	LR		
	comp=Z,63µm,22.0s						
U46A	Springville	109.70	310	P	PKiKP	14 22 09.9	-0.3
	baz=152						
T48A	Bowling Green	109.71	312	P	PKiKP	14 22 09.5	-0.7
	baz=153						
HALT	Halls	109.74	309	PFAKE		14 22 20.0	+10
HALT				LR	LR		
	comp=Z,88µm,21.0s						
MCWV	Mont Chateau	109.75	318	PFAKE		14 22 20.0	+10
MCWV				LR	LR		
	comp=Z,14µm,22.0s						
MCWV	Mont Chateau	109.75	318	P	PKiKP	14 22 08.8	-1.4
	baz=155						
R51A	Hillsboro	109.78	315	P	PKiKP	14 22 11.2	+0.8
	baz=154						
ALN	Alexandroupoli	109.82	39	PFAKE		14 22 20.0	+10
ALN				LR	LR		
	comp=Z,18µm,21.0s						
N58A	Sunbury	109.83	321	P	PKiKP	14 22 10.6	+0.3
	baz=156						
X40A	Basin Creek Fa	109.84	306	PFAKE		14 22 20.0	+9.4
X40A				LR	LR		
	comp=Z,47µm,22.0s						
X40A	Basin Creek Fa	109.84	306	P	PKiKP	14 22 08.9	-1.6
	baz=151						
HAL	Halifax	109.84	332	PFAKE		14 22 20.0	+10
HAL				LR	LR		
	comp=Z,59µm,22.0s						
HRV	Adam Dziewonsk	109.86	325	PFAKE		14 22 20.0	+10
HRV				LR	LR		
	comp=Z,57µm,22.0s						
HRV	Adam Dziewonsk	109.86	325	P	PKiKP	14 22 09.8	-0.5
	baz=158						
QUA2	Belchertown	109.87	325	PFAKE		14 22 20.0	+10
QUA2				LR	LR		
	comp=Z,49µm,22.0s						
O56A	Blue Knob Stat	109.89	319	PFAKE		14 22 20.0	+9.5
O56A				LR	LR		
	comp=Z,46µm,20.0s						
O56A	Blue Knob Stat	109.89	319	P	PKiKP	14 22 09.9	-0.7
	baz=155						
RDO	Rodhopi	109.89	38	P	PP	14 22 32.0	-12
UALR	University of	109.90	306	PFAKE		14 22 20.0	+9.3
UALR				LR	LR		
	comp=Z,39µm,20.0s						
S49A	Springfield	109.92	313	P	PKiKP	14 22 09.5	-1.1
	baz=153						
TXAR	Lajitas Array	109.92	295	PKiKP	PKiKP	14 22 09.8	-1.3
	comp=Z,6.8nm,0.9s,baz=158,slow=4.0,SNR=7.5						
TXAR				PKKPbc	PKKPbc	14 33 11.7	-0.1
	comp=Z,3.9nm,1.1s,baz=316,slow=2.5,SNR=3.0						
Q52A	Bidwell	109.92	316	P	PKiKP	14 22 09.1	-1.5
	baz=154						
HBAR	Harrisburg	109.93	308	PFAKE		14 22 20.0	+9.3
HBAR				LR	LR		
	comp=Z,38µm,20.0s						
SSPA	Standing Stone	110.01	320	PFAKE		14 22 20.0	+9.3
SSPA				LR	LR		
	comp=Z,50µm,20.0s						
SSPA	Standing Stone	110.01	320	P	PKiKP	14 22 10.9	+0.3
	baz=156						
N57A	Milroy	110.02	320	P	PKiKP	14 22 11.2	+0.5
	baz=156						
R50A	Paris	110.02	314	PFAKE		14 22 20.0	+9.2
R50A				LR	LR		
	comp=Z,31µm,18.0s						
R50A	Paris	110.02	314	P	PKiKP	14 22 08.9	-1.9
	baz=154						
GLAT	Glass	110.04	309	PFAKE		14 22 20.0	+9.1
GLAT				LR	LR		
	comp=Z,81µm,21.0s						
GNAR	Gosnell	110.04	309	PFAKE		14 22 20.0	+9.1
GNAR				LR	LR		
	comp=Z,88µm,21.0s						
O55A	Ligonier	110.07	319	P	PKiKP	14 22 11.5	+0.7
	baz=155						
S48A	Wiedeman Farm,	110.08	312	P	PKiKP	14 22 10.2	-0.7
	baz=153						
M59A	Waymart	110.09	322	P	PKiKP	14 22 09.0	-1.8
	baz=156						
P53A	Whipple	110.10	317	PFAKE		14 22 20.0	+9.1
P53A				LR	LR		
	comp=Z,30µm,20.0s						
P53A	Whipple	110.10	317	P	PKiKP	14 22 11.6	+0.7

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      baz=154
GBN   Guysborough      110.11 334  PFAKE                14 22 20.0 +9.3
GBN                                LR         LR
      comp=Z,46µm,20.0s
MIAR  Mount Ida        110.18 305  PFAKE                14 22 20.0 +8.8
MIAR                               LR         LR
      comp=Z,33µm,22.0s
MIAR  Mount Ida        110.18 305  P          PKiKP     14 22 12.5 +1.3
      baz=151
T46A  Princeton        110.20 311  P          PKiKP     14 22 11.7 +0.6
      baz=152
KSPA  Keystone Colle   110.20 322  PFAKE                14 22 20.0 +9.0
KSPA                               LR         LR
      comp=Z,48µm,20.0s
W41B  Gary Mavity, V   110.21 307  PFAKE                14 22 20.0 +8.8
W41B                               LR         LR
      comp=Z,26µm,20.0s
W41B  Gary Mavity, V   110.21 307  P          PKiKP     14 22 10.1  -1.2
      baz=151
M58A  Price's Panora   110.24 321  P          PKiKP     14 22 13.9 +2.7
      baz=156
SENIN Lac Senin/Sane   110.26  23  PFAKE                14 22 20.0 +8.8
SENIN                              LR         LR
      comp=Z,161µm,19.0s
PVMO  Portageville     110.32 309  PFAKE                14 22 20.0 +8.6
PVMO                               LR         LR
      comp=Z,97µm,22.0s
S47A  Hartford         110.32 312  P          PKiKP     14 22 11.9 +0.6
      baz=153
WHAR  Wooly Hollow     110.33 307  PFAKE                14 22 20.0 +8.5
WHAR                               LR         LR
      comp=Z,36µm,22.0s
R49A  Shelbyville      110.33 313  PFAKE                14 22 20.0 +8.6
R49A                               LR         LR
      comp=Z,41µm,22.0s
R49A  Shelbyville      110.33 313  P          PKiKP     14 22 12.0 +0.6
      baz=153
Q51A  Peebles          110.35 315  PFAKE                14 22 20.0 +8.6
Q51A                               LR         LR
      comp=Z,32µm,21.0s
Q51A  Peebles          110.35 315  P          PKiKP     14 22 11.6 +0.2
      baz=154
N56A  West Decatur     110.40 320  P          PKiKP     14 22 12.3 +0.9
      baz=155
O54A  Avella           110.40 318  P          PKiKP     14 22 11.9 +0.5
      baz=155
Q50A  Georgetown       110.41 315  P          PKiKP     14 22 12.7 +1.3
      baz=154
POO   Poona            110.41  89 eP          PKiKP     14 22 10.7  -1.5
RUDO  Rudo             110.43  33 eP          Pdif      14 18 21.9  +11
T45A  Paducah          110.46 310  PFAKE                14 22 20.0 +8.4
T45A                               LR         LR
      comp=Z,76µm,22.0s
T45A  Paducah          110.46 310  P          PKiKP     14 22 12.2 +0.6
      baz=152
P52A  Corning          110.48 316  P          PKiKP     14 22 11.9 +0.3
      baz=154
N55A  Marion Center    110.49 319  PFAKE                14 22 20.0 +8.4
N55A                               LR         LR
      comp=Z,41µm,20.0s
N55A  Marion Center    110.49 319  P          PKiKP     14 22 12.1 +0.5
      baz=155
PARMO Parma            110.56 309  PFAKE                14 22 20.0 +8.2
PARMO                              LR         LR
      comp=Z,95µm,22.0s
VTS   Vitosha          110.57  36  PFAKE                14 22 20.0 +8.1
VTS                                LR         LR
      comp=Z,55µm,21.0s
P51A  Williamsport     110.66 316  PFAKE                14 22 20.0 +8.1
P51A                               LR         LR
      comp=Z,22µm,22.0s
P51A  Williamsport     110.66 316  P          PKiKP     14 22 12.8 +0.9
      baz=154
TRY   Troy             110.66 324  PFAKE                14 22 20.0 +8.2
TRY                                LR         LR
      comp=Z,66µm,22.0s
BBLS  Lazi&#263;i      110.67  33 eP          Pdif      14 18 16.0 +4.0
WCI   Wyandotte Cave   110.67 313  PFAKE                14 22 20.0 +8.0
WCI                                LR         LR
      comp=Z,65µm,22.0s
WCI   Wyandotte Cave   110.67 313  P          PKiKP     14 22 12.1   0.0
      baz=153
L58A  Harry Jones Me   110.67 322  P          PKiKP     14 22 12.1 +0.1
      baz=156
R48A  Northridge Ran   110.67 313  P          PKiKP     14 22 12.1   0.0
      baz=153
S46A  Don Dixon Farm   110.70 311  P          PKiKP     14 22 12.5 +0.4
      baz=152
O53A  New Philadelph   110.73 317  P          PKiKP     14 22 12.2 +0.1
      baz=154
HAPS  Han Pijesak,Bl   110.75  32 eP          Pdif      14 18 19.7 +7.3
TUE   Stuetta          110.77  25  PFAKE                14 22 20.0 +7.8
TUE                                LR         LR
      comp=Z,62µm,20.0s
IPM   Ipoh             110.77 121  PFAKE                14 22 20.0 +7.0
IPM                                LR         LR
      comp=Z,43µm,20.0s
FFD   Franklin Falls   110.78 326  PFAKE                14 22 20.0 +8.0
FFD                                LR         LR
      comp=Z,58µm,22.0s
FCAR  Ozark Folk Cen   110.79 307  PFAKE                14 22 20.0 +7.7
FCAR                               LR         LR
      comp=Z,79µm,22.0s
RIY   Rijeka           110.81  29 eP          Pdif      14 18 18.3 +5.8
O52A  Adamsville       110.82 317  PFAKE                14 22 20.0 +7.8
O52A                               LR         LR
      comp=Z,27µm,20.0s
O52A  Adamsville       110.82 317  P          PKiKP     14 22 10.0  -2.3
      baz=154
W39A  Magazine         110.83 305  PFAKE                14 22 20.0 +7.6
W39A                               LR         LR
      comp=Z,52µm,22.0s
W39A  Magazine         110.83 305  P          PKiKP     14 22 11.7  -0.8
      baz=151
EMMW  East Machias     110.84 329  PFAKE                14 22 20.0 +7.9
EMMW                               LR         LR
      comp=Z,44µm,21.0s
BINY  Binghamton       110.86 322  PFAKE                14 22 20.0 +7.7
BINY                               LR         LR
      comp=Z,53µm,21.0s
BINY  Binghamton       110.86 322  P          PKiKP     14 22 09.6  -2.6
      baz=156
Q49A  Aurora           110.87 314  P          PKiKP     14 22 11.4  -0.9
      baz=153
M56A  Emporium         110.88 320  P          PKiKP     14 22 12.0  -0.3
      baz=155
PBMO  Poplar Bluff     110.92 309  PFAKE                14 22 20.0 +7.5
PBMO                               LR         LR
      comp=Z,92µm,21.0s
BLY   Banja Luka       110.92  31 eP          Pdif      14 18 14.1 +1.1
USIN  University of    110.94 311  PFAKE                14 22 20.0 +7.5
USIN                               LR         LR
      comp=Z,42µm,22.0s
X37A  Clayton          110.94 304  PFAKE                14 22 20.0 +7.4
X37A                               LR         LR
      comp=Z,21µm,22.0s
XMAS  Kiritimati       110.96 232  PFAKE                14 22 20.0 +6.6
XMAS                               LR         LR
      comp=Z,80µm,20.0s
CLF   Chambon-Foret    110.97  19  PFAKE                14 22 20.0 +7.8
CLF                                LR         LR
      comp=Z,110µm,20.0s
N54A  Moraine State    110.98 319  PFAKE                14 22 20.0 +7.5
N54A                               LR         LR
      comp=Z,36µm,20.0s
N54A  Moraine State    110.98 319  P          PKiKP     14 22 12.6 +0.1
      baz=155
ABTX  Abilene, Hawle   111.01 299  PFAKE                14 22 20.0 +7.1
ABTX                               LR         LR
      comp=Z,29µm,22.0s
ABTX  Abilene, Hawle   111.01 299  P          PKiKP     14 22 11.7  -1.2
      baz=150
P50A  Jamestown        111.03 315  P          PKiKP     14 22 12.5  -0.1
      baz=154
DIVS  Divibare         111.04  33 eP          Pdif      14 18 19.4 +5.7
M55A  Ridgway          111.05 320  P          PKiKP     14 22 12.6  -0.1
      baz=155
GGN   Saint George     111.07 330  PFAKE                14 22 20.0 +7.5
GGN                                LR         LR
      comp=Z,38µm,22.0s
ANTO  Ankara           111.07  44  PFAKE                14 22 20.0 +7.2
ANTO                               LR         LR
      comp=Z,41µm,21.0s
Q48A  North Vernon     111.10 313  P          PKiKP     14 22 12.9 +0.1
      baz=153
FUORN Ofenpass-Fuorn   111.10  25  PFAKE                14 22 20.0 +7.1
FUORN                              LR         LR
      comp=Z,103µm,21.0s
O51A  Pataskala        111.10 316  P          PKiKP     14 22 12.1  -0.7
      baz=154
N53A  Lisbon           111.11 318  PFAKE                14 22 20.0 +7.2
N53A                               LR         LR
      comp=Z,31µm,22.0s
N53A  Lisbon           111.11 318  P          PKiKP     14 22 12.7  -0.1
      baz=154
HNH   Hanover          111.17 325  PFAKE                14 22 20.0 +7.2
HNH                                LR         LR
      comp=Z,54µm,22.0s
CEY   Cerknica         111.18  29 eP          Pdif      14 18 18.2 +4.0
BR101 Keskin Array S   111.23  45 ePKiKP      PKiKP     14 22 12.3  -0.9
BR101                             ePKKPbc     PKKPbc    14 33 08.9 +1.1
BRTR  Keskin Array B   111.23  45  PKiKP      PKiKP     14 22 12.3  -0.9
      comp=Z,2.8nm,0.8s,baz=162,slow=2.4,SNR=3.5
BRTR                               PKKPbc     PKKPbc    14 33 08.9 +1.1
      comp=Z,1.5nm,0.8s,baz=37,slow=3.6,SNR=2.7
WVL   Waterville       111.26 328  PFAKE                14 22 20.0 +7.1
WVL                                LR         LR
      comp=Z,62µm,22.0s
ACCN  Adirondack Com   111.27 324  PFAKE                14 22 20.0 +7.0
ACCN                               LR         LR
      comp=Z,63µm,22.0s
LMN   Caledonia Moun   111.27 331  PFAKE                14 22 20.0 +7.1
LMN                                LR         LR
      comp=Z,52µm,22.0s
P49A  Miami Univ. Ec   111.28 314  P          PKiKP     14 22 14.4 +1.3
      baz=153
S44A  Carbondale       111.28 310  P          PKiKP     14 22 13.2   0.0
      baz=152
KNTN  Kanton           111.30 216  PFAKE                14 22 30.0  +16
KNTN                               LR         LR
      comp=Z,29µm,21.0s
ACSO  Alum Creek Sta   111.31 316  PFAKE                14 22 20.0 +6.8
ACSO                               LR         LR
      comp=Z,28µm,21.0s
ACSO  Alum Creek Sta   111.31 316  P          PKiKP     14 22 14.7 +1.5
      baz=154
KULM  Kulim            111.34 120  PFAKE                14 22 30.0  +16
KULM                               LR         LR
      comp=Z,33µm,19.0s
M54A  Oil Creek Stat   111.37 319  PFAKE                14 22 20.0 +6.7
M54A                               LR         LR
      comp=Z,34µm,20.0s
M54A  Oil Creek Stat   111.37 319  P          PKiKP     14 22 13.8 +0.5
      baz=155
N52A  McGinn's Farm,   111.40 317  P          PKiKP     14 22 12.7  -0.6
      baz=154
O50A  Cable            111.45 315  P          PKiKP     14 22 16.1 +2.7
      baz=153
P48A  Milroy           111.46 314  PFAKE                14 22 20.0 +6.5
P48A                               LR         LR
      comp=Z,30µm,19.0s
P48A  Milroy           111.46 314  P          PKiKP     14 22 14.3 +0.9
      baz=153
U40A  Yellville        111.48 307  P          PKiKP     14 22 14.4 +0.7
      baz=151
CADS  Cadrg            111.48  28 ePdiff      Pdif      14 18 19.4 +3.9
CADS                              ePP         PP        14 22 51.9  -3.5
CADS                              eSP         SP        14 32 40.5  +16
CADS                              eSS         SS        14 38 39.7  +11
LJU   Ljubljana        111.49  29 ePdiff      Pdif      14 18 18.3 +2.8
LJU                               ePP         PP        14 22 54.5  -0.8
LJU                               e                     14 30 26.1
LJU                               e                     14 30 58.7
LJU                               eSP         SP        14 32 41.2  +17
LJU                               eSS         SS        14 38 36.7 +8.1
LJU                               eSSS        SSS       14 42 32.2
LJU                               e                     14 49 23.2
LJU   Ljubljana        111.49  29 eP          Pdif      14 18 17.3 +1.8
CRES  Cresnjev         111.51  29 eP          Pdif      14 18 19.9 +4.3
LBNH  Lisbon           111.57 326  PFAKE                14 22 20.0 +6.5
LBNH                               LR         LR
      comp=Z,59µm,22.0s
LBNH  Lisbon           111.57 326  P          PKiKP     14 22 14.8 +1.2
      baz=158
FETA  Feichten         111.58  26 ePKiKP      PKiKP     14 22 15.8 +2.2
      comp=Z,12nm,1.1s
FETA                              ePP         PP        14 22 56.4 +0.2
      comp=Z,1µm,4.6s
FETA                               PKKPbc     PKKPbc    14 33 01.7  -5.2
      comp=Z,8µm,11.1s
L55A  Hinsdale         111.59 320  P          PKiKP     14 22 15.0 +1.3
      baz=155
BLO   Bloomington      111.59 313  PFAKE                14 22 20.0 +6.3
BLO                                LR         LR
      comp=Z,28µm,20.0s
M53A  WI Miller and    111.63 318  P          PKiKP     14 22 13.3  -0.5
      baz=154
ALLY  Alegheny Colle   111.65 319  PFAKE                14 22 20.0 +6.2
ALLY                               LR         LR
      comp=Z,76µm,22.0s
DAVA  Damuels          111.66  25 ePKiKP      PKiKP     14 22 14.9 +1.1
      comp=Z,29nm,1.0s
DAVA                              ePP         PP        14 22 56.9 +0.2
      comp=Z,2µm,4.2s
KSM   Kuching          111.68 131  PFAKE                14 22 30.0  +15
KSM                                LR         LR
      comp=Z,43µm,22.0s
ABTA  Abfaltersbach    111.70  27 ePP         PP        14 22 57.5 +0.5
      comp=Z,1µm,3.2s
ABTA                               PKKPbc     PKKPbc    14 33 03.2  -3.2
      comp=Z,9µm,13.2s
N51A  Ashland          111.72 317  PFAKE                14 22 30.0  +16
N51A                               LR         LR
      comp=Z,24µm,20.0s
O49A  Covington        111.73 315  PFAKE                14 22 30.0  +16
O49A                               LR         LR
      comp=Z,50µm,22.0s
O49A  Covington        111.73 315  P          PKiKP     14 22 14.5 +0.5
      baz=153
HYB   Hyderabad        111.75  93 i Pdiff     Pdif      14 18 20.0 +2.6
HYB                               ePKP        PKiKP     14 22 15.0 +0.3
HYB                               ePP         PP        14 22 58.0 +0.7
HYB                               eSKS        SKSac     14 28 52.0  -3.1
HYB                               e                     14 29 14.0
HYB                               eSdiff      Sdif      14 30 30.0  -6.6
HYB                               ePKKPbc     PKKPbc    14 33 08.0 +2.6
HYB                               e                     14 33 26.0
HYB                               e                     14 38 10.0
HYB                                LR         LR
      comp=Z,80nm,30.0s
OLIL  Olney            111.77 311  PFAKE                14 22 30.0  +16
OLIL                               LR         LR
      comp=Z,54µm,21.0s
P47A  Martinsville     111.78 313  P          PKiKP     14 22 16.0 +1.9
      baz=153
PKME  Peaks-Kenny Pk   111.82 328  PFAKE                14 22 30.0  +16
PKME                               LR         LR
      comp=Z,36µm,21.0s
HHAR  Hobbs            111.84 306  PFAKE                14 22 30.0  +16
HHAR                               LR         LR
      comp=Z,32µm,19.0s
MYKA  Terra Mystica    111.84  28 ePKiKP      PKiKP     14 22 15.2 +1.1
      comp=Z,11nm,1.1s
MYKA                              ePP         PP        14 22 59.5 +1.5
      comp=Z,2µm,4.4s
MYKA                              ePKKPbc     PKKPbc    14 33 05.8  -0.1
      comp=Z,12µm,12.5s
N50A  Nevada           111.85 316  P          PKiKP     14 22 15.1 +0.9
      baz=154
SQTA  Sankt Quirin     111.87  26 i PKiKP     PKiKP     14 22 14.2   0.0
      comp=Z,29nm,1.3s
SQTA                              ePP         PP        14 22 58.2   0.0
      comp=Z,1µm,4.0s
SQTA                              ePKKPbc     PKKPbc    14 33 03.8  -2.1
      comp=Z,7µm,11.3s
VT1   Waterbury        111.88 325  PFAKE                14 22 30.0  +16
VT1                                LR         LR
      comp=Z,57µm,22.0s
L54A  Sinclairville    111.91 320  P          PKiKP     14 22 13.4  -0.8
      baz=155
MMNY  Mt. Morris Dam   111.92 321  PFAKE                14 22 30.0  +16
MMNY                               LR         LR
      comp=Z,59µm,22.0s
OBKA  Obir             111.94  28 ePP         PP        14 22 59.7 +1.0
      comp=Z,2µm,6.1s
OBKA                               PKKPbc     PKKPbc    14 33 04.6  -1.0
      comp=Z,14µm,14.9s
M52A  Chesterland      111.94 318  PFAKE                14 22 30.0  +16
M52A                               LR         LR
      comp=Z,44µm,22.0s
M52A  Chesterland      111.94 318  P          PKiKP     14 22 14.1  -0.3
      baz=154
L53A  Girard           111.96 319  P          PKiKP     14 22 14.1  -0.2
      baz=154
NCB   Newcomb          111.96 324  PFAKE                14 22 30.0  +16
NCB                                LR         LR
      comp=Z,45µm,22.0s
MOTA  Moosalm          111.97  26 ePKiKP      PKiKP     14 22 15.0 +0.6
      comp=Z,8.1nm,1.1s
K55A  Perry            111.97 321  P          PKiKP     14 22 14.7 +0.4
      baz=155
FRGS  Fruska Gora      111.97  33 eP          Pdif      14 18 20.5 +2.8
WTTA  Wattenberg       112.00  26 ePKiKP      PKiKP     14 22 15.3 +0.8
      comp=Z,21nm,0.9s
WTTA                              ePP         PP        14 22 59.3 +0.1
      comp=Z,1µm,3.8s
ECH   Echery           112.01  23  PFAKE                14 22 30.0  +16
ECH                                LR         LR
      comp=Z,70µm,20.0s
ERPA  Erie             112.02 319  PFAKE                14 22 30.0  +16
ERPA                               LR         LR
      comp=Z,32µm,20.0s
ERPA  Erie             112.02 319  P          PKiKP     14 22 15.0 +0.6
      baz=154
M51A  Elyria           112.03 317  P          PKiKP     14 22 14.6 +0.2
      baz=154
RETA  Reutte           112.03  25 ePKiKP      PKiKP     14 22 14.4   0.0
      comp=Z,14nm,1.3s
RETA                              ePP         PP        14 22 59.2   0.0
      comp=Z,843nm,3.7s
K54A  Basiliko Farm,   112.06 320  P          PKiKP     14 22 14.5   0.0
      baz=155
WATA  Walderalm        112.06  26 ePKiKP      PKiKP     14 22 15.5 +1.0
      comp=Z,5.0nm,0.7s
O48A  Farmland         112.08 314  P          PKiKP     14 22 14.9 +0.3
      baz=153
SRIG  Santa Rosalia    112.11 286  PFAKE                14 22 30.0  +15
SRIG                               LR         LR
      comp=Z,39µm,20.0s
GROS  Grobnik          112.11  29 ePdiff      Pdif      14 18 20.7 +2.4
GROS                              eSSS        SSS       14 42 41.4
MDVR  Moldovita        112.14  34⇑iP          PKiKP     14 22 16.4 +1.8
KBA   Koelnbreinsper   112.20  27 ePKiKP      PKiKP     14 22 14.9 +0.1
      comp=Z,7.9nm,0.8s
KBA                               ePP         PP        14 23 01.3 +0.7
      comp=Z,1µm,4.0s
KBA                                PKKPbc     PKKPbc    14 33 05.1 +0.3
      comp=Z,13µm,16.8s
SOKA  Soboth           112.21  29 ePP         PP        14 23 01.7 +1.1
      comp=Z,2µm,5.6s
SOKA                              ePKKPbc     PKKPbc    14 33 05.8 +1.1
      comp=Z,15µm,19.4s
P46A  Rosedale         112.23 313  P          PKiKP     14 22 15.4 +0.5
      baz=152
TUL1  Leonard          112.26 304  PFAKE                14 22 30.0  +15
TUL1                               LR         LR
      comp=Z,49µm,21.0s
TUL1  Leonard          112.26 304  P          PKiKP     14 22 14.7  -0.4
      baz=150
N49A  Columbus Grove   112.33 315  PFAKE                14 22 30.0  +15
N49A                               LR         LR
      comp=Z,29µm,22.0s
N49A  Columbus Grove   112.33 315  P          PKiKP     14 22 15.4 +0.3
      baz=153
BFO   Black Forest     112.34  24  PFAKE                14 22 30.0  +15
BFO                                LR         LR
      comp=Z,162µm,19.0s
CCM   Cathedral Cave   112.35 309  PFAKE                14 22 30.0  +15
CCM                                LR         LR
      comp=Z,101µm,21.0s
CCM   Cathedral Cave   112.35 309  P          PKiKP     14 22 15.4 +0.2
      baz=151
M50A  Fremont          112.38 316  PFAKE                14 22 30.0  +15
M50A                               LR         LR
      comp=Z,25µm,19.0s
M50A  Fremont          112.38 316  P          PKiKP     14 22 15.3 +0.2
      baz=153
J55A  Hilton           112.38 321  PFAKE                14 22 30.0  +15
J55A                               LR         LR
      comp=Z,56µm,22.0s
J55A  Hilton           112.38 321  P          PKiKP     14 22 15.9 +0.8
      baz=155
ILGA  Ilgaz            112.44  45  PFAKE                14 22 30.0  +14
ILGA                               LR         LR
      comp=Z,31µm,22.0s
WMOK  Wichita Mounta   112.47 301  PFAKE                14 22 30.0  +14
WMOK                               LR         LR
      comp=Z,20µm,21.0s
WMOK  Wichita Mounta   112.47 301  P          PKiKP     14 22 18.1 +2.5
      baz=150
SLM   Saint Louis      112.48 310  PFAKE                14 22 30.0  +15
SLM                                LR         LR
      comp=Z,61µm,21.0s
MEDO  Medina           112.49 321  PFAKE                14 22 30.0  +15
MEDO                               LR         LR
      comp=Z,42µm,22.0s
MEDO  Medina           112.49 321  P          PKiKP     14 22 17.3 +2.0
      baz=155
PLIO  Pelee Island,    112.55 317  P          PKiKP     14 22 16.4 +1.0
      baz=154
N48A  Decatur          112.57 315  P          PKiKP     14 22 17.2 +1.7
      baz=153
FRNY  Flat Rock        112.58 325  PFAKE                14 22 30.0  +15
FRNY                               LR         LR
      comp=Z,53µm,22.0s
J54A  Appleton         112.64 321  PFAKE                14 22 30.0  +14
J54A                               LR         LR
      comp=Z,40µm,22.0s
J54A  Appleton         112.64 321  P          PKiKP     14 22 16.4 +0.8
      baz=155
MORH  Mrgy, Hungar     112.66  31 eP          Pdif      14 18 29.0 +8.4
MORH  Mrgy, Hungar     112.66  31 eP          Pdif      14 18 30.1 +9.4
MORH                              ePP         PP        14 23 02.0  -1.6
MORH                              eSP         SP        14 32 43.1 +8.3
MORH                              eSS         SS        14 38 57.0  +13
LONY  Lake Ozonia      112.66 324  PFAKE                14 22 30.0  +14
LONY                               LR         LR
      comp=Z,47µm,22.0s
LONY  Lake Ozonia      112.66 324  P          PKiKP     14 22 16.8 +1.2
      baz=156
MNTX  Cornudas Mount   112.70 294  PFAKE                14 22 30.0  +14
MNTX                               LR         LR
      comp=Z,40µm,19.0s
MNTX  Cornudas Mount   112.70 294  P          PKiKP     14 22 16.7 +0.6
      baz=149
PECO  Prince Edward    112.74 322  PFAKE                14 22 30.0  +14
PECO                               LR         LR
      comp=Z,37µm,21.0s
PECO  Prince Edward    112.74 322  P          PKiKP     14 22 16.4 +0.7
      baz=155
STCO  Saint Catharin   112.75 320  P          PKiKP     14 22 16.2 +0.4
      baz=155
M49A  Liberty Center   112.75 316  P          PKiKP     14 22 15.8   0.0
      baz=153
PQI   Presque Isle     112.81 330  PFAKE                14 22 30.0  +14
PQI                                LR         LR
      comp=Z,33µm,20.0s
N47A  Urbana           112.82 314  P          PKiKP     14 22 15.7  -0.3
      baz=152
ARSA  Arzberg          112.86  29 ePKiKP      PKiKP     14 22 16.5 +0.6
      comp=Z,18nm,1.1s
ARSA                              ePP         PP        14 23 06.3 +1.1
      comp=Z,1µm,3.4s
ARSA                              ePKKPbc     PKKPbc    14 33 01.7  -0.7
      comp=Z,24µm,23.9s
TYNO  Tyneside         112.86 320  P          PKiKP     14 22 16.0   0.0
      baz=154
SFIN  Lafayette        112.87 313  PFAKE                14 22 30.0  +14
SFIN                               LR         LR
      comp=Z,49µm,22.0s
SFIN  Lafayette        112.87 313  P          PKiKP     14 22 16.0  -0.1
      baz=152
L50A  Kingsville       112.87 317  P          PKiKP     14 22 15.8  -0.2
      baz=153
BZS   Buzias           112.88  34⇑iP          PP        14 23 00.3  -5.0
BATG  Bathurst New B   112.91 331  PFAKE                14 22 30.0  +14
BATG                               LR         LR
      comp=Z,51µm,22.0s
STU   Stuttgart        112.94  24  PFAKE                14 22 30.0  +14
STU                                LR         LR
      comp=Z,117µm,19.0s
HSIG                   112.95 288  PFAKE                14 22 30.0  +13
HSIG                               LR         LR
      comp=Z,21µm,21.0s
M48A  Edgerton         113.02 315  PFAKE                14 22 30.0  +14
M48A                               LR         LR
      comp=Z,38µm,22.0s
M48A  Edgerton         113.02 315  P          PKiKP     14 22 16.5 +0.2
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	baz=153						
P43A	Skaggs, Pawnee	113.09	311	P	PKiKP	14 22 16.5	-0.1
	baz=151						
TIH	Tihany	113.11	31	eP	Pdif	14 18 32.0	+9.4
TIH				ePP	PP	14 23 04.1	-2.8
TIH				eSP	SP	14 32 38.0	-0.9
TIH				eSS	SS	14 39 04.1	+14
H56A	Elgin	113.12	323	P	PKiKP	14 22 16.9	+0.4
	baz=156						
MOA	Molln	113.14	28	ePKiKP	PKiKP	14 22 16.1	-0.3
	comp=Z,20nm,1.6s						
MOA				ePP	PP	14 23 06.8	-0.3
	comp=Z,1µm,4.3s						
MOA				ePKKPbc	PKKPbc	14 33 03.6	+2.0
	comp=Z,9µm,12.9s						
WLVO	Wesleyville	113.16	321	P	PKiKP	14 22 17.2	+0.7
	baz=155						
J52A	Paris	113.19	319	P	PKiKP	14 22 16.8	+0.2
	baz=154						
I55A	Frankford	113.20	322	P	PKiKP	14 22 17.3	+0.7
	baz=155						
DRWO	Darlington Wes	113.21	321	P	PKiKP	14 22 17.7	+1.1
	baz=155						
M47A	Cromwell	113.22	315	P	PKiKP	14 22 17.7	+0.9
	baz=152						
WLF	Walferdange	113.22	22	PFAKE		14 22 30.0	+14
WLF				LR	LR		
	comp=Z,273µm,22.0s						
L49A	Milan	113.25	316	P	PKiKP	14 22 18.0	+1.2
	baz=153						
EPT	El Paso	113.26	294	PFAKE		14 22 30.0	+13
EPT				LR	LR		
	comp=Z,56µm,18.0s						
SBUM	Sibu	113.28	133	PFAKE		14 22 30.0	+12
SBUM				LR	LR		
	comp=Z,17µm,19.0s						
AMBH	Ambrzfalva	113.32	33	eP	Pdif	14 18 50.0	+26
L48A	N Adams	113.33	316	P	PKiKP	14 22 17.3	+0.4
	baz=153						
H55A	Tweed	113.36	322	P	PKiKP	14 22 18.0	+1.1
	baz=155						
DOU	Dourbes	113.36	20	⇑PKiKP	PKiKP	14 22 17.1	+0.4
LUWI	Luwuk	113.37	145	PFAKE		14 22 30.0	+12
LUWI				LR	LR		
	comp=Z,37µm,22.0s						
AAM	Ann Arbor	113.38	316	PFAKE		14 22 30.0	+13
AAM				LR	LR		
	comp=Z,22µm,19.0s						
ACTO	Acton	113.39	320	P	PKiKP	14 22 19.9	+2.9
	baz=154						
DELO	Deloro Mine	113.46	322	PFAKE		14 22 30.0	+13
DELO				LR	LR		
	comp=Z,50µm,22.0s						
DELO	Deloro Mine	113.46	322	P	PKiKP	14 22 18.2	+1.1
	baz=155						
K50A	Casco	113.46	317	PFAKE		14 22 30.0	+13
K50A				LR	LR		
	comp=Z,35µm,22.0s						
MSTX	Muleshoe	113.50	298	PFAKE		14 22 30.0	+12
MSTX				LR	LR		
	comp=Z,27µm,21.0s						
MSTX	Muleshoe	113.50	298	P	PKiKP	14 22 18.8	+1.1
	baz=149						
SOP	Sopron	113.51	29	eP	Pdif	14 18 30.1	+5.6
SOP	Sopron	113.51	29	eP	Pdif	14 18 36.1	+12
SOP				ePP	PP	14 23 06.1	-3.7
SOP				eSP	SP	14 32 51.1	+8.5
SOP				eSS	SS	14 39 03.1	+7.7
CONA	Conrad Observa	113.58	29	PKiKP	PKiKP	14 22 17.3	-0.1
	comp=Z,11nm,1.0s						
CONA				ePP	PP	14 23 11.1	+0.8
	comp=Z,2µm,4.6s						
CONA				ePKKPab	PKKPab	14 33 09.1	+4.0
	comp=Z,15µm,17.2s						
N44A	Piper City	113.60	312	P	PKiKP	14 22 19.2	+1.7
	baz=152						
L47A	Sherwood	113.62	315	P	PKiKP	14 22 18.5	+1.0
	baz=152						
CSKK	Cskako	113.63	31	eP	Pdif	14 18 37.1	+12
CSKK				ePP	PP	14 23 11.1	+0.5
CSKK				eSP	SP	14 32 47.0	+3.3
CSKK				eSS	SS	14 38 58.0	+1.1
ORIO	Orleans, Innes	113.69	324	P	PKiKP	14 22 17.8	+0.3
	baz=156						
K49A	Clarkson	113.75	317	P	PKiKP	14 22 19.3	+1.6
	baz=153						
PLVO	Plevna	113.77	322	PFAKE		14 22 30.0	+12
PLVO				LR	LR		
	comp=Z,53µm,22.0s						
PLVO	Plevna	113.77	322	P	PKiKP	14 22 17.2	-0.5
	baz=155						
TIRR	Tirgusor	113.78	39	PFAKE		14 22 30.0	+12
TIRR				LR	LR		
	comp=Z,82µm,21.0s						
BCLA	Clavier	113.80	21	⇑PKiKP	PKiKP	14 22 20.0	+2.5
AMTX	Amarillo	113.81	299	PFAKE		14 22 30.0	+12
AMTX				LR	LR		
	comp=Z,25µm,22.0s						
AMTX	Amarillo	113.81	299	P	PKiKP	14 22 19.0	+0.8
	baz=149						
HDIL	Hopedale	113.81	312	PFAKE		14 22 30.0	+12
HDIL				LR	LR		
	comp=Z,34µm,22.0s						
HDIL	Hopedale	113.81	312	P	PKiKP	14 22 19.2	+1.3
	baz=151						
G55A	Calabogie	113.86	323	P	PKiKP	14 22 18.9	+1.1
	baz=155						
FAKI	Fak Fak	113.87	155	PFAKE		14 22 30.0	+11
FAKI				LR	LR		
	comp=Z,34µm,20.0s						
I51A	Listowel	113.87	319	P	PKiKP	14 22 18.3	+0.4
	baz=154						
BUD	Budapest	113.93	31	eP	Pdif	14 18 47.1	+21
GEC2	GERESS Array S	113.95	27	ePKiKP	PKiKP	14 22 16.6	-1.4
GEC2				LR	LR		
	comp=Z,121µm,21.0s						
GEC2	GERESS Array S	113.95	27	ePKIKP	PKiKP	14 22 16.7	-1.4
GEC2				MLR	MLR		
	comp=Z,121µm,21.0s						
GERES	GERESS Array B	113.95	27	PKiKP	PKiKP	14 22 16.8	-1.2
	comp=Z,7.1nm,0.8s,baz=177,slow=1.9,SNR=6.4						
GERES				PKKP	PKKPdf	14 33 19.7	-1.9
	comp=Z,4.3nm,1.1s,baz=20,slow=3.1,SNR=3.7						
U32A	Winter Ranch,	113.97	302	PFAKE		14 22 30.0	+12
U32A				LR	LR		
	comp=Z,25µm,21.0s						
MLR	Muntele Rosu	113.98	37	PFAKE		14 22 30.0	+12
MLR				LR	LR		
	comp=Z,76µm,22.0s						
K48A	Perry	113.99	316	P	PKiKP	14 22 17.8	-0.4
	baz=153						
UCC	Uccle	114.00	20	PFAKE		14 22 30.0	+12
UCC				LR	LR		
	comp=Z,102µm,22.0s						
BANO	Bancroft	114.01	322	P	PKiKP	14 22 19.2	+1.1
	baz=155						
L46A	Eue Claire	114.03	314	PFAKE		14 22 30.0	+12
L46A				LR	LR		
	comp=Z,34µm,22.0s						
L46A	Eue Claire	114.03	314	P	PKPdf	14 22 14.1	-4.2
	baz=152						
M44A	Midewin, Midew	114.09	313	PFAKE		14 22 30.0	+12
M44A				LR	LR		
	comp=Z,46µm,22.0s						
M44A	Midewin, Midew	114.09	313	P	PKPdf	14 22 14.6	-3.8
	baz=152						
MEM	Membach	114.10	21	⇑x	PKiKP	14 22 22.2	+4.1
ZST	Bratislava	114.12	30	ePP	PP	14 23 10.8	-3.3
ZST				eSP	SP	14 32 54.7	+6.5
SADO	Sadowa	114.15	321	PKiKP	PKPdf	14 22 17.6	-0.8
	comp=Z,13nm,0.9s,baz=96,slow=0.4,SNR=5.7						
SADO	Sadowa	114.15	321	ePKiKP	PKPdf	14 22 18.1	-0.3
SADO				LR	LR		
	comp=Z,46µm,22.0s						
J49A	Marlette	114.16	317	P	PKPdf	14 22 14.9	-3.5
	baz=153						
K47A	Vermontville	114.17	316	P	PKPdf	14 22 16.1	-2.4
	baz=152						
BWLO	Walkerton	114.19	319	P	PKPdf	14 22 16.2	-2.3
	baz=154						
KHC	Kasperske Hory	114.19	27	eP	Pdif	14 18 28.0	+0.5
KHC				MLR	MLR		
	comp=Z,67µm,20.8s						
GRFO	Grafenberg	114.22	25	PFAKE		14 22 30.0	+12
GRFO				LR	LR		
	comp=Z,82µm,21.0s						
GRA1	Grafenberg Arr	114.22	25	PFAKE		14 22 30.0	+12
GRA1				LR	LR		
	comp=Z,91µm,21.0s						
BEBN	Eben Emael	114.22	21	⇑PP	PP	14 23 14.7	0.0
BASO	Ashfield	114.26	319	P	PKPdf	14 22 15.9	-2.7
	baz=154						
H52A	Wyevale	114.27	320	P	PKPdf	14 22 15.1	-3.5
	baz=154						
F55A	Otter Lake	114.28	323	P	PKPdf	14 22 16.3	-2.3
	baz=155						
G53A	Haliburton	114.31	321	P	PKPdf	14 22 17.0	-1.7
	baz=154						
J48A	Bridge Port	114.31	317	PFAKE		14 22 30.0	+11
J48A				LR	LR		
	comp=Z,25µm,19.0s						
J48A	Bridge Port	114.31	317	P	PKPdf	14 22 17.8	-1.0
	baz=153						
MODS	Modra-Piesok	114.33	30	ePP	PP	14 23 06.1	-9.5
MODS				eSP	SP	14 33 11.1	+21
MODS				eSS	SS	14 39 10.3	+4.1
MODS				eL	L	14 58 54.1	
BRCO	Bruce Peninsul	114.40	319	P	PKPdf	14 22 16.4	-2.5
	baz=154						
PEMO	Pembroke	114.40	323	P	PKPdf	14 22 16.2	-2.7
	baz=155						
K46A	Dorr	114.45	315	P	PKPdf	14 22 18.1	-1.0
	baz=152						
121A	Cookes Peak, D	114.48	293	P	PKPdf	14 22 18.1	-1.6
	baz=148,SNR=8.6						
N41A	Harden Midland	114.52	310	PFAKE		14 22 30.0	+11
N41A				LR	LR		
	comp=Z,39µm,20.0s						
N41A	Harden Midland	114.52	310	P	PKPdf	14 22 17.0	-2.2
	baz=151						
PSZ	Piszkesteto	114.56	32	ePP	PP	14 23 01.1	-16
PSZ				eSP	SP	14 32 53.0	+0.8
PSZ				⇓eSS	SS	14 39 11.1	+1.8
I49A	Point Hope	114.57	318	PFAKE		14 22 30.0	+11
I49A				LR	LR		
	comp=Z,43µm,20.0s						
I49A	Point Hope	114.57	318	P	PKPdf	14 22 16.3	-2.9
	baz=153						
J47A	Sunmer	114.61	316	PFAKE		14 22 30.0	+11
J47A				LR	LR		
	comp=Z,29µm,21.0s						
J47A	Sunmer	114.61	316	P	PKPdf	14 22 16.4	-3.0
	baz=152						
BMRO	Meriville Lake	114.64	319	P	PKPdf	14 22 16.4	-2.9
	baz=154						
L44A	Lake County Fo	114.74	313	P	PKPdf	14 22 17.4	-2.2
	baz=151						
KRUC	Moravsky	114.76	29	ePKP	PKPdf	14 22 19.3	-0.1
KRUC				ePP	PP	14 23 15.7	-2.9
KRUC				eSP	SP	14 33 16.5	+23
KRUC				eSS	SS	14 39 22.7	+11
KRUC				e		14 50 20.1	
TREC	Trest	114.77	28	eP	Pdif	14 18 33.0	+2.9
TREC				MLR	MLR		
	comp=Z,71µm,21.7s						
VYHS	Vyhne	114.82	31	ePP	PP	14 23 17.2	-1.8
VYHS				eSP	SP	14 33 10.3	+16
VYHS				eSS	SS	14 39 19.4	+6.7
VYHS				eL	L	14 58 47.1	
BUKO	Buck Lake	114.83	321	P	PKPdf	14 22 17.4	-2.3
	baz=154						
JAVC	Velka Javorina	114.88	30	ePKP	PKiKP	14 22 20.7	+0.9
JAVC				ePP	PP	14 23 17.9	-1.6
JAVC				eSP	SP	14 33 19.9	+25
JAVC				eSS	SS	14 39 25.5	+12
JAVC				e		14 50 25.6	
ALGO	Algonquin Park	114.89	322	P	PKPdf	14 22 18.7	-1.1
	baz=155						
RABL	Rabaul	114.92	177	PFAKE		14 22 30.0	+9.0
RABL				LR	LR		
	comp=Z,65µm,22.0s						
DGPR	DIGLIPUR	114.93	109	eP	PKiKP	14 22 21.4	+0.6
DGPR				IAMs_20	IAMs_20	14 55 53.4	
	comp=Z,35µm,32.8s						
DSB	Dublin	114.94	12	PFAKE		14 22 30.0	+10
DSB				LR	LR		
	comp=Z,53µm,20.0s						
N40A	Mertquake, Sal	114.94	310	P	PKiKP	14 22 20.8	+0.7
	baz=150						
J46A	Howard City	114.99	316	P	PKPdf	14 22 19.1	-1.0
	baz=152						
M41A	Milan	114.99	311	P	PKPdf	14 22 18.1	-2.0
	baz=151						
KLBO	Killbear Provi	115.01	320	P	PKPdf	14 22 19.5	-0.5
	baz=154						
VRAC	Vranov	115.04	29	⇑iP	PKiKP	14 22 20.1	+0.1
VRAC	Vranov	115.04	29	ePKP	PKPdf	14 22 19.8	-0.2
VRAC				ePP	PP	14 23 17.5	-3.1
VRAC				eSP	SP	14 33 19.3	+23
VRAC				eSS	SS	14 39 27.3	+12
VRAC				e		14 50 24.2	
E54A	Lac Daplat, Po	115.07	323	P	PKPdf	14 22 20.0	-0.1
	baz=155						
I48A	Sherman Twp	115.08	317	P	PKPdf	14 22 19.5	-0.7
	baz=153						
F52A	Sundridge	115.13	321	P	PKPdf	14 22 18.8	-1.5
	baz=154						
E53A	Dumoine, Ponti	115.16	323	P	PKPdf	14 22 18.8	-1.5
	baz=155						
NGP	Nagpur	115.17	92	eP	PKPdf	14 22 21.1	-0.1
I47A	Gladwin	115.20	317	PFAKE		14 22 30.0	+10
I47A				LR	LR		
	comp=Z,32µm,21.0s						
I47A	Gladwin	115.20	317	P	PKPdf	14 22 19.5	-0.9
	baz=152						
L42A	Oliver, Polo	115.22	312	PFAKE		14 22 30.0	+9.4
L42A				LR	LR		
	comp=Z,44µm,22.0s						
L42A	Oliver, Polo	115.22	312	P	PKPdf	14 22 18.7	-1.8
	baz=151						
STNC	Stoke	115.27	15	IAMs_20	IAMs_20	15 08 32.7	
	comp=Z,60µm,19.0s						
TOBO	Tobermory, Bru	115.30	319	P	PKPdf	14 22 19.1	-1.5
	baz=153						
J45A	Montague	115.32	315	PFAKE		14 22 30.0	+9.3
J45A				LR	LR		
	comp=Z,25µm,20.0s						
J45A	Montague	115.32	315	P	PKPdf	14 22 20.3	-0.4
	baz=152						
KSU1	Kansas State U	115.34	305	PFAKE		14 22 30.0	+9.1
KSU1				LR	LR		
	comp=Z,58µm,21.0s						
KSU1	Kansas State U	115.34	305	P	PKPdf	14 22 20.0	-0.9
	baz=149						
K43A	Burlington	115.35	313	PFAKE		14 22 30.0	+9.2
K43A				LR	LR		
	comp=Z,36µm,21.0s						
K43A	Burlington	115.35	313	P	PKPdf	14 22 20.2	-0.6
	baz=151						
E52A	Mattawa	115.37	322	P	PKPdf	14 22 20.0	-0.7
	baz=154						
Y22D	IRIS PASSCAL I	115.40	295	PFAKE		14 22 30.0	+8.6
Y22D				LR	LR		
	comp=Z,52µm,18.0s						
H48A	Harrisville	115.41	318	ePKPdf	PKPdf	14 22 20.2	-0.7
H48A				LR	LR		
	comp=Z,40µm,20.0s						
H48A	Harrisville	115.41	318	P	PKPdf	14 22 20.3	-0.5
	baz=153						
F51A	Arnstein	115.43	321	P	PKPdf	14 22 19.5	-1.3
	baz=154						
I46A	Reed City	115.44	316	P	PKPdf	14 22 19.8	-1.2
	baz=152						
LENM	Lemitar	115.50	295	ePKPdf	PKPdf	14 22 20.3	-1.3
D54A	Lac Fusel, La	115.56	324	P	PKPdf	14 22 19.6	-1.5
	baz=155						
H47A	Mio	115.61	317	P	PKPdf	14 22 19.5	-1.7
	baz=152						
LBWR	Ladybower, Pea	115.63	15	IAMs_20	IAMs_20	15 09 19.7	
	comp=Z,73µm,18.7s						
TUC	Tucson	115.65	291	ePKPdf	PKPdf	14 22 20.8	-1.0
TUC				LR	LR		
	comp=Z,51µm,22.0s						
TUC	Tucson	115.65	291	P	PKPdf	14 22 19.8	-2.1
	baz=147						
SIJI	Sorong	115.65	154	PKP	PKiKP	14 22 23.4	+1.0
	comp=Z,16nm,0.7s,baz=174,slow=6.9,SNR=3.7						
JAY	Jayapura	115.68	164	PKP	PKiKP	14 22 24.3	+1.8
	comp=Z,25nm,0.9s,baz=320,slow=3.3,SNR=5.4						
GNI	Garni	115.68	53	PFAKE		14 22 30.0	+8.3
GNI				LR	LR		
	comp=Z,65µm,18.0s						
MORC	Moravsky Berou	115.70	29	ePKPdf	PKPdf	14 22 20.9	-0.4
MORC				LR	LR		
	comp=Z,39µm,21.0s						
MORC	Moravsky Berou	115.70	29	⇑iP	PKiKP	14 22 23.5	+2.2
MORC	Moravsky Berou	115.70	29	ePKP	PKiKP	14 22 23.1	+1.8
MORC				ePP	PP	14 23 20.6	-4.7
MORC				eSP	SP	14 33 25.7	+23
MORC				eSS	SS	14 39 32.0	+7.7
MORC				e		14 50 25.6	
BURAR	Bucovina Array	115.70	35	⇑iP	PKiKP	14 22 24.6	+3.1
BUR08	Bucovina Ar. S	115.73	35	ePKiKP	PKPdf	14 22 20.8	-0.7
LAZ	Ladron	115.77	295	ePKPdf	PKPdf	14 22 21.4	-0.8
I45A	Fountain	115.79	316	PFAKE		14 22 30.0	+8.4
I45A				LR	LR		
	comp=Z,44µm,21.0s						
I45A	Fountain	115.79	316	P	PKPdf	14 22 21.0	-0.5
	baz=152						
D53A	Lac Vacive, Po	115.80	323	ePKiKP	PKPdf	14 22 20.4	-1.1
D53A				LR	LR		
	comp=Z,51µm,22.0s						
D53A	Lac Vacive, Po	115.80	323	P	PKPdf	14 22 20.1	-1.5
	baz=154						
L40A	Anamosa	115.83	311	PFAKE		14 22 30.0	+8.3
L40A				LR	LR		
	comp=Z,35µm,20.0s						
L40A	Anamosa	115.83	311	P	PKPdf	14 22 20.1	-1.6
	baz=150						
E51A	G1948 Merrick	115.84	321	P	PKPdf	14 22 20.9	-0.7
	baz=154						
H46A	Fife Lake	115.89	317	P	PKPdf	14 22 21.2	-0.5
	baz=152						
BRG	Berggiesshubel	115.91	26	ePKP	PKPdf	14 22 21.4	-0.2
	comp=Z,31nm,1.4s						
BRG				SKS	SKSdf	14 29 55.0	+23
BRG				SDIF		14 31 43.0	
BRG				PKKP	PKKPdf	14 33 34.0	+16
BRG				SS	SS	14 39 34.0	+7.2
	comp=N,60µm,23.4s						
	comp=E,42µm,22.0s						
	comp=N,60µm,23.4s						
	comp=Z,87µm,23.0s						
BRG	Berggiesshubel	115.91	26	ePKIKP	PKPdf	14 22 21.4	-0.2
BRG				SS	SS	14 39 34.0	+7.2
BRG				pmax	pmax		
	comp=Z,31nm,1.4s						
BRG				MLR	MLR		
	comp=E,42µm,22.0s						
BRG				MLR	MLR		
	comp=N,60µm,23.4s						
BRG				MLR	MLR		
	comp=Z,87µm,23.0s						
D52A	ZEK Kipawa Sen	115.92	322	P	PKPdf	14 22 21.3	-0.5
	baz=154						
ANMO	Albuquerque	115.93	295	ePKPdf	PKPdf	14 22 20.7	-1.7
ANMO				LR	LR		
	comp=Z,42µm,20.0s						
ANMO	Albuquerque	115.93	295	ePKIKP	PKPdf	14 22 20.7	-1.7
ANMO				MLR	MLR		
	comp=Z,42µm,20.0s						
F49A	Sandfield	115.94	319	P	PKPdf	14 22 21.5	-0.3
	baz=153						
GLMI	Grayling	115.95	317	PFAKE		14 22 30.0	+8.1
GLMI				LR	LR		
	comp=Z,38µm,22.0s						
GLMI	Grayling	115.95	317	P	PKiKP	14 22 21.9	0.0
	baz=152						
G47A	Hillman	116.00	318	P	PKPdf	14 22 21.6	-0.3
	baz=152						
NIE	Niedzica	116.05	31	ePdif	Pdif	14 18 40.4	+4.6
NIE				ePP	PP	14 23 27.8	+0.1
NIE				eSS	SS	14 39 32.6	+3.9
NIE				LMZ	LR	15 09 46.7	
	comp=Z,35µm,19.8s						
KOLS	Kolonicke sedl	116.11	33	ePP	PP	14 23 25.9	-2.2
KOLS				eSP	SP	14 33 09.0	+2.7
KOLS				eSS	SS	14 39 35.2	+5.7
KOLS				eL	L	15 00 20.2	
CLL	Collm	116.12	26	ePKPdf	PKiKP	14 22 22.6	+0.7
CLL				LR	LR		
	comp=Z,78µm,21.0s						
CLL	Collm	116.12	26	ePKiKP	PKiKP	14 22 23.0	+1.0
	comp=Z,29nm,1.2s						
CLL				e		14 22 35.0	
CLL				ePP	PP	14 23 27.0	-1.1
CLL				ePPmax		14 23 40.0	
	comp=Z,371nm,2.3s						
CLL				ePPP	PPP	14 25 54.0	
CLL				ePPPP		14 27 48.0	
CLL				eSKKSac	SKKSac	14 30 18.0	-8.5
CLL				eSdif	Sdif	14 31 23.0	+12
CLL				ePKKPab	PKKPab	14 32 57.0	+3.3
CLL				esPKKPab		14 33 07.0	
CLL				ePKKPdf	PKKPdf	14 33 20.0	+2.7
CLL				ePSKS		14 33 23.0	
CLL				ePPS	PPS	14 34 36.0	
CLL				e		14 37 15.0	
CLL				eSS	SS	14 39 33.0	+3.4
CLL				eSSS	SSS	14 44 06.0	
CLL				Lm	MLR	15 06 00.0	
	comp=Z,78µm,21.2s						
CLL				Lmax		15 06 00.0	
E50A	Wahnapitae	116.13	321	P	PKPdf	14 22 21.5	-0.7
	baz=153						
BHPL	Bhopal	116.16	89	eP	PKPdf	14 22 22.6	-0.4
BHPL				IAmb	IAmb	14 22 26.7	
	comp=Z,46nm,1.3s						
F48A	Evansville	116.19	319	P	PKPdf	14 22 22.2	-0.1
	baz=153						
HPK	Haverah Park	116.19	15	IAMs_20	IAMs_20	15 09 09.8	
	comp=Z,74µm,18.6s						
KIS	Kishinev	116.19	38	ePKP	PKPdf	14 22 17.0	-5.2
KIS	Kishinev	116.19	38	i PP	PP	14 23 28.0	-0.7
	comp=Z,4µm,12.0s						
KIS	Kishinev	116.19	38	i PKS	PKSdf	14 25 58.0	-0.7
KIS				i SKS	SKSac	14 28 40.0	-31
KIS				i SKKS	SKKSac	14 30 30.0	+2.8
KIS	Kishinev	116.19	38	i PS	PS	14 33 08.0	-1.3
JFWS	Jewell Farm	116.22	312	ePKPdf	PKPdf	14 22 21.4	-1.0
JFWS				LR	LR		
	comp=Z,54µm,22.0s						
JFWS	Jewell Farm	116.22	312	ePKIKP	PKPdf	14 22 21.4	-1.0
JFWS				MLR	MLR		
	comp=Z,54µm,22.0s						
JFWS	Jewell Farm	116.22	312	P	PKPdf	14 22 22.4	0.0
	baz=150						
H45A	Beulah	116.25	316	P	PKPdf	14 22 22.3	-0.1
	baz=152						
214A	Organ Pipe Nat	116.28	289	P	PKPdf	14 22 22.2	-0.8
	baz=147						
AKH	Akhalkalaki	116.29	51	PFAKE		14 22 30.0	+7.1
AKH				LR	LR		
	comp=Z,68µm,19.0s						
D51A	Lot 18 Range I	116.31	322	P	PKiKP	14 22 23.0	+0.5
	baz=154						
TNTI	Ternate	116.33	149	PFAKE		14 22 40.0	+16
TNTI				LR	LR		
	comp=Z,12µm,20.0s						
CBKS	Cedar Bluff	116.35	303	ePKPdf	PKPdf	14 22 22.1	-0.8
CBKS				LR	LR		
	comp=Z,30µm,22.0s						
CBKS	Cedar Bluff	116.35	303	ePKIKP	PKPdf	14 22 22.1	-0.8
CBKS				MLR	MLR		
	comp=Z,30µm,22.0s						
CBKS	Cedar Bluff	116.35	303	P	PKPdf	14 22 22.5	-0.4
	baz=148						
KSP	Ksiaz	116.41	28	ePdif	Pdif	14 18 38.3	+1.1
KSP				ePP	PP	14 23 30.6	+0.5
KSP				eSS	SS	14 39 57.0	+24
KSP				LMZ	LR	15 06 04.2	
	comp=Z,75µm,23.2s						
KSP	Ksiaz	116.41	28	ePKIKP	Pdif	14 18 38.3	+1.1
SCIA	State Center	116.44	309	PFAKE		14 22 30.0	+7.1
SCIA				LR	LR		
	comp=Z,30µm,21.0s						
SCIA	State Center	116.44	309	P	PKPdf	14 22 22.5	-0.4
	baz=150						
G46A	Petoskey	116.46	317	P	PKiKP	14 22 23.1	+0.3
	baz=152						
G45A	Suttons Bay	116.48	316	PFAKE		14 22 30.0	+7.1
G45A				LR	LR		
	comp=Z,55µm,22.0s						
G45A	Suttons Bay	116.48	316	P	PKiKP	14 22 23.2	+0.3
	baz=152						
I42A	Draeger Farm,	116.59	314	ePKPdf	PKPdf	14 22 22.4	-0.7
I42A				LR	LR		

	comp=Z,47µm,21.0s						
I42A	Draeger Farm,	116.59	314	P	PKiKP	14 22 25.2	+2.0
	baz=151						
E48A	Lockeyer	116.62	320	P	PKiKP	14 22 24.0	+0.9
	baz=153						
OJC	Ojcow	116.66	31	*e*Pdif	Pdif	14 18 37.8	-0.6
OJC				*e*PP	PP	14 23 39.9	+8.0
OJC				*e*SS	SS	14 39 43.4	+6.7
OJC				LMZ	LR	15 05 32.8	
	comp=Z,53µm,25.3s						
OJC	Ojcow	116.66	31	*e*PKPdf	Pdif	14 18 37.6	-0.8
OJC	Ojcow	116.66	31	*e*PKPdf	PKiKP	14 22 23.1	0.0
OJC	Ojcow	116.66	31	*e*PKIKP	PKiKP	14 22 23.1	0.0
VLDQ	Val d'Or	116.66	324	*e*PKPdf	PKPdf	14 22 22.4	-0.7
VLDQ				LR	LR		
	comp=Z,45µm,20.0s						
H43A	Windswept, Lux	116.70	315	*e*PKPdf	PKPdf	14 22 22.9	-0.4
H43A				LR	LR		
	comp=Z,40µm,21.0s						
H43A	Windswept, Lux	116.70	315	P	PKiKP	14 22 24.2	+0.8
	baz=151						
SOC	Sochi	116.77	48	*i* PKIKP	PKiKP	14 22 25.9	+2.4
SOC				*e*		14 23 30.4	
SOC				*e*PS	PKKPdf	14 33 16.3	+0.6
SOC				*e*SS	SS	14 39 40.9	+2.6
SOC				*e*SSS	SSS	14 43 56.5	
MANU	Manus Island	116.82	172	PFAKE		14 22 40.0	+15
MANU				LR	LR		
	comp=Z,64µm,20.0s						
KWP	Kalwaria Pacla	116.86	33	*e*Pdif	Pdif	14 18 37.0	-2.3
KWP				*e*PKPdf	PKiKP	14 22 24.3	+0.8
KWP				*e*SS	SS	14 40 03.2	+24
KWP				LMZ	LR	15 10 42.0	
	comp=Z,88µm,20.4s						
KWP	Kalwaria Pacla	116.86	33	*e*PKPdf	Pdif	14 18 36.9	-2.4
KWP	Kalwaria Pacla	116.86	33	PFAKE		14 22 30.0	+6.5
KWP				LR	LR		
	comp=Z,729µm,20.0s						
KWP	Kalwaria Pacla	116.86	33	*e*PKIKP	PKiKP	14 22 24.3	+0.8
KWP				MLR	MLR		
	comp=Z,88µm,20.4s						
T25A	Trinidad	116.89	298	*e*PKPdf	PKPdf	14 22 24.1	-0.2
T25A				LR	LR		
	comp=Z,32µm,21.0s						
T25A	Trinidad	116.89	298	P	PKPdf	14 22 21.5	-2.7
	baz=148						
E47A	Iron Bridge	116.95	319	P	PKPdf	14 22 23.1	-0.6
	baz=152,SNR=11						
EDMD	Edmundbyers	117.00	15	IAMs_20	IAMs_20	15 09 36.0	
	comp=Z,68µm,18.9s						
F45A	CMU Biological	117.00	317	P	PKPdf	14 22 23.0	-0.9
	baz=152						
D49A	Beulah Townshi	117.08	321	P	PKPdf	14 22 22.5	-1.5
	baz=153						
I41A	Arkdale	117.08	313	PFAKE		14 22 40.0	+16
I41A				LR	LR		
	comp=Z,40µm,22.0s						
I41A	Arkdale	117.08	313	P	PKPdf	14 22 23.7	-0.4
	baz=150						
D48A	Paudash Townsh	117.13	320	P	PKPdf	14 22 23.8	-0.3
	baz=153						
X18A	Snowflake	117.13	293	*e*PKPdf	PKPdf	14 22 24.3	-0.4
X18A				LR	LR		
	comp=Z,48µm,21.0s						
E46A	Sault Ste Mari	117.21	318	*e*PKPdf	PKPdf	14 22 23.1	-1.2
E46A				LR	LR		
	comp=Z,26µm,20.0s						
E46A	Sault Ste Mari	117.21	318	P	PKPdf	14 22 22.7	-1.5
	baz=152						
ESK	Eskdalemuir	117.33	14	PFAKE		14 22 40.0	+16
ESK				LR	LR		
	comp=Z,61µm,22.0s						
JBP	Jabalpur	117.34	91	*e*P	PKPdf	14 22 24.6	-0.6
LSQQ	Lebel-sur-Quev	117.38	324	P	PKPdf	14 22 24.1	-0.4
	baz=154						
LVV	L'vov	117.39	34	*e*P	Pdif	14 18 53.7	+12
LVV				*e*		14 22 23.7	
LVV				*i*		14 23 34.7	
LVV				*e*PPP	PPP	14 26 09.5	
LVV				*e*		14 29 35.3	
LVV				*i* SS	SS	14 40 05.2	+19
LVV				MLR	MLR		
	comp=N,10µm,19.0s						
LVV				MLR	MLR		
	comp=E,31µm,19.0s						
LVV				MLR	MLR		
	comp=Z,32µm,19.0s						
113A	Mohawk Valley,	117.40	288	*e*PKPdf	PKPdf	14 22 24.5	-0.5
113A				LR	LR		
	comp=Z,24µm,22.0s						
D47A	Chapleau	117.43	319	P	PKPdf	14 22 23.7	-1.0
	baz=152,SNR=10.0						
CHGQ	Chibougamau	117.44	327	P	PKPdf	14 22 23.4	-1.2
	baz=155						
W18A	Petrified Fore	117.53	293	*e*PKPdf	PKPdf	14 22 25.1	-0.4
W18A				LR	LR		
	comp=Z,48µm,20.0s						
W18A	Petrified Fore	117.53	293	P	PKPdf	14 22 24.6	-0.9
	baz=147						
D46A	Sault St. Mari	117.58	319	P	PKPdf	14 22 24.7	-0.3
	baz=152						
NEY	Neytrino	117.58	50	*i* PKIKP	PKPdf	14 22 24.8	-0.5
ZEI	Tsey	117.63	51	*i* PKIKP	PKiKP	14 22 26.5	+1.0
ZEI				pmax	pmax		
	comp=Z,41nm,1.3s						
X16A	Lo Mia Camp, P	117.71	291	*e*PKPdf	PKiKP	14 22 26.0	+0.1
X16A				LR	LR		
	comp=Z,39µm,20.0s						
KSCO	Kaye Shedlock'	117.71	301	PFAKE		14 22 40.0	+14
KSCO				LR	LR		
	comp=Z,41µm,22.0s						
KSCO	Kaye Shedlock'	117.71	301	P	PKPdf	14 22 25.3	-0.3
	baz=147						
BWNR	Bhubaneshwar	117.72	98	*e*P	PKPdf	14 22 26.0	0.0
SDCO	Great Sand Dun	117.87	298	*e*PKPdf	PKPdf	14 22 25.8	-0.4
SDCO				LR	LR		
	comp=Z,38µm,19.0s						
SDCO	Great Sand Dun	117.87	298	P	PKPdf	14 22 25.3	-0.9
	baz=147,SNR=7.8						
BGNE	Belgrade	117.92	306	*e*PKPdf	PKPdf	14 22 25.3	-0.5
BGNE				LR	LR		
	comp=Z,37µm,20.0s						
BGNE	Belgrade	117.92	306	P	PKiKP	14 22 25.9	0.0
	baz=148						
F42A	Maple Grove Fa	117.95	315	P	PKPdf	14 22 25.6	-0.1
	baz=150						
E44A	Grand Marais A	117.96	317	*e*PKPdf	PKiKP	14 22 25.7	0.0
E44A				LR	LR		
	comp=Z,53µm,22.0s						
E44A	Grand Marais A	117.96	317	P	PKPdf	14 22 25.6	-0.1
	baz=151						
AKT	Akhty	117.99	54	*e*PKIKP	PKiKP	14 22 26.8	+0.7
AKT				*e*		14 23 41.3	
AKT				pmax	pmax		
	comp=Z,81nm,1.0s						
KKM	Kota Kinabalu	118.02	135	PFAKE		14 22 40.0	+13
KKM				LR	LR		
	comp=Z,40µm,20.0s						
Y14A	Wickenburg	118.02	290	*e*PKPdf	PKPdf	14 22 26.0	-0.3
Y14A				LR	LR		
	comp=Z,34µm,22.0s						
KBZ	Khabaz	118.06	50	PKP	PKPdf	14 22 25.5	-0.4
	comp=Z,16nm,1.0s,baz=157,slow=1.8,SNR=12						
E43A	Lone Tree Farm	118.11	316	*e*PKPdf	PKPdf	14 22 25.7	-0.3
E43A				LR	LR		
	comp=Z,50µm,22.0s						
E43A	Lone Tree Farm	118.11	316	P	PKPdf	14 22 25.7	-0.3
	baz=151						
NCK	Nalchik	118.12	50	*i* PKIKP	PKPdf	14 22 24.6	-1.5
GLA	Glamis	118.12	288	*e*PKPdf	PKPdf	14 22 26.4	-0.1
GLA				LR	LR		
	comp=Z,25µm,21.0s						
GLA	Glamis	118.12	288	*e*PKIKP	PKPdf	14 22 26.4	-0.1
GLA				MLR	MLR		
	comp=Z,25µm,21.0s						
GLA	Glamis	118.12	288	P	PKPdf	14 22 25.3	-1.2
	baz=146						
KIV	Kislovodsk	118.18	49	*e*PKPdf	PKPdf	14 22 25.9	-0.5
KIV				LR	LR		
	comp=Z,51µm,22.0s						
KIV	Kislovodsk	118.18	49	PKPdf	PKPdf	14 22 25.7	-0.7
KIV	Kislovodsk	118.18	49	*e*P	Pdif	14 18 44.1	-1.3
KIV				*i*		14 22 25.7	
KIV				*e*		14 23 40.6	
KIV				*e*PS	PS	14 33 26.5	-1.1
KIV				*e*SS	SS	14 39 52.0	-4.8
KIV				pmax	pmax		
	comp=Z,127nm,1.1s						
KIV				MLR	MLR		
	comp=Z,137µm,22.0s						
MATQ	Matagami	118.20	324	P	PKPdf	14 22 25.0	-1.0
	baz=154						
G40A	Rib Lake	118.25	313	*e*PKPdf	PKPdf	14 22 26.3	0.0
G40A				LR	LR		
	comp=Z,56µm,22.0s						
G40A	Rib Lake	118.25	313	P	PKPdf	14 22 25.7	-0.6
	baz=150						
IKP	In-Ko-Pah, Jac	118.39	287	P	PKiKP	14 22 27.4	+0.3
	baz=146						
BEL	Belsk	118.39	30	*e*SS	SS	14 40 08.8	+10
BEL				LMZ	LR	15 10 50.8	
	comp=Z,48µm,20.5s						
BEL	Belsk	118.39	30	*e*SS	SS	14 40 08.8	+10
S22A	4UR Ranch, Cre	118.44	297	*e*PKPdf	PKiKP	14 22 27.4	0.0
S22A				LR	LR		
	comp=Z,37µm,20.0s						
S22A	4UR Ranch, Cre	118.44	297	P	PKPdf	14 22 26.1	-1.2
	baz=147						
SWSC	Sam W. Stewart	118.49	287	P	PKPdf	14 22 25.8	-1.4
	baz=146						
Y12C	Blythe	118.57	288	*e*PKPdf	PKPdf	14 22 26.6	-0.7
Y12C				LR	LR		
	comp=Z,25µm,20.0s						
Y12C	Blythe	118.57	288	P	PKPdf	14 22 26.1	-1.1
	baz=146						
COWI	Conover	118.60	315	*e*PKPdf	PKPdf	14 22 26.1	-0.8
COWI				LR	LR		
	comp=Z,42µm,21.0s						
WUAZ	Wupatki	118.60	292	*e*PKPdf	PKPdf	14 22 27.0	-0.5
WUAZ				LR	LR		
	comp=Z,32µm,21.0s						
WUAZ	Wupatki	118.60	292	P	PKPdf	14 22 26.4	-1.1
	baz=146						
G39A	Holcombe	118.61	313	P	PKPdf	14 22 26.8	-0.2
	baz=150						
BAR	Barrett	118.67	286	*e*PKPdf	PKPdf	14 22 26.9	-0.6
BAR				LR	LR		
	comp=Z,23µm,19.0s						
GROC	Groznyy	118.70	52	*i* PKIKP	PKiKP	14 22 28.6	+1.3
GROC				*e*		14 23 45.6	
GROC				*e*		14 29 37.2	
GROC				*e*SP	SP	14 33 31.8	+1.7
GROC				pmax	pmax		
	comp=Z,86nm,1.0s						
MVCO	Mesa Verde	118.72	295	*e*PKPdf	PKPdf	14 22 26.5	-1.3
MVCO				LR	LR		
	comp=Z,44µm,21.0s						
MVCO	Mesa Verde	118.72	295	P	PKiKP	14 22 27.8	0.0
	baz=146						
MONP2	Monument Peak	118.73	286	P	PKPdf	14 22 26.7	-1.3
	baz=146,SNR=11						
Q24A	Divide	118.74	299	PFAKE		14 22 40.0	+12
Q24A				LR	LR		
	comp=Z,40µm,21.0s						
Q24A	Divide	118.74	299	P	PKiKP	14 22 28.3	+0.3
	baz=147						
PDMCI	Parker Dam,Lak	118.85	289	P	PKiKP	14 22 27.9	0.0
	baz=146						
TARA	Tarawa	118.86	201	PFAKE		14 22 40.0	+11
TARA				LR	LR		
	comp=Z,26µm,22.0s						
GKP	Gorka Klasztor	118.88	28	*e*SS	SS	14 40 15.2	+10
GKP				LMZ	LR	15 07 27.2	
	comp=Z,73µm,22.0s						
BC3	Big Chuckawall	118.92	288	P	PKPdf	14 22 27.0	-1.1
	baz=146,SNR=7.5						
109C	Camp Elliot, M	119.05	286	P	PKPdf	14 22 27.7	-0.6
	baz=146						
CPE	Camp Elliot	119.05	286	PFAKE		14 22 40.0	+12
CPE				LR	LR		
	comp=Z,26µm,22.0s						
OGNE	Ogallala	119.09	302	*e*PKPdf	PKPdf	14 22 26.8	-1.4
OGNE				LR	LR		
	comp=Z,41µm,20.0s						
OGNE	Ogallala	119.09	302	P	PKPdf	14 22 28.1	0.0
	baz=147						
SPMN	Marine on St.	119.14	312	*e*PKPdf	PKPdf	14 22 27.6	-0.4
SPMN				LR	LR		
	comp=Z,32µm,22.0s						
SPMN	Marine on St.	119.14	312	P	PKiKP	14 22 28.2	+0.2
	baz=149						
MAK	Makhachkala	119.16	53	*e*P	Pdif	14 18 50.1	+0.4
MAK				*i*		14 22 25.1	
MAK				*e*PPP	PPP	14 26 20.5	
MAK				*e*PS	PKKPdf	14 33 37.0	+26
MAK				pmax	pmax		
	comp=Z,839nm,4.8s						
MAK				pmax	pmax		
	comp=Z,25nm,0.3s						
IRM	Iron Mountain	119.19	288	P	PKPdf	14 22 28.2	-0.3
	baz=146,SNR=12						
D41A	Chassel	119.23	316	*e*PKPdf	PKPdf	14 22 27.4	-0.7
D41A				LR	LR		
	comp=Z,33µm,21.0s						
D41A	Chassel	119.23	316	P	PKiKP	14 22 28.6	+0.4
	baz=150						
RGN	Rugen	119.24	25	PFAKE		14 22 40.0	+12
RGN				LR	LR		
	comp=Z,70µm,19.0s						
GOF	Gofitskoye	119.25	49⇑	*e*PKIKP	PKiKP	14 22 30.1	+1.8
GOF				pmax	pmax		
	comp=Z,81nm,1.7s						
ECSD	EROS Data Cent	119.30	308	*e*PKPdf	PKPdf	14 22 27.6	-0.8
ECSD				LR	LR		
	comp=Z,60µm,21.0s						
ECSD	EROS Data Cent	119.30	308	P	PKiKP	14 22 28.7	+0.3
	baz=148						
PFO	Pinyon Flats O	119.35	287	*e*PKPdf	PKPdf	14 22 28.1	-0.9
PFO				LR	LR		
	comp=Z,29µm,21.0s						
PFO	Pinyon Flats O	119.35	287	P	PKiKP	14 22 29.2	+0.2
	baz=146						
GYA0B	ALIBECK ARRAY	119.36	64	PFAKE		14 22 40.0	+11
GYA0B				LR	LR		
	comp=Z,66µm,18.0s						
W13A	Hualapai Mount	119.39	290	*e*PKPdf	PKPdf	14 22 28.8	-0.3
W13A				LR	LR		
	comp=Z,34µm,20.0s						
BELC	Belle Mtn. Jos	119.45	287	P	PKPdf	14 22 28.4	-0.8
	baz=146,SNR=23						
AKASG	Malin Array Be	119.63	37	PKP	PKPdf	14 22 27.4	-1.4
	comp=Z,21nm,0.9s,baz=236,slow=1.5,SNR=26						
AKASG				PKKPbc	PKKPab	14 32 41.3	+2.6
	comp=Z,2.0nm,0.7s,baz=33,slow=4.1,SNR=5.3						
AKBB	Malin Array Si	119.63	37	*e*PKPdf	PKPdf	14 22 27.4	-1.3
AKBB				*e*PKKPab	PKKPab	14 32 41.3	+2.6
AKBB				LR	LR		
	comp=Z,35µm,22.0s						
AKBB	Malin Array Si	119.63	37	*e*PKIKP	PKPdf	14 22 27.4	-1.3
AKBB				MLR	MLR		
	comp=Z,35µm,22.0s						
ISCO	Idaho Springs	119.63	299	*e*PKPdf	PKPdf	14 22 28.6	-1.0
ISCO				LR	LR		
	comp=Z,48µm,21.0s						
ISCO	Idaho Springs	119.63	299	*e*PKIKP	PKPdf	14 22 28.6	-1.0
ISCO				MLR	MLR		
	comp=Z,48µm,21.0s						
ISCO	Idaho Springs	119.63	299	P	PKPdf	14 22 28.9	-0.6
	baz=146,SNR=23						
MURC	Murrieta	119.68	286	P	PKPdf	14 22 28.5	-1.0
	baz=146						
SMCO	Snowmass	119.70	298	*e*PKPdf	PKPdf	14 22 29.3	-0.5
SMCO				LR	LR		
	comp=Z,35µm,20.0s						
U15A	North Rim	119.77	292	*e*PKPdf	PKiKP	14 22 30.1	+0.1
U15A				LR	LR		
	comp=Z,52µm,22.0s						
SCI2	San Clemente I	119.80	285	P	PKiKP	14 22 30.7	+1.0
	baz=146						
E38A	The Farm, Brul	119.88	313	*e*PKPdf	PKPdf	14 22 27.5	-1.9
E38A				LR	LR		
	comp=Z,30µm,20.0s						
E38A	The Farm, Brul	119.88	313	P	PKiKP	14 22 30.5	+1.1
	baz=149						
LDFC	Landfair	119.94	289	*e*PKPdf	PKPdf	14 22 29.7	-0.3
LDFC				LR	LR		
	comp=Z,31µm,20.0s						
GMRC	Granite Mounta	119.95	288	P	PKPdf	14 22 29.3	-0.8
	baz=146,SNR=13						
CIS	Catalina Islan	120.09	285	P	PKPdf	14 22 29.6	-0.7
	baz=146						
BBRC	Big Bear Solar	120.10	287	P	PKiKP	14 22 31.0	+0.4
	baz=146						
SCHQ	Schefferville	120.14	334	PKP	PKPdf	14 22 28.6	-0.9
	comp=Z,54nm,0.9s,baz=179,slow=2.2,SNR=10						
SCHQ	Schefferville	120.14	334	*e*PKPdf	PKPdf	14 22 28.7	-0.9
SCHQ				LR	LR		
	comp=Z,45µm,22.0s						
C40A	Isle Royale Na	120.17	316	*e*PKPdf	PKPdf	14 22 28.4	-1.5
C40A				LR	LR		
	comp=Z,32µm,20.0s						
C40A	Isle Royale Na	120.17	316	P	PKiKP	14 22 31.8	+1.8
	baz=150,SNR=7.6						
MUD	Monsted U'grnd	120.25	21	*i* PKIKP	PKiKP	14 22 31.5	+1.7
MUD	Monsted U'grnd	120.25	21	*i* P	PKiKP	14 22 31.5	+1.7
FMP	Fort Macarthur	120.29	285	P	PKiKP	14 22 30.8	+0.1
	baz=146						
HEC	Hector,Ludlow	120.30	288	P	PKiKP	14 22 31.7	+0.9
	baz=146						
BFSC	Mount Baldy Ra	120.42	286	P	PKiKP	14 22 32.3	+1.2
	baz=146						
SNCC	San Nicolas Is	120.48	284	PFAKE		14 22 40.0	+8.9
SNCC				LR	LR		
	comp=Z,27µm,20.0s						
SNCC	San Nicolas Is	120.48	284	P	PKiKP	14 22 31.3	+0.2
	baz=146						
KNB	Kanab	120.49	292	*e*PKPdf	PKPdf	14 22 29.2	-1.9
DLV	T Lat	120.58	125	PFAKE		14 22 40.0	+7.9
DLV				LR	LR		
	comp=Z,35µm,20.0s						
MWC	Mount Wilson	120.60	286	*e*PKPdf	PKPdf	14 22 30.7	-0.7
MWC				LR	LR		
	comp=Z,30µm,19.0s						
TUQ	Turquoise Moun	120.61	288	P	PKPdf	14 22 31.1	-0.2
	baz=146,SNR=7.7						
PKCU	Pink Cliffs	120.61	293	*e*PKPdf	PKPdf	14 22 29.4	-2.1
NDI	New Delhi	120.62	86	*e*P	PKPdf	14 22 31.0	-0.4
PASC	Pasadena Art C	120.62	286	PFAKE		14 22 40.0	+8.7
PASC				LR	LR		
	comp=Z,26µm,19.0s						
RRX	Edison Barstow	120.64	287	P	PKPdf	14 22 31.2	-0.1
	baz=146						
LCMT	Little Creek M	120.68	292	*e*PKPdf	PKPdf	14 22 29.6	-1.8
N23A	Red Feather La	120.68	300	*e*PKPdf	PKPdf	14 22 30.3	-1.2
N23A				LR	LR		
	comp=Z,26µm,22.0s						
N23A	Red Feather La	120.68	300	P	PKPdf	14 22 31.1	-0.4
	baz=146,SNR=16						
BOK	Bokaro	120.73	96	*e*P	PKPdf	14 22 31.6	-0.1
BOK				IAMs_20	IAMs_20	14 57 51.3	
	comp=Z,51µm,34.9s						
DECC	Green Verdugo	120.75	286	P	PKiKP	14 22 32.4	+0.8
	baz=146						
SUSD	Miller	120.80	307	P	PKiKP	14 22 31.7	+0.4
	baz=147						
PHWY	Pilot Hill	120.81	300	*e*PKPdf	PKPdf	14 22 29.6	-2.2
PHWY				LR	LR		
	comp=Z,23µm,21.0s						
GSC	Goldstone, Bar	120.90	288	*e*PKPdf	PKPdf	14 22 30.0	-1.9
GSC				LR	LR		
	comp=Z,24µm,20.0s						
GSC	Goldstone, Bar	120.90	288	*e*PKIKP	PKPdf	14 22 30.0	-1.9
GSC				MLR	MLR		
	comp=Z,24µm,20.0s						
GSC	Goldstone, Bar	120.90	288	P	PKPdf	14 22 31.7	-0.1
	baz=145,SNR=13						
SIMRM	Sittwe	120.95	105	PFAKE		14 22 40.0	+7.6
SIMRM				LR	LR		
	comp=Z,9µm,19.0s						
BLG	Laguna Peak, P	120.98	285	P	PKiKP	14 22 32.5	+0.5
	baz=145						
SUW	Suwalki	120.98	31	*e*PKPdf	PKPdf	14 22 30.4	-0.8
SUW				*e*SS	SS	14 40 40.1	+7.7
SUW				LMZ	LR	15 08 53.9	
	comp=Z,60µm,25.5s						
SUW	Suwalki	120.98	31	*e*PKPdf	PKPdf	14 22 29.1	-2.0
SUW				LR	LR		
	comp=Z,37µm,21.0s						
SUW	Suwalki	120.98	31	*e*PKIKP	PKPdf	14 22 29.2	-2.0
SUW				MLR	MLR		
	comp=Z,37µm,21.0s						
EYMN	Ely	121.01	314	*e*PKPdf	PKPdf	14 22 29.5	-2.0
EYMN				LR	LR		
	comp=Z,32µm,22.0s						
EYMN	Ely	121.01	314	P	PKiKP	14 22 32.7	+1.1
	baz=148,SNR=25						
DDMP	Don Marcelino,	121.01	146	*e*P	PKPdf	14 22 31.0	-1.6
O20A	White River Ci	121.04	297	PFAKE		14 22 40.0	+7.8
O20A				LR	LR		
	comp=Z,62µm,20.0s						
O20A	White River Ci	121.04	297	P	PKiKP	14 22 32.9	+0.7
	baz=146						
MTPU	Mount Pierson	121.05	293	*e*PKPdf	PKPdf	14 22 31.4	-1.1
SZCU	Shurtz Canyon	121.09	292	*e*PKPdf	PKPdf	14 22 31.4	-0.9
EDW2	Edwards Air Fo	121.11	286	P	PKiKP	14 22 33.2	+0.9
	baz=145						
SHPR	Sheep Range	121.13	290	*e*PKPdf	PKPdf	14 22 31.7	-0.6
SHPR				LR	LR		
	comp=Z,28µm,21.0s						
SHOC	Shoshone, Teco	121.15	288	P	PKiKP	14 22 32.9	+0.5
	baz=145,SNR=6.4						
SCZ2	Santa Cruz Isl	121.15	285	P	PKiKP	14 22 33.1	+0.7
	baz=145						
CCUT	Cedar City	121.17	292	*e*PKPdf	PKPdf	14 22 32.2	-0.3
SRU	San Rafael Swe	121.19	295	*e*PKPdf	PKPdf	14 22 31.3	-1.1
SRU	San Rafael Swe	121.19	295	*e*PKIKP	PKPdf	14 22 31.3	-1.1
OSI	Osito Audit: C	121.23	286	PFAKE		14 22 40.0	+7.4
OSI				LR	LR		
	comp=Z,32µm,19.0s						
OSI	Osito Audit: C	121.23	286	P	PKiKP	14 22 33.3	+0.7
	baz=145						
MSU	Marysvale	121.43	293	*e*PKPdf	PKPdf	14 22 32.7	-0.3
MSU	Marysvale	121.43	293	*e*PKIKP	PKPdf	14 22 32.7	-0.3
LRMC	Laurel Mtn Rad	121.46	287	P	PKiKP	14 22 33.5	+0.3
	baz=145						
SBC	Santa Barbara	121.56	285	P	PKiKP	14 22 33.4	+0.3
	baz=145						
P17A	Butcher Ranch,	121.58	295	*e*PKPdf	PKPdf	14 22 32.9	-0.3
TCRU	Three Creeks R	121.63	293	*e*PKPdf	PKPdf	14 22 32.6	-0.8
TMUT	Trail Mountain	121.64	295	*e*PKPdf	PKPdf	14 22 32.7	-0.8
CTBH	Cotabato--PC H	121.66	144⇑	*i*P	PKPdf	14 22 33.4	-0.4
KCP	Kidapawan	121.70	145⇑	*i*P	PKiKP	14 22 35.3	+1.1
ARVC	Arvin	121.70	286	P	PKiKP	14 22 33.8	+0.4
	baz=145						
IPIL	Ipil	121.70	142	*e*P	PKPdf	14 22 33.4	-0.5
SNART	Snartemo	121.72	19	*e*PKPdf	PKiKP	14 22 33.1	+0.5
SNART				*e*PP	PP	14 24 05.3	-1.3
SNART				IVMs_BB	IVMs_BB	15 08 52.6	
	comp=Z,6µm,24.0s						
MPMC	Manual Prospec	121.84	288	P	PKPdf	14 22 33.6	-0.2
	baz=145,SNR=22						
HOMB	Homborsund	121.86	20	*e*PKPdf	PKiKP	14 22 33.0	+0.1
HOMB				*e*PP	PP	14 24 05.7	-1.9
HOMB				IVMs_BB	IVMs_BB	15 02 47.6	
	comp=Z,23µm,38.2s						
RWWY	Rawlins	121.88	299	*e*PKPdf	PKPdf	14 22 32.3	-1.5
RWWY				LR	LR		
	comp=Z,32µm,20.0s						
FURC	Furnace Creek,	121.89	288	P	PKiKP	14 22 34.2	+0.5
	baz=145						
DAV	Davao City (W)	121.89	145	PFAKE		14 22 50.0	+16
DAV				LR	LR		
	comp=Z,26µm,21.0s						
MATI	Mati	121.96	146	*e*P	PKiKP	14 22 34.9	+0.2
PKM	Mcpherson Peak	121.97	285	P	PKiKP	14 22 34.3	+0.1
	baz=145						
ISA	Isabella, Lake	121.97	287	*e*PKPdf	PKiKP	14 22 34.2	+0.1
ISA				LR	LR		
	comp=Z,52µm,21.0s						
ISA	Isabella, Lake	121.97	287	P	PKiKP	14 22 34.1	+0.1
	baz=145						
TPNV	Topopah Spring	122.00	289	*e*PKPdf	PKPdf	14 22 33.4	-0.6
TPNV				LR	LR		
	comp=Z,34µm,21.0s						
TPNV	Topopah Spring	122.00	289	*e*PKIKP	PKPdf	14 22 33.4	-0.6
TPNV				MLR	MLR		
	comp=Z,34µm,21.0s						
TPNV	Topopah Spring	122.00	289	P	PKiKP	14 22 34.5	+0.3
	baz=145,SNR=63						
PAGZ	Pagadian	122.00	143	*e*P	PKPdf	14 22 34.5	-0.1
DAC	Darwin (Calif)	122.07	288	PFAKE		14 22 50.0	+16
DAC				LR	LR		
	comp=Z,22µm,22.0s						
PSUT	Pine Spring	122.20	292	*e*PKPdf	PKPdf	14 22 33.8	-0.6
KMY	Karmoy	122.25	18	*e*PKPdf	PKiKP	14 22 34.3	+0.6
KMY				*e*PP	PP	14 24 09.2	-0.9

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CM31  Chiang Mai Arr 122.30 112 ePKPdf    PKPdf     14 22 34.2 -0.7
CM31                            ePKKPab   PKKPab    14 32 31.9 +0.9
CMAR  Chiang Mai Arr 122.30 112 PKP       PKPdf     14 22 34.8 -0.1
      comp=Z,54nm,0.8s,baz=222,slow=3.7,SNR=43
CMAR                            PKKPab    PKKPab    14 32 31.9 +0.9
      comp=Z,5.7nm,0.9s,baz=356,slow=3.8,SNR=10.0
CMAR                            SKKPbc    SKKPbc    14 36 13.2 -0.6
      comp=Z,5.4nm,1.1s,baz=358,slow=4.0,SNR=4.7
K22A  Casper         122.38 300 ePKPdf    PKPdf     14 22 33.6 -1.0
K22A                            LR        LR
      comp=Z,49µm,21.0s
K22A  Casper         122.38 300 P         PKiKP     14 22 35.1 +0.4
      baz=145,SNR=21
DDI   Dehra Dun      122.38  85 eP        PKPdf     14 22 34.7 -0.1
SMMC  Simmler        122.40 285 P         PKiKP     14 22 35.1 +0.3
      baz=145
VES   Vestal, Richgr 122.41 286 P         PKPdf     14 22 34.5 -0.1
      baz=145
MPU   Maple Canyon   122.42 295 ePKPdf    PKPdf     14 22 34.6 -0.1
CWC   Cottonwood Cre 122.43 287 P         PKPdf     14 22 34.7 -0.1
      baz=145
BUKP  Musuan         122.52 144 eP        PKPdf     14 22 20.5  -15
GRAC  Grapevine Rang 122.55 288 P         PKPdf     14 22 34.5 -0.4
      baz=145
RSSD  Black Hills    122.56 303 ePKPdf    PKPdf     14 22 33.5 -1.4
RSSD                            LR        LR
      comp=Z,51µm,21.0s
RSSD  Black Hills    122.56 303 ePKIKP    PKPdf     14 22 33.5 -1.4
RSSD                            MLR       MLR
      comp=Z,51µm,21.0s
RSSD  Black Hills    122.56 303 P         PKiKP     14 22 35.1  0.0
      baz=145
NLU   North Lily Min 122.57 294 ePKPdf    PKPdf     14 22 34.0 -1.1
CHTO  Chiang Mai     122.61 112 ePKPdf    PKPdf     14 22 34.3 -1.2
CHTO  Chiang Mai     122.61 112 ePKIKP    PKPdf     14 22 34.3 -1.2
SMLA  Simla          122.61  84 eP        PKPdf     14 22 33.1 -2.0
BLS5  Blasjo         122.63  19 ePKPdf    PKiKP     14 22 34.8 +0.3
BLS5                            ePP       PP        14 24 13.2 +0.4
BLS5                            eSP       SP        14 34 05.0 +0.5
BLS5                            eSS       SS        14 40 51.9 -1.5
BLS5                            IVMs_BB   IVMs_BB   15 02 39.8
      comp=Z,13µm,34.7s
MICGM Minsk          122.64  34⇑ePKP      PKPdf     14 22 33.0 -1.4
MICGM                           PKPM                14 22 34.0
      comp=Z,0.2nm,0.8s
MICGM                           ePP       PP        14 24 12.0 -1.0
MICGM                           PPM                 14 24 14.0
      comp=Z,4.9nm,8.0s
MICGM                           ePKS                14 26 00.0
MICGM                           ePPP      PPP       14 26 24.0
MICGM                           eSKS      SKSac     14 29 30.0 -3.2
MICGM                           eSKKS     SKKSac    14 31 18.0 +8.8
MICGM                           eSKSP               14 33 56.0
MICGM                           ePS       PS        14 34 06.0 -1.1
MICGM                           eSS       SS        14 40 50.0 -3.5
MICGM                           eSSS      SSS       14 44 40.0
MICGM                           eLQ       LQ        14 53 10.0
MICGM                           eLR       LR        15 01 05.0
MICGM                           LRM       MLR       15 12 00.0
      comp=N,38nm,20.0s
MICGM                           LRM       MLR       15 12 00.0
      comp=N,25nm,20.0s
MICGM                           LRM       MLR       15 12 06.0
      comp=E,27nm,20.0s
MICGM                           LRM       MLR       15 12 12.0
      comp=E,33nm,20.0s
MICGM                           LRM       MLR       15 12 12.0
      comp=Z,60nm,20.0s
MICGM                           LRM       MLR       15 12 16.0
      comp=Z,39nm,20.0s
MNK   Minsk          122.64  34 ePKIKP    PKPdf     14 22 33.0 -1.4
MNK                             e                   14 24 12.0
MNK                             e                   14 29 30.0
MNK                             eSS       SS        14 40 50.0 -3.5
MNK                             pmax      pmax
      comp=Z,230nm,0.8s
MNK                             MLR       MLR
      comp=Z,39µm,20.0s
NACGM Naroch         122.70  33 eP        Pdif      14 19 14.0 +8.9
NACGM                           ePKP      PKPdf     14 22 33.0 -1.5
NACGM                           ePP       PP        14 24 10.0 -3.4
NACGM                           ePPP      PPP       14 27 08.0
NACGM                           eSKS      SKSdf     14 30 00.0  +15
NACGM                           eSKKS     SKKSac    14 31 10.0 +0.4
NACGM                           ePS       PS        14 33 51.0  -17
NACGM                           eSS       SS        14 40 42.0  -12
NACGM                           eSSS      SSS       14 45 22.0
NACGM                           eLQ       LQ        14 59 40.0
NACGM                           eLR       LR        15 02 16.0
NACGM                           LRM       MLR       15 09 44.0
      comp=Z,66nm,26.0s
NACGM                           LRM       MLR       15 10 04.0
      comp=E,65nm,24.0s
NIL   Nilore         122.80  79 ePKPdf    PKPdf     14 22 34.7 -0.8
NIL   Nilore         122.80  79 ePKIKP    PKPdf     14 22 34.7 -0.8
JLU   Jordanelle     122.82 295 ePKPdf    PKPdf     14 22 34.3 -1.2
R11A  Troy Canyon, C 122.83 291 ePKPdf    PKPdf     14 22 35.5 -0.1
R11A                            LR        LR
      comp=Z,46µm,22.0s
R11A  Troy Canyon, C 122.83 291 P         PKPdf     14 22 35.6  0.0
      baz=144,SNR=29
PAGB  Antelope Grade 122.86 285 ePKPdf    PKiKP     14 22 35.8  0.0
PAGB                            LR        LR
      comp=Z,22µm,20.0s
AGMN  Agassiz Nation 122.86 311 ePKPdf    PKPdf     14 22 33.8 -1.3
AGMN                            LR        LR
      comp=Z,50µm,22.0s
AGMN  Agassiz Nation 122.86 311 P         PKPdf     14 22 35.1  0.0
      baz=147,SNR=26
NRS   Narsarsuaq     122.87 349 PFAKE               14 22 50.0  +15
NRS                             LR        LR
      comp=Z,40µm,20.0s
VOG   Valley Oaks Go 122.94 286 P         PKiKP     14 22 36.0 +0.3
      baz=145
BELO  BELONIA        122.94 102 ex        PKiKP     14 22 31.4 -4.8
IIGN  Ignalina       122.96  32 eP        PKiKP     14 22 39.2 +4.0
IIGN                            IAmb      IAmb      14 22 45.4
      comp=Z,31nm,0.8s
KOLN  Koldanda       122.96  92 eP        PKPdf     14 22 34.8 -1.4
      comp=Z,709nm,1.4s
VORD  Divnogorie     122.99  43 ePKIKP    PKPdf     14 22 34.3 -0.9
VORD                            pmax      pmax
      comp=Z,50nm,0.9s
TIN   Tinemaha, Big  123.00 288 P         PKiKP     14 22 36.1  0.0
      baz=144
CTU   Camp Tracy     123.03 295 ePKPdf    PKPdf     14 22 35.5 -0.3
IDID  Didziasalis    123.06  32 eP        PKPdf     14 22 33.5 -1.6
IDID                            IAmb      IAmb      14 22 39.4
      comp=Z,30nm,1.0s
DUG   Dugway, Tooele 123.09 294 ePKPdf    PKPdf     14 22 34.8 -1.2
DUG                             LR        LR
      comp=Z,44µm,21.0s
DUG   Dugway, Tooele 123.09 294 ePKIKP    PKPdf     14 22 34.8 -1.2
DUG                             MLR       MLR
      comp=Z,44µm,21.0s
DUG   Dugway, Tooele 123.09 294 P         PKiKP     14 22 36.2  0.0
      baz=144,SNR=26
DHRM  DHARAMSHALA    123.12  82 eP        PKPdf     14 22 36.0 -0.4
ODD1  Odda           123.13  19 ePKPdf    PKiKP     14 22 36.0 +0.6
ODD1                            ePP       PP        14 24 15.8 -0.4
ODD1                            ePS       PS        14 34 15.5 +4.1
ODD1                            IVMs_BB   IVMs_BB   15 12 34.8
      comp=Z,15µm,17.7s
ISAL  Salakas        123.13  32 eP        PKPdf     14 22 33.5 -1.8
ISAL                            IAmb      IAmb      14 22 40.7
      comp=Z,37nm,0.9s
VSR   Storozhevoye   123.16  43 ePKIKP    PKPdf     14 22 34.0 -1.5
VSR                             pmax      pmax
      comp=Z,50nm,0.8s
VSR                             MLR       MLR
      comp=Z,24µm,20.0s
IVI   Ivigtut        123.20 347 ePKPdf    PKPdf     14 22 34.7 -0.6
IVI                             LR        LR
      comp=Z,43µm,19.0s
TCUT  Toone Canyon   123.22 296 ePKPdf    PKPdf     14 22 35.4 -0.9
IZAR  Zarasai        123.32  32 eP        PKPdf     14 22 34.2 -1.4
IZAR                            IAmb      IAmb      14 22 40.1
      comp=Z,50nm,1.0s
KONO  Kongsberg      123.36  20 ePKPdf    PKPdf     14 22 35.0 -0.6
KONO                            LR        LR
      comp=Z,47µm,19.0s
KONO  Kongsberg      123.36  20 ePKIKP    PKPdf     14 22 35.0 -0.6
KONO                            MLR       MLR
      comp=Z,47µm,19.0s
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KONO  Kongsberg      123.36  20 ePKPdf    PKPdf     14 22 35.5 -0.1
KONO                            ePP       PP        14 24 15.4 -2.3
KONO                            eSP       SP        14 34 10.3 -0.6
KONO                            eSS       SS        14 41 02.6 +0.1
KONO                            IVMs_BB   IVMs_BB   15 03 28.1
      comp=Z,20µm,38.2s
BER   Bergen         123.38  18 ePdif     Pdif      14 19 08.2 +0.3
BER                             epPKPdf   pPKPdf    14 22 40.2 -0.9
BER                             ePP       PP        14 24 16.4 -1.5
BER                             eSP       SP        14 34 11.4 +0.4
BER                             eSS       SS        14 41 02.8 +0.1
BER                             IVMs_BB   IVMs_BB   15 13 22.6
      comp=Z,22µm,19.0s
AGT   Agartala       123.39 101 ex        PKPdf     14 22 28.0 -8.8
ASK   Askoy          123.46  17 ePKPdf    PKiKP     14 22 36.5 +0.5
ASK                             ePS       PS        14 34 18.2 +4.0
DANN  Dangsing       123.52  91 eP        PKPdf     14 22 37.1 -0.3
      comp=Z,461nm,0.9s
DMN   Daman          123.56  93 eP        PKPdf     14 22 36.8 -0.6
      comp=Z,562nm,1.3s
VORR  Voronezh       123.56  42 PKIKP     PKiKP     14 22 37.0 +0.5
VORR                            pmax      pmax
      comp=Z,400nm,1.2s
GKN   Gorkha         123.66  92 eP        PKPdf     14 22 36.4 -1.1
      comp=Z,486nm,1.2s
PKIN  Phulchoki      123.67  93 eP        PKPdf     14 22 36.6 -1.1
      comp=Z,403nm,1.2s
PKI   Pulchoki       123.67  93 eP        PKPdf     14 22 35.9 -1.8
      comp=Z,396nm,1.3s
HWUT  Hardware Ranch 123.69 296 ePKPdf    PKPdf     14 22 36.9 -0.2
HWUT                            LR        LR
      comp=Z,39µm,21.0s
BUTP  Butuan         123.72 145 eP        PKiKP     14 22 39.4 +1.4
MLAC  Mammoth, Mammo 123.75 288 P         PKPdf     14 22 36.7 -0.8
      baz=144
BW06  Boulder Array  123.76 298 ePKPdf    PKPdf     14 22 36.5 -0.8
BW06                            LR        LR
      comp=Z,46µm,22.0s
BW06  Boulder Array  123.76 298 P         PKiKP     14 22 37.8 +0.3
      baz=144,SNR=23
PD31  Pinedale Array 123.76 298 ePKPdf    PKPdf     14 22 36.9 -0.4
PD31                            ePKKPbc   PKKPbc    14 32 23.4 +0.5
PD31                            e                   14 36 15.3
PDAR  Pinedale Array 123.76 298 PKP       PKPdf     14 22 36.9 -0.4
      comp=Z,4.4nm,0.5s,baz=147,slow=5.2,SNR=23
PDAR                            PKKPbc    PKKPbc    14 32 23.4 +0.5
      comp=Z,0.6nm,0.7s,baz=336,slow=2.0,SNR=2.7
PDAR                            SKKPbc    SKKPbc    14 36 15.3 +3.4
      comp=Z,2.6nm,1.0s,baz=246,slow=3.8,SNR=3.0
BGU   Big Grassy Mou 123.78 294 ePKPdf    PKPdf     14 22 37.0 -0.3
KKN   Kakani         123.79  93 eP        PKPdf     14 22 37.0 -0.8
      comp=Z,206nm,0.8s
OMMB  Old Mammoth Mi 123.81 288 ePKPdf    PKPdf     14 22 37.5 -0.1
OMMB                            LR        LR
      comp=Z,30µm,21.0s
OSL   Oslo           123.82  21 eP        PKPdf     14 22 35.8 -0.6
MDPB  Devils Postpil 123.86 287 ePKPdf    PKPdf     14 22 37.4 -0.3
MDPB                            LR        LR
      comp=Z,25µm,22.0s
MDND  Maddock        123.88 309 ePKPdf    PKPdf     14 22 36.5 -0.6
MDND                            LR        LR
      comp=Z,32µm,19.0s
MDND  Maddock        123.88 309 P         PKPdf     14 22 36.5 -0.6
      baz=146
ENPP  El Nido        123.92 137 eP        PKiKP     14 22 39.5 +1.1
SUE   Sulen          123.94  17 ePKPdf    PKiKP     14 22 37.5 +0.6
SUE                             ePP       PP        14 24 19.9 -1.7
SUE                             eSP       SP        14 34 16.3 +0.3
SUE                             eSS       SS        14 41 09.8  0.0
SUE                             IVMs_BB   IVMs_BB   15 10 16.5
      comp=Z,17µm,21.3s
SLIT  Slitere, Latvi 124.04  29 eP        PKPdf     14 22 34.5 -2.5
SLIT                            IAmb      IAmb      14 22 40.5
      comp=Z,348nm,0.8s
NV11  Mina Array Sit 124.08 289 ePKPdf    PKiKP     14 22 38.7 +0.5
NV11                            LR        LR
      comp=Z,2µm,22.0s
SKAR  Skarslia       124.12  19 ePKPdf    PKiKP     14 22 37.9 +0.5
SKAR                            ePP       PP        14 24 21.7 -1.2
SKAR                            eSP       SP        14 34 16.7 -1.0
SKAR                            eSS       SS        14 41 12.0 -0.3
SKAR                            IVMs_BB   IVMs_BB   15 12 15.9
      comp=Z,17µm,22.1s
JIRN  Jiri           124.13  94 eP        PKPdf     14 22 37.9 -0.8
      comp=Z,500nm,0.9s
NV01  Mina Array Sit 124.15 289 ePKPdf    PKiKP     14 22 39.2 +0.8
NV01                            ePKKPab   PKKPbc    14 32 20.4 -0.9
NVAR  Mina Array Bea 124.15 289 PKP       PKiKP     14 22 39.2 +0.8
      comp=Z,27nm,0.9s,baz=151,slow=3.3,SNR=29
NVAR                            PKKPbc    PKKPbc    14 32 20.4 -0.9
      comp=Z,2.6nm,1.1s,baz=27,slow=6.1,SNR=3.2
GUN   Gumba          124.19  94 eP        PKPdf     14 22 38.3 -0.4
      comp=Z,674nm,1.1s
HYA   Hoyanger       124.26  18 ePKPdf    PKiKP     14 22 38.0 +0.5
HYA                             ePP       PP        14 24 21.9 -1.8
LPSR  Galich'ya Gora 124.26  42 ePKIKP    PKiKP     14 22 37.9  0.0
LPSR                            eSS       SS        14 41 25.3  +11
LPSR                            pmax      pmax
      comp=Z,70nm,1.0s
LPSR                            MLR       MLR
      comp=Z,21µm,19.0s
SAO   San Andreas Ge 124.26 285 PFAKE               14 22 50.0  +12
SAO                             LR        LR
      comp=Z,26µm,19.0s
HVU   Hansel Valley  124.36 295 ePKPdf    PKiKP     14 22 38.6 -0.1
TURI  Tura           124.36  99 eP        PKPdf     14 22 38.5 -0.2
GUIM  Jordan         124.39 141 eP        PKPdf     14 22 38.7 -0.3
RYN   Ryan           124.41 289 ePKPdf    PKPdf     14 22 38.6  0.0
RYN                             LR        LR
      comp=Z,32µm,22.0s
AHID  Auburn Hatcher 124.42 297 ePKPdf    PKiKP     14 22 38.8 -0.1
AHID                            LR        LR
      comp=Z,31µm,22.0s
ULM   Lac du Bonnet  124.50 313 PKP       PKPdf     14 22 37.2 -0.9
      comp=Z,58nm,0.8s,baz=110,slow=0.5,SNR=29
ULM   Lac du Bonnet  124.50 313 ePKPdf    PKPdf     14 22 36.8 -1.4
ULM                             LR        LR
      comp=Z,40µm,21.0s
KVN   Kaiserville    124.55 289 ePKPdf    PKPdf     14 22 37.7 -1.2
KVN                             LR        LR
      comp=Z,28µm,22.0s
KVN   Kaiserville    124.55 289 ePKIKP    PKPdf     14 22 37.7 -1.2
KVN                             MLR       MLR
      comp=Z,28µm,22.0s
MSLP  Maasin         124.61 143 eP        PKiKP     14 22 40.6 +0.8
ELK   Elko           124.62 293 ePKPdf    PKPdf     14 22 38.6 -0.4
ELK                             LR        LR
      comp=Z,43µm,19.0s
ELK   Elko           124.62 293 ePKIKP    PKPdf     14 22 38.6 -0.4
ELK                             MLR       MLR
      comp=Z,43µm,19.0s
NAO01 NORSAR Array S 124.70  21 ePKPdf    PKPdf     14 22 37.7 -0.5
NC602 NORSAR Array S 124.71  21 ePKPdf    PKPdf     14 22 37.1 -1.1
NC602 NORSAR Array S 124.71  21 ePKPdf    PKPdf     14 22 37.6 -0.6
NC602                           ePP       PP        14 24 23.7 -3.1
NC602                           eSP       SP        14 34 22.4 -0.4
NC602                           eSS       SS        14 41 19.4 -0.2
WAKR  Walker         124.73 288 ePKPdf    PKiKP     14 22 40.5 +1.0
WAKR                            LR        LR
      comp=Z,35µm,22.0s
CMB   Columbia Colle 124.79 287 ePKPdf    PKPdf     14 22 39.3 +0.1
CMB                             LR        LR
      comp=Z,24µm,21.0s
CMB   Columbia Colle 124.79 287 ePKIKP    PKPdf     14 22 39.3 +0.1
CMB                             MLR       MLR
      comp=Z,24µm,21.0s
SNOW  Snow King Moun 124.84 298 ePKPdf    PKiKP     14 22 39.8 +0.1
SNOW                            LR        LR
      comp=Z,43µm,21.0s
NBO00 NORSAR Array S 124.86  20 ePKPdf    PKPdf     14 22 38.2 -0.3
LOHW  Long Hollow    124.89 298 ePKPdf    PKPdf     14 22 38.7 -0.7
LOHW                            LR        LR
      comp=Z,37µm,21.0s
BUSP  Coron          124.92 137 eP        PKiKP     14 22 45.0 +4.6
CHGR  Chuyangaron    124.94  72 ePKPdf    PKPdf     14 22 39.1 -0.4
CHGR                            LR        LR
      comp=Z,203µm,20.0s
NB2   NORSAR Subarra 124.94  21 PKPdf     PKPdf     14 22 37.7 -1.0
      comp=Z,271nm,2.0s,baz=202,slow=1.9
NB2   NORSAR Subarra 124.94  21 PKPdf     PKPdf     14 22 37.7 -1.0
      baz=202,slow=1.9
NB200 NORSAR Array S 124.94  21 ePKPdf    PKPdf     14 22 38.0 -0.6
NOA   NORSAR Array B 124.94  21 PKP       PKPdf     14 22 38.0 -0.6
      comp=Z,31nm,0.8s,baz=193,slow=1.8,SNR=46
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TPAW  Teton Pass     124.94 298 ePKPdf    PKPdf     14 22 38.7 -0.9
TPAW                            LR        LR
      comp=Z,46µm,21.0s
NB201 NORSAR Array S 124.97  21 ePKPdf    PKPdf     14 22 37.9 -0.8
GTK   Tadong         125.01  96 eP        PKiKP     14 22 40.6 +0.2
YERR  Yerington      125.03 288 ePKPdf    PKiKP     14 22 40.5 +0.4
YERR                            LR        LR
      comp=Z,22µm,21.0s
MOOW  Moose Ponds    125.06 298 ePKPdf    PKPdf     14 22 39.8 +0.1
MOOW                            LR        LR
      comp=Z,28µm,20.0s
NC204 NORSAR Array S 125.09  20 ePKPdf    PKPdf     14 22 38.2 -0.8
FXWY  Fox Creek      125.09 298 ePKPdf    PKiKP     14 22 40.1  0.0
SHL   Shillong       125.12 101 eP        PKPdf     14 22 40.5 +0.2
NC303 NORSAR Array S 125.14  21 ePKPdf    PKPdf     14 22 38.5 -0.6
BMN   Battle Mountai 125.26 291 ePKPdf    PKPdf     14 22 39.4 -0.8
BMN                             LR        LR
      comp=Z,33µm,20.0s
BMN   Battle Mountai 125.26 291 ePKIKP    PKPdf     14 22 39.4 -0.8
BMN                             MLR       MLR
      comp=Z,33µm,20.0s
IMW   Indian Meadow  125.27 298 ePKPdf    PKPdf     14 22 40.1 -0.1
IMW                             LR        LR
      comp=Z,36µm,21.0s
PNTR  Pine Nut       125.28 288 ePKPdf    PKPdf     14 22 39.9 -0.5
PNTR                            LR        LR
      comp=Z,34µm,21.0s
FLWY  Flagg Ranch    125.31 298 ePKPdf    PKiKP     14 22 40.4 -0.1
FLWY                            LR        LR
      comp=Z,64µm,22.0s
AKN   Aaknes         125.34  18 ePdif     Pdif      14 19 16.2 -0.5
AKN                             epPKPdf   pPKPdf    14 22 44.0 -0.9
AKN                             ePP       PP        14 24 29.3 -1.7
AKN                             eSP       SP        14 34 28.5 +0.2
AKN                             eSS       SS        14 41 24.5 -3.0
AKN                             IVMs_BB   IVMs_BB   15 14 31.5
      comp=Z,25µm,20.1s
VCNR  Virginia City  125.47 288 PFAKE               14 22 50.0 +9.0
VCNR                            LR        LR
      comp=Z,36µm,22.0s
RUBR  Rubicon Trail  125.50 288 PFAKE               14 22 50.0 +8.9
RUBR                            LR        LR
      comp=Z,26µm,20.0s
YPP   Pitchstone Pla 125.51 298 ePKPdf    PKPdf     14 22 40.8 +0.1
H17A  Grant Village  125.51 299 ePKPdf    PKPdf     14 22 40.5 -0.1
H17A                            LR        LR
      comp=Z,80µm,21.0s
H17A  Grant Village  125.51 299 P         PKPdf     14 22 40.4 -0.2
      baz=143,SNR=15
BORG  Borgarnes      125.52   2 PKP       PKPdf     14 22 39.5 -0.1
      comp=Z,26nm,0.9s,baz=228,slow=1.9,SNR=4.0
BORG  Borgarnes      125.52   2 ePKPdf    PKiKP     14 22 40.8 +0.8
BORG                            LR        LR
      comp=Z,36µm,20.0s
DOMB  Dombas         125.53  19 epPKPdf   pPKPdf    14 22 43.0 -2.2
DOMB                            ePP       PP        14 24 31.0 -1.3
DOMB                            eSP       SP        14 34 30.6 +0.5
DOMB                            eSS       SS        14 41 26.3 -3.6
DOMB                            IVMs_BB   IVMs_BB   15 13 19.7
      comp=Z,16µm,20.1s
RLMT  Red Lodge      125.54 300 ePKPdf    PKPdf     14 22 40.3 -0.3
RLMT                            LR        LR
      comp=Z,47µm,20.0s
RLMT  Red Lodge      125.54 300 P         PKPdf     14 22 40.3 -0.3
      baz=143,SNR=13
LAO   LASA Array     125.54 303 ePKPdf    PKPdf     14 22 40.0 -0.3
LAO                             LR        LR
      comp=Z,48µm,22.0s
LAO   LASA Array     125.54 303 P         PKPdf     14 22 40.1 -0.3
      baz=144,SNR=20
GUWA  GUWAHATI       125.55 100 eP        PKiKP     14 22 41.5 +0.2
LKWY  Lake           125.57 299 PFAKE               14 22 50.0 +8.9
LKWY                            LR        LR
      comp=Z,71µm,20.0s
SJMP  San Jose       125.65 138 eP        PKiKP     14 22 43.1 +1.3
OBN   Obninsk        125.66  39 ePKPdf    PKPdf     14 22 39.2 -1.0
OBN                             LR        LR
      comp=Z,35µm,21.0s
OBN   Obninsk        125.66  39 i PKIKP   PKPdf     14 22 38.4 -1.7
OBN                             i PKIKP   PKiKP     14 22 42.8 +2.3
YFT   Old Faithful   125.67 298 ePKPdf    PKiKP     14 22 41.9 +0.6
PAHR  Pah Rah Range  125.67 289 ePKPdf    PKiKP     14 22 41.2 -0.1
PAHR                            LR        LR
      comp=Z,35µm,22.0s
KHU   Kahuku         125.74 242 PFAKE               14 22 50.0 +7.8
KHU                             LR        LR
      comp=Z,25µm,19.0s
GAR   Garm           125.75  73 ePKPdf    PKPdf     14 22 41.0 -0.1
GAR                             LR        LR
      comp=Z,72µm,19.0s
GAR   Garm           125.75  73 ePKIKP    PKPdf     14 22 41.0 -0.1
GAR                             MLR       MLR
      comp=Z,72µm,19.0s
MOL   Molde          125.80  18 ePdif     Pdif      14 19 17.7 -1.0
MOL                             ePKPdf    PKiKP     14 22 40.5 -0.1
MOL                             ePP       PP        14 24 31.3 -2.7
MOL                             eSP       SP        14 34 32.2 -0.1
MOL                             eSS       SS        14 41 33.0 -0.1
MOL                             IVMs_BB   IVMs_BB   15 04 02.9
      comp=Z,14µm,31.4s
AFDM  Forest Hills D 125.80 287 ePKPdf    PKiKP     14 22 41.4 -0.1
AFDM                            LR        LR
      comp=Z,22µm,18.0s
PATS  Pohnpei        125.84 184 PFAKE               14 22 50.0 +7.7
PATS                            LR        LR
      comp=Z,57µm,20.0s
VSU   Vasula         125.85  31 eP        PKPdf     14 22 39.5 -0.9
VSU                             IAmb      IAmb      14 22 46.6
      comp=Z,232nm,0.7s
YMR   Madison River  125.90 299 ePKPdf    PKPdf     14 22 41.0 -0.3
YHH   Holmes Hill    125.94 299 ePKPdf    PKPdf     14 22 41.1 -0.4
MLOA  Mauna Loa Obse 125.98 243 PFAKE               14 22 50.0 +7.1
MLOA                            LR        LR
      comp=Z,28µm,18.0s
MCCM  Marconi Confer 126.05 285 PFAKE               14 22 50.0 +8.1
MCCM                            LR        LR
      comp=Z,22µm,22.0s
YHB   Horse Butte    126.06 298 ePKPdf    PKPdf     14 22 41.8 +0.1
POHA  Pohakuloa      126.16 243 PFAKE               14 22 50.0 +7.0
POHA                            LR        LR
      comp=Z,21µm,19.0s
KHLU  Kahalu`u       126.17 242 PFAKE               14 22 50.0 +7.1
KHLU                            LR        LR
      comp=Z,30µm,19.0s
DGMT  Dagmar         126.17 306 PFAKE               14 22 50.0 +8.1
DGMT                            LR        LR
      comp=Z,57µm,22.0s
DGMT  Dagmar         126.17 306 P         PKPdf     14 22 41.3 -0.2
      baz=144,SNR=6.7
QLMT  Earthquake Lak 126.22 298 ePKPdf    PKPdf     14 22 42.1 +0.2
GCMT  Greycliff      126.24 300 ePKPdf    PKPdf     14 22 41.9  0.0
BEKR  Beckworth      126.25 288 ePKPdf    PKPdf     14 22 42.3 +0.2
BEKR                            LR        LR
      comp=Z,21µm,19.0s
KOHI  KOHIMA         126.31 103 eP        PKPdf     14 22 42.6  0.0
TEZP  TEZPUR         126.44 101 eP        PKPdf     14 22 42.7 +0.1
HPAH  Hawaii Prepara 126.47 243 PFAKE               14 22 50.0 +6.6
HPAH                            LR        LR
      comp=Z,26µm,19.0s
HLID  Hailey         126.51 295 ePKPdf    PKPdf     14 22 42.6 +0.2
HLID                            LR        LR
      comp=Z,21µm,20.0s
HLID  Hailey         126.51 295 P         PKPdf     14 22 42.3 -0.2
      baz=143
MOS   Moscow         126.51  39 ePKIKP    PKPdf     14 22 41.0 -0.8
MOS                             e                   14 24 47.7
MOS                             e                   14 27 29.9
MOS                             pmax      pmax
      comp=Z,290nm,1.7s
MOS                             pmax      pmax
      comp=Z,800nm,2.4s
MOS                             MLR       MLR
      comp=N,30µm,22.0s
MOS                             MLR       MLR
      comp=E,28µm,22.0s
MOS                             MLR       MLR
      comp=Z,46µm,22.0s
ORV   Oroville       126.53 287 ePKPdf    PKPdf     14 22 42.4  0.0
ORV                             LR        LR
      comp=Z,18µm,20.0s
GDXM  Geysers        126.54 285 PFAKE               14 22 50.0 +7.0
GDXM                            LR        LR
      comp=Z,33µm,20.0s
LUBP  Lubang         126.56 137 eP        PKPdf     14 22 43.2  0.0
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ANGG	Ammassalik, Gr	126.70	354	ePKPdf	PKPdf	14 22 41.1	-0.7
TAWA	Tawang	126.81	99	eP	PKPdf	14 22 42.9	-0.9
HOPS	Hopland Field	126.82	285	PFAKE		14 22 50.0	+6.6
HOPS				LR	LR		
	comp=Z,29µm,22.0s						
BTK	Batken	126.83	72	ePKPdf	PKPdf	14 22 42.4	-0.7
BTK				LR	LR		
	comp=Z,46µm,18.0s						
BTK	Batken	126.83	72	ePKIKP	PKPdf	14 22 42.4	-0.7
BTK				MLR	MLR		
	comp=Z,46µm,18.0s						
MCMT	McKenzie Canyo	126.83	297	ePKPdf	PKPdf	14 22 42.8	-0.4
TBLU	Trondheim	126.86	19	ePKPdf	PKiKP	14 22 43.2	+0.5
TBLU				ePP	PP	14 24 40.8	-0.3
TBLU				eSP	SP	14 34 42.6	+1.0
TBLU				eSS	SS	14 41 49.9	+3.5
TBLU				IVMsBB		15 10 31.0	
	comp=Z,20µm,23.0s						
BOZ	Bozeman (W)	126.92	299	ePKPdf	PKiKP	14 22 43.4	-0.2
BOZ				LR	LR		
	comp=Z,44µm,22.0s						
BOZ	Bozeman (W)	126.92	299	ePKIKP	PKiKP	14 22 43.4	-0.2
BOZ				MLR	MLR		
	comp=Z,44µm,22.0s						
BOZ	Bozeman (W)	126.92	299	P	PKPdf	14 22 42.9	-0.2
	baz=142,SNR=39						
AUQP	San Andres	126.96	140	eP	PKiKP	14 22 53.5	+9.0
MOKO	MOKOCHONG	127.01	103	eP	PKiKP	14 22 44.3	-0.1
MOKO				IAMs_20	IAMs_20	14 59 49.6	
	comp=Z,56µm,49.4s						
SLVN	Son La	127.03	115	ePKPdf	PKiKP	14 22 44.2	-0.2
DLMT	Dillon	127.15	298	ePKPdf	PKPdf	14 22 43.4	-0.2
DLMT				LR	LR		
	comp=Z,43µm,21.0s						
JORH	JORHAT	127.24	102	eP	PKPdf	14 22 44.1	0.0
O03E	Paynes Creek	127.26	287	P	PKPdf	14 22 43.8	-0.1
	baz=142,SNR=40						
HLK	Haleakala	127.35	243	PFAKE		14 23 00.0	+15
HLK				LR	LR		
	comp=Z,28µm,20.0s						
LRM	Limekiln Ridge	127.45	298	ePKPdf	PKiKP	14 22 44.8	0.0
WVOR	Wild Horse Val	127.50	291	ePKPdf	PKiKP	14 22 45.1	+0.3
WVOR				LR	LR		
	comp=Z,32µm,20.0s						
QIZ	Qiongzhong	127.52	123	ePKPdf	PKiKP	14 22 45.6	+0.2
QIZ				LR	LR		
	comp=Z,31µm,21.0s						
QIZ	Qiongzhong	127.52	123	PKP	PKiKP	14 22 45.4	0.0
QIZ				PP	PP	14 24 46.8	+1.3
QIZ				SS	SS	14 41 56.4	+1.7
QIZ				AMB	AMB		
	comp=Z,1µm,9.8s						
QIZ				LR	LR		
	comp=Z,26µm,25.0s						
QIZ				LR	LR		
	comp=Z,20µm,35.8s						
QIZ				LR	LR		
	comp=Z,102µm,34.3s						
KHLH	Kahului Airpor	127.55	243	PFAKE		14 23 00.0	+15
KHLH				LR	LR		
	comp=Z,35µm,18.0s						
KCPM	Cahto Peak	127.61	285	PFAKE		14 23 00.0	+15
KCPM				LR	LR		
	comp=Z,29µm,21.0s						
O02D	Mt. Diablo Mer	127.62	286	P	PKPdf	14 22 44.5	-0.1
	baz=142						
PVCP	Virac	127.67	141	eP	PKiKP	14 22 46.0	+0.1
ZIRO	ZIRO	127.71	101	eP	PKPdf	14 22 45.1	-0.1
WDC	Whiskeytown Da	127.83	287	ePKPdf	PKiKP	14 22 45.8	+0.4
WDC				LR	LR		
	comp=Z,16µm,22.0s						
MOD	Modoc Plateau	127.84	290	ePKPdf	PKiKP	14 22 46.5	+0.9
MOD				LR	LR		
	comp=Z,27µm,19.0s						
PUL	Pulkovo	127.91	32	eP	PKPdf	14 22 43.5	-0.8
EGMT	Eagleton	128.06	302	ePKPdf	PKPdf	14 22 45.2	0.0
EGMT				LR	LR		
	comp=Z,51µm,21.0s						
EGMT	Eagleton	128.06	302	P	PKiKP	14 22 45.8	0.0
	baz=142						
IUG	Iuzhnay	128.12	70	ePKP	PKiKP	14 23 00.1	+14
IUG				i PP	PP	14 25 06.1	+16
J08A	Circle Bar Ran	128.16	292	ePKPdf	PKPdf	14 22 45.6	+0.1
J08A				LR	LR		
	comp=Z,28µm,21.0s						
DIBR	DIBRUGARH	128.16	102	eP	PKiKP	14 22 48.3	+1.8
N02D	Trinity Center	128.22	287	P	PKPdf	14 22 46.0	+0.3
	baz=142,SNR=18						
LSA	Lhasa	128.22	97	ePKPdf	PKPdf	14 22 46.1	-0.4
LSA				LR	LR		
	comp=Z,25µm,20.0s						
LSA	Lhasa	128.22	97	PKP	PKiKP	14 22 46.9	-0.3
LSA				PP	PP	14 24 52.3	+1.4
LSA				LR	LR		
	comp=Z,28µm,13.7s						
LSA				LR	LR		
	comp=Z,44µm,18.9s						
LSA	Lhasa	128.22	97	PKPdf	PKiKP	14 22 46.9	-0.3
FIA0	FINESS Array S	128.32	29	ePKPdf	PKPdf	14 22 44.3	-0.7
FIA0	FINESS Array S	128.32	29	ePKIKP	PKPdf	14 22 44.3	-0.7
FINES	FINESS Array B	128.32	29	PKP	PKPdf	14 22 44.3	-0.7
	comp=Z,154nm,0.8s,baz=129,slow=2.7,SNR=83						
FIA1	FINESS Array S	128.32	29	ePKPdf	PKPdf	14 22 44.2	-0.9
NSS	Namsos	128.33	19	ePKPdf	PKiKP	14 22 45.5	0.0
NSS				eSS	SS	14 42 05.2	+0.5
NSS				IVMs_BB	IVMs_BB	15 10 54.6	
	comp=Z,16µm,24.1s						
SCZP	Santa Cruz	128.34	135	eP	PKPdf	14 22 42.3	-4.2
PLID	Pearl Lake	128.41	295	ePKPdf	PKPdf	14 22 45.6	-0.5
PLID				LR	LR		
	comp=Z,76µm,22.0s						
M04C	Macdoel	128.45	288	P	PKPdf	14 22 46.4	+0.2
	baz=142						
LKP	Lekhapani	128.49	103	eP	PKPdf	14 22 46.7	+0.2
JBG	Jabagly	128.57	70	ePKIKP	PKPdf	14 22 45.4	-1.0
JBG				i		14 24 54.3	
HON	Honolulu	128.60	241	PFAKE		14 23 00.0	+12
HON				LR	LR		
	comp=Z,33µm,19.0s						
M02C	Callahan	128.62	287	P	PKPdf	14 22 46.7	+0.3
	baz=142,SNR=9.6						
KHMM	Horse Mountain	128.62	286	ePKPdf	PKiKP	14 22 47.2	0.0
KHMM				LR	LR		
	comp=Z,28µm,21.0s						
FRB	Frobisher Bay	128.69	337	PKP	PKPdf	14 22 44.9	-0.8
	comp=Z,132nm,0.9s,baz=158,slow=2.6,SNR=27						
KIP	Kipapa	128.69	241	PFAKE		14 23 00.0	+12
KIP				LR	LR		
	comp=Z,31µm,19.0s						
JCC	Jacoby Creek,	128.71	286	PFAKE		14 23 00.0	+13
JCC				LR	LR		
	comp=Z,35µm,19.0s						
BMO	Blue Mountains	128.80	294	ePKPdf	PKPdf	14 22 45.5	-1.2
BMO				LR	LR		
	comp=Z,62µm,22.0s						
BMO	Blue Mountains	128.80	294	ePKIKP	PKPdf	14 22 45.5	-1.2
BMO				MLR	MLR		
	comp=Z,62µm,22.0s						
KSH	Kashi	128.81	77	ePKP	PKPdf	14 22 46.8	-0.1
KSH				PP	PP	14 24 55.8	+1.4
KSH				PKS		14 26 21.4	
KSH				SKS	SKSdf	14 29 52.8	-4.3
KSH				SKKS	SKKSac	14 31 42.3	-7.2
KSH				AMB	AMB		
	comp=Z,5µm,8.7s						
KSH				LR	LR		
	comp=Z,11µm,16.2s						
KSH				LR	LR		
	comp=Z,15µm,17.4s						
KSH				LR	LR		
	comp=Z,21µm,23.1s						
YBH	Yreka Blue Hor	128.81	288	ePKPdf	PKPdf	14 22 46.9	+0.1
YBH				LR	LR		
	comp=Z,16µm,20.0s						
ARSB	Arslanbob	128.83	73	ePKPdf	PKPdf	14 22 46.7	-0.2
ARSB				LR	LR		
	comp=Z,59µm,20.0s						
BALP	Baler	128.87	137	eP	PKiKP	14 22 48.2	0.0
MSO	Missoula	128.88	298	ePKPdf	PKPdf	14 22 46.2	-0.5
MSO				LR	LR		
	comp=Z,55µm,20.0s						
MSO	Missoula	128.88	298	P	PKPdf	14 22 46.5	-0.3
	baz=141						
BOLP	Bolinao	128.91	135	eP	PKPdf	14 22 46.5	-1.1
OPA	Opana	128.93	241	PFAKE		14 23 00.0	+12
OPA				LR	LR		
	comp=Z,34µm,19.0s						
JOHN	Johnston Islan	128.94	226	PFAKE		14 23 00.0	+12
JOHN				LR	LR		
	comp=Z,35µm,20.0s						
SMPP	San Manuel, Pa	128.96	136	eP	PKPdf	14 22 47.6	-0.1
L04D	Klamath Falls	129.01	288	P	PKPdf	14 22 46.3	-0.9
	baz=141,SNR=11						
K04D	Chiloquin, OR	129.07	289	P	PKPdf	14 22 47.6	+0.3
	baz=141						
KK31	Karatay Array	129.09	70	ePKPdf	PKPdf	14 22 45.5	-1.7
KK31	Karatay Array	129.09	70	ePKIKP	PKPdf	14 22 45.5	-1.7
KKAR	Karatay Array	129.09	70	ePKPdf	PKPdf	14 22 45.5	-1.7
KKAR	Karatay Array	129.09	70	ePKIKP	PKPdf	14 22 45.5	-1.7
SFJD	Kangerlussuaq	129.10	347	PKP	PKPdf	14 22 46.3	0.0
	comp=Z,50nm,1.0s,baz=164,slow=2.0,SNR=12						
SFJD	Kangerlussuaq	129.10	347	ePKPdf	PKPdf	14 22 46.0	-0.3
SFJD				LR	LR		
	comp=Z,51µm,19.0s						
SFJD	Kangerlussuaq	129.10	347	i P	PKiKP	14 22 47.4	+0.3
	comp=Z,43µm,18.0s						
I07A	Izee	129.19	292	ePKPdf	PKPdf	14 22 47.4	-0.1
I07A				LR	LR		
	comp=Z,24µm,20.0s						
AB31	Akbulak array	129.29	58	i PKIKP	PKPdf	14 22 45.5	-1.8
AB31				pmax	pmax		
	comp=Z,145nm,1.1s						
ABKAR	Akbulak array	129.29	58	ePKPdf	PKPdf	14 22 46.3	-1.0
J05D	Fort Rock, OR	129.35	290	P	PKiKP	14 22 48.2	-0.4
	baz=141,SNR=11						
AKTO	Aktyubinsk	129.43	55	PKIKP	PKPdf	14 22 46.3	-1.2
AKTO				pmax	pmax		
	comp=Z,254nm,1.4s						
L02E	Cave Junction	129.56	287	P	PKiKP	14 22 48.7	-0.1
	baz=141						
PINE	Pine Mountain	129.61	291	PFAKE		14 23 00.0	+11
PINE				LR	LR		
	comp=Z,43µm,21.0s						
HUMO	Hull Mountain	129.61	288	ePKPdf	PKPdf	14 22 48.5	+0.2
HUMO				LR	LR		
	comp=Z,28µm,21.0s						
F10A	Beach Ranch, E	129.64	295	ePKPdf	PKPdf	14 22 48.0	-0.3
F10A				LR	LR		
	comp=Z,33µm,21.0s						
J04D	Umpqua Nationa	129.72	289	P	PKPdf	14 22 48.9	+0.3
	baz=141,SNR=10						
KMI	Kunming	129.81	112	PFAKE		14 23 00.0	+10
KMI				LR	LR		
	comp=Z,29µm,20.0s						
KMI	Kunming	129.81	112	PKP	PKPdf	14 22 48.3	-1.1
KMI				sPKP		14 23 01.1	
KMI				PP	PP	14 25 05.1	+4.2
KMI				PKS		14 26 21.9	
KMI				AMB	AMB		
	comp=Z,2µm,11.9s						
KMI				LR	LR		
	comp=Z,13µm,19.5s						
KMI				LR	LR		
	comp=Z,13µm,18.2s						
KMI				LR	LR		
	comp=Z,17µm,18.4s						
G08A	Pilot Rock	129.88	293	ePKPdf	PKiKP	14 22 49.4	-0.1
G08A				LR	LR		
	comp=Z,38µm,21.0s						
KEKH	Kekaha	129.91	240	PFAKE		14 23 00.0	+10
KEKH				LR	LR		
	comp=Z,24µm,20.0s						
K02D	Willamette Mer	130.01	288	P	PKiKP	14 22 49.9	+0.1
	baz=141,SNR=6.7						
CAUP	Cauayan	130.08	137	eP	PKiKP	14 22 53.6	+3.0
STOK	Stokkvaagen	130.17	19	ePKPdf	PKiKP	14 22 49.0	-0.2
I05D	Terrebonne, OR	130.22	291	P	PKPdf	14 22 49.4	+0.1
	baz=140,SNR=11						
MOR8	Moi Rana	130.25	20	ePKPdf	PKiKP	14 22 49.2	-0.3
MOR8				ePP	PP	14 25 03.0	-0.3
MOR8				eSS	SS	14 42 29.9	+1.5
MOR8				IVMs_BB	IVMs_BB	15 16 22.5	
	comp=Z,29µm,21.3s						
I04A	Tendick Farm,	130.28	290	P	PKiKP	14 22 50.0	-0.3
	baz=141						
FFC	Flin Flon	130.31	312	ePKPdf	PKiKP	14 22 49.7	-0.2
FFC				LR	LR		
	comp=Z,20µm,21.0s						
FFC	Flin Flon	130.31	312	i PKIKP	PKiKP	14 22 50.3	+0.4
NRN	Naryn	130.33	75	ePKPdf	PKPdf	14 22 49.5	-0.5
NRN				LR	LR		
	comp=Z,38µm,19.0s						
NRN	Naryn	130.33	75	ePKIKP	PKPdf	14 22 49.5	-0.5
NRN				MLR	MLR		
	comp=Z,38µm,19.0s						
KONS	Konsvik	130.34	19	ePKPdf	PKiKP	14 22 49.5	0.0
ABRA	Dolores	130.36	136	eP	PKPdf	14 22 47.2	-3.2
E09A	Wood Farm, Sta	130.46	295	ePKPdf	PKiKP	14 22 50.4	-0.1
E09A				LR	LR		
	comp=Z,42µm,21.0s						
J01E	Myrtle Point	130.50	288	P	PKiKP	14 22 50.7	+0.1
	baz=141						
AAK	Ala-Archa	130.56	73	ePKPdf	PKPdf	14 22 49.6	-0.6
AAK				LR	LR		
	comp=Z,56µm,20.0s						
AAK	Ala-Archa	130.56	73	i PKPdf	PKPdf	14 22 50.0	-0.2
	SNR=13						
AAK	Ala-Archa	130.56	73	ePKIKP	PKPdf	14 22 49.6	-0.6
AAK				MLR	MLR		
	comp=Z,56µm,20.0s						
G06A	Carlson Farm,	130.59	292	PFAKE		14 23 00.0	+9.1
G06A				LR	LR		
	comp=Z,38µm,22.0s						
WALA	Waterton Lakes	130.59	300	ePKPdf	PKiKP	14 22 51.0	+0.1
WALA				LR	LR		
	comp=Z,55µm,20.0s						
I03D	Drain, OR	130.64	289	P	PKiKP	14 22 51.1	+0.2
	baz=140						
APYP	Conner	130.74	136	eP	PKPdf	14 22 51.2	+0.2
FRU1	Bishkek	130.76	73	ePKPdf	PKPdf	14 22 50.2	-0.2
FRU1				LR	LR		
	comp=Z,64µm,20.0s						
F07A	Phinny Hill Vi	130.78	293	PFAKE		14 23 00.0	+8.9
F07A				LR	LR		
	comp=Z,36µm,20.0s						
E08A	Dider Farm, El	130.85	294	ePKPdf	PKPdf	14 22 50.7	+0.3
E08A				LR	LR		
	comp=Z,38µm,20.0s						
FCC	Fort Churchill	130.86	320	ePKPdf	PKPdf	14 22 50.0	+0.1
FCC				LR	LR		
	comp=Z,44µm,22.0s						
H04A	Detroit Lake	130.87	291	ePKPdf	PKPdf	14 22 49.9	-0.7
H04A				LR	LR		
	comp=Z,43µm,22.0s						
G05D	Wamic, OR	130.90	292	P	PKiKP	14 22 51.7	+0.2
	baz=140						
HAWA	Hanford	130.99	294	ePKPdf	PKPdf	14 22 50.4	-0.3
HAWA				LR	LR		
	comp=Z,42µm,21.0s						
H04D	Lebanon	131.00	290	P	PKiKP	14 22 52.3	+0.7
	baz=140						
BOOM	Boomskoye usch	131.12	74	ePKPdf	PKPdf	14 22 50.8	-0.5
BOOM				LR	LR		
	comp=Z,40µm,20.0s						
I02D	Swisshome	131.19	289	P	PKiKP	14 22 52.2	+0.2
	baz=140						
D08A	Wollman Farm,	131.22	295	ePKPdf	PKPdf	14 22 49.1	-1.9
D08A				LR	LR		
	comp=Z,31µm,19.0s						
SGDS	Sogindy	131.25	73	ePKP	PKPdf	14 22 49.7	-1.6
SGDS				ePP	PP	14 25 12.3	+2.0
SCO	Scoresbysund	131.27	1	ePKPdf	PKPdf	14 22 50.8	+0.4
SCO				LR	LR		
	comp=Z,34µm,19.0s						
SCO	Scoresbysund	131.27	1	ePKIKP	PKiKP	14 22 51.1	-0.2
SCO	Scoresbysund	131.27	1	i P	PKiKP	14 22 51.1	-0.2
ILULI	Ilulissat	131.29	348	ePKPdf	PKPdf	14 22 49.7	-0.7
ILULI				LR	LR		
	comp=Z,61µm,19.0s						
ILULI	Ilulissat	131.29	348	i PKIKP	PKPdf	14 22 49.5	-1.0
ILULI				MLR	MLR		
	comp=Z,61µm,19.0s						
ILULI	Ilulissat	131.29	348	i P	PKPdf	14 22 49.5	-1.0
	comp=Z,61µm,19.0s						
TKM2	Tokmak 2	131.29	74	PKIKP	PKPdf	14 22 48.1	-3.5
TKM2				pmax	pmax		
	comp=Z,58nm,1.7s						
COR	Corvallis	131.30	290	PFAKE		14 23 00.0	+7.8
COR				LR	LR		
	comp=Z,32µm,21.0s						
NEW	Newport	131.36	297	ePKPdf	PKPdf	14 22 51.5	+0.2
NEW				LR	LR		
	comp=Z,50µm,20.0s						
NEW	Newport	131.36	297	P	PKiKP	14 22 52.3	0.0
	baz=139						
KDJ	Kajisay	131.43	76	ePKPdf	PKPdf	14 22 51.9	+0.1
KDJ				LR	LR		
	comp=Z,46µm,20.0s						
F05D	White Salmon	131.46	292	P	PKiKP	14 22 53.2	+0.7
	baz=140						
C09A	Chrisman Ranch	131.51	296	PFAKE		14 23 00.0	+7.4
C09A				LR	LR		
	comp=Z,52µm,22.0s						
G03D	McMinnville, O	131.76	290	P	PKiKP	14 22 53.7	+0.5
	baz=140						
LOF	Lofoten	131.91	18	ePKPdf	PKiKP	14 22 52.3	-0.4
LOF				ePP	PP	14 25 12.7	-1.2
LOF				eSKPdf	SKiKP	14 26 27.0	-0.2
LOF				eSS	SS	14 42 49.7	+1.2
LOF				IVMs_BB	IVMs_BB	15 13 45.3	
	comp=Z,15µm,24.1s						
STEI	Steigen	131.99	19	ePKPdf	PKPdf	14 22 52.3	+0.5
STEI				ePP	PP	14 25 13.7	-0.7
STEI				eSKPdf	SKiKP	14 26 23.9	-3.4
STEI				eSP	SP	14 35 21.9	-4.0
STEI				eSS	SS	14 42 53.0	+3.5
STEI				IVMs_BB	IVMs_BB	15 15 00.3	
	comp=Z,20µm,22.7s						
GUMO	Guam	132.07	167	PKP	PKiKP	14 22 54.4	-0.2
	comp=Z,90nm,1.0s,baz=220,slow=9.1,SNR=4.1						
GUMO	Guam	132.07	167	ePKPdf	PKPdf	14 22 52.2	-1.5
GUMO				LR	LR		
	comp=Z,33µm,20.0s						
AAA	Alma-Ata	132.13	75	ePKIKP	PKiKP	14 22 55.7	+1.7
AAA	Alma-Ata	132.13	75	ePKP	PKiKP	14 22 55.8	+1.7
LTY	Liberty	132.15	294	ePKPdf	PKPdf	14 22 52.6	-0.4
LTY				LR	LR		
	comp=Z,34µm,21.0s						
MDOK	Medeo	132.16	75	ePKIKP	PKPdf	14 22 52.1	-1.1
MDOK				e		14 25 18.0	
MDOK	Medeo	132.16	75	ePKP	PKPdf	14 22 52.1	-1.1
MDOK				ePP	PP	14 25 18.0	+1.9
HKPS	Hong Kong Po S	132.17	126	PFAKE		14 23 10.0	+15
HKPS				LR	LR		
	comp=Z,28µm,22.0s						
BTLS	Baital	132.20	71	i PKIKP	PKiKP	14 22 54.0	0.0
BTLS				e		14 25 19.8	
BTLS	Baital	132.20	71	i PKP	PKiKP	14 22 54.0	0.0
BTLS				ePP	PP	14 25 19.9	+3.7
PRZ	Przheval'sk	132.28	76	ePKPdf	PKPdf	14 22 53.4	0.0
PRZ				LR	LR		
	comp=Z,54µm,19.0s						
LON	Longmire	132.28	293	PFAKE		14 23 00.0	+5.8
LON				LR	LR		
	comp=Z,50µm,20.0s						
JMIC	Jan Mayen	132.28	7	PKP	PKPdf	14 22 51.5	-0.8
	comp=Z,39nm,1.0s,baz=158,slow=14,SNR=2.1						
JMIC	Jan Mayen	132.28	7	ePKPdf	PKiKP	14 22 53.0	-0.4
JMIC				ePP	PP	14 25 15.2	-1.1
JMIC				eSKPdf	SKiKP	14 26 28.3	+0.4
JMIC				IVMs_BB	IVMs_BB	15 15 45.4	
	comp=Z,13µm,19.8s						
F04D	Rainier, OR	132.31	291	P	PKPdf	14 22 53.7	+0.5
	baz=139						
KUU	Kurty	132.39	74	ePKIKP	PKPdf	14 22 51.1	-2.3
KUU				e		14 25 19.3	
KUU	Kurty	132.39	74	ePKP	PKPdf	14 22 51.1	-2.3
KUU				ePP	PP	14 25 19.4	+1.9
E04D	Cinebar	132.47	292	P	PKiKP	14 22 54.5	0.0
	baz=139						
GZH	Guangzhou	132.57	124	PKP	PKiKP	14 23 01.6	+6.1
GZH				PP	PP	14 25 33.1	+15
GZH				PKS		14 26 39.3	
GZH				SKKS		14 32 37.8	
GZH	Guangzhou	132.57	124	SS	SS	14 43 39.3	+42
GZH				LR	LR		
	comp=N,14µm,18.2s						
GZH				LR	LR		
	comp=E,10µm,17.7s						
CHKK	Chushkaly	132.66	74	ePKIKP	PKPdf	14 22 53.4	-0.5
CHKK	Chushkaly	132.66	74	ePKP	PKPdf	14 22 53.4	-0.5
D05A	Enumclaw	132.69	293	ePKPdf	PKPdf	14 22 53.2	-0.6
D05A				LR	LR		
	comp=Z,28µm,20.0s						
GYA	Guiyang	132.72	115⇑	iPKP	PKPdf	14 22 50.1	-4.6
GYA				sPKP		14 23 05.0	
GYA				PP	PP	14 25 21.3	+1.8
GYA				PKS		14 26 25.0	
GYA				SKKS		14 32 13.5	
GYA				AMB	AMB		
	comp=Z,7µm,15.2s						
GYA				LR	LR		
	comp=Z,50µm,31.7s						
GYA				LR	LR		
	comp=Z,50µm,32.7s						
GYA				LR	LR		
	comp=Z,56µm,34.7s						
SATY	Saty	132.72	76	ePKIKP	PKPdf	14 22 53.0	-1.2
SATY				i		14 25 22.3	
SATY	Saty	132.72	76	ePKP	PKPdf	14 22 53.1	-1.2
SATY				i PP	PP	14 25 22.4	+2.7
C06D	Leavenworth	132.75	294	P	PKiKP	14 22 55.2	+0.1
	baz=139						
D04E	Lakebay	133.03	292	P	PKPdf	14 22 54.4	0.0
	baz=138						
UZB	Uzynbulak	133.08	76	ePKIKP	PKPdf	14 22 53.2	-1.7
UZB	Uzynbulak	133.08	76	ePKP	PKPdf	14 22 53.2	-1.7
KPKS	Kokpek	133.16	76	ePKIKP	PKPdf	14 22 52.0	-3.0
KPKS				e		14 25 25.4	
KPKS	Kokpek	133.16	76	ePKP	PKPdf	14 22 52.0	-3.0
KPKS				ePP	PP	14 25 25.4	+2.9
PDGK	Podgornoye	133.44	76	PKIKP	PKPdf	14 22 47.4	-8.2
PDGK				pmax	pmax		
	comp=Z,127nm,1.4s						
D03D	Eldon	133.44	292	P	PKiKP	14 22 57.0	+0.6
	baz=138						
B05A	Bryant	133.54	294	P	PKiKP	14 22 57.1	+0.5
	baz=138						
SUMG	Summit	133.66	355	ePKPdf	PKPdf	14 22 55.3	-0.1
SUMG				LR	LR		
	comp=Z,39µm,19.0s						
SUMG	Summit	133.66	355	i PKIKP	PKPdf	14 22 55.9	+0.5
SUMG				MLR	MLR		
	comp=Z,97µm,18.0s						
SUMG	Summit	133.66	355	i P	PKPdf	14 22 55.9	+0.5
	comp=Z,97µm,18.0s						
NLWA	Neilton Lookou	133.69	292	ePKPdf	PKPdf	14 22 55.5	-0.2
NLWA				LR	LR		
	comp=Z,40µm,20.0s						
OTUK	Ortayu	133.84	67	PKHKP	PKPpre	14 22 46.7	
OTUK				pmax	pmax		
	comp=Z,87nm,1.1s						
TRO	Tromso	134.12	20	ePdif	Pdif	14 19 55.2	-0.3
TRO				ePKPdf	PKiKP	14 22 56.6	-0.5
TRO				ePP	PP	14 25 25.5	-2.5
TRO				eSKPdf	SKPab	14 26 28.6	+1.9
TRO				eSP	SKKPbc	14 35 41.8	+5.1
TRO				eSS	SS	14 43 16.9	+1.7
TRO				IVMs_BB	IVMs_BB	15 18 55.4	
	comp=Z,26µm,20.6s						
A04D	Lummi Island	134.15	294	P	PKiKP	14 22 58.4	+0.6
	baz=138						
TDK	Taldyqorghan	134.19	74	ePKIKP	PKiKP	14 22 57.5	-0.6
TDK	Taldyqorghan	134.19	74	ePKP	PKiKP	14 22 57.5	-0.6
ARU	Arti	134.20	50	ePKPdf	PKPdf	14 22 55.6	-0.7
ARU				LR	LR		
	comp=Z,61µm,21.0s						
ARU	Arti	134.20	50	i PKIKP	PKPdf	14 22 54.7	-1.6
ARU				i		14 22 59.9	
KTK1	Kautokeino	134.33	22	ePKPdf	PKPdf	14 22 56.6	+0.3
KTK1				eSKPdf	SKPab	14 26 29.5	+1.9
LLLB	Lillooet	135.18	296	ePKPdf	PKPdf	14 22 57.5	-0.9
LLLB				LR	LR		
	comp=Z,50µm,20.0s						
ARA0	ARCESS Array S	135.20	23	ePKPpre	PKPpre	14 22 44.0	
ARA0				ePKPdf	PKPdf	14 22 57.2	-0.6
ARCES	ARCESS Array B	135.20	23	PKhKP	PKPpre	14 22 44.0	
	comp=Z,5.3nm,0.7s,baz=197,slow=2.7,SNR=10						
ARCES				PKP	PKPdf	14 22 57.2	-0.6
	comp=Z,70nm,0.8s,baz=198,slow=2.0,SNR=10.0						
ARE0	ARCESS Array S	135.20	23	ePKPdf	PKPdf	14 22 56.6	-1.2
ARE0				LR	LR		
	comp=Z,3µm,22.0s						
ARE0	ARCESS Array S	135.20	23	ePKPdf	PKPdf	14 22 58.0	+0.2

ARE0				*e*PP	**PP**	**14 25 31.6**	**-3.3**
ARE0				*e*SKPdf	**SKPbc**	**14 26 28.3**	**+1.2**
ARE0				*e*SS	**SS**	**14 43 30.9**	**+2.5**
APA	**Apatity**	**135.20**	**28**	⇓*i*PKIKP	**PKPdf**	**14 22 57.9**	**0.0**
APA				pmax	pmax		
	comp=Z,22nm,0.8s						
CD2	**Chengdu**	**135.21**	**109**	PKP	**PKPdf**	**14 22 57.9**	**-1.3**
CD2				PP	**PP**	**14 25 33.5**	**-1.8**
CD2				SKS	**SKSdf**	**14 30 06.8**	**-2.0**
CD2				SKKS	**SKKSac**	**14 32 23.6**	**-5.3**
CD2				SS	**SS**	**14 43 30.5**	**+1.5**
CD2				AMB	AMB		
	comp=Z,15µm,12.4s						
CD2				LR	LR		
	comp=Z,21µm,31.6s						
CD2				LR	LR		
	comp=Z,18µm,46.2s						
CD2				LR	LR		
	comp=Z,43µm,34.1s						
TWG	**Pinlang**	**135.26**	**133**	PFAKE		14 23 10.0	+9.0
TWG				LR	LR		
	comp=Z,50µm,21.0s						
BRZS	**Berezniki**	**135.27**	**65**	*e*PKIKP	**PKPdf**	**14 22 58.7**	**+0.1**
BRZS				*i*		14 25 35.6	
BRZS	**Berezniki**	**135.27**	**65**	*e*PKP	**PKPdf**	**14 22 58.7**	**+0.1**
BRZS				*i* PP	**PP**	**14 25 35.6**	**-0.1**
SVE	**Sverdlovsk**	**135.28**	**51**	*c* *i*PKIKP	**PKiKP**	**14 23 01.5**	**+1.6**
SVE				*e*PPP	PPP	14 28 28.7	
SVE				*e*SS	SS	14 43 27.2	-2.5
SVE				*e*SSS	SSS	14 48 25.5	
SVE				pmax	pmax		
	comp=Z,117nm,1.4s						
SVE				MLR	MLR		
	comp=Z,47µm,23.0s						
TPUB	**Ta-pu**	**135.55**	**133**	PFAKE		14 23 10.0	+8.4
TPUB				LR	LR		
	comp=Z,15µm,22.0s						
LVZ	**Lovozero**	**135.75**	**28**	*e*PKPdf	**PKPdf**	**14 22 59.8**	**+0.8**
LVZ				LR	LR		
	comp=Z,62µm,20.0s						
HAMF	**Hammerfest**	**135.81**	**21**	*e*PKPdf	**PKPdf**	**14 22 57.1**	**-1.8**
HAMF				*e*PP	**PP**	**14 25 36.8**	**-1.9**
HAMF				*e*SKPdf	**SKPdf**	**14 26 32.5**	**+0.1**
HAMF				*e*SS	**SS**	**14 43 36.3**	**+0.7**
HAMF				IVMs_BB	IVMs_BB	15 15 13.1	
	comp=Z,20µm,23.3s						
YULB	**Yu-li**	**135.87**	**133**	PFAKE		14 23 10.0	+7.8
YULB				LR	LR		
	comp=Z,14µm,19.0s						
SSLB	**Suanglung**	**136.11**	**133**	PFAKE		14 23 10.0	+7.3
SSLB				LR	LR		
	comp=Z,19µm,22.0s						
QZH	**Quanzhou**	**136.29**	**129**	*i* PKP	**PKiKP**	**14 23 05.1**	**+2.1**
QZH				PKS	**PKSdf**	**14 26 38.8**	**+1.2**
QZH				AMB	AMB		
	comp=Z,5µm,7.6s						
QZH				LR	LR		
	comp=Z,13µm,20.8s						
QZH				LR	LR		
	comp=Z,7µm,23.7s						
QZH				LR	LR		
	comp=Z,46µm,28.9s						
BRVK	**Borovoye**	**136.45**	**61**	*e*PKPpre	PKPpre	14 22 51.5	
BRVK				LR	LR		
	comp=Z,37µm,20.0s						
BRVK	**Borovoye**	**136.45**	**61**	PKIKP	**PKPdf**	**14 22 57.0**	**-3.7**
BRVK				pmax	pmax		
	comp=Z,234nm,1.9s						
NACB	**Ninganchiao**	**136.69**	**133**	PFAKE		14 23 10.0	+6.2
NACB				LR	LR		
	comp=Z,14µm,19.0s						
KULLO	**Kullorsuaq**	**137.01**	**348**	*i* PKIKP	**PKiKP**	**14 23 02.8**	**-0.1**
KULLO				MLR	MLR		
	comp=Z,48µm,22.0s						
KULLO	**Kullorsuaq**	**137.01**	**348**	*i* P	**PKiKP**	**14 23 02.8**	**-0.1**
	comp=Z,48µm,22.0s						
YHNB	**Yeheng**	**137.07**	**133**	PFAKE		14 23 10.0	+5.3
YHNB				LR	LR		
	comp=Z,19µm,22.0s						
MAKZ	**Makanchi**	**137.21**	**75**	*e*PKPpre	PKPpre	14 22 51.9	
MAKZ				LR	LR		
	comp=Z,49µm,21.0s						
MAKZ	**Makanchi**	**137.21**	**75**	PKIKP	**PKPdf**	**14 22 55.3**	**-7.0**
MAKZ				pmax	pmax		
	comp=Z,103nm,2.2s						
ENH	**Enshi**	**137.25**	**115**	*e*PKPdf	**PKPdf**	**14 23 03.9**	**+0.9**
MK31	**Makanchi Array**	**137.34**	**75**	*e*PKPpre	PKPpre	14 22 51.2	
MK31				*e*PKPdf	**PKPdf**	**14 23 02.2**	**-0.4**
MK31	**Makanchi Array**	**137.34**	**75**	*i* PKHKP	PKPpre	14 22 50.9	
MK31				pmax	pmax		
	comp=Z,36nm,1.0s						
MK32	**Makanchi Array**	**137.34**	**75**	*e*PKPpre	PKPpre	14 22 51.2	
MK32				*e*PKPdf	**PKPdf**	**14 23 02.1**	**-0.5**
MKAR	**Makanchi Array**	**137.34**	**75**	PKhKP	PKPpre	14 22 51.2	
	comp=Z,10nm,0.8s,baz=260,slow=2.4,SNR=11						
MKAR				PKP	**PKPdf**	**14 23 02.1**	**-0.5**
	comp=Z,13nm,0.7s,baz=219,slow=2.1,SNR=16						
TATO	**Taipei**	**137.39**	**133**	PFAKE		14 23 10.0	+4.8
TATO				LR	LR		
	comp=Z,15µm,20.0s						
YOJ	**Yonaguni jima**	**137.45**	**135**	PFAKE		14 23 20.0	+15
YOJ				LR	LR		
	comp=Z,22µm,20.0s						
DAG	**Danmarks Havn**	**137.64**	**2**	*i* PKIKP	**PKPdf**	**14 23 01.2**	**-1.0**
DAG				MLR	MLR		
	comp=Z,51µm,26.0s						
DAG	**Danmarks Havn**	**137.64**	**2**	*i* P	**PKPdf**	**14 23 01.2**	**-1.0**
	comp=Z,41µm,26.0s						
WMQ	**Urumqi**	**137.73**	**82**	PFAKE		14 23 10.0	+4.6
WMQ				LR	LR		
	comp=Z,27µm,20.0s						
WMQ	**Urumqi**	**137.73**	**82**	*e*PKP	**PKPdf**	**14 23 03.9**	**+0.4**
WMQ				PP	**PP**	**14 25 56.4**	**+5.1**
WMQ				PKS		14 26 42.8	
WMQ				SS	SS	14 43 59.3	-0.1
WMQ				AMB	AMB		
	comp=Z,1µm,5.1s						
WMQ				LR	LR		
	comp=Z,14µm,28.8s						
WMQ				LR	LR		
	comp=Z,17µm,29.1s						
WMQ				LR	LR		
	comp=Z,33µm,29.1s						
BJO1	**Bjornoya**	**138.40**	**16**	*e*PKPdf	**PKPdf**	**14 23 04.4**	**+0.8**
BJO1				*e*PP	**PP**	**14 25 55.4**	**+0.4**
BJO1				IVMs_BB	IVMs_BB	15 11 15.3	
	comp=Z,16µm,30.3s						
KURK	**Kurchatov**	**138.46**	**69**	*e*PKPpre	PKPpre	14 22 54.0	
KURK				LR	LR		
	comp=Z,46µm,20.0s						
KURK	**Kurchatov**	**138.46**	**69**	*i* PKHKP	PKPpre	14 22 54.0	
SEM	**Semipalatinsk**	**138.98**	**70**	*e*PKIKP	**PKPdf**	**14 23 05.3**	**-0.4**
SEM				*e*		14 25 59.8	
SEM	**Semipalatinsk**	**138.98**	**70**	*e*PKP	**PKPdf**	**14 23 05.3**	**-0.4**
SEM				*e*PP	**PP**	**14 25 59.9**	**+0.7**
ZSN	**Zaisan**	**139.03**	**76**	*e*PKIKP	**PKPdf**	**14 23 04.6**	**-1.0**
ZSN				*i*		14 26 03.1	
ZSN	**Zaisan**	**139.03**	**76**	*e*PKP	**PKPdf**	**14 23 04.6**	**-1.0**
ZSN				*i* PP	**PP**	**14 26 03.1**	**+3.8**
BBB	**Bella Bella**	**139.05**	**294**	PFAKE		14 23 20.0	+12
BBB				LR	LR		
	comp=Z,36µm,21.0s						
LZH	**Lanzhou**	**139.53**	**104**	PKP	**PKiKP**	**14 23 09.4**	**-0.1**
LZH				PP	**PP**	**14 26 05.6**	**+3.2**
LZH				PKS		14 26 44.0	
LZH				SS	SS	14 44 22.8	+2.1
LZH				AMB	AMB		
	comp=Z,8µm,9.3s						
LZH				LR	LR		
	comp=Z,14µm,18.4s						
LZH				LR	LR		
	comp=Z,17µm,18.0s						
LZH				LR	LR		
	comp=Z,30µm,19.5s						
WHN	**Wuhan**	**139.58**	**120**	PKP	**PKPdf**	**14 23 00.3**	**-6.9**
WHN				pPKP	**pPKPdf**	**14 23 11.9**	**-0.7**
WHN				PP	**PP**	**14 26 03.9**	**+1.5**
WHN				SKKS		14 32 53.6	
WHN	**Wuhan**	**139.58**	**120**	SS	SS	14 44 28.5	+7.9
WHN				LR	LR		
	comp=N,33µm,16.6s						
WHN				LR	LR		
	comp=E,29µm,17.1s						
WHN				LR	LR		
	comp=Z,106µm,26.5s						
TULEG	**Thule**	**140.07**	**345**	*e*PKPpre	PKPpre	14 22 58.1	
TULEG				*e*PKPdf	**PKiKP**	**14 23 08.0**	**-1.1**
TULEG				LR	LR		
	comp=Z,52µm,19.0s						
HSPB	**Hornsund (broa**	**140.14**	**13**	*e*PKPdf	**PKPdf**	**14 23 07.6**	**+0.9**
HSPB				*e*SKPdf	**SKPbc**	**14 26 38.9**	**-2.4**
HSPB				*e*SS	**SS**	**14 44 29.3**	**+2.7**
HSPB				IVMs_BB	IVMs_BB	15 23 46.8	
	comp=Z,11µm,19.2s						
XAN	**Xi'an**	**140.19**	**111**	*e*PKPpre	PKPpre	14 22 59.4	
XAN	**Xi'an**	**140.19**	**111**	PKP	**PKPdf**	**14 23 02.3**	**-6.0**
XAN				sPKP		14 23 16.6	
XAN				PP	**PP**	**14 26 04.9**	**-1.4**
XAN				SS	SS	14 44 25.8	-2.3
XAN				AMB	AMB		
	comp=Z,5µm,11.9s						
XAN				LR	LR		
	comp=Z,10µm,18.4s						
XAN				LR	LR		
	comp=Z,11µm,22.2s						
XAN				LR	LR		
	comp=Z,20µm,20.9s						
XAN	**Xi'an**	**140.19**	**111**	*e*PKHKP	PKPpre	14 22 59.4	
GTA	**Gaotai**	**140.25**	**97**	⇑PKP	**PKPdf**	**14 23 01.4**	**-6.9**
GTA				pPKP	sPKPdf	14 23 16.4	+0.8
GTA				PP	**PP**	**14 26 03.4**	**-3.5**
GTA				SKKS		14 32 47.4	
YKA	**Yellowknife Ar**	**140.47**	**313**	PKhKP	PKPpre	14 22 58.9	
	comp=Z,3.2nm,0.7s,baz=113,slow=4.2,SNR=10						
YKA				PKP	**PKPdf**	**14 23 06.3**	**-1.4**
	comp=Z,37nm,1.0s,baz=130,slow=3.2,SNR=32						
YKB5	**Yellowknife Ar**	**140.47**	**313**	*e*PKPpre	PKPpre	14 22 58.9	
YKB5				*e*PKPdf	**PKPdf**	**14 23 06.3**	**-1.4**
YKW3	**Yellowknife Ar**	**140.52**	**313**	*e*PKPpre	PKPpre	14 23 00.5	
HOPEN	**Hopen**	**140.91**	**17**	*e*PKPdf	**PKPdf**	**14 23 08.8**	**+0.7**
HOPEN				IVMs_BB	IVMs_BB	15 11 38.0	
	comp=Z,11µm,33.9s						
SPA0	**Spitsbergen Ar**	**141.25**	**13**	*e*PKPpre	PKPpre	14 23 01.5	
SPA0	**Spitsbergen Ar**	**141.25**	**13**	*e*PKPdf	**PKPdf**	**14 23 10.0**	**+1.2**
SPITS	**Spitsbergen Ar**	**141.25**	**13**	PKhKP	PKPpre	14 23 01.9	
	comp=Z,30nm,0.8s,baz=161,slow=5.3,SNR=16						
JMZ	**Minamidaito 2**	**141.30**	**145**	P	**PKiKP**	**14 23 12.9**	**-0.3**
JOW	**Kunigami**	**141.38**	**140**	PFAKE		14 23 20.0	+6.7
JOW				LR	LR		
	comp=Z,7µm,21.0s						
KBS	**Kingsbay**	**141.47**	**11**	*e*PKPdf	**PKPdf**	**14 23 08.6**	**-0.5**
KBS				LR	LR		
	comp=Z,45µm,20.0s						
KBS	**Kingsbay**	**141.47**	**11**	*e*PKPdf	**PKPdf**	**14 23 09.9**	**+0.8**
KBS				*e*SKSdf	**SKSdf**	**14 30 19.9**	**+2.9**
KBS				*e*SS	**SS**	**14 44 44.2**	**+2.1**
KBS				IVMs_BB	IVMs_BB	15 19 24.1	
	comp=Z,14µm,21.0s						
DIB	**Dawson Inlet,**	**141.69**	**292**	*e*PKPdf	**PKPdf**	**14 23 09.3**	**-0.9**
DIB				LR	LR		
	comp=Z,52µm,20.0s						
MIDW	**Midway**	**142.23**	**222**	PFAKE		14 23 20.0	+5.0
MIDW				LR	LR		
	comp=Z,26µm,19.0s						
NJ2	**Nanjing**	**142.75**	**125**	*e*PKP	**PKPdf**	**14 23 10.8**	**-2.0**
NJ2				PKPab	**PKiKP**	**14 23 13.3**	**-2.7**
NJ2				pPKP	**sPKPdf**	**14 23 21.3**	**+1.2**
NJ2				sPKP		14 23 25.5	
NJ2				PP	**PP**	**14 26 27.0**	**+5.4**
NJ2				SKKS		14 33 15.9	
NJ2				AMB	AMB		
	comp=Z,9µm,11.8s						
NJ2				LR	LR		
	comp=Z,27µm,24.9s						
NJ2				LR	LR		
	comp=Z,16µm,24.3s						
NJ2				LR	LR		
	comp=Z,99µm,23.8s						
RES	**Resolute Bay**	**142.88**	**336**	PKhKP	PKPpre	14 23 07.5	
	comp=Z,56nm,0.9s,baz=156,slow=8.1,SNR=19						
RES	**Resolute Bay**	**142.88**	**336**	*e*PKPpre	PKPpre	14 23 05.7	
RES				*e*PKPdf	**PKPdf**	**14 23 12.5**	**+0.8**
RES				LR	LR		
	comp=Z,39µm,21.0s						
RES	**Resolute Bay**	**142.88**	**336**	*e*PKHKP	PKPpre	14 23 05.7	
RES				*e*		14 23 12.5	
RES				MLR	MLR		
	comp=Z,39µm,21.0s						
JAM	**Amami Oshima**	**143.26**	**141**	P	**PKPdf**	**14 23 12.9**	**-0.9**
ZAA0	**Zalesovo Array**	**143.44**	**69**	*e*PKPpre	PKPpre	14 23 07.3	
ZAA0				LR	LR		
	comp=Z,34µm,20.0s						
ZALV	**Zalesovo Beam**	**143.44**	**69**	PKhKP	PKPpre	14 23 08.8	
	comp=Z,25nm,0.5s,baz=228,slow=4.5,SNR=26						
ZAA1	**Zalesovo Array**	**143.45**	**69**	*e*PKPpre	PKPpre	14 23 08.8	
WRAK	**Wrangell Islan**	**143.70**	**296**	*e*PKPdf	**PKPdf**	**14 23 13.2**	**-0.5**
WRAK				LR	LR		
	comp=Z,38µm,21.0s						
DLBC	**Dease Lake**	**143.94**	**300**	PKP	PKPbc	14 23 13.1	+0.9
	comp=Z,121nm,1.0s,baz=137,slow=2.5						
DLBC	**Dease Lake**	**143.94**	**300**	*e*PKPdf	**PKPdf**	**14 23 14.0**	**-0.2**
DLBC				LR	LR		
	comp=Z,40µm,20.0s						
TIY	**Taiyuan**	**144.82**	**112**	*e*PKP	**PKPdf**	**14 23 16.5**	**+0.1**
TIY				PP	**PP**	**14 26 38.0**	**+3.6**
TIY				LR	LR		
	comp=Z,17µm,18.3s						
TIY				LR	LR		
	comp=Z,2µm,16.2s						
TIY				LR	LR		
	comp=Z,17µm,23.0s						
CBIJ	**Chichi jima**	**145.00**	**160**	P	PKPbc	14 23 15.5	-0.7
SIT	**Sitka**	**145.39**	**295**	*e*PKPbc	**PKPab**	**14 23 17.4**	**+0.6**
SIT	**Sitka**	**145.39**	**295**	*e*PKIKP	**PKPab**	**14 23 17.4**	**+0.6**
TIA	**Tai'an**	**145.63**	**119**	PKPbc	**PKPdf**	**14 23 17.1**	**-0.6**
TIA				AMB	AMB		
	comp=Z,8µm,15.7s						
TIA				LR	LR		
	comp=Z,21µm,34.1s						
TIA				LR	LR		
	comp=Z,11µm,36.9s						
TIA				LR	LR		
	comp=Z,46µm,29.4s						
JIS	**Juneau Island**	**145.70**	**298**	*e*PKPdf	**PKPab**	**14 23 17.8**	**-0.1**
JIS				LR	LR		
	comp=Z,41µm,21.0s						
BTO	**Baotou**	**146.04**	**106**	*e*PKPbc	**PKPdf**	**14 23 17.4**	**-1.0**
BESE	**Bessie Mountai**	**146.08**	**298**	*e*PKPdf	**PKPdf**	**14 23 18.3**	**+0.5**
BESE				LR	LR		
	comp=Z,39µm,20.0s						
JSU	**Suzuyama**	**146.41**	**141**	P	**PKPbc**	**14 23 20.8**	**+0.2**
SKAG	**Skagway**	**146.78**	**299**	*e*PKPdf	**PKPdf**	**14 23 19.1**	**+0.2**
SKAG				LR	LR		
	comp=Z,29µm,22.0s						
JFU	**Fukue jima 2**	**146.93**	**137**	P	**PKPdf**	**14 23 21.0**	**+1.0**
HHC	**Hu-ho-hao-te**	**146.96**	**108**	*e*PKPbc	**PKPbc**	**14 23 21.3**	**-0.7**
HHC				PP	PP	14 26 55.0	+7.9
HHC				SKKS		14 33 40.3	
HHC				AMB	AMB		
	comp=Z,9µm,10.0s						
HHC				LR	LR		
	comp=Z,33µm,22.4s						
JNU	**Nakatsue**	**148.04**	**140**	PKPbc	**PKPbc**	**14 23 25.2**	**+0.1**
	comp=Z,116nm,0.9s,baz=108,slow=2.3,SNR=18						
JNU	**Nakatsue**	**148.04**	**140**	*e*PKPdf	**PKPdf**	**14 23 22.5**	**+0.5**
JNU	**Nakatsue**	**148.04**	**140**	P	**PKPdf**	**14 23 22.2**	**+0.3**
BJT	**Baijiatuau**	**148.38**	**114**	*e*PKPdf	**PKPdf**	**14 23 22.8**	**+0.6**
BJT	**Baijiatuau**	**148.38**	**114**	*e*PKIKP	**PKPdf**	**14 23 22.8**	**+0.6**
BJI	**Beijing**	**148.40**	**114**	*i* PKPbc	**PKPdf**	**14 23 21.9**	**-0.3**
BJI				AMB	AMB		
	comp=Z,2µm,6.9s						
BJI				LR	LR		
	comp=Z,5µm,30.4s						
BJI				LR	LR		
	comp=Z,9µm,35.9s						
HYT	**Haines Junctio**	**148.43**	**300**	*e*PKPdf	**PKPdf**	**14 23 21.3**	**-0.4**
HYT				LR	LR		
	comp=Z,35µm,22.0s						
YKU2	**Yakutat**	**148.67**	**297**	PFAKE		14 23 30.0	+0.4
YKU2				LR	LR		
	comp=Z,24µm,19.0s						
JTU	**Tsushima**	**148.85**	**137**	P	**PKPbc**	**14 23 26.9**	**-0.2**
BCPM	**Bancas Point**	**148.89**	**298**	PFAKE		14 23 30.0	-0.5
BCPM				LR	LR		
	comp=Z,26µm,20.0s						
PCA	**Pinnacle**	**149.23**	**297**	*e*PKPbc	**PKiKP**	**14 23 28.1**	**-0.4**
PCA				LR	LR		
	comp=Z,27µm,22.0s						
JMN	**Monobe**	**149.50**	**144**	P	**PKPdf**	**14 23 25.7**	**+1.4**
MOY	**Mondy**	**149.61**	**83**	*e*PKHKP	PKPpre	14 23 23.2	
MOY				pmax	pmax		
	comp=Z,3µm,2.3s						
SONA0	**Songino Array**	**149.69**	**94**	*e*PKPbc	**PKPbc**	**14 23 27.9**	**-1.0**
SONM	**Songino Array**	**149.69**	**94**	PKPbc	**PKPbc**	**14 23 27.9**	**-1.0**
	comp=Z,204nm,0.8s,baz=226,slow=2.1,SNR=68						
SONM				SKP		14 26 53.6	
	comp=Z,36nm,0.9s,baz=235,slow=2.2,SNR=4.3						
DL2	**Dalian**	**149.80**	**122**	⇓PKPbc	**PKPdf**	**14 23 22.8**	**-1.7**
DL2				pPKP	**pPKPbc**	**14 23 33.8**	**-0.9**
DL2				PP	**PP**	**14 27 06.3**	**+2.9**
DL2				AMB	AMB		
	comp=Z,9µm,9.9s						
DL2				LR	LR		
	comp=Z,16µm,33.2s						
DL2				LR	LR		
	comp=Z,10µm,31.1s						
DL2				LR	LR		
	comp=Z,50µm,40.2s						
ZAK	**Zakamensk**	**149.89**	**87**	*e*PKHKP	PKPpre	14 23 25.0	
ZAK				pmax	pmax		
	comp=Z,569nm,1.5s						
ULN	**Ulaanbaatar**	**150.03**	**94**	*e*PKPdf	**PKPdf**	**14 23 25.1**	**+0.3**
ULN				LR	LR		
	comp=Z,35µm,19.0s						
INK	**Inuvik**	**150.21**	**315**	PKPbc	**PKPbc**	**14 23 28.7**	**-0.6**
	comp=Z,329nm,0.9s,baz=108,slow=2.2,SNR=139						
INK	**Inuvik**	**150.21**	**315**	*e*PKPdf	**PKPdf**	**14 23 25.4**	**+1.3**
INK				LR	LR		
	comp=Z,90µm,22.0s						
JHJ	**Hachijo jima 2**	**150.40**	**154**	PKPbc	**PKPbc**	**14 23 30.8**	**-0.2**
	comp=Z,1µm,0.8s,baz=210,slow=9.9,SNR=12						
JHJ2	**Mitsune**	**150.40**	**154**	*e*PKPbc	**PKPbc**	**14 23 31.1**	**+0.2**
JHJ2				LR	LR		
	comp=Z,32µm,21.0s						
JHJ2	**Mitsune**	**150.40**	**154**	P	**PKPbc**	**14 23 29.7**	**-1.2**
JHS	**Saijyo**	**150.47**	**142**	P	**PKPdf**	**14 23 25.1**	**-0.7**
BALM	**Baldy**	**150.59**	**298**	*e*PKPdf	**PKPdf**	**14 23 23.5**	**-1.7**
BALM				*e*PKPbc	**PKPbc**	**14 23 30.9**	**+0.3**
BALM				LR	LR		
	comp=Z,33µm,21.0s						
BALM	**Baldy**	**150.59**	**298**	*e*PKIKP	**PKPdf**	**14 23 23.5**	**-1.7**
BALM				*e*		14 23 30.9	
BALM				MLR	MLR		
	comp=Z,33µm,21.0s						
EPYK	**Eagle Plains**	**150.62**	**310**	*e*PKPdf	**PKPdf**	**14 23 23.4**	**-1.6**
EPYK				*e*PKPbc	**PKiKP**	**14 23 30.9**	**-0.3**
EPYK				LR	LR		
	comp=Z,72µm,21.0s						
EPYK	**Eagle Plains**	**150.62**	**310**	P	**PKPdf**	**14 23 25.5**	**+0.5**
	baz=112						
JAD	**Aida**	**150.72**	**144**	P	**PKPdf**	**14 23 26.5**	**+0.4**
DAWY	**Dawson**	**150.72**	**305**	*e*PKPdf	**PKPdf**	**14 23 23.5**	**-1.7**
DAWY				*e*PKPbc	**PKPbc**	**14 23 30.9**	**+0.1**
JIE	**Ise**	**150.89**	**148**	P	**PKPbc**	**14 23 30.9**	**-1.2**
TLY	**Talaya**	**150.90**	**85**	PKPbc	**PKPbc**	**14 23 30.8**	**-0.7**
	comp=Z,48nm,0.8s,baz=234,slow=3.9,SNR=1.7						
TLY	**Talaya**	**150.90**	**85**	*e*PKPdf	**PKPdf**	**14 23 26.1**	**+0.2**
TLY				LR	LR		
	comp=Z,47µm,19.0s						
TLY	**Talaya**	**150.90**	**85**	*d* *i*PKIKP	**PKPdf**	**14 23 23.8**	**-2.1**
TLY				*e*		14 23 28.4	
TLY				pmax	pmax		
	comp=Z,2µm,1.5s						
KS15	**Wonju Array Si**	**150.96**	**132**	*e*PKPbc	**PKPbc**	**14 23 32.2**	**+0.1**
KSRS	**Korea Array**	**150.98**	**132**	PKPbc	**PKPbc**	**14 23 32.0**	**-0.1**
	comp=Z,34nm,0.7s,baz=226,slow=1.9,SNR=30						
KSRS				SKP		14 26 57.0	
	comp=Z,12nm,0.7s,baz=190,slow=2.2,SNR=7.9						
HMT	**Hamilton**	**151.09**	**296**	*e*PKPdf	**PKPdf**	**14 23 25.3**	**-0.6**
HMT				*e*PKPbc	**PKiKP**	**14 23 32.5**	**+0.2**
HMT				LR	LR		
	comp=Z,36µm,19.0s						
RAGM	**Ragged Mountai**	**151.29**	**296**	PFAKE		14 23 40.0	-0.5
RAGM				LR	LR		
	comp=Z,41µm,21.0s						
JWT	**Wachi**	**151.39**	**145**	P	**PKPbc**	**14 23 30.5**	**-2.7**
JSG	**Sagara**	**151.53**	**150**	P	**PKPab**	**14 23 38.5**	**-3.5**
IRK	**Irkutsk**	**151.56**	**85**	*e*PKIKP	**PKPdf**	**14 23 26.6**	**-0.2**
IRK				*e*		14 27 15.6	
IRK				pmax	pmax		
	comp=Z,2µm,2.7s						
EGAK	**Eagle**	**151.71**	**306**	*e*PKPbc	**PKPbc**	**14 23 33.1**	**+0.1**
EGAK				LR	LR		
	comp=Z,36µm,21.0s						
EYAK	**Cordova Ski Ar**	**151.84**	**296**	*e*PKPbc	**PKPbc**	**14 23 33.2**	**-0.1**
EYAK				LR	LR		
	comp=Z,50µm,22.0s						
INU	**Inuyama**	**151.88**	**148**	*e*PKPdf	**PKPdf**	**14 23 28.7**	**+0.9**
INU				*e*PKPbc	**sPKPdf**	**14 23 35.9**	**+0.7**
INU				LR	LR		
	comp=Z,19µm,22.0s						
MENT	**Mentasta**	**152.02**	**301**	*e*PKPbc	**PKiKP**	**14 23 34.5**	**+0.3**
MENT				LR	LR		
	comp=Z,46µm,21.0s						
JGF	**Kuroka**	**152.21**	**148**	P	**PKPdf**	**14 23 31.3**	**+2.9**
FID	**Port Fidalgo**	**152.25**	**296**	*e*PKPbc	**PKiKP**	**14 23 34.8**	**+0.1**
FID				LR	LR		
	comp=Z,34µm,20.0s						
JOD2	**Odawara 2**	**152.31**	**152**	P	**PKPdf**	**14 23 30.0**	**+1.5**
DOT	**Dot Lake**	**152.44**	**302**	*e*PKPbc	**PKiKP**	**14 23 35.5**	**+0.5**
DOT				LR	LR		
	comp=Z,48µm,22.0s						
SCRK	**Sand Creek**	**152.54**	**303**	*e*PKPbc	**PKiKP**	**14 23 35.5**	**+0.2**
SCRK				LR	LR		
	comp=Z,40µm,21.0s						
GLI	**Glacier Island**	**152.58**	**296**	*e*PKPdf	**PKPdf**	**14 23 29.5**	**+1.4**
GLI				*e*PKPbc	**PKiKP**	**14 23 36.1**	**+0.8**
GLI				LR	LR		
	comp=Z,38µm,22.0s						
PAX	**Paxson**	**152.76**	**300**	*e*PKPbc	**PKPbc**	**14 23 35.6**	**+0.1**
PAX				LR	LR		
	comp=Z,36µm,21.0s						
JGN	**Niukaw**	**152.78**	**148**	P	**PKPdf**	**14 23 29.7**	**+0.4**
RIDG	**Independent Ri**	**152.80**	**302**	PFAKE		14 23 40.0	+4.2
RIDG				LR	LR		
	comp=Z,46µm,21.0s						
JRY	**Ryogami san**	**152.98**	**151**	P	**PKPdf**	**14 23 29.3**	**-0.2**
SNY	**Shenyang**	**153.06**	**121**	⇓PKPbc	**PKPdf**	**14 23 30.3**	**+0.9**
SNY				LR	LR		
	comp=Z,19µm,46.1s						
SNY				LR	LR		
	comp=Z,15µm,50.5s						
SNY				LR	LR		
	comp=Z,73µm,36.7s						
SCM	**Sheep Creek Mo**	**153.09**	**297**	*e*PKPbc	**PKiKP**	**14 23 36.9**	**+0.5**
SCM				LR	LR		
	comp=Z,25µm,20.0s						
SEW	**Seward**	**153.28**	**293**	*e*PKPdf	**PKPdf**	**14 23 29.9**	**+0.8**
SEW				*e*PKPbc	**PKiKP**	**14 23 37.2**	**+0.5**
SEW				LR	LR		
	comp=Z,49µm,20.0s						
MJAR	**Matsushiro Arr**	**153.31**	**149**	PKP	**PKPdf**	**14 23 30.8**	**+0.8**
	comp=Z,11nm,0.9s,baz=190,slow=2.0,SNR=14						
MJAR				PKPbc	**PKiKP**	**14 23 39.0**	**+1.4**
	comp=Z,93nm,0.9s,baz=184,slow=2.9,SNR=51						
MAJO	**Matsushiro**	**153.31**	**149**	*e*PKPdf	**PKPdf**	**14 23 30.4**	**+0.4**
MAJO				*e*PKPbc	**PKiKP**	**14 23 37.9**	**+0.3**
MAJO				LR	LR		
	comp=Z,29µm,22.0s						
MAT	**Matsushiro**	**153.31**	**149**	PKP	**PKPdf**	**14 23 30.3**	**+0.3**
MAT	**Matsushiro**	**153.31**	**149**	P	**PKPdf**	**14 23 30.5**	**+0.5**
MJB9	**Matsu-Tunnel**	**153.32**	**149**	*e*PKPdf	**PKPdf**	**14 23 30.5**	**+0.5**
MJB9				*e*PKPbc	**PKiKP**	**14 23 38.2**	**+0.6**
MJB9				LR	LR		
	comp=Z,32µm,22.0s						
KNK	**Knik Glacier**	**153.41**	**296**	*e*PKPbc	**PKiKP**	**14 23 37.6**	**+0.6**
KNK				LR	LR		
	comp=Z,42µm,22.0s						
JYT	**Yasato**	**153.48**	**153**	P	**PKPbc**	**14 23 34.2**	**-3.6**
SML	**Sawmill**	**153.52**	**297**	*e*PKPdf	**PKPdf**	**14 23 26.5**	**-2.9**
SML				*e*PKPbc	**PKiKP**	**14 23 37.8**	**+0.5**
SML				LR	LR		
	comp=Z,18µm,20.0s						
SML	**Sawmill**	**153.52**	**297**	*e*PKIKP	**PKPdf**	**14 23 26.5**	**-2.9**
SML				*e*		14 23 37.8	
SML				MLR	MLR		
	comp=Z,18µm,20.0s						
DHY	**Denali Highway**	**153.60**	**300**	*e*PKPdf	**PKPdf**	**14 23 27.7**	**-2.0**
DHY				LR	LR		
	comp=Z,47µm,22.0s						
KDAK	**Kodiak Island**	**153.62**	**287**	PKP	**PKPdf**	**14 23 29.6**	**-0.1**
	comp=Z,14nm,0.9s,baz=70,slow=5.1,SNR=11						
KDAK				PKPbc	**PKiKP**	**14 23 37.7**	**+0.2**

	comp=Z,69nm,0.7s,baz=168,slow=1.3,SNR=29						
KDAK	**Kodiak Island**	153.62	287	*e*PKPbc	**PKiKP**	**14 23 37.8**	**+0.2**
KDAK				LR	LR		
	comp=Z,35µm,21.0s						
OHAK	**Old Harbor**	153.67	285	*e*PKPdf	**PKPdf**	**14 23 30.1**	**+0.4**
OHAK				*e*PKPbc	**PKiKP**	**14 23 38.5**	**+0.9**
OHAK				LR	LR		
	comp=Z,33µm,20.0s						
PRP	**Porcupine Dome**	153.70	306	PFAKE		14 23 40.0	+2.3
PRP				LR	LR		
	comp=Z,44µm,22.0s						
SII	**Sitkinak Islan**	153.75	283	*e*PKPbc	**PKiKP**	**14 23 39.0**	**+1.1**
SII				LR	LR		
	comp=Z,45µm,22.0s						
BRLK	**Bradley Lake**	153.78	291	*e*PKPdf	**PKPdf**	**14 23 27.4**	**-2.4**
BRLK				*e*PKPbc	**PKiKP**	**14 23 38.5**	**+0.6**
BRLK				LR	LR		
	comp=Z,32µm,21.0s						
PMR	**Palmer**	153.78	296	*e*PKPdf	**PKPdf**	**14 23 27.1**	**-2.6**
PMR				*e*PKPbc	**PKiKP**	**14 23 38.7**	**+1.0**
PMR				LR	LR		
	comp=Z,26µm,19.0s						
PMR	**Palmer**	153.78	296	*e*PKIKP	**PKPdf**	**14 23 27.1**	**-2.6**
PMR				*e*		14 23 38.7	
PMR				MLR	MLR		
	comp=Z,26µm,19.0s						
CNPM	**China Poot**	153.83	291	*e*PKPdf	**PKPdf**	**14 23 27.2**	**-2.7**
CNPM				*e*PKPbc	**PKiKP**	**14 23 38.4**	**+0.4**
CNPM				LR	LR		
	comp=Z,41µm,22.0s						
RC01	**Rabbit Creek A**	153.84	295	*e*PKPdf	**PKPdf**	**14 23 27.6**	**-2.3**
RC01				*e*PKPbc	**PKiKP**	**14 23 38.9**	**+1.0**
RC01				LR	LR		
	comp=Z,36µm,22.0s						
FYU	**Fort Yukon**	153.91	308	*e*PKPdf	**PKPdf**	**14 23 27.4**	**-2.4**
FYU				LR	LR		
	comp=Z,37µm,20.0s						
HDA	**Harding Lake**	153.91	303	*e*PKPdf	**PKPdf**	**14 23 26.7**	**-3.2**
HDA				LR	LR		
	comp=Z,35µm,20.0s						
HDA	**Harding Lake**	153.91	303	P	**PKPdf**	**14 23 29.8**	**-0.1**
	baz=109						
ILAR	**Eielson Array**	154.00	304	PKP	**PKPdf**	**14 23 27.4**	**-2.6**
	comp=Z,8.3nm,1.0s,baz=317,slow=1.2,SNR=26						
ILAR				PKPbc	**PKPbc**	**14 23 37.6**	**-0.4**
	comp=Z,51nm,0.9s,baz=132,slow=1.3,SNR=44						
ILB	**Eielson Array**	154.00	304	*e*PKPdf	**PKPdf**	**14 23 27.1**	**-2.9**
ILB				*e*PKPbc	**PKPbc**	**14 23 37.8**	**-0.2**
CHIR	**Chirikof Islan**	154.05	281	*e*PKPbc	**PKiKP**	**14 23 38.8**	**+0.4**
CHIR				LR	LR		
	comp=Z,54µm,21.0s						
HOM	**Homer**	154.07	291	PFAKE		14 23 40.0	+1.6
HOM				LR	LR		
	comp=Z,25µm,22.0s						
POKR	**Poker Plat Res**	154.33	304	P	**PKPdf**	**14 23 29.9**	**-0.5**
	baz=108						
CCB	**Clear Creek Bu**	154.34	303	*e*PKPdf	**PKPdf**	**14 23 27.0**	**-3.5**
CCB				LR	LR		
	comp=Z,36µm,21.0s						
RND	**Reindeer**	154.35	300	*e*PKPdf	**PKPdf**	**14 23 27.6**	**-3.0**
RND				*e*PKPbc	**PKiKP**	**14 23 39.2**	**+0.3**
RND				LR	LR		
	comp=Z,46µm,21.0s						
WRH	**Wood River Hil**	154.39	303	*e*PKPdf	**PKPdf**	**14 23 27.5**	**-3.1**
WRH				LR	LR		
	comp=Z,35µm,20.0s						
COLA	**College**	154.43	304	*e*PKPdf	**PKPdf**	**14 23 27.5**	**-3.0**
COLA				LR	LR		
	comp=Z,28µm,21.0s						
COLA	**College**	154.43	304	*e*PKIKP	**PKPdf**	**14 23 27.5**	**-3.0**
COLA				MLR	MLR		
	comp=Z,28µm,21.0s						
TCOL	**CIGO, UAF Yank**	154.43	304	P	**PKPdf**	**14 23 29.8**	**-0.7**
	baz=108						
MCK	**McKinley**	154.50	301	*e*PKPdf	**PKPdf**	**14 23 27.8**	**-3.0**
MCK				*e*PKPbc	**PKiKP**	**14 23 40.2**	**+1.0**
MCK				LR	LR		
	comp=Z,33µm,20.0s						
MCK	**McKinley**	154.50	301	*e*PKIKP	**PKPdf**	**14 23 27.8**	**-3.0**
MCK				*e*		14 23 40.2	
MCK				MLR	MLR		
	comp=Z,33µm,20.0s						
MDM	**Murphy Dome**	154.61	304	*e*PKPbc	**PKiKP**	**14 23 40.2**	**+0.8**
MDM				LR	LR		
	comp=Z,27µm,20.0s						
JSD	**Sado**	154.74	148	P	**PKPdf**	**14 23 31.7**	**-0.2**
BWN	**Browne**	154.86	302	*e*PKPdf	**PKPdf**	**14 23 28.6**	**-2.6**
BWN				*e*PKPbc	**PKiKP**	**14 23 40.7**	**+0.8**
BWN				LR	LR		
	comp=Z,34µm,21.0s						
SPU	**Mount Spurr**	154.90	294	*e*PKPdf	**PKPdf**	**14 23 28.6**	**-2.8**
SPU				*e*PKPbc	**PKiKP**	**14 23 41.2**	**+1.1**
RSO	**Redoubt South**	154.92	292	*e*PKPdf	**PKPdf**	**14 23 28.7**	**-3.0**
RSO				*e*PKPbc	**PKiKP**	**14 23 41.1**	**+0.7**
JMM	**Marumori**	155.19	153	P	**PKPdf**	**14 23 35.1**	**+2.6**
KTH	**Kantishna Hill**	155.27	300	*e*PKPdf	**PKPdf**	**14 23 28.4**	**-3.5**
KTH				*e*PKPbc	**sPKPdf**	**14 23 41.4**	**+2.1**
KTH				LR	LR		
	comp=Z,35µm,22.0s						
CN2	**Changchun**	155.47	121	*e*PKP	**PKPdf**	**14 23 31.9**	**-0.8**
CN2				*e*PP	**PP**	**14 27 38.6**	**+3.1**
CN2				SKS	**SKSdf**	**14 30 33.0**	**-4.5**
CN2				SKKS	**SKKSac**	**14 34 21.8**	**-1.5**
CN2				*e*SS	**SS**	**14 47 19.6**	**-0.2**
CN2				AMB	AMB		
	comp=Z,6µm,12.0s						
CN2				LR	LR		
	comp=Z,14µm,26.0s						
CN2				LR	LR		
	comp=Z,13µm,26.0s						
CN2				LR	LR		
	comp=Z,36µm,26.0s						
BPAW	**Bear Paw Mtn.**	155.47	301	*e*PKPdf	**PKPdf**	**14 23 28.4**	**-3.6**
BPAW				*e*PKPbc	**sPKPdf**	**14 23 41.2**	**+1.7**
BPAW				LR	LR		
	comp=Z,34µm,20.0s						
PPLA	**Purkeypile**	155.59	298	*e*PKPdf	**PKPdf**	**14 23 28.7**	**-3.7**
PPLA				LR	LR		
	comp=Z,79µm,22.0s						
JYA	**Atsumi**	155.63	150	P	**PKPdf**	**14 23 35.0**	**+1.9**
CHGN	**Chignik**	155.64	280	*e*PKPdf	**PKPdf**	**14 23 30.5**	**-1.9**
CHGN				LR	LR		
	comp=Z,36µm,22.0s						
MLY	**Manley**	155.65	303	PFAKE		14 23 40.0	+7.7
MLY				LR	LR		
	comp=Z,40µm,21.0s						
CAST	**Castle Rocks**	155.72	299	PFAKE		14 23 40.0	+7.6
CAST				LR	LR		
	comp=Z,16µm,21.0s						
CIT	**Chita**	155.93	93	*e*PKIKP	**PKPdf**	**14 23 28.0**	**-5.1**
CIT				*e*		14 23 57.4	
CIT				*e*		14 27 33.8	
CIT				pmax	pmax		
	comp=Z,121nm,1.4s						
COLD	**Coldfoot**	155.97	308	*e*PKPdf	**PKPdf**	**14 23 30.7**	**-1.9**
COLD				LR	LR		
	comp=Z,36µm,22.0s						
TOLK	**Toolik Lake Re**	155.99	312	*e*PKPdf	**PKPdf**	**14 23 29.9**	**-2.8**
TOLK				LR	LR		
	comp=Z,51µm,21.0s						
TOLK	**Toolik Lake Re**	155.99	312	P	**PKPdf**	**14 23 32.9**	**+0.3**
	baz=99						
SDPT	**Sand Point**	156.13	276	*e*PKPdf	**PKPdf**	**14 23 30.3**	**-2.8**
SDPT				LR	LR		
	comp=Z,38µm,20.0s						
SVW2	**Sparrevohn**	156.45	292	*e*PKPdf	**PKPdf**	**14 23 30.4**	**-3.0**
SVW2				LR	LR		
	comp=Z,37µm,22.0s						
JOM	**Ohasama**	156.83	153	P	**PKPdf**	**14 23 35.3**	**+0.7**
HIA	**Hailar**	157.09	105	*e*PKPdf	**PKPdf**	**14 23 34.0**	**-0.6**
HIA				LR	LR		
	comp=Z,39µm,21.0s						
TTA	**Tatalina**	157.26	296	*e*PKPdf	**PKPdf**	**14 23 31.9**	**-2.6**
TTA				LR	LR		
	comp=Z,45µm,22.0s						
TTA	**Tatalina**	157.26	296	*e*PKIKP	**PKPdf**	**14 23 31.9**	**-2.6**
TTA				MLR	MLR		
	comp=Z,45µm,22.0s						
FALS	**False Pass**	157.29	273	PFAKE		14 23 50.0	+15
FALS				LR	LR		
	comp=Z,50µm,21.0s						
MDJ	**Mudanjiang**	157.82	126	*e*PKPdf	**PKPdf**	**14 23 34.5**	**-1.2**
MDJ				LR	LR		
	comp=Z,40µm,21.0s						
MDJ	**Mudanjiang**	157.82	126	PKP	**PKPdf**	**14 23 36.3**	**+0.6**
MDJ				pPKP	sPKPdf	14 23 47.3	+4.3
MDJ				SS	SS	14 47 42.3	-2.6
MDJ				LR	LR		
	comp=Z,21µm,19.5s						
MDJ				LR	LR		
	comp=Z,18µm,21.0s						
MDJ				LR	LR		
	comp=Z,45µm,20.6s						
JTM	**Tenmabayashi**	158.03	151	P	**PKPdf**	**14 23 36.1**	**0.0**
AKUT	**Akutan**	158.04	269	PFAKE		14 23 50.0	+14
AKUT				LR	LR		
	comp=Z,28µm,21.0s						
UNV	**Unalaska Valle**	158.23	268	PFAKE		14 23 50.0	+14
UNV				LR	LR		
	comp=Z,36µm,22.0s						
USA0B	**Ussuriysk Arra**	158.37	131	*e*PKPdf	**PKPdf**	**14 23 35.0**	**-1.3**
USA0B				LR	LR		
	comp=Z,34µm,22.0s						
USRK	**Ussuriysk Ar.**	158.37	131	PKP	**PKPdf**	**14 23 37.8**	**+1.4**
	comp=Z,9.1nm,0.9s,baz=258,slow=1.8,SNR=11						
USRK				PKPab	**PKPab**	**14 24 12.9**	**+1.9**
	comp=Z,55nm,1.2s,baz=200,slow=3.6,SNR=5.5						
JOT	**Ohata**	158.60	151	P	**PKPdf**	**14 23 35.4**	**-1.3**
JSH	**Shimam**	159.53	148	P	**PKPdf**	**14 23 38.3**	**+0.5**
ERM	**Erimo**	159.67	154	*e*PKPdf	**PKPdf**	**14 23 38.7**	**+0.7**
ERM				LR	LR		
	comp=Z,27µm,20.0s						
JEM	**Erimo**	159.67	154	P	**PKPdf**	**14 23 39.0**	**+1.0**
JEW	**Eniwo**	160.07	150	P	**PKPdf**	**14 23 39.5**	**+1.1**
TEY	**Ternei**	160.71	138	⇑*e*PKIKP	**PKPdf**	**14 23 39.2**	**+0.2**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RDOG	**Red Dog Mine**	160.88	309	*e*PKPdf	**PKPdf**	**14 23 34.7**	**-3.8**
ASAJ	**Asahikawa**	161.55	151	PKP	**PKPdf**	**14 23 41.1**	**+1.2**
	comp=Z,7.1nm,0.9s,baz=242,slow=12,SNR=11						
ASAJ	**Asahikawa**	161.55	151	P	**PKPdf**	**14 23 40.8**	**+0.8**
JMP	**Maruseppu**	161.62	153	P	**PKPdf**	**14 23 39.8**	**-0.3**
ADK	**Adak**	161.90	252	*e*PKPdf	**PKPdf**	**14 23 37.6**	**-2.5**
ADK	**Adak**	161.90	252	*e*PKIKP	**PKPdf**	**14 23 37.6**	**-2.5**
YUK	**Yuzh-Kuril'sk**	162.14	159	PKIKP	**PKPdf**	**14 23 41.8**	**+1.3**
YUK				*e*		14 28 15.9	
YUK				*e*		14 30 40.6	
YUK				*e*SS	SS	14 48 36.6	+6.7
YUK				*e*SSS	SSS	14 54 56.5	
YUK				pmax	pmax		
	comp=Z,422nm,2.1s						
KLR	**Kul'dur**	162.42	122	PKP	**PKPdf**	**14 23 40.8**	**+0.1**
	comp=Z,24nm,1.1s,baz=294,slow=2.3,SNR=24						
KLR				PKPab	**PKPab**	**14 24 30.3**	**+1.8**
	comp=Z,28nm,1.1s,baz=271,slow=3.0,SNR=3.6						
ZEA	**Zeya**	163.56	104	*i* PKIKP	**PKPdf**	**14 23 39.8**	**-1.8**
ZEA				pmax	pmax		
	comp=N,36nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,220nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,4µm,8.0s						
ZEA				pmax	pmax		
	comp=N,1µm,7.0s						
KUR	**Kuril'sk**	163.64	162	*d i*PKIKP	**PKPdf**	**14 23 45.0**	**+3.1**
KUR				*i*		14 24 35.6	
KUR				*e*		14 28 26.2	
KUR				*e*SSS	SSS	14 55 15.2	
KUR				pmax	pmax		
	comp=Z,5µm,8.0s						
YSS	**Yuzh-Sakhalins**	164.25	148	*e*PKPdf	**PKPdf**	**14 23 42.3**	**-0.2**
YSS	**Yuzh-Sakhalins**	164.25	148	*e*PKIKP	**PKPdf**	**14 23 42.3**	**-0.2**
TIXI	**Tiksi**	165.31	33	PKP	**PKPdf**	**14 23 41.7**	**-0.9**
	comp=Z,3.0nm,1.0s,baz=179,slow=0.5,SNR=7.4						
TIXI				PKPab	**PKPab**	**14 24 40.6**	**-0.1**
	comp=Z,26nm,0.9s,baz=4.6,slow=3.4,SNR=7.3						
GRNR	**Gornyy**	165.50	127	*e*PKIKP	**PKPdf**	**14 23 44.0**	**+0.5**
GRNR				pmax	pmax		
	comp=Z,25nm,1.2s						
YAK	**Yakutsk**	168.02	74	*e*PKPdf	**PKPdf**	**14 23 44.6**	**-0.3**
YAK				*e*PKPab	**PKPab**	**14 24 52.5**	**-0.4**
YAK	**Yakutsk**	168.02	74	*e*PKIKP	**PKPdf**	**14 23 44.6**	**-0.3**
YAK				*e*		14 24 52.5	
NKL	**Nikolayevsk**	169.00	130	*e*PKIKP	**PKPdf**	**14 23 46.3**	**+0.4**
NKL				*e*		14 28 49.6	
NKL				*e*PPP	PPP	14 32 52.8	
NKL				*e*SS	SS	14 49 36.6	-3.7
SKR	**Severo-Kuril’s**	169.58	185	*i* PKIKP	**PKPdf**	**14 23 49.7**	**+3.4**
SKR				pmax	pmax		
	comp=Z,101nm,1.4s						
SKR				pmax	pmax		
	comp=Z,6µm,11.1s						
BILL	**Bilibino**	171.43	330	*de*PKIKP	**PKPdf**	**14 23 45.3**	**-1.5**
BILL				*e*		14 23 53.8	
BILL				*e*		14 23 56.1	
BILL				*i*		14 29 02.7	
BILL						14 30 47.0	
BILL				*e*PPP	PPP	14 33 02.0	
BILL				pmax	pmax		
	comp=Z,40nm,1.3s						
BILL				pmax	pmax		
	comp=Z,710µm,5.0s						
PET	**Petropavlovsk**	171.68	196	*e*PKPdf	**PKPdf**	**14 23 46.8**	**-0.6**
PET	**Petropavlovsk**	171.68	196	*e*PKIKP	**PKPdf**	**14 23 46.8**	**-0.6**
PEA0B	**Petropavlovsk-**	171.88	193	*e*PKPdf	**PKPdf**	**14 23 47.2**	**-0.3**
PETK	**Petropavlovsk-**	171.88	193	PKP	**PKPdf**	**14 23 47.4**	**-0.1**
	comp=Z,36nm,1.0s,baz=64,slow=3.4,SNR=14						
PETK				PKPab	**PKPab**	**14 25 12.3**	**+2.1**
	comp=Z,65nm,1.0s,baz=140,slow=4.1,SNR=5.9						
PEA1	**Petropavlovsk-**	171.88	193	*e*PKPdf	**PKPdf**	**14 23 47.4**	**-0.1**
PEA1				*e*PKPab	**PKPab**	**14 25 12.3**	**+2.1**
MA2	**Magadan**	177.52	125	PKP	**PKPdf**	**14 23 47.9**	**-1.1**
	comp=Z,18nm,1.1s,baz=112,slow=3.9,SNR=2.7						
MA2				PKPab	PKPab	14 25 36.4	+1.2
	comp=Z,57nm,1.2s,baz=223,slow=4.7,SNR=4.7						
SEY	**Seymchan**	177.80	30	PKP	**PKPdf**	**14 23 48.1**	**-0.8**
	comp=Z,11nm,1.0s,baz=205,slow=6.8,SNR=8.7						
SEY				PKPab	PKPab	14 25 35.7	-0.6
	comp=Z,6.0nm,0.8s,baz=223,slow=3.5,SNR=2.5						

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*JMA **15** 14:15:37.8±0.1, 23.°70N×122.°86E, h58km±5km, M1.9*
*ISCJB **15** 14:15:38.1±0.5, 23.°71N±0.°03×122.°85E±0.°02, h28km±5km, Error ellipse: s-maj=4.5km s-min=3.3km az=168.4*
*TAP **15** 14:15:38.9, 23.°77N×122.°88E, h55km±1km, ML2.7, D*
ISC 15 14:15:36.2±1.2**, 23.°59N**±0.°03×**122.°85E**±0.°03**, h26**km±13km**, n50, σ0.s67**/91**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.86	6	P	**Pb**	**14 15 52.8**	**+0.3**
JYNG				*e*S	**Sb**	**14 16 03.3**	**-0.4**
YOJ	**Yonaguni jima**	0.88	10	*i* P	**Pb**	**14 15 53.2**	**+0.3**
	baz=9.0						
YOJ				S	**Sb**	**14 16 03.8**	**-0.4**
	baz=9.0						
YOJ	**Yonaguni jima**	0.88	10	P	**Pb**	**14 15 53.1**	**+0.3**
YOJ				S	**Sb**	**14 16 04.0**	**-0.2**
HATJ	**Hateruma jima**	0.99	62	P	**Pb**	**14 15 55.1**	**+0.4**
HATJ				S	**Sn**	**14 16 07.3**	**-0.2**
IRIF	**Iriomote-Funau**	1.09	47	P	**Pb**	**14 15 56.4**	**0.0**
IRIF				*e*S	**Sn**	**14 16 10.2**	**+0.1**
EOS1	**EOS1**	1.16	325	P	**Pb**	**14 15 58.2**	**+0.6**
	baz=325						
EOS1				S	**Sn**	**14 16 11.4**	**-0.2**
	baz=325						
JKRS	**Kuro-shima**	1.24	58	P	**Pb**	**14 15 58.8**	**-0.1**
TWD	**Chiawan**	1.25	293	*e*P	**Pb**	**14 15 59.7**	**+0.7**
	baz=285						
TWD				*e*S	**Sn**	**14 16 13.8**	**-0.1**
	baz=285						
NACB	**Ninganchiao**	1.29	297	*e*P	**Pn**	**14 15 58.4**	**-0.1**
	baz=280						
NACB				*e*S	**Sn**	**14 16 14.3**	**-0.6**
	baz=280						
EGFH	**Guangfu**	1.31	274	P	**Pb**	**14 16 00.5**	**+0.4**
	baz=266						
EGFH				S	**Sb**	**14 16 16.7**	**+0.3**
	baz=266						
NANB	**Nanao**	1.31	310	P	**Pb**	**14 15 59.4**	**-0.7**
	baz=302						
NANB				S	**Sb**	**14 16 15.8**	**-0.6**
	baz=302						
ENA	**Nanau**	1.31	310	*e*P	**Pb**	**14 16 00.1**	**-0.1**
	baz=302						
ENA				S	**Sb**	**14 16 16.0**	**-0.6**
	baz=302						
HGSD	**Ruisui**	1.31	266	P	**Pb**	**14 16 00.5**	**+0.4**
	baz=258						
HGSD				S	**Sb**	**14 16 16.6**	**0.0**
	baz=258						
ESL	**Shilin**	1.32	280	*e*S	**Sn**	**14 16 16.0**	**+0.3**
	baz=264						
ETLH	**Xiulin Townshi**	1.40	296	*e*P	**Pb**	**14 16 01.8**	**+0.2**
	baz=281						
ETLH				S	**Sn**	**14 16 17.6**	**0.0**
	baz=281						
EHY	**Hungye**	1.41	267	*i* P	**Pb**	**14 16 02.2**	**+0.5**
	baz=260						
EHY				*e*S	**Sb**	**14 16 19.3**	**+0.1**
	baz=260						
JIJ	**Ishigaki jima**	1.41	57	P	**Pn**	**14 16 00.6**	**+0.5**
JIJ				*e*S	**Sn**	**14 16 17.8**	**-0.1**
YULB	**Yu-li**	1.44	262	*i* P	**Pb**	**14 16 02.7**	**+0.4**
	baz=249						
YULB				S	**Sb**	**14 16 20.2**	**0.0**
	baz=249						
TWF1	**Yuli**	1.45	261	*i* P	**Pb**	**14 16 02.8**	**+0.4**
	baz=247						
TWF1				S	**Sb**	**14 16 21.6**	**+1.2**
	baz=247						
CHKT	**Chengkung**	1.45	251	*e*P	**Pb**	**14 16 03.3**	**+0.8**
	baz=237						
CHKT				*e*S	**Sb**	**14 16 20.4**	**-0.1**
	baz=237						
WHF	**Hehuan Shan**	1.55	291	*e*P	**Pb**	**14 16 04.6**	**+0.1**
	baz=284						
WHF				S	**Sn**	**14 16 22.1**	**+0.1**
	baz=284						
TWE	**Neicheng**	1.56	316	*e*P	**Pb**	**14 16 04.0**	**-0.4**
	baz=311						
TWE				*e*S	**Sn**	**14 16 21.8**	**+0.2**
	baz=311						
VWDT	**VWDT**	1.57	276	P	**Pb**	**14 16 04.7**	**+0.1**
	baz=269						
VWDT				*e*S	**Sb**	**14 16 23.2**	**-1.0**
	baz=269						
NNSB	**Datong**	1.58	302	*e*P	**Pb**	**14 16 04.2**	**-0.6**
	baz=288						
NNSB				*e*S	**Sn**	**14 16 22.2**	**0.0**
	baz=288						
SLBB	**Yuanshan**	1.60	316	P	**Pb**	**14 16 05.0**	**-0.2**
	baz=301						
SLBB				*e*S	**Sn**	**14 16 23.1**	**+0.4**
	baz=301						
CHGB	**Renai**	1.60	287	*e*P	**Pb**	**14 16 04.6**	**-0.6**
	baz=280						
CHGB				*e*S	**Sn**	**14 16 23.6**	**+0.6**
	baz=280						
JISG	**Ishigakijimahi**	1.66	53	P	**Pn**	**14 16 03.7**	**+0.1**
TIPB	**Shuangxi**	1.66	326	*e*P	**Pn**	**14 16 04.3**	**+0.6**
	baz=321						
TIPB				*e*S	**Sn**	**14 16 22.5**	**-1.7**
	baz=321						
YHNB	**Yeheng**	1.72	309	P	**Pb**	**14 16 05.8**	**-1.4**
	baz=293						
YHNB				*e*S	**Sn**	**14 16 25.2**	**-0.5**
	baz=293						
ELDTW	**Lidau**	1.73	257	P	**Pb**	**14 16 06.9**	**-0.4**
	baz=251						
ELDTW				*e*S	**Sn**	**14 16 27.5**	**+1.5**
	baz=251						
NSK	**Sanguang**	1.74	309	*e*P	**Pn**	**14 16 05.9**	**+1.2**
	baz=293						
NSK				*e*S	**Sn**	**14 16 25.7**	**-0.4**
	baz=293						
YUS	**Yu-Shan**	1.75	267	P	**Pb**	**14 16 07.9**	**+0.1**
	baz=261						
YUS				*e*S	**Sb**	**14 16 28.8**	**-0.7**
	baz=261						
TWGBT	**Beinan**	1.80	245	P	**Pb**	**14 16 08.2**	**-0.3**
	baz=234						
TWGBT				S	**Sb**	**14 16 30.2**	**-0.4**
	baz=234						
TWG	**Pinlang**	1.81	245	*e*P	**Pb**	**14 16 08.1**	**-0.4**
	baz=234						
TWG				S	**Sb**	**14 16 30.2**	**-0.6**
	baz=234						
SMLT	**Sun Moon Lake**	1.81	280	*e*P	**Pb**	**14 16 08.4**	**-0.3**
	baz=273						
SMLT				*e*S	**Sb**	**14 16 29.8**	**-1.2**
	baz=273						
WHYT	**Xinyi Township**	1.83	274	*e*S	**Sb**	**14 16 30.7**	**-0.9**
	baz=268						
TYC	**Yuchr**	1.85	280	*e*P	**Pb**	**14 16 09.2**	**-0.2**
	baz=274						
TYC				*e*S	**Sb**	**14 16 30.4**	**-1.7**
	baz=274						
WJS	**Zhushan**	1.96	277	*e*P	**Pb**	**14 16 11.3**	**+0.2**
	baz=265						
WJS				*e*S	**Sb**	**14 16 35.8**	**+0.6**
	baz=265						
LIOB	**Emei**	1.98	302	*e*S	**Sn**	**14 16 33.1**	**+1.1**
	baz=289						
CHN5	**Tsauling**	1.99	271	*e*P	**Pb**	**14 16 11.3**	**-0.5**
	baz=265						
CHN5				*e*S	**Sb**	**14 16 36.3**	**+0.1**
	baz=265						
TWQ1	**Liyutan**	2.04	292	*e*S	**Sb**	**14 16 36.6**	**-1.0**
	baz=286						
TPUB	**Ta-pu**	2.06	262	*e*P	**Pb**	**14 16 12.3**	**-0.6**
	baz=253						
TPUB				*e*S	**Sb**	**14 16 37.5**	**-0.6**
	baz=253						
SLGT	**Liugui**	2.11	254	P	**Pb**	**14 16 14.3**	**+0.5**
	baz=246						
SLGT				*e*S	**Sb**	**14 16 39.3**	**-0.3**
	baz=246						
WDLH	**Douliu**	2.12	273	*e*S	**Sb**	**14 16 39.9**	**0.0**
	baz=268						
CHN1	**Nanshi**	2.17	260	P	**Pb**	**14 16 15.7**	**+0.9**
	baz=255						
CHN1				S	**Sb**	**14 16 42.3**	**+1.0**
	baz=255						
TWK	**Hsinying**	2.19	262	P	**Pb**	**14 16 15.2**	**0.0**
	baz=251						
TWK				*e*S	**Sb**	**14 16 42.5**	**+0.5**
	baz=251						
EAST	**Anshuo**	2.20	237	*e*P	**Pb**	**14 16 14.0**	**-1.3**
	baz=240						
EAST				*e*S	**Sb**	**14 16 40.9**	**-1.3**
	baz=240						
MASBT	**Mashibuluo**	2.26	245	*e*P	**Pb**	**14 16 15.2**	**-1.1**
	baz=239						
MASBT				*e*S	**Sb**	**14 16 42.8**	**-1.1**
	baz=239						
RLNB	**Erlin**	2.30	278	S	**Sb**	**14 16 45.1**	**+0.1**
	baz=284						
SCZT	**Fangliau**	2.39	240	*e*P	**Pb**	**14 16 17.5**	**-0.9**
	baz=241						

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*ISCJB **15** 14:16:47.6±0.6, 4.°92S±0.°06×152.°86E±0.°09, h43km, mb4.6/13, Error ellipse: s-maj=12.9km s-min=8.9km az=13.3*
*NEIC **15** 14:16:51.2±1.7, 4.°92S×152.°76E, h61km±6km, mb4.8/7, Error ellipse: s-maj=15.4km s-min=13.9km az=156.0*
*IDC **15** 14:16:51.4±4.1, 4.°93S×152.°77E, h61km±36km, mb4.3/11, mb1 4.4/12, mb1mx4.1/46, mbtmp4.6/12, ML2.5/1, Error ellipse: s-maj=26.1km s-min=19.7km az=61.0*
ISC 15 14:16:49.4±0.6**, 4.°97S**±0.°07×**152.°80E**±0.°09**, h43**km**, n35, σ0.s91**/37**, mb4.6**/13**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	0.99	321	*e*Pn	**Pn**	**14 17 07.5**	**+0.6**
MANU	**Manus Island**	6.15	298	*e*Pn	**Pn**	**14 18 19.7**	**+2.0**
PMG	**Port Moresby**	7.12	231	P	**Pn**	**14 18 32.6**	**+1.5**
	4.3nm,0.3s,baz=41,slow=15,SNR=12						
PMG				S	**Sn**	**14 19 49.7**	**-1.1**
	5.7nm,0.3s,baz=330,slow=20,SNR=3.1						
PMG	**Port Moresby**	7.12	231	*e*Pn	**Pn**	**14 18 32.3**	**+1.2**
PMG				*e*Sn	**Sn**	**14 19 49.7**	**-1.1**
PATS	**Pohnpei**	12.95	25	*e*Pn	**Pn**	**14 19 51.2**	**+0.3**
CTAO	**Charters Tower**	16.33	202	*e*Pn	**P**	**14 20 37.6**	**-0.5**
	54nm,1.4s						
GUMO	**Guam**	20.04	337	*e*P	**P**	**14 21 19.5**	**+0.5**
	85nm,0.9s						
DZM	**Mont Dzumac**	21.54	143	P	**P**	**14 21 36.3**	**+1.1**
	5.6nm,0.5s,baz=305,slow=12,SNR=6.3						
DZM	**Mont Dzumac**	21.54	143	*e*P	**P**	**14 21 36.3**	**+1.1**
	167nm,1.9s						
SIJI	**Sorong**	21.88	280	P	**P**	**14 21 39.8**	**+0.9**
	9.2nm,0.6s,baz=113,slow=17,SNR=6.0						
AS31	**Alice Springs**	26.03	223	*e*P	**P**	**14 22 19.0**	**+0.3**
	6.5nm,0.9s						

ASAR	Alice Springs	26.03	223	P	P	14 22 19.0	+0.3
	2.9nm,0.7s,baz=51,slow=8.7,SNR=6.3						
CM31	Chiang Mai Arr	57.95	295	*e*P	P	14 26 36.2	-1.7
	100nm,1.8s						
CMAR	Chiang Mai Arr	57.95	295	P	P	14 26 38.3	+0.5
	7.3nm,0.8s,baz=119,slow=5.1,SNR=11						
PETK	Petropavlovsk-	58.00	3	P	P	14 26 38.0	+0.3
	20nm,0.9s,baz=160,slow=6.5,SNR=3.8						
PEA1	Petropavlovsk-	58.01	3	*e*P	P	14 26 38.0	+0.3
MK32	Makanchi Array	80.45	319	*e*P	P	14 28 56.6	-0.2
MKAR	Makanchi Array	80.45	319	P	P	14 28 56.6	-0.2
	4.0nm,0.9s,baz=72,slow=4.7,SNR=2.7						
ZALV	Zalesovo Beam	81.29	326	P	P	14 28 59.9	-1.2
	5.1nm,0.7s,baz=121,slow=6.9,SNR=3.7						
ZAA1	Zalesovo Array	81.29	326	*e*P	P	14 28 59.9	-1.2
ILAR	Eielson Array	82.31	22	P	P	14 29 05.4	-0.8
	6.5nm,0.8s,baz=240,slow=6.3,SNR=4.9						
ILB	Eielson Array	82.31	22	*e*P	P	14 29 05.5	-0.8
	99nm,1.8s						
KURBB	Kurchatov Arra	83.93	322	P	P	14 29 14.6	-0.2
	2.0nm,0.8s,baz=92,slow=5.7,SNR=3.5						
MAW	Mawson	85.42	203	P	P	14 29 22.0	0.0
	1.8nm,0.6s,baz=53,slow=5.1,SNR=3.1						
MAW	Mawson	85.42	203	*e*P	P	14 29 22.0	0.0
BVAR	Borovoye Array	89.37	323	P	P	14 29 40.9	-0.5
	6.5nm,0.8s,baz=90,slow=6.1,SNR=4.3						
CLL	Collm	122.99	331	*e*PKPdf	PKPdf	14 35 41.0	-0.1
GERES	GERESS Array B	124.19	328	PKP	PKPdf	14 35 43.3	-0.3
	1.2nm,0.2s,baz=64,slow=3.1,SNR=4.5						
LPAZ	La Paz	134.34	118	PKP	PKiKP	14 36 05.6	-0.2
	1.3nm,0.7s,baz=326,slow=3.3,SNR=3.8						
ESDC	Sonseca Array	139.57	332	PKP	PKPdf	14 36 14.0	+1.2
	0.4nm,0.5s,baz=356,slow=3.6,SNR=2.4						
TORD	Torodi Ar. Bea	150.36	288	PKPbc	PKPbc	14 36 35.9	-1.3
	6.2nm,0.7s,baz=66,slow=2.3,SNR=15						
TOA1	Torodi Ar. Sit	150.36	288	*e*PKPbc	PKPbc	14 36 35.9	-1.3
BDFB	Brasilia	150.95	135	PKPbc	PKPbc	14 36 38.8	+0.1
	5.2nm,0.4s,baz=180,slow=3.7,SNR=7.6						
DBIC	Dimbokro	157.71	275	PKPab	PKPab	14 37 13.9	-0.9
	4.6nm,0.9s,baz=81,slow=5.6,SNR=4.9						
DBIC	Dimbokro	157.71	275	*e*PKPab	PKPab	14 37 14.5	-0.3

ROM 15 14:17:16.7±0.2, 43°.402N±0°.008×12°.482E±0°.004, h6km±1km, ML0.7/3, Error ellipse: s-maj=0.7km s-min=0.5km az=179.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATPI	Pietralunga -	0.08	310	P	Pg	14 17 18.9	+0.3
ATPI				S	Sg	14 17 20.2	+0.3
ATPI				AML	AML		
	comp=E,146µm,0.5s						
ATPI				AML	AML		
	comp=N,95µm,0.1s						
ATPI				AML	AML		
	comp=N,95µm,0.1s						
ATPI				AML	AML		
	comp=E,146µm,0.5s						
PIEI	Pieia	0.14	16	P	Pg	14 17 20.2	+0.5
PIEI				S	Sg	14 17 22.6	+1.0
PIEI				AML	AML		
	comp=E,70µm,1.0s						
PIEI				AML	AML		
	comp=N,43µm,1.0s						
PIEI				AML	AML		
	comp=N,43µm,1.0s						
PIEI				AML	AML		
	comp=E,70µm,1.0s						
BADI	Badiali	0.20	302	P	Pg	14 17 21.3	+0.5
BADI				S	Sg	14 17 24.9	+1.4
FRON	Frontone	0.21	57	P	Pg	14 17 21.5	+0.5
FRON				S	Sg	14 17 25.0	+1.3
PARC	Parchiule	0.30	324	P	Pb	14 17 23.7	-0.9
PARC				S	Sg	14 17 28.2	+1.6
PARC				AML	AML		
	comp=E,15µm,1.1s						
PARC				AML	AML		
	comp=N,16µm,0.2s						
PARC				AML	AML		
	comp=N,16µm,0.2s						
PARC				AML	AML		
	comp=E,15µm,1.1s						

JMA 15 14:34:01.9±0.1, 26°.44N×141°.11E, h20km, M4.3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	0.97	78	P	Pb	14 34 19.9	-0.2
JHH2				S	Sb	14 34 32.7	+0.2
CBIJ	Chichi jima	1.16	56	P	Pn	14 34 23.0	0.0
CBIJ				S	Sn	14 34 38.3	0.0

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*REY **15** 14:39:57.0, 69°.62N×14°.64W, h10km*

*ISCJB **15** 14:39:56.5±0.1, 69°.76N±0°.02×15°.67W±0°.06, h10km, mb4.6/75, Error ellipse: s-maj=3.1km s-min=2.7km az=176.0*

*BJI **15** 14:39:57.0±0.0, 69°.90N×15°.80W, h16km, mb4.7/19*

*IDC **15** 14:39:57.1±0.7, 69°.88N×15°.79W, h0km, mb4.0/16, mb1 4.2/22, mb1mx4.0/58, mbtmp4.0/22, ML3.2/6, Error ellipse: s-maj=19.6km s-min=12.0km az=16.0*

*NEIC **15** 14:39:58.6±1.5, 69°.88N×15°.74W, h11km±9km, mb4.8/54, Error ellipse: s-maj=4.3km s-min=2.5km az=188.0*

*NAO **15** 14:40:02.9±3.4, 70°.05N×13°.70W, ML4.7*

ISC 15 14:39:58.2±0.3, 69°.85N±0°.04×15°.55W±0°.04, h10km, n283, $\sigma 1^{s}10$/288, mb4.7/80, 1C-1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	2.27	289	*e*Pn	Pn	14 40 34.8	-0.9
SCO	Scoresbysund	2.27	289	*i* P	Pb	14 40 38.2	-1.1
JMI	Jan Mayen	2.54	62	*e*P	Pn	14 40 36.0	-3.4
JMIC	Jan Mayen	2.63	61	Pn	Pn	14 40 36.2	-4.5
JMIC				Lg	Lg	14 41 05.7	
JMIC	Jan Mayen	2.63	61	Pn	Pn	14 40 36.0	-4.8
	8.2nm,0.3s,baz=295,slow=6.4,SNR=6.5						
JMIC				Sn	Sn	14 41 06.8	-5.9
	8.8nm,0.3s,baz=334,slow=14,SNR=3.8						
JMIC	Jan Mayen	2.63	61	P	Pn	14 40 36.2	-4.5
JMIC				*e*		14 41 06.2	
JNW	Jan Mayen West	2.67	60	*e*P	Pn	14 40 36.5	-4.7
JNE	Jan Mayen East	2.70	62	*e*P	Pn	14 40 37.0	-4.5
IGIL	Gilhagi	3.80	185	P	Pn	14 40 53.3	-3.5
	baz=191						
IGIL				S	Sn	14 41 37.7	-3.8
	baz=191						
IFLA	Flatey	3.81	194	P	Pn	14 40 55.1	-1.6
	baz=201						
IHED	Heoinshofoi	3.84	191	P	Pn	14 40 54.5	-2.8
	baz=197						
IHED				S	Sn	14 41 39.4	-3.0
	baz=197						
IBRE	Brettingsstaoi	3.85	194	P	Pn	14 40 55.5	-1.9
	baz=201						
IBRE				S	Sn	14 41 40.1	-2.4
	baz=201						
IDIM	Dimmadalss	3.94	188	P	Pn	14 40 55.7	-3.0
	baz=194						
IDIM				S	Sn	14 41 41.5	-3.4
	baz=194						
ISIG	Siglufjorour	3.94	200	P	Pn	14 40 57.4	-1.3
	baz=207						
IGRA	Granastaoir	4.02	192	P	Pn	14 40 57.6	-2.1
	baz=198						
IGRA				S	Sn	14 41 44.7	-2.2
	baz=198						
ISKI	Skildingahlsh	4.04	189	P	Pn	14 40 57.0	-3.0
	baz=195						
ISKI				S	Sn	14 41 44.9	-2.4
	baz=195						
IGHA	Grjothals	4.05	186	P	Pn	14 40 57.2	-3.0
	baz=192						
IHLA	Hella	4.07	197	P	Pn	14 40 58.9	-1.5
	baz=203						
IHRN	Hraun	4.13	207	P	Pn	14 40 59.9	-1.3
	baz=213						
IHRN				S	Sn	14 41 49.2	-0.3
	baz=213						
IKVO	Krokottuvotn	4.19	188	P	Pn	14 40 59.3	-2.7
	baz=193						
IGRS	Grimsstaoir	4.24	183	P	Pn	14 40 59.9	-2.9
	baz=189						
IGRS				S	Sn	14 41 49.4	-2.8
	baz=189						
IREN	Reynihlio	4.25	188	P	Pn	14 41 00.6	-2.4
	baz=193						
IMEL	Melhnausar	4.32	186	P	Pn	14 41 01.1	-2.8
	baz=192						
ISVA	Svartarkot	4.58	189	P	Pn	14 41 05.5	-1.9
	baz=194						
BORG	Borgarnes	5.59	206	Pn	Pn	14 41 22.7	+1.4
	2.3nm,0.3s,baz=57,slow=5.9,SNR=5.1						
BORG	Borgarnes	5.59	206	*e*Pn	Pn	14 41 22.3	+1.1
SUMG	Summit	7.85	301	*e*Pn	Pn	14 41 51.2	-1.4
SUMG	Summit	7.85	301	*i* P	Pn	14 41 49.6	-3.0
KBS	Kingsbay	11.54	26	Pn	Pn	14 42 42.4	-0.3
KBS	Kingsbay	11.54	26	*e*Pn	Pn	14 42 42.6	-0.2
KBS	Kingsbay	11.54	26	P	Pn	14 42 42.4	-0.3
SPA0	Spitsbergen Ar	11.89	32	Pn	Pn	14 42 47.4	-0.2
	baz=240,slow=10						
SPA0	Spitsbergen Ar	11.89	32	*e*Pn	Pn	14 42 48.1	+0.6
SPA0	Spitsbergen Ar	11.89	32	P	Pn	14 42 47.4	-0.2
	baz=240,slow=10						
SPITS	Spitsbergen Ar	11.89	32	Pn	Pn	14 42 47.2	-0.4
	baz=225,slow=13,SNR=7.3						
SFJD	Kangerlussuaq	13.09	274	*e*Pn	Pn	14 43 04.5	+0.7
ARA0	ARCESS Array S	14.07	72	*e*Pn	Pn	14 43 18.9	+1.7
ARCES	ARCESS Array B	14.07	72	Pn	Pn	14 43 18.9	+1.7
	0.1nm,0.3s,baz=306,slow=14,SNR=4.8						
HFS	Hagfors	15.54	114	P	Pn	14 43 37.9	+0.8
	baz=314,slow=12						
HFS	Hagfors	15.54	114	Pn	Pn	14 43 37.6	+0.4
	0.1nm,0.3s,baz=307,slow=14,SNR=4.4						
HFS	Hagfors	15.54	114	P	Pn	14 43 37.9	+0.8
	baz=314,slow=12						
EKA	Eskdalemuir Ar	15.59	153	P	P	14 43 41.2	-0.8
EKA	Eskdalemuir Ar	15.59	153	Pn	Pn	14 43 37.8	+0.1
	baz=335,slow=12,SNR=2.2						
EKA	Eskdalemuir Ar	15.59	153	P	P	14 43 41.2	-0.8
APA0	Apatity Array	17.38	74	P	Pn	14 43 59.4	-1.0
	baz=315,slow=22						
APA0	Apatity Array	17.38	74	P	Pn	14 43 59.4	-1.0
	baz=315,slow=22						
FIA0	FINESS Array S	18.72	96	P	P	14 44 15.8	-0.7
	baz=323,slow=6.9						
FIA0	FINESS Array S	18.72	96	*e*P	P	14 44 16.8	+0.3
FIA0	FINESS Array S	18.72	96	P	P	14 44 15.8	-0.7
	baz=323,slow=6.9						
FINES	FINESS Array B	18.72	96	P	P	14 44 16.8	+0.3
	0.1nm,0.3s,baz=305,slow=6.7,SNR=7.2						
SLVR	Solovky	19.71	79	*e*P	P	14 44 24.3	-3.0
	16nm,1.1s						
VSU	Vasula	21.13	101	*e*P	P	14 44 43.1	+0.4
VSU				IAmb	IAmb	14 44 51.1	
	comp=Z,41nm,0.9s						
MEM	Membach	21.82	141	⇓P	P	14 44 51.1	+0.8
BCLA	Clavier	21.85	142	⇑P	P	14 44 52.6	+2.1
CLL	Collm	22.89	130	*e*P	P	14 45 03.0	+1.4
IZAR	Zarasai	23.11	106	*e*P	P	14 45 03.9	+0.1
IZAR				IAmb	IAmb	14 45 05.7	
	comp=Z,16nm,0.5s						
ISAL	Salakas	23.21	107	*e*P	P	14 45 05.7	+0.8
ISAL				IAmb	IAmb	14 45 07.7	
	comp=Z,8.7nm,1.1s						
IIGN	Ignalina	23.42	107	*e*P	P	14 45 08.2	+1.2
IIGN				IAmb	IAmb	14 45 10.9	
	comp=Z,7.7nm,1.1s						
IDID	Didziasalis	23.62	106	*e*P	P	14 45 08.0	-1.0
IDID				IAmb	IAmb	14 45 10.7	
	comp=Z,8.2nm,1.1s						
GEC2	GERESS Array S	25.32	131	*e*P	P	14 45 26.2	+1.4
	comp=Z,9.8nm,1.1s						
GERES	GERESS Array B	25.32	131	P	P	14 45 26.3	+1.6
	comp=Z,1.3nm,0.8s,baz=340,slow=8.3,SNR=5.7						
PRGR	Permogore	25.32	78	*e*P	P	14 45 24.5	0.0
	comp=Z,44nm,1.0s						
AKASG	Malin Array Be	28.31	109	P	P	14 45 51.0	-0.6
	comp=Z,0.2nm,0.3s,baz=330,slow=9.4,SNR=5.3						
AKBB	Malin Array Si	28.31	109	*e*P	P	14 45 51.0	-0.6
	comp=Z,14nm,1.4s						
INK	Inuvik	35.87	326	*e*P	P	14 46 56.7	-0.8
	comp=Z,17nm,1.4s						
PKME	Peaks-Kenny Pk	36.01	256	P	P	14 46 58.7	-0.3
	baz=28						
YKA	Yellowknife Ar	36.34	309	P	P	14 47 01.1	-0.5
	comp=Z,5.6nm,1.1s,baz=38,slow=9.0,SNR=13						
YKB5	Yellowknife Ar	36.34	309	*e*P	P	14 47 01.1	-0.5
TIXI	Tiksi	36.83	18	P	P	14 47 06.2	+0.5
	comp=Z,1.5nm,0.3s,baz=58,slow=0.8,SNR=8.0						
D54A	Lac Fusel, La	36.88	265	P	P	14 47 06.5	+0.1
	baz=30						
D53A	Lac Vacive, Po	37.30	266	P	P	14 47 09.9	-0.2
	baz=30						
D52A	ZEK Kipawa Sen	37.64	266	P	P	14 47 12.7	-0.2
	baz=30						
E54A	Lac Daplat, Po	37.69	265	P	P	14 47 12.9	-0.4
	baz=30						
D51A	Lot 18 Range I	37.87	267	P	P	14 47 14.9	0.0
	baz=30						
EPYK	Eagle Plains	38.17	326	*e*P	P	14 47 16.4	-0.8
	comp=Z,18nm,1.4s						
EPYK	Eagle Plains	38.17	326	P	P	14 47 16.6	-0.6
	baz=29						
TOLK	Toolik Lake Re	38.31	335	*e*P	P	14 47 18.4	0.0
	comp=Z,12nm,1.4s						
TOLK	Toolik Lake Re	38.31	335	P	P	14 47 18.3	-0.1
	baz=24						
AKTO	Aktyubinsk	38.39	81	P	P	14 47 19.1	0.0
	comp=Z,1.0nm,0.6s,baz=317,slow=11,SNR=4.7						
E51A	G1948 Merrick	38.40	267	P	P	14 47 19.5	+0.2
	baz=30						
ALGO	Algonquin Park	38.40	265	P	P	14 47 19.5	+0.2
	baz=30						
D49A	Beulah Townshi	38.40	269	P	P	14 47 20.1	+0.8
	baz=30						
G55A	Calabogie	38.55	263	P	P	14 47 21.1	+0.6
	baz=29						
D48A	Paudash Townsh	38.64	270	P	P	14 47 21.3	-0.1
	baz=30						
PLVO	Plevna	38.86	263	P	P	14 47 22.8	-0.3
	baz=29						
KBZ	Khabaz	38.96	101	P	P	14 47 25.4	+1.4
	comp=Z,0.9nm,0.4s,baz=346,slow=8.3,SNR=2.5						
F52A	Sundridge	38.98	266	P	P	14 47 24.5	+0.4
	baz=30						
F51A	Arnstein	39.07	267	P	P	14 47 24.9	0.0
	baz=30						
BANO	Bancroft	39.17	264	P	P	14 47 25.8	+0.1
	baz=29						
D47A	Chapleau	39.20	271	P	P	14 47 26.1	+0.1
	baz=30						
BUKO	Buck Lake	39.31	266	P	P	14 47 27.4	+0.5
	baz=29						
G53A	Haliburton	39.32	265	P	P	14 47 27.3	+0.3
	baz=29						
E48A	Lockeyer	39.37	269	P	P	14 47 27.0	-0.4
	baz=30						
BR101	Keskin Array S	39.49	113	*e*P	P	14 47 30.6	+2.0
BRTR	Keskin Array B	39.49	113	P	P	14 47 30.6	+2.0
	comp=Z,0.9nm,0.7s,baz=339,slow=3.7,SNR=5.2						
D46A	Sault St. Mari	39.66	271	P	P	14 47 30.2	+0.4
	baz=30						
KLBO	Killbear Provi	39.67	267	P	P	14 47 30.1	+0.3
	baz=29						
E47A	Iron Bridge	39.77	270	P	P	14 47 30.9	+0.2
	baz=30						
F49A	Sandfield	39.95	269	P	P	14 47 31.9	-0.3
	baz=30						
ABKAR	Akbulak array	40.05	80	*e*P	P	14 47 33.7	+0.7
	comp=Z,4.5nm,1.2s						
F48A	Evansville	40.09	269	P	P	14 47 32.9	-0.5
	baz=30						
E46A	Sault Ste Mari	40.21	271	P	P	14 47 34.9	+0.5
	baz=30						
BVAR	Borovoye Array	40.33	69	P	P	14 47 35.5	+0.3
	comp=Z,0.5nm,0.5s,baz=348,slow=5.0,SNR=5.3						
EGAK	Eagle	40.44	328	*e*P	P	14 47 35.5	-0.5
	comp=Z,12nm,1.4s						
C40A	Isle Royale Na	40.55	277	P	P	14 47 37.5	+0.4
	baz=31						
BMRO	Meriville Lake	40.68	267	P	P	14 47 39.0	+0.7
	baz=29						
DAWY	Dawson	40.74	326	*e*P	P	14 47 38.2	-0.5
	comp=Z,12nm,1.6s						
BWLO	Walkerton	41.07	267	P	P	14 47 40.3	-1.2
	baz=29						
L58A	Harry Jones Me	41.08	260	P	P	14 47 41.0	-0.6
	baz=27						
G47A	Hillman	41.09	270	P	P	14 47 40.7	-0.9
	baz=29						
E43A	Lone Tree Farm	41.13	274	P	P	14 47 41.3	-0.7
	baz=30						
EYMN	Ely	41.32	279	P	P	14 47 43.2	-0.4
	baz=30						
ILAR	Eielson Array	41.46	331	P	P	14 47 45.0	+0.5
	comp=Z,4.3nm,1.1s,baz=15,slow=6.8,SNR=21						
ILB	Eielson Array	41.46	331	*e*P	P	14 47 44.4	-0.1
	comp=Z,58nm,0.8s						
J52A	Paris	41.61	265	P	P	14 47 45.6	-0.4
	baz=28						
CCB	Clear Creek Bu	41.73	331	*e*P	P	14 47 46.8	+0.2
	comp=Z,58nm,0.8s						
HDA	Harding Lake	41.80	331	*e*P	P	14 47 47.5	+0.2
	comp=Z,33nm,0.9s						
DOT	Dot Lake	42.00	329	*e*P	P	14 47 49.5	+0.5
	comp=Z,15nm,0.7s						
M56A	Emporium	42.38	262	P	P	14 47 52.6	+0.3
	baz=27						
AGMN	Agassiz Nation	42.51	283	P	P	14 47 53.2	0.0
	baz=30						
BPAW	Bear Paw Mtn.	42.75	333	*e*P	P	14 47 55.3	+0.2
	comp=Z,41nm,1.0s						
MCK	McKinley	42.76	332	*e*P	P	14 47 55.5	+0.3
	comp=Z,66nm,1.0s						
PAX	Paxson	42.88	329	*e*P	P	14 47 56.5	+0.3
	comp=Z,16nm,0.8s						
SSPA	Standing Stone	43.03	261	P	P	14 47 58.3	+0.8
	baz=27						
G40A	Rib Lake	43.20	276	*e*P	P	14 47 59.1	+0.2
	comp=Z,8.3nm,1.3s						
G40A	Rib Lake	43.20	276	P	P	14 47 59.0	+0.2
	baz=29						
KTH	Kantishna Hill	43.25	333	*e*P	P	14 47 59.5	+0.4
	comp=Z,50nm,0.9s						
M53A	WI Miller and	43.27	264	P	P	14 48 00.2	+0.7
	baz=27						
HYT	Haines Junctio	43.29	323	*e*P	P	14 48 00.1	+0.5
	comp=Z,14nm,1.3s						
M52A	Chesterland	43.42	265	P	P	14 48 01.4	+0.8
	baz=27						
N54A	Moraine State	43.46	263	P	P	14 48 01.6	+0.6
	baz=27						
P58A	Pank, Wackersv	43.86	260	P	P	14 48 04.3	+0.1
	baz=26						
ZAA1	Zalesovo Array	43.96	57	*e*P	P	14 48 06.8	+2.0
ZALV	Zalesovo Beam	43.97	57	P	P	14 48 06.8	+1.9
	comp=Z,0.8nm,0.5s,baz=316,slow=13,SNR=4.4						
K43A	Burlington	44.80	272	P	P	14 48 11.8	0.0
	baz=28						
Q56A	Snyder Ridge,	44.90	261	P	P	14 48 12.8	+0.2
	baz=26						
KURK	Kurchatov	44.92	64	*e*P	P	14 48 13.1	+0.5
	comp=Z,4.4nm,0.9s						
N49A	Columbus Grove	44.95	267	P	P	14 48 13.2	+0.3
	baz=27						
KURBB	Kurchatov Arra	44.98	64	P	P	14 48 13.7	+0.7
	comp=Z,2.2nm,0.9s,baz=332,slow=7.1,SNR=11						
R58A	Rapidan	45.17	260	P	P	14 48 15.2	+0.5
	baz=26						
Q53A	Leroy	45.87	263	P	P	14 48 20.5	+0.3
	baz=26						
Q52A	Bidwell	46.03	264	P	P	14 48 21.4	-0.1
	baz=26						
L40A	Anamosa	46.37	275	P	P	14 48 24.4	+0.2
	baz=28						
N44A	Piper City	46.43	271	P	P	14 48 24.7	+0.1
	baz=27						
S55A	Lewisburg	46.49	262	P	P	14 48 25.3	0.0
	baz=26						
T58A	Grand View Acr	46.57	259	P	P	14 48 26.1	+0.4
	baz=25						
ECSD	EROS Data Cent	46.75	281	*e*P	P	14 48 26.6	-0.5
	comp=Z,9.9nm,1.4s						
ECSD	EROS Data Cent	46.75	281	P	P	14 48 27.3	+0.2
	baz=28						
T57A	Hurt	46.77	260	P	P	14 48 27.4	+0.1
	baz=25						
R51A	Hillsboro	47.08	265	P	P	14 48 30.0	+0.3
	baz=26						
T55A	Pulaski	47.18	262	P	P	14 48 31.7	+1.1
	baz=25						
EGMT	Eagleton	47.30	294	*e*P	P	14 48 31.1	-0.4
	comp=Z,38nm,1.6s						
EGMT	Eagleton	47.30	294	P	P	14 48 31.5	+0.1
	baz=28						
R50A	Paris	47.35	266	P	P	14 48 32.5	+0.6
	baz=26						
V58A	Windy Hill, Pi	47.81	259	P	P	14 48 36.3	+0.9
	baz=25						
S50A	Richmond	47.92	266	P	P	14 48 36.4	+0.1
	baz=26						
TZTN	Tazewell	48.65	264	P	P	14 48 43.0	+1.1
	baz=25						
W57A	Gilead	48.69	260	P	P	14 48 43.2	+1.0
	baz=24						
T48A	Bowling Green	49.12	267	P	P	14 48 46.5	+0.9
	baz=26						
V53A	Saluda	49.19	263	P	P	14 48 46.8	+0.7
	baz=25						
U50A	Jamestown	49.21	265	P	P	14 48 47.0	+0.7
	baz=25						
MKAR	Makanchi Array	49.53	63	P	P	14 48 49.1	+0.6
	comp=Z,2.6nm,1.0s,baz=347,slow=5.0,SNR=6.9						
X56A	White Oak	49.64	260	P	P	14 48 50.5	+1.0
	baz=24						
MSO	Missoula	49.66	297	*e*P	P	14 48 49.0	-0.7
	comp=Z,22nm,1.5s						
MSO	Missoula	49.66	297	P	P	14 48 49.0	-0.7
	baz=27						
T46A	Princeton	49.70	269	P	P	14 48 50.6	+0.7
	baz=26						
U48A	Cassie Pea, Po	49.71	267	P	P	14 48 50.1	0.0
	baz=25						
W53A	Cullowhee	49.76	263	P	P	14 48 51.0	+0.4
	baz=25						
CCM	Cathedral Cave	49.95	272	P	P	14 48 51.5	-0.3
	baz=26						
BOZ	Bozeman (W)	50.04	294	P	P	14 48 51.8	-0.9
	baz=27						
V49A	McMinnville	50.16	266	P	P	14 48 54.1	+0.6
	baz=25						
X53A	Estanollee	50.41	263	P	P	14 48 55.7	+0.4
	baz=24						
Y55A	Saluda	50.43	261	P	P	14 48 55.9	+0.4
	baz=24						
W50A	Signal Mountai	50.47	265	P	P	14 48 56.1	+0.3
	baz=25						
WVT	Waverly	50.50	268	P	P	14 48 56.3	+0.3
	baz=25						
YHH	Holmes Hill	50.52	293	*e*P	P	14 48 55.6	-0.9
	comp=Z,9.6nm,1.7s						
X52A	Dahlonega	50.52	263	P	P	14 48 56.6	+0.3
	baz=24						
Z57A	Bowman	50.62	260	P	P	14 48 57.4	+0.5
	baz=24						
Y54A	Tignall	50.78	262	P	P	14 48 58.5	+0.3
	baz=24						
W49A	Belvidere	50.87	266	P	P	14 48 58.5	-0.4
	baz=25						
V46A	Holladay	50.90	268	P	P	14 48 58.5	-0.5
	baz=25						
YPP	Pitchstone Pla	50.97	293	*e*P	P	14 48 59.8	0.0
	comp=Z,8.1nm,1.4s						
K22A	Casper	51.03	288	P	P	14 48 59.3	-0.9
	baz=26						
X50B	Fort Payne	51.26	265	P	P	14 49 02.0	+0.2
	baz=25						
Z54A	Sparta	51.40	262	P	P	14 49 02.6	-0.2
	baz=24						
GOGA	Godfrey	51.46	262	P	P	14 49 03.0	-0.2
	baz=24						
Y51A	Rockmart	51.56	264	P	P	14 49 04.1	0.0
	baz=24						
Z53A	Monticello	51.61	262	P	P	14 49 04.4	0.0
	baz=24						
D03D	Eldon	51.75	305	P	P	14 49 04.4	-0.9
	baz=25						
Y50A	Piedmont	51.80	265	P	P	14 49 05.7	-0.1
	baz=24						
155A	Kite	51.83	261	P	P	14 49 06.6	+0.5
	baz=24						
PDAR	Pinedale Array	51.92	291	P	P	14 49 06.1	-0.8
	comp=Z,2.7nm,1.1s,baz=38,slow=5.6,SNR=13						
BW06	Boulder Array	51.92	291	*e*P	P	14 49 05.7	-1.2
BW06	Boulder Array	51.92	291	P	P	14 49 06.0	-0.9
	baz=26						
Z52A	Williamson	51.99	263	P	P	14 49 07.4	+0.2

	baz=24						
U40A	Yellville	52.04	273	P	P	14 49 07.0	-0.5
	baz=25						
Y49A	Blount Mountai	52.07	265	P	P	14 49 07.5	-0.3
	baz=24						
N23A	Red Feather La	52.41	287	eP	P	14 49 10.2	-0.5
	comp=Z,23nm,1.3s						
N23A	Red Feather La	52.41	287	P	P	14 49 10.8	+0.2
	baz=26						
BMO	Blue Mountains	52.47	299	eP	P	14 49 09.5	-1.3
	comp=Z,12nm,1.6s						
Z49A	Columbiana	52.71	265	P	P	14 49 11.6	-0.9
	baz=24						
254A	Abbeville	52.73	261	P	P	14 49 12.6	-0.2
	baz=24						
HLID	Hailey	52.74	296	P	P	14 49 12.4	-0.5
	baz=25						
KSCO	Kaye Shedlock’	53.00	283	P	P	14 49 14.5	-0.4
	baz=26						
LRAL	Lakeview Retre	53.02	265	P	P	14 49 14.5	-0.3
	baz=24						
150A	Eclectic	53.07	264	P	P	14 49 15.2	0.0
	baz=24						
355A	Pearson	53.13	261	P	P	14 49 15.3	-0.4
	baz=23						
ISCO	Idaho Springs	53.29	286	eP	P	14 49 16.9	-0.3
	comp=Z,8.9nm,1.3s						
ISCO	Idaho Springs	53.29	286	P	P	14 49 16.9	-0.3
	baz=26						
W39A	Magazine	53.41	273	P	P	14 49 17.4	-0.3
	baz=25						
HVU	Hansel Valley	53.84	293	eP	P	14 49 20.7	-0.3
	comp=Z,13nm,1.6s						
O20A	White River Ci	53.86	288	eP	P	14 49 21.1	-0.1
	comp=Z,16nm,1.1s						
O20A	White River Ci	53.86	288	P	P	14 49 20.9	-0.3
	baz=25						
WMQ	Urumqi	53.86	61	eP	P	14 49 24.1	+3.1
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
SMCO	Snowmass	54.30	287	eP	P	14 49 24.4	-0.3
	comp=Z,8.6nm,1.3s						
J05D	Fort Rock, OR	55.08	301	P	P	14 49 30.3	+0.4
	baz=24						
SDCO	Great Sand Dun	55.11	285	eP	P	14 49 29.9	-0.5
	comp=Z,4.9nm,1.4s						
SDCO	Great Sand Dun	55.11	285	P	P	14 49 30.3	-0.1
	baz=25						
SONA0	Songino Array	55.27	44	eP	P	14 49 32.0	+0.7
SONM	Songino Array	55.27	44	P	P	14 49 32.0	+0.7
	comp=Z,1.2nm,0.8s,baz=348,slow=4.1,SNR=4.9						
DUG	Dugway, Tooele	55.29	292	eP	P	14 49 31.4	-0.1
	comp=Z,22nm,1.5s						
DUG	Dugway, Tooele	55.29	292	P	P	14 49 30.8	-0.7
	baz=25,SNR=5.8						
SRU	San Rafael Swe	55.53	290	eP	P	14 49 32.9	-0.5
	comp=Z,14nm,1.4s						
WMOK	Wichita Mounta	55.55	277	eP	P	14 49 33.1	-0.2
	comp=Z,18nm,1.4s						
WMOK	Wichita Mounta	55.55	277	P	P	14 49 32.9	-0.4
	baz=24						
S22A	4UR Ranch, Cre	55.55	286	eP	P	14 49 33.2	-0.4
	comp=Z,13nm,1.4s						
S22A	4UR Ranch, Cre	55.55	286	P	P	14 49 32.7	-0.9
	baz=25,SNR=8.2						
959A	Okeechobee	55.97	257	P	P	14 49 37.4	+1.1
	baz=22						
MVCO	Mesa Verde	56.59	287	eP	P	14 49 40.3	-0.7
	comp=Z,21nm,1.4s						
MVCO	Mesa Verde	56.59	287	P	P	14 49 39.9	-1.1
	baz=24,SNR=5.2						
MSU	Marysvale	56.61	291	eP	P	14 49 40.7	-0.4
MTPU	Mount Pierson	57.04	291	eP	P	14 49 44.5	+0.1
	comp=Z,12nm,1.3s						
PSUT	Pine Spring	57.13	292	eP	P	14 49 45.3	+0.5
	comp=Z,19nm,1.4s						
061Z	Ochoppi	57.51	256	P	P	14 49 47.9	+0.6
	baz=22						
SZCU	Shurtz Canyon	57.74	291	eP	P	14 49 48.8	-0.3
	comp=Z,20nm,1.5s						
ABTX	Abilene, Hawle	57.76	277	P	P	14 49 48.7	-0.4
	baz=24						
R11A	Troy Canyon, C	57.85	294	eP	P	14 49 49.9	+0.1
	comp=Z,9.5nm,1.3s						
R11A	Troy Canyon, C	57.85	294	P	P	14 49 48.8	-1.0
	baz=24,SNR=15						
ANMO	Albuquerque	57.97	284	P	P	14 49 50.4	-0.3
	baz=24						
O03E	Paynes Creek	57.99	300	P	P	14 49 49.7	-0.9
	baz=23						
KVN	Kaiserville	58.00	296	eP	P	14 49 50.3	-0.5
	comp=Z,11nm,1.1s						
KNB	Kanab	58.18	291	eP	P	14 49 51.8	-0.3
	comp=Z,11nm,1.3s						
LCMT	Little Creek M	58.32	291	eP	P	14 49 53.1	+0.1
	comp=Z,12nm,1.3s						
YERR	Yerington	58.41	297	eP	P	14 49 53.5	-0.2
	comp=Z,14nm,1.1s						
U15A	North Rim	58.55	290	eP	P	14 49 54.2	-0.7
	comp=Z,10nm,1.4s						
NV01	Mina Array Sit	58.63	296	eP	P	14 49 54.6	-0.7
NVAR	Mina Array Bea	58.63	296	P	P	14 49 54.7	-0.7
	comp=Z,2.3nm,1.1s,baz=29,slow=4.9,SNR=11						
W18A	Petrified Fore	58.90	287	P	P	14 49 57.0	-0.2
	baz=24						
WAKR	Walker	58.91	297	eP	P	14 49 57.1	-0.2
	comp=Z,14nm,1.4s						
WUAZ	Wupatki	59.08	289	eP	P	14 49 58.1	-0.3
	comp=Z,13nm,1.3s						
WUAZ	Wupatki	59.08	289	P	P	14 49 57.9	-0.5
	baz=24						
TPNV	Topopah Spring	59.34	294	eP	P	14 49 59.6	-0.6
	comp=Z,6.7nm,1.2s						
TPNV	Topopah Spring	59.34	294	P	P	14 49 59.5	-0.6
	baz=23,SNR=6.0						
SHPR	Sheep Range	59.40	293	eP	P	14 50 00.6	0.0
	comp=Z,19nm,1.6s						
OMMB	Old Mammoth Mi	59.60	296	eP	P	14 50 02.0	-0.1
	comp=Z,5.8nm,1.1s						
MDPB	Devils Postpil	59.60	297	eP	P	14 50 02.2	+0.1
	comp=Z,8.4nm,1.3s						
GRAC	Grapevine Rang	59.65	295	P	P	14 50 02.2	0.0
	baz=23						
JCT	Junction City	59.77	276	eP	P	14 50 02.9	-0.3
	comp=Z,22nm,1.4s						
JCT	Junction City	59.77	276	P	P	14 50 03.1	0.0
	baz=23						
X16A	Lo Mia Camp, P	60.11	288	eP	P	14 50 05.4	-0.1
	comp=Z,5.1nm,1.1s						
CWC	Cottonwood Cre	60.39	295	P	P	14 50 07.4	0.0
	baz=23						
MPMC	Manual Prospec	60.55	294	P	P	14 50 08.6	0.0
	baz=23						
MNTX	Cornudas Mount	60.57	282	eP	P	14 50 08.0	-0.5
	comp=Z,4.2nm,1.2s						
MNTX	Cornudas Mount	60.57	282	P	P	14 50 08.3	-0.2
	baz=23						
121A	Cookes Peak, D	60.62	284	P	P	14 50 09.0	0.0
	baz=23						
PDMCI	Parker Dam,Lak	61.09	291	P	P	14 50 12.1	+0.1
	baz=23						
GMRC	Granite Mounta	61.14	292	P	P	14 50 12.7	+0.3
	baz=23						
LRMC	Laurel Mtn Rad	61.15	294	P	P	14 50 12.5	0.0
	baz=23						
ISA	Isabella, Lake	61.23	295	P	P	14 50 13.3	+0.3
	baz=23						
GTA	Gaotai	61.44	53	eP	P	14 50 14.9	+0.5
GTA				pP	sP	14 50 18.9	+0.5
GTA				sP	pP	14 50 21.9	+4.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
IRM	Iron Mountain	61.55	292	P	P	14 50 14.5	-0.6
	baz=23						
Y12C	Blythe	61.73	291	P	P	14 50 16.8	+0.5
	baz=23						
TUC	Tucson	61.82	287	P	P	14 50 16.8	-0.2
	baz=23						
BELC	Belle Mtn. Jos	61.97	292	P	P	14 50 17.1	-1.0
	baz=23,SNR=5.5						
BC3	Big Chuckawall	62.11	292	P	P	14 50 18.6	-0.5
	baz=23						
LTX	Lajitas	62.15	279	eP	P	14 50 19.2	-0.1
TXAR	Lajitas Array	62.15	279	P	P	14 50 19.2	-0.1
	comp=Z,1.3nm,0.9s,baz=39,slow=8.1,SNR=5.5						
214A	Organ Pipe Nat	62.82	289	P	P	14 50 23.0	-0.6
	baz=23						
HHC	Hu-ho-hao-te	63.09	43	eP	P	14 50 26.8	+1.3
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
BJI	Beijing	64.91	39	eP	P	14 50 37.6	+0.3
LZH	Lanzhou	65.65	51	eP	P	14 50 42.8	+0.4
LZH				pP	sP	14 50 47.1	+0.8
LZH				sP	pP	14 50 49.8	+4.6
LZH				ePP	PP	14 53 09.0	+2.7
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
NJ2	Nanjing	73.17	39	eP	P	14 51 28.4	-0.3
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
KMI	Kunming	75.69	55	P	P	14 51 45.1	+1.4
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						

PGC 15 14:40:48.5±0.0, 61°.59N×141°.09W, h5km, ML2.4/11, 212km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	30	P	Pg	14 40 52.5	-0.6
YUK2				S	Sg	14 40 56.0	-0.2
YUK3	Moose Creek	0.35	57	P	Pg	14 40 54.6	-0.8
YUK3				S	Sg	14 40 59.7	-0.5
YUK1	Sand Pete Hill	0.63	25	P	Pg	14 40 59.4	-1.2
YUK1				S	Sg	14 41 08.1	-0.7
PTPK	Patty Peak	0.77	240	P	Pg	14 41 02.2	-1.2
PTPK				S	Sg	14 41 12.6	-0.8
BALM	Baldy	0.82	228	P	Pg	14 41 02.5	-1.7
BALM				S	Sg	14 41 13.6	-1.2
BVCY	Beaver Creek	0.84	7	P	Pg	14 41 03.6	-1.0
BVCY				S	Sg	14 41 15.1	-0.4
KIAG	Kiagna River	0.91	223	P	Pg	14 41 03.9	-1.9
KIAG				S	Sg	14 41 17.0	-0.6
TABL	Table Mountain	1.15	181	P	Pg	14 41 08.7	-1.8
TABL				S	Sg	14 41 24.6	-0.8
YUK4	Talbot Arm	1.20	101	P	Pg	14 41 10.0	-1.4
YUK4				S	Sg	14 41 25.9	-1.1
YUK6	Outpost Mounta	1.47	115	Pn	Pn	14 41 14.2	-1.6
YUK6				Sg	Sb	14 41 34.2	-1.2
SAMH	Samovar Hills	1.47	174	Pn	Pn	14 41 14.9	-0.8
SAMH				Sg	Sb	14 41 34.7	-0.6
MESA	MESA	1.47	197	Pn	Pn	14 41 14.9	-1.0
MESA				Sg	Sb	14 41 34.9	-0.7
PCA	Pinnacle	1.55	164	Pn	Pn	14 41 16.4	-0.4
PCA				Sg	Sn	14 41 37.2	0.0
YUK5	Granite Creek	1.62	105	Pn	Pn	14 41 16.8	-1.1
YUK5				Sg	Sn	14 41 37.7	-1.4
YUK7	Dusty Glacier	1.78	125	Pn	Pn	14 41 20.2	+0.1
YUK7				Sg	Sb	14 41 44.6	+0.1
HYT	Haines Junctio	1.90	112	Pn	Pn	14 41 20.9	-0.7
HYT				Sg	Sn	14 41 46.5	+0.6
PNL	Peninsula	2.10	156	Pn	Pn	14 41 24.7	+0.5
PNL				Sg	Sb	14 41 54.3	+1.0
PAX	Paxson	2.48	306	Pn	Pn	14 41 31.3	+1.7
PAX				Sg	Sb	14 42 04.5	+0.2
DOT	Dot Lake	2.49	328	Pn	Pn	14 41 28.8	-0.8
DOT				Pg	Pb	14 41 33.6	0.0
DOT				Sg	Sb	14 42 06.0	+1.4
DAWY	Dawson	2.61	17	Pn	Pn	14 41 30.8	-0.6
DAWY				Sg	Sb	14 42 08.8	+0.7
PLBC	Pleasant Camp	3.16	130	Pg	Pb	14 41 44.7	-0.5
PLBC				Sg	Sg	14 42 27.5	-2.5
BESE	Bessie Mountai	4.34	131	Sg	Sg	14 43 03.9	-3.9

ISCJB ***15*** *14:41:33.7±0.3, 69°.79N±0°.03×15°.7W±0°.1, h10km, mb4.0/15, Error ellipse: s-maj=6.0km s-min=3.1km az=21.5*

REY ***15*** *14:41:34.0, 69°.68N×14°.54W, h10km*

IDC ***15*** *14:41:34.8±0.8, 69°.89N×15°.84W, h0km, mb3.9/12, mb1 4.1/17, mb1mx3.9/52, mbtmp4.0/17, ML3.4/5, Error ellipse: s-maj=21.2km s-min=15.3km az=18.0*

NEIC ***15*** *14:41:36.1±0.3, 69°.89N×15°.72W, h10km, mb4.4/5, Error ellipse: s-maj=8.0km s-min=5.6km az=198.0*

NAO ***15*** *14:41:41.0±4.0, 70°.08N×13°.72W, ML4.8*

BER ***15*** *14:42:02.8±2.6, 70°.53N×10°.26W, h7km, Confirmed Earthquake*

ISC 15 14:41:36.0±0.5, 69°.85N±0°.05×15°.46W±0°.05, h10km, n72, σ1s.90/83, mb4.1/15, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	2.30	289	ePn	Pb	14 42 18.8	+1.2
JMI	Jan Mayen	2.52	61	e	Pn	14 42 13.3	-3.6
JMI				e		14 42 16.7	
JMIC	Jan Mayen	2.61	61	Pn	Pn	14 42 13.8	-4.3
JMIC				Lg	Lg	14 42 44.0	
JMIC	Jan Mayen	2.61	61	Pn	Pn	14 42 14.5	-3.6
	8.0nm,0.3s,baz=150,slow=7.4,SNR=4.1						
JMIC	Jan Mayen	2.61	61	Pn	Pn	14 42 13.8	-4.3
JNW	Jan Mayen West	2.65	60	e	Pn	14 42 16.1	-2.5
JNW				e		14 42 20.9	
JNE	Jan Mayen East	2.67	61	e	Pn	14 42 17.1	-1.9
JNE				e		14 42 20.2	
IGIL	Gilhagi	3.81	185	P	Pn	14 42 31.3	-3.3
	baz=192						
IGIL				S	Sn	14 43 16.7	-2.7
	baz=192						
IFLA	Flatey	3.81	195	P	Pn	14 42 32.8	-1.9
	baz=201						
IHED	Heoinshofoi	3.85	191	S	Sn	14 43 18.4	-2.1
	baz=197						
IHED				P	Pn	14 42 32.7	-2.5
	baz=197						
IBRE	Brettingsstaoi	3.86	195	P	Pn	14 42 33.5	-1.8
	baz=201						
IDIM	Dimmadalss	3.95	189	P	Pn	14 42 33.8	-2.7
	baz=195						
IDIM				S	Sn	14 43 20.0	-2.9
	baz=195						
ISIG	Siglufjorour	3.96	201	P	Pn	14 42 35.3	-1.3
	baz=207						
IGRA	Granastaoir	4.03	192	P	Pn	14 42 35.4	-2.3
	baz=198						
IGRA				S	Sn	14 43 22.9	-2.0
	baz=198						
ISKI	Skildingahlsh	4.04	189	P	Pn	14 42 35.4	-2.5
	baz=195						
ISKI				S	Sn	14 43 23.1	-2.1
	baz=195						
IGHA	Grjothals	4.05	187	P	Pn	14 42 35.3	-2.7
	baz=193						
IGHA				S	Sn	14 43 22.9	-2.5
	baz=193						
IHLA	Hella	4.08	197	P	Pn	14 42 36.8	-1.5
	baz=203						
IHLA				S	Sn	14 43 24.8	-1.2
	baz=203						
IHRN	Hraun	4.15	207	P	Pn	14 42 38.1	-1.2
	baz=213						
IHRN				S	Sn	14 43 27.6	-0.1
	baz=213						
IKVO	Krokottuvotn	4.19	188	P	Pn	14 42 37.3	-2.6
	baz=194						
IGRS	Grimsstaoir	4.24	184	P	Pn	14 42 37.7	-2.9
	baz=189						
IGRS				S	Sn	14 43 28.0	-2.1
	baz=189						
IREN	Reynihlio	4.26	188	P	Pn	14 42 38.3	-2.5
	baz=194						
IMEL	Melhnausar	4.33	187	P	Pn	14 42 38.9	-2.9
	baz=192						
IMEL				S	Sn	14 43 30.1	-2.0
	baz=192						
ISVA	Svartarkot	4.59	189	P	Pn	14 42 43.2	-2.1
	baz=195						
ISVA				S	Sn	14 43 38.0	-0.6
	baz=195						
IADA	Aoalbol	4.86	181	P	Pn	14 42 46.1	-2.9
	baz=185						
IADA				S	Sn	14 43 43.1	-2.2
	baz=185						
BORG	Borgarnes	5.61	207	Pn	Pn	14 42 59.5	+0.3
	4.4nm,0.3s,baz=12,slow=4.2,SNR=6.6						
SUMG	Summit	7.88	301	ePn	Pn	14 43 29.9	-0.9
BJO1	Bjornoya	11.39	50	eP	Pn	14 44 17.1	-1.9
SPA0	Spitsbergen Ar	11.88	32	Pn	Pn	14 44 25.5	+0.4
	baz=230,slow=16						
SPA0	Spitsbergen Ar	11.88	32	ePn	Pn	14 44 24.7	-0.4
SPA0	Spitsbergen Ar	11.88	32	P	Pn	14 44 25.5	+0.4
	baz=230,slow=16						
SPITS	Spitsbergen Ar	11.88	32	Pn	Pn	14 44 25.9	+0.8
	baz=230,slow=13,SNR=4.1						
SFJD	Kangerlussuaq	13.12	274	ePn	Pn	14 44 40.5	-1.5
NC204	NORSAR Array S	13.71	116	ePn	Pn	14 44 50.6	+0.4
HFS	Hagfors	15.52	114	P	Pn	14 45 15.6	+1.0
	baz=331,slow=12						
HFS	Hagfors	15.52	114	Pn	Pn	14 45 15.4	+0.8
	0.1nm,0.3s,baz=334,slow=13,SNR=2.9						
HFS	Hagfors	15.52	114	P	Pn	14 45 15.6	+1.0
	baz=331,slow=12						
EKA	Eskdalemuir Ar	15.58	153	P	P	14 45 21.0	+1.4
EKA	Eskdalemuir Ar	15.58	153	Pn	Pn	14 45 16.0	+0.6
	baz=340,slow=12,SNR=4.0						
EKA	Eskdalemuir Ar	15.58	153	e	P	14 45 21.0	+1.4
IVI	Ivigtut	15.86	253	ePn	P	14 45 22.9	+0.1
	13nm,0.9s						
APA0	Apatity Array	17.35	74	P	Pn	14 45 37.3	-0.5
APA0	Apatity Array	17.35	74	P	Pn	14 45 37.3	-0.5
LVZ	Lovozero	17.75	72	ePn	P	14 45 43.2	-0.6
	45nm,1.4s						
FIA0	FINESS Array S	18.69	96	P	Pn	14 45 53.7	-0.5
	baz=330,slow=14						
FIA0	FINESS Array S	18.69	96	eP	Pn	14 45 53.8	-0.5
FIA0	FINESS Array S	18.69	96	P	Pn	14 45 53.7	-0.5
	baz=330,slow=14						
FINES	FINESS Array B	18.69	96	P	Pn	14 45 53.8	-0.5
	0.2nm,0.3s,baz=312,slow=9.2,SNR=7.6						
SLVR	Solovky	19.68	79	eP	Pn	14 46 05.3	-0.9
	19nm,1.3s						
CLL	Collm	22.86	130	eP	P	14 46 40.0	+0.9
PRGR	Permogore	25.29	78	eP	P	14 47 11.3	+9.3
	37nm,1.1s						
GEC2	GERESS Array S	25.30	131	eP	P	14 47 03.5	+1.1
	22nm,1.5s						
GERES	GERESS Array B	25.30	131	P	P	14 47 03.5	+1.1
	0.7nm,0.4s,baz=339,slow=11,SNR=2.0						
VRAC	Vranov	25.65	127	P	P	14 47 07.4	+1.9
	1.9nm,0.4s,baz=331,slow=12,SNR=3.6						
AKASG	Malin Array Be	28.28	109	P	P	14 47 29.2	0.0
	0.4nm,0.3s,baz=330,slow=9.4,SNR=4.3						
AKBB	Malin Array Si	28.28	109	eP	P	14 47 28.8	-0.3
	4.3nm,0.9s						
YKA	Yellowknife Ar	36.37	309	P	P	14 48 39.0	-0.6
	2.0nm,0.8s,baz=35,slow=8.8,SNR=5.0						
YKB5	Yellowknife Ar	36.37	309	eP	P	14 48 39.0	-0.6
AKTO	Aktyubinsk	38.35	81	P	P	14 48 58.9	+2.2
	2.2nm,0.8s,baz=341,slow=9.5,SNR=5.0						
BR101	Keskin Array S	39.46	113	eP	P	14 49 08.2	+2.0
BRTR	Keskin Array B	39.46	113	P	P	14 49 08.2	+2.0
	1.3nm,0.9s,baz=315,slow=5.9,SNR=4.7						
BVAR	Borovoye Array	40.30	69	P	P	14 49 12.7	-0.2
	1.0nm,0.7s,baz=307,slow=11,SNR=3.8						
ULM	Lac du Bonnet	40.86	285	P	P	14 49 16.6	-0.9
	1.2nm,0.3s,baz=62,slow=9.0,SNR=3.5						
KURBB	Kurchatov Arra	44.95	64	P	P	14 49 52.0	+1.5
	1.9nm,0.8s,baz=329,slow=7.2,SNR=8.5						
MK32	Makanchi Array	49.50	64	eP	P	14 50 28.9	+2.7
MKAR	Makanchi Array	49.50	64	P	P	14 50 28.9	+2.7
	1.9nm,1.0s,baz=354,slow=8.5,SNR=4.9						
PD31	Pinedale Array	51.95	291	eP	P	14 50 43.7	-1.2
PDAR	Pinedale Array	51.95	291	P	P	14 50 43.7	-1.2
	0.4nm,0.6s,baz=39,slow=5.7,SNR=3.8						
N23A	Red Feather La	52.44	287	eP	P	14 50 48.1	-0.6
	4.7nm,0.8s						
TOA1	Torodi Ar. Sit	57.68	160	eP	P	14 51 27.7	+1.3
TORD	Torodi Ar. Bea	57.69	160	P	P	14 51 27.7	+1.2
	2.1nm,1.0s,baz=345,slow=10,SNR=4.5						
ASAR	Alice Springs	130.38	38	PKP	PKPdf	15 00 44.5	-1.6
	0.9nm,1.0s,baz=35,slow=3.4,SNR=5.6						
MAW	Mawson	147.10	136	PKPbc	PKPab	15 01 17.7	-1.1
	1.5nm,0.6s,baz=309,slow=6.3,SNR=3.3						

BJI ***15*** *14:43:01.9±0.0, 51°.98N×157°.55E, h115km, mb5.0/44, mB5.1/5*

KRSC ***15*** *14:43:02.7±1.3, 51°.62N×157°.80E, h112km±9km, ML5.8, FELT [felt] at GMS Vodopadnay; [IV] at lighthouse Krugliy; [II-III] at Paratunka, Severo-Kurilsk, Petropavlovsk, Institute.*

MOS ***15*** *14:43:04.0±0.9, 51°.78N×157°.41E, h124km, mb5.1/55, Error ellipse: s-maj=6.7km s-min=2.9km az=73.7*

MOS Felt (II) at Petropavlovsk-Kamchatskiy.

ISCJB ***15*** *14:43:04.5±0.2, 51°.84N±0°.03×157°.40E±0°.03, h126km±1km, mb5.2/396, Error ellipse: s-maj=4.6km s-min=2.3km az=156.9*

IDC ***15*** *14:43:05.6±0.5, 51°.83N×157°.30E, h122km±3km, mb4.3/39, mb1 4.5/44, mb1mx4.4/67, mbtmp4.7/44, Error ellipse: s-maj=9.6km s-min=5.9km az=132.0*

NEIC ***15*** *14:43:05.1±0.1, 51°.89N×157°.33E, mb5.3/297, Error ellipse: s-maj=3.7km s-min=1.8km az=165.0*

ISC 15 14:43:04.3±0.3, 51°.73N±0°.04×157°.59E±0°.03, h113km±2km, h113km:pP-P, n1178, σ1s.12/1275, mb5.2/396, 16C-7D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.31	75	iP	Pn	14 43 19.8	-0.6
KDTR				eS	Sn	14 43 31.0	-1.6
KDTR	Khodutka, Kamc	0.31	75	PN	Pn	14 43 19.8	-0.6
ASAK	Asacha	0.68	16	eP	Pn	14 43 23.2	+0.3
ASAK	Asacha	0.68	16	PN	Pn	14 43 23.2	+0.3
MTVR	Mutnovka	0.84	26	iP	Pn	14 43 24.8	+0.5
MTVR				eS	Sn	14 43 39.9	+0.5
MTVR	Mutnovka	0.84	26	PN	Pn	14 43 24.8	+0.5
MTVR				S	Sn	14 43 39.9	+0.5
RUS	Russkaya	0.91	39	iP	Pn	14 43 24.8	0.0
RUS				eS	Sn	14 43 39.9	-0.3
RUS	Russkaya	0.91	39	PN	Pn	14 43 24.8	0.0
RUS				S	Sn	14 43 39.9	-0.3
KRMR	Karymshinskiy	1.15	16	iP	Pn	14 43 28.1	+0.8
KRMR				eS	Sn	14 43 46.1	+1.4
KRMR	Karymshinskiy	1.15	16	PN	Pn	14 43 28.1	+0.8
KRMR				S	Sn	14 43 46.1	+1.4
APC	Apacha	1.23	348	eP	Pn	14 43 28.8	+0.7
APC				eS	Sn	14 43 46.8	+0.6
APC	Apacha	1.23	348	PN	Pn	14 43 28.8	+0.7
APC				S	Sn	14 43 46.8	+0.6
PEA0B	Petropavlovsk-	1.38	3	ePn	Pn	14 43 30.7	+0.8
PETK	Petropavlovsk-	1.38	3	P	Pn	14 43 30.7	+0.8
	278nm,0.3s,baz=163,slow=12,SNR=5900						
PETK				S	Sn	14 43 51.1	+1.7
	224nm,0.3s,baz=123,slow=18,SNR=23						
PEA1	Petropavlovsk-	1.39	3	ePn	Pn	14 43 30.7	+0.7
PEA1				eSn	Sn	14 43 51.1	+1.6
SKR	Severo-Kuril’s	1.40	222	iP	Pn	14 43 30.1	+0.1
SKR				eS	Sn	14 43 49.2	-0.4
SKR	Severo-Kuril’s	1.40	222	⇑iPN	Pn	14 43 30.1	+0.1
SKR				iS	Sn	14 43 49.1	-0.5
SKR				pmax	pmax		
	comp=Z,18μm,0.6s						
SKR				smax	smax		
	comp=E,90μm,1.1s						
SKR				smax	smax		
	comp=N,78μm,0.8s						
PET	Petropavlovsk	1.45	26	ePn	Pn	14 43 31.1	+0.4
PET	Petropavlovsk	1.45	26	iP	Pn	14 43 31.3	+0.6
PET	Petropavlovsk	1.45	26	κ iPN	Pn	14 43 31.3	+0.6
PET				eS	Sn	14 43 52.1	+1.4
PET				pmax	pmax		
	comp=Z,2μm,0.5s						
PET				pmax	pmax		
	comp=Z,2μm,0.4s						
PET				smax	smax		
	comp=N,18μm,0.4s						
PET				smax	smax		
	comp=N,26μm,0.5s						
PET				smax	smax		
	comp=E,15μm,0.7s						
DALK	Dalny	1.49	28	eP	Pn	14 43 31.9	+0.8
DALK				eS	Sn	14 43 52.9	+1.5
DALK	Dalny	1.49	28	PN	Pn	14 43 31.9	+0.8
DALK				S	Sn	14 43 52.9	+1.5
UGLR	Uglovaya	1.66	26	iP	Pn	14 43 34.9	+1.6
UGLR	Uglovaya	1.66	26	PN	Pn	14 43 34.9	+1.6
AVH	Avacha	1.69	24	eP	Pn	14 43 35.4	+1.8
AVH				eS	Sn	14 43 58.6	+2.6
AVH	Avacha	1.69	24	PN	Pn	14 43 35.4	+1.8
AVH				S	Sn	14 43 58.6	+2.6
KOK	Koryaka	1.69	22	eP	Pn	14 43 35.8	+2.1
KOK	Koryaka	1.69	22	PN	Pn	14 43 35.8	+2.1

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SMAR  Somma             1.71  25 eP     Pn      14 43 35.2 +1.3
SMAR                             eS     Sn      14 43 57.8 +1.3
SMAR  Somma             1.71  25  PN    Pn      14 43 35.2 +1.3
SMAR                              S     Sn      14 43 57.8 +1.3
KRER  Koryakskii        1.73  24 eP     Pn      14 43 35.9 +1.7
KRER  Koryakskii        1.73  24  PN    Pn      14 43 35.9 +1.7
SDLR  Sedlovina         1.74  26 i P    Pn      14 43 35.5 +1.2
SDLR  Sedlovina         1.74  26  PN    Pn      14 43 35.5 +1.2
KRX   Arik              1.76  21 eP     Pn      14 43 36.2 +1.7
KRX   Arik              1.76  21  PN    Pn      14 43 36.2 +1.7
NLC   Nalytchevo        1.80  36 i P    Pn      14 43 34.6 -0.2
NLC                              eS     Sn      14 43 57.2 -1.0
NLC   Nalytchevo        1.80  36  PN    Pn      14 43 34.6 -0.2
NLC                               S     Sn      14 43 57.2 -1.0
GNL   Ganaly            1.98   6 eP     Pn      14 43 38.5 +1.2
GNL   Ganaly            1.98   6  PN    Pn      14 43 38.5 +1.2
SPN   Mys Shipunski     2.02  46 i P    Pn      14 43 38.2 +0.5
SPN                              eS     Sn      14 44 02.2 -1.0
SPN   Mys Shipunski     2.02  46  PN    Pn      14 43 38.2 +0.5
SPN                               S     Sn      14 44 02.2 -1.0
KZV   Kizimen           3.76  24 i P    Pn      14 44 02.3 +1.8
KZV   Kizimen           3.76  24  PN    Pn      14 44 02.3 +1.8
MKZ   Mys Kozlova       3.77  40 eP     Pn      14 44 00.5  0.0
MKZ                              eS     Sn      14 44 42.3 -1.8
MKZ   Mys Kozlova       3.77  40  PN    Pn      14 44 00.5  0.0
MKZ                               S     Sn      14 44 42.3 -1.8
TUMD  Tumrok D          3.86  25 i P    Pn      14 44 03.4 +1.6
TUMD                             eS     Sn      14 44 46.7 +0.3
TUMR  Tumrok            3.87  22 i P    Pn      14 44 04.4 +2.4
TUMR  Tumrok            3.87  22  PN    Pn      14 44 04.4 +2.4
ESO   Esso              4.26   8 eP     Pn      14 44 09.0 +1.9
ESO                              eS     Sn      14 44 56.9 +1.1
ESO   Esso              4.26   8  PN    Pn      14 44 09.0 +1.9
ESO                               S     Sn      14 44 56.9 +1.1
KMNR  Kamenistaya       4.33  20 eP     Pn      14 44 10.7 +2.6
KMNR  Kamenistaya       4.33  20  PN    Pn      14 44 10.7 +2.6
KPT   Kopyto            4.52  19 eP     Pn      14 44 12.5 +1.8
KPT   Kopyto            4.52  19  PN    Pn      14 44 12.5 +1.8
KIRR  Kirishev          4.54  20 eP     Pn      14 44 12.4 +1.5
KIRR  Kirishev          4.54  20  PN    Pn      14 44 12.4 +1.5
KOZ   Kozyrevsk         4.54  16 eP     Pn      14 44 12.0 +1.1
KOZ   Kozyrevsk         4.54  16  PN    Pn      14 44 12.0 +1.1
BZWR  Bezymyannyi-We    4.58  21 eP     Pn      14 44 13.5 +2.0
BZWR  Bezymyannyi-We    4.58  21  PN    Pn      14 44 13.5 +2.0
BZGR  Bezymyannyi-Gr    4.60  22 eP     Pn      14 44 13.4 +1.6
BZGR  Bezymyannyi-Gr    4.60  22  PN    Pn      14 44 13.4 +1.6
LGNR  Loginova          4.73  22 i P    Pn      14 44 16.1 +2.4
LGNR  Loginova          4.73  22  PN    Pn      14 44 16.1 +2.4
SRDR  Sredinnyy         4.76  14 eP     Pn      14 44 15.4 +1.5
SRDR  Sredinnyy         4.76  14  PN    Pn      14 44 15.4 +1.5
CIRR  Tsirk             4.78  22 eP     Pn      14 44 15.9 +1.8
CIRR  Tsirk             4.78  22  PN    Pn      14 44 15.9 +1.8
KRSR  Krestovskiy       4.83  20 eP     Pn      14 44 15.6 +0.8
KRSR  Krestovskiy       4.83  20  PN    Pn      14 44 15.6 +0.8
KLY   Klyuchi           4.94  20 eP     Pn      14 44 18.4 +2.3
KLY   Klyuchi           4.94  20  PN    Pn      14 44 18.4 +2.3
BDR   Baidarnaya        5.29  22 eP     Pn      14 44 22.7 +1.6
BDR   Baidarnaya        5.29  22  PN    Pn      14 44 22.7 +1.6
SRKR  Sorokina          5.36  22 eP     Pn      14 44 24.0 +2.0
SRKR  Sorokina          5.36  22  PN    Pn      14 44 24.0 +2.0
SMKR  Semkarok          5.37  24 eP     Pn      14 44 23.3 +1.2
SMKR  Semkarok          5.37  24  PN    Pn      14 44 23.3 +1.2
KBTR  Krutoberegovo     5.45  32 eP     Pn      14 44 23.1 +0.1
KBTR                             eS     Sn      14 45 26.4 +2.0
KBTR  Krutoberegovo     5.45  32  PN    Pn      14 44 23.1 +0.1
KBTR                              S     Sn      14 45 26.4 +2.0
KBG   Krutoberegovo     5.45  32 eP     Pn      14 44 23.1 +0.1
KBG                              eS     Sn      14 45 26.2 +1.8
KBG   Krutoberegovo     5.45  32  PN    Pn      14 44 23.1 +0.1
KBG                               S     Sn      14 45 26.2 +1.8
BKI   Bering            6.09  52 eP     Pn      14 44 31.4 -0.4
BKI                              eS     Sn      14 45 33.4 -6.7
BKI   Bering            6.09  52  PN    Pn      14 44 31.4 -0.4
PALN  Palana            7.50   9 eP     Pn      14 44 53.2 +2.4
PALN  Palana            7.50   9  PN    Pn      14 44 53.2 +2.4
OSSR  Ossora            8.15  20 eP     Pn      14 45 00.8 +1.2
OSSR  Ossora            8.15  20  PN    Pn      14 45 00.8 +1.2
MA2   Magadan           8.75 337  P     Pn      14 45 08.8 +1.0
      comp=E,12nm,0.3s,baz=144,slow=10,SNR=74
MA2   Magadan           8.75 337 ePn    Pn      14 45 07.5 -0.3
MA2   Magadan           8.75 337cePN    Pn      14 45 07.0 -0.8
MA2                               pmax  pmax
      comp=Z,255nm,1.3s
OKH   Okha              9.10 287dePN    Pn      14 45 03.0 -9.5
KUR   Kuril'sk          9.16 229 ePN    Pn      14 45 15.0 +1.7
KUR                               S     Sn      14 46 59.4 +4.9
KUR                               pmax  pmax
      comp=Z,46nm,0.7s
TYV   Tymovskoe         9.40 271 ePN    Pn      14 45 18.7 +2.1
TYV                               pmax  pmax
      comp=Z,24nm,1.5s
TILK  Tilichiki         9.95  25 eP     Pn      14 45 24.3 +0.4
TILK  Tilichiki         9.95  25  PN    Pn      14 45 24.3 +0.4
SMY   Shemya           10.18  78 ePn    Pn      14 45 27.4 +0.3
SMY   Shemya           10.18  78 ePN    Pn      14 45 27.4 +0.3
NKL   Nikolayevsk      10.43 284 ePN    Pn      14 45 30.0 -0.4
NKL                               pmax  pmax
      comp=Z,66nm,1.0s
YSS   Yuzh-Sakhalins   10.79 250 ePn    Pn      14 45 36.0 +0.6
YSS   Yuzh-Sakhalins   10.79 250 ePN    Pn      14 45 36.0 +0.6
YUK   Yuzh-Kuril'sk    11.00 230 i PN   Pn      14 45 39.0 +0.7
SEY   Seymchan         11.58 348  P     Pn      14 45 46.6 +0.9
      comp=Z,1.1nm,0.3s,baz=161,slow=11,SNR=23
SEY   Seymchan         11.58 348 i PN   Pn      14 45 47.4 +1.6
KMSK  Kamenskaya       11.73  20 eP     Pn      14 45 48.8 +1.1
KMSK  Kamenskaya       11.73  20  PN    Pn      14 45 48.8 +1.1
ASAJ  Asahikawa        12.60 239  P     Pn      14 46 01.1 +1.7
      comp=Z,7.2nm,0.3s,baz=66,slow=13,SNR=238
ERM   Erimo            13.83 231 ePn    Pn      14 46 11.4 -3.9
ERM   Erimo            13.83 231ceP     Pn      14 46 11.3 -4.0
ERM                               pmax  pmax
      comp=Z,30nm,0.7s
TEY   Ternei           15.44 253⇑iP     P       14 46 37.5 -0.2
TEY                               pmax  pmax
      comp=N,60nm,0.9s
TEY                               pmax  pmax
      comp=E,50nm,0.9s
TEY                               pmax  pmax
      comp=Z,60nm,0.9s
KIWB  Kanaga Island    15.61  80 ePn    Pn      14 46 37.0 -0.8
ADK   Adak             15.89  79 ePn    Pn      14 46 40.1 -1.2
      comp=Z,137nm,1.1s
ADK   Adak             15.89  79 eP     Pn      14 46 40.1 -1.2
ADK                               pmax  pmax
      comp=Z,137nm,1.1s
GSTR  Great Sitkin T   16.24  78 ePn    Pn      14 46 45.4 -0.2
KLR   Kul'dur          16.61 272  P     Pn      14 46 50.3 +0.1
      comp=Z,2.7nm,0.3s,baz=66,slow=12,SNR=76
KLR   Kul'dur          16.61 272d iP    Pn      14 46 48.4 -1.8
KLR                               pmax  pmax
      comp=Z,73nm,0.9s
BILL  Bilibino         16.90  11 ePn    P       14 46 54.3 +0.5
      comp=Z,24nm,0.6s
BILL  Bilibino         16.90  11⇑eP     P       14 46 53.8 +0.1
BILL                              pmax  pmax
      comp=Z,21nm,0.6s
BILL                              MLR   MLR
      comp=Z,30µm,26.0s
YAK   Yakutsk          18.25 315 eP     P       14 47 07.0 -1.6
      comp=Z,216nm,0.6s
YAK   Yakutsk          18.25 315 eP     P       14 47 07.7 -0.9
YAK                              eS     S       14 50 26.2 -5.2
YAK                               pmax  pmax
      comp=Z,123nm,0.7s
YAK                               pmax  pmax
      comp=N,29nm,0.9s
YAK                               pmax  pmax
      comp=E,41nm,0.8s
YAK                               smax  smax
      comp=N,5µm,12.6s
YAK                               smax  smax
      comp=E,3µm,12.6s
ZEA   Zeya             18.42 288 eP     P       14 47 09.7 -0.8
ZEA                               pmax  pmax
      comp=E,64nm,1.8s
ZEA                               pmax  pmax
      comp=Z,220nm,2.0s
USA0B Ussuriysk Arra   18.66 256 eP     P       14 47 11.9 -1.3
      comp=Z,58nm,1.4s
USRK  Ussuriysk Ar.    18.66 256  P     P       14 47 12.6 -0.6
      comp=Z,0.9nm,0.3s,baz=63,slow=9.1,SNR=27
SPIA  Saint Paul Isl   19.35  61 eP     Pn      14 47 22.7 -0.1
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      comp=Z,716nm,1.0s
MDJ   Mudanjiang       19.90 260 eP     P       14 47 24.9 -1.7
MDJ   Mudanjiang       19.90 260  P     P       14 47 25.9 -0.8
MDJ                               pmax  pmax
      comp=Z,30nm,0.7s
MJAR  Matsushiro Arr   20.49 230  P     P       14 47 33.5 +0.4
      comp=Z,44nm,0.7s,baz=17,slow=9.0,SNR=95
MJB9  Matsu-Tunnel     20.49 230 eP     P       14 47 33.2  0.0
      comp=Z,79nm,0.8s
MAJO  Matsushiro       20.50 230 eP     P       14 47 33.2  0.0
      comp=Z,78nm,0.8s
MAJO  Matsushiro       20.50 230 i P    P       14 47 33.0 -0.2
MAJO                              pmax  pmax
      comp=Z,66nm,0.8s
MAT   Matsushiro       20.50 230  P     P       14 47 33.3 +0.1
UNV   Unalaska Valle   21.68  70 eP     P       14 47 45.8 +0.2
      comp=Z,120nm,1.0s
INU   Inuyama          22.03 230 eP     P       14 47 48.8 -0.6
      comp=Z,85nm,0.8s
CN2   Changchun        22.87 262 eP     P       14 47 55.4 -2.5
FALS  False Pass       23.31  67 eP     P       14 48 02.2 +0.3
      comp=Z,278nm,0.8s
TIXI  Tiksi            23.72 338  P     P       14 48 04.5 -0.9
      comp=Z,13nm,0.7s,baz=128,slow=12,SNR=21
TIXI  Tiksi            23.72 338 eP     P       14 48 04.2 -1.3
      comp=Z,84nm,1.1s
TIXI  Tiksi            23.72 338 i P    P       14 48 04.8 -0.7
TIXI                              pmax  pmax
      comp=Z,12nm,0.6s
SDPT  Sand Point       24.90  65 eP     P       14 48 16.4 +0.1
      comp=Z,161nm,1.5s
RDOG  Red Dog Mine     25.04  34 eP     P       14 48 17.7 +0.2
      comp=Z,133nm,0.8s
KSRS  Korea Array      25.28 247  P     P       14 48 20.5 +0.6
      comp=Z,4.1nm,0.6s,baz=37,slow=9.5,SNR=9.5
KSRS                              pP    pP      14 48 46.2 +1.8
      comp=Z,3.3nm,0.7s,baz=44,slow=8.8,SNR=2.5
KS15  Wonju Array Si   25.31 247 eP     P       14 48 20.5 +0.4
KS15                             epP    pP      14 48 46.2 +1.5
KSAR  Wonju Array Be   25.31 247  P     P       14 48 20.5 +0.3
KSAR                              pP    pP      14 48 46.2 +1.5
KSAR  Wonju Array Be   25.31 247  P     P       14 48 20.5 +0.3
KSAR                              *PP   pP      14 48 46.2 +1.5
CHGN  Chignik          25.90  62 eP     P       14 48 24.8 -0.5
      comp=Z,38nm,0.6s
TTA   Tatalina         26.81  47 eP     P       14 48 33.8 +0.3
      comp=Z,69nm,1.2s
TTA   Tatalina         26.81  47 eP     P       14 48 33.8 +0.3
TTA                               pmax  pmax
      comp=Z,69nm,1.2s
JNU   Nakatsue         26.86 237  P     P       14 48 35.0 +0.7
      comp=Z,52nm,0.7s,baz=32,slow=3.0,SNR=34
JNU   Nakatsue         26.86 237 eP     P       14 48 34.7 +0.4
      comp=Z,75nm,0.8s
SVW2  Sparrevohn       26.98  51 eP     P       14 48 35.9 +0.9
      comp=Z,30nm,0.9s
SII   Sitkinak Islan   28.18  61 eP     P       14 48 45.5 -0.3
      comp=Z,221nm,0.8s
RSO   Redoubt South    28.40  53 eP     P       14 48 48.4 +0.5
OHAK  Old Harbor       28.54  59 eP     P       14 48 48.5 -0.4
      comp=Z,89nm,0.7s
PPLA  Purkeypile       28.55  47 eP     P       14 48 50.1 +1.0
SPU   Mount Spurr      28.68  51 eP     P       14 48 50.7 +0.5
KDAK  Kodiak Island    28.82  58  P     P       14 48 51.1 -0.3
      comp=Z,62nm,0.9s,baz=257,slow=2.6,SNR=86
KDAK                              PcP   PcP     14 51 57.8 -0.2
      comp=Z,6.9nm,0.6s,baz=18,slow=3.2,SNR=4.5
KDAK                              ScP   ScP     14 55 28.5 -0.2
      comp=Z,3.3nm,0.7s,baz=270,slow=2.8,SNR=4.7
KDAK  Kodiak Island    28.82  58 eP     P       14 48 50.8 -0.5
      comp=Z,58nm,0.8s
KDAK                             ePcP   PcP     14 51 57.8 -0.2
KDAK                             eScP   ScP     14 55 28.5 -0.2
BPAW  Bear Paw Mtn.    29.09  45 eP     P       14 48 54.3 +0.5
      comp=Z,41nm,1.0s
KTH   Kantishna Hill   29.12  46 eP     P       14 48 54.8 +0.7
      comp=Z,50nm,0.9s
CNPM  China Poot       29.25  54 eP     P       14 48 54.9 -0.4
      comp=Z,87nm,0.8s
BRLK  Bradley Lake     29.40  54 eP     P       14 48 55.6 -0.9
      comp=Z,38nm,0.7s
COLD  Coldfoot         29.58  39 eP     P       14 48 58.7 +0.7
      comp=Z,38nm,1.3s
BWN   Browne           29.76  45 eP     P       14 49 00.6 +1.0
      comp=Z,176nm,1.1s
RC01  Rabbit Creek A   29.81  51 eP     P       14 48 59.5 -0.6
      comp=Z,23nm,1.0s
TOLK  Toolik Lake Re   29.97  36 eP     P       14 49 02.1 +0.5
      comp=Z,67nm,0.6s
TOLK  Toolik Lake Re   29.97  36  P     P       14 49 02.3 +0.8
      baz=263,SNR=43
MCK   McKinley         30.00  46 eP     P       14 49 01.9 +0.1
      comp=Z,66nm,1.0s
PMR   Palmer           30.05  50 eP     P       14 49 01.6 -0.6
      comp=Z,14nm,0.8s
PMR   Palmer           30.05  50 eP     P       14 49 01.6 -0.6
PMR                               pmax  pmax
      comp=Z,14nm,0.8s
RND   Reindeer         30.05  46 eP     P       14 49 02.1 -0.3
      comp=Z,76nm,1.0s
SEW   Seward           30.07  53 eP     P       14 49 02.0 -0.3
WRH   Wood River Hil   30.35  44 eP     P       14 49 05.1 +0.3
      comp=Z,105nm,1.0s
KNK   Knik Glacier     30.39  50 eP     P       14 49 05.4 +0.1
      comp=Z,183nm,1.2s
SML   Sawmill          30.41  49 eP     P       14 49 05.5  0.0
      comp=Z,173nm,1.0s
SML   Sawmill          30.41  49 eP     P       14 49 05.5  0.0
SML                               pmax  pmax
      comp=Z,173nm,1.0s
TCOL  CIGO, UAF Yank   30.44  43  P     P       14 49 06.5 +0.8
      baz=271,SNR=18
COLA  College          30.45  43 eP     P       14 49 06.0 +0.3
      comp=Z,84nm,0.8s
COLA  College          30.45  43 i P    P       14 49 06.4 +0.7
COLA                              pmax  pmax
      comp=Z,99nm,1.0s
CCB   Clear Creek Bu   30.47  44 eP     P       14 49 06.1 +0.2
      comp=Z,58nm,0.8s
POKR  Poker Plat Res   30.62  43  P     P       14 49 08.2 +0.9
      baz=271,SNR=12
DHY   Denali Highway   30.74  47 eP     P       14 49 08.2 -0.3
      comp=Z,69nm,1.2s
HDA   Harding Lake     30.85  44 eP     P       14 49 08.8 -0.5
      comp=Z,33nm,0.9s
HDA   Harding Lake     30.85  44  P     P       14 49 09.0 -0.3
      baz=273,SNR=35
ILAR  Eielson Array    30.86  44  P     P       14 49 09.4  0.0
      comp=Z,41nm,0.8s,baz=263,slow=8.1,SNR=318
ILAR                              PcP   PcP     14 52 02.5 -0.7
      comp=Z,4.9nm,0.9s,baz=287,slow=3.5,SNR=6.0
ILB   Eielson Array    30.86  44 eP     P       14 49 09.2 -0.2
      comp=Z,58nm,0.8s
ILB                              ePcP   PcP     14 52 02.5 -0.7
SCM   Sheep Creek Mo   30.88  49 eP     P       14 49 09.9 +0.2
      comp=Z,124nm,1.0s
SCM   Sheep Creek Mo   30.88  49 eP     P       14 49 09.9 +0.2
SCM                               pmax  pmax
      comp=Z,125nm,1.0s
GLI   Glacier Island   31.12  51 eP     P       14 49 11.9 +0.2
      comp=Z,34nm,1.0s
PRP   Porcupine Dome   31.41  42 eP     P       14 49 14.7 +0.3
      comp=Z,134nm,0.8s
FYU   Fort Yukon       31.51  40 eP     P       14 49 16.0 +1.0
      comp=Z,139nm,0.8s
PAX   Paxson           31.62  47 eP     P       14 49 15.8 -0.3
PAX   Paxson           31.62  47 eP     P       14 49 15.9 -0.3
EYAK  Cordova Ski Ar   31.82  52 eP     P       14 49 17.9 +0.1
      comp=Z,44nm,1.2s
SCRK  Sand Creek       32.18  45 eP     P       14 49 20.4 -0.7
      comp=Z,69nm,1.0s
DOT   Dot Lake         32.18  46 eP     P       14 49 20.1 -0.8
      comp=Z,15nm,0.7s
ULN   Ulaanbaatar      32.32 283ceP     P       14 49 21.1 -1.4
ULN                               pmax  pmax
      comp=Z,10.0nm,2.5s
MENT  Mentasta         32.42  47 eP     P       14 49 23.2 +0.1
      comp=Z,21nm,1.0s
HMT   Hamilton         32.59  52 eP     P       14 49 25.1 +0.5
      comp=Z,34nm,0.9s
SONA0 Songino Array    32.73 284 eP     P       14 49 25.7 -0.4
SONA0                            epP    pP      14 49 50.8 -0.2
SONA0                            eScP   ScP     14 55 42.0 -0.1
SONM  Songino Array    32.73 284  P     P       14 49 25.7 -0.4
      comp=Z,0.7nm,0.4s,baz=64,slow=9.0,SNR=4.0
SONM                              pP    pP      14 49 50.8 -0.2
      comp=Z,1.9nm,0.8s,baz=41,slow=9.8,SNR=4.1
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SONM                              ScP   ScP     14 55 42.0 -0.1
      comp=Z,3.6nm,0.7s,baz=81,slow=2.5,SNR=12
H11N2 WAKE ISLAND Hy   32.76 164  T     T       15 24 56.5
      baz=350,slow=76
H11N3 WAKE ISLAND Hy   32.77 164  T     T       15 24 56.2
      baz=350,slow=76,SNR=204
H11N1 WAKE ISLAND Hy   32.77 164  T     T       15 24 58.2
      baz=350,slow=76
TLY   Talaya           32.79 292  P     P       14 49 26.4  0.0
      comp=Z,2.5nm,0.6s,baz=348,slow=2.1,SNR=5.0
TLY                               pP    pP      14 49 52.3 +0.9
      comp=Z,3.1nm,0.8s,baz=52,slow=6.2,SNR=2.7
TLY   Talaya           32.79 292 eP     P       14 49 25.8 -0.7
      comp=Z,16nm,1.1s
TLY                               pP    pP      14 49 52.3 +0.9
TLY   Talaya           32.79 292 eP     P       14 49 27.6 +1.2
TLY                               pmax  pmax
      comp=Z,16nm,0.6s
HHC   Hu-ho-hao-te     33.09 269 eP     P       14 49 28.8 -0.5
HHC                               pmax  pmax
      comp=Z,20nm,1.0s
EGAK  Eagle            33.31  43 eP     P       14 49 30.3 -0.4
      comp=Z,65nm,0.8s
BALM  Baldy            33.37  50 eP     P       14 49 31.3 -0.2
      comp=Z,33nm,1.1s
BALM  Baldy            33.37  50 eP     P       14 49 31.3 -0.2
BALM                              pmax  pmax
      comp=Z,33nm,1.1s
ZAK   Zakamensk        33.51 290 eP     P       14 49 31.7 -1.0
ZAK                               pmax  pmax
      comp=Z,8.0nm,1.4s
H11S1 WAKE ISLAND Hy   33.92 164  T     T       15 26 13.7
      baz=351,slow=76
H11S3 WAKE ISLAND Hy   33.93 164  T     T       15 26 13.8
      baz=351,slow=76
H11S2 WAKE ISLAND Hy   33.94 164  T     T       15 26 17.4
      baz=351,slow=76
DAWY  Dawson           34.17  44 eP     P       14 49 38.0 -0.3
      comp=Z,75nm,1.8s
NJ2   Nanjing          34.36 250 eP     P       14 49 40.6 +0.4
NJ2                               pmax  pmax
      comp=Z,14nm,0.7s
PCA   Pinnacle         34.59  51 eP     P       14 49 42.4 +0.4
      comp=Z,73nm,0.9s
EPYK  Eagle Plains     34.93  40 eP     P       14 49 45.3 +0.5
      comp=Z,60nm,0.9s
EPYK  Eagle Plains     34.93  40  P     P       14 49 45.9 +1.1
      baz=279,SNR=38
HYT   Haines Junctio   35.72  49 eP     P       14 49 52.9 +1.2
      comp=Z,45nm,1.0s
INK   Inuvik           35.88  36 eP     P       14 49 53.7 +0.9
      comp=Z,89nm,0.9s
INK   Inuvik           35.88  36 eP     P       14 49 53.7 +0.9
INK                               pmax  pmax
      comp=Z,89nm,0.9s
SKAG  Skagway          37.16  51 eP     P       14 50 05.1 +1.3
      comp=Z,73nm,1.0s
BESE  Bessie Mountai   37.68  52 eP     P       14 50 09.5 +1.2
SIT   Sitka            37.99  55 eP     P       14 50 12.7 +2.0
      comp=Z,74nm,1.1s
SIT   Sitka            37.99  55 eP     P       14 50 12.7 +2.0
SIT                               pmax  pmax
      comp=Z,74nm,1.1s
JIS   Juneau Island    38.02  53 eP     P       14 50 12.6 +1.6
      comp=Z,49nm,0.9s
XAN   Xi'an            38.98 262  P     P       14 50 18.8 -0.6
YULB  Yu-li            39.67 238 eP     P       14 50 25.5 +0.3
      comp=Z,46nm,1.5s
WRAK  Wrangell Islan   39.75  55 eP     P       14 50 27.3 +1.9
      comp=Z,62nm,0.9s
DLBC  Dease Lake       40.09  51 eP     P       14 50 30.5 +2.2
      comp=Z,42nm,1.0s
LZH   Lanzhou          40.79 269 ⇑P     P       14 50 33.6 -0.9
LZH                               pP    pP      14 50 58.1 -2.1
LZH                               sP    sP      14 51 10.8 -2.2
LZH                               PP    PP      14 52 11.8 +1.3
LZH                               pmax  pmax
      comp=Z,32nm,1.3s
LZH                               pmax  pmax
      comp=Z,160nm,5.4s
DIB   Dawson Inlet,    41.07  59 eP     P       14 50 38.2 +1.9
      comp=Z,24nm,0.7s
ENH   Enshi            41.23 258 eP     P       14 50 36.9 -1.1
      comp=Z,14nm,0.6s
GTA   Gaotai           41.23 276 ⇑P     P       14 50 37.8 -0.2
GTA                               pP    pP      14 51 05.8 +2.1
GTA                               sP    sP      14 51 21.0 +4.5
ZAA1  Zalesovo Array   42.22 303 eP     P       14 50 43.4 -2.4
ZAA1                             epP    pP      14 51 11.2 -0.4
ZAA1                             ePcP   PcP     14 52 38.0 +0.4
ZAA1                             eScP   ScP     14 56 16.9 -0.6
ZALV  Zalesovo Beam    42.23 303  P     P       14 50 43.4 -2.4
      comp=Z,1.6nm,0.4s,baz=56,slow=6.1,SNR=7.1
ZALV                              pP    pP      14 51 11.2 -0.4
      comp=Z,2.9nm,0.7s,baz=61,slow=7.1,SNR=3.8
ZALV                              PP    PP      14 52 26.4 +1.0
      comp=Z,1.7nm,0.5s,baz=55,slow=10,SNR=3.7
ZALV                              PcP   PcP     14 52 38.0 +0.4
      comp=Z,3.2nm,0.4s,baz=92,slow=3.0,SNR=9.6
ZALV                              ScP   ScP     14 56 16.9 -0.6
      comp=Z,1.0nm,0.6s,baz=350,slow=8.0,SNR=3.7
ZALV  Zalesovo Beam    42.23 303 i P    P       14 50 43.5 -2.3
ZALV                              pmax  pmax
      comp=Z,2.0nm,0.5s
DGZ   Jazzator, Alta   42.90 296 i P    P       14 50 51.4  0.0
DGZ                               pmax  pmax
      comp=Z,10.0nm,1.3s
CD2   Chengdu          44.30 263  P     P       14 51 01.3 -1.5
CD2                               pmax  pmax
      comp=Z,40nm,0.6s
RES   Resolute Bay     45.16  21  P     P       14 51 09.2 +0.3
      comp=Z,20nm,0.8s,baz=301,slow=9.5,SNR=27
RES   Resolute Bay     45.16  21 eP     P       14 51 09.2 +0.3
      comp=Z,23nm,0.8s
YKW3  Yellowknife Ar   45.16  41 eP     P       14 51 09.8 +0.7
      comp=Z,49nm,0.9s
YKA   Yellowknife Ar   45.20  41  P     P       14 51 10.5 +1.1
      comp=Z,34nm,0.7s,baz=300,slow=7.7,SNR=78
YKA                               ScP   ScP     14 56 29.7 +0.3
      comp=Z,1.1nm,0.7s,baz=300,slow=3.6,SNR=4.3
YKB5  Yellowknife Ar   45.20  41 eP     P       14 51 10.5 +1.1
YKB5                             eScP   ScP     14 56 29.7 +0.3
GYA   Guiyang          45.70 257  P     P       14 51 14.0  0.0
GYA                               pmax  pmax
      comp=Z,10.0nm,0.8s
WMQ   Urumqi           45.97 289 eP     P       14 51 15.8  0.0
WMQ                               pP    pP      14 51 43.3 +1.3
WMQ                               pmax  pmax
      comp=Z,16nm,1.5s
WMQ                               LR    LR
      comp=Z,12µm,29.0s
WMQ                               LR    LR
      comp=Z,16µm,29.0s
WMQ                               LR    LR
      comp=Z,33µm,29.2s
KURK  Kurchatov        47.15 302 eP     P       14 51 22.7 -2.1
KURK                             epP    pP      14 51 50.3 -0.8
KURK  Kurchatov        47.15 302 i P    P       14 51 22.5 -2.3
KURK                              pmax  pmax
      comp=Z,25nm,0.8s
KURBB Kurchatov Arra   47.25 302  P     P       14 51 23.6 -2.0
      comp=Z,20nm,0.7s,baz=62,slow=7.5,SNR=78
KURBB                             pP    pP      14 51 51.9  0.0
      comp=Z,16nm,0.8s,baz=61,slow=7.7,SNR=9.2
KURBB                             PP    PP      14 53 16.9 -0.4
      comp=Z,2.6nm,0.8s,baz=56,slow=8.6,SNR=2.5
KURBB                             ScP   ScP     14 56 37.5 -0.7
      comp=Z,2.9nm,0.6s,baz=62,slow=3.8,SNR=8.7
MK31  Makanchi Array   47.36 295 eP     P       14 51 24.3 -2.3
MK31                             epP    pP      14 51 52.2 -0.7
MK31  Makanchi Array   47.36 295 eP     P       14 51 24.3 -2.3
MK31                             e*PP   pP      14 51 52.2 -0.7
MK32  Makanchi Array   47.36 295 eP     P       14 51 24.8 -1.8
MK32                             epP    pP      14 51 53.2 +0.3
MK32                             eScP   ScP     14 56 37.0 -1.8
MKAR  Makanchi Array   47.36 295  P     P       14 51 24.8 -1.8
      comp=Z,7.1nm,0.5s,baz=58,slow=6.5,SNR=65
MKAR                              pP    pP      14 51 53.2 +0.3
      comp=Z,9.2nm,1.0s,baz=65,slow=15,SNR=4.5
MKAR                              ScP   ScP     14 56 37.0 -1.8
      comp=Z,1.3nm,0.8s,baz=35,slow=3.0,SNR=4.1
MAKZ  Makanchi         47.53 296 eP     P       14 51 25.9 -2.0
MAKZ                             epP    pP      14 51 53.5 -0.7
MAKZ  Makanchi         47.53 296 eP     P       14 51 25.9 -2.0
MAKZ                             e*PP   pP      14 51 53.5 -0.7
LLLB  Lillooet         48.03  58 eP     P       14 51 33.0 +1.3
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	comp=Z,34nm,0.8s						
SPA0	Spitsbergen Ar	48.22	350	eP	P	14 51 32.5	-0.2
	comp=Z,77nm,1.5s						
SPITS	Spitsbergen Ar	48.22	350	P	P	14 51 32.5	-0.2
	comp=Z,1.4nm,0.3s,baz=57,slow=9.2,SNR=22						
A04D	Lummi Island	48.67	60	P	P	14 51 38.4	+1.9
	baz=306						
NLWA	Neilton Lookou	48.81	62	eP	P	14 51 39.2	+1.4
	comp=Z,75nm,0.9s						
KMI	Kunming	49.06	259	P	P	14 51 41.3	+1.1
KMI				pP	pP	14 52 07.3	+0.6
KMI				sP	sP	14 52 19.3	0.0
KMI				pmax	pmax		
	comp=Z,27nm,0.8s						
KMI				LR	LR		
	comp=Z,12µm,23.1s						
KMI				LR	LR		
	comp=Z,8µm,23.1s						
KMI				LR	LR		
	comp=Z,19µm,24.6s						
D03D	Eldon	49.16	62	P	P	14 51 42.3	+2.0
	baz=306,SNR=36						
B05A	Bryant	49.27	60	P	P	14 51 42.7	+1.6
	baz=306,SNR=15						
D04E	Lakebay	49.54	62	P	P	14 51 45.5	+2.3
	baz=307,SNR=7.1						
D05A	Enumclaw	49.97	61	eP	P	14 51 47.9	+1.5
	comp=Z,64nm,0.8s						
E04D	Cinebar	50.03	62	P	P	14 51 48.8	+1.9
	baz=307,SNR=17						
BVAR	Borovoye Array	50.03	308	P	P	14 51 44.6	-2.2
	comp=Z,4.5nm,0.5s,baz=50,slow=7.1,SNR=26						
BVAR				PcP	PcP	14 53 04.8	-0.2
	comp=Z,3.4nm,0.4s,baz=74,slow=2.9,SNR=10						
BRVK	Borovoye	50.06	308	eP	P	14 51 44.4	-2.7
BRVK				epP	pP	14 52 13.0	-0.6
BRVK	Borovoye	50.06	308	d iP	P	14 51 45.4	-1.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
F04D	Rainier, OR	50.07	63	P	P	14 51 48.9	+1.7
	baz=308						
C06D	Leavenworth	50.12	60	P	P	14 51 49.1	+1.4
	baz=307						
LON	Longmire	50.33	62	eP	P	14 51 50.0	+0.8
	comp=Z,12nm,0.9s						
LON	Longmire	50.33	62	eP	P	14 51 50.1	+0.8
LON				pmax	pmax		
	comp=Z,12nm,0.9s						
G03D	McMinnville, O	50.45	64	P	P	14 51 52.0	+1.9
	baz=308						
LTY	Liberty	50.64	61	eP	P	14 51 52.3	+0.7
	comp=Z,24nm,0.6s						
I02D	Swisshome	50.80	66	P	P	14 51 54.8	+2.0
	baz=308						
F05D	White Salmon	51.05	63	P	P	14 51 56.5	+1.9
	baz=308						
H04D	Lebanon	51.17	65	P	P	14 51 57.3	+1.8
	baz=309,SNR=11						
KEBM	Edson Butte	51.29	67	eP	P	14 51 58.8	+2.2
	comp=Z,70nm,0.9s						
I03D	Drain, OR	51.34	66	P	P	14 51 59.0	+2.2
	baz=309,SNR=9.9						
J01E	Myrtle Point	51.34	67	P	P	14 51 59.1	+2.3
	baz=309,SNR=6.6						
H04A	Detroit Lake	51.38	64	eP	P	14 51 58.2	+1.0
	comp=Z,59nm,1.0s						
G05D	Wamic, OR	51.52	63	P	P	14 51 59.9	+1.7
	baz=309,SNR=15						
C09A	Chrisman Ranch	51.60	59	eP	P	14 51 59.3	+0.6
	comp=Z,51nm,1.1s						
D08A	Wollman Farm,	51.71	60	eP	P	14 52 00.2	+0.7
	comp=Z,26nm,1.0s						
DAG	Danmarks Havn	51.75	359	i P	P	14 51 59.4	0.0
DAG	Danmarks Havn	51.75	359	i P	P	14 51 59.4	0.0
K02D	Willamette Mer	51.79	67	P	P	14 52 02.3	+2.0
	baz=309,SNR=8.0						
HAWA	Hanford	51.79	61	eP	P	14 52 01.1	+1.0
	comp=Z,43nm,1.0s						
I04A	Tendick Farm,	51.81	65	P	P	14 52 02.3	+1.9
	baz=309,SNR=11						
KULLO	Kullorsuaq	51.84	11	⇑iP	P	14 51 59.9	-0.2
KULLO				pmax	pmax		
	comp=Z,38nm,0.6s						
KULLO	Kullorsuaq	51.84	11	⇑iP	P	14 51 59.9	-0.2
	comp=Z,38nm,0.6s						
F07A	Phinny Hill Vi	51.88	62	eP	P	14 52 02.0	+1.2
	comp=Z,95nm,0.8s						
G06A	Carlson Farm,	51.90	63	eP	P	14 52 02.0	+1.0
	comp=Z,8.7nm,0.8s						
NEW	Newport	51.92	58	eP	P	14 52 01.9	+0.7
	comp=Z,38nm,1.1s						
NEW	Newport	51.92	58	eP	P	14 52 01.9	+0.7
NEW				pmax	pmax		
	comp=Z,38nm,1.1s						
NEW	Newport	51.92	58	P	P	14 52 02.1	+1.0
	baz=308,SNR=17						
E08A	Dider Farm, El	51.98	61	eP	P	14 52 02.3	+0.8
	comp=Z,36nm,0.9s						
I05D	Terrebonne, OR	52.07	64	P	P	14 52 03.9	+1.6
	baz=309,SNR=14						
L02E	Cave Junction	52.16	67	P	P	14 52 05.3	+2.3
	baz=310,SNR=10						
SVE	Sverdlovsk	52.21	316	eP	P	14 52 01.5	-1.6
SVE				pmax	pmax		
	comp=Z,12nm,1.1s						
HUMO	Hull Mountain	52.25	67	eP	P	14 52 05.7	+2.0
	comp=Z,41nm,1.1s						
J04D	Umpqua Nationa	52.33	66	P	P	14 52 06.7	+2.2
	baz=310,SNR=29						
KRMB	Red Mountain	52.39	68	eP	P	14 52 06.5	+1.7
E09A	Wood Farm, Sta	52.46	60	eP	P	14 52 05.9	+0.8
	comp=Z,66nm,0.9s						
PINE	Pine Mountain	52.64	64	eP	P	14 52 08.6	+1.9
	comp=Z,41nm,0.8s						
G08A	Pilot Rock	52.79	62	eP	P	14 52 08.6	+0.9
	comp=Z,18nm,1.0s						
J05D	Fort Rock, OR	52.80	65	P	P	14 52 10.3	+2.5
	baz=310,SNR=25						
L04D	Klamath Falls	52.87	67	P	P	14 52 10.5	+2.1
	baz=310,SNR=29						
KHMM	Horse Mountain	52.91	69	eP	P	14 52 11.0	+2.3
	comp=Z,77nm,1.1s						
YBH	Yreka Blue Hor	52.95	67	P	P	14 52 11.5	+2.6
	comp=Z,41nm,0.9s,baz=349,slow=4.7,SNR=56						
YBH	Yreka Blue Hor	52.95	67	eP	P	14 52 10.8	+1.9
	comp=Z,55nm,1.0s						
YBH	Yreka Blue Hor	52.95	67	eP	P	14 52 10.8	+1.9
YBH				pmax	pmax		
	comp=Z,55nm,1.0s						
M02C	Callahan	53.08	68	P	P	14 52 12.8	+2.9
	baz=310,SNR=16						
WALA	Waterton Lakes	53.09	55	eP	P	14 52 10.8	+0.9
	comp=Z,45nm,0.6s						
KDJ	Kajisay	53.10	293	epP	pP	14 52 36.4	-0.6
I07A	Izee	53.26	63	eP	P	14 52 11.4	+0.3
	comp=Z,11nm,1.0s						
F10A	Beach Ranch, E	53.30	60	eP	P	14 52 11.8	+0.4
	comp=Z,20nm,0.9s						
KMRM	Mail Ridge	53.35	69	eP	P	14 52 13.8	+2.1
	comp=Z,43nm,0.9s						
ARU	Arti	53.35	317	P	P	14 52 09.2	-2.3
ARU				*PP	pP	14 52 35.2	-3.2
ARU				S	S	14 59 32.2	-2.1
M04C	Macdoel	53.41	67	P	P	14 52 14.7	+2.4
	baz=310,SNR=29						
N02D	Trinity Center	53.44	68	P	P	14 52 15.2	+2.7
	baz=311,SNR=16						
BOOM	Boomskoye usch	53.57	295	eP	P	14 52 13.5	-0.1
BOOM				epP	pP	14 52 40.4	0.0
BOOM	Boomskoye usch	53.57	295	eP	P	14 52 13.5	-0.1
BOOM				e*PP	pP	14 52 40.4	0.0
KCPM	Cahto Peak	53.77	70	eP	P	14 52 15.4	+0.5
	comp=Z,131nm,1.6s						
WDC	Whiskeytown Da	53.79	68	eP	P	14 52 16.0	+1.1
	comp=Z,44nm,1.0s						
WDC	Whiskeytown Da	53.79	68	eP	P	14 52 16.0	+1.1
WDC				pmax	pmax		
	comp=Z,44nm,1.0s						
O02D	Mt. Diablo Mer	53.91	69	P	P	14 52 18.5	+2.6
	baz=311,SNR=15						
APA	Apatity	53.91	337	⇓iP	P	14 52 11.8	-3.6
APA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BMO	Blue Mountains	53.97	61	eP	P	14 52 17.4	+1.1
	comp=Z,41nm,1.1s						
BMO	Blue Mountains	53.97	61	eP	P	14 52 17.4	+1.1
BMO				pmax	pmax		
	comp=Z,41nm,1.1s						
PANO	Nakornpanom	54.02	251	P	P	14 52 18.4	+1.6
	comp=Z,1.2nm,1.2s						
ARA0	ARCESS Array S	54.10	341	eP	P	14 52 16.4	-0.3
ARA0				epP	pP	14 52 43.4	-0.3
ARA0				ePcP	PcP	14 53 20.0	0.0
ARCES	ARCESS Array B	54.10	341	P	P	14 52 16.4	-0.3
	comp=Z,0.9nm,0.6s,baz=62,slow=8.3,SNR=3.2						
ARCES				pP	pP	14 52 43.4	-0.4
	comp=Z,5.9nm,1.0s,baz=43,slow=11,SNR=3.9						
ARCES				PcP	PcP	14 53 20.0	0.0
	comp=Z,2.2nm,0.5s,baz=24,slow=4.2,SNR=9.7						
NONG	Nongkai	54.17	253	P	P	14 52 19.1	+1.2
	comp=Z,0.7nm,1.1s						
MOD	Modoc Plateau	54.21	66	eP	P	14 52 20.1	+2.0
	comp=Z,113nm,0.8s						
AAK	Ala-Archa	54.29	296	eP	P	14 52 17.5	-1.3
AAK				epP	pP	14 52 44.9	-0.8
AAK	Ala-Archa	54.29	296	eP	P	14 52 17.5	-1.3
AAK				e*PP	pP	14 52 44.9	-0.8
J08A	Circle Bar Ran	54.29	63	eP	P	14 52 20.3	+1.6
	comp=Z,36nm,1.2s						
O03E	Paynes Creek	54.40	68	P	P	14 52 21.1	+1.7
	baz=311,SNR=41						
MSO	Missoula	54.50	57	eP	P	14 52 21.2	+1.1
	comp=Z,50nm,1.1s						
MSO	Missoula	54.50	57	P	P	14 52 21.3	+1.2
	baz=311,SNR=32						
SKNT	Sakolnakorn	54.53	251	P	P	14 52 21.4	+0.9
	comp=Z,74nm,1.3s						
PLID	Pearl Lake	54.53	60	eP	P	14 52 21.4	+0.9
	comp=Z,47nm,0.8s						
WVOR	Wild Horse Val	54.80	64	eP	P	14 52 23.9	+1.5
	comp=Z,88nm,0.9s						
WVOR	Wild Horse Val	54.80	64	eP	P	14 52 23.9	+1.5
WVOR				pmax	pmax		
	comp=Z,87nm,0.9s						
GDXM	Geysers	54.81	70	eP	P	14 52 24.6	+2.2
	comp=Z,56nm,1.0s						
ORV	Oroville	55.06	69	eP	P	14 52 25.2	+1.0
	comp=Z,43nm,0.9s						
ORV	Oroville	55.06	69	eP	P	14 52 25.2	+1.0
ORV				pmax	pmax		
	comp=Z,43nm,0.9s						
FFC	Flin Flon	55.07	44	eP	P	14 52 24.7	+0.7
	comp=Z,428nm,1.0s						
FFC	Flin Flon	55.07	44	i P	P	14 52 25.1	+1.1
PAYA	Payao	55.14	257	P	P	14 52 27.6	+2.7
	comp=Z,46µm,0.8s						
SUMG	Summit	55.49	6	eP	P	14 52 27.5	+0.3
	comp=Z,79nm,1.4s						
SUMG	Summit	55.49	6	i P	P	14 52 27.6	+0.4
SUMG				pmax	pmax		
	comp=Z,54nm,0.7s						
SUMG	Summit	55.49	6	i P	P	14 52 27.6	+0.4
	comp=Z,54nm,0.7s						
FCC	Fort Churchill	55.50	37	eP	P	14 52 27.4	+0.5
	comp=Z,101nm,1.1s						
FCC	Fort Churchill	55.50	37	eP	P	14 52 27.4	+0.5
FCC				pmax	pmax		
	comp=Z,101nm,1.1s						
KSH	Kashi	55.50	292	P	P	14 52 30.1	+2.7
KSH				pP	pP	14 52 57.8	+3.3
KSH				sP	sP	14 53 09.8	+2.8
KSH				PcP	PcP	14 53 29.4	+3.3
KSH				S	S	15 00 06.3	+2.5
KSH				SS	SS	15 03 51.9	+2.3
KSH				pmax	pmax		
	comp=Z,32nm,1.7s						
KSH				pmax	pmax		
	comp=Z,810nm,10.1s						
KSH				LR	LR		
	comp=Z,11µm,16.2s						
KSH				LR	LR		
	comp=Z,15µm,17.3s						
KSH				LR	LR		
	comp=Z,21µm,23.1s						
BEKR	Beckworth	55.52	68	eP	P	14 52 28.8	+1.2
	comp=Z,56nm,1.0s						
HRY	Holter Researc	55.68	56	eP	P	14 52 29.9	+1.3
AFDM	Forest Hills D	55.77	69	eP	P	14 52 30.5	+1.2
	comp=Z,24nm,1.1s						
EGMT	Eagleton	55.87	54	eP	P	14 52 30.7	+0.8
	comp=Z,80nm,1.4s						
EGMT	Eagleton	55.87	54	P	P	14 52 30.9	+1.0
	baz=312,SNR=18						
UTTA	Uttaradit	55.97	255	P	P	14 52 32.0	+1.2
	comp=Z,23µm,0.9s,comp=Z,225µm						
CMMT	Chiang Mai	56.11	257	P	P	14 52 32.6	+0.7
	comp=Z,15nm,0.8s						
CHTO	Chiang Mai	56.11	257	eP	P	14 52 31.8	-0.1
	comp=Z,19nm,0.8s						
CHTO	Chiang Mai	56.11	257	eP	P	14 52 31.8	-0.1
CHTO				pmax	pmax		
	comp=Z,19nm,0.8s						
DLMT	Dillon	56.17	58	eP	P	14 52 32.6	+0.4
	comp=Z,21nm,0.9s						
RUBR	Rubicon Trail	56.18	68	eP	P	14 52 33.5	+1.1
	comp=Z,25nm,0.9s						
PAHR	Pah Rah Range	56.18	67	eP	P	14 52 33.3	+1.0
	comp=Z,52nm,1.1s						
KK31	Karatay Array	56.20	298	eP	P	14 52 31.3	-0.9
	comp=Z,15nm,1.1s						
KK31	Karatay Array	56.20	298	eP	P	14 52 31.3	-0.9
KK31				pmax	pmax		
	comp=Z,15nm,1.1s						
KKAR	Karatay Array	56.20	298	eP	P	14 52 31.1	-1.1
	comp=Z,15nm,1.1s						
KKAR	Karatay Array	56.20	298	eP	P	14 52 31.1	-1.1
KKAR				pmax	pmax		
	comp=Z,15nm,1.1s						
VCNR	Virginia City	56.31	68	eP	P	14 52 34.9	+1.6
	comp=Z,40nm,0.9s						
CM31	Chiang Mai Arr	56.39	257	eP	P	14 52 33.8	-0.1
	comp=Z,9.5nm,0.7s						
CMAR	Chiang Mai Arr	56.39	257	P	P	14 52 34.5	+0.7
	comp=Z,8.3nm,0.8s,baz=29,slow=6.8,SNR=38						
CMAR	Chiang Mai Arr	56.39	257	i P	P	14 52 34.9	+1.1
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MCMT	McKenzie Canyo	56.39	59	eP	P	14 52 34.7	+0.9
HLID	Hailey	56.39	61	eP	P	14 52 35.1	+1.3
	comp=Z,28nm,1.1s						
HLID	Hailey	56.39	61	P	P	14 52 35.6	+1.8
	baz=312,SNR=33						
PNTR	Pine Nut	56.47	68	eP	P	14 52 35.5	+1.0
	comp=Z,50nm,0.9s						
BOZ	Bozeman (W)	56.52	57	eP	P	14 52 36.0	+1.3
	comp=Z,32nm,0.6s						
BOZ	Bozeman (W)	56.52	57	eP	P	14 52 36.0	+1.3
BOZ				pmax	pmax		
	comp=Z,32nm,0.6s						
BOZ	Bozeman (W)	56.52	57	P	P	14 52 36.3	+1.7
	baz=312,SNR=62						
CHAI	Chaiyaphum	56.55	252	P	P	14 52 35.9	+1.0
	comp=Z,56µm,1.2s						
PBKT	Sadao Pong	56.63	254	P	P	14 52 37.2	+1.7
	comp=Z,8.4nm,1.1s						
CMB	Columbia Colle	56.73	69	eP	P	14 52 37.7	+1.6
	comp=Z,33nm,1.1s						
CMB	Columbia Colle	56.73	69	eP	P	14 52 37.7	+1.6
CMB				pmax	pmax		
	comp=Z,33nm,1.1s						
YERR	Yerington	56.75	68	eP	P	14 52 38.0	+1.5
	comp=Z,60nm,1.1s						
BMN	Battle Mountai	56.93	65	eP	P	14 52 39.4	+1.8
	comp=Z,27nm,0.9s						
BMN	Battle Mountai	56.93	65	eP	P	14 52 39.4	+1.8
BMN				pmax	pmax		
	comp=Z,27nm,0.9s						
WAKR	Walker	56.96	68	eP	P	14 52 39.8	+1.9
	comp=Z,48nm,1.0s						
QLMT	Earthquake Lak	57.14	58	eP	P	14 52 40.6	+1.6
YHB	Horse Butte	57.31	58	eP	P	14 52 41.2	+0.8
	comp=Z,186nm,1.8s						
KVN	Kaiserville	57.36	67	eP	P	14 52 42.3	+1.6
	comp=Z,51nm,1.0s						
KVN	Kaiserville	57.36	67	eP	P	14 52 42.3	+1.6
KVN				pmax	pmax		
	comp=Z,51nm,1.0s						
RYN	Ryan	57.40	68	eP	P	14 52 42.8	+1.8
	comp=Z,33nm,0.9s						
GCMT	Greycliff	57.41	56	eP	P	14 52 42.7	+1.8
YHH	Holmes Hill	57.47	58	eP	P	14 52 43.0	+1.4
	comp=Z,31nm,0.7s						
JIRN	Jiri	57.48	274	eP	P	14 52 41.6	-0.3
	comp=Z,37nm,0.7s						
ABKAR	Akbulak array	57.50	310	eP	P	14 52 39.4	-1.8
ABKAR				epP	pP	14 53 07.5	-1.0
AKTO	Aktyubinsk	57.60	312	P	P	14 52 39.6	-2.4
	comp=Z,1.4nm,0.3s,baz=69,slow=10,SNR=7.4						
AKTO				pP	pP	14 53 08.1	-1.0
	comp=Z,4.9nm,0.9s,baz=36,slow=7.4,SNR=4.6						
AKTO				PcP	PcP	14 53 33.2	-0.7
	comp=Z,3.6nm,0.4s,baz=75,slow=5.7,SNR=9.3						
YNR	Norris Junctio	57.61	58	eP	P	14 52 44.1	+1.7
	comp=Z,53nm,1.3s						
NV01	Mina Array Sit	57.66	68	eP	P	14 52 44.9	+2.0
NVAR	Mina Array Bea	57.66	68	P	P	14 52 44.9	+2.0
	comp=Z,20nm,0.8s,baz=294,slow=7.3,SNR=126						
YFT	Old Faithful	57.71	58	eP	P	14 52 45.3	+2.2
	comp=Z,42nm,0.8s						
NV11	Mina Array Sit	57.75	68	eP	P	14 52 45.1	+1.8
	comp=Z,3.0nm,1.1s						
MDPB	Devils Postpil	57.76	69	eP	P	14 52 45.3	+1.7
	comp=Z,38nm,1.2s						
OMMB	Old Mammoth Mi	57.82	69	eP	P	14 52 45.8	+1.7
	comp=Z,16nm,1.0s						
ELK	Elko	57.83	64	eP	P	14 52 45.9	+1.9
	comp=Z,12nm,0.8s						
ELK	Elko	57.83	64	eP	P	14 52 45.9	+1.9
ELK				pmax	pmax		
	comp=Z,12nm,0.8s						
YPP	Pitchstone Pla	57.84	58	eP	P	14 52 46.2	+2.1
	comp=Z,94nm,2.0s						
LKWY	Lake	57.86	58	eP	P	14 52 46.5	+2.3
	comp=Z,40nm,0.8s						
LKWY	Lake	57.86	58	eP	P	14 52 46.5	+2.3
LKWY				pmax	pmax		
	comp=Z,40nm,0.8s						
H17A	Grant Village	57.88	58	eP	P	14 52 47.3	+2.9
	comp=Z,75nm,1.1s						
H17A	Grant Village	57.88	58	P	P	14 52 47.6	+3.3
	baz=313,SNR=26						
MLAC	Mammoth, Mammo	57.90	69	P	P	14 52 47.2	+2.6
	baz=314						
KKN	Kakani	57.95	275	eP	P	14 52 44.5	-0.5
	comp=Z,45nm,0.6s						
IMW	Indian Meadow	58.03	58	eP	P	14 52 47.4	+1.9
	comp=Z,83nm,1.5s						
FLWY	Flagg Ranch	58.03	58	eP	P	14 52 46.9	+1.6
	comp=Z,50nm,1.1s						
PKI	Pulchoki	58.03	275	eP	P	14 52 44.3	-1.4
	comp=Z,17nm,0.6s						
PKIN	Phulchoki	58.03	275	eP	P	14 52 44.5	-1.2
	comp=Z,16nm,0.6s						
RLMT	Red Lodge	58.07	56	eP	P	14 52 47.5	+1.9
	comp=Z,87nm,1.1s						
RLMT	Red Lodge	58.07	56	P	P	14 52 47.8	+2.2
	baz=313,SNR=29						
BTK	Batken	58.07	295	eP	P	14 52 43.9	-1.6
BTK				epP	pP	14 53 11.8	-0.9
BTK	Batken	58.07	295	eP	P	14 52 43.9	-1.6
BTK				e*PP	pP	14 53 11.9	-0.9
FXWY	Fox Creek	58.16	59	eP	P	14 52 48.2	+2.0
	comp=Z,27nm,0.9s						
UMPA	Umpang Tak	58.17	255	P	P	14 52 49.7	+3.3
	comp=Z,42µm,0.7s						
DMN	Daman	58.19	275	eP	P	14 52 45.9	-0.8
	comp=Z,27nm,0.5s						
GKN	Gorkha	58.20	276	eP	P	14 52 46.7	0.0
	comp=Z,18nm,0.4s						
MOOW	Moose Ponds	58.23	58	eP	P	14 52 48.6	+1.9
	comp=Z,38nm,1.2s						
TPAW	Teton Pass	58.30	59	eP	P	14 52 48.8	+1.5
	comp=Z,36nm,0.8s						
DGMT	Dagmar	58.31	51	eP	P	14 52 48.0	+1.0
	comp=Z,57nm,0.8s						
DGMT	Dagmar	58.31	51	P	P	14 52 48.2	+1.2
	baz=314,SNR=7.2						
PAGB	Antelope Grade	58.38	71	eP	P	14 52 49.3	+1.6
	comp=Z,34nm,1.1s						
LOHW	Long Hollow	58.40	58	eP	P	14 52 49.9	+2.0
	comp=Z,69nm,1.3s						
SNOW	Snow King Moun	58.42	59	eP	P	14 52 49.6	+1.5
	comp=Z,85nm,1.4s						
REDW	Red Top Meadow	58.44	59	eP	P	14 52 50.1	+1.9
	comp=Z,81nm,1.3s						
HVU	Hansel Valley	58.48	61	eP	P	14 52 50.0	+1.6
	comp=Z,25nm,1.2s						
HVU	Hansel Valley	58.48	61	eP	P	14 52 50.0	+1.6
HVU				pmax	pmax		
	comp=Z,25nm,1.2s						
DANN	Dangsing	58.50	277	eP	P	14 52 49.3	+0.4
	comp=Z,36nm,0.5s						
LAO	LASA Array	58.54	53	eP	P	14 52 50.4	+1.7
	comp=Z,88nm,1.0s						
LAO	LASA Array	58.54	53	P	P	14 52 50.5	+1.8
	baz=314,SNR=14						
TIN	Tinemaha, Big	58.65	69	P	P	14 52 51.5	+1.9
	baz=314						
SMMC	Simmler	58.82	71	P	P	14 52 52.9	+2.1
	baz=314						
BGU	Big Grassy Mou	58.93	62	eP	P	14 52 52.5	+0.9
	comp=Z,7.1nm,0.8s						
KOLN	Koldanda	59.01	276	eP	P	14 52 52.2	-0.1
	comp=Z,14nm,0.5s						
GAR	Garm	59.08	295	eP	P	14 52 51.2	-1.4
GAR				epP	pP	14 53 18.5	-1.5
GAR	Garm	59.08	295	eP	P	14 52 51.2	-1.4
GAR				e*PP	pP	14 53 18.5	-1.5
CWC	Cottonwood Cre	59.16	69	P	P	14 52 55.0	+1.8
	baz=314						
GRAC	Grapevine Rang	59.19	68	P	P	14 52 55.4	+2.1
	baz=314,SNR=8.4						
PKM	Mcpherson Peak	59.22	72	P	P	14 52 55.5	+1.9
	baz=314,SNR=5.3						
HWUT	Hardware Ranch	59.26	61	eP	P	14 52 55.7	+1.8
	comp=Z,49nm,1.2s						
R11A	Troy Canyon, C	59.27	66	eP	P	14 52 55.2	+1.2
	comp=Z,32nm,1.1s						
R11A	Troy Canyon, C	59.27	66	P	P	14 52 55.6	+1.6
	baz=314,SNR=50						
FRB	Frobisher Bay	59.36	22	P	P	14 52 53.3	-0.6
	comp=Z,22nm,0.5s,baz=329,slow=8.2,SNR=21						
ISA	Isabella, Lake	59.47	70	eP	P	14 52 55.8	+0.6
	comp=Z,26nm,1.1s						
ISA	Isabella, Lake	59.47	70	eP	P	14 52 55.8	+0.6
ISA				pmax	pmax		
	comp=Z,26nm,1.1s						
ISA	Isabella, Lake	59.47	70	P	P	14 52 56.1	+0.9
	baz=314,SNR=9.3						
BW06	Boulder Array	59.54	59	eP	P	14 52 57.1	+1.3
	comp=Z,41nm,0.8s						
BW06	Boulder Array	59.54	59	P	P	14 52 57.5	+1.7
	baz=314,SNR=64						
PD31	Pinedale Array	59.54	59	eP	P	14 52 57.4	+1.5
PDAR	Pinedale Array	59.54	59	P	P	14 52 57.4	+1.5
	comp=Z,27nm,0.7s,baz=320,slow=2.5,SNR=216						
DUG	Dugway, Tooele	59.55	63	eP	P	14 52 57.3	+1.5
	comp=Z,50nm,1.2s						
DUG	Dugway, Tooele	59.55	63	eP	P	14 52 57.3	+1.5
DUG				pmax	pmax		
	comp=Z,50nm,1.2s						
DUG	Dugway, Tooele	59.55	63	P	P	14 52 57.8	+1.9
	baz=314,SNR=34						
DAC	Darwin (Calif)	59.55	69	eP	P	14 52 59.2	+3.3
	comp=Z,30nm,1.4s						
DAC	Darwin (Calif)	59.55	69	eP	P	14 52 59.3	+3.3
DAC				pmax	pmax		
	comp=Z,30nm,1.4s						
ARVC	Arvin	59.63	71	P	P	14 52 57.4	+1.2
	baz=315						
TCUT	Toone Canyon	59.68	61	eP	P	14 52 58.0	+1.2
	comp=Z,22nm,0.9s						
SFJD	Kangerlussuaq	59.69	12	P	P	14 52 55.7	-0.5
	comp=Z,5.8nm,0.4s,baz=352,slow=6.4,SNR=7.8						
SFJD	Kangerlussuaq	59.69	12	i P	P	14 52 55.7	-0.5
MPMC	Manual Prospec	59.77	69	P	P	14 52 59.1	+1.6
	baz=315,SNR=26						
CTU	Camp Tracy	59.79	62	eP	P	14 52 59.1	+1.5
	comp=Z,35nm,1.2s						
FURC	Furnace Creek,	59.85	68	P	P	14 52 59.8	+2.1
	baz=315,SNR=42						
TPNV	Topopah Spring	59.86	68	eP	P	14 52 59.5	+1.4
TPNV	Topopah Spring	59.86	68	eP	P	14 52 59.5	+1.4
TPNV	Topopah Spring	59.86	68	P	P	14 52 59.8	+1.7
	baz=314,SNR=44						
SCZ2	Santa Cruz Isl	59.95	72	P	P	14 52 59.8	+1.3
	baz=315						
CHGR	Chuyangaron	59.97	295	eP	P	14 52 58.9	+0.3
	comp=Z,20nm,1.0s						
OSI	Osito Audit: C	60.05	71	eP	P	14 53 00.6	+1.4
	comp=Z,39nm,0.9s						

OSI	Osito Audit: C	60.05	71	P	P	14 53 01.0	+1.7
	baz=315,SNR=5.3						
LRMC	Laurel Mtn Rad	60.06	70	P	P	14 53 00.7	+1.4
	baz=315,SNR=9.7						
PSUT	Pine Spring	60.12	65	*e*P	P	14 53 01.3	+1.4
	comp=Z,12nm,0.9s						
NLU	North Lily Min	60.13	62	*e*P	P	14 53 01.5	+1.6
	comp=Z,30nm,1.0s						
BLG	Laguna Peak, P	60.20	72	P	P	14 53 01.5	+1.3
	baz=315						
EDW2	Edwards Air Fo	60.29	70	P	P	14 53 02.5	+1.6
	baz=315,SNR=20						
PHET	Kaeng Krachan	60.29	252	P	P	14 53 03.8	+2.8
	comp=Z,54µm,0.7s						
MPU	Maple Canyon	60.33	62	*e*P	P	14 53 02.7	+1.5
	comp=Z,45nm,1.2s						
DECC	Green Verdugo	60.53	71	P	P	14 53 04.1	+1.6
	baz=315						
SNCC	San Nicolas Is	60.54	73	P	P	14 53 04.0	+1.5
	baz=315						
SHOC	Shoshone, Teco	60.58	68	P	P	14 53 04.3	+1.5
	baz=315,SNR=9.2						
PASC	Pasadena Art C	60.68	71	*e*P	P	14 53 04.5	+1.1
	comp=Z,27nm,1.0s						
GSC	Goldstone, Bar	60.69	69	*e*P	P	14 53 04.8	+1.2
	comp=Z,40nm,1.1s						
GSC	Goldstone, Bar	60.69	69	*e*P	P	14 53 04.8	+1.2
GSC				pmax	pmax		
	comp=Z,40nm,1.1s						
GSC	Goldstone, Bar	60.69	69	P	P	14 53 05.2	+1.6
	baz=315,SNR=17						
FIA0	FINESS Array S	60.75	336	*e*P	P	14 53 02.9	-0.5
FIA0				*e*PcP	PcP	14 53 45.0	-1.3
FIA0	FINESS Array S	60.75	336	*e*P	P	14 53 02.9	-0.5
FIA0				*e*		14 53 45.0	
FINES	FINESS Array B	60.75	336	P	P	14 53 02.9	-0.5
	comp=Z,1.2nm,0.5s,baz=30,slow=8.8,SNR=9.7						
FINES				PcP	PcP	14 53 45.0	-1.3
	comp=Z,1.4nm,0.5s,baz=62,slow=3.5,SNR=5.3						
SHPR	Sheep Range	60.80	67	*e*P	P	14 53 05.9	+1.5
	comp=Z,27nm,1.2s						
ULM	Lac du Bonnet	60.87	45	P	P	14 53 05.2	+0.7
	comp=Z,15nm,0.5s,baz=311,slow=6.7,SNR=30						
ULM	Lac du Bonnet	60.87	45	*e*P	P	14 53 04.9	+0.4
	comp=Z,40nm,1.1s						
ULM	Lac du Bonnet	60.87	45	*e*P	P	14 53 04.9	+0.4
ULM				pmax	pmax		
	comp=Z,40nm,1.1s						
MDND	Maddock	60.93	49	P	P	14 53 06.5	+1.6
	baz=316						
BFSC	Mount Baldy Ra	60.94	71	P	P	14 53 06.7	+1.4
	baz=315,SNR=9.1						
TMUT	Trail Mountain	61.06	62	*e*P	P	14 53 07.8	+1.4
	comp=Z,29nm,0.9s						
MSU	Marysvale	61.08	64	*e*P	P	14 53 08.2	+1.9
MSU	Marysvale	61.08	64	*e*P	P	14 53 08.2	+1.9
CIS	Catalina Islan	61.09	72	P	P	14 53 07.4	+1.2
	baz=315						
CCUT	Cedar City	61.09	65	*e*P	P	14 53 08.0	+1.6
	comp=Z,24nm,1.2s						
TUQ	Turquoise Moun	61.11	69	P	P	14 53 08.1	+1.6
	baz=315,SNR=28						
NIL	Nilore	61.12	289	*e*P	P	14 53 05.7	-0.7
NIL				*e*pP	pP	14 53 33.0	-0.9
NIL	Nilore	61.12	289	*e*P	P	14 53 05.7	-0.7
NIL				*e**PP	pP	14 53 33.0	-0.9
P17A	Butcher Ranch,	61.20	62	*e*P	P	14 53 08.3	+1.2
	comp=Z,61nm,1.4s						
K22A	Casper	61.21	57	*e*P	P	14 53 08.1	+1.0
	comp=Z,40nm,1.4s						
K22A	Casper	61.21	57	P	P	14 53 08.3	+1.2
	baz=315,SNR=9.0						
SZCU	Shurtz Canyon	61.21	65	*e*P	P	14 53 08.7	+1.4
HEC	Hector,Ludlow	61.30	69	P	P	14 53 09.3	+1.6
	baz=315,SNR=8.6						
BBRC	Big Bear Solar	61.36	70	P	P	14 53 09.8	+1.5
	baz=315						
MTPU	Mount Pierson	61.41	64	*e*P	P	14 53 10.5	+1.8
	comp=Z,17nm,1.0s						
RSSD	Black Hills	61.44	54	*e*P	P	14 53 09.9	+1.2
	comp=Z,73nm,0.6s						
RSSD				*e*pP	pP	14 53 36.0	-0.3
RSSD	Black Hills	61.44	54	*e*P	P	14 53 09.9	+1.2
RSSD				*e**PP	pP	14 53 36.0	-0.3
RSSD				pmax	pmax		
	comp=Z,73nm,0.6s						
RSSD	Black Hills	61.44	54	P	P	14 53 10.0	+1.2
	baz=316						
RWWY	Rawlins	61.53	58	*e*P	P	14 53 10.3	+0.9
	comp=Z,19nm,0.9s						
LCMT	Little Creek M	61.53	66	*e*P	P	14 53 11.1	+1.7
	comp=Z,33nm,1.1s						
SRU	San Rafael Swe	61.57	62	*e*P	P	14 53 11.1	+1.5
	comp=Z,52nm,0.9s						
SRU	San Rafael Swe	61.57	62	*e*P	P	14 53 11.1	+1.5
SRU				pmax	pmax		
	comp=Z,52nm,0.9s						
MURC	Murrieta	61.66	71	P	P	14 53 11.5	+1.4
	baz=316,SNR=8.2						
GMRC	Granite Mounta	61.72	69	P	P	14 53 12.3	+1.6
	baz=316,SNR=36						
PKCU	Pink Cliffs	61.76	65	*e*P	P	14 53 13.0	+1.9
	comp=Z,22nm,1.1s						
KNB	Kanab	61.77	65	*e*P	P	14 53 12.9	+1.9
	comp=Z,39nm,1.2s						
KNB	Kanab	61.77	65	*e*P	P	14 53 12.9	+1.9
KNB				pmax	pmax		
	comp=Z,39nm,1.2s						
LDFC	Landfair	61.83	68	*e*P	P	14 53 12.5	+1.2
	comp=Z,68nm,1.0s						
BELC	Belle Mtn. Jos	62.08	70	P	P	14 53 14.1	+1.1
	baz=316,SNR=16						
O20A	White River Ci	62.09	60	*e*P	P	14 53 14.1	+1.0
	comp=Z,33nm,1.1s						
O20A	White River Ci	62.09	60	P	P	14 53 14.4	+1.3
	baz=316,SNR=9.7						
PFO	Pinyon Flats O	62.09	70	*e*P	P	14 53 14.1	+1.0
	comp=Z,29nm,1.4s						
PFO	Pinyon Flats O	62.09	70	*e*P	P	14 53 14.1	+1.0
PFO				pmax	pmax		
	comp=Z,29nm,1.4s						
PFO	Pinyon Flats O	62.09	70	P	P	14 53 14.2	+1.1
	baz=316,SNR=6.3						
109C	Camp Elliot, M	62.22	71	P	P	14 53 15.3	+1.5
	baz=316						
AGMN	Agassiz Nation	62.31	46	*e*P	P	14 53 14.6	+0.4
	comp=Z,28nm,0.8s						
AGMN	Agassiz Nation	62.31	46	P	P	14 53 14.7	+0.5
	baz=318,SNR=16						
IRM	Iron Mountain	62.47	69	P	P	14 53 17.1	+1.6
	baz=316,SNR=26						
U15A	North Rim	62.49	65	*e*P	P	14 53 17.4	+1.5
	comp=Z,30nm,1.4s						
W13A	Hualapai Mount	62.52	68	*e*P	P	14 53 17.2	+1.2
	comp=Z,18nm,1.0s						
W13A				*e*pP	pP	14 53 43.7	+0.1
MONP2	Monument Peak	62.62	71	P	P	14 53 18.1	+1.3
	baz=316,SNR=8.7						
BAR	Barrett	62.63	71	*e*P	P	14 53 17.5	+0.9
	comp=Z,24nm,1.2s						
BC3	Big Chuckawall	62.65	70	P	P	14 53 18.0	+1.2
	baz=316,SNR=21						
PHWY	Pilot Hill	62.73	57	*e*P	P	14 53 17.8	+0.3
	comp=Z,8.8nm,1.3s						
N23A	Red Feather La	62.77	58	*e*P	P	14 53 19.1	+1.4
	comp=Z,29nm,0.8s						
N23A	Red Feather La	62.77	58	P	P	14 53 19.4	+1.7
	baz=316,SNR=27						
PDMCI	Parker Dam,Lak	62.94	68	P	P	14 53 20.2	+1.6
	baz=316,SNR=12						
SWSC	Sam W. Stewart	62.95	70	P	P	14 53 19.8	+1.2
	baz=316						
IKP	In-Ko-Pah, Jac	62.98	71	P	P	14 53 20.5	+1.5
	baz=316						
Y12C	Blythe	63.12	69	*e*P	P	14 53 21.2	+1.4
	comp=Z,32nm,1.0s						
Y12C	Blythe	63.12	69	P	P	14 53 21.5	+1.7
	baz=316,SNR=5.5						
GLA	Glamis	63.44	70	*e*P	P	14 53 23.5	+1.5
	comp=Z,52nm,1.0s						
GLA	Glamis	63.44	70	*e*P	P	14 53 23.5	+1.5
GLA				pmax	pmax		
	comp=Z,52nm,1.0s						
GLA	Glamis	63.44	70	P	P	14 53 23.6	+1.7
	baz=316,SNR=9.5						
SMCO	Snowmass	63.46	60	*e*P	P	14 53 23.1	+0.7
	comp=Z,23nm,0.9s						
WUAZ	Wupatki	63.66	66	*e*P	P	14 53 25.1	+1.6
	comp=Z,42nm,1.3s						
WUAZ	Wupatki	63.66	66	P	P	14 53 25.6	+2.0
	baz=316,SNR=21						
SUSD	Miller	63.72	51	P	P	14 53 24.1	+0.5
	baz=318						
ISCO	Idaho Springs	63.73	59	*e*P	P	14 53 25.7	+1.6
	comp=Z,36nm,1.1s						
ISCO	Idaho Springs	63.73	59	*e*P	P	14 53 25.7	+1.6
ISCO				pmax	pmax		
	comp=Z,36nm,1.1s						
ISCO	Idaho Springs	63.73	59	P	P	14 53 26.1	+2.0
	baz=317,SNR=27						
Y14A	Wickenburg	63.86	68	*e*P	P	14 53 26.4	+1.7
	comp=Z,27nm,1.0s						
MVCO	Mesa Verde	64.05	62	*e*P	P	14 53 27.4	+1.2
	comp=Z,24nm,0.9s						
MVCO	Mesa Verde	64.05	62	P	P	14 53 27.6	+1.5
	baz=317,SNR=11						
113A	Mohawk Valley,	64.26	69	*e*P	P	14 53 28.4	+1.1
	comp=Z,21nm,1.1s						
SKLT	Songkhla	64.31	247	P	P	14 53 31.3	+3.5
	comp=Z,14nm,1.7s						
NB2	NORSAR Subarra	64.41	343	P	P	14 53 26.9	-0.9
	comp=Z,0.5nm,0.4s,baz=30,slow=6.5						
NB200	NORSAR Array S	64.41	343	*e*P	P	14 53 26.9	-0.9
NOA	NORSAR Array B	64.41	343	P	P	14 53 26.9	-0.9
	comp=Z,0.6nm,0.5s,baz=26,slow=6.4,SNR=6.0						
X16A	Lo Mia Camp, P	64.41	66	*e*P	P	14 53 30.0	+1.5
	comp=Z,23nm,1.0s						
EYMN	Ely	64.51	44	*e*P	P	14 53 29.0	+0.4
EYMN	Ely	64.51	44	P	P	14 53 29.1	+0.4
	baz=320,SNR=74						
S22A	4UR Ranch, Cre	64.57	61	*e*P	P	14 53 31.1	+1.5
	comp=Z,34nm,1.2s						
S22A	4UR Ranch, Cre	64.57	61	P	P	14 53 31.5	+1.9
	baz=317,SNR=22						
Q24A	Divide	64.59	59	P	P	14 53 31.1	+1.3
	baz=317,SNR=5.4						
HFS	Hagfors	64.76	341	P	P	14 53 29.0	-1.1
	comp=Z,1.2nm,0.3s,baz=45,slow=4.2,SNR=15						
HFS	Hagfors	64.76	341	P	P	14 53 29.0	-1.1
OGNE	Ogallala	64.76	55	*e*P	P	14 53 31.9	+1.4
	comp=Z,77nm,0.8s						
OGNE	Ogallala	64.76	55	P	P	14 53 31.8	+1.2
	baz=318,SNR=8.0						
W18A	Petrified Fore	64.87	65	*e*P	P	14 53 32.8	+1.4
	comp=Z,22nm,1.1s						
W18A	Petrified Fore	64.87	65	P	P	14 53 33.3	+1.9
	baz=317,SNR=7.9						
X18A	Snowflake	65.18	65	*e*P	P	14 53 34.9	+1.4
	comp=Z,36nm,1.0s						
SDCO	Great Sand Dun	65.29	60	*e*P	P	14 53 35.5	+1.3
	comp=Z,17nm,1.2s						
SDCO	Great Sand Dun	65.29	60	P	P	14 53 35.7	+1.5
	baz=318,SNR=21						
ECSD	EROS Data Cent	65.37	50	*e*P	P	14 53 34.6	+0.3
	comp=Z,58nm,1.0s						
ECSD	EROS Data Cent	65.37	50	P	P	14 53 34.8	+0.5
	baz=319,SNR=40						
214A	Organ Pipe Nat	65.41	69	P	P	14 53 36.4	+1.6
	baz=317,SNR=15						
E38A	The Farm, Brul	65.51	45	*e*P	P	14 53 35.1	0.0
	comp=Z,66nm,0.9s						
E38A	The Farm, Brul	65.51	45	P	P	14 53 35.3	+0.1
	baz=321,SNR=13						
C40A	Isle Royale Na	65.53	43	*e*P	P	14 53 34.9	-0.3
	comp=Z,20nm,0.8s						
C40A	Isle Royale Na	65.53	43	P	P	14 53 35.0	-0.2
	baz=321,SNR=15						
IVI	Ivigtut	65.55	13	*e*P	P	14 53 35.0	-0.1
	comp=Z,17nm,0.7s						
KSCO	Kaye Shedlock'	65.88	57	P	P	14 53 38.8	+1.0
	baz=318						
SPMN	Marine on St.	66.01	47	P	P	14 53 38.8	+0.4
	baz=320,SNR=7.4						
TUC	Tucson	66.32	68	*e*P	P	14 53 41.8	+1.1
	comp=Z,22nm,1.3s						
TUC	Tucson	66.32	68	*e*P	P	14 53 41.8	+1.1
TUC				pmax	pmax		
	comp=Z,22nm,1.3s						
TUC	Tucson	66.32	68	P	P	14 53 42.1	+1.4
	baz=318						
T25A	Trinidad	66.32	60	*e*P	P	14 53 41.5	+0.7
	comp=Z,44nm,1.4s						
T25A	Trinidad	66.32	60	P	P	14 53 42.0	+1.2
	baz=318,SNR=16						
BGNE	Belgrade	66.38	53	*e*P	P	14 53 41.0	+0.2
	comp=Z,75nm,1.0s						
BGNE	Belgrade	66.38	53	P	P	14 53 41.3	+0.4
	baz=319						
D41A	Chassel	66.45	43	*e*P	P	14 53 41.3	+0.2
	comp=Z,169nm,1.5s						
D41A	Chassel	66.45	43	P	P	14 53 41.5	+0.4
	baz=322,SNR=11						
G39A	Holcombe	66.70	46	P	P	14 53 42.9	+0.1
	baz=321,SNR=11						
ANMO	Albuquerque	66.83	63	*e*P	P	14 53 45.1	+1.1
	comp=Z,23nm,1.3s						
ANMO	Albuquerque	66.83	63	*ce*P	P	14 53 44.7	+0.7
ANMO				pmax	pmax		
	comp=Z,19nm,1.3s						
ANMO	Albuquerque	66.83	63	P	P	14 53 45.3	+1.3
	baz=318						
LAZ	Ladron	66.85	64	*e*P	P	14 53 45.9	+1.7
COWI	Conover	66.96	44	*e*P	P	14 53 44.4	0.0
	comp=Z,36nm,0.9s						
LENM	Lemitar	67.11	64	*e*P	P	14 53 47.2	+1.4
G40A	Rib Lake	67.14	45	*e*P	P	14 53 45.3	-0.3
	comp=Z,36nm,1.3s						
G40A	Rib Lake	67.14	45	P	P	14 53 45.6	0.0
	baz=322,SNR=14						
BNM	Barren Site	67.32	63	*e*P	P	14 53 47.5	+0.3
CBKS	Cedar Bluff	67.53	56	*e*P	P	14 53 48.1	-0.1
	comp=Z,32nm,1.0s						
CBKS	Cedar Bluff	67.53	56	*e*P	P	14 53 48.1	-0.1
CBKS				pmax	pmax		
	comp=Z,32nm,1.0s						
CBKS	Cedar Bluff	67.53	56	P	P	14 53 48.2	0.0
	baz=319,SNR=5.6						
SCHQ	Schefferville	67.56	26	P	P	14 53 47.1	-0.9
	comp=Z,16nm,0.5s,baz=283,slow=4.3,SNR=11						
SCHQ	Schefferville	67.56	26	*e*P	P	14 53 48.1	0.0
	comp=Z,39nm,1.1s						
E43A	Lone Tree Farm	67.65	43	*e*P	P	14 53 48.5	-0.2
	comp=Z,31nm,0.9s						
E43A	Lone Tree Farm	67.65	43	P	P	14 53 48.6	-0.2
	baz=323,SNR=26						
F42A	Maple Grove Fa	67.66	44	P	P	14 53 49.1	+0.2
	baz=322						
121A	Cookes Peak, D	67.87	65	P	P	14 53 52.3	+1.8
	baz=318,SNR=11						
319A	Douglas	67.87	67	*e*P	P	14 53 51.9	+1.4
	comp=Z,43nm,0.9s						
E44A	Grand Marais A	67.91	42	*e*P	P	14 53 50.4	+0.1
	comp=Z,128nm,0.9s						
E44A	Grand Marais A	67.91	42	P	P	14 53 50.7	+0.3
	baz=323,SNR=21						
I41A	Arkdale	68.24	46	*e*P	P	14 53 52.5	+0.1
	comp=Z,38nm,1.0s						
I41A	Arkdale	68.24	46	P	P	14 53 52.7	+0.2
	baz=322						
SCIA	State Center	68.38	49	*e*P	P	14 53 53.6	+0.2
	comp=Z,132nm,0.8s						
SCIA	State Center	68.38	49	P	P	14 53 54.1	+0.7
	baz=321,SNR=9.0						
D46A	Sault St. Mari	68.46	40	P	P	14 53 53.3	-0.5
	baz=324,SNR=24						
MATQ	Matagami	68.53	35	P	P	14 53 53.9	-0.3
	baz=327,SNR=11						
D47A	Chapleau	68.70	40	P	P	14 53 54.6	-0.7
	baz=325,SNR=35						
E46A	Sault Ste Mari	68.77	41	*e*P	P	14 53 55.1	-0.7
	comp=Z,34nm,0.8s						
E46A	Sault Ste Mari	68.77	41	P	P	14 53 55.3	-0.5
	baz=324,SNR=17						
I42A	Draeger Farm,	68.79	45	*e*P	P	14 53 55.9	0.0
	comp=Z,38nm,0.8s						
I42A	Draeger Farm,	68.79	45	P	P	14 53 56.0	+0.1
	baz=323,SNR=16						
F45A	CMU Biological	68.83	42	P	P	14 53 56.0	-0.1
	baz=324,SNR=13						
H43A	Windswept, Lux	68.84	44	*e*P	P	14 53 56.1	0.0
	comp=Z,56nm,1.0s						
H43A	Windswept, Lux	68.84	44	P	P	14 53 56.4	+0.2
	baz=323,SNR=13						
KSU1	Kansas State U	68.89	53	P	P	14 53 56.1	-0.6
	baz=320						
JFWS	Jewell Farm	68.97	47	*e*P	P	14 53 56.7	-0.3
	comp=Z,16nm,0.8s						
JFWS	Jewell Farm	68.97	47	*e*P	P	14 53 56.7	-0.3
JFWS				pmax	pmax		
	comp=Z,17nm,0.8s						
JFWS	Jewell Farm	68.97	47	P	P	14 53 56.4	-0.6
	baz=322						
AKASG	Malin Array Be	68.97	328	P	P	14 53 54.8	-2.0
	comp=Z,1.0nm,0.4s,baz=31,slow=6.3,SNR=6.0						
AKASG				pP	pP	14 54 24.4	-0.7
	comp=Z,1.4nm,0.4s,baz=32,slow=6.9,SNR=3.9						
AKASG	Malin Array Be	68.97	328	*i* P	P	14 53 57.2	+0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	68.97	328	*e*P	P	14 53 54.8	-2.1
AKBB				*e*pP	pP	14 54 24.4	-0.7
AKBB	Malin Array Si	68.97	328	*e*P	P	14 53 54.8	-2.1
AKBB				*e**PP	pP	14 54 24.4	-0.7
D48A	Paudash Townsh	69.11	39	P	P	14 53 57.0	-0.9
	baz=325,SNR=12						
E47A	Iron Bridge	69.12	40	P	P	14 53 57.1	-0.7
	baz=325,SNR=25						
L40A	Anamosa	69.19	48	*e*P	P	14 53 57.9	-0.5
	comp=Z,34nm,0.8s						
L40A	Anamosa	69.19	48	P	P	14 53 58.2	-0.2
	baz=322,SNR=11						
D49A	Beulah Townshi	69.21	39	P	P	14 53 57.7	-0.8
	baz=326						
G45A	Suttons Bay	69.28	43	*e*P	P	14 53 58.6	-0.3
	comp=Z,48nm,0.6s						
G45A	Suttons Bay	69.28	43	P	P	14 53 59.0	+0.1
	baz=324						
LSQQ	Lebel-sur-Quev	69.35	35	P	P	14 53 59.1	-0.2
	baz=328						
G46A	Petoskey	69.39	42	P	P	14 53 59.3	-0.3
	baz=324,SNR=7.2						
KBZ	Khabaz	69.45	315	P	P	14 53 59.4	-0.5
	comp=Z,1.7nm,0.6s,baz=20,slow=2.0,SNR=3.5						
H45A	Beulah	69.45	43	P	P	14 53 60.0	0.0
	baz=324						
AMTX	Amarillo	69.47	60	*e*P	P	14 54 00.4	0.0
	comp=Z,49nm,1.4s						
AMTX	Amarillo	69.47	60	P	P	14 54 01.4	+1.0
	baz=320						
CHGQ	Chibougamau	69.53	33	P	P	14 53 60.0	-0.4
	baz=329,SNR=16						
E48A	Lockeyer	69.54	40	P	P	14 53 59.7	-0.8
	baz=325,SNR=20						
MSTX	Muleshoe	69.58	61	*e*P	P	14 54 01.6	+0.6
	comp=Z,33nm,1.1s						
MSTX	Muleshoe	69.58	61	P	P	14 54 01.8	+0.8
	baz=320,SNR=9.9						
MNTX	Cornudas Mount	69.84	64	*e*P	P	14 54 03.6	+1.0
	comp=Z,52nm,1.4s						
MNTX	Cornudas Mount	69.84	64	P	P	14 54 04.0	+1.4
	baz=319,SNR=31						
I45A	Fountain	69.84	44	P	P	14 54 02.8	+0.4
	baz=324						
H46A	Fife Lake	69.88	43	P	P	14 54 02.7	+0.1
	baz=324						
F48A	Evansville	69.89	40	P	P	14 54 02.1	-0.5
	baz=325,SNR=19						
G47A	Hillman	69.93	41	P	P	14 54 02.5	-0.4
	baz=325,SNR=8.7						
N40A	Mertquake, Sal	69.94	49	P	P	14 54 03.3	+0.2
	baz=322,SNR=16						
L42A	Oliver, Polo	69.95	47	*e*P	P	14 54 02.1	-0.9
	comp=Z,39nm,0.8s						
L42A	Oliver, Polo	69.95	47	P	P	14 54 02.7	-0.4
	baz=323,SNR=7.0						
VLDQ	Val d'Or	69.98	36	*e*P	P	14 54 01.7	-1.4
	comp=Z,64nm,0.8s						
K43A	Burlington	69.99	46	P	P	14 54 03.1	-0.2
	baz=323						
M41A	Milan	70.04	48	P	P	14 54 03.3	-0.3
	baz=322						
D51A	Lot 18 Range I	70.12	38	P	P	14 54 03.2	-0.8
	baz=327,SNR=16						
E50A	Wahnapitae	70.15	39	P	P	14 54 03.4	-0.8
	baz=326,SNR=11						
F49A	Sandfield	70.18	40	P	P	14 54 03.8	-0.6
	baz=326,SNR=16						
H47A	Mio	70.25	42	P	P	14 54 05.0	+0.1
	baz=325						
I46A	Reed City	70.26	43	P	P	14 54 05.3	+0.4
	baz=324						
J45A	Montague	70.26	44	P	P	14 54 05.0	0.0
	baz=324						
N41A	Harden Midland	70.42	49	*e*P	P	14 54 05.9	0.0
	comp=Z,91nm,0.9s						
N41A	Harden Midland	70.42	49	P	P	14 54 06.1	+0.1
	baz=322,SNR=19						
H48A	Harrisville	70.53	41	P	P	14 54 06.5	0.0
	baz=325						
E51A	G1948 Merrick	70.54	38	P	P	14 54 05.8	-0.8
	baz=327,SNR=16						
D52A	ZEK Kipawa Sen	70.58	37	P	P	14 54 06.1	-0.7
	baz=327,SNR=16						
I47A	Gladwin	70.59	43	P	P	14 54 07.1	+0.1
	baz=325						
L44A	Lake County Fo	70.60	46	P	P	14 54 07.0	0.0
	baz=324						
J46A	Howard City	70.65	44	P	P	14 54 07.7	+0.4
	baz=324						
D53A	Lac Vacive, Po	70.75	37	*e*P	P	14 54 07.3	-0.5
	comp=Z,29nm,1.0s						
D53A	Lac Vacive, Po	70.75	37	P	P	14 54 07.5	-0.4
	baz=328,SNR=23						
I48A	Sherman Twp	70.79	42	P	P	14 54 08.3	+0.2
	baz=325,SNR=6.5						
TOBO	Tobermory, Bru	70.83	40	P	P	14 54 07.9	-0.5
	baz=326,SNR=10						
F51A	Arnstein	70.88	39	P	P	14 54 07.6	-1.0
	baz=327,SNR=7.0						
E52A	Mattawa	71.06	38	P	P	14 54 08.8	-1.0
	baz=327,SNR=8.8						
D54A	Lac Fusel, La	71.08	36	P	P	14 54 09.4	-0.4
	baz=328,SNR=22						
J47A	Sunmer	71.09	43	P	P	14 54 10.6	+0.6
	baz=325,SNR=8.3						
WMOK	Wichita Mounta	71.13	58	*e*P	P	14 54 10.8	+0.4
	comp=Z,16nm,0.6s						
WMOK	Wichita Mounta	71.13	58	*e*P	P	14 54 10.8	+0.4
WMOK				pmax	pmax		
	comp=Z,16nm,0.6s						
WMOK	Wichita Mounta	71.13	58	P	P	14 54 11.0	+0.6
	baz=321,SNR=27						
K46A	Dorr	71.13	44	P	P	14 54 10.2	0.0
	baz=324						
M44A	Midewin, Midew	71.17	46	P	P	14 54 10.3	-0.2
	baz=324,SNR=5.4						
F52A	Sundridge	71.22	38	P	P	14 54 10.1	-0.6
	baz=327,SNR=12						
KLBO	Killbear Provi	71.24	39	P	P	14 54 10.3	-0.5
	baz=327,SNR=22						
HDIL	Hopedale	71.27	48	*e*P	P	14 54 11.0	-0.1
	comp=Z,59nm,0.8s						
HDIL	Hopedale	71.27	48	P	P	14 54 11.2	+0.1
	baz=323						
I49A	Point Hope	71.36	42	P	P	14 54 11.5	-0.1
	baz=326,SNR=9.8						
E53A	Dumoine, Ponti	71.36	37	P	P	14 54 10.8	-0.7
	baz=328,SNR=14						
L46A	Eue Claire	71.45	45	*e*P	P	14 54 11.9	-0.3
	comp=Z,65nm,1.1s						
L46A	Eue Claire	71.45	45	P	P	14 54 12.1	-0.1
	baz=324						
BMRO	Meriville Lake	71.47	40	P	P	14 54 12.1	-0.1
	baz=326,SNR=12						
K47A	Vermontville	71.48	44	P	P	14 54 12.6	+0.3
	baz=325,SNR=10.0						
BUKO	Buck Lake	71.48	39	P	P	14 54 11.7	-0.6
	baz=327,SNR=8.5						
J48A	Bridge Port	71.48	43	P	P	14 54 13.3	+0.9
	baz=325						
E54A	Lac Daplat, Po	71.49	37	P	P	14 54 11.5	-0.8
	baz=328,SNR=21						
ALGO	Algonquin Park	71.57	37	P	P	14 54 12.1	-0.7
	baz=328,SNR=12						
N44A	Piper City	71.61	47	P	P	14 54 13.1	-0.1
	baz=324,SNR=7.4						
J49A	Marlette	71.70	42	P	P	14 54 13.8	+0.2
	baz=326,SNR=5.4						
K48A	Perry	71.75	43	P	P	14 54 14.4	+0.5
	baz=325						
TUL1	Leonard	71.77	55	P	P	14 54 14.5	+0.3
	baz=322,SNR=7.5						
BASO	Ashfield	71.77	41	P	P	14 54 14.2	+0.2

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      baz=326,SNR=23
P43A  Skaggs, Pawnee   71.89  48   P      P      14 54 14.9 +0.1
      baz=323,SNR=6.2
BWLO  Walkerton        71.90  40   P      P      14 54 14.9 +0.1
      baz=326,SNR=8.2
L47A  Sherwood         71.96  44   P      P      14 54 15.2 +0.1
      baz=325,SNR=8.5
O44A  Mansfield        71.97  47   P      P      14 54 15.4 +0.1
      baz=324
K49A  Clarkson         72.04  43   P      P      14 54 16.3 +0.5
      baz=325
G53A  Haliburton       72.05  38   P      P      14 54 15.2 -0.5
      baz=327,SNR=16
PEMO  Pembroke         72.11  37   P      P      14 54 15.2 -0.8
      baz=328,SNR=12
EKA   Eskdalemuir Ar   72.11 349   P      P      14 54 15.4 -0.4
      comp=Z,1.2nm,0.3s,baz=18,slow=5.2,SNR=20
CTA   Charters Tower   72.19 191   P      P      14 54 17.1 +0.5
      comp=Z,5.3nm,0.7s,baz=30,slow=6.6,SNR=5.9
I51A  Listowel         72.21  40   P      P      14 54 16.9 +0.3
      baz=326,SNR=12
LATQ  La Tuque         72.25  33   P      P      14 54 17.0 +0.2
      baz=330
M47A  Cromwell         72.27  45   P      P      14 54 17.1  0.0
      baz=325
ABTX  Abilene, Hawle   72.29  60   P      P      14 54 18.2 +0.8
      baz=321,SNR=6.2
L48A  N Adams          72.31  44   P      P      14 54 17.7 +0.3
      baz=325,SNR=13
CCM   Cathedral Cave   72.34  51  eP      P      14 54 17.2 -0.3
      comp=Z,22nm,0.9s
CCM   Cathedral Cave   72.34  51  eP      P      14 54 17.2 -0.3
CCM                                pmax   pmax
      comp=Z,22nm,0.9s
CCM   Cathedral Cave   72.34  51   P      P      14 54 17.4 -0.1
      baz=323
AAM   Ann Arbor        72.35  43  eP      P      14 54 18.4 +0.8
      comp=Z,62nm,1.0s
AAM   Ann Arbor        72.35  43   P      P      14 54 17.7 +0.2
      baz=325
BANO  Bancroft         72.40  38   P      P      14 54 17.4 -0.4
      baz=328,SNR=17
SFIN  Lafayette        72.41  46  eP      P      14 54 17.3 -0.6
      comp=Z,20nm,0.8s
SFIN  Lafayette        72.41  46   P      P      14 54 17.7 -0.2
      baz=324,SNR=7.4
HHAR  Hobbs            72.41  54  eP      P      14 54 17.6 -0.4
      comp=Z,33nm,0.6s
L49A  Milan            72.47  43   P      P      14 54 18.5 +0.3
      baz=325
TX31  Lajitas Ar. Si   72.59  65  eP      P      14 54 20.5 +1.2
      comp=Z,40nm,0.9s
LTX   Lajitas          72.59  65  eP      P      14 54 20.8 +1.5
LTX   Lajitas          72.59  65  eP      P      14 54 20.8 +1.5
TXAR  Lajitas Array    72.59  65   P      P      14 54 20.8 +1.4
      comp=Z,38nm,0.7s,baz=298,slow=4.7,SNR=141
TRQ   Mont Tremblant   72.63  35  eP      P      14 54 18.7 -0.5
N47A  Urbana           72.63  45   P      P      14 54 18.8 -0.5
      baz=325,SNR=9.1
G55A  Calabogie        72.66  37   P      P      14 54 18.7 -0.7
      baz=328,SNR=8.8
PLVO  Plevna           72.71  37  eP      P      14 54 18.9 -0.7
      comp=Z,22nm,1.0s
PLVO  Plevna           72.71  37   P      P      14 54 19.1 -0.6
      baz=328,SNR=12
KOLS  Kolonicke sedl   72.72 331  eP      P      14 54 20.3 +0.7
KOLS  Kolonicke sedl   72.72 331  eP      P      14 54 20.3 +0.7
ACTO  Acton            72.75  40   P      P      14 54 19.8 -0.1
      baz=327
J52A  Paris            72.89  40   P      P      14 54 20.5 -0.2
      baz=327
M49A  Liberty Center   72.89  44   P      P      14 54 20.9 +0.2
      baz=325,SNR=8.3
U40A  Yellville        72.89  53   P      P      14 54 20.8  0.0
      baz=322,SNR=36
L50A  Kingsville       72.92  43   P      P      14 54 21.3 +0.4
      baz=326,SNR=8.8
BUR08 Bucovina Ar. S   72.94 329  eP      P      14 54 20.2 -0.9
      comp=Z,17nm,1.8s
ORIO  Orleans, Innes   72.94  36   P      P      14 54 20.2 -0.8
      baz=329
N48A  Decatur          72.94  45   P      P      14 54 21.0 -0.1
      baz=325,SNR=16
DELO  Deloro Mine      72.95  38  eP      P      14 54 20.0 -1.0
      comp=Z,12nm,0.8s
DELO  Deloro Mine      72.95  38   P      P      14 54 20.6 -0.4
      baz=328,SNR=9.6
BURAR Bucovina Array   72.96 328⇑iP      P      14 54 20.4 -0.8
P46A  Rosedale         72.98  47   P      P      14 54 21.4 +0.1
      baz=324,SNR=12
CLL   Collm            73.06 338  eP      P      14 54 20.0 -1.5
CLL   Collm            73.06 338  eP      P      14 54 20.0 -1.5
DRWO  Darlington Wes   73.06  39   P      P      14 54 21.9 +0.2
      baz=328
DRCO  St. Marys Ceme   73.07  39   P      P      14 54 21.6 -0.1
      baz=328
H55A  Tweed            73.08  38   P      P      14 54 21.5 -0.4
      baz=328,SNR=14
WLVO  Wesleyville      73.15  39   P      P      14 54 22.0 -0.1
      baz=328,SNR=9.4
I55A  Frankford        73.18  38   P      P      14 54 21.9 -0.4
      baz=328,SNR=9.1
PLIO  Pelee Island,    73.24  43   P      P      14 54 22.9 +0.1
      baz=326,SNR=6.3
N49A  Columbus Grove   73.26  44  eP      P      14 54 22.8 -0.2
      comp=Z,29nm,0.8s
N49A  Columbus Grove   73.26  44   P      P      14 54 23.0 +0.1
      baz=325,SNR=9.8
TYNO  Tyneside         73.26  40   P      P      14 54 22.7 -0.2
      baz=327
HPIG                   73.28  68  eP      P      14 54 24.2 +0.7
      comp=Z,38nm,1.5s
W39A  Magazine         73.34  54  eP      P      14 54 23.2 -0.3
      comp=Z,11nm,0.8s
W39A  Magazine         73.34  54   P      P      14 54 23.6 +0.1
      baz=322,SNR=10.0
M50A  Fremont          73.35  43  eP      P      14 54 23.3 -0.2
      comp=Z,86nm,0.6s
M50A  Fremont          73.35  43   P      P      14 54 23.5 +0.1
      baz=326,SNR=5.4
O48A  Farmland         73.38  45   P      P      14 54 23.4 -0.3
      baz=325,SNR=14
H56A  Elgin            73.40  37   P      P      14 54 23.2 -0.4
      baz=329,SNR=9.3
P47A  Martinsville     73.51  46   P      P      14 54 24.2 -0.2
      baz=325,SNR=7.4
S44A  Carbondale       73.57  50   P      P      14 54 25.1 +0.3
      baz=324,SNR=5.3
J54A  Appleton         73.60  39  eP      P      14 54 24.8 -0.1
      comp=Z,38nm,0.7s
J54A  Appleton         73.60  39   P      P      14 54 24.9  0.0
      baz=328,SNR=7.0
FCAR  Ozark Folk Cen   73.62  53  eP      P      14 54 24.7 -0.4
      comp=Z,28nm,0.6s
PECO  Prince Edward    73.68  38  eP      P      14 54 24.7 -0.6
      comp=Z,27nm,0.8s
PECO  Prince Edward    73.68  38   P      P      14 54 24.9 -0.4
      baz=328,SNR=13
PBMO  Poplar Bluff     73.74  51  eP      P      14 54 25.9  0.0
      comp=Z,25nm,0.7s
MEDO  Medina           73.76  39  eP      P      14 54 25.6 -0.2
      comp=Z,126nm,1.4s
MEDO  Medina           73.76  39   P      P      14 54 25.9 +0.1
      baz=328,SNR=7.0
M51A  Elyria           73.78  43   P      P      14 54 25.9  0.0
      baz=326,SNR=6.1
O49A  Covington        73.79  45   P      P      14 54 26.0 -0.1
      baz=326,SNR=7.2
N50A  Nevada           73.83  44   P      P      14 54 26.2  0.0
      baz=326,SNR=12
JCT   Junction City    73.86  61  eP      P      14 54 26.9 +0.2
      comp=Z,124nm,1.8s
JCT   Junction City    73.86  61  eP      P      14 54 26.9 +0.2
JCT                                pmax   pmax
      comp=Z,124nm,1.8s
JCT   Junction City    73.86  61   P      P      14 54 27.3 +0.6
      baz=321,SNR=7.3
P48A  Milroy           73.91  46   P      P      14 54 26.5 -0.2
      baz=325,SNR=13
J55A  Hilton           73.93  39  eP      P      14 54 26.5 -0.3
      comp=Z,36nm,0.8s
J55A  Hilton           73.93  39   P      P      14 54 26.6 -0.2
      baz=328,SNR=11
M52A  Chesterland      73.95  42  eP      P      14 54 27.0 +0.1
      comp=Z,71nm,0.7s
M52A  Chesterland      73.95  42   P      P      14 54 27.4 +0.5
      baz=327,SNR=12
WHTX  Lake Whitney,    73.95  59  eP      P      14 54 27.3 +0.2
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      comp=Z,22nm,0.6s
WHTX  Lake Whitney,    73.95  59   P      P      14 54 27.6 +0.5
      baz=322
MIAR  Mount Ida        73.96  54  eP      P      14 54 27.1  0.0
      comp=Z,46nm,1.4s
MIAR  Mount Ida        73.96  54  eP      P      14 54 27.1  0.0
MIAR                               pmax   pmax
      comp=Z,46nm,1.4s
MIAR  Mount Ida        73.96  54   P      P      14 54 27.6 +0.5
      baz=323,SNR=16
LONY  Lake Ozonia      73.99  36  eP      P      14 54 26.4 -0.8
      comp=Z,24nm,0.8s
LONY  Lake Ozonia      73.99  36   P      P      14 54 26.5 -0.7
      baz=330,SNR=11
WHAR  Wooly Hollow     74.02  53  eP      P      14 54 27.3 -0.1
      comp=Z,41nm,1.3s
ERPA  Erie             74.03  41  eP      P      14 54 27.3 -0.1
      comp=Z,54nm,1.0s
ERPA  Erie             74.03  41   P      P      14 54 27.4 -0.1
      baz=327
N51A  Ashland          74.04  43   P      P      14 54 27.5  0.0
      baz=326,SNR=10
L53A  Girard           74.06  41   P      P      14 54 27.8 +0.3
      baz=327,SNR=20
USIN  University of    74.10  48  eP      P      14 54 28.0 +0.1
      comp=Z,63nm,0.6s
OZUR                   74.11 327⇑iP      P      14 54 23.3 -4.5
VYHS  Vyhne            74.12 333  eP      P      14 54 28.6 +0.8
VYHS  Vyhne            74.12 333  eP      P      14 54 28.6 +0.8
W41B  Gary Mavity, V   74.13  53  eP      P      14 54 28.0 -0.1
      comp=Z,31nm,0.6s
W41B  Gary Mavity, V   74.13  53   P      P      14 54 28.2 +0.1
      baz=323,SNR=21
K54A  Basiliko Farm,   74.14  40   P      P      14 54 27.9 -0.2
      baz=328,SNR=9.5
O50A  Cable            74.14  44   P      P      14 54 28.0 -0.1
      baz=326,SNR=6.4
P49A  Miami Univ. Ec   74.16  45   P      P      14 54 28.1 -0.1
      baz=325,SNR=9.7
WRAB  Tennant Creek    74.20 203ceP      P      14 54 30.2 +1.7
WRAB                               pmax   pmax
      comp=Z,17nm,2.5s
Q48A  North Vernon     74.20  46   P      P      14 54 28.4  0.0
      baz=325,SNR=5.4
L54A  Sinclairville    74.20  40   P      P      14 54 28.4 -0.1
      baz=328
WR1   Warramunga Arr   74.21 203  eP      P      14 54 29.0 +0.4
WRA   Warramunga Arr   74.21 203   P      P      14 54 29.0 +0.4
      comp=Z,7.0nm,0.7s,baz=14,slow=7.3,SNR=38
WRA   Warramunga Arr   74.21 203   P      P      14 54 29.0 +0.4
MOQ   Mont Orford      74.22  34  eP      P      14 54 28.9 +0.3
K55A  Perry            74.28  39   P      P      14 54 28.9  0.0
      baz=328,SNR=20
S46A  Don Dixon Farm   74.30  48   P      P      14 54 29.3 +0.3
      baz=324
M53A  WI Miller and    74.32  42   P      P      14 54 29.6 +0.5
      baz=327,SNR=26
MMNY  Mt. Morris Dam   74.34  39  eP      P      14 54 29.0 -0.2
      comp=Z,90nm,1.0s
ACSO  Alum Creek Sta   74.34  44  eP      P      14 54 29.2 -0.1
      comp=Z,59nm,1.2s
ACSO  Alum Creek Sta   74.34  44   P      P      14 54 29.4 +0.2
      baz=326,SNR=8.2
X40A  Basin Creek Fa   74.38  54  eP      P      14 54 29.6 +0.1
      comp=Z,23nm,1.4s
X40A  Basin Creek Fa   74.38  54   P      P      14 54 29.8 +0.2
      baz=323
T45A  Paducah          74.40  50  eP      P      14 54 29.5 -0.1
      comp=Z,98nm,0.6s
T45A  Paducah          74.40  50   P      P      14 54 30.0 +0.4
      baz=324
N52A  McGinn’s Farm,   74.42  43   P      P      14 54 29.9 +0.2
      baz=327
PQI   Presque Isle     74.44  31  eP      P      14 54 29.0 -0.7
      comp=Z,13nm,0.6s
P50A  Jamestown        74.50  45   P      P      14 54 30.2  0.0
      baz=326,SNR=9.2
BATG  Bathurst New B   74.51  29  eP      P      14 54 30.4 +0.3
      comp=Z,34nm,0.9s
Q49A  Aurora           74.52  46   P      P      14 54 30.1 -0.1
      baz=325
WCI   Wyandotte Cave   74.52  47  eP      P      14 54 30.3  0.0
      comp=Z,45nm,0.9s
WCI   Wyandotte Cave   74.52  47  eP      P      14 54 30.3  0.0
WCI                                pmax   pmax
      comp=Z,45nm,0.9s
WCI   Wyandotte Cave   74.52  47   P      P      14 54 30.6 +0.3
      baz=325
R48A  Northridge Ran   74.57  47   P      P      14 54 30.9 +0.3
      baz=325
O51A  Pataskala        74.58  44   P      P      14 54 30.8 +0.1
      baz=326,SNR=10
L55A  Hinsdale         74.60  40   P      P      14 54 30.8  0.0
      baz=328,SNR=14
MODS  Modra-Piesok     74.67 334  eP      P      14 54 30.7 -0.3
MODS  Modra-Piesok     74.67 334  eP      P      14 54 30.7 -0.3
M54A  Oil Creek Stat   74.67  41  eP      P      14 54 31.1 -0.1
      comp=Z,124nm,1.3s
M54A  Oil Creek Stat   74.67  41   P      P      14 54 31.4 +0.2
      baz=328,SNR=25
NCB   Newcomb          74.68  36  eP      P      14 54 30.7 -0.5
      comp=Z,12nm,0.8s
T46A  Princeton        74.74  49   P      P      14 54 32.5 +0.9
      baz=324,SNR=22
S47A  Hartford         74.77  48   P      P      14 54 32.1 +0.4
      baz=325
N53A  Lisbon           74.78  42   P      P      14 54 32.1 +0.4
      baz=327,SNR=12
VT1   Waterbury        74.90  35  eP      P      14 54 32.2 -0.2
      comp=Z,30nm,0.8s
P51A  Williamsport     74.93  44  eP      P      14 54 32.2 -0.5
      comp=Z,24nm,0.8s
P51A  Williamsport     74.93  44   P      P      14 54 32.5 -0.1
      baz=326
O52A  Adamsville       74.93  43  eP      P      14 54 32.5 -0.2
      comp=Z,149nm,1.5s
O52A  Adamsville       74.93  43   P      P      14 54 32.7  0.0
      baz=327,SNR=11
R49A  Shelbyville      74.98  46  eP      P      14 54 33.0  0.0
      comp=Z,33nm,1.1s
R49A  Shelbyville      74.98  46   P      P      14 54 33.4 +0.5
      baz=325,SNR=5.3
N54A  Moraine State    75.00  41  eP      P      14 54 33.3 +0.3
      comp=Z,111nm,1.3s
N54A  Moraine State    75.00  41   P      P      14 54 33.4 +0.3
      baz=327,SNR=13
Q50A  Georgetown       75.06  45   P      P      14 54 33.8 +0.4
      baz=326,SNR=9.8
M55A  Ridgway          75.07  40   P      P      14 54 33.7 +0.3
      baz=328,SNR=33
O53A  New Philadelph   75.08  43   P      P      14 54 33.6 +0.1
      baz=327,SNR=11
S48A  Wiedeman Farm,   75.09  47   P      P      14 54 33.9 +0.3
      baz=325,SNR=12
GEC2  GERESS Array S   75.17 336  eP      P      14 54 33.0 -1.0
      comp=Z,7.4nm,1.5s
GEC2  GERESS Array S   75.17 336  eP      P      14 54 33.0 -1.0
GEC2                               pmax   pmax
      comp=Z,7.0nm,1.5s
GERES GERESS Array B   75.17 336   P      P      14 54 33.0 -1.0
      comp=Z,1.0nm,0.5s,baz=31,slow=5.4,SNR=4.0
GERES GERESS Array B   75.17 336   P      P      14 54 33.0 -1.0
Q51A  Peebles          75.18  45  eP      P      14 54 34.0 -0.1
      comp=Z,42nm,0.6s
Q51A  Peebles          75.18  45   P      P      14 54 34.4 +0.3
      baz=326,SNR=14
P52A  Corning          75.21  44   P      P      14 54 34.2  0.0
      baz=327
LBNH  Lisbon           75.27  34  eP      P      14 54 34.8 +0.2
      comp=Z,20nm,0.6s
LBNH  Lisbon           75.27  34  eP      P      14 54 34.8 +0.2
LBNH                               pmax   pmax
      comp=Z,20nm,0.6s
LBNH  Lisbon           75.27  34   P      P      14 54 35.1 +0.6
      baz=331,SNR=14
PKME  Peaks-Kenny Pk   75.28  32  eP      P      14 54 34.9 +0.4
      comp=Z,18nm,0.8s
PKME  Peaks-Kenny Pk   75.28  32   P      P      14 54 35.0 +0.5
      baz=332,SNR=10
M56A  Emporium         75.29  40   P      P      14 54 34.9 +0.1
      baz=328,SNR=17
S49A  Springfield      75.34  47   P      P      14 54 35.6 +0.6
      baz=325,SNR=11
R50A  Paris            75.36  46  eP      P      14 54 35.0 -0.2
      comp=Z,27nm,0.8s
R50A  Paris            75.36  46   P      P      14 54 35.6 +0.5
      baz=326,SNR=10.0
T48A  Bowling Green    75.38  48   P      P      14 54 35.6 +0.3
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      baz=325,SNR=6.8
ACCN  Adirondack Com   75.39  36  eP      P      14 54 34.9 -0.4
      comp=Z,35nm,1.0s
O54A  Avella           75.49  42   P      P      14 54 36.1 +0.3
      baz=327,SNR=9.3
WVT   Waverly          75.51  50  eP      P      14 54 36.3 +0.3
      comp=Z,20nm,0.8s
WVT   Waverly          75.51  50  eP      P      14 54 36.3 +0.3
WVT                                pmax   pmax
      comp=Z,20nm,0.8s
WVT   Waverly          75.51  50   P      P      14 54 36.5 +0.5
      baz=325
U47A  Clarksville      75.51  49   P      P      14 54 36.6 +0.6
      baz=325,SNR=6.6
BINY  Binghamton       75.54  38  eP      P      14 54 35.5 -0.7
      comp=Z,16nm,0.8s
BINY  Binghamton       75.54  38   P      P      14 54 35.9 -0.2
      baz=329,SNR=6.1
N55A  Marion Center    75.56  41  eP      P      14 54 36.3  0.0
      comp=Z,174nm,0.8s
N55A  Marion Center    75.56  41   P      P      14 54 36.6 +0.3
      baz=328,SNR=25
NATX  Nacogdoches      75.60  57   P      P      14 54 37.3 +0.7
      baz=323
HNH   Hanover          75.61  35  eP      P      14 54 36.9 +0.5
      comp=Z,21nm,0.7s
V46A  Holladay         75.64  50   P      P      14 54 37.2 +0.4
      baz=324,SNR=13
P53A  Whipple          75.64  43  eP      P      14 54 37.0 +0.3
      comp=Z,22nm,1.1s
P53A  Whipple          75.64  43   P      P      14 54 37.0 +0.3
      baz=327
R51A  Hillsboro        75.68  45   P      P      14 54 37.5 +0.6
      baz=326,SNR=14
Q52A  Bidwell          75.70  44   P      P      14 54 37.0 -0.1
      baz=327
N56A  West Decatur     75.73  40   P      P      14 54 37.5 +0.3
      baz=328,SNR=11
L58A  Harry Jones Me   75.73  38   P      P      14 54 37.2  0.0
      baz=329,SNR=10
833A  Chaparral WMA,   75.75  62   P      P      14 54 38.6 +1.1
      baz=322
WVL   Waterville       75.77  33  eP      P      14 54 37.6 +0.3
      comp=Z,98nm,1.5s
T49A  Edmonton         75.78  47  eP      P      14 54 37.9 +0.3
      comp=Z,31nm,0.6s
T49A  Edmonton         75.78  47   P      P      14 54 38.1 +0.5
      baz=325,SNR=20
U48A  Cassie Pea, Po   75.80  48   P      P      14 54 38.1 +0.4
      baz=325,SNR=14
S50A  Richmond         75.83  46   P      P      14 54 38.1 +0.3
      baz=326,SNR=6.1
BZS   Buzias           75.88 330⇑iP      P      14 54 49.5  +12
V47A  Nunnelly         75.90  49   P      P      14 54 38.6 +0.4
      baz=325,SNR=13
O55A  Ligonier         75.91  41   P      P      14 54 38.4 +0.1
      baz=328,SNR=6.8
W46A  Michie           76.05  50   P      P      14 54 39.3 +0.1
      baz=324
OXF   Oxford           76.06  52  eP      P      14 54 39.4 +0.3
      comp=Z,42nm,0.6s
OXF   Oxford           76.06  52  eP      P      14 54 39.4 +0.3
OXF                                pmax   pmax
      comp=Z,42nm,0.6s
OXF   Oxford           76.06  52   P      P      14 54 39.6 +0.5
      baz=324
R52A  Catlettsburg     76.06  45   P      P      14 54 39.3 +0.2
      baz=326,SNR=6.0
M58A  Price’s Panora   76.07  39   P      P      14 54 39.1 -0.1
      baz=329,SNR=24
Q53A  Leroy            76.11  44   P      P      14 54 39.8 +0.4
      baz=327,SNR=13
SSPA  Standing Stone   76.13  40  eP      P      14 54 39.5  0.0
      comp=Z,30nm,0.6s
SSPA  Standing Stone   76.13  40   P      P      14 54 39.7 +0.3
      baz=328
MCWV  Mont Chateau     76.15  42  eP      P      14 54 39.9 +0.3
      comp=Z,37nm,1.4s
MCWV  Mont Chateau     76.15  42   P      P      14 54 40.1 +0.5
      baz=328,SNR=6.4
U49A  Red Boiling Sp   76.15  48   P      P      14 54 40.2 +0.5
      baz=325,SNR=18
N57A  Milroy           76.16  40   P      P      14 54 39.9 +0.3
      baz=329,SNR=43
O56A  Blue Knob Stat   76.17  41  eP      P      14 54 39.8  0.0
      comp=Z,50nm,0.8s
O56A  Blue Knob Stat   76.17  41   P      P      14 54 39.9 +0.1
      baz=328,SNR=13
T50A  Nancy            76.17  47   P      P      14 54 40.3 +0.5
      baz=326,SNR=24
KSPA  Keystone Colle   76.18  38  eP      P      14 54 39.3 -0.4
      comp=Z,26nm,0.7s
GGN   Saint George     76.20  31  eP      P      14 54 39.7  0.0
      comp=Z,33nm,0.6s
S51A  Beattyville      76.22  46  eP      P      14 54 40.0  0.0
      comp=Z,22nm,0.7s
S51A  Beattyville      76.22  46   P      P      14 54 40.3 +0.3
      baz=326,SNR=7.6
CLTN  Cedars of Leba   76.24  49  eP      P      14 54 40.5 +0.3
      comp=Z,30nm,0.7s
P55A  Reedsville       76.29  42   P      P      14 54 40.9 +0.5
      baz=328,SNR=10
V48A  Smith Brothers   76.30  49   P      P      14 54 40.8 +0.3
      baz=325,SNR=11
Q54A  Coxs Mills       76.30  43  eP      P      14 54 40.5  0.0
      comp=Z,75nm,1.6s
Q54A  Coxs Mills       76.30  43   P      P      14 54 41.0 +0.5
      baz=327,SNR=6.9
M59A  Waymart          76.32  38   P      P      14 54 40.3 -0.3
      baz=330,SNR=11
PLAL  Pickwick Lake    76.32  50  eP      P      14 54 40.6 -0.1
      comp=Z,66nm,1.4s
W47A  Westpoint        76.33  50   P      P      14 54 41.1 +0.3
      baz=325,SNR=7.2
EMMW  East Machias     76.37  31  eP      P      14 54 41.0 +0.3
      comp=Z,32nm,0.8s
R53A  Hurricane        76.37  44  eP      P      14 54 41.0 +0.1
      comp=Z,31nm,0.7s
R53A  Hurricane        76.37  44   P      P      14 54 41.3 +0.5
      baz=327,SNR=7.1
S52A  Salyersville     76.42  45   P      P      14 54 41.5 +0.3
      baz=326
N58A  Sunbury          76.42  39   P      P      14 54 41.1  0.0
      baz=329,SNR=11
X46A  Booneville       76.42  51   P      P      14 54 41.6 +0.4
      baz=324
O57A  Amberson         76.59  40   P      P      14 54 42.5 +0.4
      baz=329,SNR=18
Q55A  Buckhannon       76.61  43   P      P      14 54 42.8 +0.5
      baz=328,SNR=5.7
T51A  Gray             76.62  46   P      P      14 54 42.6 +0.3
      baz=326,SNR=6.4
U50A  Jamestown        76.66  47   P      P      14 54 43.0 +0.4
      baz=326,SNR=25
BR101 Keskin Array S   76.67 319  eP      P      14 54 41.5 -1.2
BRTR  Keskin Array B   76.67 319   P      P      14 54 41.5 -1.2
      comp=Z,0.7nm,0.7s,baz=51,slow=3.8,SNR=3.7
P56A  Dayton Farm, R   76.70  41   P      P      14 54 43.3 +0.6
      baz=328,SNR=14
V49A  McMinnville      76.71  48   P      P      14 54 43.0 +0.2
      baz=326,SNR=9.7
N59A  State Game Lan   76.72  39  eP      P      14 54 42.7 -0.2
      comp=Z,34nm,0.6s
N59A  State Game Lan   76.72  39   P      P      14 54 42.9 +0.1
      baz=330,SNR=15
W48A  Pulaski          76.74  49   P      P      14 54 43.4 +0.4
      baz=325,SNR=19
X47A  Russelville      76.80  50   P      P      14 54 43.5 +0.1
      baz=325
QUA2  Belchertown      76.83  36  eP      P      14 54 43.5 +0.1
      comp=Z,34nm,0.4s
S53A  Williamson       76.83  45   P      P      14 54 43.9 +0.3
      baz=327
KSCT  Kent School, K   76.90  37  eP      P      14 54 43.5 -0.2
      comp=Z,36nm,1.3s
R54A  Victor           76.91  44   P      P      14 54 44.3 +0.3
      baz=327,SNR=8.4
HRV   Adam Dziewonsk   76.92  35   P      P      14 54 44.4 +0.5
      baz=331
T52A  Hallie           76.93  46  eP      P      14 54 44.0 -0.1
      comp=Z,72nm,1.2s
T52A  Hallie           76.93  46   P      P      14 54 44.7 +0.6
      baz=327,SNR=7.8
PAGS  Pennsylvania G   76.94  40  eP      P      14 54 44.0  0.0
      comp=Z,24nm,1.1s
Q56A  Snyder Ridge,    76.95  42   P      P      14 54 44.4 +0.3
      baz=328,SNR=5.2
O58A  Lewisberry       76.95  40   P      P      14 54 44.2  0.0
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	baz=329,SNR=8.1						
N60A	Cedar Hill Far	77.02	38	P	P	14 54 44.3	-0.2
	baz=330						
ODNJ	Ogdensburg	77.03	38	eP	P	14 54 43.8	-0.7
	comp=Z,12nm,0.7s						
P57A	Homestead Farm	77.06	41	P	P	14 54 44.8	+0.1
	baz=329						
W49A	Belvidere	77.07	49	P	P	14 54 45.2	+0.4
	baz=325,SNR=7.9						
U51A	La Follette	77.07	47	P	P	14 54 45.4	+0.5
	baz=326,SNR=9.4						
S54A	Dingess, Beckl	77.09	44	P	P	14 54 45.2	+0.2
	baz=327						
WES	Weston	77.11	35	eP	P	14 54 45.1	+0.2
	comp=Z,32nm,0.7s						
WES	Weston	77.11	35	eP	P	14 54 45.1	+0.2
WES				pmax	pmax		
	comp=Z,32nm,0.7s						
SWET	Sewanee	77.14	49	eP	P	14 54 45.1	-0.2
	comp=Z,45nm,0.8s						
TZTN	Tazewell	77.14	46	eP	P	14 54 45.5	+0.2
	comp=Z,29nm,0.7s						
TZTN	Tazewell	77.14	46	P	P	14 54 45.8	+0.6
	baz=326,SNR=9.6						
M61A	Granite Spring	77.15	37	P	P	14 54 45.2	0.0
	baz=330,SNR=9.9						
LUPA	Lehigh Univers	77.15	39	eP	P	14 54 45.0	-0.2
	comp=Z,3.9nm,1.4s						
V50A	Pikevile	77.16	48	P	P	14 54 45.7	+0.3
	baz=326,SNR=21						
R55A	Marlinton	77.19	43	P	P	14 54 46.2	+0.6
	baz=328,SNR=13						
BCX	Boston College	77.21	35	eP	P	14 54 45.3	-0.2
	comp=Z,22nm,0.8s						
T53A	Wise	77.23	45	P	P	14 54 46.4	+0.6
	baz=327,SNR=8.9						
X48A	Hartselle	77.24	50	eP	P	14 54 45.5	-0.3
	comp=Z,15nm,0.9s						
X48A	Hartselle	77.24	50	P	P	14 54 45.6	-0.2
	baz=325						
Q57A	Strasburg	77.27	41	P	P	14 54 46.2	+0.2
	baz=328						
P58A	Pank, Wackersv	77.34	40	P	P	14 54 46.5	+0.3
	baz=329,SNR=6.1						
U52A	Thorn Hill	77.35	46	P	P	14 54 47.0	+0.6
	baz=326,SNR=21						
PAL	Palisades	77.36	37	eP	P	14 54 46.1	-0.3
	comp=Z,46nm,0.6s						
PAL	Palisades	77.36	37	eP	P	14 54 46.1	-0.3
PAL				pmax	pmax		
	comp=Z,46nm,0.6s						
PAL	Palisades	77.36	37	P	P	14 54 46.4	+0.1
	baz=330,SNR=8.6						
O60A	Telford	77.38	39	P	P	14 54 46.4	-0.1
	baz=330						
BRNJ	Basking Ridge	77.39	38	eP	P	14 54 46.5	0.0
	comp=Z,20nm,0.8s						
R56A	Bull Pasture M	77.39	42	P	P	14 54 46.9	+0.2
	baz=328,SNR=6.3						
V51A	Loudon	77.39	47	eP	P	14 54 46.7	0.0
	comp=Z,40nm,0.6s						
V51A	Loudon	77.39	47	P	P	14 54 47.0	+0.4
	baz=326,SNR=14						
BRYW	Bryant College	77.44	35	eP	P	14 54 46.6	-0.2
	comp=Z,40nm,0.7s						
W50A	Signal Mountai	77.45	48	eP	P	14 54 46.9	-0.1
	comp=Z,34nm,0.8s						
W50A	Signal Mountai	77.45	48	P	P	14 54 47.3	+0.3
	baz=326,SNR=10						
S55A	Lewisburg	77.46	44	P	P	14 54 47.4	+0.4
	baz=328,SNR=6.5						
X49A	Woodville	77.53	49	P	P	14 54 47.8	+0.3
	baz=326,SNR=11						
GBN	Guysborough	77.54	27	eP	P	14 54 47.8	+0.5
	comp=Z,30nm,1.4s						
P59A	Jarrettsville	77.58	40	P	P	14 54 47.7	+0.1
	baz=329						
T54A	Tazewell	77.59	45	P	P	14 54 48.3	+0.5
	baz=327,SNR=14						
CPCT	Cooper Cave	77.61	48	eP	P	14 54 47.8	-0.1
	comp=Z,27nm,0.7s						
Y48A	Jasper	77.62	50	P	P	14 54 47.7	-0.3
	baz=325,SNR=5.1						
HAL	Halifax	77.64	29	eP	P	14 54 47.9	+0.1
	comp=Z,19nm,0.7s						
HAL	Halifax	77.64	29	eP	P	14 54 47.9	+0.1
HAL				pmax	pmax		
	comp=Z,19nm,0.7s						
Q58A	Fox Den Farm,	77.65	41	P	P	14 54 48.4	+0.4
	baz=329,SNR=9.4						
V52A	Sevierville	77.70	47	eP	P	14 54 48.5	+0.1
	comp=Z,36nm,0.6s						
V52A	Sevierville	77.70	47	P	P	14 54 48.9	+0.5
	baz=326,SNR=14						
P60A	Greenville	77.73	39	P	P	14 54 48.1	-0.3
	baz=330						
U53A	Fall Branch	77.73	46	P	P	14 54 49.0	+0.4
	baz=327,SNR=16						
W51A	Cleveland	77.73	48	P	P	14 54 48.8	+0.2
	baz=326,SNR=9.4						
R57A	Stanardsville	77.85	42	P	P	14 54 49.8	+0.6
	baz=328,SNR=8.3						
T55A	Pulaski	77.89	44	P	P	14 54 50.0	+0.5
	baz=328,SNR=8.4						
AS31	Alice Springs	77.90	202	eP	P	14 54 50.4	+1.0
	comp=Z,2.2nm,0.5s						
AS31				epP	pP	14 55 18.8	+0.7
X50B	Fort Payne	77.90	49	P	P	14 54 49.6	+0.1
	baz=326,SNR=14						
ASAR	Alice Springs	77.90	202	P	P	14 54 50.9	+1.4
	comp=Z,5.9nm,0.6s,baz=13,slow=5.1,SNR=122						
ASAR				pP	pP	14 55 18.8	+0.7
	comp=Z,2.5nm,0.5s,baz=9.7,slow=4.8,SNR=4.5						
U54A	Nelsons Funny	77.93	45	eP	P	14 54 50.0	+0.3
	comp=Z,46nm,0.6s						
U54A	Nelsons Funny	77.93	45	P	P	14 54 50.2	+0.5
	baz=327,SNR=10.0						
S56A	Natural Bridge	77.94	43	P	P	14 54 50.0	+0.3
	baz=328						
BLA	Blacksburg	77.97	44	eP	P	14 54 49.9	0.0
	comp=Z,27nm,0.8s						
BLA	Blacksburg	77.97	44	eP	P	14 54 49.9	0.0
BLA				pmax	pmax		
	comp=Z,27nm,0.8s						
BLA	Blacksburg	77.97	44	P	P	14 54 50.1	+0.2
	baz=328,SNR=5.8						
DAVOX	Davos/Dischmat	78.02	338	P	P	14 54 50.3	+0.1
	comp=Z,3.1nm,0.5s,baz=14,slow=15,SNR=3.3						
Y49A	Blount Mountai	78.03	50	eP	P	14 54 50.1	-0.2
	comp=Z,24nm,0.6s						
Y49A	Blount Mountai	78.03	50	P	P	14 54 50.3	0.0
	baz=326,SNR=9.6						
R58A	Rapidan	78.07	42	P	P	14 54 50.9	+0.5
	baz=329,SNR=8.1						
147A	Livingston	78.10	52	eP	P	14 54 51.0	+0.4
	comp=Z,46nm,0.7s						
147A	Livingston	78.10	52	P	P	14 54 51.2	+0.6
	baz=325						
S57A	Dark Hollow, R	78.13	43	eP	P	14 54 51.0	+0.3
	comp=Z,44nm,1.4s						
S57A	Dark Hollow, R	78.13	43	P	P	14 54 51.2	+0.5
	baz=328,SNR=6.9						
W52A	Murphy	78.17	47	eP	P	14 54 51.4	+0.4
	comp=Z,56nm,1.4s						
W52A	Murphy	78.17	47	P	P	14 54 51.6	+0.6
	baz=326						
X51A	Calhoun	78.18	48	P	P	14 54 51.5	+0.5
	baz=326						
V53A	Saluda	78.20	46	eP	P	14 54 51.5	+0.2
	comp=Z,17nm,0.6s						
V53A	Saluda	78.20	46	P	P	14 54 51.7	+0.5
	baz=327,SNR=12						
ZAIG	Zacatecas	78.28	68	eP	P	14 54 53.0	+1.0
	comp=Z,33nm,1.2s						
T56A	Rocky Mt	78.29	44	P	P	14 54 51.7	+0.1
	baz=328						
U55A	TA2, Sparta	78.29	45	P	P	14 54 52.0	+0.3
	baz=328,SNR=13						
Y50A	Piedmont	78.32	49	P	P	14 54 52.0	+0.1
	baz=326,SNR=15						
LNIG	Linares	78.38	65	eP	P	14 54 52.2	-0.1
	comp=Z,19nm,1.4s						
R58B	Mineral	78.40	42	eP	P	14 54 52.5	+0.3
	comp=Z,14nm,0.7s						
R58B	Mineral	78.40	42	P	P	14 54 52.5	+0.3
	baz=329,SNR=6.0						
LRAL	Lakeview Retre	78.42	51	eP	P	14 54 52.1	-0.3
	comp=Z,20nm,0.6s						
LRAL	Lakeview Retre	78.42	51	P	P	14 54 52.2	-0.2
	baz=325,SNR=11						
W53A	Cullowhee	78.46	47	P	P	14 54 53.1	+0.4
	baz=327,SNR=9.4						
V54A	Nebo	78.50	46	P	P	14 54 53.1	+0.3
	baz=327,SNR=13						
R59A	King George, V	78.51	41	P	P	14 54 53.3	+0.5
	baz=329						
Z49A	Columbiana	78.52	50	P	P	14 54 53.0	+0.1
	baz=326,SNR=12						
X52A	Dahlonega	78.59	48	P	P	14 54 53.6	+0.3
	baz=326,SNR=7.8						
S58A	Poland Farm, P	78.63	42	P	P	14 54 53.7	+0.2
	baz=329						
Y51A	Rockmart	78.63	49	P	P	14 54 53.6	0.0
	baz=326,SNR=10						
T57A	Hurt	78.64	43	eP	P	14 54 53.5	-0.1
	comp=Z,20nm,0.7s						
T57A	Hurt	78.64	43	P	P	14 54 53.9	+0.3
	baz=328,SNR=8.2						
U56A	King	78.71	44	P	P	14 54 54.5	+0.5
	baz=328,SNR=5.9						
BG3	Lake Jocassee	78.71	47	eP	P	14 54 54.4	+0.4
	comp=Z,24nm,0.7s						
Z50A	Ashland	78.76	50	eP	P	14 54 54.1	-0.2
	comp=Z,50nm,0.8s						
Z50A	Ashland	78.76	50	P	P	14 54 54.4	+0.2
	baz=326,SNR=30						
V55A	Taylorsville	78.76	45	P	P	14 54 54.4	+0.2
	baz=328						
S59A	Mechanicsville	78.81	41	P	P	14 54 55.0	+0.6
	baz=329,SNR=5.2						
149A	Jones	78.88	51	P	P	14 54 55.2	+0.3
	baz=326,SNR=9.5						
X53A	Estanollee	78.95	47	P	P	14 54 55.9	+0.7
	baz=327,SNR=12						
W54A	Cherokee Point	78.97	46	P	P	14 54 55.7	+0.3
	baz=327,SNR=6.4						
T58A	Grand View Acr	78.99	43	P	P	14 54 55.8	+0.4
	baz=329,SNR=12						
Z51A	Franklin	79.06	49	P	P	14 54 55.9	0.0
	baz=326,SNR=8.2						
U57A	Blanch	79.09	43	P	P	14 54 56.2	+0.3
	baz=328,SNR=8.9						
V56A	Mocksville	79.11	45	eP	P	14 54 56.3	+0.1
	comp=Z,30nm,0.8s						
V56A	Mocksville	79.11	45	P	P	14 54 56.5	+0.3
	baz=328,SNR=9.4						
Y52A	Lilburn	79.13	48	P	P	14 54 56.7	+0.4
	baz=326,SNR=5.1						
249A	Camden	79.23	51	P	P	14 54 57.7	+0.9
	baz=325,SNR=5.0						
150A	Eclectic	79.24	50	P	P	14 54 57.0	+0.1
	baz=326,SNR=14						
KMSC	Kings Mountain	79.30	46	P	P	14 54 57.3	+0.1
	baz=328,SNR=8.4						
X54A	Belton	79.33	47	P	P	14 54 57.9	+0.5
	baz=327,SNR=6.2						
PAULI	Pauline	79.36	46	eP	P	14 54 57.7	+0.2
	comp=Z,14nm,0.8s						
Y53A	Monroe	79.36	48	P	P	14 54 57.8	+0.3
	baz=327,SNR=5.4						
V57A	Coltrane Farms	79.36	44	P	P	14 54 57.5	0.0
	baz=328,SNR=7.8						
T59A	Double "B" Far	79.38	42	eP	P	14 54 57.8	+0.2
	comp=Z,16nm,0.8s						
T59A	Double "B" Far	79.38	42	P	P	14 54 57.7	+0.2
	baz=329,SNR=5.7						
U58A	Oxford	79.45	43	P	P	14 54 58.3	+0.3
	baz=329,SNR=11						
Z52A	Williamson	79.52	49	P	P	14 54 58.7	+0.3
	baz=326,SNR=8.4						
W56A	Indian Trail	79.64	45	P	P	14 54 59.0	0.0
	baz=328						
HODGE	Hodges	79.65	47	eP	P	14 54 59.4	+0.3
	comp=Z,28nm,1.1s						
349A	Repton	79.71	52	P	P	14 55 00.2	+0.8
	baz=326						
V58A	Windy Hill, Pi	79.72	44	P	P	14 54 59.8	+0.4
	baz=328,SNR=8.5						
X55A	Gracelyn & Ava	79.73	46	P	P	14 54 59.6	+0.1
	baz=328,SNR=5.6						
Y54A	Tignall	79.76	47	P	P	14 55 00.3	+0.6
	baz=327,SNR=32						
GOGA	Godfrey	79.78	48	P	P	14 54 59.9	+0.1
	baz=327						
U59A	Littleton	79.81	42	P	P	14 55 00.4	+0.5
	baz=329,SNR=6.3						
152A	Waverly Hall	79.81	49	eP	P	14 54 59.9	-0.1
	comp=Z,16nm,0.6s						
152A	Waverly Hall	79.81	49	P	P	14 54 60.0	0.0
	baz=326,SNR=7.3						
Z53A	Monticello	79.84	48	P	P	14 55 00.4	+0.3
	baz=327,SNR=10.0						
W57A	Gilead	79.89	45	P	P	14 55 00.5	+0.2
	baz=328,SNR=5.7						
251A	Midway	79.96	50	P	P	14 55 01.0	+0.3
	baz=326,SNR=5.8						
X56A	White Oak	79.98	46	P	P	14 55 01.1	+0.3
	baz=328,SNR=8.3						
JSC	Jenkinsville	80.06	46	eP	P	14 55 01.3	0.0
	comp=Z,14nm,0.8s						
JSC	Jenkinsville	80.06	46	eP	P	14 55 01.3	0.0
JSC				pmax	pmax		
	comp=Z,14nm,0.8s						
350A	Dozier	80.06	51	P	P	14 55 02.0	+0.7
	baz=326						
Y55A	Saluda	80.08	47	P	P	14 55 01.8	+0.4
	baz=327						
BIRD	Birdtown, Kers	80.11	45	eP	P	14 55 01.6	+0.1
	comp=Z,20nm,1.0s						
V59A	Middlesex	80.12	43	P	P	14 55 02.1	+0.5
	baz=329,SNR=6.6						
W58A	Raeford	80.33	44	P	P	14 55 03.1	+0.4
	baz=328,SNR=9.1						
252A	Lumpkin	80.36	50	P	P	14 55 03.3	+0.4
	baz=326						
U61A	Possum Corner	80.39	42	P	P	14 55 03.2	+0.3
	baz=330						
X57A	Johnson Farm,	80.42	45	P	P	14 55 03.6	+0.4
	baz=328						
V60A	Jim Taylor Roa	80.53	42	eP	P	14 55 04.1	+0.4
	comp=Z,44nm,0.6s						
V60A	Jim Taylor Roa	80.53	42	P	P	14 55 04.2	+0.4
	baz=329						
W59A	Clinton	80.54	44	P	P	14 55 04.5	+0.7
	baz=329						
Z55A	Blythe	80.55	47	P	P	14 55 04.7	+0.8
	baz=327						
253A	Americus	80.59	49	P	P	14 55 04.8	+0.6
	baz=327						
154A	Montrose	80.61	48	P	P	14 55 05.1	+0.8
	baz=327						
X58A	Rowland	80.68	44	eP	P	14 55 04.9	+0.4
	comp=Z,37nm,0.7s						
X58A	Rowland	80.68	44	P	P	14 55 05.1	+0.5
	baz=328						
352A	Blakely	80.69	50	P	P	14 55 05.3	+0.6
	baz=326,SNR=5.5						
155A	Kite	80.90	48	P	P	14 55 06.5	+0.8
	baz=327,SNR=5.4						
W60A	Pink Hill	80.95	43	P	P	14 55 06.7	+0.7
	baz=329						
X59A	McDuffie Farm,	80.98	44	P	P	14 55 06.7	+0.6
	baz=329						
254A	Abbeville	81.08	49	P	P	14 55 07.6	+0.8
	baz=327,SNR=6.9						
Y58A	Scranton	81.08	45	P	P	14 55 07.5	+0.8
	baz=328						
Z57A	Bowman	81.14	46	P	P	14 55 07.7	+0.7
	baz=328						
353A	Camilla	81.14	50	P	P	14 55 07.8	+0.7
	baz=327						
X60A	Albert Glenn T	81.25	44	P	P	14 55 08.2	+0.6
	baz=329						
156A	Sylvania	81.32	47	P	P	14 55 08.7	+0.7
	baz=328						
Y59A	Loris	81.36	44	P	P	14 55 08.8	+0.6
	baz=329						
TIGA	Tifton	81.36	49	P	P	14 55 09.0	+0.8
	baz=327						
255A	Hazlehurst	81.48	48	P	P	14 55 09.6	+0.7
	baz=327						
Z58A	St. Stephen	81.50	45	P	P	14 55 09.5	+0.5
	baz=328						
453A	Whigham	81.50	50	P	P	14 55 09.2	+0.2
	baz=327						
Y60A	Bolivia	81.63	44	P	P	14 55 09.6	0.0
	baz=329						
256A	Glennville	81.70	48	P	P	14 55 10.4	+0.4
	baz=328						
355A	Pearson	81.79	49	P	P	14 55 11.4	+0.9
	baz=327,SNR=5.7						
356A	Blackshear	82.14	48	P	P	14 55 13.2	+0.8
	baz=328						
455A	Stateville	82.21	49	P	P	14 55 13.5	+0.8
	baz=327						
556A	Lake Butler	83.12	49	P	P	14 55 18.8	+1.4
	baz=328						
557A	Orange Park	83.42	49	P	P	14 55 20.5	+1.6
	baz=328						
656A	Willston	83.59	50	P	P	14 55 21.4	+1.5
	baz=328						
STKA	Stephens Creek	84.43	194	P	P	14 55 24.4	+0.7
	comp=Z,3.1nm,0.6s,baz=13,slow=6.2,SNR=13						
RAYN	Ar Rayn	84.49	301	eP	P	14 55 23.4	-1.2
	comp=Z,16nm,1.4s						
RAYN	Ar Rayn	84.49	301	eP	P	14 55 23.4	-1.2
RAYN				pmax	pmax		
	comp=Z,16nm,1.4s						
758A	Lake Helen	84.56	49	P	P	14 55 26.2	+1.4
	baz=328						
857A	Zephyrhills	84.66	50	P	P	14 55 26.8	+1.5
	baz=328						
DWPF	Disney Wildern	85.17	49	P	P	14 55 29.0	+1.2
	baz=328						
058A	Arcadia	85.88	50	P	P	14 55 32.2	+0.8
	baz=328						
ESDC	Sonseca Array	87.56	346	P	P	14 55 38.4	-1.1
	comp=Z,1.4nm,0.6s,baz=8.5,slow=3.6,SNR=14						
KEST	Kesra	88.57	335	P	P	14 55 43.3	-1.0
	comp=Z,2.2nm,0.5s,baz=305,slow=5.3,SNR=6.8						
KEST	Kesra	88.57	335	eP	P	14 55 43.3	-1.0
	comp=Z,9.5nm,1.2s						
TOA1	Torodi Ar. Sit	112.08	335	ePKiKP	PKiKP	15 01 26.0	-0.5
TORD	Torodi Ar. Bea	112.09	335	PKiKP	PKiKP	15 01 26.0	-0.5
	comp=Z,0.3nm,0.4s,baz=22,slow=1.3,SNR=3.4						
DBIC	Dimbokro	119.91	340	PKP	PKPdf	15 01 41.1	-0.4
	comp=Z,5.9nm,1.1s,baz=0.2,slow=3.0,SNR=7.6						
VNDA	Vanda	129.00	179	PKP	PKPdf	15 01 57.1	+0.1
	comp=Z,0.6nm,0.6s,baz=339,slow=3.0,SNR=5.2						
LPAZ	La Paz	129.44	63	PKP	PKPdf	15 02 00.3	-0.1
	comp=Z,1.3nm,0.6s,baz=33,slow=1.7,SNR=6.4						
QSPA	South Pole Qui	141.47	180	ePKPpre	PKPpre	15 02 14.2	
CPUP	Villa Florida	143.43	60	PKP	PKPbc	15 02 23.1	+0.3
	comp=Z,3.6nm,0.7s,baz=317,slow=4.0,SNR=6.0						
SPB	Sao Paulo	145.96	44	ePKPdf	PKPab	15 02 31.0	-0.2
SYO	Syowa Base	146.69	215⇑	ePKPdf	PKPdf	15 02 30.0	+0.6
SYO	Syowa Base	146.69	215⇓	ePKPab	PKiKP	15 02 35.4	+1.5

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*NEIC **15** 14:43:27.8±1.0, 14°.53S×172°.38W, h10^{km}, mb4.4/3, Error ellipse: s-maj=34.8km s-min=14.3km az=23.0*

*IDC **15** 14:43:36.9±6.0, 15°.12S×173°.67W, h0^{km}, mb4.1/3, mb1 4.2/3, mb1mx3.7/35, mbtmp4.1/3, Error ellipse: s-maj=235.3km s-min=58.2km az=133.0*

ISC 15 14:43:17.3±2.6**, 14°.2S**±0°.2×**171°.0W**±0°.3**, h10^{km}, n13, σ0^{s}.39**/10**, mb4.2**/4**, Samoa Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.95	168	ePn	Pb	14 44 44.3	+0.1
RAO	Raoul Island	16.30	202	ePn	Pn	14 47 06.4	0.0
	524nm,0.7s						
STKA	Stephens Creek	46.66	239	P	P	14 51 45.9	-0.4
	2.8nm,0.9s,baz=72,slow=9.6,SNR=4.8						
STKA	Stephens Creek	46.66	239	eP	P	14 51 45.9	-0.4
	4.7nm,1.8s						
WR1	Warramunga Arr	52.40	256	eP	P	14 52 30.8	+0.5
WRA	Warramunga Arr	52.40	256	P	P	14 52 30.8	+0.5
	1.0nm,0.6s,baz=81,slow=7.7,SNR=7.6						
AS31	Alice Springs	52.71	251	eP	P	14 52 32.8	+0.2
	4.9nm,1.8s						
ASAR	Alice Springs	52.71	251	P	P	14 52 32.8	+0.2
	2.0nm,0.6s,baz=88,slow=7.8,SNR=45						
VNA3	Neumayer Olymp	93.82	174	P	P	14 56 34.1	-0.3
SNAA	Sanae	93.96	176	P	P	14 56 57.4	+22
VNA2	Neumayer--Watz	94.34	175	P	P	14 56 37.0	+0.2
	baz=314,slow=11						
VNA1	Neumayer--Stat	94.52	174	P	P	14 56 31.6	-6.0
BRTR	Keskin Array B	146.63	324	PKPbc	PKPbc	15 03 17.6	+18
	0.9nm,0.8s,baz=79,slow=3.1,SNR=4.6						

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*ISK **15** 14:43:38.5, 38°.33N×38°.10E, h3^{km}, ML2.0/3*

*DDA **15** 14:43:39.8, 38°.26N×38°.12E, h7^{km}±1^{km}, ML2.7*

ISC 15 14:43:39.5±1.3**, 38°.26N**±0°.04×**38°.08E**±0°.04**, h7^{km}**±12^{km}**, n8, σ0^{s}.75**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DARE	Darende-Malaty	0.56	304	PG	Pg	14 43 49.7	-0.7
DARE				SG	Sg	14 43 58.2	+0.4
HEKM	Malatya_Hekimh	0.63	352	i P	Pb	14 43 53.0	0.0
HEKM				i S	Sb	14 44 03.0	+0.8
ELZG	Elazig	0.75	71	i P	Pg	14 43 54.8	+0.8
ELZG				i S	Sb	14 44 05.4	-0.2
ELZG				IAML_P			
	comp=Z,1μm,0.1s						
SVRC	Sivrice-ELAZID	0.97	82	PG	Pg	14 43 57.4	-0.8
GZT	Gaziantep	0.99	205	i P	Pb	14 43 59.2	+0.2
GZT				i S	Sn	14 44 13.4	-0.7
URFA	Urfa	1.00	144	PG	Pb	14 43 59.5	+0.2
URFA				SG	Sn	14 44 14.6	+0.1
KEMA	Kemaliye	1.06	18	i P	Pb	14 43 59.0	-1.3
KEMA				i S	Sn	14 44 16.8	+0.8
CUKAN	kangal_SIVAS	1.16	336	i P	Pg	14 44 02.5	+0.6
CUKAN				i S	Sn	14 44 18.3	-0.3

SNET 15 14:44:05.7±0.8**, 11°.99N**×**87°.21W, h26^{km}**±6^{km}**, ML4.2, 4C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	0.64	73⇑	iP	Pb	14 44 17.8	-0.5
CNGN	Cerro Negro	0.71	45⇓	iP	Pb	14 44 19.2	-0.4
CNGN				eS	Sb	14 44 29.6	+0.5
MOMN	Momotombo	0.78	58⇓	iP	Pb	14 44 19.6	-1.1
CSGN	Cosiguina Volc	1.04	341	eS	Sn	14 44 39.2	+0.9
CNCH	Conchagua	1.42	335⇑	eP	Pn	14 44 30.1	+0.2
CNCH				eS	Sb	14 44 49.0	-0.2
CNCH				IAML		14 44 52.0	
	comp=Z,9μm,0.4s						
LCY	Lacayo	1.77	324	eP	Pn	14 44 35.2	+0.4
PACA	Pacayal	1.83	324⇑	eP	Pn	14 44 36.0	+0.4
PACA				eS	Sn	14 44 59.4	+1.5
TECA	Tecapa	1.95	320	eP	Pn	14 44 37.6	+0.2
TGUH	Tegucigalpa,Un	2.06	358	eP	Pn	14 44 39.2	+0.5
PAVA	Las Pavas	2.40	316	eP	Pn	14 44 44.0	+0.5
VICT	Victoria	2.40	325⇑	iP	Pn	14 44 44.1	+0.7
LOMA	Loma Larga	2.52	311	eP	Pn	14 44 45.2	+0.1
LOMA				IAML		14 45 23.1	
	comp=Z,957nm,0.3s						
CEVE	Cerro Verde	2.98	308	eP	Pn	14 44 51.9	+0.4

IDC 15 14:58:48.1±1.6**, 61°.06S**×**24°.17W, h0^{km}, mb4.1**/2**, mb1 4.1**/2**, mb1mx3.8**/16**, mbtmp4.0**/2**, MS5.3**/1**, Ms1 5.2**/1**, ms1mx4.9**/19**, Error ellipse: s-maj=106.7km s-min=55.2km az=94.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	34.62	284	LR	LR	15 18 50.9	
	comp=Z,4μm,19.5s,baz=58,slow=35						
H10S2	ASCENSION HYDR	52.48	12	T	T	16 05 07.8	
	baz=188						
H10S3	ASCENSION HYDR	52.48	12	T	T	16 05 05.0	
	baz=188						
H10S1	ASCENSION HYDR	52.50	12	T	T	16 05 16.4	
	baz=188						
TORD	Torodi Ar. Bea	76.77	26	P	P	15 10 41.1	0.0
	1.4nm,0.9s,baz=202,slow=4.4,SNR=3.8						
ASAR	Alice Springs	93.72	160	P	P	15 12 06.6	-0.1
	0.5nm,0.7s,baz=200,slow=3.7,SNR=4.1						
SONM	Songino Array	149.18	93	PKPbc	PKPbc	15 18 37.0	-0.5
	0.3nm,0.4s,baz=199,slow=3.1,SNR=3.9						
ILAR	Eielson Array	154.44	303	PKPbc	PKiKP	15 18 48.9	+0.1
	0.4nm,0.9s,baz=148,slow=5.2,SNR=4.2						

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*DJA **15** 15:00:17.9±0.9, 9°S±3°×11°2E±°, h33^{km}±10^{km}, M4.9/16,* *mb4.8/6,MLv4.9/16*

*ISCJB **15** 15:00:20.0±0.6,8°.91S±0°.05×111°.94E±0°.03,h69^{km}±5^{km}, mb4.3/25,Error ellipse: s-maj=9.0km s-min=4.5km az=16.6*

*NEIC **15** 15:00:21.4±2.3,8°.91S×111°.96E,h62^{km}±6^{km},mb4.6/15, Error ellipse: s-maj=17.5km s-min=10.0km az=191.0*

NEIC Felt [III] at Tulungagung. Also felt at Blitar.

*IDC **15** 15:00:21.6±2.2,8°.68S×112°.08E,h55^{km}±21^{km},mb4.0/14, mb1 4.1/16,mb1mx4.0/31,mbtmp4.3/16,ML4.6/2,Error ellipse: s-maj=18.8km s-min=11.6km az=37.0*

ISC 15 15:00:20.8±1.0,**8°.99S**±0°.07×**112°.02E**±0°.04,**h53**^{km}±9^{km}, **n230,**σ**1^{s}.03**/238,**mb4.4**/25,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WOJI	Wonogiri, Jawa	1.57	317	P	Pn	15 00 45.2	-1.1
WOJI				S	Sn	15 01 03.1	-2.5
NGJI	Ngawi	1.70	341	P	Pn	15 00 50.4	+2.3
NGJI				S	Sn	15 01 13.8	+5.1
YOGI	Yogyakarta	2.06	304	P	Pn	15 00 51.6	-1.4
YOGI				S	Sn	15 01 20.3	+2.7
GRJI	Gresik	2.11	13	P	Pn	15 00 54.2	+0.5
JAGI	Jajag, Banyuwa	2.17	76	*e*Pn	Pn	15 00 55.5	+0.9
JAGI	Jajag, Banyuwa	2.17	76	P	Pn	15 00 55.3	+0.8
JAGI				S	Sn	15 01 20.8	+0.5
SMRI	Semarang	2.48	321	*e*Pn	Pn	15 00 59.2	+0.5
SMRI	Semarang	2.48	321	P	Pn	15 00 59.3	+0.5
SMRI				S	Sn	15 01 29.7	+1.9
KMMI	Kalianget	2.73	45	P	Pn	15 01 02.9	+0.8
KMMI				S	Sn	15 01 35.0	+1.1
DNP	Denpasar	3.17	85	P	Pn	15 01 09.5	+1.3
SRBI	Singaraja	3.29	74	P	Pn	15 01 11.0	+1.2
CISI	Cisompet, Garu	4.39	289	*e*Pn	Pn	15 01 22.9	-2.1
CISI	Cisompet, Garu	4.39	289	P	Pn	15 01 22.9	-2.1
LEM	Lembang	4.86	296	P	Pn	15 01 31.7	+0.2
	11nm,0.3s,baz=107,slow=23,SNR=4.9						
LEM				S	Sn	15 02 26.6	0.0
	13nm,0.3s,baz=17,slow=20,SNR=5.3						
LEM	Lembang	4.86	296	P	Pn	15 01 30.4	-1.1
PLAI	Plampang	5.69	89	P	Pn	15 01 39.9	-2.9
	72nm,0.9s,0.7nm						
PBKI	Pangkalan Bun	6.25	357	P	Pn	15 01 51.3	+0.8
XMIS	Christmas Isla	6.45	256	*e*Pn	Pn	15 01 50.4	-2.8
CGJI	Cibinong	6.70	290	P	Pn	15 01 54.1	-2.4
	58nm,0.5s,0.5nm						
EDFI	Ende, Flores	9.56	89	P	Pn	15 02 32.1	-3.9
MNAI	Manna	10.10	296	*e*Pn	Pn	15 02 42.6	-0.7
MMRI	Maumere	10.11	89	*e*Pn	Pn	15 02 43.0	-0.3
KSM	Kuching	10.53	351	*e*Pn	Pn	15 02 48.4	-0.7
SBUM	Sibu	11.37	1	*e*Pn	Pn	15 03 03.5	+3.0
BATI	Baumata	11.55	97	P	Pn	15 03 04.0	+1.0
	9.4nm,0.3s,baz=49,slow=2.3,SNR=7.4						
BATI				S	Sn	15 05 06.8	-3.8
	3.3nm,0.3s,baz=342,slow=20,SNR=2.8						
BATI	Baumata	11.55	97	*e*Pn	Pn	15 03 04.0	+1.0
BATI				*e*Pn	Pn	15 03 04.0	+1.0
BATI				*e*Sn	Sn	15 05 06.8	-3.8
BATI				*e*Sn	Sn	15 05 06.8	-3.8
SOEI	Soe	12.11	95	*e*Pn	Pn	15 03 12.3	+1.5
GIRL	Giralia	13.74	171	*e*Pn	Pn	15 03 29.6	-3.3
MTN	Manton Dam	19.16	103	*e*P	P	15 04 41.0	+1.0
	26nm,1.3s						
SIJI	Sorong	20.79	68	P	Pn	15 05 00.6	-0.1
	5.6nm,0.5s,baz=315,slow=13,SNR=6.4						
WRA	Warramunga Arr	24.17	119	P	P	15 05 33.6	+1.3
	3.8nm,0.7s,baz=292,slow=12,SNR=24						
WRA				PcP	PcP	15 09 13.2	+1.0
	1.2nm,0.5s,baz=264,slow=2.6,SNR=5.1						
WR1	Warramunga Arr	24.17	119	*e*P	P	15 05 33.6	+1.3
WR1				*e*PcP	PcP	15 09 13.2	+1.0
WB2	Warramunga Arr	24.18	119	*e*P	P	15 05 33.6	+1.2
	6.3nm,0.8s						
ASAR	Alice Springs	25.52	127	P	P	15 05 46.0	+1.5
	1.3nm,0.4s,baz=302,slow=9.1,SNR=50						
ASAR				PcP	PcP	15 09 16.4	+1.2
	1.1nm,0.6s,baz=312,slow=1.5,SNR=12						
AS31	Alice Springs	25.52	127	*e*P	P	15 05 45.3	+0.7
	1.0nm,0.6s						
AS31				*e*PcP	PcP	15 09 16.4	+1.2
CM31	Chiang Mai Arr	30.17	335	*e*P	P	15 06 24.1	-2.0
	6.7nm,0.4s						
CM31				*e*PcP	PcP	15 09 28.2	+1.7
CMAR	Chiang Mai Arr	30.17	335	PcP	PcP	15 09 28.2	+1.7
	0.8nm,0.6s,baz=178,slow=3.9,SNR=4.1						
COEN	Coen	30.91	102	*e*P	P	15 06 33.9	+1.1
	10nm,0.9s						
BBOO	Buckleboo	32.49	140	*e*P	P	15 06 46.7	+0.2
	23nm,1.5s						
STKA	Stephens Creek	35.66	134	P	P	15 07 16.0	+2.1
	4.9nm,0.6s,baz=314,slow=7.7,SNR=26						
STKA				PcP	PcP	15 09 42.2	+0.7
	1.2nm,0.5s,baz=298,slow=3.3,SNR=3.9						
H08S2	Diego Garcia H	39.12	269	T	T	15 49 18.3	
	baz=95,slow=75,SNR=8.5						
H08S3	Diego Garcia H	39.13	269	T	T	15 49 29.5	
	baz=95,slow=75,SNR=18						
H08S1	Diego Carcia H	39.14	269	T	T	15 48 58.8	
	baz=95,slow=75,SNR=3.1						
KS15	Wonju Array Si	48.52	17	*e*P	P	15 08 58.9	+0.4
	24nm,1.5s						
KSRS	Korea Array	48.54	17	P	P	15 08 58.4	-0.2
	1.8nm,0.6s,baz=197,slow=9.2,SNR=3.9						
MAJO	Matsushiro	51.55	27	*e*P	P	15 09 18.9	-2.6
MJAR	Matsushiro Arr	51.55	27	P	P	15 09 18.9	-2.6
	1.8nm,0.6s,baz=213,slow=9.0,SNR=8.3						
MJB9	Matsu-Tunnel	51.55	27	*e*P	P	15 09 19.8	-1.8
	7.4nm,1.2s						
USA0B	Ussuriysk Arra	55.95	17	*e*P	P	15 09 52.0	-1.4
	7.1nm,1.4s						
USRK	Ussuriysk Ar.	55.95	17	P	P	15 09 52.1	-1.4
	1.7nm,0.7s,baz=198,slow=2.2,SNR=7.2						
SONA0	Songino Array	56.79	355	*e*P	P	15 09 58.4	-1.2
SONA0				*e*PcP	PcP	15 10 54.7	-0.2
SONM	Songino Array	56.79	355	P	P	15 09 58.4	-1.2
	1.1nm,0.5s,baz=181,slow=7.9,SNR=6.0						
SONM				PcP	PcP	15 10 54.7	-0.2
	0.2nm,0.3s,baz=166,slow=3.9,SNR=4.2						
WMQ	Urumqi	57.01	339	*e*P	P	15 10 02.3	+1.1
ASAJ	Asahikawa	59.68	25	P	P	15 10 18.2	-1.4
	1.4nm,0.7s,baz=243,slow=9.0,SNR=4.9						
MK31	Makanchi Array	61.53	337	*e*P	P	15 10 30.7	-1.6
	1.6nm,0.6s						
MK32	Makanchi Array	61.53	337	*e*P	P	15 10 30.5	-1.8
MKAR	Makanchi Array	61.53	337	P	P	15 10 30.5	-1.8
	2.4nm,0.5s,baz=151,slow=7.7,SNR=31						
YSS	Yuzh-Sakhalins	62.06	23	*e*P	P	15 10 34.8	-1.0
	9.3nm,1.0s						
OPO	Ambohidratompo	63.40	254	P	P	15 10 47.4	+1.9
	1.4nm,0.4s,baz=95,slow=11,SNR=2.0						
ZALV	Zalesovo Beam	66.79	343	P	P	15 11 04.3	-2.2
	1.8nm,0.4s,baz=155,slow=4.5,SNR=6.2						
ZAA1	Zalesovo Array	66.79	343	*e*P	P	15 11 04.3	-2.3
PEA0B	Petropavlovsk-	73.01	27	*e*P	P	15 11 44.3	-0.5
	26nm,1.4s						
PETK	Petropavlovsk-	73.01	27	P	P	15 11 43.9	-0.9
	1.4nm,0.4s,baz=174,slow=1.1,SNR=18						
PEA1	Petropavlovsk-	73.01	27	*e*P	P	15 11 43.9	-0.9
KBZ	Khabaz	81.47	317	P	P	15 12 32.0	-0.3
	2.9nm,0.7s,baz=112,slow=5.4,SNR=6.7						
BR101	Keskin Array S	86.86	311	*e*P	P	15 12 59.9	-0.3
BRTR	Keskin Array B	86.86	311	P	P	15 12 59.9	-0.3
	1.0nm,0.8s,baz=132,slow=7.3,SNR=5.8						
TORD	Torodi Ar. Bea	111.67	281	PKiKP	PKiKP	15 18 50.2	-0.3
	0.4nm,0.5s,baz=118,slow=3.4,SNR=4.4						
TOA1	Torodi Ar. Sit	111.67	281	*e*PKiKP	PKiKP	15 18 50.2	-0.3
NV01	Mina Array Sit	126.26	49	*e*PKPdf	PKiKP	15 19 19.6	+0.9
NVAR	Mina Array Bea	126.26	49	PKP	PKiKP	15 19 19.6	+0.9
	0.4nm,0.7s,baz=255,slow=1.9,SNR=3.6						
CCM	Cathedral Cave	144.27	32	P	PKPbc	15 19 50.1	+0.6
	baz=318						
N47A	Urbana	144.56	23	P	PKPab	15 19 49.9	-0.3
	baz=329,SNR=5.2						
L50A	Kingsville	144.58	19	P	PKPab	15 19 50.3	+0.1
	baz=334						
J54A	Appleton	144.60	13	P	PKPdf	15 19 51.4	-0.3
	baz=342						
U40A	Yellville	144.60	36	P	PKPab	15 19 50.5	0.0
	baz=314						
LBNH	Lisbon	144.72	5	P	PKPbc	15 19 51.6	+0.7
	baz=353						
NCB	Newcomb	144.73	8	*e*PKPdf	PKPab	15 19 51.0	+0.2
MEDO	Medina	144.74	13	P	PKPbc	15 19 51.1	+0.2
	baz=342						
J55A	Hilton	144.79	12	P	PKPbc	15 19 51.2	+0.2
	baz=343						
W39A	Magazine	144.83	38	P	PKPbc	15 19 52.2	+0.7
	baz=312						
N48A	Decatur	144.84	23	P	PKPab	15 19 51.2	0.0
	baz=330						
PLIO	Pelee Island,	144.90	19	P	PKPab	15 19 50.9	-0.5
	baz=334						
M50A	Fremont	145.07	20	P	PKPbc	15 19 51.7	-0.3
	baz=334						
N49A	Columbus Grove	145.10	22	P	PKPab	15 19 52.5	+0.3
	baz=331						
K54A	Basiliko Farm,	145.22	14	P	PKPbc	15 19 52.4	-0.1
	baz=341,SNR=6.8						
K55A	Perry	145.25	13	P	PKPbc	15 19 52.7	+0.1
	baz=342						
O48A	Farmland	145.31	23	P	PKPbc	15 19 52.9	0.0
	baz=329,SNR=6.0						
ERPA	Erie	145.35	16	P	PKPdf	15 19 53.3	+0.3
	baz=339						
MIAR	Mount Ida	145.39	39	P	PKPab	15 19 53.9	+0.5
	baz=312						
L54A	Sinclairville	145.42	15	P	PKPbc	15 19 53.2	+0.1
	baz=340,SNR=5.3						
L53A	Girard	145.43	16	P	PKPbc	15 19 52.9	-0.3
	baz=338						
M52A	Chesterland	145.49	18	P	PKPbc	15 19 53.5	+0.1
	baz=336						
P47A	Martinsville	145.51	25	P	PKPbc	15 19 53.8	+0.4
	baz=327						
N50A	Nevada	145.60	21	P	PKPbc	15 19 54.0	+0.2
	baz=333,SNR=6.6						
L55A	Hinsdale	145.68	14	P	PKPdf	15 19 54.0	+0.4
	baz=342						
O49A	Covington	145.68	22	P	PKPdf	15 19 53.9	+0.3
	baz=331,SNR=6.1						
N51A	Ashland	145.73	20	P	PKPbc	15 19 54.5	+0.3
	baz=334						
W41B	Gary Mavity, V	145.77	37	P	PKPab	15 19 55.3	+0.5
	baz=314						
M53A	WI Miller and	145.79	17	P	PKPdf	15 19 54.2	+0.4
	baz=338,SNR=7.0						
P48A	Milroy	145.88	24	P	PKPdf	15 19 54.4	+0.4
	baz=328						
O50A	Cable	145.99	22	P	PKPab	15 19 55.7	+0.2
	baz=332						
M54A	Oil Creek Stat	146.00	16	P	PKPbc	15 19 55.0	0.0
	baz=339,SNR=6.6						
N52A	McGinn’s Farm,	146.05	19	P	PKPdf	15 19 54.8	+0.6
	baz=336						
P49A	Miami Univ. Ec	146.10	24	P	PKPbc	15 19 55.4	0.0
	baz=330						
ACSO	Alum Creek Sta	146.14	21	P	PKPbc	15 19 55.6	+0.2
	baz=333,SNR=5.7						
BINY	Binghamton	146.18	11	P	PKPbc	15 19 55.4	-0.1
	baz=346						
Q48A	North Vernon	146.20	25	P	PKPbc	15 19 55.6	0.0
	baz=328,SNR=5.2						
M55A	Ridgway	146.28	15	P	PKPbc	15 19 55.7	-0.1
	baz=341,SNR=6.2						
N53A	Lisbon	146.32	18	P	PKPbc	15 19 56.0	+0.1
	baz=337						
O51A	Pataskala	146.35	20	P	PKPbc	15 19 56.1	0.0
	baz=334,SNR=5.6						
L58A	Harry Jones Me	146.35	11	P	PKPbc	15 19 56.3	+0.3
	baz=346,SNR=5.3						
P50A	Jamestown	146.39	22	P	PKPbc	15 19 56.0	-0.2
	baz=331,SNR=5.0						
M56A	Emporium	146.40	14	P	PKPbc	15 19 56.0	-0.2
	baz=342,SNR=5.1						
N54A	Moraine State	146.42	17	P	PKPbc	15 19 56.1	-0.2
	baz=338						
Q49A	Aurora	146.48	24	P	PKPbc	15 19 56.8	+0.4
	baz=329						
WCI	Wyandotte Cave	146.54	27	P	PKPbc	15 19 57.3	+0.6
	baz=326						
R48A	Northridge Ran	146.58	26	P	PKPbc	15 19 57.4	+0.6
	baz=327						
O52A	Adamsville	146.63	20	P	PKPbc	15 19 57.1	+0.2
	baz=335						
T46A	Princeton	146.75	30	P	PKPbc	15 19 57.9	+0.6
	baz=322						
P51A	Williamsport	146.78	22	P	PKPbc	15 19 57.2	0.0
	baz=332						
N55A	Marion Center	146.87	15	P	PKPbc	15 19 58.2	+0.6
	baz=340						
M58A	Price’s Panora	146.89	12	P	PKPbc	15 19 57.5	-0.1
	baz=345,SNR=5.9						
N56A	West Decatur	146.91	14	P	PKPbc	15 19 57.6	-0.1
	baz=341						
M59A	Waymart	146.92	10	P	PKPbc	15 19 57.7	+0.1
	baz=347,SNR=6.2						
P52A	Corning	146.97	20	P	PKPbc	15 19 57.8	0.0
	baz=334						
R49A	Shelbyville	146.97	25	P	PKPbc	15 19 57.9	0.0
	baz=328						
Q50A	Georgetown	146.99	23	P	PKPbc	15 19 58.0	+0.1
	baz=330						
O54A	Avella	147.03	18	P	PKPbc	15 19 58.4	+0.4
	baz=337						
Q51A	Peebles	147.07	22	P	PKPbc	15 19 58.7	+0.5
	baz=332						
S48A	Wiedeman Farm,	147.12	27	P	PKPbc	15 19 58.6	+0.3
	baz=326						
U46A	Springville	147.14	31	P	PKPbc	15 19 58.4	0.0
	baz=321						
N57A	Milroy	147.24	13	P	PKPbc	15 19 58.5	0.0
	baz=342,SNR=5.4						
SSPA	Standing Stone	147.28	14	P	PKPbc	15 19 59.1	+0.4
	baz=342						
R50A	Paris	147.33	24	P	PKPbc	15 19 59.6	+0.7
	baz=329						
N58A	Sunbury	147.35	12	P	PKPbc	15 19 59.0	+0.2
	baz=344						
P53A	Whipple	147.35	19	P	PKPbc	15 19 59.1	+0.2
	baz=335						
M61A	Granite Spring	147.41	8	P	PKPbc	15 19 59.1	+0.1
	baz=350						
O56A	Blue Knob Stat	147.46	15	P	PKPbc	15 19 59.6	+0.3
	baz=340						
N59A	State Game Lan	147.46	11	P	PKPbc	15 19 59.7	+0.5
	baz=346						
WVT	Waverly	147.50	31	*e*PKPbc	PKPbc	15 19 59.8	+0.4
WVT	Waverly	147.50	31	P	PKPbc	15 19 59.9	+0.5
	baz=322						
Q52A	Bidwell	147.52	21	P	PKPbc	15 19 59.1	-0.3
	baz=333						
U47A	Clarksville	147.52	30	P	PKPbc	15 20 00.2	+0.7
	baz=323						
V46A	Holladay	147.61	31	P	PKPbc	15 19 59.8	0.0
	baz=321						
R51A	Hillsboro	147.61	23	P	PKPbc	15 19 59.9	+0.3
	baz=330						
N60A	Cedar Hill Far	147.63	10	P	PKPbc	15 19 59.4	-0.2
	baz=347						
PAL	Palisades	147.68	8	P	PKPbc	15 20 00.0	+0.3
	baz=349						
O57A	Amberson	147.74	14	P	PKPbc	15 19 59.6	-0.4
	baz=342						
S50A	Richmond	147.81	25	P	PKPbc	15 20 00.3	+0.1
	baz=329						
P55A	Reedsville	147.82	17	P	PKPbc	15 20 00.1	-0.1
	baz=338						
U48A	Cassie Pea, Po	147.83	29	P	PKPbc	15 20 00.5	+0.2
	baz=324						
Q53A	Leroy	147.87	20	P	PKPbc	15 20 00.4	0.0
	baz=334						
OXF	Oxford	147.88	35	P	PKPbc	15 20 00.9	+0.4
	baz=318						
O59A	Robesonia	147.96	12	P	PKPbc	15 20 00.5	-0.1
	baz=345						
Q54A	Coxs Mills	147.99	19	P	PKPbc	15 20 00.7	0.0
	baz=336						
O58A	Lewisberry	147.99	13	P	PKPbc	15 20 00.1	-0.5
	baz=343						
P56A	Dayton Farm, R	148.10	16	P	PKPbc	15 20 00.9	-0.1
	baz=340						
S51A	Beattyville	148.18	24	P	PKPbc	15 20 01.4	+0.2
	baz=330						
U49A	Red Boiling Sp	148.18	28	P	PKPbc	15 20 02.4	+1.2
	baz=325						
T50A	Nancy	148.19	26	P	PKPbc	15 20 01.8	+0.5
	baz=327						
R53A	Hurricane	148.19	21	P	PKPbc	15 20 01.2	0.0
	baz=333						
Q55A	Buckhannon	148.21	18	P	PKPbc	15 20 01.8	+0.4
	baz=337						
W47A	Westpoint	148.30	32	P	PKPbc	15 20 01.7	+0.1
	baz=321						
P57A	Homestead Farm	148.34	15	P	PKPbc	15 20 01.8	+0.2
	baz=341						
Q56A	Snyder Ridge,	148.43	17	P	PKPbc	15 20 01.4	-0.4
	baz=339						
P58A	Pank, Wackersv	148.50	14	P	PKPbc	15 20 01.8	-0.2
	baz=342						
T51A	Gray	148.61	25	P	PKPbc	15 20 02.3	-0.1
	baz=329						
Q57A	Strasburg	148.65	16	P	PKPbc	15 20 02.4	-0.1
	baz=340						
R54A	Victor	148.66	20	P	PKPbc	15 20 02.3	-0.2
	baz=335						
U50A	Jamestown	148.69	27	P	PKPbc	15 20 02.9	+0.3
	baz=327						
W48A	Pulaski	148.73	31	P	PKPbc	15 20 02.7	0.0
	baz=322						
Q58A	Fox Den Farm,	148.93	15	P	PKPbc	15 20 03.9	+0.8
	baz=341						
R56A	Bull Pasture M	148.96	18	P	PKPbc	15 20 03.7	+0.4
	baz=338						
W49A	Belvidere	149.08	30	P	PKPbc	15 20 03.6	0.0
	baz=323						
U51A	La Follette	149.08	26	P	PKPbc	15 20 03.8	+0.2
	baz=328						
TZTN	Tazewell	149.14	25	P	PKPbc	15 20 03.6	-0.1
	baz=329						
V50A	Pikevile	149.19	28	P	PKPbc	15 20 03.9	0.0
	baz=326						
X48A	Hartselle	149.21	32	P	PKPbc	15 20 03.7	-0.2
	baz=321						
R57A	Stanardsville	149.31	16	P	PKPbc	15 20 04.5	+0.4
	baz=340						
U52A	Thorn Hill	149.34	25	P	PKPbc	15 20 03.6	-0.6
	baz=329						
V51A	Loudon	149.42	27	P	PKPbc	15 20 04.8	+0.4
	baz=327						
R58A	Rapidan	149.45	16	P	PKPbc	15 20 04.8	+0.4
	baz=340						
T54A	Tazewell	149.46	22	P	PKPbc	15 20 04.6	0.0
	baz=333						
W50A	Signal Mountai	149.47	29	P	PKPbc	15 20 05.1	+0.4
	baz=325						
X49A	Woodville	149.53	31	P	PKPbc	15 20 04.9	+0.1
	baz=322						
Y48A	Jasper	149.55	33	P	PKPbc	15 20 04.4	-0.5
	baz=320						
U53A	Fall Branch	149.69	24	P	PKPbc	15 20 05.5	+0.3
	baz=331						
T55A	Pulaski	149.69	21	P	PKPbc	15 20 05.1	0.0
	baz=335						
V52A	Sevierville	149.72	26	P	PKiKP	15 20 06.1	-0.1
	baz=328						
W51A	Cleveland	149.76	28	P	PKPbc	15 20 05.5	+0.2
	baz=326						
X50B	Fort Payne	149.91	30	P	PKPbc	15 20 05.5	-0.2
	baz=324						
Y49A	Blount Mountai	150.00	32	P	PKPbc	15 20 06.0	+0.1
	baz=322						
T56A	Rocky Mt	150.02	20	P	PKPbc	15 20 05.8	-0.1
	baz=336						
U55A	TA2, Sparta	150.15	21	P	PKPbc	15 20 06.4	+0.1
	baz=334						
V53A	Saluda	150.19	25	P	PKPbc	15 20 06.8	+0.4
	baz=330						
X51A	Calhoun	150.21	29	P	PKPbc	15 20 06.4	0.0
	baz=325						
T57A	Hurt	150.30	18	P	PKPbc	15 20 06.4	-0.1
	baz=337						
LRAL	Lakeview Retre	150.32	34	P	PKPbc	15 20 07.1	+0.4
	baz=320						
Y50A	Piedmont	150.32	31	P	PKPbc	15 20 06.4	-0.2
	baz=323						
Z49A	Columbiana	150.45	33	P	PKPbc	15 20 07.7	+0.7
	baz=321						
V54A	Nebo	150.45	23	P	PKPbc	15 20 07.1	+0.1
	baz=331						
W53A	Cullowhee	150.47	26	P	PKiKP	15 20 08.1	+0.2
	baz=329						
T58A	Grand View Acr	150.57	17	P	PKPbc	15 20 07.6	+0.5
	baz=339						
X52A	Dahlonega	150.62	27	P	PKiKP	15 20 08.2	+0.1
	baz=327						
Z50A	Ashland	150.72	32	P	PKPbc	15 20 07.8	+0.1
	baz=322						
149A	Jones	150.76	34	P	PKiKP	15 20 08.6	+0.2
	baz=320						
U57A	Blanch	150.79	19	P	PKPbc	15 20 07.5	-0.2
	baz=337						
T59A	Double "B" Far	150.82	16	P	PKPbc	15 20 08.1	+0.4
	baz=341						
V56A	Mocksville	150.97	21	P	PKPbc	15 20 08.5	+0.3
	baz=334						
X53A	Estanollee	150.97	27	P	PKiKP	15 20 09.1	+0.3
	baz=328						
U58A	Oxford	151.07	18	P	PKPbc	15 20 08.6	+0.2
	baz=338						
V57A	Coltrane Farms	151.15	20	P	PKPbc	15 20 08.4	-0.1
	baz=336						
Y52A	Lilburn	151.16	29	P	PKiKP	15 20 09.7	+0.5
	baz=326						
150A	Eclectic	151.17	33	P	PKiKP	15 20 09.3	+0.1
	baz=321						
KMSC	Kings Mountain	151.24	23	P	PKPbc	15 20 08.3	-0.5
	baz=332						
X54A	Belton	151.34	25	P	PKPbc	15 20 09.3	+0.3
	baz=330						
Y53A	Monroe	151.39	28	P	PKiKP	15 20 09.8	+0.1
	baz=327						
Z52A	Williamson	151.53	30	P	PKiKP	15 20 10.3	+0.3
	baz=324						
X55A	Gracelyn & Ava	151.71	24	P	PKPbc	15 20 10.1	+0.2
	baz=331						
W57A	Gilead	151.73	21	P	PKPbc	15 20 10.0	+0.1
	baz=335						
V59A	Middlesex	151.75	18	P	PKPbc	15 20 10.2	+0.3
	baz=338						
Y54A	Tignall	151.79	27	P	PKiKP	15 20 10.7	+0.2
	baz=328						
152A	Waverly Hall	151.80	31	P	PKiKP	15 20 10.9	+0.4
	baz=323						
GOGA	Godfrey	151.81	28	P	PKPbc	15 20 10.2	0.0
	baz=326						
Z53A	Monticello	151.87	29	P	PKiKP	15 20 11.0	+0.3
	baz=326						
251A	Midway	151.90	33	P	PKiKP	15 20 10.9	+0.2
	baz=321						
X56A	White Oak	151.93	23	P	PKPbc	15 20 10.6	+0.1
	baz=332						
Y55A	Saluda	152.08	25	P	PKPbc	15 20 10.7	0.0
	baz=330						
Z54A	Sparta	152.24	27	P	PKiKP	15 20 11.9	+0.5
	baz=327						

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*JMA **15** 15:01:28.5±0.1,23°.97N×121°.08E,h0^{km},M3.7*

*TAP **15** 15:01:29.1,23°.96N×121°.05E,h19^{km},ML4.0,B*

*ISCJB **15** 15:01:30.1±0.1,23°.953N±0°.009×121°.07E±0°.01, h22^{km}±1^{km},Error ellipse: s-maj=2.0km s-min=1.3km az=33.8*

ISC 15 15:01:29.6±0.8,**23°.97N**±0°.01×**121°.05E**±0°.01,**h16**^{km}±6^{km}, **n122,**σ**0^{s}.67**/203,**7C-45D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGB	Renai	0.15	51	⇓P	Pb	15 01 34.1	0.0
	baz=55						
CHGB				S	Sb	15 01 37.3	+0.1
	baz=55						
SMLT	Sun Moon Lake	0.16	239	⇑*i*P	Pg	15 01 34.0	+0.2
	baz=240						
SMLT				*i* S	Sb	15 01 37.5	+0.1
	baz=240						
TYC	Yuchr	0.19	250	⇑*i*P	Pg	15 01 34.3	+0.2
	baz=252						
TYC				*i* S	Sg	15 01 37.4	+0.4
	baz=252						
SSLB	Suanglung	0.20	206	⇑P	Pg	15 01 34.2	-0.1
	baz=208						
SSLB				S	Sg	15 01 37.3	-0.2
	baz=208						
VWDT	VWDT	0.23	158	⇑P	Pb	15 01 35.2	-0.1
	baz=158						
VWDT				S	Sb	15 01 38.8	-0.5
	baz=158						
WHF	Hehuan Shan	0.27	48	⇓P	Pb	15 01 36.1	-0.2
	baz=53						
WHF				*i* S	Sb	15 01 40.6	-0.2
	baz=53						

TWT	**Tachien** baz=14	**0.31**	**22**	⇓iP	**Pg**	**15 01 36.1**	**-0.1**
TWT	baz=14			i S	**Sg**	**15 01 40.3**	**-0.4**
WHYT	**Xinyi Township** baz=215	**0.32**	**214**	P	**Pg**	**15 01 36.6**	**+0.2**
WHYT	baz=215			S	**Sb**	**15 01 42.2**	**+0.1**
WJS	**Zhushan** baz=241	**0.33**	**244**	⇓iP	**Pb**	**15 01 37.1**	**0.0**
WJS	baz=241			S	**Sb**	**15 01 42.9**	**+0.7**
WNT	**Mingjian** baz=256	**0.35**	**255**	⇓iP	**Pb**	**15 01 37.5**	**+0.1**
WNT	baz=256			S	**Sb**	**15 01 43.5**	**+0.8**
ESL	**Shilin** baz=106	**0.38**	**113**	⇓iP	**Pg**	**15 01 37.5**	**+0.2**
ESL	baz=106			S	**Sg**	**15 01 42.8**	**+0.1**
TCU	**Taichung** baz=299	**0.39**	**298**	P	**Pb**	**15 01 38.4**	**+0.3**
EGFH	**Guangfu** baz=124	**0.46**	**131**	⇓P	**Pg**	**15 01 38.7**	**0.0**
EGFH	baz=124			eS	**Sg**	**15 01 45.0**	**0.0**
TWQ1	**Liyutan** baz=326	**0.46**	**326**	⇓iP	**Pb**	**15 01 39.7**	**+0.4**
TWQ1	baz=326			S	**Sb**	**15 01 47.1**	**+1.2**
ETLH	**Xiulin Townshi** baz=58	**0.46**	**59**	⇓P	**Pg**	**15 01 38.7**	**-0.1**
ETLH	baz=58			S	**Sb**	**15 01 45.8**	**-0.3**
WCHH	**Zhanghua** baz=284	**0.46**	**284**	⇓iP	**Pb**	**15 01 39.7**	**+0.3**
YUS	**Yu-Shan** baz=191	**0.48**	**191**	⇑iP	**Pg**	**15 01 39.3**	**-0.2**
YUS	baz=191			S	**Sg**	**15 01 46.3**	**+0.3**
CHN5	**Tsauling** baz=224	**0.50**	**223**	⇓iP	**Pg**	**15 01 39.8**	**+0.2**
CHN5	baz=224			S	**Sb**	**15 01 47.8**	**+0.5**
ALS	**Alishan** baz=198	**0.51**	**206**	⇓iP	**Pg**	**15 01 40.0**	**+0.2**
ALS	baz=198			i S	**Sb**	**15 01 47.3**	**-0.3**
HWA	**Hwalien** baz=89	**0.51**	**89**	⇓iP	**Pb**	**15 01 40.1**	**-0.1**
HWA	baz=89			S	**Sb**	**15 01 47.9**	**+0.5**
ENLB	**Shoufeng** baz=97	**0.51**	**97**	⇓P	**Pb**	**15 01 40.2**	**+0.1**
ENLB	baz=97			S	**Sb**	**15 01 48.5**	**+1.1**
TWD	**Chiawan** baz=85	**0.51**	**77**	⇓iP	**Pg**	**15 01 39.5**	**-0.2**
TWD	baz=85			S	**Sg**	**15 01 46.5**	**-0.1**
NSY	**Sanyi** baz=330	**0.52**	**330**	⇓P	**Pb**	**15 01 41.1**	**+0.7**
NSY	baz=330			S	**Sn**	**15 01 49.6**	**-1.3**
EHY	**Hungye** baz=143	**0.52**	**151**	⇓iP	**Pg**	**15 01 39.9**	**-0.1**
EHY	baz=143			S	**Sg**	**15 01 46.6**	**-0.4**
WGK	**Gukeng** baz=238	**0.53**	**238**	⇓iP	**Pb**	**15 01 40.5**	**0.0**
WGK	baz=238			S	**Sb**	**15 01 48.7**	**+0.8**
WDJ	**Dajia District** baz=315	**0.53**	**315**	⇓P	**Pb**	**15 01 41.3**	**+0.7**
WDJ	baz=315			eS	**Sn**	**15 01 49.9**	**-1.4**
NACB	**Ninganchiao** baz=76	**0.54**	**67**	⇓P	**Pg**	**15 01 39.9**	**-0.4**
NACB	baz=76			S	**Sg**	**15 01 47.2**	**-0.2**
WDLH	**Douliu** baz=240	**0.54**	**239**	⇓P	**Pg**	**15 01 40.7**	**+0.3**
NNSB	**Datong** baz=36	**0.55**	**33**	⇓P	**Pg**	**15 01 40.1**	**-0.4**
NNSB	baz=36			eS	**Sg**	**15 01 47.5**	**-0.4**
NNS	**Nan Shan** baz=35	**0.56**	**32**	⇓iP	**Pg**	**15 01 40.3**	**-0.4**
NNS	baz=35			S	**Sg**	**15 01 47.8**	**-0.3**
PTSB	**Yuanli** baz=326	**0.57**	**327**	P	**Pb**	**15 01 41.8**	**+0.6**
PTSB	baz=326			S	**Sn**	**15 01 51.0**	**-1.2**
HGSD	**Ruisui** baz=144	**0.58**	**144**	⇓P	**Pb**	**15 01 41.4**	**-0.1**
HGSD	baz=144			S	**Sb**	**15 01 49.1**	**-0.4**
NMLH	**Miaoli** baz=337	**0.61**	**337**	⇓iP	**Pb**	**15 01 42.7**	**+0.7**
NMLH	baz=337			S	**Sn**	**15 01 52.9**	**-0.4**
YULB	**Yu-li** baz=151	**0.62**	**158**	⇓P	**Pg**	**15 01 41.5**	**-0.2**
YULB	baz=151			S	**Sg**	**15 01 49.6**	**-0.3**
RLNB	**Erlin** baz=263	**0.64**	**263**	⇓P	**Pg**	**15 01 42.1**	**0.0**
RLNB	baz=263			S	**Sb**	**15 01 51.7**	**+0.7**
TWF1	**Yuli** baz=152	**0.65**	**160**	⇑iP	**Pg**	**15 01 42.3**	**-0.1**
TWF1	baz=152			eS	**Sb**	**15 01 51.6**	**+0.1**
NSTT	**Nanjuang** baz=3.0	**0.66**	**356**	⇓iP	**Pb**	**15 01 43.0**	**+0.2**
NSTT	baz=3.0			S	**Sb**	**15 01 52.2**	**+0.4**
LIOB	**Emei** baz=3.0	**0.68**	**357**	⇓iP	**Pb**	**15 01 43.4**	**+0.3**
LIOB	baz=3.0			eS	**Sb**	**15 01 52.6**	**+0.4**
WTCT	**Ta-ch'eng** baz=262	**0.71**	**262**	⇓P	**Pg**	**15 01 43.2**	**-0.3**
CHY	**Chiayi** baz=231	**0.74**	**231**	⇓P	**Pb**	**15 01 43.7**	**-0.4**
CHY	baz=231			S	**Sb**	**15 01 54.9**	**+0.9**
YHNB	**Yeheng** baz=22	**0.76**	**23**	⇓P	**Pg**	**15 01 43.9**	**-0.5**
YHNB	baz=22			S	**Sg**	**15 01 54.3**	**-0.2**
TPUB	**Ta-pu** baz=211	**0.77**	**210**	⇓P	**Pb**	**15 01 43.9**	**-0.7**
TPUB	baz=211			S	**Sb**	**15 01 54.5**	**-0.3**
WMLT	**Mailiao** baz=258	**0.77**	**258**	eP	**Pb**	**15 01 44.5**	**-0.2**
ELDTW	**Lidau** baz=186	**0.78**	**182**	eP	**Pb**	**15 01 44.2**	**-0.6**
ELDTW	baz=186			eS	**Sn**	**15 01 56.3**	**-1.2**
ENA	**Nanau** baz=55	**0.78**	**54**	⇓iP	**Pb**	**15 01 44.2**	**-0.6**
ENA	baz=55			eS	**Sb**	**15 01 54.7**	**-0.5**
NANB	**Nanao** baz=55	**0.79**	**54**	⇓iP	**Pb**	**15 01 44.3**	**-0.7**
NANB	baz=55			eS	**Sb**	**15 01 54.1**	**-1.3**
SBCB	**Hsinchu** baz=355	**0.82**	**356**	eP	**Pn**	**15 01 46.2**	**-0.3**
SBCB	baz=355			S	**Sn**	**15 01 58.2**	**-0.3**
WSF	**Szhu** baz=247	**0.83**	**247**	P	**Pb**	**15 01 44.9**	**-0.7**
HSN	**Hsinchu** baz=357	**0.83**	**355**	P	**Pn**	**15 01 47.1**	**+0.4**
HSN	baz=357			S	**Sn**	**15 01 59.7**	**+1.0**
WLGB	**Puzi** baz=235	**0.84**	**235**	⇓eP	**Pb**	**15 01 45.4**	**-0.5**
WLGB	baz=235			eS	**Sn**	**15 01 58.7**	**-0.2**
STYT	**Tauyuan** baz=199	**0.84**	**199**	⇓iP	**Pb**	**15 01 45.6**	**-0.3**
STYT	baz=199			S	**Sb**	**15 01 56.7**	**-0.4**
TWK	**Hsinying** baz=216	**0.87**	**217**	⇓iP	**Pb**	**15 01 45.7**	**-0.6**
TWK	baz=216			eS	**Sb**	**15 01 57.8**	**+0.1**
SNST	**Tainan City** baz=225	**0.90**	**214**	eP	**Pb**	**15 01 46.3**	**-0.6**
SNST	baz=225			S	**Sn**	**15 01 59.8**	**-0.5**
WLTB	**Daxi** baz=16	**0.90**	**12**	⇓P	**Pn**	**15 01 47.9**	**+0.2**
WLTB	baz=16			eS	**Sn**	**15 02 00.1**	**-0.3**
CHKT	**Chengkung** baz=146	**0.91**	**161**	eP	**Pb**	**15 01 47.0**	**0.0**
CHN1	**Nanshi** baz=222	**0.91**	**212**	P	**Pb**	**15 01 46.5**	**-0.6**
CHN1	baz=222			eS	**Sg**	**15 01 59.7**	**+0.3**
TWE	**Neicheng** baz=36	**0.94**	**37**	⇓iP	**Pb**	**15 01 47.3**	**-0.3**
SLBB	**Yuanshan** baz=25	**0.95**	**34**	P	**Pb**	**15 01 47.2**	**-0.5**
TWC	**Suao** baz=49	**0.97**	**49**	P	**Pb**	**15 01 47.8**	**-0.3**
TWC	baz=49			S	**Sb**	**15 02 00.2**	**-0.5**
SGST	**Jiashian** baz=215	**0.98**	**206**	P	**Pb**	**15 01 48.1**	**-0.2**
SGST	baz=215			S	**Sn**	**15 02 02.1**	**-0.2**
CHN8	**Yiju** baz=231	**0.99**	**231**	P	**Pb**	**15 01 47.7**	**-0.6**
CHN8	baz=231			eS	**Sn**	**15 02 03.4**	**+0.9**
NCUH	**Zhongli** baz=6.0	**1.00**	**7**	eP	**Pg**	**15 01 50.3**	**+1.2**
NCUH	baz=6.0			eS	**Sn**	**15 02 03.4**	**+0.5**
NCU	**National Centr** baz=7.0	**1.01**	**7**	P	**Pg**	**15 01 49.9**	**+0.8**
NCU	baz=7.0			eS	**Sn**	**15 02 02.7**	**-0.2**
ILA	**Ilan** baz=32	**1.02**	**39**	eP	**Pb**	**15 01 48.5**	**-0.4**
SLGT	**Liugui** baz=202	**1.04**	**201**	eP	**Pb**	**15 01 49.1**	**-0.1**
SLGT	baz=202			S	**Sn**	**15 02 04.6**	**+0.9**
TATO	**Taipei** baz=24	**1.08**	**22**	eP	**Pb**	**15 01 49.7**	**-0.2**
TATO	baz=24			S	**Sg**	**15 02 05.1**	**+0.5**
CHN3	**Shinhua** baz=227	**1.09**	**215**	eP	**Pb**	**15 01 50.0**	**0.0**
CHN3	baz=227			eS	**Sg**	**15 02 06.9**	**+2.1**
SCLT	**Jiali** baz=225	**1.11**	**225**	⇑iP	**Pb**	**15 01 50.5**	**0.0**
SCLT	baz=225			S	**Sg**	**15 02 06.6**	**+1.0**
TWA	**Mucha** baz=32	**1.12**	**26**	P	**Pn**	**15 01 50.8**	**+0.1**
TWA	baz=32			S	**Sg**	**15 02 06.8**	**+0.9**
NTC	**Toucheng** baz=25	**1.13**	**39**	eP	**Pg**	**15 01 51.1**	**-0.3**
TWG	**Pinlang** baz=174	**1.14**	**179**	P	**Pb**	**15 01 51.0**	**0.0**
TWG	baz=174			S	**Sn**	**15 02 06.2**	**-0.1**
EOS1	**EOS1** baz=60	**1.14**	**59**	eP	**Pb**	**15 01 51.2**	**+0.2**
TWGBT	**Beinan** baz=174	**1.15**	**179**	⇓P	**Pb**	**15 01 51.0**	**-0.1**
TWGBT	baz=174			S	**Sb**	**15 02 05.7**	**0.0**
TWS1	**Kuangyinshan** baz=15	**1.18**	**16**	eP	**Pb**	**15 01 51.7**	**+0.1**
TWS1	baz=15			eS	**Sg**	**15 02 09.6**	**+1.9**
TAI1	**Yung-k'ang** baz=219	**1.19**	**219**	eP	**Pg**	**15 01 52.5**	**-0.1**
TTN	**Taitung** baz=177	**1.21**	**176**	eP	**Pb**	**15 01 52.0**	**-0.2**
TIPB	**Shuangxi** baz=34	**1.23**	**35**	⇓eP	**Pn**	**15 01 52.1**	**0.0**
TIPB	baz=34			eS	**Sn**	**15 02 08.7**	**+0.2**
YM01	**YM01** baz=21	**1.27**	**22**	eP	**Pn**	**15 01 52.5**	**-0.2**
YM01	baz=21			eS	**Sg**	**15 02 10.3**	**-0.2**
YM10	**YM10** baz=21	**1.27**	**21**	eP	**Pn**	**15 01 52.3**	**-0.5**
SSD	**Sandimen** baz=198	**1.27**	**198**	eP	**Pn**	**15 01 53.0**	**+0.2**
NWF	**Wu-fen Shan** baz=30	**1.28**	**31**	P	**Pb**	**15 01 53.8**	**+0.3**
NWF	baz=30			eS	**Sg**	**15 02 11.4**	**+0.2**
WFSB	**Wu-fen Shan** baz=30	**1.28**	**31**	eP	**Pb**	**15 01 53.6**	**+0.2**
WFSB	baz=30			eS	**Sg**	**15 02 11.4**	**+0.3**
ANP	**Anpu** baz=19	**1.29**	**19**	eP	**Pb**	**15 01 53.3**	**-0.2**
YM08	**YM08** baz=22	**1.31**	**22**	eP	**Pb**	**15 01 53.7**	**-0.2**
SGLT	**Jiouru** baz=218	**1.34**	**203**	eP	**Pb**	**15 01 54.6**	**+0.3**
ECL	**Taimali** baz=169	**1.37**	**184**	eP	**Pb**	**15 01 54.5**	**-0.3**
TWY	**Chenhua** baz=21	**1.40**	**21**	eP	**Pb**	**15 01 55.0**	**-0.3**
MASBT	**Mashibuluo** baz=197	**1.40**	**196**	eP	**Pn**	**15 01 54.6**	**+0.1**
MASBT	baz=197			eS	**Sb**	**15 02 13.6**	**+0.5**
PNG	**Penghu** baz=253	**1.43**	**254**	⇓iP	**Pn**	**15 01 53.8**	**-1.1**
PNG	baz=253			eS	**Sn**	**15 02 12.9**	**-0.5**
PHUB	**P'eng-hu** baz=251	**1.43**	**252**	⇓P	**Pn**	**15 01 53.8**	**-1.1**
PHUB	baz=251			eS	**Sn**	**15 02 12.4**	**-0.9**
WDGT	**Dungji** baz=230	**1.46**	**241**	P	**Pn**	**15 01 54.5**	**-0.8**
WDGT	baz=230			S	**Sn**	**15 02 14.2**	**+0.1**
EAST	**Anshuo** baz=188	**1.59**	**187**	eP	**Pn**	**15 01 57.6**	**+0.5**
EAST	baz=188			eS	**Sb**	**15 02 19.2**	**+0.8**
TAW	**Tawu** baz=176	**1.61**	**185**	eP	**Pb**	**15 01 58.4**	**-0.6**
SCZT	**Fangliau** baz=195	**1.64**	**194**	eP	**Pn**	**15 01 57.5**	**-0.2**
SCZT	baz=195			eS	**Sn**	**15 02 19.0**	**+0.5**
VCHM	**Qimei** baz=234	**1.67**	**243**	eP	**Pn**	**15 01 57.6**	**-0.6**
WLCH	**Liuqiu** baz=201	**1.72**	**201**	eP	**Pn**	**15 01 59.8**	**+0.8**
TWP	**Hsiaoliuchiu** baz=201	**1.73**	**202**	eP	**Pb**	**15 02 00.5**	**-0.6**
JYNG	**Yonagunijimaku**	**1.80**	**74**	P	**Pn**	**15 01 59.9**	**-0.1**
JYNG				S	**Sn**	**15 02 22.9**	**+0.4**
YOJ	**Yonaguni jima** baz=76	**1.86**	**74**	eP	**Pn**	**15 02 00.7**	**-0.1**
YOJ	**Yonaguni jima**	**1.86**	**74**	P	**Pn**	**15 02 01.1**	**+0.3**
YOJ				S	**Sn**	**15 02 24.3**	**+0.3**
PTTC	**Pingtan** baz=321	**1.92**	**323**	eP	**Pn**	**15 01 60.0**	**-1.7**
LAY	**Lan-yu** baz=154	**1.97**	**166**	eP	**Pn**	**15 02 01.5**	**-0.9**
TWK1	**Hengchun** baz=201	**2.03**	**186**	eP	**Pn**	**15 02 03.9**	**+0.7**
TWKBT	**Hengchun** baz=201	**2.03**	**186**	eP	**Pn**	**15 02 03.5**	**+0.4**
PTMZ	**Houxiangcun** baz=299	**2.06**	**302**	eP	**Pn**	**15 02 01.6**	**-1.9**
IRIF	**Iriomote-Funau**	**2.48**	**81**	P	**Pn**	**15 02 09.3**	**0.0**
IRIF				S	**Sn**	**15 02 39.3**	**+0.1**
KNMB	**Chin-men Tao** baz=281	**2.48**	**282**	eP	**Pn**	**15 02 07.8**	**-1.5**
HATJ	**Hateruma jima**	**2.52**	**87**	P	**Pn**	**15 02 10.0**	**+0.1**
HATJ				eS	**Sn**	**15 02 40.9**	**+0.5**
JKRS	**Kuro-shima**	**2.72**	**84**	P	**Pn**	**15 02 13.2**	**+0.6**
JKRS				eS	**Sn**	**15 02 46.3**	**+1.1**
MHZQ	**Yeshan** baz=316	**2.81**	**320**	eP	**Pn**	**15 02 13.3**	**-0.5**
LYJJ	**Jianjiangzhen** baz=334	**2.82**	**336**	eP	**Pn**	**15 02 13.5**	**-0.6**
JIJ	**Ishigaki jima**	**2.85**	**81**	P	**Pn**	**15 02 14.3**	**-0.2**
JIJ				eS	**Sn**	**15 02 47.3**	**-1.3**
AXDP	**Jialang** baz=287	**2.96**	**289**	eP	**Pn**	**15 02 14.8**	**-1.2**
ZPLA	**Ao Xicun** baz=269	**3.02**	**270**	⇓eP	**Pn**	**15 02 15.5**	**-1.2**
JISG	**Ishigakijimahi**	**3.04**	**78**	P	**Pn**	**15 02 17.1**	**0.0**
JISG				eS	**Sn**	**15 02 52.0**	**-1.1**
XPSS	**Dashiqiu** baz=345	**3.05**	**345**	eP	**Pn**	**15 02 16.0**	**-1.2**
ZZJH	**Jiuhuzhen** baz=279	**3.16**	**280**	eP	**Pn**	**15 02 17.4**	**-1.4**
JTJ	**Tarama**	**3.40**	**78**	P	**Pn**	**15 02 22.4**	**+0.4**
JTJ				eS	**Sn**	**15 03 01.6**	**-0.4**
JIRB	**Irabujima**	**3.86**	**76**	P	**Pn**	**15 02 30.2**	**+1.9**
JIRB				S	**Sn**	**15 03 13.3**	**0.0**
JIKM	**Ikemajima**	**3.94**	**75**	P	**Pn**	**15 02 32.1**	**+2.6**
JMJ2	**Miyako jima3**	**3.98**	**78**	P	**Pn**	**15 02 31.2**	**+1.2**
JOGS	**Gusukube**	**4.05**	**78**	P	**Pn**	**15 02 33.0**	**+2.0**

ISK ***15*** *15:02:45.3, 38°.17N×38°.24E, h2^{km}, ML2.3/3*
ISCJB ***15*** *15:02:46.5±0.6, 38°.18N±0°.04×38°.27E±0°.05, h10^{km}, Error ellipse: s-maj=6.7km s-min=4.7km az=38.0*
DDA ***15*** *15:02:46.6, 38°.22N×38°.25E, h7^{km}±2^{km}, ML2.5*
ISC 15 15:02:46.2±1.0**, 38°.19N**±0°.04×**38°.25E**±0°.04**, h10^{km}, n9, σ0^{s}.65**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.28**	**292**	i P	**Pb**	**15 02 52.9**	**-0.5**
AKCD	comp=Z,16μm,0.2s			IAML_P			
ELZG	**Elazig**	**0.65**	**62**	i P	**Pg**	**15 02 59.2**	**+0.4**
ELZG				i S	**Sb**	**15 03 09.7**	**+0.7**
DARE	**Darende-Malaty**	**0.71**	**302**	PG	**Pg**	**15 03 00.1**	**+0.1**
DARE				SG	**Sb**	**15 03 11.0**	**+0.3**
HEKM	**Malatya_Hekimh**	**0.72**	**342**	i P	**Pb**	**15 03 00.8**	**-0.2**
HEKM	comp=Z,2μm,0.2s			IAML_P			
SVRC	**Sivrice-ELAZID**	**0.85**	**77**	PG	**Pg**	**15 03 02.8**	**+0.2**
URFA	**Urfa**	**0.88**	**149**	PG	**Pg**	**15 03 02.8**	**-0.3**
URFA				SG	**Sb**	**15 03 15.4**	**+0.1**
GZT	**Gaziantep**	**1.00**	**213**	i P	**Pn**	**15 03 06.6**	**+0.2**
KEMA	**Kemaliye**	**1.09**	**10**	i P	**Pg**	**15 03 05.8**	**-1.4**
KEMA	comp=Z,180nm,0.1s			IAML_P			
CUKAN	**kangal_SIVAS**	**1.28**	**332**	i P	**Pg**	**15 03 11.5**	**+0.7**

IDC ***15*** *15:13:32.9±1.1, 35°.31N×137°.32E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/32, mbtmp3.8/5, ML1.9/1, Error ellipse: s-maj=24.9km s-min=13.4km az=107.0*
ISCJB ***15*** *15:13:33.5±0.6, 36°.33N±0°.03×139°.97E±0°.07, h89^{km}±4^{km}, mb3.6/3, Error ellipse: s-maj=9.0km s-min=5.2km az=3.1*
JMA ***15*** *15:13:35.1, 36°.33N×139°.94E, h75^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s265.00000°, δ77.00000°, λ-98.00000°. NP2: ϕ_s119.00000°, δ15.00000°, λ-57.00000°. Principal axes: T Plg32.0000°, Azm2.0000°; N Plg8.0000°, Azm267.0000°; P Plg57.0000°, Azm164.0000°;*
JMA Felt I J1.
ISC 15 15:13:34.3±1.0**, 36°.34N**±0°.04×**139°.96E**±0°.06**, h81^{km}**±7^{km}**, n19, σ0^{s}.59**/31**, mb3.6**/3**, 3C-7D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.22**	**120**	⇓P	**Pn**	**15 13 46.6**	**+0.3**
JYT				S	**Sn**	**15 13 55.0**	**-0.1**
JAG	**Ashikaga**	**0.42**	**282**	⇓P	**Pn**	**15 13 47.6**	**0.0**
JAG				S	**Sn**	**15 13 57.1**	**-0.2**
JKT	**Katashina**	**0.72**	**307**	⇓P	**Pn**	**15 13 50.7**	**+0.3**
JKT				S	**Sn**	**15 14 02.5**	**+0.2**
JRY	**Ryogami san**	**0.92**	**250**	⇑P	**Pn**	**15 13 53.0**	**+0.5**
JRY				S	**Sn**	**15 14 06.0**	**0.0**
JFY	**Yanaizu**	**1.09**	**349**	⇓P	**Pn**	**15 13 54.9**	**+0.3**
JFY				eS	**Sn**	**15 14 09.8**	**+0.1**
JHK	**Hiroka**	**1.19**	**321**	⇓P	**Pn**	**15 13 56.3**	**+0.6**
JHK				eS	**Sn**	**15 14 12.3**	**+0.5**
JFT	**Otama**	**1.22**	**14**	⇓P	**Pn**	**15 13 56.9**	**+0.8**
JOD2	**Odawara 2**	**1.28**	**214**	⇑P	**Pn**	**15 13 57.2**	**+0.2**
JOD2				S	**Sn**	**15 14 13.6**	**-0.4**
JYN	**Shimob**	**1.42**	**234**	⇑P	**Pn**	**15 13 59.7**	**+0.9**
JYN				S	**Sn**	**15 14 18.2**	**+1.0**
MJAR	**Matsushiro Arr** 3.8nm,0.3s,baz=17,slow=23,SNR=201	**1.43**	**279**	Pg	**Pn**	**15 13 59.2**	**+0.5**
MJAR	3.6nm,0.3s,baz=50,slow=14,SNR=10			Lg	Lg	15 14 18.4	
MAT	**Matsushiro**	**1.43**	**279**	P	**Pn**	**15 13 59.6**	**+0.7**
MAT				S	**Sn**	**15 14 16.3**	**-1.0**
MAT	**Matsushiro**	**1.43**	**279**	P	**Pn**	**15 13 59.5**	**+0.7**
JFNN	**Fujinakano**	**1.54**	**223**	P	**Pn**	**15 14 00.9**	**+0.7**
JFNN				S	**Sn**	**15 14 20.0**	**+0.2**
JNS	**Sasagawa**	**1.57**	**341**	⇓P	**Pn**	**15 14 01.2**	**+0.6**
JNS				eS	**Sn**	**15 14 21.2**	**+0.8**
JHJ	**Hachijo jima 2** 57nm,0.3s,baz=108,slow=23,SNR=53	**3.21**	**183**	Pn	**Pn**	**15 14 23.1**	**+0.5**
JHJ	78nm,0.3s,baz=96,slow=23,SNR=6.5			Sn	**Sn**	**15 15 00.6**	**+0.8**
USRK	**Ussuriysk Ar.** 0.1nm,0.3s,baz=140,slow=13,SNR=12	**9.94**	**325**	Pn	**Pn**	**15 15 54.1**	**-0.1**
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=93,slow=9.7,SNR=3.5	**43.51**	**303**	P	**P**	**15 21 28.8**	**-0.8**
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=359,slow=7.7,SNR=16	**56.22**	**186**	P	**P**	**15 23 05.9**	**-0.3**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=8.9,slow=6.6,SNR=9.6	**59.95**	**186**	P	**P**	**15 23 32.0**	**-0.1**

NEIC ***15*** *15:24:09.5±0.0, 61°.56N×141°.05W, h14^{km}, ML2.6(OTT), ML2.6(AEIC), After AEIC.*
PGC 15 15:24:11.1±0.0**, 61°.57N×141°.05W, h5^{km}, ML2.6**/9**, 209km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	**White River**	**0.24**	**23**	P	Pg	15 24 15.0	-0.9
YUK2				S	Sg	15 24 18.6	-0.5
YUK3	**Moose Creek**	**0.35**	**53**	P	Pg	15 24 17.0	-1.0
YUK3				S	Sg	15 24 21.9	-0.7
YUK1	**Sand Pete Hill**	**0.64**	**22**	P	Pg	15 24 21.9	-1.5
YUK1				S	Sg	15 24 31.1	-0.6
PTPK	**Patty Peak**	**0.78**	**242**	P	Pg	15 24 24.8	-1.3
PTPK				S	Sg	15 24 34.6	-1.6
BALM	**Baldy**	**0.82**	**230**	ePg	Pg	15 24 25.2	-1.7
BALM				eSg	Sg	15 24 36.5	-1.0
BALM	**Baldy**	**0.82**	**230**	P	Pg	15 24 25.1	-1.7
BALM				S	Sg	15 24 36.5	-1.0
BVCY	**Beaver Creek**	**0.86**	**6**	P	Pg	15 24 26.1	-1.4
BVCY				S	Sg	15 24 39.0	+0.4
KIAG	**Kiagna River**	**0.91**	**225**	P	Pg	15 24 26.6	-1.9
KIAG				S	Sg	15 24 39.3	-0.8
TABL	**Table Mountain**	**1.13**	**182**	P	Pg	15 24 31.2	-1.6
TABL				S	Sg	15 24 46.8	-0.6
YUK4	**Talbot Arm**	**1.17**	**100**	P	Pg	15 24 32.4	-1.2
YUK4				S	Sg	15 24 48.7	-0.1
YUK6	**Outpost Mounta**	**1.44**	**115**	Pn	Pn	15 24 36.5	-1.5
YUK6				Sg	Sb	15 24 56.0	-1.2
SAMH	**Samovar Hills**	**1.45**	**175**	Pn	Pn	15 24 37.4	-0.6
SAMH				Sg	Sb	15 24 56.0	-1.3
MESA	**MESA**	**1.46**	**198**	Pn	Pn	15 24 37.6	-0.6
MESA				Sg	Sb	15 24 57.0	-0.7
CHX	**Chaix Hills**	**1.51**	**181**	ePn	Pn	15 24 38.8	0.0
PCA	**Pinnacle**	**1.52**	**165**	ePn	Pn	15 24 38.4	-0.6
PCA				eSn	Sb	15 24 59.4	0.0
PCA	**Pinnacle**	**1.52**	**165**	Pn	Pn	15 24 38.5	-0.5
PCA				Sg	Sb	15 24 59.4	0.0
BCA3	**Beaver Creek A**	**1.54**	**347**	ePn	Pn	15 24 38.0	-1.4
YUK5	**Granite Creek**	**1.60**	**104**	Pn	Pn	15 24 38.9	-1.2
YUK5				Sg	Sn	15 25 00.8	-0.4
YUK7	**Dusty Glacier**	**1.75**	**125**	Pn	Pn	15 24 42.7	+0.4
YUK7				Sg	Sb	15 25 06.0	-0.2
BCPM	**Bancas Point**	**1.76**	**156**	ePn	Pn	15 24 42.9	+0.6
MENT	**Mentasta**	**1.86**	**319**	ePn	Pn	15 24 43.5	-0.1

HYT	Haines Junctio	1.87	112	ePn	Pn	15 24 43.1	-0.7
HYT	Haines Junctio	1.87	112	Pn	Pn	15 24 43.3	-0.5
HYT				Sg	Sb	15 25 09.1	-0.4
HMT	Hamilton	2.00	233	ePn	Pb	15 24 47.1	-0.8
PNL	Peninsula	2.07	156	ePn	Pn	15 24 46.8	+0.4
PNL	Peninsula	2.07	156	Pn	Pn	15 24 47.0	+0.5
PNL				Sg	Sb	15 25 16.0	+0.9
RAGM	Ragged Mountai	2.13	238	ePn	Pb	15 24 48.8	-1.3
PAX	Paxson	2.50	306	ePn	Pn	15 24 54.0	+1.5
PAX	Paxson	2.50	306	Pn	Pn	15 24 53.4	+0.9
PAX				Sg	Sb	15 25 27.7	0.0
EYAK	Cordova Ski Ar	2.50	248	ePn	Pn	15 24 54.2	+1.8
DOT	Dot Lake	2.51	328	ePn	Pn	15 24 51.5	-1.1
DOT	Dot Lake	2.51	328	Pn	Pn	15 24 51.6	-1.0
DOT				Pg	Pb	15 24 56.5	-0.2
DOT				Sg	Sb	15 25 28.6	+0.6
DAWY	Dawson	2.62	16	ePn	Pn	15 24 53.2	-0.9
DAWY	Dawson	2.62	16	Pn	Pn	15 24 53.4	-0.7
DAWY				Sg	Sb	15 25 31.1	+0.1
FID	Port Fidalgo	2.76	255	ePn	Pn	15 24 58.0	+2.1
RIDG	Independent Ri	2.80	323	ePn	Pn	15 24 55.5	-1.1
SCM	Sheep Creek Mo	3.00	278	ePn	Pn	15 25 00.7	+1.3
GLI	Glacier Island	3.01	259	ePn	Pn	15 25 00.5	+1.1
PLBC	Pleasant Camp	3.13	130	Pg	Pb	15 25 07.0	-0.3
PLBC				Sg	Sg	15 25 48.9	-2.8
HDA	Harding Lake	3.92	319	ePn	Pn	15 25 11.0	-0.9
RND	Reindeer	4.07	300	ePn	Pn	15 25 15.0	+1.1
BESE	Bessie Mountai	4.31	131	Sg	Sg	15 26 24.5	-4.8
BM3	Burnt Mountain	6.08	347	ePn	Pn	15 25 41.5	0.0
COLD	Coldfoot	6.92	329	Pn	Pn	15 25 53.2	+0.1

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*NEIC **15** 15:25:16.8±0.0, 61°.57N×141°.05W, h14km, ML2.3(OTT), ML2.5(AEIC), After AEIC.*

PGC 15 15:25:18.3, 61°.58N×141°.08W, h1km, ML2.3/8, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.24	29	P	Pg	15 25 22.2	-0.6
YUK2				S	Sg	15 25 25.9	0.0
YUK3	Moose Creek	0.35	56	P	Pg	15 25 24.2	-0.9
YUK3				S	Sg	15 25 29.2	-0.5
YUK1	Sand Pete Hill	0.63	24	P	Pg	15 25 29.2	-1.2
YUK1				S	Sg	15 25 38.6	+0.1
PTPK	Patty Peak	0.78	240	P	Pg	15 25 32.1	-0.9
PTPK				S	Sg	15 25 42.1	-1.0
BALM	Baldy	0.82	229	ePg	Pg	15 25 32.5	-1.5
BALM	Baldy	0.82	229	P	Pg	15 25 32.5	-1.4
BALM				S	Sg	15 25 43.3	-1.2
BVCY	Beaver Creek	0.84	7	P	Pg	15 25 33.4	-1.0
BVCY				S	Sg	15 25 44.6	-0.7
KIAG	Kiagna River	0.90	224	P	Pg	15 25 34.0	-1.5
KIAG				S	Sg	15 25 46.5	-0.8
TABL	Table Mountain	1.15	182	P	Pg	15 25 38.5	-1.6
TABL				S	Sg	15 25 53.7	-1.3
YUK4	Talbot Arm	1.19	100	P	Pg	15 25 40.0	-1.1
YUK4				S	Sg	15 25 56.4	-0.1
YUK6	Outpost Mounta	1.46	115	Pn	Pn	15 25 43.6	-2.4
YUK6				Sg	Sg	15 26 04.4	-0.7
SAMH	Samovar Hills	1.46	174	Pn	Pn	15 25 45.2	-0.7
SAMH				Sg	Sg	15 26 04.8	-0.4
MESA	MESA	1.47	197	Pn	Pn	15 25 45.1	-0.9
MESA				Sg	Sg	15 26 05.0	-0.5
PCA	Pinnacle	1.54	164	ePn	Pn	15 25 45.6	-1.3
PCA				eSn	Sn	15 26 06.7	-0.9
PCA	Pinnacle	1.54	164	Pn	Pn	15 25 46.2	-0.7
PCA				Sg	Sn	15 26 06.3	-1.3
YUK5	Granite Creek	1.62	105	Sg	Sn	15 26 07.9	-1.6
YUK7	Dusty Glacier	1.78	125	Pn	Pn	15 25 50.3	+0.1
YUK7				Sg	Sn	15 26 13.4	-0.1
BCPM	Bancas Point	1.78	156	ePn	Pn	15 25 49.6	-0.5
MENT	Mentasta	1.84	319	ePn	Pn	15 25 51.0	0.0
HYT	Haines Junctio	1.89	112	ePn	Pn	15 25 47.9	-3.9
HYT	Haines Junctio	1.89	112	Sg	Sn	15 26 16.5	+0.2
HMT	Hamilton	1.99	233	ePn	Pn	15 25 48.9	-4.2
PNL	Peninsula	2.09	156	Pn	Pn	15 25 54.4	0.0
PNL				Sg	Sb	15 26 22.5	-0.8
RAGM	Ragged Mountai	2.12	237	ePn	Pn	15 25 50.4	-4.5
PAX	Paxson	2.48	306	Sg	Sb	15 26 33.9	-0.8
DOT	Dot Lake	2.49	328	ePg	Pb	15 26 03.4	-0.4
DOT	Dot Lake	2.49	328	Pg	Pb	15 26 03.6	-0.2
DOT				Sg	Sb	15 26 35.4	+0.5
DAWY	Dawson	2.61	17	Sg	Sb	15 26 39.3	+0.8
SCM	Sheep Creek Mo	2.99	278	ePg	Pb	15 26 10.9	-1.4
PLBC	Pleasant Camp	3.16	130	Sg	Sb	15 26 54.9	+0.8

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*SOME **15** 15:31:47.5, 41°.23N×72°.87E, h15km*

*NNC **15** 15:31:47.8±0.8, 41°.37N×72°.85E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=6.7km s-min=2.5km az=173.0*

*KRNET **15** 15:31:48.2±0.1, 41°.35N×72°.87E, h23km, mb3.0*

ISC 15 15:31:48.0±0.9, 41°.34N±0°.04×72°.89E±0°.02, h15km±6km, n53, σ1.52/83, 28C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob baz=10.0	0.07	105	⇑iP	Pg	15 31 51.0	-0.1
ARSB	baz=10.0			⇑iS	Sg	15 31 53.6	+0.4
ARK	Arkit baz=3.0	0.83	304	⇓iP	Pg	15 32 03.2	-0.9
ARK	baz=3.0			⇓iS	Sg	15 32 14.9	-0.1
ARLS	Aral baz=64	1.20	64	⇑iP	Pn	15 32 09.8	-0.6
ARLS	baz=64			⇑iS	Sb	15 32 26.0	+0.2
MRKS	Merke 67nm,0.3s	1.42	10	P	Pb	15 32 14.4	+0.1
MRKS	61nm,0.3s			S	Sg	15 32 33.6	-0.3
MRKS	Merke 67nm,0.3s	1.42	10	eP	Pb	15 32 14.4	+0.1
MRKS	82nm,0.4s			eS	Sg	15 32 33.6	-0.3
EKS2	Erkin-Say baz=27	1.48	26	⇑iP	Pb	15 32 15.3	+0.1
EKS2	baz=27			⇑iS	Sb	15 32 34.5	+0.6
EKS2	Erkin-Say SNR=13	1.48	26	P	Pb	15 32 15.3	+0.1
UCH	Uchtor baz=54	1.50	53	⇑iP	Pb	15 32 15.9	0.0
UCH	baz=54			⇑iS	Sg	15 32 36.2	-0.3
UCH	Uchtor SNR=135	1.50	53	P	Pb	15 32 15.8	0.0
AAK	Ala-Archa 6.7nm,0.3s	1.76	42	⇑P	Pb	15 32 20.3	+0.1
AAK	78nm,0.6s			⇓S	Sg	15 32 44.0	-0.8
AAK	Ala-Archa baz=43	1.76	42	⇑iP	Pb	15 32 20.3	+0.1
AAK	baz=43			⇑iS	Sg	15 32 44.1	-0.7
AAK	Ala-Archa SNR=13	1.76	42	P	Pb	15 32 20.7	+0.5
KZA	Kyzart baz=67	1.92	67	⇑iP	Pb	15 32 22.8	-0.1
KZA	baz=67			⇑iS	Sb	15 32 48.2	+1.4
KZA	Kyzart SNR=97	1.92	67	P	Pb	15 32 23.0	+0.1
DZA	Taraz 79nm,0.1s	1.93	324	Pg	Pg	15 32 24.2	-0.8
DZA	211nm,0.2s			Lg	Lg	15 32 50.6	
DZA	Taraz 79nm,0.1s	1.93	324	eP	Pg	15 32 24.2	-0.8
DZA	211nm,0.2s			eS	Sg	15 32 50.6	+0.4
FRU1	Bishkek baz=41	1.96	41	⇓iP	Pb	15 32 22.7	-0.7
FRU1	baz=41			⇓iS	Sb	15 32 47.6	-0.1
KBK	Karagaybulak baz=49	2.02	49	⇓iP	Pb	15 32 24.2	-0.3
KBK	baz=49			⇓iS	Sb	15 32 50.3	+0.7
KBK	Karagaybulak SNR=10.0	2.02	49	P	Pb	15 32 25.1	+0.6
BTK	Batken baz=31	2.03	231	⇑iP	Pb	15 32 23.7	-0.9
BTK	baz=31			⇑iS	Sb	15 32 49.9	+0.2
CHMS	Chumysh baz=40	2.16	39	⇓iP	Pb	15 32 26.0	-0.8
CHMS	baz=40			⇓iS	Sb	15 32 53.1	-0.3
CHMS	Chumysh SNR=11	2.16	39	P	Pb	15 32 27.0	+0.2
USP	Ospenovka baz=32	2.27	31	⇑iP	Pb	15 32 27.4	-1.2
USP	baz=32			⇑iS	Sb	15 32 55.6	-0.9
USP	Ospenovka SNR=9.8	2.27	31	P	Pb	15 32 27.8	-0.8
IUG	Iuzhnay 4.4nm,0.2s	2.28	292	Pg	Pb	15 32 29.5	+0.5
IUG	95nm,0.4s			Lg	Lg	15 32 59.5	
IUG	Iuzhnay 4.4nm,0.2s	2.28	292	eP	Pb	15 32 29.5	+0.5
IUG	95nm,0.4s			eS	Sg	15 32 59.5	-1.9
NRN	Naryn baz=87	2.34	87	⇑iP	Pb	15 32 28.8	-1.3
NRN	baz=87			⇑iS	Sb	15 32 58.1	-0.9
KK31	Karatay Array 1.1nm,0.2s,baz=140,slow=16,SNR=38	2.49	316	⇓Pg	Pb	15 32 32.0	-0.4
KK31	9.6nm,0.4s,baz=142,slow=29,SNR=19			⇓Lg	Lg	15 33 05.8	
BOOM	Boomskoye usch baz=63	2.55	62	⇑eP	Pb	15 32 31.9	-1.7
BOOM	baz=63			⇑iS	Sb	15 33 03.5	-1.3
TKM2	Tokmak 2 3.6nm,0.3s	2.56	51	⇓Pg	Pb	15 32 33.9	+0.2
TKM2	25nm,0.7s			⇓Lg	Lg	15 33 08.6	
TKM2	Tokmak 2 baz=51	2.56	51	⇑iP	Pb	15 32 31.9	-1.8
TKM2	baz=51			⇑iS	Sb	15 33 03.6	-1.5
TKM2	Tokmak 2 SNR=15	2.56	51	P	Pb	15 32 32.3	-1.4
ULHL	Ulahol baz=69	2.67	69	⇑iP	Pb	15 32 33.6	-2.0
ULHL	baz=69			⇑iS	Sb	15 33 06.4	-1.8
ULHL	Ulahol SNR=7.2	2.67	69	P	Pb	15 32 34.6	-1.0
BRLS	Borolday 0.7nm,0.2s	2.83	308	Pg	Pb	15 32 39.0	+0.9
BRLS	4.7nm,0.5s			Lg	Lg	15 33 15.9	
BRLS	Borolday 0.7nm,0.2s	2.83	308	eP	Pb	15 32 39.0	+0.9
BRLS	19nm,0.8s			eS	Sg	15 33 15.9	-2.9
KST	Kastek 8.8nm,0.4s	2.85	52	Pg	Pb	15 32 39.8	+1.1
KST	32nm,0.4s			Lg	Lg	15 33 17.2	
KST	Kastek 8.8nm,0.4s	2.85	52	eP	Pb	15 32 39.8	+1.1
KST	32nm,0.4s			eS	Sg	15 33 17.2	-2.3
DGS	Degeres 3.8nm,0.3s	2.86	47	Pg	Pb	15 32 40.2	+1.4
DGS	30nm,0.6s			Lg	Lg	15 33 17.8	
DGS	Degeres 3.8nm,0.3s	2.86	47	eP	Pb	15 32 40.2	+1.4
DGS	30nm,0.6s			eS	Sg	15 33 17.8	-2.1
MTBS	Maitube 4.7nm,0.2s	3.18	55	Pg	Pb	15 32 46.0	+1.8
MTBS	19nm,0.3s			Lg	Lg	15 33 27.8	
MTBS	Maitube 4.7nm,0.2s	3.18	55	eP	Pb	15 32 46.0	+1.8
MTBS	19nm,0.3s			eS	Sg	15 33 27.8	-2.3
KDJ	Kajisay baz=75	3.31	75	⇑iP	Pn	15 32 42.3	+2.9
KDJ	baz=75			⇑iS	Sn	15 33 21.3	+2.7
MDOK	Medeo 3.8nm,0.3s	3.58	58	Pg	Pb	15 32 53.2	+2.0
MDOK	7.5nm,0.8s			Lg	Lg	15 33 40.3	
MDOK	Medeo 3.8nm,0.3s	3.58	58	eP	Pb	15 32 53.2	+2.0
MDOK	7.5nm,0.8s			eS	Sg	15 33 40.3	-2.8
KUU	Kurty 2.2nm,0.1s	3.60	44	Pg	Pb	15 32 53.3	+1.9
KUU	18nm,0.4s			Lg	Lg	15 33 40.4	
KUU	Kurty 2.2nm,0.1s	3.60	44	eP	Pb	15 32 53.3	+1.9
KUU	18nm,0.4s			eS	Sg	15 33 40.4	-3.2
KOTS	Kotyrbulak 3.0nm,0.3s	3.66	58	eP	Pb	15 32 54.5	+2.1
KOTS	36nm,0.9s			eS	Sg	15 33 43.2	-2.3
KTBS	Karatobe 2.7nm,0.2s	3.67	49	Pg	Pb	15 32 54.6	+2.0
KTBS	23nm,0.6s			Lg	Lg	15 33 42.8	
KTBS	Karatobe 1.9nm,0.3s	3.67	49	eP	Pb	15 32 54.6	+2.0
KTBS	37nm,0.5s			eS	Sg	15 33 42.8	-3.0
CHKK	Chushkaly 1.6nm,0.2s	3.93	49	eP	Pb	15 32 59.3	+2.3
CHKK	17nm,0.3s			eS	Sg	15 33 50.6	-3.6
PDGK	Podgornoye 1.4nm,0.8s	5.28	66	⇑Pg	Pb	15 33 23.5	+3.4
PDGK	4.4nm,0.8s			⇓Lg	Lg	15 34 36.2	
OTUK	Ortayu 6.2nm,0.8s	6.91	357	⇓Lg	Lg	15 35 25.8	

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*IDC **15** 15:35:39.9±6.2, 30°.61S×177°.91W, h229km±56km, mb3.1/3, mb1 3.4/5, mb1mx3.2/25, mbtmp4.0/5, Error ellipse: s-maj=48.2km s-min=38.1km az=20.0*

ISC 15 15:35:38.7±2.0, 30°.5S±0°.1×178°.0W±0°.3, h200km, n7, σ2.89/8, mb3.3/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 0.1nm,0.3s,baz=50,slow=17,SNR=2.0	8.73	206	P	Pn	15 37 40.3	-1.1
URZ	0.8nm,0.3s,baz=148,slow=19,SNR=1.5			S	Sn	15 39 21.1	+1.7
DZM	Mont Dzumac 1.1nm,0.3s,baz=132,slow=13,SNR=12	16.27	297	P	P	15 39 17.8	+2.0
STKA	Stephens Creek 0.4nm,0.5s,baz=107,slow=14,SNR=3.9	34.46	257	P	P	15 42 08.3	+0.7
ASAR	Alice Springs 0.4nm,0.6s,baz=105,slow=7.0,SNR=11	43.11	267	P	P	15 43 17.6	-1.9
WRA	Warramunga Arr 1.9nm,1.0s,baz=106,slow=8.8,SNR=2.3	44.10	272	P	P	15 43 24.8	-2.6
FINES	FINESS Array B 2.6nm,0.4s,baz=48,slow=3.9,SNR=28	145.24	340	PKPbc	PKPdf	15 54 49.3	-2.4
AKASG	Malin Array Be 0.9nm,0.5s,baz=49,slow=2.8,SNR=3.3	151.38	323	PKPbc	PKPdf	15 55 06.2	+4.2

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*SOME **15** 15:37:40.4, 41°.28N×72°.92E, h10km*

*KRNET **15** 15:37:40.2±0.1, 41°.25N×72°.89E, h26km, mb3.3*

*NNC **15** 15:37:40.7±0.8, 41°.36N×72°.86E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=6.6km s-min=2.8km az=174.0*

ISC 15 15:37:38.4±1.0, 41°.16N±0°.03×73°.01E±0°.02, h19km±8km, n65, σ1.49/99, 27C-27D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob baz=43	0.17	352	⇑iP	Pb	15 37 44.1	+1.9
ARSB	baz=43			⇑iS	Sg	15 37 47.0	+0.5
ARK	Arkit baz=8.0	1.01	309	⇑iP	Pb	15 37 56.2	-1.2
ARK	baz=8.0			⇑iS	Sb	15 38 08.6	-1.8
ARLS	Aral baz=60	1.21	54	⇑iP	Pg	15 38 02.9	+1.1
ARLS	baz=60			⇑iS	Sg	15 38 19.8	+2.1
UCH	Uchtor baz=51	1.55	46	⇑iP	Pg	15 38 08.8	+0.5
UCH	baz=51			⇑iS	Sg	15 38 30.1	+1.5
UCH	Uchtor SNR=72	1.55	46	P	Pg	15 38 08.9	+0.5
MRKS	Merke 136nm,0.4s	1.59	6	P	Pb	15 38 07.5	+0.2
MRKS	115nm,0.3s			S	Sn	15 38 27.4	+1.7
MRKS	Merke 134nm,0.4s	1.59	6	⇓iP	Pb	15 38 07.5	+0.2
MRKS	98nm,0.2s			eS	Sn	15 38 27.1	+1.4
EKS2	Erkin-Say baz=25	1.61	21	⇓iP	Pb	15 38 08.3	+0.8
EKS2	baz=25			⇓iS	Sb	15 38 28.8	+1.4
EKS2	Erkin-Say SNR=27	1.61	21	P	Pb	15 38 08.2	+0.8
AAK	Ala-Archa 13nm,0.3s	1.85	36	⇓P	Pg	15 38 13.5	-0.3
AAK	207nm,0.7s			⇑S	Sg	15 38 37.0	-1.0
AAK	Ala-Archa baz=40	1.85	36	⇓iP	Pg	15 38 13.2	-0.7
AAK	baz=40			⇓iS	Sg	15 38 36.9	-1.0
AAK	Ala-Archa SNR=23	1.85	36	P	Pg	15 38 13.6	-0.3
KZA	Kyzart baz=64	1.91	61	⇓iP	Pg	15 38 15.2	0.0
KZA	baz=64			⇓iS	Sg	15 38 40.8	+0.7
KZA	Kyzart SNR=143	1.91	61	P	Pg	15 38 16.1	+0.9
DRK	Karamyk baz=6.0	1.92	209	⇓iP	Pg	15 38 14.5	-0.7
DRK	baz=6.0			⇓iS	Sg	15 38 39.9	-0.3
BTK	Batken baz=34	2.00	237	⇑iP	Pb	15 38 14.6	+0.5
BTK	baz=34			⇑iS	Sb	15 38 40.3	+1.6
FRU1	Bishkek baz=39	2.04	36	⇑iP	Pb	15 38 15.9	+1.0
FRU1	baz=39			⇑iS	Sb	15 38 41.7	+1.8
KBK	Karagaybulak baz=47	2.08	43	⇓iP	Pb	15 38 16.9	+1.3
KBK	baz=47			⇓iS	Sb	15 38 43.3	+2.2
KBK	Karagaybulak SNR=16	2.08	43	P	Pg	15 38 18.1	-0.2
DZA	Taraz 86nm,0.4s	2.14	325	Pg	Pb	15 38 17.3	+0.9
DZA	268nm,0.4s			Lg	Lg	15 38 43.5	
DZA	Taraz 78nm,0.1s	2.14	325	⇑iP	Pb	15 38 17.3	+0.9
DZA	335nm,0.3s			⇑iS	Sb	15 38 43.5	+0.9
CHMS	Chumysh baz=38	2.25	35	⇓iP	Pb	15 38 18.6	+0.2
CHMS	baz=38			⇓iS	Sb	15 38 46.3	+0.5
CHMS	Chumysh SNR=10	2.25	35	P	Pb	15 38 19.9	+1.6
NRN	Naryn baz=85	2.27	82	⇑iP	Pb	15 38 20.2	+1.4
NRN	baz=85			⇑iS	Sg	15 38 49.9	-1.5
USP	Ospenovka baz=30	2.38	27	⇓iP	Pb	15 38 20.0	-0.6
USP	baz=30			⇓iS	Sb	15 38 48.9	-0.6
USP	Ospenovka SNR=17	2.38	27	P	Pb	15 38 21.0	+0.5
IUG	Iuzhnay 11nm,0.2s	2.44	295	Pg	Pb	15 38 22.6	+0.9
IUG	143nm,0.3s			Lg	Lg	15 38 52.7	
IUG	Iuzhnay 11nm,0.2s	2.44	295	eP	Pb	15 38 22.6	+0.9
IUG	143nm,0.3s			eS	Sb	15 38 52.7	+1.3
BOOM	Boomskoye usch baz=60	2.56	58	⇓iP	Pb	15 38 24.0	+0.3
BOOM	baz=60			⇓iS	Sb	15 38 56.2	+1.3
SGDS	Sogindy 14nm,0.4s	2.59	27	Pg	Pb	15 38 24.8	+0.6
SGDS	57nm,0.6s			Lg	Lg	15 38 56.2	
TKM2	Tokmak 2 5.8nm,0.3s	2.61	47	⇓Pg	Pg	15 38 27.4	-1.1
TKM2	60nm,0.7s			⇓Lg	Lg	15 39 02.5	
TKM2	Tokmak 2 baz=49	2.61	47	⇑iP	Pb	15 38 24.4	-0.2
TKM2	baz=49			⇑iS	Sb	15 38 56.5	+0.2
TKM2	Tokmak 2 SNR=31	2.61	47	P	Pb	15 38 25.4	+0.8
ULHL	Ulahol baz=67	2.65	65	⇓iP	Pb	15 38 25.7	+0.4
ULHL	baz=67			⇓iS	Sb	15 38 58.8	+1.3
ULHL	Ulahol SNR=14	2.65	65	P	Pg	15 38 28.1	-1.2
KK31	Karatay Array 2.8nm,0.3s,baz=144,slow=18,SNR=79	2.69	317	Pg	Pb	15 38 25.4	-0.5
KK31	39nm,0.6s,baz=135,slow=22,SNR=22			⇑Lg	Lg	15 38 58.5	
KST	Kastek 20nm,0.4s	2.89	48	Pg	Pg	15 38 32.8	-1.0
KST	64nm,0.6s			Lg	Lg	15 39 10.8	
KST	Kastek 18nm,0.4s	2.89	48	⇑iP	Pg	15 38 32.8	-1.0
KST	64nm,0.5s			⇓iS	Sg	15 39 10.8	-0.6
DGS	Degeres 7.6nm,0.4s	2.92	44	Pg	Pg	15 38 33.0	-1.3
DGS	39nm,0.5s			Lg	Lg	15 39 10.9	
DGS	Degeres 7.6nm,0.4s	2.92	44	eP	Pg	15 38 33.0	-1.3
DGS	39nm,0.5s			eS	Sg	15 39 10.8	-1.4
MTBS	Maitube 5.5nm,0.5s	3.21	51	Pg	Pg	15 38 39.0	-1.0
MTBS	40nm,0.5s			Lg	Lg	15 39 21.1	
MTBS	Maitube 5.5nm,0.5s	3.21	51	⇑iP	Pg	15 38 39.0	-1.0
MTBS	40nm,0.5s			⇑iS	Sg	15 39 21.1	-0.5
IZV	Izvestkoviy 9.8nm,0.6s	3.27	54	Pg	Pg	15 38 39.8	-1.3
IZV	27nm,0.6s			Lg	Lg	15 39 22.2	
IZV	Izvestkoviy 9.8nm,0.6s	3.27	54	eP	Pg	15 38 39.8	-1.3
IZV	27nm,0.6s			eS	Sg	15 39 22.2	-1.3
KDJ	Kajisay baz=73	3.27	71	⇑iP	Pb	15 38 34.6	-1.3
KDJ	baz=73			⇑iS	Sb	15 39 13.4	-1.9
MDOK	Medeo 4.7nm,0.4s	3.61	55	Pg	Pg	15 38 46.2	-1.3
MDOK	19nm,0.5s			Lg	Lg	15 39 33.5	
MDOK	Medeo 4.3nm,0.3s	3.61	55	eP	Pg	15 38 46.2	-1.3
MDOK	25nm,0.9s			eS	Sg	15 39 33.5	-0.7
KUU	Kurty 4.0nm,0.1s	3.68	41	Pg	Pb	15 38 46.0	+3.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUU				Lg	Lg	15 39 33.3	
	25nm,0.3s						
KUU	Kurty	3.68	41	⇓*i*P	Pb	15 38 46.0	+3.4
	1.9nm,0.2s						
KUU				⇑*i*S	Sg	15 39 33.3	-3.1
	38nm,0.5s						
KOTS	Kotyrbulak	3.69	54	Pg	Pg	15 38 47.7	-1.3
	6.3nm,0.4s						
KOTS				Lg	Lg	15 39 36.2	
	30nm,0.6s						
KOTS	Kotyrbulak	3.69	54	*e*P	Pg	15 38 47.7	-1.3
	4.4nm,0.5s						
KOTS				*e*S	Sg	15 39 36.2	-0.5
	64nm,0.8s						
KTBS	Karatobe	3.73	46	Pg	Pg	15 38 47.7	-2.0
	4.9nm,0.5s						
KTBS				Lg	Lg	15 39 35.8	
	49nm,0.6s						
KTBS	Karatobe	3.73	46	*e*P	Pg	15 38 47.7	-2.0
	2.4nm,0.3s						
KTBS				*e*S	Sg	15 39 35.8	-2.2
	62nm,0.5s						
CHKK	Chushkaly	3.99	46	Pg	Pg	15 38 52.2	-2.5
	3.3nm,0.6s						
CHKK				Lg	Lg	15 39 43.5	
	29nm,0.4s						
CHKK	Chushkaly	3.99	46	*e*P	Pg	15 38 52.2	-2.5
	2.0nm,0.3s						
CHKK				*e*S	Sg	15 39 43.5	-2.8
	31nm,0.4s						
SATY	Saty	4.44	63	Pg	Pg	15 39 02.1	-1.3
	8.0nm,0.4s						
SATY				Lg	Lg	15 40 01.1	
	11nm,0.6s						
SATY	Saty	4.44	63	*e*P	Pg	15 39 02.1	-1.3
	8.0nm,0.4s						
SATY				⇓*i*S	Sg	15 40 01.1	+0.2
	14nm,0.5s						
KURS	Kuram	4.48	57	Pg	Pg	15 39 01.8	-2.3
	6.8nm,0.7s						
KURS				Lg	Lg	15 40 00.2	
	12nm,1.2s						
KURS	Kuram	4.48	57	*e*P	Pg	15 39 01.8	-2.3
	6.8nm,0.7s						
KURS				*e*S	Sg	15 40 00.2	-1.8
	12nm,1.2s						
MNBS	Baschi	4.93	52	Pg	Pg	15 39 10.7	-2.1
	2.8nm,0.5s						
MNBS				Lg	Lg	15 40 15.5	
	11nm,0.5s						
MNBS	Baschi	4.93	52	*e*P	Pg	15 39 10.7	-2.1
	1.0nm,0.2s						
MNBS				*e*S	Sg	15 40 15.5	-1.1
	11nm,0.5s						
PDGK	Podgornoye	5.27	64	⇓Pg	Pg	15 39 17.2	-2.1
	2.5nm,0.8s						
PDGK				⇓Lg	Lg	15 40 27.5	
	13nm,0.9s						
KTMS	Ketmen	5.90	65	Pg	Pg	15 39 29.6	-1.8
	0.9nm,0.3s						
KTMS				Lg	Lg	15 40 47.7	
	3.2nm,0.1s						
DJR	Jarkent	5.91	55	Pg	Pg	15 39 27.1	-4.4
	1.8nm,0.3s						
DJR				Lg	Lg	15 40 43.9	
	3.7nm,0.7s						
OTUK	Ortayu	7.10	356	⇑Lg	Lg	15 41 18.7	
	10nm,0.8s						

ISC 15 15:43:15.6±1.3,**49°.11N**±0°.04×**18°.63E**±0°.04,**h6^{km}**±17^{km},
n5,σ**0^{s}.72**/10,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	Kolacno	0.55	196	*e*PG	Pg	15 43 25.4	-0.7
KOLL				*e*SG	Sg	15 43 32.6	-0.6
LANS	Liptovska Anna	0.55	85	*e*PG	Pg	15 43 26.1	-0.1
LANS				*e*SG	Sb	15 43 35.7	-0.1
VYHS	Vyhne	0.63	167	*e*PG	Pb	15 43 28.9	0.0
VYHS				*e*SG	Sg	15 43 37.1	+1.4
JAVC	Velka Javorina	0.68	249	*e*PG	Pg	15 43 29.0	+0.4
JAVC				*e*SG	Sb	15 43 39.7	+0.2
MORC	Moravsky Berou	0.98	314	*e*PG	Pg	15 43 34.0	-0.3
MORC				*e*SG	Sg	15 43 47.2	+0.2

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*IDC **15** 15:45:23.0±1.1,5°.65S×153°.20E,h0^{km},mb3.8/9,
mb1 4.0/10,mb1mx3.8/29,mbtmp3.9/10,ML2.0/1,Error
ellipse: s-maj=36.0km s-min=19.6km az=106.0*
*ISCJB **15** 15:45:27.0±0.9,5°.65S±0°.08×153°.1E±0°.2,h37^{km},
mb3.9/11,Error ellipse: s-maj=23.1km s-min=11.0km
az=11.4*
*NEIC **15** 15:45:29.5±0.7,5°.64S×152°.86E,h35^{km},mb4.1/2,Error
ellipse: s-maj=18.8km s-min=9.3km az=119.0*
ISC 15 15:45:29.3±0.9,**5°.62S**±0°.09×**152°.9E**±0°.1,**h37^{km},n21,**
σ**1^{s}.21**/22,**mb3.8**/11,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.60	332	*e*Pn	Pn	15 45 55.3	+0.2
PMG	Port Moresby	6.83	236	Pn	Pn	15 47 08.6	+1.5
	1.4nm,0.3s,baz=34,slow=11,SNR=6.2						
PMG				Sn	Sn	15 48 21.0	-2.7
	8.7nm,0.3s,baz=142,slow=17,SNR=8.8						
WR1	Warramunga Arr	23.00	230	*e*P	P	15 50 31.2	+0.1
WRA	Warramunga Arr	23.00	230	P	P	15 50 31.2	+0.1
	1.1nm,0.5s,baz=59,slow=10,SNR=6.8						
AS31	Alice Springs	25.63	224	*e*P	P	15 50 56.9	+1.2
	1.4nm,1.1s						
ASAR	Alice Springs	25.63	224	P	P	15 50 56.4	+0.7
	2.2nm,0.8s,baz=57,slow=9.1,SNR=20						
STKA	Stephens Creek	28.19	201	P	P	15 51 18.9	+0.4
	1.0nm,0.8s,baz=354,slow=11,SNR=3.3						
STKA	Stephens Creek	28.19	201	*e*P	P	15 51 18.9	+0.4
	1.7nm,1.4s						
CM31	Chiang Mai Arr	58.33	296	*e*P	P	15 55 21.8	+0.6
	37nm,2.0s						
CMAR	Chiang Mai Arr	58.33	296	P	P	15 55 21.8	+0.6
	0.6nm,0.7s,baz=123,slow=6.7,SNR=4.1						
SONA0	Songino Array	67.07	328	*e*P	P	15 56 17.8	-1.3
SONM	Songino Array	67.07	328	P	P	15 56 17.8	-1.3
	0.7nm,0.6s,baz=139,slow=4.2,SNR=4.4						
VNDA	Vanda	72.01	178	P	P	15 56 46.8	-2.1
	0.3nm,0.6s,baz=342,slow=7.1,SNR=5.1						
MK32	Makanchi Array	81.01	319	*e*P	P	15 57 41.7	+1.3
MKAR	Makanchi Array	81.01	319	P	P	15 57 41.7	+1.3
	0.4nm,0.6s,baz=87,slow=7.4,SNR=3.1						
ZALV	Zalesovo Beam	81.89	326	P	P	15 57 45.2	+0.3
	2.1nm,0.6s,baz=92,slow=4.0,SNR=5.7						
ZAA1	Zalesovo Array	81.89	326	*e*P	P	15 57 45.2	+0.3
ILAR	Eielson Array	82.87	22	P	P	15 57 49.4	-0.3
	1.1nm,0.7s,baz=247,slow=5.7,SNR=15						
ILB	Eielson Array	82.87	22	*e*P	P	15 57 49.4	-0.3
	11nm,2.0s						
TORD	Torodi Ar. Bea	150.66	287	PKPbc	PKiKP	16 05 20.6	+1.3
	0.7nm,0.8s,baz=55,slow=2.5,SNR=3.3						
TOA1	Torodi Ar. Sit	150.66	287	*e*PKPbc	PKiKP	16 05 20.6	+1.3

IDC 15 15:48:33.8±2.0,**5°.86S**×**153°.20E,h0^{km},mb3.9**/3,
mb1 4.2/4,**mb1mx3.7**/31,**mbtmp4.0**/4,**ML1.6**/1,**Error
ellipse: s-maj=123.9km s-min=26.4km az=131.0,New
Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.95	239	Pn	Pn	15 50 16.5	-0.4
	0.7nm,0.3s,baz=58,slow=11,SNR=2.9						
PMG				Sn	Sn	15 51 30.9	-5.9
	4.4nm,0.3s,baz=38,slow=18,SNR=5.6						
WRA	Warramunga Arr	23.07	231	P	P	15 53 40.3	-0.9
	2.4nm,0.7s,baz=57,slow=10,SNR=3.5						
ASAR	Alice Springs	25.66	224	P	P	15 54 05.8	+0.2
	1.8nm,0.7s,baz=57,slow=8.8,SNR=14						
ILAR	Eielson Array	82.98	22	P	P	16 00 60.0	-0.6
	0.8nm,0.8s,baz=258,slow=5.3,SNR=7.0						
TORD	Torodi Ar. Bea	151.00	287	PKPbc	PKiKP	16 08 31.0	+0.6
	0.6nm,0.7s,baz=45,slow=4.3,SNR=2.8						

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*ISCJB **15** 15:55:20.1±0.9,33°.1N±0°.2×39°.4W±0°.1,h8^{km},mb3.9/9,
Error ellipse: s-maj=31.9km s-min=12.5km az=8.9*
*IDC **15** 15:55:20.8±1.6,33°.08N×39°.40W,h0^{km},mb3.8/6,
mb1 4.0/6,mb1mx3.6/51,mbtmp3.8/6,Error ellipse:
s-maj=58.4km s-min=22.1km az=15.0*
*NEIC **15** 15:55:22.2±0.6,33°.07N×39°.40W,h10^{km},mb4.4/4,Error
ellipse: s-maj=22.2km s-min=7.9km az=191.0*
ISC 15 15:55:21.9±1.3,**33°.1N**±0°.3×**39°.4W**±0°.1,**h8^{km},n20,**
σ**0^{s}.17**/14,**mb4.1**/9,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	29.17	67	P	P	16 01 23.8	+0.1
	0.1nm,0.3s,baz=273,slow=8.7,SNR=2.7						
CLL	Collm	41.92	48	*e*P	P	16 03 13.0	+0.2
TOA1	Torodi Ar. Sit	42.34	108	*e*P	P	16 03 16.6	0.0
TORD	Torodi Ar. Bea	42.34	108	P	P	16 03 16.6	0.0
	0.7nm,0.5s,baz=313,slow=9.3,SNR=9.0						
H10N2	ASCENSION HYDR	47.06	145	T	T	16 54 22.4	
	baz=331,slow=75,SNR=106						
H10N3	ASCENSION HYDR	47.06	145	T	T	16 54 22.7	
	baz=331,slow=75,SNR=101						
H10N1	ASCENSION HYDR	47.08	145	T	T	16 54 23.8	
	baz=331,slow=75,SNR=120						
H10S1	ASCENSION HYDR	47.96	146	T	T	16 55 26.9	
	baz=331						
H10S3	ASCENSION HYDR	47.96	146	T	T	16 55 35.8	
	baz=331						
H10S2	ASCENSION HYDR	47.97	146	T	T	16 55 24.8	
	baz=331						
WMOK	Wichita Mounta	48.68	289	*e*P	P	16 04 06.8	+0.1
	2.1nm,0.7s						
AKASG	Malin Array Be	52.16	49	P	P	16 04 32.5	-0.3
	0.4nm,0.4s,baz=275,slow=7.0,SNR=5.0						
AKBB	Malin Array Si	52.16	49	*e*P	P	16 04 32.5	-0.3
	5.8nm,1.4s						
PD31	Pinedale Array	54.74	302	*e*P	P	16 04 52.2	+0.1
PDAR	Pinedale Array	54.74	302	P	P	16 04 52.2	+0.1
	1.6nm,0.8s,baz=81,slow=9.2,SNR=10						
BW06	Boulder Array	54.74	302	*e*P	P	16 04 51.8	-0.3
	6.3nm,1.5s						
INK	Inuvik	61.22	335	P	P	16 05 36.8	0.0
	2.4nm,0.9s,baz=74,slow=5.9,SNR=6.1						
INK	Inuvik	61.22	335	*e*P	P	16 05 36.8	0.0
	5.8nm,1.3s						
NV01	Mina Array Sit	62.41	300	*e*P	P	16 05 45.8	0.0
NVAR	Mina Array Bea	62.41	300	P	P	16 05 45.8	0.0
	0.4nm,0.7s,baz=59,slow=7.5,SNR=4.1						

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*IDC **15** 15:55:31.5±0.8,55°.26S×29°.51W,h0^{km},mb4.0/8,
mb1 4.1/8,mb1mx4.0/23,mbtmp4.0/8,Error ellipse:
s-maj=28.3km s-min=19.6km az=50.0*
*NEIC **15** 15:55:32.7±0.4,55°.29S×29°.58W,h10^{km},mb4.3/3,Error
ellipse: s-maj=12.9km s-min=9.7km az=211.0*
*ISCJB **15** 15:55:33.6±0.6,55°.3S±0°.1×29°.6W±0°.2,h28^{km},mb4.1/7,
Error ellipse: s-maj=17.9km s-min=12.5km az=33.4*
ISC 15 15:55:35.4±0.7,**55°.3S**±0°.1×**29°.6W**±0°.1,**h28^{km},n21,**
σ**0^{s}.65**/21,**mb4.1**/7,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	4.11	281	*e*Pn	Pn	15 56 35.5	-0.7
SNAA	Sanae	20.00	155	P	P	16 00 05.3	-0.2
	0.4nm,0.3s,baz=300,slow=10,SNR=14						
SNAA	Sanae	20.00	155	*e*P	P	16 00 05.2	-0.2
	9.1nm,0.9s						
MAW	Mawson	41.57	145	P	P	16 03 19.4	-0.6
	1.5nm,0.7s,baz=221,slow=9.3,SNR=2.2						
MAW	Mawson	41.57	145	*e*P	P	16 03 19.5	-0.6
	4.3nm,1.8s						
SIV	San Ignacio	46.07	316	P	P	16 03 56.7	-0.1
	1.7nm,0.7s,baz=155,slow=8.3,SNR=9.8						
VNDA	Vanda	47.26	183	P	P	16 04 06.5	+1.1
	0.8nm,0.7s,baz=189,slow=6.0,SNR=9.1						
VNDA	Vanda	47.26	183	*e*P	P	16 04 06.2	+0.8
LPAZ	La Paz	48.82	307	P	P	16 04 19.7	+0.9
	3.0nm,0.5s,baz=122,slow=4.0,SNR=14						
LPAZ	La Paz	48.82	307	*e*P	P	16 04 19.3	+0.5
LBTB	Lobatse	50.13	76	P	P	16 04 27.5	-0.7
	1.0nm,0.4s,baz=231,slow=9.2,SNR=2.0						
LBTB	Lobatse	50.13	76	*e*P	P	16 04 27.5	-0.7
	59nm,1.9s						
MATP	Matopo	55.39	75	P	P	16 05 07.9	+0.8
	1.2nm,0.5s,baz=197,slow=8.7						
TORD	Torodi Ar. Bea	73.10	32	P	P	16 07 03.5	+0.5
	0.4nm,0.5s,baz=229,slow=4.8,SNR=2.3						
TOA1	Torodi Ar. Sit	73.11	32	*e*P	P	16 07 03.5	+0.5
FIA0	FINESS Array S	124.36	29	*e*PKPdf	PKPdf	16 14 29.3	-0.8
FINES	FINESS Array B	124.36	29	PKP	PKPdf	16 14 29.3	-0.8
	2.0nm,1.0s,baz=100,slow=2.3,SNR=5.7						
ILAR	Eielson Array	148.59	313	PKPbc	PKPbc	16 15 18.4	+0.3
	1.1nm,0.8s,baz=130,slow=1.9,SNR=9.5						
ILB	Eielson Array	148.59	313	*e*PKPbc	PKPbc	16 15 18.4	+0.3
SONA0	Songino Array	152.05	87	*e*PKPbc	PKPbc	16 15 27.0	-0.1
SONM	Songino Array	152.05	87	PKPbc	PKPbc	16 15 27.0	-0.1
	1.9nm,0.7s,baz=221,slow=3.0,SNR=7.9						

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*ISCJB **15** 15:59:15.8±0.9,33°.2N±0°.2×39°.4W±0°.2,h8^{km},mb3.7/7,
Error ellipse: s-maj=28.4km s-min=19.0km az=155.8*
*IDC **15** 15:59:16.4±1.1,33°.13N×39°.42W,h0^{km},mb3.7/7,
mb1 3.9/7,mb1mx3.7/48,mbtmp3.7/7,Error ellipse:
s-maj=35.6km s-min=23.6km az=161.0*
ISC 15 15:59:17.7±1.0,**33°.1N**±0°.2×**39°.4W**±0°.2,**h8^{km},n13,**σ**1^{s}.23**/7,
mb3.8/7,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	29.14	67	P	P	16 05 18.6	-0.6
	0.1nm,0.3s,baz=262,slow=8.9,SNR=4.9						
EKA	Eskdalemuir Ar	33.60	38	P	P	16 05 59.6	+1.4
	0.2nm,0.3s,baz=250,slow=8.2,SNR=2.7						
TORD	Torodi Ar. Bea	42.36	108	P	P	16 07 12.0	-0.6
	1.4nm,1.0s,baz=298,slow=5.6,SNR=4.5						
H10N2	ASCENSION HYDR	47.11	145	T	T	16 58 15.8	
	baz=331,slow=75,SNR=13						
H10N3	ASCENSION HYDR	47.11	145	T	T	16 58 12.6	
	baz=331,slow=75,SNR=38						
H10N1	ASCENSION HYDR	47.13	145	T	T	16 58 17.5	
	baz=331,slow=75,SNR=20						
H10S1	ASCENSION HYDR	48.00	146	T	T	16 59 21.4	
	baz=332,slow=75,SNR=12						
H10S3	ASCENSION HYDR	48.01	146	T	T	16 59 19.9	
	baz=332,slow=75,SNR=14						
H10S2	ASCENSION HYDR	48.02	146	T	T	16 59 22.6	
	baz=332,slow=75,SNR=8.7						
AKASG	Malin Array Be	52.12	49	P	P	16 08 27.1	-1.1
	1.4nm,0.7s,baz=275,slow=6.3,SNR=5.7						
PDAR	Pinedale Array	54.71	302	P	P	16 08 47.0	-0.8
	0.9nm,0.8s,baz=86,slow=5.5,SNR=7.8						
LPAZ	La Paz	56.27	214	P	P	16 09 00.1	+0.7
	0.5nm,0.4s,baz=45,slow=5.7,SNR=3.8						
BRTR	Keskin Array B	57.67	61	P	P	16 09 09.8	+1.0
	0.9nm,0.9s,baz=278,slow=12,SNR=4.8						

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*ISCJB **15** 16:02:27.5±0.5,61°.1S±0°.1×24°.9W±0°.3,h10^{km},mb4.2/11,
Error ellipse: s-maj=25.5km s-min=8.0km az=143.6*
*IDC **15** 16:02:28.4±0.9,61°.02S×25°.04W,h0^{km},mb4.2/9,
mb1 4.3/10,mb1mx4.0/27,mbtmp4.3/10,ML5.1/1,Error
ellipse: s-maj=43.1km s-min=18.3km az=41.0*
*NEIC **15** 16:02:29.8±0.5,61°.06S×25°.07W,h10^{km},mb4.4/4,Error
ellipse: s-maj=24.0km s-min=9.2km az=225.0*
ISC 15 16:02:29.5±0.7,**61°.1S**±0°.2×**25°.0W**±0°.2,**h10^{km},n31,**
σ**0^{s}.94**/25,**mb4.2**/11,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	9.14	313	*e*Pn	Pn	16 04 40.1	-1.3
VNA1	Neumayer--Stat	11.76	152	P	Pn	16 05 16.3	-0.7
VNA1				S	Sn	16 07 18.5	-10
VNA3	Neumayer Olymp	11.90	155	P	Pn	16 05 18.3	-0.8
VNA3				S	Sn	16 07 17.1	-15
VNA2	Neumayer--Watz	12.16	152	P	Pn	16 05 21.1	-1.4
	baz=312,slow=15						
VNA2				S	Sn	16 07 26.5	-11
	baz=311,slow=25						
SNAA	Sanae	13.75	150	P	Pn	16 05 43.0	-1.2
SNAA				S	Sn	16 08 05.9	-11
SNAA	Sanae	13.75	150	Pn	Pn	16 05 43.0	-1.2
	9.3nm,0.3s,baz=314,slow=12,SNR=270						
SNAA				Sn	Sn	16 08 02.1	-15
	0.6nm,0.3s,baz=0.0,slow=20,SNR=4.3						
SNAA	Sanae	13.75	150	*e*Pn	Pn	16 05 42.7	-1.6
SNAA				Sn	Sn	16 08 02.1	-15
PLCA	Paso Flores	34.21	285	P	P	16 09 15.7	+0.6
	2.6nm,0.8s,baz=135,slow=7.1,SNR=7.2						
PLCA	Paso Flores	34.21	285	*e*P	P	16 09 16.3	+1.2
MAW	Mawson	35.52	139	P	P	16 09 26.9	+1.0
	2.1nm,0.7s,baz=221,slow=4.9,SNR=3.9						
MAW	Mawson	35.52	139	*e*P	P	16 09 27.7	+1.7
	3.9nm,1.6s						
CFA	Coronel Fontan	40.70	296	P	P	16 10 10.2	+0.2
	3.5nm,0.7s,baz=163,slow=6.9,SNR=9.2						
CPUP	Villa Florida	41.02	313	P	P	16 10 12.2	-0.5
	2.3nm,0.6s,baz=167,slow=6.7,SNR=5.1						
BDFB	Brasilia	48.28	330	P	P	16 11 10.9	+0.1
	1.7nm,0.5s,baz=175,slow=12,SNR=2.4						
LVC	Limon Verde	48.85	302	P	P	16 11 14.8	-0.7
	5.3nm,0.7s,baz=131,slow=4.5,SNR=5.1						
MNMC	Minye Minye	52.24	303	*e*P	P	16 11 41.9	+0.9
	17nm,0.6s						
H10S2	ASCENSION HYDR	52.57	13	T	T	17 08 44.4	
	baz=185						
H10S3	ASCENSION HYDR	52.58	13	T	T	17 08 50.3	
	baz=185						
H10S1	ASCENSION HYDR	52.59	13	T	T	17 08 50.0	
	baz=185						
H10N1	ASCENSION HYDR	53.69	13	T	T	17 11 04.6	
	baz=180						
H10N3	ASCENSION HYDR	53.69	13	T	T	17 10 11.9	
	baz=180						
H10N2	ASCENSION HYDR	53.71	13	T	T	17 10 13.4	
	baz=180						
LPAZ	La Paz	54.22	306	P	P	16 11 56.4	+0.4
	3.3nm,0.6s,baz=169,slow=6.5,SNR=11						
LPAZ	La Paz	54.22	306	*e*P	P	16 11 56.6	+0.6
	3.7nm,0.6s						
TORD	Torodi Ar. Bea	76.96	27	P	P	16 14 21.8	-0.2
	0.6nm,0.6s,baz=192,slow=5.7,SNR=2.9						
TOA1	Torodi Ar. Sit	76.97	27	*e*P	P	16 14 21.8	-0.3
ASAR	Alice Springs	93.86	161	P	P	16 15 47.0	-0.1
	0.2nm,0.8s,baz=190,slow=4.7,SNR=2.8						
AS31	Alice Springs	93.86	161	*e*P	P	16 15 47.0	-0.1
	1.3nm,1.1s						
SONA0	Songino Array	149.60	93	*e*PKPbc	PKiKP	16 22 19.4	+0.1
SONM	Songino Array	149.60	93	PKPbc	PKiKP	16 22 19.4	+0.1
	0.5nm,0.6s,baz=224,slow=4.0,SNR=3.4						
ILAR	Eielson Array	154.09	304	PKPbc	PKiKP	16 22 28.9	+1.1
	0.3nm,0.6s,baz=45,slow=1.5,SNR=2.7						

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*NEIC **15** 16:06:37.6±0.0,61°.57N×141°.08W,h9^{km},ML2.7(AEIC),
ML2.8(OTT),After AEIC.*
PGC 15 16:06:39.1±0.0,**61°.58N**×**141°.07W,h1^{km},ML2.8**/11,
**211km Wnw of Haines Jct., Yt Southern Alaska,
Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	28	P	Pg	16 06 43.0	-0.5
YUK2				S	Sg	16 06 46.6	0.0
YUK3	Moose Creek	0.35	56	P	Pg	16 06 45.1	-0.7
YUK3				S	Sg	16 06 50.1	-0.2
YUK1	Sand Pete Hill	0.63	24	P	Pg	16 06 50.0	-1.2
YUK1				S	Sg	16 06 58.8	-0.6
BALM	Baldy	0.82	229	*e*Pg	Pg	16 06 53.1	-1.6
BALM	Baldy	0.82	229	P	Pg	16 06 53.2	-1.5
BALM				S	Sg	16 07 04.7	-0.7
BVCY	Beaver Creek	0.84	7	P	Pg	16 06 54.1	-1.1
BVCY				S	Sg	16 07 06.0	-0.2
KIAG	Kiagna River	0.91	224	P	Pg	16 06 54.6	-1.8
KIAG				S	Sg	16 07 07.3	-0.7
TABL	Table Mountain	1.14	182	P	Pg	16 06 59.3	-1.6
TABL				S	Sg	16 07 14.5	-1.3
YUK4	Talbot Arm	1.19	100	P	Pg	16 07 00.4	-1.4
YUK4				S	Sg	16 07 15.8	-1.4
YUK6	Outpost Mounta	1.46	115	Pn	Pn	16 07 04.6	-2.1
YUK6				Sg	Sg	16 07 23.1	-2.6
SAMH	Samovar Hills	1.46	174	Pn	Pn	16 07 05.8	-0.9
SAMH				Sg	Sg	16 07 25.4	-0.5
MESA	MESA	1.47	197	Pn	Pn	16 07 05.9	-0.9
MESA				Sg	Sg	16 07 25.8	-0.5
CHX	Chaix Hills	1.52	181	*e*Pn	Pn	16 07 07.1	-0.3
BCA3	Beaver Creek A	1.53	348	*e*Pn	Pn	16 07 06.0	-1.6
PCA	Pinnacle	1.54	165	*e*Pn	Pn	16 07 06.8	-1.0
PCA	Pinnacle	1.54	165	Pn	Pn	16 07 06.7	-1.0
PCA				Sg	Sn	16 07 27.1	-1.2
YUK5	Granite Creek	1.61	105	Pn	Pn	16 07 07.2	-1.5
YUK5				Sg	Sn	16 07 28.3	-2.0
SNH	Sunshine Point	1.65	212	*e*Pn	Pn	16 07 09.0	-0.1
YUK7	Dusty Glacier	1.77	125	Pn	Pn	16 07 10.9	-0.1
YUK7				Sg	Sb	16 07 34.8	-0.4
BCPM	Bancas Point	1.78	156	*e*Pn	Pn	16 07 11.3	+0.4
MENT	Mentasta	1.84	319	*e*Pn	Pn	16 07 11.3	-0.5
HYT	Haines Junctio	1.89	112	*e*Pn	Pn	16 07 11.7	-0.8
HYT	Haines Junctio	1.89	112	Pn	Pn	16 07 11.6	-0.9
HYT				Sg	Sn	16 07 36.6	-0.4
PS12	TAPS Pump St12	1.95	269	*e*Pg	Pn	16 07 13.7	+0.4
HMT	Hamilton	1.99	233	*e*Pn	Pb	16 07 15.2	-0.9
PNL	Peninsula	2.09	156	*e*Pg	Pn	16 07 15.6	+0.4
PNL	Peninsula	2.09	156	Pn	Pn	16 07 15.3	+0.1
PNL				Sg	Sb	16 07 44.5	+0.4
PAX	Paxson	2.48	306	*e*Pn	Pn	16 07 19.0	-1.7
PAX	Paxson	2.48	306	Pn	Pn	16 07 21.7	+1.0
PAX				Sg	Sb	16 07 54.2	-1.4
DOT	Dot Lake	2.50	328	*e*Pn	Pn	16 07 19.6	-1.2
DOT	Dot Lake	2.50	328	Pn	Pn	16 07 19.6	-1.2
DOT				Pg	Pb	16 07 24.2	-0.4
DOT				Sg	Sb	16 07 56.2	+0.4
EYAK	Cordova Ski Ar	2.50	248	*e*Pn	Pn	16 07 20.2	-0.5
DAWY	Dawson	2.61	16	*e*Pn	Pn	16 07 21.3	-1.1
DAWY	Dawson	2.61	16	Pn	Pn	16 07 21.4	-1.1
DAWY				Sg	Sb	16 07 59.6	+0.4
JPK	Jack Peak	2.72	261	*e*Pn	Pn	16 07 23.8	-0.1
FID	Port Fidalgo	2.75	255	*e*Pg	Pn	16 07 25.6	+1.4
FID				*e*Pn	Pb	16 07 26.2	-2.7
SCRK	Sand Creek	2.75	332	*e*Pn	Pn	16 07 23.0	-1.5
RIDG	Independent Ri	2.78	323	*e*Pn	Pn	16 07 23.7	-1.0
SCM	Sheep Creek Mo	2.99	278	*e*Pn	Pn	16 07 28.7	+1.0
GLI	Glacier Island	3.00	259	*e*Pn	Pn	16 07 28.0	+0.3
PLBC	Pleasant Camp	3.15	130	Pg	Pb	16 07 35.3	-0.5
PLBC				Sg	Sg	16 08 17.8	-2.5
EGAK	Eagle	3.21	359	*e*Pn	Pn	16 07 30.1	-0.4
HDA	Harding Lake	3.91	319	*e*Pn	Pn	16 07 38.7	-1.4
RND	Reindeer	4.05	300	*e*Pn	Pn	16 07 42.0	-0.2
ILB	Eielson Array	4.15	323	*e*Pn	Pn	16 07 40.4	-3.1
MCK	McKinley	4.22	304	*e*Pn	Pn	16 07 44.2	-0.2
BESE	Bessie Mountai	4.33	131	Sg	Sb	16 08 52.5	+3.9
BM3	Burnt Mountain	6.06	347	*e*Pn	Pn	16 08 09.5	-0.2
COLD	Coldfoot	6.91	329	Pn	Pn	16 08 20.5	-0.8

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*IDC **15** 16:20:23.7±0.9,60°.76S×23°.75W,h0^{km},mb4.0/4,
mb1 4.3/6,mb1mx3.9/26,mbtmp4.2/6,ML4.7/2,Error
ellipse: s-maj=43.2km s-min=23.1km az=100.0*
*ISCJB **15** 16:20:24.0±1.2,60°.9S±0°.1×23°.5W±0°.3,h10^{km},mb3.8/4,
Error ellipse: s-maj=22.4km s-min=15.6km az=141.0*
ISC 15 16:20:25.2±1.0,**60°.8S**±0°.1×**23°.6W**±0°.2,**h10^{km},n19,**
σ**0^{s}.85**/13,**mb3.9**/4,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	11.66	154	P	Pn	16 23 11.0	-0.4
VNA3	Neumayer Olymp	11.86	158	P	Pn	16 23 13.2	-0.8
VNA2	Neumayer--Watz	12.06	154	P	Pn	16 23 16.4	-0.5
	baz=316,slow=14						
SNAA	Sanae	13.62	152	P	Pn	16 23 37.3	-0.8
SNAA	Sanae	13.62	152	Pn	Pn	16 23 37.5	-0.7
	3.7nm,0.3s,baz=311,slow=14,SNR=77						
SNAA				Sn	Sn	16 25 58.5	-11
	0.3nm,0.3s,baz=298,slow=19,SNR=4.9						
PMSA	Palmer Station	18.66	240	P	Pn	16 24 42.7	-0.4
	2.8nm,0.3s,baz=84,slow=9.7,SNR=15						
QSPA	South Pole Qui	29.42	180	P	P	16 26 29.5	+1.0
	0.8nm,0.6s,baz=197,slow=2.2,SNR=11						
VNDA	Vanda	41.87	182	P	P	16 28 15.7	+1.0
	0.8nm,0.8s,baz=187,slow=7.3,SNR=6.5						
H10S2	ASCENSION HYDR	52.18	11	T	T	17 26 18.5	
	baz=186,slow=75,SNR=11						
H10S3	ASCENSION HYDR	52.19	11	T	T	17 26 03.1	
	baz=186,slow=75,SNR=11						
H10S1	ASCENSION HYDR	52.20	11	T	T	17 26 04.1	
	baz=186,slow=75,SNR=9.5						
H10N1	ASCENSION HYDR	53.30	11	T	T	17 28 01.8	
	baz=190						
H10N3	ASCENSION HYDR	53.30	11	T	T	17 28 03.7	
	baz=190						
H10N2	ASCENSION HYDR	53.31	11	T	T	17 28 14.9	
	baz=190						

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TORD  Torodi Ar. Bea     76.43  25  P        P       16 32 15.3 +0.6
      1.8nm,0.6s,baz=194,slow=6.4,SNR=9.4
ASAR  Alice Springs      93.86 159  P        P       16 33 42.3 -0.4
      0.5nm,0.6s,baz=183,slow=4.5,SNR=8.1
FINES FINESS Array B    127.74  28  PKP      PKPdf   16 39 28.8 -0.3
      1.9nm,0.7s,baz=139,slow=9.1,SNR=4.4
SONM  Songino Array     148.91  92  PKPbc    PKPbc   16 40 12.5 +0.3
      1.7nm,0.6s,baz=247,slow=3.0,SNR=8.9
INK   Inuvik            150.60 315  PKPbc    PKPbc   16 40 13.9 -1.5
      1.2nm,0.5s,baz=326,slow=3.6,SNR=4.4
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*MAN **15** 16:22:04.4, 5°.89N×126°.12E, h137^{km}, mb5.2, ML4.1, MS4.2*
*ISCJB **15** 16:22:05.2±0.3, 6°.08N±0°.03×126°.11E±0°.05, h154^{km}±2^{km}, mb4.2/34, Error ellipse: s-maj=9.2km s-min=4.6km az=158.5*
*IDC **15** 16:22:06.5±0.5, 6°.12N×126°.23E, h149^{km}±4^{km}, mb3.8/21, mb1 3.9/24, mb1mx3.7/50, mbtmp4.3/24, Error ellipse: s-maj=18.4km s-min=7.7km az=68.0*
*NEIC **15** 16:22:06.1±0.6, 6°.09N×126°.08E, h148^{km}±6^{km}, mb4.4/18, Error ellipse: s-maj=9.6km s-min=4.9km az=65.0*
*DJA **15** 16:22:07.9±0.9, 6°N±7°×12°6E±°, h105^{km}±14^{km}, M4.6/7, mb4.5/7, MLv4.6/6*
ISC 15 16:22:05.8±0.6**, 6°.03N**±0°.04×**126°.12E**±0°.06**, h143**^{km}±5^{km}**, n87, σ1^{s}34**/104**, mb4.2**/34**, 1C-5D, Mindanao**

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Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                    Op       ISC      h  m  s   ISC
DDMP  Don Marcelino,     0.42 280  eP       Pn      16 22 25.7 -0.3
DDMP                               eS       Sn      16 22 39.4 -1.9
MATI  Mati               0.92   8  eP       Pn      16 22 29.2 -0.1
MATI                               eS       Sn      16 22 48.1 +0.9
DAV   Davao City (W)     1.17 332  P        Pn      16 22 32.2 +0.7
      362nm,0.3s,baz=239,slow=3.2,SNR=31
DAV                                S        Sn      16 22 52.6 +1.5
      964nm,0.3s,baz=78,slow=12,SNR=21
DAV   Davao City (W)     1.17 332  ePn      Pn      16 22 31.9 +0.4
DAV                                S        Sn      16 22 52.6 +1.5
GSPH  General Santos     1.17 273⇓iP       Pn      16 22 32.0 +0.4
GSPH                              i S       Sn      16 22 50.0 -1.2
DMPH  Davao City--Mi     1.21 330⇑iP       Pn      16 22 30.7 -1.2
DMPH                              i S       Sn      16 22 51.5 -0.4
KCP   Kidapawan          1.42 314⇓iP       Pn      16 22 34.6 +0.6
KCP                               i S       Sn      16 22 56.4 +0.8
SKMP  Bagumbayan, Su     1.64 287  eP       Pn      16 22 35.7 -0.7
BUKP  Musuan             2.12 330  eP       Pn      16 22 42.4 +0.4
BUKP                               eS       Sn      16 23 12.2 +2.4
CTBH  Cotabato--PC H     2.21 303⇓iP       Pn      16 22 42.8 -0.2
SGSI  Sangihe            2.40 194  P        Pn      16 22 47.1 +1.7
CGP   Cagayan de Oro     2.80 330⇓eP       Pn      16 22 50.9 +0.6
BUTP  Butuan             2.96 350  eP       Pn      16 22 53.2 +0.8
BUTP                               eS       Sn      16 23 34.8 +6.3
IPIL  Ipil               3.94 297  eP       Pn      16 23 05.8 +0.7
MSLP  Maasin             4.27 343  eP       Pn      16 23 09.3 -0.1
SNPH  Sibulan            4.36 319  eP       Pn      16 23 12.0 +1.3
TNTI  Ternate            5.37 167  ePn      Pn      16 23 24.0  0.0
TNTI  Ternate            5.37 167  P        Pn      16 23 23.6 -0.4
SANI  Sanana             8.03 181  P        Pn      16 24 01.0 +1.4
SWI   Sorong             8.55 143  P        Pn      16 24 07.2 +0.5
SIJI  Sorong             8.56 143  P        Pn      16 24 07.6 +0.7
      4.4nm,0.3s,baz=298,slow=23,SNR=20
SIJI                               S        Sn      16 25 38.5 -3.5
      1.3nm,0.3s,baz=189,slow=23,SNR=6.6
FAKI  Fak Fak           10.79 145  ePn      Pn      16 24 38.0 +1.5
TTSI  Tana Toraja       10.99 215  P        Pn      16 24 43.0 +3.8
SBUM  Sibu              14.31 256  ePn      Pn      16 25 20.2 -1.8
BATI  Baumata           16.31 189  P        P       16 25 49.2 +2.0
      3.6nm,0.3s,baz=318,slow=3.7,SNR=5.7
JAY   Jayapura          16.85 120  P        Pn      16 25 53.8 +0.3
      0.7nm,0.3s,baz=232,slow=9.8,SNR=5.0
YULB  Yu-li             17.88 345  eP       P       16 26 02.7 -1.6
      15nm,1.2s
MTN   Manton Dam        19.40 165  eP       P       16 26 22.1 +1.3
      44nm,1.6s
KNMB  Chin-men Tao      19.78 339  eP       P       16 26 25.6 +0.7
      44nm,0.7s
PMG   Port Moresby      25.97 126  P        P       16 27 25.4  0.0
      15nm,0.6s,baz=16,slow=5.6,SNR=9.0
WRA   Warramunga Arr    27.04 163  P        P       16 27 35.7 +0.8
      1.2nm,0.5s,baz=337,slow=12,SNR=14
WR1   Warramunga Arr    27.05 163  eP       P       16 27 35.7 +0.8
JNU   Nakatsue          27.32   9  P        P       16 27 34.8 -2.5
      5.5nm,0.9s,baz=219,slow=6.5,SNR=2.9
JNU   Nakatsue          27.32   9  eP       P       16 27 34.8 -2.5
      13nm,1.2s
CM31  Chiang Mai Arr    29.24 297  eP       P       16 27 55.6 +1.2
      14nm,1.4s
CM31                               ePcP     PcP     16 30 59.6 +1.5
CMAR  Chiang Mai Arr    29.24 297  P        P       16 27 55.6 +1.2
      0.7nm,0.4s,baz=117,slow=6.9,SNR=5.7
CMAR                               PcP      PcP     16 30 59.6 +1.5
      1.1nm,0.7s,baz=149,slow=1.8,SNR=5.6
AS31  Alice Springs     30.48 166  eP       P       16 28 06.3 +1.0
      1.7nm,0.5s
AS31                               ePcP     PcP     16 31 02.1 +0.9
AS31                               eS       S       16 32 55.7 -0.4
AS31                               eScP     ScP     16 34 31.1 +0.6
ASAR  Alice Springs     30.48 166  P        P       16 28 06.2 +0.9
      2.0nm,0.4s,baz=339,slow=7.3,SNR=90
ASAR                               PcP      PcP     16 31 02.1 +0.9
      0.9nm,0.5s,baz=357,slow=3.0,SNR=4.5
ASAR                               S        S       16 32 55.7 -0.4
      1.0nm,1.1s,baz=326,slow=14,SNR=4.2
ASAR                               ScP      ScP     16 34 31.1 +0.6
      0.5nm,0.7s,baz=342,slow=3.4,SNR=5.3
LZH   Lanzhou           36.23 329 ⇓P        P       16 28 54.5 -0.8
LZH                                pP       pP      16 29 27.3 +1.1
LZH                                sP       sP      16 29 44.8 +2.3
LZH                                PP       PnPn    16 30 22.6 +0.6
LZH                                pmax     pmax
      comp=Z,17nm,1.1s
LZH                                pmax     pmax
      comp=Z,45nm,5.2s
HHC   Hu-ho-hao-te      37.04 342  eP       P       16 29 03.1 +1.1
HHC                                pmax     pmax
      comp=Z,16nm,0.8s
HHC                                pmax     pmax
      comp=Z,1µm,6.1s
USRK  Ussuriysk Ar.     38.37   7  P        P       16 29 12.2 -0.7
      comp=Z,2.4nm,0.6s,baz=189,slow=6.5,SNR=6.2
STKA  Stephens Creek    40.48 160  P        P       16 29 31.7 +1.1
      comp=Z,2.6nm,0.5s,baz=358,slow=7.0,SNR=6.0
ASAJ  Asahikawa         40.60  18  P        P       16 29 30.6 -0.8
      comp=Z,2.5nm,0.8s,baz=229,slow=8.5,SNR=6.0
H11S3 WAKE ISLAND Hy    41.42  69  T        T       17 14 11.1
      baz=217
H11S1 WAKE ISLAND Hy    41.44  69  T        T       17 14 02.1
      baz=229
H11N1 WAKE ISLAND Hy    41.88  67  T        T       17 15 10.8
      baz=249
H11N2 WAKE ISLAND Hy    41.88  67  T        T       17 15 01.2
      baz=249
H11N3 WAKE ISLAND Hy    41.89  67  T        T       17 15 08.8
      baz=249
KLR   Kul'dur           43.31   5  P        P       16 29 53.7 +0.4
      comp=Z,0.8nm,0.4s,baz=144,slow=9.5,SNR=4.1
SONA0 Songino Array     44.94 341  eP       P       16 30 06.7 +0.1
SONA0                              ePcP     PcP     16 31 45.9 +0.5
SONM  Songino Array     44.94 341  P        P       16 30 06.6 +0.1
      comp=Z,0.5nm,0.3s,baz=148,slow=6.8,SNR=3.7
SONM                               PcP      PcP     16 31 45.9 +0.5
      comp=Z,0.6nm,0.4s,baz=144,slow=5.2,SNR=4.0
WMQ   Urumqi            50.51 324  eP       P       16 30 50.1 +0.6
WMQ                                LR       LR
      comp=N,2µm,18.5s
WMQ                                LR       LR
      comp=E,1µm,20.1s
WMQ                                LR       LR
      comp=Z,2µm,23.5s
PETK  Petropavlovsk-    53.55  23  P        P       16 31 11.8 +0.1
      comp=Z,2.1nm,0.7s,baz=169,slow=4.2,SNR=4.8
PEA1  Petropavlovsk-    53.56  23  eP       P       16 31 11.8 +0.1
MK32  Makanchi Array    55.34 325  eP       P       16 31 24.1 -0.6
MK32                               ePcP     PcP     16 32 23.4 -0.2
MKAR  Makanchi Array    55.34 325  P        P       16 31 24.1 -0.6
      comp=Z,1.9nm,0.5s,baz=121,slow=7.9,SNR=25
MKAR                               PcP      PcP     16 32 23.4 -0.2
      comp=Z,1.7nm,0.5s,baz=117,slow=4.7,SNR=8.9
YAK   Yakutsk           55.95   2  eP       P       16 31 28.1 -0.6
      comp=Z,9.7nm,0.8s
KSH   Kashi             56.01 314  eP       P       16 31 31.8 +2.0
ZALV  Zalesovo Beam     58.28 333  P        P       16 31 44.8 -0.5
      comp=Z,0.9nm,0.4s,baz=140,slow=9.2,SNR=3.9
ZAA1  Zalesovo Array    58.28 333  eP       P       16 31 44.8 -0.5
KURBB Kurchatov Arra    59.49 327  P        P       16 31 53.3 -0.4
      comp=Z,3.1nm,0.6s,baz=125,slow=6.3,SNR=29
KURK  Kurchatov         59.49 327  eP       P       16 31 52.9 -0.8
      comp=Z,5.7nm,0.6s
GAR   Garm              59.94 312  eP       P       16 31 56.4 -0.9
      comp=Z,11nm,0.5s
KK31  Karatay Array     61.16 316  eP       P       16 32 04.3 -0.9
      comp=Z,3.0nm,0.8s
KKAR  Karatay Array     61.16 316  eP       P       16 32 04.4 -0.9
      comp=Z,3.0nm,0.8s
BRVK  Borovoye          65.15 327  eP       P       16 32 30.4 -1.0
      comp=Z,3.7nm,0.6s
TIXI  Tiksi             65.57   1  eP       P       16 32 34.3 +0.7
      comp=Z,3.9nm,0.9s
ABKAR Akbulak array     70.00 320  eP       P       16 33 00.8 -1.1
      comp=Z,2.6nm,0.6s
HDA   Harding Lake      83.28  26  eP       P       16 34 16.7 +0.5
      comp=Z,2.6nm,0.6s
ILAR  Eielson Array     83.30  26  P        P       16 34 14.8 -1.4
      comp=Z,0.7nm,0.6s,baz=250,slow=5.0,SNR=8.1
ILB   Eielson Array     83.30  26  eP       P       16 34 14.8 -1.4
      comp=Z,3.3nm,1.2s
MAW   Mawson            85.69 200  P        P       16 34 28.9 +0.8
      comp=Z,1.1nm,0.6s,baz=63,slow=9.0,SNR=3.6
MAW   Mawson            85.69 200  eP       P       16 34 28.9 +0.8
      comp=Z,6.1nm,1.8s
VNDA  Vanda             85.77 173  P        P       16 34 29.1 +0.7
      comp=Z,0.5nm,0.7s,baz=316,slow=7.5,SNR=5.3
ARA0  ARCESS Array S    88.10 340  eP       P       16 34 39.3 -0.5
ARCES ARCESS Array B    88.10 340  P        P       16 34 39.3 -0.5
      comp=Z,2.7nm,0.7s,baz=87,slow=6.7,SNR=15
BR101 Keskin Array S    88.10 310  eP       P       16 34 38.8 -1.9
BR131 Keskin Array S    88.10 310  eP       P       16 34 38.6 -2.1
      comp=Z,1.8nm,0.8s
BRTR  Keskin Array B    88.10 310  P        P       16 34 38.8 -1.9
      comp=Z,1.3nm,0.7s,baz=117,slow=5.1,SNR=8.6
FIA0  FINESS Array S    89.53 332  eP       P       16 34 45.9 -0.8
FINES FINESS Array B    89.53 332  P        P       16 34 45.9 -0.8
      comp=Z,1.5nm,0.6s,baz=80,slow=3.1,SNR=10.0
NB2   NORSAR Subarra    96.47 334  P        P       16 35 17.2 -1.5
      comp=Z,0.5nm,0.6s,baz=65,slow=4.6
NB200 NORSAR Array S    96.47 334  eP       P       16 35 17.4 -1.3
NOA   NORSAR Array B    96.47 334  P        P       16 35 17.4 -1.3
      comp=Z,0.8nm,0.7s,baz=62,slow=4.6,SNR=3.9
VYHS  Vyhne             96.82 320  eP       P       16 35 30.8 +10
TORD  Torodi Ar. Bea   121.61 289  PKP      PKPdf   16 40 43.6  0.0
      comp=Z,1.8nm,0.7s,baz=70,slow=1.7,SNR=12
TOA1  Torodi Ar. Sit   121.61 289  ePKPdf   PKPdf   16 40 43.6  0.0
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*ISCJB **15** 16:31:10.0±0.5, 42°.13N±0°.02×15°.18E±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=4.2km s-min=3.1km az=157.4*
*ROM **15** 16:31:10.1±0.3, 42°.10N±0°.01×15°.12E±0°.01, h3^{km}±1^{km}, ML2.7/29, Error ellipse: s-maj=1.0km s-min=1.0km az=44.0*
*BEO **15** 16:31:30.4±1.2, 43°.79N×16°.68E, h10^{km}, ML2.1/3*
ISC 15 16:31:11.0±1.4**, 42°.07N**±0°.02×**15°.10E**±0°.02**, h12**^{km}±11^{km}**, n65, σ1^{s}04**/70**, Adriatic Sea**

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Code  Station Name        Δ°   AZ°    Phase ID        Time      Res
                                    Op       ISC      h  m  s   ISC
MELA  Melanico ??? S     0.36 176  P        Pb      16 31 19.1 -0.3
MELA                               S        Sb      16 31 25.3 +0.3
MELA                               AML      AML
      comp=E,2500µm,0.2s
MELA                               AML      AML
      comp=N,1880µm,0.9s
MELA                               AML      AML
      comp=E,2620µm,0.2s
MELA                               AML      AML
      comp=N,1895µm,0.9s
MELA                               AML      AML
      comp=E,2505µm,0.2s
MELA                               AML      AML
      comp=N,1875µm,0.9s
MELA                               AML      AML
      comp=E,2620µm,0.2s
MELA                               AML      AML
      comp=N,1895µm,0.9s
MELA                               AML      AML
      comp=E,2500µm,0.2s
MELA                               AML      AML
      comp=N,1875µm,0.9s
MELA                               AML      AML
      comp=E,2620µm,0.2s
MELA                               AML      AML
      comp=N,1895µm,0.9s
MELA                               AML      AML
      comp=N,1895µm,0.9s
MELA                               AML      AML
      comp=E,2620µm,0.2s
MELA                               AML      AML
      comp=E,2500µm,0.2s
MELA                               AML      AML
      comp=N,1875µm,0.9s
CIGN  Sant'Elia a Pi     0.44 199  P        Pb      16 31 20.8 +0.1
CIGN                               S        Sb      16 31 28.5 +1.3
CIGN                               AML      AML
      comp=E,682µm,0.5s
CIGN                               AML      AML
      comp=N,634µm,0.6s
CIGN                               AML      AML
      comp=E,682µm,0.5s
CIGN                               AML      AML
      comp=N,635µm,0.6s
CIGN                               AML      AML
      comp=E,682µm,0.5s
CIGN                               AML      AML
      comp=N,635µm,0.6s
CIGN                               AML      AML
      comp=E,682µm,0.5s
CIGN                               AML      AML
      comp=N,635µm,0.6s
GATE  Gambatesa          0.57 194  P        Pb      16 31 23.7 +0.7
GATE                               AML      AML
      comp=E,790µm,0.6s
GATE                               AML      AML
      comp=N,556µm,0.4s
GATE                               AML      AML
      comp=E,363µm,0.4s
GATE                               AML      AML
      comp=N,608µm,0.5s
GATE                               AML      AML
      comp=E,790µm,0.6s
GATE                               AML      AML
      comp=N,556µm,0.5s
GATE                               AML      AML
      comp=E,363µm,0.4s
GATE                               AML      AML
      comp=N,608µm,0.5s
GATE                               AML      AML
      comp=E,790µm,0.6s
GATE                               AML      AML
      comp=N,555µm,0.4s
GATE                               AML      AML
      comp=E,364µm,0.4s
GATE                               AML      AML
      comp=N,608µm,0.5s
GATE                               AML      AML
      comp=E,790µm,0.6s
GATE                               AML      AML
      comp=E,364µm,0.4s
GATE                               AML      AML
      comp=N,555µm,0.4s
GATE                               AML      AML
      comp=N,608µm,0.5s
SGRT  San Giovanni R     0.58 123  P        Pb      16 31 22.6 -0.5
SGRT                               S        Sb      16 31 31.5 +0.2
SGRT                               AML      AML
      comp=E,5645µm,0.2s
SGRT                               AML      AML
      comp=N,2510µm,0.1s
SGRT                               AML      AML
      comp=E,5645µm,0.2s
SGRT                               AML      AML
      comp=N,2510µm,0.1s
SGRT                               AML      AML
      comp=E,5645µm,0.2s
SGRT                               AML      AML
      comp=N,2510µm,0.1s
SGRT                               AML      AML
      comp=E,5645µm,0.2s
SGRT                               AML      AML
      comp=N,2510µm,0.1s
CAFR  Castel Frentan     0.58 286  P        Pb      16 31 23.1 -0.1
BSSO  Busso              0.64 216  P        Pb      16 31 24.5 +0.3
BSSO                               S        Sb      16 31 34.8 +1.6
BSSO                               AML      AML
      comp=E,974µm,1.0s
BSSO                               AML      AML
      comp=N,872µm,0.6s
BSSO                               AML      AML
      comp=E,409µm,0.6s
BSSO                               AML      AML
      comp=N,326µm,0.5s
BSSO                               AML      AML
      comp=E,973µm,1.0s
BSSO                               AML      AML
      comp=N,872µm,0.6s
BSSO                               AML      AML
      comp=E,409µm,0.6s
BSSO                               AML      AML
      comp=N,326µm,0.5s
BSSO                               AML      AML
      comp=N,326µm,0.5s
BSSO                               AML      AML
      comp=N,872µm,0.6s
BSSO                               AML      AML
      comp=E,973µm,1.0s
BSSO                               AML      AML
      comp=E,409µm,0.6s
LPEL  Lama dei Pelig     0.68 269  P        Pg      16 31 24.2  0.0
LPEL                               AML      AML
      comp=E,1170µm,0.3s
LPEL                               AML      AML
      comp=N,1055µm,0.8s
LPEL                               AML      AML
      comp=E,1165µm,0.3s
LPEL                               AML      AML
      comp=N,1050µm,0.8s
LPEL                               AML      AML
      comp=E,1170µm,0.3s
LPEL                               AML      AML
      comp=N,1055µm,0.8s
LPEL                               AML      AML
      comp=E,1170µm,0.3s
LPEL                               AML      AML
      comp=N,1055µm,0.8s
MOCO  Biccari - m.te     0.70 176  P        Pb      16 31 25.1  0.0
MSAG  Monte S. Angel     0.70 120  P        Pb      16 31 25.1 -0.2
MSAG                               S        Sb      16 31 35.3 +0.3
MSAG                               AML      AML
      comp=E,3600µm,0.2s
MSAG                               AML      AML
      comp=N,7745µm,0.5s
MSAG                               AML      AML
      comp=E,4075µm,0.2s
MSAG                               AML      AML
      comp=N,8000µm,0.5s
MSAG                               AML      AML
      comp=E,3600µm,0.2s
MSAG                               AML      AML
      comp=N,7750µm,0.5s
MSAG                               AML      AML
      comp=E,4075µm,0.2s
MSAG                               AML      AML
      comp=N,7995µm,0.5s
MSAG                               AML      AML
      comp=E,3600µm,0.2s
MSAG                               AML      AML
      comp=N,7750µm,0.5s
MSAG                               AML      AML
      comp=E,4075µm,0.2s
MSAG                               AML      AML
      comp=N,8000µm,0.5s
MSAG                               AML      AML
      comp=E,4075µm,0.2s
MSAG                               AML      AML
      comp=E,3600µm,0.2s
MSAG                               AML      AML
      comp=N,8000µm,0.5s
MSAG                               AML      AML
      comp=N,7750µm,0.5s
SACR  S. Croce Del S     0.73 204  P        Pb      16 31 25.6 -0.1
SACR                               S        Sb      16 31 36.9 +1.2
SACR                               AML      AML
      comp=E,925µm,1.6s
SACR                               AML      AML
      comp=N,310µm,1.6s
SACR                               AML      AML
      comp=E,322µm,0.5s
SACR                               AML      AML
      comp=N,338µm,0.5s
SACR                               AML      AML
      comp=E,322µm,0.5s
SACR                               AML      AML
      comp=N,338µm,0.5s
SACR                               AML      AML
      comp=E,924µm,1.6s
SACR                               AML      AML
      comp=N,310µm,1.6s
SACR                               AML      AML
      comp=E,322µm,0.5s
SACR                               AML      AML
      comp=N,339µm,0.5s
SACR                               AML      AML
      comp=E,924µm,1.6s
SACR                               AML      AML
      comp=N,310µm,1.6s
SACR                               AML      AML
      comp=E,322µm,0.5s
SACR                               AML      AML
      comp=N,339µm,0.5s
MIDA  Miranda            0.76 236  P        Pb      16 31 26.8 +0.6
MIDA                               AML      AML
      comp=E,733µm,1.3s
MIDA                               AML      AML
      comp=N,615µm,1.5s
MIDA                               AML      AML
      comp=E,734µm,1.3s
MIDA                               AML      AML
      comp=N,614µm,1.5s
MIDA                               AML      AML
      comp=N,614µm,1.5s
MIDA                               AML      AML
      comp=E,734µm,1.3s
RNI2  Rionero Sannit     0.79 243  P        Pg      16 31 26.5 +0.1
RNI2                               AML      AML
      comp=E,510µm,1.5s
RNI2                               AML      AML
      comp=N,410µm,0.6s
RNI2                               AML      AML
      comp=E,526µm,1.5s
RNI2                               AML      AML
      comp=N,419µm,0.6s
RNI2                               AML      AML
      comp=E,510µm,1.5s
RNI2                               AML      AML
      comp=N,410µm,0.6s
RNI2                               AML      AML
      comp=E,526µm,1.5s
RNI2                               AML      AML
      comp=N,419µm,0.6s
RNI2                               AML      AML
      comp=E,526µm,1.5s
RNI2                               AML      AML
      comp=E,510µm,1.5s
RNI2                               AML      AML
      comp=N,410µm,0.6s
RNI2                               AML      AML
      comp=N,419µm,0.6s
INTR  Introdacqua        0.89 267  P        Pg      16 31 27.5 -0.7
INTR                               S        Sn      16 31 42.1 -0.2
INTR                               AML      AML
      comp=E,799µm,0.6s
INTR                               AML      AML
      comp=N,1640µm,0.6s
INTR                               AML      AML
      comp=E,798µm,0.6s
INTR                               AML      AML
      comp=N,1640µm,0.6s
INTR                               AML      AML
      comp=N,1640µm,0.6s
INTR                               AML      AML
      comp=E,798µm,0.6s
SGTA  Sant Agata di      0.95 168  AML      AML
      comp=N,259µm,0.5s
SGTA                               AML      AML
      comp=E,424µm,0.7s
SGTA                               AML      AML
      comp=E,424µm,0.7s
SGTA                               AML      AML
      comp=N,260µm,0.5s
SGTA                               AML      AML
```

	comp=E,424µm,0.7s						
SGTA				AML	AML		
	comp=N,260µm,0.5s						
VCEL	**Villa Celiera**	**0.99**	**290**	P	**Pg**	**16 31 29.8**	**-0.3**
VCEL				AML	AML		
	comp=E,834µm,0.4s						
VCEL				AML	AML		
	comp=N,930µm,0.4s						
VCEL				AML	AML		
	comp=E,834µm,0.4s						
VCEL				AML	AML		
	comp=N,930µm,0.4s						
VCEL				AML	AML		
	comp=E,834µm,0.4s						
VCEL				AML	AML		
	comp=N,930µm,0.4s						
CAFE	**Carife**	**1.04**	**174**	P	**Pg**	**16 31 30.5**	**-0.6**
CAFE				AML	AML		
	comp=E,252µm,0.4s						
CAFE				AML	AML		
	comp=N,222µm,1.3s						
CAFE				AML	AML		
	comp=E,253µm,0.4s						
CAFE				AML	AML		
	comp=N,222µm,1.3s						
CAFE				AML	AML		
	comp=N,222µm,1.3s						
CAFE				AML	AML		
	comp=E,253µm,0.4s						
POFI	**Posta Fibreno**	**1.09**	**252**	P	**Pg**	**16 31 30.8**	**-1.3**
POFI				AML	AML		
	comp=E,256µm,0.5s						
POFI				AML	AML		
	comp=N,204µm,0.5s						
POFI				AML	AML		
	comp=E,276µm,0.5s						
POFI				AML	AML		
	comp=N,216µm,0.5s						
POFI				AML	AML		
	comp=E,276µm,0.5s						
POFI				AML	AML		
	comp=N,215µm,0.5s						
POFI				AML	AML		
	comp=N,215µm,0.5s						
POFI				AML	AML		
	comp=E,276µm,0.5s						
VVLD	**Villa Vallelon**	**1.12**	**260**	P	**Pg**	**16 31 31.0**	**-1.5**
VVLD				AML	AML		
	comp=E,397µm,0.3s						
VVLD				AML	AML		
	comp=N,418µm,0.4s						
VVLD				AML	AML		
	comp=E,398µm,0.3s						
VVLD				AML	AML		
	comp=N,419µm,0.4s						
VVLD				AML	AML		
	comp=E,398µm,0.3s						
VVLD				AML	AML		
	comp=N,419µm,0.4s						
SNAL	**S. Angelo Dei**	**1.14**	**176**	P	**Pg**	**16 31 31.8**	**-1.2**
SNAL				AML	AML		
	comp=E,274µm,0.4s						
SNAL				AML	AML		
	comp=N,269µm,1.6s						
SNAL				AML	AML		
	comp=E,274µm,0.4s						
SNAL				AML	AML		
	comp=N,270µm,1.6s						
SNAL				AML	AML		
	comp=E,274µm,0.4s						
SNAL				AML	AML		
	comp=N,270µm,1.6s						
TERO	**Teramo**	**1.24**	**297**	P	**Pg**	**16 31 35.1**	**+0.3**
TERO				AML	AML		
	comp=E,130µm,0.6s						
TERO				AML	AML		
	comp=N,128µm,0.9s						
TERO				AML	AML		
	comp=E,130µm,0.6s						
TERO				AML	AML		
	comp=N,128µm,0.9s						
TERO				AML	AML		
	comp=N,128µm,0.9s						
TERO				AML	AML		
	comp=E,130µm,0.6s						
AQU	**L'Aquila**	**1.29**	**283**	*e*Pn	**Pg**	**16 31 35.8**	**0.0**
PALZ	**Palazzo San Ge**	**1.30**	**150**	AML	AML		
	comp=E,422µm,1.6s						
PALZ				AML	AML		
	comp=E,422µm,1.6s						
PALZ				AML	AML		
	comp=N,576µm,1.2s						
PALZ				AML	AML		
	comp=E,422µm,1.6s						
PALZ				AML	AML		
	comp=N,576µm,1.2s						
PALZ				AML	AML		
	comp=N,576µm,1.2s						
MRVN	**Minervino Murg**	**1.30**	**140**	AML	AML		
	comp=E,294µm,0.8s						
MRVN				AML	AML		
	comp=E,294µm,0.8s						
MRVN				AML	AML		
	comp=N,274µm,0.6s						
MRVN				AML	AML		
	comp=E,294µm,0.8s						
MRVN				AML	AML		
	comp=N,274µm,0.6s						
MRVN				AML	AML		
	comp=N,274µm,0.6s						
SMA1	**SAN MARTINO**	**1.42**	**294**	AML	AML		
	comp=N,290µm,0.6s						
SMA1				AML	AML		
	comp=E,272µm,0.6s						
SMA1				AML	AML		
	comp=N,291µm,0.6s						
SMA1				AML	AML		
	comp=E,275µm,0.6s						
SMA1				AML	AML		
	comp=E,275µm,0.6s						
SMA1				AML	AML		
	comp=N,290µm,0.6s						
GIUL	**Giuliano Di Ro**	**1.47**	**250**	AML	AML		
	comp=N,106µm,0.7s						
GIUL				AML	AML		
	comp=E,73µm,0.7s						
GIUL				AML	AML		
	comp=N,106µm,0.7s						
GIUL				AML	AML		
	comp=E,73µm,0.7s						
GIUL				AML	AML		
	comp=N,106µm,0.7s						
GIUL				AML	AML		
	comp=E,73µm,0.7s						
FIAM	**Fiamignano**	**1.48**	**278**	AML	AML		
	comp=E,220µm,0.6s						
FIAM				AML	AML		
	comp=E,220µm,0.6s						
FIAM				AML	AML		
	comp=N,200µm,0.6s						
FIAM				AML	AML		
	comp=N,200µm,0.6s						
FIAM				AML	AML		
	comp=N,200µm,0.6s						
FIAM				AML	AML		
	comp=E,220µm,0.6s						
HVAR	**Hvar**	**1.49**	**42**	*e*Pg	**Pn**	**16 31 37.3**	**-0.4**
HVAR				Sg	**Sn**	**16 31 55.2**	**-2.0**
AMUR	**Altamura**	**1.62**	**135**	AML	AML		
	comp=N,306µm,0.4s						
AMUR				AML	AML		
	comp=E,296µm,1.3s						
AMUR				AML	AML		
	comp=N,306µm,0.4s						
AMUR				AML	AML		
	comp=E,296µm,1.3s						
AMUR				AML	AML		
	comp=N,306µm,0.4s						
AMUR				AML	AML		
	comp=E,296µm,1.3s						
ZIRJ	**Zirje**	**1.64**	**14**	*i* Pn	**Pn**	**16 31 39.7**	**0.0**
ZIRJ				Sn	**Sn**	**16 32 00.6**	**-0.1**
BAI	**Bari**	**1.65**	**125**	*e*Pg	**Pn**	**16 31 40.2**	**+0.5**
BAI				Sg	**Sn**	**16 32 00.9**	**+0.1**
SG1	**Sgolgore (BA)**	**1.71**	**135**	*e*Pg	**Pn**	**16 31 41.3**	**+0.6**
SG1				Sg	**Sb**	**16 32 03.4**	**-0.4**
SLCN	**Sala Consilina**	**1.72**	**166**	AML	AML		
	comp=N,110µm,0.4s						
SLCN				AML	AML		
	comp=E,158µm,0.5s						
SLCN				AML	AML		
	comp=E,170µm,0.7s						
SLCN				AML	AML		
	comp=N,116µm,0.5s						
SLCN				AML	AML		
	comp=N,116µm,0.5s						
SLCN				AML	AML		
	comp=E,170µm,0.7s						
MORI	**Morici**	**1.85**	**14**	*i* Pn	**Pn**	**16 31 42.7**	**+0.1**
MORI				Sn	**Sn**	**16 32 06.2**	**+0.2**
DUGI	**Dugi Otok**	**1.93**	**359**	*e*Pn	**Pn**	**16 31 43.1**	**-0.5**
DUGI				Sg	**Sn**	**16 32 08.0**	**+0.2**
NOCI	**Noci**	**1.96**	**130**	AML	AML		
	comp=E,308µm,0.7s						
NOCI				AML	AML		
	comp=N,486µm,0.6s						
NOCI				AML	AML		
	comp=N,486µm,0.6s						
NOCI				AML	AML		
	comp=E,308µm,0.7s						
BULG	**Bulgheria - Ca**	**2.00**	**174**	AML	AML		
	comp=N,130µm,0.4s						
BULG				AML	AML		
	comp=E,89µm,0.8s						
BULG				AML	AML		
	comp=N,130µm,0.4s						
BULG				AML	AML		
	comp=E,89µm,0.8s						
STON	**Ston**	**2.09**	**66**	*e*Pg	**Pg**	**16 31 51.5**	**+0.5**
STON				*e*Sg	**Sn**	**16 32 08.7**	**-3.0**
STON	**Ston**	**2.09**	**66**	*i* Pn	**Pn**	**16 31 45.5**	**-0.3**
STON	**Ston**	**2.09**	**66**	*e*Pn	**Pn**	**16 31 46.1**	**+0.3**
FASA	**Fasano**	**2.11**	**126**	*e*Pg	**Pn**	**16 31 46.8**	**+0.7**
FASA				Sg	**Sn**	**16 32 12.8**	**+0.5**
FOSV	**Fossato di Vic**	**2.11**	**306**	AML	AML		
	comp=N,113µm,1.0s						
FOSV				AML	AML		
	comp=E,89µm,0.7s						
FOSV				AML	AML		
	comp=N,113µm,1.0s						
FOSV				AML	AML		
	comp=E,89µm,0.7s						
DBRK	**Dubrovnik**	**2.34**	**74**	*i* Pn	**Pn**	**16 31 49.8**	**+0.5**
TREB	**Trebinje**	**2.50**	**74**	*e*Pn	**Pg**	**16 31 59.9**	**+1.0**
TREB				*e*Sn	**Sn**	**16 32 19.9**	**-2.0**
TREB	**Trebinje**	**2.50**	**74**	*e*Pn	**Pn**	**16 31 51.9**	**+0.4**
NVLJ	**Novalja**	**2.50**	**356**	*e*Pn	**Pn**	**16 31 52.1**	**+0.6**
NVLJ				Sn	**Sn**	**16 32 22.2**	**+0.2**
UDBI	**Udbina**	**2.51**	**11**	*i* Pn	**Pn**	**16 31 52.2**	**+0.5**
UDBI				Sn	**Sn**	**16 32 22.2**	**0.0**
HCY	**Herceg Novi**	**2.55**	**80**	*e*Pn	**Pn**	**16 31 52.4**	**+0.2**
CAFI	**Castiglion Fio**	**2.63**	**300**	AML	AML		
	comp=E,40µm,0.9s						
CAFI				AML	AML		
	comp=E,40µm,0.9s						
CAFI				AML	AML		
	comp=N,41µm,0.8s						
CAFI				AML	AML		
	comp=N,41µm,0.8s						
BRY	**Bratogost**	**2.68**	**71**	*e*Pn	**Pn**	**16 31 51.7**	**-2.4**
MGRS	**Mrkonjic Grad**	**2.76**	**31**	*e*Pn	**Pb**	**16 32 00.7**	**+0.3**
UPM	**Unac-Piva**	**3.03**	**67**	*e*Pn	Pn	16 31 52.2	-6.8
DRME	**Dracevica, Mon**	**3.04**	**86**	*e*Pn	**Pn**	**16 32 00.4**	**+1.4**
BLY	**Banja Luka**	**3.08**	**29**	*e*Pn	**Pg**	**16 32 10.1**	**0.0**
PDG	**Podgorica**	**3.11**	**82**	*e*Pn	**Pb**	**16 32 07.7**	**+1.5**
PDG				*e*Sn	**Sn**	**16 32 36.6**	**-0.4**
PDG	**Podgorica**	**3.11**	**82**	*e*Pn	**Pn**	**16 32 00.6**	**+0.7**
HAPS	**Han Pijesak,Bl**	**3.47**	**53**	*e*Pn	**Pn**	**16 32 02.4**	**-2.6**
RUDO	**Rudo**	**3.50**	**62**	*e*Pn	**Pb**	**16 32 14.2**	**+1.2**
BBLS	**Lazići**	**3.64**	**59**	*e*Pn	**Pn**	**16 32 04.8**	**-2.4**
BBLS	**Lazići**	**3.64**	**59**	*e*Pn	**Pn**	**16 32 07.9**	**+0.7**
CEY	**Cerknica**	**3.70**	**353**	*e*Pn	**Pn**	**16 32 07.4**	**-0.7**
CRES	**Cresnjev**	**3.77**	**4**	*e*Pn	**Pn**	**16 32 07.2**	**-1.8**
SJES	**Sjenica**	**3.79**	**70**	*e*Pn	**Pn**	**16 32 10.2**	**+0.8**
DIVS	**Divibare**	**4.12**	**59**	*e*Pn	**Pn**	**16 32 14.2**	**+0.3**
GRUS	**Gruza**	**4.51**	**64**	*e*Pn	**Pn**	**16 32 16.6**	**-2.5**
BOVS	**Bovan**	**5.11**	**70**	*e*Sn	Sn	16 33 09.2	-17

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*ISCJB **15** 16:36:35.6±0.5, 27°.64N±0°.05×139°.9E±0°.1, h500^{km}, mb3.4/9, Error ellipse: s-maj=13.6km s-min=6.2km az=171.5*

*IDC **15** 16:36:35.5±1.4, 27°.66N×140°.09E, h490^{km}±16^{km}, mb3.1/9, mb1 3.1/12, mb1mx2.9/37, mbtmp4.0/12, Error ellipse: s-maj=34.2km s-min=11.8km az=79.0*

*JMA **15** 16:36:36.0±0.2, 27°.71N×139°.88E, h498^{km}, M4.1*

ISC 15 16:36:36.5±0.7**, 27°.70N**±0°.08×**140°.0E**±0°.1**, h500**^{km}**, n28,** σ1^{s}.**23**/37**, mb3.4**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.06**	**106**	P	**P**	**16 37 41.8**	**-0.1**
CBIJ				*e*S	**S**	**16 38 34.0**	**-1.0**
JHH2	**Haha-jima-NKT2**	**2.23**	**118**	P	**P**	**16 37 43.3**	**+0.4**
JHH2				S	**S**	**16 38 36.0**	**-0.7**
JHJ	**Hachijo jima 2**	**5.41**	**358**	P	**P**	**16 38 07.7**	**+0.6**
	2.7nm,0.3s,baz=68,slow=23,SNR=8.6						
JHJ				S	**S**	**16 39 16.6**	**-4.6**
	4.0nm,0.3s,baz=72,slow=20,SNR=2.2						
BSO1	**Boso 1**	**6.99**	**7**	P	**P**	**16 38 23.6**	**+1.8**
BSO1				S	**S**	**16 39 49.0**	**+0.7**
BSO3	**Boso 3**	**7.10**	**4**	P	**P**	**16 38 24.7**	**+1.5**
BSO3				*e*S	**S**	**16 39 50.0**	**-0.9**
BSO4	**Boso 4**	**7.28**	**2**	P	**P**	**16 38 25.9**	**+0.7**
JOD2	**Odawara 2**	**7.58**	**355**	P	**P**	**16 38 29.7**	**+1.2**
JHU	**Hanno**	**8.15**	**356**	P	**P**	**16 38 34.4**	**+0.1**
JHU				*e*S	**S**	**16 40 09.2**	**-1.9**
JRY	**Ryogami san**	**8.35**	**354**	P	**P**	**16 38 36.9**	**+0.5**
JYT	**Yasato**	**8.51**	**1**	P	**P**	**16 38 38.0**	**0.0**
JAG	**Ashikaga**	**8.71**	**357**	P	**P**	**16 38 40.1**	**-0.1**
JHO	**Hitachi**	**8.90**	**3**	P	**P**	**16 38 42.9**	**+0.7**
MJAR	**Matsushiro Arr**	**8.95**	**351**	P	**P**	**16 38 43.2**	**+0.5**
	0.1nm,0.3s,baz=237,slow=24,SNR=9.0						
MJAR				S	**S**	**16 40 26.7**	**+0.4**
	0.1nm,0.3s,baz=143,slow=16,SNR=3.1						
MAT	**Matsushiro**	**8.95**	**351**	P	**P**	**16 38 43.8**	**+1.2**
JFK	**Kawauchi**	**9.67**	**4**	P	**P**	**16 38 51.5**	**+1.2**
JFK				S	**S**	**16 40 38.6**	**-1.8**
JMK	**Ichinoseki**	**11.28**	**5**	P	**P**	**16 39 08.8**	**+1.6**
ASAJ	**Asahikawa**	**16.52**	**7**	P	**P**	**16 40 03.8**	**+1.4**
	0.3nm,0.3s,baz=242,slow=14,SNR=4.7						
SONM	**Songino Array**	**32.92**	**317**	P	**P**	**16 42 29.6**	**+0.7**
	0.5nm,0.5s,baz=105,slow=8.7,SNR=3.0						
WRA	**Warramunga Arr**	**47.67**	**187**	P	**P**	**16 44 26.6**	**-0.5**
	0.6nm,0.3s,baz=360,slow=7.2,SNR=12						
ZALV	**Zalesovo Beam**	**47.74**	**319**	P	**P**	**16 44 27.6**	**+0.3**
	1.3nm,0.5s,baz=105,slow=8.0,SNR=4.7						
MKAR	**Makanchi Array**	**48.57**	**309**	P	**P**	**16 44 34.4**	**+0.7**
	0.8nm,0.4s,baz=87,slow=10,SNR=19						
ASAR	**Alice Springs**	**51.40**	**187**	P	**P**	**16 44 54.0**	**-0.7**
	0.4nm,0.4s,baz=4.1,slow=6.7,SNR=34						
ASAR				PcP	**PcP**	**16 46 00.7**	**0.0**
	0.3nm,0.8s,baz=9.9,slow=4.6,SNR=3.0						
ARCES	**ARCESS Array B**	**72.32**	**340**	P	**P**	**16 47 11.3**	**+0.8**
	0.6nm,0.5s,baz=76,slow=7.6,SNR=8.3						
FINES	**FINESS Array B**	**76.53**	**333**	P	**P**	**16 47 34.4**	**0.0**
	2.8nm,0.3s,baz=67,slow=5.2,SNR=36						
NB2	**NORSAR Subarra**	**82.31**	**337**	P	**P**	**16 48 04.1**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=44,slow=5.3						
NOA	**NORSAR Array B**	**82.31**	**337**	P	**P**	**16 48 04.5**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=56,slow=6.1,SNR=4.2						
BRTR	**Keskin Array B**	**84.14**	**312**	P	**P**	**16 48 14.4**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=72,slow=3.8,SNR=3.5						
LPAZ	**La Paz**	**151.65**	**72**	PKPbc	**PKPbc**	**16 55 35.3**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=259,slow=6.7,SNR=3.7						

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*IDC **15** 16:59:49.8±0.7, 61°.65N×141°.28W, h0^{km}, mb4.0/13, mb1 4.1/19, mb1mx3.9/42, mbtmp3.9/19, ML3.7/5, Error ellipse: s-maj=20.1km s-min=9.4km az=44.0*

*NEIC **15** 16:59:49.1±0.0, 61°.56N×141°.09W, h12^{km}, mb4.4/10, ML3.8(OTT), ML3.9(AEIC), After AEIC.*

*AEIC **15** 16:59:49.1, 61°.56N×141°.09W, h12^{km}, ML3.9, MB4.4(NEIC), ML3.8(OTT)*

*PGC **15** 16:59:50.4, 61°.58N×141°.07W, h5^{km}, ML3.8/8, 211km Wnw of Haines Jct., Yt Southern Alaska*

*ANF **15** 16:59:51.5±4.0, 61°.75N×141°.37W, h10^{km}, ML4.9/3, Error ellipse: s-maj=44.7km s-min=18.2km az=177.0*

ISC 15 16:59:49.4±1.1**, 61°.59N**±0°.02×**141°.05W**±0°.02**, h2**^{km}±7^{km}**, n132,** σ1^{s}.**71**/157**, mb4.2**/24**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.22**	**27**	P	**Pg**	**16 59 54.3**	**+0.6**
YUK2				S	**Sg**	**16 59 57.8**	**+1.2**
YUK1	**Sand Pete Hill**	**0.62**	**23**	P	**Pg**	**17 00 01.2**	**0.0**
YUK1				S	**Sg**	**17 00 09.7**	**+0.5**
BVCY	**Beaver Creek**	**0.83**	**6**	P	**Pg**	**17 00 05.4**	**0.0**
BALM	**Baldy**	**0.84**	**229**	*e*Pg	**Pg**	**17 00 04.4**	**-1.0**
BALM	**Baldy**	**0.84**	**229**	P	**Pg**	**17 00 04.5**	**-1.0**
BALM				S	**Sg**	**17 00 15.6**	**-0.6**
KIAG	**Kiagna River**	**0.92**	**224**	P	**Pg**	**17 00 05.8**	**-1.2**
KIAG				S	**Sg**	**17 00 18.8**	**-0.2**
TABL	**Table Mountain**	**1.16**	**182**	P	**Pb**	**17 00 10.6**	**-1.6**
TABL				S	**Sg**	**17 00 26.4**	**-0.1**
YUK4	**Talbot Arm**	**1.18**	**101**	P	**Pb**	**17 00 12.4**	**-0.2**
YUK4				S	**Sg**	**17 00 27.1**	**-0.1**
SAMH	**Samovar Hills**	**1.47**	**175**	Pn	**Pn**	**17 00 16.8**	**-0.3**
SAMH				Sg	**Sn**	**17 00 36.7**	**-0.3**
MESA	**MESA**	**1.48**	**198**	P	**Pn**	**17 00 17.1**	**-0.2**
MESA				Sg	**Sn**	**17 00 36.8**	**-0.6**
BCA3	**Beaver Creek A**	**1.52**	**347**	*e*Pn	**Pn**	**17 00 17.1**	**-0.6**
CHX	**Chaix Hills**	**1.53**	**181**	*e*Pn	**Pn**	**17 00 18.1**	**+0.2**
PCA	**Pinnacle**	**1.55**	**165**	*e*Pn	**Pn**	**17 00 18.0**	**-0.1**
PCA	**Pinnacle**	**1.55**	**165**	Pn	**Pn**	**17 00 18.1**	**0.0**
PCA				Sg	**Sn**	**17 00 38.9**	**0.0**
YUK5	**Granite Creek**	**1.60**	**105**	Pn	**Pn**	**17 00 18.4**	**-0.5**
SNH	**Sunshine Point**	**1.66**	**212**	*e*Pn	**Pn**	**17 00 19.9**	**+0.3**
YUK7	**Dusty Glacier**	**1.77**	**126**	Pn	**Pn**	**17 00 22.2**	**+0.9**
YUK7				Sg	**Sn**	**17 00 45.5**	**+1.1**
MENT	**Mentasta**	**1.84**	**318**	*e*Pn	**Pb**	**17 00 23.3**	**-0.5**
HYT	**Haines Junctio**	**1.88**	**113**	*e*Pn	**Pn**	**17 00 22.9**	**+0.2**
HYT	**Haines Junctio**	**1.88**	**113**	Pn	**Pn**	**17 00 22.7**	**0.0**
HMT	**Hamilton**	**2.01**	**233**	*e*Pn	**Pn**	**17 00 25.7**	**+1.3**
PNL	**Peninsula**	**2.09**	**156**	*e*Pn	**Pn**	**17 00 26.2**	**+0.7**
PNL	**Peninsula**	**2.09**	**156**	Pn	**Pn**	**17 00 25.9**	**+0.4**
PNL				Sg	**Sb**	**17 00 55.9**	**+1.4**
YKU2	**Yakutat**	**2.19**	**161**	*e*Pn	**Pn**	**17 00 28.1**	**+1.2**
SGAM	**Sherman Glacie**	**2.30**	**243**	*e*Pg	**Pn**	**17 00 29.9**	**+1.5**
PAX	**Paxson**	**2.49**	**306**	*e*Pn	**Pn**	**17 00 31.9**	**+0.9**
PAX	**Paxson**	**2.49**	**306**	Pn	**Pn**	**17 00 31.7**	**+0.7**
PAX				Sg	**Sb**	**17 01 06.6**	**+0.6**
DOT	**Dot Lake**	**2.49**	**327**	*e*Pn	**Pn**	**17 00 30.7**	**-0.4**
DOT	**Dot Lake**	**2.49**	**327**	Pn	**Pn**	**17 00 30.5**	**-0.5**
DOT				Pg	**Pb**	**17 00 35.4**	**+0.5**
DOT				Sg	**Sg**	**17 01 07.4**	**-1.9**
EYAK	**Cordova Ski Ar**	**2.51**	**247**	*e*Pn	**Pn**	**17 00 32.8**	**+1.6**
DAWY	**Dawson**	**2.60**	**16**	*e*Pn	**Pn**	**17 00 32.5**	**-0.1**
DAWY	**Dawson**	**2.60**	**16**	Pn	**Pn**	**17 00 32.4**	**-0.1**
DAWY				Sg	**Sb**	**17 01 10.4**	**+1.2**
JPK	**Jack Peak**	**2.73**	**261**	*e*Pn	**Pn**	**17 00 36.0**	**+1.7**
SCRK	**Sand Creek**	**2.75**	**332**	*e*Pn	**Pn**	**17 00 34.0**	**-0.6**
FID	**Port Fidalgo**	**2.76**	**255**	*e*Pn	**Pn**	**17 00 37.0**	**+2.3**
FID				*e*Pg	**Pb**	**17 00 37.4**	**-2.1**
RIDG	**Independent Ri**	**2.78**	**323**	*e*Pn	**Pn**	**17 00 35.5**	**+0.5**
SCM	**Sheep Creek Mo**	**3.00**	**277**	*e*Pn	**Pn**	**17 00 39.5**	**+1.5**
GLI	**Glacier Island**	**3.01**	**259**	*e*Pn	**Pn**	**17 00 39.2**	**+1.1**
PLBC	**Pleasant Camp**	**3.15**	**131**	Pn	**Pn**	**17 00 40.8**	**+0.7**
PLBC				Sg	**Sb**	**17 01 28.3**	**+3.3**
EGAK	**Eagle**	**3.20**	**359**	*e*Pn	**Pn**	**17 00 41.0**	**+0.2**
DHY	**Denali Highway**	**3.31**	**300**	*e*Pn	**Pn**	**17 00 43.4**	**+1.1**
SML	**Sawmill**	**3.48**	**277**	*e*Pn	**Pn**	**17 00 45.6**	**+1.1**
SKAG	**Skagway**	**3.54**	**125**	*e*Pn	**Pn**	**17 00 45.8**	**+0.4**
KNK	**Knik Glacier**	**3.56**	**270**	*e*Pn	**Pn**	**17 00 47.1**	**+1.5**
PMR	**Palmer**	**3.86**	**274**	*e*Pn	**Pn**	**17 00 49.4**	**-0.4**
HDA	**Harding Lake**	**3.90**	**319**	*e*Pn	**Pn**	**17 00 49.2**	**-1.1**
RND	**Reindeer**	**4.05**	**300**	*e*Pn	**Pn**	**17 00 55.4**	**+2.9**
ILAR	**Eielson Array**	**4.14**	**323**	Pn	**Pn**	**17 00 52.2**	**-1.4**
	2.9nm,0.3s,baz=145,slow=12,SNR=98						
ILAR				Lg	Lg	17 01 59.7	
	8.5nm,0.3s,baz=162,slow=15,SNR=4.3						
ILB	**Eielson Array**	**4.14**	**323**	*e*Pn	**Pn**	**17 00 52.3**	**-1.4**
RC01	**Rabbit Creek A**	**4.21**	**267**	*e*Pn	**Pn**	**17 00 53.8**	**-0.9**
MCK	**McKinley**	**4.22**	**304**	*e*Pn	**Pn**	**17 00 58.0**	**+3.2**
WRH	**Wood River Hil**	**4.32**	**315**	*e*Pn	**Pn**	**17 00 56.0**	**-0.1**
BESE	**Bessie Mountai**	**4.33**	**131**	*e*Pn	**Pn**	**17 00 57.0**	**+0.7**
BESE	**Bessie Mountai**	**4.33**	**131**	Pn	**Pn**	**17 00 56.5**	**+0.2**
BESE				Sg	**Sb**	**17 02 03.7**	**+4.8**
CCB	**Clear Creek Bu**	**4.34**	**318**	*e*Pn	**Pn**	**17 00 55.1**	**-1.2**
SEW	**Seward**	**4.37**	**254**	*e*Pn	**Pn**	**17 00 57.6**	**+0.9**
PRP	**Porcupine Dome**	**4.42**	**335**	*e*Pn	**Pn**	**17 00 57.4**	**-0.2**
COLA	**College**	**4.51**	**320**	*e*Pn	**Pn**	**17 00 58.6**	**-0.1**
TCOL	**CIGO, UAF Yank**	**4.51**	**320**	P	**Pn**	**17 00 58.5**	**-0.1**
	baz=134						
TCOL				S	**Sn**	**17 01 48.7**	**-3.0**
	baz=134						
POKR	**Poker Plat Res**	**4.56**	**324**	P	**Pn**	**17 00 57.4**	**-2.0**
	baz=138						
POKR				S	**Sn**	**17 01 49.0**	**-3.9**
	baz=138						
BWN	**Browne**	**4.64**	**308**	*e*Pn	**Pn**	**17 01 02.2**	**+1.7**
BWN				*e*Pn	Pb	17 01 02.3	-9.2
MDM	**Murphy Dome**	**4.68**	**319**	*e*Pn	**Pn**	**17 01 00.7**	**-0.4**
JIS	**Juneau Island**	**4.72**	**132**	*e*Pn	**Pn**	**17 00 58.9**	**-2.7**
KTH	**Kantishna Hill**	**4.97**	**298**	*e*Pn	**Pn**	**17 01 07.2**	**+2.0**
SKT	**Skwentna**	**4.99**	**279**	*e*Pn	**Pn**	**17 01 05.3**	**0.0**
EPYK	**Eagle Plains**	**5.16**	**20**	*e*Pn	**Pn**	**17 01 07.3**	**-0.4**
EPYK	**Eagle Plains**	**5.16**	**20**	P	**Pn**	**17 01 07.5**	**-0.2**
	baz=204						
EPYK				S	**Sn**	**17 02 06.7**	**-1.1**
	baz=204						
BRLK	**Bradley Lake**	**5.17**	**254**	*e*Pn	**Pn**	**17 01 07.5**	**-0.3**
BPAW	**Bear Paw Mtn.**	**5.20**	**303**	*e*Pn	**Pn**	**17 01 10.5**	**+2.3**
SPU	**Mount Spurr**	**5.31**	**270**	*e*Pn	**Pn**	**17 01 09.7**	**0.0**
FYU	**Fort Yukon**	**5.32**	**342**	*e*Pn	**Pn**	**17 01 10.8**	**+1.0**
PPLA	**Purkeypile**	**5.37**	**289**	*e*Pn	**Pn**	**17 01 12.5**	**+1.8**
SIT	**Sitka**	**5.41**	**145**	*e*Pn	**Pn**	**17 01 10.1**	**-0.9**
CNPM	**China Poot**	**5.43**	**252**	*e*Pn	**Pn**	**17 01 12.0**	**+0.6**
BM3	**Burnt Mountain**	**6.05**	**347**	*e*Pn	**Pn**	**17 01 20.6**	**+0.8**
DLBC	**Dease Lake**	**6.37**	**115**	Pn	**Pn**	**17 01 28.7**	**+4.4**
	0.8nm,0.3s,baz=278,slow=18,SNR=3.5						
DLBC				Lg	Lg	17 03 07.0	
	3.6nm,0.3s,baz=45,slow=9.9,SNR=6.4						
DLBC	**Dease Lake**	**6.37**	**115**	Sg	**Sg**	**17 03 07.4**	**-6.2**
WRAK	**Wrangell Islan**	**6.86**	**135**	*e*Pn	**Pn**	**17 01 30.1**	**-0.8**
COLD	**Coldfoot**	**6.90**	**329**	*e*Pn	**Pn**	**17 01 32.9**	**+1.4**
COLD	**Coldfoot**	**6.90**	**329**	Pn	**Pn**	**17 01 31.7**	**+0.2**
KDAK	**Kodiak Island**	**6.97**	**242**	Pn	**Pn**	**17 01 33.4**	**+0.9**
	4.2nm,0.3s,baz=58,slow=8.7,SNR=48						
KDAK				Sn	**Sn**	**17 02 51.1**	**-1.2**
	1.7nm,0.3s,baz=276,slow=19,SNR=3.4						
SVW2	**Sparrevohn**	**7.01**	**272**	*e*Pn	**Pn**	**17 01 33.0**	**+0.1**
TT01	**Tatalina**	**7.11**	**287**	*e*Pn	**Pn**	**17 01 34.9**	**+0.4**
IM3	**Indian Mountai**	**7.14**	**314**	*e*Pn	**Pn**	**17 01 35.9**	**+1.1**
INK	**Inuvik**	**7.46**	**22**	Pn	**Pn**	**17 01 39.7**	**+0.6**
	1.2nm,0.3s,baz=220,slow=15,SNR=8.9						
INK				Sn	**Sn**	**17 02 59.5**	**-4.6**
	4.7nm,0.3s,baz=196,slow=15,SNR=5.0						
INK				Lg	Lg	17 03 35.5	
	0.9nm,0.3s,baz=167,slow=14,SNR=3.6						
INK	**Inuvik**	**7.46**	**22**	*e*Pn	**Pn**	**17 01 39.3**	**+0.2**
INK				*e*Sn	**Sn**	**17 02 59.5**	**-4.6**
INK				*e*Lg	Lg	17 03 35.5	
INK	**Inuvik**	**7.46**	**22**	Pn	**Pn**	**17 01 38.9**	**-0.2**
INK				Sn	**Sn**	**17 02 58.1**	**-5.9**
OHAK	**Old Harbor**	**7.62**	**240**	*e*Pn	**Pn**	**17 01 38.2**	**-3.2**
PS04	**TAPS Pump Stn4**	**7.70**	**336**	*e*Pn	**Pn**	**17 01 44.0**	**+1.5**
TOLK	**Toolik Lake Re**	**7.93**	**337**	*e*Pn	**Pn**	**17 01 46.8**	**+1.2**
TOLK	**Toolik Lake Re**	**7.93**	**337**	P	**Pn**	**17 01 43.6**	**-2.1**
	baz=149						
TOLK				S	**Sn**	**17 03 12.5**	**-3.4**
	baz=149						
FNBB	**Fort Nelson**	**9.36**	**99**	Pn	**Pn**	**17 02 04.4**	**-0.9**
FNBB				Sn	**Sn**	**17 03 44.7**	**-6.3**
BBB	**Bella Bella**	**11.76**	**137**	Pn	**Pn**	**17 02 40.3**	**+2.3**
	0.5nm,0.3s,baz=308,slow=6.7,SNR=6.2						
YKA	**Yellowknife Ar**	**12.41**	**74**	Pn	**Pn**	**17 02 46.0**	**-0.8**
	0.3nm,0.3s,baz=274,slow=13,SNR=5.6						
YKA				Lg	Lg	17 06 20.3	
	0.0nm,0.3s,baz=271,slow=30,SNR=3.9						
YKB5	**Yellowknife Ar**	**12.41**	**74**	*e*Pn	**Pn**	**17 02 46.0**	**-0.8**
NEW	**Newport**	**19.00**	**124**	P	**Pn**	**17 04 14.3**	**+1.5**
	baz=337,slow=11,SNR=5.8						
NEW				Lg	Lg	17 09 53.9	
	0.2nm,0.3s,baz=354,slow=5.0,SNR=3.5						
RES	**Resolute Bay**	**20.82**	**33**	P	Pn	17 04 33.3	-0.8
	3.4nm,0.8s,baz=255,slow=12,SNR=2.3						
RES	**Resolute Bay**	**20.82**	**33**	*e*Pn	Pn	17 04 33.3	-0.8
	9.5nm,0.9s						
HRY	**Holter Researc**	**22.41**	**118**	*e*P	**P**	**17 04 50.1**	**+0.9**
MCMT	**McKenzie Canyo**	**23.52**	**123**	*e*P	**P**	**17 05 02.2**	**+1.3**
HLID	**Hailey**	**23.96**	**127**	*e*P	**P**	**17 05 06.4**	**+1.4**

	7.8nm,1.4s						
RLMT	Red Lodge	24.76	117	eP	P	17 05 13.3	+0.9
	16nm,1.3s						
FXWY	Fox Creek	25.24	122	eP	P	17 05 18.5	+1.7
	12nm,1.4s						
MOOW	Moose Ponds	25.26	121	eP	P	17 05 18.0	+1.1
	5.3nm,1.1s						
TPAW	Teton Pass	25.39	122	eP	P	17 05 19.0	+0.8
	11nm,1.3s						
ELK	Elko	26.09	131	P	P	17 05 27.2	+2.6
	0.5nm,0.5s,baz=354,slow=7.8,SNR=3.0						
BW06	Boulder Array	26.56	121	eP	P	17 05 27.8	-1.0
	7.1nm,1.3s						
PD31	Pinedale Array	26.56	121	eP	P	17 05 30.6	+1.9
PDAR	Pinedale Array	26.56	121	P	P	17 05 30.6	+1.9
	2.2nm,0.9s,baz=322,slow=7.8,SNR=11						
NV01	Mina Array Sit	27.12	138	eP	P	17 05 35.7	+1.9
NVAR	Mina Array Bea	27.12	138	P	P	17 05 35.7	+1.9
	0.3nm,0.4s,baz=326,slow=8.0,SNR=5.8						
SEY	Seymchan	29.78	302	P	P	17 05 60.0	+2.9
	0.9nm,0.5s,baz=56,slow=9.4,SNR=5.0						
PEA1	Petropavlovsk-	32.93	284	eP	P	17 06 24.9	+0.1
PETK	Petropavlovsk-	32.93	284	P	P	17 06 24.9	0.0
	1.0nm,0.6s,baz=57,slow=14,SNR=3.2						
JFWS	Jewell Farm	35.13	98	eP	P	17 06 44.1	+0.1
	6.0nm,0.3s						
FIA0	FINESS Array S	56.90	7	eP	P	17 09 34.6	-0.5
FINES	FINESS Array B	56.90	7	P	P	17 09 34.6	-0.5
	1.8nm,0.8s,baz=352,slow=8.6,SNR=2.7						
ZAA1	Zalesovo Array	59.23	330	eP	P	17 09 51.5	-0.1
ZALV	Zalesovo Beam	59.23	330	P	P	17 09 51.5	-0.1
	2.4nm,0.9s,baz=358,slow=7.2,SNR=5.8						
HHC	Hu-ho-hao-te	62.37	305	P	P	17 10 14.0	+0.7
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,57nm,4.9s						
MK32	Makanchi Array	66.48	329	eP	P	17 10 40.7	+0.7
MKAR	Makanchi Array	66.48	329	P	P	17 10 40.7	+0.7
	comp=Z,1.8nm,1.0s,baz=26,slow=8.4,SNR=3.7						
AKASG	Malin Array Be	67.79	7	P	P	17 10 47.8	-0.4
	comp=Z,3.3nm,0.6s,baz=358,slow=6.3,SNR=23						
AKBB	Malin Array Si	67.79	7	eP	P	17 10 47.8	-0.4
	comp=Z,5.2nm,0.8s						
WMQ	Urumqi	67.81	324	eP	P	17 10 51.5	+2.9
WMQ				sP	sP	17 11 00.6	+11
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,11.6s						
WMQ				LR	LR		
	comp=N,1µm,29.3s						
WMQ				LR	LR		
	comp=E,2µm,29.2s						
WMQ				LR	LR		
	comp=Z,280nm,29.0s						
ABKAR	Akbulak array	68.23	345	eP	P	17 10 50.3	-0.7
	comp=Z,4.7nm,0.9s						
ESDC	Sonseca Array	73.25	33	P	P	17 11 22.7	+0.8
	comp=Z,0.2nm,0.3s,baz=339,slow=7.1,SNR=3.8						
KBZ	Khabaz	74.99	357	P	P	17 11 33.0	+1.3
	comp=Z,4.8nm,1.0s,baz=287,slow=3.5,SNR=6.0						
BR101	Keskin Array S	78.94	4	eP	P	17 11 54.7	+0.3
BRTR	Keskin Array B	78.94	4	P	P	17 11 54.7	+0.3
	comp=Z,0.9nm,0.8s,baz=9.5,slow=3.0,SNR=5.6						
CMAR	Chiang Mai Arr	87.17	305	P	P	17 12 36.0	-1.0
	comp=Z,0.6nm,0.5s,baz=7.5,slow=5.7,SNR=5.0						
BOSA	Boshof	145.78	22	PKPbc	PKPdf	17 19 28.2	-1.0
	comp=Z,4.4nm,0.8s,baz=43,slow=4.3,SNR=5.6						

UCR 15 17:06:10.5±3.9, 7°.59N×82°.09W, h20km±24km, MW4.0, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	Volcan	1.34	334	eP	Pn	17 06 33.3	-0.9
AZU	Azuero	1.81	83	⇑iP	Pn	17 06 39.9	-0.6
AZU				eS	Sb	17 07 05.0	-0.2
DRK0	Durika	2.02	326	eP	Pn	17 06 44.8	+1.2
ZANG	Zanguenga, Cho	2.58	58	eP	Pn	17 06 50.9	-0.3
BCIP	Isla Barro Col	2.72	55	eP	Pn	17 06 54.6	+1.5
LCR2	La Lucha 2	2.86	319	eP	Pn	17 06 55.4	+0.1
UPA	Univ. de Panam	2.88	61	eP	Pn	17 06 57.9	+2.6
UPA				eS	Sb	17 07 36.7	+0.6
CVTR	Volcan Turrial	2.93	326	eP	Pn	17 06 58.8	+2.5
ARE1	Arenal 1	3.86	318	eP	Pb	17 07 13.6	-4.4
JTS	Las Juntas de	3.90	314	eP	Pn	17 07 12.3	+2.9

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*IDC **15** 17:06:38.0±2.4, 39°.21N×142°.99E, h0km, mb3.5/3, mb1 3.5/5, mb1mx3.3/44, mbtmp3.5/5, ML2.9/2, Error ellipse: s-maj=49.6km s-min=24.0km az=134.0*

*ISCJB **15** 17:06:38.2±1.5, 39°.14N±0°.10×143°.1E±0°.2, h16km, mb3.5/3, Error ellipse: s-maj=25.3km s-min=7.5km az=29.6*

ISC 15 17:06:40.4±1.9, 39°.2N±0°.1×143°.0E±0°.2, h16km, n12, σ1s94/9, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	4.60	236	Pn	Pn	17 07 49.7	+0.4
	0.4nm,0.3s,baz=36,slow=12,SNR=32						
MJAR				Sn	Sn	17 08 43.5	+1.2
	baz=89,slow=29,SNR=2.3						
MAT	Matsushiro	4.60	236	P	Pn	17 07 50.6	+1.3
MAT				eS	Sb	17 08 53.1	-2.7
ASAJ	Asahikawa	4.93	357	Pn	Pn	17 07 52.5	-1.4
	0.6nm,0.3s,baz=213,slow=13,SNR=14						
ASAJ				Sn	Sn	17 08 53.1	+2.6
	0.6nm,0.3s,baz=342,slow=20,SNR=2.4						
H11N2	WAKE ISLAND Hy	28.32	126	T	T	17 43 04.8	
	baz=318,slow=76,SNR=92						
H11N1	WAKE ISLAND Hy	28.33	126	T	T	17 43 11.2	
	baz=318,slow=76,SNR=58						
H11N3	WAKE ISLAND Hy	28.33	126	T	T	17 43 12.9	
	baz=318,slow=76,SNR=82						
H11S1	WAKE ISLAND Hy	29.11	128	T	T	17 44 04.5	
	baz=319,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	29.12	128	T	T	17 44 10.4	
	baz=319,slow=76,SNR=2.8						
H11S2	WAKE ISLAND Hy	29.13	128	T	T	17 44 15.3	
	baz=319,slow=76,SNR=4.0						
ZALV	Zalesovo Beam	41.41	311	P	P	17 14 27.1	+1.4
	1.1nm,0.5s,baz=81,slow=14,SNR=4.1						
MKAR	Makanchi Array	44.05	301	P	P	17 14 46.2	-1.1
	0.5nm,0.8s,baz=71,slow=9.1,SNR=2.7						
ILAR	Eielson Array	47.02	33	P	P	17 15 10.3	-0.3
	0.2nm,0.5s,baz=272,slow=7.0,SNR=3.3						

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*KRNET **15** 17:07:15.8±0.1, 41°.15N×72°.35E, h8km, mb2.0*

*ISCJB **15** 17:07:18.9±1.4, 41°.1N±0°.1×72°.42E±0°.05, h10km, Error ellipse: s-maj=14.6km s-min=5.0km az=179.7*

*SOME **15** 17:07:18.0, 41°.27N×72°.30E, h0km*

*NNC **15** 17:07:18.8±1.9, 41°.26N×72°.33E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=16.4km s-min=6.1km az=172.0*

ISC 15 17:07:17.2±1.4, 41°.17N±0°.08×72°.35E±0°.03, h10km, n14, σ0s83/24, 8C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.50	72	⇑iP	Pg	17 07 25.8	-1.3
	baz=70						
ARSB				⇑iS	Sg	17 07 33.0	-0.7
	baz=70						
ARK	Arkit	0.69	336	⇑iP	Pg	17 07 29.2	-1.4
	baz=36						
ARK				⇑iS	Sg	17 07 39.0	-0.6
	baz=36						
ARLS	Aral	1.64	64	⇑iP	Pb	17 07 47.6	0.0
	baz=63						
ARLS				⇑iS	Sg	17 08 10.1	+0.2
	baz=63						
MRKS	Merke	1.70	22	P	Pg	17 07 49.4	-0.5
	5.7nm,0.2s						
MRKS				S	Sg	17 08 11.3	-0.8
	8.6nm,0.3s						
MRKS	Merke	1.70	22	eP	Pg	17 07 49.4	-0.5
	5.7nm,0.2s						
MRKS				eS	Sg	17 08 11.3	-0.8
	8.6nm,0.3s						
EKS2	Erkin-Say	1.83	35	⇑iP	Pb	17 07 51.1	+0.2
	baz=35						
EKS2				⇑iS	Sg	17 08 17.4	+1.3
	baz=35						
UCH	Uchtor	1.94	56	⇓iP	Pb	17 07 52.3	-0.6
	baz=56						
UCH				⇓iS	Sg	17 08 19.4	-0.1
	baz=56						
IUG	Iuzhnay	1.99	300	Pg	Pg	17 07 54.6	-0.7
	1.2nm,0.2s						
IUG				Lg	Lg	17 08 20.3	
	23nm,0.3s						
IUG	Iuzhnay	1.99	300	eP	Pg	17 07 54.6	-0.7
	1.2nm,0.2s						
IUG				eS	Sg	17 08 20.3	-0.8
	23nm,0.3s						
AAK	Ala-Archa	2.17	47	⇓Pg	Pb	17 07 57.0	+0.3
	0.9nm,0.5s						
AAK				⇓Lg	Lg	17 08 25.3	
	2.2nm,0.6s						
KZA	Kyzart	2.36	66	⇓iP	Pn	17 07 57.8	+1.4
	baz=66						
KZA				⇓iS	Sb	17 08 28.8	-0.5
	baz=66						
KK31	Karatay Array	2.36	325	⇓Pg	Pb	17 07 59.2	-0.7
	1.2nm,0.5s,baz=143,slow=15,SNR=9.4						
KK31				Lg	Lg	17 08 30.9	
	1.9nm,0.4s,baz=136,slow=30,SNR=13						
BRLS	Borolday	2.63	316	Pg	Pb	17 08 05.0	+0.5
	0.4nm,0.1s						
BRLS				Lg	Lg	17 08 38.1	
	1.4nm,0.2s						
BRLS	Borolday	2.63	316	eP	Pb	17 08 05.0	+0.5
	0.4nm,0.1s						
BRLS				eS	Sb	17 08 38.1	+1.3
	1.4nm,0.2s						

MEX 15 17:17:10.0±0.6, 16°.67N×99°.47W, h15km±8km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.85	297	eP	Pb	17 17 23.1	-3.4
CAIG				i S	Sb	17 17 34.6	-3.1
TLIG	Tlapa	1.25	44	eP	Pn	17 17 29.0	-4.0
TLIG				eS	Sb	17 17 44.4	-4.8
MEIG	Mezcala	1.26	354	i S	Sb	17 17 44.3	-5.3
PLIG	Platanillo	1.72	359	eP	Pn	17 17 36.5	-3.0
PLIG				eS	Sn	17 17 56.2	-5.1
ARIG	Puente Sto Nin	1.81	333	eP	Pn	17 17 37.4	-3.3
ARIG				i S	Sn	17 17 58.1	-5.3

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*DDA **15** 17:27:14.6, 40°.08N×35°.79E, h7km±2km, ML2.5*

*ISK **15** 17:27:14.6, 40°.06N×35°.81E, h9km, ML1.8/6*

*ISCJB **15** 17:27:15.1±0.5, 40°.09N±0°.04×35°.77E±0°.04, h9km, Error ellipse: s-maj=5.9km s-min=3.8km az=137.4*

ISC 15 17:27:14.6±0.9, 40°.07N±0°.04×35°.81E±0°.03, h9km, n16, σ0s61/20, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	Yozgat	0.57	222	PG	Pg	17 27 25.9	+0.2
YOZ				SG	Sb	17 27 34.5	-0.6
TOKA	Tokat	0.57	63	i P	Pb	17 27 26.9	0.0
TOKA				IAML_P			
	comp=Z,2µm,0.2s						
TOKT	Tokat	0.62	65	PG	Pg	17 27 26.9	+0.3
TOKT				SG	Sb	17 27 36.2	-0.2
CUSAR	Sarkisla-SIVAS	0.73	153	i P	Pg	17 27 27.6	-1.0
SIRC	Yozgat	0.89	215	i P	Pg	17 27 32.0	+0.3
SIRC				IAML_P			
	comp=Z,346nm,0.1s						
CORM	Corum	0.91	277	PG	Pb	17 27 32.6	-0.1
ERBA	Erbaa	0.95	49	i P	Pb	17 27 33.2	-0.1
ERBA				IAML_P			
	comp=Z,459nm,0.1s						
KVT	Kavak	1.03	10	PG	Pb	17 27 34.9	+0.2
KVT				SG	Sn	17 27 49.4	-0.5
SCER	sogukcermik	1.03	101	i P	Pb	17 27 35.0	+0.2
SCER				i S	Sn	17 27 50.2	+0.1
BNN	Bunyan	1.21	179	PN	Pb	17 27 37.6	-0.2
AVNS	Nevsehir-Avano	1.46	211	i P	Pg	17 27 44.2	+1.5
CUKAN	kangal_SIVAS	1.48	120	i P	Pg	17 27 43.7	+0.7
CUZAR	Zara_SIVAS	1.52	96	i P	Pg	17 27 44.5	+0.8
DIKM	Dikmen	1.64	345	PN	Pb	17 27 44.5	-0.5
YAYX	Yaylak	1.91	235	PN	Pn	17 27 47.9	+0.4
AB31	Akbulak array	19.40	54	⇑Pg	P	17 31 40.2	-0.6
	comp=Z,0.1nm,0.3s,baz=330,slow=13,SNR=2.5						
AB31				⇑Lg	Lg	17 32 10.5	
	comp=Z,0.2nm,0.3s,baz=345,slow=28,SNR=5.7						

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*ISN **15** 17:30:25.4±0.3, 37°.13N×42°.59E, h0km, ML2.7*

*ISCJB **15** 17:30:26.8±0.9, 37°.15N±0°.05×42°.50E±0°.06, h4km±10km, Error ellipse: s-maj=8.0km s-min=7.4km az=44.5*

*DDA **15** 17:30:27.2, 37°.22N×42°.47E, h7km±5km, ML2.5*

*ISK **15** 17:30:27.0, 37°.19N×42°.45E, h5km, ML2.7/7*

ISC 15 17:30:26.8±1.3, 37°.19N±0°.04×42°.49E±0°.04, h1km±12km, n16, σ0s48/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	Sırnak	0.31	349	i P	Pg	17 30 32.8	-0.1
CUKT	Cukurca	0.90	86	PG	Pb	17 30 45.3	+0.1
CUKT	Cukurca	0.90	86	i P	Pb	17 30 45.8	+0.6
SRTM	Siirt_Merkez	0.92	331	i P	Pb	17 30 45.6	0.0
SRTM				IAML_P			
	comp=Z,622nm,0.1s						
MSL	Mosul	0.93	147	ePg	Pg	17 30 44.0	-0.6
	baz=330						
MSL				eSg	Sg	17 30 57.0	+0.3
BTMN	Batman	1.20	306	i P	Pn	17 30 50.9	+0.2
BTMN				i S	Sn	17 31 06.9	-0.8
AKDM	Akdamar-Van	1.21	19	PN	Pn	17 30 51.1	+0.2
AKDM				SN	Sn	17 31 07.9	-0.1
BLIS	Bitlis-Merkez	1.26	347	i P	Pb	17 30 51.2	-0.2
BLIS				IAML_P			
	comp=Z,613nm,0.3s						
MARD	Mardin	1.37	276	i P	Pg	17 30 53.0	0.0
SVAN	Silvan-Diyarba	1.41	314	PN	Pg	17 30 53.7	0.0
SVAN				SN	Sn	17 31 12.7	0.0
SVAN	Silvan-Diyarba	1.41	314	i P	Pg	17 30 54.5	+0.8
SVAN				i S	Sn	17 31 13.4	+0.7
SVAN				IAML_P			
	comp=Z,597nm,0.3s						
MAZI	Mazidag	1.65	280	PN	Pn	17 30 56.5	-0.5
MAZI				SN	Sb	17 31 19.1	-0.3
MUSM	Mu-Merkez	1.72	334	i P	Pn	17 30 57.5	-0.5
MUSM				i S	Sg	17 31 21.4	-0.5
MUSM				IAML_P			
	comp=Z,268nm,0.3s						
DYBB	Diyarbakir	2.02	293	PN	Pn	17 31 01.9	-0.1
SVRC	Sivrice-ELAZID	2.79	296	PN	Pn	17 31 12.9	+0.2
URFA	Urfa	2.93	276	PN	Pn	17 31 15.5	+0.9

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*NDI **15** 17:49:03.0±2.4, 33°.04N×76°.24E, h10km, ML4.5*

*IDC **15** 17:49:06.2±0.9, 32°.51N×76°.50E, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.7/41, mbtmp3.8/14, ML3.3/2, MS4.1/1, Ms1 4.1/1, ms1mx3.2/40, Error ellipse: s-maj=27.9km s-min=16.0km az=53.0*

*ISCJB **15** 17:49:07.1±0.4, 32°.69N±0°.03×76°.78E±0°.06, h10km, mb3.7/12, MS4.1/1, Error ellipse: s-maj=7.9km s-min=4.6km az=4.8*

ISC 15 17:49:08.4±0.5, 32°.70N±0°.04×76°.63E±0°.07, h10km, n30, σ2s10/35, mb3.7/12, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	0.53	212	eP	Pb	17 49 19.1	-0.8
DHRM				eS	Sb	17 49 27.9	+0.3
DHRM				IAML		17 49 41.2	
	comp=E,166µm,0.2s						
DHRM				IAML		17 49 41.4	
	comp=N,101µm,0.3s						
BHK	Bhakra	1.29	188	eP	Pg	17 49 33.2	0.0
BHK				eS	Sg	17 49 54.2	+4.2
SMLA	Simla	1.63	164	eP	Pg	17 49 39.5	-0.2
SMLA				eS	Sg	17 50 02.1	+1.2
SMLA				IAML		17 50 22.4	
	comp=N,17µm,0.4s						
SMLA				IAML		17 50 22.6	
	comp=E,25µm,0.6s						
DDI	Dehra Dun	2.67	152	eP	Pn	17 49 53.1	+1.6
DDI				eS	Sb	17 50 28.6	-0.5
DDI				IAML		17 50 35.0	
	comp=N,928nm,0.2s						
DDI				IAML		17 50 38.7	
	comp=E,936nm,0.9s						
NDI	New Delhi	4.04	173	eP	Pn	17 50 10.0	-0.3
NDI				ex	x	17 51 14.0	
SONA	Sohna	4.45	175	eP	Pn	17 50 16.0	0.0
SONA				eS	Sn	17 51 08.9	+1.1
KUDL	Kundal	4.54	182	eP	Pn	17 50 04.6	-13
KUDL				eS	Sn	17 50 60.0	-10
KUDL				IAML		17 51 25.2	
	comp=N,80nm,0.5s						
KUDL				IAML		17 51 25.7	
	comp=E,108nm,0.4s						
BHPL	Bhopal	9.45	176	eP	Pn	17 51 23.9	-0.8
BHPL				eS	Sn	17 53 04.5	-6.5
JBP	Jabalpur	9.95	162	eP	Pn	17 51 30.5	-1.0
JBP				ex	x	17 53 16.2	
AAK	Ala-Archa	10.06	351	Pn	Pn	17 51 36.1	+3.1
	comp=E,0.3nm,0.3s,baz=166,slow=6.4,SNR=5.7						
AAK				Sn	Sn	17 53 19.9	-6.2
	comp=E,0.3nm,0.3s,baz=180,slow=16,SNR=1.8						
NGP	Nagpur	11.71	169	eP	Pn	17 51 54.7	-0.8
NGP				ex	x	17 53 58.4	
BOK	Bokaro	12.05	135	eP	Pn	17 51 59.9	-0.3
MKAR	Makanchi Array	14.73	15	Pn	Pn	17 52 38.8	+2.1
	comp=E,0.1nm,0.3s,baz=212,slow=13,SNR=4.9						
MKAR				Sn	Sn	17 55 03.3	-17
	baz=202,slow=37,SNR=3.0						
GEYT	Alibeck	15.98	294	Pn	P	17 52 54.9	-2.0
	comp=E,0.2nm,0.3s,baz=90,slow=8.6,SNR=1.9						
KOHI	KOHIMA	16.76	110	ex	P	17 53 06.5	+0.8
KURBB	Kurchatov Arra	17.96	4	P	Pn	17 53 17.3	-0.8
	comp=E,0.1nm,0.3s,baz=191,slow=11,SNR=9.0						
BVAR	Borovoye Array	20.80	349	P	Pn	17 53 50.7	-1.5
	comp=E,5.3nm,0.8s,baz=153,slow=10.0,SNR=29						
ZALV	Zalesovo Beam	22.03	13	P	P	17 54 04.4	+1.5
	comp=E,2.6nm,0.8s,baz=212,slow=10,SNR=7.2						
AKTO	Aktyubinsk	22.43	328	P	P	17 54 07.5	+0.3
	comp=E,4.9nm,0.8s,baz=121,slow=9.4,SNR=18						
CMAR	Chiang Mai Arr	24.55	120	P	P	17 54 28.4	-0.1
	comp=E,1.0nm,0.8s,baz=300,slow=8.3,SNR=8.1						
SONM	Songino Array	27.07	47	P	P	17 54 52.2	+1.0
	comp=E,1.7nm,0.9s,baz=254,slow=9.8,SNR=9.2						
BRTR	Keskin Array B	35.12	294	P	P	17 56 04.7	+2.5
	comp=E,0.6nm,0.8s,baz=100,slow=14,SNR=2.8						
FINES	FINESS Array B	43.20	327	P	P	17 57 10.2	+1.0
	comp=E,2.7nm,0.8s,baz=101,slow=9.9,SNR=9.0						
ARCES	ARCESS Array B	46.41	338	P	P	17 57 34.9	+0.2
	comp=E,1.5nm,0.8s,baz=105,slow=9.0,SNR=4.7						
ARCES				LR	LR	18 16 51.9	
	comp=E,223nm,19.4s,baz=224,slow=36						
NB2	NORSAR Subarra	50.17	325	P	P	17 58 04.0	+0.1
	comp=Z,0.8nm,0.7s,baz=90,slow=7.9						
NOA	NORSAR Array B	50.17	325	P	P	17 58 04.4	+0.5
	comp=Z,1.6nm,0.9s,baz=91,slow=7.6,SNR=4.2						
TORD	Torodi Ar. Bea	70.43	273	P	P	18 00 21.6	-1.6
	comp=Z,0.4nm,0.6s,baz=55,slow=5.1,SNR=3.9						
WRA	Warramunga Arr	76.03	125	P	P	18 00 55.8	-0.4
	comp=Z,0.7nm,0.8s,baz=316,slow=4.7,SNR=3.6						
ILAR	Eielson Array	77.07	18	P	P	18 01 01.7	+0.2
	comp=Z,0.2nm,0.5s,baz=282,slow=4.2,SNR=3.1						
ASAR	Alice Springs	78.27	128	P	P	18 01 07.8	-0.9
	comp=Z,0.3nm,0.8s,baz=313,slow=5.9,SNR=4.4						

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*GCG **15** 17:49:33.8±0.4, 13°.39N×90°.97W, h19km±240km, MD4.0*

*SNET **15** 17:49:36.8±1.0, 13°.65N×90°.82W, h15km±5km, ML3.8*

*MEX **15** 17:49:37.4±0.4, 13°.79N×90°.69W, h55km±48km, MD4.0*

ISC 15 17:49:36.5±2.2, 13°.6N±0°.1×90°.91W±0°.06, h32km±17km, n18, σ1s05/27, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.81	21	eP	Pn	17 49 53.4	+1.4
FUG	Fuego 3	0.82	4	i P	Pn	17 49 53.4	+1.4
NBG	Las Nubes	1.10	30	eP	Pb	17 49 58.3	+1.1
STG3	Santiaguito 3,	1.25	329	eP	Pn	17 49 59.3	+1.3
RTR	El Retiro	1.25	78	eP	Pn	17 49 58.3	+0.3
CEVE	Cerro Verde	1.26	81	eP	Pn	17 49 57.9	-0.3
CEVE				eS	Sb	17 50 15.1	-0.9
CEVE				IAML		17 50 20.6	
	comp=Z,2µm,0.3s						
SBLS	San Blas	1.27	80	eP	Pn	17 49 57.9	-0.3
SBLS				eS	Sb	17 50 14.8	-1.2
SNJE	San Jose	1.29	79	eP	Pn	17 49 58.3	-0.2
MTO3	Montecristo	1.69	63	⇓eP	Pn	17 50 04.6	+0.7
MTO3				eS	Sb	17 50 26.8	-1.2
LOMA	Loma Larga	1.69	89	eP	Pn	17 50 04.2	+0.5
LOMA				eS	Sb	17 50 26.3	-1.5
LFU	La Fuente	1.75	86	eP	Pn	17 50 05.9	+1.2
THIG		1.83	314	eP	Pn	17 50 05.2	-0.6
THIG				eS	Sn	17 50 28.3	+0.5
PAVA	Las Pavas	1.92	87	eP	Pn	17 50 07.9	+0.8
CCIG	Comitan	2.89	336	i P	Pn	17 50 19.4	-1.2
CCIG				i S	Sn	17 50 52.2	-2.2
CNCH	Conchagua	3.01	96	eP	Pn	17 50 23.2	+1.1
CNCH				IAML		17 51 10.2	
	comp=N,2µm,0.3s						
PCIG		3.04	313	eP	Pn	17 50 23.2	+0.8
PCIG				i S	Sn	17 50 58.1	+0.3
TGIG		3.79	326	i P	Pn	17 50 32.7	-0.1
TGIG				i S	Sn	17 51 15.6	-0.8
CMIG	Matias Romero	5.15	312	eP	Pn	17 50 51.7	+0.2
CMIG				eS	Sn	17 51 49.8	-0.1

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*CNRM **15** 17:49:46.2, 35°.65N×4°.80W, h138km, ml2.2*

*ISCJB **15** 17:49:47.6±0.4, 35°.80N±0°.02×4°.73W±0°.02, h104km±4km, Error ellipse: s-maj=3.2km s-min=2.8km az=169.1*

*IGIL **15** 17:49:49.4, 35°.82N×4°.74W, h10km, ML2.6*

*MDD **15** 17:49:50.2±0.7, 35°.73N×4°.71W, h87km±6km, mb2.6/14, Error ellipse: s-maj=5.8km s-min=4.0km az=6.0, PRXIMO*

*INMG **15** 17:49:51.4±1.4, 35°.85N×4°.75W, h86km±3km, ML2.4, Error ellipse: s-maj=4.1km s-min=2.6km az=137.0*

*SFS **15** 17:49:51.0, 35°.80N×4°.69W, ML2.7, ALBORAN OESTE*

ISC 15 17:49:47.6±1.2, 35°.75N±0°.02×4°.68W±0°.03, h111km±6km, n76, σ1s67/138, 5C-2D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEUT	Ceuta	0.54	284	P	Pn	17 50 05.9	+1.1
CEUT				S	Sn	17 50 21.8	+4.1
SMIR	Smir Dam	0.58	264	P	Pn	17 50 05.2	+0.2
SMIR				S	Sn	17 50 21.9	+3.8
CEU	Ceuta	0.58	285	P	Pn	17 50 05.4	+0.3
CEU				S	Sn	17 50 15.8	-2.4
CEU	Ceuta	0.58	285	eP	Pn	17 50 05.4	+0.3
CEU				eS	Sn	17 50 15.8	-2.4
ECEU	Ceuta	0.59	285	P	Pn	17 50 05.3	+0.2
	7.6nm,0.1s,SNR=4.9						
ECEU				S	Sn	17 50 16.1	-2.2
	7.6nm,0.2s						
PVLZ	Peæn de	0.65	152	P	Pn	17 50 04.6	-1.0
PVLZ				S	Sn	17 50 16.1	-3.0
PVLZ	Peæn de	0.65	152	eP	Pn	17 50 04.6	-1.0
PVLZ				eS	Sn	17 50 16.1	-3.0
PALE	Palemas	0.80	131	P	Pn	17 50 08.3	+1.3
PALE				S	Sn	17 50 26.1	+4.5
EMIJ	Mijas	0.82	355	⇑P	Pn	17 50 06.9	-0.2
	5.0nm,0.1s,SNR=18						
EMIJ				S	Sn	17 50 19.6	-2.3
	12nm,0.4s,SNR=12						
CHEFC	Chefchaouen	0.84	220	P	Pn	17 50 08.7	+1.4
CHEFC				S	Sn	17 50 24.2	+2.0
EJIF	Jimena Fronter	0.95	318	⇑P	Pn	17 50 10.3	+2.0
	9.9nm,0.1s,SNR=18						
EJIF				S	Sn	17 50 21.9	-2.1
	4.2nm,0.2s,SNR=7.9						
EMAL	Malaga-Limoner	1.03	11	P	Pn	17 50 09.7	+0.6
EMAL				S	Sn	17 50 23.9	-1.6
EMAL	Malaga-Limoner	1.03	11	eP	Pn	17 50 09.7	+0.6
EMAL				eS	Sn	17 50 23.9	-1.6
RSA	Sarsar	1.27	228	P	Pn	17 50 13.7	+1.8
RSA				S	Sn	17 50 30.5	+0.3
EALB	Alboran	1.35	81	P	Pn	17 50 13.1	+0.5
	2.6nm,0.1s,SNR=7.9						
EALB				S	Sn	17 50 30.6	-1.0
	1.7nm,0.3s,SNR=7.9						
AKLM	AKL	1.41	151	P	Pn	17 50 12.0	-1.5
AKLM				S	Sn	17 50 32.9	-0.1
EGOR	Sierra Gorda,	1.43	18	P	Pn	17 50 15.0	+1.2
	0.7nm,0.2s,SNR=7.9						

EGOR				S	Sn	17 50 32.8	-0.9
	6.0nm,0.4s,SNR=7.9						
ESPR	Espera	1.47	320	P	Pn	17 50 15.7	+1.6
	2.8nm,0.1s,SNR=9.3						
ESPR				S	Sn	17 50 33.0	-1.1
	10nm,0.2s						
EQUE	Quentar	1.76	34	P	Pn	17 50 19.1	+1.3
	0.5nm,0.1s,SNR=5.3						
EQUE				S	Sn	17 50 40.6	-0.1
	1.9nm,0.4s,SNR=6.0						
EBER	Berja	1.84	51	P	Pn	17 50 19.7	+0.9
	1.4nm,0.2s,SNR=7.9						
EBER				S	Sn	17 50 42.4	-0.2
	7.8nm,0.4s,SNR=7.8						
LCRM	LCR	2.06	184	P	Pn	17 50 21.4	-0.2
LCRM				S	Sn	17 50 49.3	+1.7
HORN	Hornachuelos	2.15	348	P	Pn	17 50 22.8	+0.4
HORN				S	Sn	17 50 52.3	+3.2
JBK	JBK	2.23	129	P	Pn	17 50 23.0	-0.8
JBK				S	Sn	17 50 50.0	-1.5
ENIJ	Nijar	2.34	58	S	Sn	17 50 53.3	-0.2
	9.3nm,1.6s,SNR=7.9						
ECAB	El Cabril	2.40	346	P	Pn	17 50 27.0	+1.3
	0.2nm,0.0s,SNR=9.0						
ECAB				S	Sn	17 50 53.9	-1.1
	5.6nm,0.2s,SNR=47						
EADA	Adamuz	2.42	2	⇓P	Pn	17 50 27.8	+1.9
	3.5nm,0.1s,SNR=18						
EADA				S	Sn	17 50 54.5	-0.9
	13nm,0.1s,SNR=34						
EQES	Quesada	2.42	32	P	Pn	17 50 27.9	+1.8
	1.0nm,0.1s,SNR=10						
EQES				S	Sn	17 50 55.3	-0.4
	4.6nm,0.3s						
EMIN	Mina Concepcio	2.57	322	⇑P	Pn	17 50 29.2	+1.3
	6.0nm,0.1s,SNR=18						
EMIN				S	Sn	17 50 57.7	-1.3
	3.4nm,0.1s,SNR=27						
CZD	Col de Zad	2.73	186	P	Pn	17 50 30.7	+0.4
CZD				S	Sn	17 51 00.8	-2.3
ZHG	ZHG	2.81	216	P	Pn	17 50 31.9	+0.7
ZHG				S	Sn	17 51 03.9	-0.9
EGRO	El Granado	2.88	309	⇑P	Pn	17 50 33.0	+1.1
	7.5nm,0.1s,SNR=18						
EGRO				S	Sn	17 51 04.4	-1.7
	1.9nm,0.3s,SNR=14						
MD31	MD31	2.88	181	P	Pn	17 50 32.3	+0.2
MD31				S	Sn	17 51 04.4	-1.9
SESP	Santiago Espad	2.92	35	P	Pn	17 50 34.4	+1.8
	6.7nm,1.5s,SNR=7.9						
SESP				S	Sn	17 51 06.8	-0.6
	6.6nm,0.3s,SNR=7.9						
MDT	Midelt	2.93	179	P	Pn	17 50 33.1	+0.4
MDT				S	Sn	17 51 05.8	-1.8
PVAQ	Vaqueiros	2.95	305	⇓*e*P	Pn	17 50 33.9	+1.0
PVAQ				*e*S	Sn	17 51 06.4	-1.5
PVAQ				A	A	17 51 08.4	
	9.7nm,0.2s						
PVAQ	Vaqueiros	2.95	305	P	Pn	17 50 33.9	+1.0
PVAQ				S	Sn	17 51 06.4	-1.5
	9.7nm,0.2s						
PVAQ	Vaqueiros	2.95	305	P	Pn	17 50 31.6	-1.4
PVAQ				S	Sn	17 51 06.7	-1.2
PBDV	Barranco-do-Ve	3.02	301	⇑*i*P	Pn	17 50 34.9	+1.1
PBDV				*e*S	Sn	17 51 08.1	-1.4
PBDV				A	A	17 51 09.4	
	7.3nm,0.2s						
PBDV	Barranco-do-Ve	3.02	301	P	Pn	17 50 34.9	+1.1
PBDV				S	Sn	17 51 08.1	-1.4
	7.3nm,0.2s						
PBAR	Barrancos	3.07	323	*e*P	Pn	17 50 36.1	+1.6
PBAR				*e*S	Sn	17 51 09.4	-1.4
PBAR				A	A	17 51 12.8	
	22nm,0.7s						
PBAR	Barrancos	3.07	323	P	Pn	17 50 36.1	+1.6
PBAR				S	Sn	17 51 09.4	-1.4
	22nm,0.7s						
PCVE	Castro Verde	3.29	306	*e*P	Pn	17 50 38.6	+1.2
PCVE				*e*S	Sn	17 51 15.1	-0.8
PCVE				A	A	17 51 16.1	
	6.9nm,0.5s						
PCVE	Castro Verde	3.29	306	P	Pn	17 50 38.6	+1.2
PCVE				S	Sn	17 51 15.1	-0.8
	6.9nm,0.5s						
PBEJ	Beja	3.42	313	*e*S	Sn	17 51 18.9	-0.1
PBEJ				A	A	17 51 19.5	
	7.5nm,0.1s						
PBEJ	Beja	3.42	313	S	Sn	17 51 18.9	-0.1
	3.8nm,0.1s						
EMUR	La Murta	3.46	52	P	Pn	17 50 41.9	+2.1
	5.0nm,2.1s,SNR=7.9						
MORF	Marmelete	3.56	297	*e*P	Pn	17 50 41.9	+0.8
MORF				*e*S	Sn	17 51 20.3	-2.0
MORF				AML	AML	17 51 22.6	
	comp=N,15nm,0.1s						
MORF	Marmelete	3.56	297	*e*P	Pn	17 50 41.9	+0.8
MORF				*e*S	Sn	17 51 21.1	-1.3
MORF				A	A	17 51 22.2	
	comp=N,13nm,0.1s						
MORF	Marmelete	3.56	297	P	Pn	17 50 41.9	+0.8
MORF				S	Sn	17 51 21.1	-1.3
	comp=N,13nm,0.1s						
PFVI	Vila Bisbo	3.62	294	*e*P	Pn	17 50 42.9	+1.1
PFVI				*e*S	Sn	17 51 21.9	-1.9
PFVI				A	A	17 51 24.4	
	comp=N,6.3nm,0.6s						
PFVI	Vila Bisbo	3.62	294	P	Pn	17 50 42.9	+1.1
	comp=N,1.9nm,0.1s,SNR=7.9						
PFVI				S	Sn	17 51 22.2	-1.5
	comp=N,9.4nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	3.71	300	*e*P	Pn	17 50 44.6	+1.5
PTEO				*e*S	Sn	17 51 24.8	-1.3
PTEO				A	A	17 51 26.6	
	comp=N,6.2nm,0.4s						
PTEO	Sao Teotonio	3.71	300	P	Pn	17 50 44.6	+1.5
PTEO				S	Sn	17 51 24.8	-1.3
	comp=N,3.1nm,0.4s						
PAB	San Pablo	3.80	4	P	Pn	17 50 45.7	+1.4
	comp=N,0.4nm,0.2s,SNR=7.9						
PAB				S	Sn	17 51 26.6	-1.6
	comp=N,0.6nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.82	40	P	Pn	17 50 46.8	+2.3
	comp=N,0.9nm,0.1s,SNR=6.5						
ETOB				S	Sn	17 51 28.2	-0.6
	comp=N,1.3nm,0.4s						
PNCL	Nicolau / Gran	3.88	309	*e*P	Pn	17 50 46.6	+1.3
PNCL				*e*S	Sn	17 51 28.0	-2.1
PNCL				A	A	17 51 29.9	
	comp=N,4.6nm,0.4s						
PNCL	Nicolau / Gran	3.88	309	P	Pn	17 50 46.6	+1.3
PNCL				S	Sn	17 51 28.0	-2.1
	comp=N,4.6nm,0.4s						
ESDC	Sonseca Array	3.96	8	P	Pn	17 50 48.2	+1.8
	comp=N,2.6nm,0.8s,baz=192,slow=13,SNR=3.5						
ESDC				S	Sn	17 51 30.6	-1.4
	comp=N,0.3nm,0.2s,baz=198,slow=17,SNR=5.9						
PMRV	Marv??o	4.26	330	*e*P	Pn	17 50 52.4	+2.0
PMRV				*e*S	Sn	17 51 37.6	-1.6
PMRV				A	A	17 51 52.5	
	comp=N,4.3nm,0.2s						
PMRV	Marv??o	4.26	330	P	Pn	17 50 52.4	+2.0
PMRV				S	Sn	17 51 37.6	-1.6
	comp=N,4.3nm,0.2s						
PMTG	Montargil	4.35	321	*e*P	Pn	17 50 53.4	+1.7
PMTG				*e*S	Sn	17 51 40.2	-1.2
PMTG				A	A	17 51 43.1	
	comp=N,3.5nm,0.7s						
PMTG	Montargil	4.35	321	P	Pn	17 50 53.4	+1.7
PMTG				S	Sn	17 51 40.2	-1.2
	comp=N,3.5nm,0.7s						
EPLA	Plasencia	4.45	346	P	Pn	17 50 54.5	+1.5
	comp=N,0.5nm,0.1s,SNR=7.9						
EPLA				S	Sn	17 51 42.0	-1.8
	comp=N,1.7nm,0.3s,SNR=11						
GUD	Guadarrama	4.90	5	P	Pn	17 51 01.1	+1.9
	comp=N,0.2nm,0.2s,SNR=7.9						
GUD				S	Sn	17 51 53.1	-1.8
	comp=N,1.6nm,0.5s,SNR=5.7						
MTE	Manteigas	5.16	335	*e*S	Sn	17 52 00.6	-0.5
MTE	Manteigas	5.16	335	S	Sn	17 52 00.6	-0.5
ETOR	Torete	5.47	21	P	Pn	17 51 08.6	+1.8
	comp=N,2.5nm,0.1s,SNR=17						
ETOR				S	Sn	17 52 06.6	-1.9
	comp=N,1.5nm,0.5s,SNR=6.1						
MVO	Moncorvo	5.71	342	*e*S	Sn	17 52 11.7	-2.7
MVO				A	A	17 52 16.2	
	comp=N,1.9nm,0.3s						
MVO	Moncorvo	5.71	342	P	Pn	17 51 11.9	+1.9
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				S	Sn	17 52 12.1	-2.3
	comp=N,1.8nm,0.5s,SNR=7.9						
POLO	Lamas de Olo	6.12	337	*e*S	Sn	17 52 22.6	-1.8
POLO				A	A	17 52 25.5	
	comp=N,1.3nm,0.5s						
POLO	Lamas de Olo	6.12	337	S	Sn	17 52 22.6	-1.8
	comp=N,1.3nm,0.5s						
ECAL	Calabor	6.39	346	S	Sn	17 52 28.4	-2.3
	comp=N,3.4nm,0.6s,SNR=7.9						
ELOB	Lobios	6.66	338	S	Sn	17 52 34.8	-2.5
	comp=N,3.1nm,0.7s,SNR=7.9						
PGAV	Gavieira, Arco	6.81	337	*e*S	Sn	17 52 37.8	-3.2
PGAV	Gavieira, Arco	6.81	337	S	Sn	17 52 37.8	-3.2
EPOB	Poblet	7.18	37	S	Sn	17 52 47.1	-3.0
	comp=N,2.3nm,0.9s,SNR=7.9						

MAN 15 18:04:33.5, 6°.61N×126°.19E, h320^{km}, mb4.0, ML2.8, MS2.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.34	11	*e*P	Pn	18 05 14.7	+0.6
MATI				*e*S	S	18 05 28.1	-18
DDMP	Don Marcelino,	0.69	223	*e*P	Pn	18 05 15.5	+0.5
DDMP				*e*S	S	18 05 27.0	-21
KCP	Kidapawan	1.16	290	⇓*e*P	Pn	18 05 23.4	+6.5
KCP				*i* S	S	18 05 45.2	-6.3
GSPH	General Santos	1.34	247	⇑*i*P	Pn	18 05 25.3	+7.4
GSPH				*i* S	S	18 05 42.1	-11
BUKP	Musuan	1.69	318	*e*P	Pn	18 05 20.4	+0.5

MAN 15 18:15:43.3, 6°.46N×125°.43E, h5^{km}, mb3.8, ML2.5, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.45	141	*e*P	Pg	18 15 52.5	+0.4
DDMP				*e*S	Sb	18 16 05.0	+4.2
GSPH	General Santos	0.60	232	⇑*i*P	Pg	18 15 51.9	-2.9
GSPH				*i* S	Sg	18 16 02.7	0.0
SKMP	Bagumbayan, Su	0.88	274	*e*P	Pg	18 15 59.6	-0.6
SKMP				*e*S	Sn	18 16 16.1	+0.7

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*KNET **15** 18:19:07.2±0.3, 42°.49N×74°.88E, h15^{km}±2^{km}, ml3.0, Error ellipse: s-maj=2.2km s-min=1.8km az=109.0*

*SOME **15** 18:19:08.8, 42°.53N×74°.88E, h15^{km}*

*KRNET **15** 18:19:08.1±0.1, 42°.49N×74°.88E, h14^{km}, mb3.7*

*NNC **15** 18:19:08.4±0.7, 42°.53N×74°.89E, h0^{km}, mb4.0, mpv3.9, Error ellipse: s-maj=7.5km s-min=1.6km az=174.0*

ISC 15 18:19:09.0±0.8**, 42°.51N**±0°.02×**74°.89E**±0°.01**, h12**^{km}±6^{km}**, n101,** $\sigma 1^{s}39$/186**, 51C-30D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBK	Karagaybulak	0.15	17	⇑*i*P	Pg	18 19 12.2	-0.5
	baz=16						
KBK				⇑*i*S	Sg	18 19 15.0	-0.4
	baz=16						
KBK	Karagaybulak	0.15	17	P	Pg	18 19 12.4	-0.4
	1µm,0.1s,SNR=1475						
KBK				⇓S	Sg	18 19 15.3	-0.1
	4µm,0.1s						
AAK	Ala-Archa	0.32	294	⇑P	Pg	18 19 14.7	-0.8
	191nm,0.3s						
AAK				⇑S	Sg	18 19 19.3	-0.6
	657nm,0.2s						
AAK	Ala-Archa	0.32	294	⇑*i*P	Pg	18 19 14.7	-0.8
	baz=97						
AAK				⇑*i*S	Sg	18 19 19.3	-0.6
	baz=97						
AAK	Ala-Archa	0.32	294	P	Pg	18 19 14.7	-0.8
	655nm,0.1s,SNR=536						
AAK				⇑S	Sg	18 19 19.3	-0.6
	3µm,0.3s						
FRU1	Bishkek	0.35	328	⇑*i*P	Pg	18 19 15.6	-0.5
	baz=30						
FRU1				⇑*i*S	Sg	18 19 20.9	0.0
	baz=30						
UCH	Uchtor	0.40	225	⇓*i*P	Pg	18 19 15.6	-1.4
	baz=26						
UCH				⇓*i*S	Sg	18 19 20.9	-1.5
	baz=26						
UCH	Uchtor	0.40	225	⇓P	Pg	18 19 15.7	-1.3
	93nm,0.1s,SNR=294						
UCH				⇓S	Sg	18 19 20.8	-1.6
	2µm,0.2s						
CHMS	Chumysh	0.50	348	⇑*i*P	Pg	18 19 18.1	-0.7
	baz=49						
CHMS				⇑*i*S	Sb	18 19 25.2	-1.8
	baz=49						
CHMS	Chumysh	0.50	348	⇑P	Pg	18 19 18.2	-0.6
	135nm,0.1s,SNR=1005						
CHMS				⇓S	Sb	18 19 25.4	-1.6
	809nm,0.1s						
KZA	Kyzart	0.51	148	⇓*i*P	Pg	18 19 17.8	-1.2
	baz=47						
KZA				⇓*i*S	Sg	18 19 24.8	-1.0
	baz=47						
KZA	Kyzart	0.51	148	P	Pg	18 19 18.1	-0.9
	65nm,0.1s,SNR=498						
KZA				S	Sg	18 19 25.0	-0.8
	1µm,0.3s						
TKM2	Tokmak 2	0.66	52	⇑P	Pg	18 19 21.0	-0.9
	10nm,0.1s						
TKM2				⇑S	Sg	18 19 30.0	-0.6
	33nm,0.1s						
TKM2	Tokmak 2	0.66	52	⇑*i*P	Pg	18 19 21.0	-0.9
	baz=50						
TKM2				⇑*i*S	Sg	18 19 30.1	-0.6
	baz=50						
TKM2	Tokmak 2	0.66	52	P	Pg	18 19 21.1	-0.8
	114nm,0.1s,SNR=709						
TKM2				⇓S	Sg	18 19 30.2	-0.5
	2µm,0.1s						
ARLS	Aral	0.77	213	⇓*i*P	Pg	18 19 22.6	-1.3
	baz=14						
ARLS				⇓*i*S	Sg	18 19 32.4	-1.7
	baz=14						
BOOM	Boomskoye usch	0.78	91	⇑*i*P	Pg	18 19 23.0	-1.0
	baz=89						
BOOM				⇑*i*S	Sg	18 19 33.4	-0.8
	baz=89						
USP	Ospenovka	0.81	339	⇓*i*P	Pg	18 19 23.7	-0.9
	baz=40						
USP				⇓*i*S	Sb	18 19 34.9	-1.0
	baz=40						
USP	Ospenovka	0.81	339	P	Pg	18 19 23.7	-0.9
	92nm,0.1s,SNR=723						
USP				⇓S	Sb	18 19 34.9	-1.1
	408nm,0.2s						
EKS2	Erkin-Say	0.83	281	⇑*i*P	Pg	18 19 24.1	-1.0
	baz=82						
EKS2				⇑*i*S	Sg	18 19 35.8	-0.3
	baz=82						
EKS2	Erkin-Say	0.83	281	⇑P	Pg	18 19 24.1	-1.0
	78nm,0.1s,SNR=507						
EKS2				⇓S	Sb	18 19 36.2	-0.5
	153nm,0.2s						
KST	Kastek	0.95	56	P	Pg	18 19 26.5	-0.9
	59nm,0.1s						
KST				S	Sb	18 19 39.5	-0.7
	194nm,0.5s						
KST	Kastek	0.95	56	⇑*i*P	Pg	18 19 26.5	-0.9
	baz=55						
KST				⇓*i*S	Sb	18 19 39.5	-0.7
	baz=55						
KST	Kastek	0.95	56	⇑*i*P	Pg	18 19 26.5	-0.9
	59nm,0.1s						
KST				⇓*i*S	Sb	18 19 39.5	-0.7
	192nm,0.2s						
SGDS	Sogindy	0.96	349	P	Pg	18 19 26.5	-1.0
	154nm,0.1s						
SGDS				S	Sb	18 19 39.3	-1.0
	111nm,0.2s						
DGS	Degeres	0.98	41	P	Pg	18 19 27.2	-0.6
	13nm,0.1s						
DGS				S	Sb	18 19 40.2	-0.7
	130nm,0.2s						
DGS	Degeres	0.98	41	*e*P	Pg	18 19 27.2	-0.6
	baz=41						
DGS				*e*S	Sb	18 19 40.2	-0.7
	baz=41						
DGS	Degeres	0.98	41	*e*P	Pg	18 19 27.2	-0.6
	13nm,0.1s						
DGS				*e*S	Sb	18 19 40.2	-0.7
	130nm,0.2s						
ULHL	Ulahol	1.04	104	⇑*i*P	Pb	18 19 27.2	-1.8
	baz=3.0						
ULHL				⇑*i*S	Sg	18 19 41.6	-0.9
	baz=3.0						
ULHL	Ulahol	1.04	104	P	Pb	18 19 27.2	-1.8
	79nm,0.2s,SNR=296						
MRKS	Merke	1.25	281	P	Pn	18 19 31.4	-1.0
	91nm,0.2s						
MRKS				S	Sb	18 19 47.9	-0.8
	197nm,0.2s						
MRKS	Merke	1.25	281	⇓*i*P	Pn	18 19 31.4	-1.0
	baz=82						
MRKS				⇓*i*S	Sb	18 19 47.9	-0.8
	baz=82						
MRKS	Merke	1.25	281	⇓*i*P	Pn	18 19 31.4	-1.0
	79nm,0.2s						
MRKS				⇓*i*S	Sb	18 19 47.9	-0.8
	219nm,0.1s						
MTBS	Maitube	1.29	61	P	Pn	18 19 32.5	-0.4
	62nm,0.2s						
MTBS				S	Sg	18 19 50.0	-0.5
	248nm,0.5s						
MTBS	Maitube	1.29	61	⇑*i*P	Pn	18 19 32.5	-0.4
	baz=60						
MTBS				⇑*e*S	Sn	18 19 49.9	-0.3
	baz=60						
MTBS	Maitube	1.29	61	⇑*i*P	Pn	18 19 32.5	-0.4
	62nm,0.2s						
MTBS				*e*S	Sn	18 19 49.9	-0.3
	243nm,0.3s						
NRN	Naryn	1.36	142	⇑*i*P	Pn	18 19 33.2	-0.9
	baz=42						
NRN				⇑*i*S	Sb	18 19 51.2	-0.8
	baz=42						
IZV	Izvestkoviy	1.37	67	P	Pn	18 19 34.0	-0.1
	60nm,0.1s						
IZV				S	Sg	18 19 52.5	-0.7
	138nm,0.3s						
IZV	Izvestkoviy	1.37	67	*e*P	Pn	18 19 34.0	-0.1
	baz=66						
IZV				*e*S	Sg	18 19 52.5	-0.7
	baz=66						
IZV	Izvestkoviy	1.37	67	*e*P	Pn	18 19 34.0	-0.1
	60nm,0.1s						
IZV				*e*S	Sg	18 19 52.5	-0.7
	138nm,0.3s						
TNSS	Tian-Shan	1.60	70	P	Pb	18 19 38.5	-0.3
	54nm,0.4s						
TNSS				S	Sg	18 19 59.9	-0.7
	100nm,0.3s						
TNSS	Tian-Shan	1.60	70	*e*P	Pb	18 19 38.5	-0.3
	baz=70						
TNSS				*e*S	Sg	18 19 59.9	-0.7
	baz=70						
TNSS	Tian-Shan	1.60	70	*e*P	Pb	18 19 38.5	-0.3
	54nm,0.4s						
TNSS				*e*S	Sg	18 19 59.9	-0.7
	93nm,0.4s						
AAA	Alma-Ata	1.65	64	P	Pb	18 19 39.3	0.0
	82nm,0.3s						
AAA				S	Sg	18 20 01.7	-0.2
	107nm,0.3s						
AAA	Alma-Ata	1.65	64	*e*P	Pb	18 19 39.3	0.0
	baz=64						
AAA				*e*S	Sg	18 20 01.7	-0.2
	baz=64						
AAA	Alma-Ata	1.65	64	*e*P	Pb	18 19 39.3	0.0
	82nm,0.3s						
AAA				*e*S	Sg	18 20 01.7	-0.2
	198nm,0.3s						
KNDC	Almaty	1.68	64	⇑P	Pb	18 19 39.9	0.0
	26nm,0.2s						
KNDC				⇓S	Sg	18 20 02.5	-0.6
	160nm,0.3s						
MDOK	Medeo	1.72	67	Pg	Pb	18 19 40.2	-0.4
	39nm,0.3s						
MDOK				Lg	Lg	18 20 03.1	
	166nm,0.4s						
MDOK	Medeo	1.72	67	*e*P	Pb	18 19 40.2	-0.4
	baz=66						
MDOK				*e*S	Sg	18 20 03.1	-1.1
	baz=66						
MDOK	Medeo	1.72	67	*e*P	Pb	18 19 40.2	-0.4
	39nm,0.3s						
MDOK				*e*S	Sg	18 20 03.1	-1.1
	92nm,0.2s						
KDJ	Kajisay	1.74	102	⇑*i*P	Pn	18 19 40.2	+1.0
	baz=1.0						
KDJ				⇑*i*S	Sb	18 20 03.2	+0.3
	baz=1.0						
KUU	Kurty	1.74	37	P	Pb	18 19 40.6	-0.3
	51nm,0.1s						
KUU				S	Sg	18 20 03.7	-1.3
	175nm,0.2s						
KUU	Kurty	1.74	37	⇓*i*P	Pb	18 19 40.6	-0.3
	baz=37						
KUU				⇓*i*S	Sg	18 20 03.7	-1.3
	baz=37						
KUU	Kurty	1.74	37	⇓*i*P	Pb	18 19 40.6	-0.3
	51nm,0.1s						
KUU				⇓*i*S	Sg	18 20 03.7	-1.3
	175nm,0.2s						
KTBS	Karatobe	1.78	47	P	Pb	18 19 41.2	-0.4
	16nm,0.1s						
KTBS				S	Sg	18 20 04.5	-1.7
	272nm,0.6s						
KTBS	Karatobe	1.78	47	*e*P	Pb	18 19 41.2	-0.4
	baz=43						
KTBS				*e*S	Sg	18 20 04.5	-1.7
	baz=43						
KTBS	Karatobe	1.78	47	*e*P	Pb	18 19 41.2	-0.4
	16nm,0.2s						
KTBS				*e*S	Sg	18 20 04.5	-1.7
	479nm,0.2s						
KOTS	Kotyrbulak	1.79	65	P	Pb	18 19 41.5	-0.2
	38nm,0.2s						
KOTS				S	Sg	18 20 05.0	-1.4
	1µm,0.5s						
KOTS	Kotyrbulak	1.79	65	*e*P	Pb	18 19 41.5	-0.2
	baz=65						
KOTS				*e*S	Sg	18 20 05.0	-1.4
	baz=65						
KOTS	Kotyrbulak	1.79	65	*e*P	Pb	18 19 41.5	-0.2
	38nm,0.2s						
KOTS				*e*S	Sg	18 20 05.0	-1.4
	1µm,0.5s						
ARSB	Arslanbob	1.85	231	⇑*i*P	Pn	18 19 42.0	+1.3
	baz=31						
ARSB				⇑*i*S	Sb	18 20 06.2	+0.2
	baz=31						
CHKK	Chushkaly	2.04	48	Pg	Pb	18 19 46.2	+0.2
	12nm,0.2s						
CHKK				Lg	Lg	18 20 13.0	
	399nm,0.2s						
CHKK	Chushkaly	2.04	48	*e*P	Pb	18 19 46.2	+0.2
	baz=48						
CHKK				*e*S	Sg	18 20 13.0	-1.5
	baz=48						
CHKK	Chushkaly	2.04	48	*e*P	Pb	18 19 46.2	+0.2
	13nm,0.3s						
CHKK				*e*S	Sg	18 20 13.0	-1.5
	419nm,0.2s						
ARK	Arkit	2.29	253	⇑*i*P	Pn	18 19 48.1	+1.4
	baz=53						
ARK				⇑*i*S	Sn	18 20 16.0	+1.1
	baz=53						
PRZ	Przheval'sk	2.60	89	⇑*i*P	Pn	18 19 51.9	+0.9
	baz=89						
PRZ				⇑*i*S	Sn	18 20 24.3	+1.8
	baz=89						
KURS	Kuram	2.60	67	Pg	Pb	18 19 56.4	+0.9
	12nm,0.4s						
KURS				Lg	Lg	18 20 30.4	
	44nm,0.5s						
KURS	Kuram	2.60	67	*e*P	Pb	18 19 56.4	+0.9
	baz=66						
KURS				⇓*e*S	Sg	18 20 30.4	-2.0
	baz=66						
KURS	Kuram	2.60	67	*e*P	Pb	18 19 56.4	+0.9
	12nm,0.4s						
KURS				⇓*e*S	Sg	18 20 30.4	-2.0
	69nm,0.5s						

BTLS	**Baital**	2.60	347	*e*P	Pb	18 19 55.8	+0.2
	baz=47						
BTLS				*e*S	Sg	18 20 29.3	-3.3
	baz=47						
BTLS	**Baital**	2.60	347	*e*P	Pb	18 19 55.8	+0.2
	26nm,0.3s						
BTLS				*e*S	Sg	18 20 29.2	-3.3
	62nm,0.4s						
SATY	**Saty**	2.65	77	Pg	Pb	18 19 57.2	+0.8
	66nm,0.3s						
SATY				Lg	Lg	18 20 32.3	
	131nm,0.4s						
SATY	**Saty**	2.65	77	*e*P	Pb	18 19 57.2	+0.8
	66nm,0.3s						
SATY				*e*S	Sg	18 20 32.3	-1.7
	135nm,0.1s						
DZA	**Taraz**	2.65	279	Pg	Pb	18 19 57.0	+0.6
	66nm,0.4s						
DZA				Lg	Lg	18 20 31.6	
	140nm,0.6s						
DZA	**Taraz**	2.65	279	⇑*i*P	Pb	18 19 57.0	+0.6
	baz=80						
DZA				⇑*i*S	Sg	18 20 31.6	-2.5
	baz=80						
DZA	**Taraz**	2.65	279	⇑*i*P	Pb	18 19 57.0	+0.6
	61nm,0.2s						
DZA				⇑*i*S	Sg	18 20 31.6	-2.5
	158nm,0.4s						
KPKS	**Kokpek**	2.94	70	*e*P	Pb	18 20 01.8	+0.4
	baz=70						
KPKS				*e*S	Sb	18 20 40.0	+2.6
	baz=70						
KPKS	**Kokpek**	2.94	70	*e*P	Pb	18 20 01.8	+0.4
	45nm,0.2s						
KPKS				*e*S	Sb	18 20 40.1	+2.6
	156nm,0.3s						
MNBS	**Baschi**	3.00	57	Pg	Pb	18 20 03.4	+0.9
	9.2nm,0.4s						
MNBS				Lg	Lg	18 20 42.4	
	140nm,0.5s						
MNBS	**Baschi**	3.00	57	*e*P	Pb	18 20 03.4	+0.9
	baz=60						
MNBS				*e*S	Sg	18 20 42.4	-3.1
	baz=60						
MNBS	**Baschi**	3.00	57	*e*P	Pb	18 20 03.4	+0.9
	7.9nm,0.2s						
MNBS				*e*S	Sg	18 20 42.4	-3.1
	140nm,0.5s						
UZB	**Uzynbulak**	3.11	77	Pg	Pb	18 20 04.9	+0.6
	15nm,0.2s						
UZB				Lg	Lg	18 20 45.2	
	34nm,0.2s						
UZB	**Uzynbulak**	3.11	77	*e*P	Pb	18 20 04.1	-0.1
	baz=76						
UZB				*e*S	Sb	18 20 44.0	+1.9
	baz=76						
UZB	**Uzynbulak**	3.11	77	*e*P	Pb	18 20 04.1	-0.1
	15nm,0.2s						
UZB				*e*S	Sb	18 20 44.0	+1.9
	78nm,0.5s						
KK31	**Karatay Array**	3.27	282	Pg	Pb	18 20 07.4	+0.4
	6.3nm,0.5s,baz=118,slow=14,SNR=73						
KK31				Lg	Lg	18 20 50.2	
	13nm,0.4s,baz=100,slow=26,SNR=12						
PDGK	**Podgornoye**	3.48	75	Pg	Pb	18 20 10.8	+0.2
	9.3nm,0.5s						
PDGK				Lg	Lg	18 20 55.5	
	25nm,0.6s						
PDGK	**Podgornoye**	3.48	75	⇑Pn	Pn	18 20 05.2	+2.2
	0.9nm,0.4s						
PDGK				⇑Pg	Pb	18 20 10.5	0.0
	16nm,0.6s						
PDGK				⇑Lg	Lg	18 20 57.9	
	38nm,0.5s						
PDGK	**Podgornoye**	3.48	75	⇓*i*P	Pn	18 20 04.6	+1.6
	baz=75						
PDGK				⇓*i*S	Sn	18 20 45.3	+1.1
	baz=75						
TDK	**Taldyqorghan**	3.56	44	Pg	Pb	18 20 12.2	+0.3
	21nm,0.3s						
TDK				Lg	Lg	18 20 58.0	
	71nm,0.3s						
TDK	**Taldyqorghan**	3.56	44	*e*P	Pb	18 20 12.0	+0.1
	15nm,0.2s						
TDK				*e*S	Sb	18 20 57.8	+2.6
	71nm,0.4s						
IUG	**Iuzhnay**	3.62	266	*e*P	Pb	18 20 14.2	+1.2
	baz=66						
IUG				*e*S	Sb	18 21 00.9	+4.0
	baz=66						
IUG	**Iuzhnay**	3.62	266	*e*P	Pb	18 20 14.2	+1.2
	3.7nm,0.4s						
IUG				*e*S	Sb	18 21 00.9	+4.0
	34nm,0.9s						
BRLS	**Borolday**	3.76	280	*e*P	Pb	18 20 17.4	+2.2
	baz=80						
BRLS				*e*S	Sg	18 21 06.3	-3.2
	baz=80						
BRLS	**Borolday**	3.76	280	*e*P	Pb	18 20 17.4	+2.2
	1.1nm,0.2s						
BRLS				*e*S	Sg	18 21 06.3	-3.2
	15nm,0.4s						
DJR	**Jarkent**	4.01	61	Pg	Pb	18 20 21.2	+1.7
	9.4nm,0.4s						
DJR				Lg	Lg	18 21 13.2	
	17nm,0.4s						
DJR	**Jarkent**	4.01	61	*e*P	Pb	18 20 21.2	+1.7
	9.4nm,0.4s						
DJR				*e*S	Sg	18 21 13.2	-4.4
	17nm,0.4s						
KAPS	**Kapalarasan**	4.26	48	Pg	Pb	18 20 25.6	+1.9
	3.1nm,0.3s						
KAPS				Lg	Lg	18 21 20.6	
	20nm,0.4s						
KAPS	**Kapalarasan**	4.26	48	*e*P	Pb	18 20 25.8	+2.1
	2.8nm,0.6s						
KAPS				*e*S	Sg	18 21 21.1	-4.5
	20nm,0.4s						
OTUK	**Ortayu**	6.01	343	⇑Pg	Pb	18 20 57.6	+4.1
	0.9nm,0.4s						
OTUK				⇑Lg	Lg	18 22 17.7	
	8.2nm,0.5s						
MK31	**Makanchi Array**	6.80	48	Pn	Pn	18 20 48.7	+0.2
	1.4nm,0.6s,baz=230,slow=13,SNR=6.0						
MK31				⇑Sn	Sn	18 22 08.1	+2.4
	3.2nm,0.8s,baz=222,slow=25,SNR=6.6						
MK31				⇑Lg	Lg	18 22 44.2	
	3.6nm,0.7s,baz=222,slow=25,SNR=6.6						
KURBB	**Kurchatov Arra**	8.49	16	⇑Lg	Lg	18 23 36.3	
	7.3nm,0.7s						

JSN 15 18:20:11.4±1.2, 18°.12N×75°.75W, h0^{km}±14^{km}, MD3.8, 2C-4D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJ	**Castle Mountai**	0.59	272	⇑*i*P	Pg	18 20 23.4	+0.5
YHJ	**Yallahs**	0.74	252	⇓*i*P	Pg	18 20 25.7	0.0
GWJ	**Greenwich**	0.93	267	*e*P	Pg	18 20 28.2	-1.1
HOJ	**Hope**	0.96	263	⇓*i*P	Pg	18 20 29.0	-0.8
STH	**Stony Hill**	1.01	268	*e*P	Pg	18 20 29.2	-1.6
PCJ	**Portland Cotta**	1.39	254	*e*P	Pn	18 20 36.3	-1.8
BBJ	**Bamboo Saint A**	1.47	280	*i* PA	Pn	18 20 37.8	-1.4
CVJ	**Coleyville**	1.70	274	⇓*i*P	Pn	18 20 40.9	-1.5
MCJ	**Malvern**	1.85	264	⇓*i*P	Pn	18 20 43.8	-0.7
MCJ				⇑*i*S	Sn	18 21 07.1	-1.6

MAN 15 18:20:35.0, 7°.43N×124°.79E, h30^{km}, mb5.2, ML4.2, MS4.4, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	0.51	145	⇑*e*P	Pb	18 20 44.9	-0.8
KCP				*i* S	Sn	18 21 01.8	+7.7
BUKP	**Musuan**	0.52	31	*e*P	Pb	18 20 45.8	0.0
BUKP				*e*S	Sn	18 20 55.7	+1.4
CTBH	**Cotabato--PC H**	0.58	249	⇓*i*P	Pb	18 20 46.2	-0.4
CTBH				*i* S	Sb	18 20 53.8	-0.9
SKMP	**Bagumbayan, Su**	0.94	195	*e*P	Pn	18 20 51.5	-0.6
SKMP				*e*S	Sn	18 21 03.6	-0.9
CGP	**Cagayan de Oro**	1.02	355	⇑*e*P	Pb	18 20 55.6	+1.5
CGP				*e*S	Sb	18 21 10.7	+3.5
DDMP	**Don Marcelino,**	1.60	145	*e*P	Pb	18 21 04.2	+0.2
BUTP	**Butuan**	1.74	28	*e*P	Sb	18 21 34.6	+6.9
IPIL	**Ipil**	2.23	279	*e*P	Pb	18 21 17.4	+2.8
IPIL				*e*S	Sb	18 21 43.7	+1.9
SCPH	**Surigao**	2.44	16	⇑*i*P	Pb	18 21 32.1	+14
SCPH				*i* S	Sn	18 21 40.4	-1.1
MSLP	**Maasin**	2.69	1	*e*P	Pb	18 21 30.4	+8.0
MSLP				*e*S	Sn	18 21 44.3	-3.4
OCLP	**Ormoc**	3.60	357	*e*P	Pb	18 21 37.7	-0.3
BESP	**Borongan**	4.19	9	*e*P	Pn	18 21 36.6	-0.3
BESP				*e*S	Pb	18 21 55.8	+7.7
CNP	**Catarman**	5.05	359	*e*P	Pn	18 21 52.1	+3.4

JMA ***15*** *18:21:53.4±0.1, 23°.69N×122°.86E, h52^{km}, M2.2*

TAP ***15*** *18:21:54.4, 23°.75N×122°.88E, h49^{km}±1^{km}, ML2.6, D*

ISC 15 18:21:53.4±1.3, 23°.69N±0°.04×122°.88E±0°.03, h29^{km}±13^{km}, n43, σ0^{s}.89/80, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.76	4	P	Pn	18 22 08.3	0.0
JYNG				*e*S	Sn	18 22 18.6	-0.2
YOJ	**Yonaguni jima**	0.78	8	P	Pn	18 22 08.7	+0.2
	baz=9.0						
YOJ				S	Sn	18 22 19.1	-0.1
	baz=9.0						
YOJ	**Yonaguni jima**	0.78	8	P	Pb	18 22 08.5	0.0
YOJ				*e*S	Sb	18 22 18.9	+0.1
HATJ	**Hateruma jima**	0.92	66	P	Pn	18 22 10.6	+0.2
HATJ				*e*S	Sb	18 22 22.6	-0.1
IRIF	**Iriomote-Funau**	1.01	50	P	Pn	18 22 12.0	+0.4
IRIF				S	Sb	18 22 24.6	-0.6
EOS1	**EOS1**	1.10	321	P	Pn	18 22 13.2	+0.3
	baz=326						
EOS1				*e*S	Sn	18 22 27.2	+0.1
	baz=326						
JKRS	**Kuro-shima**	1.17	62	P	Pn	18 22 14.4	+0.6
JKRS				S	Sn	18 22 29.0	+0.3
TWD	**Chiawan**	1.24	289	P	Pn	18 22 14.4	-0.5
	baz=285						
TWD				S	Sn	18 22 29.0	-1.6
	baz=285						
NANB	**Nanao**	1.27	306	*e*P	Pn	18 22 15.6	+0.4
	baz=293						
NANB				*e*S	Sn	18 22 31.5	+0.1
	baz=293						
NACB	**Ninganchiao**	1.28	293	*e*P	Pn	18 22 14.8	-0.5
	baz=289						
NACB				*e*S	Sn	18 22 30.1	-1.4
	baz=289						
ENA	**Nanau**	1.28	305	P	Pn	18 22 15.6	+0.2
	baz=293						
ENA				S	Sn	18 22 32.0	+0.5
	baz=293						
TWC	**Suao**	1.32	314	*e*S	Sn	18 22 31.8	-0.6
	baz=312						
JIJ	**Ishigaki jima**	1.33	59	P	Pn	18 22 16.2	+0.1
JIJ				*e*S	Sn	18 22 32.3	-0.6
EGFH	**Guangfu**	1.34	270	P	Pn	18 22 16.1	-0.1
	baz=267						
ESL	**Shilin**	1.34	276	*e*P	Pn	18 22 15.2	-1.0
	baz=265						
ESL				*e*S	Sn	18 22 31.6	-1.4
	baz=265						
HGSD	**Ruisui**	1.35	262	*e*P	Pn	18 22 15.9	-0.4
	baz=259						
HGSD				*e*S	Sn	18 22 31.5	-1.8
	baz=259						
ETLH	**Xiulin Townshi**	1.38	292	*e*P	Pn	18 22 16.5	-0.3
	baz=289						
ETLH				*e*S	Sn	18 22 32.9	-1.3
	baz=289						
EHY	**Hungye**	1.44	263	*e*P	Pn	18 22 17.8	+0.1
	baz=260						
EHY				*e*S	Sn	18 22 35.1	-0.5
	baz=260						
YULB	**Yu-li**	1.49	259	*e*P	Pn	18 22 18.1	-0.1
	baz=249						
YULB				*e*S	Sn	18 22 36.7	0.0
	baz=249						
TWF1	**Yuli**	1.50	257	*e*P	Pn	18 22 18.1	-0.2
	baz=255						
TWF1				*e*S	Sn	18 22 37.0	+0.1
	baz=255						
CHKT	**Chengkung**	1.51	248	*e*P	Pn	18 22 18.0	-0.6
	baz=236						
CHKT				*e*S	Sn	18 22 35.1	-2.2
	baz=236						
TWE	**Neicheng**	1.52	313	P	Pn	18 22 19.1	+0.5
	baz=300						
TWE				S	Sn	18 22 37.5	+0.2
	baz=300						
WHF	**Hehuan Shan**	1.55	287	P	Pn	18 22 19.3	-0.2
	baz=284						
WHF				*e*S	Sn	18 22 37.1	-1.7
	baz=284						
NNSB	**Datong**	1.56	299	*e*P	Pn	18 22 19.6	+0.3
	baz=287						
NNSB				*e*S	Sn	18 22 37.9	-0.7
	baz=287						
NNS	**Nan Shan**	1.57	299	S	Sn	18 22 38.3	-0.6
	baz=287						
JISG	**Ishigakijimahi**	1.58	55	P	Pn	18 22 19.1	-0.4
JISG				S	Sn	18 22 38.0	-1.0
VWDT	**VWDT**	1.60	273	*e*P	Pn	18 22 19.9	+0.2
	baz=270						
VWDT				*e*S	Sn	18 22 39.3	-0.1
	baz=270						
TIPB	**Shuangxi**	1.60	323	P	Pn	18 22 20.4	+0.5
	baz=321						
TIPB				*e*S	Sn	18 22 39.2	-0.4
	baz=321						
CHGB	**Renai**	1.61	284	*e*P	Pn	18 22 20.2	+0.1
	baz=274						
CHGB				*e*S	Sn	18 22 40.0	0.0
	baz=274						
YHNB	**Yeheng**	1.69	306	*e*P	Pn	18 22 21.7	+0.6
	baz=292						
YHNB				*e*S	Sn	18 22 41.5	-0.3
	baz=292						
YUS	**Yu-Shan**	1.78	264	P	Pn	18 22 23.2	+0.5
	baz=261						
YUS				*e*S	Sn	18 22 44.9	+0.2
	baz=261						
ELDTW	**Lidau**	1.79	254	P	Pn	18 22 22.3	-0.1
	baz=252						
ELDTW				S	Sn	18 22 42.3	-1.9
	baz=252						
WHYT	**Xinyi Township**	1.86	271	*e*P	Pn	18 22 24.5	+1.1
	baz=269						
TWGBT	**Beinan**	1.87	243	*e*P	Pn	18 22 23.8	+0.3
	baz=234						
TWGBT				*e*S	Sn	18 22 45.9	-0.3
	baz=234						
TWG	**Pinlang**	1.88	243	P	Pn	18 22 23.8	+0.3
	baz=234						
TWG				S	Sn	18 22 45.3	-1.0
	baz=234						
JTJ	**Tarama**	1.91	60	*e*S	Sn	18 22 47.2	0.0
LIOB	**Emei**	1.96	300	*e*P	Pn	18 22 25.1	+0.4
	baz=288						
LIOB				*e*S	Sn	18 22 49.0	+0.8
	baz=288						
TPUB	**Ta-pu**	2.10	260	*e*P	Pn	18 22 27.9	+1.2
	baz=258						
TPUB				*e*S	Sn	18 22 52.6	+0.6
	baz=258						
SLGT	**Liugui**	2.17	252	*e*P	Pn	18 22 29.5	+1.9
	baz=246						
SLGT				*e*S	Sn	18 22 55.1	+1.6
	baz=246						
CHN1	**Nanshi**	2.22	257	*e*P	Pn	18 22 30.5	+2.2
	baz=255						
CHN1				*e*S	Sn	18 22 56.9	+2.1
	baz=255						
TWK	**Hsinying**	2.24	260	*e*P	Pn	18 22 30.4	+1.8
	baz=257						
TWK				*e*S	Sn	18 22 57.3	+2.0
	baz=257						
EAST	**Anshuo**	2.28	236	*e*P	Pn	18 22 29.6	+0.4
	baz=242						
MASBT	**Mashibuluo**	2.33	243	*e*P	Pn	18 22 30.4	+0.5
	baz=236						
MASBT				*e*S	Sn	18 22 56.4	-1.2
	baz=236						

DDA ***15*** *18:41:36.5, 37°.65N×41°.65E, h7^{km}, ML2.0*

ISK 15 18:41:27.0, 37°.15N×42°.52E, h22^{km}, ML2.4/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUKT	**Cukurca**	0.87	83	PG	Pn	18 41 44.4	+0.2
CUKT				SG	Sn	18 41 57.2	+0.9
SRTM	**Siirt_Merkez**	0.97	331	*i* P	Pb	18 41 44.3	-0.9
SRTM				IAML_P			
	comp=Z,382nm,0.1s						
AKDM	**Akdamar-Van**	1.23	17	PN	Pb	18 41 49.6	-0.1
AKDM				SN	Sb	18 42 05.9	+0.6
BTMN	**Batman**	1.24	307	*i* P	Pb	18 41 49.7	-0.1
BTMN				*i* S	Sb	18 42 06.3	+0.9
BTMN				IAML_P			
	comp=Z,285nm,0.2s						
MARD	**Mardin**	1.40	277	*i* P	Pn	18 41 51.3	-0.1
MARD				*i* S	Sb	18 42 11.2	+1.3
SVAN	**Silvan-Diyarba**	1.45	314	PN	Pn	18 41 52.4	+0.4
SVAN				SN	Sb	18 42 11.5	+0.1
VANB	**Van**	1.60	25	PN	Pn	18 41 54.1	0.0
MAZI	**Mazidag**	1.68	281	PN	Pn	18 41 55.6	+0.3
MAZI				SN	Sb	18 42 17.4	-0.7
MUSM	**Mu-Merkez**	1.77	333	*i* P	Pn	18 41 56.8	+0.4
MUSM				IAML_P			
	comp=Z,148nm,0.1s						
DYBB	**Diyarbakir**	2.06	294	PN	Pn	18 42 01.5	+1.2
AGRB	**Hanur-Agry**	2.45	9	PN	Pn	18 42 07.2	+1.3
SVRC	**Sivrice-ELAZID**	2.83	297	PN	Pn	18 42 12.2	+1.1

IDC ***15*** *18:44:46.6±2.4, 34°.61N×24°.34E, h0^{km}, mb3.8/7, mb1 3.9/12, mb1mx3.7/36, mbtmp3.8/12, ML4.2/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/41, Error ellipse: s-maj=39.4km s-min=22.6km az=34.0*

ATH ***15*** *18:44:56.0, 34°.89N×24°.83E, h33^{km}±1^{km}, ML3.6/8, Error ellipse: s-maj=2.3km s-min=1.0km az=178.0*

ISCJB ***15*** *18:44:55.8±0.5, 34°.80N±0°.04×24°.87E±0°.03, h40^{km}±5^{km}, mb3.5/9, Error ellipse: s-maj=7.5km s-min=3.5km az=1.2*

ISK ***15*** *18:44:55.6, 34°.87N×24°.86E, h28^{km}, ML3.7/12*

THE ***15*** *18:44:56.9, 34°.84N×24°.85E, h18^{km}, ML3.6/7, Error ellipse: s-maj=1.2km s-min=0.4km az=355.0*

DDA ***15*** *18:45:37.4, 34°.53N×25°.08E, h26^{km}, ML3.9*

ISC 15 18:44:55.4±0.9, 34°.82N±0°.05×24°.86E±0°.03, h31^{km}±5^{km}, n117, σ1^{s}.52/140, mb3.6/9, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	0.20	349	P	Pb	18 45 01.8	0.0
SIVA				S	Sb	18 45 05.3	-0.9
	42µm,0.3s						
SIVA	**Sivas**	0.20	349	P	Pb	18 45 01.8	0.0
SIVA				S	Sb	18 45 05.9	-0.2
SIVA				AML	AML	18 45 07.1	
SIVA				AML	AML	18 45 07.2	
	comp=N,62556µm,0.2s						
TMBK	**Timbaki Herakl**	0.26	344	P	Pb	18 45 02.5	0.0
TMBK				S	Sb	18 45 07.2	-0.1
IDI	**Anoyia**	0.47	3	PG	Pb	18 45 05.3	-0.2
IDI				SG	Sb	18 45 12.5	+0.1
IDI	**Anoyia**	0.47	3	Pn	Pb	18 45 05.3	-0.2
	comp=N,150nm,0.3s,baz=220,slow=8.9,SNR=1143						
IDI				Sn	Sn	18 45 13.0	-0.3
	comp=N,2µm,0.3s,baz=66,slow=20,SNR=109						
IDI				LR	LR	18 45 31.2	
	comp=N,514nm,18.8s,baz=144,slow=54						
IDI	**Anoyia**	0.47	3	P	Pb	18 45 05.3	-0.2
IDI				S	Sb	18 45 12.7	+0.4
IDI				AML	AML	18 45 13.2	
	comp=E,28507µm,0.4s						
IDI				AML	AML	18 45 15.0	
	comp=N,21498µm,0.4s						
KSTL	**Kastelli Herak**	0.51	20	P	Pn	18 45 07.1	+0.5
KSTL				S	Sn	18 45 16.0	+1.7
IACM	**Heraklion**	0.52	20	P	Pb	18 45 06.6	+0.4
IACM				S	Sn	18 45 14.4	0.0
	comp=N,28µm,0.4s						
IACM	**Heraklion**	0.52	20	P	Pb	18 45 06.6	+0.4
IACM				S	Sn	18 45 14.6	+0.2
LAST	**Lasithi**	0.61	56	P	Pb	18 45 08.0	+0.2
LAST				S	Sn	18 45 17.4	+0.5
	comp=N,3µm,0.5s						
LAST	**Lasithi**	0.61	56	P	Pb	18 45 08.1	+0.3
LAST				S	Sn	18 45 17.5	+0.5
LAST				AML	AML	18 45 18.8	
	comp=N,6476µm,0.5s						
LAST				AML	AML	18 45 20.7	
	comp=E,7441µm,0.5s						
PRNS	**Prines Rethymn**	0.62	332	P	Pn	18 45 08.4	+0.4
PRNS				S	Sn	18 45 17.7	+0.8
GVDS	**Gavdos**	0.63	272	P	Pn	18 45 09.2	+1.0
GVDS				S	Sn	18 45 19.3	+2.1
GVD	**Gavdhos**	0.63	272	PG	Pn	18 45 08.9	+0.6
GVD				SG	Sn	18 45 18.9	+1.6
GVD	**Gavdhos**	0.63	272	P	Pn	18 45 08.8	+0.6
GVD				S	Sn	18 45 18.0	+0.7
	comp=E,9µm,0.6s						
GVD	**Gavdhos**	0.63	272	P	Pn	18 45 08.8	+0.6
GVD				S	Sn	18 45 18.1	+0.8
GVD				AML	AML	18 45 25.5	
	comp=N,18205µm,0.6s						
GVD				AML	AML	18 45 26.5	
	comp=E,17494µm,0.5s						
NPS	**Neapolis**	0.76	54	P	Pb	18 45 10.6	+0.4
NPS				S	Sn	18 45 21.1	+0.6
	comp=E,3µm,0.5s						
NPS	**Neapolis**	0.76	54	P	Pb	18 45 10.5	+0.2
NPS				S	Sn	18 45 21.2	+0.7
NPS				AML	AML	18 45 27.2	
	comp=N,5148µm,0.4s						
NPS				AML	AML	18 45 29.4	
	comp=E,7603µm,0.7s						
VAM	**Vamos**	0.80	318	P	Pb	18 45 10.8	0.0
VAM				S	Sn	18 45 21.7	+0.4
	comp=E,5µm,0.3s						
VAM	**Vamos**	0.80	318	P	Pb	18 45 10.8	0.0
VAM				S	Sn	18 45 21.9	+0.5
VAM				AML	AML	18 45 29.3	
	comp=N,11071µm,0.3s						
VAM				AML	AML	18 45 30.7	
	comp=E,9863µm,0.4s						
IMMV	**Iera Moni Meta**	0.96	312	PG	Pn	18 45 13.2	+0.4
IMMV	**Iera Moni Meta**	0.96	312	P	Pn	18 45 13.4	+0.6
IMMV				S	Sn	18 45 27.1	+1.7
	comp=E,6µm,0.4s						
IMMV	**Iera Moni Meta**	0.96	312	P	Pn	18 45 13.2	+0.4
IMMV				AML	AML	18 45 33.2	
	comp=E,12404µm,0.4s						
IMMV				AML	AML	18 45 34.3	
	comp=N,10023µm,0.5s						
CHAN	**Chania**	0.97	317	P	Pb	18 45 13.8	+0.2
CHAN				S	Sn	18 45 27.5	+2.0
STIA	**Sitia Lasithi**	1.08	69	P	Pb	18 45 16.0	+0.4
ZKR	**Zakros**	1.16	75	PN	Pn	18 45 16.6	+1.2
ZKR	**Zakros**	1.16	75	P	Pb	18 45 17.8	+1.0
ZKR	**Zakros**	1.16	75	P	Pb	18 45 17.6	+0.8
ZKR				S	Sb	18 45 33.9	+2.4
ZKR				AML	AML	18 45 39.5	
	comp=N,1812µm,0.5s						
ZKR				AML	AML	18 45 40.1	
	comp=E,5417µm,0.5s						
THR9	**Santorini-Faro**	1.59	15	P	Pn	18 45 22.8	+1.4
SAP1	**Santorini-Akro**	1.60	16	P	Pb	18 45 23.7	-0.6
THR5	**Thira Island,**	1.64	14	P	Pn	18 45 23.9	+1.7
ANKY	**Antikythira Is**	1.65	310	P	Pb	18 45 25.1	0.0
ANKY	**Antikythira Is**	1.65	310	P	Pb	18 45 25.1	0.0
THR3	**Thira Island,**	1.65	15	P	Pn	18 45 23.9	+1.7
SAP3	**Santorini-Thir**	1.66	14	P	Pn	18 45 24.2	+1.8
CMBO	**Columbo, Santo**	1.71	15	P	Pn	18 45 24.6	+1.6
MHLO	**Agia Marina, M**	1.90	349	P	Pn	18 45 27.1	+1.4
MHLO	**Agia Marina, M**	1.90	349	P	Pn	18 45 27.1	+1.4
MHLA	**Plaka, Milos I**	1.95	350	P	Pn	18 45 28.7	+2.3
KARP	**Karpathos**	2.02	68	PN	Pn	18 45 29.2	+1.8
KARP	**Karpathos**	2.02	68	P	Pn	18 45 29.5	+2.1
KARP	**Karpathos**	2.02	68	P	Pb	18 45 30.5	-1.1
KTHA	**Kythira Island**	2.05	315	P	Pn	18 45 29.7	+1.9
KTHA	**Kythira Island**	2.05	315	P	Pn	18 45 29.6	+1.8
KTHR	**Kythira**	2.09	314	P	Pn	18 45 30.5	+2.2
AMGA	**Amorgos Island**	2.18	22	P	Pn	18 45 30.6	+1.1
APE	**Apeiranthos**	2.31	13	PN	Pn	18 45 32.2	+0.8
APE	**Apeiranthos**	2.31	13	P	Pn	18 45 32.4	+1.0
VLI	**Veliai**	2.46	321	P	Pn	18 45 34.6	+1.3
VLI	**Veliai**	2.46	321	P	Pn	18 45 34.8	+1.5

KRND	KRANIDI	2.91	332	P	Pn	18 45 41.1	+1.6
DAT	Datca	2.92	48	PN	Pn	18 45 41.2	+1.4
DAT	Datca	2.92	48	*i* P	Pn	18 45 42.5	+2.7
DID	Didima	2.98	334	P	Pn	18 45 41.7	+1.1
DID	Didima	2.98	334	P	Pn	18 45 41.6	+0.9
BODT	Bodrum	3.00	41	PN	Pn	18 45 42.0	+1.2
ARG	Arkhangelos	3.01	61	PN	Pn	18 45 43.0	+2.0
ARG	Arkhangelos	3.01	61	P	Pn	18 45 42.9	+2.0
ARG	Arkhangelos	3.01	61	P	Pn	18 45 42.9	+2.0
EPID	Epidavros	3.12	334	P	Pn	18 45 44.1	+1.5
VLY	Voula,Athens	3.15	344	P	Pn	18 45 44.1	+1.3
KARY	Karystos	3.22	354	P	Pn	18 45 45.5	+1.6
VLX	Vlachokerasia	3.24	322	P	Pn	18 45 46.1	+1.9
VLX	Vlachokerasia	3.24	322	P	Pn	18 45 46.2	+1.9
ATHU	Athens Univers	3.26	345	P	Pn	18 45 46.0	+1.7
PTL	Penteli	3.32	346	P	Pn	18 45 46.9	+1.6
DION	Dionisos Attik	3.34	347	P	Pn	18 45 47.0	+1.5
DION	Dionisos Attik	3.34	347	P	Pn	18 45 47.1	+1.7
ITM	Ithomi	3.34	316	PN	Pn	18 45 46.9	+1.3
TRIP	Tripoli	3.42	323	P	Pn	18 45 48.7	+2.1
TRIP	Tripoli	3.42	323	P	Pn	18 45 49.0	+2.4
ACOR	Acrocorinthos	3.46	333	P	Pn	18 45 48.3	+1.2
YER	Yerkesik	3.61	49	PN	Pn	18 45 51.1	+1.8
VIL2	Platees	3.62	340	P	Pn	18 45 49.6	+0.2
TURN	Turunc	3.67	55	PN	Pn	18 45 47.6	-2.4
TURN	Turunc	3.67	55	*i* P	Pn	18 45 48.8	-1.2
EREA	Eretria	3.67	349	P	Pn	18 45 51.6	+1.6
DALY	Dalyan (Mula)	3.67	56	PN	Pn	18 45 51.8	+1.8
DALY	Dalyan (Mula)	3.67	56	*i* P	Pn	18 45 52.6	+2.6
CHOS	Chios island	3.69	15	PN	Pn	18 45 51.8	+1.5
CHOS	Chios island	3.69	15	P	Pn	18 45 51.8	+1.5
GUR	Goura	3.71	328	P	Pn	18 45 51.8	+1.1
AYDN	Tasoluk	3.74	40	*i* P	Pn	18 45 54.6	+3.6
AYDN				IAML_P			
	comp=Z,422nm,0.2s						
PROD	Prodromos	3.78	336	P	Pn	18 45 52.9	+1.4
URLA	Izmir	3.80	21	PN	Pn	18 45 52.8	+1.0
FETY	Fethiye	3.89	61	PN	Pn	18 45 54.3	+1.3
FETY	Fethiye	3.89	61	*i* P	Pn	18 45 53.4	+0.4
KLV	Kalavryta, Ach	3.89	327	P	Pn	18 45 54.3	+1.2
MRKA	Markates	4.01	346	P	Pn	18 45 56.2	+1.4
AKAS	Kas	4.12	69	PN	Pn	18 45 57.9	+1.5
AKAS	Kas	4.12	69	*i* P	Pn	18 45 57.2	+0.9
AKAS				IAML_P			
	comp=Z,2μm,0.2s						
SKIA	Skiathos	4.48	346	P	Pn	18 46 02.7	+1.6
ELL	Elmali	4.54	63	PN	Pn	18 46 03.7	+1.7
AGG	Agios Georgios	4.66	335	PN	Pn	18 46 05.3	+1.7
AKUM	Antalya-Kumluc	4.72	70	*i* P	Pn	18 46 05.4	+1.0
KULA	Kula-Manisa	4.79	39	PN	Pn	18 46 07.5	+2.0
KORT	Korkueli	4.96	62	PN	Pn	18 46 10.3	+2.4
BCK	Bucak	5.33	59	PN	Pn	18 46 15.3	+2.3
KEPZ	Antalya-Kepez	5.86	67	*i* P	Pn	18 46 21.2	+1.1
KEPZ				IAML_P			
	comp=Z,242nm,0.2s						
VAY	Valandovo	6.74	345	*i* P	Pn	18 46 37.4	+5.3
OHR	Ohrid	7.05	334	*i* P	Pn	18 46 39.1	+2.6
BRTR	Keskin Array B	8.54	52	Pn	Pn	18 46 58.6	+1.6
	comp=Z,0.1nm,0.3s,baz=216,slow=12,SNR=3.6						
BRTR				Sn	Sn	18 48 31.6	-0.8
	comp=Z,0.2nm,0.3s,baz=266,slow=28,SNR=4.5						
MMAI	Mount Meron Ar	8.95	99	Pn	Pn	18 47 01.9	-0.7
	comp=Z,3.3nm,0.3s,baz=263,slow=10.0,SNR=9.3						
MMAI				Sn	Sn	18 48 37.4	-5.0
	comp=Z,1.8nm,0.3s,baz=277,slow=25,SNR=3.6						
EIL	Elat	9.97	118	Pn	Pn	18 47 15.1	-1.5
	comp=Z,0.9nm,0.3s,baz=339,slow=6.1,SNR=11						
EIL				Sn	Sn	18 48 59.7	-7.6
	comp=Z,0.9nm,0.3s,baz=236,slow=1.3,SNR=7.5						
MLR	Muntele Rosu	10.69	4	Pn	Pn	18 47 31.3	+4.9
	comp=Z,0.1nm,0.3s,baz=204,slow=7.6,SNR=5.9						
MLR				LR	LR	18 51 21.8	
	comp=Z,146nm,20.2s,baz=306,slow=36						
AKASG	Malin Array Be	16.19	10	Pn	Pn	18 48 39.7	-0.7
	comp=Z,3.0nm,0.3s,baz=202,slow=10,SNR=12						
GERES	GERESS Array B	16.27	333	Pn	P	18 48 44.6	+0.2
	comp=Z,0.4nm,0.3s,baz=144,slow=12,SNR=18						
KBZ	Khabaz	16.54	52	Pn	P	18 48 49.0	+1.8
	comp=Z,0.2nm,0.3s,baz=246,slow=9.0,SNR=6.9						
HFS	Hagfors	26.35	347	P	P	18 50 26.6	-1.8
	comp=Z,0.7nm,0.4s,baz=138,slow=14,SNR=4.1						
FINES	FINESS Array B	26.65	1	P	P	18 50 28.5	-2.6
	comp=Z,0.9nm,0.7s,baz=169,slow=10,SNR=6.3						
NOA	NORSAR Array B	27.66	346	P	P	18 50 35.3	-5.0
	comp=Z,0.3nm,0.6s,baz=156,slow=11,SNR=2.5						
EKA	Eskdalemuir Ar	28.18	325	P	P	18 50 47.3	+2.5
	comp=Z,0.2nm,0.3s,baz=116,slow=8.2,SNR=6.5						
TORD	Torodi Ar. Bea	30.08	230	P	P	18 51 02.3	+0.2
	comp=Z,0.7nm,0.6s,baz=28,slow=9.5,SNR=11						
ARCES	ARCESS Array B	34.77	0	P	P	18 51 40.1	-2.5
	comp=Z,1.0nm,0.5s,baz=172,slow=9.8,SNR=7.0						
MKAR	Makanchi Array	44.17	56	P	P	18 53 01.1	-0.2
	comp=Z,0.5nm,0.4s,baz=269,slow=7.5,SNR=7.6						
ZALV	Zalesovo Beam	45.42	46	P	P	18 53 10.6	-0.4
	comp=Z,0.4nm,0.5s,baz=250,slow=12,SNR=2.2						
SONM	Songino Array	59.89	50	P	P	18 54 57.9	-0.5
	comp=Z,0.2nm,0.4s,baz=230,slow=3.6,SNR=2.6						

MAN 15 19:02:55.2,13°.32N×120°.71E,h28^{km},mb3.5,ML3.2, MS1.6,1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.30	53	⇓*e*P	Pn	19 03 04.2	+0.5
PGP				*i* S	Sn	19 03 10.9	+1.7
SJMP	San Jose	0.95	155	*e*P	Pn	19 03 12.0	-0.7
SJMP				*e*S	Sn	19 03 25.9	+0.6

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*NEIC **15** 19:03:20.7±0.0,61°.55N×141°.04W,h14^{km},ML3.0(AEIC), ML3.2(OTT),After AEIC.*

PGC 15 19:03:22.1,61°.57N×141°.09W,h5^{km},ML3.2/11,211km Wnw of Haines Jct., Yt Southern Alaska,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.24	28	P	Pg	19 03 26.5	-0.4
YUK2				S	Sg	19 03 30.4	+0.2
YUK3	Moose Creek	0.36	55	P	Pg	19 03 28.5	-0.7
YUK3				S	Sg	19 03 33.5	-0.4
YUK1	Sand Pete Hill	0.64	24	P	Pg	19 03 33.4	-1.0
YUK1				S	Sg	19 03 41.9	-0.8
BALM	Baldy	0.81	229	*e*Pg	Pg	19 03 36.0	-1.6
BALM	Baldy	0.81	229	P	Pg	19 03 36.2	-1.4
BALM				S	Sg	19 03 47.4	-0.8
BVCY	Beaver Creek	0.85	7	P	Pg	19 03 37.5	-0.9
BVCY				S	Sg	19 03 49.4	-0.1
KIAG	Kiagna River	0.90	224	P	Pg	19 03 37.5	-1.7
KIAG				S	Sg	19 03 50.8	-0.1
TABL	Table Mountain	1.14	181	P	Pg	19 03 42.1	-1.7
TABL				S	Sg	19 03 57.1	-1.4
YUK4	Talbot Arm	1.19	100	P	Pg	19 03 43.5	-1.4
YUK4				S	Sb	19 04 00.7	-0.3
SAMH	Samovar Hills	1.45	174	Pn	Pn	19 03 48.4	-0.7
SAMH				Sg	Sb	19 04 08.0	-0.5
YUK6	Outpost Mounta	1.46	114	Pn	Pn	19 03 47.8	-1.5
YUK6				Sg	Sb	19 04 07.3	-1.4
MESA	MESA	1.46	197	Pn	Pn	19 03 48.6	-0.6
MESA				Sg	Sb	19 04 08.4	-0.3
CHX	Chaix Hills	1.51	181	*e*Pn	Pn	19 03 49.8	-0.1
PCA	Pinnacle	1.53	164	*e*Pn	Pn	19 03 49.5	-0.6
PCA	Pinnacle	1.53	164	Pn	Pn	19 03 49.6	-0.6
PCA				Sg	Sn	19 04 09.8	-0.7
BCA3	Beaver Creek A	1.54	348	*e*Pn	Pn	19 03 49.4	-0.8
YUK5	Granite Creek	1.62	104	Pn	Pn	19 03 50.2	-1.2
YUK5				Sg	Sn	19 04 11.8	-0.9
YUK7	Dusty Glacier	1.77	125	Pn	Pn	19 03 53.3	-0.3
YUK7				Sg	Sb	19 04 17.6	-0.1
MENT	Mentasta	1.84	319	*e*Pn	Pn	19 03 52.9	-1.5
HYT	Haines Junctio	1.89	112	*e*Pn	Pn	19 03 51.9	-3.2
HYT	Haines Junctio	1.89	112	Pn	Pn	19 03 54.6	-0.5
HYT				Sg	Sn	19 04 19.9	+0.6
HMT	Hamilton	1.98	233	*e*Pn	Pn	19 03 56.6	+0.3
PNL	Peninsula	2.08	156	*e*Pn	Pn	19 03 57.1	-0.6
PNL	Peninsula	2.08	156	Pn	Pn	19 03 57.9	+0.3
PNL				Sg	Sb	19 04 26.4	-0.1
RAGM	Ragged Mountai	2.12	237	*e*Pn	Pn	19 03 57.2	-1.0
SGAM	Sherman Glacie	2.27	244	*e*Pg	Pn	19 04 00.7	+0.4
PAX	Paxson	2.48	306	*e*Pn	Pn	19 04 00.8	-2.4
PAX	Paxson	2.48	306	Pg	Pb	19 04 05.6	-1.6
PAX				Sg	Sb	19 04 39.6	+1.5
EYAK	Cordova Ski Ar	2.49	248	*e*Pn	Pn	19 04 01.7	-1.5
DOT	Dot Lake	2.50	328	*e*Pn	Pn	19 04 02.2	-1.1
DOT	Dot Lake	2.50	328	Pn	Pn	19 04 02.9	-0.5
DOT				Pg	Pb	19 04 07.7	+0.3
DOT				Sg	Sb	19 04 40.3	+1.8
DAWY	Dawson	2.62	17	*e*Pn	Pn	19 04 03.7	-1.4
DAWY	Dawson	2.62	17	Pn	Pn	19 04 04.7	-0.4
DAWY				Sg	Sb	19 04 43.0	+1.0
JPK	Jack Peak	2.71	261	*e*Pg	Pn	19 04 08.3	+2.0
FID	Port Fidalgo	2.74	255	*e*Pn	Pn	19 04 06.0	-0.6
FID				*e*Pg	Pb	19 04 09.4	-2.1
SCRK	Sand Creek	2.76	332	*e*Pn	Pn	19 04 05.7	-1.3
SCM	Sheep Creek Mo	2.99	278	*e*Pn	Pn	19 04 09.9	-0.2
GLI	Glacier Island	2.99	259	*e*Pn	Pn	19 04 08.9	-1.1
PLBC	Pleasant Camp	3.15	130	Pn	Pn	19 04 12.6	+0.3
PLBC				Pg	Pb	19 04 18.0	-0.6
PLBC				Sg	Sb	19 04 59.9	+2.6
EGAK	Eagle	3.22	359	*e*Pn	Pn	19 04 12.9	-0.4
DHY	Denali Highway	3.30	300	*e*Pn	Pn	19 04 14.7	+0.1
KNK	Knik Glacier	3.54	271	*e*Pn	Pn	19 04 16.4	-1.3
SKAG	Skagway	3.55	124	*e*Pn	Pn	19 04 15.7	-2.0
PMR	Palmer	3.85	274	*e*Pn	Pn	19 04 21.0	-0.9
HDA	Harding Lake	3.91	319	*e*Pn	Pn	19 04 22.0	-0.6
RND	Reindeer	4.05	300	*e*Pn	Pn	19 04 27.3	+2.6
ILB	Eielson Array	4.15	323	*e*Pn	Pn	19 04 25.5	-0.5
RC01	Rabbit Creek A	4.20	267	*e*Pn	Pn	19 04 26.0	-0.6
MCK	McKinley	4.22	304	*e*Pn	Pn	19 04 24.8	-2.2
WRH	Wood River Hil	4.32	315	*e*Pn	Pn	19 04 25.9	-2.4
BESE	Bessie Mountai	4.33	131	*e*Pn	Pn	19 04 25.8	-2.8
BESE	Bessie Mountai	4.33	131	Pn	Pn	19 04 27.8	-0.7
BESE				Sg	Sg	19 05 36.4	-4.6
CCB	Clear Creek Bu	4.34	318	*e*Pn	Pn	19 04 27.1	-1.5
PRP	Porcupine Dome	4.43	335	*e*Pn	Pn	19 04 29.0	-1.0
BWN	Browne	4.64	308	*e*Pn	Pn	19 04 28.7	-4.0
JIS	Juneau Island	4.72	131	*e*Pn	Pn	19 04 31.0	-2.8
KTH	Kantishna Hill	4.97	298	*e*Pn	Pn	19 04 36.6	-0.7
EPYK	Eagle Plains	5.19	20	*e*Pn	Pn	19 04 39.5	-0.8
BPAW	Bear Paw Mtn.	5.20	304	*e*Pn	Pn	19 04 41.3	+0.9
CNPM	China Poot	5.41	252	*e*Pn	Pn	19 04 43.9	+0.5
BM3	Burnt Mountain	6.07	347	*e*Pn	Pn	19 04 52.9	+0.6
DLBC	Dease Lake	6.37	115	Sg	Sg	19 06 38.3	-8.2
COLD	Coldfoot	6.91	329	Pn	Pn	19 05 02.7	-1.2

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*ISCJB **15** 19:09:52.7±0.4,61°.57N±0°.01×140°.98W±0°.04,h9^{km}±3^{km}, mb3.7/14,Error ellipse: s-maj=2.9km s-min=2.4km az=170.9*

*NEIC **15** 19:09:52.8±0.0,61°.54N×141°.03W,h8^{km},ML3.9(AEIC), After AEIC.*

*AEIC **15** 19:09:52.8,61°.54N×141°.03W,h8^{km},ML3.9*

*IDC **15** 19:09:53.0±0.6,61°.67N×140°.97W,h0^{km},mb3.8/15, mb1 4.0/21,mb1mx3.9/48,mbtmp3.8/21,ML3.4/5,Error ellipse: s-maj=13.0km s-min=8.8km az=36.0*

*PGC **15** 19:09:54.2±0.0,61°.56N×141°.06W,h1^{km},ML4.0/11, 209km Wnw of Haines Jct., Yt Southern Alaska*

ISC 15 19:09:53.0±1.0,**61°.55N**±0°.02×**141°.04W**±0°.02,**h5**^{km}±7^{km}, **n132,**σ1§**55**/160,**mb3.8**/14,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.25	22	P	Pg	19 09 58.4	+0.4
YUK2				S	Sg	19 10 02.2	+0.9
YUK3	Moose Creek	0.36	51	P	Pg	19 10 00.4	+0.4
YUK3				S	Sg	19 10 05.5	+0.8
YUK1	Sand Pete Hill	0.65	22	P	Pg	19 10 05.3	-0.2
YUK1				S	Sg	19 10 14.1	+0.1
BALM	Baldy	0.82	231	*e*Pg	Pg	19 10 07.9	-0.7
BALM	Baldy	0.82	231	P	Pg	19 10 08.2	-0.5
BALM				S	Sb	19 10 19.4	-1.6
BVCY	Beaver Creek	0.87	6	P	Pg	19 10 09.5	-0.1
BVCY				S	Sg	19 10 20.9	0.0
KIAG	Kiagna River	0.90	226	P	Pg	19 10 09.5	-0.7
KIAG				S	Sg	19 10 21.8	-0.1
TABL	Table Mountain	1.12	183	P	Pb	19 10 14.1	-0.8
TABL				S	Sb	19 10 29.6	-0.1
YUK4	Talbot Arm	1.17	99	P	Pg	19 10 15.5	+0.1
YUK4				S	Sn	19 10 34.0	+1.4
YUK6	Outpost Mounta	1.43	114	Pn	Pn	19 10 19.7	-0.1
YUK6				Sg	Sg	19 10 38.7	-0.3
SAMH	Samovar Hills	1.43	175	Pn	Pb	19 10 20.5	+0.3
SAMH				Sg	Sn	19 10 39.7	+0.8
MESA	MESA	1.45	198	Pn	Pb	19 10 20.7	+0.2
MESA				Sg	Sn	19 10 39.7	+0.3
CHX	Chaix Hills	1.50	181	*e*Pn	Pb	19 10 21.6	+0.4
PCA	Pinnacle	1.51	165	*e*Pn	Pg	19 10 21.3	-0.7
PCA	Pinnacle	1.51	165	Pn	Pg	19 10 21.6	-0.4
PCA				Sg	Sn	19 10 42.3	+1.5
BCA3	Beaver Creek A	1.56	347	*e*Pn	Pn	19 10 21.6	+0.3
YUK5	Granite Creek	1.59	104	Pn	Pn	19 10 22.0	+0.1
YUK5				Sg	Sb	19 10 43.6	+0.3
YUK7	Dusty Glacier	1.75	125	Pn	Pb	19 10 25.1	-0.4
YUK7				Sg	Sg	19 10 48.7	-0.4
HYT	Haines Junctio	1.86	112	*e*Pn	Pn	19 10 26.1	+0.5
HYT	Haines Junctio	1.86	112	Pn	Pn	19 10 26.4	+0.7
HYT				Sg	Sb	19 10 51.6	+0.4
MENT	Mentasta	1.87	319	*e*Pn	Pn	19 10 26.5	+0.8
HMT	Hamilton	1.99	234	*e*Pn	Pb	19 10 28.7	-0.9
PNL	Peninsula	2.06	156	*e*Pn	Pb	19 10 29.7	-1.1
PNL	Peninsula	2.06	156	Pn	Pb	19 10 29.9	-0.9
PNL				Sg	Sg	19 10 58.5	-0.6
RAGM	Ragged Mountai	2.12	238	*e*Pn	Pb	19 10 31.1	-0.8
YKU2	Yakutat	2.16	161	*e*Pn	Pb	19 10 31.9	-0.6
SGAM	Sherman Glacie	2.29	244	*e*Pn	Pb	19 10 33.8	-0.9
EYAK	Cordova Ski Ar	2.50	248	*e*Pn	Pb	19 10 36.8	-1.6
PAX	Paxson	2.51	306	*e*Pn	Pb	19 10 36.8	-1.7
PAX	Paxson	2.51	306	Pn	Pn	19 10 36.5	+2.0
PAX				Sg	Sb	19 11 10.8	+1.1
DOT	Dot Lake	2.52	328	*e*Pn	Pn	19 10 34.5	-0.1
DOT	Dot Lake	2.52	328	Pn	Pn	19 10 34.7	+0.1
DOT				Pg	Pb	19 10 39.8	+1.0
DOT				Sg	Sb	19 11 11.4	+1.3
DAWY	Dawson	2.63	16	*e*Pn	Pn	19 10 36.4	+0.3
DAWY	Dawson	2.63	16	Pn	Pn	19 10 36.6	+0.5
DAWY				Sg	Sb	19 11 14.9	+1.7
JPK	Jack Peak	2.73	262	*e*Pn	Pb	19 10 39.9	-2.3
FID	Port Fidalgo	2.76	255	*e*Pn	Pb	19 10 41.1	-1.6
FID				*e*Pn	Pn	19 10 41.2	+3.5
SCRK	Sand Creek	2.78	332	*e*Pn	Pn	19 10 38.2	0.0
RIDG	Independent Ri	2.81	323	*e*Pn	Pn	19 10 38.7	+0.1
GLI	Glacier Island	3.01	260	*e*Pn	Pn	19 10 43.1	+1.9
SCM	Sheep Creek Mo	3.01	278	*e*Pn	Pn	19 10 43.9	+2.6
PLBC	Pleasant Camp	3.13	130	Pn	Pn	19 10 44.4	+1.6
PLBC				Sg	Sg	19 11 31.8	-1.5
EGAK	Eagle	3.24	359	*e*Pn	Pn	19 10 45.0	+0.7
DHY	Denali Highway	3.33	300	*e*Pn	Pn	19 10 48.3	+2.6
SML	Sawmill	3.48	277	*e*Pn	Pn	19 10 50.1	+2.3
SKAG	Skagway	3.52	124	*e*Pn	Pn	19 10 50.2	+2.0
KNK	Knik Glacier	3.56	271	*e*Pn	Pn	19 10 51.8	+3.0
PMR	Palmer	3.87	274	*e*Pn	Pn	19 10 55.6	+2.6
HDA	Harding Lake	3.93	319	*e*Pn	Pn	19 10 53.3	-0.7
HDA	Harding Lake	3.93	319	P	Pn	19 10 53.4	-0.5
	baz=134						
RND	Reindeer	4.07	301	*e*Pn	Pn	19 10 59.7	+3.8
ILAR	Eielson Array	4.18	323	Pn	Pn	19 10 55.9	-1.3
	2.3nm,0.3s,baz=145,slow=13,SNR=44						
ILAR				Lg	Lg	19 12 03.5	
	17nm,0.3s,baz=154,slow=21,SNR=6.3						
ILB	Eielson Array	4.18	323	*e*Pn	Pn	19 10 56.4	-0.9
RC01	Rabbit Creek A	4.22	267	*e*Pn	Pn	19 11 00.2	+2.3
MCK	McKinley	4.25	304	*e*Pn	Pn	19 11 00.5	+2.3
BESE	Bessie Mountai	4.30	131	*e*Pn	Pn	19 10 59.9	+0.8
BESE	Bessie Mountai	4.30	131	Pn	Pn	19 11 00.1	+1.1
BESE				Sg	Sg	19 12 08.2	-2.8
WRH	Wood River Hil	4.35	315	*e*Pn	Pn	19 11 00.7	+1.1
SEW	Seward	4.37	254	*e*Pn	Pn	19 11 01.2	+1.4
CCB	Clear Creek Bu	4.37	318	*e*Pn	Pn	19 10 58.8	-1.0
PRP	Porcupine Dome	4.46	335	*e*Pn	Pn	19 11 01.4	+0.2
COLA	College	4.54	320	*e*Pn	Pn	19 11 03.1	+0.9
TCOL	CIGO, UAF Yank	4.54	320	P	Pn	19 11 02.1	-0.1
	baz=134						
POKR	Poker Plat Res	4.59	324	P	Pn	19 11 02.5	-0.5
	baz=138						
POKR				S	Sn	19 11 56.3	-0.3
	baz=138						
BWN	Browne	4.67	308	*e*Pn	Pn	19 11 06.5	+2.5
JIS	Juneau Island	4.69	132	*e*Pn	Pn	19 11 05.2	+0.9
MDM	Murphy Dome	4.71	320	*e*Pn	Pn	19 11 05.9	+1.2
KTH	Kantishna Hill	4.99	298	*e*Pn	Pn	19 11 11.7	+3.2
SKT	Skwentna	5.00	280	*e*Pn	Pn	19 11 10.4	+1.8
BRLK	Bradley Lake	5.16	254	*e*Pn	Pn	19 11 12.3	+1.5
EPYK	Eagle Plains	5.20	20	*e*Pn	Pn	19 11 12.6	+1.3
EPYK	Eagle Plains	5.20	20	P	Pn	19 11 11.0	-0.3
	baz=203						
EPYK				S	Sn	19 12 10.9	-0.6
	baz=203						
BPAW	Bear Paw Mtn.	5.22	304	*e*Pn	Pn	19 11 14.2	+2.5
SPU	Mount Spurr	5.31	271	*e*Pn	Pn	19 11 16.2	+3.3
FYU	Fort Yukon	5.36	342	*e*Pn	Pn	19 11 14.7	+1.3
SIT	Sitka	5.38	144	*e*Pn	Pn	19 11 19.0	+5.3
PPLA	Purkeypile	5.39	289	*e*Pn	Pn	19 11 15.8	+1.8
CNPM	China Poot	5.43	253	*e*Pn	Pn	19 11 15.8	+1.4
CAST	Castle Rocks	5.45	295	*e*Pn	Pn	19 11 16.6	+1.9
HOM	Homer	5.56	255	*e*Pn	Pn	19 11 17.5	+1.3
MLY	Manley	5.59	313	*e*Pn	Pn	19 11 17.6	+0.9
RSO	Redoubt South	5.80	264	*e*Pn	Pn	19 11 17.6	-2.2
DLBC	Dease Lake	6.35	115	Pn	Pn	19 11 28.2	+1.1
	0.5nm,0.3s,baz=302,slow=15,SNR=5.2						
DLBC				Lg	Lg	19 13 13.6	
	1.9nm,0.3s,baz=33,slow=24,SNR=5.9						
DLBC	Dease Lake	6.35	115	*e*Pn	Pn	19 11 28.0	+0.9
DLBC	Dease Lake	6.35	115	Pn	Pn	19 11 29.1	+2.0
DLBC				Sg	Sg	19 13 12.7	-3.8
WRAK	Wrangell Islan	6.83	135	*e*Pn	Pn	19 11 34.2	+0.5
COLD	Coldfoot	6.94	329	*e*Pn	Pn	19 11 35.9	+0.8
COLD	Coldfoot	6.94	329	Pn	Pn	19 11 35.9	+0.8
COLD				Sn	Sn	19 12 50.3	-3.9
KDAK	Kodiak Island	6.96	242	Pn	Pn	19 11 36.0	+0.6
	4.2nm,0.3s,baz=55,slow=8.7,SNR=90						
KDAK				Sn	Sn	19 12 54.6	-0.2
	1.2nm,0.3s,baz=281,slow=24,SNR=5.6						
KDAK	Kodiak Island	6.96	242	*e*Pn	Pn	19 11 36.6	+1.2
KDAK				*e*		19 11 36.7	
SVW2	Sparrevohn	7.01	273	*e*Pn	Pn	19 11 34.0	-2.1
TTA	Tatalina	7.13	288	*e*Pn	Pn	19 11 38.1	+0.4
INK	Inuvik	7.49	22	Pn	Pn	19 11 41.4	-1.3
	0.9nm,0.3s,baz=219,slow=19,SNR=8.7						
INK				Sn	Sn	19 13 02.5	-5.3
	2.9nm,0.3s,baz=194,slow=15,SNR=3.6						
INK				Lg	Lg	19 13 48.5	
	2.4nm,0.3s,baz=297,slow=16,SNR=3.7						
INK	Inuvik	7.49	22	*e*Pn	Pn	19 11 41.1	-1.5
INK	Inuvik	7.49	22	Pn	Pn	19 11 43.1	+0.5
OHAK	Old Harbor	7.61	241	*e*Pn	Pn	19 11 45.0	+0.7
TOLK	Toolik Lake Re	7.96	337	*e*Pn	Pn	19 11 50.0	+0.8
TOLK	Toolik Lake Re	7.96	337	P	Pn	19 11 49.1	-0.1
	baz=149						
TOLK				S	Sn	19 13 20.0	+0.4
	baz=149						
SII	Sitkinak Islan	8.41	239	*e*Pn	Pn	19 11 55.5	0.0
FNBB	Fort Nelson	9.35	99	Pn	Pn	19 12 08.4	+0.1
DHRN	Dharma Camp	10.80	50	Pn	Pn	19 12 27.2	-0.8
DHRN				Sn	Sn	19 14 21.8	-7.2
YKA	Yellowknife Ar	12.41	74	Pn	Pn	19 12 47.4	-2.6
	0.1nm,0.3s,baz=278,slow=13,SNR=2.7						
YKA				Lg	Lg	19 16 22.6	
	0.1nm,0.3s,baz=276,slow=30,SNR=5.0						
YKB5	Yellowknife Ar	12.41	74	*e*Pn	Pn	19 12 47.4	-2.6
NEW	Newport	18.98	124	P	Pn	19 14 17.8	+2.2
	baz=324,slow=12,SNR=3.1						
NEW				Lg	Lg	19 19 55.3	
	0.2nm,0.3s,baz=299,slow=9.6,SNR=1.9						
RES	Resolute Bay	20.85	33	P	P	19 14 34.3	-0.8
	5.0nm,1.0s,baz=240,slow=9.9,SNR=1.7						
ELK	Elko	26.06	131	P	P	19 15 28.8	+1.5
	0.6nm,0.6s,baz=333,slow=6.8,SNR=2.6						
PD31	Pinedale Array	26.54	121	*e*P	P	19 15 32.6	+1.0
PDAR	Pinedale Array	26.54	121	P	P	19 15 32.6	+1.0
	1.2nm,0.7s,baz=326,slow=7.7,SNR=12						
NV01	Mina Array Sit	27.09	138	*e*P	P	19 15 38.0	+1.5
NVAR	Mina Array Bea	27.09	138	P	P	19 15 38.0	+1.5
	0.9nm,0.8s,baz=325,slow=6.9,SNR=7.4						
EYMN	Ely	30.82	93	*e*P	P	19 16 10.6	+1.2
PEA1	Petropavlovsk-	32.94	284	*e*P	P	19 16 28.1	+0.2
PETK	Petropavlovsk-	32.94	284	P	P	19 16 28.1	+0.1
	0.9nm,0.7s,baz=144,slow=13,SNR=3.0						
NB200	NORSAR Array S	55.90	16	*e*P	P	19 19 30.9	-0.2
NOA	NORSAR Array B	55.90	16	P	P	19 19 30.9	-0.2
	0.9nm,0.8s,baz=346,slow=7.3,SNR=2.7						
FIA0	FINESS Array S	56.93	7	*e*P	P	19 19 38.6	+0.3
FINES	FINESS Array B	56.93	7	P	P	19 19 38.6	+0.3
	2.5nm,1.0s,baz=356,slow=7.2,SNR=4.0						
ZAA1	Zalesovo Array	59.26	330	*e*P	P	19 19 55.2	+0.4
ZALV	Zalesovo Beam	59.27	330	P	P	19 19 55.2	+0.4
	0.4nm,0.4s,baz=20,slow=9.9,SNR=3.1						
MK32	Makanchi Array	66.51	329	*e*P	P	19 20 43.1	0.0
MKAR	Makanchi Array	66.51	329	P	P	19 20 43.1	0.0
	0.5nm,0.7s,baz=51,slow=8.4,SNR=2.7						
AKASG	Malin Array Be	67.83	7	P	P	19 20 51.9	+0.5
	2.2nm,0.5s,baz=356,slow=6.1,SNR=16						
AKBB	Malin Array Si	67.83	7	*e*P	P	19 20 51.6	+0.2
GERES	GERESS Array B	68.10	18	P	P	19 20 54.3	+1.0
	0.2nm,0.4s,baz=0.8,slow=6.9,SNR=3.1						
ABKAR	Akbulak array	68.27	345	*e*P	P	19 20 54.5	+0.3
ESDC	Sonseca Array	73.28	33	P	P	19 21 26.0	+1.0
	0.2nm,0.3s,baz=339,slow=6.9,SNR=2.7						
KBZ	Khabaz	75.02	357	P	P	19 21 36.7	+1.7
	1.4nm,0.7s,baz=0.0,slow=6.1,SNR=3.1						
BR101	Keskin Array S	78.98	4	*e*P	P	19 21 57.5	-0.1
BRTR	Keskin Array B	78.98	4	P	P	19 21 57.5	-0.1
	0.8nm,0.9s,baz=356,slow=9.9,SNR=3.7						
CMAR	Chiang Mai Arr	87.20	305	P	P	19 22 39.8	-0.3
	0.3nm,0.6s,baz=358,slow=6.2,SNR=3.7						
VNDA	Vanda	143.16	198	PKP	PKPbc	19 29 24.4	+1.4
	0.4nm,0.8s,baz=45,slow=1.4,SNR=3.2						
VNDA	Vanda	143.16	198	*e*PKPdf	PKPbc	19 29 24.7	+1.7
BOSA	Boshof	145.82	22	PKPbc	PKPdf	19 29 30.8	-1.4
	2.9nm,0.8s,baz=63,slow=2.3,SNR=3.8						

IDC 15 19:19:12.8±5.1,**7°.12S**×**130°.01E,h177**^{km}±62^{km},**mb3.0**/1, **mb1 3.0**/4,**mb1mx2.8**/25,**mbtmp3.4**/4,**Error ellipse: s-maj=139.9km s-min=18.7km az=84.0,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.33	12	P	Pn	19 20 45.3	+1.0
	0.4nm,0.3s,baz=180,slow=20,SNR=10						
SIJI				S	Sn	19 21 56.0	-0.3
	0.5nm,0.3s,baz=197,slow=19,SNR=6.5						
WRA	Warramunga Arr	13.42	162	P	Pn	19 22 14.7	-1.8
	0.2nm,0.3s,baz=345,slow=12,SNR=8.5						
WRA				S	Sn	19 24 37.1	-8.7
	0.5nm,0.3s,baz=341,slow=22,SNR=12						
ASAR	Alice Springs	16.87	168	P	Pn	19 22 59.4	+0.6
	0.2nm,0.3s,baz=337,slow=9.9,SNR=10						
ASAR				S	S	19 25 57.8	-7.1
	0.1nm,0.3s,baz=338,slow=14,SNR=3.8						
SONM	Songino Array	58.56	342	P	P	19 28 50.7	-0.1
	0.2nm,0.4s,baz=165,slow=6.0,SNR=2.5						

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*BJI **15** 19:39:39.0±0.0,27°.99N×88°.05E,h8^{km},mb4.7/21, mB4.7/16,ML4.6/1,Ms4.1/18,Ms7 3.8/11*

*ISCJB **15** 19:39:43.7±0.4,28°.33N±0°.02×87°.66E±0°.02,h68^{km}±4^{km}, mb4.4/75,Error ellipse: s-maj=3.9km s-min=2.8km az=25.6*

*MOS **15** 19:39:44.7±1.0,28°.35N×87°.67E,h77^{km},mb4.7/19,Error ellipse: s-maj=8.2km s-min=5.1km az=105.1*

*IDC **15** 19:39:44.6±0.4,28°.44N×87°.63E,h58^{km}±2^{km},mb4.0/29, mb1 4.1/31,mb1mx4.0/55,mbtmp4.3/31,MS3.5/5, Ms1 3.6/5,ms1mx3.1/45,Error ellipse: s-maj=9.9km s-min=7.1km az=55.0*

*NEIC **15** 19:39:44.1±2.0,28°.38N×87°.60E,h52^{km}±5^{km},mb4.7/56, Error ellipse: s-maj=10.4km s-min=5.2km az=110.0*

*DMN **15** 19:39:45.2±0.4,28°.76N×87°.60E,h10^{km},Ml5.6/6,Error ellipse: s-maj=11.2km s-min=7.7km az=174.0*

*NDI **15** 19:39:45.2±6.0,28°.33N×87°.65E,h35^{km}±27^{km},ML4.7, mb4.7(NEIC)*

ISC 15 19:39:43.9±0.3,**28°.40N**±0°.03×**87°.66E**±0°.03,**h52**^{km}±2^{km}, **h52**^{km}**:pP-P,n243,**σ1§**95**/294,**mb4.5**/83,**MS3.8**/6,**4C-3D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTK	Tadong	1.36	142	*e*P	Pn	19 40 10.2	+3.5
GTK				*e*S	Sn	19 40 27.1	+3.5
GTK				IAML		19 40 30.9	
	comp=E,4μm,0.2s						
GTK				IAML		19 40 31.3	
	comp=N,4μm,0.1s						

JIRN	**Jiri**	**1.49**	**241**	ePn	**Pn**	**19 40 12.9**	**+4.3**
GUN	**Gumba**	**1.64**	**253**	ePn	**Pn**	**19 40 14.1**	**+3.4**
PKI	**Pulchoki**	**2.15**	**248**	ePn	**Pn**	**19 40 21.3**	**+3.7**
PKI				eSn	**Sn**	**19 40 47.2**	**+3.9**
	comp=N,2µm,0.3s						
PKIN	**Phulchoki**	**2.16**	**248**	ePn	**Pn**	**19 40 21.3**	**+3.6**
KKN	**Kakani**	**2.19**	**255**	ePn	**Pn**	**19 40 21.8**	**+3.8**
KKN				eSn	**Sn**	**19 40 47.7**	**+3.7**
	comp=N,6µm,0.2s						
DMN	**Daman**	**2.39**	**251**	ePn	**Pn**	**19 40 24.2**	**+3.4**
DMN				eSn	**Sn**	**19 40 52.3**	**+3.3**
	comp=N,7µm,0.5s						
GKN	**Gorkha**	**2.69**	**262**	ePn	**Pn**	**19 40 27.4**	**+2.5**
GKN				eSn	**Sn**	**19 40 57.6**	**+1.2**
	comp=N,5µm,0.2s						
LSA	**Lhasa**	**3.32**	**66**	ePn	**Pn**	**19 40 37.8**	**+4.0**
LSA	**Lhasa**	**3.32**	**66**	Pg	**Pn**	**19 40 38.0**	**+4.2**
LSA				Sg	**Sn**	**19 41 16.6**	**+4.3**
LSA				smax	smax		
	comp=N,2µm,1.1s						
LSA				smax	smax		
	comp=N,2µm,0.9s						
LSA	**Lhasa**	**3.32**	**66**	eP	**Pn**	**19 40 37.8**	**+4.0**
DANN	**Dangsing**	**3.44**	**270**	ePn	**Pn**	**19 40 36.4**	**+1.2**
DANN				eSn	**Sn**	**19 41 14.8**	**0.0**
	comp=N,9µm,0.3s						
KOLN	**Koldanda**	**3.64**	**261**	ePn	**Pn**	**19 40 39.7**	**+1.8**
KOLN				eSn	**Sn**	**19 41 21.3**	**+1.6**
	comp=N,5µm,0.3s						
TAWA	**Tawang**	**3.81**	**101**	eP	**Pn**	**19 40 43.1**	**+2.7**
TAWA				eS	**Sn**	**19 41 22.6**	**-1.4**
SHL	**Shillong**	**4.71**	**126**	eP	**Pn**	**19 40 53.0**	**+0.5**
SHL				eS	**Sn**	**19 41 42.4**	**-3.5**
SHL				IAML		19 41 46.5	
	comp=N,1µm,0.2s						
SHL				IAML		19 41 47.2	
	comp=E,1µm,0.2s						
BOK	**Bokaro**	**4.85**	**200**	eP	**Pn**	**19 40 54.5**	**+0.1**
BOK				eS	**Sn**	**19 41 46.1**	**-3.1**
BOK				IAML		19 41 49.3	
	comp=E,2µm,0.1s						
BOK				IAML		19 41 49.6	
	comp=N,1µm,0.1s						
TEZP	**TEZPUR**	**4.90**	**110**	eP	**Pn**	**19 40 55.7**	**+0.7**
TEZP				eS	**Sn**	**19 41 46.8**	**-3.6**
TEZP				IAML		19 41 50.3	
	comp=E,5µm,0.2s						
TEZP				IAML		19 41 50.7	
	comp=N,4µm,0.1s						
ZIRO	**ZIRO**	**5.54**	**98**	eP	**Pn**	**19 41 04.2**	**+0.2**
ZIRO				eS	**Sn**	**19 42 02.5**	**-4.1**
JORH	**JORHAT**	**6.08**	**104**	eP	**Pn**	**19 41 12.4**	**+1.2**
JORH				eS	**Sn**	**19 42 15.2**	**-4.2**
JORH				IAML		19 42 21.1	
	comp=E,2µm,0.2s						
JORH				IAML		19 42 27.9	
	comp=N,2µm,0.3s						
BELO	**BELONIA**	**6.16**	**145**	eP	**Pn**	**19 41 13.7**	**+1.4**
BELO				eS	**Sn**	**19 42 16.1**	**-5.3**
BELO				IAML		19 42 28.1	
	comp=E,2µm,0.2s						
BELO				IAML		19 42 29.9	
	comp=N,778nm,0.2s						
KOHI	**KOHIMA**	**6.34**	**113**	ex	**Pn**	**19 41 15.2**	**+0.4**
KOHI				ex	**Sn**	**19 42 22.9**	**-3.1**
KOHI				IAML		19 42 24.0	
	comp=N,2µm,0.4s						
KOHI				IAML		19 42 26.2	
	comp=E,3µm,0.4s						
MOKO	**MOKOCHONG**	**6.44**	**107**	eP	**Pn**	**19 41 16.9**	**+0.6**
MOKO				eS	**Sn**	**19 42 21.9**	**-6.6**
PTH	**Pithoragarh**	**6.62**	**282**	eP	**Pn**	**19 41 21.5**	**+2.7**
PTH				ex	x	19 42 32.4	
BRDH	**Bariadhala**	**6.74**	**147**	P	**Pn**	**19 41 22.1**	**+1.9**
	comp=E,52nm,0.3s,baz=270,slow=20,SNR=2.3						
BRDH				S	**Sn**	**19 42 35.5**	**-0.1**
	comp=E,134nm,0.3s,baz=270,slow=20,SNR=5.7						
DDI	**Dehra Dun**	**8.60**	**285**	eP	**Pn**	**19 41 47.9**	**+2.1**
DDI				eS	**Sn**	**19 43 16.6**	**-4.8**
NDI	**New Delhi**	**9.19**	**274**	eP	**Pn**	**19 41 52.0**	**-1.8**
NDI				eS	**Sn**	**19 43 30.0**	**-5.8**
SONA	**Sohna**	**9.32**	**272**	eP	**Pn**	**19 41 55.7**	**+0.1**
SONA				ex	x	19 43 27.8	
SONA				AML	AML	19 43 35.8	
	comp=N,339nm,0.3s						
SONA				IAML		19 43 36.9	
	comp=E,470nm,0.3s						
SIMRM	**Sittwe**	**9.51**	**149**	ePn	**Pn**	**19 41 58.6**	**+0.4**
SMLA	**Simla**	**9.52**	**289**	eP	**Pn**	**19 41 58.9**	**+0.6**
SMLA				eS	**Sn**	**19 43 36.1**	**-7.7**
SMLA				IAML		19 43 46.8	
	comp=E,705nm,0.4s						
SMLA				IAML		19 43 46.9	
	comp=N,619nm,0.5s						
BHK	**Bhakra**	**10.21**	**290**	ex	**Pn**	**19 42 08.0**	**+0.2**
BHK				ex	**Sn**	**19 44 01.6**	**+0.8**
DHRM	**DHARAMSHALA**	**10.54**	**294**	eP	**Pn**	**19 42 12.6**	**+0.1**
DHRM				eS	**Sn**	**19 44 02.5**	**-6.6**
DHRM				IAML		19 44 09.6	
	comp=N,404nm,0.5s						
DHRM				IAML		19 44 10.4	
	comp=E,458nm,0.6s						
BHPL	**Bhopal**	**10.55**	**243**	eP	**Pn**	**19 42 11.1**	**-1.3**
BHPL				eS	Sn	19 43 60.0	-9.3
BHPL				IAML		19 44 01.7	
	comp=E,277nm,0.3s						
BHPL				IAML		19 44 02.6	
	comp=N,368nm,0.2s						
NGP	**Nagpur**	**10.64**	**229**	eP	**Pn**	**19 42 12.8**	**-0.8**
NGP				ex	x	19 44 05.0	
VIS	**Vishakhapatnam**	**11.35**	**201**	i P	**Pn**	**19 42 23.2**	**-0.1**
VIS				i S	Sn	19 44 18.7	-10
CHCP	**Chirah Chowk**	**13.41**	**297**	P	**Pn**	**19 42 49.0**	**-2.5**
NIL	**Nilore**	**13.42**	**297**	ePn	**Pn**	**19 42 49.1**	**-2.5**
NIL	**Nilore**	**13.42**	**297**	eP	**Pn**	**19 42 49.1**	**-2.5**
HYB	**Hyderabad**	**13.77**	**219**	i P	Pn	19 42 51.0	-5.4
HYB				e		19 43 03.5	
HYB				eS	**Sn**	**19 45 27.0**	**-0.8**
CHTO	**Chiang Mai**	**14.06**	**130**	ePn	**Pn**	**19 42 57.4**	**-3.0**
CHTO	**Chiang Mai**	**14.06**	**130**	eP	**Pn**	**19 42 57.4**	**-3.0**
CMMT	**Chiang Mai**	**14.06**	**130**	P	**Pn**	**19 42 59.3**	**-1.1**
	comp=N,8.8nm,0.9s						
CM31	**Chiang Mai Arr**	**14.31**	**131**	eP	**Pn**	**19 43 00.6**	**-3.1**
CMAR	**Chiang Mai Arr**	**14.31**	**131**	P	**Pn**	**19 43 00.8**	**-2.9**
	comp=N,1.2nm,0.3s,baz=307,slow=13,SNR=30						
CMAR				LR	LR	19 50 35.8	
	comp=N,105nm,20.8s,baz=336,slow=45						
PAYA	**Payao**	**14.33**	**126**	P	**Pn**	**19 43 04.6**	**+0.6**
	comp=N,70µm,0.8s,comp=N,989µm						
CEP	**Cherat**	**14.53**	**296**	P	**Pn**	**19 43 03.3**	**-3.4**
KSH	**Kashi**	**14.72**	**322**	Pn	**Pn**	**19 43 06.8**	**-2.2**
KSH				Sn	Sn	19 45 38.3	-13
KSH				smax	smax		
	comp=N,93nm,0.9s						
KSH				smax	smax		
	comp=E,49nm,0.7s						
KSH	**Kashi**	**14.72**	**322**	P	**Pn**	**19 43 06.5**	**-2.5**
KSH				pP	P	19 43 09.9	-4.1
KSH				sP		19 43 14.5	
KSH				S	Sn	19 45 39.0	-12
KSH				pmax	pmax		
	comp=Z,38nm,0.8s						
KSH				pmax	pmax		
	comp=Z,190nm,3.8s						
KSH				LR	LR		
	comp=N,170nm,11.2s						
KSH				LR	LR		
	comp=E,180nm,7.1s						
GTA	**Gaotai**	**14.90**	**39**	⇑P	**Pn**	**19 43 09.6**	**-1.9**
GTA				pP	P	19 43 14.4	-1.7
GTA				sP		19 43 16.8	
GTA				pmax	pmax		
	comp=E,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=E,99nm,7.0s						
GTA				LR	LR		
	comp=E,220nm,17.1s						
GTA				LR	LR		
	comp=E,220nm,15.5s						
PHRA	**Phrae**	**15.16**	**128**	P	**Pn**	**19 43 16.5**	**+1.8**
	comp=E,3.8nm,1.2s						
WMQ	**Urumqi**	**15.39**	**0**	ePn	**Pn**	**19 43 19.0**	**+1.3**
	comp=E,17nm,1.0s						
WMQ	**Urumqi**	**15.39**	**0**	eP	P	19 43 31.4	+10
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,97nm,4.5s						
WMQ				smax	smax		
	comp=N,12nm,1.3s						
WMQ				smax	smax		
	comp=E,14nm,0.9s						
WMQ				LR	LR		
	comp=N,230nm,27.3s						
WMQ				LR	LR		
	comp=E,190nm,28.9s						
WMQ				LR	LR		
	comp=Z,23nm,19.3s						
WMQ	**Urumqi**	**15.39**	**0**	eP	**Pn**	**19 43 19.0**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH	**Lanzhou**	**15.68**	**57**	⇓P	**Pn**	**19 43 20.9**	**-0.7**
LZH				pP	P	19 43 23.4	-1.4
LZH				sP	pP	19 43 25.8	-12
LZH				eS	**Sn**	**19 46 15.3**	**+0.9**
LZH				eSS	**SnSn**	**19 46 34.8**	**+7.0**
LZH				pmax	pmax		
	comp=Z,69nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,4.2s						
LZH				LR	LR		
	comp=Z,480nm,10.5s						
LZH				LR	LR		
	comp=Z,540nm,13.2s						
UTTA	**Uttaradit**	**15.90**	**129**	P	**Pn**	**19 43 25.0**	**+0.8**
	comp=Z,40µm,1.0s,comp=Z,360µm						
PRZ	**Przheval'sk**	**15.94**	**334**	eP	**P**	**19 43 26.2**	**-1.4**
	comp=Z,70nm,0.9s						
PRZ	**Przheval'sk**	**15.94**	**334**	eP	**P**	**19 43 26.2**	**-1.4**
PRZ				pmax	pmax		
	comp=Z,70nm,0.9s						
UMPA	**Umpang Tak**	**15.94**	**137**	P	**P**	**19 43 30.6**	**+3.0**
NRN	**Naryn**	**16.12**	**327**	eP	**Pn**	**19 43 28.2**	**+0.9**
	comp=Z,33nm,1.0s						
KDJ	**Kajisay**	**16.14**	**331**	ePn	**Pn**	**19 43 28.1**	**+0.8**
	comp=Z,28nm,0.8s						
KDJ	**Kajisay**	**16.14**	**331**	eP	**Pn**	**19 43 28.1**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,28nm,0.8s						
PDGK	**Podgornoye**	**16.29**	**338**	P	**Pn**	**19 43 28.9**	**-0.4**
PDGK				pmax	pmax		
	comp=Z,61nm,0.8s						
SLVN	**Son La**	**16.32**	**112**	eP	**P**	**19 43 32.0**	**+0.1**
	comp=Z,20nm,1.6s						
BOM	**Bombay**	**16.55**	**238**	eP	**P**	**19 43 36.7**	**+2.4**
BOM				eS	**Sn**	**19 46 33.9**	**-1.4**
ULHL	**Ulahol**	**16.64**	**329**	P	**P**	**19 43 35.8**	**+0.3**
	SNR=72						
KZA	**Kyzart**	**16.98**	**327**	P	**P**	**19 43 42.1**	**+2.8**
	SNR=51						
PBKT	**Sadao Pong**	**17.00**	**131**	P	**Pn**	**19 43 38.5**	**+0.3**
	comp=Z,52nm,1.0s						
KBL	**Kabul**	**17.01**	**296**	ePn	**Pn**	**19 43 36.2**	**-2.2**
	comp=Z,62nm,1.1s						
KBL	**Kabul**	**17.01**	**296**	eP	**Pn**	**19 43 36.2**	**-2.2**
KBL				pmax	pmax		
	comp=Z,62nm,1.1s						
UCH	**Uchtor**	**17.45**	**326**	P	**P**	**19 43 48.3**	**+3.6**
	SNR=6.6						
TKM2	**Tokmak 2**	**17.47**	**329**	P	**P**	**19 43 44.4**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,28nm,0.8s						
TKM2	**Tokmak 2**	**17.47**	**329**	P	**P**	**19 43 45.1**	**+0.6**
	SNR=63						
NONG	**Nongkai**	**17.54**	**123**	P	**P**	**19 43 46.0**	**+0.7**
	comp=Z,0.9nm,1.1s						
KBK	**Karagaybulak**	**17.56**	**327**	P	**P**	**19 43 49.7**	**+4.1**
	SNR=11						
SRDT	**SRDT**	**17.57**	**140**	P	**P**	**19 43 46.8**	**+1.2**
	comp=Z,33nm,1.1s						
ARSB	**Arslanbob**	**17.61**	**321**	eP	**Pn**	**19 43 45.1**	**-0.6**
	comp=Z,116nm,1.3s						
AAK	**Ala-Archa**	**17.77**	**327**	P	**P**	**19 43 48.9**	**+1.1**
	comp=Z,1.6nm,0.3s,baz=136,slow=8.8,SNR=28						
AAK				S	**Sn**	**19 47 02.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=171,slow=19,SNR=2.5						
AAK	**Ala-Archa**	**17.77**	**327**	eP	**P**	**19 43 48.1**	**+0.3**
	comp=Z,27nm,1.0s						
AAK	**Ala-Archa**	**17.77**	**327**	P	**P**	**19 43 50.5**	**+2.7**
	SNR=14						
FRU1	**Bishkek**	**17.83**	**327**	eP	**P**	**19 43 49.1**	**+0.6**
	comp=Z,35nm,0.9s						
GAR	**Garm**	**17.86**	**311**	eP	**Pn**	**19 43 46.0**	**-2.7**
	comp=Z,90nm,1.2s						
GAR	**Garm**	**17.86**	**311**	eP	**Pn**	**19 43 46.1**	**-2.7**
GAR				pmax	pmax		
	comp=Z,90nm,1.2s						
CHMS	**Chumysh**	**17.92**	**328**	P	**P**	**19 43 51.4**	**+2.0**
	SNR=9.1						
BTK	**Batken**	**18.11**	**314**	eP	**P**	**19 43 49.5**	**-2.0**
	comp=Z,64nm,0.4s						
BTK	**Batken**	**18.11**	**314**	eP	**P**	**19 43 49.6**	**-2.0**
BTK				pmax	pmax		
	comp=Z,64nm,0.4s						
EKS2	**Erkin-Say**	**18.14**	**325**	P	**Pn**	**19 43 55.4**	**+3.3**
	SNR=15						
CHAI	**Chaiyaphum**	**18.16**	**130**	P	**Pn**	**19 43 53.5**	**+1.1**
	comp=Z,76µm,0.9s,comp=Z,719µm						
USP	**Ospenovka**	**18.24**	**328**	P	**Pn**	**19 43 55.7**	**+2.5**
	SNR=13						
CHGR	**Chuyangaron**	**18.48**	**308**	epP	pP	19 44 10.6	+1.8
MK31	**Makanchi Array**	**18.84**	**349**	eP	**Pn**	**19 44 00.7**	**+0.2**
	comp=Z,13nm,0.8s						
MK31	**Makanchi Array**	**18.84**	**349**	eP	**Pn**	**19 44 00.7**	**+0.2**
MK31				pmax	pmax		
	comp=Z,13nm,0.8s						
MK32	**Makanchi Array**	**18.84**	**349**	eP	**Pn**	**19 44 00.3**	**-0.1**
MK32				eS	**Sn**	**19 47 25.9**	**-4.6**
MKAR	**Makanchi Array**	**18.84**	**349**	P	**Pn**	**19 44 00.3**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=167,slow=12,SNR=74						
MKAR				S	**Sn**	**19 47 25.9**	**-4.6**
	baz=179,slow=8.5,SNR=2.1						
SKNT	**Sakolnakorn**	**18.84**	**124**	P	**Pn**	**19 44 00.3**	**-0.4**
	comp=Z,49nm,1.0s						
MAKZ	**Makanchi**	**18.91**	**348**	eP	**Pn**	**19 44 01.4**	**+0.1**
	comp=Z,17nm,1.0s						
MAKZ	**Makanchi**	**18.91**	**348**	P	**Pn**	**19 44 01.1**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,18nm,1.1s						
XAN	**Xi'an**	**19.02**	**67**	eP	**P**	**19 44 00.8**	**-0.8**
	comp=Z,27nm,0.9s						
XAN	**Xi'an**	**19.02**	**67**	P	**P**	**19 44 00.8**	**-0.8**
XAN				pP	pP	19 44 10.1	-4.5
XAN				S	S	19 47 23.3	-12
XAN				sS	Sn	19 47 38.1	+3.0
XAN				pmax	pmax		
	comp=Z,30nm,0.9s						
XAN				pmax	pmax		
	comp=Z,84nm,4.3s						
XAN				LR	LR		
	comp=Z,530nm,13.3s						
XAN				LR	LR		
	comp=Z,290nm,13.3s						
XAN	**Xi'an**	**19.02**	**67**	eP	**P**	**19 44 00.8**	**-0.8**
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
PHET	**Kaeng Krachan**	**19.02**	**142**	P	**Pn**	**19 44 05.9**	**+3.1**
	comp=Z,49µm,1.1s						
ENH	**Enshi**	**19.12**	**79**	eP	**P**	**19 44 01.7**	**-1.0**
	comp=Z,60nm,1.1s						
PANO	**Nakornpanom**	**19.20**	**122**	P	**Pn**	**19 44 04.8**	**-0.1**
	comp=Z,1.6nm,1.4s,comp=Z,100nm						
KK31	**Karatay Array**	**20.17**	**321**	eP	Pn	19 44 15.3	-0.9
	comp=Z,117nm,1.9s						
KK31	**Karatay Array**	**20.17**	**321**	i P	Pn	19 44 15.7	-0.5
KK31				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KKAR	**Karatay Array**	**20.17**	**321**	eP	Pn	19 44 15.2	-1.0
	comp=Z,117nm,1.9s						
KKAR	**Karatay Array**	**20.17**	**321**	eP	Pn	19 44 15.2	-1.0
KKAR				pmax	pmax		
	comp=Z,117nm,1.9s						
CHBT	**CHBT**	**20.72**	**136**	P	Pn	19 44 27.1	+4.2
DGZ	**Jazzator, Alta**	**21.28**	**360**c	iP	**P**	**19 44 27.8**	**+1.8**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BTO	**Baotou**	**22.02**	**51**	eP	**P**	**19 44 33.9**	**-0.1**
OTUK	**Ortayu**	**23.10**	**333**	P	**P**	**19 44 46.6**	**+1.4**
OTUK				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KURBB	**Kurchatov Arra**	**23.25**	**345**	P	**P**	**19 44 47.0**	**+0.4**
	comp=Z,9.4nm,0.7s,baz=165,slow=9.6,SNR=42						
KURBB				S	**S**	**19 48 54.1**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=155,slow=16,SNR=4.2						
KURK	**Kurchatov**	**23.32**	**345**	eP	**P**	**19 44 48.1**	**+0.8**
	comp=Z,46nm,1.3s						
KURK	**Kurchatov**	**23.32**	**345**d	iP	**P**	**19 44 48.7**	**+1.5**
WHN	**Wuhan**	**23.32**	**78**	P	**P**	**19 44 47.3**	**-0.1**
WHN				S	**S**	**19 48 55.1**	**-1.1**
WHN				LR	LR		
	comp=Z,600nm,11.9s						
SONA0	**Songino Array**	**24.26**	**32**	eP	**P**	**19 44 57.4**	**+1.3**
SONA0				esP	**sP**	**19 45 18.2**	**+0.8**
SONA0				eScP	**ScP**	**19 52 07.3**	**-2.1**
SONM	**Songino Array**	**24.26**	**32**	P	**P**	**19 44 57.4**	**+1.3**
	comp=Z,15nm,0.5s,baz=219,slow=10,SNR=89						
SONM				sP	**sP**	**19 45 18.2**	**+0.8**
	comp=Z,10.0nm,0.8s,baz=221,slow=9.4,SNR=5.8						
SONM				ScP	**ScP**	**19 52 07.3**	**-2.1**
	comp=Z,1.4nm,1.0s,baz=202,slow=3.2,SNR=4.7						
ULN	**Ulaanbaatar**	**24.59**	**33**	eP	**P**	**19 44 59.7**	**+0.5**
	comp=Z,26nm,0.9s						
ULN	**Ulaanbaatar**	**24.59**	**33**c	iP	**P**	**19 44 59.9**	**+0.7**
ULN				pmax	pmax		
	comp=Z,27nm,1.0s						
ZAK	**Zakamensk**	**24.96**	**24**	eP	**P**	**19 45 03.2**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MOY	**Mondy**	**25.31**	**20**	eP	**P**	**19 45 07.6**	**+2.0**
MOY				pmax	pmax		
	comp=Z,13nm,1.9s						
ZAA0	**Zalesovo Array**	**25.62**	**356**	eP	**P**	**19 45 09.3**	**+1.1**
	comp=Z,8.8nm,1.0s						
ZALV	**Zalesovo Beam**	**25.62**	**356**	P	**P**	**19 45 09.0**	**+0.8**
	comp=Z,4.5nm,0.4s,baz=187,slow=8.0,SNR=29						
ZALV				pP	**pP**	**19 45 23.5**	**+0.5**
	comp=Z,2.1nm,0.4s,baz=187,slow=12,SNR=3.1						
ZALV				S	**S**	**19 49 29.2**	**-3.3**
	comp=Z,0.4nm,0.4s,baz=226,slow=30,SNR=2.0						
ZALV	**Zalesovo Beam**	**25.62**	**356**	i P	**P**	**19 45 09.6**	**+1.4**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZAA1	**Zalesovo Array**	**25.62**	**356**	eP	**P**	**19 45 09.0**	**+0.7**
ZAA1				epP	**pP**	**19 45 23.5**	**+0.5**
ZAA1				eS	**S**	**19 49 29.2**	**-3.4**
KULM	**Kulim**	**26.08**	**149**	eP	**P**	**19 45 13.8**	**+1.1**
	comp=Z,44nm,1.4s						
GYA0B	**ALIBECK ARRAY**	**26.40**	**299**	eP	**P**	**19 45 14.5**	**-1.1**
	comp=Z,14nm,0.9s						
IPM	**Ipoh**	**26.97**	**149**	eP	**P**	**19 45 20.1**	**-0.7**
	comp=Z,78nm,2.0s						
BVAR	**Borovoye Array**	**27.72**	**337**	P	**P**	**19 45 28.2**	**+1.0**
	comp=Z,1.5nm,0.4s,baz=147,slow=10,SNR=25						
BVAR				sP	**sP**	**19 45 49.0**	**0.0**
	comp=Z,0.9nm,0.4s,baz=142,slow=11,SNR=4.1						
BRVK	**Borovoye**	**27.79**	**337**	eP	**P**	**19 45 27.6**	**-0.2**
	comp=Z,5.8nm,0.9s						
BRVK	**Borovoye**	**27.79**	**337**	i P	**P**	**19 45 28.6**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GSI	**Gunungsitoli**	**28.56**	**159**	P	**P**	**19 45 36.1**	**+1.1**
MNSI	**Mandailing Nat**	**29.72**	**155**	P	**P**	**19 45 45.6**	**+0.3**
AB31	**Akbulak array**	**29.73**	**322**	eP	**P**	**19 45 46.7**	**+1.7**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ABKAR	**Akbulak array**	**29.73**	**322**	eP	**P**	**19 45 46.6**	**+1.6**
	comp=Z,8.2nm,0.4s						
AKTO	**Aktyubinsk**	**31.42**	**323**	P	**P**	**19 46 01.1**	**+1.1**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HIA	**Hailar**	**32.17**	**41**	eP	**P**	**19 46 06.6**	**-0.1**
	comp=Z,10nm,0.7s						
HIA	**Hailar**	**32.17**	**41**	eP	**P**	**19 46 06.6**	**-0.1**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SVE	**Sverdlovsk**	**34.24**	**334**	eP	**P**	**19 46 25.3**	**+0.8**
SVE				pmax	pmax		
	comp=Z,17nm,1.1s						
KS15	**Wonju Array Si**	**34.74**	**64**	eP	**P**	**19 46 29.3**	**+0.3**
	comp=Z,107nm,1.8s						
KSRS	**Korea Array**	**34.77**	**64**	P	**P**	**19 46 29.1**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=263,slow=9.6,SNR=5.8						
KSRS				LR	LR	20 02 09.0	
	comp=Z,50nm,18.2s,baz=250,slow=39						
ARU	**Arti**	**34.81**	**332**	eP	**P**	**19 46 30.4**	**+0.9**
	comp=Z,9.6nm,0.9s						
ARU	**Arti**	**34.81**	**332**c	iP	**P**	**19 46 30.5**	**+1.1**
ARU				S	**S**	**19 52 03.2**	**+6.9**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SBUM	**Sibu**	**34.85**	**133**	eP	**P**	**19 46 31.4**	**+1.1**
	comp=Z,8.7nm,1.4s						
AKT	**Akhty**	**34.93**	**303**	eP	**P**	**19 46 32.9**	**+2.0**
AKT				e		19 47 53.8	
AKT				pmax	pmax		
	comp=Z,13nm,1.0s						
ZEI	**Tsey**	**37.94**	**304**	eP	**P**	**19 46 58.1**	**+1.5**
NCK	**Nalchik**	**38.26**	**305**	i P	**P**	**19 46 59.7**	**+0.6**
NCK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZEA	**Zeya**	**38.38**	**38**	eP	**P**	**19 47 00.5**	**+0.6**
ZEA				pmax	pmax		
	comp=Z,19nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.56**	**54**	P	**P**	**19 47 01.9**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=258,slow=8.9,SNR=12						
USRK				pP	**pP**	**19 47 15.9**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=256,slow=9.3,SNR=1.8						
USRK				sP	**sP**	**19 47 23.4**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=236,slow=10,SNR=2.6						
NEY	**Neytrino**	**38.86**	**305**	i P	**P**	**19 47 03.4**	**-0.9**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KVAR	**Kislovodsk Arr**	**38.98**	**306**	P	**P**	**19 47 05.6**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=133,slow=19,SNR=3.2						
KIV	**Kislovodsk**	**38.98**	**306**	eP	**P**	**19 47 05.5**	**+0.3**
	comp=Z,6.6nm,0.8s						
KIV	**Kislovodsk**	**38.98**	**306**	eP	**P**	**19 47 05.5**	**+0.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KLR	**Kul'dur**	**39.46**	**46**	P	**P**	**19 47 09.1**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=269,slow=9.7,SNR=15						
KLR				pP	**pP**	**19 47 23.8**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=258,slow=7.2,SNR=3.0						
KLR	**Kul'dur**	**39.46**	**46**d	iP	**P**	**19 47 08.7**	**-0.3**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MJB9	**Matsu-Tunnel**	**43.00**	**66**	eP	**P**	**19 47 38.0**	**-0.2**
MJB9				epP	**sP**	**19 47 58.5**	**-1.6**
MAJO	**Matsushiro**	**43.01**	**66**	eP	**P**	**19 47 38.0**	**-0.3**
MAJO				epP	**sP**	**19 47 59.5**	**-0.5**
MAJO	**Matsushiro**	**43.01**	**66**	eP	**P**	**19 47 38.0**	**-0.3**
MAJO				e*PP	**sP**	**19 47 59.5**	**-0.5**
MAT	**Matsushiro**	**43.01**	**66**	P	**P**	**19 47 38.1**	**-0.2**
MJAR	**Matsushiro Arr**	**43.01**	**66**	P	**P**	**19 47 38.8**	**+0.5**
	comp=Z,4.4nm,0.7s,baz=274,slow=11,SNR=14						
MJAR				sP	**sP**	**19 47 60.0**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=275,slow=11,SNR=11						
YAK	**Yakutsk**	**43.47**	**27**	i P	**P**	**19 47 41.3**	**-0.3**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ASF	**Jabal al Asfar**	**43.67**	**288**	P	**P**	**19 47 44.7**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=44,slow=7.1,SNR=4.0						
MOS	**Moscow**	**44.75**	**322**	eP	pP	19 48 07.6	+0.4
ATD	**Arta Tunnel**	**45.05**	**257**	P	**P**	**19 47 54.8**	**-0.1**
	comp=Z,2.7nm,0.5s,baz=72,slow=20,SNR=2.9						
BR101	**Keskin Array S**	**45.55**	**299**	eP	**P**	**19 47 59.1**	**+0.4**
BR131	**Keskin Array S**	**45.55**	**299**	eP	**P**	**19 47 58.2**	**-0.5**
	comp=Z,10nm,1.6s						
BRTR	**Keskin Array B**	**45.55**	**299**	P	**P**	**19 47 59.1**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=129,slow=8.9,SNR=22						
BRTR	**Keskin Array B**	**45.55**	**299**	i P	**P**	**19 47 59.5**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAJ	**Asahikawa**	**46.16**	**55**	P	**P**	**19 48 02.7**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=231,slow=6.3,SNR=8.6						
YSS	**Yuzh-Sakhalins**	**46.37**	**51**	i P	**P**	**19 48 04.4**	**-0.5**
YSS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TYV	**Tymovskoe**	**46.67**	**46**	eP	**P**	**19 48 02.4**	**-4.8**
TYV				e		19 54 48.8	
TYV				pmax	pmax		
	comp=Z,100nm,5.0s						
TYV				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TYV				MLR	MLR		
	comp=Z,700nm,15.0s						
TIXI	**Tiksi**	**48.80**	**16**	eP	**P**	**19 48 23.2**	**-0.2**

	comp=Z,5.0nm,0.4s						
TIXI	Tiksi	48.80	16	*i* P	P	19 48 22.4	-1.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	48.82	314	P	P	19 48 23.5	-0.3
	comp=Z,0.4nm,0.3s,baz=81,slow=6.9,SNR=11						
AKASG				sP	sP	19 48 45.4	-0.3
	comp=Z,1.4nm,0.5s,baz=76,slow=7.9,SNR=3.7						
AKASG	Malin Array Be	48.82	314	*i* P	P	19 48 23.7	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	48.82	314	*e*P	P	19 48 23.4	-0.4
AKBB				*e*pP	sP	19 48 44.8	-0.9
KUR	Kuril'sk	49.91	53	*i* P	P	19 48 30.8	-1.4
BUR08	Bucovina Ar. S	51.39	310	*e*P	P	19 48 43.8	+0.2
	comp=Z,6.8nm,1.2s						
FIA0	FINESS Array S	51.95	328	*e*P	P	19 48 47.4	+0.1
FIA0				*e*pP	pP	19 49 01.5	-1.4
FIA0				*e*sP	sP	19 49 09.4	-0.1
FIA0	FINESS Array S	51.95	328	*e*P	P	19 48 47.4	+0.1
FIA0				*e**SP	sP	19 49 09.4	-0.1
FINES	FINESS Array B	51.95	328	P	P	19 48 47.4	+0.1
	comp=Z,2.9nm,0.5s,baz=105,slow=7.9,SNR=29						
FINES				pP	pP	19 49 01.5	-1.4
	comp=Z,1.4nm,0.4s,baz=105,slow=7.3,SNR=2.2						
FINES				sP	sP	19 49 09.4	-0.1
	comp=Z,5.0nm,0.7s,baz=104,slow=8.0,SNR=4.7						
ARA0	ARCESS Array S	54.01	337	*e*P	P	19 49 03.1	+0.7
ARA0				*e*sP	sP	19 49 23.5	-1.1
ARCES	ARCESS Array B	54.01	337	P	P	19 49 03.1	+0.7
	comp=Z,1.3nm,0.3s,baz=103,slow=7.9,SNR=29						
ARCES				sP	sP	19 49 23.5	-1.1
	comp=Z,5.7nm,0.8s,baz=107,slow=6.5,SNR=5.6						
AGG	Agios Georgios	54.33	299	*e*P	P	19 49 04.4	-0.8
	comp=Z,40nm,1.9s						
AGG	Agios Georgios	54.33	299	*e*P	P	19 49 04.4	-0.8
AGG				pmax	pmax		
	comp=Z,40nm,1.9s						
OKC	Ostrava-Krasne	55.93	313	*e*sP	sP	19 49 37.6	-1.0
MORC	Moravsky Berou	56.33	313	*e*P	sP	19 49 42.5	+1.0
KMBO	Kilima Mbogo	56.48	248	P	P	19 49 19.7	-1.6
	comp=Z,4.9nm,1.1s,baz=27,slow=6.8,SNR=5.4						
VRAC	Vranov	56.99	312	*e*P	sP	19 49 47.5	+1.3
DPC	Dobruska-Polom	57.05	314	*e*sP	sP	19 49 47.1	+0.4
DPC				*e*x	x	19 49 55.3	
KRUC	Moravsky	57.15	312	*e*P	sP	19 49 48.3	+1.0
HFS	Hagfors	57.90	325	LR	LR	20 13 35.3	
	comp=Z,44nm,18.2s,baz=98,slow=35						
PRU	Pruhonice	58.23	313	*e*sP	sP	19 49 51.5	-3.5
PRU				*e*x	x	19 49 56.3	
BRG	Berggiesshubel	58.50	314	*e*P	sP	19 49 57.9	+1.0
	comp=Z,6.9nm,1.2s						
TIP	Timpagrande	58.55	301	*e*P	P	19 49 35.4	+0.1
	comp=Z,14nm,1.5s						
PSA00	Pilbara Seismi	58.59	144	*e*P	P	19 49 35.7	+0.1
	comp=Z,35nm,1.5s						
MOA	Molln	58.72	311	*i* P	sP	19 49 58.6	+0.2
	comp=Z,4.3nm,0.8s						
NC405	NORSAR Array S	58.84	327	*e*P	P	19 49 37.8	+1.0
	comp=Z,255nm,1.9s						
GEC2	GERESS Array S	58.94	312	*e*pP	pP	19 50 01.2	+7.6
GERES	GERESS Array B	58.94	312	P	P	19 49 38.0	+0.2
	comp=Z,0.3nm,0.4s,baz=92,slow=6.9,SNR=5.0						
GERES				sP	sP	19 50 00.1	0.0
	comp=Z,2.5nm,0.7s,baz=79,slow=6.9,SNR=13						
GERES				LR	LR	20 16 16.7	
	comp=Z,116nm,19.2s,baz=116,slow=37						
KHC	Kasperske Hory	58.97	313	*e*P	P	19 49 38.1	+0.1
KHC				*e*sP	sP	19 50 01.1	+0.9
KHC	Kasperske Hory	58.97	313	*e*P	P	19 49 38.1	+0.1
KHC				*e**SP	sP	19 50 01.1	+0.9
KHC	Kasperske Hory	58.97	313	*e*pP	pP	19 49 55.9	+2.2
KHC				*e*x	x	19 50 00.4	
NC303	NORSAR Array S	59.00	327	*e*P	P	19 49 37.2	-0.7
	comp=Z,248nm,1.9s						
CLL	Collm	59.03	315	*e*P	P	19 49 38.0	-0.3
CLL	Collm	59.03	315	*e*P	P	19 49 38.0	-0.3
NB201	NORSAR Array S	59.05	327	*e*P	P	19 49 38.4	+0.1
	comp=Z,98nm,1.5s						
NB2	NORSAR Subarra	59.08	327	P	P	19 49 38.3	-0.2
	comp=Z,0.9nm,0.5s,baz=85,slow=6.9						
NB200	NORSAR Array S	59.08	327	*e*P	P	19 49 38.4	-0.2
NB200				*e*pP	pP	19 49 54.6	+0.3
NB200				*e*sP	sP	19 50 00.6	-0.3
NOA	NORSAR Array B	59.08	327	P	P	19 49 38.4	-0.2
	comp=Z,1.0nm,0.5s,baz=89,slow=6.7,SNR=8.0						
NOA				pP	pP	19 49 54.6	+0.3
	comp=Z,0.5nm,0.5s,baz=86,slow=6.7,SNR=1.9						
NOA				sP	sP	19 50 00.6	-0.3
	comp=Z,3.1nm,0.9s,baz=86,slow=6.9,SNR=6.1						
NC204	NORSAR Array S	59.29	327	*e*P	P	19 49 40.1	+0.1
	comp=Z,134nm,1.8s						
ABTA	Abfaltersbach	60.08	310	*i* P	sP	19 50 07.5	-0.5
	comp=Z,2.3nm,0.9s						
WTTA	Wattenberg	60.57	311	*e*P	sP	19 50 10.9	-0.5
	comp=Z,7.9nm,1.1s						
SQTA	Sankt Quirin	60.87	311	*i* P	sP	19 50 12.9	-0.5
	comp=Z,4.2nm,0.6s						
MOTA	Moosalm	60.91	311	*e*P	sP	19 50 13.6	-0.1
	comp=Z,2.4nm,0.6s						
OPO	Ambohidratompo	60.92	225	P	P	19 49 51.7	-0.1
	comp=Z,1.6nm,0.5s,baz=360,slow=3.6,SNR=4.5						
RETA	Reutte	61.11	311	*e*P	sP	19 50 15.2	+0.3
	comp=Z,4.0nm,0.7s						
FETA	Feichten	61.23	311	*e*P	sP	19 50 15.9	0.0
	comp=Z,4.9nm,0.8s						
SENIN	Lac Senin/Sane	63.67	310	*e*P	P	19 50 09.0	-1.1
	comp=Z,7.4nm,1.0s						
BNI	Bardonecchia	64.43	309	*e*P	P	19 50 14.4	-0.6
	comp=Z,4.5nm,0.9s						
BNI	Bardonecchia	64.43	309	*e*P	P	19 50 14.4	-0.6
BNI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KEST	Kesra	65.15	299	P	P	19 50 20.1	+0.3
	comp=Z,1.4nm,0.5s,baz=0.0,slow=20,SNR=8.2						
WR1	Warramunga Arr	65.91	131	*e*P	P	19 50 24.8	+0.2
WR1				*e*pP	pP	19 50 41.2	+0.6
WR1				*e*sP	sP	19 50 47.0	0.0
WRA	Warramunga Arr	65.91	131	P	P	19 50 24.8	+0.2
	comp=Z,4.4nm,0.5s,baz=313,slow=6.8,SNR=24						
WRA				pP	pP	19 50 41.2	+0.6
	comp=Z,1.7nm,0.4s,baz=318,slow=6.6,SNR=2.9						
WRA				sP	sP	19 50 47.0	0.0
	comp=Z,5.7nm,0.7s,baz=317,slow=6.8,SNR=7.2						
WRAB	Tennant Creek	65.91	131	*e*P	P	19 50 24.9	+0.3
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	65.91	131	*e*P	P	19 50 24.9	+0.3
WRAB				pmax	pmax		
	comp=Z,15nm,1.1s						
WB2	Warramunga Arr	65.91	131	*e*P	P	19 50 24.6	-0.1
	comp=Z,6.3nm,0.5s						
AS31	Alice Springs	68.30	135	*e*P	P	19 50 39.8	+0.1
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	68.30	135	P	P	19 50 40.0	+0.2
	comp=Z,5.2nm,0.6s,baz=315,slow=6.2,SNR=42						
ASAR				sP	sP	19 51 02.4	+0.2
	comp=Z,5.8nm,0.8s,baz=316,slow=6.5,SNR=11						
CAST	Castle Rocks	77.13	23	*e*P	P	19 51 32.7	+1.1
	comp=Z,5.5nm,0.9s						
PRP	Porcupine Dome	77.88	20	*e*P	P	19 51 37.6	+1.8
	comp=Z,3.8nm,0.9s						
ILAR	Eielson Array	77.97	21	P	P	19 51 36.5	+0.3
	comp=Z,0.6nm,0.5s,baz=290,slow=4.6,SNR=6.6						
ILAR				pP	pP	19 51 53.0	+0.4
	comp=Z,0.4nm,0.5s,baz=293,slow=3.7,SNR=1.8						
ILAR				sP	sP	19 51 58.8	-0.1
	comp=Z,1.0nm,0.9s,baz=292,slow=5.0,SNR=2.7						
INK	Inuvik	78.89	14	P	P	19 51 42.0	+0.8
	comp=Z,0.9nm,0.4s,baz=350,slow=2.2,SNR=3.3						
INK	Inuvik	78.89	14	*e*P	P	19 51 41.7	+0.5
	comp=Z,5.1nm,1.3s						
INK	Inuvik	78.89	14	P	P	19 51 42.0	+0.8
STKA	Stephens Creek	78.89	136	P	P	19 51 41.5	-0.2
	comp=Z,0.6nm,0.4s,baz=328,slow=9.0,SNR=4.9						
STKA				sP	sP	19 52 04.9	+0.5
	comp=Z,1.5nm,0.5s,baz=312,slow=6.0,SNR=3.3						
SCRK	Sand Creek	79.43	21	*e*P	P	19 51 43.5	-1.0
	comp=Z,6.1nm,1.2s						
DOT	Dot Lake	79.64	21	*e*P	P	19 51 45.9	+0.4
	comp=Z,8.6nm,1.6s						
EPYK	Eagle Plains	79.68	17	*e*P	P	19 51 45.7	0.0
	comp=Z,20nm,1.9s						
TOA1	Torodi Ar. Sit	80.37	280	*e*P	P	19 51 49.8	-0.4
TOA1				*e*sP	sP	19 52 12.2	-0.7
TORD	Torodi Ar. Bea	80.37	280	P	P	19 51 49.8	-0.4
	comp=Z,0.5nm,0.5s,baz=105,slow=6.0,SNR=6.5						
TORD				sP	sP	19 52 12.2	-0.7
	comp=Z,1.8nm,0.9s,baz=78,slow=5.3,SNR=5.3						
KDAK	Kodiak Island	80.49	28	P	P	19 51 50.3	+0.2
	comp=Z,1.7nm,0.5s,baz=291,slow=3.8,SNR=6.1						
KDAK	Kodiak Island	80.49	28	*i* P	P	19 51 51.8	+1.7
BOSA	Boshof	82.33	232	P	P	19 52 00.1	-0.3
	comp=Z,3.5nm,0.6s,baz=50,slow=1.5,SNR=7.3						
SCHQ	Schefferville	94.25	346	LR	LR	20 40 45.1	
	comp=Z,23nm,18.5s,baz=359,slow=39						

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*ISCJB **15** 19:41:08.3±0.9, 22°.1S±0°.1×178°.8W±0°.2, h600^{km}, mb3.8/7, Error ellipse: s-maj=20.2km s-min=13.9km az=10.1*

*IDC **15** 19:41:11.2±4.0, 22°.26S×178°.81W, h624^{km}±47^{km}, mb3.2/7, mb1 3.5/9, mb1mx3.2/38, mbtmp4.3/9, Error ellipse: s-maj=25.6km s-min=22.4km az=49.0*

ISC 15 19:41:09.4±1.0, **22°.2S**±0°.1×**178°.7W**±0°.2, **h600**^{km}, **n11**, σ**1ˢ.52**/13, **mb3.7**/7, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.74	268	P	P	19 44 06.2	+0.3
	0.6nm,0.3s,baz=90,slow=19,SNR=4.5						
URZ	Urewera	16.42	192	P	P	19 44 31.6	+1.2
	2.0nm,0.3s,baz=338,slow=2.5,SNR=7.4						
URZ				S	S	19 47 14.9	+0.8
	0.4nm,0.3s,baz=36,slow=12,SNR=2.9						
STKA	Stephens Creek	36.47	246	P	P	19 47 25.8	+0.4
	3.7nm,0.4s,baz=96,slow=11,SNR=25						
ASAR	Alice Springs	43.49	259	P	P	19 48 20.7	-0.8
	7.5nm,0.5s,baz=98,slow=7.8,SNR=140						
ASAR				PcP	PcP	19 49 56.6	+0.8
	1.0nm,0.7s,baz=111,slow=3.6,SNR=5.6						
WRA	Warramunga Arr	43.72	264	P	P	19 48 21.6	-1.6
	4.0nm,0.3s,baz=98,slow=7.6,SNR=86						
VNDA	Vanda	56.19	185	P	P	19 49 52.6	-0.6
	0.4nm,0.7s,baz=60,slow=14,SNR=3.4						
NVAR	Mina Array Bea	82.71	44	P	P	19 52 33.0	+1.4
	0.9nm,0.7s,baz=215,slow=7.7,SNR=6.5						
CMAR	Chiang Mai Arr	90.03	290	P	P	19 53 06.8	+0.1
	0.8nm,0.9s,baz=128,slow=2.8,SNR=4.5						
PDAR	Pinedale Array	90.64	43	P	P	19 53 07.7	-1.6
	0.4nm,0.8s,baz=238,slow=8.2,SNR=3.7						
BRTR	Keskin Array B	147.42	310	PKPbc	PKPdf	19 59 46.0	+2.3
	0.7nm,0.7s,baz=108,slow=4.0,SNR=4.9						
TORD	Torodi Ar. Bea	171.01	183	PKPab	PKPab	20 01 31.2	-2.6
	0.3nm,0.8s,baz=144,slow=3.2,SNR=2.3						

ATH 15 19:46:38.2, 38°.23N×22°.08E, h11^{km}±1^{km}, **ML0.7**/2, **Error ellipse: s-maj=1.7km s-min=0.8km az=258.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIG2	Aigio	0.02	336	P	Pg	19 46 40.1	0.0
AIG2				S	Sg	19 46 41.3	-0.2
AIG4	Aigion	0.03	350	P	Pg	19 46 40.2	0.0
AIG4				S	Sg	19 46 41.7	+0.1
AIG3	Aigion	0.04	31	P	Pg	19 46 40.2	-0.1
AIG3				S	Sg	19 46 41.9	+0.2
LAKA	Lakka	0.08	280	P	Pg	19 46 40.8	+0.1
LAKA				S	Sg	19 46 42.4	-0.2
LAKA				AML	AML	19 46 42.8	
	comp=N,104μm,0.3s						
LAKA				AML	AML	19 46 43.0	
	comp=E,76μm,0.2s						
TRAZ	Trapeza	0.12	119	P	Pg	19 46 41.2	0.0
TRAZ				S	Sg	19 46 43.2	-0.1
TRAZ				AML	AML	19 46 44.3	
	comp=N,174μm,0.2s						
TRAZ				AML	AML	19 46 44.7	
	comp=E,138μm,0.2s						
TRIZ	Trizonia	0.14	357	P	Pg	19 46 41.4	-0.1
TRIZ				S	Sg	19 46 43.8	0.0
KALE	Kalithea	0.17	16	P	Pg	19 46 42.2	+0.2
KALE				S	Sg	19 46 44.7	0.0
SERG	Sergoula	0.19	354	P	Pg	19 46 42.2	-0.1
SERG				S	Sg	19 46 45.4	+0.3
KLV	Kalavryta, Ach	0.19	163	P	Pg	19 46 42.3	-0.1
KLV				S	Sg	19 46 45.4	+0.2
GUR	Goura	0.35	144	P	Pg	19 46 45.1	-0.2
GUR				S	Sg	19 46 50.6	+0.6
ANX	Ano Chora	0.39	341	P	Pg	19 46 45.8	-0.1

BUC 15 19:48:14.1±0.6, **46°.96N×25°.75E, h4**^{km}±2^{km}, **MD2.2**/3, **11C-11D, Error ellipse: s-maj=7.5km s-min=3.3km az=26.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIZ	Bicaz	0.24	94	⇑*i*P	Pg	19 48 19.3	+0.6
BIZ	Bicaz	0.24	94	⇑*i*P	Pg	19 48 19.3	+0.6
PRAR	RASCA	0.52	38	⇓*i*P	Pg	19 48 24.5	+0.4
PRAR	RASCA	0.52	38	⇓*i*P	Pg	19 48 24.5	+0.4
BURAR	Bucovina Array	0.75	331	⇓*i*P	Pb	19 48 29.9	0.0
BURAR	Bucovina Array	0.75	331	⇓*i*P	Pb	19 48 29.9	0.0
TESR	Tescani	0.76	126	⇓*i*P	Pg	19 48 29.0	+0.3
TESR	Tescani	0.76	126	⇓*i*P	Pg	19 48 29.0	+0.3
DOPR	Dopca	1.02	194	⇑*i*P	Pb	19 48 34.5	+0.1
DOPR	Dopca	1.02	194	⇑*i*P	Pb	19 48 34.5	+0.1
MDB	Medias	1.25	230	⇑*i*P	Pn	19 48 38.9	+0.5
MDB	Medias	1.25	230	⇑*i*P	Pn	19 48 38.9	+0.5
PLOR	Plostina	1.27	150	⇑*i*P	Pn	19 48 39.4	+0.7
PLOR				*i* S	Sn	19 48 57.6	+1.4
VRI	Vrincioaia	1.28	148	⇓*i*P	Pn	19 48 39.7	+0.9
VRI				*i* S	Sn	19 48 57.7	+1.2
MLR	Muntele Rosu	1.47	175	*e*P	Pb	19 48 42.2	+0.1
	74nm,1.6s						
MLR	Muntele Rosu	1.47	175	⇓*i*P	Pg	19 48 42.5	+0.2
MLR				*i* S	Sg	19 49 03.2	+1.8
MLR	Muntele Rosu	1.47	175	⇓*i*P	Pg	19 48 42.5	+0.2
MLR	Muntele Rosu	1.47	175	*e*P	Pb	19 48 42.2	+0.1
MLR				pmax	pmax		
	comp=Z,74nm,1.6s						
VOIR		1.60	198	⇑*i*P	Pb	19 48 44.0	-0.2
VOIR				*i* S	Sg	19 49 05.7	+0.3
VOIR		1.60	198	⇑*i*P	Pb	19 48 44.0	-0.2
LOT	Lotru	2.04	223	⇑*i*P	Pn	19 48 50.6	+1.2
LOT				*i* S	Sb	19 49 17.4	-0.3
LOT	Lotru	2.04	223	⇑*i*P	Pn	19 48 50.6	+1.2
DRGR		2.09	267	⇓*i*P	Pb	19 48 51.8	-0.9
DRGR				*i* S	Sn	19 49 17.8	+1.2
DRGR		2.09	267	⇓*i*P	Pb	19 48 51.8	-0.9

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*JMA **15** 19:52:15.6±0.3, 21°.64N×121°.79E, h94^{km}, M3.4*

*TAP **15** 19:52:15.1, 21°.61N×121°.92E, h22^{km}, ML3.4, D*

ISC 15 19:52:14.8±1.8, **21°.60N**±0°.07×**121°.92E**±0°.03, **h17**^{km}±11^{km}, **n78**, σ**1ˢ.27**/125, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.55	322	*i* P	Pg	19 52 26.2	+0.4
	baz=322						
LAY				S	Sb	19 52 34.0	+0.3
	baz=322						
TSEB	Hengchuen, Pin	0.99	287	P	Pb	19 52 33.5	0.0
	baz=286						
TWKBT	Hengchun	1.08	288	*e*P	Pb	19 52 34.3	-0.8
	baz=288						
TWK1	Hengchun	1.09	288	*e*P	Pb	19 52 34.5	-0.7
	baz=288						
HEN	Hengchun	1.17	290	*e*P	Pn	19 52 36.0	-0.4
	baz=300						
TAW	Tawu	1.21	309	*e*P	Pn	19 52 36.5	-0.4
	baz=308						
TAW				*e*S	Sb	19 52 52.0	-0.6
	baz=308						
EAST	Anshuo	1.26	308	⇓*i*P	Pn	19 52 36.3	-1.4
	baz=308						
EAST				*e*S	Sb	19 52 52.6	-1.5
	baz=308						
ECL	Taimali	1.33	318	*i* P	Pn	19 52 38.5	-0.1
	baz=318						
ECL				*e*S	Sb	19 52 55.0	-1.2
	baz=318						
TTN	Taitung	1.35	328	*e*P	Pn	19 52 37.8	-1.1
	baz=339						
SCZT	Fangliau	1.43	303	P	Pn	19 52 39.2	-0.7
	baz=316						
SCZT				*e*S	Sn	19 52 58.4	0.0
	baz=316						
TWGBT	Beinan	1.44	327	P	Pn	19 52 40.1	0.0
	baz=312						
TWGBT				*e*S	Sn	19 52 58.5	-0.1
	baz=312						
TWG	Pinlang	1.44	327	*i* P	Pn	19 52 40.0	-0.2
	baz=312						
TWG				S	Sn	19 52 58.8	0.0
	baz=312						
MASBT	Mashibuluo	1.56	310	*e*P	Pn	19 52 41.5	-0.3
	baz=310						
CHKT	Chengkung	1.57	341	P	Pn	19 52 40.7	-1.2
	baz=353						
CHKT				*e*S	Sn	19 53 00.3	-1.7
	baz=353						
WLCH	Liuqiu	1.61	298	*e*P	Pb	19 52 43.9	-0.2
	baz=312						
TWP	Hsiaoliuchiu	1.62	297	*e*P	Pb	19 52 44.5	+0.2
	baz=312						
SSD	Sandimen	1.65	314	*e*P	Pb	19 52 44.5	-0.2
	baz=314						
ELDTW	Lidau	1.78	332	*e*P	Pn	19 52 45.9	+0.9
	baz=321						
SLGT	Liugui	1.82	320	*e*P	Pb	19 52 47.6	-0.1
	baz=320						
TWF1	Yuli	1.83	342	*e*P	Pn	19 52 44.9	-0.7
	baz=350						
TWF1				*e*S	Sn	19 53 08.4	0.0
	baz=350						
YULB	Yu-li	1.87	342	*e*P	Pn	19 52 45.9	-0.2
	baz=326						
YULB				*e*S	Sn	19 53 09.8	+0.4
	baz=326						
STYT	Tauyuan	1.89	326	*e*P	Pn	19 52 47.0	+0.6
	baz=326						
SGST	Jiashian	1.92	320	*e*P	Pn	19 52 47.7	+1.0
	baz=320						
HGSD	Ruisui	1.93	346	*e*P	Pn	19 52 46.6	-0.3
	baz=355						
HGSD				*e*S	Sn	19 53 09.4	-1.4
	baz=355						
EHY	Hungye	1.97	344	*e*P	Pn	19 52 47.0	-0.5
	baz=328						
EHY				*e*S	Sn	19 53 11.7	-0.2
	baz=328						
CHN1	Nanshi	2.03	321	*e*P	Pb	19 52 51.2	-0.1
	baz=321						
TPUB	Ta-pu	2.07	325	*e*P	Pn	19 52 50.8	+2.0
	baz=325						
TPUB				*e*S	Sb	19 53 18.1	+0.8
	baz=325						
EGFH	Guangfu	2.10	348	*e*P	Pn	19 52 48.7	-0.6
	baz=332						
EGFH				*e*S	Sn	19 53 15.2	+0.1
	baz=332						
TWK	Hsinying	2.12	322	*e*P	Pn	19 52 51.5	+2.0
	baz=322						
ALS	Alishan	2.16	332	*e*P	Pb	19 52 52.5	-1.1
	baz=323						
ESL	Shilin	2.24	349	*e*P	Pn	19 52 51.4	+0.1
	baz=358						
ESL				*e*S	Sn	19 53 17.9	-0.7
	baz=358						
VWDT	VWDT	2.26	342	*e*P	Pn	19 52 52.1	+0.8
	baz=351						
WHYT	Xinyi Township	2.30	335	*e*P	Pb	19 52 55.1	-0.8
	baz=321						
WHYT				*e*S	Sb	19 53 23.4	-0.8
	baz=321						
ENLB	Shoufeng	2.31	353	*e*P	Pn	19 52 54.4	+2.3
	baz=5.0						
ENLB				*e*S	Sn	19 53 21.7	+1.6
	baz=5.0						
SSLB	Suanglung	2.35	338	*e*P	Pn	19 52 54.8	+2.1
	baz=349						
SSLB				*e*S	Sb	19 53 25.6	+0.2
	baz=349						
WGK	Gukeng	2.42	329	*e*S	Sn	19 53 25.1	+2.1
	baz=330						
SMLT	Sun Moon Lake	2.46	338	P	Pn	19 52 56.1	+1.9
	baz=349						
SMLT				*e*S	Sb	19 53 28.6	-0.1
	baz=349						
WJS	Zhushan	2.46	334	*e*P	Pn	19 52 56.3	+2.0
	baz=319						
TYC	Yuchr	2.49	337	*e*P	Pb	19 52 57.4	-1.7
	baz=349						
TYC				*e*S	Sb	19 53 27.8	-1.7
	baz=349						
WNT	Mingjian	2.53	334	*e*P	Pb	19 52 58.3	-1.5
	baz=319						
WNT				*e*S	Sb	19 53 29.3	-1.5
	baz=319						
CHGB	Renai	2.54	344	*e*P	Pn	19 52 56.3	+0.8
	baz=356						
WSF	Szhu	2.56	323	*e*S	Sn	19 53 28.0	+1.7
	baz=323						
NACB	Ninganchiao	2.58	353	*e*P	Pn	19 52 56.1	+0.3
	baz=4.0						
NACB				*e*S	Sn	19 53 25.6	-1.1
	baz=4.0						
DPDB	Guoxing	2.58	339	*e*P	Pn	19 52 58.8	+2.8
	baz=351						
WHF	Hehuan Shan	2.60	347	*e*S	Sn	19 53 27.8	-0.1
	baz=347						
ETLH	Xiulin Townshi	2.62	351	*e*P	Pn	19 52 58.4	+1.9
	baz=1.0						
ETLH				*e*S	Sn	19 53 27.6	-0.4
	baz=1.0						
WDGT	Dungji	2.66	309	*e*P	Pn	19 52 57.6	+0.7
	baz=309						
WDGT				*e*S	Sn	19 53 29.5	+0.7
	baz=309						
NANB	Nanao	2.81	357	*e*P	Pn	19 53 00.3	+1.2
	baz=6.0						
NANB				*e*S	Sn	19 53 32.1	-0.5
	baz=6.0						
ENA	Nanau	2.81	357	*e*P	Pn	19 53 00.5	+1.4
	baz=6.0						
ENA				*e*S	Sn	19 53 31.6	-1.1
	baz=6.0						
NNSB	Datong	2.85	350	*e*P	Pn	19 53 02.4	+2.7
	baz=2.0						
NNSB				*e*S	Sn	19 53 34.2	+0.4
	baz=2.0						
NNS	Nan Shan	2.87	350	*e*P	Pn	19 53 01.1	+1.2
	baz=1.0						
PHUB	P'eng-hu	2.88	312	*e*S	Sn	19 53 34.0	-0.3
	baz=312						
TWQ1	Liyutan	2.93	339	*e*P	Pn	19 53 01.6	+1.0
	baz=326						
TWQ1				*e*S	Sn	19 53 38.2	+2.8
	baz=326						
PNG	Penghu	2.93	312	*e*P	Pn	19 53 01.6	+1.0
	baz=313						
PNG				*e*S	Sn	19 53 35.9	+0.5
	baz=313						
EOS1	EOS1	2.94	4	*e*P	Pn	19 53 02.4	+1.6
	baz=4.0						
EOS1				*e*S	Sn	19 53 37.1	+1.5
	baz=4.0						
JYNG	Yonagunijimaku	2.99	18	P	Pn	19 53 01.9	+0.5
JYNG				*e*S	Sn	19 53 36.7	-0.2
TWC	Suao	2.99	359	*e*S	Sn	19 53 38.6	+1.6
	baz=359						
NSY	Sanyi	3.00	339	*e*S	Sb	19 53 42.6	-1.5
	baz=326						
HATJ	Hateruma jima	3.00	35	P	Pn	19 53 02.9	+1.3
HATJ				*e*S	Sn	19 53 37.3	+0.2
YOJ	Yonaguni jima	3.02	19	*e*P	Pn	19 53 02.9	+1.1
	baz=19						
YOJ				*e*S	Sn	19 53 38.2	+0.6
	baz=19						
YOJ	Yonaguni jima	3.02	19	P	Pn	19 53 03.2	+1.4
YOJ				*e*S	Sn	19 53 37.4	-0.2
YHNB	Yeheng	3.09	351	*e*P	Pn	19 53 05.0	+2.1
	baz=2.0						
YHNB				*e*S	Sn	19 53 40.1	+0.5
	baz=2.0						
NSK	Sanguang	3.10	351	*e*P	Pn	19 53 05.2	+2.1
	baz=2.0						
NSK				*e*S	Sn	19 53 41.0	+1.2
	baz=2.0						
TWE	Neicheng	3.11	356	*e*P	Pn	19 53 05.4	+2.3
	baz=5.0						
TWE				*e*S	Sn	19 53 40.9	+1.0
	baz=5.0						
NSTT	Nanjuang	3.13	345	*e*S	Sb	19 53 45.4	-2.5
	baz=329						
LIOB	Emei	3.14	345	*e*P	Pb	19 53 08.1	-2.1
	baz=329						

IRIF	Iriomote-Funau	3.19	31	P	Pn	19 53 05.5	+1.3
IRIF				eS	Sn	19 53 43.1	+1.2
EGS		3.23	0	eP	Pn	19 53 07.1	+2.4
	baz=10.0						
JKRS	Kuro-shima	3.25	36	P	Pn	19 53 06.7	+1.6
JKRS				eS	Sn	19 53 43.7	+0.3
TIPB	Shuangxi	3.35	359	eP	Pn	19 53 08.0	+1.5
	baz=9.0						
TIPB				eS	Sn	19 53 46.7	+0.8
	baz=9.0						
JIJ	Ishigaki jima	3.43	36	P	Pn	19 53 08.5	+1.0
JIJ				eS	Sn	19 53 47.0	-0.7
YM10	YM10	3.55	355	eP	Pn	19 53 12.0	+2.8
	baz=355						
YM10				eS	Sn	19 53 53.4	+2.5
	baz=355						
YM05	YM05	3.56	355	eP	Pn	19 53 11.8	+2.5
	baz=355						
YM05				eS	Sn	19 53 52.2	+1.1
	baz=355						
JISG	Ishigakijimahi	3.70	36	P	Pn	19 53 12.1	+0.9
JISG				eS	Sn	19 53 53.6	-0.8
JTJ	Tarama	3.96	40	P	Pn	19 53 16.2	+1.4
JTJ				eS	Sn	19 54 00.6	-0.3
JIRB	Irabujima	4.39	42	P	Pn	19 53 21.4	+0.7
JIRB				S	Sn	19 54 11.1	-0.4
JMJ2	Miyako jima3	4.43	44	P	Pn	19 53 22.2	+1.0
JMJ2				eS	Sn	19 54 11.4	-1.0
JOGS	Gusukube	4.49	45	eS	Sn	19 54 13.9	-0.1

IDC 15 20:02:48.0±1.3**, 49°.09S**×**125°.06E, h0**^{km}**, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.8**/32**, mbtmp4.0**/5**, ML2.1**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.9**/18**, Error ellipse: s-maj=48.6km s-min=24.8km az=86.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	16.31	326	T	T	20 23 24.1	
	baz=153,slow=74,SNR=20						
H01W2	Cape Leeuwin H	16.31	326	T	T	20 23 19.2	
	baz=153,slow=74,SNR=17						
H01W3	Cape Leeuwin H	16.32	326	T	T	20 23 16.9	
	baz=153,slow=74,SNR=25						
NWAO	Narrogin (SRO)	17.17	337	P	Pn	20 06 48.2	-1.1
	0.4nm,0.3s,baz=150,slow=11,SNR=3.1						
STKA	Stephens Creek	21.22	42	P	P	20 07 35.6	+0.3
	2.0nm,0.7s,baz=205,slow=11,SNR=4.9						
ASAR	Alice Springs	26.31	19	P	P	20 08 24.9	-0.5
	1.4nm,0.8s,baz=199,slow=8.8,SNR=15						
ASAR				LR	LR	20 17 55.1	
	comp=Z,94nm,21.0s,baz=148,slow=34						
VNDA	Vanda	31.79	166	P	P	20 09 13.2	-0.4
	1.0nm,0.8s,baz=316,slow=8.7,SNR=8.1						
CMAR	Chiang Mai Arr	71.14	334	P	P	20 14 08.7	+0.4
	1.2nm,0.6s,baz=183,slow=5.8,SNR=6.1						
YKA	Yellowknife Ar	145.24	45	PKPbc	PKPbc	20 22 25.8	-0.2
	1.3nm,0.6s,baz=272,slow=3.3,SNR=5.6						

*ATH **15** 20:07:55.9, 38°.23N×22°.10E, h12^{km}±1^{km}, ML3.6/19, Error ellipse: s-maj=1.0km s-min=0.6km az=290.0*

*ISCJB **15** 20:07:55.8±0.2, 38°.24N±0°.01×22°.10E±0°.01, h12^{km}±1^{km}, mb4.0/11, MS2.9/2, Error ellipse: s-maj=2.1km s-min=1.8km az=37.7*

*THE **15** 20:07:56.2, 38°.23N×22°.10E, h8^{km}, ML3.7/19, Error ellipse: s-maj=0.5km s-min=0.3km az=30.0*

*NEIC **15** 20:07:56.2±0.0, 38°.23N×22°.10E, h8^{km}, mb4.1/4, ML3.7(THE), After THE.*

*IDC **15** 20:08:00.7±1.1, 38°.20N×22°.16E, h47^{km}±13^{km}, mb3.8/10, mb1 3.8/15, mb1mx3.6/46, mbtmp3.9/15, ML3.6/4, MS3.0/2, Ms1 3.0/2, ms1mx2.5/27, Error ellipse: s-maj=12.4km s-min=10.2km az=40.0*

*BEO **15** 20:08:05.9±0.9, 38°.93N×22°.10E, h1^{km}±3^{km}, ML3.0/6*

ISC 15 20:07:56.1±0.6**, 38°.23N**±0°.01×**22°.10E**±0°.01**, h12**^{km}±3^{km}**, n239, σ1§47**/297**, mb4.1**/11**, 7C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG2	Aigio	0.03	295	P	Pg	20 07 57.9	-0.3
AIG2				S	Sg	20 07 59.2	-0.5
AIG3	Aigion	0.03	5	P	Pg	20 07 58.1	-0.1
AIG3				S	Sg	20 07 59.6	0.0
ALIK	Aliki, Aigiali	0.03	15	P	Pg	20 07 58.0	-0.2
ALIK				S	Sg	20 07 59.6	-0.1
AIG4	Aigion	0.03	318	P	Pg	20 07 58.1	-0.1
AIG4				S	Sg	20 07 59.5	-0.2
AIG1	Aigion	0.04	125	P	Pg	20 07 58.1	-0.1
AIG1				S	Sg	20 07 59.4	-0.3
LAKA	Lakka	0.10	275	P	Pg	20 07 58.5	-0.4
LAKA				S	Sg	20 08 00.1	-0.8
	104µm,0.4s						
LAKA	Lakka	0.10	275	P	Pg	20 07 58.6	-0.3
LAKA				S	Sg	20 08 00.2	-0.7
LAKA				AML	AML	20 08 00.7	
LAKA				AML	AML	20 08 00.8	
TRAZ	Trapeza	0.11	126	P	Pg	20 07 59.0	0.0
TRAZ				S	Sg	20 08 01.1	0.0
	89µm,0.2s						
TRAZ	Trapeza	0.11	126	P	Pg	20 07 59.1	0.0
TRAZ				S	Sg	20 08 01.1	0.0
TRAZ				AML	AML	20 08 01.4	
TRAZ				AML	AML	20 08 01.9	
TRIZ	Trizonia	0.14	350	P	Pg	20 07 59.2	-0.2
TRIZ				S	Sg	20 08 01.4	-0.3
	58µm,0.4s						
TRIZ	Trizonia	0.14	350	P	Pg	20 07 59.3	-0.1
TRIZ				S	Sg	20 08 01.7	-0.1
KALE	Kalithea	0.16	11	P	Pg	20 07 59.8	-0.1
KALE				S	Sg	20 08 02.5	0.0
	35µm,0.3s						
KALE	Kalithea	0.16	11	P	Pg	20 07 59.9	+0.1
KALE				S	Sg	20 08 02.9	+0.4
KALE				AML	AML	20 08 03.8	
	comp=N,93526µm,0.3s						
KALE				AML	AML	20 08 04.7	
	comp=E,40464µm,0.4s						
SERG	Sergoula	0.18	349	P	Pg	20 08 00.0	-0.2
SERG				S	Sg	20 08 02.4	-0.7
	comp=E,32µm,0.3s						
SERG	Sergoula	0.18	349	P	Pg	20 08 00.1	-0.1
SERG				S	Sg	20 08 03.1	+0.1
SERG				AML	AML	20 08 04.5	
	comp=E,51696µm,0.3s						
SERG				AML	AML	20 08 04.6	
	comp=N,75990µm,0.3s						
KLV	Kalavryta, Ach	0.19	168	P	Pg	20 08 00.1	-0.1
KLV				S	Sg	20 08 03.1	-0.1
KLV	Kalavryta, Ach	0.19	168	P	Pg	20 08 00.2	-0.1
KLV				S	Sg	20 08 03.1	-0.1
KLV				AML	AML	20 08 05.4	
	comp=E,27374µm,0.5s						
KLV				AML	AML	20 08 05.8	
	comp=N,30175µm,0.5s						
UPR	University Cam	0.25	282	P	Pg	20 08 01.6	+0.3
UPR				S	Sg	20 08 05.0	+0.1
UPR	University Cam	0.25	282	P	Pg	20 08 01.7	+0.3
GUR	Goura	0.35	147	P	Pg	20 08 02.8	-0.3
GUR				S	Sg	20 08 08.0	+0.1
	comp=N,27µm,0.5s						
GUR	Goura	0.35	147	P	Pg	20 08 02.6	-0.5
GUR				S	Sg	20 08 07.6	-0.3
GUR				AML	AML	20 08 09.0	
	comp=N,50948µm,0.5s						
GUR				AML	AML	20 08 09.1	
	comp=E,52468µm,0.5s						
DSF	Desfina	0.38	62	P	Pg	20 08 03.5	-0.2
DSF				S	Sg	20 08 08.9	+0.2
	comp=E,13µm,0.2s						
DSF	Desfina	0.38	62	P	Pg	20 08 03.5	-0.2
DSF				S	Sg	20 08 09.0	+0.2
DSF				AML	AML	20 08 09.4	
	comp=N,21093µm,0.2s						
DSF				AML	AML	20 08 10.7	
	comp=E,27885µm,0.2s						
ANX	Ano Chora	0.39	339	P	Pg	20 08 03.6	-0.3
ANX				S	Sg	20 08 09.8	+0.7
	comp=E,22µm,0.3s						
ANX	Ano Chora	0.39	339	P	Pg	20 08 03.3	-0.6
ANX				S	Sg	20 08 09.8	+0.7
ANX				AML	AML	20 08 13.2	
	comp=E,48846µm,0.2s						
ANX				AML	AML	20 08 15.1	
	comp=N,31998µm,0.6s						
DLFA	Delphi	0.40	51	P	Pg	20 08 03.8	-0.2
DLFA				S	Sg	20 08 09.2	-0.1
DLFA				AML	AML	20 08 09.8	
	comp=E,23769µm,0.4s						
DLFA				AML	AML	20 08 10.3	
	comp=N,15778µm,0.5s						
THAL	Thalero	0.48	113	P	Pg	20 08 05.5	0.0
THAL				S	Sg	20 08 12.2	+0.2
	comp=N,8µm,0.6s						
THAL	Thalero	0.48	113	P	Pg	20 08 05.8	+0.3
RLS	Riolos of Patr	0.53	251	P	Pg	20 08 06.1	-0.3
RLS				S	Sg	20 08 14.1	+0.7
RLS	Riolos of Patr	0.53	251	P	Pg	20 08 06.5	+0.1
RLS				S	Sb	20 08 14.6	-0.3
RLS				AML	AML	20 08 17.1	
	comp=E,12202µm,0.2s						
RLS				AML	AML	20 08 19.8	
	comp=N,7587µm,0.3s						
PVO	Paravola	0.59	311	P	Pg	20 08 07.4	-0.3
PVO				S	Sg	20 08 16.0	+0.5
	comp=N,11µm,0.5s						
PVO	Paravola	0.59	311	P	Pg	20 08 07.2	-0.4
PVO				AML	AML	20 08 20.3	
	comp=E,18884µm,0.5s						
PVO				AML	AML	20 08 20.4	
	comp=N,24139µm,0.5s						
PROD	Prodromos	0.63	87	P	Pg	20 08 08.3	0.0
PROD				S	Sb	20 08 17.9	0.0
PROD	Prodromos	0.63	87	P	Pb	20 08 08.9	-0.2
PROD				S	Sb	20 08 17.5	-0.3
PROD				AML	AML	20 08 23.5	
	comp=N,6753µm,0.2s						
PROD				AML	AML	20 08 24.9	
	comp=E,8008µm,0.5s						
ACOR	Acrocorinthos	0.69	119	P	Pg	20 08 09.6	0.0
ACOR				S	Sg	20 08 18.6	0.0
ACOR				AML	AML	20 08 30.0	
	comp=E,2321µm,0.7s						
ACOR				AML	AML	20 08 31.4	
	comp=N,2567µm,0.7s						
TRIP	Tripoli	0.71	169	P	Pg	20 08 09.3	-0.6
TRIP	Tripoli	0.71	169	P	Pg	20 08 09.3	-0.6
TRIP				S	Sg	20 08 18.5	-0.8
TRIP				AML	AML	20 08 25.7	
	comp=N,11707µm,0.7s						
TRIP				AML	AML	20 08 25.7	
	comp=E,15873µm,0.6s						
EVR	Evrytania	0.72	342	P	Pg	20 08 09.3	-0.8
EVR	Evrytania	0.72	342	P	Pg	20 08 09.4	-0.8
EVR				AML	AML	20 08 26.2	
	comp=N,16755µm,0.7s						
EVR				AML	AML	20 08 29.6	
	comp=E,10055µm,0.6s						
LOUT	Loutraki	0.73	109	P	Pg	20 08 10.2	0.0
LOUT	Loutraki	0.73	109	P	Pg	20 08 10.6	+0.4
AMT	Artemida-Makis	0.76	204	P	Pg	20 08 10.4	-0.4
AMT				S	Sb	20 08 22.4	+0.7
	comp=E,8µm,0.4s						
AMT	Artemida-Makis	0.76	204	P	Pg	20 08 10.3	-0.6
VTN	Vitineika	0.79	247	P	Pg	20 08 11.0	-0.3
VTN	Vitineika	0.79	247	P	Pg	20 08 11.1	-0.2
AGG	Agios Georgios	0.81	13	ePg	Pg	20 08 10.5	-1.2
AGG	Agios Georgios	0.81	13	P	Pg	20 08 10.9	-0.9
AGG	Agios Georgios	0.81	13	P	Pg	20 08 11.0	-0.7
AGG				AML	AML	20 08 27.1	
	comp=N,8033µm,0.6s						
AGG				AML	AML	20 08 27.6	
	comp=E,6645µm,0.6s						
LKR	Lokris	0.82	59	P	Pg	20 08 11.2	-0.7
LKR				S	Sb	20 08 23.6	+0.3
	comp=E,3µm,0.3s						
LKR	Lokris	0.82	59	P	Pg	20 08 11.6	-0.3
LKR				S	Sb	20 08 23.2	-0.1
ATAL	Atalanti	0.86	57	P	Pg	20 08 11.8	-0.8
ATAL	Atalanti	0.86	57	P	Pg	20 08 11.8	-0.8
VLX	Vlachokerasia	0.89	166	P	Pg	20 08 12.4	-0.8
VLX				S	Sg	20 08 25.2	+0.4
	comp=E,11µm,0.7s						
VLX	Vlachokerasia	0.89	166	P	Pg	20 08 12.4	-0.8
VLX				S	Sb	20 08 25.4	+0.1
VLX				AML	AML	20 08 30.7	
	comp=N,19544µm,0.8s						
VLX				AML	AML	20 08 30.9	
	comp=E,22150µm,0.7s						
VIL2	Platees	0.92	91	P	Pn	20 08 14.7	-0.1
VIL2				AML	AML	20 08 31.6	
	comp=E,12281µm,0.5s						
VIL2				AML	AML	20 08 35.0	
	comp=N,5994µm,0.9s						
VILL	Villia	0.96	94	P	Pb	20 08 15.0	+0.4
VILL				S	Sb	20 08 28.1	+0.8
	comp=N,6µm,0.8s						
EPID	Epidavros	1.01	127	P	Pg	20 08 15.1	-0.5
KFL	Anninata	1.04	264	P	Pb	20 08 16.0	-0.1
KFL	Anninata	1.04	264	P	Pb	20 08 16.0	-0.1
ITM	Ithomi	1.06	188	ePg	Pb	20 08 14.6	-1.8
ITM	Ithomi	1.06	188	P	Pb	20 08 15.4	-1.0
ITM	Ithomi	1.06	188	P	Pb	20 08 15.1	-1.2
SMIA	Simia	1.08	53	P	Pb	20 08 16.2	-0.6
SMIA	Simia	1.08	53	P	Pb	20 08 16.9	+0.1
DID	Didima	1.15	128	P	Pb	20 08 17.6	-0.4
DID	Didima	1.15	128	P	Pn	20 08 18.3	+0.2
ZKS	Zakynthos	1.17	243	P	Pb	20 08 17.5	-0.8
KRND	KRANIDI	1.19	135	P	Pn	20 08 18.0	-0.6
KRND	KRANIDI	1.19	135	P	Pn	20 08 17.9	-0.6
VLS	Valsamata	1.19	268	P	Pn	20 08 17.9	-0.7
VLS				S	Sn	20 08 35.5	+0.7
	comp=N,2µm,0.3s						
VLS	Valsamata	1.19	268	P	Pn	20 08 17.7	-0.9
EVGI	Lefkada island	1.20	289	P	Pn	20 08 17.8	-0.9
EVGI	Lefkada island	1.20	289	P	Pn	20 08 18.8	0.0
FSK	Fiskardo	1.23	281	P	Pn	20 08 18.2	-0.9
FSK				S	Sg	20 08 36.7	+0.9
	comp=N,3µm,0.5s						
FSK	Fiskardo	1.23	281	P	Pn	20 08 18.5	-0.7
MRKA	Markates	1.26	67	P	Pn	20 08 19.0	-0.6
MRKA	Markates	1.26	67	P	Pn	20 08 19.8	+0.3
LKD2	Lefkada island	1.26	297	P	Pn	20 08 19.1	-0.5
LKD2	Lefkada island	1.26	297	P	Pn	20 08 19.2	-0.5
TSLK	Tsoukalades, L	1.28	298	P	Pn	20 08 19.6	-0.2
ATH	Athens Observa	1.30	101	P	Pn	20 08 20.2	+0.1
ATH	Athens Observa	1.30	101	P	Pg	20 08 21.0	-0.1
ATH				S	Sn	20 08 37.8	+0.4
ATH				AML	AML	20 08 43.9	
	comp=E,2851µm,0.7s						
ATH				AML	AML	20 08 44.1	
	comp=N,2096µm,0.6s						
THL	Klokotos Trika	1.33	357	P	Pb	20 08 21.3	+0.3
THL	Klokotos Trika	1.33	357	P	Pg	20 08 21.6	-0.1
ATHU	Athens Univers	1.35	101	P	Pn	20 08 21.1	+0.3
ATHU	Athens Univers	1.35	101	P	Pb	20 08 21.3	-0.1
PYL	PYLOS	1.36	192	P	Pn	20 08 20.6	-0.4
PYL	PYLOS	1.36	192	P	Pn	20 08 20.8	-0.1
NEO	Neokhori	1.39	39	P	Pn	20 08 21.1	-0.2
NEO	Neokhori	1.39	39	P	Pn	20 08 21.2	-0.1
VLY	Voula,Athens	1.39	105	P	Pn	20 08 21.3	0.0
VLY	Voula,Athens	1.39	105	P	Pn	20 08 21.8	+0.5
PTL	Penteli	1.40	97	P	Pn	20 08 21.6	+0.1
PTL	Penteli	1.40	97	P	Pn	20 08 22.0	+0.5
XOR	Xorichti	1.42	37	P	Pn	20 08 21.6	-0.1
XOR	Xorichti	1.42	37	P	Pn	20 08 21.7	-0.1
SKIA	Skiathos	1.42	48	P	Pn	20 08 21.9	+0.2
SKIA	Skiathos	1.42	48	P	Pn	20 08 22.1	+0.3
DION	Dionisos Attik	1.45	95	P	Pn	20 08 22.3	+0.1
DION	Dionisos Attik	1.45	95	P	Pn	20 08 22.7	+0.4
EREA	Eretria	1.45	82	P	Pn	20 08 22.5	+0.3
EREA	Eretria	1.45	82	P	Pb	20 08 23.1	0.0
VLI	Veliai	1.65	156	P	Pn	20 08 25.3	+0.4
VLI	Veliai	1.65	156	P	Pn	20 08 25.3	+0.4
JAN	Janina	1.73	326	P	Pg	20 08 28.6	-0.6
JAN	Janina	1.73	326	P	Pg	20 08 28.8	-0.4
KPRO	Kipourio	1.81	342	P	Pb	20 08 29.0	-0.3
LIT	Litokhoron	1.89	9	ePn	Pn	20 08 28.4	+0.2
LIT	Litokhoron	1.89	9	P	Pn	20 08 28.1	-0.2
IGT	Igoumenitsa	1.90	314	ePg	Pb	20 08 31.6	+0.9
IGT				eSg	Sn	20 08 53.3	+1.1
IGT	Igoumenitsa	1.90	314	P	Pb	20 08 31.2	+0.5
KZN	Kozani	2.09	353	P	Pn	20 08 31.8	+0.8
KZN	Kozani	2.09	353	P	Pn	20 08 32.6	+1.5
KTHR	Kythira	2.10	160	P	Pn	20 08 32.5	+1.5
PENT	Pentalofos	2.10	339	P	Pb	20 08 33.7	-0.5
KTHA	Kythira Island	2.12	158	P	Pn	20 08 32.6	+1.3
KTHA	Kythira Island	2.12	158	P	Pn	20 08 32.8	+1.5
KEK	Kerkira	2.33	310	P	Pb	20 08 36.6	-1.3
PLG	Polygyros	2.38	26	P	Pn	20 08 34.6	-0.4
HORT	Hortiatis	2.49	18	P	Pn	20 08 36.2	-0.3
ANKY	Antikythira Is	2.55	158	P	Pn	20 08 37.8	+0.6
OUR	Ouranopolis	2.56	34	P	Pn	20 08 37.5	+0.1
SOH	Sokhos	2.76	20	P	Pn	20 08 40.9	+0.6
APE	Apeiranthos	2.96	112	⇑iP	Pn	20 08 43.5	+0.5
KNT	Kendrikon	2.99	12	P	Pn	20 08 44.1	+0.7
OHR	Ohrid	3.05	341	i Pn	Pb	20 08 48.8	-1.5
SRS	Serrai	3.10	21	ePg	Pb	20 08 49.4	-1.8
SRS				eSg	Sn	20 09 24.1	+2.1
SRS	Serrai	3.10	21	P	Pn	20 08 44.8	-0.1
VAY	Valandovo	3.11	7	ePg	Pb	20 08 50.0	-1.3
VAY				eSg	Sn	20 09 23.0	+1.0
VAY	Valandovo	3.11	7	i Pn	Pn	20 08 46.8	+1.9
IMMV	Iera Moni Meta	3.15	151	P	Pn	20 08 46.9	+1.4
NVR	Nevrokopi	3.40	23	P	Pn	20 08 49.8	+0.8
TIR	Tirane	3.56	332	ePn	Pn	20 08 51.1	0.0
TIR	Tirane	3.56	332	⇓iP	Pn	20 08 52.0	+0.9
MMB	Musomiste	3.58	20	P	Pn	20 08 52.0	+0.5
IDI	Anoyia	3.69	142	P	Pn	20 08 53.0	0.0
	comp=N,1.1nm,0.3s,baz=255,slow=10,SNR=16						
IDI				S	Sn	20 09 36.9	+0.3
	comp=N,7.2nm,0.3s,baz=8.5,slow=14,SNR=8.1						
KKB	Krupnik	3.71	11	P	Pn	20 08 55.9	+2.7
SKO	Skopje	3.77	352	ePn	Pn	20 08 56.6	+2.5
SKO	Skopje	3.77	352	i Pn	Pn	20 08 56.6	+2.5
RZN	Rozhen	4.00	29	P	Pn	20 08 59.3	+2.0
TIP	Timpagrande	4.29	284	ePn	Pn	20 09 03.0	+1.7
TIP	Timpagrande	4.29	284	⇑iP	Pn	20 09 04.1	+2.9
TIP	Timpagrande	4.29	284	S	Sn	20 09 54.1	+2.9
PLD	Plovdiv	4.35	26	ePn	Pn	20 09 04.1	+2.0
PLD				eSn	Sn	20 09 47.7	-5.0
TAR1	Taranto	4.38	303	ePn	Pn	20 09 05.1	+2.7
VTS	Vitosha	4.47	11	ePn	Pn	20 09 05.0	+1.3
VTS	Vitosha	4.47	11	ePn	Pn	20 09 04.3	+0.5
VTS				eSn	Sn	20 09 48.3	-7.5
VTS	Vitosha	4.47	11	⇑iP	Pn	20 09 04.1	+0.3
VTS	Vitosha	4.47	11	S	Sn	20 09 55.0	-0.8
FASA	Fasano	4.49	307	ePn	Pb	20 09 16.8	+2.0
MASS	Massafra	4.53	304	ePn	Pn	20 09 06.5	+2.0
DRME	Dracevica, Mon	4.54	331	ePn	Pn	20 09 07.5	+2.9
BARS	Barje	4.59	357	ePn	Pn	20 09 07.0	+1.7
BALB	Balikesir	4.72	71	ePn	Pn	20 09 08.7	+1.6
PDG	Podgorica	4.72	333	⇑iP	Pn	20 09 08.4	+1.2
PDG	Podgorica	4.72	333	S	Sn	20 10 01.0	-0.9
PDG	Podgorica	4.72	333	ePn	Pn	20 09 09.6	+2.5
TTG	Podgorica	4.72	333	ePn	Pn	20 09 09.7	+2.5
SG1	Sgolgore (BA)	4.94	304	ePn	Pn	20 09 11.3	+1.2
BAI	Bari	4.95	307	ePn	Pn	20 09 10.0	-0.2
HCY	Herceg Novi	5.03	328	ePn	Pn	20 09 13.3	+1.9
SELS	Selova	5.04	352	ePn	Pn	20 09 12.9	+1.4
ZAPS	Zavoj	5.05	4	ePn	Pn	20 09 12.7	+1.0
ZAPS				eSn	Sn	20 10 02.8	-7.3
SJES	Sjenica	5.28	343	ePn	Pn	20 09 15.8	+0.9
TREB	Trebinje	5.32	329	ePn	Pn	20 09 16.5	+1.2
DBRK	Dubrovnik	5.36	327	ePn	Pn	20 09 16.8	+0.9
DBRK				Sn	Sn	20 10 15.8	-1.8
BRY	Bratogost	5.40	331	ePn	Pn	20 09 19.6	+3.1
BOVS	Bovan	5.41	357	ePn	Pn	20 09 18.1	+1.6
UPM	Unac-Piva	5.53	335	ePn	Pn	20 09 21.4	+3.0
IVAS	Ivanjica	5.54	345	ePn	Pn	20 09 20.5	+2.1
ZAGS	Zajecar	5.58	1	ePn	Pn	20 09 20.3	+1.4
STON	Ston	5.72	326	ePn	Pn	20 09 19.5	-1.3
STON				Sn	Sn	20 10 22.8	-3.6
STON	Ston	5.72	326	ePn	Pn	20 09 21.3	+0.5
GRUS	Gruza	5.75	350	ePn	Pn	20 09 22.5	+1.3
RUDO	Rudo	5.76	340	ePn	Pn	20 09 22.5	+1.0
BBLS	Lazići	5.99	341	ePn	Pn	20 09 26.9	+2.3
BBLS	Lazići	5.99	341	ePn	Pn	20 09 26.4	+1.8
DIVS	Divibare	6.07	345	ePn	Pn	20 09 27.3	+1.5
DIVS	Divibare	6.07	345	ePn	Pn	20 09 27.5	+1.7
TRUS	Trudelj	6.12	348	ePn	Pn	20 09 27.1	+0.7
VAE	Valguarnera	6.13	265	P	Pn	20 09 29.3	+2.7
	comp=N,0.3nm,0.3s,baz=90,slow=20,SNR=1.7						
VAE				S	Sn	20 10 41.0	+4.3
	comp=N,0.9nm,0.3s,baz=75,slow=20,SNR=3.0						
HAPS	Han Pijesak,BI	6.31	339	ePn	Pn	20 09 29.4	+0.3
MAKA	Makarska	6.36	324	Sn	Sn	20 10 40.5	-1.5
GZR	Gura Zlata	7.17	4	⇑iP	Pn	20 09 41.0	+0.1
GZR	Gura Zlata	7.17	4	S	Sn	20 11 01.2	-1.1
MGRS	Mrkonjic Grad	7.24	330	ePn	Pn	20 09 44.4	+2.6
ZIRJ	Zirje	7.29	320	ePn	Pn	20 09 42.9	+0.5
ZIRJ				Sn	Sn	20 11 00.8	-4.4
LOT	Lotru	7.32	9	⇓iP	Pn	20 09 43.6	+0.7
LOT	Lotru	7.32	9	S	Sn	20 11 04.1	-1.8
MDUB	Mudurnu	7.39	70	ePn	Pn	20 09 45.3	+1.3
MORI	Morici	7.42	321	ePn	Pn	20 09 45.3	+1.2
MORI				Sn	Sn	20 11 04.6	-3.5
BLY	Banja Luka	7.48	332	ePn	Pn	20 09 46.2	+1.1
VOIR		7.53	16	⇓iP	Pn	20 09 45.2	-0.6
MLR	Muntele Rosu	7.80	20	P	Pn	20 09 51.9	+2.4
	comp=N,0.9nm,0.3s,baz=177,slow=16,SNR=12						
MLR				S	Sn	20 11 20.9	+3.1
	comp=N,0.1nm,0.3s,baz=193,slow=19,SNR=1.9						
MLR	Muntele Rosu	7.80	20	ePn	Pn	20 09 52.5	+3.0
MLR	Muntele Rosu	7.80	20	⇑iP	Pn	20 09 50.1	+0.6
AQU	L'Aquila	7.82	305	ePn	Pn	20 09 51.9	+2.2
DUGI	Dugi Otok	7.83	320	ePn	Pn	20 09 50.3	+0.5
DUGI				Sn	Sn	20 11 14.2	-4.2
UDBI	Udbina	7.89	325	ePn	Pn	20 09 51.8	+1.1
UDBI				Sn	Sn	20 11 17.6	-2.4
PLOR	Plostina	8.33	22	⇓iP	Pn	20 09 57.5	+0.8
VRI	Vrincioaia	8.37	23	⇑iP	Pn	20 09 56.9	-0.3
CRES	Cresnjev	9.05	329	ePn	Pn	20 10 07.0	+0.4
BR131	Keskin Array S	9.11	77	ePn	Pn	20 10 09.7	+2.2
BRTR	Keskin Array B	9.11	77	P	Pn	20 10 09.8	+2.3
	comp=N,0.3nm,0.3s,baz=256,slow=13,SNR=16						
PSZ	Piszkesteto	9.82	351	ePn	Pn	20 10 20.4	+3.3
SOKA	Soboth	9.92	331	ePn	Pn	20 10 20.2	+1.7
	comp=N,0.7nm,0.3s						
SOKA				eSn	Sn	20 12 07.7	-2.1
	comp=N,1.5nm,0.6s						
ABTA	Abfaltersbach	11.06	323	ePn	Pn	20 10 35.5	+1.3
	comp=N,2.1nm,0.5s						
ABTA				eSn	Sn	20 12 32.4	-5.4
	comp=N,5.0nm,0.6s						
MOA	Molln	11.19	332	i Pn	Pn	20 10 38.4	+2.6
	comp=N,0.9nm,0.4s						
WTTA	Wattenberg	11.85	323	ePn	Pn	20 10 46.3	+1.2
	comp=N,1.1nm,0.3s						
WTTA				i Sn	Sn	20 12 55.4	-1.9
	comp=N,7.5nm,0.7s						
WATA	Walderalm	11.93	323	i Pn	Pn	20 10 49.6	+3.5
	comp=N,3.6nm,0.5s						
SQTA	Sankt Quirin	12.03	322	ePn	Pn	20 10 48.7	+1.4
	comp=N,1.2nm,0.3s						
SQTA				Sn	Sn	20 12 59.0	-2.4
	comp=N,3.0nm,0.6s						
FETA	Feichten	12.13	320	eSn	Sn	20 13 02.0	-2.0
	comp=N,0.9nm,0.5s						
MOTA	Moosalm	12.16	322	ePn	Pn	20 10 50.0	+0.8
	comp=N,2.4nm,0.6s						
GERES	GERESS Array B	12.23	333	P	Pn	20 10 53.9	+3.8
	comp=N,0.1nm,0.3s,baz=157,slow=14,SNR=4.3						
CLL	Collm	14.57	337	ePP	P	20 11 31.0	+2.5
ESDC	Sonseca Array	20.30	282	P	Pn	20 12 33.5	-0.4
	comp=N,4.0nm,0.7s,baz=76,slow=11,SNR=36						
ESLA	Sonseca Array	20.30	282	eP	Pn	20 12 33.2	-0.7
	comp=N,4.4nm,0.7s						
PAB	San Pablo	20.61	282	eP	Pn	20 12 36.7	-0.8
	comp=N,6.1nm,0.8s						
HFS	Hagfors	22.56	349	P	P	20 12 57.0	+1.0
	comp=N,3.0nm,0.7s,baz=153,slow=10.0,SNR=8.7						
FIA0	FINESS Array S	23.37	5	eP	P	20 13 04.0	-0.2
FINES	FINESS Array B	23.37	5	P	P	20 13 04.0	-0.2
	comp=N,2.9nm,1.0s,baz=165,slow=33,SNR=2.6						
NB2	NORSAR Subarra	23.83	347	P	P	20 13 09.5	+0.6
	comp=Z,1.0nm,0.6s,baz=155,slow=9.3						
NB200	NORSAR Array S	23.83	347	eP	P	20 13 08.8	-0.1
NOA	NORSAR Array B	23.83	347	P	P	20 13 08.8	-0.1
	comp=Z,0.7nm,0.6s,baz=160,slow=10,SNR=4.7						
EKA	Eskdalemuir Ar	24.12	323	P	P	20 13 11.9	+0.4
	comp=Z,1.4nm,0.5s,baz=118,slow=9.8,SNR=8.7						
GEYT	Alibeck	28.24	79	LR	LR	20 28 10.4	
	comp=Z,23nm,18.2s,baz=65,slow=43						
TOA1	Torodi Ar. Sit	30.87	221	eP	P	20 14 13.4	+1.0
TORD	Torodi Ar. Bea	30.87	221	P	P	20 14 13.4	+0.9
	comp=Z,0.9nm,0.6s,baz=29,slow=10.0,SNR=8.5						
KURBB	Kurchatov Arra	41.20	54	P	P	20 15 40.4	0.0
	comp=Z,2.8nm,0.5s,baz=282,slow=8.6,SNR=24						

MK31	Makanchi Array	44.21	59	*e*P	P	20 16 05.1	+0.1
	comp=Z,2.8nm,0.8s						
MK32	Makanchi Array	44.21	59	*e*PcP	PcP	20 17 49.4	-0.2
MKAR	Makanchi Array	44.21	59	P	P	20 16 05.0	0.0
	comp=Z,3.3nm,0.4s,baz=273,slow=7.4,SNR=61						
MKAR				PcP	PcP	20 17 49.4	-0.2
	comp=Z,0.8nm,0.8s,baz=276,slow=4.3,SNR=3.2						
ZAA0	Zalesovo Array	44.73	48	*e*P	P	20 16 08.5	-0.4
	comp=Z,3.3nm,0.6s						
ZALV	Zalesovo Beam	44.73	48	P	P	20 16 08.7	-0.2
	comp=Z,3.4nm,0.5s,baz=273,slow=8.5,SNR=15						
ZALV				LR	LR	20 36 31.3	
	comp=Z,19nm,20.0s,baz=72,slow=38						
SONA0	Songino Array	59.46	51	*e*P	P	20 17 58.8	-0.1
SONM	Songino Array	59.46	51	P	P	20 17 58.8	-0.1
	comp=Z,1.1nm,0.6s,baz=283,slow=8.8,SNR=7.8						
WR1	Warramunga Arr	119.30	93	*e*PKPdf	PKPdf	20 26 44.0	-1.6
WRA	Warramunga Arr	119.30	93	PKP	PKPdf	20 26 44.0	-1.6
	comp=Z,1.0nm,0.8s,baz=354,slow=2.5,SNR=3.6						
ASAR	Alice Springs	120.94	97	PKP	PKPdf	20 26 47.7	-1.0
	comp=Z,0.3nm,0.4s,baz=299,slow=1.6,SNR=6.9						

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*SJA **15** 20:10:19.7±0.7, 23.°94S×66.°80W, h215^{km}±6^{km}, ML2.3, MW3.2*

*ISCJB **15** 20:10:22.5±1.2, 23.°84S±0.°08×66.°93W±0.°05, h188^{km}±14^{km}, Error ellipse: s-maj=14.4km s-min=6.8km az=18.9*

*GUC **15** 20:10:22.5±0.6, 23.°71S×67.°48W, h253^{km}±12^{km}, ML3.6*

ISC 15 20:10:20.3±2.9**, 23.°89S**±0.°09×**66.°86W**±0.°06**, h211**^{km}±24^{km}**, n22, σ1.^{s}13**/32**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	Humahuaca	1.49	63	*e*P	Pn	20 10 55.7	+0.3
HJA				IAML		20 10 58.2	
	comp=Z,16nm,0.4s						
HJA				*e*S	S	20 11 22.4	+0.1
AZAP	Zapla	1.68	102	*e*P	Pn	20 10 56.6	-0.2
AZAP				IAML		20 10 57.1	
	comp=Z,19nm,0.6s						
AZAP				*e*S	S	20 11 24.1	-0.8
YJA	Yavi	2.11	36	*e*P	Pn	20 11 02.2	+0.9
YJA				IAML		20 11 03.3	
	comp=Z,4.1nm,0.7s						
LVC	Limon Verde	2.27	304	*e*P	Pn	20 11 03.9	+1.1
LVC				IAML		20 11 05.4	
	comp=Z,11nm,0.1s						
PB15	IPOC Station P	2.49	285	*e*P	Pn	20 11 06.1	+1.1
PB15				*e*S	S	20 11 40.0	+0.6
PB15	IPOC Station P	2.49	285	*e*P	Pn	20 11 06.0	+1.1
PB15				*i* S	S	20 11 39.2	-0.2
PB06	IPOC Station P	2.76	295	*e*P	Pn	20 11 08.9	+1.0
PB09	IPOC Station P	3.03	313	*e*P	Pn	20 11 12.6	+1.6
PB09	IPOC Station P	3.03	313	*e*P	Pn	20 11 12.3	+1.3
PB09				*i* S	S	20 11 50.4	+0.2
PB03	IPOC Station P	3.23	304	*e*P	Pn	20 11 14.3	+0.8
PB03	IPOC Station P	3.23	304	*e*P	Pn	20 11 14.1	+0.6
PB03				*i* S	S	20 11 53.1	-1.5
PB03				IAML		20 11 55.6	
	comp=E,65nm,0.3s						
PB05	IPOC Station P	3.24	288	*e*P	Pn	20 11 14.4	+1.0
PB05	IPOC Station P	3.24	288	*e*P	Pn	20 11 13.9	+0.5
PB05				*i* S	S	20 11 52.6	-2.0
PB14	IPOC Station P	3.32	256	*e*P	Pn	20 11 15.3	+0.8
PB04	IPOC Station P	3.40	296	*e*P	Pn	20 11 16.2	+0.8
PB10	IPOC Station P	3.41	276	*e*P	Pn	20 11 16.1	+0.8
PB07	IPOC Station P	3.52	307	*e*P	Pn	20 11 17.5	+0.5
PB07	IPOC Station P	3.52	307	*e*P	Pn	20 11 17.4	+0.5
PB07				*i* S	S	20 11 58.6	-2.2
PB07				IAML		20 12 00.3	
	comp=N,70nm,0.2s						
PB01	IPOC Station P	3.73	319	*e*P	Pn	20 11 19.7	+0.4
PB01				*i* S	S	20 12 04.1	-1.2
PB01				IAML		20 12 06.6	
	comp=E,32nm,0.2s						
PB02	IPOC Station P	3.79	312	*e*P	Pn	20 11 20.7	+0.6
PB02	IPOC Station P	3.79	312	*e*P	Pn	20 11 20.5	+0.4
PB02				*i* S	S	20 12 04.5	-2.2
PB02				IAML		20 12 08.9	
	comp=E,51nm,0.5s						
PB08	IPOC Station P	4.29	330	*e*P	Pn	20 11 28.0	+1.5

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*ISCJB **15** 20:10:31.3±0.4, 10.°74S±0.°06×161.°85E±0.°08, h35^{km}, mb4.5/28, Error ellipse: s-maj=12.0km s-min=8.3km az=11.4*

*NEIC **15** 20:10:36.6±1.4, 10.°77S×161.°88E, h69^{km}±8^{km}, mb4.9/17, Error ellipse: s-maj=19.6km s-min=7.3km az=220.0*

*IDC **15** 20:10:38.1±2.2, 10.°81S×161.°88E, h83^{km}±18^{km}, mb3.8/15, mb1 3.9/17, mb1mx3.8/38, mbtmp4.1/17, MS3.1/1, Ms1 3.1/1, ms1mx2.6/20, Error ellipse: s-maj=20.5km s-min=11.8km az=81.0*

ISC 15 20:10:33.0±0.6**, 10.°74S**±0.°08×**162.°15E**±0.°10**, h35**^{km}**, n41, σ1.^{s}74**/43**, mb4.6**/28**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.53	301	P	Pn	20 11 13.2	+1.7
	159nm,0.3s,baz=145,slow=2.9,SNR=33						
HNR				S	Sn	20 11 43.7	+2.6
	276nm,0.3s,baz=176,slow=19,SNR=8.0						
HNR				LR	LR	20 12 13.6	
	comp=Z,399nm,21.0s,baz=148,slow=41						
HNR	Honiara	2.53	301	*e*Pn	Pn	20 11 12.6	+1.1
HNR	Honiara	2.53	301	*e*P	Pn	20 11 13.0	+1.4
HNR				*e*S	Sn	20 11 47.0	+5.8
DZM	Mont Dzumac	11.99	160	P	Pn	20 13 26.1	+4.5
	0.3nm,0.3s,baz=32,slow=11,SNR=6.9						
JAY	Jayapura	22.80	289	P	P	20 15 30.8	-2.2
	2.8nm,0.6s,baz=85,slow=12,SNR=3.3						
WB2	Warramunga Arr	28.29	248	*e*P	P	20 16 21.3	-2.1
	31nm,1.9s						
WR1	Warramunga Arr	28.30	248	*e*P	P	20 16 21.6	-1.9
WRA	Warramunga Arr	28.30	248	P	P	20 16 21.6	-1.9
	1.9nm,0.6s,baz=83,slow=9.3,SNR=18						
STKA	Stephens Creek	28.34	219	P	P	20 16 23.2	-0.5
	1.4nm,0.6s,baz=53,slow=12,SNR=6.7						
STKA	Stephens Creek	28.34	219	*e*P	P	20 16 23.2	-0.5
	3.6nm,1.7s						
AS31	Alice Springs	29.81	241	*e*P	P	20 16 34.2	-2.7
	2.3nm,1.4s						
ASAR	Alice Springs	29.81	241	P	P	20 16 34.2	-2.8
	1.0nm,0.4s,baz=64,slow=10,SNR=33						
TOO	Toolangi	30.63	207	*e*P	P	20 16 44.5	+0.5
	32nm,1.8s						
BBOO	Buckleboo	32.53	224	*e*P	P	20 16 59.7	-1.1
	11nm,0.7s						
OXZ	Oxford	33.59	167	*e*P	P	20 17 10.2	+0.4
	41nm,1.4s						
RPZ	Rata Peaks	33.75	168	P	P	20 17 11.7	+0.5
	7.9nm,0.9s,baz=18,slow=8.1,SNR=3.5						
RPZ	Rata Peaks	33.75	168	*e*P	P	20 17 11.9	+0.6
	50nm,1.4s						
MQZ	McQueen's Vall	34.09	166	*e*P	P	20 17 14.4	+0.3
	170nm,1.7s						
ASAJ	Asahikawa	57.41	343	P	P	20 20 18.6	+0.5
	2.3nm,0.4s,baz=191,slow=5.2,SNR=6.6						
USRK	Ussuriysk Ar.	61.15	336	P	P	20 20 43.5	-0.4
	2.3nm,0.9s,baz=145,slow=5.3,SNR=3.2						
PETK	Petropavlovsk-	63.71	357	P	P	20 21 01.4	+0.6
	1.4nm,0.8s,baz=134,slow=4.2,SNR=2.7						
PEA1	Petropavlovsk-	63.71	357	*e*P	P	20 21 01.4	+0.6
VNDA	Vanda	66.77	180	P	P	20 21 20.6	+0.2
	0.8nm,0.7s,baz=336,slow=6.4,SNR=9.2						
VNDA	Vanda	66.77	180	*e*P	P	20 21 20.7	+0.3
SONA0	Songino Array	76.36	325	*e*P	P	20 22 17.4	-1.4
SONM	Songino Array	76.36	325	P	P	20 22 17.4	-1.4
	1.1nm,0.7s,baz=139,slow=6.0,SNR=8.5						
KDAK	Kodiak Island	77.63	23	P	P	20 22 25.5	+0.1
	3.7nm,0.8s,baz=270,slow=6.2,SNR=4.8						
KDAK	Kodiak Island	77.63	23	*e*P	P	20 22 25.3	-0.2
	49nm,1.8s						
QSPA	South Pole Qui	79.26	180	P	P	20 22 33.4	-1.3
	1.1nm,1.0s,baz=263,slow=3.6,SNR=4.6						
CAST	Castle Rocks	81.78	19	*e*P	P	20 22 47.6	-0.3
	26nm,1.9s						
HDA	Harding Lake	84.12	20	*e*P	P	20 23 00.5	+0.5
	3.7nm,0.7s						
ILAR	Eielson Array	84.38	20	P	P	20 23 01.3	0.0
	0.5nm,0.6s,baz=244,slow=4.7,SNR=5.8						
SCRK	Sand Creek	84.87	21	*e*P	P	20 23 04.9	+1.0
	18nm,2.0s						
EGAK	Eagle	86.33	21	*e*P	P	20 23 11.4	+0.3
	3.3nm,0.9s						
NV01	Mina Array Sit	88.54	51	*e*P	P	20 23 23.0	+0.4
NVAR	Mina Array Bea	88.54	51	P	P	20 23 23.0	+0.4
	0.3nm,0.4s,baz=257,slow=12,SNR=1.7						
EPYK	Eagle Plains	88.75	21	*e*P	P	20 23 24.0	+1.3
	27nm,1.9s						
MK32	Makanchi Array	90.90	317	*e*P	P	20 23 32.3	-0.9
MKAR	Makanchi Array	90.90	317	P	P	20 23 32.3	-0.9
	0.8nm,0.8s,baz=106,slow=5.0,SNR=4.2						
KBL	Kabul	98.54	304	*e*P	P	20 24 06.3	-2.4
	8.7nm,0.6s						
CHGR	Chuyangaron	98.94	308	*e*P	P	20 24 08.6	-1.6
	16nm,0.7s						

NNC 15 20:11:58.3±4.1**, 38.°08N**×**68.°77E, h1**^{km}±18^{km}**, mb3.7, mpv3.3, 6C-1D, Error ellipse: s-maj=27.1km s-min=25.5km az=160.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.19	14	⇑Pn	Pn	20 13 17.8	+0.7
	0.6nm,0.4s,baz=196,slow=19,SNR=12						
KK31				⇑Pg	Pb	20 13 33.4	+3.6
	2.5nm,0.5s,baz=201,slow=18,SNR=4.4						
KK31				⇑Sn	Sn	20 14 18.8	+1.3
	1.4nm,0.4s,baz=194,slow=28,SNR=7.1						
KK31				Lg	Lg	20 14 42.6	
	16nm,0.7s,baz=198,slow=28,SNR=9.2						
AAK	Ala-Archa	6.31	42	⇑Pn	Pn	20 13 34.3	+1.7
	1.5nm,0.4s						
AAK				⇑Lg	Lg	20 15 17.0	
	15nm,1.2s						
TKM2	Tokmak 2	7.10	45	⇑Pn	Pn	20 13 41.5	-2.0
	1.4nm,0.6s						
TKM2				⇓Lg	Lg	20 15 43.9	
	6.5nm,1.0s						
AB31	Akbulak array	12.85	333	Pn	Pn	20 15 01.0	-1.0
	0.9nm,0.6s,baz=16,slow=24,SNR=11						

IDC 15 20:14:49.3±10.0**, 29.°95S**×**179.°37W, h290**^{km}±98^{km}**, mb3.1**/2**, mb1 3.4**/3**, mb1mx3.1**/27**, mbtmp3.9**/3**, Error ellipse: s-maj=90.1km s-min=51.7km az=15.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.79	198	P	Pn	20 16 54.0	+1.6
	1.9nm,0.3s,baz=9.0,slow=19,SNR=35						
URZ				S	S	20 18 29.1	-3.2
	2.8nm,0.3s,baz=39,slow=14,SNR=8.8						
ASAR	Alice Springs	41.95	267	P	P	20 22 12.3	-0.2
	0.4nm,0.4s,baz=106,slow=7.3,SNR=12						
WRA	Warramunga Arr	42.89	272	P	P	20 22 20.2	+0.1
	1.1nm,0.5s,baz=104,slow=9.4,SNR=9.4						
FINES	FINESS Array B	144.31	339	PKP	PKPab	20 33 48.8	-0.2
	2.5nm,1.0s,baz=60,slow=3.4,SNR=5.3						

NNC 15 20:16:24.0±3.4**, 38.°02N**×**69.°07E, h0**^{km}**, mb3.9, mpv3.5, 2C-3D, Error ellipse: s-maj=32.7km s-min=27.4km az=106.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.20	12	Pn	Pn	20 17 43.3	+0.3
	0.7nm,0.3s,baz=216,slow=6.1,SNR=8.0						
KK31				Pg	Pb	20 17 59.0	+3.2
	6.4nm,0.6s,baz=196,slow=17,SNR=11						
KK31				⇑Sn	Sn	20 18 44.9	+1.3
	2.1nm,0.3s,baz=34,slow=44,SNR=4.3						
KK31				Lg	Lg	20 19 08.3	
	15nm,0.6s,baz=197,slow=26,SNR=7.0						
AAK	Ala-Archa	6.20	40	⇓Pn	Pn	20 17 57.8	+0.9
	2.2nm,0.4s						
AAK				⇑Lg	Lg	20 19 39.9	
	10nm,0.7s						
TKM2	Tokmak 2	6.98	43	⇓Pn	Pn	20 18 06.5	-1.2
	3.3nm,0.7s						
AB31	Akbulak array	13.02	333	Pn	Pn	20 19 26.6	-3.5
	0.6nm,0.4s,baz=161,slow=11,SNR=15						
AKTO	Aktyubinsk	14.70	331	⇓Pn	P	20 19 56.7	-2.9
	3.1nm,0.8s						

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*ISCJB **15** 20:17:42.0±0.9, 61.°1S±0.°1×24.°9W±0.°4, h10^{km}, mb3.8/5, MS3.9/2, Error ellipse: s-maj=32.1km s-min=12.6km az=157.5*

*IDC **15** 20:17:42.2±1.0, 61.°15S×25.°09W, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.7/24, mbtmp3.9/6, ML4.0/1, MS3.8/3, Ms1 3.7/3, ms1mx3.3/15, Error ellipse: s-maj=43.0km s-min=26.3km az=46.0*

ISC 15 20:17:43.8±0.9**, 61.°2S**±0.°1×**24.°9W**±0.°2**, h10**^{km}**, n16, σ2.^{s}23**/14**, mb3.9**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	11.62	152	P	Pn	20 20 32.2	+2.9
VNA3	Neumayer Olymp	11.76	155	P	Pn	20 20 34.0	+2.6
VNA2	Neumayer--Watz	12.02	152	P	Pn	20 20 37.6	+2.8
	baz=310,slow=15						
SNAA	Sanae	13.61	150	P	Pn	20 20 58.6	+2.1
SNAA	Sanae	13.61	150	Pn	Pn	20 20 58.3	+1.8
	0.8nm,0.3s,baz=291,slow=18,SNR=36						
SNAA				Sn	Sn	20 23 23.1	-4.5
	0.4nm,0.3s,baz=333,slow=13,SNR=11						
SNAA				LR	LR	20 25 02.3	
	comp=Z,294nm,21.8s,baz=330,slow=32						
MAW	Mawson	35.39	139	P	P	20 24 38.6	-0.3
	0.7nm,0.7s,baz=278,slow=14,SNR=2.3						
CPUP	Villa Florida	41.16	313	LR	LR	20 40 11.0	
	comp=Z,54nm,20.6s,baz=138,slow=33						
H10S2	ASCENSION HYDR	52.68	13	T	T	21 24 15.4	
	baz=187,slow=75,SNR=17						
H10S3	ASCENSION HYDR	52.68	13	T	T	21 24 18.3	
	baz=187,slow=75,SNR=14						
H10S1	ASCENSION HYDR	52.70	13	T	T	21 24 14.7	
	baz=187,slow=75,SNR=14						
LPAZ	La Paz	54.35	306	P	P	20 27 10.1	-1.0
	0.6nm,0.5s,baz=140,slow=4.9,SNR=3.5						
MATP	Matopo	54.94	67	P	P	20 27 14.2	-0.7
	2.1nm,1.0s,baz=220,slow=7.9,SNR=3.0						
TORD	Torodi Ar. Bea	77.04	27	P	P	20 29 37.3	+0.6
	0.9nm,0.9s,baz=206,slow=6.4,SNR=3.5						
ASAR	Alice Springs	93.72	161	P	P	20 31 00.7	+0.1
	0.4nm,0.9s,baz=188,slow=3.7,SNR=3.7						
ASAR				LR	LR	21 09 50.5	
	comp=Z,118nm,21.4s,baz=254,slow=33						
SONM	Songino Array	149.53	94	PKPbc	PKiKP	20 37 34.1	+0.8
	1.2nm,1.0s,baz=234,slow=3.5,SNR=5.9						
ILAR	Eielson Array	154.21	303	PKPbc	PKPbc	20 37 42.2	0.0
	0.8nm,1.0s,baz=188,slow=3.5,SNR=3.0						
ILAR				PKPab	PKPab	20 37 55.2	-1.1
	0.6nm,0.6s,baz=114,slow=0.2,SNR=6.7						

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*SOME **15** 20:20:19.3, 40.°73N×74.°07E, h15^{km}*

*KRNET **15** 20:20:19.2±0.1, 40.°90N×73.°99E, h15^{km}, mb2.8*

*NNC **15** 20:20:20.8±1.1, 40.°88N×74.°03E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=7.2km s-min=5.3km az=178.0*

ISC 15 20:20:17.7±1.2**, 40.°85N**±0.°03×**74.°00E**±0.°02**, h12**^{km}±12^{km}**, n52, σ1.^{s}03**/83**, 21C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.90	302	⇑*i*P	Pb	20 20 35.9	+0.5
	baz=99						
ARSB				⇑*i*S	Sb	20 20 48.4	+1.0
	baz=99						
ARLS	Aral	1.04	14	⇑*i*P	Pb	20 20 37.9	+0.1
	baz=15						
ARLS				⇑*i*S	Sn	20 20 52.3	-0.5
	baz=15						
UCH	Uchtor	1.43	16	⇑*i*P	Pg	20 20 45.2	0.0
	baz=16						
UCH				⇑*i*S	Sg	20 21 05.0	+1.1
	baz=16						
UCH	Uchtor	1.43	16	P	Pg	20 20 45.3	0.0
	SNR=21						
KZA	Kyzart	1.55	37	⇓*i*P	Pg	20 20 47.6	+0.1
	baz=39						
KZA				⇓*i*S	Sg	20 21 08.5	+0.9
	baz=39						
KZA	Kyzart	1.55	37	P	Pg	20 20 48.2	+0.8
	SNR=13						
NRN	Naryn	1.62	68	⇑*i*P	Pg	20 20 49.2	+0.3
	baz=70						
NRN				⇑*i*S	Sg	20 21 11.1	+1.1
	baz=70						
ARK	Arkit	1.80	302	⇑*i*P	Pg	20 20 52.2	-0.1
	baz=1.0						
ARK				⇑*i*S	Sg	20 21 16.0	+0.4
	baz=1.0						
EKS2	Erkin-Say	1.82	355	⇑*i*P	Pg	20 20 52.2	-0.4
	baz=55						
EKS2				⇑*i*S	Sg	20 21 16.0	-0.2
	baz=55						
EKS2	Erkin-Say	1.82	355	P	Pg	20 20 52.0	-0.6
	SNR=8.3						
AAK	Ala-Archa	1.82	12	⇓P	Pg	20 20 54.2	+1.5
	8.9nm,0.5s						
AAK				⇓S	Sg	20 21 17.3	+0.8
	8.0nm,0.3s						
AAK	Ala-Archa	1.82	12	⇓*i*P	Pg	20 20 52.4	-0.3
	baz=12						
AAK				⇓*i*S	Sg	20 21 16.6	+0.2
	baz=12						
KBK	Karagaybulak	1.94	21	⇑*i*P	Pg	20 20 54.7	-0.3
	baz=22						
KBK				⇑*i*S	Sg	20 21 20.3	+0.2
	baz=22						
KBK	Karagaybulak	1.94	21	P	Pg	20 20 55.4	+0.5
	SNR=10						
MRKS	Merke	1.98	343	Pg	Pg	20 20 56.2	+0.5
	6.0nm,0.3s						
MRKS				Lg	Lg	20 21 22.4	
	22nm,0.3s						
MRKS	Merke	1.98	343	*e*P	Pg	20 20 56.2	+0.5
	6.0nm,0.3s						
MRKS				*e*S	Sg	20 21 22.4	+1.1
	22nm,0.3s						
FRU1	Bishkek	2.01	13	⇑*i*P	Pb	20 20 55.1	+0.8
	baz=14						
FRU1				⇑*i*S	Sg	20 21 22.7	+0.2
	baz=14						
DRK	Karamyk	2.17	232	⇑*e*P	Pg	20 20 59.0	-0.4
	baz=30						
DRK				⇑*i*S	Sg	20 21 28.6	+1.1
	baz=30						
ULHL	Ulahol	2.19	50	⇓*i*P	Pg	20 20 58.6	-1.1
	baz=51						
ULHL				⇓*i*S	Sg	20 21 27.0	-1.1
	baz=51						
ULHL	Ulahol	2.19	50	P	Pg	20 20 59.3	-0.4
	SNR=11						
CHMS	Chumysh	2.22	14	⇓*e*P	Pb	20 20 58.5	+0.7
	baz=15						
CHMS				⇓*i*S	Sg	20 21 27.3	-1.8
	baz=15						
CHMS	Chumysh	2.22	14	P	Pg	20 21 00.3	+0.1
	SNR=6.8						
TKM2	Tokmak 2	2.39	30	⇓Pg	Pg	20 21 03.5	-0.1
	3.0nm,0.5s						
TKM2				⇓Lg	Lg	20 21 36.1	
	21nm,0.7s						
TKM2	Tokmak 2	2.39	30	⇓*i*P	Pb	20 21 01.1	+0.3
	baz=30						
TKM2				⇓*i*S	Sb	20 21 31.9	+1.6
	baz=30						
USP	Ospenovka	2.44	9	⇑*i*P	Pb	20 21 01.7	+0.1
	baz=9.0						
USP				⇑*i*S	Sb	20 21 32.8	+1.1
	baz=9.0						
USP	Ospenovka	2.44	9	P	Pg	20 21 03.9	-0.7
	SNR=8.3						
BTK	Batken	2.55	253	⇓*i*P	Pb	20 21 03.7	+0.2
	baz=52						
BTK				⇓*i*S	Sb	20 21 36.2	+1.4
	baz=52						
KST	Kastek	2.64	33	Pg	Pg	20 21 08.4	+0.2
	4.9nm,0.4s						
KST				Lg	Lg	20 21 43.6	
	23nm,0.4s						
KST	Kastek	2.64	33	*e*P	Pg	20 21 08.4	+0.2
	4.9nm,0.4s						
KST				*e*S	Sg	20 21 43.6	+1.1
	23nm,0.4s						
DGS	Degeres	2.73	28	Pg	Pg	20 21 10.5	+0.4
	6.3nm,0.7s						
DGS				Lg	Lg	20 21 46.8	
	22nm,0.5s						
DGS	Degeres	2.73	28	*e*P	Pg	20 21 08.9	-1.2
	6.3nm,0.7s						
DGS				*e*S	Sg	20 21 44.8	-0.7
	22nm,0.5s						
MTBS	Maitube	2.91	38	Pg	Pg	20 21 13.0	-0.5
	7.7nm,0.2s						
MTBS				Lg	Lg	20 21 51.6	
	13nm,0.3s						
MTBS	Maitube	2.91	38	*e*P	Pg	20 21 13.0	-0.5
	7.7nm,0.2s						
MTBS				⇓*i*S	Sg	20 21 51.6	+0.3
	13nm,0.3s						
IZV	Izvestkoviy	2.93	41	Pg	Pg	20 21 13.5	-0.3
	6.3nm,0.5s						
IZV				Lg	Lg	20 21 52.4	
	18nm,0.4s						
IZV	Izvestkoviy	2.93	41	*e*P	Pg	20 21 13.5	-0.3
	6.3nm,0.5s						
IZV				*e*S	Sg	20 21 52.4	+0.5
	18nm,0.4s						
TNSS	Tian-Shan	3.10	44	Pg	Pg	20 21 16.8	-0.4
	5.2nm,0.3s						
TNSS				Lg	Lg	20 21 57.9	
	10nm,0.6s						
TNSS	Tian-Shan	3.10	44	*e*P	Pg	20 21 16.8	-0.4
	5.2nm,0.3s						
TNSS				*e*S	Sg	20 21 57.9	+0.5
	10nm,0.6s						
MDOK	Medeo	3.24	44	Pg	Pg	20 21 19.0	-0.8
	2.9nm,0.3s						
MDOK				Lg	Lg	20 22 01.6	
	7.6nm,0.5s						
MDOK	Medeo	3.24	44	*e*P	Pg	20 21 19.0	-0.8
	2.9nm,0.3s						
MDOK				*e*S	Sg	20 22 01.6	-0.3
	7.6nm,0.5s						
IUG	Iuzhnay	3.25	295	*e*P	Pg	20 21 19.0	-1.0
	4.3nm,0.4s						
IUG				*e*S	Sg	20 22 01.6	-0.4
	39nm,0.5s						
KOTS	Kotyrbulak	3.33	43	Pg	Pg	20 21 21.1	-0.3
	3.2nm,0.5s						
KOTS				Lg	Lg	20 22 05.1	
	11nm,0.6s						
KOTS	Kotyrbulak	3.33	43	*e*P	Pg	20 21 21.1	-0.3
	3.2nm,0.5s						
KOTS				*e*S	Sg	20 22 05.1	+0.6
	11nm,0.6s						
KK31	Karatay Array	3.44	312	⇑Pg	Pg	20 21 21.4	-2.2
	4.2nm,0.9s,baz=63,slow=12,SNR=5.1						
KK31				Lg	Lg	20 22 09.4	
	5.8nm,0.5s,baz=133,slow=28,SNR=9.3						
KTBS	Karatobe	3.48	34	Pg	Pg	20 21 22.8	-1.7
	1.2nm,0.2s						
KTBS				Lg	Lg	20 22 08.4	
	27nm,0.5s						
KTBS	Karatobe	3.48	34	*e*P	Pg	20 21 22.8	-1.7
	1.2nm,0.2s						
KTBS				*e*S	Sg	20 22 08.4	-1.2
	27nm,0.5s						
KUU	Kurty	3.50	29	Pg	Pg	20 21 23.2	-1.6
	1.2nm,0.1s						
KUU				Lg	Lg	20 22 08.9	
	17nm,0.6s						
KUU	Kurty	3.50	29	*e*P	Pg	20 21 23.2	-1.6
	1.2nm,0.1s						
KUU				*e*S	Sg	20 22 08.9	-1.3
	17nm,0.6s						
CHKK	Chushkaly	3.73	35	Pg	Pg	20 21 27.5	-1.7
	2.1nm,0.2s						
CHKK				Lg	Lg	20 22 16.0	
	5.0nm,0.4s						
CHKK	Chushkaly	3.73	35	*e*P	Pg	20 21 27.5	-1.7
	2.1nm,0.2s						
CHKK				*e*S	Sg	20 22 16.0	-1.5
	5.0nm,0.4s						
BRLS	Borolday	3.79	306	*e*P	Pg	20 21 28.4	-2.0
	0.8nm,0.5s						
BRLS				*e*S	Sg	20 22 17.4	-2.0
	6.4nm,0.5s						
UZB	Uzynbulak	4.39	57	Pg	Pg	20 21 39.6	-2.3
	1.1nm,0.3s						

UZB				Lg	Lg	20 22 36.8	
	3.3nm,0.6s						
UZB	Uzynbulak	4.39	57	eP	Pg	20 21 39.5	-2.3
	1.1nm,0.3s						
UZB				eS	Sg	20 22 36.8	-1.9
	3.3nm,0.6s						

ISCJB 15 20:48:23.4±2.1, 13°.9N±0°.4×90°.7W±0°.2, h96^{km}±27^{km}, Error ellipse: s-maj=70.4km s-min=9.9km az=23.4

SNET 15 20:48:23.6±0.6, 13°.98N×90°.83W, h31^{km}±446^{km}, ML2.8

GCG 15 20:48:24.4±0.4, 14°.76N×90°.51W, h92^{km}±24^{km}, MD3.1

ISC 15 20:48:24.0±2.8, 13°.9N±0°.3×90°.7W±0°.1, h91^{km}±27^{km}, n6, σ0^{s}.56/10, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	Pacaya	0.53	12	eP	Pn	20 48 39.3	0.0
PCG				eS	Sn	20 48 51.2	+0.4
FUG	Fuego 3	0.58	349	eP	Pn	20 48 39.7	-0.1
FUG				eS	Sn	20 48 51.2	-0.3
CEVE	Cerro Verde	1.07	92	eP	Pn	20 48 44.5	-0.3
CEVE				eS	Sn	20 49 01.1	+0.7
CEVE				IAML		20 49 02.5	
	comp=Z,168nm,0.3s						
SNJE	San Jose	1.09	90	eP	Pn	20 48 44.7	-0.3
STG3	Santiaguito 3,	1.17	315	eP	Pn	20 48 46.5	+0.6
STG3				eS	Sn	20 49 01.6	-0.8
MTO3	Montecristo	1.42	68	eP	Pn	20 48 49.0	-0.1

WEL 15 20:55:34.2, 40°.0S±0°.8×17°7E±°, h46^{km}±1^{km}, M3.6/30, ML4.0/24, MLv3.6/30, Error ellipse: s-maj=0.0km s-min=0.0km az=81.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PXZ	Pawanui	0.09	84	P	Pn	20 55 41.6	+0.2
PXZ				S	Sn	20 55 47.4	+0.8
WPHZ	Waipukurau	0.23	264	P	Pn	20 55 42.8	+0.4
WPHZ				S	Sn	20 55 48.8	+0.7
PRHZ	Porangahau	0.24	200	P	Pn	20 55 43.1	+0.6
KAHZ	Kahuranaki	0.27	23	P	Pn	20 55 42.8	+0.1
KAHZ				S	Sn	20 55 49.8	+1.2
CKHZ	Cape Kidnapper	0.46	34	P	Pn	20 55 45.0	+0.3
ANWZ	Angora Road	0.47	206	P	Pn	20 55 45.6	+0.8
KRHZ	Kereru	0.49	324	P	Pn	20 55 45.1	0.0
KRHZ				S	Sn	20 55 52.8	-0.1
DVHZ	Dannevirke	0.51	240	P	Pn	20 55 45.9	+0.5
DVHZ				S	Sn	20 55 54.4	+1.1
MCHZ	McNeill Hill	0.60	357	P	Pn	20 55 47.2	+0.7
KWHZ	Kaweka Forest	0.66	338	P	Pn	20 55 47.5	+0.2
BFZ	Birch Farm	0.74	211	P	Pn	20 55 49.0	+0.6
BHHZ	Black Hill Sta	0.76	316	P	Pn	20 55 49.0	+0.4
PRWZ	Pori Road	0.78	229	P	Pn	20 55 49.8	+0.9
ARHZ	Aropaoanui	0.80	14	P	Pn	20 55 49.9	+0.7
POWZ	Post Office Ro	0.82	245	P	Pn	20 55 50.1	+0.7
BKZ	Black Stump Fm	0.90	347	P	Pn	20 55 50.8	+0.3
TIWZ	Tintock	0.98	221	P	Pn	20 55 52.2	+0.6
MOVZ	Moawhango	0.99	309	P	Pn	20 55 52.7	+0.9
WHHZ	Waihua	1.03	22	P	Pn	20 55 52.6	+0.3
MRZ	Mangatainoka R	1.08	235	P	Pn	20 55 53.3	+0.4
OHWZ	Ohakea	1.11	261	P	Pn	20 55 54.9	+1.6
TUVZ	Tukino	1.14	312	P	Pn	20 55 55.5	+1.7
RAHZ	Arahi	1.15	13	P	Pn	20 55 54.5	+0.5
MTVZ	Mangateitei	1.18	303	P	Pn	20 55 55.9	+1.6
DRZ	Dome Shelter	1.19	310	P	Pn	20 55 56.2	+1.5
MTHZ	Maungataniwha	1.19	4	P	Pn	20 55 55.1	+0.6
FWVZ	Far West T-bar	1.21	310	P	Pn	20 55 56.2	+1.3
MRHZ	Matea Rd	1.23	348	P	Pn	20 55 55.9	+0.9
NGZ	Ngauruhoe	1.23	314	P	Pn	20 55 56.4	+1.2
KNZ	Kokohu	1.25	36	P	Pn	20 55 54.7	-0.4
TMWZ	Te Maipa	1.25	211	P	Pn	20 55 55.3	+0.1
HATZ	Hinemaiaia	1.25	336	P	Pn	20 55 56.1	+0.8
MHGZ	Mahia Peninsul	1.26	46	P	Pn	20 55 55.2	-0.3
RITZ	Rihia Road	1.26	327	P	Pn	20 55 56.7	+1.3
HOWZ	Holdsworth Sta	1.27	227	P	Pn	20 55 55.4	-0.1
KRVZ	Karewarewa	1.27	318	P	Pn	20 55 57.0	+1.3
WTVZ	West Tongariro	1.28	316	P	Pn	20 55 57.0	+1.2
PKVZ	Pokaka	1.31	304	P	Pn	20 55 57.5	+1.3
KATZ	Kakaramea	1.34	322	P	Pn	20 55 57.9	+1.4
SNGZ	Shannon Statio	1.34	20	P	Pn	20 55 56.7	+0.2
WAZ	Wanganui	1.38	281	P	Pn	20 55 59.1	+2.1
RATZ	Rangitukua	1.39	327	P	Pn	20 55 58.6	+1.4
TWVZ	Taurewa	1.40	313	P	Pn	20 55 58.6	+1.2
OGWZ	Otaki Gorge	1.43	237	P	Pn	20 55 57.8	+0.2
RTZ	Ruatahuna	1.44	7	P	Pn	20 55 58.3	+0.5
MTW	Mount Morrison	1.46	220	P	Pn	20 55 57.5	-0.6
WHTZ	Whakaora	1.50	336	P	Pn	20 55 59.8	+1.1
ALRZ	Allen Road	1.51	348	P	Pn	20 55 59.3	+0.5
WATZ	Wairara	1.54	329	P	Pn	20 55 59.8	+0.5
RIGZ	Rimuhau	1.55	31	P	Pn	20 55 59.9	+0.5
MUGZ	Murupara	1.56	1	P	Pn	20 55 59.8	+0.3
PRRZ	Plateau Road	1.56	350	P	Pn	20 56 00.1	+0.6
TRWZ	Traveller	1.57	210	P	Pn	20 55 59.0	-0.7
RAGZ	Rawiri	1.63	19	P	Pn	20 56 00.1	-0.4
CAW	Cannon Point	1.66	230	P	Pn	20 56 00.4	-0.5
KUTZ	Kaahu Road	1.71	335	P	Pn	20 56 01.8	+0.3
RRRZ	Republican Roa	1.71	354	P	Pn	20 56 01.8	+0.2
GRRZ	Galatos Road	1.76	344	P	Pn	20 56 02.9	+0.7
HSRZ	Hossack Road	1.77	347	P	Pn	20 56 02.7	+0.4
MSWZ	Moikau Station	1.78	219	P	Pn	20 56 01.3	-1.2
VRZ	Vera Road	1.79	300	P	Pn	20 56 03.6	+1.0
URZ	Urewera	1.80	9	P	Pn	20 56 02.6	-0.1
MWZ	Matawai	1.81	20	P	Pn	20 56 02.5	-0.4
TARZ	Mount Tarawera	1.81	354	P	Pn	20 56 03.5	+0.4
TKGZ	Te Karaka	1.81	29	P	Pn	20 56 02.4	-0.5
LREZ	Lake Rotokare	1.90	287	P	Pn	20 56 06.0	+2.0
PLWZ	Palliser	1.90	216	P	Pn	20 56 03.0	-1.2
CNGZ	Carnagh Statio	1.93	37	P	Pn	20 56 04.0	-0.5
TLZ	Tolley Road	1.95	331	P	Pn	20 56 05.4	+0.6
BHW	Baring Head	1.97	226	P	Pn	20 56 03.9	-1.2
PREZ	Palmer Road	2.11	288	P	Pn	20 56 09.3	+2.2
HIZ	Hauiti	2.12	316	P	Pn	20 56 08.1	+1.0
DREZ	Durham Road	2.14	293	P	Pn	20 56 09.5	+2.1
WHRZ	Whale Island	2.19	5	P	Pn	20 56 08.0	-0.1
RUGZ	Raukumara Rang	2.20	20	P	Pn	20 56 07.9	-0.4
TCW	Tory Channel	2.21	237	P	Pn	20 56 07.7	-0.6
KHEZ	Kahui Hut	2.23	289	P	Pn	20 56 11.4	+2.6
DUWZ	D'Urville Isla	2.28	250	P	Pn	20 56 09.2	-0.2
PKE	Pukeiti	2.29	291	P	Pn	20 56 11.5	+2.0
PUZ	Puketiti	2.29	31	P	Pn	20 56 08.7	-0.9
NMEZ	Namu Road	2.30	285	P	Pn	20 56 11.9	+2.4
NBEZ	Newall Road No	2.35	288	P	Pn	20 56 12.9	+2.6
PKGZ	Pakihiroa	2.39	26	P	Pn	20 56 10.2	-0.7
HAZ	Te Kaha	2.42	20	P	Pn	20 56 10.4	-0.8
TOZ	Tahuroa Road	2.50	337	P	Pn	20 56 12.5	+0.2
TUWZ	Tuamarina	2.54	236	P	Pn	20 56 11.5	-1.3
WMGZ	Waiomatatini S	2.57	31	P	Pn	20 56 12.6	-0.8
BSWZ	Blackbirch Sta	2.74	232	P	Pn	20 56 14.4	-1.3
MXZ	Matakaoa Point	2.76	27	P	Pn	20 56 15.7	-0.3
NNZ	Nelson	2.82	244	P	Pn	20 56 16.1	-0.6
MKAZ	Moumakai	3.18	337	P	Pn	20 56 22.8	+1.0
KBAZ	Karaka Road Bo	3.28	333	P	Pn	20 56 24.2	+1.1
QRZ	Quartz Range	3.31	255	P	Pn	20 56 23.0	-0.4
THZ	Tophouse	3.38	238	P	Pn	20 56 23.2	-1.3
AWAZ	Awhitu Peninsu	3.40	330	P	Pn	20 56 25.3	+0.6
WIAZ	Waiheke Island	3.48	338	P	Pn	20 56 26.6	+0.8
WTAZ	Waiatarua	3.54	331	P	Pn	20 56 27.9	+1.3
MBAZ	Motutapu North	3.57	335	P	Pn	20 56 28.0	+0.9
ABAZ	Army Bay	3.75	336	P	Pn	20 56 30.6	+1.1
GVZ	Greta Valley S	4.04	222	P	Pn	20 56 32.6	-0.9
DSZ	Denniston Nort	4.11	244	P	Pn	20 56 33.0	-1.5
OKCZ	Okains Bay	4.59	216	P	Pn	20 56 39.4	-1.7
MQZ	McQueen's Vall	4.77	218	P	Pn	20 56 41.3	-2.1
AKCZ	Akaroa Harbour	4.78	215	P	Pn	20 56 42.3	-1.3
INZ	Inchbonnie	4.80	234	P	Pn	20 56 41.5	-2.4
OUZ	Omahuta	5.42	332	P	Pn	20 56 53.7	+1.2
CTZ	Chatham Island	6.18	129	P	Pn	20 57 03.5	+0.7
LBZ	Lake Benmore	6.52	226	P	Pn	20 57 06.0	-1.5
ODZ	Otahua Downs	6.73	220	P	Pn	20 57 08.1	-2.2
JCZ	Jackson Bay	7.16	233	P	Pn	20 57 13.4	-2.9

NIED 15 21:17:00, 24°.30N×125°.20E, h23^{km}, Mw3.8 Best double couple: M$_0$6.32000×10^{14} NP1:ϕ$_s$254.00000°, δ20.00000°, λ130.00000°. NP2:ϕ$_s$32.00000°, δ75.00000°, λ77.00000°.

IDC 15 21:17:06.8±0.9, 24°.33N×125°.22E, h0^{km}, mb3.9/10, mb1 4.0/10, mb1mx3.7/51, mbtmp3.9/10, ML2.1/1, MS2.8/2, Ms1 2.9/2, ms1mx2.6/33, Error ellipse: s-maj=30.2km s-min=18.7km az=71.0

ISCJB 15 21:17:10.4±0.7, 24°.26N±0°.05×125°.22E±0°.05, h42^{km}±5^{km}, mb3.9/13, MS2.6/1, Error ellipse: s-maj=10.1km s-min=4.9km az=140.1

NEIC 15 21:17:10.4±2.2, 24°.01N×125°.28E, h44^{km}±11^{km}, mb4.3/5, Error ellipse: s-maj=18.3km s-min=9.3km az=137.0

JMA 15 21:17:11.8±0.1, 24°.31N×125°.16E, h34^{km}±3^{km}, M3.5

ISC 15 21:17:09.4±1.6, 24°.18N±0°.07×125°.21E±0°.05, h23^{km}±12^{km}, n44, σ1^{s}.45/48, mb4.0/13, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMJ2	Miyako jima3	0.57	10	P	Pb	21 17 21.4	+0.6
JMJ2				S	Sb	21 17 28.3	-0.3
JOGS	Gusukube	0.61	17	P	Pb	21 17 22.1	+0.7
JOGS				S	Sb	21 17 29.4	-0.2
JIRB	Irabujima	0.65	357	P	Pb	21 17 22.0	-0.2
JIRB				S	Sb	21 17 30.0	-0.8
JTJ	Tarama	0.66	315	P	Pb	21 17 22.6	+0.3
JTJ				eS	Sb	21 17 30.2	-0.8
JIKM	Ikemajima	0.75	2	P	Pb	21 17 23.8	0.0
JIKM				S	Sb	21 17 33.0	-0.5
JISG	Ishigakijimahi	0.92	297	P	Pb	21 17 26.7	0.0
JIJ	Ishigaki jima	1.00	281	P	Pn	21 17 28.8	+0.8
JKRS	Kuro-shima	1.10	273	P	Pb	21 17 31.2	+1.4
HATJ	Hateruma jima	1.29	265	P	Pb	21 17 33.6	+0.5
HATJ				S	Sn	21 17 49.8	+1.2
IRIF	Iriomote-Funau	1.36	277	P	Pn	21 17 34.4	+1.4
YOJ	Yonaguni jima	2.03	279	ePn	Pb	21 17 45.0	-0.6
NACB	Ninganchiao	3.31	271	ePn	Pn	21 17 59.3	-0.5
YHNB	Yeheng	3.53	279	ePn	Pn	21 18 04.2	+1.3
YULB	Yu-li	3.67	259	ePn	Pn	21 18 04.5	-0.3
YULB				eSn	Sn	21 18 41.9	-5.5
JOW	Kunigami	3.83	46	Pn	Pn	21 18 07.0	+0.1
	0.3nm,0.3s,baz=162,slow=13,SNR=12						
JOW				Sn	Sn	21 18 50.0	-1.2
	0.7nm,0.3s,baz=208,slow=20,SNR=3.9						
SSLB	Suanglung	3.92	265	ePn	Pn	21 18 09.1	+0.9
TWG	Pinlang	4.04	251	ePn	Pn	21 18 09.4	-0.4
TPUB	Ta-pu	4.29	259	ePn	Pn	21 18 15.4	+2.0
KSRS	Korea Array	13.44	9	LR	LR	21 26 03.0	
	comp=Z,50nm,19.1s,baz=138,slow=40						
MAJO	Matsushiro	16.64	39	ePn	P	21 21 04.4	+0.9
MJAR	Matsushiro Arr	16.64	39	Pn	P	21 21 04.4	+0.9
	0.1nm,0.3s,baz=222,slow=7.9,SNR=4.4						
ANA2	Anatahan	20.73	108	eP	P	21 21 46.1	-2.4
	65nm,0.6s						
TNTI	Ternate	23.36	175	eP	P	21 22 14.2	-2.1
	6.6nm,0.8s						
CHTO	Chiang Mai	25.00	263	eP	P	21 22 29.2	-2.4
	20nm,2.0s						
CM31	Chiang Mai Arr	25.11	262	eP	P	21 22 32.4	-0.2
	30nm,1.8s						
CMAR	Chiang Mai Arr	25.11	262	P	P	21 22 34.3	+1.6
	0.4nm,0.6s,baz=66,slow=9.0,SNR=3.3						
CMAR				LR	LR	21 31 49.0	
	comp=Z,16nm,18.9s,baz=165,slow=35						
SONA0	Songino Array	27.95	332	eP	P	21 22 59.7	+1.6
SONM	Songino Array	27.95	332	P	P	21 22 59.7	+1.6
	0.3nm,0.3s,baz=142,slow=9.8,SNR=3.9						
H11N1	WAKE ISLAND Hy	38.81	88	T	T	22 05 52.0	
	baz=285						
H11N2	WAKE ISLAND Hy	38.81	88	T	T	22 05 55.6	
	baz=285						
H11N3	WAKE ISLAND Hy	38.83	88	T	T	22 05 54.8	
	baz=285						
MK32	Makanchi Array	40.94	314	eP	P	21 24 50.0	-0.2
MKAR	Makanchi Array	40.94	314	P	P	21 24 50.0	-0.2
	1.4nm,0.4s,baz=102,slow=9.8,SNR=44						
ZALV	Zalesovo Beam	42.30	325	P	P	21 24 59.9	-1.3
	0.7nm,0.4s,baz=111,slow=7.9,SNR=3.6						
ZAA1	Zalesovo Array	42.30	325	eP	P	21 24 59.9	-1.3
WR1	Warramunga Arr	44.74	168	eP	P	21 25 22.9	+1.7
WRA	Warramunga Arr	44.74	168	P	P	21 25 22.9	+1.7
	1.4nm,0.9s,baz=336,slow=11,SNR=4.5						
ASAR	Alice Springs	48.30	169	P	P	21 25 51.5	+2.5
	0.2nm,0.4s,baz=356,slow=14,SNR=5.4						
GEYT	Alibeck	57.97	301	P	P	21 27 01.6	+1.4
	1.7nm,0.7s,baz=100,slow=6.0,SNR=4.5						
ARA0	ARCESS Array S	70.91	338	eP	P	21 28 23.6	-0.7
ARCES	ARCESS Array B	70.91	338	P	P	21 28 23.6	-0.7
	1.6nm,0.9s,baz=72,slow=8.9,SNR=2.8						
FIA0	FINESS Array S	73.29	330	eP	P	21 28 39.0	+0.3
FINES	FINESS Array B	73.29	330	P	P	21 28 39.0	+0.3
	1.5nm,0.6s,baz=53,slow=5.1,SNR=12						
HFS	Hagfors	79.34	332	P	P	21 29 13.1	0.0
	1.3nm,0.8s,baz=74,slow=5.3,SNR=6.1						

IDC 15 21:28:34.3±6.2, 6°.74S×129°.37E, h98^{km}±78^{km}, mb3.6/1, mb1 3.3/4, mb1mx3.1/28, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=134.3km s-min=25.5km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.13	18	P	Pn	21 30 02.5	+0.1
	0.7nm,0.3s,baz=129,slow=5.7,SNR=16						
SIJI				S	Sn	21 31 04.0	-7.3
	1.6nm,0.3s,baz=217,slow=20,SNR=5.1						
WRA	Warramunga Arr	13.98	160	P	Pn	21 31 46.2	-2.0
	0.2nm,0.3s,baz=339,slow=13,SNR=6.0						
WRA				S	Sn	21 34 12.5	-10
	0.4nm,0.3s,baz=336,slow=22,SNR=9.6						
ASAR	Alice Springs	17.38	166	P	Pn	21 32 32.1	+1.3
	0.2nm,0.3s,baz=344,slow=10.0,SNR=8.1						
MKAR	Makanchi Array	67.67	327	P	P	21 39 21.0	0.0
	0.7nm,0.5s,baz=119,slow=7.9,SNR=7.5						

ISCJB 15 21:36:05.5±0.3, 14°.99S±0°.05×172°.61W±0°.05, h10^{km}, mb4.4/54, MS4.3/17, Error ellipse: s-maj=7.9km s-min=6.2km az=35.3

BJI 15 21:36:05.0±0.0, 15°.11S×172°.66W, h7^{km}, mb5.0/10, mB5.2/6, Ms4.7/3, Ms7 4.5/1

NEIC 15 21:36:06.5±1.9, 14°.99S×172°.57W, h10^{km}±2^{km}, mb4.6/40, Error ellipse: s-maj=16.2km s-min=9.9km az=77.0

IDC 15 21:36:11.7±0.5, 15°.37S×173°.24W, h0^{km}, mb4.3/20, mb1 4.5/20, mb1mx4.3/50, mbtmp4.3/20, MS4.3/14, Ms1 4.3/14, ms1mx4.2/20, Error ellipse: s-maj=23.0km s-min=13.3km az=119.0

ISC 15 21:36:07.8±0.4, 14°.98S±0°.06×172°.54W±0°.06, h10^{km}, n120, σ2^{s}.74/90, mb4.5/54, MS4.2/17, 5C-4D, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.30	35	eP	Pg	21 36 38.3	+5.6
NIUE	Niue	4.78	149	ePn	Pn	21 37 19.5	-0.4
NIUE				eSn	Sn	21 38 09.1	-6.3
KNTN	Kanton	12.16	4	ePn	Pn	21 39 00.3	-0.9
KNTN				eSn	Sn	21 41 10.1	-6.9
RAR	Rarotonga	13.62	119	Pn	Pn	21 39 23.3	+2.1
	2.6nm,0.3s,baz=209,slow=6.7,SNR=4.4						
RAR				Sn	Sn	21 41 55.2	+2.5
	2.2nm,0.3s,baz=201,slow=18,SNR=3.5						
RAR				LR	LR	21 43 25.4	
	comp=Z,500nm,21.9s,baz=320,slow=31						
RAR	Rarotonga	13.62	119	ePn	Pn	21 39 23.4	+2.1
RAR				eSn	Sn	21 41 50.4	-2.3
MARNC	Mare, Loyalty	19.55	248	eP	P	21 40 34.5	-1.3
	191nm,0.8s						
PINNC	Pines Island,	20.40	245	eP	P	21 40 44.2	-0.8
	81nm,1.1s						
DZM	Mont Dzumac	21.12	247	eP	P	21 40 56.8	+3.7
	212nm,1.4s						
DZM				eLR	LR	21 45 48.0	
	comp=Z,2µm,25.1s						
DZM	Mont Dzumac	21.12	247	LR	LR	21 47 30.1	
	comp=Z,1µm,21.2s,baz=48,slow=33						
DZM	Mont Dzumac	21.12	247	eP	P	21 40 50.8	-2.3
	55nm,1.1s						
TARA	Tarawa	21.69	317	eP	P	21 40 57.1	-2.0
	98nm,0.9s						
PPT	Papeete	22.19	100	LR	LR	21 48 01.8	
	comp=Z,367nm,18.9s,baz=276,slow=31						
PPT2	Papeete2	22.19	100	eS	Sn	21 45 14.8	-5.6
	272nm,22.1s						
PPT2				eLQ	LQ	21 45 34.3	
	3µm,27.0s						
PPT2				eLR	LR	21 46 37.3	
	comp=Z,330nm,23.2s						
PPT2	Papeete2	22.19	100	eT	T	22 04 17.5	
	11nm,0.3s						
PAE	Paea	22.19	100	eT	T	22 04 16.5	
	3.5nm,0.3s						
TVO	Taravao	22.51	100	eT	T	22 04 40.4	
	2.9nm,0.4s						
TBI	Tubuai	23.31	114	eS	S	21 45 33.5	+4.6
	222nm,24.6s						
TBI				eLQ	LQ	21 46 02.3	
	2µm,28.5s						
TBI				eLR	LR	21 46 44.8	
	comp=Z,987nm,28.5s						
TBI	Tubuai	23.31	114	eT	T	22 05 38.8	
	9.0nm,0.2s						
OUZ	Omahuta	23.69	209	eP	P	21 41 19.1	-0.7
	16nm,0.9s						
MXZ	Matakaoa Point	23.91	198	eP	P	21 41 22.3	+0.4
	93nm,1.2s						
URZ	Urewera	24.93	200	P	P	21 41 30.7	-0.4
	9.1nm,0.7s,baz=6.2,slow=1.6,SNR=4.6						
URZ				LR	LR	21 49 48.7	
	comp=Z,933nm,19.9s,baz=17,slow=34						
URZ	Urewera	24.93	200	eP	P	21 41 29.1	-2.1
	44nm,1.0s						
HIZ	Hauiti	25.95	203	eP	P	21 41 39.0	-1.4
	36nm,1.0s						
BKZ	Black Stump Fm	25.95	200	eP	P	21 41 39.5	-1.0
	16nm,1.1s						
HNR	Honiara	27.44	278	LR	LR	21 51 17.7	
	comp=Z,568nm,18.2s,baz=124,slow=34						
THZ	Tophouse	29.51	202	eP	P	21 42 09.3	-3.1
	11nm,0.7s						
KHZ	Kahutara	29.86	201	eP	P	21 42 13.8	-1.5
	23nm,1.0s						
LTZ	Lake Taylor	30.63	202	eP	P	21 42 20.8	-1.5
	23nm,0.8s						
RPZ	Rata Peaks	31.88	203	P	P	21 42 33.2	0.0
	7.0nm,0.7s,baz=7.1,slow=8.1,SNR=2.1						
TAOE	Nuku Hiva Isla	32.25	83	eLR	LR	21 51 12.9	
	comp=Z,605nm,26.5s						
RKT	Rikitea	36.34	109	eT	T	22 21 55.8	
	7.8nm,0.3s						
H11S2	WAKE ISLAND Hy	39.05	328	T	T	22 24 29.5	
	baz=146,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	39.06	328	T	T	22 24 12.8	
	baz=146,slow=76,SNR=30						
H11S1	WAKE ISLAND Hy	39.06	328	T	T	22 24 22.2	
	baz=146,slow=76,SNR=22						
CTA	Charters Tower	39.55	257	P	P	21 43 40.4	+1.0
	1.5nm,0.3s,baz=96,slow=9.2,SNR=2.4						
H11N3	WAKE ISLAND Hy	39.97	329	T	T	22 26 31.2	
	baz=149,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	39.98	329	T	T	22 26 21.6	
	baz=149,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	39.99	329	T	T	22 26 24.9	
	baz=149,slow=76,SNR=18						
STKA	Stephens Creek	44.96	240	P	P	21 44 22.4	-1.1
	5.3nm,0.8s,baz=80,slow=12,SNR=8.6						
STKA				LR	LR	22 01 58.9	
	comp=Z,385nm,18.4s,baz=48,slow=35						
STKA	Stephens Creek	44.96	240	eP	P	21 44 21.9	-1.5
	2.6nm,1.1s						
WR1	Warramunga Arr	50.75	256	eP	P	21 45 07.3	-1.2
WRA	Warramunga Arr	50.75	256	P	P	21 45 07.3	-1.2
	1.8nm,0.6s,baz=94,slow=8.1,SNR=12						
AS31	Alice Springs	51.03	252	eP	P	21 45 09.2	-1.4
	4.1nm,0.9s						
ASAR	Alice Springs	51.03	252	P	P	21 45 09.5	-1.1
	6.7nm,0.6s,baz=87,slow=7.6,SNR=50						
ASAR				LR	LR	22 05 05.8	
	comp=Z,899nm,20.8s,baz=98,slow=34						
SIJI	Sorong	57.21	279	P	P	21 45 59.5	+3.7
	5.5nm,0.8s,baz=14,slow=11,SNR=3.6						
VNDA	Vanda	63.88	186	P	P	21 46 42.2	+2.0
	3.5nm,1.0s,baz=40,slow=7.3,SNR=16						
VNDA				LR	LR	22 15 01.5	
	comp=Z,81nm,18.1s,baz=16,slow=37						
VNDA	Vanda	63.88	186	eP	P	21 46 39.9	-0.4
	3.8nm,1.0s						
MJAR	Matsushiro Arr	69.16	319	P	P	21 47 19.9	+5.2
	1.6nm,0.8s,baz=171,slow=6.8,SNR=4.5						
MAJO	Matsushiro	69.16	319	eP	P	21 47 19.9	+5.2
ASAJ	Asahikawa	71.63	328	P	P	21 47 34.8	+5.2
	2.9nm,0.8s,baz=165,slow=12,SNR=3.7						
LPIG	La Paz	72.11	58	LR	LR	22 11 43.0	
	comp=Z,272nm,20.7s,baz=211,slow=29						
PETK	Petropavlovsk-	72.49	342	P	P	21 47 40.9	+6.4
	5.1nm,0.9s,baz=125,slow=9.0,SNR=4.7						
PETK				LR	LR	22 12 25.8	
	comp=Z,128nm,21.3s,baz=106,slow=30						
YBH	Yreka Blue Hor	72.77	37	P	P	21 47 48.1	+12
	2.8nm,0.8s,baz=233,slow=8.0,SNR=3.8						
NVAR	Mina Array Bea	73.46	42	P	P	21 47 51.2	+10
	0.9nm,0.8s,baz=226,slow=9.7,SNR=5.3						
NVAR				LR	LR	22 14 30.5	
	comp=Z,513nm,19.3s,baz=260,slow=31						
NV11	Mina Array Sit	73.56	42	eP	P	21 47 40.2	-1.3
KVN	Kaiserville	73.95	41	eP	P	21 47 43.0	-0.7
	1.2nm,1.1s						
MOD	Modoc Plateau	74.28	38	eP	P	21 47 45.0	-0.6
	1.4nm,0.8s						
SHPR	Sheep Range	74.48	45	eP	P	21 47 46.1	-0.8
	3.2nm,1.0s						
Y14A	Wickenburg	74.66	48	eP	P	21 47 46.1	-1.7
QSPA	South Pole Qui	75.06	180	P	P	21 47 53.3	+3.6
	16nm,1.0s,baz=28,slow=2.3,SNR=24						
QSPA	South Pole Qui	75.06	180	eP	P	21 47 48.6	-1.1
	25nm,1.1s						
PINE	Pine Mountain	75.07	36	eP	P	21 47 48.3	-1.9
	1.7nm,0.7s						
TUC	Tucson	75.48	50	eP	P	21 47 51.1	-1.5
	1.7nm,0.8s						
LCMT	Little Creek M	76.05	45	eP	P	21 47 56.8	+0.9
	3.7nm,1.2s						
J08A	Circle Bar Ran	76.23	37	eP	P	21 47 58.1	+1.4
	7.8nm,0.8s						
U15A	North Rim	76.41	46	eP	P	21 47 59.0	+0.9
	1.9nm,1.1s						
PSUT	Pine Spring	76.43	44	eP	P	21 47 58.5	+0.4
	4.1nm,1.2s						
PKCU	Pink Cliffs	76.91	45	eP	P	21 47 59.2	-1.8
	7.5nm,0.8s						
G08A	Pilot Rock	77.11	36	eP	P	21 47 59.1	-2.5
	1.6nm,0.8s						
TTA	Tatalina	78.73	8	eP	P	21 48 10.0	-0.2
	8.3nm,1.2s						
HLID	Hailey	78.78	39	eP	P	21 48 10.2	-0.9
	3.0nm,0.6s						
ANMO	Albuquerque	79.90	50	P	P	21 48 28.4	+11
	0.8nm,0.6s,baz=204,slow=3.8,SNR=3.8						
RND	Reindeer	80.28	11	eP	P	21 48 17.4	-1.2
	11nm,1.2s						
MCK	McKinley	80.56	10	eP	P	21 48 19.7	-0.4
	14nm,1.2s						
NJ2	Nanjing	80.58	307	eP	P	21 48 21.8	+1.0
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
S22A	4UR Ranch, Cre	80.88	47	eP	P	21 48 20.6	-2.1
	0.7nm,0.9s						
DLBC	Dease Lake	81.01	21	P	P	21 48 32.0	+9.3
	0.8nm,0.5s,baz=172,slow=19,SNR=3.1						
PDAR	Pinedale Array	81.40	42	P	P	21 48 33.9	+8.5
	0.4nm,0.7s,baz=204,slow=3.3,SNR=4.0						
DOT	Dot Lake	81.42	12	eP	P	21 48 27.4	+2.7
	4.4nm,0.9s						
HDA	Harding Lake	81.54	11	eP	P	21 48 26.6	+1.4
	10nm,1.2s						
ILAR	Eielson Array	81.88	11	P	P	21 48 33.6	+6.6
	1.3nm,0.8s,baz=207,slow=5.5,SNR=8.2						
BJI	Beijing	85.79	313	eP	P	21 48 54.4	+6.8
BJI				pmax	pmax		
	comp=Z,4.0nm,1.9s						
INK	Inuvik	87.67	14	P	P	21 49 02.3	+6.2
	comp=Z,1.0nm,0.7s,baz=190,slow=7.2,SNR=3.2						
INK	Inuvik	87.67	14	eP	P	21 48 54.4	-1.7
	comp=Z,2.6nm,1.1s						
MAW	Mawson	88.45	198	P	P	21 49 03.2	+3.2
	comp=Z,3.0nm,0.6s,baz=129,slow=7.2,SNR=8.9						
MAW				LR	LR	22 28 20.5	
	comp=Z,286nm,18.7s,baz=110,slow=36						
MAW	Mawson	88.45	198	eP	P	21 48 58.3	-1.7
	comp=Z,1.8nm,1.1s						
HHC	Hu-ho-hao-te	89.36	313	eP	P	21 49 05.4	+0.5
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,60nm,4.5s						
YKA	Yellowknife Ar	89.39	23	P	P	21 49 11.5	+7.1

	comp=Z,1.0nm,0.7s,baz=253,slow=4.5,SNR=3.4						
YKB5	**Yellowknife Ar**	**89.39**	**23**	*e*P	P	21 49 11.5	+7.1
KMI	**Kunming**	**91.60**	**295**	P	**P**	**21 49 14.8**	**-1.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ULM	**Lac du Bonnet**	**93.09**	**39**	LR	LR	22 28 40.9	
	comp=Z,475nm,18.1s,baz=232,slow=34						
CMAR	**Chiang Mai Arr**	**93.28**	**288**	LR	LR	22 30 20.3	
	comp=Z,59nm,18.1s,baz=154,slow=35						
LZH	**Lanzhou**	**93.65**	**306**	*e*P	**P**	**21 49 24.3**	**-0.7**
LZH				pP	sP	21 49 27.5	+0.9
LZH				sP	pP	21 49 29.0	+2.8
LZH				*e*PP	**PP**	**21 53 12.5**	**+2.3**
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,58nm,8.9s						
LZH				LR	LR		
	comp=Z,120nm,17.5s						
LZH				LR	LR		
	comp=Z,150nm,19.7s						
KSH	**Kashi**	**115.89**	**307**	*e*PKP	**PKPdf**	**21 54 49.9**	**-1.4**
KSH				PP	PP	21 56 01.8	+6.6
KSH				PKS		21 58 26.4	
KSH				SKS	**SKSdf**	**22 02 02.8**	**-1.0**
KSH				SKKS	**SKKSac**	**22 02 53.5**	**-3.3**
KSH				SS	**SS**	**22 12 03.8**	**+6.7**
KSH				AMB	AMB		
	comp=Z,75nm,7.7s						
KSH				LR	LR		
	comp=Z,120nm,5.6s						
BURAR	**Bucovina Array**	**144.28**	**339**	⇑*i*P	**PKiKP**	**21 55 49.4**	**+1.4**
BIZ	**Bicaz**	**144.55**	**338**	⇑*i*P	PKiKP	21 55 55.2	+6.8
ARCR	**ARCALIA**	**145.03**	**340**	⇑*i*P	**PKiKP**	**21 55 55.3**	**+5.9**
CFR	**Carcaliu**	**145.20**	**334**	⇑*i*P	PKiKP	21 55 57.7	+8.0
VRI	**Vrincioaia**	**145.21**	**336**	⇑*i*P	**PKiKP**	**21 55 52.2**	**+2.4**
PLOR	**Plostina**	**145.25**	**336**	⇓*i*P	**PKiKP**	**21 55 50.3**	**+0.4**
KHC	**Kasperske Hory**	**145.58**	**353**	*e*PKP	**PKiKP**	**21 55 53.0**	**+2.5**
HARR	**Harsova**	**145.68**	**334**	⇓*i*P	**PKiKP**	**21 55 54.4**	**+3.6**
TLB	**Topalu**	**145.71**	**334**	⇓*i*P	**PKiKP**	**21 55 53.6**	**+2.8**
MLR	**Muntele Rosu**	**145.83**	**337**	⇓*i*P	**PKiKP**	**21 55 54.1**	**+2.9**
GERES	**GERESS Array B**	**145.84**	**353**	PKPbc	**PKiKP**	**21 55 53.7**	**+2.5**
	comp=Z,0.8nm,0.7s,baz=28,slow=3.2,SNR=6.6						
BRTR	**Keskin Array B**	**146.35**	**322**	PKPbc	**PKiKP**	**21 55 54.3**	**+1.8**
	comp=Z,4.8nm,0.8s,baz=117,slow=2.0,SNR=23						
CONA	**Conrad Observa**	**146.42**	**350**	*e*sPKiKP	**PKiKP**	**21 55 57.1**	**+4.8**
	comp=Z,8.1nm,1.0s						
KMBO	**Kilima Mbogo**	**146.46**	**244**	PKPbc	**PKiKP**	**21 55 53.4**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=193,slow=3.6,SNR=4.1						
KMBO	**Kilima Mbogo**	**146.46**	**244**	*e*PKPdf	**PKPdf**	**21 55 46.0**	**-3.3**
MOA	**Molln**	**146.75**	**352**	*e*sPKiKP	**PKiKP**	**21 55 56.6**	**+3.7**
	comp=Z,7.1nm,1.4s						
ARSA	**Arzberg**	**147.13**	**350**	*e*sPKiKP	**PKiKP**	**21 55 58.7**	**+5.0**
	comp=Z,5.3nm,0.9s						
RETA	**Reutte**	**147.47**	**356**	*e*sPKiKP	**PKiKP**	**21 55 58.2**	**+3.7**
	comp=Z,6.8nm,2.0s						
WATA	**Walderalm**	**147.56**	**355**	*i* sPKiKP	**PKiKP**	**21 55 59.8**	**+5.0**
	comp=Z,2.2nm,0.8s						
MOTA	**Moosalm**	**147.59**	**355**	*e*sPKiKP	**PKiKP**	**21 55 59.9**	**+5.0**
	comp=Z,8.2nm,1.1s						
WTTA	**Wattenberg**	**147.63**	**355**	*e*sPKiKP	**PKPab**	**21 55 59.0**	**+4.0**
	comp=Z,2.5nm,0.8s						
SQTA	**Sankt Quirin**	**147.71**	**355**	*e*sPKiKP	**PKPab**	**21 56 00.2**	**+5.0**
	comp=Z,4.7nm,1.2s						
DAVA	**Damuels**	**147.73**	**357**	*e*sPKiKP	**PKPab**	**21 55 59.6**	**+4.2**
	comp=Z,5.2nm,1.0s						
SOKA	**Soboth**	**147.77**	**350**	*e*sPKiKP	**PKPab**	**21 55 59.9**	**+4.4**
	comp=Z,5.8nm,1.2s						
ABTA	**Abfaltersbach**	**148.05**	**353**	*e*P	**PKPab**	**21 56 00.4**	**+3.9**
	comp=Z,5.3nm,0.8s						
ESDC	**Sonseca Array**	**153.44**	**20**	PKPbc	**PKPab**	**21 56 14.4**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=344,slow=2.5,SNR=3.5						

ROM 15 21:41:31.5±0.1,**44°.218N**±0°.005×**10°.188E**±0°.006, **h10^{km},Md1.6**/8,**Error ellipse: s-maj=0.6km s-min=0.5km az=159.0,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIVI	**Fivizzano**	**0.05**	**296**	P	Pg	21 41 33.9	+0.3
FIVI				S	Sg	21 41 35.3	+0.3
FIVI				END			
FIVI				END			
T0912	**Minucciano (LU**	**0.05**	**163**	P	Pg	21 41 33.9	+0.3
T0912				S	Sg	21 41 35.4	+0.4
T0912				AML	AML		
	comp=E,41900µm,0.5s						
T0912				AML	AML		
	comp=N,32550µm,0.2s						
T0912				AML	AML		
	comp=E,40950µm,0.5s						
T0912				AML	AML		
	comp=N,31850µm,0.2s						
T0912				AML	AML		
	comp=N,32550µm,0.2s						
T0912				AML	AML		
	comp=N,31850µm,0.2s						
T0912				AML	AML		
	comp=E,41900µm,0.5s						
T0912				AML	AML		
	comp=E,40950µm,0.5s						
T0912				END			
T0912				END			
T0912				END			
T0912				END			
EQUI	**Equi**	**0.06**	**206**	P	Pg	21 41 34.0	+0.4
EQUI				S	Sg	21 41 35.4	+0.3
EQUI				AML	AML		
	comp=E,3890µm,0.4s						
EQUI				AML	AML		
	comp=N,2515µm,0.3s						
EQUI				AML	AML		
	comp=E,3890µm,0.4s						
EQUI				AML	AML		
	comp=N,2515µm,0.3s						
EQUI				END			
EQUI				END			
EQUI				END			
EQUI				END			
T0911	**Castelpoggio (**	**0.14**	**218**	P	Pg	21 41 35.4	+0.8
T0911				S	Sg	21 41 37.7	+0.9
T0911				AML	AML		
	comp=E,2675µm,0.2s						
T0911				AML	AML		
	comp=N,2920µm,0.2s						
T0911				AML	AML		
	comp=E,2638µm,0.2s						
T0911				AML	AML		
	comp=N,2955µm,0.2s						
T0911				AML	AML		
	comp=E,2640µm,0.2s						
T0911				AML	AML		
	comp=E,2670µm,0.2s						
T0911				AML	AML		
	comp=N,2920µm,0.2s						
T0911				AML	AML		
	comp=N,2955µm,0.2s						
T0911				END			
T0911				END			
T0911				END			
T0911				END			
VLC	**Villacollemand**	**0.15**	**112**	P	Pg	21 41 35.5	+0.6
VLC				S	Sg	21 41 38.0	+0.7
VLC				AML	AML		
	comp=E,680µm,0.9s						
VLC				AML	AML		
	comp=N,1180µm,0.6s						
VLC				AML	AML		
	comp=E,739µm,0.9s						
VLC				AML	AML		
	comp=N,1195µm,0.6s						
VLC				AML	AML		
	comp=N,1195µm,0.6s						
VLC				AML	AML		
	comp=N,1180µm,0.6s						
VLC				AML	AML		
	comp=E,739µm,0.9s						
VLC				AML	AML		
	comp=E,680µm,0.9s						
VLC				END			
VLC				END			
VLC				END			
VLC				END			
FOSD	**Fosdinovo**	**0.18**	**231**	P	Pg	21 41 36.2	+0.9
FOSD				S	Sg	21 41 38.9	+1.0
ERBM	**Eremo**	**0.26**	**39**	P	Pb	21 41 37.6	-0.7
ERBM				S	Sb	21 41 41.7	-1.2
ERBM				END			
ERBM				END			
ERBM				END			
ERBM				END			
GRAM	**Graiana**	**0.29**	**342**	P	Pg	21 41 38.0	+0.6
GRAM				S	Sb	21 41 42.6	-1.1
GRAM				END			
GRAM				END			
GRAM				END			
GRAM				END			
PLMA	**Palmaria, Port**	**0.30**	**235**	P	Pb	21 41 38.7	-0.2
PLMA				S	Sg	21 41 42.1	+0.8
PLMA				AML	AML		
	comp=E,788µm,1.4s						
PLMA				AML	AML		
	comp=N,936µm,0.1s						
PLMA				AML	AML		
	comp=N,936µm,0.1s						
PLMA				AML	AML		
	comp=E,787µm,1.4s						
PLMA				END			
PLMA				END			
PLMA				END			
PLMA				END			

MAN 15 21:41:44.7,10°.98N×124°.79E,h8^{km},mb4.3,ML3.2,MS2.9, 1C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.19**	**293**	*e*P	Pg	21 41 49.3	+0.7
OCLP				*e*S	Sg	21 41 52.4	+1.2
PLP	**Palo**	**0.27**	**45**	⇑*e*P	Pg	21 41 50.4	+0.3
PLP				*i* S	Sg	21 41 53.6	0.0
MSLP	**Maasin**	**0.84**	**175**	*e*P	Pn	21 42 02.5	-0.3
MSLP				*e*S	Sn	21 42 15.9	+0.5
BESP	**Borongan**	**0.89**	**46**	*e*P	Pg	21 42 01.2	-0.7
BESP				*e*S	Sb	21 42 14.4	-0.1
LLP	**Lapu-Lapu**	**1.04**	**231**	*e*P	Pg	21 42 04.8	+0.1
LLP				*e*S	Sn	21 42 19.5	-0.8
CNP	**Catarman**	**1.53**	**355**	*e*P	Pn	21 42 11.9	-0.5
CNP				*e*S	Sb	21 42 33.4	+0.5

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*ISCJB **15** 21:42:26.7±0.3, 44°.18N±0°.02×10°.16E±0°.02, h14^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.4km az=32.3*

*ROM **15** 21:42:26.3±0.1, 44°.210N±0°.004×10°.196E±0°.005, h10^{km}, ML2.2/26, Error ellipse: s-maj=0.5km s-min=0.4km az=196.0*

*GEN **15** 21:42:26.6, 44°.22N×10°.20E, h8^{km}±1^{km}, Ml2.0*

*VIE **15** 21:42:27.3±1.0, 44°.03N×10°.30E, h6^{km}, mb2.1/3, ml2.2/5, Error ellipse: s-maj=16.5km s-min=7.1km az=118.0*

*LDG **15** 21:42:28.0±0.2, 44°.08N×10°.21E, h2^{km}, Ml2.4/22, Error ellipse: s-maj=4.2km s-min=3.5km az=20.0*

ISC 15 21:42:26.7±0.8,**44°.18N**±0°.02×**10°.17E**±0°.02,**h11**^{km}±4^{km}, **n63,**σ**1^{s}38**/98,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	**Equi**	**0.01**	**224**	P	**Pg**	**21 42 28.7**	**0.0**
EQUI				S	**Sg**	**21 42 30.0**	**+0.1**
EQUI	**Equi**	**0.01**	**224**	P	**Pg**	**21 42 28.7**	**0.0**
EQUI				S	**Sg**	**21 42 30.0**	**+0.1**
EQUI				AML	AML		
	comp=E,3890µm,0.4s						
EQUI				AML	AML		
	comp=N,2515µm,0.3s						
T0912	**Minucciano (LU**	**0.03**	**102**	P	**Pg**	**21 42 28.6**	**-0.2**
T0912				S	**Sg**	**21 42 30.1**	**-0.2**
T0912				AML	AML		
	comp=E,41900µm,0.5s						
T0912				AML	AML		
	comp=N,32500µm,0.2s						
T0912				AML	AML		
	comp=E,40950µm,0.5s						
T0912				AML	AML		
	comp=N,31850µm,0.2s						
FIVI	**Fivizzano**	**0.07**	**337**	P	**Pg**	**21 42 28.6**	**-0.5**
FIVI				S	**Sg**	**21 42 29.9**	**-0.9**
T0911	**Castelpoggio (**	**0.09**	**226**	P	**Pg**	**21 42 30.0**	**+0.7**
T0911				S	**Sg**	**21 42 32.4**	**+1.1**
T0911				AML	AML		
	comp=E,2670µm,0.2s						
T0911				AML	AML		
	comp=N,2920µm,0.2s						
T0911				AML	AML		
	comp=E,2640µm,0.2s						
T0911				AML	AML		
	comp=N,2955µm,0.2s						
T0911				AML	AML		
	comp=E,2675µm,0.2s						
T0911				AML	AML		
	comp=N,2920µm,0.2s						
T0911				AML	AML		
	comp=E,2638µm,0.2s						
T0911				AML	AML		
	comp=N,2955µm,0.2s						
T0911				AML	AML		
	comp=N,2955µm,0.2s						
T0911				AML	AML		
	comp=N,2920µm,0.2s						
T0911				AML	AML		
	comp=E,2670µm,0.2s						
T0911				AML	AML		
	comp=E,2640µm,0.2s						
FOSD	**Fosdinovo**	**0.14**	**241**	P	**Pg**	**21 42 30.8**	**+0.8**
FOSD				S	**Sg**	**21 42 33.7**	**+1.5**
FOSD				AML	AML		
	comp=E,5600µm,0.2s						
FOSD				AML	AML		
	comp=N,4545µm,0.2s						
FOSD				AML	AML		
	comp=E,5600µm,0.2s						
FOSD				AML	AML		
	comp=N,4545µm,0.2s						
FOSD				AML	AML		
	comp=N,4545µm,0.2s						
FOSD				AML	AML		
	comp=E,5600µm,0.2s						
VLC	**Villacollemand**	**0.16**	**96**	P	**Pg**	**21 42 30.1**	**-0.2**
VLC				S	**Sg**	**21 42 32.7**	**-0.2**
VLC				AML	AML		
	comp=E,680µm,0.9s						
VLC				AML	AML		
	comp=N,1180µm,0.6s						
VLC				AML	AML		
	comp=E,739µm,0.9s						
VLC				AML	AML		
	comp=N,1195µm,0.6s						
VLC				AML	AML		
	comp=E,680µm,0.9s						
VLC				AML	AML		
	comp=N,1180µm,0.6s						
VLC				AML	AML		
	comp=E,739µm,0.9s						
VLC				AML	AML		
	comp=N,1195µm,0.6s						
VLC				AML	AML		
	comp=E,680µm,0.9s						
VLC				AML	AML		
	comp=E,739µm,0.9s						
VLC				AML	AML		
	comp=N,1195µm,0.6s						
VLC				AML	AML		
	comp=N,1180µm,0.6s						
PLMA	**Palmaria, Port**	**0.26**	**241**	P	**Pg**	**21 42 32.9**	**+0.8**
PLMA				S	**Sg**	**21 42 37.0**	**+1.4**
PLMA				AML	AML		
	comp=E,787µm,1.4s						
PLMA				AML	AML		
	comp=N,936µm,0.1s						
PLMA				AML	AML		
	comp=E,788µm,1.4s						
PLMA				AML	AML		
	comp=N,936µm,0.1s						
PLMA				AML	AML		
	comp=N,936µm,0.1s						
PLMA				AML	AML		
	comp=E,787µm,1.4s						
CARD	**Cardoso**	**0.27**	**123**	P	**Pg**	**21 42 32.3**	**0.0**
CARD				S	**Sg**	**21 42 36.5**	**+0.5**
CARD	**Cardoso**	**0.27**	**123**	P	**Pg**	**21 42 32.4**	**+0.1**
CARD				S	**Sg**	**21 42 36.5**	**+0.5**
CARD				AML	AML		
	comp=E,975µm,0.1s						
CARD				AML	AML		
	comp=N,974µm,1.2s						
CARD				AML	AML		
	comp=E,975µm,0.1s						
CARD				AML	AML		
	comp=N,974µm,1.2s						
CARD				AML	AML		
	comp=N,974µm,1.2s						
CARD				AML	AML		
	comp=E,975µm,0.1s						
ERBM	**Eremo**	**0.30**	**36**	P	**Pg**	**21 42 32.3**	**-0.6**
ERBM				S	**Sg**	**21 42 36.3**	**-0.6**
ERBM				AML	AML		
	comp=E,1685µm,0.8s						
ERBM				AML	AML		
	comp=N,1740µm,0.2s						
ERBM				AML	AML		
	comp=N,1740µm,0.2s						
ERBM				AML	AML		
	comp=E,1685µm,0.8s						
CODM	**Codolo**	**0.31**	**314**	P	**Pg**	**21 42 32.6**	**-0.4**
CODM				S	**Sg**	**21 42 37.1**	**-0.1**
GRAM	**Graiana**	**0.32**	**347**	P	**Pg**	**21 42 32.7**	**-0.6**
GRAM				S	**Sg**	**21 42 36.8**	**-0.9**
GRAM	**Graiana**	**0.32**	**347**	P	**Pg**	**21 42 32.7**	**-0.6**
GRAM				S	**Sg**	**21 42 37.3**	**-0.3**
GRAM				AML	AML		
	comp=E,3385µm,0.3s						
GRAM				AML	AML		
	comp=N,3460µm,0.3s						
GRAM				AML	AML		
	comp=E,3385µm,0.3s						
GRAM				AML	AML		
	comp=N,3460µm,0.3s						
GRAM				AML	AML		
	comp=E,3385µm,0.3s						
GRAM				AML	AML		
	comp=N,3460µm,0.3s						
BDI	**Bagni Di Lucca**	**0.33**	**110**	P	**Pg**	**21 42 33.4**	**0.0**
BDI				AML	AML		
	comp=E,305µm,0.7s						
BDI				AML	AML		
	comp=N,299µm,0.8s						
BDI				AML	AML		
	comp=E,285µm,0.8s						
BDI				AML	AML		
	comp=N,314µm,0.8s						
BDI				AML	AML		
	comp=E,305µm,0.7s						
BDI				AML	AML		
	comp=E,285µm,0.8s						
BDI				AML	AML		
	comp=N,299µm,0.8s						
BDI				AML	AML		
	comp=N,314µm,0.8s						
MAIM	**Mastiano**	**0.35**	**138**	P	**Pg**	**21 42 34.2**	**+0.5**
MAIM				S	**Sg**	**21 42 39.2**	**+0.8**
MAIM	**Mastiano**	**0.35**	**138**	P	**Pg**	**21 42 34.2**	**+0.5**
MAIM				S	**Sg**	**21 42 39.2**	**+0.8**
MAIM				AML	AML		
	comp=E,275µm,0.3s						
MAIM				AML	AML		
	comp=N,380µm,0.3s						
MAIM				AML	AML		
	comp=E,275µm,0.3s						
MAIM				AML	AML		
	comp=N,380µm,0.3s						
POPM	**Popiglio**	**0.45**	**107**	P	**Pg**	**21 42 35.2**	**-0.3**
POPM				S	**Sg**	**21 42 41.6**	**+0.2**
POPM	**Popiglio**	**0.45**	**107**	P	**Pg**	**21 42 35.2**	**-0.3**
POPM				S	**Sg**	**21 42 41.9**	**+0.5**
POPM				AML	AML		
	comp=E,544µm,0.2s						
POPM				AML	AML		
	comp=N,580µm,0.1s						
POPM				AML	AML		
	comp=N,580µm,0.1s						
POPM				AML	AML		
	comp=E,544µm,0.2s						
MSSA	**Maissana**	**0.49**	**287**	P	**Pg**	**21 42 36.4**	**+0.1**
MSSA				S	**Sg**	**21 42 43.5**	**+0.8**
MSSA				AML	AML		
	comp=E,176µm,0.3s						
MSSA				AML	AML		
	comp=N,170µm,0.7s						
MSSA				AML	AML		
	comp=E,176µm,0.3s						
MSSA				AML	AML		
	comp=N,170µm,0.7s						
ZCCA	**Zocca**	**0.61**	**73**	AML	AML		
	comp=E,119µm,0.9s						
ZCCA				AML	AML		
	comp=N,128µm,0.5s						
ZCCA				AML	AML		
	comp=N,128µm,0.5s						
ZCCA				AML	AML		
	comp=E,119µm,0.9s						
FNVD	**Fontana Vidola**	**0.69**	**90**	P	**Pg**	**21 42 39.8**	**-0.3**
FNVD				AML	AML		
	comp=E,176µm,0.5s						
FNVD				AML	AML		
	comp=N,193µm,1.0s						
FNVD				AML	AML		
	comp=N,193µm,1.0s						
FNVD				AML	AML		
	comp=E,176µm,0.5s						
CRMI	**Carmignano**	**0.70**	**123**	P	**Pg**	**21 42 40.7**	**+0.5**
CRMI				AML	AML		
	comp=E,51µm,0.4s						
CRMI				AML	AML		
	comp=N,62µm,0.7s						
CRMI				AML	AML		
	comp=E,51µm,0.4s						
CRMI				AML	AML		
	comp=N,62µm,0.7s						
NOVE	**Novellara**	**0.74**	**32**	AML	AML		
	comp=E,539µm,1.6s						
NOVE				AML	AML		
	comp=E,539µm,1.6s						
NOVE				AML	AML		
	comp=N,590µm,1.6s						
NOVE				AML	AML		
	comp=N,590µm,1.6s						
GORR	**Gorreto**	**0.76**	**305**	P	**Pg**	**21 42 41.6**	**+0.2**
GORR				S	**Sg**	**21 42 51.9**	**+0.5**
GORR				AML	AML		
	comp=E,156µm,0.4s						
GORR				AML	AML		
	comp=N,134µm,0.9s						
GORR				AML	AML		
	comp=N,134µm,0.9s						
GORR				AML	AML		
	comp=E,156µm,0.4s						
GROG	**Isola di Gorgo**	**0.78**	**195**	P	**Pg**	**21 42 42.4**	**+0.7**
GROG				AML	AML		
	comp=E,304µm,0.2s						
GROG				AML	AML		
	comp=N,256µm,0.4s						
GROG				AML	AML		
	comp=E,304µm,0.2s						
GROG				AML	AML		
	comp=N,256µm,0.4s						
BOB	**Bobbio (Coli)**	**0.78**	**319**	P	**Pg**	**21 42 41.7**	**-0.2**
BOB				AML	AML		
	comp=E,197µm,0.4s						
BOB				AML	AML		
	comp=N,200µm,0.6s						
BOB				AML	AML		
	comp=N,200µm,0.6s						
BOB				AML	AML		
	comp=E,197µm,0.4s						
SEI	**Scarperia**	**0.87**	**98**	P	**Pg**	**21 42 42.9**	**-0.6**
SEI				AML	AML		
	comp=E,174µm,0.5s						
SEI				AML	AML		
	comp=N,326µm,0.4s						
SEI				AML	AML		
	comp=E,174µm,0.5s						
SEI				AML	AML		
	comp=N,326µm,0.4s						
OSSC	**Osservatorio P**	**1.02**	**129**	AML	AML		
	comp=E,117µm,0.8s						

OSSC				AML	AML		
	comp=E,117µm,0.8s						
OSSC				AML	AML		
	comp=N,114µm,0.8s						
OSSC				AML	AML		
	comp=N,114µm,0.8s						
TRIF	**Trifonti**	**1.19**	**153**	AML	AML		
	comp=N,39µm,1.4s						
TRIF				AML	AML		
	comp=E,36µm,0.5s						
TRIF				AML	AML		
	comp=E,36µm,0.5s						
TRIF				AML	AML		
	comp=N,39µm,1.4s						
FROS	**Frosini**	**1.20**	**143**	AML	AML		
	comp=E,81µm,1.1s						
FROS				AML	AML		
	comp=N,71µm,0.3s						
FROS				AML	AML		
	comp=E,81µm,1.1s						
FROS				AML	AML		
	comp=N,71µm,0.3s						
PCP	**Piancastagn**	**1.22**	**288**	P	**Pb**	**21 42 48.9**	**-1.0**
QLNO	**Quiliano**	**1.32**	**277**	AML	AML		
	comp=N,44µm,0.9s						
QLNO				AML	AML		
	comp=E,31µm,1.2s						
QLNO				AML	AML		
	comp=N,44µm,0.9s						
QLNO				AML	AML		
	comp=E,31µm,1.2s						
FINB	**Finale Ligure**	**1.32**	**271**	AML	AML		
	comp=E,36µm,0.3s						
FINB				AML	AML		
	comp=N,51µm,0.3s						
FINB				AML	AML		
	comp=E,36µm,0.3s						
FINB				AML	AML		
	comp=N,51µm,0.3s						
PGF	**Pioggiola**	**1.83**	**208**	*e*Pn	**Pn**	**21 42 58.3**	**0.0**
PGF				*e*Sn	**Sn**	**21 43 19.1**	**-2.5**
	comp=N,6.4nm,0.3s						
SAOF	**Saorge**	**1.89**	**265**	AML	AML		
	comp=N,41µm,0.8s						
SAOF				AML	AML		
	comp=E,40µm,1.0s						
SAOF				AML	AML		
	comp=N,41µm,0.8s						
SAOF				AML	AML		
	comp=E,40µm,1.0s						
SBF	**Sospel**	**1.99**	**262**	*e*Pn	**Pn**	**21 43 00.2**	**-0.3**
SBF				*e*Sn	**Sn**	**21 43 24.3**	**-1.2**
	comp=E,14nm,0.4s						
MBDF	**Montbardon**	**2.49**	**284**	*e*Pn	**Pn**	**21 43 07.8**	**+0.4**
MBDF				*e*Sn	**Sn**	**21 43 40.4**	**+2.5**
	comp=E,2.5nm,0.3s						
FRF	**La Foret Royal**	**2.62**	**258**	*e*Pn	**Pn**	**21 43 08.8**	**-0.2**
FRF				*e*Sn	**Sn**	**21 43 38.9**	**-1.9**
	comp=E,5.3nm,0.3s						
LPG	**La Plagne**	**2.77**	**300**	*e*Pn	**Pn**	**21 43 12.8**	**+1.5**
LPG				*e*Sn	**Sn**	**21 43 45.8**	**+1.0**
	comp=E,3.4nm,0.5s						
LMR	**La Mourre**	**2.78**	**254**	*e*Pn	**Pn**	**21 43 10.7**	**-0.5**
LMR				*e*Sn	**Sn**	**21 43 39.9**	**-4.8**
	comp=E,2.0nm,0.2s						
LPL	**La Plagne**	**2.79**	**300**	*e*Pn	**Pn**	**21 43 13.0**	**+1.5**
LPL				*e*Sn	**Sn**	**21 43 45.9**	**+0.7**
	comp=E,1.9nm,0.3s						
DAVA	**Damuels**	**3.12**	**356**	*i* Pn	**Pn**	**21 43 19.2**	**+3.1**
	comp=E,1.3nm,0.2s						
DAVA				*e*Sn	**Sb**	**21 43 57.8**	**-2.6**
	comp=E,1.8nm,0.3s						
SQTA	**Sankt Quirin**	**3.13**	**13**	*i* Pn	**Pn**	**21 43 19.4**	**+3.2**
	comp=E,2.0nm,0.2s						
SQTA				*i* Sn	**Sb**	**21 43 60.0**	**-0.8**
	comp=E,0.8nm,0.1s						
ORIF	**Oris-en-Rattie**	**3.15**	**285**	*e*Pn	**Pn**	**21 43 18.6**	**+2.2**
ORIF				*e*Sn	**Sn**	**21 43 54.2**	**+0.1**
	comp=E,1.2nm,0.3s						
MOTA	**Moosalm**	**3.24**	**11**	*i* Pn	**Pn**	**21 43 20.6**	**+3.0**
	comp=E,1.0nm,0.4s						
WTTA	**Wattenberg**	**3.26**	**18**	*i* Pn	**Pn**	**21 43 21.2**	**+3.3**
	comp=E,0.4nm,0.1s						
WTTA				*i* Sn	**Sb**	**21 44 01.4**	**-2.9**
	comp=E,5.9nm,0.5s						
WATA	**Walderalm**	**3.31**	**17**	*i* Pn	**Pn**	**21 43 21.5**	**+2.8**
	comp=E,1.0nm,0.2s						
SMRF	**Simiane la Rot**	**3.31**	**268**	*e*Pn	**Pn**	**21 43 20.0**	**+1.4**
SMRF				*e*Sn	**Sn**	**21 43 57.2**	**-0.8**
	comp=E,2.0nm,0.4s						
NVLJ	**Novalja**	**3.40**	**82**	*e*Pn	**Pn**	**21 43 21.1**	**+1.5**
CABF	**La Chapelle**	**3.77**	**312**	*e*Pn	**Pn**	**21 43 27.4**	**+2.5**
CABF				*e*Sn	**Sn**	**21 44 09.7**	**+0.5**
	comp=E,0.5nm,0.2s						
ZIRJ	**Zirje**	**3.99**	**96**	*e*Pn	**Pn**	**21 43 28.6**	**+0.7**
MORI	**Morici**	**4.01**	**92**	*e*Pn	**Pn**	**21 43 29.9**	**+1.8**
HINF	**Hinteralfeld**	**4.31**	**329**	*e*Pn	**Pn**	**21 43 33.5**	**+1.2**
HINF				*e*Sn	**Sn**	**21 44 23.8**	**+1.2**
	comp=E,1.4nm,0.2s						
LASF	**Ste Croix**	**4.54**	**271**	*e*Pn	**Pn**	**21 43 35.7**	**+0.2**
LASF				*e*Sn	**Sn**	**21 44 27.5**	**-0.8**
	comp=E,0.3nm,0.2s						
HAU	**Haudompre**	**4.66**	**327**	*e*Pn	**Pn**	**21 43 39.0**	**+1.9**
HAU				*e*Sn	**Sn**	**21 44 32.3**	**+1.1**
	comp=E,2.6nm,0.3s						
CDF	**Champ du Feu**	**4.69**	**336**	*e*Pn	**Pn**	**21 43 38.1**	**+0.6**
CDF				*e*Sn	**Sn**	**21 44 32.6**	**+0.7**
	comp=E,1.2nm,0.2s						
SMF	**Signal de Mont**	**5.09**	**301**	*e*Pn	**Pn**	**21 43 44.8**	**+1.8**
SMF				*e*Sn	**Sn**	**21 44 42.1**	**+0.3**
	comp=E,1.0nm,0.2s						
PAGF	**Fort de Pagny**	**5.35**	**327**	*e*Pn	**Pn**	**21 43 48.6**	**+2.1**
	baz=145						
PAGF				*e*Sn	**Sn**	**21 44 48.5**	**+0.4**
	comp=E,0.4nm,0.2s,baz=145						
LOR	**Lormes**	**5.39**	**307**	*e*Pn	**Pn**	**21 43 49.0**	**+1.9**
	baz=124						
LOR				*e*Sn	**Sn**	**21 44 50.4**	**+1.2**
	comp=E,2.0nm,0.3s,baz=125						
AVF	**Avril sur Loir**	**5.46**	**301**	*e*Pn	**Pn**	**21 43 49.5**	**+1.5**
AVF				*e*Sn	**Sn**	**21 44 51.1**	**+0.3**
	comp=E,0.5nm,0.3s						
SSF	**Saint Saulge**	**5.49**	**304**	*e*Pn	**Pn**	**21 43 50.0**	**+1.5**
SSF				*e*Sn	**Sn**	**21 44 52.8**	**+1.2**
	comp=E,0.2nm,0.2s						
BGF	**Bois d'Agland**	**5.68**	**297**	*e*Pn	**Pn**	**21 43 52.6**	**+1.5**
BGF				*e*Sn	**Sn**	**21 44 56.1**	**-0.2**
	comp=E,1.2nm,0.2s						

ROM 15 21:43:18.1±0.1**, 44°.215N**±0°.006×**10°.193E**±0°.006**,**
h10km**, ML0.9**/2**, Error ellipse: s-maj=0.8km**
s-min=0.5km az=160.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.05**	**166**	P	Pg	21 43 20.7	+0.4
T0912				S	Sg	21 43 22.1	+0.3
FIVI	**Fivizzano**	**0.05**	**297**	P	Pg	21 43 20.6	+0.4
FIVI				S	Sg	21 43 21.9	+0.1
EQUI	**Equi**	**0.06**	**211**	P	Pg	21 43 20.7	+0.4
EQUI				S	Sg	21 43 22.1	+0.3
EQUI				AML	AML		
	comp=E,97µm,0.2s						
EQUI				AML	AML		
	comp=N,60µm,0.6s						
EQUI				AML	AML		
	comp=E,97µm,0.2s						
EQUI				AML	AML		
	comp=N,60µm,0.6s						
T0911	**Castelpoggio (**	**0.13**	**220**	P	Pb	21 43 22.1	-0.7
T0911				S	Sg	21 43 24.4	+0.8
T0911				AML	AML		
	comp=E,94µm,0.8s						
T0911				AML	AML		
	comp=N,110µm,0.8s						
T0911				AML	AML		
	comp=E,94µm,0.8s						
T0911				AML	AML		
	comp=N,110µm,0.8s						
VLC	**Villacollemand**	**0.15**	**112**	P	Pg	21 43 22.3	+0.7
VLC				S	Sg	21 43 24.7	+0.8
FOSD	**Fosdinovo**	**0.18**	**233**	P	Pb	21 43 22.9	-0.6
FOSD				S	Sg	21 43 25.7	+1.1
ERBM	**Eremo**	**0.26**	**38**	P	Pb	21 43 24.3	-0.6
ERBM				S	Sg	21 43 28.1	+1.0
GRAM	**Graiana**	**0.29**	**342**	P	Pg	21 43 24.8	+0.7
PLMA	**Palmaria, Port**	**0.30**	**236**	P	Pb	21 43 25.2	-0.3
PLMA				S	Sg	21 43 29.0	+0.9

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*ISCJB **15** 21:59:30.1±0.5, 13°.14N±0°.05×89°.28W±0°.03, h86km±1km,*
mb4.0/36, Error ellipse: s-maj=9.0km s-min=3.8km
az=30.0
*NEIC **15** 21:59:31.0±0.0, 13°.18N×89°.37W, h63km, mb4.4/84,*
MD4.6(SNET), After SNET.
NEIC Felt [III] at San Salvador.
*IDC **15** 21:59:31.8±1.6, 13°.54N×88°.96W, h68km±10km, mb3.8/11,*
mb1 4.0/15, mb1mx3.8/39, mbtmp4.1/15, MS2.7/3,
Ms1 2.7/3, ms1mx2.6/35, Error ellipse: s-maj=27.4km
s-min=14.8km az=45.0
*SNET **15** 21:59:31.5±0.7, 13°.18N×89°.37W, h64km±4km, ML4.5*
*GCG **15** 21:59:34.4±0.5, 13°.49N×89°.51W, h123km±22km, MD4.4*
ISC 15 21:59:31.5±0.7**, 13°.28N**±0°.06×**89°.22W**±0°.04**, h74**km±5km**,**
n259, σ1s.31/277**, mb4.1**/36**, 3C-11D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIES	**Las Flores**	**0.23**	**44**	*e*P	**Pn**	**21 59 42.8**	**0.0**
AIES				*e*S	**Sn**	**21 59 51.8**	**+0.8**
AIES				AML	AML	21 59 54.3	
	comp=Z,7µm,0.5s						
LOMA	**Loma Larga**	**0.36**	**7**	⇓*i*P	**Pn**	**21 59 44.1**	**+0.5**
LOMA				IAML		21 59 55.4	
	comp=Z,31µm,0.3s						
SNET	**Serv Nac Est T**	**0.40**	**358**	⇓*i*P	**Pn**	**21 59 44.3**	**+0.3**
SNET				*e*S	**Sn**	**21 59 54.0**	**+0.8**
SNET				IAML		21 59 56.7	
	comp=Z,28µm,0.3s						
UESS	**Universidad de**	**0.42**	**2**	*e*P	**Pn**	**21 59 44.9**	**+0.7**
OPAM	**Oficina de Pla**	**0.43**	**3**	*e*P	**Pn**	**21 59 44.8**	**+0.5**
OPAM				IAML		22 00 00.1	
	comp=Z,25µm,0.3s						
UEES	**Universidad Ev**	**0.43**	**357**	⇓*i*P	**Pn**	**21 59 44.7**	**+0.4**
UDBS	**Universidad Do**	**0.44**	**8**	*e*P	**Pn**	**21 59 45.0**	**+0.6**
CUSC	**Alcaldia de Cu**	**0.45**	**5**	⇓*e*P	**Pn**	**21 59 45.0**	**+0.7**
LFU	**La Fuente**	**0.48**	**12**	⇓*i*P	**Pn**	**21 59 45.8**	**+1.1**
PAVA	**Las Pavas**	**0.51**	**32**	⇓*e*P	**Pn**	**21 59 46.3**	**+1.3**
PAVA				IAML		21 59 59.5	
	comp=Z,35µm,0.4s						
CEDA	**San Andres**	**0.55**	**342**	⇓*i*P	**Pn**	**21 59 45.6**	**+0.4**
CEDA				IAML		22 00 00.3	
	comp=Z,32µm,0.4s						
CEVE	**Cerro Verde**	**0.67**	**324**	⇓*i*P	**Pn**	**21 59 46.6**	**-0.1**
CEVE				*e*S	**Sn**	**21 59 58.1**	**+0.2**
CEVE				IAML		21 59 59.5	
	comp=Z,44µm,0.3s						
SBLS	**San Blas**	**0.68**	**325**	⇓*i*P	**Pn**	**21 59 46.7**	**-0.1**
TECA	**Tecapa**	**0.73**	**73**	⇓*e*P	**Pn**	**21 59 48.6**	**+1.4**
RTR	**El Retiro**	**0.74**	**326**	⇓*i*P	**Pn**	**21 59 47.6**	**+0.2**
VICT	**Victoria**	**0.88**	**40**	⇑*e*P	**Pn**	**21 59 50.7**	**+1.8**
PACA	**Pacayal**	**0.89**	**78**	*e*P	**Pn**	**21 59 50.9**	**+1.9**
PACA				*e*S	**Sn**	**22 00 06.2**	**+4.1**
LLGN	**La Laguna**	**0.92**	**17**	*e*P	**Pn**	**21 59 50.9**	**+1.4**
LLGN				IAML		22 00 07.6	
	comp=Z,4µm,0.5s						
MTO3	**Montecristo**	**1.12**	**353**	⇑*e*P	**Pn**	**21 59 53.1**	**+1.1**
CNCH	**Conchagua**	**1.35**	**90**	⇑*i*P	**Pn**	**21 59 56.5**	**+1.7**
CSGN	**Cosiguina Volc**	**1.64**	**100**	*e*Pn	**Pn**	**22 00 01.3**	**+2.7**
CSGN				*e*Sn	**Sn**	**22 00 13.3**	**-5.8**
NBG	**Las Nubes**	**1.70**	**320**	*e*P	**Pn**	**22 00 01.9**	**+2.4**
PCG	**Pacaya**	**1.74**	**309**	*e*P	**Pn**	**22 00 01.8**	**+1.7**
MRL	**Marmol**	**1.85**	**346**	*e*P	**Pn**	**22 00 04.0**	**+2.6**
FUG	**Fuego 3**	**1.96**	**307**	*e*P	**Pn**	**22 00 03.9**	**+1.0**
FUG				*e*S	**Sn**	**22 00 27.2**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.04**	**68**	*e*Pn	**Pn**	**22 00 06.4**	**+2.6**
TGUH				*e*Sn	**Sn**	**22 00 22.3**	**-6.1**
APG	**El Apazote**	**2.10**	**325**	P	**Pn**	**22 00 05.1**	**+0.3**
	comp=Z,17nm,0.3s,baz=111,slow=12,SNR=48						
APG				S	**Sn**	**22 00 31.6**	**+1.4**
	comp=Z,28nm,0.3s,baz=82,slow=18,SNR=4.7						
STG3	**Santiaguito 3,**	**2.69**	**302**	*e*P	**Pn**	**22 00 13.4**	**+0.6**
ESTN	**Estel**	**2.78**	**93**	*e*Pn	**Pn**	**22 00 15.8**	**+1.9**
ESTN				*e*Sn	Sn	22 00 37.5	-8.9
CCIG	**Comitan**	**4.11**	**317**	*e*Pn	**Pn**	**22 00 33.2**	**+1.1**
ACON	**Acoyapa**	**4.16**	**108**	*e*Pn	**Pn**	**22 00 32.3**	**-0.3**
ACON				*e*Sn	**Sn**	**22 01 19.1**	**-0.9**
ESPN	**Las Esperanzas**	**4.92**	**102**	*e*Pn	**Pn**	**22 00 44.7**	**+1.8**
JTS	**Las Juntas de**	**5.12**	**125**	P	**Pn**	**22 00 47.4**	**+1.6**
	comp=Z,4.4nm,0.3s,baz=2.0,slow=12,SNR=7.0						
JTS				S	**Sn**	**22 01 42.1**	**-1.7**
	baz=336,slow=20,SNR=1.5						
JTS				LR	LR	22 02 59.5	
	comp=Z,123nm,19.8s,baz=358,slow=41						
JTS	**Las Juntas de**	**5.12**	**125**	*e*Pn	**Pn**	**22 00 45.5**	**-0.4**
JTS				*e*Sn	**Sn**	**22 01 42.1**	**-1.7**
CMIG	**Matias Romero**	**6.65**	**305**	P	**Pn**	**22 01 07.4**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=122,slow=11,SNR=14						
CMIG				S	**Sn**	**22 02 19.1**	**-2.0**
	comp=Z,3.2nm,0.3s,baz=37,slow=20,SNR=7.0						
TEIG	**Tepich**	**6.96**	**7**	*e*Pn	**Pn**	**22 01 14.6**	**+3.6**
TLIG	**Tlapa**	**9.97**	**296**	*e*Pn	**Pn**	**22 01 50.9**	**-1.2**
SJCC	**San Jacinto, C**	**14.16**	**102**	*e*P	**P**	**22 02 54.8**	**+0.9**
061Z	**Ochoppi**	**14.76**	**31**	*e*Pn	**Pn**	**22 02 55.3**	**-1.0**
LNIG	**Linares**	**15.07**	**322**	*e*Pn	**Pn**	**22 02 59.0**	**-1.3**
	comp=Z,8.9nm,1.1s						
ZARC	**Zaragoza, Cauc**	**15.25**	**111**	*e*P	**P**	**22 03 06.4**	**+0.4**
YOTC	**Yotoco, Valle**	**15.71**	**125**	*e*P	**P**	**22 03 13.2**	**+1.9**
GUY2C	**Guyana, Caldas**	**15.83**	**119**	*e*P	**P**	**22 03 15.1**	**+2.1**
BBAC	**Balboa, Cauca**	**16.29**	**132**	*e*P	**P**	**22 03 22.6**	**+4.8**
KVTX	**Kingsville**	**16.34**	**332**	*e*Pn	**Pn**	**22 03 15.5**	**-0.9**
	comp=Z,55nm,0.6s						
SOTA	**Rioblanco**	**16.68**	**131**	*e*P	**P**	**22 03 27.2**	**+4.7**
656A	**Willston**	**17.17**	**20**	*e*Pn	**Pn**	**22 03 25.1**	**-1.6**
	comp=Z,28nm,1.0s						
PAMC	**Pamplona, Colo**	**17.28**	**108**	*e*P	**Pn**	**22 03 29.0**	**+0.4**
SOCV	**Socops**	**18.70**	**104**	*e*P	**P**	**22 03 43.4**	**-0.9**
SDV	**Santo Domingo**	**18.75**	**102**	P	**P**	**22 03 45.2**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=290,slow=6.8,SNR=12						
SDV	**Santo Domingo**	**18.75**	**102**	*e*P	**P**	**22 03 44.8**	**-0.2**
	comp=Z,12nm,0.8s						
SDV	**Santo Domingo**	**18.75**	**102**	*e*P	**P**	**22 03 44.2**	**-0.7**
435B	**Jarrell**	**19.05**	**337**	*e*P	**P**	**22 03 47.6**	**-0.3**
	comp=Z,12nm,0.6s						
435B	**Jarrell**	**19.05**	**337**	P	**Pn**	**22 03 49.9**	**+0.5**
	baz=155						
NATX	**Nacogdoches**	**19.06**	**346**	*e*P	**P**	**22 03 47.0**	**-1.0**
	comp=Z,42nm,1.0s						
GRTK	**Grand Turk**	**19.09**	**62**	*e*P	**P**	**22 03 48.0**	**-0.3**
	comp=Z,75nm,0.8s						
SDD	**Santo Domingo**	**19.26**	**72**	*e*P	**P**	**22 03 48.4**	**-1.9**
	comp=Z,276nm,0.9s						
147A	**Livingston**	**19.32**	**2**	*e*P	**P**	**22 03 50.8**	**0.0**
	comp=Z,16nm,0.6s						
149A	**Jones**	**19.36**	**6**	P	**Pn**	**22 03 54.2**	**+1.2**
	baz=188						
254A	**Abbeville**	**19.36**	**15**	P	**Pn**	**22 03 54.1**	**+1.1**
	baz=198						
150A	**Eclectic**	**19.46**	**8**	P	**Pn**	**22 03 55.4**	**+1.2**
	baz=190,SNR=5.3						
151A	**Opelika**	**19.49**	**10**	P	**Pn**	**22 03 55.1**	**+0.6**
	baz=192						
JCT	**Junction City**	**19.71**	**332**	*e*P	**P**	**22 03 53.5**	**-1.6**
JCT	**Junction City**	**19.71**	**332**	P	**P**	**22 03 56.0**	**+0.9**
	baz=149						
152A	**Waverly Hall**	**19.73**	**11**	*e*P	**P**	**22 03 56.8**	**+1.5**
	comp=Z,10nm,0.9s						
LRAL	**Lakeview Retre**	**19.77**	**6**	*e*P	**P**	**22 03 56.0**	**+0.4**
	comp=Z,6.6nm,0.9s						
LRAL	**Lakeview Retre**	**19.77**	**6**	P	**Pn**	**22 03 58.4**	**+0.6**
	baz=187						
Z49A	**Columbiana**	**19.97**	**7**	P	**Pn**	**22 04 00.4**	**+0.2**
	baz=188						
257A	**Skidaway Islan**	**20.07**	**21**	*e*P	**P**	**22 03 57.8**	**-1.1**
	comp=Z,102nm,0.9s						
WHTX	**Lake Whitney,**	**20.10**	**339**	P	**P**	**22 04 00.2**	**+0.9**
	baz=157,SNR=5.8						
Z50A	**Ashland**	**20.11**	**8**	P	**P**	**22 04 00.3**	**+1.0**
	baz=190						
Z41A	**Richland Creek**	**20.15**	**351**	*e*P	**P**	**22 04 00.7**	**+0.8**
	comp=Z,20nm,0.4s						
155A	**Kite**	**20.22**	**17**	P	**P**	**22 04 02.5**	**+1.9**
	baz=200						
WLAR	**White Oak Lake**	**20.62**	**351**	*e*P	**P**	**22 04 04.5**	**-0.4**
	comp=Z,14nm,0.7s						
Y48A	**Jasper**	**20.62**	**5**	P	**P**	**22 04 06.2**	**+1.3**
	baz=186						
Y49A	**Blount Mountai**	**20.64**	**7**	P	**P**	**22 04 07.1**	**+2.0**
	baz=188						
GOGA	**Godfrey**	**20.71**	**14**	*e*P	**P**	**22 04 07.7**	**+1.8**
	comp=Z,11nm,1.1s						
GOGA	**Godfrey**	**20.71**	**14**	P	**P**	**22 04 08.1**	**+2.2**
	baz=196						
Y50A	**Piedmont**	**20.76**	**8**	P	**P**	**22 04 08.4**	**+2.0**
	baz=190						
Y51A	**Rockmart**	**20.87**	**10**	P	**P**	**22 04 09.3**	**+1.7**
	baz=192						
Y52A	**Lilburn**	**21.02**	**12**	*e*P	**P**	**22 04 09.9**	**+0.7**
	comp=Z,9.2nm,0.8s						
Y53A	**Monroe**	**21.11**	**13**	P	**P**	**22 04 12.9**	**+2.7**
	baz=196						
OXF	**Oxford**	**21.14**	**360**	*e*P	**P**	**22 04 12.3**	**+1.9**
	comp=Z,26nm,0.9s						
OXF	**Oxford**	**21.14**	**360**	P	**P**	**22 04 12.5**	**+2.1**
	baz=180						
X48A	**Hartselle**	**21.17**	**5**	*e*P	**P**	**22 04 12.0**	**+1.3**
	comp=Z,5.2nm,0.8s						
X48A	**Hartselle**	**21.17**	**5**	P	**P**	**22 04 12.6**	**+1.8**
	baz=186						
X47A	**Russelville**	**21.18**	**3**	P	**P**	**22 04 12.8**	**+1.9**
	baz=184,SNR=5.3						
X43A	**Marvell**	**21.20**	**356**	*e*P	**P**	**22 04 08.7**	**-2.3**
	comp=Z,18nm,0.5s						
X49A	**Woodville**	**21.30**	**7**	P	**P**	**22 04 13.2**	**+1.1**
	baz=188						
X50B	**Fort Payne**	**21.33**	**8**	P	**P**	**22 04 13.8**	**+1.3**
	baz=190						
X40A	**Basin Creek Fa**	**21.37**	**352**	*e*P	**P**	**22 04 11.8**	**-1.0**
	comp=Z,2.9nm,0.6s						
Z57A	**Bowman**	**21.39**	**20**	P	**P**	**22 04 14.7**	**+1.7**
	baz=204						
ABTX	**Abilene, Hawle**	**21.49**	**335**	P	**P**	**22 04 14.7**	**+0.5**
	baz=152						
MIAR	**Mount Ida**	**21.54**	**350**	P	**P**	**22 04 16.4**	**+1.8**
	baz=169,SNR=5.6						
UALR	**University of**	**21.59**	**353**	*e*P	**P**	**22 04 15.4**	**+0.3**
	comp=Z,9.1nm,0.6s						
X52A	**Dahlonega**	**21.77**	**12**	P	**P**	**22 04 18.2**	**+1.0**
	baz=194						
HODGE	**Hodges**	**21.79**	**16**	*e*P	**P**	**22 04 16.7**	**-0.7**
	comp=Z,8.9nm,1.0s						
W48A	**Pulaski**	**21.86**	**5**	P	**P**	**22 04 19.9**	**+1.8**
	baz=186						
W49A	**Belvidere**	**21.91**	**6**	P	**P**	**22 04 19.4**	**+0.8**
	baz=188						
W47A	**Westpoint**	**21.92**	**4**	P	**P**	**22 04 20.1**	**+1.3**
	baz=185						
X37A	**Clayton**	**21.94**	**346**	*e*P	**P**	**22 04 19.6**	**+0.6**
	comp=Z,4.8nm,0.8s						
W41B	**Gary Mavity, V**	**21.97**	**353**	*e*P	**P**	**22 04 19.3**	**0.0**
	comp=Z,3.7nm,0.9s						
W41B	**Gary Mavity, V**	**21.97**	**353**	P	**P**	**22 04 21.1**	**+1.8**
	baz=172						
W50A	**Signal Mountai**	**22.11**	**9**	*e*P	**P**	**22 04 19.0**	**-1.9**
	comp=Z,6.4nm,1.1s						
JSC	**Jenkinsville**	**22.12**	**18**	*e*P	**P**	**22 04 20.3**	**-0.6**
	comp=Z,7.9nm,0.9s						
W51A	**Cleveland**	**22.15**	**10**	P	**P**	**22 04 22.0**	**+0.7**
	baz=192						
W39A	**Magazine**	**22.21**	**350**	P	**P**	**22 04 23.3**	**+1.5**
	baz=169						
X56A	**White Oak**	**22.39**	**18**	P	**P**	**22 04 25.1**	**+1.4**
	baz=202						
V46A	**Holladay**	**22.45**	**2**	P	**P**	**22 04 25.2**	**+0.7**
	baz=183						
V48A	**Smith Brothers**	**22.47**	**5**	*e*P	**P**	**22 04 26.1**	**+1.4**
	comp=Z,5.2nm,0.8s						
V48A	**Smith Brothers**	**22.47**	**5**	P	**P**	**22 04 25.9**	**+1.2**
	baz=186						
V47A	**Nunnelly**	**22.50**	**4**	P	**P**	**22 04 26.7**	**+1.7**
	baz=185						
V49A	**McMinnville**	**22.59**	**7**	P	**P**	**22 04 26.6**	**+0.7**
	baz=189						
V50A	**Pikevile**	**22.60**	**9**	P	**P**	**22 04 25.8**	**-0.3**
	baz=191						
W54A	**Cherokee Point**	**22.62**	**15**	P	**P**	**22 04 27.2**	**+0.9**
	baz=198						
SJG	**San Juan**	**22.71**	**75**	LR	LR	22 13 12.3	
	comp=Z,59nm,21.7s,baz=265,slow=37						
WVT	**Waverly**	**22.79**	**3**	*e*P	**P**	**22 04 26.7**	**-1.3**
	comp=Z,3.1nm,0.8s						
WVT	**Waverly**	**22.79**	**3**	P	**P**	**22 04 29.2**	**+1.2**
	baz=184						
TKL	**Tuckaleechee C**	**22.82**	**11**	P	**P**	**22 04 29.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=180,slow=11,SNR=4.4						
TKL				LR	LR	22 13 56.4	
	comp=Z,6.2nm,19.9s,baz=180,slow=38						
V51A	**Loudon**	**22.85**	**10**	P	**P**	**22 04 30.1**	**+1.5**
	baz=192						
KMSC	**Kings Mountain**	**22.90**	**17**	P	**P**	**22 04 29.9**	**+0.6**
	baz=200						
U46A	**Springville**	**23.00**	**2**	P	**P**	**22 04 31.6**	**+1.5**
	baz=183						
V52A	**Sevierville**	**23.03**	**12**	P	**P**	**22 04 31.1**	**+0.6**
	baz=194						
V53A	**Saluda**	**23.03**	**13**	*e*P	**P**	**22 04 31.9**	**+1.4**
	comp=Z,7.1nm,0.9s						
V53A	**Saluda**	**23.03**	**13**	P	**P**	**22 04 31.1**	**+0.6**
	baz=196						
WMOK	**Wichita Mounta**	**23.05**	**340**	P	**P**	**22 04 29.5**	**-1.2**
	baz=156,SNR=8.2						
W56A	**Indian Trail**	**23.12**	**18**	P	**P**	**22 04 32.1**	**+0.8**
	baz=202						
U47A	**Clarksville**	**23.13**	**4**	P	**P**	**22 04 31.8**	**+0.4**
	baz=185						
U40A	**Yellville**	**23.21**	**353**	P	**P**	**22 04 32.9**	**+0.7**
	baz=171,SNR=5.4						
U48A	**Cassie Pea, Po**	**23.26**	**5**	P	**P**	**22 04 33.5**	**+0.8**
	baz=187						
HHAR	**Hobbs**	**23.29**	**350**	*e*P	**P**	**22 04 31.6**	**-1.4**
	comp=Z,4.1nm,0.9s						
TUL1	**Leonard**	**23.30**	**346**	*e*P	**P**	**22 04 33.0**	**0.0**
	comp=Z,10nm,1.1s						
TUL1	**Leonard**	**23.30**	**346**	P	**P**	**22 04 33.5**	**+0.5**
	baz=164						
W57A	**Gilead**	**23.32**	**19**	P	**P**	**22 04 34.4**	**+1.2**
	baz=203						
V54A	**Nebo**	**23.34**	**15**	P	**P**	**22 04 34.2**	**+0.7**
	baz=198						
U49A	**Red Boiling Sp**	**23.34**	**7**	P	**P**	**22 04 34.0**	**+0.6**
	baz=189						
PBMO	**Poplar Bluff**	**23.42**	**358**	*e*P	**P**	**22 04 35.1**	**+0.9**
	comp=Z,22nm,0.8s						
W58A	**Raeford**	**23.45**	**21**	P	**P**	**22 04 35.1**	**+0.7**
	baz=205						
MNTX	**Cornudas Mount**	**23.59**	**324**	P	**P**	**22 04 35.8**	**+0.1**
	baz=138						
V55A	**Taylorsville**	**23.60**	**16**	P	**P**	**22 04 36.6**	**+0.7**
	baz=200						
TZTN	**Tazewell**	**23.72**	**11**	P	**P**	**22 04 38.2**	**+1.3**
	baz=194						
U53A	**Fall Branch**	**23.75**	**13**	P	**P**	**22 04 38.2**	**+1.0**
	baz=196						
V56A	**Mocksville**	**23.77**	**18**	P	**P**	**22 04 38.1**	**+0.8**
	baz=202						
STVI	**Saint Thomas**	**23.87**	**75**	*e*P	**P**	**22 04 38.9**	**+0.5**
	comp=Z,26nm,1.0s						
T49A	**Edmonton**	**23.95**	**7**	*e*P	**P**	**22 04 38.3**	**-0.7**
	comp=Z,3.8nm,0.8s						
T49A	**Edmonton**	**23.95**	**7**	P	**P**	**22 04 39.3**	**+0.4**
	baz=189						
T50A	**Nancy**	**23.96**	**9**	P	**P**	**22 04 38.2**	**-0.8**
	baz=191						
MSTX	**Muleshoe**	**24.00**	**331**	P	**P**	**22 04 39.2**	**-0.3**
	baz=146,SNR=5.5						
T51A	**Gray**	**24.05**	**10**	P	**P**	**22 04 40.5**	**+0.7**
	baz=193						
V57A	**Coltrane Farms**	**24.06**	**19**	P	**P**	**22 04 41.0**	**+1.1**
	baz=203						
U54A	**Nelsons Funny**	**24.08**	**15**	P	**P**	**22 04 40.9**	**+0.8**
	baz=198						
V58A	**Windy Hill, Pi**	**24.19**	**20**	P	**P**	**22 04 41.9**	**+0.8**
	baz=205						
U55A	**TA2, Sparta**	**24.26**	**16**	P	**P**	**22 04 42.6**	**+0.8**
	baz=200						
AMTX	**Amarillo**	**24.29**	**334**	P	**P**	**22 04 42.9**	**+0.8**
	baz=150						
U56A	**King**	**24.30**	**18**	P	**P**	**22 04 43.9**	**+1.8**
	baz=202						
U57A	**Blanch**	**24.70**	**19**	P	**P**	**22 04 46.6**	**+0.8**
	baz=204						
CCM	**Cathedral Cave**	**24.74**	**356**	*e*P	**P**	**22 04 46.3**	**+0.3**
	comp=Z,11nm,0.7s						
CCM	**Cathedral Cave**	**24.74**	**356**	P	**P**	**22 04 47.0**	**+1.0**
	baz=176						
T55A	**Pulaski**	**24.91**	**16**	P	**P**	**22 04 49.0**	**+1.3**
	baz=200						

U58A	Oxford	24.93	21	P	P	22 04 48.1	+0.3
	baz=205						
WCI	Wyandotte Cave	24.98	5	eP	P	22 04 47.6	-0.7
	comp=Z,8.8nm,0.6s						
WCI	Wyandotte Cave	24.98	5	P	P	22 04 48.0	-0.3
	baz=187						
R49A	Shelbyville	25.17	8	eP	P	22 04 48.9	-1.1
	comp=Z,4.4nm,0.6s						
T57A	Hurt	25.25	19	eP	P	22 04 49.3	-1.4
	comp=Z,4.7nm,0.8s						
T57A	Hurt	25.25	19	P	P	22 04 51.3	+0.6
	baz=203						
T59A	Double "B" Far	25.80	22	P	P	22 04 56.5	+0.8
	baz=207						
Q54A	Coxs Mills	26.66	15	P	P	22 05 03.3	-0.1
	baz=199						
R57A	Stanardsville	26.67	19	P	P	22 05 03.8	+0.3
	baz=204						
CBN	Corbin Frederi	26.96	21	P	P	22 05 07.0	+0.8
	baz=206						
P52A	Corning	26.98	12	P	P	22 05 07.3	+0.9
	baz=196						
R59A	King George, V	27.05	21	P	P	22 05 08.3	+1.3
	baz=207						
N41A	Harden Midland	27.36	357	eP	P	22 05 09.2	-0.5
	comp=Z,9.9nm,0.8s						
N41A	Harden Midland	27.36	357	P	P	22 05 10.7	+1.0
	baz=177						
T25A	Trinidad	27.37	333	P	P	22 05 11.5	+1.4
	baz=147						
Q57A	Strasburg	27.38	19	P	P	22 05 11.0	+1.1
	baz=204						
O52A	Adamsville	27.51	12	P	P	22 05 11.0	-0.1
	baz=196						
N40A	Mertquake, Sal	27.58	356	P	P	22 05 12.1	+0.5
	baz=175						
P57A	Homestead Farm	27.91	19	P	P	22 05 15.7	+1.1
	baz=204						
M50A	Fremont	28.53	10	P	P	22 05 19.9	-0.3
	baz=193						
L40A	Anamosa	28.73	357	P	P	22 05 22.1	+0.3
	baz=176						
N54A	Moraine State	28.73	15	P	P	22 05 22.1	+0.2
	baz=199						
N55A	Marion Center	28.82	16	P	P	22 05 23.6	+0.9
	baz=201						
PLIO	Pelee Island,	28.94	10	P	P	22 05 23.7	0.0
	baz=194						
S22A	4UR Ranch, Cre	28.98	330	P	P	22 05 26.3	+1.7
	baz=143						
BGNE	Belgrade	29.09	346	P	P	22 05 26.0	+0.9
	baz=162						
O59A	Robesonia	29.26	21	P	P	22 05 27.7	+1.1
	baz=207						
M55A	Ridgway	29.53	16	P	P	22 05 29.4	+0.4
	baz=201						
M56A	Emporium	29.70	17	P	P	22 05 31.4	+0.9
	baz=202						
N59A	State Game Lan	29.94	21	P	P	22 05 33.5	+0.8
	baz=207						
ISCO	Idaho Springs	30.11	334	P	P	22 05 36.3	+1.8
	baz=147						
N60A	Cedar Hill Far	30.14	22	P	P	22 05 35.2	+0.8
	baz=208						
L55A	Hinsdale	30.28	16	P	P	22 05 35.8	+0.1
	baz=201						
J49A	Marlette	30.43	9	P	P	22 05 36.4	-0.5
	baz=192						
I42A	Draeger Farm,	30.50	0	P	P	22 05 37.6	0.0
	baz=181						
M59A	Waymart	30.61	21	P	P	22 05 38.6	0.0
	baz=207						
I41A	Arkdale	30.68	359	P	P	22 05 39.6	+0.5
	baz=179						
L58A	Harry Jones Me	30.92	20	P	P	22 05 41.9	+0.6
	baz=206						
ECSD	EROS Data Cent	31.01	350	P	P	22 05 42.2	+0.2
	baz=166						
M61A	Granite Spring	31.01	23	P	P	22 05 42.6	+0.5
	baz=210						
I49A	Point Hope	31.04	9	P	P	22 05 41.8	-0.5
	baz=192						
N23A	Red Feather La	31.16	335	P	P	22 05 44.4	+0.6
	baz=148						
J54A	Appleton	31.25	15	P	P	22 05 43.8	-0.3
	baz=200						
BASO	Ashfield	31.30	11	P	P	22 05 44.3	-0.3
	baz=194						
BWLO	Walkerton	31.50	11	P	P	22 05 45.6	-0.8
	baz=195						
G40A	Rib Lake	31.89	359	P	P	22 05 49.8	0.0
	baz=178						
WLVO	Wesleyville	31.92	15	P	P	22 05 49.9	-0.1
	baz=200						
G39A	Holcombe	31.94	357	P	P	22 05 49.9	-0.3
	baz=177,SNR=5.2						
SPMN	Marine on St.	31.98	355	P	P	22 05 50.1	-0.4
	baz=174,SNR=6.8						
I55A	Frankford	32.38	16	P	P	22 05 54.9	+0.9
	baz=202						
SADO	Sadowa	32.54	13	P	P	22 05 55.0	-0.4
	comp=Z,4.7nm,0.5s,baz=248,slow=5.8,SNR=7.3						
F48A	Evansville	32.92	9	P	P	22 05 58.0	-0.8
	baz=192						
F49A	Sandfield	32.94	9	P	P	22 05 57.9	-1.0
	baz=193						
E43A	Lone Tree Farm	33.04	3	P	P	22 05 59.8	0.0
	baz=184						
BANO	Bancroft	33.06	15	P	P	22 06 00.1	+0.1
	baz=201						
BUKO	Buck Lake	33.12	13	P	P	22 06 00.2	-0.3
	baz=198						
E38A	The Farm, Brul	33.28	357	P	P	22 06 01.3	-0.5
	baz=176						
E47A	Iron Bridge	33.45	7	P	P	22 06 03.3	0.0
	baz=191						
F52A	Sundridge	33.48	13	P	P	22 06 03.3	-0.3
	baz=198						
G55A	Calabogie	33.59	16	P	P	22 06 04.2	-0.4
	baz=202						
LONY	Lake Ozonia	33.64	19	P	P	22 06 05.4	+0.3
	baz=206						
D41A	Chassel	33.68	1	P	P	22 06 05.1	-0.3
	baz=181						
ALGO	Algonquin Park	33.91	14	P	P	22 06 07.0	-0.4
	baz=200						
E51A	G1948 Merrick	34.15	12	P	P	22 06 08.9	-0.5
	baz=197,SNR=5.3						
PDAR	Pinedale Array	34.24	333	P	P	22 06 11.2	+0.6
	comp=Z,0.5nm,0.5s,baz=126,slow=9.8,SNR=8.6						
PDAR				pP	pP	22 06 27.0	-1.5
	comp=Z,0.1nm,0.4s,baz=133,slow=7.5,SNR=1.6						
PDAR				ScP	ScP	22 12 23.6	-0.8
	comp=Z,0.1nm,0.4s,baz=152,slow=4.6,SNR=3.8						
D48A	Paudash Townsh	34.35	9	P	P	22 06 10.4	-0.8
	baz=193						
D49A	Beulah Townshi	34.52	9	P	P	22 06 11.8	-0.8
	baz=194						
C40A	Isle Royale Na	34.53	0	P	P	22 06 12.4	-0.3
	baz=180						
EYMN	Ely	34.61	357	P	P	22 06 12.3	-1.1
	baz=176,SNR=13						
D51A	Lot 18 Range I	34.70	12	P	P	22 06 13.8	-0.3
	baz=197						
D52A	ZEK Kipawa Sen	34.80	13	P	P	22 06 14.6	-0.4
	baz=199						
D53A	Lac Vacive, Po	35.05	14	P	P	22 06 17.1	-0.1
	baz=200						
AGMN	Agassiz Nation	35.35	352	P	P	22 06 19.1	-0.6
	baz=169						
D54A	Lac Fusel, La	35.37	15	P	P	22 06 19.5	-0.4
	baz=202						
MDND	Maddock	35.53	348	P	P	22 06 22.0	+0.6
	baz=163						
NV01	Mina Array Sit	35.95	319	eP	P	22 06 26.9	+1.6
NV01				ePcP	PcP	22 08 51.0	+0.2
NV01				eScP	ScP	22 12 32.1	+1.4
NVAR	Mina Array Bea	35.95	319	P	P	22 06 26.9	+1.6
	comp=Z,0.4nm,0.5s,baz=127,slow=8.4,SNR=2.7						
NVAR				PcP	PcP	22 08 51.0	+0.2
	comp=Z,0.4nm,0.6s,baz=144,slow=3.4,SNR=3.1						
NVAR				ScP	ScP	22 12 32.1	+1.4
	comp=Z,0.7nm,0.7s,baz=108,slow=3.8,SNR=4.6						
LPAZ	La Paz	36.02	144	P	P	22 06 27.4	+0.8
	comp=Z,1.0nm,0.7s,baz=4.1,slow=5.2,SNR=3.7						
LSQQ	Lebel-sur-Quev	37.08	13	P	P	22 06 34.1	-0.4
	baz=200						
ULM	Lac du Bonnet	37.27	353	P	P	22 06 34.2	-1.8
	comp=Z,4.3nm,0.5s,baz=195,slow=8.5,SNR=5.6						
SCHQ	Schefferville	45.01	18	P	P	22 07 38.5	-1.0
	comp=Z,6.5nm,0.5s,baz=246,slow=14,SNR=5.3						
SCHQ	Schefferville	45.01	18	eP	P	22 07 38.5	-1.0
	comp=Z,6.0nm,0.6s						
YKA	Yellowknife Ar	52.37	345	P	P	22 08 35.4	-0.4
	comp=Z,2.0nm,0.5s,baz=146,slow=7.4,SNR=8.8						
YKB5	Yellowknife Ar	52.37	345	eP	P	22 08 35.4	-0.4
INK	Inuvik	61.90	343	P	P	22 09 42.1	-0.8
	comp=Z,1.8nm,0.6s,baz=131,slow=9.3,SNR=3.7						
ILAR	Eielson Array	64.57	336	P	P	22 09 59.8	-0.9
	comp=Z,0.5nm,0.5s,baz=112,slow=4.0,SNR=4.1						
ILB	Eielson Array	64.57	336	eP	P	22 09 59.8	-0.9
	comp=Z,3.3nm,1.1s						
ESDC	Sonseca Array	78.03	52	P	P	22 11 20.2	-2.2
	comp=Z,0.2nm,0.3s,baz=289,slow=5.5,SNR=5.0						
ARA0	ARCESS Array S	85.96	19	eP	P	22 12 02.0	-1.3
ARCES	ARCESS Array B	85.96	19	P	P	22 12 02.0	-1.3
	comp=Z,1.0nm,0.7s,baz=284,slow=5.4,SNR=4.8						
MK32	Makanchi Array	119.72	7	ePKPdf	PKPdf	22 18 11.3	-2.0
MKAR	Makanchi Array	119.72	7	PKP	PKPdf	22 18 11.3	-2.0
	comp=Z,0.2nm,0.5s,baz=328,slow=4.6,SNR=2.4						
KSH	Kashi	125.69	14	ePKP	PKPdf	22 18 24.9	-0.3
LZH	Lanzhou	129.37	346	ePKP	PKPdf	22 18 31.9	-0.4
LZH				pPKP	pPKPdf	22 18 52.0	-1.4
LZH				sPKP		22 19 00.5	
WR1	Warramunga Arr	137.83	255	ePKPdf	PKPdf	22 18 49.2	+0.9
WRA	Warramunga Arr	137.83	255	PKP	PKPdf	22 18 49.2	+0.9
	comp=Z,1.1nm,0.6s,baz=85,slow=1.8,SNR=8.4						
WRA				SKP		22 22 18.3	
	comp=Z,1.1nm,0.8s,baz=97,slow=1.7,SNR=3.1						
AS31	Alice Springs	137.96	249	ePKPdf	PKPdf	22 18 48.9	+0.4
ASAR	Alice Springs	137.96	249	PKP	PKPdf	22 18 48.9	+0.4
	comp=Z,0.4nm,0.6s,baz=93,slow=2.2,SNR=3.8						
ASAR				pPKP	pPKPdf	22 19 09.8	+0.1
	comp=Z,0.4nm,0.6s,baz=76,slow=2.3,SNR=2.5						
ASAR				SKP		22 22 20.4	
	comp=Z,0.5nm,0.7s,baz=108,slow=3.0,SNR=4.7						
CM31	Chiang Mai Arr	147.45	345	ePKPdf	PKPdf	22 19 06.8	+1.4
CMAR	Chiang Mai Arr	147.45	345	PKPbc	PKPdf	22 19 06.8	+1.4
	comp=Z,2.2nm,0.8s,baz=340,slow=3.1,SNR=8.2						

NEIC **15** *21:59:30.7±0.0, 51°.84N×171°.70W, h13^{km}, mb4.9/332, ML4.5(AEIC), After AEIC.*

AEIC **15** *21:59:30.7, 51°.84N×171°.70W, h13^{km}, ML4.5, MB4.9(NEIC)*

MOS **15** *21:59:31.6±1.0, 52°.09N×171°.70W, h40^{km}, mb5.2/36, MS4.5/5, Error ellipse: s-maj=9.6km s-min=6.2km az=94.6*

ISCJB **15** *21:59:32.6±0.3, 51°.99N±0°.04×171°.68W±0°.02, h53^{km}±2^{km}, mb4.8/133, MS4.3/22, Error ellipse: s-maj=6.1km s-min=2.2km az=177.2*

IDC **15** *21:59:33.8±1.8, 52°.19N×171°.83W, h40^{km}±14^{km}, mb4.4/32, mb1 4.5/35, mb1mx4.5/43, mbtmp4.6/35, ML3.9/3, MS4.1/7, Ms1 4.1/7, ms1mx3.6/44, Error ellipse: s-maj=16.6km s-min=8.9km az=176.0*

BJI **15** *21:59:33.0±0.0, 52°.21N×171°.91W, h55^{km}, mb5.1/46, mB4.9/29, Ms4.6/20, Ms7 4.3/20*

ISC 15 21:59:33.8±0.7**, 52°.07N**±0°.07×**171°.74W**±0°.03**, h45**^{km}±5^{km}**, n735,** σ**0^{s}.95**/765**, mb4.8**/138**, MS4.3**/23**, 30C-17D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSE	Korovin Southe	1.45	282	ePn	Pn	21 59 57.7	+0.2
KOSE				eSn	Sn	22 00 17.3	+1.9
KOFP	Korovin Flat P	1.47	279	ePn	Pn	21 59 56.9	-0.9
KONE	Korovin Northe	1.50	283	ePn	Pn	21 59 58.3	+0.1
KOKL	Mount Kliuchef	1.54	281	ePn	Pn	21 59 58.6	-0.2
NIKH	Nikolski High	1.98	62	ePn	Pn	22 00 04.2	-0.6
NIKH				eSn	Sn	22 00 25.8	-2.6
OKAK	Okmok	2.55	52	ePn	Pn	22 00 12.6	0.0
OKWE	Okmok W'ng Wal	2.55	55	ePn	Pn	22 00 14.2	+1.6
OKTU	Okmok Mt. Tuli	2.61	58	ePn	Pn	22 00 14.7	+1.3
OKER	Okmok East Rim	2.64	57	ePn	Pn	22 00 15.3	+1.4
GSMY	Great Sitkin M	2.67	271	ePn	Pn	22 00 14.0	-0.2
GSTR	Great Sitkin T	2.67	272	ePn	Pn	22 00 14.5	+0.3
GSTD	Great Sitkin T	2.72	271	ePn	Pn	22 00 14.6	-0.5
GSTD				eSn	Sn	22 00 48.4	+1.7
ETKA	Kagalaska Isla	2.89	268	ePn	Pn	22 00 17.5	+0.1
ADAG	Mount Adagdak	3.00	270	ePn	Pn	22 00 19.5	+0.6
ADK	Adak	3.06	268	ePn	Pn	22 00 19.3	-0.3
ADK				eSn	Sn	22 00 54.1	-0.9
ADK	Adak	3.06	268	eP	Pn	22 00 19.3	-0.3
ADK				e		22 00 54.1	
KIWB	Kanaga Island	3.35	268	ePn	Pn	22 00 23.4	-0.3
KIKV	Kanaga Island	3.36	269	ePn	Pn	22 00 24.2	+0.3
KICM	Kanaga Island	3.38	270	ePn	Pn	22 00 24.3	+0.4
KIMD	Kanaga Island	3.42	267	ePn	Pn	22 00 24.6	+0.1
MCIR	Makushin Cirqu	3.48	55	ePn	Pn	22 00 26.5	+1.0
MREP	Makushin Rep't	3.49	58	ePn	Pn	22 00 26.8	+1.3
MSW	Makushin Switc	3.52	56	ePn	Pn	22 00 27.5	+1.5
MSW				eSn	Sn	22 01 09.6	+3.3
UNV	Unalaska Valle	3.63	59	ePn	Pn	22 00 28.6	+1.1
UNV				eSn	Sn	22 01 12.4	+3.4
TASE	Tanaga Southea	3.90	269	ePn	Pn	22 00 31.7	+0.4
AKRB	Akutan Reef Bi	3.99	57	ePn	Pn	22 00 34.6	+2.2
AKUT	Akutan	4.15	58	ePn	Pn	22 00 36.5	+2.0
WESP	Westdahl Peak	4.86	57	ePn	Pn	22 00 46.7	+2.3
SPIA	Saint Paul Isl	5.19	9	ePn	Pn	22 00 51.6	+2.8
FALS	False Pass	5.70	57	ePn	Pn	22 00 58.1	+2.3
SDPT	Sand Point	7.45	59	ePn	Pn	22 01 19.8	+0.1
CHGN	Chignik	8.89	56	ePn	Pn	22 01 39.9	+0.5
CHIA	Chirikof Islan	10.24	62	ePn	Pn	22 01 56.3	-1.7
SII	Sitkinak Islan	11.19	59	ePn	Pn	22 02 09.9	-1.0
OHAK	Old Harbor	11.85	57	ePn	Pn	22 02 20.4	+0.4
KDAK	Kodiak Island	12.39	55	P	Pn	22 02 25.1	-2.2
	1.2nm,0.3s,baz=244,slow=7.5,SNR=14						
KDAK				S	Sn	22 04 38.2	-5.6
	0.3nm,0.3s,baz=317,slow=19,SNR=2.4						
KDAK	Kodiak Island	12.39	55	ePn	Pn	22 02 25.4	-2.0
KDAK	Kodiak Island	12.39	55	i P	Pn	22 02 25.8	-1.5
SVW2	Sparrevohn	12.66	38	ePn	Pn	22 02 34.9	+3.9
ANM	Nome	12.96	12	ePn	Pn	22 02 37.8	+2.7
ANM	Nome	12.96	12	eP	Pn	22 02 37.8	+2.7
MCK	McKinley	16.71	37	eP	P	22 03 25.5	-0.7
	32nm,1.0s						
MCK	McKinley	16.71	37	eP	P	22 03 25.5	-0.7
MCK				pmax	pmax		
	comp=Z,32nm,1.0s						
WRH	Wood River Hil	17.43	35	ePn	Pn	22 03 33.3	0.0
	comp=Z,16nm,0.8s						
COLA	College	17.75	35	i P	Pn	22 03 36.9	-0.3
HDA	Harding Lake	17.82	37	P	Pn	22 03 38.2	+0.1
	baz=238						
ILAR	Eielson Array	18.03	36	P	Pn	22 03 38.9	-1.8
	comp=Z,0.6nm,0.3s,baz=236,slow=11,SNR=35						
ILAR				PcP	PcP	22 08 11.4	-1.7
	comp=Z,0.1nm,0.3s,baz=262,slow=3.5,SNR=5.6						
ILAR				LR	LR	22 11 18.6	
	comp=Z,566nm,18.8s,baz=234,slow=39						
ILB	Eielson Array	18.03	36	ePn	Pn	22 03 39.3	-1.5
	comp=Z,12nm,0.7s						
ILB				ePcP	PcP	22 08 11.4	-1.7
POKR	Poker Plat Res	18.03	34	P	P	22 03 40.8	0.0
	baz=235						
RIDG	Independent Ri	18.29	40	eP	Pn	22 03 43.9	0.0
	comp=Z,13nm,0.8s						
PEA0B	Petropavlovsk-	18.53	285	eP	Pn	22 03 47.7	+0.8
	comp=Z,16nm,0.9s						
PEA1	Petropavlovsk-	18.53	285	eP	Pn	22 03 47.6	+0.7
PETK	Petropavlovsk-	18.53	285	P	Pn	22 03 47.6	+0.7
	comp=Z,0.6nm,0.3s,baz=86,slow=14,SNR=18						
BILL	Bilibino	19.22	335	ceP	Pn	22 03 55.9	+0.9
BILL				eS	Sn	22 07 31.4	+2.1
BILL				pmax	pmax		
	comp=Z,45nm,0.8s						
BILL				MLR	MLR		
	comp=Z,337nm,16.0s						
BCPM	Bancas Point	19.44	53	eP	Pn	22 03 58.4	+0.7
	comp=Z,64nm,0.6s						
EGAK	Eagle	20.19	39	eP	P	22 04 04.6	+0.3
	comp=Z,29nm,0.8s						
SKAG	Skagway	21.55	56	eP	P	22 04 20.7	+1.8
	comp=Z,95nm,0.8s						
SEY	Seymchan	21.81	314	P	P	22 04 23.6	+1.8
	comp=Z,13nm,0.7s,baz=112,slow=9.3,SNR=25						
MA2	Magadan	22.11	305	P	P	22 04 25.4	+0.4
	comp=Z,13nm,0.8s,baz=90,slow=19,SNR=4.1						
MA2				LR	LR	22 12 17.2	
	comp=Z,270nm,21.6s,baz=104,slow=35						
EPYK	Eagle Plains	22.52	37	eP	P	22 04 28.9	-0.5
	comp=Z,18nm,0.6s						
EPYK	Eagle Plains	22.52	37	P	P	22 04 28.4	-1.0
	baz=248						
DLBC	Dease Lake	24.29	58	P	P	22 04 48.8	+2.1
	comp=Z,48nm,0.6s,baz=277,slow=8.0,SNR=103						
INK	Inuvik	24.40	34	P	P	22 04 47.6	+0.1
	comp=Z,20nm,0.6s,baz=237,slow=8.0,SNR=59						
INK				PcP	PcP	22 08 25.7	+0.4
	comp=Z,4.2nm,0.8s,baz=233,slow=2.3,SNR=4.7						
INK				LR	LR	22 15 36.8	
	comp=Z,572nm,18.3s,baz=230,slow=40						
INK	Inuvik	24.40	34	eP	P	22 04 47.5	0.0
	comp=Z,18nm,0.6s						
INK				ePcP	PcP	22 08 26.2	+1.0
INK				eScS	ScS	22 15 36.8	-10
INK	Inuvik	24.40	34	eP	P	22 04 47.5	0.0
INK				e		22 08 26.3	
INK				pmax	pmax		
	comp=Z,18nm,0.6s						
BBB	Bella Bella	26.48	72	P	P	22 05 08.2	+1.6
	comp=Z,7.1nm,0.6s,baz=316,slow=8.4,SNR=4.4						
YUK	Yuzh-Kuril'sk	29.11	271	i P	P	22 05 30.9	+0.9
A04D	Lummi Island	30.96	76	P	P	22 05 46.1	-0.2
	baz=295						
D03D	Eldon	31.25	79	P	P	22 05 51.0	+2.0
	baz=297						
B05A	Bryant	31.52	77	P	P	22 05 52.7	+1.4
	baz=296						
YKA	Yellowknife Ar	31.53	48	P	P	22 05 51.9	+0.7
	comp=Z,4.9nm,0.5s,baz=272,slow=7.8,SNR=19						
ERM	Erimo	31.86	270	eP	P	22 05 55.6	+1.3
	comp=Z,12nm,1.1s						
ERM	Erimo	31.86	270	ceP	P	22 05 54.1	-0.3
ERM				pmax	pmax		
	comp=Z,31nm,1.7s						
E04D	Cinebar	32.02	80	P	P	22 05 57.6	+1.9
	baz=298						
TIXI	Tiksi	32.24	329	P	P	22 05 56.8	-0.6
	comp=Z,0.6nm,0.2s,baz=101,slow=8.1,SNR=2.3						
TIXI				PcP	PcP	22 08 44.7	+0.1
	comp=Z,9.7nm,0.8s,baz=6.1,slow=0.7,SNR=16						
TIXI	Tiksi	32.24	329	i P	P	22 05 56.3	-1.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YAK	Yakutsk	32.27	311	i P	P	22 05 58.6	+0.9
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
I02D	Swisshome	32.45	85	P	P	22 06 00.6	+1.1
	baz=301						
I04A	Tendick Farm,	33.50	84	P	P	22 06 09.7	+0.9
	baz=302						
L02E	Cave Junction	33.66	88	P	P	22 06 10.7	+0.6
	baz=304						
I05D	Terrebonne, OR	33.87	83	P	P	22 06 12.8	+0.8
	baz=301						
HAWA	Hanford	33.94	78	eP	P	22 06 13.9	+1.5
	comp=Z,12nm,0.8s						
J04D	Umpqua Nationa	33.98	85	P	P	22 06 14.3	+1.2
	baz=303						
TEY	Ternei	34.28	279	⇑iP	P	22 06 15.0	-0.4
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
L04D	Klamath Falls	34.42	87	P	P	22 06 18.1	+1.3
	baz=304						
J05D	Fort Rock, OR	34.49	84	P	P	22 06 18.1	+0.6
	baz=303						
NEW	Newport	34.50	74	P	P	22 06 17.7	+0.3
	baz=297,SNR=12						
G08A	Pilot Rock	34.83	80	eP	P	22 06 19.0	-1.3
	comp=Z,3.6nm,0.7s						
N02D	Trinity Center	34.88	89	P	P	22 06 21.9	+1.2
	baz=305						
M04C	Macdoel	34.95	87	P	P	22 06 22.8	+1.4
	baz=304						
I07A	Izee	35.13	82	eP	P	22 06 22.7	-0.2
	comp=Z,6.3nm,0.9s						
O02D	Mt. Diablo Mer	35.30	90	P	P	22 06 25.6	+1.2
	baz=306						
O03E	Paynes Creek	35.84	89	P	P	22 06 29.7	+0.8
	baz=306						
H11N2	WAKE ISLAND Hy	36.34	215	T	T	22 45 04.2	
	baz=21,slow=76,SNR=51						
H11N3	WAKE ISLAND Hy	36.34	215	T	T	22 45 03.0	
	baz=21,slow=76,SNR=55						
H11N1	WAKE ISLAND Hy	36.35	215	T	T	22 45 04.4	
	baz=21,slow=76,SNR=46						
MSO	Missoula	37.08	75	eP	P	22 06 40.1	+0.5
	comp=Z,8.3nm,1.0s						
MSO				ePcP	PcP	22 08 59.8	+0.6
MSO	Missoula	37.08	75	P	P	22 06 39.9	+0.4
	baz=300,SNR=6.2						
USRK	Ussuriysk Ar.	37.52	281	P	P	22 06 41.9	-1.3
	comp=Z,1.8nm,0.7s,baz=66,slow=13,SNR=4.8						
USRK				PcP	PcP	22 09 00.8	+0.4
	comp=Z,2.5nm,0.7s,baz=72,slow=4.7,SNR=5.1						
H11S1	WAKE ISLAND Hy	37.53	215	T	T	22 46 41.8	
	baz=22,slow=76,SNR=154						
H11S2	WAKE ISLAND Hy	37.55	215	T	T	22 46 35.1	
	baz=22,slow=76,SNR=137						
H11S3	WAKE ISLAND Hy	37.55	215	T	T	22 46 37.1	
	baz=22,slow=76,SNR=47						
PNTR	Pine Nut	37.92	89	eP	P	22 06 46.0	-0.9
	comp=Z,19nm,0.8s						
PNTR				ePcP	PcP	22 09 03.1	+1.0
MJAR	Matsushiro Arr	38.22	266	P	P	22 06 48.7	-0.5
	comp=Z,7.9nm,0.7s,baz=47,slow=6.4,SNR=28						
MJAR				PcP	PcP	22 09 02.9	+0.1
	comp=Z,0.8nm,0.4s,baz=63,slow=4.0,SNR=4.2						
MAJO	Matsushiro	38.23	266	eP	P	22 06 48.9	-0.3
	comp=Z,27nm,0.9s						
MAJO				ePcP	PcP	22 09 02.9	+0.1
MAJO	Matsushiro	38.23	266	eP	P	22 06 48.9	-0.3
MAJO				e		22 09 02.9	
MAJO				pmax	pmax		
	comp=Z,27nm,0.9s						
MAT	Matsushiro	38.23	266	P	P	22 06 49.8	+0.6
MJB9	Matsu-Tunnel	38.23	266	eP	P	22 06 48.9	-0.3
	comp=Z,26nm,0.9s						
HLID	Hailey	38.51	79	P	P	22 06 52.0	+0.2
	baz=303						
EGMT	Eagleton	38.94	71	P	P	22 06 55.8	+0.6
	baz=300						
BOZ	Bozeman (W)	39.09	75	P	P	22 06 56.8	+0.3
	baz=302						
NVAR	Mina Array Bea	39.12	89	P	P	22 06 58.2	+1.2
	comp=Z,6.0nm,0.8s,baz=295,slow=8.5,SNR=24						
NVAR				PcP	PcP	22 09 06.4	+0.6
	comp=Z,2.0nm,0.7s,baz=309,slow=2.0,SNR=6.4						
NVAR				ScP	ScP	22 12 51.2	+0.9
	comp=Z,1.5nm,0.8s,baz=280,slow=3.8,SNR=8.6						
ELK	Elko	39.61	84	eP	P	22 07 01.8	+0.8
	comp=Z,5.0nm,0.8s						
ELK	Elko	39.61	84	eP	P	22 07 01.8	+0.8
ELK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FFC	Flin Flon	40.12	58	eP	P	22 07 05.3	+0.5
	comp=Z,146nm,0.6s						
FFC	Flin Flon	40.12	58	i P	P	22 07 05.8	+1.0
GCMT	Greycliff	40.15	73	eP	P	22 07 06.5	+1.2
GCMT				ePcP	PcP	22 09 10.0	+1.1
CWC	Cottonwood Cre	40.51	91	P	P	22 07 09.6	+1.1
	baz=310						
RLMT	Red Lodge	40.75	74	P	P	22 07 11.2	+0.8
	baz=303,SNR=13						
ISA	Isabella, Lake	40.77	92	P	P	22 07 10.9	+0.4
	baz=311						
R11A	Troy Canyon, C	40.85	87	P	P	22 07 11.6	+0.4
	baz=308,SNR=14						
MPMC	Manual Prospec	41.12	91	P	P	22 07 14.7	+1.1
	baz=310						
FURC	Furnace Creek,	41.25	90	P	P	22 07 15.2	+0.9
	baz=310						
TPNV	Topopah Spring	41.32	89	P	P	22 07 16.1	+1.0
	baz=310,SNR=12						
HWUT	Hardware Ranch	41.35	80	eP	P	22 07 15.7	+0.4
	comp=Z,5.3nm,1.1s						
HWUT				ePcP	PcP	22 09 13.8	+0.9
DUG	Dugway, Tooele	41.43	83	P	P	22 07 16.8	+0.8
	baz=307,SNR=7.2						
LAO	LASA Array	41.69	70	P	P	22 07 18.8	+0.9
	baz=302,SNR=5.4						
BW06	Boulder Array	41.89	77	P	P	22 07 20.2	+0.3
	baz=305,SNR=17						
PDAR	Pinedale Array	41.89	77	P	P	22 07 20.4	+0.5
	comp=Z,6.9nm,0.8s,baz=309,slow=4.7,SNR=50						

PDAR				ScP	ScP	22 13 00.9	-0.2
	comp=Z,0.8nm,0.9s,baz=270,slow=1.3,SNR=4.3						
DGMT	Dagmar	41.91	67	P	P	22 07 20.2	+0.5
	baz=301						
SHOC	Shoshone, Teco	41.98	90	P	P	22 07 20.9	+0.6
	baz=311						
GSC	Goldstone, Bar	42.04	91	P	P	22 07 21.6	+0.6
	baz=311,SNR=11						
BFSC	Mount Baldy Ra	42.22	93	P	P	22 07 23.1	+0.7
	baz=312						
TULEG	Thule	42.90	20	*e*P	P	22 07 27.6	+0.4
	comp=Z,17nm,0.7s						
GMRC	Granite Mounta	43.09	91	P	P	22 07 29.8	+0.4
	baz=312,SNR=5.4						
PFO	Pinyon Flats O	43.37	93	P	P	22 07 32.1	+0.4
	baz=312						
BELC	Belle Mtn. Jos	43.40	92	P	P	22 07 32.2	+0.2
	baz=312						
K22A	Casper	43.78	75	P	P	22 07 34.9	-0.1
	baz=306						
IRM	Iron Mountain	43.82	91	P	P	22 07 35.8	+0.5
	baz=312						
MONP2	Monument Peak	43.88	94	P	P	22 07 36.5	+0.5
	baz=313						
BC3	Big Chuckawall	43.97	92	P	P	22 07 36.3	-0.2
	baz=312						
KSRS	Korea Array	43.99	275	P	P	22 07 36.6	+0.2
	comp=Z,12nm,0.8s,baz=50,slow=7.8,SNR=16						
KS15	Wonju Array Si	44.02	275	*e*P	P	22 07 36.6	-0.1
	comp=Z,25nm,1.1s						
SWSC	Sam W. Stewart	44.23	93	P	P	22 07 39.0	+0.5
	baz=313						
O20A	White River Ci	44.25	79	P	P	22 07 39.0	+0.2
	baz=308,SNR=7.5						
PDMCI	Parker Dam,Lak	44.34	90	P	P	22 07 39.7	+0.3
	baz=312						
RSSD	Black Hills	44.40	72	*e*P	P	22 07 40.3	+0.3
	comp=Z,6.7nm,0.8s						
RSSD	Black Hills	44.40	72	*e*P	P	22 07 40.3	+0.3
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RSSD	Black Hills	44.40	72	P	P	22 07 39.9	-0.1
	baz=305						
Y12C	Blythe	44.48	91	P	P	22 07 41.0	+0.5
	baz=312						
GLA	Glamis	44.76	92	P	P	22 07 43.4	+0.6
	baz=313						
MDND	Maddock	44.84	65	P	P	22 07 43.8	+0.5
	baz=304						
JNU	Nakatsue	45.00	268	*e*P	P	22 07 44.6	-0.1
	comp=Z,14nm,0.9s						
TJN	Taejon	45.02	275*d*	*i*P	P	22 07 45.0	+0.3
N23A	Red Feather La	45.17	77	P	P	22 07 46.7	+0.4
	baz=308						
WUAZ	Wupatki	45.25	87	P	P	22 07 47.3	+0.5
	baz=311,SNR=8.8						
ULM	Lac du Bonnet	45.57	61	P	P	22 07 49.2	+0.2
	comp=Z,9.1nm,0.9s,baz=311,slow=7.7,SNR=8.1						
MVCO	Mesa Verde	45.92	83	*e*P	P	22 07 52.8	+0.6
	comp=Z,4.6nm,0.6s						
MVCO	Mesa Verde	45.92	83	P	P	22 07 52.5	+0.3
	baz=310						
W18A	Petrified Fore	46.52	86	P	P	22 07 57.7	+0.8
	baz=311						
S22A	4UR Ranch, Cre	46.60	81	P	P	22 07 58.2	+0.6
	baz=310						
AGMN	Agassiz Nation	46.67	63	P	P	22 07 57.5	-0.1
	baz=305,SNR=6.1						
214A	Organ Pipe Nat	46.75	92	P	P	22 07 59.0	+0.5
	baz=314						
SUSD	Miller	47.17	69	P	P	22 08 01.4	-0.1
	baz=306						
SDCO	Great Sand Dun	47.41	80	P	P	22 08 03.9	0.0
	baz=310						
OGNE	Ogallala	47.48	75	P	P	22 08 04.7	+0.5
	baz=308						
KSCO	Kaye Shedlock’	48.34	77	P	P	22 08 11.2	+0.3
	baz=310						
T25A	Trinidad	48.46	80	P	P	22 08 12.5	+0.6
	baz=310,SNR=6.3						
ANMO	Albuquerque	48.65	84	P	P	22 08 13.3	-0.1
	comp=Z,0.7nm,0.4s,baz=292,slow=7.9,SNR=4.9						
ANMO				PcP	PcP	22 09 38.8	+0.6
	comp=Z,1.7nm,0.7s,baz=276,slow=3.2,SNR=4.4						
ANMO	Albuquerque	48.65	84*c*	*e*P	P	22 08 12.1	-1.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ANMO	Albuquerque	48.65	84	P	P	22 08 13.6	+0.2
	baz=312						
ECSD	EROS Data Cent	48.94	68	P	P	22 08 14.6	-0.7
	baz=308,SNR=12						
EYMN	Ely	49.25	61	P	P	22 08 17.1	-0.5
	baz=307,SNR=12						
TLY	Talaya	49.33	305	*e*P	P	22 08 18.8	+0.6
	comp=Z,7.5nm,0.9s						
TLY	Talaya	49.33	305*d*	*i*P	P	22 08 18.7	+0.6
TLY				pmax	pmax		
	comp=Z,18nm,0.8s						
BJI	Beijing	49.47	286	*e*P	P	22 08 19.3	0.0
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BGNE	Belgrade	49.49	72	P	P	22 08 19.6	0.0
	baz=309						
ULN	Ulaanbaatar	49.82	299	*e*P	P	22 08 22.3	+0.2
	comp=Z,4.6nm,0.9s						
ULN	Ulaanbaatar	49.82	299*c*	*e*P	P	22 08 22.2	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
E38A	The Farm, Brul	50.03	62	P	P	22 08 22.9	-0.6
	baz=308,SNR=5.2						
SPMN	Marine on St.	50.18	65	P	P	22 08 24.3	-0.4
	baz=308						
SONM	Songino Array	50.19	300	P	P	22 08 24.9	0.0
	comp=Z,2.0nm,0.6s,baz=50,slow=7.5,SNR=15						
SONM				PcP	PcP	22 09 43.4	-0.2
	comp=Z,2.6nm,0.7s,baz=66,slow=4.0,SNR=7.5						
SONM				ScP	ScP	22 13 35.9	+0.4
	comp=Z,0.6nm,0.7s,baz=46,slow=4.2,SNR=3.1						
CBKS	Cedar Bluff	50.20	75	P	P	22 08 25.1	+0.1
	baz=310						
ZAK	Zakamensk	50.29	304	*e*P	P	22 08 25.7	+0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
DAG	Danmarks Havn	50.30	8⇑	*i*P	P	22 08 24.5	-0.6
DAG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DAG	Danmarks Havn	50.30	8⇑	*i*P	P	22 08 24.5	-0.6
	comp=Z,9.2nm,0.7s						
C40A	Isle Royale Na	50.53	60	P	P	22 08 26.9	-0.3
	baz=308,SNR=5.0						
G39A	Holcombe	51.05	64	P	P	22 08 30.6	-0.7
	baz=308						
D41A	Chassel	51.37	60	P	P	22 08 33.6	0.0
	baz=308						
SUMG	Summit	51.49	16	*e*P	P	22 08 33.6	-1.0
	comp=Z,19nm,1.1s						
SUMG	Summit	51.49	16⇑	*i*P	P	22 08 34.9	+0.3
SUMG	Summit	51.49	16⇑	*i*P	P	22 08 34.9	+0.3
MNTX	Cornudas Mount	51.51	86	*e*P	P	22 08 34.9	0.0
	comp=Z,4.2nm,0.8s						
MNTX	Cornudas Mount	51.51	86	P	P	22 08 35.3	+0.4
	baz=314,SNR=8.4						
MSTX	Muleshoe	51.56	82	P	P	22 08 35.1	-0.2
	baz=313						
G40A	Rib Lake	51.60	63	P	P	22 08 34.9	-0.4
	baz=309,SNR=8.9						
HHC	Hu-ho-hao-te	51.66	290	*e*P	P	22 08 36.8	+0.8
HHC				PP	PP	22 10 31.9	-1.6
HHC				S	S	22 15 47.1	-6.8
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,79nm,5.6s						
HHC				LR	LR		
	comp=Z,220nm,16.1s						
KSU1	Kansas State U	51.87	73	P	P	22 08 36.5	-1.0
	baz=311						
SCIA	State Center	52.03	68	P	P	22 08 38.4	-0.3
	baz=310						
E43A	Lone Tree Farm	52.64	60	P	P	22 08 42.9	-0.1
	baz=309,SNR=16						
E44A	Grand Marais A	53.06	59	P	P	22 08 46.5	+0.3
	baz=310						
JFWS	Jewell Farm	53.07	65	P	P	22 08 44.7	-1.6
	baz=310						
L40A	Anamosa	53.07	67	P	P	22 08 45.6	-0.7
	baz=310,SNR=9.5						
NJ2	Nanjing	53.14	277⇓	*i*P	P	22 08 46.8	-0.1
NJ2				pmax	pmax		
	comp=Z,31nm,0.8s						
I42A	Draeger Farm,	53.18	64	P	P	22 08 46.7	-0.4
	baz=310,SNR=11						
TIY	Taiyuan	53.20	286	*e*P	P	22 08 48.0	+0.6
TIY				pmax	pmax		
	comp=Z,15nm,0.9s						
H43A	Windswept, Lux	53.44	62	P	P	22 08 48.6	-0.4
	baz=310,SNR=6.1						
WMOK	Wichita Mounta	53.47	78	P	P	22 08 49.4	0.0
	baz=313,SNR=6.8						
N40A	Mertquake, Sal	53.63	68	P	P	22 08 49.7	-0.7
	baz=311						
F45A	CMU Biological	53.87	60	P	P	22 08 52.1	0.0
	baz=310						
D46A	Sault St. Mari	53.88	58	P	P	22 08 52.1	-0.1
	baz=310,SNR=5.4						
L42A	Oliver, Polo	53.99	66	P	P	22 08 51.8	-1.2
	baz=311						
E46A	Sault Ste Mari	54.07	59	P	P	22 08 53.8	+0.2
	baz=310,SNR=15						
N41A	Harden Midland	54.16	68	P	P	22 08 53.7	-0.6
	baz=311,SNR=5.6						
G45A	Suttons Bay	54.22	61	P	P	22 08 53.8	-0.8
	baz=311						
D47A	Chapleau	54.26	57	P	P	22 08 54.8	-0.1
	baz=311,SNR=8.1						
K43A	Burlington	54.28	64	P	P	22 08 54.3	-0.8
	baz=311						
ABTX	Abilene, Hawle	54.39	81	P	P	22 08 55.9	-0.2
	baz=314						
G46A	Petoskey	54.46	60	P	P	22 08 56.4	0.0
	baz=311						
TUL1	Leonard	54.47	75	P	P	22 08 56.2	-0.5
	baz=313						
E47A	Iron Bridge	54.56	58	P	P	22 08 56.8	-0.3
	baz=311,SNR=7.4						
D48A	Paudash Townsh	54.85	57	P	P	22 08 59.0	-0.2
	baz=311,SNR=17						
L44A	Lake County Fo	54.86	65	P	P	22 08 58.6	-0.7
	baz=311						
GLMI	Grayling	54.92	60	P	P	22 08 59.0	-0.7
	baz=311						
D49A	Beulah Townshi	55.02	56	P	P	22 09 00.5	0.0
	baz=311,SNR=18						
I46A	Reed City	55.05	62	P	P	22 09 00.6	-0.1
	baz=311						
G47A	Hillman	55.09	60	P	P	22 09 00.9	0.0
	baz=311						
E48A	Lockeyer	55.12	57	P	P	22 09 01.0	-0.2
	baz=311,SNR=8.3						
HDIL	Hopedale	55.15	67	P	P	22 09 00.7	-0.7
	baz=312,SNR=5.9						
H47A	Mio	55.28	60	P	P	22 09 01.9	-0.4
	baz=311						
M44A	Midewin, Midew	55.31	65	P	P	22 09 01.6	-0.9
	baz=312						
F48A	Evansville	55.31	58	P	P	22 09 02.5	0.0
	baz=311						
I47A	Gladwin	55.51	61	P	P	22 09 03.5	-0.5
	baz=312						
P43A	Skaggs, Pawnee	55.63	68	P	P	22 09 04.2	-0.7
	baz=312,SNR=6.2						
F49A	Sandfield	55.66	58	P	P	22 09 05.1	0.0
	baz=312,SNR=8.3						
K46A	Dorr	55.70	63	P	P	22 09 04.1	-1.2
	baz=312						
CCM	Cathedral Cave	55.71	70	*e*P	P	22 09 04.3	-1.2
	comp=Z,7.0nm,0.8s						
CCM	Cathedral Cave	55.71	70	*e*P	P	22 09 04.3	-1.2
CCM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CCM	Cathedral Cave	55.71	70	P	P	22 09 04.1	-1.3
	baz=313						
JCT	Junction City	55.78	83	*e*P	P	22 09 04.8	-1.3
	comp=Z,6.2nm,0.8s						
JCT				*e*PcP	PcP	22 10 05.5	+0.6
JCT	Junction City	55.78	83	*e*P	P	22 09 04.9	-1.3
JCT				*e*		22 10 05.5	
JCT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JCT	Junction City	55.78	83	P	P	22 09 05.3	-0.9
	baz=315						
I48A	Sherman Twp	55.83	60	P	P	22 09 05.8	-0.5
	baz=312						
J47A	Sunmer	55.86	62	P	P	22 09 05.9	-0.6
	baz=312						
L46A	Eue Claire	55.87	64	P	P	22 09 05.3	-1.2
	baz=312						
E50A	Wahnapitae	55.90	57	P	P	22 09 06.8	+0.1
	baz=312,SNR=8.6						
U40A	Yellville	55.92	73	P	P	22 09 05.6	-1.4
	baz=313,SNR=7.6						
LSQQ	Lebel-sur-Quev	56.02	52	P	P	22 09 07.0	-0.6
	baz=312						
K47A	Vermontville	56.14	62	P	P	22 09 07.9	-0.6
	baz=312,SNR=5.5						
D51A	Lot 18 Range I	56.15	55	P	P	22 09 08.3	-0.2
	baz=312						
W39A	Magazine	56.16	75	P	P	22 09 08.2	-0.5
	baz=313,SNR=7.5						
WHTX	Lake Whitney,	56.16	80	P	P	22 09 08.7	-0.1
	baz=314						
TOBO	Tobermory, Bru	56.29	58	P	P	22 09 09.8	+0.3
	baz=312,SNR=14						
E51A	G1948 Merrick	56.46	56	P	P	22 09 10.7	0.0
	baz=312,SNR=22						
I49A	Point Hope	56.46	60	P	P	22 09 10.8	0.0
	baz=312						
L47A	Sherwood	56.49	63	P	P	22 09 10.2	-0.9
	baz=312						
SFIN	Lafayette	56.52	66	P	P	22 09 10.9	-0.3
	baz=313,SNR=6.2						
K48A	Perry	56.53	62	P	P	22 09 11.0	-0.3
	baz=312						
SCHQ	Schefferville	56.65	42	P	P	22 09 12.1	+0.1
	comp=Z,20nm,0.8s,baz=322,slow=8.6,SNR=16						
SCHQ				LR	LR	22 34 51.0	
	comp=Z,353nm,19.1s,baz=280,slow=37						
ZAA0	Zalesovo Array	56.65	317	*e*P	P	22 09 12.1	+0.2
	comp=Z,2.8nm,0.7s						
ZAA0				*e*PcP	PcP	22 10 08.3	+0.6
ZALV	Zalesovo Beam	56.65	317	P	P	22 09 11.2	-0.7
	comp=Z,3.2nm,0.7s,baz=45,slow=6.7,SNR=13						
ZALV				PcP	PcP	22 10 07.8	+0.1
	comp=Z,7.2nm,0.8s,baz=41,slow=4.3,SNR=13						
ZALV				ScP	ScP	22 14 04.7	+1.5
	comp=Z,0.8nm,0.6s,baz=46,slow=6.2,SNR=3.0						
F51A	Arnstein	56.65	57	P	P	22 09 11.8	-0.3
	baz=312,SNR=11						
J49A	Marlette	56.69	61	P	P	22 09 12.3	-0.1
	baz=312,SNR=6.7						
CHGQ	Chibougamau	56.70	50	P	P	22 09 11.7	-0.7
	baz=313,SNR=13						
D52A	ZEK Kipawa Sen	56.71	55	P	P	22 09 12.4	-0.1
	baz=313,SNR=22						
MIAR	Mount Ida	56.73	75	P	P	22 09 12.6	-0.2
	baz=314,SNR=10						
BMRO	Meriville Lake	56.88	59	P	P	22 09 14.3	+0.6
	baz=313,SNR=8.5						
KLBO	Killbear Provi	56.89	57	P	P	22 09 14.0	+0.3
	baz=313,SNR=15						
K49A	Clarkson	56.90	61	P	P	22 09 13.8	-0.1
	baz=313						
L48A	N Adams	56.94	63	P	P	22 09 13.7	-0.5
	baz=313						
WHN	Wuhan	56.95	279	⇓P	P	22 09 14.3	-0.1
WHN				pmax	pmax		
	comp=Z,93nm,1.4s						
N47A	Urbana	56.96	64	P	P	22 09 13.4	-1.0
	baz=313,SNR=5.7						
P46A	Rosedale	56.97	67	P	P	22 09 13.7	-0.7
	baz=313						
BRCO	Bruce Peninsul	56.99	59	P	P	22 09 14.9	+0.3
	baz=313						
D53A	Lac Vacive, Po	57.00	54	P	P	22 09 14.6	0.0
	baz=313,SNR=18						
BASO	Ashfield	57.03	59	P	P	22 09 15.4	+0.5
	baz=313,SNR=6.9						
F52A	Sundridge	57.05	56	P	P	22 09 15.1	+0.1
	baz=313,SNR=23						
E52A	Mattawa	57.06	56	P	P	22 09 14.9	-0.1
	baz=313,SNR=16						
W41B	Gary Mavity, V	57.08	74	P	P	22 09 14.3	-1.0
	baz=314,SNR=5.2						
M48A	Edgerton	57.09	63	P	P	22 09 14.3	-1.0
	baz=313						
S44A	Carbondale	57.11	69	P	P	22 09 14.4	-1.1
	baz=313,SNR=5.2						
L49A	Milan	57.19	62	P	P	22 09 16.0	+0.1
	baz=313						
X40A	Basin Creek Fa	57.21	75	P	P	22 09 15.6	-0.6
	baz=314						
BWLO	Walkerton	57.24	59	P	P	22 09 16.7	+0.4
	baz=313						
BUKO	Buck Lake	57.25	57	P	P	22 09 16.6	+0.2
	baz=313,SNR=15						
N48A	Decatur	57.35	64	P	P	22 09 15.9	-1.2
	baz=313						
D54A	Lac Fusel, La	57.47	54	P	P	22 09 17.6	-0.3
	baz=313,SNR=7.4						
E53A	Dumoine, Ponti	57.50	55	P	P	22 09 18.1	0.0
	baz=313,SNR=23						
M49A	Liberty Center	57.51	63	P	P	22 09 17.7	-0.5
	baz=313,SNR=5.8						
I51A	Listowel	57.52	59	P	P	22 09 18.6	+0.3
	baz=313						
H52A	Wyevale	57.54	58	P	P	22 09 18.2	-0.2
	baz=313						
833A	Chaparral WMA,	57.56	84	P	P	22 09 18.6	-0.2
	baz=316						
P47A	Martinsville	57.59	66	P	P	22 09 18.0	-0.8
	baz=313,SNR=9.7						
ALGO	Algonquin Park	57.59	56	P	P	22 09 18.7	-0.1
	baz=313,SNR=13						
O48A	Farmland	57.69	65	P	P	22 09 18.4	-1.1
	baz=313,SNR=10.0						
E54A	Lac Daplat, Po	57.70	55	P	P	22 09 19.3	-0.2
	baz=313,SNR=18						
SSLB	Suanglung	57.74	268	*e*P	P	22 09 19.6	-0.6
	comp=Z,9.0nm,0.7s						
L50A	Kingsville	57.76	62	P	P	22 09 19.9	0.0
	baz=313						
N49A	Columbus Grove	57.77	64	P	P	22 09 19.3	-0.8
	baz=313						
XAN	Xi'an	57.78	285	P	P	22 09 19.8	-0.5
XAN				S	S	22 17 08.0	-8.1
XAN				pmax	pmax		
	comp=Z,21nm,0.8s						
XAN				pmax	pmax		
	comp=Z,50nm,4.0s						
XAN				LR	LR		
	comp=Z,160nm,19.5s						
XAN				LR	LR		
	comp=Z,200nm,19.8s						
XAN				LR	LR		
	comp=Z,230nm,20.3s						
SADO	Sadowa	57.84	57	P	P	22 09 20.6	+0.1
	comp=Z,12nm,0.7s,baz=293,slow=5.8,SNR=22						
G53A	Haliburton	57.87	57	P	P	22 09 21.1	+0.4
	baz=313,SNR=5.4						
S46A	Don Dixon Farm	58.00	69	P	P	22 09 20.7	-1.0
	baz=314						
NATX	Nacogdoches	58.02	78	P	P	22 09 22.0	+0.1
	baz=315						
ARA0	ARCESS Array S	58.05	353	*e*P	P	22 09 20.8	-0.9
ARA0				*e*PcP	PcP	22 10 13.1	0.0
ARCES	ARCESS Array B	58.05	353	P	P	22 09 20.8	-0.9
	comp=Z,4.7nm,0.7s,baz=8.9,slow=8.6,SNR=12						
ARCES				PcP	PcP	22 10 13.1	0.0
	comp=Z,2.9nm,0.6s,baz=25,slow=4.4,SNR=11						
PLIO	Pelee Island,	58.06	62	P	P	22 09 21.6	-0.5
	baz=313						
M50A	Fremont	58.07	62	P	P	22 09 21.6	-0.6
	baz=313						
P48A	Milroy	58.08	66	P	P	22 09 21.1	-1.2
	baz=314						
J52A	Paris	58.19	59	P	P	22 09 23.1	+0.1
	baz=314						
O49A	Covington	58.19	64	P	P	22 09 21.8	-1.2
	baz=314						
PEMO	Pembroke	58.19	55	P	P	22 09 22.9	-0.1
	baz=314,SNR=7.3						
BANO	Bancroft	58.30	56	P	P	22 09 24.3	+0.6
	baz=314,SNR=15						
T46A	Princeton	58.34	69	P	P	22 09 23.6	-0.5
	baz=314						
X43A	Marvell	58.35	73	P	P	22 09 23.4	-0.8
	baz=314						
P49A	Miami Univ. Ec	58.43	65	P	P	22 09 23.6	-1.1
	baz=314,SNR=5.2						
WCI	Wyandotte Cave	58.44	67	*e*P	P	22 09 24.5	-0.3
	comp=Z,20nm,0.8s						
WCI	Wyandotte Cave	58.44	67	*e*P	P	22 09 24.5	-0.3
WCI				pmax	pmax		
	comp=Z,20nm,0.8s						
WCI	Wyandotte Cave	58.44	67	P	P	22 09 24.1	-0.7
	baz=314						
N50A	Nevada	58.45	63	P	P	22 09 24.4	-0.4
	baz=314						
DGZ	Jazzator, Alta	58.47	312*d*	*i*P	P	22 09 25.5	+0.5
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
S47A	Hartford	58.54	68	P	P	22 09 24.5	-1.0
	baz=314						
R48A	Northridge Ran	58.56	67	P	P	22 09 24.9	-0.7
	baz=314						
M51A	Elyria	58.59	62	P	P	22 09 25.1	-0.7
	baz=314						
TYNO	Tyneside	58.61	59	P	P	22 09 26.1	+0.1
	baz=314						
O50A	Cable	58.62	64	P	P	22 09 25.2	-0.8
	baz=314						
U46A	Springville	58.65	70	P	P	22 09 25.6	-0.7
	baz=314						
DRWO	Darlington Wes	58.67	58	P	P	22 09 26.5	+0.1
	baz=314						
DRCO	St. Marys Ceme	58.69	58	P	P	22 09 26.9	+0.5
	baz=314,SNR=6.4						
Q49A	Aurora	58.69	66	P	P	22 09 25.1	-1.4
	baz=314						
PLVO	Plevna	58.72	56	P	P	22 09 26.9	+0.3
	baz=314,SNR=7.5						
LVZ	Lovozero	58.74	349*c*	*e*P	P	22 09 26.3	-0.2
LVZ				pmax	pmax		
	comp=Z,45nm,2.5s						
G55A	Calabogie	58.75	55	P	P	22 09 26.9	0.0
	baz=314,SNR=10						
N51A	Ashland	58.77	62	P	P	22 09 26.5	-0.6
	baz=314						
DELO	Deloro Mine	58.80	57	P	P	22 09 27.7	+0.4
	baz=314,SNR=8.3						
WLVO	Wesleyville	58.81	57	P	P	22 09 27.9	+0.6
	baz=314,SNR=6.0						
P50A	Jamestown	58.89	64	P	P	22 09 27.5	-0.4
	baz=314,SNR=8.0						
M52A	Chesterland	58.89	61	P	P	22 09 27.7	-0.2
	baz=314,SNR=5.1						
ACSO	Alum Creek Sta	58.91	63	P	P	22 09 27.4	-0.7
	baz=314						
S48A	Wiedeman Farm,	58.97	67	P	P	22 09 27.9	-0.6
	baz=314,SNR=10.0						
I55A	Frankford	58.98	57	P	P	22 09 28.8	+0.3
	baz=314,SNR=8.6						
H55A	Tweed	59.00	56	P	P	22 09 29.0	+0.4
	baz=314,SNR=11						
WVT	Waverly	59.01	70	*e*P	P	22 09 28.5	-0.3
	comp=Z,6.2nm,0.7s						
WVT	Waverly	59.01	70	*e*P	P	22 09 28.5	-0.3
WVT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WVT	Waverly	59.01	70	P	P	22 09 28.6	-0.3
	baz=314						
R49A	Shelbyville	59.03	66	P	P	22 09 28.2	-0.7
	baz=314						
V46A	Holladay	59.07	70	P	P	22 09 28.7	-0.6
	baz=314,SNR=11						
U47A	Clarksville	59.11	69	P	P	22 09 28.5	-1.0
	baz=314						
J54A	Appleton	59.14	58	P	P	22 09 30.0	+0.4
	baz=314						
T48A	Bowling Green	59.16	68	P	P	22 09 29.3	-0.5
	baz=314,SNR=5.0						
O51A	Pataskala	59.17	63	P	P	22 09 29.3	-0.6
	baz=314						
L53A	Girard	59.20	60	P	P	22 09 30.0	0.0
	baz=314						
N52A	McGinn’s Farm,	59.22	62	P	P	22 09 29.6	-0.6
	baz=314						
OXF	Oxford	59.22	72	P	P	22 09 29.4	-0.8
	baz=315						
ORIO	Orleans, Innes	59.22	55	P	P	22 09 29.9	-0.3
	baz=314						
ERPA	Erie	59.23	60	P	P	22 09 29.9	-0.3
	baz=314						
GTA	Gaotai	59.31	296	*e*P	P	22 09 30.8	-0.2

GTA				pP	pP	22 09 42.3	-1.3
GTA				sP	sP	22 09 46.3	-2.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,54nm,7.1s						
GTA				LR	LR		
	comp=Z,200nm,17.5s						
GTA				LR	LR		
	comp=Z,130nm,18.7s						
GTA				LR	LR		
	comp=Z,210nm,19.4s						
MEDO	Medina	59.31	58	P	P	22 09 30.9	+0.1
	baz=314						
Q50A	Georgetown	59.32	65	P	P	22 09 30.4	-0.5
	baz=314						
S49A	Springfield	59.32	67	P	P	22 09 30.3	-0.6
	baz=314,SNR=6.3						
M53A	WI Miller and	59.33	61	P	P	22 09 31.0	0.0
	baz=314,SNR=7.9						
LZH	Lanzhou	59.34	290	*e*P	P	22 09 31.8	+0.5
LZH				pP	sP	22 09 46.5	-2.5
LZH				sP	pP	22 09 52.6	+8.7
LZH				*e*PP	PP	22 11 44.8	+2.5
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,97nm,8.2s						
LZH				LR	LR		
	comp=Z,320nm,15.9s						
LZH				LR	LR		
	comp=Z,330nm,16.3s						
LZH				LR	LR		
	comp=Z,430nm,18.2s						
P51A	Williamsport	59.39	64	P	P	22 09 30.8	-0.6
	baz=314						
W46A	Michie	59.39	71	P	P	22 09 30.4	-1.0
	baz=315						
V47A	Nunnelly	59.40	70	P	P	22 09 30.7	-0.8
	baz=315						
H56A	Elgin	59.45	56	P	P	22 09 31.8	+0.1
	baz=314						
U48A	Cassie Pea, Po	59.49	69	P	P	22 09 31.9	-0.2
	baz=314,SNR=8.0						
L54A	Sinclairville	59.50	59	P	P	22 09 32.3	+0.2
	baz=314,SNR=9.0						
R50A	Paris	59.51	66	P	P	22 09 31.8	-0.5
	baz=314						
PECO	Prince Edward	59.53	57	P	P	22 09 32.7	+0.5
	baz=314,SNR=7.7						
Q51A	Peebles	59.55	65	P	P	22 09 32.3	-0.2
	baz=314						
J55A	Hilton	59.57	58	P	P	22 09 32.6	0.0
	baz=314						
K54A	Basiliko Farm,	59.57	59	P	P	22 09 33.0	+0.4
	baz=314						
O52A	Adamsville	59.62	63	P	P	22 09 32.5	-0.4
	baz=314,SNR=5.8						
T49A	Edmonton	59.65	68	P	P	22 09 32.9	-0.4
	baz=314						
X46A	Booneville	59.67	72	P	P	22 09 32.6	-0.7
	baz=315						
N53A	Lisbon	59.68	62	P	P	22 09 33.1	-0.2
	baz=314						
W47A	Westpoint	59.76	70	P	P	22 09 33.4	-0.6
	baz=315,SNR=10						
P52A	Corning	59.79	63	P	P	22 09 33.3	-0.9
	baz=314						
K55A	Perry	59.82	58	P	P	22 09 34.0	-0.3
	baz=315						
M54A	Oil Creek Stat	59.83	60	P	P	22 09 34.4	0.0
	baz=315						
O53A	New Philadelph	59.87	62	P	P	22 09 34.2	-0.5
	baz=314						
V48A	Smith Brothers	59.87	70	P	P	22 09 34.1	-0.6
	baz=315						
S50A	Richmond	59.89	66	P	P	22 09 34.4	-0.5
	baz=315,SNR=5.3						
R51A	Hillsboro	59.92	65	P	P	22 09 35.1	0.0
	baz=315,SNR=19						
U49A	Red Boiling Sp	59.93	68	P	P	22 09 34.7	-0.4
	baz=315,SNR=5.3						
LNIG	Linares	59.99	87	*e*P	P	22 09 34.2	-1.6
	comp=Z,3.4nm,0.7s						
L55A	Hinsdale	60.01	59	P	P	22 09 35.8	+0.2
	baz=315						
N54A	Moraine State	60.03	61	P	P	22 09 35.6	-0.2
	baz=315						
T50A	Nancy	60.11	67	P	P	22 09 36.0	-0.4
	baz=315						
X47A	Russelville	60.12	71	P	P	22 09 35.3	-1.2
	baz=315						
Q52A	Bidwell	60.19	64	P	P	22 09 35.8	-1.0
	baz=315						
W48A	Pulaski	60.23	70	P	P	22 09 36.6	-0.5
	baz=315,SNR=8.5						
LONY	Lake Ozonia	60.28	55	P	P	22 09 37.0	-0.4
	baz=315						
P53A	Whipple	60.31	63	P	P	22 09 37.2	-0.5
	baz=315						
M55A	Ridgway	60.33	60	P	P	22 09 38.1	+0.2
	baz=315,SNR=11						
O54A	Avella	60.37	62	P	P	22 09 37.9	-0.2
	baz=315,SNR=6.3						
S51A	Beattyville	60.38	66	P	P	22 09 37.6	-0.6
	baz=315						
V49A	McMinnville	60.38	69	P	P	22 09 37.4	-0.8
	baz=315						
R52A	Catlettsburg	60.42	65	P	P	22 09 37.7	-0.8
	baz=315						
U50A	Jamestown	60.53	68	P	P	22 09 38.5	-0.8
	baz=315						
W49A	Belvidere	60.63	70	P	P	22 09 39.0	-0.9
	baz=315						
M56A	Emporium	60.63	59	P	P	22 09 40.0	+0.1
	baz=315,SNR=6.9						
X48A	Hartselle	60.65	71	P	P	22 09 38.7	-1.3
	baz=315						
T51A	Gray	60.65	67	P	P	22 09 39.5	-0.6
	baz=315,SNR=5.9						
Q53A	Leroy	60.67	64	P	P	22 09 40.0	-0.1
	baz=315,SNR=7.7						
N55A	Marion Center	60.70	60	P	P	22 09 40.2	-0.2
	baz=315,SNR=7.5						
R53A	Hurricane	60.81	64	P	P	22 09 41.1	-0.1
	baz=315,SNR=5.4						
V50A	Pikevile	60.91	68	P	P	22 09 41.1	-0.7
	baz=315,SNR=5.6						
O55A	Ligonier	60.94	61	P	P	22 09 41.6	-0.4
	baz=315						
Y48A	Jasper	60.95	71	P	P	22 09 40.9	-1.2
	baz=315						
Q54A	Coxs Mills	60.97	63	P	P	22 09 42.1	-0.1
	baz=315,SNR=5.7						
N56A	West Decatur	60.97	60	P	P	22 09 42.2	-0.1
	baz=315,SNR=5.8						
X49A	Woodville	61.02	70	P	P	22 09 41.6	-1.0
	baz=315,SNR=7.3						
U51A	La Follette	61.03	67	P	P	22 09 42.1	-0.6
	baz=315						
MCWV	Mont Chateau	61.03	62	P	P	22 09 42.1	-0.5
	baz=315						
T52A	Hallie	61.09	66	P	P	22 09 42.6	-0.5
	baz=315						
W50A	Signal Mountai	61.12	69	P	P	22 09 42.4	-0.9
	baz=315						
P55A	Reedsville	61.15	62	P	P	22 09 43.5	+0.1
	baz=315,SNR=5.9						
S53A	Williamson	61.17	65	P	P	22 09 43.5	-0.1
	baz=315						
TZTN	Tazewell	61.18	67	P	P	22 09 43.4	-0.3
	baz=315						
147A	Livingston	61.19	73	P	P	22 09 43.1	-0.6
	baz=316						
V51A	Loudon	61.24	68	P	P	22 09 43.3	-0.8
	baz=315						
BINY	Binghamton	61.28	57	P	P	22 09 44.8	+0.5
	baz=316,SNR=6.3						
O56A	Blue Knob Stat	61.29	61	P	P	22 09 44.1	-0.3
	baz=315,SNR=6.0						
Q55A	Buckhannon	61.37	63	P	P	22 09 45.1	+0.1
	baz=315,SNR=12						
U52A	Thorn Hill	61.39	67	P	P	22 09 44.8	-0.3
	baz=315						
SSPA	Standing Stone	61.39	60	*e*P	P	22 09 45.0	0.0
	comp=Z,19nm,0.7s						
SSPA	Standing Stone	61.39	60	P	P	22 09 44.9	-0.1
	baz=316						
Y49A	Blount Mountai	61.44	71	P	P	22 09 44.3	-1.1
	baz=316						
T53A	Wise	61.44	66	P	P	22 09 45.7	+0.2
	baz=315						
R54A	Victor	61.45	64	P	P	22 09 45.5	0.0
	baz=315,SNR=12						
X50B	Fort Payne	61.45	70	P	P	22 09 44.7	-0.9
	baz=316,SNR=12						
L58A	Harry Jones Me	61.46	58	P	P	22 09 46.1	+0.6
	baz=316,SNR=6.6						
W51A	Cleveland	61.47	69	P	P	22 09 44.6	-1.0
	baz=316						
N57A	Milroy	61.49	60	P	P	22 09 45.7	0.0
	baz=316						
S54A	Dingess, Beckl	61.54	64	P	P	22 09 46.1	-0.1
	baz=316,SNR=8.3						
KURK	Kurchatov	61.62	317	*e*P	P	22 09 46.1	-0.3
	comp=Z,20nm,0.7s						
KURK	Kurchatov	61.62	317	*ce*P	P	22 09 46.4	+0.1
KURK				pmax	pmax		
	comp=Z,22nm,0.8s						
M58A	Price's Panora	61.62	58	P	P	22 09 46.8	+0.2
	baz=316						
V52A	Sevierville	61.65	67	P	P	22 09 46.2	-0.6
	baz=316						
TKL	Tuckaleechee C	61.68	68	P	P	22 09 46.3	-0.7
	comp=Z,0.5nm,0.6s,baz=227,slow=12,SNR=6.4						
LRAL	Lakeview Retre	61.68	72	P	P	22 09 46.1	-1.0
	baz=316						
P56A	Dayton Farm, R	61.69	61	P	P	22 09 47.3	+0.2
	baz=316,SNR=9.3						
Y50A	Piedmont	61.81	70	P	P	22 09 47.1	-0.9
	baz=316						
Q56A	Snyder Ridge,	61.83	62	P	P	22 09 47.6	-0.4
	baz=316						
O57A	Amberson	61.83	60	P	P	22 09 48.3	+0.3
	baz=316,SNR=8.7						
X51A	Calhoun	61.83	69	P	P	22 09 47.1	-1.0
	baz=316						
Z49A	Columbiana	61.84	71	P	P	22 09 47.1	-1.0
	baz=316,SNR=9.4						
U53A	Fall Branch	61.85	66	P	P	22 09 47.8	-0.4
	baz=316						
R55A	Marlinton	61.86	63	P	P	22 09 48.4	+0.1
	baz=316						
N58A	Sunbury	61.87	59	P	P	22 09 48.4	+0.1
	baz=316						
LBNH	Lisbon	61.88	53	P	P	22 09 48.3	+0.1
	baz=316						
T54A	Tazewell	61.92	65	P	P	22 09 48.9	+0.2
	baz=316,SNR=11						
W52A	Murphy	61.99	68	P	P	22 09 48.5	-0.6
	baz=316						
S55A	Lewisburg	62.01	64	P	P	22 09 49.4	+0.1
	baz=316,SNR=12						
M59A	Waymart	62.04	58	P	P	22 09 49.4	0.0
	baz=316,SNR=5.8						
149A	Jones	62.11	72	P	P	22 09 49.3	-0.7
	baz=316,SNR=6.4						
P57A	Homestead Farm	62.15	61	P	P	22 09 50.1	0.0
	baz=316						
Z50A	Ashland	62.15	71	P	P	22 09 49.3	-1.0
	baz=316						
R56A	Bull Pasture M	62.16	63	P	P	22 09 50.3	-0.1
	baz=316,SNR=6.5						
U54A	Nelsons Funny	62.17	66	P	P	22 09 50.1	-0.3
	baz=316						
Y51A	Rockmart	62.19	70	P	P	22 09 49.5	-1.0
	baz=316						
V53A	Saluda	62.22	67	P	P	22 09 50.5	-0.2
	baz=316						
Q57A	Strasburg	62.25	61	P	P	22 09 50.9	0.0
	baz=316						
O58A	Lewisberry	62.27	60	P	P	22 09 51.0	0.0
	baz=316,SNR=7.7						
N59A	State Game Lan	62.31	58	P	P	22 09 51.6	+0.4
	baz=316,SNR=6.5						
T55A	Pulaski	62.32	64	P	P	22 09 51.7	+0.4
	baz=316,SNR=10						
X52A	Dahlonega	62.36	69	P	P	22 09 51.2	-0.4
	baz=316,SNR=7.9						
249A	Camden	62.37	73	P	P	22 09 51.2	-0.5
	baz=316						
W53A	Cullowhee	62.37	68	P	P	22 09 51.3	-0.6
	baz=316						
PKME	Peaks-Kenny Pk	62.42	51	P	P	22 09 51.8	0.0
	baz=317,SNR=7.2						
BLA	Blacksburg	62.46	64	P	P	22 09 52.6	+0.3
	baz=316,SNR=10						
P58A	Pank, Wackersv	62.53	60	P	P	22 09 52.1	-0.5
	baz=316						
O59A	Robesonia	62.53	59	P	P	22 09 52.9	+0.2
	baz=316,SNR=7.9						
Z51A	Franklin	62.54	70	P	P	22 09 51.6	-1.2
	baz=316						
WMQ	Urumqi	62.55	307	*e*P	P	22 09 53.4	+0.5
WMQ				sP	sP	22 10 18.0	+7.4
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,34nm,3.7s						
WMQ				LR	LR		
	comp=Z,240nm,23.1s						
WMQ				LR	LR		
	comp=Z,200nm,26.9s						
WMQ				LR	LR		
	comp=Z,140nm,24.9s						
150A	Eclectic	62.56	72	P	P	22 09 52.0	-1.0
	baz=316						
U55A	TA2, Sparta	62.62	65	P	P	22 09 53.5	+0.1
	baz=316,SNR=9.7						
V54A	Nebo	62.63	66	P	P	22 09 53.4	0.0
	baz=316						
N60A	Cedar Hill Far	62.70	58	P	P	22 09 54.1	+0.4
	baz=316,SNR=7.0						
Q58A	Fox Den Farm,	62.72	61	P	P	22 09 53.9	0.0
	baz=316,SNR=6.8						
R57A	Stanardsville	62.72	62	P	P	22 09 54.3	+0.3
	baz=316,SNR=9.5						
X53A	Estanollee	62.77	68	P	P	22 09 54.1	-0.3
	baz=316						
Y52A	Lilburn	62.80	69	P	P	22 09 53.8	-0.7
	baz=316						
T56A	Rocky Mt	62.80	64	P	P	22 09 54.4	-0.2
	baz=316,SNR=5.2						
PRGR	Permogore	62.81	341	*e*P	P	22 09 52.2	-1.9
PRGR				pmax	pmax		
	comp=Z,18nm,0.9s						
250A	Grady	62.87	72	P	P	22 09 54.3	-0.7
	baz=316						
S57A	Dark Hollow, R	62.87	63	P	P	22 09 55.2	+0.2
	baz=316,SNR=7.5						
P59A	Jarrettsville	62.90	60	P	P	22 09 55.2	+0.1
	baz=316,SNR=7.1						
O60A	Telford	62.94	59	P	P	22 09 55.3	0.0
	baz=316						
MKAR	Makanchi Array	62.94	312	P	P	22 09 54.4	-0.9
	comp=Z,5.7nm,0.7s,baz=51,slow=6.4,SNR=46						
MKAR				LR	LR	22 37 52.2	
	comp=Z,103nm,20.4s,baz=34,slow=37						
V55A	Taylorsville	62.99	66	P	P	22 09 55.8	0.0
	baz=316						
W54A	Cherokee Point	62.99	67	P	P	22 09 55.6	-0.2
	baz=316						
R58A	Rapidan	63.00	62	P	P	22 09 56.0	+0.2
	baz=316,SNR=7.0						
CD2	Chengdu	63.07	286	P	P	22 09 55.4	-1.0
CD2				pmax	pmax		
	comp=Z,50nm,0.5s						
M61A	Granite Spring	63.07	57	P	P	22 09 56.6	+0.4
	baz=317,SNR=5.1						
Z52A	Williamson	63.08	70	P	P	22 09 55.5	-0.9
	baz=316						
Y53A	Monroe	63.08	69	P	P	22 09 55.7	-0.7
	baz=316,SNR=6.9						
BRVK	Borovoye	63.10	323	*e*P	P	22 09 56.6	+0.3
	comp=Z,19nm,0.7s						
BRVK	Borovoye	63.10	323	⇓*i*P	P	22 09 55.9	-0.3
BRVK				pmax	pmax		
	comp=Z,19nm,0.7s						
U56A	King	63.10	65	P	P	22 09 56.6	+0.1
	baz=316						
PAL	Palisades	63.22	57	P	P	22 09 57.5	+0.3
	baz=317,SNR=6.5						
350A	Dozier	63.23	73	P	P	22 09 56.9	-0.5
	baz=316						
SVE	Sverdlovsk	63.26	331	*e*P	P	22 09 57.8	+0.6
SVE				pmax	pmax		
	comp=Z,26nm,0.8s						
T57A	Hurt	63.26	64	P	P	22 09 57.6	0.0
	baz=316,SNR=8.0						
X54A	Belton	63.27	68	P	P	22 09 57.4	-0.3
	baz=316						
251A	Midway	63.29	71	P	P	22 09 57.1	-0.7
	baz=316						
R58B	Mineral	63.31	62	P	P	22 09 57.8	-0.1
	baz=316						
HRV	Adam Dziewonsk	63.32	55	P	P	22 09 57.8	-0.1
	baz=317						
V56A	Mocksville	63.42	65	P	P	22 09 58.6	0.0
	baz=316,SNR=7.4						
KMSC	Kings Mountain	63.43	66	P	P	22 09 58.5	-0.2
	baz=316,SNR=9.6						
GOGA	Godfrey	63.47	69	*e*P	P	22 09 58.4	-0.6
	comp=Z,14nm,0.8s						
GOGA	Godfrey	63.47	69	*e*P	P	22 09 58.4	-0.6
GOGA				pmax	pmax		
	comp=Z,14nm,0.8s						
GOGA	Godfrey	63.47	69	P	P	22 09 58.0	-1.0
	baz=316,SNR=6.2						
S58A	Poland Farm, P	63.47	62	P	P	22 09 59.1	+0.2
	baz=317						
Z53A	Monticello	63.50	69	P	P	22 09 58.1	-1.1
	baz=316,SNR=7.8						
R59A	King George, V	63.56	61	P	P	22 10 00.0	+0.6
	baz=317						
Y54A	Tignall	63.59	68	P	P	22 09 59.2	-0.6
	baz=316,SNR=6.7						
U57A	Blanch	63.62	64	P	P	22 10 00.1	+0.2
	baz=317,SNR=7.4						
T58A	Grand View Acr	63.69	63	P	P	22 10 00.3	-0.1
	baz=317,SNR=8.3						
X55A	Gracelyn & Ava	63.75	67	P	P	22 10 00.6	-0.2
	baz=317,SNR=6.3						
V57A	Coltrane Farms	63.77	65	P	P	22 10 00.5	-0.4
	baz=317						
S59A	Mechanicsville	63.78	62	P	P	22 10 01.2	+0.2
	baz=317						
153A	Fort Valley	63.80	70	P	P	22 10 00.4	-0.8
	baz=317						
W56A	Indian Trail	63.86	66	P	P	22 10 01.3	-0.2
	baz=317						
Z54A	Sparta	63.95	69	P	P	22 10 01.3	-0.8
	baz=317						
Y55A	Saluda	64.01	68	P	P	22 10 02.2	-0.3
	baz=317,SNR=6.1						
352A	Blakely	64.01	72	P	P	22 10 02.1	-0.5
	baz=317						
X56A	White Oak	64.08	67	P	P	22 10 02.4	-0.6
	baz=317						
U58A	Oxford	64.08	64	P	P	22 10 02.7	-0.3
	baz=317						
S60A	Water View	64.17	61	P	P	22 10 04.0	+0.5
	baz=317						
W57A	Gilead	64.18	65	P	P	22 10 03.5	-0.1
	baz=317						
V58A	Windy Hill, Pi	64.21	64	P	P	22 10 03.7	-0.1
	baz=317,SNR=5.1						
ARU	Arti	64.21	332	*e*P	P	22 10 02.7	-0.8
	comp=Z,30nm,0.6s						
ARU	Arti	64.21	332	*d i*P	P	22 10 03.1	-0.4
ARU						22 10 37.1	
ARU				S	S	22 18 38.5	+1.3
ARU				SS	SS	22 22 41.1	-4.9
ARU				pmax	pmax		
	comp=Z,26nm,0.6s						
T59A	Double "B" Far	64.21	63	P	P	22 10 04.4	+0.6
	baz=317						
154A	Montrose	64.25	70	P	P	22 10 03.1	-1.0
	baz=317						
U59A	Littleton	64.53	63	P	P	22 10 05.9	0.0
	baz=317						
T60A	Surry	64.54	62	P	P	22 10 05.6	-0.3
	baz=317						
X57A	Johnson Farm,	64.62	66	P	P	22 10 06.5	0.0
	baz=317						
W58A	Raeford	64.70	65	P	P	22 10 07.0	0.0
	baz=317						
V59A	Middlesex	64.71	64	P	P	22 10 07.2	+0.1
	baz=317,SNR=7.7						
Z56A	Williston	64.73	68	P	P	22 10 07.5	+0.3
	baz=317						
Y57A	Sumter	64.78	67	P	P	22 10 07.6	0.0
	baz=317						
U60A	Pendleton	64.79	63	P	P	22 10 08.0	+0.4
	baz=317						
Z57A	Bowman	65.13	67	P	P	22 10 09.9	+0.1
	baz=317						
156A	Sylvania	65.15	68	P	P	22 10 10.1	+0.1
	baz=317						
Y58A	Scranton	65.28	66	P	P	22 10 11.0	+0.3
	baz=317						
454A	Quitman	65.33	71	P	P	22 10 10.8	-0.4
	baz=317						
NHSC	New Hope	65.57	67	P	P	22 10 12.9	+0.2
	baz=317						
Z58A	St. Stephen	65.61	67	P	P	22 10 13.3	+0.4
	baz=317						
X60A	Albert Glenn T	65.73	65	P	P	22 10 13.9	+0.2
	baz=318						
FINES	FINESS Array B	65.95	351	P	P	22 10 13.8	-0.8
	comp=Z,7.4nm,0.7s,baz=11,slow=8.2,SNR=18						
FINES				PcP	PcP	22 10 43.9	-1.2
	comp=Z,3.6nm,0.6s,baz=45,slow=4.1,SNR=8.1						
TAOE	Nuku Hiva Isla	66.46	146	*e*LR	LR	22 30 18.5	
	comp=Z,256nm,23.2s						
556A	Lake Butler	66.57	71	P	P	22 10 19.4	+0.3
	baz=318						
NB2	NORSAR Subarra	67.22	358	P	P	22 10 22.5	-0.4
	comp=Z,4.1nm,0.6s,baz=1.7,slow=6.5						
NOA	NORSAR Array B	67.22	358	P	P	22 10 21.9	-0.9
	comp=Z,4.1nm,0.6s,baz=1.9,slow=6.4,SNR=23						
NOA				PcP	PcP	22 10 50.4	-0.1
	comp=Z,1.3nm,0.6s,baz=354,slow=3.2,SNR=4.5						
KMI	Kunming	67.92	283	P	P	22 10 28.8	+0.7
KMI				pP	sP	22 10 43.8	-2.2
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
KMI				LR	LR		
	comp=Z,140nm,16.5s						
KMI				LR	LR		
	comp=Z,190nm,16.5s						
KMI				LR	LR		
	comp=Z,380nm,28.6s						
VSU	Vasula	68.80	350	*e*P	P	22 10 32.0	-0.7
VSU				IAmb	IAmb	22 10 33.8	
	comp=Z,71nm,0.7s						
TKM2	Tokmak 2	68.95	313	P	P	22 10 34.8	+0.5
	SNR=13						
USP	Ospenovka	69.17	314	P	P	22 10 35.8	+0.4
	SNR=21						
ULHL	Ulahol	69.20	313	P	P	22 10 35.9	+0.1
	SNR=8.4						
CHMS	Chumysh	69.27	314	P	P	22 10 36.7	+0.7
	SNR=14						
KBK	Karagaybulak	69.45	314	P	P	22 10 38.0	+0.7
	SNR=16						
AAK	Ala-Archa	69.67	314	*e*P	P	22 10 39.2	+0.6
	comp=Z,20nm,0.7s						
AAK	Ala-Archa	69.67	314	*ce*P	P	22 10 38.8	+0.1
AAK				pmax	pmax		
	comp=Z,25nm,0.8s						
AAK	Ala-Archa	69.67	314	P	P	22 10 39.4	+0.7
	SNR=15						
KZA	Kyzart	69.78	313	P	P	22 10 40.2	+0.5
	SNR=20						
EKS2	Erkin-Say	69.97	314	P	P	22 10 41.0	+0.6
	SNR=27						
UCH	Uchtor	69.99	314	P	P	22 10 41.6	+0.6
	SNR=9.8						
SLVN	Son La	70.05	279	*e*P	P	22 10 41.5	+0.4
	comp=Z,8.7nm,0.9s						
SLIT	Slitere, Latvi	70.06	352	*e*P	P	22 10 39.2	-1.3
SLIT				IAmb	IAmb	22 10 41.3	
	comp=Z,134nm,0.7s						
OBN	Obninsk	70.63	343	⇑*e*P	P	22 10 43.2	-0.8
OBN				*PP	pP	22 10 57.0	+0.1
OBN				*SP	sP	22 10 58.0	-3.9
OBN				pmax	pmax		
	comp=Z,16nm,0.9s						
OBN				MLR	MLR		
	comp=Z,144nm,21.0s						
KSH	Kashi	71.49	311	P	P	22 10 53.3	+3.6
KSH				pP	PcP	22 11 10.8	+1.8
KSH				sP	sP	22 11 16.9	+9.3
KSH				PP	PP	22 13 35.3	+7.2

KSH				S	**S**	**22 20 06.8**	**+1.8**
KSH				pmax	pmax		
	comp=Z,27nm,0.8s						
KSH				pmax	pmax		
	comp=Z,140nm,7.0s						
KSH				LR	LR		
	comp=Z,150nm,11.9s						
KSH				LR	LR		
	comp=Z,240nm,8.0s						
IZAR	**Zarasai**	**71.52**	**349**	*e*P	**P**	**22 10 48.6**	**-0.8**
IZAR				IAmb	IAmb	22 10 50.3	
	comp=Z,6.7nm,0.6s						
IDID	**Didziasalis**	**71.89**	**349**	*e*P	**P**	**22 10 50.5**	**-1.2**
IDID				IAmb	IAmb	22 10 52.5	
	comp=Z,5.3nm,0.9s						
IIGN	**Ignalina**	**71.92**	**349**	*e*P	**P**	**22 10 50.8**	**-1.0**
IIGN				IAmb	IAmb	22 10 52.8	
	comp=Z,8.0nm,0.6s						
PPT	**Papeete**	**71.98**	**158**	LR	LR	22 34 25.0	
	comp=Z,109nm,20.5s,baz=315,slow=29						
PPT2	**Papeete2**	**72.00**	**158**	*e*LR	LR	22 32 45.7	
	comp=Z,132nm,23.0s						
LPSR	**Galich'ya Gora**	**72.57**	**341**	*e*P	**P**	**22 10 54.2**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR	**Storozhevoye**	**73.83**	**340**	*e*P	**P**	**22 11 02.3**	**-0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SHL	**Shillong**	**73.99**	**291**	*e*P	**P**	**22 11 06.0**	**+1.2**
VORD	**Divnogorie**	**74.04**	**340**	*e*P	**P**	**22 11 01.6**	**-2.8**
VORD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CHTO	**Chiang Mai**	**74.98**	**281**	*e*P	**P**	**22 11 10.3**	**-0.1**
	comp=Z,4.3nm,0.8s						
CHTO	**Chiang Mai**	**74.98**	**281**	*e*P	**P**	**22 11 10.3**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.25**	**281**	P	**P**	**22 11 12.4**	**+0.4**
	comp=Z,6.0nm,0.7s,baz=26,slow=6.7,SNR=28						
JIRN	**Jiri**	**75.59**	**296**	*e*P	**P**	**22 11 14.5**	**+0.2**
	comp=Z,130nm,0.8s						
KKN	**Kakani**	**75.99**	**297**	*e*P	**P**	**22 11 16.4**	**0.0**
	comp=Z,29nm,0.7s						
AKASG	**Malin Array Be**	**76.08**	**346**	P	**P**	**22 11 14.7**	**-1.5**
	comp=Z,3.6nm,0.5s,baz=16,slow=5.8,SNR=13						
PKI	**Pulchoki**	**76.09**	**297**	*e*P	**P**	**22 11 16.8**	**-0.3**
	comp=Z,22nm,0.8s						
PKIN	**Phulchoki**	**76.10**	**297**	*e*P	**P**	**22 11 16.6**	**-0.5**
	comp=Z,15nm,0.7s						
GKN	**Gorkha**	**76.18**	**298**	*e*P	**P**	**22 11 17.2**	**-0.2**
	comp=Z,44nm,0.5s						
DMN	**Daman**	**76.23**	**297**	*e*P	**P**	**22 11 17.8**	**0.0**
	comp=Z,36nm,0.8s						
DZM	**Mont Dzumac**	**76.25**	**201**	*e*LR	LR	22 34 56.1	
	comp=Z,234nm,21.6s						
DANN	**Dangsing**	**76.38**	**299**	*e*P	**P**	**22 11 19.0**	**+0.3**
	comp=Z,155nm,0.7s						
CLL	**Collm**	**76.92**	**357**	*e*P	**P**	**22 11 21.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL	**Collm**	**76.92**	**357**	*e*P	**P**	**22 11 21.0**	**0.0**
	comp=Z,5.0nm,0.7s						
CLL				*e*SS	SS	22 26 36.0	+35
KOLN	**Koldanda**	**76.93**	**298**	*e*P	**P**	**22 11 21.3**	**-0.4**
	comp=Z,46nm,0.8s						
BRG	**Berggiesshubel**	**77.32**	**356**	*i* PKP	**P**	**22 11 23.6**	**+0.4**
	comp=Z,7.9nm,0.7s						
BRG	**Berggiesshubel**	**77.32**	**356**	*i* P	**P**	**22 11 23.6**	**+0.4**
BRG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CHVC	**Chvalec**	**77.51**	**355**	*e*P	**P**	**22 11 23.8**	**-0.5**
CHVC				*e*x	x	22 11 34.2	
NIL	**Nilore**	**77.51**	**309**	*e*P	**P**	**22 11 24.9**	**+0.2**
	comp=Z,37nm,0.8s						
NIL	**Nilore**	**77.51**	**309**	*e*P	**P**	**22 11 24.9**	**+0.2**
NIL				pmax	pmax		
	comp=Z,37nm,0.8s						
OSTC	**Ostas**	**77.53**	**355**	*e*P	**P**	**22 11 24.9**	**+0.5**
TBI	**Tubuai**	**77.59**	**159**	*e*LR	LR	22 35 25.2	
	comp=Z,140nm,25.8s						
UPC	**Upice**	**77.59**	**355**	*e*P	**P**	**22 11 25.1**	**+0.3**
UPC	**Upice**	**77.59**	**355**	*e*P	**P**	**22 11 25.1**	**+0.3**
PVCC	**Panska Ves**	**77.64**	**356**	*e*P	**P**	**22 11 25.5**	**+0.5**
PVCC	**Panska Ves**	**77.64**	**356**	*e*P	**P**	**22 11 25.5**	**+0.5**
DPC	**Dobruska-Polom**	**77.73**	**355**	*e*P	**P**	**22 11 26.0**	**+0.4**
DPC	**Dobruska-Polom**	**77.73**	**355**	*e*P	**P**	**22 11 26.0**	**+0.4**
NKC	**Novy Kostel**	**78.01**	**357**	*e*P	**P**	**22 11 27.3**	**+0.2**
NKC				MLR	MLR		
	comp=Z,200nm,17.4s						
NKC	**Novy Kostel**	**78.01**	**357**	*e*P	**P**	**22 11 27.3**	**+0.2**
NKC				AMS	AMS	23 03 50.0	
	comp=Z,200nm,17.4s						
OKC	**Ostrava-Krasne**	**78.12**	**353**	*e*P	**P**	**22 11 28.0**	**+0.3**
OKC	**Ostrava-Krasne**	**78.12**	**353**	*e*P	**P**	**22 11 28.0**	**+0.3**
PRU	**Pruhonice**	**78.18**	**356**	*e*P	**P**	**22 11 28.0**	**0.0**
PRU				MLR	MLR		
	comp=Z,300nm,17.7s						
PRU	**Pruhonice**	**78.18**	**356**	*e*P	**P**	**22 11 28.0**	**0.0**
PRU				AMS	AMS	23 04 00.0	
	comp=Z,300nm,17.7s						
MORC	**Moravsky Berou**	**78.22**	**354**	*e*P	**P**	**22 11 28.0**	**-0.4**
GOPC	**GO Pecny, Ondr**	**78.24**	**356**	*e*P	**P**	**22 11 28.4**	**0.0**
GOPC				MLR	MLR		
	comp=Z,200nm,14.5s						
GOPC	**GO Pecny, Ondr**	**78.24**	**356**	*e*P	**P**	**22 11 28.4**	**0.0**
GOPC				AMS	AMS	23 05 40.0	
	comp=Z,200nm,14.5s						
KOLS	**Kolonicke sedl**	**78.67**	**351**	*e*P	**P**	**22 11 30.7**	**-0.1**
KOLS	**Kolonicke sedl**	**78.67**	**351**	*e*P	**P**	**22 11 30.7**	**-0.1**
LANS	**Liptovska Anna**	**78.71**	**353**	*e*P	**P**	**22 11 32.1**	**+1.1**
GOF	**Gofitskoye**	**78.72**	**336**	⇑*e*P	**P**	**22 11 31.8**	**+0.7**
GOF				pmax	pmax		
	comp=Z,54nm,1.0s						
KBL	**Kabul**	**78.74**	**313**	*e*P	**P**	**22 11 30.5**	**-1.1**
	comp=Z,18nm,0.8s						
KBL	**Kabul**	**78.74**	**313**	*e*P	**P**	**22 11 30.5**	**-1.1**
KBL				pmax	pmax		
	comp=Z,18nm,0.8s						
VRAC	**Vranov**	**78.75**	**354**	⇓*i*P	**P**	**22 11 31.0**	**-0.2**
VRAC	**Vranov**	**78.75**	**354**	*e*P	**P**	**22 11 31.4**	**+0.2**
TREC	**Trest**	**78.83**	**355**	*e*P	**P**	**22 11 31.3**	**-0.3**
TREC				MLR	MLR		
	comp=Z,300nm,15.0s						
TREC	**Trest**	**78.83**	**355**	*e*P	**P**	**22 11 31.3**	**-0.3**
TREC				AMS	AMS	23 05 00.0	
	comp=Z,300nm,15.0s						
KRUC	**Moravsky**	**79.01**	**355**	*e*P	**P**	**22 11 32.6**	**0.0**
KHC	**Kasperske Hory**	**79.08**	**356**	*e*P	**P**	**22 11 33.2**	**+0.2**
KHC				*e*		22 11 42.6	
KHC				MLR	MLR		
	comp=Z,200nm,21.3s						
KHC	**Kasperske Hory**	**79.08**	**356**	*e*P	**P**	**22 11 33.2**	**+0.2**
KHC				*e*pP	**PcP**	**22 11 42.6**	**+1.2**
KHC				AMS	AMS	23 04 50.0	
	comp=Z,200nm,21.3s						
JAVC	**Velka Javorina**	**79.13**	**354**	*e*P	**P**	**22 11 34.5**	**+1.1**
GERES	**GERESS Array B**	**79.36**	**356**	P	**P**	**22 11 34.5**	**-0.1**
	comp=Z,2.5nm,0.6s,baz=15,slow=5.5,SNR=26						
VYHS	**Vyhne**	**79.41**	**353**	*e*P	**P**	**22 11 34.5**	**-0.3**
BURAR	**Bucovina Array**	**79.64**	**348**	⇓*i*P	**P**	**22 11 35.7**	**-0.5**
MODS	**Modra-Piesok**	**79.64**	**354**	*e*P	**P**	**22 11 36.0**	**-0.1**
MODS	**Modra-Piesok**	**79.64**	**354**	*e*P	**P**	**22 11 36.0**	**-0.1**
MILM	**Milestii Mici**	**79.83**	**346**	⇑*i*P	**P**	**22 11 36.3**	**-0.8**
KIV	**Kislovodsk**	**79.84**	**335**	*e*P	**P**	**22 11 37.8**	**+0.5**
	comp=Z,8.3nm,0.8s						
KIV	**Kislovodsk**	**79.84**	**335**	⇑*i*P	**P**	**22 11 38.1**	**+0.8**
KIV	**Kislovodsk**	**79.84**	**335**	*e*P	**P**	**22 11 37.8**	**+0.5**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BFO	**Black Forest**	**79.98**	**360**	*i* P	**P**	**22 11 38.7**	**+0.8**
KBZ	**Khabaz**	**80.00**	**335**	P	**P**	**22 11 38.3**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=76,slow=3.8,SNR=11						
NCK	**Nalchik**	**80.03**	**335**	⇓*i*P	**P**	**22 11 38.9**	**+0.6**
NCK				pmax	pmax		
	comp=Z,21nm,0.7s						
ECH	**Echery**	**80.09**	**1**	*e*P	**P**	**22 11 38.6**	**+0.1**
	comp=Z,6.0nm,1.0s						
ECH	**Echery**	**80.09**	**1**	*e*P	**P**	**22 11 38.6**	**+0.1**
ECH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CONA	**Conrad Observa**	**80.17**	**355**	*i* P	**P**	**22 11 39.7**	**+0.6**
	comp=Z,6.6nm,0.8s						
BIZ	**Bicaz**	**80.19**	**348**	⇓*i*P	**P**	**22 11 39.6**	**+0.5**
ARCR	**ARCALIA**	**80.27**	**349**	⇑*i*P	**P**	**22 11 40.1**	**+0.6**
MOA	**Molln**	**80.33**	**356**	*i* P	**P**	**22 11 40.4**	**+0.6**
	comp=Z,2.4nm,0.7s						
GEYT	**Alibeck**	**80.39**	**322**	P	**P**	**22 11 40.4**	**0.0**
	comp=Z,6.5nm,0.8s,baz=337,slow=5.3,SNR=17						
ZEI	**Tsey**	**80.61**	**334**	*e*P	**P**	**22 11 40.9**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,12nm,0.6s						
AKT	**Akhty**	**80.73**	**331**	*e*P	**P**	**22 11 41.3**	**-0.9**
AKT				*e*		22 11 48.1	
AKT				*e*		22 14 46.1	
AKT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RETA	**Reutte**	**80.80**	**358**	*i* P	**P**	**22 11 43.2**	**+0.8**
	comp=Z,4.7nm,0.8s						
ARSA	**Arzberg**	**80.86**	**355**	*i* P	**P**	**22 11 43.7**	**+1.0**
	comp=Z,5.6nm,0.7s						
WATA	**Walderalm**	**80.93**	**358**	*i* P	**P**	**22 11 43.9**	**+0.7**
	comp=Z,3.3nm,0.6s						
MOTA	**Moosalm**	**80.94**	**358**	*i* P	**P**	**22 11 43.8**	**+0.6**
	comp=Z,3.5nm,0.7s,SNR=6.7						
WTTA	**Wattenberg**	**81.00**	**358**	*i* P	**P**	**22 11 44.6**	**+0.9**
	comp=Z,7.6nm,0.7s						
DAVA	**Damuels**	**81.01**	**359**	*i* P	**P**	**22 11 44.3**	**+0.7**
	comp=Z,3.8nm,0.8s						
SQTA	**Sankt Quirin**	**81.06**	**358**	*i* P	**P**	**22 11 44.7**	**+0.9**
	comp=Z,8.8nm,0.7s,SNR=5.6						
OZUR		**81.06**	**348**	⇑*i*P	**P**	**22 11 44.7**	**+0.9**
KBA	**Koelnbreinsper**	**81.14**	**356**	*e*P	**P**	**22 11 45.6**	**+1.3**
	comp=Z,15nm,0.7s,SNR=8.3						
VRI	**Vrincioaia**	**81.16**	**347**	⇑*i*P	**P**	**22 11 44.1**	**-0.2**
PLOR	**Plostina**	**81.18**	**347**	⇓*i*P	**P**	**22 11 44.9**	**+0.4**
DOPR	**Dopca**	**81.24**	**348**	⇑*i*P	**P**	**22 11 44.2**	**-0.5**
FETA	**Feichten**	**81.27**	**358**	*i* P	**P**	**22 11 45.9**	**+0.9**
	comp=Z,9.6nm,0.8s,SNR=7.3						
SOKA	**Soboth**	**81.46**	**355**	*i* P	**P**	**22 11 46.5**	**+0.5**
	comp=Z,6.7nm,0.8s,SNR=6.3						
ABTA	**Abfaltersbach**	**81.50**	**357**	*i* P	**P**	**22 11 46.6**	**+0.5**
	comp=Z,6.0nm,1.1s						
TLCR		**81.52**	**345**	⇓*i*P	**P**	**22 11 46.4**	**+0.3**
MYKA	**Terra Mystica**	**81.57**	**356**	*i* P	**P**	**22 11 47.2**	**+0.7**
	comp=Z,2.6nm,0.8s						
CFR	**Carcaliu**	**81.63**	**346**	⇑*i*P	**P**	**22 11 46.4**	**-0.3**
MLR	**Muntele Rosu**	**81.63**	**348**	⇑*i*P	**P**	**22 11 46.8**	**-0.2**
OBKA	**Obir**	**81.65**	**356**	*i* P	**P**	**22 11 48.2**	**+1.2**
	comp=Z,5.0nm,0.7s						
AKH	**Akhalkalaki**	**82.00**	**334**	⇑*i*P	**P**	**22 11 50.2**	**+1.2**
BZS	**Buzias**	**82.02**	**351**	⇓*i*P	**P**	**22 11 48.7**	**-0.1**
GZR	**Gura Zlata**	**82.11**	**350**	⇓*i*P	**P**	**22 11 49.0**	**-0.4**
HARR	**Harsova**	**82.14**	**346**	⇑*i*P	**P**	**22 11 49.3**	**-0.1**
TLB	**Topalu**	**82.22**	**346**	⇓*i*P	**P**	**22 11 49.8**	**-0.1**
TIRR	**Tirgusor**	**82.29**	**346**	⇑*i*P	**P**	**22 11 50.6**	**+0.4**
BNI	**Bardonecchia**	**83.25**	**1**	*e*P	**P**	**22 11 56.0**	**+0.6**
	comp=Z,5.8nm,0.8s						
BNI	**Bardonecchia**	**83.25**	**1**	*e*P	**P**	**22 11 56.0**	**+0.6**
BNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZIMR		**83.51**	**348**	⇓*i*P	**P**	**22 11 56.7**	**+0.1**
DIKM	**Dikmen**	**83.76**	**340**	⇑*i*P	**P**	**22 11 58.9**	**+1.0**
PLVB	**Pleven**	**83.88**	**348**	⇑*i*P	**P**	**22 11 58.7**	**+0.3**
VTS	**Vitosha**	**84.80**	**349**	⇑*i*P	**P**	**22 12 03.2**	**-0.2**
PHSR	**Pinarhisar**	**85.19**	**346**	⇑*i*P	**P**	**22 12 06.4**	**+1.3**
PGAV	**Gavieira, Arco**	**85.25**	**12**	*e*LR	LR	22 51 56.4	
	comp=Z,202nm,20.0s						
PDG	**Podgorica**	**85.40**	**352**	⇑*i*P	**P**	**22 12 07.3**	**+1.2**
SKO	**Skopje**	**85.64**	**350**	*i* P	**P**	**22 12 09.2**	**+1.9**
WR1	**Warramunga Arr**	**85.69**	**230**	*e*P	**P**	**22 12 09.2**	**+1.5**
WRA	**Warramunga Arr**	**85.69**	**230**	P	**P**	**22 12 09.2**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=39,slow=5.3,SNR=6.2						
POLO	**Lamas de Olo**	**85.89**	**12**	*e*P	**P**	**22 12 08.8**	**0.0**
	comp=Z,5.4nm,1.7s						
BRTR	**Keskin Array B**	**85.95**	**341**	P	**P**	**22 12 09.4**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=30,slow=2.8,SNR=22						
PVRL	**Vila Real**	**86.00**	**12**	*e*P	**P**	**22 12 08.9**	**-0.3**
	comp=Z,11nm,1.5s						
VAY	**Valandovo**	**86.16**	**349**	*i* P	**P**	**22 12 11.0**	**+1.1**
MVO	**Moncorvo**	**86.20**	**12**	*e*P	**P**	**22 12 10.4**	**+0.2**
	comp=Z,7.7nm,1.0s						
PVIS	**Viseu**	**86.53**	**12**	*e*P	**P**	**22 12 11.8**	**-0.1**
	comp=Z,12nm,0.8s						
OHR	**Ohrid**	**86.56**	**351**	*i* P	**P**	**22 12 11.1**	**-0.9**
MTE	**Manteigas**	**86.89**	**12**	*e*P	**P**	**22 12 13.6**	**0.0**
	comp=Z,12nm,1.2s						
MTE	**Manteigas**	**86.89**	**12**	*e*LR	LR	22 52 50.2	
	comp=Z,126nm,20.0s						
PCAS	**Casmilo, Conde**	**87.10**	**13**	*e*P	**P**	**22 12 14.6**	**0.0**
	comp=Z,12nm,0.8s						
PSI	**Prapat**	**87.40**	**271**	*e*P	**P**	**22 12 15.9**	**-0.6**
	comp=Z,13nm,0.7s						
PSI	**Prapat**	**87.40**	**271**	*e*P	**P**	**22 12 15.9**	**-0.6**
PSI				pmax	pmax		
	comp=Z,13nm,0.7s						
PTOM	**Tomar**	**87.54**	**13**	*e*P	**P**	**22 12 16.6**	**-0.1**
	comp=Z,10nm,0.7s						
PMRV	**Marv??o**	**87.86**	**12**	*e*P	**P**	**22 12 18.8**	**+0.5**
	comp=Z,8.3nm,1.6s						
PMRV	**Marv??o**	**87.86**	**12**	*e*LR	LR	22 53 17.3	
	comp=Z,173nm,20.0s						
ALMR	**Almeirim**	**87.97**	**13**	*e*P	**P**	**22 12 19.1**	**+0.4**
	comp=Z,14nm,0.8s						
HYB	**Hyderabad**	**87.98**	**296**	*i* P	**P**	**22 12 18.0**	**-1.1**
ESDC	**Sonseca Array**	**88.01**	**9**	P	**P**	**22 12 18.4**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=347,slow=4.6,SNR=36						
ESLA	**Sonseca Array**	**88.01**	**9**	*e*P	**P**	**22 12 19.0**	**0.0**
	comp=Z,4.1nm,0.8s						
PMTG	**Montargil**	**88.11**	**13**	*e*P	**P**	**22 12 19.3**	**-0.1**
AS31	**Alice Springs**	**89.09**	**228**	*e*P	**P**	**22 12 23.9**	**-0.2**
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**89.09**	**228**	P	**P**	**22 12 23.6**	**-0.5**
	comp=Z,4.9nm,0.9s,baz=32,slow=4.3,SNR=33						
PCVE	**Castro Verde**	**89.54**	**13**	*e*P	**P**	**22 12 26.3**	**+0.1**
PVAQ	**Vaqueiros**	**89.81**	**13**	*e*LR	LR	22 52 55.6	
	comp=Z,176nm,22.0s						
SDV	**Santo Domingo**	**89.81**	**76**	P	**P**	**22 12 28.1**	**+0.1**
	comp=Z,7.6nm,0.7s,baz=286,slow=3.4,SNR=13						
SDV	**Santo Domingo**	**89.81**	**76**	*e*P	**P**	**22 12 27.3**	**-0.7**
	comp=Z,7.8nm,0.7s						
PMOZ	**Porto Moniz, M**	**92.57**	**21**	*e*LR	LR	22 50 22.7	
	comp=Z,160nm,20.0s						
RPZ	**Rata Peaks**	**96.56**	**192**	LR	LR	22 49 46.2	
	comp=Z,104nm,19.9s,baz=348,slow=31						
RAYN	**Ar Rayn**	**97.98**	**326**	*e*P	**P**	**22 13 04.8**	**-0.4**
	comp=Z,6.2nm,0.8s						
RAYN	**Ar Rayn**	**97.98**	**326**	*e*P	**P**	**22 13 04.8**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TOA1	**Torodi Ar. Sit**	**114.80**	**7**	*e*PKiKP	**PKiKP**	**22 18 08.7**	**-0.9**
TORD	**Torodi Ar. Bea**	**114.81**	**7**	PKP	**PKiKP**	**22 18 08.7**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=339,slow=3.7,SNR=4.0						
VNDA	**Vanda**	**130.36**	**187**	PKP	**PKiKP**	**22 18 38.0**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=63,slow=2.9,SNR=3.9						
VNDA	**Vanda**	**130.36**	**187**	PKIKP	**PKiKP**	**22 18 38.0**	**-0.3**
TSUM	**Tsumeb**	**146.40**	**344**	*e*PKPdf	**PKPbc**	**22 19 10.1**	**+0.2**
MAW	**Mawson**	**149.73**	**218**	PKPbc	**PKPbc**	**22 19 16.9**	**-0.2**
	comp=Z,8.1nm,0.7s,baz=89,slow=1.2,SNR=17						
MAW	**Mawson**	**149.73**	**218**	*e*PKPbc	**PKPbc**	**22 19 17.3**	**+0.2**
WIN	**Windhoek**	**149.77**	**344**	*e*PKPdf	**PKPdf**	**22 19 14.2**	**+0.1**
WIN				*e*PKPbc	**PKPbc**	**22 19 19.3**	**+0.5**
LBTB	**Lobatse**	**149.94**	**327**	*e*PKPbc	**PKiKP**	**22 19 19.7**	**-0.3**
LBTB	**Lobatse**	**149.94**	**327**	*e*PKP2	**PKiKP**	**22 19 19.7**	**-0.3**
BOSA	**Boshof**	**153.36**	**325**	PKPbc	**PKiKP**	**22 19 27.2**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=21,slow=1.0,SNR=4.2						
BOSA				PKPab	**PKPab**	**22 19 38.9**	**-0.2**
	comp=Z,4.5nm,0.6s,baz=48,slow=4.4,SNR=7.5						

KRNET ***15*** *22:25:01.9±0.1, 40°.07N×77°.70E, mb3.3*
SOME ***15*** *22:25:01.1, 40°.07N×77°.82E, h5km*
NNC ***15*** *22:25:04.4±0.9, 40°.23N×77°.83E, h0km, mb4.1, mpv3.8,*
Error ellipse: s-maj=6.1km s-min=5.0km az=172.0
ISC 15 22:25:07.2±1.9**, 40°.27N**±0°.08×**77°.71E**±0°.04**, h10km, n57,**
σ**1§63**/91**, 24C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.74**	**312**	⇑*i*P	**Pn**	**22 25 37.0**	**-0.8**
	baz=16						
NRN				⇑*i*S	**Sg**	**22 26 02.8**	**-0.5**
	baz=16						
KDJ	**Kajisay**	**1.90**	**348**	⇓*i*P	**Pb**	**22 25 40.4**	**-1.7**
	baz=50						
KDJ				⇓*i*S	**Sg**	**22 26 08.8**	**+0.4**
	baz=50						
ULHL	**Ulahol**	**2.27**	**331**	⇑*i*P	**Pn**	**22 25 45.3**	**+0.4**
	baz=34						
ULHL				⇑*i*S	**Sb**	**22 26 16.9**	**+0.5**
	baz=34						
PRZ	**Przheval'sk**	**2.27**	**13**	⇑*e*P	**Pb**	**22 25 45.7**	**-2.7**
	baz=12						
PRZ				⇑*i*S	**Sb**	**22 26 17.5**	**+0.8**
	baz=12						
BOOM	**Boomskoye usch**	**2.59**	**330**	⇑*i*P	**Pn**	**22 25 49.2**	**-0.1**
	baz=32						
BOOM				⇑*i*S	**Sb**	**22 26 24.7**	**-1.0**
	baz=32						
KZA	**Kyzart**	**2.59**	**315**	⇓*i*P	**Pn**	**22 25 49.6**	**+0.1**
	baz=18						
KZA				⇓*i*S	**Sb**	**22 26 24.2**	**-1.8**
	baz=18						
TNSS	**Tian-Shan**	**2.83**	**349**	Pg	**Pb**	**22 25 56.7**	**-1.3**
	57nm,0.3s						
TNSS				Lg	Lg	22 26 37.1	
	48nm,0.5s						
TNSS	**Tian-Shan**	**2.83**	**349**	*e*P	**Pb**	**22 25 56.7**	**-1.3**
	57nm,0.3s						
TNSS				*e*S	**Sg**	**22 26 37.1**	**-0.9**
	48nm,0.5s						
SATY	**Saty**	**2.84**	**10**	Pg	**Pb**	**22 25 56.5**	**-1.5**
	64nm,0.4s						
SATY				Lg	Lg	22 26 36.7	
	46nm,0.7s						
SATY	**Saty**	**2.84**	**10**	*e*P	**Pb**	**22 25 56.5**	**-1.5**
	64nm,0.4s						
SATY				*e*S	**Sg**	**22 26 36.7**	**-1.6**
	46nm,0.7s						
IZV	**Izvestkoviy**	**2.88**	**344**	Pg	**Pb**	**22 25 58.2**	**-0.6**
	18nm,0.6s						
IZV				Lg	Lg	22 26 39.2	
	39nm,0.6s						
IZV	**Izvestkoviy**	**2.88**	**344**	*e*P	**Pb**	**22 25 58.2**	**-0.6**
	18nm,0.6s						
IZV				*e*S	**Sg**	**22 26 39.2**	**-0.6**
	39nm,0.6s						
MDOK	**Medeo**	**2.94**	**351**	Pg	**Pb**	**22 25 58.4**	**-1.3**
	22nm,0.2s						
MDOK				Lg	Lg	22 26 39.9	
	27nm,0.5s						
MDOK	**Medeo**	**2.94**	**351**	⇓*i*P	**Pb**	**22 25 58.4**	**-1.3**
	22nm,0.2s						
MDOK				*e*S	**Sg**	**22 26 39.9**	**-1.6**
	27nm,0.5s						
KOTS	**Kotyrbulak**	**3.00**	**352**	Pg	**Pb**	**22 25 59.8**	**-0.9**
	15nm,0.3s						
KOTS				Lg	Lg	22 26 42.1	
	118nm,0.5s						
KOTS	**Kotyrbulak**	**3.00**	**352**	*e*P	**Pb**	**22 25 59.8**	**-0.9**
	15nm,0.3s						
KOTS				*e*S	**Sg**	**22 26 42.1**	**-1.3**
	118nm,0.5s						
AAA	**Alma-Ata**	**3.00**	**349**	Pg	**Pb**	**22 26 00.7**	**0.0**
	32nm,0.2s						
AAA				Lg	Lg	22 26 43.5	
	40nm,0.4s						
AAA	**Alma-Ata**	**3.00**	**349**	*e*P	**Pb**	**22 26 00.7**	**0.0**
	32nm,0.2s						
AAA				*e*S	**Sg**	**22 26 43.5**	**+0.1**
	40nm,0.4s						
KNDC	**Almaty**	**3.00**	**350**	⇓Pg	**Pb**	**22 25 60.0**	**-0.7**
KNDC				⇓Lg	Lg	22 26 39.6	
	63nm,0.6s						
MTBS	**Maitube**	**3.02**	**342**	Pg	**Pb**	**22 26 00.3**	**-0.7**
	20nm,0.3s						
MTBS				Lg	Lg	22 26 43.1	
	29nm,0.4s						
MTBS	**Maitube**	**3.02**	**342**	*e*P	**Pb**	**22 26 00.3**	**-0.7**
	20nm,0.3s						
MTBS				*e*S	**Sg**	**22 26 43.1**	**-0.9**
	29nm,0.4s						
UZB	**Uzynbulak**	**3.04**	**18**	Pg	**Pb**	**22 25 59.3**	**-2.2**
	9.4nm,0.4s						
UZB				Lg	Lg	22 26 41.6	
	16nm,0.6s						
UZB	**Uzynbulak**	**3.04**	**18**	*e*P	**Pb**	**22 25 59.3**	**-2.2**
	9.4nm,0.4s						
UZB				*e*S	**Sb**	**22 26 41.6**	**+2.9**
	16nm,0.6s						
KST	**Kastek**	**3.07**	**335**	Pg	**Pb**	**22 26 01.1**	**-0.8**
	16nm,0.3s						
KST				Lg	Lg	22 26 44.8	
	36nm,0.8s						
KST	**Kastek**	**3.07**	**335**	*e*P	**Pb**	**22 26 01.1**	**-0.8**
	16nm,0.3s						
KST				*e*S	**Sg**	**22 26 44.3**	**-1.3**
	36nm,0.8s						
TKM2	**Tokmak 2**	**3.09**	**330**	⇑Pn	**Pn**	**22 25 57.3**	**+1.1**
	1.2nm,0.4s						
TKM2				⇑Pg	**Pb**	**22 26 01.6**	**-0.7**
	5.7nm,0.7s						
TKM2				⇓Lg	Lg	22 26 44.3	
	22nm,0.7s						
TKM2	**Tokmak 2**	**3.09**	**330**	⇓*i*P	**Pn**	**22 25 56.8**	**+0.6**
	baz=32						
TKM2				⇓*i*S	**Sb**	**22 26 36.8**	**-3.3**
	baz=32						
UCH	**Uchtor**	**3.10**	**310**	⇑*i*P	**Pn**	**22 25 56.4**	**-0.2**
	baz=13						
UCH				⇑*i*S	**Sn**	**22 26 36.0**	**+2.0**
	baz=13						
KBK	**Karagaybulak**	**3.16**	**320**	⇑*i*P	**Pn**	**22 25 57.5**	**+0.3**
	baz=22						
KBK				⇑*i*S	**Sn**	**22 26 37.7**	**+2.6**
	baz=22						
KURS	**Kuram**	**3.24**	**6**	Pg	**Pb**	**22 26 03.8**	**-0.9**
	20nm,0.5s						
KURS				Lg	Lg	22 26 49.1	
	9.7nm,1.0s						
KURS	**Kuram**	**3.24**	**6**	*e*P	**Pb**	**22 26 03.8**	**-0.9**
	20nm,0.5s						
KURS				*e*S	**Sg**	**22 26 49.1**	**-2.0**
	9.7nm,1.0s						
KPKS	**Kokpek**	**3.28**	**13**	*e*P	**Pb**	**22 26 04.2**	**-1.3**
	43nm,0.4s						
KPKS				*e*S	**Sg**	**22 26 49.5**	**-3.0**
	37nm,0.5s						
DGS	**Degeres**	**3.31**	**335**	Pg	**Pb**	**22 26 05.5**	**-0.5**
	11nm,0.4s						
DGS				Lg	Lg	22 26 51.8	
	19nm,0.6s						
DGS	**Degeres**	**3.31**	**335**	*e*P	**Pb**	**22 26 05.5**	**-0.5**
	11nm,0.4s						
DGS				*e*S	**Sg**	**22 26 51.8**	**-1.5**
	19nm,0.6s						
PDGK	**Podgornoye**	**3.34**	**23**	Pg	**Pb**	**22 26 04.3**	**-2.2**
	9.0nm,0.4s						
PDGK				Lg	Lg	22 26 49.9	
	14nm,1.1s						
PDGK	**Podgornoye**	**3.34**	**23**	⇓Pn	**Pn**	**22 25 59.2**	**-0.3**
	5.4nm,0.7s						
PDGK				⇓Pg	**Pb**	**22 26 04.3**	**-2.2**
	8.3nm,0.4s						
PDGK				⇓Lg	Lg	22 26 47.5	
	33nm,0.9s						
PDGK	**Podgornoye**	**3.34**	**23**	⇑*i*P	**Pn**	**22 26 00.3**	**+0.8**
	baz=22						
PDGK				⇑*i*S	**Sn**	**22 26 42.8**	**+3.5**
	baz=22						
AAK	**Ala-Archa**	**3.38**	**315**	⇑Pg	**Pb**	**22 26 08.4**	**+1.1**
	6.0nm,0.9s						
AAK				⇑Lg	Lg	22 26 53.9	
	36nm,1.0s						
AAK	**Ala-Archa**	**3.38**	**315**	⇑*i*P	**Pn**	**22 26 00.3**	**+0.1**
	baz=18						
AAK				⇑*i*S	**Sn**	**22 26 42.8**	**+2.3**
	baz=18						
CHMS	**Chumysh**	**3.52**	**322**	⇑*i*P	**Pn**	**22 26 02.3**	**+0.4**
	baz=24						
CHMS				⇑*i*S	**Sn**	**22 26 46.2**	**+2.6**
	baz=24						
KTBS	**Karatobe**	**3.53**	**348**	Pg	**Pb**	**22 26 09.2**	**-0.5**
	9.2nm,0.5s						
KTBS				Lg	Lg	22 26 58.2	
	19nm,0.7s						
KTBS	**Karatobe**	**3.53**	**348**	*e*P	**Pb**	**22 26 09.2**	**-0.5**
	9.2nm,0.5s						
KTBS				*e*S	**Sg**	**22 26 58.2**	**-2.2**
	19nm,0.7s						
CHKK	**Chushkaly**	**3.62**	**352**	Pg	**Pb**	**22 26 10.8**	**-0.5**
	9.0nm,0.3s						
CHKK				Lg	Lg	22 27 01.1	
	40nm,0.3s						
CHKK	**Chushkaly**	**3.62**	**352**	⇓*i*P	**Pb**	**22 26 10.8**	**-0.5**
	9.0nm,0.3s						
CHKK				*e*S	**Sg**	**22 27 01.1**	**-2.4**
	40nm,0.3s						
KTMS	**Ketmen**	**3.74**	**31**	Pg	**Pb**	**22 26 11.5**	**-1.9**
	7.9nm,0.3s						

KTMS				Lg	Lg	22 27 02.4	
	13nm,0.3s						
KTMS	Ketmen	3.74	31	*e*P	Pb	22 26 11.5	-1.9
	7.9nm,0.3s						
KTMS				*e*S	Sb	22 27 02.4	+3.6
	13nm,0.3s						
ARSB	Arslanbob	3.74	288	⇑*i*P	Pn	22 26 04.3	-0.8
	baz=91						
ARSB				⇑*i*S	Sn	22 26 49.6	+0.3
	baz=91						
KUU	Kurty	3.76	345	Pg	Pb	22 26 13.3	-0.4
	5.6nm,0.3s						
KUU				Lg	Lg	22 27 04.7	
	25nm,0.7s						
KUU	Kurty	3.76	345	*e*P	Pb	22 26 12.8	-0.9
	5.6nm,0.3s						
KUU				*e*S	Sg	22 27 04.2	-3.8
	25nm,0.7s						
MRKS	Merke	4.18	308	Pg	Pb	22 26 21.1	+0.3
	1.7nm,0.2s						
MRKS				Lg	Lg	22 27 18.8	
	6.8nm,0.7s						
MRKS	Merke	4.18	308	*e*P	Pb	22 26 21.1	+0.3
	1.7nm,0.2s						
MRKS				*e*S	Sg	22 27 18.8	-2.5
	6.8nm,0.7s						
DJR	Jarkent	4.34	20	Pg	Pb	22 26 23.8	+0.2
	8.5nm,0.4s						
DJR				Lg	Lg	22 27 23.4	
	9.0nm,0.4s						
DJR	Jarkent	4.34	20	*e*P	Pb	22 26 23.8	+0.2
	8.5nm,0.4s						
DJR				*e*S	Sg	22 27 23.4	-3.2
	9.0nm,0.4s						
KAPS	Kapalarasan	5.16	13	Pg	Pb	22 26 39.6	+2.1
	2.8nm,0.5s						
KAPS				Lg	Lg	22 27 50.5	
	7.3nm,0.7s						
KAPS	Kapalarasan	5.16	13	*e*P	Pb	22 26 39.6	+2.1
	2.8nm,0.5s						
KAPS				*e*S	Sg	22 27 50.5	-2.3
	7.3nm,0.7s						
BTLS	Baital	5.48	332	*e*P	Pb	22 26 45.7	+2.8
	2.0nm,0.3s						
BTLS				*e*S	Sg	22 28 01.1	-2.0
	6.0nm,0.7s						
KK31	Karatay Array	6.09	300	Lg	Lg	22 28 19.5	
	1.9nm,0.7s,baz=127,slow=27,SNR=4.4						

IDC ***15*** *22:34:57.3±1.0, 34.°63N×25.°04E, h0^{km}, mb3.7/7, mb1 3.7/13, mb1mx3.6/59, mbtmp3.6/13, ML3.8/5, Error ellipse: s-maj=17.4km s-min=10.4km az=74.0*

ISCJB ***15*** *22:34:59.7±0.7, 34.°64N±0.°03×25.°04E±0.°02, h16^{km}±4^{km}, mb3.5/8, Error ellipse: s-maj=5.9km s-min=3.3km az=7.0*

ISK ***15*** *22:35:00.3, 34.°76N×25.°05E, h15^{km}, ML3.4/14*

ATH ***15*** *22:35:01.0, 34.°77N×25.°02E, h19^{km}±1^{km}, ML3.6/14, Error ellipse: s-maj=1.7km s-min=0.7km az=359.0*

THE ***15*** *22:35:01.1, 34.°77N×25.°02E, h1^{km}±1^{km}, ML3.7/8, Error ellipse: s-maj=1.5km s-min=0.4km az=170.0*

DDA ***15*** *22:35:46.2, 34.°30N×25.°02E, h15^{km}, ML3.6*

ISC 15 22:34:59.6±1.1**, 34.°67N**±0.°05×**25.°03E**±0.°02**, h20**^{km}±5^{km}**, n105, σ1^{s}48**/135**, mb3.7**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.39	333	P	Pb	22 35 07.9	-0.1
SIVA				S	Sg	22 35 12.2	-1.3
	27µm,0.2s						
SIVA	Sivas	0.39	333	P	Pb	22 35 07.9	-0.1
SIVA				S	Sg	22 35 12.2	-1.3
SIVA				AML	AML	22 35 14.1	
	comp=E,50486µm,0.3s						
SIVA				AML	AML	22 35 15.9	
	comp=N,57009µm,0.2s						
TMBK	Timbaki Herakl	0.46	332	P	Pb	22 35 09.3	+0.3
TMBK				S	Sg	22 35 14.7	-0.7
LAST	Lasithi	0.61	37	P	Pg	22 35 11.9	0.0
LAST				S	Sg	22 35 20.1	-0.2
	comp=N,4µm,0.4s						
LAST	Lasithi	0.61	37	P	Pg	22 35 11.9	0.0
LAST				S	Sb	22 35 19.5	-0.5
LAST				AML	AML	22 35 21.0	
	comp=E,6119µm,0.4s						
LAST				AML	AML	22 35 21.6	
	comp=N,10352µm,0.4s						
IDI	Anoyia	0.63	349	PG	Pb	22 35 11.5	-0.5
IDI				SG	Sb	22 35 19.4	-1.0
IDI	Anoyia	0.63	349	Pg	Pb	22 35 11.3	-0.7
	comp=N,170nm,0.3s,baz=168,slow=11,SNR=1682						
IDI				Lg	Lg	22 35 19.4	
	comp=N,672nm,0.3s,baz=74,slow=20,SNR=74						
IDI	Anoyia	0.63	349	P	Pb	22 35 11.3	-0.7
IDI				S	Sb	22 35 19.3	-1.0
IDI				AML	AML	22 35 21.1	
	comp=N,7563µm,0.2s						
IDI				AML	AML	22 35 21.5	
	comp=E,16913µm,0.3s						
KSTL	Kastelli Herak	0.64	3	P	Pb	22 35 11.4	-0.6
KSTL				S	Sb	22 35 19.8	-0.7
IACM	Heraklion	0.64	3	P	Pg	22 35 12.1	-0.2
IACM				S	Sg	22 35 20.5	-0.4
	comp=E,20µm,0.4s						
IACM	Heraklion	0.64	3	P	Pg	22 35 12.2	-0.2
NPS	Neapolis	0.76	39	P	Pb	22 35 14.4	+0.2
NPS				S	Sg	22 35 24.8	0.0
	comp=E,5µm,0.5s						
NPS	Neapolis	0.76	39	P	Pb	22 35 14.5	+0.2
NPS				S	Sg	22 35 24.6	-0.2
NPS				AML	AML	22 35 26.5	
	comp=E,8641µm,0.3s						
NPS				AML	AML	22 35 26.9	
	comp=N,7119µm,0.4s						
GVDS	Gavdos	0.79	283	P	Pn	22 35 16.4	+0.7
GVDS				S	Sn	22 35 28.7	+1.7
GVD	Gavdhos	0.80	283	PG	Pn	22 35 15.9	+0.2
GVD				SG	Sn	22 35 28.0	+1.0
GVD	Gavdhos	0.80	283	P	Pn	22 35 15.8	+0.1
GVD				S	Sn	22 35 28.3	+1.3
	comp=N,9µm,0.3s						
GVD	Gavdhos	0.80	283	P	Pn	22 35 16.2	+0.5
GVD				S	Sn	22 35 26.9	-0.1
GVD				AML	AML	22 35 31.8	
	comp=N,20258µm,0.3s						
GVD				AML	AML	22 35 32.5	
	comp=E,17480µm,0.3s						
PRNS	Prines Rethymn	0.82	328	P	Pg	22 35 15.6	-0.1
PRNS				S	Sn	22 35 27.1	-0.5
VAM	Vamos	1.00	317	P	Pb	22 35 18.4	0.0
VAM				S	Sg	22 35 33.2	+0.8
	comp=E,5µm,0.3s						
VAM	Vamos	1.00	317	P	Pb	22 35 18.4	0.0
VAM				S	Sb	22 35 31.3	+0.2
VAM				AML	AML	22 35 34.4	
	comp=E,8867µm,0.4s						
VAM				AML	AML	22 35 37.1	
	comp=N,11676µm,0.2s						
STIA	Sitia Lasithi	1.02	58	P	Pg	22 35 19.9	+0.4
ZKR	Zakros	1.07	65	PG	Pg	22 35 20.5	0.0
ZKR	Zakros	1.07	65	P	Pg	22 35 20.4	0.0
ZKR				S	Sg	22 35 36.7	+2.1
	comp=N,2µm,0.4s						
ZKR	Zakros	1.07	65	P	Pg	22 35 20.3	-0.1
ZKR				S	Sg	22 35 34.8	+0.2
ZKR				AML	AML	22 35 39.3	
	comp=N,3490µm,0.4s						
ZKR				AML	AML	22 35 41.1	
	comp=E,5714µm,0.4s						
IMMV	Iera Moni Meta	1.17	313	PN	Pb	22 35 21.6	+0.4
IMMV	Iera Moni Meta	1.17	313	P	Pb	22 35 21.1	-0.1
IMMV				S	Sg	22 35 37.0	-0.7
	comp=E,4µm,0.4s						
IMMV	Iera Moni Meta	1.17	313	P	Pb	22 35 21.4	+0.2
IMMV				S	Sg	22 35 37.2	-0.5
IMMV				AML	AML	22 35 39.5	
	comp=N,8269µm,0.3s						
IMMV				AML	AML	22 35 45.0	
	comp=E,6088µm,0.4s						
CHAN	Chania	1.17	317	P	Pb	22 35 21.4	+0.2
SNT2	Vlychada, Sant	1.70	11	P	Pb	22 35 29.9	-0.3
THR6	Thira Island,	1.71	10	P	Pb	22 35 31.3	+0.9
THR3	Thira Island,	1.76	10	P	Pb	22 35 30.9	-0.4
THR3	Thira Island,	1.76	10	P	Pb	22 35 31.6	+0.3
THR5	Thira Island,	1.76	8	P	Pb	22 35 30.7	-0.6
THR5	Thira Island,	1.76	8	P	Pb	22 35 31.4	+0.1
THR8	Santorini-Mono	1.77	12	P	Pb	22 35 31.3	-0.2
THR7	Fira-Santorini	1.78	10	P	Pb	22 35 31.1	-0.5
ANAF	Anafi Island	1.79	20	P	Pb	22 35 32.1	+0.3
ANAF				S	Sb	22 35 54.7	+0.9
ANAF				AML	AML	22 35 59.3	
	comp=N,4920µm,0.4s						
ANAF				AML	AML	22 35 59.6	
	comp=E,1955µm,0.3s						
THT2	Imerovigli	1.79	10	P	Pb	22 35 30.9	-0.9
THT2	Imerovigli	1.79	10	P	Pb	22 35 31.9	+0.1
ANKY	Antikythira Is	1.85	311	P	Pb	22 35 33.4	+0.6
ANKY	Antikythira Is	1.85	311	P	Pb	22 35 33.7	+0.8
ANKY				S	Sb	22 35 56.2	+0.6
ANKY				AML	AML	22 36 05.6	
	comp=E,1925µm,0.7s						
ANKY				AML	AML	22 36 10.8	
	comp=N,1014µm,0.5s						
KARP	Karpathos	1.96	63	PN	Pn	22 35 33.3	+1.6
KARP	Karpathos	1.96	63	P	Pg	22 35 36.2	-1.0
KARP	Karpathos	1.96	63	P	Pg	22 35 36.3	-1.0
KARP				S	Sb	22 35 59.6	+1.1
KARP				AML	AML	22 36 13.8	
	comp=E,990µm,0.4s						
KARP				AML	AML	22 36 17.6	
	comp=N,1212µm,1.0s						
MHLO	Agia Marina, M	2.08	346	P	Pb	22 35 35.3	-1.4
MHLO	Agia Marina, M	2.08	346	P	Pb	22 35 35.8	-0.9
MHLO				S	Sb	22 36 01.6	-0.6
MHLO				AML	AML	22 36 10.2	
	comp=E,3965µm,0.5s						
MHLO				AML	AML	22 36 12.3	
	comp=N,5132µm,0.4s						
MHLA	Plaka, Milos I	2.13	347	P	Pb	22 35 36.7	-0.9
MHLA				S	Sb	22 36 02.4	-1.2
MHLA				AML	AML	22 36 18.9	
	comp=N,1330µm,1.5s						
MHLA				AML	AML	22 36 21.9	
	comp=E,1104µm,1.1s						
KTHA	Kythira Island	2.26	315	P	Pb	22 35 38.1	-1.6
KTHA	Kythira Island	2.26	315	P	Pb	22 35 38.3	-1.4
KTHA				S	Sb	22 36 05.8	-1.4
KTHA				AML	AML	22 36 15.1	
	comp=N,578µm,0.4s						
KTHA				AML	AML	22 36 22.1	
	comp=E,1093µm,0.5s						
AMGA	Amorgos Island	2.27	18	P	Pb	22 35 38.9	-1.0
KTHR	Kythira	2.29	314	P	Pb	22 35 38.7	-1.6
APE	Apeiranthos	2.43	9	PN	Pn	22 35 40.1	+1.8
APE	Apeiranthos	2.43	9	P	Pn	22 35 40.2	+1.9
VLI	Veliai	2.66	321	P	Pn	22 35 43.0	+1.6
VLI	Veliai	2.66	321	P	Pn	22 35 43.3	+1.9
DAT	Datca	2.92	45	PN	Pn	22 35 46.7	+1.6
DAT	Datca	2.92	45	*i* P	Pb	22 35 48.6	-2.5
ARG	Arkhangelos	2.96	58	P	Pb	22 35 49.4	-2.3
BODT	Bodrum	3.02	37	PN	Pn	22 35 47.5	+1.1
DID	Didima	3.18	333	P	Pn	22 35 50.0	+1.4
VLX	Vlachokerasia	3.45	322	P	Pn	22 35 54.2	+1.9
PTL	Penteli	3.50	345	P	Pn	22 35 54.9	+1.9
DION	Dionisos Attik	3.52	346	P	Pn	22 35 55.3	+2.1
ITM	Ithomi	3.55	316	P	Pn	22 35 55.2	+1.6
YER	Yerkesik	3.61	46	PN	Pn	22 35 56.8	+2.3
TURN	Turunc	3.64	52	PN	Pn	22 35 52.8	-2.1
TURN	Turunc	3.64	52	*i* P	Pn	22 35 54.4	-0.5
TURN				IAML_P			
	comp=Z,481nm,0.3s						
DALY	Dalyan (Mula)	3.65	53	PN	Pn	22 35 57.1	+2.2
DALY	Dalyan (Mula)	3.65	53	*i* P	Pn	22 35 58.9	+4.0
DALY				IAML_P			
	comp=Z,450nm,0.3s						
CHOS	Chios island	3.80	12	PN	Pn	22 35 58.9	+1.7
FETY	Fethiye	3.84	58	PN	Pn	22 35 59.7	+2.1
FETY	Fethiye	3.84	58	*i* P	Pn	22 35 60.0	+2.3
FETY				IAML_P			
	comp=Z,450nm,0.2s						
URLA	Izmir	3.89	18	PN	Pn	22 36 00.2	+1.8
GUR	Goura	3.92	327	P	Pn	22 36 00.2	+1.4
KSL	Kastellorizon	4.00	67	P	Pn	22 36 02.3	+2.4
AYDB	Zeytinkoy-Aydi	4.00	34	PN	Pn	22 36 02.5	+2.5
AKAS	Kas	4.05	66	PN	Pn	22 36 02.7	+2.1
AKAS	Kas	4.05	66	*i* P	Pn	22 36 03.3	+2.7
AKAS				IAML_P			
	comp=Z,341nm,0.3s						
BLCB	Balcova	4.05	23	PN	Pn	22 36 02.3	+1.8
ELL	Elmali	4.48	61	PN	Pn	22 36 08.6	+2.1
AKUM	Antalya-Kumluc	4.64	68	*i* P	Pn	22 36 10.9	+2.3
AKUM				IAML_P			
	comp=Z,378nm,0.2s						
KULA	Kula-Manisa	4.82	36	PN	Pn	22 36 13.6	+2.4
AGG	Agios Georgios	4.86	334	PN	Pn	22 36 13.7	+2.1
KORT	Korkueli	4.91	60	PN	Pn	22 36 14.9	+2.5
DEMI	Demirci	5.27	33	*i* P	Pn	22 36 20.1	+2.7
DEMI				IAML_P			
	comp=Z,17nm,0.1s						
KEPZ	Antalya-Kepez	5.79	65	*i* P	Pn	22 36 25.0	+0.6
KEPZ				IAML_P			
	comp=Z,7.9nm,0.2s						
BRTR	Keskin Array B	8.52	51	Pn	Pn	22 37 04.4	+2.4
	comp=Z,0.1nm,0.3s,baz=220,slow=14,SNR=4.2						
MMAI	Mount Meron Ar	8.79	98	Pn	Pn	22 37 05.6	0.0
	comp=Z,0.5nm,0.3s,baz=311,slow=11,SNR=3.6						
MMAI				Sn	Sn	22 38 40.6	-3.5
	comp=Z,1.1nm,0.3s,baz=271,slow=30,SNR=3.6						
EIL	Elat	9.77	118	Pn	Pn	22 37 19.9	+0.9
	comp=Z,0.5nm,0.3s,baz=29,slow=3.3,SNR=9.3						
EIL				Sn	Sn	22 39 03.1	-5.1
	comp=Z,0.6nm,0.3s,baz=350,slow=17,SNR=4.3						
STON	Ston	9.99	327	*e*Pn	Pn	22 37 19.6	-2.3
ZIRJ	Zirje	11.55	324	*e*Pn	Pn	22 37 40.1	-3.2
MORI	Morici	11.68	325	*e*Pn	Pn	22 37 42.3	-2.7
DUGI	Dugi Otok	12.09	323	*i* Pn	Pn	22 37 49.4	-1.2
UDBI	Udbina	12.16	327	*e*Pn	Pn	22 37 51.1	-0.6
AKASG	Malin Array Be	16.31	10	Pn	P	22 38 49.1	-1.2
	comp=Z,1.7nm,0.3s,baz=202,slow=11,SNR=9.3						
GERES	GERESS Array B	16.47	333	Pn	P	22 38 52.9	+0.8
	comp=Z,0.2nm,0.3s,baz=146,slow=11,SNR=11						
KBZ	Khabaz	16.52	51	Pn	P	22 38 55.2	+2.7
	comp=Z,0.2nm,0.3s,baz=247,slow=9.4,SNR=8.7						
ESDC	Sonseca Array	23.58	291	P	P	22 40 10.3	+1.3
	comp=Z,0.2nm,0.4s,baz=82,slow=8.8,SNR=6.6						
HFS	Hagfors	26.53	347	P	P	22 40 35.9	+0.2
	comp=Z,1.9nm,0.7s,baz=171,slow=12,SNR=3.2						
FINES	FINESS Array B	26.80	1	P	P	22 40 36.3	-1.8
	comp=Z,1.1nm,0.8s,baz=165,slow=12,SNR=2.5						
EKA	Eskdalemuir Ar	28.38	325	P	P	22 40 52.3	-0.1
	comp=Z,0.1nm,0.2s,baz=119,slow=9.8,SNR=3.3						
AKTO	Aktyubinsk	28.66	47	P	P	22 40 55.0	+0.1
	comp=Z,0.6nm,0.5s,baz=240,slow=8.1,SNR=3.1						
TORD	Torodi Ar. Bea	30.09	230	P	P	22 41 09.0	+1.1
	comp=Z,0.6nm,0.4s,baz=38,slow=8.1,SNR=16						
ARCES	ARCESS Array B	34.92	0	P	P	22 41 49.1	-0.5
	comp=Z,1.5nm,1.0s,baz=181,slow=7.8,SNR=3.3						
MKAR	Makanchi Array	44.13	56	P	P	22 43 07.5	+0.8
	comp=Z,0.6nm,0.4s,baz=263,slow=7.8,SNR=12						

MOS ***15*** *22:35:44.3±1.2, 9.°76S×74.°67W, h128^{km}, mb5.2/26, Error ellipse: s-maj=11.6km s-min=6.8km az=101.6*

ISCJB ***15*** *22:35:45.1±0.4, 9.°77S±0.°02×74.°67W±0.°03, h140^{km}±3^{km}, mb5.1/104, Error ellipse: s-maj=4.6km s-min=2.6km az=153.0*

NEIC ***15*** *22:35:45.4±2.6, 9.°87S×74.°63W, h131^{km}±4^{km}, mb5.4/461, ML5.1(ARE), Error ellipse: s-maj=12.8km s-min=8.7km az=51.0*

NEIC Felt [III] at Pozuzo and [II] at Oxapampa. Also felt at Lima.

IDC ***15*** *22:35:45.6±0.6, 9.°78S×74.°54W, h129^{km}±5^{km}, mb4.7/25, mb1 4.8/32, mb1mx4.7/41, mbtmp5.1/32, MS3.7/4, Ms1 3.7/4, ms1mx3.2/28, Error ellipse: s-maj=12.2km s-min=8.7km az=62.0*

GCMT ***15*** *22:35:46.4±0.4, 9.°79S±0.°03×74.°64W±0.°03, h146^{km}±4^{km}, MW5.2/80, Moment Tensor Solution. s11,c12; s80,c106; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.67±.36; $M_{\theta\theta}$-1.58±.34; $M_{\phi\phi}$6.25±.38; $M_{r\theta}$-3.94±.23; $M_{\theta\phi}$-2.65±.40; $M_{\phi r}$1.86±.30; Best double couple: $M_0$7.58500×10^{16} NP1:ϕ_s134.00000°, δ66.00000°, λ-124.00000°. NP2:ϕ_s13.00000°, δ41.00000°, λ-39.00000°. Principal axes: T 7.8130, Plg14.0000°, Azm248.0000°; N -0.4560, Plg30.0000°, Azm150.0000°; P -7.3570, Plg56.0000°, Azm0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ARE ***15*** *22:35:46.0±0.0, 9.°78S×74.°73W, h135^{km}*

VAO ***15*** *22:35:49.9±0.7, 9.°75S×74.°39W, h166^{km}, mb5.1*

BJI ***15*** *22:35:49.0±0.0, 9.°90S×74.°50W, h145^{km}, mB5.2/3*

ISC 15 22:35:44.9±0.4**, 9.°83S**±0.°04×**74.°54W**±0.°05**, h127**^{km}±4^{km}**, h128**^{km}**:pP-P, n931, σ1^{s}19**/928**, mb5.2**/117**, 6C-50D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.12	226	P	Pn	22 36 32.5	-0.4
	101nm,0.3s,baz=31,slow=9.4,SNR=231						
NNA				S	Sn	22 37 08.3	-1.7
	855nm,0.3s,baz=351,slow=19,SNR=18						
NNA	Nana	3.12	226	*e*Pn	Pn	22 36 32.6	-0.4
NNA				*e*Sn	Sn	22 37 05.7	-4.4
NNA	Nana	3.12	226	*e*P	Pn	22 36 32.6	-0.4
NNA				*e*		22 37 05.7	
ATAH	Atahualpa	4.66	305	P	Pn	22 36 53.2	-0.6
	32nm,0.3s,baz=92,slow=3.3,SNR=120						
ATAH				S	Sn	22 37 45.5	-1.8
	161nm,0.3s,baz=170,slow=23,SNR=16						
LPAZ	La Paz	8.95	136	P	Pn	22 37 54.5	+2.8
	0.7nm,0.3s,baz=327,slow=12,SNR=21						
LPAZ	La Paz	8.95	136	*e*Pn	Pn	22 37 55.5	+3.7
LPAZ	La Paz	8.95	136	*e*P	Pn	22 37 55.9	+4.1
PTLC	Puerto Leguiza	9.94	359	*e*P	Pn	22 37 58.4	-6.2
MNMC	Minye Minye	10.41	153	*e*Pn	Pn	22 38 12.2	+1.1
PB11	IPOC Station P	10.94	155	*e*Pn	Pn	22 38 17.0	-1.1
PB11				*e*Sn	Sn	22 40 11.3	-7.4
GO01	Chusmiza	11.06	153	*e*Pn	Pn	22 38 21.3	+1.4
GO01				*e*		22 40 05.7	
FLOC	Florencia	11.39	354	*e*P	Pn	22 38 22.7	-1.3
CRUC	La Cruz	11.58	348	*e*P	Pn	22 38 26.2	-0.5
MACC	Macarena, Meta	11.92	3	*e*P	Pn	22 38 27.5	-3.4
SOTA	Rioblanco	12.07	350	*e*P	Pn	22 38 33.0	-0.2
BBAC	Balboa, Cauca	12.08	347	⇓*i*P	Pn	22 38 34.6	+1.4
PB01	IPOC Station P	12.16	157	*e*Pn	Pn	22 38 32.4	-1.7
PCON	Cinco Dias	12.22	351	*e*P	Pn	22 38 35.1	-0.3
GUVC	San Jose del G	12.44	9	*e*P	Pn	22 38 35.9	-1.8
BETC	Betania	12.46	356	*e*P	Pn	22 38 38.2	+0.1
POPC	Popayan, Colom	12.47	350	*e*P	Pn	22 38 37.0	-1.3
PB04	IPOC Station P	13.12	162	*e*Pn	Pn	22 38 48.2	+1.6
GRGC	Isla de Gorgon	13.25	344	*e*P	Pn	22 38 48.4	+0.1
PRAC	Prado	13.46	359	*e*P	Pn	22 38 52.5	+1.5
ORTC	Ortega, Tolima	13.67	357	*e*P	Pn	22 38 54.4	+0.7
LVC	Limon Verde	13.80	158	P	Pn	22 38 57.6	+2.0
	0.3nm,0.3s,baz=356,slow=13,SNR=3.7						
LVC				LR	LR	22 44 19.1	
	comp=Z,237nm,18.0s,baz=324,slow=37						
LVC	Limon Verde	13.80	158	*e*P	P	22 38 58.4	-1.4
YOTC	Yotoco, Valle	13.84	352	*e*P	Pn	22 38 56.8	+0.9
VILC	Villavicencio,	13.88	4	*e*P	Pn	22 38 56.8	+0.4
PB10	IPOC Station P	14.13	165	*e*Pn	Pn	22 38 58.4	-1.0
CVER	Cruz Verde, Cu	14.27	2	*e*P	P	22 39 04.6	-0.6
CHIC	Chingaza	14.39	3	*e*P	P	22 39 06.0	-0.4
SIV	San Ignacio	14.48	116	P	Pn	22 39 04.6	+0.6
	5.2nm,0.3s,baz=300,slow=13,SNR=102						
SIV				S	Sn	22 41 44.7	+0.6
	2.7nm,0.3s,baz=235,slow=20,SNR=3.3						
ROSC	El Rosal	14.58	1	P	P	22 39 09.8	+1.3
	16nm,0.3s,baz=169,slow=12,SNR=13						
ROSC	El Rosal	14.58	1	*e*P	P	22 39 08.7	+0.2
ROSC	El Rosal	14.58	1	*e*P	P	22 39 09.5	+1.0
PLMC	San Jos del P	14.74	353	*e*P	Pn	22 39 05.7	-1.6
CTAB	Cerro Tablazo,	14.75	1	*e*P	P	22 39 12.7	+2.3
CTAU	Tausa, Cundina	14.95	2	*e*P	P	22 39 17.6	+4.9
GUY2C	Guyana, Caldas	14.98	357	*e*P	P	22 39 13.4	+0.3
YOPC	Yopal, Colombi	15.23	8	*e*P	P	22 39 18.0	+2.5
NORC	Norcasia	15.30	359	*e*P	P	22 39 16.9	+0.8
SPBC	San Pablo de B	15.39	2	*e*P	P	22 39 17.9	+0.7
RUSC	La Rusia	15.69	5	⇓*i*P	P	22 39 23.4	+2.4
HELC	Santa Helena	15.95	356	⇑*i*P	P	22 39 23.9	+0.2
GO02	Mina Guanaco	15.96	163	*e*P	Pn	22 39 22.8	+0.2
	40nm,1.0s						
SOLC	Bahia Solano	16.21	350	*e*P	P	22 39 26.4	+0.3
PTBC	PUERTO BERRIO,	16.27	0	⇓*i*P	P	22 39 27.4	+0.6
BARC	Barichara	16.37	5	⇓*i*P	P	22 39 30.1	+1.8
TAMC	Tame, Arauca	16.39	10	*e*P	Pn	22 39 27.3	-0.5
DBBC	Dabeiba	16.82	354	*e*P	P	22 39 35.0	+1.9
BRRC	Barranca, Sant	16.85	3	⇓*i*P	Pn	22 39 34.0	+0.8
PTGA	Pitinga	17.08	59	P	P	22 39 35.1	-0.8
	12nm,0.3s,baz=242,slow=15,SNR=97						
PTGA				S	Sn	22 42 36.1	-11
	4.3nm,0.3s,baz=147,slow=20,SNR=4.1						
PTGA	Pitinga	17.08	59	*e*P	P	22 39 35.2	-0.7
	215nm,1.1s						
PTGA				*e*S	Sn	22 42 39.6	-7.2
PTGA	Pitinga	17.08	59	*e*P	P	22 39 35.8	-0.1
PAMC	Pamplona, Colo	17.16	6	⇓*i*P	Pn	22 39 39.0	+1.5
ZARC	Zaragoza, Cauc	17.21	359	⇓*i*P	Pn	22 39 38.1	+0.4
ELOV	Elorza	17.46	17	⇑*i*P	Pn	22 39 41.0	+0.3
CAPV	Capacho	17.72	7	*e*P	Pn	22 39 44.3	+0.3
OCAC	Ocana	17.99	4	⇓*i*P	P	22 39 45.3	-0.7
SOCV	Socops	18.37	12	⇓*i*P	P	22 39 50.0	+0.1
AZU	Azuero	18.42	342	⇓*i*P	Pn	22 39 52.5	+0.4
SMLC	San Martn de	18.52	1	⇓*i*P	P	22 39 51.1	-0.4
UPD2	Meteti	18.59	349	⇓*i*P	Pn	22 39 54.6	+0.6
AHML	Horco Molle	18.97	154	*e*P	Pn	22 39 58.6	0.0
SDV	Santo Domingo	19.00	12	P	Pn	22 39 58.3	-0.8
	37nm,0.3s,baz=189,slow=12,SNR=157						
SDV				S	S	22 43 21.8	-4.4
	0.6nm,0.3s,baz=198,slow=20,SNR=2.1						
SDV	Santo Domingo	19.00	12	*e*P	P	22 39 58.0	+1.0
	327nm,0.9s						
SDV				*e*S	S	22 43 27.9	+1.6
SDV	Santo Domingo	19.00	12	⇓*i*P	P	22 39 57.7	+0.7
SDV	Santo Domingo	19.00	12	*e*P	P	22 39 57.9	+1.0
PNME	Penonome	19.09	342	*e*P	Pn	22 39 59.5	-0.5
UPA	Univ. de Panam	19.34	345	⇓*i*P	Pn	22 40 01.9	-0.9
LCO	Las Campanas	19.42	170	*e*P	P	22 40 01.1	-0.4
	38nm,1.1s						
LCO	Las Campanas	19.42	170	*e*P	P	22 40 01.2	-0.4
LCO				pmax	pmax		
	comp=Z,38nm,1.1s						
ARGC	Ariguani, Magd	19.56	1	⇓*i*P	P	22 40 04.2	+1.3
BCIP	Isla Barro Col	19.60	344	*e*P	P	22 40 03.8	+0.5
	comp=Z,141nm,0.8s						
BCIP	Isla Barro Col	19.60	344	*e*P	P	22 40 03.8	+0.5
BCIP				pmax	pmax		
	comp=Z,141nm,0.8s						
BCIP	Isla Barro Col	19.60	344	⇓*i*P	P	22 40 04.3	+1.0
SJCC	San Jacinto, C	19.61	358	⇓*i*P	Pn	22 40 05.0	-1.1
CODC	Agustn Codazz	19.67	3	⇓*i*P	P	22 40 03.2	-0.9
VCA	Vinchina	19.72	163	*e*P	Pn	22 40 08.1	+0.7
CYA	Choya	20.25	157	*e*P	Pn	22 40 12.5	-1.0
VIRV	Villa del Rosa	20.31	6	⇓*i*P	P	22 40 09.2	-1.8
ACLC	CERRO LA CRUZ	20.75	161	*e*P	P	22 40 17.3	+1.6
AROD	Rodeo	20.78	168	*e*P	Pn	22 40 18.9	-1.1
SMRC	Santa Marta, M	20.86	1	*e*P	P	22 40 17.3	+0.4
DABV	Dabajuro	20.98	11	*e*P	P	22 40 19.6	+1.4
AQDB	Aquidauana	21.01	122	*e*P	P	22 40 19.9	+1.3
ACCO	Cerro Coronel	21.27	167	*e*P	P	22 40 23.4	+1.9
URIC	Uribia, Colomb	21.54	7	*e*P	P	22 40 20.9	-3.2
AMOG	MOGNA	21.74	166	*e*P	P	22 40 28.4	+2.1
APLL	PUNTA DE LOS L	21.78	161	*e*P	P	22 40 27.7	+1.0
HDC	Heredia	21.89	334	*e*P	P	22 40 29.9	+1.9
	comp=Z,397nm,1.5s						
PCRV	Puerto La Cruz	22.19	27	P	P	22 40 31.6	+0.7
	comp=Z,55nm,0.6s,baz=191,slow=7.7,SNR=21						
RTLS	Leoncito	22.39	168	*e*P	P	22 40 35.2	+2.0
CFA	Coronel Fontan	22.44	166	P	P	22 40 34.1	+0.7
	comp=Z,9.7nm,0.8s,baz=352,slow=10,SNR=13						
CFA	Coronel Fontan	22.44	166	*e*P	P	22 40 34.3	+0.9
JTS	Las Juntas de	22.52	332	P	P	22 40 36.6	+2.4
	comp=Z,49nm,1.0s,baz=204,slow=4.8,SNR=18						
JTS	Las Juntas de	22.52	332	*e*P	P	22 40 35.1	+0.8
	comp=Z,81nm,1.1s						
JTS	Las Juntas de	22.52	332	*e*P	P	22 40 35.1	+0.8
JTS				pmax	pmax		
	comp=Z,81nm,1.1s						
RTCV	Cerro Valdivia	22.62	167	*e*P	P	22 40 36.1	+1.0
AUSP	Uspallata	22.79	169	*e*P	P	22 40 39.1	+2.1
CPUP	Villa Florida	23.12	137	P	P	22 40 40.5	+0.6
	comp=Z,6.0nm,0.7s,baz=322,slow=9.6,SNR=14						
CPUP	Villa Florida	23.12	137	*e*P	P	22 40 40.1	+0.3
CPUP	Villa Florida	23.12	137	*e*P	P	22 40 40.2	+0.3
CPUP	Villa Florida	23.12	137	*e*P	P	22 40 40.9	+1.0
TCA	Tanti	23.31	158	*e*P	P	22 40 42.1	+0.4
ACAN	Cantantal	23.34	164	*e*P	P	22 40 43.5	+1.5
MRA	San Martin	23.91	161	*e*P	P	22 40 47.8	+0.7
ESPN	Las Esperanzas	23.94	336	*e*P	P	22 40 48.7	+1.3
	comp=Z,131nm,1.3s						

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PRVC  Isla de Provid    24.03 344 eP    P     22 40 44.3 -4.0
TRN   Trinidad (W)      24.18  33 eP    P     22 40 51.1 +1.5
TRN   Trinidad (W)      24.18  33 eS    S     22 44 56.3 -2.5
TRCB  Terra Rica        24.61 124 eP    P     22 40 54.7 +1.2
TOSP  Speyside          25.19  34 eP    P     22 41 01.8 +3.0
TOSP  Speyside          25.19  34 eS    S     22 44 58.4  -16
GRGR  Grenville         25.30  31 eP    P     22 41 00.2 +0.4
      comp=Z,471nm,0.7s
GRHS  Sauteurs          25.39  31 eP    P     22 41 02.0 +1.4
GRSS  Sisters           25.46  31 eP    P     22 41 02.7 +1.4
ESTN  Estel             25.64 333 eP    P     22 41 04.0 +1.1
      comp=Z,100nm,1.3s
PTGB  Pitanga           26.01 128 eP    P     22 41 06.8 +0.6
MDP   Montagnes des     26.38  57  P    P     22 41 09.4 -0.2
      comp=Z,6.6nm,0.4s,baz=239,slow=7.5,SNR=10
MDP                                LR   LR    22 53 21.0
      comp=Z,85nm,18.5s,baz=306,slow=40
SVB   Belmont           26.48  30 eP    P     22 41 09.1 -1.3
BDFB  Brasilia          26.49 105  P    P     22 41 11.5 +0.8
      comp=Z,7.9nm,0.5s,baz=267,slow=12,SNR=13
BDFB                               LR   LR    22 53 28.8
      comp=Z,149nm,18.3s,baz=158,slow=40
BDFB  Brasilia          26.49 105 eP    P     22 41 11.5 +0.8
BDFB                              eP    P     22 41 12.3 +1.5
SVCV  St. Vincent, C    26.53  30 eP    P     22 41 09.9 -0.9
SVV   Soufriere Volc    26.53  30 eP    P     22 41 11.9 +1.0
SSV   Crater Summit     26.55  30 eP    P     22 41 12.5 +1.3
TGUH  Tegucigalpa,Un    26.89 332 eP    P     22 41 15.1 +0.9
      comp=Z,36nm,1.1s
MCLT  Moule a Chique    27.00  30 eP    P     22 41 04.7  -10
SLB   Belfond           27.05  30 eP    P     22 41 17.1 +1.5
SLBI  Saint Lucia, B    27.25  30 eP    P     22 41 16.4 -1.0
BB19B Bebedouro         27.40 117 eP    P     22 41 19.1 +0.4
FDF   Fort de France    27.78  29 eP    P     22 41 20.3 -1.8
MTDJ  Mount Denham      28.04 354 eP    P     22 41 23.8 -0.6
      comp=Z,142nm,1.1s
DWS   Wesley            28.44  28 epP   pP    22 41 58.2 +2.9
DWS   Wesley            28.44  28 eP    pP    22 41 58.2 +2.9
RCLB  Rio Claro- Sao    28.74 119 eP    P     22 41 31.3 +0.6
SDDR  Presa de Saban    28.81   6 eP    P     22 41 28.1 -3.1
      comp=Z,65nm,1.3s
SJG   San Juan          28.98  17  P    P     22 41 33.2 +0.6
      comp=Z,26nm,0.5s,baz=165,slow=9.0,SNR=6.3
SJG   San Juan          28.98  17 eP    P     22 41 30.6 -2.0
      comp=Z,97nm,0.8s
SJG   San Juan          28.98  17 eP    P     22 41 32.8 +0.2
MLYT  Lee's Yard        29.07  25 eP    P     22 41 29.4 -4.1
HUMP  Col San Antoni    29.09  17 eP    P     22 41 32.0 -1.6
      comp=Z,41nm,0.6s
NVBH  Bath Hotel, Ne    29.26  24 eP    P     22 41 38.3 +3.2
SPB   Sao Paulo         29.27 121 eP    P     22 41 34.6 -0.6
      comp=Z,47nm,0.9s
SPB   Sao Paulo         29.27 121 eP    P     22 41 35.4 +0.2
APG   El Apazote        29.29 327  P    P     22 41 37.2 +1.5
      comp=Z,24nm,0.8s,baz=171,slow=7.4,SNR=15
SKI   Saint Kitts       29.41  23 eP    P     22 41 39.0 +2.5
SEUS  St. Eustatius     29.46  23 eP    P     22 41 39.1 +2.2
SABA  Saba              29.47  22 epP   pP    22 42 08.8 +4.1
SABA  Saba              29.47  22 eP    pP    22 42 08.8 +4.1
CBCY  The Bluff, Cay    29.83 350 eP    P     22 41 37.4 -2.7
      comp=Z,167nm,0.9s
ANWB  Willy Bob         30.09  25 eS    S     22 46 24.8 -7.0
BSCB  Bom Sucesso       30.71 115 eP    P     22 41 48.5 +0.5
CCIG  Comitan           31.25 326 eP    P     22 41 53.0  0.0
      comp=Z,19nm,1.0s
TEIG  Tepich            32.79 336 eP    P     22 42 07.0 +0.9
      comp=Z,139nm,0.9s
SJMB  Sao Joao De Ma    33.45 109 eP    P     22 42 12.3 +0.2
CMIG  Matias Romero     33.47 323  P    P     22 42 13.3 +1.2
      comp=Z,14nm,0.8s,baz=111,slow=5.8,SNR=33
BSFB  Barra de Sao F    33.79 109 eP    P     22 42 15.7 +0.7
ALF01 Guarapari-ES      34.27 112 eP    P     22 42 19.0 -0.1
RIB01 Linhares ES       34.30 110 eP    P     22 42 19.6 +0.2
062Z  Marathon          34.93 350  P    P     22 42 26.4 +1.8
      baz=169
061Z  Ochoppi           36.02 350  P    P     22 42 35.6 +1.8
      baz=170
TLIG  Tlapa             36.12 319 eP    P     22 42 34.9 -0.1
      comp=Z,20nm,1.2s
060Z  West Palm Beac    36.49 351  P    P     22 42 38.9 +1.0
      baz=170
059Z  Ave Maria         36.57 350  P    P     22 42 40.0 +1.4
      baz=169,SNR=5.5
060A  Indiantown        37.08 351  P    P     22 42 44.3 +1.4
      baz=171
059A  Moore Haven       37.14 350  P    P     22 42 44.5 +1.2
      baz=169
058A  Arcadia           37.34 349  P    P     22 42 45.8 +0.8
      baz=168,SNR=5.4
959A  Okeechobee        37.64 351  P    P     22 42 49.1 +1.5
      baz=170
958A  Wauchula          37.85 350  P    P     22 42 50.3 +1.0
      baz=169
957A  Wimauma           38.02 349  P    P     22 42 51.7 +0.9
      baz=168
859A  Kempfer Cattle    38.17 351  P    P     22 42 53.3 +1.3
      baz=170,SNR=5.4
DWPF  Disney Wildern    38.30 350  P    P     22 42 54.2 +1.1
      baz=169
858A  St. Cloud         38.39 350  P    P     22 42 54.7 +0.8
      baz=169
857A  Zephyrhills       38.60 349  P    P     22 42 56.1 +0.5
      baz=168
758A  Lake Helen        39.10 351  P    P     22 43 00.4 +0.6
      baz=170
757A  Oxford            39.23 350  P    P     22 43 01.4 +0.5
      baz=168
658A  Bunnell           39.56 351  P    P     22 43 04.6 +1.0
      baz=170
656A  Willston          39.73 349  P    P     22 43 05.7 +0.7
      baz=168
657A  Interlachen       39.82 350  P    P     22 43 06.5 +0.7
      baz=169
655A  Horseshoe Beac    40.01 348  P    P     22 43 07.9 +0.6
      baz=167
557A  Orange Park       40.22 350  P    P     22 43 09.8 +0.8
      baz=169
556A  Lake Butler       40.32 349  P    P     22 43 10.4 +0.5
      baz=168
555A  McAlpin           40.54 349  P    P     22 43 12.3 +0.6
      baz=167
554A  Perry             40.65 348  P    P     22 43 13.2 +0.6
      baz=166
457A  Yulee             40.78 351  P    P     22 43 13.9 +0.3
      baz=170
553A  Crawfordville     40.91 347  P    P     22 43 15.2 +0.5
      baz=165
456A  Hilliard          40.96 350  P    P     22 43 15.6 +0.4
      baz=169
552A  Lynn Haven        41.06 346  P    P     22 43 16.2 +0.2
      baz=164
455A  Stateville        41.16 349  P    P     22 43 16.9 +0.1
      baz=167
454A  Quitman           41.25 348  P    P     22 43 18.1 +0.6
      baz=166
453A  Whigham           41.53 347  P    P     22 43 20.2 +0.4
      baz=166
357A  Townsend          41.56 351  P    P     22 43 20.5 +0.5
      baz=170
356A  Blackshear        41.56 350  P    P     22 43 20.8 +0.7
      baz=169
451A  Vernon            41.63 345  P    P     22 43 21.2 +0.6
      baz=164
355A  Pearson           41.71 349  P    P     22 43 21.5 +0.3
      baz=168
452A  Marianna          41.72 346  P    P     22 43 21.7 +0.4
      baz=164
TIGA  Tifton            41.94 348  P    P     22 43 23.1  0.0
      baz=167
353A  Camilla           41.98 348  P    P     22 43 23.3 -0.1
      baz=166
450A  Crestview         42.03 344  P    P     22 43 24.3 +0.4
      baz=162
257A  Skidaway Islan    42.03 352  P    P     22 43 24.0 +0.2
      baz=171
449A  Pace              42.16 344  P    P     22 43 25.3 +0.4
      baz=161
256A  Glennville        42.17 351  P    P     22 43 25.4 +0.5
      baz=169
255A  Hazlehurst        42.21 350  P    P     22 43 25.5 +0.2
      baz=168
351A  Pinckard          42.23 346  P    P     22 43 26.2 +0.8
      baz=164
352A  Blakely           42.27 347  P    P     22 43 25.8  0.0
      baz=165
254A  Abbeville         42.38 349  P    P     22 43 26.9 +0.2
      baz=167,SNR=6.6
ZAIG  Zacatecas         42.47 320 eP    P     22 43 30.2 +2.3
      comp=Z,44nm,1.6s
BRAL  Brewton           42.50 344  P    P     22 43 26.9 -0.8
      baz=162
350A  Dozier            42.55 345  P    P     22 43 28.0  0.0
      baz=163
253A  Americus          42.66 348  P    P     22 43 28.7 -0.2
      baz=166
158A  Hollywood         42.67 353  P    P     22 43 29.7 +0.7
      baz=172
349A  Repton            42.71 344  P    P     22 43 29.7 +0.4
      baz=162,SNR=8.2
157A  Early Branch      42.72 352  P    P     22 43 30.1 +0.7
      baz=171
252A  Lumpkin           42.72 347  P    P     22 43 29.3 -0.1
      baz=165
156A  Sylvania          42.77 351  P    P     22 43 30.4 +0.6
      baz=170
155A  Kite              42.89 350  P    P     22 43 31.4 +0.6
      baz=169,SNR=7.8
251A  Midway            42.97 346  P    P     22 43 31.2 -0.2
      baz=164
154A  Montrose          42.99 349  P    P     22 43 31.9 +0.3
      baz=168,SNR=11
BBSR  BB Station        43.01  12 eP    P     22 43 31.4 -0.3
      comp=Z,48nm,0.9s
NHSC  New Hope          43.04 353  P    P     22 43 33.0 +1.1
      baz=172,SNR=7.2
250A  Grady             43.06 345  P    P     22 43 32.0 -0.2
      baz=163
Z59A  Georgetown, SC    43.07 354  P    P     22 43 33.4 +1.1
      baz=173
153A  Fort Valley       43.16 349  P    P     22 43 32.9 -0.1
      baz=167
Z58A  St. Stephen       43.22 354  P    P     22 43 34.3 +0.9
      baz=173,SNR=6.4
249A  Camden            43.28 344  P    P     22 43 34.1 +0.2
      baz=162,SNR=10
Z57A  Bowman            43.29 352  P    P     22 43 33.8 -0.2
      baz=171
151A  Opelika           43.36 347  P    P     22 43 34.2 -0.5
      baz=165,SNR=5.2
152A  Waverly Hall      43.37 347  P    P     22 43 34.1 -0.5
      baz=166,SNR=13
Z56A  Williston         43.41 352  P    P     22 43 35.5 +0.6
      baz=170
Z55A  Blythe            43.42 351  P    P     22 43 35.5 +0.4
      baz=169
Z54A  Sparta            43.55 350  P    P     22 43 36.1  0.0
      baz=168
150A  Eclectic          43.60 346  P    P     22 43 36.2 -0.4
      baz=164,SNR=12
Z53A  Monticello        43.73 349  P    P     22 43 37.4 -0.1
      baz=167,SNR=14
Y60A  Bolivia           43.73 356  P    P     22 43 37.9 +0.4
      baz=175,SNR=6.1
Y58A  Scranton          43.77 354  P    P     22 43 38.4 +0.6
      baz=173
Y59A  Loris             43.77 355  P    P     22 43 37.8 -0.1
      baz=174
149A  Jones             43.78 345  P    P     22 43 37.3 -0.7
      baz=163,SNR=13
Z52A  Williamson        43.80 348  P    P     22 43 37.9 -0.2
      baz=166,SNR=23
GOGA  Godfrey           43.84 349  P    P     22 43 38.1 -0.3
      baz=167,SNR=11
Y57A  Sumter            43.96 353  P    P     22 43 40.1 +0.7
      baz=172
148A  Greensboro        44.03 344  P    P     22 43 39.5 -0.5
      baz=162
Y55A  Saluda            44.08 351  P    P     22 43 40.9 +0.5
      baz=170,SNR=14
Z51A  Franklin          44.09 347  P    P     22 43 40.2 -0.2
      baz=165
Y54A  Tignall           44.14 350  P    P     22 43 40.8  0.0
      baz=169,SNR=16
Z50A  Ashland           44.20 346  P    P     22 43 40.9 -0.4
      baz=164
LRAL  Lakeview Retre    44.25 345  P    P     22 43 41.3 -0.4
      baz=162,SNR=16
147A  Livingston        44.25 343  P    P     22 43 41.1 -0.6
      baz=161
X60A  Albert Glenn T    44.29 356  P    P     22 43 42.3 +0.4
      baz=175,SNR=6.6
Z49A  Columbiana        44.29 346  P    P     22 43 41.5 -0.5
      baz=163,SNR=10
Y53A  Monroe            44.29 349  P    P     22 43 41.9 -0.1
      baz=167,SNR=11
X59A  McDuffie Farm,    44.33 355  P    P     22 43 42.5 +0.3
      baz=174,SNR=9.9
X57A  Johnson Farm,     44.37 353  P    P     22 43 43.2 +0.6
      baz=172
X58A  Rowland           44.38 354  P    P     22 43 43.1 +0.4
      baz=173,SNR=5.4
Y52A  Lilburn           44.39 349  P    P     22 43 42.5 -0.3
      baz=167,SNR=8.4
X56A  White Oak         44.51 352  P    P     22 43 44.1 +0.3
      baz=171,SNR=6.6
VBMS  Vicksburg         44.52 341  P    P     22 43 43.8  0.0
      baz=158
HKT   Hockley           44.55 333 eP    P     22 43 45.7 +1.7
      comp=Z,59nm,1.2s
HKT   Hockley           44.55 333 eP    P     22 43 45.7 +1.7
HKT                                pmax pmax
      comp=Z,59nm,1.2s
X55A  Gracelyn & Ava    44.57 352  P    P     22 43 44.9 +0.7
      baz=170,SNR=6.9
Y51A  Rockmart          44.63 348  P    P     22 43 44.3 -0.4
      baz=165,SNR=21
W60A  Pink Hill         44.74 356  P    P     22 43 46.3 +0.8
      baz=176
X54A  Belton            44.76 351  P    P     22 43 46.0 +0.3
      baz=169,SNR=5.6
Y50A  Piedmont          44.77 347  P    P     22 43 45.2 -0.6
      baz=164,SNR=7.7
W61A  Ground Anchor     44.83 357  P    P     22 43 47.3 +1.1
      baz=177,SNR=13
W58A  Raeford           44.83 355  P    P     22 43 47.1 +0.9
      baz=174,SNR=28
X53A  Estanollee        44.87 350  P    P     22 43 46.5 -0.1
      baz=168,SNR=9.0
Y49A  Blount Mountai    44.89 346  P    P     22 43 46.1 -0.7
      baz=164,SNR=7.3
833A  Chaparral WMA,    44.91 328  P    P     22 43 47.9 +0.9
      baz=144,SNR=14
W59A  Clinton           44.91 355  P    P     22 43 47.7 +0.8
      baz=175
CNNC  Cliffs of the     44.94 356  P    P     22 43 47.5 +0.4
      baz=176,SNR=5.6
W57A  Gilead            45.04 354  P    P     22 43 48.2 +0.3
      baz=173,SNR=19
X52A  Dahlonega         45.07 349  P    P     22 43 47.7 -0.5
      baz=167,SNR=13
W56A  Indian Trail      45.09 353  P    P     22 43 48.5 +0.2
      baz=172,SNR=7.7
Y48A  Jasper            45.13 345  P    P     22 43 47.8 -0.9
      baz=162,SNR=12
V62A  Hyde County Ai    45.17 358  P    P     22 43 49.4 +0.5
      baz=178
KMSC  Kings Mountain    45.19 352  P    P     22 43 49.7 +0.6
      baz=171,SNR=7.0
X51A  Calhoun           45.23 348  P    P     22 43 49.2 -0.2
      baz=166
W54A  Cherokee Point    45.26 351  P    P     22 43 49.9 +0.3
      baz=170,SNR=9.1
X50B  Fort Payne        45.29 347  P    P     22 43 49.3 -0.7
      baz=165,SNR=17
V61A  Roper             45.42 358  P    P     22 43 52.0 +1.1
      baz=177,SNR=7.7
V60A  Jim Taylor Roa    45.42 357  P    P     22 43 51.7 +0.8
      baz=176,SNR=11
V59A  Middlesex         45.48 356  P    P     22 43 52.1 +0.7
      baz=175,SNR=38
W53A  Cullowhee         45.49 350  P    P     22 43 52.0 +0.3
      baz=168,SNR=23
X49A  Woodville         45.50 346  P    P     22 43 50.9 -0.7
      baz=164,SNR=7.2
W52A  Murphy            45.56 349  P    P     22 43 52.0 -0.1
      baz=167,SNR=8.4
V58A  Windy Hill, Pi    45.59 355  P    P     22 43 52.4 +0.2
      baz=174,SNR=18
X48A  Hartselle         45.61 345  P    P     22 43 51.8 -0.7
      baz=163,SNR=13
NATX  Nacogdoches       45.62 336  P    P     22 43 53.8 +1.2
      baz=152,SNR=8.5
V57A  Coltrane Farms    45.74 354  P    P     22 43 53.7 +0.2
      baz=173,SNR=10.0
V56A  Mocksville        45.74 353  P    P     22 43 54.1 +0.6
      baz=172,SNR=18
W51A  Cleveland         45.78 348  P    P     22 43 53.6 -0.2
      baz=166,SNR=17
V55A  Taylorsville      45.87 352  P    P     22 43 54.8 +0.3
      baz=171
X47A  Russelville       45.88 345  P    P     22 43 53.6 -1.0
      baz=162,SNR=12
V54A  Nebo              45.90 352  P    P     22 43 55.0 +0.2
      baz=170,SNR=8.0
V53A  Saluda            45.92 351  P    P     22 43 54.9  0.0
      baz=169,SNR=8.1
W50A  Signal Mountai    45.93 348  P    P     22 43 54.6 -0.4
      baz=165,SNR=19
U61A  Possum Corner     45.95 358  P    P     22 43 55.6 +0.6
      baz=178,SNR=7.4
U59A  Littleton         46.04 356  P    P     22 43 56.6 +0.8
      baz=176,SNR=18
435B  Jarrell           46.05 332  P    P     22 43 56.6 +0.6
      baz=148,SNR=5.3
W49A  Belvidere         46.06 347  P    P     22 43 55.1 -0.9
      baz=164,SNR=10
TKL   Tuckaleechee C    46.08 350  P    P     22 43 55.6 -0.5
      comp=Z,2.6nm,1.1s,baz=162,slow=7.5,SNR=9.8
X46A  Booneville        46.11 344  P    P     22 43 55.2 -1.2
      baz=161,SNR=7.4
U60A  Pendleton         46.12 357  P    P     22 43 57.1 +0.7
      baz=177,SNR=7.9
U58A  Oxford            46.13 356  P    P     22 43 57.0 +0.5
      baz=175,SNR=12
V52A  Sevierville       46.23 350  P    P     22 43 56.8 -0.5
      baz=168,SNR=14
U57A  Blanch            46.24 355  P    P     22 43 57.6 +0.3
      baz=174,SNR=16
W48A  Pulaski           46.24 346  P    P     22 43 56.7 -0.6
      baz=163,SNR=25
Z41A  Richland Creek    46.25 339  P    P     22 43 57.8 +0.4
      baz=155,SNR=5.6
U56A  King              46.26 353  P    P     22 43 58.3 +0.8
      baz=172,SNR=8.1
OXF   Oxford            46.30 343  P    P     22 43 56.4 -1.4
      baz=160,SNR=10
V51A  Loudon            46.33 349  P    P     22 43 57.3 -0.7
      baz=167,SNR=12
V50A  Pikevile          46.34 348  P    P     22 43 57.8 -0.4
      baz=166,SNR=14
U55A  TA2, Sparta       46.49 353  P    P     22 43 59.7 +0.2
      baz=171
W47A  Westpoint         46.51 345  P    P     22 43 58.6 -0.9
      baz=162,SNR=16
U53A  Fall Branch       46.57 351  P    P     22 43 59.8 -0.2
      baz=169,SNR=5.9
W46A  Michie            46.60 344  P    P     22 43 58.6 -1.6
      baz=161
V49A  McMinnville       46.60 347  P    P     22 43 59.2 -1.0
      baz=165,SNR=14
U54A  Nelsons Funny     46.61 352  P    P     22 44 00.4  0.0
      baz=170,SNR=5.9
T59A  Double "B" Far    46.64 357  P    P     22 44 01.2 +0.7
      baz=176,SNR=32
T58A  Grand View Acr    46.68 356  P    P     22 44 01.4 +0.6
      baz=175,SNR=31
U52A  Thorn Hill        46.72 350  P    P     22 44 00.6 -0.5
      baz=168
X43A  Marvell           46.75 341  P    P     22 44 00.9 -0.5
      baz=158
T60A  Surry             46.77 358  P    P     22 44 02.3 +0.9
      baz=177,SNR=8.8
V48A  Smith Brothers    46.79 346  P    P     22 44 00.9 -0.7
      baz=164,SNR=34
T57A  Hurt              46.79 355  P    P     22 44 02.3 +0.6
      baz=174,SNR=34
U51A  La Follette       46.82 350  P    P     22 44 01.0 -1.0
      baz=167
JCT   Junction City     46.86 330  P    P     22 44 02.7 +0.4
      baz=145,SNR=9.2
T56A  Rocky Mt          46.90 354  P    P     22 44 03.5 +1.0
      baz=173,SNR=12
TZTN  Tazewell          46.90 350  P    P     22 44 02.2 -0.3
      baz=168,SNR=8.3
WHTX  Lake Whitney,     47.01 333  P    P     22 44 04.1 +0.6
      baz=149,SNR=22
U50A  Jamestown         47.01 349  P    P     22 44 02.5 -0.9
      baz=166,SNR=14
V47A  Nunnelly          47.04 346  P    P     22 44 02.1 -1.4
      baz=163,SNR=9.5
T55A  Pulaski           47.07 353  P    P     22 44 04.7 +0.8
      baz=172,SNR=18
T54A  Tazewell          47.11 352  P    P     22 44 04.4 +0.2
      baz=171,SNR=9.6
BLA   Blacksburg        47.12 354  P    P     22 44 05.0 +0.7
      baz=172,SNR=8.2
V46A  Holladay          47.16 345  P    P     22 44 02.6 -1.9
      baz=162,SNR=5.8
T53A  Wise              47.17 351  P    P     22 44 04.5 -0.2
      baz=169,SNR=9.6
S61A  Accomac           47.27 359  P    P     22 44 06.4 +1.0
      baz=179
U49A  Red Boiling Sp    47.30 348  P    P     22 44 04.8 -0.8
      baz=165,SNR=8.6
S58A  Poland Farm, P    47.31 356  P    P     22 44 06.4 +0.8
      baz=175,SNR=13
S60A  Water View        47.33 358  P    P     22 44 07.0 +1.2
      baz=177,SNR=6.5
T52A  Hallie            47.36 351  P    P     22 44 06.0 -0.1
      baz=169,SNR=12
X40A  Basin Creek Fa    47.37 339  P    P     22 44 05.7 -0.5
      baz=155,SNR=16
T51A  Gray              47.38 350  P    P     22 44 05.9 -0.3
      baz=168,SNR=11
WVT   Waverly           47.40 345 eP    P     22 44 04.8 -1.6
      comp=Z,81nm,1.4s
WVT   Waverly           47.40 345 eP    P     22 44 04.8 -1.6
WVT                                pmax pmax
      comp=Z,81nm,1.4s
WVT   Waverly           47.40 345  P    P     22 44 04.6 -1.8
      baz=162
S59A  Mechanicsville    47.41 357  P    P     22 44 07.2 +0.8
      baz=176,SNR=6.7
U48A  Cassie Pea, Po    47.46 347  P    P     22 44 06.0 -0.9
      baz=164,SNR=13
S56A  Natural Bridge    47.49 355  P    P     22 44 07.5 +0.4
      baz=173
S57A  Dark Hollow, R    47.52 355  P    P     22 44 07.9 +0.6
      baz=174,SNR=32
U47A  Clarksville       47.57 346  P    P     22 44 06.2 -1.4
      baz=163,SNR=12
T50A  Nancy             47.60 349  P    P     22 44 06.8 -1.1
      baz=166
R58B  Mineral           47.65 356  P    P     22 44 09.2 +1.0
      baz=176,SNR=23
S55A  Lewisburg         47.68 354  P    P     22 44 09.2 +0.6
      baz=172,SNR=23
MIAR  Mount Ida         47.68 339 eP    P     22 44 08.0 -0.6
      comp=Z,32nm,0.9s
MIAR                              ePcP  PcP   22 45 36.8 +0.7
MIAR  Mount Ida         47.68 339 eP    P     22 44 08.0 -0.6
MIAR                              e           22 45 36.8
MIAR                               pmax pmax
      comp=Z,32nm,0.9s
MIAR  Mount Ida         47.68 339  P    P     22 44 08.4 -0.2
      baz=154,SNR=22
U46A  Springville       47.71 345  P    P     22 44 06.8 -1.9
      baz=162
W41B  Gary Mavity, V    47.79 340  P    P     22 44 09.0 -0.4
      baz=156,SNR=42
S53A  Williamson        47.80 352  P    P     22 44 08.7 -0.8
      baz=170,SNR=8.8
S54A  Dingess, Beckl    47.80 353  P    P     22 44 09.5 -0.1
      baz=171,SNR=8.8
T49A  Edmonton          47.82 348  P    P     22 44 08.9 -0.7
      baz=166,SNR=20
R59A  King George, V    47.84 357  P    P     22 44 10.6 +0.8
      baz=177,SNR=7.4
CBN   Corbin Frederi    47.86 357  P    P     22 44 10.6 +0.7
      baz=176,SNR=5.0
R60A  Leonardtown, M    47.89 358  P    P     22 44 11.2 +1.1
      baz=177
R61A  Willards          47.92 359  P    P     22 44 11.2 +0.9
      baz=179
S52A  Salyersville      47.93 351  P    P     22 44 10.1 -0.4
      baz=169
S51A  Beattyville       47.98 350  P    P     22 44 10.6 -0.2
      baz=168,SNR=7.5
R58A  Rapidan           47.99 356  P    P     22 44 12.1 +1.2
      baz=176,SNR=20
T48A  Bowling Green     48.00 347  P    P     22 44 10.1 -0.9
      baz=164,SNR=11
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R57A	**Stanardsville** baz=175,SNR=16	**48.02**	**356**	P	**P**	**22 44 11.9**	**+0.8**
R54A	**Victor** baz=172,SNR=11	**48.14**	**353**	P	**P**	**22 44 12.3**	**+0.2**
R55A	**Marlinton** comp=Z,50nm,0.8s	**48.15**	**354**	*e*P	**P**	**22 44 12.7**	**+0.5**
R55A				*e*PcP	**PcP**	**22 45 37.0**	**-0.7**
R55A	**Marlinton** baz=173,SNR=9.5	**48.15**	**354**	P	**P**	**22 44 13.2**	**+1.0**
S50A	**Richmond** baz=167,SNR=15	**48.16**	**349**	P	**P**	**22 44 11.7**	**-0.5**
R56A	**Bull Pasture M** baz=174	**48.20**	**355**	P	**P**	**22 44 13.2**	**+0.5**
T46A	**Princeton** baz=162,SNR=10	**48.28**	**346**	P	**P**	**22 44 11.9**	**-1.3**
W39A	**Magazine** baz=154,SNR=37	**48.34**	**339**	P	**P**	**22 44 14.0**	**+0.4**
R53A	**Hurricane** baz=170,SNR=6.0	**48.41**	**352**	P	**P**	**22 44 13.7**	**-0.4**
S49A	**Springfield** baz=166,SNR=13	**48.42**	**349**	P	**P**	**22 44 13.3**	**-1.0**
T45A	**Paducah** baz=162	**48.45**	**345**	P	**P**	**22 44 12.8**	**-1.7**
S48A	**Wiedeman Farm,** baz=165,SNR=14	**48.46**	**348**	P	**P**	**22 44 13.2**	**-1.3**
Q61A	**Milford** baz=179	**48.47**	**359**	P	**P**	**22 44 15.5**	**+1.0**
Q59A	**Harwood** baz=177	**48.48**	**358**	P	**P**	**22 44 15.7**	**+1.0**
R52A	**Catlettsburg** baz=170,SNR=5.3	**48.51**	**351**	P	**P**	**22 44 14.3**	**-0.7**
ABTX	**Abilene, Hawle** baz=146,SNR=49	**48.54**	**331**	P	**P**	**22 44 15.9**	**+0.6**
S47A	**Hartford** baz=164,SNR=10	**48.57**	**347**	P	**P**	**22 44 14.0**	**-1.4**
Q60A	**Greensboro** baz=178	**48.60**	**359**	P	**P**	**22 44 16.7**	**+1.2**
Q58A	**Fox Den Farm,** baz=176,SNR=21	**48.61**	**357**	P	**P**	**22 44 16.5**	**+0.9**
R51A	**Hillsboro** baz=168,SNR=10	**48.62**	**351**	P	**P**	**22 44 15.4**	**-0.3**
R50A	**Paris** baz=167,SNR=12	**48.73**	**350**	P	**P**	**22 44 16.1**	**-0.5**
Q57A	**Strasburg** baz=175,SNR=17	**48.75**	**356**	P	**P**	**22 44 17.9**	**+1.1**
Q56A	**Snyder Ridge,** baz=174,SNR=23	**48.81**	**355**	P	**P**	**22 44 18.4**	**+1.1**
Q55A	**Buckhannon** baz=173,SNR=12	**48.85**	**354**	P	**P**	**22 44 18.5**	**+1.0**
S46A	**Don Dixon Farm** baz=163,SNR=9.7	**48.85**	**346**	P	**P**	**22 44 16.2**	**-1.3**
Q53A	**Leroy** baz=171,SNR=30	**48.88**	**353**	P	**P**	**22 44 17.7**	**0.0**
R49A	**Shelbyville** baz=166,SNR=7.4	**48.89**	**349**	P	**P**	**22 44 17.1**	**-0.7**
Q54A	**Coxs Mills** baz=172,SNR=14	**48.92**	**353**	P	**P**	**22 44 18.1**	**+0.1**
WCI	**Wyandotte Cave** comp=Z,49nm,0.6s	**49.06**	**348**	*e*P	**P**	**22 44 18.3**	**-0.8**
WCI	**Wyandotte Cave**	**49.06**	**348**	*e*P	**P**	**22 44 18.3**	**-0.8**
WCI	comp=Z,49nm,0.6s			pmax	pmax		
WCI	**Wyandotte Cave** baz=165	**49.06**	**348**	P	**P**	**22 44 18.1**	**-1.0**
U40A	**Yellville** baz=156,SNR=43	**49.07**	**340**	P	**P**	**22 44 18.7**	**-0.5**
Q52A	**Bidwell** baz=170,SNR=8.6	**49.07**	**352**	P	**P**	**22 44 18.7**	**-0.5**
R48A	**Northridge Ran** baz=165,SNR=6.7	**49.13**	**348**	P	**P**	**22 44 18.7**	**-0.9**
P58A	**Pank, Wackersv** baz=176,SNR=24	**49.14**	**357**	P	**P**	**22 44 20.6**	**+1.0**
P57A	**Homestead Farm** baz=176,SNR=7.0	**49.17**	**356**	P	**P**	**22 44 21.2**	**+1.3**
Q50A	**Georgetown** baz=168,SNR=14	**49.22**	**350**	P	**P**	**22 44 19.6**	**-0.7**
P59A	**Jarrettsville** baz=178,SNR=15	**49.22**	**358**	P	**P**	**22 44 21.4**	**+1.1**
S44A	**Carbondale** baz=161,SNR=27	**49.24**	**345**	P	**P**	**22 44 19.4**	**-1.1**
P56A	**Dayton Farm, R** baz=174,SNR=12	**49.25**	**356**	P	**P**	**22 44 21.3**	**+0.8**
P61A	**Hammonton** baz=180	**49.25**	**360**	P	**P**	**22 44 21.3**	**+0.8**
Q51A	**Peebles** baz=169,SNR=5.3	**49.29**	**351**	P	**P**	**22 44 20.3**	**-0.6**
P55A	**Reedsville** baz=173,SNR=8.3	**49.33**	**355**	P	**P**	**22 44 21.5**	**+0.3**
P60A	**Greenville** baz=179,SNR=11	**49.40**	**359**	P	**P**	**22 44 22.5**	**+0.8**
P53A	**Whipple** baz=171,SNR=16	**49.48**	**353**	P	**P**	**22 44 22.4**	**+0.1**
MCWV	**Mont Chateau** baz=173,SNR=7.0	**49.48**	**355**	P	**P**	**22 44 22.6**	**+0.3**
Q49A	**Aurora** baz=167,SNR=7.3	**49.53**	**349**	P	**P**	**22 44 21.8**	**-0.8**
Q48A	**North Vernon** baz=166,SNR=13	**49.62**	**349**	P	**P**	**22 44 22.4**	**-1.0**
O61A	**Allentown** baz=180	**49.67**	**360**	P	**P**	**22 44 24.2**	**+0.5**
P51A	**Williamsport** baz=169	**49.70**	**351**	P	**P**	**22 44 23.4**	**-0.5**
P52A	**Corning** baz=170,SNR=11	**49.72**	**352**	P	**P**	**22 44 23.5**	**-0.5**
TUL1	**Leonard** baz=152,SNR=30	**49.72**	**337**	P	**P**	**22 44 24.3**	**+0.2**
O58A	**Lewisberry** baz=177,SNR=18	**49.75**	**358**	P	**P**	**22 44 25.5**	**+1.2**
O57A	**Amberson** baz=176,SNR=17	**49.87**	**357**	P	**P**	**22 44 26.4**	**+1.2**
O60A	**Telford** baz=179,SNR=24	**49.90**	**359**	P	**P**	**22 44 26.5**	**+1.0**
O59A	**Robesonia** baz=178,SNR=30	**49.91**	**358**	P	**P**	**22 44 26.6**	**+1.0**
WMOK	**Wichita Mounta** baz=148,SNR=18	**49.92**	**334**	P	**P**	**22 44 25.5**	**-0.3**
P50A	**Jamestown** baz=168,SNR=8.6	**49.94**	**351**	P	**P**	**22 44 24.9**	**-0.8**
O55A	**Ligonier** baz=174,SNR=17	**49.98**	**355**	P	**P**	**22 44 26.6**	**+0.5**
O56A	**Blue Knob Stat** baz=175,SNR=17	**49.99**	**356**	P	**P**	**22 44 27.0**	**+0.9**
P49A	**Miami Univ. Ec** baz=167,SNR=7.7	**50.02**	**350**	P	**P**	**22 44 25.1**	**-1.2**
O54A	**Avella** baz=173	**50.05**	**354**	P	**P**	**22 44 26.5**	**-0.2**
P48A	**Milroy** baz=166,SNR=9.1	**50.07**	**349**	P	**P**	**22 44 25.6**	**-1.1**
CCM	**Cathedral Cave** comp=Z,37nm,0.8s	**50.13**	**343**	*e*P	**P**	**22 44 26.3**	**-1.0**
CCM				*e*PcP	**PcP**	**22 45 43.9**	**-1.0**
CCM	**Cathedral Cave**	**50.13**	**343**	*e*P	**P**	**22 44 26.3**	**-1.0**
CCM				*e*		22 45 43.9	
CCM	comp=Z,37nm,0.8s			pmax	pmax		
CCM	**Cathedral Cave** baz=158	**50.13**	**343**	P	**P**	**22 44 26.0**	**-1.2**
O52A	**Adamsville** baz=171,SNR=10	**50.15**	**353**	P	**P**	**22 44 26.9**	**-0.5**
O53A	**New Philadelph** baz=172,SNR=6.4	**50.21**	**353**	P	**P**	**22 44 27.4**	**-0.4**
P47A	**Martinsville** baz=165,SNR=26	**50.26**	**348**	P	**P**	**22 44 27.2**	**-1.0**
O51A	**Pataskala** baz=170,SNR=7.1	**50.28**	**352**	P	**P**	**22 44 27.5**	**-0.9**
SSPA	**Standing Stone** comp=Z,123nm,1.5s	**50.31**	**357**	*e*P	**P**	**22 44 29.0**	**+0.5**
SSPA				*e*PcP	**PcP**	**22 45 44.8**	**-0.7**
SSPA	**Standing Stone** baz=176	**50.31**	**357**	P	**P**	**22 44 29.2**	**+0.7**
N57A	**Milroy** baz=176,SNR=11	**50.41**	**357**	P	**P**	**22 44 29.7**	**+0.4**
ACSO	**Alum Creek Sta** baz=169,SNR=11	**50.42**	**352**	P	**P**	**22 44 28.8**	**-0.6**
O50A	**Cable** baz=168,SNR=14	**50.43**	**351**	P	**P**	**22 44 28.7**	**-0.8**
N60A	**Cedar Hill Far** baz=179,SNR=11	**50.45**	**359**	P	**P**	**22 44 30.2**	**+0.6**
N58A	**Sunbury** baz=177,SNR=31	**50.46**	**358**	P	**P**	**22 44 30.5**	**+0.9**
N59A	**State Game Lan** baz=179,SNR=45	**50.51**	**359**	P	**P**	**22 44 31.2**	**+1.2**
N55A	**Marion Center** baz=174,SNR=27	**50.53**	**356**	P	**P**	**22 44 30.6**	**+0.5**
P46A	**Rosedale** baz=164,SNR=15	**50.59**	**347**	P	**P**	**22 44 29.5**	**-1.1**
PAL	**Palisades** comp=Z,64nm,0.9s	**50.59**	**1**	*e*P	**P**	**22 44 31.6**	**+1.0**
PAL	**Palisades**	**50.59**	**1**	*e*P	**P**	**22 44 31.6**	**+1.0**
PAL	comp=Z,65nm,0.9s			pmax	pmax		
PAL	**Palisades** baz=181,SNR=12	**50.59**	**1**	P	**P**	**22 44 30.9**	**+0.3**
O49A	**Covington** baz=168,SNR=14	**50.59**	**350**	P	**P**	**22 44 29.7**	**-0.9**
N56A	**West Decatur** baz=175,SNR=19	**50.61**	**356**	P	**P**	**22 44 31.4**	**+0.6**
N53A	**Lisbon** baz=172,SNR=9.4	**50.72**	**354**	P	**P**	**22 44 31.5**	**-0.1**
MNTX	**Cornudas Mount** baz=140,SNR=54	**50.76**	**326**	P	**P**	**22 44 31.9**	**-0.3**
N54A	**Moraine State** baz=173,SNR=17	**50.79**	**355**	P	**P**	**22 44 32.6**	**+0.5**
O48A	**Farmland** baz=167,SNR=40	**50.80**	**350**	P	**P**	**22 44 31.2**	**-1.0**
N52A	**McGinn’s Farm,** baz=171	**50.82**	**353**	P	**P**	**22 44 31.0**	**-1.4**
M61A	**Granite Spring** baz=181,SNR=7.1	**50.89**	**1**	P	**P**	**22 44 33.2**	**+0.4**
N50A	**Nevada** baz=169,SNR=13	**50.97**	**352**	P	**P**	**22 44 32.7**	**-0.8**
M58A	**Price’s Panora** baz=178,SNR=46	**50.98**	**358**	P	**P**	**22 44 34.9**	**+1.3**
N51A	**Ashland** baz=170,SNR=5.4	**51.01**	**352**	P	**P**	**22 44 33.0**	**-0.8**
M59A	**Waymart** baz=179,SNR=41	**51.12**	**359**	P	**P**	**22 44 35.7**	**+1.1**
P43A	**Skaggs, Pawnee** baz=161,SNR=73	**51.15**	**345**	P	**P**	**22 44 34.1**	**-0.7**
MSTX	**Muleshoe** baz=144,SNR=21	**51.16**	**330**	P	**P**	**22 44 35.0**	**-0.2**
M56A	**Emporium** baz=176,SNR=19	**51.17**	**356**	P	**P**	**22 44 35.3**	**+0.3**
M55A	**Ridgway** baz=175,SNR=21	**51.19**	**356**	P	**P**	**22 44 35.4**	**+0.2**
M65A	**Busby, Falmout** baz=185	**51.27**	**4**	P	**P**	**22 44 35.7**	**+0.1**
N49A	**Columbus Grove** baz=168,SNR=17	**51.28**	**351**	P	**P**	**22 44 35.0**	**-0.8**
SFIN	**Lafayette** baz=164,SNR=12	**51.29**	**348**	P	**P**	**22 44 34.3**	**-1.6**
M54A	**Oil Creek Stat** baz=174,SNR=28	**51.30**	**355**	P	**P**	**22 44 36.0**	**0.0**
M53A	**WI Miller and** baz=172,SNR=8.9	**51.33**	**354**	P	**P**	**22 44 35.7**	**-0.4**
N48A	**Decatur** baz=167,SNR=12	**51.36**	**350**	P	**P**	**22 44 35.1**	**-1.2**
AMTX	**Amarillo** baz=145	**51.36**	**331**	P	**P**	**22 44 36.4**	**-0.2**
O44A	**Mansfield** baz=162	**51.38**	**346**	P	**P**	**22 44 35.1**	**-1.4**
M51A	**Elyria** baz=170,SNR=6.3	**51.40**	**353**	P	**P**	**22 44 36.0**	**-0.6**
N47A	**Urbana** baz=166,SNR=26	**51.50**	**349**	P	**P**	**22 44 36.1**	**-1.3**
M52A	**Chesterland** baz=172	**51.50**	**353**	P	**P**	**22 44 36.5**	**-0.9**
M50A	**Fremont** baz=169,SNR=9.9	**51.58**	**352**	P	**P**	**22 44 37.2**	**-0.8**
L58A	**Harry Jones Me** baz=178,SNR=61	**51.64**	**359**	P	**P**	**22 44 39.6**	**+1.2**
M49A	**Liberty Center** baz=168,SNR=13	**51.79**	**351**	P	**P**	**22 44 38.9**	**-0.7**
BINY	**Binghamton** baz=178,SNR=68	**51.79**	**359**	P	**P**	**22 44 40.7**	**+1.1**
L53A	**Girard** baz=173,SNR=18	**51.80**	**355**	P	**P**	**22 44 39.5**	**-0.1**
PLIO	**Pelee Island,** baz=170,SNR=10	**51.86**	**352**	P	**P**	**22 44 39.2**	**-0.8**
L55A	**Hinsdale** baz=175,SNR=21	**51.88**	**356**	P	**P**	**22 44 40.7**	**+0.4**
M48A	**Edgerton** baz=167	**51.91**	**350**	P	**P**	**22 44 39.1**	**-1.4**
ERPA	**Erie** baz=173,SNR=8.8	**51.94**	**355**	P	**P**	**22 44 40.5**	**-0.1**
M47A	**Cromwell** baz=166	**51.95**	**349**	P	**P**	**22 44 39.6**	**-1.1**
HDIL	**Hopedale** baz=162,SNR=18	**51.96**	**346**	P	**P**	**22 44 39.5**	**-1.3**
L54A	**Sinclairville** baz=174,SNR=25	**52.00**	**355**	P	**P**	**22 44 41.5**	**+0.4**
HRV	**Adam Dziewonsk** comp=Z,69nm,1.0s	**52.16**	**3**	*e*P	**P**	**22 44 43.6**	**+1.4**
HRV	**Adam Dziewonsk**	**52.16**	**3**	*e*P	**P**	**22 44 43.6**	**+1.4**
HRV	comp=Z,69nm,1.0s			pmax	pmax		
HRV	**Adam Dziewonsk** baz=184	**52.16**	**3**	P	**P**	**22 44 43.1**	**+0.8**
L50A	**Kingsville** baz=170,SNR=5.5	**52.18**	**352**	P	**P**	**22 44 41.2**	**-1.2**
L48A	**N Adams** baz=168	**52.32**	**351**	P	**P**	**22 44 42.1**	**-1.4**
K54A	**Basiliko Farm,** baz=175,SNR=10	**52.33**	**356**	P	**P**	**22 44 44.0**	**+0.5**
L49A	**Milan** baz=169,SNR=5.7	**52.38**	**351**	P	**P**	**22 44 43.3**	**-0.6**
K55A	**Perry** baz=176,SNR=16	**52.40**	**357**	P	**P**	**22 44 44.5**	**+0.4**
M44A	**Midewin, Midew** baz=163	**52.46**	**347**	P	**P**	**22 44 42.6**	**-1.9**
L47A	**Sherwood** baz=167,SNR=8.5	**52.48**	**350**	P	**P**	**22 44 43.2**	**-1.4**
N41A	**Harden Midland** baz=160,SNR=23	**52.50**	**344**	P	**P**	**22 44 43.7**	**-1.1**
AAM	**Ann Arbor** baz=169	**52.55**	**351**	P	**P**	**22 44 44.4**	**-0.8**
K52A	**Tillsonburg** baz=172	**52.66**	**354**	P	**P**	**22 44 45.4**	**-0.6**
K51A	**Iona Station** baz=172	**52.69**	**354**	P	**P**	**22 44 45.2**	**-0.9**
L46A	**Eue Claire** baz=166	**52.71**	**349**	P	**P**	**22 44 44.4**	**-1.9**
121A	**Cookes Peak, D** baz=138,SNR=36	**52.74**	**324**	P	**P**	**22 44 47.9**	**+0.9**
KSU1	**Kansas State U** baz=152,SNR=9.0	**52.84**	**338**	P	**P**	**22 44 47.1**	**-0.3**
N40A	**Mertquake, Sal** baz=159,SNR=15	**52.86**	**344**	P	**P**	**22 44 46.1**	**-1.3**
MEDO	**Medina** baz=175,SNR=5.4	**52.86**	**356**	P	**P**	**22 44 47.6**	**+0.1**
K50A	**Casco** baz=170	**52.87**	**353**	P	**P**	**22 44 46.2**	**-1.3**
TYNO	**Tyneside** baz=174,SNR=7.0	**52.90**	**355**	P	**P**	**22 44 47.4**	**-0.2**
J55A	**Hilton** baz=176,SNR=19	**52.93**	**357**	P	**P**	**22 44 48.2**	**+0.3**
STCO	**Saint Catharin** baz=174	**52.95**	**356**	P	**P**	**22 44 48.1**	**0.0**
J54A	**Appleton** baz=175,SNR=6.3	**52.98**	**356**	P	**P**	**22 44 48.3**	**0.0**
K49A	**Clarkson** baz=169	**52.99**	**352**	P	**P**	**22 44 47.1**	**-1.3**
M41A	**Milan** baz=160,SNR=5.8	**53.04**	**345**	P	**P**	**22 44 47.6**	**-1.2**
J52A	**Paris** baz=173,SNR=23	**53.09**	**355**	P	**P**	**22 44 48.7**	**-0.5**
K48A	**Perry** baz=168,SNR=16	**53.11**	**351**	P	**P**	**22 44 47.8**	**-1.4**
K47A	**Vermontville** baz=167	**53.12**	**350**	P	**P**	**22 44 47.6**	**-1.7**
L44A	**Lake County Fo** baz=164	**53.19**	**348**	P	**P**	**22 44 48.2**	**-1.7**
K46A	**Dorr** baz=166	**53.27**	**350**	P	**P**	**22 44 48.8**	**-1.6**
TORO	**Toronto--Lesli** baz=174	**53.37**	**356**	P	**P**	**22 44 50.7**	**-0.4**
Y22D	**IRIS PASSCAL I** baz=139	**53.40**	**326**	P	**P**	**22 44 52.6**	**+0.8**
L42A	**Oliver, Polo** baz=162,SNR=10	**53.42**	**346**	P	**P**	**22 44 50.2**	**-1.4**
ACTO	**Acton** baz=173	**53.42**	**355**	P	**P**	**22 44 51.0**	**-0.6**
J49A	**Marlette** baz=170,SNR=7.0	**53.51**	**352**	P	**P**	**22 44 50.8**	**-1.4**
J48A	**Bridge Port** baz=169,SNR=13	**53.54**	**352**	P	**P**	**22 44 51.1**	**-1.3**
PECO	**Prince Edward** baz=177,SNR=25	**53.56**	**358**	P	**P**	**22 44 52.7**	**+0.2**
DRWO	**Darlington Wes** baz=175,SNR=7.4	**53.58**	**356**	P	**P**	**22 44 52.6**	**-0.1**
DRCO	**St. Marys Ceme** baz=175,SNR=15	**53.59**	**356**	P	**P**	**22 44 52.5**	**-0.2**
I53A	**Kortright Cn E** baz=174	**53.60**	**355**	P	**P**	**22 44 52.2**	**-0.6**
WLVO	**Wesleyville** baz=175,SNR=16	**53.62**	**357**	P	**P**	**22 44 53.0**	**+0.1**
J47A	**Sunmer** baz=168,SNR=12	**53.64**	**351**	P	**P**	**22 44 52.0**	**-1.1**
PKRO	**Pickering** baz=175	**53.70**	**356**	P	**P**	**22 44 53.3**	**-0.2**
I51A	**Listowel** baz=172,SNR=21	**53.70**	**354**	P	**P**	**22 44 52.8**	**-0.8**
K43A	**Burlington** comp=Z,98nm,1.2s	**53.78**	**347**	*e*P	**P**	**22 44 52.4**	**-1.8**
K43A				*e*PcP	**PcP**	**22 45 56.9**	**-1.6**
K43A	**Burlington** baz=163,SNR=18	**53.78**	**347**	P	**P**	**22 44 52.8**	**-1.4**
CBKS	**Cedar Bluff** baz=149,SNR=6.7	**53.79**	**336**	P	**P**	**22 44 54.7**	**+0.3**
ANMO	**Albuquerque** comp=Z,28nm,1.0s	**53.81**	**327**	*e*P	**P**	**22 44 55.2**	**+0.4**
ANMO	**Albuquerque**	**53.81**	**327**	*e*P	**P**	**22 44 55.2**	**+0.4**
ANMO	comp=Z,28nm,1.0s			pmax	pmax		
ANMO	**Albuquerque** baz=140	**53.81**	**327**	P	**P**	**22 44 55.2**	**+0.4**
L40A	**Anamosa** baz=160,SNR=50	**53.86**	**345**	P	**P**	**22 44 53.5**	**-1.3**
I55A	**Frankford** baz=176,SNR=22	**53.87**	**357**	P	**P**	**22 44 54.8**	**0.0**
LBNH	**Lisbon** baz=183,SNR=30	**53.87**	**2**	P	**P**	**22 44 55.8**	**+1.0**
J46A	**Howard City** baz=167	**53.88**	**350**	P	**P**	**22 44 53.4**	**-1.6**
I52A	**Shelburne** baz=173	**53.89**	**355**	P	**P**	**22 44 54.2**	**-0.7**
BASO	**Ashfield** baz=171,SNR=15	**53.98**	**354**	P	**P**	**22 44 54.7**	**-0.9**
BWLO	**Walkerton** baz=172,SNR=35	**54.03**	**354**	P	**P**	**22 44 55.3**	**-0.6**
I49A	**Point Hope** baz=170	**54.04**	**353**	P	**P**	**22 44 54.8**	**-1.3**
J45A	**Montague** baz=166	**54.10**	**349**	P	**P**	**22 44 54.5**	**-2.0**
DELO	**Deloro Mine** baz=176,SNR=34	**54.17**	**357**	P	**P**	**22 44 56.9**	**0.0**
H55A	**Tweed** baz=177,SNR=26	**54.18**	**358**	P	**P**	**22 44 57.3**	**+0.2**
BRCO	**Bruce Peninsul** baz=172	**54.18**	**354**	P	**P**	**22 44 56.4**	**-0.7**
H56A	**Elgin** baz=178,SNR=69	**54.19**	**358**	P	**P**	**22 44 58.0**	**+0.9**
LONY	**Lake Ozonia** baz=180,SNR=40	**54.20**	**360**	P	**P**	**22 44 57.9**	**+0.7**
SCIA	**State Center** baz=157	**54.27**	**343**	P	**P**	**22 44 56.8**	**-0.9**
TUC	**Tucson** baz=134	**54.35**	**322**	P	**P**	**22 44 59.0**	**+0.3**
I47A	**Gladwin** baz=168	**54.36**	**351**	P	**P**	**22 44 56.8**	**-1.5**
I48A	**Sherman Twp** baz=169,SNR=11	**54.40**	**352**	P	**P**	**22 44 57.6**	**-1.0**
JFWS	**Jewell Farm** baz=161,SNR=16	**54.42**	**346**	P	**P**	**22 44 57.7**	**-1.1**
I46A	**Reed City** baz=167,SNR=6.7	**54.43**	**350**	P	**P**	**22 44 57.1**	**-1.8**
H52A	**Wyevale** baz=174	**54.43**	**355**	P	**P**	**22 44 58.0**	**-0.9**
T25A	**Trinidad** baz=143,SNR=49	**54.49**	**331**	P	**P**	**22 45 00.3**	**+0.6**
SADO	**Sadowa** comp=Z,27nm,0.7s,baz=213,slow=3.4,SNR=35	**54.51**	**356**	P	**P**	**22 44 59.0**	**-0.3**
BMRO	**Meriville Lake** baz=172,SNR=17	**54.51**	**354**	P	**P**	**22 44 58.5**	**-0.9**
I45A	**Fountain** baz=166	**54.66**	**350**	P	**P**	**22 44 58.5**	**-1.9**
PLVO	**Plevna** baz=177,SNR=23	**54.66**	**358**	P	**P**	**22 45 00.9**	**+0.3**
BANO	**Bancroft** baz=176,SNR=8.2	**54.68**	**357**	P	**P**	**22 45 00.6**	**-0.1**
G53A	**Haliburton** baz=175,SNR=6.8	**54.82**	**356**	P	**P**	**22 45 01.2**	**-0.5**
H48A	**Harrisville** baz=170	**54.86**	**352**	P	**P**	**22 45 00.5**	**-1.4**
G55A	**Calabogie** baz=178,SNR=45	**54.86**	**358**	P	**P**	**22 45 02.4**	**+0.4**
H47A	**Mio** baz=168	**54.88**	**352**	P	**P**	**22 45 00.3**	**-1.8**
H46A	**Fife Lake** baz=167,SNR=11	**54.97**	**351**	P	**P**	**22 45 01.0**	**-1.7**
ORIO	**Orleans, Innes** baz=179,SNR=18	**55.03**	**359**	P	**P**	**22 45 03.6**	**+0.4**
I42A	**Draeger Farm,** baz=163,SNR=28	**55.04**	**347**	P	**P**	**22 45 02.5**	**-0.8**
PKME	**Peaks-Kenny Pk** baz=186,SNR=18	**55.04**	**5**	P	**P**	**22 45 04.0**	**+0.7**
GLMI	**Grayling** baz=168	**55.16**	**351**	P	**P**	**22 45 02.3**	**-1.8**
TOBO	**Tobermory, Bru** baz=172,SNR=14	**55.16**	**354**	P	**P**	**22 45 02.9**	**-1.2**
KLBO	**Killbear Provi** baz=173,SNR=32	**55.17**	**355**	P	**P**	**22 45 03.3**	**-0.9**
KSCO	**Kaye Shedlock’** baz=146	**55.18**	**333**	P	**P**	**22 45 04.6**	**0.0**
BUKO	**Buck Lake** baz=174,SNR=38	**55.19**	**356**	P	**P**	**22 45 03.8**	**-0.6**
H45A	**Beulah** baz=166	**55.19**	**350**	P	**P**	**22 45 02.8**	**-1.5**
PEMO	**Pembroke** baz=177,SNR=29	**55.31**	**358**	P	**P**	**22 45 05.2**	**+0.1**
H43A	**Windswept, Lux** baz=164,SNR=16	**55.36**	**349**	P	**P**	**22 45 04.5**	**-1.1**
214A	**Organ Pipe Nat** baz=132,SNR=43	**55.37**	**320**	P	**P**	**22 45 06.6**	**+0.7**
G47A	**Hillman** baz=169,SNR=8.4	**55.39**	**352**	P	**P**	**22 45 04.5**	**-1.2**
I41A	**Arkdale** baz=162,SNR=13	**55.41**	**347**	P	**P**	**22 45 05.0**	**-1.0**
BGNE	**Belgrade** baz=152,SNR=13	**55.43**	**339**	P	**P**	**22 45 05.9**	**-0.3**
F55A	**Otter Lake** baz=178,SNR=6.9	**55.43**	**358**	P	**P**	**22 45 06.3**	**+0.3**
SDCO	**Great Sand Dun** baz=142,SNR=75	**55.49**	**330**	P	**P**	**22 45 07.5**	**+0.5**
G45A	**Suttons Bay** baz=167,SNR=6.3	**55.53**	**350**	P	**P**	**22 45 05.4**	**-1.4**
F52A	**Sundridge** baz=174,SNR=12	**55.54**	**356**	P	**P**	**22 45 06.1**	**-0.7**
ALGO	**Algonquin Park** baz=176,SNR=23	**55.62**	**357**	P	**P**	**22 45 07.2**	**-0.2**
G46A	**Petoskey** baz=168,SNR=6.4	**55.68**	**351**	P	**P**	**22 45 06.4**	**-1.4**
F51A	**Arnstein** baz=174,SNR=16	**55.71**	**355**	P	**P**	**22 45 06.8**	**-1.2**
W18A	**Petrified Fore** baz=137,SNR=34	**55.73**	**325**	P	**P**	**22 45 09.3**	**+0.6**
F49A	**Sandfield** baz=171,SNR=16	**55.75**	**354**	P	**P**	**22 45 06.7**	**-1.6**
F48A	**Evansville** baz=170,SNR=18	**55.88**	**353**	P	**P**	**22 45 07.8**	**-1.4**
E52A	**Mattawa** baz=175,SNR=16	**55.98**	**357**	P	**P**	**22 45 09.5**	**-0.5**
E53A	**Dumoine, Ponti** baz=176,SNR=18	**56.02**	**357**	P	**P**	**22 45 10.1**	**-0.1**
E54A	**Lac Daplat, Po** baz=177,SNR=28	**56.06**	**358**	P	**P**	**22 45 10.6**	**+0.1**
LMN	**Caledonia Moun** comp=Z,40nm,0.9s	**56.12**	**8**	*e*P	**P**	**22 45 12.1**	**+1.2**
F45A	**CMU Biological** baz=167,SNR=14	**56.14**	**351**	P	**P**	**22 45 09.7**	**-1.3**
S22A	**4UR Ranch, Cre** baz=141,SNR=43	**56.15**	**329**	P	**P**	**22 45 12.2**	**+0.5**
E50A	**Wahnapitae** baz=173,SNR=8.0	**56.27**	**355**	P	**P**	**22 45 10.9**	**-1.1**
E51A	**G1948 Merrick** baz=174,SNR=38	**56.28**	**356**	P	**P**	**22 45 11.6**	**-0.5**
Q24A	**Divide** baz=143	**56.29**	**331**	P	**P**	**22 45 12.8**	**+0.1**
E48A	**Lockeyer** baz=171,SNR=21	**56.47**	**354**	P	**P**	**22 45 12.1**	**-1.3**
OGNE	**Ogallala** baz=147,SNR=13	**56.53**	**335**	P	**P**	**22 45 14.3**	**+0.2**
E47A	**Iron Bridge** baz=170,SNR=21	**56.58**	**353**	P	**P**	**22 45 12.9**	**-1.3**
MVCO	**Mesa Verde** baz=139,SNR=17	**56.60**	**328**	P	**P**	**22 45 15.1**	**+0.2**
E46A	**Sault Ste Mari** baz=169,SNR=16	**56.62**	**352**	P	**P**	**22 45 13.2**	**-1.3**
G40A	**Rib Lake** baz=162,SNR=9.3	**56.64**	**347**	P	**P**	**22 45 13.6**	**-1.0**
D52A	**ZEK Kipawa Sen** baz=176,SNR=26	**56.66**	**357**	P	**P**	**22 45 14.8**	**+0.1**
F42A	**Maple Grove Fa** baz=164	**56.67**	**349**	P	**P**	**22 45 13.6**	**-1.3**

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D53A  Lac Vacive, Po  56.73 357  P       P      22 45 15.4 +0.2
      baz=176,SNR=45
D54A  Lac Fusel, La   56.76 358  P       P      22 45 15.4 -0.1
      baz=178,SNR=61
D51A  Lot 18 Range I  56.83 356  P       P      22 45 15.1 -0.9
      baz=174
G39A  Holcombe        56.88 346  P       P      22 45 15.4 -1.0
      baz=160,SNR=39
WUAZ  Wupatki         56.95 324  P       P      22 45 18.2 +0.9
      baz=135,SNR=59
ECSD  EROS Data Cent  56.97 341  P       P      22 45 16.2 -0.8
      baz=154,SNR=50
LATQ  La Tuque        56.98   1  P       P      22 45 17.9 +0.9
      baz=182,SNR=35
E43A  Lone Tree Farm  57.05 350  P       P      22 45 16.2 -1.3
      baz=166,SNR=24
D46A  Sault St. Mari  57.10 352  P       P      22 45 16.3 -1.6
      baz=169,SNR=8.8
E44A  Grand Marais A  57.11 351  P       P      22 45 17.2 -0.8
      baz=167,SNR=7.8
D48A  Paudash Townsh  57.12 354  P       P      22 45 16.9 -1.1
      baz=172,SNR=19
D47A  Chapleau        57.15 353  P       P      22 45 16.7 -1.5
      baz=170,SNR=18
D49A  Beulah Townshi  57.17 354  P       P      22 45 17.0 -1.3
      baz=172,SNR=11
ISCO  Idaho Springs   57.17 332  P       P      22 45 19.2 +0.3
      baz=143,SNR=21
SPMN  Marine on St.   57.23 345  P       P      22 45 17.8 -0.9
      baz=159,SNR=36
GLA   Glamis          57.37 320 eP       P      22 45 20.8 +0.7
      comp=Z,24nm,1.1s
GLA   Glamis          57.37 320 eP       P      22 45 20.8 +0.7
GLA                              pmax    pmax
      comp=Z,24nm,1.1s
GLA   Glamis          57.37 320  P       P      22 45 20.7 +0.6
      baz=131,SNR=5.0
Y12C  Blythe          57.63 321  P       P      22 45 22.8 +0.9
      baz=132,SNR=9.7
PDMCI Parker Dam,Lak  57.77 321  P       P      22 45 23.4 +0.6
      baz=132,SNR=6.1
SWSC  Sam W. Stewart  57.92 319  P       P      22 45 24.7 +0.8
      baz=130
IKP   In-Ko-Pah, Jac  57.93 319  P       P      22 45 24.9 +0.8
      baz=130
D41A  Chassel         58.00 349  P       P      22 45 23.3 -0.9
      baz=164,SNR=14
BC3   Big Chuckawall  58.16 320  P       P      22 45 26.3 +0.6
      baz=131,SNR=18
N23A  Red Feather La  58.20 332  P       P      22 45 26.3 +0.3
      baz=143,SNR=10
E38A  The Farm, Brul  58.21 346  P       P      22 45 24.6 -1.0
      baz=160,SNR=13
IRM   Iron Mountain   58.29 321  P       P      22 45 27.4 +0.9
      baz=131,SNR=53
MONP2 Monument Peak   58.29 319  P       P      22 45 26.8 +0.1
      baz=130
SUSD  Miller          58.37 340  P       P      22 45 26.2 -0.7
      baz=152,SNR=8.9
LSQQ  Lebel-sur-Quev  58.67 358  P       P      22 45 28.7 -0.1
      baz=177
O20A  White River Ci  58.69 330  P       P      22 45 29.8 +0.4
      baz=140,SNR=14
BELC  Belle Mtn. Jos  58.73 320  P       P      22 45 30.3 +0.6
      baz=130,SNR=14
109C  Camp Elliot, M  58.73 318  P       P      22 45 30.4 +0.9
      baz=129
PFO   Pinyon Flats O  58.77 319 eP       P      22 45 30.5 +0.6
      comp=Z,24nm,1.0s
PFO   Pinyon Flats O  58.77 319 eP       P      22 45 30.5 +0.6
PFO                              pmax    pmax
      comp=Z,24nm,1.0s
PFO   Pinyon Flats O  58.77 319  P       P      22 45 30.8 +0.9
      baz=130,SNR=5.6
C40A  Isle Royale Na  58.94 349  P       P      22 45 29.9 -0.7
      baz=163,SNR=32
GMRC  Granite Mounta  59.02 321  P       P      22 45 32.5 +0.9
      baz=131,SNR=21
MURC  Murrieta        59.24 319  P       P      22 45 33.7 +0.6
      baz=129
EYMN  Ely             59.46 347  P       P      22 45 33.2 -1.1
      baz=161,SNR=25
HEC   Hector,Ludlow   59.47 320  P       P      22 45 35.6 +0.9
      baz=130,SNR=7.9
CHGQ  Chibougamau     59.49   0  P       P      22 45 34.6 +0.2
      baz=180,SNR=34
TUQ   Turquoise Moun  59.61 321  P       P      22 45 36.1 +0.4
      baz=131
SCI2  San Clemente I  59.74 317  P       P      22 45 37.0 +0.5
      baz=128
K22A  Casper          59.86 333 eP       P      22 45 37.0 -0.4
      comp=Z,35nm,0.8s
K22A                            ePcP     sP     22 46 20.6 -1.6
K22A  Casper          59.86 333  P       P      22 45 37.5 +0.2
      baz=143,SNR=20
CIS   Catalina Islan  59.91 318  P       P      22 45 37.2 -0.5
      baz=128
RRX   Edison Barstow  59.92 320  P       P      22 45 38.7 +1.0
      baz=130
BFSC  Mount Baldy Ra  59.94 319  P       P      22 45 38.4 +0.4
      baz=129,SNR=5.5
RSSD  Black Hills     60.00 336 eP       P      22 45 39.2 +0.9
      comp=Z,59nm,1.2s
RSSD  Black Hills     60.00 336 eP       P      22 45 39.2 +0.9
RSSD                             pmax    pmax
      comp=Z,59nm,1.2s
RSSD  Black Hills     60.00 336  P       P      22 45 38.6 +0.3
      baz=146
GSC   Goldstone, Bar  60.07 321  P       P      22 45 39.3 +0.5
      baz=130,SNR=11
SHOC  Shoshone, Teco  60.13 321  P       P      22 45 39.9 +0.8
      baz=131
MWC   Mount Wilson    60.19 319 eP       P      22 45 40.8 +1.0
      comp=Z,31nm,1.1s
MWC   Mount Wilson    60.19 319 eP       P      22 45 40.8 +1.0
MWC                              pmax    pmax
      comp=Z,31nm,1.1s
DECC  Green Verdugo   60.38 319  P       P      22 45 41.6 +0.7
      baz=129
EDW2  Edwards Air Fo  60.56 320  P       P      22 45 42.5 +0.4
      baz=129
SNCC  San Nicolas Is  60.56 317  P       P      22 45 43.2 +1.1
      baz=127
LRMC  Laurel Mtn Rad  60.74 320  P       P      22 45 44.3 +0.9
      baz=130
BLG   Laguna Peak, P  60.77 318  P       P      22 45 44.1 +0.6
      baz=128
TPNV  Topopah Spring  60.80 322  P       P      22 45 44.8 +1.0
      baz=132,SNR=20
FURC  Furnace Creek,  60.86 322  P       P      22 45 44.7 +0.7
      baz=131,SNR=8.8
OSI   Osito Audit: C  60.86 319  P       P      22 45 44.8 +0.6
      baz=128
AGMN  Agassiz Nation  60.88 344  P       P      22 45 43.4 -0.5
      baz=156,SNR=28
MPMC  Manual Prospec  60.98 321  P       P      22 45 45.5 +0.3
      baz=130,SNR=12
DUG   Dugway, Tooele  61.08 327  P       P      22 45 46.4 +0.8
      baz=136,SNR=70
ARVC  Arvin           61.25 319  P       P      22 45 48.0 +1.3
      baz=128
BW06  Boulder Array   61.34 331  P       P      22 45 47.0 -0.5
      baz=140,SNR=42
PDAR  Pinedale Array  61.34 331  P       P      22 45 47.0 -0.4
      comp=Z,7.9nm,0.6s,baz=140,slow=7.2,SNR=78
PDAR                             PcP     PcP    22 46 28.8 +0.2
      comp=Z,2.3nm,0.6s,baz=134,slow=5.1,SNR=4.7
R11A  Troy Canyon, C  61.34 324  P       P      22 45 48.6 +1.1
      baz=133,SNR=86
ISA   Isabella, Lake  61.35 320 eP       P      22 45 48.4 +0.9
      comp=Z,23nm,0.8s
ISA   Isabella, Lake  61.35 320 eP       P      22 45 48.4 +0.9
ISA                              pmax    pmax
      comp=Z,23nm,0.8s
ISA   Isabella, Lake  61.35 320  P       P      22 45 48.2 +0.8
      baz=129,SNR=9.9
SBC   Santa Barbara   61.40 318  P       P      22 45 47.6 -0.2
      baz=128
GRAC  Grapevine Rang  61.51 322  P       P      22 45 49.4 +0.9
      baz=131
MDND  Maddock         61.58 341  P       P      22 45 49.3 +0.6
      baz=152,SNR=22
CWC   Cottonwood Cre  61.59 321  P       P      22 45 49.8 +0.6
      baz=130
PKM   Mcpherson Peak  61.74 318  P       P      22 45 50.2  0.0
      baz=128,SNR=5.0
VES   Vestal, Richgr  61.85 320  P       P      22 45 51.5 +0.8
      baz=129
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TIN   Tinemaha, Big   62.08 321  P       P      22 45 53.1 +0.8
      baz=130
SMMC  Simmler         62.12 319  P       P      22 45 53.8 +1.2
      baz=128
VOG   Valley Oaks Go  62.34 320  P       P      22 45 53.5 -0.5
      baz=128
ULM   Lac du Bonnet   62.66 345  P       P      22 45 55.2 -0.6
      comp=Z,76nm,0.8s,baz=155,slow=6.6,SNR=62
MLAC  Mammoth, Mammo62.82 321    P       P      22 45 58.0 +0.6
      baz=130
LAO   LASA Array      62.98 336  P       P      22 45 58.2 +0.1
      baz=145,SNR=6.8
NVAR  Mina Array Bea  63.00 322  P       P      22 45 59.0 +0.4
      comp=Z,11nm,0.8s,baz=140,slow=6.9,SNR=70
RLMT  Red Lodge       63.02 333  P       P      22 45 58.5 -0.1
      baz=141,SNR=19
H17A  Grant Village   63.06 332  P       P      22 45 59.9 +0.9
      baz=140
DGMT  Dagmar          63.69 338  P       P      22 46 03.3 +0.6
      baz=147,SNR=13
SAO   San Andreas Ge  63.92 319 eP       P      22 46 02.6 -1.8
      comp=Z,14nm,1.0s
SAO   San Andreas Ge  63.92 319 eP       P      22 46 02.6 -1.8
SAO                              pmax    pmax
      comp=Z,14nm,1.0s
HLID  Hailey          64.32 329  P       P      22 46 07.8 +0.6
      baz=136,SNR=29
BOZ   Bozeman (W)     64.46 332  P       P      22 46 08.2 +0.3
      baz=139,SNR=39
TAOE  Nuku Hiva Isla  64.65 265 eLR      LR     23 05 44.0
      comp=Z,235nm,29.8s
SCHQ  Schefferville   64.75   5  P       P      22 46 09.5 +0.1
      comp=Z,72nm,1.1s,baz=188,slow=5.0,SNR=30
EGMT  Eagleton        65.50 335  P       P      22 46 14.5  0.0
      baz=142,SNR=5.5
CMLA  Cha da Macela   65.87  41 eP       P      22 46 18.1 +1.1
      comp=Z,49nm,0.7s
CMLA  Cha da Macela   65.87  41 eP       P      22 46 18.1 +1.1
CMLA                             pmax    pmax
      comp=Z,49nm,0.7s
O03E  Paynes Creek    66.28 322  P       P      22 46 19.6 -0.1
      baz=128,SNR=6.5
MSO   Missoula        66.45 332  P       P      22 46 21.3 +0.6
      baz=137,SNR=48
O02D  Mt. Diablo Mer  66.81 322  P       P      22 46 22.9 -0.2
      baz=127
M04C  Macdoel         67.22 323  P       P      22 46 26.2 +0.5
      baz=128,SNR=19
N02D  Trinity Center  67.24 322  P       P      22 46 24.5 -1.3
      baz=127
M02C  Callahan        67.58 323  P       P      22 46 27.7 -0.2
      baz=127
K04D  Chiloquin, OR   67.69 324  P       P      22 46 29.2 +0.5
      baz=129
L04D  Klamath Falls   67.76 324  P       P      22 46 29.3 +0.2
      baz=128
J05D  Fort Rock, OR   67.81 325  P       P      22 46 30.0 +0.6
      baz=129,SNR=20
J04D  Umpqua Nationa  68.28 325  P       P      22 46 33.1 +0.7
      baz=129
FFC   Flin Flon       68.34 343 eP       P      22 46 32.0 -0.2
      comp=Z,165nm,0.8s
FFC   Flin Flon       68.34 343 eP       P      22 46 32.0 -0.2
FFC                              pmax    pmax
      comp=Z,165nm,0.8s
L02E  Cave Junction   68.49 323  P       P      22 46 34.2 +0.7
      baz=127,SNR=5.3
I05D  Terrebonne, OR  68.54 326  P       P      22 46 34.1 +0.3
      baz=130
I04A  Tendick Farm,   68.80 325  P       P      22 46 35.3 -0.1
      baz=129,SNR=7.4
K02D  Willamette Mer  68.85 323  P       P      22 46 36.1 +0.3
      baz=127,SNR=14
NEW   Newport         68.98 331  P       P      22 46 36.7 +0.3
      baz=135,SNR=14
G05D  Wamic, OR       69.10 327  P       P      22 46 38.6 +1.4
      baz=130
I03D  Drain, OR       69.27 324  P       P      22 46 38.9 +0.6
      baz=128,SNR=5.4
J01E  Myrtle Point    69.29 324  P       P      22 46 39.3 +0.9
      baz=127
H04D  Lebanon         69.43 325  P       P      22 46 40.5 +1.3
      baz=128
F05D  White Salmon    69.59 327  P       P      22 46 41.0 +0.9
      baz=130
COR   Corvallis       69.79 325 eP       P      22 46 39.9 -1.5
      comp=Z,72nm,1.0s
COR   Corvallis       69.79 325 eP       P      22 46 39.9 -1.5
COR                              pmax    pmax
      comp=Z,72nm,1.0s
I02D  Swisshome       69.81 324  P       P      22 46 42.8 +1.3
      baz=127
G03D  McMinnville, O  70.15 326  P       P      22 46 44.7 +1.0
      baz=128
F04D  Rainier, OR     70.55 326  P       P      22 46 47.1 +1.1
      baz=129
E04D  Cinebar         70.61 327  P       P      22 46 47.2 +0.8
      baz=129
C06D  Leavenworth     70.61 329  P       P      22 46 46.9 +0.5
      baz=131
LIC   Lamto           71.05  80 eP       P      22 46 49.7 -0.1
      comp=Z,130nm,1.5s
D04E  Lakebay         71.11 327  P       P      22 46 50.4 +1.1
      baz=129
TIC   Toumodi         71.15  80 eP       P      22 46 50.5 +0.1
DBIC  Dimbokro        71.32  80  P       P      22 46 51.5 +0.2
      comp=Z,18nm,0.8s,baz=232,slow=5.2,SNR=22
KIC   Kosan Boka      71.36  80 eP       P      22 46 51.7 +0.1
      comp=Z,75nm,1.1s
B05A  Bryant          71.45 329  P       P      22 46 51.4  0.0
      baz=130,SNR=11
D03D  Eldon           71.50 328  P       P      22 46 52.2 +0.5
      baz=129,SNR=8.6
A04D  Lummi Island    72.05 329  P       P      22 46 55.4 +0.4
      baz=130
TBI   Tubuai          72.39 249 eLR      LR     23 09 17.7
      comp=Z,158nm,38.5s
VNA3  Neumayer Olymp  72.79 162  P       P      22 47 00.2 +1.1
PPT2  Papeete2        72.92 255 eLR      LR     23 09 37.2
      comp=Z,292nm,26.0s
VNA1  Neumayer--Stat  73.02 161  P       P      22 47 01.6 +1.2
VNA2  Neumayer--Watz  73.38 162  P       P      22 46 59.7 -2.9
      baz=305,slow=1.4
SNAA  Sanae           75.00 162  P       P      22 47 12.9 +0.9
SNAA  Sanae           75.00 162 eP       P      22 47 12.6 +0.6
      comp=Z,53nm,1.1s
SNAA  Sanae           75.00 162 eP       P      22 47 12.6 +0.6
SNAA                             pmax    pmax
      comp=Z,53nm,1.1s
TTIG  Tnine Tigouga,  75.01  55  P       P      22 47 16.0 +3.1
OUZM  OUZ             76.49  55  P       P      22 47 24.0 +2.7
PFVI  Vila Bisbo      77.17  48⇓eP      P      22 47 26.8 +2.0
      comp=Z,122nm,1.3s
MORF  Marmelete       77.37  48⇓eP      P      22 47 28.1 +2.1
      comp=Z,108nm,1.3s
PTEO  Sao Teotonio    77.41  48⇓eP      P      22 47 28.5 +2.4
      comp=Z,142nm,1.4s
ZHG   ZHG             77.47  53  P       P      22 47 29.0 +2.4
PMAFR Mafra           77.56  46⇓eP      P      22 47 28.2 +1.2
      comp=Z,139nm,1.2s
PNCL  Nicolau / Gran  77.77  48⇓eP      P      22 47 29.9 +1.8
      comp=Z,67nm,1.1s
PBDV  Barranco-do-Ve  77.88  49⇓eP      P      22 47 31.1 +2.3
      comp=Z,50nm,1.1s
PCVE  Castro Verde    77.95  48⇓eP      P      22 47 31.3 +2.2
      comp=Z,79nm,1.4s
PVAQ  Vaqueiros       78.10  48⇓eP      P      22 47 31.9 +1.9
      comp=Z,42nm,1.9s
PVAQ  Vaqueiros       78.10  48  P       P      22 47 32.1 +2.2
ALMR  Almeirim        78.15  47⇓eP      P      22 47 32.7 +2.5
      comp=Z,166nm,1.0s
GOLM  Goulmima        78.22  55  P       P      22 47 34.0 +3.1
PBEJ  Beja            78.22  48⇓eP      P      22 47 33.5 +2.8
      comp=Z,32nm,1.3s
PMTG  Montargil       78.36  47⇓eP      P      22 47 33.0 +1.6
      comp=Z,92nm,1.2s
PTOM  Tomar           78.45  46⇓eP      P      22 47 33.0 +1.2
      comp=Z,80nm,1.3s
YKA   Yellowknife Ar  78.47 342  P       P      22 47 31.4  0.0
      comp=Z,16nm,0.9s,baz=136,slow=6.2,SNR=38
YKA                              pP      pP     22 48 04.2 +0.4
      comp=Z,3.5nm,0.8s,baz=138,slow=6.4,SNR=2.5
PCAS  Casmilo, Conde  78.55  46⇓eP      P      22 47 33.9 +1.5
      comp=Z,68nm,1.5s
SFJD  Kangerlussuaq   78.58   9  P       P      22 47 31.5 -0.4
      comp=Z,15nm,0.9s,baz=214,slow=5.8,SNR=7.4
CZD   Col de Zad      78.59  53  P       P      22 47 36.1 +2.9
COI   Coimbra         78.68  46⇓eP      P      22 47 34.6 +1.5
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      comp=Z,195nm,1.1s
ARF   Arif            78.72  55  P       P      22 47 36.0 +2.3
SICH  Sidi Chahed     78.73  52  P       P      22 47 36.0 +2.5
MDT   Midelt          78.86  54  P       P      22 47 36.4 +2.0
LCRM  LCR             78.95  53  P       P      22 47 38.0 +3.0
TOA0  Torodi Ar. Sit  79.04  75 eP       P      22 47 34.4 -1.2
      comp=Z,44nm,0.9s
TORD  Torodi Ar. Bea  79.04  75  P       P      22 47 34.3 -1.3
      comp=Z,31nm,0.9s,baz=268,slow=5.2,SNR=88
TORD                             pP      pP     22 48 08.3 +0.6
      comp=Z,11nm,0.9s,baz=259,slow=4.9,SNR=2.9
PMRV  Marv??o         79.10  47⇓eP      P      22 47 36.4 +1.0
      comp=Z,37nm,1.7s
PCBR  Castelo Branco  79.19  46⇓eP      P      22 47 37.0 +1.1
      comp=Z,61nm,1.2s
SMIR  Smir Dam        79.23  51  P       P      22 47 39.0 +2.9
PVIS  Viseu           79.24  45⇓eP      P      22 47 37.2 +1.0
      comp=Z,84nm,1.2s
MTE   Manteigas       79.36  46⇓eP      P      22 47 37.9 +1.0
      comp=Z,57nm,1.6s
PGAV  Gavieira, Arco  79.47  44⇓eP      P      22 47 38.5 +1.0
      comp=Z,59nm,1.5s
PCAB  Cabril          79.54  44⇓eP      P      22 47 38.8 +1.0
      comp=Z,69nm,1.6s
POLO  Lamas de Olo    79.56  45⇓eP      P      22 47 39.1 +1.1
      comp=Z,34nm,1.4s
PVRL  Vila Real       79.58  45⇓eP      P      22 47 39.3 +1.2
      comp=Z,54nm,1.1s
AKLM  AKL             80.00  52  P       P      22 47 43.0 +2.4
MVO   Moncorvo        80.02  45⇓eP      P      22 47 41.6 +1.2
      comp=Z,85nm,1.0s
HORN  Hornachuelos    80.08  49  P       P      22 47 42.5 +1.7
PALE  Palemas         80.18  52  P       P      22 47 44.0 +2.6
QSPA  South Pole Qui  80.29 180  P       P      22 47 42.4 +0.9
      comp=Z,17nm,1.0s,baz=151,slow=2.2,SNR=24
QSPA                             pP      pP     22 48 15.2 +1.2
      comp=Z,9.5nm,0.9s,baz=150,slow=2.8,SNR=5.1
QSPA  South Pole Qui  80.29 180 eP       P      22 47 42.8 +1.3
      comp=Z,25nm,1.0s
JBK   JBK             80.96  53  P       P      22 47 48.0 +2.2
TAF   Taforalt        81.23  52  P       P      22 47 50.0 +2.9
FIGM  Figuig          81.33  55  P       P      22 47 50.0 +2.3
PAB   San Pablo       81.34  47 eP       P      22 47 49.1 +1.6
      comp=Z,33nm,1.0s
PAB   San Pablo       81.34  47 eP       P      22 47 49.1 +1.6
PAB                              pmax    pmax
      comp=Z,33nm,1.0s
ESDC  Sonseca Array   81.66  47  P       P      22 47 50.8 +1.6
      comp=Z,18nm,0.9s,baz=254,slow=5.8,SNR=85
SESP  Santiago Espad  82.19  49  P       P      22 47 53.8 +1.7
BORG  Borgarnes       84.27  20  P       P      22 48 04.3 +2.4
      comp=Z,50nm,0.9s,baz=257,slow=3.6,SNR=12
SUMG  Summit          85.52  10 eP       P      22 48 09.8 +1.3
      comp=Z,86nm,0.8s
SUMG  Summit          85.52  10⇓iP      P      22 48 09.6 +1.0
SUMG                             pmax    pmax
      comp=Z,240nm,0.9s
SUMG  Summit          85.52  10⇓iP      P      22 48 09.6 +1.0
      comp=Z,244nm,0.9s
VNDA  Vanda           87.31 190  P       P      22 48 18.4 +1.5
      comp=Z,3.6nm,1.0s,baz=124,slow=4.4,SNR=19
VNDA                             LR      LR     23 20 04.1
      comp=Z,79nm,21.1s,baz=63,slow=30
VNDA  Vanda           87.31 190 eP       P      22 48 17.2 +0.3
      comp=Z,3.7nm,0.9s
VNDA  Vanda           87.31 190 eP       P      22 48 17.2 +0.3
VNDA                             pmax    pmax
      comp=Z,4.0nm,0.9s
SCO   Scoresbysund    87.63  15 i P      P      22 48 19.6 +1.3
SCO                              pmax    pmax
      comp=Z,15nm,1.0s
SCO   Scoresbysund    87.63  15 i P      P      22 48 19.6 +1.3
      comp=Z,15nm,1.0s
ESK   Eskdalemuir     87.64  33 eP       P      22 48 18.5 -0.3
      comp=Z,20nm,1.1s
ESK   Eskdalemuir     87.64  33 eP       P      22 48 18.5 -0.3
ESK                              pmax    pmax
      comp=Z,20nm,1.1s
WIN   Windhoek        87.78 112 eP       P      22 48 20.4 -0.1
      comp=Z,12nm,1.0s
WIN   Windhoek        87.78 112 eP       P      22 48 20.4 -0.1
WIN                              pmax    pmax
      comp=Z,12nm,1.0s
EPYK  Eagle Plains    88.27 339  P       P      22 48 21.9 +0.3
      baz=119
TSUM  Tsumeb          88.80 109 eP       P      22 48 26.3 +1.1
      comp=Z,45nm,1.0s
SYO   Syowa Base      89.25 161⇓eP      P      22 48 25.6 -0.5
SYO   Syowa Base      89.25 161⇑ipP     pP     22 49 00.0 +0.7
DOU   Dourbes         90.58  39 ⇓P       P      22 48 33.4 +0.7
      comp=Z,14nm,1.3s
UCC   Uccle           90.61  39 ⇓P       P      22 48 33.1 +0.4
KEST  Kesra           90.76  54  P       P      22 48 35.0 +1.0
      comp=Z,15nm,0.9s,baz=171,slow=5.0,SNR=13
BCLA  Clavier         91.10  39 ⇑P       P      22 48 35.9 +0.8
HDA   Harding Lake    91.34 336  P       P      22 48 35.4 -0.5
      baz=110
ILAR  Eielson Array   91.44 336  P       P      22 48 36.0 -0.4
      comp=Z,3.5nm,0.9s,baz=148,slow=3.2,SNR=28
WLF   Walferdange     91.45  40 eP       P      22 48 35.7 -1.0
      comp=Z,134nm,1.2s
WLF   Walferdange     91.45  40 eP       P      22 48 35.7 -1.0
WLF                              pmax    pmax
      comp=Z,134nm,1.2s
WLF   Walferdange     91.45  40 ⇑P       P      22 48 37.7 +1.0
      comp=Z,18nm,1.3s
MEM   Membach         91.58  39 ⇑P       P      22 48 38.4 +1.0
POKR  Poker Plat Res  91.78 336  P       P      22 48 38.2 +0.2
      baz=110
COLA  College         91.87 336 eP       P      22 48 38.8 +0.5
      comp=Z,33nm,1.0s
COLA  College         91.87 336 eP       P      22 48 38.8 +0.5
COLA                             pmax    pmax
      comp=Z,33nm,1.0s
TCOL  CIGO, UAF Yank  91.87 336  P       P      22 48 38.3  0.0
      baz=109
DAG   Danmarks Havn   92.17  11⇓iP      P      22 48 39.7 +0.2
DAG                              pmax    pmax
      comp=Z,21nm,0.9s
DAG   Danmarks Havn   92.17  11⇓iP      P      22 48 39.7 +0.2
      comp=Z,25nm,0.9s
DAVOX Davos/Dischmat  93.29  43  P       P      22 48 46.4 +0.9
      comp=Z,7.4nm,0.8s,baz=260,slow=3.0,SNR=15
DAVA  Damuels         93.38  43 i PcP    P      22 48 46.8 +0.8
      comp=Z,18nm,1.6s,SNR=7.4
TOLK  Toolik Lake Re  93.71 339  P       P      22 48 47.0 +0.2
      baz=108
FETA  Feichten        93.91  43 i PcP    P      22 48 49.2 +0.8
      comp=Z,14nm,1.2s,SNR=9.0
RETA  Reutte          94.01  43 i PcP    P      22 48 49.3 +0.6
      comp=Z,14nm,1.6s,SNR=8.2
MOTA  Moosalm         94.21  43 i PcP    P      22 48 50.2 +0.5
      comp=Z,7.5nm,0.8s,SNR=11
SQTA  Sankt Quirin    94.26  43 i PcP    P      22 48 50.7 +0.8
      comp=Z,24nm,1.3s,SNR=13
WATA  Walderalm       94.53  43 i PcP    P      22 48 51.8 +0.6
      comp=Z,16nm,1.2s,SNR=7.0
WTTA  Wattenberg      94.56  43 i PcP    P      22 48 52.3 +0.9
      comp=Z,18nm,0.9s,SNR=12
ABTA  Abfaltersbach   95.07  44 i PcP    P      22 48 54.4 +0.9
      comp=Z,32nm,1.1s,SNR=18
KBA   Koelnbreinsper  95.68  43 ePcP     P      22 48 57.0 +0.6
      comp=Z,13nm,1.1s
MYKA  Terra Mystica   95.82  44 i PcP    P      22 48 57.8 +0.8
      comp=Z,14nm,0.9s,SNR=8.3
CLL   Collm           96.06  39 eP       P      22 48 59.0 +1.2
CLL                              pmax    pmax
      comp=Z,9.0nm,1.2s
CLL   Collm           96.06  39 eP       P      22 48 59.0 +1.2
      comp=Z,9.0nm,1.2s
KHC   Kasperske Hory  96.12  41 eP       P      22 48 59.3 +1.0
KHC   Kasperske Hory  96.12  41 eP       P      22 48 59.3 +1.0
KHC                             ex       x      22 49 40.4
GERES GERESS Array B  96.16  42  P       P      22 48 59.0 +0.5
      comp=Z,3.8nm,0.9s,baz=255,slow=2.6,SNR=27
MOA   Molln           96.41  43 i PcP    P      22 49 00.3 +0.7
      comp=Z,21nm,1.1s,SNR=14
OBKA  Obir            96.42  44 ePcP     P      22 49 00.6 +0.9
      comp=Z,7.6nm,0.8s
NB2   NORSAR Subarra  96.47  29  P       P      22 49 00.5 +0.9
      comp=Z,3.9nm,0.8s,baz=262,slow=4.6
NOA   NORSAR Array B  96.47  29  P       P      22 49 00.5 +0.9
      comp=Z,8.7nm,0.9s,baz=259,slow=4.6,SNR=14
NOA                              pP      pP     22 49 33.4 +0.9
      comp=Z,0.5nm,0.8s,baz=270,slow=5.3,SNR=2.1
BRG   Berggiesshubel  96.59  40 ePKP     P      22 49 01.8 +1.5
      comp=Z,16nm,1.5s
```

BRG				*e*pPKP	**pP**	**22 49 35.6**	**+2.4**
	comp=Z,9.0nm,1.5s						
BRG	**Berggiesshubel**	**96.59**	**40**	*e*P	**P**	**22 49 01.8**	**+1.5**
BRG				*e*		22 49 35.6	
BRG				pmax	pmax		
	comp=Z,16nm,1.5s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SOKA	**Soboth**	**96.78**	**44**	*i* PcP	**P**	**22 49 01.7**	**+0.4**
	comp=Z,5.9nm,1.0s,SNR=5.5						
PRU	**Pruhonice**	**96.86**	**41**	*e*P	**P**	**22 49 02.6**	**+1.1**
PRU	**Pruhonice**	**96.86**	**41**	*e*P	**P**	**22 49 02.6**	**+1.1**
GOPC	**GO Pecny, Ondr**	**97.00**	**41**	*e*P	Pdif	22 49 03.0	+0.7
GOPC	**GO Pecny, Ondr**	**97.00**	**41**	*e*P	Pdif	22 49 03.0	+0.7
ARSA	**Arzberg**	**97.18**	**43**	*i* PcP	Pdif	22 49 03.8	+0.7
	comp=Z,8.5nm,0.8s						
TREC	**Trest**	**97.39**	**41**	*e*P	Pdif	22 49 05.0	+1.0
TREC	**Trest**	**97.39**	**41**	*e*P	Pdif	22 49 05.0	+1.0
CONA	**Conrad Observa**	**97.48**	**43**	*e*PcP	Pdif	22 49 05.9	+1.4
	comp=Z,21nm,1.6s,SNR=7.3						
UPC	**Upice**	**97.85**	**40**	*e*P	Pdif	22 49 07.9	+1.9
UPC	**Upice**	**97.85**	**40**	*e*P	Pdif	22 49 07.9	+1.9
CHVC	**Chvalec**	**97.89**	**40**	*e*P	**P**	**22 49 06.1**	**-0.1**
OSTC	**Ostas**	**97.99**	**40**	*e*P	Pdif	22 49 08.2	+1.6
OSTC				*e*x	x	22 49 41.9	
DPC	**Dobruska-Polom**	**98.03**	**40**	*e*P	Pdif	22 49 08.4	+1.5
DPC	**Dobruska-Polom**	**98.03**	**40**	*e*P	Pdif	22 49 08.4	+1.5
MODS	**Modra-Piesok**	**98.47**	**42**	*e*PDIF	Pdif	22 49 09.4	+0.6
OKC	**Ostrava-Krasne**	**99.16**	**41**	*e*P	**Pdif**	**22 49 13.0**	**+1.2**
OKC	**Ostrava-Krasne**	**99.16**	**41**	*e*P	**Pdif**	**22 49 13.0**	**+1.2**
VYHS	**Vyhne**	**99.51**	**42**	*e*PDIF	**Pdif**	**22 49 14.9**	**+1.4**
BUR08	**Bucovina Ar. S**	**103.75**	**43**	*e*Pdif	**Pdif**	**22 49 33.3**	**+0.8**
AKASG	**Malin Array Be**	**106.26**	**40**	PP	**PP**	**22 54 05.9**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=277,slow=6.1,SNR=9.1						
BRTR	**Keskin Array B**	**110.19**	**51**	PP	**PP**	**22 54 35.0**	**-3.2**
	comp=Z,1.0nm,0.9s,baz=238,slow=6.8,SNR=4.3						
DZM	**Mont Dzumac**	**112.34**	**241**	*e*LR	LR	23 27 45.6	
	comp=Z,530nm,26.8s						
KBZ	**Khabaz**	**116.49**	**46**	PKP	**PKiKP**	**22 54 14.4**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=195,slow=1.6,SNR=6.3						
RAYN	**Ar Rayn**	**121.34**	**68**	*e*PKPdf	**PKPdf**	**22 54 23.8**	**-0.1**
RAYN	**Ar Rayn**	**121.34**	**68**	*e*PKIKP	**PKPdf**	**22 54 23.8**	**-0.1**
ABKAR	**Akbulak array**	**125.49**	**35**	*e*PKPdf	**PKiKP**	**22 54 32.4**	**+1.0**
STKA	**Stephens Creek**	**126.01**	**218**	PKP	**PKiKP**	**22 54 33.0**	**0.0**
	comp=Z,5.6nm,0.8s,baz=215,slow=3.8,SNR=8.7						
GEYT	**Alibeck**	**129.19**	**49**	PKP	**PKPdf**	**22 54 38.8**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=300,slow=3.3,SNR=8.0						
CTA	**Charters Tower**	**130.04**	**233**	PKP	**PKPdf**	**22 54 40.8**	**+0.1**
	comp=Z,16nm,1.1s,baz=73,slow=3.0,SNR=4.7						
CTAO	**Charters Tower**	**130.04**	**233**	*e*PKPdf	**PKPdf**	**22 54 41.0**	**+0.4**
CTAO	**Charters Tower**	**130.04**	**233**	*e*PKIKP	**PKPdf**	**22 54 41.0**	**+0.4**
ASAR	**Alice Springs**	**136.62**	**219**	PKP	**PKPdf**	**22 54 53.0**	**0.0**
	comp=Z,11nm,1.0s,baz=134,slow=2.3,SNR=32						
CHGR	**Chuyangaron**	**136.67**	**42**	*e*PKPdf	**PKPdf**	**22 54 52.4**	**-0.2**
WB2	**Warramunga Arr**	**138.96**	**224**	*e*PKPdf	**PKPdf**	**22 54 57.1**	**-0.2**
WRAB	**Tennant Creek**	**138.96**	**224**	*e*PKPdf	**PKPdf**	**22 54 58.1**	**+0.8**
WRAB	**Tennant Creek**	**138.96**	**224**	*e*PKIKP	**PKPdf**	**22 54 58.1**	**+0.8**
WRA	**Warramunga Arr**	**138.97**	**224**	PKP	**PKPdf**	**22 54 57.8**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=149,slow=1.2,SNR=25						
KSH	**Kashi**	**140.45**	**37**	*e*PKP	PKPdf	22 54 50.4	-9.2
KSH				sPKP		22 55 48.6	
KSH				PP	**PP**	**22 57 54.1**	**-4.9**
KSH				PKS	PKSdf	22 58 24.4	-11
KSH				SKS	SKSdf	23 01 42.4	-16
KSH				SKKS	SKKSac	23 04 27.5	-14
WMQ	**Urumqi**	**142.78**	**21**	*e*P	**PKPdf**	**22 55 03.3**	**-0.3**
WMQ				LR	LR		
	comp=Z,250nm,29.2s						
WMQ				LR	LR		
	comp=Z,290nm,28.8s						
WMQ				LR	LR		
	comp=Z,66nm,29.3s						
PSA00	**Pilbara Seismi**	**145.74**	**204**	*e*PKPdf	**PKPdf**	**22 55 06.3**	**-3.0**
PSA00				*e*PKPbc	**PKPbc**	**22 55 09.9**	**+0.1**
KSRS	**Korea Array**	**145.84**	**327**	PKPbc	**PKPbc**	**22 55 09.8**	**+0.1**
	comp=Z,21nm,1.0s,baz=38,slow=3.3,SNR=22						
KSRS				pPKPbc	**pPKPdf**	**22 55 43.4**	**-0.1**
	comp=Z,10nm,0.9s,baz=41,slow=2.6,SNR=4.7						
KS15	**Wonju Array Si**	**145.87**	**327**	*e*PKPbc	**PKPab**	**22 55 10.2**	**-0.3**
MTN	**Manton Dam**	**145.98**	**229**	*e*PKPdf	**PKPdf**	**22 55 09.6**	**-0.2**
JNU	**Nakatsue**	**147.06**	**319**	PKPbc	**PKPbc**	**22 55 12.4**	**-1.0**
	comp=Z,22nm,0.9s,baz=55,slow=5.9,SNR=11						
BJI	**Beijing**	**148.44**	**344**	LR	LR	22 55 16.9	
BJT	**Baijiatuau**	**148.47**	**344**	*e*PKPdf	**PKPdf**	**22 55 14.2**	**+0.9**
BJT	**Baijiatuau**	**148.47**	**344**	*e*PKIKP	**PKPdf**	**22 55 14.2**	**+0.9**
HHC	**Hu-ho-hao-te**	**148.64**	**351**	*e*PKPbc	**PKPdf**	**22 55 11.3**	**-2.4**
HHC				pPKP	pPKPbc	22 55 53.0	+1.0
HHC				sPKP		22 56 04.9	
BTO	**Baotou**	**149.09**	**353**	*e*PKPbc	**PKPbc**	**22 55 18.9**	**+0.3**
GTA	**Gaotai**	**150.12**	**9**	*e*PKPbc	**PKPdf**	**22 55 15.4**	**-0.7**
GTA				PKPab	**PKPab**	**22 55 27.8**	**+0.4**
GTA				pPKP	pPKPbc	22 55 57.6	+1.8
GTA				sPKP		22 56 15.3	
FAKI	**Fak Fak**	**150.46**	**246**	*e*PKPbc	**PKPbc**	**22 55 21.7**	**-1.0**
TIY	**Taiyuan**	**151.54**	**348**	*e*PKPbc	**PKiKP**	**22 55 25.0**	**0.0**
HYB	**Hyderabad**	**152.81**	**71**	*i* PKP	**PKPab**	**22 55 39.0**	**-0.3**
SOEI	**Soe**	**153.00**	**224**	P	**PKPdf**	**22 55 18.9**	**-2.3**
LZH	**Lanzhou**	**153.82**	**3**	⇓PKPbc	**PKPdf**	**22 55 17.1**	**-4.7**
LZH				pPKP	pPKPdf	22 55 56.6	+0.1
LZH				sPKP		22 56 11.3	
NJ2	**Nanjing**	**154.65**	**333**	*e*PKPbc	**PKPdf**	**22 55 22.5**	**-0.3**
XAN	**Xi'an**	**155.70**	**353**	P	**PKPab**	**22 55 50.5**	**-0.5**
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
XAN				pmax	pmax		
	comp=Z,56nm,3.6s						
CD2	**Chengdu**	**158.97**	**4**	PKP	**PKPdf**	**22 55 26.8**	**-1.7**
CM31	**Chiang Mai Arr**	**169.35**	**36**	*e*PKPdf	**PKPdf**	**22 55 36.9**	**-1.2**
CM31				*e*PKPab	**PKPab**	**22 56 52.1**	**+1.1**
CMAR	**Chiang Mai Arr**	**169.35**	**36**	PKPab	**PKPab**	**22 56 52.1**	**+1.1**
	comp=Z,4.5nm,0.9s,baz=313,slow=5.9,SNR=6.3						

IDC 15 22:38:08.6±1.8,7°.22S×128°.47E,h0^{km},mb3.5/1, mb1 3.6/4,mb1mx3.4/41,mbtmp3.5/4,ML3.5/3,Error ellipse: s-maj=62.8km s-min=29.8km az=78.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.90**	**24**	Pn	Pn	22 39 51.5	+0.3
	0.4nm,0.3s,baz=238,slow=17,SNR=6.9						
SIJI				Sn	Sn	22 40 58.5	-12
	1.5nm,0.3s,baz=233,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**13.87**	**156**	Pn	Pn	22 41 25.4	-1.2
	0.4nm,0.3s,baz=336,slow=12,SNR=9.1						
WRA				Sn	Sn	22 43 48.4	-13
	0.6nm,0.3s,baz=331,slow=22,SNR=7.0						
ASAR	**Alice Springs**	**17.16**	**163**	P	P	22 42 11.1	-0.7
	0.1nm,0.3s,baz=342,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**67.59**	**328**	P	P	22 49 07.1	-0.1
	0.2nm,0.4s,baz=126,slow=7.5,SNR=5.4						

*IDC **15** 22:39:47.7±3.4,6°.49S×154°.71E,h14^{km}±20^{km},mb4.3/16, mb1 4.5/17,mb1mx4.3/40,mbtmp4.4/17,ML2.7/1,MS3.9/7, Ms1 3.9/7,ms1mx3.5/26,Error ellipse: s-maj=21.8km s-min=15.3km az=102.0*

*NEIC **15** 22:39:52.7±2.6,6°.43S×154°.68E,h52^{km}±6^{km},mb4.7/39, Error ellipse: s-maj=14.3km s-min=12.2km az=58.0*

*ISCJB **15** 22:39:56.5±0.3,6°.57S±0°.04×154°.67E±0°.05,h100^{km}, mb4.5/46,Error ellipse: s-maj=6.7km s-min=5.9km az=150.9*

*BJI **15** 22:39:59.0±0.0,6°.50S×154°.50E,h112^{km},mb5.0/20, mB4.9/13*

ISC 15 22:39:58.2±0.3,6°.49S±0°.05×154°.65E±0°.05,h100^{km},n89, σ2^{s}.45/101,mb4.6/46,1C-1D,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.37**	**312**	*e*Pn	**Pn**	**22 40 48.7**	**-0.2**
HNR	**Honiara**	**6.00**	**120**	Pn	**Pn**	**22 41 23.0**	**-1.6**
	30nm,0.3s,baz=276,slow=5.8,SNR=5.7						
HNR				Sn	**Sn**	**22 42 29.0**	**-3.0**
	22nm,0.3s,baz=277,slow=9.5,SNR=4.0						
HNR				LR	LR	22 43 47.4	
	comp=Z,1μm,18.0s,baz=258,slow=40						
HNR	**Honiara**	**6.00**	**120**	*e*Pn	**Pn**	**22 41 22.9**	**-1.6**
HNR	**Honiara**	**6.00**	**120**	*e*P	**Pn**	**22 41 23.0**	**-1.6**
HNR				*e*S	**Sn**	**22 42 38.0**	**+6.0**
PMG	**Port Moresby**	**7.97**	**248**	Pn	Pn	22 41 44.5	-6.8
	5.3nm,0.3s,baz=20,slow=9.7,SNR=5.9						
PMG				Sn	**Sn**	**22 43 17.2**	**-2.7**
	3.0nm,0.3s,baz=80,slow=22,SNR=3.9						
PMG				LR	LR	22 45 01.6	
	comp=Z,725nm,20.1s,baz=54,slow=39						
PMG	**Port Moresby**	**7.97**	**248**	*e*Pn	**Pn**	**22 41 48.3**	**-3.0**
PMG				*e*Sn	**Sn**	**22 43 17.2**	**-2.7**
PATS	**Pohnpei**	**13.73**	**15**	*e*Pn	**Pn**	**22 43 05.8**	**-2.9**
CTA	**Charters Tower**	**15.79**	**210**	Pn	**Pn**	**22 43 35.6**	**+0.7**
	0.4nm,0.3s,baz=33,slow=13,SNR=12						
CTAO	**Charters Tower**	**15.79**	**210**	*e*Pn	**Pn**	**22 43 33.5**	**-1.5**
	25nm,0.8s						
EIDS	**Eidsvold**	**19.09**	**190**	*e*P	**P**	**22 44 11.4**	**-1.6**
	9.3nm,0.9s						
DZM	**Mont Dzumac**	**19.23**	**145**	P	**P**	**22 44 14.0**	**-0.7**
	1.3nm,0.3s,baz=277,slow=16,SNR=6.9						
DZM				LR	LR	22 50 28.5	
	comp=Z,244nm,19.6s,baz=24,slow=33						
DZM	**Mont Dzumac**	**19.23**	**145**	*e*P	**P**	**22 44 14.2**	**-0.6**
	26nm,1.1s						
TARA	**Tarawa**	**19.83**	**67**	*e*P	**P**	**22 44 18.2**	**-3.0**
	106nm,1.0s						
KWAJ	**Kwajalein Atol**	**19.94**	**41**	*e*P	**P**	**22 44 18.6**	**-3.7**
	211nm,0.8s						
WRAB	**Tennant Creek**	**23.82**	**234**	*e*P	**P**	**22 45 00.8**	**-1.4**
	15nm,0.8s						
WB2	**Warramunga Arr**	**23.82**	**234**	*e*P	**P**	**22 45 00.0**	**-2.2**
	16nm,0.9s						
WR1	**Warramunga Arr**	**23.83**	**234**	*e*P	**P**	**22 45 00.8**	**-1.5**
WR1				*e*PcP	**PcP**	**22 48 45.0**	**+1.8**
WR1				*e*ScP	**ScP**	**22 52 22.4**	**+10**
WRA	**Warramunga Arr**	**23.83**	**234**	P	**P**	**22 45 00.8**	**-1.5**
	10nm,0.8s,baz=56,slow=9.8,SNR=16						
WRA				PcP	**PcP**	**22 48 44.9**	**+1.8**
	2.2nm,0.5s,baz=51,slow=3.3,SNR=5.3						
WRA				ScP	**ScP**	**22 52 22.5**	**+10**
	2.7nm,0.8s,baz=34,slow=3.6,SNR=4.6						
ARMA	**Armidale**	**23.98**	**186**	*e*P	**P**	**22 45 03.5**	**-0.1**
	13nm,1.1s						
SIJI	**Sorong**	**23.99**	**283**	P	**P**	**22 45 04.0**	**+0.2**
	4.2nm,0.5s,baz=81,slow=13,SNR=3.8						
MTN	**Manton Dam**	**24.02**	**253**	*e*P	**P**	**22 45 03.3**	**-0.7**
	18nm,1.1s						
ANA2	**Anatahan**	**24.34**	**339**	*e*P	**P**	**22 45 04.4**	**-2.6**
	48nm,0.7s						
FUNA	**Funafuti**	**24.42**	**96**	*e*P	**P**	**22 45 07.2**	**-0.5**
	104nm,0.9s						
LHI	**Lord Howe Isla**	**25.25**	**171**	*e*P	**P**	**22 45 13.9**	**-1.1**
	56nm,1.1s						
AS31	**Alice Springs**	**26.26**	**227**	*e*P	**P**	**22 45 22.6**	**-1.7**
	1.4nm,0.8s						
AS31				*e*PcP	**PcP**	**22 48 50.1**	**+1.5**
AS31				*e*ScP	**ScP**	**22 52 28.3**	**+8.8**
ASAR	**Alice Springs**	**26.26**	**227**	P	**P**	**22 45 22.6**	**-1.7**
	3.2nm,0.8s,baz=60,slow=9.5,SNR=14						
ASAR				PcP	**PcP**	**22 48 50.1**	**+1.5**
	1.2nm,0.7s,baz=52,slow=3.6,SNR=5.3						
ASAR				ScP	**ScP**	**22 52 28.3**	**+8.8**
	1.8nm,0.9s,baz=47,slow=3.7,SNR=5.6						
ASAR				LR	LR	22 55 06.2	
	comp=Z,242nm,20.4s,baz=38,slow=35						
STKA	**Stephens Creek**	**28.05**	**204**	P	**P**	**22 45 38.5**	**-1.7**
	4.3nm,0.8s,baz=15,slow=11,SNR=6.9						
STKA				LR	LR	22 56 54.6	
	comp=Z,262nm,19.1s,baz=18,slow=37						
STKA	**Stephens Creek**	**28.05**	**204**	*e*P	**P**	**22 45 39.0**	**-1.2**
	1.4nm,1.1s						
THZ	**Tophouse**	**38.70**	**158**	*e*P	**P**	**22 47 15.3**	**+2.9**
	29nm,0.8s						
YULB	**Yu-li**	**44.09**	**313**	*e*P	**P**	**22 47 56.6**	**-0.1**
	16nm,0.7s						
TPUB	**Ta-pu**	**44.52**	**313**	*e*P	**P**	**22 47 58.9**	**-1.2**
	18nm,0.7s						
SSLB	**Suanglung**	**44.58**	**314**	*e*P	**P**	**22 47 58.9**	**-1.7**
	21nm,1.1s						
YHNB	**Yeheng**	**44.83**	**315**	*e*P	**P**	**22 48 02.9**	**+0.2**
	25nm,0.9s						
JNU	**Nakatsue**	**45.40**	**332**	P	**P**	**22 48 05.9**	**-1.1**
	8.0nm,0.7s,baz=76,slow=6.3,SNR=7.0						
JNU	**Nakatsue**	**45.40**	**332**	*e*P	**P**	**22 48 05.9**	**-1.1**
	14nm,0.9s						
KS15	**Wonju Array Si**	**50.34**	**332**	*e*P	**P**	**22 48 44.7**	**-0.2**
	70nm,0.8s						
NJ2	**Nanjing**	**51.31**	**320**	*e*P	**P**	**22 48 53.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	**Petropavlovsk-**	**59.42**	**2**	P	**P**	**22 49 50.2**	**0.0**
	4.3nm,0.8s,baz=193,slow=5.6,SNR=9.0						
PETK				LR	LR	23 11 42.2	
	comp=Z,48nm,21.7s,baz=181,slow=32						
PEA1	**Petropavlovsk-**	**59.43**	**2**	*e*P	**P**	**22 49 50.2**	**0.0**
KMI	**Kunming**	**59.45**	**304**	P	**P**	**22 49 53.3**	**+2.1**
KMI				pP	pwP	22 50 20.3	-0.1
KMI				sP	PcP	22 50 33.5	-4.5
KMI				pmax	pmax		
	comp=Z,24nm,1.0s						
CMAR	**Chiang Mai Arr**	**60.26**	**295**	P	**P**	**22 49 57.5**	**+0.9**
	4.0nm,0.8s,baz=119,slow=5.0,SNR=18						
CD2	**Chengdu**	**61.23**	**310**	P	**P**	**22 50 04.5**	**+1.5**
HHC	**Hu-ho-hao-te**	**61.48**	**324**	*e*P	**P**	**22 50 07.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,40nm,4.9s						
LZH	**Lanzhou**	**63.72**	**316**	⇓P	**P**	**22 50 21.3**	**+1.7**
LZH				pP	pwP	22 50 49.0	+2.5
LZH				sP	PcP	22 51 01.8	+6.9
LZH				PP	**PP**	**22 52 44.5**	**+3.5**
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,65nm,7.9s						
GTA	**Gaotai**	**68.14**	**317**	*e*P	**P**	**22 50 46.6**	**-1.3**
GTA				pP	PcP	22 51 13.8	+0.6
GTA				sP	sP	22 51 26.3	+4.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONA0	**Songino Array**	**68.73**	**327**	*e*P	**P**	**22 50 51.9**	**+0.5**
SONM	**Songino Array**	**68.73**	**327**	P	**P**	**22 50 51.9**	**+0.5**
	1.1nm,0.4s,baz=143,slow=5.3,SNR=8.3						
SHL	**Shillong**	**68.75**	**300**	⇑*i*P	**P**	**22 50 54.5**	**+2.5**
LSA	**Lhasa**	**70.71**	**304**	*e*P	**P**	**22 51 05.9**	**+1.6**
	17nm,0.8s						
VNDA	**Vanda**	**71.10**	**178**	P	**P**	**22 51 05.8**	**+0.6**
	1.1nm,0.8s,baz=326,slow=5.5,SNR=3.9						
VNDA	**Vanda**	**71.10**	**178**	*e*P	**P**	**22 51 05.0**	**-0.3**
JIRN	**Jiri**	**74.23**	**301**	*e*P	**P**	**22 51 25.6**	**+0.4**
PKI	**Pulchoki**	**74.87**	**301**	*e*P	**P**	**22 51 29.4**	**+0.6**
	26nm,0.7s						
PKIN	**Phulchoki**	**74.89**	**301**	*e*P	**P**	**22 51 29.3**	**+0.5**
	18nm,0.5s						
KKN	**Kakani**	**75.04**	**301**	*e*P	**P**	**22 51 30.5**	**+0.8**
	55nm,0.7s						
DMN	**Daman**	**75.14**	**301**	*e*P	**P**	**22 51 31.3**	**+1.0**
	107nm,0.7s						
GKN	**Gorkha**	**75.65**	**301**	*e*P	**P**	**22 51 33.9**	**+0.8**
	104nm,0.7s						
KOLN	**Koldanda**	**76.47**	**300**	*e*P	**P**	**22 51 38.4**	**+0.6**
	95nm,0.8s						
DANN	**Dangsing**	**76.49**	**301**	*e*P	**P**	**22 51 38.3**	**+0.3**
	78nm,0.7s						
WMQ	**Urumqi**	**78.22**	**317**	*e*P	**P**	**22 51 48.3**	**+1.2**
WMQ				LR	LR		
	comp=N,250nm,29.1s						
WMQ				LR	LR		
	comp=E,260nm,28.9s						
WMQ				LR	LR		
	comp=Z,340nm,29.2s						
WRH	**Wood River Hil**	**82.43**	**22**	*e*P	**P**	**22 52 08.0**	**-1.1**
	7.4nm,1.0s						
MKAR	**Makanchi Array**	**82.80**	**319**	P	**P**	**22 52 12.1**	**+0.7**
	3.6nm,0.7s,baz=100,slow=5.6,SNR=35						
MAKZ	**Makanchi**	**83.01**	**319**	*e*P	**P**	**22 52 12.9**	**+0.4**
	5.0nm,1.0s						
ILAR	**Eielson Array**	**83.03**	**22**	P	**P**	**22 52 11.2**	**-0.9**
	1.2nm,0.8s,baz=251,slow=4.4,SNR=7.1						
ILAR				LR	LR	23 26 40.3	
	comp=Z,100nm,19.5s,baz=260,slow=34						
ILB	**Eielson Array**	**83.03**	**22**	*e*P	**P**	**22 52 11.2**	**-0.9**
	4.5nm,1.0s						
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**22 52 15.3**	**+0.6**
	3.3nm,0.6s,baz=330,slow=1.7,SNR=21						
QSPA	**South Pole Qui**	**83.49**	**180**	*e*P	**P**	**22 52 15.6**	**+0.9**
	12nm,1.1s						
ZAA0	**Zalesovo Array**	**83.57**	**326**	*e*P	**P**	**22 52 14.4**	**-0.7**
	2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**83.57**	**326**	P	**P**	**22 52 13.8**	**-1.3**
	0.9nm,0.4s,baz=134,slow=6.2,SNR=6.2						
TOLK	**Toolik Lake Re**	**84.24**	**18**	*e*P	**P**	**22 52 19.1**	**+0.7**
	11nm,0.4s						
MAW	**Mawson**	**84.73**	**203**	P	**P**	**22 52 21.6**	**+0.8**
	2.3nm,0.6s,baz=77,slow=8.4,SNR=4.5						
MAW	**Mawson**	**84.73**	**203**	*e*P	**P**	**22 52 21.6**	**+0.8**
	0.6nm,0.6s						
KSH	**Kashi**	**85.42**	**310**	P	**P**	**22 52 26.5**	**+1.5**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**86.22**	**322**	*e*P	**P**	**22 52 28.2**	**-0.3**
	2.7nm,1.0s						
NIL	**Nilore**	**86.44**	**304**	*e*P	**P**	**22 52 30.7**	**+0.6**
	8.8nm,0.7s						
AFDM	**Forest Hills D**	**89.67**	**51**	*e*P	**P**	**22 52 43.5**	**-1.8**
	2.7nm,0.8s						
NVAR	**Mina Array Bea**	**91.67**	**52**	P	**P**	**22 52 56.6**	**+1.7**
	3.1nm,0.8s,baz=256,slow=7.3,SNR=15						
R11A	**Troy Canyon, C**	**93.79**	**52**	*e*P	**P**	**22 53 03.6**	**-1.0**
	2.8nm,1.1s						
SHPR	**Sheep Range**	**93.96**	**54**	*e*P	**P**	**22 53 05.7**	**+0.3**
	2.2nm,0.8s						
PDAR	**Pinedale Array**	**98.61**	**48**	P	**P**	**22 53 26.6**	**+0.1**
	0.4nm,0.8s,baz=243,slow=1.8,SNR=3.7						
NOA	**NORSAR Array B**	**119.11**	**341**	PP	PP	22 59 57.1	+1.2
	1.7nm,0.7s,baz=45,slow=8.2,SNR=3.3						
SDV	**Santo Domingo**	**135.08**	**84**	PKP	**PKPdf**	**22 59 08.1**	**+0.9**
	6.8nm,0.7s,baz=182,slow=0.2,SNR=8.2						
SDV	**Santo Domingo**	**135.08**	**84**	*e*PKPdf	**PKPdf**	**22 59 07.2**	**0.0**
ESDC	**Sonseca Array**	**141.76**	**333**	PP	PP	23 02 23.9	+1.1
	0.3nm,0.6s,baz=30,slow=5.6,SNR=4.2						
PTGA	**Pitinga**	**144.71**	**100**	PKP	**PKPab**	**22 59 23.3**	**-0.1**
	4.4nm,0.5s,baz=292,slow=19,SNR=8.4						
BDFB	**Brasilia**	**148.58**	**135**	PKPbc	**PKPbc**	**22 59 34.7**	**0.0**
	9.5nm,0.8s,baz=136,slow=1.9,SNR=7.8						
TOA0	**Torodi Ar. Sit**	**152.56**	**286**	*e*PKPdf	**PKPdf**	**22 59 36.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**152.56**	**286**	PKP	**PKPdf**	**22 59 37.1**	**+0.1**
	0.6nm,0.7s,baz=60,slow=1.6,SNR=3.6						
TORD				PKPbc	**PKPbc**	**22 59 42.9**	**-1.2**
	4.0nm,0.6s,baz=84,slow=2.4,SNR=28						
TOA1	**Torodi Ar. Sit**	**152.56**	**286**	*e*PKPdf	**PKPdf**	**22 59 37.1**	**+0.1**
TOA1				*e*PKPbc	**PKPbc**	**22 59 42.9**	**-1.2**

MAN 15 22:43:08.4,5°.51N×127°.14E,h129^{km},mb4.6,ML3.5, MS3.4,1C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.54**	**293**	*e*P	Pn	22 43 37.6	+0.8
DDMP				*e*S	Sn	22 44 00.2	+1.8
MATI	**Mati**	**1.67**	**329**	*e*P	Pn	22 43 38.7	+0.3
GSPH	**General Santos**	**2.25**	**285**	⇑*i*P	Pn	22 43 46.5	+1.0
KCP	**Kidapawan**	**2.52**	**306**	⇓*i*P	Pn	22 43 50.2	+1.4
KCP				*i* S	Sn	22 44 20.6	+0.6
SKMP	**Bagumbayan, Su**	**2.77**	**291**	*e*P	Pn	22 43 52.1	+0.2
BUKP	**Musuan**	**3.13**	**319**	*e*P	Pn	22 43 58.2	+1.5
BUKP				*e*S	Sn	22 44 31.4	-2.6

*IDC **15** 22:44:07.0±0.8,6°.48S×154°.71E,h0^{km},mb4.2/6, mb1 4.3/7,mb1mx4.0/39,mbtmp4.3/7,ML2.2/1,Error ellipse: s-maj=33.1km s-min=22.2km az=119.0*

*ISCJB **15** 22:44:13.0±0.4,6°.42S±0°.06×154°.53E±0°.07,h48^{km}, mb4.5/17,Error ellipse: s-maj=10.3km s-min=8.1km az=43.5*

*NEIC **15** 22:44:14.3±2.2,6°.53S×154°.63E,h50^{km}±9^{km},mb4.6/15, Error ellipse: s-maj=17.4km s-min=14.6km az=53.0*

ISC 15 22:44:14.2±0.5,6°.42S±0°.08×154°.48E±0°.07,h48^{km},n37, σ1^{s}.62/45,mb4.4/16,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.20**	**314**	*e*Pn	Pn	22 45 12.8	+11
HNR	**Honiara**	**6.19**	**119**	*e*Pn	**Pn**	**22 45 45.5**	**+2.5**
HNR				*e*Sn	Sn	22 46 41.0	-11
HNR	**Honiara**	**6.19**	**119**	*e*P	**Pn**	**22 45 45.0**	**+2.0**
HNR				*e*S	Sn	22 47 03.0	+11
PMG	**Port Moresby**	**7.83**	**247**	Pn	**Pn**	**22 46 06.3**	**+0.7**
	1.7nm,0.3s,baz=56,slow=7.3,SNR=2.2						
PMG				Sn	**Sn**	**22 47 38.4**	**+5.4**
	1.6nm,0.3s,baz=73,slow=18,SNR=3.1						
PMG	**Port Moresby**	**7.83**	**247**	*e*Pn	**Pn**	**22 46 07.2**	**+1.5**
PMG				*e*Sn	**Sn**	**22 47 29.8**	**-3.2**
COEN	**Coen**	**13.41**	**235**	*e*Pn	**P**	**22 47 26.6**	**-3.4**
PATS	**Pohnpei**	**13.71**	**16**	*e*Pn	**Pn**	**22 47 24.8**	**-1.3**
PATS				*e*Sn	Sn	22 49 39.5	-17
CTA	**Charters Tower**	**15.76**	**210**	Pn	**P**	**22 47 57.2**	**+1.0**
	0.4nm,0.3s,baz=32,slow=13,SNR=7.8						
DZM	**Mont Dzumac**	**19.38**	**145**	P	**P**	**22 48 36.0**	**-0.3**
	1.2nm,0.3s,baz=290,slow=13,SNR=6.6						
DZM	**Mont Dzumac**	**19.38**	**145**	*e*P	**P**	**22 48 32.5**	**-3.7**
	40nm,1.3s						
GUMO	**Guam**	**22.05**	**334**	*e*P	**P**	**22 49 03.5**	**-1.5**
	128nm,1.3s						
FAKI	**Fak Fak**	**22.43**	**278**	*e*P	**P**	**22 49 10.0**	**+0.8**
	155nm,1.7s						
WB2	**Warramunga Arr**	**23.72**	**234**	*e*P	**P**	**22 49 23.2**	**+1.1**
	11nm,1.0s						
WR1	**Warramunga Arr**	**23.73**	**234**	*e*P	**P**	**22 49 22.6**	**+0.4**
WR1				*e*PcP	**PcP**	**22 53 05.9**	**+0.6**
WRA	**Warramunga Arr**	**23.73**	**234**	P	**P**	**22 49 22.6**	**+0.4**
	6.6nm,0.7s,baz=58,slow=9.4,SNR=11						
WRA				PcP	**PcP**	**22 53 05.9**	**+0.6**
	2.0nm,0.7s,baz=62,slow=3.9,SNR=4.4						
ARMA	**Armidale**	**24.02**	**186**	*e*P	**P**	**22 49 22.8**	**-2.0**
	44nm,1.8s						
ANA2	**Anatahan**	**24.22**	**339**	*e*P	**P**	**22 49 28.2**	**+1.6**
	81nm,0.9s						
AS31	**Alice Springs**	**26.18**	**227**	*e*P	**P**	**22 49 44.4**	**-0.1**
	1.2nm,0.9s						
ASAR	**Alice Springs**	**26.18**	**227**	P	**P**	**22 49 44.4**	**-0.1**
	2.1nm,0.7s,baz=63,slow=9.5,SNR=8.0						
ASAR				PcP	**PcP**	**22 53 11.6**	**+0.9**
	0.5nm,0.7s,baz=64,slow=2.2,SNR=3.2						
STKA	**Stephens Creek**	**28.04**	**204**	P	**P**	**22 50 00.2**	**-0.8**
	2.3nm,0.7s,baz=25,slow=11,SNR=5.4						
STKA				PcP	**PcP**	**22 53 15.1**	**+0.2**
	1.3nm,0.7s,baz=72,slow=2.8,SNR=3.2						
STKA	**Stephens Creek**	**28.04**	**204**	*e*P	**P**	**22 49 59.0**	**-2.0**
	3.7nm,1.6s						
STKA				*e*PcP	**PcP**	**22 53 15.1**	**+0.2**
SONA0	**Songino Array**	**68.58**	**327**	*e*P	**P**	**22 55 12.8**	**+0.6**
SONM	**Songino Array**	**68.58**	**327**	P	**P**	**22 55 12.8**	**+0.6**
	3.2nm,0.7s,baz=135,slow=6.3,SNR=4.4						
VNDA	**Vanda**	**71.17**	**178**	P	**P**	**22 55 26.7**	**-0.7**
	0.8nm,0.8s,baz=336,slow=5.7,SNR=4.4						
QSPA	**South Pole Qui**	**83.55**	**180**	*e*P	**P**	**22 56 37.0**	**0.0**
	35nm,2.0s						
MAW	**Mawson**	**84.73**	**203**	P	**P**	**22 56 43.0**	**+0.2**
	1.4nm,0.8s,baz=68,slow=7.9,SNR=4.3						
MAW	**Mawson**	**84.73**	**203**	*e*P	**P**	**22 56 43.0**	**+0.2**
	2.5nm,1.4s						
NV01	**Mina Array Sit**	**91.77**	**52**	*e*P	**P**	**22 57 17.3**	**-0.1**
NVAR	**Mina Array Bea**	**91.77**	**52**	P	**P**	**22 57 17.3**	**-0.1**
	10nm,0.8s,baz=255,slow=6.3,SNR=6.5						
NV11	**Mina Array Sit**	**91.88**	**52**	*e*P	**P**	**22 57 18.5**	**+0.7**
	1.0nm,0.8s						
R11A	**Troy Canyon, C**	**93.88**	**52**	*e*P	**P**	**22 57 28.2**	**+1.1**
	29nm,1.0s						
AKTO	**Aktyubinsk**	**99.03**	**320**	P	**Pdif**	**22 57 50.9**	**+1.0**
	8.2nm,0.7s,baz=73,slow=4.0,SNR=3.3						
WVT	**Waverly**	**116.04**	**53**	*e*PKPdf	**PKiKP**	**23 02 54.6**	**+2.2**
PTGA	**Pitinga**	**144.89**	**100**	PKP	**PKPab**	**23 03 44.7**	**-1.6**
	2.9nm,0.6s,baz=193,slow=3.2,SNR=6.1						
BDFB	**Brasilia**	**148.75**	**135**	PKPbc	**PKPbc**	**23 03 56.7**	**-0.8**
	3.7nm,0.6s,baz=244,slow=4.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**152.38**	**286**	PKP	**PKPdf**	**23 03 58.9**	**-0.3**
	0.4nm,0.7s,baz=92,slow=0.2,SNR=2.6						
TORD				PKPbc	**PKPbc**	**23 04 05.8**	**-0.2**
	3.1nm,0.8s,baz=78,slow=2.3,SNR=13						
TOA1	**Torodi Ar. Sit**	**152.38**	**286**	*e*PKPdf	**PKPdf**	**23 03 58.9**	**-0.3**
TOA1				*e*PKPbc	**PKPbc**	**23 04 05.8**	**-0.2**

*NIED **15** 22:45:00,39°.60N×142°.30E,h71^{km},Mw5.0 Best double couple: $M_0$3.33000×10^{16} NP1:ϕ_s59.00000°,δ16.00000°, λ-65.00000°. NP2:ϕ_s213.00000°,δ75.00000°, λ-97.00000°.*

*NEIC **15** 22:45:57.9±1.8,39°.62N×142°.26E,h63^{km}±2^{km},mb5.2/346, Error ellipse: s-maj=12.3km s-min=6.9km az=111.0*

NEIC Felt [III] at Misawa. Also felt at Morioka and Sendai. Recorded [4 JMA] in Aomori and Iwate.

MOS ***15*** *22:45:57.2±0.8, 39°.65N×142°.15E, h66^{km}, mb5.5/56, MS4.2/12, Error ellipse: s-maj=6.0km s-min=3.7km az=102.1*

BJI ***15*** *22:45:57.3±0.0, 39°.55N×142°.03E, h71^{km}, mb5.4/72, mB5.2/38, Ms4.3/62, Ms7 4.1/58*

ISCJB ***15*** *22:45:58.4±0.2, 39°.62N±0°.01×142°.19E±0°.02, h77^{km}±1^{km}, mb5.2/165, Error ellipse: s-maj=2.8km s-min=2.0km az=41.4*

JMA ***15*** *22:45:58.7±0.1, 39°.60N×142°.29E, h70^{km}±1^{km}, M5.1 Broadband fault plane solution: P waves. NP1: ϕ_s213.00000°, δ75.00000°, λ-90.00000°. NP2: ϕ_s33.00000°, δ15.00000°, λ-90.00000°. Principal axes: T Plg30.0000°, Azm303.0000°; N Plg0.0000°, Azm33.0000°; P Plg60.0000°, Azm123.0000°;*

JMA Felt IV J1.

IDC ***15*** *22:45:58.1±0.7, 39°.58N×142°.23E, h64^{km}±5^{km}, mb4.8/44, mb1 4.8/50, mb1mx4.8/58, mbtmp5.1/50, MS4.0/27, Ms1 4.0/27, ms1mx3.8/44 Error ellipse: s-maj=11.4km s-min=7.9km az=89.0*

ISC 15 22:45:57.8±0.3**, 39°.62N**±0°.02×**142°.26E**±0°.03**, h64**^{km}±2^{km}**, h64**^{km}**:pP-P, n1018,** σ1^{s}**36**/1095**, mb5.2**/184**, 129C-37D,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	0.34	263	⇓P	Pn	22 46 10.3	+1.6
MIYJ				S	Sn	22 46 18.8	+2.2
JTH	Tanohata	0.44	316	⇓P	Pn	22 46 11.2	+1.6
JTH				S	Sn	22 46 20.4	+2.2
OFUJ	Ofunato	0.71	221	⇓P	Pn	22 46 13.6	+1.2
OFUJ				S	Sn	22 46 24.3	+1.2
JKEN	Kujiedanarisaw	0.72	324	⇓P	Pn	22 46 14.1	+1.5
JKEN				S	Sn	22 46 25.6	+2.1
JOM	Ohasama	0.76	259	⇓P	Pn	22 46 14.8	+1.7
JOM				S	Sn	22 46 26.6	+2.3
JKZ	Kuzumaki	0.81	297	⇓P	Pn	22 46 15.5	+1.9
JKZ				S	Sn	22 46 27.5	+2.2
JANG	Nango	0.95	323	⇓P	Pn	22 46 16.7	+1.3
JANG				S	Sn	22 46 29.9	+1.5
JKMT	Kesennumamotoy	1.01	217	⇓P	Pn	22 46 17.1	+0.9
JSZI	Iwateshizukuis	1.02	277	⇓P	Pn	22 46 17.8	+1.6
JSZI				S	Sn	22 46 32.6	+2.7
JMK	Ichinoseki	1.05	231	⇓P	Pn	22 46 17.8	+1.2
JMK				S	Sn	22 46 31.8	+1.2
JRG	Rokugo	1.28	261	⇓P	Pn	22 46 21.1	+1.5
JRG				eS	Sn	22 46 38.5	+2.5
JIO	Ouri	1.36	212	⇓P	Pn	22 46 21.4	+0.7
JIO				S	Sn	22 46 37.8	-0.1
JAH	Hinai	1.37	295	⇑P	Pn	22 46 22.6	+1.7
JAH				S	Sn	22 46 41.1	+2.9
JIKH	Ishinomakikobu	1.45	206	⇑P	Pn	22 46 22.1	+0.3
JOFO	Osakifurukawao	1.46	226	⇓P	Pn	22 46 23.4	+1.4
JTM	Tenmabayashi	1.48	322	⇓P	Pn	22 46 23.8	+1.5
JTM				S	Sn	22 46 42.9	+2.1
JYW	Yuwa	1.59	268	⇑P	Pn	22 46 25.6	+1.9
JYK	Kaneyama	1.63	245	⇓P	Pn	22 46 25.9	+1.5
JYK				S	Sn	22 46 46.6	+2.1
JNTW	Noshirotokiwa	1.74	293	⇑P	Pn	22 46 27.9	+2.1
JOU	Okura	1.76	225	⇓P	Pn	22 46 27.2	+1.0
JOU				S	Sn	22 46 49.0	+1.4
JHHS	Hirosakihyakuz	1.79	306	⇑P	Pn	22 46 28.8	+2.4
JAHD	Aomorihigashid	1.79	337	⇑P	Pn	22 46 27.8	+1.3
JIW	Iwasaki	1.98	300	⇑P	Pn	22 46 31.0	+1.9
JOT	Ohata	1.99	333	⇑P	Pn	22 46 30.3	+1.1
JOT				S	Sn	22 46 54.3	+1.3
JSI2	Shiura 2	2.02	316	⇑P	Pn	22 46 31.5	+2.0
JTB	Tobi-shima	2.14	259	⇑P	Pn	22 46 32.1	+0.9
JMST	Minamisoumatoc	2.17	210	⇑P	Pn	22 46 31.8	+0.1
JYS	Shirataka	2.21	232	⇓P	Pn	22 46 33.8	+1.6
JYA	Atsumi	2.23	243	⇑P	Pn	22 46 34.1	+1.7
JSR	Shiriuchi	2.37	324	⇑P	Pn	22 46 36.1	+1.8
JKB	Kayabe	2.45	338	⇑P	Pn	22 46 36.6	+1.2
JOG3	Oga3	2.47	278	⇑P	Pn	22 46 29.8	-5.9
ERM	Erimo	2.49	16	ePn	Pn	22 46 36.8	+0.8
ERM				eSn	Sn	22 46 56.8	-8.4
ERM	Erimo	2.49	16	c iP	Pn	22 46 36.5	+0.5
JFK	Kawauchi	2.50	206	⇑P	Pn	22 46 36.2	+0.1
JOMM	Oshimamatsumae	2.56	319	⇑P	Pn	22 46 38.9	+1.9
JAW	Awa shima	2.62	245	⇑P	Pn	22 46 39.5	+1.8
ONAJ	Iwakimizuishiy	2.76	205	⇑P	Pn	22 46 39.6	-0.2
JYM2	Yakumo 2	2.88	331	⇑P	Pn	22 46 43.0	+1.7
JNS	Sasagawa	2.92	233	P	Pn	22 46 43.6	+1.8
JNB	Noboribetsu	2.99	342	⇑P	Pn	22 46 43.5	+0.7
JOSM	Okushiri--Mats	3.24	320	⇑P	Pn	22 46 47.7	+1.5
JEW	Eniwo	3.28	350	⇑P	Pn	22 46 47.8	+1.1
JHO	Hitachi	3.29	204	⇑P	Pn	22 46 46.2	-0.6
JHST	Hiyamasetana	3.33	328	⇑P	Pn	22 46 49.6	+2.2
JSH	Shimam	3.46	332	⇑P	Pn	22 46 50.9	+1.8
JHK	Hiroka	3.48	228	⇑P	Pn	22 46 51.3	+1.9
JIZZ	Izumozaki	3.48	234	⇑P	Pn	22 46 52.2	+2.8
JSD	Sado	3.50	244	⇑P	Pn	22 46 51.4	+1.6
JHYU	Hitachinakayam	3.53	203	P	Pn	22 46 49.5	-0.7
JKT	Katashina	3.71	221	⇑P	Pn	22 46 55.0	+2.3
JAG	Ashikaga	3.88	216	⇑P	Pn	22 46 56.5	+1.5
JAB	Ashibetsu	3.88	360	⇑P	Pn	22 46 56.6	+1.6
JIHU	Itakohorinouch	3.90	201	P	Pn	22 46 55.4	+0.2
JSK	Shakotan	3.96	341	⇑P	Pn	22 46 57.6	+1.5
JJN	Nakama	4.08	233	⇑P	Pn	22 47 00.4	+2.7
JHR	Hokuryu	4.14	355	P	Pn	22 46 59.9	+1.4
JKK2	Kamakawa 2	4.27	5	⇑P	Pn	22 47 01.2	+1.0
JNK	Nakash	4.37	24	⇑P	Pn	22 47 00.5	-1.2
JSZ	Suzu	4.41	242	⇑P	Pn	22 47 04.1	+1.9
MJAR	Matsushiro Arr	4.43	227	P	Pn	22 47 04.5	+1.9
	5.2nm,0.3s,baz=28,slow=13,SNR=607						
MJAR				LR	LR	22 48 60.0	
	comp=Z,1µm,22.0s,baz=45,slow=42						
MJB9	Matsu-Tunnel	4.43	227	ePn	Pn	22 47 05.0	+2.5
MAJO	Matsushiro	4.43	227	ePn	Pn	22 47 05.0	+2.4
MAJO	Matsushiro	4.43	227	c iP	Pn	22 47 04.7	+2.1
MAT	Matsushiro	4.43	227	P	Pn	22 47 04.8	+2.2
MAT				S	Sn	22 47 54.8	+1.9
MAT	Matsushiro	4.43	227	P	Pn	22 47 04.9	+2.3
ASAJ	Asahikawa	4.50	3	P	Pn	22 47 04.6	+1.1
	150nm,0.3s,baz=216,slow=11,SNR=971						
ASAJ				S	Sn	22 47 55.2	+0.7
	190nm,0.3s,baz=72,slow=19,SNR=11						
ASAJ	Asahikawa	4.50	3	⇑P	Pn	22 47 04.5	+1.1
JHG	Hegura jima	4.53	249	⇑P	Pn	22 47 05.9	+2.0
JNG	Nsakai	4.59	227	P	Pn	22 47 07.0	+2.2
JKUC	kamogawauchiur	4.74	201	P	Pn	22 47 06.8	0.0
GLVR	Golovnino	4.79	30	eP	Pn	22 47 09.6	+2.3
GLVR				eS	Sn	22 47 58.5	-2.9
GLVR				pmax	pmax		
	comp=N,296nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.3s						
GLVR				pmax	pmax		
	comp=E,223nm,0.2s						
GLVR				smax	smax		
	comp=E,6µm,0.8s						
GLVR				smax	smax		
	comp=N,5µm,0.6s						
JSS	Shosan	4.79	356	⇑P	Pn	22 47 08.6	+1.3
JTT	Ttatey	4.91	234	P	Pn	22 47 11.8	+2.7
BSO3	Boso 3	5.01	197	P	Pn	22 47 09.7	-0.4
BSO1	Boso 1	5.06	192	P	Pn	22 47 09.8	-0.8
JYN	Shimob	5.06	217	P	Pn	22 47 12.6	+1.4
JJH	Hakui	5.08	240	⇑P	Pn	22 47 13.7	+2.3
GRPR	Tuman	5.10	30	eP	Pn	22 47 13.5	+1.9
GRPR				eS	Sn	22 48 05.8	-3.3
GRPR				pmax	pmax		
	comp=N,309nm,0.3s						
GRPR				pmax	pmax		
	comp=E,172nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,664nm,0.3s						
GRPR				smax	smax		
	comp=E,4µm,0.5s						
GRPR				smax	smax		
	comp=N,1µm,0.2s						
LAGR	Lagunnoye	5.16	30	eP	Pn	22 47 14.7	+2.3
LAGR				eS	Sn	22 48 07.4	-3.1
LAGR				pmax	pmax		
	comp=Z,1µm,0.3s						
LAGR				pmax	pmax		
	comp=N,400nm,0.2s						
LAGR				pmax	pmax		
	comp=E,286nm,0.1s						
LAGR				smax	smax		
	comp=N,3µm,0.4s						
LAGR				smax	smax		
	comp=E,7µm,0.5s						
YUK	Yuzh-Kuril'sk	5.17	30	i P	Pn	22 47 14.6	+2.1
YUK				i S	Sn	22 48 07.7	-3.1
YUK				pmax	pmax		
	comp=Z,597nm,0.4s						
YUK				pmax	pmax		
	comp=E,135nm,0.3s						
YUK				pmax	pmax		
	comp=N,160nm,0.2s						
YUK				smax	smax		
	comp=N,4µm,0.5s						
YUK				smax	smax		
	comp=E,2µm,0.3s						
JGN	Niukaw	5.17	231	P	Pn	22 47 15.3	+2.6
AJI	Ajiro2	5.22	210	P	Pn	22 47 12.8	-0.4
JNY	Yasuok	5.50	221	P	Pn	22 47 19.1	+1.8
SHZ3	Shizuoka 3	5.57	217	P	Pn	22 47 19.6	+1.4
JGF	Kuroka	5.59	226	P	Pn	22 47 20.7	+2.3
JKG	Kaga	5.75	236	P	Pn	22 47 23.0	+2.5
INU	Inuyama	5.96	226	ePn	Pn	22 47 25.5	+2.1
JMKN	Mikurajimanish	6.10	201	P	Pn	22 47 24.1	-1.3
JFM	Mihama	6.44	233	P	Pn	22 47 32.7	+2.7
TSUJ	Tsu 2	6.76	225	P	Pn	22 47 37.1	+2.7
JHJ2	Mitsune	6.79	198	ePn	Pn	22 47 33.6	-1.1
JHJ2				eSn	Sn	22 48 45.1	-5.4
JHJ	Hachijo jima 2	6.79	198	P	Pn	22 47 32.8	-1.9
	comp=E,30nm,0.3s,baz=331,slow=19,SNR=26						
JHJ				S	Sn	22 48 43.9	-6.7
	comp=E,79nm,0.3s,baz=113,slow=22,SNR=7.5						
TEY	Ternei	6.85	324	⇑iP	Pn	22 47 37.4	+1.9
TEY				pmax	pmax		
	comp=E,200nm,2.3s						
TEY				pmax	pmax		
	comp=N,400nm,1.2s						
TEY				pmax	pmax		
	comp=Z,500nm,1.1s						
TEY				pmax	pmax		
	comp=N,270nm,0.9s						
TEY				pmax	pmax		
	comp=E,260nm,0.9s						
TEY				pmax	pmax		
	comp=Z,360nm,0.9s						
TEY				pmax	pmax		
	comp=E,710nm,0.7s						
TEY				pmax	pmax		
	comp=N,760nm,0.6s						
TEY				pmax	pmax		
	comp=Z,1µm,0.6s						
KUR	Kuril'sk	6.98	35	d iP	Pn	22 47 38.0	+0.7
KUR				i S	Sn	22 48 52.1	-3.0
KUR				pmax	pmax		
	comp=Z,554nm,0.7s						
KUR				pmax	pmax		
	comp=E,329nm,0.8s						
KUR				pmax	pmax		
	comp=N,312nm,0.5s						
KUR				smax	smax		
	comp=E,622nm,0.4s						
KUR				smax	smax		
	comp=N,366nm,0.6s						
KUR				smax	smax		
	comp=E,1µm,1.1s						
KUR				smax	smax		
	comp=N,700nm,1.2s						
KUR				MLR	MLR		
	comp=Z,900nm,14.0s						
YSS	Yuzh-Sakhalins	7.34	3	ePn	Pn	22 47 43.3	+1.0
YSS				eSn	Sn	22 49 05.6	+1.6
YSS	Yuzh-Sakhalins	7.34	3	eP	Pn	22 47 43.3	+1.0
YSS				e		22 49 05.6	
MSHR	Mys Shultsa	8.89	293	i P	Pn	22 48 05.1	+1.7
USA0B	Ussuriysk Arra	8.92	304	ePn	Pn	22 48 06.4	+2.5
USRK	Ussuriysk Ar.	8.92	304	P	Pn	22 48 06.2	+2.4
	comp=Z,11nm,0.3s,baz=122,slow=13,SNR=62						
MDJ	Mudanjiang	10.65	302	P	Pn	22 48 30.1	+2.6
MDJ				sP		22 48 51.8	
MDJ				S	Sn	22 50 33.5	+8.5
MDJ				pmax	pmax		
	comp=Z,150nm,0.9s						
MDJ				LR	LR		
	comp=Z,670nm,22.1s						
MDJ				LR	LR		
	comp=Z,1µm,20.6s						
MDJ				LR	LR		
	comp=Z,2µm,20.3s						
JNU	Nakatsue	11.23	238	P	Pn	22 48 35.9	+0.4
	comp=Z,2.0nm,0.3s,baz=63,slow=7.7,SNR=13						
JNU				LR	LR	22 53 02.9	
	comp=Z,602nm,21.2s,baz=45,slow=38						
JNU	Nakatsue	11.23	238	ePn	Pn	22 48 36.2	+0.7
TYV	Tymovskoe	11.25	1	eP	Pn	22 48 35.8	+0.2
TYV				eS	Sn	22 50 32.3	-7.3
TYV				pmax	pmax		
	comp=Z,100nm,1.9s						
TYV				pmax	pmax		
	comp=Z,91nm,0.9s						
TYV				smax	smax		
	comp=N,100nm,4.2s						
TYV				MLR	MLR		
	comp=Z,900nm,21.0s						
KSRS	Korea Array	11.44	264	P	Pn	22 48 42.4	+4.2
	comp=Z,3.9nm,0.3s,baz=84,slow=14,SNR=55						
KSRS				S	Sn	22 50 49.1	+4.8
	comp=Z,4.5nm,0.3s,baz=70,slow=23,SNR=12						
KSRS				LR	LR	22 52 45.9	
	comp=Z,615nm,19.1s,baz=80,slow=36						
GRNR	Gornyy	11.88	342	eP	Pn	22 48 45.1	+0.8
GRNR				pmax	pmax		
	comp=N,42nm,0.6s						
GRNR				pmax	pmax		
	comp=E,42nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,74nm,0.6s						
KLR	Kul'dur	12.19	325	P	Pn	22 48 48.3	-0.1
	comp=Z,6.4nm,0.3s,baz=129,slow=12,SNR=189						
KLR				LR	LR	22 53 26.9	
	comp=Z,917nm,18.4s,baz=158,slow=37						
KLR	Kul'dur	12.19	325	c iP	Pn	22 48 47.4	-1.0
KLR				pmax	pmax		
	comp=Z,85nm,0.8s						
TJN	Taejon	12.19	259	ceP	Pn	22 48 50.2	+1.7
CN2	Changchun	13.24	294	eP	Pn	22 49 01.8	-0.9
CN2				epP	P	22 49 12.5	+2.1
CN2				eS	Sn	22 51 27.1	-1.0
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				LR	LR		
	comp=Z,290nm,16.0s						
CN2				LR	LR		
	comp=Z,720nm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
NKL	Nikolayevsk	13.58	356	eP	Pn	22 49 06.5	-0.7
NKL				pmax	pmax		
	comp=N,74nm,1.0s						
NKL				pmax	pmax		
	comp=E,43nm,1.0s						
NKL				pmax	pmax		
	comp=Z,120nm,1.0s						
DL2	Dalian	16.00	274	P	Pn	22 49 38.8	+0.1
DL2				epP	pP	22 49 50.8	-3.9
DL2				eS	Sn	22 52 33.8	-1.3
DL2				pmax	pmax		
	comp=Z,160nm,0.8s						
DL2				pmax	pmax		
	comp=Z,370nm,4.0s						
DL2				LR	LR		
	comp=Z,600nm,18.9s						
DL2				LR	LR		
	comp=Z,600nm,25.1s						
DL2				LR	LR		
	comp=Z,810nm,24.3s						
PEA0B	Petropavlovsk-	17.14	33	eP	P	22 49 53.5	-0.1
	comp=Z,30nm,0.9s						
PETK	Petropavlovsk-	17.14	33	P	P	22 49 53.9	+0.3
	comp=Z,0.5nm,0.3s,baz=204,slow=10,SNR=9.2						
PETK				PcP	PcP	22 54 33.1	-0.5
	comp=Z,0.3nm,0.3s,baz=211,slow=1.4,SNR=4.2						
PETK				LR	LR	22 56 48.9	
	comp=Z,174nm,18.5s,baz=216,slow=38						
PEA1	Petropavlovsk-	17.14	33	eP	P	22 49 53.9	+0.3
PEA1				ePcP	PcP	22 54 33.1	-0.6
ZEA	Zeya	17.43	329	eP	Pn	22 49 54.6	-1.7
ZEA				eS	Sn	22 53 10.0	+0.6
ZEA				pmax	pmax		
	comp=N,140nm,1.0s						
ZEA				pmax	pmax		
	comp=E,120nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,320nm,1.0s						
ZEA				pmax	pmax		
	comp=N,300nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,500nm,2.0s						
ZEA				smax	smax		
	comp=E,300nm,3.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
PET	Petropavlovsk	17.49	35	eP	P	22 49 59.8	+2.4
PET				eS	S	22 53 16.0	+0.7
PET				pmax	pmax		
	comp=Z,20nm,1.1s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
PET				MLR	MLR		
	comp=Z,300nm,12.0s						
HIA	Hailar	18.69	308	eP	P	22 50 09.0	-1.7
	comp=Z,160nm,0.9s						
HIA	Hailar	18.69	308	eP	P	22 50 09.0	-1.7
HIA				pmax	pmax		
	comp=Z,160nm,0.9s						
BJI	Beijing	20.02	280	⇑iP	P	22 50 23.4	-1.9
BJI				pP	pP	22 50 39.4	+0.3
BJI				S	S	22 53 59.8	-6.9
BJI				pmax	pmax		
	comp=Z,32nm,1.2s						
BJI				LR	LR		
	comp=Z,76nm,12.3s						
BJI				LR	LR		
	comp=Z,170nm,21.6s						
BJI				LR	LR		
	comp=Z,220nm,22.7s						
TIA	Tai'an	20.10	268	P	P	22 50 24.6	-1.6
TIA				S	S	22 53 59.3	-9.2
TIA				pmax	pmax		
	comp=Z,140nm,1.0s						
TIA				LR	LR		
	comp=Z,390nm,18.1s						
TIA				LR	LR		
	comp=Z,580nm,19.1s						
TIA				LR	LR		
	comp=Z,660nm,18.1s						
NJ2	Nanjing	20.39	256	eP	P	22 50 29.4	+0.1
NJ2				pmax	pmax		
	comp=Z,92nm,0.7s						
MA2	Magadan	20.69	12	P	P	22 50 33.4	+1.1
	comp=Z,79nm,0.7s,baz=197,slow=10,SNR=31						
MA2	Magadan	20.69	12	eP	P	22 50 32.6	+0.2
	comp=Z,78nm,0.7s						
MA2	Magadan	20.69	12	ceP	P	22 50 33.0	+0.7
MA2				pmax	pmax		
	comp=Z,67nm,0.7s						
JISG	Ishigakijimahi	21.29	231	P	P	22 50 40.6	+1.6
JIJ	Ishigaki jima	21.56	231	P	P	22 50 42.8	+0.9
YOJ	Yonaguni jima	22.17	233	eP	P	22 50 46.1	-2.4
	comp=Z,74nm,1.0s						
YOJ	Yonaguni jima	22.17	233	eP	P	22 50 46.1	-2.4
YOJ				pmax	pmax		
	comp=Z,74nm,1.0s						
TATO	Taipei	22.76	236	eP	P	22 50 53.5	-1.3
	comp=Z,89nm,0.9s						
SARN	Sarigan	23.04	171	eP	P	22 50 59.1	+1.4
	comp=Z,46nm,1.0s						
YHNB	Yeheng	23.05	236	eP	P	22 50 56.2	-1.6
	comp=Z,38nm,0.6s						
NACB	Ninganchiao	23.26	235	eP	P	22 50 56.9	-2.9
	comp=Z,45nm,0.8s						
TIY	Taiyuan	23.32	275	eP	P	22 50 58.8	-1.5
TIY				S	S	22 55 07.8	-0.2
TIY				pmax	pmax		
	comp=Z,36nm,0.6s						
TIY				LR	LR		
	comp=Z,350nm,16.0s						
TIY				LR	LR		
	comp=Z,200nm,11.2s						
TIY				LR	LR		
	comp=Z,450nm,25.0s						
CIT	Chita	23.37	312	eP	P	22 50 58.2	-2.4
CIT				e		22 51 14.4	
CIT				e		22 51 25.1	
CIT				e		22 51 30.9	
CIT				pmax	pmax		
	comp=Z,665nm,1.0s						
HHC	Hu-ho-hao-te	23.41	283	P	P	22 50 58.6	-2.6
HHC				pP	pP	22 51 12.9	-3.1
HHC				sP	sP	22 51 27.4	+3.5
HHC				PP	PnPn	22 51 35.8	+5.6
HHC				S	S	22 55 06.6	-2.9
HHC				pmax	pmax		
	comp=Z,29nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.8s						
HHC				LR	LR		
	comp=Z,960nm,18.3s						
YAK	Yakutsk	23.72	345	eP	P	22 51 02.4	-1.3
	comp=Z,312nm,0.9s						
YAK	Yakutsk	23.72	345	eP	P	22 51 02.0	-1.6
YAK				e*PP	sP	22 51 23.3	-3.0
YAK				eS	S	22 55 10.8	-3.0
YAK				e		23 02 00.4	
YAK				pmax	pmax		
	comp=Z,188nm,0.8s						
YAK				pmax	pmax		
	comp=N,94nm,0.9s						
YAK				pmax	pmax		
	comp=E,37nm,0.9s						
YAK				smax	smax		
	comp=N,197nm,1.8s						
YAK				smax	smax		
	comp=E,290nm,1.7s						
YULB	Yu-li	24.02	234	eP	P	22 51 03.5	-3.1
	comp=E,34nm,0.6s						
SEY	Seymchan	24.13	11	P	P	22 51 08.3	+1.0
	comp=E,30nm,0.7s,baz=196,slow=7.6,SNR=39						
WHN	Wuhan	24.49	257	⇓P	P	22 51 10.8	-0.1
WHN				pP	pP	22 51 25.5	-1.0
WHN				pmax	pmax		
	comp=E,310nm,0.6s						
WHN				LR	LR		
	comp=E,530nm,9.6s						
WHN				LR	LR		
	comp=E,290nm,9.8s						
WHN				LR	LR		
	comp=E,880nm,22.3s						
TPUB	Ta-pu	24.50	235	eP	P	22 51 09.9	-1.2
	comp=E,57nm,0.8s						
TWG	Pinlang	24.57	233	eP	P	22 51 11.1	-0.7
	comp=E,269nm,0.7s						
BTO	Baotou	24.61	283	eP	P	22 51 10.6	-1.5
KNMB	Chin-men Tao	25.15	240	eP	P	22 51 17.1	+0.2
	comp=E,69nm,0.8s						
SMY	Shemya	25.41	48	eP	P	22 51 20.8	+1.7
	comp=E,92nm,1.0s						
SMY	Shemya	25.41	48	eP	P	22 51 20.8	+1.7
SMY				pmax	pmax		
	comp=Z,93nm,1.0s						
ULN	Ulaanbaatar	26.55	300	eP	P	22 51 30.1	+0.5
	comp=Z,62nm,0.9s						
ULN	Ulaanbaatar	26.55	300	ceP	P	22 51 29.7	0.0
ULN				pmax	pmax		
	comp=Z,97nm,1.3s						
ULN	Ulaanbaatar	26.55	300	P	P	22 51 30.0	+0.3
	SNR=29						
SONA0	Songino Array	26.99	300	eP	P	22 51 34.0	+0.4
SONM	Songino Array	26.99	300	P	P	22 51 34.0	+0.4
	comp=Z,52nm,0.7s,baz=86,slow=8.5,SNR=94						
SONM				LR	LR	23 02 43.3	
	comp=Z,599nm,19.4s,baz=92,slow=37						
XAN	Xi'an	27.16	269	P	P	22 51 33.5	-1.6
XAN				pP	sP	22 51 54.8	-3.7
XAN				PP	PnPn	22 52 20.4	-1.0
XAN				S	S	22 55 56.8	-12
XAN				sS	sS	22 56 34.8	-0.7
XAN				pmax	pmax		
	comp=Z,20nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,3.9s						
XAN				LR	LR		
	comp=Z,220nm,17.4s						
XAN				LR	LR		
	comp=Z,220nm,19.0s						

XAN				LR	LR		
	comp=Z,360nm,20.6s						
ENH	Enshi	28.31	261	eP	P	22 51 45.4	0.0
	comp=Z,133nm,0.6s						
IRK	Irkutsk	28.93	309	eP	P	22 51 50.7	0.0
IRK				e		22 52 11.7	
IRK				pmax	pmax		
	comp=Z,110nm,2.0s						
H11N2	WAKE ISLAND Hy	29.01	126	T	T	23 22 32.3	
	baz=318,slow=75,SNR=2069						
H11N1	WAKE ISLAND Hy	29.02	126	T	T	23 22 28.7	
	baz=318,slow=75,SNR=618						
H11N3	WAKE ISLAND Hy	29.03	126	T	T	23 22 28.7	
	baz=318,slow=75,SNR=3230						
TLY	Talaya	29.22	307	P	P	22 51 54.0	+0.7
	comp=Z,14nm,0.7s,baz=130,slow=3.9,SNR=24						
TLY	Talaya	29.22	307	eP	P	22 51 54.0	+0.7
	comp=Z,56nm,0.9s						
TLY	Talaya	29.22	307	c iP	P	22 51 54.1	+0.8
TLY				pmax	pmax		
	comp=Z,183nm,1.0s						
TLY	Talaya	29.22	307	P	P	22 51 54.2	+1.0
	SNR=33						
ZAK	Zakamensk	29.27	305	eP	P	22 51 54.2	+0.4
ZAK				pmax	pmax		
	comp=Z,84nm,1.2s						
H11S1	WAKE ISLAND Hy	29.81	128	T	T	23 23 30.3	
	baz=319,slow=76,SNR=123						
H11S3	WAKE ISLAND Hy	29.81	128	T	T	23 23 35.4	
	baz=319,slow=76,SNR=63						
H11S2	WAKE ISLAND Hy	29.83	128	T	T	23 23 25.5	
	baz=319,slow=76,SNR=72						
LZH	Lanzhou	30.38	276	⇑P	P	22 52 03.6	-0.3
LZH				pP	pP	22 52 21.3	+1.6
LZH				sP	sP	22 52 29.6	+2.3
LZH				PP	PnPn	22 53 06.1	+1.6
LZH				pmax	pmax		
	comp=Z,83nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,4.5s						
LZH				LR	LR		
	comp=Z,290nm,12.1s						
LZH				LR	LR		
	comp=Z,350nm,12.0s						
LZH				LR	LR		
	comp=Z,570nm,15.2s						
ADK	Adak	30.75	53	eP	P	22 52 07.3	+0.6
	comp=Z,93nm,1.8s						
ADK	Adak	30.75	53	eP	P	22 52 07.3	+0.6
ADK				pmax	pmax		
	comp=Z,93nm,1.8s						
MOY	Mondy	30.85	307	eP	P	22 52 08.2	+0.4
MOY				pmax	pmax		
	comp=Z,92nm,2.2s						
BILL	Bilibino	31.36	17	⇑eP	P	22 52 13.2	+1.2
BILL				e*PP	pP	22 52 26.0	-1.5
BILL				e		22 52 40.8	
BILL						22 53 18.0	
BILL				pmax	pmax		
	comp=Z,22nm,1.2s						
BILL				MLR	MLR		
	comp=Z,128nm,20.0s						
GYA	Guiyang	32.38	257	⇑iP	P	22 52 20.8	-0.7
GYA				pP	pP	22 52 39.8	+2.5
GYA				sP	sP	22 52 47.8	+2.9
GYA				PP	PnPn	22 53 31.1	+0.8
GYA				PcP	PcP	22 55 06.8	-1.0
GYA				S	S	22 57 28.8	-2.5
GYA				sS	sS	22 57 58.9	+1.2
GYA				ScP	ScP	22 58 42.6	-3.2
GYA				SS	SnSn	22 59 26.0	-3.3
GYA				pmax	pmax		
	comp=Z,100nm,0.7s						
GYA				pmax	pmax		
	comp=Z,80nm,5.3s						
GYA				LR	LR		
	comp=Z,150nm,12.6s						
GYA				LR	LR		
	comp=Z,150nm,10.4s						
GYA				LR	LR		
	comp=Z,240nm,18.6s						
CD2	Chengdu	32.41	267	P	P	22 52 21.5	-0.2
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
CD2				LR	LR		
	comp=Z,320nm,11.6s						
CD2				LR	LR		
	comp=Z,340nm,21.3s						
CD2				LR	LR		
	comp=Z,460nm,17.6s						
GTA	Gaotai	32.52	283	⇑P	P	22 52 22.8	+0.2
GTA				pP	pP	22 52 39.8	+1.3
GTA				sP	sP	22 52 48.3	+2.2
GTA				S	S	22 57 30.6	-2.7
GTA				ScP	ScP	22 58 49.3	+3.1
GTA				pmax	pmax		
	comp=Z,43nm,1.1s						
GTA				pmax	pmax		
	comp=Z,160nm,8.1s						
GTA				LR	LR		
	comp=Z,280nm,16.5s						
GTA				LR	LR		
	comp=Z,620nm,18.7s						
GTA				LR	LR		
	comp=Z,960nm,19.7s						
TIXI	Tiksi	32.81	352	P	P	22 52 24.3	-0.3
	comp=Z,13nm,0.5s,baz=133,slow=6.4,SNR=8.9						
TIXI				LR	LR	23 06 54.0	
	comp=Z,130nm,20.5s,baz=179,slow=38						
TIXI	Tiksi	32.81	352	eP	P	22 52 24.4	-0.2
	comp=Z,17nm,0.6s						
QIZ	Qiongzhong	34.65	243	P	P	22 52 41.3	+0.2
QIZ				S	S	22 58 07.3	+1.2
QIZ				LR	LR		
	comp=Z,220nm,24.0s						
QIZ				LR	LR		
	comp=Z,190nm,18.6s						
QIZ				LR	LR		
	comp=Z,220nm,23.0s						
KMI	Kunming	36.07	258	P	P	22 52 53.8	+0.3
KMI				pP	pP	22 53 11.6	+2.1
KMI				PP	PP	22 54 16.8	+0.3
KMI				S	S	22 58 25.5	-2.9
KMI				sS	ScP	22 58 57.9	-1.2
KMI				pmax	pmax		
	comp=Z,100nm,1.1s						
KMI				pmax	pmax		
	comp=Z,230nm,3.1s						
KMI				LR	LR		
	comp=Z,190nm,12.6s						
KMI				LR	LR		
	comp=Z,270nm,19.4s						
KMI				LR	LR		
	comp=Z,340nm,26.9s						
SLVN	Son La	37.40	252	eP	P	22 53 04.4	-0.3
	comp=Z,41nm,1.1s						
DGZ	Jazzator, Alta	39.47	303	c iP	P	22 53 23.2	+1.3
DGZ				pmax	pmax		
	comp=Z,141nm,0.7s						
PANO	Nakornpanom	39.57	246	P	P	22 53 24.5	+1.7
	comp=Z,0.5nm,1.0s						
NONG	Nongkai	40.02	249	P	P	22 53 27.2	+0.7
	comp=Z,2.2nm,0.8s						
SKNT	Sakolnakorn	40.13	247	P	P	22 53 28.3	+0.8
	comp=Z,44nm,1.0s						
WMQ	Urumqi	40.33	294	eP	P	22 53 30.0	+1.1
WMQ				pP	pP	22 53 44.9	-0.2
WMQ				pmax	pmax		
	comp=Z,53nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,3.7s						
WMQ				LR	LR		
	comp=Z,100nm,7.7s						
WMQ				LR	LR		
	comp=Z,110nm,20.9s						
WMQ				LR	LR		
	comp=Z,290nm,26.5s						
ZALV	Zalesovo Beam	40.71	310	P	P	22 53 32.1	+0.2
	comp=Z,93nm,0.5s,baz=95,slow=7.5,SNR=133						
ZALV				LR	LR	23 11 29.7	
	comp=Z,299nm,18.3s,baz=68,slow=38						
RDOG	Red Dog Mine	40.91	28	eP	P	22 53 34.4	+1.0
	comp=Z,18nm,1.0s						
ZSN	Zaisan	41.50	300	c iP	P	22 53 39.3	+0.8
ZSN				pmax	pmax		
	comp=Z,26nm,0.9s						
ZSN	Zaisan	41.50	300	⇑iP	P	22 53 39.3	+0.8
	comp=Z,26nm,0.9s						
SIJI	Sorong	41.53	197	P	P	22 53 39.0	0.0
	comp=Z,14nm,0.6s,baz=20,slow=8.8,SNR=10						
PAYA	Payao	41.59	254	P	P	22 53 42.1	+2.6
	comp=Z,69µm,0.7s,comp=Z,652µm						
PHRA	Phrae	41.86	252	P	P	22 53 42.4	+0.7
	comp=Z,9.3nm,0.8s,comp=Z,724nm						
UTTA	Uttaradit	42.10	251	P	P	22 53 44.1	+0.5
	comp=Z,49µm,0.6s,comp=Z,495µm						
CHAI	Chaiyaphum	42.27	248	P	P	22 53 45.3	+0.3
	comp=Z,92µm,0.9s,comp=Z,854µm						
LBMI	Labuha	42.28	202	P	P	22 53 46.4	+1.3
LAMP	Lampang	42.29	253	P	P	22 53 46.5	+1.3
	comp=Z,99µm,0.8s,comp=Z,877µm						
PBKT	Sadao Pong	42.56	249	P	P	22 53 48.1	+0.7
	comp=Z,14nm,1.0s,comp=Z,567nm						
CMMT	Chiang Mai	42.61	254	P	P	22 53 48.2	+0.4
	comp=Z,22nm,0.8s,comp=Z,396nm						
CHTO	Chiang Mai	42.62	254	eP	P	22 53 48.4	+0.6
	comp=Z,31nm,0.6s						
CHTO	Chiang Mai	42.62	254	eP	P	22 53 48.4	+0.6
CHTO				pmax	pmax		
	comp=Z,31nm,0.6s						
LSA	Lhasa	42.69	273	P	P	22 53 50.7	+1.8
CM31	Chiang Mai Arr	42.84	253	eP	P	22 53 50.1	+0.5
	comp=Z,16nm,0.6s						
CM31				eScP	ScP	22 59 25.1	0.0
CMAR	Chiang Mai Arr	42.84	253	P	P	22 53 50.0	+0.4
	comp=Z,11nm,0.8s,baz=45,slow=7.0,SNR=43						
CMAR				ScP	ScP	22 59 25.1	0.0
	comp=Z,1.1nm,0.4s,baz=46,slow=2.2,SNR=5.8						
MKAR	Makanchi Array	43.36	300	P	P	22 53 54.0	+0.4
	comp=Z,70nm,0.7s,baz=86,slow=11,SNR=154						
MKAR				LR	LR	23 12 42.7	
	comp=Z,389nm,21.1s,baz=66,slow=37						
MAKZ	Makanchi	43.56	300	eP	P	22 53 55.8	+0.6
	comp=Z,92nm,0.8s						
MAKZ	Makanchi	43.56	300	eP	P	22 53 55.8	+0.6
MAKZ				pmax	pmax		
	comp=Z,92nm,0.8s						
SHL	Shillong	44.15	267	eP	P	22 53 59.6	-0.8
SHL	Shillong	44.15	267	eP	P	22 54 02.5	+2.1
UMPA	Umpang Tak	44.33	251	P	P	22 54 11.1	+9.4
OHAK	Old Harbor	44.43	45	eP	P	22 54 02.4	+0.5
	comp=Z,28nm,0.9s						
KDAK	Kodiak Island	44.75	44	eP	P	22 54 05.2	+0.7
	comp=Z,65nm,0.7s						
KURK	Kurchatov	44.90	306	eP	P	22 54 06.1	+0.3
	comp=Z,204nm,0.6s						
KURK	Kurchatov	44.90	306	c iP	P	22 54 06.1	+0.3
KURK				pmax	pmax		
	comp=Z,189nm,1.0s						
KURK	Kurchatov	44.90	306	P	P	22 54 06.3	+0.5
	SNR=60						
TOLK	Toolik Lake Re	45.88	28	P	P	22 54 15.2	+1.9
	baz=267						
PHET	Kaeng Krachan	45.96	247	P	P	22 54 16.1	+1.5
	comp=Z,146µm,0.7s						
SEW	Seward	46.15	40	eP	P	22 54 16.2	+0.7
	comp=Z,49nm,1.2s						
TDK	Taldyqorghan	46.44	299	eP	P	22 54 18.8	+0.7
TDK				pmax	pmax		
	comp=Z,66nm,0.6s						
TDK	Taldyqorghan	46.44	299	eP	P	22 54 18.9	+0.7
	comp=Z,66nm,0.6s						
TCOL	CIGO, UAF Yank	46.55	34	P	P	22 54 20.2	+1.6
	baz=272						
COLA	College	46.55	34	eP	P	22 54 19.8	+1.3
	comp=Z,31nm,0.8s						
COLA				ePcP	PcP	22 55 50.9	-0.9
COLA	College	46.55	34	⇓iP	P	22 54 20.5	+1.9
COLA				pmax	pmax		
	comp=Z,17nm,0.9s						
UZB	Uzynbulak	46.58	296	c iP	P	22 54 19.3	0.0
UZB				pmax	pmax		
	comp=Z,21nm,1.4s						
UZB	Uzynbulak	46.58	296	⇑iP	P	22 54 19.4	0.0
	comp=Z,21nm,1.4s						
KPKS	Kokpek	46.72	296	c iP	P	22 54 20.4	+0.1
KPKS				pmax	pmax		
	comp=Z,18nm,0.6s						
KPKS	Kokpek	46.72	296	⇑iP	P	22 54 20.5	+0.1
	comp=Z,18nm,0.6s						
POKR	Poker Plat Res	46.72	33	P	P	22 54 22.1	+2.1
	baz=273						
HDA	Harding Lake	46.96	34	P	P	22 54 22.6	+0.8
	baz=274						
ILAR	Eielson Array	46.97	34	P	P	22 54 22.9	+1.0
	comp=Z,19nm,0.7s,baz=268,slow=6.3,SNR=118						
SATY	Saty	47.04	296	c iP	P	22 54 23.3	+0.5
SATY				pmax	pmax		
	comp=Z,28nm,1.0s						
SATY	Saty	47.04	296	⇑iP	P	22 54 23.4	+0.5
	comp=Z,28nm,1.0s						
JIRN	Jiri	47.49	273	eP	P	22 54 27.6	+0.7
CHKK	Chushkaly	47.76	297	⇑iP	P	22 54 28.3	-0.1
CHKK	Chushkaly	47.76	297	⇑iP	P	22 54 28.3	-0.1
MDOK	Medeo	47.94	297	i P	P	22 54 30.7	+0.8
MDOK				pmax	pmax		
	comp=Z,712nm,0.5s						
MDOK	Medeo	47.94	297	i P	P	22 54 30.8	+0.8
	comp=Z,712nm,0.5s						
TNSS	Tian-Shan	48.05	296	⇑iP	P	22 54 32.1	+1.0
TNSS	Tian-Shan	48.05	296	⇑iP	P	22 54 32.1	+1.0
KKN	Kakani	48.13	274	eP	P	22 54 32.4	+0.8
	comp=Z,366nm,0.5s						
PKI	Pulchoki	48.14	274	eP	P	22 54 32.0	+0.2
	comp=Z,119nm,0.6s						
PKIN	Phulchoki	48.14	274	eP	P	22 54 32.0	+0.2
	comp=Z,82nm,0.5s						
KUU	Kurty	48.19	298	c iP	P	22 54 31.3	-0.4
KUU				pmax	pmax		
	comp=Z,38nm,0.5s						
KUU	Kurty	48.19	298	⇑iP	P	22 54 31.3	-0.4
	comp=Z,38nm,0.5s						
BNSI	Bone	48.33	210	P	P	22 54 48.1	+15
DMN	Daman	48.35	274	eP	P	22 54 33.9	+0.5
	comp=Z,88nm,0.5s						
GKN	Gorkha	48.52	275	eP	P	22 54 35.0	+0.4
	comp=Z,304nm,0.5s						
BRZS	Berezniki	48.78	306	c iP	P	22 54 36.1	0.0
BRZS				pmax	pmax		
	comp=Z,19nm,0.4s						
BRZS	Berezniki	48.78	306	⇑iP	P	22 54 36.2	0.0
	comp=Z,19nm,0.4s						
ULHL	Ulahol	48.81	296	P	P	22 54 37.5	+0.7
	SNR=10						
KAPI	Kappang	49.02	210	P	P	22 54 38.7	+0.5
	comp=Z,5.0nm,0.5s,baz=22,slow=7.3,SNR=2.9						
KAPI	Kappang	49.02	210	eP	P	22 54 38.7	+0.5
	comp=Z,37nm,1.0s						
DANN	Dangsing	49.02	276	eP	P	22 54 39.6	+1.0
TKM2	Tokmak 2	49.03	297	P	P	22 54 39.5	+1.2
	SNR=105						
SKLT	Songkhla	49.34	240	P	P	22 54 43.9	+3.1
	comp=Z,9.3nm,0.9s						
BVAR	Borovoye Array	49.36	311	S	S	23 01 42.3	+0.1
	comp=Z,2.9nm,1.0s,baz=76,slow=15,SNR=4.3						
BTLS	Baital	49.37	300	c iP	P	22 54 40.4	-0.2
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BTLS	Baital	49.37	300	⇑iP	P	22 54 40.5	-0.2
	comp=Z,6.6nm,0.4s						
BRVK	Borovoye	49.41	311	eP	P	22 54 41.1	+0.2
	comp=Z,48nm,0.8s						
BRVK				ePcP	PcP	22 55 58.9	-3.3
BRVK	Borovoye	49.41	311	c iP	P	22 54 41.5	+0.6
BRVK				pmax	pmax		
	comp=Z,56nm,0.9s						
BRVK	Borovoye	49.41	311	P	P	22 54 41.8	+0.9
	SNR=25						
KOLN	Koldanda	49.43	275	eP	P	22 54 42.3	+0.7
SGDS	Sogindy	49.51	298	⇑eP	P	22 54 41.9	0.0
	comp=Z,12nm,0.6s						
KZA	Kyzart	49.56	296	P	P	22 54 44.3	+1.6
	SNR=41						
KBK	Karagaybulak	49.57	297	P	P	22 54 43.4	+1.0
	SNR=97						
CHMS	Chumysh	49.58	297	P	P	22 54 42.9	+0.5
	SNR=20						
USP	Ospenovka	49.66	297	P	P	22 54 43.6	+0.6
	SNR=34						
BOK	Bokaro	49.71	269	eP	P	22 54 44.0	+0.4
BOK				IAmb	IAmb	22 54 45.7	
	comp=Z,24nm,1.0s						
FRU1	Bishkek	49.73	297	ePKPpre	P	22 54 44.5	+1.0
FRU1	Bishkek	49.73	297	eP	P	22 54 44.5	+1.0
AAK	Ala-Archa	49.89	297	ePKPpre	P	22 54 45.4	+0.6
AAK	Ala-Archa	49.89	297	i P	P	22 54 45.2	+0.4
	SNR=20						
AAK	Ala-Archa	49.89	297	ceP	P	22 54 45.2	+0.4
AAK				pmax	pmax		
	comp=Z,22nm,0.7s						
AAK	Ala-Archa	49.89	297	P	P	22 54 45.6	+0.8
	SNR=13						
AAK	Ala-Archa	49.89	297	P	P	22 54 45.5	+0.6
	SNR=19						
UCH	Uchtor	50.02	296	P	P	22 54 47.2	+1.0
	SNR=24						
DAWY	Dawson	50.28	34	eP	P	22 54 48.6	+1.2
	comp=Z,4.5nm,0.8s						
EKS2	Erkin-Say	50.37	297	P	P	22 54 48.8	+0.4
	SNR=48						
PKDT	Phuket	50.38	243	P	P	22 54 50.3	+1.7
	comp=Z,96nm,0.8s						
DGPR	DIGLIPUR	50.64	253	eP	P	22 54 51.0	+0.4
KULM	Kulim	50.71	239	eP	P	22 54 51.6	+0.4
	comp=Z,20nm,0.8s						
EPYK	Eagle Plains	50.96	31	P	P	22 54 54.5	+2.1
	baz=281						
BWNR	Bhubaneshwar	51.71	265	eP	P	22 54 58.0	-0.6
BWNR				IAmb	IAmb	22 55 01.0	
	comp=Z,19nm,1.0s						
INK	Inuvik	51.79	28	eP	P	22 55 00.1	+1.7
	comp=Z,27nm,0.9s						
INK	Inuvik	51.79	28	eP	P	22 55 00.2	+1.7
INK				pmax	pmax		
	comp=Z,27nm,0.9s						
DDI	Dehra Dun	52.43	281	eP	P	22 55 03.4	-0.5
DDI				IAmb	IAmb	22 55 08.6	
	comp=Z,63nm,1.0s						
BATI	Baumata	52.49	203	P	P	22 55 04.7	+0.3
	comp=Z,28nm,0.6s,baz=98,slow=7.1,SNR=3.2						
JBG	Jabagly	52.68	298	c iP	P	22 55 06.2	+0.5
JBG				pmax	pmax		
	comp=Z,45nm,1.8s						
SMLA	Simla	52.72	282	eP	P	22 55 05.2	-0.7
DHRM	DHARAMSHALA	52.85	284	eP	P	22 55 06.2	-1.0
IUG	Iuzhnay	53.13	298	c iP	P	22 55 09.6	+0.6
IUG	Iuzhnay	53.13	298	⇑iP	P	22 55 09.6	+0.6
SVE	Sverdlovsk	53.67	318	d iP	P	22 55 13.6	+1.0
SVE				pmax	pmax		
	comp=Z,167nm,0.8s						
SVE				MLR	MLR		
	comp=Z,291nm,17.0s						
PSI	Prapat	53.70	238	eP	P	22 55 13.5	0.0
	comp=Z,12nm,0.7s						
PSI	Prapat	53.70	238	eP	P	22 55 13.5	0.0
PSI				pmax	pmax		
	comp=Z,12nm,0.7s						
NDI	New Delhi	53.87	280	eP	P	22 55 13.5	-1.0
BKNI	Bangkinang	54.23	234	P	P	22 55 21.6	+4.5
NIL	Nilore	54.47	287	eP	P	22 55 20.0	+1.2
	comp=Z,110nm,0.6s						
NIL	Nilore	54.47	287	eP	P	22 55 20.0	+1.2
NIL				pmax	pmax		
	comp=Z,110nm,0.6s						
ARU	Arti	54.89	318	P	P	22 55 21.7	+0.3
	comp=Z,40nm,0.6s,baz=70,slow=5.8,SNR=18						
ARU	Arti	54.89	318	eP	P	22 55 21.4	0.0
	comp=Z,117nm,0.7s						
ARU	Arti	54.89	318	c iP	P	22 55 21.9	+0.5
ARU				*PP	pP	22 55 36.9	-1.3
ARU						22 56 20.8	
ARU						22 57 21.8	
ARU				S	S	23 02 59.1	+1.3
ARU				SS	SS	23 06 33.0	-8.3
ARU				pmax	pmax		
	comp=Z,129nm,0.8s						
ARU				MLR	MLR		
	comp=Z,280nm,16.0s						
GSI	Gunungsitoli	55.71	238	eP	P	22 55 28.6	+0.7
	comp=Z,196nm,1.9s						
LHSI	Lahat	56.01	229	P	P	22 55 42.9	+13
MDSI	Maura Dua	56.16	228	P	P	22 55 35.7	+4.6
NGP	Nagpur	56.44	271	eP	P	22 55 32.6	-0.5
NGP				IAmb	IAmb	22 55 33.8	
	comp=Z,25nm,0.6s						
BHPL	Bhopal	56.54	274	eP	P	22 55 33.0	-0.8
KBL	Kabul	57.14	290	eP	P	22 55 38.1	0.0
	comp=Z,79nm,0.8s						
KBL	Kabul	57.14	290	eP	P	22 55 38.1	0.0
KBL				pmax	pmax		
	comp=Z,79nm,0.8s						
AKTO	Aktyubinsk	57.47	311	P	P	22 55 39.9	0.0
	comp=Z,32nm,0.7s,baz=73,slow=12						
SPA0	Spitsbergen Ar	58.12	349	eP	P	22 55 43.2	-1.0
	comp=Z,36nm,0.9s						
SPA0	Spitsbergen Ar	58.12	349	eP	P	22 55 44.8	+0.6
SPITS	Spitsbergen Ar	58.12	349	P	P	22 55 44.7	+0.6
	comp=Z,22nm,1.0s,baz=85,slow=10,SNR=5.5						
KBS	Kingsbay	58.23	350	eP	P	22 55 45.9	+1.1
KIRV	Kirov	58.60	322	P	P	22 55 48.4	+0.7
	comp=Z,75nm,0.6s,baz=46,slow=2.5,SNR=30						
HYB	Hyderabad	58.96	267	i P	P	22 55 50.5	-0.3
HYB				epP	pP	22 56 08.0	+0.2
PRGR	Permogore	58.98	326	⇑iP	P	22 55 50.7	+0.5
PRGR				i *PP	pP	22 56 05.7	-1.4
PRGR				e		22 56 35.5	
PRGR				eS	S	23 03 49.0	-2.4
PRGR				pmax	pmax		
	comp=Z,134nm,0.7s						
HSPB	Hornsund (broa	59.06	348	eP	P	22 56 02.7	+12
HSPB	Hornsund (broa	59.06	348	eP	P	22 56 02.7	+12
HSPB	Hornsund (broa	59.06	348	eP	P	22 55 51.0	+0.4
CTA	Charters Tower	59.51	176	P	P	22 55 53.8	-0.5
	comp=Z,7.9nm,0.7s,baz=345,slow=8.3,SNR=3.9						
CTAO	Charters Tower	59.51	176	eP	P	22 55 53.9	-0.4
	comp=Z,34nm,1.3s						
CTAO	Charters Tower	59.51	176	eP	P	22 55 53.9	-0.4
CTAO				pmax	pmax		
	comp=Z,35nm,1.3s						
WRAB	Tennant Creek	59.70	189	eP	P	22 55 54.8	-0.8
	comp=Z,56nm,0.8s						
WRAB	Tennant Creek	59.70	189	ceP	P	22 55 55.1	-0.5
WRAB				pmax	pmax		
	comp=Z,60nm,0.8s						
WB2	Warramunga Arr	59.71	189	eP	P	22 55 55.2	-0.5
	comp=Z,61nm,0.7s						
WRA	Warramunga Arr	59.71	189	P	P	22 55 55.0	-0.7
	comp=Z,51nm,0.7s,baz=5.0,slow=7.6,SNR=83						
WRA	Warramunga Arr	59.71	189	P	P	22 55 55.0	-0.7
LVZ	Lovozero	60.04	335	eP	P	22 55 57.1	-0.3
	comp=Z,24nm,1.0s						
LVZ	Lovozero	60.04	335	eP	P	22 55 57.2	-0.3
LVZ				pmax	pmax		
	comp=Z,24nm,1.0s						
MDRS	Chennai	60.27	262	eP	P	22 56 00.8	+1.0
APA	Apatity	60.61	335	⇑iP	P	22 56 00.7	-0.7
APA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
APA				MLR	MLR		
	comp=Z,200nm,20.0s						
YKA	Yellowknife Ar	61.25	31	P	P	22 56 06.5	+0.8
	comp=Z,3.7nm,0.6s,baz=301,slow=6.4,SNR=10						
HAMF	Hammerfest	61.60	341	eP	P	22 56 07.9	-0.1
ARCES	ARCESS Array B	61.82	339	P	P	22 56 09.9	+0.4
	comp=Z,5.5nm,0.7s,baz=46,slow=6.0,SNR=15						
ARCES				LR	LR	23 26 08.4	
	comp=Z,108nm,21.6s,baz=44,slow=39						
ARE0	ARCESS Array S	61.82	339	eP	P	22 56 08.7	-0.8
POO	Poona	61.95	271	eP	P	22 56 09.8	-1.4
POO				IAmb	IAmb	22 56 11.6	
	comp=Z,34nm,0.8s						
KTK1	Kautokeino	62.78	339	eP	P	22 56 16.6	+0.7
GEYT	Alibeck	63.19	298	P	P	22 56 19.5	+0.3
	comp=Z,22nm,0.7s,baz=29,slow=3.4,SNR=42						
GEYT				LR	LR	23 25 29.5	
	comp=Z,95nm,19.5s,baz=125,slow=38						
DAG	Danmarks Havn	63.26	355	i P	P	22 56 18.7	-0.3
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DAG	Danmarks Havn	63.26	355	i P	P	22 56 18.7	-0.3
	comp=Z,6.1nm,0.8s						
ASAR	Alice Springs	63.44	189	P	P	22 56 20.5	-0.3
	comp=Z,26nm,0.7s,baz=4.1,slow=5.2,SNR=160						
ASAR				LR	LR	23 23 24.5	
	comp=Z,91nm,21.0s,baz=14,slow=35						
ASAR				PKP2bc		23 25 23.4	
	comp=Z,0.8nm,0.8s,baz=198,slow=1.8,SNR=7.4						
TRO	Tromso	63.49	341	eP	P	22 56 20.5	-0.1

GOA	Goa	63.75	269	eP	P	22 56 23.2	+0.1
A04D	Lummi Island	64.47	47	P	P	22 56 28.7	+1.4
	baz=302						
D03D	Eldon	64.87	48	P	P	22 56 32.1	+2.1
	baz=302,SNR=12						
B05A	Bryant	65.05	47	P	P	22 56 32.6	+1.4
	baz=302						
D04E	Lakebay	65.24	48	P	P	22 56 34.5	+2.0
	baz=302						
DZM	Mont Dzumac	65.40	155	eLR	LR	23 16 22.8	
	comp=Z,296nm,35.5s						
DZM	Mont Dzumac	65.40	155	P	P	22 56 35.3	+1.6
	comp=Z,34nm,0.9s,baz=8.1,slow=22,SNR=7.8						
DZM	Mont Dzumac	65.40	155	eP	P	22 56 34.8	+1.1
	comp=Z,92nm,1.3s						
MOS	Moscow	65.58	323	eP	P	22 56 33.4	-1.0
MOS				e		22 56 52.1	
MOS				e		22 58 57.1	
MOS				eS	S	23 05 12.9	-1.7
MOS				e		23 06 21.1	
MOS				pmax	pmax		
	comp=Z,79nm,1.2s						
MOS				pmax	pmax		
	comp=Z,100nm,1.4s						
TRD	Trivandrum	65.63	261	ex	pP	22 56 51.4	-1.3
STEI	Steigen	65.65	341	eP	P	22 56 34.9	+0.2
F04D	Rainier, OR	65.69	50	P	P	22 56 37.3	+2.0
	baz=302						
E04D	Cinebar	65.69	49	P	P	22 56 37.4	+2.1
	baz=302						
LOF	Lofoten	65.93	341	eP	P	22 56 36.6	+0.1
G03D	McMinnville, O	66.01	50	P	P	22 56 39.5	+2.1
	baz=303						
I02D	Swisshome	66.25	52	P	P	22 56 40.8	+1.9
	baz=303						
COR	Corvallis	66.32	51	eP	P	22 56 40.5	+1.1
	comp=Z,64nm,1.0s						
COR	Corvallis	66.32	51	eP	P	22 56 40.5	+1.1
COR				pmax	pmax		
	comp=Z,63nm,1.0s						
OBN	Obninsk	66.43	323	P	P	22 56 40.1	+0.2
	comp=Z,19nm,0.7s,baz=34,slow=2.0,SNR=12						
OBN	Obninsk	66.43	323	eP	P	22 56 40.1	+0.2
	comp=Z,62nm,0.7s						
OBN	Obninsk	66.43	323c	iP	P	22 56 40.0	+0.2
OBN				*PP	pP	22 56 56.0	-1.1
OBN				*SP	sP	22 57 06.0	+1.7
OBN						22 59 09.0	
OBN				S	S	23 05 29.0	+4.0
OBN				SSS	SSS	23 12 36.0	
OBN				pmax	pmax		
	comp=Z,68nm,0.8s						
OBN				MLR	MLR		
	comp=Z,163nm,16.0s						
H04D	Lebanon	66.69	51	P	P	22 56 43.6	+1.8
	baz=303						
F05D	White Salmon	66.70	49	P	P	22 56 43.7	+1.8
	baz=303						
J01E	Myrtle Point	66.71	53	P	P	22 56 43.8	+1.9
	baz=303						
LPSR	Galich'ya Gora	66.75	320	eP	P	22 56 42.0	0.0
LPSR				e*SP	pP	22 57 01.2	+2.0
LPSR				pmax	pmax		
	comp=Z,60nm,0.8s						
I03D	Drain, OR	66.78	52	P	P	22 56 44.6	+2.2
	baz=303,SNR=10						
FIA1	FINESS Array S	66.84	332	eP	P	22 56 42.7	+0.3
	comp=Z,40nm,0.6s						
FINES	FINESS Array B	66.84	332	P	P	22 56 42.6	+0.2
	comp=Z,22nm,0.6s,baz=41,slow=8.8,SNR=109						
FINES				pP	pP	22 56 59.6	0.0
	comp=Z,38nm,0.6s,baz=46,slow=8.0,SNR=10						
FINES				LR	LR	23 28 07.5	
	comp=Z,158nm,19.9s,baz=47,slow=38						
K02D	Willamette Mer	67.13	53	P	P	22 56 46.3	+1.6
	baz=303						
G05D	Wamic, OR	67.14	50	P	P	22 56 46.4	+1.7
	baz=304						
KONS	Konsvik	67.28	340	eP	P	22 56 45.8	+0.7
I04A	Tendick Farm,	67.29	51	P	P	22 56 47.3	+1.7
	baz=304,SNR=13						
STOK	Stokkvaagen	67.43	340	eP	P	22 56 46.9	+0.8
VSR	Storozhevoye	67.44	318	eP	P	22 56 46.3	-0.1
VSR				*SP	pP	22 57 06.5	+2.9
VSR				pmax	pmax		
	comp=Z,30nm,0.6s						
VORD	Divnogorie	67.52	318	eP	P	22 56 46.8	-0.1
VORD				e*SP	pP	22 57 07.0	+2.9
VORD				pmax	pmax		
	comp=Z,20nm,0.7s						
I05D	Terrebonne, OR	67.63	50	P	P	22 56 49.3	+1.5
	baz=304						
J04D	Umpqua Nationa	67.78	52	P	P	22 56 50.8	+1.8
	baz=304,SNR=6.9						
NEW	Newport	67.83	45	P	P	22 56 50.1	+1.1
	baz=305,SNR=17						
AKT	Akhty	68.08	306⇑	iP	P	22 56 50.9	+0.1
AKT				e		22 57 14.5	
AKT				e		22 59 19.9	
AKT				pmax	pmax		
	comp=Z,33nm,0.7s						
SUMG	Summit	68.10	0	eP	P	22 56 52.7	+2.0
SUMG	Summit	68.10	0	i P	P	22 56 52.7	+2.0
L04D	Klamath Falls	68.23	53	P	P	22 56 53.2	+1.5
	baz=304						
J05D	Fort Rock, OR	68.28	51	P	P	22 56 54.1	+2.0
	baz=304,SNR=12						
GROC	Groznyy	68.31	309	eP	P	22 56 50.3	-1.7
GROC				e*PP	pP	22 57 08.1	-1.1
GROC				e		22 57 16.6	
GROC				pmax	pmax		
	comp=Z,16nm,0.4s						
K04D	Chiloquin, OR	68.34	52	P	P	22 56 54.0	+1.6
	baz=304						
M02C	Callahan	68.36	54	P	P	22 56 54.0	+1.6
	baz=304						
VSU	Vasula	68.57	329	eP	P	22 56 53.2	-0.1
VSU				IAmb	IAmb	22 56 54.3	
	comp=Z,116nm,0.8s						
VSU	Vasula	68.57	329c	eP	P	22 56 54.4	+1.1
VSU				pmax	pmax		
	comp=Z,163nm,1.7s						
N02D	Trinity Center	68.68	54	P	P	22 56 56.5	+2.0
	baz=304,SNR=5.2						
M04C	Macdoel	68.76	53	P	P	22 56 56.9	+1.8
	baz=305,SNR=12						
GOF	Gofitskoye	68.88	311⇓	iP	P	22 56 56.2	+0.7
GOF				pmax	pmax		
	comp=Z,108nm,0.6s						
O02D	Mt. Diablo Mer	69.08	55	P	P	22 56 58.9	+2.0
	baz=305,SNR=14						
NSS	Namsos	69.10	339	eP	P	22 56 56.9	+0.3
O03E	Paynes Creek	69.63	54	P	P	22 57 01.3	+0.9
	baz=305,SNR=9.3						
ZEI	Tsey	69.68	309	eP	P	22 56 59.8	-1.0
ZEI				pmax	pmax		
	comp=Z,15nm,0.5s						
KVAR	Kislovodsk Arr	69.72	311	P	P	22 57 02.2	+1.3
	comp=Z,25nm,0.9s,baz=90,slow=20,SNR=32						
KIV	Kislovodsk	69.73	311	eP	P	22 57 01.6	+0.7
	comp=Z,73nm,0.8s						
KIV	Kislovodsk	69.73	311⇑	iP	P	22 57 01.8	+0.9
KIV	Kislovodsk	69.73	311	i P	P	22 57 01.7	+0.9
	SNR=39						
KIV	Kislovodsk	69.73	311	eP	P	22 57 01.6	+0.7
KIV				pmax	pmax		
	comp=Z,73nm,0.8s						
KIV	Kislovodsk	69.73	311	P	P	22 57 02.2	+1.3
	SNR=26						
KBZ	Khabaz	69.73	310	P	P	22 57 01.7	+0.9
	comp=Z,40nm,0.9s,baz=60,slow=4.8,SNR=56						
KBZ				LR	LR	23 32 56.5	
	comp=Z,82nm,19.4s,baz=47,slow=40						
NEY	Neytrino	70.12	310	i P	P	22 57 03.1	-0.3
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MSO	Missoula	70.41	45	P	P	22 57 06.0	+0.9
	baz=307,SNR=14						
TBLU	Trondheim	70.58	339	eP	P	22 57 04.9	-0.7
IZAR	Zarasai	70.59	327	eP	P	22 57 06.3	+0.4
IZAR				IAmb	IAmb	22 57 07.7	
	comp=Z,16nm,0.6s						
IDID	Didziasalis	70.68	327	eP	P	22 57 06.9	+0.6
IDID				IAmb	IAmb	22 57 08.3	
	comp=Z,17nm,0.7s						
GNI	Garni	70.70	306	eP	P	22 57 06.7	-0.3
	comp=Z,17nm,0.8s						
GNI	Garni	70.70	306	P	P	22 57 08.6	+1.5
GNI	Garni	70.70	306c	eP	P	22 57 08.1	+1.0
GNI				pmax	pmax		
	comp=Z,111nm,1.3s						
AKH	Akhalkalaki	70.73	308⇓	iP	P	22 57 08.3	+1.1
ISAL	Salakas	70.76	327	eP	P	22 57 07.5	+0.6
ISAL				IAmb	IAmb	22 57 09.0	
	comp=Z,26nm,0.8s						
IIGN	Ignalina	70.87	327	eP	P	22 57 08.3	+0.7
IIGN				IAmb	IAmb	22 57 09.6	
	comp=Z,22nm,0.8s						
STKA	Stephens Creek	71.14	181	P	P	22 57 09.4	+0.1
	comp=Z,13nm,0.7s,baz=333,slow=8.6,SNR=28						
STKA				LR	LR	23 27 52.9	
	comp=Z,42nm,21.9s,baz=24,slow=35						
FFC	Flin Flon	71.18	34	eP	P	22 57 10.2	+0.8
	comp=Z,231nm,1.0s						
FFC	Flin Flon	71.18	34	i P	P	22 57 10.4	+1.0
FORT	Forrest	71.27	193	eP	P	22 57 10.0	-0.1
	comp=Z,38nm,0.8s						
MDH	Madha	71.39	288	P	P	22 57 11.0	-0.2
UOSS	Minazif	71.66	287	eP	P	22 57 11.7	-1.1
	comp=Z,44nm,0.8s						
UOSS	Minazif	71.66	287	i P	P	22 57 13.2	+0.3
	SNR=12						
SOC	Sochi	71.67	312	eP	P	22 57 12.1	-0.5
SOC				eS	S	23 06 26.7	-0.6
SOC				pmax	pmax		
	comp=Z,26nm,0.7s						
SOC				MLR	MLR		
	comp=Z,165nm,23.0s						
BATM	Batumi	71.71	309⇑	iP	P	22 57 12.8	-0.1
HATD	Hatta, Dubai	71.78	287	i P	P	22 57 14.2	+0.6
	SNR=17						
BCA	Borcka	71.84	309⇑	iP	P	22 57 13.7	0.0
DOMB	Dombas	71.88	339	eP	P	22 57 14.1	+0.5
EGMT	Eagleton	71.90	42	P	P	22 57 15.1	+1.1
	baz=310,SNR=11						
HFS	Hagfors	72.01	336	P	P	22 57 14.4	+0.1
	comp=Z,7.8nm,0.4s,baz=38,slow=6.8,SNR=64						
NAZ	Nazwa, Dubai	72.04	288	i P	P	22 57 15.5	+0.4
	SNR=5.6						
NB2	NORSAR Subarra	72.06	337	P	P	22 57 14.7	0.0
	comp=Z,3.1nm,0.5s,baz=36,slow=6.2						
NB2	NORSAR Subarra	72.06	337	P	P	22 57 14.7	0.0
	baz=36,slow=6.2						
NOA	NORSAR Array B	72.06	337	P	P	22 57 15.0	+0.3
	comp=Z,6.6nm,0.6s,baz=39,slow=6.0,SNR=28						
NOA				LR	LR	23 31 41.4	
	comp=Z,101nm,21.8s,baz=40,slow=38						
NOA	NORSAR Array B	72.06	337	P	P	22 57 15.0	+0.3
HLID	Hailey	72.14	48	P	P	22 57 17.1	+1.4
	baz=308,SNR=16						
NC602	NORSAR Array S	72.21	337	eP	P	22 57 15.7	+0.2
ANN	Anapa	72.22	314	eP	P	22 57 15.2	-0.7
ANN				pmax	pmax		
	comp=Z,52nm,1.4s						
FAQ	Al Faqa, Dubai	72.23	288	i P	P	22 57 16.4	+0.2
	SNR=10						
BBOO	Buckleboo	72.29	185	eP	P	22 57 15.7	-0.5
	comp=Z,36nm,1.0s						
AKN	Aaknes	72.33	340	eP	P	22 57 16.7	+0.5
BOZ	Bozeman (W)	72.44	45	P	P	22 57 18.6	+1.3
	baz=309,SNR=60						
ASUD	Al Ashush, Dub	72.49	288	i P	P	22 57 18.4	+0.6
	SNR=16						
ASUD	Al Ashush, Dub	72.49	288	P	P	22 57 19.0	+1.2
	SNR=5.2						
AKASG	Malin Array Be	72.67	322	P	P	22 57 18.2	-0.1
	comp=Z,14nm,0.4s,baz=45,slow=6.2,SNR=105						
AKASG				pP	pP	22 57 36.2	+0.4
	comp=Z,7.8nm,0.4s,baz=44,slow=6.8,SNR=6.0						
AKASG				PP	PP	23 00 00.8	+0.7
	comp=Z,2.5nm,0.6s,baz=45,slow=8.7,SNR=4.4						
AKASG				LR	LR	23 32 21.1	
	comp=Z,110nm,18.4s,baz=45,slow=38						
AKASG	Malin Array Be	72.67	322	i P	P	22 57 18.6	+0.2
AKASG				pmax	pmax		
	comp=Z,14nm,0.4s						
NVAR	Mina Array Bea	72.92	54	P	P	22 57 21.6	+1.2
	comp=Z,21nm,0.8s,baz=292,slow=5.7,SNR=82						
NVAR				LR	LR	23 26 56.7	
	comp=Z,32nm,19.3s,baz=286,slow=34						
MLAC	Mammoth, Mammo	73.07	55	P	P	22 57 22.7	+1.3
	baz=307						
SUW	Suwalki	73.07	327	eP	P	22 57 20.9	+0.2
SUW	Suwalki	73.07	327	eP	P	22 57 20.9	+0.2
OSL	Oslo	73.09	337	eP	P	22 57 20.1	-0.6
SKAR	Skarslia	73.20	338	eP	P	22 57 21.8	+0.3
KTUT	Trabzon	73.23	309⇑	iP	P	22 57 22.3	+0.4
HYA	Hoyanger	73.39	339	eP	P	22 57 23.0	+0.5
VOG	Valley Oaks Go	73.51	56	P	P	22 57 25.8	+2.2
	baz=307						
KONO	Kongsberg	73.66	337	eP	P	22 57 24.4	+0.3
SMMC	Simmler	73.72	58	P	P	22 57 26.6	+1.7
	baz=307						
H17A	Grant Village	73.78	46	P	P	22 57 28.4	+3.0
	baz=310,SNR=14						
TIN	Tinemaha, Big	73.80	55	P	P	22 57 27.1	+1.6
	baz=308						
SUE	Sulen	73.86	340	eP	P	22 57 25.2	0.0
SIM	Simferopol'	73.96	315	i P	P	22 57 26.7	+0.6
SIM				pmax	pmax		
	comp=Z,28nm,0.8s						
VES	Vestal, Richgr	73.99	57	P	P	22 57 27.1	+0.6
	baz=308						
RLMT	Red Lodge	74.02	44	P	P	22 57 28.3	+1.5
	baz=310,SNR=13						
KELT	Kelkit	74.06	309	i P	P	22 57 28.1	+1.0
KELT				IAML_P			
	comp=Z,941nm,0.6s						
PKM	Mcpherson Peak	74.09	58	P	P	22 57 28.6	+1.3
	baz=307						
ASK	Askoy	74.23	339	eP	P	22 57 28.1	+0.7
CWC	Cottonwood Cre	74.27	56	P	P	22 57 29.5	+1.2
	baz=308						
BER	Bergen	74.28	339	eP	P	22 57 27.4	-0.3
GRAC	Grapevine Rang	74.38	55	P	P	22 57 30.3	+1.5
	baz=308						
DGMT	Dagmar	74.41	39	P	P	22 57 29.4	+0.6
	baz=313						
ISA	Isabella, Lake	74.49	57	P	P	22 57 29.8	+0.3
	baz=308,SNR=10.0						
ARVC	Arvin	74.59	57	P	P	22 57 30.9	+0.9
	baz=308						
LAO	LASA Array	74.59	42	P	P	22 57 31.2	+1.3
	baz=312,SNR=10						
R11A	Troy Canyon, C	74.66	53	P	P	22 57 31.8	+1.2
	baz=309,SNR=37						
SCZ2	Santa Cruz Isl	74.75	58	P	P	22 57 31.9	+1.0
	baz=308						
BLS5	Blasjo	74.77	338	eP	P	22 57 31.4	+0.8
MPMC	Manual Prospec	74.88	56	P	P	22 57 33.0	+1.1
	baz=308,SNR=22						
FURC	Furnace Creek,	75.03	55	P	P	22 57 33.9	+1.5
	baz=308,SNR=19						
KEMA	Kemaliye	75.07	309	i P	P	22 57 34.6	+1.9
KEMA				IAML_P			
	comp=Z,446nm,0.7s						
LRMC	Laurel Mtn Rad	75.11	56	P	P	22 57 34.1	+0.9
	baz=308						
TPNV	Topopah Spring	75.12	54	P	P	22 57 34.6	+1.4
	baz=309,SNR=36						
DUG	Dugway, Tooele	75.17	50	P	P	22 57 35.1	+1.6
	baz=310,SNR=27						
BORG	Borgarnes	75.17	353	P	P	22 57 33.8	+1.0
	comp=Z,16nm,1.0s,baz=342,slow=3.2,SNR=4.0						
BORG	Borgarnes	75.17	353	eP	P	22 57 32.8	+0.1
	comp=Z,235nm,2.0s						
ERBA	Erbaa	75.20	311	i P	P	22 57 34.7	+1.2
ERBA				IAML_P			
	comp=Z,617nm,0.5s						
EDW2	Edwards Air Fo	75.28	57	P	P	22 57 35.3	+1.3
	baz=308,SNR=6.9						
SNCC	San Nicolas Is	75.28	59	P	P	22 57 35.3	+1.3
	baz=308						
BW06	Boulder Array	75.39	46	P	P	22 57 35.7	+0.9
	baz=311,SNR=42						
PDAR	Pinedale Array	75.39	46	P	P	22 57 35.6	+0.8
	comp=Z,14nm,0.5s,baz=281,slow=1.0,SNR=207						
MILM	Milestii Mici	75.42	319⇑	iP	P	22 57 34.5	0.0
SNART	Snartemo	75.45	337	eP	P	22 57 34.8	+0.4
DIKM	Dikmen	75.45	312⇑	iP	P	22 57 35.8	+1.0
HAVZ	Havza	75.56	312	i P	P	22 57 36.9	+1.4
HAVZ				IAML_P			
	comp=Z,373nm,0.6s						
BEL	Belsk	75.65	327	eP	P	22 57 36.9	+1.1
BEL				epP	sP	22 58 00.0	-0.3
BEL	Belsk	75.65	327	eP	P	22 57 36.9	+1.1
BEL				e*PP	sP	22 58 00.0	-0.3
CUKAN	kangal_SIVAS	75.65	309	i P	P	22 57 37.3	+1.1
LVV	L'vov	75.69	324	eP	P	22 57 36.2	+0.2
LVV				e		22 57 54.2	
SHOC	Shoshone, Teco	75.75	55	P	P	22 57 37.8	+1.1
	baz=309,SNR=5.1						
GSC	Goldstone, Bar	75.79	56	P	P	22 57 38.0	+1.0
	baz=309,SNR=8.9						
NWAO	Narrogin (SRO)	75.82	202	P	P	22 57 36.5	-0.3
	comp=Z,9.3nm,0.6s,baz=32,slow=6.1,SNR=7.8						
IAS	Iasi	75.85	320⇑	iP	P	22 57 37.5	+0.5
BFSC	Mount Baldy Ra	75.89	57	P	P	22 57 38.3	+0.7
	baz=308,SNR=8.5						
CIS	Catalina Islan	75.92	58	P	P	22 57 38.4	+0.7
	baz=308						
RRX	Edison Barstow	75.93	56	P	P	22 57 38.8	+1.1
	baz=309						
BZK	Bozkurt	75.96	313⇑	iP	P	22 57 38.7	+1.0
GKP	Gorka Klasztor	76.02	330	eP	P	22 57 38.3	+0.5
GKP	Gorka Klasztor	76.02	330	eP	P	22 57 38.3	+0.5
AKCD	Akcadag	76.03	308	i P	P	22 57 40.3	+2.0
AKCD				IAML_P			
	comp=Z,885nm,0.4s						
CUALT	Altinyayla-SIV	76.11	310	i P	P	22 57 45.3	+6.5
TUQ	Turquoise Moun	76.27	55	P	P	22 57 41.0	+1.3
	baz=309,SNR=7.7						
CUSAR	Sarkisla-SIVAS	76.31	310	i P	P	22 57 36.8	-3.2
HEC	Hector,Ludlow	76.38	56	P	P	22 57 41.6	+1.2
	baz=309,SNR=14						
PRAR	RASCA	76.39	321⇑	iP	P	22 57 40.2	+0.1
KWP	Kalwaria Pacla	76.42	324	eP	P	22 57 41.4	+1.2
KWP	Kalwaria Pacla	76.42	324	eP	P	22 57 41.4	+1.2
BIR	Birlad	76.46	320⇑	iP	P	22 57 41.8	+1.3
COAL	Corum-Alaca	76.51	311	i P	P	22 57 47.5	+6.5
COAL				IAML_P			
	comp=Z,67nm,0.5s						
MURC	Murrieta	76.59	58	P	P	22 57 42.3	+0.8
	baz=309						
TLCR		76.60	318⇓	iP	P	22 57 42.0	+0.7
BURAR	Bucovina Array	76.70	322⇓	iP	P	22 57 42.7	+0.8
ILGA	Ilgaz	76.72	313	i P	P	22 57 44.0	+1.6
ILGA				IAML_P			
	comp=Z,66nm,0.1s						
BIZ	Bicaz	76.75	321⇑	iP	P	22 57 43.2	+1.1
TESR	Tescani	76.78	320⇑	iP	P	22 57 42.8	+0.5
GMRC	Granite Mounta	76.84	56	P	P	22 57 44.2	+1.2
	baz=309,SNR=15						
TOO	Toolangi	76.87	177	eP	P	22 57 42.9	+0.2
	comp=Z,9.3nm,0.8s						
TOO	Toolangi	76.87	177	eP	P	22 57 42.9	+0.2
TOO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CFR	Carcaliu	76.96	319⇓	iP	P	22 57 43.6	+0.3
ULM	Lac du Bonnet	76.99	34	P	P	22 57 43.5	+0.2
	comp=Z,11nm,0.6s,baz=318,slow=6.6,SNR=12						
SIRC	Yozgat	77.01	310	i P	P	22 57 49.5	+5.6
SIRC				IAML_P			
	comp=Z,103nm,0.4s						
PETR	Petresti	77.04	319⇑	iP	P	22 57 44.8	+1.1
MDND	Maddock	77.05	38	P	P	22 57 45.0	+1.2
	baz=316						
PFO	Pinyon Flats O	77.06	57	eP	P	22 57 44.3	0.0
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	77.06	57	eP	P	22 57 44.3	0.0
PFO				pmax	pmax		
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	77.06	57	P	P	22 57 45.1	+0.8
	baz=309						
109C	Camp Elliot, M	77.10	58	P	P	22 57 45.3	+1.0
	baz=309						
ODBI	Odobesti	77.10	319⇑	iP	P	22 57 45.1	+1.0
BELC	Belle Mtn. Jos	77.12	57	P	P	22 57 45.2	+0.6
	baz=309,SNR=7.2						
KOLS	Kolonicke sedl	77.12	324	eP	P	22 57 45.0	+0.8
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KOLS	Kolonicke sedl	77.12	324	eP	P	22 57 45.0	+0.8
KOLS				ePP	PP	23 00 39.1	+1.2
K22A	Casper	77.14	45	P	P	22 57 45.3	+0.6
	baz=312,SNR=6.3						
VRI	Vrincioaia	77.19	320⇑	iP	P	22 57 45.0	+0.4
STHS	Stebnicka Huta	77.23	325	eP	P	22 57 46.2	+1.4
STHS				e		22 58 08.3	
STHS	Stebnicka Huta	77.23	325	eP	P	22 57 46.2	+1.4
STHS				esP	sP	22 58 08.3	-1.1
PLOR	Plostina	77.24	320⇓	iP	P	22 57 46.0	+1.1
CDAG	Cicekdag	77.28	311	i P	P	22 57 46.9	+1.5
CDAG				IAML_P			
	comp=Z,889nm,0.5s						
DELI	KIRIKKALE	77.30	312	i P	P	22 57 46.5	+1.1
DELI				IAML_P			
	comp=Z,383nm,0.8s						
TIRR	Tirgusor	77.31	318⇑	iP	P	22 57 45.4	+0.1
UZH	Uzhgorod	77.33	324⇓	iP	P	22 57 45.7	+0.4
UZH				e		22 57 50.9	
HARR	Harsova	77.40	318⇑	iP	P	22 57 46.6	+0.8
TLB	Topalu	77.41	318⇑	iP	P	22 57 46.8	+1.0
BISRR	Bisoca	77.42	319⇓	iP	P	22 57 47.2	+1.2
ANDN	Andirin	77.44	308	i P	P	22 57 47.8	+1.5
ANDN				IAML_P			
	comp=Z,730nm,0.7s						
RSSD	Black Hills	77.47	42	eP	P	22 57 47.3	+0.8
	comp=Z,35nm,1.0s						
RSSD	Black Hills	77.47	42	eP	P	22 57 47.3	+0.8
RSSD				pmax	pmax		
	comp=Z,35nm,1.0s						
RSSD	Black Hills	77.47	42	P	P	22 57 47.1	+0.7
	baz=314						
ARCR	ARCALIA	77.49	322⇑	iP	P	22 57 46.9	+0.7
OZUR		77.50	320⇓	iP	P	22 57 47.8	+1.4
MONP2	Monument Peak	77.54	58	P	P	22 57 47.9	+0.9
	baz=309						
IRM	Iron Mountain	77.57	56	P	P	22 57 48.2	+1.2
	baz=310,SNR=13						
BR131	Keskin Array S	77.64	312	P	P	22 57 48.3	+0.9
	SNR=5.6						
BRTR	Keskin Array B	77.64	312	P	P	22 57 47.9	+0.4
	comp=Z,4.7nm,0.6s,baz=102,slow=3.3,SNR=54						
BRTR				PP	PP	23 00 41.0	-1.6
	comp=Z,3.6nm,0.8s,baz=45,slow=8.9,SNR=6.9						
BRTR				LR	LR	23 36 40.3	
	comp=Z,55nm,20.2s,baz=54,slow=39						
NIE	Niedzica	77.64	325	eP	P	22 57 48.5	+1.4
NIE				epP	sP	22 58 13.6	+1.8
NIE	Niedzica	77.64	325	eP	P	22 57 48.5	+1.4
NIE				e*PP	sP	22 58 13.6	+1.8
BC3	Big Chuckawall	77.69	57	P	P	22 57 48.8	+1.0
	baz=310,SNR=7.7						
YAHY	KAYSERI_Yahyal	77.70	309	i P	P	22 57 49.3	+1.6
YAHY				IAML_P			
	comp=Z,238nm,0.8s						
PGOR	Pogoanele	77.73	319⇓	iP	P	22 57 49.0	+1.4
DOPR	Dopca	77.78	320⇑	iP	P	22 57 49.3	+1.4
CMDR	Camlidere-ANKA	77.79	313	i P	P	22 58 09.2	+21
CMDR				IAML_P			
	comp=Z,1µm,0.1s						
MLR	Muntele Rosu	77.84	320	P	P	22 57 48.9	+0.5
	comp=Z,4.0nm,0.7s,baz=346,slow=6.9,SNR=14						
MLR	Muntele Rosu	77.84	320⇑	iP	P	22 57 49.2	+0.8
ICOR	Ion Corvin	77.86	318⇑	iP	P	22 57 49.7	+1.3
KIRS	Kırehir-Merke	77.87	311	i P	P	22 57 49.3	+0.7
KIRS				IAML_P			
	comp=Z,166nm,0.7s						
O20A	White River Ci	77.87	48	P	P	22 57 49.6	+0.8
	baz=312,SNR=6.8						
IKP	In-Ko-Pah, Jac	77.90	58	P	P	22 57 50.0	+1.1
	baz=309,SNR=6.7						
SWSC	Sam W. Stewart	77.91	57	P	P	22 57 49.7	+0.8
	baz=310						
ANTO	Ankara	78.03	312	eP	P	22 57 50.7	+1.2
	comp=Z,26nm,0.8s						
ANTO	Ankara	78.03	312	eP	P	22 57 50.7	+1.2
ANTO				pmax	pmax		
	comp=Z,27nm,0.8s						
SECR		78.11	319⇑	iP	P	22 57 51.0	+1.3
PDMCI	Parker Dam,Lak	78.11	55	P	P	22 57 51.1	+1.1
	baz=310,SNR=11						
RASA	Rasa	78.13	318⇑	iP	P	22 57 50.2	+0.4
KIBS	BOLU	78.20	313	i P	P	22 57 51.5	+1.1
KIBS				IAML_P			
	comp=Z,596nm,0.7s						

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LANS  Liptovska Anna  78.21 326  eP      P      22 57 52.3 +2.0
LANS                             e              22 58 16.8
LANS                             e              23 00 47.3
LANS  Liptovska Anna  78.21 326  eP      P      22 57 52.3 +2.0
LANS                             esP     sP     22 58 16.8 +1.9
LANS                             ePP     PP     23 00 47.3 +0.3
Y12C  Blythe          78.22  56   P      P      22 57 51.8 +1.3
      baz=310,SNR=13
KSP   Ksiaz           78.26 328  eP      P      22 57 51.4 +1.0
KSP   Ksiaz           78.26 328  eP      P      22 57 51.4 +1.0
OKC   Ostrava-Krasne  78.26 327  eP      P      22 57 51.6 +1.2
OKC   Ostrava-Krasne  78.26 327  eP      P      22 57 51.6 +1.2
KKUL  Konya-Kulu      78.42 312  i P     P      22 57 53.7 +2.0
KKUL                              IAML_P
      comp=Z,469nm,0.7s
AGMN  Agassiz Nation  78.44  35   P      P      22 57 51.3 -0.2
      baz=318,SNR=5.2
GLA   Glamis          78.47  57   P      P      22 57 53.2 +1.2
      baz=310,SNR=12
OSTC  Ostas           78.51 328  eP      P      22 57 52.5 +0.6
OSTC                             ex      x      22 57 57.4
CHVC  Chvalec         78.55 328  eP      P      22 57 53.3 +1.2
CHVC                             ex      x      22 58 18.6
MORC  Moravsky Berou  78.56 327⇑iP      P      22 57 53.2 +1.0
MORC  Moravsky Berou  78.56 327  eP      P      22 57 53.1 +0.9
DPC   Dobruska-Polom  78.62 328  eP      P      22 57 53.6 +1.1
DPC                              e              22 58 00.5
DPC   Dobruska-Polom  78.62 328  eP      P      22 57 53.6 +1.1
DPC                              ePCP    PcP    22 58 00.5 -0.8
UPC   Upice           78.63 328  eP      P      22 57 53.6 +1.1
UPC                               MLR    MLR
      comp=Z,200nm,19.4s
UPC   Upice           78.63 328  eP      P      22 57 53.6 +1.1
UPC                               AMS    AMS    23 34 00.0
      comp=Z,200nm,19.4s
N23A  Red Feather La  78.65  46   P      P      22 57 54.6 +1.5
      baz=313,SNR=15
RAZG  Razgrad         78.92 318⇓iP      P      22 57 55.2 +1.0
PSZ   Piszkesteto     78.94 325⇑iP      P      22 57 53.9 -0.5
PSZ   Piszkesteto     78.94 325⇑eP      P      22 57 55.0 +0.7
LOT   Lotru           78.95 321⇑iP      P      22 57 54.9 +0.4
VYHS  Vyhne           78.98 326  eP      P      22 57 55.5 +1.0
VYHS                             e              22 58 19.3
VYHS                             e              23 00 48.8
VYHS                              pmax   pmax
      comp=Z,11nm,1.6s
VYHS  Vyhne           78.98 326  eP      P      22 57 55.5 +1.0
VYHS                             esP     sP     22 58 19.3 +0.2
VYHS                             ePP     PP     23 00 48.8 -4.5
HUMR  Humele          79.01 320⇑iP      P      22 57 54.6 -0.1
WUAZ  Wupatki         79.06  53   P      P      22 57 56.9 +1.5
      baz=311,SNR=19
BRG   Berggiesshubel  79.17 330  eP      P      22 57 55.8 +0.4
      comp=Z,6.8nm,0.9s
BRG                              epP     pP     22 58 10.5 -2.5
      comp=Z,4.6nm,0.8s
BRG                              ePP     PP     23 00 54.0 -0.8
      comp=Z,5.3nm,1.0s
      comp=N,146nm,21.8s
      comp=E,98nm,14.3s
      comp=Z,197nm,21.7s
BRG   Berggiesshubel  79.17 330  eP      P      22 57 55.8 +0.4
BRG                              e*PP    pP     22 58 10.5 -2.5
BRG                              e              23 00 54.0
BRG                               pmax   pmax
      comp=Z,7.0nm,0.9s
BRG                               pmax   pmax
      comp=Z,5.0nm,0.8s
BRG                               pmax   pmax
      comp=Z,5.0nm,1.0s
BRG                               MLR    MLR
      comp=N,146nm,21.8s
BRG                               MLR    MLR
      comp=E,98nm,14.3s
BRG                               MLR    MLR
      comp=Z,197nm,21.7s
CLL   Collm           79.19 330  i P     P      22 57 55.7 +0.2
CLL                              e*PP    pP     22 58 13.0 -0.1
CLL                               pmax   pmax
      comp=Z,13nm,0.7s
CLL   Collm           79.19 330  i P     P      22 57 55.7 +0.2
      comp=Z,13nm,0.7s
CLL                              ePcP    PcP    22 58 03.0 -0.7
CLL                              epP     pP     22 58 13.0 -0.1
CLL                              i              22 58 16.5
      comp=Z,18nm,0.6s
CLL                              i              22 58 19.4
CLL                              e              23 00 45.0
CLL                              eSSS    SSS    23 16 20.0
CLL                               Lm     MLR    23 33 00.0
      comp=N,100nm,21.2s
CLL                               Lm     MLR    23 33 00.0
      comp=E,100nm,21.4s
PVCC  Panska Ves      79.19 329  eP      P      22 57 56.9 +1.3
PVCC                              MLR    MLR
      comp=Z,100nm,18.2s
PVCC  Panska Ves      79.19 329  eP      P      22 57 56.9 +1.3
PVCC                              AMS    AMS    23 35 30.0
      comp=Z,100nm,18.2s
JAVC  Velka Javorina  79.20 326  eP      P      22 57 57.7 +1.9
VRAC  Vranov          79.31 327   P      P      22 57 57.2 +0.9
      comp=Z,3.9nm,0.5s,baz=31,slow=6.2,SNR=14
VRAC                              PP     PP     23 00 55.1 -1.0
      comp=Z,4.1nm,0.7s,baz=48,slow=11,SNR=3.1
VRAC  Vranov          79.31 327⇑iP      P      22 57 57.7 +1.4
VRAC  Vranov          79.31 327  eP      P      22 57 57.4 +1.1
KDHN  Kadinhani       79.32 311  i P     P      22 57 57.0 +0.3
KDHN                              IAML_P
      comp=Z,173nm,0.8s
ZIMR                  79.44 319⇑iP      P      22 57 57.2 +0.2
GZR   Gura Zlata      79.47 321⇑iP      P      22 57 57.7 +0.4
ISCO  Idaho Springs   79.58  47   P      P      22 57 59.7 +1.3
      baz=313,SNR=13
GOPC  GO Pecny, Ondr  79.59 329  eP      P      22 57 58.4 +0.6
GOPC                             e              22 58 05.4
GOPC                              MLR    MLR
      comp=Z,100nm,17.8s
GOPC  GO Pecny, Ondr  79.59 329  eP      P      22 57 58.4 +0.6
GOPC                             ePCP    PcP    22 58 05.4 -0.1
GOPC                              AMS    AMS    23 35 30.0
      comp=Z,100nm,17.8s
KRUC  Moravsky        79.59 327  eP      P      22 57 58.7 +0.9
PRU   Pruhonice       79.63 329  eP      P      22 57 58.6 +0.7
PRU                              e              22 58 04.7
PRU                              e              22 58 16.6
PRU                               MLR    MLR
      comp=Z,200nm,17.9s
PRU   Pruhonice       79.63 329  eP      P      22 57 58.6 +0.7
PRU                              ePCP    PcP    22 58 04.7 -0.9
PRU                              epP     pP     22 58 16.6 +1.0
PRU                               AMS    AMS    23 35 10.0
      comp=Z,200nm,17.9s
MVCO  Mesa Verde      79.67  50   P      P      22 58 00.1 +1.3
      baz=312,SNR=15
VLAD  Vladila         79.68 320⇑iP      P      22 57 58.0 -0.3
ELND  Elena           79.69 318⇓iP      P      22 57 58.9 +0.4
MODS  Modra-Piesok    79.74 326  eP      P      22 57 59.0 +0.4
MODS                             e              22 58 22.9
MODS                              pmax   pmax
      comp=Z,12nm,1.1s
MODS  Modra-Piesok    79.74 326  eP      P      22 57 59.0 +0.4
MODS                             esP     sP     22 58 22.9 -0.4
PHSR  Pinarhisar      79.74 316⇑iP      P      22 57 59.7 +1.0
TREC  Trest           79.78 328  eP      P      22 57 59.6 +0.7
TREC                             e              22 58 14.6
TREC                              MLR    MLR
      comp=Z,200nm,21.7s
TREC  Trest           79.78 328  eP      P      22 57 59.6 +0.7
TREC                             ex      x      22 58 14.6
TREC                              AMS    AMS    23 35 40.0
      comp=Z,200nm,21.7s
SUSD  Miller          79.82  40   P      P      22 57 59.7 +0.5
      baz=317
BZS   Buzias          79.86 322⇑iP      P      22 57 59.4 +0.1
ZST   Bratislava      79.95 326  eP      P      22 58 00.4 +0.7
ZST   Bratislava      79.95 326  eP      P      22 58 00.4 +0.7
PLVB  Pleven          80.01 319⇑iP      P      22 58 00.8 +0.7
NKC   Novy Kostel     80.26 330  eP      P      22 58 02.2 +0.8
NKC   Novy Kostel     80.26 330  eP      P      22 58 02.2 +0.8
RAYN  Ar Rayn         80.29 292  eP      P      22 58 02.1  0.0
      comp=Z,15nm,0.8s
RAYN                             ePP     PP     23 01 04.5 -0.7
RAYN  Ar Rayn         80.29 292  i P     P      22 58 02.2 +0.1
      SNR=18
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RAYN  Ar Rayn         80.29 292  eP      P      22 58 02.1 +0.1
RAYN                             e              23 01 04.5
RAYN                              pmax   pmax
      comp=Z,15nm,0.8s
S22A  4UR Ranch, Cre  80.29  49   P      P      22 58 03.8 +1.6
      baz=313,SNR=24
W18A  Petrified Fore  80.33  52   P      P      22 58 03.8 +1.5
      baz=312,SNR=6.1
Q24A  Divide          80.42  47   P      P      22 58 03.8 +0.9
      baz=314
MDVR  Moldovita       80.43 322⇑iP      P      22 58 02.5 +0.1
214A  Organ Pipe Nat  80.48  56   P      P      22 58 04.0 +1.1
      baz=311,SNR=15
SOP   Sopron          80.58 326  eP      P      22 58 04.1 +1.0
EYMN  Ely             80.61  33   P      P      22 58 03.5 +0.1
      baz=321,SNR=13
ASF   Jabal al Asfar  80.62 304   LR     LR     23 38 27.6
      comp=Z,210nm,20.1s,baz=67,slow=39
KHC   Kasperske Hory  80.69 329  eP      P      22 58 04.5 +0.8
KHC                              e              22 58 20.5
KHC                               MLR    MLR
      comp=Z,200nm,16.2s
KHC   Kasperske Hory  80.69 329  eP      P      22 58 04.5 +0.8
KHC                              ePCP    PcP    22 58 11.5 +1.2
KHC                              epP     pP     22 58 20.5 -0.9
KHC                               AMS    AMS    23 36 00.0
      comp=Z,200nm,16.2s
CONA  Conrad Observa  80.69 327  i PcP   P      22 58 05.1 +1.3
      comp=Z,15nm,1.3s,SNR=8.8
KEPZ  Antalya-Kepez   80.72 311  i P     P      22 58 04.3 +0.1
KEPZ                              IAML_P
      comp=Z,271nm,0.5s
OGNE  Ogallala        80.75  44   P      P      22 58 05.0 +0.7
      baz=315,SNR=5.0
MORH  Mrgy, Hungar    80.79 324  eP      P      22 58 04.1 -0.2
GERES GERESS Array B  80.86 328   P      P      22 58 05.1 +0.3
      comp=Z,1.8nm,0.5s,baz=39,slow=5.9,SNR=22
GERES                             PP     PP     23 01 05.0 -4.1
      comp=Z,1.2nm,0.7s,baz=46,slow=7.7,SNR=3.5
GERES                             LR     LR     23 36 58.8
      comp=Z,125nm,19.1s,baz=36,slow=38
EKA   Eskdalemuir Ar  80.92 341   P      P      22 58 05.2 +0.4
      comp=Z,1.4nm,0.6s,baz=27,slow=4.6,SNR=8.6
MMAI  Mount Meron Ar  81.01 306   LR     LR     23 37 51.8
      comp=Z,128nm,19.2s,baz=290,slow=38
SDCO  Great Sand Dun  81.06  48   P      P      22 58 07.5 +1.2
      baz=314,SNR=15
GRFO  Grafenberg      81.17 330  eP      P      22 58 06.7 +0.5
      comp=Z,27nm,0.8s
GRFO  Grafenberg      81.17 330  eP      P      22 58 06.7 +0.5
GRFO                              pmax   pmax
      comp=Z,27nm,0.8s
VTS   Vitosha         81.27 319⇑iP      P      22 58 08.3 +1.2
ARSA  Arzberg         81.36 326  i P     P      22 58 07.7 +0.4
      comp=Z,4.6nm,0.6s
MOA   Molln           81.42 328  i PcP   P      22 58 09.5 +1.9
      comp=Z,13nm,1.9s
ECSD  EROS Data Cent  81.48  39   P      P      22 58 08.3 +0.2
      baz=318,SNR=15
TUC   Tucson          81.54  55  eP      P      22 58 09.2 +0.6
      comp=Z,16nm,1.1s
TUC   Tucson          81.54  55  eP      P      22 58 09.2 +0.6
TUC                               pmax   pmax
      comp=Z,16nm,1.1s
TUC   Tucson          81.54  55   P      P      22 58 09.8 +1.2
      baz=312
C40A  Isle Royale Na  81.61  32   P      P      22 58 08.5 -0.1
      baz=322
E38A  The Farm, Brul  81.63  34   P      P      22 58 08.5 -0.2
      baz=321,SNR=6.1
EZN   Ezine           81.66 316⇓iP      P      22 58 09.4 +0.4
KSCO  Kaye Shedlock'  81.79  45   P      P      22 58 10.6 +0.7
      baz=315
SOKA  Soboth          82.02 326   PcP    P      22 58 11.6 +0.7
      comp=Z,12nm,0.8s,SNR=12
T25A  Trinidad        82.10  48   P      P      22 58 12.8 +1.1
      baz=314,SNR=22
SPMN  Marine on St.   82.14  36   P      P      22 58 11.3 -0.1
      baz=320
MEM   Membach         82.30 334 ⇓P      P      22 58 12.6 +0.4
OBKA  Obir            82.36 327  eP      P      22 58 12.8 +0.2
      comp=Z,5.3nm,0.7s
KBA   Koelnbreinsper  82.41 328  ePcP    P      22 58 14.4 +1.4
      comp=Z,12nm,0.7s
ANMO  Albuquerque     82.42  51  eP      P      22 58 14.9 +1.6
      comp=Z,30nm,1.2s
ANMO  Albuquerque     82.42  51ceP      P      22 58 15.1 +1.7
ANMO                              pmax   pmax
      comp=Z,29nm,1.3s
ANMO  Albuquerque     82.42  51   P      P      22 58 14.8 +1.4
      baz=314
BGNE  Belgrade        82.44  41   P      P      22 58 13.2 +0.1
      baz=317
D41A  Chassel         82.53  32   P      P      22 58 13.7 +0.2
      baz=323
MYKA  Terra Mystica   82.65 327  eP      P      22 58 13.8 -0.3
      comp=Z,5.0nm,0.6s
SCHQ  Schefferville   82.67  16   P      P      22 58 14.5 +0.4
      comp=Z,3.6nm,0.5s,baz=15,slow=3.2,SNR=3.5
BCLA  Clavier         82.70 334 ⇑P      P      22 58 14.2  0.0
G39A  Holcombe        82.82  35   P      P      22 58 14.5 -0.5
      baz=321
WATA  Walderalm       82.93 329  i PcP   P      22 58 16.2 +0.5
      comp=Z,5.1nm,0.9s
WTTA  Wattenberg      82.96 329  ePcP    P      22 58 16.8 +0.9
      comp=Z,5.1nm,0.7s
SNF   Seneffe         82.97 334 ⇑P      P      22 58 15.7 +0.1
ABTA  Abfaltersbach   83.02 328  eP      P      22 58 15.4 -0.7
      comp=Z,7.9nm,1.2s
MOTA  Moosalm         83.11 329  ePcP    P      22 58 17.0 +0.4
      comp=Z,12nm,1.2s,SNR=9.5
RETA  Reutte          83.13 329  ePcP    P      22 58 17.3 +0.7
      comp=Z,14nm,1.1s,SNR=10.0
SQTA  Sankt Quirin    83.17 329  ePcP    P      22 58 17.4 +0.5
      comp=Z,9.8nm,1.2s
DOU   Dourbes         83.22 334 ⇓P      P      22 58 16.6 -0.3
G40A  Rib Lake        83.26  34   P      P      22 58 17.4 +0.1
      baz=322,SNR=12
121A  Cookes Peak, D  83.27  53   P      P      22 58 19.3 +1.6
      baz=313,SNR=14
PDG   Podgorica       83.37 321⇓iP      P      22 58 17.8  0.0
BFO   Black Forest    83.37 331  eP      P      22 58 18.1 +0.3
BFO                              epP     pP     22 58 30.2 -5.3
BFO   Black Forest    83.37 331  i P     P      22 58 18.5 +0.7
CBKS  Cedar Bluff     83.50  44   P      P      22 58 18.6 -0.1
      baz=317
FETA  Feichten        83.52 329  eP      P      22 58 18.0 -0.8
      comp=Z,6.6nm,1.0s
EIL   Elat            83.52 303   LR     LR     23 38 35.8
      comp=Z,146nm,19.1s,baz=64,slow=38
DAVA  Damuels         83.64 330  ePcP    P      22 58 20.2 +0.8
      comp=Z,14nm,0.9s,SNR=8.1
E43A  Lone Tree Farm  83.73  32   P      P      22 58 19.7  0.0
      baz=324,SNR=9.1
F42A  Maple Grove Fa  83.75  33   P      P      22 58 20.0 +0.3
      baz=323
E44A  Grand Marais A  83.96  31   P      P      22 58 21.2 +0.4
      baz=325,SNR=6.4
DAVOX Davos/Dischmat  84.06 329   P      P      22 58 22.1 +0.6
      comp=Z,3.7nm,0.7s,baz=36,slow=4.2,SNR=8.6
DAVOX                             LR     LR     23 39 16.0
      comp=Z,59nm,19.1s,baz=40,slow=38
I41A  Arkdale         84.36  35   P      P      22 58 22.9  0.0
      baz=322
D46A  Sault St. Mari  84.48  30   P      P      22 58 23.2 -0.2
      baz=326,SNR=20
SCIA  State Center    84.50  38   P      P      22 58 23.9 +0.2
      baz=320
PMOR  Pomariorio Ree  84.62 114  eT      T      00 31 27.3
      comp=Z,42nm,0.2s
D47A  Chapleau        84.70  29   P      P      22 58 24.3 -0.3
      baz=327,SNR=15
E46A  Sault Ste Mari  84.81  30   P      P      22 58 25.0 -0.1
      baz=326,SNR=5.9
F45A  CMU Biological  84.89  31   P      P      22 58 25.4 -0.1
      baz=325
I42A  Draeger Farm,   84.91  34   P      P      22 58 25.9 +0.2
      baz=323,SNR=13
KSU1  Kansas State U  84.94  42   P      P      22 58 25.8 -0.1
      baz=318
H43A  Windswept, Lux  84.94  33   P      P      22 58 26.2 +0.4
      baz=324,SNR=9.8
D48A  Paudash Townsh  85.08  28   P      P      22 58 25.9 -0.5
      baz=327,SNR=5.4
JFWS  Jewell Farm     85.09  36   P      P      22 58 26.0 -0.6
      baz=322
E47A  Iron Bridge     85.13  30   P      P      22 58 26.5 -0.2
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      baz=326,SNR=11
LSQQ  Lebel-sur-Quev  85.13  25   P      P      22 58 26.4 -0.2
      baz=331
D49A  Beulah Townshi  85.16  28   P      P      22 58 26.4 -0.5
      baz=328,SNR=5.7
CHGQ  Chibougamau     85.19  23   P      P      22 58 26.4 -0.5
      baz=332,SNR=6.0
PPT   Papeete         85.21 117   LR     LR     23 32 36.4
      comp=Z,68nm,19.7s,baz=338,slow=33
PPT2  Papeete2        85.22 117  eS      S      23 09 03.1  +10
      comp=Z,292nm,26.0s
PPT2  Papeete2        85.22 117  eLR     LR     23 25 04.4
      comp=Z,462nm,30.8s
PPT2  Papeete2        85.22 117  eT      T      00 32 07.2
      comp=Z,33nm,0.3s
AMTX  Amarillo        85.26  48   P      P      22 58 28.6 +0.9
      baz=316
PAE   Paea            85.27 117  eT      T      00 32 09.8
      comp=Z,7.1nm,0.4s
MSTX  Muleshoe        85.28  49   P      P      22 58 28.4 +0.6
      baz=316,SNR=11
MNTX  Cornudas Mount  85.32  52   P      P      22 58 28.8 +0.9
      baz=314,SNR=15
L40A  Anamosa         85.32  37   P      P      22 58 27.7  0.0
      baz=322,SNR=7.1
TIAR  Tiarei          85.36 117  eT      T      00 32 16.9
      comp=Z,9.1nm,0.3s
G45A  Suttons Bay     85.36  32   P      P      22 58 28.0 +0.1
      baz=325
G46A  Petoskey        85.45  31   P      P      22 58 28.6 +0.3
      baz=326,SNR=10
E48A  Lockeyer        85.53  29   P      P      22 58 28.4 -0.3
      baz=327,SNR=7.3
H45A  Beulah          85.54  32   P      P      22 58 29.0 +0.2
      baz=325
F48A  Evansville      85.91  30   P      P      22 58 30.5  0.0
      baz=327,SNR=9.5
I45A  Fountain        85.94  33   P      P      22 58 31.3 +0.5
      baz=325
H46A  Fife Lake       85.96  32   P      P      22 58 31.3 +0.4
      baz=325
GLMI  Grayling        85.96  31   P      P      22 58 31.2 +0.3
      baz=326
G47A  Hillman         85.97  31   P      P      22 58 31.1 +0.1
      baz=326,SNR=6.1
D51A  Lot 18 Range I  86.03  27   P      P      22 58 30.6 -0.6
      baz=329
N40A  Mertquake, Sal  86.07  38   P      P      22 58 31.9 +0.4
      baz=321
L42A  Oliver, Polo    86.08  36   P      P      22 58 31.4 -0.1
      baz=323
E50A  Wahnapitae      86.11  28   P      P      22 58 31.5 -0.1
      baz=328
K43A  Burlington      86.12  35   P      P      22 58 31.7  0.0
      baz=323
M41A  Milan           86.17  37   P      P      22 58 32.2 +0.3
      baz=322
F49A  Sandfield       86.18  29   P      P      22 58 31.8 -0.1
      baz=327,SNR=5.2
H47A  Mio             86.31  31   P      P      22 58 33.2 +0.6
      baz=326
I46A  Reed City       86.35  32   P      P      22 58 33.4 +0.6
      baz=325
J45A  Montague        86.37  33   P      P      22 58 32.9  0.0
      baz=325
MEH   Mehetia         86.46 117  eT      T      00 33 40.5
      comp=Z,159nm,0.3s
D52A  ZEK Kipawa Sen  86.46  27   P      P      22 58 33.1 -0.2
      baz=330
E51A  G1948 Merrick   86.46  27   P      P      22 58 33.0 -0.4
      baz=329,SNR=5.8
N41A  Harden Midland  86.55  38   P      P      22 58 34.1 +0.2
      baz=322
H48A  Harrisville     86.58  31   P      P      22 58 34.2 +0.3
      baz=326
D53A  Lac Vacive, Po  86.62  26   P      P      22 58 34.0 -0.1
      baz=330,SNR=6.2
I47A  Gladwin         86.67  32   P      P      22 58 34.8 +0.4
      baz=326
L44A  Lake County Fo  86.72  35   P      P      22 58 34.8 +0.1
      baz=324
J46A  Howard City     86.75  33   P      P      22 58 35.3 +0.5
      baz=325
F51A  Arnstein        86.83  28   P      P      22 58 34.8 -0.3
      baz=329,SNR=5.1
TOBO  Tobermory, Bru  86.83  29   P      P      22 58 35.4 +0.3
      baz=328
I48A  Sherman Twp     86.85  31   P      P      22 58 35.9 +0.7
      baz=326
D54A  Lac Fusel, La   86.90  25   P      P      22 58 35.2 -0.2
      baz=331
E52A  Mattawa         86.97  27   P      P      22 58 35.3 -0.5
      baz=330
WMOK  Wichita Mounta  87.00  46   P      P      22 58 36.7 +0.5
      baz=318,SNR=12
F52A  Sundridge       87.16  28   P      P      22 58 36.9 +0.2
      baz=329
J47A  Sunmer          87.18  32   P      P      22 58 37.8 +0.9
      baz=326
KLBO  Killbear Provi  87.21  28   P      P      22 58 36.8 -0.1
      baz=329
K46A  Dorr            87.23  33   P      P      22 58 37.4 +0.3
      baz=325
E53A  Dumoine, Ponti  87.24  26   P      P      22 58 37.0 -0.1
      baz=330
M44A  Midewin, Midew  87.30  35   P      P      22 58 37.8 +0.4
      baz=324
E54A  Lac Daplat, Po  87.35  26   P      P      22 58 37.2 -0.4
      baz=331
HDIL  Hopedale        87.40  37   P      P      22 58 38.3 +0.3
      baz=323
I49A  Point Hope      87.41  31   P      P      22 58 38.7 +0.7
      baz=327
BUKO  Buck Lake       87.43  28   P      P      22 58 38.0  0.0
      baz=329
ALGO  Algonquin Park  87.47  27   P      P      22 58 38.0 -0.2
      baz=330
BMRO  Meriville Lake  87.48  29   P      P      22 58 38.8 +0.5
      baz=328,SNR=5.1
J48A  Bridge Port     87.56  32   P      P      22 58 39.8 +1.2
      baz=326
L46A  Eue Claire      87.56  34   P      P      22 58 39.0 +0.3
      baz=325
K47A  Vermontville    87.58  33   P      P      22 58 39.2 +0.4
      baz=326
TUL1  Leonard         87.76  44   P      P      22 58 40.2 +0.4
      baz=319
J49A  Marlette        87.77  31   P      P      22 58 40.3 +0.6
      baz=327
BASO  Ashfield        87.80  30   P      P      22 58 40.8 +1.0
      baz=328,SNR=5.5
K48A  Perry           87.83  32   P      P      22 58 40.9 +0.9
      baz=326,SNR=5.5
BWLO  Walkerton       87.92  30   P      P      22 58 40.8 +0.5
      baz=328
H52A  Wyevale         87.94  29   P      P      22 58 40.2 -0.2
      baz=329
G53A  Haliburton      87.99  28   P      P      22 58 40.8 +0.1
      baz=330
P43A  Skaggs, Pawnee  88.02  37   P      P      22 58 41.2 +0.3
      baz=323
ABTX  Abilene, Hawle  88.06  48   P      P      22 58 42.0 +0.7
      baz=317,SNR=6.7
L47A  Sherwood        88.06  33   P      P      22 58 41.5 +0.4
      baz=325,SNR=5.1
O44A  Mansfield       88.10  36   P      P      22 58 41.4 +0.1
      baz=323
K49A  Clarkson        88.12  32   P      P      22 58 42.3 +0.9
      baz=326
F55A  Otter Lake      88.16  26   P      P      22 58 41.3 -0.2
      baz=331
I51A  Listowel        88.23  30   P      P      22 58 42.7 +0.8
      baz=328
I52A  Shelburne       88.32  29   P      P      22 58 42.9 +0.6
      baz=329
BANO  Bancroft        88.32  27   P      P      22 58 42.5 +0.2
      baz=330,SNR=6.4
M47A  Cromwell        88.39  34   P      P      22 58 42.8 +0.1
      baz=325
L48A  N Adams         88.41  33   P      P      22 58 43.5 +0.7
      baz=326,SNR=8.7
AAM   Ann Arbor       88.44  32   P      P      22 58 43.6 +0.7
      baz=326
CCM   Cathedral Cave  88.44  39  eP      P      22 58 43.4 +0.5
      comp=Z,25nm,0.8s
CCM   Cathedral Cave  88.44  39  eP      P      22 58 43.4 +0.5
CCM                               pmax   pmax
      comp=Z,25nm,0.8s
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CCM	Cathedral Cave baz=322	88.44	39	P	P	22 58 43.3	+0.3
K50A	Casco baz=327	88.47	31	P	P	22 58 43.4	+0.5
SFIN	Lafayette baz=324	88.54	35	P	P	22 58 43.7	+0.3
G55A	Calabogie baz=331	88.54	26	P	P	22 58 43.0	-0.3
L49A	Milan baz=326	88.55	32	P	P	22 58 44.0	+0.6
PLVO	Plevna baz=331	88.61	27	P	P	22 58 43.5	-0.1
N47A	Urbana baz=325,SNR=6.8	88.75	34	P	P	22 58 44.5	+0.1
ACTO	Acton baz=329	88.76	29	P	P	22 58 44.9	+0.5
ORIO	Orleans, Innes baz=332	88.78	26	P	P	22 58 44.1	-0.3
DELO	Deloro Mine baz=330,SNR=6.3	88.87	27	P	P	22 58 45.0	+0.1
J52A	Paris baz=328	88.91	30	P	P	22 58 45.7	+0.7
K51A	Iona Station baz=328	88.95	31	P	P	22 58 46.2	+0.9
U40A	Yellville baz=321,SNR=22	88.95	41	P	P	22 58 45.7	+0.3
H55A	Tweed baz=331,SNR=5.3	88.99	27	P	P	22 58 45.6	+0.2
M49A	Liberty Center baz=326,SNR=5.3	88.99	33	P	P	22 58 46.0	+0.5
L50A	Kingsville baz=327	89.00	32	P	P	22 58 46.0	+0.5
N48A	Decatur baz=326,SNR=6.8	89.06	34	P	P	22 58 46.2	+0.4
P46A	Rosedale baz=324,SNR=6.5	89.10	36	P	P	22 58 46.6	+0.5
WLVO	Wesleyville baz=330	89.11	28	P	P	22 58 46.3	+0.4
I55A	Frankford baz=330	89.11	27	P	P	22 58 45.9	-0.1
K52A	Tillsonburg baz=328	89.21	30	P	P	22 58 47.0	+0.5
TYNO	Tyneside baz=329	89.27	29	P	P	22 58 47.4	+0.7
H56A	Elgin baz=331	89.28	26	P	P	22 58 46.8	0.0
TBI	Tubuai comp=Z,158nm,38.5s	89.29	121	*e*S	S	23 09 38.3	+6.8
TBI	Tubuai comp=Z,181nm,34.5s	89.29	121	*e*LR	LR	23 26 42.6	
TBI	Tubuai comp=Z,113nm,0.3s	89.29	121	*e*T	T	00 37 02.5	
PLIO	Pelee Island, baz=327	89.32	32	P	P	22 58 47.4	+0.4
N49A	Columbus Grove baz=326,SNR=6.7	89.36	33	P	P	22 58 47.8	+0.5
W39A	Magazine baz=320	89.36	43	P	P	22 58 47.4	0.0
M50A	Fremont baz=327	89.44	32	P	P	22 58 47.9	+0.4
O48A	Farmland baz=325	89.49	34	P	P	22 58 48.0	+0.1
JCT	Junction City baz=317,SNR=9.3	89.53	50	P	P	22 58 48.7	+0.4
J54A	Appleton baz=330	89.58	29	P	P	22 58 48.5	+0.3
PECO	Prince Edward baz=331	89.60	27	P	P	22 58 48.4	+0.2
P47A	Martinsville baz=325,SNR=5.2	89.63	35	P	P	22 58 49.1	+0.5
S44A	Carbondale baz=323,SNR=8.1	89.69	38	P	P	22 58 49.4	+0.6
MEDO	Medina baz=330	89.74	29	P	P	22 58 49.3	+0.3
WHTX	Lake Whitney, baz=318	89.78	47	P	P	22 58 49.7	+0.4
LONY	Lake Ozonia baz=332	89.82	25	P	P	22 58 49.4	+0.1
J55A	Hilton baz=330	89.89	28	P	P	22 58 49.8	+0.2
O49A	Covington baz=326,SNR=5.4	89.91	34	P	P	22 58 50.3	+0.5
N50A	Nevada baz=327	89.92	33	P	P	22 58 50.6	+0.7
MIAR	Mount Ida baz=320,SNR=22	89.97	43	P	P	22 58 51.0	+0.8
M52A	Chesterland baz=328	90.01	31	P	P	22 58 50.9	+0.6
P48A	Milroy baz=325	90.03	35	P	P	22 58 50.2	-0.2
ERPA	Erie baz=329,SNR=5.2	90.06	30	P	P	22 58 51.3	+0.9
L53A	Girard baz=329,SNR=8.5	90.09	30	P	P	22 58 51.6	+1.0
N51A	Ashland baz=327	90.12	32	P	P	22 58 51.0	+0.2
K54A	Basiliko Farm, baz=330,SNR=6.6	90.13	29	P	P	22 58 51.4	+0.6
W41B	Gary Mavity, V baz=321,SNR=6.6	90.18	42	P	P	22 58 51.3	+0.2
L54A	Sinclairville baz=329,SNR=6.1	90.22	30	P	P	22 58 51.9	+0.7
O50A	Cable baz=326,SNR=6.9	90.25	33	P	P	22 58 52.1	+0.7
K55A	Perry baz=330,SNR=6.8	90.26	28	P	P	22 58 51.9	+0.5
P49A	Miami Univ. Ec baz=326	90.28	34	P	P	22 58 52.1	+0.5
Q48A	North Vernon baz=325	90.33	35	P	P	22 58 52.3	+0.5
M53A	WI Miller and baz=328	90.37	31	P	P	22 58 52.7	+0.8
X40A	Basin Creek Fa baz=321,SNR=5.7	90.41	43	P	P	22 58 52.9	+0.6
S46A	Don Dixon Farm baz=324	90.43	37	P	P	22 58 52.7	+0.4
ACSO	Alum Creek Sta baz=327,SNR=5.3	90.44	33	P	P	22 58 52.9	+0.6
L55A	Hinsdale baz=330	90.59	29	P	P	22 58 53.4	+0.4
435B	Jarrell baz=318	90.60	48	P	P	22 58 53.6	+0.4
P50A	Jamestown baz=326	90.62	34	P	P	22 58 53.8	+0.7
Q49A	Aurora baz=326	90.64	35	P	P	22 58 53.8	+0.6
WCI	Wyandotte Cave comp=Z,11nm,0.7s	90.65	36	*e*P	P	22 58 53.2	-0.1
WCI	Wyandotte Cave	90.65	36	*e*P	P	22 58 53.2	-0.1
WCI	 comp=Z,11nm,0.7s			pmax	pmax		
WCI	Wyandotte Cave baz=325	90.65	36	P	P	22 58 53.8	+0.5
O51A	Pataskala baz=327	90.67	33	P	P	22 58 53.8	+0.4
R48A	Northridge Ran baz=325	90.70	36	P	P	22 58 54.1	+0.6
M54A	Oil Creek Stat baz=329	90.70	30	P	P	22 58 53.7	+0.2
N53A	Lisbon baz=328	90.84	31	P	P	22 58 54.6	+0.4
T46A	Princeton baz=324,SNR=5.8	90.86	38	P	P	22 58 55.2	+0.9
PKME	Peaks-Kenny Pk baz=336	90.87	22	P	P	22 58 54.5	+0.3
LBNH	Lisbon baz=334	91.01	24	P	P	22 58 55.3	+0.4
O52A	Adamsville baz=328	91.02	32	P	P	22 58 55.5	+0.5
P51A	Williamsport baz=327	91.04	33	P	P	22 58 55.1	+0.1
N54A	Moraine State baz=329	91.05	31	P	P	22 58 55.5	+0.4
M55A	Ridgway baz=330,SNR=6.8	91.08	30	P	P	22 58 56.1	+0.8
O53A	New Philadelph baz=328	91.16	32	P	P	22 58 55.9	+0.3
Q50A	Georgetown baz=326	91.17	34	P	P	22 58 56.2	+0.4
S48A	Wiedeman Farm, baz=325	91.22	36	P	P	22 58 56.4	+0.4
M56A	Emporium baz=330	91.29	29	P	P	22 58 56.8	+0.6
Q51A	Peebles baz=327,SNR=5.1	91.30	34	P	P	22 58 56.9	+0.6
P52A	Corning baz=327	91.30	33	P	P	22 58 56.6	+0.3
833A	Chaparral WMA, baz=317	91.35	51	P	P	22 58 57.6	+0.9
Z41A	Richland Creek baz=321	91.37	43	P	P	22 58 57.5	+0.8
X43A	Marvell baz=322	91.39	41	P	P	22 58 57.1	+0.3
S49A	Springfield baz=325	91.47	36	P	P	22 58 57.5	+0.4
BINY	Binghamton baz=332	91.47	27	P	P	22 58 57.6	+0.5
R50A	Paris baz=326	91.48	35	P	P	22 58 57.5	+0.3
T48A	Bowling Green baz=325	91.51	37	P	P	22 58 57.6	+0.3
O54A	Avella baz=328	91.56	31	P	P	22 58 58.0	+0.5
N55A	Marion Center baz=330	91.59	30	P	P	22 58 58.1	+0.4
WVT	Waverly comp=Z,6.3nm,0.7s	91.62	38	*e*P	P	22 58 58.7	+0.8
WVT	Waverly	91.62	38	*e*P	P	22 58 58.7	+0.8
WVT	 comp=Z,6.0nm,0.7s			pmax	pmax		
WVT	Waverly baz=324	91.62	38	P	P	22 58 58.1	+0.3
U47A	Clarksville baz=324	91.63	38	P	P	22 58 58.3	+0.4
L58A	Harry Jones Me baz=332	91.66	27	P	P	22 58 58.5	+0.6
P53A	Whipple baz=328	91.73	32	P	P	22 58 58.5	+0.2
V46A	Holladay baz=324	91.75	39	P	P	22 58 58.7	+0.2
R51A	Hillsboro baz=326	91.80	34	P	P	22 58 58.8	+0.2
Q52A	Bidwell baz=327	91.81	33	P	P	22 58 58.7	+0.1
T49A	Edmonton baz=325	91.91	36	P	P	22 58 59.5	+0.3
U48A	Cassie Pea, Po baz=325	91.93	37	P	P	22 58 59.3	+0.1
S50A	Richmond baz=326	91.95	35	P	P	22 58 59.8	+0.4
O55A	Ligonier baz=329	91.96	31	P	P	22 58 59.6	+0.2
V47A	Nunnelly baz=324,SNR=7.2	92.02	38	P	P	22 59 00.0	+0.4
M58A	Price's Panora baz=331,SNR=5.6	92.03	28	P	P	22 59 00.2	+0.5
SSPA	Standing Stone baz=330	92.14	29	P	P	22 59 00.5	+0.4
OXF	Oxford baz=323	92.14	40	P	P	22 59 00.5	+0.2
N57A	Milroy baz=330	92.16	29	P	P	22 59 00.7	+0.5
O56A	Blue Knob Stat baz=330	92.19	30	P	P	22 59 00.7	+0.2
Q53A	Leroy baz=328	92.21	33	P	P	22 59 00.9	+0.4
MCWV	Mont Chateau baz=329	92.22	31	P	P	22 59 00.9	+0.3
M59A	Waymart baz=332	92.25	27	P	P	22 59 00.9	+0.2
U49A	Red Boiling Sp baz=325,SNR=8.3	92.28	37	P	P	22 59 01.3	+0.4
T50A	Nancy baz=326,SNR=6.8	92.30	36	P	P	22 59 01.4	+0.5
S51A	Beattyville baz=326	92.34	35	P	P	22 59 01.4	+0.2
P55A	Reedsville baz=329	92.35	31	P	P	22 59 01.5	+0.3
Q54A	Coxs Mills baz=328	92.39	32	P	P	22 59 01.9	+0.6
N58A	Sunbury baz=331	92.40	29	P	P	22 59 01.5	+0.2
V48A	Smith Brothers baz=324	92.42	38	P	P	22 59 01.8	+0.2
W47A	Westpoint baz=324	92.44	39	P	P	22 59 01.8	+0.1
R53A	Hurricane baz=328	92.47	33	P	P	22 59 02.1	+0.4
N59A	State Game Lan baz=332	92.68	28	P	P	22 59 03.2	+0.5
Q55A	Buckhannon baz=329	92.69	32	P	P	22 59 03.5	+0.7
HRV	Adam Dziewonsk baz=335	92.69	24	P	P	22 59 03.4	+0.8
T51A	Gray baz=326	92.74	35	P	P	22 59 02.8	-0.2
P56A	Dayton Farm, R baz=330	92.75	31	P	P	22 59 03.6	+0.6
U50A	Jamestown baz=326	92.79	36	P	P	22 59 03.6	+0.3
V49A	McMinnville baz=325	92.83	37	P	P	22 59 03.7	+0.2
W48A	Pulaski baz=324,SNR=9.7	92.85	38	P	P	22 59 03.9	+0.3
X47A	Russelville baz=324	92.91	39	P	P	22 59 03.7	-0.1
S53A	Williamson baz=327	92.94	34	P	P	22 59 04.3	+0.3
N60A	Cedar Hill Far baz=332	92.96	27	P	P	22 59 03.7	-0.2
R54A	Victor baz=328	93.00	33	P	P	22 59 04.5	+0.3
Q56A	Snyder Ridge, baz=329	93.01	31	P	P	22 59 04.5	+0.3
T52A	Hallie baz=327	93.05	35	P	P	22 59 04.7	+0.2
W49A	Belvidere baz=325	93.19	38	P	P	22 59 05.3	+0.2
S54A	Dingess, Beckl baz=328	93.19	33	P	P	22 59 05.2	+0.1
U51A	La Follette baz=326	93.20	36	P	P	22 59 05.3	+0.2
PAL	Palisades baz=333	93.26	27	P	P	22 59 05.4	+0.1
TZTN	Tazewell baz=326	93.27	35	P	P	22 59 05.8	+0.3
R55A	Marlinton baz=329	93.28	32	P	P	22 59 05.6	+0.1
V50A	Pikevile baz=325	93.28	37	P	P	22 59 05.6	+0.1
T53A	Wise baz=327	93.35	34	P	P	22 59 05.6	-0.3
X48A	Hartselle baz=324	93.36	39	P	P	22 59 05.8	0.0
KEST	Kesra comp=Z,100nm,19.4s,baz=288,slow=38	93.36	323	LR	LR	23 44 33.5	
R56A	Bull Pasture M baz=329	93.46	32	P	P	22 59 06.3	-0.1
U52A	Thorn Hill baz=326	93.48	35	P	P	22 59 06.6	+0.2
V51A	Loudon baz=326	93.52	36	P	P	22 59 06.8	+0.1
S55A	Lewisburg baz=328	93.55	33	P	P	22 59 06.9	+0.1
W50A	Signal Mountai baz=325	93.57	37	P	P	22 59 06.6	-0.4
X49A	Woodville baz=325,SNR=5.8	93.65	38	P	P	22 59 07.3	+0.1
P60A	Greenville baz=332	93.70	28	P	P	22 59 07.2	-0.1
T54A	Tazewell baz=328	93.70	34	P	P	22 59 07.8	+0.3
Y48A	Jasper baz=324	93.73	39	P	P	22 59 07.5	-0.1
V52A	Sevierville baz=326	93.83	36	P	P	22 59 08.0	-0.1
U53A	Fall Branch baz=327	93.85	35	P	P	22 59 08.2	0.0
W51A	Cleveland baz=326	93.86	37	P	P	22 59 08.3	+0.1
T55A	Pulaski baz=328	93.99	33	P	P	22 59 09.0	+0.2
U54A	Nelsons Funny baz=328	94.05	34	P	P	22 59 08.3	-0.8
BLA	Blacksburg baz=328	94.06	33	P	P	22 59 08.7	-0.4
Y49A	Blount Mountai baz=325	94.14	39	P	P	22 59 09.2	-0.3
Y50A	Piedmont baz=325	94.44	38	P	P	22 59 11.2	+0.3
LRAL	Lakeview Retre baz=324	94.52	40	P	P	22 59 11.5	+0.2
W53A	Cullowhee baz=327	94.59	36	P	P	22 59 11.8	+0.1
Z49A	Columbiana baz=324	94.62	39	P	P	22 59 12.1	+0.3
X52A	Dahlonega baz=326	94.72	37	P	P	22 59 12.4	+0.3
T57A	Hurt baz=329	94.73	32	P	P	22 59 12.4	+0.3
Y51A	Rockmart baz=325	94.75	38	P	P	22 59 12.4	0.0
Z50A	Ashland baz=325	94.87	39	P	P	22 59 13.0	+0.2
X53A	Estanollee baz=326,SNR=6.1	95.08	36	P	P	22 59 14.4	+0.7
W54A	Cherokee Point baz=327	95.09	35	P	P	22 59 13.9	0.0
Z51A	Franklin baz=325	95.18	38	P	P	22 59 14.2	-0.1
U57A	Blanch baz=329	95.18	33	P	P	22 59 14.2	0.0
V56A	Mocksville baz=328	95.22	34	P	P	22 59 14.3	-0.1
Y52A	Lilburn baz=326	95.25	37	P	P	22 59 15.1	+0.5
ESDC	Sonseca Array comp=Z,0.3nm,0.6s,baz=22,slow=3.8,SNR=4.7	95.26	334	P	P	22 59 14.0	-0.6
ESDC	 comp=Z,0.8nm,0.7s,baz=29,slow=7.4,SNR=4.1			PP	PP	23 03 01.0	-3.3
ESDC	 comp=Z,61nm,19.5s,baz=95,slow=39			LR	LR	23 47 37.3	
150A	Eclectic baz=325	95.35	39	P	P	22 59 15.0	-0.1
X54A	Belton baz=327	95.46	36	P	P	22 59 15.9	+0.4
V57A	Coltrane Farms baz=329	95.46	33	P	P	22 59 15.5	0.0
Y53A	Monroe baz=326	95.48	37	P	P	22 59 15.9	+0.3
Z52A	Williamson baz=326	95.64	38	P	P	22 59 16.5	+0.2
X55A	Gracelyn & Ava baz=328	95.86	35	P	P	22 59 17.6	+0.3
Y54A	Tignall baz=327	95.89	36	P	P	22 59 17.6	+0.1
GOGA	Godfrey baz=326	95.91	37	P	P	22 59 17.8	+0.3
Z53A	Monticello baz=326	95.97	37	P	P	22 59 17.7	-0.1
W57A	Gilead baz=329	96.00	34	P	P	22 59 17.7	-0.3
X56A	White Oak baz=328	96.11	35	P	P	22 59 18.4	0.0
Y55A	Saluda baz=327	96.20	36	P	P	22 59 18.8	-0.1
W58A	Raeford baz=329	96.43	33	P	P	22 59 19.5	-0.4
TORD	Torodi Ar. Bea comp=Z,3.6nm,0.9s,baz=36,slow=7.7,SNR=5.5	115.95	317	PP	PP	23 05 37.0	-0.7
TORD	 comp=Z,1.1nm,0.8s,baz=222,slow=3.9,SNR=4.4			PKKPbc	PKKPbc	23 15 02.7	-0.6
VNDA	Vanda comp=Z,0.5nm,0.5s,baz=332,slow=4.7,SNR=9.3	117.49	175	PKP	PKPdf	23 04 34.1	-0.7
MAW	Mawson comp=Z,1.8nm,0.6s,baz=66,slow=3.9,SNR=5.2	122.15	206	PKP	PKiKP	23 04 44.2	+0.1
MAW	 comp=Z,4.5nm,0.8s,baz=0.0,slow=2.3,SNR=4.3			pPKP	pPKPdf	23 05 03.7	+1.2
SDV	Santo Domingo	122.92	40	*e*PKPdf	PKPdf	23 04 46.2	-1.3
BOSA	Boshof comp=Z,4.1nm,0.8s,baz=90,slow=4.1,SNR=2.8	127.66	262	pPKP	pPKPdf	23 05 15.3	+0.8
QSPA	South Pole Qui	129.36	180	*e*PKPdf	PKPdf	23 04 57.3	-0.6
PTGA	Pitinga comp=Z,0.9nm,0.3s,baz=15,slow=9.1,SNR=4.9	136.30	33	PKP	PKPdf	23 05 12.8	+0.2
SNAA	Sanae	143.41	198	PKPdf	PKPab	23 05 20.0	-0.1
SNAA	Sanae	143.41	198	*e*PKPpre	PKPab	23 05 19.1	-1.0
SNAA	Sanae	143.41	198	*e*PKHKP	PKPab	23 05 19.1	-0.9
LPAZ	La Paz comp=Z,9.8nm,0.4s,baz=5.2,slow=4.0,SNR=69	144.78	57	PKP	PKPbc	23 05 27.5	-0.1
LPAZ	La Paz	144.78	57	*e*PKPdf	PKPab	23 05 27.3	-0.1
VNA2	Neumayer--Watz baz=66,slow=1.3	144.98	197	PKPdf	PKPbc	23 05 25.6	-0.3
VNA3	Neumayer Olymp	145.23	195	PKPdf	PKPbc	23 05 26.1	-0.6
VNA1	Neumayer--Stat	145.38	197	PKPdf	PKPdf	23 05 26.5	-0.5
LVC	Limon Verde	148.59	67	*e*PKPdf	PKPdf	23 05 33.6	-0.8
LVC				*e*PKPbc	PKPbc	23 05 38.3	+0.1
LVC				*e*PKPab	PKPab	23 05 41.5	-0.3
LVC	Limon Verde	148.59	67	*e*PKIKP	PKPdf	23 05 33.6	-0.8
LVC				*e*		23 05 41.5	
LCO	Las Campanas	150.94	79	*e*PKPdf	PKPdf	23 05 38.2	+0.3
LCO	Las Campanas	150.94	79	*e*PKIKP	PKPdf	23 05 38.2	+0.3
BDFB	Brasilia comp=Z,2.1nm,0.5s,baz=258,slow=8.1,SNR=3.1	154.48	24	PKPbc	PKiKP	23 05 51.9	+0.3
BDFB	 comp=Z,1.5nm,0.4s,baz=301,slow=9.5,SNR=3.6			PKPab	PKPab	23 06 06.0	-0.1
CPUP	Villa Florida comp=Z,5.4nm,0.7s,baz=309,slow=4.6,SNR=11	158.95	57	PKPab	PKPab	23 06 24.8	-0.3
CPUP	 comp=Z,2.6nm,0.8s,baz=313,slow=2.7,SNR=2.7			pPKPab	pPKPab	23 06 45.3	+2.4

ROM 15 22:47:05.9±0.1, 43°.017N±0°.004×12°.964E±0°.003, h14km, ML0.5/2, Error ellipse: s-maj=0.3km s-min=0.2km az=9.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CESI	CESI - Serrava	0.04	255	P	Pg	22 47 08.9	+0.2
CESI				S	Sg	22 47 10.9	+0.3
FDMO	Fiordimonte	0.09	78	P	Pg	22 47 09.3	+0.2
FDMO				S	Sg	22 47 11.6	+0.4
CSP1	Cessapalombo	0.19	67	P	Pg	22 47 10.8	+0.3
CSP1				S	Sg	22 47 14.2	+0.6
NRCA	Norcia	0.21	149	P	Pg	22 47 11.0	+0.3
NRCA				S	Sb	22 47 14.8	-0.7
NRCA	 comp=E,15µm,1.2s			AML	AML		
NRCA	 comp=N,24µm,0.1s			AML	AML		
NRCA	 comp=N,24µm,0.1s			AML	AML		
NRCA	 comp=E,15µm,1.2s			AML	AML		
ASSB	Assisi San Ben	0.23	277	P	Pg	22 47 11.2	+0.3
ASSB				S	Sg	22 47 15.0	+0.7
ASSB	 comp=E,20µm,1.1s			AML	AML		
ASSB	 comp=N,19µm,1.4s			AML	AML		
ASSB	 comp=E,20µm,1.1s			AML	AML		
ASSB	 comp=N,19µm,1.4s			AML	AML		
SNTG	Esanatoglia	0.24	356	P	Pg	22 47 11.5	+0.3

JMA 15 23:01:20.6±0.2, 37°.28N×141°.80E, h41km±3km, M3.8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.74	277	P	Pn	23 01 34.7	0.0
JFK				S	Sn	23 01 44.4	-0.4
ONAJ	Iwakimizuishiy	0.82	258	P	Pn	23 01 35.8	+0.1
ONAJ				S	Sn	23 01 46.2	-0.5
JMST	Minamisoumatoc	0.85	302	P	Pn	23 01 36.1	0.0
JMST				S	Sn	23 01 47.1	-0.3
JMM	Marumori	0.99	306	P	Pn	23 01 38.2	+0.2
JMM				S	Sn	23 01 50.8	0.0
JFFD	Fukushimafurud	1.01	260	P	Pn	23 01 38.5	+0.2
JFFD				S	Sn	23 01 51.2	-0.1
JFT	Otama	1.19	282	P	Pn	23 01 42.1	+1.3
JFT				S	Sn	23 01 57.0	+1.2
JHO	Hitachi	1.19	236	P	Pn	23 01 40.7	-0.1
JHO				*e*S	Sn	23 01 55.1	-0.7
JIO	Ouri	1.23	343	P	Pn	23 01 41.1	-0.1
JIO				S	Sn	23 01 55.2	-1.4
JOU	Okura	1.41	321	P	Pn	23 01 45.1	+1.3
JOU				S	Sn	23 02 02.4	+1.2
JYS	Shirataka	1.67	305	P	Pn	23 01 49.1	+1.8
JYS				S	Sn	23 02 11.1	+3.6
JFY	Yanaizu	1.68	275	P	Pn	23 01 48.9	+1.5
JFY				S	Sn	23 02 10.5	+2.8
JMK	Ichinoseki	1.73	345	P	Pn	23 01 48.6	+0.4
JMK				S	Sn	23 02 09.1	+0.1
MAT	Matsushiro	2.97	257	P	Pn	23 02 09.5	+4.2
MAT				*e*S	Sn	23 02 46.4	+6.7

SJA 15 23:06:57.0±0.4, 26°.89S×66°.92W, h134km±7km, ML3.2, MW3.9, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHML	**Horco Molle**	1.42	86	*e*P	Pn	23 07 25.4	+0.9
AHML				IAML		23 07 25.7	
	comp=Z,126nm,0.4s						
AHML				*e*S	Sn	23 07 46.1	+0.6
CYA	**Choya**	1.83	148	*e*P	Pn	23 07 30.2	+0.9
CYA				*e*S	Sn	23 07 54.6	+0.6
CYA				IAML		23 07 56.5	
	comp=Z,136nm,0.3s						
VCA	**Vinchina**	2.17	212	*e*P	Pn	23 07 34.3	+0.9
VCA				IAML		23 08 07.8	
	comp=Z,240nm,0.3s						
ACLC	**CERRO LA CRUZ**	2.53	181	*e*P	Pn	23 07 39.1	+1.2
AGUA	**GUANDACOL**	2.94	208	*e*P	Pn	23 07 45.7	+2.6
APLL	**PUNTA DE LOS L**	3.51	175	*e*P	Pn	23 07 51.2	+0.8
TCA	**Tanti**	4.87	156	*e*P	Pn	23 08 09.7	+1.2

NNC 15 23:08:22.3±8.7, 37°.53N×70°.99E, h0^{km}, mb4.0, mpv3.6, 2C-1D, Error ellipse: s-maj=60.0km s-min=45.9km az=15.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	4.67	351	Pg	Pg	23 09 49.5	-2.3
	2.6nm,0.2s						
IUG				Lg	Lg	23 10 53.5	
	16nm,0.3s						
MRKS	**Merke**	5.48	17	Pg	Pg	23 10 05.5	-1.8
	6.1nm,0.3s						
MRKS				Lg	Lg	23 11 21.2	
	4.2nm,0.6s						
BRLS	**Borolday**	5.56	351	Pg	Pb	23 09 57.4	-3.0
	1.7nm,0.3s						
BRLS				Lg	Lg	23 11 07.0	
	1.2nm,0.3s						
KK31	**Karatay Array**	5.58	356	Pg	Pb	23 10 04.2	+3.6
	0.4nm,0.3s,baz=198,slow=15,SNR=13						
KK31				⇑Lg	Lg	23 11 18.4	
	0.5nm,0.3s,baz=199,slow=26,SNR=4.4						
AAK	**Ala-Archa**	5.76	27	⇓Pg	Pg	23 10 08.5	-4.3
	1.8nm,0.5s						
AAK				⇑Lg	Lg	23 11 26.1	
	6.9nm,0.7s						
KST	**Kastek**	6.69	33	Pg	Pb	23 10 22.9	+3.4
	5.0nm,0.4s						
KST				Lg	Lg	23 11 51.2	
	3.2nm,0.5s						
KOTS	**Kotyrbulak**	7.37	37	Pg	Pb	23 10 32.9	+1.8
	2.5nm,0.4s						
KOTS				Lg	Lg	23 12 08.6	
	3.2nm,0.6s						

ISCJB ***15*** *23:19:26.9±0.4, 23°.93S±0°.03×66°.98W±0°.04, h214^{km}±6^{km}, mb3.3/1, Error ellipse: s-maj=6.5km s-min=4.3km az=156.4*

SJA ***15*** *23:19:27.2±0.9, 23°.93S×66°.91W, h210^{km}±6^{km}, ML3.1, MW3.3*

IDC ***15*** *23:19:27.9±1.3, 23°.88S×66°.82W, h201^{km}±16^{km}, mb3.2/1, mb1 3.4/7, mb1mx3.2/32, mbtmp3.9/7, Error ellipse: s-maj=22.5km s-min=20.8km az=90.0*

NEIC ***15*** *23:19:29.0±0.0, 23°.81S×67°.31W, h216^{km}, ML4.3(GUC), After GUC.*

GUC ***15*** *23:19:29.4±0.6, 23°.84S×67°.26W, h211^{km}±13^{km}, ML4.3*

ISC 15 23:19:27.0±0.8, 23°.93S±0°.05×66°.96W±0°.05, h208^{km}±9^{km}, n55, $\sigma 1^{s}48$/75, 7C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	1.54	121	*e*P	Pn	23 20 03.0	+1.0
SLA				IAML		23 20 03.1	
	comp=Z,155nm,0.3s						
SLA				*e*S	S	23 20 28.9	0.0
YJA	**Yavi**	2.19	38	*e*P	Pn	23 20 09.0	+0.4
YJA				IAML		23 20 10.1	
	comp=Z,28nm,0.3s						
LVC	**Limon Verde**	2.23	306	P	Pn	23 20 10.3	+1.4
	comp=Z,33nm,0.3s,baz=112,slow=8.5,SNR=395						
LVC				S	S	23 20 41.9	+0.9
	comp=Z,28nm,0.3s,baz=274,slow=20,SNR=25						
LVC	**Limon Verde**	2.23	306	*e*Pn	Pn	23 20 10.2	+1.4
LVC				*e*S	S	23 20 36.3	-4.7
LVC	**Limon Verde**	2.23	306	*e*P	Pn	23 20 10.3	+1.4
LVC				*e*S	S	23 20 41.6	+0.6
LVC				IAML		23 20 45.0	
	comp=Z,72nm,0.1s						
FSA	**Cafayete**	2.34	158	*e*P	Pn	23 20 10.6	+0.7
PB15	**IPOC Station P**	2.42	287	*e*P	Pn	23 20 12.5	+1.7
PB15				*e*S	S	23 20 45.0	+0.6
PB15	**IPOC Station P**	2.42	287	⇑*i*P	Pn	23 20 12.2	+1.4
PB15				*e*S	S	23 20 44.1	-0.2
GO02	**Mina Guanaco**	2.69	242	*e*Pn	Pn	23 20 15.5	+1.6
GO02	**Mina Guanaco**	2.69	242	⇑*i*P	Pn	23 20 15.5	+1.6
GO02				*e*S	S	23 20 51.7	+1.7
GO02				IAML		23 20 52.2	
	comp=N,845nm,0.2s						
PB06	**IPOC Station P**	2.70	296	*e*P	Pn	23 20 15.2	+1.5
PB06	**IPOC Station P**	2.70	296	⇓*i*P	Pn	23 20 15.1	+1.3
PB06				*e*S	S	23 20 49.3	-0.5
PB06				IAML		23 20 52.0	
	comp=N,613nm,0.4s						
PB09	**IPOC Station P**	2.99	315	*e*P	Pn	23 20 18.9	+1.7
PB09	**IPOC Station P**	2.99	315	⇑*i*P	Pn	23 20 18.6	+1.4
PB09				*e*S	S	23 20 55.8	-0.2
PB05	**IPOC Station P**	3.17	289	*e*P	Pn	23 20 20.1	+0.9
PB05	**IPOC Station P**	3.17	289	⇑*i*P	Pn	23 20 20.3	+1.1
PB05				*e*S	S	23 20 58.6	-1.0
PB03	**IPOC Station P**	3.19	305	*e*P	Pn	23 20 20.6	+1.2
PB03	**IPOC Station P**	3.19	305	⇑*i*P	Pn	23 20 20.4	+0.9
PB03				*e*S	S	23 20 59.3	-0.7
PB03				IAML		23 20 59.8	
	comp=N,482nm,0.4s						
AHML	**Horco Molle**	3.20	153	*e*P	Pn	23 20 20.1	+0.7
AHML				IAML		23 20 20.5	
	comp=Z,11nm,0.8s						
PB14	**IPOC Station P**	3.22	257	*e*P	Pn	23 20 21.1	+1.1
PB14	**IPOC Station P**	3.22	257	⇑*i*P	Pn	23 20 21.1	+1.1
PB14				*e*S	S	23 21 01.3	+0.4
PB14				IAML		23 21 03.3	
	comp=E,701nm,0.5s						
PB10	**IPOC Station P**	3.32	276	*e*Pn	Pn	23 20 22.2	+1.3
PB10	**IPOC Station P**	3.32	276	*e*P	Pn	23 20 22.5	+1.6
PB10	**IPOC Station P**	3.32	276	⇑*i*P	Pn	23 20 22.2	+1.3
PB10				*e*S	S	23 21 02.2	-0.4
PB10				IAML		23 21 05.0	
	comp=N,261nm,0.2s						
PB04	**IPOC Station P**	3.34	298	*e*Pn	Pn	23 20 22.2	+0.9
PB04				*e*S	S	23 21 02.2	-1.1
PB04	**IPOC Station P**	3.34	298	*e*P	Pn	23 20 22.3	+1.0
PB04	**IPOC Station P**	3.34	298	⇓*i*P	Pn	23 20 22.5	+1.2
PB04				*e*S	S	23 21 02.5	-0.8
PB04				IAML		23 21 05.0	
	comp=N,447nm,0.4s						
PB07	**IPOC Station P**	3.48	308	*e*P	Pn	23 20 23.9	+0.9
PB01	**IPOC Station P**	3.71	320	*e*Pn	Pn	23 20 26.0	+0.3
PB01				*e*S	S	23 21 09.6	-1.6
PB02	**IPOC Station P**	3.76	313	*e*P	Pn	23 20 27.7	+1.4
PB08	**IPOC Station P**	4.29	331	*e*P	Pn	23 20 34.5	+1.4
CYA	**Choya**	4.61	167	*e*P	Pn	23 20 37.6	+0.9
GO03	**Copiap**	4.70	218	*e*Pn	Pn	23 20 36.7	-1.1
GO03				*e*S	S	23 21 31.8	-1.6
GO01	**Chusmiza**	4.72	333	*e*Pn	Pn	23 20 39.4	+0.8
PB11	**IPOC Station P**	4.85	328	*e*Pn	Pn	23 20 40.0	+0.1
PB11				*e*S	S	23 21 34.3	-2.8
PB11	**IPOC Station P**	4.85	328	*e*P	Pn	23 20 41.0	+1.1
VCA	**Vinchina**	4.92	193	*e*P	Pn	23 20 42.8	+2.2
VCA				IAML		23 21 43.4	
	comp=Z,11nm,0.3s						
PSGCX	**Pisagua**	5.22	325	*e*P	Pn	23 20 44.4	-0.2
MNMC	**Minye Minye**	5.37	332	*e*Pn	Pn	23 20 46.7	0.0
MNMCX	**Minye Minye**	5.37	332	*e*P	Pn	23 20 48.1	+1.4
ACLC	**CERRO LA CRUZ**	5.47	180	*e*P	Pn	23 20 48.2	+0.4
PB16	**IPOC Station P**	6.05	336	*e*P	Pn	23 20 57.4	+1.7
LCO	**Las Campanas**	6.07	213	*e*Pn	Pn	23 20 55.4	-0.2
PB12	**IPOC Station P**	6.15	329	*e*P	Pn	23 20 56.2	-0.3
APLL	**PUNTA DE LOS L**	6.45	177	*e*P	Pn	23 20 59.5	-0.7
APLL				IAML		23 21 01.0	
	comp=Z,10nm,0.2s						
GO04	**Tololo Observa**	7.10	208	*e*Pn	Pn	23 21 07.5	-1.2
LPAZ	**La Paz**	7.68	352	P	Pn	23 21 17.5	+0.7
	comp=Z,0.4nm,0.3s,baz=180,slow=4.0,SNR=16						
LPAZ				S	S	23 22 41.9	-2.2
	comp=Z,0.2nm,0.3s,baz=72,slow=20,SNR=4.5						
LPAZ	**La Paz**	7.68	352	*e*Pn	Pn	23 21 16.8	0.0
CFA	**Coronel Fontan**	7.73	188	P	Pn	23 21 17.1	+0.4
	comp=Z,0.6nm,0.3s,baz=6.7,slow=10,SNR=10.0						
CFA				S	S	23 22 38.4	-5.8
	comp=Z,2.5nm,0.3s,baz=156,slow=20,SNR=19						
CPUP	**Villa Florida**	9.04	107	P	Pn	23 21 35.1	+1.4
	comp=Z,0.1nm,0.3s,baz=306,slow=14,SNR=2.6						
SIV	**San Ignacio**	9.64	36	P	Pn	23 21 39.5	-2.1
	comp=Z,0.2nm,0.3s,baz=237,slow=11,SNR=17						
BDFB	**Brasilia**	19.62	69	P	P	23 23 40.3	+0.3
	comp=Z,2.3nm,0.3s,baz=240,slow=12,SNR=26						
BDFB	**Brasilia**	19.62	69	*e*P	P	23 23 40.8	+0.7
TORD	**Torodi Ar. Bea**	76.50	69	P	P	23 30 54.4	-0.1
	comp=Z,0.4nm,0.5s,baz=240,slow=4.9,SNR=8.6						
MKAR	**Makanchi Array**	146.44	39	PKPbc	PKPab	23 38 45.9	+1.1
	comp=Z,0.4nm,0.7s,baz=330,slow=1.6,SNR=4.0						

IDC 15 23:28:22.9±1.2, 60°.83S×24°.40W, h0^{km}, mb3.9/3, mb1 4.0/3, mb1mx3.7/20, mbtmp3.9/3, MS3.1/1, Ms1 3.3/1, ms1mx2.8/15, Error ellipse: s-maj=53.9km s-min=39.1km az=44.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	52.27	12	T	T	00 34 12.3	
	baz=185						
H10S3	**ASCENSION HYDR**	52.28	12	T	T	00 34 40.4	
	baz=185						
H10S1	**ASCENSION HYDR**	52.29	12	T	T	00 34 38.2	
	baz=185						
LPAZ	**La Paz**	54.34	305	P	P	23 37 51.8	0.0
	0.6nm,0.4s,baz=146,slow=7.3,SNR=3.6						
LPAZ				LR	LR	00 01 01.0	
	comp=Z,20nm,20.9s,baz=311,slow=36						
TORD	**Torodi Ar. Bea**	76.61	26	P	P	23 40 15.1	0.0
	0.9nm,0.7s,baz=200,slow=5.8,SNR=7.6						
ASAR	**Alice Springs**	93.98	160	P	P	23 41 42.5	-0.1
	0.4nm,0.7s,baz=181,slow=4.4,SNR=4.0						
SONM	**Songino Array**	149.30	92	PKPbc	PKPbc	23 48 12.2	-0.3
	1.0nm,0.8s,baz=205,slow=3.9,SNR=4.5						
INK	**Inuvik**	150.33	315	PKPbc	PKPbc	23 48 13.7	-0.5
	0.9nm,0.6s,baz=156,slow=1.6,SNR=3.2						

DDA ***15*** *23:37:06.0, 39°.84N×40°.11E, h7^{km}±2^{km}, ML2.5*

ISK ***15*** *23:37:06.2, 39°.88N×40°.09E, h7^{km}, ML1.9/5*

ISCJB ***15*** *23:37:07.0±0.4, 39°.85N±0°.03×40°.09E±0°.04, h12^{km}, Error ellipse: s-maj=4.8km s-min=4.1km az=15.2*

ISC 15 23:37:06.7±0.9, 39°.86N±0°.03×40°.10E±0°.03, h12^{km}, n19, $\sigma 0^{s}46$/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EUZM	**Uzumlu**	0.34	244	*i* P	Pb	23 37 14.3	-0.4
KOPT	**Kop Dagi**	0.35	62	*i* P	Pb	23 37 15.0	0.0
KOPT				IAML_P			
	comp=Z,5μm,0.2s						
ERZN	**Erzincan**	0.39	227	PG	Pg	23 37 14.9	+0.3
ERZN				SG	Sg	23 37 20.7	+0.9
BAYT	**Aydıntepe-Bayb**	0.54	4	PG	Pg	23 37 16.9	-0.4
BAYT				SG	Sg	23 37 24.3	-0.1
YEDI	**Yedisu-Bingol**	0.54	140	PG	Pg	23 37 17.5	+0.2
YEDI				SG	Sb	23 37 25.7	-0.3
KELT	**Kelkit**	0.71	295	*i* P	Pb	23 37 20.9	-0.2
KELT				IAML_P			
	comp=Z,1μm,0.1s						
KRIK	**Erzurum-spir**	0.80	53	*i* P	Pb	23 37 22.8	+0.2
TNCL	**Tunceli-Merkez**	0.85	210	*i* P	Pg	23 37 22.5	-0.7
TNCL				IAML_P			
	comp=Z,87nm,0.1s						
KARO	**Karliova-Bingo**	0.92	126	PG	Pn	23 37 25.1	-0.5
BNGB	**Bingl**	0.97	152	PG	Pg	23 37 25.3	-0.2
MACK	**Trabzon**	1.11	347	*i* P	Pb	23 37 27.9	0.0
MACK				IAML_P			
	comp=Z,2μm,0.1s						
KTUT	**Trabzon**	1.16	348	PN	Pb	23 37 28.4	-0.2
KEMA	**Kemaliye**	1.37	245	*i* P	Pn	23 37 32.0	+0.3
KEMA				IAML_P			
	comp=Z,378nm,0.1s						
SUSE	**Susehri**	1.50	284	*i* P	Pg	23 37 35.2	-0.2
SUSE				IAML_P			
	comp=Z,245nm,0.2s						
MUSM	**Mu-Merkez**	1.58	135	*i* P	Pb	23 37 35.8	0.0
MUSM				IAML_P			
	comp=Z,249nm,0.3s						
DBAD	**Bademkaya**	1.69	46	*i* P	Pb	23 37 37.0	-0.6
DBAD				IAML_P			
	comp=Z,157nm,0.1s						
DAGI	**Agillar**	1.85	48	*i* P	Pg	23 37 41.8	-0.3
SENK	**Senkaya-Erzuru**	1.86	67	PN	Pn	23 37 39.3	+0.7
BCA	**Borcka**	1.97	36	PN	Pn	23 37 40.7	+0.8

ISCJB ***15*** *23:41:11.2±0.6, 15°.36S±0°.09×173°.4W±0°.1, h10^{km}, mb4.1/14, Error ellipse: s-maj=20.6km s-min=12.1km az=17.3*

IDC ***15*** *23:41:11.9±0.9, 15°.29S×173°.43W, h0^{km}, mb4.0/8, mb1 4.2/8, mb1mx4.0/23, mbtmp4.0/8, Error ellipse: s-maj=33.3km s-min=20.6km az=116.0*

NEIC ***15*** *23:41:12.6±1.7, 15°.40S×173°.30W, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=19.1km s-min=10.5km az=223.0*

ISC 15 23:41:12.6±0.8, 15°.3S±0°.1×173°.4W±0°.2, h10^{km}, n32, $\sigma 1^{s}44$/25, mb4.2/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	5.00	139	*e*Pn	Pn	23 42 20.9	-6.9
NIUE				*e*Sn	Sn	23 43 10.2	-15
KNTN	**Kanton**	12.53	8	*e*Pn	Pn	23 44 08.6	-2.5
KNTN				*e*Sn	Sn	23 46 12.8	-18
OUZ	**Omahuta**	23.05	208	*e*P	P	23 46 15.8	-2.2
	13nm,1.1s						
URZ	**Urewera**	24.39	198	P	P	23 46 32.0	+1.0
	3.0nm,0.4s,baz=0.0,slow=5.1,SNR=3.9						
URZ	**Urewera**	24.39	198	*e*P	P	23 46 30.7	-0.3
	11nm,1.0s						
HIZ	**Hauiti**	25.37	202	*e*P	P	23 46 35.0	-4.9
	27nm,1.2s						
BKZ	**Black Stump Fm**	25.41	199	*e*P	P	23 46 40.6	+0.3
	11nm,1.1s						
KHZ	**Kahutara**	29.30	200	*e*P	P	23 47 14.5	-0.7
	28nm,1.1s						
H11S2	**WAKE ISLAND Hy**	38.88	329	T	T	00 30 01.6	
	baz=149,slow=76,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	38.89	329	T	T	00 30 02.3	
	baz=149,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	38.90	329	T	T	00 30 19.1	
	baz=149,slow=76,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	39.83	330	T	T	00 31 25.9	
	baz=150,slow=76,SNR=8.0						
H11N1	**WAKE ISLAND Hy**	39.83	330	T	T	00 31 05.8	
	baz=150,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	39.84	330	T	T	00 31 28.9	
	baz=150,slow=76,SNR=8.3						
STKA	**Stephens Creek**	44.13	240	P	P	23 49 21.2	-0.3
	0.5nm,0.3s,baz=78,slow=9.3,SNR=2.4						
WR1	**Warramunga Arr**	49.91	257	*e*P	P	23 50 06.6	-0.2
WRA	**Warramunga Arr**	49.91	257	P	P	23 50 06.6	-0.2
	1.7nm,0.7s,baz=87,slow=8.0,SNR=5.9						
AS31	**Alice Springs**	50.18	252	*e*P	P	23 50 08.9	+0.1
	1.2nm,0.9s						
ASAR	**Alice Springs**	50.18	252	P	P	23 50 08.9	+0.1
	2.7nm,0.7s,baz=85,slow=7.8,SNR=24						
VNDA	**Vanda**	63.50	186	P	P	23 51 43.8	+1.3
	0.2nm,0.6s,baz=43,slow=9.5,SNR=3.7						
VNDA	**Vanda**	63.50	186	*e*P	P	23 51 42.5	0.0
MJAR	**Matsushiro Arr**	68.87	320	P	P	23 52 18.7	+1.1
	0.5nm,0.3s,baz=147,slow=6.8,SNR=4.5						
MAJO	**Matsushiro**	68.87	320	*e*P	P	23 52 18.7	+1.1
PETK	**Petropavlovsk-**	72.53	342	P	P	23 52 40.7	+1.2
	1.7nm,0.7s,baz=120,slow=8.5,SNR=4.1						
PEA1	**Petropavlovsk-**	72.53	342	*e*P	P	23 52 40.7	+1.2
NV01	**Mina Array Sit**	74.22	42	*e*P	P	23 52 50.4	+0.3
NVAR	**Mina Array Bea**	74.22	42	P	P	23 52 50.4	+0.3
	0.3nm,0.7s,baz=230,slow=7.0,SNR=3.5						
SNAA	**Sanae**	93.02	177	*e*P	P	23 54 25.6	-0.5
	0.3nm,0.8s						
GEC2	**GERESS Array S**	146.03	352	*e*PKPdf	PKPbc	00 00 53.5	+0.6
GERES	**GERESS Array B**	146.03	352	PKPbc	PKPbc	00 00 53.5	+0.6
	0.4nm,0.8s,baz=343,slow=3.1,SNR=5.9						
BR101	**Keskin Array S**	146.09	321	*e*PKPdf	PKPab	00 00 54.6	+0.7
BRTR	**Keskin Array B**	146.09	321	PKPbc	PKPab	00 00 54.6	+0.7
	2.1nm,0.8s,baz=96,slow=3.0,SNR=13						

ARO 15 23:44:29.5, 12°N±149°×4°5E±2°0, h15^{km}±99^{km}, Ml3.5, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBO	**Obock**	1.75	271	*e*P	Pn	23 44 57.9	-1.4
MCAD	**Moucha**	1.84	263	*e*P	Pn	23 44 58.9	-1.7
ATA	**Atar**	1.90	255	*e*P	Pn	23 44 59.8	-1.7
TDD	**Tadjoura Ara**	2.13	266	*e*P	Pn	23 45 03.1	-1.5
ATD	**Arta Tunnel**	2.23	259	*e*P	Pn	23 45 04.3	-1.6
ATD				*e*S	Sn	23 45 33.3	0.0
ATD	**Arta Tunnel**	2.23	259	*e*P	Pn	23 45 04.3	-1.6
SGH	**Sud-Ghoubbet**	2.46	258	*e*P	Pn	23 45 08.4	-0.7
KSDD	**Koussour**	2.61	261	*e*P	Pn	23 45 10.2	-1.1
GBR	**Grand-Bara**	2.69	253	*e*P	Pn	23 45 12.1	-0.2
MAOD	**Malaho**	2.79	273	*e*P	Pn	23 45 12.9	-0.8

ISCJB ***15*** *23:58:04.6±1.5, 34°.15N±0°.04×25°.2E±0°.1, h25^{km}±14^{km}, Error ellipse: s-maj=15.1km s-min=5.2km az=161.7*

ATH ***15*** *23:58:05.9, 34°.27N×25°.07E, h19^{km}±3^{km}, ML2.4/4, Error ellipse: s-maj=4.6km s-min=2.1km az=2.0*

HLW ***15*** *23:58:10.2, 33°.92N×24°.99E, h10^{km}±20^{km}, Md3.2, Ml3.1*

ISC 15 23:58:05.2±1.4, 34°.22N±0°.04×25°.09E±0°.07, h19^{km}±4^{km}, n11, $\sigma 1^{s}53$/18, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	0.83	344	P	Pb	23 58 20.9	0.0
SIVA				S	Sb	23 58 31.7	-0.1
SIVA				AML	AML	23 58 35.8	
	comp=E,1508μm,0.4s						
SIVA				AML	AML	23 58 40.4	
	comp=N,1104μm,0.7s						
LAST	**Lasithi**	0.99	19	P	Pg	23 58 24.1	-0.3
GVD	**Gavdhos**	1.03	307	P	Pb	23 58 24.6	+0.1
GVD				S	Sg	23 58 38.6	-0.2
GVD				AML	AML	23 58 42.5	
	comp=N,546μm,0.3s						
GVD				AML	AML	23 58 44.4	
	comp=E,552μm,0.3s						
IDI	**Anoyia**	1.08	351	P	Pb	23 58 25.0	-0.2
IDI				S	Sb	23 58 39.3	+0.3
IDI				AML	AML	23 58 41.5	
	comp=N,166μm,0.2s						
IDI				AML	AML	23 58 43.4	
	comp=E,172μm,0.5s						
NPS	**Neapolis**	1.12	22	P	Pg	23 58 26.5	-0.5
VAM	**Vamos**	1.39	328	P	Pb	23 58 30.8	+0.2
VAM				S	Sg	23 58 49.7	-0.5
VAM				AML	AML	23 58 54.4	
	comp=E,235μm,0.4s						
VAM				AML	AML	23 58 59.2	
	comp=N,206μm,0.5s						
IMMV	**Iera Moni Meta**	1.54	324	P	Pg	23 58 33.9	-1.0
SLUM	**Salum**	2.72	178	P	Pn	23 58 50.5	+2.5
	baz=175						
SLUM				AMP		23 59 00.0	
	baz=175						
SLUM				S	Sn	23 59 18.9	-1.5
	baz=175						
VLI	**Veliai**	3.05	325	P	Pn	23 58 54.1	+1.7
SWA2		4.97	176	P	Pn	23 59 21.0	+2.1
	baz=175						
SWA2				S	Sn	00 00 13.6	-2.3
	baz=175						
HFRF	**Wahat Farafira**	7.57	158	P	Pn	23 59 56.0	+1.4
	baz=156						
HFRF				S	Sn	00 01 17.2	-2.8
	baz=156						

ISCJB ***16*** *00:11:30.4±0.2, 38°.23N±0°.01×22°.11E±0°.02, h10^{km}±1^{km}, mb3.5/6, Error ellipse: s-maj=2.3km s-min=2.0km az=135.7*

ATH ***16*** *00:11:30.1, 38°.23N×22°.12E, h12^{km}, ML3.2/17, Error ellipse: s-maj=0.8km s-min=0.6km az=284.0*

THE ***16*** *00:11:30.6, 38°.23N×22°.10E, h7^{km}, ML3.2/21, Error ellipse: s-maj=0.4km s-min=0.2km az=6.0*

IDC ***16*** *00:11:36.9±2.2, 38°.08N×22°.16E, h66^{km}±27^{km}, mb3.3/7, mb1 3.5/10, mb1mx3.3/41, mbtmp3.6/10, ML3.3/3, Error ellipse: s-maj=19.2km s-min=16.3km az=70.0*

ISC 16 00:11:30.6±0.7, 38°.23N±0°.01×22°.11E±0°.01, h11^{km}±3^{km}, n153, $\sigma 0^{s}95$/202, mb3.6/6, 3C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIG3	**Aigion**	0.03	359	P	Pg	00 11 32.4	-0.2
AIG3				S	Sg	00 11 34.2	+0.1
AIG2	**Aigio**	0.03	299	P	Pg	00 11 32.4	-0.3
AIG2				S	Sg	00 11 33.5	-0.6
ALIK	**Aliki, Aigiali**	0.03	9	P	Pg	00 11 32.5	-0.2
ALIK				S	Sg	00 11 33.6	-0.5
AIG1	**Aigion**	0.03	122	P	Pg	00 11 32.5	-0.2
AIG1				S	Sg	00 11 33.8	-0.3
AIG4	**Aigion**	0.04	319	P	Pg	00 11 32.5	-0.2
AIG4				S	Sg	00 11 34.1	-0.1
LAKA	**Lakka**	0.10	277	P	Pg	00 11 33.1	-0.3
LAKA				S	Sg	00 11 34.5	-0.9
	33μm,0.4s						
LAKA	**Lakka**	0.10	277	P	Pg	00 11 33.2	-0.3
LAKA				S	Sg	00 11 34.7	-0.7
LAKA				AML	AML	00 11 35.0	
LAKA				AML	AML	00 11 35.2	
TRAZ	**Trapeza**	0.10	125	P	Pg	00 11 33.2	-0.2
TRAZ				S	Sg	00 11 35.3	-0.2
	42μm,0.3s						
TRAZ	**Trapeza**	0.10	125	P	Pg	00 11 33.5	+0.1
TRAZ				S	Sg	00 11 35.5	0.0
TRAZ				AML	AML	00 11 36.3	
	comp=N,76010μm,0.2s						
TRAZ				AML	AML	00 11 37.5	
	comp=E,68533μm,0.4s						
TRIZ	**Trizonia**	0.14	350	P	Pg	00 11 33.7	-0.2
TRIZ				S	Sg	00 11 35.8	-0.4
	comp=E,18μm,0.3s						
TRIZ	**Trizonia**	0.14	350	P	Pg	00 11 33.7	-0.2
TRIZ				S	Sg	00 11 35.9	-0.4
KALE	**Kalithea**	0.17	10	P	Pg	00 11 34.3	-0.1
KALE				S	Sg	00 11 36.8	-0.2
	comp=E,17μm,0.2s						
KALE	**Kalithea**	0.17	10	P	Pg	00 11 34.3	-0.1
KALE				S	Sg	00 11 37.1	+0.1
KALE				AML	AML	00 11 37.5	
	comp=E,25674μm,0.2s						
KALE				AML	AML	00 11 37.6	
	comp=N,45284μm,0.2s						
KLV	**Kalavryta, Ach**	0.19	169	P	Pg	00 11 34.5	-0.2
KLV				S	Sg	00 11 37.3	-0.3
KLV	**Kalavryta, Ach**	0.19	169	P	Pg	00 11 34.5	-0.2
KLV				S	Sg	00 11 37.9	+0.3
KLV				AML	AML	00 11 40.2	
	comp=E,13494μm,0.4s						
KLV				AML	AML	00 11 40.7	
	comp=N,18314μm,0.5s						
SERG	**Sergoula**	0.19	348	P	Pg	00 11 34.4	-0.4
SERG				S	Sg	00 11 37.3	-0.3
	comp=N,18μm,0.2s						
SERG	**Sergoula**	0.19	348	P	Pg	00 11 34.5	-0.2
SERG				S	Sg	00 11 37.3	-0.3
SERG				AML	AML	00 11 38.7	
	comp=E,29460μm,0.2s						
SERG				AML	AML	00 11 39.0	
	comp=N,42305μm,0.2s						
UPR	**University Cam**	0.26	283	P	Pg	00 11 36.0	+0.1
UPR				S	Sg	00 11 39.5	0.0
UPR	**University Cam**	0.26	283	P	Pg	00 11 36.0	+0.1
UPR				S	Sg	00 11 39.6	+0.2
GUR	**Goura**	0.35	147	P	Pg	00 11 37.0	-0.6
GUR				S	Sg	00 11 41.9	-0.3
	comp=N,14μm,0.6s						
GUR	**Goura**	0.35	147	P	Pg	00 11 37.3	-0.3
GUR				S	Sg	00 11 42.5	+0.3
GUR				AML	AML	00 11 43.3	
	comp=N,28603μm,0.5s						
GUR				AML	AML	00 11 43.3	
	comp=E,25193μm,0.6s						
DSF	**Desfina**	0.38	61	P	Pg	00 11 37.8	-0.3
DSF				S	Sg	00 11 43.1	-0.1

	comp=E,7μm,0.1s						
DSF	Desfina	0.38	61	P	Pg	00 11 37.9	-0.3
DSF				S	Sg	00 11 42.8	-0.4
DSF				AML	AML	00 11 44.6	
	comp=N,11873μm,0.1s						
DSF				AML	AML	00 11 44.7	
	comp=E,14637μm,0.1s						
ANX	Ano Chora	0.39	338	P	Pg	00 11 37.8	-0.6
ANX				S	Sg	00 11 44.1	+0.4
	comp=E,8μm,0.4s						
ANX	Ano Chora	0.39	338	P	Pg	00 11 37.7	-0.8
ANX				S	Sg	00 11 43.6	-0.1
ANX				AML	AML	00 11 47.4	
	comp=N,17420μm,0.3s						
ANX				AML	AML	00 11 48.7	
	comp=E,14566μm,0.3s						
DLFA	Delphi	0.40	51	P	Pg	00 11 38.0	-0.4
DLFA				S	Sg	00 11 43.7	-0.1
DLFA				AML	AML	00 11 43.9	
	comp=N,4830μm,0.7s						
DLFA				AML	AML	00 11 44.1	
	comp=E,10351μm,0.3s						
THAL	Thalero	0.48	113	P	Pg	00 11 40.0	0.0
THAL	Thalero	0.48	113	P	Pg	00 11 40.0	0.0
THAL				S	Sg	00 11 46.3	0.0
THAL				AML	AML	00 11 53.8	
	comp=N,4270μm,0.3s						
THAL				AML	AML	00 12 05.4	
	comp=E,4466μm,0.5s						
RLS	Riolos of Patr	0.53	252	P	Pg	00 11 40.5	-0.4
RLS				S	Sg	00 11 47.9	-0.1
RLS	Riolos of Patr	0.53	252	P	Pg	00 11 40.6	-0.4
RLS				S	Sg	00 11 48.8	+0.8
RLS				AML	AML	00 11 51.4	
	comp=E,4716μm,0.2s						
RLS				AML	AML	00 11 52.2	
	comp=N,3324μm,0.3s						
PVO	Paravola	0.60	311	P	Pg	00 11 41.9	-0.3
PVO	Paravola	0.60	311	P	Pg	00 11 41.6	-0.6
PVO				S	Sg	00 11 50.5	+0.4
PVO				AML	AML	00 11 54.8	
	comp=N,6204μm,0.4s						
PVO				AML	AML	00 11 55.1	
	comp=E,4566μm,0.5s						
PROD	Prodromos	0.63	87	P	Pg	00 11 42.9	+0.1
PROD				S	Sg	00 11 51.5	+0.4
PROD	Prodromos	0.63	87	P	Pg	00 11 43.0	+0.1
PROD				S	Sg	00 11 50.1	-1.0
ACOR	Acrocorinthos	0.69	119	P	Pg	00 11 43.8	-0.2
ACOR				S	Sg	00 11 52.7	-0.4
TRIP	Tripoli	0.71	169	P	Pg	00 11 43.8	-0.6
TRIP				S	Sb	00 11 54.4	-0.4
	comp=E,2μm,0.5s						
TRIP	Tripoli	0.71	169	P	Pg	00 11 43.8	-0.6
EVR	Evrytania	0.73	341	P	Pg	00 11 43.9	-0.8
EVR				S	Sb	00 11 55.0	-0.3
	comp=E,2μm,0.5s						
EVR	Evrytania	0.73	341	P	Pg	00 11 43.8	-0.9
EVR				AML	AML	00 11 58.7	
	comp=N,4238μm,0.4s						
EVR				AML	AML	00 12 03.8	
	comp=E,2951μm,0.4s						
LOUT	Loutraki	0.73	109	P	Pg	00 11 44.3	-0.4
LOUT	Loutraki	0.73	109	P	Pb	00 11 45.4	+0.1
AMT	Artemida-Makis	0.76	204	P	Pg	00 11 44.8	-0.5
AMT				S	Sg	00 11 55.4	+0.1
	comp=E,3μm,0.5s						
AMT	Artemida-Makis	0.76	204	P	Pg	00 11 44.8	-0.5
AMT				AML	AML	00 12 03.5	
	comp=N,5730μm,0.4s						
AMT				AML	AML	00 12 12.1	
	comp=E,4036μm,0.5s						
VTN	Vitineika	0.79	247	P	Pb	00 11 46.2	-0.1
AGG	Agios Georgios	0.81	12	P	Pg	00 11 45.4	-1.0
AGG	Agios Georgios	0.81	12	P	Pg	00 11 45.3	-1.0
AGG				AML	AML	00 12 00.2	
	comp=E,2779μm,0.3s						
AGG				AML	AML	00 12 01.4	
	comp=N,2620μm,0.6s						
LKR	Lokris	0.82	59	P	Pg	00 11 45.6	-0.8
LKR				S	Sb	00 11 57.7	-0.2
	comp=N,2μm,0.2s						
LKR	Lokris	0.82	59	P	Pg	00 11 45.7	-0.8
LKR				S	Sg	00 11 56.7	-0.5
LKR				AML	AML	00 12 00.6	
	comp=N,3004μm,0.4s						
LKR				AML	AML	00 12 02.2	
	comp=E,4145μm,0.2s						
ATAL	Atalanti	0.86	57	P	Pg	00 11 46.2	-0.9
ATAL				S	Sb	00 11 59.1	+0.1
	comp=E,885nm,0.7s						
ATAL	Atalanti	0.86	57	P	Pg	00 11 46.0	-1.1
ATAL				AML	AML	00 12 02.9	
	comp=N,1833μm,0.3s						
ATAL				AML	AML	00 12 05.1	
	comp=E,1743μm,0.7s						
VLX	Vlachokerasia	0.88	166	P	Pg	00 11 46.8	-0.9
VLX				S	Sb	00 11 59.6	-0.2
	comp=E,3μm,0.5s						
VLX	Vlachokerasia	0.88	166	P	Pg	00 11 46.8	-0.9
VIL2	Platees	0.92	91	P	Pn	00 11 49.4	0.0
VILL	Villia	0.95	93	P	Pg	00 11 48.6	-0.4
VILL				S	Sb	00 12 02.5	+0.7
	comp=E,2μm,0.7s						
EPID	Epidavros	1.01	127	P	Pg	00 11 49.2	-0.8
KFL	Anninata	1.04	264	P	Pb	00 11 50.4	-0.3
KFL	Anninata	1.04	264	P	Pb	00 11 50.3	-0.4
ITM	Ithomi	1.06	188	P	Pb	00 11 49.8	-1.1
ITM				S	Sn	00 12 06.4	+0.4
	comp=E,770nm,0.5s						
ITM	Ithomi	1.06	188	P	Pb	00 11 49.8	-1.1
SMIA	Simia	1.08	53	P	Pb	00 11 50.5	-0.8
SMIA	Simia	1.08	53	P	Pb	00 11 50.2	-1.1
DID	Didima	1.15	128	P	Pb	00 11 52.2	-0.3
DID	Didima	1.15	128	P	Pb	00 11 51.8	-0.7
KRND	KRANIDI	1.18	135	P	Pb	00 11 52.5	-0.5
KRND				S	Sn	00 12 10.1	+1.0
	comp=E,1μm,0.5s						
KRND	KRANIDI	1.18	135	P	Pb	00 11 52.4	-0.5
VLS	Valsamata	1.20	268	P	Pn	00 11 52.4	-0.8
VLS				S	Sn	00 12 10.2	+0.8
	comp=E,575nm,0.3s						
VLS	Valsamata	1.20	268	P	Pn	00 11 51.9	-1.4
EVGI	Lefkada island	1.20	289	P	Pn	00 11 52.4	-0.9
EVGI	Lefkada island	1.20	289	P	Pn	00 11 52.6	-0.7
FSK	Fiskardo	1.23	281	P	Pn	00 11 53.1	-0.7
FSK				S	Sn	00 12 11.6	+1.2
	comp=E,728nm,0.6s						
FSK	Fiskardo	1.23	281	P	Pn	00 11 52.8	-1.0
MRKA	Markates	1.26	67	P	Pn	00 11 53.7	-0.4
MRKA	Markates	1.26	67	P	Pn	00 11 53.8	-0.3
LKD2	Lefkada island	1.27	297	P	Pn	00 11 53.6	-0.6
LKD2	Lefkada island	1.27	297	P	Pn	00 11 53.5	-0.8
TSLK	Tsoukalades, L	1.28	298	P	Pn	00 11 54.4	0.0
TSLK	Tsoukalades, L	1.28	298	P	Pn	00 11 53.8	-0.6
ATH	Athens Observa	1.30	101	P	Pn	00 11 54.4	-0.2
ATH				S	Sg	00 12 12.4	0.0
	comp=E,430nm,0.5s						
ATH	Athens Observa	1.30	101	P	Pn	00 11 54.6	0.0
THL	Klokotos Trika	1.34	357	P	Pb	00 11 55.7	0.0
THL	Klokotos Trika	1.34	357	P	Pb	00 11 55.9	+0.3
ATHU	Athens Univers	1.35	101	P	Pn	00 11 54.7	-0.6
ATHU	Athens Univers	1.35	101	P	Pn	00 11 54.8	-0.6
PYL	PYLOS	1.36	192	P	Pn	00 11 55.1	-0.4
PYL	PYLOS	1.36	192	P	Pn	00 11 55.1	-0.4
VLY	Voula,Athens	1.39	105	P	Pn	00 11 55.6	-0.2
VLY	Voula,Athens	1.39	105	P	Pn	00 11 55.6	-0.2
NEO	Neokhori	1.39	39	P	Pn	00 11 55.5	-0.4
NEO	Neokhori	1.39	39	P	Pn	00 11 55.5	-0.4
PTL	Penteli	1.40	97	P	Pn	00 11 55.7	-0.4
PTL	Penteli	1.40	97	P	Pn	00 11 55.9	-0.2
SKIA	Skiathos	1.42	48	P	Pn	00 11 56.4	+0.1
SKIA	Skiathos	1.42	48	P	Pn	00 11 55.9	-0.4
XOR	Xorichti	1.42	36	P	Pn	00 11 55.7	-0.7
XOR	Xorichti	1.42	36	P	Pn	00 11 55.7	-0.7
DION	Dionisos Attik	1.45	95	P	Pn	00 11 56.5	-0.2
DION	Dionisos Attik	1.45	95	P	Pn	00 11 56.7	0.0
EREA	Eretria	1.45	82	P	Pn	00 11 56.7	-0.1
EREA	Eretria	1.45	82	P	Pn	00 11 56.8	+0.1
LRSO	Larissa Observ	1.46	9	P	Pn	00 11 56.7	-0.1
VLI	Veliai	1.65	156	P	Pn	00 11 59.4	0.0
VLI	Veliai	1.65	156	P	Pn	00 11 59.6	+0.2
MEV	Metsovon	1.70	337	P	Pb	00 12 02.0	+0.1
JAN	Janina	1.73	326	P	Pg	00 12 03.2	-0.6
JAN	Janina	1.73	326	P	Pg	00 12 03.1	-0.7
KPRO	Kipourio	1.82	342	P	Pb	00 12 03.4	-0.5
KPRO	Kipourio	1.82	342	P	Pb	00 12 04.0	+0.1
LIT	Litokhoron	1.89	9	P	Pn	00 12 02.8	0.0
LIT	Litokhoron	1.89	9	P	Pn	00 12 02.9	0.0
IGT	Igoumenitsa	1.90	314	P	Pg	00 12 06.3	-0.7
IGT	Igoumenitsa	1.90	314	P	Pb	00 12 05.9	+0.6
KTHR	Kythira	2.09	160	P	Pn	00 12 06.3	+0.8
KZN	Kozani	2.09	353	P	Pn	00 12 06.9	+1.2
KZN	Kozani	2.09	353	P	Pn	00 12 06.7	+1.0
PENT	Pentalofos	2.10	339	P	Pb	00 12 08.1	-0.7
PENT	Pentalofos	2.10	339	P	Pb	00 12 08.7	-0.1
KTHA	Kythira Island	2.11	158	P	Pn	00 12 06.0	+0.2
KTHA	Kythira Island	2.11	158	P	Pn	00 12 06.6	+0.7
SERI	Serifos	2.17	119	P	Pn	00 12 06.7	+0.1
NEST	Nestorio	2.33	340	P	Pb	00 12 11.7	-1.0
PLG	Polygyros	2.38	25	P	Pn	00 12 09.4	-0.2
ANKY	Antikythira Is	2.54	158	P	Pn	00 12 12.2	+0.4
OUR	Ouranopolis	2.56	34	P	Pn	00 12 11.6	-0.4
SOH	Sokhos	2.77	20	P	Pn	00 12 14.8	-0.1
KNT	Kendrikon	2.99	12	P	Pn	00 12 18.4	+0.4
OHR	Ohrid	3.05	341	*i* Pn	Pb	00 12 26.0	+1.1
OHR				*i* Sn	Sg	00 13 06.8	-1.8
SRS	Serrai	3.11	21	P	Pn	00 12 19.7	+0.2
VAY	Valandovo	3.11	6	*i* Pn	Pb	00 12 23.1	-2.8
VAY				*i* Sn	Sn	00 12 58.5	+1.8
NVR	Nevrokopi	3.40	23	P	Pn	00 12 23.9	+0.3
MMB	Musomiste	3.58	20	P	Pn	00 12 26.6	+0.5
IDI	Anoyia	3.69	142	P	Pn	00 12 28.6	+1.0
	comp=E,1.4nm,0.3s,baz=285,slow=4.1,SNR=12						
IDI				S	Sn	00 13 11.2	+0.2
	comp=E,2.3nm,0.3s,baz=146,slow=9.5,SNR=6.4						
KKB	Krupnik	3.71	11	P	Pb	00 12 32.8	-3.3
SKO	Skopje	3.77	352	*i* Pn	Pb	00 12 37.0	-0.2
RZN	Rozhen	4.00	29	P	Pn	00 12 32.8	+0.9
TIP	Timpagrande	4.29	284⇑	*i*P	Pn	00 12 38.4	+2.6
VTS	Vitosha	4.47	11⇓	*i*P	Pn	00 12 40.3	+1.9
DBRK	Dubrovnik	5.37	327	*e*Pn	Pn	00 12 50.9	+0.4
ELND	Elena	5.50	30⇑	*i*P	Pn	00 12 55.0	+2.6
STON	Ston	5.72	326	*e*Pn	Pn	00 12 56.9	+1.5
STON				Sn	Sn	00 13 58.7	-2.3
ZIRJ	Zirje	7.30	320	*e*Pn	Pn	00 13 18.1	+1.0
ZIRJ				Sn	Sn	00 14 34.9	-5.0
MORI	Morici	7.42	321	*e*Pn	Pn	00 13 20.7	+2.0
MLR	Muntele Rosu	7.80	20	P	Pn	00 13 30.7	+6.6
	comp=E,0.3nm,0.3s,baz=155,slow=13,SNR=5.0						
MLR	Muntele Rosu	7.80	20⇑	*i*P	Pn	00 13 27.2	+3.1
PLOR	Plostina	8.33	22⇓	*i*P	Pn	00 13 35.0	+3.7
VRI	Vrincioaia	8.37	23⇓	*i*P	Pn	00 13 35.0	+3.2
BRTR	Keskin Array B	9.11	77	P	Pn	00 13 44.9	+2.8
	comp=E,0.2nm,0.3s,baz=260,slow=13,SNR=9.4						
ESDC	Sonseca Array	20.31	282	P	Pn	00 16 08.0	-0.5
	comp=E,1.3nm,0.7s,baz=76,slow=11,SNR=14						
FINES	FINESS Array B	23.37	5	P	P	00 16 40.6	+1.7
	comp=E,2.4nm,0.8s,baz=198,slow=13,SNR=2.8						
NOA	NORSAR Array B	23.83	347	P	P	00 16 45.5	+2.1
	comp=E,0.3nm,0.6s,baz=164,slow=11,SNR=2.7						
EKA	Eskdalemuir Ar	24.12	323	P	P	00 16 46.8	+0.6
	comp=E,0.7nm,0.7s,baz=114,slow=10,SNR=4.2						
TORD	Torodi Ar. Bea	30.87	221	P	P	00 17 46.8	-0.2
	comp=E,0.3nm,0.6s,baz=34,slow=9.3,SNR=4.3						
MKAR	Makanchi Array	44.21	59	P	P	00 19 39.2	-0.4
	comp=E,1.2nm,0.4s,baz=274,slow=7.4,SNR=23						
ZALV	Zalesovo Beam	44.73	48	P	P	00 19 44.0	+0.4
	comp=E,1.3nm,0.5s,baz=270,slow=9.6,SNR=5.4						

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*NEIC **16** 00:12:58.4±0.0, 61°.55N×141°.04W, h0^{km}, ML2.6(OTT), ML2.9(AEIC), After AEIC.*

PGC 16 00:12:59.5, 61°.58N×141°.07W, h5^{km}, ML2.6/11, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.23	27	*e*Pg	Pg	00 13 03.4	-0.7
YUK2				*e*Sg	Sg	00 13 07.1	-0.1
YUK2	White River	0.23	27	P	Pg	00 13 03.4	-0.7
YUK2				S	Sg	00 13 07.1	-0.1
YUK3	Moose Creek	0.35	56	*e*Pg	Pg	00 13 05.4	-0.9
YUK3				*e*Sg	Sg	00 13 10.3	-0.7
YUK3	Moose Creek	0.35	56	P	Pg	00 13 05.4	-0.9
YUK3				S	Sg	00 13 10.3	-0.7
YUK1	Sand Pete Hill	0.63	24	*e*Pg	Pg	00 13 10.3	-1.4
YUK1				*e*Sg	Sg	00 13 19.7	-0.1
YUK1	Sand Pete Hill	0.63	24	P	Pg	00 13 10.3	-1.4
YUK1				S	Sg	00 13 19.7	-0.1
PTPK	Patty Peak	0.78	240	P	Pg	00 13 13.5	-1.0
PTPK				S	Sg	00 13 24.5	-0.1
BALM	Baldy	0.82	229	*e*Pg	Pg	00 13 13.9	-1.4
BALM				*e*Sg	Sg	00 13 22.0	-3.9
BALM	Baldy	0.82	229	P	Pg	00 13 13.9	-1.4
BALM				S	Sg	00 13 25.0	-1.0
BVCY	Beaver Creek	0.84	7	P	Pg	00 13 14.5	-1.2
BVCY				S	Sg	00 13 25.9	-0.7
KIAG	Kiagna River	0.91	224	P	Pg	00 13 15.2	-1.7
KIAG				S	Sg	00 13 27.8	-0.8
TABL	Table Mountain	1.15	182	P	Pg	00 13 19.8	-1.7
TABL				S	Sg	00 13 35.1	-1.2
YUK4	Talbot Arm	1.19	100	P	Pg	00 13 21.0	-1.3
YUK4				S	Sg	00 13 37.2	-0.5
YUK6	Outpost Mounta	1.46	115	Pn	Pn	00 13 25.3	-1.4
YUK6				Sg	Sb	00 13 45.0	-1.1
SAMH	Samovar Hills	1.46	174	Pn	Pn	00 13 25.8	-0.9
SAMH				Sg	Sb	00 13 44.8	-1.3
MESA	MESA	1.47	197	Pn	Pn	00 13 26.4	-0.4
MESA				Sg	Sb	00 13 45.4	-1.1
CHX	Chaix Hills	1.52	181	*e*Pn	Pn	00 13 27.6	+0.1
PCA	Pinnacle	1.54	165	*e*Pn	Pn	00 13 26.5	-1.2
PCA	Pinnacle	1.54	165	Pn	Pn	00 13 26.3	-1.4
PCA				Sg	Sb	00 13 48.3	0.0
YUK5	Granite Creek	1.61	105	Pn	Pn	00 13 26.3	-2.4
YUK5				Sg	Sn	00 13 49.2	-0.7
SNH	Sunshine Point	1.65	212	*e*Pn	Pn	00 13 29.2	+0.1
YUK7	Dusty Glacier	1.77	125	Pn	Pn	00 13 31.5	+0.5
YUK7				Sg	Sb	00 13 54.8	-0.3
BCPM	Bancas Point	1.78	156	*e*Pn	Pn	00 13 31.5	+0.6
BCPM				*e*Sn	Sn	00 13 51.9	-1.9
MENT	Mentasta	1.84	319	*e*Pn	Pn	00 13 32.0	+0.2
HYT	Haines Junctio	1.89	112	*e*Pn	Pn	00 13 32.1	-0.3
HYT	Haines Junctio	1.89	112	Pn	Pn	00 13 31.9	-0.6
HYT				Sg	Sb	00 13 57.8	-0.6
HMT	Hamilton	2.00	233	*e*Pn	Pb	00 13 35.8	-0.5
PNL	Peninsula	2.09	156	*e*Pn	Pn	00 13 35.6	+0.5
PNL	Peninsula	2.09	156	Pn	Pn	00 13 35.6	+0.5
PNL				Sg	Sb	00 14 04.7	+0.6
RAGM	Ragged Mountai	2.13	237	*e*Pn	Pn	00 13 36.9	+1.2
SGAM	Sherman Glacie	2.29	244	*e*Pn	Pb	00 13 39.8	-1.4
PAX	Paxson	2.49	306	*e*Pn	Pn	00 13 42.2	+1.5
PAX	Paxson	2.49	306	Sg	Sn	00 14 12.6	+1.2
DOT	Dot Lake	2.50	328	*e*Pn	Pn	00 13 40.1	-0.7
DOT	Dot Lake	2.50	328	Pn	Pn	00 13 40.0	-0.8
DOT				Pg	Pb	00 13 44.7	-0.1
DOT				Sg	Sb	00 14 16.7	+0.9
DAWY	Dawson	2.61	16	*e*Pn	Pn	00 13 41.1	-1.3
DAWY	Dawson	2.61	16	Pn	Pn	00 13 41.8	-0.6
DAWY				Sg	Sb	00 14 19.5	+0.4
FID	Port Fidalgo	2.75	255	*e*Pn	Pn	00 13 44.4	+0.2
FID				*e*Pn	Pb	00 13 46.8	-2.4
SCRK	Sand Creek	2.75	332	*e*Pn	Pn	00 13 43.4	-1.1
RIDG	Independent Ri	2.78	323	*e*Pn	Pn	00 13 44.2	-0.5
SCM	Sheep Creek Mo	2.99	278	*e*Pn	Pn	00 13 48.8	+1.2
GLI	Glacier Island	3.00	259	*e*Pn	Pn	00 13 47.5	-0.1
PLBC	Pleasant Camp	3.15	130	Pg	Pb	00 13 55.4	-0.6
PLBC				Sg	Sb	00 14 37.1	+2.5
EGAK	Eagle	3.21	359	*e*Pn	Pn	00 13 50.6	+0.1
DHY	Denali Highway	3.30	300	*e*Pn	Pn	00 13 52.0	0.0
SML	Sawmill	3.47	277	*e*Pn	Pn	00 13 54.6	+0.4
KNK	Knik Glacier	3.55	271	*e*Pn	Pn	00 13 56.1	+0.9
PMR	Palmer	3.85	274	*e*Pn	Pn	00 13 59.0	-0.4
ILB	Eielson Array	4.15	323	*e*Pn	Pn	00 14 02.1	-1.3
WRH	Wood River Hil	4.32	315	*e*Pn	Pn	00 14 06.2	+0.5
BESE	Bessie Mountai	4.33	131	*e*Pn	Pn	00 14 05.8	-0.2
BESE	Bessie Mountai	4.33	131	Sg	Sg	00 15 14.8	-3.6
PRP	Porcupine Dome	4.43	335	*e*Pn	Pn	00 14 06.6	-0.8
JIS	Juneau Island	4.72	132	*e*Pn	Pn	00 14 08.7	-2.6
KTH	Kantishna Hill	4.97	298	*e*Pn	Pn	00 14 15.3	+0.6
BM3	Burnt Mountain	6.06	347	*e*Pn	Pn	00 14 30.3	+0.6
DLBC	Dease Lake	6.37	115	Sg	Sg	00 16 15.7	-8.1

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*IDC **16** 00:18:00.1±1.2, 6°.73S×151°.25E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.8/28, mbtmp3.9/7, ML1.8/1, Error ellipse: s-maj=46.4km s-min=22.9km az=116.0*

*ISCJB **16** 00:18:03.7±0.7, 6°.8S±0°.1×151°.1E±0°.1, h36^{km}, mb3.7/7, Error ellipse: s-maj=20.7km s-min=8.7km az=40.5*

*NEIC **16** 00:18:05.0±2.1, 6°.75S×151°.13E, h35^{km}±3^{km}, mb4.0/7, Error ellipse: s-maj=21.0km s-min=10.2km az=98.0*

ISC 16 00:18:04.5±0.8, 6°.7S±0°.1×151°.2E±0°.2, h36^{km}, n19, σ1^{s}.66/20, mb3.8/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.66	22	*e*Pn	Pn	00 18 45.2	+0.3
RABL				*e*Sn	Sn	00 19 12.9	-3.0
PMG	Port Moresby	4.81	236	Pn	Pn	00 19 14.4	0.0
	2.9nm,0.3s,baz=28,slow=15,SNR=2.8						
PMG				Sn	Sn	00 20 07.2	-1.7
	3.5nm,0.3s,baz=7.1,slow=8.1,SNR=2.2						
COEN	Coen	10.69	227	*e*Pn	Pn	00 20 31.4	-3.7
MTN	Manton Dam	20.67	251	*e*P	Pn	00 22 42.9	-1.0
	9.4nm,1.1s						
WB2	Warramunga Arr	20.99	229	*e*P	P	00 22 44.7	-0.1
	7.1nm,1.0s						
WR1	Warramunga Arr	21.00	230	*e*P	P	00 22 44.7	-0.3
WRA	Warramunga Arr	21.00	230	P	P	00 22 44.7	-0.3
	3.0nm,0.5s,baz=54,slow=9.7,SNR=11						
AS31	Alice Springs	23.68	223	*e*P	P	00 23 13.1	+0.1
	2.2nm,1.1s						
ASAR	Alice Springs	23.68	223	P	P	00 23 13.6	+0.5
	2.4nm,0.5s,baz=55,slow=9.1,SNR=45						
STKA	Stephens Creek	26.62	198	P	P	00 23 40.7	+1.0
	1.9nm,0.5s,baz=351,slow=11,SNR=6.0						
STKA	Stephens Creek	26.62	198	*e*P	P	00 23 40.7	+1.0
	0.9nm,1.0s						
CAN	Canberra	28.57	184	*e*P	P	00 23 56.1	-1.1
	5.5nm,1.1s						
VNDA	Vanda	71.03	178	P	P	00 29 19.4	+1.2
	0.9nm,0.9s,baz=335,slow=8.7,SNR=4.2						
MK32	Makanchi Array	80.69	319	*e*P	P	00 30 16.7	+2.8
MKAR	Makanchi Array	80.69	319	P	P	00 30 16.7	+2.8
	0.5nm,0.8s,baz=126,slow=6.8,SNR=4.1						
ILAR	Eielson Array	84.50	22	P	P	00 30 34.0	+0.7
	0.3nm,0.6s,baz=238,slow=5.2,SNR=3.9						
ILB	Eielson Array	84.50	22	*e*P	P	00 30 34.0	+0.7
	0.8nm,0.6s						
TORD	Torodi Ar. Bea	149.28	284	PKPbc	PKiKP	00 37 51.5	-0.1
	0.3nm,0.5s,baz=110,slow=3.3,SNR=6.7						
TOA1	Torodi Ar. Sit	149.28	284	*e*PKPbc	PKiKP	00 37 51.5	-0.1

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*NEIC **16** 00:20:57.9±0.0, 61°.56N×141°.05W, h13^{km}, ML2.8(AEIC), ML2.9(OTT), After AEIC.*

PGC 16 00:20:59.3, 61°.58N×141°.06W, h1^{km}, ML2.9/11, 210km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.23	27	*e*Pg	Pg	00 21 03.2	-0.5
YUK2				*e*Sg	Sg	00 21 06.8	0.0
YUK2	White River	0.23	27	P	Pg	00 21 03.2	-0.5
YUK2				S	Sg	00 21 06.8	0.0
YUK3	Moose Creek	0.35	55	*e*Pg	Pg	00 21 05.3	-0.7
YUK3				*e*Sg	Sg	00 21 10.2	-0.3
YUK3	Moose Creek	0.35	55	P	Pg	00 21 05.3	-0.7
YUK3				S	Sg	00 21 10.2	-0.3
YUK1	Sand Pete Hill	0.63	23	*e*Pg	Pg	00 21 10.2	-1.2
YUK1				*e*Sg	Sg	00 21 19.3	-0.2
YUK1	Sand Pete Hill	0.63	23	P	Pg	00 21 10.2	-1.2
YUK1				S	Sg	00 21 19.3	-0.2
PTPK	Patty Peak	0.78	240	P	Pg	00 21 13.3	-1.1
PTPK				S	Sg	00 21 24.2	-0.3
BALM	Baldy	0.83	229	P	Pg	00 21 13.6	-1.5
BALM				S	Sg	00 21 24.9	-0.9
BVCY	Beaver Creek	0.84	6	P	Pg	00 21 14.4	-1.1
BVCY				S	Sg	00 21 24.7	-1.7
KIAG	Kiagna River	0.91	224	P	Pg	00 21 15.0	-1.8
KIAG				S	Sg	00 21 27.6	-0.9
TABL	Table Mountain	1.15	182	P	Pg	00 21 19.5	-1.7
TABL				S	Sg	00 21 34.9	-1.2
YUK4	Talbot Arm	1.18	100	P	Pg	00 21 20.6	-1.3
YUK4				S	Sg	00 21 37.0	-0.3
YUK6	Outpost Mounta	1.45	115	Pn	Pn	00 21 24.9	-2.0
YUK6				Sg	Sg	00 21 45.1	-0.8
SAMH	Samovar Hills	1.46	174	Pn	Pn	00 21 25.9	-1.1
SAMH				Sg	Sg	00 21 45.0	-1.2
MESA	MESA	1.47	198	Pn	Pn	00 21 26.2	-0.9
MESA				Sg	Sg	00 21 46.1	-0.5
CHX	Chaix Hills	1.52	181	*e*Pn	Pn	00 21 26.5	-1.3
PCA	Pinnacle	1.54	165	*e*Pn	Pn	00 21 27.4	-0.6
PCA				*e*Sn	Sn	00 21 44.5	-4.2
PCA	Pinnacle	1.54	165	Pn	Pn	00 21 27.2	-0.7
PCA				Sg	Sn	00 21 48.1	-0.5
YUK5	Granite Creek	1.61	105	Sg	Sn	00 21 48.6	-1.8
SNH	Sunshine Point	1.65	213	*e*Pn	Pn	00 21 29.1	-0.4
SNH				*e*Sg	Sb	00 21 52.1	+0.2
YUK7	Dusty Glacier	1.77	125	Pn	Pn	00 21 31.3	+0.1
YUK7				Sg	Sn	00 21 54.4	-0.1
BCPM	Bancas Point	1.78	156	*e*Pg	Pn	00 21 31.6	+0.4
MENT	Mentasta	1.84	319	*e*Pn	Pn	00 21 32.2	0.0
HYT	Haines Junctio	1.88	112	*e*Pn	Pn	00 21 31.9	-0.8
HYT	Haines Junctio	1.88	112	Pn	Pn	00 21 31.8	-0.9
HYT				Sg	Sn	00 21 57.1	0.0
HMT	Hamilton	2.00	233	*e*Pn	Pb	00 21 35.7	-0.8
PNL	Peninsula	2.09	156	*e*Pn	Pn	00 21 35.4	0.0
PNL	Peninsula	2.09	156	Pn	Pn	00 21 35.2	-0.2
PNL				Sg	Sb	00 22 04.3	-0.1
RAGM	Ragged Mountai	2.13	237	*e*Pn	Pb	00 21 38.5	-0.3
SGAM	Sherman Glacie	2.29	244	*e*Pg	Pn	00 21 39.6	+1.4
PAX	Paxson	2.49	306	*e*Pn	Pn	00 21 40.6	-0.4
PAX	Paxson	2.49	306	Pn	Pn	00 21 42.1	+1.1
PAX				Sg	Sb	00 22 15.9	-0.1
DOT	Dot Lake	2.50	328	*e*Pn	Pn	00 21 39.7	-1.4
DOT				*e*Sn	Sn	00 22 06.2	-6.0
DOT	Dot Lake	2.50	328	Pn	Pn	00 21 39.8	-1.3
DOT				Pg	Pb	00 21 44.6	-0.4
DOT				Sg	Sb	00 22 16.8	+0.6
EYAK	Cordova Ski Ar	2.50	248	*e*Pn	Pn	00 21 36.7	-4.4
DAWY	Dawson	2.61	16	*e*Pn	Pn	00 21 41.5	-1.2
DAWY	Dawson	2.61	16	Pn	Pn	00 21 41.7	-1.0
DAWY				Sg	Sb	00 22 19.5	+0.1
FID	Port Fidalgo	2.75	255	*e*Pn	Pn	00 21 45.4	+0.8
FID				*e*Pg	Pb	00 21 46.6	-2.7
SCRK	Sand Creek	2.75	332	*e*Pn	Pn	00 21 43.4	-1.3
RIDG	Independent Ri	2.78	323	*e*Pn	Pn	00 21 44.0	-1.0
SCM	Sheep Creek Mo	3.00	278	*e*Pn	Pn	00 21 49.6	+1.6
GLI	Glacier Island	3.00	259	*e*Pn	Pn	00 21 49.0	+0.9
PLBC	Pleasant Camp	3.15	130	Pg	Pb	00 21 55.9	-0.2
PLBC				Sg	Sb	00 22 36.9	+1.9
EGAK	Eagle	3.21	359	*e*Pn	Pn	00 21 50.4	-0.5
HDA	Harding Lake	3.91	319	*e*Pn	Pn	00 21 57.4	-3.0
ILB	Eielson Array	4.15	323	*e*Pn	Pn	00 22 01.9	-1.9
MCK	McKinley	4.22	304	*e*Pn	Pn	00 22 01.8	-3.1
BESE	Bessie Mountai	4.33	131	*e*Pn	Pn	00 22 02.3	-4.0
BESE	Bessie Mountai	4.33	131	Sg	Sb	00 23 13.4	+4.6
PRP	Porcupine Dome	4.43	335	*e*Pn	Pn	00 22 06.5	-1.2
COLA	College	4.51	320	*e*Pn	Pn	00 22 07.3	-1.4
BWN	Browne	4.64	308	*e*Pn	Pn	00 22 08.8	-1.7
JIS	Juneau Island	4.72	132	*e*Pn	Pn	00 22 07.0	-4.5
BM3	Burnt Mountain	6.06	347	*e*Pn	Pn	00 22 30.1	+0.2
DLBC	Dease Lake	6.37	115	Sg	Sg	00 24 16.9	-6.7
COLD	Coldfoot	6.91	329	Pn	Pn	00 22 41.1	-0.4
INK	Inuvik	7.47	22	Sn	Sn	00 24 06.5	-7.9

BJI 16 00:29:02.8±0.0, 32°.64N×105°.35E, h15^{km}, ML3.7/15, Ms3.3/4, Ms7 3.3/1, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	2.19	219	Pn	Pn	00 29 39.5	+0.7
CD2				Pg	Pb	00 29 42.0	-0.2
CD2				Sn	Sb	00 30 08.6	-0.6
CD2				Sg	Sg	00 30 11.5	-1.9
CD2				smax	smax		
	comp=E,2μm,0.7s						
XAN	Xi'an	3.30	64	Pn	Pn	00 29 54.4	+0.4
XAN				Pg	Pg	00 30 03.8	-2.2
XAN				Sn	Sb	00 30 37.8	-3.3
XAN				Sg	Sg	00 30 50.1	+1.3
XAN				smax	smax		

	comp=N,340nm,0.9s						
XAN				smax	smax		
	comp=E,290nm,0.8s						
LZH	**Lanzhou**	**3.66**	**341**	*e*Pg	Pb	00 30 08.3	+1.1
LZH				Sg	Sg	00 30 58.1	-2.2
LZH				smax	smax		
	comp=N,200nm,0.9s						
LZH				smax	smax		
	comp=E,320nm,0.8s						
LZH				LR	LR		
	comp=N,220nm,5.4s						
LZH				LR	LR		
	comp=E,260nm,6.0s						
LZH				LR	LR		
	comp=Z,260nm,6.2s						
GYA	**Guiyang**	**6.26**	**169**	⇑*i*Pn	Pn	00 30 34.1	-0.7
GYA				Pg	Pg	00 30 58.8	-4.0
GYA				Sn	Sn	00 31 43.8	-2.4
GYA				Sg	Sb	00 32 12.9	+6.4
GYA				smax	smax		
	comp=N,40nm,0.7s						
GYA				smax	smax		
	comp=E,30nm,0.7s						
WHN	**Wuhan**	**7.96**	**103**	P	Pn	00 30 55.3	-2.6
WHN				S	Sn	00 32 28.6	+0.9
WHN				LR	LR		
	comp=Z,480nm,4.3s						
WMQ	**Urumqi**	**17.77**	**314**	*e*P	Pn	00 33 09.8	+0.2

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*PGC **16** 01:01:16.5, 61°.56N×141°.10W, h5^{km}, ML2.5/11, 211km Wnw of Haines Jct., Yt Southern Alaska*

NEIC 16 01:01:15.5±0.0**, 61°.53N×141°.08W, h2**^{km}**, ML2.5**(OTT), **ML2.5**(AEIC)**, After AEIC., Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.28**	**24**	*e*Pg	Pg	01 01 20.9	0.0
YUK2				*e*Sg	Sg	01 01 24.6	0.0
YUK2	**White River**	**0.28**	**24**	P	Pg	01 01 20.9	0.0
YUK2				S	Sg	01 01 24.6	0.0
YUK3	**Moose Creek**	**0.39**	**50**	*e*Pg	Pg	01 01 22.9	0.0
YUK3				*e*Sg	Sg	01 01 28.0	+0.1
YUK3	**Moose Creek**	**0.39**	**50**	P	Pg	01 01 22.9	0.0
YUK3				S	Sg	01 01 28.0	+0.1
YUK1	**Sand Pete Hill**	**0.68**	**22**	*e*Pg	Pg	01 01 27.8	-0.7
YUK1				*e*Sg	Sg	01 01 36.9	-0.3
YUK1	**Sand Pete Hill**	**0.68**	**22**	P	Pg	01 01 27.8	-0.7
YUK1				S	Sg	01 01 36.9	-0.3
PTPK	**Patty Peak**	**0.75**	**243**	*e*Pg	Pg	01 01 30.2	+0.4
PTPK				*e*Sg	Sg	01 01 40.2	+0.6
PTPK	**Patty Peak**	**0.75**	**243**	P	Pg	01 01 30.2	+0.4
PTPK				S	Sg	01 01 40.2	+0.6
BALM	**Baldy**	**0.79**	**231**	*e*Pg	Pg	01 01 30.5	-0.1
BALM				*e*Sg	Sg	01 01 40.9	+0.2
BALM	**Baldy**	**0.79**	**231**	P	Pg	01 01 30.5	0.0
BALM				S	Sg	01 01 41.4	+0.6
KIAG	**Kiagna River**	**0.87**	**226**	P	Pg	01 01 31.9	-0.2
KIAG				S	Sb	01 01 44.4	-1.0
BVCY	**Beaver Creek**	**0.89**	**7**	*e*Pg	Pg	01 01 32.1	-0.5
BVCY	**Beaver Creek**	**0.89**	**7**	P	Pg	01 01 32.1	-0.5
TABL	**Table Mountain**	**1.09**	**182**	*e*Pg	Pg	01 01 36.4	0.0
TABL				*e*Sg	Sb	01 01 51.5	-0.5
TABL	**Table Mountain**	**1.09**	**182**	P	Pg	01 01 36.4	0.0
TABL				S	Sb	01 01 51.5	-0.5
YUK4	**Talbot Arm**	**1.18**	**98**	*e*Pg	Pg	01 01 37.9	-0.2
YUK4	**Talbot Arm**	**1.18**	**98**	P	Pg	01 01 37.9	-0.2
SAMH	**Samovar Hills**	**1.41**	**174**	*e*Pn	Pb	01 01 42.7	+0.1
SAMH				*e*Sg	Sn	01 02 02.4	+1.0
SAMH	**Samovar Hills**	**1.41**	**174**	Pn	Pb	01 01 42.7	+0.1
SAMH				Sg	Sn	01 02 02.4	+1.0
MESA	**MESA**	**1.42**	**198**	*e*Pn	Pb	01 01 43.0	+0.2
MESA				*e*Sg	Sn	01 02 01.9	+0.1
MESA	**MESA**	**1.42**	**198**	Pn	Pb	01 01 43.0	+0.2
MESA				Sg	Sn	01 02 01.9	+0.1
YUK6	**Outpost Mounta**	**1.44**	**113**	*e*Pn	Pn	01 01 42.0	-0.7
YUK6				*e*Sn	Sn	01 02 02.5	+0.2
YUK6	**Outpost Mounta**	**1.44**	**113**	Pn	Pn	01 01 42.0	-0.7
YUK6				Sg	Sn	01 02 02.5	+0.2
CHX	**Chaix Hills**	**1.47**	**181**	*e*Pn	Pg	01 01 44.1	+0.4
PCA	**Pinnacle**	**1.50**	**164**	*e*Pn	Pb	01 01 43.7	-0.3
PCA				*e*Sn	Sg	01 02 04.3	+0.9
PCA	**Pinnacle**	**1.50**	**164**	Pn	Pb	01 01 43.9	0.0
PCA				Sg	Sg	01 02 04.3	+0.9
BCA3	**Beaver Creek A**	**1.57**	**348**	*e*Pn	Pn	01 01 43.5	-0.9
YUK5	**Granite Creek**	**1.60**	**103**	*e*Pn	Pn	01 01 44.9	0.0
YUK5				*e*Sn	Sn	01 02 05.7	-0.5
YUK5	**Granite Creek**	**1.60**	**103**	Pn	Pn	01 01 44.9	0.0
YUK5				Sg	Sn	01 02 05.7	-0.5
SNH	**Sunshine Point**	**1.61**	**213**	*e*Pn	Pg	01 01 46.2	0.0
SNH				*e*Sn	Sg	01 02 09.0	+2.0
YUK7	**Dusty Glacier**	**1.75**	**124**	*e*Pn	Pb	01 01 48.0	-0.3
YUK7				*e*Sg	Sg	01 02 12.3	+0.7
YUK7	**Dusty Glacier**	**1.75**	**124**	Pn	Pb	01 01 48.0	-0.3
YUK7				Sg	Sg	01 02 12.3	+0.7
HYT	**Haines Junctio**	**1.87**	**111**	*e*Pn	Pb	01 01 49.6	-0.8
HYT				*e*Sn	Sn	01 02 12.0	-0.8
HYT				*e*Sn	Sb	01 02 14.2	-0.1
HYT	**Haines Junctio**	**1.87**	**111**	Pn	Pn	01 01 49.0	+0.5
HYT				Sg	Sb	01 02 14.2	-0.1
HMT	**Hamilton**	**1.96**	**234**	*e*Pn	Pg	01 01 52.8	-0.2
HMT				*e*Sn	Sn	01 02 13.9	-0.9
PNL	**Peninsula**	**2.04**	**155**	*e*Pn	Pb	01 01 52.5	-0.8
PNL	**Peninsula**	**2.04**	**155**	Pn	Pb	01 01 52.5	-0.7
PNL				Sg	Sg	01 02 20.8	-0.2
RAGM	**Ragged Mountai**	**2.10**	**238**	*e*Pg	Pg	01 01 55.8	+0.2
SGAM	**Sherman Glacie**	**2.26**	**245**	*e*Pg	Pb	01 01 56.5	-0.4
PAX	**Paxson**	**2.51**	**307**	*e*Pg	Pg	01 02 02.8	-0.7
PAX				*e*Sg	Sb	01 02 33.7	+1.1
PAX	**Paxson**	**2.51**	**307**	Pg	Pb	01 02 00.0	-1.3
PAX				Sg	Sb	01 02 33.7	+1.1
DOT	**Dot Lake**	**2.53**	**328**	*e*Pn	Pn	01 01 57.5	-0.1
DOT				*e*Pg	Pb	01 02 02.1	+0.5
DOT				*e*Sg	Sg	01 02 35.0	-1.8
DOT	**Dot Lake**	**2.53**	**328**	Pn	Pn	01 01 57.5	-0.1
DOT				Pg	Pb	01 02 02.1	+0.5
DOT				Sg	Sg	01 02 35.0	-1.8
DAWY	**Dawson**	**2.66**	**16**	*e*Pn	Pn	01 01 59.2	-0.2
DAWY				*e*Sg	Sb	01 02 37.6	+0.8
DAWY	**Dawson**	**2.66**	**16**	Pn	Pn	01 01 59.9	+0.6
DAWY				Sg	Sb	01 02 37.7	+0.8
JPK	**Jack Peak**	**2.71**	**262**	*e*Pn	Pb	01 02 02.4	-2.1
FID	**Port Fidalgo**	**2.73**	**256**	*e*Pg	Pb	01 02 03.8	-1.2
FID				*e*Pn	Pn	01 02 03.9	+3.6
SCRK	**Sand Creek**	**2.79**	**333**	*e*Pg	Pb	01 02 05.3	-0.9
GLI	**Glacier Island**	**2.98**	**260**	*e*Pn	Pn	01 02 05.9	+2.2
PLBC	**Pleasant Camp**	**3.13**	**130**	*e*Pg	Pb	01 02 12.6	+0.9
PLBC	**Pleasant Camp**	**3.13**	**130**	Pg	Pb	01 02 12.6	+0.9
PLBC				Sg	Sg	01 02 54.8	-1.0
EGAK	**Eagle**	**3.26**	**359**	*e*Pn	Pn	01 02 07.8	+0.3
HDA	**Harding Lake**	**3.94**	**320**	*e*Pg	Pb	01 02 23.7	-1.8
ILB	**Eielson Array**	**4.18**	**324**	*e*Pg	Pg	01 02 34.0	-1.6
BESE	**Bessie Mountai**	**4.30**	**131**	*e*Pn	Pn	01 02 21.1	-0.7
BESE				*e*Sn	Sn	01 03 10.5	-2.0
BESE	**Bessie Mountai**	**4.30**	**131**	Sg	Sg	01 03 31.0	-2.5
CCB	**Clear Creek Bu**	**4.37**	**319**	*e*Pn	Pn	01 02 22.1	-0.6
BM3	**Burnt Mountain**	**6.11**	**347**	*e*Pn	Pn	01 02 47.3	+0.7
DLBC	**Dease Lake**	**6.35**	**114**	Sg	Sg	01 04 33.0	-6.3

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*ISCJB **16** 01:21:01.4±0.8, 51°.49N±0°.03×16°.03E±0°.04, h0^{km}, Error ellipse: s-maj=5.4km s-min=3.2km az=27.6*

*PRU **16** 01:21:02.8±0.0, 51°.53N×16°.05E, h0^{km}*

*VIE **16** 01:21:05.0±0.9, 51°.34N×15°.95E, h0^{km}, mb1.8/3, ml2.5/3, Error ellipse: s-maj=7.4km s-min=6.0km az=50.0, Suspected Mining induced.*

ISC 16 01:21:02.2±1.5**, 51°.50N**±0°.07×**16°.09E**±0°.04**, h0**^{km}**, n20, σ0**^{s}**.76**/42**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**169**	*e*Pg	**Pb**	**01 21 16.0**	**-0.8**
KSP				*e*Sg	**Sb**	**01 21 25.4**	**-1.3**
CHVC	**Chvalec**	**0.92**	**181**	*e*PG	**Pb**	**01 21 20.8**	**-0.2**
CHVC				*e*SG	**Sb**	**01 21 32.7**	**-1.0**
	comp=Z,17nm,0.4s						
OSTC	**Ostas**	**0.95**	**175**	*e*PG	**Pb**	**01 21 21.5**	**-0.1**
OSTC				*e*SG	**Sb**	**01 21 34.0**	**-0.7**
	comp=Z,25nm,0.2s						
UPC	**Upice**	**1.00**	**183**	*e*PG	**Pb**	**01 21 22.2**	**-0.2**
UPC				*e*SG	**Sb**	**01 21 35.6**	**-0.4**
	comp=Z,40nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pb**	**01 21 24.7**	**-0.5**
DPC				*e*SG	**Sb**	**01 21 40.4**	**-0.4**
	comp=Z,11nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**225**	*e*PG	**Pg**	**01 21 28.6**	**+0.2**
PVCC				*e*SG	**Sn**	**01 21 47.5**	**+0.1**
	comp=Z,74nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**246**	PG	**Pn**	**01 21 30.6**	**+0.4**
BRG				SG	**Sb**	**01 21 50.6**	**+0.3**
	23nm,0.5s						
GOPC	**GO Pecny, Ondr**	**1.79**	**208**	*e*PG	**Pb**	**01 21 35.8**	**-0.1**
GOPC				*e*SG	**Sg**	**01 21 59.5**	**-0.3**
	comp=Z,8.8nm,0.3s						
PRU	**Pruhonice**	**1.81**	**214**	*e*PG	**Pb**	**01 21 36.3**	**+0.1**
PRU				*e*SG	**Sg**	**01 22 00.3**	**+0.1**
	comp=Z,14nm,0.3s						
CLL	**Collm**	**1.94**	**265**	*e*Pn	**Pn**	**01 21 35.0**	**-1.5**
CLL				*e*Pg	**Pb**	**01 21 38.0**	**-0.5**
CLL				*i*		01 21 42.0	
CLL				*e*Sg	**Sn**	**01 22 03.0**	**+1.4**
	comp=Z,8.0nm,0.5s						
MORC	**Moravsky Berou**	**1.96**	**151**	*e*PN	**Pn**	**01 21 36.5**	**-0.2**
MORC				*e*SG	**Sg**	**01 22 05.4**	**+0.3**
OKC	**Ostrava-Krasne**	**2.12**	**141**	*e*PG	**Pb**	**01 21 41.5**	**0.0**
OKC				*e*SG	**Sg**	**01 22 11.0**	**+0.8**
	comp=Z,10nm,0.6s						
VRAC	**Vranov**	**2.22**	**171**	*e*PN	**Pn**	**01 21 40.7**	**+0.4**
VRAC				*e*SG	**Sg**	**01 22 13.7**	**+0.2**
TREC	**Trest**	**2.24**	**190**	*e*PN	**Pn**	**01 21 41.5**	**+0.9**
TREC				*e*PG	**Pg**	**01 21 44.4**	**-0.8**
TREC				*e*SG	**Sg**	**01 22 14.0**	**-0.2**
	comp=Z,10nm,0.3s						
KRUC	**Moravsky**	**2.45**	**175**	*e*PN	**Pn**	**01 21 43.5**	**+0.1**
KRUC				*e*SG	**Sg**	**01 22 21.6**	**+0.7**
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**01 21 46.3**	**+0.3**
NKC				*e*SG	**Sg**	**01 22 27.3**	**+0.5**
	comp=Z,13nm,0.4s						
KHC	**Kasperske Hory**	**2.87**	**215**	*e*PN	**Pn**	**01 21 49.7**	**+0.5**
KHC				*e*PG	**Pb**	**01 21 55.1**	**+0.8**
KHC				*e*SG	**Sg**	**01 22 34.1**	**-0.2**
	comp=Z,3.5nm,0.4s						
MODS	**Modra-Piesok**	**3.23**	**166**	*e*SG	**Sg**	**01 22 45.2**	**-0.5**
VYHS	**Vyhne**	**3.49**	**148**	*e*PN	**Pn**	**01 21 57.4**	**-0.4**
VYHS				*e*SG	**Sg**	**01 22 57.2**	**+2.8**
MOA	**Molln**	**3.84**	**199**	*e*Pn	**Pn**	**01 22 03.3**	**+0.6**
	comp=Z,0.5nm,0.2s						
MOA				*e*Sg	**Sg**	**01 23 05.5**	**-0.2**
	comp=Z,2.1nm,0.3s						

RSNC 16 01:29:31.5±1.0**, 6°.82N×73°.15W, h146**^{km}±4^{km}**, ML3.4, Mw3.5, 2C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**187**	*e*P	Pn	01 29 51.4	-0.4
BARC				*e*S	Sn	01 30 06.1	-1.0
BARC				*i*		01 30 07.8	
	comp=Z,516nm,0.2s						
GIRC	**Giron, Santand**	**0.26**	**351**	*e*P	Pn	01 29 51.5	-0.2
GIRC				*i*		01 30 08.0	
	comp=Z,277nm,0.1s						
BRRC	**Barranca, Sant**	**0.62**	**297**	*e*P	Pn	01 29 53.2	+0.1
BRRC				*e*S	Sn	01 30 09.7	+0.2
BRRC				*i*		01 30 14.2	
	comp=Z,402nm,0.2s						
PAMC	**Pamplona, Colo**	**0.68**	**41**	*e*P	Pn	01 29 54.2	+0.1
PAMC				*e*S	Sn	01 30 11.3	+0.1
RUSC	**La Rusia**	**0.93**	**176**	*e*P	Pn	01 29 55.2	-0.7
RUSC				*e*S	Sn	01 30 13.8	-0.7
RUSC				*i*		01 30 15.0	
	comp=Z,323nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.33**	**258**	⇑*e*P	Pn	01 29 57.7	-1.3
PTBC				*e*S	Sn	01 30 19.1	-0.9
PTBC				*i*		01 30 26.2	
	comp=Z,325nm,0.3s						
TAMC	**Tame, Arauca**	**1.41**	**106**	⇓*i*P	Pn	01 29 59.8	-0.1
TAMC				*e*S	Sn	01 30 21.1	-0.4
TAMC				*i*		01 30 22.1	
	comp=Z,112nm,0.5s						
OCAC	**Ocana**	**1.42**	**353**	*e*P	Pn	01 29 59.6	-0.4
OCAC				*e*S	Sn	01 30 21.5	-0.4
OCAC				*i*		01 30 27.9	
	comp=Z,236nm,0.4s						
SPBC	**San Pablo de B**	**1.48**	**218**	⇑*e*P	Pn	01 30 00.1	-0.6
SPBC				*e*S	Sn	01 30 22.1	-0.9
YOPC	**Yopal, Colombi**	**1.63**	**153**	*e*P	Pn	01 30 02.1	-0.3
YOPC				*e*S	Sn	01 30 25.8	-0.2
YOPC				*i*		01 30 29.5	
	comp=N,672nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.82**	**292**	*e*P	Pn	01 30 03.6	-0.7
ZARC				*e*S	Sn	01 30 29.2	-0.3
NORC	**Norcasia**	**2.12**	**234**	*e*P	Pn	01 30 07.2	-0.7
NORC				*e*S	Sn	01 30 35.4	-0.3
NORC				*i*		01 30 43.1	
	comp=Z,202nm,0.2s						
SMLC	**San Martn de**	**2.17**	**335**	*e*P	Pn	01 30 07.8	-0.6
SMLC				*e*S	Sn	01 30 35.7	-1.0
SMLC				*i*		01 30 40.4	
	comp=Z,246nm,0.1s						
CHIC	**Chingaza**	**2.25**	**195**	*e*P	Pn	01 30 09.3	-0.6
CHIC				*e*S	Sn	01 30 38.9	-0.4
CHIC				*i*		01 30 44.9	
	comp=Z,111nm,0.3s						
ROSC	**El Rosal**	**2.29**	**211**	*e*P	Pn	01 30 11.1	+0.8
ROSC				*e*S	Sn	01 30 43.5	+3.4
HELC	**Santa Helena**	**2.44**	**255**	*e*P	Pn	01 30 12.0	-0.1
HELC				*e*S	Sn	01 30 43.6	+0.3
HELC				*i*		01 30 51.4	
	comp=Z,180nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.71**	**234**	*e*P	Pn	01 30 15.3	-0.3
GUY2C				*e*S	Sn	01 30 53.2	+3.7
GUY2C				*i*		01 30 56.5	
	comp=Z,145nm,0.6s						
VILC	**Villavicencio,**	**2.75**	**191**	*e*P	Pn	01 30 14.9	-0.8
VILC				*e*S	Sn	01 30 48.6	-1.2
VILC				*i*		01 30 52.5	
	comp=Z,119nm,0.3s						
DBBC	**Dabeiba**	**3.04**	**274**	*e*P	Pn	01 30 18.8	-0.6
CODC	**Agustn Codazz**	**3.10**	**355**	*e*P	Pn	01 30 19.0	-1.1
CODC				*e*S	Sn	01 30 57.2	-0.5
CODC				*i*		01 31 05.9	
	comp=Z,42nm,0.7s						
SDV	**Santo Domingo**	**3.23**	**50**	*e*P	Pn	01 30 20.6	-1.2
PRAC	**Prado**	**3.54**	**209**	*e*P	Pn	01 30 24.3	-1.4
PRAC				*e*S	Sn	01 31 07.7	-0.1
PRAC				*i*		01 31 13.6	
	comp=Z,99nm,0.4s						
ORTC	**Ortega, Tolima**	**3.57**	**216**	*e*P	Pn	01 30 25.6	-0.5
ORTC				*e*S	Sn	01 31 09.0	+0.5
SJCC	**San Jacinto, C**	**3.65**	**327**	*e*P	Pn	01 30 25.1	-2.2
SJCC				*e*S	Sn	01 31 06.5	-4.0
SJCC				*i*		01 31 14.2	
	comp=Z,44nm,0.3s						

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*IDC **16** 01:43:51.2±1.3, 37°.21N×141°.40E, h0^{km}, mb4.0/10, mb1 4.1/13, mb1mx3.8/47, mbtmp4.0/13, ML2.5/2, MS2.5/2, Ms1 2.5/2, ms1mx2.2/45, Error ellipse: s-maj=36.8km s-min=20.7km az=85.0*

*ISCJB **16** 01:43:57.8±0.5, 37°.05N±0°.03×141°.03E±0°.05, h57^{km}±3^{km}, mb4.2/17, Error ellipse: s-maj=7.3km s-min=4.3km az=16.9*

*JMA **16** 01:44:00.0, 37°.08N×140°.87E, h49^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$100.00000°, δ71.00000°, λ50.00000°. NP2: φ$_s$348.00000°, δ44.00000°, λ152.00000°. Principal axes: T Plg48.0000°, Azm327.0000°; N Plg37.0000°, Azm115.0000°; P Plg16.0000°, Azm218.0000°;*

JMA Felt II J1.

*NIED **16** 01:44:00, 37°.10N×140°.90E, h50^{km}, Mw3.8 Best double couple: M$_0$5.97000×10^{14} NP1:φ$_s$347.00000°, δ51.00000°, λ149.00000°. NP2:φ$_s$98.00000°, δ66.00000°, λ44.00000°.*

*NEIC **16** 01:44:00.4±1.2, 37°.03N×140°.92E, h65^{km}±9^{km}, mb4.3/9, Error ellipse: s-maj=12.2km s-min=8.5km az=110.0*

ISC 16 01:43:58.4±0.8**, 37°.04N**±0°.04×**141°.04E**±0°.07**, h50**^{km}±6^{km}**, n55, σ1**^{s}**.06**/64**, mb4.1**/17**, 6C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.20**	**288**	⇑P	**Pn**	**01 44 07.5**	**+0.6**
ONAJ				S	**Sn**	**01 44 12.8**	**-0.1**
JFK	**Kawauchi**	**0.35**	**338**	⇓P	**Pn**	**01 44 08.8**	**+0.7**
JFK				S	**Sn**	**01 44 14.9**	**-0.2**
JFFD	**Fukushimafurud**	**0.38**	**278**	⇑P	**Pn**	**01 44 08.6**	**+0.2**
JFFD				S	**Sn**	**01 44 14.3**	**-1.2**
JHO	**Hitachi**	**0.57**	**221**	⇑P	**Pn**	**01 44 11.2**	**+0.7**
JHO				S	**Sn**	**01 44 19.2**	**0.0**
JFT	**Otama**	**0.74**	**311**	⇑P	**Pn**	**01 44 12.8**	**+0.2**
JFT				S	**Sn**	**01 44 21.9**	**-1.1**
JMM	**Marumori**	**0.85**	**347**	⇓P	**Pn**	**01 44 14.7**	**+0.6**
JMM				S	**Sn**	**01 44 25.5**	**-0.1**
JFY	**Yanaizu**	**1.12**	**289**	⇑P	**Pn**	**01 44 17.4**	**-0.4**
JFY				S	**Sn**	**01 44 30.3**	**-2.0**
JOU	**Okura**	**1.36**	**348**	P	**Pn**	**01 44 21.7**	**+0.7**
JYS	**Shirataka**	**1.41**	**327**	⇑P	**Pn**	**01 44 22.3**	**+0.6**
JYS				S	**Sn**	**01 44 38.9**	**-0.3**
JAG	**Ashikaga**	**1.41**	**245**	⇓P	**Pn**	**01 44 21.9**	**+0.2**
JKT	**Katashina**	**1.46**	**260**	P	**Pn**	**01 44 22.9**	**+0.5**
MJAR	**Matsushiro Arr**	**2.32**	**259**	Pn	**Pn**	**01 44 34.8**	**+0.6**
	3.8nm,0.3s,baz=77,slow=18,SNR=84						
MJAR				Sn	**Sn**	**01 45 02.8**	**+1.3**
	4.9nm,0.3s,baz=97,slow=20,SNR=6.6						
MJAR				LR	LR	01 45 44.4	
	comp=Z,82nm,20.4s,baz=105,slow=43						
MAJO	**Matsushiro**	**2.33**	**259**	*e*Pn	**Pn**	**01 44 35.1**	**+0.9**
MAJO				*e*Sn	**Sn**	**01 45 02.1**	**+0.5**
MAT	**Matsushiro**	**2.33**	**259**	P	**Pn**	**01 44 34.9**	**+0.7**
MAT				S	**Sn**	**01 45 03.1**	**+1.5**
MJB9	**Matsu-Tunnel**	**2.33**	**259**	*e*Pn	**Pn**	**01 44 35.4**	**+1.1**
MJB9				*e*Sn	**Sn**	**01 45 02.3**	**+0.6**
INU	**Inuyama**	**3.66**	**244**	*e*Pn	**Pn**	**01 44 53.6**	**+1.0**
INU				*e*Sn	**Sn**	**01 45 31.0**	**-3.5**
JHJ	**Hachijo jima 2**	**4.04**	**195**	Pn	**Pn**	**01 44 59.7**	**+1.9**
	36nm,0.3s,baz=333,slow=21,SNR=34						
JHJ				Sn	**Sn**	**01 45 44.7**	**+0.9**
	51nm,0.3s,baz=61,slow=20,SNR=8.4						
JHJ2	**Mitsune**	**4.04**	**195**	*e*Pn	**Pn**	**01 44 60.0**	**+2.2**
JHJ2				*e*Sn	**Sn**	**01 45 44.7**	**+0.9**
ERM	**Erimo**	**5.23**	**18**	*e*Pn	**Pn**	**01 45 14.9**	**+0.8**
ERM				*e*Sn	**Sn**	**01 46 15.5**	**+2.5**
ASAJ	**Asahikawa**	**7.17**	**9**	LR	LR	01 48 54.9	
	comp=Z,37nm,18.4s,baz=90,slow=44						
USRK	**Ussuriysk Ar.**	**9.92**	**319**	Pn	**Pn**	**01 46 16.9**	**-1.3**
	0.1nm,0.3s,baz=129,slow=13,SNR=2.5						
SARN	**Sarigan**	**20.69**	**167**	*e*P	**P**	**01 48 30.9**	**-3.4**
	20nm,1.2s						
ULN	**Ulaanbaatar**	**27.10**	**304**	*e*P	**P**	**01 49 36.2**	**-0.3**
	2.2nm,0.5s						
SONA0	**Songino Array**	**27.53**	**304**	*e*P	**P**	**01 49 41.2**	**+0.8**
SONM	**Songino Array**	**27.53**	**304**	P	**P**	**01 49 41.2**	**+0.8**
	1.9nm,0.6s,baz=99,slow=8.3,SNR=8.9						
H11N2	**WAKE ISLAND Hy**	**28.41**	**120**	T	T	02 19 53.2	
	baz=313,slow=75,SNR=250						
H11N1	**WAKE ISLAND Hy**	**28.42**	**120**	T	T	02 19 52.0	
	baz=313,slow=75,SNR=340						
H11N3	**WAKE ISLAND Hy**	**28.43**	**120**	T	T	02 19 51.4	
	baz=313,slow=75,SNR=300						
H11S1	**WAKE ISLAND Hy**	**29.12**	**122**	T	T	02 20 43.0	
	baz=314,slow=75,SNR=292						
H11S3	**WAKE ISLAND Hy**	**29.12**	**122**	T	T	02 20 40.5	
	baz=314,slow=75,SNR=188						
H11S2	**WAKE ISLAND Hy**	**29.13**	**122**	T	T	02 20 42.2	
	baz=314,slow=75,SNR=182						
FAKI	**Fak Fak**	**40.59**	**194**	*e*P	**P**	**01 51 33.5**	**+0.3**
	79nm,1.4s						
ZAA1	**Zalesovo Array**	**41.69**	**312**	*e*P	**P**	**01 51 41.9**	**0.0**
ZALV	**Zalesovo Beam**	**41.69**	**312**	P	**P**	**01 51 41.9**	**0.0**
	1.6nm,0.4s,baz=118,slow=6.4,SNR=7.2						
MK31	**Makanchi Array**	**43.86**	**302**	*e*P	**P**	**01 52 00.1**	**+0.4**
	1.9nm,0.8s						
MK32	**Makanchi Array**	**43.86**	**302**	*e*P	**P**	**01 51 59.8**	**+0.1**
MKAR	**Makanchi Array**	**43.86**	**302**	P	**P**	**01 51 59.8**	**+0.1**
	1.9nm,0.6s,baz=88,slow=9.9,SNR=20						
MAKZ	**Makanchi**	**44.07**	**302**	*e*P	**P**	**01 52 01.0**	**-0.3**
	3.3nm,0.8s						
SIMRM	**Sittwe**	**45.02**	**262**	*e*P	**P**	**01 52 08.5**	**-0.6**
	96nm,1.4s						
KURK	**Kurchatov**	**45.69**	**308**	*e*P	**P**	**01 52 14.4**	**+0.3**
	6.5nm,0.9s						
WR1	**Warramunga Arr**	**57.02**	**188**	*e*P	**P**	**01 53 39.9**	**+0.7**
WRA	**Warramunga Arr**	**57.02**	**188**	P	**P**	**01 53 39.9**	**+0.7**
	1.9nm,1.0s,baz=5.6,slow=10,SNR=3.3						
ARA0	**ARCESS Array S**	**63.89**	**339**	*e*P	**P**	**01 54 26.1**	**+0.7**
ARCES	**ARCESS Array B**	**63.89**	**339**	P	**P**	**01 54 26.1**	**+0.7**
	2.2nm,0.9s,baz=52,slow=9.9,SNR=5.4						
FIA0	**FINESS Array S**	**68.67**	**332**	*e*P	**P**	**01 54 56.3**	**+0.2**
FINES	**FINESS Array B**	**68.67**	**332**	P	**P**	**01 54 56.3**	**+0.2**
	2.0nm,0.6s,baz=48,slow=8.5,SNR=9.9						
NB2	**NORSAR Subarra**	**74.06**	**337**	P	**P**	**01 55 29.5**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=41,slow=6.2						
NB200	**NORSAR Array S**	**74.06**	**337**	*e*P	**P**	**01 55 28.6**	**-0.1**
NOA	**NORSAR Array B**	**74.06**	**337**	P	**P**	**01 55 28.6**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=54,slow=6.9,SNR=3.0						
AKASG	**Malin Array Be**	**74.11**	**322**	P	**P**	**01 55 29.3**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=48,slow=5.9,SNR=7.0						
AKBB	**Malin Array Si**	**74.11**	**322**	*e*P	**P**	**01 55 28.7**	**-0.4**
	comp=Z,2.3nm,0.5s						
BR101	**Keskin Array S**	**78.62**	**311**	*e*P	**P**	**01 55 55.6**	**+0.5**
BRTR	**Keskin Array B**	**78.62**	**311**	P	**P**	**01 55 55.6**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=64,slow=3.4,SNR=3.1						
GEC2	**GERESS Array S**	**82.55**	**328**	*e*P	**P**	**01 56 15.0**	**-0.9**
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**82.55**	**328**	P	**P**	**01 56 15.0**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=53,slow=3.9,SNR=3.7						

IDC 16 02:00:10.9±2.3**, 5°.20S×152°.31E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/24**, mbtmp3.7**/3**, Error ellipse: s-maj=164.6km s-min=29.6km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.59**	**230**	Sn	Sn	02 03 07.3	+2.1
	3.9nm,0.3s,baz=223,slow=16,SNR=4.7						
WRA	**Warramunga Arr**	**22.81**	**228**	P	P	02 05 14.6	-1.0
	0.7nm,0.5s,baz=54,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**25.52**	**222**	P	P	02 05 41.8	+0.4
	1.0nm,0.6s,baz=56,slow=9.0,SNR=8.6						
ILAR	**Eielson Array**	**82.72**	**22**	P	P	02 12 36.0	-0.4
	0.5nm,0.8s,baz=256,slow=5.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**149.96**	**287**	PKPbc	PKPbc	02 20 04.8	+0.4
	0.6nm,1.0s,baz=84,slow=2.8,SNR=2.3						

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*VIE **16** 02:15:13.8±0.3, 45°.92N×15°.21E, h6^{km}±6^{km}, mb1.4/3, ml1.7/4, Error ellipse: s-maj=2.2km s-min=1.8km az=44.0*

LJU 16 02:15:13.5, 45°.89N×15°.17E, h8^{km}**, ML1.4, 5C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEGS	**Legarje**	**0.12**	**61**	⇑*i*Pg	Pg	02 15 15.8	-0.3
LEGS				*i* Sg	Sg	02 15 18.0	0.0
PDKS	**Podkum**	**0.21**	**325**	⇓*i*Pg	Pg	02 15 17.9	+0.2
PDKS				*i*		02 15 18.1	
	comp=Z,37nm,0.1s						
CRES	**Cresnjev**	**0.21**	**108**	⇓*i*Pg	Pg	02 15 17.4	-0.3
CRES				*e*Sg	Sg	02 15 20.8	+0.2
	comp=Z,32nm,0.1s						
CESS	**Cesta pri Krsk**	**0.22**	**68**	*i* Pg	Pg	02 15 17.9	-0.1
	comp=Z,61nm,0.1s						
VISS	**Visnje**	**0.25**	**249**	*i* Pg	Pg	02 15 18.3	-0.2
VISS				*i*		02 15 18.7	
	comp=Z,34nm,0.2s						
GCIS	**Gornji Cirnik**	**0.32**	**94**	*e*Pg	Pg	02 15 19.7	-0.1
GCIS				*i* Sg	Sg	02 15 24.9	+0.8
	comp=Z,17nm,0.1s						
DOBS	**Dobrina**	**0.33**	**39**	⇓*i*Pg	Pg	02 15 20.3	+0.2
	comp=Z,29nm,0.2s						
GOLS	**Golise**	**0.34**	**69**	⇓*i*Pg	Pg	02 15 20.5	+0.3
	comp=Z,24nm,0.2s						
OZLJ	**Ozalj**	**0.35**	**143**	*i* Pg	Pg	02 15 19.9	-0.4
VNDS	**Vrh nad Dolski**	**0.39**	**303**	⇓*i*Pg	Pg	02 15 21.6	+0.5
VNDS				*i* Sg	Sg	02 15 27.0	+0.8
BOJS	**Bojanci**	**0.39**	**172**	*i* Pg	Pg	02 15 20.3	-0.8
BOJS				*i*		02 15 20.5	
BOJS				*e*Sg	Sg	02 15 27.6	+1.3
GBRS	**Gornja Briga**	**0.44**	**215**	⇑*i*Pg	Pg	02 15 22.4	+0.4
GBRS				*i* Sg	Sg	02 15 28.7	+0.8
LJU	**Ljubljana**	**0.47**	**289**	⇓*i*Pg	Pg	02 15 23.3	+0.6
GBAS	**Gorenja Brezov**	**0.51**	**275**	⇑*i*Pg	Pg	02 15 23.9	+0.5
	comp=Z,12nm,0.2s						
CEY	**Cerknica**	**0.54**	**254**	*i* Pg	Pg	02 15 24.4	+0.4

PTJ	Puntijarka	0.56	88	iPg		02 15 24.9	
PTJ				Sg	Sg	02 15 32.2	+0.6
GROS	Grobnik	0.61	22	⇓iPg	Pg	02 15 25.6	+0.2
MOZS	Mozjanca	0.65	309	⇓iPg	Pg	02 15 26.4	+0.4
	comp=Z,9.0nm,0.2s						
CRNS	Crni Vrh	0.66	287	⇓iPg	Pg	02 15 26.8	+0.5
KNDS	Knezji Dol	0.66	237	⇑iPg	Pg	02 15 26.4	+0.2
RIY	Rijeka	0.74	221	ePg		02 15 27.7	
PERS	Pernice	0.74	357	i Pg	Pg	02 15 28.1	+0.3
	comp=Z,10.0nm,0.2s						
OBKA	Obir	0.75	325	ePg	Pg	02 15 28.4	+0.4
	comp=Z,1.5nm,0.1s,SNR=7.1						
OBKA				eSg	Sb	02 15 39.1	-0.3
	comp=Z,7.5nm,0.2s						
JAVS	Javornik	0.77	271	i Pg	Pg	02 15 28.4	+0.1
SOKA	Soboth	0.79	353	ePg	Pg	02 15 28.7	0.0
	comp=Z,2.0nm,0.2s,SNR=14						
SOKA				i Sg	Sg	02 15 39.3	+0.2
	comp=Z,4.3nm,0.2s						
SKDS	Skadanscina	0.88	247	ePg	Pg	02 15 30.4	0.0
VOJS	Vojsko	0.91	279	i Pg	Pg	02 15 31.0	+0.1
GORS	Gorjuse	0.92	298	⇑iPg	Pg	02 15 31.3	+0.1
	comp=Z,6.0nm,0.1s						
KALN	Kalnik	0.93	75	ePg	Pb	02 15 31.9	0.0
CADS	Cadrg	1.05	289	ePg	Pg	02 15 33.4	-0.3
	comp=Z,8.0nm,0.2s						
MYKA	Terra Mystica	1.29	305	ePn	Pg	02 15 38.7	+0.4
	comp=Z,0.6nm,0.1s						
MYKA				eSg	Sn	02 15 55.8	+0.4
	comp=Z,0.9nm,0.1s						
NVLJ	Novalja	1.34	189	ePn	Pg	02 15 40.4	+1.1
ARSA	Arzberg	1.38	10	ePg	Pn	02 15 39.3	+0.2
	comp=Z,1.1nm,0.2s						
ARSA				eSg	Sb	02 15 56.9	-0.5
	comp=Z,1.9nm,0.3s						
UDBI	Udbina	1.43	163	ePn	Pn	02 15 39.4	-0.4
DUGI	Dugi Otok	1.90	182	ePn	Pb	02 15 48.6	+0.2

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*ISCJB **16** 02:16:21.2±0.4, 50°.26N±0°.03×18°.79E±0°.02, h0km, Error ellipse: s-maj=4.0km s-min=2.1km az=16.0*

*VIE **16** 02:16:22.6±1.1, 50°.32N×18°.75E, h0km, mb2.4/4, ml2.8/4, Error ellipse: s-maj=8.1km s-min=7.4km az=60.0, Suspected Mining induced.*

*PRU **16** 02:16:23.0±0.0, 50°.26N×18°.83E, h0km*

*IDC **16** 02:16:25.5±1.3, 50°.46N×18°.26E, h0km, mb1 3.6/4, mb1mx3.2/36, mbtmp3.5/4, ML2.8/4, Error ellipse: s-maj=27.9km s-min=8.8km az=132.0*

ISC 16 02:16:21.3±0.7**, 50°.26N**±0°.03×**18°.88E**±0°.02**, h0km, n44, σ1s.10**/75**, 5C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.08	67	i Pg	Pg	02 16 24.7	+1.9
CHZP				i Sg	Sg	02 16 26.4	+2.5
RAC	Raciborz	0.47	248	ePg	Pb	02 16 32.9	+0.4
RAC				eSg	Sb	02 16 40.4	+0.3
OKC	Ostrava-Krasne	0.63	228	ePG	Pg	02 16 34.2	+0.8
OKC				eSG	Sg	02 16 41.2	-0.4
	comp=Z,125nm,0.8s						
MORC	Moravsky Berou	0.99	241	⇑iP	Pb	02 16 41.4	+0.1
MORC	Moravsky Berou	0.99	241	ePG	Pb	02 16 41.1	-0.2
MORC				eSG	Sg	02 16 53.7	+0.7
LANS	Liptovska Anna	1.18	161	ePG	Pn	02 16 45.0	-0.1
LANS				eSG	Sb	02 17 00.7	+0.4
NIE	Niedzica	1.25	132	ePg	Pn	02 16 45.9	-0.1
NIE				eSg	Sn	02 17 03.8	+0.2
JAVC	Velka Javorina	1.61	210	ePN	Pb	02 16 51.9	0.0
DPC	Dobruska-Polom	1.64	274	ePG	Pb	02 16 52.1	-0.3
DPC				eSG	Sg	02 17 15.6	+1.6
	comp=Z,39nm,0.4s						
OSTC	Ostas	1.73	281	ePG	Pg	02 16 54.6	+0.2
OSTC				eSG	Sg	02 17 17.9	+1.1
	comp=Z,66nm,1.1s						
KSP	Ksiaz	1.75	290	ePb	Pb	02 16 54.2	0.0
KSP				ePg	Pg	02 16 55.9	+1.1
KSP				eSg	Sg	02 17 19.0	+1.6
STHS	Stebnicka Huta	1.75	118	ePN	Pg	02 16 54.6	-0.2
STHS				eSN	Sg	02 17 17.9	+0.4
STHS				eLG	Lg	02 17 22.8	
VRAC	Vranov	1.76	238	Pg	Pb	02 16 54.6	+0.1
	3.6nm,0.3s,baz=48,slow=14,SNR=15						
VRAC				Lg	Lg	02 17 17.3	
	13nm,0.3s,baz=85,slow=14,SNR=17						
VRAC	Vranov	1.76	238	⇑iP	Pb	02 16 54.9	+0.4
VRAC	Vranov	1.76	238	ePN	Pb	02 16 54.2	-0.3
VRAC				eSG	Sb	02 17 17.5	+0.4
VYHS	Vyhne	1.77	181	ePN	Pn	02 16 53.4	+0.2
VYHS				eSN	Sb	02 17 17.8	+0.5
CHVC	Chvalec	1.83	281	ePN	Pb	02 16 55.0	-0.7
CHVC				ePG	Pg	02 16 57.1	+0.7
CHVC				eSG	Sg	02 17 22.5	+2.3
	comp=Z,37nm,0.6s						
UPC	Upice	1.85	279	ePG	Pg	02 16 56.7	-0.1
UPC				eSG	Sg	02 17 22.1	+1.4
	comp=Z,53nm,1.1s						
KRUC	Moravsky	2.01	234	ePN	Pn	02 16 56.2	-0.3
KRUC				eSG	Sb	02 17 24.9	+0.7
MODS	Modra-Piesok	2.16	210	ePN	Pn	02 16 58.8	+0.3
MODS				eSN	Sb	02 17 27.9	-0.7
MODS				eLG	Lg	02 17 36.8	
ZST	Bratislava	2.37	210	eSN	Sn	02 17 30.4	-0.8
TREC	Trest	2.40	248	ePN	Pn	02 17 02.4	+0.5
TREC				ePG	Pb	02 17 04.9	-0.5
TREC				eSG	Sb	02 17 37.3	+1.8
	comp=Z,29nm,0.6s						
PSZ	Piszkesteto	2.44	164	⇑iP	Pn	02 17 03.7	+1.3
PSZ	Piszkesteto	2.44	164	ePn	Pg	02 17 09.0	+1.0
KOLS	Kolonicke sedl	2.58	120	ePN	Pn	02 17 04.6	+0.3
KOLS				eSN	Sn	02 17 36.2	-0.2
GOPC	GO Pecny, Ondr	2.66	264	ePG	Pb	02 17 10.2	+0.5
GOPC				eSG	Sg	02 17 46.4	-0.2
	comp=Z,24nm,0.8s						
PVCC	Panska Ves	2.77	277	ePG	Pg	02 17 13.5	-0.9
PVCC				eSG	Sg	02 17 51.9	+1.7
	comp=Z,36nm,0.4s						
PRU	Pruhonice	2.80	266	ePG	Pb	02 17 12.9	+0.7
PRU				eSG	Sg	02 17 51.4	+0.1
	comp=Z,9.4nm,0.5s						
CSKK	Cskako	2.93	188	ePn	Pn	02 17 10.1	+1.0
CONA	Conrad Observa	3.06	221	i Pn	Pn	02 17 11.8	+0.8
	0.7nm,0.2s						
CONA				i Sn	Sn	02 17 49.1	+0.8
	3.5nm,0.3s						
BRG	Berggiesshubel	3.21	283	PG	Pg	02 17 21.3	-1.4
BRG				SG	Sg	02 18 04.6	+0.4
	16nm,0.6s						
KHC	Kasperske Hory	3.62	254	ePN	Pn	02 17 19.3	+0.6
KHC				ePG	Pb	02 17 27.5	+1.3
KHC				eSG	Sg	02 18 16.4	-1.2
	comp=Z,21nm,0.5s						
GERES	GERESS Array B	3.65	249	Pn	Pn	02 17 21.1	+1.9
	0.3nm,0.3s,baz=61,slow=16,SNR=7.2						
GERES				Pg	Pb	02 17 26.6	-0.2
	1.4nm,0.3s,baz=60,slow=14,SNR=24						
GERES				Lg	Lg	02 18 12.5	
	1.4nm,0.3s,baz=56,slow=22,SNR=4.4						
CLL	Collm	3.87	288	ePg	Pg	02 17 35.0	-0.5
CLL				eSg	Sg	02 18 25.0	-0.6
	comp=Z,13nm,0.6s						
MOA	Molln	3.87	233	ePn	Pn	02 17 22.4	+0.3
	comp=Z,0.6nm,0.2s						
MOA				eSn	Sn	02 18 11.8	+3.5
	comp=Z,3.0nm,0.3s						
NKC	Novy Kostel	4.13	272	eSG	Sg	02 18 34.0	+0.2
	comp=Z,14nm,0.6s						
BURAR	Bucovina Array	4.95	120	⇑iP	Pn	02 17 38.2	+1.3
BZS	Buzias	5.00	157	⇓iP	Pn	02 17 38.7	+1.2
GZR	Gura Zlata	5.53	150	⇑iP	Pn	02 17 45.9	+1.0
AKASG	Malin Array Be	6.62	82	Pg	Pg	02 18 27.3	-0.8
	comp=Z,0.7nm,0.3s,baz=273,slow=14,SNR=4.7						
DAVOX	Davos/Dischmat	6.91	243	Pn	Pn	02 18 05.2	+1.1
	comp=Z,0.4nm,0.3s,baz=54,slow=8.7,SNR=3.8						
DAVOX				Lg	Lg	02 19 57.4	
	comp=Z,0.2nm,0.3s,baz=61,slow=18,SNR=2.2						
HFS	Hagfors	10.32	345	Pn	Pn	02 18 48.2	-2.3
	comp=Z,0.1nm,0.3s,baz=108,slow=17,SNR=3.1						
FINES	FINESS Array B	11.91	17	Pn	Pn	02 19 10.1	-2.0
	comp=Z,0.3nm,0.3s,baz=199,slow=13,SNR=11						
ARCES	ARCESS Array B	19.60	7	Pn	P	02 20 48.2	-2.5
	comp=Z,0.1nm,0.3s,baz=189,slow=11,SNR=4.6						

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*IDC **16** 02:29:53.5±2.7, 6°.78S×150°.01E, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.7/24, mbtmp4.0/4, ML2.2/1, Error ellipse: s-maj=76.6km s-min=41.2km az=114.0*

*NEIC **16** 02:29:54.9±2.3, 6°.76S×149°.92E, h18km±6km, mb4.3/10, Error ellipse: s-maj=10.7km s-min=8.7km az=192.0*

*ISCJB **16** 02:29:55.3±0.6, 6°.75S±0°.09×149°.90E±0°.09, h34km, mb4.5/10, Error ellipse: s-maj=15.8km s-min=8.5km az=43.3*

ISC 16 02:29:56.8±0.7**, 6°.80S**±0°.10×**149°.99E**±0°.10**, h34km, n20, σ1s.41**/22**, mb4.8**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.37	40	ePn	Pn	02 30 48.0	+1.0
PMG	Port Moresby	3.82	227	Pn	Pn	02 30 56.2	+3.0
	12nm,0.3s,baz=44,slow=6.8,SNR=11						
PMG				Sn	Sn	02 31 37.9	+0.9
	30nm,0.3s,baz=41,slow=20,SNR=11						
PMG	Port Moresby	3.82	227	ePn	Pn	02 30 53.8	+0.6
PMG				eSn	Sn	02 31 34.5	-2.5
CTAO	Charters Tower	13.70	195	ePn	Pn	02 33 06.0	-2.8
WB2	Warramunga Arr	20.03	228	eP	P	02 34 26.8	-0.2
	8.2nm,0.8s						
WR1	Warramunga Arr	20.04	228	eP	P	02 34 28.2	+1.1
WRA	Warramunga Arr	20.04	228	P	P	02 34 28.2	+1.1
	7.4nm,0.7s,baz=54,slow=10,SNR=30						
AS31	Alice Springs	22.81	221	eP	P	02 34 56.3	-0.5
	1.0nm,0.5s						
ASAR	Alice Springs	22.81	221	P	P	02 34 57.8	+0.9
	1.3nm,0.7s,baz=52,slow=9.9,SNR=12						
STKA	Stephens Creek	26.16	196	P	P	02 35 29.6	+1.5
	0.9nm,0.4s,baz=18,slow=12,SNR=3.6						
STKA	Stephens Creek	26.16	196	eP	P	02 35 29.6	+1.5
	1.5nm,1.4s						
KAPI	Kappang	30.13	272	eP	P	02 36 04.2	+0.4
	24nm,1.3s						
PSAB2	Pilbara Seismi	32.60	240	eP	P	02 36 25.0	-0.4
	29nm,1.4s						
PSAC1	Pilbara Seismi	32.63	240	eP	P	02 36 24.9	-0.8
	17nm,1.5s						
AFI	Afiamalu	38.23	104	eP	P	02 37 13.9	-0.1
	58nm,1.2s						
NACB	Ninganchiao	41.41	319	eP	P	02 37 38.6	-1.6
	20nm,1.0s						
MQZ	McQueen’s Vall	41.80	155	eP	P	02 37 43.8	+0.7
	26nm,1.3s						
TATO	Taipei	42.04	320	eP	P	02 37 45.0	-0.3
	20nm,0.6s						
TORD	Torodi Ar. Bea	148.17	284	PKPbc	PKiKP	02 49 42.0	0.0
	1.1nm,0.8s,baz=64,slow=2.7,SNR=8.2						
TOA1	Torodi Ar. Sit	148.17	284	ePKPbc	PKiKP	02 49 42.0	0.0

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*ISCJB **16** 02:44:53.0±0.3, 51°.50N±0°.01×16°.15E±0°.02, h0km, Error ellipse: s-maj=2.2km s-min=2.0km az=159.5*

*BGR **16** 02:44:55.3±0.8, 51°.49N×16°.23E, h1km, ML3.2/6, Error ellipse: s-maj=11.1km s-min=4.4km az=28.0*

*IDC **16** 02:44:55.2±0.6, 51°.44N×16°.09E, h0km, mb1 3.3/8, mb1mx3.2/48, mbtmp3.2/8, ML3.0/8, Error ellipse: s-maj=10.6km s-min=6.1km az=104.0*

*UPP **16** 02:44:55.1±3.1, 51°.37N×15°.45E, h1km, ML2.0, Suspected explosion*

*VIE **16** 02:44:56.5±0.6, 51°.35N×16°.22E, h0km, mb2.7/9, ml3.2/9, ms3.3/1, Error ellipse: s-maj=4.7km s-min=4.1km az=6.0, Suspected Mining induced.*

ISC 16 02:44:53.5±0.6**, 51°.53N**±0°.03×**16°.18E**±0°.02**, h0km, n69, σ1s.95**/129**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	174	ePg	Pn	02 45 12.0	+1.4
KSP				i Sg	Sb	02 45 19.8	+1.3
KSP	Ksiaz	0.69	174	ePg	Pg	02 45 07.4	+0.6
CHVC	Chvalec	0.95	185	ePG	Pg	02 45 12.3	+0.7
CHVC				eSG	Sg	02 45 24.2	+0.3
OSTC	Ostas	0.98	179	ePG	Pb	02 45 13.1	-0.2
OSTC				eSG	Sg	02 45 25.3	+0.5
UPC	Upice	1.03	186	ePG	Pg	02 45 13.6	+0.4
UPC				eSG	Sg	02 45 27.2	+0.6
	comp=Z,644nm,0.5s						
DPC	Dobruska-Polom	1.19	176	ePg	Pg	02 45 16.2	0.0
DPC				eSg	Sb	02 45 32.7	-0.1
DPC	Dobruska-Polom	1.19	176	ePG	Pg	02 45 16.3	+0.1
DPC				eSG	Sg	02 45 30.9	-0.7
	comp=Z,251nm,0.8s						
PVCC	Panska Ves	1.43	226	ePG	Pb	02 45 22.0	+1.0
PVCC				eSG	Sn	02 45 41.7	+1.5
	comp=Z,712nm,0.2s						
BRG	Berggiesshubel	1.56	246	PN	Pn	02 45 22.7	+0.3
BRG				PG	Pg	02 45 24.6	+1.3
BRG				SG	Sg	02 45 44.4	+0.9
	313nm,0.5s						
BRG	Berggiesshubel	1.56	246	ePn	Pb	02 45 23.0	-0.2
BRG				eSg	Sn	02 45 43.3	+0.1
GOPC	GO Pecny, Ondr	1.85	209	ePG	Pb	02 45 28.5	+0.4
GOPC				eSG	Sg	02 45 53.3	+0.5
	comp=Z,109nm,0.5s						
PRU	Pruhonice	1.86	215	ePG	Pb	02 45 29.0	+0.6
PRU				eSG	Sg	02 45 55.7	+2.4
	comp=Z,128nm,0.6s						
RAC	Raciborz	1.93	138	ePg	Pg	02 45 31.1	+0.6
RAC				eSg	Sg	02 45 56.2	+0.7
MORC	Moravsky Berou	1.96	153	ePN	Pn	02 45 27.9	-0.1
MORC				eSG	Sg	02 45 59.0	+2.6
MORC	Moravsky Berou	1.96	153	ePn	Pn	02 45 27.9	-0.1
MORC				eSg	Sb	02 45 55.5	+0.5
CLL	Collm	2.00	265	ePn	Pn	02 45 29.0	+0.4
CLL				ePg	Pg	02 45 33.0	+1.1
CLL				eSg	Sg	02 46 00.0	+2.2
	comp=Z,86nm,0.8s						
CLL	Collm	2.00	265	ePn	Pn	02 45 29.4	+0.8
OKC	Ostrava-Krasne	2.11	143	eSg	Sb	02 45 59.9	+0.7
OKC	Ostrava-Krasne	2.11	143	ePG	Pb	02 45 32.1	-0.4
OKC				eSG	Sb	02 45 59.2	0.0
	comp=Z,91nm,0.5s						
CHZP	Chorzow	2.17	124	ePn	Pg	02 45 35.2	+0.1
CHZP				ePg	Pb	02 45 38.4	+4.8
CHZP				eSn	Sb	02 46 01.9	+0.8
CHZP				eSg	Sg	02 46 07.1	+4.0
VRAC	Vranov	2.24	173	Pn	Pn	02 45 32.8	+0.9
	comp=Z,4.0nm,0.3s,baz=346,slow=15,SNR=17						
VRAC				Lg	Lg	02 46 02.6	
	comp=Z,8.0nm,0.3s,baz=85,slow=19,SNR=6.6						
VRAC	Vranov	2.24	173	ePN	Pn	02 45 31.7	-0.2
VRAC				eSG	Sb	02 46 03.4	+0.3
TREC	Trest	2.28	192	ePG	Pb	02 45 36.3	+0.7
TREC				eSG	Sg	02 46 05.9	-0.9
	comp=Z,77nm,0.3s						
KRUC	Moravsky	2.48	177	ePN	Pn	02 45 35.2	+0.1
KRUC				eSG	Sg	02 46 16.2	+3.2
TANN	Tannenbergstha	2.60	246	ePn	Pn	02 45 38.4	+1.5
NKC	Novy Kostel	2.70	243	ePN	Pn	02 45 40.2	+2.0
NKC				ePG	Pg	02 45 44.5	-0.7
NKC				eSG	Sg	02 46 22.9	+2.8
	comp=Z,101nm,0.3s						
JAVC	Velka Javorina	2.84	160	ePN	Pn	02 45 41.2	+1.1
JAVC				eSG	Sg	02 46 24.4	-0.3
KHC	Kasperske Hory	2.93	216	ePN	Pn	02 45 42.7	+1.4
KHC				ePG	Pb	02 45 48.1	+1.6
KHC				eSG	Sg	02 46 29.3	+1.9
	comp=Z,48nm,0.4s						
MOX	Moxa	3.01	255	eSg	Sg	02 46 32.1	+1.9
MANZ	Manzenberg	3.01	241	ePn	Pn	02 45 43.8	+1.3
GERES	GERESS Array B	3.13	212	Pn	Pn	02 45 44.8	+0.7
	comp=Z,1.2nm,0.3s,baz=34,slow=13,SNR=30						
GERES				Pg	Pb	02 45 50.4	+0.4
	comp=Z,12nm,0.3s,baz=33,slow=16,SNR=88						
GERES				Lg	Lg	02 46 30.8	
	comp=Z,14nm,0.3s,baz=32,slow=26,SNR=6.4						
LANS	Liptovska Anna	3.18	137	ePN	Pn	02 45 47.3	+2.5
LANS				ePG	Pg	02 45 55.9	+1.5
LANS				eSG	Sg	02 46 35.2	-0.4
MODS	Modra-Piesok	3.24	167	ePN	Pn	02 45 46.9	+1.3
MODS				ePG	Pg	02 45 57.8	+2.3
MODS				eSG	Sg	02 46 36.0	-1.5
MODS				eLG	Lg	02 46 49.2	
NIE	Niedzica	3.38	127	ePn	Pb	02 45 53.9	-0.3
NIE				ePg	Pg	02 46 02.3	+4.2
NIE				eSg	Sg	02 46 46.5	+4.7
ZST	Bratislava	3.39	170	ePG	Pg	02 45 57.9	-0.6
ZST				eSG	Sg	02 46 40.8	-1.6
VYHS	Vyhne	3.49	150	ePN	Pn	02 45 49.6	+0.6
VYHS				ePG	Pg	02 46 02.5	+2.2
VYHS				eSG	Sg	02 46 45.4	-0.1
CONA	Conrad Observa	3.61	183	ePn	Pn	02 45 52.2	+1.4
	comp=Z,1.0nm,0.2s						
CONA				Sg	Sg	02 46 50.5	+1.0
	comp=Z,45nm,0.4s						
BSD	Bornholm Skovb	3.67	349	i P	Pn	02 45 53.0	+1.6
BSD				i		02 45 57.6	
BSD				i S	Sn	02 46 37.1	+1.8
SOP	Sopron	3.86	176	ePg	Pb	02 46 05.1	+2.7
SOP				Sn	Sg	02 46 59.1	+1.7
STHS	Stebnicka Huta	3.86	121	ePG	Pg	02 46 11.1	+3.6
STHS				eSG	Sg	02 47 02.8	+5.2
STHS				eLG	Lg	02 47 17.2	
MOA	Molln	3.89	199	ePn	Pn	02 45 55.3	+0.8
	comp=Z,3.8nm,0.3s						
MOA				eSg	Sg	02 47 00.5	+2.1
	comp=Z,18nm,0.3s						
ARSA	Arzberg	4.31	186	Pn	Pn	02 46 03.3	+3.0
	comp=Z,1.3nm,0.2s						
ARSA				Sg	Sg	02 47 12.0	+0.2
	comp=Z,28nm,0.5s						
PSZ	Piszkesteto	4.34	145	ePn	Pn	02 46 00.1	-0.7
PSZ				ePg	Pg	02 46 18.0	+1.3
PSZ				eSg	Sg	02 47 11.0	-1.9
PSZ	Piszkesteto	4.34	145	Sn	Sn	02 46 49.0	-3.1
CSKK	Cskako	4.39	161	ePn	Pb	02 46 07.1	-4.3
CSKK				eSg	Sb	02 47 09.1	+4.3
LUNU	Lund	4.42	339	P	Pn	02 46 03.0	+1.3
LUNU				S	Sn	02 46 54.7	+0.8
KOLS	Kolonicke sedl	4.70	121	ePN	Pn	02 46 06.5	+0.9
KOLS				ePG	Pg	02 46 28.5	+5.1
BJUU	Bjuv	4.92	339	P	Pn	02 46 09.3	+0.7
BJUU				S	Sn	02 47 05.6	-0.6
BEHE	Becsehely	5.08	175	ePn	Pn	02 46 13.0	+2.2
BEHE				eSg	Sg	02 47 40.0	+3.4
DEL	Delary	5.13	346	P	Pn	02 46 12.8	+1.3
WATA	Walderalm	5.16	217	i Pn	Pn	02 46 14.1	+2.0
	comp=Z,3.6nm,0.4s						
WATA				Sg	Sg	02 47 42.5	+3.2
	comp=Z,11nm,0.5s						
WTTA	Wattenberg	5.20	217	ePn	Pn	02 46 14.7	+2.0
	comp=Z,0.9nm,0.2s						
WTTA				eSg	Sg	02 47 42.6	+2.1
	comp=Z,10nm,0.4s						
RETA	Reutte	5.37	223	i Pn	Pn	02 46 15.8	+0.9
	comp=Z,1.7nm,0.2s						
RETA				eSn	Sn	02 47 17.4	-0.1
	comp=Z,2.7nm,0.2s						
SQTA	Sankt Quirin	5.40	219	i Pn	Pn	02 46 17.6	+2.2
	comp=Z,1.9nm,0.2s						
SQTA				Sg	Sg	02 47 50.1	+3.2
	comp=Z,13nm,0.5s						
VXJU	Vaexsjoe	5.45	353	P	Pn	02 46 17.7	+1.8
MORH	Mrgy, Hungar	5.56	162	ePn	Pn	02 46 17.1	-0.4
MORH				Sn	Sn	02 47 21.1	-1.0
OSKU	Oskarshamn	5.68	360	P	Pn	02 46 21.1	+2.2
DAVA	Damuels	5.91	227	ePn	Pn	02 46 23.1	+0.7
	comp=Z,1.1nm,0.2s						
DAVA				Sg	Sg	02 48 08.9	+5.6
	comp=Z,21nm,0.6s						
EKSU	Eksjoe	6.08	356	P	Pn	02 46 26.4	+2.0
VSTU	Vaestervik	6.14	2	P	Pn	02 46 27.8	+2.4
DAVOX	Davos/Dischmat	6.30	223	Pn	Pn	02 46 26.2	-1.5
	comp=Z,0.2nm,0.3s,baz=18,slow=20,SNR=2.7						
DAVOX				Lg	Lg	02 48 10.3	
	comp=Z,0.7nm,0.3s,baz=41,slow=10,SNR=2.7						
LNKU	Linkoeping	6.72	357	P	Pn	02 46 35.0	+1.7
VIKU	Vikbolandet	6.99	2	P	Pn	02 46 39.2	+2.2
AKASG	Malin Array Be	8.25	91	Pn	Pn	02 46 53.1	-1.2
	comp=Z,0.8nm,0.3s,baz=275,slow=12,SNR=3.5						
AKASG				Sn	Sn	02 48 24.1	-4.1
	comp=Z,1.1nm,0.3s,baz=91,slow=24,SNR=3.5						
HFS	Hagfors	8.73	352	Pn	Pn	02 47 00.7	-0.3
	comp=Z,0.2nm,0.3s,baz=166,slow=14,SNR=12						
NOA	NORSAR Array B	9.92	346	Pn	Pn	02 47 16.7	-0.5
	comp=Z,0.0nm,0.3s,baz=158,slow=12,SNR=5.2						
NOA				Sn	Sn	02 49 07.3	-1.9
	comp=Z,0.0nm,0.3s,baz=243,slow=9.2,SNR=2.6						
FINES	FINESS Array B	11.32	25	Pn	Pn	02 47 34.4	-1.9
	comp=Z,0.3nm,0.3s,baz=212,slow=12,SNR=8.5						
FINES				Sn	Sn	02 49 39.4	-4.0
	comp=Z,0.3nm,0.3s,baz=206,slow=19,SNR=3.9						
EKA	Eskdalemuir Ar	12.14	296	Pn	Pn	02 47 44.9	-2.6
	baz=101,slow=14,SNR=4.9						
ARCES	ARCESS Array B	18.59	10	Pn	P	02 49 10.2	-1.7
	comp=Z,0.4nm,0.3s,baz=193,slow=14,SNR=10						

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*IDC **16** 03:18:53.4±1.2, 47°.70N×155°.04E, h0km, mb3.5/5, mb1 3.8/8, mb1mx3.5/32, mbtmp3.6/8, ML3.6/3, MS3.0/3, Ms1 2.9/3, ms1mx2.5/30, Error ellipse: s-maj=45.4km s-min=19.7km az=152.0*

*SKHL **16** 03:18:58.4±0.8, 47°.87N×155°.52E, h45km±2km, mb4.1/1*

*KRSC **16** 03:18:59.2±1.6, 47°.95N×156°.47E, h41km±26km, ML4.4*

*MOS **16** 03:19:01.7±1.0, 48°.05N×156°.13E, h30km, mb4.0/1, Error ellipse: s-maj=58.4km s-min=5.3km az=78.4*

ISC 16 03:19:03.0±1.8**, 48°.0N**±0°.1×**155°.8E**±0°.2**, h35km, n56, σ0s.96**/57**, mb3.6**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	2.65	4	eP	Pn	03 19 43.4	+0.2
SKR				eS	Sn	03 20 16.1	+2.0
SKR	Severo-Kuril’s	2.65	4	ePN	Pn	03 19 42.2	-1.0
SKR				eS	Sn	03 20 12.2	-1.9
SKR				pmax	pmax		
	comp=Z,163nm,0.5s						
SKR				smax	smax		
	comp=E,287nm,0.5s						
SKR				smax	smax		
	comp=N,423nm,0.6s						
SKR	Severo-Kuril’s	2.65	4	eP	Pn	03 19 41.6	-1.6
SKR				AMB	AMB	03 19 44.0	
	comp=N,30nm,0.4s						
SKR				eS	Sn	03 20 13.4	-0.7
SKR				A	A	03 20 15.3	
	comp=N,200nm,0.5s						
SKR				A	A	03 20 15.3	
	comp=N,260nm,0.5s						
ASAK	Asacha	4.55	16	eP	Pn	03 20 09.5	+0.2
ASAK	Asacha	4.55	16	PN	Pn	03 20 09.5	+0.2
MTVR	Mutnovka	4.70	18	eP	Pn	03 20 10.9	-0.6
MTVR				eS	Sn	03 21 04.8	0.0
MTVR	Mutnovka	4.70	18	PN	Pn	03 20 10.9	-0.6
MTVR				S	Sn	03 21 04.8	0.0
RUS	Russkaya	4.73	20	eP	Pn	03 20 10.7	-1.0
RUS				eS	Sn	03 21 05.6	+0.4
RUS	Russkaya	4.73	20	PN	Pn	03 20 10.7	-1.0
RUS				S	Sn	03 21 05.6	+0.4
RUS	Russkaya	4.73	20	eP	Pn	03 20 10.7	-1.0
RUS				eS	Sn	03 21 05.6	+0.4
PETK	Petropavlovsk-	5.21	13	Pn	Pn	03 20 18.2	-0.2
	comp=N,2.3nm,0.3s,baz=177,slow=11,SNR=22						
PETK				Sn	Sn	03 21 23.4	+6.2
	baz=175,slow=20,SNR=2.1						
PET	Petropavlovsk	5.31	19	PN	Pn	03 20 19.9	+0.3
PET	Petropavlovsk	5.31	19	eP	Pn	03 20 19.9	+0.3
DALK	Dalny	5.34	19	eP	Pn	03 20 20.5	+0.5
DALK				eS	Sn	03 21 21.0	+0.8
DALK	Dalny	5.34	19	PN	Pn	03 20 20.5	+0.5
UGLR	Uglovaya	5.52	19	eP	Pn	03 20 23.3	+0.7
UGLR	Uglovaya	5.52	19	PN	Pn	03 20 23.3	+0.7
AVH	Avacha	5.55	18	eP	Pn	03 20 25.2	+2.1
AVH	Avacha	5.55	18	PN	Pn	03 20 25.2	+2.1
KOK	Koryaka	5.56	18	eP	Pn	03 20 24.1	+0.9
KOK	Koryaka	5.56	18	PN	Pn	03 20 24.1	+0.9
KOK	Koryaka	5.56	18	eP	Pn	03 20 24.1	+0.9
SMAR	Somma	5.56	19	eP	Pn	03 20 24.6	+1.2
SMAR	Somma	5.56	19	PN	Pn	03 20 24.6	+1.2
KRER	Koryakskii	5.59	18	eP	Pn	03 20 24.7	+1.0
KRER	Koryakskii	5.59	18	PN	Pn	03 20 24.7	+1.0
SDLR	Sedlovina	5.60	19	eP	Pn	03 20 23.8	+0.1
SDLR	Sedlovina	5.60	19	PN	Pn	03 20 23.8	+0.1
NLC	Nalytchevo	5.61	22	eP	Pn	03 20 22.8	-0.9
NLC				eS	Sn	03 21 25.2	-1.7
NLC	Nalytchevo	5.61	22	PN	Pn	03 20 22.8	-0.9
KRX	Arik	5.62	18	eP	Pn	03 20 24.8	+0.7
KRX	Arik	5.62	18	PN	Pn	03 20 24.8	+0.7
SPN	Mys Shipunski	5.73	26	eP	Pn	03 20 26.0	+0.6
SPN				eS	Sn	03 21 29.5	-0.4
SPN	Mys Shipunski	5.73	26	PN	Pn	03 20 26.0	+0.6
SPN	Mys Shipunski	5.73	26	eP	Pn	03 20 26.0	+0.6

GNL	Ganaly	5.82	13	eP	Pn	03 20 26.7	-0.1
GNL	Ganaly	5.82	13	PN	Pn	03 20 26.7	-0.1
MKZ	Mys Kozlova	7.50	27	P	Pn	03 20 48.7	-1.0
MKZ	Mys Kozlova	7.50	27	PN	Pn	03 20 48.7	-1.0
MKZ	Mys Kozlova	7.50	27	eP	Pn	03 20 48.7	-1.0
KBTR	Krutoberegovo	9.24	25	eP	Pn	03 21 12.8	-0.8
KBTR	Krutoberegovo	9.24	25	PN	Pn	03 21 12.8	-0.8
ASAJ	Asahikawa	9.99	252	Pn	Pn	03 21 11.0	-13
	comp=N,1.1nm,0.3s,baz=61,slow=13,SNR=18						
ASAJ				LR	LR	03 24 16.7	
	comp=N,45nm,20.6s,baz=154,slow=34						
KLR	Kul'dur	15.94	283	Pn	Pn	03 22 35.0	-9.4
	comp=N,0.2nm,0.3s,baz=84,slow=11,SNR=5.2						
KSRS	Korea Array	22.93	253	P	P	03 23 51.9	-12
	comp=N,1.7nm,0.6s,baz=46,slow=10,SNR=4.1						
KSRS				LR	LR	03 32 06.4	
	comp=N,18nm,18.2s,baz=35,slow=36						
H11N2	WAKE ISLAND Hy	29.64	159	T	T	03 56 41.7	
	baz=344,slow=76,SNR=129						
H11N1	WAKE ISLAND Hy	29.65	159	T	T	03 56 40.0	
	baz=344,slow=76,SNR=204						
H11N3	WAKE ISLAND Hy	29.65	159	T	T	03 56 41.2	
	baz=344,slow=76,SNR=120						
H11S1	WAKE ISLAND Hy	30.76	159	T	T	03 58 06.6	
	baz=344,slow=76,SNR=824						
H11S3	WAKE ISLAND Hy	30.77	160	T	T	03 58 04.8	
	baz=344,slow=76,SNR=866						
H11S2	WAKE ISLAND Hy	30.78	159	T	T	03 58 05.3	
	baz=344,slow=76,SNR=691						
ILAR	Eielson Array	34.39	40	P	P	03 25 48.1	+1.9
	comp=N,0.2nm,0.6s,baz=274,slow=8.5,SNR=4.2						
NVAR	Mina Array Bea	60.22	65	P	P	03 29 07.6	0.0
	comp=N,0.4nm,0.6s,baz=298,slow=7.6,SNR=3.8						
PDAR	Pinedale Array	62.50	56	P	P	03 29 23.1	0.0
	comp=N,0.4nm,0.8s,baz=321,slow=1.3,SNR=3.8						
KBZ	Khabaz	71.26	315	LR	LR	04 04 43.4	
	comp=N,27nm,18.2s,baz=84,slow=39						
TXAR	Lajitas Array	75.26	63	P	P	03 30 41.3	-1.1
	comp=N,0.2nm,0.4s,baz=312,slow=5.7,SNR=2.2						

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*ISK **16** 03:43:03.9, 38°.97N×26°.05E, h9^{km}, ML3.2/22*
*ISCJB **16** 03:43:04.8±0.4, 38°.97N±0°.02×26°.07E±0°.03, h10^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=2.6km az=167.4*
*ATH **16** 03:43:04.6, 38°.99N×26°.07E, h24^{km}±1^{km}, ML2.9/7, Error ellipse: s-maj=2.0km s-min=1.0km az=268.0*
*DDA **16** 03:43:05.2, 38°.96N×26°.17E, h27^{km}±1^{km}, ML2.9*
*THE **16** 03:43:05.4, 38°.98N×26°.05E, h9^{km}, ML2.7/8, Error ellipse: s-maj=1.0km s-min=0.5km az=80.0*
ISC 16 03:43:05.4±0.9**, 38°.98N**±0°.02×**26°.07E**±0°.02**, h13**^{km}±7^{km}**, n54, σ0^s.63**/78**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.29	325	P	Pg	03 43 10.8	-0.5
SIGR				S	Sg	03 43 15.5	+0.2
	3μm,0.5s						
SIGR	SIGRI	0.29	325	P	Pg	03 43 10.9	-0.5
SIGR				S	Sg	03 43 15.6	+0.4
SIGR				AML	AML	03 43 16.1	
	comp=E,8367μm,0.5s						
SIGR				AML	AML	03 43 18.0	
	comp=N,4855μm,0.5s						
PRK	Paraskevi	0.31	31	P	Pb	03 43 12.0	-0.9
PRK				S	Sg	03 43 16.2	+0.1
	comp=N,12μm,0.4s						
PRK	Paraskevi	0.31	31	P	Pg	03 43 11.9	+0.1
PRK				S	Sg	03 43 16.5	+0.4
PRK				AML	AML	03 43 17.6	
	comp=E,20332μm,0.4s						
PRK				AML	AML	03 43 17.7	
	comp=N,26672μm,0.4s						
PSRA	Psara	0.58	222	P	Pg	03 43 17.3	+0.5
PSRA				S	Sg	03 43 25.4	+0.9
PSRA				AML	AML	03 43 26.6	
	comp=E,1738μm,0.4s						
PSRA				AML	AML	03 43 30.4	
	comp=N,2969μm,0.2s						
AYVA	Ayvalik	0.59	55	i P	Pg	03 43 16.9	+0.1
AYVA				i S	Sg	03 43 24.8	+0.1
CHOS	Chios island	0.59	181	P	Pg	03 43 16.0	-0.9
CHOS				S	Sg	03 43 26.0	+1.3
	comp=N,1μm,0.3s						
CHOS	Chios island	0.59	181	P	Pg	03 43 16.0	-0.9
CHOS				S	Sg	03 43 25.7	+1.1
CHOS				AML	AML	03 43 28.5	
	comp=N,2313μm,0.4s						
CHOS				AML	AML	03 43 29.3	
	comp=E,2136μm,0.3s						
DKL	Dikili	0.66	81	PG	Pg	03 43 17.4	-0.8
DKL				SG	Sg	03 43 27.3	+0.4
URLA	Izmir	0.74	146	PG	Pg	03 43 18.6	-1.1
URLA				SG	Sg	03 43 29.3	-0.2
URLA	Izmir	0.74	146	i P	Pg	03 43 19.4	-0.3
URLA				i S	Sg	03 43 29.8	+0.3
URLA				IAML_P			
	comp=Z,4μm,0.1s						
ZEDA	zmir-Bergama	0.79	90	i P	Pg	03 43 20.0	-0.6
ZEDA				i S	Sg	03 43 30.0	-0.9
BAYC	CANAKKALE_Bayr	0.85	26	i P	Pb	03 43 22.0	-0.1
BAYC				i S	Sb	03 43 35.0	+1.6
BAYC				IAML_P			
	comp=Z,5μm,0.2s						
BOZC	Bozcaada	0.86	359	PG	Pg	03 43 21.2	-0.9
BOZC				SG	Sb	03 43 33.6	-0.2
BOZC	Bozcaada	0.86	359	i P	Pg	03 43 21.4	-0.7
BOZC				i S	Sb	03 43 34.8	+1.0
EZN	Ezine	0.87	13	PG	Pg	03 43 21.4	-0.8
BLCB	Balcova	0.96	127	PG	Pg	03 43 23.2	-0.8
LIA	Limnos Island	1.15	324	P	Pg	03 43 26.7	-0.8
LIA				S	Sb	03 43 42.6	+0.7
	comp=Z,495nm,0.6s						
LIA	Limnos Island	1.15	324	P	Pg	03 43 26.1	-1.3
LIA				S	Sb	03 43 41.9	0.0
LIA				AML	AML	03 43 44.4	
	comp=E,1023μm,0.7s						
LIA				AML	AML	03 43 49.7	
	comp=N,898μm,0.6s						
STEP	BALIKESIR_Sava	1.34	72	i P	Pn	03 43 29.4	-0.5
AKHS	Akhisar	1.37	94	i P	Pn	03 43 30.2	0.0
AKHS				IAML_P			
	comp=Z,4μm,0.2s						
SMG	Samos	1.40	154	P	Pn	03 43 30.6	-0.1
SMG				S	Sb	03 43 49.4	+0.1
	comp=Z,498nm,0.5s						
SMG	Samos	1.40	154	P	Pn	03 43 31.3	+0.6
SMG				S	Sb	03 43 49.8	+0.5
SMG				AML	AML	03 43 54.0	
	comp=E,1165μm,0.4s						
SMG				AML	AML	03 43 54.9	
	comp=N,832μm,0.5s						
GELI	Tayfur-Gelibol	1.46	12	PN	Pn	03 43 31.2	-0.2
SMTH	Samothraki Isl	1.55	345	P	Pn	03 43 32.3	-0.4
SMTH				S	Sn	03 43 52.4	-0.3
	comp=N,205nm,0.5s						
SMTH	Samothraki Isl	1.55	345	P	Pn	03 43 33.3	+0.5
SMTH				S	Sn	03 43 52.5	-0.3
SMTH				AML	AML	03 43 56.3	
	comp=N,348μm,0.5s						
SMTH				AML	AML	03 43 56.9	
	comp=E,483μm,0.5s						
BALB	Balikesir	1.56	64	PN	Pn	03 43 32.4	-0.4
KARY	Karystos	1.59	234	P	Pn	03 43 32.4	-0.8
ENEZ	Enez	1.76	2	PN	Pn	03 43 35.5	-0.1
EREA	Eretria	1.76	252	P	Pn	03 43 35.0	-0.6
AYDB	Zeytinkoy-Aydi	1.76	125	PN	Pn	03 43 35.4	-0.4
DION	Dionisos Attik	1.90	242	P	Pn	03 43 37.1	-0.4
KESN	Edirne-Kesan	1.91	14	i P	Pn	03 43 38.6	+0.6
KESN				i S	Sn	03 44 02.6	+0.5
KESN				IAML_P			
	comp=Z,17nm,0.1s						
RKY	Sarkoy-Tekirda	1.91	26	PN	Pn	03 43 37.6	-0.2
ALN	Alexandroupoli	1.92	360	P	Pn	03 43 37.4	-0.4
ALN				S	Sn	03 44 02.2	+0.4
	comp=Z,102nm,0.4s						
EDC	Edincik	1.95	45	PN	Pn	03 43 37.9	-0.3
DURS	Dursunbey	1.97	71	i P	Pn	03 43 38.1	-0.5
DURS				IAML_P			
	comp=Z,761nm,0.3s						
MANT	Manisa	2.01	103	i P	Pn	03 43 39.9	+0.6
MANT				IAML_P			
	comp=Z,137nm,0.2s						
DEMI	Demirci	2.07	87	i P	Pb	03 43 43.7	+0.9
DEMI				IAML_P			
	comp=Z,2μm,0.3s						
KULA	Kula-Manisa	2.08	102	PN	Pn	03 43 39.5	-0.6
OUR	Ouranopolis	2.10	311	P	Pn	03 43 40.3	0.0
BODT	Bodrum	2.15	152	PN	Pn	03 43 40.6	-0.4
KCTX	Karacabey (Bur	2.19	53	PN	Pn	03 43 41.2	-0.3
RDO	Rodhopi	2.21	350	PN	Pn	03 43 41.6	-0.1
RDO	Rodhopi	2.21	350	P	Pn	03 43 41.7	0.0
RDO				S	Sn	03 44 09.0	+0.1
	comp=Z,52nm,0.9s						
YER	Yerkesik	2.54	136	PN	Pn	03 43 46.2	-0.2
TVSB	Tavsanli	2.68	79	PN	Pn	03 43 48.4	0.0
KDZ	Kurdzhali	2.72	350	PN	Pn	03 43 48.8	0.0
TURN	Turunc	2.90	136	PN	Pn	03 43 49.9	-1.4
EDRB	Edirne	2.91	10	PN	Pn	03 43 51.6	+0.1
CTKS	Kestanelik-??a	2.93	39	PN	Pn	03 43 52.1	+0.4
YLV	Yalova	3.00	57	PN	Pn	03 43 53.1	+0.3
KAVV	Kandilli-Istan	3.10	47	PN	Pn	03 43 54.8	+0.7
ISK	Istanbul-Kandi	3.10	47	PN	Pn	03 43 54.6	+0.5

KRSC 16 03:52:53.3±1.3**, 55°.33N**×**165°.89E, h30**^{km}±11^{km}**, ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.14	160	i P	Pn	03 52 59.2	-0.1
BKI				eS	Sn	03 53 04.4	+1.5
KBTR	Krutoberegovo	1.95	298	eP	Pn	03 53 24.6	+0.4
KBTR				eS	Sn	03 53 48.6	+1.0
MKZ	Mys Kozlova	2.52	254	eP	Pb	03 53 35.6	-2.2
MKZ				eS	Sb	03 54 05.7	-2.7
TUMD	Tumrok D	3.15	270	eP	Pb	03 53 44.7	-3.8
KZV	Kizimen	3.21	268	eP	Pn	03 53 45.5	+3.7
TUMR	Tumrok	3.29	272	eP	Pb	03 53 47.6	-3.3
SPN	Mys Shipunski	4.11	239	eP	Pn	03 53 57.3	+3.4
SPN				eS	Sn	03 54 45.2	+4.3
NLC	Nalytchevo	4.41	243	eS	Sn	03 54 53.3	+5.1
SDLR	Sedlovina	4.59	246	eP	Pn	03 54 05.4	+4.7
SMAR	Somma	4.64	246	eP	Pn	03 54 06.2	+4.8
UGLR	Uglovaya	4.66	246	eP	Pn	03 54 06.8	+5.2
AVH	Avacha	4.67	247	eP	Pn	03 54 07.1	+5.3
AVH				eS	Sn	03 55 00.8	+5.8
KRX	Arik	4.68	248	eP	Pn	03 54 06.6	+4.8
KOK	Koryaka	4.71	247	eP	Pn	03 54 07.5	+5.2
GNL	Ganaly	4.91	254	eP	Pn	03 54 10.3	+5.2
RUS	Russkaya	5.24	239	S	Sn	03 55 14.9	+6.1
KDTR	Khodutka, Kamc	5.84	236	eP	Pn	03 54 21.4	+3.7
KDTR				eS	Sn	03 55 26.2	+2.7

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*ISCJB **16** 03:58:01.7±0.7, 15°.78S±0°.06×27°.06E±0°.04, h10^{km}, Error ellipse: s-maj=8.4km s-min=5.9km az=176.6*
*LSZ **16** 03:58:03.0±0.3, 15°.68S×27°.23E, h10^{km}, MD1.8*
*EAF **16** 03:58:03.7±1.5, 15°.58S×27°.07E, h0^{km}±30^{km}, MD3.9*
ISC 16 03:58:01.9±0.9**, 15°.71S**±0°.07×**27°.04E**±0°.05**, h10**^{km}**, n17, σ2^s.72**/31**, 1C, Zambia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITZ	Itezhi-Tezhi	0.99	268	⇑ i P	Pn	03 58 23.2	+1.3
ITZ				i		03 58 23.3	
	baz=86,slow=18						
ITZ				i S	Sn	03 58 37.9	+1.9
LSZ	Lusaka	1.19	69	i P	Pb	03 58 24.4	-0.2
LSZ				i S	Sb	03 58 38.4	-1.7
LSZ	Lusaka	1.19	69	i P	Pb	03 58 24.4	-0.2
LSZ				i S	Sb	03 58 38.4	-1.7
LSZ	Lusaka	1.19	69	i P	Pb	03 58 24.4	-0.2
LSZ				i S	Sb	03 58 38.4	-1.7
MONG	Mongu	3.85	278	i P	Pn	03 59 04.6	+3.3
MONG				i		03 59 04.9	
	baz=71,slow=8.6						
MONG				i S	Sn	03 59 47.3	+0.5
MATP	Matopo	4.89	164	i P	Pn	03 59 17.8	+2.1
MATP				i S	Sn	04 00 16.0	+3.6
MATP	Matopo	4.89	164	i P	Pn	03 59 17.8	+2.1
MATP				i S	Sn	04 00 16.0	+3.6
MATP	Matopo	4.89	164	i P	Pn	03 59 17.8	+2.1
MATP				i S	Sn	04 00 16.0	+3.6
MSNA	Messina	7.17	157	i P	Pn	03 59 50.2	+3.3
MSNA				i S	Sn	04 01 07.7	-0.9
MSNA	Messina	7.17	157	i P	Pn	03 59 50.2	+3.3
MSNA				i S	Sn	04 01 07.7	-0.9
MSNA	Messina	7.17	157	i P	Pn	03 59 50.2	+3.3
MSNA				i S	Sn	04 01 07.7	-0.9
TSUM	Tsumeb	9.67	248	i P	Pn	04 00 22.7	+1.4
TSUM				i S	Sn	04 02 04.7	-5.4
TSUM	Tsumeb	9.67	248	i P	Pn	04 00 22.7	+1.4
TSUM				i S	Sn	04 02 04.7	-5.4
TSUM	Tsumeb	9.67	248	i P	Pn	04 00 22.7	+1.4
TSUM				i S	Sn	04 02 04.7	-5.4
BOSA	Boshof	12.95	187	i P	Pn	04 01 07.0	+0.9
BOSA				i S	Sn	04 03 20.5	-10
BOSA	Boshof	12.95	187	i P	Pn	04 01 07.0	+0.9
BOSA				i S	Sn	04 03 20.5	-10
BOSA	Boshof	12.95	187	i P	Pn	04 01 07.0	+0.9
BOSA				i S	Sn	04 03 20.5	-10

UCR 16 04:02:59.6±1.2**, 9°.62N**×**83°.87W, h56**^{km}±63^{km}**, MW3.1, 2C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	La Lucha 2	0.18	312	eP	Pn	04 03 09.3	+0.4
LCR2				eS	Sn	04 03 15.3	-0.1
LCR2	La Lucha 2	0.18	312	eP	Pn	04 03 09.3	+0.5
LCR2				eS	Sn	04 03 15.2	-0.2
LCR2	La Lucha 2	0.18	312	⇑ eP	Pn	04 03 09.3	+0.4
CVTR	Volcan Turrial	0.41	15	eP	Pn	04 03 10.6	-0.3
CVTR				eS	Sn	04 03 19.6	+0.7
CVTR	Volcan Turrial	0.41	15	eP	Pn	04 03 10.5	-0.3
CVTR				eS	Sn	04 03 19.5	+0.6
CVTR	Volcan Turrial	0.41	15	eP	Pn	04 03 10.6	-0.3
CVTR				eS	Sn	04 03 19.7	+0.8
EDLM	Las Mercedes	0.43	141	eP	Pn	04 03 06.2	-4.4
DRK0	Durika	0.71	120	⇑ eP	Pn	04 03 10.7	-3.2
DRK0				eS	Sn	04 03 17.8	-6.5
JTS	Las Juntas de	1.26	302	eP	Pn	04 03 27.9	+6.9

IDC 16 04:05:33.6±20.0**, 19°.66S**×**177°.80W, h414**^{km}±164^{km}**, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.1**/34**, mbtmp4.4**/5**, Error ellipse: s-maj=170.7km s-min=32.7km az=41.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	19.05	192	P	P	04 09 28.3	+0.1
	1.3nm,0.3s,baz=38,slow=17,SNR=7.3						
CTA	Charters Tower	33.77	263	P	P	04 11 38.9	-0.2
	5.4nm,0.9s,baz=106,slow=15,SNR=2.9						
STKA	Stephens Creek	38.33	243	P	P	04 12 16.2	-0.8
	1.9nm,0.5s,baz=97,slow=9.0,SNR=8.0						
ASAR	Alice Springs	44.90	256	P	P	04 13 09.9	+0.3
	4.0nm,0.6s,baz=96,slow=7.9,SNR=48						
ASAR				PcP	PcP	04 14 42.5	-0.5
	0.3nm,0.5s,baz=100,slow=3.9,SNR=4.0						
WRA	Warramunga Arr	44.91	261	P	P	04 13 09.9	+0.2
	2.3nm,0.3s,baz=94,slow=7.6,SNR=45						

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*IDC **16** 04:14:09.3±1.2, 32°.18S×178°.36W, h0^{km}, mb4.5/4, mb1 4.6/5, mb1mx4.1/28, mbtmp4.4/5, ML4.1/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/25, Error ellipse: s-maj=37.7km s-min=29.8km az=177.0*
*ISCJB **16** 04:14:12.3±0.6, 32°.26S±0°.03×178°.4W±0°.1, h35^{km}, mb4.6/13, MS3.5/2, Error ellipse: s-maj=13.6km s-min=3.7km az=13.6*
*NEIC **16** 04:14:13.8±2.0, 32°.17S×178°.41W, h32^{km}±5^{km}, mb4.7/12, Error ellipse: s-maj=17.9km s-min=7.9km az=110.0*
ISC 16 04:14:13.2±0.8**, 32°.26S**±0°.05×**178°.1W**±0°.1**, h35**^{km}**, n71, σ1^s.75**/75**, mb4.7**/13**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.99	3	P	Pn	04 15 01.1	+3.0
GLKZ				S	Sn	04 15 33.6	+0.8
RAO	Raoul Island	3.00	3	ePn	Pn	04 14 57.6	-0.7
RAO				eSn	Sn	04 15 32.2	-0.9
MXZ	Matakaoa Point	6.05	208	ePn	Pn	04 15 40.1	0.0
MXZ				eSn	Sn	04 16 52.2	+4.1
MXZ	Matakaoa Point	6.05	208	P	Pn	04 15 40.7	+0.5
MXZ				S	Sn	04 16 46.5	-1.6
HAZ	Te Kaha	6.43	210	P	Pn	04 15 46.9	+1.5
HAZ				S	Sn	04 16 56.8	-0.7
PUZ	Puketiti	6.51	206	P	Pn	04 15 47.3	+0.7
PUZ				S	Sn	04 16 58.9	-0.7
GRZ	Great Barrier	6.64	231	P	Pn	04 15 51.3	+3.1
RUGZ	Raukumara Rang	6.65	210	P	Pn	04 15 49.1	+0.5
TWGZ	Tauwhareparae	6.71	207	P	Pn	04 15 49.3	0.0
KUZ	Kuaotunu	6.77	227	P	Pn	04 15 54.3	+4.2
CNGZ	Carnagh Statio	6.89	205	P	Pn	04 15 52.5	+0.8
TKGZ	Te Karaka	6.99	207	P	Pn	04 15 56.6	+3.6
MWZ	Matawai	7.03	209	P	Pn	04 15 53.9	+0.3
OPRZ	Ohinepanea	7.08	217	P	Pn	04 15 57.7	+3.4
MARZ	Manawahe	7.12	215	P	Pn	04 15 57.9	+2.9
URZ	Urewera	7.14	212	Pn	Pn	04 15 54.8	-0.4
	3.0nm,0.3s,baz=11,slow=19,SNR=23						
URZ				Sn	Sn	04 17 13.0	-2.0
	4.1nm,0.3s,baz=7.5,slow=15,SNR=8.7						
URZ	Urewera	7.14	212	ePn	Pn	04 15 54.5	-0.6
URZ	Urewera	7.14	212	P	Pn	04 15 54.6	-0.6
RAGZ	Rawiri	7.21	209	P	Pn	04 15 55.8	-0.4
WCZ	Waipu Caves	7.24	237	P	Pn	04 16 00.2	+3.7
RIGZ	Rimuhau	7.25	206	P	Pn	04 15 58.1	+1.4
PRGZ	Paritu Road	7.40	205	P	Pn	04 16 01.1	+2.4
MUGZ	Murupara	7.47	212	P	Pn	04 15 59.3	-0.5
SNGZ	Shannon Statio	7.48	208	P	Pn	04 16 00.6	+0.7
RTZ	Ruatahuna	7.49	211	P	Pn	04 15 59.2	-0.9
OUZ	Omahuta	7.50	245	ePn	Pn	04 16 01.4	+1.3
OUZ				eSn	Sn	04 17 19.3	-4.6
OUZ	Omahuta	7.50	245	P	Pn	04 16 02.8	+2.7
KNZ	Kokohu	7.56	206	P	Pn	04 16 01.4	+0.5
MHGZ	Mahia Peninsul	7.60	204	P	Pn	04 16 00.7	-0.7
RAHZ	Arahi	7.70	209	P	Pn	04 16 03.7	+0.9
MTHZ	Maungataniwha	7.75	211	P	Pn	04 16 04.5	+0.9
BKZ	Black Stump Fm	8.16	211	ePn	Pn	04 16 08.6	-0.6
BKZ				eSn	Sn	04 17 36.7	-3.6
BKZ	Black Stump Fm	8.16	211	P	Pn	04 16 08.6	-0.6
MCHZ	McNeill Hill	8.31	209	P	Pn	04 16 11.5	+0.4
HIZ	Hauiti	8.47	221	ePn	Pn	04 16 13.8	+0.4
HIZ	Hauiti	8.47	221	P	Pn	04 16 16.3	+2.9
KAHZ	Kahuranaki	8.54	207	P	Pn	04 16 12.9	-1.5
KRHZ	Kereru	8.61	210	P	Pn	04 16 13.4	-2.0
BHHZ	Black Hill Sta	8.62	212	P	Pn	04 16 15.5	0.0
THZ	Tophouse	11.88	215	ePn	Pn	04 16 57.7	-2.4
RPZ	Rata Peaks	14.25	214	Sn	Sn	04 19 55.5	-14
	0.6nm,0.3s,baz=9.6,slow=18,SNR=3.1						
DZM	Mont Dzumac	17.05	303	LR	LR	04 22 42.8	
	comp=Z,148nm,21.0s,baz=60,slow=30						
PPT	Papeete	29.62	67	LR	LR	04 31 22.3	
	comp=Z,75nm,18.7s,baz=42,slow=35						
STKA	Stephens Creek	33.99	260	P	P	04 20 53.5	-0.2
	0.6nm,0.3s,baz=102,slow=15,SNR=3.3						
CTA	Charters Tower	34.03	282	P	P	04 20 55.0	+0.9
	3.2nm,0.3s,baz=127,slow=12,SNR=6.6						
CTAO	Charters Tower	34.03	282	eP	P	04 20 55.4	+1.2
	15nm,1.2s						
BBOO	Buckleboo	38.39	256	eP	P	04 21 30.3	-1.0
	26nm,1.4s						
COEN	Coen	39.71	288	eP	P	04 21 42.0	-0.5
	16nm,1.1s						
AS31	Alice Springs	42.93	269	eP	P	04 22 08.0	-0.9
	1.7nm,0.9s						
ASAR	Alice Springs	42.93	269	P	P	04 22 07.8	-1.2
	3.5nm,0.6s,baz=104,slow=7.1,SNR=33						
WB2	Warramunga Arr	44.08	274	eP	P	04 22 17.2	-0.9
	12nm,0.6s						
WRAB	Tennant Creek	44.09	274	eP	P	04 22 17.2	-1.0
	8.8nm,0.6s						
WR1	Warramunga Arr	44.09	274	eP	P	04 22 17.2	-1.0
WRA	Warramunga Arr	44.09	274	P	P	04 22 17.2	-1.0
	8.4nm,0.4s,baz=103,slow=8.5,SNR=133						
PATS	Pohnpei	44.90	326	eP	P	04 22 23.6	-1.0
	102nm,1.3s						
FORT	Forrest	45.49	257	eP	P	04 22 27.7	-1.6
	28nm,1.1s						
CASY	Casey	53.45	208	eP	P	04 23 29.5	0.0
	2.2nm,0.5s						
QSPA	South Pole Qui	57.86	180	eP	P	04 24 07.0	+5.8
	3.5nm,0.9s						
JNU	Nakatsue	80.87	319	LR	LR	04 57 21.9	
	comp=Z,23nm,18.7s,baz=178,slow=32						
ARA0	ARCESS Array S	140.38	347	ePKPpre	PKPpre	04 33 32.6	
ARA0				ePKPdf	PKiKP	04 33 40.4	+0.3
ARCES	ARCESS Array B	140.38	347	PKhKP	PKPpre	04 33 32.6	
	2.5nm,0.9s,baz=69,slow=2.7,SNR=5.6						
ARCES				PKP	PKiKP	04 33 40.4	+0.3
	2.5nm,0.9s,baz=74,slow=2.5,SNR=6.9						
FIA0	FINESS Array S	146.84	339	ePKPbc	PKPbc	04 33 51.4	+0.4
FINES	FINESS Array B	146.84	339	PKPbc	PKPbc	04 33 51.4	+0.4
	5.3nm,0.8s,baz=50,slow=3.4,SNR=15						
NB2	NORSAR Subarra	150.56	351	PKP	PKPbc	04 34 01.6	+0.9
	comp=Z,0.8nm,0.5s,baz=17,slow=2.6						
NB200	NORSAR Array S	150.56	351	ePKPbc	PKPbc	04 34 01.9	+1.2
NOA	NORSAR Array B	150.56	351	PKPbc	PKPbc	04 34 01.9	+1.2
	comp=Z,1.2nm,0.5s,baz=15,slow=4.1,SNR=7.0						
BR101	Keskin Array S	153.34	295	ePKPbc	PKPbc	04 34 07.7	-0.1
BRTR	Keskin Array B	153.34	295	PKPbc	PKPbc	04 34 07.7	-0.1
	comp=Z,0.2nm,0.5s,baz=101,slow=3.1,SNR=2.8						
DBIC	Dimbokro	153.78	165	PKPbc	PKiKP	04 34 12.5	+3.1
	comp=Z,3.5nm,1.0s,baz=195,slow=5.7,SNR=2.6						
TORD	Torodi Ar. Bea	160.98	179	PKPab	PKPab	04 34 54.5	+1.5
	comp=Z,0.4nm,0.6s,baz=158,slow=4.4,SNR=9.2						
TOA1	Torodi Ar. Sit	160.98	179	ePKPab	PKPab	04 34 54.5	+1.4

IDC 16 04:30:05.3±2.7**, 6°.68S**×**151°.57E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/18**, mbtmp3.8**/3**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.4**/28**, Error ellipse: s-maj=83.2km s-min=43.4km az=111.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.30	230	P	P	04 34 53.2	-0.6
	2.3nm,0.8s,baz=58,slow=12,SNR=8.7						
ASAR	Alice Springs	23.95	223	P	P	04 35 21.4	-0.1
	1.0nm,0.5s,baz=55,slow=9.2,SNR=16						
STKA	Stephens Creek	26.75	199	P	P	04 35 47.7	+0.9
	1.0nm,0.4s,baz=24,slow=12,SNR=5.2						
ASAJ	Asahikawa	51.20	352	LR	LR	04 57 09.6	
	comp=Z,9.7nm,21.7s,baz=52,slow=32						
TORD	Torodi Ar. Bea	149.66	285	PKPbc	PKPbc	04 49 57.4	-0.8
	0.4nm,0.6s,baz=110,slow=3.2,SNR=3.0						

SNET 16 04:32:03.4±1.0**, 13°.20N**×**89°.37W, h65**^{km}±5^{km}**, ML3.6, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOMA	Loma Larga	0.48	24	eP	Pn	04 32 15.9	+0.2
LOMA				eS	Sn	04 32 25.6	+0.9
LOMA				IAML		04 32 28.2	
	comp=Z,4μm,0.2s						
SNET	Serv Nac Est T	0.51	16	eP	Pn	04 32 16.0	0.0
SNET				eS	Sn	04 32 25.8	+0.7
SNET				IAML		04 32 29.9	
	comp=Z,3μm,0.3s						
UEES	Universidad Ev	0.53	14	eP	Pn	04 32 16.4	+0.1
UEES				eS	Sn	04 32 27.0	+1.2
UEES				IAML		04 32 29.7	
	comp=Z,4μm,0.2s						
OPAM	Oficina de Pla	0.54	18	eP	Pn	04 32 16.6	+0.3
OPAM				eS	Sn	04 32 26.7	+1.0
OPAM				IAML		04 32 29.6	
	comp=Z,3μm,0.3s						
UESS	Universidad de	0.55	18	eP	Pn	04 32 16.7	+0.5
UESS				eS	Sn	04 32 27.3	+1.7
UESS				IAML		04 32 29.9	
	comp=Z,3μm,0.2s						
UDBS	Universidad Do	0.56	22	eP	Pn	04 32 16.8	+0.3
UDBS				eS	Sn	04 32 27.1	+1.0
UDBS				IAML		04 32 30.6	
	comp=Z,3μm,0.2s						
CEDA	San Andres	0.60	358	⇓ i P	Pn	04 32 17.3	+0.4
CEDA				eS	Sn	04 32 28.2	+1.4
CEDA				IAML		04 32 34.6	
	comp=Z,2μm,0.3s						
LFU	La Fuente	0.60	25	eP	Pn	04 32 17.5	+0.5
PAVA	Las Pavas	0.67	40	eP	Pn	04 32 18.0	+0.3
PAVA				eS	Sn	04 32 29.6	+1.4
PAVA				IAML		04 32 30.7	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	0.67	339	eP	Pn	04 32 18.3	+0.4

CEVE				eS	Sn	04 32 30.1	+1.5
CEVE				IAML		04 32 31.4	
	comp=Z,4µm,0.3s						
SBLS	San Blas	0.68	339	eP	Pn	04 32 18.4	+0.4
SNJE	San Jose	0.70	341	eP	Pn	04 32 18.7	+0.4
RTR	El Retiro	0.74	339	eP	Pn	04 32 19.4	+0.7
UNIC	Universidad Ca	0.80	348	eP	Pn	04 32 19.9	+0.5
TECA	Tecapa	0.90	71	eP	Pn	04 32 20.6	0.0
VICT	Victoria	1.04	43	eP	Pn	04 32 22.6	+0.3
VICT				eS	Sn	04 32 37.5	+1.2
VICT				IAML		04 32 38.8	
	comp=Z,514nm,0.3s						
LLGN	La Laguna	1.04	23	eP	Pn	04 32 23.0	+0.6
LLGN				eS	Sn	04 32 37.9	+1.3
LLGN				IAML		04 32 39.2	
	comp=Z,339nm,0.4s						
PACA	Pacayal	1.06	75	eP	Pn	04 32 22.8	+0.3
PACA				eS	Sn	04 32 38.2	+1.5
VSM	San Miguel	1.09	78	eP	Pn	04 32 23.9	+0.8
MTO3	Montecristo	1.19	1	eP	Pn	04 32 25.0	+0.5
MTO3				eS	Sn	04 32 41.2	+1.2
CNCH	Conchagua	1.50	87	eP	Pn	04 32 28.5	+0.2
CNCH				eS	Sn	04 32 49.2	+2.0
CNCH				IAML		04 32 53.1	
	comp=Z,2µm,0.3s						
CSGN	Cosiguina Volc	1.78	97	eP	Pn	04 32 33.2	+1.2
CSGN				eS	Sn	04 32 54.7	+0.9

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*ISCJB **16** 05:07:06.9±0.7, 9°.8N±0°.1×57°.10E±0°.09, h13^{km}, mb4.0/17, MS3.3/12, Error ellipse: s-maj=16.0km s-min=11.9km az=23.8*

*IDC **16** 05:07:06.1±1.1, 9°.66N×57°.10E, h0^{km}, mb4.0/15, mb1 4.2/15, mb1mx3.9/40, mbtmp4.0/15, MS3.4/13, Ms1 3.4/13, ms1mx3.2/37, Error ellipse: s-maj=27.9km s-min=18.9km az=29.0*

*NEIC **16** 05:07:08.2±1.3, 9°.81N×57°.08E, h10^{km}, mb4.2/4, Error ellipse: s-maj=28.8km s-min=23.7km az=229.0*

ISC 16 05:07:08.7±1.1**, 9°.8N**±0°.2×**57°.1E**±0°.1**, h13^{km}, n36, σ1^s.00**/27**, mb4.0**/17**, MS3.4**/12**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	13.46	6	LR	LR	05 14 47.3	
	comp=Z,265nm,18.7s,baz=220,slow=34						
UOSS	Minazif	15.11	357	ePn	Pn	05 10 39.6	-2.4
	12nm,0.9s						
RAYN	Ar Rayn	17.60	322	eP	Pn	05 11 13.9	0.0
	5.8nm,0.9s						
H08N2	Diego Garcia H	21.15	139	T	T	05 33 29.9	
	baz=319,slow=76,SNR=133						
H08N3	Diego Garcia H	21.16	139	T	T	05 33 30.5	
	baz=319,slow=76,SNR=192						
H08N1	Diego Carcia H	21.17	139	T	T	05 33 31.6	
	baz=319,slow=76,SNR=141						
GEYT	Alibeck	28.04	2	LR	LR	05 24 44.9	
	comp=Z,32nm,21.1s,baz=105,slow=38						
KBZ	Khabaz	36.01	342	P	P	05 14 10.6	+1.1
	6.0nm,0.9s,baz=168,slow=6.2,SNR=10						
KBZ				LR	LR	05 30 27.4	
	comp=Z,44nm,18.9s,baz=167,slow=39						
BR101	Keskin Array S	36.42	329	eP	P	05 14 14.3	+1.0
BRTR	Keskin Array B	36.42	329	P	P	05 14 14.3	+1.0
	0.9nm,0.9s,baz=125,slow=7.6,SNR=3.6						
BRTR				LR	LR	05 30 37.2	
	comp=Z,18nm,18.1s,baz=94,slow=39						
AKTO	Aktyubinsk	40.53	1	P	P	05 14 49.2	+1.6
	1.4nm,0.6s,baz=178,slow=9.0,SNR=5.4						
CMAR	Chiang Mai Arr	41.39	73	P	P	05 14 55.9	+0.8
	1.3nm,0.4s,baz=264,slow=9.0,SNR=6.0						
CMAR				LR	LR	05 31 30.9	
	comp=Z,23nm,19.1s,baz=255,slow=35						
MAKZ	Makanchi	42.53	25	eP	P	05 15 04.2	+0.2
	5.7nm,0.8s						
MK31	Makanchi Array	42.65	26	eP	P	05 15 05.3	+0.3
	2.7nm,0.8s						
MK32	Makanchi Array	42.65	26	eP	P	05 15 04.8	-0.2
MKAR	Makanchi Array	42.65	26	P	P	05 15 04.8	-0.2
	2.2nm,0.7s,baz=207,slow=8.4,SNR=19						
MKAR				LR	LR	05 33 19.6	
	comp=Z,55nm,20.9s,baz=206,slow=37						
KURBB	Kurchatov Arra	44.39	19	P	P	05 15 19.3	+0.4
	1.6nm,1.1s,baz=216,slow=8.2,SNR=5.8						
AKASG	Malin Array Be	46.82	336	P	P	05 15 39.0	+0.8
	0.3nm,0.4s,baz=138,slow=6.9,SNR=3.7						
BOSA	Boshof	49.03	218	LR	LR	05 33 35.6	
	comp=Z,85nm,21.2s,baz=26,slow=32						
ZALV	Zalesovo Beam	49.31	21	P	P	05 15 57.1	-0.3
	3.3nm,0.5s,baz=222,slow=8.3,SNR=10						
ZALV				LR	LR	05 36 43.1	
	comp=Z,25nm,18.6s,baz=258,slow=36						
ZAA1	Zalesovo Array	49.31	21	eP	P	05 15 57.1	-0.3
TORD	Torodi Ar. Bea	54.33	279	P	P	05 16 35.6	+0.1
	0.6nm,0.8s,baz=93,slow=5.8,SNR=4.0						
TOA1	Torodi Ar. Sit	54.34	279	eP	P	05 16 35.6	+0.1
SONA0	Songino Array	56.09	38	eP	P	05 16 48.2	+0.3
SONM	Songino Array	56.09	38	P	P	05 16 48.2	+0.3
	0.7nm,0.5s,baz=228,slow=5.6,SNR=4.4						
TLY	Talaya	56.34	33	LR	LR	05 41 14.8	
	comp=Z,53nm,19.5s,baz=190,slow=36						
FIA0	FINESS Array S	56.37	343	eP	P	05 16 48.3	-1.1
FINES	FINESS Array B	56.37	343	P	P	05 16 48.3	-1.1
	2.7nm,0.8s,baz=152,slow=9.5,SNR=3.8						
FINES				LR	LR	05 42 32.4	
	comp=Z,27nm,19.2s,baz=260,slow=38						
ESDC	Sonseca Array	61.63	310	P	P	05 17 26.2	-0.3
	1.8nm,0.6s,baz=85,slow=5.8,SNR=14						
ARA0	ARCESS Array S	63.05	348	eP	P	05 17 33.8	-1.6
ARCES	ARCESS Array B	63.05	348	P	P	05 17 33.7	-1.6
	3.4nm,0.9s,baz=141,slow=5.8,SNR=4.6						
ARCES				LR	LR	05 49 20.1	
	comp=Z,27nm,18.1s,baz=304,slow=40						
KSRS	Korea Array	68.89	54	LR	LR	05 48 39.7	
	comp=Z,32nm,19.1s,baz=212,slow=36						
MJAR	Matsushiro Arr	77.12	55	LR	LR	05 53 32.7	
	comp=Z,20nm,19.5s,baz=145,slow=36						
WR1	Warramunga Arr	81.50	112	eP	P	05 19 26.2	-0.3
WRA	Warramunga Arr	81.50	112	P	P	05 19 26.2	-0.3
	1.4nm,0.9s,baz=285,slow=6.4,SNR=5.9						
ASAR	Alice Springs	82.00	116	P	P	05 19 27.7	-1.4
	0.7nm,0.7s,baz=290,slow=5.3,SNR=5.9						

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*IDC **16** 05:14:23.1±2.2, 32°.28S×178°.56W, h0^{km}, mb4.1/3, mb1 4.3/5, mb1mx3.9/26, mbtmp4.2/5, ML4.1/2, MS3.3/1, Ms1 3.2/1, ms1mx2.5/21, Error ellipse: s-maj=56.7km s-min=34.7km az=126.0*

*NEIC **16** 05:14:25.2±1.6, 32°.38S×178°.69W, h16^{km}±8^{km}, mb4.2/8, Error ellipse: s-maj=23.8km s-min=17.2km az=91.0*

ISC 16 05:14:14.2±1.6**, 32°.7S**±0°.1×**176°.1W**±0°.2**, h35^{km}, n53, σ1^s.89**/54**, mb4.2**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.75	335	P	Pn	05 14 56.2	-13
GLKZ				S	Sn	05 15 27.5	-25
RIZ	Raoul Island	3.77	335	P	Pn	05 14 57.5	-12
RIZ				S	Sn	05 15 30.0	-23
MXZ	Matakaoa Point	6.67	222	ePn	Pn	05 15 49.5	-0.1
MXZ	Matakaoa Point	6.67	222	P	Pn	05 15 50.6	+1.0
MXZ				S	Sn	05 17 06.1	+1.7
PKGZ	Pakihiroa	7.03	221	P	Pn	05 15 55.1	+0.4
PKGZ				S	Sn	05 17 15.1	+1.8
PUZ	Puketiti	7.07	219	P	Pn	05 15 55.1	0.0
PUZ				S	Sn	05 17 16.6	+2.4
HAZ	Te Kaha	7.10	223	P	Pn	05 15 57.5	+2.0
HAZ				S	Sn	05 17 18.1	+3.1
TWGZ	Tauwhareparae	7.29	220	P	Pn	05 16 00.4	+2.2
RUGZ	Raukumara Rang	7.31	222	P	Pn	05 15 59.0	+0.5
CNGZ	Carnagh Statio	7.40	217	P	Pn	05 16 00.7	+1.0
MWZ	Matawai	7.65	221	P	Pn	05 16 03.6	+0.5
MWZ				S	Sn	05 17 29.2	+0.6
RIGZ	Rimuhau	7.80	218	P	Pn	05 16 05.3	+0.2
RAGZ	Rawiri	7.83	220	P	Pn	05 16 05.6	0.0
RAGZ				S	Sn	05 17 33.2	+0.1
URZ	Urewera	7.83	223	Pn	Pn	05 16 06.1	+0.5
	1.6nm,0.3s,baz=272,slow=3.4,SNR=12						
URZ				Sn	Sn	05 17 32.7	-0.3
	13nm,0.3s,baz=162,slow=20,SNR=16						
URZ	Urewera	7.83	223	ePn	Pn	05 16 05.2	-0.4
URZ				eSn	Sn	05 17 21.4	-12
URZ	Urewera	7.83	223	P	Pn	05 16 06.1	+0.5
KUZ	Kuaotunu	7.84	237	P	Pn	05 16 09.2	+3.5
PRGZ	Paritu Road	7.90	216	P	Pn	05 16 06.8	+0.3
MHGZ	Mahia Peninsul	8.06	215	P	Pn	05 16 09.1	+0.3
SNGZ	Shannon Statio	8.07	219	P	Pn	05 16 11.2	+2.2
MUGZ	Murupara	8.18	223	P	Pn	05 16 10.3	0.0
MUGZ				S	Sn	05 17 41.0	-0.5
WIAZ	Waiheke Island	8.28	238	P	Pn	05 16 13.7	+1.9
TOZ	Tahuroa Road	8.50	231	P	Pn	05 16 17.3	+2.5
BKZ	Black Stump Fm	8.81	221	ePn	Pn	05 16 19.2	+0.1
BKZ	Black Stump Fm	8.81	221	P	Pn	05 16 17.7	-1.3
OUZ	Omahuta	8.91	251	ePn	Pn	05 16 06.0	-14
OUZ	Omahuta	8.91	251	P	Pn	05 16 20.5	+0.1
BFZ	Birch Farm	10.06	215	ePn	Pn	05 16 36.7	+0.6
THZ	Tophouse	12.58	221	ePn	Pn	05 17 09.0	-1.7
KHZ	Kahutara	12.70	217	ePn	Pn	05 17 12.8	+0.5
LTZ	Lake Taylor	13.62	219	ePn	Pn	05 17 24.1	-0.8
MQZ	McQueen's Vall	14.09	215	ePn	Pn	05 17 30.2	-0.9
OXZ	Oxford	14.12	218	ePn	Pn	05 17 30.8	-0.9
RPZ	Rata Peaks	14.91	219	Pn	Pn	05 17 42.4	+0.1
	2.3nm,0.3s,baz=53,slow=3.2,SNR=7.0						
RPZ				Sn	Sn	05 20 12.8	-13
	0.9nm,0.3s,baz=36,slow=18,SNR=2.5						
RPZ	Rata Peaks	14.91	219	ePn	Pn	05 17 41.6	-0.7
FOZ	Fox Glacier	15.46	222	ePn	Pn	05 17 47.7	-1.8
LBZ	Lake Benmore	15.82	219	ePn	Pn	05 17 51.2	-3.1
ODZ	Otahua Downs	16.05	216	ePn	Pn	05 17 57.0	-0.1
	15nm,0.8s						
WKZ	Wanaka	16.74	219	ePn	Pn	05 18 04.6	-1.3
	28nm,1.2s						
MLZ	Mavora Lakes	17.57	219	eP	P	05 18 17.3	+0.2
	7.1nm,0.7s						
WHZ	Wether Hill Ro	18.01	218	ePn	P	05 18 22.1	+0.3
	12nm,1.1s						
STKA	Stephens Creek	35.59	260	P	P	05 21 07.4	-1.0
	1.5nm,0.7s,baz=105,slow=12,SNR=4.2						
STKA				LR	LR	05 33 30.4	
	comp=Z,48nm,19.2s,baz=3.7,slow=34						
CTAO	Charters Tower	35.78	281	eP	P	05 21 02.4	-7.7
	8.6nm,0.8s						
ASAR	Alice Springs	44.62	268	P	P	05 22 20.3	-3.1
	0.8nm,0.6s,baz=106,slow=7.3,SNR=10						
WC3	Warramunga Arr	45.78	273	eP	P	05 22 29.0	-3.6
	2.3nm,0.8s						
WB2	Warramunga Arr	45.80	273	eP	P	05 22 29.6	-3.2
	3.4nm,1.0s						
WR1	Warramunga Arr	45.81	273	eP	P	05 22 29.5	-3.4
WRA	Warramunga Arr	45.81	273	P	P	05 22 29.5	-3.4
	1.7nm,0.5s,baz=121,slow=8.0,SNR=29						
QSPA	South Pole Qui	57.43	180	eP	P	05 24 09.2	+10
	7.8nm,0.9s						
FIA0	FINESS Array S	147.84	340	ePKPbc	PKPab	05 34 05.7	+8.5
FINES	FINESS Array B	147.84	340	PKPbc	PKPab	05 34 05.7	+8.5
	2.9nm,0.8s,baz=20,slow=4.4,SNR=3.6						
NB200	NORSAR Array S	151.24	353	ePKPbc	PKPab	05 34 15.7	+4.5
NOA	NORSAR Array B	151.24	353	PKPbc	PKPab	05 34 15.7	+4.5
	0.3nm,0.5s,baz=14,slow=4.2,SNR=3.3						

RSNC 16 05:41:22.7±0.6**, 6°.76N**×**73°.13W, h154^{km}**±7^{km}**, ML1.9, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.18	199	eP	Pn	05 41 44.7	+0.9
BARC				eS	Sn	05 41 59.4	-0.5
BRRC	Barranca, Sant	0.68	301	eS	Sn	05 42 02.5	-0.4
BRRC				i		05 42 03.8	
	comp=N,13nm,0.2s						
BRRC	Barranca, Sant	0.68	301	i P	Pn	05 41 46.2	+0.7
BRRC				eS	Sn	05 42 02.7	-0.2
BRRC				i		05 42 03.8	
	comp=N,13nm,0.2s						
PTBC	PUERTO BERRIO,	1.34	261	eP	Pn	05 41 50.5	-0.5
PTBC				eS	Sn	05 42 11.9	-0.8
PTBC				i		05 42 17.6	
	comp=N,5.2nm,0.2s						
PTBC	PUERTO BERRIO,	1.34	261	eS	Sn	05 42 11.3	-1.4
PTBC				i		05 42 17.6	
	comp=N,5.2nm,0.2s						
SPBC	San Pablo de B	1.45	221	eS	Sn	05 42 14.5	-0.3
ZARC	Zaragoza, Cauc	1.87	293	eP	Pn	05 41 56.4	-0.2
ZARC				eS	Sn	05 42 22.6	-0.1
ZARC				i		05 42 29.5	
	comp=E,6.9nm,0.2s						
SMLC	San Martn de	2.23	335	eS	Sn	05 42 29.4	-0.9
SMLC				i		05 42 32.6	
	comp=N,10nm,0.1s						

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*IDC **16** 05:41:51.3±1.0, 22°.41S×171°.35E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/30, mbtmp3.9/7, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/21, Error ellipse: s-maj=34.1km s-min=23.5km az=168.0*

*ISCJB **16** 05:42:02.6±0.9, 22°.5S±0°.2×171°.08E±0°.09, h100^{km}, mb3.8/6, Error ellipse: s-maj=32.0km s-min=12.4km az=179.9*

ISC 16 05:42:03.8±1.0**, 22°.4S**±0°.2×**171°.0E**±0°.1**, h100^{km}, n9, σ1^s.94**/9**, mb3.9**/6**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.24	273	Pn	Pn	05 43 03.1	-3.2
	4.3nm,0.3s,baz=130,slow=20,SNR=23						
DZM				Sn	Sn	05 43 56.8	+2.1
	3.1nm,0.3s,baz=109,slow=18,SNR=3.1						
ASAR	Alice Springs	34.11	260	P	P	05 48 40.4	+1.2
	0.8nm,0.8s,baz=95,slow=9.0,SNR=7.3						
WRA	Warramunga Arr	34.23	267	P	P	05 48 40.8	+0.6
	1.2nm,0.8s,baz=91,slow=8.5,SNR=7.3						
VNDA	Vanda	55.38	182	LR	LR	06 11 35.2	
	comp=Z,25nm,18.5s,baz=283,slow=32						
QSPA	South Pole Qui	67.70	180	P	P	05 52 50.0	-0.1
	2.5nm,0.8s,baz=357,slow=4.2,SNR=8.4						
NVAR	Mina Array Bea	89.65	48	P	P	05 54 51.2	+0.5
	0.9nm,0.7s,baz=221,slow=8.2,SNR=9.0						
SONM	Songino Array	90.70	323	P	P	05 54 57.2	+1.9
	0.5nm,0.6s,baz=141,slow=5.0,SNR=2.8						
ILAR	Eielson Array	92.73	17	P	P	05 55 02.6	-1.6
	0.3nm,0.7s,baz=207,slow=6.9,SNR=2.9						
GERES	GERESS Array B	148.02	331	PKPbc	PKiKP	06 01 39.7	+0.4
	0.5nm,0.3s,baz=62,slow=3.2,SNR=8.5						

SVSA 16 05:53:28.5±0.5**, 37°.51N**×**25°.17W, h0^{km}**±4^{km}**, MD3.5, ML1.7, Error ellipse: s-maj=2.4km s-min=1.3km az=73.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	Pico Bartolome	0.26	1	eP	Pg	05 53 33.5	-0.1
BART				eS	Sg	05 53 37.6	+0.6
BART				A	A	05 53 40.4	
	100nm,0.3s						
CMLA	Cha da Macela	0.38	312	eS	Sg	05 53 40.8	+0.2
CMLA				A	A	05 53 42.7	
	45nm,0.1s						
PDA	Ponta Delgada	0.45	301	eP	Pg	05 53 36.6	-0.6
PDA				eS	Sg	05 53 43.2	+0.1
PDA				A	A	05 53 44.5	
	43nm,0.1s						
PSMN	Pico do Norte,	0.52	170	eP	Pg	05 53 37.9	-0.5
PSMN				eS	Sg	05 53 44.9	-0.2
PSMN				A	A	05 53 45.9	
	3.6nm,0.1s						
PSMA	Santa Maria	0.52	176	eP	Pg	05 53 38.0	-0.4
PSMA				eS	Sg	05 53 45.0	-0.2
PSMA				A	A	05 53 46.2	
	5.6nm,0.1s						
PSET	Sete Cidades	0.53	306	eP	Pg	05 53 38.3	-0.4
PSET				eS	Sg	05 53 45.5	-0.2
PSET				A	A	05 53 47.8	
	19nm,0.1s						

MEX 16 05:58:38.3±0.8**, 15°.96N**×**97°.54W, h9^{km}**±4^{km}**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.35	35	eP	Pn	05 59 00.3	-3.1
VHO				i S	Sb	05 59 16.8	-4.5
HUIG	Huatulco	1.39	98	eP	Pn	05 59 00.1	-3.7
HUIG				i S	Sb	05 59 17.1	-5.2
TLIG	Tlapa	1.87	328	eP	Pn	05 59 07.5	-3.0
TLIG				i S	Sn	05 59 28.9	-5.5
CMIG	Matias Romero	2.78	66	eP	Pn	05 59 19.9	-3.2
CMIG				i S	Sn	05 59 52.2	-4.6

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*ISCJB **16** 06:05:28.2±0.3, 21°.12S±0°.03×67°.34W±0°.03, h204^{km}±5^{km}, Error ellipse: s-maj=5.2km s-min=4.2km az=162.4*

*SJA **16** 06:05:28.1±0.8, 21°.11S×67°.30W, h207^{km}±6^{km}, ML3.7, MW3.6*

*IDC **16** 06:05:28.7±0.8, 21°.14S×67°.21W, h197^{km}±11^{km}, mb3.4/4, mb1 3.6/10, mb1mx3.4/28, mbtmp3.9/10, Error ellipse: s-maj=18.1km s-min=14.7km az=162.0*

*GUC **16** 06:05:29.7±0.7, 21°.10S×67°.67W, h214^{km}±9^{km}, ML4.2*

*SCB **16** 06:05:31.7±3.9, 21°.01S×67°.20W, h17^{km}±39^{km}, ML3.9/1, Error ellipse: s-maj=5.0km s-min=4.4km az=2.0*

ISC 16 06:05:28.5±0.7**, 21°.08S**±0°.04×**67°.25W**±0°.04**, h192^{km}**±7^{km}**, n61, σ1^s.55**/93**, 14C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	1.95	124	eP	Pn	06 06 08.4	+2.1
YJA				IAML		06 06 09.8	
	comp=Z,335nm,0.5s						
YJA				eS	Sn	06 06 38.0	+2.2
YJA	Yavi	1.95	124	P	Pn	06 06 05.7	-0.6
PB09	IPOC Station P	1.99	249	⇑iP	Pn	06 06 07.7	+1.3
PB09				i S	Sn	06 06 35.7	-0.2
PB09				IAML		06 06 39.2	
	comp=E,298nm,0.2s						
PB08	IPOC Station P	2.01	297	eP	Pn	06 06 08.1	+1.2
PB08				eS	Sn	06 06 37.6	+0.7
PB08	IPOC Station P	2.01	297	⇑iP	Pn	06 06 08.2	+1.2
PB08				i S	Sn	06 06 37.5	+0.7
PB08				IAML		06 06 39.8	
	comp=E,289nm,0.3s						
PB08	IPOC Station P	2.01	297	P	Pn	06 06 05.5	-1.5
PB01	IPOC Station P	2.09	271	⇑iP	Pn	06 06 07.8	+0.3
PB01				i S	Sn	06 06 36.2	-1.5
PB01				IAML		06 06 38.9	
	comp=N,1µm,0.2s						
PB01	IPOC Station P	2.09	271	P	Pn	06 06 06.2	-1.3
LVC	Limon Verde	2.17	225	P	Pn	06 06 09.5	+0.9
	comp=N,44nm,0.3s,baz=29,slow=9.0,SNR=692						
LVC				S	Sn	06 06 40.5	+0.7
	comp=N,36nm,0.3s,baz=136,slow=22,SNR=18						
LVC	Limon Verde	2.17	225	eP	Pn	06 06 09.2	+0.6
LVC				eS	Sn	06 06 39.7	-0.1
LVC				IAML		06 06 42.1	
	comp=Z,130nm,0.1s						
LVC	Limon Verde	2.17	225	eP	Pn	06 06 09.5	+0.9
LVC				i S	Sn	06 06 39.4	-0.4
GO01	Chusmiza	2.30	307	⇑iP	Pn	06 06 11.1	+0.9
GO01				eS	Sn	06 06 43.2	+0.6
GO01				IAML		06 06 53.0	
	comp=E,677nm,0.2s						
PB02	IPOC Station P	2.48	264	eP	Pn	06 06 12.4	+0.6
PB02	IPOC Station P	2.48	264	⇑iP	Pn	06 06 11.9	+0.2
PB02				i S	Sn	06 06 43.9	-1.5
PB02				IAML		06 06 44.5	
	comp=N,1µm,0.3s						
PB03	IPOC Station P	2.52	247	eP	Pn	06 06 13.0	+0.7
PB03				eS	Sn	06 06 45.8	-0.6
PB03	IPOC Station P	2.52	247	⇑iP	Pn	06 06 12.5	+0.2
PB03				i S	Sn	06 06 44.8	-1.6
PB03				IAML		06 06 45.6	
	comp=E,808nm,0.2s						
PB07	IPOC Station P	2.54	255	eP	Pn	06 06 13.1	+0.6
PB07	IPOC Station P	2.54	255	⇑iP	Pn	06 06 12.7	+0.2
PB07				i S	Sn	06 06 45.1	-1.7
PB07				IAML		06 06 46.7	
	comp=N,1µm,0.3s						
PB11	IPOC Station P	2.61	300	eP	Pn	06 06 13.3	-0.1
PB11	IPOC Station P	2.61	300	⇑iP	Pn	06 06 13.6	+0.2
PB11				i S	Sn	06 06 47.1	-1.1
PB11				IAML		06 06 49.4	
	comp=E,2µm,0.4s						
PB11	IPOC Station P	2.61	300	P	Pn	06 06 12.4	-1.0
PB06	IPOC Station P	2.69	233	⇑iP	Pn	06 06 14.7	+0.4
PB06				i S	Sn	06 06 49.0	-1.0
PB06				IAML		06 06 50.6	
	comp=E,960nm,0.2s						
PB06	IPOC Station P	2.69	233	P	Pn	06 06 14.2	-0.1
PB06				S	Sn	06 06 48.8	-1.2
HJA	Humahuaca	2.72	141	eP	Pn	06 06 16.8	+2.0
HJA				IAML		06 06 18.3	
	comp=Z,308nm,0.7s						
MNMC	Minye Minye	2.94	311	⇑iP	Pn	06 06 18.1	+0.8
MNMC				i S	Sn	06 06 54.8	-0.5
MNMC				IAML		06 06 57.1	
	comp=E,491nm,0.2s						
MNMC	Minye Minye	2.94	311	P	Pn	06 06 17.4	+0.1
MNMC				S	Sn	06 06 53.7	-1.6
MNMCX	Minye Minye	2.94	311	eP	Pn	06 06 18.3	+1.0
PB15	IPOC Station P	2.95	224	⇑iP	Pn	06 06 17.9	+0.5
PB15				i S	Sn	06 06 54.9	-0.7
PB04	IPOC Station P	2.97	245	eP	Pn	06 06 17.6	+0.1
PB04	IPOC Station P	2.97	245	⇑iP	Pn	06 06 17.6	+0.1
PB04				i S	Sn	06 06 53.7	-2.1
PB04	IPOC Station P	2.97	245	P	Pn	06 06 17.3	-0.2
PB04				S	Sn	06 06 54.5	-1.3
PSGC	Pisagua	3.07	298	eP	Pn	06 06 18.1	-0.7
PSGC				i S	Sn	06 06 54.9	-3.1
PSGC				IAML		06 06 57.2	
	comp=E,391nm,0.5s						
PSGC	Pisagua	3.07	298	P	Pn	06 06 18.3	-0.4
PSGC				S	Sn	06 06 54.4	-3.5
PB05	IPOC Station P	3.26	237	eP	Pn	06 06 21.2	+0.2
PB05	IPOC Station P	3.26	237	⇑iP	Pn	06 06 21.1	+0.1
PB05				i S	Sn	06 06 59.4	-2.6
PB16	IPOC Station P	3.46	322	⇑iP	Pn	06 06 25.2	+1.3
PB16				i S	Sn	06 07 07.8	+0.6
BB01	Montecillos	3.53	32	P	Pn	06 06 24.5	0.0
BS06	Camiri	3.65	74	P	Pn	06 06 26.7	+1.0
BS06				S	Sn	06 07 06.6	-3.8
AZAP	Zapla	3.72	148	eP	Pn	06 06 27.6	+0.9
AZAP				eS	Sn	06 07 11.8	-0.6
AZAP				IAML		06 07 14.1	
	comp=Z,184nm,0.4s						
PB10	IPOC Station P	3.90	231	P	Pn	06 06 28.9	+0.2
BS08	Valle Grande	3.92	50	P	Pn	06 06 30.2	+1.0
SLA	San Lorenzo	3.96	156	eP	Pn	06 06 30.8	+1.1
SLA				IAML		06 07 23.9	
	comp=Z,38nm,0.5s						
SLA	San Lorenzo	3.96	156	P	Pn	06 06 31.0	+1.3
BS05	Cuyupaya	4.06	4	P	Pn	06 06 31.9	+0.7
BBOJ	La Paz, Jacaqu	4.18	348	P	Pn	06 06 34.6	+1.8
BBOE	La Paz, Chanca	4.30	351	P	Pn	06 06 35.7	+1.3
LPAZ	La Paz	4.84	350	P	Pn	06 06 43.0	+1.7
	comp=Z,1.7nm,0.3s,baz=98,slow=3.5,SNR=67						
LPAZ				S	Sn	06 07 37.7	-0.8
	comp=Z,0.1nm,0.3s,baz=32,slow=22,SNR=6.5						
LPAZ	La Paz	4.84	350	⇓eP	Pn	06 06 42.5	+1.2
LPAZ	La Paz	4.84	350	P	Pn	06 06 42.8	+1.5
LPAZ				S	Sn	06 07 39.3	+0.8
BBOB	La Paz, Bander	4.99	350	P	Pn	06 06 44.4	+1.3
BBOB				S	Sn	06 07 41.2	-0.5
	comp=Z,91nm,1.3s						
AHML	Horco Molle	5.94	163	P	Pn	06 06 56.6	+1.7
SIV	San Ignacio	7.74	50	P	Pn	06 07 17.4	-1.1
	comp=Z,4.2nm,0.3s,baz=248,slow=10,SNR=104						
SIV				S	Sn	06 08 41.3	-4.6
	comp=Z,0.4nm,0.3s,baz=156,slow=19,SNR=4.4						
CPUP	Villa Florida	10.48	122	P	Pn	06 07 54.1	0.0
	comp=Z,0.4nm,0.3s,baz=302,slow=11,SNR=8.4						
CFA	Coronel Fontan	10.52	185	P	Pn	06 07 53.8	-0.7
	comp=Z,0.5nm,0.3s,baz=314,slow=8.8,SNR=6.9						
CFA				S	Sn	06 09 44.0	-7.8
	comp=Z,1.2nm,0.3s,baz=277,slow=23,SNR=12						
NNA	Nana	12.89	313	P	P	06 08 29.9	+1.3
	comp=Z,0.7nm,0.3s,baz=137,slow=17,SNR=4.6						
BDFB	Brasilia	19.04	77	P	P	06 09 37.0	+0.7
	comp=Z,0.9nm,0.3s,baz=250,slow=9.7,SNR=12						
TXAR	Lajitas Array	61.19	324	P	P	06 15 22.9	-0.2
	comp=Z,0.3nm,0.6s,baz=141,slow=5.8,SNR=3.5						
PDAR	Pinedale Array	74.53	329	P	P	06 16 47.2	+0.9
	comp=Z,0.2nm,0.6s,baz=141,slow=7.3,SNR=3.6						
TORD	Torodi Ar. Bea	75.76	70	P	P	06 16 52.6	-0.9
	comp=Z,2.0nm,0.6s,baz=251,slow=5.5,SNR=16						
YKA	Yellowknife Ar	91.32	340	P	P	06 18 11.9	+0.2
	comp=Z,0.9nm,0.7s,baz=129,slow=4.9,SNR=3.7						
ZST	Bratislava	101.79	43	ePDIF	Pdif	06 19 00.8	+1.3

IDC 16 06:15:04.2±2.7**, 54°.17N**×**86°.57E, h0^{km}, mb1 3.0**/2,

mb1mx2.9/34, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=22.3km s-min=14.1km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.06	259	*i*		06 20 31.9	
	baz=78,slow=317,SNR=6.6						
ZALV	Zalesovo Beam	1.06	259	Pg	Pg	06 15 23.2	-1.2
	0.8nm,0.3s,baz=73,slow=16,SNR=6.9						
ZALV				Lg	Lg	06 15 39.1	
	2.7nm,0.3s,baz=78,slow=29,SNR=21						
KURBB	Kurchatov Arra	6.07	237	Pn	Pn	06 16 36.2	+1.1
	0.1nm,0.3s,baz=55,slow=14,SNR=13						
KURBB				Lg	Lg	06 18 19.1	
	0.0nm,0.3s,baz=50,slow=30,SNR=6.0						
MKAR	Makanchi Array	7.87	202	Pn	Pn	06 17 00.5	+0.6
	0.1nm,0.3s,baz=24,slow=12,SNR=5.6						

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*NEIC **16** 06:21:13.0±0.0, 61°.58N×141°.06W, h15^{km}, ML2.5(OTT), ML2.5(AEIC), After AEIC.*

PGC 16 06:21:15.1, 61°.60N×141°.10W, h5^{km}, ML2.5/11, 213km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	33	P	Pg	06 21 18.9	-0.6
YUK2				S	Sg	06 21 22.4	-0.2
YUK3	Moose Creek	0.35	59	P	Pg	06 21 21.1	-0.9
YUK3				S	Sg	06 21 25.8	-0.9
YUK1	Sand Pete Hill	0.62	26	P	Pg	06 21 25.9	-1.1
YUK1				S	Sg	06 21 34.9	-0.2
PTPK	Patty Peak	0.78	239	P	Pg	06 21 29.2	-0.7
PTPK				S	Sg	06 21 38.6	-1.4
BALM	Baldy	0.82	227	*e*Pg	Pg	06 21 29.6	-1.2
BALM	Baldy	0.82	227	P	Pg	06 21 29.6	-1.3
BALM				S	Sg	06 21 40.8	-0.7
BVCY	Beaver Creek	0.83	8	P	Pg	06 21 30.1	-0.8
BVCY				S	Sg	06 21 41.0	-0.7
KIAG	Kiagna River	0.91	223	P	Pg	06 21 31.1	-1.4
KIAG				S	Sg	06 21 43.9	-0.4
TABL	Table Mountain	1.16	181	P	Pg	06 21 35.9	-1.5
TABL				S	Sg	06 21 51.2	-1.1
YUK4	Talbot Arm	1.21	101	P	Pg	06 21 36.6	-1.6
YUK4				S	Sg	06 21 53.3	-0.5
YUK6	Outpost Mounta	1.48	115	Pn	Pn	06 21 41.0	-1.5
YUK6				Sg	Sb	06 22 01.5	-0.8
SAMH	Samovar Hills	1.48	174	Pn	Pn	06 21 42.1	-0.3
SAMH				Sg	Sn	06 22 01.9	-0.4
MESA	MESA	1.48	197	Pn	Pn	06 21 42.1	-0.5
MESA				Sg	Sb	06 22 02.1	-0.3
PCA	Pinnacle	1.56	164	*e*Pn	Pn	06 21 43.7	+0.2
PCA	Pinnacle	1.56	164	Pn	Pn	06 21 43.6	0.0
PCA				Sg	Sn	06 22 03.6	-0.5
YUK5	Granite Creek	1.63	105	Pn	Pn	06 21 43.4	-1.2
YUK5				Sg	Sn	06 22 03.6	-2.3
YUK7	Dusty Glacier	1.79	125	Pn	Pn	06 21 47.1	+0.2
YUK7				Sg	Sn	06 22 10.5	+0.4
MENT	Mentasta	1.82	319	*e*Pg	Pn	06 21 47.8	+0.7
HYT	Haines Junctio	1.91	112	*e*Pg	Pn	06 21 48.8	+0.5
HYT	Haines Junctio	1.91	112	Pn	Pn	06 21 48.0	-0.4
HYT				Sg	Sb	06 22 13.8	-0.7
HMT	Hamilton	1.99	232	*e*Pg	Pb	06 21 51.6	-0.2
PNL	Peninsula	2.11	156	Pn	Pn	06 21 50.3	-0.7
PNL				Sg	Sb	06 22 21.0	+0.7
RAGM	Ragged Mountai	2.12	237	*e*Pn	Pn	06 21 52.1	+0.9
PAX	Paxson	2.46	306	Sg	Sb	06 22 31.2	+0.7
DOT	Dot Lake	2.47	328	*e*Pn	Pn	06 21 55.7	-0.3
DOT	Dot Lake	2.47	328	Pn	Pn	06 21 55.5	-0.5
DOT				Pg	Pb	06 22 00.2	+0.2
DOT				Sg	Sb	06 22 31.7	+1.0
EYAK	Cordova Ski Ar	2.49	247	*e*Pn	Pn	06 21 54.6	-1.7
DAWY	Dawson	2.60	17	*e*Pn	Pn	06 21 57.5	-0.3
DAWY	Dawson	2.60	17	Pn	Pn	06 21 57.3	-0.5
DAWY				Sg	Sb	06 22 35.1	+0.8
SCRK	Sand Creek	2.73	332	*e*Pn	Pn	06 21 59.3	-0.4
FID	Port Fidalgo	2.74	254	*e*Pn	Pb	06 22 02.7	-1.8
RIDG	Independent Ri	2.76	323	*e*Pn	Pn	06 21 58.5	-1.5
SCM	Sheep Creek Mo	2.98	277	*e*Pn	Pn	06 22 01.7	-1.3
GLI	Glacier Island	2.99	259	*e*Pn	Pn	06 22 04.1	+1.0
PLBC	Pleasant Camp	3.18	130	Pg	Pb	06 22 11.6	-0.3
PLBC				Sg	Sb	06 22 52.8	+1.9
EGAK	Eagle	3.19	360	*e*Pn	Pn	06 22 06.0	+0.2
DHY	Denali Highway	3.28	300	*e*Pn	Pn	06 22 06.0	-1.2
HDA	Harding Lake	3.88	319	*e*Pn	Pn	06 22 16.4	+1.1
RND	Reindeer	4.03	300	*e*Pn	Pn	06 22 13.7	-3.8
ILB	Eielson Array	4.12	323	*e*Pn	Pn	06 22 18.6	-0.1
RC01	Rabbit Creek A	4.19	267	*e*Pn	Pn	06 22 16.2	-3.4
WRH	Wood River Hil	4.29	315	*e*Pn	Pn	06 22 17.9	-3.1
BESE	Bessie Mountai	4.35	131	*e*Pn	Pn	06 22 21.2	-0.7
BESE	Bessie Mountai	4.35	131	Sg	Sg	06 23 30.7	-4.0
PRP	Porcupine Dome	4.40	335	*e*Pn	Pn	06 22 20.2	-2.4
FYU	Fort Yukon	5.31	342	*e*Pn	Pn	06 22 32.2	-2.6

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*DDA **16** 06:32:45.4, 35°.85N×32°.99E, h7^{km}±6^{km}, ML2.6*

*ISK **16** 06:32:45.6, 35°.86N×33°.03E, h28^{km}, ML3.1/20*

*ISCJB **16** 06:32:46.1±0.4, 35°.85N±0°.02×33°.01E±0°.04, h28^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=3.8km az=19.8*

*NIC **16** 06:32:47.4±0.2, 35°.72N×33°.08E, h10^{km}, ML3.0*

ISC 16 06:32:45.4±1.1, **35°.83N**±0°.02×**33°.03E**±0°.03, **h9**^{km}±13^{km}, **n30, σ0^{s}44**/38, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEKE	Tekeli-Mersin	0.32	12	PG	Pb	06 32 53.8	+0.6
TEKE				SG	Sb	06 32 58.7	+0.2
YORU	Yoruktepe-Mers	0.44	43	PG	Pb	06 32 55.5	+0.1
YORU				SG	Sb	06 33 02.3	+0.2
OREN	Orenkoy-Mersin	0.51	43	PG	Pb	06 32 56.6	+0.1
AKK1	Akkuyu-Mersin	0.52	53	PG	Pb	06 32 56.9	+0.3
AKK2	Akkuyu-Mersin	0.52	54	PG	Pb	06 32 56.8	+0.1
AKKU	Akkuyu-Mersin	0.53	52	PG	Pb	06 32 56.8	-0.1
BERE	Bereket-Mersin	0.54	17	PG	Pb	06 32 56.7	-0.4
AKDN	Akdeniz- Kıbrı	0.54	186	PG	Pn	06 32 58.6	-0.6
GULN	MERSIN_Gulnar	0.54	50	*i* P	Pb	06 32 57.9	+0.8
GULN				*i* S	Sb	06 33 05.0	0.0
GULN				IAML_P			
	comp=Z,2μm,0.2s						
TEPE	Tepekoy-Mersin	0.58	48	PG	Pb	06 32 57.5	-0.2
YESI	Yesilovacik-Me	0.61	54	PG	Pb	06 32 58.1	-0.2
TISA	Tisan-Mersin	0.62	58	PG	Pb	06 32 58.2	-0.2
KARG	Kargicak-Mersi	0.66	56	PG	Pb	06 32 59.4	+0.3
IKL	Isikli	0.67	52	PG	Pb	06 32 59.2	0.0
TEVE	Tevekalti-Mers	0.69	29	PG	Pg	06 32 59.1	+0.4
GAZI	Gazipasa	0.70	305	PG	Pg	06 32 59.4	+0.4
GAZI	Gazipasa	0.70	305	*i* P	Pg	06 32 59.2	+0.2
GAZI				*i* S	Sg	06 33 07.9	-0.3
LEF	Lefka	0.72	189	PG	Pb	06 33 00.6	+0.5
LEF	Lefka	0.72	189	*i* P	Pb	06 33 01.1	+1.0
LEF				*i* S	Sb	06 33 10.6	+0.5
ALFC	Alefka	0.76	208	P	Pb	06 33 00.9	0.0
	baz=34						
ALFC				S	Sg	06 33 10.6	+0.6
ERMK	Ermenek	0.81	353	*i* P	Pb	06 33 01.6	-0.2
ERMK				*i* S	Sg	06 33 11.2	-0.5
KEBE	Keben-Mersin	0.82	42	PG	Pb	06 33 01.8	-0.1
AKIN	Akıncılar- Kıb	0.89	156	PG	Pg	06 33 02.7	+0.2
SILI	Silifke-Mersin	0.90	53	PG	Pg	06 33 02.6	-0.1
CSS	Mathiatis	0.90	164	PG	Pg	06 33 02.7	0.0
CSS	Mathiatis	0.90	164	P	Pg	06 33 02.2	-0.5
	baz=344						
CSS				S	Sg	06 33 13.9	-0.6
SLFK	Silifke-Mersin	0.93	53	PG	Pg	06 33 03.2	0.0
SZAC	Souni	1.08	187	P	Pb	06 33 06.1	-0.2
	baz=9.0						
KEPZ	Antalya-Kepez	1.57	313	*i* P	Pn	06 33 12.6	-0.9
KEPZ				IAML_P			
	comp=Z,225nm,0.2s						
KERG	Konya-Eregli	1.81	29	*i* P	Pn	06 33 17.7	+0.8

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*DSN **16** 06:49:55.5±2.8, 26°.56N×57°.98E, h10^{km}, ML3.9/8, Error ellipse: s-maj=38.7km s-min=12.5km az=9.0*

*IDC **16** 06:49:56.1±1.3, 26°.54N×57°.70E, h0^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.6/49, mbtmp3.8/9, ML4.2/1, MS2.9/5, Ms1 2.9/5, ms1mx2.7/37, Error ellipse: s-maj=27.2km s-min=23.5km az=141.0*

*OMAN **16** 06:49:56.9±3.7, 26°.71N×58°.04E, h24^{km}, ml4.0/13, Error ellipse: s-maj=34.9km s-min=15.2km az=46.0*

*ISCJB **16** 06:49:56.7±0.4, 26°.64N±0°.03×57°.80E±0°.04, h10^{km}, mb3.6/9, MS3.0/3, Error ellipse: s-maj=5.6km s-min=3.7km az=173.1*

*THR **16** 06:49:57.3, 26°.76N×57°.39E, h18^{km}, ML3.7*

*TEH **16** 06:49:58.5, 26°.58N×57°.54E, h8^{km}, ML4.0*

ISC 16 06:49:58.2±0.6, **26°.50N**±0°.03×**57°.69E**±0°.03, **h10**^{km}**, n74, σ1^{s}67**/73, **mb3.8**/9, **MS2.9**/3, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	0.86	175	*e*Pg	Pn	06 50 17.9	+1.5
NIAN	Nian	1.30	324	*e*Pg	Pn	06 50 20.9	-1.6
NIAN				IAMB	IAmb	06 50 45.8	
	comp=Z,0.0nm,0.4s						
BANOM	Banah	1.38	246	*e*P	Pb	06 50 24.4	+0.3
	SNR=348						
BANOM	Banah	1.38	246	P	Pb	06 50 24.7	+0.6
	SNR=347						
BANOM				S	Sg	06 50 48.0	+5.5
SHME	Shamm	1.46	252	*e*P	Pb	06 50 25.6	0.0
	SNR=158						
SHME				S	Sg	06 50 48.7	+3.4
SHME	Shamm	1.46	252	*e*Pn	Pb	06 50 26.3	+0.8
GENO	Geno	1.62	304	*e*Pn	Pn	06 50 26.9	-0.2
GENO				*e*Sg	Sb	06 50 50.0	+1.0
GENO				IAMB	IAmb	06 50 57.0	
	comp=Z,0.0nm,0.6s						
BNDS	Bandar-Abbas	1.62	304	*e*Pg	Pn	06 50 21.1	-6.0
BNDS	Bandar-Abbas	1.62	304	AML	AML	06 50 51.6	
	comp=N,1μm,0.4s						
BNDS				AML	AML	06 50 55.8	
	comp=E,1μm,0.6s						
BNDS	Bandar-Abbas	1.62	304	Pg	Pn	06 50 21.1	-6.0
MDH	Madha	1.73	227	*e*P	Pn	06 50 28.0	-0.3
	SNR=17						
MDH	Madha	1.73	227	P	Pn	06 50 28.2	-0.1
	SNR=17						
MDH	Madha	1.73	227	*e*Pn	Pn	06 50 28.1	-0.3
MSFE	Esma-Masafi	1.79	231	*e*P	Pn	06 50 29.0	-0.2
	SNR=18						
MSFE	Esma-Masafi	1.79	231	*e*Pn	Pn	06 50 29.2	0.0
UOSS	Minazif	2.05	221	*e*P	Pn	06 50 32.2	-0.5
	SNR=10						
UOSS	Minazif	2.05	221	P	Pn	06 50 32.4	-0.4
UOSS	Minazif	2.05	221	*e*Pn	Pn	06 50 31.9	-0.8
UMQ	Umm Al-Quwin	2.07	242	*e*Pn	Pn	06 50 33.9	+0.9
HATD	Hatta, Dubai	2.18	220	*e*P	Pn	06 50 33.9	-0.7
	SNR=13						
HATD	Hatta, Dubai	2.18	220	P	Pb	06 50 36.9	-0.9
HATD	Hatta, Dubai	2.18	220	*e*Pn	Pb	06 50 36.5	-1.3
ASHO	Ashiyiah	2.33	220	*e*P	Pn	06 50 38.4	+1.8
	SNR=31						
ASHO	Ashiyiah	2.33	220	P	Pb	06 50 39.4	-1.0
ASHO	Ashiyiah	2.33	220	*e*Pn	Pb	06 50 39.1	-1.3
NAZ	Nazwa, Dubai	2.37	231	*e*P	Pb	06 50 39.5	-1.5
	SNR=5.5						
NAZ	Nazwa, Dubai	2.37	231	*e*Pn	Pb	06 50 39.9	-1.1
FAQ	Al Faqa, Dubai	2.58	228	P	Pb	06 50 42.8	-1.7
FAQ	Al Faqa, Dubai	2.58	228	*e*Pn	Pb	06 50 42.8	-1.7
CHBR	Chabahar	2.67	109	*e*Pn	Pb	06 50 46.4	+0.4
CHBR	Chabahar	2.67	109	Pn	Pb	06 50 46.4	+0.4
ASUD	Al Ashush, Dub	2.83	229	*i* P	Pn	06 50 45.0	+1.5
	SNR=11						
ASUD	Al Ashush, Dub	2.83	229	P	Pb	06 50 47.1	-1.8
ASUD	Al Ashush, Dub	2.83	229	*e*Pn	Pb	06 50 46.9	-2.0
HOQ	Hoqain	2.93	187	P	Pn	06 50 46.5	+1.7
BIDO	Bidbid	2.99	172	P	Pn	06 50 46.7	+0.9
BIDO				S	Sn	06 51 22.4	+0.7
ALNE	Al Ain	3.00	216	*e*Pn	Pn	06 50 48.3	+2.4
AJN	Ajban	3.11	232	*e*Pn	Pn	06 50 48.9	+1.5
NGRK	Negar Kerman	3.24	345	*e*Pn	Pn	06 50 51.0	+1.5
ARQ	Araqi	3.33	199	P	Pn	06 50 53.1	+2.8
ARQ				S	Sb	06 51 35.7	-2.1
CHMN	Cheshme madani	3.35	358	*e*Pn	Pn	06 50 52.4	+1.5
CHMN				IAMB	IAmb	06 51 48.0	
	comp=N,0.0nm,0.6s						
WSAR	Wadi Sarin	3.36	165	Pn	Pn	06 50 51.0	+0.2
	comp=N,25nm,0.3s,baz=5.6,slow=13,SNR=108						
WSAR				Sn	Sn	06 51 29.5	-1.2
	comp=N,8.3nm,0.3s,baz=11,slow=10,SNR=3.7						
WSAR	Wadi Sarin	3.36	165	P	Pn	06 50 51.3	+0.6
WSAR				S	Sn	06 51 30.9	+0.2
SMDO	Samad	3.44	174	P	Pn	06 50 54.0	+2.0
	SNR=8.8						
KRBR	Kerman	3.56	347	*e*Pn	Pn	06 50 50.0	-3.8
KRBR	Kerman	3.56	347	AML	AML	06 51 58.0	
	comp=E,204nm,0.6s						
KRBR	Kerman	3.56	347	Pn	Pn	06 50 50.0	-3.8
TVBK	TV Kerman	3.57	347	*e*Pn	Pn	06 50 55.3	+1.4
ZHSF	Zahedan	4.13	41	*e*Pn	Pn	06 51 01.5	0.0
ZHSF	Zahedan	4.13	41	Pn	Pn	06 51 01.5	0.0
GHIR	Ghir-Karzin	4.54	294	*e*Pn	Pn	06 51 01.9	-5.3
GHIR	Ghir-Karzin	4.54	294	Pn	Pn	06 51 01.9	-5.3
JLN	Jalan Bani Buh	4.61	160	P	Pn	06 51 09.8	+1.9
ISRV	Sarvestan	4.96	306	*e*Pn	Pn	06 51 12.9	-0.2
MZR	Muzera	5.18	229	*e*Pn	Pn	06 51 16.3	+0.6
IPAR	Pars	5.28	310	*e*Pn	Pn	06 51 17.9	+0.5
IBAF	Bafgh	5.40	340	*e*Pn	Pn	06 51 20.4	+1.4
MHTO	MHTO	5.50	177	P	Pn	06 51 22.8	+2.7
BSRN	Basiran	5.59	13	*e*Pn	Pn	06 51 19.3	-2.2
BSRN	Basiran	5.59	13	Pn	Pn	06 51 19.3	-2.2
BSRN				Sg	Sb	06 52 44.3	+1.3
IKAZ	Kazeroun	6.11	304	*e*Pn	Pn	06 51 27.7	-1.2
TKDS	Koohdasht(Taba	7.11	356	*e*Pn	Pn	06 51 44.9	+2.6
GEYT	Alibeck	11.40	2	LR	LR	06 57 42.5	
	comp=E,55nm,18.3s,baz=170,slow=41						
GNI	Garni	17.36	325	LR	LR	07 02 06.0	
	comp=E,16nm,20.7s,baz=112,slow=42						
MMAI	Mount Meron Ar	20.39	294	LR	LR	07 05 08.7	
	comp=E,48nm,18.5s,baz=165,slow=45						
AKTO	Aktyubinsk	23.90	1	P	P	06 55 14.2	+2.2
	comp=E,2.5nm,0.7s,baz=169,slow=9.6,SNR=6.3						
AKTO				LR	LR	07 05 35.5	
	comp=E,36nm,18.7s,baz=160,slow=39						
BRTR	Keskin Array B	23.99	309	P	P	06 55 13.6	+0.4
	comp=E,2.3nm,0.8s,baz=131,slow=11,SNR=12						
BRTR				LR	LR	07 06 30.8	
	comp=E,58nm,18.4s,baz=106,slow=42						
MKAR	Makanchi Array	28.08	37	P	P	06 55 50.0	+0.1
	comp=E,0.2nm,0.4s,baz=227,slow=11,SNR=2.6						
BVAR	Borovoye Array	28.14	16	P	P	06 55 49.9	-0.5
	comp=E,0.4nm,0.3s,baz=188,slow=7.1,SNR=3.4						
KURBB	Kurchatov Arra	28.89	28	P	P	06 55 54.2	-2.8
	comp=E,0.3nm,0.7s,baz=229,slow=8.5,SNR=2.7						
AKASG	Malin Array Be	32.49	326	P	P	06 56 27.7	-1.1
	comp=E,0.6nm,0.3s,baz=132,slow=8.6,SNR=8.1						
GERES	GERESS Array B	40.62	315	P	P	06 57 36.6	-1.7
	comp=E,0.5nm,0.3s,baz=111,slow=7.3,SNR=4.2						
FINES	FINESS Array B	40.90	337	P	P	06 57 40.1	-0.1
	comp=E,2.7nm,0.8s,baz=151,slow=9.5,SNR=4.1						
TORD	Torodi Ar. Bea	53.95	267	P	P	06 59 21.4	-1.1
	comp=E,1.1nm,0.7s,baz=50,slow=8.6,SNR=8.0						

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*NEIC **16** 06:53:10.1±0.0, 61°.54N×141°.03W, h13^{km}, ML2.5(AEIC), ML2.6(OTT), After AEIC.*

PGC 16 06:53:11.4, 61°.56N×141°.05W, h5^{km}, ML2.6/11, 209km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.25	23	P	Pg	06 53 15.8	-0.5
YUK2				S	Sg	06 53 19.6	0.0
YUK3	Moose Creek	0.35	52	P	Pg	06 53 17.7	-0.7
YUK3				S	Sg	06 53 22.6	-0.5
YUK1	Sand Pete Hill	0.65	22	P	Pg	06 53 22.7	-1.2
YUK1				S	Sg	06 53 31.4	-0.9
PTPK	Patty Peak	0.78	242	P	Pg	06 53 25.3	-1.0
PTPK				S	Sg	06 53 36.0	-0.4
BALM	Baldy	0.82	231	*e*Pg	Pg	06 53 25.7	-1.4
BALM	Baldy	0.82	231	P	Pg	06 53 25.6	-1.5
BALM				S	Sg	06 53 37.0	-0.7
BVCY	Beaver Creek	0.86	6	P	Pg	06 53 27.0	-1.0
BVCY				S	Sg	06 53 38.2	-1.0
KIAG	Kiagna River	0.90	225	P	Pg	06 53 26.9	-1.8
KIAG				S	Sg	06 53 38.9	-1.4
TABL	Table Mountain	1.12	182	P	Pg	06 53 31.4	-1.6
TABL				S	Sg	06 53 46.0	-1.5
YUK4	Talbot Arm	1.17	99	P	Pg	06 53 32.7	-1.2
YUK4				S	Sg	06 53 49.1	-0.1
YUK6	Outpost Mounta	1.44	114	Pn	Pn	06 53 37.0	-1.3
YUK6				Sg	Sb	06 53 57.1	-0.4
SAMH	Samovar Hills	1.44	175	Pn	Pn	06 53 37.7	-0.6
SAMH				Sg	Sb	06 53 56.9	-0.5
MESA	MESA	1.45	198	Pn	Pn	06 53 38.0	-0.6
MESA				Sg	Sb	06 53 56.0	-1.9
CHX	Chaix Hills	1.50	181	*e*Pn	Pn	06 53 39.1	0.0
PCA	Pinnacle	1.52	165	*e*Pn	Pn	06 53 38.7	-0.6
PCA				*e*Sn	Sg	06 54 00.0	-0.1
PCA	Pinnacle	1.52	165	Pn	Pn	06 53 38.8	-0.5
PCA				Sg	Sn	06 53 59.2	-0.2
BCA3	Beaver Creek A	1.55	347	*e*Pn	Pn	06 53 38.6	-1.1
YUK5	Granite Creek	1.59	104	Pn	Pn	06 53 39.4	-1.1
YUK5				Sg	Sn	06 54 01.1	-0.4
SNH	Sunshine Point	1.64	213	*e*Pn	Pn	06 53 40.7	-0.2
SNH				*e*Sn	Sg	06 54 04.5	+0.5
YUK7	Dusty Glacier	1.75	125	Pn	Pn	06 53 42.9	+0.3
YUK7				Sg	Sb	06 54 06.1	-0.4
BCPM	Bancas Point	1.75	156	*e*Pn	Pn	06 53 42.6	+0.1
MENT	Mentasta	1.87	319	*e*Pn	Pn	06 53 44.8	+0.7
MENT				*e*Sn	Sg	06 54 11.2	-0.1
HYT	Haines Junctio	1.87	112	*e*Pn	Pn	06 53 43.8	-0.4
HYT				*e*Sn	Sb	06 54 09.0	-0.7
HYT	Haines Junctio	1.87	112	Pn	Pn	06 53 43.8	-0.4
HYT				Sg	Sn	06 54 08.3	+0.2
HMT	Hamilton	1.99	233	*e*Pn	Pb	06 53 47.8	-0.3
HMT				*e*		06 54 16.3	
PNL	Peninsula	2.06	156	*e*Pn	Pn	06 53 47.3	+0.5
PNL	Peninsula	2.06	156	Pn	Pn	06 53 47.4	+0.6
PNL				Sg	Sb	06 54 15.6	+0.3
RAGM	Ragged Mountai	2.12	238	*e*Pn	Pb	06 53 49.1	-1.3
SGAM	Sherman Glacie	2.29	244	*e*Pg	Pb	06 53 51.5	-1.6
EYAK	Cordova Ski Ar	2.50	248	*e*Pn	Pb	06 53 54.8	-2.0
PAX	Paxson	2.51	306	*e*Pn	Pb	06 53 55.0	-2.0
PAX	Paxson	2.51	306	Pg	Pb	06 53 55.6	-1.4
PAX				Sg	Sb	06 54 28.8	+0.6
DOT	Dot Lake	2.52	328	*e*Pn	Pn	06 53 52.4	-0.6
DOT	Dot Lake	2.52	328	Pn	Pn	06 53 52.3	-0.7
DOT				Pg	Pb	06 53 57.2	0.0
DOT				Sg	Sb	06 54 29.6	+1.2
DAWY	Dawson	2.63	16	*e*Pn	Pn	06 53 54.1	-0.4
DAWY	Dawson	2.63	16	Pn	Pn	06 53 53.8	-0.7
DAWY				Sg	Sb	06 54 32.3	+0.7
JPK	Jack Peak	2.73	262	*e*Pn	Pn	06 53 57.4	+1.5
FID	Port Fidalgo	2.75	255	*e*Pg	Pb	06 53 58.7	-2.4
FID				*e*Pg	Pn	06 53 59.1	+2.8
SCRK	Sand Creek	2.78	332	*e*Pn	Pn	06 53 56.9	+0.2
RIDG	Independent Ri	2.80	323	*e*Pn	Pn	06 53 57.4	+0.5
GLI	Glacier Island	3.00	260	*e*Pn	Pn	06 54 00.8	+1.1
SCM	Sheep Creek Mo	3.00	278	*e*Pn	Pn	06 54 01.7	+2.0
PLBC	Pleasant Camp	3.13	130	Pg	Pb	06 54 07.5	0.0
PLBC				Sg	Sg	06 54 49.6	-2.4
EGAK	Eagle	3.23	359	*e*Pn	Pn	06 54 03.2	+0.4
SML	Sawmill	3.48	277	*e*Pn	Pb	06 54 10.3	-3.2
SKAG	Skagway	3.52	124	*e*Pn	Pb	06 54 13.4	-0.8
PMR	Palmer	3.87	274	*e*Pn	Pn	06 54 13.5	+2.1
HDA	Harding Lake	3.93	319	*e*Pn	Pn	06 54 11.8	-0.5
RND	Reindeer	4.07	301	*e*Pn	Pn	06 54 17.5	+3.2
ILB	Eielson Array	4.17	323	*e*Pn	Pn	06 54 17.7	+2.0
RC01	Rabbit Creek A	4.21	267	*e*Pn	Pn	06 54 11.7	-4.5
BESE	Bessie Mountai	4.31	131	*e*Pn	Pn	06 54 17.7	+0.1
BESE	Bessie Mountai	4.31	131	Sg	Sg	06 55 25.9	-3.7
WRH	Wood River Hil	4.34	315	*e*Pn	Pn	06 54 15.6	-2.4
PRP	Porcupine Dome	4.45	335	*e*Pn	Pn	06 54 19.8	+0.2
FYU	Fort Yukon	5.35	342	*e*Pn	Pn	06 54 30.5	-1.3
DLBC	Dease Lake	6.35	115	Sg	Sg	06 56 27.4	-7.8
COLD	Coldfoot	6.93	329	*e*Pn	Pn	06 54 51.3	-2.2
INK	Inuvik	7.49	22	Sn	Sn	06 56 20.1	-6.0

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*NEIC **16** 07:02:51.2±0.0, 61°.54N×141°.09W, h1^{km}, ML2.7(OTT), ML2.7(AEIC), After AEIC.*

PGC 16 07:02:52.3, 61°.56N×141°.09W, h5^{km}, ML2.7/9, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.26	27	P	Pg	07 02 56.8	-0.5
YUK2				S	Sg	07 03 00.5	-0.3
YUK3	Moose Creek	0.37	54	P	Pg	07 02 58.8	-0.8
YUK3				S	Sg	07 03 03.8	-0.7
YUK1	Sand Pete Hill	0.65	24	P	Pg	07 03 03.7	-1.2
YUK1				S	Sg	07 03 12.3	-1.1
PTPK	Patty Peak	0.76	241	P	Pg	07 03 06.0	-0.9
PTPK				S	Sg	07 03 15.3	-1.4
BALM	Baldy	0.80	230	*e*Pg	Pg	07 03 06.2	-1.4
BALM	Baldy	0.80	230	P	Pg	07 03 06.3	-1.3
BALM				S	Sg	07 03 17.3	-0.7
BVCY	Beaver Creek	0.87	7	P	Pg	07 03 07.9	-1.0
BVCY				S	Sg	07 03 19.1	-1.0
KIAG	Kiagna River	0.88	225	P	Pg	07 03 07.6	-1.6
KIAG				S	Sg	07 03 19.8	-0.9
TABL	Table Mountain	1.12	181	P	Pg	07 03 12.2	-1.6
TABL				S	Sg	07 03 27.3	-1.0
SAMH	Samovar Hills	1.44	174	Pn	Pn	07 03 18.6	-0.5
SAMH				Sg	Sb	07 03 37.5	-0.8
MESA	MESA	1.45	197	Pn	Pn	07 03 18.8	-0.5
MESA				Sg	Sb	07 03 37.7	-0.9
YUK6	Outpost Mounta	1.46	114	Pn	Pn	07 03 17.8	-1.6
YUK6				Sg	Sb	07 03 36.9	-2.0
CHX	Chaix Hills	1.50	181	*e*Pn	Pn	07 03 20.0	+0.1
PCA	Pinnacle	1.52	164	*e*Pn	Pn	07 03 19.6	-0.6
PCA				*e*Sn	Sb	07 03 40.5	-0.1
PCA	Pinnacle	1.52	164	Pn	Pn	07 03 19.8	-0.4
PCA				Sg	Sn	07 03 39.9	-0.5
YUK5	Granite Creek	1.61	104	Pn	Pn	07 03 20.3	-1.2
YUK5				Sg	Sn	07 03 42.2	-0.6
SNH	Sunshine Point	1.63	213	*e*Pn	Pn	07 03 22.0	+0.4
SNH				*e*Sn	Sg	07 03 44.5	+0.1
YUK7	Dusty Glacier	1.77	124	Pn	Pn	07 03 23.8	+0.1
YUK7				Sg	Sb	07 03 47.8	+0.1
MENT	Mentasta	1.85	320	*e*Pn	Pn	07 03 25.2	+0.4
HYT	Haines Junctio	1.89	111	*e*Pn	Pn	07 03 24.9	-0.4
HYT				*e*Sn	Sb	07 03 50.3	-0.8
HYT	Haines Junctio	1.89	111	Pn	Pn	07 03 24.7	-0.6
HYT				Sg	Sn	07 03 50.2	+0.8
HMT	Hamilton	1.97	233	*e*Pn	Pn	07 03 27.0	+0.6
PNL	Peninsula	2.07	156	*e*Pn	Pn	07 03 28.4	+0.8
PNL	Peninsula	2.07	156	Pn	Pn	07 03 27.8	+0.1
PNL				Sg	Sb	07 03 56.8	+0.5
RAGM	Ragged Mountai	2.11	238	*e*Pn	Pn	07 03 28.2	0.0
SGAM	Sherman Glacie	2.27	244	*e*Pn	Pb	07 03 32.2	-1.5
EYAK	Cordova Ski Ar	2.48	248	*e*Pn	Pn	07 03 34.6	+1.3
PAX	Paxson	2.49	307	*e*Pn	Pn	07 03 33.3	-0.2
PAX	Paxson	2.49	307	Pg	Pn	07 03 35.3	+1.8
PAX				Sg	Sb	07 04 08.6	+0.1
DOT	Dot Lake	2.51	328	*e*Pn	Pn	07 03 33.1	-0.6
DOT	Dot Lake	2.51	328	Pn	Pn	07 03 33.0	-0.8
DOT				Pg	Pb	07 03 37.9	+0.1
DOT				Sg	Sb	07 04 10.3	+1.3
DAWY	Dawson	2.64	16	*e*Pn	Pn	07 03 35.0	-0.4
DAWY	Dawson	2.64	16	Pn	Pn	07 03 34.9	-0.6
DAWY				Sg	Sb	07 04 13.6	+0.9
JPK	Jack Peak	2.71	262	*e*Pn	Pn	07 03 38.2	+1.8
FID	Port Fidalgo	2.74	255	*e*Pn	Pn	07 03 38.0	+1.2
FID				*e*Pn	Pb	07 03 39.5	-2.1
SCRK	Sand Creek	2.77	333	*e*Pn	Pn	07 03 36.5	-0.9
GLI	Glacier Island	2.98	259	*e*Pn	Pn	07 03 41.0	+0.7
SCM	Sheep Creek Mo	2.99	278	*e*Pn	Pn	07 03 41.1	+0.8
PLBC	Pleasant Camp	3.15	130	Pg	Pb	07 03 48.6	0.0
PLBC				Sg	Sg	07 04 30.9	-2.3
EGAK	Eagle	3.23	359	*e*Pn	Pn	07 03 43.4	-0.2
SML	Sawmill	3.46	277	*e*Pn	Pn	07 03 47.6	+0.8
KNK	Knik Glacier	3.54	271	*e*Pn	Pn	07 03 47.8	-0.1
SKAG	Skagway	3.54	124	*e*Pn	Pn	07 03 48.7	+0.8
PMR	Palmer	3.85	274	*e*Pn	Pn	07 03 52.5	+0.5
HDA	Harding Lake	3.92	320	*e*Pn	Pn	07 03 52.3	-0.7
RND	Reindeer	4.05	301	*e*Pn	Pn	07 03 55.3	+0.4
ILB	Eielson Array	4.16	323	*e*Pn	Pn	07 03 55.6	-0.8
MCK	McKinley	4.23	305	*e*Pn	Pn	07 03 56.8	-0.6
BESE	Bessie Mountai	4.32	131	*e*Pn	Pn	07 03 57.7	-0.9
BESE	Bessie Mountai	4.32	131	Pn	Pn	07 03 58.7	+0.1
BESE				Sg	Sg	07 05 06.2	-4.7
WRH	Wood River Hil	4.33	316	*e*Pn	Pn	07 03 58.8	+0.2
SEW	Seward	4.34	254	*e*Pn	Pn	07 03 58.6	-0.3
CCB	Clear Creek Bu	4.35	318	*e*Pn	Pn	07 03 59.5	+0.5
PRP	Porcupine Dome	4.44	335	*e*Pn	Pn	07 03 60.0	-0.4
JIS	Juneau Island	4.71	131	*e*Pn	Pn	07 04 03.6	-0.3

KTH	Kantishna Hill	4.97	298	ePn	Pn	07 04 07.4	-0.1
FYU	Fort Yukon	5.35	342	ePn	Pn	07 04 12.7	+0.1
CNPM	China Poot	5.41	252	ePn	Pn	07 04 13.9	+0.4
DLBC	Dease Lake	6.37	115	Sg	Sg	07 06 09.6	-6.9
WRAK	Wrangell Islan	6.85	135	ePn	Pn	07 04 32.8	-0.4

NEIC 16 07:22:47.0±0.0, 58°.21N×151°.20W, h46^{km}, ML3.4(AEIC), After AEIC., Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	0.85	241	ePn	Pn	07 23 02.0	-0.6
KDAK				eSn	Sn	07 23 13.1	-0.9
CNPM	China Poot	1.32	359	ePn	Pn	07 23 08.4	-0.7
CNPM				eSn	Sn	07 23 24.5	-1.1
HOM	Homer	1.47	351	ePn	Pn	07 23 10.8	-0.3
OHAK	Old Harbor	1.49	230	ePn	Pn	07 23 10.7	-0.7
BRSE	Bradley Lake S	1.56	9	ePn	Pn	07 23 11.6	-0.7
FONW	Fourpeaked Sta	1.56	295	ePn	Pn	07 23 11.3	-1.1
BRLK	Bradley Lake	1.57	6	ePn	Pn	07 23 11.6	-0.9
AUH	Augustine H	1.65	316	ePn	Pn	07 23 12.6	-0.9
AUL	Augustine Lava	1.66	316	ePn	Pn	07 23 12.9	-0.7
AUL				eSn	Sn	07 23 34.5	+0.8
AUW	Augustine West	1.66	316	ePn	Pn	07 23 12.7	-1.0
KAHG	Katmai Hook Gl	1.79	281	ePn	Pn	07 23 14.9	-0.5
ILS	Iliamna Low So	2.00	332	ePn	Pn	07 23 17.3	-1.2
IVE	Iliamna Volcan	2.04	333	ePn	Pn	07 23 18.1	-0.9
KAHC	Katmai Hardscr	2.05	284	ePn	Pn	07 23 17.8	-1.4
SEW	Seward	2.10	25	ePn	Pn	07 23 18.9	-0.9
SII	Sitkinak Islan	2.31	226	ePn	Pn	07 23 22.6	0.0
RSO	Redoubt South	2.40	341	ePn	Pn	07 23 23.1	-0.9
KELA	Mount Kelaz	2.41	277	ePn	Pn	07 23 23.1	-0.8
RDJH	Redoubt Jeurge	2.53	342	ePn	Pn	07 23 24.6	-1.0
RC01	Rabbit Creek A	2.98	14	ePn	Pn	07 23 31.2	-0.6
SPU	Mount Spurr	3.02	352	ePn	Pn	07 23 31.6	-0.6
SPWE	Spurr West	3.15	348	ePn	Pn	07 23 34.2	0.0
CHIA	Chirikof Islan	3.37	227	ePn	Pn	07 23 36.9	-0.3
GLI	Glacier Island	3.40	36	ePn	Pn	07 23 36.7	-0.8
KNK	Knik Glacier	3.50	22	ePn	Pn	07 23 38.3	-0.7
FID	Port Fidalgo	3.51	41	ePn	Pn	07 23 38.1	-0.9
FID				ePn	Pn	07 23 38.3	-0.7
FID				eSn	Sn	07 24 14.9	-4.3
PMR	Palmer	3.55	16	ePn	Pn	07 23 39.3	-0.3
EYAK	Cordova Ski Ar	3.65	48	ePn	Pn	07 23 41.0	+0.2
SVW2	Sparrevohn	3.65	324	ePn	Pn	07 23 39.4	-1.6
JPK	Jack Peak	3.69	37	ePn	Pn	07 23 41.4	-0.2
SGAM	Sherman Glacie	3.83	51	ePn	Pn	07 23 44.2	+0.7
SML	Sawmill	3.89	21	ePn	Pn	07 23 44.5	+0.3
RAGM	Ragged Mountai	4.00	54	ePn	Pn	07 23 45.7	0.0
RAGM				eSn	Sn	07 24 31.9	+0.6
SCM	Sheep Creek Mo	4.12	26	ePn	Pn	07 23 47.8	+0.3
SCM				eSn	Sn	07 24 34.4	0.0
HMT	Hamilton	4.15	56	ePn	Pn	07 23 48.8	+1.0
CHGN	Chignik	4.36	247	ePn	Pn	07 23 49.5	-1.2
PPLA	Purkeypile	4.73	354	ePn	Pn	07 23 54.8	-1.0
DHY	Denali Highway	5.23	19	ePn	Pn	07 24 03.2	+0.5
DHY				eSn	Sn	07 25 01.1	-0.8
CAST	Castle Rocks	5.25	356	ePn	Pn	07 24 02.4	-0.5
TT01	Tatalina	5.28	335	ePn	Pn	07 24 01.9	-1.4
TTA	Tatalina	5.30	335	ePn	Pn	07 24 02.6	-1.0
BALM	Baldy	5.31	54	ePn	Pn	07 24 04.6	+0.8
KTH	Kantishna Hill	5.37	1	ePn	Pn	07 24 03.4	-1.1
PAX	Paxson	5.55	28	ePn	Pn	07 24 07.3	+0.3
MCK	McKinley	5.65	10	ePn	Pn	07 24 08.7	+0.3
BPAW	Bear Paw Mtn.	5.92	1	ePn	Pn	07 24 11.2	-0.8
PCA	Pinnacle	5.94	67	ePn	Pn	07 24 12.2	-0.2
MENT	Mentasta	6.01	35	ePn	Pn	07 24 13.9	+0.6
BCPM	Bancas Point	6.21	69	ePn	Pn	07 24 18.6	+2.6
WRH	Wood River Hil	6.46	12	ePn	Pn	07 24 19.1	-0.3
HDA	Harding Lake	6.55	16	ePn	Pn	07 24 21.3	+0.6
CCB	Clear Creek Bu	6.66	13	ePn	Pn	07 24 21.2	-1.0
SCRK	Sand Creek	6.76	28	ePn	Pn	07 24 24.5	+0.8
MLY	Manley	6.85	2	ePn	Pn	07 24 24.9	+0.1
ILB	Eielson Array	6.90	16	ePn	Pn	07 24 25.6	+0.1
PRP	Porcupine Dome	7.81	18	ePn	Pn	07 24 37.9	-0.1
EGAK	Eagle	8.15	32	ePn	Pn	07 24 43.4	+0.9
DAWY	Dawson	8.19	39	ePn	Pn	07 24 44.1	+1.1
SKAG	Skagway	8.33	75	ePn	Pn	07 24 47.0	+2.0
FYU	Fort Yukon	8.83	16	ePn	Pn	07 24 52.9	+1.1
JIS	Juneau Island	8.87	82	ePn	Pn	07 24 53.6	+1.2
AKUT	Akutan	9.09	250	ePn	Pn	07 24 54.7	-0.7
UNV	Unalaska Valle	9.61	250	ePn	Pn	07 25 01.2	-1.4

PGC 16 07:24:27.9, 61°.56N×141°.08W, h5^{km}, ML2.4/9, 210km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.26	26	P	Pg	07 24 32.2	-0.6
YUK2				S	Sg	07 24 36.2	-0.1
YUK3	Moose Creek	0.37	53	P	Pg	07 24 34.2	-0.8
YUK3				S	Sg	07 24 39.4	-0.5
YUK1	Sand Pete Hill	0.65	23	P	Pg	07 24 39.2	-1.2
YUK1				S	Sg	07 24 47.8	-1.0
PTPK	Patty Peak	0.76	241	P	Pg	07 24 41.4	-1.1
PTPK				S	Sg	07 24 51.8	-0.6
BALM	Baldy	0.81	230	P	Pg	07 24 41.7	-1.6
BALM				S	Sg	07 24 52.7	-1.0
BVCY	Beaver Creek	0.86	7	P	Pg	07 24 43.4	-1.1
BVCY				S	Sg	07 24 55.1	-0.6
KIAG	Kiagna River	0.89	225	P	Pg	07 24 43.7	-1.2
KIAG				S	Sg	07 24 55.4	-0.9
TABL	Table Mountain	1.12	182	P	Pg	07 24 47.8	-1.5
TABL				S	Sg	07 25 02.7	-1.2
YUK4	Talbot Arm	1.19	99	S	Sg	07 25 05.4	-0.6
SAMH	Samovar Hills	1.44	174	Pn	Pn	07 24 54.1	-0.6
SAMH				Sg	Sb	07 25 12.7	-1.2
MESA	MESA	1.45	197	Pn	Pn	07 24 54.3	-0.6
YUK6	Outpost Mounta	1.45	114	Pn	Pn	07 24 53.6	-1.3
YUK6				Sg	Sb	07 25 13.6	-0.7
PCA	Pinnacle	1.52	164	Pn	Pn	07 24 55.2	-0.6
PCA				Sg	Sn	07 25 15.2	-0.7
YUK5	Granite Creek	1.61	104	Sg	Sn	07 25 17.6	-0.7
YUK7	Dusty Glacier	1.76	124	Pn	Pn	07 24 59.4	+0.2
YUK7				Sg	Sb	07 25 23.3	0.0
HYT	Haines Junctio	1.88	111	Pn	Pn	07 25 00.5	-0.3
HYT				Sg	Sb	07 25 26.6	0.0
PNL	Peninsula	2.07	156	Pn	Pn	07 25 03.2	-0.1
DOT	Dot Lake	2.51	328	Pn	Pn	07 25 08.7	-0.6
DOT				Pg	Pb	07 25 13.4	0.0
DOT				Sg	Sb	07 25 46.1	+1.5
DAWY	Dawson	2.63	16	Pn	Pn	07 25 11.0	0.0
DAWY				Sg	Sb	07 25 49.0	+0.9

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*ISCJB **16** 07:37:50.7±0.4, 26°.81S±0°.03×65°.07W±0°.05, h10^{km}, mb4.0/5, Error ellipse: s-maj=6.1km s-min=3.7km az=2.3*

*SJA **16** 07:37:51.2±0.9, 26°.73S×65°.36W, h21^{km}±2^{km}, ML4.0, MW4.2, Fault plane solution: NP1:ϕ_s158.10000°, δ38.00000°, λ100.00000°.*

*NEIC **16** 07:37:55.2±1.7, 26°.87S×65°.06W, h38^{km}±15^{km}, mb4.2/3, MD4.2(SJA), Error ellipse: s-maj=12.5km s-min=7.8km az=206.0*

NEIC Felt [IV] at San Miguel de Tucuman.

*IDC **16** 07:37:55.8±1.9, 26°.84S×65°.01W, h46^{km}±18^{km}, mb3.5/2, mb1 3.8/7, mb1mx3.6/23, mbtmp3.8/7, ML3.8/5, MS3.0/1, Ms1 3.0/1, ms1mx2.5/18, Error ellipse: s-maj=26.7km s-min=25.1km az=112.0*

ISC 16 07:37:51.2±0.6, **26°.73S**±0°.03×**65°.16W**±0°.06, **h10^{km}, n57, σ1^{s}61**/58, **mb4.1**/5, **10C-3D, Tucuman Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHML	Horco Molle	0.17	252	⇑iP	Pg	07 37 55.8	+0.9
AHML				AMPG		07 37 55.9	
	comp=Z,776μm,0.1s						
AHML				iS	Sg	07 37 57.8	+0.3
AHML				AMSG		07 37 57.9	
	comp=Z,351μm,0.1s						
FSA	Cafayete	0.96	310	⇓iP	Pn	07 38 08.6	-2.4
FSA				AMPG		07 38 08.7	
	comp=Z,5μm,0.1s						
FSA				eS	Sb	07 38 19.5	-3.4
FSA				AMSG		07 38 19.9	
	comp=Z,11μm,0.6s						
FSA				IAML		07 38 20.7	
	comp=Z,6μm,0.4s						
CYA	Choya	1.80	198	⇑eP	Pb	07 38 23.4	-0.8
CYA				AMPN		07 38 23.5	
	comp=Z,128nm,0.5s						
CYA				eS	Sg	07 38 47.3	-1.7
CYA				AMSN		07 38 47.5	
	comp=Z,4μm,0.2s						
CYA				AMSN		07 38 47.6	
	comp=Z,6μm,0.6s						
CYA				IAML		07 38 49.0	
	comp=Z,737nm,0.4s						
SLA	San Lorenzo	2.03	351	⇑eP	Pb	07 38 27.9	-0.3
SLA				AMPN		07 38 28.1	
	comp=Z,128nm,0.3s						
SLA				iS	Sg	07 38 56.3	-0.1
SLA				IAML		07 39 06.0	
	comp=Z,1μm,0.6s						
AZAP	Zapla	2.50	2	⇓eP	Pn	07 38 33.5	+1.4
AZAP				iS	Sg	07 39 10.3	-1.3
AZAP				IAML		07 39 16.8	
	comp=Z,2μm,0.3s						
ACLC	CERRO LA CRUZ	3.12	210	⇑eP	Pn	07 38 41.3	+0.7
VCA	Vinchina	3.36	233	eP	Pn	07 38 45.3	+1.4
VCA				IAML		07 39 37.8	
	comp=Z,551nm,0.7s						
HJA	Humahuaca	3.52	356	⇓eP	Pn	07 38 48.6	+2.4
HJA				IAML		07 39 49.7	
	comp=Z,350nm,0.3s						
APLL	PUNTA DE LOS L	3.84	198	⇑iP	Pn	07 38 50.9	+0.4
APLL				IAML		07 40 03.3	
	comp=Z,139nm,0.6s						
AGUA	GUANDACOL	4.03	226	⇑iP	Pn	07 38 54.9	+1.9
GO02	Mina Guanaco	4.29	290	ePn	Pb	07 39 00.5	-6.4
YJA	Yavi	4.55	356	eP	Pn	07 39 03.4	+2.9
YJA				IAML		07 40 28.5	
	comp=Z,57nm,0.4s						
GO03	Copiap	4.61	258	ePn	Pn	07 39 03.1	+2.2
TCA	Tanti	4.61	174	⇑iP	Pn	07 39 02.4	+1.3
AMOG	MOGNA	5.11	214	⇑eP	Pn	07 39 08.8	+0.9
AROD	Rodeo	5.11	227	eP	Pn	07 39 10.3	+2.2
ACCO	Cerro Coronel	5.15	221	iP	Pn	07 39 09.9	+1.2
LVC	Limon Verde	5.34	319	P	Pb	07 39 16.3	-8.5
	comp=Z,3.5nm,0.3s,baz=156,slow=6.4,SNR=20						
LVC				Lg	Lg	07 40 37.4	
	comp=Z,0.6nm,0.3s,baz=68,slow=16,SNR=3.1						
LCO	Las Campanas	5.41	244	ePn	Pn	07 39 13.3	+1.1
LCO	Las Campanas	5.41	244	⇑iP	Pn	07 39 13.6	+1.5
CFA	Coronel Fontan	5.55	208	P	Pn	07 39 14.7	+0.8
	comp=Z,2.4nm,0.3s,baz=46,slow=19,SNR=53						
CFA				Lg	Lg	07 40 39.8	
	comp=Z,8.5nm,0.3s,baz=131,slow=20,SNR=4.9						
CFA				LR	LR	07 41 44.6	
	comp=Z,124nm,18.8s,baz=102,slow=42						
CFA	Coronel Fontan	5.55	208	eP	Pn	07 39 14.8	+0.9
MRA	San Martin	5.69	185	⇑eP	Pn	07 39 16.0	+0.2
MRA				IAML		07 40 53.7	
	comp=Z,120nm,0.5s						
ACAN	Cantantal	5.80	197	iP	Pn	07 39 18.6	+1.2
PB10	IPOC Station P	5.85	302	ePn	Pn	07 39 21.9	+3.9
RTCV	Cerro Valdivia	5.90	209	iP	Pn	07 39 19.1	+0.4
GO04	Tololo Observa	6.04	234	ePn	Pn	07 39 22.1	+1.3
GO04	Tololo Observa	6.04	234	iP	Pn	07 39 22.2	+1.5
RTLS	Leoncito	6.21	215	iP	Pn	07 39 24.7	+1.5
PB04	IPOC Station P	6.31	313	ePn	Pn	07 39 27.3	+2.8
ASAL	Salagasta	6.66	208	iP	Pn	07 39 29.6	+0.5
PB01	IPOC Station P	6.91	324	ePn	Pn	07 39 35.9	+3.2
ARCO	CERRO ARCO	6.92	207	iP	Pn	07 39 34.7	+1.9
CPUP	Villa Florida	7.02	88	P	Pn	07 39 35.8	+1.7
	comp=Z,0.5nm,0.3s,baz=268,slow=11,SNR=14						
CPUP				Lg	Lg	07 41 40.0	
	comp=Z,6.9nm,0.3s,baz=352,slow=20,SNR=4.9						
CPUP	Villa Florida	7.02	88	ePn	Pn	07 39 35.1	+1.1
CPUP	Villa Florida	7.02	88	iP	Pn	07 39 36.6	+2.6
AAGR	Agrelo	7.09	206	iP	Pn	07 39 36.0	+0.9
GO01	Chusmiza	7.95	331	ePn	Pn	07 39 51.4	+4.0
PEL	Peldehue	7.99	216	ePn	Pn	07 39 46.9	-0.5
PB11	IPOC Station P	8.08	328	ePn	Pn	07 39 51.2	+2.5
MNMC	Minye Minye	8.60	331	ePn	Pn	07 39 58.0	+1.9
LPAZ	La Paz	10.76	345	P	Pn	07 40 29.6	+3.7
	comp=Z,0.2nm,0.3s,baz=196,slow=5.9,SNR=7.4						
SIV	San Ignacio	11.34	20	P	Pn	07 40 34.5	+1.1
	comp=Z,0.7nm,0.3s,baz=231,slow=10,SNR=16						
SIV				S	Sn	07 42 55.8	+15
	comp=Z,0.7nm,0.3s,baz=279,slow=19,SNR=2.7						
GO09	Cerro Castillo	25.11	191	eP	P	07 43 15.1	-0.9
	comp=Z,6.3nm,1.0s						
GO10	Punta Arenas	26.76	188	eP	P	07 43 30.9	-0.1
	comp=Z,16nm,0.8s						
QSPA	South Pole Qui	63.48	180	eP	P	07 48 20.9	-0.4
	comp=Z,1.3nm,1.0s						
TOA1	Torodi Ar. Sit	76.03	67	eP	P	07 49 37.4	-1.8
TORD	Torodi Ar. Bea	76.03	67	P	P	07 49 37.4	-1.8
	comp=Z,0.9nm,0.6s,baz=292,slow=7.8,SNR=7.7						
PD31	Pinedale Array	80.34	328	eP	P	07 50 03.0	+0.2
PDAR	Pinedale Array	80.34	328	P	P	07 50 03.0	+0.2
	comp=Z,0.3nm,0.6s,baz=117,slow=6.1,SNR=4.2						
ASAR	Alice Springs	126.62	202	PKP	PKPdf	07 56 54.1	-1.3
	comp=Z,0.5nm,0.7s,baz=148,slow=1.7,SNR=6.7						
WR1	Warramunga Arr	129.90	204	ePKPdf	PKPdf	07 57 00.5	-1.3
WRA	Warramunga Arr	129.90	204	PKP	PKPdf	07 57 00.5	-1.3
	comp=Z,1.6nm,1.0s,baz=179,slow=2.3,SNR=5.1						
ZAA1	Zalesovo Array	144.94	31	ePKPbc	PKPab	07 57 28.0	+0.5
ZALV	Zalesovo Beam	144.94	31	PKP	PKPab	07 57 28.0	+0.5
	comp=Z,1.0nm,0.3s,baz=319,slow=1.5,SNR=5.4						
MK32	Makanchi Array	147.46	43	ePKPbc	PKPbc	07 57 35.5	+0.1
MKAR	Makanchi Array	147.46	43	PKPbc	PKPbc	07 57 35.5	+0.1
	comp=Z,1.0nm,0.8s,baz=290,slow=3.5,SNR=5.6						

PGC 16 08:10:01.9±0.0, **61°.56N**×**141°.07W, h5^{km}, ML2.1**/10, **210km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.26	25	P	Pg	08 10 06.4	-0.6
YUK2				S	Sg	08 10 10.1	-0.2
YUK3	Moose Creek	0.36	52	P	Pg	08 10 08.3	-0.7
YUK3				S	Sg	08 10 13.5	-0.4
YUK1	Sand Pete Hill	0.65	23	P	Pg	08 10 13.3	-1.2
YUK1				S	Sg	08 10 22.1	-0.9
PTPK	Patty Peak	0.77	242	P	Pg	08 10 15.6	-1.1
PTPK				S	Sg	08 10 25.9	-0.7
BALM	Baldy	0.81	230	P	Pg	08 10 15.8	-1.6
BALM				S	Sg	08 10 26.8	-1.0
KIAG	Kiagna River	0.89	225	P	Pg	08 10 17.2	-1.8
KIAG				S	Sg	08 10 29.4	-1.1
TABL	Table Mountain	1.12	182	P	Pg	08 10 21.7	-1.7
TABL				S	Sg	08 10 36.9	-1.0
YUK4	Talbot Arm	1.18	99	P	Pg	08 10 23.4	-1.2
SAMH	Samovar Hills	1.44	174	Pn	Pn	08 10 28.0	-0.7
SAMH				Sg	Sb	08 10 47.4	-0.4
YUK6	Outpost Mounta	1.45	114	Pn	Pn	08 10 27.6	-1.3
YUK6				Sg	Sb	08 10 47.5	-0.7
MESA	MESA	1.45	198	Pn	Pn	08 10 28.4	-0.5
MESA				Sg	Sb	08 10 48.1	-0.1
PCA	Pinnacle	1.52	164	Pn	Pn	08 10 29.3	-0.5
PCA				Sg	Sn	08 10 49.6	-0.3
YUK5	Granite Creek	1.60	104	Sg	Sn	08 10 51.7	-0.5
YUK7	Dusty Glacier	1.76	125	Pn	Pn	08 10 33.4	+0.2
HYT	Haines Junctio	1.88	111	Sg	Sb	08 10 60.0	-0.5
PNL	Peninsula	2.06	156	Pn	Pn	08 10 37.8	+0.5
PNL				Sg	Sb	08 11 06.6	+0.8
PAX	Paxson	2.50	307	Pg	Pb	08 10 45.4	-2.0
PAX				Sg	Sb	08 11 18.2	-0.2
DOT	Dot Lake	2.52	328	Pn	Pn	08 10 42.8	-0.6
DOT				Pg	Pb	08 10 47.5	-0.1
DOT				Sg	Sb	08 11 20.2	+1.4
DAWY	Dawson	2.64	16	Pn	Pn	08 10 44.7	-0.4
DAWY				Sg	Sb	08 11 23.2	+1.0
PLBC	Pleasant Camp	3.14	130	Sg	Sg	08 11 40.2	-2.4

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*IDC **16** 08:24:27.4±4.9, 39°.06N×67°.02E, h0^{km}, mb3.4/1, mb1 3.7/3, mb1mx3.4/29, mbtmp3.7/3, ML3.3/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/31, Error ellipse: s-maj=221.2km s-min=24.7km az=150.0*

*NNC **16** 08:24:36.5±11.0, 37°.08N×70°.44E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=98.3km s-min=76.7km az=159.0*

ISC 16 08:24:20.3±1.8, **37°.1N**±0°.2×**68°.8E**±0°.2, **h10^{km}, n7, σ2^{s}01**/7, **4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.13	12	P	Pb	08 26 08.7	+1.4
	3.7nm,0.3s,baz=177,slow=12,SNR=86						
KK31				⇑S	Sb	08 27 19.1	-1.6
	2.7nm,0.3s,baz=188,slow=22,SNR=13						
AAK	Ala-Archa	7.04	37	⇑P	Pn	08 26 11.9	+8.3
	3.4nm,0.5s						
AAK				⇓S	Sn	08 27 26.2	+2.4
	6.8nm,0.5s						
TKM2	Tokmak 2	7.79	40	⇑P	Pn	08 26 19.9	+5.9
	6.1nm,0.4s						
TKM2				⇑S	Sn	08 27 41.5	-0.9
	3.4nm,0.8s						
MKAR	Makanchi Array	13.92	42	Pn	Pn	08 27 37.7	+0.1
	0.1nm,0.3s,baz=236,slow=18,SNR=6.4						
MKAR				LR	LR	08 32 56.8	
	comp=Z,16nm,20.6s,baz=174,slow=38						
ZALV	Zalesovo Beam	20.15	28	P	P	08 28 52.3	-2.2
	0.7nm,0.3s,baz=223,slow=12,SNR=4.5						
JNU	Nakatsue	50.13	75	LR	LR	08 56 40.9	
	comp=Z,142nm,18.7s,baz=8.5,slow=38						
TORD	Torodi Ar. Bea	63.99	267	P	P	08 34 54.4	+0.2
	0.4nm,0.8s,baz=52,slow=6.5,SNR=4.1						

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*IDC **16** 08:36:24.9±0.7, 31°.30S×178°.20W, h0^{km}, mb4.5/9, mb1 4.6/11, mb1mx4.3/26, mbtmp4.5/11, ML4.1/2, MS3.4/4, Ms1 3.4/4, ms1mx3.1/28, Error ellipse: s-maj=24.9km s-min=19.4km az=115.0*

*ISCJB **16** 08:36:29.2±0.4, 31°.08S±0°.05×178°.32W±0°.08, h46^{km}, mb4.5/29, MS3.3/2, Error ellipse: s-maj=10.2km s-min=5.9km az=24.6*

*NEIC **16** 08:36:29.7±1.8, 30°.93S×178°.27W, h36^{km}±6^{km}, mb4.5/24, Error ellipse: s-maj=16.0km s-min=1.7km az=122.0*

ISC 16 08:36:30.4±0.5, **31°.06S**±0°.06×**178°.2W**±0°.1, **h46^{km}, n67, σ1^{s}72**/69, **mb4.6**/29, **1C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.82	8	ePn	Pn	08 36 56.8	-2.5
RAO				eSn	Sn	08 37 17.7	-3.4
MXZ	Matakaoa Point	7.10	203	ePn	Pn	08 38 12.2	+0.6
MXZ				eSn	Sn	08 39 32.1	+1.1
OUZ	Omahuta	8.04	237	ePn	Pn	08 38 25.4	+0.9
URZ	Urewera	8.15	207	Pn	Pn	08 38 22.0	-4.1
	2.8nm,0.3s,baz=293,slow=2.8,SNR=13						
URZ				Sn	Sn	08 39 52.1	-4.7
	3.2nm,0.3s,baz=2.3,slow=23,SNR=7.5						
HIZ	Hauiti	9.37	216	ePn	Pn	08 38 43.6	+0.8
THZ	Tophouse	12.85	211	ePn	Pn	08 39 29.1	-1.3
OXZ	Oxford	14.49	210	ePn	Pn	08 39 54.0	+1.4
RPZ	Rata Peaks	15.23	211	Pn	Pn	08 39 58.1	-4.2
	0.9nm,0.3s,baz=22,slow=16,SNR=4.2						
RPZ				Sn	Sn	08 42 32.7	-17
	0.6nm,0.3s,baz=234,slow=19,SNR=3.7						
RPZ				LR	LR	08 44 56.9	
	comp=Z,89nm,18.6s,baz=1.5,slow=34						
DZM	Mont Dzumac	16.39	299	LR	LR	08 45 29.0	
	comp=Z,199nm,18.0s,baz=126,slow=33						
ODZ	Otahua Downs	16.47	209	ePn	P	08 40 19.1	-1.1
	34nm,1.4s						
WHZ	Wether Hill Ro	18.31	212	eP	Pn	08 40 40.6	-0.3
	20nm,1.2s						
LHI	Lord Howe Isla	19.44	263	eP	P	08 40 52.1	-1.0
	92nm,1.4s						
ARMA	Armidale	25.91	264	eP	P	08 41 57.8	-0.6
	3.3nm,0.9s						
PPT	Papeete	29.23	69	LR	LR	08 55 26.9	
	comp=Z,46nm,18.1s,baz=334,slow=39						
TOO	Toolangi	30.55	248	eP	P	08 42 39.7	+0.1
	6.7nm,1.3s						
CTA	Charters Tower	33.75	280	P	P	08 43 09.9	+2.1
	2.5nm,0.5s,baz=102,slow=9.4,SNR=3.1						
CTAO	Charters Tower	33.75	280	eP	P	08 43 05.7	-2.1
	13nm,1.1s						
STKA	Stephens Creek	34.17	258	P	P	08 43 11.9	+0.6
	5.4nm,0.8s,baz=104,slow=12,SNR=9.6						
STKA				LR	LR	08 55 34.7	
	comp=Z,82nm,18.7s,baz=26,slow=34						
STKA	Stephens Creek	34.17	258	eP	P	08 43 11.4	+0.1
	1.2nm,0.9s						
COEN	Coen	39.30	287	eP	P	08 43 53.9	-1.2
	36nm,1.4s						
AS31	Alice Springs	42.91	268	eP	P	08 44 23.9	-0.9
	3.2nm,0.8s						
ASAR	Alice Springs	42.91	268	P	P	08 44 23.9	-0.8
	7.0nm,0.6s,baz=104,slow=7.3,SNR=110						
WB2	Warramunga Arr	43.95	273	eP	P	08 44 32.3	-0.8
	17nm,0.6s						
WRAB	Tennant Creek	43.95	273	eP	P	08 44 32.2	-1.0
	14nm,0.6s						
WRA	Warramunga Arr	43.96	273	P	P	08 44 32.4	-0.9
	14nm,0.6s,baz=99,slow=9.1,SNR=95						
FORT	Forrest	45.72	256	eP	P	08 44 47.2	+0.1
	14nm,0.8s						
SBA	Scott Base	47.37	184	eP	P	08 45 01.6	+2.3
	3.8nm,1.4s						
VNDA	Vanda	47.42	186	eP	P	08 45 01.0	+1.2
	2.5nm,1.3s						
MTN	Manton Dam	49.92	280	eP	P	08 45 19.0	-0.9
	26nm,1.3s						
QSPA	South Pole Qui	59.05	180	P	P	08 46 25.9	+0.4
	3.7nm,0.8s,baz=348,slow=0.2,SNR=21						
QSPA	South Pole Qui	59.05	180	eP	P	08 46 26.1	+0.6
	8.2nm,1.0s						
SYO	Syowa Base	76.43	193	⇓iX	P	08 48 12.0	-2.6
SYO	Syowa Base	76.43	193	⇑epP	pP	08 48 28.6	+1.7
SNAA	Sanae	77.50	178	P	P	08 48 20.0	-0.7
SNAA	Sanae	77.50	178	eP	P	08 48 19.9	-0.9
	9.6nm,1.3s						
VNA3	Neumayer Olymp	77.66	176	P	P	08 48 20.8	-0.8
VNA2	Neumayer--Watz	78.09	177	P	P	08 48 21.4	-2.5
VNA1	Neumayer--Stat	78.32	177	P	P	08 48 24.1	-1.1
MJAR	Matsushiro Arr	78.69	326	P	P	08 48 30.6	+2.9
	1.0nm,0.6s,baz=137,slow=5.4,SNR=3.0						
ADK	Adak	82.60	1	eP	P	08 48 48.7	+0.6
	10nm,0.8s						
PETK	Petropavlovsk-	86.41	346	P	P	08 49 10.0	+2.6
	3.9nm,0.8s,baz=126,slow=5.9,SNR=7.3						
PEA1	Petropavlovsk-	86.42	346	eP	P	08 49 10.0	+2.6
NJ2	Nanjing	86.55	311	eP	P	08 49 08.8	+0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMB	Columbia Colle	87.36	42	eP	P	08 49 12.9	+0.4
	comp=Z,2.1nm,0.9s						
YERR	Yerington	88.67	42	eP	P	08 49 18.8	-0.1
	comp=Z,0.7nm,1.1s						
NVAR	Mina Array Bea	88.84	43	P	P	08 49 19.9	+0.2
	comp=Z,1.1nm,0.7s,baz=220,slow=8.1,SNR=13						
NV11	Mina Array Sit	88.93	43	eP	P	08 49 20.2	+0.2
	comp=Z,0.1nm,0.9s						
Y14A	Wickenburg	89.20	49	eP	P	08 49 22.1	+0.8
	comp=Z,2.6nm,0.8s						
X16A	Lo Mia Camp, P	90.51	49	eP	P	08 49 28.5	+0.9
	comp=Z,2.2nm,0.8s						
U15A	North Rim	91.20	47	eP	P	08 49 32.1	+1.2
	comp=Z,2.2nm,0.6s						
KLR	Kul'dur	91.52	330	P	P	08 49 34.6	+3.0
	comp=Z,0.8nm,0.3s,baz=131,slow=9.3,SNR=4.3						
HHC	Hu-ho-hao-te	96.57	314	P	P	08 49 56.1	+0.9
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,80nm,4.8s						
MK32	Makanchi Array	118.07	310	ePKPdf	PKiKP	08 55 14.1	+2.1
MKAR	Makanchi Array	118.07	310	PKP	PKiKP	08 55 14.1	+2.1
	comp=Z,0.5nm,0.6s,baz=118,slow=1.0,SNR=4.2						
KSH	Kashi	120.43	300	ePKP	PKiKP	08 55 18.0	+1.1
KSH				PKS	PKSdf	08 58 53.3	-0.3
ARA0	ARCESS Array S	139.20	348	ePKPpre	PKPpre	08 55 46.7	
ARCES	ARCESS Array B	139.20	348	PKhKP	PKPpre	08 55 46.7	
	comp=Z,1.7nm,0.8s,baz=70,slow=3.0,SNR=6.5						
FIA0	FINESS Array S	145.71	339	ePKPdf	PKPdf	08 56 01.5	-1.5
FIA0				ePKPbc	PKPab	08 56 04.8	+1.0
FINES	FINESS Array B	145.71	339	PKP	PKPdf	08 56 01.5	-1.5
	comp=Z,16nm,0.6s,baz=26,slow=3.5,SNR=27						
FINES				PKPbc	PKPab	08 56 04.8	+1.0
	comp=Z,17nm,0.6s,baz=31,slow=3.2,SNR=22						
NB2	NORSAR Subarra	149.38	351	PKP	PKPbc	08 56 12.1	-1.5
	comp=Z,2.6nm,0.6s,baz=18,slow=4.1						
NB200	NORSAR Array S	149.38	351	ePKPbc	PKiKP	08 56 15.6	+0.9
NOA	NORSAR Array B	149.38	351	PKP	PKPbc	08 56 11.8	-1.8
	comp=Z,1.2nm,0.6s,baz=15,slow=4.2,SNR=13						
NOA				PKPbc	PKiKP	08 56 15.6	+0.9
	comp=Z,3.0nm,0.6s,baz=15,slow=4.1,SNR=13						
AKASG	Malin Array Be	151.72	322	PKPbc	PKiKP	08 56 21.5	+1.7
	comp=Z,4.0nm,0.5s,baz=59,slow=2.8,SNR=8.8						

BR101	**Keskin Array S**	**152.76**	**297**	*e*PKPbc	**PKiKP**	**08 56 24.3**	**+1.8**
BRTR	**Keskin Array B**	**152.76**	**297**	PKPbc	**PKiKP**	**08 56 24.3**	**+1.8**
	comp=Z,1.7nm,0.6s,baz=137,slow=4.6,SNR=9.0						
TORD	**Torodi Ar. Bea**	**162.17**	**180**	PKPab	**PKPab**	**08 57 12.4**	**-1.6**
	comp=Z,1.6nm,0.6s,baz=185,slow=3.5,SNR=11						
TOA1	**Torodi Ar. Sit**	**162.17**	**180**	*e*PKPab	**PKPab**	**08 57 12.4**	**-1.6**

ISCJB ***16*** *08:39:27.7±0.6, 37°.56N±0°.03×39°.92E±0°.03, h4^{km}±5^{km}, Error ellipse: s-maj=5.4km s-min=3.7km az=173.7*

DDA ***16*** *08:39:27.4, 37°.58N×39°.93E, h7^{km}±2^{km}, ML2.7*

ISK ***16*** *08:39:27.1, 37°.57N×39°.91E, h14^{km}, ML2.5/5*

ISC 16 08:39:28.0±1.0**, 37°.57N**±0°.04×**39°.92E**±0°.03**, h15**^{km}±9^{km}**, n13, σ0^{s}.40**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIYA	**Diyarbakir**	**0.39**	**25**	*i* P	**Pg**	**08 39 35.9**	**+0.1**
DIYA				*i* S	**Sg**	**08 39 41.4**	**+0.2**
DYBB	**Diyarbakir**	**0.42**	**25**	PG	**Pg**	**08 39 36.2**	**-0.2**
DYBB				SG	**Sg**	**08 39 42.4**	**+0.2**
MAZI	**Mazidag**	**0.44**	**105**	PG	**Pg**	**08 39 36.3**	**-0.5**
MAZI				SG	**Sg**	**08 39 43.1**	**+0.4**
MARD	**Mardin**	**0.73**	**110**	*i* P	**Pg**	**08 39 42.4**	**+0.1**
MARD				*i* S	**Sg**	**08 39 52.1**	**+0.1**
URFA	**Urfa**	**0.88**	**262**	PG	**Pb**	**08 39 44.2**	**-0.9**
URFA				SG	**Sb**	**08 39 57.2**	**+0.4**
HANI	**Diyarbakir_Han**	**0.92**	**24**	*i* P	**Pb**	**08 39 45.0**	**-0.8**
HANI				*i* S	**Sg**	**08 39 58.7**	**+0.7**
HANI				IAML_P			
	comp=Z,913nm,0.2s						
SVRC	**Sivrice-ELAZID**	**0.94**	**329**	PG	**Pb**	**08 39 45.9**	**-0.2**
BTMN	**Batman**	**1.12**	**73**	*i* P	**Pg**	**08 39 49.8**	**+0.2**
BTMN				*i* S	**Sn**	**08 40 04.4**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.17**	**60**	PN	**Pn**	**08 39 49.7**	**-0.2**
ELZG	**Elazig**	**1.18**	**322**	*i* P	**Pb**	**08 39 50.5**	**+0.3**
ELZG				*i* S	**Sn**	**08 40 06.2**	**+0.1**
SURC	**SANLIURFA_SURC**	**1.25**	**237**	*i* P	**Pb**	**08 39 51.6**	**+0.2**
SURC				*i* S	**Sb**	**08 40 07.4**	**+0.1**
SRTM	**Siirt_Merkez**	**1.64**	**75**	*i* P	**Pn**	**08 39 56.9**	**+0.4**
SRTM				*i* S	**Sb**	**08 40 18.8**	**+0.1**
AKCD	**Akcadag**	**1.73**	**295**	*i* P	**Pb**	**08 39 59.4**	**-0.3**
AKCD				*i* S	**Sg**	**08 40 23.7**	**-0.2**

UCR 16 08:53:24.6±2.4**, 11°.31N×86°.39W, h61**^{km}±58^{km}**, MW3.7, 1C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GB1A	**Borinquen Arri**	**1.09**	**117**	*e*P	Pn	08 53 45.2	+1.3
GB1A				*e*S	Sn	08 53 58.9	+0.6
BUEV	**Buena Vista**	**1.09**	**118**⇑	*e*P	Pn	08 53 45.1	+1.2
BUEV				*e*S	Sn	08 53 58.8	+0.5
MESS	**Mesas**	**1.30**	**116**	*e*P	Pn	08 53 46.7	0.0
MESS				*e*S	Sn	08 54 03.7	+0.4
CUI	**Cuipilapa**	**1.36**	**118**⇓	*e*P	Pn	08 53 47.8	+0.2
CUI				*e*S	Sn	08 54 04.6	-0.2
ARE1	**Arenal 1**	**1.84**	**117**⇓	*e*P	Pn	08 53 53.3	-0.7
SRA1	**San Ramn**	**2.23**	**123**	*e*P	Pn	08 53 58.7	-0.7
SRA1				*e*S	Sn	08 54 23.5	-2.5
LCR2	**La Lucha 2**	**2.81**	**123**	*e*P	Pn	08 54 06.9	-0.5
DRK0	**Durika**	**3.70**	**123**	*e*P	Pn	08 54 18.6	-1.0

MEX 16 08:54:35.8±0.4**, 14°.37N×92°.43W, h18**^{km}±26^{km}**, MD3.5, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.56**	**17**	*e*P	Pb	08 54 45.3	-1.7
THIG				*e*S	Sg	08 54 52.2	-2.3
PCIG		**1.53**	**330**	*e*P	Pn	08 54 58.9	-3.3
CCIG	**Comitan**	**1.92**	**8**	*e*P	Pn	08 55 05.0	-2.8
CCIG				*i* S	Sn	08 55 26.8	-4.8
TGIG		**2.48**	**345**	*i* P	Pn	08 55 12.3	-3.1
TGIG				*i* S	Sn	08 55 41.7	-3.6
CMIG	**Matias Romero**	**3.59**	**319**	*e*P	Pn	08 55 28.7	-1.9
CMIG				*i* S	Sn	08 56 08.9	-3.6

IDC 16 08:57:05.8±3.2**, 53°.82N×88°.31E, h0**^{km}**, mb1 2.8**/3**, mb1mx2.8**/55**, mbtmp2.8**/3**, ML2.3**/3**, Error ellipse: s-maj=25.8km s-min=18.9km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.07**	**275**	*i*		09 09 25.6	
	baz=91,slow=314						
ZALV	**Zalesovo Beam**	**2.07**	**275**	Pn	Pn	08 57 42.4	+0.5
	1.6nm,0.3s,baz=96,slow=15,SNR=12						
ZALV				Lg	Lg	08 58 11.2	
	4.6nm,0.3s,baz=94,slow=25,SNR=15						
KURBB	**Kurchatov Arra**	**6.81**	**246**	Pn	Pn	08 58 46.8	-0.1
	0.1nm,0.3s,baz=63,slow=14,SNR=7.7						
KURBB				Sn	Sn	09 00 04.9	-0.1
	0.0nm,0.3s,baz=34,slow=20,SNR=4.0						
KURBB				Lg	Lg	09 00 41.5	
	0.0nm,0.3s,baz=64,slow=33,SNR=5.6						
MKAR	**Makanchi Array**	**8.02**	**211**	Pn	Pn	08 59 04.7	+1.2
	0.1nm,0.3s,baz=27,slow=13,SNR=2.6						
MKAR				Sn	Sn	09 00 34.9	+0.1
	0.1nm,0.3s,baz=30,slow=27,SNR=2.7						

IDC 16 08:59:25.7±4.0**, 53°.86N×88°.17E, h0**^{km}**, mb1 2.9**/2**, mb1mx2.9**/52**, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=41.4km s-min=21.1km az=40.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.99**	**274**	*i*		09 11 39.1	
	baz=92,slow=304,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.99**	**274**	Pn	Pn	09 00 01.1	+0.5
	1.5nm,0.3s,baz=88,slow=16,SNR=5.7						
ZALV				Lg	Lg	09 00 29.3	
	3.2nm,0.3s,baz=98,slow=24,SNR=15						
KURBB	**Kurchatov Arra**	**6.75**	**245**	Pn	Pn	09 01 05.6	-0.3
	0.1nm,0.3s,baz=62,slow=14,SNR=6.1						
MKAR	**Makanchi Array**	**8.01**	**210**	Pn	Pn	09 01 24.9	+1.7
	0.1nm,0.3s,baz=24,slow=14,SNR=4.1						

IDC 16 09:03:06.8±3.1**, 32°.22S×178°.14W, h0**^{km}**, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.7**/29**, mbtmp3.7**/3**, ML2.9**/1**, Error ellipse: s-maj=72.4km s-min=37.2km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.17**	**211**	Pn	Pn	09 04 52.4	-0.5
	0.2nm,0.3s,baz=38,slow=18,SNR=1.7						
URZ				Sn	Sn	09 06 15.5	+0.5
	2.0nm,0.3s,baz=182,slow=20,SNR=9.0						
ASAR	**Alice Springs**	**42.92**	**269**	P	P	09 11 07.2	-0.3
	0.3nm,0.4s,baz=106,slow=7.6,SNR=2.9						
WRA	**Warramunga Arr**	**44.08**	**274**	P	P	09 11 17.0	+0.2
	1.0nm,0.5s,baz=103,slow=8.7,SNR=3.7						
FINES	**FINESS Array B**	**146.80**	**339**	PKPbc	PKPbc	09 22 49.2	-0.8
	1.0nm,0.5s,baz=66,slow=3.4,SNR=6.4						

IDC ***16*** *09:03:26.6±2.6, 20°.51S×178°.75W, h601^{km}±29^{km}, mb3.3/14, mb1 3.5/15, mb1mx3.4/29, mbtmp4.2/15, Error ellipse: s-maj=20.8km s-min=15.9km az=130.0*

ISCJB ***16*** *09:03:29.0±0.7, 20°.5S±0°.2×178°.9W±0°.1, h645^{km}, mb3.7/14, Error ellipse: s-maj=23.6km s-min=14.0km az=147.1*

ISC 16 09:03:30.4±0.8**, 20°.5S**±0°.2×**178°.9W**±0°.2**, h645**^{km}**, n20, σ1^{s}.15**/22**, mb3.7**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.76**	**261**	P	**P**	**09 06 24.3**	**-1.3**
	0.3nm,0.3s,baz=113,slow=18,SNR=2.5						
STKA	**Stephens Creek**	**37.04**	**244**	P	**P**	**09 09 48.6**	**+0.2**
	1.0nm,0.5s,baz=77,slow=10,SNR=5.3						
ASAR	**Alice Springs**	**43.71**	**257**	P	**P**	**09 10 41.0**	**-0.3**
	3.2nm,0.4s,baz=90,slow=8.1,SNR=75						
ASAR				PcP	**PcP**	**09 12 13.8**	**+0.5**
	0.6nm,0.5s,baz=97,slow=3.8,SNR=3.9						
ASAR				ScP	**ScP**	**09 15 08.8**	**+4.1**
	0.2nm,0.6s,baz=101,slow=4.8,SNR=3.6						
WRA	**Warramunga Arr**	**43.78**	**262**	P	**P**	**09 10 41.1**	**-0.7**
	2.6nm,0.3s,baz=93,slow=7.6,SNR=70						
QSPA	**South Pole Qui**	**69.56**	**180**	P	**P**	**09 13 36.3**	**-0.2**
	1.1nm,0.4s,baz=196,slow=1.6,SNR=8.1						
MJAR	**Matsushiro Arr**	**69.73**	**324**	P	**P**	**09 13 37.2**	**-0.5**
	1.3nm,0.5s,baz=161,slow=6.8,SNR=4.7						
ASAJ	**Asahikawa**	**73.34**	**332**	P	**P**	**09 13 59.1**	**+0.7**
	1.8nm,0.4s,baz=224,slow=13,SNR=3.4						
PETK	**Petropavlovsk-**	**76.07**	**346**	P	**P**	**09 14 13.6**	**+0.1**
	3.0nm,0.7s,baz=120,slow=7.2,SNR=8.1						
KSRS	**Korea Array**	**76.35**	**319**	P	**P**	**09 14 16.5**	**+1.2**
	1.3nm,0.7s,baz=101,slow=7.2,SNR=3.2						
USRK	**Ussuriysk Ar.**	**78.51**	**326**	P	**P**	**09 14 27.3**	**+0.6**
	1.2nm,0.7s,baz=153,slow=2.1,SNR=5.8						
NVAR	**Mina Array Bea**	**81.60**	**44**	P	**P**	**09 14 42.8**	**-0.4**
	0.8nm,0.6s,baz=225,slow=8.5,SNR=8.8						
TXAR	**Lajitas Array**	**87.76**	**58**	P	**P**	**09 15 13.3**	**+0.2**
	0.9nm,0.9s,baz=238,slow=7.2,SNR=6.1						
ILAR	**Eielson Array**	**88.51**	**13**	P	**P**	**09 15 14.3**	**-1.2**
	1.4nm,0.9s,baz=228,slow=5.7,SNR=9.6						
CMAR	**Chiang Mai Arr**	**89.34**	**290**	P	**P**	**09 15 21.4**	**+0.9**
	0.6nm,0.3s,baz=128,slow=3.7,SNR=5.4						
PDAR	**Pinedale Array**	**89.54**	**44**	P	**P**	**09 15 21.1**	**-0.1**
	0.7nm,0.6s,baz=208,slow=4.4,SNR=7.9						
ARCES	**ARCESS Array B**	**128.78**	**349**	PKP	**PKPdf**	**09 21 25.0**	**-0.4**
	1.1nm,0.7s,baz=105,slow=4.1,SNR=3.9						
AKASG	**Malin Array Be**	**142.62**	**330**	PKhKP	PKPpre	09 21 48.2	
	2.1nm,0.3s,baz=38,slow=4.4,SNR=7.1						
BRTR	**Keskin Array B**	**146.23**	**312**	PKPbc	**PKPbc**	**09 22 00.6**	**-0.2**
	1.1nm,0.7s,baz=29,slow=3.3,SNR=5.5						
CLL	**Collm**	**147.88**	**346**	*i* PKPbc	**PKPbc**	**09 22 04.6**	**+0.2**
	comp=Z,9.0nm,0.9s						
CLL				*i* PKPab	**PKPab**	**09 22 09.5**	**0.0**
	comp=Z,6.0nm,1.1s						
GERES	**GERESS Array B**	**149.98**	**343**	PKPbc	**PKiKP**	**09 22 09.9**	**-0.4**
	comp=Z,0.4nm,0.2s,baz=46,slow=2.8,SNR=5.1						

SJA ***16*** *09:19:33.6±0.4, 18°.51S×69°.44W, h137^{km}±2^{km}, ML2.8, MW3.4*

ISCJB ***16*** *09:19:34.3±0.4, 18°.56S±0°.03×69°.32W±0°.08, h135^{km}±3^{km}, mb4.1/8, Error ellipse: s-maj=12.8km s-min=5.2km az=2.3*

GUC ***16*** *09:19:35.1±0.6, 18°.57S×69°.31W, h121^{km}±3^{km}, ML3.4*

NEIC ***16*** *09:19:35.0±0.0, 18°.57S×69°.31W, h121^{km}, mb4.3/5, After GUC.*

IDC ***16*** *09:19:36.4±1.1, 18°.68S×68°.88W, h132^{km}±9^{km}, mb4.0/3, mb1 3.8/6, mb1mx3.4/30, mbtmp4.0/6, Error ellipse: s-maj=24.9km s-min=9.1km az=100.0*

ISC 16 09:19:35.0±0.7**, 18°.53S**±0°.03×**69°.22W**±0°.07**, h122**^{km}±6^{km}**, n41, σ1^{s}.46**/64**, mb4.3**/8**, 3C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.34**	**306**	*e*P	**Pn**	**09 19 53.6**	**+0.6**
PB16				*e*S	**Sn**	**09 20 08.2**	**+1.7**
PB16	**IPOC Station P**	**0.34**	**306**⇓	*e*P	**Pn**	**09 19 53.9**	**+0.9**
PB16				*i* S	**Sn**	**09 20 07.5**	**+1.0**
PB16				IAML		09 20 08.8	
	comp=N,2µm,0.4s						
MNMC	**Minye Minye**	**0.69**	**211**	*e*Pn	**Pn**	**09 19 55.3**	**+0.4**
MNMC				*e*Sn	**Sn**	**09 20 11.1**	**+1.3**
MNMC	**Minye Minye**	**0.69**	**211**⇑	*e*P	**Pn**	**09 19 54.2**	**-0.6**
MNMC				*e*S	**Sn**	**09 20 09.6**	**-0.2**
MNMC				IAML		09 20 16.2	
	comp=E,2µm,0.4s						
MNMCX	**Minye Minye**	**0.69**	**211**	*e*P	**Pn**	**09 19 55.0**	**+0.2**
MNMCX				*e*S	**Sn**	**09 20 11.3**	**+1.5**
PB12	**IPOC Station P**	**1.06**	**265**⇑	*e*P	**Pn**	**09 19 57.1**	**-0.8**
PB12				*i* S	**Sn**	**09 20 14.3**	**-0.7**
PB12				IAML		09 20 15.6	
	comp=N,1µm,0.3s						
GO01	**Chusmiza**	**1.13**	**179**	*e*Pn	**Pn**	**09 20 00.0**	**+1.0**
GO01				*e*Sn	**Sn**	**09 20 18.0**	**+0.8**
GO01	**Chusmiza**	**1.13**	**179**⇓	*e*P	**Pn**	**09 19 59.8**	**+0.8**
GO01				*e*S	**Sn**	**09 20 18.3**	**+1.1**
GO01				IAML		09 20 19.4	
	comp=N,675nm,0.7s						
PB11	**IPOC Station P**	**1.29**	**199**	*e*Pn	**Pn**	**09 20 00.6**	**+0.2**
PB11				*e*Sn	**Sn**	**09 20 19.4**	**-0.2**
PB11	**IPOC Station P**	**1.29**	**199**⇓	*e*P	**Pn**	**09 20 00.5**	**+0.1**
PB11				*i* S	**Sn**	**09 20 19.4**	**-0.2**
PB11				IAML		09 20 20.6	
	comp=E,1µm,0.3s						
PSGC	**Pisagua**	**1.36**	**219**⇓	*e*P	**Pn**	**09 20 00.8**	**-0.2**
PSGC				*i* S	**Sn**	**09 20 20.2**	**-0.7**
PSGC				IAML		09 20 24.5	
	comp=E,411nm,0.4s						
PSGCX	**Pisagua**	**1.36**	**219**	*e*P	**Pn**	**09 20 00.5**	**-0.6**
PB08	**IPOC Station P**	**1.60**	**178**	*e*P	**Pn**	**09 20 04.9**	**+0.8**
PB08				*e*S	**Sn**	**09 20 28.3**	**+2.0**
PB08	**IPOC Station P**	**1.60**	**178**⇓	*e*P	**Pn**	**09 20 04.9**	**+0.8**
PB08				*e*S	**Sn**	**09 20 27.0**	**+0.7**
LPAZ	**La Paz**	**2.46**	**25**	P	**Pn**	**09 20 17.5**	**+2.5**
	comp=E,1.4nm,0.3s,baz=211,slow=12,SNR=123						
LPAZ				S	**Sn**	**09 20 48.7**	**+3.1**
	comp=E,1.1nm,0.3s,baz=221,slow=20,SNR=6.2						
LPAZ	**La Paz**	**2.46**	**25**	*e*Pn	**Pn**	**09 20 18.1**	**+3.1**
LPAZ				*e*Sn	**Sn**	**09 20 41.3**	**-4.3**
PB01	**IPOC Station P**	**2.51**	**186**	*e*Pn	**Pn**	**09 20 15.5**	**+0.4**
PB01				*e*Sn	**Sn**	**09 20 45.5**	**-0.4**
PB01	**IPOC Station P**	**2.51**	**186**⇑	*e*P	**Pn**	**09 20 15.5**	**+0.4**
PB01				*i* S	**Sn**	**09 20 46.0**	**+0.1**
PB01				IAML		09 20 50.0	
	comp=E,145nm,0.5s						
PB02	**IPOC Station P**	**2.84**	**193**	*e*P	**Pn**	**09 20 19.3**	**-0.1**
PB02	**IPOC Station P**	**2.84**	**193**⇓	*e*P	**Pn**	**09 20 19.7**	**+0.3**
PB02				*e*S	**Sn**	**09 20 54.2**	**+0.6**
PB02				IAML		09 21 00.2	
	comp=E,269nm,0.5s						
PB03	**IPOC Station P**	**3.53**	**188**	*e*P	**Pn**	**09 20 28.8**	**+0.2**
PB04	**IPOC Station P**	**3.88**	**193**	*e*Pn	**Pn**	**09 20 36.7**	**+3.5**
PB04				*e*Sn	**Sn**	**09 21 19.5**	**+1.2**
LVC	**Limon Verde**	**4.07**	**176**	P	**Pn**	**09 20 36.9**	**+1.1**
	comp=E,3.2nm,0.3s,baz=6.0,slow=9.0,SNR=25						
LVC				S	**Sn**	**09 21 20.7**	**-2.2**
	comp=E,3.0nm,0.3s,baz=220,slow=22,SNR=8.8						
LVC	**Limon Verde**	**4.07**	**176**	*e*Pn	**Pn**	**09 20 37.4**	**+1.6**
LVC	**Limon Verde**	**4.07**	**176**	*e*P	**Pn**	**09 20 36.8**	**+1.0**
LVC				IAML		09 21 34.8	
	comp=Z,9.7nm,0.5s						
PB10	**IPOC Station P**	**5.11**	**194**	*e*Pn	**Pn**	**09 20 50.2**	**+0.8**
PB10				*e*Sn	**Sn**	**09 21 47.3**	**-0.2**
GO02	**Mina Guanaco**	**6.61**	**183**	*e*Pn	**Pn**	**09 21 08.8**	**-1.2**
GO02				*e*Sn	**Sn**	**09 22 22.6**	**-1.4**
SIV	**San Ignacio**	**8.18**	**73**	P	**Pn**	**09 21 28.9**	**-2.1**
	comp=Z,1.5nm,0.3s,baz=268,slow=9.2,SNR=36						
SIV				S	**Sn**	**09 22 57.8**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=338,slow=19,SNR=2.8						
I42A	**Draeger Farm,**	**64.69**	**344**	*e*P	**P**	**09 30 00.2**	**+0.4**
	comp=Z,2.3nm,0.5s						
H43A	**Windswept, Lux**	**64.95**	**345**	*e*P	**P**	**09 30 01.4**	**-0.2**
	comp=Z,3.6nm,0.6s						
SNAA	**Sanae**	**65.17**	**161**	*e*P	**P**	**09 30 02.6**	**-0.1**
	comp=Z,7.7nm,1.5s						
PV16	**Nyswonger Mesa**	**67.71**	**327**	*e*P	**P**	**09 30 18.3**	**-1.3**
	comp=Z,2.5nm,0.6s						
DBIC	**Dimbokro**	**68.20**	**75**	P	**P**	**09 30 21.3**	**-1.6**
	comp=Z,8.8nm,1.1s,baz=225,slow=7.1,SNR=2.7						
QSPA	**South Pole Qui**	**71.64**	**180**	*e*P	**P**	**09 30 44.6**	**+1.3**
	comp=Z,5.7nm,1.4s						
TOA1	**Torodi Ar. Sit**	**76.65**	**71**	*e*P	**P**	**09 31 12.0**	**-1.1**
TOA0	**Torodi Ar. Sit**	**76.66**	**71**	*e*P	**P**	**09 31 12.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**76.66**	**71**	P	**P**	**09 31 12.0**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=250,slow=5.4,SNR=12						
YKA	**Yellowknife Ar**	**88.31**	**341**	P	**P**	**09 32 13.2**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=132,slow=4.8,SNR=7.0						
YKB5	**Yellowknife Ar**	**88.31**	**341**	*e*P	**P**	**09 32 13.2**	**+0.8**
SONA0	**Songino Array**	**150.56**	**6**	*e*PKPbc	**PKPbc**	**09 39 13.2**	**+0.6**
SONM	**Songino Array**	**150.56**	**6**	PKPbc	**PKPbc**	**09 39 13.3**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=325,slow=1.8,SNR=3.2						

ARE ***16*** *09:27:37.0±0.0, 15°.67S×71°.91W, h20^{km}*

ISCJB ***16*** *09:27:37.9±0.2, 15°.81S±0°.03×72°.01W±0°.05, h35^{km}, mb4.8/108, MS4.4/5, Error ellipse: s-maj=7.0km s-min=2.5km az=156.4*

GCMT ***16*** *09:27:40.5±0.3, 15°.81S±0°.02×71°.83W±0°.04, h18^{km}±1^{km}, MW5.0/61, Moment Tensor Solution. s33,c41; s61,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.47±.29; $M_{\theta\theta}$5.28±.19; $M_{\phi\phi}$-2.81±.33; $M_{r\theta}$-1.75±.40; $M_{\theta\phi}$0.25±.18; $M_{\phi r}$1.06±.68; Best double couple: $M_0$4.78700×10^{16} NP1:ϕ_s122.00000°, δ70.00000°, λ-43.00000°. NP2: ϕ_s230.00000°, δ50.00000°, λ-153.00000°. Principal axes: T 5.6570, Plg12.0000°, Azm180.0000°; N -1.7400, Plg43.0000°, Azm282.0000°; P -3.9170, Plg44.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *09:27:40.5±3.0, 15°.85S×72°.25W, h39^{km}±7^{km}, mb4.9/116, ML4.5(ARE) Error ellipse: s-maj=11.6km s-min=8.0km az=54.0*

NEIC Felt [III] at Cabanaconde.

IDC ***16*** *09:27:43.2±2.0, 15°.69S×71°.80W, h52^{km}±20^{km}, mb3.8/6, mb1 4.1/13, mb1mx3.9/39, mbtmp4.2/13, ML3.7/6, MS4.4/10, Ms1 4.5/10, ms1mx4.3/28, Error ellipse: s-maj=26.2km s-min=14.5km az=54.0*

BJI ***16*** *09:27:44.1±0.0, 15°.90S×72°.00W, h60^{km}*

ISC 16 09:27:40.0±0.4**, 15°.86S**±0°.04×**72°.18W**±0°.06**, h35**^{km}**, n175, σ2^{s}.04**/187**, mb4.8**/108**, MS4.4**/5**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**3.26**	**147**	*e*P	**Pn**	**09 28 32.6**	**+3.9**
PB12				*e*S	**Sn**	**09 29 13.2**	**+6.8**
PB16	**IPOC Station P**	**3.55**	**134**	*e*P	Pn	09 28 38.4	+5.2
I08BO	**LAS PENAS INFR**	**3.60**	**96**	*i*		09 46 50.0	
	baz=279,slow=329,SNR=1.7						
LPAZ	**La Paz**	**3.92**	**97**	P	**Pn**	**09 28 41.4**	**+3.1**
	1.0nm,0.3s,baz=274,slow=13,SNR=30						
LPAZ				LR	LR	09 30 28.3	
	comp=Z,4µm,19.8s,baz=270,slow=46						
LPAZ	**La Paz**	**3.92**	**97**	*e*Pn	**Pn**	**09 28 41.8**	**+3.5**
LPAZ				*e*Sn	**Sn**	**09 29 19.4**	**-4.0**
LPAZ	**La Paz**	**3.92**	**97**	*e*P	**Pn**	**09 28 42.2**	**+3.9**
MNMC	**Minye Minye**	**4.08**	**143**	*e*Pn	**Pn**	**09 28 43.7**	**+3.5**
MNMC				*e*Sn	**Sn**	**09 29 25.4**	**-1.5**
MNMCX	**Minye Minye**	**4.08**	**143**	*e*P	**Pn**	**09 28 44.4**	**+4.2**
PSGCX	**Pisagua**	**4.20**	**152**	*e*P	**Pn**	**09 28 45.0**	**+3.3**
PB11	**IPOC Station P**	**4.56**	**149**	*e*Pn	**Pn**	**09 28 50.5**	**+3.8**
PB11				*e*Sn	**Sn**	**09 29 35.9**	**-2.7**
PB11	**IPOC Station P**	**4.56**	**149**	*e*P	**Pn**	**09 28 49.8**	**+3.1**
GO01	**Chusmiza**	**4.74**	**143**	*e*Pn	**Pn**	**09 28 53.1**	**+3.7**
GO01				*e*Sn	Sn	09 29 34.0	-9.3
PB08	**IPOC Station P**	**5.14**	**146**	*e*P	**Pn**	**09 28 57.8**	**+3.0**
PB01	**IPOC Station P**	**5.75**	**154**	*e*Pn	**Pn**	**09 29 01.7**	**-1.3**
PB01				*e*Sn	**Sn**	**09 30 05.3**	**-2.5**
PB02	**IPOC Station P**	**5.84**	**159**	*e*P	**Pn**	**09 29 06.7**	**+2.4**
NNA	**Nana**	**5.94**	**310**	P	**Pn**	**09 29 09.4**	**+3.8**
	1.3nm,0.3s,baz=178,slow=10.0,SNR=3.4						
NNA				S	Sn	09 30 25.8	+13
	baz=48,slow=21,SNR=1.7						
NNA				LR	LR	09 31 32.0	
	comp=Z,4µm,18.6s,baz=138,slow=37						
NNA	**Nana**	**5.94**	**310**	*e*Pn	**Pn**	**09 29 05.8**	**+0.2**
NNA				*e*Sn	**Sn**	**09 30 07.7**	**-4.8**
PB07	**IPOC Station P**	**6.22**	**160**	*e*P	**Pn**	**09 29 12.4**	**+2.8**
PB09	**IPOC Station P**	**6.53**	**155**	*e*P	**Pn**	**09 29 16.5**	**+2.8**
PB03	**IPOC Station P**	**6.57**	**160**	*e*P	**Pn**	**09 29 16.6**	**+2.3**
PB04	**IPOC Station P**	**6.72**	**164**	*e*Pn	**Pn**	**09 29 17.2**	**+0.8**
PB04				*e*Sn	**Sn**	**09 30 31.0**	**-0.7**
PB04	**IPOC Station P**	**6.72**	**164**	*e*P	**Pn**	**09 29 17.7**	**+1.4**
PB05	**IPOC Station P**	**7.20**	**165**	*e*P	**Pn**	**09 29 24.9**	**+2.0**
PB06	**IPOC Station P**	**7.24**	**160**	*e*P	**Pn**	**09 29 25.4**	**+1.9**
LVC	**Limon Verde**	**7.39**	**156**	P	**Pn**	**09 29 28.1**	**+2.4**
	9.2nm,0.3s,baz=336,slow=9.7,SNR=52						
LVC				S	**Sn**	**09 30 53.2**	**+4.7**
	4.1nm,0.3s,baz=176,slow=14,SNR=2.0						
LVC				LR	LR	09 32 15.7	
	comp=Z,6µm,20.4s,baz=319,slow=37						
LVC	**Limon Verde**	**7.39**	**156**	*e*Pn	**Pn**	**09 29 26.5**	**+0.7**
LVC				*e*Sn	**Sn**	**09 30 47.2**	**-1.4**
LVC	**Limon Verde**	**7.39**	**156**	*e*P	**Pn**	**09 29 28.3**	**+2.6**
LVC				IAML		09 30 58.9	
	comp=Z,20nm,0.5s						
PB10	**IPOC Station P**	**7.76**	**169**	*e*Pn	**Pn**	**09 29 30.6**	**+0.1**
PB10				*e*Sn	**Sn**	**09 30 57.6**	**+0.3**
PB10	**IPOC Station P**	**7.76**	**169**	*e*P	**Pn**	**09 29 32.1**	**+1.5**
GO02	**Mina Guanaco**	**9.56**	**166**	*e*Pn	**Pn**	**09 29 56.5**	**+0.9**
GO02				*e*Sn	**Sn**	**09 31 43.1**	**+1.1**
ATAH	**Atahualpa**	**10.60**	**324**	P	Pn	09 30 15.7	+5.9
	comp=Z,0.1nm,0.3s,baz=140,slow=16,SNR=1.6						
ATAH				S	**Sn**	**09 32 11.8**	**+4.3**
	comp=Z,0.2nm,0.3s,baz=303,slow=24,SNR=1.2						
SIV	**San Ignacio**	**10.69**	**92**	P	**Pn**	**09 30 09.4**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=293,slow=8.8,SNR=22						
SIV				S	**Sn**	**09 32 13.6**	**+4.3**
	comp=Z,0.2nm,0.3s,baz=231,slow=14,SNR=1.8						
GO03	**Copiap**	**11.81**	**172**	*e*Pn	**Pn**	**09 30 24.0**	**-2.1**
GO03				*e*Sn	**Sn**	**09 32 33.1**	**-3.6**
LCO	**Las Campanas**	**13.16**	**174**	*e*Pn	**Pn**	**09 30 44.7**	**0.0**
LCO				*e*Sn	**Sn**	**09 33 06.0**	**-3.9**
GO04	**Tololo Observa**	**14.30**	**175**	*e*Pn	**Pn**	**09 30 59.6**	**-0.6**
GO04				*e*Sn	**Sn**	**09 33 38.6**	**+0.8**
CFA	**Coronel Fontan**	**16.08**	**168**	P	**P**	**09 31 27.9**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=346,slow=13,SNR=8.8						
CFA				S	**S**	**09 34 34.2**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=359,slow=21,SNR=1.1						
CFA				LR	LR	09 37 27.1	
	comp=Z,1µm,19.6s,baz=314,slow=36						
CPUP	**Villa Florida**	**17.32**	**129**	P	**Pn**	**09 31 39.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=308,slow=13,SNR=1.9						
CPUP				LR	LR	09 39 53.3	
	comp=Z,1µm,19.4s,baz=313,slow=43						
CPUP	**Villa Florida**	**17.32**	**129**	*e*Pn	**Pn**	**09 31 38.7**	**-0.4**
CPUP				*e*Sn	**Sn**	**09 34 46.8**	**-4.1**
SOTA	**Rioblanco**	**18.41**	**346**	*e*P	**Pn**	**09 31 56.9**	**+3.8**
GO05	**Huala**	**19.07**	**179**	*e*P	**P**	**09 31 56.1**	**-3.3**
	comp=Z,83nm,1.6s						
PTGA	**Pitinga**	**19.27**	**40**	P	**P**	**09 31 59.4**	**-2.4**
	baz=219,slow=14,SNR=11						
PTGA	**Pitinga**	**19.27**	**40**	*e*P	**P**	**09 31 59.5**	**-2.3**
	comp=Z,47nm,1.5s						
ORTC	**Ortega, Tolima**	**19.88**	**351**	*e*P	**Pn**	**09 32 11.6**	**+1.3**
YOTC	**Yotoco, Valle**	**20.15**	**348**	*e*P	**P**	**09 32 10.9**	**-0.6**
ROSC	**El Rosal**	**20.68**	**354**	LR	LR	09 40 49.7	
	comp=Z,2µm,19.4s,baz=202,slow=38						
ROSC	**El Rosal**	**20.68**	**354**	*e*P	**P**	**09 32 14.2**	**-3.3**
	comp=Z,5.5nm,1.0s						
PLMC	**San Jos del P**	**21.03**	**349**	*e*P	**P**	**09 32 23.5**	**+2.5**
GUY2C	**Guyana, Caldas**	**21.19**	**351**	*e*P	**P**	**09 32 27.5**	**+4.4**
NORC	**Norcasia**	**21.45**	**353**	*e*P	**P**	**09 32 28.2**	**+2.6**
HELC	**Santa Helena**	**22.16**	**351**	*e*P	**P**	**09 32 34.8**	**+1.4**
BDFB	**Brasilia**	**23.26**	**93**	LR	LR	09 42 22.6	
	comp=Z,1µm,18.4s,baz=281,slow=38						
JTS	**Las Juntas de**	**28.90**	**333**	LR	LR	09 46 25.1	
	comp=Z,566nm,18.7s,baz=216,slow=39						
SMRT	**St. Maarten**	**34.88**	**15**	*e*P	**P**	**09 34 25.6**	**-2.6**
	comp=Z,58nm,1.1s						
HOPE	**Hope Point**	**47.28**	**152**	*e*P	**P**	**09 36 10.1**	**+0.3**
	comp=Z,632nm,1.9s						
LNIG	**Linares**	**48.47**	**326**	*e*P	**P**	**09 36 20.3**	**+0.9**
	comp=Z,14nm,1.4s						
PMSA	**Palmer Station**	**49.18**	**175**	*e*P	**P**	**09 36 24.1**	**-0.1**
	comp=Z,275nm,1.8s						
T59A	**Double "B" Far**	**52.79**	**355**	*e*P	**P**	**09 36 52.0**	**+0.3**
	comp=Z,26nm,1.5s						
CCAR	**Cane Creek**	**52.91**	**340**	*e*P	**P**	**09 36 53.4**	**+0.8**
	comp=Z,8.8nm,0.7s						
T57A	**Hurt**	**53.00**	**353**	*e*P	**P**	**09 36 53.5**	**+0.2**
	comp=Z,32nm,1.4s						
V48A	**Smith Brothers**	**53.16**	**345**	*e*P	**P**	**09 36 55.2**	**+0.6**
	comp=Z,39nm,1.9s						
WLAR	**White Oak Lake**	**53.16**	**338**	*e*P	**P**	**09 36 55.2**	**+0.6**
	comp=Z,25nm,1.0s						
JCT	**Junction City**	**53.20**	**330**	*e*P	**P**	**09 36 54.0**	**-1.0**
	comp=Z,26nm,1.8s						
WHTX	**Lake Whitney,**	**53.40**	**333**	*e*P	**P**	**09 36 57.4**	**+1.1**
	comp=Z,12nm,1.2s						
HPIG		**53.55**	**322**	*e*P	**P**	**09 36 57.9**	**+0.2**
	comp=Z,8.0nm,1.4s						
S57A	**Dark Hollow, R**	**53.72**	**353**	*e*P	**P**	**09 36 58.6**	**+0.1**
	comp=Z,34nm,1.4s						
WVT	**Waverly**	**53.79**	**344**	*e*P	**P**	**09 36 59.7**	**+0.6**
	comp=Z,5.0nm,1.1s						
R58B	**Mineral**	**53.81**	**354**	*e*P	**P**	**09 36 58.7**	**-0.5**
	comp=Z,31nm,1.9s						
UALR	**University of**	**53.88**	**339**	*e*P	**P**	**09 36 59.9**	**+0.1**
	comp=Z,29nm,1.5s						
MIAR	**Mount Ida**	**54.10**	**338**	*e*P	**P**	**09 37 02.5**	**+1.0**
	comp=Z,12nm,1.2s						
T49A	**Edmonton**	**54.17**	**347**	*e*P	**P**	**09 37 02.1**	**+0.2**
	comp=Z,11nm,1.2s						
W41B	**Gary Mavity, V**	**54.21**	**340**	*e*P	**P**	**09 37 02.4**	**+0.2**
	comp=Z,13nm,1.4s						

TXAR	**Lajitas Array**	54.25	326	P	P	09 37 04.9	+2.1
	comp=Z,1.3nm,1.0s,baz=134,slow=7.3,SNR=6.7						
W39A	**Magazine**	54.76	338	*e*P	P	09 37 06.8	+0.6
	comp=Z,9.9nm,1.1s						
X37A	**Clayton**	54.81	337	*e*P	P	09 37 09.2	+2.7
	comp=Z,13nm,1.2s						
FCAR	**Ozark Folk Cen**	54.83	340	*e*P	P	09 37 02.8	-3.9
	comp=Z,6.5nm,1.2s						
ABTX	**Abilene, Hawle**	54.91	332	*e*P	P	09 37 05.3	-2.1
	comp=Z,10.0nm,0.9s						
PBMO	**Poplar Bluff**	55.12	342	*e*P	P	09 37 09.3	+0.6
	comp=Z,6.8nm,0.9s						
R49A	**Shelbyville**	55.23	348	*e*P	P	09 37 10.6	+1.1
	comp=Z,31nm,1.9s						
WCI	**Wyandotte Cave**	55.41	347	*e*P	P	09 37 09.2	-1.7
	comp=Z,20nm,1.6s						
USIN	**University of**	55.48	345	*e*P	P	09 37 10.6	-0.8
	comp=Z,48nm,1.5s						
HHAR	**Hobbs**	55.79	339	*e*P	P	09 37 13.5	-0.2
	comp=Z,6.3nm,1.0s						
TUL1	**Leonard**	56.13	337	*e*P	P	09 37 15.5	-0.6
	comp=Z,6.5nm,0.8s						
O56A	**Blue Knob Stat**	56.16	354	*e*P	P	09 37 16.5	+0.3
	comp=Z,30nm,1.5s						
LUPA	**Lehigh Univers**	56.25	357	*e*P	P	09 37 14.9	-1.9
	comp=Z,0.6nm,0.5s						
SSPA	**Standing Stone**	56.46	355	*e*P	P	09 37 19.5	+1.2
	comp=Z,35nm,1.7s						
CCM	**Cathedral Cave**	56.54	342	*e*P	P	09 37 17.5	-1.5
	comp=Z,13nm,1.5s						
N59A	**State Game Lan**	56.59	357	*e*P	P	09 37 16.9	-2.3
	comp=Z,29nm,1.9s						
N55A	**Marion Center**	56.71	354	*e*P	P	09 37 20.3	+0.2
	comp=Z,32nm,1.3s						
O49A	**Covington**	56.90	349	*e*P	P	09 37 21.1	-0.4
	comp=Z,14nm,1.4s						
N53A	**Lisbon**	56.95	352	*e*P	P	09 37 20.7	-1.1
	comp=Z,25nm,1.5s						
N54A	**Moraine State**	57.00	353	*e*P	P	09 37 19.8	-2.3
	comp=Z,72nm,1.8s						
MNTX	**Cornudas Mount**	57.02	326	*e*P	P	09 37 21.1	-1.4
	comp=Z,4.9nm,1.3s						
MSTX	**Muleshoe**	57.49	330	*e*P	P	09 37 24.4	-1.5
	comp=Z,25nm,1.4s						
M54A	**Oil Creek Stat**	57.50	353	*e*P	P	09 37 25.1	-0.6
	comp=Z,21nm,1.3s						
N49A	**Columbus Grove**	57.58	349	*e*P	P	09 37 26.4	+0.1
	comp=Z,14nm,1.2s						
ALLY	**Alegheny Colle**	57.69	353	*e*P	P	09 37 27.8	+0.8
	comp=Z,41nm,1.4s						
AMTX	**Amarillo**	57.73	331	*e*P	P	09 37 29.9	+2.3
	comp=Z,9.5nm,1.4s						
ERPA	**Erie**	58.14	353	*e*P	P	09 37 30.4	+0.3
	comp=Z,13nm,0.8s						
TRY	**Troy**	58.32	359	*e*P	P	09 37 30.5	-0.8
	comp=Z,24nm,1.7s						
HDIL	**Hopedale**	58.34	345	*e*P	P	09 37 29.9	-1.7
	comp=Z,12nm,1.0s						
MMNY	**Mt. Morris Dam**	58.54	355	*e*P	P	09 37 32.7	-0.2
	comp=Z,24nm,1.3s						
N41A	**Harden Midland**	58.90	343	*e*P	P	09 37 35.5	+0.1
	comp=Z,8.3nm,0.8s						
J55A	**Hilton**	59.06	355	*e*P	P	09 37 36.1	-0.4
	comp=Z,64nm,1.9s						
J54A	**Appleton**	59.14	355	*e*P	P	09 37 37.6	+0.5
	comp=Z,12nm,0.8s						
PECO	**Prince Edward**	59.67	356	*e*P	P	09 37 41.7	+1.0
	comp=Z,29nm,1.5s						
LAZ	**Ladron**	60.04	327	*e*P	P	09 37 41.1	-2.7
I47A	**Gladwin**	60.65	350	*e*P	P	09 37 48.6	+1.2
	comp=Z,43nm,1.8s						
SADO	**Sadowa**	60.67	354	*e*P	P	09 37 46.5	-1.1
	comp=Z,16nm,1.3s						
KSCO	**Kaye Shedlock'**	61.57	333	*e*P	P	09 37 56.2	+2.2
	comp=Z,21nm,1.4s						
I41A	**Arkdale**	61.78	346	*e*P	P	09 37 54.6	-0.5
	comp=Z,9.0nm,1.3s						
SDCO	**Great Sand Dun**	61.84	330	*e*P	P	09 37 55.8	-0.2
	comp=Z,8.9nm,1.2s						
Q24A	**Divide**	62.66	331	*e*P	P	09 38 04.0	+2.5
	comp=Z,5.4nm,0.9s						
E46A	**Sault Ste Mari**	62.90	351	*e*P	P	09 38 02.6	0.0
	comp=Z,10nm,1.3s						
Y14A	**Wickenburg**	62.97	322	*e*P	P	09 38 03.1	-0.2
	comp=Z,9.5nm,1.6s						
WUAZ	**Wupatki**	63.17	325	*e*P	P	09 38 02.2	-2.6
	comp=Z,5.7nm,1.1s						
ECSD	**EROS Data Cent**	63.38	340	*e*P	P	09 38 06.5	+0.7
	comp=Z,18nm,1.4s						
ISCO	**Idaho Springs**	63.54	332	*e*P	P	09 38 10.1	+2.7
	comp=Z,4.1nm,1.2s						
PV13	**Radium Mtn., P**	63.79	328	*e*P	P	09 38 09.5	+0.5
	comp=Z,9.9nm,1.5s						
PV14	**Lion Creek, Pa**	64.06	328	*e*P	P	09 38 10.1	-0.6
	comp=Z,21nm,2.0s						
PV23	**Carpenter Ridg**	64.11	328	*e*P	P	09 38 08.9	-2.2
	comp=Z,28nm,2.0s						
PV21	**Cone Mtn., Par**	64.18	329	*e*P	P	09 38 11.1	-0.4
	comp=Z,14nm,1.8s						
KNB	**Kanab**	65.06	325	*e*P	P	09 38 18.5	+1.3
	comp=Z,14nm,1.4s						
C40A	**Isle Royale Na**	65.28	348	*e*P	P	09 38 14.1	-4.0
	comp=Z,15nm,1.3s						
SRU	**San Rafael Swe**	65.38	328	*e*P	P	09 38 20.3	+1.1
	comp=Z,8.1nm,1.3s						
CCUT	**Cedar City**	65.74	325	*e*P	P	09 38 18.8	-2.9
	comp=Z,4.7nm,1.2s						
TMUT	**Trail Mountain**	65.87	328	*e*P	P	09 38 23.7	+1.2
	comp=Z,12nm,1.9s						
TCRU	**Three Creeks R**	66.01	326	*e*P	P	09 38 25.8	+2.4
	comp=Z,4.9nm,0.5s						
SHPR	**Sheep Range**	66.02	323	*e*P	P	09 38 23.6	+0.1
	comp=Z,19nm,1.9s						
MPU	**Maple Canyon**	66.63	328	*e*P	P	09 38 24.7	-2.6
	comp=Z,10.0nm,1.5s						
PSUT	**Pine Spring**	66.72	325	*e*P	P	09 38 31.2	+3.3
	comp=Z,4.2nm,1.1s						
JLU	**Jordanelle**	66.97	328	*e*P	P	09 38 31.1	+1.6
	comp=Z,12nm,1.5s						
AGMN	**Agassiz Nation**	67.28	343	*e*P	P	09 38 31.0	+0.1
	comp=Z,9.8nm,1.3s						
DUG	**Dugway, Tooele**	67.37	327	*e*P	P	09 38 33.0	+1.1
	comp=Z,7.7nm,1.1s						
R11A	**Troy Canyon, C**	67.55	324	*e*P	P	09 38 34.6	+1.5
	comp=Z,16nm,2.0s						
BW06	**Boulder Array**	67.70	331	*e*P	P	09 38 33.1	-1.0
	comp=Z,8.7nm,1.5s						
PD31	**Pinedale Array**	67.70	331	*e*P	P	09 38 36.0	+1.9
PDAR	**Pinedale Array**	67.70	331	P	P	09 38 36.0	+1.9
	comp=Z,0.3nm,0.6s,baz=151,slow=6.6,SNR=7.0						
HWUT	**Hardware Ranch**	67.78	329	*e*P	P	09 38 32.9	-1.7
	comp=Z,12nm,1.8s						
MDND	**Maddock**	68.00	340	*e*P	P	09 38 35.1	-0.4
	comp=Z,25nm,1.1s						
HVU	**Hansel Valley**	68.51	328	*e*P	P	09 38 39.8	+0.7
	comp=Z,4.9nm,1.0s						
OMMB	**Old Mammoth Mi**	69.03	322	*e*P	P	09 38 43.4	+0.8
	comp=Z,7.7nm,1.3s						
ELK	**Elko**	69.04	326	*e*P	P	09 38 42.6	0.0
	comp=Z,6.1nm,1.5s						
ULM	**Lac du Bonnet**	69.06	344	*e*P	P	09 38 42.4	+0.4
	comp=Z,17nm,1.4s						
FXWY	**Fox Creek**	69.06	331	*e*P	P	09 38 41.3	-1.2
	comp=Z,9.4nm,1.8s						
NVAR	**Mina Array Bea**	69.16	323	P	P	09 38 45.2	+1.9
	comp=Z,0.8nm,1.0s,baz=144,slow=5.5,SNR=7.3						
IMW	**Indian Meadow**	69.22	331	*e*P	P	09 38 42.7	-0.9
	comp=Z,8.0nm,1.4s						
FLWY	**Flagg Ranch**	69.25	331	*e*P	P	09 38 43.7	0.0
	comp=Z,8.9nm,1.1s						
KVN	**Kaiserville**	69.46	323	*e*P	P	09 38 45.1	+0.1
	comp=Z,5.7nm,1.4s						
YHH	**Holmes Hill**	69.86	332	*e*P	P	09 38 46.9	-0.6
	comp=Z,6.5nm,1.3s						
YERR	**Yerington**	70.08	323	*e*P	P	09 38 48.3	-0.6
	comp=Z,12nm,1.5s						
DGMT	**Dagmar**	70.10	338	*e*P	P	09 38 48.9	+0.3
	comp=Z,19nm,1.3s						
GCMT	**Greycliff**	70.11	333	*e*P	P	09 38 48.6	-0.3
PAHR	**Pah Rah Range**	70.64	323	*e*P	P	09 38 50.8	-1.5
	comp=Z,8.6nm,1.2s						
HLID	**Hailey**	70.64	329	*e*P	P	09 38 50.4	-1.8
	comp=Z,4.6nm,1.3s						
MCMT	**McKenzie Canyo**	70.82	331	*e*P	P	09 38 51.5	-1.8
BOZ	**Bozeman (W)**	70.83	332	*e*P	P	09 38 53.5	+0.2
	comp=Z,5.7nm,1.4s						
MFID	**Camas Ranch**	71.25	328	*e*P	P	09 38 58.5	+2.6
	comp=Z,13nm,1.4s						
BEKR	**Beckworth**	71.31	323	*e*P	P	09 38 56.2	-0.1
	comp=Z,9.2nm,1.7s						
EGMT	**Eagleton**	71.90	334	*e*P	P	09 38 59.8	+0.2
	comp=Z,9.5nm,1.4s						
TOA1	**Torodi Ar. Sit**	78.53	73	*e*P	P	09 39 36.6	-1.8
TORD	**Torodi Ar. Bea**	78.53	73	P	P	09 39 36.6	-1.8
	comp=Z,1.4nm,0.7s,baz=253,slow=3.8,SNR=3.8						
TORD				LR	LR	10 12 55.8	
	comp=Z,251nm,20.1s,baz=305,slow=35						
NRS	**Narsarsuaq**	79.69	13	*e*P	P	09 39 41.9	-1.7
	comp=Z,27nm,0.7s						
RAR	**Rarotonga**	82.21	250	P	P	09 40 01.0	+2.9
	comp=Z,14nm,0.9s,baz=125,slow=9.0,SNR=3.0						
ESDC	**Sonseca Array**	84.10	46	LR	LR	10 13 07.3	
	comp=Z,215nm,21.7s,baz=205,slow=32						
YKA	**Yellowknife Ar**	84.88	342	P	P	09 40 11.7	+0.9
	comp=Z,1.4nm,0.8s,baz=138,slow=5.3,SNR=6.7						
YKB5	**Yellowknife Ar**	84.88	342	*e*P	P	09 40 11.7	+0.9
SUMG	**Summit**	91.03	10	*e*P	P	09 40 39.1	-1.5
	comp=Z,9.5nm,1.1s						
KSH	**Kashi**	143.57	43	*e*PKP	PKiKP	09 47 14.6	-0.3
KSH				PKS	PKSdf	09 50 48.8	+1.5
MJAR	**Matsushiro Arr**	146.06	313	PKPbc	PKPab	09 47 17.3	0.0
	comp=Z,5.4nm,1.0s,baz=79,slow=0.7,SNR=5.1						
MAJO	**Matsushiro**	146.06	313	*e*PKPbc	PKPab	09 47 17.3	0.0
MAT	**Matsushiro**	146.06	313	PKP	PKPdf	09 47 15.5	-0.3
WMQ	**Urumqi**	147.30	27	*e*PKPbc	PKPdf	09 47 17.1	-0.7
HHC	**Hu-ho-hao-te**	154.89	353	*e*PKPbc	PKPdf	09 47 27.6	-1.9
NJ2	**Nanjing**	161.01	330	*e*PKP	PKPdf	09 47 35.8	-1.3
CD2	**Chengdu**	164.57	13	PKP	PKPdf	09 47 39.1	-1.6

IDC 16 09:32:33.4±3.6, 16°.11S×71°.60W, h116^{km}±36^{km}, mb3.1/2, mb1 3.3/6, mb1mx3.2/38, mbtmp3.6/6, Error ellipse: s-maj=35.3km s-min=20.9km az=117.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	3.34	94	P	Pn	09 33 25.9	+1.3
	0.8nm,0.3s,baz=271,slow=7.7,SNR=5.8						
LPAZ				S	Sn	09 34 04.2	+0.1
	0.7nm,0.3s,baz=244,slow=19,SNR=1.7						
LVC	**Limon Verde**	6.95	159	P	Pn	09 34 12.7	-0.3
	3.8nm,0.3s,baz=326,slow=9.3,SNR=8.6						
LVC				S	Sn	09 35 32.6	+1.9
	4.2nm,0.3s,baz=1.3,slow=6.3,SNR=11						
SIV	**San Ignacio**	10.12	91	P	Pn	09 34 54.5	-1.2
	0.8nm,0.3s,baz=281,slow=8.0,SNR=9.6						
CFA	**Coronel Fontan**	15.73	169	P	Pn	09 36 07.7	-0.8
	0.1nm,0.3s,baz=327,slow=16,SNR=1.4						
TXAR	**Lajitas Array**	54.77	325	P	P	09 41 50.9	-0.4
	0.2nm,0.5s,baz=138,slow=9.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	78.06	72	P	P	09 44 20.4	+0.5
	0.5nm,0.8s,baz=263,slow=7.2,SNR=2.5						

IDC 16 09:33:49.6±5.2, 15°.74S×72°.06W, h55^{km}±47^{km}, mb3.2/2, mb1 3.7/4, mb1mx3.4/34, mbtmp3.7/4, ML2.9/2, Error ellipse: s-maj=52.2km s-min=43.2km az=45.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	3.82	99	P	Pn	09 34 46.3	-0.2
	0.3nm,0.3s,baz=265,slow=15,SNR=1.4						
LVC	**Limon Verde**	7.46	157	S	Sn	09 36 59.0	-0.5
	1.8nm,0.3s,baz=61,slow=15,SNR=6.1						
CFA	**Coronel Fontan**	16.18	168	P	Pn	09 37 33.8	+0.4
	0.2nm,0.3s,baz=332,slow=12,SNR=5.2						
TXAR	**Lajitas Array**	54.22	326	P	P	09 43 09.8	-0.2
	0.3nm,0.6s,baz=151,slow=8.2,SNR=2.8						
TORD	**Torodi Ar. Bea**	78.38	73	P	P	09 45 44.7	-0.1
	0.4nm,0.6s,baz=242,slow=6.1,SNR=1.4						
ASAR	**Alice Springs**	133.33	213	PKP	PKPdf	09 52 59.5	-0.9
	0.7nm,0.9s,baz=145,slow=3.4,SNR=3.3						
SONM	**Songino Array**	147.97	2	PKPbc	PKPbc	09 53 28.8	-0.2
	1.2nm,0.7s,baz=1.4,slow=1.7,SNR=4.0						

*NIED **16** 09:35:00, 35°.50N×141°.10E, h44^{km}, Mw4.3 Best double couple: $M_0$3.49000×10^{15} NP1:ϕ_s212.00000°, δ21.00000°, λ104.00000°. NP2:ϕ_s16.00000°, δ69.00000°, λ84.00000°.*

*IDC **16** 09:35:03.5±0.9, 35°.52N×141°.10E, h0^{km}, mb4.0/17, mb1 4.0/24, mb1mx4.0/58, mbtmp3.9/24, ML3.2/6, MS3.4/1, Ms1 3.4/1, ms1mx2.9/47, Error ellipse: s-maj=20.9km s-min=16.2km az=151.0*

*ISCJB **16** 09:35:07.3±0.5, 35°.59N±0°.03×141°.09E±0°.05, h40^{km}±4^{km}, mb4.2/33, Error ellipse: s-maj=7.4km s-min=4.9km az=175.7*

*NEIC **16** 09:35:08.2±2.3, 35°.60N×141°.06E, h32^{km}±5^{km}, mb4.5/19, Error ellipse: s-maj=9.8km s-min=7.1km az=94.0*

NEIC Recorded [1 JMA] in Chiba.

*JMA **16** 09:35:08.1±0.2, 35°.54N×141°.05E, h37^{km}±1^{km}, M3.6*

JMA Felt I J1.

ISC 16 09:35:08.0±0.9, 35°.56N±0°.04×141°.06E±0°.05, h32^{km}±6^{km}, n74, σ1^{s}.10/84, mb4.2/33, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	0.22	312	⇓P	Pb	09 35 15.3	+0.6
CHOJ				S	Sb	09 35 20.0	+0.8
JSMT	**Sammumatsuo**	0.51	280	⇓P	Pn	09 35 18.9	-0.2
JIHU	**Itakohorinouch**	0.60	313	⇓P	Pn	09 35 20.5	+0.2
JIHU				S	Sn	09 35 29.7	+0.8
JCN	**Nagara**	0.71	259	P	Pn	09 35 22.4	+0.5
BSO4	**Boso 4**	0.82	227	P	Pb	09 35 23.1	-0.6
BSO3	**Boso 3**	0.88	211	P	Pb	09 35 23.7	-0.9
BSO3				*e*X		09 35 35.0	
BSO1	**Boso 1**	0.90	184	⇓P	Pb	09 35 23.8	-1.1
BSO1				*e*X		09 35 38.3	
JYT	**Yasato**	0.97	314	⇓P	Pb	09 35 25.3	-1.1
JYT				*e*S	Sb	09 35 37.7	-1.2
MJAR	**Matsushiro Arr**	2.51	294	Pn	Pn	09 35 47.9	+1.2
	1.5nm,0.3s,baz=95,slow=9.0,SNR=66						
MJAR				LR	LR	09 36 53.5	
	comp=Z,672nm,19.2s,baz=115,slow=44						
MAJO	**Matsushiro**	2.51	294	*e*Pn	Pn	09 35 48.5	+1.8
MAJO				*e*Sn	Sn	09 36 15.2	-1.1
MAT	**Matsushiro**	2.51	294	P	Pn	09 35 48.7	+2.0
MAT				S	Sn	09 36 15.1	-1.2
JHJ2	**Mitsune**	2.65	203	*e*Pn	Pn	09 35 49.1	+0.6
JHJ2				*e*Sn	Sn	09 36 20.9	+1.4
JHJ	**Hachijo jima 2**	2.65	204	Pn	Pn	09 35 47.7	-0.9
	24nm,0.3s,baz=328,slow=23,SNR=22						
JHJ				Sn	Sn	09 36 20.8	+1.2
	45nm,0.3s,baz=298,slow=22,SNR=5.2						
INU	**Inuyama**	3.31	268	*e*Pn	Pn	09 35 58.5	+0.9
INU				*e*Sn	Sn	09 36 33.1	-2.7
ERM	**Erimo**	6.65	14	*e*Pn	Pn	09 36 43.2	-0.3
ERM				*e*Sn	Sn	09 37 56.0	-2.2
ASAJ	**Asahikawa**	8.63	7	Pn	Pn	09 37 09.9	-0.8
	1.1nm,0.3s,baz=225,slow=6.9,SNR=9.8						
ASAJ				Sn	Sn	09 38 43.5	-3.3
	0.3nm,0.3s,baz=219,slow=8.4,SNR=1.5						
JNU	**Nakatsue**	8.76	257	Pn	Pn	09 37 11.4	-1.2
	0.1nm,0.3s,baz=90,slow=20,SNR=1.9						
JNU	**Nakatsue**	8.76	257	*e*Pn	Pn	09 37 11.7	-0.8
KSRS	**Korea Array**	10.74	284	Pn	Pn	09 37 40.0	+0.4
	0.1nm,0.3s,baz=95,slow=14,SNR=2.8						
KS15	**Wonju Array Si**	10.77	284	*e*Pn	Pn	09 37 40.0	0.0
USA0B	**Ussuriysk Arra**	11.09	324	*e*Pn	Pn	09 37 43.1	-1.2
USRK	**Ussuriysk Ar.**	11.09	324	Pn	Pn	09 37 44.8	+0.5
	0.1nm,0.3s,baz=140,slow=13,SNR=4.0						
YSS	**Yuzh-Sakhalins**	11.46	6	*e*Pn	Pn	09 37 47.9	-1.4
KLR	**Kul'dur**	15.28	336	Pn	Pn	09 38 41.3	0.0
	0.1nm,0.3s,baz=180,slow=15,SNR=3.6						
ANA2	**Anatahan**	19.58	167	*e*P	P	09 39 30.1	-3.4
	53nm,0.6s						
PETK	**Petropavlovsk-**	21.11	29	P	P	09 39 49.5	-0.3
	1.1nm,0.7s,baz=216,slow=6.5,SNR=2.4						
PEA1	**Petropavlovsk-**	21.12	29	*e*P	P	09 39 49.5	-0.3
SEY	**Seymchan**	28.29	11	P	P	09 40 57.9	-0.4
	2.1nm,0.7s,baz=211,slow=18,SNR=3.5						
SONA0	**Songino Array**	28.40	306	*e*P	P	09 41 00.1	+0.5
SONM	**Songino Array**	28.40	306	P	P	09 41 00.1	+0.5
	0.9nm,0.6s,baz=85,slow=11,SNR=4.7						
TIXI	**Tiksi**	36.72	354	P	P	09 42 12.0	+0.2
	1.5nm,0.3s,baz=106,slow=4.2,SNR=3.5						
ZAA0	**Zalesovo Array**	42.71	314	*e*P	P	09 43 01.0	-0.9
	3.0nm,1.0s						
ZAA1	**Zalesovo Array**	42.71	314	*e*P	P	09 43 02.2	+0.4
ZALV	**Zalesovo Beam**	42.71	314	P	P	09 43 02.2	+0.4
	2.3nm,0.5s,baz=81,slow=7.9,SNR=5.1						
MK31	**Makanchi Array**	44.68	303	*e*P	P	09 43 16.7	-1.1
	2.3nm,1.0s						
MK32	**Makanchi Array**	44.68	303	*e*P	P	09 43 17.9	0.0
MKAR	**Makanchi Array**	44.68	303	P	P	09 43 17.9	0.0
	1.6nm,0.8s,baz=90,slow=9.0,SNR=13						
MAKZ	**Makanchi**	44.89	303	*e*P	P	09 43 18.4	-1.1
	2.2nm,0.8s						
PMG	**Port Moresby**	45.09	171	*e*P	P	09 43 22.0	+0.8
	77nm,1.4s						
TTA	**Tatalina**	46.80	34	*e*P	P	09 43 32.7	-1.7
	2.7nm,0.5s						
RC01	**Rabbit Creek A**	49.71	37	*e*P	P	09 43 57.9	+1.1
	4.2nm,0.9s						
ILAR	**Eielson Array**	50.90	32	P	P	09 44 07.5	+1.8
	0.9nm,0.6s,baz=265,slow=6.2,SNR=10.0						
ILB	**Eielson Array**	50.90	32	*e*P	P	09 44 03.4	-2.3
	3.1nm,1.3s						
AAK	**Ala-Archa**	50.95	299	*e*P	P	09 44 05.5	-1.2
	1.8nm,0.8s						
EGAK	**Eagle**	53.34	31	*e*P	P	09 44 24.2	+0.3
	3.3nm,1.3s						
EPYK	**Eagle Plains**	54.95	29	*e*P	P	09 44 37.0	+1.4
	7.1nm,1.2s						
WRAB	**Tennant Creek**	55.55	188	*e*P	P	09 44 40.5	+0.1
	36nm,1.1s						
WB2	**Warramunga Arr**	55.56	188	*e*P	P	09 44 40.8	+0.4
	26nm,0.8s						
CHGR	**Chuyangaron**	56.05	296	*e*P	P	09 44 45.8	+1.7
	10nm,0.9s						
ARU	**Arti**	57.28	319	*e*P	P	09 44 52.7	+0.3
	4.8nm,0.9s						
ABKAR	**Akbulak array**	58.68	311	*e*P	P	09 45 02.3	0.0
	2.6nm,0.8s						
RES	**Resolute Bay**	64.10	14	P	P	09 45 39.8	+1.4
	3.6nm,0.8s,baz=299,slow=4.9,SNR=3.8						
RES	**Resolute Bay**	64.10	14	*e*P	P	09 45 39.5	+1.0
	7.1nm,1.0s						
ARA0	**ARCESS Array S**	65.28	340	*e*P	P	09 45 46.1	-0.1
ARCES	**ARCESS Array B**	65.28	340	P	P	09 45 46.1	-0.1
	1.3nm,0.8s,baz=50,slow=8.4,SNR=4.2						
FIA0	**FINESS Array S**	69.99	332	*e*P	P	09 46 16.1	0.0
FINES	**FINESS Array B**	69.99	332	P	P	09 46 16.1	0.0
	2.6nm,0.7s,baz=56,slow=7.8,SNR=5.8						
KBZ	**Khabaz**	71.65	311	P	P	09 46 27.6	+1.1
	2.7nm,0.8s,baz=90,slow=3.7,SNR=4.8						
AKASG	**Malin Array Be**	75.29	322	P	P	09 46 47.8	0.0
	1.1nm,0.5s,baz=48,slow=6.1,SNR=6.3						
AKBB	**Malin Array Si**	75.29	322	*e*P	P	09 46 47.6	-0.2
	2.5nm,0.6s						
NC204	**NORSAR Array S**	75.40	338	*e*P	P	09 46 48.2	-0.1
	15nm,1.3s						
NB2	**NORSAR Subarra**	75.44	337	P	P	09 46 48.9	+0.4
	comp=Z,1.0nm,0.6s,baz=41,slow=5.9						
NB200	**NORSAR Array S**	75.44	337	*e*P	P	09 46 49.2	+0.7
NOA	**NORSAR Array B**	75.44	337	P	P	09 46 49.2	+0.7
	comp=Z,1.7nm,0.7s,baz=39,slow=5.8,SNR=7.3						
NV01	**Mina Array Sit**	76.11	53	*e*P	P	09 46 53.3	+0.4
NVAR	**Mina Array Bea**	76.11	53	P	P	09 46 53.3	+0.3
	comp=Z,0.2nm,0.7s,baz=285,slow=3.5,SNR=2.9						
PD31	**Pinedale Array**	78.91	45	*e*P	P	09 47 08.9	+0.3
PDAR	**Pinedale Array**	78.91	45	P	P	09 47 08.9	+0.3
	comp=Z,0.2nm,0.5s,baz=329,slow=2.6,SNR=4.2						
BR101	**Keskin Array S**	79.62	312	*e*P	P	09 47 13.1	+0.7
BRTR	**Keskin Array B**	79.62	312	P	P	09 47 13.1	+0.7
	comp=Z,0.9nm,0.9s,baz=126,slow=6.3,SNR=3.7						
TXAR	**Lajitas Array**	91.25	52	P	P	09 48 10.8	+0.2
	comp=Z,0.2nm,0.5s,baz=270,slow=2.7,SNR=3.0						
TOA1	**Torodi Ar. Sit**	118.16	314	*e*PKPdf	PKPdf	09 53 52.8	+0.4
TORD	**Torodi Ar. Bea**	118.16	314	PKP	PKPdf	09 53 52.8	+0.4
	comp=Z,0.4nm,0.8s,baz=7.1,slow=2.3,SNR=2.6						
LPAZ	**La Paz**	147.67	61	PKPbc	PKPbc	09 54 50.5	-0.1
	comp=Z,0.9nm,0.7s,baz=296,slow=2.5,SNR=5.3						

*BJI **16** 09:35:51.7±0.0, 6°.14S×155°.21E, h47^{km}, mb5.1/76, mB5.4/66, Ms5.4/86, Ms7 5.3/81*

*MOS **16** 09:35:51.9±0.9, 6°.16S×154°.71E, h33^{km}, mb5.6/53, MS5.6/37, Error ellipse: s-maj=7.2km s-min=5.4km az=88.8*

*NEIC **16** 09:35:53.6±2.2, 6°.29S×154°.77E, h40^{km}, mb5.4/239, ME5.0, MS5.7/696, MW6.0, MW5.9, Error ellipse: s-maj=10.6km s-min=9.6km az=193.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{18}Nm; M_{rr}1.17; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-1.19; $M_{r\theta}$0.01; $M_{\theta\phi}$0.12; $M_{\phi r}$-0.17; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s175.00000°, δ49.00000°, λ91.00000°. NP2:ϕ_s354.00000°, δ41.00000°, λ89.00000°. Principal axes: T 1.1800, Plg86.0000°, Azm92.0000°; N 0.0300, Plg0.0000°, Azm355.0000°; P -1.2100, Plg4.0000°, Azm265.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s325.00000°, δ45.00000°, λ90.00000°. NP2:ϕ_s145.00000°, δ45.00000°, λ90.00000°. Principal axes: T Plg90.0000°, Azm0.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm55.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*ISCJB **16** 09:35:53.5±0.7, 6°.26S±0°.02×154°.76E±0°.02, h48^{km}±5^{km}, mb5.4/302, MS5.7/709 Error ellipse: s-maj=3.5km s-min=2.9km az=34.3*

*NEIC **16** 09:35:54.1±0.0, 6°.34S×154°.71E, h50^{km}, Moment Tensor Solution. s193 Moment tensor: Scale 10^{17}Nm; M_{rr}8.53; $M_{\theta\theta}$-5.07; $M_{\phi\phi}$-3.46; $M_{r\theta}$2.58; $M_{\theta\phi}$3.80; $M_{\phi r}$-0.92; Best double couple: $M_0$8.80000×10^{17} NP1:ϕ_s123.00000°, δ54.00000°, λ83.00000°. NP2:ϕ_s314.00000°, δ37.00000°, λ99.00000°. Principal axes: T 9.0100, Plg79.0000°, Azm6.0000°; N -0.4700, Plg5.0000°, Azm127.0000°; P -8.5400, Plg8.0000°, Azm218.0000°;*

*IDC **16** 09:35:55.9±0.3, 6°.26S×154°.80E, h58^{km}±2^{km}, mb4.8/37, mb1 4.9/42, mb1mx4.9/46, mbtmp5.1/42, MS5.3/22, Ms1 5.3/22, ms1mx5.1/28 Error ellipse: s-maj=8.5km s-min=7.4km az=92.0*

*DJA **16** 09:35:56.0±0.2, 6°S±3°×15°5E±°, h60^{km}, M5.8/63, mb5.6/63, mB6.1/61, MLv6.2/1, Mw(mB)5.8/61, Mwp5.9/6*

*GCMT **16** 09:35:58.6±0.1, 6°.57S±0°.01×154°.69E±0°.01, h44^{km}, MW5.9/141, Moment Tensor Solution. s141, c286; s134, c368; Duration: 2^{s}.2 Moment tensor: Scale 10^{18} Nm; M_{rr}0.88±.01; $M_{\theta\theta}$-0.51±.01; $M_{\phi\phi}$-0.37±.01; $M_{r\theta}$0.05±.01; $M_{\theta\phi}$0.48±.01; $M_{\phi r}$-0.09±.01; Best double couple: $M_0$0.90600×10^{18} NP1:ϕ_s133.00000°, δ48.00000°, λ93.00000°. NP2:ϕ_s309.00000°, δ42.00000°, λ87.00000°. Principal axes: T 0.8810, Plg86.0000°, Azm78.0000°; N 0.0510, Plg2.0000°, Azm311.0000°; P -0.9320, Plg3.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 09:35:55.5±0.2, 6°.25S±0°.03×154°.81E±0°.03, h57^{km}±1^{km}, h57^{km}:pP-P, n1554, σ1^{s}.42/1210, mb5.4/300, MS5.7/713, 24C-7D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.99	122	P	Pn	09 37 23.8	+2.1
	92nm,0.3s,baz=227,slow=3.0,SNR=40						
HNR				S	Sn	09 38 34.0	+5.0
	baz=155,slow=20,SNR=1.2						
HNR				LR	LR	09 39 43.6	
	comp=Z,47μm,20.8s,baz=290,slow=38						
HNR	**Honiara**	5.99	122	*e*Pn	Pn	09 37 22.7	+1.1
HNR				*e*Sn	Sn	09 38 25.6	-3.3
HNR	**Honiara**	5.99	122	*e*P	Pn	09 37 23.0	+1.3
HNR				*e*S	Sn	09 38 37.0	+8.0
PMG	**Port Moresby**	8.21	247	P	Pn	09 37 53.7	+1.7
	100nm,0.3s,baz=67,slow=7.2,SNR=100						
PMG				S	Sn	09 39 27.0	+3.7
	63nm,0.3s,baz=82,slow=21,SNR=12						
PMG				LR	LR	09 40 57.4	
	comp=Z,49μm,21.6s,baz=52,slow=37						
PMG	**Port Moresby**	8.21	247	*e*Pn	Pn	09 37 53.2	+1.2
PMG				*e*Sn	Sn	09 39 18.0	-5.3
PMG	**Port Moresby**	8.21	247	*d iP*	Pn	09 37 53.5	+1.5
PMG				pmax	pmax		
	comp=Z,4μm,0.7s						
MANU	**Manus Island**	8.52	299	*e*Pn	Pn	09 37 55.7	-0.6
PATS	**Pohnpei**	13.46	15	*e*Pn	Pn	09 39 04.6	+0.8
PATS				*e*Sn	Sn	09 41 29.9	-1.9
PATS	**Pohnpei**	13.46	15	P	Pn	09 39 04.8	+1.0
	baz=14,SNR=3.1						
COEN	**Coen**	13.78	235	*e*Pn	Pn	09 39 08.2	+0.1
COEN	**Coen**	13.78	235	P	Pn	09 39 08.2	+0.1

	baz=14,SNR=39						
JAY	Jayapura	14.54	284	P	Pn	09 39 19.9	+1.6
	baz=122,slow=13						
GENI	Genyem	15.04	283	P	P	09 39 27.4	-1.6
MTSU	Mount Surprise	15.63	220	P	P	09 39 34.1	-1.4
	baz=16,SNR=38						
CTA	Charters Tower	16.07	210	P	Pn	09 39 39.0	+1.0
	comp=Z,2.0nm,0.3s,baz=30,slow=15,SNR=16						
CTA				S	Sn	09 42 39.1	+3.7
	comp=Z,0.2nm,0.3s,baz=265,slow=17,SNR=1.9						
CTA				LR	LR	09 45 24.5	
	comp=Z,20µm,19.4s,baz=36,slow=35						
CTA	Charters Tower	16.07	210	P	Pn	09 39 39.0	+1.0
CTAO	Charters Tower	16.07	210	*e*Pn	Pn	09 39 37.0	-1.0
	comp=Z,335nm,1.4s						
CTAO	Charters Tower	16.07	210	*e*P	Pn	09 39 37.0	-1.0
CTAO				pmax	pmax		
	comp=Z,335nm,1.4s						
BAKI	Biak	19.32	284	P	Pn	09 40 36.7	+19
DZM	Mont Dzumac	19.33	146	*e*P	P	09 40 16.5	+0.1
	comp=Z,523nm,0.9s						
DZM				*e*S	S	09 43 49.2	-3.2
	comp=Z,13µm,25.9s						
DZM				*e*LR	LR	09 44 58.5	
	comp=Z,37µm,26.2s						
DZM	Mont Dzumac	19.33	146	P	Pn	09 40 17.4	-0.6
	comp=Z,3.2nm,0.3s,baz=350,slow=9.7,SNR=49						
DZM				LR	LR	09 46 52.4	
	comp=Z,15µm,21.6s,baz=324,slow=34						
DZM	Mont Dzumac	19.33	146	*e*P	P	09 40 16.5	+0.1
	comp=Z,273nm,1.0s						
EIDS	Eidsvold	19.35	190	*e*P	P	09 40 15.9	-0.5
	comp=Z,348nm,1.4s						
EIDS	Eidsvold	19.35	190	P	P	09 40 16.8	+0.4
	baz=19,SNR=22						
TARA	Tarawa	19.60	68	*e*P	P	09 40 19.1	-0.1
	comp=Z,436nm,1.0s						
PINNC	Pines Island,	20.33	144	*e*P	P	09 40 27.9	+0.8
	comp=Z,203nm,1.0s						
PINNC				LR	LR		
	comp=Z,10µm,20.0s						
QIS	Mount Isa	20.49	225	P	P	09 40 30.0	+1.1
	baz=20,SNR=50						
RMQ	Roma	20.94	195	P	P	09 40 35.1	+1.4
	baz=21,SNR=16						
GUMO	Guam	22.04	333	P	P	09 40 47.2	+1.7
	comp=Z,72nm,0.7s,baz=163,slow=13,SNR=3.9						
GUMO				LR	LR	09 48 43.5	
	comp=Z,4µm,20.0s,baz=152,slow=35						
GUMO	Guam	22.04	333	*e*P	P	09 40 46.0	+0.4
	comp=Z,276nm,1.1s						
GUMO				LR	LR		
	comp=Z,4µm,21.0s						
FAKI	Fak Fak	22.73	277	*e*P	P	09 40 52.7	-0.3
	comp=Z,146nm,0.8s						
FAKI	Fak Fak	22.73	277	P	P	09 40 53.8	+0.8
	comp=Z,237nm,1.6s,comp=Z,6µm						
KDU	Kakadu	22.93	252	P	P	09 40 55.3	+0.3
	baz=23,SNR=11						
WC3	Warramunga Arr	24.08	234	*e*P	P	09 41 06.7	+0.8
	comp=Z,255nm,1.1s						
WRAB	Tennant Creek	24.09	234	*e*P	P	09 41 06.5	+0.7
	comp=Z,1µm,2.0s						
WRAB	Tennant Creek	24.09	234	*e*P	P	09 41 06.6	+0.7
WRAB				pmax	pmax		
	comp=Z,1µm,2.0s						
WB2	Warramunga Arr	24.09	234	*e*P	P	09 41 06.5	+0.6
	comp=Z,290nm,1.0s						
SIJI	Sorong	24.09	282	P	P	09 41 07.0	+0.9
	comp=Z,78nm,0.9s,baz=39,slow=9.0,SNR=19						
SIJI				S	S	09 45 23.0	+3.1
	comp=Z,3.9nm,0.7s,baz=149,slow=20,SNR=1.3						
SIJI				LR	LR	09 52 04.9	
	comp=Z,7µm,21.7s,baz=176,slow=40						
SWI	Sorong	24.10	282	P	P	09 41 08.1	+2.0
	comp=Z,124nm,1.1s,comp=Z,3µm						
WR1	Warramunga Arr	24.10	234	*e*P	P	09 41 06.8	+0.8
WR1				*e*PcP	PcP	09 44 46.7	+0.4
WR1				*e*S	S	09 45 21.0	+1.1
WRA	Warramunga Arr	24.10	234	P	P	09 41 06.8	+0.8
	comp=Z,116nm,1.0s,baz=63,slow=10,SNR=112						
WRA				PcP	PcP	09 44 46.7	+0.4
	comp=Z,18nm,0.8s,baz=46,slow=3.6,SNR=4.0						
WRA				S	S	09 45 21.0	+1.1
	comp=Z,6.5nm,0.8s,baz=58,slow=19,SNR=2.9						
ANA2	Anatahan	24.18	338	*e*P	P	09 41 07.4	+0.6
	comp=Z,122nm,0.7s						
ARMA	Armidale	24.23	187	*e*P	P	09 41 07.8	+0.6
	comp=Z,269nm,1.4s						
ARMA				LR	LR		
	comp=Z,23µm,21.0s						
ARMA	Armidale	24.23	187	P	P	09 41 07.7	+0.6
	baz=24,SNR=30						
MTN	Manton Dam	24.24	253	*e*P	P	09 41 07.9	+0.5
	comp=Z,157nm,0.9s						
MTN	Manton Dam	24.24	253	P	P	09 41 08.4	+1.1
	baz=24,SNR=11						
PALU	Palau	24.37	303	P	P	09 41 09.9	+1.4
	baz=24,SNR=10						
SARN	Sarigan	24.49	339	*e*P	P	09 41 09.5	-0.1
	comp=Z,50nm,1.0s						
LHI	Lord Howe Isla	25.46	172	*e*P	P	09 41 16.4	-1.8
	comp=Z,99nm,0.9s						
LHI				LR	LR		
	comp=Z,16µm,21.0s						
LHI	Lord Howe Isla	25.46	172	P	P	09 41 17.2	-1.0
	baz=26,SNR=3.6						
AS31	Alice Springs	26.54	227	*e*P	P	09 41 28.5	+0.4
	comp=Z,48nm,1.4s						
AS31				LR	LR		
	comp=Z,200nm,20.0s						
ASAR	Alice Springs	26.54	227	P	P	09 41 28.1	-0.1
	comp=Z,20nm,0.7s,baz=58,slow=8.6,SNR=233						
ASAR				PcP	PcP	09 44 51.4	-0.4
	comp=Z,12nm,0.7s,baz=59,slow=2.1,SNR=6.4						
ASAR				pPcP		09 45 05.9	
	comp=Z,9.6nm,0.6s,baz=60,slow=2.4,SNR=5.7						
ASAR				LR	LR	09 51 33.6	
	comp=Z,14µm,20.7s,baz=114,slow=35						
CMSA	Cobar Meteorol	26.57	198	P	P	09 41 27.9	-0.4
	baz=27,SNR=32						
AAI	Ambon	26.64	274	P	P	09 41 30.9	+1.8
MGCD	Mangrove Creek	27.05	187	P	P	09 41 33.5	+1.0
	baz=27,SNR=8.7						
KNRA	Kununurra	27.20	248	P	P	09 41 34.5	+0.4
	baz=27,SNR=11						
H11S3	WAKE ISLAND Hy	27.23	25	T	T	10 10 01.0	
	baz=213						
H11S2	WAKE ISLAND Hy	27.24	25	T	T	10 10 05.0	
	baz=213						
H11S1	WAKE ISLAND Hy	27.25	25	T	T	10 10 07.3	
	baz=213						
RIV	Riverview	27.65	187	P	P	09 41 38.4	+0.5
	baz=28,SNR=4.3						
NLAI	Namlea	27.77	275	P	P	09 41 41.1	+1.8
	comp=Z,113nm,1.8s						
LBMI	Labuha	27.81	281	P	P	09 41 41.7	+2.0
	comp=Z,271nm,0.9s,comp=Z,8µm						
WAKE	Wake Island	27.92	24	PFAKE		09 41 50.0	+10
WAKE				LR	LR		
	comp=Z,16µm,21.0s						
TNTI	Ternate	28.27	283	PFAKE		09 42 00.0	+16
TNTI				LR	LR		
	comp=Z,2µm,20.0s						
STKA	Stephens Creek	28.33	204	P	P	09 41 43.9	-0.2
	comp=Z,16nm,0.7s,baz=12,slow=8.8,SNR=32						
STKA				pP	pP	09 41 57.8	+0.6
	comp=Z,31nm,0.6s,baz=18,slow=11,SNR=11						
STKA				LR	LR	09 53 01.9	
	comp=Z,16µm,19.8s,baz=13,slow=36						
STKA	Stephens Creek	28.33	204	*e*P	P	09 41 43.6	-0.5
	comp=Z,14nm,0.9s						
STKA				LR	LR		
	comp=Z,3µm,20.0s						
STKA	Stephens Creek	28.33	204	P	P	09 41 43.4	-0.7
	baz=28,SNR=34						
H11N1	WAKE ISLAND Hy	28.41	24	T	T	10 11 33.1	
	baz=201,slow=76						
H11N3	WAKE ISLAND Hy	28.42	25	T	T	10 11 24.6	
	baz=201,slow=76						
H11N2	WAKE ISLAND Hy	28.43	24	T	T	10 11 39.7	
	baz=201,slow=76						
YNG	Young	28.54	191	P	P	09 41 45.6	-0.3
	baz=29,SNR=4.9						
SANI	Sanana	29.04	277	P	P	09 41 51.3	+0.7
	comp=Z,126nm,1.1s,comp=Z,3µm						
CAN	Canberra	29.42	190	*e*P	P	09 41 54.1	+0.3
	comp=Z,77nm,1.3s						
CAN				LR	LR		
	comp=Z,15µm,21.0s						
CAN	Canberra	29.42	190	*e*P	P	09 41 54.1	+0.3
CAN				pmax	pmax		
	comp=Z,77nm,1.3s						
CAN				MLR	MLR		
	comp=Z,15µm,21.0s						
SOEI	Soe	30.44	261	P	P	09 42 04.6	+1.5
HTT	Hallett	30.81	207	P	P	09 42 05.8	-0.3
	baz=31,SNR=12						
SGSI	Sangihe	30.86	288	P	P	09 42 08.9	+2.2
MILA	Mila	31.10	189	P	P	09 42 09.4	+0.9
	baz=31,SNR=3.6						
WRKA	Warakurna	31.52	231	P	P	09 42 11.7	-0.8
	baz=32,SNR=46						
DAV	Davao City (W)	32.03	294	PFAKE		09 42 30.0	+13
DAV				LR	LR		
	comp=Z,5µm,22.0s						
DAV	Davao City (W)	32.03	294⇑	*e*P	P	09 42 16.9	0.0
TOO	Toolangi	32.31	194	*e*P	P	09 42 19.2	0.0
	comp=Z,61nm,1.5s						
TOO				LR	LR		
	comp=Z,19µm,20.0s						
TOO	Toolangi	32.31	194	P	P	09 42 19.6	+0.3
	baz=32,SNR=7.2						
TOO	Toolangi	32.31	194	*e*P	P	09 42 19.2	0.0
TOO				pmax	pmax		
	comp=Z,61nm,1.5s						
TOO				MLR	MLR		
	comp=Z,19µm,20.0s						
LUWI	Luwuk	32.38	278	*e*P	P	09 42 19.3	-0.8
	comp=Z,380nm,0.8s						
LUWI	Luwuk	32.38	278	P	P	09 42 22.7	+2.7
MMRI	Maumere	32.38	264	P	P	09 42 20.8	+0.7
KCP	Kidapawan	32.45	293⇑	*e*P	P	09 42 19.6	-1.1
ARPS	Mount Arapiles	32.61	200	P	P	09 42 22.1	+0.3
	baz=33,SNR=20						
EDFI	Ende, Flores	32.92	264	P	P	09 42 24.5	-0.5
	comp=Z,153nm,0.9s,comp=Z,2µm						
KNTN	Kanton	33.54	86	PFAKE		09 42 40.0	+10
KNTN				LR	LR		
	comp=Z,4µm,18.0s						
OUZ	Omahuta	33.62	152	*e*P	P	09 42 30.8	+0.1
	comp=Z,93nm,1.0s						
OUZ				LR	LR		
	comp=Z,5µm,20.0s						
OUZ	Omahuta	33.62	152	P	P	09 42 31.4	+0.8
BKSI	Bulukumba	34.52	270	P	P	09 42 44.4	+5.7
WCZ	Waipu Caves	34.56	151	P	P	09 42 39.6	+0.9
BNSI	Bone	34.60	271	P	P	09 42 43.2	+3.8
KAPI	Kappang	34.91	270	P	P	09 42 42.3	+0.3
	comp=Z,6.9nm,0.6s,baz=40,slow=23,SNR=4.9						
KAPI				pP	pP	09 42 55.5	-0.3
	comp=Z,52nm,0.9s,baz=110,slow=6.0,SNR=9.5						
SPSI	Sidrap Palu	34.97	272	P	P	09 42 43.6	+1.0
FORT	Forrest	35.01	222	*e*P	P	09 42 43.0	+0.4
	comp=Z,101nm,0.8s						
FORT				LR	LR		
	comp=Z,14µm,22.0s						
FORT	Forrest	35.01	222	P	P	09 42 42.6	-0.1
	baz=35,SNR=18						
TTSI	Tana Toraja	35.02	274	P	P	09 42 50.2	+7.2
WBSI	Waikabubak, Su	35.23	262	P	P	09 42 46.7	+1.8
WIAZ	Waiheke Island	35.63	151	P	P	09 42 48.2	+0.3
KUZ	Kuaotunu	35.87	151	P	P	09 42 50.1	+0.1
MKAZ	Moumakai	35.89	152	P	P	09 42 50.8	+0.7
RCP	Roxas	36.48	299⇓	*e*P	P	09 42 56.9	+1.5
TOZ	Tahuroa Road	36.56	152	P	P	09 42 56.7	+0.9
MOO	Moorlands	36.67	189	P	P	09 42 58.2	+1.5
	baz=37,SNR=4.5						
PLAI	Plampang	36.79	264	P	P	09 42 57.9	-0.3
HIZ	Hauiti	36.90	153	*e*P	P	09 42 57.0	-1.7
	comp=Z,136nm,1.2s						
HIZ				LR	LR		
	comp=Z,4µm,20.0s						
HIZ	Hauiti	36.90	153	P	P	09 43 00.1	+1.3
PSAD2	Pilbara Seismi	36.99	242	PFAKE		09 43 10.0	+10
PSAD2				LR	LR		
	comp=Z,18µm,20.0s						
PSAC2	Pilbara Seismi	37.02	242	PFAKE		09 43 10.0	+10
PSAC2				LR	LR		
	comp=Z,19µm,20.0s						
MBWA	Marble Bar	37.05	243	PFAKE		09 43 10.0	+10
MBWA				LR	LR		
	comp=Z,16µm,20.0s						
PSAD1	Pilbara Seismi	37.05	242	PFAKE		09 43 10.0	+10
PSAD1				LR	LR		
	comp=Z,20µm,21.0s						
PSAB2	Pilbara Seismi	37.06	242	PFAKE		09 43 10.0	+10
PSAB2				LR	LR		
	comp=Z,19µm,20.0s						
TLZ	Tolley Road	37.06	152	P	P	09 43 00.9	+0.8
PSAA3	Pilbara Seismi	37.07	242	PFAKE		09 43 10.0	+10
PSAA3				LR	LR		
	comp=Z,19µm,20.0s						
PSAA2	Pilbara Seismi	37.07	242	PFAKE		09 43 10.0	+10
PSAA2				LR	LR		
	comp=Z,18µm,20.0s						
PSAB3	Pilbara Seismi	37.08	242	PFAKE		09 43 10.0	+9.5
PSAB3				LR	LR		
	comp=Z,19µm,20.0s						
PSA00	Pilbara Seismi	37.08	242	*e*P	P	09 43 00.8	+0.3
	comp=Z,168nm,1.5s						
PSA00				LR	LR		
	comp=Z,18µm,19.0s						
PSAA1	Pilbara Seismi	37.09	242	PFAKE		09 43 10.0	+9.4
PSAA1				LR	LR		
	comp=Z,19µm,19.0s						
PSAB1	Pilbara Seismi	37.10	242	PFAKE		09 43 10.0	+9.3
PSAB1				LR	LR		
	comp=Z,19µm,20.0s						
PSAC1	Pilbara Seismi	37.10	242	PFAKE		09 43 10.0	+9.3
PSAC1				LR	LR		
	comp=Z,20µm,19.0s						
PSAC3	Pilbara Seismi	37.11	242	PFAKE		09 43 10.0	+9.2
PSAC3				LR	LR		
	comp=Z,18µm,19.0s						
TAU	Tasmania Unive	37.11	189	*e*P	P	09 43 01.9	+1.5
	comp=Z,92nm,1.0s						
TAU	Tasmania Unive	37.11	189	*e*P	P	09 43 01.9	+1.5
TAU				pmax	pmax		
	comp=Z,92nm,1.0s						
OPRZ	Ohinepanea	37.15	151	P	P	09 43 01.5	+0.6
PSAD3	Pilbara Seismi	37.16	242	PFAKE		09 43 10.0	+8.8
PSAD3				LR	LR		
	comp=Z,19µm,20.0s						
VRZ	Vera Road	37.36	154	P	P	09 43 06.8	+4.1
HAZ	Te Kaha	37.68	150	P	P	09 43 06.5	+1.1
URZ	Urewera	37.74	151	P	P	09 43 06.2	+0.3
	comp=Z,91nm,1.0s,baz=337,slow=3.9,SNR=23						
URZ	Urewera	37.74	151	*e*P	P	09 43 05.3	-0.6
	comp=Z,134nm,1.2s						
URZ				LR	LR		
	comp=Z,4µm,20.0s						
URZ	Urewera	37.74	151	P	P	09 43 06.2	+0.3
OTVZ	Oturere	37.79	153	P	P	09 43 07.9	+1.4
RUGZ	Raukumara Rang	37.79	150	P	P	09 43 07.5	+1.1
MXZ	Matakaoa Point	37.80	149	*e*P	P	09 43 06.6	+0.2
	comp=Z,251nm,1.4s						
MXZ				LR	LR		
	comp=Z,4µm,18.0s						
MXZ	Matakaoa Point	37.80	149	P	P	09 43 07.5	+1.1
MRHZ	Matea Rd	37.87	152	P	P	09 43 09.2	+2.2
TUVZ	Tukino	37.87	153	P	P	09 43 08.9	+1.7
QRZ	Quartz Range	37.90	158	P	P	09 43 08.0	+0.8
PKGZ	Pakihiroa	37.93	149	P	P	09 43 07.8	+0.2
WAZ	Wanganui	37.98	154	P	P	09 43 11.8	+3.8
MWZ	Matawai	38.01	150	P	P	09 43 09.7	+1.5
WMGZ	Waiomatatini S	38.05	149	P	P	09 43 08.8	+0.3
PUZ	Puketiti	38.17	149	P	P	09 43 09.1	-0.4
BKZ	Black Stump Fm	38.17	152	*e*P	P	09 43 09.9	+0.3
	comp=Z,171nm,1.6s						
BKZ				LR	LR		
	comp=Z,7µm,21.0s						
NNZ	Nelson	38.56	157	P	P	09 43 15.4	+2.6
THZ	Tophouse	38.86	158	*e*P	P	09 43 15.1	-0.2
	comp=Z,61nm,0.7s						
THZ				LR	LR		
	comp=Z,8µm,20.0s						
SNZO	South Karori	39.16	156	*e*P	P	09 43 18.3	+0.6
	comp=Z,95nm,0.9s						
SNZO				LR	LR		
	comp=Z,8µm,22.0s						
TGY	Tagaytay City	39.23	301	P	P	09 43 18.9	+0.2
	comp=Z,90nm,0.3s,baz=158,slow=16,SNR=1.8						
BFZ	Birch Farm	39.29	154	*e*P	P	09 43 18.6	-0.2
	comp=Z,90nm,1.1s						
BFZ				LR	LR		
	comp=Z,5µm,22.0s						
FOZ	Fox Glacier	39.41	163	*e*P	P	09 43 19.7	-0.1
	comp=Z,126nm,1.4s						
FOZ				LR	LR		
	comp=Z,12µm,20.0s						
LTZ	Lake Taylor	39.52	160	*e*P	P	09 43 20.9	0.0
	comp=Z,181nm,1.3s						
LTZ				LR	LR		
	comp=Z,15µm,19.0s						
KHZ	Kahutara	39.66	158	*e*P	P	09 43 20.6	-1.3
	comp=Z,333nm,1.8s						
KHZ				LR	LR		
	comp=Z,10µm,20.0s						
KMBL	Kambalda	39.67	227	P	P	09 43 22.0	-0.2
	baz=40,SNR=20						
OXZ	Oxford	39.93	160	*e*P	P	09 43 24.1	0.0
	comp=Z,91nm,1.0s						
OXZ				LR	LR		
	comp=Z,8µm,22.0s						
RPZ	Rata Peaks	39.96	162	P	P	09 43 24.2	-0.2
	comp=Z,71nm,0.8s,baz=356,slow=0.5,SNR=27						
RPZ				pP	pP	09 43 40.4	+1.4
	comp=Z,79nm,0.7s,baz=339,slow=9.4,SNR=7.7						
RPZ	Rata Peaks	39.96	162	*e*P	P	09 43 24.3	-0.1
	comp=Z,98nm,0.8s						
RPZ				LR	LR		
	comp=Z,10µm,22.0s						
MEEK	Meekatharra	39.98	235	P	P	09 43 24.6	-0.3
	baz=40,SNR=27						
LBZ	Lake Benmore	40.30	163	*e*P	P	09 43 26.6	-0.6
	comp=Z,50nm,1.0s						
LBZ				LR	LR		
	comp=Z,18µm,20.0s						
CRLZ	Canterbury Las	40.35	160	*e*P	P	09 43 26.9	-0.6
	comp=Z,132nm,1.0s						
JAGI	Jajag, Banyuwa	40.37	264	*e*P	P	09 43 27.3	-0.9
	comp=Z,188nm,1.0s						
JAGI				LR	LR		
	comp=Z,3µm,20.0s						
JAGI	Jajag, Banyuwa	40.37	264	P	P	09 43 26.9	-1.3
WKZ	Wanaka	40.38	164	*e*P	P	09 43 27.9	0.0
	comp=Z,54nm,1.0s						
WKZ				LR	LR		
	comp=Z,19µm,20.0s						
KKM	Kota Kinabalu	40.41	287	*e*P	P	09 43 29.9	+1.3
	comp=Z,60nm,0.8s						
KKM	Kota Kinabalu	40.41	287	P	P	09 43 31.0	+2.3
MQZ	McQueen's Vall	40.47	160	*e*P	P	09 43 28.4	-0.2
	comp=Z,268nm,1.7s						
DCZ	Deep Cove	40.51	167	*e*P	P	09 43 28.7	-0.2
	comp=Z,151nm,1.7s						
DCZ				LR	LR		
	comp=Z,6µm,20.0s						
MLZ	Mavora Lakes	40.65	166	*e*P	P	09 43 29.8	-0.4
	comp=Z,80nm,1.0s						
MLZ				LR	LR		
	comp=Z,14µm,22.0s						
ODZ	Otahua Downs	41.04	163	*e*P	P	09 43 32.5	-0.8
	comp=Z,126nm,1.7s						
ODZ				LR	LR		
	comp=Z,15µm,20.0s						
WHZ	Wether Hill Ro	41.10	166	*e*P	P	09 43 31.9	-1.8
	comp=Z,198nm,1.9s						
WHZ				LR	LR		
	comp=Z,7µm,20.0s						
JHJ	Hachijo jima 2	41.67	341	P	P	09 43 39.5	+1.0
	comp=Z,50nm,0.8s,baz=68,slow=19,SNR=1.6						
JOHN	Johnston Islan	42.01	57	PFAKE		09 43 50.0	+8.4
JOHN				LR	LR		
	comp=Z,5µm,20.0s						
GIRL	Giralia	42.36	243	*e*P	P	09 43 42.9	-1.5
	comp=Z,345nm,1.4s						
GIRL				LR	LR		
	comp=Z,19µm,20.0s						
GIRL	Giralia	42.36	243	P	P	09 43 45.7	+1.3
	baz=42,SNR=4.1						
NGJI	Ngawi	43.05	266	P	P	09 44 05.5	+15
MORW	Morawa	43.05	233	*e*P	P	09 43 49.4	-0.6
	comp=Z,62nm,0.9s						
MORW				LR	LR		
	comp=Z,12µm,20.0s						
MORW	Morawa	43.05	233	P	P	09 43 49.7	-0.2
	baz=43,SNR=6.3						
PBKI	Pangkalan Bun	43.14	273	P	P	09 44 08.6	+18
BLDU	Ballidu	43.18	231	P	P	09 43 50.5	-0.5
	baz=43,SNR=9.7						
SBUM	Sibu	43.40	280	*e*P	P	09 43 54.0	+1.1
	comp=Z,71nm,1.5s						
SBUM	Sibu	43.40	280	P	P	09 43 55.0	+2.1
YOJ	Yonaguni jima	43.49	316	PFAKE		09 44 10.0	+16
YOJ				LR	LR		
	comp=Z,2µm,22.0s						
MIDW	Midway	43.52	37	PFAKE		09 44 10.0	+16
MIDW				LR	LR		
	comp=Z,11µm,22.0s						
WOJI	Wonogiri, Jawa	43.57	265	P	P	09 43 59.7	+5.4
STKI	Sintang	43.70	277	P	P	09 44 11.0	+16
NWAO	Narrogin (SRO)	43.85	228	P	P	09 43 56.0	-0.3
	comp=Z,22nm,0.8s,baz=75,slow=5.5,SNR=6.5						
NWAO				pP	pP	09 44 11.7	+1.2
	comp=Z,27nm,0.7s,baz=77,slow=7.2,SNR=4.0						
NWAO	Narrogin (SRO)	43.85	228	*e*P	P	09 43 56.0	-0.3
NWAO				LR	LR		
	comp=Z,10µm,20.0s						
NWAO	Narrogin (SRO)	43.85	228	*e*P	P	09 43 56.0	-0.3
NWAO				MLR	MLR		
	comp=Z,10µm,20.0s						
YULB	Yu-li	44.04	313	*e*P	P	09 43 58.1	+0.2
	comp=Z,50nm,0.8s						
YULB				LR	LR		
	comp=Z,3µm,20.0s						
SMRI	Semarang	44.07	266	P	P	09 43 59.8	+1.5
MUN	Mundaring	44.17	230	P	P	09 43 59.0	+0.1
	baz=44,SNR=4.6						
NACB	Ninganchiao	44.31	314	*e*P	P	09 44 00.7	+0.6
	comp=Z,203nm,1.3s						
NACB				LR	LR		
	comp=Z,3µm,21.0s						
TPUB	Ta-pu	44.47	312	*e*P	P	09 44 01.0	-0.4
TPUB				LR	LR		
	comp=Z,3µm,21.0s						
SSLB	Suanglung	44.53	313	*e*P	P	09 44 02.0	+0.2
	comp=Z,138nm,1.5s						
SSLB				LR	LR		
	comp=Z,3µm,20.0s						
INU	Inuyama	44.64	339	PFAKE		09 44 10.0	+7.5
INU				LR	LR		
	comp=Z,2µm,20.0s						
YHNB	Yeheng	44.77	315	*e*P	P	09 44 04.6	+0.7
	comp=Z,151nm,1.2s						
YHNB				LR	LR		
	comp=Z,3µm,22.0s						
TATO	Taipei	44.89	315	PFAKE		09 44 20.0	+15
TATO				LR	LR		
	comp=Z,5µm,21.0s						
KSM	Kuching	45.09	278	*e*P	P	09 44 06.1	-0.4
	comp=Z,139nm,1.5s						
KSM	Kuching	45.09	278	P	P	09 44 08.0	+1.5
KSM	Kuching	45.09	278	P	P	09 44 08.0	+1.5
JNU	Nakatsue	45.27	331	P	P	09 44 07.5	-0.2
	comp=Z,29nm,0.7s,baz=118,slow=2.7,SNR=25						
JNU	Nakatsue	45.27	331	*e*P	P	09 44 07.6	0.0
	comp=Z,37nm,0.8s						
JNU				LR	LR		
	comp=Z,2µm,22.0s						
MJAR	Matsushiro Arr	45.32	341	P	P	09 44 07.5	-0.4
	comp=Z,6.2nm,0.9s,baz=169,slow=7.5,SNR=7.6						
MJAR				pP	pP	09 44 23.7	+0.8
	comp=Z,2.7nm,0.7s,baz=177,slow=8.5,SNR=4.5						
MJAR				LR	LR	10 04 34.4	
	comp=Z,1µm,18.1s,baz=170,slow=38						
MAJO	Matsushiro	45.32	341	*e*P	P	09 44 07.8	-0.2
	comp=Z,16nm,1.0s						
MAJO				LR	LR		
	comp=Z,2µm,20.0s						
MAJO	Matsushiro	45.32	341⇑	*e*P	P	09 44 07.7	-0.2
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAT	Matsushiro	45.32	341	P	P	09 44 06.6	-1.3
MAT				S	S	09 50 42.0	-2.6
MJB9	Matsu-Tunnel	45.33	341	*e*P	P	09 44 08.0	+0.1
	comp=Z,17nm,1.0s						
MJB9				LR	LR		
	comp=Z,2µm,20.0s						

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CISI   Cisompet, Garu    46.66 266 eP     P      09 44 17.7 -1.2
       comp=Z,1µm,1.6s
CISI   Cisompet, Garu    46.66 266  P     P      09 44 17.5 -1.4
KNMB   Chin-men Tao      46.81 312  PFAKE        09 44 30.0 +10
KNMB                                LR    LR
       comp=Z,3µm,22.0s
QZH    Quanzhou          46.94 313⇑iP     P      09 44 21.3 +0.5
QZH                                 pP    pP     09 44 34.8 -1.0
QZH                                 S     S      09 51 08.3 +0.2
QZH                                 sS    sS     09 51 29.8 -3.5
QZH                                 pmax  pmax
       comp=Z,530nm,9.9s
QZH                                 LR    LR
       comp=Z,2µm,21.8s
QZH                                 LR    LR
       comp=Z,2µm,18.9s
QZH                                 LR    LR
       comp=Z,3µm,28.4s
SKJI   Sukabumi          47.92 266  P     P      09 44 29.0 +0.3
XMAS   Kiritimati        48.38  82  PFAKE        09 44 40.0 +7.8
XMAS                                LR    LR
       comp=Z,9µm,21.0s
CGJI   Cibinong          48.80 267  P     P      09 44 33.7 -1.7
HKPS   Hong Kong Po S    48.88 307 eP     P      09 44 37.9 +2.0
       comp=Z,57nm,0.7s
HKPS                                LR    LR
       comp=Z,6µm,21.0s
SSE    Sheshan           49.11 321  PFAKE        09 44 50.0  +12
SSE                                 LR    LR
       comp=Z,3µm,22.0s
SSE    Sheshan           49.11 321  P     P      09 44 37.9 +0.4
SSE                                 S     S      09 51 41.4 +2.7
SSE                                 pmax  pmax
       comp=Z,22nm,0.8s
SSE                                 pmax  pmax
       comp=Z,140nm,4.1s
SSE                                 LR    LR
       comp=Z,670nm,19.2s
SSE                                 LR    LR
       comp=Z,610nm,19.2s
ERM    Erimo             49.20 349  PFAKE        09 44 50.0  +12
ERM                                 LR    LR
       comp=Z,4µm,20.0s
DLV    T  Lat            49.49 291  PFAKE        09 44 50.0 +9.1
DLV                                 LR    LR
       comp=Z,2µm,22.0s
TJN    Taejon            49.60 331⇓eP     P      09 44 41.6 +0.5
GZH    Guangzhou         49.92 307  P     P      09 44 46.1 +2.3
GZH                                 S     S      09 51 55.8 +5.6
GZH                                 LR    LR
       comp=Z,850nm,19.1s
GZH                                 LR    LR
       comp=Z,2µm,18.6s
KASI   Kota Agung        50.04 268  P     P      09 44 43.3 -1.6
KSRS   Korea Array       50.20 332  P     P      09 44 45.7 +0.1
       comp=Z,14nm,0.8s,baz=149,slow=8.1,SNR=17
KSRS                                pP    pP     09 45 00.7  0.0
       comp=Z,6.5nm,0.7s,baz=146,slow=7.1,SNR=4.3
KSRS                                LR    LR     10 05 46.0
       comp=Z,610nm,19.3s,baz=150,slow=36
KS15   Wonju Array Si    50.21 332 eP     P      09 44 46.5 +0.8
       comp=Z,46nm,1.1s
MDSI   Maura Dua         50.43 269  P     P      09 44 46.8 -1.0
DSRI   Dabo              50.45 275  P     P      09 45 03.1  +15
LWLI   Liwa              50.51 269  P     P      09 44 52.6 +4.0
YUK    Yuzh-Kuril'sk     50.70 352  P     P      09 44 52.2 +2.9
YUK                                              09 44 58.9
YUK                                 S     S      09 52 03.7 +3.4
YUK                                              09 52 18.4
YUK                                 SS    SS     09 52 21.5 -194
QIZ    Qiongzhong        50.92 301  PFAKE        09 45 00.0 +8.5
QIZ                                 LR    LR
       comp=Z,3µm,22.0s
QIZ    Qiongzhong        50.92 301  P     P      09 44 52.8 +1.3
QIZ                                 pP    pP     09 45 06.4 +0.1
QIZ                                 S     S      09 52 06.0 +1.7
QIZ                                 SS    SS     09 55 42.8 +2.8
QIZ                                 pmax  pmax
       comp=Z,26nm,1.0s
QIZ                                 pmax  pmax
       comp=Z,670nm,14.1s
QIZ                                 LR    LR
       comp=Z,950nm,22.6s
QIZ                                 LR    LR
       comp=Z,2µm,21.1s
QIZ                                 LR    LR
       comp=Z,3µm,29.9s
NJ2    Nanjing           51.23 320 eP     P      09 44 54.5 +1.0
NJ2                                 pP    pP     09 45 07.0 -1.6
NJ2                                 sP    sP     09 45 11.8 -3.4
NJ2                                 S     S      09 52 10.5 +2.5
NJ2                                 sS    sS     09 52 31.3 -2.3
NJ2                                 pmax  pmax
       comp=Z,13nm,0.5s
NJ2                                 pmax  pmax
       comp=Z,610nm,10.0s
NJ2                                 LR    LR
       comp=Z,1µm,24.6s
NJ2                                 LR    LR
       comp=Z,2µm,20.2s
NJ2                                 LR    LR
       comp=Z,3µm,24.6s
ASAJ   Asahikawa         51.33 349  P     P      09 44 55.0 +0.9
       comp=Z,4.7nm,0.6s,baz=214,slow=5.3,SNR=4.3
ASAJ   Asahikawa         51.33 349  P     P      09 44 55.0 +0.9
MYKOM  Kota Tinggi       51.50 277 eP     P      09 44 55.8 -0.1
       comp=Z,53nm,1.2s
MYKOM  Kota Tinggi       51.50 277  P     P      09 44 57.0 +1.1
KUR    Kuril'sk          51.62 354c iP    P      09 44 58.7 +2.5
KUR                                e                09 46 16.0
KUR                                              09 46 54.7
KUR                                 PPP   PPP    09 47 50.7
KUR                                iS     S      09 52 25.7  +13
KUR                                 pmax  pmax
       comp=Z,400nm,6.8s
KUR                                 pmax  pmax
       comp=Z,92nm,1.2s
KUR                                 MLR   MLR
       comp=N,1µm,19.0s
KUR                                 MLR   MLR
       comp=Z,2µm,19.0s
MNAI   Manna             51.65 269 eP     P      09 44 55.0 -2.0
       comp=Z,194nm,1.1s
KEKH   Kekaha            52.64  56  PFAKE        09 45 20.0  +16
KEKH                                LR    LR
       comp=Z,2µm,18.0s
JRMM   Jerantut          53.22 280  P     P      09 45 09.0 +0.4
WHN    Wuhan             53.28 316⇑iP     P      09 45 10.4 +1.6
WHN                                 S     S      09 52 39.9 +3.7
WHN                                 pmax  pmax
       comp=Z,70nm,0.6s
WHN                                 LR    LR
       comp=Z,6µm,25.3s
WHN                                 LR    LR
       comp=Z,5µm,20.0s
WHN                                 LR    LR
       comp=Z,11µm,30.2s
KRJI   Kerinci           53.35 272  P     P      09 45 12.9 +3.2
SDSI   Sungai Dareh      53.51 273  P     P      09 45 10.8  0.0
HON    Honolulu          53.78  58  PFAKE        09 45 30.0  +17
HON                                 LR    LR
       comp=Z,3µm,20.0s
KIP    Kipapa            53.81  58  PFAKE        09 45 30.0  +17
KIP                                 LR    LR
       comp=Z,3µm,20.0s
OPA    Opana             53.93  58 eP     P      09 45 14.8 +1.1
       comp=Z,154nm,1.1s
OPA                                 LR    LR
       comp=Z,3µm,19.0s
YSS    Yuzh-Sakhalins    54.04 350 eP     P      09 45 12.4 -1.6
       comp=Z,30nm,1.1s
YSS                                 LR    LR
       comp=Z,4µm,22.0s
YSS    Yuzh-Sakhalins    54.04 350 eP     P      09 45 13.9 -0.1
YSS                                e*PP   pP     09 45 26.9 -2.4
YSS                                eS     S      09 52 48.0 +2.1
YSS                                eSSS   SSS    09 58 14.7
YSS                                 pmax  pmax
       comp=Z,10.0nm,0.8s
YSS                                 MLR   MLR
       comp=Z,2µm,19.0s
YSS                                 MLR   MLR
       comp=N,2µm,18.0s
YSS                                 MLR   MLR
       comp=E,700nm,19.0s
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BKNI   Bangkinang        54.06 275 eP     P      09 45 14.9 +0.1
       comp=E,88nm,0.8s
BKNI   Bangkinang        54.06 275  P     P      09 45 15.4 +0.6
USA0B  Ussuriysk Arra    54.27 340 eP     P      09 45 15.4 -0.3
       comp=E,110nm,1.7s
USA0B                               LR    LR
       comp=Z,2µm,22.0s
USRK   Ussuriysk Ar.     54.27 340  P     P      09 45 16.4 +0.6
       comp=Z,9.3nm,0.8s,baz=151,slow=8.6,SNR=15
USRK                                LR    LR     10 05 19.5
       comp=Z,2µm,21.9s,baz=146,slow=32
DL2    Dalian            54.44 328  P     P      09 45 19.3 +2.2
DL2                                 pP    pP     09 45 31.6 -0.8
DL2                                 S     S      09 52 53.9 +2.3
DL2                                 pmax  pmax
       comp=Z,50nm,0.9s
DL2                                 pmax  pmax
       comp=Z,560nm,9.8s
DL2                                 LR    LR
       comp=Z,1µm,25.8s
DL2                                 LR    LR
       comp=Z,1µm,24.9s
DL2                                 LR    LR
       comp=Z,3µm,23.6s
PDSI   Padang            54.48 273  P     P      09 45 15.4 -2.5
IPM    Ipoh              54.75 280 eP     P      09 45 19.7 -0.2
       comp=Z,115nm,1.3s
IPM                                 LR    LR
       comp=Z,700nm,20.0s
IPM    Ipoh              54.75 280  P     P      09 45 21.0 +1.2
PANO   Nakornpanom       54.78 296  P     P      09 45 21.5 +1.6
       comp=Z,0.9nm,1.0s
KHLU   Kahalu`u          54.88  61  PFAKE        09 45 30.0 +9.2
KHLU                                LR    LR
       comp=Z,4µm,20.0s
KHLH   Kahului Airpor    54.94  59  PFAKE        09 45 30.0 +9.0
KHLH                                LR    LR
       comp=Z,5µm,20.0s
KHU    Kahuku            54.99  61 eP     P      09 45 23.2 +1.4
       comp=Z,205nm,1.0s
KHU                                 LR    LR
       comp=Z,4µm,22.0s
KHU    Kahuku            54.99  61 eP     P      09 45 23.2 +1.4
KHU                                 pmax  pmax
       comp=Z,205nm,1.0s
KHU                                 MLR   MLR
       comp=Z,4µm,22.0s
HLK    Haleakala         55.04  59  PFAKE        09 45 30.0 +7.9
HLK                                 LR    LR
       comp=Z,5µm,20.0s
TIA    Tai'an            55.06 323  P     P      09 45 21.8 +0.1
TIA                                 pP    pP     09 45 35.3 -1.7
TIA                                 S     S      09 53 04.9 +4.7
TIA                                 sS    sS     09 53 28.5 +3.9
TIA                                 pmax  pmax
       comp=Z,46nm,1.2s
TIA                                 LR    LR
       comp=Z,1µm,19.2s
TIA                                 LR    LR
       comp=Z,760nm,19.9s
TIA                                 LR    LR
       comp=Z,2µm,19.2s
MLOA   Mauna Loa Obse    55.14  61  PFAKE        09 45 40.0  +17
MLOA                                LR    LR
       comp=Z,5µm,22.0s
AIN    Ainahou           55.18  61 eP     P      09 45 25.5 +2.5
       comp=Z,169nm,1.0s
HPAH   Hawaii Prepara    55.23  60  PFAKE        09 45 40.0  +17
HPAH                                LR    LR
       comp=Z,4µm,20.0s
POHA   Pohakuloa         55.26  61  PFAKE        09 45 40.0  +16
POHA                                LR    LR
       comp=Z,4µm,20.0s
KULM   Kulim             55.27 281 eP     P      09 45 23.6  0.0
       comp=Z,43nm,1.1s
KULM                                LR    LR
       comp=Z,1µm,20.0s
PPT    Papeete           55.39 107  LR    LR     10 04 20.0
       comp=Z,1µm,21.9s,baz=272,slow=31
PPT2   Papeete2          55.39 107 eS     S      09 53 03.2 -2.0
       comp=Z,2µm,25.8s
PPT2                               eLQ    LQ     09 59 20.9
       comp=Z,4µm,29.2s
PPT2                               eLR    LR     10 01 43.7
       comp=Z,4µm,27.0s,baz=286
CHBT   CHBT              55.46 290  P     P      09 45 29.2 +4.3
       comp=Z,65nm,0.5s
MDJ    Mudanjiang        55.48 338  PFAKE        09 45 40.0  +15
MDJ                                 LR    LR
       comp=Z,2µm,20.0s
MDJ    Mudanjiang        55.48 338  P     P      09 45 24.8 +0.3
MDJ                                 pP    pP     09 45 37.1 -2.7
MDJ                                 sP    sP     09 45 42.5 -3.9
MDJ                                 PP    PP     09 47 32.8 +3.7
MDJ                                 PcS   PcS    09 50 16.5 -7.5
MDJ                                 S     S      09 53 04.8 -0.6
MDJ                                 SS    SS     09 56 50.6 -0.6
MDJ                                 pmax  pmax
       comp=Z,18nm,1.4s
MDJ                                 pmax  pmax
       comp=Z,270nm,4.1s
MDJ                                 LR    LR
       comp=Z,1µm,21.8s
MDJ                                 LR    LR
       comp=Z,2µm,20.1s
MDJ                                 LR    LR
       comp=Z,2µm,20.6s
MNSI   Mandailing Nat    55.57 275  P     P      09 45 25.0 -0.7
SKLT   Songkhla          55.68 283  P     P      09 45 43.7  +17
SNY    Shenyang          55.70 332 ⇑P     P      09 45 26.8 +0.7
SNY                                 PP    PP     09 47 27.5 -3.6
SNY                                 S     S      09 53 08.0 -0.4
SNY                                 LR    LR
       comp=Z,2µm,20.0s
SNY                                 LR    LR
       comp=Z,1µm,18.4s
SNY                                 LR    LR
       comp=Z,3µm,18.0s
SISI   Saibi             55.79 273  P     P      09 45 28.1 +0.8
TBI    Tubuai            56.14 114 eS     S      09 53 14.8 -0.2
       comp=Z,2µm,29.0s
TBI                                eLR    LR     10 02 06.8
       comp=Z,13µm,29.0s
CN2    Changchun         56.44 335 eP     P      09 45 31.5 +0.1
CN2                                esP    pP     09 45 49.5 +2.8
CN2                                eS     S      09 53 18.4 +0.2
CN2                                 pmax  pmax
       comp=Z,30nm,0.7s
CN2                                 LR    LR
       comp=Z,1µm,21.0s
CN2                                 LR    LR
       comp=Z,560nm,21.0s
CN2                                 LR    LR
       comp=Z,1µm,21.0s
PSI    Prapat            56.52 277 eP     P      09 45 31.4 -1.2
       comp=Z,22nm,0.6s
PSI    Prapat            56.52 277 eP     P      09 45 31.5 -1.2
PSI                                 pmax  pmax
       comp=Z,23nm,0.6s
ENH    Enshi             56.60 313 eP     P      09 45 33.0 +0.2
       comp=Z,86nm,1.0s
ENH                                 LR    LR
       comp=Z,2µm,21.0s
SKR    Severo-Kuril's    56.71   1⇑eP     P      09 45 32.2 -0.9
CHAI   Chaiyaphum        56.73 294  P     P      09 45 35.4 +1.5
       comp=Z,36µm,0.7s
GYA    Guiyang           56.86 307⇑iP     P      09 45 35.9 +1.0
GYA                                 pP    pP     09 45 51.3 +1.1
GYA                                 PP    PP     09 47 43.8 +1.9
GYA                                 S     S      09 53 27.4 +2.8
GYA                                 sS    pS     09 53 45.6 +3.8
GYA                                 SS    SS     09 57 14.9 +1.2
GYA                                 pmax  pmax
       comp=Z,40nm,0.9s
GYA                                 pmax  pmax
       comp=Z,770nm,10.9s
GYA                                 LR    LR
       comp=Z,1µm,21.2s
GYA                                 LR    LR
       comp=Z,2µm,19.9s
GYA                                 LR    LR
       comp=Z,4µm,21.7s
SLVN   Son La            56.95 300 eP     P      09 45 36.6 +1.1
       comp=Z,31nm,0.9s
GSI    Gunungsitoli      57.63 276 eP     P      09 45 38.8 -1.5
       comp=Z,74nm,0.9s
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GSI    Gunungsitoli      57.63 276  P     P      09 45 39.0 -1.4
KCSI   Kotacane, Aceh    57.77 278  P     P      09 45 39.7 -1.7
TYV    Tymovskoe         57.84 351 eP     P      09 45 42.1 +1.0
TYV                                eS     S      09 53 36.0 -0.3
TYV                                 pmax  pmax
       comp=Z,10.0nm,1.0s
TYV                                 pmax  pmax
       comp=Z,100nm,6.7s
TYV                                 smax  smax
       comp=E,500nm,8.9s
PBKT   Sadao Pong        57.87 294  P     P      09 45 43.8 +1.9
       comp=E,19nm,1.0s,comp=E,630nm
PHET   Kaeng Krachan     58.03 289  P     P      09 45 45.4 +2.3
       comp=E,95µm,1.0s,comp=E,854µm
BJT    Baijiatuau        58.19 326  PFAKE        09 46 00.0  +16
BJT                                 LR    LR
       comp=Z,2µm,22.0s
BJI    Beijing           58.20 326 eP     P      09 45 45.1 +1.2
BJI                                 sP    sP     09 46 07.1 +1.3
BJI                                 S     S      09 53 41.8 +0.4
BJI                                 pmax  pmax
       comp=Z,5.0nm,0.7s
BJI                                 pmax  pmax
       comp=Z,220nm,14.7s
BJI                                 LR    LR
       comp=Z,430nm,23.5s
BJI                                 LR    LR
       comp=Z,540nm,22.6s
BJI                                 LR    LR
       comp=Z,1µm,35.3s
UTTA   Uttaradit         58.62 295  P     P      09 45 48.5 +1.3
       comp=Z,154µm,0.8s
KLR    Kul'dur           58.80 343  P     P      09 45 48.4 +0.5
       comp=Z,12nm,0.9s,baz=139,slow=4.6,SNR=26
KLR    Kul'dur           58.80 343c iP    P      09 45 48.3 +0.4
KLR                                 pmax  pmax
       comp=Z,18nm,1.0s
TIY    Taiyuan           58.90 321 eP     P      09 45 52.6 +3.7
TIY                                 S     S      09 53 52.6 +1.8
TIY                                 pmax  pmax
       comp=Z,350nm,6.7s
TIY                                 LR    LR
       comp=Z,1µm,18.7s
TIY                                 LR    LR
       comp=Z,560nm,14.2s
TIY                                 LR    LR
       comp=Z,2µm,22.0s
SRDT   SRDT              58.90 291  P     P      09 45 51.5 +2.3
       comp=Z,28nm,0.9s
GRNR   Gornyy            58.97 346 eP     P      09 45 49.4 +0.4
GRNR                                pmax  pmax
       comp=Z,13nm,1.0s
XAN    Xi'an             59.05 316  PFAKE        09 46 00.0  +10
XAN                                 LR    LR
       comp=Z,2µm,19.0s
XAN    Xi'an             59.05 316  P     P      09 45 49.8 -0.1
XAN                                 pP    pP     09 46 06.3 +0.9
XAN                                 PP    PP     09 48 02.4 +1.3
XAN                                 S     S      09 53 48.1 -4.7
XAN                                 sS    sS     09 54 21.0 +3.2
XAN                                 ScS   ScS    09 55 29.1 -6.1
XAN                                 SS    SS     09 57 44.6 -3.2
XAN                                 pmax  pmax
       comp=Z,20nm,0.9s
XAN                                 pmax  pmax
       comp=Z,140nm,5.2s
XAN                                 LR    LR
       comp=Z,970nm,19.0s
XAN                                 LR    LR
       comp=Z,2µm,20.6s
XAN                                 LR    LR
       comp=Z,2µm,21.1s
PET    Petropavlovsk     59.13   3 eP     P      09 45 51.0 +0.9
       comp=Z,44nm,0.7s
PET                                 LR    LR
       comp=Z,4µm,22.0s
PET    Petropavlovsk     59.13   3 eP     P      09 45 51.6 +1.5
PET                                e*PP   pP     09 46 06.6 +1.0
PET                                eS     S      09 53 54.1 +1.1
PET                                e*SS   sS     09 54 19.5 +1.1
PET                                 pmax  pmax
       comp=Z,400nm,11.9s
PET                                 pmax  pmax
       comp=Z,72nm,0.7s
PET                                 pmax  pmax
       comp=Z,700nm,19.7s
PHRA   Phrae             59.16 296  P     P      09 45 52.4 +1.5
       comp=Z,15nm,1.0s
PEA0B  Petropavlovsk-    59.18   2 eP     P      09 45 53.1 +2.7
       comp=Z,57nm,0.8s
PEA0B                               LR    LR
       comp=Z,4µm,22.0s
PETK   Petropavlovsk-    59.18   2  P     P      09 45 51.5 +1.1
       comp=Z,42nm,0.6s,baz=154,slow=6.1,SNR=56
PETK                                LR    LR     10 07 42.9
       comp=Z,4µm,21.9s,baz=182,slow=32
PEA1   Petropavlovsk-    59.19   2 eP     P      09 45 51.5 +1.0
MLSI   Meulaboh, Aceh    59.24 279  P     P      09 45 51.3 -0.3
KMI    Kunming           59.45 304  P     P      09 45 54.3 +1.2
KMI                                 pP    pP     09 46 06.8 -1.7
KMI                                 sP    sP     09 46 10.5 -4.5
KMI                                 PP    PP     09 48 08.5 +3.5
KMI                                 S     S      09 53 57.0 -1.6
KMI                                 sS    sS     09 54 23.4 -1.0
KMI                                 SS    SS     09 57 56.8 +2.0
KMI                                 pmax  pmax
       comp=Z,54nm,1.0s
KMI                                 pmax  pmax
       comp=Z,790nm,6.5s
KMI                                 LR    LR
       comp=Z,1µm,20.2s
KMI                                 LR    LR
       comp=Z,2µm,24.9s
KMI                                 LR    LR
       comp=Z,3µm,27.3s
UMPA   Umpang Tak        59.68 293  P     P      09 45 56.5 +1.9
       comp=Z,132µm,0.9s
PAYA   Payao             59.77 297  P     P      09 45 56.3 +1.1
       comp=Z,198µm,0.8s
CM31   Chiang Mai Arr    60.30 295 eP     P      09 45 60.0 +1.2
       comp=Z,105nm,0.8s
CMAR   Chiang Mai Arr    60.30 295  P     P      09 46 00.3 +1.5
       comp=Z,80nm,0.8s,baz=113,slow=5.1,SNR=141
CMAR                                pP    pP     09 46 15.4 +1.1
       comp=Z,24nm,0.8s,baz=127,slow=5.0,SNR=4.5
CMAR                                LR    LR     10 10 55.2
       comp=Z,1µm,21.5s,baz=116,slow=35
CMAR                                PKP2bc       10 15 31.6
       comp=Z,2.7nm,0.8s,baz=285,slow=4.1,SNR=7.4
NKL    Nikolayevsk       60.37 350 eP     P      09 45 52.9 -5.7
NKL                                e             09 46 44.2
NKL                                eSS    SS     09 58 05.9 -1.8
NKL                                 pmax  pmax
       comp=Z,22nm,1.1s
NKL                                 pmax  pmax
       comp=E,17nm,1.4s
NKL                                 pmax  pmax
       comp=N,34nm,1.6s
NKL                                 pmax  pmax
       comp=Z,92nm,2.4s
NKL                                 MLR   MLR
       comp=N,1µm,20.0s
NKL                                 MLR   MLR
       comp=Z,2µm,20.0s
NKL                                 MLR   MLR
       comp=E,287nm,19.0s
CMMT   Chiang Mai        60.41 296  P     P      09 46 00.6 +1.0
       comp=E,38nm,1.0s,comp=E,634nm
CHTO   Chiang Mai        60.41 296 eP     P      09 46 00.3 +0.7
       comp=E,56nm,0.8s
CHTO   Chiang Mai        60.41 296 eP     P      09 46 00.3 +0.7
CHTO                                pmax  pmax
       comp=Z,56nm,0.8s
SMY    Shemya            61.00  13 eP     P      09 46 04.1 +1.3
       comp=Z,72nm,1.0s
SMY                                 LR    LR
       comp=Z,6µm,20.0s
SMY    Shemya            61.00  13 eP     P      09 46 04.1 +1.3
SMY                                 pmax  pmax
       comp=Z,72nm,1.0s
SMY                                 MLR   MLR
       comp=Z,6µm,20.0s
CD2    Chengdu           61.19 310  P     P      09 46 05.3 +0.6
CD2                                 PcP   PcP    09 46 46.8 -0.2
CD2                                 PP    PP     09 48 21.3 +1.1
CD2                                 S     S      09 54 11.6 -8.8
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CD2				SS	**SS**	**09 58 18.3**	**-3.3**
CD2				pmax	pmax		
	comp=Z,80nm,0.4s						
CD2				pmax	pmax		
	comp=Z,810nm,9.3s						
CD2				LR	LR		
	comp=Z,2µm,19.9s						
CD2				LR	LR		
	comp=Z,3µm,22.8s						
CD2				LR	LR		
	comp=Z,4µm,27.0s						
HHC	**Hu-ho-hao-te**	**61.39**	**324**	P	**P**	**09 46 06.3**	**+0.4**
HHC				S	**S**	**09 54 24.9**	**+2.2**
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.8s						
HHC				LR	LR		
	comp=Z,2µm,16.4s						
BTO	**Baotou**	**62.16**	**323**	*e*P	P	09 46 16.9	+5.8
KIWB	**Kanaga Island**	**62.65**	**19**	*e*P	**P**	**09 46 15.1**	**+1.1**
ADK	**Adak**	**62.83**	**19**	*e*P	**P**	**09 46 16.4**	**+1.2**
	comp=Z,73nm,0.7s						
ADK				LR	LR		
	comp=Z,5µm,20.0s						
ADK	**Adak**	**62.83**	**19**	*e*P	**P**	**09 46 16.4**	**+1.2**
ADK				pmax	pmax		
	comp=Z,73nm,0.7s						
ADK				MLR	MLR		
	comp=Z,5µm,20.0s						
HIA	**Hailar**	**63.17**	**335**	*e*P	**P**	**09 46 16.9**	**-0.7**
	comp=Z,30nm,0.8s						
HIA				LR	LR		
	comp=Z,2µm,19.0s						
HIA	**Hailar**	**63.17**	**335**	*ce*P	**P**	**09 46 17.8**	**+0.2**
HIA				pmax	pmax		
	comp=Z,173nm,0.7s						
GSTR	**Great Sitkin T**	**63.21**	**20**	*e*P	**P**	**09 46 18.5**	**+0.8**
LZH	**Lanzhou**	**63.66**	**315**	*e*P	**P**	**09 46 22.6**	**+1.4**
LZH				pP	pP	09 46 38.1	+1.3
LZH				sP	sP	09 46 44.1	+0.8
LZH				S	**S**	**09 54 49.4**	**-2.1**
LZH				sS	sS	09 55 14.0	-3.4
LZH				pmax	pmax		
	comp=Z,44nm,1.0s						
LZH				pmax	pmax		
	comp=Z,400nm,6.6s						
LZH				LR	LR		
	comp=Z,3µm,17.4s						
LZH				LR	LR		
	comp=Z,3µm,18.2s						
LZH				LR	LR		
	comp=Z,4µm,18.4s						
ZEA	**Zeya**	**64.11**	**342**	*e*P	**P**	**09 46 24.2**	**+0.6**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=E,800nm,19.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,19.0s						
DGPR	**DIGLIPUR**	**64.41**	**288**	*e*P	**P**	**09 46 24.1**	**-2.2**
MA2	**Magadan**	**65.69**	**358**	*e*P	**P**	**09 46 34.0**	**+0.2**
	comp=Z,51nm,0.9s						
MA2				LR	LR		
	comp=Z,2µm,21.0s						
MA2	**Magadan**	**65.69**	**358**	*c i*P	**P**	**09 46 35.7**	**+1.9**
MA2				pmax	pmax		
	comp=Z,62nm,1.0s						
NIKH	**Nikolski High**	**66.53**	**23**	*e*P	**P**	**09 46 38.9**	**-0.4**
	comp=Z,92nm,0.9s						
NIKH				LR	LR		
	comp=Z,8µm,22.0s						
IMP	**Imphal**	**66.76**	**300**	*e*P	**P**	**09 46 41.2**	**-0.2**
IMP				IAMs_20	IAMs_20	10 28 02.9	
	comp=Z,2µm,13.6s						
MOKO	**MOKOCHONG**	**66.77**	**302**	*e*P	**P**	**09 46 41.2**	**-0.3**
SAIH	**SAIHA**	**66.86**	**298**	*e*P	**P**	**09 46 41.5**	**-0.7**
SAIH				IAmb	IAmb	09 46 45.8	
KOHI	**KOHIMA**	**66.91**	**301**	*e*P	**P**	**09 46 40.4**	**-2.1**
JORH	**JORHAT**	**67.14**	**302**	*e*P	**P**	**09 46 44.0**	**+0.4**
CASY	**Casey**	**67.24**	**198**	*e*P	**P**	**09 46 42.6**	**-1.0**
	comp=Z,32nm,1.0s						
CASY				LR	LR		
	comp=Z,6µm,22.0s						
SILR	**SILCHAR**	**67.72**	**300**	*e*P	**P**	**09 46 48.6**	**+1.2**
ZIRO	**ZIRO**	**67.74**	**303**	*e*P	**P**	**09 46 47.6**	**-0.1**
GTA	**Gaotai**	**68.07**	**317**	⇑P	**P**	**09 46 50.4**	**+0.9**
GTA				pP	pP	09 47 06.6	+1.4
GTA				sP	PcP	09 47 14.3	-1.0
GTA				S	**S**	**09 55 45.0**	**-0.1**
GTA				sS	sS	09 56 12.8	+1.4
GTA				SS	**SS**	**10 00 07.5**	**-1.2**
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA				pmax	pmax		
	comp=Z,380nm,8.6s						
GTA				LR	LR		
	comp=Z,950nm,19.7s						
GTA				LR	LR		
	comp=Z,1µm,24.4s						
GTA				LR	LR		
	comp=Z,2µm,24.4s						
UNV	**Unalaska Valle**	**68.11**	**24**	*e*P	**P**	**09 46 51.0**	**+1.7**
	comp=Z,42nm,1.1s						
UNV				LR	LR		
	comp=Z,8µm,22.0s						
TEZP	**TEZPUR**	**68.32**	**302**	*e*P	**P**	**09 46 50.6**	**-0.5**
SONA0	**Songino Array**	**68.61**	**327**	*e*P	**P**	**09 46 53.2**	**+0.5**
SONA0				⇑*e*		10 15 08.4	
SONM	**Songino Array**	**68.61**	**327**	P	**P**	**09 46 53.2**	**+0.5**
	comp=Z,7.5nm,0.5s,baz=133,slow=5.0,SNR=43						
SONM				pP	**pP**	**09 47 08.4**	**-0.1**
	comp=Z,5.5nm,0.5s,baz=138,slow=5.0,SNR=5.1						
SONM				PKPPKP		10 15 08.4	
	comp=Z,0.9nm,0.6s,baz=293,slow=2.6,SNR=5.6						
SONM				LR	LR	10 19 32.9	
	comp=Z,1µm,18.1s,baz=130,slow=38						
AKUT	**Akutan**	**68.62**	**24**	PFAKE		09 47 00.0	+7.6
AKUT				LR	LR		
	comp=Z,6µm,22.0s						
SHL	**Shillong**	**68.76**	**300**	*e*P	**P**	**09 46 54.5**	**+0.4**
SHL				IAmb	IAmb	09 46 56.7	
	comp=Z,37nm,0.8s						
SEY	**Seymchan**	**69.01**	**359**	P	**P**	**09 46 55.1**	**+0.5**
	comp=Z,13nm,0.9s,baz=168,slow=6.5,SNR=16						
SEY	**Seymchan**	**69.01**	**359**	⇑*e*P	**P**	**09 46 54.9**	**+0.2**
GUWA	**GUWAHATI**	**69.12**	**301**	*e*P	**P**	**09 46 56.1**	**0.0**
SPIA	**Saint Paul Isl**	**69.32**	**19**	PFAKE		09 47 10.0	+13
SPIA				LR	LR		
	comp=Z,7µm,20.0s						
TAWA	**Tawang**	**69.42**	**302**	*e*P	**P**	**09 46 58.6**	**+0.1**
TURI	**Tura**	**70.09**	**300**	*e*P	**P**	**09 47 01.6**	**-0.5**
FALS	**False Pass**	**70.09**	**24**	PFAKE		09 47 10.0	+8.5
FALS				LR	LR		
	comp=Z,7µm,22.0s						
LSA	**Lhasa**	**70.70**	**304**	PFAKE		09 47 20.0	+14
LSA				LR	LR		
	comp=Z,1µm,22.0s						
YAK	**Yakutsk**	**70.79**	**348**	PFAKE		09 47 20.0	+14
YAK				LR	LR		
	comp=Z,2µm,22.0s						
YAK	**Yakutsk**	**70.79**	**348**	*e*P	**P**	**09 47 05.6**	**0.0**
YAK				_e_*PP	**pP**	**09 47 18.2**	**-3.3**
YAK				*e*		09 47 28.3	
YAK				*e*		09 49 42.6	
YAK				*e*PPP	PPP	09 51 30.0	
YAK				*e*S	**S**	**09 56 19.8**	**+3.9**
YAK				*e*		09 57 04.8	
YAK				*e*SS	**SS**	**10 00 44.8**	**-4.5**
YAK				pmax	pmax		
	comp=Z,28nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,70nm,2.7s						
YAK				pmax	pmax		
	comp=N,50nm,2.3s						
YAK				pmax	pmax		
	comp=E,44nm,2.5s						
YAK				smax	smax		
	comp=N,148nm,8.3s						
YAK				smax	smax		
	comp=E,170nm,8.8s						
VNDA	**Vanda**	**71.33**	**178**	P	**P**	**09 47 08.8**	**+0.1**
	comp=E,8.6nm,0.9s,baz=338,slow=7.5,SNR=54						
VNDA				LR	LR	10 13 57.9	
	comp=E,2µm,19.2s,baz=345,slow=32						
SDPT	**Sand Point**	**71.65**	**25**	*e*P	**P**	**09 47 11.1**	**+0.1**
	comp=E,40nm,0.7s						
SDPT				LR	LR		
	comp=Z,4µm,21.0s						
ZAK	**Zakamensk**	**71.77**	**328**	*e*P	**P**	**09 47 11.7**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,25nm,1.1s						
SBA	**Scott Base**	**71.84**	**177**	*e*P	**P**	**09 47 13.1**	**+1.3**
	comp=Z,110nm,1.5s						
SBA	**Scott Base**	**71.84**	**177**	*e*P	**P**	**09 47 13.1**	**+1.3**
SBA				pmax	pmax		
	comp=Z,110nm,1.5s						
BOD	**Bodaibo**	**71.86**	**338**	*e*P	**P**	**09 47 11.6**	**-0.5**
BOD				pmax	pmax		
	comp=Z,20nm,1.7s						
GTK	**Tadong**	**72.09**	**301**	*e*P	**P**	**09 47 14.7**	**+0.3**
TLY	**Talaya**	**72.33**	**329**	P	**P**	**09 47 15.7**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=86,slow=4.8,SNR=4.6						
TLY	**Talaya**	**72.33**	**329**	*e*P	**P**	**09 47 15.0**	**-0.1**
	comp=Z,16nm,1.0s						
TLY				LR	LR		
	comp=Z,1µm,20.0s						
TLY	**Talaya**	**72.33**	**329**	*ce*P	**P**	**09 47 15.1**	**-0.1**
BWNR	**Bhubaneshwar**	**72.72**	**293**	*e*P	**P**	**09 47 16.5**	**-1.6**
CHGN	**Chignik**	**73.16**	**25**	PFAKE		09 47 30.0	+10
CHGN				LR	LR		
	comp=Z,4µm,21.0s						
BOK	**Bokaro**	**73.50**	**297**	⇑*e*P	**P**	**09 47 22.6**	**-0.1**
BOK				IAmb	IAmb	09 47 26.3	
	comp=Z,23nm,0.6s						
BOK				IAMs_20	IAMs_20	10 14 53.7	
	comp=Z,2µm,24.9s						
MOY	**Mondy**	**73.68**	**328**	*e*P	**P**	**09 47 23.5**	**+0.2**
MOY				pmax	pmax		
	comp=Z,18nm,1.2s						
JIRN	**Jiri**	**74.25**	**301**	*e*P	**P**	**09 47 27.7**	**+0.3**
	comp=Z,58nm,0.7s						
GAMB	**Gambell**	**74.25**	**15**	PFAKE		09 47 40.0	+14
GAMB				LR	LR		
	comp=Z,5µm,22.0s						
VIS	**Vishakhapatnam**	**74.44**	**290**	*i* P	**P**	**09 47 28.1**	**-0.1**
BILL	**Bilibino**	**74.56**	**4**	*e*P	**P**	**09 47 28.8**	**+0.9**
	comp=Z,50nm,0.8s						
BILL	**Bilibino**	**74.56**	**4**	*ce*P	**P**	**09 47 28.6**	**+0.7**
BILL				*e*		09 47 44.4	
BILL				*e*		09 50 16.1	
BILL				*e*PPP	PPP	09 52 01.5	
BILL				pmax	pmax		
	comp=Z,65nm,1.0s						
GUN	**Gumba**	**74.58**	**301**	*e*P	**P**	**09 47 29.6**	**+0.3**
	comp=Z,135nm,0.7s						
PKI	**Pulchoki**	**74.89**	**301**	*e*P	**P**	**09 47 31.0**	**-0.1**
	comp=Z,25nm,0.5s						
PKIN	**Phulchoki**	**74.90**	**301**	*e*P	**P**	**09 47 30.9**	**-0.2**
	comp=Z,24nm,0.6s						
KKN	**Kakani**	**75.06**	**301**	*e*P	**P**	**09 47 32.0**	**+0.1**
	comp=Z,43nm,0.5s						
PALK	**Pallekele**	**75.14**	**279**	*e*P	**P**	**09 47 33.4**	**+0.9**
	comp=Z,60nm,1.0s						
PALK	**Pallekele**	**75.14**	**279**	*e*P	**P**	**09 47 33.4**	**+0.9**
PALK				pmax	pmax		
	comp=Z,60nm,1.0s						
SII	**Sitkinak Islan**	**75.15**	**26**	PFAKE		09 47 40.0	+8.5
SII				LR	LR		
	comp=Z,4µm,21.0s						
DMN	**Daman**	**75.16**	**301**	*e*P	**P**	**09 47 32.0**	**-0.6**
	comp=Z,87nm,0.6s						
GKN	**Gorkha**	**75.66**	**301**	*e*P	**P**	**09 47 35.2**	**-0.1**
	comp=Z,51nm,0.5s						
OHAK	**Old Harbor**	**75.94**	**26**	*e*P	**P**	**09 47 36.1**	**+0.1**
	comp=Z,26nm,0.9s						
OHAK				LR	LR		
	comp=Z,3µm,22.0s						
KOLN	**Koldanda**	**76.49**	**300**	*e*P	**P**	**09 47 39.8**	**-0.3**
	comp=Z,78nm,0.8s						
MDRS	**Chennai**	**76.50**	**285**	*e*P	**P**	**09 47 37.5**	**-2.6**
MDRS				IAmb	IAmb	09 47 43.1	
	comp=Z,66nm,1.4s						
DANN	**Dangsing**	**76.50**	**301**	*e*P	**P**	**09 47 39.8**	**-0.4**
	comp=Z,72nm,0.6s						
ANM	**Nome**	**76.57**	**17**	PFAKE		09 47 50.0	+11
ANM				LR	LR		
	comp=Z,2µm,22.0s						
KDAK	**Kodiak Island**	**76.58**	**26**	P	**P**	**09 47 40.5**	**+0.9**
	comp=Z,20nm,1.1s,baz=206,slow=1.1,SNR=7.4						
KDAK				pP	**pP**	**09 47 56.5**	**+0.8**
	comp=Z,16nm,0.7s,baz=119,slow=5.4,SNR=6.6						
KDAK	**Kodiak Island**	**76.58**	**26**	*e*P	**P**	**09 47 40.7**	**+1.0**
	comp=Z,23nm,0.9s						
KDAK				LR	LR		
	comp=Z,3µm,22.0s						
PYUN	**Piuthan**	**77.09**	**301**	*e*P	**P**	**09 47 43.8**	**+0.3**
	comp=Z,77nm,0.9s						
HVS	**Khovu-Aksy**	**77.37**	**326**	⇓*e*P	**P**	**09 47 45.6**	**+1.2**
SVW2	**Sparrevohn**	**77.38**	**22**	*e*P	**P**	**09 47 44.1**	**0.0**
	comp=Z,118nm,1.7s						
SVW2				LR	LR		
	comp=Z,8µm,22.0s						
HOM	**Homer**	**78.07**	**25**	*e*P	**P**	**09 47 48.9**	**+1.0**
	comp=Z,182nm,0.8s						
HOM				LR	LR		
	comp=Z,5µm,22.0s						
RSO	**Redoubt South**	**78.09**	**24**	*e*P	**P**	**09 47 48.2**	**-0.1**
WMQ	**Urumqi**	**78.16**	**317**	PFAKE		09 48 00.0	+11
WMQ				LR	LR		
	comp=Z,1µm,22.0s						
WMQ	**Urumqi**	**78.16**	**317**	P	**P**	**09 47 51.5**	**+2.6**
WMQ				sP	pP	09 48 08.4	+3.4
WMQ				PP	**PP**	**09 50 50.6**	**+4.4**
WMQ				S	**S**	**09 57 41.5**	**+2.3**
WMQ				SKS	**SKSac**	**09 57 57.0**	**-1.6**
WMQ				SS	**SS**	**10 02 46.9**	**+4.6**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,7.3s						
WMQ				LR	LR		
	comp=Z,600nm,15.9s						
WMQ				LR	LR		
	comp=Z,480nm,28.1s						
WMQ				LR	LR		
	comp=Z,2µm,26.3s						
CNPM	**China Poot**	**78.16**	**25**	*e*P	**P**	**09 47 49.3**	**+0.8**
	comp=Z,70nm,0.6s						
CNPM				LR	LR		
	comp=Z,6µm,22.0s						
TTA	**Tatalina**	**78.39**	**21**	*e*P	**P**	**09 47 49.9**	**+0.1**
	comp=Z,30nm,1.0s						
TTA				LR	LR		
	comp=Z,6µm,20.0s						
TTA	**Tatalina**	**78.39**	**21**	*e*P	**P**	**09 47 49.9**	**+0.1**
TTA				pmax	pmax		
	comp=Z,30nm,1.0s						
TTA				MLR	MLR		
	comp=Z,6µm,20.0s						
BRLK	**Bradley Lake**	**78.44**	**25**	*e*P	**P**	**09 47 49.7**	**-0.4**
	comp=Z,52nm,1.0s						
BRLK				LR	LR		
	comp=Z,6µm,21.0s						
JBP	**Jabalpur**	**78.63**	**295**	⇑*e*P	**P**	**09 47 51.6**	**-0.2**
JBP				AMB	AMB	09 48 08.3	
	comp=Z,119nm,2.6s						
JBP				*e*x	x	09 59 15.1	
HYB	**Hyderabad**	**78.86**	**289**	*i* P	**P**	**09 47 52.0**	**-1.2**
HYB				*e*pP	**pP**	**09 48 07.0**	**-2.0**
HYB				*e*S	**S**	**09 57 48.0**	**+0.5**
HYB				*e*ScS	**SKKSac**	**09 58 08.0**	**+2.2**
NGP	**Nagpur**	**79.08**	**293**	*e*P	**P**	**09 47 53.8**	**-0.6**
NGP				IAmb	IAmb	09 47 56.7	
	comp=Z,68nm,1.7s						
SEW	**Seward**	**79.23**	**25**	*e*P	**P**	**09 47 54.8**	**+0.5**
	comp=Z,80nm,1.1s						
SEW				LR	LR		
	comp=Z,6µm,22.0s						
TIXI	**Tiksi**	**79.59**	**352**	P	**P**	**09 47 56.8**	**+0.8**
	comp=Z,4.8nm,0.5s,baz=124,slow=4.4,SNR=8.8						
TIXI	**Tiksi**	**79.59**	**352**	*e*P	**P**	**09 47 57.0**	**+0.9**
	comp=Z,28nm,1.5s						
RC01	**Rabbit Creek A**	**79.66**	**24**	*e*P	**P**	**09 47 57.0**	**+0.3**
	comp=Z,50nm,1.0s						
RC01				LR	LR		
	comp=Z,4µm,22.0s						
PPLA	**Purkeypile**	**79.75**	**22**	*e*P	**P**	**09 47 57.2**	**-0.1**
	comp=Z,44nm,1.4s						
PPLA				LR	LR		
	comp=Z,9µm,22.0s						
RDOG	**Red Dog Mine**	**79.85**	**15**	*e*P	**P**	**09 47 58.5**	**+1.0**
	comp=Z,37nm,0.8s						
RDOG				LR	LR		
	comp=Z,4µm,20.0s						
CAST	**Castle Rocks**	**80.10**	**21**	*e*P	**P**	**09 47 58.6**	**-0.4**
	comp=Z,37nm,0.9s						
CAST				LR	LR		
	comp=Z,8µm,22.0s						
PMR	**Palmer**	**80.18**	**24**	*e*P	**P**	**09 47 59.5**	**+0.1**
	comp=Z,43nm,0.9s						
PMR				LR	LR		
	comp=Z,4µm,22.0s						
PMR	**Palmer**	**80.18**	**24**	*e*P	**P**	**09 47 59.5**	**+0.1**
PMR				pmax	pmax		
	comp=Z,43nm,0.9s						
PMR				MLR	MLR		
	comp=Z,4µm,22.0s						
KNK	**Knik Glacier**	**80.36**	**24**	*e*P	**P**	**09 48 01.0**	**+0.5**
	comp=Z,29nm,0.8s						
KNK				LR	LR		
	comp=Z,4µm,22.0s						
DGZ	**Jazzator, Alta**	**80.44**	**323**	*c i*P	**P**	**09 48 00.7**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,17nm,0.9s						
KTH	**Kantishna Hill**	**80.60**	**22**	*e*P	**P**	**09 48 01.1**	**-0.7**
	comp=Z,35nm,1.0s						
KTH				LR	LR		
	comp=Z,8µm,22.0s						
SML	**Sawmill**	**80.62**	**24**	*e*P	**P**	**09 48 02.5**	**+0.6**
	comp=Z,88nm,0.9s						
SML				LR	LR		
	comp=Z,5µm,22.0s						
SML	**Sawmill**	**80.62**	**24**	*e*P	**P**	**09 48 02.5**	**+0.6**
SML				pmax	pmax		
	comp=Z,88nm,0.9s						
SML				MLR	MLR		
	comp=Z,5µm,22.0s						
GLI	**Glacier Island**	**80.64**	**25**	*e*P	**P**	**09 48 02.4**	**+0.4**
	comp=Z,38nm,0.6s						
GLI				LR	LR		
	comp=Z,4µm,22.0s						
FID	**Port Fidalgo**	**80.83**	**25**	*e*P	**P**	**09 48 03.2**	**+0.2**
	comp=Z,144nm,1.6s						
FID				LR	LR		
	comp=Z,4µm,21.0s						
BPAW	**Bear Paw Mtn.**	**80.89**	**21**	*e*P	**P**	**09 48 02.6**	**-0.6**
	comp=Z,12nm,1.0s						
BPAW				LR	LR		
	comp=Z,6µm,20.0s						
EYAK	**Cordova Ski Ar**	**81.04**	**26**	*e*P	**P**	**09 48 05.3**	**+1.3**
	comp=Z,20nm,0.8s						
EYAK				LR	LR		
	comp=Z,4µm,22.0s						
SCM	**Sheep Creek Mo**	**81.04**	**24**	*e*P	**P**	**09 48 04.6**	**+0.5**
	comp=Z,54nm,1.0s						
SCM				LR	LR		
	comp=Z,5µm,22.0s						
SCM	**Sheep Creek Mo**	**81.04**	**24**	*e*P	**P**	**09 48 04.6**	**+0.5**
SCM				pmax	pmax		
	comp=Z,55nm,1.0s						
SCM				MLR	MLR		
	comp=Z,5µm,22.0s						
RND	**Reindeer**	**81.29**	**22**	*e*P	**P**	**09 48 05.1**	**-0.3**
	comp=Z,37nm,1.0s						
RND				LR	LR		
	comp=Z,11µm,22.0s						
RND	**Reindeer**	**81.29**	**22**	*e*P	**P**	**09 48 05.1**	**-0.3**
RND				pmax	pmax		
	comp=Z,37nm,1.0s						
RND				MLR	MLR		
	comp=Z,11µm,22.0s						
RAGM	**Ragged Mountai**	**81.42**	**26**	PFAKE		09 48 20.0	+14
RAGM				LR	LR		
	comp=Z,3µm,22.0s						
MCK	**McKinley**	**81.44**	**22**	*e*P	**P**	**09 48 05.9**	**-0.3**
	comp=Z,76nm,0.9s						
MCK				LR	LR		
	comp=Z,11µm,22.0s						
MCK	**McKinley**	**81.44**	**22**	*e*P	**P**	**09 48 05.9**	**-0.3**
MCK				pmax	pmax		
	comp=Z,76nm,0.9s						
MCK				MLR	MLR		
	comp=Z,11µm,22.0s						
BWN	**Browne**	**81.48**	**21**	PFAKE		09 48 20.0	+14
BWN				LR	LR		
	comp=Z,7µm,22.0s						
MLY	**Manley**	**81.52**	**20**	*e*P	**P**	**09 48 06.8**	**+0.2**
	comp=Z,16nm,0.8s						
MLY				LR	LR		
	comp=Z,8µm,20.0s						
HMT	**Hamilton**	**81.58**	**26**	PFAKE		09 48 20.0	+13
HMT				LR	LR		
	comp=Z,3µm,20.0s						
DHY	**Denali Highway**	**81.67**	**23**	*e*P	**P**	**09 48 07.6**	**0.0**
	comp=Z,29nm,0.9s						
DHY				LR	LR		
	comp=Z,5µm,22.0s						
WRH	**Wood River Hil**	**82.15**	**22**	*e*P	**P**	**09 48 09.3**	**-0.6**
	comp=Z,41nm,1.4s						
WRH				LR	LR		
	comp=Z,6µm,22.0s						
CCB	**Clear Creek Bu**	**82.35**	**21**	*e*P	**P**	**09 48 10.1**	**-0.8**
	comp=Z,41nm,1.5s						
CCB				LR	LR		
	comp=Z,6µm,22.0s						
MDM	**Murphy Dome**	**82.36**	**21**	PFAKE		09 48 20.0	+9.0
MDM				LR	LR		
	comp=Z,5µm,22.0s						
PAX	**Paxson**	**82.36**	**23**	*e*P	**P**	**09 48 10.9**	**-0.2**
	comp=Z,9.9nm,0.8s						
PAX				LR	LR		
	comp=Z,6µm,22.0s						
PAX	**Paxson**	**82.36**	**23**	*e*P	**P**	**09 48 10.9**	**-0.2**
PAX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PAX				MLR	MLR		
	comp=Z,6µm,22.0s						
TCOL	**CIGO, UAF Yank**	**82.45**	**21**	P	**P**	**09 48 09.2**	**-2.2**
	baz=238						
COLA	**College**	**82.45**	**21**	*e*P	**P**	**09 48 11.2**	**-0.2**
	comp=Z,28nm,0.8s						
COLA				LR	LR		
	comp=Z,5µm,22.0s						
COLA	**College**	**82.45**	**21**	*c i*P	**P**	**09 48 10.7**	**-0.7**
COLA				pmax	pmax		
	comp=Z,16nm,0.8s						
HDA	**Harding Lake**	**82.54**	**22**	*e*P	**P**	**09 48 11.7**	**-0.2**
	comp=Z,32nm,1.2s						
HDA				LR	LR		
	comp=Z,10µm,22.0s						
HDA	**Harding Lake**	**82.54**	**22**	P	**P**	**09 48 10.4**	**-1.5**
	baz=238						
SMLA	**Simla**	**82.72**	**302**	*e*P	**P**	**09 48 12.9**	**-0.6**
SMLA				IAmb	IAmb	09 48 15.8	
	comp=Z,28nm,0.6s						
MK31	**Makanchi Array**	**82.73**	**319**	*e*P	**P**	**09 48 13.5**	**+0.2**
	comp=Z,22nm,0.8s						
MK31	**Makanchi Array**	**82.73**	**319**	*e*P	**P**	**09 48 13.5**	**+0.2**
MK31				pmax	pmax		
	comp=Z,22nm,0.8s						
MK32	**Makanchi Array**	**82.73**	**319**	*e*P	**P**	**09 48 12.9**	**-0.4**
MKAR	**Makanchi Array**	**82.73**	**319**	P	**P**	**09 48 12.9**	**-0.4**
	comp=Z,20nm,0.7s,baz=100,slow=6.3,SNR=72						
MKAR				pP	**pP**	**09 48 29.5**	**0.0**
	comp=Z,7.9nm,0.6s,baz=114,slow=4.3,SNR=5.2						
MKAR				LR	LR	10 25 29.4	
	comp=Z,1µm,20.3s,baz=104,slow=36						
POKR	**Poker Plat Res**	**82.73**	**21**	P	**P**	**09 48 10.9**	**-2.0**
	baz=238						
BALM	**Baldy**	**82.74**	**26**	*e*P	**P**	**09 48 14.0**	**+0.8**
	comp=Z,29nm,1.0s						
BALM				LR	LR		
	comp=Z,2µm,22.0s						
ILAR	**Eielson Array**	**82.75**	**22**	P	**P**	**09 48 12.9**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=240,slow=4.2,SNR=48						
ILAR				pP	**pP**	**09 48 30.2**	**+0.9**
	comp=Z,10.0nm,0.9s,baz=246,slow=5.5,SNR=4.1						
ILAR				LR	LR	10 20 33.8	
	comp=Z,6µm,21.9s,baz=250,slow=32						
ILB	**Eielson Array**	**82.75**	**22**	*e*P	**P**	**09 48 11.7**	**-1.3**
	comp=Z,13nm,0.9s						
MAKZ	**Makanchi**	**82.94**	**319**	*e*P	**P**	**09 48 13.8**	**-0.6**
	comp=Z,38nm,0.9s						
MAKZ				LR	LR		

	comp=Z,1µm,21.0s						
MAKZ	**Makanchi**	**82.94**	**319**	*e*P	**P**	**09 48 13.8**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,38nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,1µm,21.0s						
COLD	**Coldfoot**	**82.97**	**19**	*e*P	**P**	**09 48 15.5**	**+1.5**
	comp=Z,14nm,1.2s						
COLD				LR	LR		
	comp=Z,2µm,20.0s						
RIDG	**Independent Ri**	**82.99**	**23**	*e*P	**P**	**09 48 14.6**	**+0.3**
	comp=Z,80nm,1.4s						
RIDG				LR	LR		
	comp=Z,8µm,22.0s						
MENT	**Mentasta**	**83.05**	**24**	*e*P	**P**	**09 48 14.9**	**+0.3**
	comp=Z,21nm,0.7s						
MENT				LR	LR		
	comp=Z,4µm,21.0s						
DOT	**Dot Lake**	**83.25**	**23**	*e*P	**P**	**09 48 15.8**	**+0.1**
	comp=Z,28nm,0.9s						
DOT				LR	LR		
	comp=Z,6µm,22.0s						
PCA	**Pinnacle**	**83.25**	**27**	*e*P	**P**	**09 48 16.0**	**+0.2**
	comp=Z,53nm,0.9s						
PCA				LR	LR		
	comp=Z,2µm,21.0s						
YKU2	**Yakutat**	**83.28**	**28**	PFAKE		09 48 30.0	+14
YKU2				LR	LR		
	comp=Z,2µm,22.0s						
SCRK	**Sand Creek**	**83.44**	**23**	*e*P	**P**	**09 48 16.8**	**0.0**
	comp=Z,19nm,1.0s						
SCRK				LR	LR		
	comp=Z,7µm,21.0s						
POO	**Poona**	**83.45**	**289**	*e*P	**P**	**09 48 16.9**	**-0.8**
ZAA0	**Zalesovo Array**	**83.46**	**326**	*e*P	**P**	**09 48 15.7**	**-1.1**
	comp=Z,25nm,0.9s						
ZAA0				LR	LR		
	comp=Z,700nm,19.0s						
ZALV	**Zalesovo Beam**	**83.46**	**326**	P	**P**	**09 48 15.9**	**-0.9**
	comp=Z,19nm,0.7s,baz=108,slow=4.8,SNR=24						
ZALV				LR	LR	10 25 33.8	
	comp=Z,637nm,21.3s,baz=70,slow=36						
ZAA1	**Zalesovo Array**	**83.46**	**326**	*e*P	**P**	**09 48 15.9**	**-0.9**
BCPM	**Bancas Point**	**83.48**	**27**	PFAKE		09 48 30.0	+13
BCPM				LR	LR		
	comp=Z,2µm,21.0s						
PRP	**Porcupine Dome**	**83.63**	**21**	PFAKE		09 48 30.0	+12
PRP				LR	LR		
	comp=Z,5µm,22.0s						
DHRM	**DHARAMSHALA**	**83.66**	**303**	*e*P	**P**	**09 48 18.4**	**-0.3**
DHRM				IAmb	IAmb	09 48 20.1	
	comp=Z,24nm,0.7s						
DHRM				IAMs_20	IAMs_20	10 23 20.5	
	comp=Z,2µm,24.5s						
PDGK	**Podgornoye**	**83.69**	**315**	P	**P**	**09 48 17.8**	**-0.7**
PDGK				pmax	pmax		
	comp=Z,12nm,1.0s						
QSPA	**South Pole Qui**	**83.72**	**180**	*e*P	**P**	**09 48 18.0**	**-0.2**
	comp=Z,237nm,1.4s						
QSPA				LR	LR		
	comp=Z,2µm,19.0s						
TOLK	**Toolik Lake Re**	**83.97**	**18**	*e*P	**P**	**09 48 20.0**	**+0.8**
	comp=Z,16nm,0.7s						
TOLK				LR	LR		
	comp=Z,3µm,20.0s						
TOLK	**Toolik Lake Re**	**83.97**	**18**	P	**P**	**09 48 18.1**	**-1.1**
	baz=236						
FYU	**Fort Yukon**	**84.26**	**20**	*e*P	**P**	**09 48 21.9**	**+1.2**
	comp=Z,49nm,1.5s						
FYU				LR	LR		
	comp=Z,6µm,20.0s						
KPKS	**Kokpek**	**84.29**	**315**	*e*P	**P**	**09 48 20.6**	**-0.9**
KPKS	**Kokpek**	**84.29**	**315**	*e*P	**P**	**09 48 20.6**	**-0.9**
SATY	**Saty**	**84.39**	**314**	*e*P	**P**	**09 48 22.0**	**0.0**
SATY	**Saty**	**84.39**	**314**	*e*P	**P**	**09 48 22.1**	**0.0**
SIT	**Sitka**	**84.47**	**31**	PFAKE		09 48 30.0	+8.1
SIT				LR	LR		
	comp=Z,2µm,20.0s						
DIB	**Dawson Inlet,**	**84.76**	**35**	*e*P	**P**	**09 48 23.6**	**+0.2**
	comp=Z,61nm,1.4s						
DIB				LR	LR		
	comp=Z,2µm,21.0s						
HYT	**Haines Junctio**	**84.80**	**27**	*e*P	**P**	**09 48 24.9**	**+1.2**
	comp=Z,38nm,1.0s						
HYT				LR	LR		
	comp=Z,4µm,22.0s						
EGAK	**Eagle**	**84.90**	**23**	*e*P	**P**	**09 48 24.5**	**+0.5**
	comp=Z,24nm,0.9s						
EGAK				LR	LR		
	comp=Z,9µm,22.0s						
MAW	**Mawson**	**85.01**	**203**	P	**P**	**09 48 24.5**	**+0.1**
	comp=Z,26nm,0.6s,baz=91,slow=5.9,SNR=58						
MAW				pP	**pP**	**09 48 41.3**	**+1.0**
	comp=Z,20nm,0.6s,baz=120,slow=4.5,SNR=5.7						
MAW				LR	LR	10 22 38.8	
	comp=Z,2µm,21.9s,baz=92,slow=33						
MAW	**Mawson**	**85.01**	**203**	*e*P	**P**	**09 48 24.6**	**+0.1**
	comp=Z,32nm,1.5s						
MAW				LR	LR		
	comp=Z,600nm,21.0s						
MAW	**Mawson**	**85.01**	**203**	P	**P**	**09 48 24.5**	**+0.1**
	baz=85,SNR=41						
MAW	**Mawson**	**85.01**	**203**	*e*P	**P**	**09 48 24.6**	**+0.1**
MAW				pmax	pmax		
	comp=Z,32nm,1.5s						
MAW				MLR	MLR		
	comp=Z,600nm,21.0s						
MOBC	**Moresby Island**	**85.03**	**35**	PFAKE		09 48 40.0	+15
MOBC				LR	LR		
	comp=Z,2µm,20.0s						
KDJ	**Kajisay**	**85.06**	**313**	*e*P	**P**	**09 48 25.1**	**-0.4**
	comp=Z,50nm,0.9s						
KDJ	**Kajisay**	**85.06**	**313**	*e*P	**P**	**09 48 25.1**	**-0.4**
KDJ				pmax	pmax		
	comp=Z,50nm,0.9s						
BESE	**Bessie Mountai**	**85.23**	**30**	*e*P	**P**	**09 48 25.4**	**-0.4**
	comp=Z,36nm,1.2s						
BESE				LR	LR		
	comp=Z,2µm,22.0s						
DAWY	**Dawson**	**85.29**	**24**	*e*P	**P**	**09 48 26.9**	**+1.0**
	comp=Z,110nm,2.0s						
DAWY				LR	LR		
	comp=Z,3µm,20.0s						
SKAG	**Skagway**	**85.31**	**29**	*e*P	**P**	**09 48 26.5**	**+0.4**
	comp=Z,28nm,1.2s						
SKAG				LR	LR		
	comp=Z,2µm,19.0s						
JIS	**Juneau Island**	**85.36**	**30**	PFAKE		09 48 40.0	+14
JIS				LR	LR		
	comp=Z,2µm,21.0s						
MDOK	**Medeo**	**85.38**	**314**	*e*P	**P**	**09 48 26.6**	**-0.4**
MDOK				*e*S	**S**	**09 58 47.2**	**-6.6**
MDOK	**Medeo**	**85.38**	**314**	*e*P	**P**	**09 48 26.6**	**-0.4**
MDOK				*e*S	**S**	**09 58 47.3**	**-6.6**
KSH	**Kashi**	**85.39**	**310**	P	**P**	**09 48 29.5**	**+2.3**
KSH				PP	**PP**	**09 51 51.9**	**+5.9**
KSH				SKS	**SKSac**	**09 58 41.9**	**-5.8**
KSH				S	**S**	**09 58 51.0**	**-3.0**
KSH				pmax	pmax		
	comp=Z,27nm,0.8s						
KSH				pmax	pmax		
	comp=Z,490nm,6.8s						
KSH				LR	LR		
	comp=Z,800nm,16.7s						
KSH				LR	LR		
	comp=Z,1µm,18.1s						
KSH				LR	LR		
	comp=Z,2µm,19.8s						
TNSS	**Tian-Shan**	**85.43**	**314**	*e*P	**P**	**09 48 27.2**	**-0.4**
TNSS	**Tian-Shan**	**85.43**	**314**	*e*P	**P**	**09 48 27.3**	**-0.4**
CHKK	**Chushkaly**	**85.58**	**315**	*e*P	**P**	**09 48 27.3**	**-0.5**
CHKK	**Chushkaly**	**85.58**	**315**	*e*P	**P**	**09 48 27.3**	**-0.5**
ULHL	**Ulahol**	**85.76**	**313**	P	**P**	**09 48 33.6**	**+4.6**
	SNR=9.2						
NRN	**Naryn**	**85.77**	**312**	*e*P	**P**	**09 48 29.4**	**+0.1**
	comp=Z,42nm,1.2s						
NRN				LR	LR		
	comp=Z,1µm,21.0s						
WRAK	**Wrangell Islan**	**85.81**	**32**	*e*P	**P**	**09 48 29.8**	**+1.2**
	comp=Z,35nm,1.1s						
WRAK				LR	LR		
	comp=Z,2µm,22.0s						
BOOM	**Boomskoye usch**	**86.03**	**313**	*e*P	**P**	**09 48 29.6**	**-0.8**
	comp=Z,34nm,1.0s						
KUU	**Kurty**	**86.05**	**315**	*e*P	**P**	**09 48 29.6**	**-0.6**
KUU				*e*S	S	09 59 09.7	+10
KUU	**Kurty**	**86.05**	**315**	*e*P	**P**	**09 48 29.6**	**-0.6**
KUU				*e*S	S	09 59 09.7	+10
KURK	**Kurchatov**	**86.14**	**322**	*e*P	**P**	**09 48 29.0**	**-1.3**
	comp=Z,50nm,1.3s						
KURK				LR	LR		
	comp=Z,999nm,22.0s						
KURK	**Kurchatov**	**86.14**	**322***c*	*i*P	**P**	**09 48 28.8**	**-1.6**
KURK				pmax	pmax		
	comp=Z,24nm,1.3s						
TKM2	**Tokmak 2**	**86.37**	**314**	P	**P**	**09 48 32.2**	**+0.1**
	SNR=19						
NIL	**Nilore**	**86.44**	**304**	*e*P	**P**	**09 48 32.1**	**-0.2**
	comp=Z,236nm,1.9s						
NIL	**Nilore**	**86.44**	**304**	*e*P	**P**	**09 48 32.2**	**-0.2**
NIL				pmax	pmax		
	comp=Z,236nm,1.9s						
KZA	**Kyzart**	**86.45**	**313**	P	**P**	**09 48 33.7**	**+1.0**
	SNR=12						
UCH	**Uchtor**	**87.02**	**313**	P	**P**	**09 48 35.6**	**+0.1**
	SNR=6.1						
BBB	**Bella Bella**	**87.04**	**37**	P	**P**	**09 48 35.2**	**+0.5**
	comp=Z,8.3nm,0.9s,baz=295,slow=8.2,SNR=2.8						
BBB	**Bella Bella**	**87.04**	**37**	PFAKE		09 48 50.0	+15
BBB				LR	LR		
	comp=Z,3µm,22.0s						
AAK	**Ala-Archa**	**87.11**	**313**	*e*P	**P**	**09 48 36.0**	**+0.5**
	comp=Z,27nm,1.1s						
AAK				LR	LR		
	comp=Z,1µm,22.0s						
AAK	**Ala-Archa**	**87.11**	**313**⇓	*e*P	**P**	**09 48 36.1**	**+0.5**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SGDS	**Sogindy**	**87.17**	**314**	*e*P	**P**	**09 48 35.1**	**-0.6**
SGDS				*e*S	**S**	**09 59 11.1**	**0.0**
USP	**Ospenovka**	**87.23**	**314**	P	**P**	**09 48 36.1**	**+0.1**
	SNR=5.9						
EPYK	**Eagle Plains**	**87.24**	**22**	*e*P	**P**	**09 48 36.2**	**+0.7**
	comp=Z,42nm,0.9s						
EPYK				LR	LR		
	comp=Z,7µm,22.0s						
EPYK	**Eagle Plains**	**87.24**	**22**	P	**P**	**09 48 35.3**	**-0.2**
	baz=248						
JCC	**Jacoby Creek,**	**87.39**	**49**	PFAKE		09 48 50.0	+13
JCC				LR	LR		
	comp=Z,2µm,19.0s						
KMRM	**Mail Ridge**	**87.52**	**49**	PFAKE		09 48 50.0	+12
KMRM				LR	LR		
	comp=Z,3µm,21.0s						
KCPM	**Cahto Peak**	**87.52**	**50**	*e*P	**P**	**09 48 39.7**	**+2.1**
	comp=Z,43nm,1.2s						
KCPM				LR	LR		
	comp=Z,4µm,18.0s						
KEBM	**Edson Butte**	**87.54**	**47**	PFAKE		09 48 50.0	+12
KEBM				LR	LR		
	comp=Z,4µm,20.0s						
DLBC	**Dease Lake**	**87.59**	**31**	P	**P**	**09 48 38.6**	**+1.2**
	comp=Z,11nm,1.0s,baz=231,slow=7.2,SNR=12						
DLBC				pP	**pP**	**09 48 53.8**	**0.0**
	comp=Z,12nm,0.9s,baz=255,slow=4.4,SNR=7.4						
DLBC	**Dease Lake**	**87.59**	**31**	*e*P	**P**	**09 48 37.8**	**+0.4**
	comp=Z,38nm,1.1s						
DLBC				LR	LR		
	comp=Z,3µm,21.0s						
KHMM	**Horse Mountain**	**87.62**	**49**	PFAKE		09 48 50.0	+12
KHMM				LR	LR		
	comp=Z,2µm,21.0s						
EKS2	**Erkin-Say**	**87.63**	**313**	P	**P**	**09 48 38.9**	**+0.8**
	SNR=6.8						
HOPS	**Hopland Field**	**87.79**	**51**	PFAKE		09 48 50.0	+11
HOPS				LR	LR		
	comp=Z,3µm,18.0s						
MCCM	**Marconi Confer**	**87.80**	**51**	PFAKE		09 48 50.0	+11
MCCM				LR	LR		
	comp=Z,3µm,20.0s						
BTLS	**Baital**	**87.89**	**316**	*e*P	**P**	**09 48 38.0**	**-1.0**
BTLS				*e*S	**S**	**09 59 21.6**	**+3.9**
BTLS	**Baital**	**87.89**	**316**	*e*P	**P**	**09 48 38.1**	**-1.0**
BTLS				*e*S	**S**	**09 59 21.7**	**+3.9**
GDXM	**Geysers**	**87.97**	**51**	*e*P	**P**	**09 48 42.0**	**+2.2**
	comp=Z,15nm,0.9s						
GDXM				LR	LR		
	comp=Z,4µm,18.0s						
K02D	**Willamette Mer**	**88.00**	**47**	P	**P**	**09 48 40.0**	**+0.3**
	baz=260						
O02D	**Mt. Diablo Mer**	**88.21**	**49**	P	**P**	**09 48 41.3**	**+0.5**
	baz=260						
M02C	**Callahan**	**88.36**	**48**	P	**P**	**09 48 42.6**	**+1.1**
	baz=260						
N02D	**Trinity Center**	**88.40**	**49**	P	**P**	**09 48 42.0**	**+0.3**
	baz=260						
WDC	**Whiskeytown Da**	**88.46**	**49**	PFAKE		09 48 50.0	+8.1
WDC				LR	LR		
	comp=Z,2µm,20.0s						
HUMO	**Hull Mountain**	**88.49**	**47**	*e*P	**P**	**09 48 44.1**	**+2.1**
	comp=Z,21nm,1.1s						
HUMO				LR	LR		
	comp=Z,5µm,22.0s						
YBH	**Yreka Blue Hor**	**88.53**	**48**	P	**P**	**09 48 43.4**	**+1.2**
	comp=Z,5.2nm,1.0s,baz=207,slow=6.7,SNR=6.8						
YBH				pP	**pP**	**09 49 00.4**	**+1.7**
	comp=Z,5.6nm,0.8s,baz=60,slow=6.4,SNR=5.9						
YBH	**Yreka Blue Hor**	**88.53**	**48**	PFAKE		09 48 50.0	+7.7
YBH				LR	LR		
	comp=Z,6µm,21.0s						
COR	**Corvallis**	**88.59**	**45**	PFAKE		09 48 50.0	+7.7
COR				LR	LR		
	comp=Z,7µm,21.0s						
NLWA	**Neilton Lookou**	**88.70**	**42**	PFAKE		09 48 50.0	+7.1
NLWA				LR	LR		
	comp=Z,6µm,22.0s						
SAO	**San Andreas Ge**	**88.70**	**53**	PFAKE		09 48 50.0	+6.9
SAO				LR	LR		
	comp=Z,3µm,22.0s						
O03E	**Paynes Creek**	**88.97**	**49**	P	**P**	**09 48 44.1**	**-0.3**
	baz=261						
H04D	**Lebanon**	**88.98**	**45**	P	**P**	**09 48 44.6**	**+0.5**
	baz=260						
F04D	**Rainier, OR**	**89.05**	**44**	P	**P**	**09 48 44.7**	**+0.2**
	baz=260						
I04A	**Tendick Farm,**	**89.09**	**46**	P	**P**	**09 48 45.4**	**+0.6**
	baz=260						
INK	**Inuvik**	**89.09**	**21**	P	**P**	**09 48 45.0**	**+0.8**
	comp=Z,4.6nm,0.8s,baz=255,slow=4.5,SNR=8.1						
INK				pP	**pP**	**09 49 00.5**	**0.0**
	comp=Z,6.1nm,0.5s,baz=276,slow=5.2,SNR=7.4						
INK	**Inuvik**	**89.09**	**21**	*e*P	**P**	**09 48 44.7**	**+0.5**
	comp=Z,20nm,1.3s						
INK				LR	LR		
	comp=Z,5µm,21.0s						
ORV	**Oroville**	**89.09**	**50**	*e*P	**P**	**09 48 45.9**	**+1.0**
	comp=Z,11nm,1.0s						
ORV				LR	LR		
	comp=Z,1µm,21.0s						
M04C	**Macdoel**	**89.18**	**48**	P	**P**	**09 48 46.2**	**+0.8**
	baz=261						
J04D	**Umpqua Nationa**	**89.21**	**47**	P	**P**	**09 48 46.1**	**+0.5**
	baz=261						
D03D	**Eldon**	**89.25**	**42**	P	**P**	**09 48 46.8**	**+1.4**
	baz=260						
K04D	**Chiloquin, OR**	**89.37**	**47**	P	**P**	**09 48 47.2**	**+0.9**
	baz=261						
H04A	**Detroit Lake**	**89.39**	**45**	PFAKE		09 49 00.0	+14
H04A				LR	LR		
	comp=Z,6µm,21.0s						
BTK	**Batken**	**89.40**	**310**	*e*P	**P**	**09 48 45.3**	**-1.1**
	comp=Z,60nm,1.4s						
BTK	**Batken**	**89.40**	**310**	*e*P	**P**	**09 48 45.3**	**-1.1**
BTK				pmax	pmax		
	comp=Z,60nm,1.4s						
AFDM	**Forest Hills D**	**89.40**	**51**	*e*P	**P**	**09 48 46.9**	**+0.6**
	comp=Z,14nm,1.0s						
AFDM				LR	LR		
	comp=Z,2µm,21.0s						
E04D	**Cinebar**	**89.44**	**43**	P	**P**	**09 48 46.1**	**-0.2**
	baz=260						
PAGB	**Antelope Grade**	**89.51**	**54**	PFAKE		09 49 00.0	+13
PAGB				LR	LR		
	comp=Z,3µm,20.0s						
GAR	**Garm**	**89.62**	**309**	*e*P	**P**	**09 48 47.6**	**+0.1**
	comp=Z,63nm,1.3s						
GAR	**Garm**	**89.62**	**309**	*e*P	**P**	**09 48 47.6**	**+0.1**
GAR				pmax	pmax		
	comp=Z,63nm,1.3s						
SMMC	**Simmler**	**89.66**	**55**	P	**P**	**09 48 47.9**	**+0.2**
	baz=262						
CMB	**Columbia Colle**	**89.73**	**52**	*e*P	**P**	**09 48 48.3**	**+0.4**
	comp=Z,5.7nm,0.9s						
CMB				LR	LR		
	comp=Z,3µm,20.0s						
CMB	**Columbia Colle**	**89.73**	**52**	*e*P	**P**	**09 48 48.3**	**+0.4**
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMB				MLR	MLR		
	comp=Z,3µm,20.0s						
PKM	**Mcpherson Peak**	**89.75**	**55**	P	**P**	**09 48 48.6**	**+0.3**
	baz=262,SNR=8.7						
SNCC	**San Nicolas Is**	**89.77**	**57**	PFAKE		09 49 00.0	+12
SNCC				LR	LR		
	comp=Z,3µm,20.0s						
J05D	**Fort Rock, OR**	**89.85**	**47**	P	**P**	**09 48 48.9**	**+0.4**
	baz=261,SNR=12						
I05D	**Terrebonne, OR**	**89.94**	**46**	P	**P**	**09 48 49.6**	**+0.8**
	baz=261						
LON	**Longmire**	**89.98**	**43**	PFAKE		09 49 00.0	+11
LON				LR	LR		
	comp=Z,4µm,22.0s						
BEKR	**Beckworth**	**90.00**	**50**	*e*P	**P**	**09 48 49.6**	**+0.2**
	comp=Z,28nm,1.3s						
BEKR				LR	LR		
	comp=Z,3µm,22.0s						
KBL	**Kabul**	**90.03**	**305**	PFAKE		09 49 00.0	+10
KBL				LR	LR		
	comp=Z,1µm,22.0s						
B05A	**Bryant**	**90.03**	**42**	P	**P**	**09 48 49.1**	**+0.1**
	baz=261						
RUBR	**Rubicon Trail**	**90.05**	**51**	PFAKE		09 49 00.0	+10
RUBR				LR	LR		
	comp=Z,2µm,21.0s						
KK31	**Karatay Array**	**90.07**	**313**	*e*P	**P**	**09 48 48.9**	**-0.5**
	comp=Z,16nm,1.3s						
KK31	**Karatay Array**	**90.07**	**313**	*e*P	**P**	**09 48 48.9**	**-0.5**
KK31				pmax	pmax		
	comp=Z,16nm,1.3s						
KKAR	**Karatay Array**	**90.07**	**313**	*e*P	**P**	**09 48 49.1**	**-0.3**
	comp=Z,16nm,1.3s						
KKAR	**Karatay Array**	**90.07**	**313**	*e*P	**P**	**09 48 49.1**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,16nm,1.3s						
F05D	**White Salmon**	**90.09**	**44**	P	**P**	**09 48 49.4**	**0.0**
	baz=261						
G05D	**Wamic, OR**	**90.09**	**45**	P	**P**	**09 48 49.9**	**+0.5**
	baz=261						
PINE	**Pine Mountain**	**90.14**	**46**	PFAKE		09 49 00.0	+10
PINE				LR	LR		
	comp=Z,6µm,22.0s						
MOD	**Modoc Plateau**	**90.33**	**48**	*e*P	**P**	**09 48 50.5**	**-0.4**
	comp=Z,11nm,1.1s						
MOD				LR	LR		
	comp=Z,5µm,20.0s						
VES	**Vestal, Richgr**	**90.47**	**54**	P	**P**	**09 48 51.9**	**+0.6**
	baz=263,SNR=8.3						
VCNR	**Virginia City**	**90.47**	**51**	*e*P	**P**	**09 48 52.3**	**+0.7**
	comp=Z,19nm,1.0s						
VCNR				LR	LR		
	comp=Z,2µm,19.0s						
PNTR	**Pine Nut**	**90.48**	**51**	*e*P	**P**	**09 48 53.3**	**+1.6**
	comp=Z,28nm,0.8s						
PNTR				LR	LR		
	comp=Z,2µm,21.0s						
WAKR	**Walker**	**90.53**	**51**	*e*P	**P**	**09 48 52.2**	**+0.3**
	comp=Z,59nm,1.9s						
WAKR				LR	LR		
	comp=Z,3µm,21.0s						
LLLB	**Lillooet**	**90.55**	**39**	*e*P	**P**	**09 48 51.7**	**+0.3**
	comp=Z,8.8nm,0.7s						
LLLB				LR	LR		
	comp=Z,6µm,20.0s						
G06A	**Carlson Farm,**	**90.56**	**45**	PFAKE		09 49 00.0	+8.3
G06A				LR	LR		
	comp=Z,4µm,20.0s						
ARVC	**Arvin**	**90.58**	**55**	P	**P**	**09 48 52.7**	**+0.8**
	baz=263						
OSI	**Osito Audit: C**	**90.61**	**55**	PFAKE		09 49 00.0	+7.9
OSI				LR	LR		
	comp=Z,3µm,20.0s						
OSI	**Osito Audit: C**	**90.61**	**55**	P	**P**	**09 48 53.2**	**+1.1**
	baz=263						
MDPB	**Devils Postpil**	**90.70**	**52**	*e*P	**P**	**09 48 52.8**	**+0.1**
	comp=Z,13nm,1.0s						
MDPB				LR	LR		
	comp=Z,3µm,20.0s						
CIS	**Catalina Islan**	**90.71**	**57**	P	**P**	**09 48 54.0**	**+1.4**
	baz=263						
PAHR	**Pah Rah Range**	**90.73**	**50**	*e*P	**P**	**09 48 53.5**	**+0.8**
	comp=Z,28nm,1.2s						
PAHR				LR	LR		
	comp=Z,2µm,19.0s						
YERR	**Yerington**	**90.74**	**51**	*e*P	**P**	**09 48 54.0**	**+1.2**
	comp=Z,15nm,0.9s						
YERR				LR	LR		
	comp=Z,2µm,21.0s						
OMMB	**Old Mammoth Mi**	**90.76**	**52**	*e*P	**P**	**09 48 54.3**	**+1.2**
	comp=Z,29nm,1.6s						
OMMB				LR	LR		
	comp=Z,3µm,20.0s						
LTY	**Liberty**	**90.83**	**43**	*e*P	**P**	**09 48 52.8**	**-0.1**
	comp=Z,16nm,1.1s						
LTY				LR	LR		
	comp=Z,4µm,22.0s						
DECC	**Green Verdugo**	**90.88**	**56**	P	**P**	**09 48 54.3**	**+0.9**
	baz=263						
MLAC	**Mammoth, Mammo**	**90.89**	**52**	P	**P**	**09 48 54.6**	**+1.0**
	baz=263						
ISA	**Isabella, Lake**	**90.94**	**54**	*e*P	**P**	**09 48 54.5**	**+0.8**
	comp=Z,66nm,1.8s						
ISA				LR	LR		
	comp=Z,4µm,21.0s						
ISA	**Isabella, Lake**	**90.94**	**54**	*e*P	**P**	**09 48 54.5**	**+0.8**
ISA				pmax	pmax		
	comp=Z,66nm,1.8s						
ISA				MLR	MLR		
	comp=Z,4µm,21.0s						
ISA	**Isabella, Lake**	**90.94**	**54**	P	**P**	**09 48 54.4**	**+0.8**
	baz=263,SNR=6.4						
PASC	**Pasadena Art C**	**91.00**	**56**	*e*P	**P**	**09 48 55.9**	**+2.0**
	comp=Z,120nm,1.8s						
PASC				LR	LR		
	comp=Z,2µm,20.0s						
MWC	**Mount Wilson**	**91.11**	**56**	*e*P	**P**	**09 48 55.7**	**+1.1**
	comp=Z,64nm,1.0s						
MWC				LR	LR		
	comp=Z,2µm,20.0s						
F07A	**Phinny Hill Vi**	**91.15**	**44**	PFAKE		09 49 10.0	+16
F07A				LR	LR		
	comp=Z,3µm,20.0s						
EDW2	**Edwards Air Fo**	**91.23**	**55**	P	**P**	**09 48 56.0**	**+1.0**
	baz=263,SNR=13						
RYN	**Ryan**	**91.26**	**51**	*e*P	**P**	**09 48 55.6**	**+0.4**
	comp=Z,21nm,1.0s						
RYN				LR	LR		
	comp=Z,2µm,20.0s						
CWC	**Cottonwood Cre**	**91.35**	**54**	P	**P**	**09 48 56.4**	**+0.7**
	baz=263						
NV01	**Mina Array Sit**	**91.40**	**52**	*e*P	**P**	**09 48 57.1**	**+1.1**
NV01				*e*PKKPdf	**PKKPdf**	**10 06 16.7**	**+1.4**
NVAR	**Mina Array Bea**	**91.40**	**52**	P	**P**	**09 48 57.1**	**+1.1**
	comp=Z,24nm,1.0s,baz=252,slow=6.3,SNR=77						
NVAR				pP	**pP**	**09 49 12.4**	**-0.1**
	comp=Z,14nm,0.8s,baz=251,slow=6.2,SNR=10						
NVAR				PKKPbc	**PKKPdf**	**10 06 16.7**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=112,slow=3.4,SNR=4.2						
NVAR				LR	LR	10 24 43.7	
	comp=Z,2µm,20.0s,baz=283,slow=32						
BFSC	**Mount Baldy Ra**	**91.44**	**56**	P	**P**	**09 48 56.6**	**+0.5**
	baz=263,SNR=10						
HAWA	**Hanford**	**91.48**	**44**	*e*P	**P**	**09 48 55.9**	**+0.1**
	comp=Z,14nm,1.1s						
HAWA				LR	LR		
	comp=Z,4µm,20.0s						
NV11	**Mina Array Sit**	**91.52**	**52**	*e*P	**P**	**09 48 57.5**	**+1.1**
	comp=Z,2.0nm,1.0s						
NV11				LR	LR		
	comp=Z,200nm,20.0s						
LRMC	**Laurel Mtn Rad**	**91.56**	**55**	P	**P**	**09 48 57.5**	**+0.9**
	baz=264,SNR=12						
WVOR	**Wild Horse Val**	**91.63**	**48**	*e*P	**P**	**09 48 56.7**	**-0.1**
	comp=Z,8.6nm,0.8s						
WVOR				LR	LR		
	comp=Z,4µm,20.0s						
WVOR	**Wild Horse Val**	**91.63**	**48**	*e*P	**P**	**09 48 56.7**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WVOR				MLR	MLR		
	comp=Z,4µm,20.0s						
KVN	**Kaiserville**	**91.63**	**51**	*e*P	**P**	**09 48 57.3**	**+0.3**
	comp=Z,22nm,0.9s						

KVN				LR	LR		
	comp=Z,2µm,20.0s						
KVN	**Kaiserville**	**91.63**	**51**	*e*P	**P**	**09 48 57.3**	**+0.3**
KVN				pmax	pmax		
	comp=Z,22nm,0.9s						
KVN				MLR	MLR		
	comp=Z,2µm,20.0s						
BRVK	**Borovoye**	**91.66**	**323**	*e*P	**P**	**09 48 55.5**	**-1.0**
	comp=Z,15nm,0.9s						
BRVK				LR	LR		
	comp=Z,1µm,21.0s						
BRVK	**Borovoye**	**91.66**	**323**	*e*P	**P**	**09 48 55.5**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,15nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,1µm,21.0s						
DAC	**Darwin (Calif)**	**91.72**	**54**	PFAKE		09 49 10.0	+13
DAC				LR	LR		
	comp=Z,3µm,20.0s						
G08A	**Pilot Rock**	**91.74**	**45**	PFAKE		09 49 10.0	+13
G08A				LR	LR		
	comp=Z,5µm,20.0s						
109C	**Camp Elliot, M**	**91.75**	**57**	P	**P**	**09 48 58.2**	**+0.8**
	baz=264						
CPE	**Camp Elliot**	**91.75**	**57**	*e*P	**P**	**09 48 58.5**	**+1.2**
	comp=Z,71nm,1.6s						
CPE				LR	LR		
	comp=Z,3µm,21.0s						
MURC	**Murrieta**	**91.75**	**57**	P	**P**	**09 48 58.3**	**+0.8**
	baz=264						
MPMC	**Manual Prospec**	**91.78**	**54**	P	**P**	**09 48 58.9**	**+1.2**
	baz=264,SNR=30						
E08A	**Dider Farm, El**	**91.82**	**44**	PFAKE		09 49 10.0	+13
E08A				LR	LR		
	comp=Z,4µm,20.0s						
J08A	**Circle Bar Ran**	**91.86**	**47**	*e*P	**P**	**09 48 57.9**	**+0.1**
	comp=Z,7.8nm,0.8s						
J08A				LR	LR		
	comp=Z,5µm,22.0s						
GRAC	**Grapevine Rang**	**91.98**	**53**	P	**P**	**09 48 58.4**	**0.0**
	baz=264,SNR=9.2						
D08A	**Wollman Farm,**	**91.99**	**43**	*e*P	**P**	**09 48 58.8**	**+0.7**
	comp=Z,38nm,1.8s						
BBRC	**Big Bear Solar**	**92.05**	**56**	P	**P**	**09 48 58.5**	**-0.5**
	baz=264						
BAR	**Barrett**	**92.09**	**58**	PFAKE		09 49 10.0	+11
BAR				LR	LR		
	comp=Z,3µm,22.0s						
GSC	**Goldstone, Bar**	**92.25**	**55**	*e*P	**P**	**09 49 01.4**	**+1.7**
	comp=Z,21nm,1.3s						
GSC				LR	LR		
	comp=Z,3µm,20.0s						
GSC	**Goldstone, Bar**	**92.25**	**55**	P	**P**	**09 49 00.7**	**+0.9**
	baz=264,SNR=8.2						
MONP2	**Monument Peak**	**92.32**	**57**	P	**P**	**09 49 01.4**	**+1.1**
	baz=264,SNR=7.1						
FURC	**Furnace Creek,**	**92.33**	**54**	P	**P**	**09 49 01.1**	**+1.1**
	baz=264,SNR=24						
PFO	**Pinyon Flats O**	**92.36**	**57**	*e*P	**P**	**09 49 01.1**	**+0.7**
	comp=Z,20nm,1.0s						
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	**Pinyon Flats O**	**92.36**	**57**	P	**P**	**09 49 01.0**	**+0.6**
	baz=264,SNR=5.7						
E09A	**Wood Farm, Sta**	**92.45**	**44**	*e*P	**P**	**09 49 01.0**	**+0.7**
	comp=Z,23nm,1.1s						
E09A				LR	LR		
	comp=Z,4µm,20.0s						
BMN	**Battle Mountai**	**92.46**	**50**	*e*P	**P**	**09 49 01.0**	**+0.3**
	comp=Z,18nm,0.9s						
BMN				LR	LR		
	comp=Z,3µm,21.0s						
BMN	**Battle Mountai**	**92.46**	**50**	*e*P	**P**	**09 49 01.0**	**+0.3**
BMN				pmax	pmax		
	comp=Z,18nm,0.9s						
BMN				MLR	MLR		
	comp=Z,3µm,21.0s						
C09A	**Chrisman Ranch**	**92.51**	**42**	*e*P	**P**	**09 49 00.7**	**+0.1**
	comp=Z,20nm,1.3s						
C09A				LR	LR		
	comp=Z,8µm,22.0s						
IKP	**In-Ko-Pah, Jac**	**92.56**	**58**	P	**P**	**09 49 02.4**	**+1.1**
	baz=264						
HEC	**Hector,Ludlow**	**92.58**	**55**	P	**P**	**09 49 02.4**	**+1.0**
	baz=264,SNR=11						
SHOC	**Shoshone, Teco**	**92.74**	**54**	P	**P**	**09 49 03.0**	**+1.0**
	baz=264,SNR=13						
BELC	**Belle Mtn. Jos**	**92.78**	**56**	P	**P**	**09 49 03.4**	**+1.0**
	baz=264,SNR=24						
SWSC	**Sam W. Stewart**	**92.84**	**57**	P	**P**	**09 49 03.9**	**+1.5**
	baz=264						
BMO	**Blue Mountains**	**92.86**	**45**	*e*P	**P**	**09 49 02.4**	**0.0**
	comp=Z,8.5nm,0.8s						
BMO				LR	LR		
	comp=Z,4µm,20.0s						
BMO	**Blue Mountains**	**92.86**	**45**	*e*P	**P**	**09 49 02.4**	**0.0**
BMO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BMO				MLR	MLR		
	comp=Z,4µm,20.0s						
TPNV	**Topopah Spring**	**92.86**	**53**	*e*P	**P**	**09 49 04.0**	**+1.3**
	comp=Z,47nm,1.5s						
TPNV				LR	LR		
	comp=Z,2µm,20.0s						
TPNV	**Topopah Spring**	**92.86**	**53**	*e*P	**P**	**09 49 04.0**	**+1.3**
TPNV				pmax	pmax		
	comp=Z,47nm,1.5s						
TPNV				MLR	MLR		
	comp=Z,2µm,20.0s						
TPNV	**Topopah Spring**	**92.86**	**53**	P	**P**	**09 49 03.6**	**+1.0**
	baz=264,SNR=26						
SYO	**Syowa Base**	**92.97**	**199**	⇑*i*P	**P**	**09 49 00.4**	**-1.8**
SYO	**Syowa Base**	**92.97**	**199**	⇓*e*P	P	09 49 13.4	+11
TUQ	**Turquoise Moun**	**92.98**	**55**	P	**P**	**09 49 04.2**	**+1.0**
	baz=264,SNR=11						
F10A	**Beach Ranch, E**	**93.03**	**44**	*e*P	**P**	**09 49 02.9**	**-0.2**
	comp=Z,12nm,1.0s						
F10A				LR	LR		
	comp=Z,4µm,20.0s						
GMRC	**Granite Mounta**	**93.13**	**56**	P	**P**	**09 49 05.2**	**+1.3**
	baz=265						
BC3	**Big Chuckawall**	**93.20**	**57**	P	**P**	**09 49 05.4**	**+1.2**
	baz=265,SNR=13						
NEW	**Newport**	**93.33**	**42**	P	**P**	**09 49 04.0**	**-0.4**
	comp=Z,13nm,1.1s,baz=243,slow=3.4,SNR=12						
NEW				pP	**pP**	**09 49 19.9**	**-0.9**
	comp=Z,14nm,1.1s,baz=238,slow=5.4,SNR=7.9						
NEW	**Newport**	**93.33**	**42**	*e*P	**P**	**09 49 04.2**	**-0.2**
	comp=Z,19nm,1.1s						
NEW				LR	LR		
	comp=Z,8µm,22.0s						
NEW	**Newport**	**93.33**	**42**	P	**P**	**09 49 04.2**	**-0.2**
	baz=264						
IRM	**Iron Mountain**	**93.50**	**56**	P	**P**	**09 49 06.8**	**+1.3**
	baz=265,SNR=32						
R11A	**Troy Canyon, C**	**93.52**	**52**	*e*P	**P**	**09 49 04.9**	**-0.8**
	comp=Z,18nm,1.1s						
R11A				LR	LR		
	comp=Z,2µm,20.0s						
R11A	**Troy Canyon, C**	**93.52**	**52**	P	**P**	**09 49 06.4**	**+0.7**
	baz=265,SNR=34						
LDFC	**Landfair**	**93.61**	**55**	PFAKE		09 49 20.0	+14
LDFC				LR	LR		
	comp=Z,3µm,20.0s						
GLA	**Glamis**	**93.67**	**57**	*e*P	**P**	**09 49 09.0**	**+2.7**
	comp=Z,19nm,1.0s						
GLA				LR	LR		
	comp=Z,3µm,21.0s						
GLA	**Glamis**	**93.67**	**57**	*e*P	**P**	**09 49 09.0**	**+2.7**
GLA				pmax	pmax		
	comp=Z,19nm,1.0s						
GLA				MLR	MLR		
	comp=Z,3µm,21.0s						
GLA	**Glamis**	**93.67**	**57**	P	**P**	**09 49 07.6**	**+1.3**
	baz=265						
SHPR	**Sheep Range**	**93.69**	**54**	*e*P	**P**	**09 49 07.8**	**+1.3**
	comp=Z,19nm,1.0s						
SHPR				LR	LR		
	comp=Z,2µm,20.0s						
MFID	**Camas Ranch**	**93.78**	**47**	PFAKE		09 49 20.0	+13
MFID				LR	LR		
	comp=Z,4µm,22.0s						
Y12C	**Blythe**	**93.98**	**57**	*e*P	**P**	**09 49 09.4**	**+1.7**
	comp=Z,45nm,1.7s						
Y12C				LR	LR		
	comp=Z,2µm,19.0s						
Y12C	**Blythe**	**93.98**	**57**	P	**P**	**09 49 08.5**	**+0.8**
	baz=265						
ELK	**Elko**	**93.99**	**50**	*e*P	**P**	**09 49 09.3**	**+1.4**
	comp=Z,11nm,1.1s						
ELK				LR	LR		
	comp=Z,2µm,20.0s						
ELK	**Elko**	**93.99**	**50**	*e*P	**P**	**09 49 09.3**	**+1.4**
ELK				pmax	pmax		
	comp=Z,11nm,1.1s						
ELK				MLR	MLR		
	comp=Z,2µm,20.0s						
PDMCI	**Parker Dam,Lak**	**94.34**	**56**	P	**P**	**09 49 09.9**	**+0.7**
	baz=265						
W13A	**Hualapai Mount**	**94.61**	**55**	*e*P	**P**	**09 49 11.7**	**+0.9**
	comp=Z,18nm,1.0s						
W13A				LR	LR		
	comp=Z,3µm,20.0s						
HLID	**Hailey**	**94.82**	**47**	PFAKE		09 49 20.0	+8.5
HLID				LR	LR		
	comp=Z,6µm,22.0s						
HLID	**Hailey**	**94.82**	**47**	P	**P**	**09 49 12.0**	**+0.4**
	baz=266						
PSUT	**Pine Spring**	**94.89**	**52**	*e*P	**P**	**09 49 13.1**	**+1.1**
	comp=Z,18nm,1.1s						
CCUT	**Cedar City**	**95.21**	**53**	*e*P	**P**	**09 49 15.4**	**+1.9**
	comp=Z,9.3nm,0.9s						
Y14A	**Wickenburg**	**95.25**	**57**	*e*P	**P**	**09 49 15.2**	**+1.6**
	comp=Z,12nm,1.5s						
Y14A				LR	LR		
	comp=Z,2µm,19.0s						
LCMT	**Little Creek M**	**95.27**	**53**	*e*P	**P**	**09 49 14.7**	**+1.0**
	comp=Z,27nm,1.4s						
214A	**Organ Pipe Nat**	**95.28**	**59**	P	**P**	**09 49 14.4**	**+0.7**
	baz=266						
MSO	**Missoula**	**95.36**	**44**	PFAKE		09 49 30.0	+16
MSO				LR	LR		
	comp=Z,3µm,20.0s						
MSO	**Missoula**	**95.36**	**44**	P	**P**	**09 49 14.9**	**+1.0**
	baz=267						
SRIG	**Santa Rosalia**	**95.44**	**63**	PFAKE		09 49 30.0	+16
SRIG				LR	LR		
	comp=Z,4µm,22.0s						
WALA	**Waterton Lakes**	**95.51**	**41**	*e*P	**P**	**09 49 15.1**	**+0.6**
	comp=Z,15nm,1.0s						
KNB	**Kanab**	**95.61**	**53**	*e*P	**P**	**09 49 16.8**	**+1.5**
	comp=Z,48nm,1.5s						
KNB	**Kanab**	**95.61**	**53**	*e*P	**P**	**09 49 16.8**	**+1.5**
KNB				pmax	pmax		
	comp=Z,48nm,1.5s						
BGU	**Big Grassy Mou**	**95.68**	**50**	*e*P	**P**	**09 49 17.3**	**+1.8**
	comp=Z,8.7nm,1.2s						
YKW3	**Yellowknife Ar**	**95.76**	**28**	*e*P	**P**	**09 49 15.6**	**+0.5**
	comp=Z,13nm,1.0s						
YKW3				LR	LR		
	comp=Z,2µm,19.0s						
YKA	**Yellowknife Ar**	**95.77**	**28**	P	**P**	**09 49 15.3**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=266,slow=4.6,SNR=22						
YKA				pP	**pP**	**09 49 31.8**	**+0.2**
	comp=Z,5.1nm,0.6s,baz=267,slow=4.5,SNR=8.9						
YKA				PKKPbc	**PKKPbc**	**10 06 04.1**	**-3.3**
	comp=Z,0.7nm,0.6s,baz=87,slow=16,SNR=5.3						
YKA				LR	LR	10 29 08.4	
	comp=Z,88nm,20.6s,baz=296,slow=33						
YKB5	**Yellowknife Ar**	**95.77**	**28**	*e*P	**P**	**09 49 15.3**	**+0.2**
YKB5				*e*PKKPdf	**PKKPbc**	**10 06 04.1**	**-3.3**
DUG	**Dugway, Tooele**	**95.80**	**50**	PFAKE		09 49 30.0	+14
DUG				LR	LR		
	comp=Z,2µm,22.0s						
DUG	**Dugway, Tooele**	**95.80**	**50**	P	**P**	**09 49 16.8**	**+0.8**
	baz=267						
HVU	**Hansel Valley**	**95.92**	**49**	*e*P	**P**	**09 49 16.9**	**+0.3**
	comp=Z,8.7nm,0.9s						
HVU	**Hansel Valley**	**95.92**	**49**	*e*P	**P**	**09 49 16.9**	**+0.3**
HVU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
U15A	**North Rim**	**96.00**	**54**	*e*P	**P**	**09 49 19.0**	**+1.8**
	comp=Z,17nm,1.3s						
U15A				LR	LR		
	comp=Z,2µm,20.0s						
MCMT	**McKenzie Canyo**	**96.02**	**46**	*e*P	**P**	**09 49 17.8**	**+0.8**
PKCU	**Pink Cliffs**	**96.04**	**53**	*e*P	**P**	**09 49 19.7**	**+2.3**
	comp=Z,24nm,1.2s						
MTPU	**Mount Pierson**	**96.17**	**52**	*e*P	**P**	**09 49 19.6**	**+1.6**
	comp=Z,15nm,1.1s						
MSU	**Marysvale**	**96.20**	**52**	*e*P	**P**	**09 49 20.3**	**+2.3**
MSU	**Marysvale**	**96.20**	**52**	*e*P	**P**	**09 49 20.3**	**+2.3**
DLMT	**Dillon**	**96.22**	**45**	PFAKE		09 49 30.0	+12
DLMT				LR	LR		
	comp=Z,3µm,20.0s						
X16A	**Lo Mia Camp, P**	**96.58**	**56**	*e*P	**P**	**09 49 21.5**	**+1.7**
	comp=Z,3.2nm,1.0s						
X16A				LR	LR		
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**96.69**	**55**	*e*P	**P**	**09 49 22.5**	**+2.3**
	comp=Z,8.3nm,1.0s						
WUAZ				LR	LR		
	comp=Z,3µm,20.0s						
WUAZ	**Wupatki**	**96.69**	**55**	P	**P**	**09 49 20.5**	**+0.2**
	baz=267						
HSIG		**96.69**	**62**	PFAKE		09 49 30.0	+10
HSIG				LR	LR		
	comp=Z,3µm,20.0s						
MPU	**Maple Canyon**	**96.69**	**51**	*e*P	**P**	**09 49 21.6**	**+1.4**
	comp=Z,4.5nm,1.0s						
HWUT	**Hardware Ranch**	**96.81**	**49**	*e*P	**P**	**09 49 21.5**	**+0.8**
	comp=Z,5.0nm,0.8s						
HWUT				LR	LR		
	comp=Z,3µm,20.0s						
JLU	**Jordanelle**	**96.86**	**50**	*e*P	**P**	**09 49 21.8**	**+0.8**
	comp=Z,28nm,2.0s						
BOZ	**Bozeman (W)**	**96.91**	**45**	PFAKE		09 49 30.0	+9.0
BOZ				LR	LR		
	comp=Z,3µm,21.0s						
BOZ	**Bozeman (W)**	**96.91**	**45**	P	**P**	**09 49 20.8**	**-0.2**
	baz=268						
TMUT	**Trail Mountain**	**96.99**	**51**	*e*P	**P**	**09 49 23.0**	**+1.3**
	comp=Z,9.8nm,0.9s						
TUC	**Tucson**	**97.02**	**58**	PFAKE		09 49 30.0	+8.2
TUC				LR	LR		
	comp=Z,3µm,21.0s						
YHB	**Horse Butte**	**97.19**	**46**	*e*P	Pdif	09 49 23.2	+0.7
	comp=Z,4.5nm,0.8s						
AHID	**Auburn Hatcher**	**97.20**	**48**	PFAKE		09 49 30.0	+7.5
AHID				LR	LR		
	comp=Z,4µm,20.0s						
TPAW	**Teton Pass**	**97.33**	**47**	PFAKE		09 49 30.0	+6.8
TPAW				LR	LR		
	comp=Z,4µm,22.0s						
IMW	**Indian Meadow**	**97.35**	**47**	PFAKE		09 49 30.0	+6.7
IMW				LR	LR		
	comp=Z,5µm,21.0s						
YMR	**Madison River**	**97.35**	**46**	*e*P	Pdif	09 49 23.9	+0.7
	comp=Z,5.8nm,0.9s						
P17A	**Butcher Ranch,**	**97.36**	**51**	*e*P	**P**	**09 49 23.1**	**-0.1**
	comp=Z,8.6nm,1.0s						
YHH	**Holmes Hill**	**97.44**	**46**	*e*P	Pdif	09 49 24.7	+1.1
	comp=Z,2.9nm,1.0s						
YFT	**Old Faithful**	**97.44**	**46**	*e*P	Pdif	09 49 24.3	+0.7
	comp=Z,8.6nm,0.9s						
SNOW	**Snow King Moun**	**97.47**	**47**	PFAKE		09 49 40.0	+16
SNOW				LR	LR		
	comp=Z,4µm,21.0s						
MOOW	**Moose Ponds**	**97.49**	**47**	PFAKE		09 49 40.0	+16
MOOW				LR	LR		
	comp=Z,5µm,21.0s						
SRU	**San Rafael Swe**	**97.52**	**51**	*e*P	Pdif	09 49 24.9	+0.9
	comp=Z,3.8nm,0.8s						
SRU	**San Rafael Swe**	**97.52**	**51**	*e*P	Pdif	09 49 24.9	+0.9
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FLWY	**Flagg Ranch**	**97.53**	**46**	PFAKE		09 49 40.0	+16
FLWY				LR	LR		
	comp=Z,6µm,22.0s						
LOHW	**Long Hollow**	**97.59**	**47**	PFAKE		09 49 40.0	+16
LOHW				LR	LR		
	comp=Z,4µm,21.0s						
H17A	**Grant Village**	**97.62**	**46**	*e*P	Pdif	09 49 24.9	+0.4
	comp=Z,5.8nm,0.9s						
H17A				LR	LR		
	comp=Z,8µm,22.0s						
H17A	**Grant Village**	**97.62**	**46**	P	Pdif	09 49 24.9	+0.5
	baz=269						
LKWY	**Lake**	**97.75**	**46**	PFAKE		09 49 40.0	+15
LKWY				LR	LR		
	comp=Z,5µm,21.0s						
X18A	**Snowflake**	**97.81**	**56**	*e*P	**P**	**09 49 23.0**	**-2.4**
	comp=Z,11nm,1.4s						
X18A				LR	LR		
	comp=Z,2µm,20.0s						
AB31	**Akbulak array**	**97.87**	**319**	*i* P	**P**	**09 49 22.2**	**-2.8**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ABKAR	**Akbulak array**	**97.87**	**319**	*e*P	**P**	**09 49 21.5**	**-3.5**
	comp=Z,4.1nm,1.1s						
W18A	**Petrified Fore**	**98.01**	**55**	*e*P	**P**	**09 49 24.8**	**-1.4**
	comp=Z,5.1nm,0.8s						
W18A				LR	LR		
	comp=Z,2µm,19.0s						
W18A	**Petrified Fore**	**98.01**	**55**	P	**P**	**09 49 26.0**	**-0.2**
	baz=268						
EGMT	**Eagleton**	**98.24**	**42**	*e*P	**P**	**09 49 26.1**	**-0.7**
	comp=Z,7.7nm,0.9s						
EGMT				LR	LR		
	comp=Z,5µm,22.0s						
EGMT	**Eagleton**	**98.24**	**42**	P	**P**	**09 49 26.3**	**-0.5**
	baz=270						
319A	**Douglas**	**98.25**	**59**	PFAKE		09 49 40.0	+13
319A				LR	LR		
	comp=Z,4µm,22.0s						
BW06	**Boulder Array**	**98.34**	**48**	*e*P	**P**	**09 49 26.7**	**-0.9**
	comp=Z,3.6nm,0.9s						
BW06				LR	LR		
	comp=Z,3µm,20.0s						
BW06	**Boulder Array**	**98.34**	**48**	P	**P**	**09 49 26.2**	**-1.4**
	baz=269						
PD31	**Pinedale Array**	**98.34**	**48**	*e*P	**P**	**09 49 27.3**	**-0.3**
PD31				*e*PKKPdf	**PKKPbc**	**10 05 56.9**	**-3.1**
PDAR	**Pinedale Array**	**98.34**	**48**	P	**P**	**09 49 27.3**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=264,slow=2.8,SNR=16						
PDAR				pP	**pP**	**09 49 42.6**	**-1.6**
	comp=Z,2.3nm,0.7s,baz=255,slow=2.9,SNR=10						
PDAR				PKKPbc	**PKKPbc**	**10 05 56.9**	**-3.1**
	comp=Z,0.3nm,0.6s,baz=70,slow=4.8,SNR=3.7						
RLMT	**Red Lodge**	**98.57**	**45**	*e*P	Pdif	09 49 28.9	+0.4
	comp=Z,4.7nm,1.0s						
RLMT				LR	LR		
	comp=Z,3µm,20.0s						
RLMT	**Red Lodge**	**98.57**	**45**	P	**P**	**09 49 27.9**	**-0.6**
	baz=270						
PV09	**Paradox Valley**	**98.59**	**52**	*e*P	Pdif	09 49 29.6	+0.7
PV05	**Paradox Valley**	**98.61**	**53**	PFAKE		09 49 40.0	+11
PV05				LR	LR		
	comp=Z,2µm,20.0s						
ARU	**Arti**	**98.63**	**326**	*e*P	**P**	**09 49 26.3**	**-1.9**
	comp=Z,6.2nm,0.7s						
ARU				LR	LR		
	comp=Z,1µm,20.0s						
ARU	**Arti**	**98.63**	**326***c*	*i*P	**P**	**09 49 25.3**	**-2.9**
ARU						09 53 25.6	
ARU				S	**SKSac**	**09 59 55.6**	**-5.7**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,1µm,21.0s						
PV10	**Paradox Valley**	**98.66**	**52**	PFAKE		09 49 40.0	+11
PV10				LR	LR		
	comp=Z,4µm,22.0s						
PV14	**Lion Creek, Pa**	**98.67**	**52**	PFAKE		09 49 40.0	+11
PV14				LR	LR		
	comp=Z,4µm,22.0s						
PV19	**Morning Glory**	**98.70**	**52**	PFAKE		09 49 40.0	+11
PV19				LR	LR		
	comp=Z,3µm,22.0s						
PV20	**West Nyswonger**	**98.71**	**52**	*e*P	**P**	**09 49 28.7**	**-0.7**
	comp=Z,9.2nm,1.0s						
PV20				LR	LR		
	comp=Z,3µm,20.0s						
MSEY	**Mahe Island**	**98.74**	**264**	PFAKE		09 49 40.0	+10
MSEY				LR	LR		
	comp=Z,1µm,22.0s						
PV16	**Nyswonger Mesa**	**98.75**	**52**	PFAKE		09 49 40.0	+10
PV16				LR	LR		
	comp=Z,3µm,20.0s						
PV18	**Skein Mesa, Pa**	**98.76**	**52**	PFAKE		09 49 40.0	+10
PV18				LR	LR		
	comp=Z,3µm,21.0s						
PV04	**Paradox Valley**	**98.76**	**52**	*e*P	**P**	**09 49 29.2**	**-0.3**
	comp=Z,18nm,1.1s						
PV11	**David Mesa, Pa**	**98.79**	**52**	PFAKE		09 49 40.0	+10
PV11				LR	LR		
	comp=Z,4µm,22.0s						
PV03	**Paradox Valley**	**98.81**	**52**	PFAKE		09 49 40.0	+10
PV03				LR	LR		
	comp=Z,3µm,20.0s						
PV13	**Radium Mtn., P**	**98.83**	**52**	PFAKE		09 49 40.0	+10
PV13				LR	LR		
	comp=Z,3µm,21.0s						
PV12	**Saucer Basin,**	**98.84**	**52**	PFAKE		09 49 40.0	+10
PV12				LR	LR		
	comp=Z,4µm,20.0s						
PV02	**Paradox Valley**	**98.89**	**52**	PFAKE		09 49 40.0	+10
PV02				LR	LR		
	comp=Z,3µm,21.0s						
PV01	**Paradox Valley**	**99.02**	**52**	PFAKE		09 49 40.0	+9.2
PV01				LR	LR		
	comp=Z,3µm,21.0s						
MVCO	**Mesa Verde**	**99.07**	**53**	*e*P	**Pdif**	**09 49 30.9**	**0.0**
	comp=Z,14nm,1.5s						
MVCO				LR	LR		
	comp=Z,2µm,20.0s						
MVCO	**Mesa Verde**	**99.07**	**53**	P	**Pdif**	**09 49 29.8**	**-1.2**
	baz=269						
GEYT	**Alibeck**	**99.08**	**307**	LR	LR	10 37 33.1	
	comp=Z,749nm,19.9s,baz=85,slow=37						
O20A	**White River Ci**	**99.30**	**50**	*e*P	**Pdif**	**09 49 31.7**	**-0.2**
	comp=Z,11nm,1.1s						
O20A				LR	LR		
	comp=Z,3µm,20.0s						
O20A	**White River Ci**	**99.30**	**50**	P	**Pdif**	**09 49 32.1**	**+0.2**
	baz=270						
121A	**Cookes Peak, D**	**99.56**	**58**	P	**Pdif**	**09 49 33.3**	**+0.1**
	baz=269						
RWWY	**Rawlins**	**100.08**	**49**	PFAKE		09 49 50.0	+15
RWWY				LR	LR		
	comp=Z,4µm,20.0s						
Y22D	**IRIS PASSCAL I**	**100.31**	**57**	PFAKE		09 49 50.0	+14
Y22D				LR	LR		
	comp=Z,2µm,21.0s						
S22A	**4UR Ranch, Cre**	**100.40**	**53**	PFAKE		09 49 50.0	+13
S22A				LR	LR		
	comp=Z,2µm,21.0s						
S22A	**4UR Ranch, Cre**	**100.40**	**53**	P	**Pdif**	**09 49 38.3**	**+1.4**
	baz=270						
K22A	**Casper**	**100.57**	**48**	PFAKE		09 49 50.0	+13
K22A				LR	LR		
	comp=Z,2µm,20.0s						
K22A	**Casper**	**100.57**	**48**	P	**Pdif**	**09 49 38.5**	**+1.1**
	baz=271						
EPT	**El Paso**	**100.63**	**59**	PFAKE		09 49 50.0	+12
EPT				LR	LR		
	comp=Z,3µm,20.0s						
LAO	**LASA Array**	**100.67**	**44**	PFAKE		09 49 50.0	+12
LAO				LR	LR		
	comp=Z,2µm,20.0s						
ANMO	**Albuquerque**	**100.70**	**56**	*e*Pdif	**Pdif**	**09 49 39.7**	**+1.5**
ANMO				LR	LR		
	comp=Z,2µm,20.0s						
ANMO	**Albuquerque**	**100.70**	**56**	*e*P	**Pdif**	**09 49 39.7**	**+1.5**
ANMO				MLR	MLR		
	comp=Z,2µm,20.0s						
ANMO	**Albuquerque**	**100.70**	**56**	P	**Pdif**	**09 49 38.3**	**+0.1**
	baz=270						
SNAA	**Sanae**	**100.86**	**187**	P	**Pdif**	**09 49 38.5**	**+0.5**
SNAA	**Sanae**	**100.86**	**187**	PFAKE		09 49 50.0	+12
SNAA				LR	LR		
	comp=Z,6µm,21.0s						
N23A	**Red Feather La**	**101.05**	**50**	PFAKE		09 49 50.0	+10
N23A				LR	LR		
	comp=Z,2µm,20.0s						
N23A	**Red Feather La**	**101.05**	**50**	P	**Pdif**	**09 49 39.6**	**-0.2**
	baz=271						
HPIG		**101.28**	**64**	PFAKE		09 49 50.0	+9.0
HPIG				LR	LR		
	comp=Z,3µm,22.0s						
RES	**Resolute Bay**	**101.29**	**15**	PFAKE		09 49 50.0	+10
RES				LR	LR		
	comp=Z,2µm,21.0s						
ISCO	**Idaho Springs**	**101.32**	**51**	PFAKE		09 49 50.0	+9.0
ISCO				LR	LR		
	comp=Z,2µm,19.0s						
ISCO	**Idaho Springs**	**101.32**	**51**	P	**Pdif**	**09 49 41.6**	**+0.5**
	baz=271						
PHWY	**Pilot Hill**	**101.40**	**49**	PFAKE		09 49 50.0	+8.7
PHWY				LR	LR		
	comp=Z,3µm,20.0s						

SDCO	**Great Sand Dun**	**101.45**	**53**	PFAKE		09 49 50.0	+8.4
SDCO				LR	LR		
	comp=Z,3µm,20.0s						
SDCO	**Great Sand Dun**	**101.45**	**53**	P	**Pdif**	**09 49 42.2**	**+0.5**
	baz=271						
MNTX	**Cornudas Mount**	**101.59**	**59**	PFAKE		09 49 50.0	+8.0
MNTX				LR	LR		
	comp=Z,3µm,22.0s						
Q24A	**Divide**	**101.70**	**52**	PFAKE		09 49 50.0	+7.2
Q24A				LR	LR		
	comp=Z,2µm,20.0s						
Q24A	**Divide**	**101.70**	**52**	P	**Pdif**	**09 49 43.0**	**+0.2**
	baz=271						
DGMT	**Dagmar**	**101.94**	**42**	PFAKE		09 50 00.0	+17
DGMT				LR	LR		
	comp=Z,5µm,22.0s						
DGMT	**Dagmar**	**101.94**	**42**	P	**Pdif**	**09 49 44.0**	**+0.8**
	baz=274						
VNA3	**Neumayer Olymp**	**101.98**	**185**	P	**Pdif**	**09 49 42.5**	**-0.4**
VNA2	**Neumayer--Watz**	**102.07**	**186**	P	**Pdif**	**09 49 43.8**	**+0.4**
RSSD	**Black Hills**	**102.33**	**46**	PFAKE		09 50 00.0	+15
RSSD				LR	LR		
	comp=Z,5µm,21.0s						
T25A	**Trinidad**	**102.33**	**53**	PFAKE		09 50 00.0	+15
T25A				LR	LR		
	comp=Z,3µm,20.0s						
T25A	**Trinidad**	**102.33**	**53**	P	**Pdif**	**09 49 47.1**	**+1.6**
	baz=272						
FFC	**Flin Flon**	**102.70**	**35**	PFAKE		09 50 00.0	+14
FFC				LR	LR		
	comp=Z,3µm,21.0s						
TXAR	**Lajitas Array**	**103.07**	**61**	Pdiff	**Pdif**	**09 49 49.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=257,slow=6.3,SNR=2.9						
TXAR				PP	**PKiKP**	**09 54 09.5**	**+1.0**
	comp=Z,1.2nm,1.0s,baz=270,slow=7.7,SNR=4.1						
TXAR				PKKPbc	**PKKPbc**	**10 05 46.1**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=119,slow=4.4,SNR=11						
PMSA	**Palmer Station**	**103.54**	**164**	PFAKE		09 50 00.0	+10
PMSA				LR	LR		
	comp=Z,3µm,22.0s						
KSCO	**Kaye Shedlock’**	**103.66**	**51**	PFAKE		09 50 00.0	+8.8
KSCO				LR	LR		
	comp=Z,2µm,22.0s						
MSTX	**Muleshoe**	**103.75**	**57**	PFAKE		09 50 00.0	+8.3
MSTX				LR	LR		
	comp=Z,2µm,22.0s						
MSTX	**Muleshoe**	**103.75**	**57**	P	**Pdif**	**09 49 52.6**	**+0.9**
	baz=272						
OGNE	**Ogallala**	**104.00**	**49**	PFAKE		09 50 00.0	+7.3
OGNE				LR	LR		
	comp=Z,3µm,20.0s						
ZAIG	**Zacatecas**	**104.01**	**68**	PFAKE		09 50 10.0	+17
ZAIG				LR	LR		
	comp=Z,2µm,22.0s						
ABPO	**Ambohimpanom**	**104.42**	**249**	PFAKE		09 50 10.0	+15
ABPO				LR	LR		
	comp=Z,2µm,19.0s						
PRGR	**Permogore**	**104.54**	**332**	*e*P	**Pdif**	**09 49 52.2**	**-2.2**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AMTX	**Amarillo**	**104.62**	**56**	PFAKE		09 50 10.0	+14
AMTX				LR	LR		
	comp=Z,2µm,21.0s						
KBS	**Kingsbay**	**105.03**	**353**	PFAKE		09 54 20.0	+9.4
KBS				LR	LR		
	comp=Z,2µm,21.0s						
MDND	**Maddock**	**105.06**	**42**	PFAKE		09 54 20.0	+8.5
MDND				LR	LR		
	comp=Z,4µm,22.0s						
MDND	**Maddock**	**105.06**	**42**	P	**PKiKP**	**09 54 12.5**	**+1.0**
	baz=277						
TULEG	**Thule**	**105.88**	**10**	PFAKE		09 54 20.0	+7.8
TULEG				LR	LR		
	comp=Z,2µm,22.0s						
CBKS	**Cedar Bluff**	**105.93**	**52**	PFAKE		09 54 30.0	+17
CBKS				LR	LR		
	comp=Z,3µm,21.0s						
FCC	**Fort Churchill**	**106.19**	**30**	PFAKE		09 54 30.0	+17
FCC				LR	LR		
	comp=Z,3µm,20.0s						
JCT	**Junction City**	**106.40**	**60**	PFAKE		09 54 30.0	+15
JCT				LR	LR		
	comp=Z,4µm,22.0s						
JCT	**Junction City**	**106.40**	**60**	P	**PKiKP**	**09 54 14.8**	**+0.2**
	baz=272						
ABTX	**Abilene, Hawle**	**106.43**	**58**	PFAKE		09 54 30.0	+15
ABTX				LR	LR		
	comp=Z,2µm,21.0s						
LVZ	**Lovozero**	**106.80**	**340**	PFAKE		09 54 30.0	+16
LVZ				LR	LR		
	comp=Z,2µm,22.0s						
833A	**Chaparral WMA,**	**106.83**	**62**	PFAKE		09 54 30.0	+15
833A				LR	LR		
	comp=Z,3µm,20.0s						
LNIG	**Linares**	**106.85**	**66**	PFAKE		09 54 30.0	+15
LNIG				LR	LR		
	comp=Z,2µm,22.0s						
BGNE	**Belgrade**	**106.88**	**49**	PFAKE		09 54 30.0	+15
BGNE				LR	LR		
	comp=Z,3µm,19.0s						
MAK	**Makhachkala**	**106.89**	**313**	*e*P	**Pdif**	**09 50 07.9**	**+2.6**
MAK				*e*		09 54 34.2	
MAK				*e*		10 00 45.3	
MAK				*e*SS	SS	10 09 39.5	+5.8
MAK				pmax	pmax		
	comp=Z,147nm,1.3s						
WMOK	**Wichita Mounta**	**107.01**	**56**	PFAKE		09 54 30.0	+14
WMOK				LR	LR		
	comp=Z,2µm,20.0s						
WMOK	**Wichita Mounta**	**107.01**	**56**	P	**PKiKP**	**09 54 15.2**	**-0.4**
	baz=274						
ULM	**Lac du Bonnet**	**107.10**	**39**	PFAKE		09 54 30.0	+15
ULM				LR	LR		
	comp=Z,5µm,21.0s						
APA	**Apatity**	**107.38**	**340**	⇓*i*P	**Pdif**	**09 50 00.7**	**-6.2**
APA				*i*		09 54 31.4	
APA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,2µm,24.0s						
TLIG	**Tlapa**	**107.68**	**74**	PFAKE		09 54 30.0	+13
TLIG				LR	LR		
	comp=Z,4µm,21.0s						
ECSD	**EROS Data Cent**	**107.70**	**46**	PFAKE		09 54 30.0	+13
ECSD				LR	LR		
	comp=Z,2µm,20.0s						
ECSD	**EROS Data Cent**	**107.70**	**46**	P	**PKiKP**	**09 54 16.6**	**+0.1**
	baz=278						
KVTX	**Kingsville**	**108.19**	**63**	PFAKE		09 54 30.0	+12
KVTX				LR	LR		
	comp=Z,2µm,20.0s						
435B	**Jarrell**	**108.29**	**60**	PFAKE		09 54 30.0	+12
435B				LR	LR		
	comp=Z,4µm,22.0s						
WHTX	**Lake Whitney,**	**108.32**	**58**	PFAKE		09 54 30.0	+12
WHTX				LR	LR		
	comp=Z,2µm,20.0s						
KSU1	**Kansas State U**	**108.32**	**51**	PFAKE		09 54 30.0	+12
KSU1				LR	LR		
	comp=Z,3µm,20.0s						
ARA0	**ARCESS Array S**	**108.83**	**343**	*e*PKiKP	**PKiKP**	**09 54 18.1**	**+0.2**
ARA0				*e*PP	**PP**	**09 54 44.8**	**-0.2**
ARA0				*e*PKKPab	**PKKPab**	**10 05 40.1**	**+0.8**
ARCES	**ARCESS Array B**	**108.83**	**343**	PKiKP	**PKiKP**	**09 54 18.1**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=64,slow=2.8,SNR=3.7						
ARCES				PP	**PP**	**09 54 44.8**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=48,slow=1.8,SNR=4.8						
ARCES				PKKPab	**PKKPab**	**10 05 40.1**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=265,slow=3.0,SNR=6.6						
TUL1	**Leonard**	**109.34**	**54**	PFAKE		09 54 30.0	+10
TUL1				LR	LR		
	comp=Z,4µm,19.0s						
LVIG	**Laguna Verde**	**109.73**	**71**	PFAKE		09 54 30.0	+9.0
LVIG				LR	LR		
	comp=Z,2µm,20.0s						
X37A	**Clayton**	**109.83**	**56**	PFAKE		09 54 30.0	+9.2
X37A				LR	LR		
	comp=Z,2µm,20.0s						
HKT	**Hockley**	**109.86**	**61**	PFAKE		09 54 30.0	+9.1
HKT				LR	LR		
	comp=Z,3µm,19.0s						
AKH	**Akhalkalaki**	**110.07**	**312**	PFAKE		09 54 30.0	+8.7
AKH				LR	LR		
	comp=Z,700nm,21.0s						
SPMN	**Marine on St.**	**110.12**	**44**	PFAKE		09 54 30.0	+9.0
SPMN				LR	LR		
	comp=Z,2µm,20.0s						
RAYN	**Ar Rayn**	**110.16**	**293**	PFAKE		09 54 30.0	+8.2
RAYN				LR	LR		
	comp=Z,700nm,22.0s						
KIV	**Kislovodsk**	**110.19**	**315**	PFAKE		09 54 30.0	+8.7
KIV				LR	LR		
	comp=Z,600nm,21.0s						
KIV	**Kislovodsk**	**110.19**	**315**	*e*P	**Pdif**	**09 50 18.3**	**-1.8**
KIV				*i*		09 54 19.7	
KIV				*e*		09 54 54.2	
KIV				*e*PS	**PS**	**10 04 24.8**	**-1.6**
KIV				*e*SS	SS	10 10 15.4	-3.0
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
EYMN	**Ely**	**110.40**	**41**	PFAKE		09 54 30.0	+8.5
EYMN				LR	LR		
	comp=Z,6µm,22.0s						
SCIA	**State Center**	**110.46**	**48**	PFAKE		09 54 30.0	+8.2
SCIA				LR	LR		
	comp=Z,3µm,20.0s						
E38A	**The Farm, Brul**	**110.68**	**42**	PFAKE		09 54 30.0	+8.0
E38A				LR	LR		
	comp=Z,4µm,22.0s						
NATX	**Nacogdoches**	**110.71**	**59**	PFAKE		09 54 30.0	+7.5
NATX				LR	LR		
	comp=Z,2µm,20.0s						
HHAR	**Hobbs**	**110.78**	**54**	PFAKE		09 54 30.0	+7.4
HHAR				LR	LR		
	comp=Z,3µm,20.0s						
OBN	**Obninsk**	**111.02**	**327**	PFAKE		09 54 30.0	+7.7
OBN				LR	LR		
	comp=Z,2µm,20.0s						
OBN	**Obninsk**	**111.02**	**327**	*i* PKIKP	**PKiKP**	**09 54 23.2**	**+0.8**
OBN				*e*		09 55 03.4	
OBN				*e*PPP	PPP	09 57 24.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
W39A	**Magazine**	**111.05**	**55**	PFAKE		09 54 40.0	+17
W39A				LR	LR		
	comp=Z,3µm,21.0s						
W39A	**Magazine**	**111.05**	**55**	P	**PKiKP**	**09 54 22.6**	**-0.5**
	baz=277						
G39A	**Holcombe**	**111.24**	**44**	P	**PKiKP**	**09 54 22.8**	**-0.3**
	baz=283						
MIAR	**Mount Ida**	**111.30**	**55**	PFAKE		09 54 40.0	+16
MIAR				LR	LR		
	comp=Z,3µm,20.0s						
U40A	**Yellville**	**111.64**	**53**	P	**PKiKP**	**09 54 23.3**	**-0.9**
	baz=278						
WLAR	**White Oak Lake**	**111.79**	**56**	PFAKE		09 54 40.0	+16
WLAR				LR	LR		
	comp=Z,2µm,22.0s						
L40A	**Anamosa**	**111.89**	**47**	PFAKE		09 54 40.0	+16
L40A				LR	LR		
	comp=Z,2µm,21.0s						
L40A	**Anamosa**	**111.89**	**47**	P	**PKiKP**	**09 54 23.4**	**-1.1**
	baz=282						
G40A	**Rib Lake**	**111.91**	**44**	PFAKE		09 54 40.0	+16
G40A				LR	LR		
	comp=Z,2µm,20.0s						
X40A	**Basin Creek Fa**	**111.92**	**55**	PFAKE		09 54 40.0	+15
X40A				LR	LR		
	comp=Z,3µm,20.0s						
C40A	**Isle Royale Na**	**111.94**	**41**	PFAKE		09 54 40.0	+16
C40A				LR	LR		
	comp=Z,6µm,22.0s						
Z41A	**Richland Creek**	**112.10**	**57**	PFAKE		09 54 40.0	+15
Z41A				LR	LR		
	comp=Z,3µm,21.0s						
WHAR	**Wooly Hollow**	**112.25**	**55**	PFAKE		09 54 40.0	+15
WHAR				LR	LR		
	comp=Z,3µm,20.0s						
UALR	**University of**	**112.28**	**55**	PFAKE		09 54 40.0	+15
UALR				LR	LR		
	comp=Z,4µm,21.0s						
FCAR	**Ozark Folk Cen**	**112.29**	**54**	PFAKE		09 54 40.0	+15
FCAR				LR	LR		
	comp=Z,2µm,19.0s						
W41B	**Gary Mavity, V**	**112.30**	**55**	PFAKE		09 54 40.0	+15
W41B				LR	LR		
	comp=Z,3µm,20.0s						
W41B	**Gary Mavity, V**	**112.30**	**55**	P	**PKiKP**	**09 54 24.1**	**-1.3**
	baz=278						
SOC	**Sochi**	**112.37**	**315**	*i* PKIKP	**PKiKP**	**09 54 21.5**	**-3.8**
SOC				*e*		09 55 09.8	
SOC				*e*PPP	PPP	09 57 30.6	
SOC				MLR	MLR		
	comp=Z,800nm,22.0s						
JFWS	**Jewell Farm**	**112.42**	**46**	PFAKE		09 54 40.0	+15
JFWS				LR	LR		
	comp=Z,2µm,19.0s						
JFWS	**Jewell Farm**	**112.42**	**46**	P	**PKiKP**	**09 54 24.7**	**-0.7**
	baz=283						
COWI	**Conover**	**112.42**	**43**	PFAKE		09 54 40.0	+15
COWI				LR	LR		
	comp=Z,4µm,22.0s						
I41A	**Arkdale**	**112.42**	**45**	PFAKE		09 54 40.0	+15
I41A				LR	LR		
	comp=Z,3µm,20.0s						
N41A	**Harden Midland**	**112.44**	**49**	PFAKE		09 54 40.0	+14
N41A				LR	LR		
	comp=Z,3µm,20.0s						
N41A	**Harden Midland**	**112.44**	**49**	P	**PKiKP**	**09 54 25.2**	**-0.4**
	baz=282						
M41A	**Milan**	**112.53**	**48**	P	**PKiKP**	**09 54 25.4**	**-0.3**
	baz=282						
D41A	**Chassel**	**112.55**	**41**	PFAKE		09 54 40.0	+14
D41A				LR	LR		
	comp=Z,6µm,22.0s						
CCM	**Cathedral Cave**	**112.64**	**51**	PFAKE		09 54 40.0	+14
CCM				LR	LR		
	comp=Z,3µm,19.0s						
CCM	**Cathedral Cave**	**112.64**	**51**	P	**PKiKP**	**09 54 25.0**	**-1.0**
	baz=280						
CCAR	**Cane Creek**	**112.87**	**56**	PFAKE		09 54 40.0	+13
CCAR				LR	LR		
	comp=Z,2µm,19.0s						
L42A	**Oliver, Polo**	**113.04**	**47**	PFAKE		09 54 40.0	+13
L42A				LR	LR		
	comp=Z,2µm,20.0s						
L42A	**Oliver, Polo**	**113.04**	**47**	P	**PKiKP**	**09 54 25.7**	**-0.9**
	baz=283						
I42A	**Draeger Farm,**	**113.13**	**45**	PFAKE		09 54 40.0	+13
I42A				LR	LR		
	comp=Z,3µm,22.0s						
I42A	**Draeger Farm,**	**113.13**	**45**	P	**PKiKP**	**09 54 26.1**	**-0.7**
	baz=284						
FIA0	**FINESS Array S**	**113.19**	**336**	*e*PP	**PP**	**09 55 11.3**	**-5.2**
FIA0				*e*PKKPab	**PKKPab**	**10 05 24.1**	**+4.1**
FINES	**FINESS Array B**	**113.19**	**336**	PP	**PP**	**09 55 11.3**	**-5.2**
	comp=Z,1.8nm,0.7s,baz=76,slow=5.9,SNR=3.8						
FINES				PKKPab	**PKKPab**	**10 05 24.1**	**+4.1**
	comp=Z,3.1nm,0.7s,baz=298,slow=3.0,SNR=5.0						
SUMG	**Summit**	**113.24**	**4**	PFAKE		09 54 40.0	+13
SUMG				LR	LR		
	comp=Z,2µm,21.0s						
SLM	**Saint Louis**	**113.31**	**51**	PFAKE		09 54 40.0	+13
SLM				LR	LR		
	comp=Z,4µm,21.0s						
PBMO	**Poplar Bluff**	**113.50**	**53**	PFAKE		09 54 40.0	+12
PBMO				LR	LR		
	comp=Z,2µm,19.0s						
X43A	**Marvell**	**113.51**	**55**	PFAKE		09 54 40.0	+12
X43A				LR	LR		
	comp=Z,3µm,20.0s						
HBAR	**Harrisburg**	**113.53**	**54**	PFAKE		09 54 40.0	+12
HBAR				LR	LR		
	comp=Z,2µm,20.0s						
HDIL	**Hopedale**	**113.63**	**48**	PFAKE		09 54 40.0	+12
HDIL				LR	LR		
	comp=Z,3µm,20.0s						
HDIL	**Hopedale**	**113.63**	**48**	P	**PKiKP**	**09 54 27.4**	**-0.4**
	baz=283						
P43A	**Skaggs, Pawnee**	**113.65**	**49**	P	**PKiKP**	**09 54 27.6**	**-0.3**
	baz=282						
E43A	**Lone Tree Farm**	**113.78**	**42**	PFAKE		09 54 40.0	+12
E43A				LR	LR		
	comp=Z,4µm,21.0s						
E43A	**Lone Tree Farm**	**113.78**	**42**	P	**PKiKP**	**09 54 27.3**	**-0.6**
	baz=287						
H43A	**Windswept, Lux**	**113.78**	**44**	PFAKE		09 54 40.0	+12
H43A				LR	LR		
	comp=Z,2µm,20.0s						
CCIG	**Comitan**	**113.83**	**75**	PFAKE		09 54 40.0	+11
CCIG				LR	LR		
	comp=Z,2µm,20.0s						
K43A	**Burlington**	**113.83**	**46**	PFAKE		09 54 40.0	+12
K43A				LR	LR		
	comp=Z,2µm,19.0s						
GNAR	**Gosnell**	**113.97**	**53**	PFAKE		09 54 40.0	+11
GNAR				LR	LR		
	comp=Z,2µm,20.0s						
PARMO	**Parma**	**114.06**	**53**	PFAKE		09 54 40.0	+11
PARMO				LR	LR		
	comp=Z,2µm,19.0s						
PVMO	**Portageville**	**114.14**	**53**	PFAKE		09 54 40.0	+11
PVMO				LR	LR		
	comp=Z,2µm,20.0s						
VBMS	**Vicksburg**	**114.15**	**58**	PFAKE		09 54 40.0	+11
VBMS				LR	LR		
	comp=Z,2µm,20.0s						
MET	**Memphis--Engin**	**114.18**	**54**	PFAKE		09 54 40.0	+11
MET				LR	LR		
	comp=Z,2µm,21.0s						
M44A	**Midewin, Midew**	**114.36**	**47**	PFAKE		09 54 40.0	+11
M44A				LR	LR		
	comp=Z,2µm,19.0s						
E44A	**Grand Marais A**	**114.41**	**41**	PFAKE		09 54 40.0	+11
E44A				LR	LR		
	comp=Z,5µm,22.0s						
GLAT	**Glass**	**114.50**	**53**	PFAKE		09 54 40.0	+10
GLAT				LR	LR		
	comp=Z,2µm,20.0s						
HALT	**Halls**	**114.52**	**53**	PFAKE		09 54 40.0	+10
HALT				LR	LR		
	comp=Z,2µm,20.0s						
OXF	**Oxford**	**114.71**	**55**	PFAKE		09 54 40.0	+10
OXF				LR	LR		
	comp=Z,3µm,21.0s						
OXF	**Oxford**	**114.71**	**55**	P	PKPdf	09 54 29.7	-0.3
	baz=280						
ILULI	**Ilulissat**	**114.85**	**10**	PFAKE		09 54 40.0	+11
ILULI				LR	LR		
	comp=Z,2µm,21.0s						
T45A	**Paducah**	**114.86**	**52**	PFAKE		09 54 40.0	+10
T45A				LR	LR		
	comp=Z,3µm,20.0s						
OLIL	**Olney**	**114.93**	**50**	PFAKE		09 54 40.0	+10
OLIL				LR	LR		
	comp=Z,4µm,22.0s						
I45A	**Fountain**	**114.96**	**44**	PFAKE		09 54 40.0	+10
I45A				LR	LR		
	comp=Z,2µm,21.0s						
F45A	**CMU Biological**	**114.97**	**42**	P	**PKiKP**	**09 54 29.8**	**-0.4**
	baz=288						
J45A	**Montague**	**115.02**	**45**	PFAKE		09 54 40.0	+10
J45A				LR	LR		
	comp=Z,3µm,21.0s						
G45A	**Suttons Bay**	**115.07**	**43**	PFAKE		09 54 40.0	+10
G45A				LR	LR		
	comp=Z,3µm,22.0s						
SFIN	**Lafayette**	**115.30**	**48**	PFAKE		09 54 40.0	+9.0
SFIN				LR	LR		
	comp=Z,2µm,20.0s						
U46A	**Springville**	**115.36**	**53**	P	**PKiKP**	**09 54 30.4**	**-0.9**
	baz=282						
P46A	**Rosedale**	**115.40**	**49**	P	**PKiKP**	**09 54 30.6**	**-0.6**
	baz=284						
USIN	**University of**	**115.42**	**51**	PFAKE		09 54 40.0	+8.7
USIN				LR	LR		
	comp=Z,3µm,20.0s						
T46A	**Princeton**	**115.44**	**52**	P	**PKiKP**	**09 54 30.5**	**-0.9**
	baz=282						
L46A	**Eue Claire**	**115.47**	**46**	PFAKE		09 54 40.0	+8.7
L46A				LR	LR		
	comp=Z,2µm,20.0s						
V46A	**Holladay**	**115.52**	**53**	P	**PKiKP**	**09 54 30.7**	**-0.9**
	baz=281						
E46A	**Sault Ste Mari**	**115.55**	**41**	PFAKE		09 54 40.0	+8.7
E46A				LR	LR		
	comp=Z,6µm,22.0s						
E46A	**Sault Ste Mari**	**115.55**	**41**	P	**PKiKP**	**09 54 31.3**	**0.0**
	baz=289						
WVT	**Waverly**	**115.68**	**53**	PFAKE		09 54 40.0	+8.1
WVT				LR	LR		
	comp=Z,2µm,20.0s						
WVT	**Waverly**	**115.68**	**53**	P	**PKPdf**	**09 54 30.8**	**-1.1**
	baz=282						
PLAL	**Pickwick Lake**	**115.70**	**54**	PFAKE		09 54 40.0	+8.0
PLAL				LR	LR		
	comp=Z,2µm,19.0s						
SCO	**Scoresbysund**	**115.81**	**359**	PFAKE		09 54 40.0	+8.9
SCO				LR	LR		
	comp=Z,2µm,21.0s						
GLMI	**Grayling**	**115.83**	**43**	PFAKE		09 54 40.0	+8.1
GLMI				LR	LR		
	comp=Z,3µm,22.0s						
147A	**Livingston**	**115.95**	**57**	PFAKE		09 54 40.0	+7.5
147A				LR	LR		
	comp=Z,2µm,20.0s						
147A	**Livingston**	**115.95**	**57**	P	**PKPdf**	**09 54 31.1**	**-1.4**
	baz=280						
MYIG	**Mrida**	**115.96**	**70**	PFAKE		09 54 40.0	+7.2
MYIG				LR	LR		
	comp=Z,2µm,20.0s						
X47A	**Russelville**	**115.97**	**55**	P	**PKPdf**	**09 54 31.2**	**-1.3**
	baz=281						
V47A	**Nunnelly**	**115.98**	**53**	P	**PKPdf**	**09 54 31.2**	**-1.3**
	baz=282						
BLO	**Bloomington**	**116.02**	**49**	PFAKE		09 54 40.0	+7.5
BLO				LR	LR		
	comp=Z,4µm,20.0s						
W47A	**Westpoint**	**116.04**	**54**	P	**PKPdf**	**09 54 31.8**	**-0.8**
	baz=281						
U47A	**Clarksville**	**116.04**	**52**	P	**PKPdf**	**09 54 32.1**	**-0.5**
	baz=282						
T47A	**Sharon Grove**	**116.07**	**52**	*e*PKPdf	**PKPdf**	**09 54 31.9**	**-0.8**
T47A				LR	LR		
	comp=Z,4µm,20.0s						
T47A	**Sharon Grove**	**116.07**	**52**	P	**PKPdf**	**09 54 31.6**	**-1.0**
	baz=282						
D47A	**Chapleau**	**116.10**	**40**	P	**PKPdf**	**09 54 31.2**	**-1.2**
	baz=290						
I47A	**Gladwin**	**116.16**	**44**	PFAKE		09 54 40.0	+7.4
I47A				LR	LR		
	comp=Z,3µm,21.0s						
J47A	**Sunmer**	**116.17**	**45**	PFAKE		09 54 40.0	+7.4
J47A				LR	LR		
	comp=Z,2µm,20.0s						
E47A	**Iron Bridge**	**116.19**	**41**	P	**PKPdf**	**09 54 30.9**	**-1.6**
	baz=290						
N47A	**Urbana**	**116.21**	**47**	P	**PKPdf**	**09 54 31.3**	**-1.5**
	baz=285						
G47A	**Hillman**	**116.24**	**42**	P	**PKPdf**	**09 54 31.3**	**-1.3**
	baz=289						
L47A	**Sherwood**	**116.27**	**46**	P	**PKPdf**	**09 54 31.9**	**-1.0**
	baz=286						
WCI	**Wyandotte Cave**	**116.42**	**50**	*e*PKPdf	**PKPdf**	**09 54 31.5**	**-1.7**
WCI				LR	LR		
	comp=Z,4µm,22.0s						
WCI	**Wyandotte Cave**	**116.42**	**50**	*e*PKIKP	**PKPdf**	**09 54 31.5**	**-1.7**
WCI				MLR	MLR		
	comp=Z,4µm,22.0s						
WCI	**Wyandotte Cave**	**116.42**	**50**	P	**PKPdf**	**09 54 32.4**	**-0.9**
	baz=284						
V48A	**Smith Brothers**	**116.56**	**53**	*e*PKPdf	**PKPdf**	**09 54 32.4**	**-1.3**
V48A				LR	LR		
	comp=Z,1µm,21.0s						
V48A	**Smith Brothers**	**116.56**	**53**	P	**PKPdf**	**09 54 32.1**	**-1.5**
	baz=282						
W48A	**Pulaski**	**116.59**	**54**	P	**PKPdf**	**09 54 32.5**	**-1.1**
	baz=282						
T48A	**Bowling Green**	**116.60**	**52**	P	**PKPdf**	**09 54 32.6**	**-1.1**
	baz=283						
U48A	**Cassie Pea, Po**	**116.62**	**52**	P	**PKPdf**	**09 54 33.2**	**-0.5**
	baz=283						
X48A	**Hartselle**	**116.64**	**55**	PFAKE		09 54 50.0	+16
X48A				LR	LR		
	comp=Z,2µm,21.0s						
X48A	**Hartselle**	**116.64**	**55**	P	**PKPdf**	**09 54 32.6**	**-1.1**
	baz=281						
Y48A	**Jasper**	**116.64**	**55**	P	**PKPdf**	**09 54 32.3**	**-1.5**
	baz=281						
Q48A	**North Vernon**	**116.68**	**49**	P	**PKPdf**	**09 54 33.3**	**-0.5**
	baz=284						
FURI	**Furi**	**116.70**	**277**	PFAKE		09 54 50.0	+15
FURI				LR	LR		
	comp=Z,1µm,20.0s						
N48A	**Decatur**	**116.70**	**47**	P	**PKPdf**	**09 54 33.1**	**-0.6**
	baz=286						

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S48A  Wiedeman Farm, 116.74  51  P        PKPdf    09 54 33.6 -0.3
      baz=284
H48A  Harrisville    116.75  43  PFAKE             09 54 50.0 +16
H48A                             LR       LR
      comp=Z,3µm,21.0s
M48A  Edgerton       116.75  46  PFAKE             09 54 50.0 +16
M48A                             LR       LR
      comp=Z,2µm,20.0s
O48A  Farmland       116.77  48  P        PKPdf    09 54 33.6 -0.2
      baz=286
P48A  Milroy         116.78  49  PFAKE             09 54 50.0 +16
P48A                             LR       LR
      comp=Z,2µm,20.0s
P48A  Milroy         116.78  49  P        PKPdf    09 54 33.3 -0.7
      baz=285
K48A  Perry          116.79  45  P        PKPdf    09 54 33.3 -0.6
      baz=288
L48A  N Adams        116.83  46  P        PKPdf    09 54 33.3 -0.6
      baz=287
AKASG Malin Array Be 116.83 325  PKP      PKPdf    09 54 32.3 -1.4
      comp=Z,1.4nm,0.6s,baz=55,slow=2.7,SNR=4.4
AKASG                            pPKP     pPKPdf   09 54 47.8 -2.8
      comp=Z,1.3nm,0.5s,baz=56,slow=2.5,SNR=3.1
AKASG                            PKKPab   PKKPab   10 05 03.4 -0.8
      comp=Z,0.3nm,0.4s,baz=262,slow=3.2,SNR=4.1
AKBB  Malin Array Si 116.83 325 ePKPdf    PKPdf    09 54 32.9 -0.7
AKBB  Malin Array Si 116.83 325 ePKIKP    PKPdf    09 54 32.9 -0.7
F48A  Evansville     116.84  41  P        PKPdf    09 54 33.2 -0.7
      baz=290
CLTN  Cedars of Leba 116.87  53 ePKPdf    PKPdf    09 54 33.1 -1.1
CLTN                             LR       LR
      comp=Z,1µm,20.0s
J48A  Bridge Port    116.88  44  PFAKE             09 54 50.0 +16
J48A                             LR       LR
      comp=Z,2µm,21.0s
J48A  Bridge Port    116.88  44  P        PKiKP    09 54 34.0  0.0
      baz=288
D48A  Paudash Townsh 116.89  40  P        PKPdf    09 54 32.7 -1.2
      baz=292
SFJD  Kangerlussuaq  116.89  11  PFAKE             09 54 50.0 +17
SFJD                             LR       LR
      comp=Z,1µm,19.0s
E48A  Lockeyer       116.91  41  P        PKPdf    09 54 32.7 -1.2
      baz=291
LRAL  Lakeview Retre 116.95  56  PFAKE             09 54 50.0 +16
LRAL                             LR       LR
      comp=Z,3µm,20.0s
LRAL  Lakeview Retre 116.95  56  P        PKPdf    09 54 33.6 -0.8
      baz=281
249A  Camden         117.03  57  P        PKPdf    09 54 33.6 -1.0
      baz=280
W49A  Belvidere      117.13  54  P        PKPdf    09 54 33.2 -1.5
      baz=282
D49A  Beulah Townshi 117.14  39  P        PKPdf    09 54 33.7 -0.7
      baz=292
149A  Jones          117.20  57  P        PKPdf    09 54 33.5 -1.4
      baz=281
X49A  Woodville      117.21  54  P        PKPdf    09 54 33.3 -1.5
      baz=282
U49A  Red Boiling Sp 117.22  52  P        PKPdf    09 54 33.9 -0.9
      baz=283
BRAL  Brewton        117.23  58  PFAKE             09 54 50.0 +15
BRAL                             LR       LR
      comp=Z,1µm,19.0s
F49A  Sandfield      117.24  41  P        PKPdf    09 54 34.1 -0.5
      baz=291
KMBO  Kilima Mbogo   117.24 266  PKP      PKPdf    09 54 35.0 -0.8
      comp=Z,0.8nm,0.3s,baz=55,slow=16,SNR=2.4
KMBO  Kilima Mbogo   117.24 266 ePKPdf    PKPdf    09 54 35.0 -0.8
KMBO                             LR       LR
      comp=Z,1µm,20.0s
L49A  Milan          117.25  46  P        PKiKP    09 54 34.7  0.0
      baz=288
R49A  Shelbyville    117.26  50  PFAKE             09 54 50.0 +15
R49A                             LR       LR
      comp=Z,4µm,22.0s
R49A  Shelbyville    117.26  50  P        PKPdf    09 54 34.4 -0.5
      baz=284
T49A  Edmonton       117.27  51 ePKPdf    PKPdf    09 54 33.4 -1.5
T49A                             LR       LR
      comp=Z,4µm,20.0s
T49A  Edmonton       117.27  51  P        PKPdf    09 54 34.4 -0.5
      baz=284
AAM   Ann Arbor      117.27  45  PFAKE             09 54 50.0 +15
AAM                              LR       LR
      comp=Z,3µm,22.0s
Y49A  Blount Mountai 117.27  55  PFAKE             09 54 50.0 +15
Y49A                             LR       LR
      comp=Z,3µm,21.0s
V49A  McMinnville    117.28  53  P        PKPdf    09 54 33.7 -1.3
      baz=283
M49A  Liberty Center 117.29  46  P        PKPdf    09 54 34.8  0.0
      baz=287
N49A  Columbus Grove 117.30  47 ePKPdf    PKPdf    09 54 33.8 -1.1
N49A                             LR       LR
      comp=Z,2µm,20.0s
N49A  Columbus Grove 117.30  47  P        PKPdf    09 54 33.7 -1.1
      baz=287
S49A  Springfield    117.30  51  P        PKPdf    09 54 34.1 -0.9
      baz=284
Z49A  Columbiana     117.30  56  P        PKPdf    09 54 34.5 -0.6
      baz=281
J49A  Marlette       117.31  44  P        PKPdf    09 54 33.9 -0.9
      baz=289
I49A  Point Hope     117.33  43  PFAKE             09 54 50.0 +15
I49A                             LR       LR
      comp=Z,3µm,20.0s
I49A  Point Hope     117.33  43  P        PKPdf    09 54 33.9 -0.9
      baz=289
TEIG  Tepich         117.37  71  PFAKE             09 54 50.0 +14
TEIG                             LR       LR
      comp=Z,2µm,22.0s
SWET  Sewanee        117.38  54  PFAKE             09 54 50.0 +15
SWET                             LR       LR
      comp=Z,2µm,19.0s
O49A  Covington      117.39  48  PFAKE             09 54 50.0 +15
O49A                             LR       LR
      comp=Z,2µm,21.0s
O49A  Covington      117.39  48  P        PKPdf    09 54 33.9 -1.2
      baz=286
250A  Grady          117.75  57  PFAKE             09 54 50.0 +14
250A                             LR       LR
      comp=Z,2µm,20.0s
250A  Grady          117.75  57  P        PKPdf    09 54 34.2 -1.8
      baz=281
BR101 Keskin Array S 117.75 312 ePKPdf    PKPdf    09 54 34.8 -1.2
BR101                           epPKPdf   pPKPdf   09 54 50.8 -2.1
BR101                           ePP       PP       09 55 48.6 -1.0
BR101                           ePKKPab   PKKPab   10 05 08.4 +7.9
BRTR  Keskin Array B 117.75 312  PKP      PKPdf    09 54 34.8 -1.2
      comp=Z,1.2nm,0.6s,baz=144,slow=3.1,SNR=5.3
BRTR                             pPKP     pPKPdf   09 54 50.8 -2.1
      comp=Z,0.8nm,0.6s,baz=116,slow=1.6,SNR=3.7
BRTR                             PP       PP       09 55 48.6 -1.0
      comp=Z,1.0nm,1.0s,baz=57,slow=5.3,SNR=2.2
BRTR                             PKKPab   PKKPab   10 05 08.4 +7.9
      comp=Z,1.0nm,0.8s,baz=198,slow=2.5,SNR=4.6
X50B  Fort Payne     117.77  54  P        PKPdf    09 54 34.8 -1.2
      baz=282
TOBO  Tobermory, Bru 117.77  42  P        PKPdf    09 54 34.6 -1.1
      baz=291
350A  Dozier         117.79  58  P        PKPdf    09 54 34.5 -1.6
      baz=280
Z50A  Ashland        117.79  56 ePKPdf    PKPdf    09 54 34.7 -1.4
Z50A                             LR       LR
      comp=Z,3µm,21.0s
Z50A  Ashland        117.79  56  P        PKPdf    09 54 35.0 -1.0
      baz=281
Y50A  Piedmont       117.82  55  P        PKPdf    09 54 35.1 -1.0
      baz=282
T50A  Nancy          117.83  51  P        PKPdf    09 54 34.9 -1.1
      baz=284
150A  Eclectic       117.83  56  P        PKPdf    09 54 35.3 -0.9
      baz=281
E50A  Wahnapitae     117.85  40  P        PKPdf    09 54 35.1 -0.7
      baz=292
K50A  Casco          117.85  45  PFAKE             09 54 50.0 +14
K50A                             LR       LR
      comp=Z,3µm,22.0s
W50A  Signal Mountai 117.88  53 ePKPdf    PKPdf    09 54 35.2 -1.1
W50A                             LR       LR
      comp=Z,2µm,21.0s
W50A  Signal Mountai 117.88  53  P        PKPdf    09 54 35.3 -1.0
      baz=283
R50A  Paris          117.91  50  PFAKE             09 54 50.0 +14
R50A                             LR       LR
      comp=Z,3µm,21.0s
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R50A  Paris          117.91  50  P        PKPdf    09 54 35.2 -0.9
      baz=285
O50A  Cable          117.93  48  P        PKPdf    09 54 35.3 -0.9
      baz=287
V50A  Pikevile       117.94  53  P        PKPdf    09 54 35.4 -0.9
      baz=283
P50A  Jamestown      117.95  48  P        PKPdf    09 54 35.2 -1.0
      baz=286
L50A  Kingsville     117.95  45  P        PKPdf    09 54 35.3 -0.8
      baz=288
U50A  Jamestown      117.97  52  P        PKPdf    09 54 35.3 -1.1
      baz=284
M50A  Fremont        117.98  46  PFAKE             09 54 50.0 +14
M50A                             LR       LR
      comp=Z,2µm,22.0s
M50A  Fremont        117.98  46  P        PKPdf    09 54 35.2 -1.0
      baz=288
S50A  Richmond       118.00  51  P        PKPdf    09 54 35.6 -0.8
      baz=285
Q50A  Georgetown     118.02  49  P        PKPdf    09 54 35.3 -1.0
      baz=286
N50A  Nevada         118.09  47  P        PKPdf    09 54 36.1 -0.3
      baz=287
BASO  Ashfield       118.10  43  P        PKPdf    09 54 35.8 -0.5
      baz=290
BMRO  Meriville Lake 118.20  42  P        PKPdf    09 54 36.0 -0.5
      baz=291
CSGN  Cosiguina Volc 118.26  79  PFAKE             09 54 50.0 +12
CSGN                             LR       LR
      comp=Z,2µm,22.0s
W51A  Cleveland      118.33  53  P        PKPdf    09 54 36.5 -0.6
      baz=283
ANTO  Ankara         118.34 312  PFAKE             09 54 50.0 +13
ANTO                             LR       LR
      comp=Z,400nm,21.0s
Y51A  Rockmart       118.36  55  P        PKPdf    09 54 36.4 -0.7
      baz=282
ACSO  Alum Creek Sta 118.37  47 ePKPdf    PKPdf    09 54 36.1 -0.9
ACSO                             LR       LR
      comp=Z,2µm,19.0s
ACSO  Alum Creek Sta 118.37  47  P        PKPdf    09 54 36.4 -0.5
      baz=287
X51A  Calhoun        118.38  54  PFAKE             09 54 50.0 +13
X51A                             LR       LR
      comp=Z,2µm,20.0s
X51A  Calhoun        118.38  54  P        PKPdf    09 54 36.7 -0.4
      baz=283
Z51A  Franklin       118.39  56  P        PKPdf    09 54 36.8 -0.4
      baz=282
BWLO  Walkerton      118.42  43  P        PKPdf    09 54 36.9 -0.1
      baz=291
151A  Opelika        118.42  56  P        PKPdf    09 54 36.7 -0.6
      baz=281
451A  Vernon         118.43  59  PFAKE             09 54 50.0 +13
451A                             LR       LR
      comp=Z,3µm,20.0s
251A  Midway         118.44  57  P        PKPdf    09 54 36.5 -0.8
      baz=281
Q51A  Peebles        118.45  49  PFAKE             09 54 50.0 +13
Q51A                             LR       LR
      comp=Z,2µm,22.0s
CPCT  Cooper Cave    118.45  53  PFAKE             09 54 50.0 +13
CPCT                             LR       LR
      comp=Z,2µm,21.0s
D51A  Lot 18 Range I 118.45  39  P        PKPdf    09 54 36.8 -0.1
      baz=294
SUW   Suwalki        118.49 330  PFAKE             09 54 50.0 +13
SUW                              LR       LR
      comp=Z,1µm,22.0s
V51A  Loudon         118.50  53  PFAKE             09 54 50.0 +13
V51A                             LR       LR
      comp=Z,4µm,21.0s
P51A  Williamsport   118.53  48  PFAKE             09 54 50.0 +13
P51A                             LR       LR
      comp=Z,2µm,21.0s
TGUH  Tegucigalpa,Un 118.54  77  PFAKE             09 54 50.0 +12
TGUH                             LR       LR
      comp=Z,2µm,19.0s
F51A  Arnstein       118.56  40  P        PKPdf    09 54 36.6 -0.5
      baz=292
KLBO  Killbear Provi 118.58  41  P        PKPdf    09 54 36.5 -0.7
      baz=292
KIS   Kishinev       118.60 321 ePP       PP       09 55 54.0 -0.9
KIS                             eL        L        10 40 10.0
KIS                              LRM      MLR      10 56 24.0
      comp=Z,900nm,21.0s
I51A  Listowel       118.61  43  P        PKPdf    09 54 36.8 -0.5
      baz=290
N51A  Ashland        118.61  47  PFAKE             09 54 50.0 +13
N51A                             LR       LR
      comp=Z,2µm,19.0s
N51A  Ashland        118.61  47  P        PKPdf    09 54 36.8 -0.6
      baz=288
U51A  La Follette    118.63  52  P        PKPdf    09 54 37.2 -0.4
      baz=284
S51A  Beattyville    118.63  50 ePKPdf    PKPdf    09 54 36.9 -0.6
S51A                             LR       LR
      comp=Z,4µm,21.0s
S51A  Beattyville    118.63  50  P        PKPdf    09 54 37.0 -0.6
      baz=285
O51A  Pataskala      118.67  47  P        PKPdf    09 54 36.9 -0.6
      baz=287
152A  Waverly Hall   118.90  56 ePKPdf    PKPdf    09 54 36.9 -1.3
152A                             LR       LR
      comp=Z,3µm,21.0s
152A  Waverly Hall   118.90  56  P        PKPdf    09 54 38.0 -0.2
      baz=282
NB2   NORSAR Subarra118.94 341   PKPdf    PKiKP    09 54 37.6 +0.1
      comp=Z,0.4nm,0.7s,baz=39,slow=1.9
NB200 NORSAR Array S 118.94 341 ePKPdf    PKPdf    09 54 37.1 -0.4
NB200                           ePP       PP       09 55 56.9 +0.2
NB200                           ePKKPab   PKKPab   10 05 07.0 +12
NOA   NORSAR Array B 118.94 341  PKP      PKPdf    09 54 37.1 -0.4
      comp=Z,1.4nm,1.0s,baz=45,slow=2.1,SNR=3.4
NOA                              PP       PP       09 55 56.9 +0.2
      comp=Z,0.5nm,0.8s,baz=51,slow=5.2,SNR=2.2
NOA                              PKKPab   PKKPab   10 05 07.0 +12
      comp=Z,0.8nm,0.8s,baz=230,slow=5.7,SNR=4.2
TZTN  Tazewell       118.95  52  PFAKE             09 54 50.0 +12
TZTN                             LR       LR
      comp=Z,4µm,21.0s
TZTN  Tazewell       118.95  52  P        PKPdf    09 54 38.0 -0.2
      baz=285
352A  Blakely        118.96  58  PFAKE             09 54 50.0 +12
352A                             LR       LR
      comp=Z,2µm,20.0s
352A  Blakely        118.96  58  P        PKPdf    09 54 37.9 -0.5
      baz=281
F52A  Sundridge      119.00  40  P        PKPdf    09 54 37.7 -0.3
      baz=293
W52A  Murphy         119.01  53 ePKPdf    PKPdf    09 54 37.9 -0.5
W52A                             LR       LR
      comp=Z,3µm,22.0s
W52A  Murphy         119.01  53  P        PKPdf    09 54 38.1 -0.3
      baz=284
252A  Lumpkin        119.02  57  P        PKPdf    09 54 38.3 -0.1
      baz=282
Z52A  Williamson     119.04  55  P        PKPdf    09 54 37.7 -0.7
      baz=282
H52A  Wyevale        119.06  42  P        PKPdf    09 54 37.7 -0.5
      baz=292
LSQQ  Lebel-sur-Quev 119.07  36  P        PKPdf    09 54 37.5 -0.6
      baz=297
BUKO  Buck Lake      119.08  41  P        PKPdf    09 54 37.8 -0.4
      baz=293
V52A  Sevierville    119.09  52 ePKPdf    PKPdf    09 54 37.8 -0.7
V52A                             LR       LR
      comp=Z,4µm,20.0s
V52A  Sevierville    119.09  52  P        PKPdf    09 54 37.9 -0.6
      baz=284
D52A  ZEK Kipawa Sen 119.10  39  P        PKPdf    09 54 37.5 -0.6
      baz=294
U52A  Thorn Hill     119.13  52  P        PKPdf    09 54 37.9 -0.7
      baz=285
N52A  McGinn's Farm, 119.14  46  P        PKPdf    09 54 38.0 -0.4
      baz=288
M52A  Chesterland    119.14  46  PFAKE             09 54 50.0 +12
M52A                             LR       LR
      comp=Z,3µm,20.0s
M52A  Chesterland    119.14  46  P        PKPdf    09 54 37.8 -0.6
      baz=289
X52A  Dahlonega      119.15  54  P        PKPdf    09 54 38.5 -0.2
      baz=284
R52A  Catlettsburg   119.17  49  P        PKPdf    09 54 37.9 -0.7
      baz=286
P52A  Corning        119.17  48  P        PKPdf    09 54 37.7 -0.8
      baz=288
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K52A  Tillsonburg    119.17  44  P        PKiKP    09 54 38.7 +0.3
      baz=290
Y52A  Lilburn        119.18  55 ePKPdf    PKPdf    09 54 38.1 -0.6
Y52A                             LR       LR
      comp=Z,3µm,19.0s
Y52A  Lilburn        119.18  55  P        PKPdf    09 54 38.1 -0.6
      baz=283
VLDQ  Val d'Or       119.21  37 ePKPdf    PKPdf    09 54 36.6 -1.7
E52A  Mattawa        119.23  40  P        PKPdf    09 54 38.1 -0.3
      baz=294
T52A  Hallie         119.24  51  PFAKE             09 54 50.0 +11
T52A                             LR       LR
      comp=Z,3µm,22.0s
O52A  Adamsville     119.24  47  PFAKE             09 54 50.0 +11
O52A                             LR       LR
      comp=Z,2µm,20.0s
O52A  Adamsville     119.24  47  P        PKPdf    09 54 38.4 -0.3
      baz=288
ESTN  Estel          119.42  79  PFAKE             09 54 50.0 +10
ESTN                             LR       LR
      comp=Z,2µm,21.0s
D53A  Lac Vacive, Po 119.50  39  PFAKE             09 54 50.0 +11
D53A                             LR       LR
      comp=Z,3µm,20.0s
D53A  Lac Vacive, Po 119.50  39  P        PKPdf    09 54 38.9  0.0
      baz=295
SADO  Sadowa         119.51  41  PFAKE             09 54 50.0 +11
SADO                             LR       LR
      comp=Z,8µm,22.0s
253A  Americus       119.51  57  PFAKE             09 54 50.0 +11
253A                             LR       LR
      comp=Z,2µm,20.0s
253A  Americus       119.51  57  P        PKPdf    09 54 39.0 -0.4
      baz=282
Y53A  Monroe         119.57  55  P        PKPdf    09 54 39.1 -0.4
      baz=283
353A  Camilla        119.58  58  P        PKPdf    09 54 39.4 -0.1
      baz=282
453A  Whigham        119.59  58  PFAKE             09 54 50.0 +10
453A                             LR       LR
      comp=Z,2µm,21.0s
W53A  Cullowhee      119.60  53  P        PKPdf    09 54 39.6 -0.1
      baz=284
T53A  Wise           119.62  51  P        PKPdf    09 54 39.4 -0.2
      baz=286
TYNO  Tyneside       119.64  43  P        PKiKP    09 54 39.4  0.0
      baz=291
X53A  Estanollee     119.65  54  P        PKPdf    09 54 39.5 -0.1
      baz=284
M53A  WI Miller and  119.66  45  P        PKPdf    09 54 38.9 -0.5
      baz=290
O53A  New Philadelph 119.66  47  P        PKPdf    09 54 39.1 -0.3
      baz=288
R53A  Hurricane      119.69  49  PFAKE             09 54 50.0 +10
R53A                             LR       LR
      comp=Z,4µm,20.0s
R53A  Hurricane      119.69  49  P        PKPdf    09 54 38.9 -0.7
      baz=287
Z53A  Monticello     119.71  55  P        PKPdf    09 54 38.8 -1.0
      baz=283
G53A  Haliburton     119.71  41  P        PKPdf    09 54 38.7 -0.7
      baz=293
S53A  Williamson     119.74  50  P        PKPdf    09 54 38.7 -1.0
      baz=286
ALGO  Algonquin Park 119.75  40  P        PKPdf    09 54 38.9 -0.6
      baz=294
N53A  Lisbon         119.75  46 ePKPdf    PKPdf    09 54 39.0 -0.6
N53A                             LR       LR
      comp=Z,3µm,22.0s
N53A  Lisbon         119.75  46  P        PKPdf    09 54 38.9 -0.7
      baz=289
V53A  Saluda         119.75  52 ePKPdf    PKPdf    09 54 39.0 -0.8
V53A                             LR       LR
      comp=Z,4µm,21.0s
V53A  Saluda         119.75  52  P        PKPdf    09 54 39.1 -0.8
      baz=285
U53A  Fall Branch    119.75  52  P        PKPdf    09 54 39.0 -0.8
      baz=285
P53A  Whipple        119.77  48 ePKPdf    PKPdf    09 54 38.9 -0.7
P53A                             LR       LR
      comp=Z,2µm,20.0s
P53A  Whipple        119.77  48  P        PKPdf    09 54 38.9 -0.7
      baz=288
GOGA  Godfrey        119.77  55  PFAKE             09 54 50.0 +10
GOGA                             LR       LR
      comp=Z,2µm,20.0s
GOGA  Godfrey        119.77  55  P        PKPdf    09 54 38.6 -1.2
      baz=283
E53A  Dumoine, Ponti 119.82  39  P        PKPdf    09 54 38.5 -1.1
      baz=295
BG3   Lake Jocassee  119.83  53 ePKPdf    PKPdf    09 54 38.9 -1.0
BG3                              LR       LR
      comp=Z,2µm,21.0s
TIRR  Tirgusor       119.86 318  PFAKE             09 54 50.0 +10
TIRR                             LR       LR
      comp=Z,2µm,20.0s
ERPA  Erie           119.91  45  PFAKE             09 54 50.0 +10
ERPA                             LR       LR
      comp=Z,3µm,21.0s
ALLY  Alegheny Colle 119.96  45  PFAKE             09 54 50.0 +10
ALLY                             LR       LR
      comp=Z,3µm,21.0s
TIGA  Tifton         120.09  57  PFAKE             09 54 50.0 +9.4
TIGA                             LR       LR
      comp=Z,2µm,21.0s
ANGG  Ammassalik, Gr 120.09   6  PFAKE             09 54 50.0 +10
ANGG                             LR       LR
      comp=Z,1µm,22.0s
E54A  Lac Daplat, Po 120.09  39  P        PKPdf    09 54 38.8 -1.2
      baz=295
D54A  Lac Fusel, La  120.11  38  P        PKPdf    09 54 38.9 -1.2
      baz=296
454A  Quitman        120.20  58  P        PKPdf    09 54 39.0 -1.7
      baz=282
BANO  Bancroft       120.20  41  P        PKPdf    09 54 39.4 -1.0
      baz=294
154A  Montrose       120.24  56  PFAKE             09 54 50.0 +9.1
154A                             LR       LR
      comp=Z,3µm,20.0s
O54A  Avella         120.28  47  P        PKPdf    09 54 39.6 -1.1
      baz=289,SNR=7.0
Y54A  Tignall        120.29  54  P        PKPdf    09 54 40.1 -0.7
      baz=284
U54A  Nelsons Funny  120.30  51  PFAKE             09 54 50.0 +9.0
U54A                             LR       LR
      comp=Z,3µm,22.0s
U54A  Nelsons Funny  120.30  51  P        PKPdf    09 54 40.1 -0.7
      baz=286
N54A  Moraine State  120.30  46 ePKPdf    PKPdf    09 54 39.8 -0.9
N54A                             LR       LR
      comp=Z,2µm,21.0s
N54A  Moraine State  120.30  46  P        PKPdf    09 54 40.1 -0.6
      baz=290
S54A  Dingess, Beckl 120.33  50  P        PKPdf    09 54 40.3 -0.6
      baz=287
WLVO  Wesleyville    120.33  42  P        PKPdf    09 54 40.2 -0.3
      baz=293
Q54A  Coxs Mills     120.33  48 ePKPdf    PKPdf    09 54 39.7 -1.0
Q54A                             LR       LR
      comp=Z,2µm,20.0s
Q54A  Coxs Mills     120.33  48  P        PKPdf    09 54 39.5 -1.3
      baz=288,SNR=8.4
L54A  Sinclairville  120.33  44  P        PKPdf    09 54 40.3 -0.4
      baz=291
T54A  Tazewell       120.34  51  P        PKPdf    09 54 40.3 -0.7
      baz=286
BOSA  Boshof         120.34 232  PKP      PKPdf    09 54 41.0 -0.3
      comp=Z,4.5nm,0.7s,baz=159,slow=1.8,SNR=12
M54A  Oil Creek Stat 120.35  45 ePKPdf    PKPdf    09 54 40.2 -0.6
M54A                             LR       LR
      comp=Z,2µm,21.0s
M54A  Oil Creek Stat 120.35  45  P        PKPdf    09 54 39.1 -1.6
      baz=290,SNR=5.4
PEMO  Pembroke       120.37  40  P        PKPdf    09 54 40.3 -0.3
      baz=295
X54A  Belton         120.38  54  P        PKPdf    09 54 40.7 -0.3
      baz=284
W54A  Cherokee Point 120.39  53  P        PKPdf    09 54 40.9 -0.1
      baz=285
V54A  Nebo           120.40  52  P        PKPdf    09 54 40.8 -0.3
      baz=286
J54A  Appleton       120.42  43  PFAKE             09 54 50.0 +9.1
J54A                             LR       LR
      comp=Z,2µm,19.0s
R54A  Victor         120.46  49  P        PKPdf    09 54 40.7 -0.4
      baz=288
KONO  Kongsberg      120.51 340  PFAKE             09 54 50.0 +9.4
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KONO				LR	LR		
	comp=Z,2µm,22.0s						
MEDO	**Medina**	**120.58**	**43**	PFAKE		09 54 50.0	+8.8
MEDO				LR	LR		
	comp=Z,2µm,20.0s						
MEDO	**Medina**	**120.58**	**43**	P	**PKiKP**	**09 54 41.2**	**0.0**
	baz=292						
ACON	**Acoyapa**	**120.59**	**80**	PFAKE		09 54 50.0	+8.0
ACON				LR	LR		
	comp=Z,1µm,21.0s						
DELO	**Deloro Mine**	**120.61**	**41**	PFAKE		09 54 50.0	+8.8
DELO				LR	LR		
	comp=Z,8µm,21.0s						
DELO	**Deloro Mine**	**120.61**	**41**	P	**PKPdf**	**09 54 40.4**	**-0.7**
	baz=294						
K54A	**Basiliko Farm,**	**120.63**	**44**	P	**PKPdf**	**09 54 40.4**	**-0.9**
	baz=292						
PLVO	**Plevna**	**120.75**	**40**	P	**PKPdf**	**09 54 40.9**	**-0.4**
	baz=295						
655A	**Horseshoe Beac**	**120.75**	**59**	P	**PKPdf**	**09 54 41.6**	**-0.2**
	baz=281						
PAULI	**Pauline**	**120.76**	**53**	*e*PKPdf	**PKPdf**	**09 54 41.0**	**-0.7**
PAULI				LR	LR		
	comp=Z,3µm,21.0s						
155A	**Kite**	**120.76**	**56**	P	**PKPdf**	**09 54 41.5**	**-0.3**
	baz=283						
JTS	**Las Juntas de**	**120.79**	**82**	PFAKE		09 54 50.0	+7.6
JTS				LR	LR		
	comp=Z,2µm,22.0s						
MCWV	**Mont Chateau**	**120.84**	**47**	PFAKE		09 54 50.0	+8.2
MCWV				LR	LR		
	comp=Z,2µm,21.0s						
555A	**McAlpin**	**120.88**	**59**	PFAKE		09 54 50.0	+7.8
555A				LR	LR		
	comp=Z,2µm,22.0s						
555A	**McAlpin**	**120.88**	**59**	P	**PKPdf**	**09 54 41.3**	**-0.8**
	baz=282						
H55A	**Tweed**	**120.88**	**41**	P	**PKPdf**	**09 54 41.2**	**-0.4**
	baz=294						
Q55A	**Buckhannon**	**120.88**	**48**	P	**PKPdf**	**09 54 40.9**	**-1.0**
	baz=289						
G55A	**Calabogie**	**120.89**	**40**	P	**PKPdf**	**09 54 41.0**	**-0.6**
	baz=295						
U55A	**TA2, Sparta**	**120.90**	**51**	P	**PKPdf**	**09 54 41.3**	**-0.8**
	baz=286						
255A	**Hazlehurst**	**120.91**	**57**	PFAKE		09 54 50.0	+7.8
255A				LR	LR		
	comp=Z,3µm,20.0s						
T55A	**Pulaski**	**120.93**	**50**	P	**PKPdf**	**09 54 41.3**	**-0.7**
	baz=287						
Y55A	**Saluda**	**120.94**	**54**	P	**PKPdf**	**09 54 41.3**	**-0.8**
	baz=284						
S55A	**Lewisburg**	**120.95**	**49**	P	**PKPdf**	**09 54 41.3**	**-0.8**
	baz=288						
V55A	**Taylorsville**	**120.95**	**52**	P	**PKPdf**	**09 54 41.1**	**-1.0**
	baz=286						
L55A	**Hinsdale**	**120.96**	**44**	P	**PKPdf**	**09 54 41.3**	**-0.7**
	baz=292						
J55A	**Hilton**	**120.97**	**43**	PFAKE		09 54 50.0	+8.0
J55A				LR	LR		
	comp=Z,2µm,18.0s						
J55A	**Hilton**	**120.97**	**43**	P	**PKPdf**	**09 54 41.3**	**-0.5**
	baz=293						
X55A	**Gracelyn & Ava**	**120.99**	**53**	P	**PKPdf**	**09 54 41.1**	**-1.1**
	baz=285,SNR=7.5						
M55A	**Ridgway**	**120.99**	**45**	P	**PKPdf**	**09 54 41.3**	**-0.7**
	baz=291						
K55A	**Perry**	**121.01**	**43**	P	**PKPdf**	**09 54 41.4**	**-0.6**
	baz=292						
KWP	**Kalwaria Pacla**	**121.03**	**326**	PFAKE		09 54 50.0	+8.1
KWP				LR	LR		
	comp=Z,9µm,20.0s						
MLR	**Muntele Rosu**	**121.04**	**320**	PFAKE		09 54 50.0	+7.8
MLR				LR	LR		
	comp=Z,1µm,21.0s						
O55A	**Ligonier**	**121.05**	**46**	P	**PKPdf**	**09 54 41.5**	**-0.7**
	baz=290						
KMSC	**Kings Mountain**	**121.05**	**53**	*e*PKPdf	**PKiKP**	**09 54 42.5**	**+0.1**
KMSC				LR	LR		
	comp=Z,5µm,20.0s						
KMSC	**Kings Mountain**	**121.05**	**53**	P	**PKPdf**	**09 54 41.5**	**-0.8**
	baz=286,SNR=6.9						
R55A	**Marlinton**	**121.08**	**49**	*e*PKPdf	**PKPdf**	**09 54 41.6**	**-0.7**
R55A				LR	LR		
	comp=Z,2µm,21.0s						
R55A	**Marlinton**	**121.08**	**49**	P	**PKPdf**	**09 54 41.6**	**-0.7**
	baz=288,SNR=6.1						
N55A	**Marion Center**	**121.08**	**46**	PFAKE		09 54 50.0	+7.7
N55A				LR	LR		
	comp=Z,3µm,21.0s						
N55A	**Marion Center**	**121.08**	**46**	P	**PKPdf**	**09 54 42.0**	**-0.2**
	baz=291						
MMNY	**Mt. Morris Dam**	**121.12**	**43**	PFAKE		09 54 50.0	+7.7
MMNY				LR	LR		
	comp=Z,2µm,20.0s						
BLA	**Blacksburg**	**121.18**	**50**	*e*PKPdf	**PKPdf**	**09 54 41.9**	**-0.6**
BLA				LR	LR		
	comp=Z,3µm,19.0s						
BLA	**Blacksburg**	**121.18**	**50**	*e*PKIKP	**PKPdf**	**09 54 41.9**	**-0.6**
BLA				MLR	MLR		
	comp=Z,3µm,19.0s						
BLA	**Blacksburg**	**121.18**	**50**	P	**PKPdf**	**09 54 42.4**	**-0.1**
	baz=287						
PECO	**Prince Edward**	**121.26**	**42**	PFAKE		09 54 50.0	+7.5
PECO				LR	LR		
	comp=Z,8µm,22.0s						
PECO	**Prince Edward**	**121.26**	**42**	P	**PKPdf**	**09 54 41.8**	**-0.5**
	baz=294						
356A	**Blackshear**	**121.34**	**57**	P	**PKPdf**	**09 54 42.3**	**-0.6**
	baz=283						
JSC	**Jenkinsville**	**121.34**	**54**	*e*PKPdf	**PKiKP**	**09 54 43.7**	**+0.7**
JSC				LR	LR		
	comp=Z,3µm,22.0s						
JSC	**Jenkinsville**	**121.34**	**54**	*e*PKIKP	**PKiKP**	**09 54 43.7**	**+0.7**
JSC				MLR	MLR		
	comp=Z,3µm,22.0s						
556A	**Lake Butler**	**121.38**	**59**	P	**PKPdf**	**09 54 42.5**	**-0.5**
	baz=282						
256A	**Glennville**	**121.39**	**56**	P	**PKPdf**	**09 54 42.2**	**-0.7**
	baz=283						
M56A	**Emporium**	**121.39**	**45**	P	**PKPdf**	**09 54 42.2**	**-0.6**
	baz=292						
656A	**Willston**	**121.40**	**59**	PFAKE		09 54 50.0	+6.8
656A				LR	LR		
	comp=Z,2µm,20.0s						
656A	**Willston**	**121.40**	**59**	P	**PKPdf**	**09 54 42.9**	**-0.2**
	baz=281						
ESPN	**Las Esperanzas**	**121.44**	**80**	PFAKE		09 55 00.0	+16
ESPN				LR	LR		
	comp=Z,300nm,19.0s						
U56A	**King**	**121.46**	**51**	P	**PKPdf**	**09 54 42.7**	**-0.4**
	baz=287						
H56A	**Elgin**	**121.46**	**41**	P	**PKPdf**	**09 54 42.6**	**-0.2**
	baz=295						
X56A	**White Oak**	**121.47**	**53**	P	**PKPdf**	**09 54 42.6**	**-0.4**
	baz=285						
Z56A	**Williston**	**121.49**	**55**	PFAKE		09 55 00.0	+17
Z56A				LR	LR		
	comp=Z,2µm,19.0s						
Z56A	**Williston**	**121.49**	**55**	P	**PKPdf**	**09 54 42.7**	**-0.5**
	baz=284						
N56A	**West Decatur**	**121.52**	**45**	P	**PKPdf**	**09 54 42.9**	**-0.2**
	baz=291						
Q56A	**Snyder Ridge,**	**121.53**	**48**	P	**PKPdf**	**09 54 42.8**	**-0.3**
	baz=289						
V56A	**Mocksville**	**121.53**	**52**	PFAKE		09 55 00.0	+17
V56A				LR	LR		
	comp=Z,3µm,21.0s						
V56A	**Mocksville**	**121.53**	**52**	P	**PKPdf**	**09 54 42.6**	**-0.5**
	baz=286						
T56A	**Rocky Mt**	**121.53**	**50**	P	**PKPdf**	**09 54 42.7**	**-0.4**
	baz=288						
BORG	**Borgarnes**	**121.54**	**358**	PFAKE		09 54 50.0	+7.6
BORG				LR	LR		
	comp=Z,1µm,22.0s						
156A	**Sylvania**	**121.55**	**55**	P	**PKPdf**	**09 54 42.7**	**-0.6**
	baz=284						
456A	**Hilliard**	**121.55**	**58**	PFAKE		09 55 00.0	+17
456A				LR	LR		
	comp=Z,2µm,20.0s						
O56A	**Blue Knob Stat**	**121.56**	**46**	*e*PKPdf	**PKPdf**	**09 54 42.2**	**-0.9**
O56A				LR	LR		
	comp=Z,3µm,22.0s						
O56A	**Blue Knob Stat**	**121.56**	**46**	P	**PKPdf**	**09 54 42.9**	**-0.2**
	baz=291						
ORIO	**Orleans, Innes**	**121.57**	**39**	P	**PKiKP**	**09 54 43.1**	**+0.1**
	baz=296						
R56A	**Bull Pasture M**	**121.57**	**48**	P	**PKPdf**	**09 54 43.1**	**-0.2**
	baz=289						
HDC	**Heredia**	**121.61**	**82**	PFAKE		09 55 00.0	+16
HDC				LR	LR		
	comp=Z,1µm,20.0s						
P56A	**Dayton Farm, R**	**121.63**	**47**	P	**PKPdf**	**09 54 42.7**	**-0.5**
	baz=290						
W56A	**Indian Trail**	**121.65**	**52**	P	**PKPdf**	**09 54 43.0**	**-0.4**
	baz=286						
S56A	**Natural Bridge**	**121.68**	**49**	P	**PKPdf**	**09 54 42.8**	**-0.7**
	baz=288						
857A	**Zephyrhills**	**121.87**	**61**	P	**PKPdf**	**09 54 43.6**	**-0.4**
	baz=281						
BIRD	**Birdtown, Kers**	**121.88**	**53**	*e*PKPdf	**PKPdf**	**09 54 43.6**	**-0.3**
BIRD				LR	LR		
	comp=Z,4µm,21.0s						
SSPA	**Standing Stone**	**121.91**	**45**	*e*PKPdf	**PKPdf**	**09 54 42.8**	**-1.0**
SSPA				LR	LR		
	comp=Z,2µm,22.0s						
SSPA	**Standing Stone**	**121.91**	**45**	P	**PKPdf**	**09 54 43.7**	**-0.1**
	baz=291						
457A	**Yulee**	**121.97**	**58**	P	**PKPdf**	**09 54 43.7**	**-0.4**
	baz=283						
957A	**Wimauma**	**121.97**	**61**	PFAKE		09 55 00.0	+16
957A				LR	LR		
	comp=Z,2µm,21.0s						
BALB	**Balikesir**	**122.00**	**313**	PFAKE		09 55 00.0	+16
BALB				LR	LR		
	comp=Z,1µm,20.0s						
V57A	**Coltrane Farms**	**122.06**	**51**	P	**PKPdf**	**09 54 43.8**	**-0.3**
	baz=287						
Q57A	**Strasburg**	**122.10**	**47**	P	**PKPdf**	**09 54 43.7**	**-0.5**
	baz=290						
257A	**Skidaway Islan**	**122.10**	**56**	PFAKE		09 55 00.0	+15
257A				LR	LR		
	comp=Z,2µm,20.0s						
257A	**Skidaway Islan**	**122.10**	**56**	P	**PKPdf**	**09 54 43.8**	**-0.5**
	baz=284						
Y57A	**Sumter**	**122.10**	**54**	PFAKE		09 55 00.0	+16
Y57A				LR	LR		
	comp=Z,3µm,20.0s						
N57A	**Milroy**	**122.11**	**45**	P	**PKPdf**	**09 54 43.7**	**-0.4**
	baz=292						
W57A	**Gilead**	**122.11**	**52**	PFAKE		09 55 00.0	+16
W57A				LR	LR		
	comp=Z,4µm,20.0s						
W57A	**Gilead**	**122.11**	**52**	P	**PKPdf**	**09 54 44.1**	**-0.2**
	baz=286						
S57A	**Dark Hollow, R**	**122.12**	**49**	PFAKE		09 55 00.0	+16
S57A				LR	LR		
	comp=Z,3µm,21.0s						
S57A	**Dark Hollow, R**	**122.12**	**49**	P	**PKPdf**	**09 54 43.7**	**-0.6**
	baz=289						
T57A	**Hurt**	**122.13**	**50**	PFAKE		09 55 00.0	+16
T57A				LR	LR		
	comp=Z,3µm,21.0s						
T57A	**Hurt**	**122.13**	**50**	P	**PKPdf**	**09 54 43.7**	**-0.6**
	baz=288						
X57A	**Johnson Farm,**	**122.22**	**53**	P	**PKPdf**	**09 54 44.1**	**-0.5**
	baz=286						
P57A	**Homestead Farm**	**122.23**	**47**	P	**PKPdf**	**09 54 44.1**	**-0.3**
	baz=291						
U57A	**Blanch**	**122.24**	**51**	P	**PKPdf**	**09 54 44.3**	**-0.2**
	baz=288						
O57A	**Amberson**	**122.25**	**46**	P	**PKPdf**	**09 54 44.0**	**-0.4**
	baz=291						
R57A	**Stanardsville**	**122.26**	**48**	P	**PKPdf**	**09 54 43.8**	**-0.7**
	baz=290						
658A	**Bunnell**	**122.48**	**59**	P	**PKPdf**	**09 54 44.3**	**-0.8**
	baz=282						
NHSC	**New Hope**	**122.51**	**55**	PFAKE		09 55 00.0	+15
NHSC				LR	LR		
	comp=Z,2µm,20.0s						
IVI	**Ivigtut**	**122.53**	**13**	PFAKE		09 55 00.0	+16
IVI				LR	LR		
	comp=Z,3µm,22.0s						
LONY	**Lake Ozonia**	**122.53**	**40**	PFAKE		09 55 00.0	+15
LONY				LR	LR		
	comp=Z,4µm,22.0s						
LONY	**Lake Ozonia**	**122.53**	**40**	P	**PKPdf**	**09 54 44.6**	**-0.3**
	baz=297						
DWPF	**Disney Wildern**	**122.59**	**61**	PFAKE		09 55 00.0	+14
DWPF				LR	LR		
	comp=Z,2µm,22.0s						
158A	**Hollywood**	**122.60**	**55**	P	**PKPdf**	**09 54 45.2**	**-0.1**
	baz=285						
V58A	**Windy Hill, Pi**	**122.61**	**51**	P	**PKPdf**	**09 54 45.0**	**-0.2**
	baz=288						
758A	**Lake Helen**	**122.62**	**60**	P	**PKPdf**	**09 54 45.2**	**-0.2**
	baz=282						
BINY	**Binghamton**	**122.63**	**43**	PFAKE		09 55 00.0	+15
BINY				LR	LR		
	comp=Z,2µm,20.0s						
BINY	**Binghamton**	**122.63**	**43**	P	**PKPdf**	**09 54 44.8**	**-0.3**
	baz=294						
M58A	**Price's Panora**	**122.64**	**44**	P	**PKPdf**	**09 54 44.8**	**-0.4**
	baz=293						
R58A	**Rapidan**	**122.65**	**48**	P	**PKPdf**	**09 54 45.2**	**0.0**
	baz=290						
N58A	**Sunbury**	**122.66**	**45**	P	**PKPdf**	**09 54 44.7**	**-0.5**
	baz=292						
Q58A	**Fox Den Farm,**	**122.66**	**47**	P	**PKPdf**	**09 54 44.9**	**-0.4**
	baz=291						
T58A	**Grand View Acr**	**122.70**	**50**	P	**PKPdf**	**09 54 44.8**	**-0.6**
	baz=289						
Y58A	**Scranton**	**122.71**	**54**	PFAKE		09 55 00.0	+14
Y58A				LR	LR		
	comp=Z,3µm,20.0s						
Y58A	**Scranton**	**122.71**	**54**	P	**PKPdf**	**09 54 44.8**	**-0.6**
	baz=286						
W58A	**Raeford**	**122.74**	**52**	P	**PKPdf**	**09 54 45.4**	**-0.1**
	baz=287						
P58A	**Pank, Wackersv**	**122.75**	**47**	P	**PKPdf**	**09 54 45.1**	**-0.3**
	baz=291						
Z58A	**St. Stephen**	**122.75**	**54**	P	**PKPdf**	**09 54 45.3**	**-0.2**
	baz=286						
RGN	**Rugen**	**122.76**	**334**	PFAKE		09 55 00.0	+15
RGN				LR	LR		
	comp=Z,1µm,22.0s						
O58A	**Lewisberry**	**122.79**	**46**	P	**PKPdf**	**09 54 44.5**	**-0.9**
	baz=292						
L58A	**Harry Jones Me**	**122.79**	**43**	P	**PKPdf**	**09 54 45.2**	**-0.2**
	baz=294						
X58A	**Rowland**	**122.79**	**53**	PFAKE		09 55 00.0	+14
X58A				LR	LR		
	comp=Z,5µm,21.0s						
S58A	**Poland Farm, P**	**122.84**	**49**	P	**PKPdf**	**09 54 45.1**	**-0.6**
	baz=290						
R58B	**Mineral**	**122.85**	**48**	PFAKE		09 55 00.0	+14
R58B				LR	LR		
	comp=Z,2µm,19.0s						
R58B	**Mineral**	**122.85**	**48**	P	**PKPdf**	**09 54 44.9**	**-0.7**
	baz=290						
U58A	**Oxford**	**122.86**	**50**	P	**PKPdf**	**09 54 45.3**	**-0.3**
	baz=288						
PAGS	**Pennsylvania G**	**122.89**	**46**	*e*PKPdf	**PKPdf**	**09 54 45.1**	**-0.5**
LSZ	**Lusaka**	**122.96**	**247**	*e*PKPdf	**PKiKP**	**09 54 47.2**	**+0.4**
LSZ				LR	LR		
	comp=Z,2µm,21.0s						
KSPA	**Keystone Colle**	**123.04**	**44**	PFAKE		09 55 00.0	+14
KSPA				LR	LR		
	comp=Z,3µm,20.0s						
NCB	**Newcomb**	**123.05**	**41**	*e*PKPdf	**PKPdf**	**09 54 45.0**	**-0.9**
NCB				LR	LR		
	comp=Z,5µm,22.0s						
059A	**Moore Haven**	**123.06**	**62**	PFAKE		09 55 00.0	+13
059A				LR	LR		
	comp=Z,2µm,22.0s						
FRNY	**Flat Rock**	**123.06**	**39**	*e*PKPdf	**PKPdf**	**09 54 45.4**	**-0.4**
FRNY				LR	LR		
	comp=Z,3µm,20.0s						
SDMD	**Soldier's Deli**	**123.11**	**46**	*e*PKPdf	**PKiKP**	**09 54 46.4**	**+0.1**
SDMD				LR	LR		
	comp=Z,1µm,20.0s						
CBN	**Corbin Frederi**	**123.15**	**48**	PFAKE		09 55 00.0	+14
CBN				LR	LR		
	comp=Z,4µm,20.0s						
NRS	**Narsarsuaq**	**123.15**	**12**	PFAKE		09 55 00.0	+14
NRS				LR	LR		
	comp=Z,3µm,21.0s						
O59A	**Robesonia**	**123.24**	**45**	P	**PKPdf**	**09 54 45.9**	**-0.4**
	baz=293						
MVL	**Millersville**	**123.24**	**46**	*e*PKPdf	**PKPdf**	**09 54 46.1**	**-0.2**
MVL				LR	LR		
	comp=Z,3µm,22.0s						
M59A	**Waymart**	**123.28**	**44**	P	**PKPdf**	**09 54 45.9**	**-0.5**
	baz=294						
V59A	**Middlesex**	**123.29**	**51**	P	**PKPdf**	**09 54 46.0**	**-0.5**
	baz=288						
N59A	**State Game Lan**	**123.29**	**44**	*e*PKPdf	**PKPdf**	**09 54 45.4**	**-1.1**
N59A				LR	LR		
	comp=Z,2µm,21.0s						
N59A	**State Game Lan**	**123.29**	**44**	P	**PKPdf**	**09 54 45.8**	**-0.6**
	baz=293						
Y59A	**Loris**	**123.32**	**53**	P	**PKPdf**	**09 54 46.5**	**-0.1**
	baz=287						
P59A	**Jarrettsville**	**123.33**	**46**	P	**PKPdf**	**09 54 46.0**	**-0.5**
	baz=292						
R59A	**King George, V**	**123.34**	**48**	P	**PKPdf**	**09 54 45.8**	**-0.7**
	baz=291						
X59A	**McDuffie Farm,**	**123.37**	**53**	P	**PKPdf**	**09 54 45.8**	**-0.9**
	baz=287						
OKC	**Ostrava-Krasne**	**123.41**	**328**	*e*PS	PS	10 06 25.8	+0.4
OKC				AMS	AMS	10 54 00.0	
	comp=Z,1µm,20.0s						
T59A	**Double "B" Far**	**123.43**	**49**	*e*PKPdf	**PKPdf**	**09 54 46.4**	**-0.4**
T59A				LR	LR		
	comp=Z,2µm,21.0s						
T59A	**Double "B" Far**	**123.43**	**49**	P	**PKPdf**	**09 54 46.3**	**-0.4**
	baz=289						
U59A	**Littleton**	**123.45**	**50**	PFAKE		09 55 00.0	+13
U59A				LR	LR		
	comp=Z,3µm,20.0s						
061Z	**Ochoppi**	**123.46**	**63**	PFAKE		09 55 00.0	+13
061Z				LR	LR		
	comp=Z,1µm,20.0s						
PSZ	**Piszkesteto**	**123.52**	**325**	PFAKE		09 55 00.0	+13
PSZ				LR	LR		
	comp=Z,2µm,22.0s						
MOQ	**Mont Orford**	**123.67**	**38**	*e*PKPdf	**PKPdf**	**09 54 46.2**	**-0.9**
ACCN	**Adirondack Com**	**123.67**	**41**	PFAKE		09 55 00.0	+13
ACCN				LR	LR		
	comp=Z,7µm,22.0s						
LUPA	**Lehigh Univers**	**123.70**	**45**	PFAKE		09 55 00.0	+13
LUPA				LR	LR		
	comp=Z,200nm,21.0s						
R60A	**Leonardtown, M**	**123.71**	**48**	P	**PKPdf**	**09 54 46.4**	**-0.9**
	baz=291						
CNNC	**Cliffs of the**	**123.73**	**52**	PFAKE		09 55 00.0	+12
CNNC				LR	LR		
	comp=Z,3µm,20.0s						
CNNC	**Cliffs of the**	**123.73**	**52**	P	**PKPdf**	**09 54 46.7**	**-0.6**
	baz=288						
060A	**Indiantown**	**123.73**	**62**	PFAKE		09 55 00.0	+12
060A				LR	LR		
	comp=Z,2µm,20.0s						
060A	**Indiantown**	**123.73**	**62**	P	**PKPdf**	**09 54 47.1**	**-0.5**
	baz=281						
MORC	**Moravsky Berou**	**123.76**	**328**	*e*PKPdf	**PKPdf**	**09 54 47.0**	**-0.1**
MORC				LR	LR		
	comp=Z,1µm,20.0s						
MORC	**Moravsky Berou**	**123.76**	**328**	*e*PKIKP	**PKPdf**	**09 54 47.0**	**-0.1**
MORC				MLR	MLR		
	comp=Z,1µm,20.0s						
MORC	**Moravsky Berou**	**123.76**	**328**	*e*PKP	**PKPdf**	**09 54 46.7**	**-0.4**
MBAR	**Mbarara**	**123.77**	**265**	PFAKE		09 55 00.0	+11
MBAR				LR	LR		
	comp=Z,700nm,20.0s						
N60A	**Cedar Hill Far**	**123.78**	**44**	P	**PKPdf**	**09 54 46.9**	**-0.4**
	baz=294						
O60A	**Telford**	**123.78**	**45**	P	**PKPdf**	**09 54 47.2**	**-0.2**
	baz=293						
VYHS	**Vyhne**	**123.80**	**326**	*e*PKIKP	**PKiKP**	**09 54 48.2**	**+0.8**
VYHS	**Vyhne**	**123.80**	**326**	*e*PKP	**PKiKP**	**09 54 48.2**	**+0.8**
P60A	**Greenville**	**123.82**	**46**	P	**PKPdf**	**09 54 47.0**	**-0.4**
	baz=293						
VT1	**Waterbury**	**123.83**	**40**	PFAKE		09 55 00.0	+12
VT1				LR	LR		
	comp=Z,3µm,20.0s						
Y60A	**Bolivia**	**123.84**	**53**	PFAKE		09 55 00.0	+12
Y60A				LR	LR		
	comp=Z,5µm,21.0s						
S60A	**Water View**	**123.85**	**48**	P	**PKiKP**	**09 54 47.8**	**0.0**
	baz=291						
X60A	**Albert Glenn T**	**123.86**	**52**	P	**PKPdf**	**09 54 47.4**	**-0.2**
	baz=288						
PSUB	**Penn St. - Bra**	**123.91**	**45**	*e*PKPdf	**PKPdf**	**09 54 47.0**	**-0.5**
PSUB				LR	LR		
	comp=Z,3µm,22.0s						
TRY	**Troy**	**123.96**	**42**	*e*PKPdf	**PKiKP**	**09 54 48.0**	**+0.1**
TRY				LR	LR		
	comp=Z,7µm,22.0s						
Q60A	**Greensboro**	**123.98**	**47**	P	**PKPdf**	**09 54 47.5**	**-0.3**
	baz=292						
OSTC	**Ostas**	**123.98**	**329**	AMS	AMS	10 47 50.0	
	comp=Z,2µm,24.1s						
T60A	**Surry**	**123.99**	**49**	PFAKE		09 55 00.0	+12
T60A				LR	LR		
	comp=Z,3µm,20.0s						
T60A	**Surry**	**123.99**	**49**	P	**PKPdf**	**09 54 47.7**	**-0.1**
	baz=290						
ODNJ	**Ogdensburg**	**124.03**	**44**	*e*PKPdf	**PKPdf**	**09 54 46.9**	**-0.9**
ODNJ				LR	LR		
	comp=Z,2µm,19.0s						
CHVC	**Chvalec**	**124.04**	**330**	AMS	AMS	10 48 30.0	
	comp=Z,2µm,21.3s						
V60A	**Jim Taylor Roa**	**124.05**	**51**	*e*PKPdf	**PKPdf**	**09 54 47.5**	**-0.4**
V60A				LR	LR		
	comp=Z,3µm,20.0s						
V60A	**Jim Taylor Roa**	**124.05**	**51**	P	**PKPdf**	**09 54 47.8**	**-0.2**
	baz=289						
VTS	**Vitosha**	**124.05**	**318**	*e*PKPdf	**PKiKP**	**09 54 48.1**	**-0.2**
VTS				LR	LR		
	comp=Z,900nm,21.0s						
VTS	**Vitosha**	**124.05**	**318**	*e*PKIKP	**PKiKP**	**09 54 48.1**	**-0.2**
VTS				MLR	MLR		
	comp=Z,900nm,21.0s						
DPC	**Dobruska-Polom**	**124.05**	**329**	*e*PS	PS	10 06 30.8	-0.4
DPC				AMS	AMS	10 48 00.0	
	comp=Z,2µm,24.0s						
UPC	**Upice**	**124.11**	**329**	*e*PS	PS	10 06 35.1	+3.5
UPC				AMS	AMS	10 48 40.0	
	comp=Z,2µm,23.2s						
BRNJ	**Basking Ridge**	**124.22**	**44**	*e*PKPdf	**PKPdf**	**09 54 48.0**	**-0.2**
BRNJ				LR	LR		
	comp=Z,3µm,20.0s						
JAVC	**Velka Javorina**	**124.22**	**327**	*e*PKP	**PKiKP**	**09 54 48.7**	**+0.4**
LBNH	**Lisbon**	**124.39**	**39**	PFAKE		09 55 00.0	+11
LBNH				LR	LR		
	comp=Z,3µm,20.0s						
LBNH	**Lisbon**	**124.39**	**39**	P	**PKPdf**	**09 54 48.1**	**-0.3**
	baz=299						
HNH	**Hanover**	**124.42**	**40**	*e*PKPdf	**PKiKP**	**09 54 48.8**	**+0.1**
HNH				LR	LR		
	comp=Z,4µm,21.0s						
W61A	**Ground Anchor**	**124.44**	**51**	P	**PKPdf**	**09 54 48.4**	**-0.4**
	baz=289						
U61A	**Possum Corner**	**124.48**	**50**	PFAKE		09 55 00.0	+11
U61A				LR	LR		
	comp=Z,3µm,20.0s						
U61A	**Possum Corner**	**124.48**	**50**	P	**PKPdf**	**09 54 48.5**	**-0.3**
	baz=290						
M61A	**Granite Spring**	**124.51**	**43**	P	**PKPdf**	**09 54 48.3**	**-0.4**
	baz=295						
KSCT	**Kent School, K**	**124.53**	**43**	PFAKE		09 55 00.0	+11
KSCT				LR	LR		
	comp=Z,4µm,21.0s						
PAL	**Palisades**	**124.55**	**44**	PFAKE		09 55 00.0	+11
PAL				LR	LR		
	comp=Z,3µm,22.0s						
PAL	**Palisades**	**124.55**	**44**	P	**PKPdf**	**09 54 48.6**	**-0.2**
	baz=295						
V61A	**Roper**	**124.56**	**50**	PFAKE		09 55 00.0	+11
V61A				LR	LR		
	comp=Z,4µm,20.0s						
S61A	**Accomac**	**124.59**	**48**	PFAKE		09 55 00.0	+11
S61A				LR	LR		
	comp=Z,2µm,21.0s						
MODS	**Modra-Piesok**	**124.72**	**327**	*e*PKIKP	**PKiKP**	**09 54 51.5**	**+2.2**
MODS	**Modra-Piesok**	**124.72**	**327**	*e*PKP	**PKiKP**	**09 54 51.5**	**+2.2**
KRUC	**Moravsky**	**124.79**	**328**	*e*PKP	**PKPdf**	**09 54 48.8**	**-0.2**
PVCC	**Panska Ves**	**124.82**	**330**	AMS	AMS	10 49 10.0	
	comp=Z,1µm,24.5s						
BRG	**Berggiesshubel**	**124.91**	**331**	*e*PKP	**PKiKP**	**09 54 49.4**	**-0.1**
	comp=Z,3.9nm,1.0s						
BRG				*e*		09 55 04.2	
	comp=Z,5.1nm,1.0s						
BRG				*e*		09 55 18.0	
	comp=Z,10nm,1.1s						
BRG				PP	**PP**	**09 56 39.0**	**+1.6**
BRG				SS	SS	10 13 32.0	+3.9
BRG	**Berggiesshubel**	**124.91**	**331**	*e*PKIKP	**PKiKP**	**09 54 49.4**	**-0.1**
BRG				*e*		09 55 04.2	

BRG						09 56 39.0	
BRG				SS	SS	10 13 32.0	+3.9
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FFD	Franklin Falls	124.94	40	PFAKE		09 55 00.0	+10
FFD				LR	LR		
	comp=Z,4µm,22.0s						
QUA2	Belchertown	125.03	42	PFAKE		09 55 00.0	+10
QUA2				LR	LR		
	comp=Z,6µm,21.0s						
CLL	Collm	125.07	332	PFAKE		09 55 00.0	+10
CLL				LR	LR		
	comp=Z,2µm,21.0s						
CLL	Collm	125.07	332	ePKIKP	PKPdf	09 54 49.0	-0.5
CLL	Collm	125.07	332	ePKPdf	PKPdf	09 54 49.0	-0.5
CLL				epPKPdf	sPKPdf	09 55 10.0	-2.6
CLL				i sPKPdf	pPKPdf	09 55 18.7	+12
	comp=Z,8.0nm,1.1s						
CLL				i		09 55 46.9	
	comp=Z,9.0nm,0.9s						
CLL				ePP	PP	09 56 43.0	+4.5
CLL				e		09 58 06.0	
CLL				ePPP	PPP	09 59 20.0	
CLL				eSKKSac	SKKSac	10 03 30.0	-2.3
CLL				eSKSP		10 06 29.0	
CLL				ePPS	PPS	10 08 10.0	
CLL				ePPPrev		10 11 59.0	
CLL				eSS	SS	10 13 30.0	-0.2
CLL				eSSS	SSS	10 18 18.0	
CLL				eSSSS		10 21 24.0	
YLE	Yale	125.08	43	PFAKE		09 55 00.0	+10
YLE				LR	LR		
	comp=Z,4µm,22.0s						
GOPC	GO Pecny, Ondr	125.10	329	ePS	PS	10 06 41.8	+1.5
GOPC				AMS	AMS	10 50 00.0	
	comp=Z,2µm,22.3s						
V62A	Hyde County Ai	125.12	51	PFAKE		09 55 00.0	+10
V62A				LR	LR		
	comp=Z,4µm,20.0s						
TREC	Trest	125.12	329	AMS	AMS	10 52 00.0	
	comp=Z,2µm,21.2s						
PRU	Pruhonice	125.17	330	eSP	SP	10 06 35.0	+2.0
PRU				AMS	AMS	10 49 30.0	
	comp=Z,1µm,23.8s						
HRV	Adam Dziewonsk	125.45	41	PFAKE		09 55 00.0	+9.1
HRV				LR	LR		
	comp=Z,6µm,22.0s						
HRV	Adam Dziewonsk	125.45	41	P	PKPdf	09 54 50.1	-0.3
	baz=298						
PQI	Presque Isle	125.48	35	PFAKE		09 55 00.0	+9.2
PQI				LR	LR		
	comp=Z,4µm,22.0s						
PKME	Peaks-Kenny Pk	125.50	37	PFAKE		09 55 00.0	+9.2
PKME				LR	LR		
	comp=Z,4µm,20.0s						
PKME	Peaks-Kenny Pk	125.50	37	P	PKPdf	09 54 50.3	-0.2
	baz=302						
WVL	Waterville	125.64	38	PFAKE		09 55 00.0	+8.9
WVL				LR	LR		
	comp=Z,4µm,19.0s						
LIT	Litokhoron	125.65	316	PFAKE		09 55 00.0	+8.6
LIT				LR	LR		
	comp=Z,400nm,21.0s						
WES	Weston	125.66	41	PFAKE		09 55 00.0	+8.7
WES				LR	LR		
	comp=Z,6µm,22.0s						
BRYW	Bryant College	125.74	42	PFAKE		09 55 00.0	+8.5
BRYW				LR	LR		
	comp=Z,6µm,21.0s						
BCX	Boston College	125.79	41	PFAKE		09 55 00.0	+8.5
BCX				LR	LR		
	comp=Z,6µm,22.0s						
BCIP	Isla Barro Col	125.81	83	PFAKE		09 55 00.0	+7.7
BCIP				LR	LR		
	comp=Z,900nm,21.0s						
NKC	Novy Kostel	126.05	331	AMS	AMS	10 53 00.0	
	comp=Z,1µm,21.8s						
KHC	Kasperske Hory	126.20	329	ePKPdf	PKPdf	09 54 50.0	-1.8
KHC				LR	LR		
	comp=Z,600nm,22.0s						
KHC	Kasperske Hory	126.20	329	ePKIKP	PKPdf	09 54 51.5	-0.3
KHC				MLR	MLR		
	comp=Z,2µm,23.5s						
KHC	Kasperske Hory	126.20	329	ePKPDF	PKPdf	09 54 51.5	-0.3
KHC				epPKP	pPKPdf	09 55 08.6	-0.1
KHC				ex	x	09 55 20.7	
KHC				ex	x	10 06 12.7	
KHC				AMS	AMS	10 50 10.0	
	comp=Z,2µm,23.5s						
AGG	Agios Georgios	126.21	315	PFAKE		09 55 00.0	+7.5
AGG				LR	LR		
	comp=Z,600nm,20.0s						
BATG	Bathurst New B	126.23	34	ePKPdf	PKPdf	09 54 50.8	-1.0
GEC2	GERESS Array S	126.32	329	PFAKE		09 55 00.0	+7.5
GEC2				LR	LR		
	comp=Z,1µm,21.0s						
GERES	GERESS Array B	126.32	329	PKP	PKPdf	09 54 52.3	+0.2
	comp=Z,2.1nm,0.7s,baz=60,slow=3.2,SNR=10						
GERES				pPKP	pPKPdf	09 55 08.2	-0.9
	comp=Z,3.7nm,0.9s,baz=70,slow=1.6,SNR=5.7						
GO02	Mina Guanaco	126.72	128	ePKPdf	PKPdf	09 54 52.6	-1.2
TTG	Podgorica	126.74	320	PFAKE		09 55 00.0	+6.6
TTG				LR	LR		
	comp=Z,1µm,22.0s						
BLY	Banja Luka	126.81	323	PFAKE		09 55 00.0	+6.5
BLY				LR	LR		
	comp=Z,1µm,21.0s						
TIR	Tirane	126.86	318	PFAKE		09 55 10.0	+16
TIR				LR	LR		
	comp=Z,600nm,22.0s						
EMMW	East Machias	126.89	37	PFAKE		09 55 10.0	+16
EMMW				LR	LR		
	comp=Z,3µm,20.0s						
GRA1	Grafenberg Arr	127.00	331	PFAKE		09 55 10.0	+16
GRA1				LR	LR		
	comp=Z,1µm,20.0s						
GRFO	Grafenberg	127.00	331	PFAKE		09 55 10.0	+16
GRFO				LR	LR		
	comp=Z,1µm,22.0s						
GGN	Saint George	127.03	36	PFAKE		09 55 10.0	+16
GGN				LR	LR		
	comp=Z,3µm,19.0s						
MTDJ	Mount Denham	127.65	72	PFAKE		09 55 10.0	+14
MTDJ				LR	LR		
	comp=Z,1µm,20.0s						
LMN	Caledonia Moun	127.78	34	ePKPdf	PKiKP	09 54 55.2	-0.2
LMN				LR	LR		
	comp=Z,4µm,22.0s						
ESK	Eskdalemuir	128.00	344	PFAKE		09 55 10.0	+14
ESK				LR	LR		
	comp=Z,1µm,20.0s						
TRI	Trieste	128.23	326	PFAKE		09 55 10.0	+14
TRI				LR	LR		
	comp=Z,1µm,20.0s						
POPC	Popayan, Colom	128.55	92	eP	PKPdf	09 54 56.4	-1.2
STU	Stuttgart	128.60	331	PFAKE		09 55 10.0	+13
STU				LR	LR		
	comp=Z,800nm,20.0s						
YOTC	Yotoco, Valle	129.01	90	eP	PKPdf	09 54 57.7	-0.6
PB11	IPOC Station P	129.19	122	ePKPdf	PKPdf	09 54 58.3	-0.2
HAL	Halifax	129.19	35	PFAKE		09 55 10.0	+12
HAL				LR	LR		
	comp=Z,3µm,22.0s						
UCC	Uccle	129.23	336	PFAKE		09 55 10.0	+12
UCC				LR	LR		
	comp=Z,1µm,21.0s						
BFO	Black Forest	129.32	332	PFAKE		09 55 10.0	+12
BFO				LR	LR		
	comp=Z,1µm,20.0s						
WLF	Walferdange	129.34	334	PFAKE		09 55 10.0	+12
WLF				LR	LR		
	comp=Z,9µm,21.0s						
FLOC	Florencia	129.46	93	eP	PKPdf	09 54 57.0	-2.0
MNMC	Minye Minye	129.51	121	PFAKE		09 55 10.0	+10
MNMC				LR	LR		
	comp=Z,2µm,22.0s						
FUORN	Ofenpass-Fuorn	129.53	329	PFAKE		09 55 10.0	+11
FUORN				LR	LR		
	comp=Z,1µm,22.0s						
WIN	Windhoek	129.68	234	PFAKE		09 55 10.0	+10
WIN				LR	LR		
	comp=Z,2µm,20.0s						
GTBY	Guantanamo Bay	129.71	69	PFAKE		09 55 10.0	+10
GTBY				LR	LR		
	comp=Z,1µm,21.0s						
GBN	Guysborough	129.86	33	PFAKE		09 55 10.0	+10
GBN				LR	LR		
	comp=Z,2µm,20.0s						
ECH	Echery	129.95	332	PFAKE		09 55 10.0	+10
ECH				LR	LR		
	comp=Z,900nm,21.0s						
TIP	Timpagrande	130.00	317	PFAKE		09 55 10.0	+10
TIP				LR	LR		
	comp=Z,600nm,21.0s						
GUY2C	Guyana, Caldas	130.08	88	eP	PKPdf	09 55 00.3	-0.4
TUE	Stuetta	130.10	329	PFAKE		09 55 10.0	+10
TUE				LR	LR		
	comp=Z,1µm,21.0s						
AQU	L'Aquila	130.43	323	PFAKE		09 55 10.0	+9.1
AQU				LR	LR		
	comp=Z,1µm,22.0s						
PRAC	Prado	130.44	90	eP	PKPdf	09 55 01.0	+0.1
DSB	Dublin	130.69	345	PFAKE		09 55 10.0	+9.0
DSB				LR	LR		
	comp=Z,800nm,22.0s						
ZARC	Zaragoza, Cauc	130.69	86	eP	PKPdf	09 55 01.0	-0.3
TSUM	Tsumeb	130.87	238	PFAKE		09 55 10.0	+7.5
TSUM				LR	LR		
	comp=Z,2µm,20.0s						
CEL	Celeste	131.04	317	PFAKE		09 55 10.0	+7.7
CEL				LR	LR		
	comp=Z,800nm,21.0s						
PTBC	PUERTO BERRIO,	131.05	87	eP	PKPdf	09 54 59.0	-3.0
VLC	Villacollemand	131.07	326	PFAKE		09 55 10.0	+7.9
VLC				LR	LR		
	comp=Z,1µm,22.0s						
ROSC	El Rosal	131.09	89	PKP	PKPdf	09 55 01.7	-0.8
	comp=Z,14nm,0.5s,baz=137,slow=14,SNR=7.0						
ROSC	El Rosal	131.09	89	PFAKE		09 55 10.0	+6.5
ROSC				LR	LR		
	comp=Z,100nm,19.0s						
SENIN	Lac Senin/Sane	131.20	330	PFAKE		09 55 10.0	+7.4
SENIN				LR	LR		
	comp=Z,1µm,21.0s						
LPAZ	La Paz	131.97	118	PKP	PKPdf	09 55 03.9	-0.5
	comp=Z,6.5nm,1.1s,baz=286,slow=0.4,SNR=8.9						
LPAZ				pPKP	pPKPdf	09 55 20.8	-0.5
	comp=Z,5.1nm,0.8s,baz=282,slow=3.5,SNR=6.6						
CLF	Chambon-Foret	132.25	335	PFAKE		09 55 20.0	+16
CLF				LR	LR		
	comp=Z,1µm,21.0s						
RUSC	La Rusia	132.39	88	eP	PKPdf	09 55 04.3	-0.8
BNI	Bardonecchia	132.43	330	PFAKE		09 55 20.0	+15
BNI				LR	LR		
	comp=Z,2µm,21.0s						
GRTK	Grand Turk	133.09	66	PFAKE		09 55 20.0	+13
GRTK				LR	LR		
	comp=Z,2µm,22.0s						
WDD	Wied Dalam	133.19	315	PFAKE		09 55 20.0	+13
WDD				LR	LR		
	comp=Z,400nm,20.0s						
CLTB	Caltabellotta	133.20	317	PFAKE		09 55 20.0	+13
CLTB				LR	LR		
	comp=Z,700nm,21.0s						
SSB	Saint Sauveur	133.32	331	PFAKE		09 55 20.0	+13
SSB				LR	LR		
	comp=Z,1µm,20.0s						
SDDR	Presa de Saban	133.41	70	PFAKE		09 55 20.0	+12
SDDR				LR	LR		
	comp=Z,2µm,21.0s						
SDD	Santo Domingo	134.79	70	PFAKE		09 55 20.0	+10
SDD				LR	LR		
	comp=Z,900nm,19.0s						
SDV	Santo Domingo	134.90	84	PFAKE		09 55 20.0	+9.1
SDV				LR	LR		
	comp=Z,1µm,22.0s						
CPUP	Villa Florida	135.05	137	PKP	PKPdf	09 55 08.2	-1.0
	comp=Z,3.1nm,0.8s,baz=272,slow=2.0,SNR=5.8						
KEST	Kesra	136.82	318	PKP	PKPdf	09 55 12.7	+0.3
	comp=Z,4.8nm,1.0s,baz=14,slow=8.3,SNR=2.6						
KEST	Kesra	136.82	318	PFAKE		09 55 20.0	+5.9
KEST				LR	LR		
	comp=Z,800nm,22.0s						
AOPR	Arecibo Observ	137.76	70	ePKPdf	PKiKP	09 55 15.4	-1.0
OBIP	Obispado Ponce	137.95	70	ePKPdf	PKiKP	09 55 15.9	-0.8
SJG	San Juan	138.37	70	PFAKE		09 55 30.0	+12
SJG				LR	LR		
	comp=Z,1µm,22.0s						
SABA	Saba	141.18	70	PFAKE		09 55 30.0	+6.6
SABA				LR	LR		
	comp=Z,1µm,21.0s						
SMRT	St. Maarten	141.24	69	PFAKE		09 55 30.0	+6.5
SMRT				LR	LR		
	comp=Z,2µm,22.0s						
PGAV	Gavieira, Arco	141.38	340	ePKP	PKPdf	09 55 19.5	-1.0
PGAV	Gavieira, Arco	141.38	340	eLR	LR	10 44 18.3	
	comp=Z,1µm,20.0s						
SEUS	St. Eustatius	141.45	70	PFAKE		09 55 30.0	+6.1
SEUS				LR	LR		
	comp=Z,1µm,22.0s						
ESDC	Sonseca Array	141.62	333	PKP	PKPdf	09 55 19.7	-1.2
	comp=Z,0.2nm,0.3s,baz=2.9,slow=3.0,SNR=5.2						
ESDC				PKKP	PKKPdf	10 04 21.2	-19
	comp=Z,0.2nm,0.2s,baz=180,slow=1.5,SNR=4.7						
ESLA	Sonseca Array	141.62	333	PFAKE		09 55 30.0	+6.2
ESLA				LR	LR		
	comp=Z,800nm,20.0s						
MVO	Moncorvo	141.64	338	eLR	LR	10 45 47.0	
	comp=Z,695nm,24.0s						
SKI	Saint Kitts	141.71	70	PFAKE		09 55 30.0	+5.5
SKI				LR	LR		
	comp=Z,2µm,21.0s						
POLO	Lamas de Olo	141.74	339	ePKP	PKPdf	09 55 17.4	-3.7
PAB	San Pablo	141.90	334	PFAKE		09 55 30.0	+5.6
PAB				LR	LR		
	comp=Z,900nm,20.0s						
MTE	Manteigas	142.49	338	ePKP	PKPdf	09 55 20.7	-1.8
MTE	Manteigas	142.49	338	eLR	LR	10 45 50.3	
	comp=Z,737nm,24.0s						
MTE	Manteigas	142.49	338	PFAKE		09 55 30.0	+4.5
MTE				LR	LR		
	comp=Z,700nm,22.0s						
ANWB	Willy Bob	142.52	69	PFAKE		09 55 40.0	+14
ANWB				LR	LR		
	comp=Z,1µm,22.0s						
PCBR	Castelo Branco	142.95	337	ePKP	PKPdf	09 55 23.4	+0.2
COI	Coimbra	142.98	338	PFAKE		09 55 40.0	+14
COI				LR	LR		
	comp=Z,1µm,21.0s						
SPB	Sao Paulo	143.24	145	PFAKE		09 55 40.0	+13
SPB				LR	LR		
	comp=Z,1µm,20.0s						
PMRV	Marv??o	143.27	337	ePKP	PKPab	09 55 19.3	-0.4
PMRV	Marv??o	143.27	337	eLR	LR	10 46 44.6	
	comp=Z,1µm,22.0s						
FDF	Fort de France	143.69	74	PFAKE		09 55 40.0	+11
FDF				LR	LR		
	comp=Z,1µm,22.0s						
PMTG	Montargil	143.91	337	ePKP	PKPdf	09 55 24.8	-0.1
ALMR	Almeirim	143.97	338	ePKP	PKPdf	09 55 24.5	-0.5
ALMR				AMS	AMS	11 05 42.4	
	comp=Z,1µm,15.7s						
ALMR	Almeirim	143.97	338	ePKIKP	PKPdf	09 55 24.5	-0.5
PMAFR	Mafra	144.40	338	ePKP	PKPbc	09 55 24.4	+0.1
LIS	Lisbon	144.56	338	ePKP	PKPdf	09 55 25.5	-0.6
LIS				AMS	AMS	11 00 58.3	
	comp=N,1µm,27.7s						
LIS	Lisbon	144.56	338	ePKIKP	PKPdf	09 55 25.4	-0.6
PTGA	Pitinga	144.60	100	PFAKE		09 55 40.0	+9.5
PTGA				LR	LR		
	comp=Z,700nm,20.0s						
PBEJ	Beja	144.67	336	ePKP	PKPbc	09 55 25.6	+0.5
PNCL	Nicolau / Gran	144.86	337	ePKP	PKPab	09 55 25.1	-0.6
PCVE	Castro Verde	145.08	336	ePKP	PKPbc	09 55 26.2	-0.3
PVAQ	Vaqueiros	145.14	335	ePKP	PKPbc	09 55 26.2	-0.5
PVAQ	Vaqueiros	145.14	335	eLR	LR	10 47 46.5	
	comp=Z,727nm,20.0s						
PVAQ	Vaqueiros	145.14	335	PFAKE		09 55 40.0	+9.0
PVAQ				LR	LR		
	comp=Z,800nm,20.0s						
PBDV	Barranco-do-Ve	145.37	335	ePKP	PKPbc	09 55 27.0	-0.4
PTEO	Sao Teotonio	145.43	337	ePKP	PKPbc	09 55 27.1	-0.4
MORF	Marmelete	145.60	336	ePKP	PKPdf	09 55 27.3	-0.7
MORF				AMS	AMS	11 05 07.7	
	comp=Z,1µm,20.3s						
MORF	Marmelete	145.60	336	ePKP	PKPdf	09 55 27.7	-0.3
MORF	Marmelete	145.60	336	ePKIKP	PKPdf	09 55 27.3	-0.7
PFVI	Vila Bisbo	145.82	336	ePKP	PKPbc	09 55 28.9	+0.1
PFVI	Vila Bisbo	145.82	336	PFAKE		09 55 40.0	+7.6
PFVI				LR	LR		
	comp=Z,1µm,21.0s						
TAM	Tamanrasset	146.14	302	PFAKE		09 55 40.0	+6.4
TAM				LR	LR		
	comp=Z,800nm,21.0s						
H07S1	FLORES T-PHASE	146.57	8	ePKP	PKPdf	09 55 21.3	-8.2
PGRA	Graciosa	147.27	4	ePKP	PKPdf	09 55 27.2	-3.5
PGRA	Graciosa	147.27	4	eLR	LR	10 48 58.3	
ROSA	Rosais	147.56	4	ePKP	PKPdf	09 55 26.6	-4.6
ROSA	Rosais	147.56	4	eLR	LR	10 48 51.9	
ROSA	Rosais	147.56	4	PFAKE		09 55 40.0	+4.1
ROSA				LR	LR		
	comp=Z,1µm,22.0s						
RTC	Rabat Centre	147.59	331	PFAKE		09 55 40.0	+3.8
RTC				LR	LR		
	comp=Z,3µm,22.0s						
PSET	Sete Cidades	148.57	1	ePKP	PKPdf	09 55 30.3	-2.6
CMLA	Cha da Macela	148.63	1	ePKP	PKPdf	09 55 25.5	-7.5
CMLA	Cha da Macela	148.63	1	eLR	LR	10 48 00.5	
CMLA	Cha da Macela	148.63	1	PFAKE		09 55 40.0	-0.2
CMLA				LR	LR		
	comp=Z,1µm,20.0s						
BDFB	Brasilia	148.63	134	PKP	PKPdf	09 55 33.2	-0.4
	comp=Z,8.2nm,0.9s,baz=105,slow=1.7,SNR=7.5						
BDFB				PKPbc	PKPbc	09 55 36.9	-0.5
	comp=Z,28nm,1.0s,baz=212,slow=3.6,SNR=13						
BDFB				pPKPbc	pPKPdf	09 55 52.2	+1.6
	comp=Z,44nm,1.0s,baz=223,slow=1.8,SNR=7.1						
BDFB	Brasilia	148.63	134	ePKPdf	PKPdf	09 55 33.2	-0.4
BDFB				ePKPbc	PKPbc	09 55 36.9	-0.5
BDFB				epPKPab	pPKPdf	09 55 52.2	+1.6
BDFB				LR	LR		
	comp=Z,2µm,21.0s						
BDFB	Brasilia	148.63	134	ePKIKP	PKPdf	09 55 33.3	-0.4
BDFB				MLR	MLR		
	comp=Z,2µm,21.0s						
PSMN	Pico do Norte,	149.39	360	ePKP	PKPdf	09 55 30.4	-3.8
PSMN	Pico do Norte,	149.39	360	eLR	LR	10 47 28.4	
SHEL	Horse Pasture	150.72	221	i PKIKP	PKiKP	09 55 44.7	+1.6
PMOZ	Porto Moniz, M	152.53	345	eLR	LR	10 49 02.0	
	comp=Z,771nm,18.0s						
TOC2	Torodi Ar. Sit	152.62	287	PFAKE		09 55 50.0	+3.0
TOC2				LR	LR		
	comp=Z,1µm,22.0s						
TOC3	Torodi Ar. Sit	152.62	286	PFAKE		09 55 50.0	+3.0
TOC3				LR	LR		
	comp=Z,1µm,21.0s						
TOB2	Torodi Ar. Sit	152.63	287	PFAKE		09 55 50.0	+3.0
TOB2				LR	LR		
	comp=Z,1µm,22.0s						
TOC1	Torodi Ar. Sit	152.63	287	PFAKE		09 55 50.0	+3.0
TOC1				LR	LR		
	comp=Z,2µm,22.0s						
TOB3	Torodi Ar. Sit	152.64	287	PFAKE		09 55 50.0	+3.0
TOB3				LR	LR		
	comp=Z,1µm,22.0s						
TOA0	Torodi Ar. Sit	152.65	287	PFAKE		09 55 50.0	+2.9
TOA0				LR	LR		
	comp=Z,1µm,22.0s						
TORD	Torodi Ar. Bea	152.65	287	PKP	PKPdf	09 55 38.2	-1.6
	comp=Z,2.7nm,1.0s,baz=36,slow=2.0,SNR=8.6						
TORD				PKPbc	PKPbc	09 55 45.5	-1.3
	comp=Z,7.5nm,0.7s,baz=4.1,slow=6.4,SNR=36						
TORD				pPKP	PKPab	09 55 59.0	+1.4
	comp=Z,35nm,0.8s,baz=48,slow=2.7,SNR=23						
TOA1	Torodi Ar. Sit	152.65	287	ePKPdf	PKPdf	09 55 38.2	-1.6
TOA1				ePKPbc	PKPbc	09 55 45.5	-1.3
TOA1				ePKPab	PKPab	09 55 59.0	+1.4
TOA1				LR	LR		
	comp=Z,1µm,22.0s						
TOC4	Torodi Ar. Sit	152.65	286	PFAKE		09 55 50.0	+2.9
TOC4				LR	LR		
	comp=Z,1µm,21.0s						
TOA3	Torodi Ar. Sit	152.65	287	PFAKE		09 55 50.0	+2.9
TOA3				LR	LR		
	comp=Z,1µm,22.0s						
TOB4	Torodi Ar. Sit	152.66	287	PFAKE		09 55 50.0	+2.9
TOB4				LR	LR		
	comp=Z,1µm,22.0s						
TOC7	Torodi Ar. Sit	152.66	287	PFAKE		09 55 50.0	+2.9
TOC7				LR	LR		
	comp=Z,1µm,22.0s						
TOC5	Torodi Ar. Sit	152.67	287	PFAKE		09 55 50.0	+2.9
TOC5				LR	LR		
	comp=Z,2µm,22.0s						
KIC	Kosan Boka	159.68	271	ePKP1	PKPab	09 56 27.4	-0.5
	comp=Z,200nm,1.1s						
DBIC	Dimbokro	159.79	272	PKPab	PKPab	09 56 27.3	-1.0
	comp=Z,24nm,1.0s,baz=67,slow=6.8,SNR=6.6						
DBIC				pPKPab	pPKPab	09 56 43.2	-1.5
	comp=Z,58nm,1.2s,baz=96,slow=5.8,SNR=7.0						
TIC	Toumodi	159.95	272	ePKP1	PKPab	09 56 28.1	-1.0
LIC	Lamto	159.96	271	ePKP1	PKPab	09 56 28.1	-1.0
	comp=Z,300nm,1.6s						

UCR 16 09:36:48.5±2.3, 11°.60N×86°.51W, h98^{km}±66^{km}, MW3.7, 1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GB1A	Borinquen Arri	1.33	125	eP	Pn	09 37 13.9	+1.2
GB1A				eS	Sn	09 37 31.4	+0.3
BUEV	Buena Vista	1.34	126	eP	Pn	09 37 13.7	+0.9
BUEV				eS	Sn	09 37 32.1	+0.9
ACON	Acoyapa	1.35	74	⇓iP	Pn	09 37 13.3	+0.4
ACON				eS	Sn	09 37 30.5	-0.9
MESS	Mesas	1.54	123	eP	Pn	09 37 15.1	-0.2
MESS				eS	Sn	09 37 35.3	-0.3
CUI	Cuipilapa	1.61	125	eP	Pn	09 37 16.4	+0.3
CUI				eS	Sn	09 37 37.5	+0.3
JTS	Las Juntas de	2.00	130	eP	Pn	09 37 21.3	+0.2
JTS				eS	Sn	09 37 43.4	-2.6
ESPN	Las Esperanzas	2.24	74	eP	Pn	09 37 15.7	-8.4

ISCJB 16 09:47:56.3±1.1, 27°.55N±0°.09×140°.0E±0°.5, h479^{km}, mb3.2/6, Error ellipse: s-maj=57.0km s-min=12.2km az=179.1

IDC 16 09:47:57.9±1.5, 27°.67N×140°.14E, h485^{km}±19^{km}, mb3.0/6, mb1 3.1/9, mb1mx2.8/32, mbtmp3.9/9, Error ellipse: s-maj=67.0km s-min=14.1km az=82.0

ISC 16 09:47:57.5±1.5, 27°.6N±0°.1×140°.0E±0°.5, h479^{km}, n9, σ0^s.79/10, mb3.4/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	5.48	358	P	P	09 49 27.1	-0.8
	7.6nm,0.3s,baz=60,slow=13,SNR=1.9						
JHJ				S	S	09 50 43.1	+1.4
	0.3nm,0.3s,baz=255,slow=21,SNR=1.9						
MJAR	Matsushiro Arr	9.03	351	P	P	09 50 03.3	-0.8
	0.1nm,0.3s,baz=185,slow=8.1,SNR=6.5						
USRK	Ussuriysk Ar.	17.76	341	P	P	09 51 36.5	+0.1
	0.1nm,0.3s,baz=156,slow=12,SNR=3.5						
WRA	Warramunga Arr	47.60	187	P	P	09 55 49.7	+0.5
	0.5nm,0.3s,baz=6.4,slow=7.4,SNR=11						
MKAR	Makanchi Array	48.66	309	P	P	09 55 57.0	+0.1
	0.4nm,0.4s,baz=87,slow=9.4,SNR=7.3						
ASAR	Alice Springs	51.33	187	P	P	09 56 16.9	+0.1
	0.3nm,0.8s,baz=1.6,slow=6.5,SNR=3.0						
ARCES	ARCESS Array B	72.41	340	P	P	09 58 34.3	+0.4
	1.5nm,0.8s,baz=59,slow=7.4,SNR=3.9						
FINES	FINESS Array B	76.62	333	P	P	09 58 57.6	-0.1
	1.3nm,0.4s,baz=72,slow=5.5,SNR=9.8						
NOA	NORSAR Array B	82.40	338	P	P	09 59 27.7	-0.8
	0.2nm,0.5s,baz=61,slow=4.5,SNR=2.4						

MEX 16 09:48:46.3±0.6, 16°.95N×100°.26W, h10^{km}±2^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.10	358	eP	Pg	09 48 48.1	-0.8
CAIG				i S	Sg	09 48 50.3	-0.5
MEIG	Mezcala	1.15	32	eP	Pb	09 49 04.4	-4.0
MEIG				i S	Sg	09 49 18.4	-5.0
ZIIG	Zihuatanejo	1.32	300	i P	Pn	09 49 07.5	-3.4
ZIIG				i S	Sb	09 49 23.0	-5.3
ARIG	Puente Sto Nin	1.33	357	eP	Pn	09 49 07.3	-3.7
ARIG				eS	Sb	09 49 23.7	-4.8

PLIG	Platanillo	1.61	27	eP	Pn	09 49 11.8	-3.1
PLIG				eS	Sn	09 49 30.9	-4.9
TLIG	Tlapa	1.73	69	eP	Pn	09 49 13.1	-3.5
TLIG				eS	Sn	09 49 34.3	-4.6

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*IDC **16** 10:01:40.6±27.0, 17°.32S×178°.55W, h364km±294km, mb3.4/9, mb1 3.7/9, mb1mx3.4/31, mbtmp4.1/9, Error ellipse: s-maj=79.4km s-min=24.2km az=19.0*

*ISCJB **16** 10:01:54.8±0.8, 17°.7S±0°.2×178°.8W±0°.2, h547km, mb3.6/8, Error ellipse: s-maj=29.8km s-min=15.9km az=135.6*

ISC 16 10:01:55.8±0.9, 17°.7S±0°.2×178°.7W±0°.2, h547km, n9, σ0s.95/9, mb3.6/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera 2.5nm,0.3s,baz=244,slow=2.5,SNR=11	20.81	189	P	P	10 05 58.1	-1.1
STKA	Stephens Creek 2.1nm,0.4s,baz=93,slow=10,SNR=12	38.48	241	P	P	10 08 32.5	+1.1
WRA	Warramunga Arr 1.2nm,0.4s,baz=94,slow=8.1,SNR=2.6	44.38	259	P	P	10 09 17.5	-0.8
ASAR	Alice Springs 7.1nm,0.4s,baz=89,slow=8.1,SNR=199	44.57	254	P	P	10 09 19.9	+0.2
PETK	Petropavlovsk- 1.5nm,0.7s,baz=111,slow=6.3,SNR=3.2	73.40	345	P	P	10 12 32.1	-0.1
NVAR	Mina Array Bea 0.7nm,0.7s,baz=226,slow=8.0,SNR=5.3	79.47	44	P	P	10 13 05.8	-0.3
ILAR	Eielson Array 0.4nm,0.4s,baz=227,slow=4.6,SNR=8.2	85.75	13	P	P	10 13 35.9	-0.9
TXAR	Lajitas Array 0.7nm,0.7s,baz=212,slow=6.1,SNR=7.9	86.13	58	P	P	10 13 40.6	+1.1
PDAR	Pinedale Array 0.5nm,0.5s,baz=216,slow=3.3,SNR=8.0	87.40	44	P	P	10 13 45.9	+0.4

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*NIED **16** 10:11:00, 24°.30N×121°.40E, h8km, Mw4.9 Best double couple: M0 2.28000×10^16 NP1:φs190.00000°, δ50.00000°, λ-31.00000°. NP2:φs301.00000°, δ66.00000°, λ-136.00000°.*

*BJI **16** 10:11:34.7±0.0, 24°.21N×121°.54E, h10km, mb4.7/67, mB5.2/45, ML5.3/13, Ms5.0/78, Ms7 4.8/72*

*JMA **16** 10:11:34.3±0.1, 24°.25N×121°.43E, h0km, M5.1*

*ISCJB **16** 10:11:35.3±0.2, 24°.279N±0°.008×121°.57E±0°.01, h13km±1km, mb5.1/239, MS4.6/18, Error ellipse: s-maj=1.8km s-min=1.2km az=30.2*

*NEIC **16** 10:11:35.3±2.0, 24°.26N×121°.52E, h10km±1km, mb5.2/175, ML5.3(TAP), Error ellipse: s-maj=8.0km s-min=4.7km az=150.0*

NEIC Felt at Taichung, Tainan and Yungho. Recorded [4 TAP] in Hualien, Nantou and Yilan; [3 TAP] in Yunlin; [2 TAP] in Changhua, Chiayi, Hsinchu, Miaoli, Taitung and Taoyuan; [1 TAP] in Penghu.

*TAP **16** 10:11:35.0, 24°.28N×121°.50E, h5km, ML5.5, C*

*MOS **16** 10:11:36.5±1.1, 24°.24N×121°.57E, h26km, mb5.3/77, MS4.6/7, Error ellipse: s-maj=7.6km s-min=4.6km az=119.5*

*IDC **16** 10:11:40.6±1.5, 24°.24N×121°.70E, h46km±14km, mb4.6/47, mb1 4.6/50, mb1mx4.6/60, mbtmp4.8/50, ML3.0/4, MS4.1/9, Ms1 4.1/9, ms1mx3.8/54, Error ellipse: s-maj=11.5km s-min=7.5km az=61.0*

ISC 16 10:11:35.6±0.6, 24°.28N±0°.01×121°.52E±0°.01, h9km±3km, n742, σ1s.39/853, mb5.1/255, MS4.7/22, 111C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi baz=192	0.08	209	⇑P	Pg	10 11 37.5	-0.4
ETLH	baz=192			S	Sg	10 11 38.8	-0.7
NACB	Ninganchiao	0.12	147	ePg	Pg	10 11 39.1	+0.7
NACB				eSg	Sg	10 11 41.1	+0.7
NACB	Ninganchiao baz=139	0.12	147	⇑P	Pg	10 11 38.8	+0.4
NACB	baz=139			S	Sg	10 11 41.1	+0.7
NNSB	Datong baz=325	0.20	320	⇑P	Pg	10 11 39.3	-0.6
NNSB	baz=325			S	Sg	10 11 41.9	-0.8
TWD	Chiawan baz=153	0.21	161	⇑iP	Pg	10 11 40.2	+0.3
TWD	baz=153			S	Sg	10 11 43.5	+0.8
NNS	Nan Shan baz=326	0.21	320	⇑iP	Pg	10 11 39.5	-0.6
NNS	baz=326			i S	Sg	10 11 42.4	-0.7
ENA	Nanau baz=57	0.25	53	⇑iP	Pg	10 11 40.8	+0.1
ENA	baz=57			eS	Sg	10 11 44.2	+0.1
NANB	Nanao baz=57	0.26	54	⇑iP	Pg	10 11 40.8	0.0
NANB	baz=57			eS	Sg	10 11 44.2	-0.1
WHF	Hehuan Shan baz=237	0.27	241	⇑iP	Pg	10 11 40.5	-0.7
WHF	baz=237			i S	Sg	10 11 44.0	-0.9
HWA	Hwalien baz=161	0.31	166	⇑P	Pg	10 11 42.5	+0.8
HWA	baz=161			eS	Sb	10 11 47.3	-1.1
TDCB	Techi baz=266	0.33	266	⇑P	Pg	10 11 41.9	-0.4
TDCB	baz=266			S	Sg	10 11 45.7	-1.1
ENLB	Shoufeng baz=166	0.38	169	⇑eP	Pb	10 11 44.6	+0.1
ENLB	baz=166			S	Sb	10 11 50.0	-0.5
CHGB	Renai baz=234	0.38	236	⇑P	Pg	10 11 42.8	-0.5
CHGB	baz=234			S	Sg	10 11 48.5	+0.1
YHNB	Yeheng	0.41	341	ePg	Pg	10 11 43.9	+0.1
YHNB				eSg	Sg	10 11 49.7	+0.4
YHNB	Yeheng baz=330	0.41	341	⇑P	Pg	10 11 43.9	+0.1
YHNB	baz=330			S	Sg	10 11 49.2	-0.1
NSK	Sanguang baz=329	0.43	339	⇑iP	Pg	10 11 44.0	0.0
NSK	baz=329			i S	Sg	10 11 49.4	-0.3
TWC	Suao baz=45	0.45	42	⇑iP	Pg	10 11 44.4	0.0
TWC	baz=45			S	Sg	10 11 50.1	-0.2
TWE	Neicheng baz=21	0.46	16	⇑iP	Pg	10 11 44.9	+0.2
TWE	baz=21			S	Sg	10 11 51.0	+0.2
ESL	Shilin baz=174	0.47	190	⇑P	Pg	10 11 44.5	-0.3
ILA	Ilan baz=26	0.53	23	⇑iP	Pg	10 11 46.2	+0.2
ILA	baz=26			S	Sb	10 11 54.0	-0.9
LIOB	Emei baz=309	0.59	309	⇑P	Pg	10 11 47.5	+0.4
LIOB	baz=309			S	Sg	10 11 55.1	+0.2
NSTT	Nanjuang baz=307	0.59	307	⇑P	Pg	10 11 47.3	+0.2
NSTT	baz=307			i S	Sg	10 11 55.1	+0.2
EGFH	Guangfu baz=186	0.61	188	eP	Pg	10 11 47.2	-0.3
EGFH	baz=186			eS	Sb	10 11 56.6	-0.6
EOS1	EOS1 baz=53	0.62	64	⇑P	Pb	10 11 48.3	-0.3
EOS1	baz=53			eS	Sb	10 11 57.3	-0.1
WLTB	Daxi baz=338	0.62	337	⇑iP	Pb	10 11 48.6	-0.1
WLTB	baz=338			eS	Sb	10 11 57.2	-0.5
VWDT	VWDT baz=217	0.63	214	⇑P	Pg	10 11 47.2	-0.6
VWDT	baz=217			eS	Sg	10 11 56.6	+0.7
NTC	Toucheng baz=28	0.64	26	⇑P	Pg	10 11 48.0	-0.1
NTC	baz=28			eS	Sg	10 11 56.6	+0.1
EGS	baz=36	0.68	33	⇑iP	Pg	10 11 48.9	+0.2
EGS	baz=36			S	Sb	10 11 59.3	+0.1
TWQ1	Liyutan baz=275	0.69	276	⇑iP	Pb	10 11 49.5	-0.4
TWQ1	baz=275			eS	Sg	10 11 58.5	+0.6
TATO	Taipei	0.70	357	ePg	Pg	10 11 49.5	+0.4
TATO				eSg	Sg	10 11 58.8	+0.6
TATO	Taipei baz=13	0.70	357	⇑P	Pg	10 11 49.5	+0.4
TATO	baz=13			S	Sg	10 11 58.4	+0.1
TATO	Taipei SNR=217	0.70	357	P	Pb	10 11 49.7	-0.3
TWA	Mucha baz=7.0	0.70	4	⇑iP	Pg	10 11 49.6	+0.4
TWA	baz=7.0			S	Sg	10 11 58.2	-0.2
NSY	Sanyi baz=281	0.71	282	⇑iP	Pb	10 11 50.2	0.0
NSY	baz=281			S	Sb	10 11 59.5	-0.5
SBCB	Hsinchu baz=317	0.71	317	⇑P	Pb	10 11 50.5	+0.3
SBCB	baz=317			S	Sb	10 12 00.5	+0.4
SSLB	Suanglung	0.71	227	ePg	Pg	10 11 48.6	-0.8
SSLB				eSg	Sg	10 11 58.6	0.0
SSLB	Suanglung baz=235	0.71	227	⇑P	Pg	10 11 48.6	-0.8
SSLB	baz=235			S	Sg	10 11 58.7	0.0
TYC	Yuchr baz=237	0.71	239	⇑iP	Pg	10 11 49.0	-0.4
TYC	baz=237			S	Sg	10 11 57.7	-1.0
NMLH	Miaoli baz=291	0.72	291	⇑iP	Pb	10 11 50.6	+0.3
HSN	Hsinchu baz=321	0.73	316	eP	Pb	10 11 50.9	+0.4
TIPB	Shuangxi baz=9.0	0.75	22	⇑iP	Pg	10 11 50.0	-0.1
TIPB	baz=9.0			S	Sg	10 11 59.7	-0.1
NCUH	Zhongli baz=338	0.76	336	P	Pb	10 11 51.7	+0.7
NCU	National Centr baz=338	0.76	336	P	Pb	10 11 51.5	+0.5
NCU	baz=338			eS	Sn	10 12 03.0	-1.2
TAP	Taipei baz=1.0	0.76	359	⇑P	Pb	10 11 50.9	-0.1
TAP	baz=1.0			eS	Sg	10 12 00.4	+0.1
PTSB	Yuanli baz=282	0.77	283	⇑iP	Pb	10 11 51.4	+0.2
PTSB	baz=282			S	Sb	10 12 01.2	-0.5
TCU	Taichung baz=260	0.78	261	⇑iP	Pb	10 11 51.9	+0.5
TCU	baz=260			eS	Sb	10 12 02.4	+0.2
HGSD	Ruisui baz=193	0.79	187	⇑P	Pg	10 11 51.0	+0.2
HGSD	baz=193			eS	Sn	10 12 03.6	-1.2
EHY	Hungye baz=174	0.79	194	⇑P	Pg	10 11 50.1	-0.7
WDJ	Dajia District baz=275	0.81	275	⇑P	Pb	10 11 52.5	+0.6
NWF	Wu-fen Shan baz=18	0.83	16	⇑iP	Pg	10 11 51.8	+0.2
NWF	baz=18			eS	Sb	10 12 03.7	+0.2
WFSB	Wu-fen Shan baz=6.0	0.83	16	⇑P	Pg	10 11 51.8	+0.2
TWS1	Kuangyinshan baz=7.0	0.83	353	⇑P	Pb	10 11 52.7	+0.5
TWS1	baz=7.0			eS	Sn	10 12 05.4	-0.5
WHYT	Xinyi Township baz=236	0.84	227	⇑P	Pg	10 11 51.3	-0.6
WJS	Zhushan baz=237	0.86	238	⇑iP	Pb	10 11 52.5	-0.2
WJS	baz=237			eS	Sn	10 12 05.8	-0.7
WNT	Mingjian baz=234	0.86	243	⇑iP	Pb	10 11 53.0	+0.1
WNT	baz=234			S	Sb	10 12 05.1	+0.6
YM01	YM01 baz=4.0	0.87	3	⇑P	Pb	10 11 52.9	0.0
YM01	baz=4.0			eS	Sb	10 12 04.7	0.0
YM10	YM10 baz=4.0	0.88	2	⇑iP	Pb	10 11 53.2	+0.1
YM10	baz=4.0			S	Sg	10 12 04.3	+0.3
YM05	YM05 baz=5.0	0.89	2	⇑iP	Pb	10 11 53.3	+0.1
NTST	Danshui baz=8.0	0.89	356	⇑eP	Pn	10 11 53.8	-0.5
NTST	baz=8.0			eS	Sn	10 12 07.6	+0.2
YM03	YM03 baz=2.0	0.90	1	⇑iP	Pb	10 11 53.5	-0.1
YM03	baz=2.0			eS	Sn	10 12 07.2	-0.6
WCHH	Zhanghua baz=256	0.90	258	⇑iP	Pn	10 11 54.1	-0.4
WCHH	baz=256			eS	Sn	10 12 07.8	+0.2
YULB	Yu-li	0.90	193	ePg	Pg	10 11 52.3	-0.7
YULB				eSg	Sg	10 12 04.2	-0.5
YULB	Yu-li baz=183	0.90	193	⇑P	Pg	10 11 52.0	-1.0
YULB	baz=183			eS	Sb	10 12 06.1	+0.4
ANP	Anpu baz=3.0	0.91	360	⇑P	Pb	10 11 53.7	+0.1
YM08	YM08 baz=5.0	0.91	4	⇑iP	Pg	10 11 53.3	+0.1
YM08	baz=5.0			eS	Sg	10 12 05.3	+0.2
TWF1	Yuli baz=191	0.94	193	⇓P	Pg	10 11 52.7	-1.1
TWF1	baz=191			S	Sg	10 12 06.1	+0.1
TWY	Chenhua baz=6.0	1.00	4	⇑P	Pb	10 11 55.4	+0.3
TWY	baz=6.0			eS	Sn	10 12 09.9	-0.2
WGK	Gukeng baz=236	1.06	236	⇑iP	Pn	10 11 56.6	0.0
WGK	baz=236			i S	Sn	10 12 11.8	+0.3
WDLH	Douliu baz=237	1.07	237	⇑iP	Pn	10 11 57.0	+0.1
WDLH	baz=237			S	Sn	10 12 12.6	+0.7
RLNB	Erlin baz=250	1.13	250	⇑P	Pn	10 11 57.6	0.0
RLNB	baz=250			S	Sn	10 12 13.9	+0.6
ELDTW	Lidau baz=203	1.18	203	⇓P	Pb	10 11 56.9	-1.3
ELDTW	baz=203			eS	Sg	10 12 13.0	-0.6
WTCT	Ta-ch'eng baz=250	1.21	250	⇑iP	Pb	10 11 58.7	0.0
WTCT	baz=250			i S	Sn	10 12 15.7	+0.5
CHN2	Minshiung baz=232	1.21	233	⇑iP	Pg	10 11 59.3	+0.4
CHN2	baz=232			i S	Sn	10 12 17.5	+2.2
CHY	Chiayi baz=232	1.27	233	⇑iP	Pg	10 11 60.0	-0.1
CHY	baz=232			S	Sn	10 12 18.5	+1.8
TPUB	Ta-pu	1.27	220	ePn	Pb	10 11 59.8	-0.1
TPUB				eSn	Sb	10 12 16.4	+0.2
TPUB	Ta-pu baz=220	1.27	220	⇑P	Pb	10 11 59.7	-0.1
TPUB	baz=220			S	Sn	10 12 18.2	+1.4
WMLT	Mailiao baz=260	1.28	249	P	Pb	10 11 59.9	+0.1
WMLT	baz=260			S	Sn	10 12 17.4	+0.4
JYNG	Yonagunijimaku	1.31	82	P	Pb	10 12 00.5	+0.1
JYNG				eS	Sg	10 12 20.4	+2.6
WSF	Szhu baz=242	1.35	242	⇑iP	Pn	10 12 00.9	+0.2
WSF	baz=242			S	Sg	10 12 19.9	+0.8
YOJ	Yonaguni jima	1.37	82	ePn	Pb	10 12 01.3	-0.2
YOJ				eSn	Sn	10 12 19.4	+0.2
YOJ	Yonaguni jima baz=71	1.37	82	⇑P	Pb	10 12 01.3	-0.2
YOJ	baz=71			S	Sg	10 12 20.2	+0.5
YOJ	Yonaguni jima	1.37	82	eP	Pb	10 12 01.3	-0.2
YOJ				e		10 12 19.4	
YOJ	Yonaguni jima	1.37	82	P	Pb	10 12 01.6	+0.2
YOJ				S	Sg	10 12 21.2	+1.5
WLGB	Puzi baz=249	1.37	235	P	Pb	10 12 01.5	0.0
WLGB	baz=249			S	Sg	10 12 21.1	+1.3
TWK	Hsinying baz=224	1.38	224	⇑iP	Pb	10 12 01.6	-0.1
TWK	baz=224			eS	Sg	10 12 22.0	+1.9
SNST	Tainan City baz=222	1.41	222	P	Pg	10 12 02.6	-0.1
SNST	baz=222			S	Sg	10 12 22.5	+1.5
CHN1	Nanshi baz=220	1.42	220	⇑iP	Pg	10 12 02.9	0.0
CHN1	baz=220			eS	Sg	10 12 21.4	+0.1
SGST	Jiashian baz=216	1.47	216	⇑iP	Pb	10 12 03.5	+0.3
SGST	baz=216			S	Sg	10 12 24.5	+1.6
TWG	Pinlang	1.51	196	ePn	Pn	10 12 02.9	+0.1
TWG	Pinlang baz=178	1.51	196	eP	Pn	10 12 00.9	-2.0
TWGBT	Beinan baz=176	1.51	196	⇓eP	Pn	10 12 00.9	-1.9
SLGT	Liugui baz=213	1.51	212	⇑P	Pb	10 12 04.0	+0.2
SLGT	baz=213			S	Sg	10 12 26.1	+1.9
CHN8	Yiju baz=233	1.52	233	⇑iP	Pb	10 12 03.8	-0.1
CHN8	baz=233			S	Sg	10 12 25.6	+1.2
TTN	Taitung baz=169	1.55	193	eP	Pb	10 12 04.6	0.0
CHN3	Shinhua baz=223	1.60	222	⇑iP	Pg	10 12 06.1	-0.2
CHN3	baz=223			eS	Sg	10 12 29.4	+2.4
SCLT	Jiali baz=229	1.64	228	⇑iP	Pb	10 12 06.1	0.0
SCLT	baz=229			S	Sg	10 12 29.4	+1.1
TAI1	Yung-k'ang baz=226	1.71	224	P	Pb	10 12 07.3	+0.1
TAI1	baz=226			eS	Sg	10 12 31.0	+0.4
SSD	Sandimen baz=226	1.73	208	eP	Pb	10 12 06.8	-0.7
SSD	baz=226			eS	Sg	10 12 31.9	+0.7
ECL	Taimali baz=177	1.75	197	eP	Pn	10 12 07.1	+0.9
SGLT	Jiouru baz=212	1.81	212	eP	Pb	10 12 09.7	+0.7
MASBT	Mashibuluo baz=225	1.85	206	⇑P	Pb	10 12 09.3	-0.3
MASBT	baz=225			eS	Sb	10 12 33.6	+0.8
SNJT	Kaohsiung City baz=218	1.87	216	⇑P	Pb	10 12 09.9	0.0
SNJT	baz=218			eS	Sg	10 12 37.6	+2.0
PNG	Penghu baz=256	1.93	249	⇑eP	Pn	10 12 08.0	-0.8
PNG	baz=256			eS	Sb	10 12 34.7	-0.6
PHUB	P'eng-hu baz=248	1.94	247	⇑eP	Pn	10 12 08.0	-0.9
PHUB	baz=248			S	Sb	10 12 34.8	-0.8
EAST	Anshuo baz=180	1.98	198	eP	Pb	10 12 11.9	0.0
WDGT	Dungji baz=241	1.98	240	⇑iP	Pn	10 12 09.3	-0.1
WDGT	baz=241			S	Sb	10 12 36.0	-0.7
TAW	Tawu baz=179	1.99	197	eP	Pb	10 12 11.9	-0.2
PTTC	Pingtan baz=310	2.00	308	eP	Pn	10 12 08.4	-1.3
IRIF	Iriomote-Funau	2.01	88	P	Pn	10 12 10.7	+0.9
IRIF				eS	Sb	10 12 38.4	+0.8
KAU	Kaohsiung baz=215	2.03	214	eP	Pb	10 12 13.3	+0.5
SCZT	Fangliau baz=206	2.07	204	P	Pb	10 12 12.7	-0.7
SCZT	baz=206			eS	Sb	10 12 39.9	+0.7
HATJ	Hateruma jima	2.10	95	P	Pb	10 12 12.5	-1.3
HATJ				eS	Sb	10 12 41.0	+1.0
WLCH	Liuqiu baz=230	2.19	209	eP	Pb	10 12 15.6	+0.2
VCHM	Qimei baz=243	2.19	241	⇑eP	Pn	10 12 12.0	-0.3
VCHM	baz=243			eS	Sn	10 12 40.6	+1.1
TWP	Hsiaoliuchiu baz=230	2.20	209	eP	Pb	10 12 15.2	-0.4
LAY	Lan-yu baz=161	2.23	179	eP	Pn	10 12 10.9	-1.9
JKRS	Kuro-shima	2.27	90	P	Pn	10 12 14.9	+1.6
JKRS				eS	Sb	10 12 44.9	-0.1
PTMZ	Houxiangcun baz=291	2.31	290	⇑eP	Pn	10 12 12.9	-1.1
HEN	Hengchun baz=176	2.37	198	eP	Pb	10 12 17.4	-1.2
JIJ	Ishigaki jima	2.39	87	P	Pn	10 12 16.0	+1.0
JIJ				eS	Sb	10 12 47.1	-1.4
TWK1	Hengchun baz=175	2.41	196	eP	Pb	10 12 17.9	-1.4
TWKBT	Hengchun baz=175	2.41	196	eP	Pn	10 12 16.8	+1.5
TSEB	Hengchuen, Pin baz=174	2.43	194	eP	Pb	10 12 18.4	-1.2
JISG	Ishigakijimahi	2.56	82	P	Pn	10 12 17.5	+0.2
JISG				eS	Sn	10 12 49.9	+1.3
QZH	Quanzhou	2.75	285	⇑iPn	Pn	10 12 18.8	-1.1
QZH				Sn	Sn	10 12 48.9	-4.4
QZH	comp=N,6μm,0.7s			smax	smax		
QZH	comp=E,4μm,0.8s			smax	smax		
LYJJ	Jianjiangzhen baz=326	2.77	325	eP	Pn	10 12 18.9	-1.3
KNMB	Chin-men Tao	2.87	274	ePn	Pn	10 12 20.3	-1.2
KNMB	Chin-men Tao baz=277	2.87	274	eP	Pn	10 12 20.4	-1.2
MHZQ	Yeshan baz=311	2.90	309	eP	Pn	10 12 21.6	-0.4
XPSS	Dashiqiu baz=338	2.91	336	eP	Pn	10 12 21.1	-1.0
JTJ	Tarama	2.92	82	P	Pn	10 12 24.0	+1.7
AXDP	Jialang baz=284	3.29	282	⇑eP	Pn	10 12 26.6	-0.8
JIRB	Irabujima	3.37	80	P	Pn	10 12 29.8	+1.3
JIKM	Ikemajima	3.45	78	P	Pn	10 12 30.8	+1.2
ZPLA	Ao Xicun baz=266	3.46	265	eP	Pn	10 12 29.1	-0.7
JMJ	Miyako jima 2 baz=82	3.48	80	eP	Pn	10 12 32.4	+2.5
JMJ2	Miyako jima3	3.50	82	P	Pn	10 12 32.5	+2.3

ZZJH	Jiuhuzhen	3.56	274	eP	Pn	10 12 30.4	-0.7
	baz=277						
JOGS	Gusukube	3.57	81	P	Pn	10 12 33.7	+2.5
JOW	Kunigami	6.61	66	P	Pn	10 13 13.6	+0.6
	0.6nm,0.3s,baz=227,slow=19,SNR=3.6						
JOW				S	Sn	10 14 34.9	+6.4
	baz=222,slow=23,SNR=0.8						
JOW	Kunigami	6.61	66	ePn	Pn	10 13 13.5	+0.5
JOW				eSn	Sn	10 14 30.0	+1.5
JOW	Kunigami	6.61	66	eP	Pn	10 13 15.4	+2.4
	baz=68						
SSE	Sheshan	6.80	358	ePn	Pn	10 13 16.0	+0.4
SSE	Sheshan	6.80	358	P	Pn	10 13 15.3	-0.3
SSE				S	Sn	10 14 30.0	-3.2
SSE				smax	smax		
	comp=N,200nm,1.3s						
SSE				smax	smax		
	comp=E,280nm,1.1s						
SSE				LR	LR		
	comp=N,2µm,11.8s						
SSE				LR	LR		
	comp=E,2µm,11.7s						
HKPS	Hong Kong Po S	7.07	255	ePn	Pn	10 13 19.1	-0.3
GZH	Guangzhou	7.59	263	P	Pn	10 13 20.6	-5.9
GZH				S	Sn	10 14 38.5	-14
GZH				smax	smax		
	comp=N,2µm,0.9s						
GZH				smax	smax		
	comp=E,1µm,0.9s						
NJ2	Nanjing	8.10	344	⇑P	Pn	10 13 32.5	-0.9
NJ2				sP	Pb	10 13 38.6	-18
NJ2				S	Sn	10 15 00.8	-4.3
NJ2				pmax	pmax		
	comp=E,39nm,0.6s						
NJ2				smax	smax		
	comp=E,710nm,1.1s						
NJ2				smax	smax		
	comp=E,700nm,1.0s						
NJ2				LR	LR		
	comp=E,6µm,8.6s						
NJ2				LR	LR		
	comp=E,5µm,7.8s						
NJ2				LR	LR		
	comp=E,7µm,9.4s						
WHN	Wuhan	8.92	316	P	Pn	10 13 45.3	+0.6
WHN				LR	LR		
	comp=E,14µm,9.4s						
WHN				LR	LR		
	comp=E,10µm,7.7s						
WHN				LR	LR		
	comp=E,17µm,8.8s						
TGY	Tagaytay City	10.13	183	LR	LR	10 18 45.9	
	comp=E,842nm,19.8s,baz=344,slow=42						
JNU	Nakatsue	12.04	41	P	Pn	10 14 27.9	+0.4
	comp=E,0.1nm,0.3s,baz=214,slow=11,SNR=2.5						
JNU				S	Sn	10 16 32.6	-9.4
	comp=E,0.1nm,0.3s,baz=180,slow=12,SNR=1.9						
JNU				LR	LR	10 19 49.3	
	comp=E,898nm,19.6s,baz=228,slow=41						
JNU	Nakatsue	12.04	41	ePn	Pn	10 14 28.2	+0.7
QIZ	Qiongzhong	12.05	247	P	Pn	10 14 26.8	-0.8
QIZ				S	Sn	10 16 52.8	+11
QIZ				pmax	pmax		
	comp=E,12nm,1.2s						
QIZ				LR	LR		
	comp=E,2µm,11.3s						
QIZ				LR	LR		
	comp=E,1µm,14.7s						
QIZ				LR	LR		
	comp=E,2µm,13.7s						
TIA	Tai'an	12.49	343	P	Pn	10 14 34.9	+1.3
TIA				pmax	pmax		
	comp=E,6.0nm,1.2s						
TIA				pmax	pmax		
	comp=E,470nm,4.9s						
TIA				LR	LR		
	comp=E,2µm,9.3s						
TIA				LR	LR		
	comp=E,2µm,8.5s						
TIA				LR	LR		
	comp=E,5µm,10.0s						
GYA	Guiyang	13.61	282	⇑iP	Pn	10 14 48.8	-0.3
GYA				PP	P	10 15 01.0	+2.9
GYA				S	Sn	10 17 16.9	-3.6
GYA				pmax	pmax		
	comp=E,50nm,0.8s						
GYA				pmax	pmax		
	comp=E,130nm,4.5s						
GYA				LR	LR		
	comp=E,2µm,8.4s						
GYA				LR	LR		
	comp=E,5µm,10.1s						
GYA				LR	LR		
	comp=E,5µm,9.8s						
KS15	Wonju Array Si	14.21	21	ePn	Pn	10 14 57.4	+0.3
KSRS	Korea Array	14.23	21	P	Pn	10 14 58.3	+0.9
	comp=E,0.3nm,0.3s,baz=200,slow=12,SNR=2.7						
KSRS				LR	LR	10 21 08.0	
	comp=E,369nm,19.3s,baz=145,slow=40						
DL2	Dalian	14.59	0	P	P	10 15 12.3	+3.5
DL2				eS	S	10 18 00.3	-3.2
DL2				pmax	pmax		
	comp=Z,39nm,0.8s						
DL2				LR	LR		
	comp=N,2µm,12.5s						
DL2				LR	LR		
	comp=E,920nm,11.7s						
DL2				LR	LR		
	comp=Z,3µm,13.2s						
XAN	Xi'an	14.68	314	ePn	Pn	10 15 03.5	-0.1
XAN	Xi'an	14.68	314	P	Pn	10 15 03.8	+0.2
XAN				S	Sn	10 17 43.3	-3.2
XAN				pmax	pmax		
	comp=Z,15nm,1.2s						
XAN				LR	LR		
	comp=Z,2µm,7.3s						
XAN				LR	LR		
	comp=Z,3µm,10.3s						
XAN				LR	LR		
	comp=Z,4µm,10.8s						
XAN	Xi'an	14.68	314	eP	Pn	10 15 03.5	-0.1
TIY	Taiyuan	15.48	332	eP	P	10 15 19.5	+0.7
TIY				S	Sn	10 18 12.1	+6.0
TIY				pmax	pmax		
	comp=Z,310nm,3.7s						
TIY				LR	LR		
	comp=Z,3µm,8.1s						
TIY				LR	LR		
	comp=Z,2µm,10.4s						
TIY				LR	LR		
	comp=Z,3µm,10.8s						
BJT	Baijiatuau	16.33	345	ePn	Pn	10 15 25.8	+0.6
	comp=Z,34nm,1.1s						
BJT	Baijiatuau	16.33	345	eP	Pn	10 15 25.8	+0.6
BJT				pmax	pmax		
	comp=Z,34nm,1.1s						
BJI	Beijing	16.35	345	eP	P	10 15 28.4	+0.1
BJI				pmax	pmax		
	comp=Z,13nm,1.2s						
BJI				LR	LR		
	comp=Z,680nm,9.5s						
BJI				LR	LR		
	comp=Z,440nm,9.7s						
SLVN	Son La	16.51	263	ePn	Pn	10 15 26.9	-0.7
	comp=Z,33nm,1.0s						
CD2	Chengdu	17.07	297	P	Pn	10 15 33.6	-1.1
CD2				PP	PnPn	10 15 50.3	+5.9
CD2				S	S	10 18 52.0	-2.5
CD2				sS	sS	10 18 56.3	-2.8
CD2				SS	SnSn	10 19 05.4	+7.5
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				LR	LR		
	comp=Z,2µm,19.9s						
CD2				LR	LR		
	comp=Z,6µm,7.3s						
CD2				LR	LR		
	comp=Z,7µm,8.5s						
KMI	Kunming	17.09	277	P	P	10 15 36.6	-0.3
KMI				pmax	pmax		
	comp=Z,17nm,0.7s						
KMI				pmax	pmax		
	comp=Z,490nm,5.8s						
KMI				LR	LR		
	comp=Z,3µm,8.1s						
KMI				LR	LR		
	comp=Z,7µm,9.5s						
KMI				LR	LR		
	comp=Z,6µm,9.7s						
PANO	Nakornpanom	17.33	249	P	P	10 15 42.6	+3.3
	comp=Z,0.6nm,1.0s						
KCP	Kidapawan	17.51	168	⇑eP	P	10 15 47.2	+5.9
SNY	Shenyang	17.59	5	⇓P	P	10 15 47.1	+5.1
SNY				pmax	pmax		
	comp=Z,23nm,1.6s						
SNY				pmax	pmax		
	comp=Z,910nm,11.4s						
SNY				LR	LR		
	comp=Z,2µm,11.0s						
SNY				LR	LR		
	comp=Z,1µm,11.8s						
SNY				LR	LR		
	comp=Z,3µm,11.6s						
JHJ	Hachijo jima 2	18.26	57	LR	LR	10 22 27.0	
	comp=Z,568nm,20.7s,baz=238,slow=36						
JHJ2	Mitsune	18.29	57	eP	Pn	10 15 49.0	-0.7
	comp=Z,388nm,1.2s						
HHC	Hu-ho-hao-te	18.51	336	P	Pn	10 15 54.8	+2.3
HHC				pP	sP	10 15 59.3	+2.5
HHC				S	Sn	10 19 20.4	+0.9
HHC				SS	S	10 19 44.5	+21
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC				pmax	pmax		
	comp=Z,900nm,4.3s						
HHC				LR	LR		
	comp=Z,2µm,11.6s						
KKM	Kota Kinabalu	18.83	197	eP	Pn	10 15 57.4	+0.9
	comp=Z,80nm,1.1s						
MJB9	Matsu-Tunnel	18.85	46	eP	P	10 15 56.0	0.0
	comp=Z,7.8nm,0.9s						
MAJO	Matsushiro	18.85	46	eP	P	10 15 55.6	-0.4
	comp=Z,7.9nm,0.9s						
MAJO	Matsushiro	18.85	46	⇓iP	Pn	10 15 58.1	+1.6
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAT	Matsushiro	18.85	46	P	P	10 15 55.2	-0.8
MJAR	Matsushiro Arr	18.85	46	P	P	10 15 55.0	-1.0
	comp=Z,0.0nm,0.3s,baz=237,slow=8.6,SNR=12						
MJAR				LR	LR	10 22 57.3	
	comp=Z,872nm,21.5s,baz=235,slow=36						
BTO	Baotou	18.93	332	eP	Pn	10 16 05.9	+8.4
LZH	Lanzhou	19.26	312	eP	Pn	10 16 03.8	+2.2
LZH				pP	sP	10 16 07.8	+2.5
LZH				sP	pP	10 16 10.9	+7.1
LZH				PP	P	10 16 21.5	+21
LZH				pmax	pmax		
	comp=Z,53nm,1.1s						
LZH				pmax	pmax		
	comp=Z,600nm,6.0s						
LZH				LR	LR		
	comp=Z,2µm,10.3s						
LZH				LR	LR		
	comp=Z,3µm,12.5s						
LZH				LR	LR		
	comp=Z,4µm,12.8s						
CN2	Changchun	19.74	8	eP	Pn	10 16 08.5	+1.3
CN2				esP	sP	10 16 15.5	+5.4
CN2				eS	S	10 19 45.5	-2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,650nm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
CHAI	Chaiyaphum	20.13	249	P	Pn	10 16 14.5	+2.5
	comp=Z,68µm,1.1s						
UTTA	Uttaradit	20.61	256	P	Pn	10 16 20.3	+2.7
	comp=Z,25µm,0.7s,comp=Z,225µm						
PHRA	Phrae	20.63	258	P	Pn	10 16 19.7	+1.8
	comp=Z,4.1nm,1.0s,comp=Z,320nm						
PAYA	Payao	20.68	261	P	Pn	10 16 20.8	+2.3
	comp=Z,63µm,0.8s,comp=Z,967µm						
PBKT	Sadao Pong	20.71	252	P	Pn	10 16 20.1	+1.3
	comp=Z,35nm,1.0s						
LAMP	Lampang	21.16	259	P	P	10 16 25.2	+3.9
	comp=Z,67µm,0.9s,comp=Z,652µm						
MDJ	Mudanjiang	21.33	16	eP	P	10 16 24.0	+1.0
	comp=Z,20nm,0.8s						
MDJ	Mudanjiang	21.33	16	P	P	10 16 20.6	-2.3
MDJ				pmax	pmax		
	comp=Z,17nm,2.2s						
MDJ				pmax	pmax		
	comp=Z,290nm,2.7s						
MDJ				LR	LR		
	comp=Z,1µm,18.3s						
MDJ				LR	LR		
	comp=Z,2µm,17.7s						
MDJ				LR	LR		
	comp=Z,2µm,13.2s						
CHBT	CHBT	21.48	241	P	P	10 16 32.9	+8.2
	comp=Z,25nm,1.0s						
USA0B	Ussuriysk Arra	21.64	21	eP	P	10 16 28.2	+1.9
	comp=Z,32nm,1.3s						
USRK	Ussuriysk Ar.	21.64	21	P	P	10 16 26.9	+0.6
	comp=Z,7.1nm,1.0s,baz=207,slow=9.8,SNR=5.9						
USRK				LR	LR	10 26 29.3	
	comp=Z,380nm,18.0s,baz=189,slow=41						
CMMT	Chiang Mai	21.68	260	P	P	10 16 30.5	+3.6
	comp=Z,18nm,1.2s						
CHTO	Chiang Mai	21.68	260	eP	P	10 16 28.0	+1.1
	comp=Z,60nm,1.3s						
CHTO	Chiang Mai	21.68	260	eP	P	10 16 28.0	+1.1
CHTO				pmax	pmax		
	comp=Z,60nm,1.3s						
CM31	Chiang Mai Arr	21.80	259	eP	P	10 16 31.6	+3.4
	comp=Z,103nm,1.5s						
CM31				ePcP	PcP	10 20 27.9	-0.6
CMAR	Chiang Mai Arr	21.80	259	P	P	10 16 30.5	+2.3
	comp=Z,19nm,0.9s,baz=61,slow=8.3,SNR=34						
CMAR				PcP	PcP	10 20 28.0	-0.5
	comp=Z,2.8nm,0.6s,baz=51,slow=0.3,SNR=10						
CMAR				LR	LR	10 23 52.3	
	comp=Z,299nm,21.3s,baz=85,slow=33						
CMAR	Chiang Mai Arr	21.80	259	i P	P	10 16 31.3	+3.1
CMAR				pmax	pmax		
	comp=Z,19nm,0.9s						
UMPA	Umpang Tak	22.71	254	P	P	10 16 43.1	+5.2
	comp=Z,108µm,1.0s						
SBUM	Sibu	23.49	204	eP	P	10 16 43.9	-2.0
	comp=Z,44nm,1.0s						
GTA	Gaotai	23.74	315	⇑P	P	10 16 49.9	+1.5
GTA				pP	sP	10 16 54.4	+1.2
GTA				sP	pP	10 16 57.3	+5.6
GTA				S	S	10 21 09.6	+5.7
GTA				pmax	pmax		
	comp=Z,32nm,1.1s						
GTA				pmax	pmax		
	comp=Z,570nm,6.2s						
GTA				LR	LR		
	comp=Z,890nm,11.1s						
GTA				LR	LR		
	comp=Z,1µm,12.1s						
GTA				LR	LR		
	comp=Z,2µm,11.7s						
TEY	Ternei	24.07	27	eP	P	10 16 53.5	+2.3
TEY				e		10 21 02.2	
GUMO	Guam	24.47	112	P	P	10 16 54.5	-0.7
	comp=Z,181nm,1.1s,baz=296,slow=4.1,SNR=6.5						
GUMO	Guam	24.47	112	eP	P	10 16 56.1	+0.9
	comp=Z,342nm,1.3s						
GUMO	Guam	24.47	112	eP	P	10 16 56.1	+0.9
GUMO				pmax	pmax		
	comp=Z,342nm,1.3s						
HIA	Hailar	24.98	357	⇑eP	P	10 17 00.7	+1.1
HIA				pmax	pmax		
	comp=Z,114nm,1.0s						
KSM	Kuching	25.13	207	eP	P	10 17 01.3	+0.1
	comp=Z,52nm,0.8s						
LUWI	Luwuk	25.20	177	eP	P	10 17 01.8	+0.1
	comp=Z,77nm,0.8s						
LUWI	Luwuk	25.20	177	P	P	10 17 02.3	+0.6
LBMI	Labuha	25.43	166	P	P	10 17 05.1	+1.2
MTKI	Muara Teweh, K	25.88	195	P	P	10 17 09.6	+1.6
STKI	Sintang	25.96	203	P	P	10 17 09.3	+0.6
KLR	Kul'dur	26.17	15	P	P	10 17 10.8	+0.5
	comp=Z,5.3nm,0.8s,baz=206,slow=8.5,SNR=12						
KLR				PcP	PcP	10 20 36.1	-1.2
	comp=Z,2.1nm,0.9s,baz=126,slow=19,SNR=2.8						
KLR	Kul'dur	26.17	15	⇑iP	P	10 17 11.2	+0.9
KLR				pmax	pmax		
	comp=Z,16nm,1.8s						
ASAJ	Asahikawa	26.24	36	P	P	10 17 10.3	-0.7
	comp=Z,4.5nm,0.6s,baz=272,slow=9.2,SNR=3.6						
ASAJ				PcP	PcP	10 20 36.0	-1.6
	comp=Z,3.4nm,0.9s,baz=220,slow=7.9,SNR=2.2						
ASAJ				LR	LR	10 28 07.6	
	comp=Z,788nm,19.5s,baz=226,slow=38						
SONA0	Songino Array	26.41	337	eP	P	10 17 14.1	+1.5
SONM	Songino Array	26.41	337	P	P	10 17 14.1	+1.5
	comp=Z,43nm,0.8s,baz=155,slow=9.4,SNR=91						
SIJI	Sorong	26.72	158	P	P	10 17 15.4	-0.2
	comp=Z,9.5nm,0.7s,baz=106,slow=23,SNR=4.4						
TTSI	Tana Toraja	27.21	184	P	P	10 17 20.8	+0.9
LSA	Lhasa	27.55	288	eP	P	10 17 24.3	+0.7
	comp=Z,18nm,0.7s						
LSA	Lhasa	27.55	288	P	P	10 17 26.3	+2.7
LSA				LR	LR		
	comp=Z,4µm,10.0s						
LSA				LR	LR		
	comp=Z,7µm,11.7s						
LSA	Lhasa	27.55	288	eP	P	10 17 24.3	+0.7
LSA				pmax	pmax		
	comp=Z,18nm,0.7s						
IPM	Ipoh	27.88	228	eP	P	10 17 26.3	+0.3
	comp=Z,43nm,1.1s						
NLAI	Namlea	27.88	168	P	P	10 17 27.2	+1.2
YSS	Yuzh-Sakhalins	28.29	32	eP	P	10 17 29.1	-0.3
	comp=Z,35nm,1.2s						
YSS	Yuzh-Sakhalins	28.29	32	eP	P	10 17 31.4	+2.0
YSS				e		10 17 44.6	
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
KAPI	Kappang	29.16	184	P	P	10 17 37.1	-0.3
	comp=Z,11nm,0.8s,baz=28,slow=8.6,SNR=4.1						
ZAK	Zakamensk	29.66	336	eP	P	10 17 41.7	0.0
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ZEA	Zeya	29.74	7	eP	P	10 17 42.8	+0.7
ZEA				e		10 28 21.0	
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,12.0s						
ZEA				MLR	MLR		
	comp=E,1µm,11.0s						
PSI	Prapat	30.53	229	eP	P	10 17 50.7	+1.0
	comp=E,26nm,1.0s						
TLY	Talaya	30.61	338	P	P	10 17 50.7	+0.8
	comp=E,4.4nm,0.7s,baz=171,slow=5.6,SNR=8.4						
TLY	Talaya	30.61	338	eP	P	10 17 50.3	+0.3
	comp=E,14nm,0.8s						
TLY	Talaya	30.61	338	d iP	P	10 17 50.5	+0.6
TLY	Talaya	30.61	338	P	P	10 17 51.6	+1.6
	SNR=9.0						
IRK	Irkutsk	30.87	339	eP	P	10 17 51.8	-0.4
IRK				pmax	pmax		
	comp=Z,51nm,3.0s						
TYV	Tymovskoe	31.16	26	eP	P	10 17 59.9	+5.1
TYV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,5.4s						
TYV				MLR	MLR		
	comp=Z,1µm,17.0s						
MOY	Mondy	31.55	335	eP	P	10 17 59.6	+1.2
MOY				pmax	pmax		
	comp=Z,35nm,2.9s						
MNSI	Mandailing Nat	31.56	226	P	P	10 17 58.9	+0.2
JIRN	Jiri	31.88	284	eP	P	10 18 04.9	+3.1
	comp=Z,65nm,0.7s						
GUN	Gumba	32.15	284	eP	P	10 18 07.1	+3.0
	comp=Z,33nm,0.7s						
GRJI	Gresik	32.23	197	P	P	10 18 05.2	+0.7
NKL	Nikolayevsk	32.27	22	eP	P	10 17 59.5	-4.9
NKL				e		10 20 50.0	
NKL				eS	S	10 23 16.7	-1.1
NKL				pmax	pmax		
	comp=Z,13nm,1.0s						
NKL				pmax	pmax		
	comp=N,35nm,1.5s						
NKL				pmax	pmax		
	comp=E,20nm,1.3s						
NKL				pmax	pmax		
	comp=Z,88nm,1.9s						
NKL				MLR	MLR		
	comp=Z,511nm,14.0s						
NKL				MLR	MLR		
	comp=E,143nm,14.0s						
NKL				MLR	MLR		
	comp=N,224nm,10.0s						
PKI	Pulchoki	32.58	284	eP	P	10 18 09.6	+1.7
	comp=N,28nm,0.9s						
PKIN	Phulchoki	32.59	284	eP	P	10 18 09.6	+1.7
	comp=N,27nm,0.9s						
KKN	Kakani	32.68	284	eP	P	10 18 10.9	+2.2
	comp=N,45nm,0.9s						
MMRI	Maumere	32.72	179	eP	P	10 18 08.6	-0.2
	comp=N,100nm,1.0s						
MMRI	Maumere	32.72	179	P	P	10 18 09.1	+0.4
EDFI	Ende, Flores	32.82	180	P	P	10 18 09.1	-0.7
	comp=N,60nm,0.8s						
NGJI	Ngawi	32.95	199	P	P	10 18 11.4	+0.6
SMRI	Semarang	32.96	201	eP	P	10 18 11.0	+0.1
	comp=N,52nm,0.8s						
LHSI	Lahat	32.97	215	P	P	10 18 11.4	+0.4
KLSI		33.11	212	P	P	10 18 12.6	+0.4
MDSI	Maura Dua	33.20	213	P	P	10 18 13.5	+0.5
PWJI	Pagerwojo	33.47	198	P	P	10 18 15.0	-0.3
SISI	Saibi	33.50	224	P	P	10 18 15.9	+0.3
WOJI	Wonogiri, Jawa	33.55	199	P	P	10 18 16.0	0.0
LWLI	Liwa	33.72	213	P	P	10 18 27.3	+10
WMQ	Urumqi	33.82	314	P	P	10 18 20.3	+2.1
WMQ				sP	sP	10 18 27.3	+4.2
WMQ				pmax	pmax		
	comp=N,23nm,0.9s						
WMQ				pmax	pmax		
	comp=N,980nm,11.6s						
WMQ				LR	LR		
	comp=N,770nm,11.3s						
WMQ				LR	LR		
	comp=N,870nm,11.3s						
WMQ				LR	LR		
	comp=N,480nm,12.3s						
SOEI	Soe	33.93	175	eP	P	10 18 16.4	-3.0
	comp=N,43nm,0.9s						
SOEI	Soe	33.93	175	P	P	10 18 20.0	+0.5
KASI	Kota Agung	33.95	211	P	P	10 18 19.7	+0.2
DANN	Dangsing	34.00	285	eP	P	10 18 21.6	+1.3
	comp=N,75nm,0.8s						
KOLN	Koldanda	34.17	284	eP	P	10 18 20.9	-0.8
	comp=N,56nm,0.9s						
BATI	Baumata	34.34	176	P	P	10 18 20.3	-2.6
CISI	Cisompet, Garu	34.35	205	eP	P	10 18 21.9	-1.2
	comp=N,154nm,1.4s						
PYUN	Piuthan	34.69	285	eP	P	10 18 26.0	-0.2
	comp=N,57nm,0.8s						
MANU	Manus Island	36.26	133	eP	P	10 18 40.6	+1.1
	comp=N,342nm,1.9s						
DGZ	Jazzator, Alta	36.71	322	⇓iP	P	10 18 44.3	+1.1
DGZ				pmax	pmax		
	comp=Z,11nm,1.0s						
MTN	Manton Dam	38.07	165	eP	P	10 18 52.4	-2.4
	comp=Z,41nm,0.6s						
YAK	Yakutsk	38.15	6	eP	P	10 18 54.8	-0.1
	comp=Z,19nm,0.8s						
YAK	Yakutsk	38.15	6	eP	P	10 18 54.7	-0.2
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
MK31	Makanchi Array	38.49	316	eP	P	10 18 58.6	+0.5
	comp=E,62nm,0.9s						
MK31	Makanchi Array	38.49	316	i P	P	10 18 59.5	+1.4
MK31				pmax	pmax		
	comp=Z,78nm,0.9s						
MK32	Makanchi Array	38.49	316	eP	P	10 18 59.8	+1.7
MK32				ePcP	PcP	10 21 09.8	-1.3
MKAR	Makanchi Array	38.49	316	P	P	10 18 59.8	+1.7
	comp=Z,28nm,0.8s,baz=330,slow=24,SNR=36						
MKAR				PcP	PcP	10 21 09.8	-1.3
	comp=Z,2.6nm,0.8s,baz=93,slow=2.9,SNR=3.9						
MKAR				ScP	S	10 24 54.8	+1.1

	comp=Z,0.2nm,0.6s,baz=106,slow=5.2,SNR=2.0						
PDGK	Podgornoye	39.27	309	P	P	10 19 05.9	+1.0
PDGK				pmax	pmax		
	comp=Z,44nm,1.2s						
PETK	Petropavlovsk-	39.62	34	P	P	10 19 07.1	-0.4
	comp=Z,0.8nm,0.4s,baz=211,slow=5.0,SNR=2.1						
PETK				LR	LR	10 34 50.2	
	comp=Z,322nm,21.6s,baz=176,slow=35						
PEA1	Petropavlovsk-	39.62	34	eP	P	10 19 07.1	-0.4
ZAA0	Zalesovo Array	40.34	327	eP	P	10 19 13.9	+0.5
	comp=Z,61nm,0.9s						
ZALV	Zalesovo Beam	40.34	327	P	P	10 19 13.8	+0.4
	comp=Z,48nm,0.8s,baz=119,slow=7.7,SNR=115						
ZALV				PcP	PcP	10 21 16.0	-0.7
	comp=Z,1.1nm,0.5s,baz=121,slow=6.9,SNR=1.9						
ZAA1	Zalesovo Array	40.34	327	eP	P	10 19 13.8	+0.4
ZAA1				ePcP	PcP	10 21 16.0	-0.7
KDJ	Kajisay	40.65	307	eP	P	10 19 16.1	-0.3
	comp=Z,8.6nm,0.8s						
KDJ	Kajisay	40.65	307	eP	P	10 19 16.1	-0.3
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH	Kashi	41.11	303	P	P	10 19 24.8	+4.6
KSH				pP	sP	10 19 30.8	+5.7
KSH				sP	pP	10 19 32.0	+8.3
KSH				PcP	PcP	10 21 23.3	+3.6
KSH				S	S	10 25 39.8	+6.4
KSH				pmax	pmax		
	comp=Z,13nm,1.0s						
KSH				pmax	pmax		
	comp=Z,110nm,2.8s						
KSH				LR	LR		
	comp=Z,650nm,18.7s						
ULHL	Ulahol	41.35	307	P	P	10 19 21.3	-0.9
	SNR=5.2						
NRN	Naryn	41.38	306	eP	P	10 19 20.7	-1.9
	comp=Z,16nm,0.7s						
NRN	Naryn	41.38	306	eP	P	10 19 20.7	-1.9
NRN				pmax	pmax		
	comp=Z,17nm,0.7s						
PMG	Port Moresby	41.80	140	P	P	10 19 24.4	-1.4
	comp=Z,36nm,1.0s,baz=299,slow=15						
PMG	Port Moresby	41.80	140	eP	P	10 19 22.1	-3.7
	comp=Z,46nm,1.1s						
PMG	Port Moresby	41.80	140	⇑iP	P	10 19 26.4	+0.6
PMG				pmax	pmax		
	comp=Z,184nm,1.1s						
TKM2	Tokmak 2	41.95	308	P	P	10 19 28.9	+1.8
TKM2				pmax	pmax		
	comp=Z,14nm,0.8s						
TKM2	Tokmak 2	41.95	308	P	P	10 19 29.4	+2.2
	SNR=21						
KZA	Kyzart	42.05	307	P	P	10 19 30.9	+2.7
	SNR=9.0						
H11N1	WAKE ISLAND Hy	42.17	87	T	T	11 04 46.2	
	baz=283						
H11N2	WAKE ISLAND Hy	42.17	87	T	T	11 04 46.1	
	baz=283,slow=74						
H11N3	WAKE ISLAND Hy	42.19	87	T	T	11 04 46.6	
	baz=283,slow=74						
KURK	Kurchatov	42.22	320	eP	P	10 19 27.9	-1.0
	comp=Z,56nm,1.1s						
KURK	Kurchatov	42.22	320	d iP	P	10 19 29.7	+0.8
KURK				pmax	pmax		
	comp=Z,92nm,1.7s						
KURK	Kurchatov	42.22	320	P	P	10 19 30.1	+1.1
	SNR=23						
KURBB	Kurchatov Arra	42.24	320	P	P	10 19 30.0	+0.9
	comp=Z,27nm,1.0s,baz=116,slow=7.4,SNR=63						
H11S3	WAKE ISLAND Hy	42.31	89	T	T	11 04 47.2	
	baz=284,slow=74,SNR=142						
H11S1	WAKE ISLAND Hy	42.32	89	T	T	11 04 45.4	
	baz=284,slow=74,SNR=59						
H11S2	WAKE ISLAND Hy	42.33	89	T	T	11 04 46.0	
	baz=284,slow=74,SNR=69						
KBK	Karagaybulak	42.37	307	P	P	10 19 32.9	+2.4
	SNR=7.0						
UCH	Uchtor	42.61	307	P	P	10 19 35.5	+2.7
	SNR=19						
AAK	Ala-Archa	42.70	307	P	P	10 19 34.3	+1.1
	comp=Z,3.2nm,0.5s,baz=115,slow=4.9,SNR=8.1						
AAK	Ala-Archa	42.70	307	deP	P	10 19 35.1	+1.9
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EKS2	Erkin-Say	43.22	307	P	P	10 19 39.4	+2.0
	SNR=6.2						
COEN	Coen	43.49	149	eP	P	10 19 39.8	+0.2
	comp=Z,51nm,1.0s						
SEY	Seymchan	43.79	20	P	P	10 19 41.0	-0.5
	comp=Z,1.9nm,0.7s,baz=198,slow=9.6,SNR=3.6						
SEY				PcP	PcP	10 21 27.8	-0.2
	comp=Z,2.7nm,0.5s,baz=243,slow=2.3,SNR=6.2						
OTUK	Ortayu	45.35	315	P	P	10 19 55.3	+1.1
OTUK				pmax	pmax		
	comp=Z,62nm,1.1s						
GAR	Garm	45.43	302	eP	P	10 19 55.3	+0.2
	comp=Z,61nm,1.5s						
GAR	Garm	45.43	302	eP	P	10 19 55.3	+0.2
GAR				pmax	pmax		
	comp=Z,61nm,1.5s						
PSAD1	Pilbara Seismi	45.48	182	eP	P	10 19 53.8	-1.6
	comp=Z,64nm,0.8s						
PSAB2	Pilbara Seismi	45.58	182	eP	P	10 19 54.6	-1.6
	comp=Z,68nm,0.8s						
PSAA2	Pilbara Seismi	45.59	182	eP	P	10 19 54.5	-1.7
	comp=Z,66nm,0.8s						
PSAB1	Pilbara Seismi	45.60	182	eP	P	10 19 54.6	-1.7
	comp=Z,68nm,0.8s						
PSA00	Pilbara Seismi	45.60	182	eP	P	10 19 54.6	-1.7
	comp=Z,62nm,0.8s						
PSAA3	Pilbara Seismi	45.61	182	eP	P	10 19 54.8	-1.6
	comp=Z,62nm,0.8s						
PSAD2	Pilbara Seismi	45.64	182	eP	P	10 19 54.9	-1.8
	comp=Z,60nm,0.8s						
KK31	Karatay Array	45.66	307	eP	P	10 19 57.5	+0.7
	comp=Z,15nm,1.2s						
KK31	Karatay Array	45.66	307	i P	P	10 19 58.5	+1.7
KK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KKAR	Karatay Array	45.66	307	eP	P	10 19 55.8	-0.9
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	45.66	307	eP	P	10 19 55.8	-0.9
KKAR				pmax	pmax		
	comp=Z,15nm,1.2s						
PSAD3	Pilbara Seismi	45.67	182	eP	P	10 19 55.2	-1.8
	comp=Z,61nm,0.8s						
WRAB	Tennant Creek	45.68	163	eP	P	10 19 55.6	-1.4
	comp=Z,58nm,1.5s						
WRAB	Tennant Creek	45.68	163	⇓eP	P	10 19 55.5	-1.5
WRAB				pmax	pmax		
	comp=Z,27nm,1.3s						
WR1	Warramunga Arr	45.69	163	eP	P	10 19 55.7	-1.4
WR1				ePcP	PcP	10 21 33.5	-1.6
WRA	Warramunga Arr	45.69	163	P	P	10 19 55.7	-1.4
	comp=Z,16nm,0.5s,baz=344,slow=11,SNR=93						
WRA				PcP	PcP	10 21 33.5	-1.6
	comp=Z,4.5nm,0.7s,baz=332,slow=2.3,SNR=4.0						
WB2	Warramunga Arr	45.69	163	eP	P	10 19 55.4	-1.7
	comp=Z,20nm,0.6s						
WC3	Warramunga Arr	45.71	163	eP	P	10 19 55.9	-1.4
	comp=Z,22nm,0.7s						
KBL	Kabul	46.40	295	eP	P	10 19 59.5	-3.4
	comp=Z,16nm,0.9s						
KBL	Kabul	46.40	295	eP	P	10 19 59.5	-3.4
KBL				pmax	pmax		
	comp=Z,17nm,0.9s						
GIRL	Giralia	47.17	189	eP	P	10 20 07.5	-1.2
	comp=Z,150nm,0.8s						
TIXI	Tiksi	47.59	3	P	P	10 20 10.2	-1.2
	comp=Z,7.7nm,0.8s,baz=156,slow=4.8,SNR=18						
TIXI				ScP	ScP	10 25 30.2	-5.3
	comp=Z,1.7nm,0.3s,baz=0.0,slow=0.0,SNR=4.2						
TIXI	Tiksi	47.59	3	eP	P	10 20 11.2	-0.2
	comp=Z,11nm,0.9s						
TIXI	Tiksi	47.59	3	⇑iP	P	10 20 10.3	-1.0
TIXI				pmax	pmax		
	comp=Z,13nm,0.9s						
BVA0	Borovoye Array	47.80	321	i P	P	10 20 14.2	+0.9
BVAR	Borovoye Array	47.80	321	P	P	10 20 14.3	+0.9
	comp=Z,14nm,0.8s,baz=110,slow=12,SNR=46						
BRVK	Borovoye	47.87	321	eP	P	10 20 13.0	-0.8
	comp=Z,49nm,0.9s						
BRVK	Borovoye	47.87	321	P	P	10 20 14.8	+1.0
BRVK				pmax	pmax		
	comp=Z,61nm,1.1s						
BRVK	Borovoye	47.87	321	P	P	10 20 15.2	+1.4
	SNR=23						
AS31	Alice Springs	49.15	165	eP	P	10 20 23.8	-0.2
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	49.15	165	P	P	10 20 23.4	-0.6
	comp=Z,8.4nm,0.7s,baz=356,slow=6.4,SNR=82						
ASAR				PcP	PcP	10 21 45.9	-1.5
	comp=Z,3.1nm,0.7s,baz=352,slow=3.9,SNR=4.4						
ASAR				ScP	ScP	10 25 36.9	-6.0
	comp=Z,0.5nm,0.8s,baz=352,slow=4.8,SNR=3.3						
CTA	Charters Tower	50.24	149	P	P	10 20 33.0	+0.6
	comp=Z,8.5nm,0.6s,baz=330,slow=10,SNR=8.7						
CTA				PcP	PcP	10 21 51.4	-0.1
	comp=Z,9.8nm,0.9s,baz=315,slow=4.3,SNR=3.2						
CTAO	Charters Tower	50.24	149	eP	P	10 20 31.9	-0.5
	comp=Z,35nm,1.4s						
CTAO	Charters Tower	50.24	149	eP	P	10 20 31.9	-0.5
CTAO				pmax	pmax		
	comp=Z,35nm,1.4s						
BILL	Bilibino	51.49	20	⇑eP	P	10 20 42.0	+0.8
BILL				e		10 21 55.3	
BILL				e		10 22 34.3	
BILL				ePPP	PPP	10 23 46.9	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,445nm,19.0s						
MORW	Morawa	53.30	186	eP	P	10 20 53.9	-1.1
	comp=Z,26nm,0.8s						
ABKAR	Akbulak array	53.60	314	eP	P	10 20 56.3	-0.8
	comp=Z,35nm,1.0s						
SVE	Sverdlovsk	54.15	324	⇓eP	P	10 21 02.4	+1.4
SVE				pmax	pmax		
	comp=Z,49nm,1.3s						
AKTO	Aktyubinsk	54.92	316	P	P	10 21 07.5	+0.7
	comp=Z,16nm,1.0s,baz=88,slow=7.1,SNR=7.5						
FORT	Forrest	55.10	173	eP	P	10 21 07.2	-0.9
	comp=Z,45nm,0.8s						
ARU	Arti	55.22	323	P	P	10 21 08.9	+0.1
	comp=Z,3.7nm,0.3s,baz=73,slow=3.8,SNR=31						
ARU	Arti	55.22	323	eP	P	10 21 07.3	-1.5
	comp=Z,33nm,0.9s						
ARU	Arti	55.22	323	d iP	P	10 21 09.1	+0.3
ARU						10 23 08.7	
ARU				S	S	10 28 56.4	+4.2
ARU				SS	SS	10 32 33.6	-2.5
ARU				pmax	pmax		
	comp=Z,41nm,1.0s						
NWAO	Narrogin (SRO)	57.03	184	P	P	10 21 20.6	-1.3
	comp=Z,28nm,0.8s,baz=21,slow=8.6,SNR=14						
NWAO	Narrogin (SRO)	57.03	184	eP	P	10 21 20.6	-1.3
NWAO				eP	P	10 21 20.9	-1.0
EIDS	Eidsvold	57.05	148	eP	P	10 21 20.7	-1.5
	comp=Z,18nm,1.1s						
BANOM	Banah	58.52	287	P	P	10 21 35.0	+2.2
SHME	Shamm	58.63	287	P	P	10 21 35.2	+1.7
MDH	Madha	58.67	286	P	P	10 21 34.4	+0.6
MSFE	Esma-Masafi	58.78	286	P	P	10 21 37.2	+2.6
HATD	Hatta, Dubai	58.93	285	P	P	10 21 37.7	+2.1
ASHO	Ashiyiah	59.03	285	i P	P	10 21 38.4	+2.0
	SNR=7.0						
STKA	Stephens Creek	59.04	160	P	P	10 21 34.8	-1.3
	comp=Z,12nm,0.6s,baz=340,slow=7.4,SNR=47						
STKA	Stephens Creek	59.04	160	eP	P	10 21 35.1	-1.0
	comp=Z,2.7nm,0.7s						
STKA	Stephens Creek	59.04	160	eP	P	10 21 35.1	-1.0
STKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FAQ	Al Faqa, Dubai	59.43	285	P	P	10 21 41.0	+2.0
ALNE	Al Ain	59.46	285	i P	P	10 21 41.2	+1.9
	SNR=7.5						
ASUD	Al Ashush, Dub	59.69	285	P	P	10 21 42.9	+2.1
KIRV	Kirov	60.32	325	P	P	10 21 45.2	+0.6
	comp=Z,61nm,0.8s,baz=85,slow=3.9,SNR=26						
PRGR	Permogore	62.26	328	eP	P	10 21 56.9	-0.8
PRGR				pmax	pmax		
	comp=Z,24nm,0.5s						
AKT	Akhty	62.54	306	eP	P	10 22 01.4	+1.3
AKT				e		10 22 38.3	
AKT				pmax	pmax		
	comp=Z,24nm,0.9s						
GROC	Groznyy	63.68	308	eP	P	10 22 07.2	-0.3
GROC				e		10 22 43.3	
GROC				pmax	pmax		
	comp=Z,68nm,1.2s						
CAN	Canberra	64.73	155	eP	P	10 22 13.8	-0.5
	comp=Z,18nm,1.5s						
CAN	Canberra	64.73	155	eP	P	10 22 13.9	-0.5
CAN				pmax	pmax		
	comp=Z,19nm,1.5s						
GNI	Garni	65.01	305	P	P	10 22 17.2	+0.8
	baz=119,slow=4.7						
GNI	Garni	65.01	305	eP	P	10 22 15.8	-0.6
	comp=Z,26nm,0.9s						
GNI	Garni	65.01	305	i P	P	10 22 19.0	+2.5
	SNR=7.1						
GNI	Garni	65.01	305	deP	P	10 22 18.5	+2.1
GNI				pmax	pmax		
	comp=Z,177nm,1.6s						
GNI	Garni	65.01	305	P	P	10 22 19.3	+2.9
	SNR=12						
ZEI	Tsey	65.12	308	eP	P	10 22 15.7	-1.5
ZEI				pmax	pmax		
	comp=Z,26nm,0.6s						
NCK	Nalchik	65.21	308	⇑eP	P	10 22 19.1	+1.6
NCK				pmax	pmax		
	comp=Z,36nm,0.8s						
TTA	Tatalina	65.27	30	eP	P	10 22 16.9	-0.7
	comp=Z,13nm,1.0s						
TTA	Tatalina	65.27	30	eP	P	10 22 16.9	-0.7
TTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GOF	Gofitskoye	65.32	310	⇓iP	P	10 22 19.4	+1.2
GOF				pmax	pmax		
	comp=Z,72nm,1.1s						
TOO	Toolangi	65.52	159	eP	P	10 22 19.0	-0.4
	comp=Z,12nm,0.8s						
TOO	Toolangi	65.52	159	eP	P	10 22 19.0	-0.4
TOO				pmax	pmax		
	comp=Z,12nm,0.8s						
SVW2	Sparrevohn	65.66	32	eP	P	10 22 20.4	+0.3
	comp=Z,11nm,1.2s						
KBZ	Khabaz	65.66	309	P	P	10 22 21.7	+1.3
	comp=Z,22nm,0.9s,baz=96,slow=5.8,SNR=33						
AKH	Akhalkalaki	65.68	306	eP	P	10 22 20.9	+0.1
	comp=Z,44nm,1.0s						
AKH	Akhalkalaki	65.68	306	⇓iP	P	10 22 23.3	+2.5
KVAR	Kislovodsk Arr	65.77	309	P	P	10 22 22.2	+1.0
	comp=Z,3.8nm,0.3s,baz=106,slow=20,SNR=25						
KIV	Kislovodsk	65.77	309	eP	P	10 22 19.6	-1.7
	comp=Z,91nm,1.3s						
KIV	Kislovodsk	65.77	309	i P	P	10 22 22.9	+1.6
	SNR=6.1						
KIV	Kislovodsk	65.77	309	eP	P	10 22 22.7	+1.5
KIV				e		10 26 26.1	
KIV				pmax	pmax		
	comp=Z,179nm,1.1s						
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV				pmax	pmax		
	comp=Z,498nm,1.1s						
KIV				MLR	MLR		
	comp=Z,403nm,17.0s						
KIV				pmax	pmax		
	comp=Z,111nm,1.1s						
KIV				pmax	pmax		
	comp=Z,61nm,1.1s						
KIV				pmax	pmax		
	comp=Z,295nm,1.1s						
KIV	Kislovodsk	65.77	309	P	P	10 22 23.1	+1.8
	SNR=22						
NEY	Neytrino	65.88	308	⇓eP	P	10 22 24.4	+2.3
NEY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LVZ	Lovozero	66.59	336	⇓eP	P	10 22 26.5	+0.5
LVZ				pmax	pmax		
	comp=Z,21nm,1.1s						
LPSR	Galich'ya Gora	66.69	319	eP	P	10 22 26.8	0.0
LPSR				pmax	pmax		
	comp=Z,70nm,1.1s						
VSR	Storozhevoye	66.78	317	eP	P	10 22 27.4	-0.1
VSR				pmax	pmax		
	comp=Z,50nm,1.1s						
MOS	Moscow	66.92	322	eP	P	10 22 26.9	-1.3
MOS				pmax	pmax		
	comp=Z,68nm,1.2s						
CAST	Castle Rocks	66.99	29	eP	P	10 22 28.9	+0.3
	comp=Z,19nm,0.9s						
PPLA	Purkeypile	67.02	30	eP	P	10 22 30.4	+1.4
	comp=Z,12nm,0.8s						
APA	Apatity	67.11	335	⇑iP	P	10 22 29.1	-0.1
APA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,400nm,21.0s						
RSO	Redoubt South	67.12	32	eP	P	10 22 31.3	+1.6
COLD	Coldfoot	67.22	25	eP	P	10 22 31.5	+1.5
	comp=Z,6.0nm,1.1s						
TOLK	Toolik Lake Re	67.24	23	eP	P	10 22 30.1	-0.1
	comp=Z,11nm,0.8s						
TOLK	Toolik Lake Re	67.24	23	P	P	10 22 27.3	-2.9
	baz=278						
MLY	Manley	67.33	27	eP	P	10 22 30.6	-0.1
	comp=Z,20nm,1.0s						
SPU	Mount Spurr	67.34	32	eP	P	10 22 30.3	-0.7
BPAW	Bear Paw Mtn.	67.37	28	eP	P	10 22 29.6	-1.3
	comp=Z,14nm,1.0s						
KTH	Kantishna Hill	67.48	29	eP	P	10 22 31.6	-0.2
	comp=Z,13nm,0.9s						
OBN	Obninsk	67.62	322	P	P	10 22 32.8	+0.1
	comp=Z,3.9nm,0.3s,baz=101,slow=6.2,SNR=9.0						
OBN	Obninsk	67.62	322	eP	P	10 22 33.1	+0.5
	comp=Z,22nm,0.8s						
OBN	Obninsk	67.62	322	ceP	P	10 22 31.4	-1.3
OBN				e		10 22 54.8	
OBN				e		10 25 03.6	
OBN				pmax	pmax		
	comp=Z,58nm,1.6s						
OBN				MLR	MLR		
	comp=Z,409nm,19.0s						
KDAK	Kodiak Island	67.65	35	eP	P	10 22 32.3	-0.6
	comp=Z,75nm,1.8s						
KDAK	Kodiak Island	67.65	35	i P	P	10 22 34.1	+1.3
SOC	Sochi	67.95	309	eP	P	10 22 34.8	-0.2
SOC				e		10 25 05.6	
SOC				ePPP	PPP	10 26 41.3	
SOC				eS	S	10 31 34.8	+0.7
SOC				pmax	pmax		
	comp=Z,35nm,0.9s						
SOC				MLR	MLR		
	comp=Z,566nm,21.0s						
BWN	Browne	68.01	28	eP	P	10 22 34.2	-0.8
	comp=Z,17nm,0.8s						
CNPM	China Poot	68.03	33	eP	P	10 22 36.4	+1.2
	comp=Z,12nm,1.0s						
BRLK	Bradley Lake	68.16	33	eP	P	10 22 36.2	+0.1
	comp=Z,20nm,0.9s						
MCK	McKinley	68.32	29	eP	P	10 22 36.2	-0.8
	comp=Z,18nm,1.0s						
MCK	McKinley	68.32	29	eP	P	10 22 36.2	-0.8
MCK				pmax	pmax		
	comp=Z,19nm,1.0s						
MDM	Murphy Dome	68.39	27	eP	P	10 22 36.6	-0.9
	comp=Z,20nm,0.8s						
RND	Reindeer	68.42	29	eP	P	10 22 36.9	-0.8
	comp=Z,40nm,0.8s						
RND	Reindeer	68.42	29	eP	P	10 22 36.9	-0.8
RND				pmax	pmax		
	comp=Z,40nm,0.8s						
RC01	Rabbit Creek A	68.47	31	eP	P	10 22 38.1	+0.1
	comp=Z,9.5nm,1.0s						
WRH	Wood River Hil	68.54	28	eP	P	10 22 37.2	-1.1
	comp=Z,16nm,1.0s						
TCOL	CIGO, UAF Yank	68.56	27	P	P	10 22 37.3	-1.1
	baz=281						
COLA	College	68.56	27	⇑eP	P	10 22 38.9	+0.5
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAYN	Ar Rayn	68.62	287	eP	P	10 22 39.2	-0.4
	comp=Z,47nm,1.3s						
RAYN	Ar Rayn	68.62	287	i P	P	10 22 40.6	+1.0
	SNR=20						
CCB	Clear Creek Bu	68.63	28	eP	P	10 22 38.4	-0.4
	comp=Z,11nm,1.5s						
PMR	Palmer	68.65	31	eP	P	10 22 37.6	-1.4
	comp=Z,12nm,1.0s						
PMR	Palmer	68.65	31	eP	P	10 22 37.6	-1.4
PMR				pmax	pmax		
	comp=Z,12nm,1.0s						
POKR	Poker Plat Res	68.69	27	P	P	10 22 39.7	+0.4
	baz=282						
SEW	Seward	68.80	32	eP	P	10 22 39.1	-0.9
	comp=Z,21nm,1.1s						
SML	Sawmill	68.98	31	eP	P	10 22 40.6	-0.6
	comp=Z,30nm,1.2s						
SML	Sawmill	68.98	31	eP	P	10 22 40.6	-0.6
SML				pmax	pmax		
	comp=Z,30nm,1.2s						
ILAR	Eielson Array	68.99	27	P	P	10 22 40.8	-0.3
	comp=Z,2.2nm,0.8s,baz=298,slow=8.9,SNR=20						
ILB	Eielson Array	68.99	27	eP	P	10 22 40.3	-0.9
	comp=Z,4.6nm,0.9s						
KNK	Knik Glacier	69.00	31	eP	P	10 22 39.8	-1.5
	comp=Z,21nm,1.0s						
HDA	Harding Lake	69.04	28	eP	P	10 22 40.7	-0.8
	comp=Z,16nm,1.0s						
HDA	Harding Lake	69.04	28	P	P	10 22 40.6	-0.8
	baz=282						
DHY	Denali Highway	69.14	29	eP	P	10 22 41.1	-1.2
	comp=Z,7.2nm,0.8s						
FYU	Fort Yukon	69.27	25	eP	P	10 22 43.5	+0.7
	comp=Z,15nm,1.0s						
ANN	Anapa	69.27	311	eP	P	10 22 41.7	-1.5
ANN				eS	S	10 31 49.0	-0.7
ANN				pmax	pmax		
	comp=Z,114nm,1.4s						
PRP	Porcupine Dome	69.39	26	eP	P	10 22 43.5	-0.2
	comp=Z,12nm,1.3s						
SCM	Sheep Creek Mo	69.44	30	eP	P	10 22 43.3	-0.8
	comp=Z,31nm,0.9s						
SCM	Sheep Creek Mo	69.44	30	eP	P	10 22 43.3	-0.8
SCM				pmax	pmax		
	comp=Z,31nm,0.9s						
ARA0	ARCESS Array S	69.57	338	eP	P	10 22 45.1	+0.5
ARCES	ARCESS Array B	69.57	338	P	P	10 22 45.1	+0.5
	comp=Z,9.8nm,0.8s,baz=61,slow=7.6,SNR=21						
PAX	Paxson	70.01	29	eP	P	10 22 47.7	+0.1
	comp=Z,14nm,1.2s						
PAX	Paxson	70.01	29	eP	P	10 22 47.7	+0.1
PAX				pmax	pmax		
	comp=Z,14nm,1.2s						
RIDG	Independent Ri	70.10	28	eP	P	10 22 48.5	+0.4
	comp=Z,22nm,1.0s						
SCRK	Sand Creek	70.40	28	eP	P	10 22 49.1	-0.9
	comp=Z,13nm,1.0s						
EYAK	Cordova Ski Ar	70.49	32	eP	P	10 22 49.0	-1.5
	comp=Z,29nm,1.3s						
MENT	Mentasta	70.80	29	eP	P	10 22 51.2	-1.1
	comp=Z,18nm,0.9s						
EGAK	Eagle	71.36	27	eP	P	10 22 54.5	-1.1
	comp=Z,19nm,0.9s						
SIM	Simferopol'	71.51	312	deP	P	10 22 57.5	+0.6
SIM				pmax	pmax		
	comp=Z,38nm,0.9s						
FIA1	FINESS Array S	71.52	330	eP	P	10 22 55.7	-0.9
	comp=Z,31nm,0.8s						
FIA0	FINESS Array S	71.52	330	eP	P	10 22 57.2	+0.5
FIA0	FINESS Array S	71.52	330	eP	P	10 22 57.2	+0.5
FINES	FINESS Array B	71.52	330	P	P	10 22 57.2	+0.5
	comp=Z,25nm,0.8s,baz=93,slow=7.6,SNR=49						
FINES	FINESS Array B	71.52	330	i P	P	10 22 57.2	+0.5
FINES				pmax	pmax		
	comp=Z,26nm,0.8s						
BALM	Baldy	71.96	31	eP	P	10 22 58.2	-1.2
	comp=Z,13nm,1.1s						
BALM	Baldy	71.96	31	eP	P	10 22 58.3	-1.2
BALM				pmax	pmax		
	comp=Z,13nm,1.1s						
VSU	Vasula	72.08	327	eP	P	10 22 59.4	-0.6
VSU				IAmb	IAmb	10 23 01.4	
	comp=Z,103nm,0.8s						
VSU	Vasula	72.08	327	ceP	P	10 23 00.8	+0.8
VSU				pmax	pmax		
	comp=Z,128nm,0.9s						
DAWY	Dawson	72.31	27	eP	P	10 23 00.9	-0.6
	comp=Z,22nm,0.9s						
EPYK	Eagle Plains	72.59	24	eP	P	10 23 02.6	-0.5
	comp=Z,16nm,0.9s						
EPYK	Eagle Plains	72.59	24	P	P	10 23 02.3	-0.8
	baz=291						
MICGM	Minsk	72.64	322	eP	P	10 23 04.0	+0.5
MICGM				eLR	LR	10 41 20.0	
MNK	Minsk	72.64	322	eP	P	10 23 04.0	+0.5
ILGA	Ilgaz	72.91	308	eP	P	10 23 04.6	-1.1
	comp=Z,35nm,1.3s						

AKASG	Malin Array Be	73.01	318	P	P	10 23 05.5	-0.3
	comp=Z,8.7nm,0.8s,baz=61,slow=6.4,SNR=36						
AKBB	Malin Array Si	73.01	318	eP	P	10 23 05.2	-0.6
	comp=Z,20nm,1.0s						
INK	Inuvik	73.02	22	eP	P	10 23 04.8	-0.7
	comp=Z,19nm,1.1s						
INK	Inuvik	73.02	22	eP	P	10 23 04.8	-0.7
INK				pmax	pmax		
	comp=Z,19nm,1.1s						
IDID	Didziasalis	73.03	323	eP	P	10 23 05.9	+0.1
IDID				IAmb	IAmb	10 23 07.4	
	comp=Z,19nm,0.8s						
IZAR	Zarasai	73.16	324	eP	P	10 23 06.6	+0.1
IZAR				IAmb	IAmb	10 23 08.1	
	comp=Z,10nm,0.6s						
ASF	Jabal al Asfar	73.19	298	P	P	10 23 08.3	+1.0
	comp=Z,8.4nm,0.8s,baz=192,slow=1.7,SNR=14						
ISAL	Salakas	73.28	324	eP	P	10 23 07.2	-0.1
ISAL				IAmb	IAmb	10 23 09.9	
	comp=Z,19nm,1.1s						
BR101	Keskin Array S	73.37	306	eP	P	10 23 09.3	+1.0
BR131	Keskin Array S	73.37	306	eP	P	10 23 08.4	+0.1
	comp=Z,28nm,0.9s						
BR131	Keskin Array S	73.37	306	P	P	10 23 09.7	+1.4
	SNR=19						
BRTR	Keskin Array B	73.37	306	P	P	10 23 09.3	+1.0
	comp=Z,14nm,0.8s,baz=101,slow=6.4,SNR=74						
ANTO	Ankara	73.94	307	eP	P	10 23 12.4	+0.9
	comp=Z,37nm,0.8s						
ANTO	Ankara	73.94	307	⇓iP	P	10 23 12.5	+0.9
ANTO	Ankara	73.94	307	eP	P	10 23 12.4	+0.9
ANTO				pmax	pmax		
	comp=Z,37nm,0.8s						
ANTO	Ankara	73.94	307	P	P	10 23 12.9	+1.3
	SNR=7.5						
MMAI	Mount Meron Ar	74.12	299	P	P	10 23 13.9	+1.2
	comp=Z,3.4nm,0.7s,baz=72,slow=8.1,SNR=4.3						
HYT	Haines Junctio	74.26	30	eP	P	10 23 11.7	-1.4
	comp=Z,20nm,1.1s						
MDUB	Mudurnu	74.91	308	eP	P	10 23 16.2	-1.1
	comp=Z,100nm,0.9s						
CSS	Mathiatis	75.12	302	eP	P	10 23 18.3	-0.1
	comp=Z,52nm,1.2s						
SUW	Suwalki	75.41	323	eP	P	10 23 20.3	+0.6
SUW				LMZ	LR	10 43 20.4	
	comp=Z,1µm,27.5s						
SUW	Suwalki	75.41	323	eP	P	10 23 20.0	+0.3
	comp=Z,144nm,1.1s						
SUW	Suwalki	75.41	323	eP	P	10 23 20.3	+0.6
CFR	Carcaliu	75.47	313	⇑iP	P	10 23 20.6	+0.4
TIRR	Tirgusor	75.53	312	⇓iP	P	10 23 21.4	+0.8
EIL	Elat	75.59	296	P	P	10 23 22.5	+1.3
	comp=Z,9.2nm,1.0s,baz=90,slow=5.6,SNR=7.1						
TLB	Topalu	75.73	313	⇑iP	P	10 23 22.4	+0.7
SKAG	Skagway	75.79	31	eP	P	10 23 21.9	+0.2
	comp=Z,24nm,0.8s						
TESR	Tescani	75.99	315	⇑iP	P	10 23 23.6	+0.4
ICOR	Ion Corvin	76.06	312	⇓iP	P	10 23 24.8	+1.2
VRI	Vrincioaia	76.16	314	⇑iP	P	10 23 25.5	+1.3
YLV	Yalova	76.19	308	⇓iP	P	10 23 24.9	+0.4
BIZ	Bicaz	76.19	315	⇑iP	P	10 23 24.7	+0.4
PLOR	Plostina	76.22	314	⇑iP	P	10 23 25.8	+1.2
ISP	Isparta	76.29	305	eP	P	10 23 24.1	-1.1
	comp=Z,44nm,1.2s						
ISP	Isparta	76.29	305	eP	P	10 23 24.1	-1.1
ISP				pmax	pmax		
	comp=Z,44nm,1.2s						
LVV	L'vov	76.44	319	eP	P	10 23 26.2	+0.5
BUR08	Bucovina Ar. S	76.51	316	eP	P	10 23 25.3	-1.0
	comp=Z,9.8nm,1.0s						
BURAR	Bucovina Array	76.51	316	⇑iP	P	10 23 26.4	+0.1
JIS	Juneau Island	76.72	32	eP	P	10 23 27.5	+0.4
	comp=Z,20nm,1.0s						
SIT	Sitka	76.77	33	eP	P	10 23 29.1	+1.8
	comp=Z,31nm,1.0s						
MLR	Muntele Rosu	76.81	314	P	P	10 23 29.0	+1.0
	comp=Z,12nm,0.8s,baz=350,slow=2.9,SNR=17						
MLR	Muntele Rosu	76.81	314	eP	P	10 23 28.0	-0.1
	comp=Z,16nm,0.9s						
MLR	Muntele Rosu	76.81	314	⇑iP	P	10 23 28.9	+0.9
MLR	Muntele Rosu	76.81	314	eP	P	10 23 28.0	-0.1
MLR				pmax	pmax		
	comp=Z,16nm,0.9s						
SECR		76.89	314	⇑iP	P	10 23 30.0	+1.6
DOPR	Dopca	77.00	315	⇓iP	P	10 23 29.3	+0.3
KWP	Kalwaria Pacla	77.31	319	eP	P	10 23 31.6	+1.0
KWP				LMZ	LR	10 45 16.4	
	comp=Z,1µm,25.7s						
KWP	Kalwaria Pacla	77.31	319	eP	P	10 23 31.5	+0.8
	comp=Z,342nm,0.6s						
KWP	Kalwaria Pacla	77.31	319	eP	P	10 23 31.6	+1.0
VOIR		77.42	314	⇑iP	P	10 23 31.5	+0.1
BEL	Belsk	77.58	321	eP	P	10 23 33.2	+1.2
BEL	Belsk	77.58	321	eP	P	10 23 33.2	+1.2
BALB	Balikesir	77.58	308	eP	P	10 23 33.1	+0.8
	comp=Z,174nm,1.3s						
ELND	Elena	77.79	312	⇑iP	P	10 23 34.4	+1.0
HUMR	Humele	77.80	313	⇓iP	P	10 23 33.6	+0.2
UZH	Uzhgorod	77.95	318	eP	P	10 23 37.1	+2.9
UZH				e		10 23 42.1	
UZH				e		10 26 34.1	
UZH				eS	S	10 33 28.7	+1.0
NC405	NORSAR Array S	78.04	332	eP	P	10 23 33.7	-0.7
	comp=Z,48nm,0.8s						
NC303	NORSAR Array S	78.13	332	eP	P	10 23 35.1	+0.1
	comp=Z,155nm,2.0s						
LOT	Lotru	78.25	315	⇓iP	P	10 23 36.8	+0.7
NB201	NORSAR Array S	78.25	332	eP	P	10 23 34.8	-0.9
	comp=Z,209nm,1.9s						
NB2	NORSAR Subarra	78.29	332	P	P	10 23 36.0	+0.1
	comp=Z,3.7nm,0.7s,baz=59,slow=5.6						
NB200	NORSAR Array S	78.29	332	eP	P	10 23 36.3	+0.4
NOA	NORSAR Array B	78.29	332	P	P	10 23 36.3	+0.4
	comp=Z,9.6nm,0.8s,baz=60,slow=5.5,SNR=23						
NC204	NORSAR Array S	78.36	333	eP	P	10 23 34.4	-1.9
	comp=Z,62nm,1.3s						
WRAK	Wrangell Islan	78.52	33	eP	P	10 23 36.3	-0.9
	comp=Z,12nm,0.9s						
EZN	Ezine	78.63	309	⇑iP	P	10 23 38.8	+0.7
DLBC	Dease Lake	78.71	31	eP	P	10 23 37.1	-1.2
	comp=Z,12nm,0.9s						
OJC	Ojcow	78.80	320	eP	P	10 23 39.2	+0.3
OJC				LMZ	LR	10 46 04.7	
	comp=Z,2µm,27.6s						
OJC	Ojcow	78.80	320	eP	P	10 23 38.0	-0.9
	comp=Z,27nm,0.9s						
OJC	Ojcow	78.80	320	eP	P	10 23 39.2	+0.3
NIE	Niedzica	78.84	319	eP	P	10 23 40.2	+1.1
NIE	Niedzica	78.84	319	eP	P	10 23 40.2	+1.1
GZR	Gura Zlata	78.91	315	⇑iP	P	10 23 39.9	+0.2
PSZ	Piszkesteto	79.70	318	eP	P	10 23 42.1	-1.9
	comp=Z,20nm,1.3s						
PSZ	Piszkesteto	79.70	318	eP	P	10 23 42.1	-1.9
PSZ				pmax	pmax		
	comp=Z,20nm,1.3s						
VTS	Vitosha	79.70	312	eP	P	10 23 41.8	-2.4
	comp=Z,23nm,1.0s						
VTS	Vitosha	79.70	312	⇓iP	P	10 23 45.3	+1.1
VTS	Vitosha	79.70	312	eP	P	10 23 41.8	-2.4
VTS				pmax	pmax		
	comp=Z,23nm,1.0s						
MDVR	Moldovita	79.85	315	⇑iP	P	10 23 44.7	-0.1
VYHS	Vyhne	80.10	319	eP	P	10 23 47.3	+1.2
VYHS				pmax	pmax		
	comp=Z,14nm,1.1s						
VYHS	Vyhne	80.10	319	eP	P	10 23 47.2	+1.2
MORC	Moravsky Berou	80.31	320	eP	P	10 23 46.8	-0.3
	comp=Z,13nm,1.1s						
MORC	Moravsky Berou	80.31	320	⇑iP	P	10 23 47.9	+0.7
MORC	Moravsky Berou	80.31	320	eP	P	10 23 46.8	-0.3
MORC				pmax	pmax		
	comp=Z,13nm,1.1s						
MORC	Moravsky Berou	80.31	320	eP	P	10 23 47.9	+0.7
KSP	Ksiaz	80.55	322	eP	P	10 23 49.1	+0.7
KSP				LMZ	LR	10 48 38.8	
	comp=Z,2µm,23.0s						
KSP	Ksiaz	80.55	322	eP	P	10 23 49.1	+0.7
JAVC	Velka Javorina	80.64	319	eP	P	10 23 51.1	+2.1
VAY	Valandovo	80.68	311	i P	P	10 23 49.6	+0.4
OSTC	Ostas	80.72	321	eP	P	10 23 51.3	+2.0
DPC	Dobruska-Polom	80.76	321	eP	P	10 23 50.6	+1.0
DPC	Dobruska-Polom	80.76	321	eP	P	10 23 50.6	+1.0
CHVC	Chvalec	80.80	322	eP	P	10 23 50.7	+0.9
CHVC				ex	x	10 23 54.5	
UPC	Upice	80.86	321	eP	P	10 23 51.3	+1.2
UPC	Upice	80.86	321	eP	P	10 23 51.3	+1.2
VRAC	Vranov	81.07	320	⇑iP	P	10 23 52.8	+1.6
VRAC	Vranov	81.07	320	eP	P	10 23 52.5	+1.3
MODS	Modra-Piesok	81.09	319	eP	P	10 23 51.5	+0.2
MODS				pmax	pmax		
	comp=Z,13nm,1.3s						
MODS	Modra-Piesok	81.09	319	eP	P	10 23 51.5	+0.2
URZ	Urewera	81.15	139	P	P	10 23 50.5	-1.1
	comp=Z,6.3nm,0.9s,baz=97,slow=22,SNR=6.8						
SKO	Skopje	81.19	312	i P	P	10 23 52.8	+0.9
ZST	Bratislava	81.27	319	eP	P	10 23 53.1	+0.8
ZST	Bratislava	81.27	319	eP	P	10 23 53.0	+0.8
KRUC	Moravsky	81.30	320	eP	P	10 23 53.5	+1.1
RPZ	Rata Peaks	81.49	146	P	P	10 23 52.7	-0.6
	comp=Z,10nm,0.9s,baz=315,slow=1.4,SNR=3.2						
TREC	Trest	81.72	321	eP	P	10 23 50.8	-3.9
TREC				e		10 23 55.8	
TREC	Trest	81.72	321	eP	P	10 23 50.8	-3.9
TREC				epP	pP	10 23 55.8	-2.3
AGG	Agios Georgios	81.79	309	eP	P	10 23 54.0	-1.2
	comp=Z,20nm,1.1s						
AGG	Agios Georgios	81.79	309	eP	P	10 23 54.1	-1.2
AGG				pmax	pmax		
	comp=Z,20nm,1.1s						
BRG	Berggiesshubel	81.86	322	eP	P	10 23 55.9	+0.6
	comp=Z,9.6nm,1.4s						
	comp=N,903nm,19.9s						
	comp=E,420nm,24.2s						
	comp=Z,2µm,22.0s						
BRG	Berggiesshubel	81.86	322	eP	P	10 23 55.9	+0.6
BRG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,903nm,19.9s						
BRG				MLR	MLR		
	comp=E,420nm,24.2s						
BRG				MLR	MLR		
	comp=Z,2µm,22.0s						
PRU	Pruhonice	81.94	321	eP	P	10 23 56.3	+0.5
PRU				e		10 24 03.1	
PRU	Pruhonice	81.94	321	eP	P	10 23 56.3	+0.5
PRU				ex	x	10 24 03.1	
CONA	Conrad Observa	82.13	319	i pP	P	10 23 58.0	+1.0
	comp=Z,11nm,1.4s						
CLL	Collm	82.17	323	eP	P	10 23 56.8	-0.1
	comp=Z,7.7nm,0.9s						
CLL	Collm	82.17	323	eP	P	10 23 57.0	+0.1
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CLL	Collm	82.17	323	i P	P	10 23 57.1	+0.1
	comp=Z,8.0nm,1.0s						
CLL				i (PcP)	PcP	10 24 02.4	+0.1
CLL				ePP	PP	10 27 05.0	+0.4
SUMG	Summit	82.44	354	eP	P	10 23 56.4	-2.1
	comp=Z,6.1nm,0.9s						
SUMG	Summit	82.44	354	eP	P	10 23 56.4	-2.1
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARSA	Arzberg	82.65	319	i pP	P	10 24 00.2	+0.6
	comp=Z,3.8nm,0.9s						
YKW3	Yellowknife Ar	82.72	23	eP	P	10 23 57.7	-1.8
	comp=Z,8.0nm,0.8s						
YKA	Yellowknife Ar	82.77	23	P	P	10 23 58.9	-0.9
	comp=Z,5.0nm,0.7s,baz=314,slow=4.8,SNR=20						
YKB5	Yellowknife Ar	82.77	23	eP	P	10 23 58.9	-0.9
ITM	Ithomi	82.85	307	eP	P	10 23 59.1	-1.7
	comp=Z,27nm,0.7s						
KHC	Kasperske Hory	82.90	321	eP	P	10 23 59.2	-1.7
	comp=Z,2.5nm,1.0s						
KHC	Kasperske Hory	82.90	321	eP	P	10 24 01.4	+0.5
KHC	Kasperske Hory	82.90	321	eP	P	10 24 01.4	+0.5
GEC2	GERESS Array S	82.97	321	eP	P	10 24 00.9	-0.4
	comp=Z,10nm,1.1s						
GEC2	GERESS Array S	82.97	321	eP	P	10 24 00.9	-0.4
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GERES	GERESS Array B	82.97	321	P	P	10 24 01.9	+0.6
	comp=Z,4.0nm,0.9s,baz=57,slow=4.9,SNR=12						
MOA	Molln	83.12	320	epP	P	10 24 03.0	+1.0
	comp=Z,10nm,1.1s						
SOKA	Soboth	83.22	318	i pP	P	10 24 03.1	+0.5
	comp=Z,6.7nm,1.0s						
OBKA	Obir	83.59	318	epP	P	10 24 04.8	+0.3
	comp=Z,7.6nm,1.1s						
KBA	Koelnbreinsper	84.04	319	i pP	P	10 24 07.0	+0.1
	comp=Z,4.2nm,1.1s						
MYKA	Terra Mystica	84.08	319	i pP	P	10 24 06.9	-0.2
	comp=Z,9.8nm,1.5s						
ABPO	Ambohimpanom	84.19	246	i P	P	10 24 09.0	+0.9
ABTA	Abfaltersbach	84.70	319	ePcP	P	10 24 10.2	0.0
	comp=Z,4.5nm,1.0s						
WATA	Walderalm	84.95	320	ePcP	P	10 24 12.2	+0.7
	comp=Z,7.3nm,1.1s						
WTTA	Wattenberg	84.96	320	ePcP	P	10 24 11.9	+0.4
	comp=Z,9.0nm,1.1s						
MOTA	Moosalm	85.23	320	ePcP	P	10 24 12.9	0.0
	comp=Z,3.5nm,0.9s						
KMBO	Kilima Mbogo	85.23	267	P	P	10 24 14.1	+0.5
	comp=Z,1.8nm,0.3s,baz=35,slow=6.7,SNR=8.2						
KMBO	Kilima Mbogo	85.23	267	P	P	10 24 15.3	+1.7
KMBO	Kilima Mbogo	85.23	267	i P	P	10 24 15.6	+2.0
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FETA	Feichten	85.61	320	i PcP	P	10 24 14.6	-0.3
	comp=Z,6.2nm,1.0s						
BFO	Black Forest	86.29	322	i P	P	10 24 19.4	+1.4
LLLB	Lillooet	86.86	35	eP	P	10 24 19.7	-1.1
	comp=Z,14nm,1.0s						
D03D	Eldon	87.96	38	P	P	10 24 26.8	+0.7
	baz=304						
B05A	Bryant	88.10	37	P	P	10 24 26.6	-0.1
	baz=305						
D05A	Enumclaw	88.78	38	eP	P	10 24 30.4	+0.4
	comp=Z,33nm,0.9s						
E04D	Cinebar	88.81	38	P	P	10 24 30.2	+0.1
	baz=305						
LON	Longmire	89.13	38	eP	P	10 24 31.5	-0.2
	comp=Z,13nm,1.0s						
LON	Longmire	89.13	38	eP	P	10 24 31.5	-0.2
LON				pmax	pmax		
	comp=Z,13nm,1.0s						
LTY	Liberty	89.47	37	eP	P	10 24 32.8	-0.5
	comp=Z,13nm,0.9s						
F05D	White Salmon	89.83	38	P	P	10 24 36.5	+1.6
	baz=306						
H04D	Lebanon	89.87	40	P	P	10 24 36.9	+1.8
	baz=305						
I03D	Drain, OR	89.98	41	P	P	10 24 35.4	-0.3
	baz=304						
H04A	Detroit Lake	90.11	40	eP	P	10 24 37.1	+0.8
	comp=Z,24nm,1.3s						
G05D	Wamic, OR	90.28	39	P	P	10 24 38.4	+1.2
	baz=306						
C09A	Chrisman Ranch	90.43	36	eP	P	10 24 36.8	-1.0
	comp=Z,26nm,1.2s						
I04A	Tendick Farm,	90.48	41	P	P	10 24 38.7	+0.6
	baz=305						
D08A	Wollman Farm,	90.54	36	eP	P	10 24 37.8	-0.4
HAWA	Hanford	90.61	37	eP	P	10 24 38.9	+0.4
	comp=Z,17nm,0.9s						
NEW	Newport	90.75	35	eP	P	10 24 39.6	+0.4
	comp=Z,18nm,1.0s						
NEW	Newport	90.75	35	eP	P	10 24 39.6	+0.4
NEW				pmax	pmax		
	comp=Z,17nm,1.0s						
NEW	Newport	90.75	35	P	P	10 24 39.3	+0.1
	baz=309						
I05D	Terrebonne, OR	90.80	40	P	P	10 24 39.1	-0.4
	baz=306						
J04D	Umpqua Nationa	90.98	41	P	P	10 24 41.5	+0.8
	baz=305						
E09A	Wood Farm, Sta	91.30	37	eP	P	10 24 41.8	+0.1
	comp=Z,18nm,1.0s						
PINE	Pine Mountain	91.35	40	eP	P	10 24 43.5	+1.1
	comp=Z,51nm,1.3s						
L04D	Klamath Falls	91.45	42	P	P	10 24 43.5	+0.7
	baz=305						
J05D	Fort Rock, OR	91.48	41	P	P	10 24 43.7	+0.9
	baz=306						
YBH	Yreka Blue Hor	91.48	42	eP	P	10 24 43.9	+1.1
	comp=Z,19nm,1.3s						
YBH	Yreka Blue Hor	91.48	42	eP	P	10 24 43.9	+1.1
YBH				pmax	pmax		
	comp=Z,19nm,1.3s						
M02C	Callahan	91.58	43	P	P	10 24 44.4	+1.1
	baz=305						
M04C	Macdoel	91.98	42	P	P	10 24 46.6	+1.4
	baz=305						
F10A	Beach Ranch, E	92.13	37	eP	P	10 24 46.7	+0.9
	comp=Z,6.6nm,0.8s						
O02D	Mt. Diablo Mer	92.31	44	P	P	10 24 47.7	+1.0
	baz=305						
KEST	Kesra	92.44	311	P	P	10 24 46.7	-0.7
	comp=Z,1.2nm,0.4s,baz=66,slow=18,SNR=2.3						
KEST	Kesra	92.44	311	eP	P	10 24 46.7	-0.7
	comp=Z,27nm,1.9s						
BMO	Blue Mountains	92.79	38	eP	P	10 24 49.2	+0.4
	comp=Z,7.7nm,0.8s						
BMO	Blue Mountains	92.79	38	eP	P	10 24 49.2	+0.4
BMO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MOD	Modoc Plateau	92.84	41	eP	P	10 24 46.8	-2.4
	comp=Z,39nm,1.5s						
O03E	Paynes Creek	92.87	43	P	P	10 24 49.4	+0.1
	baz=305						
J08A	Circle Bar Ran	93.05	39	eP	P	10 24 50.1	0.0
	comp=Z,9.9nm,0.8s						
MSO	Missoula	93.33	35	eP	P	10 24 50.1	-1.1
	comp=Z,11nm,1.1s						
MSO	Missoula	93.33	35	P	P	10 24 52.2	+0.9
	baz=311						
WVOR	Wild Horse Val	93.52	40	eP	P	10 24 51.8	-0.4
	comp=Z,7.4nm,1.0s						
WVOR	Wild Horse Val	93.52	40	eP	P	10 24 51.8	-0.4
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BEKR	Beckworth	94.01	43	eP	P	10 24 53.6	-1.1
	comp=Z,10nm,0.9s						
AFDM	Forest Hills D	94.17	44	eP	P	10 24 54.4	-0.8
	comp=Z,8.1nm,1.2s						
HRY	Holter Researc	94.48	34	eP	P	10 24 56.0	-0.6
EGMT	Eagleton	94.60	32	eP	P	10 24 56.9	-0.2
	comp=Z,9.5nm,0.9s						
EGMT	Eagleton	94.60	32	P	P	10 24 56.8	-0.2
	baz=314						
RUBR	Rubicon Trail	94.62	43	eP	P	10 24 56.8	-0.8
	comp=Z,11nm,0.9s						
PAHR	Pah Rah Range	94.71	43	eP	P	10 24 56.9	-1.0
	comp=Z,9.6nm,1.0s						
VCNR	Virginia City	94.79	43	eP	P	10 24 57.0	-1.3
	comp=Z,6.9nm,0.9s						
PNTR	Pine Nut	94.95	43	eP	P	10 24 56.9	-2.1
	comp=Z,10.0nm,1.0s						
CMB	Columbia Colle	95.08	44	eP	P	10 24 57.5	-1.9
	comp=Z,8.6nm,1.0s						
CMB	Columbia Colle	95.08	44	eP	P	10 24 57.5	-1.9
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HLID	Hailey	95.21	37	P	P	10 25 01.0	+0.9
	baz=311						
BOZ	Bozeman (W)	95.34	34	eP	P	10 24 57.7	-2.9
	comp=Z,2.8nm,1.0s						
BOZ	Bozeman (W)	95.34	34	eP	P	10 24 57.7	-2.9
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOZ	Bozeman (W)	95.34	34	P	P	10 25 01.1	+0.4
	baz=313						
WAKR	Walker	95.40	44	eP	P	10 24 59.5	-1.6
	comp=Z,3.7nm,0.8s						
RYN	Ryan	95.90	43	eP	P	10 25 01.6	-1.6
	comp=Z,5.5nm,1.0s						
KVN	Kaiserville	95.90	42	eP	P	10 25 01.5	-1.8
	comp=Z,9.2nm,1.2s						
KVN	Kaiserville	95.90	42	eP	P	10 25 01.5	-1.8
KVN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
YHB	Horse Butte	96.14	35	eP	P	10 25 02.9	-1.5
	comp=Z,6.6nm,1.1s						
MDPB	Devils Postpil	96.15	44	eP	P	10 25 03.7	-0.8
	comp=Z,5.2nm,1.2s						
NV01	Mina Array Sit	96.15	43	eP	P	10 25 04.5	0.0
NVAR	Mina Array Bea	96.15	43	P	P	10 25 04.5	0.0
	comp=Z,2.3nm,0.8s,baz=282,slow=4.8,SNR=20						
NV11	Mina Array Sit	96.25	43	eP	P	10 25 03.8	-1.1
	comp=Z,0.3nm,1.2s						
RLMT	Red Lodge	96.88	34	P	P	10 25 07.6	0.0
	baz=315						
CWC	Cottonwood Cre	97.50	45	P	P	10 25 10.3	-0.3
	baz=308						
GRAC	Grapevine Rang	97.62	44	P	Pdif	10 25 11.8	+0.7
	baz=308						
R11A	Troy Canyon, C	97.88	42	P	Pdif	10 25 13.4	+1.0
	baz=309						
SCZ2	Santa Cruz Isl	97.94	47	P	Pdif	10 25 13.3	+0.8
	baz=306						
MPMC	Manual Prospec	98.11	45	P	P	10 25 13.3	-0.1
	baz=308						
DUG	Dugway, Tooele	98.32	39	P	Pdif	10 25 16.6	+2.4
	baz=312						
TPNV	Topopah Spring	98.35	43	P	Pdif	10 25 15.3	+0.9
	baz=309						
BW06	Boulder Array	98.37	35	P	P	10 25 14.5	0.0
	baz=314						
PD31	Pinedale Array	98.37	35	eP	P	10 25 13.9	-0.5
PDAR	Pinedale Array	98.37	35	P	P	10 25 13.9	-0.5
	comp=Z,0.4nm,0.8s,baz=229,slow=1.4,SNR=4.1						
EDW2	Edwards Air Fo	98.50	46	P	Pdif	10 25 16.1	+1.0
	baz=307						
SHOC	Shoshone, Teco	98.99	44	P	Pdif	10 25 18.7	+1.6
	baz=309						
GSC	Goldstone, Bar	99.02	45	P	Pdif	10 25 18.5	+1.1
	baz=308						
TUQ	Turquoise Moun	99.50	44	P	Pdif	10 25 19.0	-0.5
	baz=309						
GMRC	Granite Mounta	100.07	45	P	Pdif	10 25 21.4	-0.7
	baz=309						
IRM	Iron Mountain	100.80	45	P	Pdif	10 25 26.1	+0.9
	baz=309						
U15A	North Rim	101.12	42	ePdif	Pdif	10 25 24.7	-2.3
VNDA	Vanda	104.34	172	PP	PP	10 29 58.2	-0.3
	comp=Z,1.2nm,1.0s,baz=335,slow=8.1,SNR=5.1						
TOA1	Torodi Ar. Sit	110.47	296	ePP	PP	10 30 46.4	+1.9
TORD	Torodi Ar. Bea	110.47	296	PP	PP	10 30 46.4	+1.9
	comp=Z,0.9nm,0.8s,baz=73,slow=5.1,SNR=5.1						
QSPA	South Pole Qui	114.06	180	PKP	PKPdf	10 30 13.7	-1.0
	comp=Z,2.7nm,1.0s,baz=273,slow=1.6,SNR=8.4						
DBBC	Dabeiba	144.41	31	eP	PKPdf	10 31 13.5	+0.1
SOLC	Bahia Solano	144.50	34	eP	PKPab	10 31 10.2	-1.5
SDV	Santo Domingo	144.97	21	ePKPbc	PKPab	10 31 12.7	-0.9
SDV	Santo Domingo	144.97	21	eP	PKPab	10 31 12.2	-1.4
HELC	Santa Helena	145.45	31	eP	PKiKP	10 31 19.5	0.0
PTBC	PUERTO BERRIO,	145.63	29	eP	PKPdf	10 31 12.9	-2.6
BARC	Barichara	146.13	27	eP	PKPbc	10 31 17.5	+0.1
PLMC	San Jos del P	146.21	33	eP	PKPdf	10 31 16.9	+0.4
NORC	Norcasia	146.31	30	eP	PKPdf	10 31 16.9	+0.2
GUY2C	Guyana, Caldas	146.38	31	eP	PKPdf	10 31 16.9	-0.4
MALC	Bahia Malaga	146.42	36	eP	PKiKP	10 31 20.2	-0.9
RUSC	La Rusia	146.81	27	eP	PKPdf	10 31 17.5	-0.5
YOTC	Yotoco, Valle	146.96	34	eP	PKPdf	10 31 17.5	-0.3
ROSC	El Rosal	147.20	30	PKPbc	PKPdf	10 31 19.1	+0.5
	comp=Z,6.3nm,0.5s,baz=43,slow=1.6,SNR=6.3						
ROSC	El Rosal	147.20	30	ePKPdf	PKPdf	10 31 18.1	-0.4
ORTC	Ortega, Tolima	147.58	32	eP	PKPdf	10 31 19.5	+0.8
CHIC	Chingaza	147.66	29	eP	PKPbc	10 31 20.9	-1.2
PRAC	Prado	147.92	32	eP	PKPbc	10 31 21.5	-0.8
POPC	Popayan, Colom	148.01	36	eP	PKPbc	10 31 21.5	-1.2
BBAC	Balboa, Cauca	148.13	38	eP	PKPbc	10 31 21.5	-1.5
VILC	Villavicencio,	148.13	30	eP	PKPbc	10 31 22.2	-0.8
BETC	Betania	148.53	34	eP	PKPbc	10 31 22.2	-1.7
USHA	Ushuaia	148.59	169	PKPbc	PKPbc	10 31 22.2	-0.5
	comp=Z,35nm,0.9s,baz=183,slow=2.4,SNR=7.6						
FLOC	Florencia	149.36	35	eP	PKPbc	10 31 26.2	+0.2
MACC	Macarena, Meta	149.79	32	eP	PKPbc	10 31 25.5	-1.5
GO09	Cerro Castillo	151.01	162	ePKPbc	PKPbc	10 31 28.2	-0.5
LPAZ	La Paz	167.96	51	PKPab	PKPab	10 32 50.2	-1.1
	comp=Z,3.0nm,0.9s,baz=348,slow=5.0,SNR=6.4						
LPAZ	La Paz	167.96	51	ePKPab	PKPab	10 32 47.2	-4.1
LPAZ	La Paz	167.96	51	ePKP2	PKPab	10 32 47.2	-4.1

UCR 16 10:24:12.1±1.7, 10°.57N×85°.53W, h83^{km}±9^{km}, MW3.5, 7C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUEV	Buena Vista	0.26	28	⇑iP	Pn	10 24 24.5	-0.1
BUEV				eS	Sn	10 24 33.2	-0.6
GB1A	Borinquen Arri	0.28	28	⇑eP	Pn	10 24 24.7	0.0
GB1A				eS	Sn	10 24 33.5	-0.5
CUI	Cuipilapa	0.37	76	⇑iP	Pn	10 24 25.1	-0.1
CUI				eS	Sn	10 24 34.5	-0.4
MESS	Mesas	0.37	63	⇑eP	Pn	10 24 25.0	-0.2
MESS				eS	Sn	10 24 34.7	-0.2

JTS	**Las Juntas de**	**0.63**	**116**	⇑*i*P	Pn	10 24 27.6	+0.3
JTS				*e*S	Sn	10 24 38.4	-0.3
ARE1	**Arenal 1**	**0.81**	**98**	⇑*i*P	Pn	10 24 29.3	+0.2
ARE1				*e*S	Sn	10 24 42.3	+0.5
CEDE	**Laguna Cedeo**	**0.82**	**96**	⇑*i*P	Pn	10 24 29.6	+0.3
CEDE				*e*S	Sn	10 24 42.1	0.0
SRA1	**San Ramn**	**1.14**	**115**	*e*P	Pn	10 24 33.1	0.0
SRA1				*e*S	Sn	10 24 48.8	-0.1
ACON	**Acoyapa**	**1.43**	**14**	*e*P	Pn	10 24 35.2	-1.5
LCR2	**La Lucha 2**	**1.71**	**119**	*e*P	Pn	10 24 40.8	+0.2
LCR2				*e*S	Sn	10 25 02.7	+0.7
ESPN	**Las Esperanzas**	**2.02**	**37**	*e*P	Pn	10 24 43.1	-1.2
DRK0	**Durika**	**2.60**	**120**	*e*P	Pn	10 24 54.6	+2.4

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*ISCJB **16** 10:24:51.6±0.4, 60°.28S±0°.07×26°.8W±0°.1, h10^{km}, mb4.6/34, Error ellipse: s-maj=11.1km s-min=8.1km az=23.4*

*IDC **16** 10:24:51.6±0.5, 60°.31S×26°.73W, h0^{km}, mb4.4/10, mb1 4.5/10, mb1mx4.3/22, mbtmp4.4/10, Error ellipse: s-maj=22.6km s-min=17.3km az=69.0*

*NEIC **16** 10:24:57.3±1.2, 60°.28S×26°.85W, h35^{km}±1^{km}, mb4.8/29, Error ellipse: s-maj=16.5km s-min=12.7km az=47.0*

ISC 16 10:24:55.3±0.6**, 60°.28S**±0°.09×**26°.87W**±0°.09**, h22**^{km}±4^{km}**, h23**^{km}**:pP-P, n89,** σ0.^{s}**85**/94**, mb4.7**/34**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.95**	**315**	*e*Pn	**Pn**	**10 26 50.0**	**+0.8**
VNA1	**Neumayer--Stat**	**12.88**	**152**	P	Pn	10 27 50.3	-6.4
VNA3	**Neumayer Olymp**	**13.00**	**155**	P	Pn	10 27 51.4	-7.0
VNA2	**Neumayer--Watz**	**13.28**	**151**	P	Pn	10 27 55.2	-6.9
	baz=303,slow=15						
VNA2				S	Sn	10 30 06.9	-22
	baz=313,slow=19						
SNAA	**Sanae**	**14.88**	**150**	P	Pn	10 28 16.9	-7.2
SNAA	**Sanae**	**14.88**	**150**	Pn	Pn	10 28 17.0	-7.0
	5.4nm,0.3s,baz=312,slow=15,SNR=97						
SNAA				Sn	Sn	10 30 49.3	-19
	0.6nm,0.3s,baz=283,slow=20,SNR=2.4						
SNAA	**Sanae**	**14.88**	**150**	*e*Pn	Pn	10 28 17.2	-6.9
PMSA	**Palmer Station**	**17.54**	**239**	*e*Pn	**Pn**	**10 28 57.7**	**-0.3**
	3.0nm,0.6s						
GO09	**Cerro Castillo**	**26.60**	**269**	*e*P	**P**	**10 30 31.1**	**-0.5**
	16nm,1.1s						
QSPA	**South Pole Qui**	**29.96**	**180**	P	**P**	**10 31 01.3**	**-0.3**
	3.9nm,0.4s,baz=322,slow=0.4,SNR=41						
QSPA	**South Pole Qui**	**29.96**	**180**	*e*P	**P**	**10 31 01.7**	**+0.1**
	9.9nm,0.7s						
TRQA	**Tornquist**	**31.35**	**299**	*e*P	**P**	**10 31 12.9**	**-1.0**
	4.1nm,1.1s						
MAW	**Mawson**	**36.71**	**140**	P	**P**	**10 31 58.4**	**-1.6**
	2.7nm,0.8s,baz=271,slow=9.5,SNR=5.2						
MAW	**Mawson**	**36.71**	**140**	*e*P	**P**	**10 31 59.5**	**-0.5**
	1.5nm,1.0s						
GO05	**Huala**	**38.36**	**291**	*e*P	**P**	**10 32 13.1**	**-1.3**
	12nm,0.9s						
PEL	**Peldehue**	**39.33**	**294**	*e*P	**P**	**10 32 23.6**	**+1.0**
	20nm,0.9s						
SPB	**Sao Paulo**	**39.37**	**329**	*e*P	**P**	**10 32 22.7**	**-0.2**
	12nm,1.0s						
CPUP	**Villa Florida**	**39.83**	**315**	P	**P**	**10 32 27.1**	**+0.4**
	6.3nm,0.7s,baz=158,slow=5.9,SNR=18						
CPUP	**Villa Florida**	**39.83**	**315**	*e*P	**P**	**10 32 26.7**	**0.0**
SBA	**Scott Base**	**41.86**	**184**	*e*P	**P**	**10 32 44.9**	**+2.0**
	5.2nm,1.1s						
GO04	**Tololo Observa**	**41.90**	**296**	*e*P	**P**	**10 32 44.4**	**+0.4**
	20nm,1.1s						
VNDA	**Vanda**	**42.34**	**183**	P	**P**	**10 32 47.3**	**+0.5**
	2.8nm,0.6s,baz=182,slow=6.4,SNR=34						
VNDA	**Vanda**	**42.34**	**183**	*e*P	**P**	**10 32 46.9**	**0.0**
	3.0nm,0.8s						
LCO	**Las Campanas**	**42.84**	**297**	*e*P	**P**	**10 32 52.3**	**+0.5**
	19nm,1.1s						
GO03	**Copiap**	**43.86**	**298**	*e*P	**P**	**10 33 00.3**	**+0.6**
	10nm,0.7s						
GO02	**Mina Guanaco**	**45.70**	**301**	*e*P	**P**	**10 33 14.8**	**0.0**
	29nm,0.6s						
BOSA	**Boshof**	**47.00**	**72**	P	**P**	**10 33 23.9**	**-0.7**
	2.0nm,0.5s,baz=247,slow=5.2,SNR=4.1						
PB10	**IPOC Station P**	**47.56**	**301**	*e*P	**P**	**10 33 30.0**	**+1.0**
	12nm,0.8s						
LVC	**Limon Verde**	**47.67**	**303**	*e*P	**P**	**10 33 30.5**	**+0.3**
	9.3nm,0.8s						
PB04	**IPOC Station P**	**48.44**	**302**	*e*P	**P**	**10 33 36.3**	**+0.4**
	33nm,0.9s						
WIN	**Windhoek**	**48.52**	**59**	*e*P	**P**	**10 33 37.0**	**+0.4**
	6.1nm,1.0s						
PB01	**IPOC Station P**	**49.30**	**303**	*e*P	**P**	**10 33 42.8**	**+0.4**
	19nm,0.7s						
CASY	**Casey**	**49.87**	**159**	*e*P	**P**	**10 33 47.8**	**+1.6**
	3.9nm,0.8s						
LBTB	**Lobatse**	**50.21**	**69**	P	**P**	**10 33 48.9**	**-0.5**
	6.6nm,1.1s,baz=193,slow=8.5,SNR=3.9						
GO01	**Chusmiza**	**50.41**	**305**	*e*P	**P**	**10 33 51.8**	**+0.4**
	10nm,0.6s						
PB11	**IPOC Station P**	**50.52**	**304**	*e*P	**P**	**10 33 52.0**	**+0.2**
	14nm,1.0s						
MNMC	**Minye Minye**	**51.06**	**304**	*e*P	**P**	**10 33 56.4**	**+0.5**
	35nm,0.6s						
H10S2	**ASCENSION HYDR**	**52.03**	**15**	T	T	11 30 45.2	
	baz=188						
H10S3	**ASCENSION HYDR**	**52.03**	**15**	T	T	11 30 33.1	
	baz=188,slow=74						
H10S1	**ASCENSION HYDR**	**52.05**	**15**	T	T	11 30 46.5	
	baz=188,slow=74						
LPAZ	**La Paz**	**53.03**	**308**	P	**P**	**10 34 11.5**	**+0.4**
	5.9nm,0.6s,baz=127,slow=5.2,SNR=36						
LPAZ	**La Paz**	**53.03**	**308**	*e*P	**P**	**10 34 11.4**	**+0.4**
	13nm,1.0s						
LSZ	**Lusaka**	**59.84**	**66**	*e*P	**P**	**10 34 58.9**	**-0.1**
	8.0nm,1.1s						
NNA	**Nana**	**60.49**	**301**	*e*P	**P**	**10 35 01.9**	**-1.5**
	12nm,1.1s						
PTGA	**Pitinga**	**64.63**	**323**	*e*P	**P**	**10 35 30.1**	**-0.9**
	2.4nm,0.7s						
DBIC	**Dimbokro**	**68.97**	**24**	P	**P**	**10 35 58.8**	**+0.3**
	2.8nm,0.6s,baz=201,slow=8.6,SNR=3.5						
TOA0	**Torodi Ar. Sit**	**76.68**	**29**	*e*P	**P**	**10 36 45.4**	**+1.2**
	7.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**76.68**	**29**	P	**P**	**10 36 44.6**	**+0.4**
	3.3nm,0.5s,baz=200,slow=6.7,SNR=25						
TOA1	**Torodi Ar. Sit**	**76.69**	**29**	*e*P	**P**	**10 36 44.6**	**+0.4**
SDV	**Santo Domingo**	**77.14**	**315**	*e*P	**P**	**10 36 46.5**	**-0.6**
	12nm,0.9s						
ASAR	**Alice Springs**	**94.90**	**162**	P	**P**	**10 38 14.1**	**-1.5**
	0.2nm,0.6s,baz=184,slow=3.8,SNR=3.7						
MLR	**Muntele Rosu**	**113.86**	**38**	⇓*i*P	**PKiKP**	**10 43 34.0**	**+2.8**
PHWY	**Pilot Hill**	**119.72**	**302**	*e*PKPdf	**PKiKP**	**10 43 44.9**	**+1.9**
PD31	**Pinedale Array**	**122.67**	**300**	*e*PKPdf	**PKPdf**	**10 43 47.4**	**-1.0**
PDAR	**Pinedale Array**	**122.67**	**300**	PKP	**PKPdf**	**10 43 47.4**	**-1.0**
	0.2nm,0.5s,baz=147,slow=5.3,SNR=2.8						
NV01	**Mina Array Sit**	**123.12**	**290**	*e*PKPdf	**PKPdf**	**10 43 49.6**	**+0.2**
NVAR	**Mina Array Bea**	**123.12**	**290**	PKP	**PKPdf**	**10 43 49.6**	**+0.2**
	0.3nm,0.7s,baz=163,slow=3.4,SNR=2.3						
HFS	**Hagfors**	**124.14**	**23**	PKP	**PKPdf**	**10 43 49.8**	**-0.5**
	1.8nm,0.8s,baz=236,slow=1.6,SNR=2.5						
NB200	**NORSAR Array S**	**124.51**	**21**	*e*PKPdf	**PKPdf**	**10 43 51.0**	**0.0**
NOA	**NORSAR Array B**	**124.51**	**21**	PKP	**PKPdf**	**10 43 51.0**	**0.0**
	0.8nm,0.8s,baz=206,slow=2.0,SNR=2.7						
FIA0	**FINESS Array S**	**128.03**	**29**	*e*PKPdf	**PKPdf**	**10 43 57.8**	**0.0**
FINES	**FINESS Array B**	**128.03**	**29**	PKP	**PKPdf**	**10 43 57.8**	**+0.1**
	5.3nm,1.0s,baz=326,slow=30,SNR=5.0						
AKTO	**Aktyubinsk**	**129.66**	**56**	PKP	**PKPdf**	**10 44 01.0**	**-0.2**
	1.3nm,0.8s,baz=206,slow=1.6,SNR=4.2						
ARA0	**ARCESS Array S**	**134.80**	**23**	*e*PKPdf	**PKPdf**	**10 44 10.5**	**+0.2**
ARCES	**ARCESS Array B**	**134.80**	**23**	PKP	**PKPdf**	**10 44 10.5**	**+0.2**
	2.0nm,0.7s,baz=130,slow=1.9,SNR=4.9						
MKAR	**Makanchi Array**	**137.93**	**76**	SKP		10 47 51.7	
	0.8nm,0.9s,baz=235,slow=4.3,SNR=4.5						
KURBB	**Kurchatov Arra**	**138.82**	**69**	PKP	**PKPdf**	**10 44 16.7**	**-1.6**
	0.6nm,0.2s,baz=237,slow=3.8,SNR=2.8						
YKA	**Yellowknife Ar**	**139.35**	**315**	PKP	**PKPdf**	**10 44 19.0**	**+0.1**
	0.7nm,0.6s,baz=134,slow=1.9,SNR=5.2						
YKB5	**Yellowknife Ar**	**139.35**	**315**	*e*PKPdf	**PKPdf**	**10 44 19.1**	**+0.1**
ZALV	**Zalesovo Beam**	**143.92**	**69**	PKP	PKPbc	10 44 26.4	+1.1
	1.0nm,0.4s,baz=212,slow=4.4,SNR=2.7						
ZAA1	**Zalesovo Array**	**143.92**	**69**	*e*PKPdf	PKPbc	10 44 26.4	+1.1
INK	**Inuvik**	**149.09**	**316**	PKPbc	**PKPbc**	**10 44 38.9**	**-1.0**
	5.7nm,0.7s,baz=118,slow=3.4,SNR=10						
EPYK	**Eagle Plains**	**149.50**	**312**	*e*PKPbc	**PKPbc**	**10 44 40.3**	**-0.7**
DAWY	**Dawson**	**149.61**	**307**	*e*PKPbc	**PKPbc**	**10 44 40.8**	**-0.5**
DAWY				*e*PKPab	**sPKPdf**	**10 44 46.0**	**+0.1**
SONA0	**Songino Array**	**150.55**	**94**	*e*PKPbc	**PKPbc**	**10 44 44.2**	**0.0**
SONM	**Songino Array**	**150.55**	**94**	PKPbc	**PKPbc**	**10 44 44.2**	**0.0**
	3.6nm,1.0s,baz=184,slow=3.9,SNR=7.3						
SONM				PKPab	**pPKPbc**	**10 44 49.4**	**-1.6**
	2.6nm,0.9s,baz=199,slow=3.1,SNR=3.8						
EGAK	**Eagle**	**150.60**	**307**	*e*PKPdf	**PKPdf**	**10 44 39.0**	**+0.8**
EGAK				*e*PKPbc	**PKPbc**	**10 44 43.8**	**+0.2**
MENT	**Mentasta**	**150.92**	**303**	*e*PKPdf	**PKPdf**	**10 44 37.7**	**-1.1**
MENT				*e*PKPbc	**PKPbc**	**10 44 44.5**	**0.0**
MENT				*e*PKPab	**sPKPbc**	**10 44 53.1**	**-0.6**
DOT	**Dot Lake**	**151.34**	**304**	*e*PKPdf	**PKPdf**	**10 44 39.6**	**+0.2**
DOT				*e*PKPbc	**PKPbc**	**10 44 45.6**	**+0.1**
DOT				*e*PKPab	**PKPab**	**10 44 53.5**	**-0.3**
SCRK	**Sand Creek**	**151.43**	**305**	*e*PKPdf	**PKPdf**	**10 44 39.9**	**+0.2**
SCRK				*e*PKPbc	**PKPbc**	**10 44 45.9**	**+0.2**
SCRK				*e*PKPab	**sPKPbc**	**10 44 55.3**	**+0.3**
PAX	**Paxson**	**151.67**	**302**	*e*PKPbc	**PKPbc**	**10 44 45.9**	**-0.4**
PAX				*e*PKPab	**PKPab**	**10 44 56.6**	**+1.3**
SCM	**Sheep Creek Mo**	**152.01**	**299**	*e*PKPbc	**PKiKP**	**10 44 47.7**	**+0.3**
SCM				*e*pPKPab	**sPKPab**	**10 45 07.3**	**+1.4**
SML	**Sawmill**	**152.44**	**299**	*e*PKPbc	**PKPbc**	**10 44 47.9**	**-0.1**
SML				*e*pPKPab	**sPKPab**	**10 45 08.0**	**+0.2**
ILAR	**Eielson Array**	**152.89**	**305**	PKPbc	**PKPbc**	**10 44 48.4**	**-0.5**
	3.1nm,0.9s,baz=156,slow=2.5,SNR=26						
ILB	**Eielson Array**	**152.89**	**305**	*e*PKPbc	**PKPbc**	**10 44 48.6**	**-0.3**
ILB				*e*PKPab	**PKPab**	**10 45 01.5**	**+1.3**
RND	**Reindeer**	**153.25**	**302**	*e*PKPdf	**PKPdf**	**10 44 43.8**	**+1.5**
RND				*e*PKPbc	**PKPbc**	**10 44 49.6**	**-0.2**
WRH	**Wood River Hil**	**153.29**	**304**	*e*PKPbc	**PKPbc**	**10 44 49.9**	**+0.1**
MCK	**McKinley**	**153.40**	**303**	*e*PKPdf	**PKPdf**	**10 44 44.6**	**+2.2**
MCK				*e*PKPbc	**PKPbc**	**10 44 50.0**	**0.0**
MCK				*e*PKPab	**PKPab**	**10 45 03.0**	**+0.5**
CAST	**Castle Rocks**	**154.63**	**301**	*e*PKPbc	**PKPbc**	**10 44 52.2**	**-0.5**
CAST				*e*PKPab	**PKPab**	**10 45 06.2**	**-1.5**

DJA 16 10:26:47.4±0.6**, 6°S**±3°×**10°2E**±°**, h33**^{km}±5^{km}**, M4.0**/8**, mb4.4**/2**, mB5.0**/1**, MLv3.8**/8**, Mw(mB)4.3**/1**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.73**	**27**	P	Pn	10 27 16.0	+0.8
MNAI				S	Sn	10 27 37.6	+1.5
KASI	**Kota Agung**	**2.35**	**81**	P	Pn	10 27 23.7	0.0
MDSI	**Maura Dua**	**2.45**	**55**	P	Pn	10 27 26.2	+1.1
MDSI				S	Sn	10 27 55.0	+1.1
LHSI	**Lahat**	**2.47**	**33**	P	Pn	10 27 26.0	+0.6
LHSI				S	Sn	10 27 56.1	+1.7
KLSI		**2.82**	**65**	P	Pn	10 27 30.4	+0.2
CGJI	**Cibinong**	**3.57**	**101**	P	Pn	10 27 40.7	+0.2
PPSI	**Pulau Pagai**	**3.80**	**325**	P	Pn	10 27 43.8	+0.2
PDSI	**Padang**	**5.25**	**341**	P	Pn	10 28 03.8	+0.2
SISI	**Saibi**	**5.49**	**326**	P	Pn	10 28 06.7	-0.3

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*JMA **16** 10:41:10.2±0.1, 24°.26N×121°.45E, h0^{km}, M3.2*

*TAP **16** 10:41:10.7, 24°.29N×121°.49E, h6^{km}, ML3.6, C*

*ISCJB **16** 10:41:11.3±0.2, 24°.289N±0°.010×121°.52E±0°.01, h3^{km}±2^{km}, Error ellipse: s-maj=2.0km s-min=1.4km az=36.1*

ISC 16 10:41:11.2±0.8**, 24°.29N**±0°.01×**121°.48E**±0°.01**, h7**^{km}±6^{km}**, n107,** σ0.^{s}**89**/165**, 46C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.08**	**178**	⇑P	**Pg**	**10 41 13.4**	**+0.2**
	baz=185						
ETLH				S	**Sg**	**10 41 14.8**	**+0.1**
	baz=185						
NACB	**Ninganchiao**	**0.15**	**136**	⇓P	**Pg**	**10 41 14.6**	**+0.2**
	baz=139						
NACB				S	**Sg**	**10 41 16.7**	**+0.2**
	baz=139						
NNSB	**Datong**	**0.17**	**328**	⇓P	**Pg**	**10 41 14.8**	**+0.1**
	baz=318						
NNSB				S	**Sg**	**10 41 17.2**	**+0.1**
	baz=318						
NNS	**Nan Shan**	**0.18**	**328**	⇑*i*P	**Pg**	**10 41 15.1**	**+0.1**
	baz=320						
NNS				S	**Sg**	**10 41 17.8**	**+0.3**
	baz=320						
TWD	**Chiawan**	**0.23**	**152**	⇑*i*P	**Pg**	**10 41 16.1**	**+0.3**
	baz=153						
TWD				S	**Sg**	**10 41 19.1**	**+0.2**
	baz=153						
WHF	**Hehuan Shan**	**0.24**	**234**	⇑*i*P	**Pg**	**10 41 16.3**	**+0.2**
	baz=234						
WHF				*i* S	**Sg**	**10 41 19.5**	**+0.1**
	baz=234						
ENA	**Nanau**	**0.28**	**59**	⇑*i*P	**Pg**	**10 41 16.4**	**-0.3**
	baz=60						
ENA				*e*S	**Sg**	**10 41 19.7**	**-0.7**
	baz=60						
TWT	**Tachien**	**0.28**	**263**	⇑*i*P	**Pb**	**10 41 17.5**	**-1.2**
	baz=253						
TWT				S	**Sb**	**10 41 21.4**	**-2.3**
	baz=253						
NANB	**Nanao**	**0.28**	**60**	⇑*i*P	**Pg**	**10 41 16.4**	**-0.4**
	baz=59						
NANB				*e*S	**Sg**	**10 41 19.6**	**-1.0**
	baz=59						
TDCB	**Techi**	**0.29**	**264**	⇑P	**Pb**	**10 41 17.6**	**-1.4**
	baz=254						
TDCB				S	**Sg**	**10 41 21.4**	**+0.4**
	baz=254						
HWA	**Hwalien**	**0.33**	**159**	P	**Pb**	**10 41 18.3**	**-1.1**
	baz=159						
CHGB	**Renai**	**0.36**	**231**	⇑P	**Pb**	**10 41 18.5**	**-1.5**
	baz=232						
CHGB				S	**Sg**	**10 41 23.2**	**+0.2**
	baz=232						
YHNB	**Yeheng**	**0.39**	**346**	⇑P	**Pb**	**10 41 19.4**	**-1.2**
	baz=344						
YHNB				S	**Sg**	**10 41 24.2**	**+0.1**
	baz=344						
ENLB	**Shoufeng**	**0.40**	**164**	*e*P	**Pb**	**10 41 20.3**	**-0.3**
	baz=165						
ENLB				S	**Sb**	**10 41 25.9**	**-0.9**
	baz=165						
NSK	**Sanguang**	**0.40**	**344**	⇑*i*P	**Pb**	**10 41 19.5**	**-1.2**
	baz=343						
NSK				*i* S	**Sg**	**10 41 24.7**	**+0.3**
	baz=343						
TWC	**Suao**	**0.47**	**46**	⇑*i*P	**Pg**	**10 41 19.9**	**-0.3**
	baz=47						
TWC				S	**Sg**	**10 41 26.0**	**-0.4**
	baz=47						
TWE	**Neicheng**	**0.47**	**22**	⇑*i*P	**Pg**	**10 41 20.4**	**+0.2**
	baz=35						
TWE				S	**Sg**	**10 41 26.1**	**-0.2**
	baz=35						
ESL	**Shilin**	**0.47**	**185**	⇑*i*P	**Pb**	**10 41 20.4**	**-1.5**
	baz=173						
ILA	**Ilan**	**0.54**	**27**	*e*P	**Pg**	**10 41 21.2**	**-0.4**
	baz=29						
LIOB	**Emei**	**0.55**	**310**	⇑*i*P	**Pb**	**10 41 23.1**	**-0.1**
	baz=309						
LIOB				S	**Sb**	**10 41 30.8**	**-0.6**
	baz=309						
NSTT	**Nanjuang**	**0.56**	**308**	⇑*i*P	**Pb**	**10 41 22.9**	**-0.4**
	baz=307						
NSTT				*i* S	**Sb**	**10 41 30.3**	**-1.1**
	baz=307						
WLTB	**Daxi**	**0.60**	**340**	*e*P	**Pb**	**10 41 24.2**	**+0.2**
	baz=339						
WLTB				*e*S	**Sb**	**10 41 32.5**	**-0.2**
	baz=339						
VWDT	**VWDT**	**0.61**	**210**	⇑P	**Pb**	**10 41 23.1**	**-1.2**
	baz=216						
EGFH	**Guangfu**	**0.62**	**184**	⇑*i*P	**Pb**	**10 41 22.9**	**-1.4**
	baz=186						
EGFH				*e*S	**Sb**	**10 41 31.8**	**-1.4**
	baz=186						
TWQ1	**Liyutan**	**0.65**	**276**	⇑*i*P	**Pb**	**10 41 25.1**	**+0.3**
	baz=274						
TWQ1				S	**Sb**	**10 41 33.8**	**-0.3**
	baz=274						
EOS1	**EOS1**	**0.65**	**66**	⇑P	**Pg**	**10 41 23.8**	**+0.1**
	baz=54						
EOS1				S	**Sb**	**10 41 33.4**	**-0.7**
	baz=54						
NTC	**Toucheng**	**0.65**	**29**	*e*P	**Pg**	**10 41 23.7**	**-0.1**
	baz=29						
NTC				*e*S	**Sg**	**10 41 32.5**	**+0.3**
	baz=29						
NSY	**Sanyi**	**0.67**	**281**	⇑P	**Pn**	**10 41 25.8**	**-1.3**
	baz=280						
NSY				S	**Sb**	**10 41 35.3**	**+0.7**
	baz=280						
NMLH	**Miaoli**	**0.68**	**292**	P	**Pn**	**10 41 26.0**	**-1.2**
	baz=290						
NMLH				*e*S	**Sb**	**10 41 35.0**	**+0.1**
	baz=290						
SBCB	**Hsinchu**	**0.68**	**318**	*e*P	**Pn**	**10 41 26.0**	**-1.2**
	baz=317						
TYC	**Yuchr**	**0.68**	**236**	⇑*i*P	**Pb**	**10 41 24.8**	**-0.7**
	baz=236						
TYC				*i* S	**Sg**	**10 41 33.1**	**-0.2**
	baz=236						
TATO	**Taipei**	**0.69**	**1**	⇑P	**Pb**	**10 41 24.9**	**-0.6**
	baz=13						
TATO				S	**Sg**	**10 41 33.7**	**+0.3**
	baz=13						
SSLB	**Suanglung**	**0.69**	**224**	⇑P	**Pb**	**10 41 24.4**	**-1.2**
	baz=233						
SSLB				S	**Sg**	**10 41 33.1**	**-0.4**
	baz=233						
HSN	**Hsinchu**	**0.69**	**318**	*e*P	**Pn**	**10 41 27.0**	**-0.4**
	baz=321						
EGS		**0.69**	**36**	P	**Pg**	**10 41 24.5**	**-0.1**
	baz=38						
TWA	**Mucha**	**0.70**	**8**	⇑*i*P	**Pb**	**10 41 25.1**	**-0.7**
	baz=8.0						
TWA				S	**Sg**	**10 41 33.7**	**-0.1**
	baz=8.0						
PTSB	**Yuanli**	**0.72**	**283**	⇑*i*P	**Pn**	**10 41 27.2**	**-0.7**
	baz=282						
PTSB				S	**Sb**	**10 41 37.0**	**+0.8**
	baz=282						
NCUH	**Zhongli**	**0.73**	**339**	P	**Pn**	**10 41 27.4**	**-0.6**
	baz=338						
NCU	**National Centr**	**0.73**	**339**	*e*P	**Pn**	**10 41 27.1**	**-0.9**
	baz=339						
TCU	**Taichung**	**0.75**	**260**	*e*P	**Pn**	**10 41 27.1**	**-1.0**
	baz=259						
TIPB	**Shuangxi**	**0.75**	**25**	⇑*i*P	**Pg**	**10 41 25.5**	**-0.2**
	baz=12						
TIPB				S	**Sg**	**10 41 35.1**	**-0.4**
	baz=12						
WDJ	**Dajia District**	**0.77**	**275**	⇑P	**Pn**	**10 41 27.9**	**-0.5**
	baz=274						
EHY	**Hungye**	**0.79**	**191**	P	**Pg**	**10 41 25.9**	**-0.5**
	baz=183						
HGSD	**Ruisui**	**0.79**	**184**	⇑P	**Pb**	**10 41 26.6**	**-0.7**
	baz=192						
TWS1	**Kuangyinshan**	**0.81**	**356**	⇑*i*P	**Pn**	**10 41 28.4**	**-0.7**
	baz=7.0						
TWS1				S	**Sb**	**10 41 39.2**	**+0.3**
	baz=7.0						
WHYT	**Xinyi Township**	**0.82**	**224**	⇑P	**Pb**	**10 41 26.9**	**-0.9**
	baz=225						
WJS	**Zhushan**	**0.83**	**236**	⇑P	**Pn**	**10 41 28.1**	**-1.2**
	baz=229						
NWF	**Wu-fen Shan**	**0.83**	**19**	⇑P	**Pb**	**10 41 27.3**	**-0.7**
	baz=19						
NWF				*e*S	**Sb**	**10 41 39.3**	**-0.1**
	baz=19						
WFSB	**Wu-fen Shan**	**0.83**	**19**	⇑P	**Pb**	**10 41 27.3**	**-0.7**
	baz=19						
WFSB				*e*S	**Sb**	**10 41 39.1**	**-0.2**
	baz=19						
WNT	**Mingjian**	**0.83**	**241**	P	**Pn**	**10 41 28.6**	**-0.8**
	baz=235						
YM01	**YM01**	**0.86**	**6**	⇑*i*P	**Pb**	**10 41 28.5**	**0.0**
	baz=5.0						
YM01				S	**Sg**	**10 41 38.9**	**-0.1**
	baz=5.0						
WCHH	**Zhanghua**	**0.86**	**256**	*e*P	**Pn**	**10 41 30.0**	**+0.2**
	baz=256						
YM10	**YM10**	**0.87**	**5**	⇑*i*P	**Pb**	**10 41 28.7**	**0.0**
	baz=4.0						
YM10				*e*S	**Sg**	**10 41 38.8**	**-0.5**
	baz=4.0						
YM05	**YM05**	**0.88**	**5**	⇑*i*P	**Pb**	**10 41 28.8**	**0.0**
	baz=4.0						
YM05				S	**Sg**	**10 41 39.6**	**0.0**
	baz=4.0						
YM03	**YM03**	**0.89**	**4**	⇑*i*P	**Pb**	**10 41 29.1**	**0.0**
	baz=3.0						
YM03				S	**Sb**	**10 41 41.1**	**-0.1**
	baz=3.0						
ANP	**Anpu**	**0.90**	**2**	⇑P	**Pb**	**10 41 29.1**	**-0.1**
	baz=17						
YM08	**YM08**	**0.90**	**6**	⇑P	**Pb**	**10 41 28.8**	**-0.4**
	baz=7.0						
YULB	**Yu-li**	**0.91**	**191**	P	**Pg**	**10 41 27.9**	**-0.7**
	baz=185						
YULB				*e*S	**Sb**	**10 41 41.7**	**+0.2**
	baz=185						
YUS	**Yu-Shan**	**0.93**	**211**	⇑*i*P	**Pb**	**10 41 28.7**	**-1.2**
	baz=212						
TWF1	**Yuli**	**0.94**	**190**	*e*P	**Pg**	**10 41 28.6**	**-0.8**
	baz=191						
TWF1				*e*S	**Sb**	**10 41 42.7**	**0.0**
	baz=191						
TWY	**Chenhua**	**0.99**	**6**	*e*P	**Pn**	**10 41 31.0**	**-0.5**
	baz=6.0						
TWY				*e*S	**Sb**	**10 41 44.6**	**+0.6**
	baz=6.0						
CHN5	**Tsauling**	**1.00**	**227**	⇑*i*P	**Pn**	**10 41 31.4**	**-0.4**
	baz=228						
CHN5				S	**Sn**	**10 41 47.3**	**+1.1**
	baz=228						
WDLH	**Douliu**	**1.05**	**236**	⇑P	**Pn**	**10 41 32.7**	**+0.4**
	baz=236						
RLNB	**Erlin**	**1.10**	**249**	⇑P	**Pn**	**10 41 33.2**	**+0.2**
	baz=249						
RLNB				S	**Sn**	**10 41 49.8**	**+1.4**
	baz=249						
ELDTW	**Lidau**	**1.17**	**201**	P	**Pb**	**10 41 33.2**	**-0.6**
	baz=191						
WTCT	**Ta-ch'eng**	**1.17**	**249**	P	**Pn**	**10 41 34.8**	**+0.8**
	baz=250						
CHKT	**Chengkung**	**1.19**	**185**	*e*P	**Pn**	**10 41 33.8**	**-0.4**
	baz=185						
CHN2	**Minshiung**	**1.19**	**231**	P	**Pn**	**10 41 35.1**	**+0.9**
	baz=232						
CHY	**Chiayi**	**1.24**	**231**	*e*P	**Pn**	**10 41 35.2**	**+0.2**
	baz=232						
TPUB	**Ta-pu**	**1.25**	**219**	⇑P	**Pn**	**10 41 35.5**	**+0.3**
	baz=220						
TPUB				*e*S	**Sn**	**10 41 55.3**	**+3.1**
	baz=220						
WSF	**Szhu**	**1.32**	**241**	*e*P	**Pb**	**10 41 36.3**	**0.0**
	baz=241						
JYNG	**Yonagunijimaku**	**1.35**	**83**	P	**Pb**	**10 41 36.7**	**-0.1**
JYNG				S	**Sg**	**10 41 53.2**	**-1.4**
TWK	**Hsinying**	**1.36**	**222**	P	**Pb**	**10 41 37.4**	**+0.3**
	baz=223						
TWK				*e*S	**Sn**	**10 41 58.4**	**+3.4**
	baz=223						
SNST	**Tainan City**	**1.39**	**220**	P	**Pb**	**10 41 38.2**	**+0.7**
	baz=221						
CHN1	**Nanshi**	**1.40**	**219**	⇑P	**Pb**	**10 41 38.3**	**+0.6**
	baz=220						
CHN1				*e*S	**Sn**	**10 41 58.8**	**+2.9**
	baz=220						
YOJ	**Yonaguni jima**	**1.41**	**83**	*e*P	**Pn**	**10 41 37.3**	**+0.1**
	baz=71						
YOJ				*e*S	**Sb**	**10 41 56.0**	**0.0**
	baz=71						
YOJ	**Yonaguni jima**	**1.41**	**83**	P	**Pb**	**10 41 37.5**	**-0.3**
YOJ				*e*S	**Sb**	**10 41 55.1**	**-0.9**
SGST	**Jiashian**	**1.45**	**215**	*e*P	**Pg**	**10 41 39.2**	**+0.1**
	baz=215						
CHN8	**Yiju**	**1.49**	**231**	*e*P	**Pg**	**10 41 39.2**	**-0.7**
	baz=232						
SLGT	**Liugui**	**1.50**	**211**	*e*P	**Pg**	**10 41 39.8**	**-0.1**
	baz=212						
TWG	**Pinlang**	**1.50**	**194**	*e*P	**Pg**	**10 41 39.2**	**-0.9**
	baz=178						
TWGBT	**Beinan**	**1.51**	**194**	*e*P	**Pg**	**10 41 39.1**	**-1.0**
	baz=178						
CHN3	**Shinhua**	**1.58**	**221**	*e*P	**Pg**	**10 41 42.4**	**+0.9**
	baz=221						
SCLT	**Jiali**	**1.61**	**227**	*e*P	**Pg**	**10 41 41.5**	**-0.7**
	baz=228						
SSD	**Sandimen**	**1.72**	**207**	*e*P	**Pg**	**10 41 43.6**	**-0.6**
	baz=208						
ECL	**Taimali**	**1.75**	**196**	*e*P	**Pg**	**10 41 43.4**	**-1.4**
	baz=178						
MASBT	**Mashibuluo**	**1.84**	**205**	*e*P	**Pg**	**10 41 45.1**	**-1.4**
	baz=224						

MASBT				eS	Sg	10 42 12.3	+2.0
	baz=224						
PNG	**Penghu**	**1.90**	**248**	eP	Pb	10 41 45.3	-0.9
	baz=256						
PNG				eS	Sg	10 42 11.1	-1.2
	baz=256						
PHUB	**P'eng-hu**	**1.91**	**247**	eP	Pb	10 41 44.9	-1.5
	baz=248						
PHUB				eS	Sg	10 42 11.5	-1.0
	baz=248						
WDGT	**Dungji**	**1.95**	**239**	eP	Pb	10 41 45.7	-1.4
	baz=240						
EAST	**Anshuo**	**1.98**	**197**	eP	Pg	10 41 47.9	-1.4
	baz=182						
IRIF	**Iriomote-Funau**	**2.06**	**88**	P	Pn	10 41 46.3	+0.1
IRIF				eS	Sn	10 42 12.2	+0.2
SCZT	**Fangliau**	**2.06**	**203**	P	Pb	10 41 49.0	0.0
	baz=222						
HATJ	**Hateruma jima**	**2.14**	**96**	P	Pn	10 41 46.2	-1.1
VCHM	**Qimei**	**2.16**	**241**	eP	Pn	10 41 48.3	+0.7
	baz=242						
VCHM				eS	Sb	10 42 16.6	-1.1
	baz=242						
PTMZ	**Houxiangcun**	**2.27**	**290**	eP	Pn	10 41 48.8	-0.4
	baz=292						
JKRS	**Kuro-shima**	**2.31**	**91**	P	Pn	10 41 50.6	+0.9
JKRS				eS	Sn	10 42 19.8	+1.5
TWKBT	**Hengchun**	**2.41**	**195**	eP	Pn	10 41 52.2	+1.1
	baz=176						
JIJ	**Ishigaki jima**	**2.43**	**88**	P	Pn	10 41 51.7	+0.3
JIJ				eS	Sn	10 42 21.3	-0.1
JISG	**Ishigakijimahi**	**2.60**	**83**	P	Pn	10 41 52.9	-0.7
JISG				eS	Sn	10 42 25.7	+0.2
KNMB	**Chin-men Tao**	**2.82**	**274**	eP	Pn	10 41 56.3	-0.5
	baz=277						
JTJ	**Tarama**	**2.96**	**82**	P	Pn	10 41 59.6	+1.0
JTJ				S	Sn	10 42 34.9	+0.5
AXDP	**Jialang**	**3.25**	**282**	eP	Pn	10 42 02.1	-0.5
	baz=285						
JIRB	**Irabujima**	**3.41**	**80**	P	Pn	10 42 06.6	+1.8
ZPLA	**Ao Xicun**	**3.43**	**265**	eP	Pn	10 42 05.4	+0.3
	baz=267						
JIKM	**Ikemajima**	**3.49**	**79**	P	Pn	10 42 07.0	+1.1
JMJ2	**Miyako jima3**	**3.54**	**82**	P	Pn	10 42 08.5	+2.0

JMA 16 10:42:57.8±0.1, 24°.29N×123°.31E, h19^{km}, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.32**	**302**	P	Pg	10 43 04.8	0.0
YOJ				S	Sg	10 43 08.7	-0.9
JYNG	**Yonagunijimaku**	**0.37**	**296**	P	Pg	10 43 05.5	-0.1
JYNG				S	Sg	10 43 10.2	-0.7
IRIF	**Iriomote-Funau**	**0.39**	**83**	P	Pg	10 43 05.8	-0.1
HATJ	**Hateruma jima**	**0.51**	**117**	P	Pg	10 43 07.6	-0.5
HATJ				S	Sg	10 43 14.7	-0.3
JKRS	**Kuro-shima**	**0.64**	**95**	P	Pb	10 43 09.5	-0.8
JKRS				S	Sb	10 43 18.0	-0.8
JISG	**Ishigakijimahi**	**0.96**	**72**	P	Pb	10 43 15.4	-0.4

TAP 16 10:43:02.3, 24°.27N×121°.48E, h6^{km}, ML1.8, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.06**	**178**	P	Pg	10 43 04.6	+0.6
	baz=179						
ETLH				S	Sg	10 43 05.8	+0.6
	baz=179						
NACB	**Ninganchiao**	**0.14**	**132**	⇑P	Pg	10 43 05.8	+0.7
	baz=132						
NACB				S	Sg	10 43 07.9	+0.7
	baz=132						
NNSB	**Datong**	**0.18**	**331**	P	Pg	10 43 06.6	+0.6
	baz=323						
NNSB				S	Sg	10 43 09.2	+0.7
	baz=323						
NNS	**Nan Shan**	**0.20**	**330**	P	Pg	10 43 06.9	+0.7
	baz=324						
NNS				S	Sg	10 43 09.6	+0.7
	baz=324						
TWD	**Chiawan**	**0.22**	**151**	eP	Pg	10 43 07.4	+0.8
	baz=149						
TWD				S	Sg	10 43 10.6	+1.2
	baz=149						
WHF	**Hehuan Shan**	**0.23**	**238**	⇑iP	Pg	10 43 07.6	+0.6
	baz=237						
WHF				i S	Sg	10 43 10.6	+0.5
	baz=237						
TWT	**Tachien**	**0.28**	**267**	eP	Pb	10 43 09.4	-0.4
	baz=256						
ENA	**Nanau**	**0.29**	**56**	P	Pg	10 43 08.1	+0.2
	baz=57						
NANB	**Nanao**	**0.29**	**57**	P	Pg	10 43 08.2	+0.1
	baz=43						
NANB				eS	Sg	10 43 11.8	-0.1
	baz=43						
TDCB	**Techi**	**0.29**	**267**	P	Pb	10 43 09.1	-0.9
	baz=257						
TDCB				S	Sg	10 43 12.9	+0.9
	baz=257						
CHGB	**Renai**	**0.35**	**233**	P	Pg	10 43 09.8	+0.6
	baz=233						
CHGB				S	Sg	10 43 14.8	+1.0
	baz=233						
YHNB	**Yeheng**	**0.41**	**347**	P	Pb	10 43 11.3	-0.7
	baz=346						
YHNB				S	Sg	10 43 16.2	+0.6
	baz=346						
NSK	**Sanguang**	**0.42**	**345**	eP	Pb	10 43 11.8	-0.4
	baz=346						
ESL	**Shilin**	**0.46**	**185**	P	Pg	10 43 11.1	0.0
	baz=173						
TWC	**Suao**	**0.48**	**45**	eP	Pg	10 43 11.4	-0.1
	baz=46						
TWE	**Neicheng**	**0.48**	**21**	eP	Pb	10 43 12.7	-0.4
	baz=33						
TWE				eS	Sb	10 43 20.4	-0.1
	baz=33						
LIOB	**Emei**	**0.56**	**312**	eP	Pb	10 43 14.6	0.0
	baz=312						
VWDT	**VWDT**	**0.60**	**211**	eP	Pg	10 43 14.4	+0.6
	baz=217						
EOS1	**EOS1**	**0.65**	**65**	eP	Pg	10 43 14.8	-0.1
	baz=64						
SSLB	**Suanglung**	**0.68**	**225**	eP	Pg	10 43 14.8	-0.5
	baz=237						
EGS		**0.71**	**36**	eP	Pb	10 43 16.9	-0.1
	baz=36						
TIPB	**Shuangxi**	**0.77**	**24**	P	Pg	10 43 17.4	+0.3
	baz=12						
TIPB				eS	Sg	10 43 27.3	+0.3
	baz=12						
EHY	**Hungye**	**0.77**	**191**	eP	Pg	10 43 17.4	+0.3
	baz=183						
YULB	**Yu-li**	**0.89**	**191**	eP	Pg	10 43 19.4	+0.1
	baz=192						
YULB				eS	Sb	10 43 31.6	-0.6
	baz=192						
TWF1	**Yuli**	**0.93**	**190**	eP	Pg	10 43 19.8	-0.3
	baz=179						

JMA 16 10:44:21.5±0.2, 24°.49N×123°.43E, h28^{km}±3^{km}, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.31**	**119**	P	Pb	10 44 28.8	-0.2
YOJ	**Yonaguni jima**	**0.38**	**266**	P	Pb	10 44 29.6	-0.4
YOJ				eS	Sb	10 44 35.4	-0.4
HATJ	**Hateruma jima**	**0.55**	**141**	P	Pb	10 44 32.3	-0.4
JKRS	**Kuro-shima**	**0.58**	**115**	S	Sb	10 44 40.9	-0.3
JIJ	**Ishigaki jima**	**0.66**	**101**	S	Sb	10 44 42.4	-1.0
JISG	**Ishigakijimahi**	**0.81**	**83**	S	Sb	10 44 47.1	-0.4

TAP 16 10:45:17.6, 24°.28N×121°.48E, h6^{km}±1^{km}, ML1.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.07**	**179**	P	Pg	10 45 19.4	0.0
	baz=179						
ETLH				S	Sg	10 45 20.6	-0.2
	baz=179						
NACB	**Ninganchiao**	**0.15**	**136**	P	Pg	10 45 20.7	+0.1
	baz=135						
NACB				S	Sg	10 45 22.9	+0.3
	baz=135						
NNSB	**Datong**	**0.17**	**329**	P	Pg	10 45 21.2	+0.1
	baz=328						
NNSB				S	Sg	10 45 23.4	0.0
	baz=328						
NNS	**Nan Shan**	**0.19**	**328**	eP	Pg	10 45 21.6	+0.3
	baz=329						
NNS				eS	Sg	10 45 24.1	+0.1
	baz=329						
TWD	**Chiawan**	**0.23**	**152**	eP	Pg	10 45 22.1	+0.1
	baz=150						
WHF	**Hehuan Shan**	**0.24**	**236**	i P	Pg	10 45 22.2	-0.2
	baz=234						
WHF				S	Sg	10 45 25.5	-0.1
	baz=234						
ENA	**Nanau**	**0.28**	**58**	eP	Pg	10 45 22.7	-0.3
	baz=59						
NANB	**Nanao**	**0.28**	**59**	eP	Pg	10 45 22.8	-0.4
	baz=59						
TDCB	**Techi**	**0.30**	**265**	eP	Pg	10 45 22.8	-0.7
	baz=264						
TDCB				eS	Sg	10 45 27.2	-0.1
	baz=264						
CHGB	**Renai**	**0.36**	**232**	eP	Pg	10 45 24.5	0.0
	baz=231						
YHNB	**Yeheng**	**0.40**	**346**	eP	Pg	10 45 25.4	+0.1
	baz=346						

MEX 16 10:48:16.3±0.4, 14°.72N×93°.08W, h50^{km}±12^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.81**	**76**	eP	Pn	10 48 29.9	-1.5
THIG				eS	Sn	10 48 40.1	-2.4
PCIG		**0.99**	**352**	eP	Pn	10 48 32.5	-1.4
PCIG				eS	Sn	10 48 44.7	-2.2
CCIG	**Comitan**	**1.80**	**30**	eP	Pn	10 48 43.5	-1.6
CCIG				eS	Sn	10 49 04.4	-2.5
TGIG		**2.05**	**359**	i P	Pn	10 48 46.8	-1.6
TGIG				eS	Sn	10 49 11.6	-1.3
CMIG	**Matias Romero**	**2.93**	**324**	eP	Pn	10 48 59.2	-1.3
CMIG				eS	Sn	10 49 31.8	-2.7

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*ISCJB **16** 10:52:51.9±0.6, 8°.24S±0°.05×107°.24E±0°.05, h46^{km}, Error ellipse: s-maj=8.7km s-min=5.5km az=35.1*

*DJA **16** 10:52:51.7±0.3, 8°S±3°×10°7E±°, h10^{km}, M4.8/12, mb5.1/5, mB5.9/3, MLv4.7/12, Mw(mB)5.5/3*

*IDC **16** 10:52:56.4±2.6, 7°.97S×107°.27E, h84^{km}±21^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.4/37, mbtmp4.0/6, Error ellipse: s-maj=41.7km s-min=16.7km az=59.0*

ISC 16 10:52:52.8±0.8, 8°.18S±0°.08×107°.23E±0°.07, h46^{km}, n29, σ1^s.82/30, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.85**	**43**	P	**Pn**	**10 53 07.9**	**-0.6**
CISI				S	**Sn**	**10 53 17.7**	**-2.2**
SKJI	**Sukabumi**	**1.35**	**330**	P	**Pn**	**10 53 16.5**	**+1.3**
SKJI				S	**Sn**	**10 53 32.5**	**+0.5**
LEM	**Lembang**	**1.40**	**16**	P	**Pn**	**10 53 17.1**	**+1.0**
	413nm,0.3s,baz=30,slow=11,SNR=75						
LEM				S	**Sn**	**10 53 34.6**	**+1.1**
	567nm,0.3s,baz=172,slow=20,SNR=11						
LEM	**Lembang**	**1.40**	**16**	P	**Pn**	**10 53 17.3**	**+1.2**
LEM				S	**Sn**	**10 53 36.1**	**+2.6**
CGJI	**Cibinong**	**2.18**	**316**	P	**Pn**	**10 53 27.8**	**+1.2**
SBJI	**Serang**	**2.32**	**332**	P	**Pn**	**10 53 30.9**	**+2.3**
SMRI	**Semarang**	**3.38**	**71**	P	**Pn**	**10 53 44.9**	**+1.8**
WOJI	**Wonogiri, Jawa**	**3.67**	**85**	P	**Pn**	**10 53 47.0**	**-0.2**
KASI	**Kota Agung**	**3.79**	**314**	P	**Pn**	**10 53 50.4**	**+1.7**
KLSI		**4.27**	**324**	P	**Pn**	**10 53 57.1**	**+1.8**
MDSI	**Maura Dua**	**4.76**	**320**	P	**Pn**	**10 54 03.6**	**+1.5**
MNAI	**Manna**	**5.70**	**312**	P	**Pn**	**10 54 16.0**	**+1.0**
	129nm,0.6s,6µm						
JAGI	**Jajag, Banyuwa**	**6.86**	**93**	P	**Pn**	**10 54 32.5**	**+1.6**
SRBI	**Singaraja**	**7.90**	**90**	P	**Pn**	**10 54 47.1**	**+1.8**
KRJI	**Kerinci**	**8.34**	**316**	P	**Pn**	**10 54 51.4**	**0.0**
PPSI	**Pulau Pagai**	**8.98**	**306**	P	**Pn**	**10 54 58.9**	**-1.1**
WRA	**Warramunga Arr**	**28.73**	**117**	P	**P**	**10 58 46.1**	**0.0**
	0.7nm,0.5s,baz=285,slow=12,SNR=9.0						
ASAR	**Alice Springs**	**29.83**	**124**	P	**P**	**10 58 56.7**	**+0.8**
	0.5nm,0.8s,baz=307,slow=10.0,SNR=4.5						
H08S2	**Diego Garcia H**	**34.41**	**268**	T	T	11 36 59.3	
	baz=93						
H08S3	**Diego Garcia H**	**34.41**	**268**	T	T	11 36 58.3	
	baz=93						
H08S1	**Diego Carcia H**	**34.42**	**268**	T	T	11 36 56.3	
	baz=93						
WHN	**Wuhan**	**39.10**	**10**	P	**P**	**11 00 19.0**	**+3.2**
WHN				pP	**pP**	**11 00 22.6**	**-4.8**
STKA	**Stephens Creek**	**39.69**	**131**	P	**P**	**11 00 21.6**	**+0.9**
	6.4nm,0.5s,baz=306,slow=8.1,SNR=27						
NJ2	**Nanjing**	**41.52**	**15**	eP	**P**	**11 00 34.6**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
LZH	**Lanzhou**	**44.15**	**356**	eP	P	11 01 11.8	+15
LZH				pP	sP	11 01 16.3	+2.3
LZH				sP	pwP	11 01 18.8	+6.2
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
MKAR	**Makanchi Array**	**59.07**	**340**	P	**P**	**11 02 46.5**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=140,slow=7.7,SNR=4.0						
ZALV	**Zalesovo Beam**	**64.73**	**346**	P	**P**	**11 03 23.9**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=129,slow=8.3,SNR=2.4						
MAW	**Mawson**	**66.31**	**197**	P	**P**	**11 03 37.3**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=48,slow=7.0,SNR=4.3						
TXAR	**Lajitas Array**	**144.16**	**50**	PKP	**PKPdf**	**11 12 23.6**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=280,slow=1.4,SNR=4.0						

SOME 16 10:56:37.5, 43°.20N×82°.07E, h0^{km}, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.00**	**305**	eP	Pg	10 57 15.4	-0.5
	1.0nm,0.1s						
DJR				eS	Sg	10 57 50.6	+8.8
	0.9nm,0.1s						
KPKS	**Kokpek**	**2.48**	**277**	eP	Pg	10 57 25.5	+0.4
	3.2nm,0.1s						
KPKS				eS	Sg	10 57 59.7	+2.4
	8.9nm,0.3s						

NNC 16 10:56:46.4±4.5, 43°.91N×84°.49E, h0^{km}, mb3.2, mpv2.9, 2C-1D, Error ellipse: s-maj=32.6km s-min=17.2km az=119.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.28**	**333**	⇓Pg	Pb	10 57 45.6	+0.1
	0.3nm,0.3s,baz=142,slow=17,SNR=7.3						
MK31				Lg	Lg	10 58 26.9	
	0.5nm,0.2s,baz=147,slow=29,SNR=6.2						
MAKZ	**Makanchi**	**3.40**	**329**	⇑Pg	Pb	10 57 48.6	+1.0
	0.3nm,0.3s						
MAKZ				⇑Lg	Lg	10 58 33.8	
	0.5nm,0.2s						
DJR	**Jarkent**	**3.41**	**279**	Pg	Pb	10 57 49.1	+1.3
	1.8nm,0.2s						
DJR				Lg	Lg	10 58 35.5	
	8.3nm,0.5s						
KAPS	**Kapalarasan**	**3.92**	**292**	Pg	Pg	10 58 00.2	-1.3
	0.6nm,0.3s						
KAPS				Lg	Lg	10 58 53.3	
	3.8nm,0.3s						
UZB	**Uzynbulak**	**4.05**	**261**	Pg	Pb	10 57 58.1	-0.5
	1.4nm,0.5s						
UZB				Lg	Lg	10 58 50.5	
	1.7nm,0.4s						

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*ISCJB **16** 11:04:24.4±0.7, 24°.40S±0°.09×178°.9E±0°.1, h549^{km}, mb3.6/8, Error ellipse: s-maj=17.4km s-min=11.4km az=7.1*

*IDC **16** 11:04:24.1±2.5, 24°.31S×178°.97E, h532^{km}±25^{km}, mb3.2/8, mb1 3.5/10, mb1mx3.3/30, mbtmp4.2/10, Error ellipse: s-maj=34.4km s-min=19.9km az=148.0*

ISC 16 11:04:25.0±0.8, 24°.5S±0°.1×179°.0E±0°.1, h549^{km}, n14, σ1^s.32/15, mb3.6/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.79**	**279**	P	**P**	**11 07 01.5**	**0.0**
	3.6nm,0.3s,baz=167,slow=7.5,SNR=25						
URZ	**Urewera**	**13.80**	**186**	P	**P**	**11 07 22.6**	**+0.8**
	1.6nm,0.3s,baz=290,slow=3.7,SNR=7.1						
URZ				S	**S**	**11 09 45.8**	**-1.7**
	0.3nm,0.3s,baz=0.0,slow=20,SNR=5.0						
STKA	**Stephens Creek**	**33.65**	**249**	P	**P**	**11 10 21.9**	**+1.4**
	2.0nm,0.4s,baz=89,slow=9.8,SNR=17						
ASAR	**Alice Springs**	**41.04**	**262**	P	**P**	**11 11 19.4**	**-1.7**
	4.0nm,0.5s,baz=87,slow=8.1,SNR=140						
ASAR				ScP	**ScP**	**11 16 08.5**	**+3.0**
	0.2nm,0.5s,baz=107,slow=4.1,SNR=4.1						
WRA	**Warramunga Arr**	**41.46**	**267**	P	**P**	**11 11 24.3**	**-0.2**
	3.7nm,0.7s,baz=92,slow=8.4,SNR=16						
MJAR	**Matsushiro Arr**	**71.89**	**326**	P	**P**	**11 14 52.6**	**-0.2**
	0.9nm,0.6s,baz=183,slow=4.5,SNR=3.2						
PETK	**Petropavlovsk-**	**79.49**	**347**	P	**P**	**11 15 34.2**	**-0.2**
	2.2nm,0.7s,baz=115,slow=7.7,SNR=8.2						
NVAR	**Mina Array Bea**	**85.82**	**44**	P	**P**	**11 16 06.9**	**-0.1**
	0.2nm,0.4s,baz=232,slow=5.6,SNR=4.0						
TXAR	**Lajitas Array**	**91.53**	**58**	P	**P**	**11 16 34.7**	**+1.1**
	0.3nm,0.7s,baz=219,slow=6.9,SNR=2.7						
ILAR	**Eielson Array**	**92.84**	**14**	P	**P**	**11 16 37.2**	**-1.4**
	0.2nm,0.5s,baz=195,slow=6.5,SNR=3.6						
HFS	**Hagfors**	**142.96**	**348**	PKhKP	PKPpre	11 22 53.2	
	5.6nm,0.3s,baz=66,slow=3.6,SNR=63						
AKASG	**Malin Array Be**	**144.98**	**326**	PKP	**PKPdf**	**11 22 59.5**	**-0.2**
	0.5nm,0.4s,baz=43,slow=4.3,SNR=6.5						
MMAI	**Mount Meron Ar**	**147.12**	**293**	PKPbc	**PKPbc**	**11 23 07.3**	**+0.3**
	1.1nm,0.4s,baz=100,slow=3.2,SNR=2.6						
BRTR	**Keskin Array B**	**147.21**	**306**	PKPbc	**PKPbc**	**11 23 06.5**	**-0.6**
	0.6nm,0.5s,baz=70,slow=1.4,SNR=3.7						

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*IDC **16** 11:14:29.9±2.2, 51°.36N×179°.73E, h30^{km}±13^{km}, mb4.3/34, mb1 4.5/36, mb1mx4.4/50, mbtmp4.5/36, ML3.0/2, MS4.2/21, Ms1 4.1/21, ms1mx4.0/36, Error ellipse: s-maj=16.5km s-min=10.0km az=166.0*

*AEIC **16** 11:14:29.0±0.0, 51°.09N×179°.74E, h22^{km}*

*MOS **16** 11:14:29.9±0.9, 51°.41N×179°.75E, h40^{km}, mb5.0/78, Error ellipse: s-maj=6.8km s-min=5.3km az=90.5*

*NEIC **16** 11:14:31.2±1.9, 51°.18N×179°.77E, h42^{km}±5^{km}, mb4.8/292, ML5.1(AEIC), Error ellipse: s-maj=13.3km s-min=7.8km az=168.0*

*ISCJB **16** 11:14:32.3±0.6, 51°.43N±0°.04×179°.82E±0°.02, h62^{km}±5^{km}, mb4.8/336, Error ellipse: s-maj=6.0km s-min=2.5km az=1.7*

*GCMT **16** 11:14:33.2±0.4, 51°.23N±0°.03×179°.98W±0°.04, h34^{km}±1^{km}, MW5.1/69, Moment Tensor Solution. s28,c34; s69,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.29±.30; $M_{\theta\theta}$-3.44±.20; $M_{\phi\phi}$-0.84±.19; $M_{r\theta}$1.86±.21; $M_{\theta\phi}$-1.85±.12; $M_{\phi r}$1.97±.19; Best double couple: $M_0$5.12300×10^{16} NP1:ϕ_s53.00000°,δ61.00000°,λ80.00000°. NP2: ϕ_s252.00000°,δ31.00000°,λ107.00000°. Principal axes: T 5.1340, Plg72.0000°, Azm299.0000°; N -0.0210, Plg9.0000°, Azm57.0000°; P -5.1110, Plg15.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **16** 11:14:34.8±0.0, 51°.79N×179°.13E, h62^{km}, mb4.9/49, mB5.0/36, Ms4.6/31, Ms7 4.4/31*

ISC 16 11:14:30.7±0.4, 51°.23N±0°.07×179°.77E±0°.03, h37^{km}±1^{km}, n870, σ0^s.98/884, mb4.8/337, MS4.3/32, 28C-10D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**2.02**	**71**	ePn	**Pn**	**11 15 03.8**	**+1.6**
KIWB				eSn	**Sn**	**11 15 26.6**	**+0.4**
ADK	**Adak**	**2.31**	**72**	ePn	**Pn**	**11 15 08.8**	**+2.7**
ADK				eSn	**Sn**	**11 15 29.4**	**-3.8**
ADK	**Adak**	**2.31**	**72**	eP	**Pn**	**11 15 08.8**	**+2.7**
ADK				e		11 15 29.4	
GSTR	**Great Sitkin T**	**2.74**	**70**	ePn	**Pn**	**11 15 14.2**	**+2.1**
SMY	**Shemya**	**3.82**	**295**	ePn	**Pn**	**11 15 28.8**	**+2.0**
SMY	**Shemya**	**3.82**	**295**	eP	**Pn**	**11 15 28.8**	**+2.0**
NIKH	**Nikolski High**	**7.22**	**72**	ePn	**Pn**	**11 16 16.6**	**+3.1**
NIKH				eSn	**Sn**	**11 17 35.7**	**+1.4**
SPIA	**Saint Paul Isl**	**8.35**	**41**	ePn	**Pn**	**11 16 32.7**	**+3.8**
SPIA				eSn	**Sn**	**11 18 01.3**	**-0.5**
UNV	**Unalaska Valle**	**8.77**	**67**	ePn	**Pn**	**11 16 37.9**	**+3.2**
AKUT	**Akutan**	**9.25**	**66**	ePn	**Pn**	**11 16 43.3**	**+1.9**
FALS	**False Pass**	**10.75**	**64**	ePn	**Pn**	**11 17 03.8**	**+1.9**
FALS				eSn	**Sn**	**11 18 58.4**	**-2.3**
SDPT	**Sand Point**	**12.51**	**63**	ePn	**Pn**	**11 17 26.1**	**+0.3**
SDPT				eSn	**Sn**	**11 19 41.4**	**-2.2**
GAMB	**Gambell**	**13.37**	**17**	ePn	**Pn**	**11 17 37.3**	**-0.3**
PEA0B	**Petropavlovsk-**	**13.67**	**287**	ePn	**Pn**	**11 17 39.6**	**-2.2**
PETK	**Petropavlovsk-**	**13.67**	**287**	Pn	**Pn**	**11 17 40.8**	**-1.0**
	0.2nm,0.3s,baz=78,slow=17,SNR=5.2						
PETK				Sn	**Sn**	**11 20 09.2**	**-2.9**
	0.1nm,0.3s,baz=125,slow=17,SNR=1.9						
PETK				LR	LR	11 22 50.5	
	comp=Z,946nm,21.9s,baz=95,slow=37						
PEA1	**Petropavlovsk-**	**13.67**	**287**	ePn	**Pn**	**11 17 40.8**	**-1.0**
CHGN	**Chignik**	**13.84**	**60**	ePn	**Pn**	**11 17 44.5**	**+0.5**
CHIR	**Chirikof Islan**	**15.30**	**63**	ePn	**Pn**	**11 18 03.0**	**-0.6**
	212nm,1.6s						
SII	**Sitkinak Islan**	**16.20**	**61**	ePn	**Pn**	**11 18 14.0**	**-1.2**
	99nm,0.6s						
OHAK	**Old Harbor**	**16.79**	**59**	ePn	**Pn**	**11 18 20.6**	**-2.1**
	76nm,0.8s						
SVW2	**Sparrevohn**	**16.81**	**44**	eP	**P**	**11 18 25.5**	**+0.8**
	39nm,1.0s						
KDAK	**Kodiak Island**	**17.26**	**57**	P	**Pn**	**11 18 26.1**	**-2.3**
	4.1nm,0.3s,baz=244,slow=4.0,SNR=56						
KDAK				S	**Sn**	**11 21 35.3**	**-3.9**
	0.1nm,0.3s,baz=112,slow=18,SNR=4.2						
KDAK	**Kodiak Island**	**17.26**	**57**	ePn	**Pn**	**11 18 26.6**	**-1.9**
KDAK				eP	**P**	**11 18 26.9**	**-2.8**
KDAK				eSn	**Sn**	**11 21 38.6**	**-0.5**
KDAK	**Kodiak Island**	**17.26**	**57**	eP	**Pn**	**11 18 26.6**	**-1.9**
KDAK				e		11 21 38.6	
TTA	**Tatalina**	**17.49**	**39**	eP	**P**	**11 18 34.5**	**+2.2**
	21nm,1.0s						
TTA	**Tatalina**	**17.49**	**39**	eP	**P**	**11 18 34.5**	**+2.2**
TTA				pmax	pmax		
	comp=Z,21nm,1.0s						
RSO	**Redoubt South**	**17.86**	**48**	ePn	**P**	**11 18 38.8**	**+2.4**
BILL	**Bilibino**	**18.11**	**344**	eP	**P**	**11 18 40.0**	**+1.0**
	comp=Z,39nm,1.1s						
BILL	**Bilibino**	**18.11**	**344**	c iP	**P**	**11 18 40.6**	**+1.6**
BILL				pmax	pmax		
	comp=Z,64nm,1.7s						
CNPM	**China Poot**	**18.32**	**52**	eP	**Pn**	**11 18 41.9**	**+0.3**
	comp=Z,36nm,0.8s						
SPU	**Mount Spurr**	**18.42**	**46**	eP	**Pn**	**11 18 43.9**	**+1.1**
BRLK	**Bradley Lake**	**18.55**	**51**	eP	**Pn**	**11 18 44.2**	**-0.2**
	comp=Z,16nm,0.8s						
SEY	**Seymchan**	**18.77**	**319**	P	**P**	**11 18 46.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=142,slow=19,SNR=2.1						
SEY	**Seymchan**	**18.77**	**319**	⇑eP	**Pn**	**11 18 49.4**	**+2.5**
PPLA	**Purkeypile**	**19.02**	**41**	eP	**Pn**	**11 18 49.7**	**-0.4**
	comp=Z,70nm,1.1s						
CAST	**Castle Rocks**	**19.29**	**40**	eP	**Pn**	**11 18 53.6**	**+0.3**
	comp=Z,45nm,1.0s						
SEW	**Seward**	**19.33**	**51**	eP	**P**	**11 18 52.7**	**+0.2**
	comp=Z,25nm,0.9s						
RC01	**Rabbit Creek A**	**19.46**	**48**	eP	**P**	**11 18 52.9**	**-0.9**
	comp=Z,17nm,0.8s						
KTH	**Kantishna Hill**	**19.82**	**40**	eP	**Pn**	**11 18 59.2**	**-0.4**
	comp=Z,97nm,1.0s						
PMR	**Palmer**	**19.88**	**47**	eP	**P**	**11 18 58.1**	**-0.3**
	comp=Z,11nm,0.8s						
PMR	**Palmer**	**19.88**	**47**	eP	**P**	**11 18 58.1**	**-0.3**
PMR				pmax	pmax		
	comp=Z,11nm,0.8s						
BPAW	**Bear Paw Mtn.**	**20.03**	**39**	eP	**P**	**11 18 59.5**	**-0.6**
	comp=Z,37nm,0.7s						
KNK	**Knik Glacier**	**20.14**	**47**	eP	**P**	**11 19 00.8**	**-0.4**
	comp=Z,22nm,0.7s						
SML	**Sawmill**	**20.31**	**46**	eP	**P**	**11 19 02.6**	**-0.6**
	comp=Z,30nm,0.8s						
SML				eS	**S**	**11 22 50.4**	**+1.8**
SML	**Sawmill**	**20.31**	**46**	eP	**P**	**11 19 02.6**	**-0.6**
SML				eS	**S**	**11 22 50.4**	**+1.8**

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SML                                     pmax   pmax
      comp=Z,30nm,0.8s
MLY   Manley             20.55  37  eP     P       11 19 06.2 +0.5
      comp=Z,59nm,1.4s
RND   Reindeer           20.61  42  eP     P       11 19 06.2 -0.2
      comp=Z,58nm,1.4s
RND                                 eS     S       11 22 54.8 +0.3
RND   Reindeer           20.61  42  eP     P       11 19 06.2 -0.2
RND                                 eS     S       11 22 54.8 +0.3
RND                                 pmax   pmax
      comp=Z,58nm,1.4s
GLI   Glacier Island     20.65  49  eP     P       11 19 05.3 -1.5
      comp=Z,25nm,0.7s
BWN   Browne             20.66  39  eP     Pn      11 19 08.2 -1.2
      comp=Z,145nm,1.2s
MCK   McKinley           20.70  41  eP     P       11 19 07.7 +0.4
      comp=Z,20nm,0.8s
MCK   McKinley           20.70  41  eP     P       11 19 07.7 +0.4
MCK                                 pmax   pmax
      comp=Z,20nm,0.8s
SCM   Sheep Creek Mo     20.78  47  eP     P       11 19 07.8 -0.4
      comp=Z,48nm,0.9s
SCM   Sheep Creek Mo     20.78  47  eP     P       11 19 07.8 -0.4
SCM                                 pmax   pmax
      comp=Z,48nm,0.9s
FID   Port Fidalgo       20.92  50  eP     P       11 19 09.0 -0.7
      comp=Z,52nm,1.2s
DHY   Denali Highway     21.12  43  eP     P       11 19 12.3 +0.2
      comp=Z,63nm,1.0s
EYAK  Cordova Ski Ar     21.23  51  eP     P       11 19 12.6 -0.4
      comp=Z,18nm,0.8s
WRH   Wood River Hil     21.33  39  eP     P       11 19 14.3 +0.2
      comp=Z,19nm,1.0s
CCB   Clear Creek Bu     21.51  39  eP     P       11 19 14.8 -1.2
      comp=Z,18nm,1.0s
TCOL  CIGO, UAF Yank     21.58  38   P     P       11 19 17.0 +0.3
      baz=246
COLA  College            21.59  38  eP     P       11 19 18.4 +1.7
      comp=Z,33nm,0.9s
COLA  College            21.59  38⇓eP     P       11 19 16.7 -0.1
COLA                                pmax   pmax
      comp=Z,31nm,2.0s
RAGM  Ragged Mountai     21.73  51  eP     P       11 19 19.4 +1.0
      comp=Z,41nm,1.2s
HDA   Harding Lake       21.77  40  eP     P       11 19 19.5 +0.8
      comp=Z,13nm,0.8s
HDA   Harding Lake       21.77  40   P     P       11 19 18.8 +0.1
      baz=248,SNR=14
POKR  Poker Plat Res     21.85  38   P     P       11 19 19.4 -0.2
      baz=246
COLD  Coldfoot           21.85  32  eP     P       11 19 20.0 +0.4
      comp=Z,14nm,1.0s
HMT   Hamilton           21.92  51  eP     P       11 19 20.0 -0.5
      comp=Z,16nm,0.8s
PAX   Paxson             21.92  44  eP     P       11 19 19.9 -0.6
      comp=Z,24nm,0.8s
PAX   Paxson             21.92  44  eP     P       11 19 19.9 -0.6
PAX                                 pmax   pmax
      comp=Z,24nm,0.8s
ILAR  Eielson Array      21.93  39   P     P       11 19 18.6 -1.8
      comp=Z,3.2nm,0.5s,baz=241,slow=9.1,SNR=38
ILAR                                PcP    PcP     11 23 17.4 -0.6
      comp=Z,0.5nm,0.4s,baz=259,slow=2.9,SNR=7.5
ILAR                                ScP    ScP     11 26 52.4 +0.3
      comp=Z,1.7nm,1.0s,baz=270,slow=3.4,SNR=8.5
ILB   Eielson Array      21.93  39  eP     P       11 19 20.0 -0.4
      comp=Z,18nm,1.0s
KUR   Kuril'sk           21.97 267⇓iP     P       11 19 22.2 +1.2
RIDG  Independent Ri     22.41  42  eP     P       11 19 24.5 -1.3
      comp=Z,33nm,1.1s
MENT  Mentasta           22.69  45  eP     P       11 19 28.2 -0.4
      comp=Z,14nm,0.7s
DOT   Dot Lake           22.72  43  eP     P       11 19 28.6 -0.4
      comp=Z,26nm,1.0s
PRP   Porcupine Dome     22.74  38  eP     P       11 19 28.9 -0.4
      comp=Z,16nm,0.8s
TOLK  Toolik Lake Re     22.83  29  eP     P       11 19 30.9 +0.8
      comp=Z,47nm,0.9s
TOLK  Toolik Lake Re     22.83  29   P     P       11 19 30.4 +0.3
      baz=236,SNR=26
SCRK  Sand Creek         22.85  42  eP     P       11 19 28.9 -1.6
      comp=Z,13nm,0.8s
BALM  Baldy              22.96  50  eP     P       11 19 31.4 -0.2
      comp=Z,10nm,0.8s
BALM  Baldy              22.96  50  eP     P       11 19 31.4 -0.2
BALM                                pmax   pmax
      comp=Z,10.0nm,0.8s
TYV   Tymovskoe          23.18 284  eP     P       11 19 34.8 +1.0
TYV                                 pmax   pmax
      comp=Z,300nm,2.9s
TYV                                 pmax   pmax
      comp=Z,24nm,1.6s
FYU   Fort Yukon         23.27  36  eP     P       11 19 34.9 +0.5
      comp=Z,105nm,1.5s
NKL   Nikolayevsk        23.84 290  eP     P       11 19 39.6 -0.5
NKL                                 pmax   pmax
      comp=N,10.0nm,1.4s
NKL                                 pmax   pmax
      comp=E,30nm,1.4s
NKL                                 pmax   pmax
      comp=Z,53nm,1.4s
NKL                                 MLR    MLR
      comp=N,457nm,21.0s
NKL                                 MLR    MLR
      comp=Z,702nm,21.0s
NKL                                 MLR    MLR
      comp=E,117nm,13.0s
PCA   Pinnacle           23.88  53  eP     P       11 19 40.1 -0.4
      comp=E,37nm,1.1s
EGAK  Eagle              24.25  41  eP     P       11 19 43.6 -0.1
      comp=E,38nm,1.1s
YSS   Yuzh-Sakhalins     24.44 275  eP     P       11 19 46.9 +1.3
      comp=E,21nm,0.9s
YSS   Yuzh-Sakhalins     24.44 275αeP     P       11 19 46.9 +1.3
YSS                                 e              11 19 56.3
YSS                                 e              11 19 59.8
YSS                                 eS     S       11 24 01.1 -1.8
YSS                                 eSSS   SSS     11 25 00.9
YSS                                 pmax   pmax
      comp=Z,10.0nm,0.7s
YSS                                 MLR    MLR
      comp=Z,300nm,18.0s
YSS                                 MLR    MLR
      comp=N,200nm,16.0s
YSS                                 MLR    MLR
      comp=E,100nm,16.0s
DAWY  Dawson             24.83  43  eP     P       11 19 48.8 -0.3
      comp=E,24nm,1.0s
HYT   Haines Junctio     25.29  51  eP     P       11 19 52.1 -1.3
      comp=E,6.3nm,0.8s
ASAJ  Asahikawa          25.81 269   P     P       11 19 59.1 +1.0
      comp=E,19nm,0.9s,baz=39,slow=7.2,SNR=14
SKAG  Skagway            26.36  54  eP     P       11 20 03.1 +0.2
      comp=E,10nm,1.2s
EPYK  Eagle Plains       26.44  39  eP     P       11 20 03.0 -0.6
      comp=E,14nm,1.0s
EPYK  Eagle Plains       26.44  39   P     P       11 20 02.5 -1.1
      baz=256,SNR=12
GRNR  Gornyy             27.00 286  eP     P       11 20 09.0 +0.2
GRNR                                pmax   pmax
      comp=Z,26nm,1.0s
INK   Inuvik             28.10  35   P     P       11 20 18.3 -0.1
      comp=Z,2.0nm,0.4s,baz=244,slow=8.7,SNR=17
INK                                 PcP    PcP     11 23 31.7 +0.1
      comp=Z,2.5nm,0.5s,baz=311,slow=4.6,SNR=6.2
INK                                 ScP    ScP     11 27 10.6 +1.3
      comp=Z,2.7nm,1.1s,baz=194,slow=4.2,SNR=3.9
INK                                 LR     LR      11 32 34.2
      comp=Z,244nm,19.3s,baz=244,slow=39
INK   Inuvik             28.10  35  eP     P       11 20 18.2 -0.1
      comp=Z,6.9nm,0.8s
INK                                 ePcP   PcP     11 23 31.2 -0.4
YAK   Yakutsk            28.85 311⇑eP     P       11 20 24.8 -0.3
YAK                                 pmax   pmax
      comp=Z,9.0nm,0.9s
TEY   Ternei             29.13 275⇑iP     P       11 20 27.7 -0.1
TEY                                 pmax   pmax
      comp=Z,10.0nm,1.2s
TIXI  Tiksi              30.33 331  PcP    PcP     11 23 36.0 -1.3
      comp=Z,5.7nm,0.8s,baz=111,slow=4.5,SNR=6.5
TIXI  Tiksi              30.33 331⇑eP     P       11 20 36.9 -1.2
TIXI                                pmax   pmax
      comp=Z,4.0nm,1.8s
KLR   Kul'dur            30.36 285c iP     P       11 20 38.7 +0.1
KLR                                 pmax   pmax
      comp=Z,71nm,1.5s
ZEA   Zeya               31.48 295  eP     P       11 20 47.8 -0.7
ZEA                                 pmax   pmax
      comp=E,24nm,1.0s
ZEA                                 pmax   pmax
      comp=Z,35nm,1.0s
USRK  Ussuriysk Ar.      32.42 277   P     P       11 20 56.4 -0.5
      comp=Z,2.9nm,0.6s,baz=55,slow=9.4,SNR=13
USRK                                LR     LR      11 34 41.5
      comp=Z,184nm,20.7s,baz=43,slow=37
MJAR  Matsushiro Arr     32.88 260   P     P       11 21 01.2 +0.3
      comp=Z,2.4nm,0.8s,baz=48,slow=6.4,SNR=7.5
MJAR                                ScP    ScP     11 27 27.1 +1.5
      comp=Z,1.7nm,0.9s,baz=28,slow=1.6,SNR=4.5
MJAR                                LR     LR      11 32 21.4
      comp=Z,281nm,21.8s,baz=85,slow=33
MAJO  Matsushiro         32.88 260  eP     P       11 21 00.4 -0.5
      comp=Z,30nm,1.6s
MAJO                                eScP   ScP     11 27 27.1 +1.5
MAJO  Matsushiro         32.88 260c iP     P       11 21 01.6 +0.7
MAJO                                pmax   pmax
      comp=Z,20nm,1.6s
H11N2 WAKE ISLAND Hy     33.03 203   T     T       11 56 11.0
      baz=19,slow=75,SNR=251
H11N3 WAKE ISLAND Hy     33.04 203   T     T       11 56 35.8
      baz=19,slow=75,SNR=316
H11N1 WAKE ISLAND Hy     33.05 203   T     T       11 56 06.8
      baz=19,slow=75,SNR=251
H11S1 WAKE ISLAND Hy     34.25 202   T     T       11 57 37.0
      baz=19,slow=76,SNR=177
H11S2 WAKE ISLAND Hy     34.27 202   T     T       11 57 47.3
      baz=19,slow=76,SNR=114
H11S3 WAKE ISLAND Hy     34.27 202   T     T       11 57 38.1
      baz=19,slow=76,SNR=104
LLLB  Lillooet           35.95  68  eP     P       11 21 26.4 -1.0
      comp=Z,11nm,1.3s
YKW3  Yellowknife Ar     35.97  46  eP     P       11 21 27.1 -0.2
      comp=Z,18nm,1.0s
YKA   Yellowknife Ar     35.98  46   P     P       11 21 27.2 -0.2
      comp=Z,6.9nm,0.6s,baz=284,slow=7.5,SNR=67
YKA                                 PcP    PcP     11 23 53.8 +0.6
      comp=Z,2.5nm,0.8s,baz=298,slow=2.4,SNR=7.5
YKA                                 ScP    ScP     11 27 36.5 +0.3
      comp=Z,1.0nm,0.8s,baz=274,slow=3.5,SNR=3.6
YKA                                 LR     LR      11 37 25.5
      comp=Z,49nm,19.1s,baz=179,slow=38
YKB5  Yellowknife Ar     35.98  46  eP     P       11 21 27.2 -0.2
YKB5                                ePcP   PcP     11 23 53.9 +0.6
YKB5                                eScP   ScP     11 27 36.5 +0.3
NLWA  Neilton Lookou     36.18  73  eP     P       11 21 31.8 +2.4
      comp=Z,21nm,1.1s
D03D  Eldon              36.58  73   P     P       11 21 34.9 +2.2
      baz=298,SNR=17
CN2   Changchun          36.69 280  eP     P       11 21 35.1 +1.3
CN2                                 esP    sP      11 21 57.5 +9.0
CN2                                 eS     S       11 27 13.0 -1.4
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                 pmax   pmax
      comp=Z,200nm,4.0s
CN2                                 LR     LR
      comp=Z,270nm,25.0s
CN2                                 LR     LR
      comp=Z,240nm,25.0s
CN2                                 LR     LR
      comp=Z,270nm,25.0s
B05A  Bryant             36.84  71   P     P       11 21 36.3 +1.3
      baz=297,SNR=8.3
D04E  Lakebay            36.94  73   P     P       11 21 36.9 +1.1
      baz=298
BOD   Bodaibo            37.35 306  eP     P       11 21 38.1 -1.0
BOD                                 pmax   pmax
      comp=Z,29nm,1.1s
E04D  Cinebar            37.36  74   P     P       11 21 40.4 +1.1
      baz=299,SNR=5.8
D05A  Enumclaw           37.40  73  eP     P       11 21 42.1 +2.4
      comp=Z,37nm,1.0s
HIA   Hailar             37.51 291  eP     P       11 21 40.0 -0.7
      comp=Z,15nm,0.6s
HIA   Hailar             37.51 291c iP     P       11 21 40.2 -0.4
HIA                                 pmax   pmax
      comp=Z,184nm,1.5s
LON   Longmire           37.72  73  eP     P       11 21 43.1 +0.6
      comp=Z,8.6nm,0.6s
LON   Longmire           37.72  73  eP     P       11 21 43.1 +0.6
LON                                 pmax   pmax
      comp=Z,9.0nm,0.6s
LTY   Liberty            38.16  72  eP     P       11 21 47.2 +0.9
      comp=Z,8.8nm,0.9s
H04A  Detroit Lake       38.52  76  eP     P       11 21 50.9 +1.7
      comp=Z,36nm,1.0s
KSRS  Korea Array        38.74 270   P     P       11 21 51.1  0.0
      comp=Z,2.2nm,0.6s,baz=55,slow=7.9,SNR=5.5
KSRS                                LR     LR      11 36 41.2
      comp=Z,134nm,21.7s,baz=38,slow=34
G05D  Wamic, OR          38.77  75   P     P       11 21 52.5 +1.2
      baz=301
KS15  Wonju Array Si     38.77 270  eP     P       11 21 51.6 +0.3
      comp=Z,23nm,1.1s
I04A  Tendick Farm,      38.85  78   P     P       11 21 53.7 +1.7
      baz=302
L02E  Cave Junction      39.00  81   P     P       11 21 55.3 +2.0
      baz=304
I05D  Terrebonne, OR     39.22  76   P     P       11 21 56.8 +1.6
      baz=302
HAWA  Hanford            39.26  72  eP     P       11 21 56.4 +1.0
      comp=Z,21nm,0.9s
F07A  Phinny Hill Vi     39.28  73  eP     P       11 21 56.1 +0.6
      comp=Z,19nm,1.1s
D08A  Wollman Farm,      39.30  71  eP     P       11 21 55.5 -0.2
      comp=Z,13nm,0.9s
C09A  Chrisman Ranch     39.32  70  eP     P       11 21 56.1 +0.2
      comp=Z,23nm,1.5s
E08A  Dider Farm, El     39.50  72  eP     P       11 21 58.5 +1.1
      comp=Z,16nm,0.9s
JNU   Nakatsue           39.66 262  eP     P       11 21 58.8 -0.2
      comp=Z,36nm,1.4s
PINE  Pine Mountain      39.75  77  eP     P       11 22 01.5 +1.7
      comp=Z,18nm,0.9s
L04D  Klamath Falls      39.77  80   P     P       11 22 01.7 +1.8
      baz=304
NEW   Newport            39.77  69  eP     P       11 21 59.8 +0.1
      comp=Z,12nm,0.9s
NEW   Newport            39.77  69  eP     P       11 21 59.8 +0.1
NEW                                 pmax   pmax
      comp=Z,12nm,0.9s
NEW   Newport            39.77  69   P     P       11 21 59.8 +0.1
      baz=299,SNR=6.6
YBH   Yreka Blue Hor     39.79  81  eP     P       11 22 03.1 +3.1
      comp=Z,11nm,0.8s
YBH   Yreka Blue Hor     39.79  81  eP     P       11 22 03.1 +3.1
YBH                                 pmax   pmax
      comp=Z,11nm,0.8s
J05D  Fort Rock, OR      39.85  78   P     P       11 22 02.1 +1.6
      baz=303
M02C  Callahan           39.89  81   P     P       11 22 02.2 +1.4
      baz=304
E09A  Wood Farm, Sta     40.03  72  eP     P       11 22 02.1 +0.3
      comp=Z,23nm,1.2s
G08A  Pilot Rock         40.17  74  eP     P       11 22 02.9 -0.2
      comp=Z,6.3nm,1.1s
RES   Resolute Bay       40.25  24  eP     P       11 22 03.7 +0.5
      comp=Z,12nm,1.1s
RES   Resolute Bay       40.25  24  eP     P       11 22 03.7 +0.5
RES                                 pmax   pmax
      comp=Z,12nm,1.1s
M04C  Macdoel            40.30  80   P     P       11 22 05.8 +1.6
      baz=304
I07A  Izee               40.48  76  eP     P       11 22 05.7 +0.1
      comp=Z,8.4nm,0.9s
O02D  Mt. Diablo Mer     40.63  83   P     P       11 22 09.0 +2.1
      baz=306
F10A  Beach Ranch, E     40.86  72  eP     P       11 22 09.3 +0.6
      comp=Z,9.3nm,1.0s
O03E  Paynes Creek       41.17  82   P     P       11 22 13.0 +1.6
      baz=306
MOD   Modoc Plateau      41.18  79  eP     P       11 22 11.8 +0.2
      comp=Z,6.0nm,0.7s
WALA  Waterton Lakes     41.25  66  eP     P       11 22 12.1 +0.2
      comp=Z,14nm,1.0s
BMO   Blue Mountains     41.40  73  eP     P       11 22 13.9 +0.7
      comp=Z,12nm,1.1s
BMO   Blue Mountains     41.40  73  eP     P       11 22 13.9 +0.7
BMO                                 pmax   pmax
      comp=Z,12nm,1.1s
J08A  Circle Bar Ran     41.50  76  eP     P       11 22 14.5 +0.5
WVOR  Wild Horse Val     41.91  77  eP     P       11 22 18.9 +1.4
      comp=Z,13nm,0.8s
WVOR  Wild Horse Val     41.91  77  eP     P       11 22 18.9 +1.4
WVOR                                pmax   pmax
      comp=Z,13nm,0.8s
PLID  Pearl Lake         42.06  72  eP     P       11 22 20.0 +1.2
      comp=Z,4.8nm,0.9s
BEKR  Beckworth          42.32  81  eP     P       11 22 22.1 +1.2
      comp=Z,11nm,1.3s
MSO   Missoula           42.36  69  eP     P       11 22 21.1 +0.1
      comp=Z,8.7nm,0.8s
MSO   Missoula           42.36  69   P     P       11 22 21.3 +0.2
      baz=301
RUBR  Rubicon Trail      42.93  82  eP     P       11 22 27.6 +1.7
      comp=Z,13nm,0.9s
PAHR  Pah Rah Range      43.02  81  eP     P       11 22 27.4 +0.8
      comp=Z,14nm,1.1s
MFID  Camas Ranch        43.07  74  eP     P       11 22 27.8 +0.9
      comp=Z,8.0nm,1.0s
VCNR  Virginia City      43.10  82  eP     P       11 22 28.0 +0.8
      comp=Z,11nm,0.8s
PNTR  Pine Nut           43.26  82  eP     P       11 22 29.8 +1.3
      comp=Z,18nm,0.7s
CMB   Columbia Colle     43.40  84  eP     P       11 22 30.0 +0.5
      comp=Z,7.8nm,1.1s
CMB   Columbia Colle     43.40  84  eP     P       11 22 30.0 +0.5
CMB                                 pmax   pmax
      comp=Z,8.0nm,1.1s
YERR  Yerington          43.54  82  eP     P       11 22 31.7 +0.9
      comp=Z,37nm,1.6s
HRY   Holter Researc     43.66  68  eP     P       11 22 31.6 +0.1
WAKR  Walker             43.71  82  eP     P       11 22 31.3 -0.9
      comp=Z,13nm,1.3s
HLID  Hailey             43.84  73  eP     P       11 22 34.1 +1.0
      comp=Z,16nm,1.1s
HLID  Hailey             43.84  73   P     P       11 22 34.0 +0.9
      baz=304,SNR=26
BMN   Battle Mountai     43.93  79  eP     P       11 22 35.0 +1.2
      comp=Z,5.1nm,0.6s
BMN   Battle Mountai     43.93  79  eP     P       11 22 35.0 +1.2
BMN                                 pmax   pmax
      comp=Z,5.0nm,0.6s
DLMT  Dillon             43.93  70  eP     P       11 22 34.4 +0.6
      comp=Z,8.3nm,1.1s
MCMT  McKenzie Canyo     44.08  71  eP     P       11 22 35.4 +0.3
EGMT  Eagleton           44.16  65  eP     P       11 22 35.0 -0.5
      comp=Z,8.1nm,0.7s
EGMT  Eagleton           44.16  65   P     P       11 22 34.9 -0.6
      baz=302,SNR=6.3
RYN   Ryan               44.20  82  eP     P       11 22 37.3 +1.2
      comp=Z,8.6nm,0.9s
KVN   Kaiserville        44.21  81  eP     P       11 22 37.8 +1.7
      comp=Z,12nm,1.3s
BOZ   Bozeman (W)        44.37  69  eP     P       11 22 37.7 +0.3
      comp=Z,18nm,0.9s
BOZ   Bozeman (W)        44.37  69  eP     P       11 22 37.7 +0.3
BOZ                                 pmax   pmax
      comp=Z,18nm,0.9s
BOZ   Bozeman (W)        44.37  69   P     P       11 22 37.6 +0.3
      baz=303,SNR=30
NV01  Mina Array Sit     44.46  82  eP     P       11 22 39.4 +1.2
NV01                                eScP   ScP     11 28 10.2 +0.1
NVAR  Mina Array Bea     44.46  82   P     P       11 22 39.4 +1.2
      comp=Z,1.3nm,0.7s,baz=292,slow=8.4,SNR=13
NVAR                                ScP    ScP     11 28 10.2 +0.1
      comp=Z,0.3nm,0.7s,baz=245,slow=4.7,SNR=3.6
MDPB  Devils Postpil     44.47  83  eP     P       11 22 39.2 +0.9
      comp=Z,11nm,1.0s
BJI   Beijing            44.53 281  eP     P       11 22 39.5 +1.1
BJI                                 pmax   pmax
      comp=Z,7.0nm,0.8s
BJI                                 LR     LR
      comp=Z,97nm,16.9s
BJI                                 LR     LR
      comp=Z,88nm,17.3s
BJT   Baijiatuau         44.54 281  eP     P       11 22 39.6 +1.0
      comp=Z,10nm,0.8s
BJT   Baijiatuau         44.54 281  eP     P       11 22 39.6 +1.0
BJT                                 pmax   pmax
      comp=Z,10.0nm,0.8s
NV11  Mina Array Sit     44.55  82  eP     P       11 22 40.4 +1.5
      comp=Z,0.9nm,1.3s
QLMT  Earthquake Lak     44.91  70  eP     P       11 22 42.2 +0.5
ELK   Elko               44.97  77  eP     P       11 22 43.6 +1.4
      comp=Z,10nm,0.9s
ELK   Elko               44.97  77  eP     P       11 22 43.6 +1.4
ELK                                 pmax   pmax
      comp=Z,11nm,0.9s
YHB   Horse Butte        45.10  70  eP     P       11 22 43.8 +0.6
      comp=Z,34nm,0.9s
YMR   Madison River      45.28  70  eP     P       11 22 45.3 +0.6
      comp=Z,27nm,0.9s
YHH   Holmes Hill        45.28  70  eP     P       11 22 45.0 +0.3
      comp=Z,29nm,1.0s
TLY   Talaya             45.39 302  eP     P       11 22 45.6 +0.4
      comp=Z,25nm,1.5s
TLY   Talaya             45.39 302ceP     P       11 22 45.5 +0.4
GCMT  Greycliff          45.42  68  eP     P       11 22 45.7 +0.1
YNR   Norris Junctio     45.42  70  eP     P       11 22 46.7 +0.9
      comp=Z,24nm,0.9s
YFT   Old Faithful       45.48  70  eP     P       11 22 48.1 +1.8
      comp=Z,20nm,0.8s
VES   Vestal, Richgr     45.58  85   P     P       11 22 47.9 +1.0
      baz=310
YPP   Pitchstone Pla     45.60  70  eP     P       11 22 48.5 +1.2
      comp=Z,9.1nm,1.0s
H17A  Grant Village      45.66  70  eP     P       11 22 49.7 +1.9
      comp=Z,27nm,0.9s
H17A  Grant Village      45.66  70   P     P       11 22 49.2 +1.5
      baz=304,SNR=17
LKWY  Lake               45.67  70  eP     P       11 22 48.8 +1.0
      comp=Z,19nm,0.9s
LKWY  Lake               45.67  70  eP     P       11 22 48.8 +1.0
LKWY                                pmax   pmax
      comp=Z,19nm,0.9s
IMW   Indian Meadow      45.73  71  eP     P       11 22 49.1 +0.8
      comp=Z,14nm,0.9s
FLWY  Flagg Ranch        45.77  70  eP     P       11 22 49.7 +1.2
      comp=Z,24nm,0.9s
FXWY  Fox Creek          45.83  71  eP     P       11 22 49.7 +0.7
      comp=Z,4.9nm,1.0s
HVU   Hansel Valley      45.86  74  eP     P       11 22 50.7 +1.5
      comp=Z,10nm,0.8s
HVU   Hansel Valley      45.86  74  eP     P       11 22 50.7 +1.5
HVU                                 pmax   pmax
      comp=Z,10.0nm,0.8s
SONA0 Songino Array      45.91 296  eP     P       11 22 49.4 -0.1
SONA0                               ePcP   PcP     11 24 26.2 +0.3
SONM  Songino Array      45.91 296   P     P       11 22 49.4 -0.1
      comp=Z,3.6nm,0.6s,baz=53,slow=8.7,SNR=14
SONM                                PcP    PcP     11 24 26.2 +0.3
      comp=Z,2.8nm,0.9s,baz=62,slow=4.2,SNR=4.1
SONM                                LR     LR      11 43 31.9
      comp=Z,652nm,18.5s,baz=64,slow=38
GRAC  Grapevine Rang     45.93  83   P     P       11 22 50.7 +1.0
      baz=309
MOOW  Moose Ponds        45.93  71  eP     P       11 22 50.0 +0.2
      comp=Z,5.5nm,0.9s
TPAW  Teton Pass         45.96  71  eP     P       11 22 51.0 +0.9
      comp=Z,28nm,1.6s
RLMT  Red Lodge          46.02  68  eP     P       11 22 51.2 +0.7
      comp=Z,26nm,1.0s
RLMT  Red Lodge          46.02  68   P     P       11 22 51.0 +0.5
      baz=304,SNR=20
SNOW  Snow King Moun     46.09  71  eP     P       11 22 51.6 +0.5
      comp=Z,9.3nm,1.1s
LOHW  Long Hollow        46.09  71  eP     P       11 22 51.7 +0.6
      comp=Z,7.2nm,0.9s
R11A  Troy Canyon, C     46.20  80  eP     P       11 22 53.0 +1.1
      comp=Z,8.6nm,1.0s
R11A  Troy Canyon, C     46.20  80   P     P       11 22 52.5 +0.5
      baz=308,SNR=16
BGU   Big Grassy Mou     46.21  75  eP     P       11 22 52.9 +1.0
      comp=Z,13nm,1.0s
ZAK   Zakamensk          46.26 301  eP     P       11 22 52.1 -0.1
ZAK                                 e              11 24 26.9
ZAK                                 pmax   pmax
      comp=Z,16nm,1.4s
ZAK                                 pmax   pmax
      comp=Z,5.0nm,1.4s
AHID  Auburn Hatcher     46.29  72  eP     P       11 22 53.5 +0.9
      comp=Z,17nm,1.0s
MPMC  Manual Prospec     46.45  84   P     P       11 22 53.8 -0.1
      baz=310
FURC  Furnace Creek,     46.58  83   P     P       11 22 56.0 +1.4
      baz=309
TPNV  Topopah Spring     46.66  82  eP     P       11 22 56.7 +1.2
      comp=Z,19nm,0.8s
TPNV  Topopah Spring     46.66  82  eP     P       11 22 56.7 +1.2
TPNV                                pmax   pmax
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	comp=Z,19nm,0.8s						
TPNV	Topopah Spring	46.66	82	P	P	11 22 56.3	+0.8
	baz=309,SNR=27						
HWUT	Hardware Ranch	46.69	74	*e*P	P	11 22 57.0	+1.3
	comp=Z,15nm,1.4s						
DUG	Dugway, Tooele	46.78	76	*e*P	P	11 22 57.5	+1.1
DUG	Dugway, Tooele	46.78	76	*e*P	P	11 22 57.5	+1.1
DUG	Dugway, Tooele	46.78	76	P	P	11 22 57.4	+1.0
	baz=307,SNR=21						
MOY	Mondy	46.80	303	*e*P	P	11 22 56.6	+0.2
MOY				pmax	pmax		
	comp=Z,20nm,1.3s						
HHC	Hu-ho-hao-te	46.87	285	P	P	11 22 58.0	+1.0
HHC				sP	sP	11 23 17.9	+5.9
HHC				S	S	11 29 44.0	-1.0
HHC				sS	sS	11 30 06.8	+6.3
HHC				pmax	pmax		
	comp=Z,28nm,1.2s						
HHC				pmax	pmax		
	comp=Z,120nm,4.2s						
HHC				LR	LR		
	comp=Z,450nm,20.1s						
EDW2	Edwards Air Fo	46.88	85	P	P	11 22 58.2	+1.0
	baz=310						
TCUT	Toone Canyon	47.08	74	*e*P	P	11 22 59.5	+0.6
	comp=Z,17nm,0.9s						
CTU	Camp Tracy	47.12	75	*e*P	P	11 22 59.8	+0.7
	comp=Z,13nm,1.1s						
PSUT	Pine Spring	47.15	79	*e*P	P	11 22 59.4	0.0
	comp=Z,9.4nm,1.0s						
BW06	Boulder Array	47.21	71	*e*P	P	11 23 00.4	+0.6
	comp=Z,30nm,0.9s						
BW06	Boulder Array	47.21	71	P	P	11 23 00.3	+0.4
	baz=306,SNR=44						
PD31	Pinedale Array	47.21	71	*e*P	P	11 23 00.3	+0.5
PDAR	Pinedale Array	47.21	71	P	P	11 23 00.3	+0.5
	comp=Z,19nm,0.8s,baz=308,slow=3.9,SNR=154						
GSC	Goldstone, Bar	47.35	84	*e*P	P	11 23 02.0	+1.1
	comp=Z,9.7nm,0.8s						
GSC	Goldstone, Bar	47.35	84	*e*P	P	11 23 02.0	+1.1
GSC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GSC	Goldstone, Bar	47.35	84	P	P	11 23 01.9	+1.0
	baz=310						
NLU	North Lily Min	47.37	76	*e*P	P	11 23 02.1	+1.0
	comp=Z,20nm,1.2s						
MPU	Maple Canyon	47.60	76	*e*P	P	11 23 03.0	+0.1
	comp=Z,6.5nm,0.9s						
TUQ	Turquoise Moun	47.82	83	P	P	11 23 05.3	+0.7
	baz=310						
NJ2	Nanjing	47.92	271	*e*P	P	11 23 04.9	-0.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
TCRU	Three Creeks R	47.97	78	*e*P	P	11 23 07.6	+1.8
	comp=Z,8.1nm,0.8s						
CCUT	Cedar City	48.07	79	*e*P	P	11 23 07.2	+0.6
	comp=Z,4.4nm,0.9s						
MSU	Marysvale	48.20	77	*e*P	P	11 23 08.7	+1.1
MSU	Marysvale	48.20	77	*e*P	P	11 23 08.7	+1.1
TMUT	Trail Mountain	48.30	76	*e*P	P	11 23 08.9	+0.5
	comp=Z,22nm,1.0s						
GMRC	Granite Mounta	48.41	84	P	P	11 23 09.6	+0.5
	baz=311						
LCMT	Little Creek M	48.48	80	*e*P	P	11 23 09.8	+0.2
	comp=Z,10nm,0.9s						
P17A	Butcher Ranch,	48.48	76	*e*P	P	11 23 10.7	+1.1
	comp=Z,9.4nm,0.8s						
MTPU	Mount Pierson	48.49	78	*e*P	P	11 23 11.3	+1.3
	comp=Z,5.7nm,0.8s						
PFO	Pinyon Flats O	48.67	85	P	P	11 23 11.7	+0.6
	baz=311						
BELC	Belle Mtn. Jos	48.71	85	P	P	11 23 12.2	+0.8
	baz=311						
KNB	Kanab	48.74	79	*e*P	P	11 23 13.5	+1.8
	comp=Z,11nm,1.1s						
KNB	Kanab	48.74	79	*e*P	P	11 23 13.5	+1.8
KNB				pmax	pmax		
	comp=Z,11nm,1.1s						
PKCU	Pink Cliffs	48.78	79	*e*P	P	11 23 14.0	+1.8
	comp=Z,8.1nm,0.9s						
SRU	San Rafael Swe	48.84	76	*e*P	P	11 23 13.6	+1.2
	comp=Z,12nm,0.6s						
SRU	San Rafael Swe	48.84	76	*e*P	P	11 23 13.6	+1.2
SRU				pmax	pmax		
	comp=Z,12nm,0.6s						
K22A	Casper	49.07	70	*e*P	P	11 23 14.1	0.0
	comp=Z,15nm,0.9s						
K22A	Casper	49.07	70	P	P	11 23 14.0	-0.2
	baz=307						
IRM	Iron Mountain	49.14	84	P	P	11 23 15.1	+0.5
	baz=311						
RWWY	Rawlins	49.25	71	*e*P	P	11 23 15.2	-0.4
	comp=Z,18nm,1.0s						
BC3	Big Chuckawall	49.27	85	P	P	11 23 16.6	+0.9
	baz=311						
W13A	Hualapai Mount	49.31	82	*e*P	P	11 23 16.3	+0.2
	comp=Z,6.3nm,1.0s						
U15A	North Rim	49.44	80	*e*P	P	11 23 18.2	+1.0
	comp=Z,11nm,0.6s						
O20A	White River Ci	49.59	73	*e*P	P	11 23 18.6	+0.5
	comp=Z,21nm,1.1s						
O20A	White River Ci	49.59	73	P	P	11 23 18.4	+0.3
	baz=308,SNR=12						
PDMCI	Parker Dam,Lak	49.67	83	P	P	11 23 19.2	+0.7
	baz=311						
Y12C	Blythe	49.79	84	*e*P	P	11 23 19.4	-0.1
	comp=Z,9.3nm,1.2s						
MDND	Maddock	49.93	60	*e*P	P	11 23 20.4	0.0
	comp=Z,23nm,1.0s						
MDND	Maddock	49.93	60	P	P	11 23 20.1	-0.3
	baz=306						
PV09	Paradox Valley	50.07	75	*e*P	P	11 23 22.8	+0.8
PV22	Blue Mesa, Par	50.25	75	*e*P	P	11 23 22.8	-0.5
	comp=Z,24nm,1.0s						
PV18	Skein Mesa, Pa	50.36	76	*e*P	P	11 23 24.3	+0.2
	comp=Z,27nm,0.9s						
PV12	Saucer Basin,	50.38	75	*e*P	P	11 23 25.0	+0.7
	comp=Z,19nm,0.9s						
SPA0	Spitsbergen Ar	50.46	356	*e*P	P	11 23 23.7	-0.4
	comp=Z,34nm,1.0s						
N23A	Red Feather La	50.49	71	*e*P	P	11 23 25.7	+0.6
	comp=Z,20nm,1.2s						
N23A	Red Feather La	50.49	71	P	P	11 23 25.5	+0.4
	baz=308,SNR=10						
ULM	Lac du Bonnet	50.51	56	P	P	11 23 24.6	-0.2
	comp=Z,2.6nm,0.6s,baz=313,slow=9.5,SNR=3.3						
PHWY	Pilot Hill	50.53	70	*e*P	P	11 23 25.6	+0.2
	comp=Z,5.9nm,1.1s						
WUAZ	Wupatki	50.60	80	*e*P	P	11 23 26.9	+1.1
	comp=Z,11nm,0.9s						
WUAZ	Wupatki	50.60	80	P	P	11 23 26.7	+0.9
	baz=311						
PV01	Paradox Valley	50.64	75	*e*P	P	11 23 26.6	+0.5
	comp=Z,13nm,0.9s						
SMCO	Snowmass	50.95	73	*e*P	P	11 23 28.6	-0.1
	comp=Z,3.4nm,0.7s						
MVCO	Mesa Verde	51.27	76	*e*P	P	11 23 31.6	+0.7
	comp=Z,31nm,1.5s						
MVCO	Mesa Verde	51.27	76	P	P	11 23 30.9	0.0
	baz=310						
ISCO	Idaho Springs	51.37	72	*e*P	P	11 23 32.0	+0.3
	comp=Z,10nm,1.1s						
ISCO	Idaho Springs	51.37	72	*e*P	P	11 23 32.0	+0.3
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ISCO	Idaho Springs	51.37	72	P	P	11 23 32.2	+0.4
	baz=309,SNR=9.7						
DAG	Danmarks Havn	51.74	5	*e*P	P	11 23 31.1	-2.5
DAG				pmax	pmax		
	comp=Z,42nm,1.4s						
DAG	Danmarks Havn	51.74	5	*i* P	P	11 23 31.1	-2.5
	comp=Z,18nm,1.4s						
WHN	Wuhan	51.77	273	P	P	11 23 34.6	+0.2
W18A	Petrified Fore	51.87	79	*e*P	P	11 23 36.2	+0.8
	comp=Z,11nm,1.0s						
W18A	Petrified Fore	51.87	79	P	P	11 23 36.1	+0.7
	baz=311						
S22A	4UR Ranch, Cre	51.95	75	*e*P	P	11 23 36.4	+0.4
	comp=Z,15nm,1.2s						
S22A	4UR Ranch, Cre	51.95	75	P	P	11 23 37.0	+0.9
	baz=310,SNR=6.3						
X18A	Snowflake	52.13	80	*e*P	P	11 23 37.8	+0.5
	comp=Z,7.7nm,0.8s						
Q24A	Divide	52.18	72	P	P	11 23 37.5	-0.3
	baz=310						
SUSD	Miller	52.34	63	P	P	11 23 38.6	0.0
	baz=308						
SDCO	Great Sand Dun	52.75	74	*e*P	P	11 23 42.9	+0.9
	comp=Z,13nm,1.3s						
SDCO	Great Sand Dun	52.75	74	P	P	11 23 42.8	+0.9
	baz=310,SNR=15						
OGNE	Ogallala	52.77	69	P	P	11 23 42.0	+0.1
	baz=309						
XAN	Xi'an	52.80	280	P	P	11 23 41.6	-0.6
XAN				pP	pP	11 23 54.8	+1.6
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,140nm,5.2s						
TUC	Tucson	53.09	83	*e*P	P	11 23 44.9	+0.6
	comp=Z,11nm,1.4s						
TUC	Tucson	53.09	83	*e*P	P	11 23 44.9	+0.6
TUC				pmax	pmax		
	comp=Z,11nm,1.4s						
TUC	Tucson	53.09	83	P	P	11 23 45.0	+0.7
	baz=313						
ZAA1	Zalesovo Array	53.48	313	*e*PcP	PcP	11 24 53.4	+0.1
ZALV	Zalesovo Beam	53.48	313	PcP	PcP	11 24 53.4	+0.1
	comp=Z,2.6nm,0.6s,baz=50,slow=4.6,SNR=4.2						
ZALV				LR	LR	11 47 57.0	
	comp=Z,235nm,19.4s,baz=74,slow=38						
KSCO	Kaye Shedlock'	53.65	71	*e*P	P	11 23 49.2	+0.8
	comp=Z,25nm,0.9s						
KSCO	Kaye Shedlock'	53.65	71	P	P	11 23 48.9	+0.4
	baz=310,SNR=6.5						
SUMG	Summit	53.66	13	*e*P	P	11 23 48.1	-0.2
	comp=Z,18nm,1.0s						
SUMG	Summit	53.66	13	*i* P	P	11 23 48.4	+0.1
SUMG				pmax	pmax		
	comp=Z,40nm,1.0s						
SUMG	Summit	53.66	13	*i* P	P	11 23 48.4	+0.1
	comp=Z,40nm,1.0s						
T25A	Trinidad	53.80	74	*e*P	P	11 23 50.3	+0.6
	comp=Z,25nm,1.2s						
T25A	Trinidad	53.80	74	P	P	11 23 50.0	+0.4
	baz=311,SNR=13						
LAZ	Ladron	53.95	78	*e*P	P	11 23 52.4	+1.6
ANMO	Albuquerque	54.00	77	*e*P	P	11 23 52.1	+1.0
	comp=Z,8.8nm,1.5s						
ANMO	Albuquerque	54.00	77	*e*P	P	11 23 52.1	+1.0
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ANMO	Albuquerque	54.00	77	P	P	11 23 51.4	+0.3
	baz=312						
ECSD	EROS Data Cent	54.10	63	*e*P	P	11 23 50.7	-0.8
	comp=Z,4.1nm,0.9s						
ECSD	EROS Data Cent	54.10	63	P	P	11 23 50.6	-0.9
	baz=310						
EYMN	Ely	54.20	56	*e*P	P	11 23 51.5	-0.6
	comp=Z,8.9nm,0.9s						
EYMN	Ely	54.20	56	P	P	11 23 51.0	-1.1
	baz=309,SNR=5.7						
LENM	Lemitar	54.20	78	*e*P	P	11 23 53.7	+1.1
BNM	Barren Site	54.43	78	*e*P	P	11 23 55.7	+1.5
LZH	Lanzhou	54.56	285	*e*P	P	11 23 56.3	+1.2
LZH				pP	sP	11 24 11.6	+1.3
LZH				sP	pP	11 24 19.8	+14
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
GTA	Gaotai	54.79	291	⇑P	P	11 23 57.0	+0.3
GTA				pP	sP	11 24 15.6	+3.5
GTA				sP	pP	11 24 24.0	+16
GTA				pmax	pmax		
	comp=Z,11nm,1.3s						
GTA				pmax	pmax		
	comp=Z,100nm,6.2s						
GTA				LR	LR		
	comp=Z,180nm,17.8s						
GTA				LR	LR		
	comp=Z,220nm,19.0s						
GTA				LR	LR		
	comp=Z,270nm,17.8s						
DGZ	Jazzator, Alta	54.92	308*c*	*i*P	P	11 23 57.7	+0.2
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ENH	Enshi	55.00	276	*e*P	P	11 23 55.6	-2.6
	comp=Z,23nm,1.3s						
E38A	The Farm, Brul	55.02	57	*e*P	P	11 23 57.1	-1.0
	comp=Z,20nm,1.0s						
E38A	The Farm, Brul	55.02	57	P	P	11 23 56.8	-1.3
	baz=310,SNR=9.0						
C40A	Isle Royale Na	55.43	55	P	P	11 24 00.3	-0.7
	baz=310						
CBKS	Cedar Bluff	55.49	69	*e*P	P	11 24 02.3	+0.7
	comp=Z,44nm,1.0s						
CBKS	Cedar Bluff	55.49	69	*e*P	P	11 24 02.3	+0.7
CBKS				pmax	pmax		
	comp=Z,44nm,1.0s						
CBKS	Cedar Bluff	55.49	69	P	P	11 24 01.5	-0.2
	baz=311,SNR=8.0						
G39A	Holcombe	56.08	58	P	P	11 24 05.0	-0.8
	baz=311						
D41A	Chassel	56.29	55	P	P	11 24 06.5	-0.7
	baz=311						
G40A	Rib Lake	56.61	58	*e*P	P	11 24 08.9	-0.6
	comp=Z,6.4nm,1.1s						
G40A	Rib Lake	56.61	58	P	P	11 24 08.7	-0.8
	baz=311						
COWI	Conover	56.62	56	*e*P	P	11 24 08.7	-0.9
	comp=Z,4.3nm,0.4s						
MNTX	Cornudas Mount	56.86	79	*e*P	P	11 24 12.5	+1.0
	comp=Z,7.4nm,0.9s						
MNTX	Cornudas Mount	56.86	79	P	P	11 24 11.8	+0.4
	baz=314,SNR=8.2						
MSTX	Muleshoe	56.91	76	*e*P	P	11 24 12.3	+0.4
	comp=Z,24nm,1.4s						
MSTX	Muleshoe	56.91	76	P	P	11 24 11.6	-0.4
	baz=313						
AMTX	Amarillo	56.95	74	P	P	11 24 12.4	+0.2
	baz=313						
KSU1	Kansas State U	57.13	67	P	P	11 24 13.2	-0.1
	baz=312						
E43A	Lone Tree Farm	57.55	55	*e*P	P	11 24 15.8	-0.3
	comp=Z,8.1nm,1.0s						
E43A	Lone Tree Farm	57.55	55	P	P	11 24 15.5	-0.6
	baz=312						
I41A	Arkdale	57.59	59	*e*P	P	11 24 16.2	-0.3
	comp=Z,8.8nm,0.9s						
I41A	Arkdale	57.59	59	P	P	11 24 15.9	-0.5
	baz=312						
ARA0	ARCESS Array S	58.09	350	*e*P	P	11 24 18.5	-1.0
ARCES	ARCESS Array B	58.09	350	P	P	11 24 18.5	-1.0
	comp=Z,5.0nm,0.5s,baz=27,slow=8.3,SNR=31						
ARE0	ARCESS Array S	58.09	350	*e*P	P	11 24 18.9	-0.7
JFWS	Jewell Farm	58.15	60	*e*P	P	11 24 20.1	-0.3
	comp=Z,8.3nm,1.0s						
JFWS	Jewell Farm	58.15	60	*e*P	P	11 24 20.1	-0.3
JFWS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
JFWS	Jewell Farm	58.15	60	P	P	11 24 19.4	-1.0
	baz=312						
L40A	Anamosa	58.19	61	*e*P	P	11 24 20.1	-0.6
	comp=Z,12nm,1.1s						
L40A	Anamosa	58.19	61	P	P	11 24 19.9	-0.8
	baz=312						
I42A	Draeger Farm,	58.21	58	*e*P	P	11 24 20.4	-0.4
	comp=Z,11nm,1.0s						
I42A	Draeger Farm,	58.21	58	P	P	11 24 20.0	-0.8
	baz=312,SNR=5.7						
LVZ	Lovozero	58.36	345	⇓*e*P	P	11 24 20.4	-1.2
LVZ				pmax	pmax		
	comp=Z,17nm,1.1s						
H43A	Windswept, Lux	58.43	57	*e*P	P	11 24 22.1	-0.2
	comp=Z,12nm,1.0s						
H43A	Windswept, Lux	58.43	57	P	P	11 24 21.7	-0.6
	baz=313						
KURK	Kurchatov	58.47	313	*e*P	P	11 24 22.2	-0.3
	comp=Z,90nm,1.3s						
KURK	Kurchatov	58.47	313	P	P	11 24 23.2	+0.7
KURBB	Kurchatov Arra	58.58	313	P	P	11 24 23.2	-0.1
	comp=Z,20nm,0.5s,baz=44,slow=6.9,SNR=71						
TRO	Tromso	58.64	352	*e*P	P	11 24 22.8	-0.6
WMQ	Urumqi	58.67	302	*e*P	P	11 24 25.3	+1.2
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,37nm,4.5s						
WMQ				LR	LR		
	comp=Z,230nm,17.5s						
WMQ				LR	LR		
	comp=Z,210nm,17.5s						
WMQ				LR	LR		
	comp=Z,550nm,22.3s						
D46A	Sault St. Mari	58.71	53	P	P	11 24 23.6	-0.7
	baz=313						
N40A	Mertquake, Sal	58.78	62	P	P	11 24 24.1	-0.8
	baz=313						
WMOK	Wichita Mounta	58.80	72	*e*P	P	11 24 25.7	+0.7
	comp=Z,7.5nm,0.9s						
WMOK	Wichita Mounta	58.80	72	*e*P	P	11 24 25.7	+0.7
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMOK	Wichita Mounta	58.80	72	P	P	11 24 25.0	0.0
	baz=313,SNR=11						
KTK1	Kautokeino	58.83	350	*e*P	P	11 24 23.5	-1.2
E46A	Sault Ste Mari	58.93	54	*e*P	P	11 24 25.5	-0.3
	comp=Z,16nm,1.1s						
E46A				*e*PcP	PcP	11 25 15.5	+0.8
E46A	Sault Ste Mari	58.93	54	P	P	11 24 25.2	-0.5
	baz=313						
M41A	Milan	59.03	61	P	P	11 24 25.5	-1.0
	baz=313						
D47A	Chapleau	59.06	52	P	P	11 24 25.9	-0.8
	baz=313						
L42A	Oliver, Polo	59.08	60	P	P	11 24 25.9	-0.9
	baz=313						
N41A	Harden Midland	59.31	62	*e*P	P	11 24 28.1	-0.3
	comp=Z,21nm,1.1s						
N41A	Harden Midland	59.31	62	P	P	11 24 27.7	-0.8
	baz=313						
K43A	Burlington	59.33	59	*e*P	P	11 24 27.9	-0.7
	comp=Z,14nm,1.0s						
K43A	Burlington	59.33	59	P	P	11 24 27.5	-1.1
	baz=313						
E47A	Iron Bridge	59.39	53	P	P	11 24 28.2	-0.8
	baz=314						
MK31	Makanchi Array	59.42	308	*e*P	P	11 24 28.6	-0.6
	comp=Z,7.0nm,0.8s						
MK31	Makanchi Array	59.42	308	*e*P	P	11 24 28.6	-0.6
MK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK32	Makanchi Array	59.42	308	*e*P	P	11 24 28.5	-0.7
MKAR	Makanchi Array	59.42	308	P	P	11 24 28.5	-0.7
	comp=Z,4.3nm,0.4s,baz=48,slow=6.1,SNR=42						
MKAR				LR	LR	11 50 42.8	
	comp=Z,262nm,21.3s,baz=349,slow=37						
TX31	Lajitas Ar. Si	59.56	80	*e*P	P	11 24 30.3	-0.2
	comp=Z,12nm,1.4s						
LTX	Lajitas	59.56	80	*e*P	P	11 24 30.9	+0.4
TXAR	Lajitas Array	59.56	80	P	P	11 24 30.9	+0.4
	comp=Z,1.2nm,0.5s,baz=291,slow=5.0,SNR=19						
MAKZ	Makanchi	59.57	308	*e*P	P	11 24 29.9	-0.3
	comp=Z,8.7nm,0.8s						
MAKZ	Makanchi	59.57	308	*e*P	P	11 24 29.9	-0.3
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
D48A	Paudash Townsh	59.62	51	P	P	11 24 29.6	-1.0
	baz=314						
ABTX	Abilene, Hawle	59.73	75	*e*P	P	11 24 31.3	-0.3
	comp=Z,21nm,1.1s						
ABTX	Abilene, Hawle	59.73	75	P	P	11 24 31.6	+0.1
	baz=314						
TUL1	Leonard	59.77	69	*e*P	P	11 24 31.8	+0.1
	comp=Z,18nm,1.1s						
TUL1	Leonard	59.77	69	P	P	11 24 31.3	-0.4
	baz=314						
D49A	Beulah Townshi	59.78	51	P	P	11 24 30.8	-0.8
	baz=314						
MATQ	Matagami	59.80	47	P	P	11 24 29.9	-1.8
	baz=315						
J45A	Montague	59.87	57	P	P	11 24 31.2	-1.0
	baz=314						
E48A	Lockeyer	59.93	52	P	P	11 24 31.9	-0.7
	baz=314						
F48A	Evansville	60.15	53	P	P	11 24 33.7	-0.5
	baz=314						
HDIL	Hopedale	60.28	61	*e*P	P	11 24 34.9	-0.2
	comp=Z,43nm,1.5s						
HDIL	Hopedale	60.28	61	P	P	11 24 34.7	-0.4
	baz=314						
M44A	Midewin, Midew	60.39	60	*e*P	P	11 24 35.1	-0.7
	comp=Z,12nm,0.6s						
M44A	Midewin, Midew	60.39	60	P	P	11 24 35.4	-0.5
	baz=314						
BVAR	Borovoye Array	60.42	319	P	P	11 24 34.8	-1.1
	comp=Z,4.5nm,0.5s,baz=45,slow=7.1,SNR=22						
BRVK	Borovoye	60.44	319	*e*P	P	11 24 36.7	+0.7
	comp=Z,33nm,1.6s						
BRVK	Borovoye	60.44	319*c*	*e*P	P	11 24 35.6	-0.4
BRVK				pmax	pmax		
	comp=Z,21nm,1.6s						
F49A	Sandfield	60.49	53	P	P	11 24 35.8	-0.7
	baz=314,SNR=5.7						
LOF	Lofoten	60.52	354	*e*P	P	11 24 35.9	-0.4
H48A	Harrisville	60.58	54	P	P	11 24 36.2	-1.0
	baz=314						
HHAR	Hobbs	60.59	68	*e*P	P	11 24 36.6	-0.8
	comp=Z,4.7nm,0.6s						
STEI	Steigen	60.60	353	*e*P	P	11 24 36.1	-0.8
E50A	Wahnapitae	60.67	51	P	P	11 24 36.9	-0.8
	baz=315						
SCHQ	Schefferville	60.67	38	P	P	11 24 36.6	-1.1
	comp=Z,8.5nm,0.8s,baz=355,slow=11,SNR=2.9						
P43A	Skaggs, Pawnee	60.78	62	P	P	11 24 38.4	-0.2
	baz=314						
J47A	Sunmer	60.83	56	*e*P	P	11 24 38.8	0.0
	comp=Z,37nm,1.6s						
J47A	Sunmer	60.83	56	P	P	11 24 38.4	-0.5
	baz=314						
D51A	Lot 18 Range I	60.87	50	P	P	11 24 37.7	-1.3
	baz=315						
CCM	Cathedral Cave	60.91	65	*e*P	P	11 24 38.6	-0.9
	comp=Z,4.4nm,0.8s						
CCM	Cathedral Cave	60.91	65	*e*P	P	11 24 38.6	-0.9
CCM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CCM	Cathedral Cave	60.91	65	P	P	11 24 38.9	-0.6
	baz=314						
X37A	Clayton	60.93	70	*e*P	P	11 24 39.9	+0.3
	comp=Z,11nm,1.0s						
TOBO	Tobermory, Bru	61.13	53	P	P	11 24 40.3	-0.5
	baz=315,SNR=12						
JCT	Junction City	61.14	76	*e*P	P	11 24 40.7	-0.5
	comp=Z,6.6nm,0.9s						
JCT	Junction City	61.14	76	*e*P	P	11 24 40.7	-0.5
JCT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
JCT	Junction City	61.14	76	P	P	11 24 41.2	0.0
	baz=315						
U40A	Yellville	61.17	67	P	P	11 24 40.0	-1.3
	baz=314,SNR=12						
CHGQ	Chibougamau	61.17	45	P	P	11 24 39.2	-1.9
	baz=316						
E51A	G1948 Merrick	61.20	51	P	P	11 24 40.2	-1.2
	baz=315						
D52A	ZEK Kipawa Sen	61.41	50	P	P	11 24 41.8	-1.0
	baz=316						
F51A	Arnstein	61.43	51	P	P	11 24 42.0	-0.8
	baz=315						
W39A	Magazine	61.44	69	*e*P	P	11 24 42.7	-0.3
	comp=Z,29nm,1.4s						
W39A	Magazine	61.44	69	P	P	11 24 42.8	-0.3
	baz=314,SNR=7.4						
WHTX	Lake Whitney,	61.50	74	*e*P	P	11 24 44.3	+0.7
	comp=Z,6.8nm,0.8s						
WHTX	Lake Whitney,	61.50	74	P	P	11 24 43.6	+0.1
	baz=315						
L47A	Sherwood	61.51	58	P	P	11 24 42.7	-0.8
	baz=315						
SFIN	Lafayette	61.61	60	*e*P	P	11 24 43.8	-0.4
	comp=Z,14nm,0.8s						
SFIN	Lafayette	61.61	60	P	P	11 24 43.7	-0.4
	baz=314,SNR=5.4						
D53A	Lac Vacive, Po	61.68	49	*e*P	P	11 24 43.3	-1.2
	comp=Z,14nm,1.6s						
D53A	Lac Vacive, Po	61.68	49	P	P	11 24 43.2	-1.3
	baz=316						
KLBO	Killbear Provi	61.69	52	P	P	11 24 44.0	-0.6
	baz=315						
BMRO	Meriville Lake	61.73	53	P	P	11 24 43.4	-1.4
	baz=315						
E52A	Mattawa	61.79	50	P	P	11 24 44.2	-1.1
	baz=316						
F52A	Sundridge	61.81	51	P	P	11 24 44.4	-1.1
	baz=316						
BASO	Ashfield	61.91	54	P	P	11 24 45.4	-0.7
	baz=315						
FCAR	Ozark Folk Cen	61.92	67	*e*P	P	11 24 45.5	-0.9
	comp=Z,23nm,1.1s						
L48A	N Adams	61.94	57	P	P	11 24 45.8	-0.6
	baz=315						
N47A	Urbana	62.01	59	P	P	11 24 45.7	-1.2

	baz=315						
MIAR	Mount Ida	62.02	69	eP	P	11 24 47.3	+0.3
	comp=Z,21nm,1.1s						
MIAR	Mount Ida	62.02	69	eP	P	11 24 47.3	+0.3
MIAR				pmax	pmax		
	comp=Z,21nm,1.1s						
MIAR	Mount Ida	62.02	69	P	P	11 24 47.2	+0.3
	baz=315,SNR=10						
BUKO	Buck Lake	62.03	52	P	P	11 24 45.9	-1.0
	baz=316						
P46A	Rosedale	62.08	61	P	P	11 24 46.9	-0.4
	baz=315						
D54A	Lac Fusel, La	62.12	49	P	P	11 24 46.1	-1.5
	baz=316						
E53A	Dumoine, Ponti	62.20	50	P	P	11 24 46.9	-1.2
	baz=316						
OLIL	Olney	62.21	62	eP	P	11 24 49.6	+1.4
	comp=Z,8.6nm,0.8s						
WHAR	Wooly Hollow	62.24	67	eP	P	11 24 48.1	-0.4
	comp=Z,17nm,1.1s						
ARU	Arti	62.26	328	P	P	11 24 47.6	-0.7
	comp=Z,1.7nm,0.4s,baz=0.5,slow=5.7,SNR=4.6						
ARU	Arti	62.26	328	eP	P	11 24 48.3	0.0
	comp=Z,16nm,1.4s						
ARU	Arti	62.26	328⇓	eP	P	11 24 49.4	+1.1
ARU				pmax	pmax		
	comp=Z,14nm,1.4s						
PBMO	Poplar Bluff	62.27	65	eP	P	11 24 47.9	-0.7
	comp=Z,29nm,1.4s						
S44A	Carbondale	62.29	64	P	P	11 24 48.0	-0.8
	baz=315						
ALGO	Algonquin Park	62.32	50	P	P	11 24 47.2	-1.6
	baz=316						
W41B	Gary Mavity, V	62.35	68	eP	P	11 24 48.7	-0.5
	comp=Z,15nm,1.0s						
W41B	Gary Mavity, V	62.35	68	P	P	11 24 48.7	-0.5
	baz=315,SNR=8.1						
I51A	Listowel	62.39	54	P	P	11 24 48.8	-0.5
	baz=316						
N48A	Decatur	62.39	58	P	P	11 24 48.8	-0.6
	baz=315						
E54A	Lac Daplat, Po	62.39	49	P	P	11 24 47.9	-1.4
	baz=316						
X40A	Basin Creek Fa	62.49	68	eP	P	11 24 50.5	+0.3
	comp=Z,12nm,1.1s						
X40A	Basin Creek Fa	62.49	68	P	P	11 24 49.8	-0.4
	baz=315						
H06N1	SOCORRO T-PHAS	62.55	94	T	T	12 32 28.6	
	SNR=5.7						
G53A	Haliburton	62.64	51	P	P	11 24 50.1	-0.9
	baz=316,SNR=7.9						
H06E1	SOCORRO T-PHAS	62.65	94	T	T	12 32 25.3	
	SNR=4.0						
P47A	Martinsville	62.69	60	P	P	11 24 50.5	-0.9
	baz=315						
O48A	Farmland	62.74	59	P	P	11 24 51.1	-0.7
	baz=315						
HNR	Honiara	62.80	202	eP	P	11 24 51.5	-0.8
	comp=Z,67nm,0.9s						
HNR	Honiara	62.80	202	eP	P	11 24 51.5	-0.8
HNR				pmax	pmax		
	comp=Z,67nm,0.9s						
BANO	Bancroft	63.05	51	P	P	11 24 52.8	-0.9
	baz=316						
P48A	Milroy	63.16	60	eP	P	11 24 53.9	-0.6
	comp=Z,31nm,1.4s						
P48A	Milroy	63.16	60	P	P	11 24 53.6	-0.9
	baz=316						
PLVO	Plevna	63.45	51	P	P	11 24 55.0	-1.4
	baz=317						
G55A	Calabogie	63.47	50	P	P	11 24 55.0	-1.5
	baz=317						
TYNO	Tyneside	63.48	54	P	P	11 24 55.9	-0.7
	baz=316						
T46A	Princeton	63.52	63	P	P	11 24 56.5	-0.5
	baz=316						
M51A	Elyria	63.56	56	P	P	11 24 56.4	-0.8
	baz=316						
WCI	Wyandotte Cave	63.56	61	P	P	11 24 56.7	-0.5
	baz=316						
WLVO	Wesleyville	63.62	52	P	P	11 24 56.9	-0.5
	baz=317						
LATQ	La Tuque	63.75	46	P	P	11 24 57.3	-1.0
	baz=318						
H55A	Tweed	63.76	51	P	P	11 24 57.6	-0.8
	baz=317						
I55A	Frankford	63.76	51	P	P	11 24 56.5	-1.9
	baz=317						
HKT	Hockley	63.92	74	eP	P	11 24 59.1	-0.5
HKT				pmax	pmax		
	comp=Z,14nm,1.4s						
P50A	Jamestown	63.94	59	P	P	11 24 58.8	-0.8
	baz=316						
J54A	Appleton	63.97	53	P	P	11 24 59.0	-0.9
	baz=317						
T47A	Sharon Grove	64.00	63	eP	P	11 24 59.7	-0.5
	comp=Z,10nm,0.8s						
T47A	Sharon Grove	64.00	63	P	P	11 24 59.6	-0.5
	baz=316						
S48A	Wiedeman Farm,	64.10	62	P	P	11 24 59.9	-0.9
	baz=316						
L53A	Girard	64.11	55	P	P	11 24 59.9	-0.8
	baz=317						
H56A	Elgin	64.18	50	P	P	11 24 59.8	-1.4
	baz=317						
O51A	Pataskala	64.19	58	P	P	11 25 00.2	-1.1
	baz=316						
WVT	Waverly	64.20	64	eP	P	11 25 01.7	+0.2
	comp=Z,18nm,1.5s						
WVT	Waverly	64.20	64	eP	P	11 25 01.7	+0.2
WVT				pmax	pmax		
	comp=Z,18nm,1.5s						
WVT	Waverly	64.20	64	P	P	11 25 01.0	-0.4
	baz=316						
M53A	Wl Miller and	64.27	55	P	P	11 25 01.0	-0.8
	baz=317						
V46A	Holladay	64.28	64	P	P	11 25 01.5	-0.4
	baz=316						
U47A	Clarksville	64.29	63	P	P	11 25 01.9	-0.1
	baz=316						
L54A	Sinclairville	64.39	54	P	P	11 25 02.5	-0.1
	baz=317						
J55A	Hilton	64.39	52	P	P	11 25 02.4	-0.2
	baz=317						
Q50A	Georgetown	64.39	59	P	P	11 25 02.5	-0.1
	baz=316						
K54A	Basiliko Farm,	64.43	53	P	P	11 25 02.5	-0.3
	baz=317						
PRZ	Przheval'sk	64.44	306	eP	P	11 25 04.5	+1.4
	comp=Z,35nm,1.4s						
S49A	Springfield	64.44	61	P	P	11 25 02.6	-0.4
	baz=316						
OXF	Oxford	64.46	66	eP	P	11 25 03.6	+0.4
	comp=Z,44nm,0.9s						
OXF	Oxford	64.46	66	eP	P	11 25 03.6	+0.4
OXF				pmax	pmax		
	comp=Z,44nm,0.9s						
OXF	Oxford	64.46	66	P	P	11 25 02.8	-0.4
	baz=316,SNR=6.6						
V47A	Nunnelly	64.60	64	P	P	11 25 04.2	+0.1
	baz=316						
Q51A	Peebles	64.60	59	P	P	11 25 03.7	-0.4
	baz=316						
R50A	Paris	64.61	60	P	P	11 25 03.5	-0.6
	baz=316						
O52A	Adamsville	64.62	57	eP	P	11 25 03.7	-0.5
	comp=Z,30nm,1.4s						
O52A	Adamsville	64.62	57	P	P	11 25 03.7	-0.5
	baz=317						
N53A	Lisbon	64.64	56	P	P	11 25 03.9	-0.4
	baz=317						
K55A	Perry	64.65	53	P	P	11 25 03.6	-0.8
	baz=317						
U48A	Cassie Pea, Po	64.66	63	P	P	11 25 04.1	-0.3
	baz=316,SNR=6.1						
T49A	Edmonton	64.79	62	P	P	11 25 04.6	-0.8
	baz=316						
SLVN	Son La	64.89	273	eP	P	11 25 06.5	+0.3
	comp=Z,12nm,1.1s						
LONY	Lake Ozonia	64.96	49	P	P	11 25 05.2	-1.1
	baz=318						
N54A	Moraine State	64.97	55	P	P	11 25 06.3	-0.2
	baz=317						
W47A	Westpoint	64.97	64	P	P	11 25 06.4	-0.1
	baz=316						
R51A	Hillsboro	65.00	60	P	P	11 25 06.3	-0.4
	baz=316,SNR=8.0						
V48A	Smith Brothers	65.05	64	P	P	11 25 06.3	-0.7
	baz=316						
CLTN	Cedars of Leba	65.08	63	eP	P	11 25 07.5	+0.4
	comp=Z,7.6nm,1.0s						
U49A	Red Boiling Sp	65.08	62	P	P	11 25 07.3	+0.1
	baz=316						
M55A	Ridgway	65.22	54	P	P	11 25 07.8	-0.3
	baz=317						
Q52A	Bidwell	65.22	58	P	P	11 25 07.4	-0.7
	baz=317						
T50A	Nancy	65.23	61	P	P	11 25 08.0	-0.2
	baz=316						
P53A	Whipple	65.31	57	P	P	11 25 08.0	-0.6
	baz=317						
KDJ	Kajisay	65.31	307	eP	P	11 25 08.3	-0.5
	comp=Z,40nm,1.4s						
KDJ	Kajisay	65.31	307	eP	P	11 25 08.3	-0.5
KDJ				pmax	pmax		
	comp=Z,40nm,1.4s						
X47A	Russelville	65.35	65	P	P	11 25 08.4	-0.5
	baz=316						
W48A	Pulaski	65.42	64	P	P	11 25 09.0	-0.4
	baz=316,SNR=8.6						
S51A	Beattyville	65.47	60	P	P	11 25 09.6	-0.1
	baz=317						
R52A	Catlettsburg	65.48	59	P	P	11 25 09.6	-0.1
	baz=317						
M56A	Emporium	65.51	54	P	P	11 25 07.9	-2.0
	baz=318						
TKM2	Tokmak 2	65.51	309	P	P	11 25 10.8	+0.6
	SNR=22						
MOQ	Mont Orford	65.54	48	eP	P	11 25 09.1	-1.0
V49A	McMinnville	65.55	63	P	P	11 25 09.3	-0.9
	baz=317						
BOOM	Boomskoye usch	65.66	308	eP	P	11 25 11.8	+0.7
	comp=Z,37nm,1.3s						
U50A	Jamestown	65.67	62	P	P	11 25 10.5	-0.5
	baz=317						
ULHL	Ulahol	65.69	308	P	P	11 25 12.1	+0.7
	SNR=6.7						
Q53A	Leroy	65.70	58	P	P	11 25 10.5	-0.6
	baz=317						
FIA0	FINESS Array S	65.73	346	eP	P	11 25 09.4	-1.6
FIA0	FINESS Array S	65.73	346	eP	P	11 25 09.4	-1.6
FINES	FINESS Array B	65.73	346	P	P	11 25 09.4	-1.6
	comp=Z,2.4nm,0.4s,baz=19,slow=6.2,SNR=9.1						
FINES	FINESS Array B	65.73	346	i P	P	11 25 10.0	-0.9
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
T51A	Gray	65.77	61	P	P	11 25 11.1	-0.6
	baz=317						
USP	Ospenovka	65.79	309	P	P	11 25 12.7	+1.0
	SNR=19						
W49A	Belvidere	65.81	64	P	P	11 25 11.1	-0.9
	baz=317						
R53A	Hurricane	65.85	59	P	P	11 25 11.6	-0.6
	baz=317						
X48A	Hartselle	65.86	65	eP	P	11 25 11.2	-1.0
	comp=Z,8.2nm,1.0s						
X48A	Hartselle	65.86	65	P	P	11 25 11.3	-1.0
	baz=317						
CHMS	Chumysh	65.87	309	P	P	11 25 11.8	-0.5
	SNR=6.4						
O55A	Ligonier	65.87	55	P	P	11 25 11.2	-1.1
	baz=318						
KBK	Karagaybulak	66.03	309	P	P	11 25 14.6	+1.1
	SNR=14						
V50A	Pikevile	66.07	63	P	P	11 25 13.0	-0.6
	baz=317						
FRU1	Bishkek	66.07	309	eP	P	11 25 14.8	+1.2
	comp=Z,96nm,1.3s						
FRU1	Bishkek	66.07	309	eP	P	11 25 14.8	+1.2
FRU1				pmax	pmax		
	comp=Z,96nm,1.3s						
BINY	Binghamton	66.08	52	P	P	11 25 13.0	-0.6
	baz=318						
U51A	La Follette	66.15	61	P	P	11 25 13.5	-0.7
	baz=317						
Y48A	Jasper	66.18	65	P	P	11 25 13.8	-0.5
	baz=317						
T52A	Hallie	66.19	60	P	P	11 25 13.4	-0.9
	baz=317						
O56A	Blue Knob Stat	66.21	55	P	P	11 25 13.4	-1.1
	baz=318						
X49A	Woodville	66.22	64	P	P	11 25 13.4	-1.2
	baz=317						
AAK	Ala-Archa	66.27	309	P	P	11 25 15.7	+0.7
	comp=Z,6.8nm,0.4s,baz=73,slow=4.0,SNR=29						
AAK	Ala-Archa	66.27	309	eP	P	11 25 15.7	+0.7
	comp=Z,48nm,1.3s						
AAK	Ala-Archa	66.27	309c	iP	P	11 25 15.3	+0.3
AAK				pmax	pmax		
	comp=Z,40nm,1.3s						
AAK	Ala-Archa	66.27	309	P	P	11 25 16.1	+1.2
	SNR=11						
L58A	Harry Jones Me	66.27	52	P	P	11 25 13.7	-1.0
	baz=318						
SSPA	Standing Stone	66.29	54	P	P	11 25 14.3	-0.6
	baz=318						
W50A	Signal Mountai	66.29	63	P	P	11 25 14.3	-0.7
	baz=317						
KZA	Kyzart	66.31	308	P	P	11 25 16.4	+0.8
	SNR=10						
Q55A	Buckhannon	66.36	57	P	P	11 25 15.0	-0.5
	baz=318						
N57A	Milroy	66.37	54	P	P	11 25 15.2	-0.3
	baz=318						
V51A	Loudon	66.39	62	P	P	11 25 15.6	0.0
	baz=317						
NRN	Naryn	66.42	307	eP	P	11 25 16.9	+0.7
	comp=Z,32nm,1.5s						
NRN	Naryn	66.42	307	eP	P	11 25 16.9	+0.7
NRN				pmax	pmax		
	comp=Z,32nm,1.5s						
147A	Livingston	66.44	67	P	P	11 25 15.8	-0.2
	baz=317						
M58A	Price's Panora	66.46	53	P	P	11 25 15.8	-0.2
	baz=318						
R54A	Victor	66.48	58	P	P	11 25 16.1	-0.1
	baz=318						
U52A	Thorn Hill	66.50	61	P	P	11 25 16.2	-0.2
	baz=317						
LBNH	Lisbon	66.50	48	P	P	11 25 15.1	-1.1
	baz=319						
UCH	Uchtor	66.56	309	P	P	11 25 18.5	+1.3
	SNR=20						
EKS2	Erkin-Say	66.60	309	P	P	11 25 18.0	+1.0
	SNR=15						
W51A	Cleveland	66.63	63	P	P	11 25 16.8	-0.4
	baz=317						
X50B	Fort Payne	66.64	64	P	P	11 25 16.9	-0.4
	baz=317						
LSA	Lhasa	66.64	289	eP	P	11 25 19.5	+1.6
	comp=Z,8.7nm,0.4s						
LSA	Lhasa	66.64	289	eP	P	11 25 19.5	+1.6
LSA				pmax	pmax		
	comp=Z,9.0nm,0.4s						
Y49A	Blount Mountai	66.65	65	P	P	11 25 17.1	-0.2
	baz=317						
N58A	Sunbury	66.73	53	P	P	11 25 16.9	-0.8
	baz=318						
O57A	Amberson	66.73	54	P	P	11 25 16.7	-1.1
	baz=318						
V52A	Sevierville	66.78	61	P	P	11 25 17.5	-0.6
	baz=317						
DOMB	Dombas	66.84	355	eP	P	11 25 17.6	-0.5
M59A	Waymart	66.85	52	P	P	11 25 17.7	-0.8
	baz=319						
148A	Greensboro	66.87	66	P	P	11 25 18.8	+0.1
	baz=317						
R55A	Marlinton	66.87	57	P	P	11 25 18.5	-0.3
	baz=318						
LRAL	Lakeview Retre	66.91	66	P	P	11 25 18.7	-0.4
	baz=317						
U53A	Fall Branch	66.95	60	P	P	11 25 18.9	-0.4
	baz=317						
T54A	Tazewell	66.99	59	P	P	11 25 19.4	-0.1
	baz=318						
Z49A	Columbiana	67.06	65	P	P	11 25 19.7	-0.3
	baz=317						
N59A	State Game Lan	67.15	53	P	P	11 25 19.9	-0.6
	baz=319						
R56A	Bull Pasture M	67.15	57	P	P	11 25 20.0	-0.5
	baz=318						
O58A	Lewisberry	67.16	54	P	P	11 25 20.2	-0.3
	baz=318						
Q57A	Strasburg	67.20	56	P	P	11 25 20.7	-0.1
	baz=318						
AKTO	Aktyubinsk	67.28	324	P	P	11 25 20.7	-0.4
	comp=Z,8.2nm,0.9s,baz=44,slow=6.8,SNR=14						
V53A	Saluda	67.34	61	P	P	11 25 21.6	-0.1
	baz=318						
149A	Jones	67.35	66	P	P	11 25 21.8	0.0
	baz=317						
Z50A	Ashland	67.37	65	eP	P	11 25 21.1	-0.8
	comp=Z,17nm,1.2s						
Z50A	Ashland	67.37	65	P	P	11 25 21.7	-0.2
	baz=317						
Y51A	Rockmart	67.38	64	P	P	11 25 21.7	-0.3
	baz=317						
NC204	NORSAR Array S	67.50	354	eP	P	11 25 21.8	-0.6
	comp=Z,78nm,1.3s						
W53A	Cullowhee	67.51	62	P	P	11 25 22.4	-0.5
	baz=318						
ABKAR	Akbulak array	67.51	322	eP	P	11 25 22.5	0.0
	comp=Z,11nm,1.1s						
NC303	NORSAR Array S	67.52	354	eP	P	11 25 22.1	-0.2
	comp=Z,67nm,1.1s						
N60A	Cedar Hill Far	67.52	52	P	P	11 25 22.4	-0.3
	baz=319						
X52A	Dahlonega	67.52	63	P	P	11 25 22.7	-0.2
	baz=318						
PANO	Nakornpanom	67.55	270	P	P	11 25 24.5	+1.3
	comp=Z,0.2nm,1.4s						
LUPA	Lehigh Univers	67.59	53	eP	P	11 25 22.2	-1.0
	comp=Z,1.3nm,0.3s						
NC405	NORSAR Array S	67.60	354	eP	P	11 25 22.5	-0.5
	comp=Z,83nm,1.3s						
Q58A	Fox Den Farm,	67.65	55	P	P	11 25 23.2	-0.4
	baz=318						
U55A	TA2, Sparta	67.69	59	P	P	11 25 24.1	+0.1
	baz=318						
NB201	NORSAR Array S	67.69	354	eP	P	11 25 23.1	-0.5
	comp=Z,106nm,1.4s						
R57A	Stanardsville	67.70	56	P	P	11 25 23.4	-0.5
	baz=318						
NB2	NORSAR Subarra	67.71	354	P	P	11 25 22.7	-1.0
	comp=Z,18nm,0.9s,baz=7.5,slow=6.5						
NB2	NORSAR Subarra	67.71	354	P	P	11 25 22.7	-1.0
	baz=7.5,slow=6.5						
NB200	NORSAR Array S	67.71	354	eP	P	11 25 23.1	-0.6
NOA	NORSAR Array B	67.71	354	P	P	11 25 23.1	-0.6
	comp=Z,5.6nm,0.5s,baz=3.0,slow=5.7,SNR=31						
V54A	Nebo	67.73	60	P	P	11 25 24.7	+0.5
	baz=318						
NBO00	NORSAR Array S	67.75	354	eP	P	11 25 23.7	-0.2
	comp=Z,58nm,1.6s						
150A	Eclectic	67.78	65	P	P	11 25 23.8	-0.7
	baz=317						
NONG	Nongkai	67.79	271	P	P	11 25 25.7	+1.0
	comp=Z,0.2nm,1.2s						
KK31	Karatay Array	67.82	312	eP	P	11 25 25.0	+0.3
	comp=Z,56nm,1.4s						
KK31	Karatay Array	67.82	312	eP	P	11 25 25.0	+0.3
KK31				pmax	pmax		
	comp=Z,56nm,1.4s						
T56A	Rocky Mt	67.84	58	P	P	11 25 24.7	-0.2
	baz=318						
KSH	Kashi	67.87	306	P	P	11 25 29.3	+4.2
KSH				pP	sP	11 25 44.9	+4.1
KSH				sP	PcP	11 25 51.1	-0.4
KSH				PP	PP	11 28 00.8	+6.2
KSH				S	S	11 34 21.5	+0.7
KSH				ScS	SKiKP	11 35 18.8	+0.7
KSH				SS	SS	11 38 45.8	+3.8
KSH				pmax	pmax		
	comp=Z,49nm,1.3s						
KSH				pmax	pmax		
	comp=Z,140nm,5.0s						
KSH				LR	LR		
	comp=Z,440nm,14.0s						
KSH				LR	LR		
	comp=Z,840nm,19.5s						
KSH				LR	LR		
	comp=Z,250nm,17.7s						
X53A	Estanollee	67.92	62	P	P	11 25 24.9	-0.5
	baz=318						
NC602	NORSAR Array S	67.99	354	eP	P	11 25 24.8	-0.6
	comp=Z,48nm,1.3s						
NC602	NORSAR Array S	67.99	354	eP	P	11 25 24.7	-0.7
ARSB	Arslanbob	68.00	309	eP	P	11 25 26.6	+0.7
	comp=Z,47nm,1.2s						
PAL	Palisades	68.01	52	P	P	11 25 24.9	-0.9
	baz=320						
W54A	Cherokee Point	68.11	61	P	P	11 25 26.5	-0.1
	baz=318						
SKAR	Skarslia	68.23	355	eP	P	11 25 26.8	-0.2
Y53A	Monroe	68.25	63	P	P	11 25 27.3	-0.1
	baz=318						
T57A	Hurt	68.28	58	P	P	11 25 27.0	-0.6
	baz=318						
X54A	Belton	68.41	62	P	P	11 25 28.3	-0.1
	baz=318						
HFS	Hagfors	68.43	353	P	P	11 25 27.0	-1.1
	comp=Z,6.5nm,0.6s,baz=29,slow=3.4,SNR=31						
V56A	Mocksville	68.50	59	P	P	11 25 28.8	-0.2
	baz=318						
KMSC	Kings Mountain	68.54	60	eP	P	11 25 29.1	-0.2
	comp=Z,12nm,0.9s						
KMSC	Kings Mountain	68.54	60	P	P	11 25 28.9	-0.3
	baz=318						
GOGA	Godfrey	68.64	63	P	P	11 25 29.8	-0.1
	baz=318						
Z53A	Monticello	68.68	63	P	P	11 25 29.9	-0.2
	baz=318						
T58A	Grand View Acr	68.70	57	P	P	11 25 29.3	-0.9
	baz=319						
Y54A	Tignall	68.74	62	P	P	11 25 30.5	0.0
	baz=318						
X55A	Gracelyn & Ava	68.87	61	P	P	11 25 30.7	-0.6
	baz=318						
PAYA	Payao	68.88	275	P	P	11 25 32.8	+1.2
	comp=Z,38µm,1.2s,comp=Z,427µm						
W56A	Indian Trail	68.95	60	P	P	11 25 30.9	-0.9
	baz=318						
TAOE	Nuku Hiva Isla	69.11	137	eT	T	12 40 46.0	
	comp=Z,25nm,0.2s						
Y55A	Saluda	69.14	62	P	P	11 25 32.2	-0.8
	baz=318						
X56A	White Oak	69.19	61	P	P	11 25 33.3	+0.1
	baz=318						
KONO	Kongsberg	69.19	355	eP	P	11 25 32.7	-0.1
	comp=Z,29nm,1.1s						
KONO	Kongsberg	69.19	355⇑	eP	P	11 25 32.6	-0.3
KONO				pmax	pmax		
	comp=Z,18nm,1.0s						
T59A	Double "B" Far	69.20	57	P	P	11 25 32.6	-0.7
	baz=319						
V58A	Windy Hill, Pi	69.25	59	P	P	11 25 32.9	-0.8
	baz=319						
PHRA	Phrae	69.30	274	P	P	11 25 35.3	+1.2
	comp=Z,1.4nm,1.3s						
UTTA	Uttaradit	69.66	273	P	P	11 25 36.8	+0.5
	comp=Z,16µm,0.9s						
OBN	Obninsk	69.69	338⇑	eP	P	11 25 33.5	-2.5
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
V59A	Middlesex	69.74	58	P	P	11 25 36.7	0.0
	baz=319						
CMMT	Chiang Mai	69.87	275	P	P	11 25 38.6	+0.9
	comp=Z,4.2nm,1.1s						
CHTO	Chiang Mai	69.87	275	eP	P	11 25 37.2	-0.5
	comp=Z,10nm,1.3s						
CHTO	Chiang Mai	69.87	275	eP	P	11 25 37.2	-0.5
CHTO				pmax	pmax		
	comp=Z,11nm,1.3s						
BTK	Batken	70.02	309	eP	P	11 25 38.5	+0.1
	comp=Z,62nm,1.1s						
BTK	Batken	70.02	309	eP	P	11 25 38.5	+0.1
BTK				pmax	pmax		
	comp=Z,62nm,1.1s						
CMAR	Chiang Mai Arr	70.13	275	P	P	11 25 39.4	0.0
	comp=Z,2.9nm,0.5s,baz=24,slow=7.0,SNR=13						
CMAR				LR	LR	11 59 37.5	
	comp=Z,50nm,18.6s,baz=315,slow=39						
CMAR	Chiang Mai Arr	70.13	275	i P	P	11 25 39.7	+0.4
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
Z57A	Bowman	70.26	61	P	P	11 25 39.8	-0.1
	baz=319						
X60A	Albert Glenn T	70.78	59	P	P	11 25 43.1	0.0
	baz=320						
W61A	Ground Anchor	70.85	58	P	P	11 25 43.2	-0.2
	baz=320						
GUN	Gumba	71.08	291	eP	P	11 25 46.2	+0.8
	comp=Z,43nm,0.4s						
JIRN	Jiri	71.08	291	eP	P	11 25 46.2	+0.8

	comp=Z,70nm,0.8s						
GAR	**Garm**	**71.09**	**309**	*e*P	**P**	**11 25 45.3**	**+0.3**
	comp=Z,146nm,1.3s						
GAR	**Garm**	**71.09**	**309**	*e*P	**P**	**11 25 45.3**	**+0.3**
GAR				pmax	pmax		
	comp=Z,146nm,1.3s						
KKN	**Kakani**	**71.52**	**291**	*e*P	**P**	**11 25 48.7**	**+0.8**
	comp=Z,22nm,0.5s						
PKI	**Pulchoki**	**71.61**	**291**	*e*P	**P**	**11 25 48.9**	**+0.3**
	comp=Z,32nm,0.7s						
PKIN	**Phulchoki**	**71.61**	**291**	*e*P	**P**	**11 25 48.8**	**+0.3**
	comp=Z,28nm,0.7s						
PMOR	**Pomariorio Ree**	**71.73**	**147**	*e*T	T	12 44 03.9	
	comp=Z,12nm,0.2s						
GKN	**Gorkha**	**71.74**	**292**	*e*P	**P**	**11 25 49.7**	**+0.6**
	comp=Z,30nm,0.4s						
DMN	**Daman**	**71.76**	**291**	*e*P	**P**	**11 25 50.1**	**+0.7**
CHGR	**Chuyangaron**	**71.92**	**310**	*e*P	**P**	**11 25 51.4**	**+1.4**
	comp=Z,127nm,1.4s						
DANN	**Dangsing**	**71.98**	**293**	*e*P	**P**	**11 25 51.4**	**+0.6**
KOLN	**Koldanda**	**72.51**	**293**	*e*P	**P**	**11 25 54.3**	**+0.5**
PYUN	**Piuthan**	**72.62**	**293**	*e*P	**P**	**11 25 54.9**	**+0.4**
	comp=Z,67nm,1.1s						
PPT	**Papeete**	**73.58**	**150**	LR	LR	11 50 29.4	
	comp=Z,151nm,21.4s,baz=356,slow=29						
PPT2	**Papeete2**	**73.59**	**150**	*e*LR	LR	11 48 38.4	
	comp=Z,439nm,27.8s,baz=340						
PPT2	**Papeete2**	**73.59**	**150**	*e*T	T	12 46 24.0	
	comp=Z,7.2nm,0.3s						
TIAR	**Tiarei**	**73.64**	**149**	*e*T	T	12 46 26.6	
	comp=Z,2.7nm,0.2s						
PAE	**Paea**	**73.66**	**150**	*e*T	T	12 46 28.0	
	comp=Z,3.0nm,0.3s						
NIL	**Nilore**	**73.76**	**304**	*e*P	**P**	**11 26 01.6**	**+0.7**
	comp=Z,39nm,1.1s						
ESK	**Eskdalemuir**	**73.80**	**2**	*e*P	**P**	**11 26 00.9**	**+0.2**
	comp=Z,21nm,1.2s						
ESK	**Eskdalemuir**	**73.80**	**2**	*e*P	**P**	**11 26 00.9**	**+0.2**
ESK				pmax	pmax		
	comp=Z,21nm,1.2s						
DZM	**Mont Dzumac**	**73.91**	**193**	*e*LR	LR	11 48 49.2	
	comp=Z,404nm,25.8s						
KBL	**Kabul**	**75.22**	**307**	*e*P	**P**	**11 26 09.3**	**-0.3**
	comp=Z,46nm,1.1s						
KBL	**Kabul**	**75.22**	**307**	*e*P	**P**	**11 26 09.3**	**-0.3**
KBL				pmax	pmax		
	comp=Z,46nm,1.1s						
AKASG	**Malin Array Be**	**75.41**	**341**	P	**P**	**11 26 08.9**	**-1.1**
	comp=Z,2.4nm,0.3s,baz=23,slow=6.0,SNR=15						
AKASG				LR	LR	12 03 28.8	
	comp=Z,158nm,19.3s,baz=265,slow=39						
AKASG	**Malin Array Be**	**75.41**	**341**	P	**P**	**11 26 09.0**	**-1.1**
AKBB	**Malin Array Si**	**75.41**	**341**	*e*P	**P**	**11 26 09.4**	**-0.7**
	comp=Z,7.7nm,0.8s						
AKBB	**Malin Array Si**	**75.41**	**341**	*e*P	**P**	**11 26 09.4**	**-0.7**
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DSB	**Dublin**	**75.77**	**4**	*e*P	**P**	**11 26 12.0**	**-0.1**
	comp=Z,26nm,1.2s						
MTN	**Manton Dam**	**76.50**	**229**	*e*P	**P**	**11 26 16.6**	**-0.1**
	comp=Z,45nm,1.5s						
CLL	**Collm**	**77.23**	**352**	*e*P	**P**	**11 26 19.3**	**-1.1**
	comp=Z,6.4nm,1.1s						
CLL	**Collm**	**77.23**	**352**	*e*P	**P**	**11 26 19.3**	**-1.1**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	**Collm**	**77.23**	**352**	*e*P	**P**	**11 26 19.0**	**-1.4**
	comp=Z,13nm,1.5s						
CLL				*e*		11 26 27.0	
LVV	**L'vov**	**77.23**	**344**	*e*P	**P**	**11 26 19.7**	**-0.8**
OJC	**Ojcow**	**77.50**	**347**	*e*P	**P**	**11 26 21.3**	**-0.7**
	comp=Z,11nm,1.2s						
OJC	**Ojcow**	**77.50**	**347**	*e*P	**P**	**11 26 21.3**	**-0.7**
OJC				pmax	pmax		
	comp=Z,11nm,1.2s						
BRG	**Berggiesshubel**	**77.57**	**351**	*e*P	**P**	**11 26 21.3**	**-1.0**
	comp=Z,7.5nm,1.3s						
BRG	**Berggiesshubel**	**77.57**	**351**	*e*P	**P**	**11 26 21.3**	**-1.0**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GEYT	**Alibeck**	**77.58**	**316**	LR	LR	12 02 56.1	
	comp=Z,266nm,22.0s,baz=50,slow=38						
GYA0B	**ALIBECK ARRAY**	**77.58**	**316**	*e*P	**P**	**11 26 24.0**	**+1.3**
	comp=Z,8.6nm,1.1s						
KWP	**Kalwaria Pacla**	**77.63**	**345**	*e*P	**P**	**11 26 23.0**	**+0.3**
	comp=Z,186nm,0.8s						
KWP	**Kalwaria Pacla**	**77.63**	**345**	*e*P	**P**	**11 26 23.0**	**+0.3**
KWP				pmax	pmax		
	comp=Z,186nm,0.8s						
KIV	**Kislovodsk**	**78.16**	**330**	*e*P	**P**	**11 26 26.1**	**+0.2**
	comp=Z,7.3nm,0.5s						
KIV	**Kislovodsk**	**78.16**	**330**	*e*P	**P**	**11 26 26.1**	**+0.2**
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV				MLR	MLR		
	comp=Z,483nm,18.0s						
MORC	**Moravsky Berou**	**78.24**	**348**	*e*P	**P**	**11 26 25.6**	**-0.6**
	comp=Z,4.9nm,1.1s						
MORC	**Moravsky Berou**	**78.24**	**348**	*e*P	**P**	**11 26 25.6**	**-0.6**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	**Khabaz**	**78.29**	**330**	P	**P**	**11 26 26.4**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=112,slow=5.4,SNR=3.4						
KBZ				LR	LR	12 04 54.6	
	comp=Z,187nm,21.9s,baz=351,slow=39						
NKC	**Novy Kostel**	**78.34**	**352**	*e*P	**P**	**11 26 26.0**	**-0.7**
NKC	**Novy Kostel**	**78.34**	**352**	*e*P	**P**	**11 26 26.0**	**-0.7**
MEM	**Membach**	**78.40**	**356**	⇓P	**P**	**11 26 27.0**	**0.0**
SNF	**Seneffe**	**78.57**	**357**	⇑P	**P**	**11 26 25.9**	**-1.9**
	comp=Z,11nm,0.6s						
LANS	**Liptovska Anna**	**78.59**	**347**	*e*P	**P**	**11 26 29.0**	**+0.9**
LANS	**Liptovska Anna**	**78.59**	**347**	*e*P	**P**	**11 26 29.0**	**+0.9**
BCLA	**Clavier**	**78.62**	**356**	⇑P	**P**	**11 26 27.7**	**-0.5**
AKT	**Akhty**	**78.66**	**325**	*e*P	**P**	**11 26 28.2**	**-0.5**
AKT				*e*		11 26 36.6	
AKT				*e*		11 29 27.9	
AKT				pmax	pmax		
	comp=Z,14nm,1.3s						
ZEI	**Tsey**	**78.81**	**329**	*e*P	P	11 26 23.0	-6.6
VRAC	**Vranov**	**78.82**	**349**	P	**P**	**11 26 28.2**	**-1.1**
	comp=Z,3.5nm,0.6s,baz=10,slow=5.4,SNR=7.7						
ANN	**Anapa**	**78.95**	**334**	*e*P	**P**	**11 26 27.7**	**-2.4**
ANN				*e**PP	**pwP**	**11 26 43.6**	**+2.5**
ANN				*e*S	**S**	**11 36 21.3**	**-4.3**
ANN				pmax	pmax		
	comp=Z,25nm,1.0s						
DOU	**Dourbes**	**78.97**	**357**	⇑P	**P**	**11 26 29.7**	**-0.4**
GRA1	**Grafenberg Arr**	**78.99**	**352**	*e*P	**P**	**11 26 30.6**	**+0.4**
	comp=Z,29nm,1.4s						
GRF	**Grafenberg Arr**	**78.99**	**352**	*e*P	**P**	**11 26 30.6**	**+0.4**
GRF				pmax	pmax		
	comp=Z,29nm,1.4s						
GRFO	**Grafenberg**	**78.99**	**352**	*e*P	**P**	**11 26 31.4**	**+1.3**
	comp=Z,40nm,1.5s						
GRFO	**Grafenberg**	**78.99**	**352**	*e*P	**P**	**11 26 31.5**	**+1.3**
GRFO				pmax	pmax		
	comp=Z,40nm,1.5s						
TBI	**Tubuai**	**79.04**	**151**	*e*LR	LR	11 51 08.3	
	comp=Z,361nm,23.5s						
BUR08	**Bucovina Ar. S**	**79.12**	**343**	*e*P	**P**	**11 26 30.8**	**-0.3**
	comp=Z,9.2nm,0.9s						
BURAR	**Bucovina Array**	**79.14**	**343**	⇓*i*P	**P**	**11 26 31.2**	**0.0**
BURAR	**Bucovina Array**	**79.14**	**343**	⇓P	**P**	**11 26 31.2**	**0.0**
VYHS	**Vyhne**	**79.33**	**347**	*e*P	**P**	**11 26 32.5**	**+0.4**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VYHS	**Vyhne**	**79.33**	**347**	*e*P	**P**	**11 26 32.5**	**+0.4**
KHC	**Kasperske Hory**	**79.33**	**351**	*e*P	**P**	**11 26 31.9**	**-0.2**
	comp=Z,1.8nm,0.9s						
KHC	**Kasperske Hory**	**79.33**	**351**	*e*P	**P**	**11 26 31.9**	**-0.2**
KHC	**Kasperske Hory**	**79.33**	**351**	*e*P	**P**	**11 26 31.9**	**-0.2**
WLF	**Walferdange**	**79.34**	**356**	*e*P	**P**	**11 26 32.2**	**+0.1**
	comp=Z,43nm,1.0s						
WLF	**Walferdange**	**79.34**	**356**	*e*P	**P**	**11 26 32.2**	**+0.1**
WLF				pmax	pmax		
	comp=Z,43nm,1.0s						
TBLG	**Delisi**	**79.48**	**327**	*e*P	**P**	**11 26 33.7**	**+0.6**
	comp=Z,12nm,0.6s						
GEC2	**GERESS Array S**	**79.60**	**351**	*e*P	**P**	**11 26 33.4**	**-0.3**
	comp=Z,10nm,1.5s						
GEC2	**GERESS Array S**	**79.60**	**351**	*e*P	**P**	**11 26 33.4**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
GERES	**GERESS Array B**	**79.60**	**351**	P	**P**	**11 26 32.5**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=32,slow=5.2,SNR=8.1						
GERES				LR	LR	12 05 16.5	
	comp=Z,99nm,18.3s,baz=348,slow=38						
MODS	**Modra-Piesok**	**79.65**	**348**	*e*P	**P**	**11 26 33.4**	**-0.5**
MODS				pmax	pmax		
	comp=Z,12nm,1.1s						
MODS	**Modra-Piesok**	**79.65**	**348**	*e*P	**P**	**11 26 33.4**	**-0.5**
ZST	**Bratislava**	**79.85**	**348**	*e*P	**P**	**11 26 34.7**	**-0.2**
ZST	**Bratislava**	**79.85**	**348**	*e*P	**P**	**11 26 34.7**	**-0.2**
AKH	**Akhalkalaki**	**80.18**	**328**	*e*P	**P**	**11 26 37.8**	**+0.7**
	comp=Z,6.0nm,1.0s						
AKH	**Akhalkalaki**	**80.18**	**328**	*e*P	**P**	**11 26 37.8**	**+0.7**
AKH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CONA	**Conrad Observa**	**80.26**	**349**	*e*P	**P**	**11 26 37.6**	**+0.3**
	comp=Z,7.5nm,1.0s,SNR=5.5						
BFO	**Black Forest**	**80.55**	**354**	*e*P	**P**	**11 26 38.7**	**-0.1**
	comp=Z,11nm,1.4s						
BFO	**Black Forest**	**80.55**	**354**	*e*P	**P**	**11 26 38.7**	**-0.1**
BFO				pmax	pmax		
	comp=Z,11nm,1.4s						
ECH	**Echery**	**80.73**	**355**	*e*P	**P**	**11 26 39.3**	**-0.5**
	comp=Z,8.1nm,1.2s						
GNI	**Garni**	**80.89**	**327**	LR	LR	12 07 29.7	
	comp=Z,323nm,19.3s,baz=32,slow=39						
GNI	**Garni**	**80.89**	**327**	*e*P	**P**	**11 26 39.1**	**-1.8**
	comp=Z,15nm,1.3s						
GNI	**Garni**	**80.89**	**327**	⇓*e*P	**P**	**11 26 42.0**	**+1.1**
GNI				pmax	pmax		
	comp=Z,36nm,1.6s						
ARSA	**Arzberg**	**80.97**	**349**	*i* P	**P**	**11 26 41.4**	**+0.4**
	comp=Z,6.9nm,1.1s						
MLR	**Muntele Rosu**	**81.04**	**342**	P	**P**	**11 26 41.6**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=135,slow=8.7,SNR=3.4						
MLR				LR	LR	12 06 34.9	
	comp=Z,223nm,19.2s,baz=316,slow=39						
MLR	**Muntele Rosu**	**81.04**	**342**	*e*P	**P**	**11 26 41.9**	**+0.4**
	comp=Z,11nm,1.5s						
MLR	**Muntele Rosu**	**81.04**	**342**	⇑*i*P	**P**	**11 26 41.5**	**-0.1**
MLR	**Muntele Rosu**	**81.04**	**342**	⇑P	**P**	**11 26 41.5**	**-0.1**
CLF	**Chambon-Foret**	**81.11**	**358**	*e*P	**P**	**11 26 41.8**	**+0.2**
	comp=Z,27nm,0.9s						
RETA	**Reutte**	**81.21**	**352**	*i* P	**P**	**11 26 42.9**	**+0.5**
	comp=Z,3.5nm,0.8s						
VOIR		**81.27**	**342**	⇑*i*P	**P**	**11 26 42.7**	**0.0**
VOIR		**81.27**	**342**	⇑P	**P**	**11 26 42.7**	**0.0**
WR1	**Warramunga Arr**	**81.29**	**223**	*e*P	**P**	**11 26 42.0**	**-0.8**
WRA	**Warramunga Arr**	**81.29**	**223**	P	**P**	**11 26 42.0**	**-0.8**
	comp=Z,2.7nm,1.0s,baz=46,slow=6.1,SNR=5.3						
WATA	**Walderalm**	**81.29**	**352**	*i* P	**P**	**11 26 42.4**	**-0.5**
	comp=Z,6.4nm,0.5s						
MOTA	**Moosalm**	**81.33**	**352**	*i* P	**P**	**11 26 42.4**	**-0.6**
	comp=Z,4.1nm,0.6s						
WTTA	**Wattenberg**	**81.36**	**352**	*e*P	**P**	**11 26 43.1**	**-0.2**
	comp=Z,11nm,0.6s,SNR=5.6						
KBA	**Koelnbreinsper**	**81.38**	**351**	*i* P	**P**	**11 26 43.6**	**+0.3**
	comp=Z,21nm,0.5s,SNR=15						
SQTA	**Sankt Quirin**	**81.44**	**352**	*i* P	**P**	**11 26 43.4**	**-0.2**
	comp=Z,14nm,1.3s						
DAVA	**Damuels**	**81.48**	**353**	*i* P	**P**	**11 26 43.5**	**-0.4**
	comp=Z,6.5nm,1.0s						
SOKA	**Soboth**	**81.59**	**349**	*e*P	**P**	**11 26 44.2**	**-0.2**
	comp=Z,29nm,1.4s,SNR=12						
CSGN	**Cosiguina Volc**	**81.67**	**80**	*e*P	**P**	**11 26 45.1**	**-0.1**
	comp=Z,215nm,1.0s						
FETA	**Feichten**	**81.68**	**352**	*i* P	**P**	**11 26 44.8**	**-0.1**
	comp=Z,13nm,1.2s,SNR=6.0						
BZS	**Buzias**	**81.71**	**345**	⇓*i*P	**P**	**11 26 43.7**	**-1.2**
BZS	**Buzias**	**81.71**	**345**	⇓P	**P**	**11 26 43.7**	**-1.2**
GZR	**Gura Zlata**	**81.73**	**344**	⇑*i*P	**P**	**11 26 44.8**	**-0.3**
GZR	**Gura Zlata**	**81.73**	**344**	⇑P	**P**	**11 26 44.8**	**-0.3**
ABTA	**Abfaltersbach**	**81.79**	**351**	*e*P	**P**	**11 26 44.9**	**-0.5**
	comp=Z,15nm,1.2s						
MYKA	**Terra Mystica**	**81.79**	**350**	*i* P	**P**	**11 26 45.9**	**+0.5**
	comp=Z,2.5nm,0.5s						
OBKA	**Obir**	**81.81**	**350**	*e*P	**P**	**11 26 45.2**	**-0.3**
	comp=Z,6.6nm,0.6s						
PSI	**Prapat**	**82.09**	**265**	*e*P	**P**	**11 26 47.4**	**-0.1**
	comp=Z,38nm,1.6s						
PSI	**Prapat**	**82.09**	**265**	*e*P	**P**	**11 26 47.4**	**-0.1**
PSI				pmax	pmax		
	comp=Z,38nm,1.6s						
FUORN	**Ofenpass-Fuorn**	**82.11**	**353**	*e*P	**P**	**11 26 47.0**	**-0.4**
	comp=Z,5.5nm,0.8s						
TUE	**Stuetta**	**82.33**	**353**	*e*P	**P**	**11 26 48.4**	**-0.1**
	comp=Z,6.8nm,0.9s						
MDVR	**Moldovita**	**82.50**	**344**	⇑*i*P	**P**	**11 26 48.8**	**-0.4**
SENIN	**Lac Senin/Sane**	**82.57**	**355**	*e*P	**P**	**11 26 49.8**	**+0.1**
	comp=Z,11nm,1.6s						
BLY	**Banja Luka**	**83.22**	**348**	*e*P	**P**	**11 26 52.8**	**0.0**
	comp=Z,19nm,1.6s						
ILGA	**Ilgaz**	**83.44**	**335**	*e*P	**P**	**11 26 55.1**	**+0.8**
	comp=Z,5.8nm,0.6s						
SSB	**Saint Sauveur**	**83.79**	**357**	*e*P	**P**	**11 26 55.5**	**-0.3**
	comp=Z,2.6nm,0.7s						
SSB	**Saint Sauveur**	**83.79**	**357**	*e*P	**P**	**11 26 55.5**	**-0.3**
SSB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BNI	**Bardonecchia**	**83.92**	**355**	*e*P	**P**	**11 26 57.1**	**+0.6**
	comp=Z,12nm,1.2s						
BNI	**Bardonecchia**	**83.92**	**355**	*e*P	**P**	**11 26 57.1**	**+0.6**
BNI				pmax	pmax		
	comp=Z,12nm,1.2s						
VTS	**Vitosha**	**84.33**	**343**	*e*P	**P**	**11 26 57.8**	**-0.9**
	comp=Z,4.4nm,1.0s						
VTS	**Vitosha**	**84.33**	**343**	*e*P	**P**	**11 26 57.8**	**-0.9**
VTS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VLC	**Villacollemand**	**84.55**	**352**	*e*P	**P**	**11 26 59.2**	**-0.4**
	comp=Z,28nm,1.6s						
BR101	**Keskin Array S**	**84.70**	**334**	*e*P	**P**	**11 27 00.3**	**-0.3**
BR131	**Keskin Array S**	**84.70**	**334**	*e*P	**P**	**11 26 59.9**	**-0.8**
	comp=Z,3.4nm,0.8s						
BRTR	**Keskin Array B**	**84.70**	**334**	P	**P**	**11 27 00.3**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=64,slow=2.9,SNR=11						
AS31	**Alice Springs**	**84.77**	**221**	*e*P	**P**	**11 27 00.8**	**0.0**
	comp=Z,3.7nm,1.5s						
ASAR	**Alice Springs**	**84.77**	**221**	P	**P**	**11 27 01.1**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=23,slow=4.7,SNR=12						
PDG	**Podgorica**	**85.19**	**346**	⇑*i*P	**P**	**11 27 02.1**	**-0.7**
STKA	**Stephens Creek**	**89.32**	**212**	P	**P**	**11 27 22.4**	**-0.2**
	comp=Z,4.3nm,1.1s,baz=126,slow=14,SNR=3.6						
STKA	**Stephens Creek**	**89.32**	**212**	*e*P	**P**	**11 27 22.6**	**0.0**
	comp=Z,2.4nm,1.4s						
STKA	**Stephens Creek**	**89.32**	**212**	*e*P	**P**	**11 27 22.6**	**0.0**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ESDC	**Sonseca Array**	**89.42**	**3**	P	**P**	**11 27 22.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=340,slow=2.9,SNR=4.8						
WSAR	**Wadi Sarin**	**89.66**	**308**	LR	LR	12 10 02.6	
	comp=Z,197nm,20.6s,baz=54,slow=37						
MMAI	**Mount Meron Ar**	**90.44**	**331**	LR	LR	12 12 02.9	
	comp=Z,87nm,21.3s,baz=215,slow=38						
ASF	**Jabal al Asfar**	**90.75**	**329**	LR	LR	12 13 04.0	
	comp=Z,182nm,19.2s,baz=286,slow=39						
RPZ	**Rata Peaks**	**94.86**	**186**	LR	LR	12 05 16.7	
	comp=Z,140nm,19.5s,baz=40,slow=32						
TOA1	**Torodi Ar. Sit**	**115.87**	**358**	*e*PKPdf	**PKiKP**	**11 33 08.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**115.88**	**358**	PKP	**PKiKP**	**11 33 08.7**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=351,slow=3.1,SNR=11						
DBIC	**Dimbokro**	**122.20**	**5**	PKP	**PKPdf**	**11 33 21.0**	**-0.6**
	comp=Z,3.2nm,0.4s,baz=8.7,slow=1.6,SNR=7.3						
DBIC	**Dimbokro**	**122.20**	**5**	PKIKP	**PKPdf**	**11 33 21.0**	**-0.6**
TSUM	**Tsumeb**	**145.08**	**330**	*e*PKPbc	**PKPdf**	**11 34 04.2**	**+0.1**
MAW	**Mawson**	**145.81**	**217**	PKPbc	**PKPbc**	**11 34 04.2**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=63,slow=6.5,SNR=4.5						
MAW	**Mawson**	**145.81**	**217**	*e*PKPdf	**PKPbc**	**11 34 04.4**	**+0.1**
LBTB	**Lobatse**	**147.19**	**313**	*e*PKPbc	**PKPab**	**11 34 10.7**	**-0.9**
LBTB	**Lobatse**	**147.19**	**313**	*e*PKP2	**PKPab**	**11 34 10.7**	**-0.9**
WIN	**Windhoek**	**148.38**	**328**	*e*PKPbc	**PKPbc**	**11 34 13.5**	**+0.3**
WIN	**Windhoek**	**148.38**	**328**	*e*PKP2	**PKPbc**	**11 34 13.5**	**+0.3**
BOSA	**Boshof**	**150.40**	**310**	PKPbc	**PKPbc**	**11 34 17.8**	**-0.1**
	comp=Z,3.4nm,0.5s,baz=348,slow=1.4,SNR=6.8						

MEX 16 11:34:46.5±0.6, 15°.14N×93°.52W, h67^{km}±12^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PCIG		**0.63**	**27**	*e*P	Pn	11 34 58.8	-1.6
PCIG				*e*S	Sn	11 35 09.0	-1.5
TGIG		**1.67**	**13**	*e*P	Pn	11 35 12.2	-1.5
TGIG				*e*S	Sn	11 35 32.2	-2.1
CCIG	**Comitan**	**1.75**	**49**	*i* P	Pn	11 35 13.5	-1.3
CCIG				*i* S	Sn	11 35 34.9	-1.4
CMIG	**Matias Romero**	**2.34**	**326**	*e*P	Pn	11 35 21.9	-0.8
CMIG				*i* S	Sn	11 35 48.3	-2.1

MEX 16 11:39:32.4±0.8, 17°.33N×95°.15W, h127^{km}±7^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.34**	**133**	*e*P	Pn	11 39 49.3	-1.1
CMIG				*e*S	Sn	11 40 01.6	-2.2
VHO	**Vista Hermosa**	**1.54**	**261**	*e*P	Pn	11 39 59.9	-1.0
VHO				*i* S	Sn	11 40 21.3	-1.3
HUIG	**Huatulco**	**1.80**	**211**	*e*P	Pn	11 40 01.9	-1.9
HUIG				*i* S	Sn	11 40 26.6	-1.2
PCIG		**2.45**	**131**	*e*P	Pn	11 40 10.8	-1.1
PCIG				*i* S	Sn	11 40 39.7	-2.5
CCIG	**Comitan**	**3.06**	**109**	*i* P	Pn	11 40 19.5	-0.4
CCIG				*i* S	Sn	11 40 55.4	-1.2

SNET 16 11:42:38.6±1.1, 13°.17N×89°.40W, h59^{km}±5^{km}, ML3.9, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AIES	**Las Flores**	**0.44**	**51**	*e*P	Pn	11 42 49.8	-0.1
AIES				AML	AML	11 42 50.0	
	comp=Z,6μm,0.1s						
AIES				*e*S	Sn	11 42 58.7	+0.5
LOMA	**Loma Larga**	**0.52**	**26**	*e*P	Pn	11 42 51.0	+0.1
LOMA				*e*S	Sn	11 43 01.9	+2.2
LOMA				IAML		11 43 05.0	
	comp=Z,5μm,0.2s						
SNET	**Serv Nac Est T**	**0.54**	**18**	*e*P	Pn	11 42 51.1	0.0
SNET				*e*S	Sn	11 43 01.1	+1.1
SNET				IAML		11 43 03.2	
	comp=Z,3μm,0.2s						
UEES	**Universidad Ev**	**0.57**	**16**	*e*P	Pn	11 42 51.5	0.0
UEES				*e*S	Sn	11 43 01.6	+0.8
UEES				IAML		11 43 05.7	
	comp=Z,4μm,0.2s						
OPAM	**Oficina de Pla**	**0.57**	**20**	*e*P	Pn	11 42 51.7	+0.3
OPAM				*e*S	Sn	11 43 01.9	+1.1
OPAM				IAML		11 43 05.1	
	comp=Z,2μm,0.2s						
UDBS	**Universidad Do**	**0.59**	**24**	*e*P	Pn	11 42 52.0	+0.3
UDBS				*e*S	Sn	11 43 02.6	+1.4
UDBS				IAML		11 43 04.7	
	comp=Z,3μm,0.3s						
CEDA	**San Andres**	**0.63**	**1**	*e*P	Pn	11 42 52.4	+0.4
CEDA				*e*S	Sn	11 43 03.2	+1.4
CEDA				IAML		11 43 07.0	
	comp=Z,5μm,0.2s						
LFU	**La Fuente**	**0.64**	**26**	*i* P	Pn	11 42 52.8	+0.6
CEVE	**Cerro Verde**	**0.69**	**342**	*i* P	Pn	11 42 53.3	+0.4
CEVE				*e*S	Sn	11 43 05.2	+1.9
CEVE				IAML		11 43 05.8	
	comp=Z,5μm,0.2s						
SBLS	**San Blas**	**0.70**	**342**	*e*P	Pn	11 42 53.4	+0.4
SNVI	**San Vicente**	**0.70**	**51**	*e*P	Pn	11 42 53.0	0.0
SNVI				*e*S	Sn	11 43 04.1	+0.6
PAVA	**Las Pavas**	**0.71**	**40**	*e*P	Pn	11 42 53.4	+0.3
PAVA				*e*S	Sn	11 43 05.3	+1.8
PAVA				IAML		11 43 06.1	
	comp=Z,2μm,0.3s						
SNJE	**San Jose**	**0.72**	**344**	*e*P	Pn	11 42 53.7	+0.4
RTR	**El Retiro**	**0.76**	**342**	*e*P	Pn	11 42 54.4	+0.6
UNIC	**Universidad Ca**	**0.82**	**350**	*e*P	Pn	11 42 55.1	+0.6
UNIC				*e*S	Sn	11 43 07.2	+1.0
TECA	**Tecapa**	**0.94**	**70**	*e*P	Pn	11 42 55.9	-0.1
VICT	**Victoria**	**1.08**	**43**	*e*P	Pn	11 42 58.1	+0.3
VICT				*e*S	Sn	11 43 13.2	+1.1
LLGN	**La Laguna**	**1.08**	**24**	*e*P	Pn	11 42 58.1	+0.2
LLGN				*e*S	Sn	11 43 13.4	+1.2
PACA	**Pacayal**	**1.09**	**74**	*e*P	Pn	11 42 58.3	+0.4
PACA				*e*S	Sn	11 43 14.3	+1.9
PACA				IAML		11 43 17.8	
	comp=Z,9μm,0.3s						
LCY	**Lacayo**	**1.11**	**77**	*e*P	Pn	11 42 58.8	+0.6
VSM	**San Miguel**	**1.13**	**77**	*e*P	Pn	11 42 59.4	+0.8
MTO3	**Montecristo**	**1.22**	**2**	⇓*i*P	Pn	11 43 00.2	+0.5
MTO3				*e*S	Sn	11 43 16.4	+0.9
CNCH	**Conchagua**	**1.53**	**86**	*e*P	Pn	11 43 04.1	+0.3
CNCH				*e*S	Sn	11 43 23.9	+1.0
CNCH				IAML		11 43 32.2	
	comp=Z,4μm,0.3s						
CSGN	**Cosiguina Volc**	**1.81**	**96**	*e*P	Pn	11 43 08.4	+0.9

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*MRB **16** 11:58:08.4±0.3, 40°.69N×1°.02E, h4^{km}±6^{km}, ML1.6/13,*
Error ellipse: s-maj=2.2km s-min=1.5km az=337.0

MDD 16 11:58:08.2±0.4, 40°.73N×0°.99E, h10^{km}±1^{km}, mbLg1.3/18, Error ellipse: s-maj=4.2km s-min=2.5km az=177.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
COBS	**Casablanca**	**0.28**	**93**	Pg	Pg	11 58 13.2	-0.6
COBS				Lg	Lg	11 58 17.7	
	218nm,0.2s						
COBS	**Casablanca**	**0.28**	**93**	P	Pg	11 58 12.3	-1.5
COBS				S	Sg	11 58 17.8	+0.3
	218nm,0.2s						
COBS	**Casablanca**	**0.28**	**93**	P	Pg	11 58 13.3	-0.5
EBR	**Ebro Roquetas**	**0.39**	**284**	Pg	Pg	11 58 14.9	-1.0
	41nm,0.5s						
EBR				Lg	Lg	11 58 21.1	
	56nm,2.1s,SNR=7.9						
EBR	**Ebro Roquetas**	**0.39**	**284**	S	Sg	11 58 21.5	+0.4
	52nm,0.3s						
EBR	**Ebro Roquetas**	**0.39**	**284**	S	Sg	11 58 21.9	+0.9
	41nm,0.5s						
CMAS	**Mas de Barbera**	**0.52**	**270**	Pg	Pg	11 58 18.5	+0.3
CMAS				Lg	Lg	11 58 24.4	
	8.4nm,0.1s						
CMAS	**Mas de Barbera**	**0.52**	**270**	P	Pg	11 58 16.9	-1.3
CMAS				S	Sg	11 58 24.5	-0.5
	8.4nm,0.1s						
CMAS	**Mas de Barbera**	**0.52**	**270**	P	Pg	11 58 18.5	+0.3
CMAS				S	Sb	11 58 26.3	-0.6
	25nm,0.2s						
ERTA	**Horta de San J**	**0.55**	**295**	Pg	Pg	11 58 18.0	-0.8
	2.2nm,0.5s,SNR=11						
ERTA				Lg	Lg	11 58 26.2	
	6.7nm,1.1s,SNR=7.9						
CGAR	**Garraf**	**0.57**	**11**	Pg	Pn	11 58 25.4	+2.9
CGAR				Lg	Lg	11 58 35.9	
	1.1nm,0.3s						
CGAR	**Garraf**	**0.57**	**11**	P	Pn	11 58 22.9	+0.4
CGAR				S	Sn	11 58 35.9	+3.9
	2.2nm,0.3s						
CGAR	**Garraf**	**0.57**	**11**	P	Pn	11 58 25.4	+3.0
CGAR				S	Sn	11 58 37.7	+5.7
	7.6nm,0.3s						
EPOB	**Poblet**	**0.63**	**6**	Pg	Pg	11 58 19.8	-0.5
	4.1nm,0.2s,SNR=20						
EPOB				Lg	Lg	11 58 28.2	
	14nm,0.3s,SNR=7.5						
EPOB	**Poblet**	**0.63**	**6**	P	Pg	11 58 19.8	-0.5
EPOB				S	Sb	11 58 29.9	-0.2
	9.2nm,0.2s						
EPOB	**Poblet**	**0.63**	**6**	P	Pb	11 58 20.9	-0.4
EPOB				S	Sb	11 58 29.9	-0.2
	12nm,0.2s						
CAVN	**Les Avellanes**	**1.17**	**351**	Pg	Pb	11 58 30.4	-0.1
CAVN				Lg	Lg	11 58 46.4	
	7.8nm,0.3s						
CAVN	**Les Avellanes**	**1.17**	**351**	P	Pb	11 58 27.6	-2.8
CAVN				S	Sb	11 58 44.0	-1.6
	7.0nm,0.3s						
CAVN	**Les Avellanes**	**1.17**	**351**	P	Pb	11 58 30.4	0.0
CAVN				S	Sn	11 58 46.4	-0.2
	16nm,0.3s						
EMOS	**Mosqueruela**	**1.17**	**252**	Pg	Pb	11 58 29.6	-1.0
	1.5nm,2.1s,SNR=7.9						
EMOS				Lg	Lg	11 58 45.3	
	1.7nm,2.1s,SNR=7.9						
EMOS	**Mosqueruela**	**1.17**	**252**	S	Sb	11 58 41.3	-4.7
EMOS	**Mosqueruela**	**1.17**	**252**	S	Sn	11 58 46.7	-0.2
	4.3nm,0.4s						
CORI	**Orista**	**1.48**	**32**	Pg	Pb	11 58 35.5	-0.2
CORI				Lg	Lg	11 58 55.6	
	9.0nm,0.2s						
CORI	**Orista**	**1.48**	**32**	P	Pn	11 58 31.7	-3.1
CORI				S	Sn	11 58 50.6	-3.6
	1.1nm,0.2s						
CORI	**Orista**	**1.48**	**32**	P	Pb	11 58 35.6	-0.1

CORI				S	Sg	11 58 55.7	0.0
	9.0nm,0.2s						
ESAC	San Caprasio	1.48	312	Pg	Pb	11 58 35.5	-0.4
	9.3nm,0.3s,SNR=8.2						
ESAC				Lg	Lg	11 58 55.9	
	15nm,0.2s,SNR=7.4						
CFON	Fontmartina	1.50	46	Pn	Pn	11 58 33.6	-1.6
	0.3nm,1.1s,SNR=7.9						
CFON				Pg	Pb	11 58 35.4	-0.7
	1.3nm,0.3s,SNR=6.0						
CFON				Lg	Lg	11 58 55.7	
	2.6nm,0.4s,SNR=7.9						
CFON	Fontmartina	1.50	46	S	Sn	11 58 50.3	-4.6
	2.5nm,0.2s						
CFON	Fontmartina	1.50	46	S	Sg	11 58 56.5	+0.1
	8.4nm,0.2s						
CTRE	Tremp	1.60	354	Pg	Pb	11 58 37.5	-0.4
CTRE				Lg	Lg	11 58 59.4	
	3.9nm,0.5s						
CTRE	Tremp	1.60	354	P	Pn	11 58 33.1	-3.6
CTRE				S	Sn	11 58 53.8	-3.6
	0.9nm,0.4s						
CTRE	Tremp	1.60	354	P	Pb	11 58 37.5	-0.4
CTRE				S	Sg	11 58 59.4	-0.3
	3.9nm,0.5s						
CSOR	Sort	1.65	4	Pg	Pb	11 58 38.4	-0.4
	1.2nm,0.4s,SNR=13						
CSOR				Lg	Lg	11 59 00.9	
	2.6nm,0.3s,SNR=8.6						
CSOR	Sort	1.65	4	P	Pn	11 58 34.2	-3.1
CSOR				S	Sn	11 58 55.8	-2.8
	1.2nm,0.3s						
CSOR	Sort	1.65	4	P	Pb	11 58 38.4	-0.3
CSOR				S	Sb	11 59 00.3	+0.7
	8.1nm,0.4s						
ETOS	Mallorca	1.69	124	Pn	Pn	11 58 36.7	-1.1
	0.5nm,1.6s,SNR=7.9						
ETOS				Sn	Sn	11 58 58.3	-1.2
	1.5nm,1.5s,SNR=7.9						
EIBI	Ibiza	1.72	171	Pn	Pn	11 58 37.1	-1.1
	1.2nm,1.2s,SNR=7.9						
EIBI				Sn	Sn	11 58 58.7	-1.4
	2.8nm,0.5s,SNR=7.9						
CBRU	Bruguera	1.79	29	P	Pn	11 58 36.1	-3.2
CBRU				S	Sn	11 58 58.5	-3.7
	0.9nm,0.3s						
CBRU	Bruguera	1.79	29	S	Sb	11 59 03.9	+0.1
	5.0nm,0.3s						
CCAS	Cassa de la Se	1.85	51	S	Sb	11 59 05.2	0.0
	1.8nm,0.4s						
CEST	Esterri de Car	1.88	6	S	Sb	11 59 06.0	-0.3
	2.5nm,0.4s						
CLLI	Llivia	1.90	23	Lg	Lg	11 59 09.0	
	1.3nm,0.8s,SNR=7.9						
CBEU	Beuda	1.98	39	Pg	Pn	11 58 43.0	+1.2
CBEU	Beuda	1.98	39	P	Pn	11 58 38.7	-3.1
CBEU				S	Sn	11 59 02.7	-4.1
	1.2nm,0.3s						
CBEU	Beuda	1.98	39	P	Pn	11 58 43.0	+1.2
EJON	La Jonquera	2.23	39	Lg	Lg	11 59 19.4	
	28nm,7.4s,SNR=7.9						
SJAF	Saint Jean de	2.25	38	Pg	Pb	11 58 49.0	0.0
	2.3nm,3.2s,SNR=7.9						
SJAF				Lg	Lg	11 59 19.6	
	4.3nm,2.0s,SNR=7.9						
ETOR	Torete	2.32	273	Pg	Pb	11 58 50.3	+0.3
	1.4nm,3.1s,SNR=7.9						
ETOR				Lg	Lg	11 59 21.9	
	12nm,5.1s,SNR=7.9						
ATE	Arette	2.67	332	Pg	Pb	11 58 57.2	+1.1
	5.0nm,3.2s,SNR=7.9						
ATE				Lg	Lg	11 59 33.6	
	24nm,19.0s,SNR=7.9						

IDC 16 11:59:17.0±10.0, 30°.59S×178°.92W, h118^{km}±76^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.4/26, mbtmp4.0/5, Error ellipse: s-maj=86.1km s-min=26.2km az=45.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.33	202	P	Pn	12 01 16.7	+1.9
	0.3nm,0.3s,baz=144,slow=17,SNR=1.9						
URZ				S	Sn	12 02 45.0	-2.1
	6.5nm,0.3s,baz=37,slow=21,SNR=17						
STKA	Stephens Creek	33.66	257	P	P	12 05 47.5	+0.9
	2.1nm,0.5s,baz=97,slow=11,SNR=6.0						
ASAR	Alice Springs	42.31	268	P	P	12 06 59.0	-0.3
	0.2nm,0.3s,baz=106,slow=7.5,SNR=13						
WRA	Warramunga Arr	43.31	273	P	P	12 07 06.8	-0.7
	0.8nm,0.3s,baz=103,slow=8.8,SNR=2.5						
QSPA	South Pole Qui	59.52	180	P	P	12 09 07.6	-0.1
	1.3nm,0.5s,baz=226,slow=1.4,SNR=16						

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*ISCJB **16** 12:06:38.5±0.3, 30°.17N±0°.04×92°.13E±0°.04, h10^{km}, mb4.2/27, MS3.2/3, Error ellipse: s-maj=5.9km s-min=5.3km az=140.6*

*IDC **16** 12:06:39.1±0.7, 30°.04N×92°.07E, h0^{km}, mb4.0/12, mb1 4.1/14, mb1mx3.9/47, mbtmp4.0/14, ML3.9/2, MS3.2/4, Ms1 3.3/4, ms1mx3.0/29, Error ellipse: s-maj=31.9km s-min=15.1km az=56.0*

*NEIC **16** 12:06:40.2±2.5, 30°.06N×92°.02E, h10^{km}±1^{km}, mb4.2/24, Error ellipse: s-maj=12.4km s-min=6.1km az=156.0*

ISC 16 12:06:40.5±0.5, 30°.14N±0°.05×92°.04E±0°.06, h10^{km}, n62, σ1^{s}60/62, mb4.2/27, MS3.2/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	0.89	241	*e*Pg	Pg	12 06 55.8	-2.0
LSA				*e*Sg	Sb	12 07 08.3	-2.2
SHL	Shillong	4.56	182	*e*P	Pn	12 07 52.0	+2.2
SHL				*i* S	Sb	12 08 58.0	+2.2
JIRN	Jiri	5.70	246	*e*P	Pn	12 08 09.4	+3.8
	29nm,0.4s						
GUN	Gumba	5.84	249	*e*P	Pn	12 08 10.9	+3.4
PKI	Pulchoki	6.36	248	*e*P	Pn	12 08 18.0	+3.4
PKIN	Phulchoki	6.37	248	*e*P	Pn	12 08 18.0	+3.3
KKN	Kakani	6.37	250	*e*P	Pn	12 08 17.6	+2.9
	26nm,0.5s						
DMN	Daman	6.59	249	*e*P	Pn	12 08 21.3	+3.6
	30nm,0.6s						
DANN	Dangsing	7.46	258	*e*P	Pn	12 08 31.1	+1.5
	34nm,0.5s						
KOLN	Koldanda	7.77	254	*e*P	Pn	12 08 36.3	+2.5
	23nm,0.4s						
PYUN	Piuthan	8.18	258	*e*P	Pn	12 08 41.4	+1.9
	71nm,0.8s						
CMAR	Chiang Mai Arr	13.22	150	Pn	Pn	12 09 48.5	+0.2
	0.5nm,0.3s,baz=323,slow=13,SNR=10						
CMAR				LR	LR	12 15 56.8	
	comp=Z,106nm,19.1s,baz=280,slow=42						
NIL	Nilore	16.34	287	*e*Pn	Pn	12 10 29.6	-0.5
	7.4nm,0.8s						
KDJ	Kajisay	16.92	319	*e*Pn	Pn	12 10 36.0	-1.6
	4.5nm,0.9s						
NRN	Naryn	17.19	315	*e*Pn	Pn	12 10 39.2	-1.8
	3.6nm,0.9s						
MK31	Makanchi Array	18.27	338	*e*Pn	Pn	12 10 53.0	-1.1
MK32	Makanchi Array	18.27	338	*e*P	Pn	12 10 52.7	-1.4
MKAR	Makanchi Array	18.27	338	Pn	Pn	12 10 52.7	-1.4
	0.1nm,0.3s,baz=138,slow=14,SNR=5.4						
ARSB	Arslanbob	19.04	311	*e*P	P	12 11 03.0	+0.1
	3.2nm,0.8s						
KBL	Kabul	19.91	289	*e*P	P	12 11 11.4	-1.1
	18nm,0.9s						
GAR	Garm	19.92	302	*e*P	P	12 11 12.6	+0.1
	8.8nm,1.1s						
BTK	Batken	19.95	305	*e*P	P	12 11 12.8	0.0
	16nm,0.7s						
SONA0	Songino Array	20.83	28	*e*P	P	12 11 23.0	+0.7
SONM	Songino Array	20.83	28	P	P	12 11 23.0	+0.7
	7.0nm,0.9s,baz=215,slow=12,SNR=12						
KK31	Karatay Array	21.51	313	*e*P	P	12 11 27.6	-2.0
	3.0nm,1.4s						
KURBB	Kurchatov Arra	22.83	337	P	P	12 11 46.1	+2.5
	4.4nm,0.7s,baz=147,slow=10.0,SNR=33						
KURBB				PcP	PcP	12 15 34.8	+0.3
	0.6nm,1.0s,baz=168,slow=1.5,SNR=5.0						
KURK	Kurchatov	22.88	338	*e*P	P	12 11 44.9	+0.8
	5.8nm,0.8s						
TLY	Talaya	23.18	19	*e*P	P	12 11 49.6	+2.4
	2.2nm,1.0s						
ZAA0	Zalesovo Array	24.36	350	*e*P	P	12 11 58.7	+0.2
	3.3nm,0.8s						
ZALV	Zalesovo Beam	24.36	350	P	P	12 11 59.7	+1.2
	2.4nm,0.6s,baz=179,slow=9.0,SNR=11						
ZAA1	Zalesovo Array	24.37	350	*e*P	P	12 11 59.7	+1.1
BVAR	Borovoye Array	27.81	331	P	P	12 12 31.8	+2.0
	1.1nm,0.4s,baz=156,slow=11,SNR=4.4						
GEYT	Alibeck	29.05	295	LR	LR	12 27 12.9	
	comp=Z,44nm,20.9s,baz=15,slow=42						
MYKOM	Kota Tinggi	30.34	156	*e*P	P	12 12 50.2	-2.3
	6.0nm,1.1s						
ABKAR	Akbulak array	30.88	317	*e*P	P	12 12 58.4	+1.4
	2.3nm,0.6s						
MAJO	Matsushiro	38.80	68	*e*P	P	12 14 03.6	-1.9
	4.4nm,1.1s						
KBZ	Khabaz	40.98	303	LR	LR	12 35 36.5	
	comp=Z,38nm,18.2s,baz=36,slow=42						
TIXI	Tiksi	46.09	15	*e*P	P	12 15 04.6	+0.3
	3.3nm,0.5s						
AKASG	Malin Array Be	50.42	313	P	P	12 15 38.3	+0.3
	0.9nm,0.5s,baz=79,slow=6.4,SNR=4.2						
AKBB	Malin Array Si	50.42	313	*e*P	P	12 15 36.8	-1.2
	10nm,1.6s						
FIA0	FINESS Array S	52.58	326	*e*P	P	12 15 54.9	+0.9
FINES	FINESS Array B	52.58	326	P	P	12 15 54.9	+0.9
	2.6nm,0.8s,baz=96,slow=13,SNR=3.6						
BUR08	Bucovina Ar. S	53.24	309	*e*P	P	12 15 59.9	+0.6
HFS	Hagfors	58.66	325	P	P	12 16 38.7	+0.9
	baz=94,slow=6.2						
NC405	NORSAR Array S	59.51	326	*e*P	P	12 16 42.6	-1.1
	49nm,1.6s						
NC602	NORSAR Array S	59.64	326	*e*P	P	12 16 43.7	-0.9
	62nm,1.6s						
NB2	NORSAR Subarra	59.76	326	P	P	12 16 47.0	+1.6
	comp=Z,0.9nm,0.6s,baz=81,slow=6.9						
NB200	NORSAR Array S	59.76	326	*e*P	P	12 16 45.5	0.0
NOA	NORSAR Array B	59.76	326	P	P	12 16 45.5	0.0
	comp=Z,1.5nm,0.7s,baz=82,slow=6.8,SNR=6.5						
NOA				LR	LR	12 44 11.2	
	comp=Z,18nm,19.8s,baz=75,slow=38						
NC204	NORSAR Array S	59.94	327	*e*P	P	12 16 45.4	-1.3
	comp=Z,31nm,1.5s						
GERES	GERESS Array B	60.61	312	P	P	12 16 53.0	+1.4
	comp=Z,0.7nm,0.6s,baz=76,slow=7.0,SNR=5.2						
WRAB	Tennant Creek	64.31	135	*e*P	P	12 17 15.4	-1.1
	comp=Z,17nm,1.5s						
WR1	Warramunga Arr	64.32	135	*e*P	P	12 17 16.2	-0.3
WRA	Warramunga Arr	64.32	135	P	P	12 17 16.2	-0.3
	comp=Z,1.2nm,0.6s,baz=313,slow=6.7,SNR=7.6						
WB2	Warramunga Arr	64.32	135	*e*P	P	12 17 16.4	-0.1
	comp=Z,13nm,1.4s						
WC3	Warramunga Arr	64.35	135	*e*P	P	12 17 16.2	-0.5
	comp=Z,9.3nm,1.3s						
AS31	Alice Springs	66.91	138	*e*P	P	12 17 32.3	-0.9
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	66.91	138	P	P	12 17 33.0	-0.2
	comp=Z,1.7nm,0.8s,baz=325,slow=6.5,SNR=20						
ILAR	Eielson Array	74.94	22	P	P	12 18 21.8	+0.3
	comp=Z,1.0nm,0.8s,baz=301,slow=5.4,SNR=13						
ILB	Eielson Array	74.94	22	*e*P	P	12 18 20.4	-1.1
	comp=Z,1.9nm,1.0s						
TOA1	Torodi Ar. Sit	83.81	282	*e*P	P	12 19 10.3	-0.3
TORD	Torodi Ar. Bea	83.81	282	P	P	12 19 10.3	-0.3
	comp=Z,1.8nm,1.1s,baz=38,slow=5.4,SNR=3.3						

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*ISK **16** 12:08:26.7, 38°.57N×44°.25E, h5^{km}, ML2.8/4*

*DDA **16** 12:08:27.4, 38°.57N×44°.31E, h7^{km}±6^{km}, ML2.9*

ISC 16 12:08:27.0±1.6, 38°.56N±0°.03×44°.30E±0°.06, h7^{km}±13^{km}, n13, σ0^{s}91/20, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASK	Baskale_VAN	0.56	204	*i* P	Pb	12 08 39.0	-0.2
BASK				*i* S	Sn	12 08 50.0	-1.2
BASK				IAML_P			
	comp=Z,9µm,0.3s						
CLDR	Caldiran	0.65	333	PG	Pg	12 08 39.8	+0.2
CLDR				SG	Sb	12 08 50.0	-0.2
CLDR	Caldiran	0.65	333	*i* P	Pb	12 08 40.1	-0.7
CLDR				*i* S	Sb	12 08 50.7	+0.4
CLDR				IAML_P			
	comp=Z,4µm,0.1s						
TVAN	Van	0.70	268	*i* P	Pb	12 08 41.6	-0.1
TVAN				IAML_P			
	comp=Z,2µm,0.3s						
VMUR	Van-Muradiye	0.71	307	*i* P	Pb	12 08 42.5	+0.7
VMUR				IAML_P			
	comp=Z,470nm,0.2s						
VANB	Van	0.71	273	PG	Pg	12 08 40.9	+0.2
VANB				SG	Sb	12 08 51.1	-0.7
YOVA	Hakkari_Yksek	0.97	180	*i* P	Pn	12 08 47.3	0.0
YOVA				IAML_P			
	comp=Z,3µm,0.2s						
GEVA	Gevas	1.00	256	*i* P	Pg	12 08 45.9	-0.3
GEVA				*i* S	Sn	12 09 01.5	-0.6
GEVA				IAML_P			
	comp=Z,1µm,0.2s						
AKDM	Akdamar-Van	1.06	258	PG	Pg	12 08 46.9	-0.4
AKDM				SG	Sn	12 09 03.0	-0.5
HAKT	HAKKARI	1.10	205	*i* P	Pg	12 08 48.1	-0.1
HAKT				*i* S	Sn	12 09 07.6	+2.9
HAKT				IAML_P			
	comp=Z,1µm,0.2s						
AGRB	Hanur-Agry	1.43	315	PN	Pg	12 08 54.9	+0.4
GNI	Garni	1.62	12	PN	Pg	12 08 57.9	-0.2
SRTM	Siirt_Merkez	1.95	254	*i* P	Pg	12 09 05.1	+0.7

TAP 16 12:20:20.1, 24°.28N×121°.49E, h7^{km}±1^{km}, ML0.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.08	182	*e*P	Pg	12 20 22.1	0.0
	baz=181						
ETLH				*e*S	Sg	12 20 23.4	-0.1
	baz=181						
NACB	Ninganchiao	0.15	138	*e*S	Sg	12 20 25.3	0.0
	baz=137						
NNSB	Datong	0.17	327	*e*S	Sg	12 20 26.1	0.0
	baz=327						
WHF	Hehuan Shan	0.24	235	P	Pg	12 20 24.9	-0.2
	baz=234						
WHF				S	Sg	12 20 28.2	-0.2
	baz=234						

JMA 16 12:20:30.4±0.1, 24°.85N×123°.38E, h27^{km}±5^{km}, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.51	221	P	Pb	12 20 40.6	-0.3
YOJ				S	Sb	12 20 47.7	-0.3
IRIF	Iriomote-Funau	0.60	148	P	Pb	12 20 42.2	-0.2
IRIF				S	Sb	12 20 50.4	-0.2
JKRS	Kuro-shima	0.84	137	P	Pb	12 20 46.1	-0.2
JKRS				S	Sb	12 20 57.4	+0.2
JIJ	Ishigaki jima	0.85	125	P	Pb	12 20 45.8	-0.7
JIJ				S	Sb	12 20 56.5	-1.0
HATJ	Hateruma jima	0.88	154	P	Pn	12 20 46.8	-0.2
HATJ				S	Sb	12 20 57.6	-0.8
JISG	Ishigakijimahi	0.89	107	P	Pn	12 20 46.5	-0.6
JISG				S	Sb	12 20 58.0	-0.6

TAP 16 12:20:41.5, 24°.29N×121°.50E, h9^{km}±1^{km}, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.08	189	P	Pg	12 20 43.8	0.0
	baz=189						
ETLH				S	Sg	12 20 45.3	-0.2
	baz=189						
NACB	Ninganchiao	0.14	141	*e*S	Sg	12 20 47.0	+0.2
	baz=140						
NNSB	Datong	0.18	324	*e*P	Pg	12 20 45.6	+0.3
	baz=324						
NNSB				*e*S	Sg	12 20 48.0	+0.1
	baz=324						
WHF	Hehuan Shan	0.25	237	P	Pg	12 20 46.8	+0.1
	baz=235						
WHF				S	Sg	12 20 50.1	-0.2
	baz=235						
NANB	Nanao	0.27	58	*e*S	Sg	12 20 50.7	+0.1
	baz=58						
CHGB	Renai	0.37	233	*e*P	Pg	12 20 48.8	-0.1
	baz=232						
CHGB				*e*S	Sg	12 20 53.8	0.0
	baz=232						

JMA 16 12:20:58.3±0.2, 24°.84N×123°.36E, h35^{km}, M0.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.49	220	P	Pn	12 21 08.5	-0.3
YOJ				*e*S	Sn	12 21 15.6	-0.6
IRIF	Iriomote-Funau	0.60	146	P	Pn	12 21 10.2	-0.2
IRIF				S	Sn	12 21 19.3	+0.3
JKRS	Kuro-shima	0.84	135	S	Sn	12 21 25.3	+0.5
JIJ	Ishigaki jima	0.86	123	S	Sn	12 21 24.4	-0.8
HATJ	Hateruma jima	0.88	152	*e*S	Sn	12 21 25.9	+0.2
JISG	Ishigakijimahi	0.90	106	S	Sn	12 21 25.4	-0.9

JMA 16 12:35:02.2±0.1, 24°.88N×123°.37E, h31^{km}±5^{km}, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.53	218	P	Pb	12 35 12.8	-0.3
YOJ				S	Sb	12 35 20.4	-0.2
JYNG	Yonagunijimaku	0.58	222	P	Pb	12 35 13.7	-0.2
JYNG				*e*S	Sb	12 35 21.9	0.0
IRIF	Iriomote-Funau	0.63	149	P	Pb	12 35 14.4	-0.5
IRIF				S	Sb	12 35 23.6	+0.1
JKRS	Kuro-shima	0.86	138	P	Pn	12 35 18.2	0.0
JKRS				*e*S	Sn	12 35 29.6	-0.2
JIJ	Ishigaki jima	0.87	126	P	Pn	12 35 18.2	-0.1
JIJ				S	Sn	12 35 28.7	-1.3
JISG	Ishigakijimahi	0.90	109	P	Pn	12 35 18.8	0.0
JISG				S	Sn	12 35 30.2	-0.6
HATJ	Hateruma jima	0.91	154	P	Pn	12 35 19.0	+0.1
HATJ				*e*S	Sn	12 35 29.6	-1.3
JTJ	Tarama	1.23	101	S	Sn	12 35 39.5	+0.6

TAP 16 12:35:37.8, 24°.29N×121°.48E, h5^{km}, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.08	177	P	Pg	12 35 40.3	+0.6
	baz=178						
ETLH				S	Sg	12 35 41.8	+0.8
	baz=178						
NACB	Ninganchiao	0.15	136	*e*P	Pg	12 35 41.6	+0.6
	baz=137						
NACB				S	Sg	12 35 43.8	+0.8
	baz=137						
NNSB	Datong	0.17	329	*e*P	Pg	12 35 41.8	+0.5
	baz=321						
NNSB				*e*S	Sg	12 35 44.1	+0.6
	baz=321						
NNS	Nan Shan	0.18	328	S	Sg	12 35 44.8	+0.8
	baz=322						
TWD	Chiawan	0.23	152	S	Sg	12 35 46.8	+1.4
	baz=151						
WHF	Hehuan Shan	0.24	234	P	Pg	12 35 43.3	+0.6
	baz=232						
WHF				*e*S	Sg	12 35 47.1	+1.2
	baz=232						
ENA	Nanau	0.28	59	*e*P	Pg	12 35 43.2	0.0
	baz=61						
NANB	Nanao	0.28	60	*e*P	Pg	12 35 43.3	-0.1
	baz=61						
CHGB	Renai	0.36	231	*e*P	Pb	12 35 45.8	-0.9
	baz=231						
YHNB	Yeheng	0.39	346	P	Pg	12 35 46.1	+0.6
	baz=346						
YHNB				S	Sg	12 35 51.2	+0.5
	baz=346						
NSK	Sanguang	0.40	344	P	Pg	12 35 46.5	+0.8
	baz=345						
NSK				S	Sg	12 35 51.6	+0.6
	baz=345						
TWE	Neicheng	0.47	22	*e*P	Pb	12 35 47.7	-0.8
	baz=25						
VWDT	VWDT	0.61	210	*e*P	Pg	12 35 49.8	+0.1
	baz=215						
VWDT				*e*S	Sb	12 35 59.1	-0.8
	baz=215						
EOS1	EOS1	0.65	66	*e*P	Pb	12 35 51.4	-0.2
	baz=55						
EOS1				*e*S	Sb	12 36 00.3	-0.5
	baz=55						

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*ISCJB **16** 12:45:15.8±0.5, 39°.86N±0°.03×34°.83E±0°.03, h10^{km}, Error ellipse: s-maj=4.1km s-min=3.5km az=141.4*

*DDA **16** 12:45:15.1, 39°.83N×34°.78E, h7^{km}±2^{km}, ML2.8*

*ISK **16** 12:45:15.3, 39°.98N×34°.97E, h18^{km}, ML2.4/6*

ISC 16 12:45:14.7±0.9, 39°.87N±0°.03×34°.87E±0°.03, h10^{km}, n13, σ0^{s}81/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORM	Corum	0.36	329	PG	Pb	12 45 22.7	-0.5
CORM				SG	Sb	12 45 28.3	-0.7
COAL	Corum-Alaca	0.39	13	*i* P	Pb	12 45 24.2	+0.3
COAL				*i* S	Sb	12 45 31.3	+1.3
COAL				IAML_P			
	comp=Z,726nm,0.1s						
YOZ	Yozgat	0.42	124	PG	Pb	12 45 24.4	+0.2
YOZ				SG	Sb	12 45 31.3	+0.6
CDAG	Cicekdag	0.46	237	*i* P	Pg	12 45 23.1	-0.6
CDAG				*i* S	Sg	12 45 31.3	+1.6
CDAG				IAML_P			
	comp=Z,4µm,0.1s						
SIRC	Yozgat	0.58	158	*i* P	Pb	12 45 26.8	-0.1
SIRC				*i* S	Sb	12 45 35.6	+0.4
SIRC				IAML_P			
	comp=Z,2µm,0.1s						
DELI	KIRIKKALE	0.74	280	*i* P	Pb	12 45 29.5	-0.3
DELI				*i* S	Sg	12 45 38.6	-0.1
DELI				IAML_P			
	comp=Z,1µm,0.1s						
KIRS	Kırehir-Merke	1.04	225	*i* P	Pg	12 45 34.0	-0.8
KIRS				*i* S	Sg	12 45 48.4	+0.1
KIRS				IAML_P			
	comp=Z,700nm,0.1s						
AVNS	Nevsehir-Avano	1.06	181	*i* P	Pg	12 45 35.3	+0.1
AVNS				*i* S	Sn	12 45 50.3	-0.3
AVNS				IAML_P			
	comp=Z,2µm,0.2s						
CUSAR	Sarkisla-SIVAS	1.15	113	*i* P	Pb	12 45 34.6	-2.2
CUSAR				*i* S	Sn	12 45 52.6	-0.4
BNN	Bunyan	1.27	143	PN	Pg	12 45 39.6	+0.6
SERE	Sereflikochisa	1.37	228	PN	Pg	12 45 41.4	+0.4
ANTO	Ankara	1.60	271	PN	Pb	12 45 44.5	+0.1
SULT	Sultanhani-AKS	1.98	213	PN	Pb	12 45 50.6	-0.2

UCR 16 12:49:25.4±1.8, 8°.93N×82°.88W, h5^{km}±11^{km}, MW3.5, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	Volcan	0.23	125	⇑*i*P	Pg	12 49 30.6	+0.7
BRU2				*e*S	Sg	12 49 34.9	+1.9
LCR2	La Lucha 2	1.37	306	*e*P	Pn	12 49 49.7	-1.8
LCR2				*e*S	Sg	12 50 08.0	-1.6
CVTR	Volcan Turrial	1.39	321	*e*P	Pn	12 49 50.8	-1.0
CVTR				*e*S	Sb	12 50 10.3	0.0
ARE1	Arenal 1	2.37	310	*e*P	Pn	12 50 06.1	+1.1
JTS	Las Juntas de	2.45	304	*e*P	Pn	12 50 06.4	+0.3

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*ISCJB **16** 13:11:12.4±0.6, 36°.70N±0°.06×77°.2E±0°.1, h100^{km}, Error ellipse: s-maj=17.3km s-min=4.8km az=156.6*

*NNC **16** 13:11:18.3±3.8, 36°.94N×77°.04E, h126^{km}±41^{km}, mb3.0, mpv3.7, Error ellipse: s-maj=30.3km s-min=26.1km az=170.0*

ISC 16 13:11:12.5±1.0, 36°.59N±0°.08×77°.1E±0°.1, h100^{km}, n13, σ2^{s}26/18, 3C-6D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.36	343	⇑P	Pn	13 12 45.5	+1.8
	1.9nm,0.3s						
AAK				⇓S	Sn	13 13 53.4	-1.6

	9.2nm,0.8s						
TKM2	Tokmak 2	6.43	350	⇑P	Pn	13 12 46.4	+1.6
	2.8nm,0.5s						
TKM2				⇓S	Sn	13 13 56.4	-0.3
	1.3nm,0.4s						
PDGK	Podgornoye	6.99	15	⇓P	Pn	13 12 53.5	+1.3
	2.1nm,0.3s						
PDGK				⇓S	Sn	13 14 07.2	-3.0
	4.3nm,0.5s						
KK31	Karatay Array	8.23	324	P	Pn	13 13 09.6	+0.6
	2.1nm,0.5s,baz=137,slow=15,SNR=26						
KK31				⇓S	Sn	13 14 35.6	-4.7
	3.7nm,0.5s,baz=152,slow=27,SNR=5.6						
PYUN	Piuthan	9.83	148	eP	Pn	13 13 33.5	+2.4
	24nm,0.3s						
PYUN				eS	Sn	13 15 15.3	-4.4
DANN	Dangsing	9.97	144	eP	Pn	13 13 34.8	+1.8
	11nm,0.4s						
GKN	Gorkha	10.69	141	eP	Pn	13 13 44.1	+1.4
	8.3nm,0.2s						
KKN	Kakani	11.19	139	eP	Pn	13 13 50.8	+1.2
	3.6nm,0.2s						
PKIN	Phulchoki	11.42	139	eP	Pn	13 13 53.7	+1.0
	2.1nm,0.3s						
PKI	Pulchoki	11.43	139	eP	Pn	13 13 53.8	+0.9
JIRN	Jiri	11.78	136	eP	Pn	13 13 57.9	+0.2
AB31	Akbulak array	17.77	321	⇓P	Pn	13 15 13.9	+0.7
	0.7nm,0.5s,baz=125,slow=10,SNR=15						
AKTO	Aktyubinsk	19.48	321	⇑P	P	13 15 32.1	+0.8
	0.8nm,0.5s						

NEIC ***16*** *13:17:37.3±2.1, 33.°93S×179.°53E, h89*^{km}*±11*^{km}*, mb4.3/5, Error ellipse: s-maj=37.9km s-min=21.9km az=79.0*

IDC ***16*** *13:17:41.9±6.0, 34.°36S×179.°52E, h124*^{km}*±43*^{km}*, mb3.9/4, mb1 4.0/5, mb1mx3.7/33, mbtmp4.3/5, Error ellipse: s-maj=52.6km s-min=25.8km az=57.0*

WEL ***16*** *13:17:42.0±1.5, 35°S±11°×18°0E±1°3, h220*^{km}*±13*^{km}*, M3.8/78, mB4.5/17, MLv4.4/78, Mw(mB)3.6/17, Error ellipse: s-maj=0.0km s-min=0.0km az=53.6*

ISCJB ***16*** *13:17:43.4±1.2, 34.°87S±0.°06×179.°9E±0.°1, h200*^{km}*, mb4.0/7, Error ellipse: s-maj=15.9km s-min=7.3km az=164.6*

ISC 16 13:17:43.1±1.4**, 34.°67S**±0.°08×**179.°9E**±0.°1**, h200**^{km}**, n117, σ1§90**/115**, mb3.9**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.15	203	ePn	Pn	13 18 33.2	-1.2
MXZ	Matakaoa Point	3.15	203	P	Pn	13 18 33.2	-1.2
MXZ				S	Sn	13 19 12.0	-2.7
WMGZ	Waiomatatini S	3.35	200	P	Pn	13 18 37.4	+0.6
HAZ	Te Kaha	3.51	208	P	Pn	13 18 38.2	-0.5
HAZ				S	Sn	13 19 24.6	+2.2
PKGZ	Pakihiroa	3.52	204	P	Pn	13 18 38.9	-0.1
PUZ	Puketiti	3.63	200	P	Pn	13 18 40.0	-0.3
PUZ				S	Sn	13 19 24.7	-0.7
RUGZ	Raukumara Rang	3.73	208	P	Pn	13 18 41.0	-0.6
TWGZ	Tauwhareparae	3.82	203	P	Pn	13 18 43.3	+0.7
TWGZ				S	Sn	13 19 31.1	+1.7
GRZ	Great Barrier	3.93	245	P	Pn	13 18 42.1	-1.8
MYRZ	Mayor Island	3.93	227	P	Pn	13 18 44.9	+1.0
WHRZ	Whale Island	3.94	215	P	Pn	13 18 44.9	+0.8
KUZ	Kuaotunu	3.96	237	P	Pn	13 18 43.0	-1.2
CNGZ	Carnagh Statio	4.03	199	P	Pn	13 18 45.3	+0.1
TKGZ	Te Karaka	4.10	203	P	Pn	13 18 45.5	-0.5
MWZ	Matawai	4.11	207	P	Pn	13 18 45.8	-0.4
OPRZ	Ohinepanea	4.14	219	P	Pn	13 18 46.8	+0.2
MARZ	Manawahe	4.19	217	P	Pn	13 18 47.6	+0.4
URZ	Urewera	4.21	211	P	Pn	13 18 46.4	-1.0
	14nm,0.3s,baz=261,slow=5.0,SNR=116						
URZ				S	Sn	13 19 36.2	-2.0
	16nm,0.3s,baz=316,slow=21,SNR=11						
URZ	Urewera	4.21	211	ePn	Pn	13 18 46.1	-1.3
URZ	Urewera	4.21	211	P	Pn	13 18 46.5	-0.9
TGRZ	Tauranga	4.22	223	P	Pn	13 18 47.8	+0.3
RAGZ	Rawiri	4.30	207	P	Pn	13 18 48.3	-0.3
RIGZ	Rimuhau	4.37	202	P	Pn	13 18 48.7	-0.7
WIAZ	Waiheke Island	4.39	240	P	Pn	13 18 49.8	+0.1
OMRZ	Omania	4.44	218	P	Pn	13 18 50.3	0.0
KARZ	Kaharoa	4.44	220	P	Pn	13 18 50.2	-0.1
MKAZ	Moumakai	4.53	236	P	Pn	13 18 51.3	0.0
ABAZ	Army Bay	4.53	243	P	Pn	13 18 50.7	-0.7
PRGZ	Paritu Road	4.53	200	P	Pn	13 18 50.7	-0.8
MUGZ	Murupara	4.54	212	P	Pn	13 18 50.6	-1.0
RRRZ	Republican Roa	4.55	215	P	Pn	13 18 52.4	+0.7
MBAZ	Motutapu North	4.55	241	P	Pn	13 18 51.2	-0.4
RTZ	Ruatahuna	4.57	210	P	Pn	13 18 50.8	-1.2
SNGZ	Shannon Statio	4.58	206	P	Pn	13 18 51.8	-0.2
ETAZ	East Tamaki Re	4.61	239	P	Pn	13 18 52.7	+0.3
HSRZ	Hossack Road	4.66	218	P	Pn	13 18 53.9	+0.8
TOZ	Tahuroa Road	4.67	228	P	Pn	13 18 54.4	+1.2
KNZ	Kokohu	4.69	201	P	Pn	13 18 52.6	-0.7
WCZ	Waipu Caves	4.69	253	P	Pn	13 18 51.4	-2.0
HRRZ	Handcock Road	4.70	217	P	Pn	13 18 54.9	+1.3
EPAZ	Eden Park BICE	4.71	241	P	Pn	13 18 54.7	+1.1
PRRZ	Plateau Road	4.73	215	P	Pn	13 18 52.9	-1.1
MHGZ	Mahia Peninsul	4.74	199	P	Pn	13 18 53.6	-0.5
GRRZ	Galatos Road	4.76	218	P	Pn	13 18 55.3	+1.0
RAHZ	Arahi	4.79	207	P	Pn	13 18 54.1	-0.6
ALRZ	Allen Road	4.81	215	P	Pn	13 18 54.6	-0.4
MTHZ	Maungataniwha	4.83	209	P	Pn	13 18 54.9	-0.4
WTAZ	Waiatarua	4.86	241	P	Pn	13 18 56.6	+1.0
AWAZ	Awhitu Peninsu	4.87	239	P	Pn	13 18 56.2	+0.5
WHHZ	Waihua	4.88	205	P	Pn	13 18 54.9	-0.9
MRHZ	Matea Rd	4.99	213	P	Pn	13 18 55.8	-1.6
KUTZ	Kaahu Road	5.01	219	P	Pn	13 18 58.4	+0.9
TLZ	Tolley Road	5.05	222	P	Pn	13 18 58.2	+0.2
ARHZ	Aropaoanui	5.13	206	P	Pn	13 18 58.0	-1.0
OUZ	Omahuta	5.18	262	ePn	Pn	13 18 55.5	-4.2
OUZ	Omahuta	5.18	262	P	Pn	13 18 56.1	-3.6
WATZ	Wairara	5.22	218	P	Pn	13 19 00.4	+0.2
BKZ	Black Stump Fm	5.24	210	ePn	Pn	13 18 58.9	-1.6
BKZ	Black Stump Fm	5.24	210	P	Pn	13 18 59.4	-1.1
RATZ	Rangitukua	5.32	217	P	Pn	13 19 02.5	+0.9
MCHZ	McNeill Hill	5.40	207	P	Pn	13 19 01.6	-0.9
HIZ	Hauiti	5.56	225	ePn	Pn	13 19 05.5	+0.9
HIZ	Hauiti	5.56	225	P	Pn	13 19 05.7	+1.1
WTVZ	West Tongariro	5.61	216	P	Pn	13 19 05.5	+0.2
OTVZ	Oturere	5.61	216	P	Pn	13 19 04.2	-1.2
KAHZ	Kahuranaki	5.64	204	P	Pn	13 19 04.6	-1.0
NGZ	Ngauruhoe	5.65	216	P	Pn	13 19 05.4	-0.4
TWVZ	Taurewa	5.65	218	P	Pn	13 19 05.5	-0.3
BHHZ	Black Hill Sta	5.69	211	P	Pn	13 19 04.6	-1.7
TUVZ	Tukino	5.69	215	P	Pn	13 19 05.8	-0.7
KRHZ	Kereru	5.69	208	P	Pn	13 19 04.3	-2.0
FWVZ	Far West T-bar	5.73	216	P	Pn	13 19 06.4	-0.6
WHVZ	Whangaehu Hut	5.74	215	P	Pn	13 19 05.9	-1.1
MOVZ	Moawhango	5.76	214	P	Pn	13 19 05.5	-1.7
PKVZ	Pokaka	5.86	217	P	Pn	13 19 07.9	-0.6
PXZ	Pawanui	5.86	203	P	Pn	13 19 05.0	-3.4
MTVZ	Mangateitei	5.87	215	P	Pn	13 19 07.7	-1.0
PNHZ	Pukenui	5.99	208	P	Pn	13 19 08.3	-1.9
VRZ	Vera Road	6.04	221	P	Pn	13 19 10.7	0.0
PRHZ	Porangahau	6.15	204	P	Pn	13 19 08.9	-3.3
DVHZ	Dannevirke	6.34	207	P	Pn	13 19 11.9	-2.8
ANWZ	Angora Road	6.38	204	P	Pn	13 19 12.5	-2.6
WAZ	Wanganui	6.39	216	P	Pn	13 19 14.5	-0.9
POWZ	Post Office Ro	6.57	208	P	Pn	13 19 16.1	-1.5
PRWZ	Pori Road	6.64	207	P	Pn	13 19 16.7	-1.7
BFZ	Birch Farm	6.65	204	ePn	Pn	13 19 15.7	-2.9
BFZ	Birch Farm	6.65	204	P	Pn	13 19 16.2	-2.5
TIWZ	Tintock	6.86	206	P	Pn	13 19 19.8	-1.6
TRWZ	Traveller	7.48	205	P	Pn	13 19 28.3	-1.2
SNZO	South Karori	7.78	210	ePn	Pn	13 19 29.1	-4.2
THZ	Tophouse	8.95	216	ePn	Pn	13 19 45.0	-3.6
KHZ	Kahutara	9.18	211	ePn	Pn	13 19 48.2	-3.4
LTZ	Lake Taylor	10.04	214	ePn	Pn	13 19 59.2	-3.5
CRLZ	Canterbury Las	10.52	210	ePn	Pn	13 20 06.3	-2.5
OXZ	Oxford	10.57	213	ePn	Pn	13 20 04.1	-5.4
MQZ	McQueen's Vall	10.61	210	ePn	Pn	13 20 05.4	-4.7
WVZ	Waitaha Valley	10.99	218	P	Pn	13 20 13.4	-1.6
RPZ	Rata Peaks	11.32	214	P	Pn	13 20 15.8	-3.3
	0.8nm,0.3s,baz=57,slow=17,SNR=2.7						
RPZ				S	Sn	13 22 14.2	-11
	1.1nm,0.3s,baz=281,slow=19,SNR=2.1						
RPZ	Rata Peaks	11.32	214	ePn	Pn	13 20 15.2	-4.0
FOZ	Fox Glacier	11.79	218	ePn	Pn	13 20 23.9	-1.2
ODZ	Otahua Downs	12.54	212	ePn	Pn	13 20 31.8	-2.9
WKZ	Wanaka	13.12	216	ePn	Pn	13 20 40.7	-1.2
WHZ	Wether Hill Ro	14.42	215	ePn	Pn	13 20 56.5	-1.5
DZM	Mont Dzumac	17.21	313	ePn	P	13 21 23.3	-7.1
	50nm,1.3s						
CTA	Charters Tower	33.01	287	P	P	13 24 02.5	+3.0
	2.6nm,0.6s,baz=148,slow=9.5,SNR=3.9						
AS31	Alice Springs	41.29	273	eP	P	13 25 13.3	+4.2
	1.0nm,0.8s						
ASAR	Alice Springs	41.29	273	P	P	13 25 12.8	+3.7
	2.1nm,0.7s,baz=114,slow=7.9,SNR=22						
WRAB	Tennant Creek	42.67	278	eP	P	13 25 20.0	-0.3
	51nm,1.9s						
WR1	Warramunga Arr	42.67	278	eP	P	13 25 23.4	+3.2
WRA	Warramunga Arr	42.67	278	P	P	13 25 23.4	+3.2
	1.7nm,0.5s,baz=125,slow=7.2,SNR=4.5						
QSPA	South Pole Qui	55.45	180	eP	P	13 27 08.5	+12
	12nm,0.6s						
MAW	Mawson	67.69	202	P	P	13 28 26.7	+8.5
	1.8nm,0.7s,baz=151,slow=8.2,SNR=6.9						
MAW	Mawson	67.69	202	eP	P	13 28 27.4	+9.3
	5.0nm,2.0s						
FIA0	FINESS Array S	148.42	336	ePKPbc	PKPab	13 37 10.9	+2.0
FINES	FINESS Array B	148.42	336	PKPbc	PKPab	13 37 10.9	+2.0
	1.3nm,0.6s,baz=64,slow=4.4,SNR=9.4						
TORD	Torodi Ar. Bea	158.51	185	PKPab	PKPab	13 38 01.3	+8.6
	0.3nm,0.5s,baz=179,slow=3.4,SNR=3.6						
TOA1	Torodi Ar. Sit	158.51	185	eP	PKPab	13 38 01.3	+8.6

ISCJB ***16*** *13:24:26.5±0.4, 61.°58N±0.°01×141.°08W±0.°03, h0*^{km}*±3*^{km}*, Error ellipse: s-maj=2.6km s-min=2.3km az=160.7*

AEIC ***16*** *13:24:27.5, 61.°54N×141.°03W, h10*^{km}*, ML3.3, ML3.5(OTT)*

NEIC ***16*** *13:24:27.5±0.0, 61.°54N×141.°03W, h10*^{km}*, ML3.3(AEIC), ML3.5(OTT), After AEIC.*

PGC ***16*** *13:24:29.0, 61.°56N×141.°06W, h5*^{km}*, ML3.5/11, 209km Wnw of Haines Jct., Yt Southern Alaska*

ISC 16 13:24:28.1±0.9**, 61.°56N**±0.°02×**141.°01W**±0.°02**, h17**^{km}±7^{km}**, n89, σ1§76**/123**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.24	19	P	Pg	13 24 33.2	-0.5
YUK2				S	Sg	13 24 37.0	-0.4
YUK3	Moose Creek	0.34	51	P	Pg	13 24 35.2	-0.2
YUK3				S	Sg	13 24 40.4	0.0
YUK1	Sand Pete Hill	0.64	21	P	Pg	13 24 40.1	-0.6
YUK1				S	Sg	13 24 49.0	-0.2
PTPK	Patty Peak	0.80	242	P	Pg	13 24 42.7	-1.0
PTPK				S	Sg	13 24 53.6	-0.6
BALM	Baldy	0.83	231	ePg	Pb	13 24 43.0	-1.2
BALM	Baldy	0.83	231	P	Pb	13 24 43.0	-1.2
BALM				S	Sb	13 24 54.2	-0.9
BVCY	Beaver Creek	0.86	5	P	Pb	13 24 44.4	-0.2
BVCY				S	Sb	13 24 56.0	+0.2
KIAG	Kiagna River	0.91	226	P	Pb	13 24 44.4	-1.3
KIAG				S	Sb	13 24 56.5	-1.0
TABL	Table Mountain	1.13	183	P	Pb	13 24 48.8	-0.4
TABL				S	Sb	13 25 03.0	-0.7
YUK4	Talbot Arm	1.16	100	P	Pg	13 24 50.2	-0.3
YUK4				S	Sg	13 25 06.4	+0.7
YUK6	Outpost Mounta	1.42	115	Pn	Pb	13 24 54.4	+0.1
YUK6				Sg	Sg	13 25 14.7	+0.6
SAMH	Samovar Hills	1.44	175	Pn	Pg	13 24 55.1	-0.7
SAMH				Sg	Sg	13 25 14.2	-0.4
MESA	MESA	1.46	199	Pn	Pg	13 24 55.5	-0.8
MESA				Sg	Sg	13 25 14.9	-0.4
CHX	Chaix Hills	1.50	182	ePn	Pg	13 24 56.5	-0.6
PCA	Pinnacle	1.52	166	ePn	Pb	13 24 56.2	+0.4
PCA				eSn	Sg	13 25 16.6	-0.4
PCA	Pinnacle	1.52	166	Pn	Pb	13 24 56.2	+0.4
PCA				Sg	Sg	13 25 17.3	+0.3
BCA3	Beaver Creek A	1.55	347	ePn	Pb	13 24 55.9	-0.5
YUK5	Granite Creek	1.58	104	Pn	Pb	13 24 56.9	0.0
YUK5				Sg	Sg	13 25 18.4	-0.6
SNH	Sunshine Point	1.65	214	ePn	Pb	13 24 58.5	+0.4
SNH				eSn	Sg	13 25 21.8	+0.5
YUK7	Dusty Glacier	1.74	125	Pn	Pb	13 25 00.2	+0.5
YUK7				Sg	Sg	13 25 23.9	-0.3
BCPM	Bancas Point	1.75	157	ePn	Pb	13 24 59.6	-0.1
HYT	Haines Junctio	1.85	112	ePn	Pb	13 25 01.1	-0.5
HYT				eSg	Sg	13 25 26.4	-1.3
HYT	Haines Junctio	1.85	112	Pn	Pb	13 25 01.0	-0.6
HYT				Sg	Sg	13 25 27.1	-0.7
MENT	Mentasta	1.88	319	ePn	Pb	13 25 01.2	-0.7
PS12	TAPS Pump St12	1.98	269	ePn	Pb	13 25 03.5	-0.3
PS12				eSg	Sg	13 25 30.3	-1.6
HMT	Hamilton	2.01	234	ePn	Pb	13 25 04.2	+0.1
PNL	Peninsula	2.06	157	ePn	Pb	13 25 04.6	-0.5
PNL				eLg	Lg	13 25 33.7	
PNL	Peninsula	2.06	157	Pn	Pb	13 25 04.4	-0.6
PNL				Sg	Sg	13 25 33.8	-0.5
RAGM	Ragged Mountai	2.14	238	ePg	Pb	13 25 06.9	+0.5
PS11	TAPS Pump St11	2.18	286	ePg	Pb	13 25 08.3	+1.2
SGAM	Sherman Glacie	2.30	244	ePg	Pb	13 25 08.8	-0.4
EYAK	Cordova Ski Ar	2.52	248	ePn	Pb	13 25 11.8	-1.0
PAX	Paxson	2.52	306	ePg	Pb	13 25 11.9	-1.0
PAX	Paxson	2.52	306	Pn	Pb	13 25 11.9	-1.0
PAX				Sg	Sb	13 25 46.1	+2.5
DOT	Dot Lake	2.53	327	ePn	Pn	13 25 10.0	+1.7
DOT	Dot Lake	2.53	327	Pn	Pn	13 25 09.3	+0.9
DOT				Pg	Pb	13 25 14.6	+1.6
DOT				Sg	Sg	13 25 47.0	-2.3
DAWY	Dawson	2.62	16	ePn	Pn	13 25 11.3	+1.6
DAWY	Dawson	2.62	16	Pn	Pn	13 25 11.3	+1.6
DAWY				Sg	Sg	13 25 49.8	-2.4
JPK	Jack Peak	2.74	262	ePn	Pn	13 25 11.6	+0.2
FID	Port Fidalgo	2.77	255	ePn	Pb	13 25 15.8	-1.4
SCRK	Sand Creek	2.78	332	ePn	Pn	13 25 12.8	+0.8
RIDG	Independent Ri	2.81	323	ePn	Pn	13 25 13.3	+0.9
GLI	Glacier Island	3.02	260	ePn	Pn	13 25 18.1	+3.0
PLBC	Pleasant Camp	3.12	131	Pn	Pn	13 25 19.1	+2.6
PLBC				Sg	Sg	13 26 07.2	-1.0
EGAK	Eagle	3.23	359	ePn	Pn	13 25 19.8	+1.8
DHY	Denali Highway	3.34	300	ePn	Pb	13 25 23.8	-3.1
SML	Sawmill	3.50	277	ePn	Pn	13 25 25.6	+3.9
SKAG	Skagway	3.51	124	ePn	Pn	13 25 20.2	-1.7
KNK	Knik Glacier	3.58	271	ePn	Pn	13 25 21.4	-1.4
PMR	Palmer	3.88	274	ePn	Pn	13 25 26.3	-0.7
HDA	Harding Lake	3.94	319	ePn	Pn	13 25 28.4	+0.7
HDA	Harding Lake	3.94	319	P	Pn	13 25 28.1	+0.4
	baz=134						
RND	Reindeer	4.08	300	ePn	Pn	13 25 34.4	+4.6
ILB	Eielson Array	4.18	323	ePn	Pn	13 25 30.9	-0.1
RC01	Rabbit Creek A	4.23	267	ePn	Pn	13 25 33.6	+1.8
MCK	McKinley	4.26	304	ePn	Pn	13 25 32.1	0.0
BESE	Bessie Mountai	4.30	131	ePn	Pn	13 25 34.7	+2.0
BESE	Bessie Mountai	4.30	131	Pn	Pn	13 25 34.8	+2.1
BESE				Sg	Sg	13 26 42.0	-3.9
WRH	Wood River Hil	4.35	315	ePn	Pn	13 25 36.0	+2.6
CCB	Clear Creek Bu	4.37	318	ePn	Pn	13 25 33.6	-0.1
SEW	Seward	4.38	254	ePn	Pn	13 25 36.5	+2.7
PRP	Porcupine Dome	4.45	335	ePn	Pn	13 25 34.4	-0.5
COLA	College	4.54	320	ePn	Pn	13 25 36.2	+0.3
TCOL	CIGO, UAF Yank	4.54	320	P	Pn	13 25 35.9	-0.1
	baz=134						
TCOL				S	Sn	13 26 28.9	+0.5
	baz=134						
POKR	Poker Plat Res	4.59	324	P	Pn	13 25 37.8	+1.1
	baz=138						
POKR				S	Sn	13 26 30.8	+1.2
	baz=138						
JIS	Juneau Island	4.69	132	ePn	Pn	13 25 39.9	+1.9
KTH	Kantishna Hill	5.00	298	ePn	Pn	13 25 45.6	+3.2
EPYK	Eagle Plains	5.18	20	P	Pn	13 25 45.5	+0.7
	baz=203						
EPYK				S	Sn	13 26 46.1	+1.9
	baz=203						
BPAW	Bear Paw Mtn.	5.23	303	ePn	Pn	13 25 48.4	+2.8
FYU	Fort Yukon	5.35	342	ePn	Pn	13 25 49.5	+2.4
PPLA	Purkeypile	5.40	289	ePn	Pn	13 25 51.8	+3.9
CNPM	China Poot	5.45	252	ePn	Pn	13 25 50.9	+2.5
CAST	Castle Rocks	5.46	295	ePn	Pn	13 25 51.7	+3.0
MLY	Manley	5.60	313	ePn	Pn	13 25 53.5	+2.9
BM3	Burnt Mountain	6.08	347	ePn	Pn	13 25 59.6	+2.4
DLBC	Dease Lake	6.34	115	ePn	Pn	13 26 01.8	+1.0
DLBC	Dease Lake	6.34	115	Sg	Sg	13 27 45.5	-5.7
WRAK	Wrangell Islan	6.83	135	ePn	Pn	13 26 09.2	+1.9
COLD	Coldfoot	6.94	329	ePn	Pn	13 26 11.1	+2.2
COLD	Coldfoot	6.94	329	Pn	Pn	13 26 10.5	+1.7
COLD				Sn	Sn	13 27 25.2	-2.1
KDAK	Kodiak Island	6.98	242	ePn	Pn	13 26 11.5	+2.1
SVW2	Sparrevohn	7.03	273	ePn	Pn	13 26 13.3	+3.1
INK	Inuvik	7.47	22	ePn	Pn	13 26 18.6	+2.5
INK	Inuvik	7.47	22	Pn	Pn	13 26 17.7	+1.6
INK				Sn	Sn	13 27 37.4	-3.0
OHAK	Old Harbor	7.62	241	ePn	Pn	13 26 20.1	+1.9
TOLK	Toolik Lake Re	7.96	337	ePn	Pn	13 26 25.6	+2.7
TOLK	Toolik Lake Re	7.96	337	P	Pn	13 26 22.2	-0.8
	baz=149						
TOLK				S	Sn	13 27 54.4	+1.9
	baz=149						
FNBB	Fort Nelson	9.34	99	Pn	Pn	13 26 43.4	+1.5
DHRN	Dharma Camp	10.79	50	Pn	Pn	13 27 01.2	-0.3
DHRN				Sn	Sn	13 28 57.0	-4.6

NEIC ***16*** *13:31:41.6±2.3, 29.°48S×69.°46W, h98*^{km}*±10*^{km}*, mb4.4/4, ML4.5(GUC), Error ellipse: s-maj=15.7km s-min=7.1km az=102.0*

NEIC Felt [III] at Vallenar, Chile.

SJA ***16*** *13:31:41.6±0.7, 29.°42S×69.°83W, h129*^{km}*±3*^{km}*, ML4.3, MW4.2*

GUC ***16*** *13:31:42.9±0.6, 29.°45S×69.°86W, h112*^{km}*±4*^{km}*, ML4.5*

ISCJB ***16*** *13:31:42.4±0.3, 29.°41S±0.°03×69.°76W±0.°04, h121*^{km}*±3*^{km}*, mb3.9/9, Error ellipse: s-maj=5.1km s-min=4.4km az=166.4*

IDC ***16*** *13:31:43.6±1.4, 29.°27S×69.°35W, h108*^{km}*±13*^{km}*, mb3.6/5, mb1 4.0/10, mb1mx3.8/28, mbtmp4.2/10, MS2.9/3, Ms1 2.9/3, ms1mx2.7/22, Error ellipse: s-maj=27.5km s-min=11.3km az=80.0*

VAO ***16*** *13:31:43.9±0.5, 29.°29S×69.°30W, h52*^{km}*±10*^{km}*, mb4.4*

ISC 16 13:31:42.7±0.6**, 29.°42S**±0.°03×**69.°82W**±0.°03**, h117**^{km}±6^{km}**, n83, σ1§68**/95**, mb4.0**/9**, 3C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AROD	Rodeo	0.80	158	eP	Pn	13 32 04.1	+1.1
AROD				eS	Sn	13 32 20.9	+2.6
LCO	Las Campanas	0.88	298	ePn	Pn	13 32 04.6	+1.0
LCO				eSn	Sn	13 32 20.0	+0.6
LCO	Las Campanas	0.88	298	eP	Pn	13 32 04.0	+0.4
LCO				eS	Sn	13 32 20.9	+1.5
LCO	Las Campanas	0.88	298	⇓eP	Pn	13 32 04.5	+1.0
LCO				eS	Sn	13 32 20.2	+0.9
LCO				IAML		13 32 21.9	
	comp=N,9µm,0.3s						
LCO	Las Campanas	0.88	298	eP	Pn	13 32 04.8	+1.3
GO04	Tololo Observa	1.14	229	ePn	Pn	13 32 06.8	+0.7
GO04				eSn	Sn	13 32 24.8	+0.9
GO04	Tololo Observa	1.14	229	eP	Pn	13 32 06.5	+0.4
GO04				eS	Sn	13 32 25.0	+1.1
GO04	Tololo Observa	1.14	229	⇓eP	Pn	13 32 06.5	+0.4
GO04				eS	Sn	13 32 24.6	+0.7
AGUA	GUANDACOL	1.16	93	eP	Pn	13 32 07.3	+1.2
AGUA				eS	Sn	13 32 25.7	+1.7
ACCO	Cerro Coronel	1.33	151	eP	Pn	13 32 09.5	+1.2
LSCH	La Serena	1.33	248	eP	Pn	13 32 08.2	+0.2
LSCH				eS	Sn	13 32 27.3	+0.1
VCA	Vinchina	1.57	64	eP	Pn	13 32 12.8	+2.0
VCA				eS	Sn	13 32 33.6	+1.3
VCA				IAML		13 32 36.0	
	comp=Z,17µm,0.7s						
VCA	Vinchina	1.57	64	⇑iP	Pn	13 32 12.7	+1.8
VCA				eS	Sn	13 32 34.6	+2.4
GO03	Copiap	1.86	348	ePn	Pn	13 32 15.4	+1.1
GO03				eSn	Sn	13 32 37.8	-0.6
GO03	Copiap	1.86	348	eP	Pn	13 32 15.2	+0.9
GO03	Copiap	1.86	348	eP	Pn	13 32 15.1	+0.8
GO03				eS	Sn	13 32 39.0	+0.6
GO03				IAML		13 32 40.0	
	comp=N,6µm,0.3s						
AMOG	MOGNA	1.90	143	eP	Pn	13 32 15.2	+0.5
CO02	Combarbal	2.05	210	eP	Pn	13 32 17.0	+0.3
CO02				eS	Sn	13 32 43.0	+0.2
RTLL	Cerro Villicun	2.23	149	eP	Pn	13 32 19.6	+0.7
RTLL				eS	Sn	13 32 47.3	+0.7
RTLL				IAML		13 32 48.0	
	comp=N,5µm,0.3s						
RTLL	Cerro Villicun	2.23	149	eP	Pn	13 32 19.6	+0.7
RTLL				eS	Sn	13 32 46.0	-0.6
RTLL				IAML		13 32 48.8	
	comp=E,6µm,0.4s						
ZON	Zonda	2.33	155	eP	Pn	13 32 20.6	+0.4
ZON				IAML		13 32 52.8	
	comp=Z,442nm,0.2s						
SJA	San Juan	2.36	153	eP	Pn	13 32 21.0	+0.4
SJA				IAML		13 32 53.1	
	comp=Z,924nm,0.3s						
RTLS	Leoncito	2.41	169	eP	Pn	13 32 22.8	+1.3
RTLS				IAML		13 32 22.9	
	comp=Z,2µm,0.2s						
CFA	Coronel Fontan	2.56	148	P	Pn	13 32 23.8	+0.5
	comp=Z,236nm,0.3s,baz=325,slow=10,SNR=1495						
CFA				S	Sn	13 32 54.0	-0.4
	comp=Z,436nm,0.3s,baz=68,slow=22,SNR=57						
CFA				LR	LR	13 33 41.9	
	comp=Z,90nm,21.2s,baz=278,slow=47						
CFA	Coronel Fontan	2.56	148	eP	Pn	13 32 23.7	+0.5
RTCV	Cerro Valdivia	2.67	156	eP	Pn	13 32 25.4	+0.8
APLL	PUNTA DE LOS L	3.01	110	eP	Pn	13 32 29.1	0.0
APLL				IAML		13 33 03.5	
	comp=Z,820nm,0.2s						
ACAN	Cantantal	3.63	142	eP	Pn	13 32 37.9	+0.6
CYA	Choya	3.65	75	eP	Pn	13 32 37.3	-0.2
CYA				IAML		13 32 37.9	
	comp=Z,312nm,0.2s						
PEL	Peldehue	3.78	191	ePn	Pn	13 32 38.7	-0.5
FCH	Farellones	3.91	186	⇑iP	Pn	13 32 42.2	+0.9
FCH				eS	Sn	13 33 27.6	+1.0
GO02	Mina Guanaco	4.25	3	ePn	Pn	13 32 45.9	+0.1
MRA	San Martin	4.62	131	eP	Pn	13 32 50.4	-0.1
MRA				IAML		13 33 42.5	
	comp=Z,401nm,0.4s						
FSA	Cafayete	4.74	47	eP	Pn	13 32 52.7	+0.5
FSA				IAML		13 33 48.5	
	comp=Z,43nm,0.5s						
AHML	Horco Molle	4.75	57	eP	Pn	13 32 50.9	-1.3
AHML				IAML		13 33 38.3	
	comp=Z,102nm,0.5s						
TCA	Tanti	4.90	114	eP	Pn	13 32 53.1	-1.1
TCA				IAML		13 34 02.8	
	comp=Z,232nm,0.4s						
GO05	Huala	5.85	197	ePn	Pn	13 33 03.2	-3.9
PB10	IPOC Station P	5.92	353	ePn	Pn	13 33 05.4	-2.7
LVC	Limon Verde	6.83	7	P	Pn	13 33 19.0	-1.7
	comp=Z,14nm,0.3s,baz=179,slow=8.9,SNR=86						
LVC				S	Sn	13 34 33.8	-3.5
	comp=Z,6.4nm,0.3s,baz=0.0,slow=20,SNR=4.0						
LVC	Limon Verde	6.83	7	ePn	Pn	13 33 18.9	-1.7
LVC	Limon Verde	6.83	7	eP	Pn	13 33 19.2	-1.5
LVC	Limon Verde	6.83	7	eP	Pn	13 33 19.0	-1.7
PB04	IPOC Station P	7.07	357	ePn	Pn	13 33 20.3	-3.4
PB01	IPOC Station P	8.35	2	ePn	Pn	13 33 37.5	-3.5
PB11	IPOC Station P	9.62	1	ePn	Pn	13 33 53.1	-5.1
GO01	Chusmiza	9.73	3	ePn	Pn	13 33 55.8	-4.2
MNMC	Minye Minye	10.25	1	ePn	Pn	13 34 03.0	-3.8
TRQA	Tornquist	10.80	145	eP	Pn	13 34 14.2	+0.3
CPUP	Villa Florida	11.47	77	P	Pn	13 34 18.6	-4.3
	comp=Z,1.4nm,0.3s,baz=253,slow=12,SNR=13						
CPUP	Villa Florida	11.47	77	ePn	Pn	13 34 17.8	-5.1
CPUP	Villa Florida	11.47	77	eP	Pn	13 34 18.7	-4.2
LPAZ	La Paz	13.16	7	P	Pn	13 34 44.4	-1.4
	comp=Z,2.0nm,0.3s,baz=193,slow=6.1,SNR=64						
LPAZ				LR	LR	13 40 11.0	
	comp=Z,56nm,19.9s,baz=167,slow=39						
LPAZ	La Paz	13.16	7	ePn	Pn	13 34 44.0	-1.8
LPAZ	La Paz	13.16	7	eP	Pn	13 34 46.2	+0.4
OGAUY	Aigu	13.73	115	eP	Pn	13 34 51.9	-0.5
PLTB	Pedras Altas	14.16	104	eP	Pn	13 34 55.1	-2.8
CPSB	Cacapava Do Su	14.24	98	eP	Pn	13 34 56.3	-2.6
AQDB	Aquidauana	15.58	58	eP	Pn	13 35 13.8	-2.1
SIV	San Ignacio	15.60	33	P	Pn	13 35 13.1	-3.1
	comp=Z,0.1nm,0.3s,baz=223,slow=11,SNR=3.2						
PTGB	Pitanga	16.49	78	eP	Pn	13 35 25.4	-1.8
CNLB	Canela	16.53	94	eP	Pn	13 35 25.8	-1.9
TRCB	Terra Rica	16.77	71	eP	Pn	13 35 31.1	+0.5
FRTB	Fartura	19.12	76	eP	P	13 35 58.4	+1.8
ITRB	Iturama	20.14	66	eP	P	13 36 08.3	+0.7
SPB	Sao Paulo	20.84	79	eP	P	13 36 16.8	+1.7
BB19B	Bebedouro	20.95	71	eP	P	13 36 15.9	-0.5
RCLB	Rio Claro- Sao	21.20	76	eP	P	13 36 20.6	+1.6

PARB	Paraibuna	22.48	80	*e*P	P	13 36 32.1	-0.5
CLDB	Colider	22.62	38	*e*P	P	13 36 35.8	+1.9
CAM01	Campos-RJ	26.45	80	*e*P	P	13 37 12.2	+3.5
QSPA	South Pole Qui	60.80	180	LR	LR	14 07 28.5	
	comp=Z,22nm,20.6s,baz=244,slow=35						
TXAR	Lajitas Array	66.77	328	P	P	13 42 24.2	+2.6
	comp=Z,0.5nm,0.5s,baz=154,slow=8.8,SNR=8.2						
SYO	Syowa Base	69.42	159	⇑*e*P	P	13 42 45.6	+8.1
MSTX	Muleshoe	70.33	331	*e*P	P	13 42 45.3	+1.6
	comp=Z,6.3nm,0.7s						
DBIC	Dimbokro	71.92	71	P	P	13 42 53.6	0.0
	comp=Z,3.1nm,0.6s,baz=215,slow=10,SNR=4.8						
MVCO	Mesa Verde	75.56	329	*e*P	P	13 43 17.6	+3.0
	comp=Z,4.1nm,0.9s						
MTPU	Mount Pierson	77.94	327	*e*P	P	13 43 30.5	+2.4
	comp=Z,2.1nm,0.7s						
CCUT	Cedar City	78.11	326	*e*P	P	13 43 32.7	+3.8
	comp=Z,2.7nm,0.9s						
PDAR	Pinedale Array	80.60	331	P	P	13 43 44.5	+2.1
	comp=Z,0.4nm,0.6s,baz=117,slow=7.2,SNR=4.0						
TORD	Torodi Ar. Bea	80.85	69	P	P	13 43 43.0	-1.0
	comp=Z,1.0nm,0.6s,baz=294,slow=4.7,SNR=8.7						
NVAR	Mina Array Bea	81.28	323	P	P	13 43 48.7	+2.7
	comp=Z,0.4nm,0.8s,baz=171,slow=6.3,SNR=3.5						
ZALV	Zalesovo Beam	149.34	30	PKPbc	PKiKP	13 51 18.8	+0.4
	comp=Z,1.2nm,0.4s,baz=291,slow=5.2,SNR=3.6						
ZALV				pPKPbc	pPKPab	13 51 53.5	-1.1
	comp=Z,1.6nm,0.5s,baz=308,slow=4.9,SNR=4.8						
MKAR	Makanchi Array	152.24	44	pPKPbc	pPKPbc	13 52 00.2	+2.7
	comp=Z,0.8nm,0.6s,baz=312,slow=1.9,SNR=5.7						

MEX 16 13:32:28.9±0.5, 15.°01N×93.°61W, h17^{km}±11^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.79	28	*e*P	Pb	13 32 41.4	-2.8
PCIG				*e*S	Sb	13 32 51.0	-3.7
TGIG		1.82	15	*e*P	Pn	13 32 55.9	-3.7
TGIG				*i* S	Sn	13 33 17.9	-4.5
CCIG	Comitan	1.90	48	*e*P	Pn	13 32 57.7	-3.1
CCIG				*i* S	Sn	13 33 20.5	-4.0
CMIG	Matias Romero	2.41	330	*e*P	Pn	13 33 04.4	-3.2
CMIG				*i* S	Sn	13 33 32.8	-4.0

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*NEIC **16** 13:52:15.4±0.0, 61.°55N×141.°03W, h12^{km}, ML2.8(AEIC), ML2.9(OTT), After AEIC.*

PGC 16 13:52:16.8, 61.°57N×141.°02W, h5^{km}, ML2.9/11, 208km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	White River	0.23	21	P	Pg	13 52 20.8	-0.6
YUK2				S	Sg	13 52 24.3	-0.2
YUK3	Moose Creek	0.34	52	P	Pg	13 52 22.7	-0.7
YUK3				S	Sg	13 52 27.6	-0.3
YUK1	Sand Pete Hill	0.63	22	P	Pg	13 52 27.7	-1.2
YUK1				S	Sg	13 52 36.5	-0.6
PTPK	Patty Peak	0.79	242	P	Pg	13 52 30.7	-1.3
PTPK				S	Sg	13 52 41.1	-1.3
BALM	Baldy	0.83	231	P	Pg	13 52 31.1	-1.7
BALM				S	Sg	13 52 42.4	-1.2
BVCY	Beaver Creek	0.85	5	P	Pg	13 52 31.9	-1.2
BVCY				S	Sg	13 52 43.6	-0.5
KIAG	Kiagna River	0.92	225	P	Pg	13 52 32.4	-1.9
KIAG				S	Sg	13 52 45.1	-1.1
TABL	Table Mountain	1.14	183	P	Pg	13 52 36.9	-1.6
TABL				S	Sg	13 52 52.9	-0.4
YUK4	Talbot Arm	1.16	100	P	Pg	13 52 38.1	-1.0
YUK4				S	Sb	13 52 54.8	-0.1
YUK6	Outpost Mounta	1.43	115	Pn	Pn	13 52 42.3	-1.3
YUK6				Sg	Sb	13 53 01.9	-0.8
SAMH	Samovar Hills	1.45	175	Pn	Pn	13 52 43.2	-0.5
SAMH				Sg	Sb	13 53 02.9	-0.2
MESA	MESA	1.47	198	Pn	Pn	13 52 43.6	-0.5
MESA				Sg	Sb	13 53 02.3	-1.4
CHX	Chaix Hills	1.51	182	*e*Pn	Pn	13 52 44.8	+0.2
PCA	Pinnacle	1.53	165	*e*Pn	Pn	13 52 44.4	-0.4
PCA				*e*Sn	Sg	13 53 05.9	+0.1
PCA	Pinnacle	1.53	165	Pn	Pn	13 52 44.3	-0.4
PCA				Sg	Sb	13 53 05.3	+0.1
BCA3	Beaver Creek A	1.54	347	*e*Pn	Pn	13 52 43.8	-1.2
YUK5	Granite Creek	1.59	105	Pn	Pn	13 52 44.7	-1.0
YUK5				Sg	Sn	13 53 06.1	-0.5
SNH	Sunshine Point	1.65	213	*e*Pn	Pn	13 52 46.9	+0.4
YUK7	Dusty Glacier	1.75	125	Pn	Pn	13 52 48.4	+0.5
YUK7				Sg	Sb	13 53 11.9	+0.1
HYT	Haines Junctio	1.86	112	*e*Pn	Pn	13 52 49.1	-0.3
HYT	Haines Junctio	1.86	112	Pn	Pn	13 52 49.1	-0.3
HYT				Sg	Sb	13 53 14.5	-0.4
MENT	Mentasta	1.86	319	*e*Pn	Pn	13 52 49.8	+0.4
HMT	Hamilton	2.01	233	*e*Pn	Pb	13 52 52.7	-1.1
PNL	Peninsula	2.07	157	*e*Pn	Pn	13 52 52.8	+0.6
PNL	Peninsula	2.07	157	Pn	Pn	13 52 52.7	+0.5
PNL				Sg	Sb	13 53 21.5	+0.7
RAGM	Ragged Mountai	2.14	238	*e*Pn	Pn	13 52 53.6	+0.4
SGAM	Sherman Glacie	2.30	244	*e*Pg	Pn	13 52 56.9	+1.5
PAX	Paxson	2.51	306	*e*Pn	Pn	13 52 59.0	+0.6
PAX	Paxson	2.51	306	Pg	Pn	13 52 60.0	+1.7
PAX				Sg	Sb	13 53 33.0	-0.6
DOT	Dot Lake	2.52	327	*e*Pn	Pn	13 52 57.1	-1.2
DOT	Dot Lake	2.52	327	Pn	Pn	13 52 57.3	-1.0
DOT				Pg	Pb	13 53 02.1	-0.3
DOT				Sg	Sb	13 53 34.1	+0.5
EYAK	Cordova Ski Ar	2.52	248	*e*Pn	Pn	13 53 00.3	+2.0
DAWY	Dawson	2.61	16	*e*Pn	Pn	13 52 59.0	-0.7
DAWY	Dawson	2.61	16	Pn	Pn	13 52 59.0	-0.6
DAWY				Sg	Sb	13 53 37.9	+1.4
JPK	Jack Peak	2.74	262	*e*Pg	Pn	13 53 02.6	+1.2
FID	Port Fidalgo	2.77	255	*e*Pg	Pn	13 53 04.2	+2.4
SCRK	Sand Creek	2.77	332	*e*Pn	Pn	13 53 00.0	-1.9
RIDG	Independent Ri	2.80	323	*e*Pn	Pn	13 53 01.3	-1.0
SCM	Sheep Creek Mo	3.02	278	*e*Pn	Pn	13 53 07.0	+1.8
GLI	Glacier Island	3.02	259	*e*Pn	Pn	13 53 06.2	+1.0
PLBC	Pleasant Camp	3.13	131	Pg	Pb	13 53 12.7	-0.2
PLBC				Sg	Sb	13 53 53.5	+2.2
EGAK	Eagle	3.22	359	*e*Pn	Pn	13 53 07.5	-0.5
DHY	Denali Highway	3.33	300	*e*Pn	Pn	13 53 08.9	-0.6
SML	Sawmill	3.49	277	*e*Pn	Pn	13 53 10.2	-1.5
HDA	Harding Lake	3.93	319	*e*Pn	Pn	13 53 16.1	-1.5
RND	Reindeer	4.07	300	*e*Pn	Pn	13 53 22.6	+2.9
ILB	Eielson Array	4.17	323	*e*Pn	Pn	13 53 18.8	-2.2
MCK	McKinley	4.25	304	*e*Pn	Pn	13 53 19.6	-2.4
BESE	Bessie Mountai	4.31	131	*e*Pn	Pn	13 53 23.0	0.0
BESE	Bessie Mountai	4.31	131	Pn	Pn	13 53 22.9	-0.1
BESE				Sg	Sg	13 54 31.2	-3.7
WRH	Wood River Hil	4.34	315	*e*Pn	Pn	13 53 24.2	+0.9
CCB	Clear Creek Bu	4.36	318	*e*Pn	Pn	13 53 22.4	-1.2
SEW	Seward	4.38	254	*e*Pn	Pn	13 53 24.0	+0.1
PRP	Porcupine Dome	4.44	335	*e*Pn	Pn	13 53 24.6	-0.3
BWN	Browne	4.66	308	*e*Pn	Pn	13 53 24.9	-2.8
BM3	Burnt Mountain	6.07	347	*e*Pn	Pn	13 53 47.0	-0.1
COLD	Coldfoot	6.93	329	Pn	Pn	13 53 58.3	-0.5
COLD				Sn	Sn	13 55 11.9	-5.9
INK	Inuvik	7.47	22	Sn	Sn	13 55 23.4	-7.7

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*IDC **16** 13:54:28.0±1.4, 61.°45S×24.°57W, h0^{km}, mb3.9/5, mb1 4.0/6, mb1mx3.8/20, mbtmp4.0/6, ML4.7/2, MS3.0/3, Ms1 3.1/3, ms1mx2.9/15, Error ellipse: s-maj=40.9km s-min=26.6km az=99.0*

*ISCJB **16** 13:54:28.1±1.1, 61.°5S±0.°1×24.°5W±0.°3, h10^{km}, mb3.8/5, MS3.0/2, Error ellipse: s-maj=21.8km s-min=16.3km az=40.9*

ISC 16 13:54:30.3±1.2, 61.°6S±0.°1×24.°4W±0.°2, h10^{km}, n12, σ1^{s}82/12, mb3.9/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	11.13	151	P	Pn	13 57 11.3	+2.0
VNA3	Neumayer Olymp	11.28	155	P	Pn	13 57 12.6	+1.3
SNAA	Sanae	13.12	149	P	Pn	13 57 37.9	+1.4
SNAA				S	Sn	14 00 01.2	-1.1
SNAA	Sanae	13.12	149	Pn	Pn	13 57 37.8	+1.3
	6.2nm,0.3s,baz=302,slow=13,SNR=158						
SNAA				Sn	Sn	13 59 58.4	-3.8
	0.3nm,0.3s,baz=342,slow=20,SNR=2.4						
SNAA				LR	LR	14 02 43.5	
	comp=Z,66nm,18.4s,baz=246,slow=37						
PMSA	Palmer Station	17.94	243	P	Pn	13 58 38.1	-1.3
	1.7nm,0.3s,baz=83,slow=10,SNR=7.7						
QSPA	South Pole Qui	28.62	180	P	P	14 00 27.0	+0.4
	1.3nm,0.6s,baz=194,slow=1.8,SNR=14						
MAW	Mawson	34.91	138	P	P	14 01 21.7	+0.3
	1.4nm,0.6s,baz=247,slow=11,SNR=5.0						
VNDA	Vanda	41.06	182	P	P	14 02 13.8	+0.6
	0.5nm,0.5s,baz=192,slow=8.2,SNR=7.1						
CPUP	Villa Florida	41.62	313	LR	LR	14 21 10.3	
	comp=Z,23nm,18.1s,baz=198,slow=39						
LPAZ	La Paz	54.79	306	LR	LR	14 26 20.8	
	comp=Z,14nm,21.9s,baz=145,slow=35						
TORD	Torodi Ar. Bea	77.31	26	P	P	14 06 23.5	-1.2
	0.6nm,0.4s,baz=209,slow=5.9,SNR=6.7						
ASAR	Alice Springs	93.25	160	P	P	14 07 45.5	+0.5
	0.3nm,0.9s,baz=180,slow=2.5,SNR=2.8						

NNC 16 13:57:36.3±5.9, 37.°03N×70.°53E, h0^{km}, mb3.8, mpv3.4, 4C-2D, Error ellipse: s-maj=54.9km s-min=40.5km az=141.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.07	360	⇑P	Pn	13 59 09.5	+2.2
	1.0nm,0.4s,baz=183,slow=13,SNR=3.9						
KK31				⇓S	Sn	14 00 20.1	+2.7
	0.8nm,0.3s,baz=181,slow=22,SNR=5.0						
AAK	Ala-Archa	6.38	27	⇑P	Pn	13 59 12.0	+0.4
	1.9nm,0.3s						
AAK				⇓S	Sn	14 00 24.8	-0.4
	7.3nm,0.7s						
TKM2	Tokmak 2	7.05	32	⇑P	Pn	13 59 20.0	-0.9
	1.0nm,0.3s						
TKM2				⇑S	Sn	14 00 44.1	+2.3
	1.4nm,0.7s						

JMA 16 14:04:43.0±0.1, 24.°87N×123.°40E, h30^{km}, M1.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.54	221	P	Pb	14 04 53.6	-0.5
YOJ				*e*S	Sb	14 05 01.0	-0.6
JYNG	Yonagunijimaku	0.59	225	P	Pb	14 04 54.6	-0.3
JYNG				S	Sb	14 05 02.3	-0.6
IRIF	Iriomote-Funau	0.61	151	P	Pb	14 04 54.8	-0.5
IRIF				S	Sb	14 05 03.2	-0.4
JKRS	Kuro-shima	0.84	138	P	Pn	14 04 58.6	-0.2
JKRS				S	Sb	14 05 09.7	-0.3
JIJ	Ishigaki jima	0.84	127	P	Pn	14 04 58.1	-0.7
JIJ				S	Sb	14 05 08.6	-1.5
JISG	Ishigakijimahi	0.88	109	P	Pn	14 04 58.8	-0.5
JISG				*e*S	Sn	14 05 09.9	-1.1
JTJ	Tarama	1.21	101	S	Sn	14 05 19.3	+0.2

TAP 16 14:05:24.6, 24.°29N×121.°49E, h6^{km}, ML1.5, 3C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi	0.08	183	P	Pg	14 05 27.9	+1.3
	baz=183						
ETLH				S	Sg	14 05 29.2	+1.2
	baz=183						
NACB	Ninganchiao	0.15	139	P	Pg	14 05 29.2	+1.5
	baz=139						
NACB				S	Sg	14 05 31.5	+1.7
	baz=139						
NNSB	Datong	0.17	326	P	Pg	14 05 29.6	+1.5
	baz=325						
NNSB				S	Sg	14 05 32.1	+1.7
	baz=325						
NNS	Nan Shan	0.18	325	*e*P	Pg	14 05 29.6	+1.2
	baz=326						
NNS				*i* S	Sg	14 05 32.7	+1.8
	baz=326						
TWD	Chiawan	0.23	154	P	Pg	14 05 30.9	+1.7
	baz=152						
TWD				S	Sg	14 05 34.1	+1.9
	baz=152						
WHF	Hehuan Shan	0.25	235	⇑*i*P	Pg	14 05 31.0	+1.3
	baz=233						
WHF				S	Sg	14 05 34.5	+1.5
	baz=233						
ENA	Nanau	0.27	59	⇑*i*P	Pb	14 05 31.2	-0.7
	baz=60						
ENA				*e*S	Sg	14 05 34.9	+1.4
	baz=60						
NANB	Nanao	0.28	60	⇑*i*P	Pb	14 05 31.1	-0.9
	baz=60						
NANB				*e*S	Sg	14 05 34.4	+0.7
	baz=60						
TWT	Tachien	0.29	263	S	Sb	14 05 36.3	-1.0
	baz=262						
TDCB	Techi	0.30	263	*e*P	Pg	14 05 31.1	+0.5
	baz=263						
TDCB				S	Sb	14 05 36.2	-1.6
	baz=263						
CHGB	Renai	0.37	232	P	Pb	14 05 33.2	-0.4
	baz=231						
CHGB				*e*S	Sb	14 05 38.2	-1.5
	baz=231						
YHNB	Yeheng	0.39	345	P	Pb	14 05 34.3	+0.2
	baz=345						
YHNB				*e*S	Sb	14 05 39.6	-0.7
	baz=345						
NSK	Sanguang	0.40	343	*e*S	Sb	14 05 40.2	-0.5
	baz=344						
TWC	Suao	0.46	46	P	Pb	14 05 34.8	-0.3
	baz=46						
TWC				*e*S	Sb	14 05 40.9	-1.2
	baz=46						
TWE	Neicheng	0.46	21	*e*P	Pb	14 05 35.6	+0.5
	baz=22						
TWE				S	Sb	14 05 42.5	+0.3
	baz=22						
SLBB	Yuanshan	0.48	16	P	Pb	14 05 35.8	+0.2
	baz=16						
SLBB				*e*S	Sb	14 05 42.4	-0.6
	baz=16						
LIOB	Emei	0.56	310	*e*S	Sb	14 05 45.6	+0.6
	baz=309						
VWDT	VWDT	0.62	211	*e*P	Pb	14 05 37.6	-0.2
	baz=210						
VWDT				*e*S	Sb	14 05 48.3	+1.5
	baz=210						
EOS1	EOS1	0.64	66	P	Pb	14 05 38.7	+0.5
	baz=66						
EOS1				*e*S	Sb	14 05 47.9	+0.5
	baz=66						
SMLT	Sun Moon Lake	0.67	233	*e*P	Pb	14 05 39.1	+0.3
	baz=232						
SSLB	Suanglung	0.70	224	P	Pb	14 05 39.2	0.0
	baz=224						
TIPB	Shuangxi	0.75	24	P	Pb	14 05 40.0	0.0
	baz=24						
TIPB				*e*S	Sb	14 05 50.2	-0.3
	baz=24						
EHY	Hungye	0.79	191	*e*S	Sb	14 05 52.8	+1.0
	baz=190						
YULB	Yu-li	0.91	191	P	Pb	14 05 43.0	+0.2
	baz=191						
YULB				*e*S	Sn	14 05 56.4	-0.9
	baz=191						

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*EAF **16** 14:07:53.3±1.8, 23.°17S×30.°09E, h4^{km}±77^{km}, MD3.2*

BUL 16 14:07:53.9±2.0, 23.°13S×30.°23E, h0^{km}±54^{km}, MD3.2, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	Messina	0.80	346	*i* P	Pg	14 08 07.7	-1.5
MSNA				*i* S	Sg	14 08 19.2	-0.4
MSNA	Messina	0.80	346	*i* P	Pg	14 08 07.7	-1.5
MSNA				*i* S	Sg	14 08 19.2	-0.4
MATP	Matopo	3.13	329	*i* P	Pn	14 08 41.9	-2.8
MATP				*i* S	Sn	14 09 19.3	-3.5
MATP	Matopo	3.13	329	*i* P	Pn	14 08 41.9	-2.8
MATP				*i* S	Sn	14 09 19.3	-3.5
BLWY	Bulawayo	3.33	333	*i* P	Pn	14 08 46.9	-0.5
BLWY				*i* S	Sn	14 09 22.9	-4.9
BLWY	Bulawayo	3.33	333	*i* P	Pn	14 08 46.9	-0.5
BLWY				*i* S	Sn	14 09 22.9	-4.9

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*NIED **16** 14:09:00, 43.°00N×145.°50E, h44^{km}, Mw5.0 Best double couple: M$_0$3.92000×10^{16} NP1:φ$_s$232.00000°, δ26.00000°, λ114.00000°. NP2:φ$_s$26.00000°, δ66.00000°, λ79.00000°.*

*BJI **16** 14:09:25.9±0.0, 43.°03N×145.°46E, h53^{km}, mb5.3/75, mB5.1/55, Ms4.5/76, Ms7 4.3/75*

*ISCJB **16** 14:09:25.8±0.2, 42.°91N±0.°01×145.°45E±0.°02, h47^{km}±1^{km}, mb5.3/547, MS4.4/62, Error ellipse: s-maj=2.6km s-min=1.7km az=140.7*

*IDC **16** 14:09:26.2±3.1, 43.°00N×145.°44E, h33^{km}±23^{km}, mb5.0/33, mb1 5.1/40, mb1mx5.1/43, mbtmp5.1/40, ML4.9/6, MS4.2/30, Ms1 4.2/30, ms1mx4.2/30, Error ellipse: s-maj=12.1km s-min=8.5km az=117.0*

*MOS **16** 14:09:26.4±0.9, 42.°97N×145.°41E, h51^{km}, mb5.5/103, MS4.4/14, Error ellipse: s-maj=5.3km s-min=3.5km az=101.3*

MOS Felt (II-III) at Yuzhno-Kuril'sk.

*NEIC **16** 14:09:27.5±0.3, 43.°02N×145.°41E, h47^{km}±2^{km}, mb5.2/295, Error ellipse: s-maj=2.7km s-min=1.4km az=155.0*

NEIC Recorded [4 JMA] in eastern Hokkaido.

*JMA **16** 14:09:27.1±0.1, 42.°97N×145.°46E, h47^{km}±1^{km}, M5.1 Broadband fault plane solution: P waves. NP1: φ$_s$23.00000°, δ76.00000°, λ91.00000°. NP2:φ$_s$199.00000°, δ14.00000°, λ86.00000°. Principal axes: T Plg59.0000°, Azm294.0000°; N Plg1.0000°, Azm203.0000°; P Plg31.0000°, Azm112.0000°;*

JMA Felt IV J1.

*SKHL **16** 14:09:27.4±0.4, 42.°94N×145.°54E, h54^{km}±1^{km}, mb5.6/4, mbh5.5/2, Ms4.4/5, msh4.4/1*

SKHL Felt (II-III) at Yuzhno-Kuril'sk (124 km).

*GCMT **16** 14:09:29.5±0.2, 42.°95N±0.°01×145.°50E±0.°02, h46^{km}±1^{km}, MW5.0/94, Moment Tensor Solution. s64,c83; s94,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.81±.15; M$_{\theta\theta}$-1.53±.11; M$_{\phi\phi}$-2.28±.11; M$_{r\theta}$0.79±.09; M$_{\theta\phi}$-2.43±.07; M$_{\phi r}$2.35±.09; Best double couple: M$_0$4.79300×10^{16} NP1:φ$_s$28.00000°, δ61.00000°, λ77.00000°. NP2: φ$_s$234.00000°, δ32.00000°, λ112.00000°. Principal axes: T 4.6120, Plg71.0000°, Azm269.0000°; N 0.3630, Plg11.0000°, Azm35.0000°; P -4.9750, Plg15.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 14:09:26.5±0.3, 42.°93N±0.°03×145.°53E±0.°03, h40^{km}±2^{km}, h40^{km}:pP-P, n1675, σ1^{s}06/1769, mb5.3/576, MS4.4/64, 161C-70D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	Kushirohamanak	0.31	300	⇓P	Pn	14 09 35.6	+0.7
JKHN				*e*S	Sn	14 09 41.4	+0.7
NEM2	Nemuro 2	0.46	20	⇓P	Pn	14 09 37.4	+0.6
NEM2				*e*S	Sn	14 09 44.6	+0.6
JNK	Nakash	0.88	318	⇓P	Pn	14 09 42.2	-0.3
JNK				*e*S	Sn	14 09 52.8	-1.3
JNSB	Nemuroshibetsu	0.93	336	⇓P	Pn	14 09 43.1	0.0
JNSB				*e*S	Sn	14 09 55.1	-0.1
JRA	Rausu	1.05	344	⇓P	Pn	14 09 44.8	+0.1
JRA				*e*S	Sn	14 09 58.4	+0.3
GRPR	Tuman	1.08	10	*d i*PN	Pn	14 09 45.1	0.0
GRPR				*i* S	Sn	14 09 58.4	-0.5
GRPR				pmax	pmax		
	comp=Z,9μm,0.3s						
GRPR				pmax	pmax		
	comp=E,2μm,0.2s						
GRPR				pmax	pmax		
	comp=N,4μm,0.4s						
GRPR				smax	smax		
	comp=N,107μm,0.5s						
GRPR				smax	smax		
	comp=E,123μm,0.5s						
GRPR	Tuman	1.08	10	*i* P	Pn	14 09 45.1	0.0
GRPR				AMB	AMB	14 09 47.5	
	comp=E,600nm,0.3s						
GRPR				AMB	AMB	14 09 47.5	
	comp=E,170nm,0.3s						
GRPR				AMB	AMB	14 09 47.5	
	comp=E,1μm,0.3s						
GRPR				*i* S	Sn	14 09 58.4	-0.5
GRPR				A	A	14 10 01.0	
	comp=E,10μm,0.4s						
GRPR				A	A	14 10 01.0	
	comp=E,12μm,0.4s						
YUK	Yuzh-Kuril'sk	1.13	12	*d i*PN	Pn	14 09 46.0	+0.1
YUK				*i* S	Sn	14 10 00.1	-0.1
YUK				pmax	pmax		
	comp=Z,6μm,0.3s						
YUK				pmax	pmax		
	comp=N,2μm,0.1s						
YUK				pmax	pmax		
	comp=E,2μm,0.2s						
YUK				smax	smax		
	comp=N,101μm,0.4s						
YUK				smax	smax		
	comp=E,56μm,0.4s						
YUK	Yuzh-Kuril'sk	1.13	12	*i* P	Pn	14 09 46.0	+0.1
YUK				AMB	AMB	14 09 49.9	
	comp=E,170nm,0.3s						
YUK				AMB	AMB	14 09 49.9	
	comp=E,290nm,0.3s						
YUK				AMB	AMB	14 09 49.9	
	comp=E,1μm,0.3s						
YUK				*i* S	Sn	14 10 00.2	0.0
YUK				A	A	14 10 05.6	
	comp=E,10μm,0.4s						
YUK				A	A	14 10 05.6	
	comp=E,8μm,0.4s						
LAGR	Lagunnoye	1.14	10	*d i*PN	Pn	14 09 46.4	+0.4
LAGR				*i* S	Sn	14 10 01.0	+0.6
LAGR				pmax	pmax		
	comp=N,3μm,0.3s						
LAGR				pmax	pmax		
	comp=Z,7μm,0.3s						
LAGR				pmax	pmax		
	comp=E,703nm,0.1s						
LAGR				smax	smax		
	comp=E,213μm,0.6s						
LAGR				smax	smax		
	comp=N,130μm,0.4s						
LAGR	Lagunnoye	1.14	10	*i* P	Pn	14 09 46.4	+0.4
LAGR				AMB	AMB	14 09 48.6	
	comp=N,310nm,0.3s						
LAGR				AMB	AMB	14 09 48.6	
	comp=N,700nm,0.3s						
LAGR				AMB	AMB	14 09 48.6	
	comp=N,1μm,0.3s						
LAGR				*i* S	Sn	14 10 01.0	+0.6
LAGR				A	A	14 10 03.7	
	comp=N,13μm,0.5s						
LAGR				A	A	14 10 03.7	
	comp=N,21μm,0.5s						
JOB	Onbets	1.24	269	⇓P	Pn	14 09 47.4	0.0
JOB				*e*S	Sn	14 10 02.6	-0.3
JAR	Ashorobuto	1.34	286	⇓P	Pn	14 09 48.9	+0.2
JAR				*e*S	Sn	14 10 05.1	-0.2
JTKR	Abashiri--Toko	1.57	312	⇓P	Pn	14 09 52.5	+0.6
JCH	Churui	1.62	259	⇓P	Pn	14 09 52.3	-0.3
JTHR	Tokachihiroo	1.76	249	⇓P	Pn	14 09 55.4	+0.9
JMP	Maruseppu	1.91	305	⇓P	Pn	14 09 57.5	+0.9
JEM	Erimo	1.98	243	⇓P	Pn	14 09 58.2	+0.7
ERM	Erimo	1.98	243	*e*Pn	Pn	14 09 59.8	+2.3
ERM	Erimo	1.98	243	*de*PN	Pn	14 09 58.1	+0.6
JNBK	Urakawa-nobuka	2.15	253	⇓P	Pn	14 09 59.7	-0.1
JFR	Furan	2.16	277	⇓P	Pn	14 10 00.5	+0.4
JKK2	Kamakawa 2	2.23	296	⇓P	Pn	14 10 02.2	+1.2
JSHD	Hidakashinhida	2.31	258	⇓P	Pn	14 10 02.3	+0.2
JBT2	Biratori 2	2.33	267	⇓P	Pn	14 10 01.9	-0.4
JKA	Kamikawa-asahi	2.44	300	*e*P	Pn	14 10 04.1	+0.3
ASAJ	Asahikawa	2.44	300	Pn	Pn	14 10 04.1	+0.3
	comp=N,683nm,0.3s,baz=122,slow=10.0,SNR=2164						
ASAJ				Sn	Sn	14 10 37.2	+4.9
	comp=N,381nm,0.3s,baz=26,slow=32,SNR=8.3						
ASAJ				LR	LR	14 11 19.6	
	comp=N,9μm,19.6s,baz=81,slow=48						
ASAJ	Asahikawa	2.44	300	⇓P	Pn	14 10 05.4	+1.6
JAB	Ashibetsu	2.48	284	⇓P	Pn	14 10 06.4	+2.0
KUR	Kuril'sk	2.85	35	*c i*PN	Pn	14 10 11.2	+1.7
KUR				*i* S	Sn	14 10 44.0	+1.4

KUR				pmax	pmax		
	comp=Z,1μm,0.6s						
KUR				pmax	pmax		
	comp=N,524nm,0.5s						
KUR				pmax	pmax		
	comp=E,372nm,0.6s						
KUR				smax	smax		
	comp=N,7μm,0.5s						
KUR				smax	smax		
	comp=E,3μm,0.4s						
KUR				smax	smax		
	comp=N,18μm,1.9s						
KUR				smax	smax		
	comp=E,11μm,1.9s						
KUR	Kuril'sk	2.85	35	iP	Pn	14 10 10.9	+1.4
KUR				AMB	AMB	14 10 21.2	
	comp=E,210nm,0.6s						
KUR				AMB	AMB	14 10 21.2	
	comp=E,370nm,0.6s						
KUR				AMB	AMB	14 10 21.2	
	comp=E,1μm,0.6s						
KUR				iS	Sn	14 10 42.4	-0.2
KUR				A	A	14 10 50.2	
	comp=E,5μm,0.9s						
KUR				A	A	14 10 50.2	
	comp=E,7μm,0.9s						
JHR	Hokuryu	2.89	288	⇓P	Pn	14 10 12.0	+2.0
JSE	Soyaes	2.94	315	⇓P	Pn	14 10 11.2	+0.6
JSS	Shosan	3.04	300	⇓P	Pn	14 10 14.4	+2.3
JYG	Yagishiri	3.33	298	⇓P	Pn	14 10 17.5	+1.5
JNB	Noboribetsu	3.34	264	⇓P	Pn	14 10 16.8	+0.6
JKB	Kayabe	3.49	254	⇓P	Pn	14 10 19.7	+1.5
JAHD	Aomorihigashid	3.53	243	⇑P	Pn	14 10 20.1	+1.2
JWK2	Keihoku	3.54	314	⇓P	Pn	14 10 21.0	+2.1
JARK	Aomorirokkasho	3.65	240	⇑P	Pn	14 10 21.1	+0.7
JSK	Shakotan	3.72	278	⇓P	Pn	14 10 21.9	+0.5
JANG	Nango	3.94	231	⇑P	Pn	14 10 24.2	-0.3
JTM	Tenmabayashi	3.96	239	⇑P	Pn	14 10 25.3	+0.6
JSH	Shimam	4.04	268	⇓P	Pn	14 10 26.8	+0.9
JTH	Tanohata	4.06	224	⇑P	Pn	14 10 25.2	-1.0
JHST	Hiyamasetana	4.20	265	⇓P	Pn	14 10 29.3	+1.3
JSI2	Shiura 2	4.25	246	⇑P	Pn	14 10 29.8	+1.1
JKZ	Kuzumaki	4.31	228	⇑P	Pn	14 10 29.6	-0.1
MIYJ	Miyakonagasawa	4.36	221	P	Pn	14 10 29.7	-0.6
YSS	Yuzh-Sakhalins	4.48	335	ePn	Pn	14 10 32.6	+0.8
YSS	Yuzh-Sakhalins	4.48	335	⇓ePN	Pn	14 10 32.7	+0.9
YSS				eS	Sn	14 11 26.7	+4.1
YSS				pmax	pmax		
	comp=Z,200nm,0.7s						
YSS				MLR	MLR		
	comp=Z,4μm,14.0s						
YSS				MLR	MLR		
	comp=N,3μm,13.0s						
YSS				MLR	MLR		
	comp=E,1μm,13.0s						
YSS	Yuzh-Sakhalins	4.48	335	eP	Pn	14 10 32.7	+0.9
YSS				AMB	AMB	14 10 34.5	
	comp=E,200nm,0.7s						
YSS				AMS	AMS	14 12 32.0	
	comp=E,3μm,13.0s						
YSS				AMS	AMS	14 12 32.0	
	comp=E,1μm,13.0s						
YSS				AMS	AMS	14 12 32.0	
	comp=E,4μm,13.0s						
JHHS	Hirosakihyakuz	4.48	241	⇑P	Pn	14 10 33.0	+1.1
JAH	Hinai	4.58	235	⇑P	Pn	14 10 33.7	+0.5
JSZI	Iwateshizukuis	4.69	229	⇑P	Pn	14 10 35.3	+0.5
JOM	Ohasama	4.70	224	⇑P	Pn	14 10 34.8	-0.2
JIW	Iwasaki	4.74	242	⇑P	Pn	14 10 35.9	+0.4
OFUJ	Ofunato	4.83	218	⇑P	Pn	14 10 36.3	-0.4
JRG	Rokugo	5.11	228	P	Pn	14 10 40.8	+0.3
JKMT	Kesennumamotoy	5.13	218	⇑P	Pn	14 10 40.3	-0.6
JMK	Ichinoseki	5.14	221	⇑P	Pn	14 10 40.6	-0.4
JIO	Ouri	5.48	217	⇑P	Pn	14 10 44.9	-0.8
JIKH	Ishinomakikobu	5.55	215	P	Pn	14 10 45.4	-1.2
JYK	Kaneyama	5.60	226	P	Pn	14 10 47.1	-0.2
JOU	Okura	5.87	221	P	Pn	14 10 50.5	-0.5
JAW	Awa shima	6.54	229	P	Pn	14 11 00.5	+0.4
JFK	Kawauchi	6.60	214	P	Pn	14 10 59.6	-1.5
UGL	Uglegorsk	6.60	340	ePN	Pn	14 11 03.0	+2.0
UGL				e		14 12 25.2	
UGL				pmax	pmax		
	comp=Z,603nm,0.8s						
UGL				MLR	MLR		
	comp=Z,3μm,16.0s						
UGL				MLR	MLR		
	comp=N,3μm,14.0s						
UGL				MLR	MLR		
	comp=E,1μm,18.0s						
UGL	Uglegorsk	6.60	340	eP	Pn	14 11 03.0	+2.0
UGL				AMB	AMB	14 11 06.9	
	comp=E,130nm,0.8s						
UGL				AMB	AMB	14 11 06.9	
	comp=E,370nm,0.8s						
UGL				AMB	AMB	14 11 06.9	
	comp=E,400nm,0.8s						
UGL				eS	Sn	14 12 15.2	+0.3
UGL				A	A	14 12 29.6	
	comp=E,20nm,0.5s						
UGL				A	A	14 12 29.6	
	comp=E,80nm,0.5s						
UGL				AMS	AMS	14 13 48.0	
	comp=E,3μm,16.0s						
UGL				AMS	AMS	14 13 48.0	
	comp=E,1μm,16.0s						
TEY	Ternei	6.77	291	⇑iPN	Pn	14 11 06.1	+2.8
TEY				eS	Sn	14 12 26.1	+7.0
TEY				pmax	pmax		
	comp=Z,110nm,0.8s						
TEY				pmax	pmax		
	comp=E,130nm,0.8s						
TEY				pmax	pmax		
	comp=E,300nm,1.6s						
TEY				smax	smax		
	comp=E,70nm,0.9s						
TEY				smax	smax		
	comp=N,80nm,1.1s						
TEY	Ternei	6.77	291	eP	Pn	14 11 06.1	+2.8
TEY				AMB	AMB	14 11 06.9	
	comp=N,40nm,0.8s						
TEY				AMB	AMB	14 11 06.9	
	comp=N,130nm,0.8s						
TEY				AMB	AMB	14 11 06.9	
	comp=N,110nm,0.8s						
TEY				AMB	AMB	14 11 07.7	
	comp=N,300nm,2.0s						
TEY				AMB	AMB	14 11 07.7	
	comp=N,300nm,2.0s						
TEY				eS	Sn	14 12 18.4	-0.7
TEY				A	A	14 12 19.4	
	comp=N,50nm,0.8s						
TEY				A	A	14 12 19.4	
	comp=N,70nm,0.8s						
JFFD	Fukushimafurud	6.97	215	⇑P	Pn	14 11 04.8	-1.2
JFY	Yanaizu	7.09	221	⇑P	Pn	14 11 08.0	+0.2
JHO	Hitachi	7.38	213	P	Pn	14 11 09.7	-1.9
JSD	Sado	7.38	231	⇑P	Pn	14 11 12.2	+0.4
JIZZ	Izumozaki	7.50	226	P	Pn	14 11 14.4	+1.1
JHK	Hiroka	7.55	223	P	Pn	14 11 14.3	+0.2
JKT	Katashina	7.82	220	P	Pn	14 11 18.2	+0.3
JAG	Ashikaga	8.01	218	P	Pn	14 11 19.6	-0.7
JJN	Nakama	8.11	227	P	Pn	14 11 22.5	+0.8
TYV	Tymovskoe	8.17	347	ePN	Pn	14 11 24.5	+2.0
TYV				pmax	pmax		
	comp=Z,300nm,1.9s						
TYV				pmax	pmax		
	comp=Z,80nm,0.9s						
TYV	Tymovskoe	8.17	347	eP	Pn	14 11 24.5	+2.0
TYV				AMB	AMB	14 11 25.4	
	comp=Z,300nm,2.0s						
TYV				AMB	AMB	14 11 26.6	
	comp=Z,30nm,0.6s						
TYV				AMB	AMB	14 11 26.6	
	comp=Z,20nm,0.6s						
TYV				AMB	AMB	14 11 26.6	
	comp=Z,50nm,0.6s						
TYV				eS	Sn	14 12 54.1	+0.6
TYV				A	A	14 12 57.8	
	comp=Z,200nm,5.0s						
TYV				A	A	14 13 00.8	
	comp=Z,30nm,0.7s						
TYV				AMS	AMS	14 14 23.6	
	comp=Z,2μm,21.0s						
TYV				AMS	AMS	14 14 23.6	
	comp=Z,1μm,21.0s						
JSZ	Suzu	8.30	231	P	Pn	14 11 24.9	+0.5
MJAR	Matsushiro Arr	8.51	224	Pn	Pn	14 11 27.4	+0.2
	comp=Z,3.6nm,0.3s,baz=26,slow=13,SNR=364						
MJAR				Sn	Sn	14 12 59.6	-2.4
	comp=Z,0.8nm,0.3s,baz=85,slow=28,SNR=3.2						
MJAR				LR	LR	14 15 31.4	
	comp=Z,832nm,18.1s,baz=40,slow=43						
MJB9	Matsu-Tunnel	8.51	224	ePn	Pn	14 11 27.3	0.0
MAJO	Matsushiro	8.51	224	ePn	Pn	14 11 27.2	0.0
MAJO				eSn	Sn	14 12 59.6	-2.4
MAJO	Matsushiro	8.51	224	c iPN	Pn	14 11 27.4	+0.2
MAJO				pmax	pmax		
	comp=Z,123nm,0.6s						
MAT	Matsushiro	8.51	224	P	Pn	14 11 27.4	+0.2
MAT				S	Sn	14 13 01.1	-0.9
MAT	Matsushiro	8.51	224	P	Pn	14 11 27.4	+0.2
JRY	Ryogami san	8.59	219	P	Pn	14 11 27.9	-0.5
JNG	Nsakai	8.67	224	P	Pn	14 11 29.8	+0.3
JGN	Niukaw	9.22	226	P	Pn	14 11 37.6	+0.6
JKG	Kaga	9.72	230	P	Pn	14 11 44.4	+0.7
USA0B	Ussuriysk Arra	9.91	282	ePn	Pn	14 11 45.5	-0.8
USRK	Ussuriysk Ar.	9.91	282	Pn	Pn	14 11 48.3	+2.0
	comp=Z,3.6nm,0.3s,baz=88,slow=13,SNR=68						
USRK				LR	LR	14 15 29.3	
	comp=Z,2μm,21.1s,baz=92,slow=37						
VLA	Vladivostok	9.99	276	⇑ePN	Pn	14 11 50.8	+3.3
VLA				pmax	pmax		
	comp=Z,164nm,0.9s						
VLA	Vladivostok	9.99	276	eP	Pn	14 11 50.8	+3.3
GRNR	Gornyy	10.01	325	⇑iPN	Pn	14 11 50.6	+2.9
GRNR				pmax	pmax		
	comp=Z,30nm,0.3s						
GRNR	Gornyy	10.01	325	eP	Pn	14 11 50.6	+2.9
GRNR				AMB	AMB	14 11 51.0	
	comp=Z,30nm,0.3s						
INU	Inuyama	10.04	224	ePn	Pn	14 11 48.8	+0.5
JFM	Mihama	10.45	228	P	Pn	14 11 55.3	+1.5
MSHR	Mys Shultsa	10.57	273	⇑ePN	Pn	14 11 57.9	+2.5
SKR	Severo-Kuril's	10.61	39	ePN	Pn	14 12 00.9	+5.0
SKR				eS	Sn	14 14 03.2	+10
SKR				pmax	pmax		
	comp=Z,204nm,1.0s						
SKR				pmax	pmax		
	comp=Z,600nm,2.6s						
SKR				MLR	MLR		
	comp=Z,800nm,14.0s						
SKR	Severo-Kuril's	10.61	39	eP	Pn	14 11 58.7	+2.8
SKR				AMB	AMB	14 12 04.0	
	comp=Z,30nm,0.6s						
SKR				AMB	AMB	14 12 04.0	
	comp=Z,40nm,0.6s						
SKR				AMB	AMB	14 12 04.0	
	comp=Z,60nm,0.6s						
SKR				AMB	AMB	14 12 11.3	
	comp=Z,600nm,3.0s						
SKR				eS	Sn	14 13 51.1	-2.2
SKR				AMS	AMS	14 17 41.4	
	comp=Z,800nm,14.0s						
NKL	Nikolayevsk	10.72	344	ePN	Pn	14 11 58.8	+1.4
NKL				pmax	pmax		
	comp=N,30nm,1.0s						
NKL				pmax	pmax		
	comp=E,27nm,1.0s						
NKL				pmax	pmax		
	comp=Z,76nm,1.0s						
NKL				MLR	MLR		
	comp=N,764nm,22.0s						
NKL				MLR	MLR		
	comp=E,562nm,17.0s						
NKL				MLR	MLR		
	comp=Z,1μm,21.0s						
NKL	Nikolayevsk	10.72	344	eP	Pn	14 11 59.0	+1.6
NKL				AMB	AMB	14 12 05.9	
	comp=Z,30nm,1.0s						
NKL				AMB	AMB	14 12 05.9	
	comp=Z,80nm,1.0s						
NKL				AMS	AMS	14 15 57.9	
	comp=Z,800nm,20.0s						
NKL				AMS	AMS	14 15 57.9	
	comp=Z,600nm,20.0s						
NKL				AMS	AMS	14 15 57.9	
	comp=Z,1μm,20.0s						
OKH	Okha	10.77	352	eP	Pn	14 12 00.5	+2.6
OKH				AMB	AMB	14 12 02.4	
	comp=Z,60nm,1.0s						
OKH				AMB	AMB	14 12 02.4	
	comp=Z,40nm,1.0s						
OKH				AMB	AMB	14 12 02.4	
	comp=Z,90nm,1.0s						
OKH				eS	Sn	14 13 58.3	+1.3
OKH				AMS	AMS	14 16 27.7	
	comp=Z,800nm,18.0s						
JHJ2	Mitsune	10.78	206	ePn	Pn	14 11 56.5	-1.9
JHJ	Hachijo jima 2	10.79	207	Pn	Pn	14 11 56.7	-1.7
	comp=Z,34nm,0.3s,baz=104,slow=21,SNR=16						
JHJ				Sn	Sn	14 13 48.3	-10
	comp=Z,184nm,0.3s,baz=312,slow=17,SNR=14						
KLR	Kul'dur	11.45	308	Pn	Pn	14 12 10.6	+3.2
	comp=Z,3.2nm,0.3s,baz=115,slow=14,SNR=98						
KLR				LR	LR	14 16 55.9	
	comp=Z,2μm,19.6s,baz=126,slow=40						
KLR	Kul'dur	11.45	308	c iPN	Pn	14 12 10.1	+2.8
KLR				pmax	pmax		
	comp=Z,115nm,1.1s						
KLR	Kul'dur	11.45	308	eP	Pn	14 12 10.1	+2.8
MDJ	Mudanjiang	11.64	284	ePn	Pn	14 12 11.2	+1.1
MDJ	Mudanjiang	11.64	284	P	Pn	14 12 12.3	+2.2
MDJ				S	Sn	14 14 19.3	+0.6
MDJ				LR	LR		
	comp=Z,820nm,15.1s						
MDJ				LR	LR		
	comp=Z,1μm,18.9s						
MDJ				LR	LR		
	comp=Z,2μm,20.5s						
PEA0B	Petropavlovsk-	13.02	34	ePn	Pn	14 12 28.9	+0.1
PETK	Petropavlovsk-	13.02	34	Pn	Pn	14 12 28.3	-0.5
	comp=Z,0.5nm,0.3s,baz=198,slow=11,SNR=20						
PETK				LR	LR	14 18 16.3	
	comp=Z,934nm,19.2s,baz=209,slow=41						
PEA1	Petropavlovsk-	13.02	34	ePn	Pn	14 12 28.3	-0.6
EKMR	Ekimchan	13.16	325	eP	Pn	14 12 31.4	+0.7
EKMR				AMB	AMB	14 12 36.9	
	comp=Z,30nm,0.9s						
EKMR				AMB	AMB	14 12 36.9	
	comp=Z,60nm,0.9s						
PET	Petropavlovsk	13.37	36	ePn	Pn	14 12 32.7	-0.8
PET	Petropavlovsk	13.37	36	ePN	P	14 12 38.1	-4.1
PET				eS	Sn	14 15 07.7	+7.1
PET				pmax	pmax		
	comp=Z,25nm,0.7s						
PET				MLR	MLR		
	comp=Z,800nm,17.0s						
PET				MLR	MLR		
	comp=Z,900nm,18.0s						
PET	Petropavlovsk	13.37	36	eP	Pn	14 12 32.9	-0.6
PET				eS	Sn	14 14 55.2	-5.4
PET				A	A	14 15 00.9	
	comp=Z,10.0nm,0.5s						
PET				AMS	AMS	14 21 08.0	
	comp=Z,900nm,18.0s						
KSRS	Korea Array	14.52	254	Pn	Pn	14 12 48.8	-0.3
	comp=Z,0.6nm,0.3s,baz=64,slow=13,SNR=25						
KSRS				Sn	Sn	14 15 35.8	+7.1
	comp=Z,0.5nm,0.3s,baz=68,slow=24,SNR=4.9						
KSRS				LR	LR	14 18 07.5	
	comp=Z,524nm,21.3s,baz=63,slow=36						
KS15	Wonju Array Si	14.55	254	ePn	Pn	14 12 49.0	-0.7
KS15				eSn	Sn	14 15 35.8	+6.3
CN2	Changchun	14.63	280	eP	Pn	14 12 49.8	-0.9
CN2				esP	P	14 13 04.9	+8.5
CN2				eS	Sn	14 15 28.8	-2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,330nm,14.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
CN2				LR	LR		
	comp=Z,1μm,19.0s						
JNU	Nakatsue	15.12	234	Pn	Pn	14 12 55.3	-1.9
	comp=Z,1.1nm,0.3s,baz=18,slow=2.3,SNR=12						
JNU				LR	LR	14 19 07.7	
	comp=Z,901nm,19.1s,baz=16,slow=38						
JNU	Nakatsue	15.12	234	ePn	Pn	14 12 55.2	-2.1
	comp=Z,79nm,1.1s						
TJN	Taejon	15.43	251	⇓eP	Pn	14 13 00.6	-0.7
ZEA	Zeya	16.21	318	eP	Pn	14 13 12.2	+1.0
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=E,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,58nm,1.0s						
ZEA				pmax	pmax		
	comp=N,300nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,300nm,2.0s						
ZEA				MLR	MLR		
	comp=E,800nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,15.0s						
ZEA				MLR	MLR		
	comp=N,600nm,13.0s						
ZEA	Zeya	16.21	318	eP	Pn	14 13 10.8	-0.4
ZEA				AMB	AMB	14 13 18.6	
	comp=N,40nm,1.0s						
ZEA				AMB	AMB	14 13 18.6	
	comp=N,50nm,1.0s						
ZEA				AMB	AMB	14 13 18.6	
	comp=N,60nm,1.0s						
ZEA				AMB	AMB	14 13 27.0	
	comp=N,300nm,2.0s						
ZEA				AMB	AMB	14 13 27.0	
	comp=N,300nm,2.0s						
ZEA				AMS	AMS	14 20 02.0	
	comp=N,600nm,15.0s						
ZEA				AMS	AMS	14 20 02.0	
	comp=N,1μm,15.0s						
SNY	Shenyang	16.25	274	⇓P	Pn	14 13 11.1	-0.7
SNY				pmax	pmax		
	comp=N,29nm,1.1s						
SNY				LR	LR		
	comp=N,1μm,27.1s						
KROS	Kirovskiy	16.75	320	eP	Pn	14 13 18.0	0.0
KROS				AMB	AMB	14 13 22.8	
	comp=N,20nm,0.8s						
KROS				AMB	AMB	14 13 22.8	
	comp=N,10.0nm,0.8s						
KROS				AMB	AMB	14 13 22.8	
	comp=N,30nm,0.8s						
MA2	Magadan	16.98	9	Pn	Pn	14 13 20.9	+0.2
	comp=N,1.5nm,0.3s,baz=198,slow=14,SNR=4.6						
MA2	Magadan	16.98	9	eP	Pn	14 13 20.6	-0.2
	comp=N,36nm,0.8s						
MA2	Magadan	16.98	9	⇓eP	P	14 13 22.3	0.0
DL2	Dalian	18.48	266	P	P	14 13 38.8	-0.2
DL2				sP	sP	14 13 54.8	+0.9
DL2				S	Sn	14 17 02.8	-2.1
DL2				pmax	pmax		
	comp=N,110nm,0.8s						
DL2				pmax	pmax		
	comp=N,330nm,5.9s						
DL2				LR	LR		
	comp=N,290nm,16.4s						
DL2				LR	LR		
	comp=N,460nm,17.1s						
DL2				LR	LR		
	comp=N,520nm,16.0s						
HIA	Hailar	18.92	298	eP	P	14 13 42.7	-1.1
	comp=N,32nm,0.6s						
HIA	Hailar	18.92	298	eP	P	14 13 42.7	-1.1
HIA				pmax	pmax		
	comp=Z,32nm,0.6s						
SEY	Seymchan	20.43	9	P	P	14 13 57.9	-2.2
	comp=Z,13nm,0.6s,baz=177,slow=7.4,SNR=18						
SEY				S	S	14 17 48.6	+2.2
	comp=Z,2.9nm,0.9s,baz=56,slow=16,SNR=3.8						
SEY	Seymchan	20.43	9	deP	P	14 13 57.8	-2.3
YAK	Yakutsk	21.31	339	eP	P	14 14 07.3	-2.3
	comp=Z,205nm,0.7s						
YAK	Yakutsk	21.31	339	eP	P	14 14 10.5	+0.9
YAK				e*PP	sP	14 14 25.3	+0.6
YAK				eS	S	14 17 59.9	-3.9
YAK				e		14 18 12.9	
YAK				e*SS	sS	14 18 33.5	+14
YAK				pmax	pmax		
	comp=Z,71nm,0.9s						
YAK				pmax	pmax		
	comp=N,29nm,1.0s						
YAK				pmax	pmax		
	comp=E,18nm,1.1s						
YAK				smax	smax		
	comp=N,42nm,1.4s						
YAK				smax	smax		
	comp=E,30nm,1.4s						
YAK				MLR	MLR		
	comp=Z,419nm,18.0s						
YAK				MLR	MLR		
	comp=N,441nm,18.0s						
YAK				MLR	MLR		
	comp=E,140nm,19.0s						
JOW	Kunigami	21.34	227	P	P	14 14 11.5	+1.4
	comp=E,12nm,0.9s,baz=108,slow=15,SNR=23						
JOW	Kunigami	21.34	227	eP	P	14 14 09.3	-0.9
	comp=E,40nm,0.9s						
JOW	Kunigami	21.34	227	P	P	14 14 11.4	+1.2
JIH	Iheya	21.34	228	P	P	14 14 10.9	+0.7
SMY	Shemya	21.41	53	eP	P	14 14 10.5	-0.2
	comp=E,187nm,1.1s						
SMY	Shemya	21.41	53	eP	P	14 14 10.5	-0.2
SMY				pmax	pmax		
	comp=Z,187nm,1.1s						
JNTH	Nagotoyohara	21.72	227	P	P	14 14 16.2	+1.9
JAGN	Aguni-jima	22.09	228	P	P	14 14 21.2	+3.0
BJI	Beijing	22.13	273	⇑iP	P	14 14 17.4	-1.1
BJI				sP	sP	14 14 32.6	-1.0
BJI				S	S	14 18 16.0	-3.9
BJI				pmax	pmax		
	comp=Z,49nm,1.0s						
BJI				LR	LR		
	comp=Z,130nm,13.1s						
BJI				LR	LR		
	comp=Z,230nm,21.4s						
BJI				LR	LR		
	comp=Z,390nm,27.0s						
BJT	Baijiatuau	22.14	272	eP	P	14 14 17.3	-1.4
	comp=Z,75nm,0.7s						
BJT	Baijiatuau	22.14	272	eP	P	14 14 17.3	-1.4
BJT				pmax	pmax		
	comp=Z,75nm,0.7s						
JKE	Kume jima 2	22.55	229	P	P	14 14 22.0	-1.1
NJ2	Nanjing	23.69	252	eP	P	14 14 33.8	-0.7
NJ2				pP	pP	14 14 44.5	-0.7
NJ2				sP	sP	14 14 47.3	-2.7
NJ2				PP	PnPn	14 15 04.1	+1.2
NJ2				S	S	14 18 37.8	-8.8
NJ2				pmax	pmax		
	comp=Z,160nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,530nm,3.5s						
NJ2				LR	LR		
	comp=Z,940nm,20.5s						
NJ2				LR	LR		
	comp=Z,710nm,19.4s						
NJ2				LR	LR		
	comp=Z,1μm,18.0s						
JIKM	Ikemajima	24.50	229	P	P	14 14 43.4	+1.4
JOGS	Gusukube	24.55	229	P	P	14 14 44.6	+2.2
JMJ2	Miyako jima3	24.60	229	P	P	14 14 46.1	+3.1
JIRB	Irabujima	24.62	229	P	P	14 14 44.7	+1.6
BOD	Bodaibo	24.72	318	eP	P	14 14 40.6	-3.2
BOD				pmax	pmax		
	comp=Z,11nm,1.0s						
JTJ	Tarama	25.03	230	P	P	14 14 47.6	+0.8
HHC	Hu-ho-hao-te	25.27	277	P	P	14 14 49.4	+0.3
HHC				pP	pP	14 14 58.1	-1.8
HHC				sP	sP	14 15 06.3	+1.5
HHC				pmax	pmax		
	comp=Z,85nm,1.0s						
HHC				pmax	pmax		
	comp=Z,420nm,4.1s						
HHC				LR	LR		
	comp=Z,500nm,14.3s						
JISG	Ishigakijimahi	25.29	230	P	P	14 14 49.0	-0.2
JIJ	Ishigaki jima	25.56	230	P	P	14 14 51.2	-0.5
BTO	Baotou	26.46	277	eP	P	14 15 00.3	+0.4
TATO	Taipei	26.65	235	eP	P	14 15 02.0	+0.4
	comp=Z,107nm,1.0s						
ADK	Adak	26.83	57	eP	P	14 15 05.3	+2.4
	comp=Z,49nm,1.3s						

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ADK   Adak              26.83  57 eP     P       14 15 05.3 +2.4
ADK                                pmax  pmax
      comp=Z,49nm,1.3s
YHNB  Yeheng            26.95 235 eP     P       14 15 04.4 +0.1
      comp=Z,47nm,0.9s
GSTR  Great Sitkin T    27.23  57 eP     P       14 15 07.0 +0.4
ULN   Ulaanbaatar       27.26 294 eP     P       14 15 06.8 -0.2
      comp=Z,42nm,0.9s
ULN   Ulaanbaatar       27.26 294 eP     P       14 15 06.8 -0.2
ULN                                pmax  pmax
      comp=Z,42nm,0.9s
ULN   Ulaanbaatar       27.26 294 eP     P       14 15 06.8 -0.2
BILL  Bilibino          27.48  17 eP     P       14 15 11.7 +3.1
BILL                              e              14 15 54.3
BILL                              ePPP   PPP     14 16 05.4
BILL                              e              14 18 25.9
BILL                               pmax  pmax
      comp=Z,8.0nm,0.7s
BILL                               MLR   MLR
      comp=Z,765nm,21.0s
BILL  Bilibino          27.48  17 eP     P       14 15 11.7 +3.1
SONA0 Songino Array     27.70 294 eP     P       14 15 10.9  0.0
SONM  Songino Array     27.70 294  P     P       14 15 10.9  0.0
      comp=Z,65nm,0.8s,baz=84,slow=8.6,SNR=212
SONM                               LR    LR      14 27 09.9
      comp=Z,1µm,20.6s,baz=88,slow=38
WHN   Wuhan             27.71 254 ⇑P     P       14 15 11.8 +0.8
WHN                                pP    pP      14 15 23.8 +1.9
WHN                                sP    sP      14 15 30.1 +3.4
WHN                                S     S       14 19 48.5 -2.0
WHN                                pmax  pmax
      comp=Z,210nm,0.8s
WHN                                LR    LR
      comp=Z,3µm,22.6s
WHN                                LR    LR
      comp=Z,1µm,21.5s
WHN                                LR    LR
      comp=Z,2µm,24.1s
SSLB  Suanglung         27.86 235 eP     P       14 15 12.9 +0.4
      comp=Z,17nm,0.7s
YULB  Yu-li             27.96 234 eP     P       14 15 14.5 +1.2
      comp=Z,17nm,0.8s
TPUB  Ta-pu             28.43 234 eP     P       14 15 17.4  0.0
      comp=Z,35nm,0.8s
QZH   Quanzhou          28.47 240  P     P       14 15 18.8 +1.0
QZH                                S     S       14 19 59.3 -3.3
QZH                                sS    sS      14 20 21.3 +0.5
QZH                                LR    LR
      comp=Z,290nm,22.7s
QZH                                LR    LR
      comp=Z,450nm,21.8s
QZH                                LR    LR
      comp=Z,390nm,20.2s
KNMB  Chin-men Tao      28.94 239 eP     P       14 15 23.1 +1.1
      comp=Z,78nm,1.0s
H11N2 WAKE ISLAND Hy    29.30 135  T     T       14 46 28.6
      baz=328,slow=75,SNR=8998
H11N1 WAKE ISLAND Hy    29.32 135  T     T       14 46 26.2
      baz=328,slow=75,SNR=8394
H11N3 WAKE ISLAND Hy    29.32 135  T     T       14 46 26.7
      baz=328,slow=75
TLY   Talaya            29.36 302  P     P       14 15 25.4 -0.2
      comp=Z,3.0nm,0.6s,baz=188,slow=3.0,SNR=7.2
TLY                                PcP   PcP     14 18 31.7 +0.9
      comp=Z,4.5nm,0.7s,baz=79,slow=5.2,SNR=8.9
TLY   Talaya            29.36 302 eP     P       14 15 25.6 +0.1
      comp=Z,8.5nm,0.8s
TLY   Talaya            29.36 302 eP     P       14 15 26.2 +0.7
TLY                               e              14 16 34.4
TLY                               eS     S       14 20 20.6 +4.3
TLY                               eSS    ScP     14 22 03.8 -5.5
TLY                                pmax  pmax
      comp=Z,27nm,1.3s
TLY                                MLR   MLR
      comp=Z,2µm,15.0s
TLY   Talaya            29.36 302 eP     P       14 15 26.2 +0.7
ZAK   Zakamensk         29.61 299 eP     P       14 15 27.7 -0.1
ZAK                               e              14 18 32.1
ZAK                                pmax  pmax
      comp=Z,33nm,1.2s
ZAK   Zakamensk         29.61 299 eP     P       14 15 27.7 -0.1
XAN   Xi'an             29.80 265 eP     P       14 15 29.3 -0.3
      comp=Z,76nm,0.8s
XAN   Xi'an             29.80 265  P     P       14 15 29.8 +0.2
XAN                                pmax  pmax
      comp=Z,45nm,1.0s
XAN                                pmax  pmax
      comp=Z,210nm,4.5s
XAN                                LR    LR
      comp=Z,190nm,16.3s
XAN                                LR    LR
      comp=Z,210nm,17.3s
XAN                                LR    LR
      comp=Z,240nm,17.6s
TIXI  Tiksi             29.93 350  P     P       14 15 25.5 -4.9
      comp=Z,2.0nm,0.3s,baz=87,slow=1.3,SNR=9.5
TIXI  Tiksi             29.93 350 eP     P       14 15 26.3 -4.0
      comp=Z,5.2nm,0.6s
TIXI  Tiksi             29.93 350⇑eP     P       14 15 28.5 -1.8
TIXI                               pmax  pmax
      comp=Z,3.0nm,0.6s
H11S1 WAKE ISLAND Hy    30.23 137  T     T       14 47 35.6
      baz=329,slow=76
H11S3 WAKE ISLAND Hy    30.23 137  T     T       14 47 38.2
      baz=329,slow=76
H11S2 WAKE ISLAND Hy    30.25 137  T     T       14 47 30.4
      baz=329,slow=76
MOY   Mondy             31.01 302 eP     P       14 15 40.3 +0.1
MOY                                pmax  pmax
      comp=Z,22nm,1.4s
MOY   Mondy             31.01 302 eP     P       14 15 40.3 +0.1
ENH   Enshi             31.33 258 eP     P       14 15 42.7 -0.4
      comp=Z,57nm,0.7s
LZH   Lanzhou           32.62 272 eP     P       14 15 55.0 +0.5
LZH                                pP    pP      14 16 05.5 -0.1
LZH                                sP    sP      14 16 11.6 +1.2
LZH                                S     S       14 21 10.4 +2.7
LZH                                sS    sS      14 21 30.0 +4.0
LZH                                pmax  pmax
      comp=Z,59nm,1.1s
LZH                                pmax  pmax
      comp=Z,220nm,6.0s
LZH                                LR    LR
      comp=Z,720nm,14.2s
LZH                                LR    LR
      comp=Z,630nm,13.6s
LZH                                LR    LR
      comp=Z,850nm,14.6s
GZH   Guangzhou         33.17 244  P     P       14 15 55.8 -3.5
GTA   Gaotai            34.27 280 ⇑P     P       14 16 08.6 -0.2
GTA                                pP    pP      14 16 21.3 +1.4
GTA                                sP    sP      14 16 25.8 +1.1
GTA                                PcP   PcP     14 18 45.4 +0.9
GTA                                S     S       14 21 31.9 -1.2
GTA                                sS    sS      14 21 54.3 +2.8
GTA                                ScP   ScP     14 22 26.6 +0.4
GTA                                PcS   PcS     14 22 31.8 +0.9
GTA                                SS    SnSn    14 23 45.4 +1.2
GTA                                pmax  pmax
      comp=Z,20nm,1.1s
GTA                                pmax  pmax
      comp=Z,89nm,8.9s
GTA                                LR    LR
      comp=Z,210nm,16.8s
GTA                                LR    LR
      comp=Z,320nm,19.4s
GTA                                LR    LR
      comp=Z,510nm,18.1s
CD2   Chengdu           35.14 264  P     P       14 16 15.3 -1.1
CD2                                pP    pP      14 16 25.4 -2.0
CD2                                sP    sP      14 16 32.0 -0.2
CD2                                PP    PP      14 17 37.5 +1.0
CD2                                PcP   PcP     14 18 46.4 -0.7
CD2                                S     S       14 21 48.8 +2.2
CD2                                pmax  pmax
      comp=Z,170nm,5.0s
CD2                                LR    LR
      comp=Z,420nm,17.8s
CD2                                LR    LR
      comp=Z,300nm,12.8s
CD2                                LR    LR
      comp=Z,410nm,19.9s
GYA   Guiyang           35.57 255⇑iP     P       14 16 20.0 -0.1
GYA                                pP    pP      14 16 32.6 +1.4
GYA                                sP    sP      14 16 37.8 +1.9
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GYA                                PP    PP      14 17 42.0 +0.7
GYA                                S     S       14 21 54.4 +1.0
GYA                                sS    sS      14 22 13.9 +2.1
GYA                                SS    SnSn    14 24 16.3 +0.3
GYA                                pmax  pmax
      comp=Z,50nm,0.7s
GYA                                pmax  pmax
      comp=Z,120nm,4.9s
GYA                                LR    LR
      comp=Z,220nm,22.7s
GYA                                LR    LR
      comp=Z,310nm,20.8s
GYA                                LR    LR
      comp=Z,300nm,20.6s
TGY   Tagaytay City     35.68 224  P     P       14 16 20.5 -0.6
      comp=Z,201nm,0.5s,baz=214,slow=3.0,SNR=5.7
RDOG  Red Dog Mine      36.82  29 eP     P       14 16 29.9 -0.3
      comp=Z,12nm,0.8s
QIZ   Qiongzhong        38.34 243  P     P       14 16 43.3 -0.3
QIZ                                S     S       14 22 36.3 +0.9
QIZ                                pmax  pmax
      comp=Z,10.0nm,1.1s
QIZ                                LR    LR
      comp=Z,240nm,15.8s
QIZ                                LR    LR
      comp=Z,410nm,27.3s
QIZ                                LR    LR
      comp=Z,400nm,22.1s
TTA   Tatalina          38.81  38 eP     P       14 16 47.8 +0.6
      comp=Z,17nm,0.8s
TTA   Tatalina          38.81  38 eP     P       14 16 47.8 +0.6
TTA                                pmax  pmax
      comp=Z,17nm,0.8s
SVW2  Sparrevohn        38.97  41 eP     P       14 16 49.0 +0.6
      comp=Z,14nm,0.8s
KMI   Kunming           39.18 257  P     P       14 16 51.8 +0.9
KMI                                pP    pP      14 17 03.8 +1.8
KMI                                sP    sP      14 17 09.1 +2.4
KMI                                PP    PnPn    14 18 23.9  0.0
KMI                                S     S       14 22 46.8 -1.6
KMI                                sS    sS      14 23 08.3 +1.3
KMI                                SS    SS      14 25 29.1  -13
KMI                                pmax  pmax
      comp=Z,100nm,0.9s
KMI                                pmax  pmax
      comp=Z,260nm,3.9s
KMI                                LR    LR
      comp=Z,230nm,19.0s
KMI                                LR    LR
      comp=Z,210nm,20.9s
KMI                                LR    LR
      comp=Z,360nm,22.7s
DGZ   Jazzator, Alta    39.81 301c iP    P       14 16 56.2 +0.4
DGZ                                pmax  pmax
      comp=Z,23nm,1.1s
KCP   Kidapawan         40.05 213⇓eP     P       14 16 57.0 -1.0
CTBH  Cotabato--PC H    40.20 214⇑iP     P       14 17 01.4 +2.3
OHAK  Old Harbor        40.36  47 eP     P       14 16 59.8 -0.2
      comp=Z,43nm,0.7s
ZAA1  Zalesovo Array    40.55 308 eP     P       14 17 01.1 -0.5
ZAA1                              ePcP   PcP     14 19 03.6 +0.4
ZAA0  Zalesovo Array    40.55 308 eP     P       14 17 00.6 -1.0
      comp=Z,14nm,0.6s
ZALV  Zalesovo Beam     40.55 308  P     P       14 17 01.1 -0.6
      comp=Z,9.5nm,0.4s,baz=88,slow=7.6,SNR=33
ZALV                               PcP   PcP     14 19 03.6 +0.4
      comp=Z,44nm,0.5s,baz=84,slow=3.1,SNR=39
ZALV                               LR    LR      14 35 07.3
      comp=Z,865nm,18.1s,baz=70,slow=38
PPLA  Purkeypile        40.56  39 eP     P       14 17 02.4 +0.6
      comp=Z,58nm,1.2s
KDAK  Kodiak Island     40.67  46  P     P       14 17 02.6  0.0
      comp=Z,20nm,0.5s,baz=286,slow=4.0,SNR=32
KDAK  Kodiak Island     40.67  46 eP     P       14 17 02.0 -0.6
      comp=Z,85nm,0.9s
SLVN  Son La            40.77 251 eP     P       14 17 03.0 -0.9
      comp=Z,30nm,1.0s
KTH   Kantishna Hill    41.12  38 eP     P       14 17 07.5 +1.2
      comp=Z,53nm,0.9s
CNPM  China Poot        41.20  44 eP     P       14 17 06.1 -0.8
      comp=Z,19nm,0.8s
MLY   Manley            41.20  35 eP     P       14 17 07.2 +0.2
      comp=Z,61nm,1.3s
WMQ   Urumqi            41.30 292 eP     P       14 17 07.8 -0.2
      comp=Z,71nm,0.9s
WMQ   Urumqi            41.30 292  P     P       14 17 08.5 +0.5
WMQ                                pP    pP      14 17 20.3 +1.0
WMQ                                sP    sP      14 17 24.8 +0.8
WMQ                                pmax  pmax
      comp=Z,59nm,1.1s
WMQ                                pmax  pmax
      comp=Z,120nm,5.1s
WMQ                                LR    LR
      comp=Z,410nm,18.3s
WMQ                                LR    LR
      comp=Z,490nm,13.1s
WMQ                                LR    LR
      comp=Z,640nm,20.9s
WMQ   Urumqi            41.30 292 eP     P       14 17 07.8 -0.2
WMQ                                pmax  pmax
      comp=Z,71nm,0.9s
BRLK  Bradley Lake      41.35  43 eP     P       14 17 08.8 +0.5
      comp=Z,14nm,0.5s
COLD  Coldfoot          41.48  32 eP     P       14 17 09.3 +0.2
      comp=Z,9.0nm,0.7s
BWN   Browne            41.76  37 eP     P       14 17 13.1 +1.6
      comp=Z,219nm,1.4s
TOLK  Toolik Lake Re    41.79  30 eP     P       14 17 11.7  0.0
      comp=Z,22nm,0.6s
TOLK  Toolik Lake Re    41.79  30  P     P       14 17 11.9 +0.2
      baz=267
RC01  Rabbit Creek A    41.80  41 eP     P       14 17 12.0 +0.1
      comp=Z,21nm,0.8s
MCK   McKinley          42.01  37 eP     P       14 17 13.7 +0.2
      comp=Z,33nm,0.7s
MCK   McKinley          42.01  37 eP     P       14 17 13.7 +0.2
MCK                                pmax  pmax
      comp=Z,33nm,0.7s
SEW   Seward            42.04  43 eP     P       14 17 13.5 -0.2
      comp=Z,22nm,0.9s
PMR   Palmer            42.05  40 eP     P       14 17 13.9 +0.1
      comp=Z,22nm,0.9s
PMR   Palmer            42.05  40 eP     P       14 17 13.9 +0.1
PMR                                pmax  pmax
      comp=Z,23nm,0.9s
RND   Reindeer          42.06  38 eP     P       14 17 13.9 -0.1
      comp=Z,28nm,0.7s
RND   Reindeer          42.06  38 eP     P       14 17 13.9 -0.1
RND                                pmax  pmax
      comp=Z,28nm,0.7s
MDM   Murphy Dome       42.27  35 eP     P       14 17 16.7 +1.1
      comp=Z,14nm,0.8s
WRH   Wood River Hil    42.34  36 eP     P       14 17 16.6 +0.4
      comp=Z,22nm,0.6s
KNK   Knik Glacier      42.39  41 eP     P       14 17 16.7 +0.1
      comp=Z,44nm,1.1s
SML   Sawmill           42.41  40 eP     P       14 17 17.2 +0.3
      comp=Z,65nm,0.8s
SML   Sawmill           42.41  40 eP     P       14 17 17.2 +0.3
SML                                pmax  pmax
      comp=Z,65nm,0.8s
TCOL  CIGO, UAF Yank    42.42  36  P     P       14 17 17.9 +1.0
      baz=272
COLA  College           42.43  36 eP     P       14 17 17.6 +0.8
      comp=Z,55nm,0.8s
COLA  College           42.43  36c iP    P       14 17 17.7 +0.8
COLA                               pmax  pmax
      comp=Z,60nm,0.9s
CCB   Clear Creek Bu    42.46  36 eP     P       14 17 17.4 +0.3
      comp=Z,11nm,0.8s
POKR  Poker Plat Res    42.60  35  P     P       14 17 19.6 +1.3
      baz=272
DHY   Denali Highway    42.75  38 eP     P       14 17 19.9 +0.2
      comp=Z,29nm,0.7s
HDA   Harding Lake      42.84  36 eP     P       14 17 20.0 -0.3
      comp=Z,37nm,0.5s
ILAR  Eielson Array     42.85  36  P     P       14 17 20.4 +0.1
      comp=Z,18nm,0.5s,baz=247,slow=5.2,SNR=180
ILAR                               LR    LR      14 37 32.0
      comp=Z,87nm,19.2s,baz=272,slow=39
ILB   Eielson Array     42.85  36 eP     P       14 17 20.3  0.0
      comp=Z,31nm,0.9s
SCM   Sheep Creek Mo    42.88  40 eP     P       14 17 21.1 +0.4
      comp=Z,36nm,1.0s
SCM   Sheep Creek Mo    42.88  40 eP     P       14 17 21.1 +0.4
SCM                                pmax  pmax
      comp=Z,36nm,1.0s
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GLI   Glacier Island    43.10  41 eP     P       14 17 22.6 +0.2
      comp=Z,15nm,0.6s
PANO  Nakornpanom       43.15 246  P     P       14 17 25.2 +1.9
      comp=Z,0.5nm,1.2s
PRP   Porcupine Dome    43.38  34 eP     P       14 17 25.8 +1.1
      comp=Z,73nm,0.6s
FID   Port Fidalgo      43.42  41 eP     P       14 17 25.0  0.0
      comp=Z,18nm,0.8s
FYU   Fort Yukon        43.44  33 eP     P       14 17 26.0 +1.0
      comp=Z,116nm,0.6s
NONG  Nongkai           43.51 249  P     P       14 17 27.2 +1.1
      comp=Z,1.3nm,1.1s
PAX   Paxson            43.62  38 eP     P       14 17 27.3 +0.6
      comp=Z,11nm,0.8s
PAX   Paxson            43.62  38 eP     P       14 17 27.3 +0.6
PAX                                pmax  pmax
      comp=Z,11nm,0.8s
EYAK  Cordova Ski Ar    43.80  42 eP     P       14 17 29.0 +0.9
      comp=Z,21nm,1.0s
MK31  Makanchi Array    43.92 298 eP     P       14 17 28.8 -0.3
      comp=Z,78nm,0.8s
MK31  Makanchi Array    43.92 298 i P    P       14 17 28.9 -0.3
MK31                               pmax  pmax
      comp=Z,77nm,0.7s
MK32  Makanchi Array    43.92 298 eP     P       14 17 29.0 -0.2
MK32                              ePcP   PcP     14 19 14.8 +0.2
MKAR  Makanchi Array    43.92 298  P     P       14 17 29.0 -0.2
      comp=Z,72nm,0.8s,baz=80,slow=9.0,SNR=397
MKAR                               PcP   PcP     14 19 14.8 +0.2
      comp=Z,11nm,0.7s,baz=56,slow=2.6,SNR=4.8
MKAR                               LR    LR      14 36 53.5
      comp=Z,547nm,20.3s,baz=66,slow=38
MAKZ  Makanchi          44.12 298 eP     P       14 17 30.6 -0.2
      comp=Z,86nm,0.8s
MAKZ  Makanchi          44.12 298 eP     P       14 17 30.6 -0.2
MAKZ                               pmax  pmax
      comp=Z,86nm,0.8s
SCRK  Sand Creek        44.17  37 eP     P       14 17 31.0 -0.1
      comp=Z,27nm,0.6s
DOT   Dot Lake          44.17  37 eP     P       14 17 30.9 -0.1
      comp=Z,17nm,0.6s
RAGM  Ragged Mountai    44.36  42 eP     P       14 17 34.0 +1.4
      comp=Z,42nm,1.3s
MENT  Mentasta          44.42  38 eP     P       14 17 34.0 +1.0
      comp=Z,27nm,0.7s
DLV   T  Lat            44.50 237 eP     P       14 17 35.8 +1.5
      comp=Z,94nm,0.7s
HMT   Hamilton          44.57  42 eP     P       14 17 35.4 +1.1
      comp=Z,43nm,1.4s
BAKI  Biak              44.73 193  P     P       14 17 35.9  0.0
      comp=Z,42nm,0.9s
PAYA  Payao             44.90 253  P     P       14 17 38.6 +1.3
      comp=Z,100µm,0.7s,comp=Z,809µm
KURK  Kurchatov         45.01 304 eP     P       14 17 36.9 -0.9
      comp=Z,106nm,1.3s
KURK  Kurchatov         45.01 304c iP    P       14 17 37.2 -0.6
KURK                               pmax  pmax
      comp=Z,86nm,1.3s
KURK  Kurchatov         45.01 304  P     P       14 17 37.5 -0.3
      SNR=26
KURK  Kurchatov         45.01 304 eP     P       14 17 37.2 -0.6
LSA   Lhasa             45.03 271 eP     P       14 17 38.5 -0.2
      comp=Z,24nm,0.7s
LSA   Lhasa             45.03 271 eP     P       14 17 38.6 -0.2
LSA                                pmax  pmax
      comp=Z,24nm,0.7s
LSA   Lhasa             45.03 271 eP     P       14 17 38.6 -0.2
KURBB Kurchatov Arra    45.09 304  P     P       14 17 37.9 -0.5
      comp=Z,42nm,0.6s,baz=73,slow=8.6,SNR=201
KURBB                              PcP   PcP     14 19 18.7 +0.2
      comp=Z,18nm,0.6s,baz=78,slow=3.4,SNR=11
PHRA  Phrae             45.23 252  P     P       14 17 41.0 +1.1
      comp=Z,10nm,1.1s
EGAK  Eagle             45.29  35 eP     P       14 17 39.8  0.0
      comp=Z,32nm,0.7s
BALM  Baldy             45.37  41 eP     P       14 17 40.9 +0.2
      comp=Z,31nm,1.0s
BALM  Baldy             45.37  41 eP     P       14 17 40.9 +0.2
BALM                               pmax  pmax
      comp=Z,31nm,1.0s
JAY   Jayapura          45.45 187  P     P       14 17 42.8 +1.2
      comp=Z,9.8nm,0.7s,baz=326,slow=3.6,SNR=3.4
SIJI  Sorong            45.45 200  P     P       14 17 42.4 +0.8
      comp=Z,12nm,0.6s,baz=180,slow=23,SNR=6.3
UTTA  Uttaradit         45.51 251  P     P       14 17 43.1 +1.0
      comp=Z,77µm,0.8s,comp=Z,652µm
GENI  Genyem            45.57 188  P     P       14 17 42.4 -0.2
      comp=Z,56nm,0.9s
LAMP  Lampang           45.63 252  P     P       14 17 44.3 +1.2
      comp=Z,134µm,0.7s
CHAI  Chaiyaphum        45.81 248  P     P       14 17 45.2 +0.7
CMMT  Chiang Mai        45.91 253  P     P       14 17 46.1 +0.7
      comp=Z,33nm,1.2s,comp=Z,312nm
CHTO  Chiang Mai        45.92 253 eP     P       14 17 46.0 +0.7
      comp=Z,43nm,0.9s
CHTO  Chiang Mai        45.92 253 eP     P       14 17 46.1 +0.7
CHTO                               pmax  pmax
      comp=Z,43nm,0.9s
CHTO  Chiang Mai        45.92 253  P     P       14 17 46.4 +1.0
      SNR=7.7
PBKT  Sadao Pong        46.03 249  P     P       14 17 47.3 +1.0
      comp=Z,14nm,1.3s
CM31  Chiang Mai Arr    46.15 253 eP     P       14 17 47.9 +0.6
      comp=Z,22nm,0.6s
CM31                              ePcP   PcP     14 19 23.4 +0.7
CMAR  Chiang Mai Arr    46.15 253  P     P       14 17 48.3 +1.1
      comp=Z,16nm,0.7s,baz=43,slow=7.3,SNR=95
CMAR                               PcP   PcP     14 19 23.4 +0.7
      comp=Z,3.2nm,0.6s,baz=360,slow=1.1,SNR=5.5
CMAR                               LR    LR      14 38 12.5
      comp=Z,285nm,18.6s,baz=54,slow=37
DAWY  Dawson            46.16  36 eP     P       14 17 47.2 +0.4
      comp=Z,11nm,0.8s
LBMI  Labuha            46.30 205  P     P       14 17 48.5 +0.1
SHL   Shillong          46.80 266 eP     P       14 17 51.0 -1.5
EPYK  Eagle Plains      46.85  33 eP     P       14 17 53.2 +1.0
      comp=Z,158nm,1.2s
EPYK  Eagle Plains      46.85  33  P     P       14 17 53.4 +1.2
      baz=280,SNR=98
PDGK  Podgornoye        47.02 294  P     P       14 17 53.2 -0.7
PDGK                               pmax  pmax
      comp=Z,28nm,0.8s
INK   Inuvik            47.70  30  P     P       14 17 59.4 +0.7
      comp=Z,27nm,0.5s,baz=292,slow=6.3,SNR=52
INK   Inuvik            47.70  30 eP     P       14 17 59.2 +0.5
      comp=Z,67nm,1.3s
INK   Inuvik            47.70  30 eP     P       14 17 59.2 +0.5
INK                                pmax  pmax
      comp=Z,67nm,1.3s
HYT   Haines Junctio    47.72  40 eP     P       14 18 00.8 +1.7
      comp=Z,143nm,1.0s
UMPA  Umpang Tak        47.74 251  P     P       14 18 05.5 +5.8
      comp=Z,48µm,1.0s
CHBT  CHBT              47.84 244  P     P       14 18 03.4 +3.0
      comp=Z,48nm,0.5s,comp=Z,615nm
PRZ   Przheval'sk       48.10 294 eP     P       14 18 02.6 +0.2
      comp=Z,32nm,0.8s
PRZ   Przheval'sk       48.10 294 eP     P       14 18 02.6 +0.2
PRZ                                pmax  pmax
      comp=Z,32nm,0.8s
KDJ   Kajisay           49.07 294 eP     P       14 18 09.6 -0.2
      comp=Z,36nm,0.8s
BVA0  Borovoye Array    49.11 309  P     P       14 18 09.2 -0.5
SKAG  Skagway           49.15  42 eP     P       14 18 11.0 +1.1
      comp=Z,20nm,1.1s
BRVK  Borovoye          49.15 310 eP     P       14 18 09.5 -0.6
      comp=Z,65nm,1.4s
BRVK  Borovoye          49.15 310c iP    P       14 18 09.7 -0.4
BRVK  Borovoye          49.15 310  P     P       14 18 10.2 +0.1
      SNR=20
BRVK  Borovoye          49.15 310 eP     P       14 18 09.7 -0.4
PHET  Kaeng Krachan     49.53 247  P     P       14 18 15.5 +2.1
      comp=Z,114µm,0.7s
ULHL  Ulahol            49.65 294  P     P       14 18 14.4 +0.1
      SNR=19
BESE  Bessie Mountai    49.65  43 eP     P       14 18 14.8 +0.9
      comp=Z,19nm,1.0s
OTUK  Ortayu            49.70 303  P     P       14 18 14.3 -0.1
OTUK                               pmax  pmax
      comp=Z,56nm,0.6s
BOOM  Boomskoye usch    49.74 295 eP     P       14 18 15.3 +0.3
      comp=Z,102nm,0.8s
BOOM  Boomskoye usch    49.74 295 eP     P       14 18 15.3 +0.3
BOOM                               pmax  pmax
      comp=Z,102nm,0.8s
JIRN  Jiri              49.79 272 eP     P       14 18 15.7  0.0
      comp=Z,43nm,0.4s
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TKM2	**Tokmak 2**	**49.79**	**295**	P	**P**	**14 18 15.6**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,87nm,0.8s						
TKM2	**Tokmak 2**	**49.79**	**295**	P	**P**	**14 18 15.6**	**+0.3**
	SNR=115						
GUN	**Gumba**	**49.87**	**273**	*e*P	**P**	**14 18 16.2**	**-0.1**
	comp=Z,135nm,0.6s						
JIS	**Juneau Island**	**49.99**	**43**	*e*P	**P**	**14 18 18.0**	**+1.7**
	comp=Z,28nm,0.9s						
SBUM	**Sibu**	**50.05**	**226**	*e*P	**P**	**14 18 18.1**	**+0.8**
	comp=Z,4.2nm,0.6s						
SBUM	**Sibu**	**50.05**	**226**	P	**P**	**14 18 19.0**	**+1.7**
SBUM	**Sibu**	**50.05**	**226**	P	**P**	**14 18 19.0**	**+1.7**
NRN	**Naryn**	**50.16**	**293**	*e*P	**P**	**14 18 18.1**	**-0.3**
	comp=Z,13nm,0.8s						
NRN	**Naryn**	**50.16**	**293**	*e*P	**P**	**14 18 18.1**	**-0.3**
NRN				pmax	pmax		
	comp=Z,13nm,0.8s						
CHMS	**Chumysh**	**50.31**	**296**	P	**P**	**14 18 19.0**	**-0.1**
	SNR=8.3						
KBK	**Karagaybulak**	**50.33**	**295**	P	**P**	**14 18 19.7**	**+0.3**
	SNR=52						
USP	**Ospenovka**	**50.36**	**296**	P	**P**	**14 18 19.5**	**0.0**
	SNR=43						
KKN	**Kakani**	**50.38**	**273**	*e*P	**P**	**14 18 19.9**	**-0.1**
	comp=Z,60nm,0.7s						
KZA	**Kyzart**	**50.38**	**295**	P	**P**	**14 18 21.1**	**+0.9**
	SNR=65						
PKI	**Pulchoki**	**50.41**	**273**	*e*P	**P**	**14 18 20.0**	**-0.4**
	comp=Z,31nm,0.7s						
PKIN	**Phulchoki**	**50.41**	**273**	*e*P	**P**	**14 18 19.9**	**-0.5**
	comp=Z,19nm,0.5s						
FRU1	**Bishkek**	**50.47**	**296**	*e*P	**P**	**14 18 20.0**	**-0.4**
	comp=Z,42nm,0.7s						
FRU1	**Bishkek**	**50.47**	**296**	*e*P	**P**	**14 18 20.0**	**-0.4**
FRU1				pmax	pmax		
	comp=Z,42nm,0.7s						
DMN	**Daman**	**50.61**	**273**	*e*P	**P**	**14 18 21.8**	**0.0**
	comp=Z,67nm,0.8s						
AAK	**Ala-Archa**	**50.64**	**296**	*e*P	**P**	**14 18 21.2**	**-0.5**
	comp=Z,22nm,0.7s						
AAK	**Ala-Archa**	**50.64**	**296**	*i* P	**P**	**14 18 21.7**	**0.0**
	SNR=18						
AAK	**Ala-Archa**	**50.64**	**296**	*c i*P	**P**	**14 18 21.6**	**-0.1**
AAK				pmax	pmax		
	comp=Z,20nm,0.6s						
AAK	**Ala-Archa**	**50.64**	**296**	P	**P**	**14 18 21.9**	**+0.1**
	SNR=13						
AAK	**Ala-Archa**	**50.64**	**296**	*e*P	**P**	**14 18 21.6**	**-0.1**
AAK	**Ala-Archa**	**50.64**	**296**	P	**P**	**14 18 21.5**	**-0.3**
	SNR=18						
GKN	**Gorkha**	**50.73**	**274**	*e*P	**P**	**14 18 22.4**	**-0.2**
	comp=Z,38nm,0.4s						
UCH	**Uchtor**	**50.81**	**295**	P	**P**	**14 18 23.4**	**0.0**
	SNR=14						
KSH	**Kashi**	**51.05**	**291**	P	**P**	**14 18 28.4**	**+3.5**
KSH				pP	pP	14 18 38.3	+1.9
KSH				sP	sP	14 18 42.6	+1.6
KSH				PcP	**PcP**	**14 19 43.3**	**+3.0**
KSH				PP	**PP**	**14 20 26.1**	**+4.7**
KSH				S	**S**	**14 25 42.8**	**+3.3**
KSH				SS	**SS**	**14 29 17.6**	**+3.1**
KSH				pmax	pmax		
	comp=Z,32nm,0.8s						
KSH				pmax	pmax		
	comp=Z,80nm,5.2s						
KSH				LR	LR		
	comp=Z,480nm,16.1s						
KSH				LR	LR		
	comp=Z,320nm,16.7s						
KSH				LR	LR		
	comp=Z,450nm,17.8s						
EKS2	**Erkin-Say**	**51.10**	**296**	P	**P**	**14 18 25.0**	**-0.2**
	SNR=49						
DANN	**Dangsing**	**51.18**	**275**	*e*P	**P**	**14 18 26.6**	**+0.4**
	comp=Z,347nm,0.8s						
KOLN	**Koldanda**	**51.62**	**274**	*e*P	**P**	**14 18 29.5**	**+0.1**
	comp=Z,95nm,0.7s						
MTKI	**Muara Teweh, K**	**51.62**	**221**	P	**P**	**14 18 29.3**	**+0.1**
	comp=Z,141nm,0.8s						
WRAK	**Wrangell Islan**	**51.67**	**45**	*e*P	**P**	**14 18 29.9**	**+0.8**
	comp=Z,16nm,1.1s						
PYUN	**Piuthan**	**51.88**	**275**	*e*P	**P**	**14 18 31.4**	**+0.1**
	comp=Z,38nm,0.5s						
KSM	**Kuching**	**51.89**	**227**	*e*P	**P**	**14 18 32.1**	**+1.0**
	comp=Z,23nm,0.7s						
KSM	**Kuching**	**51.89**	**227**	P	**P**	**14 18 33.0**	**+1.8**
KSM	**Kuching**	**51.89**	**227**	P	**P**	**14 18 33.0**	**+1.8**
DLBC	**Dease Lake**	**52.08**	**42**	*e*P	**P**	**14 18 33.6**	**+1.4**
	comp=Z,29nm,1.3s						
SPSI	**Sidrap Palu**	**52.17**	**213**	P	**P**	**14 18 33.3**	**+0.1**
	comp=Z,13nm,0.7s						
BNSI	**Bone**	**52.43**	**213**	P	**P**	**14 18 34.8**	**-0.3**
	comp=Z,40nm,0.9s						
STKI	**Sintang**	**52.46**	**225**	P	**P**	**14 18 35.6**	**+0.2**
	comp=Z,37nm,0.7s						
SVE	**Sverdlovsk**	**52.92**	**317**	*d e*P	**P**	**14 18 37.9**	**-0.4**
SVE				pmax	pmax		
	comp=Z,43nm,1.0s						
SVE	**Sverdlovsk**	**52.92**	**317**	*e*P	**P**	**14 18 37.9**	**-0.4**
KK31	**Karatay Array**	**53.05**	**298**	*e*P	**P**	**14 18 38.8**	**-0.6**
	comp=Z,46nm,0.8s						
KK31	**Karatay Array**	**53.05**	**298**	*i* P	**P**	**14 18 39.0**	**-0.5**
KK31				pmax	pmax		
	comp=Z,31nm,0.7s						
KKAR	**Karatay Array**	**53.05**	**298**	*e*P	**P**	**14 18 38.8**	**-0.7**
	comp=Z,46nm,0.8s						
KKAR	**Karatay Array**	**53.05**	**298**	*e*P	**P**	**14 18 38.8**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,46nm,0.8s						
SKLT	**Songkhla**	**53.11**	**241**	P	**P**	**14 18 42.8**	**+2.6**
	comp=Z,32nm,1.1s						
KAPI	**Kappang**	**53.13**	**213**	P	**P**	**14 18 40.6**	**+0.3**
	comp=Z,30nm,0.6s,baz=326,slow=1.6,SNR=19						
KAPI	**Kappang**	**53.13**	**213**	*e*P	**P**	**14 18 41.0**	**+0.7**
	comp=Z,31nm,0.6s						
KAPI	**Kappang**	**53.13**	**213**	*e*P	**P**	**14 18 41.0**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,31nm,0.6s						
TRTT	**Trang**	**53.21**	**243**	P	**P**	**14 18 43.0**	**+2.1**
	comp=Z,32nm,1.1s						
HNR	**Honiara**	**53.75**	**162**	LR	LR	14 38 21.3	
	comp=Z,224nm,20.6s,baz=358,slow=32						
ARU	**Arti**	**54.13**	**317**	*e*P	**P**	**14 18 46.0**	**-1.2**
	comp=Z,54nm,1.1s						
ARU	**Arti**	**54.13**	**317**	*c i*P	**P**	**14 18 46.2**	**-0.9**
ARU				*PP	**pP**	**14 18 56.7**	**-2.1**
ARU				*e*		14 19 50.8	
ARU				S	**S**	**14 26 20.9**	**+0.1**
ARU				SS	**SKiKP**	**14 29 57.3**	**+2.2**
ARU				pmax	pmax		
	comp=Z,52nm,1.2s						
ARU				MLR	MLR		
	comp=Z,297nm,18.0s						
ARU	**Arti**	**54.13**	**317**	*e*P	**P**	**14 18 46.3**	**-0.9**
BTK	**Batken**	**54.29**	**294**	*e*P	**P**	**14 18 47.8**	**-0.9**
	comp=Z,55nm,1.1s						
BTK	**Batken**	**54.29**	**294**	*e*P	**P**	**14 18 47.8**	**-0.9**
BTK				pmax	pmax		
	comp=Z,55nm,1.1s						
JRMM	**Jerantut**	**54.47**	**237**	P	**P**	**14 18 52.0**	**+1.9**
JRMM	**Jerantut**	**54.47**	**237**	P	**P**	**14 18 51.0**	**+0.9**
KULM	**Kulim**	**54.52**	**240**	*e*P	**P**	**14 18 51.5**	**+0.9**
	comp=Z,57nm,0.8s						
KULM	**Kulim**	**54.52**	**240**	P	**P**	**14 18 52.0**	**+1.5**
KULM	**Kulim**	**54.52**	**240**	P	**P**	**14 18 52.0**	**+1.5**
IPM	**Ipoh**	**54.91**	**239**	*e*P	**P**	**14 18 53.9**	**+0.5**
	comp=Z,26nm,0.8s						
IPM	**Ipoh**	**54.91**	**239**	P	**P**	**14 18 55.0**	**+1.7**
IPM	**Ipoh**	**54.91**	**239**	P	**P**	**14 18 55.0**	**+1.7**
HOPEN	**Hopen**	**55.10**	**346**	*e*P	**P**	**14 18 54.1**	**+0.2**
GAR	**Garm**	**55.15**	**293**	*e*P	**P**	**14 18 54.4**	**-0.6**
	comp=Z,164nm,1.3s						
GAR	**Garm**	**55.15**	**293**	*e*P	**P**	**14 18 54.4**	**-0.6**
GAR				pmax	pmax		
	comp=Z,164nm,1.3s						
MYKOM	**Kota Tinggi**	**55.29**	**234**	*e*P	**P**	**14 18 57.3**	**+1.2**
	comp=Z,33nm,0.8s						
MYKOM	**Kota Tinggi**	**55.29**	**234**	P	**P**	**14 18 58.0**	**+1.9**
MYKOM	**Kota Tinggi**	**55.29**	**234**	P	**P**	**14 18 58.0**	**+1.9**
SPA0	**Spitsbergen Ar**	**55.36**	**349**	*e*P	**P**	**14 18 54.5**	**-1.3**
NDI	**New Delhi**	**55.77**	**279**	*e*P	**P**	**14 18 58.0**	**-1.4**
EDFI	**Ende, Flores**	**55.84**	**209**	P	**P**	**14 18 59.0**	**-1.1**
	comp=Z,47nm,0.7s						
NIL	**Nilore**	**55.89**	**286**	*e*P	**P**	**14 19 00.3**	**+0.1**
	comp=Z,76nm,0.8s						
NIL	**Nilore**	**55.89**	**286**	*e*P	**P**	**14 19 00.4**	**+0.1**
NIL				pmax	pmax		
	comp=Z,76nm,0.8s						
RES	**Resolute Bay**	**56.09**	**16**	*e*P	**P**	**14 19 00.4**	**-0.6**
	comp=Z,130nm,0.6s						
RES	**Resolute Bay**	**56.09**	**16**	*e*P	**P**	**14 19 00.4**	**-0.6**
RES				pmax	pmax		
	comp=Z,130nm,0.6s						
HSPB	**Hornsund (broa**	**56.34**	**348**	*e*P	**P**	**14 19 02.9**	**0.0**
COEN	**Coen**	**56.65**	**183**	*e*P	**P**	**14 19 06.5**	**+0.8**
	comp=Z,21nm,0.8s						
AB31	**Akbulak array**	**56.65**	**309**	*i* P	**P**	**14 19 05.2**	**-0.2**
AB31				pmax	pmax		
	comp=Z,70nm,0.6s						
ABKAR	**Akbulak array**	**56.65**	**309**	*e*P	**P**	**14 19 05.2**	**-0.2**
	comp=Z,88nm,0.6s						
TPI	**Tanjungpandan**	**56.86**	**227**	P	**P**	**14 19 07.0**	**-0.3**
	comp=Z,68nm,1.0s,comp=Z,896nm						
MTN	**Manton Dam**	**57.05**	**197**	*e*P	**P**	**14 19 08.8**	**+0.3**
	comp=Z,57nm,0.7s						
YKA	**Yellowknife Ar**	**57.14**	**33**	P	**P**	**14 19 09.0**	**+0.4**
	comp=Z,5.3nm,0.5s,baz=301,slow=7.0,SNR=41						
YKA				LR	LR	14 47 16.6	
	comp=Z,14nm,19.4s,baz=292,slow=40						
YKB5	**Yellowknife Ar**	**57.14**	**33**	*e*P	**P**	**14 19 09.1**	**+0.4**
AKTO	**Aktyubinsk**	**57.17**	**311**	P	**P**	**14 19 08.5**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,30nm,0.8s						
PPBI	**Pangkal Pinang**	**57.19**	**229**	P	**P**	**14 19 09.8**	**+0.2**
	comp=Z,84nm,0.8s						
PSI	**Prapat**	**57.52**	**239**	*e*P	**P**	**14 19 12.2**	**+0.1**
	comp=Z,37nm,0.8s						
PSI	**Prapat**	**57.52**	**239**	*e*P	**P**	**14 19 12.2**	**+0.1**
PSI				pmax	pmax		
	comp=Z,37nm,0.8s						
PRGR	**Permogore**	**57.59**	**326**	⇓*i*P	**P**	**14 19 11.3**	**-0.5**
PRGR				pmax	pmax		
	comp=Z,64nm,0.9s						
MLSI	**Meulaboh, Aceh**	**58.03**	**243**	P	**P**	**14 19 14.7**	**-0.8**
	comp=Z,69nm,0.9s						
LVZ	**Lovozero**	**58.05**	**335**	*e*P	**P**	**14 19 14.3**	**-0.7**
	comp=Z,59nm,1.4s						
LVZ	**Lovozero**	**58.05**	**335**	*c e*P	**P**	**14 19 15.0**	**-0.1**
LVZ				pmax	pmax		
	comp=Z,31nm,1.3s						
BKNI	**Bangkinang**	**58.14**	**236**	*e*P	**P**	**14 19 17.0**	**+0.7**
	comp=Z,185nm,0.8s						
BKNI	**Bangkinang**	**58.14**	**236**	P	**P**	**14 19 16.4**	**+0.1**
	comp=Z,256nm,0.8s,comp=Z,2µm						
KBL	**Kabul**	**58.35**	**289**	*e*P	**P**	**14 19 16.4**	**-1.5**
	comp=Z,51nm,0.8s						
KBL	**Kabul**	**58.35**	**289**	*e*P	**P**	**14 19 16.4**	**-1.5**
KBL				pmax	pmax		
	comp=Z,51nm,0.8s						
APA	**Apatity**	**58.63**	**335**	⇑*i*P	**P**	**14 19 17.4**	**-1.6**
APA				pmax	pmax		
	comp=Z,11nm,0.8s						
APA				MLR	MLR		
	comp=Z,200nm,17.0s						
MNSI	**Mandailing Nat**	**58.67**	**237**	P	**P**	**14 19 20.0**	**0.0**
	comp=Z,31nm,0.8s						
TULEG	**Thule**	**58.82**	**9**	*e*P	**P**	**14 19 18.5**	**-1.8**
	comp=Z,42nm,0.8s						
SMRI	**Semarang**	**59.08**	**222**	*e*P	**P**	**14 19 23.5**	**+0.7**
	comp=Z,142nm,0.8s						
SMRI	**Semarang**	**59.08**	**222**	P	**P**	**14 19 23.0**	**+0.2**
	comp=Z,193nm,0.8s						
HAMF	**Hammerfest**	**59.30**	**341**	*e*P	**P**	**14 19 23.3**	**-0.3**
PDSI	**Padang**	**59.47**	**235**	P	**P**	**14 19 25.6**	**0.0**
	comp=Z,22nm,0.6s,comp=Z,2µm						
GSI	**Gunungsitoli**	**59.53**	**239**	*e*P	**P**	**14 19 26.4**	**+0.4**
	comp=Z,54nm,0.9s						
GSI	**Gunungsitoli**	**59.53**	**239**	P	**P**	**14 19 25.8**	**-0.2**
	comp=Z,72nm,0.8s						
ARA0	**ARCESS Array S**	**59.60**	**339**	*e*P	**P**	**14 19 25.6**	**-0.1**
ARCES	**ARCESS Array B**	**59.60**	**339**	P	**P**	**14 19 25.6**	**-0.1**
	comp=Z,11nm,0.7s,baz=51,slow=9.6,SNR=23						
ARCES				LR	LR	14 50 30.5	
	comp=Z,216nm,19.0s,baz=44,slow=41						
ARE0	**ARCESS Array S**	**59.60**	**339**	*e*P	**P**	**14 19 25.5**	**-0.2**
KRJI	**Kerinci**	**59.81**	**234**	P	**P**	**14 19 28.0**	**0.0**
	comp=Z,156nm,0.9s						
LLLB	**Lillooet**	**59.88**	**47**	*e*P	**P**	**14 19 27.5**	**-0.5**
	comp=Z,14nm,1.0s						
LHSI	**Lahat**	**60.03**	**230**	P	**P**	**14 19 29.5**	**+0.2**
	comp=Z,158nm,0.9s,comp=Z,3µm						
KLSI		**60.06**	**229**	P	**P**	**14 19 30.3**	**+0.7**
KLI	**Kotabumi**	**60.14**	**228**	P	**P**	**14 19 30.0**	**-0.1**
	comp=Z,140nm,0.8s,comp=Z,3µm						
DAG	**Danmarks Havn**	**60.15**	**356**	⇓*i*P	**P**	**14 19 28.0**	**-1.4**
DAG				pmax	pmax		
	comp=Z,11nm,0.9s						
DAG	**Danmarks Havn**	**60.15**	**356**	⇓*i*P	**P**	**14 19 28.0**	**-1.4**
	comp=Z,13nm,0.9s						
MDSI	**Maura Dua**	**60.20**	**229**	P	**P**	**14 19 30.2**	**-0.3**
	comp=Z,53nm,1.2s,comp=Z,876nm						
LEM	**Lembang**	**60.31**	**225**	P	**P**	**14 19 32.5**	**+1.1**
	comp=Z,113nm,0.7s,baz=290,slow=20,SNR=9.4						
KTK1	**Kautokeino**	**60.55**	**340**	*e*P	**P**	**14 19 32.1**	**-0.1**
SISI	**Saibi**	**60.63**	**236**	P	**P**	**14 19 32.7**	**-0.8**
	comp=Z,39nm,0.8s						
LWLI	**Liwa**	**60.70**	**229**	P	**P**	**14 19 34.1**	**0.0**
	comp=Z,49nm,0.7s,comp=Z,11µm						
D03D	**Eldon**	**60.85**	**51**	P	**P**	**14 19 36.2**	**+1.5**
	baz=303						
KASI	**Kota Agung**	**60.88**	**228**	P	**P**	**14 19 33.3**	**-1.9**
B05A	**Bryant**	**61.02**	**50**	P	**P**	**14 19 36.9**	**+1.2**
	baz=303						
TRO	**Tromso**	**61.16**	**341**	*e*P	**P**	**14 19 35.7**	**-0.6**
HYB	**Hyderabad**	**61.56**	**268**	*i* P	**P**	**14 19 39.0**	**-0.9**
HYB				*e*pP	**pP**	**14 19 51.0**	**-0.7**
HYB				*e*		14 19 56.5	
E04D	**Cinebar**	**61.69**	**52**	P	**P**	**14 19 42.0**	**+1.8**
	baz=304						
KULLO	**Kullorsuaq**	**61.79**	**7**	⇑*i*P	**P**	**14 19 39.6**	**-0.9**
KULLO				pmax	pmax		
	comp=Z,38nm,0.6s						
KULLO	**Kullorsuaq**	**61.79**	**7**	⇑*i*P	**P**	**14 19 39.6**	**-0.9**
	comp=Z,38nm,0.6s						
G03D	**McMinnville, O**	**62.03**	**53**	P	**P**	**14 19 44.3**	**+1.7**
	baz=304						
LTY	**Liberty**	**62.38**	**50**	*e*P	**P**	**14 19 45.2**	**+0.2**
	comp=Z,12nm,0.8s						
H04D	**Lebanon**	**62.72**	**54**	P	**P**	**14 19 48.9**	**+1.7**
	baz=304						
J01E	**Myrtle Point**	**62.77**	**55**	P	**P**	**14 19 49.5**	**+1.9**
	baz=305						
I03D	**Drain, OR**	**62.82**	**55**	P	**P**	**14 19 49.7**	**+1.8**
	baz=305						
H04A	**Detroit Lake**	**62.95**	**53**	*e*P	**P**	**14 19 50.1**	**+1.2**
	comp=Z,22nm,1.0s						
G05D	**Wamic, OR**	**63.15**	**52**	P	**P**	**14 19 51.7**	**+1.5**
	baz=305						
K02D	**Willamette Mer**	**63.20**	**56**	P	**P**	**14 19 52.1**	**+1.5**
	baz=305						
I04A	**Tendick Farm,**	**63.33**	**54**	P	**P**	**14 19 52.8**	**+1.4**
	baz=305						
STEI	**Steigen**	**63.33**	**341**	*e*P	**P**	**14 19 49.9**	**-0.9**
WRAB	**Tennant Creek**	**63.39**	**192**	*e*P	**P**	**14 19 51.6**	**-0.2**
	comp=Z,12nm,0.9s						
WRAB	**Tennant Creek**	**63.39**	**192**	*e*P	**P**	**14 19 51.6**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
C09A	**Chrisman Ranch**	**63.40**	**49**	*e*P	**P**	**14 19 52.3**	**+0.5**
	comp=Z,15nm,0.9s						
WB2	**Warramunga Arr**	**63.40**	**192**	*e*P	**P**	**14 19 51.6**	**-0.3**
	comp=Z,15nm,0.9s						
WR1	**Warramunga Arr**	**63.40**	**192**	*e*P	**P**	**14 19 51.5**	**-0.4**
WRA	**Warramunga Arr**	**63.40**	**192**	P	**P**	**14 19 51.5**	**-0.5**
	comp=Z,6.9nm,0.7s,baz=7.0,slow=7.6,SNR=38						
D08A	**Wollman Farm,**	**63.47**	**50**	*e*P	**P**	**14 19 52.4**	**+0.2**
	comp=Z,11nm,0.8s						
HAWA	**Hanford**	**63.51**	**50**	*e*P	**P**	**14 19 52.5**	**+0.1**
	comp=Z,13nm,0.8s						
L02E	**Cave Junction**	**63.54**	**56**	P	**P**	**14 19 54.4**	**+1.6**
	baz=305						
LOF	**Lofoten**	**63.56**	**342**	*e*P	**P**	**14 19 51.8**	**-0.6**
F07A	**Phinny Hill Vi**	**63.57**	**51**	*e*P	**P**	**14 19 53.3**	**+0.4**
	comp=Z,24nm,0.8s						
E08A	**Dider Farm, El**	**63.72**	**50**	*e*P	**P**	**14 19 54.6**	**+0.7**
	comp=Z,16nm,1.0s						
NEW	**Newport**	**63.76**	**48**	*e*P	**P**	**14 19 54.5**	**+0.4**
	comp=Z,20nm,1.0s						
NEW	**Newport**	**63.76**	**48**	*e*P	**P**	**14 19 54.5**	**+0.4**
NEW				pmax	pmax		
	comp=Z,19nm,1.0s						
NEW	**Newport**	**63.76**	**48**	P	**P**	**14 19 55.0**	**+0.8**
	baz=306						
GEYT	**Alibeck**	**63.79**	**298**	P	**P**	**14 19 53.7**	**-0.8**
	comp=Z,101nm,0.4s,baz=56,slow=4.6,SNR=17						
GEYT				LR	LR	14 50 01.9	
	comp=Z,1µm,18.1s,baz=55,slow=38						
GYA0B	**ALIBECK ARRAY**	**63.79**	**298**	*e*P	**P**	**14 19 54.1**	**-0.4**
	comp=Z,53nm,1.0s						
J04D	**Umpqua Nationa**	**63.83**	**54**	P	**P**	**14 19 56.2**	**+1.4**
	baz=305						
PINE	**Pine Mountain**	**64.20**	**53**	*e*P	**P**	**14 19 58.3**	**+0.9**
	comp=Z,24nm,0.9s						
KHMM	**Horse Mountain**	**64.20**	**57**	*e*P	**P**	**14 19 59.2**	**+1.9**
	comp=Z,62nm,1.2s						
E09A	**Wood Farm, Sta**	**64.22**	**50**	*e*P	**P**	**14 19 58.1**	**+1.0**
	comp=Z,23nm,0.9s						
L04D	**Klamath Falls**	**64.30**	**55**	P	**P**	**14 19 59.2**	**+1.3**
	baz=306,SNR=5.1						
J05D	**Fort Rock, OR**	**64.32**	**54**	P	**P**	**14 19 59.8**	**+1.8**
	baz=306						
YBH	**Yreka Blue Hor**	**64.33**	**56**	*e*P	**P**	**14 19 58.9**	**+0.8**
	comp=Z,19nm,1.0s						
YBH	**Yreka Blue Hor**	**64.33**	**56**	*e*P	**P**	**14 19 58.9**	**+0.8**
YBH				pmax	pmax		
	comp=Z,19nm,1.0s						
MOS	**Moscow**	**64.40**	**323**	*e*P	**P**	**14 19 56.5**	**-1.6**
MOS				*e*		14 20 19.9	
M02C	**Callahan**	**64.44**	**56**	P	**P**	**14 20 00.5**	**+1.8**
	baz=306						
G08A	**Pilot Rock**	**64.48**	**51**	*e*P	**P**	**14 19 59.2**	**+0.2**
	comp=Z,9.0nm,1.3s						
SUMG	**Summit**	**64.76**	**1**	*e*P	**P**	**14 20 00.8**	**+0.1**
	comp=Z,65nm,0.7s						
SUMG	**Summit**	**64.76**	**1**	⇑*i*P	**P**	**14 20 01.0**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,160nm,0.6s						
SUMG	**Summit**	**64.76**	**1**	⇑*i*P	**P**	**14 20 01.0**	**+0.3**
	comp=Z,159nm,0.6s						
N02D	**Trinity Center**	**64.78**	**57**	P	**P**	**14 20 02.7**	**+1.7**
	baz=306						
M04C	**Macdoel**	**64.83**	**56**	P	**P**	**14 20 03.0**	**+1.6**
	baz=306,SNR=5.8						
KONS	**Konsvik**	**64.97**	**341**	*e*P	**P**	**14 20 01.2**	**-0.4**
WALA	**Waterton Lakes**	**65.00**	**46**	*e*P	**P**	**14 20 02.6**	**+0.2**
	comp=Z,15nm,1.0s						
F10A	**Beach Ranch, E**	**65.05**	**50**	*e*P	**P**	**14 20 03.1**	**+0.4**
	comp=Z,12nm,1.0s						
FIA1	**FINESS Array S**	**65.06**	**333**	*e*P	**P**	**14 20 01.5**	**-0.8**
	comp=Z,89nm,0.6s						
FIA0	**FINESS Array S**	**65.06**	**333**	*e*P	**P**	**14 20 01.6**	**-0.7**
FIA0	**FINESS Array S**	**65.06**	**333**	*e*P	**P**	**14 20 01.6**	**-0.7**
FINES	**FINESS Array B**	**65.06**	**333**	P	**P**	**14 20 01.6**	**-0.7**
	comp=Z,83nm,0.7s,baz=46,slow=7.4,SNR=303						
FINES				LR	LR	14 50 52.1	
	comp=Z,262nm,21.2s,baz=66,slow=38						
WDC	**Whiskeytown Da**	**65.11**	**57**	*e*P	**P**	**14 20 03.9**	**+0.9**
	comp=Z,26nm,1.2s						
WDC	**Whiskeytown Da**	**65.11**	**57**	*e*P	**P**	**14 20 03.9**	**+0.9**
WDC				pmax	pmax		
	comp=Z,26nm,1.2s						
STOK	**Stokkvaagen**	**65.13**	**341**	*e*P	**P**	**14 20 02.6**	**-0.1**
O02D	**Mt. Diablo Mer**	**65.19**	**58**	P	**P**	**14 20 05.4**	**+1.7**
	baz=306						
OBN	**Obninsk**	**65.27**	**323**	*e*P	**P**	**14 20 02.6**	**-1.1**
	comp=Z,77nm,1.0s						
OBN	**Obninsk**	**65.27**	**323**	*c i*P	**P**	**14 20 02.9**	**-0.8**
OBN				*e*		14 20 34.8	
OBN				*e*		14 22 29.2	
OBN				pmax	pmax		
	comp=Z,106nm,1.3s						
OBN				MLR	MLR		
	comp=Z,255nm,16.0s						
OBN	**Obninsk**	**65.27**	**323**	*e*P	**P**	**14 20 02.9**	**-0.8**
BMO	**Blue Mountains**	**65.68**	**51**	*e*P	**P**	**14 20 07.2**	**+0.4**
	comp=Z,6.9nm,0.8s						
BMO	**Blue Mountains**	**65.68**	**51**	*e*P	**P**	**14 20 07.2**	**+0.4**
BMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MOD	**Modoc Plateau**	**65.69**	**55**	*e*P	**P**	**14 20 07.8**	**+0.9**
	comp=Z,12nm,1.0s						
O03E	**Paynes Creek**	**65.73**	**57**	P	**P**	**14 20 08.0**	**+0.8**
	baz=307,SNR=6.8						
LPSR	**Galich'ya Gora**	**65.80**	**320**	*e*P	**P**	**14 20 06.4**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,130nm,0.8s						
J08A	**Circle Bar Ran**	**65.90**	**53**	*e*P	**P**	**14 20 09.1**	**+0.8**
	comp=Z,21nm,1.1s						
PLID	**Pearl Lake**	**66.28**	**50**	*e*P	**P**	**14 20 11.1**	**+0.3**
	comp=Z,24nm,1.1s						
MSO	**Missoula**	**66.35**	**47**	*e*P	**P**	**14 20 11.2**	**+0.2**
	comp=Z,29nm,1.3s						
MSO	**Missoula**	**66.35**	**47**	P	**P**	**14 20 11.7**	**+0.6**
	baz=308,SNR=5.6						
ORV	**Oroville**	**66.36**	**57**	*e*P	**P**	**14 20 11.2**	**+0.1**
	comp=Z,17nm,1.0s						
ORV	**Oroville**	**66.36**	**57**	*e*P	**P**	**14 20 11.2**	**+0.1**
ORV				pmax	pmax		
	comp=Z,17nm,1.0s						
WVOR	**Wild Horse Val**	**66.36**	**54**	*e*P	**P**	**14 20 11.7**	**+0.4**
	comp=Z,16nm,1.1s						
WVOR	**Wild Horse Val**	**66.36**	**54**	*e*P	**P**	**14 20 11.7**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,16nm,1.1s						
SCO	**Scoresbysund**	**66.53**	**355**	*i* P	**P**	**14 20 11.5**	**-0.2**
SCO				pmax	pmax		
	comp=Z,11nm,0.7s						
SCO	**Scoresbysund**	**66.53**	**355**	*i* P	**P**	**14 20 11.5**	**-0.2**
	comp=Z,11nm,0.7s						
VSR	**Storozhevoye**	**66.58**	**319**	*e*P	**P**	**14 20 11.7**	**-0.6**
VSR				pmax	pmax		
	comp=Z,170nm,0.6s						
VORD	**Divnogorie**	**66.67**	**319**	*e*P	**P**	**14 20 11.9**	**-1.0**
VORD				pmax	pmax		
	comp=Z,120nm,0.9s						
PALK	**Pallekele**	**66.71**	**258**	P	**P**	**14 20 13.3**	**-0.4**
	comp=Z,16nm,0.8s,baz=115,slow=6.3,SNR=3.6						
PALK	**Pallekele**	**66.71**	**258**	*e*P	**P**	**14 20 13.3**	**-0.4**
	comp=Z,118nm,1.6s						
PALK	**Pallekele**	**66.71**	**258**	*e*P	**P**	**14 20 13.3**	**-0.4**
PALK				pmax	pmax		
	comp=Z,118nm,1.6s						
NSS	**Namsos**	**66.85**	**340**	*e*P	**P**	**14 20 13.8**	**0.0**
BEKR	**Beckworth**	**66.88**	**57**	*e*P	**P**	**14 20 14.1**	**-0.5**
	comp=Z,27nm,0.9s						
VSU	**Vasula**	**66.96**	**330**	*e*P	**P**	**14 20 12.7**	**-1.8**
VSU				IAmb	IAmb	14 20 14.8	
	comp=Z,178nm,0.7s						
VSU	**Vasula**	**66.96**	**330**	*c i*P	**P**	**14 20 13.9**	**-0.6**
VSU				pmax	pmax		
	comp=Z,178nm,1.0s						
AFDM	**Forest Hills D**	**67.05**	**58**	*e*P	**P**	**14 20 14.9**	**-0.6**
	comp=Z,12nm,1.0s						
FFC	**Flin Flon**	**67.06**	**36**	*e*P	**P**	**14 20 14.8**	**-0.5**
	comp=Z,287nm,0.8s						
FFC	**Flin Flon**	**67.06**	**36**	*i* P	**P**	**14 20 16.0**	**+0.7**
AS31	**Alice Springs**	**67.12**	**192**	*e*P	**P**	**14 20 16.5**	**+0.5**
	comp=Z,3.8nm,0.8s						
ASAR	**Alice Springs**	**67.13**	**192**	P	**P**	**14 20 16.8**	**+0.8**
	comp=Z,8.4nm,0.7s,baz=7.5,slow=5.7,SNR=106						
ASAR				PKPPKP		14 48 45.0	
	comp=Z,0.5nm,0.6s,baz=189,slow=3.8,SNR=6.7						
MAK	**Makhachkala**	**67.32**	**308**	*e*P	**P**	**14 20 15.4**	**-1.7**
MAK				*e*		14 22 43.4	
MAK				*e*S	**S**	**14 29 08.5**	**-0.9**
MAK				*e*SS	**SS**	**14 33 30.2**	**+1.4**
MAK				pmax	pmax		
	comp=Z,157nm,1.2s						
MAK				MLR	MLR		
	comp=Z,108nm,15.0s						
DZM	**Mont Dzumac**	**67.49**	**159**	*e*LR	LR	14 40 41.3	
	comp=Z,356nm,23.6s						
RUBR	**Rubicon Trail**	**67.50**	**57**	*e*P	**P**	**14 20 18.2**	**-0.4**
	comp=Z,30nm,0.7s						
ILULI	**Ilulissat**	**67.50**	**6**	*e*P	**P**	**14 20 17.0**	**-0.8**
	comp=Z,44nm,0.9s						
ILULI	**Ilulissat**	**67.50**	**6**	⇑*i*P	**P**	**14 20 17.2**	**-0.6**
ILULI				pmax	pmax		
	comp=Z,42nm,0.9s						
ILULI	**Ilulissat**	**67.50**	**6**	⇑*i*P	**P**	**14 20 17.2**	**-0.6**
	comp=Z,42nm,0.9s						
HRY	**Holter Researc**	**67.55**	**47**	*e*P	**P**	**14 20 18.9**	**+0.1**
PAHR	**Pah Rah Range**	**67.57**	**56**	*e*P	**P**	**14 20 19.4**	**+0.4**
	comp=Z,26nm,1.0s						
EGMT	**Eagleton**	**67.81**	**45**	*e*P	**P**	**14 20 20.4**	**+0.2**
	comp=Z,19nm,0.8s						
EGMT	**Eagleton**	**67.81**	**45**	P	**P**	**14 20 20.9**	**+0.6**
	baz=310,SNR=14						
PNTR	**Pine Nut**	**67.81**	**57**	*e*P	**P**	**14 20 21.1**	**+0.5**

	comp=Z,33nm,0.9s						
DLMT	Dillon	67.99	48	eP	P	14 20 22.2	+0.7
	comp=Z,48nm,1.5s						
YERR	Yerington	68.10	57	eP	P	14 20 23.3	+0.9
	comp=Z,40nm,0.9s						
AKT	Akhty	68.10	307	eP	P	14 20 22.4	+0.1
AKT				e		14 20 47.0	
AKT				pmax	pmax		
	comp=Z,49nm,0.6s						
HLID	Hailey	68.11	50	eP	P	14 20 22.9	+0.5
	comp=Z,12nm,1.1s						
HLID	Hailey	68.11	50	P	P	14 20 23.5	+1.1
	baz=309,SNR=11						
MCMT	McKenzie Canyo	68.19	49	eP	P	14 20 23.2	+0.3
WAKR	Walker	68.27	57	eP	P	14 20 24.6	+1.1
	comp=Z,19nm,1.0s						
BOZ	Bozeman (W)	68.37	47	eP	P	14 20 24.6	+0.7
	comp=Z,47nm,1.4s						
BOZ	Bozeman (W)	68.37	47	eP	P	14 20 24.6	+0.7
BOZ				pmax	pmax		
	comp=Z,47nm,1.4s						
BOZ	Bozeman (W)	68.37	47	P	P	14 20 25.0	+1.0
	baz=310,SNR=40						
PSA00	Pilbara Seismi	68.41	206	eP	P	14 20 23.9	-0.2
	comp=Z,20nm,0.8s						
BMN	Battle Mountai	68.43	55	eP	P	14 20 25.5	+1.1
	comp=Z,22nm,1.2s						
BMN	Battle Mountai	68.43	55	eP	P	14 20 25.5	+1.1
BMN				pmax	pmax		
	comp=Z,22nm,1.2s						
GOF	Gofitskoye	68.52	312⇑	eP	P	14 20 24.3	-0.3
KVN	Kaiserville	68.76	56	eP	P	14 20 27.0	+0.5
	comp=Z,31nm,0.9s						
KVN	Kaiserville	68.76	56	eP	P	14 20 27.0	+0.5
KVN				pmax	pmax		
	comp=Z,31nm,0.9s						
RYN	Ryan	68.76	57	eP	P	14 20 27.1	+0.6
	comp=Z,18nm,0.9s						
QLMT	Earthquake Lak	68.97	48	eP	P	14 20 28.5	+0.8
NV01	Mina Array Sit	69.02	57	eP	P	14 20 29.6	+1.4
NVAR	Mina Array Bea	69.02	57	P	P	14 20 29.6	+1.4
	comp=Z,13nm,0.8s,baz=290,slow=6.6,SNR=90						
NVAR				LR	LR	14 48 42.5	
	comp=Z,30nm,21.0s,baz=274,slow=34						
OMMB	Old Mammoth Mi	69.09	58	eP	P	14 20 29.4	+0.6
	comp=Z,26nm,1.5s						
IZAR	Zarasai	69.10	328	eP	P	14 20 27.9	-0.2
IZAR				IAmb	IAmb	14 20 29.1	
	comp=Z,45nm,0.7s						
NV11	Mina Array Sit	69.11	57	eP	P	14 20 29.1	+0.5
	comp=Z,1.3nm,0.9s						
YHB	Horse Butte	69.15	48	eP	P	14 20 29.6	+0.7
	comp=Z,22nm,1.0s						
SLIT	Slitere, Latvi	69.17	331	eP	P	14 20 26.8	-1.6
SLIT				IAmb	IAmb	14 20 28.3	
	comp=Z,381nm,0.6s						
NCK	Nalchik	69.21	310⇓	iP	P	14 20 29.6	+0.6
NCK				pmax	pmax		
	comp=Z,66nm,0.9s						
IDID	Didziasalis	69.23	328	eP	P	14 20 28.8	-0.1
IDID				IAmb	IAmb	14 20 30.1	
	comp=Z,36nm,0.8s						
ISAL	Salakas	69.28	328	eP	P	14 20 29.1	-0.1
ISAL				IAmb	IAmb	14 20 30.5	
	comp=Z,52nm,0.7s						
GCMT	Greycliff	69.30	46	eP	P	14 20 30.2	+0.5
YHH	Holmes Hill	69.31	48	eP	P	14 20 30.5	+0.6
	comp=Z,12nm,1.0s						
YMR	Madison River	69.33	48	eP	P	14 20 31.0	+1.0
	comp=Z,15nm,1.0s						
MICGM	Minsk	69.36	326⇑	eP	P	14 20 29.0	-0.7
MICGM				PM		14 20 30.0	
	comp=Z,0.4nm,1.0s						
MICGM				eLR	LR	14 51 44.0	
MNK	Minsk	69.36	326	eP	P	14 20 29.0	-0.7
IIGN	Ignalina	69.40	328	eP	P	14 20 29.9	0.0
IIGN				IAmb	IAmb	14 20 31.2	
	comp=Z,65nm,0.7s						
ELK	Elko	69.41	53	eP	P	14 20 31.3	+0.7
	comp=Z,4.3nm,0.9s						
KIV	Kislovodsk	69.42	311	eP	P	14 20 30.7	+0.3
	comp=Z,114nm,0.7s						
KIV	Kislovodsk	69.42	311⇓	iP	P	14 20 31.3	+0.9
KIV	Kislovodsk	69.42	311	i P	P	14 20 30.9	+0.4
	SNR=28						
KIV	Kislovodsk	69.42	311	eP	P	14 20 30.8	+0.4
KIV				MLR	MLR		
	comp=Z,403nm,17.0s						
KIV	Kislovodsk	69.42	311	P	P	14 20 31.2	+0.9
	SNR=32						
KIV	Kislovodsk	69.42	311	eP	P	14 20 30.8	+0.4
KBZ	Khabaz	69.45	311	P	P	14 20 31.0	+0.6
	comp=Z,78nm,0.8s,baz=57,slow=4.5,SNR=112						
KBZ				LR	LR	14 54 25.7	
	comp=Z,262nm,19.0s,baz=44,slow=39						
KBZ	Khabaz	69.45	311	P	P	14 20 31.0	+0.6
PAGB	Antelope Grade	69.48	60	eP	P	14 20 30.8	-0.1
	comp=Z,29nm,1.0s						
NACGM	Naroch	69.51	327	eP	P	14 20 19.0	-12
NACGM				PM		14 20 20.0	
	comp=Z,0.3nm,1.0s						
NACGM				eLR	LR	14 52 02.0	
MOL	Molde	69.58	341	eP	P	14 20 30.8	-0.1
DOMB	Dombas	69.66	340	eP	P	14 20 30.5	-1.0
YPP	Pitchstone Pla	69.67	48	eP	P	14 20 33.1	+0.9
	comp=Z,13nm,1.2s						
TBLG	Delisi	69.69	308	eP	P	14 20 32.4	+0.4
	comp=Z,97nm,1.0s						
SFJD	Kangerlussuaq	69.71	7	eP	P	14 20 30.8	-0.8
	comp=Z,68nm,1.4s						
SFJD	Kangerlussuaq	69.71	7⇑	iP	P	14 20 31.1	-0.5
SFJD	Kangerlussuaq	69.71	7⇑	iP	P	14 20 31.1	-0.5
H17A	Grant Village	69.72	48	eP	P	14 20 33.9	+1.4
	comp=Z,33nm,1.1s						
H17A	Grant Village	69.72	48	P	P	14 20 34.7	+2.3
	baz=311,SNR=10						
NC405	NORSAR Array S	69.73	338	eP	P	14 20 31.4	-0.5
	comp=Z,110nm,0.7s						
NC303	NORSAR Array S	69.73	338	eP	P	14 20 31.4	-0.5
	comp=Z,120nm,0.9s						
IMW	Indian Meadow	69.84	48	eP	P	14 20 33.9	+0.7
	comp=Z,23nm,1.1s						
FLWY	Flagg Ranch	69.85	48	eP	P	14 20 34.5	+1.3
	comp=Z,43nm,1.6s						
NEY	Neytrino	69.85	311⇓	eP	P	14 20 34.0	+0.8
NEY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NC204	NORSAR Array S	69.86	339	eP	P	14 20 32.0	-0.7
	comp=Z,120nm,0.7s						
NB201	NORSAR Array S	69.90	338	eP	P	14 20 32.4	-0.6
	comp=Z,138nm,0.8s						
NB2	NORSAR Subarra	69.93	338	P	P	14 20 32.4	-0.8
	comp=Z,89nm,0.9s,baz=33,slow=6.5						
NB2	NORSAR Subarra	69.93	338	P	P	14 20 32.4	-0.8
	baz=33,slow=6.5						
NB200	NORSAR Array S	69.93	338	eP	P	14 20 32.6	-0.5
NOA	NORSAR Array B	69.93	338	P	P	14 20 32.6	-0.5
	comp=Z,45nm,0.7s,baz=34,slow=6.1,SNR=201						
NOA				LR	LR	14 55 03.3	
	comp=Z,224nm,20.2s,baz=20,slow=39						
RLMT	Red Lodge	69.95	47	eP	P	14 20 34.7	+0.9
	comp=Z,19nm,1.3s						
RLMT	Red Lodge	69.95	47	P	P	14 20 34.9	+1.2
	baz=311,SNR=7.7						
FXWY	Fox Creek	69.96	49	eP	P	14 20 34.6	+0.7
	comp=Z,24nm,1.3s						
MOOW	Moose Ponds	70.04	49	eP	P	14 20 35.0	+0.6
	comp=Z,23nm,1.1s						
AKN	Aaknes	70.05	341	eP	P	14 20 33.8	-0.1
NBO00	NORSAR Array S	70.06	338	eP	P	14 20 33.5	-0.4
	comp=Z,124nm,0.8s						
NC602	NORSAR Array S	70.09	338	eP	P	14 20 33.1	-1.0
	comp=Z,40nm,1.0s						
NC602	NORSAR Array S	70.09	338	eP	P	14 20 33.1	-1.0
TPAW	Teton Pass	70.10	49	eP	P	14 20 35.5	+0.7
	comp=Z,38nm,1.3s						
HVU	Hansel Valley	70.18	51	eP	P	14 20 35.6	+0.4
	comp=Z,8.8nm,0.9s						
HVU	Hansel Valley	70.18	51	eP	P	14 20 35.6	+0.4
HVU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NAO01	NORSAR Array S	70.18	338	eP	P	14 20 33.7	-1.0
	comp=Z,76nm,0.8s						
LOHW	Long Hollow	70.21	49	eP	P	14 20 35.6	+0.1
	comp=Z,29nm,1.5s						
SNOW	Snow King Moun	70.22	49	eP	P	14 20 36.8	+1.3
	comp=Z,13nm,0.9s						
PKM	Mcpherson Peak	70.28	61	P	P	14 20 37.3	+1.3
	baz=309						
DGMT	Dagmar	70.30	42	eP	P	14 20 36.1	+0.4
	comp=Z,34nm,0.7s						
DGMT	Dagmar	70.30	42	P	P	14 20 36.0	+0.4
	baz=313,SNR=8.5						
CWC	Cottonwood Cre	70.40	58	P	P	14 20 37.8	+1.1
	baz=310						
LAO	LASA Array	70.49	44	P	P	14 20 37.9	+0.9
	baz=312						
GRAC	Grapevine Rang	70.50	57	P	P	14 20 38.5	+1.5
	baz=310,SNR=14						
BGU	Big Grassy Mou	70.58	52	eP	P	14 20 38.6	+1.0
	comp=Z,12nm,1.4s						
AKH	Akhalkalaki	70.61	309	eP	P	14 20 38.7	+0.8
	comp=Z,20nm,0.8s						
AKH	Akhalkalaki	70.61	309⇑	iP	P	14 20 39.0	+1.2
ISA	Isabella, Lake	70.65	59	P	P	14 20 38.8	+0.8
	baz=310						
GNI	Garni	70.70	307	eP	P	14 20 38.6	+0.2
	comp=Z,145nm,1.6s						
GNI	Garni	70.70	307c	iP	P	14 20 39.5	+1.1
GNI				pmax	pmax		
	comp=Z,267nm,1.3s						
GNI	Garni	70.70	307	P	P	14 20 40.2	+1.8
	SNR=5.7						
R11A	Troy Canyon, C	70.72	55	eP	P	14 20 39.3	+0.7
	comp=Z,16nm,1.1s						
R11A	Troy Canyon, C	70.72	55	P	P	14 20 39.7	+1.1
	baz=310,SNR=20						
DAC	Darwin (Calif)	70.81	58	eP	P	14 20 41.2	+2.0
	comp=Z,20nm,1.3s						
DAC	Darwin (Calif)	70.81	58	eP	P	14 20 41.2	+2.0
DAC				pmax	pmax		
	comp=Z,20nm,1.3s						
HWUT	Hardware Ranch	70.98	51	eP	P	14 20 41.0	+0.9
	comp=Z,34nm,1.4s						
SKAR	Skarslia	71.01	339	eP	P	14 20 39.5	-0.2
MPMC	Manual Prospec	71.02	58	P	P	14 20 41.5	+1.0
	baz=310,SNR=11						
HYA	Hoyanger	71.12	340	eP	P	14 20 40.3	-0.1
FURC	Furnace Creek,	71.14	58	P	P	14 20 42.3	+1.4
	baz=310,SNR=16						
DUG	Dugway, Tooele	71.18	52	eP	P	14 20 42.3	+1.0
	comp=Z,26nm,1.1s						
DUG	Dugway, Tooele	71.18	52	P	P	14 20 42.5	+1.2
	baz=311,SNR=17						
TPNV	Topopah Spring	71.22	57	eP	P	14 20 42.5	+0.9
	comp=Z,33nm,1.0s						
TPNV	Topopah Spring	71.22	57	P	P	14 20 42.7	+1.1
	baz=310,SNR=32						
BW06	Boulder Array	71.34	49	eP	P	14 20 42.5	+0.2
	comp=Z,14nm,0.9s						
BW06	Boulder Array	71.34	49	P	P	14 20 42.9	+0.6
	baz=312,SNR=31						
PD31	Pinedale Array	71.34	49	eP	P	14 20 43.0	+0.6
PDAR	Pinedale Array	71.34	49	P	P	14 20 43.0	+0.6
	comp=Z,7.6nm,0.5s,baz=244,slow=1.3,SNR=91						
KARS	Kars	71.35	308	eP	P	14 20 42.9	+0.5
TCUT	Toone Canyon	71.39	51	eP	P	14 20 43.3	+0.6
	comp=Z,74nm,1.5s						
EDW2	Edwards Air Fo	71.45	60	P	P	14 20 43.9	+1.0
	baz=310,SNR=6.6						
BATM	Batumi	71.50	310⇓	iP	P	14 20 43.7	+0.7
AKASG	Malin Array Be	71.53	323	P	P	14 20 42.5	-0.5
	comp=Z,85nm,0.6s,baz=41,slow=6.1,SNR=319						
AKASG				LR	LR	14 54 56.8	
	comp=Z,248nm,19.9s,baz=70,slow=38						
AKBB	Malin Array Si	71.53	323	eP	P	14 20 42.2	-0.8
	comp=Z,110nm,0.8s						
AKBB	Malin Array Si	71.53	323	eP	P	14 20 42.2	-0.8
AKBB				pmax	pmax		
	comp=Z,110nm,0.8s						
KONO	Kongsberg	71.54	338	eP	P	14 20 42.4	-0.5
	comp=Z,19nm,0.8s						
KONO	Kongsberg	71.54	338⇑	eP	P	14 20 42.2	-0.7
KONO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KONO	Kongsberg	71.54	338	eP	P	14 20 42.0	-0.9
SUE	Sulen	71.56	341	eP	P	14 20 43.2	+0.2
SUW	Suwalki	71.58	328	eP	P	14 20 42.5	-0.7
SUW	Suwalki	71.58	328	eP	P	14 20 42.2	-1.0
	comp=Z,204nm,1.2s						
SUW	Suwalki	71.58	328	eP	P	14 20 42.2	-1.0
SUW				pmax	pmax		
	comp=Z,204nm,1.2s						
DECC	Green Verdugo	71.63	60	P	P	14 20 45.4	+1.5
	baz=310						
PSUT	Pine Spring	71.65	54	eP	P	14 20 44.2	0.0
	comp=Z,13nm,1.1s						
BCA	Borcka	71.65	310⇑	iP	P	14 20 44.1	+0.2
ANN	Anapa	71.69	315	eP	P	14 20 42.9	-1.1
ANN				e*PP	pP	14 20 52.8	-3.2
ANN				e		14 21 00.3	
ANN				eS	S	14 30 00.4	-0.3
ANN				eSSS	SSS	14 37 49.8	
ANN				pmax	pmax		
	comp=Z,137nm,0.8s						
JLU	Jordanelle	71.70	51	eP	P	14 20 45.1	+0.5
	comp=Z,24nm,1.4s						
ANGG	Ammassalik, Gr	71.76	1	eP	P	14 20 43.0	-1.1
	comp=Z,22nm,0.7s						
NLU	North Lily Min	71.77	52	eP	P	14 20 44.8	-0.1
	comp=Z,16nm,1.2s						
SHOC	Shoshone, Teco	71.87	58	P	P	14 20 46.9	+1.5
	baz=310						
GSC	Goldstone, Bar	71.92	59	eP	P	14 20 46.1	+0.3
	comp=Z,19nm,1.2s						
GSC	Goldstone, Bar	71.92	59	eP	P	14 20 46.1	+0.3
GSC				pmax	pmax		
	comp=Z,19nm,1.2s						
GSC	Goldstone, Bar	71.92	59	P	P	14 20 47.0	+1.2
	baz=310						
ASK	Askoy	71.96	341	eP	P	14 20 45.5	+0.1
MPU	Maple Canyon	71.98	52	eP	P	14 20 46.9	+0.7
	comp=Z,12nm,0.8s						
BER	Bergen	72.01	340	eP	P	14 20 45.9	+0.2
BFSC	Mount Baldy Ra	72.07	60	P	P	14 20 47.5	+0.8
	baz=310						
ODD1	Odda	72.10	340	eP	P	14 20 46.3	0.0
CIS	Catalina Islan	72.12	61	P	P	14 20 47.5	+0.6
	baz=310						
BORG	Borgarnes	72.17	354	eP	P	14 20 47.8	+1.2
	comp=Z,105nm,1.4s						
BORG	Borgarnes	72.17	354	eP	P	14 20 47.8	+1.2
BORG				pmax	pmax		
	comp=Z,105nm,1.4s						
SHPR	Sheep Range	72.17	57	eP	P	14 20 48.5	+1.1
	comp=Z,21nm,1.0s						
KLNR	Kaliningrad	72.24	330c	eP	P	14 20 46.5	-0.7
KLNR				pmax	pmax		
	comp=Z,165nm,0.6s						
BANOM	Banah	72.30	289	i P	P	14 20 48.1	0.0
	SNR=6.3						
SHME	Shamm	72.33	289	i P	P	14 20 47.9	-0.4
	SNR=16						
TUQ	Turquoise Moun	72.39	58	P	P	14 20 49.8	+1.2
	baz=311,SNR=9.0						
HEC	Hector,Ludlow	72.52	59	P	P	14 20 50.4	+1.0
	baz=311,SNR=7.5						
BIDO	Bidbid	72.55	286	P	P	14 20 51.0	+1.5
	SNR=5.8						
BLS5	Blasjo	72.57	339	eP	P	14 20 48.7	-0.4
CCUT	Cedar City	72.58	55	eP	P	14 20 50.2	+0.4
	comp=Z,26nm,1.5s						
MSU	Marysvale	72.66	53	eP	P	14 20 51.3	+1.0
TMUT	Trail Mountain	72.70	52	eP	P	14 20 51.0	+0.4
	comp=Z,22nm,1.4s						
SZCU	Shurtz Canyon	72.72	55	eP	P	14 20 51.3	+0.7
	comp=Z,8.6nm,0.9s						
MSFE	Esma-Masafi	72.76	289	i P	P	14 20 50.7	-0.1
	SNR=10						
MURC	Murrieta	72.77	60	P	P	14 20 52.0	+1.2
	baz=311						
P17A	Butcher Ranch,	72.86	52	eP	P	14 20 51.9	+0.5
	comp=Z,54nm,1.6s						
ULM	Lac du Bonnet	72.86	36	P	P	14 20 50.8	-0.2
	comp=Z,11nm,0.7s,baz=317,slow=7.9,SNR=9.6						
ULM				LR	LR	14 55 21.2	
	comp=Z,79nm,19.7s,baz=40,slow=38						
ULM	Lac du Bonnet	72.86	36	eP	P	14 20 50.7	-0.3
	comp=Z,14nm,0.8s						
MDND	Maddock	72.93	40	P	P	14 20 52.1	+0.6
	baz=316						
MTPU	Mount Pierson	72.96	54	eP	P	14 20 53.2	+0.9
	comp=Z,14nm,1.0s						
GMRC	Granite Mounta	72.98	58	P	P	14 20 53.2	+1.1
	baz=311,SNR=6.2						
UOSS	Minazif	72.99	288	eP	P	14 20 51.6	-0.5
	comp=Z,50nm,0.8s						
UOSS	Minazif	72.99	288	i P	P	14 20 51.9	-0.2
	SNR=14						
UOSS	Minazif	72.99	288	P	P	14 20 51.4	-0.7
	SNR=5.2						
KTUT	Trabzon	73.00	310⇑	iP	P	14 20 51.7	-0.2
LCMT	Little Creek M	73.00	55	eP	P	14 20 53.5	+1.2
	comp=Z,19nm,1.0s						
KMY	Karmoy	73.06	340	eP	P	14 20 51.9	0.0
K22A	Casper	73.07	47	eP	P	14 20 52.7	+0.1
	comp=Z,44nm,1.3s						
K22A	Casper	73.07	47	P	P	14 20 53.0	+0.4
	baz=313,SNR=11						
HATD	Hatta, Dubai	73.12	288	i P	P	14 20 53.1	+0.2
	SNR=11						
HATD	Hatta, Dubai	73.12	288	P	P	14 20 53.2	+0.2
	SNR=5.5						
LDFC	Landfair	73.13	58	eP	P	14 20 53.3	+0.4
	comp=Z,37nm,1.0s						
SRU	San Rafael Swe	73.22	52	eP	P	14 20 53.6	0.0
	comp=Z,20nm,1.1s						
SRU	San Rafael Swe	73.22	52	eP	P	14 20 53.6	0.0
SRU				pmax	pmax		
	comp=Z,20nm,1.1s						
PFO	Pinyon Flats O	73.23	60	eP	P	14 20 53.6	-0.1
	comp=Z,15nm,1.0s						
PFO	Pinyon Flats O	73.23	60	eP	P	14 20 53.6	-0.1
PFO				pmax	pmax		
	comp=Z,15nm,1.0s						
PFO	Pinyon Flats O	73.23	60	P	P	14 20 54.5	+0.9
	baz=311						
KNB	Kanab	73.26	55	eP	P	14 20 54.9	+1.1
	comp=Z,24nm,1.1s						
ASHO	Ashiyiah	73.26	288	i P	P	14 20 53.7	-0.1
	SNR=14						
ASHO	Ashiyiah	73.26	288	P	P	14 20 53.9	+0.1
	SNR=5.4						
BELC	Belle Mtn. Jos	73.27	59	P	P	14 20 54.4	+0.5
	baz=311						
SIM	Simferopol'	73.29	316c	eP	P	14 20 53.7	+0.1
SIM				pmax	pmax		
	comp=Z,72nm,0.9s						
SIM				MLR	MLR		
	comp=Z,150nm,16.0s						
SNART	Snartemo	73.31	339	eP	P	14 20 53.4	0.0
NAZ	Nazwa, Dubai	73.34	289	i P	P	14 20 54.0	-0.2
	SNR=8.3						
RWWY	Rawlins	73.36	48	eP	P	14 20 54.5	+0.1
	comp=Z,17nm,0.8s						
RSSD	Black Hills	73.37	45	eP	P	14 20 54.3	-0.1
	comp=Z,11nm,0.8s						
RSSD	Black Hills	73.37	45	eP	P	14 20 54.3	-0.1
RSSD				pmax	pmax		
	comp=Z,11nm,0.8s						
RSSD	Black Hills	73.37	45	P	P	14 20 54.6	+0.2
	baz=314						
FAQ	Al Faqa, Dubai	73.54	289	i P	P	14 20 55.1	-0.3
	SNR=13						
BSD	Bornholm Skovb	73.69	333⇑	iP	P	14 20 55.3	-0.4
BSD				pmax	pmax		
	comp=Z,76nm,0.8s						
BSD	Bornholm Skovb	73.69	333⇑	iP	P	14 20 55.3	-0.4
	comp=Z,76nm,0.8s						
BSY	Bisya	73.70	286	P	P	14 20 57.1	+0.7
	SNR=7.1						
BAR	Barrett	73.70	61	eP	P	14 20 56.1	-0.2
	comp=Z,18nm,0.9s						
IRM	Iron Mountain	73.71	58	P	P	14 20 57.2	+0.9
	baz=311,SNR=7.3						
MONP2	Monument Peak	73.72	60	P	P	14 20 57.3	+0.6
	baz=311						
ASUD	Al Ashush, Dub	73.80	289	i P	P	14 20 57.2	+0.3
	SNR=6.4						
O20A	White River Ci	73.84	50	eP	P	14 20 57.3	+0.1
	comp=Z,33nm,1.4s						
O20A	White River Ci	73.84	50	P	P	14 20 57.6	+0.4
	baz=313,SNR=5.6						
BC3	Big Chuckawall	73.84	59	P	P	14 20 58.1	+0.9
	baz=311						
W13A	Hualapai Mount	73.87	57	eP	P	14 20 57.6	+0.1
	comp=Z,15nm,1.1s						
ALNE	Al Ain	73.87	288	i P	P	14 20 57.2	-0.2
	SNR=20						
U15A	North Rim	73.96	55	eP	P	14 20 59.0	+0.9
	comp=Z,23nm,0.9s						
COP	Copenhagen	74.03	335	i P	P	14 20 57.7	0.0
COP				pmax	pmax		
	comp=Z,41nm,0.7s						
COP	Copenhagen	74.03	335	i P	P	14 20 57.7	0.0
	comp=Z,41nm,0.7s						
AJN	Ajban	74.08	289	i P	P	14 20 58.1	-0.4
	SNR=7.4						
IKP	In-Ko-Pah, Jac	74.08	60	P	P	14 20 59.6	+1.0
	baz=311						
SWSC	Sam W. Stewart	74.09	60	P	P	14 20 58.9	+0.4
	baz=311						
BEL	Belsk	74.18	328	eP	P	14 20 59.4	+0.7
BEL	Belsk	74.18	328	eP	P	14 20 59.4	+0.7
PDMCI	Parker Dam,Lak	74.24	58	P	P	14 21 00.6	+1.3
	baz=312						
MHTO	MHTO	74.28	284	P	P	14 21 00.5	+0.8
	SNR=10						
AGMN	Agassiz Nation	74.32	38	eP	P	14 20 58.8	-0.8
	comp=Z,17nm,0.8s						
AGMN	Agassiz Nation	74.32	38	P	P	14 20 59.0	-0.5
	baz=318,SNR=7.6						
Y12C	Blythe	74.36	58	eP	P	14 21 00.3	+0.2
	comp=Z,31nm,1.1s						
Y12C	Blythe	74.36	58	P	P	14 21 01.3	+1.2
	baz=312						
MUD	Monsted U'grnd	74.37	337	i P	P	14 20 59.3	-0.4
MUD				pmax	pmax		
	comp=Z,26nm,0.9s						
MUD	Monsted U'grnd	74.37	337	i P	P	14 20 59.3	-0.4
	comp=Z,26nm,0.9s						
KIS	Kishinev	74.41	321⇑	iP	P	14 20 59.0	-1.1
KIS	Kishinev	74.41	321	ePcP	PcP	14 21 08.5	-6.1
KIS				eL	L	14 52 22.0	
KIS				LRM	MLR	14 56 34.0	
	comp=Z,500nm,19.0s						
KIS	Kishinev	74.41	321⇑	iP	P	14 20 59.0	-1.1
KIS				e		14 21 08.5	
KIS				i		14 21 15.0	
KIS				e		14 21 24.0	
KIS				MLR	MLR		
	comp=Z,500nm,19.0s						
LVV	L'vov	74.42	325	eP	P	14 21 00.2	0.0
LVV				e		14 21 22.7	
LVV				eS	S	14 30 35.6	+3.9
LVV				ePS	PnS	14 30 53.5	-16
LVV				eSS	SS	14 35 22.1	+4.7
LVV				MLR	MLR		
	comp=N,100nm,16.0s						
LVV				MLR	MLR		
	comp=E,200nm,16.0s						
LVV				MLR	MLR		
	comp=Z,200nm,16.0s						
PV09	Paradox Valley	74.44	52	eP	P	14 21 01.3	+0.4
MILM	Milestii Mici	74.47	321⇑	iP	P	14 21 00.0	-0.4
PV21	Cone Mtn., Par	74.49	52	eP	P	14 21 01.6	+0.5
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	74.53	183	P	P	14 21 01.6	+0.9
	comp=Z,4.2nm,0.7s,baz=353,slow=5.4,SNR=12						
STKA				LR	LR	14 51 27.4	
	comp=Z,67nm,22.0s,baz=22,slow=34						
STKA	Stephens Creek	74.53	183	eP	P	14 21 01.6	+0.9
	comp=Z,4.8nm,1.5s						
PV23	Carpenter Ridg	74.54	52	eP	P	14 21 02.0	+0.6
	comp=Z,22nm,0.9s						
PV10	Paradox Valley	74.58	52	eP	P	14 21 02.6	+1.0
	comp=Z,30nm,0.8s						
PHWY	Pilot Hill	74.58	48	eP	P	14 21 01.5	-0.1
	comp=Z,7.8nm,1.0s						
PV14	Lion Creek, Pa	74.59	52	eP	P	14 21 02.0	+0.3
	comp=Z,66nm,1.5s						
N23A	Red Feather La	74.59	48	eP	P	14 21 01.9	+0.3
	comp=Z,29nm,1.2s						
N23A	Red Feather La	74.59	48	P	P	14 21 02.7	+1.0
	baz=314,SNR=7.4						
PV22	Blue Mesa, Par	74.61	52	eP	P	14 21 02.3	+0.6
	comp=Z,23nm,1.1s						
GLA	Glamis	74.63	59	epP	pP	14 21 15.2	+1.8
GLA	Glamis	74.63	59	P	P	14 21 02.9	+1.2
	baz=312,SNR=5.4						
PV20	West Nyswonger	74.64	52	eP	P	14 21 02.4	+0.5

	comp=Z,26nm,0.9s						
PV04	Paradox Valley	74.64	52	eP	P	14 21 02.5	+0.6
	comp=Z,21nm,0.9s						
PV19	Morning Glory	74.65	52	eP	P	14 21 02.5	+0.5
	comp=Z,26nm,0.9s						
PV17	East Wray Mesa	74.69	52	eP	P	14 21 02.8	+0.6
	comp=Z,32nm,0.9s						
PV16	Nyswonger Mesa	74.69	52	eP	P	14 21 02.7	+0.4
	comp=Z,27nm,1.1s						
PV11	David Mesa, Pa	74.72	52	eP	P	14 21 02.8	+0.4
	comp=Z,22nm,0.7s						
PV18	Skein Mesa, Pa	74.74	52	eP	P	14 21 03.1	+0.6
	comp=Z,44nm,1.3s						
PV05	Paradox Valley	74.74	52	eP	P	14 21 03.2	+0.7
	comp=Z,26nm,0.9s						
PV12	Saucer Basin,	74.75	52	eP	P	14 21 03.0	+0.4
	comp=Z,21nm,0.9s						
PV07	Paradox Valley	74.76	52	eP	P	14 21 03.0	+0.4
	comp=Z,20nm,1.3s						
PV03	Paradox Valley	74.77	52	eP	P	14 21 03.1	+0.4
	comp=Z,29nm,1.2s						
PV13	Radium Mtn., P	74.85	52	eP	P	14 21 03.5	+0.3
	comp=Z,30nm,1.1s						
PV02	Paradox Valley	74.87	52	eP	P	14 21 03.2	0.0
	comp=Z,10.0nm,0.8s						
DIKM	Dikmen	75.01	313	⇑iP	P	14 21 03.9	+0.2
FORT	Forrest	75.08	196	eP	P	14 21 05.1	+1.1
	comp=Z,60nm,0.7s						
KWP	Kalwaria Pacla	75.12	326	eP	P	14 21 04.8	+0.6
KWP	Kalwaria Pacla	75.12	326	eP	P	14 21 04.5	+0.3
	comp=Z,1µm,0.7s						
KWP	Kalwaria Pacla	75.12	326	eP	P	14 21 04.5	+0.3
WUAZ	Wupatki	75.13	55	eP	P	14 21 05.4	+0.7
	comp=Z,21nm,1.0s						
WUAZ	Wupatki	75.13	55	P	P	14 21 06.1	+1.4
	baz=312,SNR=8.9						
Y14A	Wickenburg	75.18	57	eP	P	14 21 05.5	+0.6
	comp=Z,20nm,0.9s						
SMCO	Snowmass	75.21	50	eP	P	14 21 05.4	0.0
	comp=Z,34nm,1.7s						
PRAR	RASCA	75.32	322	⇑iP	P	14 21 05.3	-0.1
BZK	Bozkurt	75.46	314	⇑iP	P	14 21 06.7	+0.5
BIR	Birlad	75.50	321	⇑iP	P	14 21 07.6	+1.2
ISCO	Idaho Springs	75.54	49	eP	P	14 21 07.8	+0.7
	comp=Z,22nm,1.4s						
ISCO	Idaho Springs	75.54	49	eP	P	14 21 07.8	+0.7
ISCO				pmax	pmax		
	comp=Z,22nm,1.4s						
ISCO	Idaho Springs	75.54	49	P	P	14 21 08.1	+1.0
	baz=314,SNR=6.5						
BUR08	Bucovina Ar. S	75.57	323	eP	P	14 21 07.0	+0.1
	comp=Z,67nm,0.6s						
BURAR	Bucovina Array	75.58	323	⇑iP	P	14 21 07.4	+0.4
IVI	Ivigtut	75.62	7	eP	P	14 21 06.1	-0.7
	comp=Z,30nm,0.7s						
MVCO	Mesa Verde	75.68	52	eP	P	14 21 08.5	+0.5
	comp=Z,39nm,1.5s						
MVCO	Mesa Verde	75.68	52	P	P	14 21 08.8	+0.8
	baz=314						
BIZ	Bicaz	75.69	322	⇓iP	P	14 21 08.1	+0.5
TLCR		75.74	319	⇓iP	P	14 21 07.0	-0.8
TESR	Tescani	75.77	321	⇑iP	P	14 21 08.2	+0.2
BIGH	Upper Bighouse	75.79	344	⇑eP	P	14 21 07.9	+0.1
BIGH				IAmb	IAmb	14 21 08.5	
	comp=Z,48nm,1.1s						
X16A	Lo Mia Camp, P	75.82	56	eP	P	14 21 09.6	+0.9
	comp=Z,25nm,1.0s						
OJC	Ojcow	75.84	327	eP	P	14 21 08.8	+0.5
OJC	Ojcow	75.84	327	eP	P	14 21 08.4	+0.1
	comp=Z,154nm,0.9s						
OJC	Ojcow	75.84	327	eP	P	14 21 08.8	+0.5
CFR	Carcaliu	76.07	320	⇑iP	P	14 21 09.6	0.0
UZH	Uzhgorod	76.07	325	eP	P	14 21 08.7	-0.9
UZH				e		14 21 21.7	
UZH				eS	S	14 30 46.5	-3.4
PETR	Petresti	76.09	321	⇓iP	P	14 21 09.3	-0.5
ODBI	Odobesti	76.14	321	⇑iP	P	14 21 10.6	+0.5
MZR	Muzera	76.14	288	i P	P	14 21 10.3	-0.2
	SNR=34						
MZR	Muzera	76.14	288	P	P	14 21 10.3	-0.2
	SNR=9.1						
VRI	Vrincioaia	76.21	321	⇑iP	P	14 21 11.0	+0.5
ILGA	Ilgaz	76.25	314	eP	P	14 21 11.7	+0.6
	comp=Z,71nm,0.9s						
PLOR	Plostina	76.26	321	⇓iP	P	14 21 10.8	0.0
NIE	Niedzica	76.27	327	eP	P	14 21 11.6	+0.8
NIE	Niedzica	76.27	327	eP	P	14 21 11.6	+0.8
S22A	4UR Ranch, Cre	76.28	51	eP	P	14 21 12.0	+0.6
	comp=Z,12nm,1.1s						
S22A	4UR Ranch, Cre	76.28	51	P	P	14 21 12.6	+1.2
	baz=314,SNR=12						
BMR	Baia Mare	76.29	324	⇑iP	P	14 21 12.2	+1.3
TRPA	Tarpa	76.35	325	⇑iP	P	14 21 12.1	+0.9
TRPA	Tarpa	76.35	325	⇑iP	P	14 21 11.1	-0.1
ARCR	ARCALIA	76.37	323	⇑iP	P	14 21 12.8	+1.4
Q24A	Divide	76.38	49	P	P	14 21 12.5	+0.5
	baz=315,SNR=5.9						
W18A	Petrified Fore	76.38	55	eP	P	14 21 12.8	+0.9
	comp=Z,12nm,1.1s						
W18A	Petrified Fore	76.38	55	P	P	14 21 12.8	+0.9
	baz=313						
GRER		76.46	320	⇓iP	P	14 21 11.9	0.0
TIRR	Tirgusor	76.47	319	eP	P	14 21 11.7	-0.3
	comp=Z,70nm,0.8s						
TIRR	Tirgusor	76.47	319	⇑iP	P	14 21 12.3	+0.4
TIRR	Tirgusor	76.47	319	eP	P	14 21 11.7	-0.3
TIRR				pmax	pmax		
	comp=Z,70nm,0.8s						
OZUR		76.47	322	⇑iP	P	14 21 12.8	+0.8
EYMN	Ely	76.49	35	eP	P	14 21 11.4	-0.6
	comp=Z,30nm,0.8s						
EYMN	Ely	76.49	35	P	P	14 21 11.9	-0.2
	baz=321,SNR=24						
TLB	Topalu	76.55	319	⇑iP	P	14 21 12.6	+0.2
X18A	Snowflake	76.65	55	eP	P	14 21 14.0	+0.6
	comp=Z,20nm,1.3s						
OGNE	Ogallala	76.66	46	eP	P	14 21 13.2	0.0
	comp=Z,42nm,0.7s						
OGNE	Ogallala	76.66	46	P	P	14 21 13.6	+0.3
	baz=316,SNR=12						
MFTR	Murfatlar	76.67	319	⇓iP	P	14 21 13.2	+0.1
KSP	Ksiaz	76.68	330	eP	P	14 21 13.5	+0.4
KSP	Ksiaz	76.68	330	eP	P	14 21 13.5	+0.4
DOPR	Dopca	76.75	322	⇑iP	P	14 21 14.7	+1.1
OKC	Ostrava-Krasne	76.79	328	eP	P	14 21 13.9	+0.2
OKC				MLR	MLR		
	comp=Z,400nm,19.1s						
OKC	Ostrava-Krasne	76.79	328	eP	P	14 21 13.9	+0.2
OKC				AMS	AMS	14 57 10.0	
	comp=Z,400nm,19.1s						
PGOR	Pogoanele	76.81	320	⇓iP	P	14 21 14.9	+1.0
LANS	Liptovska Anna	76.82	327	eP	P	14 21 15.2	+1.3
LANS				e		14 21 26.9	
LANS	Liptovska Anna	76.82	327	eP	P	14 21 15.2	+1.3
LANS				epP	pP	14 21 26.9	+0.9
MLR	Muntele Rosu	76.86	321	eP	P	14 21 14.2	-0.1
	comp=Z,29nm,0.8s						
MLR	Muntele Rosu	76.86	321	⇓iP	P	14 21 14.7	+0.4
MLR	Muntele Rosu	76.86	321	eP	P	14 21 14.2	-0.1
MLR				pmax	pmax		
	comp=Z,29nm,0.8s						
ISR	Istrita	76.86	321	⇑iP	P	14 21 15.3	+1.0
RRH	Rhenigidale	76.87	345	⇑eP	P	14 21 13.8	-0.1
OSTC	Ostas	76.94	330	eP	P	14 21 15.0	+0.4
OSTC				AMS	AMS	14 57 20.0	
	comp=Z,500nm,23.5s						
CHVC	Chvalec	76.98	330	eP	P	14 21 15.2	+0.4
CHVC				ex	x	14 21 20.1	
CHVC				AMS	AMS	14 57 30.0	
	comp=Z,500nm,21.2s						
CJR	Cluj-Napoca	76.98	323	⇓iP	P	14 21 15.8	+0.9
KAC	Achnashellach	76.99	344	eP	P	14 21 14.7	0.0
ICOR	Ion Corvin	77.02	319	⇑iP	P	14 21 16.0	+1.0
SDCO	Great Sand Dun	77.03	50	eP	P	14 21 15.6	-0.1
	comp=Z,12nm,1.4s						
SDCO	Great Sand Dun	77.03	50	P	P	14 21 16.4	+0.8
	baz=315,SNR=7.9						
UPC	Upice	77.06	330	eP	P	14 21 15.3	+0.1
UPC				e		14 21 26.5	
UPC				e		14 21 31.9	
UPC				MLR	MLR		
	comp=Z,500nm,21.1s						
UPC	Upice	77.06	330	eP	P	14 21 15.3	+0.1
UPC				epP	PcP	14 21 26.5	+0.5
UPC				esP	sP	14 21 31.9	+0.1
UPC				AMS	AMS	14 57 40.0	
	comp=Z,500nm,21.1s						
DPC	Dobruska-Polom	77.07	329	eP	P	14 21 15.9	+0.6
DPC				e		14 21 26.9	
DPC				MLR	MLR		
	comp=Z,400nm,22.9s						
DPC	Dobruska-Polom	77.07	329	eP	P	14 21 15.9	+0.6
DPC				epP	pP	14 21 26.9	-0.5
DPC				AMS	AMS	14 56 50.0	
	comp=Z,400nm,22.9s						
MORC	Moravsky Berou	77.07	328	eP	P	14 21 15.7	+0.3
	comp=Z,55nm,0.8s						
MORC	Moravsky Berou	77.07	328	⇑iP	P	14 21 15.8	+0.4
MORC	Moravsky Berou	77.07	328	eP	P	14 21 15.7	+0.3
MORC				pmax	pmax		
	comp=Z,55nm,0.8s						
MORC	Moravsky Berou	77.07	328	⇑iP	P	14 21 15.8	+0.4
SECR		77.15	321	⇑iP	P	14 21 16.1	+0.3
PSN	Preselentsi	77.15	319	P	P	14 21 16.4	+0.6
LTVH	Ltavrtes, Hu	77.20	325	i P	P	14 21 23.1	+7.1
KPL	Plockton	77.21	344	⇑eP	P	14 21 15.6	-0.3
KPL				IAmb	IAmb	14 21 16.7	
	comp=Z,49nm,1.0s						
BR101	Keskin Array S	77.24	313	eP	P	14 21 16.8	+0.1
BR131	Keskin Array S	77.24	313	eP	P	14 21 16.5	-0.1
	comp=Z,21nm,0.8s						
BR131	Keskin Array S	77.24	313	P	P	14 21 16.8	+0.2
	SNR=19						
BRTR	Keskin Array B	77.24	313	P	P	14 21 16.8	+0.2
	comp=Z,18nm,0.7s,baz=78,slow=3.7,SNR=89						
BRTR				LR	LR	15 01 31.2	
	comp=Z,115nm,18.5s,baz=64,slow=40						
RASA	Rasa	77.25	320	⇓iP	P	14 21 16.4	0.0
VOIR		77.31	322	⇑iP	P	14 21 17.4	+0.6
DRGR		77.31	324	⇑iP	P	14 21 17.2	+0.4
SULR		77.33	320	⇑iP	P	14 21 16.6	-0.2
ECSD	EROS Data Cent	77.37	41	P	P	14 21 16.9	-0.2
	baz=318,SNR=6.5						
CLL	Collm	77.48	332	eP	P	14 21 17.1	-0.5
	comp=Z,66nm,0.8s						
CLL	Collm	77.48	332	⇑iP	P	14 21 17.2	-0.3
CLL				i *PP	pP	14 21 29.0	-0.6
CLL				i *SP	sP	14 21 33.8	-0.4
CLL				eS	S	14 31 06.0	+0.7
CLL				pmax	pmax		
	comp=Z,84nm,0.9s						
CLL	Collm	77.48	332	⇑iP	P	14 21 17.2	-0.3
	comp=Z,84nm,0.9s						
CLL				i pP	pP	14 21 29.0	-0.6
CLL				i sP	sP	14 21 33.8	-0.4
CLL				ePP	PP	14 24 15.0	+3.2
CLL				eS	S	14 31 06.0	+0.7
CLL				e		14 37 06.0	
CLL				e		14 40 36.0	
C40A	Isle Royale Na	77.50	34	eP	P	14 21 16.8	-0.9
	comp=Z,8.1nm,0.5s						
C40A	Isle Royale Na	77.50	34	P	P	14 21 16.9	-0.8
	baz=322,SNR=6.2						
E38A	The Farm, Brul	77.50	36	eP	P	14 21 17.1	-0.6
	comp=Z,22nm,0.8s						
E38A	The Farm, Brul	77.50	36	P	P	14 21 17.3	-0.5
	baz=321,SNR=9.4						
BRG	Berggiesshubel	77.51	331	i P	P	14 21 17.6	-0.1
	comp=Z,21nm,0.8s						
BRG				SS	S	14 31 04.0	-1.6
	comp=N,326nm,20.5s						
	comp=E,157nm,21.6s						
	comp=Z,326nm,17.2s						
BRG	Berggiesshubel	77.51	331	i P	P	14 21 17.6	-0.1
BRG				SS	S	14 31 04.0	-1.6
BRG				pmax	pmax		
	comp=Z,21nm,0.8s						
BRG				MLR	MLR		
	comp=N,326nm,20.5s						
BRG				MLR	MLR		
	comp=E,157nm,21.6s						
BRG				MLR	MLR		
	comp=Z,326nm,17.2s						
PVCC	Panska Ves	77.57	330	eP	P	14 21 18.8	+0.7
PVCC				MLR	MLR		
	comp=Z,400nm,17.1s						
PVCC	Panska Ves	77.57	330	eP	P	14 21 18.8	+0.7
PVCC				AMS	AMS	14 58 30.0	
	comp=Z,400nm,17.1s						
ANTO	Ankara	77.59	313	eP	P	14 21 18.0	-0.5
	comp=Z,92nm,0.8s						
ANTO	Ankara	77.59	313	⇓iP	P	14 21 19.4	+0.9
ANTO	Ankara	77.59	313	eP	P	14 21 18.0	-0.5
ANTO				pmax	pmax		
	comp=Z,92nm,0.8s						
ANTO	Ankara	77.59	313	P	P	14 21 19.4	+0.9
	SNR=11						
VYHS	Vyhne	77.59	327	eP	P	14 21 18.8	+0.5
VYHS				pmax	pmax		
	comp=Z,27nm,1.2s						
VYHS	Vyhne	77.59	327	eP	P	14 21 18.8	+0.5
VYHS				epP	pP	14 21 30.8	+0.5
VYHS				esP	sP	14 21 35.3	+0.4
BR231	Keskin MP Arra	77.62	313	eP	P	14 21 18.8	+0.1
	comp=Z,79nm,0.8s						
PSZ	Piszkesteto	77.62	326	eP	P	14 21 18.5	0.0
	comp=Z,65nm,0.9s						
PSZ	Piszkesteto	77.62	326	⇓iP	P	14 21 19.3	+0.8
PSZ	Piszkesteto	77.62	326	eP	P	14 21 18.5	0.0
PSZ				pmax	pmax		
	comp=Z,65nm,0.9s						
PSZ	Piszkesteto	77.62	326	⇑iP	P	14 21 19.1	+0.6
TUC	Tucson	77.65	57	eP	P	14 21 18.9	-0.1
	comp=Z,16nm,1.1s						
TUC	Tucson	77.65	57	eP	P	14 21 18.9	-0.1
TUC				pmax	pmax		
	comp=Z,16nm,1.1s						
TUC	Tucson	77.65	57	P	P	14 21 20.1	+1.1
	baz=313						
JAVC	Velka Javorina	77.76	328	⇑iP	P	14 21 20.7	+1.4
GOLR		77.81	321	⇑iP	P	14 21 20.4	+0.9
VRAC	Vranov	77.82	329	⇓iP	P	14 21 20.6	+1.1
VRAC	Vranov	77.82	329	⇑iP	P	14 21 20.1	+0.6
LOT	Lotru	77.88	322	⇑iP	P	14 21 20.2	+0.2
ESY	Stoneypath	77.89	342	⇑eP	P	14 21 19.7	0.0
MDUB	Mudurnu	78.00	315	eP	P	14 21 19.8	-0.9
	comp=Z,356nm,0.9s						
GOPC	GO Pecny, Ondr	78.00	330	eP	P	14 21 20.7	+0.2
GOPC				e		14 21 32.4	
GOPC				e		14 21 37.7	
GOPC				MLR	MLR		
	comp=Z,400nm,20.4s						
GOPC	GO Pecny, Ondr	78.00	330	eP	P	14 21 20.7	+0.2
GOPC				epP	pP	14 21 32.4	-0.2
GOPC				esP	sP	14 21 37.7	+0.6
GOPC				AMS	AMS	14 58 40.0	
	comp=Z,400nm,20.4s						
SPMN	Marine on St.	78.02	38	eP	P	14 21 19.9	-0.7
	comp=Z,12nm,0.8s						
SPMN	Marine on St.	78.02	38	P	P	14 21 20.5	-0.1
	baz=320						
EAB	Aberfoyle	78.02	343	⇑eP	P	14 21 20.5	+0.1
PRU	Pruhonice	78.03	330	eP	P	14 21 20.9	+0.3
PRU				e		14 21 31.9	
PRU				e		14 21 36.8	
PRU				MLR	MLR		
	comp=Z,400nm,19.1s						
PRU	Pruhonice	78.03	330	eP	P	14 21 20.9	+0.3
PRU				epP	pP	14 21 31.9	-0.8
PRU				esP	sP	14 21 36.8	-0.5
PRU				AMS	AMS	14 58 50.0	
	comp=Z,400nm,19.1s						
T25A	Trinidad	78.08	50	eP	P	14 21 21.8	+0.4
	comp=Z,25nm,1.3s						
T25A	Trinidad	78.08	50	P	P	14 21 22.1	+0.7
	baz=315,SNR=7.4						
KRUC	Moravsky	78.09	329	⇑iP	P	14 21 21.4	+0.4
EBL	Broad Law	78.12	342	⇑iP	P	14 21 21.1	+0.1
EAU	Auchinoon	78.14	343	⇑eP	P	14 21 21.4	+0.2
SIRR	Siria	78.18	324	⇓iP	P	14 21 22.2	+0.7
COPA	Copaceanca	78.22	321	⇑iP	P	14 21 21.4	-0.4
TREC	Trest	78.25	329	eP	P	14 21 22.0	+0.1
TREC				e		14 21 33.1	
TREC				e		14 21 39.2	
TREC				MLR	MLR		
	comp=Z,400nm,18.8s						
TREC	Trest	78.25	329	eP	P	14 21 22.0	+0.1
TREC				epP	pP	14 21 33.1	-0.9
TREC				esP	sP	14 21 39.2	+0.7
TREC				AMS	AMS	14 58 10.0	
	comp=Z,400nm,18.8s						
MODS	Modra-Piesok	78.31	328	eP	P	14 21 22.0	-0.2
MODS				pmax	pmax		
	comp=Z,58nm,1.1s						
MODS	Modra-Piesok	78.31	328	eP	P	14 21 22.0	-0.2
MODS				esP	sP	14 21 39.5	+0.6
BUD	Budapest	78.32	326	⇑iP	P	14 21 23.0	+0.7
GZR	Gura Zlata	78.37	323	⇓iP	P	14 21 22.4	-0.3
PGBU	Glenifferbraes	78.40	343	⇑eP	P	14 21 22.8	+0.3
PGBU				IAmb	IAmb	14 21 23.6	
	comp=Z,105nm,1.1s						
D41A	Chassel	78.42	34	P	P	14 21 22.7	-0.1
	baz=323,SNR=5.4						
LAZ	Ladron	78.42	54	eP	P	14 21 24.4	+1.1
ANMO	Albuquerque	78.44	53	eP	P	14 21 23.9	+0.5
	comp=Z,16nm,1.4s						
ANMO	Albuquerque	78.44	53	c iP	P	14 21 24.6	+1.1
ANMO				pmax	pmax		
	comp=Z,10.0nm,2.0s						
ANMO	Albuquerque	78.44	53	P	P	14 21 24.6	+1.1
	baz=315						
AMBH	Ambrzfalva	78.51	325	⇑iP	P	14 21 24.0	+0.7
ZIMR		78.52	320	⇑iP	P	14 21 23.5	+0.1
ZST	Bratislava	78.52	328	eP	P	14 21 22.3	-1.1
ZST				eSP		14 21 40.4	
ZST	Bratislava	78.52	328	eP	P	14 21 22.2	-1.1
ZST				esP	sP	14 21 40.4	+0.4
NKC	Novy Kostel	78.58	331	eP	P	14 21 24.0	+0.3
NKC				MLR	MLR		
	comp=Z,300nm,22.5s						
NKC	Novy Kostel	78.58	331	eP	P	14 21 24.0	+0.3
NKC				AMS	AMS	14 58 30.0	
	comp=Z,300nm,22.5s						
ESK	Eskdalemuir	78.58	342	eP	P	14 21 23.3	-0.2
	comp=Z,32nm,0.9s						
ESK	Eskdalemuir	78.58	342	⇑eP	P	14 21 23.5	-0.1
ESK				IAmb	IAmb	14 21 24.0	
	comp=Z,25nm,0.6s						
ESK	Eskdalemuir	78.58	342	i P	P	14 21 23.9	+0.3
G39A	Holcombe	78.70	37	P	P	14 21 23.5	-0.9
	baz=322,SNR=5.8						
BZS	Buzias	78.70	324	⇓iP	P	14 21 24.0	-0.4
VLAD	Vladila	78.71	321	⇓iP	P	14 21 24.9	+0.4
CSKK	Cskako	78.73	327	i P	P	14 21 24.1	-0.5
CRAR	CRAIOVA	78.73	322	⇑iP	P	14 21 24.6	0.0
SRE	Strehaia	78.74	322	⇑iP	P	14 21 25.3	+0.6
CTYL	Yalikoy Yolu	78.74	317	⇑iP	P	14 21 24.5	-0.2
EDMD	Edmundbyers	78.74	342	⇑eP	P	14 21 24.3	-0.2
EDMD				IAmb	IAmb	14 21 25.1	
	comp=Z,30nm,1.1s						
SCHQ	Schefferville	78.78	18	P	P	14 21 24.6	-0.1
	comp=Z,14nm,0.6s,baz=344,slow=9.0,SNR=6.3						
SCHQ				LR	LR	15 01 00.7	
	comp=Z,124nm,18.9s,baz=306,slow=39						
SCHQ	Schefferville	78.78	18	eP	P	14 21 24.3	-0.4
	comp=Z,15nm,0.6s						
BHH	Howats Hill	78.79	342	⇑eP	P	14 21 25.0	+0.3
ELND	Elena	78.83	319	⇑iP	P	14 21 25.4	+0.2
JMB	Yambol	78.84	319	P	P	14 21 25.7	+0.5
YLV	Yalova	78.87	316	⇑iP	P	14 21 25.5	0.0
BNM	Barren Site	78.90	54	eP	P	14 21 26.8	+0.8
HERR	Herculane	78.93	323	⇑iP	P	14 21 25.1	-0.6
COWI	Conover	78.94	35	eP	P	14 21 25.1	-0.6
	comp=Z,17nm,0.7s						
PHSR	Pinarhisar	79.01	318	⇑iP	P	14 21 27.0	+0.8
PLVB	Pleven	79.08	320	⇑iP	P	14 21 26.6	+0.1
KHC	Kasperske Hory	79.09	330	eP	P	14 21 26.5	0.0
	comp=Z,23nm,0.8s						
KHC	Kasperske Hory	79.09	330	eP	P	14 21 26.8	+0.3
KHC				e		14 21 37.9	
KHC				e		14 21 43.5	
KHC				MLR	MLR		
	comp=Z,600nm,19.2s						
KHC	Kasperske Hory	79.09	330	eP	P	14 21 26.8	+0.3
KHC				epP	pP	14 21 37.9	-0.7
KHC				esP	sP	14 21 43.5	+0.3
KHC				AMS	AMS	14 59 30.0	
	comp=Z,600nm,19.2s						
BBO1	Bothel	79.12	342	⇑eP	P	14 21 26.6	0.0
G40A	Rib Lake	79.14	36	eP	P	14 21 26.4	-0.4
	comp=Z,12nm,0.5s						
G40A	Rib Lake	79.14	36	P	P	14 21 26.5	-0.4
	baz=322,SNR=9.8						
SOP	Sopron	79.15	328	⇑iP	P	14 21 27.1	+0.2
CONA	Conrad Observa	79.22	328	eP	P	14 21 28.1	+0.7
	comp=Z,17nm,0.8s,SNR=26						
319A	Douglas	79.22	57	eP	P	14 21 28.6	+0.9
	comp=Z,59nm,0.8s						
KESW	Keswick, Cumbr	79.23	342	⇑eP	P	14 21 27.3	+0.2
KESW				IAmb	IAmb	14 21 28.4	
	comp=Z,81nm,1.0s						
GEC2	GERESS Array S	79.28	330	eP	P	14 21 27.2	-0.5
	comp=Z,16nm,0.8s						
GEC2	GERESS Array S	79.28	330	eP	P	14 21 27.2	-0.5
GEC2				pmax	pmax		
	comp=Z,16nm,0.8s						
GERES	GERESS Array B	79.28	330	P	P	14 21 27.5	-0.2
	comp=Z,11nm,0.8s,baz=32,slow=5.2,SNR=79						
GERES				LR	LR	15 00 02.7	
	comp=Z,528nm,20.0s,baz=40,slow=38						
MDVR	Moldovita	79.32	323	⇑iP	P	14 21 27.8	-0.1
GAL1	Galloway	79.33	343	⇑eP	P	14 21 27.2	-0.5
GAL1				IAmb	IAmb	14 21 28.4	
	comp=Z,25nm,1.0s						
121A	Cookes Peak, D	79.34	55	P	P	14 21 29.8	+1.5
	baz=314,SNR=17						
CLGH	Cloghs, Cushen	79.42	344	⇑eP	P	14 21 28.1	-0.1
CLGH				IAmb	IAmb	14 21 29.1	
	comp=Z,57nm,1.1s						
CBKS	Cedar Bluff	79.42	46	P	P	14 21 28.1	-0.5
	baz=318						
GRA1	Grafenberg Arr	79.46	332	eP	P	14 21 28.4	-0.1
	comp=Z,59nm,0.9s						
GRF	Grafenberg Arr	79.46	332	eP	P	14 21 28.4	-0.1
GRF				pmax	pmax		
	comp=Z,59nm,0.9s						
GRFO	Grafenberg	79.46	332	eP	P	14 21 27.9	-0.6
	comp=Z,57nm,0.8s						
GRFO	Grafenberg	79.46	332	eP	P	14 21 27.9	-0.6
GRFO				pmax	pmax		
	comp=Z,57nm,0.8s						
HPK	Haverah Park	79.46	341	⇑eP	P	14 21 28.6	+0.2
HPK				IAmb	IAmb	14 21 29.5	
	comp=Z,84nm,1.0s						
MORH	Mrgy, Hungar	79.50	326	i P	P	14 21 28.2	-0.5
MORH	Mrgy, Hungar	79.50	326	⇑iP	P	14 21 28.1	-0.6
MPEP	Malo Peshtene	79.51	321	P	P	14 21 29.4	+0.5
E43A	Lone Tree Farm	79.61	34	eP	P	14 21 28.8	-0.6
	comp=Z,19nm,0.7s						
E43A	Lone Tree Farm	79.61	34	P	P	14 21 28.8	-0.6
	baz=324,SNR=13						
F42A	Maple Grove Fa	79.64	35	P	P	14 21 29.5	-0.1
	baz=323						
DIM	Dimitrovgrad	79.66	319	P	P	14 21 30.4	+0.7
FRGS	Fruska Gora	79.85	324	i P	P	14 21 30.6	-0.1
E44A	Grand Marais A	79.85	33	eP	P	14 21 30.4	-0.2
	comp=Z,42nm,0.8s						
E44A	Grand Marais A	79.85	33	P	P	14 21 30.6	-0.1
	baz=324						
IOMK	Kirk Michael	79.86	343	⇑eP	P	14 21 30.4	-0.1
IOMK				IAmb	IAmb	14 21 31.4	
	comp=Z,61nm,0.9s						
MOA	Molln	79.90	329	eP	P	14 21 31.1	+0.2
	comp=Z,16nm,0.8s,SNR=12						
ARSA	Arzberg	79.91	328	eP	P	14 21 31.3	+0.3
	comp=Z,13nm,0.8s,SNR=9.4						
PGB	Panagyurishte	79.93	320	P	P	14 21 31.8	+0.5
WIM	Isle of Man	79.99	343	⇑iP	P	14 21 31.4	+0.1
LBWR	Ladybower, Pea	80.00	341	⇑eP	P	14 21 31.6	+0.3
LBWR				IAmb	IAmb	14 21 32.5	
	comp=Z,142nm,1.0s						
WACR	West Acre	80.02	339	⇑eP	P	14 21 31.4	-0.1
WACR				IAmb	IAmb	14 21 32.3	
	comp=Z,68nm,1.0s						
KDZ	Kurdzhali	80.03	319	P	P	14 21 32.4	+0.7
BEHE	Becsehely	80.05	327	eP	P	14 21 31.1	-0.7
QASN	Qassioun	80.16	307	eP	P	14 21 27.5	-5.2
GMM	Mts of Mourne	80.17	343	⇑iP	P	14 21 32.0	-0.2
TOTH	TOTAH	80.19	307	eP	P	14 21 32.8	0.0
I41A	Arkdale	80.24	37	eP	P	14 21 32.4	-0.4
	comp=Z,17nm,0.8s						
BHL	Bhannes	80.26	307	eP	P	14 21 33.5	+0.3
MATQ	Matagami	80.26	27	P	P	14 21 32.2	-0.6
	baz=330,SNR=9.6						

ALN	Alexandroupoli	80.29	318	eP	P	14 21 33.1	0.0
	comp=Z,24nm,0.8s						
ALN	Alexandroupoli	80.29	318	P	P	14 21 33.4	+0.3
ALN	Alexandroupoli	80.29	318	eP	P	14 21 33.1	0.0
ALN				pmax	pmax		
	comp=Z,24nm,0.8s						
VTS	Vitosha	80.31	321	eP	P	14 21 33.7	+0.3
	comp=Z,58nm,0.7s						
VTS	Vitosha	80.31	321	⇑iP	P	14 21 34.1	+0.6
VTS	Vitosha	80.31	321	eP	P	14 21 33.7	+0.3
VTS				pmax	pmax		
	comp=Z,58nm,0.7s						
VTS	Vitosha	80.31	321	P	P	14 21 34.0	+0.6
BALB	Balikesir	80.32	316	eP	P	14 21 33.3	-0.1
	comp=Z,163nm,0.8s						
RZN	Rozhen	80.33	319	P	P	14 21 34.2	+0.6
RDO	Rodhopi	80.35	318	eP	P	14 21 34.1	+0.7
RDO	Rodhopi	80.35	318	P	P	14 21 34.1	+0.7
D46A	Sault St. Mari	80.38	32	P	P	14 21 32.7	-0.8
	baz=326,SNR=28						
MEM	Membach	80.38	335	⇓P	P	14 21 33.4	-0.1
	comp=Z,20nm,1.0s						
SCIA	State Center	80.38	40	eP	P	14 21 33.3	-0.3
	comp=Z,38nm,0.6s						
SCIA	State Center	80.38	40	P	P	14 21 33.9	+0.3
	baz=321						
BRBR	Barbar	80.44	307	eP	P	14 21 34.1	-0.2
GROS	Grobnik	80.57	328	iP	P	14 21 34.5	-0.1
SOKA	Soboth	80.57	328	eP	P	14 21 34.7	+0.1
	comp=Z,43nm,0.7s,SNR=29						
PERS	Pernice	80.57	328	iP	P	14 21 34.8	+0.1
D47A	Chapleau	80.60	31	P	P	14 21 33.7	-1.0
	baz=326,SNR=12						
SHBL	Chebaa	80.60	307	eP	P	14 21 35.6	+0.4
WME	Myndd Eilian	80.60	342	⇑iP	P	14 21 34.4	-0.1
DIVS	Divibare	80.61	324	iP	P	14 21 34.6	-0.3
E46A	Sault Ste Mari	80.70	32	eP	P	14 21 34.4	-0.9
	comp=Z,69nm,1.7s						
E46A	Sault Ste Mari	80.70	32	P	P	14 21 34.6	-0.7
	baz=326,SNR=6.8						
WLF1	Llynfaes	80.72	342	⇑eP	P	14 21 34.8	-0.4
WLF1				IAmb	IAmb	14 21 36.0	
	comp=Z,180nm,1.8s						
BCLA	Clavier	80.76	336	⇑P	P	14 21 34.6	-0.8
	comp=Z,16nm,0.9s						
BCLA				⇓PcP	PcP	14 21 40.1	-2.0
BCLA				⇑sP	sP	14 21 51.6	-0.5
F45A	CMU Biological	80.78	34	P	P	14 21 35.2	-0.5
	baz=325,SNR=5.2						
I42A	Draeger Farm,	80.79	37	eP	P	14 21 35.3	-0.4
	comp=Z,14nm,0.7s						
I42A	Draeger Farm,	80.79	37	P	P	14 21 35.4	-0.4
	baz=323,SNR=6.8						
YRC	Rhoscolyn	80.80	342	⇑eP	P	14 21 35.2	-0.4
YLL	Llanberis	80.81	342	⇑eP	P	14 21 35.3	-0.4
FOEL	Foel Wylfa	80.82	341	⇑eP	P	14 21 36.0	+0.2
FOEL				IAmb	IAmb	14 21 37.0	
	comp=Z,102nm,0.9s						
H43A	Windswept, Lux	80.82	36	eP	P	14 21 35.3	-0.6
	comp=Z,19nm,0.6s						
H43A	Windswept, Lux	80.82	36	P	P	14 21 35.6	-0.3
	baz=324,SNR=5.1						
MANT	Manisa	80.83	315	eP	P	14 21 35.4	-1.0
	comp=Z,168nm,0.8s						
CSS	Mathiatis	80.83	310	eP	P	14 21 36.1	-0.1
	comp=Z,67nm,0.6s						
CSS	Mathiatis	80.83	310	P	P	14 21 36.3	+0.1
	comp=Z,25nm,0.7s						
KSU1	Kansas State U	80.84	44	P	P	14 21 35.6	-0.5
	baz=319						
MMB	Musomiste	80.88	320	P	P	14 21 36.9	+0.5
KBA	Koelnbreinsper	80.89	329	eP	P	14 21 36.6	+0.1
	comp=Z,50nm,0.8s,SNR=34						
OBKA	Obir	80.90	328	eP	P	14 21 36.3	-0.2
	comp=Z,23nm,0.7s,SNR=9.7						
LLW	Llanuwychllyn	80.97	342	⇑eP	P	14 21 36.6	+0.1
LLW				IAmb	IAmb	14 21 37.6	
	comp=Z,25nm,1.1s						
EZN	Ezine	80.97	317	⇑iP	P	14 21 36.8	0.0
KKB	Krupnik	80.97	320	P	P	14 21 37.4	+0.6
JFWS	Jewell Farm	80.97	38	P	P	14 21 35.8	-0.9
	baz=322						
SNF	Seneffe	80.99	336	⇑P	P	14 21 36.0	-0.6
	comp=Z,19nm,1.0s						
SNF				⇑sP	sP	14 21 53.1	-0.3
D48A	Paudash Townsh	80.99	31	P	P	14 21 35.7	-1.1
	baz=327,SNR=8.2						
E47A	Iron Bridge	81.03	32	P	P	14 21 36.3	-0.7
	baz=326,SNR=21						
BBLS	Lazići	81.05	324	iP	P	14 21 37.4	+0.1
HAPS	Han Pijesak,Bl	81.07	324	eP	P	14 21 36.0	-1.4
D49A	Beulah Townshi	81.08	30	P	P	14 21 36.2	-1.0
	baz=327,SNR=7.4						
LSQQ	Lebel-sur-Quev	81.08	27	P	P	14 21 36.7	-0.6
	baz=330						
CRES	Cresnjev	81.11	327	iP	P	14 21 37.0	-0.4
MYKA	Terra Mystica	81.15	329	eP	P	14 21 37.2	-0.5
	comp=Z,14nm,0.7s,SNR=9.8						
WLF	Walferdange	81.16	335	⇑P	P	14 21 37.9	+0.2
	comp=Z,12nm,1.1s						
WLF				⇓pP	pP	14 21 50.6	+0.8
CHGQ	Chibougamau	81.17	25	P	P	14 21 36.9	-0.8
	baz=332,SNR=15						
L40A	Anamosa	81.19	39	eP	P	14 21 37.1	-0.8
	comp=Z,21nm,0.8s						
L40A	Anamosa	81.19	39	P	P	14 21 37.4	-0.5
	baz=322,SNR=8.2						
DSB	Dublin	81.19	343	eP	P	14 21 37.6	-0.1
	comp=Z,20nm,0.8s						
AMTX	Amarillo	81.23	50	eP	P	14 21 39.3	+0.9
	comp=Z,12nm,0.8s						
AMTX	Amarillo	81.23	50	P	P	14 21 39.0	+0.5
	baz=317						
G45A	Suttons Bay	81.25	34	eP	P	14 21 37.8	-0.4
	comp=Z,31nm,0.9s						
G45A	Suttons Bay	81.25	34	P	P	14 21 37.8	-0.4
	baz=325						
RAYN	Ar Rayn	81.26	294	eP	P	14 21 38.4	-0.2
	comp=Z,25nm,0.6s						
RAYN	Ar Rayn	81.26	294	iP	P	14 21 38.8	+0.2
	SNR=18						
RAYN	Ar Rayn	81.26	294	eP	P	14 21 38.4	-0.2
RAYN				pmax	pmax		
	comp=Z,25nm,0.6s						
DOU	Dourbes	81.26	336	⇑P	P	14 21 37.5	-0.6
	comp=Z,6.8nm,1.1s						
RAR	Rarotonga	81.27	130	LR	LR	14 51 46.6	
	comp=Z,144nm,19.9s,baz=33,slow=31						
RUDO	Rudo	81.27	324	eP	P	14 21 37.8	-0.5
MSTX	Muleshoe	81.27	51	eP	P	14 21 38.8	+0.1
	comp=Z,6.2nm,0.8s						
MSTX	Muleshoe	81.27	51	P	P	14 21 39.0	+0.3
	baz=317,SNR=5.5						
BLY	Banja Luka	81.29	326	eP	P	14 21 37.8	-0.5
	comp=Z,17nm,0.6s						
BLY	Banja Luka	81.29	326	⇓iP	P	14 21 38.5	+0.1
BLY	Banja Luka	81.29	326	iP	P	14 21 37.9	-0.5
LJU	Ljubljana	81.29	328	iP	P	14 21 37.9	-0.5
LJU	Ljubljana	81.29	328	iP	P	14 21 37.9	-0.5
SRS	Serrai	81.31	320	P	P	14 21 38.4	-0.2
WATA	Walderalm	81.33	330	iP	P	14 21 38.5	-0.3
	comp=Z,20nm,0.7s,SNR=9.8						
G46A	Petoskey	81.34	33	P	P	14 21 38.4	-0.3
	baz=325,SNR=11						
WTTA	Wattenberg	81.36	330	eP	P	14 21 39.2	+0.2
	comp=Z,33nm,0.7s,SNR=14						
MNTX	Cornudas Mount	81.37	55	eP	P	14 21 39.2	+0.2
	comp=Z,22nm,1.0s						
MNTX	Cornudas Mount	81.37	55	P	P	14 21 40.0	+1.0
	baz=316,SNR=24						
E48A	Lockeyer	81.44	31	P	P	14 21 38.3	-0.8
	baz=327,SNR=9.4						
BOJS	Bojanci	81.45	327	iP	P	14 21 39.0	-0.3
ABTA	Abfaltersbach	81.48	329	eP	P	14 21 39.0	-0.5
	comp=Z,26nm,1.1s,SNR=9.3						
MOTA	Moosalm	81.49	331	eP	P	14 21 39.7	+0.1
	comp=Z,54nm,1.0s,SNR=25						
RETA	Reutte	81.49	331	iP	P	14 21 39.7	+0.2
	comp=Z,31nm,1.0s,SNR=15						
SQTA	Sankt Quirin	81.56	330	eP	P	14 21 40.1	+0.2
	comp=Z,34nm,0.8s,SNR=16						
CEY	Cerknica	81.59	328	iP	P	14 21 39.2	-0.8
MCH1	Michaelchurch	81.60	341	⇑eP	P	14 21 39.9	0.0
MCH1				IAmb	IAmb	14 21 40.9	
	comp=Z,53nm,0.9s						
STRD	Stroud	81.60	340	⇑eP	P	14 21 39.9	0.0
STRD				IAmb	IAmb	14 21 40.9	
	comp=Z,88nm,0.8s						
JAVS	Javornik	81.60	328	iP	P	14 21 39.2	-1.0
BFO	Black Forest	81.61	333	eP	P	14 21 38.9	-1.2
	comp=Z,19nm,1.0s						
BFO	Black Forest	81.61	333	iP	P	14 21 40.0	-0.1
VAY	Valandovo	81.64	320	iP	P	14 21 40.8	+0.5
SKO	Skopje	81.65	321	iP	P	14 21 41.2	+0.8
MONM	Monmouth	81.70	341	⇑eP	P	14 21 40.6	+0.2
MONM				IAmb	IAmb	14 21 41.5	
	comp=Z,43nm,0.9s						
OUR	Ouranopolis	81.73	319	eP	P	14 21 40.8	0.0
OUR	Ouranopolis	81.73	319	P	P	14 21 40.8	0.0
OUR	Ouranopolis	81.73	319	eP	P	14 21 40.8	0.0
VLDQ	Val d'Or	81.74	27	eP	P	14 21 38.6	-2.1
	comp=Z,42nm,0.8s						
SWN1	Swindon	81.75	340	⇑eP	P	14 21 41.1	+0.4
SWN1				IAmb	IAmb	14 21 41.9	
	comp=Z,119nm,0.9s						
HMNX	Herstmonceux	81.78	339	⇑eP	P	14 21 41.5	+0.6
HMNX				IAmb	IAmb	14 21 42.3	
	comp=Z,86nm,0.9s						
WOL	Wolverton	81.79	340	⇑eP	P	14 21 40.7	-0.2
WOL				IAmb	IAmb	14 21 41.5	
	comp=Z,57nm,0.8s						
UPM	Unac-Piva	81.80	324	eP	P	14 21 39.6	-1.8
F48A	Evansville	81.81	32	P	P	14 21 40.5	-0.6
	baz=327,SNR=11						
H46A	Fife Lake	81.84	34	P	P	14 21 41.1	-0.3
	baz=325						
GLMI	Grayling	81.85	33	P	P	14 21 41.2	-0.2
	baz=326						
G47A	Hillman	81.86	33	P	P	14 21 41.1	-0.3
	baz=326,SNR=5.8						
FETA	Feichten	81.90	331	eP	P	14 21 41.9	+0.1
	comp=Z,20nm,0.9s,SNR=18						
RIY	Rijeka	81.91	327	eP	P	14 21 40.3	-1.3
N40A	Mertquake, Sal	81.95	40	P	P	14 21 42.0	+0.1
	baz=322,SNR=6.5						
D51A	Lot 18 Range I	81.95	29	P	P	14 21 40.8	-1.1
	baz=329,SNR=7.9						
L42A	Oliver, Polo	81.95	38	eP	P	14 21 41.0	-0.9
	comp=Z,22nm,0.6s						
L42A	Oliver, Polo	81.95	38	P	P	14 21 41.1	-0.9
	baz=323,SNR=7.6						
PLG	Polygyros	81.96	319	P	P	14 21 42.0	-0.1
DAVA	Damuels	81.98	331	eP	P	14 21 42.1	-0.1
	comp=Z,25nm,0.8s,SNR=14						
K43A	Burlington	81.99	37	eP	P	14 21 41.3	-0.9
	comp=Z,20nm,0.7s						
K43A	Burlington	81.99	37	P	P	14 21 41.7	-0.4
	baz=323						
E50A	Wahnapitae	82.02	30	P	P	14 21 41.5	-0.8
	baz=328,SNR=5.7						
RSBS	Rosebush, Pemb	82.05	342	⇑eP	P	14 21 42.0	-0.3
RSBS				IAmb	IAmb	14 21 43.1	
	comp=Z,13nm,1.0s						
M41A	Milan	82.05	39	P	P	14 21 41.9	-0.6
	baz=322						
F49A	Sandfield	82.08	31	P	P	14 21 41.8	-0.8
	baz=327,SNR=5.8						
ECH	Echery	82.10	333	eP	P	14 21 41.7	-1.0
	comp=Z,27nm,1.0s						
ECH	Echery	82.10	333	eP	P	14 21 41.7	-1.0
ECH				pmax	pmax		
	comp=Z,27nm,1.0s						
H47A	Mio	82.20	33	P	P	14 21 43.4	+0.1
	baz=326						
BRY	Bratogost	82.20	324	eP	P	14 21 42.5	-1.0
I46A	Reed City	82.23	34	P	P	14 21 43.3	-0.1
	baz=325						
PDG	Podgorica	82.27	323	iP	P	14 21 43.4	-0.2
TTG	Podgorica	82.27	323	eP	P	14 21 43.0	-0.6
	comp=Z,117nm,0.6s						
TTG	Podgorica	82.27	323	eP	P	14 21 43.0	-0.6
TTG				pmax	pmax		
	comp=Z,117nm,0.6s						
PHP	Peshkopia	82.33	322	P	P	14 21 43.9	-0.1
E51A	G1948 Merrick	82.38	30	P	P	14 21 43.2	-1.0
	baz=329,SNR=9.4						
D52A	ZEK Kipawa Sen	82.39	29	P	P	14 21 43.3	-0.8
	baz=329,SNR=9.7						
FUORN	Ofenpass-Fuorn	82.41	331	eP	P	14 21 44.4	-0.3
	comp=Z,56nm,0.8s						
N41A	Harden Midland	82.43	40	eP	P	14 21 44.2	-0.3
	comp=Z,31nm,1.0s						
N41A	Harden Midland	82.43	40	P	P	14 21 44.5	0.0
	baz=322						
TREB	Trebinje	82.44	324	iP	P	14 21 43.5	-1.0
H48A	Harrisville	82.47	33	eP	P	14 21 44.3	-0.3
	comp=Z,31nm,0.7s						
H48A	Harrisville	82.47	33	P	P	14 21 44.4	-0.3
	baz=326						
DRME	Dracevica, Mon	82.50	323	iP	P	14 21 44.7	-0.1
D53A	Lac Vacive, Po	82.55	28	eP	P	14 21 44.2	-0.8
	comp=Z,17nm,0.8s						
D53A	Lac Vacive, Po	82.55	28	P	P	14 21 44.3	-0.7
	baz=330,SNR=14						
HCY	Herceg Novi	82.59	323	iP	P	14 21 44.4	-0.9
STON	Ston	82.59	324	iP	P	14 21 44.1	-1.1
L44A	Lake County Fo	82.60	37	P	P	14 21 45.3	0.0
	baz=324						
OHR	Ohrid	82.62	321	iP	P	14 21 45.6	0.0
LIT	Litokhoron	82.63	320	eP	P	14 21 44.6	-1.0
	comp=Z,31nm,0.9s						
LIT	Litokhoron	82.63	320	eP	P	14 21 44.6	-1.0
LIT				pmax	pmax		
	comp=Z,31nm,0.9s						
TOBO	Tobermory, Bru	82.73	31	P	P	14 21 45.5	-0.5
	baz=327						
I48A	Sherman Twp	82.74	33	P	P	14 21 46.0	0.0
	baz=326						
F51A	Arnstein	82.74	30	P	P	14 21 45.2	-0.8
	baz=328,SNR=7.7						
D54A	Lac Fusel, La	82.84	28	P	P	14 21 45.6	-0.9
	baz=330,SNR=10						
TIR	Tirane	82.86	322	eP	P	14 21 46.4	-0.3
	comp=Z,113nm,0.9s						
TIR	Tirane	82.86	322	⇓iP	P	14 21 46.9	+0.2
TIR	Tirane	82.86	322	eP	P	14 21 46.4	-0.3
TIR				pmax	pmax		
	comp=Z,113nm,0.9s						
TUE	Stuetta	82.86	331	eP	P	14 21 46.3	-0.6
	comp=Z,23nm,0.8s						
XOR	Xorichti	82.86	319	P	P	14 21 46.2	-0.6
HTL	Hartland	82.88	341	⇑eP	P	14 21 46.7	+0.1
HTL				IAmb	IAmb	14 21 47.8	
	comp=Z,59nm,1.2s						
E52A	Mattawa	82.89	29	P	P	14 21 45.8	-1.0
	baz=329,SNR=6.7						
WMOK	Wichita Mounta	82.95	48	eP	P	14 21 47.6	+0.2
	comp=Z,8.9nm,0.9s						
WMOK	Wichita Mounta	82.95	48	eP	P	14 21 47.6	+0.2
WMOK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMOK	Wichita Mounta	82.95	48	P	P	14 21 47.6	+0.2
	baz=318,SNR=9.0						
J47A	Sunmer	83.07	35	P	P	14 21 48.1	+0.3
	baz=326,SNR=7.1						
F52A	Sundridge	83.07	30	P	P	14 21 47.1	-0.7
	baz=329,SNR=10						
K46A	Dorr	83.11	35	P	P	14 21 47.6	-0.4
	baz=325						
KLBO	Killbear Provi	83.12	31	P	P	14 21 47.4	-0.5
	baz=328,SNR=7.8						
E53A	Dumoine, Ponti	83.17	29	P	P	14 21 47.3	-0.9
	baz=330,SNR=5.2						
M44A	Midewin, Midew	83.18	38	eP	P	14 21 48.2	-0.1
	comp=Z,37nm,0.8s						
M44A	Midewin, Midew	83.18	38	P	P	14 21 48.1	-0.2
	baz=324						
SMIA	Simia	83.23	318	P	P	14 21 48.4	-0.3
HDIL	Hopedale	83.27	39	eP	P	14 21 48.6	-0.2
	comp=Z,40nm,0.6s						
HDIL	Hopedale	83.27	39	P	P	14 21 48.7	-0.1
	baz=323						
E54A	Lac Daplat, Po	83.28	28	P	P	14 21 47.9	-0.9
	baz=330,SNR=6.0						
I49A	Point Hope	83.30	33	eP	P	14 21 48.7	-0.2
	comp=Z,25nm,0.8s						
I49A	Point Hope	83.30	33	P	P	14 21 48.8	-0.1
	baz=327						
BMRO	Meriville Lake	83.38	32	P	P	14 21 49.3	-0.1
	baz=328,SNR=9.4						
ALGO	Algonquin Park	83.39	29	P	P	14 21 48.4	-1.0
	baz=330,SNR=5.1						
L46A	Eue Claire	83.44	36	eP	P	14 21 49.3	-0.4
	comp=Z,52nm,1.0s						
L46A	Eue Claire	83.44	36	P	P	14 21 49.5	-0.2
	baz=325						
J48A	Bridge Port	83.44	34	eP	P	14 21 49.8	+0.1
	comp=Z,25nm,0.8s						
J48A	Bridge Port	83.44	34	P	P	14 21 49.9	+0.1
	baz=326,SNR=5.2						
K47A	Vermontville	83.46	35	P	P	14 21 49.8	+0.1
	baz=325						
ATAL	Atalanti	83.47	318	eP	P	14 21 49.2	-0.7
ATAL	Atalanti	83.47	318	P	P	14 21 49.2	-0.7
LKR	Lokris	83.52	318	P	P	14 21 49.2	-0.9
AGG	Agios Georgios	83.55	319	eP	P	14 21 48.8	-1.6
	comp=Z,33nm,0.8s						
AGG	Agios Georgios	83.55	319	eP	P	14 21 48.8	-1.6
AGG				pmax	pmax		
	comp=Z,33nm,0.8s						
BRCO	Bruce Peninsul	83.59	32	P	P	14 21 50.4	0.0
	baz=328						
J49A	Marlette	83.66	33	P	P	14 21 50.6	-0.1
	baz=326						
SENIN	Lac Senin/Sane	83.67	332	eP	P	14 21 50.4	-0.7
	comp=Z,16nm,0.8s						
TUL1	Leonard	83.68	46	eP	P	14 21 51.2	+0.2
	comp=Z,27nm,0.6s						
TUL1	Leonard	83.68	46	P	P	14 21 51.2	+0.2
	baz=320,SNR=6.0						
BASO	Ashfield	83.70	32	P	P	14 21 51.2	+0.2
	baz=327,SNR=5.4						
K48A	Perry	83.72	34	P	P	14 21 51.2	+0.1
	baz=326						
KARP	Karpathos	83.78	314	eP	P	14 21 50.9	-0.7
	comp=Z,152nm,0.6s						
CCA1	Carnmenellis	83.80	342	⇑eP	P	14 21 51.4	0.0
CCA1				IAmb	IAmb	14 21 52.4	
	comp=Z,35nm,0.8s						
BWLO	Walkerton	83.81	32	P	P	14 21 51.7	+0.1
	baz=328,SNR=5.9						
PMOR	Pomariorio Ree	83.83	117	eT	T	15 54 00.7	
	comp=Z,101nm,0.2s						
H52A	Wyevale	83.85	31	P	P	14 21 51.2	-0.5
	baz=328						
P43A	Skaggs, Pawnee	83.90	40	P	P	14 21 51.9	-0.2
	baz=323						
G53A	Haliburton	83.90	30	P	P	14 21 51.4	-0.6
	baz=329,SNR=7.9						
PEMO	Pembroke	83.92	29	P	P	14 21 51.2	-0.9
	baz=330,SNR=6.4						
DSF	Desfina	83.93	319	P	P	14 21 50.9	-1.5
L47A	Sherwood	83.94	35	P	P	14 21 52.0	-0.3
	baz=325,SNR=11						
O44A	Mansfield	83.97	39	P	P	14 21 52.2	-0.3
	baz=324						
JSA	Saint Aubin	83.98	339	⇑eP	P	14 21 52.1	-0.2
JSA				IAmb	IAmb	14 21 52.6	
	comp=Z,30nm,0.9s						
ABTX	Abilene, Hawle	84.04	50	eP	P	14 21 53.4	+0.4
	comp=Z,14nm,0.9s						
ANX	Ano Chora	84.08	319	P	P	14 21 52.5	-0.7
TX31	Lajitas Ar. Si	84.09	55	eP	P	14 21 53.9	+0.5
	comp=Z,22nm,0.9s						
LTX	Lajitas	84.09	55	eP	P	14 21 54.2	+0.9
TXAR	Lajitas Array	84.09	55	P	P	14 21 54.2	+0.9
	comp=Z,12nm,0.9s,baz=295,slow=3.6,SNR=92						
TXAR				PKKPbc	PKKPbc	14 40 08.6	+3.3
	comp=Z,0.7nm,0.7s,baz=150,slow=5.9,SNR=8.2						
TXAR				LR	LR	14 54 27.1	
	comp=Z,51nm,21.8s,baz=0.0,slow=32						
F55A	Otter Lake	84.09	28	P	P	14 21 52.0	-0.9
	baz=331						
IGT	Igoumenitsa	84.09	321	eP	P	14 21 52.6	-0.5
IGT	Igoumenitsa	84.09	321	P	P	14 21 52.6	-0.5
IGT	Igoumenitsa	84.09	321	eP	P	14 21 52.6	-0.5
I51A	Listowel	84.12	32	P	P	14 21 53.2	0.0
	baz=328,SNR=7.1						
KALE	Kalithea	84.14	319	eP	P	14 21 52.2	-1.2
KALE	Kalithea	84.14	319	P	P	14 21 52.2	-1.2
SERG	Sergoula	84.16	319	P	P	14 21 52.6	-0.9
BANO	Bancroft	84.24	29	P	P	14 21 53.4	-0.4
	baz=330,SNR=9.9						
DID	Didima	84.29	317	eP	P	14 21 51.6	-2.6
DID	Didima	84.29	317	P	P	14 21 51.6	-2.6
L48A	N Adams	84.29	35	P	P	14 21 54.1	0.0
	baz=326,SNR=16						
CCM	Cathedral Cave	84.33	42	eP	P	14 21 54.1	-0.2
	comp=Z,21nm,0.8s						
CCM	Cathedral Cave	84.33	42	eP	P	14 21 54.1	-0.2
CCM				pmax	pmax		
	comp=Z,21nm,0.8s						
CCM	Cathedral Cave	84.33	42	P	P	14 21 54.3	0.0
	baz=322						
LAKA	Lakka	84.33	319	P	P	14 21 47.8	-6.6
K50A	Casco	84.35	33	P	P	14 21 54.4	+0.1
	baz=327						
HHAR	Hobbs	84.36	44	eP	P	14 21 54.3	-0.2
	comp=Z,16nm,1.0s						
TRQ	Mont Tremblant	84.36	27	eP	P	14 21 53.9	-0.5
GUR	Goura	84.40	318	eP	P	14 21 53.5	-1.3
GUR	Goura	84.40	318	P	P	14 21 53.5	-1.3
SFIN	Lafayette	84.41	38	eP	P	14 21 54.2	-0.5
	comp=Z,14nm,0.6s						
SFIN	Lafayette	84.41	38	P	P	14 21 54.4	-0.2
	baz=324,SNR=6.3						
L49A	Milan	84.44	35	P	P	14 21 54.9	+0.1
	baz=326						
VLC	Villacollemand	84.46	329	eP	P	14 21 54.3	-0.6
	comp=Z,34nm,0.9s						
G55A	Calabogie	84.47	28	P	P	14 21 54.1	-0.8
	baz=330,SNR=10						
PLVO	Plevna	84.53	29	eP	P	14 21 54.4	-0.8
	comp=Z,18nm,0.8s						
PLVO	Plevna	84.53	29	P	P	14 21 54.4	-0.8
	baz=330,SNR=12						
LKD2	Lefkada island	84.53	320	P	P	14 21 54.9	-0.5
M48A	Edgerton	84.55	35	P	P	14 21 55.2	-0.2
	baz=326						
HPIG		84.58	58	eP	P	14 21 56.3	+0.3
	comp=Z,32nm,1.1s						
N47A	Urbana	84.63	36	P	P	14 21 55.4	-0.3
	baz=325,SNR=11						
PPT	Papeete	84.63	120	LR	LR	14 51 22.0	
	comp=Z,206nm,20.1s,baz=328,slow=30						
PPT2	Papeete2	84.64	120	eLR	LR	14 48 28.6	
	comp=Z,871nm,32.0s,baz=314						
PPT2	Papeete2	84.64	120	eT	T	15 55 01.0	
	comp=Z,7.1nm,0.2s						
ACTO	Acton	84.66	31	P	P	14 21 55.8	-0.1
	baz=328						
EVGI	Lefkada island	84.67	320	P	P	14 21 55.6	-0.4
ORIO	Orleans, Innes	84.72	28	P	P	14 21 55.3	-0.7
	baz=331						
RLS	Riolos of Patr	84.72	319	P	P	14 21 56.3	0.0
PKRO	Pickering	84.73	31	P	P	14 21 55.7	-0.5
	baz=329						
TRIP	Tripoli	84.75	318	P	P	14 21 55.8	-0.7
DELO	Deloro Mine	84.79	29	eP	P	14 21 55.8	-0.7
	comp=Z,12nm,0.9s						
DELO	Deloro Mine	84.79	29	P	P	14 21 56.0	-0.5
	baz=330						
J52A	Paris	84.81	32	P	P	14 21 56.6	0.0
	baz=328						
AQU	L'Aquila	84.81	326	iP	P	14 21 56.8	0.0
MATE	Matera	84.83	323	⇑iP	P	14 21 56.0	-0.8
U40A	Yellville	84.85	44	P	P	14 21 56.8	-0.2
	baz=321,SNR=24						
M49A	Liberty Center	84.87	35	P	P	14 21 56.9	-0.1
	baz=326,SNR=6.6						
L50A	Kingsville	84.89	34	P	P	14 21 57.1	+0.1
	baz=327,SNR=5.1						
X37A	Clayton	84.91	46	eP	P	14 21 57.5	+0.2
	comp=Z,8.4nm,0.7s						
H55A	Tweed	84.92	29	P	P	14 21 56.7	-0.4
	baz=330,SNR=9.2						
TORO	Toronto--Lesli	84.93	31	P	P	14 21 57.2	0.0
	baz=329						
N48A	Decatur	84.93	36	P	P	14 21 57.1	-0.2
	baz=326,SNR=6.4						
DRWO	Darlington Wes	84.94	30	P	P	14 21 57.1	-0.1
	baz=329						
DRCO	St. Marys Ceme	84.94	30	P	P	14 21 57.2	-0.1
	baz=329						
LAST	Lasithi	84.97	315	P	P	14 21 57.7	0.0
P46A	Rosedale	84.98	38	P	P	14 21 57.9	+0.3
	baz=324						
WLVO	Wesleyville	85.02	30	P	P	14 21 57.5	-0.1
	baz=329						
BNI	Bardonecchia	85.03	332	eP	P	14 21 57.5	-0.4

	comp=Z,22nm,1.0s						
BNI	**Bardonecchia**	**85.03**	**332**	*e*P	**P**	**14 21 57.5**	**-0.4**
BNI				pmax	pmax		
	comp=Z,22nm,1.0s						
I55A	**Frankford**	**85.03**	**30**	P	**P**	**14 21 57.1**	**-0.6**
	baz=330,SNR=5.3						
VLS	**Valsamata**	**85.05**	**320**	P	**P**	**14 21 57.4**	**-0.6**
K52A	**Tillsonburg**	**85.11**	**32**	P	**P**	**14 21 58.3**	**+0.2**
	baz=328						
TYNO	**Tyneside**	**85.17**	**32**	P	**P**	**14 21 58.2**	**-0.2**
	baz=329						
ITM	**Ithomi**	**85.19**	**318**	*e*P	**P**	**14 21 57.8**	**-0.9**
	comp=Z,139nm,0.7s						
ITM	**Ithomi**	**85.19**	**318**	P	**P**	**14 21 57.8**	**-0.9**
PLIO	**Pelee Island,**	**85.20**	**34**	P	**P**	**14 21 58.6**	**0.0**
	baz=327						
H56A	**Elgin**	**85.21**	**29**	P	**P**	**14 21 58.1**	**-0.5**
	baz=331,SNR=5.4						
N49A	**Columbus Grove**	**85.24**	**35**	*e*P	**P**	**14 21 58.6**	**-0.2**
	comp=Z,15nm,0.6s						
N49A	**Columbus Grove**	**85.24**	**35**	P	**P**	**14 21 58.8**	**0.0**
	baz=326,SNR=7.9						
W39A	**Magazine**	**85.27**	**45**	*e*P	**P**	**14 21 58.5**	**-0.6**
	comp=Z,20nm,1.2s						
W39A	**Magazine**	**85.27**	**45**	P	**P**	**14 21 59.2**	**+0.1**
	baz=321,SNR=5.5						
M50A	**Fremont**	**85.32**	**34**	*e*P	**P**	**14 21 59.1**	**-0.1**
	comp=Z,16nm,0.6s						
M50A	**Fremont**	**85.32**	**34**	P	**P**	**14 21 59.1**	**-0.1**
	baz=327						
STCO	**Saint Catharin**	**85.34**	**31**	P	**P**	**14 21 59.2**	**-0.1**
	baz=329						
KTHA	**Kythira Island**	**85.36**	**317**	P	**P**	**14 21 58.0**	**-1.5**
O48A	**Farmland**	**85.37**	**36**	P	**P**	**14 21 59.3**	**-0.2**
	baz=326						
KTHR	**Kythira**	**85.38**	**317**	P	**P**	**14 21 58.5**	**-1.1**
SIVA	**Sivas**	**85.42**	**315**	P	**P**	**14 22 00.1**	**+0.3**
J54A	**Appleton**	**85.48**	**31**	*e*P	**P**	**14 21 59.8**	**-0.2**
	comp=Z,21nm,0.8s						
J54A	**Appleton**	**85.48**	**31**	P	**P**	**14 21 59.9**	**-0.2**
	baz=329						
IMMV	**Iera Moni Meta**	**85.51**	**316**	P	**P**	**14 22 00.1**	**-0.2**
P47A	**Martinsville**	**85.51**	**38**	P	**P**	**14 22 00.1**	**-0.1**
	baz=325						
PYL	**PYLOS**	**85.51**	**318**	*e*P	**P**	**14 21 58.9**	**-1.4**
PYL	**PYLOS**	**85.51**	**318**	P	**P**	**14 21 58.9**	**-1.4**
PECO	**Prince Edward**	**85.52**	**29**	*e*P	**P**	**14 21 59.5**	**-0.7**
	comp=Z,16nm,0.6s						
PECO	**Prince Edward**	**85.52**	**29**	P	**P**	**14 21 59.6**	**-0.5**
	baz=330,SNR=6.0						
JCT	**Junction City**	**85.53**	**52**	*e*P	**P**	**14 22 00.6**	**0.0**
	comp=Z,17nm,0.8s						
JCT	**Junction City**	**85.53**	**52**	*e*P	**P**	**14 22 00.6**	**0.0**
JCT				pmax	pmax		
	comp=Z,17nm,0.8s						
JCT	**Junction City**	**85.53**	**52**	P	**P**	**14 22 00.9**	**+0.3**
	baz=318						
ANKY	**Antikythira Is**	**85.54**	**316**	*e*P	**P**	**14 21 59.0**	**-1.4**
ANKY	**Antikythira Is**	**85.54**	**316**	P	**P**	**14 21 59.0**	**-1.4**
SSB	**Saint Sauveur**	**85.54**	**334**	*e*P	**P**	**14 22 00.3**	**0.0**
	comp=Z,39nm,1.4s						
SSB	**Saint Sauveur**	**85.54**	**334**	*e*P	**P**	**14 22 00.4**	**0.0**
SSB				pmax	pmax		
	comp=Z,39nm,1.4s						
S44A	**Carbondale**	**85.57**	**41**	P	**P**	**14 22 00.9**	**+0.4**
	baz=323,SNR=12						
FCAR	**Ozark Folk Cen**	**85.58**	**43**	*e*P	**P**	**14 22 00.3**	**-0.3**
	comp=Z,23nm,0.8s						
MEDO	**Medina**	**85.65**	**31**	P	**P**	**14 22 00.7**	**-0.1**
	baz=329						
PBMO	**Poplar Bluff**	**85.73**	**42**	*e*P	**P**	**14 22 01.4**	**+0.1**
	comp=Z,70nm,1.4s						
WHTX	**Lake Whitney,**	**85.74**	**49**	*e*P	**P**	**14 22 01.7**	**+0.3**
	comp=Z,21nm,0.6s						
WHTX	**Lake Whitney,**	**85.74**	**49**	P	**P**	**14 22 02.0**	**+0.5**
	baz=319,SNR=6.0						
LONY	**Lake Ozonia**	**85.76**	**27**	*e*P	**P**	**14 22 00.7**	**-0.7**
	comp=Z,11nm,1.2s						
LONY	**Lake Ozonia**	**85.76**	**27**	P	**P**	**14 22 00.6**	**-0.7**
	baz=332						
O49A	**Covington**	**85.78**	**36**	*e*P	**P**	**14 22 01.1**	**-0.4**
	comp=Z,9.8nm,0.6s						
O49A	**Covington**	**85.78**	**36**	P	**P**	**14 22 01.5**	**0.0**
	baz=326						
J55A	**Hilton**	**85.80**	**30**	*e*P	**P**	**14 22 01.0**	**-0.5**
	comp=Z,20nm,0.7s						
J55A	**Hilton**	**85.80**	**30**	P	**P**	**14 22 01.0**	**-0.5**
	baz=330,SNR=5.3						
N50A	**Nevada**	**85.81**	**35**	P	**P**	**14 22 01.8**	**+0.1**
	baz=327						
MIAR	**Mount Ida**	**85.89**	**45**	*e*P	**P**	**14 22 02.4**	**+0.2**
	comp=Z,22nm,0.8s						
MIAR	**Mount Ida**	**85.89**	**45**	*e*P	**P**	**14 22 02.4**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,22nm,0.8s						
MIAR	**Mount Ida**	**85.89**	**45**	P	**P**	**14 22 02.6**	**+0.5**
	baz=321,SNR=17						
M52A	**Chesterland**	**85.90**	**33**	*e*P	**P**	**14 22 01.9**	**-0.2**
	comp=Z,30nm,0.6s						
M52A	**Chesterland**	**85.90**	**33**	P	**P**	**14 22 02.4**	**+0.2**
	baz=328,SNR=5.1						
FRNY	**Flat Rock**	**85.90**	**27**	*e*P	**P**	**14 22 01.0**	**-1.0**
	comp=Z,6.3nm,0.9s						
P48A	**Milroy**	**85.91**	**37**	P	**P**	**14 22 01.9**	**-0.3**
	baz=325						
MOQ	**Mont Orford**	**85.91**	**26**	*e*P	**P**	**14 22 02.2**	**0.0**
BATG	**Bathurst New B**	**85.93**	**21**	*e*P	**P**	**14 22 02.2**	**+0.1**
	comp=Z,37nm,0.6s						
PQI	**Presque Isle**	**85.95**	**22**	*e*P	**P**	**14 22 01.8**	**-0.5**
	comp=Z,12nm,0.8s						
ERPA	**Erie**	**85.95**	**32**	*e*P	**P**	**14 22 02.2**	**-0.2**
	comp=Z,22nm,0.6s						
ERPA	**Erie**	**85.95**	**32**	P	**P**	**14 22 02.5**	**+0.1**
	baz=328						
WHAR	**Wooly Hollow**	**85.97**	**44**	*e*P	**P**	**14 22 02.5**	**-0.1**
	comp=Z,34nm,0.7s						
L53A	**Girard**	**85.99**	**32**	P	**P**	**14 22 02.5**	**-0.1**
	baz=328,SNR=12						
N51A	**Ashland**	**86.01**	**34**	*e*P	**P**	**14 22 02.3**	**-0.4**
	comp=Z,15nm,0.6s						
N51A	**Ashland**	**86.01**	**34**	P	**P**	**14 22 02.5**	**-0.1**
	baz=327						
TIP	**Timpagrande**	**86.01**	**323**	*e*P	**P**	**14 22 02.5**	**-0.3**
	comp=Z,70nm,1.3s						
TIP	**Timpagrande**	**86.01**	**323**	⇑*i*P	**P**	**14 22 02.5**	**-0.3**
K54A	**Basiliko Farm,**	**86.03**	**31**	P	**P**	**14 22 02.5**	**-0.2**
	baz=329,SNR=5.3						
W41B	**Gary Mavity, V**	**86.08**	**44**	*e*P	**P**	**14 22 02.9**	**-0.2**
	comp=Z,19nm,1.0s						
W41B	**Gary Mavity, V**	**86.08**	**44**	P	**P**	**14 22 03.1**	**0.0**
	baz=322,SNR=12						
L54A	**Sinclairville**	**86.12**	**32**	P	**P**	**14 22 03.1**	**-0.1**
	baz=329						
O50A	**Cable**	**86.12**	**36**	P	**P**	**14 22 03.2**	**0.0**
	baz=326						
P49A	**Miami Univ. Ec**	**86.16**	**37**	P	**P**	**14 22 03.3**	**-0.2**
	baz=326,SNR=6.6						
K55A	**Perry**	**86.17**	**31**	P	**P**	**14 22 03.2**	**-0.2**
	baz=330,SNR=6.1						
Q48A	**North Vernon**	**86.20**	**38**	P	**P**	**14 22 03.7**	**0.0**
	baz=325						
MMNY	**Mt. Morris Dam**	**86.22**	**31**	*e*P	**P**	**14 22 03.0**	**-0.7**
	comp=Z,17nm,0.8s						
M53A	**WI Miller and**	**86.26**	**33**	P	**P**	**14 22 04.1**	**+0.2**
	baz=328						
S46A	**Don Dixon Farm**	**86.31**	**40**	P	**P**	**14 22 04.4**	**+0.2**
	baz=324						
X40A	**Basin Creek Fa**	**86.31**	**45**	*e*P	**P**	**14 22 04.3**	**+0.1**
	comp=Z,10nm,0.8s						
X40A	**Basin Creek Fa**	**86.31**	**45**	P	**P**	**14 22 04.5**	**+0.2**
	baz=321,SNR=5.4						
ACSO	**Alum Creek Sta**	**86.33**	**35**	*e*P	**P**	**14 22 04.2**	**0.0**
	comp=Z,19nm,0.8s						
ACSO	**Alum Creek Sta**	**86.33**	**35**	P	**P**	**14 22 04.3**	**+0.1**
	baz=327						
N52A	**McGinn’s Farm,**	**86.38**	**34**	P	**P**	**14 22 04.5**	**0.0**
	baz=328						
T45A	**Paducah**	**86.40**	**41**	P	**P**	**14 22 04.9**	**+0.2**
	baz=324						
NCB	**Newcomb**	**86.45**	**28**	*e*P	**P**	**14 22 03.9**	**-0.9**
	comp=Z,6.7nm,0.8s						
P50A	**Jamestown**	**86.50**	**36**	P	**P**	**14 22 05.1**	**0.0**
	baz=326,SNR=5.0						
L55A	**Hinsdale**	**86.50**	**31**	P	**P**	**14 22 04.9**	**-0.2**
	baz=330						
Q49A	**Aurora**	**86.51**	**37**	P	**P**	**14 22 05.1**	**0.0**
	baz=326						
WCI	**Wyandotte Cave**	**86.52**	**38**	*e*P	**P**	**14 22 05.1**	**-0.1**
	comp=Z,97nm,0.6s						
WCI	**Wyandotte Cave**	**86.52**	**38**	*e*P	**P**	**14 22 05.1**	**-0.1**
WCI				pmax	pmax		
	comp=Z,97nm,0.6s						
WCI	**Wyandotte Cave**	**86.52**	**38**	P	**P**	**14 22 05.4**	**+0.2**
	baz=325						
O51A	**Pataskala**	**86.55**	**35**	P	**P**	**14 22 05.5**	**+0.1**
	baz=327						
M54A	**Oil Creek Stat**	**86.60**	**32**	*e*P	**P**	**14 22 05.5**	**-0.1**
	comp=Z,17nm,0.6s						
M54A	**Oil Creek Stat**	**86.60**	**32**	P	**P**	**14 22 05.5**	**-0.1**
	baz=329,SNR=7.4						
VT1	**Waterbury**	**86.62**	**26**	*e*P	**P**	**14 22 05.8**	**+0.1**
	comp=Z,40nm,1.4s						
N53A	**Lisbon**	**86.73**	**33**	*e*P	**P**	**14 22 06.0**	**-0.2**
	comp=Z,24nm,1.0s						
N53A	**Lisbon**	**86.73**	**33**	P	**P**	**14 22 06.3**	**0.0**
	baz=328,SNR=5.6						
T46A	**Princeton**	**86.74**	**40**	P	**P**	**14 22 06.8**	**+0.5**
	baz=324,SNR=9.7						
H06N1	**SOCORRO T-PHAS**	**86.80**	**67**	T	T	15 58 19.9	
	SNR=3.8						
PKME	**Peaks-Kenny Pk**	**86.87**	**24**	*e*P	**P**	**14 22 06.6**	**-0.1**
	comp=Z,23nm,1.3s						
PKME	**Peaks-Kenny Pk**	**86.87**	**24**	P	**P**	**14 22 06.8**	**0.0**
	baz=335,SNR=6.8						
O52A	**Adamsville**	**86.90**	**34**	*e*P	**P**	**14 22 06.9**	**-0.2**
	comp=Z,16nm,0.8s						
O52A	**Adamsville**	**86.90**	**34**	P	**P**	**14 22 07.1**	**0.0**
	baz=328						
P51A	**Williamsport**	**86.92**	**36**	P	**P**	**14 22 07.1**	**-0.1**
	baz=327						
N54A	**Moraine State**	**86.94**	**33**	*e*P	**P**	**14 22 06.5**	**-0.7**
	comp=Z,43nm,1.3s						
N54A	**Moraine State**	**86.94**	**33**	P	**P**	**14 22 07.5**	**+0.3**
	baz=329,SNR=8.0						
LBNH	**Lisbon**	**86.97**	**26**	P	**P**	**14 22 07.7**	**+0.3**
	baz=334						
R49A	**Shelbyville**	**86.98**	**38**	P	**P**	**14 22 07.7**	**+0.2**
	baz=326						
M55A	**Ridgway**	**86.98**	**32**	P	**P**	**14 22 07.4**	**0.0**
	baz=329,SNR=11						
O53A	**New Philadelph**	**87.05**	**34**	P	**P**	**14 22 07.9**	**+0.2**
	baz=328,SNR=6.0						
Q50A	**Georgetown**	**87.05**	**36**	P	**P**	**14 22 08.1**	**+0.3**
	baz=326						
S48A	**Wiedeman Farm,**	**87.10**	**39**	P	**P**	**14 22 08.2**	**+0.2**
	baz=325,SNR=7.1						
T47A	**Sharon Grove**	**87.16**	**40**	*e*P	**P**	**14 22 08.6**	**+0.2**
	comp=Z,38nm,0.8s						
T47A	**Sharon Grove**	**87.16**	**40**	P	**P**	**14 22 08.7**	**+0.4**
	baz=324,SNR=13						
U46A	**Springville**	**87.16**	**41**	P	**P**	**14 22 08.7**	**+0.3**
	baz=324						
ACCN	**Adirondack Com**	**87.16**	**27**	*e*P	**P**	**14 22 08.0**	**-0.3**
	comp=Z,24nm,1.3s						
Q51A	**Peebles**	**87.17**	**36**	*e*P	**P**	**14 22 08.4**	**0.0**
	comp=Z,26nm,0.7s						
Q51A	**Peebles**	**87.17**	**36**	P	**P**	**14 22 08.5**	**0.0**
	baz=327,SNR=9.7						
P52A	**Corning**	**87.18**	**35**	P	**P**	**14 22 08.2**	**-0.2**
	baz=327						
M56A	**Emporium**	**87.19**	**31**	P	**P**	**14 22 08.5**	**0.0**
	baz=330						
X43A	**Marvell**	**87.29**	**44**	P	**P**	**14 22 09.5**	**+0.5**
	baz=322						
S49A	**Springfield**	**87.34**	**38**	P	**P**	**14 22 09.6**	**+0.3**
	baz=326,SNR=6.2						
R50A	**Paris**	**87.36**	**37**	*e*P	**P**	**14 22 09.4**	**+0.1**
	comp=Z,29nm,1.5s						
R50A	**Paris**	**87.36**	**37**	P	**P**	**14 22 09.4**	**+0.1**
	baz=326						
T48A	**Bowling Green**	**87.39**	**39**	P	**P**	**14 22 09.7**	**+0.2**
	baz=325						
WVL	**Waterville**	**87.39**	**24**	*e*P	**P**	**14 22 09.2**	**-0.1**
	comp=Z,12nm,0.8s						
O54A	**Avella**	**87.44**	**33**	P	**P**	**14 22 10.1**	**+0.4**
	baz=328,SNR=6.2						
N55A	**Marion Center**	**87.49**	**32**	*e*P	**P**	**14 22 09.9**	**+0.1**
	comp=Z,24nm,0.8s						
N55A	**Marion Center**	**87.49**	**32**	P	**P**	**14 22 10.0**	**+0.1**
	baz=329,SNR=9.7						
WVT	**Waverly**	**87.51**	**41**	*e*P	**P**	**14 22 09.8**	**-0.2**
	comp=Z,17nm,0.7s						
WVT	**Waverly**	**87.51**	**41**	*e*P	**P**	**14 22 09.8**	**-0.2**
WVT				pmax	pmax		
	comp=Z,17nm,0.7s						
WVT	**Waverly**	**87.51**	**41**	P	**P**	**14 22 10.3**	**+0.3**
	baz=324						
U47A	**Clarksville**	**87.51**	**40**	P	**P**	**14 22 10.4**	**+0.4**
	baz=324						
LMN	**Caledonia Moun**	**87.57**	**21**	*e*P	**P**	**14 22 10.3**	**+0.1**
	comp=Z,47nm,0.6s						
L58A	**Harry Jones Me**	**87.58**	**30**	P	**P**	**14 22 10.3**	**0.0**
	baz=331						
P53A	**Whipple**	**87.62**	**34**	*e*P	**P**	**14 22 10.3**	**-0.2**
	comp=Z,39nm,1.4s						
P53A	**Whipple**	**87.62**	**34**	P	**P**	**14 22 10.6**	**+0.1**
	baz=328,SNR=5.2						
V46A	**Holladay**	**87.63**	**41**	P	**P**	**14 22 10.8**	**+0.1**
	baz=324,SNR=8.9						
N56A	**West Decatur**	**87.64**	**32**	P	**P**	**14 22 10.7**	**0.0**
	baz=330						
R51A	**Hillsboro**	**87.67**	**37**	P	**P**	**14 22 10.9**	**+0.1**
	baz=326						
Q52A	**Bidwell**	**87.69**	**35**	P	**P**	**14 22 10.6**	**-0.3**
	baz=327						
GGN	**Saint George**	**87.70**	**22**	*e*P	**P**	**14 22 10.4**	**-0.4**
	comp=Z,14nm,0.8s						
T49A	**Edmonton**	**87.79**	**38**	*e*P	**P**	**14 22 11.4**	**0.0**
	comp=Z,19nm,0.7s						
T49A	**Edmonton**	**87.79**	**38**	P	**P**	**14 22 11.7**	**+0.3**
	baz=325,SNR=11						
U48A	**Cassie Pea, Po**	**87.81**	**39**	P	**P**	**14 22 11.7**	**+0.2**
	baz=325,SNR=7.0						
S50A	**Richmond**	**87.83**	**37**	P	**P**	**14 22 11.7**	**+0.1**
	baz=326,SNR=5.6						
O55A	**Ligonier**	**87.85**	**33**	P	**P**	**14 22 11.8**	**+0.1**
	baz=329,SNR=10.0						
V47A	**Nunnelly**	**87.90**	**41**	P	**P**	**14 22 12.1**	**+0.2**
	baz=324,SNR=14						
EMMW	**East Machias**	**87.91**	**23**	*e*P	**P**	**14 22 11.6**	**-0.1**
	comp=Z,13nm,0.8s						
M58A	**Price’s Panora**	**87.94**	**30**	P	**P**	**14 22 12.1**	**0.0**
	baz=331,SNR=7.6						
KSPA	**Keystone Colle**	**88.03**	**30**	*e*P	**P**	**14 22 12.2**	**-0.3**
	comp=Z,8.3nm,0.7s						
OXF	**Oxford**	**88.03**	**43**	*e*P	**P**	**14 22 12.5**	**-0.1**
	comp=Z,32nm,0.8s						
OXF	**Oxford**	**88.03**	**43**	*e*P	**P**	**14 22 12.5**	**-0.1**
OXF				pmax	pmax		
	comp=Z,32nm,0.8s						
OXF	**Oxford**	**88.03**	**43**	P	**P**	**14 22 12.8**	**+0.2**
	baz=323,SNR=5.1						
SSPA	**Standing Stone**	**88.04**	**32**	*e*P	**P**	**14 22 12.6**	**+0.1**
	comp=Z,16nm,0.7s						
SSPA	**Standing Stone**	**88.04**	**32**	P	**P**	**14 22 12.7**	**+0.2**
	baz=330						
R52A	**Catlettsburg**	**88.05**	**36**	P	**P**	**14 22 12.6**	**0.0**
	baz=327						
N57A	**Milroy**	**88.06**	**31**	P	**P**	**14 22 12.9**	**+0.3**
	baz=330,SNR=20						
Q53A	**Leroy**	**88.09**	**35**	P	**P**	**14 22 13.2**	**+0.4**
	baz=328,SNR=12						
O56A	**Blue Knob Stat**	**88.09**	**32**	*e*P	**P**	**14 22 13.0**	**+0.2**
	comp=Z,44nm,0.6s						
O56A	**Blue Knob Stat**	**88.09**	**32**	P	**P**	**14 22 13.0**	**+0.2**
	baz=330,SNR=23						
MCWV	**Mont Chateau**	**88.10**	**33**	*e*P	**P**	**14 22 13.1**	**+0.2**
	comp=Z,16nm,0.6s						
MCWV	**Mont Chateau**	**88.10**	**33**	P	**P**	**14 22 13.3**	**+0.4**
	baz=329,SNR=5.0						
U49A	**Red Boiling Sp**	**88.16**	**39**	P	**P**	**14 22 13.5**	**+0.4**
	baz=325,SNR=16						
M59A	**Waymart**	**88.17**	**29**	P	**P**	**14 22 13.0**	**-0.2**
	baz=331						
T50A	**Nancy**	**88.17**	**38**	P	**P**	**14 22 13.5**	**+0.3**
	baz=326,SNR=19						
S51A	**Beattyville**	**88.22**	**37**	*e*P	**P**	**14 22 13.4**	**0.0**
	comp=Z,19nm,0.9s						
S51A	**Beattyville**	**88.22**	**37**	P	**P**	**14 22 13.5**	**0.0**
	baz=326,SNR=6.0						
P55A	**Reedsville**	**88.24**	**33**	P	**P**	**14 22 14.0**	**+0.5**
	baz=329,SNR=11						
CLTN	**Cedars of Leba**	**88.25**	**40**	*e*P	**P**	**14 22 13.8**	**+0.2**
	comp=Z,12nm,0.7s						
Q54A	**Coxs Mills**	**88.27**	**34**	*e*P	**P**	**14 22 13.9**	**+0.3**
	comp=Z,26nm,0.7s						
Q54A	**Coxs Mills**	**88.27**	**34**	P	**P**	**14 22 14.3**	**+0.6**
	baz=328,SNR=9.7						
V48A	**Smith Brothers**	**88.30**	**40**	*e*P	**P**	**14 22 13.9**	**0.0**
	comp=Z,16nm,0.8s						
V48A	**Smith Brothers**	**88.30**	**40**	P	**P**	**14 22 13.9**	**0.0**
	baz=325,SNR=7.6						
N58A	**Sunbury**	**88.31**	**31**	P	**P**	**14 22 13.8**	**+0.1**
	baz=331,SNR=11						
W47A	**Westpoint**	**88.33**	**41**	P	**P**	**14 22 14.1**	**+0.1**
	baz=324,SNR=6.3						
R53A	**Hurricane**	**88.35**	**35**	P	**P**	**14 22 14.1**	**+0.1**
	baz=327						
X46A	**Booneville**	**88.41**	**42**	P	**P**	**14 22 14.6**	**+0.2**
	baz=324						
O57A	**Amberson**	**88.50**	**32**	P	**P**	**14 22 15.0**	**+0.3**
	baz=330,SNR=5.5						
Q55A	**Buckhannon**	**88.57**	**34**	P	**P**	**14 22 15.6**	**+0.4**
	baz=329,SNR=9.9						
N59A	**State Game Lan**	**88.59**	**30**	*e*P	**P**	**14 22 14.5**	**-0.6**
	comp=Z,21nm,0.9s						
N59A	**State Game Lan**	**88.59**	**30**	P	**P**	**14 22 15.4**	**+0.3**
	baz=331,SNR=7.7						
T51A	**Gray**	**88.62**	**38**	P	**P**	**14 22 15.4**	**0.0**
	baz=326,SNR=6.2						
P56A	**Dayton Farm, R**	**88.64**	**33**	P	**P**	**14 22 16.0**	**+0.7**
	baz=329,SNR=12						
HRV	**Adam Dziewonsk**	**88.65**	**26**	P	**P**	**14 22 15.8**	**+0.4**
	baz=334						
U50A	**Jamestown**	**88.67**	**38**	P	**P**	**14 22 16.0**	**+0.4**
	baz=326,SNR=9.9						
V49A	**McMinnville**	**88.71**	**39**	P	**P**	**14 22 15.9**	**+0.1**
	baz=325,SNR=6.6						
W48A	**Pulaski**	**88.73**	**41**	P	**P**	**14 22 15.9**	**0.0**
	baz=325,SNR=21						
X47A	**Russelville**	**88.79**	**42**	P	**P**	**14 22 16.0**	**-0.2**
	baz=324						
S53A	**Williamson**	**88.82**	**36**	P	**P**	**14 22 16.5**	**+0.2**
	baz=327						
WES	**Weston**	**88.83**	**26**	*e*P	**P**	**14 22 16.1**	**0.0**
	comp=Z,20nm,0.8s						
WES	**Weston**	**88.83**	**26**	*e*P	**P**	**14 22 16.2**	**0.0**
WES				pmax	pmax		
	comp=Z,20nm,0.8s						
PAGS	**Pennsylvania G**	**88.83**	**31**	*e*P	**P**	**14 22 15.9**	**-0.3**
	comp=Z,22nm,0.6s						
PAGS				*e*pP	**pP**	**14 22 28.9**	**+0.3**
O58A	**Lewisberry**	**88.85**	**31**	P	**P**	**14 22 16.2**	**-0.2**
	baz=330,SNR=11						
N60A	**Cedar Hill Far**	**88.88**	**30**	P	**P**	**14 22 16.4**	**0.0**
	baz=332						
R54A	**Victor**	**88.89**	**35**	P	**P**	**14 22 16.8**	**+0.2**
	baz=328						
Q56A	**Snyder Ridge,**	**88.89**	**33**	P	**P**	**14 22 16.8**	**+0.2**
	baz=329,SNR=5.2						
T52A	**Hallie**	**88.93**	**37**	*e*P	**P**	**14 22 16.6**	**-0.2**
	comp=Z,16nm,0.8s						
T52A	**Hallie**	**88.93**	**37**	P	**P**	**14 22 17.1**	**+0.3**
	baz=327						
M61A	**Granite Spring**	**88.96**	**28**	P	**P**	**14 22 16.6**	**-0.2**
	baz=332,SNR=5.2						
O59A	**Robesonia**	**88.96**	**31**	P	**P**	**14 22 16.9**	**0.0**
	baz=331						
P57A	**Homestead Farm**	**88.98**	**32**	P	**P**	**14 22 17.1**	**+0.1**
	baz=330						
TBI	**Tubuai**	**88.99**	**124**	*e*LR	LR	14 50 01.3	
	comp=Z,239nm,30.5s						
TBI	**Tubuai**	**88.99**	**124**	*e*T	T	16 00 24.7	
	comp=Z,18nm,0.3s						
W49A	**Belvidere**	**89.07**	**40**	P	**P**	**14 22 17.5**	**+0.1**
	baz=325,SNR=9.8						
S54A	**Dingess, Beckl**	**89.07**	**35**	P	**P**	**14 22 17.6**	**+0.1**
	baz=328						
U51A	**La Follette**	**89.07**	**38**	P	**P**	**14 22 17.4**	**-0.1**
	baz=326,SNR=6.8						
SWET	**Sewanee**	**89.15**	**40**	*e*P	**P**	**14 22 17.7**	**-0.2**
	comp=Z,25nm,0.7s						
TZTN	**Tazewell**	**89.15**	**37**	*e*P	**P**	**14 22 17.9**	**+0.1**
	comp=Z,18nm,0.8s						
TZTN	**Tazewell**	**89.15**	**37**	P	**P**	**14 22 18.2**	**+0.4**
	baz=326,SNR=7.5						
R55A	**Marlinton**	**89.16**	**34**	*e*P	**P**	**14 22 18.0**	**+0.1**
	comp=Z,20nm,0.8s						
R55A	**Marlinton**	**89.16**	**34**	P	**P**	**14 22 18.3**	**+0.3**
	baz=328,SNR=9.1						
V50A	**Pikevile**	**89.16**	**39**	P	**P**	**14 22 17.9**	**0.0**
	baz=326,SNR=5.3						
MVL	**Millersville**	**89.17**	**31**	*e*P	**P**	**14 22 18.1**	**+0.3**
	comp=Z,13nm,0.7s						
PAL	**Palisades**	**89.18**	**29**	P	**P**	**14 22 18.1**	**+0.2**
	baz=332						
Q57A	**Strasburg**	**89.21**	**33**	P	**P**	**14 22 18.1**	**+0.1**
	baz=330						
T53A	**Wise**	**89.23**	**37**	P	**P**	**14 22 18.5**	**+0.2**
	baz=327						
BRNJ	**Basking Ridge**	**89.23**	**29**	*e*P	**P**	**14 22 18.2**	**+0.1**
	comp=Z,26nm,0.8s						
X48A	**Hartselle**	**89.24**	**41**	*e*P	**P**	**14 22 17.8**	**-0.5**
	comp=Z,12nm,0.7s						
X48A	**Hartselle**	**89.24**	**41**	P	**P**	**14 22 18.1**	**-0.2**
	baz=325						
O60A	**Telford**	**89.25**	**30**	P	**P**	**14 22 18.2**	**+0.1**
	baz=331,SNR=5.5						
P58A	**Pank, Wackersv**	**89.25**	**32**	P	**P**	**14 22 18.4**	**+0.2**
	baz=330,SNR=5.5						
R56A	**Bull Pasture M**	**89.35**	**34**	P	**P**	**14 22 18.8**	**-0.1**
	baz=329						
U52A	**Thorn Hill**	**89.35**	**37**	P	**P**	**14 22 19.2**	**+0.4**
	baz=327,SNR=9.9						
V51A	**Loudon**	**89.40**	**38**	*e*P	**P**	**14 22 19.0**	**0.0**
	comp=Z,18nm,0.9s						
V51A	**Loudon**	**89.40**	**38**	P	**P**	**14 22 19.2**	**+0.2**
	baz=326						
S55A	**Lewisburg**	**89.44**	**35**	P	**P**	**14 22 19.1**	**-0.1**
	baz=328						
W50A	**Signal Mountai**	**89.45**	**39**	*e*P	**P**	**14 22 19.2**	**-0.1**
	comp=Z,15nm,0.8s						
W50A	**Signal Mountai**	**89.45**	**39**	P	**P**	**14 22 19.4**	**+0.1**
	baz=326,SNR=6.3						
P59A	**Jarrettsville**	**89.48**	**31**	P	**P**	**14 22 19.4**	**+0.1**
	baz=331						
X49A	**Woodville**	**89.53**	**40**	P	**P**	**14 22 19.7**	**0.0**
	baz=325,SNR=6.5						
Q58A	**Fox Den Farm,**	**89.58**	**32**	P	**P**	**14 22 19.8**	**0.0**
	baz=330						
T54A	**Tazewell**	**89.58**	**36**	P	**P**	**14 22 20.1**	**+0.2**
	baz=328,SNR=7.4						
P60A	**Greenville**	**89.61**	**30**	P	**P**	**14 22 19.7**	**-0.1**
	baz=331						
CPCT	**Cooper Cave**	**89.61**	**39**	*e*P	**P**	**14 22 19.9**	**-0.1**
	comp=Z,17nm,0.9s						
Y48A	**Jasper**	**89.61**	**41**	P	**P**	**14 22 19.6**	**-0.4**
	baz=324						
V52A	**Sevierville**	**89.71**	**38**	*e*P	**P**	**14 22 20.5**	**+0.1**
	comp=Z,15nm,0.7s						
V52A	**Sevierville**	**89.71**	**38**	P	**P**	**14 22 20.7**	**+0.2**
	baz=326,SNR=6.1						
U53A	**Fall Branch**	**89.73**	**37**	P	**P**	**14 22 20.7**	**+0.1**
	baz=327,SNR=6.7						
W51A	**Cleveland**	**89.74**	**39**	P	**P**	**14 22 20.7**	**+0.1**
	baz=326						
R57A	**Stanardsville**	**89.80**	**33**	P	**P**	**14 22 21.0**	**+0.2**
	baz=330						
T55A	**Pulaski**	**89.87**	**35**	P	**P**	**14 22 21.4**	**+0.1**
	baz=328,SNR=5.9						
X50B	**Fort Payne**	**89.90**	**40**	P	**P**	**14 22 21.3**	**-0.2**
	baz=325						
U54A	**Nelsons Funny**	**89.93**	**36**	*e*P	**P**	**14 22 21.3**	**-0.3**
	comp=Z,14nm,0.8s						
U54A	**Nelsons Funny**	**89.93**	**36**	P	**P**	**14 22 21.6**	**+0.1**
	baz=328						
BLA	**Blacksburg**	**89.94**	**35**	*e*P	**P**	**14 22 22.0**	**+0.4**
	comp=Z,18nm,0.8s						
BLA	**Blacksburg**	**89.94**	**35**	*e*P	**P**	**14 22 22.0**	**+0.4**
BLA				pmax	pmax		
	comp=Z,18nm,0.8s						
BLA	**Blacksburg**	**89.94**	**35**	P	**P**	**14 22 21.6**	**0.0**
	baz=328						
R58A	**Rapidan**	**90.01**	**33**	P	**P**	**14 22 21.7**	**0.0**
	baz=330						
Y49A	**Blount Mountai**	**90.03**	**41**	P	**P**	**14 22 22.1**	**+0.1**
	baz=325						
Q59A	**Harwood**	**90.05**	**32**	P	**P**	**14 22 21.9**	**0.0**
	baz=331						
S57A	**Dark Hollow, R**	**90.09**	**34**	*e*P	**P**	**14 22 22.7**	**+0.5**
	comp=Z,8.9nm,1.0s						
X51A	**Calhoun**	**90.18**	**39**	P	**P**	**14 22 22.9**	**+0.2**
	baz=326						
V53A	**Saluda**	**90.20**	**37**	P	**P**	**14 22 23.0**	**+0.2**

	baz=327						
T56A	Rocky Mt	90.26	35	P	P	14 22 23.2	+0.1
	baz=329						
U55A	TA2, Sparta	90.28	36	P	P	14 22 23.4	+0.1
	baz=328						
R58B	Mineral	90.34	33	P	P	14 22 23.5	+0.1
	baz=330						
W53A	Cullowhee	90.46	38	P	P	14 22 24.5	+0.4
	baz=327,SNR=5.8						
V54A	Nebo	90.50	37	P	P	14 22 24.4	+0.2
	baz=328						
Z49A	Columbiana	90.51	41	P	P	14 22 24.2	0.0
	baz=325						
X52A	Dahlonega	90.60	39	P	P	14 22 24.8	+0.1
	baz=326						
T57A	Hurt	90.61	34	eP	P	14 22 24.7	0.0
	comp=Z,7.3nm,0.6s						
T57A	Hurt	90.61	34	P	P	14 22 24.5	-0.1
	baz=329						
Y51A	Rockmart	90.63	40	P	P	14 22 24.8	-0.1
	baz=326,SNR=6.5						
U56A	King	90.69	35	P	P	14 22 25.2	+0.2
	baz=328						
BG3	Lake Jocassee	90.71	38	eP	P	14 22 25.6	+0.4
	comp=Z,14nm,1.0s						
Z50A	Ashland	90.75	41	eP	P	14 22 25.4	+0.1
	comp=Z,29nm,0.6s						
Z50A	Ashland	90.75	41	P	P	14 22 25.5	+0.1
	baz=325,SNR=14						
149A	Jones	90.86	42	P	P	14 22 26.4	+0.5
	baz=325						
X53A	Estanollee	90.95	38	P	P	14 22 26.8	+0.5
	baz=327,SNR=8.0						
T58A	Grand View Acr	90.96	34	P	P	14 22 26.6	+0.4
	baz=330						
W54A	Cherokee Point	90.97	37	P	P	14 22 26.8	+0.4
	baz=327						
Z51A	Franklin	91.06	40	P	P	14 22 27.3	+0.5
	baz=326						
U57A	Blanch	91.06	35	P	P	14 22 27.0	+0.2
	baz=329						
V56A	Mocksville	91.10	36	P	P	14 22 27.4	+0.5
	baz=328						
Y52A	Lilburn	91.13	39	P	P	14 22 27.7	+0.6
	baz=326						
150A	Eclectic	91.23	41	P	P	14 22 27.7	+0.1
	baz=325						
KMSC	Kings Mountain	91.30	37	eP	P	14 22 27.7	-0.2
	comp=Z,11nm,0.9s						
KMSC	Kings Mountain	91.30	37	P	P	14 22 27.9	0.0
	baz=328						
T59A	Double "B" Far	91.33	33	P	P	14 22 28.1	+0.1
	baz=330						
X54A	Belton	91.34	38	P	P	14 22 28.2	+0.1
	baz=327						
V57A	Coltrane Farms	91.34	35	P	P	14 22 28.0	-0.1
	baz=329						
PAULI	Pauline	91.36	37	eP	P	14 22 28.2	0.0
	comp=Z,11nm,0.9s						
Y53A	Monroe	91.36	39	P	P	14 22 28.7	+0.5
	baz=326						
U58A	Oxford	91.42	34	P	P	14 22 28.7	+0.3
	baz=330						
W56A	Indian Trail	91.64	36	P	P	14 22 29.7	+0.3
	baz=328						
Y54A	Tignall	91.77	38	P	P	14 22 30.7	+0.7
	baz=327,SNR=7.4						
GOGA	Godfrey	91.78	39	P	P	14 22 30.4	+0.3
	baz=327						
Z53A	Monticello	91.84	39	P	P	14 22 30.7	+0.3
	baz=326						
W57A	Gilead	91.87	36	P	P	14 22 30.6	+0.1
	baz=329						
X56A	White Oak	91.98	37	P	P	14 22 31.2	+0.2
	baz=328						
Y55A	Saluda	92.08	38	P	P	14 22 31.7	+0.2
	baz=328						
V59A	Middlesex	92.09	34	P	P	14 22 31.7	+0.3
	baz=330						
KEST	Kesra	92.09	326	P	P	14 22 31.1	-0.5
	comp=Z,18nm,0.8s,baz=273,slow=1.8,SNR=29						
KEST				LR	LR	15 08 44.5	
	comp=Z,175nm,18.2s,baz=338,slow=39						
KEST	Kesra	92.09	326	eP	P	14 22 31.2	-0.5
	comp=Z,19nm,0.8s						
W58A	Raeford	92.31	35	P	P	14 22 32.8	+0.3
	baz=329						
V60A	Jim Taylor Roa	92.49	34	eP	P	14 22 33.0	-0.3
	comp=Z,309nm,0.3s						
POLO	Lamas de Olo	92.69	340	eP	P	14 22 33.6	-0.7
	comp=Z,12nm,1.3s						
MVO	Moncorvo	92.70	340	eP	P	14 22 33.4	-0.9
	comp=Z,11nm,1.3s						
MVO	Moncorvo	92.70	340	eLR	LR	14 59 16.0	
	comp=Z,114nm,18.0s						
155A	Kite	92.90	39	P	P	14 22 35.2	-0.1
	baz=327						
Y58A	Scranton	93.08	36	P	P	14 22 36.4	+0.4
	baz=329						
353A	Camilla	93.14	41	P	P	14 22 36.9	+0.5
	baz=326						
ESDC	Sonseca Array	93.26	337	P	P	14 22 36.5	-0.4
	comp=Z,7.3nm,0.7s,baz=16,slow=4.1,SNR=38						
ESDC				LR	LR	15 08 49.7	
	comp=Z,26nm,18.3s,baz=55,slow=38						
ESLA	Sonseca Array	93.26	337	eP	P	14 22 36.2	-0.7
	comp=Z,7.4nm,0.8s						
PAB	San Pablo	93.49	337	eP	P	14 22 37.1	-0.9
	comp=Z,6.9nm,0.8s						
PAB	San Pablo	93.49	337	eP	P	14 22 37.1	-0.9
PAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MTE	Manteigas	93.55	340	eP	P	14 22 37.6	-0.7
	comp=Z,14nm,1.7s						
MTE	Manteigas	93.55	340	eLR	LR	14 59 08.9	
	comp=Z,106nm,20.0s						
MTE	Manteigas	93.55	340	eP	P	14 22 37.3	-0.9
	comp=Z,7.7nm,0.8s						
PMRV	Marv??o	94.43	339	eP	P	14 22 41.7	-0.5
PMRV	Marv??o	94.43	339	eLR	LR	15 02 24.5	
	comp=Z,88nm,18.0s						
PMTG	Montargil	94.98	340	eP	P	14 22 43.7	-1.0
	comp=Z,10.0nm,1.4s						
PNCL	Nicolau / Gran	95.96	340	eP	P	14 22 48.6	-0.6
	comp=Z,12nm,1.1s						
PVAQ	Vaqueiros	96.42	339	eP	P	14 22 50.7	-0.6
	comp=Z,20nm,2.1s						
PVAQ	Vaqueiros	96.42	339	eLR	LR	15 01 40.4	
	comp=Z,139nm,18.0s						
PTEO	Sao Teotonio	96.54	340	eP	P	14 22 51.6	-0.3
TOA1	Torodi Ar. Sit	115.09	321	ePKiKP	PKiKP	14 28 02.7	-1.0
TORD	Torodi Ar. Bea	115.10	321	PKP	PKiKP	14 28 02.7	-1.0
	comp=Z,0.7nm,0.4s,baz=15,slow=1.6,SNR=9.4						
TORD				PP	PP	14 28 54.1	-8.7
	comp=Z,3.0nm,1.0s,baz=24,slow=7.4,SNR=6.0						
TORD				PKKPab	PKKPab	14 38 52.6	+5.5
	comp=Z,0.9nm,0.8s,baz=222,slow=1.9,SNR=3.9						
VNDA	Vanda	120.60	176	PKP	PKiKP	14 28 12.8	+0.3
	comp=Z,2.4nm,0.8s,baz=319,slow=5.0,SNR=17						
VNDA				PKKPbc	PKKPbc	14 38 20.5	+1.5
	comp=Z,1.3nm,1.0s,baz=221,slow=2.8,SNR=5.5						
SBA	Scott Base	121.22	175	ePKPdf	PKiKP	14 28 14.8	+1.1
SBA	Scott Base	121.22	175	ePKIKP	PKiKP	14 28 14.8	+1.1
DBIC	Dimbokro	123.77	324	PKP	PKPdf	14 28 20.1	-0.4
	comp=Z,6.7nm,0.9s,baz=325,slow=10,SNR=3.1						
MAW	Mawson	126.22	208	PKP	PKiKP	14 28 24.7	+0.9
	comp=Z,9.4nm,0.7s,baz=42,slow=1.9,SNR=24						
MAW	Mawson	126.22	208	ePKPdf	PKiKP	14 28 24.2	+0.4
MAW	Mawson	126.22	208	ePKIKP	PKiKP	14 28 24.2	+0.4
BOSA	Boshof	130.45	266	PKP	PKiKP	14 28 33.4	-0.3
	comp=Z,3.3nm,0.8s,baz=323,slow=5.5,SNR=3.7						
QSPA	South Pole Qui	132.67	180	ePKPdf	PKiKP	14 28 36.9	0.0
SYO	Syowa Base	134.89	209	⇑ePKPdf	PKPdf	14 28 39.2	-0.5
SYO	Syowa Base	134.89	209	⇓iPKiKP	PKiKP	14 28 40.8	-0.4
LPAZ	La Paz	140.92	58	PKhKP	PKPpre	14 28 45.8	
	comp=Z,1.8nm,0.8s,baz=359,slow=6.5,SNR=4.6						
LPAZ				PKP	PKPdf	14 28 53.1	-0.2
	comp=Z,2.8nm,0.7s,baz=333,slow=4.5,SNR=9.4						
LPAZ	La Paz	140.92	58	ePKPdf	PKPdf	14 28 51.3	-1.9
LVC	Limon Verde	145.00	66	ePKPbc	PKPdf	14 29 00.8	+0.8
LVC	Limon Verde	145.00	66	ePKIKP	PKPdf	14 29 00.8	+0.8
GO02	Mina Guanaco	146.24	70	ePKPbc	PKPbc	14 29 03.1	0.0
SNAA	Sanae	147.31	198	PKPbc	PKPbc	14 29 05.2	+0.7
SNAA	Sanae	147.31	198	ePKPbc	PKPbc	14 29 04.7	+0.2
SNAA	Sanae	147.31	198	ePKP2	PKPbc	14 29 04.7	+0.2
GO03	Copiap	147.31	74	ePKPbc	PKPbc	14 29 06.6	+0.8
HJA	Humahuaca	147.73	62	eP	PKiKP	14 29 09.3	-0.2
LCO	Las Campanas	147.82	76	ePKPbc	PKPbc	14 29 08.1	+0.7
LCO	Las Campanas	147.82	76	ePKP2	PKPbc	14 29 08.1	+0.7
GO04	Tololo Observa	148.41	78	ePKPbc	PKPbc	14 29 09.2	+0.2
AZAP	Zapla	148.66	63	eP	PKPbc	14 29 10.3	+0.6
SLA	San Lorenzo	148.72	65	eP	PKPbc	14 29 10.4	+0.6
VNA3	Neumayer Olymp	149.07	195	PKPbc	PKiKP	14 29 09.8	-0.5
VNA1	Neumayer--Stat	149.26	197	PKPbc	PKiKP	14 29 10.4	-0.2
FSA	Cafayete	149.33	67	eP	PKiKP	14 29 12.2	-0.2
VCA	Vinchina	149.43	74	eP	PKiKP	14 29 12.1	-0.4
AGUA	GUANDACOL	149.67	75	eP	PKPbc	14 29 12.4	+0.5
PEL	Peldehue	150.05	83	ePKPbc	PKPbc	14 29 13.1	+0.4
PEL	Peldehue	150.05	83	ePKIKP	PKPbc	14 29 13.1	+0.4
BDFB	Brasilia	150.43	27	PKPbc	PKPbc	14 29 14.2	+0.1
	comp=Z,22nm,0.8s,baz=344,slow=1.3,SNR=22						
ACLC	CERRO LA CRUZ	150.72	73	eP	PKPbc	14 29 14.2	-0.4
CYA	Choya	150.93	70	eP	PKPbc	14 29 13.9	-1.0
CPUP	Villa Florida	155.06	56	PKP	PKPdf	14 29 15.5	+0.4
	comp=Z,0.6nm,0.4s,baz=315,slow=1.4,SNR=2.2						
CPUP				PKPab	pPKPbc	14 29 37.1	+0.5
	comp=Z,5.6nm,0.9s,baz=325,slow=6.4,SNR=6.4						

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*ISCJB **16** 14:36:06.0±1.1, 20°.9S±0°.1×178°.1W±0°.2, h495km, mb4.0/6, Error ellipse: s-maj=22.3km s-min=14.5km az=15.3*

*IDC **16** 14:36:08.5±6.4, 20°.61S×178°.22W, h506km±62km, mb3.5/6, mb1 3.7/7, mb1mx3.3/24, mbtmp4.4/7, Error ellipse: s-maj=56.5km s-min=31.0km az=136.0*

ISC 16 14:36:06.3±1.0, **21°.0S**±0°.2×**178°.0W**±0°.2, **h495**km, **n13, σ0s.94**/13, **mb4.3**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.50	263	P	P	14 39 11.2	-0.4
	0.4nm,0.3s,baz=150,slow=16,SNR=4.3						
URZ	Urewera	17.70	193	S	S	14 42 40.4	-1.5
	0.2nm,0.3s,baz=161,slow=18,SNR=3.4						
STKA	Stephens Creek	37.56	245	P	P	14 42 39.4	+1.6
	2.5nm,0.4s,baz=91,slow=11,SNR=12						
JAY	Jayapura	44.19	289	P	P	14 43 30.3	-0.7
	6.5nm,0.4s,baz=121,slow=5.1,SNR=8.8						
ASAR	Alice Springs	44.39	257	P	P	14 43 33.0	+0.5
	10nm,0.5s,baz=88,slow=8.6,SNR=333						
ASAR				PcP	PcP	14 45 06.2	+0.4
	0.9nm,0.5s,baz=100,slow=3.7,SNR=6.5						
WRA	Warramunga Arr	44.52	263	P	P	14 43 33.3	-0.2
	4.3nm,0.3s,baz=87,slow=8.5,SNR=120						
ILAR	Eielson Array	88.81	13	P	P	14 48 05.4	-1.0
	0.3nm,0.5s,baz=219,slow=7.0,SNR=4.7						
PDAR	Pinedale Array	89.34	43	P	P	14 48 10.8	+1.1
	0.2nm,0.5s,baz=180,slow=3.3,SNR=3.3						
ARCES	ARCESS Array B	129.41	350	PKP	PKPdf	14 54 17.1	-0.4
	1.5nm,0.8s,baz=48,slow=1.3,SNR=4.7						
FINES	FINESS Array B	136.25	344	PKP	PKPdf	14 54 30.9	+0.4
	6.4nm,1.1s,baz=131,slow=5.8,SNR=3.5						
AKASG	Malin Array Be	143.45	331	PKhKP	PKPpre	14 54 40.7	
	2.6nm,0.4s,baz=43,slow=4.6,SNR=15						
BRTR	Keskin Array B	147.17	312	PKPbc	PKPbc	14 54 53.2	-0.6
	1.0nm,0.5s,baz=155,slow=4.0,SNR=5.7						
GERES	GERESS Array B	150.68	344	PKPbc	PKPbc	14 55 01.8	-0.3
	0.3nm,0.4s,baz=16,slow=1.9,SNR=4.7						

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*ISK **16** 14:51:31.6, 38°.97N×26°.09E, h9km, ML2.5/12*

*ISCJB **16** 14:51:32.1±0.4, 38°.96N±0°.02×26°.09E±0°.03, h12km±4km, Error ellipse: s-maj=4.4km s-min=3.4km az=179.8*

*ATH **16** 14:51:32.6, 39°.01N×26°.02E, h19km±2km, ML2.4/2, Error ellipse: s-maj=2.4km s-min=1.1km az=93.0*

*DDA **16** 14:51:32.6, 39°.00N×26°.15E, h7km±2km, ML2.7*

*THE **16** 14:51:32.5, 38°.98N×26°.05E, h17km±1km, ML2.2/4, Error ellipse: s-maj=1.7km s-min=0.9km az=94.0*

ISC 16 14:51:32.2±0.9, **38°.98N**±0°.02×**26°.09E**±0°.03, **h15**km±8km, **n29, σ0s.60**/47, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.30	322	PG	Pg	14 51 38.1	-0.3
SIGR				SG	Sg	14 51 42.9	+0.3
SIGR	SIGRI	0.30	322	P	Pg	14 51 38.1	-0.3
SIGR				S	Sg	14 51 43.1	+0.5
	912nm,0.4s						
SIGR	SIGRI	0.30	322	P	Pg	14 51 38.1	-0.3
SIGR				S	Sg	14 51 42.6	0.0
SIGR				AML	AML	14 51 43.2	
	comp=E,1470μm,0.4s						
SIGR				AML	AML	14 51 43.6	
	comp=N,2167μm,0.4s						
PRK	Paraskevi	0.30	28	P	Pb	14 51 39.2	-0.1
PRK				S	Sb	14 51 44.4	+0.2
	comp=N,1μm,0.3s						
PRK	Paraskevi	0.30	28	P	Pb	14 51 39.2	-0.1
PRK				S	Sb	14 51 44.3	+0.1
PRK				AML	AML	14 51 44.7	
	comp=E,2047μm,0.4s						
PRK				AML	AML	14 51 44.8	
	comp=N,2115μm,0.3s						
KRBN	Karaburun	0.53	136	PG	Pg	14 51 42.4	-0.2
AYVA	Ayvalik	0.57	55	iP	Pb	14 51 44.2	+0.3
AYVA				iS	Sg	14 51 51.2	+0.1
AYVA				IAML_P			
	comp=Z,698nm,0.1s						
CHOS	Chios island	0.59	183	PG	Pg	14 51 43.3	-0.5
CHOS				SG	Sg	14 51 52.2	+0.5
CHOS	Chios island	0.59	183	P	Pg	14 51 43.5	-0.3
CHOS				S	Sb	14 51 53.3	+0.8
	comp=Z,170nm,0.3s						
CHOS	Chios island	0.59	183	P	Pg	14 51 43.4	-0.3
CHOS				S	Sb	14 51 53.5	+1.0
PSRA	Psara	0.60	224	P	Pg	14 51 44.4	+0.5
PSRA				S	Sg	14 51 53.0	+1.2
DKL	Dikili	0.64	81	PG	Pg	14 51 44.7	0.0
DKL				SG	Sb	14 51 53.9	0.0
URLA	Izmir	0.73	147	PG	Pb	14 51 46.1	-0.5
URLA	Izmir	0.73	147	iP	Pb	14 51 46.2	-0.5
URLA				iS	Sg	14 51 54.0	-2.1
URLA				IAML_P			
	comp=Z,2μm,0.1s						
ZEDA	zmir-Bergama	0.77	91	iP	Pb	14 51 47.5	+0.3
ZEDA				iS	Sb	14 51 57.4	-0.1
BAYC	CANAKKALE_Bayr	0.84	25	iP	Pg	14 51 48.9	+0.4
BAYC				iS	Sn	14 52 00.7	-1.0
BOZC	Bozcaada	0.86	358	PG	Pb	14 51 48.7	-0.2
BOZC	Bozcaada	0.86	358	iP	Pg	14 51 48.9	0.0
BOZC				iS	Sg	14 52 00.0	-0.2
BOZC				IAML_P			
	comp=Z,1μm,0.2s						
EZN	Ezine	0.87	12	PG	Pb	14 51 48.8	-0.1
EZN	Ezine	0.87	12	P	Pb	14 51 48.2	-0.7
EZN				S	Sg	14 52 00.8	+0.4
LIA	Limnos Island	1.16	323	P	Pn	14 51 53.7	-0.1
LIA				S	Sb	14 52 07.9	-0.8
	comp=Z,55nm,1.0s						
LIA	Limnos Island	1.16	323	P	Pn	14 51 53.7	-0.1
LIA				S	Sb	14 52 08.2	-0.5
GELI	Tayfur-Gelibol	1.45	12	PN	Pb	14 51 58.5	-0.4
SMTH	Samothraki Isl	1.55	344	P	Pb	14 52 00.8	+0.2
GONE	Gonen-Balikesi	1.63	49	PN	Pn	14 52 00.9	+0.5
RKY	Sarkoy-Tekirda	1.90	26	PN	Pn	14 52 05.1	+0.9
ALN	Alexandroupoli	1.92	359	PN	Pn	14 52 04.7	+0.4
MRMT	Marmara Adasi	2.00	35	PN	Pn	14 52 06.1	+0.6
KCTX	Karacabey (Bur	2.17	53	PN	Pn	14 52 08.7	+0.9

SNET 16 14:52:21.2±1.1, **12°.58N**×**90°.38W**, **h15**km±7km, **ML3.5**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	1.45	31	eP	Pn	14 52 47.0	-0.2
CEVE				eS	Sb	14 53 07.0	+0.5
CEVE				IAML		14 53 11.8	
	comp=Z,661nm,0.3s						
SBLS	San Blas	1.46	30	eP	Pn	14 52 47.5	+0.3
SBLS				eS	Sg	14 53 08.1	-0.3
SNJE	San Jose	1.49	30	eP	Pn	14 52 47.9	+0.2
SNJE				eS	Sb	14 53 07.9	+0.3
PAVA	Las Pavas	1.81	51	eP	Pn	14 52 51.9	0.0
MTO3	Montecristo	2.07	29	eP	Pn	14 52 56.0	+0.4

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*IDC **16** 14:56:04.1±1.1, 29°.47N×141°.50E, h0km, mb3.6/5, mb1 3.8/8, mb1mx3.6/30, mbtmp3.7/8, ML3.2/3, MS2.1/1, Ms1 2.1/1, ms1mx2.0/30, Error ellipse: s-maj=56.0km s-min=18.6km az=87.0*

*ISCJB **16** 14:56:07.6±0.5, 29°.67N±0°.06×141°.4E±0°.2, h46km, mb3.7/4, Error ellipse: s-maj=30.5km s-min=4.3km az=165.6*

*JMA **16** 14:56:07.4, 29°.76N×141°.76E, h50km, M3.7*

ISC 16 14:56:10.1±0.8, **29°.65N**±0°.08×**141°.5E**±0°.2, **h46**km, **n15, σ1s.42**/18, **mb3.8**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.62	166	P	Pn	14 56 49.3	-0.7
CBIJ				S	Sn	14 57 20.4	-0.1
JHH2	Haha-jima-NKT2	3.07	168	eS	Sn	14 57 31.6	0.0
JHCJ	Hachijojimakas	3.70	338	P	Pn	14 57 03.7	-1.1
JHCJ				S	Sn	14 57 46.1	-1.1
JHJ2	Mitsune	3.73	338	P	Pn	14 57 04.3	-0.9
JHJ	Hachijo jima 2	3.75	338	Pn	Pn	14 57 04.4	-1.1
	4.6nm,0.3s,baz=29,slow=22,SNR=8.3						
JHJ				Sn	Sn	14 57 41.1	-7.3
	7.7nm,0.3s,baz=90,slow=20,SNR=3.0						
JHJ				LR	LR	14 58 07.3	
	comp=Z,25nm,18.3s,baz=187,slow=32						
BSO1	Boso 1	5.01	355	P	Pn	14 57 20.7	-1.5
JHU	Hanno	6.46	344	eS	Sn	14 58 53.8	-1.1
JAG	Ashikaga	6.97	346	P	Pn	14 57 49.0	-0.6
JAG				eS	Sn	14 59 05.5	-2.0
MJAR	Matsushiro Arr	7.40	339	Pn	Pn	14 57 55.4	-0.1
	0.2nm,0.3s,baz=161,slow=12,SNR=8.9						
ASAJ	Asahikawa	14.47	3	Pn	Pn	14 59 31.1	-0.9
	0.2nm,0.3s,baz=301,slow=9.4,SNR=4.0						
KLR	Kul'dur	20.91	342	P	P	15 00 51.7	+3.1
	0.6nm,0.4s,baz=148,slow=9.3,SNR=3.6						
WRA	Warramunga Arr	49.78	189	P	P	15 04 57.0	-1.3
	0.8nm,0.4s,baz=0.8,slow=7.8,SNR=23						
ASAR	Alice Springs	53.50	189	P	P	15 05 25.1	-0.9
	0.2nm,0.3s,baz=2.3,slow=5.6,SNR=7.0						
ILAR	Eielson Array	55.80	29	P	P	15 05 43.4	+1.1
	0.2nm,0.7s,baz=265,slow=7.0,SNR=4.2						
BRTR	Keskin Array B	83.82	312	P	P	15 08 36.8	+1.7
	1.0nm,0.7s,baz=66,slow=7.0,SNR=4.5						

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*SOME **16** 15:08:59.0, 40°.58N×77°.33E, h0km*

*KRNET **16** 15:09:00.5±0.1, 40°.57N×77°.19E, h12km, mb2.9*

*NNC **16** 15:09:00.9±0.9, 40°.58N×77°.41E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=6.0km s-min=4.4km az=178.0*

ISC 16 15:09:00.5±1.8, **40°.57N**±0°.08×**77°.35E**±0°.04, **h10**km, **n46, σ1s.55**/75, **25C-10D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	Naryn	1.34	311	⇑iP	Pn	15 09 24.2	-1.3
	baz=13						
NRN				⇑iS	Sb	15 09 41.4	-1.8
	baz=13						
KDJ	Kajisay	1.57	355	⇑iP	Pb	15 09 29.6	-0.1
	baz=0.0						
KDJ				⇑iS	Sg	15 09 51.4	+0.5
	baz=0.0						
ULHL	Ulahol	1.87	334	⇑iP	Pb	15 09 34.1	-0.8
	baz=37						
ULHL				⇑iS	Sb	15 09 59.3	+0.9
	baz=37						
PRZ	Przheval'sk	2.07	22	⇑eP	Pg	15 09 39.5	-0.6
	baz=25						
PRZ				⇑iS	Sg	15 10 07.1	+0.1
	baz=25						
KZA	Kyzart	2.19	314	⇑iP	Pb	15 09 39.5	-0.9
	baz=16						
KZA				⇑iS	Sb	15 10 07.1	-0.6
	baz=16						
BOOM	Boomskoye usch	2.19	332	⇑eP	Pb	15 09 39.3	-1.0
	baz=34						
BOOM				⇑iS	Sb	15 10 07.7	+0.1
	baz=34						
TNSS	Tian-Shan	2.48	353	Pg	Pg	15 09 46.7	-1.4
	43nm,0.5s						
TNSS				Lg	Lg	15 10 19.7	
	18nm,0.4s						
TNSS	Tian-Shan	2.48	353	eP	Pg	15 09 46.7	-1.4
	43nm,0.5s						
TNSS				eS	Sg	15 10 21.2	+0.8
	18nm,0.4s						
IZV	Izvestkoviy	2.53	348	Pg	Pg	15 09 47.4	-1.5
	14nm,0.4s						
IZV				Lg	Lg	15 10 22.2	
	16nm,0.3s						
IZV	Izvestkoviy	2.53	348	eP	Pg	15 09 47.5	-1.5
	14nm,0.4s						
IZV				eS	Sg	15 10 22.2	+0.5
	16nm,0.3s						
MDOK	Medeo	2.60	355	Pg	Pg	15 09 48.6	-1.7
	18nm,0.4s						
MDOK				Lg	Lg	15 10 24.4	
	21nm,0.6s						
MDOK	Medeo	2.60	355	eP	Pg	15 09 48.6	-1.7
	18nm,0.4s						
MDOK				eS	Sg	15 10 24.4	+0.3
	21nm,0.6s						
SATY	Saty	2.61	17	Pg	Pb	15 09 48.1	+0.7
	18nm,0.5s						
SATY				Lg	Lg	15 10 23.5	
	19nm,0.4s						
SATY	Saty	2.61	17	eP	Pb	15 09 48.1	+0.7
	18nm,0.4s						
SATY				eS	Sg	15 10 23.6	-0.8
	34nm,0.6s						
ARLS	Aral	2.62	300	⇓iP	Pb	15 09 44.8	-2.9
	baz=2.0						
ARLS				⇓iS	Sn	15 10 16.8	+1.7
	baz=2.0						
MTBS	Maitube	2.65	345	Pg	Pb	15 09 48.9	+0.8
	10.0nm,0.3s						
MTBS				Lg	Lg	15 10 25.4	
	18nm,0.4s						
MTBS	Maitube	2.65	345	eP	Pb	15 09 49.2	+1.1
	9.6nm,0.2s						
MTBS				⇑iS	Sg	15 10 25.4	-0.3
	16nm,0.2s						
KOTS	Kotyrbulak	2.67	356	Pg	Pg	15 09 49.9	-1.7
	18nm,0.3s						
KOTS				Lg	Lg	15 10 27.0	
	13nm,0.4s						
KOTS	Kotyrbulak	2.67	356	eP	Pg	15 09 49.9	-1.7
	18nm,0.3s						
KOTS				eS	Sg	15 10 26.2	0.0
	13nm,0.4s						
KST	Kastek	2.68	338	Pg	Pb	15 09 49.7	+1.1
	14nm,0.6s						
KST				Lg	Lg	15 10 25.9	
	15nm,1.1s						
KST	Kastek	2.68	338	⇑iP	Pb	15 09 49.7	+1.1
	14nm,0.6s						
KST				eS	Sg	15 10 25.9	-0.7
	15nm,1.1s						
TKM2	Tokmak 2	2.69	331	⇑Pg	Pb	15 09 49.7	+0.8
	7.7nm,0.8s						
TKM2				⇑Lg	Lg	15 10 27.4	
	12nm,0.7s						
TKM2	Tokmak 2	2.69	331	⇓eP	Pb	15 09 46.3	-2.6
	baz=34						
TKM2				⇓iS	Sb	15 10 19.9	-2.1
	baz=34						
UCH	Uchtor	2.70	309	⇓iP	Pn	15 09 46.0	+1.6
	baz=10.0						
UCH				⇓iS	Sn	15 10 19.5	+2.1
	baz=10.0						
KBK	Karagaybulak	2.76	320	⇑eP	Pn	15 09 46.7	+1.8
	baz=22						
KBK				⇑iS	Sn	15 10 21.0	+2.7
	baz=22						
UZB	Uzynbulak	2.86	25	Pg	Pb	15 09 52.8	+1.0
	4.9nm,0.4s						
UZB				Lg	Lg	15 10 31.5	
	14nm,0.8s						
UZB	Uzynbulak	2.86	25	eP	Pb	15 09 52.8	+1.0
	4.9nm,0.4s						
UZB				eS	Sg	15 10 31.5	-1.0
	14nm,0.8s						
AAK	Ala-Archa	2.98	315	⇓Pg	Pg	15 09 57.0	-0.5
	9.2nm,0.8s						
AAK				⇑Lg	Lg	15 10 34.8	
	10nm,0.6s						
AAK	Ala-Archa	2.98	315	⇑iP	Pn	15 09 50.0	+2.1
	baz=16						
AAK				⇑iS	Sn	15 10 25.8	+2.0
	baz=16						

KURS	**Kuram**	**2.98**	**12**	Pg	**Pb**	**15 09 53.9**	**+0.2**
	9.5nm,0.5s						
KURS				Lg	Lg	15 10 33.4	
	10nm,0.4s						
KURS	**Kuram**	**2.98**	**12**	*e*P	**Pb**	**15 09 53.9**	**+0.2**
	9.5nm,0.5s						
KURS				*e*S	**Sg**	**15 10 33.4**	**-2.8**
	10nm,0.4s						
KPKS	**Kokpek**	**3.06**	**18**	*e*P	**Pb**	**15 09 56.2**	**+1.1**
	8.1nm,0.2s						
KPKS				*e*S	**Sg**	**15 10 37.1**	**-1.6**
	25nm,0.3s						
KTBS	**Karatobe**	**3.18**	**351**	Pg	**Pb**	**15 09 58.3**	**+1.2**
	12nm,0.4s						
KTBS				Lg	Lg	15 10 41.4	
	6.3nm,0.5s						
KTBS	**Karatobe**	**3.18**	**351**	*e*P	**Pb**	**15 09 58.3**	**+1.2**
	12nm,0.4s						
KTBS				*e*S	**Sg**	**15 10 40.9**	**-1.7**
	6.3nm,0.5s						
PDGK	**Podgornoye**	**3.19**	**29**	⇑Pg	**Pb**	**15 09 58.0**	**+0.7**
	5.4nm,0.7s						
PDGK				⇑Lg	Lg	15 10 41.3	
	29nm,0.7s						
PDGK	**Podgornoye**	**3.19**	**29**	⇓*i*P	**Pb**	**15 09 55.0**	**-2.2**
	baz=31						
PDGK				⇓*i*S	**Sb**	**15 10 34.4**	**-1.8**
	baz=31						
CHKK	**Chushkaly**	**3.29**	**355**	Pg	**Pb**	**15 10 00.1**	**+1.1**
	16nm,0.5s						
CHKK				Lg	Lg	15 10 43.8	
	17nm,0.2s						
CHKK	**Chushkaly**	**3.29**	**355**	*e*P	**Pb**	**15 10 00.1**	**+1.1**
	16nm,0.5s						
CHKK				*e*S	**Sg**	**15 10 43.8**	**-2.4**
	17nm,0.2s						
EKS2	**Erkin-Say**	**3.40**	**309**	⇑*i*P	**Pn**	**15 09 55.5**	**+1.8**
	baz=10.0						
EKS2				⇑*i*S	**Sn**	**15 10 35.9**	**+1.8**
	baz=10.0						
KUU	**Kurty**	**3.41**	**348**	Pg	**Pb**	**15 10 02.1**	**+1.2**
	3.1nm,0.2s						
KUU				Lg	Lg	15 10 47.6	
	8.8nm,0.5s						
KUU	**Kurty**	**3.41**	**348**	⇓*i*P	**Pb**	**15 10 02.1**	**+1.2**
	2.0nm,0.4s						
KUU				*e*S	**Sg**	**15 10 47.6**	**-2.3**
	10nm,0.9s						
SGDS	**Sogindy**	**3.52**	**326**	Pg	**Pb**	**15 10 04.9**	**+2.0**
	8.6nm,0.4s						
SGDS				Lg	Lg	15 10 51.2	
	4.8nm,0.6s						
KTMS	**Ketmen**	**3.64**	**37**	Pg	**Pb**	**15 10 06.5**	**+1.5**
	3.4nm,0.3s						
KTMS				Lg	Lg	15 10 55.0	
	11nm,0.8s						
KTMS	**Ketmen**	**3.64**	**37**	*e*P	**Pb**	**15 10 06.5**	**+1.5**
	2.3nm,0.2s						
KTMS				*e*S	**Sg**	**15 10 55.0**	**-2.5**
	11nm,0.8s						
MRKS	**Merke**	**3.78**	**306**	*e*P	**Pb**	**15 10 09.2**	**+1.9**
	2.0nm,0.3s						
MRKS				*e*S	**Sg**	**15 10 59.8**	**-2.0**
	3.9nm,0.5s						
DJR	**Jarkent**	**4.17**	**25**	*e*P	**Pb**	**15 10 15.8**	**+1.8**
	1.3nm,0.3s						
DJR				*e*S	**Sg**	**15 11 11.2**	**-3.2**
	5.5nm,0.5s						

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*DDA **16** 15:14:56.9, 38°.27N×38°.18E, h6km±1km, ML2.8*
*ISK **16** 15:14:56.8, 38°.34N×38°.17E, h6km, ML1.7/4*
*ISCJB **16** 15:14:57.6±0.6, 38°.32N±0°.04×38°.19E±0°.04, h3km±8km, Error ellipse: s-maj=5.9km s-min=5.3km az=176.3*
ISC 16 15:14:57.4±1.1**, 38°.33N**±0°.04×**38°.20E**±0°.03**, h8**km±10km**, n11, σ0ˢ.58**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.22**	**262**	*i* P	**Pg**	**15 15 02.0**	**+0.2**
AKCD				*i* S	**Sg**	**15 15 05.1**	**+0.3**
HEKM	**Malatya_Hekimh**	**0.58**	**342**	*i* P	**Pb**	**15 15 10.1**	**+0.1**
HEKM				IAML_P			
	comp=Z,2μm,0.2s						
DARE	**Darende-Malaty**	**0.61**	**294**	PG	**Pg**	**15 15 08.6**	**-0.6**
ELZG	**Elazig**	**0.64**	**74**	*i* P	**Pg**	**15 15 10.0**	**+0.2**
ELZG				*i* S	**Sb**	**15 15 20.7**	**+0.4**
ELZG				IAML_P			
	comp=Z,1μm,0.1s						
SVRC	**Sivrice-ELAZID**	**0.88**	**86**	PG	**Pg**	**15 15 14.3**	**+0.1**
KEMA	**Kemaliye**	**0.97**	**14**	*i* P	**Pn**	**15 15 17.0**	**-0.5**
KEMA				*i* S	**Sg**	**15 15 28.3**	**-0.4**
URFA	**Urfa**	**1.01**	**151**	PG	**Pb**	**15 15 16.9**	**-0.4**
URFA				SG	**Sn**	**15 15 31.8**	**-0.7**
GZT	**Gaziantep**	**1.09**	**207**	*i* P	**Pn**	**15 15 20.3**	**+1.1**
CUKAN	**kangal_SIVAS**	**1.14**	**330**	*i* P	**Pn**	**15 15 20.0**	**+0.1**
CUKAN				*i* S	**Sn**	**15 15 36.4**	**+0.6**
KMRS	**Kahramanmaras**	**1.31**	**232**	PN	**Pg**	**15 15 22.2**	**-0.3**
GAZ	**Gaziantep**	**1.39**	**214**	PN	**Pg**	**15 15 23.3**	**-0.8**

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*NEIC **16** 15:16:31.1±0.0, 61°.54N×141°.06W, h7km, ML2.9(AEIC), ML3.0(OTT), After AEIC.*
PGC 16 15:16:32.3±0.0**, 61°.55N**×**141°.08W, h5**km**, ML3.0**/11**, 210km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	**White River**	**0.26**	**25**	P	Pg	15 16 36.6	-0.8
YUK2				S	Sg	15 16 40.4	-0.5
YUK3	**Moose Creek**	**0.37**	**52**	P	Pg	15 16 38.6	-1.0
YUK3				S	Sg	15 16 43.8	-0.7
YUK1	**Sand Pete Hill**	**0.66**	**23**	P	Pg	15 16 43.5	-1.5
YUK1				S	Sg	15 16 52.4	-1.1
PTPK	**Patty Peak**	**0.76**	**242**	P	Pg	15 16 46.0	-0.9
PTPK				S	Sg	15 16 56.6	-0.2
BALM	**Baldy**	**0.80**	**230**	*e*Pg	Pg	15 16 46.3	-1.4
BALM	**Baldy**	**0.80**	**230**	P	Pg	15 16 46.3	-1.4
BALM				S	Sg	15 16 57.3	-0.7
BVCY	**Beaver Creek**	**0.87**	**7**	P	Pg	15 16 47.8	-1.3
BVCY				S	Sg	15 16 59.6	-0.7
KIAG	**Kiagna River**	**0.88**	**225**	P	Pg	15 16 47.7	-1.6
KIAG				S	Sg	15 16 59.7	-1.1
TABL	**Table Mountain**	**1.11**	**182**	P	Pg	15 16 52.2	-1.5
TABL				S	Sg	15 17 07.4	-0.7
YUK4	**Talbot Arm**	**1.19**	**99**	P	Pg	15 16 53.8	-1.3
SAMH	**Samovar Hills**	**1.43**	**174**	Pn	Pn	15 16 58.5	-0.6
SAMH				Sg	Sb	15 17 17.4	-0.7
MESA	**MESA**	**1.44**	**198**	Pn	Pn	15 16 58.8	-0.4
MESA				Sg	Sn	15 17 18.8	+0.2
YUK6	**Outpost Mounta**	**1.45**	**114**	Pn	Pn	15 16 57.8	-1.5
YUK6				Sg	Sb	15 17 16.9	-1.7
CHX	**Chaix Hills**	**1.49**	**181**	*e*Pn	Pn	15 16 59.8	0.0
PCA	**Pinnacle**	**1.51**	**164**	*e*Pn	Pn	15 16 59.6	-0.6
PCA				*e*Sn	Sb	15 17 20.6	+0.2
PCA	**Pinnacle**	**1.51**	**164**	Pn	Pn	15 16 59.5	-0.6
PCA				Sg	Sn	15 17 20.1	-0.1
BCA3	**Beaver Creek A**	**1.56**	**348**	*e*Pn	Pn	15 16 59.0	-1.7
YUK5	**Granite Creek**	**1.61**	**104**	Sg	Sn	15 17 21.7	-1.0
SNH	**Sunshine Point**	**1.62**	**213**	*e*Pn	Pn	15 17 02.0	+0.4
SNH				*e*Sn	Sg	15 17 25.0	+0.6
YUK7	**Dusty Glacier**	**1.76**	**124**	Pn	Pn	15 17 03.8	+0.2
YUK7				Sg	Sn	15 17 25.8	-0.7
MENT	**Mentasta**	**1.86**	**320**	*e*Pn	Pn	15 17 05.5	+0.6
HYT	**Haines Junctio**	**1.88**	**111**	*e*Pn	Pn	15 17 04.7	-0.5
HMT	**Hamilton**	**1.98**	**233**	*e*Pn	Pb	15 17 07.9	-0.8
PNL	**Peninsula**	**2.06**	**156**	*e*Pn	Pn	15 17 08.1	+0.5
PNL	**Peninsula**	**2.06**	**156**	Pn	Pn	15 17 08.1	+0.5
PNL				Sg	Sb	15 17 36.7	+0.6
RAGM	**Ragged Mountai**	**2.11**	**238**	*e*Pn	Pn	15 17 09.5	+1.2
SGAM	**Sherman Glacie**	**2.27**	**244**	*e*Pn	Pb	15 17 12.1	-1.6
EYAK	**Cordova Ski Ar**	**2.49**	**248**	*e*Pn	Pn	15 17 14.7	+1.3
PAX	**Paxson**	**2.50**	**307**	*e*Pn	Pn	15 17 15.4	+1.7
PAX	**Paxson**	**2.50**	**307**	Pn	Pn	15 17 15.3	+1.6
PAX				Sg	Sb	15 17 49.3	+0.5
DOT	**Dot Lake**	**2.52**	**328**	*e*Pn	Pn	15 17 13.1	-0.8
DOT	**Dot Lake**	**2.52**	**328**	Pn	Pn	15 17 13.0	-0.9
DOT				Pg	Pb	15 17 18.0	0.0
DOT				Sg	Sb	15 17 49.7	+0.5
DAWY	**Dawson**	**2.64**	**16**	*e*Pn	Pn	15 17 15.0	-0.6
DAWY	**Dawson**	**2.64**	**16**	Pn	Pn	15 17 14.8	-0.8
DAWY				Sg	Sb	15 17 53.4	+0.6
JPK	**Jack Peak**	**2.71**	**262**	*e*Pn	Pn	15 17 18.1	+1.6
FID	**Port Fidalgo**	**2.74**	**255**	*e*Pn	Pn	15 17 19.3	+2.4
SCRK	**Sand Creek**	**2.78**	**332**	*e*Pn	Pn	15 17 16.4	-1.2
RIDG	**Independent Ri**	**2.80**	**323**	*e*Pn	Pn	15 17 17.1	-0.7
GLI	**Glacier Island**	**2.99**	**260**	*e*Pn	Pn	15 17 21.5	+1.2
SCM	**Sheep Creek Mo**	**2.99**	**278**	*e*Pn	Pn	15 17 20.1	-0.3
PLBC	**Pleasant Camp**	**3.14**	**130**	Pn	Pn	15 17 22.6	+0.3
PLBC				Pg	Pb	15 17 28.2	-0.3
PLBC				Sg	Sg	15 18 10.1	-2.9
EGAK	**Eagle**	**3.24**	**359**	*e*Pn	Pn	15 17 23.1	-0.7
DHY	**Denali Highway**	**3.31**	**300**	*e*Pn	Pn	15 17 24.5	-0.4
SML	**Sawmill**	**3.47**	**277**	*e*Pn	Pn	15 17 27.7	+0.7
SKAG	**Skagway**	**3.53**	**124**	*e*Pn	Pn	15 17 28.4	+0.7
HDA	**Harding Lake**	**3.92**	**320**	*e*Pn	Pn	15 17 32.2	-1.0
RND	**Reindeer**	**4.06**	**301**	*e*Pn	Pn	15 17 37.4	+2.3
ILB	**Eielson Array**	**4.17**	**323**	*e*Pn	Pn	15 17 33.9	-2.6
RC01	**Rabbit Creek A**	**4.20**	**267**	*e*Pn	Pn	15 17 39.9	+2.9
MCK	**McKinley**	**4.24**	**305**	*e*Pn	Pn	15 17 40.6	+3.2
BESE	**Bessie Mountai**	**4.31**	**131**	*e*Pn	Pn	15 17 38.2	-0.4
BESE	**Bessie Mountai**	**4.31**	**131**	Pn	Pn	15 17 38.2	-0.4
BESE				Sg	Sg	15 18 47.3	-3.4
CCB	**Clear Creek Bu**	**4.36**	**318**	*e*Pn	Pn	15 17 37.6	-1.5
PRP	**Porcupine Dome**	**4.45**	**335**	*e*Pn	Pn	15 17 38.1	-2.4
BPAW	**Bear Paw Mtn.**	**5.21**	**304**	*e*Pn	Pn	15 17 50.4	-0.5
DLBC	**Dease Lake**	**6.36**	**115**	Sg	Sg	15 19 49.1	-7.2
COLD	**Coldfoot**	**6.93**	**329**	Pn	Pn	15 18 12.0	-2.4

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*DDA **16** 15:18:02.4, 36°.97N×28°.87E, h7km±3km, ML2.6*
*ISCJB **16** 15:18:03.4±0.5, 36°.95N±0°.04×28°.85E±0°.03, h10km, Error ellipse: s-maj=5.4km s-min=3.7km az=180.0*
*ISK **16** 15:18:03.2, 36°.90N×28°.82E, h13km, ML2.2/11*
ISC 16 15:18:03.0±0.9**, 37°.05N**±0°.04×**28°.89E**±0°.03**, h10**km**, n19, σ1ˢ.98**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.29**	**233**	PG	**Pn**	**15 18 13.1**	**-0.2**
TURN				SG	**Sb**	**15 18 20.4**	**+5.4**
TURN	**Turunc**	**0.29**	**233**	*i* P	**Pn**	**15 18 13.0**	**-0.2**
TURN				*i* S	**Sb**	**15 18 20.9**	**+5.8**
DALY	**Dalyan (Mula)**	**0.30**	**219**	PG	**Pg**	**15 18 07.4**	**-1.5**
DALY	**Dalyan (Mula)**	**0.30**	**219**	*i* P	**Pg**	**15 18 08.7**	**-0.3**
DALY				*i* S	**Sg**	**15 18 11.7**	**-1.2**
DALY				IAML_P			
	comp=Z,6μm,0.1s						
FETY	**Fethiye**	**0.44**	**159**	PG	**Pg**	**15 18 10.1**	**-1.5**
FETY				SG	**Sg**	**15 18 15.8**	**-1.6**
FETY	**Fethiye**	**0.44**	**159**	*i* P	**Pg**	**15 18 10.3**	**-1.3**
FETY				*i* S	**Sg**	**15 18 16.4**	**-1.0**
FETY				IAML_P			
	comp=Z,3μm,0.1s						
YER	**Yerkesik**	**0.49**	**280**	PG	**Pb**	**15 18 13.3**	**-0.4**
YER				SG	**Sb**	**15 18 20.7**	**-0.3**
GOLH	**Golhisar**	**0.57**	**71**	*i* P	**Pb**	**15 18 14.8**	**-0.4**
GOLH				*i* S	**Sb**	**15 18 23.9**	**+0.5**
ELL	**Elmali**	**0.87**	**110**	PG	**Pn**	**15 18 20.8**	**-0.6**
AKAS	**Kas**	**1.00**	**144**	PG	**Pg**	**15 18 21.4**	**-0.8**
AKAS	**Kas**	**1.00**	**144**	*i* P	**Pn**	**15 18 23.7**	**+0.6**
AYDN	**Tasoluk**	**1.01**	**308**	*i* P	**Pn**	**15 18 23.2**	**0.0**
AYDN				IAML_P			
	comp=Z,722nm,0.1s						
ARG	**Arkhangelos**	**1.03**	**217**	PG	**Pg**	**15 18 20.6**	**-2.2**
DAT	**Datca**	**1.10**	**254**	PG	**Pg**	**15 18 23.0**	**-1.1**
DAT	**Datca**	**1.10**	**254**	*i* P	**Pn**	**15 18 23.9**	**-0.6**
BRDR	**BURDUR-Merkez**	**1.14**	**55**	*i* P	**Pn**	**15 18 26.6**	**+1.5**
BRDR				IAML_P			
	comp=Z,397nm,0.2s						
KORT	**Korkueli**	**1.17**	**92**	PN	**Pn**	**15 18 26.6**	**+1.1**
KORT	**Korkueli**	**1.17**	**92**	*i* P	**Pn**	**15 18 27.5**	**+2.0**
KORT				IAML_P			
	comp=Z,392nm,0.2s						
BODT	**Bodrum**	**1.26**	**271**	PN	**Pg**	**15 18 26.5**	**-0.7**

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*ISCJB **16** 15:25:09.0±1.2, 12°.57N±0°.06×89°.02W±0°.04, h19km±7km, mb4.3/2, Error ellipse: s-maj=10.4km s-min=5.6km az=28.2*
*NEIC **16** 15:25:10.0±0.0, 12°.68N×89°.00W, h22km, mb4.3/2, MD4.0(SNET), After SNET.*
NEIC Felt [I] in La Paz.
*SNET **16** 15:25:10.6±1.1, 12°.68N×89°.00W, h22km±2km, ML4.0*
ISC 16 15:25:11.0±1.9**, 12°.69N**±0°.08×**88°.99W**±0°.05**, h26**km±13km**, n25, σ0ˢ.75**/35**, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TECA	**Tecapa**	**0.94**	**31**	*e*P	**Pb**	**15 25 28.2**	**-0.5**
LOMA	**Loma Larga**	**0.97**	**350**	*e*P	**Pb**	**15 25 28.6**	**-0.7**
PACA	**Pacayal**	**1.02**	**40**	*e*P	**Pb**	**15 25 29.4**	**-0.6**
PACA				*e*S	**Sn**	**15 25 44.1**	**+0.9**
PACA				IAML		15 25 51.3	
	comp=Z,13μm,0.2s						
SNET	**Serv Nac Est T**	**1.02**	**347**	*e*P	**Pn**	**15 25 29.7**	**-0.1**
SNET				*e*S	**Sn**	**15 25 43.9**	**+0.7**
SNET				IAML		15 25 45.9	
	comp=Z,3μm,0.3s						
PAVA	**Las Pavas**	**1.02**	**3**	*e*P	**Pn**	**15 25 29.6**	**-0.2**
PAVA				*e*S	**Sn**	**15 25 43.5**	**+0.2**
PAVA				IAML		15 25 51.0	
	comp=Z,2μm,0.3s						
OPAM	**Oficina de Pla**	**1.04**	**349**	*e*P	**Pb**	**15 25 29.8**	**-0.7**
CUSC	**Alcaldia de Cu**	**1.05**	**350**	*e*P	**Pn**	**15 25 29.9**	**-0.3**
CUSC				IAML		15 25 48.2	
	comp=Z,3μm,0.2s						
UEES	**Universidad Ev**	**1.05**	**347**	*e*P	**Pb**	**15 25 30.4**	**-0.4**
LFU	**La Fuente**	**1.06**	**354**	⇓*e*P	**Pb**	**15 25 30.3**	**-0.6**
LFU				*e*S	**Sn**	**15 25 45.0**	**+0.7**
LCND	**La Caada**	**1.24**	**60**	*e*P	**Pn**	**15 25 32.3**	**-0.4**
LCND				*e*S	**Sb**	**15 25 49.6**	**+0.2**
CNCH	**Conchagua**	**1.27**	**62**	*e*P	**Pn**	**15 25 32.7**	**-0.6**
CNCH				*e*S	**Sb**	**15 25 51.3**	**+0.9**
CEVE	**Cerro Verde**	**1.29**	**332**	*e*P	**Pn**	**15 25 33.6**	**0.0**
CEVE				*e*S	**Sb**	**15 25 52.7**	**+1.7**
CEVE				IAML		15 26 01.6	
	comp=Z,5μm,0.3s						
SBLS	**San Blas**	**1.30**	**332**	*e*P	**Pn**	**15 25 33.7**	**0.0**
VICT	**Victoria**	**1.31**	**15**	*e*P	**Pb**	**15 25 34.2**	**-0.8**
VICT				*e*S	**Sb**	**15 25 53.0**	**+1.5**
VICT				IAML		15 25 56.4	
	comp=Z,1μm,0.5s						
SNJE	**San Jose**	**1.32**	**333**	*e*P	**Pn**	**15 25 34.0**	**0.0**
SNJE				*e*S	**Sb**	**15 25 52.1**	**+0.3**
RTR	**El Retiro**	**1.36**	**332**	*e*P	**Pn**	**15 25 34.7**	**+0.2**
CSGN	**Cosiguina Volc**	**1.43**	**78**	*e*Pn	**Pn**	**15 25 35.2**	**-0.1**
CSGN	**Cosiguina Volc**	**1.43**	**78**	*e*P	**Pn**	**15 25 35.2**	**-0.1**
MTO3	**Montecristo**	**1.74**	**348**	*e*P	**Pn**	**15 25 40.5**	**+0.8**
MTO3				*e*S	**Sb**	**15 26 03.8**	**-0.2**
TGUH	**Tegucigalpa,Un**	**2.16**	**51**	*e*Pn	**Pn**	**15 25 45.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.16**	**51**	*e*P	**Pn**	**15 25 46.1**	**+0.8**
ESTN	**Estel**	**2.59**	**81**	*e*Pn	**Pn**	**15 25 51.6**	**+0.2**
JTS	**Las Juntas de**	**4.62**	**121**	*e*Pn	**Pn**	**15 26 20.0**	**+0.8**
GOGA	**Godfrey**	**21.24**	**13**	*e*P	**P**	**15 29 53.0**	**-2.1**
	comp=Z,24nm,1.3s						
BG3	**Lake Jocassee**	**22.88**	**13**	*e*P	**P**	**15 30 12.8**	**+0.1**
	comp=Z,6.6nm,0.7s						

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*ISCJB **16** 15:25:43.8±0.5, 38°.34N±0°.03×31°.83E±0°.04, h9km±7km, Error ellipse: s-maj=5.7km s-min=5.5km az=2.7*
*DDA **16** 15:25:43.5, 38°.33N×31°.84E, h7km±2km, ML2.6*
*ISK **16** 15:25:43.5, 38°.34N×31°.85E, h7km, ML2.0/9*
ISC 16 15:25:43.8±1.0**, 38°.34N**±0°.04×**31°.85E**±0°.03**, h15**km±12km**, n13, σ0ˢ.36**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDHN	**Kadinhani**	**0.27**	**49**	*i* P	**Pb**	**15 25 50.1**	**-0.4**
KDHN				*i* S	**Sb**	**15 25 54.6**	**-0.4**
KDHN				IAML_P			
	comp=Z,4μm,0.1s						
DOGA	**KONYA_Doganhis**	**0.28**	**212**	*i* P	**Pg**	**15 25 49.2**	**-0.5**
DOGA				*i* S	**Sg**	**15 25 54.0**	**+0.2**
DOGA				IAML_P			
	comp=Z,2μm,0.1s						
LADK	**Ladik-KONYA**	**0.43**	**109**	PG	**Pg**	**15 25 52.3**	**-0.1**
LADK				SG	**Sg**	**15 25 58.8**	**+0.6**
KIZT	**Kizilcal**	**0.54**	**2**	PG	**Pg**	**15 25 54.4**	**-0.1**
KIZT				SG	**Sb**	**15 26 02.4**	**-0.3**
KONT	**Konya--Tatoy**	**0.56**	**134**	PG	**Pg**	**15 25 54.7**	**-0.2**
KONT				SG	**Sb**	**15 26 02.9**	**-0.3**
KONT	**Konya--Tatoy**	**0.56**	**134**	*i* P	**Pb**	**15 25 55.8**	**+0.4**
KONT				IAML_P			
	comp=Z,1μm,0.2s						
BOLV	**Bolvadin**	**0.80**	**298**	*i* P	**Pg**	**15 25 59.2**	**-0.2**
BOLV				IAML_P			
	comp=Z,1μm,0.2s						
CHBY	**Cihanbeyli**	**0.85**	**73**	PG	**Pb**	**15 26 00.4**	**+0.1**
SHUT	**Suhut-Afyon**	**1.04**	**282**	PG	**Pb**	**15 26 03.8**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.13**	**347**	PN	**Pb**	**15 26 05.6**	**+0.4**
CIFT	**Cifteler, Eski**	**1.19**	**329**	PN	**Pb**	**15 26 06.5**	**+0.4**
SULT	**Sultanhani-AKS**	**1.32**	**96**	PN	**Pg**	**15 26 09.1**	**0.0**
YAYX	**Yaylak**	**1.65**	**68**	PN	**Pb**	**15 26 13.9**	**0.0**

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*IDC **16** 15:33:24.9±0.8, 22°.88S×171°.10E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.1/30, mbtmp4.2/12, ML4.1/1, MS3.4/12, Ms1 3.4/12, ms1mx3.2/26, Error ellipse: s-maj=27.4km s-min=20.4km az=147.0*
*NEIC **16** 15:33:28.9±0.4, 22°.53S×170°.82E, h16km±8km, mb4.5/4, Error ellipse: s-maj=56.6km s-min=18.8km az=159.0*
*ISCJB **16** 15:33:30.7±0.6, 22°.7S±0°.1×170°.73E±0°.07, h42km, mb4.2/13, MS3.5/9, Error ellipse: s-maj=19.6km s-min=9.0km az=174.4*
ISC 16 15:33:32.4±0.7**, 22°.7S**±0°.2×**170°.77E**±0°.08**, h42**km**, n47, σ1ˢ.25**/42**, mb4.1**/13**, MS3.5**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**3.07**	**270**	*e*Pn	**Pn**	**15 34 17.4**	**-1.0**
DZM	**Mont Dzumac**	**4.04**	**278**	Pn	**Pn**	**15 34 30.9**	**-1.0**
	9.8nm,0.3s,baz=101,slow=8.1,SNR=331						
DZM				Sn	**Sn**	**15 35 17.4**	**-0.8**
	15nm,0.3s,baz=124,slow=21,SNR=7.4						
DZM				LR	LR	15 35 26.3	
	comp=Z,102nm,19.2s,baz=18,slow=28						
DZM	**Mont Dzumac**	**4.04**	**278**	*e*Pn	**Pn**	**15 34 30.4**	**-1.6**
DZM				*e*Sn	**Sn**	**15 35 17.4**	**-0.8**
URZ	**Urewera**	**16.47**	**162**	LR	LR	15 42 49.3	
	comp=Z,152nm,18.3s,baz=355,slow=35						
HNR	**Honiara**	**16.75**	**320**	LR	LR	15 42 53.4	
	comp=Z,89nm,20.1s,baz=164,slow=33						
RPZ	**Rata Peaks**	**21.00**	**179**	LR	LR	15 45 08.6	
	comp=Z,191nm,18.8s,baz=275,slow=34						
CTA	**Charters Tower**	**22.96**	**272**	P	**P**	**15 38 35.3**	**+1.8**
	2.8nm,0.6s,baz=94,slow=11,SNR=4.8						
STKA	**Stephens Creek**	**27.44**	**244**	P	**P**	**15 39 15.2**	**+0.7**
	2.9nm,0.7s,baz=93,slow=12,SNR=8.6						
STKA				LR	LR	15 49 20.3	
	comp=Z,64nm,18.0s,baz=53,slow=35						
STKA	**Stephens Creek**	**27.44**	**244**	*e*P	**P**	**15 39 15.2**	**+0.7**
	2.0nm,1.1s						
AS31	**Alice Springs**	**33.85**	**261**	*e*P	**P**	**15 40 11.4**	**+0.3**
	1.3nm,0.6s						
ASAR	**Alice Springs**	**33.85**	**261**	P	**P**	**15 40 11.4**	**+0.2**
	3.0nm,0.7s,baz=90,slow=9.4,SNR=52						
WR1	**Warramunga Arr**	**33.99**	**268**	*e*P	**P**	**15 40 11.3**	**-1.1**
WRA	**Warramunga Arr**	**33.99**	**268**	P	**P**	**15 40 11.3**	**-1.1**
	0.7nm,0.4s,baz=85,slow=8.1,SNR=20						
JAY	**Jayapura**	**35.37**	**300**	LR	LR	15 54 12.3	
	comp=Z,50nm,18.1s,baz=200,slow=35						
VNDA	**Vanda**	**55.08**	**182**	LR	LR	16 02 43.2	
	comp=Z,37nm,19.5s,slow=32						
QSPA	**South Pole Qui**	**67.41**	**180**	P	P	15 44 19.1	-4.3
	1.4nm,0.9s,baz=137,slow=3.3,SNR=7.9						
USRK	**Ussuriysk Ar.**	**75.42**	**332**	P	**P**	**15 45 10.7**	**-1.0**
	2.0nm,0.9s,baz=155,slow=18,SNR=3.7						
PETK	**Petropavlovsk-**	**76.30**	**352**	P	**P**	**15 45 15.8**	**-0.7**
	3.0nm,0.8s,baz=135,slow=7.0,SNR=6.4						
PETK				LR	LR	16 12 36.1	
	comp=Z,16nm,20.8s,baz=350,slow=31						
PEA1	**Petropavlovsk-**	**76.31**	**352**	*e*P	**P**	**15 45 15.8**	**-0.8**
CM31	**Chiang Mai Arr**	**81.20**	**294**	*e*P	**P**	**15 45 47.0**	**+2.7**
	30nm,1.8s						
CMAR	**Chiang Mai Arr**	**81.20**	**294**	P	**P**	**15 45 47.0**	**+2.7**
	2.4nm,0.6s,baz=134,slow=4.1,SNR=11						
KDAK	**Kodiak Island**	**85.78**	**19**	LR	LR	16 21 07.5	
	comp=Z,20nm,18.5s,baz=129,slow=33						
SNAA	**Sanae**	**85.82**	**182**	P	**P**	**15 46 07.2**	**0.0**
VNA3	**Neumayer Olymp**	**86.35**	**180**	P	**P**	**15 46 06.6**	**-3.2**
YBH	**Yreka Blue Hor**	**88.77**	**43**	LR	LR	16 20 31.8	
	comp=Z,18nm,18.1s,baz=202,slow=32						
NV01	**Mina Array Sit**	**90.00**	**48**	*e*P	**P**	**15 46 27.3**	**-0.6**
NVAR	**Mina Array Bea**	**90.00**	**48**	P	**P**	**15 46 27.3**	**-0.6**
	0.7nm,0.7s,baz=229,slow=6.3,SNR=5.3						
SONA0	**Songino Array**	**90.80**	**323**	*e*P	**P**	**15 46 32.0**	**+0.7**
SONM	**Songino Array**	**90.80**	**323**	P	**P**	**15 46 32.0**	**+0.7**
	0.9nm,0.4s,baz=118,slow=3.6,SNR=7.1						
ILAR	**Eielson Array**	**93.07**	**17**	P	**P**	**15 46 40.6**	**-0.5**
	0.2nm,0.5s,baz=215,slow=6.2,SNR=3.1						
ILB	**Eielson Array**	**93.07**	**17**	*e*P	**P**	**15 46 40.6**	**-0.5**
	13nm,2.0s						
NEW	**Newport**	**95.47**	**40**	LR	LR	16 25 39.1	
	comp=Z,30nm,18.0s,baz=223,slow=33						
TXAR	**Lajitas Array**	**97.14**	**61**	LR	LR	16 24 32.6	
	comp=Z,22nm,19.4s,baz=0.0,slow=32						
ARA0	**ARCESS Array S**	**128.72**	**345**	*e*PKPdf	**PKPdf**	**15 52 33.2**	**-1.2**
ARCES	**ARCESS Array B**	**128.72**	**345**	PKP	**PKPdf**	**15 52 33.2**	**-1.2**
	1.1nm,0.5s,baz=20,slow=1.4,SNR=8.0						
OSTC	**Ostas**	**145.80**	**331**	*e*PKP	**PKPab**	**15 53 07.6**	**+0.3**
CHVC	**Chvalec**	**145.85**	**331**	*e*PKP	**PKPbc**	**15 53 07.2**	**+0.2**
DPC	**Dobruska-Polom**	**145.90**	**330**	*e*PKP	**PKPab**	**15 53 08.1**	**+0.4**
UPC	**Upice**	**145.92**	**331**	*e*PKP	**PKPab**	**15 53 08.8**	**+1.0**
UPC				*e*pPKP	**PKiKP**	**15 53 12.1**	**+1.4**
BRG	**Berggiesshubel**	**146.55**	**333**	*e*PKP	**PKPbc**	**15 53 09.6**	**+0.5**
	8.5nm,1.4s						
CLL	**Collm**	**146.61**	**334**	*e*PKPbc	**PKPab**	**15 53 10.0**	**-0.3**
TREC	**Trest**	**147.02**	**330**	*e*PKP	**PKPab**	**15 53 12.3**	**+0.2**
TREC				*e*pPKP	**PKiKP**	**15 53 15.0**	**+2.0**
NKC	**Novy Kostel**	**147.66**	**334**	*e*PKP	**PKPab**	**15 53 14.9**	**+0.3**
KHC	**Kasperske Hory**	**148.01**	**331**	*e*PKP	**PKiKP**	**15 53 14.7**	**-0.4**
KHC				*e*pPKP	**PKPab**	**15 53 18.5**	**+2.5**
GERES	**GERESS Array B**	**148.16**	**331**	PKPbc	**PKPbc**	**15 53 14.6**	**+0.8**
	2.5nm,0.6s,baz=29,slow=3.0,SNR=15						
TORD	**Torodi Ar. Bea**	**165.95**	**230**	PKPab	**PKPab**	**15 54 34.3**	**+0.7**
	1.0nm,1.0s,baz=108,slow=4.7,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**165.95**	**230**	*e*PKPab	**PKPab**	**15 54 34.3**	**+0.6**

IDC 16 15:39:11.7±2.2**, 1°.94N**×**126°.74E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/35**, mbtmp3.4**/3**, Error ellipse: s-maj=186.1km s-min=26.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.98**	**161**	P	P	15 44 19.7	+1.5
	1.3nm,0.5s,baz=341,slow=12,SNR=20						
ASAR	**Alice Springs**	**26.39**	**165**	P	P	15 44 48.9	-1.2
	0.1nm,0.3s,baz=332,slow=9.7,SNR=4.3						
MKAR	**Makanchi Array**	**59.03**	**326**	P	P	15 49 13.4	-0.2
	0.2nm,0.3s,baz=133,slow=7.4,SNR=5.1						

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*NIED **16** 15:47:00, 37°.70N×143°.70E, h5km, Mw3.6 Best double couple: $M_0$3.31000×10^{14} NP1:ϕ_s71.00000°, δ24.00000°, λ-49.00000°. NP2:ϕ_s208.00000°, δ72.00000°, λ-106.00000°.*
*IDC **16** 15:47:48.8±1.1, 37°.59N×143°.91E, h0km, mb3.7/5, mb1 3.9/9, mb1mx3.7/32, mbtmp3.8/9, ML3.9/3, MS3.0/3, Ms1 3.0/3, ms1mx2.4/30, Error ellipse: s-maj=29.2km s-min=19.8km az=94.0*
*ISCJB **16** 15:47:51.1±0.5, 37°.68N±0°.03×143°.69E±0°.04, h33km, mb3.9/7, MS3.2/2, Error ellipse: s-maj=5.1km s-min=3.9km az=9.0*
*JMA **16** 15:47:51.7±0.2, 37°.70N×143°.65E, h51km, M3.9*
*NEIC **16** 15:47:52.6±1.5, 37°.65N×143°.85E, h28km±8km, mb4.2/2, Error ellipse: s-maj=24.8km s-min=11.6km az=78.0*
ISC 16 15:47:53.5±1.0**, 37°.70N**±0°.05×**143°.70E**±0°.08**, h35**km**, n46, σ1ˢ.81**/58**, mb4.0**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.87**	**290**	P	**Pn**	**15 48 21.8**	**-1.1**
JIKH				*e*S	**Sn**	**15 48 43.5**	**-1.7**
JIO	**Ouri**	**2.00**	**293**	P	**Pn**	**15 48 23.7**	**-1.0**
JIO				*e*S	**Sn**	**15 48 47.0**	**-1.5**
JKMT	**Kesennumamotoy**	**2.07**	**303**	P	**Pn**	**15 48 24.6**	**-1.1**
JKMT				*e*S	**Sn**	**15 48 48.7**	**-1.6**
OFUJ	**Ofunato**	**2.11**	**311**	P	**Pn**	**15 48 24.9**	**-1.3**
OFUJ				*e*S	**Sn**	**15 48 49.5**	**-1.7**
JMK	**Ichinoseki**	**2.31**	**303**	P	**Pn**	**15 48 28.2**	**-0.9**

JMK				eS	Sn	15 48 55.3	-1.0
JOM	Ohasama	2.58	314	P	Pn	15 48 32.0	-0.8
JOM				eS	Sn	15 49 02.0	-1.0
JFT	Otama	2.68	267	P	Pn	15 48 33.7	-0.4
JFT				S	Sn	15 49 04.1	-1.2
JYK	Kaneyama	2.89	296	P	Pn	15 48 36.8	-0.2
JYK				eS	Sn	15 49 10.9	+0.3
JANG	Nango	3.16	328	P	Pn	15 48 39.8	-0.9
JANG				eS	Sn	15 49 16.1	-1.1
JAW	Awa shima	3.59	283	P	Pn	15 48 46.9	+0.3
JAG	Ashikaga	3.63	251	P	Pn	15 48 46.7	-0.4
BSO1	Boso 1	3.76	217	P	Pn	15 48 46.9	-1.5
BSO1				eS	Sn	15 49 30.2	-0.9
JRY	Ryogami san	4.20	248	P	Pn	15 48 54.2	-0.8
JRY				S	Sn	15 49 40.0	-2.9
JOT	Ohata	4.21	332	P	Pn	15 48 54.9	-0.2
ERM	Erimo	4.33	355	ePn	Pn	15 48 55.6	-1.1
ERM				eSn	Sn	15 49 42.2	-3.7
JOD2	Odawara 2	4.44	238	P	Pn	15 48 57.5	-0.9
JOD2				eS	Sn	15 49 46.5	-2.3
MJAR	Matsushiro Arr	4.54	257	Pn	Pn	15 48 59.6	-0.1
	0.8nm,0.3s,baz=327,slow=15,SNR=29						
MJAR				Sn	Sn	15 49 51.7	+0.5
	0.0nm,0.3s,baz=74,slow=24,SNR=4.0						
MAJO	Matsushiro	4.54	257	ePn	Pn	15 49 00.3	+0.7
MAJO				eSn	Sn	15 49 51.7	+0.4
MAT	Matsushiro	4.54	257	P	Pn	15 49 00.8	+1.1
MAT				S	Sn	15 49 50.3	-0.9
MJB9	Matsu-Tunnel	4.54	257	ePn	Pn	15 49 00.5	+0.8
JKB	Kayabe	4.66	335	P	Pn	15 49 00.9	-0.3
JKB				eS	Sn	15 49 50.4	-3.6
JCH	Churui	4.91	357	P	Pn	15 49 03.1	-1.7
JCH				eS	Sn	15 49 56.3	-4.0
JHJ2	Mitsune	5.57	216	ePn	Pn	15 49 12.3	-1.5
JHJ	Hachijo jima 2	5.58	216	Pn	Pn	15 49 11.5	-2.5
	12nm,0.3s,baz=335,slow=21,SNR=14						
JHJ				Sn	Sn	15 50 10.3	-6.6
	9.8nm,0.3s,baz=64,slow=18,SNR=3.5						
INU	Inuyama	5.87	248	ePn	Pn	15 49 18.8	+0.9
ASAJ	Asahikawa	6.46	353	Pn	Pn	15 49 25.6	-0.4
	5.6nm,0.3s,baz=203,slow=13,SNR=43						
ASAJ				Sn	Sn	15 50 37.0	-1.5
	0.8nm,0.3s,baz=0.0,slow=20,SNR=3.9						
ASAJ				LR	LR	15 52 16.3	
	comp=Z,36nm,19.2s,baz=252,slow=40						
YSS	Yuzh-Sakhalins	9.27	356	ePn	Pn	15 50 05.3	+0.8
USRK	Ussuriysk Ar.	10.97	310	Pn	Pn	15 50 29.8	+1.9
	0.1nm,0.3s,baz=112,slow=14,SNR=4.2						
H11N2	WAKE ISLAND Hy	26.98	125	T	T	16 21 47.6	
	baz=317,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	26.99	125	T	T	16 21 49.7	
	baz=317,slow=74,SNR=10						
H11N3	WAKE ISLAND Hy	27.00	125	T	T	16 21 46.9	
	baz=317,slow=74,SNR=11						
H11S1	WAKE ISLAND Hy	27.75	127	T	T	16 22 45.3	
	baz=319,slow=74,SNR=2.9						
H11S3	WAKE ISLAND Hy	27.75	127	T	T	16 22 49.5	
	baz=126,slow=74,SNR=4.0						
H11S2	WAKE ISLAND Hy	27.77	127	T	T	16 22 07.3	
	SNR=5.2						
SONM	Songino Array	28.94	302	LR	LR	16 06 38.3	
	comp=Z,31nm,18.2s,baz=54,slow=39						
ZAA1	Zalesovo Array	42.82	312	eP	P	15 55 51.1	+3.4
ZALV	Zalesovo Beam	42.82	312	P	P	15 55 51.1	+3.4
	1.4nm,0.5s,baz=74,slow=6.4,SNR=6.0						
MK32	Makanchi Array	45.31	302	eP	P	15 56 09.3	+1.5
MKAR	Makanchi Array	45.31	302	P	P	15 56 09.3	+1.5
	0.3nm,0.5s,baz=82,slow=10,SNR=4.8						
KURK	Kurchatov	46.95	308	eP	P	15 56 21.8	+1.1
	2.2nm,0.6s						
ILAR	Eielson Array	47.95	33	P	P	15 56 28.3	+0.1
	0.7nm,0.7s,baz=269,slow=6.2,SNR=9.1						
WR1	Warramunga Arr	58.01	190	eP	P	15 57 42.8	+0.1
WRA	Warramunga Arr	58.01	190	P	P	15 57 42.8	0.0
	1.9nm,1.0s,baz=357,slow=7.5,SNR=4.8						
AS31	Alice Springs	61.73	190	eP	P	15 58 08.7	+0.3
	2.7nm,1.4s						
ASAR	Alice Springs	61.73	190	P	P	15 58 08.7	+0.3
	0.2nm,0.6s,baz=15,slow=10,SNR=4.2						
ULM	Lac du Bonnet	77.93	34	LR	LR	16 36 00.7	
	comp=Z,20nm,20.8s,baz=17,slow=37						

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*ISCJB **16** 15:53:05.3±0.7, 15°.77S±0°.09×71°.52W±0°.10, h100^{km}, mb3.3/3, Error ellipse: s-maj=15.4km s-min=10.7km az=43.4*

*IDC **16** 15:53:06.2±1.9, 15°.76S×71°.54W, h87^{km}±20^{km}, mb3.2/3, mb1 3.6/9, mb1mx3.4/27, mbtmp3.8/9, MS3.5/9, Ms1 3.5/9, ms1mx3.3/16, Error ellipse: s-maj=29.7km s-min=20.2km az=30.0*

ISC 16 15:53:06.3±0.8**, 15°.9S**±0°.1×**71°.56W**±0°.10**, h100**^{km}**, n18, σ1**^{s}**.09**/13**, mb3.5**/3**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.32	97	P	Pn	15 53 57.8	+0.9
	0.3nm,0.3s,baz=266,slow=12,SNR=15						
LPAZ				LR	LR	15 55 17.9	
	comp=Z,89nm,20.8s,baz=294,slow=40						
NNA	Nana	6.43	307	P	Pn	15 54 39.3	+0.8
	1.7nm,0.3s,baz=155,slow=5.6,SNR=6.9						
NNA				LR	LR	15 57 08.5	
	comp=Z,385nm,18.3s,baz=141,slow=38						
LVC	Limon Verde	7.13	160	P	Pn	15 54 47.8	-0.5
	2.1nm,0.3s,baz=352,slow=8.6,SNR=15						
LVC				LR	LR	15 57 34.8	
	comp=Z,570nm,19.4s,baz=326,slow=37						
SIV	San Ignacio	10.09	92	P	Pn	15 55 27.6	-0.7
	0.5nm,0.3s,baz=277,slow=16,SNR=15						
ATAH	Atahualpa	10.98	322	LR	LR	15 59 43.2	
	comp=Z,273nm,19.4s,baz=164,slow=36						
CFA	Coronel Fontan	15.93	170	P	P	15 56 47.4	+1.1
	0.2nm,0.3s,baz=340,slow=13,SNR=7.9						
CFA				LR	LR	16 02 37.0	
	comp=Z,178nm,21.6s,baz=106,slow=36						
CPUP	Villa Florida	16.84	130	LR	LR	16 04 53.2	
	comp=Z,143nm,20.2s,baz=322,slow=42						
PTGA	Pitinga	18.92	38	P	P	15 57 18.6	-0.8
	0.1nm,0.3s,baz=231,slow=13,SNR=5.0						
PTGA				LR	LR	16 05 03.3	
	comp=Z,258nm,18.4s,baz=223,slow=38						
MDP	Montagnes des	28.04	43	LR	LR	16 10 34.4	
	comp=Z,199nm,18.1s,baz=60,slow=38						
JTS	Las Juntas de	29.20	332	LR	LR	16 11 33.1	
	comp=Z,70nm,20.0s,baz=236,slow=38						
TXAR	Lajitas Array	54.62	325	P	P	16 02 23.8	-1.1
	0.1nm,0.5s,baz=148,slow=7.5,SNR=3.2						
TORD	Torodi Ar. Bea	77.97	73	P	P	16 04 55.0	+0.9
	0.7nm,0.9s,baz=246,slow=9.8,SNR=3.3						
YKA	Yellowknife Ar	85.10	341	P	P	16 05 30.9	+0.3
	0.2nm,0.3s,baz=131,slow=4.6,SNR=4.4						
MODS	Modra-Piesok	100.95	43	ePDIF	Pdif	16 06 42.0	-2.4
VYHS	Vyhne	101.99	43	ePDIF	Pdif	16 06 48.9	-0.1
KSH	Kashi	143.18	44	ePKP	PKPab	16 12 20.1	-4.8
KSH				PKS	PKSdf	16 15 54.3	-11
MJAR	Matsushiro Arr	146.51	314	PKPbc	PKPab	16 12 37.8	+0.3
	2.2nm,0.9s,baz=278,slow=0.3,SNR=7.9						
SONM	Songino Array	148.11	3	PKPbc	PKPab	16 12 43.0	-0.6
	0.7nm,0.4s,baz=248,slow=1.6,SNR=4.5						

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*ISK **16** 15:54:27.9, 38°.47N×28°.47E, h4^{km}, ML2.3/7*

*ISCJB **16** 15:54:28.8±0.5, 38°.46N±0°.04×28°.48E±0°.04, h5^{km}±6^{km}, Error ellipse: s-maj=7.9km s-min=4.8km az=151.2*

*DDA **16** 15:54:28.8, 38°.45N×28°.53E, h6^{km}±1^{km}, ML2.6*

ISC 16 15:54:28.6±1.0**, 38°.46N**±0°.04×**28°.49E**±0°.04**, h9**^{km}±7^{km}**, n16, σ0**^{s}**.49**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANT	Manisa	0.06	56	i P	Pg	15 54 30.8	0.0
MANT				i S	Sg	15 54 32.2	-0.2
KULA	Kula-Manisa	0.14	66	PG	Pg	15 54 31.9	+0.1
USAK	Uak-Merkez	0.49	58	i P	Pg	15 54 38.1	+0.1
USAK				i S	Sb	15 54 46.0	-0.6
GOMA	Golmarmara-Man	0.52	299	PG	Pg	15 54 37.9	-0.7
DEMI	Demirci	0.61	17	i P	Pg	15 54 40.4	-0.1
AKHS	Akhisar	0.68	309	i P	Pg	15 54 41.9	+0.2
AYDB	Zeytinkoy-Aydi	0.69	223	PG	Pg	15 54 41.8	-0.2
AYDB				SG	Sb	15 54 52.4	-0.3
KHAL	Karahalli	0.79	96	i P	Pb	15 54 44.8	+0.2
KHAL				i S	Sb	15 54 55.0	-0.5
KHAL				IAML_P			
	comp=Z,2µm,0.1s						
AYDN	Tasoluk	0.93	212	i P	Pn	15 54 48.2	+0.3
AYDN				IAML_P			
	comp=Z,2µm,0.2s						
GDZ	Gediz	1.00	50	i P	Pb	15 54 47.9	-0.3
GDZ				IAML_P			
	comp=Z,944nm,0.2s						
STEP	BALIKESIR_Sava	1.10	327	i P	Pn	15 54 51.1	+0.9
STEP				IAML_P			
	comp=Z,894nm,0.2s						
DURS	Dursunbey	1.14	359	i P	Pn	15 54 51.5	+0.6
DURS				IAML_P			
	comp=Z,646nm,0.2s						
TVSB	Tavsanli	1.25	37	PN	Pg	15 54 52.0	-0.5
BALB	Balikesir	1.27	338	PN	Pn	15 54 53.1	+0.5
DKL	Dikili	1.38	297	PN	Pn	15 54 54.4	+0.3
URLA	Izmir	1.49	267	PN	Pn	15 54 56.3	+0.7

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*MDD **16** 15:56:32.1±1.3, 34°.69N×16°.43W, h74^{km}, mb4.1/13, Error ellipse: s-maj=21.7km s-min=5.4km az=124.0, PRXIMO*

*INMG **16** 15:56:34.0±1.9, 34°.85N×16°.62W, h10^{km}, ML2.9, Error ellipse: s-maj=14.2km s-min=3.0km az=120.0*

*CNRM **16** 15:56:34.9, 34°.78N×16°.28W, h101^{km}, ml3.2*

ISC 16 15:56:26.3±1.4**, 34°.91N**±0°.06×**16°.46W**±0°.09**, h10**^{km}**, n51, σ3**^{s}**.10**/82**, 2C-1D, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	1.83	177	⇓ePn	Pn	15 56 58.6	+0.8
PMPST				eSn	Sn	15 57 18.1	-3.0
PMPST				A	A	15 57 19.4	
	89nm,0.1s						
PMPS	Porto Santo	1.85	177	ePn	Pn	15 56 57.5	-0.6
PMPS				eSn	Sn	15 57 18.5	-3.1
PMPS				A	A	15 57 21.6	
	56nm,0.3s						
PMPS	Porto Santo	1.85	177	P	Pn	15 56 57.5	-0.6
PMPS				S	Sn	15 57 18.1	-3.5
	45nm,0.1s						
PMOZ	Porto Moniz, M	2.17	197	⇑ePn	Pn	15 57 03.1	+0.5
PMOZ				eSn	Sn	15 57 25.8	-3.8
PMOZ				A	A	15 57 38.1	
	163nm,0.5s						
PMOZ	Porto Moniz, M	2.17	197	P	Pn	15 57 03.1	+0.5
	40nm,0.2s,SNR=7.9						
PMOZ				S	Sn	15 57 25.8	-3.8
	163nm,0.5s						
PMOZ	Porto Moniz, M	2.17	197	P	Pn	15 57 07.0	+4.4
PMOZ				S	Sb	15 57 34.5	+1.8
PMAR	Madeira	2.21	190	ePn	Pn	15 57 03.5	+0.2
PMAR				eSn	Sn	15 57 26.6	-4.2
PMAR				A	A	15 57 37.2	
	168nm,0.2s						
PMAR	Madeira	2.21	190	P	Pn	15 57 03.5	+0.2
PMAR				S	Sn	15 57 26.6	-4.2
	84nm,0.2s						
PMAR	Madeira	2.21	190	P	Pn	15 57 06.3	+3.1
PMAR				S	Sb	15 57 34.5	+0.4
EFAM	Famara	6.28	156	S	Sn	15 59 01.8	-9.0
	24nm,1.0s,SNR=4.0						
TBT	Taburiente	6.33	192	P	Pn	15 57 59.4	-0.4
	22nm,0.3s,SNR=7.9						
TBT				S	Sn	15 59 03.6	-8.5
	94nm,0.8s,SNR=7.9						
EBAJ	Bajamar	6.35	179	P	Pn	15 57 59.6	-0.4
	3.5nm,0.3s,SNR=7.9						
EBAJ				S	Sn	15 59 03.6	-9.0
	12nm,1.1s,SNR=7.9						
PFVI	Vila Bisbo	6.57	68	⇑ePn	Pn	15 58 06.5	+3.4
PFVI				eSn	Sn	15 59 15.1	-3.0
PFVI				A	A	15 59 25.6	
	4.8nm,0.4s						
PFVI	Vila Bisbo	6.57	68	P	Pn	15 58 05.9	+2.9
	5.2nm,0.1s,SNR=14						
PFVI				S	Sn	15 59 16.0	-2.1
	13nm,1.1s,SNR=7.9						
CFUE	Fuerteventura	6.60	160	P	Pn	15 58 03.2	-0.2
	8.7nm,0.2s,SNR=7.9						
CFUE				S	Sn	15 59 09.3	-10
	14nm,0.9s,SNR=7.9						
EGOM	La Gomera	6.76	186	P	Pn	15 58 04.3	-1.3
	2.6nm,0.3s,SNR=7.9						
EGOM				S	Sn	15 59 13.6	-9.1
	80nm,0.9s,SNR=7.9						
MORF	Marmelete	6.76	67	ePn	Pn	15 58 09.4	+3.7
MORF				eSn	Sn	15 59 19.8	-3.0
MORF				A	A	15 59 29.2	
	4.2nm,0.1s						
MORF	Marmelete	6.76	67	P	Pn	15 58 09.4	+3.7
MORF				S	Sn	15 59 19.8	-3.0
	4.2nm,0.1s						
CFTV	Fuerteventura	6.79	162	P	Pn	15 58 05.8	-0.2
	2.2nm,0.2s,SNR=7.9						
CFTV				S	Sn	15 59 13.7	-10
	14nm,0.9s,SNR=7.9						
EOSO	Osorio	6.86	173	S	Sn	15 59 15.9	-9.4
	37nm,1.0s,SNR=4.0						
PMAFR	Mafra	7.03	53	eSn	Sn	15 59 27.0	-2.2
PMAFR	Mafra	7.03	53	P	Pn	15 58 12.9	+3.7
	8.8nm,1.7s,SNR=7.9						
PMAFR				S	Sn	15 59 26.9	-2.3
	30nm,0.4s,SNR=7.9						
PNCL	Nicolau / Gran	7.14	61	ePn	Pn	15 58 14.4	+3.5
PNCL				eSn	Sn	15 59 28.6	-3.5
PNCL				A	A	15 59 34.1	
	2.2nm,0.2s						
PNCL	Nicolau / Gran	7.14	61	P	Pn	15 58 14.4	+3.5
PNCL				S	Sn	15 59 28.6	-3.5
	2.2nm,0.2s						
PBDV	Barranco-do-Ve	7.29	69	ePn	Pn	15 58 16.4	+3.5
PBDV				eSn	Sn	15 59 33.2	-2.6
PBDV				A	A	15 59 38.1	
	2.8nm,0.3s						
PBDV	Barranco-do-Ve	7.29	69	P	Pn	15 58 16.4	+3.5
PBDV				S	Sn	15 59 33.2	-2.6
	2.8nm,0.3s						
PCVE	Castro Verde	7.33	66	ePn	Pn	15 58 17.2	+3.8
PCVE	Castro Verde	7.33	66	P	Pn	15 58 17.2	+3.8
PVAQ	Vaqueiros	7.50	68	ePn	Pn	15 58 19.3	+3.5
PVAQ				eSn	Sn	15 59 37.9	-3.0
PVAQ				A	A	15 59 50.7	
	2.6nm,0.2s						
PVAQ	Vaqueiros	7.50	68	P	Pn	15 58 19.3	+3.5
PVAQ				S	Sn	15 59 37.9	-3.0
	2.6nm,0.2s						
PVAQ	Vaqueiros	7.50	68	P	Pn	15 58 19.7	+3.9
PVAQ				S	Sn	15 59 44.2	+3.3
EGRO	El Granado	7.72	68	P	Pn	15 58 21.7	+3.0
	4.1nm,0.3s,SNR=4.6						
EGRO				S	Sn	15 59 42.5	-3.7
	6.5nm,1.2s						
PMTG	Montargil	7.79	55	ePn	Pn	15 58 22.8	+3.1
PMTG				eSn	Sn	15 59 42.9	-5.1
PMTG				A	A	15 59 56.6	
	1.3nm,0.2s						
PMTG	Montargil	7.79	55	P	Pn	15 58 22.8	+3.1
PMTG				S	Sn	15 59 42.9	-5.1
	1.3nm,0.2s						
TTIG	Tnine Tigouga,	8.04	121	P	Pn	15 58 25.0	+1.8
OUK	Oukaimeden	8.11	115	P	Pn	15 58 28.8	+4.4
OUK				S	Sn	15 59 56.6	+0.3
ZHG	ZHG	8.27	97	P	Pn	15 58 29.8	+3.4
ZHG				S	Sn	15 59 54.1	-5.8
EMIN	Mina Concepcio	8.40	67	P	Pn	15 58 31.1	+3.0
	1.2nm,0.2s,SNR=6.8						
EMIN				S	Sn	15 59 58.8	-4.2
	5.3nm,1.9s						
RSA	Sarsar	8.74	87	P	Pn	15 58 36.7	+3.8
RSA				S	Sn	16 00 07.7	-3.8
ESPR	Espera	8.83	74	P	Pn	15 58 37.1	+3.1
	3.6nm,0.2s,SNR=7.1						
ESPR				S	Sn	16 00 08.4	-5.1
	2.2nm,0.3s						
EJIF	Jimena Fronter	9.08	77	P	Pn	15 58 39.9	+2.4
	1.1nm,0.2s,SNR=7.9						
OUZM	OUZ	9.08	113	P	Pn	15 58 41.3	+3.7
OUZM				S	Sn	16 00 18.9	-1.1
CHEFC	Chefchaouen	9.13	86	P	Pn	15 58 40.6	+2.4
CHEFC				S	Sn	16 00 21.5	+0.4
ECAB	El Cabril	9.44	67	P	Pn	15 58 45.2	+2.8
	3.2nm,0.6s,SNR=5.6						
ECAB				S	Sn	16 00 24.0	-4.6
	1.2nm,0.6s						
CZD	Col de Zad	9.67	98	P	Pn	15 58 50.0	+4.2
LCRM	LCR	9.68	94	P	Pn	15 58 47.8	+2.0
LCRM				S	Sn	16 00 32.0	-2.7
MD31	MD31	9.94	99	P	Pn	15 58 53.1	+3.7
MD31				S	Sn	16 00 41.8	+0.8
MDT	Midelt	10.08	99	P	Pn	15 58 54.4	+3.1
MDT				S	Sn	16 00 44.4	0.0
EADA	Adamuz	10.10	68	P	Pn	15 58 54.6	+3.1
	1.0nm,0.2s,SNR=7.9						
EADA				S	Sn	16 00 38.7	-6.2
	1.1nm,1.4s,SNR=7.9						
AKLM	AKL	10.38	89	P	Pn	15 59 00.3	+4.9
AKLM				S	Sn	16 00 47.7	-4.1
JBK	JBK	11.47	89	P	Pn	15 59 08.8	-1.5
JBK				S	Sn	16 01 15.8	-2.7

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*DDA **16** 16:08:31.8, 38°.68N×43°.17E, h7^{km}±3^{km}, ML2.5*

*ISK **16** 16:08:31.3, 38°.69N×43°.18E, h18^{km}, ML2.3/3*

*ISCJB **16** 16:08:32.8±0.5, 38°.72N±0°.04×43°.17E±0°.04, h7^{km}±10^{km}, Error ellipse: s-maj=6.2km s-min=5.6km az=162.9*

ISC 16 16:08:32.5±1.0**, 38°.72N**±0°.04×**43°.19E**±0°.03**, h14**^{km}±11^{km}**, n11, σ0**^{s}**.81**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.20	128	PG	Pg	16 08 37.3	+0.2
VANB				SG	Sg	16 08 41.7	+1.4
TVAN	Van	0.25	138	i P	Pg	16 08 37.7	-0.4
TVAN				i S	Sg	16 08 40.8	-1.0
ADCV	BITLIS_Adilcev	0.38	284	i P	Pb	16 08 40.6	-0.5
ADCV				i S	Sg	16 08 45.2	-0.3
VMUR	Van-Muradiye	0.41	47	i P	Pb	16 08 41.5	0.0
VMUR				i S	Sb	16 08 48.2	+0.5
GEVA	Gevas	0.41	194	i P	Pg	16 08 40.3	-0.6
CLDR	Caldiran	0.71	53	PG	Pb	16 08 46.0	-0.8
CLDR				SG	Sg	16 08 56.8	+0.9
TUTA	Tutak	0.75	337	i P	Pg	16 08 47.2	+0.1
AGRB	Hanur-Agry	0.87	350	PG	Pb	16 08 49.2	-0.4
SRTM	Siirt_Merkez	1.23	234	i P	Pg	16 08 57.5	+1.3
SRTM				IAML_P			
	comp=Z,278nm,0.2s						
EATA	Eleskirt	1.27	335	i P	Pg	16 08 56.5	-0.5
EATA				IAML_P			
	comp=Z,765nm,0.3s						
MUSM	Mu-Merkez	1.31	271	i P	Pb	16 08 56.8	-0.3
MUSM				IAML_P			
	comp=Z,173nm,0.1s						

NNC 16 16:15:57.4±4.0**, 37°.59N**×**69°.73E, h0**^{km}**, mb3.7, mpv3.2, 6C-2D, Error ellipse: s-maj=42.5km s-min=29.3km az=158.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.54	6	⇑Pn	Pn	16 17 21.1	-0.1
	0.3nm,0.3s,baz=183,slow=12,SNR=8.3						
KK31				⇑Pg	Pg	16 17 41.3	-2.3
	0.4nm,0.3s,baz=185,slow=15,SNR=3.9						
KK31				⇑Lg	Lg	16 18 54.7	
	4.1nm,0.6s,baz=190,slow=26,SNR=6.3						
AAK	Ala-Archa	6.23	34	⇑Pn	Pn	16 17 30.9	+0.3
	3.5nm,0.6s						
AAK				⇓Lg	Lg	16 19 12.0	
	5.7nm,0.7s						
TKM2	Tokmak 2	6.96	38	⇑Pn	Pn	16 17 40.9	0.0
	2.8nm,0.6s						
TKM2				⇑Lg	Lg	16 19 38.3	
	2.0nm,0.8s						
AB31	Akbulak array	13.65	332	P	Pn	16 19 08.1	-4.0
	0.5nm,0.5s,baz=156,slow=12,SNR=10						
AKTO	Aktyubinsk	15.34	331	⇓P	Pn	16 19 37.2	+2.2
	6.5nm,1.2s						

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*MDD **16** 16:26:40.9±1.7, 34°.71N×16°.41W, h50^{km}, mb3.9/8, Error ellipse: s-maj=26.5km s-min=7.1km az=126.0, PRXIMO*

*INMG **16** 16:26:41.2±1.3, 34°.91N×16°.53W, h10^{km}, ML2.4, Error ellipse: s-maj=18.2km s-min=5.8km az=116.0*

*CNRM **16** 16:26:47.9, 34°.61N×16°.04W, h50^{km}, ml2.6*

ISC 16 16:26:37.8±1.6**, 34°.78N**±0°.08×**16°.42W**±0°.08**, h10**^{km}**, n29, σ2**^{s}**.36**/44**, 3D, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	1.70	178	⇓ePn	Pn	16 27 06.9	-0.6
PMPST				eSn	Sn	16 27 26.4	-2.9
PMPST				A	A	16 27 26.5	
	25nm,0.5s						
PMPS	Porto Santo	1.72	178	ePn	Pn	16 27 07.1	-0.7
PMPS				eSn	Sn	16 27 26.6	-3.2
PMPS				A	A	16 27 31.3	
	14nm,0.2s						
PMPS	Porto Santo	1.72	178	P	Pn	16 27 06.9	-0.9
PMPS				S	Sn	16 27 26.4	-3.4
	12nm,0.5s						
PMOZ	Porto Moniz, M	2.06	199	⇓ePn	Pn	16 27 11.6	-0.9
PMOZ				eSn	Sn	16 27 34.7	-3.6
PMOZ				A	A	16 27 41.8	
	42nm,0.7s						
PMOZ	Porto Moniz, M	2.06	199	P	Pn	16 27 11.6	-0.9
	28nm,0.9s						
PMOZ				S	Sn	16 27 34.7	-3.6
	42nm,0.7s						
PMOZ	Porto Moniz, M	2.06	199	P	Pg	16 27 20.7	+3.4
PMOZ				S	Sg	16 27 45.6	+1.6
PMAR	Madeira	2.09	192	⇓ePn	Pn	16 27 11.8	-1.3
PMAR				eSn	Sn	16 27 34.9	-4.4
PMAR				A	A	16 27 39.0	
	47nm,0.2s						
PMAR	Madeira	2.09	192	P	Pn	16 27 11.8	-1.3
PMAR				S	Sn	16 27 34.9	-4.4
	24nm,0.2s						
PMAR	Madeira	2.09	192	P	Pg	16 27 19.4	+1.4
PMAR				S	Sb	16 27 42.3	+0.2
EFAM	Famara	6.15	156	P	Pn	16 28 07.5	-1.1
	2.4nm,1.6s,SNR=7.9						
EFAM				S	Sn	16 29 10.4	-8.6
	3.8nm,2.7s,SNR=7.9						
PFVI	Vila Bisbo	6.59	67	ePn	Pn	16 28 15.4	+0.8
PFVI				eSn	Sn	16 29 22.9	-6.9
PFVI				A	A	16 29 25.4	
	3.8nm,0.6s						
PFVI	Vila Bisbo	6.59	67	P	Pn	16 28 14.8	+0.2
	1.7nm,0.2s,SNR=7.9						
PFVI				S	Sn	16 29 23.2	-6.5
	16nm,1.3s,SNR=7.9						
CFTV	Fuerteventura	6.65	162	P	Pn	16 28 15.2	-0.4
	3.0nm,0.4s,SNR=7.9						
CFTV				S	Sn	16 29 22.9	-8.7
	1.6nm,0.4s,SNR=7.9						
PMAFR	Mafra	7.07	52	S	Sn	16 29 35.2	-6.6
	9.0nm,2.7s,SNR=7.9						
PNCL	Nicolau / Gran	7.17	60	ePn	Pn	16 28 22.9	+0.2
PNCL				eSn	Sn	16 29 34.2	-10
PNCL				A	A	16 29 39.1	
	1.3nm,0.7s						
PNCL	Nicolau / Gran	7.17	60	P	Pn	16 28 22.9	+0.2
PVAQ	Vaqueiros	7.51	67	ePn	Pn	16 28 28.1	+0.8
PVAQ				eSn	Sn	16 29 45.6	-7.0
PVAQ				A	A	16 29 56.3	
	1.1nm,0.1s						
PVAQ	Vaqueiros	7.51	67	P	Pn	16 28 28.1	+0.8
PVAQ				S	Sn	16 29 45.6	-7.0
	1.1nm,0.1s						
PVAQ	Vaqueiros	7.51	67	P	Pn	16 28 32.1	+4.7
PVAQ				S	Sn	16 29 53.3	+0.7
TTIG	Tnine Tigouga,	7.94	120	P	Pn	16 28 35.3	+2.0
TTIG				S	Sn	16 30 00.5	-2.8
OUK	Oukaimeden	8.02	114	P	Pn	16 28 38.6	+4.0
OUK				S	Sn	16 30 05.7	+0.2
ZHG	ZHG	8.21	97	P	Pn	16 28 39.3	+2.2
ZHG				S	Sn	16 30 07.0	-3.0
EMIN	Mina Concepcio	8.41	66	P	Pn	16 28 40.2	+0.5
	1.2nm,0.4s,SNR=7.9						
EMIN				S	Sn	16 30 06.5	-8.2
	3.4nm,0.8s,SNR=7.9						
ESPR	Espera	8.82	73	P	Pn	16 28 45.1	-0.2
	1.2nm,0.3s,SNR=7.9						
ESPR				S	Sn	16 30 16.4	-8.4
	4.1nm,0.6s,SNR=7.9						
ECAB	El Cabril	9.45	66	P	Pn	16 28 53.9	-0.1
	1.7nm,0.6s,SNR=4.0						
ECAB				S	Sn	16 30 31.4	-8.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.7nm,0.7s,SNR=4.0						
MD31	MD31	9.88	98	P	Pn	16 29 02.2	+2.2
MD31				S	Sn	16 30 47.6	-3.4
MDT	Midelt	10.02	98	P	Pn	16 29 05.5	+3.6
MDT				S	Sn	16 30 51.5	-2.9
EADA	Adamuz	10.11	67	P	Pn	16 29 03.3	+0.2
	1.6nm,2.1s,SNR=7.9						
AKLM	AKL	10.35	88	P	Pn	16 29 06.1	-0.2
AKLM				S	Sn	16 31 00.1	-2.3

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*ISCJB **16** 16:33:34.3±1.3, 24°.0S±0°.1×180°.0E±0°.2, h518km, mb4.1/5, Error ellipse: s-maj=24.8km s-min=15.6km az=172.1*

*IDC **16** 16:33:34.2±8.3, 23°.97S×179°.97W, h507km±103km, mb3.5/5, mb1 3.7/6, mb1mx3.2/27, mbtmp4.4/6, Error ellipse: s-maj=62.5km s-min=27.9km az=10.0*

ISC 16 16:33:35.1±1.4, 24°.1S±0°.1×180°.0W±0°.2, h518km, n6, σ1s.08/7, mb4.1/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.30	189	P	P	16 36 38.7	+1.1
	0.6nm,0.3s,baz=256,slow=2.9,SNR=8.6						
URZ				S	S	16 39 06.7	-1.3
	0.6nm,0.3s,baz=72,slow=22,SNR=14						
CTA	Charters Tower	31.51	271	P	P	16 39 15.0	+0.4
	8.6nm,0.4s,baz=92,slow=11,SNR=30						
STKA	Stephens Creek	34.67	248	P	P	16 39 41.6	+0.4
	1.4nm,0.5s,baz=92,slow=10,SNR=7.5						
ASAR	Alice Springs	42.03	261	P	P	16 40 40.9	-0.4
	2.0nm,0.3s,baz=98,slow=7.3,SNR=143						
WRA	Warramunga Arr	42.42	266	P	P	16 40 43.3	-1.1
	6.1nm,0.4s,baz=91,slow=8.3,SNR=121						
TXAR	Lajitas Array	90.53	58	P	P	16 45 41.7	-0.3
	0.4nm,0.7s,baz=205,slow=7.6,SNR=6.2						

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*ISCJB **16** 16:41:47.4±0.4, 54°.25N±0°.03×86°.15E±0°.04, h0km, Error ellipse: s-maj=4.6km s-min=2.6km az=43.9*

*NNC **16** 16:41:53.0±3.1, 53°.99N×85°.91E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=29.0km s-min=20.1km az=167.0, Suspected Mining explosion.*

ISC 16 16:41:48.0±0.9, 54°.27N±0°.03×86°.13E±0°.03, h0km, n25, σ0s.95/42, 4C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALR	Pechorkino, Sa	0.29	301	P	Pg	16 41 53.2	-0.4
SALR				S	Sg	16 41 58.3	+0.8
ELT	Eltsovka	1.01	176	P	Pg	16 42 05.7	-1.6
ELT				S	Sg	16 42 20.1	-0.3
KEM	Kemerovo	1.08	359	P	Pg	16 42 07.9	-0.8
KEM				S	Sg	16 42 23.8	+1.1
KHAR	Kharino, NSO,	1.53	284	P	Pn	16 42 16.2	-0.3
KHAR				S	Sn	16 42 36.5	-0.6
LUZB	Luzhba, Kemero	1.74	109	P	Pn	16 42 18.4	-1.2
LUZB				S	Sn	16 42 41.9	-0.6
NVSII	Novosibirsk	1.78	290	P	Pn	16 42 20.0	-0.1
NVS	Novosibirsk	1.78	290	P	Pn	16 42 20.0	-0.1
NVS				S	Sn	16 42 43.9	+0.5
TASR	Tashtagol	1.84	145	P	Pn	16 42 19.9	-1.0
TASR				S	Sn	16 42 44.7	-0.1
BSTK	Bystrovka, Nov	2.06	280	S	Sb	16 42 52.2	-0.1
ALXA	Alekseevka, NS	2.17	289	S	Sn	16 42 52.1	-0.9
GALT	Gorno-Altaysk,	2.32	183	P	Pn	16 42 27.7	+0.3
ARTR	Artybash	2.57	164	P	Pn	16 42 31.6	+0.7
VEH	Verkhnyaya Baz	2.68	111	P	Pn	16 42 33.4	+0.8
DJO	Djoy, Khakassi	3.38	114	P	Pn	16 42 42.4	+0.3
UKR	Ust'-Kan	3.44	195	P	Pn	16 42 43.5	+0.6
UKR				S	Sn	16 43 23.7	-0.7
ULGR	Ulagan, Altay	3.82	162	P	Pn	16 42 49.2	+1.1
ULGR				S	Sn	16 43 34.3	+0.6
CHBI	Chibit, Altay	4.05	167	P	Pn	16 42 52.6	+1.3
AKAR	Aktash	4.06	166	P	Pn	16 42 52.9	+1.4
AKAR				S	Sn	16 43 41.0	+1.3
TEL	Teeli	4.09	141	P	Pn	16 42 52.9	+1.1
TEL				S	Sn	16 43 40.5	+0.1
CUR	Chagan-Uzun	4.39	161	P	Pn	16 42 57.0	+0.9
CUR				S	Sn	16 43 49.0	+1.1
DGZ	Jazzator, Alta	4.64	170	P	Pn	16 43 00.5	+1.0
DGZ				S	Sn	16 43 55.5	+1.2
ARDR	Aradan	4.68	108	P	Pn	16 43 00.5	+0.6
ARDR				S	Sn	16 43 54.6	-0.3
KURK	Kurchatov	5.81	235	⇑Pn	Pn	16 43 16.8	+1.4
	2.4nm,0.5s						
KURK				⇓Sn	Sn	16 44 21.4	-1.2
	1.2nm,0.4s						
KURK				⇑Lg	Lg	16 44 50.9	
	6.6nm,0.5s						
KURBB	Kurchatov Arra	5.91	235	⇑Pn	Pn	16 43 18.3	+1.5
	3.2nm,0.2s						
KURBB				⇑Sn	Sn	16 44 24.5	-0.7
	5.9nm,0.3s						
KURBB				⇓Lg	Lg	16 44 56.5	
	16nm,0.6s						
MK31	Makanchi Array	7.87	200	Pn	Pn	16 43 45.2	+1.4
	0.2nm,0.2s,baz=25,slow=12,SNR=73						
MK31				Sn	Sn	16 45 12.1	-1.4
	1.8nm,0.6s,baz=24,slow=27,SNR=7.1						
MK31				Lg	Lg	16 45 53.5	
	6.3nm,0.8s,baz=34,slow=32,SNR=7.6						

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*ISCJB **16** 17:01:48.1±0.3, 67°.05N±0°.02×20°.99E±0°.07, h0km, Error ellipse: s-maj=3.8km s-min=2.9km az=1.6*

*UPP **16** 17:01:48.2±0.1, 67°.08N×20°.95E, h1km, ML1.6, Explosion*

*HEL **16** 17:01:48.8±0.0, 67°.08N×20°.93E, h0km, ML1.6(UPP), Explosion*

*IDC **16** 17:01:50.8±0.8, 67°.09N×21°.30E, h0km, mb1 3.0/4, mb1mx2.9/38, mbtmp3.0/4, ML2.1/4, Error ellipse: s-maj=15.2km s-min=6.4km az=113.0*

*NAO **16** 17:01:51.1±0.9, 67°.10N×21°.03E, ML2.6*

*BER **16** 17:01:53.2±4.0, 67°.10N×20°.86E, h0km, ML1.5, ML2.6(NAO), Suspected explosion*

ISC 16 17:01:48.5±0.7, 67°.10N±0°.02×20°.94E±0°.02, h0km, n53, σ1s.65/68, Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DUNU	Dundret	0.15	278	P	Pg	17 01 51.4	0.0
DUNU				S	Sg	17 01 53.3	+0.1
DUNU	Dundret	0.15	278	*i* P	Pg	17 01 51.4	0.0
DUNU				*i* S	Sg	17 01 53.3	+0.1
MASU	Masugnsbyn	0.54	48	P	Pg	17 01 58.8	-0.1
MASU	Masugnsbyn	0.54	48	*i* P	Pg	17 01 58.8	-0.1
ERTU	Ertsjaerv	0.74	137	P	Pg	17 02 01.7	-0.9
ERTU	Ertsjaerv	0.74	137	*e*P	Pg	17 02 01.8	-0.9
ERTU				*e*PB	Pb	17 02 04.2	0.0
PAJU	Pajala	0.85	94	P	Pg	17 02 04.0	-0.9
PAJU	Pajala	0.85	94	*i* P	Pg	17 02 04.0	-0.9
RATU	Laukkuluspa	0.89	325	P	Pg	17 02 05.1	-0.6
RATU	Laukkuluspa	0.89	325	*e*P	Pg	17 02 05.1	-0.6
HARU	Harads	0.94	179	P	Pg	17 02 05.2	-1.3
HARU	Harads	0.94	179	*e*P	Pg	17 02 05.2	-1.3
LANU	Lannavaara	1.03	22	P	Pg	17 02 07.7	-0.6
LANU	Lannavaara	1.03	22	*e*P	Pg	17 02 07.4	-0.9
LANU				*e*SN	Sn	17 02 26.9	+1.4
NIKU	Nikkaluokta	1.06	317	P	Pg	17 02 08.1	-0.8
NIKU	Nikkaluokta	1.06	317	*e*P	Pg	17 02 08.1	-0.8
KALU	Kalix	1.58	141	*e*PN	Pn	17 02 17.6	-0.1
SJUU	Sjulsmark	1.62	170	P	Pn	17 02 17.6	-0.7
SJUU	Sjulsmark	1.62	170	*e*P	Pn	17 02 17.6	-0.7
HEF	Hetta	1.67	37	Pg	Pg	17 02 21.2	+0.6
HEF				Lg	Lg	17 02 43.6	
HEF	Hetta	1.67	37	*e*P	Pn	17 02 18.6	-0.5
HEF				*e*SN	Sg	17 02 43.5	+1.4
HEF	Hetta	1.67	37	*e*P	Pn	17 02 18.7	-0.4
HEF				*e*S	Sg	17 02 43.8	+1.6
TOF	Tornio	1.70	126	*e*PN	Pn	17 02 19.3	0.0
KIF	Kilpisjarvi	1.91	358	Pn	Pb	17 02 23.6	-0.6
KIF				Lg	Lg	17 02 54.4	
KIF	Kilpisjarvi	1.91	358	*e*PG	Pg	17 02 25.9	+0.7
KIF				*e*		17 02 53.6	
KIF	Kilpisjarvi	1.91	358	Pn	Pb	17 02 23.6	-0.6
KIF				Sg	Sg	17 02 54.4	+4.5
RNF	Rovaniemi	2.06	102	*e*PB	Pn	17 02 24.9	+0.5
RNF				*e*SG	Sb	17 02 52.5	-0.4
KTK1	Kautokeino	2.10	23	*e*P	Pg	17 02 27.8	-1.0
KTK1				IAML		17 03 05.6	
	comp=Z,7.8nm,0.3s						
SGF	Sodankyl	2.20	78	*e*PB	Pn	17 02 27.3	+1.1
STEI	Steigen	2.34	293	*e*P	Pn	17 02 29.8	+1.5
STEI					IAML	17 03 11.5	
	comp=Z,4.5nm,0.5s						
OUL	Oulu	2.86	133	*e*PB	Pn	17 02 38.0	+2.7
ARE0	ARCESS Array S	2.97	33	*e*SB	Sb	17 03 17.4	-1.8
ARA0	ARCESS Array S	2.98	33	Pn	Pb	17 02 39.7	-2.6
	baz=207,slow=14						
ARA0				Sn	Sb	17 03 16.1	-3.1
	baz=222,slow=22						
ARA0	ARCESS Array S	2.98	33	Pn	Pb	17 02 39.7	-2.6
	baz=207,slow=14						
ARA0				Sn	Sb	17 03 16.1	-3.1
	baz=222,slow=22						
ARCES	ARCESS Array B	2.98	33	Pn	Pn	17 02 37.2	+0.3
	comp=Z,0.4nm,0.3s,baz=210,slow=12,SNR=27						
ARCES				Sn	Sb	17 03 15.8	-3.3
	comp=Z,0.8nm,0.3s,baz=214,slow=23,SNR=7.0						
ARCES				Lg	Lg	17 03 23.7	
	comp=Z,2.1nm,0.3s,baz=210,slow=28,SNR=15						
LOF	Lofoten	3.02	293	*e*P	Pb	17 02 41.2	-1.8
KONS	Konsvik	3.16	263	*e*P	Pb	17 02 44.0	-1.4
OUF	Merijarvi	3.16	149	*e*PB	Pn	17 02 42.4	+3.0
UMAU	Umeaa	3.23	182	*e*P	Pn	17 02 40.5	+0.1
MSF	Maaselka	3.46	106	*e*PB	Pb	17 02 49.0	-1.5
VAF	Ylistaro	4.14	169	*e*P	Pn	17 02 54.9	+2.0
HEMU	Hemsoen	4.61	197	*e*P	Pn	17 03 02.0	+2.6
FIA0	FINESS Array S	6.10	156	Pn	Pn	17 03 22.2	+2.4
	baz=346,slow=14						
FIA0				Sn	Sn	17 04 32.5	+2.2
	baz=344,slow=28						
FIA0	FINESS Array S	6.10	156	Pn	Pn	17 03 22.2	+2.4
	baz=346,slow=14						
FIA0				Sn	Sn	17 04 32.5	+2.2
	baz=344,slow=28						
FINES	FINESS Array B	6.10	156	Pn	Pn	17 03 21.6	+1.7
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=11						
FINES				Sn	Sn	17 04 31.2	+1.0
	comp=Z,0.3nm,0.3s,baz=342,slow=22,SNR=5.8						
FINES				Lg	Lg	17 05 00.6	
	comp=Z,0.3nm,0.3s,baz=347,slow=26,SNR=3.3						
NB2	NORSAR Subarra	7.42	220	Pn	Pn	17 03 39.2	+1.2
	baz=26,slow=14						
NB2	NORSAR Subarra	7.42	220	Pn	Pn	17 03 39.2	+1.2
	baz=26,slow=14						
NOA	NORSAR Array B	7.42	220	Pn	Pn	17 03 39.3	+1.4
	comp=Z,0.0nm,0.3s,baz=28,slow=12,SNR=9.5						
NRA0	NORESS Array S	7.61	217	Pn	Pn	17 03 42.9	+2.4
	baz=47,slow=16						
NRA0	NORESS Array S	7.61	217	Pn	Pn	17 03 42.9	+2.4
	baz=47,slow=16						
HFS	Hagfors	7.70	208	Pn	Pn	17 03 43.3	+1.6
	baz=16,slow=14						
HFS	Hagfors	7.70	208	Pn	Pn	17 03 43.6	+1.9
	comp=Z,0.2nm,0.3s,baz=21,slow=12,SNR=14						
HFS				Sn	Sn	17 05 08.6	-0.9
	comp=Z,0.1nm,0.3s,baz=21,slow=26,SNR=3.5						
HFS	Hagfors	7.70	208	Pn	Pn	17 03 43.3	+1.6
	baz=16,slow=14						

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*ISN **16** 17:06:21.1±2.1, 32°.22N×47°.41E, h17km±14km, ML2.9*

*ISCJB **16** 17:06:22.4±1.6, 32°.2N±0°.2×47°.27E±0°.08, h10km, Error ellipse: s-maj=24.8km s-min=6.8km az=17.3*

*THR **16** 17:06:27.1, 32°.49N×47°.55E, h18km, ML2.8*

ISC 16 17:06:23.6±1.9, 32°.2N±0°.1×47°.25E±0°.05, h10km, n5, σ1s.41/8, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.32	92	AML	AML	17 07 10.0	
	comp=N,229nm,0.3s						
SHGR				Pg	Pn	17 06 48.1	+0.1
SHGR				AML	AML	17 07 10.6	
	comp=E,228nm,0.5s						
IBDR	Badra	1.46	311	*e*Pg	Pn	17 06 48.0	-2.0
	baz=125						
IBDR				AML	AML	17 06 48.9	
IBDR				*e*Sg	Sn	17 07 11.0	+1.8
BHD	Baghdad	2.66	295	*e*Pn	Pn	17 07 06.0	-0.5
BHD				AML	AML	17 07 08.6	
BHD				*e*Sn	Sn	17 07 40.0	+1.3
KHMZ	Khomeyn	2.77	55	Pn	Pn	17 07 07.3	-0.9
KHMZ				Sg	Sn	17 07 42.0	0.0
SNGE	Sanandaj	2.93	2	Pn	Pn	17 07 10.5	+0.1

UCR 16 17:26:56.2±5.7, 13°.74N×84°.05W, h33km±141km, MW4.1, Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESPN	Las Esperanzas	1.55	189	*e*P	Pn	17 27 19.9	-1.6
ESPN				*e*S	Sn	17 27 39.6	-0.9
MATN	Matagalpa	2.00	247	*e*P	Pn	17 27 26.8	-1.0
MATN				*e*S	Sn	17 27 50.6	-1.1
RCON	San Juan de Ri	2.07	263	*e*P	Pn	17 27 26.2	-2.6
ACON	Acoyapa	2.07	212	*e*P	Pn	17 27 27.4	-1.3
ACON				*e*S	Sn	17 27 52.8	-0.6
ESTN	Estel	2.35	255	*e*P	Pn	17 27 32.1	-0.5
ESTN				*e*S	Sn	17 28 02.1	+1.8
CNGN	Cerro Negro	2.86	245	*e*P	Pn	17 27 41.0	+1.4
MESS	Mesas	3.18	201	*e*P	Pb	17 27 48.7	-3.4
GB1A	Borinquen Arri	3.19	205	*e*P	Pn	17 27 47.1	+3.0
BUEV	Buena Vista	3.21	205	*e*P	Pb	17 27 49.0	-3.6
BUEV				*e*S	Sn	17 28 26.4	+4.9
CEDE	Laguna Cedeo	3.29	191	*e*P	Pb	17 27 51.9	-2.1
CEDE				*e*S	Sb	17 28 31.0	-2.7
ARE1	Arenal 1	3.32	192	*e*P	Pb	17 27 51.3	-3.1
ARE1				*e*S	Sb	17 28 30.9	-3.5
JTS	Las Juntas de	3.54	195	*e*P	Pb	17 27 54.1	-4.0
CVTR	Volcan Turrial	3.70	176	*e*S	Sb	17 28 41.8	-4.1

JMA 16 17:28:06.8±0.2, 24°.89N×123°.18E, h23km, M2.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.45	200	P	Pb	17 28 15.9	-0.3
YOJ				*e*S	Sb	17 28 21.9	-0.6
JYNG	Yonagunijimaku	0.49	206	P	Pb	17 28 16.5	-0.2
JYNG				S	Sb	17 28 23.5	+0.1
IRIF	Iriomote-Funau	0.75	138	P	Pb	17 28 20.9	-0.2
IRIF				*e*S	Sb	17 28 31.4	+0.5
JKRS	Kuro-shima	1.00	131	P	Pn	17 28 25.0	-0.4
JKRS				*e*S	Sb	17 28 38.2	+0.1
HATJ	Hateruma jima	1.01	145	P	Pn	17 28 25.2	-0.3
JIJ	Ishigaki jima	1.02	121	P	Pn	17 28 25.3	-0.4
JISG	Ishigakijimahi	1.07	106	P	Pn	17 28 25.9	-0.5

TAP 16 17:28:43.8, 24°.28N×121°.47E, h10km±1km, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.07	174	*e*P	Pg	17 28 47.0	+0.9
	baz=174						
ETLH				*e*S	Sg	17 28 48.4	+0.6
	baz=174						
NACB	Ninganchiao	0.15	132	*e*P	Pg	17 28 48.3	+1.2
	baz=132						
NACB				*e*S	Sg	17 28 50.4	+1.0
	baz=132						
NNSB	Datong	0.17	331	*e*P	Pg	17 28 48.0	+0.4
	baz=331						
NNSB				*e*S	Sg	17 28 51.7	+1.4
	baz=331						
NNS	Nan Shan	0.19	331	*e*S	Sg	17 28 52.1	+1.5
	baz=332						
WHF	Hehuan Shan	0.23	236	*e*P	Pg	17 28 49.4	+0.7
	baz=234						
WHF				*e*S	Sg	17 28 53.4	+1.3
	baz=234						
ENA	Nanau	0.29	58	*e*P	Pb	17 28 50.7	-0.4
	baz=58						
ENA				*e*S	Sb	17 28 55.6	-0.3
	baz=58						

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*ISCJB **16** 17:35:06.6±0.6, 6°.49S±0°.07×154°.95E±0°.07, h56km, mb4.0/11, MS3.7/1, Error ellipse: s-maj=11.7km s-min=8.4km az=143.9*

*NEIC **16** 17:35:06.1±2.9, 6°.48S×154°.97E, h36km±5km, mb4.1/4, Error ellipse: s-maj=16.1km s-min=11.2km az=209.0*

*IDC **16** 17:35:06.5±6.7, 6°.57S×155°.12E, h51km±53km, mb3.8/7, mb1 4.0/8, mb1mx3.7/28, mbtmp4.1/8, ML2.4/1, MS3.7/2, Ms1 3.7/2, ms1mx2.8/31, Error ellipse: s-maj=45.8km s-min=27.7km az=104.0*

ISC 16 17:35:06.8±1.0, 6°.6S±0°.1×155°.1E±0°.1, h56km, n26, σ0s.81/26, mb4.0/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.82	309	*e*Pn	Pn	17 36 04.0	+0.9
HNR	Honiara	5.52	121	*e*Pn	Pn	17 36 33.0	+6.5
PMG	Port Moresby	8.37	250	P	Pn	17 37 05.9	+0.4
	2.7nm,0.3s,baz=70,slow=6.9,SNR=11						
PMG				S	Sn	17 38 39.0	+0.4
	1.6nm,0.3s,baz=90,slow=1.0,SNR=4.1						
PMG	Port Moresby	8.37	250	*e*Pn	Pn	17 37 05.9	+0.4
PMG				*e*		17 37 06.7	
PMG				*e*Sn	Sn	17 38 37.6	-1.0
PMG				*e*		17 38 39.0	
MANU	Manus Island	8.98	300	*e*Pn	Pn	17 37 14.4	+0.5
PATS	Pohnpei	13.74	13	*e*Pn	Pn	17 38 18.4	-0.5
DZM	Mont Dzumac	18.85	146	LR	LR	17 45 20.5	
	comp=Z,160nm,20.6s,baz=134,slow=32						
FAKI	Fak Fak	23.10	278	*e*P	P	17 40 06.4	-1.7
	55nm,1.2s						
WRAB	Tennant Creek	24.13	235	*e*P	P	17 40 18.4	+0.7
	5.0nm,0.9s						
WB2	Warramunga Arr	24.13	235	*e*P	P	17 40 18.6	+0.9
	8.7nm,1.1s						
WR1	Warramunga Arr	24.14	235	*e*P	P	17 40 18.4	+0.6
WR1				*e*PcP	PcP	17 43 58.9	+1.0
WRA	Warramunga Arr	24.14	235	P	P	17 40 18.4	+0.6
	2.2nm,0.4s,baz=61,slow=9.5,SNR=47						
WRA				PcP	PcP	17 43 58.8	+1.0
	0.9nm,0.5s,baz=46,slow=3.3,SNR=7.6						
SIJI	Sorong	24.48	283	P	P	17 40 19.9	-1.1
	6.6nm,0.4s,baz=129,slow=13,SNR=11						
SIJI				LR	LR	17 49 57.4	
	comp=Z,295nm,21.6s,baz=66,slow=36						
AS31	Alice Springs	26.52	228	*e*P	P	17 40 39.0	-0.5
	1.2nm,0.3s						
ASAR	Alice Springs	26.52	228	P	P	17 40 39.5	0.0
	0.9nm,0.5s,baz=56,slow=9.3,SNR=31						
ASAR				PcP	PcP	17 44 03.5	+0.3
	0.7nm,0.7s,baz=59,slow=2.5,SNR=6.3						
H11S3	WAKE ISLAND Hy	27.44	24	T	T	18 09 35.7	
	baz=202,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	27.44	24	T	T	18 09 22.8	
	baz=202,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	27.45	24	T	T	18 09 16.7	
	baz=202,slow=75,SNR=6.6						
CMAR	Chiang Mai Arr	60.75	295	P	P	17 45 14.2	+1.0
	3.7nm,0.7s,baz=125,slow=5.3,SNR=27						
SONA0	Songino Array	69.10	327	*e*P	P	17 46 06.8	-0.4
SONM	Songino Array	69.10	327	P	P	17 46 06.8	-0.4
	0.4nm,0.4s,baz=122,slow=5.4,SNR=4.3						
ILAR	Eielson Array	82.98	21	P	P	17 47 25.6	+0.1
	0.2nm,0.4s,baz=236,slow=6.0,SNR=3.6						
MK32	Makanchi Array	83.22	319	*e*P	P	17 47 27.5	+0.3
MKAR	Makanchi Array	83.22	319	P	P	17 47 27.5	+0.3
	0.7nm,0.8s,baz=100,slow=5.5,SNR=7.0						
TORD	Torodi Ar. Bea	153.06	286	PKPbc	PKPbc	17 54 58.1	-1.1
	1.1nm,0.7s,baz=70,slow=2.4,SNR=5.8						
TOA1	Torodi Ar. Sit	153.06	286	*e*PKPbc	PKPbc	17 54 58.1	-1.1

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*IDC **16** 17:46:32.5±1.0, 4°.78S×134°.02E, h0km, mb4.0/4, mb1 4.4/10, mb1mx4.0/30, mbtmp4.3/10, ML4.1/6, MS3.1/6, Ms1 3.2/6, ms1mx2.9/34, Error ellipse: s-maj=30.9km s-min=18.4km az=63.0*

*BJI **16** 17:46:32.8±0.0, 5°.11S×134°.32E, h33km, mb4.5/21, mB4.9/13, Ms4.6/1*

*ISCJB **16** 17:46:33.2±0.3, 4°.87S±0°.03×134°.05E±0°.03, h28km, mb4.6/17, Error ellipse: s-maj=4.4km s-min=4.1km az=36.7*

*NEIC **16** 17:46:35.6±3.1, 4°.72S×134°.15E, h34km±6km, mb4.7/14, Error ellipse: s-maj=14.4km s-min=6.1km az=56.0*

*DJA **16** 17:46:37.0±0.3, 5°S±4°×13°4E±°, h54km±21km, M4.6/11, mb5.0/7, mB5.2/1, MLv4.5/11, Mw(mB)4.7/1*

ISC 16 17:46:35.3±0.5, 4°.83S±0°.05×134°.05E±0°.05, h28km, n54, σ2s.84/61, mb4.6/17, Irian Jaya region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.62	317	*e*Pn	Pn	17 47 15.2	-0.5
FAKI	Fak Fak	2.62	317	P	Pn	17 47 13.9	-1.8
FAKI				S	Sn	17 47 42.9	-3.7
SRPI	Serui, Papua	3.67	37	P	Pn	17 47 30.7	+0.5
SRPI				S	Sn	17 48 12.6	+0.1
BNDI	Bandanaira	4.14	274	P	Pn	17 47 36.0	-0.7
BNDI				S	Sn	17 48 25.4	+1.1
SAUI	Saumlaki	4.15	221	*e*Pn	Pn	17 47 40.6	+3.7
BAKI	Biak	4.16	30	P	Pn	17 47 36.9	-0.1
SIJI	Sorong	4.82	325	Pn	Pn	17 47 45.4	-0.6
	2.6nm,0.3s,baz=247,slow=23,SNR=29						
SIJI				Sn	Sn	17 48 37.2	-3.8
	6.2nm,0.3s,baz=320,slow=23,SNR=7.5						
SWI	Sorong	4.83	325	P	Pn	17 47 44.4	-1.8
MSAI	Masohi	5.32	286	P	Pn	17 47 51.6	-1.3
	36nm,0.6s,0.2nm						
AAI	Ambon	5.95	281	P	Pn	17 48 00.7	-0.9
	160nm,0.7s,0.6nm						
GENI	Genyem	6.50	70	P	Pn	17 48 09.8	+0.7
	65nm,0.7s,0.3nm						
JAY	Jayapura	7.03	71	Pn	Pn	17 48 16.6	+0.1
	0.7nm,0.3s,baz=232,slow=13,SNR=5.9						
JAY				LR	LR	17 51 54.0	
	comp=Z,213nm,19.2s,baz=9.5,slow=46						
NLAI	Namlea	7.11	283	P	Pn	17 48 20.8	+3.3
LBMI	Labuha	7.75	302	P	Pn	17 48 25.1	-1.3
	61nm,1.0s,0.2nm						
MTN	Manton Dam	8.46	200	*e*Pn	Pn	17 48 37.7	+1.6
MTN				*e*Sn	Sn	17 50 09.2	-1.6
SANI	Sanana	8.51	289	P	Pn	17 48 34.7	-2.0
	41nm,0.8s						
SOEI	Soe	10.86	243	*e*Pn	Pn	17 49 10.1	+1.0
SOEI				*e*Sn	Sn	17 51 09.2	-0.7
BATI	Baumata	11.60	242	Pn	Pn	17 49 19.5	+0.4
	7.3nm,0.3s,baz=88,slow=4.4,SNR=8.5						
BATI				Sn	Sn	17 51 28.6	+0.8
	3.2nm,0.3s,baz=150,slow=20,SNR=4.5						
MMRI	Maumere	12.32	252	*e*Pn	Pn	17 49 31.5	+2.5
COEN	Coen	12.77	136	*e*Pn	Pn	17 49 34.2	-0.9
PMG	Port Moresby	13.78	110	*e*Pn	Pn	17 49 47.6	-1.3
KAPI	Kappang	14.25	269	LR	LR	17 56 00.5	
	comp=Z,95nm,20.3s,baz=322,slow=40						
DAV	Davao City (W)	14.54	324	LR	LR	17 55 47.7	
	comp=Z,65nm,18.2s,baz=120,slow=38						
WRAB	Tennant Creek	15.01	179	*e*Pn	Pn	17 50 04.7	-1.0
	37nm,0.6s						
WRAB				*e*Sn	Sn	17 52 43.8	-7.4
WB2	Warramunga Arr	15.02	179	*e*Pn	Pn	17 50 04.7	-1.1
	35nm,0.7s						
WB2				*e*Sn	Sn	17 52 44.1	-7.3
WR1	Warramunga Arr	15.02	179	*e*Pn	Pn	17 50 04.9	-0.9
WR1				*e*Sn	Sn	17 52 44.3	-7.1
WRA	Warramunga Arr	15.02	179	Pn	Pn	17 50 04.9	-0.9
	0.4nm,0.3s,baz=347,slow=14,SNR=30						
WRA				Sn	Sn	17 52 44.3	-7.1
	1.1nm,0.3s,baz=5.0,slow=24,SNR=10						
AS31	Alice Springs	18.72	180	*e*P	Pn	17 50 53.4	+1.0
	6.8nm,0.7s						
ASAR	Alice Springs	18.72	180	P	Pn	17 50 53.4	+0.9
	2.3nm,0.3s,baz=4.4,slow=10,SNR=162						
ASAR				Sn	Sn	17 54 14.8	-6.5
	0.4nm,0.3s,baz=359,slow=26,SNR=7.3						
CTA	Charters Tower	19.26	143	P	Pn	17 51 00.6	+1.6
	0.5nm,0.3s,baz=319,slow=12,SNR=13						
CTAO	Charters Tower	19.26	143	*e*P	Pn	17 50 59.4	+0.5
	13nm,0.9s						
GUMO	Guam	21.22	30	LR	LR	17 58 00.1	
	comp=Z,62nm,21.1s,baz=216,slow=32						
PSA00	Pilbara Seismi	21.60	218	*e*P	P	17 51 25.1	+1.9
	45nm,1.3s						
LHI	Lord Howe Isla	35.44	141	*e*P	P	17 53 29.6	+0.3
	90nm,1.3s						
JHJ	Hachijo jima 2	38.13	8	LR	LR	18 08 33.2	
	comp=Z,34nm,18.8s,baz=322,slow=35						
NJ2	Nanjing	39.43	339	*e*P	P	17 54 04.8	+1.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WHN	Wuhan	39.91	333	P	P	17 54 13.8	+6.8

CM31	Chiang Mai Arr	41.63	305	*e*P	P	17 54 22.4	+1.0
	3.5nm,0.8s						
CMAR	Chiang Mai Arr	41.63	305	P	P	17 54 22.4	+1.0
	1.3nm,0.8s,baz=133,slow=7.4,SNR=9.0						
CMAR				LR	LR	18 15 23.4	
	comp=Z,15nm,18.1s,baz=165,slow=42						
KMI	Kunming	42.57	316	P	P	17 54 31.4	+2.1
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,82nm,4.2s						
GTA	Gaotai	54.18	327	*e*P	P	17 55 56.6	-1.8
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	63.89	324	*e*P	P	17 57 07.6	+1.9
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,37nm,5.5s						
WMQ				LR	LR		
	comp=N,210nm,28.8s						
WMQ				LR	LR		
	comp=E,280nm,28.9s						
MK31	Makanchi Array	68.72	325	*e*P	P	17 57 36.5	0.0
	5.7nm,1.4s						
MK32	Makanchi Array	68.72	325	*e*P	P	17 57 37.7	+1.2
MKAR	Makanchi Array	68.72	325	P	P	17 57 37.7	+1.2
	0.8nm,0.4s,baz=120,slow=7.7,SNR=14						
MAKZ	Makanchi	68.91	324	*e*P	P	17 57 38.1	+0.4
	3.0nm,0.6s						
KDJ	Kajisay	69.56	318	*e*P	P	17 57 43.3	+1.2
	2.1nm,0.6s						
SBLHI	Steaming Bluff	73.53	68	*e*P	P	17 58 04.4	-1.9
	59nm,1.1s						
BYL	Byron's Ledge	73.54	68	*e*P	P	17 58 05.7	-0.6
	60nm,1.0s						
HATHI	Halema‘uma‘u T	73.54	68	*e*P	P	17 58 04.1	-2.3
	93nm,1.1s						
VNDA	Vanda	74.13	174	P	P	17 58 10.1	+1.5
	0.9nm,0.8s,baz=326,slow=5.7,SNR=5.6						
VNDA	Vanda	74.13	174	*e*P	P	17 58 09.6	+1.0
MAW	Mawson	78.43	202	P	P	17 58 35.8	+2.7
	3.1nm,0.9s,baz=42,slow=6.9,SNR=4.8						
VYHS	Vyhne	110.17	320	*e*PDIF	Pdif	18 01 12.2	+9.0

IDC ***16*** *18:01:35.0±1.2, 28.°32N×105.°16E, h0^{km}, mb3.9/3, mb1 3.9/5, mb1mx3.5/37, mbtmp3.7/5, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/47, Error ellipse: s-maj=48.8km s-min=22.0km az=68.0*

ISCJB ***16*** *18:01:35.5±0.5, 28.°27N±0.°04×104.°99E±0.°06, h19^{km}, mb4.0/9, MS2.9/2, Error ellipse: s-maj=8.0km s-min=6.0km az=16.9*

BJI ***16*** *18:01:36.6±0.0, 28.°33N×104.°89E, h7^{km}, ML3.4/15*

NEIC ***16*** *18:01:40.0±1.6, 28.°28N×104.°96E, h38^{km}±7^{km}, mb4.0/6, Error ellipse: s-maj=16.9km s-min=12.4km az=105.0*

ISC 16 18:01:37.9±0.6**, 28.°35N**±0.°04×**104.°98E**±0.°05**, h19**^{km}**, n24, σ1.^{s}34**/31**, mb4.0**/9**, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYA	Guiyang	2.41	141	⇑*i*Pn	Pn	18 02 17.6	+1.2
GYA				Pg	Pg	18 02 23.3	-0.8
GYA				Sn	Sb	18 02 50.3	+0.2
GYA				Sg	Sg	18 02 55.8	+0.4
GYA				smax	smax		
	comp=N,230nm,0.7s						
GYA				smax	smax		
	comp=E,260nm,0.7s						
CD2	Chengdu	2.76	338	Pg	Pb	18 02 27.8	+1.1
CD2				Sn	Sn	18 02 56.3	+2.2
CD2				Sg	Sg	18 03 06.5	-0.3
CD2				smax	smax		
	comp=N,380nm,0.6s						
CD2				smax	smax		
	comp=E,650nm,0.7s						
KMI	Kunming	3.78	212	Pg	Pg	18 02 48.6	-1.8
KMI				Sg	Sg	18 03 40.6	+1.1
KMI				smax	smax		
	comp=N,33nm,0.5s						
KMI				smax	smax		
	comp=E,24nm,1.0s						
KMI				LR	LR		
	comp=N,200nm,7.9s						
KMI				LR	LR		
	comp=E,310nm,7.9s						
KMI				LR	LR		
	comp=Z,190nm,7.0s						
ENH	Enshi	4.38	63	*e*Pn	Pn	18 02 45.0	+1.6
ENH				*e*Sn	Sn	18 03 33.9	-0.1
XAN	Xi'an	6.60	30	Pn	Pn	18 03 14.3	+0.3
XAN				Sn	Sn	18 04 30.9	+2.1
XAN				Sg	Sg	18 05 05.8	-3.9
XAN				smax	smax		
	comp=Z,81nm,0.7s						
XAN				smax	smax		
	comp=Z,96nm,1.1s						
SLVN	Son La	7.05	188	*e*Pn	Pn	18 03 20.2	0.0
WHN	Wuhan	8.46	73	P	Pn	18 03 41.5	+2.1
CMAR	Chiang Mai Arr	11.29	211	Pn	Pn	18 04 18.5	+0.2
	baz=21,slow=11,SNR=8.1						
SONA0	Songino Array	19.49	3	*e*P	Pn	18 06 05.8	+0.7
SONM	Songino Array	19.49	3	P	Pn	18 06 05.8	+0.7
	comp=Z,0.2nm,0.3s,baz=188,slow=8.8,SNR=5.5						
WMQ	Urumqi	20.75	323	*e*P	P	18 06 17.3	-0.3
MK31	Makanchi Array	25.58	322	*e*P	P	18 07 04.8	-1.0
	comp=Z,1.4nm,0.9s						
MK32	Makanchi Array	25.58	322	*e*P	P	18 07 05.7	0.0
MKAR	Makanchi Array	25.58	322	P	P	18 07 05.7	0.0
	comp=Z,1.4nm,0.9s,baz=133,slow=11,SNR=7.9						
MAKZ	Makanchi	25.76	322	*e*P	P	18 07 08.4	+1.1
	comp=Z,3.4nm,1.3s						
MJAR	Matsushiro Arr	29.10	65	LR	LR	18 20 31.3	
	comp=Z,26nm,20.5s,baz=200,slow=39						
KLR	Kul'dur	29.24	37	LR	LR	18 20 31.3	
	comp=Z,36nm,19.3s,baz=150,slow=39						
TIXI	Tiksi	45.31	10	*e*P	P	18 09 52.8	-1.2
	comp=Z,2.8nm,1.1s						
WRAB	Tennant Creek	55.77	146	*e*P	P	18 11 13.1	-0.6
	comp=Z,4.7nm,1.1s						
WR1	Warramunga Arr	55.77	146	*e*P	P	18 11 12.8	-1.0
WRA	Warramunga Arr	55.77	146	P	P	18 11 12.8	-1.0
	comp=Z,1.2nm,0.5s,baz=340,slow=9.3,SNR=7.8						
WB2	Warramunga Arr	55.78	146	*e*P	P	18 11 13.2	-0.6
	comp=Z,5.0nm,1.1s						
AS31	Alice Springs	58.75	149	*e*P	P	18 11 33.1	-1.6
	comp=Z,1.6nm,1.3s						
ASAR	Alice Springs	58.75	149	P	P	18 11 34.4	-0.4
	comp=Z,0.5nm,0.5s,baz=331,slow=7.0,SNR=22						

ISCJB ***16*** *18:19:05.5±0.9, 6.°2S±0.°1×154.°72E±0.°08, h56^{km}, mb3.8/6, Error ellipse: s-maj=21.4km s-min=9.3km az=21.8*

IDC ***16*** *18:19:09.2±3.2, 6.°35S×154.°82E, h81^{km}±31^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.5/41, mbtmp4.0/8, Error ellipse: s-maj=29.9km s-min=26.7km az=112.0*

ISC 16 18:19:07.3±1.0**, 6.°1S**±0.°2×**154.°7E**±0.°1**, h56**^{km}**, n8, σ1.^{s}59**/9**, mb3.8**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.12	123	P	Pn	18 20 34.5	-0.8
	2.6nm,0.3s,baz=257,slow=7.4,SNR=4.1						
HNR				S	Sn	18 21 46.1	+2.1
	5.0nm,0.3s,baz=278,slow=18,SNR=6.9						
PMG	Port Moresby	8.17	246	P	Pn	18 21 05.0	+1.7
	2.4nm,0.3s,baz=63,slow=14,SNR=3.8						
WRA	Warramunga Arr	24.10	233	P	P	18 24 17.5	-0.4
	1.7nm,0.5s,baz=64,slow=11,SNR=7.6						
ASAR	Alice Springs	26.55	227	P	P	18 24 38.8	-1.4
	0.6nm,0.6s,baz=57,slow=9.0,SNR=9.0						
CMAR	Chiang Mai Arr	60.17	295	P	P	18 29 09.9	+0.1
	2.0nm,0.7s,baz=115,slow=5.0,SNR=12						
SONM	Songino Array	68.47	327	P	P	18 30 04.9	+1.2
	0.5nm,0.5s,baz=96,slow=5.8,SNR=2.7						
MKAR	Makanchi Array	82.58	319	P	P	18 31 23.9	-0.5
	0.5nm,0.6s,baz=101,slow=6.3,SNR=6.6						
MAW	Mawson	85.08	203	P	P	18 31 34.9	-1.8
	1.3nm,0.5s,baz=103,slow=4.6,SNR=7.5						

IDC ***16*** *18:26:34.5±1.1, 52.°84N×167.°77W, h0^{km}, mb3.8/10, mb1 3.9/12, mb1mx3.7/48, mbtmp3.7/12, ML3.1/2, Error ellipse: s-maj=29.6km s-min=18.3km az=167.0*

NEIC ***16*** *18:26:38.9±0.0, 52.°75N×167.°56W, h26^{km}, mb3.8/6, ML3.5(AEIC), After AEIC.*

ISCJB ***16*** *18:26:39.3±0.5, 52.°81N±0.°06×167.°60W±0.°06, h42^{km}, mb3.7/10, Error ellipse: s-maj=9.0km s-min=3.5km az=155.3*

ISC 16 18:26:41.0±0.7**, 52.°91N**±0.°09×**167.°70W**±0.°06**, h42**^{km}**, n62, σ1.^{s}43**/60**, mb3.8**/10**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKTU	Okmok Mt. Tuli	0.52	336	*e*Pn	Pn	18 26 52.5	+0.4
OKER	Okmok East Rim	0.58	339	*e*Pn	Pn	18 26 53.6	+0.6
NIKH	Nikolski High	0.70	275	*e*Pn	Pn	18 26 53.5	-1.0
NIKH				*e*Sn	Sn	18 27 03.3	-0.9
OKAK	Okmok	0.78	329	*e*Pn	Pn	18 26 53.9	-1.6
MREP	Makushin Rep't	1.06	32	*e*Pn	Pn	18 26 59.1	-0.3
MSW	Makushin Switc	1.14	28	*e*Pn	Pn	18 27 00.3	-0.2
MSW				*e*Sn	Sn	18 27 16.0	+1.0
MCIR	Makushin Cirqu	1.15	24	*e*Pn	Pn	18 27 01.3	+0.6
UNV	Unalaska Valle	1.18	37	*e*Pn	Pn	18 27 00.2	-0.7
UNV				*e*Sn	Sn	18 27 16.3	+0.6
AKRB	Akutan Reef Bi	1.56	38	*e*Pn	Pn	18 27 06.7	+0.5
AKUT	Akutan	1.68	42	*e*Pn	Pn	18 27 07.4	-0.4
AKSA	Akutan Strait	1.71	43	*e*Pn	Pn	18 27 08.2	-0.1
WESP	Westdahl Peak	2.37	47	*e*Pn	Pn	18 27 18.3	+0.8
FALS	False Pass	3.19	51	*e*Pn	Pn	18 27 30.5	+1.9
KOFP	Korovin Flat P	3.96	263	*e*Pn	Pn	18 27 41.2	+2.1
SPIA	Saint Paul Isl	4.52	342	*e*Pn	Pn	18 27 49.9	+3.1
SDPT	Sand Point	4.90	57	*e*Pn	Pn	18 27 52.4	+0.5
GSTR	Great Sitkin T	5.17	264	*e*Pn	Pn	18 27 57.9	+2.0
GSTR				*e*Sn	Sn	18 29 07.1	+13
GSTD	Great Sitkin T	5.24	264	*e*Pn	Pn	18 27 58.7	+1.9
ADAG	Mount Adagdak	5.53	264	*e*Pn	Pn	18 28 03.1	+2.5
ADK	Adak	5.60	263	*e*Pn	Pn	18 28 03.1	+1.5
ADK				*e*Sn	Sn	18 29 05.2	+0.6
KIWB	Kanaga Island	5.89	263	*e*Pn	Pn	18 28 08.2	+2.6
KIKV	Kanaga Island	5.89	264	*e*Pn	Pn	18 28 08.0	+2.3
CHGN	Chignik	6.37	54	*e*Pn	Pn	18 28 16.5	+4.3
KDAK	Kodiak Island	9.88	54	Pn	Pn	18 29 00.9	+0.6
	0.2nm,0.3s,baz=200,slow=8.1,SNR=6.6						
SVW2	Sparrevohn	10.51	34	*e*Pn	Pn	18 29 10.6	+1.7
CNPM	China Poot	11.29	48	*e*Pn	Pn	18 29 20.6	+1.1
GLI	Glacier Island	13.75	46	*e*Pn	Pn	18 29 52.9	-0.1
FID	Port Fidalgo	13.96	47	*e*Pn	Pn	18 29 54.6	-1.3
SCM	Sheep Creek Mo	14.10	43	*e*Pn	Pn	18 29 55.9	-2.0
BPAW	Bear Paw Mtn.	14.15	31	*e*Pn	P	18 30 02.6	-2.6
RAGM	Ragged Mountai	14.64	50	*e*Pn	Pn	18 30 07.5	+2.3
DHY	Denali Highway	14.75	38	*e*Pn	Pn	18 30 07.5	+0.8
HMT	Hamilton	14.82	51	*e*Pn	Pn	18 30 06.8	-0.7
MLY	Manley	14.89	29	*e*Pn	Pn	18 30 09.3	+0.8
ILAR	Eielson Array	15.93	34	Pn	Pn	18 30 21.5	-0.4
	0.1nm,0.3s,baz=238,slow=8.4,SNR=2.8						
ILB	Eielson Array	15.93	34	*e*Pn	Pn	18 30 22.0	+0.2
	9.7nm,1.8s						
DOT	Dot Lake	16.32	40	*e*Pn	Pn	18 30 26.7	-0.1
	15nm,1.7s						
SCRK	Sand Creek	16.51	39	*e*P	Pn	18 30 28.7	-0.6
	1.9nm,0.9s						
EGAK	Eagle	17.98	38	*e*P	Pn	18 30 46.3	-1.1
	12nm,2.0s						
HYT	Haines Junctio	18.16	52	*e*P	Pn	18 30 53.2	+3.4
	8.6nm,0.8s						
EPYK	Eagle Plains	20.36	37	*e*P	P	18 31 12.7	-0.9
	6.3nm,0.5s						
INK	Inuvik	22.33	33	P	P	18 31 34.1	-0.6
	3.2nm,0.8s,baz=231,slow=13,SNR=5.6						
YKA	Yellowknife Ar	29.11	50	P	P	18 32 37.9	+0.6
	0.6nm,0.7s,baz=275,slow=10,SNR=4.5						
YKB5	Yellowknife Ar	29.11	50	*e*P	P	18 32 37.9	+0.6
H11N2	WAKE ISLAND Hy	38.52	220	T	T	19 15 18.7	
	baz=25,slow=76,SNR=67						
H11N3	WAKE ISLAND Hy	38.53	220	T	T	19 15 03.8	
	baz=25,slow=76,SNR=60						
H11N1	WAKE ISLAND Hy	38.54	220	T	T	19 15 23.5	
	baz=25,slow=76,SNR=52						
PD31	Pinedale Array	39.30	81	*e*P	P	18 34 06.3	+0.4
PDAR	Pinedale Array	39.30	81	P	P	18 34 06.3	+0.4
	0.1nm,0.4s,baz=308,slow=6.4,SNR=2.6						
H11S1	WAKE ISLAND Hy	39.71	220	T	T	19 16 40.2	
	baz=24,slow=76,SNR=62						
H11S2	WAKE ISLAND Hy	39.72	220	T	T	19 16 41.5	
	baz=24,slow=76,SNR=51						
H11S3	WAKE ISLAND Hy	39.73	220	T	T	19 16 41.4	
	baz=24,slow=76,SNR=53						
TXAR	Lajitas Array	51.73	91	P	P	18 35 43.5	-0.6
	0.7nm,0.6s,baz=308,slow=5.6,SNR=12						
MK32	Makanchi Array	64.17	314	*e*P	P	18 37 10.4	-0.4
MKAR	Makanchi Array	64.17	314	P	P	18 37 10.4	-0.4
	0.2nm,0.3s,baz=60,slow=7.2,SNR=5.3						
FIA0	FINESS Array S	65.47	353	*e*P	P	18 37 18.8	-0.3
FINES	FINESS Array B	65.47	353	P	P	18 37 18.8	-0.3
	0.5nm,0.4s,baz=25,slow=6.3,SNR=11						
AKASG	Malin Array Be	75.78	349	P	P	18 38 20.9	-1.1
	1.3nm,0.5s,baz=13,slow=6.0,SNR=5.9						
CMAR	Chiang Mai Arr	77.48	284	P	P	18 38 33.2	+1.1
	0.3nm,0.6s,baz=28,slow=6.5,SNR=6.1						
BR101	Keskin Array S	85.90	344	*e*P	P	18 39 16.7	+0.3
BRTR	Keskin Array B	85.90	344	P	P	18 39 16.7	+0.3
	1.7nm,0.9s,baz=36,slow=2.7,SNR=8.3						
ASAR	Alice Springs	91.53	231	P	P	18 39 41.8	-1.1
	0.4nm,0.7s,baz=43,slow=5.2,SNR=4.5						

IDC ***16*** *18:30:24.4±3.2, 23.°52S×179.°88W, h496^{km}±28^{km}, mb3.5/8, mb1 3.6/10, mb1mx3.3/27, mbtmp4.5/10, Error ellipse: s-maj=36.9km s-min=25.2km az=124.0*

ISCJB ***16*** *18:30:27.5±1.0, 23.°52S±0.°06×179.°8E±0.°2, h532^{km}, mb4.0/8, Error ellipse: s-maj=22.1km s-min=6.9km az=165.9*

ISC 16 18:30:27.3±1.0**, 23.°63S**±0.°08×**180.°0E**±0.°2**, h532**^{km}**, n32, σ2.^{s}23**/32**, mb3.9**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	12.59	274	P	P	18 33 09.2	-2.9
	0.1nm,0.3s,baz=304,slow=22,SNR=3.7						
KUZ	Kuaotunu	13.58	195	P	P	18 33 28.3	+6.1
WIAZ	Waiheke Island	13.77	197	P	P	18 33 32.0	+7.8
MBAZ	Motutapu North	13.81	197	P	P	18 33 33.6	+9.0
MKAZ	Moumakai	14.06	196	P	P	18 33 34.2	+7.0
WMGZ	Waiomatatini S	14.21	185	P	P	18 33 32.5	+3.8
PKGZ	Pakihiroa	14.31	186	P	P	18 33 30.8	+1.0
PUZ	Puketiti	14.47	185	P	P	18 33 34.0	+2.5
PUZ				S	S	18 36 02.6	-0.7
TOZ	Tahuroa Road	14.58	194	P	P	18 33 37.1	+4.6
TWGZ	Tauwhareparae	14.61	186	P	P	18 33 34.7	+1.8
TWGZ				S	S	18 36 04.5	-1.4
URZ	Urewera	14.79	189	P	P	18 33 33.4	-1.3
	3.6nm,0.3s,baz=308,slow=2.3,SNR=17						
URZ	Urewera	14.79	189	P	P	18 33 34.2	-0.6
MWZ	Matawai	14.81	188	P	P	18 33 37.4	+2.4
MWZ				S	S	18 36 07.2	-2.5
RAGZ	Rawiri	14.98	188	P	P	18 33 35.9	-1.0
RIGZ	Rimuhau	15.15	187	P	P	18 33 38.3	-0.2
RIGZ				S	S	18 36 12.5	-3.5
HIZ	Hauiti	15.47	195	P	P	18 33 46.4	+4.6
BKZ	Black Stump Fm	15.77	190	P	P	18 33 43.0	-1.9
FWVZ	Far West T-bar	16.03	193	P	P	18 33 48.4	+0.7
PKVZ	Pokaka	16.11	193	P	P	18 33 48.6	+0.3
CTA	Charters Tower	31.46	270	P	P	18 36 06.7	+1.1
	8.3nm,0.3s,baz=94,slow=11,SNR=39						
STKA	Stephens Creek	34.81	248	P	P	18 36 34.9	+1.2
	4.0nm,1.2s,baz=53,slow=7.3,SNR=3.0						
ASAR	Alice Springs	42.07	260	P	P	18 37 33.0	+0.2
	1.8nm,0.5s,baz=92,slow=7.3,SNR=68						
ASAR				ScP	ScP	18 42 18.4	+3.3
	0.8nm,0.8s,baz=110,slow=4.2,SNR=7.8						
WRA	Warramunga Arr	42.41	266	P	P	18 37 35.2	-0.3
	4.0nm,0.4s,baz=99,slow=7.6,SNR=60						
JAY	Jayapura	43.40	293	P	P	18 37 43.4	+0.1
	4.2nm,0.5s,baz=140,slow=4.3,SNR=6.9						
MJAR	Matsushiro Arr	71.67	326	P	P	18 40 55.2	-0.1
	0.7nm,0.5s,baz=159,slow=6.7,SNR=4.9						
PETK	Petropavlovsk-	78.83	347	P	P	18 41 34.5	-0.4
	3.8nm,0.9s,baz=127,slow=9.5,SNR=5.1						
USRK	Ussuriysk Ar.	80.53	327	P	P	18 41 44.5	+0.6
	3.8nm,1.1s,baz=183,slow=4.7,SNR=4.4						
FINES	FINESS Array B	138.18	342	PKP	PKPdf	18 48 52.0	+0.7
	0.3nm,0.3s,baz=106,slow=4.5,SNR=3.6						
NB2	NORSAR Subarra	141.81	351	PKP	PKPdf	18 48 53.5	-4.5
	comp=Z,0.4nm,0.6s,baz=17,slow=3.0						
NOA	NORSAR Array B	141.81	351	PKhKP	PKPpre	18 48 53.1	
	comp=Z,0.4nm,0.7s,baz=16,slow=4.6,SNR=4.0						
AKASG	Malin Array Be	144.74	327	PKP	PKPdf	18 49 03.1	-0.2
	comp=Z,0.8nm,0.4s,baz=45,slow=4.4,SNR=7.9						
BRTR	Keskin Array B	147.40	308	PKPbc	PKPbc	18 49 12.3	+0.6
	comp=Z,0.9nm,0.6s,baz=102,slow=4.1,SNR=6.0						

ISK ***16*** *18:42:51.9, 38.°70N×43.°17E, h5^{km}, ML2.1/5*

ISCJB ***16*** *18:42:52.8±0.8, 38.°70N±0.°04×43.°17E±0.°05, h13^{km}±9^{km}, Error ellipse: s-maj=6.0km s-min=5.9km az=177.5*

DDA ***16*** *18:42:52.3, 38.°70N×43.°15E, h7^{km}±2^{km}, ML2.8*

ISC 16 18:42:52.5±1.1**, 38.°71N**±0.°04×**43.°16E**±0.°04**, h15**^{km}±11^{km}**, n9, σ0.^{s}64**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.21	121	PG	Pg	18 42 57.5	+0.1
VANB				SG	Sg	18 43 01.9	+1.2
TVAN	Van	0.27	132	*i* P	Pg	18 42 58.0	-0.3
TVAN				*i* S	Sg	18 43 00.9	-1.3
ADCV	BITLIS_Adilcev	0.35	287	*i* P	Pb	18 43 01.2	+0.6
ADCV				*i* S	Sb	18 43 05.7	-0.4
ADCV				IAML_P			
	comp=Z,624nm,0.1s						
GEVA	Gevas	0.40	191	*i* P	Pg	18 43 00.5	-0.1
GEVA				*i* S	Sb	18 43 07.6	+0.1
GEVA				IAML_P			
	comp=Z,4µm,0.1s						
AKDM	Akdamar-Van	0.40	200	PG	Pg	18 43 00.3	-0.3
VMUR	Van-Muradiye	0.43	49	*i* P	Pb	18 43 02.0	0.0
VMUR				*i* S	Sb	18 43 08.6	+0.2
CLDR	Caldiran	0.74	54	PG	Pg	18 43 06.7	-0.2
AGRB	Hanur-Agry	0.88	352	PG	Pg	18 43 09.2	-0.3
CUKT	Cukurca	1.50	166	PN	Pb	18 43 20.3	+0.2

IDC ***16*** *18:57:09.6±0.6, 34.°39N×25.°09E, h0^{km}, mb4.3/24, mb1 4.3/34, mb1mx4.2/51, mbtmp4.3/34, ML4.0/9, MS3.5/22, Ms1 3.5/22, ms1mx3.4/42, Error ellipse: s-maj=13.3km s-min=11.9km az=17.0*

ISCJB ***16*** *18:57:10.9±0.5, 34.°18N±0.°02×25.°07E±0.°02, h26^{km}±3^{km}, mb4.5/93, MS3.6/18, Error ellipse: s-maj=3.6km s-min=1.9km az=28.1*

HLW ***16*** *18:57:10.6, 34.°46N×25.°28E, h10^{km}±13^{km}, Ml4.5*

NEIC ***16*** *18:57:10.3±2.4, 34.°25N×25.°02E, h6^{km}±4^{km}, mb4.5/78, ML4.1(THE), Error ellipse: s-maj=7.2km s-min=6.6km az=182.0*

BJI ***16*** *18:57:10.9±0.0, 34.°28N×24.°58E, h37^{km}, mb4.6/33, mB4.9/23, Ms4.1/3, Ms7 3.9/3*

ISK ***16*** *18:57:12.0, 34.°23N×25.°03E, h60^{km}, ML4.3/27*

MOS ***16*** *18:57:12.3±1.1, 34.°37N×24.°95E, h28^{km}, mb4.7/32, Error ellipse: s-maj=5.8km s-min=3.5km az=87.9*

ATH ***16*** *18:57:12.7, 34.°30N×25.°06E, h33^{km}±3^{km}, ML3.9/19, Error ellipse: s-maj=3.7km s-min=1.0km az=189.0*

DDA ***16*** *18:57:13.1, 34.°09N×24.°93E, h16^{km}±5^{km}, ML4.3*

THE ***16*** *18:57:13.1, 34.°34N×25.°03E, h0^{km}±1^{km}, ML4.1/7, Error ellipse: s-maj=2.1km s-min=0.7km az=174.0*

NIC ***16*** *18:57:18.4±0.1, 34.°57N×25.°58E, h35^{km}, mb4.9, ML4.4*

GII ***16*** *18:57:20.8±0.4, 34.°15N×25.°71E, h50^{km}, mb4.6/4, MD4.5/4*

ISC 16 18:57:13.2±0.8**, 34.°27N**±0.°04×**25.°07E**±0.°03**, h26**^{km}±5^{km}**, n598, σ1.^{s}77**/634**, mb4.6**/93**, MS3.5**/18**, 22C-22D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	Sivas	0.78	344	P	Pb	18 57 26.8	-1.3
SIVA				S	Sb	18 57 38.8	+0.5
	51µm,0.6s						
SIVA	Sivas	0.78	344	P	Pb	18 57 27.1	-1.0
SIVA				S	Sb	18 57 38.6	+0.3
SIVA				AML	AML	18 57 45.2	
SIVA				AML	AML	18 57 45.3	
	comp=N,97060µm,0.7s						
TMBK	Timbaki Herakl	0.84	343	P	Pb	18 57 28.4	-0.7
TMBK				S	Sb	18 57 40.3	+0.3
LAST	Lasithi	0.95	21	P	Pn	18 57 30.1	-0.9
LAST				S	Sn	18 57 44.1	+0.4
	comp=N,6µm,0.6s						
LAST	Lasithi	0.95	21	P	Pn	18 57 30.4	-0.6
LAST				S	Sn	18 57 44.1	+0.4
LAST				AML	AML	18 57 52.1	
	comp=N,10456µm,0.5s						
LAST				AML	AML	18 58 00.9	
	comp=E,11518µm,0.6s						
GVD	Gavdhos	0.99	305	PG	Pn	18 57 30.5	-0.9
GVD				SG	Sb	18 57 44.1	-0.2
GVD	Gavdhos	0.99	305	*e*Pn	Pn	18 57 30.8	-0.6
GVD				*e*Sn	Sn	18 57 45.3	+0.8
GVD	Gavdhos	0.99	305	P	Pn	18 57 30.8	-0.6
GVD				S	Sn	18 57 45.3	+0.8
	comp=E,17µm,0.6s						
GVD	Gavdhos	0.99	305	P	Pn	18 57 30.8	-0.6
GVD				S	Sn	18 57 45.7	+1.1
GVD				AML	AML	18 57 58.8	
	comp=E,33984µm,0.5s						
GVD				AML	AML	18 58 01.3	
	comp=N,34216µm,0.4s						
GVDS	Gavdos	0.99	306	P	Pn	18 57 31.1	-0.3
GVDS				S	Sn	18 57 45.5	+0.9
IDI	Anoyia	1.03	352	PG	Pn	18 57 31.1	-0.9
IDI	Anoyia	1.03	352	Pn	Pn	18 57 30.9	-1.1
	comp=N,198nm,0.3s,baz=172,slow=21,SNR=758						
IDI				Sn	Sn	18 57 46.4	+0.8
	comp=N,315nm,0.3s,baz=234,slow=19,SNR=14						
IDI	Anoyia	1.03	352	P	Pn	18 57 31.2	-0.8
IDI				AML	AML	18 57 53.8	
	comp=E,14480µm,0.7s						
IDI				AML	AML	18 57 54.8	
	comp=N,14324µm,0.6s						
KSTL	Kastelli Herak	1.03	0	P	Pn	18 57 30.6	-1.4
KSTL				S	Sb	18 57 44.3	-1.2
IACM	Heraklion	1.03	0	P	Pn	18 57 32.0	0.0
IACM				S	Sn	18 57 45.9	+0.3
	comp=N,40µm,0.6s						
IACM	Heraklion	1.03	0	P	Pn	18 57 31.8	-0.2
NPS	Neapolis	1.09	24	P	Pn	18 57 32.5	-0.3
NPS				S	Sb	18 57 48.7	+1.5
	comp=N,5µm,1.0s						
NPS	Neapolis	1.09	24	P	Pn	18 57 32.8	0.0
NPS				AML	AML	18 57 53.8	
	comp=E,12239µm,0.6s						
NPS				AML	AML	18 58 03.9	
	comp=N,7542µm,0.7s						
PRNS	Prines Rethymn	1.19	337	P	Pn	18 57 34.2	+0.1
STIA	Sitia Lasithi	1.25	42	P	Pb	18 57 36.8	+0.6
STIA				S	Sb	18 57 53.1	+1.2
ZKR	Zakros	1.27	48	PN	Pn	18 57 34.9	-0.3
ZKR	Zakros	1.27	48	*e*Pn	Pb	18 57 36.7	+0.3
ZKR				*e*Sn	Sb	18 57 55.7	+3.4
ZKR	Zakros	1.27	48	P	Pb	18 57 36.7	+0.3
ZKR				S	Sb	18 57 55.2	+2.9
	comp=N,4µm,1.3s						
ZKR	Zakros	1.27	48	P	Pb	18 57 36.6	+0.1
ZKR				S	Sb	18 57 51.8	-0.5
ZKR				AML	AML	18 57 59.9	
	comp=N,5116µm,0.8s						
ZKR				AML	AML	18 58 10.1	
	comp=E,11823µm,0.6s						
VAM	Vamos	1.34	328	P	Pn	18 57 36.2	0.0
VAM	Vamos	1.34	328	P	Pn	18 57 36.7	+0.4
VAM				AML	AML	18 58 06.7	
	comp=E,15802µm,0.8s						
VAM				AML	AML	18 58 07.2	
	comp=N,10367µm,0.4s						
IMMV	Iera Moni Meta	1.49	323	PN	Pn	18 57 38.0	-0.3
IMMV	Iera Moni Meta	1.49	323	P	Pn	18 57 38.5	+0.2
IMMV	Iera Moni Meta	1.49	323	P	Pn	18 57 38.9	+0.6
IMMV				AML	AML	18 58 18.2	
	comp=N,12546µm,0.7s						
IMMV				AML	AML	18 58 18.6	
	comp=E,14804µm,0.6s						
CHAN	Chania	1.50	326	P	Pn	18 57 39.2	+0.7
CHAN				S	Sb	18 57 58.7	-0.4
THR9	Santorini-Faro	2.10	6	P	Pn	18 57 48.3	+1.7
THR9	Santorini-Faro	2.10	6	P	Pn	18 57 47.8	+1.2
THR6	Thira Island,	2.10	7	*e*Pn	Pn	18 57 47.3	+0.6
THR6	Thira Island,	2.10	7	P	Pn	18 57 47.3	+0.6
THR6	Thira Island,	2.10	7	P	Pn	18 57 47.5	+0.9
SAP1	Santorini-Akro	2.10	7	P	Pn	18 57 47.6	+1.0
KARP	Karpathos	2.14	53	PN	Pn	18 57 47.5	+0.2
KARP	Karpathos	2.14	53	*e*Pn	Pn	18 57 47.2	-0.1

KARP	Karpathos	2.14	53	P	Pb	18 57 50.1	-1.2
KARP	Karpathos	2.14	53	P	Pb	18 57 49.3	-2.0
KARP				AML	AML	18 58 37.0	
	comp=E,2681µm,0.6s						
KARP				AML	AML	18 58 46.8	
	comp=N,3229µm,0.8s						
THR3	Thira Island,	2.15	7	*e*Pn	Pn	18 57 49.0	+1.6
THR3	Thira Island,	2.15	7	P	Pn	18 57 49.0	+1.6
THR3	Thira Island,	2.15	7	P	Pn	18 57 47.8	+0.4
ANKY	Antikythira Is	2.15	318	*e*Pn	Pn	18 57 48.6	+1.2
ANKY				*e*Sg	Sb	18 58 16.2	-1.6
ANKY	Antikythira Is	2.15	318	P	Pn	18 57 48.6	+1.2
ANKY				S	Sb	18 58 16.2	-1.6
	comp=N,2µm,0.6s						
ANKY	Antikythira Is	2.15	318	P	Pn	18 57 48.7	+1.2
ANKY				AML	AML	18 58 34.5	
	comp=E,3700µm,0.5s						
ANKY				AML	AML	18 58 40.6	
	comp=N,2948µm,0.7s						
THR5	Thira Island,	2.15	6	P	Pn	18 57 47.6	+0.2
THR5	Thira Island,	2.15	6	P	Pn	18 57 48.3	+0.9
ANAF	Anafi Island	2.16	15	P	Pn	18 57 48.0	+0.5
ANAF				AML	AML	18 58 36.0	
	comp=E,4762µm,0.5s						
ANAF				AML	AML	18 58 42.6	
	comp=N,6555µm,0.4s						
SAP3	Santorini-Thir	2.17	6	P	Pn	18 57 48.2	+0.5
SAP3	Santorini-Thir	2.17	6	P	Pn	18 57 48.3	+0.5
MHLO	Agia Marina, M	2.48	347	P	Pn	18 57 52.8	+1.0
MHLO	Agia Marina, M	2.48	347	P	Pn	18 57 52.5	+0.6
MHLA	Plaka, Milos I	2.53	348	P	Pn	18 57 52.9	+0.3
KTHA	Kythira Island	2.57	321	P	Pn	18 57 54.5	+1.3
KTHA	Kythira Island	2.57	321	P	Pn	18 57 54.9	+1.7
KTHA				AML	AML	18 58 48.2	
	comp=N,1879µm,0.9s						
KTHA				AML	AML	18 58 53.6	
	comp=E,3089µm,1.0s						
KTHR	Kythira	2.61	320	P	Pn	18 57 54.9	+1.2
AMGA	Amorgos Island	2.64	15	P	Pn	18 57 54.2	+0.1
AMGA				AML	AML	18 58 48.6	
	comp=E,1612µm,1.1s						
AMGA				AML	AML	18 59 00.2	
	comp=N,2129µm,0.8s						
SLUM	Salum	2.77	177	P	Pn	18 57 57.3	+1.3
	baz=182						
SLUM				AMP		18 58 00.0	
	baz=182						
APE	Apeiranthos	2.82	8	PN	Pn	18 57 56.8	+0.2
APE	Apeiranthos	2.82	8	*ce*P	Pn	18 57 57.1	+0.5
APE	Apeiranthos	2.82	8	P	Pn	18 57 56.5	-0.1
SERI	Serifos	2.92	351	P	Pn	18 57 58.0	0.0
SERI				AML	AML	18 59 01.4	
	comp=N,571µm,0.8s						
SERI				AML	AML	18 59 05.7	
	comp=E,774µm,1.2s						
VLI	Veliai	3.00	325	*e*Pn	Pn	18 57 59.2	+0.2
VLI	Veliai	3.00	325	P	Pn	18 57 59.2	+0.2
VLI	Veliai	3.00	325	P	Pn	18 57 59.4	+0.3
VLI				AML	AML	18 59 02.9	
	comp=N,1444µm,0.7s						
VLI				AML	AML	18 59 25.7	
	comp=E,1061µm,0.9s						
ARG	Arkhangelos	3.17	51	PN	Pn	18 58 01.8	+0.5
ARG	Arkhangelos	3.17	51	P	Pn	18 58 03.1	+1.8
ARG	Arkhangelos	3.17	51	P	Pn	18 58 03.4	+2.0
DAT	Datca	3.20	39	PN	Pn	18 58 02.7	+0.9
DAT	Datca	3.20	39	*i* P	Pn	18 58 03.9	+2.0
DAT				IAML_P			
	comp=Z,700nm,0.2s						
DATC	Datca-Mugla	3.26	40	PN	Pn	18 58 03.4	+0.8
BODT	Bodrum	3.33	33	PN	Pn	18 58 04.3	+0.7
MATC	Matruh	3.44	147	P	Pn	18 58 05.6	+0.5
	baz=151						
KRND	KRANIDI	3.48	334	P	Pn	18 58 05.5	-0.1
KRND	KRANIDI	3.48	334	P	Pn	18 58 06.2	+0.6
KRND				AML	AML	18 59 19.9	
	comp=E,832µm,1.0s						
KRND				AML	AML	18 59 22.9	
	comp=N,1024µm,1.2s						
MRSB	Marmaris-Mugla	3.53	45	PN	Pn	18 58 07.1	+0.7
DID	Didima	3.56	336	*e*Pn	Pn	18 58 06.3	-0.4
DID	Didima	3.56	336	P	Pn	18 58 06.3	-0.4
DID	Didima	3.56	336	P	Pn	18 58 06.4	-0.3
DID				AML	AML	18 59 19.0	
	comp=N,958µm,0.5s						
DID				AML	AML	18 59 25.6	
	comp=E,601µm,0.8s						
EPID	Epidavros	3.69	335	P	Pn	18 58 08.6	0.0
SMG	Samos	3.72	22	P	Pn	18 58 09.7	+0.7
VLY	Voula,Athens	3.72	344	*e*Pn	Pn	18 58 09.4	+0.4
VLY	Voula,Athens	3.72	344	P	Pn	18 58 09.4	+0.4
VLY	Voula,Athens	3.72	344	P	Pn	18 58 09.4	+0.4
VLY				AML	AML	18 59 20.5	
	comp=N,447µm,0.6s						
VLY				AML	AML	18 59 36.9	
	comp=E,498µm,0.6s						
PYL	PYLOS	3.77	315	P	Pn	18 58 09.2	-0.4
VLX	Vlachokerasia	3.79	326	*e*Pn	Pn	18 58 10.6	+0.6
VLX	Vlachokerasia	3.79	326	P	Pn	18 58 10.6	+0.6
VLX	Vlachokerasia	3.79	326	P	Pn	18 58 10.2	+0.2
KARY	Karystos	3.79	352	P	Pn	18 58 10.4	+0.5
GCAM	G?zelcaml?	3.85	27	PN	Pn	18 58 11.8	+1.1
ATH	Athens Observa	3.85	344	P	Pn	18 58 10.8	0.0
ITM	Ithomi	3.87	320	PN	Pn	18 58 11.7	+0.7
ITM	Ithomi	3.87	320	*e*Pn	Pn	18 58 10.9	-0.1
ITM	Ithomi	3.87	320	P	Pn	18 58 11.4	+0.4
ITM	Ithomi	3.87	320	P	Pn	18 58 11.6	+0.6
DALY	Dalyan (Mula)	3.87	48	PN	Pn	18 58 12.0	+1.0
DALY	Dalyan (Mula)	3.87	48	*i* P	Pn	18 58 13.9	+2.8
DALY				*i* S	Sn	18 58 46.5	-9.2
YER	Yerkesik	3.88	42	PN	Pn	18 58 12.1	+1.0
YER	Yerkesik	3.88	42	*e*Pn	Pn	18 58 12.9	+1.8
YER	Yerkesik	3.88	42	P	Pn	18 58 12.9	+1.8
YER	Yerkesik	3.88	42	*e*P	Pn	18 58 12.9	+1.8
TURN	Turunc	3.88	47	PN	Pn	18 58 07.9	-3.2
TURN	Turunc	3.88	47	*i* P	Pn	18 58 09.1	-2.0
TURN				*i* S	Sn	18 58 46.5	-9.3
TURN				IAML_P			
	comp=Z,4µm,0.4s						
PTL	Penteli	3.90	346	*e*Pn	Pn	18 58 11.4	0.0
PTL	Penteli	3.90	346	P	Pn	18 58 11.4	0.0
PTL	Penteli	3.90	346	P	Pn	18 58 11.5	0.0
DION	Dionisos Attik	3.91	347	P	Pn	18 58 11.6	0.0
DION	Dionisos Attik	3.91	347	P	Pn	18 58 11.9	+0.3
TRIP	Tripoli	3.97	326	P	Pn	18 58 13.8	+1.4
ACOR	Acrocorinthos	4.03	334	P	Pn	18 58 13.5	+0.3
FETY	Fethiye	4.04	53	PN	Pn	18 58 14.0	+0.7
FETY	Fethiye	4.04	53	*e*Pn	Pn	18 58 14.1	+0.7
FETY	Fethiye	4.04	53	*i* P	Pn	18 58 15.0	+1.6
FETY				IAML_P			
	comp=Z,3µm,0.2s						
AYDN	Tasoluk	4.08	33	*i* P	Pn	18 58 16.4	+2.4
AYDN				IAML_P			
	comp=Z,2µm,0.4s						
VILL	Villia	4.14	340	P	Pn	18 58 14.7	0.0
KSL	Kastellorizon	4.14	62	P	Pn	18 58 15.4	+0.6
KSL				AML	AML	18 59 06.5	
	comp=N,530µm,0.7s						
KSL				AML	AML	18 59 07.2	
	comp=E,593µm,0.6s						
CHOS	Chios island	4.18	11	PN	Pn	18 58 16.2	+0.8
CHOS	Chios island	4.18	11	P	Pn	18 58 16.0	+0.6
VIL2	Platees	4.20	340	P	Pn	18 58 14.7	-0.8
AKAS	Kas	4.20	61	PN	Pn	18 58 16.5	+0.9
AKAS	Kas	4.20	61	*i* P	Pn	18 58 17.0	+1.3
EREA	Eretria	4.24	348	P	Pn	18 58 16.5	+0.3
EREA	Eretria	4.24	348	P	Pn	18 58 16.4	+0.3
URLA	Izmir	4.26	16	PN	Pn	18 58 17.4	+0.9
URLA	Izmir	4.26	16	*i* P	Pn	18 58 17.2	+0.7
GUR	Goura	4.27	330	*e*Pn	Pn	18 58 17.3	+0.7
GUR	Goura	4.27	330	P	Pn	18 58 17.3	+0.7
GUR	Goura	4.27	330	P	Pn	18 58 17.3	+0.7
AYDB	Zeytinkoy-Aydi	4.32	31	PN	Pn	18 58 18.5	+1.2
PROD	Prodromos	4.35	337	P	Pn	18 58 17.2	-0.5
KLV	Kalavryta, Ach	4.45	329	P	Pn	18 58 19.9	+0.9
KLV	Kalavryta, Ach	4.45	329	P	Pn	18 58 20.0	+1.1
TRAZ	Trapeza	4.53	330	P	Pn	18 58 20.9	+0.9
MRKA	Markates	4.59	345	P	Pn	18 58 20.9	+0.1
MRKA	Markates	4.59	345	P	Pn	18 58 20.9	+0.1
DSF	Desfina	4.61	334	P	Pn	18 58 21.3	+0.1
ELL	Elmali	4.66	57	PN	Pn	18 58 22.9	+0.9
LKR	Lokris	4.68	340	P	Pn	18 58 22.2	+0.1
LKR	Lokris	4.68	340	P	Pn	18 58 22.2	+0.1
LAKA	Lakka	4.68	329	*e*Pn	Pn	18 58 22.7	+0.5
LAKA	Lakka	4.68	329	P	Pn	18 58 22.7	+0.5
LAKA	Lakka	4.68	329	P	Pn	18 58 22.1	-0.1
GOLH	Golhisar	4.70	50	*i* P	Pn	18 58 24.2	+1.7
ATAL	Atalanti	4.71	340	P	Pn	18 58 23.2	+0.7
KALE	Kalithea	4.74	331	P	Pn	18 58 23.0	-0.1
AKUM	Antalya-Kumluc	4.78	63	*i* P	Pn	18 58 24.3	+0.9
AKUM				*i* S	Sn	18 59 14.5	-3.4
SERG	Sergoula	4.80	330	P	Pn	18 58 24.0	+0.3
SERG	Sergoula	4.80	330	P	Pn	18 58 24.1	+0.3
SMIA	Simia	4.84	343	P	Pn	18 58 24.6	+0.3
SIGR	SIGRI	4.97	7	PN	Pn	18 58 27.1	+1.0
ANX	Ano Chora	5.01	330	P	Pn	18 58 28.3	+1.6
DKL	Dikili	5.01	17	PN	Pn	18 58 27.7	+1.0
SKIA	Skiathos	5.05	346	P	Pn	18 58 27.5	+0.2
SKIA	Skiathos	5.05	346	P	Pn	18 58 27.5	+0.2
PRK	Paraskevi	5.06	11	P	Pn	18 58 28.2	+0.8
MANT	Manisa	5.07	33	*e*Pn	Pn	18 58 29.1	+1.5
KORT	Korkueli	5.09	56	PN	Pn	18 58 28.8	+0.9
KORT	Korkueli	5.09	56	*i* P	Pn	18 58 31.4	+3.5
KULA	Kula-Manisa	5.13	33	PN	Pn	18 58 29.4	+1.0
PVO	Paravola	5.19	328	P	Pn	18 58 31.4	+2.2
AGG	Agios Georgios	5.23	336	PN	Pn	18 58 30.3	+0.6
AGG	Agios Georgios	5.23	336	*e*Pn	Pn	18 58 30.1	+0.4
AGG	Agios Georgios	5.23	336	*e*P	Pn	18 58 30.1	+0.4
AGG	Agios Georgios	5.23	336	P	Pn	18 58 30.0	+0.3
ANTB	Antalya	5.25	58	PN	Pn	18 58 30.9	+0.9
BRDR	BURDUR-Merkez	5.30	48	*i* P	Pn	18 58 32.2	+1.5
BRDR				IAML_P			
	comp=Z,868nm,0.2s						
XOR	Xorichti	5.30	344	P	Pn	18 58 30.6	-0.2
VLS	Valsamata	5.32	318	P	Pn	18 58 31.8	+0.8
EVR	Evrytania	5.33	331	P	Pn	18 58 33.0	+1.8
KHAL	Karahalli	5.43	40	*i* P	Pn	18 58 33.6	+1.0
KHAL				IAML_P			
	comp=Z,896nm,0.2s						
USAK	Uak-Merkez	5.46	35	*i* P	Pn	18 58 34.9	+2.0
USAK				IAML_P			
	comp=Z,3µm,0.4s						
BCK	Bucak	5.50	53	PN	Pn	18 58 34.0	+0.5
DEMI	Demirci	5.59	31	*i* P	Pn	18 58 36.5	+1.7
DEMI				IAML_P			
	comp=Z,872nm,0.4s						
ISP	Isparta	5.66	50	*e*Pn	Pn	18 58 37.0	+1.2
ISP	Isparta	5.66	50	*e*P	Pn	18 58 37.0	+1.2
KZIL	AFYON_Kizioren	5.71	44	*i* P	Pn	18 58 38.9	+2.5
KZIL				IAML_P			
	comp=Z,222nm,0.1s						
LKD2	Lefkada island	5.74	323	P	Pn	18 58 37.7	+1.0
BALB	Balikesir	5.81	22	*e*Pn	Pn	18 58 38.2	+0.5
THL	Klokotos Trika	5.82	336	P	Pn	18 58 39.1	+1.2
KEPZ	Antalya-Kepez	5.94	62	*i* P	Pn	18 58 40.7	+1.2
KEPZ				IAML_P			
	comp=Z,200nm,0.1s						
GDZ	Gediz	5.97	35	*i* P	Pn	18 58 41.4	+1.3
GDZ				IAML_P			
	comp=Z,504nm,0.4s						
PPCY	Paphos	6.03	82	P	Pn	18 58 39.9	-0.8
	baz=268						
OUR	Ouranopolis	6.12	352	PN	Pn	18 58 42.3	+0.5
ALAN	Alanya-ANTALYA	6.13	66	PN	Pn	18 58 42.6	+0.6
SHUT	Suhut-Afyon	6.15	44	PN	Pn	18 58 43.3	+0.9
LIT	Litokhoron	6.17	341	*e*Pn	Pn	18 58 42.5	-0.2
LIT	Litokhoron	6.17	341	*e*P	Pn	18 58 42.5	-0.2
GELI	Tayfur-Gelibol	6.22	10	PN	Pn	18 58 44.2	+0.9
GAZI	Gazipasa	6.25	70	PN	Pn	18 58 43.8	+0.1
GAZI	Gazipasa	6.25	70	*i* P	Pn	18 58 43.7	0.0
GAZI				IAML_P			
	comp=Z,2µm,0.1s						
TVSB	Tavsanli	6.25	33	PN	Pn	18 58 44.6	+0.7
ALFC	Alefka	6.26	80	P	Pn	18 58 43.1	-0.9
	baz=266						
ALFC				S	Sn	18 59 49.8	-4.9
SZAC	Souni	6.47	84	P	Pn	18 58 46.3	-0.5
	baz=270						
SZAC				S	Sn	18 59 54.9	-4.8
LEF	Lefka	6.50	80	PN	Pn	18 58 47.3	+0.2
LEF	Lefka	6.50	80	*i* P	Pn	18 58 47.4	+0.3
LEF				IAML_P			
	comp=Z,1µm,0.2s						
HORT	Hortiatis	6.51	347	PN	Pn	18 58 47.6	+0.3
HNAT	Natroun	6.60	133	P	Pn	18 58 48.9	+0.3
	baz=135						
ALN	Alexandroupoli	6.66	6	*e*Pn	Pn	18 58 48.2	-1.1
ALN	Alexandroupoli	6.66	6	*e*P	Pn	18 58 48.2	-1.1
ERMK	Ermenek	6.83	67	*i* P	Pn	18 58 54.6	+2.8
ERMK				IAML_P			
	comp=Z,1µm,0.2s						
TEKE	Tekeli-Mersin	6.85	72	PN	Pn	18 58 51.5	-0.4
CSS	Mathiatis	6.85	82	PN	Pn	18 58 52.1	+0.2
CSS	Mathiatis	6.85	82	*e*Pn	Pn	18 58 50.9	-1.0
CSS				*e*		18 59 58.7	
CSS	Mathiatis	6.85	82	P	Pn	18 58 51.4	-0.5
	baz=268						
CSS				S	Sn	19 00 03.9	-5.1
CSS	Mathiatis	6.85	82	Pn	Pn	18 58 51.2	-0.7
CSS	Mathiatis	6.85	82	P	Pn	18 58 51.6	-0.3
	comp=Z,7.7nm,0.6s,comp=Z,0.1nm						
KONT	Konya--Tatoy	6.95	56	PN	Pn	18 58 54.1	+0.8
BERE	Bereket-Mersin	6.98	70	PN	Pn	18 58 54.1	+0.2
LADK	Ladik-KONYA	7.08	54	PN	Pn	18 58 55.6	+0.4
TEVE	Tevekalti-Mers	7.18	70	PN	Pn	18 58 56.8	+0.3
KOT	Kottamia	7.18	125	P	Pn	18 58 56.9	+0.3
	baz=127						
KOT				AMP		19 00 00.0	
	baz=127						
KOT				S	Sn	19 00 11.3	-6.1
	baz=127						
AKKU	Akkuyu-Mersin	7.19	72	PN	Pn	18 58 56.8	+0.1
GULN	MERSIN_Gulnar	7.19	72	*i* P	Pn	18 58 56.2	-0.5
GULN				IAML_P			
	comp=Z,928nm,0.2s						
VAY	Valandovo	7.31	345	*i* Pn	Pn	18 59 03.4	+5.1
IKL	Isikli	7.32	72	PN	Pn	18 58 58.6	+0.2
HHAG	Hagoal	7.35	124	P	Pn	18 58 59.5	+0.6
	baz=126						
HHAG				AMP		19 00 00.0	
	baz=126						
HHAG				S	Sn	19 00 16.9	-4.6
	baz=126						
KDZ	Kurdzhali	7.37	2	P	Pn	18 59 01.1	+2.0
MMB	Musomiste	7.38	352	P	Pn	18 59 02.3	+3.0
KEBE	Keben-Mersin	7.39	70	PN	Pn	18 58 59.7	+0.3
RZN	Rozhen	7.41	358	P	Pn	18 59 01.6	+1.8
SILI	Silifke-Mersin	7.54	71	PN	Pn	18 59 01.9	+0.6
EREN	Erenkoy	7.58	78	PN	Pn	18 59 02.6	+0.6
EREN	Erenkoy	7.58	78	*i* P	Pn	18 59 05.1	+3.1
EREN				IAML_P			
	comp=Z,7µm,0.4s						
OHR	Ohrid	7.62	335	*i* Pn	Pn	18 59 00.2	-2.4
OHR				*i* Sn	Sn	19 00 22.3	-5.8
KKB	Krupnik	7.75	349	P	Pn	18 59 08.7	+4.5
SUZ	Suez	7.93	122	P	Pn	18 59 06.5	-0.3
	baz=123						
RSH		8.01	112	P	Pn	18 59 06.4	-1.5
	baz=113						
ZAF	Zafarana	8.08	126	P	Pn	18 59 08.8	0.0
	baz=127						
MERS	Mersin	8.13	69	PN	Pn	18 59 09.5	0.0
TIR	Tirane	8.18	331	*e*Pn	Pn	18 59 10.4	+0.3
TIR	Tirane	8.18	331	*e*P	Pn	18 59 10.4	+0.3
SKO	Skopje	8.20	341	*e*Pn	Pn	18 59 09.7	-0.8
TIP	Timpagrande	8.28	309	*e*Pn	Pn	18 59 12.2	+0.7
BR231	Keskin MP Arra	8.30	46	*e*Pn	Pn	18 59 14.2	+2.2
ANTO	Ankara	8.32	46	*e*Pn	Pn	18 59 14.1	+1.9
CEL	Celeste	8.41	301	*e*Pn	Pn	18 59 12.7	-0.7
OFRI	`Ofer	8.45	98	Pn	Pn	18 59 13.6	-0.3
VTS	Vitosha	8.46	351	*e*Pn	Pn	18 59 13.7	-0.5
VTS	Vitosha	8.46	351	*e*P	Pn	18 59 13.7	-0.5
VTS	Vitosha	8.46	351	P	Pn	18 59 16.8	+2.7
HNTI	Hanita	8.51	95	Pn	Pn	18 59 14.3	-0.4
KZIT	Kziot	8.55	111	PN	Pn	18 59 14.7	-0.7
KZIT	Kziot	8.55	111	Pn	Pn	18 59 15.3	-0.1
KZIT				Sn	Sn	19 00 44.6	-6.4
KZIT	Kziot	8.55	111	P	Pn	18 59 15.7	+0.3
	comp=Z,61nm,0.8s,comp=Z,0.7nm						
SLTI	Sal'it	8.59	101	Pn	Pn	18 59 15.5	-0.4
SLTI				Sn	Sn	19 00 45.6	-6.4
KARA	Karaisali	8.65	67	PN	Pn	18 59 17.0	+0.4
MMA0B	Mount Meron ar	8.71	95	Pn	Pn	18 59 17.2	-0.3
MMAI	Mount Meron Ar	8.71	95	Pn	Pn	18 59 15.8	-1.7
	comp=Z,5.9nm,0.3s,baz=262,slow=12,SNR=15						
MMAI				Sn	Sn	19 00 50.6	-4.3
	comp=Z,22nm,0.3s,baz=284,slow=21,SNR=14						
AMAZ	Amatzia	8.72	106	Pn	Pn	18 59 17.3	-0.3
AMAZ				Sn	Sn	19 00 49.0	-6.1
AMAZ	Amatzia	8.72	106	P	Sn	19 00 50.2	-4.9
BR131	Keskin Array S	8.75	49	*e*Pn	Pn	18 59 19.0	+0.8
BRTR	Keskin Array B	8.75	49	Pn	Pn	18 59 16.6	-1.6
	comp=Z,0.3nm,0.3s,baz=228,slow=11,SNR=14						
BRTR				LR	LR	19 03 41.2	
	comp=Z,355nm,19.4s,baz=236,slow=45						
BRTR	Keskin Array B	8.75	49	*ce*P	Pn	18 59 18.7	+0.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WDD	Wied Dalam	8.79	283	*e*Pn	Pn	18 59 17.6	-0.9
MMLI	Mount Malkishu	8.85	99	PN	Pn	18 59 18.9	-0.6
GEM	Giv'at Ha'Em	8.89	94	Pn	Pn	18 59 19.5	-0.4
KSDI	Kefar Szold	8.89	94	Pn	Pn	18 59 18.4	-1.5
KSDI	Kefar Szold	8.89	94	P	Sn	19 00 54.0	-5.2
YTIR	Yattir	8.94	106	Pn	Pn	18 59 20.8	+0.1
YTIR				Sn	Sn	19 00 54.2	-6.4
NATI	Neve Ativ	8.94	93	Pn	Pn	18 59 20.4	-0.2
HMDT	Nahal Hemdat	8.98	100	Pn	Pn	18 59 20.8	-0.5
HMDT				Sn	Sn	19 00 55.0	-6.6
SHMJ	Saham	9.06	97	P	Pn	18 59 21.7	-0.7
	comp=Z,41nm,0.8s,comp=Z,0.6nm						
SHMJ	Saham	9.06	97	P	Sn	19 01 00.5	-3.1
DSI	Dead Sea	9.08	104	Pn	Pn	18 59 22.0	-0.5
DSI				Sn	Sn	19 00 57.4	-6.4
MZDA	Masada	9.15	106	Pn	Pn	18 59 23.0	-0.5
MZDA				Sn	Sn	19 00 59.3	-6.4
KRMI	Paran Flat	9.17	114	Pn	Pn	18 59 23.5	-0.3
KRMI				Sn	Sn	19 00 59.5	-6.7
PRNI	Paran	9.27	112	Pn	Pn	18 59 25.1	-0.1
LISJ	El Lisan	9.27	106	P	Sn	19 01 01.3	-7.3
ZFRI	Zfri	9.31	111	Pn	Pn	18 59 25.3	-0.4
ZFRI				Sn	Sn	19 01 02.8	-6.8
PDG	Podgorica	9.34	332	⇑*i*P	Sn	19 01 08.5	-1.6
TTG	Podgorica	9.34	332	*e*Pn	Pn	18 59 23.9	-2.1
TTG	Podgorica	9.34	332	*e*P	Pn	18 59 23.9	-2.1
WALJ	Wala	9.43	104	P	Pn	18 59 27.6	+0.3
WALJ	Wala	9.43	104	P	Sn	19 01 06.8	-5.6
HRFI	Mount Harif	9.44	114	PN	Pn	18 59 27.1	-0.5
HRFI	Mount Harif	9.44	114	Pn	Pn	18 59 27.7	+0.1
HRFI				Sn	Sn	19 01 06.0	-6.9
HRFI	Mount Harif	9.44	114	P	Pn	18 59 27.1	-0.5
HRFI	Mount Harif	9.44	114	P	Sn	19 01 10.6	-2.3
MBRI	Mt Berech	9.47	115	Pn	Pn	18 59 27.9	-0.1
EIL	Elat	9.56	116	Pn	Pn	18 59 28.9	-0.3
	comp=Z,7.7nm,0.3s,baz=0.1,slow=1.5,SNR=50						
EIL				Sn	Sn	19 01 12.9	-2.9
	comp=Z,6.7nm,0.3s,baz=251,slow=6.3,SNR=7.0						
EIL	Elat	9.56	116	Pn	Pn	18 59 28.9	-0.3
EIL				Sn	Sn	19 01 09.4	-6.4
AQBJ	Aqaba	9.61	115	P	Pn	18 59 30.3	+0.5
	comp=Z,64nm,0.4s						
AQBJ	Aqaba	9.61	115	P	Sn	19 01 15.2	-1.7
JDRJ	Daraweish	9.62	109	P	Pn	18 59 30.8	+0.7
	comp=Z,40nm,0.7s						
JDRJ	Daraweish	9.62	109	P	Sn	19 01 12.6	-4.8
DBRK	Dubrovnik	9.98	329	*e*Pn	Pn	18 59 32.1	-2.8
ASF	Jabal al Asfar	10.13	99	Pn	Pn	18 59 35.8	-1.2
	comp=Z,0.5nm,0.3s,baz=227,slow=9.3,SNR=7.3						
ASF				Sn	Sn	19 01 32.7	+2.9
	comp=Z,1.3nm,0.3s,baz=130,slow=7.7,SNR=4.4						
ASF	Jabal al Asfar	10.13	99	P	Pn	18 59 36.0	-1.0
	comp=Z,6.6nm,0.9s						
CLTB	Caltabellotta	10.16	292	*e*Pn	Pn	18 59 38.3	+0.8
STON	Ston	10.34	328	*e*Pn	Pn	18 59 35.6	-4.1
TIRR	Tirgusor	10.50	13	*e*Pn	Pn	18 59 43.2	+1.3
TIRR	Tirgusor	10.50	13	*e*P	Pn	18 59 43.2	+1.3
HARR	Harsova	10.64	11	⇑*i*P	Pn	18 59 56.3	+12
HARR	Harsova	10.64	11	⇑P	Pn	18 59 56.3	+12
HERR	Herculane	10.79	350	⇓*i*P	Pn	18 59 46.8	+0.8
MAKA	Makarska	10.97	328	*e*Pn	Pn	18 59 44.8	-3.6
HVAR	Hvar	11.15	325	*e*Pn	Pn	18 59 47.8	-3.0
HVAR				Sn	Sn	19 01 38.0	-17
VOIR		11.15	360	⇑*i*P	Pn	19 00 04.0	+13
VOIR		11.15	360	⇑P	Pn	19 00 04.0	+13
MLR	Muntele Rosu	11.23	3	Pn	Pn	18 59 51.1	-1.0
	comp=Z,0.1nm,0.3s,baz=166,slow=8.3,SNR=2.5						
MLR				LR	LR	19 04 42.0	
	comp=Z,282nm,21.1s,baz=144,slow=41						
MLR	Muntele Rosu	11.23	3	*e*Pn	Pn	18 59 52.1	+0.1
MLR	Muntele Rosu	11.23	3	⇓*i*P	Pn	18 59 55.6	+3.6
MLR	Muntele Rosu	11.23	3	⇓P	Pn	18 59 55.6	+3.6
GZR	Gura Zlata	11.25	352	⇓*i*P	Pn	18 59 51.6	-0.7
GZR	Gura Zlata	11.25	352	⇓P	Pn	18 59 51.6	-0.7
BZS	Buzias	11.64	348	⇓*i*P	Pn	18 59 56.0	-1.5
BZS	Buzias	11.64	348	⇓P	Pn	18 59 56.1	-1.5
VRI	Vrincioaia	11.65	6	⇓*i*P	Pn	19 00 22.2	+24
DOPR	Dopca	11.69	1	⇓*i*P	Pn	19 00 08.1	+10
ZIRJ	Zirje	11.89	325	*e*Pn	Pn	18 59 56.5	-4.5
ZIRJ				Sn	Sn	19 01 58.6	-14
MORI	Morici	12.02	326	*e*Pn	Pn	18 59 59.9	-2.9
BLY	Banja Luka	12.10	332	*e*Pn	Pn	19 00 02.2	-1.7
DUGI	Dugi Otok	12.43	324	*e*Pn	Pn	19 00 05.1	-3.2
UDBI	Udbina	12.51	328	*e*Pn	Pn	19 00 07.5	-2.0
BIZ	Bicaz	12.68	3	⇑*i*P	P	19 00 23.5	+0.7
SIM	Simferopol'	12.73	30	P	Pn	19 00 06.6	-5.9
SIM				S	Sn	19 02 42.5	+9.2
SIM				pmax	pmax		
	comp=Z,12nm,6.1s						
SIM				MLR	MLR		
	comp=Z,69nm,10.0s						
NVLJ	Novalja	12.94	326	*e*Pn	Pn	19 00 11.7	-3.7
KEST	Kesra	12.98	281	Pn	Pn	19 00 19.7	+3.7
	comp=Z,0.1nm,0.3s,baz=88,slow=4.5,SNR=3.6						
KEST				LR	LR	19 06 21.7	
	comp=Z,85nm,19.5s,baz=48,slow=43						
BURAR	Bucovina Array	13.33	0	⇑*i*P	Pn	19 00 25.5	+4.7
BURAR	Bucovina Array	13.33	0	⇑P	Pn	19 00 25.5	+4.7
OZLJ	Ozalj	13.50	330	*e*Pn	Pn	19 00 20.5	-2.4
ANN	Anapa	14.18	38	*e*P	Pn	19 00 30.1	-2.1
ANN				*e*S	Sn	19 03 07.9	-0.7
ANN				pmax	pmax		
	comp=Z,17nm,1.0s						
UZH	Uzhgorod	14.50	353	*e*P	Pn	19 00 37.7	+1.2
SOKA	Soboth	14.54	331	*e*Pn	Pn	19 00 35.1	-2.2
	comp=Z,12nm,1.2s						
OBKA	Obir	14.60	330	*e*Pn	Pn	19 00 38.5	+0.4
	comp=Z,7.1nm,0.6s						
ARSA	Arzberg	14.83	334	*e*Pn	Pn	19 00 41.2	0.0
	comp=Z,4.7nm,0.5s						
VYHS	Vyhne	14.95	344	*e*P	P	19 00 48.2	+0.1
VYHS	Vyhne	14.95	344	*e*PN	P	19 00 48.2	+0.1
BATM	Batumi	15.01	56	⇓*i*P	Pn	19 00 44.1	+0.6
MYKA	Terra Mystica	15.08	328	*e*P	P	19 00 47.3	-2.2
	comp=Z,1.2nm,0.4s						
ZST	Bratislava	15.14	339	*e*P	P	19 00 48.6	-1.4
ZST	Bratislava	15.14	339	*e*PN	P	19 00 48.6	-1.4
MODS	Modra-Piesok	15.24	340	*e*P	P	19 00 49.8	-1.5
MODS	Modra-Piesok	15.24	340	*e*PN	P	19 00 49.8	-1.5
CONA	Conrad Observa	15.29	336	P	P	19 00 51.4	-0.5
	comp=Z,1.6nm,0.8s						
KBA	Koelnbreinsper	15.56	329	*e*Pn	Pn	19 00 50.4	-0.5
	comp=Z,7.9nm,0.6s						
JAVC	Velka Javorina	15.58	342	*e*PN	P	19 00 54.4	-0.7
KARS	Kars	15.64	61	*e*P	P	19 00 54.3	-1.6
KARS	Kars	15.64	61	*e*P	P	19 00 54.3	-1.6
ABTA	Abfaltersbach	15.68	326	*e*Pn	Pn	19 00 51.7	-0.6
	comp=Z,37nm,1.4s,SNR=11						
MOA	Molln	15.80	332	*e*Pn	Pn	19 00 53.3	-0.6
	comp=Z,11nm,0.7s,SNR=5.4						
KRUC	Moravsky	16.12	339	*e*PN	Pn	19 00 59.0	+1.1
AKH	Akhalkalaki	16.19	58	*e*Pn	Pn	19 00 59.8	+0.7
	comp=Z,16nm,1.2s						
AKH	Akhalkalaki	16.19	58	⇑*i*P	P	19 01 00.6	-1.4
VRAC	Vranov	16.28	340	Pn	Pn	19 00 59.3	-0.7
	comp=Z,0.9nm,0.3s,baz=148,slow=10,SNR=9.9						
VRAC	Vranov	16.28	340	⇑*i*P	P	19 01 02.7	-0.1
VRAC	Vranov	16.28	340	⇑P	P	19 01 02.7	-0.1
VRAC	Vranov	16.28	340	*e*PN	Pn	19 00 59.3	-0.7
OKC	Ostrava-Krasne	16.37	344	AMS	AMS	19 08 20.0	
	comp=Z,200nm,12.6s						
OJC	Ojcow	16.40	348	*e*Pn	Pn	19 00 58.9	-2.6
	comp=Z,7.1nm,1.3s						
OJC	Ojcow	16.40	348	*e*P	Pn	19 00 58.9	-2.6
OJC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NEY	Neytrino	16.41	52	⇑*e*P	P	19 01 04.2	-0.2
NEY				pmax	pmax		
	comp=Z,13nm,1.3s						

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MORC  Moravsky Berou   16.46 343  ePn     Pn       19 01 01.1 -1.2
      comp=Z,16nm,1.6s
MORC  Moravsky Berou   16.46 343⇓iP       Pn       19 01 03.6 +1.3
MORC  Moravsky Berou   16.46 343 ⇓P       Pn       19 01 03.6 +1.3
MORC  Moravsky Berou   16.46 343  ePN     Pn       19 01 00.7 -1.6
WTTA  Wattenberg       16.46 326  ePn     Pn       19 01 01.9 -0.5
      comp=Z,26nm,1.0s,SNR=12
WATA  Walderalm        16.54 326  ePn     Pn       19 01 02.8 -0.6
      comp=Z,9.0nm,0.7s
TREC  Trest            16.61 338   AMS    AMS      19 08 30.0
      comp=Z,200nm,13.1s
SQTA  Sankt Quirin     16.63 325  ePn     Pn       19 01 05.2 +0.7
      comp=Z,6.5nm,0.5s,SNR=8.6
FUORN Ofenpass-Fuorn   16.67 322  eP      Pn       19 01 05.7 +0.5
      comp=Z,25nm,1.1s
AKASG Malin Array Be   16.70   9   Pn     Pn       19 01 03.2 -2.0
      comp=Z,8.2nm,0.3s,baz=201,slow=10,SNR=53
AKASG                              Sn     Sn       19 04 12.8 +3.0
      baz=195,slow=22,SNR=5.0
AKBB  Malin Array Si   16.70   9  ePn     Pn       19 01 03.8 -1.4
AKBB  Malin Array Si   16.70   9  eP      Pn       19 01 03.8 -1.4
FETA  Feichten         16.72 324  eP      P        19 01 08.8 +1.0
      comp=Z,29nm,1.4s,SNR=10
KIV   Kislovodsk       16.72  49  eP      P        19 01 07.8  0.0
      comp=Z,32nm,1.0s
KIV   Kislovodsk       16.72  49⇓iP       P        19 01 08.4 +0.7
KIV   Kislovodsk       16.72  49  eP      P        19 01 08.6 +0.9
KIV                                pmax   pmax
      comp=Z,111nm,1.1s
KIV                                MLR    MLR
      comp=Z,220nm,13.0s
GNI   Garni            16.72  64  ePn     Pn       19 01 06.1 +0.3
      comp=Z,29nm,1.4s
GNI   Garni            16.72  64  eP      Pn       19 01 06.1 +0.3
GNI                                pmax   pmax
      comp=Z,29nm,1.4s
KVAR  Kislovodsk Arr   16.72  49   Pn     P        19 01 06.9 -0.9
      baz=270,slow=20,SNR=12
KVAR                               LR     LR       19 09 00.7
      comp=Z,96nm,20.7s,baz=198,slow=43
KBZ   Khabaz           16.74  50   Pn     P        19 01 07.5 -0.4
      comp=Z,0.8nm,0.3s,baz=262,slow=8.7,SNR=21
KBZ                                LR     LR       19 09 28.3
      comp=Z,136nm,18.1s,baz=255,slow=44
MOTA  Moosalm          16.77 325  ePn     Pn       19 01 07.0 +0.7
      comp=Z,3.2nm,0.5s
GERES GERESS Array B   16.84 333   Pn     Pn       19 01 08.2 +1.1
      comp=Z,5.1nm,0.3s,baz=144,slow=12,SNR=134
GERES                              LR     LR       19 09 27.0
      comp=Z,236nm,18.0s,baz=144,slow=44
DAVOX Davos/Dischmat   16.98 322   Pn     Pn       19 01 08.2 -0.8
      comp=Z,0.1nm,0.3s,baz=119,slow=12,SNR=2.3
DAVOX                              LR     LR       19 09 35.4
      comp=Z,124nm,19.3s,baz=86,slow=44
RETA  Reutte           17.03 325  ePn     Pn       19 01 09.7 +0.2
      comp=Z,6.9nm,0.5s,SNR=6.9
TUE   Stuetta          17.05 320  eP      P        19 01 12.0 +0.4
      comp=Z,5.4nm,0.8s
NCK   Nalchik          17.09  52⇑eP       P        19 01 12.8 +1.1
NCK                                pmax   pmax
      comp=Z,44nm,1.3s
KHC   Kasperske Hory   17.12 334  ePn     Pn       19 01 09.9 -0.7
      comp=Z,12nm,1.4s
KHC   Kasperske Hory   17.12 334  eP      Pn       19 01 09.9 -0.7
KHC                                pmax   pmax
      comp=Z,12nm,1.4s
KHC   Kasperske Hory   17.12 334  eP      Pn       19 01 11.1 +0.5
KHC                                AMS    AMS      19 08 30.0
      comp=Z,500nm,13.3s
TBLG  Delisi           17.18  59  eP      Pn       19 01 12.0 +0.7
      comp=Z,12nm,1.0s
TBLG  Delisi           17.18  59  eP      Pn       19 01 12.0 +0.7
TBLG                               pmax   pmax
      comp=Z,12nm,1.0s
DPC   Dobruska-Polom   17.30 341  eP      Pn       19 01 12.0 -0.8
DPC                                MLR    MLR
      comp=Z,300nm,13.6s
DPC   Dobruska-Polom   17.30 341  eP      Pn       19 01 12.0 -0.8
DPC                                AMS    AMS      19 08 50.0
      comp=Z,300nm,13.6s
DAVA  Damuels          17.32 323  eP      P        19 01 14.3 -0.2
      comp=Z,12nm,0.8s,SNR=7.9
GOPC  GO Pecny, Ondr   17.37 337  eP      Pn       19 01 13.3 -0.3
GOPC                               MLR    MLR
      comp=Z,100nm,10.4s
GOPC  GO Pecny, Ondr   17.37 337  eP      Pn       19 01 13.3 -0.3
GOPC                               AMS    AMS      19 08 30.0
      comp=Z,100nm,10.4s
GOF   Gofitskoye       17.50  47⇑eP       P        19 01 15.8 -0.5
GOF                                pmax   pmax
      comp=Z,29nm,0.9s
PRU   Pruhonice        17.51 337  eP      Pn       19 01 15.3 -0.1
PRU                                MLR    MLR
      comp=Z,200nm,12.2s
PRU   Pruhonice        17.51 337  eP      Pn       19 01 15.3 -0.1
PRU                                AMS    AMS      19 09 00.0
      comp=Z,200nm,12.2s
OSTC  Ostas            17.52 341   AMS    AMS      19 09 00.0
      comp=Z,200nm,12.6s
UPC   Upice            17.53 341  eP      Pn       19 01 15.1 -0.5
UPC                                MLR    MLR
      comp=Z,300nm,11.7s
UPC   Upice            17.53 341  eP      Pn       19 01 15.1 -0.5
UPC                                AMS    AMS      19 08 50.0
      comp=Z,300nm,11.7s
CHVC  Chvalec          17.59 341  eP      Pn       19 01 15.9 -0.5
CHVC                               AMS    AMS      19 09 00.0
      comp=Z,300nm,13.5s
BNI   Bardonecchia     17.75 313  eP      Pn       19 01 18.3 -0.2
      comp=Z,2.2nm,0.7s
BNI   Bardonecchia     17.75 313  eP      Pn       19 01 18.3 -0.2
BNI                                pmax   pmax
      comp=Z,2.0nm,0.7s
PVCC  Panska Ves       17.97 338  eP      Pn       19 01 19.9 -1.2
PVCC                               MLR    MLR
      comp=Z,100nm,12.7s
PVCC  Panska Ves       17.97 338  eP      Pn       19 01 19.9 -1.2
PVCC                               AMS    AMS      19 09 10.0
      comp=Z,100nm,12.7s
SENIN Lac Senin/Sane   18.10 317  eP      Pn       19 01 22.8 -0.2
      comp=Z,6.8nm,0.5s
NKC   Novy Kostel      18.44 334  eP      P        19 01 26.3 -0.4
NKC                                MLR    MLR
      comp=Z,500nm,12.8s
NKC   Novy Kostel      18.44 334  eP      P        19 01 26.3 -0.4
NKC                                AMS    AMS      19 09 20.0
      comp=Z,500nm,12.8s
BRG   Berggiesshubel   18.47 337  eP      P        19 01 26.1 -0.8
      comp=Z,6.3nm,0.7s
BRG   Berggiesshubel   18.47 337  eP      P        19 01 26.1 -0.8
BRG                                pmax   pmax
      comp=Z,6.0nm,0.7s
GRA1  Grafenberg Arr   18.48 331  eP      P        19 01 25.8 -1.3
      comp=Z,84nm,1.6s
GRF   Grafenberg Arr   18.48 331  eP      P        19 01 25.8 -1.3
GRF                                pmax   pmax
      comp=Z,84nm,1.6s
GRFO  Grafenberg       18.48 331  eP      P        19 01 26.4 -0.7
      comp=Z,89nm,1.6s
GRFO  Grafenberg       18.48 331  eP      P        19 01 26.4 -0.7
GRFO                               pmax   pmax
      comp=Z,89nm,1.6s
STU   Stuttgart        18.68 326  eP      P        19 01 27.8 -1.5
      comp=Z,11nm,0.8s
STU   Stuttgart        18.68 326  eP      P        19 01 27.8 -1.5
STU                                pmax   pmax
      comp=Z,11nm,0.8s
BFO   Black Forest     18.80 323  eP      P        19 01 29.8 -0.8
      comp=Z,5.2nm,0.7s
BFO   Black Forest     18.80 323  eP      P        19 01 29.8 -0.8
BFO                                pmax   pmax
      comp=Z,5.0nm,0.7s
CLL   Collm            19.15 336  eP      P        19 01 32.4 -1.9
      comp=Z,6.1nm,0.7s
CLL   Collm            19.15 336  i P     P        19 01 33.3 -1.0
CLL                               eS      Sn       19 05 02.0 -7.0
CLL                                pmax   pmax
      comp=Z,30nm,1.8s
CLL   Collm            19.15 336  i P     P        19 01 33.3 -1.0
      comp=Z,30nm,1.8s
CLL                               ePP     sP       19 01 45.0 +1.1
CLL                               i PPP   PPP      19 01 54.0
CLL                               eS      Sn       19 05 02.0 -7.0
CLL                               eSS     SnSn     19 05 30.0 +6.8
SSB   Saint Sauveur    19.18 311  eP      P        19 01 34.2 -0.6
      comp=Z,5.1nm,1.1s
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SSB   Saint Sauveur    19.18 311  eP      P        19 01 34.2 -0.6
SSB                                pmax   pmax
      comp=Z,5.0nm,1.1s
ECH   Echery           19.31 322  eP      P        19 01 35.6 -0.6
      comp=Z,20nm,1.6s
ECH   Echery           19.31 322  eP      P        19 01 35.6 -0.6
ECH                                pmax   pmax
      comp=Z,20nm,1.6s
VORD  Divnogorie       19.64  28  eP      P        19 01 39.8 +0.1
VORD                               pmax   pmax
      comp=Z,8.0nm,0.5s
SUW   Suwalki          19.78 357  eP      P        19 01 39.1 -2.1
      comp=Z,141nm,1.4s
SUW   Suwalki          19.78 357  eP      P        19 01 39.1 -2.1
SUW                                pmax   pmax
      comp=Z,141nm,1.4s
VSR   Storozhevoye     19.79  27  eP      P        19 01 40.0 -1.4
VSR                                pmax   pmax
      comp=Z,8.0nm,0.4s
TAM   Tamanrasset      20.59 241  eP      Pn       19 01 52.6 -0.2
      comp=Z,11nm,1.6s
WLF   Walferdange      20.75 324  eP      P        19 01 51.5 -0.3
      comp=Z,228nm,1.6s
WLF   Walferdange      20.75 324  eP      P        19 01 51.5 -0.3
WLF                                pmax   pmax
      comp=Z,228nm,1.6s
WLF   Walferdange      20.75 324 ⇑P       P        19 01 50.9 -1.0
RAYN  Ar Rayn          20.81 116  eP      Pn       19 01 55.3  0.0
      comp=Z,12nm,1.0s
RAYN  Ar Rayn          20.81 116  eP      Pn       19 01 55.3  0.0
RAYN                               pmax   pmax
      comp=Z,12nm,1.0s
LPSR  Galich'ya Gora   20.84  24  eP      P        19 01 50.0 -2.7
LPSR                               pmax   pmax
      comp=Z,10.0nm,0.6s
IDID  Didziasalis      21.08   3  eP      P        19 01 51.5 -3.7
IIGN  Ignalina         21.09   2  eP      P        19 01 52.2 -3.3
ISAL  Salakas          21.31   2  eP      P        19 01 53.8 -4.0
MEM   Membach          21.45 325 ⇑P       P        19 01 59.4 +0.1
      comp=Z,11nm,0.7s
BCLA  Clavier          21.66 324 ⇑P       P        19 02 02.3 +0.7
DOU   Dourbes          21.80 323 ⇑P       P        19 02 03.4 +0.3
CLF   Chambon-Foret    21.89 316  eP      P        19 02 04.9 +0.8
      comp=Z,42nm,1.6s
SNF   Seneffe          22.22 323 ⇑P       P        19 02 07.4 -0.2
OBN   Obninsk          22.33  18   P      P        19 02 08.3 -0.3
      comp=Z,2.9nm,0.5s,baz=42,slow=21,SNR=9.7
OBN                                LR     LR       19 11 27.8
      comp=Z,36nm,20.6s,baz=184,slow=39
OBN   Obninsk          22.33  18  eP      P        19 02 08.6 -0.1
      comp=Z,59nm,1.4s
OBN   Obninsk          22.33  18deP       P        19 02 09.3 +0.6
OBN                               e                19 02 33.8
OBN                               ePPP    PPP      19 02 40.7
OBN                               e                19 06 01.3
OBN                                pmax   pmax
      comp=Z,54nm,1.7s
OBN                                MLR    MLR
      comp=Z,138nm,14.0s
UCC   Uccle            22.37 324  eP      P        19 02 08.1 -1.0
      comp=Z,20nm,1.3s
UCC   Uccle            22.37 324  eP      P        19 02 08.1 -1.0
UCC                                pmax   pmax
      comp=Z,20nm,1.3s
MOS   Moscow           23.16  18  eP      P        19 02 13.6 -3.8
MOS                               e                19 06 30.3
ESDC  Sonseca Array    23.76 292   P      P        19 02 23.0 -0.5
      comp=Z,0.9nm,0.4s,baz=83,slow=9.1,SNR=11
ESLA  Sonseca Array    23.76 292  eP      P        19 02 23.8 +0.3
      comp=Z,4.4nm,0.8s
PAB   San Pablo        24.05 291  eP      P        19 02 26.1 -0.1
      comp=Z,11nm,1.4s
PAB   San Pablo        24.05 291  eP      P        19 02 26.1 -0.1
PAB                                pmax   pmax
      comp=Z,11nm,1.4s
MDT   Midelt           24.74 275   P      P        19 02 33.5 +0.9
      comp=Z,1.1nm,0.6s,baz=113,slow=3.8,SNR=7.1
MVO   Moncorvo         26.20 295  eP      P        19 02 47.3 +1.5
      comp=Z,17nm,1.9s
PMRV  Marv??o          26.39 291  eP      P        19 02 48.3 +0.8
      comp=Z,17nm,1.6s
MTE   Manteigas        26.55 293  eP      P        19 02 49.9 +1.0
      comp=Z,11nm,1.6s
PVAQ  Vaqueiros        26.69 286  eP      P        19 02 53.0 +2.8
PVAQ  Vaqueiros        26.69 286  eP      P        19 02 49.4 -0.8
      comp=Z,10nm,1.0s
PBEJ  Beja             26.78 288  eP      P        19 02 54.3 +3.3
      comp=Z,12nm,1.7s
PBDV  Barranco-do-Ve   26.87 286  eP      P        19 02 54.9 +3.1
      comp=Z,38nm,1.8s
SNART Snartemo         26.88 339  eP      P        19 02 53.2 +1.6
HFS   Hagfors          26.93 347   P      P        19 02 51.4 -0.6
      comp=Z,3.8nm,0.5s,baz=160,slow=9.9,SNR=27
HFS                                LR     LR       19 16 03.6
      comp=Z,88nm,18.9s,baz=151,slow=42
PCVE  Castro Verde     26.93 287  eP      P        19 02 55.1 +2.8
FIA0  FINESS Array S   27.20   1  ePcP    PcP      19 06 14.9 +0.9
FINES FINESS Array B   27.20   1   P      P        19 02 52.6 -1.8
      comp=Z,1.3nm,0.4s,baz=157,slow=11,SNR=15
FINES                              PcP    PcP      19 06 14.9 +0.9
      comp=Z,1.0nm,0.5s,baz=119,slow=2.4,SNR=5.4
FINES                              LR     LR       19 14 26.1
      comp=Z,104nm,20.2s,baz=192,slow=38
FIA1  FINESS Array S   27.20   1  eP      P        19 02 52.1 -2.3
      comp=Z,26nm,1.4s
PNCL  Nicolau / Gran   27.30 288  eP      P        19 02 58.8 +3.2
      comp=Z,18nm,1.9s
KONO  Kongsberg        27.36 343  eP      P        19 02 54.0 -1.9
      comp=Z,36nm,1.4s
KONO  Kongsberg        27.36 343⇑eP       P        19 02 54.8 -1.1
KONO                               pmax   pmax
      comp=Z,22nm,1.7s
KONO  Kongsberg        27.36 343  eP      P        19 02 55.5 -0.4
NC602 NORSAR Array S   27.90 346  eP      P        19 02 59.0 -1.7
      comp=Z,28nm,1.4s
NC602 NORSAR Array S   27.90 346  eP      P        19 02 59.2 -1.5
BLS5  Blasjo           28.00 340  eP      P        19 03 01.9 +0.2
NAO01 NORSAR Array S   28.13 345  eP      P        19 03 01.3 -1.5
      comp=Z,52nm,1.4s
NC405 NORSAR Array S   28.21 346  eP      P        19 03 01.7 -1.8
NB201 NORSAR Array S   28.23 346  eP      P        19 03 02.3 -1.4
      comp=Z,36nm,1.4s
NB2   NORSAR Subarra   28.24 346   P      P        19 03 01.9 -1.9
      comp=Z,1.3nm,0.6s,baz=156,slow=9.3
NB2   NORSAR Subarra   28.24 346   P      P        19 03 01.9 -1.9
      baz=156,slow=9.3
NOA   NORSAR Array B   28.24 346   P      P        19 03 02.5 -1.4
      comp=Z,0.8nm,0.5s,baz=147,slow=8.8,SNR=23
NOA                                LR     LR       19 16 08.9
      comp=Z,105nm,19.5s,baz=165,slow=40
NBO00 NORSAR Array S   28.32 345  eP      P        19 03 03.1 -1.5
      comp=Z,44nm,1.4s
NC303 NORSAR Array S   28.38 346  eP      P        19 03 02.6 -2.4
      comp=Z,23nm,1.4s
UOSS  Minazif          28.53 101  eP      P        19 03 06.9 +0.2
      comp=Z,11nm,0.9s
NC204 NORSAR Array S   28.55 346  eP      P        19 03 05.6 -1.0
      comp=Z,52nm,1.6s
SKAR  Skarslia         28.57 343  eP      P        19 03 07.1 +0.3
EKA   Eskdalemuir Ar   28.73 326   P      P        19 03 07.2 -0.9
      comp=Z,1.2nm,0.5s,baz=124,slow=9.3,SNR=8.5
ESK   Eskdalemuir      28.74 326  eP      P        19 03 07.4 -0.9
      comp=Z,15nm,1.4s
ESK   Eskdalemuir      28.74 326  i P     P        19 03 09.6 +1.3
AKTO  Aktyubinsk       28.91  46   P      P        19 03 08.9 -0.9
      comp=Z,2.4nm,0.6s,baz=248,slow=9.2,SNR=5.2
AKTO                               LR     LR       19 18 31.1
      comp=Z,91nm,19.8s,baz=249,slow=44
AKTO  Aktyubinsk       28.91  46   P      P        19 03 09.0 -0.9
KIRV  Kirov            29.23  26   P      P        19 03 10.0 -2.6
      comp=Z,6.1nm,0.5s,baz=238,slow=4.8,SNR=5.4
KIRV                               LR     LR       19 15 13.1
      comp=Z,61nm,19.7s,baz=132,slow=37
DSB   Dublin           29.24 320  eP      P        19 03 11.8 -1.0
      comp=Z,15nm,1.3s
HYA   Hoyanger         29.53 341  eP      P        19 03 15.4 +0.2
DOMB  Dombas           29.60 345  eP      P        19 03 16.2 +0.3
ABKAR Akbulak array    29.70  49  eP      P        19 03 16.9  0.0
      comp=Z,2.2nm,1.1s
TOA0  Torodi Ar. Sit   29.86 231  eP      P        19 03 19.2 +0.5
      comp=Z,7.8nm,0.5s
TORD  Torodi Ar. Bea   29.86 231   P      P        19 03 19.4 +0.8
      comp=Z,4.9nm,0.4s,baz=35,slow=8.7,SNR=115
TORD                               LR     LR       19 18 28.0
      comp=Z,183nm,18.6s,baz=5.0,slow=43
TORD  Torodi Ar. Bea   29.86 231  eP      P        19 03 17.4 -1.3
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AKN   Aaknes           30.19 343  eP      P        19 03 20.5 -0.6
PRGR  Permogore        30.37  19  eP      P        19 03 19.9 -2.7
PRGR                               pmax   pmax
      comp=Z,10.0nm,0.9s
NSS   Namsos           31.33 349  eP      P        19 03 30.6 -0.5
ARU   Arti             31.82  36   P      P        19 03 33.7 -1.7
      comp=Z,1.9nm,0.5s,baz=227,slow=11,SNR=12
ARU                                LR     LR       19 18 51.4
      comp=Z,33nm,19.9s,baz=287,slow=41
ARU   Arti             31.82  36  eP      P        19 03 33.8 -1.6
      comp=Z,30nm,1.5s
ARU   Arti             31.82  36d iP      P        19 03 34.5 -1.0
ARU                                                19 04 36.5
ARU                                S      S        19 08 45.6 +1.5
ARU                                pmax   pmax
      comp=Z,20nm,1.5s
SVE   Sverdlovsk       33.01  36  eP      P        19 03 46.1 +0.1
KONS  Konsvik          33.03 351  eP      P        19 03 45.3 -0.7
LVZ   Lovozero         34.12   6  eP      P        19 03 53.6 -1.8
      comp=Z,9.3nm,0.8s
LVZ   Lovozero         34.12   6  eP      P        19 03 53.7 -1.8
LVZ                                pmax   pmax
      comp=Z,9.0nm,0.8s
STEI  Steigen          34.18 353  eP      P        19 03 54.4 -1.5
LOF   Lofoten          34.55 352  eP      P        19 03 57.6 -1.5
KTK1  Kautokeino       34.81 359  eP      P        19 04 01.6 +0.2
ARCES ARCESS Array B   35.32   0   P      P        19 04 03.6 -2.1
      comp=Z,1.4nm,0.5s,baz=178,slow=8.5,SNR=13
ARCES                              LR     LR       19 19 17.3
      comp=Z,119nm,19.0s,baz=203,slow=38
ARE0  ARCESS Array S   35.32   0  eP      P        19 04 04.1 -1.7
      comp=Z,0.7nm,1.0s
ARE0  ARCESS Array S   35.32   0  eP      P        19 04 04.1 -1.7
TRO   Tromso           35.58 356  eP      P        19 04 08.2 +0.2
KK31  Karatay Array    36.18  62  eP      P        19 04 13.2 -0.3
      comp=Z,8.3nm,1.0s
KK31  Karatay Array    36.18  62  eP      P        19 04 13.2 -0.3
KK31                               pmax   pmax
      comp=Z,8.0nm,1.0s
KKAR  Karatay Array    36.18  62  eP      P        19 04 13.9 +0.4
      comp=Z,8.3nm,1.0s
KKAR  Karatay Array    36.18  62  eP      P        19 04 13.9 +0.4
KKAR                               pmax   pmax
      comp=Z,8.0nm,1.0s
GAR   Garm             36.33  69  eP      P        19 04 16.2 +1.2
      comp=Z,16nm,1.3s
GAR   Garm             36.33  69  eP      P        19 04 16.2 +1.2
GAR                                pmax   pmax
      comp=Z,16nm,1.3s
HAMF  Hammerfest       36.44 359  eP      P        19 04 15.7 +0.3
BTK   Batken           36.60  67  eP      P        19 04 17.8 +0.6
      comp=Z,6.0nm,1.4s
BTK   Batken           36.60  67  eP      P        19 04 17.8 +0.6
BTK                                pmax   pmax
      comp=Z,6.0nm,1.4s
BRVK  Borovoye         36.96  45  eP      P        19 04 20.3 +0.3
      comp=Z,5.2nm,1.2s
BRVK  Borovoye         36.96  45⇓eP       P        19 04 20.5 +0.5
BRVK                               pmax   pmax
      comp=Z,5.0nm,1.2s
BVAR  Borovoye Array   37.02  46   P      P        19 04 19.9 -0.6
      comp=Z,1.9nm,0.8s,baz=257,slow=5.9,SNR=11
DBIC  Dimbokro         38.96 232   LR     LR       19 23 54.5
      comp=Z,109nm,19.2s,baz=14,slow=41
DBIC  Dimbokro         38.96 232  eP      P        19 04 37.4 +0.2
      comp=Z,37nm,1.6s
DBIC  Dimbokro         38.96 232  eP      P        19 04 37.4 +0.2
DBIC                               pmax   pmax
      comp=Z,37nm,1.6s
AAK   Ala-Archa        39.12  63   P      P        19 04 39.3 +0.7
      comp=Z,2.0nm,0.4s,baz=246,slow=13,SNR=8.7
AAK   Ala-Archa        39.12  63  eP      P        19 04 39.4 +0.7
      comp=Z,9.3nm,1.2s
AAK   Ala-Archa        39.12  63deP       P        19 04 40.3 +1.7
AAK                                pmax   pmax
      comp=Z,12nm,1.7s
FRU1  Bishkek          39.21  62  eP      P        19 04 40.0 +0.8
      comp=Z,16nm,1.4s
FRU1  Bishkek          39.21  62  eP      P        19 04 40.1 +0.8
FRU1                               pmax   pmax
      comp=Z,16nm,1.4s
NIL   Nilore           39.67  77  eP      P        19 04 44.0 +0.9
      comp=Z,14nm,1.2s
NIL   Nilore           39.67  77  eP      P        19 04 44.0 +0.9
NIL                                pmax   pmax
      comp=Z,14nm,1.2s
BOOM  Boomskoye usch   40.20  63  eP      P        19 04 48.6 +1.0
      comp=Z,5.1nm,1.3s
BOOM  Boomskoye usch   40.20  63  eP      P        19 04 48.6 +1.0
BOOM                               pmax   pmax
      comp=Z,5.0nm,1.3s
NRN   Naryn            40.36  64  eP      P        19 04 50.0 +0.9
      comp=Z,12nm,1.0s
NRN   Naryn            40.36  64  eP      P        19 04 50.0 +0.9
NRN                                pmax   pmax
      comp=Z,12nm,1.0s
KSH   Kashi            40.61  67   P      P        19 04 50.5 -0.4
KSH                                pP     pwP      19 05 01.4 -0.2
KSH                                sP     sP       19 05 07.8 +7.1
KSH                                PP     PnPn     19 06 27.1 -1.5
KSH                                pmax   pmax
      comp=Z,11nm,1.2s
KSH                                pmax   pmax
      comp=Z,140nm,4.9s
KDJ   Kajisay          41.16  63  eP      P        19 04 56.9 +1.4
      comp=Z,5.6nm,0.8s
KDJ   Kajisay          41.16  63  eP      P        19 04 56.9 +1.4
KDJ                                pmax   pmax
      comp=Z,6.0nm,0.8s
KURBB Kurchatov Arra   41.74  50   P      P        19 04 59.1 -0.8
      comp=Z,6.1nm,0.7s,baz=276,slow=8.8,SNR=9.3
KURK  Kurchatov        41.80  50  eP      P        19 05 00.5 +0.1
      comp=Z,7.4nm,0.9s
KURK  Kurchatov        41.80  50d iP      P        19 05 01.1 +0.7
KURK                               pmax   pmax
      comp=Z,12nm,1.3s
PRZ   Przheval'sk      42.01  62  eP      P        19 05 03.0 +0.5
      comp=Z,13nm,1.2s
PRZ   Przheval'sk      42.01  62  eP      P        19 05 03.0 +0.5
PRZ                                pmax   pmax
      comp=Z,13nm,1.2s
MAKZ  Makanchi         44.12  56  eP      P        19 05 19.7 +0.4
      comp=Z,5.4nm,1.1s
MAKZ  Makanchi         44.12  56  eP      P        19 05 19.7 +0.4
MAKZ                               pmax   pmax
      comp=Z,5.0nm,1.1s
SCO   Scoresbysund     44.14 339  eP      P        19 05 20.1 +1.0
      comp=Z,15nm,1.2s
SPA0  Spitsbergen Ar   44.17 357  eP      P        19 05 17.8 -1.5
      comp=Z,24nm,1.3s
SPA0  Spitsbergen Ar   44.17 357  eP      P        19 05 18.5 -0.8
MK31  Makanchi Array   44.33  56  eP      P        19 05 21.3 +0.3
      comp=Z,4.5nm,0.8s
MK31  Makanchi Array   44.33  56  eP      P        19 05 21.3 +0.3
MK31                               pmax   pmax
      comp=Z,5.0nm,0.8s
MKAR  Makanchi Array   44.33  56   P      P        19 05 21.4 +0.4
      comp=Z,3.7nm,0.6s,baz=274,slow=6.6,SNR=39
MKAR                               LR     LR       19 27 44.5
      comp=Z,34nm,18.8s,baz=242,slow=42
MKAR  Makanchi Array   44.33  56  i P     P        19 05 21.3 +0.3
MKAR                               pmax   pmax
      comp=Z,4.0nm,0.6s
KBS   Kingsbay         45.10 356  eP      P        19 05 26.3 -0.4
      comp=Z,43nm,1.4s
KBS   Kingsbay         45.10 356  eP      P        19 05 26.3 -0.4
KBS                                pmax   pmax
      comp=Z,43nm,1.4s
ZAA0  Zalesovo Array   45.68  46  eP      P        19 05 30.6 -0.9
      comp=Z,6.9nm,0.6s
ZALV  Zalesovo Beam    45.68  46   P      P        19 05 30.9 -0.6
      comp=Z,7.8nm,0.4s,baz=269,slow=8.9,SNR=35
ZALV                               LR     LR       19 27 38.5
      comp=Z,44nm,21.3s,baz=250,slow=40
ZALV  Zalesovo Beam    45.68  46   P      P        19 05 31.0 -0.6
DGZ   Jazzator, Alta   47.49  51d iP      P        19 05 46.8 +0.8
DGZ                                pmax   pmax
      comp=Z,3.0nm,0.8s
WMQ   Urumqi           48.52  59  eP      P        19 05 56.8 +2.8
WMQ                                pmax   pmax
      comp=Z,10.0nm,0.8s
WMQ                                pmax   pmax
      comp=Z,64nm,4.1s
WMQ                                LR     LR
      comp=Z,140nm,29.0s
WMQ                                LR     LR
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	comp=Z,100nm,28.9s						
WMQ				LR	LR		
	comp=Z,160nm,23.5s						
ILULI	**Ilulissat**	**53.54**	**334**	*e*P	**P**	**19 06 31.5**	**+0.3**
	comp=Z,19nm,1.4s						
ILULI	**Ilulissat**	**53.54**	**334**	*e*P	**P**	**19 06 31.5**	**+0.3**
ILULI				pmax	pmax		
	comp=Z,19nm,1.4s						
LSA	**Lhasa**	**55.36**	**75**	*e*P	**P**	**19 06 46.0**	**+0.4**
	comp=Z,3.4nm,0.8s						
LSA	**Lhasa**	**55.36**	**75**	*e*P	**P**	**19 06 46.0**	**+0.4**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MOY	**Mondy**	**55.67**	**47**	*e*P	**P**	**19 06 48.7**	**+1.6**
TLY	**Talaya**	**57.27**	**47**	*e*P	**P**	**19 07 00.5**	**+2.2**
TLY				pmax	pmax		
	comp=Z,22nm,1.1s						
TLY				MLR	MLR		
	comp=Z,148nm,16.0s						
ZAK	**Zakamensk**	**57.39**	**48**	*e*P	**P**	**19 07 00.1**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA	**Gaotai**	**58.45**	**61**	*e*P	**P**	**19 07 08.3**	**+1.3**
GTA				pP	pwP	19 07 20.8	+2.6
GTA				sP	sP	19 07 26.8	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,57nm,8.1s						
GTA				LR	LR		
	comp=Z,54nm,17.8s						
GTA				LR	LR		
	comp=Z,66nm,18.1s						
GTA				LR	LR		
	comp=Z,69nm,17.1s						
SONM	**Songino Array**	**60.11**	**50**	P	**P**	**19 07 19.6**	**+1.3**
	comp=Z,3.8nm,0.8s,baz=275,slow=8.8,SNR=17						
ULN	**Ulaanbaatar**	**60.52**	**50**	*e*P	**P**	**19 07 21.3**	**+0.2**
	comp=Z,5.7nm,0.7s						
ULN	**Ulaanbaatar**	**60.52**	**50**	*de*P	**P**	**19 07 22.3**	**+1.1**
TIXI	**Tiksi**	**62.02**	**20**	⇓*e*P	**P**	**19 07 31.3**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.5s						
BOSA	**Boshof**	**62.54**	**180**	P	**P**	**19 07 36.2**	**+1.4**
	comp=Z,5.9nm,0.9s,baz=352,slow=7.7,SNR=6.8						
BOSA				LR	LR	19 35 00.5	
	comp=Z,78nm,19.0s,baz=7.5,slow=36						
BOSA	**Boshof**	**62.54**	**180**	*e*P	**P**	**19 07 36.6**	**+1.8**
	comp=Z,9.1nm,1.4s						
HHC	**Hu-ho-hao-te**	**66.20**	**56**	P	**P**	**19 07 59.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,66nm,5.4s						
BATG	**Bathurst New B**	**66.46**	**312**	*e*P	**P**	**19 08 01.3**	**+1.1**
	comp=Z,12nm,1.2s						
CM31	**Chiang Mai Arr**	**66.75**	**83**	*e*P	**P**	**19 08 02.9**	**+0.3**
	comp=Z,4.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**66.75**	**83**	P	**P**	**19 08 02.9**	**+0.3**
	comp=Z,1.8nm,1.1s,baz=308,slow=8.2,SNR=6.4						
CMAR				LR	LR	19 41 51.7	
	comp=Z,53nm,18.1s,baz=242,slow=40						
BJI	**Beijing**	**69.70**	**55**	*e*P	**P**	**19 08 20.0**	**-0.7**
BJI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WHN	**Wuhan**	**73.00**	**64**	P	**P**	**19 08 45.3**	**+4.5**
BILL	**Bilibino**	**73.94**	**14**	*e*P	**P**	**19 08 47.5**	**+1.8**
BILL				*e*		19 08 55.4	
BILL				*e*		19 11 32.3	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KLR	**Kul'dur**	**74.49**	**41**	⇓*e*P	**P**	**19 08 49.8**	**+0.6**
KLR				pmax	pmax		
	comp=Z,10.0nm,1.9s						
NJ2	**Nanjing**	**75.55**	**61**	*e*P	**P**	**19 08 56.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**77.52**	**45**	P	**P**	**19 09 06.5**	**0.0**
	comp=Z,3.6nm,0.6s,baz=297,slow=4.7,SNR=16						
KSRS	**Korea Array**	**78.88**	**52**	P	**P**	**19 09 14.8**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=315,slow=4.8,SNR=5.7						
KSRS				LR	LR	19 49 25.1	
	comp=Z,38nm,19.1s,baz=270,slow=40						
ILAR	**Eielson Array**	**81.08**	**357**	P	**P**	**19 09 25.6**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=356,slow=2.8,SNR=5.2						
ILB	**Eielson Array**	**81.08**	**357**	*e*P	**P**	**19 09 25.3**	**-0.3**
	comp=Z,3.0nm,1.4s						
WRH	**Wood River Hil**	**81.44**	**357**	*e*P	**P**	**19 09 27.7**	**+0.2**
	comp=Z,3.7nm,0.9s						
Q51A	**Peebles**	**81.50**	**312**	*e*P	**P**	**19 09 29.0**	**+0.6**
	comp=Z,9.4nm,0.7s						
SCRK	**Sand Creek**	**81.70**	**355**	*e*P	**P**	**19 09 29.8**	**+0.7**
	comp=Z,4.7nm,1.2s						
V53A	**Saluda**	**83.20**	**309**	*e*P	**P**	**19 09 37.5**	**+0.1**
	comp=Z,5.8nm,0.6s						
MAJO	**Matsushiro**	**85.97**	**48**	*e*P	**P**	**19 09 51.4**	**+0.1**
MAJO	**Matsushiro**	**85.97**	**48**	*e*P	**P**	**19 09 51.4**	**+0.1**
MJAR	**Matsushiro Arr**	**85.97**	**48**	P	**P**	**19 09 51.4**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=300,slow=5.5,SNR=10						
PHWY	**Pilot Hill**	**92.11**	**325**	*e*P	**P**	**19 10 19.9**	**-0.7**
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**117.96**	**101**	*e*PKPdf	**PKPdf**	**19 15 57.4**	**-0.5**
ASAR	**Alice Springs**	**117.96**	**101**	PKP	**PKPdf**	**19 15 57.4**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=336,slow=2.0,SNR=3.2						

IDC ***16*** *19:06:09.2±2.4, 38°.26N×87°.47E, h0^{km}, mb3.7/4, mb1 3.7/9, mb1mx3.4/40, mbtmp3.6/9, ML3.2/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/40, Error ellipse: s-maj=49.4km s-min=33.2km az=35.0*

BJI ***16*** *19:06:10.9±0.0, 38°.28N×87°.32E, h7^{km}, ML3.6/8, Ms3.3/2, Ms7 3.1/1*

ISC 16 19:06:15.4±1.6**, 38°.4N**±0°.1×**87°.3E**±0°.1**, h35**^{km}**, n13, σ2^{s}.37**/15**, mb3.8**/4**, 1C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**5.40**	**3**	*e*Pn	**Pn**	**19 07 35.3**	**+1.9**
WMQ				Sn	**Sn**	**19 08 38.8**	**+4.5**
WMQ				smax	smax		
	comp=N,20nm,0.5s						
WMQ				smax	smax		
	comp=E,20nm,0.7s						
MK31	**Makanchi Array**	**9.14**	**338**	⇑Pn	**Pn**	**19 08 25.9**	**+1.2**
	2.1nm,0.5s,baz=153,slow=14,SNR=52						
MK31				⇓Sn	**Sn**	**19 10 07.5**	**+1.1**
	1.5nm,0.6s,baz=156,slow=25,SNR=4.6						
MKAR	**Makanchi Array**	**9.14**	**338**	Pn	**Pn**	**19 08 25.2**	**+0.5**
	1.2nm,0.3s,baz=153,slow=14,SNR=37						
MKAR				Sn	**Sn**	**19 10 04.3**	**-2.1**
	0.4nm,0.3s,baz=153,slow=20,SNR=4.0						
MKAR				Lg	Lg	19 11 04.8	
	0.2nm,0.3s,baz=159,slow=29,SNR=3.3						
GTA	**Gaotai**	**9.79**	**80**	*e*P	Pn	19 08 24.3	-9.4
GTA				pP		19 08 29.5	
GTA				sP		19 08 32.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				smax	smax		
	comp=N,5.0nm,1.1s						
GTA				smax	smax		
	comp=E,7.0nm,1.1s						
KURBB	**Kurchatov Arra**	**13.70**	**336**	Pn	**Pn**	**19 09 25.6**	**-1.4**
	comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=6.3						
ZALV	**Zalesovo Beam**	**15.62**	**355**	Pn	**Pn**	**19 09 51.5**	**-1.1**
	comp=E,0.1nm,0.3s,baz=158,slow=15,SNR=3.3						
ZALV				Sn	**Sn**	**19 12 39.0**	**-5.5**
	comp=E,0.1nm,0.3s,baz=157,slow=26,SNR=3.3						
SONM	**Songino Array**	**16.76**	**50**	Pn	**Pn**	**19 10 06.0**	**-1.4**
	baz=259,slow=14,SNR=2.4						
TLY	**Talaya**	**17.51**	**36**	LR	LR	19 16 16.0	
	comp=E,25nm,19.5s,baz=352,slow=34						
BVAR	**Borovoye Array**	**18.71**	**327**	P	**P**	**19 10 31.3**	**+0.6**
	comp=E,0.1nm,0.3s,baz=123,slow=11,SNR=8.3						
ARCES	**ARCESS Array B**	**44.77**	**334**	P	**P**	**19 14 25.1**	**0.0**
	comp=E,1.6nm,0.8s,baz=93,slow=10.0,SNR=2.8						
HFS	**Hagfors**	**49.71**	**321**	P	**P**	**19 15 04.3**	**+0.7**
	comp=E,0.8nm,0.5s,baz=93,slow=12,SNR=6.2						
NOA	**NORSAR Array B**	**50.77**	**322**	P	**P**	**19 15 12.1**	**+0.4**
	comp=E,0.4nm,0.6s,baz=82,slow=6.3,SNR=2.7						
ILAR	**Eielson Array**	**68.76**	**22**	P	**P**	**19 17 15.2**	**-0.1**
	comp=E,0.3nm,0.5s,baz=324,slow=4.5,SNR=5.7						

ISCJB ***16*** *19:19:04.9±0.5, 61°.0S±0°.1×24°.6W±0°.3, h10^{km}, mb4.4/15, Error ellipse: s-maj=22.6km s-min=8.4km az=142.4*

IDC ***16*** *19:19:06.1±0.9, 60°.71S×24°.39W, h0^{km}, mb4.1/6, mb1 4.4/7, mb1mx4.1/19, mbtmp4.2/7, ML5.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.8/22, Error ellipse: s-maj=32.9km s-min=20.5km az=55.0*

NEIC ***16*** *19:19:10.4±1.6, 60°.81S×24°.57W, h30^{km}±6^{km}, mb4.7/13, Error ellipse: s-maj=29.4km s-min=18.5km az=66.0*

ISC 16 19:19:07.2±0.7**, 60°.8S**±0°.1×**24°.2W**±0°.1**, h10**^{km}**, n32, σ1^{s}.57**/29**, mb4.5**/15**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.81**	**153**	P	**Pn**	**19 21 53.6**	**-1.8**
VNA3	**Neumayer Olymp**	**11.98**	**157**	P	**Pn**	**19 21 55.4**	**-2.5**
SNAA	**Sanae**	**13.78**	**151**	P	**Pn**	**19 22 20.2**	**-2.1**
SNAA	**Sanae**	**13.78**	**151**	Pn	**Pn**	**19 22 20.2**	**-2.1**
	11nm,0.3s,baz=311,slow=14,SNR=184						
SNAA				Sn	Sn	19 24 42.4	-13
	0.7nm,0.3s,baz=303,slow=18,SNR=3.8						
SNAA				LR	LR	19 25 55.0	
	comp=Z,71nm,20.1s,baz=192,slow=29						
SNAA	**Sanae**	**13.78**	**151**	*e*Pn	**Pn**	**19 22 20.0**	**-2.3**
SNAA				*e*		19 24 43.4	
PMSA	**Palmer Station**	**18.43**	**240**	P	**P**	**19 23 23.8**	**+1.4**
	7.9nm,0.3s,baz=88,slow=9.8,SNR=22						
PMSA	**Palmer Station**	**18.43**	**240**	*e*P	**P**	**19 23 24.2**	**+1.9**
	28nm,1.0s						
QSPA	**South Pole Qui**	**29.44**	**180**	*e*P	**P**	**19 25 11.5**	**+0.7**
	9.1nm,1.4s						
MAW	**Mawson**	**35.45**	**139**	P	**P**	**19 26 04.2**	**+1.2**
	2.8nm,0.9s,baz=256,slow=8.3,SNR=3.9						
CPUP	**Villa Florida**	**41.15**	**312**	P	**P**	**19 26 49.6**	**-1.8**
	4.1nm,0.7s,baz=161,slow=6.9,SNR=8.7						
CPUP	**Villa Florida**	**41.15**	**312**	*e*P	**P**	**19 26 49.1**	**-2.3**
	14nm,1.4s						
VNDA	**Vanda**	**41.88**	**182**	P	**P**	**19 26 57.9**	**+1.0**
	0.6nm,0.7s,baz=187,slow=6.3,SNR=9.4						
VNDA	**Vanda**	**41.88**	**182**	*e*P	**P**	**19 26 58.1**	**+1.2**
GO02	**Mina Guanaco**	**47.12**	**298**	*e*P	**P**	**19 27 38.4**	**-1.3**
	8.9nm,0.8s						
LVC	**Limon Verde**	**49.07**	**301**	*e*P	**P**	**19 27 54.2**	**-0.7**
	5.6nm,0.9s						
PB04	**IPOC Station P**	**49.84**	**299**	*e*P	**P**	**19 27 59.5**	**-1.0**
	23nm,1.2s						
PB01	**IPOC Station P**	**50.71**	**301**	*e*P	**P**	**19 28 06.0**	**-1.0**
	13nm,0.7s						
GO01	**Chusmiza**	**51.81**	**302**	*e*P	**P**	**19 28 14.7**	**-1.0**
	6.6nm,0.8s						
PB11	**IPOC Station P**	**51.92**	**301**	*e*P	**P**	**19 28 14.8**	**-1.3**
	14nm,1.2s						
H10S2	**ASCENSION HYDR**	**52.22**	**12**	T	T	20 25 44.7	
	baz=187,slow=74,SNR=8.1						
H10S3	**ASCENSION HYDR**	**52.22**	**12**	T	T	20 25 47.2	
	baz=187,slow=74,SNR=7.5						
H10S1	**ASCENSION HYDR**	**52.23**	**12**	T	T	20 25 44.2	
	baz=187,slow=74,SNR=6.9						
MNMC	**Minye Minye**	**52.45**	**302**	*e*P	**P**	**19 28 19.1**	**-1.1**
	21nm,0.6s						
LPAZ	**La Paz**	**54.41**	**305**	P	**P**	**19 28 33.8**	**-1.2**
	3.3nm,0.6s,baz=140,slow=5.3,SNR=18						
LPAZ	**La Paz**	**54.41**	**305**	*e*P	**P**	**19 28 34.2**	**-0.8**
	3.8nm,0.8s						
TOA0	**Torodi Ar. Sit**	**76.53**	**26**	*e*P	**P**	**19 30 58.6**	**+1.3**
	1.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.53**	**26**	P	**P**	**19 30 58.4**	**+1.2**
	1.1nm,0.6s,baz=197,slow=4.5,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.53**	**26**	*e*P	**P**	**19 30 58.8**	**+1.5**
	1.0nm,0.7s						
TOA1	**Torodi Ar. Sit**	**76.54**	**26**	*e*P	**P**	**19 30 58.4**	**+1.1**
ASAR	**Alice Springs**	**93.98**	**160**	P	**P**	**19 32 24.6**	**-0.7**
	0.5nm,0.9s,baz=186,slow=3.1,SNR=5.0						
SONM	**Songino Array**	**149.19**	**92**	PKPbc	**PKPbc**	**19 38 55.5**	**+0.6**
	0.9nm,0.8s,baz=205,slow=3.0,SNR=3.6						
ILAR	**Eielson Array**	**154.28**	**304**	PKPbc	**PKiKP**	**19 39 08.2**	**+2.3**
	1.1nm,1.1s,baz=110,slow=0.2,SNR=4.5						

MEX 16 19:33:07.7±0.5**, 28°.04N**×**112°.18W, h11**^{km}±7^{km}**, MD3.5, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.72**	**185**	*e*P	Pg	19 33 19.8	-1.9
SRIG				*e*S	Sg	19 33 29.3	-1.9
GUYB	**Guaymas**	**1.16**	**97**	*e*P	Pb	19 33 26.4	-3.4
GUYB				*e*S	Sb	19 33 40.3	-4.5
HSIG		**1.45**	**48**	*e*P	Pn	19 33 30.1	-3.8
HSIG				*e*S	Sn	19 33 48.1	-4.9

IDC ***16*** *19:41:52.0±0.3, 63°.32S×62°.35W, h0^{km}, mb5.3/18, mb1 5.3/18, mb1mx5.3/19, mbtmp5.3/18, MS5.1/20, Ms1 5.1/20, ms1mx5.0/28, Error ellipse: s-maj=18.2km s-min=11.1km az=107.0*

ISCJB ***16*** *19:41:52.9±0.2, 63°.34S±0°.02×62°.4W±0°.1, h10^{km}, mb5.5/111, MS5.2/586, Error ellipse: s-maj=6.7km s-min=3.4km az=10.1*

MOS ***16*** *19:41:53.2±1.2, 63°.32S×62°.60W, h10^{km}, mb5.7/33, MS5.2/45, Error ellipse: s-maj=25.3km s-min=7.9km az=88.0*

NEIC ***16*** *19:41:53.5±2.7, 63°.38S×62°.54W, h9^{km}±2^{km}, mb5.7/99, MS5.2/574, MW5.7, Error ellipse: s-maj=12.4km s-min=7.5km az=105.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.94; $M_{\theta\theta}$4.83; $M_{\phi\phi}$-3.89; $M_{r\theta}$0.45; $M_{\theta\phi}$1.30; $M_{\phi r}$-1.24; Best double couple: $M_0$4.80000×10^{17} NP1:ϕ_s305.00000°, δ78.00000°, λ-16.00000°. NP2:ϕ_s38.00000°, δ74.00000°, λ-168.00000°. Principal axes: T 5.0300, Plg3.0000°, Azm352.0000°; N -0.4900, Plg70.0000°, Azm89.0000°; P -4.5400, Plg20.0000°, Azm261.0000°;*

BJI ***16*** *19:41:54.7±0.0, 63°.30S×62°.50W, h12^{km}, mB5.5/43, Ms5.6/46, Ms7 5.4/47*

GCMT ***16*** *19:41:58.5±0.1, 63°.37S×62°.41W, h12^{km}, MW5.6/118, Moment Tensor Solution. s104,c189; s118,c227; Duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.78±.04; $M_{\theta\theta}$3.50±.03; $M_{\phi\phi}$-0.72±.05; $M_{r\theta}$0.01±.10; $M_{\theta\phi}$1.66±.04; $M_{\phi r}$-0.30±.12; Best double couple: $M_0$3.45500×10^{17} NP1:ϕ_s61.00000°, δ47.00000°, λ-104.00000°. NP2:ϕ_s261.00000°, δ45.00000°, λ-75.00000°. Principal axes: T 4.0760, Plg1.0000°, Azm161.0000°; N -1.2430, Plg10.0000°, Azm71.0000°; P -2.8340, Plg80.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 19:41:54.6±0.6**, 63°.33S**±0°.03×**62°.59W**±0°.05**, h13**^{km}±3^{km}**, n1105, σ1^{s}.71**/746**, mb5.6**/111**, MS5.2**/587**, 51C-42D, South Shetland Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**1.59**	**203**	Pn	**Pn**	**19 42 21.0**	**-1.4**
	2μm,0.3s,baz=39,slow=10,SNR=1400						
PMSA				Sn	**Sn**	**19 42 41.3**	**-1.4**
	23μm,0.3s,baz=289,slow=18,SNR=81						
PMSA	**Palmer Station**	**1.59**	**203**	*e*Pn	**Pn**	**19 42 21.2**	**-1.2**
PMSA				*e*Sn	**Sn**	**19 42 41.6**	**-1.0**
PMSA	**Palmer Station**	**1.59**	**203**	⇓*e*P	**Pn**	**19 42 20.8**	**-1.5**
PMSA				*e*S	**Sn**	**19 42 42.8**	**+0.1**
PMSA	**Palmer Station**	**1.59**	**203**	*e*P	**Pn**	**19 42 21.2**	**-1.2**
USHA	**Ushuaia**	**9.03**	**338**	Pn	**Pn**	**19 44 06.7**	**+2.2**
	2.8nm,0.3s,baz=160,slow=13,SNR=8.2						
USHA				Sn	**Sn**	**19 45 46.6**	**+0.7**
	0.5nm,0.3s,baz=139,slow=20,SNR=2.2						
USHA				LR	LR	19 46 49.1	
	comp=Z,47μm,19.8s,baz=133,slow=33						
USHA	**Ushuaia**	**9.03**	**338**	*e*P	**Pn**	**19 44 02.8**	**-1.7**
USHA				*e*S	Sn	19 46 04.9	+19
GO10	**Punta Arenas**	**11.12**	**333**	*e*Pn	**Pn**	**19 44 36.2**	**+3.1**
GO10	**Punta Arenas**	**11.12**	**333**	*e*P	**Pn**	**19 44 33.5**	**+0.4**
GO10				*e*S	Sn	19 46 58.8	+22
EFI	**East Falkland**	**11.93**	**14**	*e*Pn	**Pn**	**19 44 45.2**	**+1.0**
EFI	**East Falkland**	**11.93**	**14**	*e*P	**Pn**	**19 44 45.2**	**+1.0**
EFI	**East Falkland**	**11.93**	**14**	*e*P	Pn	19 44 37.9	-6.3
EFI				*e*S	Sn	19 47 06.0	+9.0
GO09	**Cerro Castillo**	**13.16**	**332**	*e*Pn	**Pn**	**19 45 00.7**	**-0.4**
GO09	**Cerro Castillo**	**13.16**	**332**	*e*P	**Pn**	**19 45 01.9**	**+0.9**
GO09				*e*S	**S**	**19 47 48.5**	**-3.4**
HOPE	**Hope Point**	**16.16**	**68**	*e*Pn	**Pn**	**19 45 40.2**	**-0.9**
	152nm,1.0s						
VNA3	**Neumayer Olymp**	**21.19**	**134**	P	**P**	**19 46 44.0**	**+4.7**
VNA1	**Neumayer--Stat**	**21.71**	**133**	P	**P**	**19 46 48.5**	**+3.6**
PLCA	**Paso Flores**	**23.12**	**344**	PcP	**PcP**	**19 50 48.1**	**-0.3**
	8.3nm,1.0s,baz=200,slow=5.5,SNR=3.4						
PLCA				LR	LR	19 55 51.8	
	comp=Z,8μm,18.5s,baz=206,slow=36						
SNAA	**Sanae**	**23.30**	**136**	P	**P**	**19 47 04.5**	**+2.8**
SNAA				S	**S**	**19 51 16.4**	**+3.0**
SNAA	**Sanae**	**23.30**	**136**	P	**P**	**19 47 03.6**	**+1.9**
	591nm,1.0s,baz=270,slow=7.5,SNR=172						
SNAA				S	**S**	**19 51 14.3**	**+0.8**
	5.7nm,0.8s,baz=189,slow=19,SNR=3.3						
SNAA				LR	LR	19 55 27.2	
	comp=Z,2μm,19.8s,baz=264,slow=35						
SNAA	**Sanae**	**23.30**	**136**	*e*P	**P**	**19 47 03.1**	**+1.4**
	855nm,1.1s						
SNAA				*e*S	**S**	**19 51 14.3**	**+0.8**
SNAA	**Sanae**	**23.30**	**136**	*e*P	**P**	**19 47 03.1**	**+1.4**
SNAA				*e*S	**S**	**19 51 14.3**	**+0.8**
SNAA				pmax	pmax		
	comp=Z,855nm,1.1s						
QSPA	**South Pole Qui**	**26.89**	**180**	*e*P	**P**	**19 47 36.0**	**+1.0**
	comp=Z,296nm,0.9s						
LPA	**La Plata**	**28.59**	**8**	*ce*P	**P**	**19 47 50.0**	**-0.1**
LPA				*e*PP	**PnPn**	**19 48 40.0**	**+0.1**
LPA				*e*PPP	PPP	19 48 48.0	
LPA				*e*PCP	**PcP**	**19 51 01.0**	**+0.1**
LPA				*e*S	**S**	**19 52 38.0**	**+0.2**
LPA				*e*PS	**PgS**	**19 52 46.0**	**-14**
LPA				*e*PSP	PSP	19 52 50.0	
LPA				*e*PPS	PPS	19 52 53.0	
LPA				*e*PS		19 53 01.0	
LPA				*e*SS	**SnSn**	**19 53 59.0**	**+1.6**
LPA				*e*SSS	SSS	19 54 15.0	
GO05	**Huala**	**28.93**	**344**	*e*P	**P**	**19 47 54.8**	**+1.6**
	comp=Z,230nm,1.0s						
GO05				LR	LR		
	comp=Z,8μm,18.0s						
PEL	**Peldehue**	**30.63**	**347**	*e*P	**P**	**19 48 10.8**	**+2.5**
	comp=Z,60nm,1.0s						
PEL				LR	LR		
	comp=Z,3μm,19.0s						
PEL	**Peldehue**	**30.63**	**347**	*e*P	**P**	**19 48 10.8**	**+2.5**
PEL				pmax	pmax		
	comp=Z,60nm,1.0s						
PEL				MLR	MLR		
	comp=Z,3μm,19.0s						
GO04	**Tololo Observa**	**33.59**	**347**	*e*P	**P**	**19 48 34.9**	**+0.4**
	comp=Z,60nm,0.9s						
GO04				LR	LR		
	comp=Z,4μm,18.0s						
AGUA	**GUANDACOL**	**34.07**	**351**	*e*P	**P**	**19 48 39.9**	**+1.4**
LCO	**Las Campanas**	**34.73**	**347**	*e*P	**P**	**19 48 43.7**	**-0.7**
	comp=Z,52nm,0.9s						
LCO				LR	LR		
	comp=Z,3μm,18.0s						
LCO	**Las Campanas**	**34.73**	**347**	*e*P	**P**	**19 48 45.8**	**+1.4**
LCO	**Las Campanas**	**34.73**	**347**	*e*P	**P**	**19 48 43.7**	**-0.7**
LCO				pmax	pmax		
	comp=Z,52nm,0.9s						
LCO				MLR	MLR		
	comp=Z,3μm,18.0s						
LCO	**Las Campanas**	**34.73**	**347**	*e*P	**P**	**19 48 45.1**	**+0.8**
VCA	**Vinchina**	**34.79**	**351**	*e*P	**P**	**19 48 46.9**	**+2.0**
CNLB	**Canela**	**34.86**	**18**	*e*P	**P**	**19 48 46.9**	**+1.6**
CYA	**Choya**	**34.96**	**355**	*e*P	**P**	**19 48 46.6**	**+0.5**
SBA	**Scott Base**	**35.92**	**196**	*e*P	**P**	**19 48 55.8**	**+2.0**
	comp=Z,60nm,1.1s						
SBA				LR	LR		
	comp=Z,6μm,21.0s						
SBA	**Scott Base**	**35.92**	**196**	*e*P	**P**	**19 48 55.8**	**+2.0**
SBA				pmax	pmax		
	comp=Z,60nm,1.1s						
SBA				MLR	MLR		
	comp=Z,6μm,21.0s						
GO03	**Copiap**	**36.09**	**348**	*e*P	**P**	**19 48 55.5**	**-0.3**
	comp=Z,54nm,1.2s						
GO03				LR	LR		
	comp=Z,4μm,18.0s						
AHML	**Horco Molle**	**36.59**	**356**	*e*P	**P**	**19 49 01.2**	**+1.1**
ITAB	**Concordia**	**36.74**	**16**	*e*P	**P**	**19 49 01.9**	**+0.6**
VNDA	**Vanda**	**36.78**	**195**	P	**P**	**19 49 02.2**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=155,slow=6.9,SNR=16						
VNDA	**Vanda**	**36.78**	**195**	*e*P	**P**	**19 49 03.1**	**+1.9**
	comp=Z,33nm,1.3s						
SYO	**Syowa Base**	**37.05**	**144**	⇑*e*pP	**P**	**19 49 03.6**	**+0.1**
SYO	**Syowa Base**	**37.05**	**144**	⇓*i*sP	**P**	**19 49 05.0**	**+1.5**
SYO	**Syowa Base**	**37.05**	**144**	⇓*i*PnPn	PnPn	19 50 20.0	-7.9
SYO	**Syowa Base**	**37.05**	**144**	⇑*i*PP	PP	19 50 22.0	-5.7
CPUP	**Villa Florida**	**37.16**	**8**	P	**P**	**19 49 04.4**	**-0.6**
	comp=Z,32nm,1.0s,baz=187,slow=6.9,SNR=22						
CPUP				ScP	**ScP**	**19 55 12.5**	**+1.5**
	comp=Z,10nm,0.9s,baz=185,slow=3.9,SNR=8.3						
CPUP				LR	LR	20 03 50.6	
	comp=Z,4μm,21.4s,baz=180,slow=36						
CPUP	**Villa Florida**	**37.16**	**8**	*e*P	**P**	**19 49 04.3**	**-0.6**
CPUP				*e*pP	**P**	**19 49 04.3**	**-0.6**
CPUP	**Villa Florida**	**37.16**	**8**	*e*P	**P**	**19 49 04.3**	**-0.6**
CPUP				*e**PP	**P**	**19 49 04.3**	**-0.6**
CPUP	**Villa Florida**	**37.16**	**8**	*e*P	**P**	**19 49 04.3**	**-0.6**
GO02	**Mina Guanaco**	**38.44**	**350**	*e*P	**P**	**19 49 16.3**	**+0.2**
	comp=Z,115nm,1.0s						
GO02				LR	LR		
	comp=Z,5μm,21.0s						
SLA	**San Lorenzo**	**38.65**	**356**	*e*P	**P**	**19 49 18.6**	**+0.9**
AZAP	**Zapla**	**39.13**	**356**	*e*P	**P**	**19 49 22.3**	**+0.5**
PTGB	**Pitanga**	**39.23**	**15**	*e*P	**P**	**19 49 23.6**	**+1.1**
PB10	**IPOC Station P**	**40.16**	**349**	*e*P	**P**	**19 49 29.7**	**-0.4**
	comp=Z,113nm,0.8s						
PB10				LR	LR		
	comp=Z,4μm,19.0s						
PB10	**IPOC Station P**	**40.16**	**349**	*e*P	**P**	**19 49 31.2**	**+1.1**
PB15	**IPOC Station P**	**40.37**	**350**	*e*P	**P**	**19 49 33.6**	**+1.5**
PB05	**IPOC Station P**	**40.78**	**349**	*e*P	**P**	**19 49 36.8**	**+1.4**
PB06	**IPOC Station P**	**40.88**	**350**	*e*P	**P**	**19 49 36.7**	**+0.5**
FRTB	**Fartura**	**40.91**	**18**	*e*P	**P**	**19 49 35.4**	**-1.0**
LVC	**Limon Verde**	**40.92**	**351**	*e*P	**P**	**19 49 37.8**	**+0.9**
	comp=Z,88nm,0.8s						
LVC				LR	LR		
	comp=Z,5μm,20.0s						
LVC	**Limon Verde**	**40.92**	**351**	*e*P	**P**	**19 49 37.7**	**+0.9**
LVC	**Limon Verde**	**40.92**	**351**	*e*P	**P**	**19 49 37.8**	**+0.9**
LVC				pmax	pmax		
	comp=Z,88nm,0.8s						
LVC				MLR	MLR		
	comp=Z,5μm,20.0s						
LVC	**Limon Verde**	**40.92**	**351**	*e*P	**P**	**19 49 37.3**	**+0.4**
SPB	**Sao Paulo**	**41.00**	**21**	*e*P	**P**	**19 49 37.0**	**0.0**
	comp=Z,127nm,1.1s						
SPB				LR	LR		
	comp=Z,2μm,22.0s						
SPB	**Sao Paulo**	**41.00**	**21**	*e*P	**P**	**19 49 37.6**	**+0.6**
TRCB	**Terra Rica**	**41.07**	**14**	*e*P	**P**	**19 49 37.9**	**+0.2**
YJA	**Yavi**	**41.18**	**356**	*e*P	**P**	**19 49 40.7**	**+1.6**
PB04	**IPOC Station P**	**41.29**	**349**	*e*P	**P**	**19 49 41.2**	**+1.6**
	comp=Z,82nm,1.0s						
PB04				LR	LR		
	comp=Z,4μm,18.0s						
PB04	**IPOC Station P**	**41.29**	**349**	⇓*e*P	**P**	**19 49 39.9**	**+0.2**
PB03	**IPOC Station P**	**41.54**	**350**	*e*P	**P**	**19 49 42.7**	**+1.0**
PARB	**Paraibuna**	**41.56**	**24**	*e*P	**P**	**19 49 41.8**	**0.0**
PB09	**IPOC Station P**	**41.75**	**351**	*e*P	**P**	**19 49 44.5**	**+1.1**
PB02	**IPOC Station P**	**42.28**	**350**	⇓*e*P	**P**	**19 49 48.9**	**+1.3**
PB01	**IPOC Station P**	**42.52**	**350**	*e*P	**P**	**19 49 50.0**	**+0.4**
	comp=Z,66nm,0.9s						
PB01				LR	LR		
	comp=Z,3μm,22.0s						
VAS01	**Vassouras-RJ**	**43.01**	**26**	*e*P	**P**	**19 49 53.5**	**0.0**
AQDB	**Aquidauana**	**43.08**	**9**	*e*P	**P**	**19 49 53.9**	**-0.2**
BB19B	**Bebedouro**	**43.30**	**19**	*e*P	**P**	**19 49 55.5**	**-0.4**
PB08	**IPOC Station P**	**43.39**	**351**	*e*P	**P**	**19 49 58.3**	**+1.3**
MAW	**Mawson**	**43.62**	**153**	P	**P**	**19 49 58.6**	**+0.7**
	comp=Z,68nm,0.9s,baz=210,slow=8.2,SNR=51						
MAW				PcP	**PcP**	**19 51 44.7**	**-0.2**
	comp=Z,19nm,0.8s,baz=186,slow=4.4,SNR=5.8						
MAW				LR	LR	20 08 09.3	
	comp=Z,4μm,20.6s,baz=217,slow=36						
PB11	**IPOC Station P**	**43.80**	**350**	*e*P	**P**	**19 50 00.6**	**+0.5**
	comp=Z,128nm,0.9s						
PB11				LR	LR		
	comp=Z,3μm,22.0s						
PB11	**IPOC Station P**	**43.80**	**350**	*e*P	**P**	**19 50 01.1**	**+1.0**
CAM01	**Campos-RJ**	**43.82**	**29**	*e*P	**P**	**19 50 00.7**	**+0.7**
GO01	**Chusmiza**	**43.86**	**351**	*e*P	**P**	**19 50 02.0**	**+1.1**
	comp=Z,50nm,0.8s						
GO01				LR	LR		

	comp=Z,3µm,20.0s						
PSGCX	Pisagua	44.00	350	eP	P	19 50 02.5	+0.9
MNMC	Minye Minye	44.42	351	eP	P	19 50 05.5	+0.3
	comp=Z,94nm,1.0s						
MNMC				LR	LR		
	comp=Z,3µm,20.0s						
MNMCX	Minye Minye	44.42	351	eP	P	19 50 07.6	+2.4
PB12	IPOC Station P	44.99	350	eP	P	19 50 10.4	+0.9
ALF01	Guarapari-ES	45.20	29	eP	P	19 50 11.9	+0.9
PB16	IPOC Station P	45.21	351	eP	P	19 50 13.2	+1.4
PMNB	Patos De Minas	46.11	21	eP	P	19 50 19.0	+0.6
SJMB	Sao Joao De Ma	46.95	28	eP	P	19 50 25.6	+0.8
RPN	Rapa Nui	47.13	298	LR	LR	20 04 36.1	
	comp=Z,4µm,21.1s,baz=136,slow=29						
LPAZ	La Paz	47.15	353	P	P	19 50 27.8	+0.7
	comp=Z,16nm,0.6s,baz=154,slow=7.9,SNR=37						
LPAZ				PcP	PcP	19 51 59.1	+0.5
	comp=Z,27nm,0.9s,baz=135,slow=4.4,SNR=5.1						
LPAZ				ScP	ScP	19 55 53.5	+1.7
	comp=Z,5.6nm,1.1s,baz=156,slow=3.8,SNR=4.3						
LPAZ				LR	LR	20 12 07.4	
	comp=Z,5µm,18.4s,baz=164,slow=38						
LPAZ	La Paz	47.15	353	eP	P	19 50 27.6	+0.5
	comp=Z,37nm,0.9s						
LPAZ				ePcP	PcP	19 52 00.7	+2.1
LPAZ				eScP	ScP	19 55 53.7	+1.9
LPAZ	La Paz	47.15	353	eP	P	19 50 28.0	+0.9
LPAZ	La Paz	47.15	353	eP	P	19 50 27.6	+0.5
LPAZ				e		19 52 00.7	
LPAZ				pmax	pmax		
	comp=Z,37nm,0.9s						
LPAZ	La Paz	47.15	353	eP	P	19 50 27.9	+0.7
BDFB	Brasilia	48.71	19	P	P	19 50 38.1	-0.6
	comp=Z,76nm,0.9s,baz=188,slow=4.8,SNR=27						
BDFB				LR	LR	20 10 32.1	
	comp=Z,2µm,20.5s,slow=35						
BDFB	Brasilia	48.71	19	eP	P	19 50 38.0	-0.6
	comp=Z,91nm,1.0s						
BDFB	Brasilia	48.71	19	eP	P	19 50 38.0	-0.6
BDFB				pmax	pmax		
	comp=Z,91nm,1.0s						
CASY	Casey	50.59	176	eP	P	19 50 53.0	+0.8
	comp=Z,82nm,1.0s						
CASY				ePcP	PcP	19 52 09.8	+0.2
NNA	Nana	52.26	342	eP	P	19 51 05.7	+0.3
	comp=Z,157nm,1.8s						
NNA				LR	LR		
	comp=Z,2µm,20.0s						
NNA	Nana	52.26	342	eP	P	19 51 05.7	+0.3
NNA				pmax	pmax		
	comp=Z,157nm,1.8s						
NNA				MLR	MLR		
	comp=Z,2µm,20.0s						
MCQ	Macquarie Isla	58.14	207	PFAKE		19 52 00.0	+13
MCQ				LR	LR		
	comp=Z,4µm,19.0s						
SUR	Sutherland	58.70	100	eP	P	19 51 52.1	+0.3
	comp=Z,79nm,1.0s						
SUR				LR	LR		
	comp=Z,4µm,18.0s						
CRZF	Crozet Islands	58.98	133	eP	P	19 51 54.4	+1.1
	comp=Z,366nm,1.5s						
RCBR	Riachuelo	60.59	31	eP	P	19 52 05.8	+1.1
	comp=Z,22nm,1.3s						
RCBR				LR	LR		
	comp=Z,1µm,20.0s						
RCBR	Riachuelo	60.59	31	eP	P	19 52 05.8	+1.1
RCBR				pmax	pmax		
	comp=Z,22nm,1.3s						
RCBR				MLR	MLR		
	comp=Z,1µm,20.0s						
PTGA	Pitinga	62.48	3	eP	P	19 52 16.2	-1.2
	comp=Z,29nm,1.0s						
PTGA				LR	LR		
	comp=Z,3µm,18.0s						
PTGA	Pitinga	62.48	3	eP	P	19 52 16.2	-1.2
BOSA	Boshof	63.89	102	P	P	19 52 26.7	-0.2
	comp=Z,84nm,0.8s,baz=207,slow=6.0,SNR=88						
BOSA				LR	LR	20 16 14.4	
	comp=Z,2µm,18.3s,baz=210,slow=32						
BOSA	Boshof	63.89	102	eP	P	19 52 26.4	-0.5
	comp=Z,102nm,0.9s						
BOSA	Boshof	63.89	102	eP	P	19 52 26.4	-0.5
BOSA				pmax	pmax		
	comp=Z,102nm,0.9s						
PTLC	Puerto Leguiza	64.00	346	eP	P	19 52 24.8	-2.7
WHZ	Wether Hill Ro	64.00	217	eP	P	19 52 28.6	+1.3
	comp=Z,72nm,1.0s						
ODZ	Otahua Downs	64.03	219	eP	P	19 52 28.9	+1.5
	comp=Z,109nm,1.2s						
MLZ	Mavora Lakes	64.44	217	eP	P	19 52 30.9	+0.7
	comp=Z,263nm,1.7s						
DCZ	Deep Cove	64.61	216	eP	P	19 52 32.7	+1.5
	comp=Z,91nm,0.9s						
MQZ	McQueen’s Vall	64.67	221	eP	P	19 52 32.4	+0.8
	comp=Z,108nm,1.1s						
MQZ				LR	LR		
	comp=Z,4µm,19.0s						
WKZ	Wanaka	64.69	218	eP	P	19 52 33.2	+1.4
	comp=Z,113nm,1.1s						
LBZ	Lake Benmore	64.77	219	eP	P	19 52 33.4	+1.2
	comp=Z,93nm,1.2s						
CRLZ	Canterbury Las	64.80	221	eP	P	19 52 34.8	+2.3
	comp=Z,177nm,1.5s						
RPZ	Rata Peaks	65.13	220	P	P	19 52 35.6	+0.9
	comp=Z,80nm,0.9s,baz=175,slow=6.7,SNR=21						
RPZ	Rata Peaks	65.13	220	eP	P	19 52 35.5	+0.9
	comp=Z,121nm,1.1s						
OXZ	Oxford	65.20	221	eP	P	19 52 35.9	+0.8
	comp=Z,122nm,1.1s						
WIN	Windhoek	65.47	92	eP	P	19 52 36.9	-0.5
	comp=Z,147nm,1.0s						
WIN				LR	LR		
	comp=Z,3µm,22.0s						
WIN	Windhoek	65.47	92	eP	P	19 52 36.9	-0.5
WIN				pmax	pmax		
	comp=Z,147nm,1.0s						
WIN				MLR	MLR		
	comp=Z,3µm,22.0s						
FLOC	Florencia	65.48	346	eP	P	19 52 38.7	+1.5
KHZ	Kahutara	65.58	222	eP	P	19 52 38.8	+1.3
	comp=Z,88nm,1.3s						
LTZ	Lake Taylor	65.62	221	eP	P	19 52 38.9	+1.0
	comp=Z,184nm,1.0s						
FOZ	Fox Glacier	65.65	219	eP	P	19 52 38.1	+0.1
	comp=Z,90nm,1.0s						
PAYG	Puerto Ayora	65.80	329	eP	P	19 52 41.7	+2.5
	comp=Z,64nm,1.0s						
PAYG				LR	LR		
	comp=Z,1µm,19.0s						
MACC	Macarena, Meta	65.85	348	eP	P	19 52 38.7	-0.8
BBAC	Balboa, Cauca	66.11	344	eP	P	19 52 42.1	+0.6
SOTA	Rioblanco	66.14	345	eP	P	19 52 46.7	+4.7
SNZO	South Karori	66.22	224	PFAKE		19 52 50.0	+8.3
SNZO				LR	LR		
	comp=Z,2µm,18.0s						
BFZ	Birch Farm	66.31	225	eP	P	19 52 43.2	+0.9
	comp=Z,136nm,0.8s						
THZ	Tophouse	66.36	222	eP	P	19 52 42.7	0.0
	comp=Z,142nm,0.9s						
THZ				LR	LR		
	comp=Z,2µm,20.0s						
POPC	Popayan, Colom	66.55	345	eP	P	19 52 43.4	-0.9
LBTB	Lobatse	67.16	100	eP	P	19 52 47.2	-0.8
	comp=Z,163nm,0.9s						
LBTB	Lobatse	67.16	100	eP	P	19 52 47.2	-0.8
LBTB				pmax	pmax		
	comp=Z,163nm,0.9s						
GRGC	Isla de Gorgon	67.19	343	eP	P	19 52 50.7	+2.6
PRAC	Prado	67.51	347	eP	P	19 52 49.4	-0.8
BKZ	Black Stump Fm	67.60	226	eP	P	19 52 52.0	+1.4
	comp=Z,94nm,1.0s						
ORTC	Ortega, Tolima	67.74	346⇑	eP	P	19 52 52.7	+1.1
VILC	Villavicencio,	67.78	348	eP	P	19 52 52.0	+0.1
YOTC	Yotoco, Valle	67.93	345	eP	P	19 52 52.0	-0.9
TBI	Tubuai	68.02	262	eS	S	20 01 53.3	+1.3
	comp=Z,392nm,26.2s						
TBI	Tubuai	68.02	262	eLR	LR	20 13 24.3	
	comp=Z,2µm,27.2s						
TBI	Tubuai	68.02	262	eT	T	21 06 38.9	
	comp=Z,14nm,0.3s						
MALC	Bahia Malaga	68.08	344	eP	P	19 52 53.4	-0.3
URZ	Urewera	68.22	227	P	P	19 52 55.4	+1.0
	comp=Z,40nm,0.9s,baz=168,slow=9.3,SNR=11						
URZ	Urewera	68.22	227	eP	P	19 52 54.8	+0.4
	comp=Z,93nm,1.2s						
URZ				LR	LR		
	comp=Z,1µm,18.0s						
CHIC	Chingaza	68.30	348	eP	P	19 52 56.7	+1.1
MXZ	Matakaoa Point	68.45	228	eP	P	19 52 56.1	+0.3
	comp=Z,183nm,1.3s						
MXZ				LR	LR		
	comp=Z,2µm,19.0s						
ROSC	El Rosal	68.56	347	P	P	19 52 58.3	+1.1
	comp=Z,16nm,0.8s,baz=115,slow=0.8,SNR=7.3						
ROSC				LR	LR	20 24 01.9	
	comp=Z,1µm,20.6s,baz=196,slow=37						
ROSC	El Rosal	68.56	347	eP	P	19 52 59.7	+2.6
	comp=Z,18nm,0.8s						
TSUM	Tsumeb	68.62	90	eP	P	19 52 57.3	0.0
	comp=Z,32nm,0.9s						
TSUM				LR	LR		
	comp=Z,2µm,22.0s						
CTAB	Cerro Tablazo,	68.72	348	eP	P	19 53 05.4	+7.1
HIZ	Hauiti	68.72	225	eP	P	19 52 58.6	+1.0
	comp=Z,122nm,1.0s						
HIZ				LR	LR		
	comp=Z,2µm,21.0s						
RREF	El Recreo	68.73	346	eP	P	19 52 58.7	+0.2
PLMC	San Jos del P	68.83	345	eP	P	19 52 59.4	+0.9
GUY2C	Guyana, Caldas	69.05	346	eP	P	19 53 00.0	-0.3
NORC	Norcasia	69.33	347	eP	P	19 52 56.7	-4.9
RUSC	La Rusia	69.49	349	eP	P	19 53 01.4	-1.7
HELC	Santa Helena	70.02	346	eP	P	19 53 01.4	-4.8
BARC	Barichara	70.19	349	eP	P	19 53 05.4	-1.7
PTBC	PUERTO BERRIO,	70.25	347	eP	P	19 53 04.0	-3.2
ELOV	Elorza	70.33	353	eP	P	19 53 06.0	-1.6
BRRC	Barranca, Sant	70.75	348	eP	P	19 53 07.3	-2.8
DBBC	Dabeiba	70.91	346	eP	P	19 53 13.3	+2.1
ZARC	Zaragoza, Cauc	71.24	347	eP	P	19 53 12.0	-1.1
TAU	Tasmania Unive	71.46	203	eP	P	19 53 14.3	+0.1
	comp=Z,306nm,2.0s						
TAU				LR	LR		
	comp=Z,3µm,20.0s						
TAU	Tasmania Unive	71.46	203	eP	P	19 53 14.3	+0.1
TAU				pmax	pmax		
	comp=Z,306nm,2.0s						
TAU				MLR	MLR		
	comp=Z,3µm,20.0s						
SOCV	Socops	71.68	351	eP	P	19 53 15.3	-0.5
OUZ	Omahuta	72.14	226	eP	P	19 53 18.4	-0.1
	comp=Z,135nm,0.9s						
OUZ				LR	LR		
	comp=Z,2µm,19.0s						
MEH	Mehetia	72.17	266	eP	P	19 53 22.4	+3.5
	comp=Z,61nm,1.1s						
MEH	Mehetia	72.17	266	eT	T	21 11 50.2	
	comp=Z,77nm,0.3s						
AZU	Azuero	72.19	342	eP	P	19 53 18.7	-0.2
SDV	Santo Domingo	72.27	352	eP	P	19 53 20.5	+0.9
	comp=Z,38nm,1.0s						
SDV				LR	LR		
	comp=Z,2µm,18.0s						
SMLC	San Martn de	72.45	348	eP	P	19 53 18.0	-2.4
TVO	Taravao	72.79	265	eP	P	19 53 26.6	+4.0
	comp=Z,38nm,1.0s						
TIAR	Tiarei	73.03	265	eP	P	19 53 27.9	+3.9
	comp=Z,46nm,1.0s						
PAE	Paea	73.04	265	eP	P	19 53 27.6	+3.6
	comp=Z,14nm,1.2s						
PPTF	Pamatai, Papee	73.10	265	eP	P	19 53 26.4	+1.9
	comp=Z,238nm,1.5s						
PPT2	Papeete2	73.10	265	eP	P	19 53 28.3	+3.8
	comp=Z,60nm,1.0s						
PPT2				eS	S	20 02 52.8	+1.2
	comp=Z,1µm,24.5s						
PPT2				eLQ	LQ	20 12 39.6	
	comp=Z,1µm,27.8s						
PPT2				eLR	LR	20 15 44.8	
	comp=Z,3µm,22.2s,baz=154						
PPT	Papeete	73.12	265	P	P	19 53 28.0	+3.5
	comp=Z,89nm,1.0s,baz=158,slow=18,SNR=4.4						
PPT				LR	LR	20 18 14.0	
	comp=Z,2µm,18.5s,baz=168,slow=30						
PPT	Papeete	73.12	265	P	P	19 53 28.0	+3.5
PPT				pmax	pmax		
	comp=Z,77nm,1.0s						
PPT				MLR	MLR		
	comp=Z,2µm,18.5s						
BCIP	Isla Barro Col	73.48	342	eP	P	19 53 26.6	+0.1
	comp=Z,464nm,1.9s						
BCIP				LR	LR		
	comp=Z,900nm,20.0s						
BCIP	Isla Barro Col	73.48	342	eP	P	19 53 26.6	+0.1
BCIP				pmax	pmax		
	comp=Z,464nm,1.9s						
BCIP				MLR	MLR		
	comp=Z,900nm,20.0s						
ARGC	Ariguani, Magd	73.52	348	eP	P	19 53 30.6	+3.9
CODC	Agustn Codazz	73.52	349	eP	P	19 53 26.6	-0.1
SJCC	San Jacinto, C	73.65	347	eP	P	19 53 26.0	-1.6
RAR	Rarotonga	74.43	254	P	P	19 53 30.5	-1.6
	comp=Z,33nm,1.0s,baz=88,slow=8.6,SNR=3.6						
RAR				LR	LR	20 17 40.4	
	comp=Z,678nm,21.6s,baz=184,slow=29						
PMOR	Pomariorio Ree	74.62	267	eT	T	21 14 49.3	
	comp=Z,7.5nm,0.2s						
RAO	Raoul Island	74.62	235	eP	P	19 53 35.7	+2.5
	comp=Z,807nm,1.2s						
RAO	Raoul Island	74.62	235	eP	P	19 53 35.7	+2.5
RAO				pmax	pmax		
	comp=Z,807nm,1.2s						
HDC	Heredia	74.96	338	eP	P	19 53 37.5	+2.2
	comp=Z,63nm,0.5s						
HDC				LR	LR		
	comp=Z,600nm,19.0s						
GRGR	Grenville	75.23	1	eP	P	19 53 37.4	+0.8
	comp=Z,345nm,1.4s						
GRGR				LR	LR		
	comp=Z,2µm,21.0s						
JTS	Las Juntas de	75.39	337	LR	LR	20 21 44.2	
	comp=Z,456nm,18.4s,baz=222,slow=32						
JTS	Las Juntas de	75.39	337	eP	P	19 53 38.5	+0.9
	comp=Z,38nm,1.0s						
JTS				LR	LR		
	comp=Z,700nm,22.0s						
JTS	Las Juntas de	75.39	337	eP	P	19 53 38.5	+0.9
JTS				pmax	pmax		
	comp=Z,38nm,1.0s						
JTS				MLR	MLR		
	comp=Z,700nm,22.0s						
BBGH	Gun Hill	76.27	3	eP	P	19 53 43.4	+0.8
	comp=Z,562nm,1.1s						
BBGH				LR	LR		
	comp=Z,3µm,20.0s						
TAOE	Nuku Hiva Isla	76.55	277	eP	P	19 53 43.8	-0.7
	comp=Z,160nm,1.1s						
LSZ	Lusaka	76.84	98	eP	P	19 53 46.1	0.0
	comp=Z,90nm,1.1s						
LSZ				LR	LR		
	comp=Z,2µm,20.0s						
TOO	Toolangi	76.97	203	eP	P	19 53 46.1	-0.4
	comp=Z,17nm,0.6s						
TOO				LR	LR		
	comp=Z,2µm,18.0s						
TOO	Toolangi	76.97	203	eP	P	19 53 46.1	-0.4
TOO				pmax	pmax		
	comp=Z,17nm,0.6s						
TOO				MLR	MLR		
	comp=Z,2µm,18.0s						
ACON	Acoyapa	77.06	337	eP	P	19 53 46.0	-1.1
	comp=Z,22nm,0.7s						
ESPN	Las Esperanzas	77.14	338	eP	P	19 53 46.1	-1.4
	comp=Z,108nm,1.0s						
FDF	Fort de France	77.82	1	eP	P	19 53 51.6	+0.2
	comp=Z,168nm,1.2s						
FDF				LR	LR		
	comp=Z,2µm,22.0s						
FDF	Fort de France	77.82	1	eP	P	19 53 51.6	+0.2
FDF				pmax	pmax		
	comp=Z,168nm,1.2s						
FDF				MLR	MLR		
	comp=Z,2µm,22.0s						
ESTN	Estel	78.38	336	eP	P	19 53 52.6	-1.9
	comp=Z,77nm,0.6s						
ESTN				LR	LR		
	comp=Z,300nm,18.0s						
CSGN	Cosiguina Volc	78.48	335	eP	P	19 53 53.9	-1.2
	comp=Z,202nm,1.6s						
CAN	Canberra	78.50	206	eP	P	19 53 54.0	-1.2
	comp=Z,24nm,1.2s						
CAN				LR	LR		
	comp=Z,2µm,19.0s						
CAN	Canberra	78.50	206	eP	P	19 53 54.0	-1.2
CAN				pmax	pmax		
	comp=Z,24nm,1.2s						
CAN				MLR	MLR		
	comp=Z,2µm,19.0s						
TGUH	Tegucigalpa,Un	79.48	336	eP	P	19 54 00.6	-0.1
	comp=Z,83nm,0.9s						
TGUH				LR	LR		
	comp=Z,900nm,22.0s						
LHI	Lord Howe Isla	79.84	215	PFAKE		19 54 10.0	+7.6
LHI				LR	LR		
	comp=Z,700nm,20.0s						
SKI	Saint Kitts	80.40	360	PFAKE		19 54 20.0	+15
SKI				LR	LR		
	comp=Z,2µm,19.0s						
SEUS	St. Eustatius	80.56	360	PFAKE		19 54 20.0	+14
SEUS				LR	LR		
	comp=Z,2µm,18.0s						
SABA	Saba	80.69	359	PFAKE		19 54 20.0	+13
SABA				LR	LR		
	comp=Z,3µm,22.0s						
ANWB	Willy Bob	80.73	1	PFAKE		19 54 20.0	+13
ANWB				LR	LR		
	comp=Z,2µm,22.0s						
SMRT	St. Maarten	81.11	360	eP	P	19 54 08.0	-1.2
	comp=Z,205nm,1.4s						
SMRT				LR	LR		
	comp=Z,2µm,18.0s						
OBIP	Obispado Ponce	81.17	356	eP	P	19 54 08.3	-1.1
	comp=Z,67nm,1.2s						
MTP	Monte Pirata	81.19	357	eP	P	19 54 09.8	+0.2
	comp=Z,24nm,0.9s						
SJG	San Juan	81.22	357	LR	LR	20 34 11.8	
	comp=Z,1µm,18.1s,baz=158,slow=39						
SJG	San Juan	81.22	357	PFAKE		19 54 20.0	+10
SJG				LR	LR		
	comp=Z,1µm,21.0s						
LIC	Lamto	81.69	58	ePKP1	P	19 54 16.6	+4.2
	comp=Z,100nm,1.4s						
ABPO	Ambohimpanom	81.70	116	eP	P	19 54 14.0	+1.2
	comp=Z,18nm,1.1s						
ABPO				LR	LR		
	comp=Z,2µm,19.0s						
ABPO	Ambohimpanom	81.70	116	eP	P	19 54 14.0	+1.2
ABPO				pmax	pmax		
	comp=Z,18nm,1.1s						
ABPO				MLR	MLR		
	comp=Z,2µm,19.0s						
KIC	Kosan Boka	81.93	58	ePKP1	P	19 54 17.1	+3.4
	comp=Z,204nm,1.9s						
TIC	Toumodi	82.08	58	ePKP1	P	19 54 17.8	+3.3
MTDJ	Mount Denham	82.13	346	eP	P	19 54 16.5	+1.9
	comp=Z,111nm,1.3s						
MTDJ				LR	LR		
	comp=Z,800nm,20.0s						
DBIC	Dimbokro	82.17	58	P	P	19 54 14.5	-0.4
	comp=Z,4.4nm,0.8s,baz=166,slow=3.8,SNR=3.3						
DBIC				LR	LR	20 23 09.3	
	comp=Z,1µm,21.5s,baz=186,slow=30						
SDDR	Presa de Saban	82.32	352	eP	P	19 54 16.6	+1.0
	comp=Z,30nm,1.0s						
SDDR				LR	LR		
	comp=Z,1µm,22.0s						
CCIG	Comitan	82.62	331	eP	P	19 54 17.4	+0.1
	comp=Z,40nm,1.0s						
CCIG				LR	LR		
	comp=Z,1µm,22.0s						
ARMA	Armidale	82.69	209	eP	P	19 54 17.4	-0.3
	comp=Z,34nm,1.1s						
ARMA				LR	LR		
	comp=Z,1µm,18.0s						
STKA	Stephens Creek	83.18	201	P	P	19 54 18.9	-1.1
	comp=Z,18nm,0.8s,baz=148,slow=5.7,SNR=13						
STKA				LR	LR	20 26 39.8	
	comp=Z,2µm,20.6s,baz=160,slow=32						
STKA	Stephens Creek	83.18	201	P	P	19 54 19.0	-1.1
GTBY	Guantanamo Bay	83.56	348	PFAKE		19 54 30.0	+8.1
GTBY				LR	LR		
	comp=Z,700nm,20.0s						
CMIG	Matias Romero	84.02	329	LR	LR	20 26 01.8	
	comp=Z,426nm,19.1s,baz=136,slow=32						
NWAO	Narrogin (SRO)	84.07	180	P	P	19 54 23.3	-1.4
	comp=Z,52nm,0.8s,baz=163,slow=4.7,SNR=13						
NWAO	Narrogin (SRO)	84.07	180	eP	P	19 54 23.5	-1.2
	comp=Z,65nm,0.8s						
NWAO	Narrogin (SRO)	84.07	180	eP	P	19 54 23.5	-1.2
NWAO				pmax	pmax		
	comp=Z,65nm,0.8s						
GRTK	Grand Turk	84.82	352	PFAKE		19 54 40.0	+12
GRTK				LR	LR		
	comp=Z,1µm,21.0s						
TLIG	Tlapa	85.37	326	eP	P	19 54 32.4	+1.1
	comp=Z,18nm,0.9s						
TLIG				LR	LR		
	comp=Z,1µm,20.0s						
TEIG	Tepich	85.69	336	eP	P	19 54 32.0	-0.6
	comp=Z,66nm,0.9s						
TEIG				LR	LR		
	comp=Z,700nm,20.0s						
FORT	Forrest	85.83	189	eP	P	19 54 32.3	-1.2
	comp=Z,103nm,0.8s						
DZM	Mont Dzumac	86.62	225	eLR	LR	20 22 04.9	
	comp=Z,2µm,23.4s						
DZM	Mont Dzumac	86.62	225	P	P	19 54 39.1	+1.5
	comp=Z,17nm,0.9s,baz=98,slow=7.1,SNR=3.3						
DZM	Mont Dzumac	86.62	225	eP	P	19 54 38.5	+0.9
	comp=Z,94nm,1.6s						
MYIG	Mrida	86.68	335	PFAKE		19 54 50.0	+12
MYIG				LR	LR		
	comp=Z,900nm,22.0s						
LVIG	Laguna Verde	86.92	328	PFAKE		19 54 50.0	+11
LVIG				LR	LR		
	comp=Z,600nm,19.0s						
EIDS	Eidsvold	87.68	210	PFAKE		19 54 50.0	+7.4
EIDS				LR	LR		
	comp=Z,1µm,18.0s						
059Z	Ave Maria	90.60	343	P	P	19 54 58.6	+2.6
	baz=172						
TOA0	Torodi Ar. Sit	90.63	61	eP	P	19 54 56.8	+0.3
TORD	Torodi Ar. Bea	90.63	61	P	P	19 54 54.6	-1.9
	comp=Z,14nm,0.9s,baz=205,slow=4.9,SNR=22						
TORD				LR	LR	20 28 20.5	
	comp=Z,2µm,20.5s,baz=280,slow=31						
MBAR	Mbarara	90.97	93	eP	P	19 55 00.2	+1.8
	comp=Z,49nm,1.0s						
MBAR				LR	LR		
	comp=Z,2µm,20.0s						
MBAR	Mbarara	90.97	93	diP	P	19 55 00.4	+2.0
MBAR				pmax	pmax		
	comp=Z,32nm,0.9s						
058A	Arcadia	91.36	343	P	P	19 55 01.7	+2.2
	baz=172						
ZAIG	Zacatecas	91.39	324	eP	P	19 54 59.2	-0.9
	comp=Z,22nm,1.0s						
ZAIG				LR	LR		
	comp=Z,1µm,19.0s						
ASAR	Alice Springs	92.32	195	P	P	19 55 02.8	-1.7
	comp=Z,14nm,1.0s,baz=166,slow=4.0,SNR=42						
ASAR				PP	PP	19 58 43.1	-1.1
	comp=Z,0.4nm,0.7s,baz=171,slow=7.7,SNR=4.6						
ASAR				PKKPbc	PKKPbc	20 12 16.0	+0.5
	comp=Z,0.6nm,0.7s,baz=355,slow=2.1,SNR=5.9						
ASAR				LR	LR	20 33 52.9	
	comp=Z,676nm,21.0s,baz=175,slow=34						
AS31	Alice Springs	92.32	195	eP	P	19 55 03.0	-1.5
	comp=Z,5.7nm,1.1s						
LNIG	Linares	92.62	327	eP	P	19 55 05.2	-0.2
	comp=Z,27nm,0.9s						
LNIG				LR	LR		
	comp=Z,600nm,20.0s						
NAI	Nairobi	93.09	99	PFAKE		19 55 20.0	+12
NAI				LR	LR		
	comp=Z,3µm,20.0s						
KMBO	Kilima Mbogo	93.42	99	P	P	19 55 11.8	+1.9
	comp=Z,9.8nm,1.1s,baz=225,slow=1.3,SNR=11						
KMBO	Kilima Mbogo	93.42	99	eP	P	19 55 08.8	-1.0
	comp=Z,29nm,1.3s						
KMBO				LR	LR		
	comp=Z,3µm,20.0s						
KMBO	Kilima Mbogo	93.42	99	eP	P	19 55 08.8	-1.0
KMBO				pmax	pmax		
	comp=Z,29nm,1.3s						
KMBO				MLR	MLR		
	comp=Z,3µm,20.0s						
658A	Bunnell	93.62	344	PFAKE		19 55 20.0	+10
658A				LR	LR		
	comp=Z,2µm,21.0s						

656A	Willston	93.73	343	PFAKE		19 55 20.0	+10
656A				LR	LR		
	comp=Z,700nm,20.0s						
CTA	Charters Tower	93.83	207	P	P	19 55 12.2	+0.8
	comp=Z,11nm,0.9s,baz=202,slow=4.2,SNR=5.3						
CTAO	Charters Tower	93.83	207	PFAKE		19 55 20.0	+8.6
CTAO				LR	LR		
	comp=Z,2µm,19.0s						
657A	Interlachen	93.86	343	P	P	19 55 12.3	+1.3
	baz=171						
556A	Lake Butler	94.34	343	P	P	19 55 15.4	+2.2
	baz=171						
555A	McAlpin	94.53	342	PFAKE		19 55 30.0	+16
555A				LR	LR		
	comp=Z,800nm,18.0s						
454A	Quitman	95.21	342	P	P	19 55 18.0	+0.8
	baz=171						
PSAC1	Pilbara Seismi	95.40	182	PFAKE		19 55 30.0	+11
PSAC1				LR	LR		
	comp=Z,2µm,20.0s						
452A	Marianna	95.57	341	P	P	19 55 19.4	+0.6
	baz=170						
833A	Chaparral WMA,	95.89	328	PFAKE		19 55 30.0	+10
833A				LR	LR		
	comp=Z,500nm,22.0s						
WB2	Warramunga Arr	95.94	196	PFAKE		19 55 30.0	+8.9
WB2				LR	LR		
	comp=Z,2µm,20.0s						
WRA	Warramunga Arr	95.94	196	P	P	19 55 19.0	-2.1
	comp=Z,6.1nm,0.6s,baz=172,slow=3.7,SNR=28						
WRA	Warramunga Arr	95.94	196	P	P	19 55 19.0	-2.1
WRAB	Tennant Creek	95.95	196	*e*P	P	19 55 20.0	-1.1
	comp=Z,27nm,1.4s						
WRAB				LR	LR		
	comp=Z,1µm,20.0s						
WRAB	Tennant Creek	95.95	196⇑	*e*P	P	19 55 20.5	-0.6
WRAB				pmax	pmax		
	comp=Z,38nm,2.4s						
WC1	Warramunga Arr	95.96	196	PFAKE		19 55 30.0	+8.8
WC1				LR	LR		
	comp=Z,1µm,18.0s						
352A	Blakely	96.15	341	PFAKE		19 55 30.0	+8.6
352A				LR	LR		
	comp=Z,700nm,21.0s						
HPIG		96.19	322	PFAKE		19 55 30.0	+8.0
HPIG				LR	LR		
	comp=Z,900nm,19.0s						
255A	Hazlehurst	96.25	343	PFAKE		19 55 30.0	+8.1
255A				LR	LR		
	comp=Z,700nm,18.0s						
254A	Abbeville	96.37	342	P	P	19 55 23.7	+1.3
	baz=171						
253A	Americus	96.60	342	PFAKE		19 55 30.0	+6.5
253A				LR	LR		
	comp=Z,800nm,22.0s						
HKT	Hockley	96.64	331	PFAKE		19 55 30.0	+6.4
HKT				LR	LR		
	comp=Z,400nm,20.0s						
251A	Midway	96.82	341	P	P	19 55 27.1	+2.6
	baz=170						
250A	Grady	96.84	340	PFAKE		19 55 40.0	+15
250A				LR	LR		
	comp=Z,600nm,19.0s						
154A	Montrose	97.01	343	PFAKE		19 55 40.0	+15
154A				LR	LR		
	comp=Z,700nm,21.0s						
NHSC	New Hope	97.13	345	PFAKE		19 55 40.0	+14
NHSC				LR	LR		
	comp=Z,700nm,21.0s						
152A	Waverly Hall	97.28	341	PFAKE		19 55 40.0	+13
152A				LR	LR		
	comp=Z,900nm,21.0s						
150A	Eclectic	97.42	340	P	P	19 55 27.0	-0.1
	baz=170						
Z56A	Williston	97.48	344	PFAKE		19 55 40.0	+12
Z56A				LR	LR		
	comp=Z,700nm,21.0s						
149A	Jones	97.53	340	P	P	19 55 26.1	-1.5
	baz=169						
Z53A	Monticello	97.72	342	P	Pdif	19 55 29.1	+0.5
	baz=171						
Z52A	Williamson	97.75	342	P	Pdif	19 55 29.9	+1.2
	baz=170						
VBMS	Vicksburg	97.79	336	PFAKE		19 55 40.0	+11
VBMS				LR	LR		
	comp=Z,500nm,20.0s						
Y60A	Bolivia	97.80	347	PFAKE		19 55 40.0	+11
Y60A				LR	LR		
	comp=Z,500nm,19.0s						
Y60A	Bolivia	97.80	347	P	Pdif	19 55 30.4	+1.5
	baz=173						
435B	Jarrell	97.83	330	PFAKE		19 55 40.0	+11
435B				LR	LR		
	comp=Z,400nm,22.0s						
GOGA	Godfrey	97.84	342	PFAKE		19 55 40.0	+11
GOGA				LR	LR		
	comp=Z,600nm,20.0s						
147A	Livingston	97.84	338	PFAKE		19 55 40.0	+11
147A				LR	LR		
	comp=Z,2161µm,21.0s						
Y58A	Scranton	97.86	346	PFAKE		19 55 40.0	+11
Y58A				LR	LR		
	comp=Z,600nm,20.0s						
TXAR	Lajitas Array	97.93	325	P	P	19 55 29.2	-0.4
	comp=Z,3.8nm,1.0s,baz=153,slow=6.1,SNR=10						
TXAR				PP	PP	19 59 33.4	+4.6
	comp=Z,0.4nm,0.6s,baz=162,slow=12,SNR=3.9						
TXAR				PKKP	PKKPdf	20 12 04.3	-0.6
	comp=Z,0.7nm,0.8s,baz=311,slow=2.7,SNR=4.9						
TXAR				LR	LR	20 31 59.3	
	comp=Z,570nm,21.9s,baz=0.0,slow=31						
TX31	Lajitas Ar. Si	97.93	325	*e*P	P	19 55 28.9	-0.8
	comp=Z,6.0nm,1.0s						
LRAL	Lakeview Retre	97.99	339	PFAKE		19 55 40.0	+10
LRAL				LR	LR		
	comp=Z,500nm,20.0s						
MSEY	Mahe Island	98.02	117	PFAKE		19 55 40.0	+9.4
MSEY				LR	LR		
	comp=Z,1µm,19.0s						
Z50A	Ashland	98.04	340	*e*P	P	19 55 29.1	-0.9
	comp=Z,7.8nm,0.9s						
Z50A				LR	LR		
	comp=Z,800nm,21.0s						
Z50A	Ashland	98.04	340	P	P	19 55 29.3	-0.6
	baz=170						
Y57A	Sumter	98.05	345	PFAKE		19 55 40.0	+10
Y57A				LR	LR		
	comp=Z,800nm,21.0s						
JCT	Junction City	98.06	328	PFAKE		19 55 40.0	+10
JCT				LR	LR		
	comp=Z,400nm,19.0s						
JCT	Junction City	98.06	328	P	Pdif	19 55 31.6	+1.4
	baz=164						
Z49A	Columbiana	98.07	340	P	P	19 55 29.7	-0.4
	baz=169						
NATX	Nacogdoches	98.14	333	PFAKE		19 55 40.0	+9.5
NATX				LR	LR		
	comp=Z,300nm,22.0s						
Y52A	Lilburn	98.37	342	PFAKE		19 55 40.0	+8.5
Y52A				LR	LR		
	comp=Z,700nm,22.0s						
JSC	Jenkinsville	98.42	344	PFAKE		19 55 40.0	+8.4
JSC				LR	LR		
	comp=Z,800nm,22.0s						
X58A	Rowland	98.46	346	PFAKE		19 55 40.0	+8.2
X58A				LR	LR		
	comp=Z,700nm,20.0s						
HODGE	Hodges	98.49	344	PFAKE		19 55 40.0	+8.0
HODGE				LR	LR		
	comp=Z,700nm,18.0s						
X56A	White Oak	98.59	345	P	Pdif	19 55 34.1	+1.7
	baz=172						
Y50A	Piedmont	98.64	341	P	Pdif	19 55 33.8	+1.2
	baz=170						
BIRD	Birdtown, Kers	98.68	345	PFAKE		19 55 40.0	+7.2
BIRD				LR	LR		
	comp=Z,500nm,18.0s						
Y49A	Blount Mountai	98.70	340	*e*P	P	19 55 32.4	-0.6
	comp=Z,8.7nm,0.8s						
Y49A	Blount Mountai	98.70	340	P	Pdif	19 55 33.9	+0.9
	baz=169						
X54A	Belton	98.81	344	P	Pdif	19 55 34.2	+0.8
	baz=171						
X53A	Estanollee	98.89	343	P	Pdif	19 55 34.3	+0.5
	baz=171						
WHTX	Lake Whitney,	98.97	331	PFAKE		19 55 50.0	+16
WHTX				LR	LR		
	comp=Z,300nm,19.0s						
CNNC	Cliffs of the	98.99	347	PFAKE		19 55 50.0	+16
CNNC				LR	LR		
	comp=Z,1µm,22.0s						
PAULI	Pauline	99.01	344	PFAKE		19 55 50.0	+16
PAULI				LR	LR		
	comp=Z,700nm,20.0s						
X52A	Dahlonega	99.07	342	P	Pdif	19 55 35.6	+1.0
	baz=170						
W57A	Gilead	99.13	346	PFAKE		19 55 50.0	+15
W57A				LR	LR		
	comp=Z,600nm,22.0s						
W57A	Gilead	99.13	346	P	Pdif	19 55 35.8	+1.1
	baz=172						
V62A	Hyde County Ai	99.13	349	PFAKE		19 55 50.0	+15
V62A				LR	LR		
	comp=Z,600nm,21.0s						
X51A	Calhoun	99.17	342	PFAKE		19 55 50.0	+15
X51A				LR	LR		
	comp=Z,700nm,20.0s						
X50B	Fort Payne	99.18	341	P	Pdif	19 55 36.0	+0.9
	baz=170						
Z41A	Richland Creek	99.23	335	PFAKE		19 55 50.0	+15
Z41A				LR	LR		
	comp=Z,300nm,20.0s						
KMSC	Kings Mountain	99.27	345	PFAKE		19 55 50.0	+15
KMSC				LR	LR		
	comp=Z,800nm,20.0s						
KMSC	Kings Mountain	99.27	345	P	Pdif	19 55 36.9	+1.5
	baz=172						
W54A	Cherokee Point	99.32	344	P	Pdif	19 55 37.1	+1.5
	baz=171						
BG3	Lake Jocassee	99.33	343	PFAKE		19 55 50.0	+14
BG3				LR	LR		
	comp=Z,500nm,20.0s						
X48A	Hartselle	99.39	340	PFAKE		19 55 50.0	+14
X48A				LR	LR		
	comp=Z,700nm,21.0s						
X48A	Hartselle	99.39	340	P	Pdif	19 55 36.7	+0.8
	baz=169						
V61A	Roper	99.42	349	PFAKE		19 55 50.0	+14
V61A				LR	LR		
	comp=Z,400nm,21.0s						
V60A	Jim Taylor Roa	99.45	348	PFAKE		19 55 50.0	+14
V60A				LR	LR		
	comp=Z,500nm,21.0s						
W53A	Cullowhee	99.53	343	P	Pdif	19 55 36.9	+0.2
	baz=171						
W52A	Murphy	99.56	342	PFAKE		19 55 50.0	+13
W52A				LR	LR		
	comp=Z,600nm,22.0s						
W52A	Murphy	99.56	342	P	Pdif	19 55 37.5	+0.7
	baz=170						
V58A	Windy Hill, Pi	99.67	346	P	Pdif	19 55 39.4	+2.2
	baz=172						
CCAR	Cane Creek	99.67	336	PFAKE		19 55 50.0	+13
CCAR				LR	LR		
	comp=Z,600nm,21.0s						
HSIG		99.67	318	PFAKE		19 55 50.0	+13
HSIG				LR	LR		
	comp=Z,700nm,22.0s						
WLAR	White Oak Lake	99.70	335	PFAKE		19 55 50.0	+13
WLAR				LR	LR		
	comp=Z,500nm,18.0s						
X46A	Booneville	99.73	338	P	Pdif	19 55 39.2	+1.7
	baz=168						
V56A	Mocksville	99.83	345	PFAKE		19 55 50.0	+12
V56A				LR	LR		
	comp=Z,600nm,22.0s						
W50A	Signal Mountai	99.86	341	PFAKE		19 55 50.0	+12
W50A				LR	LR		
	comp=Z,900nm,21.0s						
W49A	Belvidere	99.92	340	P	Pdif	19 55 40.2	+1.9
	baz=169						
U61A	Possum Corner	99.94	349	PFAKE		19 55 50.0	+12
U61A				LR	LR		
	comp=Z,500nm,19.0s						
V53A	Saluda	99.98	343	PFAKE		19 55 50.0	+11
V53A				LR	LR		
	comp=Z,700nm,20.0s						
CPCT	Cooper Cave	99.99	342	PFAKE		19 55 50.0	+11
CPCT				LR	LR		
	comp=Z,500nm,20.0s						
ABTX	Abilene, Hawle	100.07	329	PFAKE		19 55 50.0	+11
ABTX				LR	LR		
	comp=Z,400nm,19.0s						
U59A	Littleton	100.08	348	PFAKE		19 55 50.0	+11
U59A				LR	LR		
	comp=Z,900nm,22.0s						
V52A	Sevierville	100.25	343	PFAKE		19 55 50.0	+10
V52A				LR	LR		
	comp=Z,700nm,21.0s						
V51A	Loudon	100.31	342	PFAKE		19 55 50.0	+10
V51A				LR	LR		
	comp=Z,500nm,20.0s						
COEN	Coen	100.41	205	PFAKE		19 55 50.0	+8.8
COEN				LR	LR		
	comp=Z,2µm,20.0s						
X40A	Basin Creek Fa	100.42	335	PFAKE		19 55 50.0	+9.4
X40A				LR	LR		
	comp=Z,400nm,20.0s						
UALR	University of	100.61	335	PFAKE		19 55 50.0	+8.6
UALR				LR	LR		
	comp=Z,400nm,20.0s						
MNTX	Cornudas Mount	100.62	324	PFAKE		19 55 50.0	+8.4
MNTX				LR	LR		
	comp=Z,1µm,18.0s						
MIAR	Mount Ida	100.62	334	PFAKE		19 55 50.0	+8.5
MIAR				LR	LR		
	comp=Z,400nm,21.0s						
T59A	Double "B" Far	100.67	348	PFAKE		19 55 50.0	+8.4
T59A				LR	LR		
	comp=Z,600nm,22.0s						
U54A	Nelsons Funny	100.69	344	PFAKE		19 55 50.0	+8.2
U54A				LR	LR		
	comp=Z,600nm,19.0s						
T60A	Surry	100.77	349	PFAKE		19 55 50.0	+8.0
T60A				LR	LR		
	comp=Z,500nm,19.0s						
TAM	Tamanrasset	100.86	61	PFAKE		19 55 50.0	+7.0
TAM				LR	LR		
	comp=Z,2µm,19.0s						
T57A	Hurt	100.87	346	PFAKE		19 55 50.0	+7.5
T57A				LR	LR		
	comp=Z,700nm,21.0s						
CLTN	Cedars of Leba	100.88	341	PFAKE		19 55 50.0	+7.4
CLTN				LR	LR		
	comp=Z,600nm,22.0s						
TZTN	Tazewell	100.93	343	PFAKE		19 55 50.0	+7.2
TZTN				LR	LR		
	comp=Z,700nm,20.0s						
W41B	Gary Mavity, V	100.98	336	PFAKE		19 55 50.0	+7.0
W41B				LR	LR		
	comp=Z,400nm,20.0s						
EPT	El Paso	100.99	323	PFAKE		19 55 50.0	+6.7
EPT				LR	LR		
	comp=Z,800nm,20.0s						
X37A	Clayton	101.03	333	PFAKE		19 55 50.0	+6.8
X37A				LR	LR		
	comp=Z,400nm,21.0s						
HBAR	Harrisburg	101.06	337	PFAKE		19 55 50.0	+6.6
HBAR				LR	LR		
	comp=Z,500nm,20.0s						
WHAR	Wooly Hollow	101.10	336	PFAKE		19 55 50.0	+6.4
WHAR				LR	LR		
	comp=Z,400nm,20.0s						
BLA	Blacksburg	101.21	346	PFAKE		19 56 00.0	+16
BLA				LR	LR		
	comp=Z,600nm,19.0s						
S61A	Accomac	101.21	349	PFAKE		19 56 00.0	+16
S61A				LR	LR		
	comp=Z,600nm,21.0s						
W39A	Magazine	101.30	334	PFAKE		19 56 00.0	+16
W39A				LR	LR		
	comp=Z,500nm,21.0s						
S58A	Poland Farm, P	101.36	348	PFAKE		19 56 00.0	+15
S58A				LR	LR		
	comp=Z,600nm,21.0s						
319A	Douglas	101.39	321	PFAKE		19 56 00.0	+15
319A				LR	LR		
	comp=Z,500nm,22.0s						
T52A	Hallie	101.42	343	PFAKE		19 56 00.0	+15
T52A				LR	LR		
	comp=Z,600nm,19.0s						
GLAT	Glass	101.53	338	PFAKE		19 56 00.0	+15
GLAT				LR	LR		
	comp=Z,600nm,21.0s						
S57A	Dark Hollow, R	101.59	347	PFAKE		19 56 00.0	+14
S57A				LR	LR		
	comp=Z,800nm,22.0s						
FCAR	Ozark Folk Cen	101.65	336	PFAKE		19 56 00.0	+14
FCAR				LR	LR		
	comp=Z,300nm,19.0s						
R58B	Mineral	101.69	348	PFAKE		19 56 00.0	+14
R58B				LR	LR		
	comp=Z,600nm,21.0s						
PVMO	Portageville	101.74	338	PFAKE		19 56 00.0	+14
PVMO				LR	LR		
	comp=Z,500nm,19.0s						
CBN	Corbin Frederi	101.88	348	PFAKE		19 56 00.0	+13
CBN				LR	LR		
	comp=Z,400nm,21.0s						
WMOK	Wichita Mounta	101.90	330	PFAKE		19 56 00.0	+13
WMOK				LR	LR		
	comp=Z,400nm,19.0s						
S51A	Beattyville	102.02	343	PFAKE		19 56 00.0	+12
S51A				LR	LR		
	comp=Z,600nm,22.0s						
MSTX	Muleshoe	102.11	327	PFAKE		19 56 00.0	+12
MSTX				LR	LR		
	comp=Z,600nm,20.0s						
R55A	Marlinton	102.23	346	PFAKE		19 56 00.0	+11
R55A				LR	LR		
	comp=Z,500nm,19.0s						
TUL1	Leonard	102.39	333	PFAKE		19 56 00.0	+11
TUL1				LR	LR		
	comp=Z,500nm,22.0s						
R53A	Hurricane	102.49	345	PFAKE		19 56 00.0	+10
R53A				LR	LR		
	comp=Z,600nm,21.0s						
TUC	Tucson	102.71	320	PFAKE		19 56 00.0	+9.1
TUC				LR	LR		
	comp=Z,600nm,20.0s						
AMTX	Amarillo	102.72	328	PFAKE		19 56 00.0	+9.1
AMTX				LR	LR		
	comp=Z,400nm,20.0s						
R50A	Paris	102.75	343	PFAKE		19 56 00.0	+9.2
R50A				LR	LR		
	comp=Z,500nm,22.0s						
R49A	Shelbyville	102.87	342	PFAKE		19 56 00.0	+8.6
R49A				LR	LR		
	comp=Z,600nm,19.0s						
FURI	Furi	102.96	96	PFAKE		19 56 00.0	+7.2
FURI				LR	LR		
	comp=Z,3µm,20.0s						
Q54A	Coxs Mills	103.01	346	PFAKE		19 56 00.0	+8.1
Q54A				LR	LR		
	comp=Z,700nm,21.0s						
SDMD	Soldier's Deli	103.03	349	PFAKE		19 56 00.0	+8.0
SDMD				LR	LR		
	comp=Z,300nm,19.0s						
Y22D	IRIS PASSCAL I	103.28	323	PFAKE		19 56 00.0	+6.5
Y22D				LR	LR		
	comp=Z,1µm,19.0s						
MTN	Manton Dam	103.32	194	PFAKE		19 56 00.0	+5.9
MTN				LR	LR		
	comp=Z,2µm,20.0s						
Q51A	Peebles	103.35	344	PFAKE		19 56 00.0	+6.5
Q51A				LR	LR		
	comp=Z,600nm,21.0s						
PSUB	Penn St. - Bra	103.42	350	PFAKE		19 56 10.0	+16
PSUB				LR	LR		
	comp=Z,500nm,21.0s						
MCWV	Mont Chateau	103.57	346	PFAKE		19 56 10.0	+16
MCWV				LR	LR		
	comp=Z,300nm,22.0s						
P53A	Whipple	103.57	345	PFAKE		19 56 10.0	+16
P53A				LR	LR		
	comp=Z,800nm,22.0s						
MVL	Millersville	103.57	349	PFAKE		19 56 10.0	+16
MVL				LR	LR		
	comp=Z,500nm,22.0s						
P51A	Williamsport	103.77	344	PFAKE		19 56 10.0	+15
P51A				LR	LR		
	comp=Z,600nm,21.0s						
PAGS	Pennsylvania G	103.83	349	PFAKE		19 56 10.0	+14
PAGS				LR	LR		
	comp=Z,600nm,22.0s						
ANMO	Albuquerque	103.98	324	PKiKP	PKiKP	20 00 13.6	-0.3
	comp=Z,1.0nm,0.5s,baz=202,slow=2.0,SNR=3.0						
ANMO	Albuquerque	103.98	324	PFAKE		19 56 10.0	+13
ANMO				LR	LR		
	comp=Z,900nm,19.0s						
PMG	Port Moresby	103.99	210	PFAKE		19 56 10.0	+13
PMG				LR	LR		
	comp=Z,2µm,18.0s						
SLM	Saint Louis	103.99	338	PFAKE		19 56 10.0	+14
SLM				LR	LR		
	comp=Z,700nm,20.0s						
O56A	Blue Knob Stat	104.04	347	PFAKE		19 56 10.0	+13
O56A				LR	LR		
	comp=Z,500nm,21.0s						
BRNJ	Basking Ridge	104.11	351	PFAKE		19 56 10.0	+13
BRNJ				LR	LR		
	comp=Z,700nm,20.0s						
O52A	Adamsville	104.24	345	PFAKE		19 56 10.0	+13
O52A				LR	LR		
	comp=Z,700nm,21.0s						
SSPA	Standing Stone	104.34	348	PFAKE		19 56 10.0	+12
SSPA				LR	LR		
	comp=Z,500nm,19.0s						
PAL	Palisades	104.38	351	PFAKE		19 56 10.0	+12
PAL				LR	LR		
	comp=Z,700nm,22.0s						
N59A	State Game Lan	104.43	350	PFAKE		19 56 10.0	+12
N59A				LR	LR		
	comp=Z,500nm,22.0s						
ACSO	Alum Creek Sta	104.49	344	PFAKE		19 56 10.0	+11
ACSO				LR	LR		
	comp=Z,600nm,20.0s						
ODNJ	Ogdensburg	104.51	351	PFAKE		19 56 10.0	+11
ODNJ				LR	LR		
	comp=Z,600nm,20.0s						
X18A	Snowflake	104.55	321	PFAKE		19 56 10.0	+11
X18A				LR	LR		
	comp=Z,700nm,20.0s						
GLA	Glamis	104.61	317	PFAKE		19 56 10.0	+11
GLA				LR	LR		
	comp=Z,500nm,21.0s						
O49A	Covington	104.62	343	PFAKE		19 56 10.0	+11
O49A				LR	LR		
	comp=Z,600nm,18.0s						
N53A	Lisbon	104.81	346	PFAKE		19 56 10.0	+10
N53A				LR	LR		
	comp=Z,500nm,21.0s						
BAR	Barrett	104.85	315	PFAKE		19 56 10.0	+10
BAR				LR	LR		
	comp=Z,300nm,21.0s						
X16A	Lo Mia Camp, P	104.87	320	PFAKE		19 56 10.0	+9.4
X16A				LR	LR		
	comp=Z,400nm,20.0s						
N54A	Moraine State	104.87	346	PFAKE		19 56 10.0	+10
N54A				LR	LR		
	comp=Z,500nm,18.0s						
CMLA	Cha da Macela	105.00	30	PFAKE		20 00 30.0	+15
CMLA				LR	LR		
	comp=Z,700nm,20.0s						
W18A	Petrified Fore	105.04	322	PFAKE		20 00 30.0	+14
W18A				LR	LR		
	comp=Z,800nm,20.0s						
KSPA	Keystone Colle	105.07	350	PFAKE		20 00 30.0	+15
KSPA				LR	LR		
	comp=Z,600nm,21.0s						
KSCT	Kent School, K	105.07	352	PFAKE		20 00 30.0	+15
KSCT				LR	LR		
	comp=Z,600nm,22.0s						
N51A	Ashland	105.10	345	PFAKE		20 00 30.0	+14
N51A				LR	LR		
	comp=Z,600nm,20.0s						
BRYW	Bryant College	105.14	353	PFAKE		20 00 30.0	+14
BRYW				LR	LR		
	comp=Z,600nm,22.0s						
Y12C	Blythe	105.17	317	PFAKE		20 00 30.0	+14
Y12C				LR	LR		
	comp=Z,600nm,20.0s						
CPE	Camp Elliot	105.18	315	PFAKE		20 00 30.0	+14
CPE				LR	LR		
	comp=Z,600nm,21.0s						
N49A	Columbus Grove	105.33	343	PFAKE		20 00 30.0	+14
N49A				LR	LR		

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     comp=Z,600nm,21.0s
M54A Oil Creek Stat  105.38 347  PFAKE             20 00 30.0  +14
M54A                             LR       LR
     comp=Z,500nm,20.0s
T25A Trinidad        105.53 326  PFAKE             20 00 30.0  +13
T25A                             LR       LR
     comp=Z,800nm,19.0s
QUA2 Belchertown     105.55 352  PFAKE             20 00 30.0  +14
QUA2                             LR       LR
     comp=Z,800nm,22.0s
ALLY Alegheny Colle  105.57 346  PFAKE             20 00 30.0  +14
ALLY                             LR       LR
     comp=Z,500nm,19.0s
M52A Chesterland     105.59 345  PFAKE             20 00 30.0  +14
M52A                             LR       LR
     comp=Z,500nm,19.0s
WES  Weston          105.60 353  PFAKE             20 00 30.0  +14
WES                              LR       LR
     comp=Z,800nm,18.0s
KSU1 Kansas State U  105.63 333  PFAKE             20 00 30.0  +13
KSU1                             LR       LR
     comp=Z,400nm,22.0s
M50A Fremont         105.66 344  PFAKE             20 00 30.0  +14
M50A                             LR       LR
     comp=Z,500nm,20.0s
HDIL Hopedale        105.71 339  PFAKE             20 00 30.0  +13
HDIL                             LR       LR
     comp=Z,900nm,21.0s
BINY Binghamton      105.72 350  PFAKE             20 00 30.0  +13
BINY                             LR       LR
     comp=Z,700nm,22.0s
HRV  Adam Dziewonsk  105.73 353  PFAKE             20 00 30.0  +13
HRV                              LR       LR
     comp=Z,600nm,18.0s
WUAZ Wupatki         105.88 320  PFAKE             20 00 30.0  +13
WUAZ                             LR       LR
     comp=Z,500nm,19.0s
M48A Edgerton        105.95 343  PFAKE             20 00 30.0  +13
M48A                             LR       LR
     comp=Z,800nm,22.0s
ERPA Erie            106.01 347  PFAKE             20 00 30.0  +13
ERPA                             LR       LR
     comp=Z,500nm,19.0s
CBKS Cedar Bluff     106.02 331  PFAKE             20 00 30.0  +13
CBKS                             LR       LR
     comp=Z,400nm,19.0s
TRY  Troy            106.08 352  PFAKE             20 00 30.0  +13
TRY                              LR       LR
     comp=Z,500nm,20.0s
N41A Harden Midland  106.12 338  PFAKE             20 00 30.0  +13
N41A                             LR       LR
     comp=Z,600nm,20.0s
W13A Hualapai Mount  106.22 318  PFAKE             20 00 30.0  +12
W13A                             LR       LR
     comp=Z,500nm,21.0s
SNCC San Nicolas Is  106.30 313  PFAKE             20 00 30.0  +12
SNCC                             LR       LR
     comp=Z,1µm,22.0s
SDCO Great Sand Dun  106.38 326  PFAKE             20 00 30.0  +12
SDCO                             LR       LR
     comp=Z,700nm,20.0s
RTC  Rabat Centre    106.59  46  PFAKE             20 00 30.0  +12
RTC                              LR       LR
     comp=Z,3µm,20.0s
AAM  Ann Arbor       106.62 344  PFAKE             20 00 30.0  +12
AAM                              LR       LR
     comp=Z,600nm,20.0s
MVCO Mesa Verde      106.66 323  PFAKE             20 00 30.0  +11
MVCO                             LR       LR
     comp=Z,700nm,19.0s
L46A Eue Claire      106.69 342  PFAKE             20 00 30.0  +12
L46A                             LR       LR
     comp=Z,500nm,18.0s
FFD  Franklin Falls  106.70 353  PFAKE             20 00 30.0  +12
FFD                              LR       LR
     comp=Z,700nm,20.0s
S22A 4UR Ranch, Cre  106.72 325  PFAKE             20 00 30.0  +11
S22A                             LR       LR
     comp=Z,800nm,20.0s
ACCN Adirondack Com  106.73 352  PFAKE             20 00 30.0  +12
ACCN                             LR       LR
     comp=Z,700nm,22.0s
KSCO Kaye Shedlock’  106.87 328  PFAKE             20 00 30.0  +11
KSCO                             LR       LR
     comp=Z,700nm,21.0s
SOEI Soe             106.94 187  PFAKE             20 00 30.0  +10
SOEI                             LR       LR
     comp=Z,2µm,18.0s
K50A Casco           106.96 345  PFAKE             20 00 30.0  +11
K50A                             LR       LR
     comp=Z,600nm,22.0s
HNH  Hanover         106.97 353  PFAKE             20 00 30.0  +11
HNH                              LR       LR
     comp=Z,600nm,19.0s
U15A North Rim       106.99 320  PFAKE             20 00 30.0  +10
U15A                             LR       LR
     comp=Z,600nm,21.0s
J54A Appleton        107.02 348  PFAKE             20 00 30.0  +11
J54A                             LR       LR
     comp=Z,400nm,19.0s
ATD  Arta Tunnel     107.16  99  PFAKE             20 00 30.0  +10
ATD                              LR       LR
     comp=Z,1µm,19.0s
L42A Oliver, Polo    107.19 339  PFAKE             20 00 30.0  +11
L42A                             LR       LR
     comp=Z,700nm,22.0s
OSI  Osito Audit: C  107.29 314  PFAKE             20 00 30.0  +10
OSI                              LR       LR
     comp=Z,500nm,22.0s
GSC  Goldstone, Bar  107.31 316  PFAKE             20 00 30.0  +10
GSC                              LR       LR
     comp=Z,400nm,19.0s
NCB  Newcomb         107.36 351  PFAKE             20 00 30.0  +10
NCB                              LR       LR
     comp=Z,500nm,20.0s
Q24A Divide          107.44 326  PFAKE             20 00 30.0  +10
Q24A                             LR       LR
     comp=Z,700nm,19.0s
LBNH Lisbon          107.48 353  PFAKE             20 00 30.0  +10
LBNH                             LR       LR
     comp=Z,600nm,19.0s
L40A Anamosa         107.50 338  PFAKE             20 00 30.0  +10
L40A                             LR       LR
     comp=Z,600nm,21.0s
J48A Bridge Port     107.62 344  PFAKE             20 00 30.0  +10
J48A                             LR       LR
     comp=Z,800nm,22.0s
VT1  Waterbury       107.62 352  PFAKE             20 00 30.0  +10
VT1                              LR       LR
     comp=Z,700nm,19.0s
HAL  Halifax         107.62 359  PFAKE             20 00 30.0  +10
HAL                              LR       LR
     comp=Z,1µm,21.0s
PV13 Radium Mtn., P  107.64 323  PFAKE             20 00 30.0 +9.4
PV13                             LR       LR
     comp=Z,700nm,18.0s
J47A Sunmer          107.69 343  PFAKE             20 00 30.0  +10
J47A                             LR       LR
     comp=Z,700nm,20.0s
WVL  Waterville      107.69 355  PFAKE             20 00 30.0  +10
WVL                              LR       LR
     comp=Z,400nm,20.0s
SCIA State Center    107.69 336  PFAKE             20 00 30.0  +10
SCIA                             LR       LR
     comp=Z,400nm,20.0s
PV18 Skein Mesa, Pa  107.74 323  PFAKE             20 00 30.0 +9.2
PV18                             LR       LR
     comp=Z,700nm,19.0s
EMMW East Machias    107.76 356  PFAKE             20 00 30.0  +10
EMMW                             LR       LR
     comp=Z,1µm,22.0s
PV12 Saucer Basin,   107.78 323  PFAKE             20 00 30.0 +9.1
PV12                             LR       LR
     comp=Z,900nm,19.0s
PV07 Paradox Valley  107.85 324  PFAKE             20 00 30.0 +9.0
PV07                             LR       LR
     comp=Z,900nm,21.0s
PV10 Paradox Valley  107.90 323  PFAKE             20 00 30.0 +8.9
PV10                             LR       LR
     comp=Z,600nm,19.0s
SHPR Sheep Range     107.91 318  PFAKE             20 00 30.0 +8.9
SHPR                             LR       LR
     comp=Z,600nm,20.0s
PV23 Carpenter Ridg  107.96 323  PFAKE             20 00 30.0 +8.7
PV23                             LR       LR
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     comp=Z,800nm,19.0s
LONY Lake Ozonia     108.03 351  PFAKE             20 00 30.0 +9.2
LONY                             LR       LR
     comp=Z,600nm,21.0s
J45A Montague        108.09 342  PFAKE             20 00 30.0 +9.0
J45A                             LR       LR
     comp=Z,500nm,18.0s
SMCO Snowmass        108.11 325  PFAKE             20 00 30.0 +8.3
SMCO                             LR       LR
     comp=Z,1µm,20.0s
I49A Point Hope      108.13 345  PFAKE             20 00 30.0 +9.0
I49A                             LR       LR
     comp=Z,600nm,22.0s
MMRI Maumere         108.15 185  PFAKE             20 00 30.0 +7.9
MMRI                             LR       LR
     comp=Z,900nm,18.0s
GGN  Saint George    108.15 357  PFAKE             20 00 30.0 +9.0
GGN                              LR       LR
     comp=Z,1µm,22.0s
DELO Deloro Mine     108.16 349  PFAKE             20 00 30.0 +8.9
DELO                             LR       LR
     comp=Z,700nm,20.0s
JFWS Jewell Farm     108.17 339  PFAKE             20 00 30.0 +8.9
JFWS                             LR       LR
     comp=Z,500nm,20.0s
BGNE Belgrade        108.17 333  PFAKE             20 00 30.0 +8.8
BGNE                             LR       LR
     comp=Z,500nm,21.0s
ISA  Isabella, Lake  108.17 315  PFAKE             20 00 30.0 +8.5
ISA                              LR       LR
     comp=Z,600nm,18.0s
FRNY Flat Rock       108.17 352  PFAKE             20 00 30.0 +8.9
FRNY                             LR       LR
     comp=Z,800nm,22.0s
ISCO Idaho Springs   108.35 326  PFAKE             20 00 30.0 +8.0
ISCO                             LR       LR
     comp=Z,500nm,22.0s
JAGI Jajag, Banyuwa  108.37 177  PFAKE             20 00 30.0 +7.5
JAGI                             LR       LR
     comp=Z,1µm,20.0s
PKME Peaks-Kenny Pk  108.38 355  PFAKE             20 00 30.0 +8.6
PKME                             LR       LR
     comp=Z,600nm,22.0s
I47A Gladwin         108.42 344  PFAKE             20 00 30.0 +8.4
I47A                             LR       LR
     comp=Z,700nm,22.0s
SADO Sadowa          108.56 348  PFAKE             20 00 30.0 +8.2
SADO                             LR       LR
     comp=Z,700nm,21.0s
OGNE Ogallala        108.58 329  PFAKE             20 00 30.0 +7.9
OGNE                             LR       LR
     comp=Z,500nm,22.0s
PLVO Plevna          108.64 349  PFAKE             20 00 30.0 +8.1
PLVO                             LR       LR
     comp=Z,500nm,20.0s
TPNV Topopah Spring  108.66 317  PFAKE             20 00 30.0 +7.5
TPNV                             LR       LR
     comp=Z,400nm,21.0s
I45A Fountain        108.66 342  PFAKE             20 00 30.0 +8.0
I45A                             LR       LR
     comp=Z,700nm,20.0s
PAGB Antelope Grade  108.81 313  PFAKE             20 00 30.0 +7.4
PAGB                             LR       LR
     comp=Z,800nm,21.0s
LMN  Caledonia Moun  108.85 358  PFAKE             20 00 30.0 +7.7
LMN                              LR       LR
     comp=Z,1µm,21.0s
PFVI Vila Bisbo      108.86  43  PFAKE             20 00 30.0 +7.4
PFVI                             LR       LR
     comp=Z,500nm,20.0s
CISI Cisompet, Garu  108.94 170  PFAKE             20 00 30.0 +6.3
CISI                             LR       LR
     comp=Z,2µm,22.0s
H48A Harrisville     108.94 345  PFAKE             20 00 30.0 +7.5
H48A                             LR       LR
     comp=Z,500nm,22.0s
GLMI Grayling        109.22 344  PFAKE             20 00 30.0 +6.9
GLMI                             LR       LR
     comp=Z,800nm,22.0s
O20A White River Ci  109.34 324  PFAKE             20 00 40.0  +16
O20A                             LR       LR
     comp=Z,1µm,18.0s
PVAQ Vaqueiros       109.45  44  PFAKE             20 00 40.0  +16
PVAQ                             LR       LR
     comp=Z,600nm,19.0s
N23A Red Feather La  109.46 326  PFAKE             20 00 40.0  +16
N23A                             LR       LR
     comp=Z,400nm,22.0s
G45A Suttons Bay     109.57 343  PFAKE             20 00 40.0  +16
G45A                             LR       LR
     comp=Z,900nm,22.0s
PQI  Presque Isle    109.74 356  PFAKE             20 00 40.0  +16
PQI                              LR       LR
     comp=Z,1µm,22.0s
R11A Troy Canyon, C  109.74 318  PFAKE             20 00 40.0  +16
R11A                             LR       LR
     comp=Z,600nm,20.0s
ECSD EROS Data Cent  110.10 334  PFAKE             20 00 40.0  +15
ECSD                             LR       LR
     comp=Z,400nm,21.0s
OMMB Old Mammoth Mi  110.12 315  PFAKE             20 00 40.0  +15
OMMB                             LR       LR
     comp=Z,500nm,20.0s
SAO  San Andreas Ge  110.14 313  PFAKE             20 00 40.0  +15
SAO                              LR       LR
     comp=Z,1µm,20.0s
MDPB Devils Postpil  110.17 315  PFAKE             20 00 40.0  +15
MDPB                             LR       LR
     comp=Z,400nm,20.0s
BATG Bathurst New B  110.29 357  PFAKE             20 00 40.0  +15
BATG                             LR       LR
     comp=Z,800nm,20.0s
G40A Rib Lake        110.45 340  PFAKE             20 00 40.0  +15
G40A                             LR       LR
     comp=Z,400nm,22.0s
RWWY Rawlins         110.53 326  PFAKE             20 00 40.0  +14
RWWY                             LR       LR
     comp=Z,500nm,21.0s
DUG  Dugway, Tooele  110.64 321  PFAKE             20 00 40.0  +14
DUG                              LR       LR
     comp=Z,500nm,20.0s
NVAR Mina Array Bea  110.65 316  PKiKP    PKiKP    20 00 24.9 -1.4
     comp=Z,1.9nm,0.9s,baz=178,slow=3.3,SNR=7.5
NVAR                             PKKP     PKKPdf   20 11 37.4 -4.0
     comp=Z,1.0nm,0.7s,baz=308,slow=3.6,SNR=5.2
E46A Sault Ste Mari  110.70 344  PFAKE             20 00 40.0  +14
E46A                             LR       LR
     comp=Z,800nm,22.0s
SPMN Marine on St.   110.84 338  PFAKE             20 00 40.0  +14
SPMN                             LR       LR
     comp=Z,600nm,22.0s
RYN  Ryan            110.90 316  PFAKE             20 00 40.0  +13
RYN                              LR       LR
     comp=Z,300nm,20.0s
CMB  Columbia Colle  110.95 314  PFAKE             20 00 40.0  +13
CMB                              LR       LR
     comp=Z,700nm,22.0s
E43A Lone Tree Farm  111.06 342  PFAKE             20 00 40.0  +14
E43A                             LR       LR
     comp=Z,600nm,20.0s
WAKR Walker          111.08 315  PFAKE             20 00 40.0  +13
WAKR                             LR       LR
     comp=Z,500nm,20.0s
E44A Grand Marais A  111.16 343  PFAKE             20 00 40.0  +13
E44A                             LR       LR
     comp=Z,700nm,22.0s
K22A Casper          111.26 327  PFAKE             20 00 40.0  +13
K22A                             LR       LR
     comp=Z,500nm,20.0s
YERR Yerington       111.45 316  PFAKE             20 00 40.0  +12
YERR                             LR       LR
     comp=Z,400nm,19.0s
PNTR Pine Nut        111.66 315  PFAKE             20 00 40.0  +12
PNTR                             LR       LR
     comp=Z,500nm,20.0s
RUBR Rubicon Trail   111.81 315  PFAKE             20 00 40.0  +12
RUBR                             LR       LR
     comp=Z,500nm,18.0s
COI  Coimbra         111.81  42  PFAKE             20 00 40.0  +12
COI                              LR       LR
     comp=Z,600nm,20.0s
KAPI Kappang         111.82 183  PFAKE             20 00 40.0  +11
KAPI                             LR       LR
     comp=Z,1µm,22.0s
ELK  Elko            111.85 319  PKiKP    PKiKP    20 00 29.1 +0.6
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     comp=Z,1.7nm,0.8s,baz=148,slow=3.4,SNR=5.3
VCNR Virginia City   111.87 315  PFAKE             20 00 40.0  +11
VCNR                             LR       LR
     comp=Z,500nm,20.0s
MCCM Marconi Confer  111.87 312  PFAKE             20 00 40.0  +12
MCCM                             LR       LR
     comp=Z,900nm,21.0s
D41A Chassel         111.96 341  PFAKE             20 00 40.0  +12
D41A                             LR       LR
     comp=Z,700nm,21.0s
E38A The Farm, Brul  111.97 339  PFAKE             20 00 40.0  +12
E38A                             LR       LR
     comp=Z,600nm,21.0s
AFDM Forest Hills D  111.97 314  PFAKE             20 00 40.0  +12
AFDM                             LR       LR
     comp=Z,900nm,22.0s
RSSD Black Hills     112.05 329  PFAKE             20 00 40.0  +11
RSSD                             LR       LR
     comp=Z,400nm,20.0s
BW06 Boulder Array   112.15 324  PFAKE             20 00 40.0  +11
BW06                             LR       LR
     comp=Z,900nm,18.0s
PDAR Pinedale Array  112.15 324  PKiKP    PKiKP    20 00 28.6 -0.3
     comp=Z,1.2nm,0.7s,baz=147,slow=3.0,SNR=8.9
BMN  Battle Mountai  112.15 318  PFAKE             20 00 40.0  +11
BMN                              LR       LR
     comp=Z,300nm,19.0s
PAHR Pah Rah Range   112.16 316  PFAKE             20 00 40.0  +11
PAHR                             LR       LR
     comp=Z,500nm,19.0s
MTE  Manteigas       112.25  43  PFAKE             20 00 40.0  +11
MTE                              LR       LR
     comp=Z,700nm,19.0s
PAB  San Pablo       112.47  45  PFAKE             20 00 40.0  +11
PAB                              LR       LR
     comp=Z,500nm,19.0s
AHID Auburn Hatcher  112.56 323  PFAKE             20 00 40.0  +10
AHID                             LR       LR
     comp=Z,700nm,19.0s
BEKR Beckworth       112.61 315  PFAKE             20 00 40.0  +10
BEKR                             LR       LR
     comp=Z,600nm,19.0s
ORV  Oroville        112.70 314  PFAKE             20 00 40.0  +10
ORV                              LR       LR
     comp=Z,1µm,21.0s
HOPS Hopland Field   112.70 313  PFAKE             20 00 40.0  +10
HOPS                             LR       LR
     comp=Z,1µm,19.0s
ESDC Sonseca Array   112.72  46  PKiKP    PKiKP    20 00 28.4 -1.5
     comp=Z,0.7nm,0.7s,baz=251,slow=1.6,SNR=5.6
ESDC                             PKKPab   PKKPab   20 11 26.1 +2.6
     comp=Z,0.1nm,0.3s,baz=27,slow=4.8,SNR=4.2
FAKI Fak Fak         112.99 196  PFAKE             20 00 40.0 +8.7
FAKI                             LR       LR
     comp=Z,800nm,19.0s
SNOW Snow King Moun  113.11 324  PFAKE             20 00 40.0 +9.2
SNOW                             LR       LR
     comp=Z,600nm,19.0s
TPAW Teton Pass      113.19 324  PFAKE             20 00 40.0 +9.0
TPAW                             LR       LR
     comp=Z,600nm,19.0s
EYMN Ely             113.27 339  PFAKE             20 00 40.0 +9.4
EYMN                             LR       LR
     comp=Z,700nm,21.0s
MOOW Moose Ponds     113.37 324  PFAKE             20 00 40.0 +8.7
MOOW                             LR       LR
     comp=Z,500nm,20.0s
IMW  Indian Meadow   113.56 324  PFAKE             20 00 40.0 +8.3
IMW                              LR       LR
     comp=Z,400nm,20.0s
FLWY Flagg Ranch     113.67 324  PFAKE             20 00 40.0 +8.2
FLWY                             LR       LR
     comp=Z,600nm,19.0s
H17A Grant Village   113.93 324  PFAKE             20 00 40.0 +7.7
H17A                             LR       LR
     comp=Z,700nm,20.0s
WDC  Whiskeytown Da  113.96 314  PFAKE             20 00 40.0 +7.8
WDC                              LR       LR
     comp=Z,600nm,20.0s
LKWY Lake            114.04 325  PFAKE             20 00 40.0 +7.4
LKWY                             LR       LR
     comp=Z,1µm,20.0s
RLMT Red Lodge       114.27 326  PFAKE             20 00 40.0 +7.1
RLMT                             LR       LR
     comp=Z,700nm,19.0s
WVOR Wild Horse Val  114.41 318  PFAKE             20 00 40.0 +6.8
WVOR                             LR       LR
     comp=Z,400nm,19.0s
MOD  Modoc Plateau   114.44 316  PFAKE             20 00 40.0 +6.7
MOD                              LR       LR
     comp=Z,400nm,19.0s
MFID Camas Ranch     114.48 320  PFAKE             20 00 40.0 +6.8
MFID                             LR       LR
     comp=Z,500nm,19.0s
KHMM Horse Mountain  114.62 313  PFAKE             20 00 50.0  +16
KHMM                             LR       LR
     comp=Z,1µm,18.0s
MDND Maddock         114.64 334  PFAKE             20 00 40.0 +6.8
MDND                             LR       LR
     comp=Z,500nm,21.0s
LAO  LASA Array      114.99 328  PFAKE             20 00 50.0  +16
LAO                              LR       LR
     comp=Z,800nm,20.0s
YBH  Yreka Blue Hor  115.06 314  PFAKE             20 00 50.0  +16
YBH                              LR       LR
     comp=Z,600nm,19.0s
J08A Circle Bar Ran  115.21 318  PFAKE             20 00 50.0  +15
J08A                             LR       LR
     comp=Z,500nm,18.0s
BOZ  Bozeman (W)     115.33 324  ePKPdf   PKiKP    20 00 35.6 +0.8
BOZ                              LR       LR
     comp=Z,500nm,21.0s
BOZ  Bozeman (W)     115.33 324  ePKIKP   PKiKP    20 00 35.7 +0.8
BOZ                              MLR      MLR
     comp=Z,500nm,21.0s
DLMT Dillon          115.37 323  ePKPdf   PKiKP    20 00 36.6 +1.7
LUWI Luwuk           115.67 186  PFAKE             20 00 50.0  +14
LUWI                             LR       LR
     comp=Z,900nm,21.0s
LRM  Limekiln Ridge  115.75 324  ePKPdf   PKiKP    20 00 35.9 +0.1
LRM                              ePP      PP       20 01 42.1 +2.2
HUMO Hull Mountain   115.92 314  PFAKE             20 00 50.0  +14
HUMO                             LR       LR
     comp=Z,898nm,18.0s
BKNI Bangkinang      115.98 162  PFAKE             20 00 50.0  +13
BKNI                             LR       LR
     comp=Z,1µm,19.0s
WDD  Wied Dalam      116.00  62  PFAKE             20 00 50.0  +14
WDD                              LR       LR
     comp=Z,1µm,21.0s
I07A Izee            116.17 318  PFAKE             20 00 50.0  +14
I07A                             LR       LR
     comp=Z,400nm,21.0s
DGMT Dagmar          116.20 330  PFAKE             20 00 50.0  +14
DGMT                             LR       LR
     comp=Z,500nm,20.0s
BMO  Blue Mountains  116.22 320  ePKPdf   PKPdf    20 00 35.7 -0.8
BMO                              LR       LR
     comp=Z,500nm,18.0s
BMO  Blue Mountains  116.22 320  ePKIKP   PKPdf    20 00 35.7 -0.8
BMO                              MLR      MLR
     comp=Z,500nm,18.0s
ULM  Lac du Bonnet   116.23 337  PKP      PKPdf    20 00 35.5 -0.7
     comp=Z,5.7nm,0.6s,baz=168,slow=2.7,SNR=5.1
PINE Pine Mountain   116.35 317  ePKPdf   PKiKP    20 00 38.0 +1.0
PINE                             LR       LR
     comp=Z,1µm,21.0s
CLTB Caltabellotta   117.00  60  PFAKE             20 00 50.0  +12
CLTB                             LR       LR
     comp=Z,900nm,18.0s
MSO  Missoula        117.08 323  ePKPdf   PKPdf    20 00 37.6 -0.5
MSO                              ePP      PP       20 01 46.6 -2.3
MSO                              LR       LR
     comp=Z,500nm,18.0s
EGMT Eagleton        117.09 326  PFAKE             20 00 50.0  +12
EGMT                             LR       LR
     comp=Z,600nm,20.0s
G08A Pilot Rock      117.11 319  ePKPdf   PKPdf    20 00 37.9 -0.3
G08A                             LR       LR
     comp=Z,500nm,18.0s
F10A Beach Ranch, E  117.22 320  ePKPdf   PKPdf    20 00 38.3 -0.1
F10A                             ePP      PP       20 01 49.5 -0.4
F10A                             LR       LR
     comp=Z,400nm,20.0s
H04A Detroit Lake    117.55 316  PFAKE             20 00 50.0  +11
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H04A                                   LR       LR
      comp=Z,500nm,18.0s
G06A  Carlson Farm,    117.56 317  PFAKE             20 00 50.0  +11
G06A                               LR       LR
      comp=Z,800nm,20.0s
MYKOM Kota Tinggi      117.79 165  PFAKE             20 00 50.0  +10
MYKOM                              LR       LR
      comp=Z,700nm,21.0s
SCHQ  Schefferville    117.87 357  PKP      PKiKP    20 00 39.7 +0.4
      comp=Z,7.3nm,0.9s,baz=252,slow=3.2,SNR=3.4
F07A  Phinny Hill Vi   117.94 318  PFAKE             20 00 50.0  +10
F07A                               LR       LR
      comp=Z,800nm,20.0s
E09A  Wood Farm, Sta   117.98 320 ePKPdf    PKiKP    20 00 39.9 +0.1
E09A                               LR       LR
      comp=Z,600nm,19.0s
JTMT  Jette            118.02 323  PFAKE             20 00 50.0  +10
JTMT                               LR       LR
      comp=Z,600nm,20.0s
KSM   Kuching          118.06 172  PFAKE             20 00 50.0 +9.0
KSM                                LR       LR
      comp=Z,1µm,21.0s
PSI   Prapat           118.09 159  PFAKE             20 00 50.0 +8.8
PSI                                LR       LR
      comp=Z,2µm,21.0s
PALK  Pallekele        118.11 138  PFAKE             20 00 50.0 +8.9
PALK                               LR       LR
      comp=Z,1µm,20.0s
E08A  Dider Farm, El   118.22 319  PFAKE             20 00 50.0  +10
E08A                               LR       LR
      comp=Z,600nm,21.0s
HAWA  Hanford          118.28 319  PFAKE             20 00 50.0  +10
HAWA                               LR       LR
      comp=Z,700nm,18.0s
CEL   Celeste          118.64  62  PFAKE             20 00 50.0 +8.6
CEL                                LR       LR
      comp=Z,1µm,20.0s
D08A  Wollman Farm,    118.69 320  PFAKE             20 00 50.0 +8.9
D08A                               LR       LR
      comp=Z,600nm,21.0s
RAYN  Ar Rayn          118.87  95 ePKPdf    PKPdf    20 00 41.3 -0.9
RAYN                               LR       LR
      comp=Z,1µm,22.0s
SBUM  Sibu             119.14 174  PFAKE             20 00 50.0 +6.9
SBUM                               LR       LR
      comp=Z,600nm,20.0s
C09A  Chrisman Ranch   119.18 320 ePKPdf    PKPdf    20 00 40.8 -1.2
C09A                              ePP       PP       20 02 02.6 -0.7
C09A                               LR       LR
      comp=Z,600nm,19.0s
NEW   Newport          119.27 321  PKP      PKPdf    20 00 41.6 -0.6
      comp=Z,17nm,1.0s,baz=157,slow=2.6,SNR=9.8
NEW   Newport          119.27 321 ePKPdf    PKPdf    20 00 41.1 -1.1
NEW                               ePP       PP       20 01 59.7 -4.4
NEW                                LR       LR
      comp=Z,600nm,19.0s
NEW   Newport          119.27 321 ePKIKP    PKPdf    20 00 41.1 -1.1
NEW                                MLR      MLR
      comp=Z,600nm,19.0s
LON   Longmire         119.28 317 ePKPdf    PKPdf    20 00 42.2 -0.1
LON                                LR       LR
      comp=Z,800nm,21.0s
LON   Longmire         119.28 317 ePKIKP    PKPdf    20 00 42.2 -0.1
LON                                MLR      MLR
      comp=Z,800nm,21.0s
LTY   Liberty          119.39 318 ePKPdf    PKPdf    20 00 41.6 -0.9
LTY                                LR       LR
      comp=Z,600nm,22.0s
D05A  Enumclaw         119.73 317 ePKPdf    PKPdf    20 00 42.0 -1.0
TIP   Timpagrande      119.78  62  PFAKE             20 00 50.0 +6.4
TIP                                LR       LR
      comp=Z,1µm,22.0s
TIP   Timpagrande      119.78  62⇓iP        PKiKP    20 00 44.5 +0.9
IPM   Ipoh             120.06 161 ePKPdf    PKPdf    20 00 43.6 -1.3
IPM                                LR       LR
      comp=Z,800nm,20.0s
ITM   Ithomi           120.17  67  PFAKE             20 01 00.0  +16
ITM                                LR       LR
      comp=Z,500nm,19.0s
NLWA  Neilton Lookou   120.49 316  PFAKE             20 01 00.0  +15
NLWA                               LR       LR
      comp=Z,600nm,20.0s
SSB   Saint Sauveur    120.54  49  PFAKE             20 01 00.0  +15
SSB                                LR       LR
      comp=Z,700nm,20.0s
KULM  Kulim            120.80 160  PFAKE             20 01 00.0  +14
KULM                               LR       LR
      comp=Z,800nm,20.0s
BNI   Bardonecchia     121.08  51 ePKPdf    PKPdf    20 00 44.6 -1.3
BNI                                LR       LR
      comp=Z,900nm,18.0s
BNI   Bardonecchia     121.08  51 ePKIKP    PKPdf    20 00 44.6 -1.3
BNI                                MLR      MLR
      comp=Z,900nm,18.0s
AQU   L'Aquila         121.20  57  PFAKE             20 01 00.0  +14
AQU                                LR       LR
      comp=Z,2µm,19.0s
VLC   Villacollemand   121.63  54  PFAKE             20 01 00.0  +13
VLC                                LR       LR
      comp=Z,500nm,20.0s
FFC   Flin Flon        121.64 334  PFAKE             20 01 00.0  +13
FFC                                LR       LR
      comp=Z,500nm,20.0s
FFC   Flin Flon        121.64 334 i PKIKP   PKiKP    20 00 49.6 +3.0
AGG   Agios Georgios   121.90  66  PFAKE             20 01 00.0  +12
AGG                                LR       LR
      comp=Z,500nm,22.0s
CLF   Chambon-Foret    122.19  46 ePKPdf    PKPdf    20 00 47.0 -0.7
CLF                                LR       LR
      comp=Z,800nm,20.0s
SENIN Lac Senin/Sane   122.44  50 ePKPdf    PKPdf    20 00 48.3 -0.3
SENIN                              LR       LR
      comp=Z,1µm,18.0s
LLLB  Lillooet         122.75 319 ePKPdf    PKPdf    20 00 48.5 -0.3
LLLB                               LR       LR
      comp=Z,600nm,20.0s
KKM   Kota Kinabalu    122.82 179  PFAKE             20 01 00.0  +10
KKM                                LR       LR
      comp=Z,1µm,22.0s
TIR   Tirane           122.87  63  PFAKE             20 01 00.0  +11
TIR                                LR       LR
      comp=Z,900nm,22.0s
BRBR  Barbar           123.04  81 eP        PKiKP    20 00 53.1 +2.7
OHR   Ohrid            123.04  64 i P       PKiKP    20 00 53.8 +3.8
LEF   Lefka            123.12  77⇓iP        PKiKP    20 00 50.9 +0.7
CSS   Mathiatis        123.18  77 ePKPdf    PKPdf    20 00 49.5 -0.6
CSS                                LR       LR
      comp=Z,600nm,20.0s
TOTH  TOTAH            123.21  81 eP        PKiKP    20 00 50.7 +0.2
TUE   Stuetta          123.25  52 ePKPdf    PKPdf    20 00 48.8 -1.3
TUE                                LR       LR
      comp=Z,700nm,22.0s
QASN  Qassioun         123.28  81 eP        PKiKP    20 00 51.7 +1.0
PDG   Podgorica        123.54  62⇓iP        PKPdf    20 00 50.4 -0.1
TTG   Podgorica        123.54  62  PFAKE             20 01 00.0 +9.3
TTG                                LR       LR
      comp=Z,600nm,21.0s
DAVOX Davos/Dischmat   123.70  52  PKP      PKPdf    20 00 49.9 -1.1
      comp=Z,19nm,0.9s,baz=199,slow=5.7,SNR=12
FUORN Ofenpass-Fuorn   123.70  52 ePKPdf    PKPdf    20 00 50.2 -0.8
FUORN                              LR       LR
      comp=Z,1µm,20.0s
VAY   Valandovo        123.94  65 i P       PKiKP    20 00 52.5 +0.9
ECH   Echery           123.98  49 ePKPdf    PKPdf    20 00 51.1 -0.1
ECH                                LR       LR
      comp=Z,600nm,19.0s
SKO   Skopje           124.03  63 i P       PKPdf    20 00 50.0 -1.5
MANT  Manisa           124.07  71  PFAKE             20 01 00.0 +7.7
MANT                               LR       LR
      comp=Z,1µm,19.0s
FCC   Fort Churchill   124.13 341  PFAKE             20 01 00.0 +8.7
FCC                                LR       LR
      comp=Z,600nm,21.0s
DAVA  Damuels          124.13  52 ePKPdf    PKPdf    20 00 51.1 -0.6
      comp=Z,20nm,1.0s,SNR=14
TRI   Trieste          124.20  55  PFAKE             20 01 00.0 +8.0
TRI                                LR       LR
      comp=Z,800nm,19.0s
FETA  Feichten         124.21  52 ePKPdf    PKPdf    20 00 51.7 -0.2
      comp=Z,26nm,1.1s,SNR=15
DSB   Dublin           124.23  37  PFAKE             20 01 00.0 +8.2
DSB                                LR       LR
      comp=Z,700nm,20.0s
EZN   Ezine            124.24  69⇓iP        PKiKP    20 00 53.0 +0.8
EZN   Ezine            124.24  69 ⇓PKIKP    PKiKP    20 00 53.0 +0.8
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ISP   Isparta          124.36  73  PFAKE             20 01 00.0 +7.3
ISP                                LR       LR
      comp=Z,400nm,20.0s
BFO   Black Forest     124.48  50 ePKPdf    PKPdf    20 00 50.8 -1.4
BFO                                LR       LR
      comp=Z,800nm,20.0s
BFO   Black Forest     124.48  50 ePKIKP    PKPdf    20 00 50.8 -1.4
BFO                                MLR      MLR
      comp=Z,800nm,20.0s
SQTA  Sankt Quirin     124.55  53 ePKPdf    PKPdf    20 00 51.6 -0.9
      comp=Z,7.0nm,0.6s,SNR=13
MOTA  Moosalm          124.62  52 ePKPdf    PKPdf    20 00 51.8 -0.9
      comp=Z,16nm,0.7s,SNR=22
RETA  Reutte           124.62  52 ePKPdf    PKPdf    20 00 51.7 -0.8
      comp=Z,18nm,0.8s,SNR=10
ABTA  Abfaltersbach    124.62  54 ePKPdf    PKPdf    20 00 52.1 -0.5
      comp=Z,17nm,1.1s
BLY   Banja Luka       124.68  59 ePKPdf    PKPdf    20 00 51.1 -1.5
BLY                                LR       LR
      comp=Z,800nm,19.0s
BLY   Banja Luka       124.68  59⇑iP        PKiKP    20 00 52.8 -0.2
IVI   Ivigtut          124.70   8  PFAKE             20 01 00.0 +7.6
IVI                                LR       LR
      comp=Z,700nm,22.0s
WTTA  Wattenberg       124.74  53 ePKPdf    PKPdf    20 00 52.1 -0.8
      comp=Z,31nm,0.9s,SNR=26
BALB  Balikesir        124.74  70 ePKPdf    PKPdf    20 00 51.4 -1.5
BALB                               LR       LR
      comp=Z,1µm,20.0s
DOU   Dourbes          124.75  46 ⇑PKP      PKiKP    20 00 52.8 -0.1
WATA  Walderalm        124.78  53 ePKPdf    PKPdf    20 00 52.7 -0.3
      comp=Z,26nm,1.2s,SNR=9.3
WAKE  Wake Island      124.83 241  PFAKE             20 01 00.0 +6.0
WAKE                               LR       LR
      comp=Z,700nm,19.0s
NRS   Narsarsuaq       124.85  10  PFAKE             20 01 00.0 +7.3
NRS                                LR       LR
      comp=Z,500nm,21.0s
UOSS  Minazif          124.86 104  PFAKE             20 01 00.0 +6.0
UOSS                               LR       LR
      comp=Z,1µm,20.0s
WLF   Walferdange      124.89  48 ePKPdf    PKPdf    20 00 51.9 -0.9
WLF                                LR       LR
      comp=Z,3µm,20.0s
WLF   Walferdange      124.89  48 ePKIKP    PKPdf    20 00 51.9 -0.9
WLF                                MLR      MLR
      comp=Z,3µm,20.0s
WLF   Walferdange      124.89  48 ⇑PKP      PKiKP    20 00 55.1 +1.9
MYKA  Terra Mystica    124.94  55 ePKPdf    PKPdf    20 00 52.3 -0.9
      comp=Z,26nm,1.2s,SNR=10
ALN   Alexandroupoli   125.02  68  PFAKE             20 01 00.0 +6.3
ALN                                LR       LR
      comp=Z,200nm,21.0s
STU   Stuttgart        125.16  50  PFAKE             20 01 00.0 +6.2
STU                                LR       LR
      comp=Z,700nm,19.0s
OBKA  Obir             125.17  55 ePKPdf    PKPdf    20 00 53.2 -0.5
      comp=Z,9.6nm,0.8s,SNR=5.4
KBA   Koelnbreinsper   125.20  54 ePKPdf    PKPdf    20 00 53.0 -0.8
      comp=Z,22nm,1.0s,SNR=14
VTS   Vitosha          125.30  64 ePKPdf    PKPdf    20 00 52.7 -1.4
VTS                                LR       LR
      comp=Z,300nm,20.0s
VTS   Vitosha          125.30  64⇓iP        PKPdf    20 00 53.0 -1.1
VTS   Vitosha          125.30  64 ⇓PKIKP    PKPdf    20 00 53.0 -1.1
SOKA  Soboth           125.49  56 ePKPdf    PKPdf    20 00 54.0 -0.2
      comp=Z,10.0nm,0.9s,SNR=10
MEM   Membach          125.65  47 ⇑PKP      PKiKP    20 00 55.9 +1.2
BBB   Bella Bella      126.02 316  PKP      PKiKP    20 00 56.5 +1.2
      comp=Z,16nm,1.1s,baz=178,slow=4.5,SNR=4.1
BBB   Bella Bella      126.02 316 ePKPdf    PKPdf    20 00 54.7 -0.2
YLV   Yalova           126.15  71⇑iP        PKPdf    20 00 54.6 -1.1
YLV   Yalova           126.15  71 ⇑PKIKP    PKPdf    20 00 54.6 -1.1
ARSA  Arzberg          126.15  56 ePKPdf    PKPdf    20 00 54.6 -0.8
      comp=Z,14nm,0.9s,SNR=9.3
MOA   Molln            126.19  54 ePKPdf    PKPdf    20 00 54.0 -1.4
      comp=Z,12nm,0.9s,SNR=10
PHSR  Pinarhisar       126.25  68⇓iP        PKiKP    20 00 57.1 +0.9
MDVR  Moldovita        126.48  62⇓iP        PKiKP    20 00 57.3 +0.7
PLVB  Pleven           126.50  65⇓iP        PKPdf    20 00 55.0 -1.2
ELND  Elena            126.64  66⇓iP        PKPdf    20 00 54.0 -2.5
GRA1  Grafenberg Arr   126.65  51 ePKPdf    PKPdf    20 00 55.6 -0.7
GRA1                               LR       LR
      comp=Z,600nm,19.0s
GEC2  GERESS Array S   126.82  53 ePKPdf    PKPdf    20 00 54.9 -1.9
GERES GERESS Array B   126.82  53  PKP      PKPdf    20 00 55.4 -1.4
      comp=Z,14nm,0.8s,baz=191,slow=1.4,SNR=36
FRB   Frobisher Bay    126.85 357  PKP      PKPdf    20 00 55.0 -1.1
      comp=Z,19nm,0.8s,baz=164,slow=5.0,SNR=12
HERR  Herculane        126.85  62⇓iP        PKPdf    20 00 55.7 -1.1
CONA  Conrad Observa   126.85  55 ePKPdf    PKPdf    20 00 55.4 -1.4
      comp=Z,6.8nm,0.8s
MDUB  Mudurnu          126.85  72  PFAKE             20 01 10.0  +12
MDUB                               LR       LR
      comp=Z,1µm,19.0s
ESK   Eskdalemuir      126.93  38 ePKPdf    PKPdf    20 00 55.6 -1.0
ESK                                LR       LR
      comp=Z,1µm,19.0s
ESK   Eskdalemuir      126.93  38 i PKIKP   PKiKP    20 00 58.3 +1.2
KHC   Kasperske Hory   127.02  53 ePKPdf    PKPdf    20 00 54.5 -2.5
KHC                                LR       LR
      comp=Z,300nm,22.0s
KHC   Kasperske Hory   127.02  53 ePKIKP    PKPdf    20 00 55.6 -1.4
KHC                                MLR      MLR
      comp=Z,800nm,22.7s
KHC   Kasperske Hory   127.02  53 ePKP      PKPdf    20 00 55.6 -1.4
KHC                                AMS      AMS      20 50 30.0
      comp=Z,800nm,22.7s
ANTO  Ankara           127.04  74  PFAKE             20 01 10.0  +12
ANTO                               LR       LR
      comp=Z,400nm,19.0s
ANTO  Ankara           127.04  74⇑iP        PKiKP    20 00 59.0 +1.1
ANTO  Ankara           127.04  74 ⇑PKIKP    PKiKP    20 00 59.0 +1.1
TIM   Timisoara        127.08  61⇓iP        PKiKP    20 01 06.1 +8.4
TIM   Timisoara        127.08  61 ⇓PKIKP    PKiKP    20 01 06.1 +8.4
BZS   Buzias           127.14  61⇓iP        PKPdf    20 00 56.0 -1.3
BZS   Buzias           127.14  61 ⇓PKIKP    PKPdf    20 00 56.0 -1.3
BR131 Keskin Array S   127.29  75 ePKPdf    PKPdf    20 00 56.4 -1.6
BRTR  Keskin Array B   127.29  75  PKP      PKPdf    20 00 56.4 -1.6
      comp=Z,11nm,1.0s,baz=187,slow=3.4,SNR=18
BRTR                               SKPab    SKiKP    20 04 15.6  -18
      comp=Z,1.5nm,0.8s,baz=191,slow=5.0,SNR=3.2
GZR   Gura Zlata       127.41  62⇑iP        PKPdf    20 00 56.9 -1.0
GZR   Gura Zlata       127.41  62 ⇑PKIKP    PKPdf    20 00 56.9 -1.0
NKC   Novy Kostel      127.53  51 ePKIKP    PKiKP    20 00 59.3 +0.8
NKC                                MLR      MLR
      comp=Z,500nm,15.2s
NKC   Novy Kostel      127.53  51 ePKP      PKiKP    20 00 59.3 +0.8
NKC                                AMS      AMS      20 55 40.0
      comp=Z,500nm,15.2s
HUMR  Humele           127.59  64⇑iP        PKiKP    20 00 59.2 +0.4
MODS  Modra-Piesok     127.75  56 ePKIKP    PKPdf    20 00 57.9 -0.5
MODS  Modra-Piesok     127.75  56 ePKP      PKPdf    20 00 57.9 -0.5
TREC  Trest            127.85  54  AMS      AMS      20 51 30.0
      comp=Z,700nm,20.2s
KRUC  Moravsky         127.99  55 ePKP      PKiKP    20 00 59.1 -0.3
PRU   Pruhonice        128.08  53 ePKIKP    PKiKP    20 01 00.0 +0.4
PRU                                MLR      MLR
      comp=Z,800nm,21.0s
PRU   Pruhonice        128.08  53 ePKP      PKiKP    20 01 00.0 +0.4
PRU                                AMS      AMS      20 52 10.0
      comp=Z,800nm,21.0s
GOPC  GO Pecny, Ondr   128.10  53  AMS      AMS      20 50 40.0
      comp=Z,600nm,21.1s
VRAC  Vranov           128.26  55⇑iP        PKPdf    20 00 58.7 -0.7
VRAC  Vranov           128.26  55 ⇑PKIKP    PKPdf    20 00 58.7 -0.7
VRAC  Vranov           128.26  55 ePKP      PKPdf    20 00 59.4  0.0
DIB   Dawson Inlet,    128.28 314  PFAKE             20 01 10.0  +10
DIB                                LR       LR
      comp=Z,500nm,20.0s
JAVC  Velka Javorina   128.29  56 ePKP      PKPdf    20 00 59.5  0.0
DLV   T  Lat           128.30 169  PFAKE             20 01 10.0 +8.6
DLV                                LR       LR
      comp=Z,1µm,20.0s
PSZ   Piszkesteto      128.36  58 ePKPdf    PKPdf    20 00 57.8 -1.9
PSZ                                LR       LR
      comp=Z,500nm,20.0s
VOIR                   128.36  64⇑iP        PKPdf    20 00 58.8 -1.0
VOIR                   128.36  64 ⇑PKIKP    PKPdf    20 00 58.8 -1.0
VYHS  Vyhne            128.43  57 ePKIKP    PKPdf    20 00 58.6 -1.1
VYHS                              e                  20 03 09.6
VYHS  Vyhne            128.43  57 ePKP      PKPdf    20 00 58.6 -1.1
VYHS                              ePP       PP       20 03 09.6 +4.0
VYHS                              e                  20 04 16.9
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DRGR                   128.53  61⇑iP        PKiKP    20 01 00.6 -0.1
DRGR                   128.53  61 ⇑PKIKP    PKiKP    20 01 00.6 -0.1
PVCC  Panska Ves       128.53  53 ePKIKP    PKiKP    20 01 01.4 +0.9
PVCC                               MLR      MLR
      comp=Z,600nm,20.1s
PVCC  Panska Ves       128.53  53 ePKP      PKiKP    20 01 01.4 +0.9
PVCC                               AMS      AMS      20 56 20.0
      comp=Z,600nm,20.1s
BRG   Berggiesshubel   128.60  52 ePKP      PKPdf    20 00 59.5 -0.4
      comp=Z,12nm,1.2s
BRG                                PP       PP       20 02 46.0  -21
BRG                                SKP               20 04 22.0
BRG                                SS       SS       20 19 46.0  -37
      comp=N,246nm,18.3s
      comp=E,322nm,18.9s
      comp=Z,472nm,17.0s
BRG   Berggiesshubel   128.60  52 ePKIKP    PKPdf    20 00 59.5 -0.4
BRG                                pmax     pmax
      comp=Z,12nm,1.2s
BRG                                MLR      MLR
      comp=N,246nm,18.3s
BRG                                MLR      MLR
      comp=E,322nm,18.9s
BRG                                MLR      MLR
      comp=Z,472nm,17.0s
CLL   Collm            128.62  51 ePKPdf    PKPdf    20 00 58.5 -1.4
CLL                                LR       LR
      comp=Z,500nm,19.0s
CLL   Collm            128.62  51 i PKIKP   PKPdf    20 00 59.2 -0.7
CLL                                pmax     pmax
      comp=Z,19nm,1.2s
CLL                                MLR      MLR
      comp=Z,500nm,18.0s
CLL   Collm            128.62  51 i PKiKP   PKPdf    20 00 59.2 -0.7
      comp=Z,19nm,1.2s
CLL                               i                  20 01 07.9
CLL                               e                  20 03 34.0
CLL                               e                  20 04 21.0
CLL                               e                  20 04 26.0
CLL                               eSKSac    SKSac    20 08 06.0 -0.7
CLL                               eSKKSac   SKKSac   20 10 06.0 +3.8
CLL                               eSdif     Sdif     20 11 24.0  +14
CLL                               ePPS      PPS      20 14 42.0
CLL                               e                  20 15 42.0
CLL                               ePPPrev            20 17 24.0
CLL                               eSS       SS       20 20 23.0 -0.3
CLL                               eSSS      SSS      20 25 12.0
CLL                               eSSSS              20 28 48.0
CLL                                Lm       MLR      21 02 00.0
      comp=N,300nm,18.2s
CLL                                Lm       MLR      21 02 00.0
      comp=E,300nm,19.3s
CLL                                Lm       MLR      21 02 00.0
      comp=Z,500nm,18.0s
ISR   Istrita          128.71  65⇓iP        PKiKP    20 01 00.8 -0.3
ISR   Istrita          128.71  65 ⇓PKIKP    PKiKP    20 01 00.8 -0.3
MLR   Muntele Rosu     128.77  64  PKP      PKPdf    20 00 59.0 -1.6
      comp=Z,28nm,1.0s,baz=197,slow=4.2,SNR=27
MLR                                SKPbc    SKiKP    20 04 19.7  -17
      comp=Z,12nm,1.1s,baz=297,slow=4.5,SNR=4.9
MLR   Muntele Rosu     128.77  64 ePKPdf    PKPdf    20 00 58.9 -1.6
MLR                                LR       LR
      comp=Z,600nm,22.0s
MLR   Muntele Rosu     128.77  64⇑iP        PKPdf    20 00 59.3 -1.3
MLR   Muntele Rosu     128.77  64 ⇑PKIKP    PKPdf    20 00 59.3 -1.3
TLB   Topalu           128.89  67⇓iP        PKiKP    20 01 02.2 +0.9
TLB   Topalu           128.89  67 ⇓PKIKP    PKiKP    20 01 02.2 +0.9
HARR  Harsova          128.93  66⇑iP        PKiKP    20 01 02.2 +0.8
HARR  Harsova          128.93  66 ⇑PKIKP    PKiKP    20 01 02.2 +0.8
TIRR  Tirgusor         128.94  67 ePKPdf    PKPdf    20 00 59.4 -1.4
TIRR                               LR       LR
      comp=Z,800nm,19.0s
TIRR  Tirgusor         128.94  67⇓iP        PKPdf    20 01 00.0 -0.8
TIRR  Tirgusor         128.94  67 ⇓PKIKP    PKPdf    20 01 00.0 -0.8
MORC  Moravsky Berou   129.00  55 ePKPdf    PKPdf    20 00 59.9 -0.9
MORC                               LR       LR
      comp=Z,500nm,20.0s
MORC  Moravsky Berou   129.00  55⇓iP        PKPdf    20 01 00.9 +0.1
MORC  Moravsky Berou   129.00  55 ⇓PKIKP    PKPdf    20 01 00.9 +0.1
DPC   Dobruska-Polom   129.02  54 ePKIKP    PKPdf    20 01 00.3 -0.5
DPC                               e                  20 01 08.4
DPC                                MLR      MLR
      comp=Z,500nm,17.7s
DPC   Dobruska-Polom   129.02  54 ePKP      PKPdf    20 01 00.3 -0.5
DPC                               epPKP     sPKPdf   20 01 08.4 +1.6
DPC                                AMS      AMS      20 52 20.0
      comp=Z,500nm,17.7s
UPC   Upice            129.04  54 ePKIKP    PKiKP    20 01 01.3 -0.2
UPC                               e                  20 01 09.5
UPC                                MLR      MLR
      comp=Z,600nm,20.5s
UPC   Upice            129.04  54 ePKP      PKiKP    20 01 01.3 -0.2
UPC                               ex        x        20 01 09.5
UPC                                AMS      AMS      20 52 10.0
      comp=Z,600nm,20.5s
CHVC  Chvalec          129.12  54 ePKP      PKiKP    20 01 01.3 -0.4
CHVC                              ex        x        20 01 07.4
CHVC                               AMS      AMS      20 52 00.0
      comp=Z,700nm,22.6s
BISRR Bisoca           129.13  65⇓iP        PKPdf    20 01 00.5 -0.7
OSTC  Ostas            129.15  54 ePKP      PKPdf    20 01 00.9 -0.1
OSTC                              ex        x        20 01 09.6
OSTC                               AMS      AMS      20 52 10.0
      comp=Z,500nm,22.0s
OKC   Ostrava-Krasne   129.28  56 ePKIKP    PKPdf    20 01 00.3 -0.9
OKC                                MLR      MLR
      comp=Z,400nm,15.6s
OKC   Ostrava-Krasne   129.28  56 ePKP      PKPdf    20 01 00.3 -0.9
OKC                               ex        x        20 01 13.6
OKC                                AMS      AMS      20 57 10.0
      comp=Z,400nm,15.6s
BZK   Bozkurt          129.28  73⇑iP        PKPdf    20 00 59.3 -2.2
PLOR  Plostina         129.35  65⇑iP        PKPdf    20 00 59.9 -1.7
PLOR  Plostina         129.35  65 ⇑PKIKP    PKPdf    20 00 59.9 -1.7
VRI   Vrincioaia       129.39  65⇑iP        PKPdf    20 00 59.7 -1.9
VRI   Vrincioaia       129.39  65 ⇑PKIKP    PKPdf    20 00 59.7 -1.9
CFR   Carcaliu         129.41  66⇓iP        PKPdf    20 01 00.3 -1.3
CFR   Carcaliu         129.41  66 ⇓PKIKP    PKPdf    20 01 00.3 -1.3
KSP   Ksiaz            129.42  54 ePKP      PKPdf    20 01 01.4 -0.1
KSP   Ksiaz            129.42  54 ePKIKP    PKPdf    20 01 01.4 -0.1
ARCR  ARCALIA          129.43  62⇑iP        PKPdf    20 01 01.5 -0.1
ODBI  Odobesti         129.44  65⇑iP        PKiKP    20 01 03.1 +0.7
TRPA  Tarpa            129.56  60⇑iP        PKPdf    20 01 01.4 -0.4
TLCR                   129.70  67⇓iP        PKPdf    20 01 02.3 +0.1
TLCR                   129.70  67 ⇓PKIKP    PKPdf    20 01 02.3 +0.1
NIE   Niedzica         129.74  57 ePKP      PKPdf    20 01 01.6 -0.6
NIE   Niedzica         129.74  57 ePKIKP    PKPdf    20 01 01.6 -0.6
UZH   Uzhgorod         129.87  59⇑iPKIKP    PKiKP    20 01 02.8 -0.4
UZH                               i                  20 01 08.8
TESR  Tescani          129.88  64⇓iP        PKPdf    20 01 01.0 -1.5
ANGG  Ammassalik, Gr   129.94  13  PFAKE             20 01 10.0 +7.3
ANGG                               LR       LR
      comp=Z,900nm,22.0s
BIZ   Bicaz            130.01  63⇑iP        PKPdf    20 01 01.9 -0.9
BURAR Bucovina Array   130.20  62⇑iP        PKPdf    20 01 02.0 -1.2
BURAR Bucovina Array   130.20  62 ⇑PKIKP    PKPdf    20 01 02.0 -1.2
OJC   Ojcow            130.21  56 ePKP      PKPdf    20 01 02.8 -0.2
OJC   Ojcow            130.21  56 ePKPdf    PKPdf    20 01 01.5 -1.5
OJC   Ojcow            130.21  56 ePKIKP    PKPdf    20 01 02.8 -0.2
BUR08 Bucovina Ar. S   130.22  62 ePKPdf    PKPdf    20 01 01.3 -2.0
SFJD  Kangerlussuaq    130.32   6  PKP      PKPdf    20 01 02.2 -0.4
      baz=263,slow=2.7
SFJD                               SKPbc    SKPbc    20 04 25.5 +0.3
      comp=Z,10.0nm,0.8s,baz=131,slow=4.2,SNR=4.0
SFJD  Kangerlussuaq    130.32   6  PFAKE             20 01 10.0 +6.5
SFJD                               LR       LR
      comp=Z,400nm,20.0s
CRAG  Craig            130.38 315 ePKPdf    PKiKP    20 01 04.2 +0.2
PRAR  RASCA            130.40  63⇑iP        PKiKP    20 01 04.0 -0.3
KWP   Kalwaria Pacla   130.84  59  PFAKE             20 01 20.0  +15
KWP                                LR       LR
      comp=Z,6µm,21.0s
WRAK  Wrangell Islan   130.93 316 ePKPdf    PKPdf    20 01 03.8 -0.3
WRAK                               LR       LR
      comp=Z,400nm,20.0s
MILM  Milestii Mici    131.10  65⇑iP        PKPdf    20 01 03.5 -1.3
KIS   Kishinev         131.16  65 ePKP      PKPdf    20 01 04.0 -0.9
KIS                               eL        L        20 46 36.0
KIS                                LRM      MLR      20 59 24.0
      comp=Z,400nm,21.0s
KIS   Kishinev         131.16  65 ePKIKP    PKPdf    20 01 04.0 -0.9
KIS                               i                  20 01 07.0
KIS                               e                  20 01 11.0
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KIS                               MLR       MLR
      comp=Z,400nm,21.0s
BORG  Borgarnes      131.35  22 i PKIKP   PKiKP     20 01 08.3 +2.7
RGN   Rugen          131.40  49  PFAKE              20 01 20.0  +14
RGN                               LR        LR
      comp=Z,700nm,20.0s
YKA   Yellowknife Ar 131.41 331  PKhKP    PKPpre    20 00 56.1
      comp=Z,1.2nm,0.9s,baz=152,slow=2.4,SNR=4.6
YKA                               PKP       PKPdf     20 01 04.0 -0.8
      comp=Z,8.7nm,0.7s,baz=160,slow=2.0,SNR=32
YKA                               SKPbc     SKPbc     20 04 28.2 -1.0
      comp=Z,4.8nm,0.8s,baz=148,slow=3.8,SNR=12
YKA   Yellowknife Ar 131.41 331 ePKPpre   PKPpre    20 00 54.5
YKA                              ePKPdf    PKPdf     20 01 04.2 -0.7
YKW3  Yellowknife Ar 131.47 331 ePKPdf    PKPdf     20 01 03.5 -1.5
LVV   L'vov          131.50  60 i PKIKP   PKPdf     20 01 02.7 -2.8
LVV                              e                   20 03 23.8
LVV                              ePPP      PPP       20 06 17.5
LVV                              eSSS      SSS       20 21 02.0
LVV                               MLR       MLR
      comp=N,100nm,18.0s
LVV                               MLR       MLR
      comp=E,200nm,18.0s
LVV                               MLR       MLR
      comp=Z,200nm,18.0s
SIM   Simferopol'    131.74  71 ePKIKP    PKPdf     20 01 05.1 -1.0
SIM                               pmax      pmax
      comp=Z,19nm,1.1s
SIM                               MLR       MLR
      comp=Z,110nm,19.0s
DLBC  Dease Lake     131.90 319  PKP      PKPdf     20 01 05.8 -0.3
      comp=Z,20nm,1.1s,baz=232,slow=1.1,SNR=14
DLBC                              SKPbc     SKPbc     20 04 31.8 +0.5
      comp=Z,8.4nm,1.0s,baz=168,slow=5.3,SNR=5.4
DLBC  Dease Lake     131.90 319 ePKPdf    PKPdf     20 01 06.3 +0.3
DLBC                             eSKPbc    SKPbc     20 04 31.1 -0.2
DLBC                              LR        LR
      comp=Z,600nm,22.0s
SIT   Sitka          132.39 315  PFAKE              20 01 20.0  +12
SIT                               LR        LR
      comp=Z,600nm,21.0s
ILULI Ilulissat      132.51   6 ePKPdf    PKPdf     20 01 05.0 -1.8
ILULI                             LR        LR
      comp=Z,400nm,21.0s
ILULI Ilulissat      132.51   6 i PKIKP   PKPdf     20 01 06.2 -0.5
ILULI                             pmax      pmax
      comp=Z,31nm,0.8s
ILULI Ilulissat      132.51   6 i P       PKPdf     20 01 06.2 -0.5
      comp=Z,31nm,0.8s
GNI   Garni          132.55  83  PFAKE              20 01 20.0  +11
GNI                               LR        LR
      comp=Z,800nm,21.0s
UTTA  Uttaradit      132.99 158  P        PKiKP     20 01 15.0 +4.6
AKH   Akhalkalaki    133.01  81 ePKPdf    PKPdf     20 01 05.9 -3.0
AKH                               LR        LR
      comp=Z,900nm,19.0s
ANN   Anapa          133.05  74 i PKIKP   PKPdf     20 01 09.0 +0.5
ANN                              e                   20 01 17.2
ANN                              e                   20 03 35.8
ANN                              e                   20 08 15.9
ANN                               pmax      pmax
      comp=Z,20nm,1.0s
SOC   Sochi          133.07  76 i PKIKP   PKiKP     20 01 11.0 +1.2
SOC                              e                   20 03 32.6
SOC                              ePS       PS        20 13 44.1 -8.0
SOC                              eSS       SS        20 21 13.4 -4.6
SOC                               MLR       MLR
      comp=Z,273nm,16.0s
JIS   Juneau Island  133.09 317 ePKPdf    PKPdf     20 01 06.7 -1.4
BLS5  Blasjo         133.19  41 ePKPdf    PKiKP     20 01 09.7 +0.1
CM31  Chiang Mai Arr 133.40 156 ePKPdf    PKPdf     20 01 07.7 -2.4
CMAR  Chiang Mai Arr 133.40 156  PKP      PKPdf     20 01 08.9 -1.1
      comp=Z,4.0nm,0.9s,baz=220,slow=3.2,SNR=12
CMAR                              SKPab     SKPab     20 04 40.0 +0.2
      comp=Z,0.8nm,0.3s,baz=177,slow=5.2,SNR=5.6
CMAR  Chiang Mai Arr 133.40 156  PKIKP    PKPdf     20 01 09.0 -1.1
BESE  Bessie Mountai 133.48 317 ePKPdf    PKPdf     20 01 07.4 -1.6
BESE                              LR        LR
      comp=Z,500nm,19.0s
PHRA  Phrae          133.68 157  P        PKiKP     20 01 13.3 +1.5
CHTO  Chiang Mai     133.75 155 ePKPdf    PKPdf     20 01 09.4 -1.3
CHTO                              LR        LR
      comp=Z,700nm,21.0s
CMMT  Chiang Mai     133.75 155  P        PKiKP     20 01 14.8 +2.8
NEY   Neytrino       134.13  79⇑ePKIKP    PKiKP     20 01 11.5 -0.7
AKASG Malin Array Be 134.25  63  PKP      PKPdf     20 01 07.3 -3.2
      comp=Z,6.9nm,0.7s,baz=241,slow=1.5,SNR=5.1
AKASG                             SKPbc     SKPbc     20 04 37.8 -1.6
      comp=Z,4.0nm,0.6s,baz=229,slow=3.3,SNR=11
KONO  Kongsberg      134.32  43  PFAKE              20 01 20.0 +8.2
KONO                              LR        LR
      comp=Z,600nm,21.0s
SKAG  Skagway        134.34 317 ePKPdf    PKPdf     20 01 10.3 -0.2
SKAG                              LR        LR
      comp=Z,500nm,19.0s
SUW   Suwalki        134.49  56 ePKP      PKPdf     20 01 11.4 +0.5
SUW   Suwalki        134.49  56 ePKPpre   PKPpre    20 01 03.1
SUW                              ePKPdf    PKPdf     20 01 10.7 -0.2
SUW                               LR        LR
      comp=Z,600nm,18.0s
SUW   Suwalki        134.49  56 ePKIKP    PKPdf     20 01 11.4 +0.5
HYA   Hoyanger       134.53  39 ePKPdf    PKiKP     20 01 11.9 -0.3
KBZ   Khabaz         134.59  79  PKP      PKPdf     20 01 10.1 -1.3
      comp=Z,8.4nm,0.8s,baz=244,slow=1.5,SNR=11
KBZ                               PP        PP        20 03 50.8 +5.5
      comp=Z,5.0nm,1.0s,baz=217,slow=7.7,SNR=4.1
KBZ                               SKPbc     SKPbc     20 04 40.1 -0.6
      comp=Z,4.9nm,0.8s,baz=152,slow=1.6,SNR=3.9
KIV   Kislovodsk     134.68  78 ePKPpre   PKPpre    20 00 58.9
KIV                               LR        LR
      comp=Z,500nm,20.0s
KIV   Kislovodsk     134.68  78 i PKIKP   PKiKP     20 01 12.6 -0.6
KIV                              e                   20 03 44.9
KIV                              eSS       SS        20 21 35.8 -1.8
KIV                               pmax      pmax
      comp=Z,61nm,1.1s
NCK   Nalchik        134.72  80⇓iPKIKP    PKiKP     20 01 15.0 +1.8
SKAR  Skarslia       134.76  41 epPKPdf   pPKPdf    20 01 15.1 -0.7
AKT   Akhty          134.96  85 ePKIKP    PKiKP     20 01 13.2 -0.7
AKT                              e                   20 03 51.3
AKT                               pmax      pmax
      comp=Z,15nm,0.7s
QIZ   Qiongzhong     135.43 170  PFAKE              20 01 30.0  +15
QIZ                               LR        LR
      comp=Z,1μm,20.0s
QIZ   Qiongzhong     135.43 170  PKP      PKiKP     20 01 14.8 -0.6
QIZ                               SS        SS        20 21 51.0 +5.7
QIZ                               AMB       AMB
      comp=Z,220nm,8.4s
QIZ                               LR        LR
      comp=Z,590nm,19.4s
QIZ                               LR        LR
      comp=Z,260nm,17.8s
QIZ                               LR        LR
      comp=Z,820nm,17.2s
AKN   Aaknes         135.58  39 ePKPdf    PKPdf     20 01 11.9 -0.8
NAO01 NORSAR Array S 135.66  42 ePKPdf    PKPdf     20 01 13.0 +0.1
NBO00 NORSAR Array S 135.78  42 ePKPdf    PKiKP     20 01 14.1 -0.7
NC602 NORSAR Array S 135.78  43 ePKPdf    PKPdf     20 01 13.7 +0.5
NC602 NORSAR Array S 135.78  43 ePKPdf    PKiKP     20 01 14.1 -0.7
NB2   NORSAR Subarra135.92  42  PKPdf    PKPdf     20 01 12.0 -1.5
      comp=Z,8.5nm,1.1s,baz=202,slow=1.9
NB2   NORSAR Subarra135.92  42  PKPdf    PKPdf     20 01 12.0 -1.5
      baz=202,slow=1.9
NOA   NORSAR Array B 135.92  42  PKP      PKPdf     20 01 11.6 -1.9
      comp=Z,13nm,1.0s,baz=214,slow=1.7,SNR=14
NOA                               SKPbc     SKPbc     20 04 44.0 -0.4
      comp=Z,7.8nm,1.1s,baz=219,slow=3.2,SNR=9.3
NB201 NORSAR Array S 135.95  42 ePKPdf    PKPdf     20 01 12.8 -0.8
NC204 NORSAR Array S 135.97  42 ePKPdf    PKPdf     20 01 13.6  0.0
MAK   Makhachkala    136.04  83 eP        Pdif      19 58 20.8 +2.1
MAK                              e                   20 03 57.7
MAK                              ePPP      PPP       20 06 53.3
MAK                              e                   20 08 28.4
MAK                              ePS       PS        20 14 18.9 +1.6
MAK                              eSS       SS        20 21 57.0 +3.4
MAK                              eSSS      SSS       20 26 58.1
MAK                               pmax      pmax
      comp=Z,108nm,1.0s
DOMB  Dombas         136.07  40 ePKPdf    PKiKP     20 01 14.7 -0.6
BCPM  Bancas Point   136.07 315  PFAKE              20 01 30.0  +15
BCPM                              LR        LR
      comp=Z,600nm,22.0s
HYT   Haines Junctio 136.09 317 ePKPpre   PKPpre    20 01 09.8
NC303 NORSAR Array S 136.11  42 ePKPdf    PKPdf     20 01 12.6 -1.1
PCA   Pinnacle       136.38 315 ePKPpre   PKPpre    20 01 08.4
PCA                              ePKPdf    PKiKP     20 01 15.8 -0.3
PCA                               LR        LR
      comp=Z,600nm,21.0s
SCO   Scoresbysund   136.50  19  PFAKE              20 01 30.0  +14
SCO                               LR        LR
      comp=Z,400nm,20.0s
SUMG  Summit         136.62  10  PFAKE              20 01 30.0  +13
SUMG                              LR        LR
      comp=Z,800nm,22.0s
SUMG  Summit         136.62  10 i PKIKP   PKPdf     20 01 14.5 -0.4
SUMG                              pmax      pmax
      comp=Z,220nm,1.1s
SUMG  Summit         136.62  10 i P       PKPdf     20 01 14.5 -0.4
      comp=Z,224nm,1.1s
MICGM Minsk          136.64  58 e         PKPdf     20 01 11.0 -3.9
MNK   Minsk          136.64  58 ePKIKP    PKPdf     20 01 11.0 -3.9
IIGN  Ignalina       136.65  56 eP        PKPdf     20 01 13.6 -1.3
IIGN                              IAmb      IAmb      20 01 18.5
      comp=Z,15nm,1.1s
GEYT  Alibeck        136.76  97  PKP      PKPdf     20 01 15.3 -0.5
      comp=Z,5.5nm,0.7s,baz=222,slow=1.9,SNR=6.3
GYA0B ALIBECK ARRAY  136.76  97 ePKPpre   PKPpre    20 01 07.7
GYA0B                            ePKPdf    PKPdf     20 01 14.6 -1.2
ISAL  Salakas        136.78  56 eP        PKPdf     20 01 13.1 -2.1
ISAL                              IAmb      IAmb      20 01 18.8
      comp=Z,20nm,1.1s
IDID  Didziasalis    136.82  57 eP        PKPdf     20 01 12.5 -2.7
IDID                              IAmb      IAmb      20 01 18.6
      comp=Z,8.9nm,0.9s
IZAR  Zarasai        136.96  56 eP        PKPdf     20 01 12.9 -2.6
IZAR                              IAmb      IAmb      20 01 19.1
      comp=Z,10nm,0.8s
SLVN  Son La         137.04 161  PFAKE              20 01 30.0  +11
SLVN                              LR        LR
      comp=Z,1μm,22.0s
TBLU  Trondheim      137.36  40 ePKPdf    PKiKP     20 01 17.0 -0.9
BALM  Baldy          137.77 315 ePKPpre   PKPpre    20 01 11.2
BALM                             ePKPdf    PKPdf     20 01 16.5 -0.5
BALM                              LR        LR
      comp=Z,600nm,21.0s
BALM  Baldy          137.77 315 ePKIKP    PKPdf     20 01 11.2 -5.8
BALM                             e                   20 01 16.5
BALM                              MLR       MLR
      comp=Z,600nm,21.0s
HMT   Hamilton       137.87 313 ePKPpre   PKPpre    20 01 13.3
HMT                               LR        LR
      comp=Z,700nm,20.0s
RAGM  Ragged Mountai 138.04 313 ePKPdf    PKPdf     20 01 17.0 -0.4
RAGM                              LR        LR
      comp=Z,1μm,19.0s
KOLN  Koldanda       138.23 132 eP        PKPdf     20 01 08.6  -10
      comp=Z,25nm,0.7s
PYUN  Piuthan        138.33 131 eP        PKPdf     20 01 08.3  -11
      comp=Z,20nm,0.7s
EYAK  Cordova Ski Ar 138.52 312  PFAKE              20 01 30.0  +10
EYAK                              LR        LR
      comp=Z,1μm,20.0s
DMN   Daman          138.58 134 eP        PKPdf     20 01 09.6  -10
      comp=Z,26nm,0.8s
SII   Sitkinak Islan 138.60 303  PFAKE              20 01 30.0 +9.3
SII                               LR        LR
      comp=Z,600nm,20.0s
VORD  Divnogorie     138.60  69 ePKIKP    PKPdf     20 01 19.6 +1.0
VORD                              pmax      pmax
      comp=Z,10.0nm,0.8s
PKI   Pulchoki       138.64 135 eP        PKPdf     20 01 11.1 -8.9
PKIN  Phulchoki      138.64 135 eP        PKPdf     20 01 11.0 -8.9
      comp=Z,24nm,0.8s
SHL   Shillong       138.66 144 ePKPpre   PKPpre    20 01 11.8
SHL                              ePKPdf    PKiKP     20 01 21.1 -1.0
SHL                               LR        LR
      comp=Z,800nm,19.0s
KBL   Kabul          138.69 111  PFAKE              20 01 30.0 +8.1
KBL                               LR        LR
      comp=Z,500nm,21.0s
VSR   Storozhevoye   138.73  69 ePKIKP    PKPdf     20 01 19.4 +0.5
VSR                               pmax      pmax
      comp=Z,10.0nm,0.7s
OHAK  Old Harbor     138.75 304 ePKPdf    PKPdf     20 01 16.7 -2.0
OHAK                              LR        LR
      comp=Z,700nm,18.0s
GKN   Gorkha         138.79 133 eP        PKPdf     20 01 10.3  -10
DANN  Dangsing       138.82 132 eP        PKPdf     20 01 10.7  -10
      comp=Z,44nm,0.7s
NSS   Namsos         138.82  39 ePKPdf    PKPdf     20 01 19.5 +0.9
KDAK  Kodiak Island  138.90 305  PKhKP    PKPpre    20 01 14.0
      comp=Z,9.8nm,0.9s,baz=79,slow=5.2,SNR=2.3
KDAK                              PKP       PKPdf     20 01 18.9 -0.1
      comp=Z,7.3nm,0.6s,baz=163,slow=1.1,SNR=3.9
KDAK                              SKP                 20 04 52.6
      comp=Z,5.1nm,0.8s,baz=170,slow=3.0,SNR=3.6
KDAK  Kodiak Island  138.90 305 ePKPpre   PKPpre    20 01 11.8
KDAK                             ePKPdf    PKPdf     20 01 18.9 -0.1
KDAK                              LR        LR
      comp=Z,800nm,18.0s
FID   Port Fidalgo   138.92 312  PFAKE              20 01 30.0 +8.8
FID                               LR        LR
      comp=Z,600nm,19.0s
DAWY  Dawson         139.13 319 ePKPpre   PKPpre    20 01 11.9
DAWY                             ePKPdf    PKPdf     20 01 18.9 -0.5
DAWY                              LR        LR
      comp=Z,700nm,20.0s
VSU   Vasula         139.15  53 eP        PKPdf     20 01 17.5 -1.9
VSU                               IAmb      IAmb      20 01 24.2
      comp=Z,53nm,1.0s
VSU   Vasula         139.15  53ciPKIKP    PKiKP     20 01 22.3 +0.7
GLI   Glacier Island 139.22 312  PFAKE              20 01 30.0 +8.2
GLI                               LR        LR
      comp=Z,600nm,20.0s
RES   Resolute Bay   139.37 347  PKP      PKPdf     20 01 19.6 +0.2
      comp=Z,10nm,0.8s,baz=188,slow=6.3,SNR=7.5
RES   Resolute Bay   139.37 347 ePKPpre   PKPpre    20 01 12.8
RES                              epPKPdf   PKiKP     20 01 20.9 -0.8
RES                               LR        LR
      comp=Z,800nm,22.0s
SEW   Seward         139.46 310 ePKPdf    PKPdf     20 01 20.7 +0.8
SEW                               LR        LR
      comp=Z,700nm,19.0s
MENT  Mentasta       139.62 316 ePKPpre   PKPpre    20 01 13.1
MENT                             ePKPdf    PKPdf     20 01 20.8 +0.6
MENT                              LR        LR
      comp=Z,500nm,20.0s
LPSR  Galich'ya Gora 139.65  67 ePKIKP    PKiKP     20 01 22.4 -0.5
LPSR                              pmax      pmax
      comp=Z,10.0nm,0.5s
NIL   Nilore         139.66 116 ePKPpre   PKPpre    20 01 11.6
NIL                               LR        LR
      comp=Z,300nm,20.0s
CNPM  China Poot     139.67 308 ePKPdf    PKPdf     20 01 18.1 -2.3
CNPM                              LR        LR
      comp=Z,900nm,18.0s
TULEG Thule          139.68 358 ePKPdf    PKPdf     20 01 19.0 -0.9
TULEG                             LR        LR
      comp=Z,600nm,20.0s
BRLK  Bradley Lake   139.72 309  PFAKE              20 01 30.0 +7.1
BRLK                              LR        LR
      comp=Z,700nm,20.0s
HOM   Homer          139.91 308  PFAKE              20 01 30.0 +6.8
HOM                               LR        LR
      comp=Z,800nm,18.0s
SCM   Sheep Creek Mo 139.99 313 ePKPpre   PKPpre    20 01 11.5
SCM                               LR        LR
      comp=Z,500nm,20.0s
SCM   Sheep Creek Mo 139.99 313 ePKHKP    PKPpre    20 01 11.5
SCM                               MLR       MLR
      comp=Z,500nm,20.0s
CHGN  Chignik        140.03 300  PFAKE              20 01 30.0 +6.5
CHGN                              LR        LR
      comp=Z,500nm,20.0s
KNK   Knik Glacier   140.06 312 ePKPpre   PKPpre    20 01 12.7
EPYK  Eagle Plains   140.08 323  PFAKE              20 01 30.0 +6.6
EPYK                              LR        LR
      comp=Z,700nm,18.0s
EGAK  Eagle          140.17 319 ePKPpre   PKPpre    20 01 15.6
EGAK                             ePKPdf    PKPdf     20 01 21.6 +0.5
EGAK                              LR        LR
      comp=Z,500nm,19.0s
DOT   Dot Lake       140.24 316 ePKPpre   PKPpre    20 01 14.2
DOT                              ePKPdf    PKPdf     20 01 19.2 -2.1
DOT                               LR        LR
      comp=Z,700nm,20.0s
RC01  Rabbit Creek A 140.27 311 ePKPpre   PKPpre    20 01 14.9
RC01                              LR        LR
      comp=Z,700nm,21.0s
SML   Sawmill        140.30 312 ePKPpre   PKPpre    20 01 14.5
SML                               LR        LR
      comp=Z,500nm,19.0s
PMR   Palmer         140.42 311 ePKPpre   PKPpre    20 01 15.2
PMR                               LR        LR
      comp=Z,500nm,20.0s
SCRK  Sand Creek     140.45 317 ePKPpre   PKPpre    20 01 13.6
SCRK                              LR        LR
      comp=Z,700nm,22.0s
OBN   Obninsk        140.50  63  PFAKE              20 01 30.0 +5.5
OBN                               LR        LR
      comp=Z,600nm,20.0s
OBN   Obninsk        140.50  63 i PKIKP   PKiKP     20 01 26.0 +1.5
OBN                              e                   20 04 23.0
OBN                              ePPP      PPP       20 07 31.2
OBN                               pmax      pmax
      comp=Z,12nm,0.9s
OBN                               MLR       MLR
      comp=Z,237nm,18.0s
RIDG  Independent Ri 140.55 316  PFAKE              20 01 30.0 +5.5
RIDG                              LR        LR
      comp=Z,800nm,20.0s
KMI   Kunming        140.58 159  PKP      PKPdf     20 01 23.8 +0.3
KMI                               PP        PP        20 04 26.6 +4.2
KMI                               SS        SS        20 22 45.8 -1.0
KMI                               AMB       AMB
      comp=Z,250nm,11.9s
KMI                               LR        LR
      comp=Z,510nm,25.5s
KMI                               LR        LR
      comp=Z,270nm,21.4s
KMI                               LR        LR
      comp=Z,910nm,28.2s
INK   Inuvik         140.68 326  PKhKP    PKPpre    20 01 13.8
      comp=Z,14nm,0.8s,baz=106,slow=4.0,SNR=13
INK   Inuvik         140.68 326 ePKPpre   PKPpre    20 01 13.3
INK                               LR        LR
      comp=Z,800nm,21.0s
INK   Inuvik         140.68 326 ePKHKP    PKPpre    20 01 13.4
INK                               MLR       MLR
      comp=Z,800nm,21.0s
NACB  Ninganchiao    140.76 186  PFAKE              20 01 30.0 +3.9
NACB                              LR        LR
      comp=Z,400nm,20.0s
RSO   Redoubt South  140.87 308 ePKPpre   PKPpre    20 01 16.6
DHY   Denali Highway 140.88 314 ePKPpre   PKPpre    20 01 17.4
DHY                               LR        LR
      comp=Z,600nm,20.0s
FALS  False Pass     141.00 296  PFAKE              20 01 30.0 +4.5
FALS                              LR        LR
      comp=Z,800nm,21.0s
FINES FINESS Array B 141.04  50  PKhKP    PKPpre    20 01 13.9
      comp=Z,2.4nm,0.6s,baz=180,slow=1.9,SNR=7.2
FINES                             SKP                 20 04 57.6
      comp=Z,4.1nm,0.7s,baz=180,slow=3.8,SNR=4.7
FINES FINESS Array B 141.04  50  PKHKP    PKPpre    20 01 14.0
FINES                             pmax      pmax
      comp=Z,2.0nm,0.6s
FINES                             pmax      pmax
      comp=N,4.0nm,0.7s
KNMB  Chin-men Tao   141.14 181  PFAKE              20 01 40.0  +13
KNMB                              LR        LR
      comp=Z,400nm,20.0s
YHNB  Yeheng         141.26 186  PFAKE              20 01 40.0  +13
YHNB                              LR        LR
      comp=Z,600nm,21.0s
MOS   Moscow         141.37  63 i PKIKP   PKiKP     20 01 30.1 +3.8
MOS                              e                   20 04 33.9
UNV   Unalaska Valle 141.55 292  PFAKE              20 01 40.0  +13
UNV                               LR        LR
      comp=Z,800nm,22.0s
RND   Reindeer       141.60 314 ePKPpre   PKPpre    20 01 18.2
QZH   Quanzhou       141.61 182 ePKP      PKPdf     20 01 21.6 -3.4
QZH                              ePP       PP        20 04 31.5 +3.2
QZH                               SS        SS        20 23 02.3 +4.1
QZH                               LR        LR
      comp=Z,390nm,17.3s
QZH                               LR        LR
      comp=Z,190nm,16.9s
QZH                               LR        LR
      comp=Z,460nm,17.1s
HDA   Harding Lake   141.68 316 ePKPpre   PKPpre    20 01 18.6
HDA                              ePKPdf    PKiKP     20 01 25.3 -1.5
HDA                               LR        LR
      comp=Z,600nm,22.0s
MCK   McKinley       141.85 314 ePKPpre   PKPpre    20 01 17.9
MCK                               LR        LR
      comp=Z,800nm,20.0s
MCK   McKinley       141.85 314 ePKHKP    PKPpre    20 01 17.9
MCK                               MLR       MLR
      comp=Z,800nm,20.0s
LOF   Lofoten        141.90  36 ePKPdf    PKPdf     20 01 25.1 +1.0
ILAR  Eielson Array  141.91 316  PKhKP    PKPpre    20 01 18.9
      comp=Z,15nm,1.0s,baz=174,slow=2.4,SNR=41
ILAR                              SKP                 20 05 00.2
      comp=Z,2.7nm,0.9s,baz=161,slow=1.1,SNR=3.7
ILB   Eielson Array  141.91 316 ePKPpre   PKPpre    20 01 18.6
NIKH  Nikolski High  141.92 290 ePKPdf    PKPdf     20 01 22.4 -2.2
NIKH                              LR        LR
      comp=Z,700nm,20.0s
PRP   Porcupine Dome 142.00 318 ePKPpre   PKPpre    20 01 19.7
PRP                               LR        LR
      comp=Z,800nm,21.0s
WRH   Wood River Hil 142.08 315 ePKPpre   PKPpre    20 01 18.6
WRH                               LR        LR
      comp=Z,600nm,19.0s
CCB   Clear Creek Bu 142.11 316 ePKPpre   PKPpre    20 01 18.1
CCB                               LR        LR
      comp=Z,600nm,19.0s
COLA  College        142.28 316 ePKPpre   PKPpre    20 01 18.9
COLA                              LR        LR
      comp=Z,500nm,20.0s
COLA  College        142.28 316 i PKHKP   PKPpre    20 01 18.6
COLA                             i                   20 01 21.8
BWN   Browne         142.32 314 ePKPpre   PKPpre    20 01 19.7
BWN                               LR        LR
      comp=Z,600nm,20.0s
SVW2  Sparrevohn     142.32 307 ePKPpre   PKPpre    20 01 18.9
SVW2                              LR        LR
      comp=Z,700nm,18.0s
PPLA  Purkeypile     142.36 311 ePKPpre   PKPpre    20 01 19.6
PPLA                              LR        LR
      comp=Z,700nm,19.0s
LSA   Lhasa          142.38 141 ePKPpre   PKPpre    20 01 20.5
LSA                               LR        LR
      comp=Z,900nm,21.0s
KTH   Kantishna Hill 142.38 313 ePKPpre   PKPpre    20 01 19.2
KTH                               LR        LR
      comp=Z,600nm,20.0s
GYA   Guiyang        142.46 164⇑iPKP      PKPdf     20 01 23.8 -2.8
GYA                               PP        PP        20 04 33.3 -0.4
GYA                               SKKS                20 11 23.0
GYA                               AMB       AMB
      comp=Z,210nm,10.2s
GYA                               LR        LR
      comp=Z,600nm,19.6s
GYA                               LR        LR
      comp=Z,520nm,18.8s
GYA                               LR        LR
      comp=Z,760nm,18.8s
MDM   Murphy Dome    142.46 316 ePKPpre   PKPpre    20 01 20.1
DAG   Danmarks Havn  142.52  15 i PKIKP   PKPdf     20 01 21.2 -3.8
DAG                               pmax      pmax
      comp=Z,18nm,0.9s
DAG   Danmarks Havn  142.52  15 i P       PKPdf     20 01 21.2 -3.8
      comp=Z,22nm,0.9s
FYU   Fort Yukon     142.63 319 ePKPdf    PKPdf     20 01 22.8 -2.6
FYU                               LR        LR
      comp=Z,600nm,22.0s
CAST  Castle Rocks   142.67 312  PFAKE              20 01 40.0  +11
CAST                              LR        LR
      comp=Z,700nm,22.0s
BPAW  Bear Paw Mtn.  142.77 313 ePKPpre   PKPpre    20 01 20.7
BPAW                              LR        LR
      comp=Z,600nm,20.0s
GAR   Garm           143.01 108 ePKPdf    PKPdf     20 01 23.6 -3.6
GAR   Garm           143.01 108 ePKIKP    PKPdf     20 01 23.6 -3.6
MLY   Manley         143.30 315 ePKPdf    PKPab     20 01 23.0 +0.3
MLY                               LR        LR
      comp=Z,600nm,19.0s
TTA   Tatalina       143.69 310 ePKPdf    PKPdf     20 01 27.7 +0.1
TTA                               LR        LR
      comp=Z,500nm,20.0s
BTK   Batken         144.10 108  PFAKE              20 01 40.0 +7.4
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BTK				LR	LR		
	comp=Z,500nm,21.0s						
TRO	Tromso	144.35	36	*e*PKPdf	PKPab	20 01 26.2	-0.4
GSTR	Great Sitkin T	144.41	284	*e*PKPdf	PKPab	20 01 27.3	0.0
ADK	Adak	144.53	283	*e*PKPdf	PKPab	20 01 27.0	-0.8
ADK				LR	LR		
	comp=Z,900nm,18.0s						
ADK	Adak	144.53	283	*e*PKIKP	PKPab	20 01 27.0	-0.8
ADK				MLR	MLR		
	comp=Z,900nm,18.0s						
COLD	Coldfoot	144.55	318	*e*PKPdf	PKPbc	20 01 27.8	+0.2
KTK1	Kautokeino	145.15	39	*e*PKPbc	PKPbc	20 01 28.6	-0.9
TOLK	Toolik Lake Re	145.25	320	*e*PKPbc	PKPbc	20 01 29.5	-0.4
TOLK				LR	LR		
	comp=Z,800nm,20.0s						
SPIA	Saint Paul Isl	145.38	294	PFAKE		20 01 40.0	+5.5
SPIA				LR	LR		
	comp=Z,1μm,20.0s						
KSH	Kashi	145.82	114	*e*PKPbc	PKPdf	20 01 30.8	-1.3
KSH				PP	PP	20 04 55.6	+1.3
KSH				PKS		20 05 05.9	
KSH				SKS	SKSdf	20 08 35.6	-4.9
KSH				SKKS	SKKSac	20 11 38.8	-6.6
KSH				SS	SS	20 23 40.5	-7.3
KSH				AMB	AMB		
	comp=Z,250nm,4.4s						
KSH				LR	LR		
	comp=Z,950nm,23.3s						
KSH				LR	LR		
	comp=Z,340nm,17.5s						
KSH				LR	LR		
	comp=Z,460nm,23.0s						
ARCES	ARCESS Array B	146.11	39	PKPbc	PKPdf	20 01 30.4	-1.0
	comp=Z,48nm,0.8s,baz=257,slow=2.2,SNR=82						
ARCES				SKPbc	SKPbc	20 05 10.8	+0.1
	comp=Z,3.5nm,0.7s,baz=250,slow=2.7,SNR=5.1						
ARE0	ARCESS Array S	146.11	39	*e*PKPdf	PKPdf	20 01 31.1	-0.3
ARE0	ARCESS Array S	146.11	39	*e*PKPdf	PKPdf	20 01 31.7	+0.2
HAMF	Hammerfest	146.26	37	*e*PKPdf	PKPbc	20 01 32.5	-0.4
CD2	Chengdu	146.41	158	PKPbc	PKPdf	20 01 33.6	+0.3
CD2				PP	PP	20 04 57.5	+0.2
CD2				SKKS		20 11 45.4	
CD2				SS	SS	20 23 51.3	-2.4
CD2				AMB	AMB		
	comp=Z,340nm,6.9s						
CD2				LR	LR		
	comp=Z,820nm,19.9s						
CD2				LR	LR		
	comp=Z,540nm,21.4s						
CD2				LR	LR		
	comp=Z,1μm,27.0s						
ABKAR	Akbulak array	146.43	87	*e*PKPdf	PKPdf	20 01 30.2	-2.4
KK31	Karatay Array	146.45	105	*e*PKPdf	PKPdf	20 01 32.5	-0.4
KK31	Karatay Array	146.45	105	*e*PKIKP	PKPdf	20 01 32.5	-0.4
KKAR	Karatay Array	146.45	105	*e*PKPdf	PKPdf	20 01 32.5	-0.4
KKAR	Karatay Array	146.45	105	*e*PKIKP	PKPdf	20 01 32.5	-0.4
ENH	Enshi	146.54	168	*e*PKPdf	PKPdf	20 01 32.4	-1.1
ENH				LR	LR		
	comp=Z,800nm,19.0s						
WHN	Wuhan	147.14	175	PKPbc	PKPdf	20 01 31.3	-3.1
WHN				SS	SS	20 24 00.1	-1.5
WHN				LR	LR		
	comp=Z,1μm,19.3s						
WHN				LR	LR		
	comp=Z,1μm,21.3s						
WHN				LR	LR		
	comp=Z,2μm,23.8s						
APA	Apatity	147.37	45	⇑*i*PKP2	PKPbc	20 01 35.0	-1.1
APA				pmax	pmax		
	comp=Z,15nm,0.8s						
NRN	Naryn	147.44	112	*e*PKPdf	PKPdf	20 01 35.3	+0.3
NRN				LR	LR		
	comp=Z,800nm,19.0s						
AAK	Ala-Archa	147.79	109	*e*PKPdf	PKPdf	20 01 35.8	+0.4
AAK				LR	LR		
	comp=Z,800nm,20.0s						
AAK	Ala-Archa	147.79	109	*d i*PKP2	PKPbc	20 01 37.3	-1.0
LVZ	Lovozero	147.95	45	*e*PKPdf	PKPbc	20 01 36.5	-1.2
LVZ				LR	LR		
	comp=Z,7μm,20.0s						
LVZ	Lovozero	147.95	45	⇓*i*PKP2	PKPbc	20 01 37.0	-0.7
ANM	Nome	147.99	307	PFAKE		20 01 50.0	+9.3
ANM				LR	LR		
	comp=Z,700nm,20.0s						
FRU1	Bishkek	147.99	109	*e*PKPdf	PKPbc	20 01 37.1	-1.6
FRU1				*e*PKPbc	pPKPdf	20 01 38.2	-1.9
FRU1				LR	LR		
	comp=Z,700nm,21.0s						
HSPB	Hornsund (broa	148.02	25	*e*pPKPdf	pPKPdf	20 01 38.2	-0.8
BOOM	Boomskoye usch	148.29	111	*e*PKPdf	PKPdf	20 01 36.3	+0.1
BOOM				*e*PKPbc	PKPbc	20 01 39.2	-0.4
BOOM				LR	LR		
	comp=Z,700nm,20.0s						
PRGR	Permogore	148.37	60	⇑*i*PKP2	PKPbc	20 01 37.7	-1.2
PRGR				pmax	pmax		
	comp=Z,55nm,0.7s						
KBS	Kingsbay	148.46	21	*e*PKPbc	PKPbc	20 01 38.6	-0.2
KBS				LR	LR		
	comp=Z,500nm,19.0s						
KBS	Kingsbay	148.46	21	*e*pPKPdf	pPKPdf	20 01 38.9	-0.7
KDJ	Kajisay	148.51	113	*e*PKPdf	PKPdf	20 01 35.2	-1.4
KDJ				*e*PKPbc	PKPbc	20 01 39.5	-0.7
KDJ				LR	LR		
	comp=Z,800nm,20.0s						
KDJ	Kajisay	148.51	113	*e*PKIKP	PKPdf	20 01 35.2	-1.4
KDJ				*e*		20 01 39.5	
KDJ				MLR	MLR		
	comp=Z,800nm,20.0s						
JNU	Nakatsue	148.61	202	*e*PKPbc	PKPbc	20 01 39.5	-1.1
JNU				LR	LR		
	comp=Z,400nm,22.0s						
NJ2	Nanjing	148.69	182	*e*PKPbc	PKPdf	20 01 36.5	-0.4
NJ2				pPKP	sPKPbc	20 01 45.5	-1.2
NJ2				PP	PP	20 05 11.0	+0.5
NJ2				SS	SS	20 24 19.0	0.0
NJ2				AMB	AMB		
	comp=Z,450nm,6.0s						
NJ2				LR	LR		
	comp=Z,400nm,18.7s						
NJ2				LR	LR		
	comp=Z,310nm,18.2s						
NJ2				LR	LR		
	comp=Z,550nm,19.4s						
SPA0	Spitsbergen Ar	148.80	23	*e*PKPdf	PKPdf	20 01 34.2	-1.6
SPA0	Spitsbergen Ar	148.80	23	*e*pPKPdf	PKPbc	20 01 39.4	-0.4
SPITS	Spitsbergen Ar	148.80	23	PKPbc	PKPbc	20 01 38.5	-1.2
	comp=Z,22nm,0.5s,baz=211,slow=4.7,SNR=39						
RDOG	Red Dog Mine	149.02	314	*e*PKPdf	PKPdf	20 01 35.3	-1.0
RDOG				*e*PKPbc	PKPbc	20 01 40.9	+0.4
RDOG				LR	LR		
	comp=Z,600nm,20.0s						
SMY	Shemya	149.22	277	*e*PKPdf	PKPdf	20 01 36.6	-0.5
SMY				LR	LR		
	comp=Z,500nm,19.0s						
SMY	Shemya	149.22	277	*e*PKIKP	PKPdf	20 01 36.6	-0.5
SMY				MLR	MLR		
	comp=Z,500nm,19.0s						
PRZ	Przheval'sk	149.30	114	*e*PKPdf	PKPdf	20 01 37.7	-0.2
PRZ				*e*PKPbc	pPKPdf	20 01 41.8	-0.6
PRZ				LR	LR		
	comp=Z,700nm,20.0s						
PRZ	Przheval'sk	149.30	114	*e*PKIKP	PKPdf	20 01 37.7	-0.2
PRZ				*e*		20 01 41.8	
PRZ				MLR	MLR		
	comp=Z,700nm,20.0s						
INU	Inuyama	149.48	213	*e*PKPdf	PKPdf	20 01 37.2	-0.9
INU				*e*PKPbc	PKiKP	20 01 43.9	+0.2
INU				LR	LR		
	comp=Z,400nm,21.0s						
HOPEN	Hopen	149.66	28	*e*PKPdf	PKPdf	20 01 38.4	+1.2
GAMB	Gambell	149.90	303	PFAKE		20 01 50.0	+1.6
GAMB				LR	LR		
	comp=Z,700nm,22.0s						
XAN	Xi'an	150.21	166	PFAKE		20 01 50.0	-0.6
XAN				LR	LR		
	comp=Z,700nm,20.0s						
XAN	Xi'an	150.21	166	PKPbc	PKPdf	20 01 39.6	+0.2
XAN				SKS	SKSdf	20 08 43.3	-3.3
XAN				AMB	AMB		
	comp=Z,230nm,8.1s						
XAN				LR	LR		
	comp=Z,520nm,18.4s						
XAN				LR	LR		
	comp=Z,280nm,19.5s						
XAN				LR	LR		
	comp=Z,670nm,19.0s						
MJAR	Matsushiro Arr	150.31	215	PKPbc	PKPbc	20 01 43.3	-1.3
	comp=Z,13nm,0.8s,baz=185,slow=3.5,SNR=26						
MAJO	Matsushiro	150.32	215	*e*PKPbc	PKPbc	20 01 42.8	-1.9
MAJO				LR	LR		
	comp=Z,400nm,20.0s						
MAJO	Matsushiro	150.32	215	*d i*PKIKP	PKPbc	20 01 42.9	-1.7
MAT	Matsushiro	150.32	215	PKP	PKPbc	20 01 43.1	-1.5
MJB9	Matsu-Tunnel	150.32	215	*e*PKPbc	PKPbc	20 01 43.0	-1.6
ARU	Arti	150.66	76	*e*PKPdf	PKPdf	20 01 38.4	-0.9
ARU				LR	LR		
	comp=Z,700nm,20.0s						
ARU	Arti	150.66	76	*i* PKIKP	PKPbc	20 01 42.8	-1.9
ARU				MLR	MLR		
	comp=Z,683nm,19.0s						
LZH	Lanzhou	151.48	157	*e*PKPbc	PKPdf	20 01 41.8	+0.4
LZH				pPKP	PKiKP	20 01 48.9	+0.9
LZH				sPKP		20 01 52.5	
LZH				PP	PP	20 05 28.4	+1.5
LZH				SKKS		20 12 18.1	
LZH				SS	SS	20 24 54.9	+4.3
LZH				AMB	AMB		
	comp=Z,260nm,7.7s						
LZH				LR	LR		
	comp=Z,540nm,18.4s						
LZH				LR	LR		
	comp=Z,420nm,17.9s						
LZH				LR	LR		
	comp=Z,630nm,20.1s						
SVE	Sverdlovsk	151.81	77	*e*PKIKP	PKPdf	20 01 43.7	+2.7
SVE				pmax	pmax		
	comp=Z,52nm,0.9s						
TJN	Taejon	152.33	197	⇓*i*PKIKP	PKPbc	20 01 48.0	-1.3
TIA	Tai'an	152.85	179	PKPbc	PKPbc	20 01 48.3	-2.2
KSRS	Korea Array	153.31	199	PKPbc	PKPbc	20 01 50.4	-1.0
	comp=Z,5.0nm,0.7s,baz=171,slow=2.2,SNR=9.9						
KSRS				PKPab	PKPab	20 02 03.1	-0.3
	comp=Z,10nm,0.9s,baz=181,slow=4.2,SNR=9.8						
KSRS				PP	PP	20 05 35.0	-2.0
	comp=Z,2.7nm,0.9s,baz=169,slow=6.8,SNR=4.3						
BRVK	Borovoye	153.74	91	*e*PKPdf	PKPdf	20 01 42.3	-1.7
BRVK				*e*PKPbc	PKiKP	20 01 52.5	+0.6
BRVK				LR	LR		
	comp=Z,700nm,18.0s						
BRVK	Borovoye	153.74	91	*c i*PKIKP	PKPdf	20 01 42.7	-1.3
BRVK				*e*		20 01 43.5	
BRVK				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA	Gaotai	153.84	148	⇑PKPbc	PKPdf	20 01 45.4	+0.6
GTA				PP	PP	20 05 42.6	+2.3
GTA				SKS	SKSdf	20 08 51.8	+0.9
GTA				SKKS	SKKSac	20 12 30.5	+0.9
GTA				SS	SS	20 25 15.4	-1.2
GTA				AMB	AMB		
	comp=Z,280nm,12.2s						
GTA				LR	LR		
	comp=Z,420nm,19.4s						
GTA				LR	LR		
	comp=Z,280nm,20.0s						
GTA				LR	LR		
	comp=Z,730nm,20.9s						
ERM	Erimo	153.89	227	PFAKE		20 02 00.0	-5.8
ERM				LR	LR		
	comp=Z,600nm,19.0s						
WMQ	Urumqi	154.08	125	*e*PKPbc	PKPdf	20 01 47.3	+2.4
WMQ				PKPab	PKPab	20 02 07.8	+1.1
WMQ				PP	PP	20 05 50.0	+8.2
WMQ				SS	SS	20 25 25.1	+5.6
WMQ				LR	LR		
	comp=Z,330nm,23.5s						
WMQ				LR	LR		
	comp=Z,280nm,21.7s						
WMQ				LR	LR		
	comp=Z,460nm,20.1s						
MAKZ	Makanchi	154.31	113	*e*PKPdf	PKPdf	20 01 42.7	-2.3
MAKZ				*e*PKPbc	PKiKP	20 01 53.4	+0.1
MAKZ				LR	LR		
	comp=Z,800nm,20.0s						
MAKZ	Makanchi	154.31	113	*e*PKIKP	PKPdf	20 01 42.7	-2.3
MAKZ				MLR	MLR		
	comp=Z,800nm,20.0s						
MK31	Makanchi Array	154.43	114	*e*PKPdf	PKPdf	20 01 42.8	-2.4
MK31				*e*PKPbc	PKiKP	20 01 54.3	+0.7
MK31	Makanchi Array	154.43	114	*e*PKIKP	PKPdf	20 01 42.8	-2.4
MKAR	Makanchi Array	154.43	114	PKP	PKPdf	20 01 43.1	-2.1
	comp=Z,5.4nm,0.9s,baz=248,slow=0.7,SNR=25						
MKAR				PKPbc	PKPbc	20 01 52.4	-1.1
	comp=Z,16nm,0.9s,baz=225,slow=2.9,SNR=31						
MKAR				PKPab	PKPab	20 02 07.6	-0.4
	comp=Z,8.6nm,0.7s,baz=218,slow=3.8,SNR=11						
YUK	Yuzh-Kuril'sk	154.73	234	PKP2	PKPab	20 02 11.1	+1.8
YUK				*e*		20 05 46.4	
YUK				*e*SS	SS	20 25 28.9	+2.6
YUK				*e*SSS	SSS	20 31 22.3	
YUK				pmax	pmax		
	comp=Z,192nm,1.1s						
KUR	Kuril'sk	155.00	238	*i* PKP2	PKPab	20 02 15.2	+4.8
KUR				*i*		20 05 49.5	
DL2	Dalian	155.41	188	PKP	PKPdf	20 01 44.0	-2.7
DL2				AMB	AMB		
	comp=Z,420nm,6.1s						
DL2				LR	LR		
	comp=Z,410nm,18.9s						
DL2				LR	LR		
	comp=Z,270nm,17.2s						
DL2				LR	LR		
	comp=Z,470nm,19.8s						
KURK	Kurchatov	155.85	103	*e*PKPdf	PKPdf	20 01 44.9	-2.0
KURK				*e*PKPab	PKPab	20 02 14.7	+0.8
KURK				LR	LR		
	comp=Z,600nm,19.0s						
KURK	Kurchatov	155.85	103	⇑*e*PKIKP	PKPdf	20 01 45.4	-1.5
KURK				*i*		20 01 45.5	
KURK				pmax	pmax		
	comp=Z,79nm,1.0s						
PET	Petropavlovsk	156.37	263	PFAKE		20 02 00.0	+12
PET				LR	LR		
	comp=Z,400nm,20.0s						
BJT	Baijiatuau	156.64	178	*e*PKPab	PKPab	20 02 17.3	-0.2
BJT				LR	LR		
	comp=Z,400nm,19.0s						
BJI	Beijing	156.66	178	*e*PKP	PKPdf	20 01 49.0	+0.7
BJI				SS	SS	20 25 46.0	-0.5
BJI				AMB	AMB		
	comp=Z,170nm,7.3s						
BJI				LR	LR		
	comp=Z,170nm,20.2s						
BJI				LR	LR		
	comp=Z,100nm,19.8s						
BJI				LR	LR		
	comp=Z,170nm,19.6s						
PETK	Petropavlovsk-	156.85	263	PKP	PKPdf	20 01 46.8	-1.4
	comp=Z,5.2nm,0.9s,baz=108,slow=4.8,SNR=7.1						
PETK				PP	PP	20 05 60.0	+2.6
	comp=Z,10.0nm,1.2s,baz=126,slow=7.3,SNR=3.6						
PETK	Petropavlovsk-	156.85	263	*e*PKPdf	PKPdf	20 01 46.3	-1.9
PETK	Petropavlovsk-	156.85	263	*e*PKIKP	PKPdf	20 01 46.3	-1.9
HHC	Hu-ho-hao-te	157.22	168	PKP	PKPdf	20 01 48.3	-0.9
HHC				PP	PP	20 06 00.9	+1.9
HHC				SS	SS	20 25 53.5	+0.7
HHC				AMB	AMB		
	comp=Z,200nm,8.5s						
HHC				LR	LR		
	comp=Z,860nm,21.4s						
YSS	Yuzh-Sakhalins	158.35	233	*e*PKPdf	PKPdf	20 01 49.3	-0.9
YSS				*e*PKPab	PKPab	20 02 26.0	+1.2
YSS				LR	LR		
	comp=Z,500nm,22.0s						
YSS	Yuzh-Sakhalins	158.35	233	*i* PKIKP	PKPdf	20 01 48.1	-2.1
YSS				*e*		20 06 04.8	
YSS				*e*SS	SS	20 26 12.5	+7.3
YSS				pmax	pmax		
	comp=Z,300nm,12.0s						
YSS				MLR	MLR		
	comp=Z,400nm,17.0s						
YSS				MLR	MLR		
	comp=N,200nm,19.0s						
YSS				MLR	MLR		
	comp=E,200nm,19.0s						
DGZ	Jazzator, Alta	158.83	116	*ce*PKIKP	PKPdf	20 01 51.4	+0.4
USRK	Ussuriysk Ar.	159.09	210	PKPab	PKPab	20 02 27.6	-0.4
	comp=E,20nm,0.8s,baz=170,slow=3.1,SNR=26						
BILL	Bilibino	159.80	305	PFAKE		20 02 00.0	+8.7
BILL				LR	LR		
	comp=Z,2μm,22.0s						
BILL	Bilibino	159.80	305	*e*PKIKP	PKPdf	20 01 51.5	+0.2
BILL				*e*		20 06 15.1	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CN2	Changchun	159.89	197	*e*PKP	PKPdf	20 01 51.4	-0.8
CN2				*e*PP	PP	20 06 16.0	+2.6
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,230nm,24.0s						
CN2				LR	LR		
	comp=Z,130nm,24.0s						
CN2				LR	LR		
	comp=Z,270nm,25.0s						
MDJ	Mudanjiang	160.00	206	*e*PKPab	PKPab	20 02 30.6	-1.4
MDJ				LR	LR		
	comp=Z,500nm,20.0s						
MDJ	Mudanjiang	160.00	206	P	PKPab	20 02 31.3	-0.7
MDJ				pmax	pmax		
	comp=Z,14nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,310nm,2.9s						
ZAA0	Zalesovo Array	160.83	104	*e*PKPdf	PKPdf	20 01 51.5	-1.3
ZAA0				*e*PKPab	PKPab	20 02 34.0	-1.4
ZALV	Zalesovo Beam	160.83	104	PKP	PKPdf	20 01 51.5	-1.4
	comp=Z,2.9nm,0.8s,baz=223,slow=3.5,SNR=6.6						
ZALV				PKPab	PKPab	20 02 34.6	-0.8
	comp=Z,18nm,0.9s,baz=229,slow=4.8,SNR=8.6						
ZALV				PP	PP	20 06 19.9	+1.0
	comp=Z,1.6nm,0.7s,baz=251,slow=7.0,SNR=4.6						
TYV	Tymovskoe	161.62	239	*e*PKP2	PKPab	20 02 40.8	+1.9
TYV				pmax	pmax		
	comp=Z,41nm,1.0s						
TYV				pmax	pmax		
	comp=Z,500nm,6.5s						
SONM	Songino Array	163.31	153	PKP	PKPdf	20 01 55.2	-0.5
	comp=Z,0.5nm,0.3s,baz=205,slow=2.5,SNR=3.0						
SONM				PKPab	PKPab	20 02 45.9	-0.7
	comp=Z,4.0nm,0.8s,baz=194,slow=4.3,SNR=7.3						
ULN	Ulaanbaatar	163.47	155	*e*PKPdf	PKPdf	20 01 55.6	-0.4
ULN				*e*PKPab	PKPab	20 02 46.1	-1.3
ULN	Ulaanbaatar	163.47	155	*d i*PKIKP	PKPdf	20 01 55.3	-0.7
GRNR	Gornyy	163.80	228	*e*PKP2	PKPab	20 02 48.0	-0.5
GRNR				pmax	pmax		
	comp=Z,29nm,1.0s						
KLR	Kul'dur	163.84	216	⇑*e*PKIKP	PKPdf	20 01 55.7	-0.3
MOY	Mondy	165.42	136	*e*PKIKP	PKPdf	20 01 57.7	+0.2
MOY				pmax	pmax		
	comp=Z,22nm,2.3s						
TLY	Talaya	166.22	142	PKP	PKPdf	20 01 58.7	+0.7
	comp=Z,1.1nm,0.5s,baz=249,slow=8.7,SNR=4.8						
TLY	Talaya	166.22	142	*e*PKIKP	PKPdf	20 01 58.9	+0.9
TLY				*e*		20 06 51.7	
TLY				pmax	pmax		
	comp=Z,15nm,0.9s						
ZEA	Zeya	169.11	213	*e*PKP2	PKPab	20 03 12.4	+0.6
ZEA				*e*		20 07 04.0	
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
TIXI	Tiksi	170.58	337	*e*PKPdf	PKPdf	20 02 02.4	+2.2
TIXI				*e*PKPab	PKPab	20 03 16.5	-1.4
TIXI	Tiksi	170.58	337	⇑*e*PKIKP	PKPdf	20 01 54.1	-6.1
YAK	Yakutsk	174.20	263	*e*PKP2	PKPab	20 03 34.5	+0.2
YAK				*e*		20 07 27.4	
YAK				pmax	pmax		
	comp=Z,15nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,13nm,1.4s						

ISC 16 20:05:18.2±1.2**,50°.13N**±0°.06×**19°.22E**±0°.05**,h0**^{km}**,n5,**
σ**1ˢ.40**/10**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.38	77	*e*Pg	Pg	20 05 25.5	-0.1
OJC				*e*Sg	Sg	20 05 31.1	+0.6
LANS	Liptovska Anna	1.00	170	*e*PG	Pg	20 05 38.0	+0.7
LANS				*e*SG	Sg	20 05 51.0	+0.8
NIE	Niedzica	1.00	135	*e*Pg	Pb	20 05 38.6	+0.1
NIE				*e*Sg	Sb	20 05 53.5	+1.3
MORC	Moravsky Berou	1.14	252	*e*PG	Pb	20 05 41.3	+0.5
MORC				*e*SG	Sb	20 05 56.9	+0.8
VYHS	Vyhne	1.66	189	*e*PN	Pn	20 05 48.0	-0.6
VYHS				*e*SN	Sn	20 06 07.5	-3.1

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*TIR **16** 20:07:50.2, 38°.23N×21°.10E, h8^{km}, Md3.9/9*
*ATH **16** 20:07:51.2, 37°.40N×21°.29E, h31^{km}±2^{km}, ML2.1/3, Error ellipse: s-maj=2.5km s-min=1.3km az=215.0*
*THE **16** 20:07:52.3, 37°.39N×21°.29E, h15^{km}±1^{km}, ML1.7/6, Error ellipse: s-maj=1.6km s-min=0.6km az=224.0*
ISC 16 20:07:51.4±1.4**,37°.40N**±0°.03×**21°.29E**±0°.03**,h5**^{km}±12^{km}**,**
n23,σ**1ˢ.45**/40**,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMT	Artemida-Makis	0.36	69	P	Pg	20 07 59.3	+0.9
AMT				S	Sb	20 08 05.5	-0.9
	598nm,0.4s						
AMT	Artemida-Makis	0.36	69	P	Pg	20 07 59.5	+1.1
AMT				S	Sb	20 08 05.5	-0.9
AMT				AML	AML	20 08 06.0	
	comp=N,980μm,0.4s						
AMT				AML	AML	20 08 08.6	
	comp=E,1329μm,0.4s						
ZKS	Zakynthos	0.49	307	P	Pg	20 08 01.8	+0.9
ZKS				S	Sb	20 08 09.9	-0.3
	comp=E,250nm,0.6s						
ITM	Ithomi	0.56	113	P	Pg	20 08 02.5	+0.4
ITM				S	Sb	20 08 11.0	-1.0
	comp=E,95nm,0.6s						
ITM	Ithomi	0.56	113	P	Pg	20 08 02.5	+0.4
ITM				S	Sb	20 08 11.9	-0.1
ITM				AML	AML	20 08 12.6	
	comp=N,167μm,0.2s						
ITM				AML	AML	20 08 13.2	
	comp=E,144μm,0.3s						
PYL	PYLOS	0.62	144	P	Pg	20 08 04.1	+0.7
PYL				S	Sb	20 08 13.5	-0.4
	comp=E,50nm,0.5s						
PYL	PYLOS	0.62	144	P	Pg	20 08 03.9	+0.5
PYL				S	Sb	20 08 13.8	-0.1
RLS	Riolos of Patr	0.67	12	P	Pg	20 08 04.7	+0.5
RLS				S	Sb	20 08 15.8	+0.6
VLMS	Volimes, Zakyn	0.68	314	P	Pg	20 08 04.8	+0.3
VLMS				S	Sb	20 08 16.2	+0.6
VLMS				AML	AML	20 08 16.7	
	comp=N,381μm,0.2s						
VLMS				AML	AML	20 08 17.6	
	comp=E,321μm,0.2s						
TRIP	Tripoli	0.79	81	P	Pg	20 08 07.2	+0.6
TRIP				S	Sb	20 08 18.4	-0.5
	comp=E,38nm,0.5s						
TRIP	Tripoli	0.79	81	P	Pg	20 08 07.2	+0.6
TRIP				S	Sb	20 08 18.4	-0.5
VLX	Vlachokerasia	0.87	92	P	Pb	20 08 08.8	-0.3
VLX				S	Sn	20 08 21.7	-2.0
	comp=E,52nm,0.8s						
KLV	Kalavryta, Ach	0.94	47	P	Pb	20 08 09.3	-1.0
GUR	Goura	0.99	57	P	Pb	20 08 10.4	-0.8
LKD2	Lefkada island	1.47	341	*i* PN	Sb	20 08 39.6	+1.3
LKD2				*i* SN	Pn	20 08 19.1	+0.5
IGT	Igoumenitsa	2.25	341	*i* PN	Pb	20 08 31.5	-1.1
IGT				*i* SN	Sg	20 09 03.0	-0.8
SRN	Sarande	2.67	338	*i* PN	Pb	20 08 37.4	-2.3
SRN				*i* SN	Sb	20 09 13.4	+0.6
TPE	Tepelena	3.05	341	*i* PN	Pn	20 08 43.2	+2.8
TPE				*i* SN	Sb	20 09 22.6	-1.2
SCTE	Santa Cesarea	3.46	321	*i* PN	Pb	20 08 50.6	-2.6
TIR	Tirane	4.09	345	*i* PN	Pn	20 08 58.1	+3.5
TIR				*i* SN	Sb	20 09 49.5	-4.2
PHP	Peshkopia	4.33	352	*i* PN	Pn	20 08 58.4	+0.5
PHP				*i* SN	Sn	20 09 51.1	+2.4
BCI	Bajram Curri	5.04	350	*i* PN	Pn	20 09 08.4	+0.7
SGRT	San Giovanni R	6.10	317	*i* PN	Pn	20 09 28.2	+5.9

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*ISCJB **16** 20:25:42.5±1.1, 17°.9S±0°.3×178°.5W±0°.2, h579^{km}, mb4.2/9, Error ellipse: s-maj=41.0km s-min=15.6km az=153.4*

IDC 16 20:25:44.7±2.9, 17°.99S×178°.47W, h594^{km}±32^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.3/34, mbtmp4.6/10, Error ellipse: s-maj=35.3km s-min=17.1km az=151.0

ISC 16 20:25:43.4±1.2, 17°.9S±0°.3×178°.4W±0°.2, h579^{km}, n12, σ1^s.03/13, mb4.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.82	251	P	P	20 28 51.8	+1.2
	0.4nm,0.3s,baz=90,slow=19,SNR=3.6						
PMG	Port Moresby	34.46	280	P	P	20 31 45.0	+0.8
	16nm,0.7s,baz=205,slow=6.1,SNR=3.2						
STKA	Stephens Creek	38.62	241	P	P	20 32 18.0	-0.1
	11nm,0.9s,baz=91,slow=11,SNR=13						
JAY	Jayapura	42.91	286	P	P	20 32 53.1	+0.6
	11nm,0.7s,baz=148,slow=3.9,SNR=9.5						
WRA	Warramunga Arr	44.63	260	P	P	20 33 04.0	-1.6
	4.5nm,0.5s,baz=94,slow=8.4,SNR=72						
ASAR	Alice Springs	44.78	254	P	P	20 33 05.9	-0.9
	23nm,0.7s,baz=87,slow=8.7,SNR=290						
ASAR				ScP	ScP	20 37 32.7	-1.2
	0.1nm,0.4s,baz=98,slow=4.8,SNR=4.4						
SIJI	Sorong	52.24	283	P	P	20 34 01.9	-0.2
	baz=129,slow=6.5						
PETK	Petropavlovsk-	73.70	345	P	P	20 36 18.8	0.0
	1.8nm,0.6s,baz=129,slow=8.9,SNR=5.0						
NVAR	Mina Array Bea	79.44	44	P	P	20 36 51.1	+0.3
	1.3nm,0.7s,baz=223,slow=8.6,SNR=9.2						
ILAR	Eielson Array	85.91	13	P	P	20 37 21.3	-1.0
	0.8nm,0.5s,baz=227,slow=4.8,SNR=4.1						
TXAR	Lajitas Array	86.01	58	P	P	20 37 24.9	+1.2
	1.7nm,0.7s,baz=219,slow=5.7,SNR=16						
GERES	GERESS Array B	147.63	345	PKPbc	PKPbc	20 44 22.6	-0.9
	0.8nm,0.6s,baz=33,slow=3.2,SNR=9.9						

NEIC 16 20:33:19.8±0.0, 61°.56N×141°.09W, h10^{km}, ML2.5(OTT), ML2.5(AEIC), After AEIC.

PGC 16 20:33:20.9±0.0, 61°.58N×141°.09W, h1^{km}, ML2.5/11, 211km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.24	29	P	Pg	20 33 25.0	-0.5
YUK2				S	Sg	20 33 28.5	-0.1
YUK3	Moose Creek	0.36	56	P	Pg	20 33 27.2	-0.6
YUK3				S	Sg	20 33 32.2	-0.3
YUK1	Sand Pete Hill	0.64	24	P	Pg	20 33 31.9	-1.1
YUK1				S	Sg	20 33 40.0	-1.3
PTPK	Patty Peak	0.77	240	P	Pg	20 33 34.6	-1.0
PTPK				S	Sg	20 33 45.5	-0.1
BALM	Baldy	0.82	229	*e*Pg	Pg	20 33 35.0	-1.5
BALM	Baldy	0.82	229	P	Pg	20 33 35.1	-1.4
BALM				S	Sg	20 33 46.2	-0.8
BVCY	Beaver Creek	0.85	7	P	Pg	20 33 36.0	-1.1
BVCY				S	Sg	20 33 48.2	+0.1
KIAG	Kiagna River	0.90	224	P	Pg	20 33 36.5	-1.6
TABL	Table Mountain	1.14	181	P	Pg	20 33 41.3	-1.5
TABL				S	Sg	20 33 56.6	-0.9
YUK4	Talbot Arm	1.19	100	P	Pg	20 33 42.7	-1.1
YUK4				S	Sg	20 33 59.4	+0.1
SAMH	Samovar Hills	1.46	174	Pn	Pn	20 33 47.4	-1.1
SAMH				Sg	Sg	20 34 05.7	-2.1
YUK6	Outpost Mounta	1.46	115	Pn	Pn	20 33 46.9	-1.8
YUK6				Sg	Sg	20 34 07.1	-0.7
MESA	MESA	1.47	197	Pn	Pn	20 33 47.9	-0.8
MESA				Sg	Sg	20 34 07.7	-0.2
PCA	Pinnacle	1.54	164	*e*Pn	Pn	20 33 48.7	-0.9
PCA	Pinnacle	1.54	164	Pn	Pn	20 33 49.0	-0.6
PCA				Sg	Sn	20 34 09.5	-0.8
YUK5	Granite Creek	1.62	105	Pn	Pn	20 33 49.2	-1.5
YUK5				Sg	Sn	20 34 11.2	-1.1
YUK7	Dusty Glacier	1.78	125	Pn	Pn	20 33 52.9	0.0
YUK7				Sg	Sn	20 34 15.9	-0.3
BCPM	Bancas Point	1.78	156	*e*Pn	Pn	20 33 52.5	-0.3
MENT	Mentasta	1.84	319	*e*Pn	Pn	20 33 52.8	-0.8
HYT	Haines Junctio	1.89	112	*e*Pn	Pn	20 33 53.6	-0.8
HYT	Haines Junctio	1.89	112	Pn	Pn	20 33 53.7	-0.7
HYT				Sg	Sn	20 34 18.9	0.0
HMT	Hamilton	1.99	233	*e*Pn	Pb	20 33 57.0	-0.8
PNL	Peninsula	2.09	156	Pn	Pn	20 33 57.3	+0.3
PNL				Sg	Sb	20 34 26.8	+0.8
RAGM	Ragged Mountai	2.12	237	*e*Pn	Pn	20 33 58.8	+1.3
PAX	Paxson	2.48	306	*e*Pn	Pn	20 34 02.4	-0.1
PAX	Paxson	2.48	306	Pn	Pn	20 34 03.5	+1.0
PAX				Sg	Sb	20 34 36.6	-0.8
EYAK	Cordova Ski Ar	2.49	248	*e*Pn	Pn	20 34 02.6	+0.1
DOT	Dot Lake	2.49	328	*e*Pn	Pn	20 34 01.4	-1.2
DOT	Dot Lake	2.49	328	Pn	Pn	20 34 01.4	-1.3
DOT				Pg	Pb	20 34 06.1	-0.4
DOT				Sg	Sb	20 34 38.2	+0.6
DAWY	Dawson	2.62	17	*e*Pn	Pn	20 34 03.5	-0.8
DAWY	Dawson	2.62	17	Pn	Pn	20 34 03.5	-0.8
DAWY				Sg	Sb	20 34 41.4	+0.3
FID	Port Fidalgo	2.74	255	*e*Pn	Pn	20 34 05.3	-0.7
SCRK	Sand Creek	2.75	332	*e*Pn	Pn	20 34 04.9	-1.4
RIDG	Independent Ri	2.78	323	*e*Pn	Pn	20 34 05.8	-0.8
SCM	Sheep Creek Mo	2.98	278	*e*Pn	Pn	20 34 08.1	-1.3
GLI	Glacier Island	2.99	259	*e*Pn	Pn	20 34 07.7	-1.7
PLBC	Pleasant Camp	3.16	130	Pg	Pb	20 34 17.4	-0.4
PLBC				Sg	Sg	20 34 59.9	-2.3
EGAK	Eagle	3.21	359	*e*Pn	Pn	20 34 12.0	-0.5
DHY	Denali Highway	3.30	300	*e*Pn	Pn	20 34 13.1	-0.7
SML	Sawmill	3.46	277	*e*Pn	Pn	20 34 15.9	0.0
RND	Reindeer	4.04	300	*e*Pn	Pn	20 34 22.6	-1.4
ILB	Eielson Array	4.14	323	*e*Pn	Pn	20 34 24.1	-1.1

JMA 16 20:35:07.6±0.2, 33°.12N×138°.06E, h368^{km}, M2.9

ISCJB 16 20:35:11.2±0.5, 33°.45N±0°.06×138°.01E±0°.08, h350^{km}, mb3.2/5, Error ellipse: s-maj=9.5km s-min=7.8km az=138.6

IDC 16 20:35:13.0±0.7, 33°.39N×137°.91E, h332^{km}±15^{km}, mb3.0/5, mb1 3.1/7, mb1mx2.8/51, mbtmp3.6/7, Error ellipse: s-maj=42.7km s-min=11.1km az=66.0

ISC 16 20:35:12.9±0.9, 33°.44N±0°.08×137°.97E±0°.08, h350^{km}, n24, σ2^s.03/29, mb3.1/5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.84	291	P	Pn	20 35 56.1	-1.5
TK04	Tokai 4	0.95	355	P	Pn	20 35 57.1	-1.1
TTO1	TONANKAI O.B.S	1.01	281	P	Pn	20 35 56.3	-1.9
JIE	Ise	1.42	312	P	Pn	20 35 58.4	-2.1
JHJ	Hachijo jima 2	1.55	101	P	Pn	20 36 00.1	-1.2
	9.9nm,0.3s,baz=240,slow=20,SNR=8.2						
JHJ				S	S	20 36 38.2	-1.9
	4.5nm,0.3s,baz=227,slow=19,SNR=3.7						
JTNC	Tanabenakahech	2.01	282	P	Pn	20 36 01.6	-2.6
JOD2	Odawara 2	2.04	27	*e*S	S	20 36 45.8	0.0
JWY	Kouya	2.13	292	P	Pn	20 36 03.2	-1.9
JYTA	Yamagatataniai	2.38	335	P	Pn	20 36 05.8	-1.1
JRY	Ryogami san	2.68	16	P	Pn	20 36 09.6	+0.2
BSO1	Boso 1	2.77	63	P	Pn	20 36 07.4	-2.1
BSO1				*e*S	S	20 36 52.7	-2.5
JWT	Wachi	2.81	312	P	Pn	20 36 09.0	-1.5
JAI	Aioi	2.96	278	P	Pn	20 36 09.3	-2.5
MJAR	Matsushiro Arr	3.10	4	P	Pn	20 36 12.6	-0.5
	0.3nm,0.3s,baz=189,slow=10,SNR=47						
MJAR				S	S	20 36 59.2	-2.4
	0.1nm,0.3s,baz=187,slow=19,SNR=4.3						
MAT	Matsushiro	3.10	3	P	Pn	20 36 12.6	-0.5
MAT				S	S	20 36 57.9	-3.7
MAT	Matsushiro	3.10	3	P	Pn	20 36 12.7	-0.4
JAG	Ashikaga	3.22	22	P	Pn	20 36 13.2	-0.9
JAG				*e*S	S	20 36 58.9	-4.6
JMN	Monobe	3.43	276	P	Pn	20 36 14.1	-2.1
KSRS	Korea Array	9.12	299	P	Pn	20 37 20.8	+0.5
	0.1nm,0.3s,baz=111,slow=13,SNR=5.3						
MKAR	Makanchi Array	43.75	305	P	P	20 42 46.4	+1.6
	0.3nm,0.3s,baz=85,slow=9.2,SNR=12						
KURBB	Kurchatov Arra	46.09	310	P	P	20 43 04.5	+1.7
	0.6nm,0.4s,baz=91,slow=9.0,SNR=14						
WRA	Warramunga Arr	53.19	184	P	P	20 43 56.9	+0.6
	0.5nm,0.6s,baz=357,slow=6.5,SNR=12						
ASAR	Alice Springs	56.92	184	P	P	20 44 23.6	+0.9
	0.8nm,1.1s,baz=19,slow=12,SNR=4.5						
FINES	FINESS Array B	70.66	332	P	P	20 45 53.4	+2.5
	2.3nm,1.0s,baz=58,slow=5.2,SNR=7.9						

IDC 16 20:42:16.1±1.2, 35°.95N×27°.43E, h0^{km}, mb3.8/4, mb1 3.7/6, mb1mx3.4/46, mbtmp3.7/6, ML3.2/3, MS4.1/3, Ms1 4.2/3, ms1mx3.5/34, Error ellipse: s-maj=26.8km s-min=20.6km az=134.0

ISK 16 20:42:18.7, 35°.93N×27°.52E, h10^{km}, ML3.3/20

ATH 16 20:42:18.7, 35°.94N×27°.51E, h22^{km}±2^{km}, ML3.2/2, Error ellipse: s-maj=4.4km s-min=1.2km az=145.0

THE 16 20:42:19.8, 35°.89N×27°.54E, h4^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=2.2km s-min=0.7km az=145.0

DDA 16 20:42:19.7, 35°.97N×27°.56E, h33^{km}±2^{km}, ML3.5

ISCJB 16 20:42:20.2±0.5, 35°.92N±0°.03×27°.51E±0°.03, h19^{km}±5^{km}, mb3.7/4, MS4.2/3, Error ellipse: s-maj=5.4km s-min=2.6km az=148.0

ISC 16 20:42:19.5±0.8, 35°.92N±0°.03×27°.53E±0°.02, h22^{km}±8^{km}, n71, σ1^s.64/96, mb3.8/4, MS4.3/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.48	219	PG	Pb	20 42 28.7	-0.5
KARP				SG	Sb	20 42 35.6	-0.3
KARP	Karpathos	0.48	219	P	Pb	20 42 28.7	-0.5
KARP				S	Sb	20 42 35.6	-0.3
	6μm,0.1s						
KARP	Karpathos	0.48	219	P	Pb	20 42 28.8	-0.5
KARP				S	Sb	20 42 35.6	-0.3
KARP				AML	AML	20 42 37.1	
	comp=N,8698μm,0.1s						
KARP				AML	AML	20 42 37.3	
	comp=E,14054μm,0.2s						
ARG	Arkhangelos	0.56	58	PG	Pb	20 42 30.2	-0.5
ARG				SG	Sb	20 42 38.3	-0.1
ARG	Arkhangelos	0.56	58	P	Pb	20 42 30.2	-0.5
ARG				S	Sb	20 42 39.3	+0.9
	comp=E,2μm,0.2s						
ARG	Arkhangelos	0.56	58	P	Pb	20 42 30.3	-0.5
ARG				S	Sb	20 42 37.6	-0.7
ARG				AML	AML	20 42 40.6	
	comp=N,4087μm,0.2s						
ARG				AML	AML	20 42 41.5	
	comp=E,4624μm,0.2s						
DAT	Datca	0.81	3	PG	Pn	20 42 35.1	-0.5
DAT				SG	Sn	20 42 46.5	-0.5
DAT	Datca	0.81	3	*i* P	Pn	20 42 35.9	+0.3
DAT				*i* S	Sn	20 42 47.1	+0.1
DAT				IAML_P			
	comp=Z,7μm,0.2s						
DATC	Datca-Mugla	0.84	7	PG	Pn	20 42 35.8	-0.2
MRSB	Marmaris-Mugla	0.96	34	PG	Pn	20 42 37.6	0.0
BODT	Bodrum	1.15	351	PN	Pb	20 42 40.7	0.0
DALY	Dalyan (Mula)	1.27	45	PN	Pb	20 42 42.7	0.0
DALY	Dalyan (Mula)	1.27	45	*i* P	Pb	20 42 43.4	+0.6
DALY				*i* S	Sb	20 43 00.0	+1.4
DALY				IAML_P			
	comp=Z,7μm,0.2s						
TURN	Turunc	1.28	42	PG	Pn	20 42 38.4	-3.6
TURN	Turunc	1.28	42	*i* P	Pn	20 42 38.7	-3.4
TURN				*i* S	Sn	20 42 52.9	-5.7
ZKR	Zakros	1.34	234	PN	Pb	20 42 44.1	+0.1
ZKR	Zakros	1.34	234	P	Pb	20 42 44.0	+0.1
ZKR				S	Sb	20 43 02.0	+1.4
	comp=Z,628nm,0.5s						
ZKR	Zakros	1.34	234	P	Pb	20 42 44.0	+0.1
YER	Yerkesik	1.35	26	PN	Pb	20 42 44.4	+0.2
YER	Yerkesik	1.35	26	P	Pb	20 42 44.2	0.0
YER				S	Sb	20 43 02.5	+1.4
STIA	Sitia Lasithi	1.38	239	P	Pb	20 42 45.0	+0.5
STIA				S	Sb	20 43 02.9	+1.3
FETY	Fethiye	1.44	60	PN	Pb	20 42 45.5	-0.2
FETY	Fethiye	1.44	60	P	Pb	20 42 45.7	0.0
FETY				S	Sb	20 43 05.2	+1.6
FETY	Fethiye	1.44	60	*i* P	Pb	20 42 46.5	+0.9
AMGA	Amorgos Island	1.60	305	P	Pn	20 42 47.1	+0.6
AMGA				S	Sb	20 43 09.8	+1.5
	comp=Z,460nm,0.7s						
AMGA	Amorgos Island	1.60	305	P	Pb	20 42 47.7	-0.7
KSL	Kastellorizon	1.68	82	P	Pb	20 42 49.1	-0.5
KSL				S	Sb	20 43 11.0	+0.7
	comp=Z,135nm,0.9s						
KSL	Kastellorizon	1.68	82	P	Pb	20 42 49.4	-0.2
NPS	Neapolis	1.70	248	P	Pb	20 42 48.7	-1.2
NPS				S	Sn	20 43 09.7	+0.9
	comp=Z,818nm,0.2s						
NPS	Neapolis	1.70	248	P	Pb	20 42 48.8	-1.2
AKAS	Kas	1.71	79	PN	Pb	20 42 49.9	-0.3
AKAS	Kas	1.71	79	*i* P	Pb	20 42 50.8	+0.5
AKAS				IAML_P			
	comp=Z,8μm,0.2s						
AYDN	Tasoluk	1.76	9	*i* P	Pb	20 42 50.3	-0.8
AYDN				*i* S	Sb	20 43 13.2	+0.4
AYDN				IAML_P			
	comp=Z,1μm,0.2s						
THR6	Thira Island,	1.78	285	P	Pb	20 42 50.2	-1.2
GCAM	G?zelcaml?	1.79	352	PN	Pb	20 42 50.5	-1.1
GCAM	G?zelcaml?	1.79	352	*i* P	Pb	20 42 50.9	-0.7
GCAM				IAML_P			
	comp=Z,622nm,0.1s						
THR3	Thira Island,	1.79	286	P	Pn	20 42 50.0	+1.0
CMBO	Columbo, Santo	1.81	288	P	Pn	20 42 50.2	+1.0
THR5	Thira Island,	1.84	286	P	Pb	20 42 50.9	-1.4
LAST	Lasithi	1.84	246	P	Pb	20 42 51.0	-1.4
LAST				S	Sn	20 43 13.6	+1.2
	comp=Z,248nm,0.5s						
LAST	Lasithi	1.84	246	P	Pb	20 42 51.0	-1.4
APE	Apeiranthos	1.98	306	PN	Pn	20 42 52.9	+1.2
AYDB	Zeytinkoy-Aydi	2.04	8	PN	Pn	20 42 53.5	+0.9
ELL	Elmali	2.09	66	PN	Pb	20 42 55.2	-1.5
GOLH	Golhisar	2.10	51	*i* P	Pb	20 42 57.2	+0.4
GOLH				*i* S	Sb	20 43 24.2	+1.7
DENT	Denizli	2.19	33	PN	Pn	20 42 56.1	+1.5
IDI	Anoyia	2.24	254	PN	Pn	20 42 56.3	+1.0
AKUM	Antalya-Kumluc	2.31	79	*i* P	Pb	20 42 59.5	-0.9
AKUM				*i* S	Sb	20 43 27.9	-0.6
AKUM				IAML_P			
	comp=Z,889nm,0.1s						
KORT	Korkueli	2.51	64	PN	Pn	20 43 01.0	+1.9
KORT	Korkueli	2.51	64	*i* P	Pb	20 43 03.1	-0.9
KORT				IAML_P			
	comp=Z,828nm,0.2s						
MANT	Manisa	2.69	17	*i* P	Pn	20 43 03.2	+1.6
MANT				*i* S	Sn	20 43 31.5	-2.1
MANT				IAML_P			
	comp=Z,382nm,0.1s						
BRDR	BURDUR-Merkez	2.69	48	*i* P	Pb	20 43 05.2	-1.9
BRDR				*i* S	Sb	20 43 37.3	-2.4
BRDR				IAML_P			
	comp=Z,382nm,0.2s						
KULA	Kula-Manisa	2.74	19	PN	Pn	20 43 03.8	+1.6
KHAL	Karahalli	2.90	32	*i* P	Pn	20 43 07.1	+2.7
KHAL				*i* S	Sn	20 43 41.1	+2.4
KHAL				IAML_P			
	comp=Z,184nm,0.2s						
IMMV	Iera Moni Meta	2.93	262	PN	Pn	20 43 06.6	+2.0
IMMV	Iera Moni Meta	2.93	262	P	Pn	20 43 06.2	+1.6
AKHS	Akhisar	2.96	4	*i* P	Pn	20 43 07.2	+2.1
AKHS				IAML_P			
	comp=Z,778nm,0.2s						
GVD	Gavdhos	3.02	250	PN	Pn	20 43 07.9	+2.1
KEPZ	Antalya-Kepez	3.43	72	*i* P	Pn	20 43 15.2	+3.7
KEPZ				*i* S	Sn	20 43 54.6	+3.1
KEPZ				IAML_P			
	comp=Z,528nm,0.2s						
GAZI	Gazipasa	3.89	84	*i* P	Pn	20 43 19.2	+1.3
BRTR	Keskin Array B	6.15	50	Pn	Pn	20 43 51.7	+2.7
	comp=Z,0.1nm,0.3s,baz=231,slow=14,SNR=3.7						
BRTR				Sn	Sn	20 45 01.4	+2.7
	comp=Z,0.2nm,0.3s,baz=218,slow=26,SNR=4.4						
MMAI	Mount Meron Ar	7.12	112	Pn	Pn	20 44 01.8	-0.5
	comp=Z,1.5nm,0.3s,baz=300,slow=14,SNR=8.3						
MMAI				Sn	Sn	20 45 19.5	-3.0
	comp=Z,1.6nm,0.3s,baz=294,slow=25,SNR=3.6						
EIL	Elat	8.82	133	Pn	Pn	20 44 25.4	-0.2
	comp=Z,0.3nm,0.3s,baz=27,slow=2.3,SNR=6.2						
EIL				Sn	Sn	20 45 58.2	-6.2
	comp=Z,0.3nm,0.3s,baz=31,slow=19,SNR=3.3						
VYHS	Vyhne	14.11	336	*e*PN	Pn	20 45 39.0	+1.1
VYHS				*e*SN		20 46 06.3	
FINES	FINESS Array B	25.56	358	P	P	20 47 45.9	-0.5
	comp=Z,1.6nm,0.9s,baz=170,slow=9.7,SNR=4.8						
NOA	NORSAR Array B	27.21	343	LR	LR	20 59 57.9	
	comp=Z,158nm,18.5s,baz=280,slow=39						
TORD	Torodi Ar. Bea	32.47	232	P	P	20 48 48.1	-0.2
	comp=Z,0.6nm,0.4s,baz=33,slow=9.0,SNR=23						
ARCES	ARCESS Array B	33.69	359	P	P	20 48 57.4	-1.1
	comp=Z,1.3nm,0.7s,baz=171,slow=8.2,SNR=5.8						
KURBB	Kurchatov Arra	39.14	52	P	P	20 49 46.2	+1.1
	comp=Z,0.3nm,0.4s,baz=267,slow=8.8,SNR=3.2						
USRK	Ussuriysk Ar.	74.93	46	LR	LR	21 32 37.4	
	comp=Z,286nm,19.6s,baz=328,slow=40						
MJAR	Matsushiro Arr	83.37	49	LR	LR	21 38 08.0	
	comp=Z,120nm,18.7s,baz=325,slow=40						

IDC 16 20:56:42.3±1.0, 56°.32S×142°.48W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.9/26, mbtmp4.1/4, MS3.4/1, Ms1 3.4/1, ms1mx3.1/25, Error ellipse: s-maj=55.1km s-min=26.5km az=6.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	39.06	349	LR	LR	21 14 34.3	
	comp=Z,59nm,20.6s,baz=127,slow=28						
SNAA	Sanae	49.20	164	P	P	21 05 31.1	-0.6
	1.4nm,0.6s,baz=204,slow=10.0,SNR=5.3						
ASAR	Alice Springs	67.15	261	P	P	21 07 37.9	-0.1
	1.8nm,0.6s,baz=143,slow=6.6,SNR=18						
LPAZ	La Paz	67.93	86	P	P	21 07 42.5	-1.0
	1.0nm,0.8s,baz=187,slow=6.4,SNR=3.8						
H01W1	Cape Leeuwin H	68.47	239	T	T	22 23 05.2	
	baz=144,slow=75,SNR=17						
H01W2	Cape Leeuwin H	68.47	239	T	T	22 23 08.2	
	baz=144,slow=75,SNR=14						
H01W3	Cape Leeuwin H	68.48	239	T	T	22 23 07.6	
	baz=144,slow=75,SNR=19						
WRA	Warramunga Arr	69.89	264	P	P	21 07 55.0	-0.1
	1.4nm,0.7s,baz=146,slow=5.8,SNR=9.3						
TORD	Torodi Ar. Bea	128.88	133	PKP	PKiKP	21 15 53.3	+0.9
	0.7nm,0.9s,baz=186,slow=5.8,SNR=2.7						
ESDC	Sonseca Array	148.23	104	PKPbc	PKPbc	21 16 29.3	-0.3
	1.3nm,0.8s,baz=240,slow=2.9,SNR=9.0						
MKAR	Makanchi Array	151.06	270	PKPbc	PKPbc	21 16 35.4	-0.9
	1.1nm,0.8s,baz=108,slow=4.7,SNR=12						

ISCJB 16 21:12:22.3±1.6, 13°.7N±0°.3×90°.8W±0°.2, h81^{km}±37^{km}, Error ellipse: s-maj=61.1km s-min=8.2km az=25.2

SNET 16 21:12:24.0±0.9, 13°.89N×90°.66W, h66^{km}±10^{km}, ML3.2

GCG 16 21:12:25.1±0.4, 14°.06N×90°.74W, h84^{km}±31^{km}, MD3.5

ISC 16 21:12:21.5±2.7, 13°.8N±0°.3×90°.8W±0°.1, h93^{km}±31^{km}, n9, σ0^s.82/14, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.63	13	*e*P	Pn	21 12 39.0	+1.0
PCG				*e*S	Sn	21 12 50.1	-0.2
FUG	Fuego 3	0.67	353	*e*P	Pn	21 12 39.2	+0.9
FUG				*e*S	Sn	21 12 49.9	-0.9
RTR	El Retiro	1.08	84	*e*P	Pn	21 12 43.2	+0.6
RTR				*e*S	Sn	21 12 57.9	-0.6
CEVE	Cerro Verde	1.10	87	⇓*e*P	Pn	21 12 43.2	+0.3
CEVE				*e*S	Sn	21 12 57.5	-1.4
CEVE				IAML		21 13 00.3	
	comp=Z,526nm,0.2s						
SBLS	San Blas	1.10	87	*e*P	Pn	21 12 43.1	+0.2
SNJE	San Jose	1.12	85	*e*P	Pn	21 12 43.2	+0.1
STG3	Santiaguito 3,	1.22	320	*e*P	Pn	21 12 43.7	-0.5
STG3				*e*S	Sn	21 13 01.4	+0.2
MTO3	Montecristo	1.49	65	*e*P	Pn	21 12 47.8	+0.2
LOMA	Loma Larga	1.54	95	*e*P	Pn	21 12 49.0	+1.0

ISCJB 16 21:25:54.9±0.6, 8°.93S±0°.06×124°.04E±0°.06, h74^{km}, mb3.9/6, Error ellipse: s-maj=10.1km s-min=7.7km az=44.6

IDC 16 21:25:58.0±2.5, 9°.01S×123°.86E, h82^{km}±27^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.5/25, mbtmp4.0/7, Error ellipse: s-maj=50.0km s-min=20.9km az=61.0

DJA 16 21:25:58.7±0.6, 9°S±4°×12°4E±°, h98^{km}±8^{km}, M4.2/6, mb4.8/2, mB5.1/2, MLv3.9/6, Mw(mB)4.4/2

ISC 16 21:25:57.1±0.7, 9°.01S±0°.07×123°.86E±0°.08, h74^{km}, n17, σ1^s.83/20, mb3.8/6, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.84	151	P	Pn	21 26 17.2	+3.1
BATI	Baumata	1.20	189	P	Pn	21 26 19.7	+1.3
	154nm,0.3s,baz=106,slow=2.0,SNR=266						
BATI				LR	LR	21 26 33.3	
	comp=Z,225nm,18.4s,baz=350,slow=29						
BATI				S	Sn	21 26 36.1	+1.8
	194nm,0.3s,baz=131,slow=20,SNR=41						
BATI	Baumata	1.20	189	P	Pn	21 26 19.6	+1.2
BATI				S	Sn	21 26 35.8	+1.5
MMRI	Maumere	1.64	283	P	Pn	21 26 26.6	+2.5
MMRI				S	Sn	21 26 46.7	+2.1
EDFI	Ende, Flores	2.16	277	P	Pn	21 26 32.9	+1.8
WSI	Waingapu	3.57	259	P	Pn	21 26 49.7	-0.5
WBSI	Waikabubak, Su	4.45	262	P	Pn	21 27 00.9	-1.3
PLAI	Plampang	6.01	271	P	Pn	21 27 24.0	+0.5
	95nm,0.6s,2μm						
WRA	Warramunga Arr	14.86	138	P	Pn	21 29 19.0	-4.3
	0.6nm,0.3s,baz=308,slow=14,SNR=30						
WRA				S	Sn	21 31 53.4	-14
	2.6nm,0.3s,baz=318,slow=25,SNR=12						
ASAR	Alice Springs	17.45	148	P	Pn	21 29 54.5	-1.3
	0.6nm,0.3s,baz=324,slow=12,SNR=34						
ASAR				S	Sn	21 32 54.4	-15
	0.9nm,0.3s,baz=314,slow=22,SNR=12						
STKA	Stephens Creek	28.09	147	P	P	21 31 42.7	+0.8
	0.5nm,0.3s,baz=319,slow=11,SNR=5.3						
CMAR	Chiang Mai Arr	36.74	318	P	P	21 32 58.1	+0.6
	0.6nm,0.8s,baz=144,slow=7.8,SNR=5.1						
USRK	Ussuriysk Ar.	53.47	7	P	P	21 35 10.2	+0.5
	0.9nm,0.7s,baz=191,slow=7.6,SNR=4.2						
SONM	Songino Array	58.68	346	P	P	21 35 46.6	-0.4
	0.4nm,0.6s,baz=169,slow=7.7,SNR=3.1						
MKAR	Makanchi Array	66.75	330	P	P	21 36 40.6	-0.1
	2.5nm,0.5s,baz=135,slow=7.5,SNR=37						
ZALV	Zalesovo Beam	70.85	337	P	P	21 37 04.8	-1.1
	0.9nm,0.3s,baz=152,slow=4.8,SNR=4.7						
TORD	Torodi Ar. Bea	123.19	280	PKP	PKiKP	21 44 46.2	-0.5
	0.2nm,0.5s,baz=113,slow=3.3,SNR=2.8						

KRSC 16 21:51:21.8±1.4, 47°.89N×157°.36E, h6^{km}±28^{km}, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	3.95	6	*e*P	Pn	21 52 26.0	+3.1
KDTR				*e*S	Sn	21 53 12.4	+2.9
MTVR	Mutnovka	4.62	6	*e*P	Pn	21 52 36.2	+3.8
MTVR				*e*S	Sn	21 53 31.1	+4.7
KRMR	Karymshinskiy	4.97	5	*e*S	Sn	21 53 41.1	+6.5
DALK	Dalny	5.22	9	*e*P	Pn	21 52 44.7	+4.3
UGLR	Uglovaya	5.40	9	*e*P	Pn	21 52 47.5	+4.5
AVH	Avacha	5.45	9	*e*P	Pn	21 52 47.0	+3.4
SMAR	Somma	5.45	9	*e*P	Pn	21 52 48.5	+4.7
KOK	Koryaka	5.47	8	*e*S	Sn	21 53 52.7	+5.6
SDLR	Sedlovina	5.48	10	*e*P	Pn	21 52 47.9	+3.9
SPN	Mys Shipunski	5.48	17	*e*P	Pn	21 52 49.2	+5.3
SPN				*e*S	Sn	21 53 52.3	+5.0
KRX	Arik	5.53	8	*e*P	Pn	21 52 49.7	+4.9
GNL	Ganaly	5.82	3	*e*P	Pn	21 52 53.3	+4.6

ISN 16 21:58:59.8±2.4, 32°.15N×47°.54E, h11^{km}±12^{km}, ML3.2

ISCJB 16 21:59:01.5±1.3, 31°.9N±0°.1×47°.57E±0°.05, h33^{km}, Error ellipse: s-maj=16.3km s-min=5.6km az=12.9

TEH 16 21:59:02.1, 32°.12N×47°.70E, h16^{km}, ML3.2

ISC 16 21:59:03.8±1.5, 31°.93N±0°.09×47°.53E±0°.06, h35^{km}, n23, σ1^s.25/23, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHWZ	Ahwaz	1.12	122	*e*Sg	Sn	21 59 39.6	+2.4
IKFM	Kafar-mosalman	1.61	9	*e*Pn	Pn	21 59 28.3	-1.5
IKFM				IAMB	IAmb	21 59 57.0	
	comp=Z,0.0nm,0.6s						
IKMR	Kamar-syah	1.74	24	*e*Pg	Pn	21 59 30.2	-1.3
IBDR	Badra	1.79	311	*e*Pg	Pn	21 59 30.0	-2.3
	baz=125						
IBDR				AML	AML	21 59 34.8	
	comp=Z,37nm,0.3s						
IBDR				*e*Sg	Sn	21 59 55.0	+1.1
IDOB	Doab	1.93	16	*e*Pn	Pn	21 59 33.4	-1.0
IKOM	Komasi	2.24	360	*e*Pn	Pn	21 59 37.7	-0.9

IKOM				IAMB	IAmb	22 00 07.6	
	comp=Z,0.0nm,0.4s						
HSAM	Samen	2.45	21	*e*Pn	Pn	21 59 40.3	-1.3
IGHG	Ghaleghazi	2.53	342	*e*Pn	Pn	21 59 42.7	+0.1
IGHG				IAMB	IAmb	22 00 28.7	
	comp=Z,2μm,0.6s						
IBZA	Bozab	2.55	6	IAMB	IAmb	22 00 26.3	
	comp=N,0.0nm,0.6s						
IVIS	Veis	2.65	348	*e*Pn	Pn	21 59 44.8	+0.6
IVIS				IAMB	IAmb	22 00 28.0	
	comp=E,1μm,0.6s						
JHBN	Jahan bin	2.68	83	*e*Pn	Pn	21 59 43.3	-1.4
JHBN				IAMB	IAmb	22 00 45.4	
	comp=Z,0.0nm,1.1s						
IDHR	Dehrash	2.93	341	*e*Pn	Pn	21 59 47.8	-0.3
IDHR				IAMB	IAmb	22 00 26.8	
	comp=Z,0.0nm,0.3s						
IPIR	Pirpir	2.94	74	*e*Pn	Pn	21 59 48.2	-0.2
IPIR				IAMB	IAmb	22 00 35.2	
	comp=Z,304nm,0.6s						
BHD	Baghdad	2.98	298	*e*Pn	Pn	21 59 48.0	-0.6
BHD				AML	AML	21 59 51.9	
	comp=Z,3μm,0.5s						
BHD				*e*Sn	Sn	22 00 24.0	+0.9
ROKH	ROKH	3.00	81	*e*Pn	Pn	21 59 47.3	-1.8
ROKH				IAMB	IAmb	22 00 32.2	
	comp=Z,0.0nm,0.8s						
HAGD	Aghdareh	3.18	25	*e*Pn	Pn	21 59 50.6	-1.1
HAGD				IAMB	IAmb	22 00 47.0	
	comp=Z,0.0nm,0.7s						
HSRG	Sareghieh	3.36	10	*e*Pn	Pn	21 59 54.0	-0.2
HSRG				IAMB	IAmb	22 00 47.3	
	comp=Z,0.0nm,0.7s						
IKLH	Kolahrood	3.69	67	*e*Pn	Pn	21 59 58.2	-0.4
IKLH				IAMB	IAmb	21 59 59.3	
	comp=Z,302nm,0.2s						
IRAZ	Razeghan	4.00	29	IAMB	IAmb	22 00 03.7	
	comp=Z,591nm,0.3s						
IRAZ				*e*Pn	Pn	22 00 02.5	-0.4
QABG	Abgarm-Qazvin	4.14	24	*e*Pn	Pn	22 00 04.7	-0.1
IZEF	Zefreh	4.17	75	IAMB	IAmb	22 00 15.9	
	comp=Z,105nm,0.5s						
KRSH	Karshahi	4.37	61	*e*Pn	Pn	22 00 06.4	-1.5
QALM	Alamut, Qazvin	5.18	29	*e*Pn	Pn	22 00 18.4	-0.7

HEL ***16*** *22:01:27.8, 67°.18N×20°.66E, h0km, ML1.3, Explosion*

UPP 16 22:01:27.7±0.1, 67°.19N×20°.69E, h2km±3km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	217	P	Pg	22 01 29.4	+0.1
DUNU				S	Sg	22 01 30.6	+0.2
DUNU	Dundret	0.08	217	*i* P	Pg	22 01 29.4	+0.1
DUNU				*i* S	Sg	22 01 30.6	+0.2
RATU	Laukkuluspa	0.77	327	P	Pg	22 01 42.0	-0.4
RATU				S	Sg	22 01 52.1	-0.2
RATU	Laukkuluspa	0.77	327	*i* P	Pg	22 01 42.0	-0.4
RATU				*i* S	Sg	22 01 52.1	-0.2
ERTU	Ertsjaerv	0.87	136	P	Pg	22 01 43.6	-0.7
ERTU				S	Sg	22 01 55.5	0.0
ERTU	Ertsjaerv	0.87	136	*e*P	Pg	22 01 43.5	-0.8
ERTU				*e*S	Sg	22 01 55.3	-0.2
SALU	Saltoluokta	0.87	284	P	Pg	22 01 43.9	-0.5
SALU				S	Sg	22 01 55.4	-0.2
SALU	Saltoluokta	0.87	284	*i* P	Pg	22 01 43.9	-0.5
SALU				*i* S	Sg	22 01 55.4	-0.2
NIKU	Nikkaluokta	0.94	318	P	Pg	22 01 45.0	-0.6
NIKU	Nikkaluokta	0.94	318	*e*P	Pg	22 01 45.0	-0.6
PAJU	Pajala	0.96	99	P	Pg	22 01 45.6	-0.4
PAJU	Pajala	0.96	99	*e*P	Pg	22 01 45.6	-0.4
HARU	Harads	1.03	174	P	Pg	22 01 46.5	-0.9
HARU				S	Sg	22 02 00.3	-0.6
HARU	Harads	1.03	174	*e*P	Pg	22 01 46.5	-0.9
HARU				*e*S	Sg	22 02 00.3	-0.6
HEF	Hetta	1.67	41	*e*P	Pn	22 01 57.8	-0.1
	baz=233						
HEF				MSG		22 02 18.1	
	comp=Z,1.2nm,0.2s						
HEF				*e*SN	Sg	22 02 22.3	+1.2
KALU	Kalix	1.71	140	P	Pb	22 01 59.2	-0.5
KALU	Kalix	1.71	140	*e*P	Pb	22 01 59.2	-0.5
SJUU	Sjulsmark	1.73	167	P	Pn	22 01 58.9	+0.2
SJUU	Sjulsmark	1.73	167	*e*P	Pn	22 01 58.9	+0.2
TOF	Tornio	1.82	126	*e*PN	Pn	22 02 00.9	+0.9
TOF				MSG		22 02 22.5	
	comp=Z,2.3nm,0.2s						
TOF				*e*SN	Sb	22 02 25.1	+0.1
KIF	Kilpisjarvi	1.83	1	*e*P	Pb	22 02 01.2	-0.6
KIF				MSG		22 02 23.5	
	comp=Z,1.8nm,0.2s						
KIF				*e*SG	Sg	22 02 27.6	+1.3
RNF	Rovaniemi	2.18	103	*e*PB	Pb	22 02 06.5	-1.2
	baz=296						
RNF				*e*SG	Sb	22 02 36.2	+1.1
SGF	Sodankyl	2.28	81	*e*SG	Sb	22 02 38.6	+0.7
ARE0	ARCESS Array S	2.96	35	*e*P	Pn	22 02 16.4	+0.8
	baz=218						
ARE0				*e*SB	Sb	22 02 57.0	-0.5

UPP 16 22:01:41.6±0.1, 67°.17N×20°.65E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.06	211	P	Pg	22 01 43.0	+0.3
RATU	Laukkuluspa	0.77	328	P	Pg	22 01 56.0	-0.3
RATU				S	Sg	22 02 07.0	+0.7
SALU	Saltoluokta	0.86	285	P	Pg	22 01 57.3	-0.8
ERTU	Ertsjaerv	0.87	135	P	Pg	22 01 57.9	-0.4
NIKU	Nikkaluokta	0.93	319	P	Pg	22 01 59.6	+0.1
SJUU	Sjulsmark	1.72	167	P	Pn	22 02 12.6	-0.1
SJUU				S	Sb	22 02 35.9	-0.1

IDC 16 22:06:27.6±2.1, 3°.95N×65°.23E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/34, mbtmp3.9/4, MS3.3/9, Ms1 3.3/9, ms1mx3.1/27, Error ellipse: s-maj=74.9km s-min=30.1km az=52.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEYT	Alibeck	34.44	350	LR	LR	22 27 46.4	
	comp=Z,32nm,18.1s,baz=35,slow=37						
CMAR	Chiang Mai Arr	35.98	64	LR	LR	22 28 22.9	
	comp=Z,28nm,18.8s,baz=230,slow=37						
AAK	Ala-Archa	39.40	11	LR	LR	22 29 36.6	
	comp=Z,47nm,19.5s,baz=134,slow=35						
GNI	Garni	40.52	336	LR	LR	22 30 43.7	
	comp=Z,30nm,20.6s,baz=120,slow=36						
BRTR	Keskin Array B	45.66	326	P	P	22 14 50.2	-0.1
	0.5nm,0.7s,baz=141,slow=9.3,SNR=3.7						
BRTR				LR	LR	22 33 42.7	
	comp=Z,31nm,18.7s,baz=100,slow=36						
AKTO	Aktyubinsk	46.72	354	LR	LR	22 35 19.9	
	comp=Z,37nm,19.4s,baz=134,slow=37						
KIRV	Kirov	55.87	350	LR	LR	22 43 06.0	
	comp=Z,25nm,18.1s,baz=123,slow=39						
SONM	Songino Array	56.18	32	P	P	22 16 09.3	-0.1
	0.3nm,0.4s,baz=220,slow=8.7,SNR=2.7						
SONM				LR	LR	22 41 34.5	
	comp=Z,46nm,18.8s,baz=256,slow=38						
KSRS	Korea Array	66.07	51	LR	LR	22 46 34.1	
	comp=Z,12nm,19.7s,baz=200,slow=36						
WRA	Warramunga Arr	71.85	112	P	P	22 17 53.3	+0.3
	3.3nm,0.8s,baz=280,slow=6.5,SNR=11						
ASAR	Alice Springs	72.22	116	P	P	22 17 54.9	-0.2
	1.0nm,0.6s,baz=290,slow=5.9,SNR=10						

NIED ***16*** *22:12:00, 35°.20N×139°.10E, h150km, Mw4.0 Best double couple: M₀1.23000×10¹⁵ NP1:φs74.00000°, δ43.00000°, λ166.00000°. NP2:φs174.00000°, δ80.00000°, λ48.00000°.*

ISCJB ***16*** *22:12:44.7±0.3, 35°.18N±0°.04×139°.01E±0°.06, h150km±2km, mb3.6/16, Error ellipse: s-maj=8.3km s-min=6.1km az=161.3*

JMA ***16*** *22:12:45.2±0.1, 35°.15N×139°.09E, h149km±1km, M3.6*

IDC ***16*** *22:12:45.6±0.5, 35°.14N×138°.92E, h146km±4km, mb3.5/16, mb1 3.6/19, mb1mx3.5/37, mbtmp3.9/19, Error ellipse: s-maj=14.1km s-min=6.1km az=69.0*

ISC 16 22:12:45.8±0.7, 35°.18N±0°.05×139°.01E±0°.06, h147km±5km, n39, σ0ˢ.57/47, mb3.8/16, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.10	39	P	Pn	22 13 05.3	-0.2
JOD2				S	Sn	22 13 20.5	-0.1
AJI	Ajiro2	0.15	153	P	Pn	22 13 05.1	-0.5
JFNN	Fujinakano	0.27	273	P	Pn	22 13 05.8	0.0
JFNN				S	Sn	22 13 21.5	+0.5
JIZS	Izushimoda	0.48	193	P	Pn	22 13 06.4	-0.3
JIZS				S	Sn	22 13 22.3	-0.2
JYN	Shimob	0.49	310	P	Pn	22 13 06.9	+0.1
JYN				S	Sn	22 13 23.5	+0.7
JIM2	Oshima 3	0.58	143	P	Pn	22 13 06.7	-0.6
SHZ3	Shizuoka 3	0.66	260	P	Pn	22 13 07.8	0.0
JRY	Ryogami san	0.84	354	P	Pn	22 13 09.5	+0.5
JRY				S	Sn	22 13 27.2	+0.5
JAG	Ashikaga	1.29	16	P	Pn	22 13 12.6	-0.4
JAG				S	Sn	22 13 32.3	-1.5
MJAR	Matsushiro Arr	1.50	335	P	Pn	22 13 14.9	-0.2
	3.0nm,0.3s,baz=180,slow=12,SNR=92						
MJAR				S	Sn	22 13 37.0	-0.7
	1.4nm,0.3s,baz=178,slow=17,SNR=14						
MAT	Matsushiro	1.50	335	P	Pn	22 13 15.2	+0.1
MAT				S	Sn	22 13 37.4	-0.3
MAT	Matsushiro	1.50	335	P	Pn	22 13 15.3	+0.1
MAT				*e*S	Sn	22 13 37.4	-0.3
TK02	Tokai 2	1.61	220	P	Pn	22 13 16.5	+0.5
BSO1	Boso 1	1.70	107	P	Pn	22 13 16.2	-0.5
JYTA	Yamagatataniai	1.90	283	P	Pn	22 13 20.0	+0.5
JYTA				*e*S	Sn	22 13 45.6	+0.2
JIE	Ise	2.05	248	P	Pn	22 13 21.3	0.0
JHJ	Hachijo jima 2	2.16	162	P	Pn	22 13 22.3	-0.3
	56nm,0.3s,baz=328,slow=17,SNR=34						
JHJ				S	Sn	22 13 51.0	+0.1
	41nm,0.3s,baz=52,slow=22,SNR=12						
JHJ2	Mitsune	2.17	162	P	Pn	22 13 22.6	-0.2
JNU	Nakatsue	7.05	255	P	Pn	22 14 26.2	-0.3
	0.6nm,0.3s,baz=144,slow=7.4,SNR=7.2						
KSRS	Korea Array	9.23	287	P	Pn	22 14 56.1	+0.6
	0.3nm,0.3s,baz=100,slow=14,SNR=7.1						
PETK	Petropavlovsk-	22.27	31	P	P	22 17 31.7	+1.0
	3.1nm,0.8s,baz=215,slow=5.0,SNR=6.7						
SONM	Songino Array	27.29	308	P	P	22 18 15.9	-0.6
	0.4nm,0.5s,baz=100,slow=6.6,SNR=2.6						
H11N2	WAKE ISLAND Hy	29.01	115	T	T	22 48 21.8	
	baz=308,slow=75,SNR=8.6						
H11N1	WAKE ISLAND Hy	29.02	115	T	T	22 48 23.2	
	baz=308,slow=75,SNR=8.1						
H11N3	WAKE ISLAND Hy	29.03	115	T	T	22 48 24.1	
	baz=308,slow=75,SNR=10						
ZALV	Zalesovo Beam	41.76	314	P	P	22 20 20.1	-0.2
	1.6nm,0.5s,baz=92,slow=6.8,SNR=6.7						
MKAR	Makanchi Array	43.48	303	P	P	22 20 34.3	-0.1
	1.7nm,0.5s,baz=88,slow=9.9,SNR=30						
KDAK	Kodiak Island	49.77	41	P	P	22 21 23.5	+0.4
	3.2nm,0.5s,baz=315,slow=5.0,SNR=5.1						
ILAR	Eielson Array	52.09	31	P	P	22 21 40.6	+0.3
	0.4nm,0.8s,baz=280,slow=6.1,SNR=5.8						
WRA	Warramunga Arr	55.00	185	P	P	22 22 00.4	-1.6
	0.5nm,0.4s,baz=351,slow=6.5,SNR=12						
INK	Inuvik	56.91	26	P	P	22 22 14.5	-0.5
	0.9nm,0.4s,baz=270,slow=2.0,SNR=3.1						
ASAR	Alice Springs	58.73	185	P	P	22 22 27.7	-0.5
	0.2nm,0.3s,baz=20,slow=12,SNR=4.3						
ARCES	ARCESS Array B	65.03	339	P	P	22 23 09.6	-0.2
	1.3nm,0.9s,baz=50,slow=8.4,SNR=3.8						
FINES	FINESS Array B	69.53	332	P	P	22 23 38.3	+0.1
	0.7nm,0.3s,baz=69,slow=6.8,SNR=12						
AKASG	Malin Array Be	74.55	322	P	P	22 24 07.5	-0.7
	0.8nm,0.5s,baz=46,slow=6.8,SNR=5.5						
NOA	NORSAR Array B	75.12	337	P	P	22 24 11.4	0.0
	0.4nm,0.8s,baz=44,slow=5.3,SNR=2.6						
NVAR	Mina Array Bea	77.66	52	P	P	22 24 27.6	+1.2
	1.5nm,0.7s,baz=296,slow=5.0,SNR=11						
PDAR	Pinedale Array	80.35	44	P	P	22 24 41.8	+0.8
	0.3nm,0.3s,baz=216,slow=4.5,SNR=6.5						
TXAR	Lajitas Array	92.80	51	P	P	22 25 42.6	+0.7
	0.6nm,0.6s,baz=310,slow=3.3,SNR=6.7						

ISCJB ***16*** *22:24:39.5±0.4, 35°.23N±0°.04×77°.42E±0°.07, h10km, mb3.6/9, MS2.8/2, Error ellipse: s-maj=8.5km s-min=5.2km az=153.2*

IDC ***16*** *22:24:39.2±0.9, 35°.09N×77°.24E, h0km, mb3.7/10, mb1 3.8/15, mb1mx3.6/42, mbtmp3.7/15, ML3.5/4, MS2.9/2, Ms1 3.0/2, ms1mx2.6/30, Error ellipse: s-maj=24.2km s-min=15.9km az=55.0*

BJI ***16*** *22:24:45.5±0.0, 35°.29N×77°.46E, h5km, mb4.1/3, ML3.8/4, Ms3.4/3, Ms7 3.4/2*

ISC 16 22:24:42.0±0.6, 35°.27N±0°.05×77°.33E±0°.07, h10km, n29, σ2ˢ.38/33, mb3.8/9, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	3.72	246	P	Pn	22 25 39.6	0.0
BHK	Bhakra	3.91	192	*e*P	Pb	22 25 53.0	+1.9
BHK				*e*S	Sb	22 26 41.4	+2.8
KSH	Kashi	4.38	346	Pn	Pn	22 25 49.9	+1.2
KSH				Sn	Sn	22 26 32.8	-7.0
KSH				smax	smax		
	comp=N,190nm,0.7s						
KSH				smax	smax		
	comp=E,150nm,0.8s						
CEP	Cherat	4.70	254	P	Pn	22 25 53.6	+0.5
CEP				S	Sb	22 27 00.0	-1.3
AAK	Ala-Archa	7.69	344	Pn	Pn	22 26 39.7	+5.6
	0.4nm,0.3s,baz=196,slow=18,SNR=2.4						
AAK				Pg	Pb	22 26 57.7	+2.3
	0.7nm,0.3s,baz=186,slow=9.2,SNR=4.8						
AAK				Sn	Sn	22 28 09.0	+7.7
	0.2nm,0.3s,baz=221,slow=19,SNR=1.9						
AAK				Lg	Lg	22 28 40.2	
	0.8nm,0.3s,baz=82,slow=23,SNR=3.5						
DANN	Dangsing	8.80	140	*e*P	Pn	22 26 51.1	+1.5
	19nm,0.3s						
KOLN	Koldanda	9.19	143	*e*P	Pn	22 26 55.5	+0.7
	26nm,0.6s						
GKN	Gorkha	9.55	137	*e*P	Pn	22 27 00.0	+0.3
	20nm,0.3s						
KKN	Kakani	10.07	136	*e*P	Pn	22 27 05.9	-1.1
	22nm,0.6s						
DMN	Daman	10.11	137	*e*P	Pn	22 27 06.5	-1.1
	14nm,0.4s						
PKIN	Phulchoki	10.30	136	*e*P	Pn	22 27 08.5	-1.7
	16nm,0.5s						
PKI	Pulchoki	10.31	136	*e*P	Pn	22 27 08.6	-1.8
	15nm,0.5s						
JIRN	Jiri	10.71	133	*e*P	Pn	22 27 12.9	-2.9
	46nm,0.5s						
WMQ	Urumqi	11.70	40	*e*P	Pn	22 27 37.1	+8.1
MKAR	Makanchi Array	12.11	16	Pn	Pn	22 27 36.0	+1.4
	0.4nm,0.3s,baz=199,slow=13,SNR=20						
MKAR				Sn	Sn	22 29 49.4	-0.2
	0.4nm,0.3s,baz=195,slow=23,SNR=9.4						
KURBB	Kurchatov Arra	15.37	3	Pn	Pn	22 28 18.1	-0.8
	baz=184,slow=11,SNR=3.6						
BVAR	Borovoye Array	18.42	347	P	P	22 28 57.2	-0.1
	0.3nm,0.3s,baz=155,slow=11,SNR=8.5						
ZALV	Zalesovo Beam	19.41	13	P	P	22 29 10.0	+2.0
	0.6nm,0.3s,baz=218,slow=9.8,SNR=8.9						
AKTO	Aktyubinsk	20.65	323	P	P	22 29 20.9	-0.8
	0.8nm,0.4s,baz=116,slow=12,SNR=4.4						
ARU	Arti	24.72	335	P	P	22 30 03.7	+0.4
	0.3nm,0.3s,baz=183,slow=17,SNR=3.3						
SONM	Songino Array	24.95	51	P	P	22 30 05.8	+0.1
	1.1nm,0.8s,baz=243,slow=10,SNR=5.1						
CMAR	Chiang Mai Arr	25.45	126	P	P	22 30 08.7	-1.5
	0.8nm,0.4s,baz=310,slow=8.3,SNR=4.9						
CMAR				LR	LR	22 42 05.3	
	comp=Z,19nm,21.2s,baz=345,slow=41						
BRTR	Keskin Array B	34.69	291	P	P	22 31 31.4	-0.7
	0.5nm,0.7s,baz=116,slow=14,SNR=3.7						
FINES	FINESS Array B	41.39	325	P	P	22 32 26.9	-1.2
	1.9nm,0.7s,baz=111,slow=11,SNR=8.1						
FINES				LR	LR	22 50 43.9	
	comp=Z,25nm,19.3s,baz=89,slow=38						
ARCES	ARCESS Array B	44.28	337	P	P	22 32 52.4	+0.9
	1.1nm,0.6s,baz=94,slow=9.9,SNR=4.9						
NB2	NORSAR Subarra	48.44	324	P	P	22 33 22.5	-1.8
	comp=Z,1.1nm,0.7s,baz=92,slow=7.9						
NOA	NORSAR Array B	48.44	324	P	P	22 33 22.6	-1.7
	comp=Z,0.2nm,0.4s,baz=92,slow=7.6,SNR=3.1						
TORD	Torodi Ar. Bea	70.87	273	P	P	22 35 58.1	-1.4
	comp=Z,0.9nm,0.9s,baz=40,slow=5.9,SNR=5.1						
WRA	Warramunga Arr	77.04	126	P	P	22 36 34.1	-1.3
	comp=Z,1.0nm,0.9s,baz=316,slow=4.7,SNR=3.8						

ISK ***16*** *22:45:58.5, 38°.37N×38°.86E, h6km, ML2.2/7*

ISCJB ***16*** *22:45:59.8±0.6, 38°.33N±0°.03×38°.88E±0°.04, h11km±5km, Error ellipse: s-maj=5.5km s-min=4.8km az=158.2*

DDA ***16*** *22:45:59.1, 38°.32N×38°.88E, h7km±3km, ML2.7*

ISC 16 22:45:59.6±1.0, 38°.33N±0°.04×38°.86E±0°.03, h13km±9km, n16, σ0ˢ.59/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.19	32	*i* P	Pg	22 46 04.7	+0.6
ELZG				*i* S	Sg	22 46 07.4	+0.2
SVRC	Sivrice-ELAZID	0.36	83	PG	Pg	22 46 06.1	-0.8
SVRC				SG	Sg	22 46 11.2	-0.6
AKCD	Akcadag	0.73	267	*i* P	Pb	22 46 14.2	-0.2
AKCD				*i* S	Sb	22 46 24.3	0.0
HEKM	Malatya_Hekimh	0.89	308	*i* P	Pb	22 46 17.0	0.0
HEKM				*i* S	Sb	22 46 28.3	-0.5
HEKM				IAML_P			
	comp=Z,1μm,0.1s						
URFA	Urfa	0.89	182	PG	Pb	22 46 16.9	0.0
URFA				SG	Sb	22 46 30.0	+1.2
TNCL	Tunceli-Merkez	0.95	34	*i* P	Pb	22 46 17.8	-0.1
TNCL				IAML_P			
	comp=Z,177nm,0.1s						
ATAB	Bozova	0.97	207	*i* P	Pn	22 46 19.1	+0.2
KEMA	Kemaliye	0.98	343	*i* P	Pb	22 46 18.4	0.0
KEMA				*i* S	Sb	22 46 31.1	-0.1
KEMA				IAML_P			
	comp=Z,925nm,0.1s						
DIYA	Diyarbakir	1.08	112	*i* P	Pb	22 46 20.1	0.0
DYBB	Diyarbakir	1.08	110	PN	Pb	22 46 19.9	-0.3
DARE	Darende-Malaty	1.10	283	PN	Pg	22 46 19.7	-1.2
HANI	Diyarbakir_Han	1.22	86	*i* P	Pn	22 46 22.3	0.0
CUKAN	kangal_SIVAS	1.46	313	*i* P	Pg	22 46 28.2	+0.5
CUKAN				*i* S	Sg	22 46 46.2	-0.5
MAZI	Mazidag	1.53	124	PN	Pb	22 46 27.5	-0.4
KMRS	Kahramanmaras	1.75	242	PN	Pn	22 46 30.6	+0.9
SVAN	Silvan-Diyarba	1.85	95	PN	Pn	22 46 31.7	+0.6

ISCJB ***16*** *23:05:10.3±0.3, 60°.00S±0°.05×26°.3W±0°.1, h26km, mb5.1/34, MS4.5/24, Error ellipse: s-maj=10.1km s-min=5.5km az=142.8*

BJI ***16*** *23:05:12.0±0.0, 59°.60S×25°.50W, h30km, mB5.3/4, Ms5.3/4, Ms7 5.0/4*

IDC ***16*** *23:05:13.4±2.1, 59°.93S×26°.55W, h29km±13km, mb4.8/13, mb1 4.8/14, mb1mx4.7/17, mbtmp4.9/14, ML3.6/1, MS4.2/12, Ms1 4.2/12, ms1mx4.2/16, Error ellipse: s-maj=17.4km s-min=13.0km az=52.0*

NEIC ***16*** *23:05:13.1±1.3, 59°.88S×26°.31W, h30km±1km, mb5.1/31, Error ellipse: s-maj=16.8km s-min=12.0km az=217.0*

MOS ***16*** *23:05:13.0±1.0, 59°.87S×26°.33W, h33km, mb5.2/15, Error ellipse: s-maj=27.3km s-min=13.1km az=103.8*

GCMT ***16*** *23:05:18.1±0.3, 60°.51S±0°.03×26°.21W±0°.04, h29km, MW5.0/68, Moment Tensor Solution. s42,c54; s68,c92; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.22±.23; Mθθ-0.22±.17; Mφφ-3.00±.15; Mrθ-0.60±.26; Mθφ-2.20±.10; Mφr1.50±.22; Best double couple: M₀4.12300×10¹⁶ NP1:φs8.00000°, δ57.00000°, λ62.00000°. NP2: φs231.00000°, δ42.00000°, λ125.00000°. Principal axes: T 3.8910, Plg66.0000°, Azm225.0000°; N 0.4670, Plg23.0000°, Azm24.0000°; P -4.3550, Plg8.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 23:05:12.5±0.3, 60°.03S±0°.06×26°.35W±0°.07, h26km, n239, σ1ˢ.45/226, mb5.2/34, MS4.4/25, 11C-7D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.97	153	P	Pn	23 08 14.4	-0.4
VNA1	Neumayer--Stat	12.97	153	S	Sn	23 10 30.7	-7.3
VNA3	Neumayer Olymp	13.11	156	P	Pn	23 08 15.0	-1.7
VNA3	Neumayer Olymp	13.11	156	S	Sn	23 10 27.8	-14
SNAA	Sanae	14.97	151	P	Pn	23 08 40.6	-1.4
SNAA	Sanae	14.97	151	Pn	Pn	23 08 40.7	-1.2
	7.1nm,0.3s,baz=304,slow=14,SNR=78						
SNAA				Sn	Sn	23 11 13.2	-13
	0.4nm,0.3s,baz=303,slow=18,SNR=2.0						
SNAA				LR	LR	23 13 09.3	
	comp=Z,1μm,21.3s,baz=334,slow=32						
SNAA	Sanae	14.97	151	*e*Pn	Pn	23 08 40.9	-1.1
	45nm,0.7s						
SNAA				*e*Sn	Sn	23 11 13.2	-13
SNAA	Sanae	14.97	151	*e*P	Pn	23 08 40.9	-1.1
SNAA				pmax	pmax		
	comp=Z,45nm,0.7s						
PMSA	Palmer Station	17.89	239	P	Pn	23 09 19.4	+0.3
	comp=Z,0.2nm,0.3s,baz=83,slow=7.6,SNR=1.5						
PMSA				PcP	PcP	23 13 55.0	+1.1
	comp=Z,0.5nm,0.3s,baz=132,slow=14,SNR=3.4						
PMSA	Palmer Station	17.89	239	*e*P	P	23 09 20.3	+0.8
	comp=Z,55nm,0.6s						
PMSA	Palmer Station	17.89	239	*e*P	P	23 09 29.2	+10
EFI	East Falkland	19.50	281	*e*Pn	Pn	23 09 39.8	+1.2
	comp=Z,271nm,0.6s						
EFI	East Falkland	19.50	281	⇓*e*P	Pn	23 09 39.5	+0.9
EFI				pmax	pmax		
	comp=Z,103nm,0.7s						
USHA	Ushuaia	22.93	264	P	P	23 10 12.7	-1.5
	comp=Z,79nm,1.0s,baz=103,slow=8.7,SNR=12						
SYO	Syowa Base	28.30	136	⇑*e*P	P	23 10 59.0	-4.2
SYO	Syowa Base	28.30	136	⇓*e*pP	P	23 11 06.7	+3.5
SYO	Syowa Base	28.30	136	⇑*i*sP	sP	23 11 09.0	-3.4
QSPA	South Pole Qui	30.20	180	*e*P	P	23 11 22.5	+2.1
	comp=Z,37nm,1.1s						
OGAUY	Aigu	31.67	312	*e*P	P	23 11 33.3	-0.1
PLTB	Pedras Altas	33.57	315	*e*P	P	23 11 49.6	-0.5
CPSB	Cacapava Do Su	34.75	316	*e*P	P	23 12 01.0	+0.7
CNLB	Canela	34.89	321	*e*P	P	23 12 01.5	-0.1
MAW	Mawson	36.73	140	P	P	23 12 17.9	+1.1
	comp=Z,14nm,1.0s,baz=227,slow=7.6,SNR=19						
MAW				PcP	PcP	23 14 39.9	+1.3
	comp=Z,4.5nm,0.7s,baz=244,slow=2.4,SNR=4.7						
MAW				LR	LR	23 26 16.7	
	comp=Z,635nm,19.1s,baz=248,slow=34						
MAW	Mawson	36.73	140	*e*P	P	23 12 17.9	+1.1
	comp=Z,6.8nm,1.2s						
MAW				*e*PcP	PcP	23 14 39.9	+1.3
MAW	Mawson	36.73	140	*e*P	P	23 12 17.9	+1.1
MAW				*e*		23 14 39.9	
MAW				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ITAB	Concordia	37.23	320	*e*P	P	23 12 21.9	+0.3
GO05	Huala	38.52	290	*e*P	P	23 12 32.2	-0.3
	comp=Z,47nm,0.7s						
ESAR	Angra dos Reis	39.11	333	*e*P	P	23 12 37.7	+0.4
SPB	Sao Paulo	39.30	329	*e*P	P	23 12 39.7	+0.8
PEL	Peldehue	39.48	293	*e*P	P	23 12 40.8	+0.3
	comp=Z,192nm,0.6s						
PEL	Peldehue	39.48	293	*e*P	P	23 12 40.8	+0.3
PEL				pmax	pmax		
	comp=Z,192nm,0.6s						
PTGB	Pitanga	39.56	322	*e*P	P	23 12 40.9	-0.4
VAS01	Vassouras-RJ	39.61	335	*e*P	P	23 12 42.0	+0.4
CAM01	Campos-RJ	39.68	337	*e*P	P	23 12 42.7	+0.5
CPUP	Villa Florida	39.84	314	P	P	23 12 42.9	-0.6
	comp=Z,27nm,0.9s,baz=154,slow=8.7,SNR=24						
CPUP				LR	LR	23 27 47.2	
	comp=Z,205nm,21.4s,baz=170,slow=34						
CPUP	Villa Florida	39.84	314	*e*P	P	23 12 42.7	-0.8
CPUP	Villa Florida	39.84	314	*e*P	P	23 12 42.7	-0.8
CPUP	Villa Florida	39.84	314	*e*P	P	23 12 43.8	+0.3
FRTB	Fartura	40.11	326	*e*P	P	23 12 46.9	+1.2
TRCB	Terra Rica	41.54	322	*e*P	P	23 12 57.5	-0.1
RIB01	Linhares ES	41.90	340	*e*P	P	23 13 00.8	+0.3
BB19B	Bebedouro	41.99	328	*e*P	P	23 13 00.9	-0.4
GO04	Tololo Observa	42.03	295	*e*P	P	23 13 01.6	-0.1
	comp=Z,40nm,0.7s						
SBA	Scott Base	42.12	184	*e*P	P	23 13 04.6	+2.9
	comp=Z,12nm,0.9s						
SBA	Scott Base	42.12	184	*e*P	P	23 13 04.6	+2.9
SBA				pmax	pmax		

	comp=Z,12nm,0.9s						
VNDA	Vanda	42.60	183	P	P	23 13 07.5	+1.9
	comp=Z,9.3nm,0.8s,baz=185,slow=6.9,SNR=62						
VNDA				LR	LR	23 29 48.5	
	comp=Z,125nm,19.2s,baz=168,slow=34						
VNDA	Vanda	42.60	183	eP	P	23 13 07.8	+2.2
	comp=Z,17nm,1.1s						
VNDA	Vanda	42.60	183	eP	P	23 13 07.8	+2.2
VNDA				pmax	pmax		
	comp=Z,17nm,1.1s						
SJMB	Sao Joao De Ma	42.64	339	eP	P	23 13 06.0	-0.5
LCO	Las Campanas	42.97	296	eP	P	23 13 09.3	-0.1
	comp=Z,32nm,0.8s						
LCO	Las Campanas	42.97	296c	eP	P	23 13 10.0	+0.5
LCO	Las Campanas	42.97	296	eP	P	23 13 09.4	-0.1
ITRB	Iturama	43.79	326	eP	P	23 13 15.4	-0.4
PMNB	Patos De Minas	43.90	332	eP	P	23 13 16.6	-0.1
GO03	Copiap	43.98	298	eP	P	23 13 16.7	-0.7
	comp=Z,26nm,0.8s						
AQDB	Aquidauana	44.68	319	eP	P	23 13 22.2	-0.7
GO02	Mina Guanaco	45.80	300	eP	P	23 13 31.9	-0.3
	comp=Z,46nm,0.8s						
BOSA	Boshof	46.67	71	P	P	23 13 39.5	+0.7
	comp=Z,6.6nm,1.0s,baz=206,slow=7.1,SNR=17						
BOSA				LR	LR	23 29 30.5	
	comp=Z,278nm,18.4s,baz=206,slow=31						
BDFB	Brasilia	47.06	331	P	P	23 13 40.8	-1.1
	comp=Z,11nm,0.7s,baz=143,slow=5.5,SNR=20						
BDFB				LR	LR	23 33 54.8	
	comp=Z,241nm,18.1s,baz=136,slow=37						
PB10	IPOC Station P	47.67	300	eP	P	23 13 46.6	+0.2
	comp=Z,39nm,1.0s						
LVC	Limon Verde	47.76	302	eP	P	23 13 47.5	-0.1
	comp=Z,26nm,0.8s						
LVC	Limon Verde	47.76	302	eP	P	23 13 47.5	-0.1
LVC				pmax	pmax		
	comp=Z,26nm,0.8s						
LVC	Limon Verde	47.76	302	eP	P	23 13 48.2	+0.6
PB01	IPOC Station P	49.39	303	eP	P	23 13 59.4	-0.4
	comp=Z,36nm,0.7s						
LBTB	Lobatse	49.88	69	eP	P	23 14 02.8	-0.7
	comp=Z,17nm,1.0s						
LBTB	Lobatse	49.88	69	eP	P	23 14 02.8	-0.7
LBTB				pmax	pmax		
	comp=Z,17nm,1.0s						
CASY	Casey	50.01	159	eP	P	23 14 03.9	+0.1
	comp=Z,44nm,1.8s						
GO01	Chusmiza	50.49	304	eP	P	23 14 08.4	-0.2
	comp=Z,24nm,0.7s						
PEXB	Peixe	50.54	332	eP	P	23 14 08.1	-0.3
H10S2	ASCENSION HYDR	51.72	15	T	T	00 10 16.0	
	baz=187,slow=74,SNR=7.7						
H10S3	ASCENSION HYDR	51.73	15	T	T	00 10 12.8	
	baz=187,slow=74,SNR=8.1						
H10S1	ASCENSION HYDR	51.74	15	T	T	00 10 14.3	
	baz=187,slow=74,SNR=8.3						
H10N1	ASCENSION HYDR	52.84	15	T	T	00 11 46.1	
	baz=180,slow=71,SNR=3.3						
H10N3	ASCENSION HYDR	52.84	15	T	T	00 11 46.2	
	baz=180,slow=71,SNR=4.5						
H10N2	ASCENSION HYDR	52.86	15	T	T	00 11 46.4	
	baz=180,slow=71,SNR=5.8						
LPAZ	La Paz	53.09	307	P	P	23 14 28.1	-0.1
	comp=Z,17nm,0.6s,baz=137,slow=5.0,SNR=125						
LPAZ				S	S	23 21 54.4	-2.7
	comp=Z,0.2nm,0.3s,baz=196,slow=7.4,SNR=2.0						
LPAZ				LR	LR	23 39 12.5	
	comp=Z,144nm,19.2s,baz=161,slow=38						
LPAZ	La Paz	53.09	307	eP	P	23 14 27.4	-0.8
	comp=Z,22nm,0.6s						
LPAZ	La Paz	53.09	307	eP	P	23 14 28.4	+0.2
LPAZ				pmax	pmax		
	comp=Z,17nm,0.6s						
LPAZ	La Paz	53.09	307	eP	P	23 14 28.3	+0.2
SMTB	Santa Maria do	53.51	334	eP	P	23 14 30.6	+0.1
RCBR	Riachuelo	54.57	348	eP	P	23 14 41.9	+3.6
LSZ	Lusaka	59.50	66	eP	P	23 15 13.7	+0.3
	comp=Z,19nm,1.0s						
LSZ	Lusaka	59.50	66	eP	P	23 15 13.7	+0.3
LSZ				pmax	pmax		
	comp=Z,19nm,1.0s						
NNA	Nana	60.60	300	eP	P	23 15 20.1	-0.6
	comp=Z,26nm,0.9s						
NNA	Nana	60.60	300c	eP	P	23 15 21.3	+0.5
NNA				pmax	pmax		
	comp=Z,42nm,0.7s						
PTGA	Pitinga	64.60	322	eP	P	23 15 45.1	-2.3
	comp=Z,4.4nm,0.8s						
PTGA	Pitinga	64.60	322	eP	P	23 15 49.2	+1.8
LIC	Lamto	68.17	23	eP	P	23 15 58.5	-12
	comp=Z,112nm,1.7s						
KIC	Kosan Boka	68.36	23	eP	P	23 16 00.7	-11
	comp=Z,134nm,1.7s						
TIC	Toumodi	68.59	23	eP	P	23 16 02.2	-11
DBIC	Dimbokro	68.64	23	P	P	23 16 13.4	+0.3
	comp=Z,4.9nm,0.6s,baz=158,slow=9.3,SNR=10						
DBIC				LR	LR	23 41 32.8	
	comp=Z,96nm,18.4s,baz=158,slow=32						
DBIC	Dimbokro	68.64	23	eP	P	23 16 13.4	+0.3
	comp=Z,42nm,1.4s						
DBIC	Dimbokro	68.64	23	eP	P	23 16 13.4	+0.3
DBIC				pmax	pmax		
	comp=Z,42nm,1.4s						
PTLC	Puerto Leguiza	70.71	308	eP	P	23 16 23.4	-2.5
GUVC	San Jose del G	72.03	311	eP	P	23 16 30.2	-3.7
SOTA	Rioblanco	73.22	307	eP	P	23 16 41.7	+0.1
BBAC	Balboa, Cauca	73.37	306	eP	P	23 16 40.5	-1.6
POPC	Popayan, Colom	73.61	307	eP	P	23 16 42.9	-0.7
VILC	Villavicencio,	73.88	310	eP	P	23 16 41.4	-3.6
PRAC	Prado	73.97	309	eP	P	23 16 43.1	-2.4
ORTC	Ortega, Tolima	74.29	309	eP	P	23 16 45.6	-1.7
ROSC	El Rosal	74.79	310	P	P	23 16 49.7	-0.9
	comp=Z,5.5nm,0.4s,baz=241,slow=19,SNR=3.5						
ROSC				LR	LR	23 50 13.5	
	comp=Z,158nm,21.6s,baz=181,slow=36						
YOTC	Yotoco, Valle	74.80	308	eP	P	23 16 48.2	-2.1
ELOV	Elorza	74.99	315	eP	P	23 16 50.2	-1.0
RUSC	La Rusia	75.28	312	eP	P	23 16 49.6	-3.9
SPBC	San Pablo de B	75.44	310	eP	P	23 16 47.4	-6.6
GUY2C	Guyana, Caldas	75.54	309	eP	P	23 16 52.9	-2.1
NORC	Norcasia	75.66	310	eP	P	23 16 52.5	-2.7
KMBO	Kilima Mbogo	76.11	67	LR	LR	23 47 07.2	
	comp=Z,521nm,20.5s,baz=177,slow=33						
TORD	Torodi Ar. Bea	76.34	28	P	P	23 16 58.5	-0.5
	comp=Z,30nm,0.6s,baz=195,slow=5.3,SNR=173						
TORD				LR	LR	23 45 41.3	
	comp=Z,193nm,19.4s,baz=295,slow=32						
TOA1	Torodi Ar. Sit	76.35	28	eP	P	23 16 58.5	-0.5
PTBC	PUERTO BERRIO,	76.40	310	eP	P	23 16 55.1	-4.3
HELC	Santa Helena	76.49	309	eP	P	23 16 56.8	-3.5
SOCV	Socops	76.67	315	eP	P	23 16 59.4	-1.6
ZARC	Zaragoza, Cauc	77.42	310	eP	P	23 17 01.1	-4.1
SMLC	San Martn de	78.33	312	eP	P	23 17 07.0	-3.1
VIRV	Villa del Rosa	79.28	314	eP	P	23 17 12.2	-3.2
TOO	Toolangi	82.51	173	eP	P	23 17 33.5	+1.0
	comp=Z,8.7nm,0.8s						
TOO	Toolangi	82.51	173	eP	P	23 17 33.5	+1.0
TOO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CAN	Canberra	84.92	176	eP	P	23 17 45.5	+0.7
	comp=Z,27nm,1.3s						
CAN	Canberra	84.92	176	eP	P	23 17 45.6	+0.7
CAN				pmax	pmax		
	comp=Z,27nm,1.3s						
STKA	Stephens Creek	87.89	170	P	P	23 17 59.8	+0.3
	comp=Z,8.8nm,0.9s,baz=176,slow=6.1,SNR=11						
PPT	Papeete	90.17	233	LR	LR	23 51 15.6	
	comp=Z,212nm,18.1s,baz=174,slow=31						
ASAR	Alice Springs	95.05	162	P	P	23 18 33.0	+0.1
	comp=Z,6.0nm,0.7s,baz=183,slow=4.2,SNR=45						
ASAR				PKiKP	PKiKP	23 23 13.8	-0.3
	comp=Z,0.5nm,0.8s,baz=167,slow=1.2,SNR=3.6						
ASAR				PKKPbc	PKKPbc	23 35 25.7	+1.2
	comp=Z,0.4nm,0.6s,baz=11,slow=2.5,SNR=6.1						
ASAR	Alice Springs	95.05	162	eP	P	23 18 33.3	+0.4
WRA	Warramunga Arr	98.77	162	P	P	23 18 49.4	-0.3
	comp=Z,1.5nm,0.8s,baz=202,slow=5.6,SNR=3.9						
KHC	Kasperske Hory	113.53	27	AMS	AMS	00 05 20.0	
	comp=Z,100nm,16.3s						
TREC	Trest	114.14	29	AMS	AMS	00 11 20.0	
	comp=Z,100nm,14.5s						
GOPC	GO Pecny, Ondr	114.55	28	AMS	AMS	00 11 10.0	
	comp=Z,200nm,22.4s						
PRU	Pruhonice	114.56	28	AMS	AMS	00 07 20.0	
	comp=Z,100nm,23.3s						
PVCC	Panska Ves	115.07	27	AMS	AMS	00 08 10.0	
	comp=Z,100nm,20.5s						
OKC	Ostrava-Krasne	115.29	30	AMS	AMS	00 07 40.0	
	comp=Z,100nm,21.2s						
DPC	Dobruska-Polom	115.32	29	AMS	AMS	00 10 00.0	
	comp=Z,100nm,20.7s						
UPC	Upice	115.39	28	AMS	AMS	00 10 40.0	
	comp=Z,100nm,19.8s						
CLL	Collm	115.44	26	eP	Pdif	23 20 01.0	-1.8
CLL	Collm	115.44	26	ePdif	Pdif	23 20 01.0	-1.8
CLL				eSKSP		23 34 44.0	
CLL				Lm	MLR	00 08 00.0	
	comp=N,100nm,18.2s						
CLL				Lm	MLR	00 08 00.0	
	comp=E,100nm,21.9s						
CLL				Lm	MLR	00 08 00.0	
	comp=Z,100nm,20.6s						
CHVC	Chvalec	115.47	28	AMS	AMS	00 10 10.0	
	comp=Z,100nm,17.6s						
OSTC	Ostas	115.48	29	AMS	AMS	00 10 10.0	
	comp=Z,100nm,16.2s						
AKASG	Malin Array Be	119.14	37	PKP	PKPdf	23 23 57.6	-0.1
	comp=Z,0.7nm,0.5s,baz=242,slow=1.6,SNR=4.1						
AKBB	Malin Array Si	119.14	37	ePKPdf	PKiKP	23 23 57.6	-0.1
AKBB	Malin Array Si	119.14	37	ePKIKP	PKiKP	23 23 57.6	-0.1
GEYT	Alibeck	119.42	65	PKP	PKPdf	23 23 58.4	-0.3
	comp=Z,1.2nm,0.6s,baz=187,slow=3.8,SNR=3.0						
PDAR	Pinedale Array	122.78	300	PKP	PKPdf	23 24 04.3	-0.9
	comp=Z,0.8nm,0.3s,baz=142,slow=4.6,SNR=11						
BGU	Big Grassy Mou	122.84	296	ePKPdf	PKPdf	23 24 04.9	-0.4
NIL	Nilore	123.15	79	ePKPdf	PKPdf	23 24 05.0	-1.0
NIL	Nilore	123.15	79	ePKIKP	PKPdf	23 24 05.0	-1.0
CM31	Chiang Mai Arr	123.19	112	ePKPdf	PKiKP	23 24 07.0	+0.3
CMAR	Chiang Mai Arr	123.19	112	PKP	PKiKP	23 24 07.0	+0.3
	comp=Z,2.8nm,0.6s,baz=229,slow=3.7,SNR=15						
CMAR	Chiang Mai Arr	123.19	112	ePKIKP	PKiKP	23 24 07.4	+0.7
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NVAR	Mina Array Bea	123.28	290	PKP	PKiKP	23 24 07.2	+0.6
	comp=Z,1.4nm,0.6s,baz=123,slow=3.2,SNR=12						
ULM	Lac du Bonnet	123.39	314	PKP	PKPdf	23 24 05.0	-0.9
	comp=Z,3.5nm,0.6s,baz=149,slow=4.6,SNR=4.8						
ULM	Lac du Bonnet	123.39	314	ePKIKP	PKPdf	23 24 05.5	-0.3
ULM				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FXWY	Fox Creek	124.12	299	ePKPdf	PKPdf	23 24 07.5	-0.3
NB2	NORSAR Subarra	124.18	21	PKPdf	PKPdf	23 24 06.7	-0.3
	comp=Z,4.2nm,1.2s,baz=202,slow=1.9						
NOA	NORSAR Array B	124.18	21	PKP	PKiKP	23 24 07.4	0.0
	comp=Z,2.4nm,0.8s,baz=195,slow=1.6,SNR=8.9						
NOA	NORSAR Array B	124.18	21	ePKIKP	PKPdf	23 24 06.8	-0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	Obninsk	125.21	39	ePKIKP	PKiKP	23 24 09.3	-0.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FIA0	FINESS Array S	127.69	29	ePKPdf	PKiKP	23 24 14.0	-0.2
FIA0	FINESS Array S	127.69	29	ePKIKP	PKiKP	23 24 14.0	-0.2
FINES	FINESS Array B	127.69	29	PKP	PKiKP	23 24 14.0	-0.2
	comp=Z,3.7nm,0.5s,baz=157,slow=1.8,SNR=38						
G08A	Pilot Rock	128.96	295	ePKPdf	PKPdf	23 24 16.9	0.0
KSH	Kashi	129.12	77	ePKP	PKPdf	23 24 17.4	+0.1
KSH				sPKP		23 24 31.8	
KSH				PKS		23 27 53.4	
KSH				SKKS		23 33 12.6	
KSH				LR	LR		
	comp=Z,270nm,13.6s						
KSH				LR	LR		
	comp=Z,450nm,11.2s						
KKAR	Karatay Array	129.26	70⇑	ePKIKP	PKiKP	23 24 18.1	0.0
NEW	Newport	130.39	299	SKPbc	SKPab	23 27 39.3	-1.2
	comp=Z,1.4nm,0.5s,baz=100,slow=6.1,SNR=4.0						
AAK	Ala-Archa	130.80	73	PKP	PKPdf	23 24 20.8	+0.4
	comp=Z,6.3nm,0.6s,baz=201,slow=3.6,SNR=12						
AAK	Ala-Archa	130.80	73	ePKPdf	PKPdf	23 24 19.8	-0.7
AAK	Ala-Archa	130.80	73⇓	iPKIKP	PKiKP	23 24 21.2	-0.2
SUMG	Summit	132.59	355	ePKPdf	PKPdf	23 24 23.3	+0.1
SUMG	Summit	132.59	355	i PKIKP	PKiKP	23 24 24.3	-0.1
SUMG				pmax	pmax		
	comp=Z,18nm,0.8s						
SUMG	Summit	132.59	355	i P	PKiKP	23 24 24.3	-0.1
	comp=Z,18nm,0.8s						
GYA	Guiyang	133.65	115	ePKP	PKiKP	23 24 29.8	+2.2
GYA				PP	PP	23 27 01.4	+6.0
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
ARU	Arti	133.98	50	i PKIKP	PKPdf	23 24 24.1	-1.7
ARA0	ARCESS Array S	134.47	23	ePKPdf	PKiKP	23 24 27.0	-0.7
ARCES	ARCESS Array B	134.47	23	PKhKP	PKPpre	23 24 14.0	
	comp=Z,0.9nm,0.8s,baz=48,slow=1.3,SNR=4.2						
ARCES				PKP	PKiKP	23 24 27.0	-0.7
	comp=Z,3.4nm,0.5s,baz=196,slow=1.6,SNR=25						
ARCES				SKPbc	SKPbc	23 27 52.9	-1.2
	comp=Z,3.4nm,0.9s,baz=186,slow=2.3,SNR=7.6						
SVE	Sverdlovsk	135.07	51	ePKIKP	PKiKP	23 24 29.0	-0.3
CD2	Chengdu	136.06	109	PKP	PKPdf	23 24 28.3	-2.3
BRVK	Borovoye	136.43	60c	iPKIKP	PKPdf	23 24 30.2	-0.3
BVAR	Borovoye Array	136.46	61	PKhKP	PKPpre	23 24 19.2	
	comp=Z,1.8nm,0.8s,baz=232,slow=24,SNR=5.7						
BVAR				PKP	PKPdf	23 24 30.9	+0.4
	comp=Z,5.5nm,0.8s,baz=270,slow=0.9,SNR=16						
BVAR				SKPbc	SKPbc	23 27 59.0	-1.7
	comp=Z,0.8nm,0.6s,baz=48,slow=2.2,SNR=3.9						
DAG	Danmarks Havn	136.64	3⇑	iPKIKP	PKPdf	23 24 30.1	-0.1
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAG	Danmarks Havn	136.64	3⇑	iP	PKPdf	23 24 30.1	-0.1
	comp=Z,3.7nm,0.7s						
MAKZ	Makanchi	137.47	75	ePKPpre	PKPpre	23 24 24.8	
MAKZ	Makanchi	137.47	75	ePKHKP	PKPpre	23 24 24.8	
MKAR	Makanchi Array	137.62	75	PKhKP	PKPpre	23 24 22.8	
	comp=Z,1.1nm,0.7s,baz=226,slow=1.5,SNR=12						
MKAR				PKP	PKPdf	23 24 33.0	+0.1
	comp=Z,1.9nm,0.7s,baz=238,slow=2.4,SNR=12						
MKAR				SKPbc	SKPbc	23 28 04.0	-0.4
	comp=Z,0.9nm,0.7s,baz=252,slow=2.3,SNR=5.7						
MKAR	Makanchi Array	137.62	75	ePKHKP	PKPpre	23 24 25.0	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WMQ	Urumqi	138.14	82	ePKP	PKPdf	23 24 33.4	-0.7
WMQ				LR	LR		
	comp=Z,410nm,24.1s						
WMQ				LR	LR		
	comp=Z,220nm,28.5s						
KURBB	Kurchatov Arra	138.49	68	PKhKP	PKPpre	23 24 24.5	
	comp=Z,1.2nm,0.7s,baz=233,slow=3.7,SNR=14						
KURBB				PKP	PKPdf	23 24 32.4	-1.9
	comp=Z,2.9nm,0.8s,baz=230,slow=2.8,SNR=11						
KURK	Kurchatov	138.59	68	ePKPdf	PKPdf	23 24 34.0	-0.5
KURK	Kurchatov	138.59	68⇓	ePKIKP	PKPdf	23 24 34.1	-0.4
YKA	Yellowknife Ar	139.37	315	PKP	PKPdf	23 24 35.4	-0.1
	comp=Z,2.9nm,0.6s,baz=126,slow=2.6,SNR=13						
YKA	Yellowknife Ar	139.37	315	ePKIKP	PKPdf	23 24 35.7	+0.1
LZH	Lanzhou	140.32	104	ePKP	PKPdf	23 24 36.5	-1.9
LZH				sPKP		23 24 49.3	
LZH				LR	LR		
	comp=Z,200nm,13.1s						
LZH				LR	LR		
	comp=Z,270nm,17.2s						
WHN	Wuhan	140.58	121	PKP	PKiKP	23 24 42.8	+1.4
GTA	Gaotai	140.93	97	ePKP	PKiKP	23 24 43.4	+1.4
GTA				sPKP		23 24 54.5	
XAN	Xi'an	141.08	112	PKP	PKPdf	23 24 39.8	+0.1
DGZ	Jazzator, Alta	142.11	75⇓	ePKIKP	PKPdf	23 24 39.1	-2.1
ZAA0	Zalesovo Array	143.59	68	ePKPpre	PKPpre	23 24 41.0	
ZALV	Zalesovo Beam	143.59	68	PKhKP	PKPpre	23 24 40.9	
	comp=Z,3.4nm,0.5s,baz=230,slow=4.4,SNR=20						
ZALV	Zalesovo Beam	143.59	68	ePKPpre	PKPpre	23 24 40.5	
ZAA1	Zalesovo Array	143.59	68	ePKPpre	PKPpre	23 24 40.9	
NJ2	Nanjing	143.79	125	ePKP	PKPbc	23 24 43.4	+1.2
TIA	Tai'an	146.61	119	PKPbc	PKPab	23 24 52.3	+0.3
BTO	Baotou	146.86	106	ePKPbc	PKPab	23 24 52.5	-0.5
HHC	Hu-ho-hao-te	147.79	107	ePKPbc	PKPdf	23 24 49.3	-1.9
INK	Inuvik	149.09	316	PKPbc	PKPbc	23 24 55.8	-0.7
	comp=Z,13nm,0.7s,baz=65,slow=3.6,SNR=38						
INK	Inuvik	149.09	316	ePKPbc	PKPbc	23 24 55.0	-1.4
INK	Inuvik	149.09	316	ePKIKP	PKPbc	23 24 55.0	-1.4
JNU	Nakatsue	149.18	141	PKPbc	PKPbc	23 24 58.4	+0.5
	comp=Z,8.4nm,0.9s,baz=253,slow=11,SNR=2.9						
BJI	Beijing	149.32	114	ePKPbc	PKPbc	23 24 57.5	-0.4
MOY	Mondy	150.03	82	ePKP2	PKiKP	23 25 00.4	+0.1
MOY				pmax	pmax		
	comp=Z,37nm,1.7s						
SONA0	Songino Array	150.30	93	ePKPdf	PKPdf	23 24 54.7	-0.4
SONA0				ePKPbc	PKiKP	23 25 01.2	+0.2
SONM	Songino Array	150.30	93	PKP	PKPdf	23 24 54.7	-0.4
	comp=Z,1.3nm,0.8s,baz=232,slow=1.7,SNR=5.7						
SONM				PKPbc	PKiKP	23 25 01.2	+0.2
	comp=Z,18nm,0.9s,baz=226,slow=2.1,SNR=60						
SONM	Songino Array	150.30	93	ePKPdf	PKPdf	23 24 55.5	+0.5
SONM	Songino Array	150.30	93	ePKIKP	PKPdf	23 24 55.6	+0.5
ZAK	Zakamensk	150.39	86	ePKIKP	PKPdf	23 24 54.5	-0.5
ZAK				pmax	pmax		
	comp=Z,29nm,1.3s						
ULN	Ulaanbaatar	150.65	93	ePKPbc	PKiKP	23 25 01.8	0.0
ULN	Ulaanbaatar	150.65	93c	iPKIKP	PKiKP	23 25 01.6	-0.2
TLY	Talaya	151.36	84	PKPbc	PKiKP	23 25 03.9	+1.0
	comp=Z,3.9nm,0.7s,baz=243,slow=3.1,SNR=12						
TLY	Talaya	151.36	84	ePKPbc	PKiKP	23 25 03.5	+0.5
TLY	Talaya	151.36	84	ePKIKP	PKiKP	23 25 03.5	+0.5
TLY				pmax	pmax		
	comp=Z,48nm,1.1s						
PAX	Paxson	151.76	302	ePKPbc	PKPbc	23 25 02.5	-0.6
KSRS	Korea Array	152.08	132	PKPbc	PKiKP	23 25 05.4	+0.6
	comp=Z,2.9nm,0.9s,baz=185,slow=1.4,SNR=5.9						
KSRS				PKPab	sPKPbc	23 25 15.6	+0.8
	comp=Z,5.6nm,0.9s,baz=204,slow=3.1,SNR=7.2						
KDAK	Kodiak Island	152.78	289	PKPbc	PKiKP	23 25 05.5	-0.1
	comp=Z,17nm,0.6s,baz=175,slow=3.2,SNR=22						
BRLK	Bradley Lake	152.87	294	ePKPbc	PKPbc	23 25 04.8	-0.8
ILAR	Eielson Array	152.97	306	PKPbc	PKPbc	23 25 05.0	-0.6
	comp=Z,10nm,0.9s,baz=158,slow=2.7,SNR=58						
ILAR				PKPab	PKPab	23 25 16.8	-0.3
	comp=Z,4.2nm,0.7s,baz=161,slow=4.8,SNR=9.2						
WRH	Wood River Hil	153.37	305	ePKPdf	PKPdf	23 24 58.1	-0.8
COLA	College	153.39	306c	iPKIKP	PKPbc	23 25 06.1	-0.4
MAJO	Matsushiro	154.47	150	ePKPdf	PKPdf	23 25 01.0	-0.4
MAJO				ePKPbc	PKiKP	23 25 10.6	+0.7
MAJO				ePKPab	PKPab	23 25 24.5	+0.2
MAJO	Matsushiro	154.47	150⇓	ePKIKP	PKPdf	23 25 01.2	-0.2
MJAR	Matsushiro Arr	154.47	150	PKP	PKPdf	23 25 01.0	-0.5
	comp=Z,0.5nm,0.3s,baz=210,slow=3.4,SNR=4.3						
MJAR				PKPbc	PKiKP	23 25 10.6	+0.7
	comp=Z,0.7nm,0.3s,baz=196,slow=4.6,SNR=6.9						
MJAR				PKPab	PKPab	23 25 24.5	+0.2
	comp=Z,4.2nm,0.8s,baz=203,slow=4.5,SNR=6.6						
MJA0	Matsu Arr-Jizo	154.49	150	ePKIKP	PKPdf	23 25 03.1	+1.6
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KLR	Kul'dur	163.43	121	PKP	PKPdf	23 25 09.8	-1.7
	comp=Z,4.4nm,1.1s,baz=273,slow=3.4,SNR=7.1						
KLR				PKPab	PKPab	23 26 03.1	+0.2
	comp=Z,2.8nm,0.9s,baz=277,slow=4.4,SNR=4.6						
KLR	Kul'dur	163.43	121⇓	ePKIKP	PKPdf	23 25 11.3	-0.2
TIXI	Tiksi	164.73	30	PKPab	PKPab	23 26 07.4	-0.6
	comp=Z,1.6nm,0.4s,baz=301,slow=7.0,SNR=4.0						
TIXI	Tiksi	164.73	30⇑	ePKIKP	PKPdf	23 25 14.6	+2.6
GRNR	Gornyy	166.55	126	ePKP2	PKPab	23 26 06.0	-11
BILL	Bilibino	170.27	331	ePKIKP	PKPdf	23 25 14.8	-1.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PETK	Petropavlovsk-	172.71	200	PKP	PKPdf	23 25 18.5	+0.8
	comp=Z,1.3nm,0.6s,baz=121,slow=5.5,SNR=3.9						
PETK				PKPab	PKPab	23 26 44.0	+0.3
	comp=Z,2.4nm,0.7s,baz=140,slow=4.8,SNR=5.0						
PETK	Petropavlovsk-	172.71	200	ePKIKP	PKPdf	23 25 21.4	+3.7
PEA1	Petropavlovsk-	172.71	200	ePKPdf	PKPdf	23 25 18.5	+0.8
PEA1				ePKPab	PKPab	23 26 44.0	+0.3

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*IDC **16** 23:26:27.3±1.2, 52°.47N×132°.23W, h0km, mb3.7/4, mb1 3.6/9, mb1mx3.4/44, mbtmp3.4/9, ML3.2/4, MS3.3/10, Ms1 3.3/10, ms1mx3.1/40, Error ellipse: s-maj=21.8km s-min=8.2km az=56.0*

*PGC **16** 23:26:28.2±3.9, 52°.48N×132°.50W, h25km, ML3.7/10, 97km southwest of Sandspit, Bc Haida Gwaii Region*

ISC 16 23:26:27.7±1.8**, 52°.47N**±0°.06×**132°.33W**±0°.07**, h5**km±11km**, n42,** σ1ˢ.05/33**, mb3.7**/4**, MS3.1**/4**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	Barry Inlet	0.37	74	P	Pb	23 26 37.5	+0.7
BNB				S	Sb	23 26 44.3	+1.4
HG1B	Mitchell Dam	0.48	15	P	Pb	23 26 38.7	+0.1
HG1B				S	Sb	23 26 45.1	-0.9
MOBC	Moresby Island	0.71	18	P	Pb	23 26 42.4	-0.2
MOBC				S	Sb	23 26 52.6	-0.1
DIB	Dawson Inlet,	0.73	353	P	Pg	23 26 41.8	0.0
DIB				S	Sg	23 26 51.4	+0.1
H02S1	DAWSON INLET T	0.73	353	Pg	Pg	23 26 41.9	0.0
H02S1				Lg	Lg	23 26 52.1	
NDB	Naden	1.53	346	P	Pn	23 26 53.4	-2.3
MASB	Masset	1.56	7	P	Pn	23 26 55.2	-0.8
RUBB	Prince Rupert	2.23	33	Pn	Pn	23 27 05.0	-0.4
BBB	Bella Bella	2.60	95	Pn	Pn	23 27 09.4	-1.0
	1.6nm,0.3s,baz=278,slow=8.1,SNR=52						
BBB				Pg	Pg	23 27 16.1	-1.5
	7.5nm,0.3s,baz=277,slow=18,SNR=22						
BBB				Sn	Sn	23 27 40.1	-2.3
	24nm,0.3s,baz=246,slow=16,SNR=7.3						
BBB				Lg	Lg	23 27 54.4	
	15nm,0.3s,baz=125,slow=4.5,SNR=7.2						
BBB				LR	LR	23 28 13.7	
	comp=Z,720nm,18.3s,baz=292,slow=42						
BBB	Bella Bella	2.60	95	Pn	Pn	23 27 09.5	-1.0
HOLB	Holberg	3.20	123	Pn	Pn	23 27 17.8	-0.9
PHC	Port Hardy	3.53	118	Pn	Pn	23 27 21.8	-1.4
BPBC	Brooks Peninsu	3.68	127	Pn	Pn	23 27 24.8	-0.6
MAYB	Maynard	3.84	121	Pn	Pn	23 27 26.7	-0.9
UBRB	Upper Baezaeko	5.04	82	Pn	Pn	23 27 45.2	+1.2
BTB	Buttle Lake	5.25	122	Pn	Pn	23 27 47.5	+0.5
TXB	Texada	5.70	116	Pn	Pn	23 27 53.4	+0.4
DLBC	Dease Lake	6.12	11	Pg	Pb	23 28 15.0	+0.3
	0.4nm,0.3s,baz=199,slow=10,SNR=3.7						
DLBC				Lg	Lg	23 29 38.8	
	0.3nm,0.3s,baz=303,slow=17,SNR=3.1						
NEW	Newport	10.59	107	Lg	Lg	23 31 56.5	
	0.1nm,0.3s,baz=322,slow=18,SNR=2.4						
NEW				LR	LR	23 33 06.3	
	comp=Z,124nm,19.4s,baz=287,slow=38						
YBH	Yreka Blue Hor	12.57	145	LR	LR	23 33 29.0	
	comp=Z,100nm,18.8s,baz=336,slow=34						
KDAK	Kodiak Island	12.73	303	LR	LR	23 33 16.0	
	comp=Z,186nm,21.0s,baz=128,slow=32						
YKA	Yellowknife Ar	13.79	36	LR	LR	23 34 36.3	
	comp=Z,6.0nm,21.7s,baz=230,slow=35						
ILAR	Eielson Array	14.42	334	Pn	Pn	23 29 54.0	+1.7
	0.0nm,0.3s,baz=149,slow=11,SNR=3.2						
ILAR				LR	LR	23 35 14.1	
	comp=Z,87nm,18.5s,baz=151,slow=36						
ELK	Elko	16.55	128	Pn	Pn	23 30 21.2	+0.5
	baz=301,slow=12,SNR=2.3						
ELK				LR	LR	23 36 53.1	
	comp=Z,100nm,18.5s,baz=322,slow=38						
NVAR	Mina Array Bea	17.10	140	Pn	P	23 30 29.4	0.0
	0.1nm,0.3s,baz=320,slow=11,SNR=2.8						
PDAR	Pinedale Array	18.09	113	P	P	23 30 40.7	+0.3
	0.0nm,0.3s,baz=307,slow=6.7,SNR=4.8						
ANMO	Albuquerque	25.41	123	LR	LR	23 41 45.8	
	comp=Z,41nm,20.4s,baz=338,slow=36						
TXAR	Lajitas Array	31.32	126	P	P	23 32 49.1	+0.1
	1.1nm,1.0s,baz=338,slow=5.6,SNR=4.6						
TXAR				LR	LR	23 45 40.1	
	comp=Z,43nm,19.8s,baz=0.0,slow=37						
PETK	Petropavlovsk-	40.76	300	LR	LR	23 49 23.9	
	comp=Z,62nm,21.6s,baz=68,slow=34						
MA2	Magadan	41.28	311	LR	LR	23 49 28.9	
	comp=Z,29nm,20.6s,baz=324,slow=33						
H11N2	WAKE ISLAND Hy	56.85	259	T	T	00 38 15.1	
	baz=39,slow=76,SNR=110						
H11N3	WAKE ISLAND Hy	56.85	259	T	T	00 38 14.4	
	baz=39,slow=76,SNR=109						
H11N1	WAKE ISLAND Hy	56.87	259	T	T	00 38 12.4	
	baz=39,slow=76,SNR=102						
H11S1	WAKE ISLAND Hy	57.91	258	T	T	00 39 15.9	
	baz=40,slow=74,SNR=6.5						
H11S2	WAKE ISLAND Hy	57.92	258	T	T	00 39 52.4	
	SNR=6.8						
H11S3	WAKE ISLAND Hy	57.92	258	T	T	00 39 15.6	
	baz=46,slow=74,SNR=6.8						
NB2	NORSAR Subarra	63.15	19	P	P	23 36 57.0	+0.9
	comp=Z,7.5nm,1.4s,baz=338,slow=6.5						
NOA	NORSAR Array B	63.15	19	P	P	23 36 57.5	+1.4
	comp=Z,1.5nm,1.0s,baz=338,slow=6.7,SNR=3.5						
HHC	Hu-ho-hao-te	71.86	314	P	P	23 37 57.8	+6.2
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,70nm,6.3s						
AKASG	Malin Array Be	76.02	12	P	P	23 38 14.8	-0.8

	comp=Z,0.2nm,0.3s,baz=337,slow=4.0,SNR=3.9						
MKAR	**Makanchi Array**	76.77	336	P	**P**	**23 38 19.5**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=20,slow=4.7,SNR=2.9						
WMQ	**Urumqi**	78.06	332	*e*P	P	23 38 34.3	+7.0
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,27nm,3.9s						
WMQ				LR	LR		
	comp=N,280nm,15.1s						
WMQ				LR	LR		
	comp=E,180nm,21.7s						
WMQ				LR	LR		
	comp=Z,230nm,21.7s						

SNET 16 23:31:05.6±0.9**, 13°.09N×90°.00W, h24**^{km}±4^{km}**, ML3.5, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	0.82	27	*e*P	Pb	23 31 21.6	+0.2
CEVE				*e*S	Sn	23 31 34.4	+0.9
CEVE				IAML		23 31 41.6	
	comp=Z,2μm,0.3s						
SBLS	**San Blas**	0.83	26	*e*P	Pb	23 31 21.6	0.0
SBLS				*e*S	Sn	23 31 33.9	+0.2
SNJE	**San Jose**	0.87	27	*e*P	Pb	23 31 22.1	0.0
RTR	**El Retiro**	0.88	23	*e*P	Pb	23 31 22.4	+0.1
CEDA	**San Andres**	0.92	40	*e*P	Pb	23 31 22.9	-0.2
CEDA				IAML		23 31 46.1	
	comp=Z,2μm,0.5s						
LOMA	**Loma Larga**	0.98	56	⇓*e*P	Pn	23 31 23.6	-0.4
LOMA				IAML		23 31 42.1	
	comp=Z,1μm,0.2s						
LFU	**La Fuente**	1.09	53	*e*P	Pn	23 31 25.3	-0.1
PAVA	**Las Pavas**	1.21	59	*e*P	Pn	23 31 27.2	+0.1
MTO3	**Montecristo**	1.44	26	*e*P	Pn	23 31 30.9	+0.4
MTO3				*e*S	Sb	23 31 50.8	+0.8
TECA	**Tecapa**	1.52	74	*e*P	Pn	23 31 31.1	-0.4
PACA	**Pacayal**	1.68	77	*e*P	Pn	23 31 34.1	+0.5
LCND	**La Caada**	2.07	84	*e*P	Pn	23 31 39.8	+0.9
LCND				IAML		23 32 09.1	
	comp=Z,474nm,0.3s						
CNCH	**Conchagua**	2.12	85	*e*P	Pn	23 31 39.9	+0.2

KLM ***16*** *23:41:10.0, 5°.91N×97°.94E, h100^{km}, mb5.5*

BJI ***16*** *23:41:11.8±0.0, 5°.23N×97°.91E, h30^{km}, mb5.2/76, mB5.1/57, Ms5.2/79, Ms7 5.1/72*

GCMT ***16*** *23:41:12.4±0.3, 5°.38N±0°.02×98°.10E±0°.02, h26^{km}, MW5.0/84, Moment Tensor Solution. s45,c51; s84,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.65±.18; $M_{\theta\theta}$-3.19±.12; $M_{\phi\phi}$0.53±.12; $M_{r\theta}$2.23±.20; $M_{\theta\phi}$1.06±.09; $M_{\phi r}$1.52±.28; Best double couple: $M_0$4.13500×10^{16} NP1:ϕ_s76.00000°,δ67.00000°,λ61.00000°. NP2: ϕ_s311.00000°,δ37.00000°,λ139.00000°. Principal axes: T 4.2620, Plg58.0000°, Azm306.0000°; N -0.2560, Plg27.0000°, Azm89.0000°; P -4.0090, Plg17.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***16*** *23:41:12.7±2.1, 5°.33N×97°.90E, h26^{km}±14^{km}, mb4.8/30, mb1 4.9/34, mb1mx4.8/41, mbtmp4.9/34, ML4.0/3, MS4.3/29, Ms1 4.3/29, ms1mx4.3/34 Error ellipse: s-maj=12.4km s-min=9.3km az=70.0*

MOS ***16*** *23:41:13.9±0.9, 5°.43N×97°.97E, h38^{km}, mb5.7/66, MS4.4/14, Error ellipse: s-maj=7.7km s-min=4.2km az=115.6*

ISCJB ***16*** *23:41:13.5±0.7, 5°.42N±0°.02×97°.96E±0°.02, h33^{km}±5^{km}, mb5.3/158, MS4.6/62, Error ellipse: s-maj=4.1km s-min=3.2km az=162.1*

DJA ***16*** *23:41:14.9±0.2, 6°N±2°×9°8E±°, h10^{km}, M5.2/25, mB5.5/19, mb5.2/25, MLv5.7/11, Mw(mB)5.0/19*

NEIC ***16*** *23:41:14.4±1.2, 5°.38N×97°.97E, h29^{km}±3^{km}, mb5.3/129, Error ellipse: s-maj=9.3km s-min=7.5km az=212.0*

NEIC Felt [II] at Kathu and Phuket, Thailand. Also felt at Krabi. Felt at Gelugor, Malaysia.

ISC 16 23:41:14.4±0.4**, 5°.42N**±0°.03×**97°.93E**±0°.03**, h29**^{km}±2^{km}**, h29**^{km}**:pP-P, n580,** σ1^s**84**/655**, mb5.4**/166**, MS4.5**/64**, 71C-51D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	1.00	259	*e*Pn	**Pn**	**23 41 32.4**	**-0.2**
LHMI	**Lhok Sumawe**	1.00	259	P	**Pb**	**23 41 34.6**	**+1.5**
LHMI				S	**Sb**	**23 41 51.0**	**+5.1**
KCSI	**Kotacane, Aceh**	1.90	185	P	**Pn**	**23 41 45.7**	**+0.8**
KCSI				S	**Sb**	**23 42 16.6**	**+4.9**
MLSI	**Meulaboh, Aceh**	1.91	233	P	**Pb**	**23 41 48.4**	**-0.2**
MLSI				S	**Sb**	**23 42 19.0**	**+7.0**
PKDT	**Phuket**	2.48	9	P	**Pn**	**23 41 51.0**	**-2.0**
KULM	**Kulim**	2.71	93	P	Pn	23 41 51.0	-5.1
PSI	**Prapat**	2.79	159	Pn	**Pn**	**23 41 55.1**	**-2.2**
	22nm,0.3s,baz=342,slow=12,SNR=99						
PSI				Pg	**Pb**	**23 42 05.2**	**+1.6**
	448nm,0.3s,baz=340,slow=17,SNR=95						
PSI				Lg	Lg	23 42 42.2	
	985nm,0.3s,baz=211,slow=16,SNR=13						
PSI				LR	LR	23 43 27.3	
	comp=Z,12μm,19.0s,baz=326,slow=48						
PSI	**Prapat**	2.79	159	*e*Pn	**Pn**	**23 41 57.4**	**+0.1**
PSI				*e*Pb	**Pb**	**23 42 05.2**	**+1.6**
PSI	**Prapat**	2.79	159	*e*P	**Pn**	**23 41 57.4**	**+0.1**
TRTT	**Trang**	2.97	36	P	**Pn**	**23 41 57.4**	**-2.2**
SKLT	**Songkhla**	3.19	57	P	**Pn**	**23 42 01.2**	**-1.5**
IPM	**Ipoh**	3.22	107	P	**Pn**	**23 42 01.0**	**-2.2**
SNSI	**Sinabang, Aceh**	3.40	208	P	**Pn**	**23 42 08.2**	**+2.6**
GSI	**Gunungsitoli**	4.11	185	*e*Pn	**Pn**	**23 42 14.6**	**-0.8**
GSI	**Gunungsitoli**	4.11	185	P	**Pn**	**23 42 16.4**	**+1.0**
CMBY	**CAMPBELL BAY**	4.28	292	*e*P	**Pn**	**23 42 18.7**	**+1.0**
CMBY				IAmb	IAmb	23 42 19.8	
	comp=Z,2μm,0.6s						
JRMM	**Jerantut**	4.78	108	P	**Pn**	**23 42 22.0**	**-2.6**
MNSI	**Mandailing Nat**	4.88	160	P	**Pn**	**23 42 26.7**	**+0.7**
MNSI				S	Sb	23 43 50.8	+13
BKNI	**Bangkinang**	5.94	148	*e*Pn	**Pn**	**23 42 40.1**	**-0.5**
BKNI	**Bangkinang**	5.94	148	P	**Pn**	**23 42 40.6**	**0.0**
	comp=Z,2μm,0.8s,comp=Z,14μmcomp=Z,13nm						
PDSI	**Padang**	6.78	158	P	**Pn**	**23 42 53.5**	**+1.3**
	comp=Z,383nm,1.0s,comp=Z,4μmcomp=Z,1.3nm						
SISI	**Saibi**	6.80	170	P	Pn	23 42 57.6	+5.2
	comp=Z,94nm,1.0s,comp=Z,1μmcomp=Z,0.8nm						
MYKOM	**Kota Tinggi**	6.92	121	P	**Pn**	**23 42 52.0**	**-2.1**
RGRI	**Rengat**	7.23	142	P	**Pn**	**23 43 01.9**	**+3.7**
TPRI	**Tanjung Pinang**	7.96	124	P	**Pn**	**23 43 09.1**	**+0.8**
PBA	**Port Blair**	8.04	321	*e*Pn	Pn	23 43 11.3	+1.9
KRJI	**Kerinci**	8.26	155	P	**Pn**	**23 43 16.5**	**+4.0**
	comp=Z,222nm,1.0s,comp=Z,6μm						
PPSI	**Pulau Pagai**	8.39	166	P	Pn	23 43 20.6	+6.3
CHBT	**CHBT**	8.48	31	P	**Pn**	**23 43 15.8**	**+0.4**
	comp=Z,434nm,0.5s,comp=Z,6μmcomp=Z,2.3nm						
SRDT	**SRDT**	8.95	7	P	Pn	23 43 31.7	+10
DGPR	**DIGLIPUR**	9.15	328	*e*P	**Pn**	**23 43 26.2**	**+1.6**
DGPR				IAmb	IAmb	23 43 30.1	
	comp=Z,660nm,1.7s						
PMBI	**Palembang**	10.75	140	P	**Pn**	**23 43 49.2**	**+2.6**
UMPA	**Umpang Tak**	10.75	5	P	**Pn**	**23 43 47.2**	**+0.6**
	comp=Z,135μm,0.9s						
LHSI	**Lahat**	10.75	149	P	**Pn**	**23 43 49.4**	**+2.8**
	comp=Z,119nm,1.2s,comp=Z,2μm						
PPBI	**Pangkal Pinang**	11.13	132	P	Pn	23 44 00.1	+8.2
CHAI	**Chaiyaphum**	11.15	21	P	**Pn**	**23 43 54.7**	**+2.7**
	comp=Z,52μm,0.8s,comp=Z,877μm						
PBKT	**Sadao Pong**	11.47	15	P	**Pn**	**23 43 57.5**	**+1.1**
	comp=Z,53nm,0.6s,comp=Z,657nm						
MDSI	**Maura Dua**	11.65	148	P	**Pn**	**23 43 59.5**	**+0.5**
	comp=Z,41nm,1.5s						
LWLI	**Liwa**	12.04	149	P	**Pn**	**23 44 05.1**	**+0.7**
KLSI		12.13	146	P	Pn	23 43 57.4	-8.0
DLV	**T Lat**	12.28	57	*e*Pn	**Pn**	**23 44 07.9**	**+0.2**
UTTA	**Uttaradit**	12.51	12	P	**Pn**	**23 44 13.3**	**+2.6**
	comp=Z,64μm,0.8s,comp=Z,562μm						
KASI	**Kota Agung**	12.70	149	P	**Pn**	**23 44 13.9**	**+0.7**
	comp=Z,61nm,1.0s						
CM31	**Chiang Mai Arr**	12.99	4	*e*Pn	**Pn**	**23 44 17.7**	**+0.4**
CMAR	**Chiang Mai Arr**	12.99	4	Pn	**Pn**	**23 44 17.5**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=198,slow=14,SNR=28						
CMAR				Lg	Lg	23 47 58.4	
	comp=Z,1.8nm,0.3s,baz=177,slow=33,SNR=9.9						
CMAR				LR	LR	23 49 09.2	
	comp=Z,3μm,21.0s,baz=204,slow=36						
LAMP	**Lampang**	13.12	7	P	**Pn**	**23 44 22.4**	**+3.3**
	comp=Z,54μm,1.0s,comp=Z,585μm						
PHRA	**Phrae**	13.19	10	P	**Pn**	**23 44 22.2**	**+2.3**
	comp=Z,7.5nm,1.0s,comp=Z,712nm						
CMMT	**Chiang Mai**	13.34	4	P	**Pn**	**23 44 24.1**	**+2.0**
	comp=Z,25nm,1.2s,comp=Z,409nm						
CHTO	**Chiang Mai**	13.35	4	*e*Pn	**Pn**	**23 44 22.6**	**+0.5**
CHTO	**Chiang Mai**	13.35	4	*e*P	**Pn**	**23 44 22.6**	**+0.5**
PANO	**Nakornpanom**	13.36	29	P	**Pn**	**23 44 24.6**	**+2.3**
	comp=Z,1.5nm,1.2s						
NONG	**Nongkai**	13.56	22	P	**Pn**	**23 44 26.6**	**+1.7**
	comp=Z,1.3nm,1.0s,comp=Z,1μm						
PAYA	**Payao**	13.98	8	P	**Pn**	**23 44 33.2**	**+2.4**
	comp=Z,293μm,1.0s						
CGJI	**Cibinong**	14.25	147	P	**Pn**	**23 44 37.5**	**+3.1**
	comp=Z,38nm,1.6s						
STKI	**Sintang**	14.54	111	P	**P**	**23 44 44.2**	**-0.4**
LEM	**Lembang**	15.54	141	LR	LR	23 51 10.9	
	comp=Z,2μm,20.1s,baz=317,slow=39						
SLVN	**Son La**	16.84	20	*e*Pn	**Pn**	**23 45 08.6**	**+0.3**
	comp=Z,172nm,1.4s						
PALK	**Pallekele**	17.22	277	P	**Pn**	**23 45 11.7**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=114,slow=12,SNR=2.0						
PALK				LR	LR	23 52 28.6	
	comp=Z,1μm,18.0s,baz=113,slow=39						
PALK	**Pallekele**	17.22	277	*e*P	**P**	**23 45 14.6**	**+0.1**
	comp=Z,108nm,0.9s						
PALK	**Pallekele**	17.22	277	*i* Pn	**P**	**23 45 16.1**	**+1.6**
	SNR=15						
PALK	**Pallekele**	17.22	277	*e*P	**P**	**23 45 14.6**	**+0.1**
PALK				pmax	pmax		
	comp=Z,107nm,0.9s						
SMRI	**Semarang**	17.59	135	*e*Pn	**Pn**	**23 45 16.1**	**-1.6**
	comp=Z,203nm,1.2s						
SMRI	**Semarang**	17.59	135	P	**P**	**23 45 23.7**	**+5.2**
QIZ	**Qiongzhong**	17.82	40	*e*Pn	**Pn**	**23 45 19.4**	**-1.1**
	comp=Z,76nm,1.4s						
QIZ	**Qiongzhong**	17.82	40	P	**P**	**23 45 22.1**	**+1.0**
QIZ				S	**Sn**	**23 48 38.1**	**-0.5**
QIZ				sS	**sS**	**23 48 54.3**	**-2.5**
QIZ				pmax	pmax		
	comp=Z,14nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,690nm,6.7s						
QIZ				LR	LR		
	comp=Z,4μm,11.8s						
BRDH	**Bariadhala**	18.20	341	P	**Pn**	**23 45 24.0**	**-1.0**
	comp=Z,12nm,0.3s,baz=221,slow=14,SNR=3.0						
WOJI	**Wonogiri, Jawa**	18.48	135	P	**Pn**	**23 45 30.2**	**+1.6**
	comp=Z,102nm,1.2s,comp=Z,3μm						
NGJI	**Ngawi**	18.54	133	P	**Pn**	**23 45 32.1**	**+2.8**
	comp=Z,225nm,1.1s						
BWNR	**Bhubaneshwar**	18.91	323	*e*P	**P**	**23 45 31.2**	**-1.8**
BWNR				IAmb	IAmb	23 45 32.6	
	comp=Z,234nm,1.6s						
PWJI	**Pagerwojo**	19.23	134	P	**Pn**	**23 45 40.0**	**+2.3**
	comp=Z,129nm,2.1s,comp=Z,3μm						
KMI	**Kunming**	20.12	13	P	Pn	23 45 49.0	+0.6
KMI				pP	pP	23 45 55.8	+1.6
KMI				sP	sP	23 45 59.3	+1.5
KMI				PP	**PnPn**	**23 46 09.0**	**+5.6**
KMI				S	**S**	**23 49 28.3**	**-3.0**
KMI				sS	sS	23 49 42.5	-1.1
KMI				SS	**SnSn**	**23 50 03.1**	**+14**
KMI				pmax	pmax		
	comp=Z,110nm,1.2s						
KMI				pmax	pmax		
	comp=Z,690nm,7.2s						
KMI				LR	LR		
	comp=Z,5μm,11.2s						
KMI				LR	LR		
	comp=Z,3μm,11.7s						
KMI				LR	LR		
	comp=Z,5μm,12.9s						
KMMI	**Kalianget**	20.24	128	P	Pn	23 45 54.7	+5.0
KOHI	**KOHIMA**	20.51	350	*e*P	**P**	**23 45 49.1**	**-1.5**
SHL	**Shillong**	20.85	344	*e*P	**P**	**23 45 54.2**	**-0.1**
	comp=Z,593nm,1.1s						
SHL	**Shillong**	20.85	344	*e*P	**P**	**23 45 54.2**	**-0.1**
SHL				pmax	pmax		
	comp=Z,593nm,1.1s						
SHL	**Shillong**	20.85	344	*e*P	**P**	**23 45 53.0**	**-1.3**
	comp=Z,72nm,1.0s						
SHL				*e*P	Pn	23 45 53.5	-3.4
MOKO	**MOKOCHONG**	21.04	351	*e*P	**P**	**23 45 56.6**	**+0.3**
MOKO				IAmb	IAmb	23 45 58.1	
	comp=Z,776nm,1.1s						
TRD	**Trivandrum**	21.04	280	*e*P	**P**	**23 45 56.6**	**+0.3**
JAGI	**Jajag, Banyuwa**	21.27	130	*e*P	**P**	**23 45 58.7**	**0.0**
	comp=Z,128nm,1.1s						
JORH	**JORHAT**	21.49	351	*e*P	**P**	**23 45 59.9**	**-1.0**
BOK	**Bokaro**	21.64	329	*e*P	**P**	**23 46 04.1**	**+1.5**
TEZP	**TEZPUR**	21.64	347	*e*P	**P**	**23 46 00.6**	**-2.0**
SRBI	**Singaraja**	21.84	128	P	**P**	**23 46 09.9**	**+5.0**
	comp=Z,108nm,1.1s,comp=Z,1μm						
ZIRO	**ZIRO**	22.32	350	*e*P	**P**	**23 46 09.0**	**-1.1**
HYB	**Hyderabad**	22.39	304	*i* P	**P**	**23 46 12.5**	**+1.7**
GYA	**Guiyang**	22.52	21	⇑*i*P	**P**	**23 46 12.6**	**+0.4**
GYA				pP	pP	23 46 20.0	+0.1
GYA				PP	**PnPn**	**23 46 41.8**	**+5.7**
GYA				S	**S**	**23 50 17.3**	**-0.4**
GYA				sS	pS	23 50 26.4	-0.9
GYA				SS	Sn	23 50 57.0	+25
GYA				pmax	pmax		
	comp=Z,110nm,0.9s						
GYA				pmax	pmax		
	comp=Z,330nm,7.7s						
GYA				LR	LR		
	comp=Z,7μm,12.3s						
GYA				LR	LR		
	comp=Z,3μm,13.3s						
GYA				LR	LR		
	comp=Z,10μm,12.3s						
TAWA	**Tawang**	22.79	346	*e*P	**P**	**23 46 15.0**	**-0.3**
HKPS	**Hong Kong Po S**	22.94	42	*e*P	**P**	**23 46 17.4**	**+0.8**
	comp=Z,124nm,1.0s						
GZH	**Guangzhou**	23.01	39	P	**P**	**23 46 21.6**	**+4.4**
GZH				LR	LR		
	comp=Z,2μm,13.0s						
GZH				LR	LR		
	comp=Z,2μm,13.6s						
TTSI	**Tana Toraja**	23.43	111	P	**P**	**23 46 28.0**	**+6.5**
GTK	**Tadong**	23.52	339	*e*P	**P**	**23 46 23.2**	**+0.8**
NGP	**Nagpur**	24.08	312	*e*P	**P**	**23 46 26.7**	**-0.9**
KAPI	**Kappang**	24.13	115	P	**P**	**23 46 26.8**	**-1.4**
	comp=Z,6.2nm,0.4s,baz=235,slow=3.2,SNR=3.2						
KAPI				LR	LR	23 56 33.3	
	comp=Z,810nm,18.1s,baz=122,slow=38						
KAPI	**Kappang**	24.13	115	*e*P	**P**	**23 46 26.8**	**-1.4**
	comp=Z,55nm,1.3s						
KAPI	**Kappang**	24.13	115	*e*P	**P**	**23 46 26.8**	**-1.4**
KAPI				pmax	pmax		
	comp=Z,55nm,1.3s						
BNSI	**Bone**	24.20	113	P	P	23 46 44.4	+16
TGY	**Tagaytay City**	24.23	67	LR	LR	23 56 04.2	
	comp=Z,456nm,18.9s,baz=256,slow=37						
BKSI	**Bulukumba**	24.60	115	P	**P**	**23 46 34.6**	**+2.2**
	comp=Z,32nm,0.8s,comp=Z,598nm						
JIRN	**Jiri**	24.77	334	*e*P	**P**	**23 46 35.8**	**+1.4**
	comp=Z,519nm,0.9s						
LSA	**Lhasa**	24.98	346	*i* P	**P**	**23 46 38.0**	**+1.7**
	SNR=17						
PKI	**Pulchoki**	25.04	333	*e*P	**P**	**23 46 37.9**	**+1.2**
	comp=Z,331nm,1.1s						
PKIN	**Phulchoki**	25.05	333	*e*P	**P**	**23 46 37.9**	**+1.1**
	comp=Z,157nm,0.9s						
DMN	**Daman**	25.21	332	*e*P	**P**	**23 46 39.6**	**+1.4**
	comp=Z,370nm,1.0s						
KKN	**Kakani**	25.29	333	*e*P	**P**	**23 46 40.1**	**+1.3**
	comp=Z,491nm,0.9s						
LUWI	**Luwuk**	25.63	104	P	**P**	**23 46 47.9**	**+6.1**
GOA	**Goa**	25.70	295	*e*P	**P**	**23 46 42.5**	**+0.1**
GKN	**Gorkha**	25.77	332	*e*P	**P**	**23 46 44.5**	**+1.4**
	comp=Z,629nm,1.1s						
CD2	**Chengdu**	25.94	12	P	**P**	**23 46 45.0**	**+0.5**
CD2				sP	sP	23 46 57.8	+1.5
CD2				PcP	**PcP**	**23 50 12.4**	**-0.5**
CD2				S	**S**	**23 51 21.8**	**+8.6**
CD2				sS	sS	23 51 30.8	+3.9
CD2				pmax	pmax		
	comp=Z,140nm,1.1s						
CD2				pmax	pmax		
	comp=Z,550nm,8.4s						
CD2				LR	LR		
	comp=Z,5μm,10.0s						
CD2				LR	LR		
	comp=Z,4μm,9.3s						
CD2				LR	LR		
	comp=Z,6μm,11.7s						
KOLN	**Koldanda**	26.07	330	*e*P	**P**	**23 46 47.6**	**+1.7**
	comp=Z,605nm,0.9s						
DANN	**Dangsing**	26.47	331	*e*P	**P**	**23 46 51.1**	**+1.5**
	comp=Z,441nm,0.8s						
BHPL	**Bhopal**	26.55	314	*e*P	**P**	**23 46 50.9**	**+0.8**
BHPL				IAmb	IAmb	23 46 53.0	
	comp=Z,54nm,1.3s						
DAV	**Davao City (W)**	27.53	85	LR	LR	00 00 10.3	
	comp=Z,476nm,18.2s,baz=256,slow=41						
QZH	**Quanzhou**	27.74	43	*e*P	**P**	**23 47 01.8**	**+1.1**
QZH				S	**S**	**23 51 43.8**	**+2.1**
QZH				LR	LR		
	comp=Z,2μm,12.6s						
QZH				LR	LR		
	comp=Z,1μm,10.6s						
QZH				LR	LR		
	comp=Z,2μm,11.2s						
TWG	**Pinlang**	28.25	50	*e*P	**P**	**23 47 05.8**	**+0.4**
	comp=Z,252nm,1.2s						
YULB	**Yu-li**	28.75	49	*e*P	**P**	**23 47 09.1**	**-0.7**
	comp=Z,17nm,0.9s						
WHN	**Wuhan**	29.38	30	⇓*i*P	**P**	**23 47 16.6**	**+1.3**
WHN				pmax	pmax		
	comp=Z,59nm,0.7s						
WHN				LR	LR		
	comp=Z,4μm,9.4s						
WHN				LR	LR		
	comp=Z,5μm,8.7s						
WHN				LR	LR		
	comp=Z,9μm,11.5s						
XAN	**Xi'an**	30.25	18	P	**P**	**23 47 22.3**	**-0.6**
XAN				S	**S**	**23 52 20.9**	**-0.1**
XAN				pmax	pmax		
	comp=Z,48nm,0.9s						
XAN				pmax	pmax		
	comp=Z,190nm,3.9s						
XAN				LR	LR		
	comp=Z,1μm,6.0s						
XAN				LR	LR		
	comp=Z,2μm,6.0s						
XAN				LR	LR		
	comp=Z,680nm,6.8s						
NDI	**New Delhi**	30.34	322	*e*P	**P**	**23 47 24.0**	**+0.2**
LZH	**Lanzhou**	31.00	9	*e*P	**P**	**23 47 30.6**	**+0.9**
LZH				pP	sP	23 47 41.0	-0.5
LZH				sP	pP	23 47 45.3	+7.2
LZH				S	**S**	**23 52 39.4**	**+6.5**
LZH				pmax	pmax		
	comp=Z,73nm,1.2s						
LZH				pmax	pmax		
	comp=Z,290nm,5.4s						
LZH				LR	LR		
	comp=Z,2μm,13.0s						
LZH				LR	LR		
	comp=Z,2μm,11.4s						
LZH				LR	LR		
	comp=Z,2μm,13.6s						
DDI	**Dehra Dun**	31.05	325	*e*P	**P**	**23 47 31.4**	**+1.4**
DDI				IAmb	IAmb	23 47 32.9	
	comp=Z,83nm,0.8s						
SMLA	**Simla**	32.16	325	*e*P	**P**	**23 47 40.9**	**+1.2**
SMLA				IAmb	IAmb	23 47 43.8	
	comp=Z,79nm,1.1s						
BHK	**Bhakra**	32.80	325	*e*P	**P**	**23 47 45.6**	**+0.2**
BHK				*e*x	x	23 48 11.8	
NJ2	**Nanjing**	32.94	34	⇑P	**P**	**23 47 47.6**	**+1.0**
NJ2				pP	**sP**	**23 47 57.3**	**-1.2**
NJ2				sP	**pP**	**23 48 00.8**	**+5.8**
NJ2				S	**S**	**23 53 10.8**	**+7.8**
NJ2				pmax	pmax		
	comp=Z,36nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,330nm,3.5s						
NJ2				LR	LR		
	comp=Z,2μm,9.7s						
NJ2				LR	LR		
	comp=Z,2μm,10.4s						
NJ2				LR	LR		
	comp=Z,3μm,10.2s						
GTA	**Gaotai**	33.88	3	⇑P	**P**	**23 47 55.6**	**+0.7**
GTA				pP	pP	23 48 04.3	+1.0
GTA				sP	sP	23 48 08.5	+1.8
GTA				PcP	**PcP**	**23 50 34.3**	**+1.0**
GTA				S	**S**	**23 53 21.8**	**+4.2**
GTA				sS	sS	23 53 33.8	+2.3
GTA				pmax	pmax		
	comp=Z,46nm,1.1s						
GTA				pmax	pmax		
	comp=Z,260nm,7.9s						
GTA				LR	LR		
	comp=Z,1μm,13.3s						
GTA				LR	LR		
	comp=Z,1μm,13.0s						
GTA				LR	LR		
	comp=Z,2μm,13.0s						
NIL	**Nilore**	36.25	324	*e*P	**P**	**23 48 15.4**	**+0.1**
	comp=Z,154nm,0.8s						
NIL	**Nilore**	36.25	324	*e*P	**P**	**23 48 15.4**	**+0.1**
NIL				pmax	pmax		
	comp=Z,154nm,0.8s						
PALU	**Palau**	36.36	85	P	**P**	**23 48 15.7**	**-0.7**
	baz=36,SNR=8.4						
BTO	**Baotou**	36.67	15	*e*P	**P**	**23 48 20.1**	**+1.2**
HHC	**Hu-ho-hao-te**	37.33	17	P	**P**	**23 48 26.3**	**+1.8**
HHC				sP	sP	23 48 41.8	+5.4
HHC				PP	**PnPn**	**23 49 55.3**	**+4.6**
HHC				S	**S**	**23 54 15.3**	**+4.7**
HHC				sS	ScP	23 54 28.5	-0.3
HHC				pmax	pmax		
	comp=Z,54nm,1.5s						
HHC				pmax	pmax		
	comp=Z,350nm,4.3s						
HHC				LR	LR		
	comp=Z,3μm,12.2s						
BJT	**Baijiatuau**	38.16	23	*e*P	**P**	**23 48 32.2**	**+0.8**
	comp=Z,60nm,1.0s						
BJT	**Baijiatuau**	38.16	23	*e*P	**P**	**23 48 32.2**	**+0.8**
BJT				pmax	pmax		
	comp=Z,60nm,1.0s						
BJI	**Beijing**	38.18	23	⇑*i*P	**P**	**23 48 33.0**	**+1.5**
BJI				pP	**pP**	**23 48 37.9**	**-2.1**
BJI				sP	**sP**	**23 48 43.3**	**-0.1**
BJI				S	**S**	**23 54 27.8**	**+4.6**
BJI				pmax	pmax		
	comp=Z,29nm,1.3s						
BJI				LR	LR		
	comp=Z,290nm,11.4s						
BJI				LR	LR		
	comp=Z,380nm,17.9s						
BJI				LR	LR		
	comp=Z,260nm,18.6s						
WMQ	**Urumqi**	39.29	348	P	**P**	**23 48 42.6**	**+1.7**
WMQ				pP	pP	23 48 49.0	-0.4
WMQ				PP	**PP**	**23 50 20.5**	**+9.2**
WMQ				S	**S**	**23 54 43.5**	**+3.5**
WMQ				ScS	**ScS**	**23 58 47.4**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,63nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.8s						
WMQ				LR	LR		
	comp=Z,280nm,11.1s						
WMQ				LR	LR		
	comp=Z,200nm,13.5s						
KSH	**Kashi**	39.31	333	P	**P**	**23 48 41.0**	**-0.2**
KSH				pP	sP	23 48 51.6	-1.5
KSH				S	**S**	**23 54 38.8**	**-1.7**
KSH				SS	**SS**	**23 57 26.1**	**-8.6**
KSH				ScS	**ScS**	**23 58 42.6**	**-5.7**
KSH				pmax	pmax		
	comp=Z,57nm,0.7s						
KSH				pmax	pmax		
	comp=Z,210nm,8.9s						
KSH				LR	LR		
	comp=Z,270nm,13.6s						
KSH				LR	LR		
	comp=Z,320nm,9.3s						
KSH				LR	LR		
	comp=Z,450nm,11.2s						
KBL	**Kabul**	39.41	321	*e*P	**P**	**23 48 42.7**	**+0.5**
	comp=Z,73nm,1.0s						

KBL	**Kabul**	39.41	321	*e*P	P	23 48 42.7	+0.5
KBL				pmax	pmax		
	comp=Z,73nm,1.0s						
DL2	**Dalian**	39.64	29	P	P	23 48 45.1	+1.3
DL2				PP	PP	23 50 23.9	+8.7
DL2				S	S	23 54 46.4	+1.1
DL2				pmax	pmax		
	comp=Z,28nm,1.0s						
DL2				pmax	pmax		
	comp=Z,180nm,5.1s						
DL2				LR	LR		
	comp=Z,880nm,12.2s						
DL2				LR	LR		
	comp=Z,780nm,10.5s						
DL2				LR	LR		
	comp=Z,900nm,12.4s						
PRZ	**Przheval'sk**	40.77	338	*e*P	P	23 48 55.1	+1.7
	comp=Z,77nm,0.8s						
PRZ	**Przheval'sk**	40.77	338	*e*P	P	23 48 55.1	+1.7
PRZ				pmax	pmax		
	comp=Z,77nm,0.8s						
TJN	**Taejon**	40.96	37⇓	*e*P	P	23 48 54.3	-0.4
PDGK	**Podgornoye**	41.11	339	*i* P	P	23 48 56.7	+0.6
PDGK				pmax	pmax		
	comp=Z,74nm,0.8s						
ULHL	**Ulahol**	41.43	335	P	P	23 49 00.0	+1.2
	SNR=55						
KZA	**Kyzart**	41.71	334	P	P	23 49 03.0	+1.7
	SNR=24						
KSRS	**Korea Array**	42.01	36	P	P	23 49 02.8	-0.5
	comp=Z,15nm,0.9s,baz=231,slow=8.7,SNR=21						
KSRS				LR	LR	00 08 40.4	
	comp=Z,834nm,19.2s,baz=225,slow=39						
UCH	**Uchtor**	42.15	334	P	P	23 49 06.7	+1.7
	SNR=119						
TKM2	**Tokmak 2**	42.25	335	*i* P	P	23 49 06.4	+0.9
TKM2				pmax	pmax		
	comp=Z,73nm,1.3s						
TKM2	**Tokmak 2**	42.25	335	P	P	23 49 07.0	+1.4
	SNR=57						
WRKA	**Warakurna**	42.29	137	P	P	23 49 05.0	-0.9
	baz=42,SNR=17						
WRKA				P	P	23 49 05.2	-0.7
	baz=42,SNR=5.0						
KBK	**Karagaybulak**	42.31	335	P	P	23 49 08.2	+2.2
	SNR=97						
AAK	**Ala-Archa**	42.49	334	*e*P	P	23 49 07.6	+0.2
	comp=Z,81nm,1.0s						
AAK	**Ala-Archa**	42.49	334	*i* P	P	23 49 09.9	+2.5
	SNR=20						
AAK	**Ala-Archa**	42.49	334⇓	*e*P	P	23 49 07.4	0.0
AAK				pmax	pmax		
	comp=Z,123nm,1.7s						
AAK	**Ala-Archa**	42.49	334	P	P	23 49 09.9	+2.5
	SNR=29						
CHMS	**Chumysh**	42.67	335	P	P	23 49 10.0	+1.3
	SNR=25						
EKS2	**Erkin-Say**	42.82	334	P	P	23 49 12.1	+2.1
	SNR=49						
SONA0	**Songino Array**	42.87	8	*e*PcP	PcP	23 51 01.3	+0.3
SONM	**Songino Array**	42.87	8	P	P	23 49 08.9	-1.5
	comp=Z,47nm,1.0s,baz=192,slow=8.6,SNR=133						
SONM				PcP	PcP	23 51 01.3	+0.3
	comp=Z,21nm,0.9s,baz=186,slow=4.0,SNR=11						
SONM				LR	LR	00 08 47.3	
	comp=Z,1µm,18.2s,baz=184,slow=38						
SONM	**Songino Array**	42.87	8	*e*P	P	23 49 09.2	-1.2
SONM	**Songino Array**	42.87	8	*e*P	P	23 49 09.2	-1.2
USP	**Ospenovka**	43.00	335	P	P	23 49 12.9	+1.5
	SNR=146						
ULN	**Ulaanbaatar**	43.00	9	*e*P	P	23 49 12.5	+1.0
	comp=Z,43nm,0.9s						
ULN	**Ulaanbaatar**	43.00	9*c*	*i*P	P	23 49 12.3	+0.8
ULN				pmax	pmax		
	comp=Z,69nm,1.3s						
MK32	**Makanchi Array**	43.37	344	*e*P	P	23 49 12.9	-1.3
MK32				*e*PcP	PcP	23 51 02.8	+0.2
MKAR	**Makanchi Array**	43.37	344	P	P	23 49 12.9	-1.4
	comp=Z,78nm,0.8s,baz=163,slow=7.8,SNR=254						
MKAR				PcP	PcP	23 51 02.8	+0.2
	comp=Z,8.2nm,0.7s,baz=195,slow=3.7,SNR=4.9						
MKAR				LR	LR	00 11 37.5	
	comp=Z,405nm,18.0s,baz=168,slow=42						
MKAR	**Makanchi Array**	43.37	344	*i* P	P	23 49 13.3	-1.0
MKAR				pmax	pmax		
	comp=Z,79nm,0.8s						
MAKZ	**Makanchi**	43.47	344	*e*P	P	23 49 14.0	-1.1
	comp=Z,67nm,0.8s						
MAKZ	**Makanchi**	43.47	344	*e*P	P	23 49 14.0	-1.1
MAKZ				pmax	pmax		
	comp=Z,67nm,0.8s						
WRA	**Warramunga Arr**	43.78	126	P	P	23 49 14.9	-3.1
	comp=Z,13nm,0.7s,baz=296,slow=9.7,SNR=54						
WRAB	**Tennant Creek**	43.79	126	*e*P	P	23 49 16.2	-1.9
	comp=Z,18nm,0.7s						
WRAB	**Tennant Creek**	43.79	126⇑	*e*P	P	23 49 17.0	-1.0
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s						
WB2	**Warramunga Arr**	43.79	126	*e*P	P	23 49 17.3	-0.8
	comp=Z,62nm,1.5s						
KK31	**Karatay Array**	44.67	331	*e*P	P	23 49 24.8	0.0
	comp=Z,36nm,1.1s						
KK31	**Karatay Array**	44.67	331	*e*P	P	23 49 24.8	0.0
KK31				pmax	pmax		
	comp=Z,36nm,1.1s						
DGZ	**Jazzator, Alta**	45.01	350*c*	*i*P	P	23 49 28.8	+1.3
DGZ				pmax	pmax		
	comp=Z,52nm,1.0s						
ZAK	**Zakamensk**	45.03	5	*e*P	P	23 49 28.2	+0.6
ZAK				pmax	pmax		
	comp=Z,27nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.6s						
CN2	**Changchun**	45.24	28	*e*P	P	23 49 29.8	+0.5
CN2				*e*sP	sP	23 49 43.5	+2.2
CN2				*e*S	S	23 56 07.9	+0.2
CN2				*e*SS	ScS	23 59 22.8	-1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,840nm,12.0s						
CN2				LR	LR		
	comp=Z,880nm,12.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
ASAR	**Alice Springs**	45.47	131	P	P	23 49 27.8	-3.6
	comp=Z,2.9nm,0.5s,baz=305,slow=7.9,SNR=32						
ASAR				ScP	ScP	23 54 58.8	-2.5
	comp=Z,1.5nm,0.9s,baz=276,slow=4.4,SNR=3.2						
AS31	**Alice Springs**	45.47	131	*e*P	P	23 49 30.4	-1.1
	comp=Z,3.4nm,0.8s						
AS31				*e*ScP	ScP	23 54 58.8	-2.5
FORT	**Forrest**	46.11	143	P	P	23 49 36.5	+0.2
	baz=46,SNR=8.0						
TLY	**Talaya**	46.35	5	P	P	23 49 38.4	+0.5
	comp=Z,7.8nm,0.8s,baz=202,slow=7.0,SNR=23						
TLY	**Talaya**	46.35	5	*e*P	P	23 49 38.4	+0.5
	comp=Z,25nm,0.9s						
TLY	**Talaya**	46.35	5	*e*P	P	23 49 39.0	+1.1
TLY				*e*		23 51 25.2	
TLY				*e*S	S	23 56 21.3	-2.1
TLY				*e*SS	SS	23 59 46.2	-3.2
TLY				pmax	pmax		
	comp=Z,121nm,1.6s						
TLY				MLR	MLR		
	comp=Z,5µm,16.0s						
HIA	**Hailar**	47.44	19	*e*P	P	23 49 47.0	+0.5
	comp=Z,26nm,1.3s						
HIA	**Hailar**	47.44	19	*e*P	P	23 49 47.0	+0.5
HIA				pmax	pmax		
	comp=Z,26nm,1.3s						
MDJ	**Mudanjiang**	47.86	30	P	P	23 49 40.6	-9.2
MDJ				pmax	pmax		
	comp=Z,12nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,170nm,2.8s						
OTUK	**Ortayu**	47.93	337	*i* P	P	23 49 51.2	+0.9
OTUK				pmax	pmax		
	comp=Z,101nm,1.0s						
KURK	**Kurchatov**	47.95	344	*e*P	P	23 49 50.7	+0.3
	comp=Z,148nm,1.0s						
KURK	**Kurchatov**	47.95	344*d*	*e*P	P	23 49 51.4	+1.0
KURK				pmax	pmax		
	comp=Z,187nm,1.2s						
MAJO	**Matsushiro**	48.14	44	*e*P	P	23 49 51.5	-0.6
MAJO				*e*PcP	PcP	23 51 20.1	+0.7
MAJO				*e*ScP	ScP	23 55 11.6	-0.6
MAJO	**Matsushiro**	48.14	44	*e*P	P	23 49 51.5	-0.6
MAJO				*e*		23 51 20.1	
MAT	**Matsushiro**	48.14	44	P	P	23 49 51.9	-0.2
MAT				S	S	23 56 53.2	+3.8
MJAR	**Matsushiro Arr**	48.14	44	P	P	23 49 50.0	-2.1
	comp=Z,5.6nm,0.7s,baz=232,slow=8.5,SNR=19						
MJAR				PcP	PcP	23 51 20.1	+0.7
	comp=Z,3.0nm,0.5s,baz=247,slow=4.4,SNR=11						
MJAR				ScP	ScP	23 55 11.6	-0.7
	comp=Z,0.5nm,0.3s,baz=203,slow=2.5,SNR=4.4						
MJAR				LR	LR	00 11 12.1	
	comp=Z,183nm,19.7s,baz=220,slow=37						
CIT	**Chita**	48.22	13	*e*P	P	23 49 53.4	+0.9
CIT				*e*		23 50 05.6	
CIT				*e*		23 50 13.0	
CIT				pmax	pmax		
	comp=Z,90nm,1.1s						
QIS	**Mount Isa**	48.39	124	P	P	23 49 52.8	-1.5
	baz=48,SNR=10						
GEYT	**Alibeck**	48.53	317	P	P	23 49 54.0	-1.2
	comp=Z,262nm,0.8s,baz=149,slow=6.9,SNR=225						
GEYT				LR	LR	00 11 44.0	
	comp=Z,364nm,21.5s,baz=145,slow=38						
USRK	**Ussuriysk Ar.**	48.82	32	P	P	23 49 57.4	+0.2
	comp=Z,4.0nm,0.8s,baz=244,slow=8.1,SNR=5.8						
USRK				LR	LR	00 11 31.6	
	comp=Z,310nm,21.0s,baz=207,slow=37						
ZALV	**Zalesovo Beam**	49.54	350	P	P	23 50 01.3	-1.2
	comp=Z,85nm,0.8s,baz=183,slow=5.7,SNR=190						
ZALV				LR	LR	00 13 14.7	
	comp=Z,210nm,19.2s,baz=239,slow=39						
ZALV	**Zalesovo Beam**	49.54	350	*e*P	P	23 50 01.2	-1.4
ZALV	**Zalesovo Beam**	49.54	350	*e*P	P	23 50 01.2	-1.4
KLR	**Kul'dur**	52.18	28	P	P	23 50 21.5	-1.0
	comp=Z,25nm,0.9s,baz=231,slow=6.5,SNR=58						
KLR	**Kul'dur**	52.18	28*c*	*i*P	P	23 50 23.6	+1.0
KLR				pmax	pmax		
	comp=Z,52nm,1.0s						
BRVK	**Borovoye**	52.62	339	*e*P	P	23 50 25.5	-0.1
	comp=Z,70nm,0.7s						
BRVK	**Borovoye**	52.62	339*c*	*i*P	P	23 50 25.9	+0.2
RAYN	**Ar Rayn**	53.52	295	*e*P	P	23 50 32.2	-0.8
	comp=Z,13nm,1.0s						
RAYN	**Ar Rayn**	53.52	295	*i* P	P	23 50 32.4	-0.6
	SNR=17						
RAYN	**Ar Rayn**	53.52	295	*e*P	P	23 50 32.2	-0.8
RAYN				pmax	pmax		
	comp=Z,13nm,1.0s						
BOD	**Bodaibo**	53.75	11	*e*P	P	23 50 35.1	+1.2
BOD				pmax	pmax		
	comp=Z,63nm,1.2s						
ZEA	**Zeya**	53.76	21	*e*P	P	23 50 35.0	+0.9
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=E,18nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
ZEA				MLR	MLR		
	comp=N,1µm,15.0s						
ZEA				MLR	MLR		
	comp=E,1µm,15.0s						
ERM	**Erimo**	54.19	41⇓	*e*P	P	23 50 37.0	-0.4
ERM				pmax	pmax		
	comp=Z,32nm,1.2s						
ABKAR	**Akbulak array**	54.19	330	*e*P	P	23 50 37.6	+0.3
	comp=Z,60nm,1.0s						
HTT	**Hallett**	54.77	138	P	P	23 50 41.4	-0.5
	baz=55,SNR=5.4						
GRNR	**Gornyy**	55.43	29	*e*P	P	23 50 48.0	+1.7
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
ABPO	**Ambohimpanom**	55.52	243	*e*P	P	23 50 47.2	-0.4
	comp=Z,20nm,0.9s						
ABPO	**Ambohimpanom**	55.52	243	*e*P	P	23 50 47.3	-0.4
ABPO				pmax	pmax		
	comp=Z,20nm,0.9s						
STKA	**Stephens Creek**	55.71	135	P	P	23 50 47.3	-1.3
	comp=Z,4.3nm,0.7s,baz=326,slow=7.7,SNR=6.7						
STKA				LR	LR	00 15 26.5	
	comp=Z,555nm,21.3s,baz=281,slow=37						
STKA	**Stephens Creek**	55.71	135	P	P	23 50 48.1	-0.5
	baz=56,SNR=3.7						
YSS	**Yuzh-Sakhalins**	56.49	35	*e*P	P	23 50 54.0	+0.1
	comp=Z,45nm,1.0s						
YSS	**Yuzh-Sakhalins**	56.49	35⇑	*e*P	P	23 50 54.7	+0.8
YSS				*e*		23 53 00.3	
YSS				*e*S	S	23 58 41.8	-1.6
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
YUK	**Yuzh-Kuril'sk**	56.90	40*c*	*i*P	P	23 50 55.1	-1.7
YUK				*e*		23 51 50.3	
YUK				*e*S	S	23 58 49.5	+0.6
YUK				*e*		00 00 45.3	
YUK				pmax	pmax		
	comp=Z,256nm,1.0s						
YUK				pmax	pmax		
	comp=Z,256nm,1.8s						
MAK	**Makhachkala**	58.04	318	*e*P	P	23 51 01.7	-3.2
MAK				*e*S	S	23 59 03.4	-0.5
MAK				pmax	pmax		
	comp=Z,239nm,1.4s						
MAK				MLR	MLR		
	comp=Z,334nm,18.0s						
CMSA	**Cobar Meteorol**	58.49	132	P	P	23 51 07.9	-0.4
	baz=58,SNR=19						
RMQ	**Roma**	58.54	125	P	P	23 51 09.9	+1.2
	baz=58,SNR=10						
TYV	**Tymovskoe**	58.61	31	*e*P	P	23 51 07.2	-1.6
TYV				pmax	pmax		
	comp=Z,200nm,4.1s						
TYV				pmax	pmax		
	comp=Z,22nm,1.5s						
TYV				MLR	MLR		
	comp=Z,900nm,20.0s						
GNI	**Garni**	58.83	314	*e*P	P	23 51 10.6	-0.2
	comp=Z,103nm,1.4s						
GNI	**Garni**	58.83	314	*i* P	P	23 51 11.1	+0.4
	SNR=9.3						
GNI	**Garni**	58.83	314*c*	*e*P	P	23 51 10.7	-0.1
GNI				pmax	pmax		
	comp=Z,521nm,1.7s						
FURI	**Furi**	58.84	277	*e*P	P	23 51 12.6	+1.1
	comp=Z,52nm,1.0s						
SVE	**Sverdlovsk**	59.08	337*d*	*i*P	P	23 51 13.0	+1.1
SVE				*e*S	S	23 59 17.3	+0.3
SVE				pmax	pmax		
	comp=Z,194nm,1.0s						
SVE				MLR	MLR		
	comp=Z,371nm,23.0s						
GROC	**Groznyy**	59.28	318	*e*P	P	23 51 11.8	-1.8
GROC				*e*		23 51 59.6	
GROC				pmax	pmax		
	comp=Z,178nm,1.1s						
TBLG	**Delisi**	59.42	316	*e*P	P	23 51 14.8	+0.2
	comp=Z,91nm,0.9s						
TBLG	**Delisi**	59.42	316	*e*P	P	23 51 14.9	+0.2
TBLG				pmax	pmax		
	comp=Z,91nm,0.9s						
ARU	**Arti**	59.62	336	*e*P	P	23 51 16.0	+0.2
	comp=Z,70nm,1.0s						
ARU	**Arti**	59.62	336*c*	*i*P	P	23 51 15.9	+0.2
ARU						23 52 00.2	
ARU						23 53 28.7	
ARU				PPP	PPP	23 54 52.4	
ARU				S	S	23 59 29.7	+5.6
ARU				SS	SS	00 03 16.2	-3.8
ARU				pmax	pmax		
	comp=Z,79nm,1.0s						
ARU				MLR	MLR		
	comp=Z,471nm,21.0s						
AKH	**Akhalkalaki**	60.17	315	*e*P	P	23 51 20.2	+0.2
	comp=Z,43nm,1.1s						
AKH	**Akhalkalaki**	60.17	315	*e*P	P	23 51 20.2	+0.2
AKH				pmax	pmax		
	comp=Z,43nm,1.1s						
NCK	**Nalchik**	60.87	317	*i* P	P	23 51 24.7	+0.2
NCK				pmax	pmax		
	comp=Z,41nm,0.8s						
KMBO	**Kilima Mbogo**	60.95	266	P	P	23 51 25.0	-0.9
	comp=Z,21nm,0.9s,baz=60,slow=9.2,SNR=45						
KMBO				LR	LR	00 17 05.2	
	comp=Z,182nm,18.3s,baz=90,slow=35						
KMBO	**Kilima Mbogo**	60.95	266	*e*P	P	23 51 26.2	+0.4
	comp=Z,32nm,1.0s						
KMBO	**Kilima Mbogo**	60.95	266	*i* P	P	23 51 26.0	+0.1
	SNR=25						
KMBO	**Kilima Mbogo**	60.95	266	*e*P	P	23 51 26.2	+0.4
KMBO				pmax	pmax		
	comp=Z,32nm,1.0s						
YAK	**Yakutsk**	61.19	16	*e*P	P	23 51 26.8	+0.5
	comp=Z,92nm,0.8s						
YAK	**Yakutsk**	61.19	16*c*	*i*P	P	23 51 26.5	+0.2
YAK				*e*		23 53 41.8	
YAK				*e*S	S	23 59 37.3	-6.6
YAK				pmax	pmax		
	comp=Z,94nm,0.9s						
YAK				pmax	pmax		
	comp=N,45nm,1.2s						
YAK				pmax	pmax		
	comp=E,45nm,1.5s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YAK				smax	smax		
	comp=N,31nm,19.4s						
YAK				smax	smax		
	comp=E,25nm,15.6s						
YAK				MLR	MLR		
	comp=Z,1µm,17.0s						
YAK				MLR	MLR		
	comp=N,660nm,16.0s						
YAK				MLR	MLR		
	comp=E,395nm,15.0s						
NEY	**Neytrino**	61.37	317⇓	*e*P	P	23 51 29.4	+1.3
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	61.42	317	P	P	23 51 28.1	-0.1
	comp=Z,40nm,0.9s,baz=98,slow=5.2,SNR=49						
KBZ				LR	LR	00 21 04.9	
	comp=Z,138nm,20.3s,baz=124,slow=39						
KIV	**Kislovodsk**	61.65	318	*e*P	P	23 51 29.9	-0.1
	comp=Z,103nm,1.1s						
KIV	**Kislovodsk**	61.65	318	*i* P	P	23 51 30.2	+0.3
	SNR=18						
KIV	**Kislovodsk**	61.65	318	*e*P	P	23 51 29.8	-0.1
KIV				pmax	pmax		
	comp=Z,295nm,1.1s						
KIV				MLR	MLR		
	comp=Z,237nm,17.0s						
GOF	**Gofitskoye**	61.83	319⇑	*i*P	P	23 51 31.3	+0.3
GOF				pmax	pmax		
	comp=Z,115nm,0.9s						
SOC	**Sochi**	63.54	316*c*	*i*P	P	23 51 41.4	-1.0
SOC				*e*		23 53 59.1	
SOC				*e*S	S	00 00 16.1	+1.9
SOC				*e*		00 01 32.8	
SOC				pmax	pmax		
	comp=Z,93nm,0.8s						
ANN	**Anapa**	65.48	317	*e*P	P	23 51 51.7	-3.3
ANN				*e*		23 54 18.3	
ANN				*e*S	S	00 00 34.4	-3.7
ANN				pmax	pmax		
	comp=Z,65nm,1.5s						
SKR	**Severo-Kuril's**	66.03	36⇓	*e*P	P	23 51 59.9	+1.5
VORD	**Divnogorie**	66.40	324	*e*P	P	23 51 59.7	-1.1
VORD				pmax	pmax		
	comp=Z,50nm,0.8s						
VSR	**Storozhevoye**	66.56	324	*e*P	P	23 52 00.8	-1.1
VSR				pmax	pmax		
	comp=Z,80nm,0.9s						
BR131	**Keskin Array S**	66.87	311	*e*P	P	23 52 03.0	-1.3
	comp=Z,13nm,0.8s						
BRTR	**Keskin Array B**	66.87	311	P	P	23 52 01.2	-3.1
	comp=Z,11nm,0.8s,baz=127,slow=7.4,SNR=78						
BRTR	**Keskin Array B**	66.87	311	*i* P	P	23 52 03.0	-1.3
BRTR				pmax	pmax		
	comp=Z,11nm,0.8s						
LPSR	**Galich'ya Gora**	67.22	325	*e*P	P	23 52 05.5	-0.5
LPSR				pmax	pmax		
	comp=Z,110nm,1.0s						
MA2	**Magadan**	67.24	26	P	P	23 52 06.0	0.0
	comp=Z,28nm,0.9s,baz=215,slow=7.5,SNR=6.1						
MA2	**Magadan**	67.24	26	*e*P	P	23 52 06.3	+0.2
	comp=Z,54nm,1.1s						
MA2	**Magadan**	67.24	26*d*	*e*P	P	23 52 05.8	-0.2
MA2				pmax	pmax		
	comp=Z,56nm,1.7s						
MBAR	**Mbarara**	67.36	267	*e*P	P	23 52 08.3	+0.4
	comp=Z,40nm,0.9s						
ANTO	**Ankara**	67.53	311	*e*P	P	23 52 07.9	-0.5
	comp=Z,28nm,1.1s						
ANTO	**Ankara**	67.53	311	*e*P	P	23 52 07.9	-0.5
ANTO				pmax	pmax		
	comp=Z,28nm,1.1s						
SIM	**Simferopol'**	67.78	317*c*	*e*P	P	23 52 09.0	-0.8
SIM				S	S	00 01 04.4	-1.7
SIM				pmax	pmax		
	comp=Z,42nm,1.0s						
PETK	**Petropavlovsk-**	67.84	34	P	P	23 52 09.6	-0.4
	comp=Z,5.9nm,0.7s,baz=227,slow=2.9,SNR=15						
PETK				PKP2bc		00 20 32.5	
	comp=Z,1.9nm,0.9s,baz=76,slow=8.6,SNR=3.9						
PETK				LR	LR	00 24 47.7	
	comp=Z,386nm,18.1s,baz=218,slow=38						
PRGR	**Permogore**	68.08	336⇑	*i*P	P	23 52 11.5	+0.2
PRGR				*e*		23 52 35.2	
PRGR				*e*		23 54 43.4	
PRGR				pmax	pmax		
	comp=Z,133nm,0.8s						
PET	**Petropavlovsk**	68.35	35	*e*P	P	23 52 12.6	-0.6
	comp=Z,41nm,0.7s						
PET	**Petropavlovsk**	68.35	35⇓	*i*P	P	23 52 14.0	+0.9
PET				*e*S	S	00 01 14.6	+2.2
PET				pmax	pmax		
	comp=Z,100nm,13.1s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
TIXI	**Tiksi**	68.93	10	*e*P	P	23 52 16.0	-0.4
	comp=Z,38nm,1.1s						
TIXI	**Tiksi**	68.93	10*c*	*i*P	P	23 52 16.2	-0.2
TIXI				pmax	pmax		
	comp=Z,66nm,1.7s						
MOS	**Moscow**	69.12	328	*e*P	P	23 52 16.8	-1.1
MOS				*e*		23 54 51.8	
MOS				pmax	pmax		
	comp=Z,145nm,1.3s						
MOS				pmax	pmax		
	comp=Z,200nm,1.5s						
OBN	**Obninsk**	69.45	327	*e*P	P	23 52 19.7	-0.2
	comp=Z,92nm,1.1s						
OBN	**Obninsk**	69.45	327*c*	*i*P	P	23 52 19.7	-0.2
OBN				*e*		23 52 42.2	
OBN				*e*		23 54 51.1	
OBN				*e*PPP	PPP	23 56 32.2	
OBN				pmax	pmax		
	comp=Z,107nm,1.2s						
OBN				MLR	MLR		
	comp=Z,194nm,25.0s						
SEY	**Seymchan**	69.62	23	P	P	23 52 19.7	-1.1
	comp=Z,26nm,0.9s,baz=259,slow=3.3,SNR=21						
SEY	**Seymchan**	69.62	23*c*	*e*P	P	23 52 21.7	+0.9
YLV	**Yalova**	70.24	311⇓	*i*P	P	23 52 24.7	-0.5
YLV	**Yalova**	70.24	311	⇓P	P	23 52 24.7	-0.5
TIRR	**Tirgusor**	71.64	315⇓	*i*P	P	23 52 33.4	-0.1
TIRR	**Tirgusor**	71.64	315	⇓P	P	23 52 33.4	-0.1
PSN	**Preselentsi**	71.66	314	P	P	23 52 32.3	-1.4
PHSR	**Pinarhisar**	71.79	312⇑	*i*P	P	23 52 33.9	-0.7
MILM	**Milestii Mici**	71.84	318⇑	*i*P	P	23 52 34.2	-0.5
KIS	**Kishinev**	71.86	318⇑	*i*P	P	23 52 33.0	-1.8
	comp=Z,110nm,1.2s						
KIS				*e*L	L	00 28 00.0	
KIS	**Kishinev**	71.86	318	*i* P	P	23 52 33.0	-1.8
KIS				*e*		23 52 45.0	
KIS				pmax	pmax		
	comp=Z,110nm,1.2s						
TLB	**Topalu**	71.92	315⇑	*i*P	P	23 52 34.3	-0.9
TLB	**Topalu**	71.92	315	⇑P	P	23 52 34.4	-0.8
CFR	**Carcaliu**	71.97	316⇓	*i*P	P	23 52 35.2	-0.3
CFR	**Carcaliu**	71.97	316	⇓P	P	23 52 35.2	-0.3
ICOR	**Ion Corvin**	72.01	315⇑	*i*P	P	23 52 36.3	+0.5
LSZ	**Lusaka**	72.06	252	*e*P	P	23 52 37.9	+1.2
	comp=Z,26nm,1.1s						
LSZ	**Lusaka**	72.06	252	*e*P	P	23 52 37.9	+1.2
LSZ				pmax	pmax		

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          comp=Z,26nm,1.1s
CASY  Casey            72.11 175  eP    P      23 52 36.1 +0.2
          comp=Z,18nm,1.0s
AKASG Malin Array Be   72.40 322  P     P      23 52 35.0 -3.0
          comp=Z,47nm,0.9s,baz=85,slow=4.9,SNR=134
AKASG                             PP    PP     23 55 14.4 -4.7
          comp=Z,2.4nm,0.8s,baz=81,slow=7.2,SNR=4.5
AKASG                             LR    LR     00 26 54.9
          comp=Z,116nm,21.9s,baz=55,slow=38
IAS   Iasi             72.73 318⇓iP     P      23 52 40.0  0.0
IAS   Iasi             72.73 318 ⇓P     P      23 52 40.0  0.0
BISRR Bisoca           73.02 316⇓iP     P      23 52 43.1 +1.2
VRI   Vrincioaia       73.06 316⇑iP     P      23 52 42.6 +0.5
VRI   Vrincioaia       73.06 316 ⇑P     P      23 52 42.6 +0.5
PLOR  Plostina         73.11 316⇓iP     P      23 52 43.1 +0.7
PLOR  Plostina         73.11 316 ⇓P     P      23 52 43.1 +0.7
ELND  Elena            73.20 313⇓iP     P      23 52 42.7 -0.2
TESR  Tescani          73.23 317⇓iP     P      23 52 43.2 +0.2
SECR                   73.38 315⇓iP     P      23 52 45.0 +1.0
MLR   Muntele Rosu     73.54 316⇑iP     P      23 52 45.0  0.0
MLR   Muntele Rosu     73.54 316 ⇑P     P      23 52 45.0  0.0
PRAR  RASCA            73.66 318⇑iP     P      23 52 45.6 +0.1
BIZ   Bicaz            73.67 317⇓iP     P      23 52 46.1 +0.5
DOPR  Dopca            74.00 316⇓iP     P      23 52 47.7 +0.1
MICGM Minsk            74.07 325⇑eP     P      23 52 47.0 -0.8
MICGM                             PM           23 52 48.0
          comp=Z,0.4nm,1.0s
MNK   Minsk            74.07 325  eP    P      23 52 47.0 -0.8
MNK                               pmax  pmax
          comp=Z,370nm,1.0s
HUMR  Humele           74.07 315⇓iP     P      23 52 47.6 -0.4
VOIR                   74.16 316⇑iP     P      23 52 48.0 -0.6
VOIR                   74.16 316 ⇑P     P      23 52 48.0 -0.6
PUL   Pulkovo          74.16 331⇓eP     P      23 52 49.2 +1.0
PUL                               pmax  pmax
          comp=Z,110nm,0.8s
PLVB  Pleven           74.17 313⇑iP     P      23 52 48.7 +0.1
BURAR Bucovina Array   74.38 318⇓iP     P      23 52 50.8 +1.0
BURAR Bucovina Array   74.38 318 ⇓P     P      23 52 50.8 +1.0
BUR08 Bucovina Ar. S   74.39 318  eP    P      23 52 50.3 +0.4
          comp=Z,49nm,1.1s
PGB   Panagyurishte    74.40 313  P     P      23 52 48.9 -1.1
MMB   Musomiste        74.61 312  P     P      23 52 48.9 -2.3
NACGM Naroch           74.78 326  e     P      23 52 51.0 -0.9
ARCR  ARCALIA          74.88 317⇓iP     P      23 52 53.7 +1.1
IDID  Didziasalis      74.90 326  eP    P      23 52 53.2 +0.7
IDID                              IAmb  IAmb   23 52 54.6
          comp=Z,56nm,0.8s
LOT   Lotru            75.05 315⇓iP     P      23 52 53.6 -0.2
VTS   Vitosha          75.09 313⇑iP     P      23 52 54.2 +0.1
VTS   Vitosha          75.09 313 ⇑P     P      23 52 54.2 +0.1
VTS   Vitosha          75.09 313  P     P      23 52 49.3 -4.8
LVZ   Lovozero         75.15 340  eP    P      23 52 54.0 +0.2
          comp=Z,54nm,0.7s
LVZ   Lovozero         75.15 340deP     P      23 52 54.4 +0.6
LVZ                               pmax  pmax
          comp=Z,134nm,2.5s
IIGN  Ignalina         75.19 326  eP    P      23 52 54.9 +0.7
IIGN                              IAmb  IAmb   23 52 56.3
          comp=Z,57nm,0.7s
IZAR  Zarasai          75.27 326  eP    P      23 52 55.1 +0.5
IZAR                              IAmb  IAmb   23 52 56.5
          comp=Z,38nm,0.8s
ISAL  Salakas          75.29 326  eP    P      23 52 55.4 +0.6
ISAL                              IAmb  IAmb   23 52 56.8
          comp=Z,38nm,0.8s
CJR   Cluj-Napoca      75.34 317⇑iP     P      23 52 57.0 +1.7
CJR   Cluj-Napoca      75.34 317 ⇑P     P      23 52 57.0 +1.7
VAY   Valandovo        75.45 311 i P    P      23 52 54.1 -1.9
APA   Apatity          75.46 339⇑iP     P      23 52 55.2 -0.3
APA                               pmax  pmax
          comp=Z,32nm,0.8s
APA                               MLR   MLR
          comp=Z,300nm,20.0s
LVV   L'vov            75.50 320  eP    P      23 52 56.1  0.0
BMR   Baia Mare        75.54 318⇓iP     P      23 52 57.5 +1.1
BMR   Baia Mare        75.54 318 ⇓P     P      23 52 57.5 +1.1
VSU   Vasula           75.61 329  eP    P      23 52 56.5  0.0
VSU                               IAmb  IAmb   23 52 57.3
          comp=Z,146nm,0.8s
VSU   Vasula           75.61 329c iP    P      23 52 56.7 +0.2
VSU                               pmax  pmax
          comp=Z,163nm,0.8s
DEV   Deva             75.71 316⇓iP     P      23 52 58.8 +1.4
DEV   Deva             75.71 316 ⇓P     P      23 52 58.8 +1.4
GZR   Gura Zlata       75.74 315⇑iP     P      23 52 58.1 +0.4
GZR   Gura Zlata       75.74 315 ⇑P     P      23 52 58.1 +0.4
HERR  Herculane        75.93 315⇑iP     P      23 52 59.1 +0.4
DRGR                   75.95 317⇓iP     P      23 52 59.9 +1.0
DRGR                   75.95 317 ⇓P     P      23 52 59.9 +1.0
TRPA  Tarpa            76.23 318⇑iP     P      23 53 01.1 +0.8
TRPA  Tarpa            76.23 318⇑iP     P      23 53 00.1 -0.3
KWP   Kalwaria Pacla   76.32 320  eP    P      23 53 01.0 +0.1
KWP                               epP   pP     23 53 06.1 -3.8
KWP   Kalwaria Pacla   76.32 320  eP    P      23 53 01.0 +0.1
KWP                               e*PP  pP     23 53 06.1 -3.8
SKO   Skopje           76.35 312  i P   P      23 52 59.2 -2.0
MDVR  Moldovita        76.42 315⇓iP     P      23 53 00.9 -0.7
LBTB  Lobatse          76.43 243  eP    P      23 53 02.0  0.0
          comp=Z,50nm,1.3s
LBTB  Lobatse          76.43 243  eP    P      23 53 02.0  0.0
LBTB                              pmax  pmax
          comp=Z,51nm,1.3s
UZH   Uzhgorod         76.46 319  eP    P      23 53 00.1 -1.5
UZH                               e            23 53 06.5
UZH                               e            23 53 20.5
BZS   Buzias           76.57 315⇓iP     P      23 53 02.5 +0.2
BZS   Buzias           76.57 315 ⇓P     P      23 53 02.5 +0.2
LTVH  Ltavrtes, Hu     76.57 317  i P   P      23 53 03.1 +0.8
SIRR  Siria            76.61 316⇓iP     P      23 53 02.5 -0.1
FINES FINESS Array B   76.62 332  P     P      23 53 00.4 -1.9
          comp=Z,36nm,0.7s,baz=103,slow=6.0,SNR=88
FINES                             LR    LR     00 32 29.1
          comp=Z,120nm,18.0s,baz=116,slow=40
FINES FINESS Array B   76.62 332  i P   P      23 53 02.5 +0.2
FINES                             pmax  pmax
          comp=Z,36nm,0.7s
SUW   Suwalki          76.68 324  eP    P      23 53 02.4 -0.3
SUW                               epP   pP     23 53 07.1 -4.7
SUW   Suwalki          76.68 324  eP    P      23 53 02.4 -0.3
SUW                               e*PP  pP     23 53 07.1 -4.7
MAW   Mawson           76.97 193  P     P      23 53 02.9 -1.1
          comp=Z,5.0nm,0.9s,baz=6.2,slow=6.5,SNR=7.7
MAW                               LR    LR     00 21 18.6
          comp=Z,147nm,19.3s,baz=46,slow=31
MAW   Mawson           76.97 193  P     P      23 53 06.1 +2.1
          baz=77,SNR=24
BILL  Bilibino         76.98  21  eP    P      23 53 04.5 +0.3
BILL                              e            23 53 14.5
BILL                              e            23 55 57.8
BILL                              ePPP  PPP    23 57 40.4
BILL                              pmax  pmax
          comp=Z,46nm,1.7s
BILL                              MLR   MLR
          comp=Z,1µm,17.0s
AMBH  Ambrzfalva       77.26 316⇑iP     P      23 53 07.0 +0.8
BOSA  Boshof           77.53 239  P     P      23 53 06.4 -1.8
          comp=Z,6.3nm,0.7s,baz=89,slow=6.3,SNR=15
BOSA                              LR    LR     00 26 02.8
          comp=Z,223nm,18.0s,baz=60,slow=35
BOSA  Boshof           77.53 239  eP    P      23 53 08.3 +0.2
          comp=Z,58nm,1.4s
BOSA  Boshof           77.53 239  eP    P      23 53 08.4 +0.2
BOSA                              pmax  pmax
          comp=Z,58nm,1.4s
BEL   Belsk            77.81 322  eP    P      23 53 09.6 +0.4
BEL   Belsk            77.81 322  eP    P      23 53 09.6 +0.4
NIE   Niedzica         77.86 319  eP    P      23 53 10.1 +0.6
NIE                               epP   pP     23 53 14.5 -4.1
NIE   Niedzica         77.86 319  eP    P      23 53 10.1 +0.6
NIE                               e*PP  pP     23 53 14.5 -4.1
PSZ   Piszkesteto      77.98 318⇑iP     P      23 53 10.4 +0.1
PSZ   Piszkesteto      77.98 318 ⇑P     P      23 53 10.4 +0.1
PSZ   Piszkesteto      77.98 318⇑iP     P      23 53 10.1 -0.2
OJC   Ojcow            78.26 320  eP    P      23 53 11.9 +0.2
OJC   Ojcow            78.26 320  eP    P      23 53 11.9 +0.2
LANS  Liptovska Anna   78.37 319  eP    P      23 53 13.9 +1.5
LANS  Liptovska Anna   78.37 319  eP    P      23 53 13.8 +1.4
KLNR  Kaliningrad      78.49 325⇑eP     P      23 53 12.8  0.0
KLNR                              pmax  pmax
          comp=Z,165nm,0.7s
BUD   Budapest         78.53 317⇑iP     P      23 53 13.0 -0.2
MORH  Mrgy, Hungar     78.69 316⇑iP     P      23 53 13.1 -1.0
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VYHS  Vyhne            78.73 318  eP    P      23 53 14.7 +0.3
VYHS                              pmax  pmax
          comp=Z,17nm,1.2s
VYHS  Vyhne            78.73 318  eP    P      23 53 14.7 +0.3
ARCES ARCESS Array B   78.83 340  P     P      23 53 15.4 +0.9
          comp=Z,9.2nm,0.5s,baz=96,slow=4.3,SNR=84
ARCES                             LR    LR     00 31 06.9
          comp=Z,285nm,21.8s,baz=112,slow=38
ARE0  ARCESS Array S   78.83 340  eP    P      23 53 15.9 +1.4
SRO2  Moca             78.97 317  eP    P      23 53 15.8 +0.2
SRO2  Moca             78.97 317  eP    P      23 53 15.8 +0.2
CSKK  Cskako           79.03 317  eP    P      23 53 16.0  0.0
TIH   Tihany           79.25 317⇑iP     P      23 53 17.0 -0.2
OKC   Ostrava-Krasne   79.29 320  eP    P      23 53 17.5 +0.2
OKC                               e            23 53 22.9
OKC   Ostrava-Krasne   79.29 320  eP    P      23 53 17.5 +0.2
OKC                               ePCP  PcP    23 53 22.9 -2.6
KTK1  Kautokeino       79.50 339  eP    P      23 53 19.3 +1.2
JAVC  Velka Javorina   79.53 319  eP    P      23 53 19.5 +0.7
BLY   Banja Luka       79.63 314  eP    P      23 53 19.0 -0.4
          comp=Z,38nm,1.3s
BLY   Banja Luka       79.63 314⇓iP     P      23 53 19.5 +0.2
MORC  Moravsky Berou   79.67 319⇑iP     P      23 53 20.0 +0.5
MORC  Moravsky Berou   79.67 319 ⇑P     P      23 53 20.1 +0.5
MORC  Moravsky Berou   79.67 319  eP    P      23 53 19.6 +0.1
HAMF  Hammerfest       79.71 341  eP    P      23 53 19.5 +0.3
TIP   Timpagrande      79.76 309  eP    P      23 53 20.2  0.0
          comp=Z,26nm,1.3s
TIP   Timpagrande      79.76 309⇓iP     P      23 53 20.1 -0.1
MODS  Modra-Piesok     79.76 318  eP    P      23 53 19.2 -0.8
MODS                              pmax  pmax
          comp=Z,30nm,1.3s
MODS  Modra-Piesok     79.76 318  eP    P      23 53 19.2 -0.8
ZST   Bratislava       79.86 318  eP    P      23 53 19.9 -0.6
ZST   Bratislava       79.86 318  eP    P      23 53 19.9 -0.6
BEHE  Becsehely        80.00 316⇑iP     P      23 53 22.0 +0.7
GKP   Gorka Klasztor   80.11 323  eP    P      23 53 21.9 +0.2
GKP                               epP   PcP    23 53 26.6 -2.4
GKP   Gorka Klasztor   80.11 323  eP    P      23 53 21.9 +0.2
SOP   Sopron           80.20 317⇑eP     P      23 53 22.0 -0.3
VRAC  Vranov           80.26 319⇑iP     P      23 53 23.5 +0.8
VRAC  Vranov           80.26 319 ⇑P     P      23 53 23.5 +0.8
VRAC  Vranov           80.26 319  eP    P      23 53 22.6 -0.1
KRUC  Moravsky         80.38 319  eP    P      23 53 23.0 -0.3
DPC   Dobruska-Polom   80.49 320  eP    P      23 53 24.0 +0.1
DPC                               MLR   MLR
          comp=Z,100nm,22.4s
DPC   Dobruska-Polom   80.49 320  eP    P      23 53 24.0 +0.1
DPC                               ePCP  PcP    23 53 28.5 -2.3
DPC                               AMS   AMS    00 37 10.0
          comp=Z,100nm,22.4s
KSP   Ksiaz            80.54 321  eP    P      23 53 24.6 +0.5
KSP                               epP   PcP    23 53 28.7 -2.3
KSP   Ksiaz            80.54 321  eP    P      23 53 24.6 +0.5
OSTC  Ostas            80.57 320  eP    P      23 53 24.3  0.0
OSTC                              ex    x      23 53 31.3
OSTC                              AMS   AMS    00 41 50.0
          comp=Z,200nm,19.9s
CHVC  Chvalec          80.67 320  eP    P      23 53 25.0 +0.1
CHVC                              ex    x      23 53 28.9
CHVC                              ex    x      23 53 39.2
CHVC                              AMS   AMS    00 42 00.0
          comp=Z,200nm,20.6s
CONA  Conrad Observa   80.68 318  eP    P      23 53 24.8 -0.3
          comp=Z,11nm,1.2s,SNR=5.7
UPC   Upice            80.70 320  eP    P      23 53 25.2 +0.2
UPC                               MLR   MLR
          comp=Z,100nm,15.6s
UPC   Upice            80.70 320  eP    P      23 53 25.2 +0.2
UPC                               ePCP  PcP    23 53 29.4 -2.3
UPC                               AMS   AMS    00 42 00.0
          comp=Z,100nm,15.6s
GCIS  Gornji Cirnik    80.77 315  i P   P      23 53 25.5  0.0
ARSA  Arzberg          80.89 317  eP    P      23 53 26.3 +0.2
          comp=Z,23nm,1.3s,SNR=6.8
TREC  Trest            80.98 319  eP    P      23 53 26.4 -0.2
TREC                              MLR   MLR
          comp=Z,100nm,18.8s
TREC  Trest            80.98 319  eP    P      23 53 26.4 -0.2
TREC                              ePCP  PcP    23 53 32.0 -1.0
TREC                              ex    x      23 53 47.3
TREC                              AMS   AMS    00 34 00.0
          comp=Z,100nm,18.8s
TRO   Tromso           81.11 340  eP    P      23 53 27.4 +0.7
SOKA  Soboth           81.21 316  eP    P      23 53 28.1 +0.3
          comp=Z,26nm,1.2s,SNR=11
GOPC  GO Pecny, Ondr   81.46 320  eP    P      23 53 29.2 +0.1
GOPC  GO Pecny, Ondr   81.46 320  eP    P      23 53 29.2 +0.1
OBKA  Obir             81.54 316  eP    P      23 53 29.7  0.0
          comp=Z,19nm,1.4s,SNR=7.0
LJU   Ljubljana        81.54 316  i P   P      23 53 29.8 +0.2
BSD   Bornholm Skovb   81.58 325⇑iP     P      23 53 29.2 -0.3
BSD                               pmax  pmax
          comp=Z,26nm,0.8s
BSD   Bornholm Skovb   81.58 325⇑iP     P      23 53 29.2 -0.3
          comp=Z,26nm,0.8s
PVCC  Panska Ves       81.62 320  eP    P      23 53 30.1 +0.2
PVCC                              e            23 53 48.2
PVCC                              MLR   MLR
          comp=Z,100nm,21.3s
PVCC  Panska Ves       81.62 320  eP    P      23 53 30.1 +0.2
PVCC                              ePCP  PcP    23 53 35.3 -0.4
PVCC                              ex    x      23 53 48.2
PVCC                              AMS   AMS    00 34 00.0
          comp=Z,100nm,21.3s
PRU   Pruhonice        81.62 320  eP    P      23 53 29.9  0.0
PRU                               MLR   MLR
          comp=Z,100nm,18.3s
PRU   Pruhonice        81.62 320  eP    P      23 53 29.9  0.0
PRU                               ePCP  PcP    23 53 35.3 -0.4
PRU                               AMS   AMS    00 42 40.0
          comp=Z,100nm,18.3s
MOA   Molln            81.75 317  eP    P      23 53 30.2 -0.4
          comp=Z,16nm,1.3s,SNR=12
BRG   Berggiesshubel   82.03 320  i P   P      23 53 32.6 +0.6
          comp=Z,52nm,1.2s
BRG                               PP    PP     23 56 39.7 -0.2
          comp=Z,5.8nm,1.3s
BRG                               S     S      00 03 46.0 +1.5
BRG                               SS    SS     00 09 06.0 +2.3
BRG                               ePKKP PKKPdf 00 11 47.1 -6.2
          comp=Z,2.7nm,1.1s
          comp=N,62nm,16.5s
          comp=E,131nm,18.6s
          comp=Z,125nm,18.5s
BRG   Berggiesshubel   82.03 320  i P   P      23 53 32.6 +0.6
BRG                                            23 56 39.7
BRG                               S     S      00 03 46.0 +1.5
BRG                               SS    SS     00 09 06.0 +2.3
BRG                               pmax  pmax
          comp=Z,52nm,1.2s
BRG                               pmax  pmax
          comp=Z,6.0nm,1.3s
BRG                               pmax  pmax
          comp=Z,3.0nm,1.1s
BRG                               MLR   MLR
          comp=N,62nm,16.5s
BRG                               MLR   MLR
          comp=E,131nm,18.6s
BRG                               MLR   MLR
          comp=Z,125nm,18.5s
CADS  Cadrg            82.10 316  i P   P      23 53 32.0 -0.6
GERES GERESS Array B   82.15 318  P     P      23 53 32.7 -0.1
          comp=Z,10nm,1.1s,baz=90,slow=6.7,SNR=59
GERES                             LR    LR     00 35 22.0
          comp=Z,84nm,19.7s,baz=97,slow=40
MYKA  Terra Mystica    82.17 316  eP    P      23 53 32.7 -0.2
          comp=Z,12nm,1.5s,SNR=5.1
KHC   Kasperske Hory   82.23 319  eP    P      23 53 32.9 -0.2
          comp=Z,4.9nm,1.3s
KHC   Kasperske Hory   82.23 319  eP    P      23 53 32.9 -0.2
KHC                               pmax  pmax
          comp=Z,5.0nm,1.3s
KHC   Kasperske Hory   82.23 319  eP    P      23 53 33.0 -0.2
KHC                               AMS   AMS    00 44 20.0
          comp=Z,100nm,18.4s
STEI  Steigen          82.25 338  eP    P      23 53 33.4 +0.6
KBA   Koelnbreinsper   82.37 317  eP    P      23 53 33.4 -0.7
          comp=Z,15nm,1.3s
CLL   Collm            82.63 321⇑iP     P      23 53 35.0 -0.1
CLL                               pmax  pmax
          comp=Z,31nm,1.1s
CLL   Collm            82.63 321⇑iP     P      23 53 35.0 -0.1
          comp=Z,31nm,1.1s
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CLL                               i PcP PcP    23 53 40.2 +0.1
CLL                               ePP   PP     23 56 43.0 -1.8
CLL                               Lm    MLR    00 33 00.0
          comp=Z,100nm,21.3s
TSUM  Tsumeb           82.70 250  eP    P      23 53 36.3  0.0
          comp=Z,20nm,1.0s
LOF   Lofoten          82.90 338  eP    P      23 53 36.0 -0.2
ADK   Adak             82.92  39  eP    P      23 53 36.4 -0.2
          comp=Z,91nm,1.1s
ADK   Adak             82.92  39  eP    P      23 53 36.4 -0.2
ADK                               pmax  pmax
          comp=Z,91nm,1.1s
ABTA  Abfaltersbach    82.94 316  eP    P      23 53 36.1 -0.9
          comp=Z,12nm,1.2s
NKC   Novy Kostel      82.97 320  eP    P      23 53 36.8 -0.2
NKC                               MLR   MLR
          comp=Z,200nm,16.7s
NKC   Novy Kostel      82.97 320  eP    P      23 53 36.8 -0.2
NKC                               AMS   AMS    00 43 30.0
          comp=Z,200nm,16.7s
KONS  Konsvik          82.98 336  eP    P      23 53 37.5 +0.9
SPA0  Spitsbergen Ar   82.99 348  eP    P      23 53 37.2 +0.7
HSPB  Hornsund (broa   83.03 347  eP    P      23 53 36.2 -0.5
NSS   Namsos           83.40 334  eP    P      23 53 39.8 +1.0
NC602 NORSAR Array S   83.53 330  eP    P      23 53 39.7 +0.1
WTTA  Wattenberg       83.54 317  eP    P      23 53 39.2 -1.0
          comp=Z,12nm,0.9s,SNR=5.2
WATA  Walderalm        83.58 317  eP    P      23 53 39.4 -0.9
          comp=Z,8.0nm,0.8s
NC303 NORSAR Array S   83.62 331  eP    P      23 53 40.3 +0.2
          comp=Z,123nm,1.2s
WIN   Windhoek         83.64 247  eP    P      23 53 41.1  0.0
          comp=Z,27nm,0.9s
WIN   Windhoek         83.64 247  eP    P      23 53 41.2  0.0
WIN                               pmax  pmax
          comp=Z,27nm,0.9s
NB2   NORSAR Subarra   83.70 331  P     P      23 53 38.4 -2.1
          comp=Z,50nm,0.9s,baz=93,slow=5.1
NB2   NORSAR Subarra   83.70 331  P     P      23 53 38.4 -2.1
          baz=93,slow=5.1
NOA   NORSAR Array B   83.70 331  P     P      23 53 37.7 -2.8
          comp=Z,30nm,0.9s,baz=90,slow=5.5,SNR=94
NOA                               LR    LR     00 34 10.2
          comp=Z,201nm,21.8s,baz=95,slow=38
SQTA  Sankt Quirin     83.83 317  eP    P      23 53 40.9 -0.7
          comp=Z,18nm,1.3s,SNR=7.0
NAO01 NORSAR Array S   83.86 331  eP    P      23 53 41.5 +0.2
          comp=Z,84nm,0.9s
MOTA  Moosalm          83.90 317  eP    P      23 53 41.1 -0.9
          comp=Z,13nm,1.0s
OSL   Oslo             83.94 330  eP    P      23 53 42.8 +1.2
RETA  Reutte           84.12 317  eP    P      23 53 42.5 -0.5
          comp=Z,16nm,1.0s,SNR=11
TBLU  Trondheim        84.14 333  eP    P      23 53 43.5 +0.9
FETA  Feichten         84.16 317  eP    P      23 53 42.9 -0.4
          comp=Z,14nm,1.3s,SNR=6.0
SYO   Syowa Base       84.22 198⇓eX     P      23 53 41.0 -1.8
SYO   Syowa Base       84.22 198⇓ePcP   PcP    23 53 46.8 +0.2
KONO  Kongsberg        84.51 329  eP    P      23 53 44.9 +0.2
          comp=Z,71nm,1.1s
KONO  Kongsberg        84.51 329ceP     P      23 53 45.6 +1.0
KONO                              pmax  pmax
          comp=Z,85nm,1.3s
KONO  Kongsberg        84.51 329  eP    P      23 53 45.1 +0.5
DOMB  Dombas           84.72 332  eP    P      23 53 46.0 +0.4
DAVA  Damuels          84.73 317  eP    P      23 53 45.9 -0.3
          comp=Z,24nm,1.4s,SNR=8.8
MUD   Monsted U'grnd   84.83 326⇑iP     P      23 53 47.4 +1.1
MUD                               pmax  pmax
          comp=Z,71nm,0.9s
MUD   Monsted U'grnd   84.83 326⇑iP     P      23 53 47.4 +1.1
          comp=Z,71nm,0.9s
SKAR  Skarslia         85.13 330  eP    P      23 53 49.1 +1.4
MOL   Molde            85.40 332  eP    P      23 53 49.9 +0.9
AKN   Aaknes           85.68 332  eP    P      23 53 51.1 +0.6
KEST  Kesra            85.72 305  P     P      23 53 48.6 -2.7
          comp=Z,10.0nm,0.8s,baz=42,slow=2.5,SNR=13
KEST                              LR    LR     00 37 20.2
          comp=Z,59nm,19.4s,baz=266,slow=39
BFO   Black Forest     85.72 318  eP    P      23 53 50.5 -0.5
          comp=Z,6.1nm,1.0s
BFO   Black Forest     85.72 318  eP    P      23 53 50.5 -0.5
BFO                               pmax  pmax
          comp=Z,6.0nm,1.0s
SNART Snartemo         85.80 328  eP    P      23 53 52.2 +1.1
ODD1  Odda             86.00 330  eP    P      23 53 53.5 +1.3
BLS5  Blasjo           86.12 329  eP    P      23 53 53.6 +0.9
HYA   Hoyanger         86.13 331  eP    P      23 53 54.1 +1.5
BER   Bergen           86.61 330  eP    P      23 53 56.0 +1.0
ASK   Askoy            86.67 330  eP    P      23 53 56.3 +1.0
KMY   Karmoy           86.76 329  eP    P      23 53 57.0 +1.2
SUE   Sulen            86.83 331  eP    P      23 53 56.3 +0.2
WLF   Walferdange      87.06 319  eP    P      23 53 57.9 +0.4
          comp=Z,160nm,1.4s
WLF   Walferdange      87.06 319  eP    P      23 53 57.9 +0.4
WLF                               pmax  pmax
          comp=Z,160nm,1.4s
WLF   Walferdange      87.06 319 ⇑P     P      23 53 58.7 +1.2
          comp=Z,20nm,1.8s
MEM   Membach          87.07 320 ⇓P     P      23 53 58.1 +0.6
BEBN  Eben Emael       87.26 321 ⇓P     P      23 53 59.3 +0.9
BCLA  Clavier          87.54 320 ⇓P     P      23 54 00.3 +0.5
          comp=Z,18nm,1.7s
DOU   Dourbes          88.02 320 ⇓P     P      23 54 02.2 +0.1
VNDA  Vanda            89.80 169  P     P      23 54 08.2 -1.6
          comp=Z,1.1nm,0.7s,baz=316,slow=7.0,SNR=9.6
VNDA                              LR    LR     00 32 33.7
          comp=Z,139nm,18.1s,baz=314,slow=34
VNDA  Vanda            89.80 169  eP    P      23 54 09.8  0.0
          comp=Z,12nm,1.0s
VNDA  Vanda            89.80 169  eP    P      23 54 09.8  0.0
VNDA                              pmax  pmax
          comp=Z,12nm,1.0s
DAG   Danmarks Havn    90.64 348⇑iP     P      23 54 13.4 -0.5
DAG                               pmax  pmax
          comp=Z,8.0nm,0.8s
DAG   Danmarks Havn    90.64 348⇑iP     P      23 54 13.4 -0.5
          comp=Z,11nm,0.8s
SBA   Scott Base       90.89 169  eP    P      23 54 15.7 +0.8
          comp=Z,18nm,1.1s
SBA   Scott Base       90.89 169  eP    P      23 54 15.7 +0.8
SBA                               pmax  pmax
          comp=Z,18nm,1.1s
ESK   Eskdalemuir      91.88 326  eP    P      23 54 20.3 +0.3
          comp=Z,29nm,1.0s
ESK   Eskdalemuir      91.88 326  eP    P      23 54 20.3 +0.3
ESK                               pmax  pmax
          comp=Z,29nm,1.0s
MLY   Manley           93.94  23  eP    P      23 54 29.9 +0.5
          comp=Z,9.5nm,0.8s
TORD  Torodi Ar. Bea   94.83 284  P     P      23 54 32.3 -2.1
          comp=Z,3.6nm,1.0s,baz=54,slow=6.7,SNR=12
TORD                              PP    PP     23 58 25.4 +2.0
          comp=Z,2.0nm,1.1s,baz=57,slow=5.5,SNR=3.7
TORD                              PKKPbc PKKPbc 00 11 29.8 -0.9
          comp=Z,0.2nm,0.5s,baz=294,slow=2.6,SNR=4.8
TORD                              LR    LR     00 36 49.2
          comp=Z,140nm,19.1s,baz=5.0,slow=35
QSPA  South Pole Qui   95.34 180  eP    P      23 54 36.2 +0.4
          comp=Z,5.2nm,0.8s
ILAR  Eielson Array    95.55  23  P     P      23 54 35.6 -1.1
          comp=Z,1.5nm,0.9s,baz=296,slow=4.2,SNR=11
ILAR                              PP    PP     23 58 22.4 -5.1
          comp=Z,0.8nm,0.9s,baz=291,slow=6.2,SNR=4.3
ILAR                              PKKPbc PKKPdf 00 11 26.9 -3.3
          comp=Z,0.3nm,0.6s,baz=146,slow=1.7,SNR=4.6
ESDC  Sonseca Array    95.66 311  P     P      23 54 36.0 -1.9
          comp=Z,1.1nm,0.7s,baz=64,slow=4.7,SNR=7.7
ESDC                              LR    LR     00 42 18.5
          comp=Z,51nm,18.8s,baz=175,slow=38
HDA   Harding Lake     95.68  23  P     P      23 54 36.5 -0.8
          baz=295
SUMG  Summit           97.33 348  eP    P      23 54 45.1  0.0
          comp=Z,30nm,1.5s
SUMG  Summit           97.33 348  eP    P      23 54 44.7 -0.4
SUMG                              pmax  pmax
          comp=Z,92nm,1.6s
SUMG  Summit           97.33 348  i P   P      23 54 44.7 -0.4
          comp=Z,92nm,1.6s
BOZ   Bozeman (W)     122.76  24  P     PKPdf  00 00 08.1 -0.1
          baz=324
HLID  Hailey          123.16  28  P     PKPdf  00 00 08.9 -0.1
          baz=320
CHGQ  Chibougamau     124.49 354  P     PKiKP  00 00 11.3 -0.2
          baz=9.2
NVAR  Mina Array Bea  124.93  34  PKP   PKPdf  00 00 11.5 -1.1
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	comp=Z,2.5nm,0.9s,baz=324,slow=2.5,SNR=10.0						
NVAR				PKKPbc	**PKKPab**	**00 09 53.0**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=111,slow=3.7,SNR=5.0						
PDAR	**Pinedale Array**	**125.93**	**25**	PKP	**PKPdf**	**00 00 12.5**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=270,slow=0.3,SNR=5.0						
PDAR				PP	**PP**	**00 02 06.3**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=309,slow=3.1,SNR=4.4						
EYMN	**Ely**	**126.21**	**8**	P	**PKPdf**	**00 00 14.5**	**0.0**
	baz=348						
R11A	**Troy Canyon, C**	**126.48**	**33**	*e*PKPdf	**PKiKP**	**00 00 16.1**	**+0.1**
R11A	**Troy Canyon, C**	**126.48**	**33**	P	**PKiKP**	**00 00 16.4**	**+0.4**
	baz=317						
DUG	**Dugway, Tooele**	**126.52**	**29**	*e*PKPdf	**PKPdf**	**00 00 15.2**	**-0.3**
DUG	**Dugway, Tooele**	**126.52**	**29**	*e*PKIKP	**PKPdf**	**00 00 15.2**	**-0.3**
DUG	**Dugway, Tooele**	**126.52**	**29**	P	**PKPdf**	**00 00 15.7**	**+0.2**
	baz=321						
MPMC	**Manual Prospec**	**127.04**	**36**	P	**PKPdf**	**00 00 16.7**	**0.0**
	baz=314						
BLG	**Laguna Peak, P**	**127.40**	**39**	P	**PKPdf**	**00 00 16.9**	**-0.3**
	baz=311						
D54A	**Lac Fusel, La**	**127.43**	**355**	P	**PKiKP**	**00 00 17.8**	**+0.4**
	baz=6.7						
E38A	**The Farm, Brul**	**127.52**	**8**	P	**PKiKP**	**00 00 17.8**	**+0.2**
	baz=348						
D53A	**Lac Vacive, Po**	**127.58**	**356**	P	**PKPdf**	**00 00 15.5**	**-1.6**
	baz=5.4						
D48A	**Paudash Townsh**	**127.63**	**360**	P	**PKPdf**	**00 00 15.8**	**-1.5**
	baz=0.3						
D51A	**Lot 18 Range I**	**127.66**	**358**	P	**PKiKP**	**00 00 17.8**	**0.0**
	baz=3.3						
D52A	**ZEK Kipawa Sen**	**127.73**	**357**	P	**PKPdf**	**00 00 15.8**	**-1.7**
	baz=4.5						
D46A	**Sault St. Mari**	**127.88**	**2**	P	**PKPdf**	**00 00 15.1**	**-2.6**
	baz=358						
GSC	**Goldstone, Bar**	**127.97**	**36**	P	**PKPdf**	**00 00 17.6**	**-0.8**
	baz=314						
E48A	**Lockeyer**	**128.32**	**0**	P	**PKPdf**	**00 00 18.0**	**-0.6**
	baz=360						
ALGO	**Algonquin Park**	**128.72**	**356**	P	**PKPdf**	**00 00 17.7**	**-1.7**
	baz=5.1						
F52A	**Sundridge**	**128.95**	**358**	P	**PKPdf**	**00 00 19.5**	**-0.3**
	baz=3.5						
GMRC	**Granite Mounta**	**129.00**	**36**	P	**PKiKP**	**00 00 21.1**	**+0.1**
	baz=315						
BANO	**Bancroft**	**129.65**	**356**	P	**PKiKP**	**00 00 21.6**	**-0.3**
	baz=5.3						
U15A	**North Rim**	**129.66**	**32**	*e*PKPdf	**PKPdf**	**00 00 21.7**	**-0.1**
DELO	**Deloro Mine**	**130.12**	**356**	P	**PKPdf**	**00 00 21.6**	**-0.5**
	baz=5.7						
WVT	**Waverly**	**138.31**	**7**	*e*PKPpre	PKPpre	00 00 27.3	
WVT	**Waverly**	**138.31**	**7**	*e*PKHKP	PKPpre	00 00 27.3	
TXAR	**Lajitas Array**	**139.69**	**30**	PP	PP	00 03 38.4	+3.7
	comp=Z,0.7nm,0.8s,baz=359,slow=5.4,SNR=3.8						
PAULI	**Pauline**	**139.97**	**360**	*e*PKPdf	**PKPdf**	**00 00 40.5**	**-0.2**
BDFB	**Brasilia**	**145.07**	**250**	PKPbc	**PKPbc**	**00 00 47.0**	**-2.8**
	comp=Z,16nm,0.8s,baz=82,slow=4.9,SNR=20						
BDFB	**Brasilia**	**145.07**	**250**	*e*PKPbc	**PKPbc**	**00 00 47.0**	**-2.8**
BDFB				*e*PKPbc	**PKPdf**	**00 00 50.0**	**-0.3**
BDFB	**Brasilia**	**145.07**	**250**	*e*PKP2	**PKPbc**	**00 00 47.0**	**-2.8**
BDFB				*e*		00 00 50.0	
658A	**Bunnell**	**145.34**	**359**	*e*PKPbc	**PKPdf**	**00 00 51.0**	**+0.6**
LNIG	**Linares**	**145.43**	**29**	*e*PKPdf	**PKPbc**	**00 00 50.5**	**-0.1**
ZAIG	**Zacatecas**	**145.55**	**35**	*e*PKPdf	**PKPab**	**00 00 52.9**	**+1.3**
CPUP	**Villa Florida**	**148.53**	**226**	PKPbc	**PKPbc**	**00 00 58.1**	**-1.2**
	comp=Z,13nm,0.8s,baz=84,slow=1.7,SNR=18						
CPUP	**Villa Florida**	**148.53**	**226**	*e*PKPbc	**PKPbc**	**00 00 59.0**	**-0.3**
CPUP	**Villa Florida**	**148.53**	**226**	*e*PKP2	**PKPbc**	**00 00 59.0**	**-0.3**
CCIG	**Comitan**	**156.24**	**25**	*e*PKPab	**PKPab**	**00 01 36.1**	**+0.7**
LVC	**Limon Verde**	**158.70**	**215**	*e*PKPab	**PKPab**	**00 01 47.2**	**+1.1**
LVC	**Limon Verde**	**158.70**	**215**	*e*PKP2	**PKPab**	**00 01 47.2**	**+1.1**
GO01	**Chusmiza**	**161.09**	**220**	*e*PKPab	**PKPab**	**00 01 57.1**	**+0.4**
LPAZ	**La Paz**	**162.58**	**231**	PKP	**PKPdf**	**00 01 13.2**	**-2.2**
	comp=Z,2.2nm,0.9s,baz=318,slow=1.5,SNR=9.3						
LPAZ				PKPab	**PKPab**	**00 02 02.8**	**-0.8**
	comp=Z,12nm,0.8s,baz=74,slow=4.9,SNR=28						
LPAZ	**La Paz**	**162.58**	**231**	*e*PKPdf	**PKPdf**	**00 01 14.9**	**-0.6**
LPAZ				*e*PKPab	**PKPab**	**00 02 03.8**	**+0.2**
LPAZ	**La Paz**	**162.58**	**231**	*e*PKIKP	**PKPdf**	**00 01 14.9**	**-0.6**
ROSC	**El Rosal**	**167.20**	**323**	PKPab	**PKPab**	**00 02 23.4**	**-0.2**
	comp=Z,11nm,0.7s,baz=38,slow=9.6,SNR=7.8						

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*GCG **16** 23:47:46.6±0.3, 13°.79N×91°.52W, h5^{km}±999^{km}, MD3.5*
*MEX **16** 23:47:51.6±0.3, 13°.84N×91°.95W, h22^{km}±48^{km}, MD3.8*
ISC 16 23:47:46.0±2.9**, 13°.9N**±0°.2×**91°.64W**±0°.06**, h14**^{km}±12^{km}**, n8, σ1.^{s}23**/14**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.80**	**5**	*e*P	**Pn**	**23 48 04.3**	**+1.2**
FUG	**Fuego 3**	**0.94**	**55**	*e*P	**Pb**	**23 48 04.4**	**+0.1**
FUG				*e*S	**Sg**	**23 48 16.0**	**-0.7**
PCG	**Pacaya**	**1.11**	**64**	*e*P	**Pb**	**23 48 07.1**	**-0.1**
THIG		**1.17**	**329**	*e*P	**Pg**	**23 48 08.8**	**+0.3**
THIG				*e*S	**Sb**	**23 48 21.9**	**-1.0**
NBG	**Las Nubes**	**1.43**	**61**	*e*P	**Pn**	**23 48 12.3**	**+0.5**
NBG				*e*S	**Sn**	**23 48 29.5**	**-1.0**
PCIG		**2.35**	**320**	*e*P	**Pn**	**23 48 24.9**	**+0.7**
PCIG				*i* S	**Sn**	**23 48 50.8**	**-2.1**
CCIG	**Comitan**	**2.41**	**349**	*e*P	**Pb**	**23 48 28.7**	**-0.6**
CCIG				*i* S	**Sn**	**23 48 56.5**	**+1.8**
TGIG		**3.19**	**334**	*e*P	**Pn**	**23 48 37.3**	**+1.4**
TGIG				*i* S	**Sn**	**23 49 13.4**	**-0.4**

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*IDC **16** 23:51:44.7±0.9, 29°.34N×95°.17E, h0^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.5/40, mbtmp3.6/8, Error ellipse: s-maj=45.5km s-min=17.9km az=60.0*
*ISCJB **16** 23:51:48.0±0.8, 29°.4N±0°.1×95°.22E±0°.06, h33^{km}, mb3.7/6, Error ellipse: s-maj=15.6km s-min=6.8km az=162.2*
ISC 16 23:51:50.2±1.1**, 29°.5N**±0°.1×**95°.29E**±0°.09**, h35**^{km}**, n13, σ1.^{s}19**/15**, mb3.6**/6**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKI	**Pulchoki**	**8.90**	**260**	*e*P	**Pn**	**23 53 58.5**	**+1.9**
	7.3nm,0.3s						
PKI				*e*S	**Sn**	**23 55 34.9**	**-0.9**
PKIN	**Phulchoki**	**8.91**	**260**	*e*P	**Pn**	**23 53 58.5**	**+1.8**
	9.1nm,0.3s						
PKIN				*e*S	**Sn**	**23 55 34.9**	**-1.1**
KKN	**Kakani**	**8.96**	**262**	*e*P	**Pn**	**23 53 58.7**	**+1.4**
	7.9nm,0.3s						
DMN	**Daman**	**9.15**	**261**	*e*S	**Sn**	**23 55 41.4**	**-0.5**
GKN	**Gorkha**	**9.47**	**264**	*e*S	**Sn**	**23 55 48.0**	**-1.5**
MKAR	**Makanchi Array**	**20.03**	**333**	P	**Pn**	**23 56 21.2**	**-0.8**
	0.6nm,0.5s,baz=137,slow=12,SNR=6.7						
SONM	**Songino Array**	**20.23**	**22**	P	**P**	**23 56 22.5**	**+0.1**
	0.7nm,0.4s,baz=203,slow=14,SNR=4.0						
KURBB	**Kurchatov Arra**	**24.59**	**334**	P	**P**	**23 57 08.2**	**+1.3**
	0.3nm,0.4s,baz=164,slow=10,SNR=3.5						
ZALV	**Zalesovo Beam**	**25.60**	**346**	P	**P**	**23 57 16.6**	**+0.5**
	0.7nm,0.4s,baz=164,slow=9.5,SNR=4.1						
NOA	**NORSAR Array B**	**61.86**	**327**	P	**P**	**00 02 05.4**	**-0.3**
	0.2nm,0.6s,baz=80,slow=6.6,SNR=2.2						
WRA	**Warramunga Arr**	**61.91**	**138**	P	**P**	**00 02 06.2**	**-0.3**
	1.7nm,0.6s,baz=324,slow=7.2,SNR=14						
ASAR	**Alice Springs**	**64.59**	**141**	P	**P**	**00 02 23.9**	**-0.3**
	1.2nm,0.4s,baz=324,slow=6.4,SNR=15						
TORD	**Torodi Ar. Bea**	**86.71**	**283**	P	**P**	**00 04 30.1**	**-0.9**
	0.3nm,0.8s,baz=77,slow=2.3,SNR=2.2						

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*IDC **17** 00:29:52.6±1.0, 31°.62N×83°.23E, h0^{km}, mb3.7/10, mb1 3.9/13, mb1mx3.6/50, mbtmp3.8/13, ML3.7/3, MS3.2/2, Ms1 3.3/2, ms1mx2.8/30, Error ellipse: s-maj=29.2km s-min=18.2km az=52.0*
*ISCJB **17** 00:29:55.7±0.8, 31°.7N±0°.1×83°.3E±0°.1, h33^{km}, mb3.7/10, MS3.2/1, Error ellipse: s-maj=20.0km s-min=12.6km az=143.8*
ISC 17 00:29:57.9±1.0**, 31°.7N**±0°.1×**83°.3E**±0°.2**, h35**^{km}**, n14, σ0.^{s}48**/14**, mb3.6**/10**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.09**	**357**	Pn	**Pn**	**00 33 27.8**	**-0.7**
	0.1nm,0.3s,baz=183,slow=14,SNR=5.7						
KURBB	**Kurchatov Arra**	**19.23**	**351**	P	**P**	**00 34 18.7**	**-0.3**
	0.0nm,0.3s,baz=173,slow=10,SNR=22						
CMAR	**Chiang Mai Arr**	**19.34**	**129**	P	**P**	**00 34 20.3**	**-0.1**
	0.7nm,0.3s,baz=314,slow=9.4,SNR=6.3						
CMAR				LR	LR	00 42 10.1	
	comp=Z,56nm,19.8s,baz=318,slow=38						
GEYT	**Alibeck**	**21.54**	**294**	P	**P**	**00 34 44.6**	**+0.5**
	3.1nm,1.0s,baz=109,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**22.26**	**2**	P	**P**	**00 34 51.1**	**-0.6**
	1.0nm,0.5s,baz=179,slow=11,SNR=6.5						
BVAR	**Borovoye Array**	**23.27**	**340**	P	**P**	**00 35 02.4**	**+0.2**
	0.6nm,0.7s,baz=157,slow=7.9,SNR=5.3						
SONM	**Songino Array**	**23.85**	**41**	P	**P**	**00 35 09.0**	**+1.0**
	0.6nm,0.6s,baz=219,slow=13,SNR=3.8						
AKTO	**Aktyubinsk**	**26.49**	**322**	P	**P**	**00 35 32.1**	**+0.2**
	0.7nm,0.5s,baz=180,slow=9.1,SNR=3.0						
FINES	**FINESS Array B**	**47.12**	**327**	P	**P**	**00 38 26.3**	**+0.1**
	2.4nm,0.9s,baz=43,slow=8.6,SNR=4.2						
ARCES	**ARCESS Array B**	**49.51**	**337**	P	**P**	**00 38 44.7**	**+0.1**
	2.9nm,0.9s,baz=101,slow=8.3,SNR=3.9						
NB2	**NORSAR Subarra**	**54.23**	**325**	P	**P**	**00 39 20.1**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=89,slow=7.4						
NOA	**NORSAR Array B**	**54.23**	**325**	P	**P**	**00 39 20.2**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=87,slow=7.4,SNR=5.4						
NOA				LR	LR	01 02 28.2	
	comp=Z,22nm,19.5s,baz=5.0,slow=36						
ASAR	**Alice Springs**	**73.32**	**132**	P	**P**	**00 41 25.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=324,slow=6.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**76.13**	**277**	P	**P**	**00 41 42.2**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=47,slow=4.6,SNR=5.8						

IDC 17 00:34:32.7±1.6**, 12°.62N×143°.77E, h0**^{km}**, mb3.8**/4**, mb1 4.2**/4**, mb1mx3.6**/37**, mbtmp3.8**/4**, MS3.2**/2**, Ms1 3.3**/2**, ms1mx2.7**/33**, Error ellipse: s-maj=90.6km s-min=17.3km az=124.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.44**	**48**	Pn	Pn	00 34 59.9	-0.2
	68nm,0.3s,baz=225,slow=2.4,SNR=22						
GUMO				Sn	Sg	00 35 18.9	-0.3
	71nm,0.3s,baz=18,slow=20,SNR=16						
H11S3	**WAKE ISLAND Hy**	**22.83**	**72**	T	T	01 03 19.6	
	baz=258,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**22.84**	**72**	T	T	01 03 21.0	
	baz=258,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**22.84**	**72**	T	T	01 03 25.2	
	baz=258,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**23.29**	**69**	T	T	01 03 54.8	
	baz=255,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**23.29**	**69**	T	T	01 04 00.8	
	baz=255,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**23.30**	**69**	T	T	01 03 53.9	
	baz=255,slow=75,SNR=8.0						
ASAJ	**Asahikawa**	**31.41**	**358**	LR	LR	00 53 53.5	
	comp=Z,79nm,19.8s,baz=7.5,slow=37						
WRA	**Warramunga Arr**	**33.66**	**196**	P	P	00 41 14.9	-0.6
	2.1nm,0.5s,baz=15,slow=8.3,SNR=22						
ASAR	**Alice Springs**	**37.33**	**195**	P	P	00 41 46.9	-0.1
	0.6nm,0.7s,baz=18,slow=12,SNR=6.6						
CMAR	**Chiang Mai Arr**	**43.49**	**284**	LR	LR	01 00 12.4	
	comp=Z,20nm,20.8s,baz=155,slow=35						
ILAR	**Eielson Array**	**69.90**	**25**	P	P	00 45 45.8	+0.4
	0.2nm,0.4s,baz=246,slow=6.7,SNR=3.1						
NVAR	**Mina Array Bea**	**88.36**	**51**	P	P	00 47 27.9	+0.7
	0.4nm,0.5s,baz=273,slow=5.6,SNR=4.6						

SVSA 17 00:46:22.0±1.0**, 38°.62N×29°.09W, h9**^{km}±8^{km}**, MD3.5, ML1.5, Error ellipse: s-maj=13.8km s-min=6.6km az=18.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.30**	**88**	*e*P	Pg	00 46 27.1	-1.0
PCED				*e*S	Sg	00 46 31.5	-0.6
PCED				A	A	00 46 33.1	
	15nm,0.1s						
CALA	**Caldeira**	**0.31**	**97**	*e*P	Pg	00 46 27.6	-0.5
HOR	**Horta**	**0.37**	**104**	*e*P	Pg	00 46 28.9	-0.4
HOR				*e*S	Sg	00 46 33.0	-1.2
HOR				A	A	00 46 34.3	
	33nm,0.3s						
PCAN	**Candelaria**	**0.50**	**108**	*e*P	Pg	00 46 30.2	-1.5
PCAN				*e*S	Sg	00 46 36.8	-1.5
PCAN				A	A	00 46 39.0	
	17nm,0.5s						
PICO	**Pico**	**0.53**	**102**	*e*P	Pg	00 46 30.9	-1.5
PICO				*e*S	Sg	00 46 37.8	-1.6
PICO				A	A	00 46 39.3	
	22nm,0.3s						

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*IDC **17** 00:50:51.2±0.7, 34°.46N×85°.83E, h0^{km}, mb3.8/13, mb1 4.0/17, mb1mx3.8/43, mbtmp3.9/17, ML3.3/3, Error ellipse: s-maj=23.0km s-min=14.4km az=40.0*
*NEIC **17** 00:50:53.2±1.8, 34°.58N×86°.00E, h10^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=14.6km s-min=5.5km az=183.0*
*ISCJB **17** 00:50:54.3±0.3, 34°.64N±0°.04×86°.04E±0°.07, h33^{km}, mb3.8/16, Error ellipse: s-maj=8.8km s-min=5.1km az=164.6*
ISC 17 00:50:56.4±0.6**, 34°.64N**±0°.08×**86°.04E**±0°.08**, h35**^{km}**, n46, σ1.^{s}01**/45**, mb3.9**/16**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.56**	**137**	*e*Pn	**Pn**	**00 52 29.3**	**-1.6**
JIRN	**Jiri**	**6.96**	**179**	*e*P	**Pn**	**00 52 37.9**	**+1.6**
	35nm,0.5s						
DMN	**Daman**	**7.06**	**187**	*e*Pn	**Pn**	**00 52 35.9**	**-1.6**
PKIN	**Phulchoki**	**7.07**	**185**	*e*P	**Pn**	**00 52 37.9**	**+0.3**
	19nm,0.6s						
PKI	**Pulchoki**	**7.07**	**185**	*e*P	**Pn**	**00 52 38.0**	**+0.2**
	13nm,0.4s						
KOLN	**Koldanda**	**7.16**	**198**	*e*P	**Pn**	**00 52 41.5**	**+2.6**
	5.3nm,0.4s						
WMQ	**Urumqi**	**9.26**	**7**	*e*Pn	Pn	00 53 16.0	+8.6
WMQ				smax	smax		
	comp=N,19nm,0.9s						
WMQ				smax	smax		
	comp=E,18nm,1.1s						
NIL	**Nilore**	**10.64**	**268**	*e*Pn	**Pn**	**00 53 26.9**	**+0.5**
BOOM	**Boomskoye usch**	**11.12**	**318**	*e*Pn	**Pn**	**00 53 32.8**	**-0.3**
MK31	**Makanchi Array**	**12.46**	**348**	*e*Pn	**Pn**	**00 53 51.3**	**0.0**
MK32	**Makanchi Array**	**12.46**	**348**	*e*Pn	**Pn**	**00 53 51.8**	**+0.5**
MKAR	**Makanchi Array**	**12.46**	**348**	Pn	**Pn**	**00 53 51.8**	**+0.5**
	comp=E,0.2nm,0.3s,baz=159,slow=14,SNR=12						
MAKZ	**Makanchi**	**12.53**	**347**	*e*Pn	**Pn**	**00 53 52.5**	**+0.3**
KURBB	**Kurchatov Arra**	**16.88**	**343**	Pn	**Pn**	**00 54 50.2**	**+0.4**
	comp=E,0.2nm,0.3s,baz=158,slow=12,SNR=57						
KURK	**Kurchatov**	**16.95**	**344**	*e*Pn	**Pn**	**00 54 50.1**	**-0.6**
	comp=E,39nm,1.4s						
ZALV	**Zalesovo Beam**	**19.32**	**358**	P	**Pn**	**00 55 19.3**	**-0.4**
	comp=E,0.2nm,0.3s,baz=175,slow=10,SNR=8.8						
ZALV	**Zalesovo Beam**	**19.32**	**358**	*e*P	**P**	**00 55 18.8**	**+0.4**
ZAA1	**Zalesovo Array**	**19.32**	**358**	*e*P	**Pn**	**00 55 19.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**19.80**	**141**	P	**P**	**00 55 23.5**	**-0.4**
	baz=326,slow=11,SNR=9.4						
SONA0	**Songino Array**	**20.12**	**43**	*e*P	**P**	**00 55 28.2**	**+0.9**
SONM	**Songino Array**	**20.12**	**43**	P	**P**	**00 55 28.2**	**+0.9**
	comp=E,1.5nm,0.7s,baz=239,slow=11,SNR=8.5						
SONM	**Songino Array**	**20.12**	**43**	*e*P	**P**	**00 55 27.8**	**+0.4**
BVAR	**Borovoye Array**	**21.48**	**334**	P	**P**	**00 55 43.1**	**+1.3**
	comp=E,2.7nm,0.7s,baz=137,slow=11,SNR=16						
BRVK	**Borovoye**	**21.55**	**333**	*e*P	**P**	**00 55 43.6**	**+1.1**
	comp=E,5.2nm,0.8s						
GEYT	**Alibeck**	**22.71**	**286**	P	**P**	**00 55 55.4**	**+0.2**
	comp=E,3.2nm,0.9s,baz=80,slow=10,SNR=7.5						
GYA0B	**ALIBECK ARRAY**	**22.71**	**286**	*e*P	**P**	**00 55 55.9**	**+0.7**
	comp=E,6.5nm,1.0s						
ABKAR	**Akbulak array**	**24.13**	**315**	*e*P	**P**	**00 56 09.3**	**+0.5**
	comp=E,2.7nm,0.7s						
AKTO	**Aktyubinsk**	**25.78**	**316**	P	**P**	**00 56 24.1**	**+0.3**
	comp=E,1.3nm,0.6s,baz=149,slow=8.8,SNR=5.7						
KLR	**Kul'dur**	**36.42**	**52**	P	**P**	**00 57 60.0**	**+2.5**
	comp=E,1.5nm,0.8s,baz=281,slow=7.7,SNR=4.8						
BR101	**Keskin Array S**	**41.56**	**293**	*e*P	**P**	**00 58 40.5**	**-0.4**
BRTR	**Keskin Array B**	**41.56**	**293**	P	**P**	**00 58 40.5**	**-0.4**
	comp=E,0.7nm,1.0s,baz=74,slow=11,SNR=3.2						
AKASG	**Malin Array Be**	**43.64**	**310**	P	**P**	**00 58 56.7**	**-0.6**
	comp=E,0.4nm,0.4s,baz=78,slow=7.2,SNR=4.1						
AKBB	**Malin Array Si**	**43.64**	**310**	*e*P	**P**	**00 58 56.7**	**-0.6**
NB2	**NORSAR Subarra**	**53.17**	**324**	P	**P**	**01 00 09.8**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=82,slow=7.4						
NB200	**NORSAR Array S**	**53.17**	**324**	*e*P	**P**	**01 00 10.3**	**-0.4**
NOA	**NORSAR Array B**	**53.17**	**324**	P	**P**	**01 00 10.3**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=84,slow=7.3,SNR=6.3						
GEC2	**GERESS Array S**	**53.84**	**309**	*e*P	**P**	**01 00 16.2**	**+0.4**
GERES	**GERESS Array B**	**53.84**	**309**	P	**P**	**01 00 16.2**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=69,slow=7.3,SNR=15						
ESDC	**Sonseca Array**	**68.91**	**304**	P	**P**	**01 01 56.7**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=48,slow=6.1,SNR=5.0						
WRA	**Warramunga Arr**	**71.09**	**132**	P	**P**	**01 02 11.6**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=347,slow=6.9,SNR=7.3						
WR1	**Warramunga Arr**	**71.09**	**132**	*e*P	**P**	**01 02 11.6**	**+0.3**
AS31	**Alice Springs**	**73.66**	**135**	*e*P	**P**	**01 02 27.5**	**+0.9**
	comp=Z,2.5nm,1.3s						
ASAR	**Alice Springs**	**73.66**	**135**	P	**P**	**01 02 27.5**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=318,slow=6.2,SNR=7.7						
TOA1	**Torodi Ar. Sit**	**78.05**	**278**	*e*P	**P**	**01 02 50.0**	**-2.0**
TORD	**Torodi Ar. Bea**	**78.05**	**278**	P	**P**	**01 02 50.0**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=31,slow=6.0,SNR=7.9						
SIV	**San Ignacio**	**145.16**	**294**	PKPbc	**PKPbc**	**01 10 29.1**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=53,slow=7.1,SNR=4.2						

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*NIED **17** 00:52:00, 37°.20N×142°.30E, h32^{km}, Mw3.6 Best double couple: M$_0$3.16000×10^{14} NP1:φ$_s$194.00000°, δ25.00000°, λ73.00000°. NP2:φ$_s$32.00000°, δ66.00000°, λ98.00000°.*
JMA 17 00:52:11.0±0.2**, 37°.24N×142°.27E, h35**^{km}**, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.12**	**277**	P	Pn	00 52 30.7	+0.5
JFK				*e*S	Sn	00 52 45.0	+0.6
ONAJ	**Iwakimizuishiy**	**1.18**	**264**	P	Pn	00 52 31.4	+0.3
ONAJ				*e*S	Sn	00 52 46.0	0.0
JMST	**Minamisoumatoc**	**1.20**	**294**	P	Pn	00 52 31.7	+0.4
JIKH	**Ishinomakikobu**	**1.25**	**329**	P	Pn	00 52 32.3	+0.4
JMM	**Marumori**	**1.33**	**298**	P	Pn	00 52 33.8	+0.7
JMM				*e*S	Sn	00 52 50.4	+0.9
JFFD	**Fukushimafurud**	**1.37**	**264**	P	Pn	00 52 34.5	+0.8
JFFD				*e*S	Sn	00 52 51.7	+1.1
JIO	**Ouri**	**1.42**	**329**	P	Pn	00 52 34.9	+0.7
JIO				*e*S	Sn	00 52 52.4	+0.8
JFT	**Otama**	**1.56**	**281**	P	Pn	00 52 38.1	+1.8
JOU	**Okura**	**1.70**	**312**	P	Pn	00 52 39.7	+1.6
JOU				*e*S	Sn	00 53 00.8	+2.1
JMK	**Ichinoseki**	**1.90**	**334**	P	Pn	00 52 42.5	+1.6
JYS	**Shirataka**	**2.00**	**300**	P	Pn	00 52 44.9	+2.6
JFY	**Yanaizu**	**2.05**	**275**	P	Pn	00 52 45.2	+2.2
JYK	**Kaneyama**	**2.25**	**319**	P	Pn	00 52 48.0	+2.2
JOM	**Ohasama**	**2.36**	**341**	P	Pn	00 52 49.3	+2.1
JAG	**Ashikaga**	**2.40**	**251**	P	Pn	00 52 49.0	+1.2
MAT	**Matsushiro**	**3.33**	**259**	P	Pn	00 53 04.3	+3.7
MAT				S	Sn	00 53 45.3	+6.3

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*IDC **17** 01:23:25.0±1.5, 34°.60N×24°.99E, h0^{km}, mb3.5/2, mb1 3.4/3, mb1mx3.2/44, mbtmp3.4/3, ML4.1/1, Error ellipse: s-maj=49.1km s-min=24.1km az=141.0*
*ISCJB **17** 01:23:26.8±0.8, 34°.72N±0°.04×25°.03E±0°.02, h6^{km}±4^{km}, mb3.3/2, Error ellipse: s-maj=6.8km s-min=3.0km az=1.2*
*ISK **17** 01:23:27.0, 34°.79N×25°.03E, h10^{km}, ML3.5/16*
*THE **17** 01:23:27.8, 34°.76N×25°.02E, h10^{km}±1^{km}, ML3.5/5, Error ellipse: s-maj=1.6km s-min=0.4km az=4.0*
*ATH **17** 01:23:27.4, 34°.76N×25°.01E, h20^{km}±1^{km}, ML3.3/8, Error ellipse: s-maj=2.0km s-min=0.8km az=357.0*
ISC 17 01:23:26.7±1.4**, 34°.70N**±0°.05×**24°.99E**±0°.02**, h9**^{km}±9^{km}**, n66, σ0.^{s}90**/88**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.35**	**334**	P	**Pb**	**01 23 34.4**	**-0.7**
SIVA				S	**Sg**	**01 23 38.6**	**+0.4**
	18μm,0.2s						
SIVA	**Sivas**	**0.35**	**334**	P	**Pb**	**01 23 34.3**	**-0.7**
SIVA				S	**Sg**	**01 23 38.6**	**+0.4**
SIVA				AML	AML	01 23 38.9	
	comp=E,44279μm,0.3s						
SIVA				AML	AML	01 23 40.5	
	comp=N,26166μm,0.2s						
TMBK	**Timbaki Herakl**	**0.41**	**333**	P	**Pb**	**01 23 35.6**	**-0.5**
TMBK				S	**Sg**	**01 23 41.3**	**+1.1**
IDI	**Anoyia**	**0.59**	**352**	PG	**Pg**	**01 23 37.5**	**-0.6**
IDI				SG	**Sg**	**01 23 45.1**	**-0.8**
IDI	**Anoyia**	**0.59**	**352**	P	**Pg**	**01 23 37.7**	**-0.4**
IDI				S	**Sg**	**01 23 45.5**	**-0.4**
IDI				AML	AML	01 23 46.6	
	comp=N,7130μm,0.3s						
IDI				AML	AML	01 23 47.9	
	comp=E,6973μm,0.3s						
KSTL	**Kastelli Herak**	**0.60**	**6**	P	**Pg**	**01 23 37.9**	**-0.4**
KSTL				S	**Sg**	**01 23 45.8**	**-0.4**
LAST	**Lasithi**	**0.61**	**41**	P	**Pg**	**01 23 38.1**	**-0.3**
LAST				S	**Sg**	**01 23 47.0**	**+0.6**
LAST	**Lasithi**	**0.61**	**41**	P	**Pg**	**01 23 38.2**	**-0.3**
LAST				S	**Sg**	**01 23 46.4**	**0.0**
LAST				AML	AML	01 23 47.4	
	comp=E,2678μm,0.3s						
LAST				AML	AML	01 23 48.0	
	comp=N,4721μm,0.4s						
NPS	**Neapolis**	**0.75**	**42**	P	**Pg**	**01 23 40.8**	**-0.4**
NPS				S	**Sg**	**01 23 51.0**	**0.0**
	comp=N,2μm,0.5s						
NPS	**Neapolis**	**0.75**	**42**	P	**Pg**	**01 23 40.7**	**-0.4**
NPS				S	**Sg**	**01 23 51.1**	**0.0**
NPS				AML	AML	01 23 53.0	
	comp=E,4950μm,0.6s						
NPS				AML	AML	01 23 53.8	
	comp=N,2504μm,0.2s						
GVDS	**Gavdos**	**0.76**	**281**	P	**Pn**	**01 23 43.1**	**-0.4**
GVDS				S	**Sn**	**01 23 54.3**	**-0.8**
GVD	**Gavdhos**	**0.76**	**281**	PG	**Pb**	**01 23 42.6**	**+0.6**
GVD				SG	**Sn**	**01 23 53.9**	**-1.2**
GVD	**Gavdhos**	**0.76**	**281**	P	**Pb**	**01 23 42.3**	**+0.2**
GVD				S	**Sn**	**01 23 54.2**	**-0.9**
	comp=N,5μm,0.3s						
GVD	**Gavdhos**	**0.76**	**281**	P	**Pb**	**01 23 42.2**	**+0.2**
GVD				S	**Sb**	**01 23 52.8**	**+0.4**
GVD				AML	AML	01 23 58.1	
	comp=N,9148μm,0.3s						
GVD				AML	AML	01 23 58.8	
	comp=E,11423μm,0.3s						
PRNS	**Prines Rethymn**	**0.77**	**329**	P	**Pb**	**01 23 42.1**	**-0.2**
PRNS				S	**Sb**	**01 23 53.1**	**+0.2**
VAM	**Vamos**	**0.96**	**317**	P	**Pg**	**01 23 44.8**	**-0.2**
VAM				S	**Sb**	**01 23 58.7**	**+0.5**
	comp=E,3μm,0.3s						
VAM	**Vamos**	**0.96**	**317**	P	**Pg**	**01 23 44.9**	**-0.2**
VAM				S	**Sb**	**01 23 58.1**	**-0.1**
VAM				AML	AML	01 24 01.2	
	comp=E,5554μm,0.4s						
VAM				AML	AML	01 24 01.4	
	comp=N,7314μm,0.2s						
STIA	**Sitia Lasithi**	**1.03**	**61**	P	**Pn**	**01 23 47.2**	**0.0**
ZKR	**Zakros**	**1.08**	**67**	PG	**Pg**	**01 23 47.1**	**-0.4**
ZKR				SG	**Sb**	**01 24 01.9**	**0.0**
ZKR	**Zakros**	**1.08**	**67**	P	**Pg**	**01 23 47.2**	**-0.3**
ZKR				S	**Sn**	**01 24 03.2**	**0.0**
ZKR	**Zakros**	**1.08**	**67**	P	**Pg**	**01 23 46.9**	**-0.6**
ZKR				S	**Sb**	**01 24 02.5**	**+0.7**
ZKR				AML	AML	01 24 05.7	
	comp=N,1284μm,0.3s						
ZKR				AML	AML	01 24 07.4	
	comp=E,2241μm,0.5s						
IMMV	**Iera Moni Meta**	**1.12**	**313**	PN	**Pg**	**01 23 47.7**	**-0.5**
IMMV	**Iera Moni Meta**	**1.12**	**313**	P	**Pg**	**01 23 47.5**	**-0.7**
IMMV				S	**Sb**	**01 24 03.6**	**+0.6**
	comp=E,2μm,0.5s						
IMMV	**Iera Moni Meta**	**1.12**	**313**	P	**Pn**	**01 23 48.5**	**-0.1**
IMMV				S	**Sb**	**01 24 03.6**	**+0.6**
IMMV				AML	AML	01 24 05.4	
	comp=N,3958μm,0.4s						
IMMV				AML	AML	01 24 05.9	
	comp=E,2750μm,0.3s						
CHAN	**Chania**	**1.13**	**316**	P	**Pg**	**01 23 48.0**	**-0.3**
THR9	**Santorini-Faro**	**1.68**	**10**	P	**Pb**	**01 23 57.2**	**-0.4**
THR6	**Thira Island,**	**1.68**	**11**	P	**Pb**	**01 23 57.2**	**-0.5**
THT1	**Athinios (Pele**	**1.72**	**12**	P	**Pn**	**01 23 57.3**	**+0.7**
THR3	**Thira Island,**	**1.73**	**11**	P	**Pb**	**01 23 58.1**	**-0.6**
THR5	**Thira Island,**	**1.73**	**9**	P	**Pn**	**01 23 57.6**	**+0.7**
THR8	**Santorini-Mono**	**1.75**	**13**	P	**Pn**	**01 23 58.0**	**+0.9**
THR7	**Fira-Santorini**	**1.75**	**12**	P	**Pn**	**01 23 58.0**	**+0.8**
THT2	**Imerovigli**	**1.76**	**11**	P	**Pb**	**01 23 58.4**	**-0.7**
ANAF	**Anafi Island**	**1.77**	**21**	P	**Pn**	**01 23 57.9**	**+0.5**
THR2	**Thira island,**	**1.78**	**12**	P	**Pn**	**01 23 58.4**	**+0.8**
CMBO	**Columbo, Santo**	**1.79**	**11**	P	**Pn**	**01 23 58.4**	**+0.6**
ANKY	**Antikythira Is**	**1.81**	**310**	P	**Pb**	**01 24 00.0**	**+0.1**
ANKY	**Antikythira Is**	**1.81**	**310**	P	**Pb**	**01 23 59.8**	**-0.1**
KARP	**Karpathos**	**1.97**	**64**	PN	**Pn**	**01 24 00.4**	**+0.2**
MHLO	**Agia Marina, M**	**2.04**	**346**	P	**Pn**	**01 24 01.9**	**+0.7**
MHLA	**Plaka, Milos I**	**2.09**	**347**	P	**Pn**	**01 24 03.0**	**+1.1**

KTHA	Kythira Island	2.21	315	P	Pn	01 24 04.8	+1.2
APE	Apeiranthos	2.40	10	PN	Pn	01 24 06.2	0.0
APE	Apeiranthos	2.40	10	P	Pn	01 24 07.0	+0.9
VLI	Veliai	2.62	321	P	Pn	01 24 09.7	+0.6
DAT	Datca	2.92	45	PN	Pn	01 24 13.8	+0.5
ARG	Arkhangelos	2.97	59	PN	Pn	01 24 14.7	+0.8
ARG	Arkhangelos	2.97	59	P	Pn	01 24 15.3	+1.3
BODT	Bodrum	3.01	38	PN	Pn	01 24 15.0	+0.4
VLY	Voula,Athens	3.29	343	P	Pn	01 24 19.3	+1.0
DION	Dionisos Attik	3.48	346	P	Pn	01 24 22.0	+1.1
ITM	Ithomi	3.51	316	PN	Pn	01 24 21.8	+0.4
YER	Yerkesik	3.61	47	PN	Pn	01 24 23.7	+0.9
TURN	Turunc	3.65	53	PN	Pn	01 24 20.0	-3.2
DALY	Dalyan (Mula)	3.65	54	PN	Pn	01 24 24.3	+1.1
FETY	Fethiye	3.85	59	PN	Pn	01 24 27.2	+1.2
AYDB	Zeytinkoy-Aydi	3.99	35	PN	Pn	01 24 28.7	+0.6
AKAS	Kas	4.06	67	PN	Pn	01 24 30.3	+1.2
ELL	Elmali	4.49	62	PN	Pn	01 24 36.3	+1.4
AGG	Agios Georgios	4.81	334	PN	Pn	01 24 40.9	+1.6
KORT	Korkueli	4.92	61	PN	Pn	01 24 42.1	+1.3
BRTR	Keskin Array B	8.52	51	Pn	Pn	01 25 34.5	+4.2
	comp=E,0.1nm,0.3s,baz=236,slow=15,SNR=4.5						
VYHS	Vyhne	14.52	343	*e*PN	Pn	01 26 52.6	+0.3
GERES	GERESS Array B	16.42	333	Pn	Pn	01 27 18.7	+1.4
	comp=E,0.3nm,0.3s,baz=142,slow=13,SNR=9.2						
TORD	Torodi Ar. Bea	30.09	230	P	P	01 29 35.9	-0.7
	comp=E,0.6nm,0.4s,baz=32,slow=9.2,SNR=21						
MKAR	Makanchi Array	44.14	56	P	P	01 31 34.9	-0.6
	comp=E,0.1nm,0.4s,baz=264,slow=7.8,SNR=3.5						

TIR 17 01:24:01.6, 41°.26N×20°.32E, h12km, Md2.1/3, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.35	284	*i* PG	Pg	01 24 09.1	+0.4
TIR				*i* SG	Sb	01 24 14.5	-0.9
PHP	Peshkopia	0.43	12	*i* PG	Pg	01 24 10.5	+0.3
PHP				*i* SG	Sb	01 24 17.2	-0.6
PUK	Puka	0.84	338	*i* PG	Pb	01 24 18.1	-0.1
PUK				*i* SG	Sn	01 24 30.9	-0.8

ROM 17 01:25:16.7±0.1, 43°.438N±0°.004×12°.473E±0°.004, h8km±1km, ML0.2/1, Error ellipse: s-maj=0.5km s-min=0.2km az=346.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	Pietralunga -	0.05	283	S	Sg	01 25 19.7	0.0
ATPI	Pietralunga -	0.05	283	P	Pg	01 25 18.6	+0.2
ATPI				S	Sg	01 25 19.7	0.0
ATPI				END			
ATPI				END			
ATVO	AVT- Monte Val	0.07	221	S	Sg	01 25 20.6	+0.5
ATVO	AVT- Monte Val	0.07	221	P	Pg	01 25 19.1	+0.4
ATVO				S	Sg	01 25 20.6	+0.6
ATVO				END			
ATVO				END			
PIEI	Pieia	0.11	25	S	Sg	01 25 21.8	+0.9
PIEI	Pieia	0.11	25	P	Pg	01 25 19.6	+0.4
PIEI				S	Sg	01 25 21.7	+0.8
PIEI				AML	AML		
	comp=E,25μm,1.1s						
PIEI				AML	AML		
	comp=N,19μm,0.3s						
PIEI				END			
PIEI				END			
BADI	Badiali	0.18	293	S	Sg	01 25 23.9	+1.0
BADI	Badiali	0.18	293	P	Pg	01 25 20.8	+0.4
BADI				S	Sg	01 25 24.0	+1.1
BADI				END			
BADI				END			
FRON	Frontone	0.20	67	S	Sg	01 25 24.9	+1.4
FRON	Frontone	0.20	67	P	Pg	01 25 21.3	+0.6
FRON				S	Sg	01 25 24.8	+1.3
SSFR	Montelago di S	0.23	90	S	Sg	01 25 25.8	+1.6
SSFR	Montelago di S	0.23	90	P	Pg	01 25 21.5	+0.3
SSFR				S	Sg	01 25 25.9	+1.6
PARC	Parchiule	0.27	321	P	Pb	01 25 23.2	-0.7
PARC				S	Sb	01 25 27.8	-0.9
MPAG	Monte Paganucc	0.28	47	P	Pg	01 25 22.9	+0.5
MPAG				S	Sb	01 25 27.7	-1.4

IDC 17 01:28:46.5±2.1, 3°.28N×125°.36E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/51, mbtmp3.8/4, MS2.7/3, Ms1 2.8/3, ms1mx2.5/35, Error ellipse: s-maj=206.7km s-min=26.9km az=64.0

MAN 17 01:28:51.9, 3°.92N×126°.31E, h1km, MS3.4

ISC 17 01:28:47.7±1.0, 3°.5N±0°.1×126°.0E±0°.3, h10km, n11, σ2s.12/11, mb3.8/4, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	2.57	353	*e*P	Pn	01 29 30.6	+1.2
DDMP				*e*S	Sn	01 29 59.8	-1.0
SKMP	Bagumbayan, Su	3.31	334	*e*P	Pb	01 29 43.3	-3.2
SKMP				*e*S	Sn	01 30 21.8	+2.9
DAV	Davao City (W)	3.54	353	LR	LR	01 30 57.6	
	comp=Z,42nm,20.7s,baz=178,slow=35						
KCP	Kidapawan	3.57	345⇓	*e*P	Pn	01 29 45.6	+2.3
KCP				*i* S	Sn	01 30 17.0	-8.6
BUKP	Musuan	4.42	348	*e*P	Pn	01 29 57.8	+2.9
BUKP				*e*S	Sn	01 30 46.9	+0.4
WRA	Warramunga Arr	24.72	161	P	P	01 34 09.8	+0.4
	2.6nm,0.7s,baz=338,slow=10,SNR=20						
ASAR	Alice Springs	28.11	164	P	P	01 34 39.6	-0.3
	0.4nm,0.5s,baz=342,slow=8.8,SNR=3.2						
CMAR	Chiang Mai Arr	30.36	301	LR	LR	01 47 09.4	
	comp=Z,17nm,19.6s,baz=220,slow=37						
JHJ	Hachijo jima 2	32.13	22	LR	LR	01 45 24.4	
	comp=Z,37nm,21.9s,baz=354,slow=31						
STKA	Stephens Creek	38.21	158	P	P	01 36 08.0	+0.2
	2.2nm,0.7s,baz=333,slow=9.9,SNR=3.1						
MKAR	Makanchi Array	57.31	326	P	P	01 38 35.1	-0.8
	0.3nm,0.4s,baz=120,slow=7.2,SNR=3.7						

ISK 17 01:40:31.9, 40°.52N×41°.91E, h5km, ML4.1/32

NEIC 17 01:40:31.8±0.0, 40°.53N×41°.91E, h5km, mb4.3/28, ML4.1(ISK), After ISK.

DDA 17 01:40:32.7, 40°.51N×41°.95E, h11km, ML3.9

IDC 17 01:40:32.9±0.6, 40°.47N×41°.83E, h0km, mb4.1/16, mb1 4.1/27, mb1mx4.0/49, mbtmp4.0/27, ML3.6/9, MS3.1/19, Ms1 3.1/19, ms1mx3.0/58, Error ellipse: s-maj=9.8km s-min=7.8km az=10.0

TIF 17 01:40:32.3, 40°.52N×41°.92E, h8km±1km

MOS 17 01:40:33.5±1.5, 40°.48N×41°.83E, h15km, mb4.4/21, Error ellipse: s-maj=5.2km s-min=3.7km az=122.5

ISCJB 17 01:40:33.4±0.3, 40°.55N±0°.01×41°.78E±0°.01, h3km±2km, mb4.2/44, MS3.0/10, Error ellipse: s-maj=2.0km s-min=1.6km az=7.2

AZER 17 01:40:41.0±0.3, 40°.41N×41°.89E, h22km, ml4.1/25, Error ellipse: s-maj=2.5km s-min=2.0km az=177.0

ISC 17 01:40:32.3±0.6, 40°.55N±0°.01×42°.04E±0°.01, h0km±3km, n375, σ2s.39/430, mb4.3/54, MS3.1/10, 41C-17D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SENK	Senkaya-Erzuru	0.24	87	PG	Pg	01 40 39.8	+3.0
SENK				SG	Sg	01 40 45.6	+5.8
HOMI	Horasan	0.51	192	*i* P	Pg	01 40 42.8	+0.7
HOMI				*i* S	Sg	01 40 49.6	+0.9
DAGI	Agillar	0.54	350	*i* P	Pb	01 40 44.5	-0.2
DAGI				*i* S	Sb	01 40 52.5	-0.4
DBAD	Bademkaya	0.54	331	*i* P	Pb	01 40 44.6	-0.1
DBAD				*i* S	Sg	01 40 51.3	+1.7
KOPR	Koprukoy-ERZUR	0.57	195	PG	Pg	01 40 43.2	-0.1
KOPR				SG	Sg	01 40 51.8	+1.1
AKDA	Akdag	0.68	230	*i* P	Pg	01 40 45.6	+0.3
AKDA				*i* S	Sg	01 40 54.2	0.0
EATA	Eleskirt	0.77	153	*i* P	Pg	01 40 48.5	+1.5
EATA				*i* S	Sb	01 40 59.9	+0.1
KARS	Kars	0.79	84	PG	Pn	01 40 50.5	-0.4
KARS				SG	Sn	01 41 04.0	+0.5
KARS	Kars	0.79	84	*e*Pg	Pb	01 40 50.2	+1.2
KARS	Kars	0.79	84	*e*PG	Pb	01 40 50.2	+1.2
DBOC	Borcka	0.84	340	*i* P	Pg	01 40 49.4	+1.0
DBOC				*i* S	Sb	01 41 01.1	-0.7
KRIK	Erzurum-spir	0.88	256	*i* P	Pg	01 40 49.0	0.0
KRIK				*i* S	Sg	01 41 00.1	-0.3
BCA	Borcka	0.95	341	PG	Pg	01 40 51.1	+0.6
BCA	Borcka	0.95	341	*e*Pg	Pg	01 40 50.9	+0.4
BCA				*e*Sn	Sb	01 41 04.4	-0.4
DIGO	Kars	1.02	97	*i* P	Pn	01 40 54.7	+0.5
DIGO				*i* S	Sn	01 41 11.9	+2.6
EPOS	Posof	1.08	28	*i* P	Pn	01 40 55.8	+0.9
EPOS				*i* S	Sn	01 41 12.9	+2.1
BATM	Batumi	1.09	346	PN	Pg	01 40 53.6	+0.5
BATM	Batumi	1.09	346	P	Pg	01 40 53.6	+0.5
BATM				S	Sb	01 41 08.9	+0.2
BATM	Batumi	1.09	346	*i* P	Pb	01 40 54.1	+0.1
BATM				*i* S	Sb	01 41 08.7	0.0
CHAY	Cayeli-Rize	1.13	299	PG	Pg	01 40 53.9	-0.1
EAK	Akyaka	1.20	83	*i* P	Pn	01 40 57.5	+1.1
AGRB	Hanur-Agry	1.22	143	PN	Pg	01 40 56.3	+0.7
ECAT	Cat-ERZURUM	1.25	221	*i* P	Pg	01 40 55.5	-0.7
ECAT				*i* S	Sg	01 41 12.2	-0.2
TUTA	Tutak	1.29	152	*i* P	Pn	01 40 57.4	-0.3
AKH	Akhalkalaki	1.40	51	PN	Pg	01 41 00.9	+1.9
AKH	Akhalkalaki	1.40	51	P	Pg	01 41 00.7	+1.6
AKH				S	Sg	01 41 20.7	+3.5
AKH	Akhalkalaki	1.40	51	*e*Pn	Pg	01 41 00.7	+1.6
AKH				*e*Sn	Sb	01 41 18.0	+0.3
AKH	Akhalkalaki	1.40	51	*e*PG	Pg	01 41 00.6	+1.6
AKH				*e*S	Sg	01 41 20.6	+3.5
KARO	Karliova-Bingo	1.46	212	PN	Pn	01 40 59.3	-0.7
BAYT	Aydıntepe-Bayb	1.46	264	PN	Pn	01 40 59.1	-0.9
VRTB	Varto-Mus	1.46	198	PN	Pn	01 40 59.4	-0.6
VRTB	Varto-Mus	1.46	198	*i* P	Pn	01 41 00.6	+0.6
VRTB				*i* S	Sg	01 41 20.6	+1.5
VRTB				IAML_P			
	comp=Z,31μm,0.5s						
YEDI	Yedisu-Bingol	1.60	226	PN	Pn	01 41 01.1	-0.8
IGDI	IGDIR	1.70	113	*i* P	Pg	01 41 06.0	+1.1
BNGL	BINGOL	1.74	204	*i* P	Pn	01 41 04.7	+0.8
MACK	Trabzon	1.77	284	*i* P	Pb	01 41 05.2	-0.5
TASB	TASBURUN-IGDIR	1.77	108	PN	Pb	01 41 06.3	+0.6
KTUT	Trabzon	1.78	285	PN	Pn	01 41 03.9	-0.4
KTUT	Trabzon	1.78	285	*e*Pn	Pn	01 41 03.7	-0.6
ERCV	ERCIS-VAN	1.82	146	PN	Pb	01 41 06.7	+0.1
MUSM	Mu-Merkez	1.87	193	*i* P	Pn	01 41 06.4	+0.8
MUSM				*i* S	Sb	01 41 31.8	+0.5
MUSM				IAML_P			
	comp=Z,22μm,0.7s						
BNGB	Bingl	1.88	214	PN	Pn	01 41 05.7	0.0
BGOL	Bingol	1.88	215	*i* P	Pn	01 41 06.6	+0.8
TKB	Tkibuli	1.94	21	P	Pg	01 41 09.6	+0.2
TKB				S	Sg	01 41 35.7	+1.2
KZRT	Kazreti	1.97	64	P	Pb	01 41 09.6	+0.5
KZRT				S	Sg	01 41 39.5	+3.9
EUZM	Uzumlu	1.98	246	*i* P	Pn	01 41 07.1	-0.1
EUZM				*i* S	Sb	01 41 35.7	+1.1
CLDR	Caldiran	2.01	134	PN	Pb	01 41 09.5	-0.4
CLDR	Caldiran	2.01	134	*i* P	Pb	01 41 10.8	+0.9
ERZN	Erzincan	2.02	242	PN	Pn	01 41 07.4	-0.4
BINT	Bingol	2.06	216	PN	Pn	01 41 05.3	-2.9
GNI	Garni	2.10	100	PN	Pb	01 41 11.4	+0.1
GNI	Garni	2.10	100	Pn	Pg	01 41 13.3	+0.8
	comp=Z,29nm,0.3s,baz=291,slow=5.3,SNR=40						
GNI				Sn	Sg	01 41 41.2	+1.5
	comp=Z,25nm,0.3s,baz=278,slow=14,SNR=6.0						
GNI				LR	LR	01 41 43.7	
	comp=Z,119nm,18.6s,baz=276,slow=32						
GNI	Garni	2.10	100	*e*Pn	Pb	01 41 11.2	-0.2
GNI				*e*Sn	Sn	01 41 34.9	-0.9
BLIS	Bitlis-Merkez	2.13	178	*i* P	Pn	01 41 10.4	+1.1
BLIS				IAML_P			
	comp=Z,8μm,0.5s						
KELT	Kelkit	2.17	260	*i* P	Pn	01 41 10.0	+0.2
VANB	Van	2.21	151	PN	Pb	01 41 12.9	-0.3
VANB	Van	2.21	151	*e*Pn	Pb	01 41 12.6	-0.6
ONI	Oni	2.30	27	PN	Pb	01 41 13.7	-0.9
ONI	Oni	2.30	27	P	Pb	01 41 15.4	+0.8
ONI				S	Sg	01 41 46.4	+0.3
ONI	Oni	2.30	27	*e*PN	Pb	01 41 15.4	+0.8
ONI				*e*S	Sg	01 41 46.4	+0.3
HYR	Heyderabad	2.31	110	Pn	Pg	01 41 18.5	+2.0
	SNR=13						
HYR				Sn	Sg	01 41 47.6	+1.1
HYR	Heyderabad	2.31	110	P	Pg	01 41 18.5	+2.0
	SNR=13						
HYR				S	Sg	01 41 47.6	+1.1
AKDM	Akdamar-Van	2.33	162	PN	Pn	01 41 13.3	+1.2
TBLG	Delisi	2.35	59	PN	Pb	01 41 14.6	-1.0
TBLG	Delisi	2.35	59	P	Pb	01 41 15.1	-0.5
TBLG				S	Sg	01 41 49.7	+1.8
TBLG	Delisi	2.35	59	*e*Pn	Pb	01 41 14.9	-0.6
TBLG				*e*Sn	Sn	01 41 38.3	-3.5
TBLG	Delisi	2.35	59⇑	*i*PN	Pb	01 41 15.1	-0.5
TBLG				*e*S	Sg	01 41 49.7	+1.8
TBLG	Delisi	2.35	59	*i* P	Pb	01 41 15.4	-0.2
BTNK	Botanikuri	2.37	61	P	Pb	01 41 15.1	-0.8
BTNK				S	Sg	01 41 50.5	+2.1
BTNK	Botanikuri	2.37	61	*i* P	Pb	01 41 15.4	-0.5
TNCL	Tunceli-Merkez	2.40	234	*i* P	Pn	01 41 13.5	+0.6
SEAG	Tbilisi Sea	2.41	59	P	Pb	01 41 16.3	-0.3
SEAG				S	Sg	01 41 49.2	-0.5
HANI	Diyarbakir_Han	2.48	211	*i* P	Pn	01 41 15.5	+1.5
HANI				IAML_P			
	comp=Z,2μm,0.3s						
SVAN	Silvan-Diyarba	2.48	196	PN	Pn	01 41 14.4	+0.4
SVAN	Silvan-Diyarba	2.48	196	*i* P	Pn	01 41 15.4	+1.4
SRTM	Siirt_Merkez	2.56	182	*i* P	Pn	01 41 16.9	+1.9
QZX	Qazax, Azerbai	2.58	78	Pn	Pg	01 41 23.2	+1.5
	SNR=36						
QZX				Sn	Sg	01 41 56.3	+1.2
QZX	Qazax, Azerbai	2.58	78	P	Pg	01 41 23.2	+1.5
	SNR=36						
QZX				S	Sg	01 41 56.3	+1.2
GUDG	Gudauri	2.65	43	P	Pb	01 41 20.1	-0.6
GUDG				S	Sg	01 41 59.7	+2.4
NEY	Neytrino	2.75	10	*de*PN	Pb	01 41 21.1	-1.2
REFA	Refahiye_ERZN	2.77	246	*i* P	Pn	01 41 16.5	-1.5
GDB	GEDABAY	2.83	85	Pn	Pg	01 41 26.9	+0.4
	SNR=25						
GDB				Sn	Sg	01 42 02.7	-0.5
GDB	GEDABAY	2.83	85	P	Pg	01 41 26.9	+0.4
	SNR=25						
GDB				S	Sg	01 42 02.7	-0.5
SBZ	Shahbuz	2.93	112	Pn	Pb	01 41 27.1	+1.6
	SNR=29						
SBZ				Sn	Sb	01 42 02.9	+1.0
SBZ	Shahbuz	2.93	112	P	Pb	01 41 27.1	+1.6
	SNR=29						
SBZ				S	Sb	01 42 02.9	+1.0
DYBB	Diyarbakir	2.98	210	PN	Pn	01 41 21.2	+0.3
NAX	Nakhchivan	2.99	116	Pn	Pb	01 41 27.6	+1.1
	SNR=9.4						
NAX				Sn	Sb	01 42 03.9	+0.3
NAX	Nakhchivan	2.99	116	P	Pb	01 41 27.6	+1.1
	SNR=9.4						
NAX				S	Sb	01 42 03.9	+0.3
SVRC	Sivrice-ELAZID	3.03	225	PN	Pn	01 41 21.7	+0.1
ELZG	Elazig	3.13	230	*i* P	Pn	01 41 23.8	+0.8
NCK	Nalchik	3.16	21⇑	*e*PN	Pb	01 41 28.4	-1.0
DDFL	Dedoflistskaro	3.21	72	P	Pb	01 41 31.5	+1.3
DDFL				S	Sg	01 42 17.0	+1.6
DDFL	Dedoflistskaro	3.21	72	*i* P	Pn	01 41 26.9	+2.8
KBZ	Khabaz	3.24	11	Pn	Pb	01 41 28.1	-2.6
	comp=Z,2.9nm,0.3s,baz=197,slow=5.3,SNR=30						
KBZ				Lg	Lg	01 42 17.1	
	comp=Z,3.9nm,0.3s,baz=15,slow=16,SNR=2.1						
KBZ				LR	LR	01 42 44.6	
	comp=Z,399nm,18.8s,baz=209,slow=39						
GANJ	Ganja	3.26	87	Pn	Pb	01 41 32.6	+1.6
	SNR=9.2						
GANJ				Sn	Sb	01 42 12.9	+1.6
GANJ	Ganja	3.26	87	P	Pb	01 41 32.6	+1.6
	SNR=9.2						
GANJ				S	Sb	01 42 12.9	+1.6
MAZI	Mazidag	3.33	202	PN	Pn	01 41 26.1	+0.4
LGD	Lagodekhi	3.42	67	P	Pb	01 41 31.4	-2.3
LGD				S	Sb	01 42 16.4	+0.6
LGD	Lagodekhi	3.42	67	*e*PN	Pb	01 41 31.4	-2.3
LGD				*e*S	Sb	01 42 16.4	+0.6
KIV	Kislovodsk	3.44	8	PN	Pn	01 41 29.6	+2.4
KIV	Kislovodsk	3.44	8	*e*Pn	Pn	01 41 28.5	+1.3
KIV				*e*Sn	Sn	01 42 04.3	-4.3
KIV	Kislovodsk	3.44	8	*e*PN	Pn	01 41 30.4	+3.2
KIV				pmax	pmax		
	comp=Z,536nm,1.1s						
KIV				MLR	MLR		
	comp=Z,132nm,7.0s						
YOVA	Hakkari_Yksek	3.44	149	*i* P	Pb	01 41 36.1	+2.0
KVAR	Kislovodsk Arr	3.44	8	Pn	Pb	01 41 31.0	-3.1
	baz=276,slow=17,SNR=12						
KVAR				Lg	Lg	01 42 24.1	
	baz=294,slow=20,SNR=2.7						
ORD	Ordubad	3.45	117	Pn	Pb	01 41 33.9	-0.3
ORD				Sn	Sb	01 42 15.2	-1.6
ORD	Ordubad	3.45	117	P	Pb	01 41 33.9	-0.3
ORD				S	Sb	01 42 15.2	-1.6
SOC	Sochi	3.49	331	*d i*PN	Pn	01 41 28.9	+1.1
SOC				*e*PPP	PPP	01 41 39.0	
SOC				*e*		01 42 11.2	
SOC				pmax	pmax		
	comp=Z,335nm,0.8s						
SOC				MLR	MLR		
	comp=Z,558nm,13.0s						
CUKT	Cukurca	3.52	159	PN	Pn	01 41 30.5	+2.2
CUKT	Cukurca	3.52	159	*i* P	Pg	01 41 39.7	0.0
HEKM	Malatya_Hekimh	3.56	243	*i* P	Pb	01 41 38.9	+2.6
ZKTA	Zakatala	3.63	71	Pn	Pb	01 41 38.0	+0.7
ZKTA				Sn	Sb	01 42 22.6	+0.8
ZKTA	Zakatala	3.63	71	P	Pb	01 41 38.0	+0.7
ZKTA				S	Sb	01 42 22.6	+0.8
MNGR	Mingechevir, A	3.84	85	Pn	Pb	01 41 40.5	-0.4
MNGR				Sn	Sb	01 42 27.1	-0.9
MNGR	Mingechevir, A	3.84	85	P	Pb	01 41 40.5	-0.4
MNGR				S	Sb	01 42 27.1	-0.9
GROC	Groznyy	3.86	45	*e*PN	Pb	01 41 42.2	+1.0
GROC				*e*		01 41 45.3	
GROC				*e*		01 42 41.9	
GROC				pmax	pmax		
	comp=Z,236nm,1.0s						
GROC				smax	smax		
	comp=E,273nm,1.1s						
GROC				smax	smax		
	comp=E,750nm,1.3s						
BRDA	Brd	3.93	93	Pn	Pb	01 41 41.5	-1.0
BRDA				Sn	Sb	01 42 28.8	-1.7
BRDA	Brd	3.93	93	P	Pb	01 41 41.5	-1.0
BRDA				S	Sb	01 42 28.8	-1.7
SEKA	Sheki	3.96	79	Pn	Pb	01 41 43.3	+0.2
SEKA				Sn	Sb	01 42 32.3	+0.7
SEKA	Sheki	3.96	79	P	Pb	01 41 43.3	+0.2
SEKA				S	Sb	01 42 32.3	+0.7
URFA	Urfa	3.99	220	PN	Pn	01 41 35.3	+0.5
DARE	Darende-Malaty	4.04	242	PN	Pn	01 41 35.8	+0.4
TOKT	Tokat	4.20	269	PN	Pn	01 41 38.6	+1.0
ZRD	Zardab	4.32	92	Pn	Pb	01 41 46.8	-2.2
ZRD				Sn	Sb	01 42 38.4	-3.2
ZRD	Zardab	4.32	92	P	Pb	01 41 46.8	-2.2
ZRD				S	Sb	01 42 38.4	-3.2
QBL	Gabala	4.42	83	Pn	Pb	01 41 48.4	-2.4
QBL				Sn	Sb	01 42 41.5	-3.2
QBL	Gabala	4.42	83	P	Pb	01 41 48.4	-2.4
QBL				S	Sb	01 42 41.5	-3.2
GOF	Gofitskoye	4.57	9⇑	*e*PN	Pg	01 41 57.8	-2.0
GOF				*e*S	Sg	01 43 02.6	+3.7
GOF				pmax	pmax		
	comp=Z,51nm,0.9s						
GOF				smax	smax		
	comp=N,151nm,0.8s						
KVT	Kavak	4.58	279	PN	Pn	01 41 43.4	+0.6
XNQ	Khinaliq	4.67	80	Pn	Pb	01 41 52.0	-3.1
XNQ				Sn	Sb	01 42 47.7	-4.2
XNQ	Khinaliq	4.67	80	P	Pb	01 41 52.0	-3.1
XNQ				S	Sb	01 42 47.7	-4.2
IML	Ismayilli	4.68	85	Pn	Pb	01 41 51.9	-3.3
IML				Sn	Sb	01 42 47.6	-4.4
IML	Ismayilli	4.68	85	P	Pb	01 41 51.9	-3.3
IML				S	Sb	01 42 47.6	-4.4
KDMR	Kurdemir	4.69	90	Pn	Pb	01 41 51.9	-3.5
KDMR				Sn	Sb	01 42 47.6	-4.8
KDMR	Kurdemir	4.69	90	P	Pb	01 41 51.9	-3.5
KDMR				S	Sb	01 42 47.6	-4.8
MAK	Makhachkala	4.74	58	*e*PN	Pn	01 41 42.2	-2.8
MAK				pmax	pmax		
	comp=Z,124nm,1.1s						
MAK				MLR	MLR		
	comp=Z,332nm,9.0s						
QSAR	Qusar	4.80	76	Pn	Pb	01 41 53.9	-3.4
QSAR				Sn	Sb	01 42 51.1	-4.5
QSAR	Qusar	4.80	76	P	Pb	01 41 53.9	-3.4
QSAR				S	Sb	01 42 51.1	-4.5
SAAT	Saatly	4.93	96	Pn	Pb	01 41 54.3	-5.2
SAAT				Sn	Sn	01 42 52.0	+6.6
SAAT	Saatly	4.93	96	P	Pb	01 41 54.3	-5.2
SAAT				S	Sn	01 42 52.0	+6.6
QUBA	Quba, Azerbaij	4.95	79	Pn	Pb	01 41 55.9	-4.0
QUBA				Sn	Sb	01 42 54.8	-5.2
QUBA	Quba, Azerbaij	4.95	79	P	Pb	01 41 55.9	-4.0
QUBA				S	Sb	01 42 54.8	-5.2
PQL	Pirkuli	4.99	85	Pn	Pb	01 41 56.1	-4.4
PQL				Sn	Sb	01 42 55.3	-5.8
PQL	Pirkuli	4.99	85	P	Pb	01 41 56.1	-4.4
PQL				S	Sb	01 42 55.3	-5.8
KMRS	Kahramanmaras	5.03	234	PN	Pn	01 41 49.5	+0.5
GLBA	Clilabad	5.06	103	Pn	Pb	01 41 56.5	-5.1
GLBA				Sn	Sn	01 42 55.8	+7.4
GLBA	Clilabad	5.06	103	P	Pb	01 41 56.5	-5.1
GLBA				S	Sn	01 42 55.8	+7.4
GAZ	Gaziantep	5.06	230	PN	Pn	01 41 50.4	+1.0
BNN	Bunyan	5.07	252	PN	Pn	01 41 50.5	+0.8
LRK	Lerik	5.22	109	Pn	Pn	01 41 58.5	+6.7
LRK				Sn	Sn	01 42 59.5	+6.7
LRK	Lerik	5.22	109	P	Pn	01 41 58.5	+6.7
LRK				S	Sn	01 42 59.5	+6.7
SIZA	Siyzn	5.23	82	Pn	Pb	01 41 59.6	-5.0
SIZA				Sn	Sb	01 43 01.4	-6.6
SIZA	Siyzn	5.23	82	P	Pb	01 41 59.6	-5.0
SIZA				S	Sb	01 43 01.4	-6.6
DIKM	Dikmen	5.24	284	PN	Pn	01 41 53.1	+1.2
ATGJ	Altiaghaj	5.25	84	Pn	Pb	01 41 59.8	-5.2
ATGJ				Sn	Sb	01 43 01.8	-6.8
ATGJ	Altiaghaj	5.25	84	P	Pb	01 41 59.8	-5.2
ATGJ				S	Sb	01 43 01.8	-6.8
GBS	Qobustan	5.26	88	Pn	Pb	01 41 59.8	-5.3
GBS				Sn	Sb	01 43 01.8	-7.0
GBS	Qobustan	5.26	88	P	Pb	01 41 59.8	-5.3
GBS				S	Sb	01 43 01.8	-7.0
ALIB	Äli-Bayra	5.36	94	Pn	Pb	01 42 01.0	-5.8
ALIB				Sn	Sn	01 43 04.1	+8.1
ALIB	Äli-Bayra	5.36	94	P	Pb	01 42 01.0	-5.8
ALIB				S	Sn	01 43 04.1	+8.1
ANN	Anapa	5.44	323	*e*P	Pn	01 41 58.3	+3.8
ANN				*e*S	Sn	01 43 01.6	+3.8
ANN				pmax	pmax		
	comp=Z,109nm,0.9s						
ANN				MLR	MLR		
	comp=Z,434nm,17.0s						
LKRN	Lenkeran, Azer	5.52	107	Pn	Pn	01 42 02.6	+7.0
LKRN				Sn	Sn	01 43 06.9	+7.1
LKRN	Lenkeran, Azer	5.52	107	P	Pn	01 42 02.6	+7.0
LKRN				S	Sn	01 43 06.9	+7.1
ASTR	Astara	5.58	109	Pn	Pn	01 42 03.4	+6.9
ASTR				Sn	Sn	01 43 08.4	+7.0
ASTR	Astara	5.58	109	P	Pn	01 42 03.4	+6.9
ASTR				S	Sn	01 43 08.4	+7.0
GOBA	Gobu	5.87	89	Pn	Pn	01 42 08.1	+7.6
GOBA				Sn	Sn	01 43 16.8	+8.4
GOBA	Gobu	5.87	89	P	Pn	01 42 08.1	+7.6
GOBA				S	Sn	01 43 16.8	+8.4
NDR	Nardaran	6.05	87	Pn	Pn	01 42 10.7	+7.7
NDR				Sn	Sn	01 43 21.4	+8.5
NDR	Nardaran	6.05	87	P	Pn	01 42 10.7	+7.7
NDR				S	Sn	01 43 21.4	+8.5
GALA	Gala	6.19	89	Pn	Pn	01 42 12.6	+7.7
GALA				Sn	Sn	01 43 24.6	+8.4
GALA	Gala	6.19	89	P	Pn	01 42 12.6	+7.7
GALA				S	Sn	01 43 24.6	+8.4
ILGA	Ilgaz	6.34	277	*e*Pn	Pn	01 42 09.9	+2.8
BR101	Keskin Array S	6.49	265	*e*Pn	Pn	01 42 13.1	+3.9
BR101				*e*Pg	Pb	01 42 29.1	+3.0
BR131	Keskin Array S	6.49	265	*e*Pn	Pn	01 42 11.4	+2.2
BR131	Keskin Array S	6.49	265	P	Pn	01 42 11.7	+2.5
BRTR	Keskin Array B	6.49	265	Pn	Pn	01 42 13.1	+3.9
	comp=Z,0.1nm,0.3s,baz=94,slow=12,SNR=12						
BRTR				Pg	Pb	01 42 29.1	+2.9
	comp=Z,0.2nm,0.3s,baz=90,slow=14,SNR=15						

BRTR				Lg	Lg	01 43 58.8	
	comp=Z,0.1nm,0.3s,baz=75,slow=27,SNR=2.4						
BRTR				LR	LR	01 44 22.5	
	comp=Z,75nm,19.0s,baz=64,slow=36						
FEO	Feodosiya	6.62	315	*e*P	Pn	01 42 10.0	-0.8
FEO				*e*S	Sn	01 43 21.3	-5.7
FEO				pmax	pmax		
	comp=Z,15nm,0.8s						
FEO				pmax	pmax		
	comp=Z,10.0nm,0.2s						
FEO				smax	smax		
	comp=E,21nm,0.8s						
FEO				smax	smax		
	comp=N,64nm,1.0s						
SUDU	Sudak	6.76	312⇑	*e*P	Pn	01 42 13.3	+0.6
SUDU				*e*S	Sn	01 43 28.2	-2.1
SUDU				pmax	pmax		
	comp=Z,55nm,0.9s						
SUDU				smax	smax		
	comp=N,7.0nm,0.9s						
SUDU				smax	smax		
	comp=E,43nm,0.9s						
SUDU				smax	smax		
	comp=N,29nm,0.7s						
ALU	Alushta	6.99	309⇑	*e*P	Pn	01 42 11.9	-3.9
ALU				*e*S	Sn	01 43 26.5	-9.4
ALU				pmax	pmax		
	comp=Z,6.0nm,0.2s						
ALU				smax	smax		
	comp=N,62nm,0.8s						
ALU				smax	smax		
	comp=E,85nm,0.8s						
YAL	Yalta	7.03	307⇑	*e*P	Pn	01 42 16.9	+0.5
YAL				*e*S	Sn	01 43 32.2	-4.8
YAL				pmax	pmax		
	comp=Z,86nm,0.4s						
YAL				smax	smax		
	comp=N,25nm,0.7s						
YAL				smax	smax		
	comp=E,39nm,0.7s						
ANTO	Ankara	7.11	268	*e*Pn	Pn	01 42 18.1	+0.5
ANTO	Ankara	7.11	268	*e*P	Pn	01 42 18.1	+0.5
BR231	Keskin MP Arra	7.13	267	*e*Pn	Pn	01 42 18.1	+0.2
SIM	Simferopol'	7.30	310⇑	*e*P	Pn	01 42 22.3	+2.1
SIM				*e*S	Sn	01 43 41.5	-2.2
SIM				pmax	pmax		
	comp=Z,43nm,0.8s						
SIM				smax	smax		
	comp=N,49nm,0.9s						
SIM				smax	smax		
	comp=E,87nm,0.9s						
SEVA	Sevastopol	7.34	306⇑	*i*P	Sn	01 43 43.9	-0.8
SEV	Sevastopol'	7.36	306	*e*P	Pn	01 42 20.1	-0.8
SEV				*e*S	Sn	01 43 40.0	-5.1
SEV				pmax	pmax		
	comp=Z,27nm,0.8s						
SEV				smax	smax		
	comp=N,28nm,0.8s						
SEV				smax	smax		
	comp=E,11nm,0.8s						
MMAI	Mount Meron Ar	9.21	217	Pn	Pn	01 42 46.3	-0.1
	comp=E,0.1nm,0.3s,baz=55,slow=16,SNR=2.4						
MMAI				Lg	Lg	01 45 19.5	
	baz=257,slow=41,SNR=2.6						
MMAI				LR	LR	01 46 16.7	
	comp=E,128nm,19.5s,baz=335,slow=38						
ASF	Jabal al Asfar	9.33	208	Pn	Pn	01 42 48.4	+0.4
	comp=E,0.1nm,0.3s,baz=45,slow=11,SNR=3.0						
TLCR		10.76	300⇑	*i*P	Pn	01 43 06.4	-1.0
TLCR		10.76	300	⇑P	Pn	01 43 06.4	-1.0
TIRR	Tirgusor	10.79	296	*e*Pn	Pn	01 43 07.1	-0.8
TIRR	Tirgusor	10.79	296⇑	*i*P	Pn	01 43 07.4	-0.6
TIRR	Tirgusor	10.79	296	⇑P	Pn	01 43 07.4	-0.6
VSR	Storozhevoye	10.85	350	*e*P	Pn	01 43 09.5	+0.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
TLB	Topalu	11.08	296⇑	*i*P	Pn	01 43 10.7	-1.2
TLB	Topalu	11.08	296	⇑P	Pn	01 43 10.7	-1.2
HARR	Harsova	11.19	296⇓	*i*P	Pn	01 43 12.8	-0.6
HARR	Harsova	11.19	296	⇓P	Pn	01 43 12.8	-0.6
CFR	Carcaliu	11.20	299⇑	*i*P	Pn	01 43 12.1	-1.5
CFR	Carcaliu	11.20	299	⇑P	Pn	01 43 12.1	-1.5
MILM	Milestii Mici	11.49	308⇓	*i*P	Pn	01 43 28.6	+11
BIR	Birlad	11.93	303⇑	*i*P	Pn	01 43 33.6	+10
BIR	Birlad	11.93	303	⇑P	Pn	01 43 33.6	+10
LPSR	Galich'ya Gora	12.24	351	*e*P	Pn	01 43 26.8	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BISRR	Bisoca	12.27	299⇓	*i*P	Pn	01 43 24.1	-4.2
EIL	Elat	12.30	210	LR	LR	01 48 54.7	
	comp=Z,78nm,18.8s,baz=348,slow=41						
VRI	Vrincioaia	12.37	300⇑	*i*P	Pn	01 43 38.9	+9.4
VRI	Vrincioaia	12.37	300	⇑P	Pn	01 43 38.9	+9.4
PLOR	Plostina	12.41	300⇑	*i*P	Pn	01 43 29.6	-0.6
PLOR	Plostina	12.41	300	⇑P	Pn	01 43 29.6	-0.6
TESR	Tescani	12.65	303⇓	*i*P	Pn	01 43 31.8	-1.6
GEYT	Alibeck	12.74	97	Pn	Pn	01 43 37.2	+2.5
	comp=Z,0.1nm,0.3s,baz=286,slow=12,SNR=5.0						
GEYT				LR	LR	01 50 33.5	
	comp=Z,55nm,18.6s,baz=50,slow=47						
MLR	Muntele Rosu	12.77	298	Pn	Pn	01 43 34.6	-0.6
	comp=Z,0.2nm,0.3s,baz=168,slow=2.3,SNR=11						
MLR				Sn	Sn	01 45 55.1	-2.9
	comp=Z,0.2nm,0.3s,baz=133,slow=16,SNR=3.0						
MLR	Muntele Rosu	12.77	298	*e*Pn	Pn	01 43 32.9	-2.2
MLR	Muntele Rosu	12.77	298⇑	*i*P	Pn	01 43 34.3	-0.8
MLR	Muntele Rosu	12.77	298	⇑P	Pn	01 43 34.3	-0.8
OZUR		13.06	300⇓	*i*P	Pn	01 43 38.0	-1.1
BIZ	Bicaz	13.16	304⇓	*i*P	Pn	01 43 39.6	-0.8
PRAR	RASCA	13.26	306⇑	*i*P	Pn	01 43 41.7	0.0
DOPR	Dopca	13.28	300⇑	*i*P	Pn	01 43 41.0	-1.1
MTUR	Matau	13.29	296⇑	*i*P	Pn	01 43 41.0	-1.3
MTUR	Matau	13.29	296	⇑P	Pn	01 43 41.0	-1.3
VOIR		13.36	297⇑	*i*P	Pn	01 43 43.0	-0.1
VOIR		13.36	297	⇑P	Pn	01 43 43.0	-0.1
AKASG	Malin Array Be	13.53	323	Pn	Pn	01 43 44.2	-1.1
	comp=Z,3.5nm,0.3s,baz=138,slow=11,SNR=19						
AKBB	Malin Array Si	13.53	323	*e*Pn	Pn	01 43 39.7	-5.6
AKBB	Malin Array Si	13.53	323	*e*P	Pn	01 43 39.7	-5.6
BURAR	Bucovina Array	13.99	306⇑	*i*P	Pn	01 43 55.5	+3.7
BURAR	Bucovina Array	13.99	306	⇑P	Pn	01 43 55.5	+3.7
BUR08	Bucovina Ar. S	14.01	306	*e*Pn	Pn	01 43 51.4	-0.6
VTS	Vitosha	14.23	285	*e*Pn	Pn	01 43 56.6	+1.5
VTS	Vitosha	14.23	285	*e*P	Pn	01 43 56.6	+1.5
LOT	Lotru	14.23	296⇑	*i*P	Pn	01 43 51.7	-3.4
AKTO	Aktyubinsk	14.91	43	Pn	Pn	01 44 04.7	+0.4
	comp=Z,0.2nm,0.3s,baz=240,slow=15,SNR=5.0						
LIT	Litokhoron	14.92	275	*e*Pn	Pn	01 44 00.0	-4.5
LIT	Litokhoron	14.92	275	*e*P	Pn	01 44 00.0	-4.5
OBN	Obninsk	15.02	348⇑	*e*P	P	01 44 09.7	-1.6
OBN				*e*S	S	01 47 01.5	-9.1
OBN				pmax	pmax		
	comp=Z,21nm,1.7s						
OBN				MLR	MLR		
	comp=Z,104nm,16.0s						
ABKAR	Akbulak array	15.35	50	*e*Pn	Pn	01 44 10.8	+0.7
	comp=Z,3.2nm,0.9s						
MOS	Moscow	15.48	351	*e*P	Pn	01 44 11.3	-0.4
BZS	Buzias	15.75	296⇑	*i*P	Pn	01 44 13.4	-1.8
BZS	Buzias	15.75	296	⇑P	Pn	01 44 13.5	-1.8
TRPA	Tarpa	15.85	305⇑	*i*P	Pn	01 44 17.0	+0.4
UZH	Uzhgorod	16.19	306	*e*P	Pn	01 44 19.2	-1.8
KWP	Kalwaria Pacla	16.36	310	*e*P	P	01 44 26.2	0.0
KWP	Kalwaria Pacla	16.36	310	*e*P	P	01 44 26.2	0.0
PSZ	Piszkesteto	17.46	302	*e*P	Pn	01 44 36.8	-0.4
	comp=Z,4.9nm,0.9s						
PSZ	Piszkesteto	17.46	302	*e*P	Pn	01 44 36.8	-0.4
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIE	Niedzica	17.70	307	*e*P	Pn	01 44 40.5	+0.4
NIE	Niedzica	17.70	307	*e*P	Pn	01 44 40.5	+0.4
VYHS	Vyhne	18.30	303	*e*P	P	01 44 49.2	+1.5
VYHS	Vyhne	18.30	303	*e*P	P	01 44 49.2	+1.5
SUW	Suwalki	18.50	323	*e*P	P	01 44 49.3	-0.4
SUW	Suwalki	18.50	323	*e*P	P	01 44 48.6	-1.2
	comp=Z,29nm,1.0s						
SUW	Suwalki	18.50	323	*e*P	P	01 44 49.3	-0.4
KIRV	Kirov	18.66	12	P	Pn	01 44 54.0	+2.3
	comp=Z,0.8nm,0.3s,baz=242,slow=5.4,SNR=3.7						
KIRV				LR	LR	01 52 26.5	
	comp=Z,109nm,18.7s,baz=239,slow=38						
KIRV	Kirov	18.66	12	P	Pn	01 44 54.0	+2.3
JAVC	Velka Javorina	19.15	304	*e*P	Pn	01 44 59.6	+1.8
OKC	Ostrava-Krasne	19.16	307	*e*P	Pn	01 44 58.9	+1.0
OKC	Ostrava-Krasne	19.16	307	*e*P	Pn	01 44 58.9	+1.0
OKC				*e*x	x	01 45 09.3	
ARU	Arti	19.21	29	P	Pn	01 45 01.2	+2.8
	comp=Z,0.0nm,0.3s,baz=238,slow=9.5,SNR=7.8						
ARU				LR	LR	01 54 25.1	
	comp=Z,65nm,18.3s,baz=232,slow=43						
ARU	Arti	19.21	29	*e*P	Pn	01 44 59.0	+0.6
	comp=Z,7.2nm,0.8s						
ARU	Arti	19.21	29*d*	*i*P	Pn	01 44 59.9	+1.4
ARU				S	S	01 48 38.4	+2.5
ARU				pmax	pmax		
	comp=Z,12nm,1.1s						
MODS	Modra-Piesok	19.27	302	*e*P	Pn	01 45 00.9	+1.6
MODS	Modra-Piesok	19.27	302	*e*P	Pn	01 45 00.9	+1.6
TIP	Timpagrande	19.44	274	*e*P	Pn	01 45 01.5	0.0
	comp=Z,11nm,1.0s						
VRAC	Vranov	19.96	305	P	Pn	01 45 06.7	-0.7
	comp=Z,0.3nm,0.3s,baz=157,slow=7.7,SNR=3.1						
VRAC				LR	LR	01 54 44.1	
	comp=Z,41nm,18.3s,baz=108,slow=43						
KRUC	Moravsky	20.01	304	*e*P	Pn	01 45 08.5	+0.4
CONA	Conrad Observa	20.09	300	*e*pP	P	01 45 09.4	+2.1
	comp=Z,18nm,1.1s,SNR=11						
SVE	Sverdlovsk	20.29	30	*e*P	Pn	01 45 16.7	+5.5
SVE				pmax	pmax		
	comp=Z,19nm,1.2s						
VSU	Vasula	20.41	337*d*	*e*P	Pn	01 45 14.5	+1.9
VSU				pmax	pmax		
	comp=Z,114nm,1.7s						
SOKA	Soboth	20.43	296	*e*P	Pn	01 45 12.3	-0.8
	comp=Z,8.1nm,1.5s						
DPC	Dobruska-Polom	20.44	307	*e*P	Pn	01 45 12.1	-1.1
DPC	Dobruska-Polom	20.44	307	*e*P	Pn	01 45 12.1	-1.1
OSTC	Ostas	20.57	308	*e*P	Pn	01 45 16.8	+2.1
TREC	Trest	20.65	304	*e*P	Pn	01 45 15.1	-0.5
TREC	Trest	20.65	304	*e*P	Pn	01 45 15.1	-0.5
CHVC	Chvalec	20.68	308	*e*P	Pn	01 45 15.1	-0.8
MOA	Molln	21.13	299	pP	P	01 45 20.1	+1.5
	comp=Z,3.7nm,0.8s						
PRGR	Permogore	21.23	5	*e*P	P	01 45 18.8	-0.6
PRGR				pmax	pmax		
	comp=Z,11nm,0.5s						
GOPC	GO Pecny, Ondr	21.25	305	*e*P	P	01 45 21.1	+1.2
GOPC	GO Pecny, Ondr	21.25	305	*e*P	P	01 45 21.1	+1.2
KK31	Karatay Array	21.33	74	*e*P	P	01 45 20.1	-0.6
	comp=Z,6.1nm,0.9s						
KK31	Karatay Array	21.33	74	*e*P	P	01 45 20.1	-0.6
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KKAR	Karatay Array	21.33	74	*e*P	P	01 45 21.2	+0.5
	comp=Z,6.1nm,0.9s						
KKAR	Karatay Array	21.33	74	*e*P	P	01 45 21.2	+0.5
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PRU	Pruhonice	21.43	305	*e*P	P	01 45 22.5	+0.8
PRU				*e*		01 45 27.1	
PRU	Pruhonice	21.43	305	*e*P	P	01 45 22.5	+0.8
PRU				*e*x	x	01 45 27.1	
AQU	L'Aquila	21.50	284	*e*P	P	01 45 20.5	-2.2
	comp=Z,19nm,1.0s						
PVCC	Panska Ves	21.56	307	*e*P	P	01 45 24.3	+1.2
PVCC	Panska Ves	21.56	307	*e*P	P	01 45 24.3	+1.2
KBA	Koelnbreinsper	21.64	297	*e*pP	P	01 45 25.5	+1.3
	comp=Z,20nm,0.9s,SNR=19						
GEC2	GERESS Array S	21.69	302	*e*P	P	01 45 25.2	+0.5
	comp=Z,5.8nm,0.8s						
GEC2	GERESS Array S	21.69	302	*e*P	P	01 45 25.2	+0.5
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GERES	GERESS Array B	21.69	302	P	P	01 45 25.2	+0.5
	comp=Z,4.6nm,0.8s,baz=103,slow=9.7,SNR=17						
GERES				LR	LR	01 55 06.7	
	comp=Z,27nm,19.4s,baz=100,slow=40						
GAR	Garm	21.75	85	*e*P	P	01 45 26.2	+0.8
	comp=Z,34nm,1.1s						
GAR	Garm	21.75	85	*e*P	P	01 45 26.2	+0.8
GAR				pmax	pmax		
	comp=Z,34nm,1.1s						
KHC	Kasperske Hory	21.83	303	*e*P	P	01 45 27.2	+1.1
	comp=Z,3.5nm,1.0s						
KHC	Kasperske Hory	21.83	303*c*	*i*P	P	01 45 26.6	+0.5
KHC	Kasperske Hory	21.83	303	*e*P	P	01 45 26.8	+0.7
ABTA	Abfaltersbach	22.17	296	*e*pP	P	01 45 31.1	+1.3
	comp=Z,16nm,1.0s,SNR=9.4						
CLL	Collm	22.74	308	*e*P	P	01 45 36.7	+1.0
	comp=Z,8.0nm,1.0s						
CLL	Collm	22.74	308	*i* P	P	01 45 37.0	+1.3
CLL				*i*		01 45 40.8	
CLL				*e*S	S	01 49 41.0	-4.2
CLL				pmax	pmax		
	comp=Z,25nm,1.9s						
CLL	Collm	22.74	308	*i* (P)	P	01 45 37.0	+1.3
	comp=Z,25nm,1.9s						
CLL				*i*		01 45 40.8	
CLL				*i*		01 45 45.9	
CLL				*e*S	S	01 49 41.0	-4.2
NKC	Novy Kostel	22.79	305	*e*P	P	01 45 37.1	+0.7
NKC	Novy Kostel	22.79	305	*e*P	P	01 45 37.1	+0.7
WTTA	Wattenberg	22.81	297	*e*pP	P	01 45 38.1	+1.3
	comp=Z,23nm,1.2s,SNR=9.8						
BRVK	Borovoye	22.85	47	*e*P	P	01 45 38.0	+1.0
	comp=Z,4.4nm,0.9s						
BRVK	Borovoye	22.85	47⇓	*e*P	P	01 45 40.9	+4.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
WATA	Walderalm	22.86	297	*e*pP	P	01 45 37.9	+0.7
	comp=Z,21nm,1.1s,SNR=12						
BVAR	Borovoye Array	22.90	47	P	P	01 45 41.1	+3.7
	comp=Z,2.5nm,0.9s,baz=248,slow=14,SNR=9.1						
FIA0	FINESS Array S	23.08	340	*e*P	P	01 45 40.2	+1.0
FIA0	FINESS Array S	23.08	340	*e*P	P	01 45 40.2	+1.0
FINES	FINESS Array B	23.08	340	P	P	01 45 40.2	+1.0
	comp=Z,2.0nm,0.7s,baz=144,slow=13,SNR=5.6						
FINES				LR	LR	01 55 33.1	
	comp=Z,75nm,18.9s,baz=68,slow=39						
SQTA	Sankt Quirin	23.10	297	*e*pP	P	01 45 40.0	+0.3
	comp=Z,24nm,0.9s,SNR=6.6						
MOTA	Moosalm	23.18	297	pP	P	01 45 40.4	-0.2
	comp=Z,24nm,0.9s,SNR=27						
FETA	Feichten	23.41	296	*e*pP	P	01 45 43.3	+0.4
	comp=Z,14nm,0.8s,SNR=22						
RETA	Reutte	23.43	298	*e*pP	P	01 45 42.5	-0.5
	comp=Z,4.3nm,0.7s						
GRA1	Grafenberg Arr	23.45	303	*e*P	P	01 45 44.6	+1.5
	comp=Z,9.5nm,1.0s						
GRF	Grafenberg Arr	23.45	303	*e*P	P	01 45 44.6	+1.5
GRF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FUORN	Ofenpass-Fuorn	23.70	295	*e*P	P	01 45 47.0	+1.1
	comp=Z,12nm,1.0s						
DAVOX	Davos/Dischmat	23.97	296	P	P	01 45 48.5	0.0
	comp=Z,9.1nm,0.8s,baz=92,slow=6.3,SNR=16						
DAVA	Damuels	24.01	297	*e*pP	P	01 45 48.9	+0.1
	comp=Z,22nm,0.8s,SNR=12						
AAK	Ala-Archa	24.28	74	P	P	01 45 54.1	+2.7
	comp=Z,1.1nm,0.3s,baz=241,slow=9.5,SNR=5.8						
AAK	Ala-Archa	24.28	74⇓	*i*P	P	01 45 54.5	+3.1
AAK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
TUE	Stuetta	24.32	295	*e*P	P	01 45 52.3	+0.6
	comp=Z,18nm,1.1s						
BOOM	Boomskoye usch	25.36	74	*e*P	P	01 46 04.8	+3.7
	comp=Z,4.7nm,1.1s						
BOOM	Boomskoye usch	25.36	74	*e*P	P	01 46 04.8	+3.7
BOOM				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SENIN	Lac Senin/Sane	25.74	295	*e*P	P	01 46 04.7	+0.1
	comp=Z,8.9nm,0.8s						
ECH	Echery	25.91	299	*e*P	P	01 46 05.9	0.0
	comp=Z,7.3nm,1.1s						
ECH	Echery	25.91	299	*e*P	P	01 46 05.9	0.0
ECH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH	Kashi	25.91	81	P	P	01 46 07.8	+1.7
KSH				sP		01 46 14.8	
KSH				PP	PnPn	01 46 47.3	+4.3
KSH				pmax	pmax		
	comp=Z,19nm,1.5s						
KSH				pmax	pmax		
	comp=Z,110nm,6.6s						
KSH				LR	LR		
	comp=N,83nm,5.9s						
KSH				LR	LR		
	comp=E,80nm,6.3s						
KEST	Kesra	26.07	270	P	P	01 46 09.8	+2.2
	comp=E,13nm,0.9s,baz=313,slow=2.7,SNR=12						
KEST	Kesra	26.07	270	*e*P	P	01 46 09.8	+2.2
	comp=E,21nm,1.0s						
BNI	Bardonecchia	26.20	292	*e*P	P	01 46 09.1	+0.4
	comp=E,10nm,0.9s						
BNI	Bardonecchia	26.20	292	*e*P	P	01 46 09.1	+0.4
BNI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HFS	Hagfors	26.33	328	P	P	01 46 10.4	+0.9
	comp=Z,11nm,0.8s,baz=123,slow=11,SNR=10						
HFS				LR	LR	01 57 13.1	
	comp=Z,47nm,18.9s,baz=122,slow=38						
KURBB	Kurchatov Arra	27.20	56	P	P	01 46 19.9	+2.4
	comp=Z,2.7nm,0.8s,baz=267,slow=9.0,SNR=22						
KURK	Kurchatov	27.27	56	*e*P	P	01 46 18.0	-0.1
	comp=Z,5.2nm,1.0s						
KURK	Kurchatov	27.27	56⇓	*e*P	P	01 46 20.5	+2.5
KURK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
SSB	Saint Sauveur	27.70	292	*e*P	P	01 46 22.1	+0.1
	comp=Z,3.7nm,0.9s						
SSB	Saint Sauveur	27.70	292	*e*P	P	01 46 22.1	+0.1
SSB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NB2	NORSAR Subarra	27.85	328	P	P	01 46 26.6	+3.4
	comp=Z,4.7nm,1.2s,baz=124,slow=9.3						
NB200	NORSAR Array S	27.85	328	*e*P	P	01 46 24.9	+1.7
NOA	NORSAR Array B	27.85	328	P	P	01 46 24.9	+1.7
	comp=Z,1.6nm,1.1s,baz=123,slow=8.3,SNR=2.8						
NOA				LR	LR	01 58 37.5	
	comp=Z,40nm,21.1s,baz=130,slow=39						
NOA	NORSAR Array B	27.85	328	P	P	01 46 25.0	+1.7
CLF	Chambon-Foret	29.18	298	*e*P	P	01 46 35.8	+0.6
	comp=Z,10nm,1.0s						
MK31	Makanchi Array	29.53	64	*e*P	P	01 46 40.1	+1.8
	comp=Z,2.8nm,0.6s						
MK31	Makanchi Array	29.53	64	*e*P	P	01 46 40.1	+1.8
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	Makanchi Array	29.53	64	*e*P	P	01 46 40.8	+2.4
MKAR	Makanchi Array	29.53	64	P	P	01 46 40.8	+2.4
	comp=Z,2.4nm,0.8s,baz=278,slow=7.6,SNR=12						
MKAR				LR	LR	01 59 54.0	
	comp=Z,24nm,21.3s,baz=222,slow=39						
ARCES	ARCESS Array B	30.33	349	LR	LR	01 59 21.7	
	comp=Z,68nm,18.1s,baz=184,slow=37						
ZAA1	Zalesovo Array	31.47	50	*e*P	P	01 46 56.8	+1.5
ZALV	Zalesovo Beam	31.47	50	P	P	01 46 56.8	+1.5
	comp=Z,0.7nm,0.4s,baz=269,slow=8.6,SNR=2.9						
ZALV				LR	LR	02 01 44.1	
	comp=Z,18nm,19.3s,baz=250,slow=40						
DGZ	Jazzator, Alta	32.86	58⇑	*e*P	P	01 47 10.8	+3.0
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ESK	Eskdalemuir	33.07	312	*e*P	P	01 47 09.1	-0.2
	comp=Z,12nm,1.1s						
ESK	Eskdalemuir	33.07	312	*e*P	P	01 47 09.1	-0.2
ESK				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ	Urumqi	33.66	69	*e*P	P	01 47 17.9	+3.2
ESDC	Sonseca Array	34.89	284	P	P	01 47 24.1	-1.3
	comp=Z,3.2nm,0.9s,baz=64,slow=8.8,SNR=18						
PAB	San Pablo	35.21	284	*e*P	P	01 47 27.9	-0.3
	comp=Z,4.4nm,1.0s						
PAB	San Pablo	35.21	284	*e*P	P	01 47 27.9	-0.3
PAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JMIC	Jan Mayen	39.60	337	LR	LR	02 04 57.7	
	comp=Z,57nm,18.3s,baz=88,slow=37						
BORG	Borgarnes	42.99	326	LR	LR	02 06 34.4	
	comp=Z,28nm,20.6s,baz=107,slow=36						
TOA1	Torodi Ar. Sit	44.59	244	*e*P	P	01 48 44.4	-1.9
TORD	Torodi Ar. Bea	44.59	244	P	P	01 48 44.4	-1.9
	comp=Z,2.0nm,1.0s,baz=45,slow=9.2,SNR=6.6						
ULN	Ulaanbaatar	45.93	58⇓	*e*P	P	01 48 59.2	+2.4
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TIXI	Tiksi	51.13	24	P	P	01 49 37.6	+1.3
	comp=Z,2.4nm,0.5s,baz=57,slow=5.1,SNR=3.0						
TIXI	Tiksi	51.13	24⇓	*e*P	P	01 49 37.5	+1.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HHC	Hu-ho-hao-te	51.38	65	*e*P	P	01 49 41.1	+2.3
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
CM31	Chiang Mai Arr	53.22	97	*e*P	P	01 49 53.1	+0.6
	comp=Z,4.3nm,0.9s						
CMAR	Chiang Mai Arr	53.22	97	P	P	01 49 53.1	+0.6
	comp=Z,1.0nm,0.3s,baz=300,slow=6.1,SNR=5.0						
CMAR				LR	LR	02 20 30.8	
	comp=Z,17nm,19.0s,baz=200,slow=45						
KLR	Kul'dur	60.56	49⇑	*e*P	P	01 50 46.7	+2.5
KLR				pmax	pmax		
	comp=Z,5.0nm,1.9s						
SEY	Seymchan	62.96	29⇑	*e*P	P	01 51 02.8	+2.6
TJN	Taejon	64.37	63⇓	*e*P	P	01 51 11.4	+1.5
BOSA	Boshof	70.56	196	P	P	01 51 48.5	-0.6
	comp=Z,3.1nm,0.7s,baz=336,slow=5.7,SNR=6.9						
PEA1	Petropavlovsk-	71.47	35	*e*P	P	01 51 56.4	+2.0
PETK	Petropavlovsk-	71.47	35	P	P	01 51 56.4	+2.0
	comp=Z,0.7nm,0.4s,baz=329,slow=7.2,SNR=3.8						

KRSC ***17*** *01:40:53.6±1.2, 52°.92N×160°.03E, h54^{km}±11^{km}, ML4.6*

ISCJB ***17*** *01:40:55.4±0.4, 52°.96N±0°.03×159°.92E±0°.06, h61^{km}±3^{km}, mb4.1/35, Error ellipse: s-maj=7.1km s-min=2.9km az=41.3*

MOS ***17*** *01:40:55.0±0.8, 52°.94N×159°.91E, h57^{km}, mb4.2/4, Error ellipse: s-maj=8.6km s-min=4.2km az=80.9*

IDC ***17*** *01:40:59.5±1.1, 53°.18N×159°.52E, h84^{km}±8^{km}, mb3.7/27, mb1 3.9/29, mb1mx3.8/53, mbtmp4.0/29, MS2.8/3, Ms1 2.8/3, ms1mx2.5/37, Error ellipse: s-maj=18.0km s-min=11.0km az=162.0*

ISC 17 01:40:55.3±0.7**, 52°.96N**±0°.03×**159°.95E**±0°.03**, h51**^{km}±5^{km}**, n136,** σ**1^{s}.58**/174**, mb4.1**/35**, 2C-4D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.15	17	*i* P	Pn	01 41 04.1	+0.6
SPN				*e*S	Sn	01 41 10.1	+0.9
SPN	Mys Shipunski	0.15	17	PN	Pn	01 41 04.1	+0.6
SPN				S	Sn	01 41 10.1	+0.9
NLC	Nalytchevo	0.42	301	*e*P	Pn	01 41 06.0	+0.3
NLC				*e*S	Sn	01 41 13.5	+0.3
NLC	Nalytchevo	0.42	301	PN	Pn	01 41 06.0	+0.3
NLC				S	Sn	01 41 13.5	+0.3
UGLR	Uglovaya	0.73	291	*e*P	Pn	01 41 10.0	+0.5
UGLR				*e*S	Sn	01 41 20.8	+0.9
UGLR	Uglovaya	0.73	291	PN	Pn	01 41 10.0	+0.5
UGLR				S	Sn	01 41 20.8	+0.9
DALK	Dalny	0.73	276	*e*P	Pn	01 41 09.4	0.0
DALK				*e*S	Sn	01 41 19.9	+0.2
DALK	Dalny	0.73	276	PN	Pn	01 41 09.4	0.0
DALK				S	Sn	01 41 19.9	+0.2
SMAR	Somma	0.76	294	*e*P	Pn	01 41 10.1	0.0
SMAR				*e*S	Sn	01 41 21.4	+0.6
SMAR	Somma	0.76	294	PN	Pn	01 41 10.1	0.0
SMAR				S	Sn	01 41 21.4	+0.6
PET	Petropavlovsk	0.79	275⇓	*i*PN	Pn	01 41 10.3	+0.1
PET				*e*S	Sn	01 41 21.2	+0.1
PET				pmax	pmax		
	comp=Z,1µm,0.6s						
PET				smax	smax		
	comp=N,38nm,0.3s						
PET				smax	smax		
	comp=N,7µm,0.4s						
AVH	Avacha	0.79	293	*e*P	Pn	01 41 11.1	+0.7
AVH				*e*S	Sn	01 41 22.9	+1.5
AVH	Avacha	0.79	293	PN	Pn	01 41 11.1	+0.7
AVH				S	Sn	01 41 22.9	+1.5
KRER	Koryakskii	0.80	296	*i* P	Pn	01 41 11.3	+0.6
KRER	Koryakskii	0.80	296	PN	Pn	01 41 11.3	+0.6
KOK	Koryaka	0.86	294	*e*P	Pn	01 41 12.2	+0.9
KOK	Koryaka	0.86	294	PN	Pn	01 41 12.2	+0.9
KRX	Arik	0.88	298	*e*P	Pn	01 41 11.9	+0.3
KRX				*e*S	Sn	01 41 23.6	0.0
KRX	Arik	0.88	298	PN	Pn	01 41 11.9	+0.3
KRX				S	Sn	01 41 23.6	0.0
RUS	Russkaya	1.02	240	*e*P	Pn	01 41 13.4	+0.1
RUS				*e*S	Sn	01 41 26.5	-0.1
RUS	Russkaya	1.02	240	PN	Pn	01 41 13.4	+0.1

RUS				S	Sn	01 41 26.5	-0.1
KRMR	**Karymshinskiy**	1.11	264	eP	Pn	01 41 14.7	+0.2
KRMR				eS	Sn	01 41 28.7	-0.1
KRMR	**Karymshinskiy**	1.11	264	PN	Pn	01 41 14.7	+0.2
KRMR				S	Sn	01 41 28.7	-0.1
MTVR	**Mutnovka**	1.18	247	eP	Pn	01 41 15.9	+0.3
MTVR				eS	Sn	01 41 31.1	+0.5
MTVR	**Mutnovka**	1.18	247	PN	Pn	01 41 15.9	+0.3
MTVR				S	Sn	01 41 31.1	+0.5
PETK	**Petropavlovsk-**	1.37	277	P	Pn	01 41 18.9	+0.9
	comp=N,297nm,0.3s,baz=92,slow=19,SNR=4318						
PETK				S	Sn	01 41 35.8	+0.8
	comp=N,236nm,0.3s,baz=108,slow=17,SNR=18						
PETK				LR	LR	01 41 54.4	
	comp=N,173nm,18.9s,baz=147,slow=50						
ASAK	**Asacha**	1.38	246	eP	Pn	01 41 19.1	+0.9
ASAK				eS	Sn	01 41 37.4	+2.1
ASAK	**Asacha**	1.38	246	PN	Pn	01 41 19.1	+0.9
ASAK				S	Sn	01 41 37.4	+2.1
GNL	**Ganaly**	1.42	302	eP	Pn	01 41 19.7	+0.9
GNL	**Ganaly**	1.42	302	PN	Pn	01 41 19.7	+0.9
KDTR	**Khodutka, Kamc**	1.62	226	eP	Pn	01 41 22.2	+0.7
KDTR				eS	Sn	01 41 41.8	+0.6
KDTR	**Khodutka, Kamc**	1.62	226	PN	Pn	01 41 22.2	+0.7
KDTR				S	Sn	01 41 41.8	+0.6
APC	**Apacha**	1.69	270	eP	Pn	01 41 23.8	+1.4
APC				eS	Sn	01 41 45.8	+2.9
APC	**Apacha**	1.69	270	PN	Pn	01 41 23.8	+1.4
APC				S	Sn	01 41 45.8	+2.9
MKZ	**Mys Kozlova**	1.92	33	eP	Pn	01 41 24.5	-1.0
MKZ				eS	Sn	01 41 48.4	-0.1
MKZ	**Mys Kozlova**	1.92	33	PN	Pn	01 41 24.5	-1.0
MKZ				S	Sn	01 41 48.4	-0.1
KZV	**Kizimen**	2.17	5	eP	Pn	01 41 30.7	+1.6
KZV				eS	Sn	01 41 56.2	+1.3
KZV	**Kizimen**	2.17	5	PN	Pn	01 41 30.7	+1.6
KZV				S	Sn	01 41 56.2	+1.3
TUMD	**Tumrok D**	2.27	6	eP	Pn	01 41 31.8	+1.5
TUMD				eS	Sn	01 41 58.5	+1.4
TUMR	**Tumrok**	2.33	3	eP	Pn	01 41 33.5	+2.2
TUMR	**Tumrok**	2.33	3	PN	Pn	01 41 31.8	+0.5
TUMR				S	Sn	01 41 58.5	-0.3
PAU	**Pauzhetka**	2.44	234	eP	Pn	01 41 35.7	+3.0
PAU				eS	Sn	01 42 03.9	+2.6
PAU	**Pauzhetka**	2.44	234	PN	Pn	01 41 35.7	+3.0
PAU				S	Sn	01 42 03.9	+2.6
KIRR	**Kirishev**	3.01	4	eP	Pn	01 41 42.1	+1.5
KIRR	**Kirishev**	3.01	4	PN	Pn	01 41 42.1	+1.5
BZGR	**Bezymyannyi-Gr**	3.02	8	eP	Pn	01 41 43.4	+2.7
BZGR	**Bezymyannyi-Gr**	3.02	8	PN	Pn	01 41 43.4	+2.7
BZWR	**Bezymyannyi-We**	3.03	6	eP	Pn	01 41 43.6	+2.7
BZWR	**Bezymyannyi-We**	3.03	6	PN	Pn	01 41 43.6	+2.7
ESO	**Esso**	3.06	347	eP	Pn	01 41 42.9	+1.7
ESO	**Esso**	3.06	347	PN	Pn	01 41 42.9	+1.7
KOZ	**Kozyrevsk**	3.11	359	eP	Pn	01 41 44.5	+2.7
KOZ	**Kozyrevsk**	3.11	359	PN	Pn	01 41 44.5	+2.7
LGNR	**Loginova**	3.16	8	eP	Pn	01 41 44.4	+1.6
LGNR	**Loginova**	3.16	8	PN	Pn	01 41 44.4	+1.6
CIRR	**Tsirk**	3.20	8	eP	Pn	01 41 46.0	+2.8
CIRR	**Tsirk**	3.20	8	PN	Pn	01 41 46.0	+2.8
KRSR	**Krestovskiy**	3.29	6	eP	Pn	01 41 45.9	+1.5
KRSR	**Krestovskiy**	3.29	6	PN	Pn	01 41 45.9	+1.5
SKR	**Severo-Kuril's**	3.29	228	eP	Pn	01 41 46.1	+1.8
SKR				eS	Sn	01 42 23.1	+0.9
SKR	**Severo-Kuril's**	3.29	228	ePN	Pn	01 41 45.8	+1.5
SKR				eS	Sn	01 42 23.6	+1.4
SKR				pmax	pmax		
	comp=Z,30nm,0.4s						
SKR				smax	smax		
	comp=N,340nm,0.7s						
SKR				smax	smax		
	comp=E,206nm,0.6s						
SRDR	**Sredinnyy**	3.37	358	eP	Pn	01 41 47.1	+1.6
SRDR	**Sredinnyy**	3.37	358	PN	Pn	01 41 47.1	+1.6
KLY	**Klyuchi**	3.39	7	eP	Pn	01 41 46.6	+1.0
KLY	**Klyuchi**	3.39	7	PN	Pn	01 41 46.6	+1.0
KBTR	**Krutoberegovo**	3.66	26	eP	Pn	01 41 51.6	+2.2
KBTR				eS	Sn	01 42 32.5	+1.3
KBTR	**Krutoberegovo**	3.66	26	PN	Pn	01 41 51.6	+2.2
KBTR				S	Sn	01 42 32.5	+1.3
KBG	**Krutoberegovo**	3.67	25	eP	Pn	01 41 53.1	+3.6
KBG	**Krutoberegovo**	3.67	25	PN	Pn	01 41 53.1	+3.6
BDR	**Baidarnaya**	3.69	11	eP	Pn	01 41 52.2	+2.3
BDR				eS	Sn	01 42 35.6	+3.5
BDR	**Baidarnaya**	3.69	11	PN	Pn	01 41 52.2	+2.3
BDR				S	Sn	01 42 35.6	+3.5
SMKR	**Semkarok**	3.74	13	eP	Pn	01 41 53.7	+3.2
SMKR	**Semkarok**	3.74	13	PN	Pn	01 41 53.7	+3.2
SRKR	**Sorokina**	3.77	10	eP	Pn	01 41 53.8	+2.8
SRKR	**Sorokina**	3.77	10	PN	Pn	01 41 53.8	+2.8
BKI	**Bering**	4.20	55	eP	Pn	01 41 57.5	+0.8
BKI				eS	Sn	01 42 40.9	-3.5
BKI	**Bering**	4.20	55	PN	Pn	01 41 57.5	+0.8
MA2	**Magadan**	8.37	326	LR	LR	01 46 27.0	
	comp=E,57nm,21.2s,baz=123,slow=41						
YSS	**Yuzh-Sakhalins**	12.58	248	ePN	Pn	01 43 52.9	+1.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASAJ	**Asahikawa**	14.47	239	P	Pn	01 44 17.5	+0.4
	comp=Z,0.6nm,0.3s,baz=69,slow=9.2,SNR=5.8						
KLR	**Kul'dur**	18.05	269	P	Pn	01 45 01.8	-0.4
	comp=Z,0.3nm,0.3s,baz=71,slow=9.1,SNR=8.1						
KLR	**Kul'dur**	18.05	269	⇓eP	Pn	01 45 03.2	+1.0
KLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
USRK	**Ussuriysk Ar.**	20.36	256	P	P	01 45 26.9	-0.4
	comp=Z,1.5nm,0.5s,baz=49,slow=12,SNR=8.7						
USRK				LR	LR	01 53 22.7	
	comp=Z,48nm,19.4s,baz=119,slow=37						
MJA0	**Matsu Arr-Jizo**	22.38	231	eP	P	01 45 50.8	+1.7
MJA0				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MAJO	**Matsushiro**	22.39	232	c iP	P	01 45 50.0	+0.7
MAJO				pmax	pmax		
	comp=Z,12nm,0.6s						
MAT	**Matsushiro**	22.39	232	P	P	01 45 49.6	+0.3
MJAR	**Matsushiro Arr**	22.39	232	P	P	01 45 50.0	+0.7
	comp=Z,4.5nm,0.6s,baz=15,slow=10,SNR=19						
MJAR	**Matsushiro Arr**	22.39	232	P	P	01 45 50.0	+0.7
TIXI	**Tiksi**	23.17	335	P	P	01 45 54.8	-2.2
	comp=Z,1.5nm,0.3s,baz=112,slow=8.7,SNR=2.8						
TIXI	**Tiksi**	23.17	335	⇓eP	P	01 45 56.0	-1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KSRS	**Korea Array**	27.09	248	P	P	01 46 33.9	+0.9
	comp=Z,2.1nm,0.8s,baz=40,slow=10,SNR=4.7						
KSRS				LR	LR	01 55 46.7	
	comp=Z,12nm,21.8s,baz=240,slow=33						
ILAR	**Eielson Array**	28.97	45	P	P	01 46 50.4	+0.8
	comp=Z,0.8nm,0.7s,baz=263,slow=8.6,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	33.60	168	T	T	02 23 28.6	
	baz=352,slow=76,SNR=448						
H11N3	**WAKE ISLAND Hy**	33.61	168	T	T	02 23 15.5	
	baz=352,slow=76,SNR=855						
H11N1	**WAKE ISLAND Hy**	33.61	168	T	T	02 23 19.1	
	baz=352,slow=76,SNR=617						
INK	**Inuvik**	34.03	38	P	P	01 47 34.6	+0.7
	comp=Z,1.7nm,0.4s,baz=291,slow=8.9,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	34.78	169	T	T	02 24 41.7	
	baz=352,slow=76,SNR=135						
H11S3	**WAKE ISLAND Hy**	34.79	169	T	T	02 24 47.6	
	baz=352,slow=76,SNR=224						
H11S2	**WAKE ISLAND Hy**	34.80	169	T	T	02 24 43.0	
	baz=352,slow=76,SNR=52						
DLBC	**Dease Lake**	38.20	53	P	P	01 48 09.9	+0.3
	comp=Z,1.4nm,0.6s,baz=345,slow=13,SNR=4.3						
YKA	**Yellowknife Ar**	43.32	42	P	P	01 48 52.4	+0.7
	comp=Z,1.2nm,0.7s,baz=299,slow=6.9,SNR=3.6						
DGZ	**Jazzator, Alta**	43.65	296	⇓eP	P	01 48 53.3	-1.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	47.73	302	⇑eP	P	01 49 24.4	-2.3
KURBB	**Kurchatov Arra**	47.83	302	P	P	01 49 25.1	-2.4
	comp=Z,0.8nm,0.5s,baz=60,slow=7.6,SNR=5.6						
KURBB				PcP	PcP	01 50 54.1	-1.4
	comp=Z,0.1nm,0.4s,baz=64,slow=2.8,SNR=4.2						
MKAR	**Makanchi Array**	48.14	296	P	P	01 49 27.2	-2.8
	comp=Z,1.2nm,0.6s,baz=55,slow=7.2,SNR=7.0						
BVAR	**Borovoye Array**	50.41	308	P	P	01 49 44.2	-2.9
	comp=Z,1.3nm,0.5s,baz=62,slow=7.5,SNR=7.6						
BVAR				PcP	PcP	01 51 03.1	-1.7
	comp=Z,0.5nm,0.4s,baz=112,slow=3.7,SNR=3.4						
ARCESS	**ARCESS Array B**	53.39	342	P	P	01 50 06.3	-2.8
	comp=Z,1.4nm,0.8s,baz=35,slow=8.1,SNR=3.3						
AAK	**Ala-Archa**	55.06	296	P	P	01 50 18.8	-3.1
	comp=Z,1.4nm,0.4s,baz=166,slow=4.2,SNR=2.8						
NVAR	**Mina Array Bea**	55.87	70	P	P	01 50 29.6	+1.8
	comp=Z,0.5nm,0.7s,baz=297,slow=8.1,SNR=4.9						
PDAR	**Pinedale Array**	57.66	61	P	P	01 50 42.4	+1.9
	comp=Z,0.9nm,0.7s,baz=305,slow=3.2,SNR=7.7						
ULM	**Lac du Bonnet**	58.98	47	P	P	01 50 49.8	+0.6
	comp=Z,3.3nm,0.5s,baz=344,slow=7.2,SNR=3.5						
FINES	**FINESS Array B**	60.21	336	P	P	01 50 55.9	-1.5
	comp=Z,1.8nm,0.8s,baz=38,slow=7.0,SNR=6.3						
NB2	**NORSAR Subarra**	63.65	344	P	P	01 51 19.0	-1.7
	comp=Z,0.6nm,0.5s,baz=22,slow=6.9						
NOA	**NORSAR Array B**	63.65	344	P	P	01 51 19.3	-1.4
	comp=Z,0.7nm,0.5s,baz=21,slow=6.7,SNR=7.6						
HFS	**Hagfors**	64.05	342	P	P	01 51 22.4	-0.8
	comp=Z,1.3nm,0.6s,baz=35,slow=5.4,SNR=13						
AKASG	**Malin Array Be**	68.69	329	P	P	01 51 50.8	-2.2
	comp=Z,0.5nm,0.3s,baz=29,slow=6.8,SNR=3.5						
TXAR	**Lajitas Array**	70.77	67	P	P	01 52 07.8	+1.5
	comp=Z,1.1nm,0.7s,baz=304,slow=4.0,SNR=9.9						
CLL	**Collm**	72.45	339	eP	P	01 52 16.0	+0.1
CLL	**Collm**	72.45	339	eP	P	01 52 16.0	+0.1
MLR	**Muntele Rosu**	74.32	328	P	P	01 52 26.8	-0.4
	comp=Z,1.6nm,0.6s,baz=1.2,slow=14,SNR=5.4						
KHC	**Kasperske Hory**	74.37	338	eP	P	01 52 27.6	+0.3
KHC	**Kasperske Hory**	74.37	338	eP	P	01 52 27.6	+0.3
GERES	**GERESS Array B**	74.61	338	P	P	01 52 28.6	-0.2
	comp=Z,0.9nm,0.4s,baz=28,slow=5.8,SNR=8.7						
CONA	**Conrad Observa**	74.95	336	eP	P	01 52 30.7	-0.1
	comp=Z,1.4nm,0.5s						
BFO	**Black Forest**	76.24	341	iP	P	01 52 40.7	+2.6
SOKA	**Soboth**	76.32	336	eP	P	01 52 38.7	+0.1
	comp=Z,2.6nm,0.5s						
KBA	**Koelnbreinsper**	76.35	337	eP	P	01 52 39.7	+0.8
	comp=Z,8.3nm,0.8s						
OBKA	**Obir**	76.59	336	eP	P	01 52 40.8	+0.6
	comp=Z,1.9nm,0.7s						
MOTA	**Moosalm**	76.61	339	eP	P	01 52 42.4	+2.1
	comp=Z,0.7nm,0.4s						
BRTR	**Keskin Array B**	76.67	320	P	P	01 52 40.5	-0.3
	comp=Z,0.6nm,0.7s,baz=103,slow=2.6,SNR=4.2						
BRTR	**Keskin Array B**	76.67	320	eP	P	01 52 41.6	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ABTA	**Abfaltersbach**	76.85	338	eP	P	01 52 42.1	+0.5
	comp=Z,3.3nm,0.7s						
FETA	**Feichten**	76.99	339	eP	P	01 52 43.0	+0.6
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	79.60	204	P	P	01 52 57.3	+0.5
	comp=Z,0.5nm,0.8s,baz=4.3,slow=5.0,SNR=4.3						
ESDC	**Sonseca Array**	86.69	348	P	P	01 53 33.0	-0.5
	comp=Z,1.3nm,0.6s,baz=3.6,slow=5.0,SNR=17						
KEST	**Kesra**	88.05	336	P	P	01 53 39.5	-0.6
	comp=Z,1.9nm,0.8s,baz=317,slow=6.3,SNR=3.7						

UCR 17 01:45:40.7±2.4**, 8°.93N**×**82°.86W, h11**^{km}±7^{km}**, MW3.6, 2C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDSV	**San Vito**	0.15	225	⇑eP	Pg	01 45 44.9	+0.6
EDSV				eS	Sg	01 45 49.2	+2.3
BRU2	**Volcan**	0.21	128	⇑iP	Pg	01 45 45.7	+0.3
BRU2				eS	Sg	01 45 49.9	+1.3
DRK0	**Durika**	0.50	311	⇓eP	Pg	01 45 49.8	-0.8
DRK0				eS	Sg	01 45 57.1	-0.2
PTJ1	**Puerto Jimnez**	0.58	228	eP	Pg	01 45 51.1	-1.0
PTJ1				eS	Sg	01 46 00.3	+0.5
EDPN	**Palmar Norte**	0.59	273	eP	Pg	01 45 51.2	-1.0
EDPN				eS	Sg	01 46 00.3	+0.3
EDLM	**Las Mercedes**	0.80	296	eP	Pg	01 45 55.5	-0.7
EDLM				eS	Sg	01 46 06.6	0.0
LCR2	**La Lucha 2**	1.39	306	eP	Pn	01 46 05.0	-1.2
LCR2				eS	Sb	01 46 22.9	-1.6
CVTR	**Volcan Turrial**	1.40	321	eP	Pn	01 46 06.0	-0.5
CVTR				eS	Sn	01 46 25.4	+0.2
ARE1	**Arenal 1**	2.38	310	eP	Pb	01 46 21.8	-1.8
ARE1				eS	Sb	01 46 52.6	-0.4
JTS	**Las Juntas de**	2.47	303	eP	Pn	01 46 21.4	+0.5
JTS				eS	Sn	01 46 53.1	+2.1

IDC 17 02:02:55.4±2.1**, 5°.64S**×**153°.87E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/31**, mbtmp3.7**/3**, Error ellipse: s-maj=88.9km s-min=35.3km az=115.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.72	231	P	P	02 08 09.6	+0.2
	1.2nm,0.6s,baz=65,slow=10,SNR=6.2						
WRA				PcP	PcP	02 11 53.2	-0.6
	1.0nm,0.5s,baz=48,slow=2.5,SNR=8.0						
ASAR	**Alice Springs**	26.28	225	P	P	02 08 32.8	-0.1
	0.7nm,0.5s,baz=53,slow=9.6,SNR=6.2						
ASAR				PcP	PcP	02 11 59.3	-0.2
	0.8nm,0.7s,baz=49,slow=2.4,SNR=7.3						
MKAR	**Makanchi Array**	81.66	319	P	P	02 15 15.9	+0.3
	0.2nm,0.5s,baz=88,slow=5.7,SNR=3.2						
TORD	**Torodi Ar. Bea**	151.58	287	PKPbc	PKPbc	02 22 52.3	-0.5
	1.0nm,0.7s,baz=82,slow=2.3,SNR=10.0						

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*ISCJB **17** 02:13:25.2±0.9, 10°.4S±0°.1×161°.4E±0°.1, h62^{km}, mb3.7/6, Error ellipse: s-maj=22.0km s-min=8.2km az=144.1*

*IDC **17** 02:13:30.3±2.5, 10°.27S×161°.13E, h86^{km}±17^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/30, mbtmp3.9/7, MS2.9/1, Ms1 2.9/1, ms1mx2.6/17, Error ellipse: s-maj=30.2km s-min=21.5km az=71.0*

ISC 17 02:13:27.8±0.9**, 10°.3S**±0°.1×**161°.3E**±0°.1**, h62**^{km}**, n9, σ1^{s}56**/14**, mb3.8**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	1.58	304	P	Pn	02 13 54.0	+0.5
	285nm,0.3s,baz=162,slow=6.4,SNR=42						
HNR				S	Sn	02 14 13.8	+0.8
	771nm,0.3s,baz=169,slow=10,SNR=15						
HNR	**Honiara**	1.58	304	iP	Pn	02 13 54.5	+0.9
HNR				iS	Sn	02 14 14.0	+1.0
DZM	**Mont Dzumac**	12.70	158	P	Pn	02 16 28.7	+3.1
	1.5nm,0.3s,baz=333,slow=18,SNR=34						
DZM				S	Sn	02 18 42.7	-2.7
	0.8nm,0.3s,baz=352,slow=19,SNR=5.2						
DZM				LR	LR	02 20 02.8	
	comp=Z,50nm,20.5s,baz=354,slow=31						
WRA	**Warramunga Arr**	27.67	247	P	P	02 19 09.5	-0.7
	0.6nm,0.4s,baz=78,slow=9.3,SNR=7.2						
WRA				pP	sP	02 19 30.5	-0.4
	2.1nm,0.8s,baz=71,slow=10,SNR=3.5						
ASAR	**Alice Springs**	29.28	240	P	P	02 19 24.2	-0.2
	0.3nm,0.6s,baz=64,slow=10,SNR=3.0						
ASAR				pP	pwP	02 19 43.9	0.0
	1.0nm,0.6s,baz=62,slow=10,SNR=4.8						
USRK	**Ussuriysk Ar.**	60.42	336	P	P	02 23 30.3	-0.5
	1.2nm,0.7s,baz=131,slow=7.8,SNR=5.1						
SONM	**Songino Array**	75.53	325	P	P	02 25 04.6	-1.1
	1.2nm,0.7s,baz=143,slow=5.1,SNR=4.5						
NVAR	**Mina Array Bea**	88.94	51	P	P	02 26 17.2	+1.1
	0.1nm,0.3s,baz=251,slow=7.5,SNR=2.8						
MKAR	**Makanchi Array**	90.01	318	P	P	02 26 18.6	-2.0
	0.2nm,0.4s,baz=90,slow=6.6,SNR=5.2						

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*ISN **17** 02:29:34.7±0.3, 37°.50N×43°.11E, h0^{km}, ML2.6*

*ISK **17** 02:29:37.6, 37°.89N×43°.29E, h5^{km}, ML2.6/5*

*DDA **17** 02:29:38.0, 37°.87N×43°.22E, h7^{km}±2^{km}, ML2.6*

*ISCJB **17** 02:29:39.0±0.5, 37°.92N±0°.03×43°.32E±0°.06, h9^{km}±7^{km}, Error ellipse: s-maj=8.6km s-min=3.8km az=153.5*

ISC 17 02:29:38.9±1.1**, 37°.94N**±0°.03×**43°.29E**±0°.04**, h8**^{km}±14^{km}**, n15, σ0^{s}68**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEVA	**Gevas**	0.42	334	iP	Pb	02 29 48.0	-0.7
GEVA				iS	Sb	02 29 54.5	-0.8
AKDM	**Akdamar-Van**	0.46	328	PG	Pg	02 29 48.2	+0.3
AKDM				SG	Sb	02 29 56.7	+0.1
HAKT	**HAKKARI**	0.50	139	iP	Pg	02 29 48.3	-0.3
HAKT				iS	Sg	02 29 56.4	+1.2
BASK	**Baskale_VAN**	0.58	78	iP	Pb	02 29 51.2	-0.1
BASK				IAML_P			
	comp=Z,810nm,0.1s						
TVAN	**Van**	0.60	9	iP	Pb	02 29 51.9	+0.1
TVAN				iS	Sb	02 30 00.1	-0.4
TVAN				IAML_P			
	comp=Z,751nm,0.1s						
VANB	**Van**	0.66	7	PG	Pg	02 29 51.0	-0.7
VANB				SG	Sg	02 30 00.7	+0.3
CUKT	**Cukurca**	0.73	160	PG	Pg	02 29 51.7	-1.3
CUKT				SG	Sg	02 30 02.8	+0.3
CUKT	**Cukurca**	0.73	160	iP	Pg	02 29 52.7	-0.3
CUKT				IAML_P			
	comp=Z,3μm,0.4s						
YOVA	**Hakkari_Yksek**	0.86	113	iP	Pg	02 29 55.0	-0.5
YOVA				IAML_P			
	comp=Z,552nm,0.2s						
BLIS	**Bitlis-Merkez**	1.04	298	iP	Pb	02 29 58.7	-0.6
BLIS				IAML_P			
	comp=Z,678nm,0.2s						
SRTM	**Siirt_Merkez**	1.08	273	iP	Pb	02 29 59.8	-0.2
MSL	**Mosul**	1.54	185	ePg	Pn	02 29 59.0	-7.7
	baz=360						
MSL				eSg	Sn	02 30 16.0	-11
MUSM	**Mu-Merkez**	1.60	300	iP	Pb	02 30 08.7	-0.2
MUSM				IAML_P			
	comp=Z,486nm,0.4s						
SVAN	**Silvan-Diyarba**	1.67	278	PN	Pb	02 30 09.3	-0.6
MAZI	**Mazidag**	2.31	259	PN	Pn	02 30 18.3	+1.0

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*ISCJB **17** 02:33:38.0±0.5, 4°.99S±0°.04×134°.12E±0°.06, h28^{km}, Error ellipse: s-maj=8.5km s-min=5.0km az=7.0*

*IDC **17** 02:33:37.3±1.6, 4°.87S×134°.12E, h0^{km}, mb4.0/1, mb1 4.2/4, mb1mx3.8/28, mbtmp4.0/4, ML3.7/3, Error ellipse: s-maj=34.3km s-min=30.5km az=99.0*

*NEIC **17** 02:33:39.2±1.8, 4°.85S×134°.27E, h37^{km}±9^{km}, mb4.1/7, Error ellipse: s-maj=17.4km s-min=11.1km az=82.0*

ISC 17 02:33:39.1±0.7**, 4°.94S**±0°.06×**134°.07E**±0°.06**, h28**^{km}**, n18, σ2^{s}14**/27**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	2.71	318	ePn	Pn	02 34 20.3	-0.6
FAKI				eSn	Sn	02 34 49.6	-3.1
JAY	**Jayapura**	7.05	70	Pn	Pn	02 35 20.8	+0.2
	0.8nm,0.3s,baz=253,slow=14,SNR=3.9						
JAY				Sn	Sn	02 36 42.5	+2.6
	1.1nm,0.3s,baz=279,slow=17,SNR=2.2						
MTN	**Manton Dam**	8.37	200	ePn	Pn	02 35 41.9	+3.2
MTN				eSn	Sn	02 37 15.2	+3.0
COEN	**Coen**	12.68	136	ePn	Pn	02 36 36.2	-1.6
WRAB	**Tennant Creek**	14.90	179	ePn	Pn	02 37 09.1	+1.0
WB2	**Warramunga Arr**	14.91	179	ePn	Pn	02 37 07.5	-0.7
	17nm,1.5s						
WB2				eSn	Sn	02 39 50.1	-2.5
WR1	**Warramunga Arr**	14.91	179	ePn	Pn	02 37 08.8	+0.7
WR1				eSn	Sn	02 39 50.9	-1.7
WRA	**Warramunga Arr**	14.91	179	Pn	Pn	02 37 08.8	+0.6
	0.3nm,0.3s,baz=360,slow=14,SNR=14						
WRA				Sn	Sn	02 39 50.9	-1.7
	0.8nm,0.3s,baz=8.0,slow=25,SNR=4.5						
WC3	**Warramunga Arr**	14.93	179	ePn	Pn	02 37 08.9	+0.5
	9.1nm,1.0s						
WC3				eSn	Sn	02 39 52.5	-0.5
AS31	**Alice Springs**	18.61	180	eP	Pn	02 37 55.4	+0.5
	2.7nm,0.8s						
AS31				eS	Sn	02 41 19.9	-2.6
ASAR	**Alice Springs**	18.62	180	P	Pn	02 37 58.0	+3.0
	0.5nm,0.3s,baz=7.0,slow=11,SNR=22						
ASAR				S	Sn	02 41 19.9	-2.6
	0.2nm,0.3s,baz=2.1,slow=28,SNR=3.0						
ASAR	**Alice Springs**	18.62	180	eP	P	02 37 54.0	-0.6
GSI	**Gunungsitoli**	36.98	279	eP	P	02 40 46.9	+0.4
	23nm,1.1s						
BFZ	**Birch Farm**	51.90	140	eP	P	02 42 41.9	-3.5
	44nm,1.3s						
MK31	**Makanchi Array**	68.82	325	eP	P	02 44 44.0	+3.0
	2.3nm,1.3s						
MK32	**Makanchi Array**	68.82	325	eP	P	02 44 43.4	+2.4
MKAR	**Makanchi Array**	68.82	325	P	P	02 44 43.4	+2.4
	1.8nm,1.1s,baz=132,slow=6.4,SNR=7.7						
MAKZ	**Makanchi**	69.00	325	eP	P	02 44 41.3	-0.9
	5.1nm,1.3s						

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*IDC **17** 02:37:42.0±0.3, 15°.54S×71°.67W, h0^{km}, mb5.0/38, mb1 5.0/45, mb1mx5.0/48, mbtmp5.0/45, ML4.3/5, MS5.8/20, Ms1 5.8/20, ms1mx5.8/23, Error ellipse: s-maj=10.1km s-min=7.9km az=58.0*

*NEIC **17** 02:37:42.0±0.0, 15°.66S×71°.82W, h11^{km}, Moment Tensor Solution. s124 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.15; $M_{\theta\theta}$0.90; $M_{\phi\phi}$0.25; $M_{r\theta}$-0.54; $M_{\theta\phi}$-0.32; $M_{\phi r}$-0.24; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s94.00000°, δ58.00000°, λ-107.00000°. NP2:ϕ_s305.00000°, δ36.00000°, λ-64.00000°. Principal axes: T 1.1100, Plg11.0000°, Azm197.0000°; N 0.2400, Plg14.0000°, Azm104.0000°; P -1.3500, Plg71.0000°, Azm322.0000°;*

*NEIC **17** 02:37:43.2±2.4, 15°.66S×71°.74W, h7^{km}, mb5.6/445, ME5.5, MS5.8/652, MW5.8, MW6.0, ML5.7(ARE) Error ellipse: s-maj=10.4km s-min=8.7km az=244.0, Moment Tensor Solution. s44 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.98; $M_{\theta\theta}$5.07; $M_{\phi\phi}$-0.09; $M_{r\theta}$3.00; $M_{\theta\phi}$-1.19; $M_{\phi r}$-3.56; Best double couple: $M_0$7.00000×10^{17} NP1:ϕ_s305.00000°, δ67.00000°, λ-70.00000°. NP2:ϕ_s83.00000°, δ30.00000°, λ-128.00000°. Principal axes: T 6.6300, Plg19.0000°, Azm21.0000°; N 0.6000, Plg18.0000°, Azm117.0000°; P -7.2300, Plg63.0000°, Azm247.0000°; Apparent Stress 0.08 MPa Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Three people injured and 31 homes destroyed in Arequipa. Felt [VI] at Cabanaconde, Choco and Huambo; [V] at Maca and Madrigal; [IV] at Aplao; [III] at Arequipa.

*BJI **17** 02:37:44.7±0.0, 15°.61S×71°.77W, h20^{km}, mB5.8/52, Ms6.2/67, Ms7 6.2/64*

*VAO **17** 02:37:44.9±2.1, 15°.66S×71°.80W, h17^{km}±14^{km}, mb5.4*

*ARE **17** 02:37:44.0±0.0, 15°.76S×72°.03W, h9^{km}*

*ISCJB **17** 02:37:45.2±0.1, 15°.56S±0°.01×71°.70W±0°.02, h33^{km}, mb5.4/464, MS5.8/663, Error ellipse: s-maj=3.6km s-min=1.6km az=154.2*

*MOS **17** 02:37:47.0±1.3, 15°.30S×71°.68W, h33^{km}, mb5.6/71, MS5.8/92, Error ellipse: s-maj=9.2km s-min=5.2km az=108.6*

*GCMT **17** 02:37:47.2±0.1, 15°.73S×71°.83W, h12^{km}, MW6.0/129, Moment Tensor Solution. s129,c270; s129,c454; Duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-1.10±.01; $M_{\theta\theta}$1.14±.01; $M_{\phi\phi}$-0.04±.01; $M_{r\theta}$-0.13±.02; $M_{\theta\phi}$-0.41±.01; $M_{\phi r}$0.02±.02; Best double couple: $M_0$1.19200×10^{18} NP1:ϕ_s106.00000°, δ48.00000°, λ-92.00000°. NP2:ϕ_s289.00000°, δ42.00000°, λ-88.00000°. Principal axes: T 1.2760, Plg3.0000°, Azm197.0000°; N -0.1690, Plg1.0000°, Azm107.0000°; P -1.1080, Plg87.0000°, Azm356.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 17 02:37:43.7±0.5**, 15°.67S**±0°.03×**71°.75W**±0°.03**, h13**^{km}±2^{km}**, h13**^{km}**:pP-P, n1901, σ1^{s}58**/1687**, mb5.5**/459**, MS5.9**/691**, 23C-32D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I08BO	**LAS PENAS INFR**	3.21	100	Pg	Pg	02 38 43.5	-2.0
	baz=268,slow=31,SNR=7.2						
I08BO				i		02 54 10.0	
	baz=278,slow=324,SNR=2.7						
PB12	**IPOC Station P**	3.23	155	eP	Pn	02 38 37.2	+3.0
PB12				eS	Sb	02 39 22.7	+2.3
PB12	**IPOC Station P**	3.23	155	⇑iP	Pn	02 38 37.3	+3.0
PB12				iS	Sb	02 39 19.7	-0.7
PB12				IAML		02 39 37.3	
	comp=E,6μm,0.6s						
PB16	**IPOC Station P**	3.41	141	eP	Pb	02 38 43.2	-1.2
PB16				eS	Sg	02 39 31.0	-2.5
PB16	**IPOC Station P**	3.41	141	⇑iP	Pb	02 38 42.8	-1.6
PB16				iS	Sg	02 39 31.9	-1.6
PB16				IAML		02 39 50.3	
	comp=E,3μm,0.5s						
LPAZ	**La Paz**	3.53	101	Pn	Pn	02 38 39.9	+1.0
	comp=E,0.0nm,0.3s,baz=243,slow=4.5,SNR=2.2						

LPAZ				Pg	Pb	02 38 46.5	0.0
	comp=E,11nm,0.3s,baz=290,slow=10,SNR=262						
LPAZ				Lg	Lg	02 39 44.7	
	comp=E,8.0nm,0.3s,baz=344,slow=6.5,SNR=1.5						
LPAZ	La Paz	3.53	101	eP	Pb	02 38 47.5	+0.9
LPAZ	La Paz	3.53	101	⇓iP	Pb	02 38 47.0	+0.5
MNMC	Minye Minye	4.01	150	ePn	Pn	02 38 44.7	-0.5
MNMC	Minye Minye	4.01	150	⇑iP	Pn	02 38 49.3	+4.1
MNMC				i S	Sb	02 39 44.7	+1.7
MNMC				IAML		02 40 02.7	
	comp=E,9µm,0.5s						
MNMCX	Minye Minye	4.01	150	eP	Pn	02 38 49.5	+4.3
PSGC	Pisagua	4.21	159	⇑iP	Pn	02 38 49.5	+1.8
PSGC				i S	Sn	02 39 39.8	+3.0
PSGC				IAML		02 40 01.2	
	comp=E,1µm,0.5s						
PSGCX	Pisagua	4.21	159	eP	Pn	02 38 49.7	+2.0
PB11	IPOC Station P	4.53	154	ePn	Pn	02 38 54.9	+2.6
PB11				eSn	Sn	02 39 44.9	0.0
PB11	IPOC Station P	4.53	154	eP	Pn	02 38 56.0	+3.7
PB11	IPOC Station P	4.53	154	⇑iP	Pn	02 38 54.9	+2.6
PB11				i S	Sn	02 39 45.2	+0.3
GO01	Chusmiza	4.67	149	ePn	Pn	02 38 54.9	+0.5
GO01	Chusmiza	4.67	149	⇑iP	Pn	02 38 59.3	+5.0
GO01				i S	Sb	02 39 56.3	-5.8
PB08	IPOC Station P	5.09	151	eP	Pn	02 39 04.4	+4.3
PB01	IPOC Station P	5.76	158	ePn	Pn	02 39 10.5	+1.4
PB02	IPOC Station P	5.89	163	eP	Pn	02 39 11.8	+0.9
NNA	Nana	6.15	306	Pn	Pn	02 39 14.5	0.0
	comp=E,13nm,0.3s,baz=143,slow=13,SNR=23						
NNA				Sn	Sn	02 40 30.1	+5.3
	comp=E,19nm,0.3s,baz=108,slow=9.6,SNR=2.0						
NNA				Lg	Lg	02 40 53.7	
	comp=E,42nm,0.3s,baz=73,slow=19,SNR=2.8						
NNA				LR	LR	02 41 56.5	
	comp=E,99µm,18.5s,baz=134,slow=42						
NNA	Nana	6.15	306	ePn	Pn	02 39 14.1	-0.4
NNA	Nana	6.15	306	i P	Pn	02 39 16.2	+1.7
PB07	IPOC Station P	6.28	164	eP	Pn	02 39 17.0	+0.7
PB09	IPOC Station P	6.54	159	eP	Pn	02 39 22.1	+2.1
PB03	IPOC Station P	6.62	164	eP	Pn	02 39 21.5	+0.5
PB04	IPOC Station P	6.80	167	ePn	Pn	02 39 23.3	-0.2
PB04	IPOC Station P	6.80	167	eP	Pn	02 39 23.0	-0.5
PB05	IPOC Station P	7.30	169	eP	Pn	02 39 29.9	-0.4
PB06	IPOC Station P	7.30	164	eP	Pn	02 39 30.3	0.0
LVC	Limon Verde	7.41	159	Pn	Pn	02 39 33.5	+1.5
	comp=E,38nm,0.3s,baz=338,slow=11,SNR=304						
LVC				Sn	Sn	02 40 58.3	+2.2
	comp=E,20nm,0.3s,baz=347,slow=14,SNR=3.1						
LVC				Lg	Lg	02 41 31.6	
	comp=E,12nm,0.3s,baz=249,slow=18,SNR=2.6						
LVC				LR	LR	02 42 22.5	
	comp=E,169µm,19.9s,baz=320,slow=37						
LVC	Limon Verde	7.41	159	ePn	Pn	02 39 32.6	+0.6
LVC	Limon Verde	7.41	159	eP	Pn	02 39 33.2	+1.2
LVC				IAML		02 39 53.5	
	comp=Z,184nm,0.6s						
LVC	Limon Verde	7.41	159	eP	Pn	02 39 34.0	+2.0
LVC	Limon Verde	7.41	159	eP	Pn	02 39 33.9	+2.0
PB15	IPOC Station P	7.80	164	eP	Pn	02 39 37.3	0.0
PB10	IPOC Station P	7.89	172	ePn	Pn	02 39 37.1	-1.1
PB10	IPOC Station P	7.89	172	eP	Pn	02 39 37.3	-0.9
YJA	Yavi	8.76	139	eP	Pn	02 39 56.1	+5.5
PB14	IPOC Station P	9.00	172	eP	Pn	02 39 52.6	-1.2
HJA	Humahuaca	9.59	142	eP	Pn	02 40 06.8	+4.8
GO02	Mina Guanaco	9.66	168	ePn	Pn	02 40 02.4	-0.4
GO02				eSn	Sn	02 41 50.7	-0.8
SIV	San Ignacio	10.28	93	Pn	Pn	02 40 10.5	-0.6
	comp=Z,0.1nm,0.3s,baz=216,slow=19,SNR=2.7						
SIV				Sn	Sn	02 42 05.3	-1.0
	comp=Z,1.4nm,0.3s,baz=348,slow=19,SNR=2.2						
AZAP	Zapla	10.58	145	eP	Pn	02 40 18.4	+3.0
ATAH	Atahualpa	10.69	322	Pn	Pn	02 40 18.0	+0.9
	comp=Z,0.6nm,0.3s,baz=137,slow=12,SNR=6.1						
ATAH				Sn	Sn	02 42 22.2	+5.3
	comp=Z,0.4nm,0.3s,baz=73,slow=8.0,SNR=1.7						
ATAH				Lg	Lg	02 43 23.4	
	comp=Z,1.0nm,0.3s,baz=108,slow=20,SNR=4.5						
ATAH				LR	LR	02 44 29.5	
	comp=Z,77µm,21.7s,baz=171,slow=38						
SLA	San Lorenzo	10.74	148	eP	Pn	02 40 21.0	+3.4
FSA	Cafayete	11.70	154	eP	Pn	02 40 30.9	+0.2
GO03	Copiap	11.95	174	ePn	Pn	02 40 32.8	-1.2
AHML	Horco Molle	12.57	153	eP	Pn	02 40 43.8	+1.4
LCO	Las Campanas	13.32	176	ePn	Pn	02 40 52.1	-0.8
LCO	Las Campanas	13.32	176	eP	Pn	02 40 51.2	-1.7
LCO	Las Campanas	13.32	176	eP	Pn	02 40 54.1	+1.3
LCO	Las Campanas	13.32	176	eP	Pn	02 40 52.3	-0.6
VCA	Vinchina	13.41	166	eP	Pn	02 40 54.4	+0.3
CYA	Choya	13.85	158	eP	Pn	02 41 01.6	+1.7
AGUA	GUANDACOL	14.08	168	eP	Pn	02 41 05.2	+2.1
GO04	Tololo Observa	14.47	177	ePn	Pn	02 41 07.5	-1.0
GO04				eSn	Sn	02 43 47.3	-1.6
GO04	Tololo Observa	14.47	177	eP	Pn	02 41 09.7	+1.2
AMOG	MOGNA	15.49	169	eP	Pn	02 41 23.8	+1.6
RTLL	Cerro Villicun	15.88	170	eP	P	02 41 29.3	-1.5
AQDB	Aquidauana	15.99	110	eP	P	02 41 31.0	-1.0
SJA	San Juan	16.05	170	eP	P	02 41 34.2	+1.5
CFA	Coronel Fontan	16.19	169	Pn	Pn	02 41 31.8	+0.7
	comp=Z,1.3nm,0.3s,baz=345,slow=12,SNR=30						
CFA				Sn	S	02 44 37.9	-5.8
	comp=Z,0.3nm,0.3s,baz=354,slow=17,SNR=1.9						
CFA	Coronel Fontan	16.19	169	eP	Pn	02 41 32.3	+1.2
RTLS	Leoncito	16.21	173	eP	P	02 41 34.2	-0.6
RTCV	Cerro Valdivia	16.39	170	eP	P	02 41 35.1	-1.3
TCA	Tanti	16.91	159	eP	P	02 41 42.2	-0.1
ACAN	Cantantal	17.05	167	eP	Pn	02 41 42.3	+0.4
CPUP	Villa Florida	17.12	131	P	Pn	02 41 43.1	+0.2
	comp=Z,0.3nm,0.3s,baz=305,slow=12,SNR=39						
CPUP				S	Sn	02 44 53.6	+0.3
	comp=Z,0.1nm,0.3s,baz=329,slow=15,SNR=1.8						
CPUP				Lg	Lg	02 46 52.0	
	comp=Z,0.1nm,0.3s,baz=36,slow=15,SNR=1.9						
CPUP				LR	LR	02 49 17.1	
	comp=Z,21µm,19.4s,baz=312,slow=40						
CPUP	Villa Florida	17.12	131	ePn	Pn	02 41 42.8	-0.1
CPUP				eP	Pn	02 41 43.1	+0.2
CPUP	Villa Florida	17.12	131	eP	Pn	02 41 42.8	-0.1
PEL	Peldehue	17.43	177	eP	Pn	02 41 46.9	+0.2
	comp=Z,474nm,1.3s						
PEL				eSn	Sn	02 44 53.8	-6.8
PEL	Peldehue	17.43	177	eP	Pn	02 41 46.8	0.0
PEL	Peldehue	17.43	177	eP	Pn	02 41 46.9	+0.2
PEL				pmax	pmax		
	comp=Z,474nm,1.3s						
MRA	San Martin	17.56	163	eP	P	02 41 49.6	+0.2
FLOC	Florencia	17.57	347	eP	P	02 41 50.1	+0.6
CPAS1	Pasto	17.63	341	eP	P	02 41 54.1	+3.5
CPAS2	Pasto	17.64	342	eP	P	02 41 55.5	+4.8
CRUC	La Cruz	17.88	343	eP	P	02 41 58.8	+5.4
SOTA	Rioblanco	18.33	344	eP	P	02 42 01.5	+3.0
BBAC	Balboa, Cauca	18.40	342	eP	P	02 42 00.8	+1.9
POPC	Popayan, Colom	18.73	344	eP	Pn	02 42 06.8	+3.7
PTGA	Pitinga	18.85	39	P	Pn	02 42 04.0	-0.3
	comp=Z,1.5nm,0.3s,baz=222,slow=14,SNR=56						
PTGA				S	Sn	02 45 33.7	-1.5
	comp=Z,0.2nm,0.3s,baz=286,slow=20,SNR=1.7						
PTGA	Pitinga	18.85	39	eP	Pn	02 42 04.5	+0.2
	comp=Z,271nm,1.3s						
PTGA				eSn	Sn	02 45 33.7	-1.5
PTGA				eS	S	02 45 35.0	-3.0
PTGA	Pitinga	18.85	39	eP	Pn	02 42 04.4	+0.1
MARP	Paez Belalcaza	18.86	347	eP	Pn	02 42 05.5	+0.9
GO05	Huala	19.26	180	eP	P	02 42 07.9	-0.2
	comp=Z,222nm,1.1s						
GO05				eS	S	02 45 47.2	+1.1
GO05	Huala	19.26	180	eP	P	02 42 05.9	-2.2
TRCB	Terra Rica	19.38	114	eP	Pn	02 42 11.3	+0.7
GRGC	Isla de Gorgon	19.61	341	eP	Pn	02 42 12.8	-0.6
VILC	Villavicencio,	19.75	354	eP	Pn	02 42 14.8	-0.4
ORTC	Ortega, Tolima	19.75	350	eP	Pn	02 42 18.1	+2.9
YOTC	Yotoco, Valle	20.05	347	eP	Pn	02 42 18.1	-0.6
EDS3	Malargue	20.13	174	eP	Pn	02 42 21.2	+1.6
CHIC	Chingaza	20.26	354	eP	Pn	02 42 24.8	+3.3
MALC	Bahia Malaga	20.32	344	eP	Pn	02 42 22.1	+0.3
PTGB	Pitanga	20.53	119	eP	Pn	02 42 24.0	-0.3
ROSC	El Rosal	20.53	353	P	P	02 42 22.8	+0.3
	comp=Z,5.4nm,0.4s,baz=191,slow=4.9,SNR=16						
ROSC				S	S	02 46 12.4	+0.1
	comp=Z,4.1nm,0.4s,baz=163,slow=17,SNR=1.9						
ROSC				Lg	Lg	02 48 26.8	
	comp=Z,6.9nm,0.8s,baz=202,slow=19,SNR=2.3						
ROSC				LR	LR	02 51 11.4	
	comp=Z,33µm,20.1s,baz=199,slow=40						
ROSC	El Rosal	20.53	353	eP	Pn	02 42 24.5	-0.1
	comp=Z,93nm,1.2s						
ROSC				eS	S	02 46 12.4	+0.1
ROSC				LR	LR		
	comp=Z,37µm,21.0s						
CTAB	Cerro Tablazo,	20.69	353	eP	Pn	02 42 29.4	+2.9
RREF	El Recreo	20.74	350	eP	Pn	02 42 31.4	+4.0
YOPC	Yopal, Colombi	20.89	358	eP	P	02 42 25.4	-0.7
PLMC	San Jos del P	20.93	347	eP	Pn	02 42 29.4	+0.5
GUY2C	Guyana, Caldas	21.06	350	eP	P	02 42 30.1	+1.8
NORC	Norcasia	21.32	351	eP	P	02 42 32.1	+1.5
RUSC	La Rusia	21.46	356	eP	P	02 42 33.4	+0.8
ITAB	Concordia	21.55	126	eP	P	02 42 34.6	+1.6
TAMC	Tame, Arauca	21.96	360	eP	P	02 42 37.4	-0.1
HELC	Santa Helena	22.04	350	eP	P	02 42 37.4	-1.3
BARC	Barichara	22.16	356	eP	P	02 42 41.4	+1.6
PTBC	PUERTO BERRIO,	22.23	353	eP	P	02 42 38.7	-1.6
SOLC	Bahia Solano	22.46	345	eP	P	02 42 46.7	+3.9
ELOV	Elorza	22.63	6	eP	P	02 42 44.1	-0.6
BB19B	Bebedouro	22.67	107	eP	P	02 42 45.0	-0.1
BRRC	Barranca, Sant	22.71	355	eP	P	02 42 46.7	+1.3
LPA	La Plata	22.82	150	αeP	P	02 42 49.5	+3.0
LPA				ePP	PnPn	02 43 11.0	+0.1
LPA				ePPP	PPP	02 43 18.0	
LPA				ePPP	PPP	02 44 21.0	
LPA				ePPP	PPP	02 45 01.0	
LPA				ePCP	PcP	02 46 35.0	-2.7
LPA				eS	S	02 46 58.0	+2.4
LPA				eSS	SnSn	02 47 30.0	+3.4
LPA				eSSS	SSS	02 47 43.0	
LPA				eSSS	SSS	02 49 13.0	
LPA				eSSS	SSS	02 50 19.0	
I09BR	BRASILIA INFRA	22.85	93	i		04 49 00.0	
	baz=266,slow=322,SNR=0.7						
BDFB	Brasilia	22.85	93	P	P	02 42 47.2	+0.1
	comp=Z,49nm,0.9s,baz=259,slow=12,SNR=57						
BDFB				S	S	02 46 54.5	-2.1
	comp=Z,9.1nm,0.9s,baz=196,slow=19,SNR=1.4						
BDFB				Lg	Lg	02 49 29.5	
	comp=Z,9.8nm,1.0s,baz=198,slow=20,SNR=1.6						
BDFB				LR	LR	02 52 38.9	
	comp=Z,40µm,18.1s,baz=266,slow=39						
BDFB	Brasilia	22.85	93	eP	P	02 42 47.2	+0.1
BDFB				eP	P	02 42 47.7	+0.6
BDFB				eS	S	02 46 54.5	-2.1
BDFB				LR	LR		
	comp=Z,27µm,22.0s						
BDFB	Brasilia	22.85	93	eP	P	02 42 47.2	+0.1
BDFB				eS	S	02 46 54.5	-2.1
BDFB				MLR	MLR		
	comp=Z,27µm,22.0s						
DBBC	Dabeiba	22.97	349	eP	P	02 42 49.4	+1.1
PEXB	Peixe	23.03	84	eP	P	02 42 49.5	+0.6
ZARC	Zaragoza, Cauc	23.21	352	eP	P	02 42 47.4	-3.3
CAPV	Capacho	23.39	359	eP	P	02 42 54.7	+2.0
CNLB	Canela	23.55	129	eP	P	02 42 53.9	-0.2
PAYG	Puerto Ayora	23.59	307	eP	P	02 42 52.8	-1.8
	comp=Z,189nm,1.4s						
PAYG				LR	LR		
	comp=Z,17µm,19.0s						
SOCV	Socops	23.81	2	eP	P	02 42 56.7	+0.1
TRQA	Tornquist	23.91	161	PFAKE		02 43 10.0	+13
TRQA				LR	LR		
	comp=Z,10µm,19.0s						
SPB	Sao Paulo	24.19	113	eP	P	02 42 59.9	-0.2
	comp=Z,360nm,1.0s						
SPB				eS	S	02 47 15.7	-2.5
SPB				LR	LR		
	comp=Z,46µm,19.0s						
SPB	Sao Paulo	24.19	113	eP	P	02 43 01.5	+1.3
PMNB	Patos De Minas	24.35	100	eP	P	02 43 02.4	+0.6
SMLC	San Martn de	24.42	354	eP	P	02 43 00.7	-1.5
SDV	Santo Domingo	24.42	3	P	P	02 43 02.4	-0.1
	comp=Z,102nm,1.0s,baz=193,slow=7.6,SNR=50						
SDV				S	S	02 47 18.1	-4.1
	comp=Z,4.3nm,0.3s,baz=212,slow=17,SNR=2.2						
SDV	Santo Domingo	24.42	3	eP	P	02 43 01.9	-0.6
	comp=Z,274nm,1.1s						
SDV				eS	S	02 47 17.0	-5.2
SDV				LR	LR		
	comp=Z,49µm,18.0s						
SDV	Santo Domingo	24.42	3	eP	P	02 43 02.7	+0.2
SDV	Santo Domingo	24.42	3	eP	P	02 43 02.9	+0.4
AZU	Azuero	24.79	339	eP	P	02 43 10.0	+4.4
UPD2	Meteti	24.85	345	eP	P	02 43 08.0	+1.9
CODC	Agustn Codazz	25.49	356	eP	P	02 43 10.7	-1.3
SJCC	San Jacinto, C	25.62	352	eP	P	02 43 15.3	+2.1
UPA	Univ. de Panam	25.68	342	eP	P	02 43 12.7	-0.9
BCIP	Isla Barro Col	25.94	341	eP	P	02 43 16.5	+0.5
	comp=Z,443nm,1.5s						
BCIP	Isla Barro Col	25.94	341	eP	P	02 43 16.5	+0.5
BCIP				pmax	pmax		
	comp=Z,443nm,1.5s						
BCIP	Isla Barro Col	25.94	341	eP	P	02 43 20.7	+4.6
DABV	Dabajuro	26.44	2	eP	P	02 43 19.3	-1.2
BRU2	Volcan	26.61	335	eP	P	02 43 22.2	0.0
PCRV	Puerto La Cruz	26.62	16	P	P	02 43 22.4	+0.1
	comp=Z,63nm,1.2s,baz=178,slow=8.8,SNR=6.0						
URIC	Uribia, Colomb	27.19	359	eP	P	02 43 22.7	-4.7
DRK0	Durika	27.26	335	eP	P	02 43 31.5	+3.3
VAS01	Vassouras-RJ	27.53	108	eP	P	02 43 32.2	+1.7
MDP	Montagnes des	27.99	44	P	P	02 43 33.2	-1.4
	comp=Z,18nm,1.0s,baz=239,slow=8.4,SNR=2.9						
MDP				S	S	02 48 17.1	-1.6
	comp=Z,9.0nm,0.9s,baz=300,slow=20,SNR=2.3						
LCR2	La Lucha 2	28.01	334	eP	P	02 43 36.4	+1.4
TRN	Trinidad (W)	28.08	22	eP	P	02 43 36.6	+1.4
CVTR	Volcan Turrial	28.16	334	eP	P	02 43 38.2	+1.7
HDC	Heredia	28.29	334	eP	P	02 43 37.4	+0.1
	comp=Z,186nm,1.3s						
HDC				LR	LR		
	comp=Z,20µm,18.0s						
HDC	Heredia	28.29	334	eP	P	02 43 38.9	+1.6
SRA1	San Ramn	28.52	333	eP	P	02 43 41.4	+2.0
JTS	Las Juntas de	28.92	332	P	P	02 43 44.0	+1.2
	comp=Z,12nm,1.0s,baz=222,slow=7.8,SNR=12						
JTS	Las Juntas de	28.92	332	eP	P	02 43 43.9	+1.1
	comp=Z,93nm,1.4s						
JTS				LR	LR		
	comp=Z,19µm,20.0s						
JTS	Las Juntas de	28.92	332	d iP	P	02 43 44.8	+2.0
JTS				pmax	pmax		
	comp=Z,153nm,2.4s						
JTS				MLR	MLR		
	comp=Z,17µm,16.0s						
JTS	Las Juntas de	28.92	332	eP	P	02 43 44.5	+1.7
CEDE	Laguna Cedeo	28.98	333	eP	P	02 43 45.2	+1.8
TOSP	Speyside	29.00	23	eP	P	02 43 45.4	+1.9
SJMB	Sao Joao De Ma	29.34	100	eP	P	02 43 47.5	+0.9
GRGR	Grenville	29.37	20	eP	P	02 43 44.5	-2.3
	comp=Z,275nm,1.3s						
GRGR				LR	LR		
	comp=Z,30µm,21.0s						
MESS	Mesas	29.42	332	eP	P	02 43 50.7	+3.3
BUEV	Buena Vista	29.57	332	eP	P	02 43 50.5	+1.8
BSFB	Barra de Sao F	29.66	101	eP	P	02 43 49.2	-0.1
RIB01	Linhares ES	30.10	102	eP	P	02 43 54.0	+0.7
ESPN	Las Esperanzas	30.34	335	eP	P	02 43 53.9	-1.5
	comp=Z,54nm,1.2s						
ESPN				LR	LR		
	comp=Z,39µm,18.0s						
ESPN	Las Esperanzas	30.34	335	eP	P	02 43 55.9	+0.6
ACON	Acoyapa	30.50	333	eP	P	02 43 56.8	0.0
	comp=Z,86nm,1.4s						
SVB	Belmont	30.57	20	eP	P	02 43 56.9	-0.5
	comp=Z,179nm,1.1s						
SVB				LR	LR		
	comp=Z,34µm,19.0s						
SVB	Belmont	30.57	20	eP	P	02 43 56.4	-1.0
SVCV	St. Vincent, C	30.61	21	eP	P	02 44 00.1	+2.4
SSV	Crater Summit	30.64	20	eP	P	02 43 49.1	-9.0
SFAN	Fancy Village	30.70	20	eP	P	02 44 13.5	+15
BBGH	Gun Hill	31.06	23	eP	P	02 44 06.3	+4.6
MCLT	Moule a Chique	31.08	21	eP	P	02 43 59.1	-2.8
SLBI	Saint Lucia, B	31.36	20	eP	P	02 44 02.8	-1.5
CNGN	Cerro Negro	31.66	331	eP	P	02 44 06.8	-0.3
MATN	Matagalpa	31.69	333	eP	P	02 44 07.0	-0.4
FDF	Fort de France	31.97	20	eP	P	02 44 07.5	-2.3
	comp=Z,50nm,1.0s						
FDF				LR	LR		
	comp=Z,30µm,20.0s						
FDF	Fort de France	31.97	20	eP	P	02 44 09.4	-0.4
FDF	Fort de France	31.97	20	eP	P	02 44 07.5	-2.3
FDF				pmax	pmax		
	comp=Z,50nm,1.0s						
FDF				MLR	MLR		
	comp=Z,30µm,20.0s						
ESTN	Estel	32.04	332	eP	P	02 44 09.5	-0.9
	comp=Z,126nm,1.4s						
ESTN				LR	LR		
	comp=Z,15µm,21.0s						
ESTN	Estel	32.04	332	eP	P	02 44 11.5	+1.1
RCON	San Juan de Ri	32.28	333	eP	P	02 44 13.1	+0.5
CSGN	Cosiguina Volc	32.48	330	eP	P	02 44 15.1	+0.8
	comp=Z,153nm,1.2s						
CSGN				LR	LR		
	comp=Z,9µm,20.0s						
CSGN	Cosiguina Volc	32.48	330	eP	P	02 44 15.7	+1.4
DLPL	La Plaine	32.50	19	eP	P	02 44 24.0	+10
TGUH	Tegucigalpa,Un	33.28	332	eP	P	02 44 23.1	+1.7
	comp=Z,198nm,1.4s						
TGUH				LR	LR		
	comp=Z,14µm,18.0s						
TGUH	Tegucigalpa,Un	33.28	332	eP	P	02 44 21.2	-0.2
MLYT	Lee's Yard	33.53	17	eP	P	02 44 23.8	+0.4
CRPR	Cabo Rojo, PR	33.77	8	eP	P	02 44 26.4	+1.0
	comp=Z,238nm,1.2s						
OBIP	Obispado Ponce	33.88	9	eP	P	02 44 24.7	-1.6
	comp=Z,204nm,1.3s						
OBIP				eS	S	02 49 49.4	-1.2
OBIP				LR	LR		
	comp=Z,26µm,22.0s						
SDD	Santo Domingo	33.96	3	PFAKE		02 44 40.0	+13
SDD				LR	LR		
	comp=Z,65µm,21.0s						
MPR	Mayaguez	33.97	8	eP	P	02 44 26.4	-0.7
	comp=Z,223nm,1.3s						
SKI	Saint Kitts	33.97	16	eP	P	02 44 25.9	-1.3
	comp=Z,194nm,1.3s						
SKI				LR	LR		
	comp=Z,40µm,22.0s						
SKI	Saint Kitts	33.97	16	eP	P	02 44 26.1	-1.1
SKI	Saint Kitts	33.97	16	eP	P	02 44 25.9	-1.3
SKI				pmax	pmax		
	comp=Z,194nm,1.3s						
SKI				MLR	MLR		
	comp=Z,40µm,22.0s						
SJG	San Juan	34.01	10	eP	P	02 44 26.2	-1.3
	comp=Z,253nm,1.5s						
SJG				LR	LR		
	comp=Z,20µm,21.0s						
SJG	San Juan	34.01	10	eP	P	02 44 26.3	-1.3
SJG				pmax	pmax		
	comp=Z,253nm,1.5s						
SJG				MLR	MLR		
	comp=Z,20µm,21.0s						
SEUS	St. Eustatius	34.06	15	PFAKE		02 44 40.0	+12
SEUS				LR	LR		
	comp=Z,25µm,19.0s						
SEUS	St. Eustatius	34.06	15	eP	P	02 44 26.8	-1.2
HUMP	Col San Antoni	34.09	10	eP	P	02 44 26.7	-1.6
	comp=Z,111nm,1.3s						
HUMP				eS	S	02 49 49.4	-4.5
MTP	Monte Pirata	34.10	11	eP	P	02 44 26.7	-1.6
	comp=Z,134nm,1.5s						
MTP				eS	S	02 49 50.4	-3.7
SABA	Saba	34.12	15	PFAKE		02 44 40.0	+11
SABA				LR	LR		
	comp=Z,28µm,22.0s						
SABA	Saba	34.12	15	eP	P	02 44 26.4	-2.2
AOPR	Arecibo Observ	34.15	8	eP	P	02 44 30.8	+2.0
	comp=Z,178nm,1.5s						
AOPR				ePcP	PcP	02 47 06.4	+0.5
MTDJ	Mount Denham	34.16	350	eP	P	02 44 27.1	-1.8
	comp=Z,126nm,1.1s						
MTDJ				LR	LR		
	comp=Z,12µm,22.0s						
CBYP	Canovanas	34.22	10	eP	P	02 44 28.0	-1.4
	comp=Z,129nm,1.1s						
EMPR	Esperanza - Ma	34.31	9	eP	P	02 44 30.0	-0.1
	comp=Z,267nm,1.2s						
CUPR	Culebra, Puert	34.35	11	eP	P	02 44 30.2	-0.3
	comp=Z,88nm,1.2s						
SDDR	Presa de Saban	34.43	1	eP	P	02 44 32.6	+1.4
	comp=Z,89nm,1.4s						
SDDR				LR	LR		
	comp=Z,21µm,18.0s						
ANWB	Willy Bob	34.55	17	eP	P	02 44 30.7	-1.4
	comp=Z,107nm,0.9s						
ANWB				LR	LR		
	comp=Z,32µm,20.0s						
SMRT	St. Maarten	34.58	15	eP	P	02 44 28.6	-3.8
	comp=Z,167nm,1.4s						
SMRT				LR	LR		
	comp=Z,20µm,18.0s						
SMRT	St. Maarten	34.58	15	eP	P	02 44 28.4	-4.0
ABVI	Anegada Island	34.95	12	eP	P	02 44 34.0	-1.6
	comp=Z,256nm,1.4s						
GTBY	Guantanamo Bay	35.52	355	PFAKE		02 44 50.0	+9.4
GTBY				LR	LR		
	comp=Z,10µm,21.0s						
APG	El Apazote	35.65	328	P	P	02 44 43.0	+1.0
	comp=Z,38nm,1.0s,baz=162,slow=10						
FSCY	Frank Sound, G	35.98	345	eP	P	02 44 46.1	+1.6
	comp=Z,672nm,1.4s						
CBCY	The Bluff, Cay	36.05	347	eP	P	02 44 44.1	-1.0
	comp=Z,208nm,1.2s						
RCBR	Riachuelo	36.49	78	eP	P	02 44 47.5	-1.6
	comp=Z,69nm,1.0s						
RCBR				LR	LR		
	comp=Z,31µm,18.0s						
RCBR	Riachuelo	36.49	78	eP	P	02 44 47.5	-1.6
RCBR				pmax	pmax		
	comp=Z,69nm,1.0s						
RCBR				MLR	MLR		
	comp=Z,31µm,18.0s						
RCBR	Riachuelo	36.49	78	eP	P	02 44 50.8	+1.7
RPN	Rapa Nui	36.67	246	PFAKE		02 45 00.0	+9.5
RPN				LR	LR		
	comp=Z,33µm,19.0s						
GRTK	Grand Turk	36.95	1	PFAKE		02 45 00.0	+7.2
GRTK				LR	LR		
	comp=Z,15µm,21.0s						
GO10	Punta Arenas	37.41	179	eP	P	02 44 55.8	-0.7
	comp=Z,399nm,1.3s						
GO10				LR	LR		
	comp=Z,20µm,19.0s						
EFI	East Falkland	37.55	166	PFAKE		02 45 10.0	+12
EFI				LR	LR		
	comp=Z,27µm,21.0s						
EFI	East Falkland	37.55	166	⇓eP	P	02 45 00.6	+3.0
EFI				pmax	pmax		
	comp=Z,245nm,1.1s						
EFI				MLR	MLR		
	comp=Z,24µm,20.0s						
CCIG	Comitan	37.59	327	eP	P	02 44 57.9	-0.6
	comp=Z,77nm,1.3s						
CCIG				LR	LR		
	comp=Z,23µm,21.0s						
USHA	Ushuaia	39.17	177	P	P	02 45 12.2	+1.1
	comp=Z,73nm,1.0s,baz=340,slow=4.3,SNR=10						
TEIG	Tepich	39.19	335	eP	P	02 45 11.5	-0.2
	comp=Z,141nm,1.4s						
TEIG				LR	LR		
	comp=Z,15µm,19.0s						
CMIG	Matias Romero	39.75	324	P	P	02 45 15.4	-1.1
	comp=Z,13nm,1.0s,baz=138,slow=6.5,SNR=26						
CMIG				S	S	02 51 16.8	-3.5
	comp=Z,1.1nm,0.7s,baz=114,slow=16,SNR=2.4						
CMIG				LR	LR	03 01 36.3	
	comp=Z,4µm,18.8s,baz=148,slow=36						
MYIG	Mrida	40.46	334	PFAKE		02 45 30.0	+7.8
MYIG				LR	LR		
	comp=Z,18µm,18.0s						
062Z	Marathon	41.16	347	P	P	02 45 28.5	+0.5
	baz=166						
061Z	Ochoppi	42.23	348	PFAKE		02 45 50.0	+13
061Z				LR	LR		
	comp=Z,9µm,22.0s						
061Z	Ochoppi	42.23	348	P	P	02 45 36.7	-0.1
	baz=167						
TLIG	Tlapa	42.30	320	eP	P	02 45 36.5	-1.1
	comp=Z,44nm,1.3s						
TLIG				LR	LR		
	comp=Z,13µm,22.0s						
060Z	West Palm Beac	42.69	348	P	P	02 45 41.3	+0.8
	baz=168						
060Z				S	S	02 52 09.3	+5.7
	baz=168						
LVIG	Laguna Verde	42.72	325	PFAKE		02 45 50.0	+9.2

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LVIG                                 LR      LR
           comp=Z,4µm,18.0s
059Z   Ave Maria          42.80 347  P       P          02 45 40.9  -0.5
           baz=166
060A   Indiantown         43.26 349  PFAKE              02 46 00.0  +15
060A                                 LR      LR
           comp=Z,10µm,20.0s
060A   Indiantown         43.26 349  P       P          02 45 46.4  +1.3
           baz=168
059A   Moore Haven        43.35 348  PFAKE              02 46 00.0  +14
059A                                 LR      LR
           comp=Z,10µm,22.0s
059A   Moore Haven        43.35 348  P       P          02 45 45.5  -0.3
           baz=167
058A   Arcadia            43.58 347  P       P          02 45 47.8  +0.2
           baz=166
959A   Okeechobee         43.84 348  P       P          02 45 50.6  +0.8
           baz=167
958A   Wauchula           44.08 347  P       P          02 45 52.3  +0.6
           baz=166
957A   Wimauma            44.26 347  PFAKE              02 46 10.0  +17
957A                                 LR      LR
           comp=Z,10µm,22.0s
957A   Wimauma            44.26 347  P       P          02 45 52.2  -0.9
           baz=166
859A   Kempfer Cattle     44.36 348  P       P          02 45 54.6  +0.6
           baz=167
DWPF   Disney Wildern     44.52 348  PFAKE              02 46 10.0  +15
DWPF                                 LR      LR
           comp=Z,8µm,20.0s
DWPF   Disney Wildern     44.52 348  P       P          02 45 55.4  +0.2
           baz=167
858A   St. Cloud          44.60 348  P       P          02 45 56.0  +0.2
           baz=167
857A   Zephyrhills        44.84 347  P       P          02 45 57.9  +0.2
           baz=166
758A   Lake Helen         45.30 348  P       P          02 46 01.4   0.0
           baz=167
757A   Oxford             45.45 347  P       P          02 46 02.4  -0.2
           baz=166
658A   Bunnell            45.76 348  PFAKE              02 46 20.0  +15
658A                                 LR      LR
           comp=Z,10µm,22.0s
658A   Bunnell            45.76 348  P       P          02 46 06.1  +1.1
           baz=167
656A   Willston           45.97 347  PFAKE              02 46 20.0  +13
656A                                 LR      LR
           comp=Z,10µm,22.0s
656A   Willston           45.97 347  P       P          02 46 06.9  +0.2
           baz=166
657A   Interlachen        46.03 348  P       P          02 46 07.6  +0.5
           baz=166
655A   Horseshoe Beac     46.27 346  P       P          02 46 09.0   0.0
           baz=165
557A   Orange Park        46.42 348  P       P          02 46 09.9  -0.4
           baz=167
556A   Lake Butler        46.55 347  P       P          02 46 11.5  +0.2
           baz=166
555A   McAlpin            46.79 347  PFAKE              02 46 30.0  +17
555A                                 LR      LR
           comp=Z,7µm,21.0s
555A   McAlpin            46.79 347  P       P          02 46 12.3  -0.8
           baz=165
554A   Perry              46.92 346  P       P          02 46 14.1   0.0
           baz=164
457A   Yulee              46.98 348  P       P          02 46 14.6  +0.1
           baz=167
456A   Hilliard           47.17 348  PFAKE              02 46 30.0  +14
456A                                 LR      LR
           comp=Z,9µm,20.0s
456A   Hilliard           47.17 348  P       P          02 46 16.8  +0.7
           baz=166
553A   Crawfordville      47.20 345  P       P          02 46 16.1  -0.2
           baz=163
HOPE   Hope Point         47.26 153  PFAKE              02 46 30.0  +13
HOPE                                 LR      LR
           comp=Z,16µm,21.0s
552A   Lynn Haven         47.37 344  P       P          02 46 17.6   0.0
           baz=162
455A   Stateville         47.40 347  P       P          02 46 17.3  -0.6
           baz=165
454A   Quitman            47.51 346  P       P          02 46 19.4  +0.7
           baz=164
357A   Townsend           47.74 349  P       P          02 46 20.6  +0.1
           baz=167
356A   Blackshear         47.77 348  P       P          02 46 20.6  -0.1
           baz=166
453A   Whigham            47.81 345  PFAKE              02 46 30.0  +9.0
453A                                 LR      LR
           comp=Z,9µm,18.0s
453A   Whigham            47.81 345  P       P          02 46 21.1   0.0
           baz=164
355A   Pearson            47.94 347  P       P          02 46 22.6  +0.5
           baz=166
451A   Vernon             47.95 344  P       P          02 46 21.9  -0.2
           baz=162
452A   Marianna           48.02 344  P       P          02 46 22.0  -0.6
           baz=163
TIGA   Tifton             48.20 346  eP      P          02 46 22.4  -1.6
           comp=Z,96nm,1.3s
TIGA                                 LR      LR
           comp=Z,8µm,21.0s
TIGA   Tifton             48.20 346  P       P          02 46 24.1   0.0
           baz=165
257A   Skidaway Islan     48.20 349  PFAKE              02 46 40.0  +16
257A                                 LR      LR
           comp=Z,11µm,18.0s
257A   Skidaway Islan     48.20 349  P       P          02 46 23.9  -0.1
           baz=168
BBSR   BB Station         48.24   8  PFAKE              02 46 40.0  +16
BBSR                                 LR      LR
           comp=Z,8µm,21.0s
353A   Camilla            48.25 346  P       P          02 46 24.5   0.0
           baz=164
450A   Crestview          48.36 343  P       P          02 46 24.4  -0.9
           baz=161
256A   Glennville         48.36 348  P       P          02 46 25.6  +0.3
           baz=167
255A   Hazlehurst         48.43 348  eP      P          02 46 24.3  -1.5
           comp=Z,122nm,1.3s
255A                                 LR      LR
           comp=Z,10µm,20.0s
255A   Hazlehurst         48.43 348  P       P          02 46 25.2  -0.6
           baz=166
449A   Pace               48.50 342  P       P          02 46 26.6  +0.2
           baz=160
352A   Blakely            48.55 345  eP      P          02 46 25.8  -1.0
           comp=Z,98nm,1.3s
352A                                 LR      LR
           comp=Z,9µm,19.0s
352A   Blakely            48.55 345  P       P          02 46 26.8   0.0
           baz=163
254A   Abbeville          48.62 347  P       P          02 46 27.3  +0.1
           baz=165
ZAIG   Zacatecas          48.68 321  eP      P          02 46 30.3  +2.0
           comp=Z,63nm,1.3s
ZAIG                                 LR      LR
           comp=Z,11µm,22.0s
158A   Hollywood          48.80 351  P       P          02 46 29.2  +0.6
           baz=169
BRAL   Brewton            48.83 343  eP      P          02 46 31.0  +2.0
           comp=Z,307nm,1.4s
BRAL   Brewton            48.83 343  P       P          02 46 28.9   0.0
           baz=160
350A   Dozier             48.87 343  P       P          02 46 29.0  -0.2
           baz=161
157A   Early Branch       48.88 350  P       P          02 46 29.8  +0.6
           baz=168
253A   Americus           48.92 346  eP      P          02 46 30.9  +1.3
           comp=Z,267nm,1.4s
253A   Americus           48.92 346  P       P          02 46 28.9  -0.7
           baz=164,SNR=7.9
156A   Sylvania           48.94 349  P       P          02 46 29.7  -0.1
           baz=168,SNR=7.6
RGRS   Roger Stewart      48.97 351  eP      P          02 46 29.9  -0.1
           comp=Z,2µm,1.4s
252A   Lumpkin            49.00 345  P       P          02 46 29.5  -0.8
           baz=163,SNR=9.3
CSU    Charleston Sou     49.03 351  eP      P          02 46 30.2  -0.2
349A   Repton             49.05 342  P       P          02 46 30.6   0.0
           baz=160
155A   Kite               49.10 348  P       P          02 46 31.1  +0.1
           baz=166
Z59A   Georgetown, SC     49.16 352  P       P          02 46 30.9  -0.5
           baz=170
NHSC   New Hope           49.16 351  eP      P          02 46 32.8  +1.3
           comp=Z,539nm,1.4s
NHSC                                 LR      LR
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           comp=Z,17µm,22.0s
NHSC   New Hope           49.16 351  P       P          02 46 31.0  -0.4
           baz=169,SNR=19
154A   Montrose           49.22 347  eP      P          02 46 32.6  +0.7
           comp=Z,204nm,1.3s
154A                                 LR      LR
           comp=Z,11µm,21.0s
154A   Montrose           49.22 347  P       P          02 46 31.5  -0.4
           baz=166,SNR=13
251A   Midway             49.26 345  P       P          02 46 31.1  -1.1
           baz=163,SNR=18
Z58A   St. Stephen        49.33 351  P       P          02 46 32.0  -0.8
           baz=170,SNR=15
PMSA   Palmer Station     49.34 176  P       P          02 46 32.6  +0.1
           comp=Z,32nm,1.1s,baz=340,slow=7.9,SNR=9.3
PMSA   Palmer Station     49.34 176  eP      P          02 46 32.5  +0.1
           comp=Z,168nm,1.4s
PMSA   Palmer Station     49.34 176  eP      P          02 46 33.3  +0.8
250A   Grady              49.38 344  eP      P          02 46 33.9  +0.7
           comp=Z,196nm,1.3s
250A   Grady              49.38 344  P       P          02 46 32.4  -0.7
           baz=162,SNR=6.3
153A   Fort Valley        49.41 347  P       P          02 46 32.6  -0.8
           baz=165
Z57A   Bowman             49.43 350  P       P          02 46 33.0  -0.5
           baz=169
Z56A   Williston          49.58 349  PFAKE              02 46 50.0  +15
Z56A                                 LR      LR
           comp=Z,10µm,18.0s
Z56A   Williston          49.58 349  P       P          02 46 34.3  -0.3
           baz=168
249A   Camden             49.61 343  P       P          02 46 34.5  -0.4
           baz=160,SNR=21
Z55A   Blythe             49.62 349  P       P          02 46 35.0  +0.1
           baz=167
152A   Waverly Hall       49.64 346  eP      P          02 46 35.2  +0.1
           comp=Z,137nm,1.3s
152A                                 LR      LR
           comp=Z,8µm,22.0s
152A   Waverly Hall       49.64 346  P       P          02 46 34.5  -0.7
           baz=164,SNR=20
151A   Opelika            49.65 345  P       P          02 46 34.3  -0.9
           baz=163,SNR=8.3
Z54A   Sparta             49.77 348  P       P          02 46 36.0  -0.1
           baz=166
Y60A   Bolivia            49.78 353  eP      P          02 46 37.3  +1.2
           comp=Z,479nm,1.4s
Y60A                                 LR      LR
           comp=Z,8µm,21.0s
Y60A   Bolivia            49.78 353  P       P          02 46 36.3  +0.2
           baz=172,SNR=5.5
Y59A   Loris              49.84 352  P       P          02 46 36.8  +0.2
           baz=171
Y58A   Scranton           49.87 351  eP      P          02 46 37.9  +1.0
           comp=Z,244nm,1.0s
Y58A                                 LR      LR
           comp=Z,8µm,20.0s
Y58A   Scranton           49.87 351  P       P          02 46 36.9  +0.1
           baz=170,SNR=12
KVTX   Kingsville         49.88 329  PFAKE              02 46 50.0  +13
KVTX                                 LR      LR
           comp=Z,11µm,20.0s
150A   Eclectic           49.91 344  P       P          02 46 36.5  -0.7
           baz=162,SNR=14
Z53A   Monticello         49.96 347  P       P          02 46 37.2  -0.4
           baz=165,SNR=11
Y56A   Pelion             50.02 350  P       P          02 46 38.1  +0.1
           baz=168
Z52A   Williamson         50.07 346  P       P          02 46 38.1  -0.3
           baz=164,SNR=18
GOGA   Godfrey            50.07 347  eP      P          02 46 37.1  -1.3
           comp=Z,84nm,1.4s
GOGA                                 LR      LR
           comp=Z,10µm,22.0s
GOGA   Godfrey            50.07 347  eP      P          02 46 37.1  -1.3
GOGA                                 pmax    pmax
           comp=Z,83nm,1.4s
GOGA                                 MLR     MLR
           comp=Z,10µm,22.0s
GOGA   Godfrey            50.07 347  P       P          02 46 38.1  -0.3
           baz=165,SNR=10
Y57A   Sumter             50.09 351  PFAKE              02 46 50.0  +12
Y57A                                 LR      LR
           comp=Z,20µm,22.0s
Y57A   Sumter             50.09 351  P       P          02 46 38.9  +0.4
           baz=169
149A   Jones              50.10 343  P       P          02 46 38.0  -0.7
           baz=161,SNR=16
Y55A   Saluda             50.26 349  P       P          02 46 39.6  -0.2
           baz=167,SNR=8.2
X60A   Albert Glenn T     50.31 353  P       P          02 46 40.0  -0.1
           baz=172,SNR=10
Y54A   Tignall            50.34 348  P       P          02 46 40.2  -0.2
           baz=166,SNR=16
Z51A   Franklin           50.37 345  P       P          02 46 39.9  -0.8
           baz=163,SNR=6.3
148A   Greensboro         50.37 343  P       P          02 46 40.1  -0.6
           baz=160,SNR=7.7
X59A   McDuffie Farm,     50.38 353  P       P          02 46 40.7   0.0
           baz=171,SNR=5.9
X58A   Rowland            50.46 352  eP      P          02 46 42.2  +0.9
           comp=Z,88nm,1.0s
X58A                                 LR      LR
           comp=Z,12µm,20.0s
X58A   Rowland            50.46 352  P       P          02 46 41.0  -0.3
           baz=170,SNR=7.0
X57A   Johnson Farm,      50.48 351  P       P          02 46 41.8  +0.4
           baz=170
JSC    Jenkinsville       50.49 350  eP      P          02 46 43.2  +1.7
           comp=Z,70nm,1.3s
JSC                                  LR      LR
           comp=Z,10µm,22.0s
JSC    Jenkinsville       50.49 350  eP      P          02 46 43.2  +1.7
JSC                                  pmax    pmax
           comp=Z,70nm,1.3s
JSC                                  MLR     MLR
           comp=Z,10µm,22.0s
Z50A   Ashland            50.49 345  eP      P          02 46 41.1  -0.5
           comp=Z,112nm,1.0s
Z50A                                 LR      LR
           comp=Z,8µm,20.0s
Z50A   Ashland            50.49 345  P       P          02 46 40.6  -1.0
           baz=162,SNR=24
Y53A   Monroe             50.52 347  P       P          02 46 40.1  -1.7
           baz=165,SNR=11
LRAL   Lakeview Retre     50.57 343  eP      P          02 46 42.0  -0.2
           comp=Z,112nm,1.3s
LRAL                                 LR      LR
           comp=Z,6µm,19.0s
LRAL   Lakeview Retre     50.57 343  P       P          02 46 41.5  -0.7
           baz=161,SNR=24
Z49A   Columbiana         50.60 344  P       P          02 46 41.6  -0.8
           baz=162,SNR=14
147A   Livingston         50.60 342  eP      P          02 46 42.4   0.0
           comp=Z,172nm,1.3s
147A   Livingston         50.60 342  P       P          02 46 41.1  -1.3
           baz=159,SNR=7.6
HODGE  Hodges             50.62 349  eP      P          02 46 43.9  +1.3
           comp=Z,48nm,1.3s
HODGE                                LR      LR
           comp=Z,10µm,20.0s
Y52A   Lilburn            50.63 347  eP      P          02 46 42.7  +0.1
           comp=Z,88nm,1.4s
Y52A                                 LR      LR
           comp=Z,7µm,18.0s
Y52A   Lilburn            50.63 347  P       P          02 46 41.9  -0.8
           baz=165
X56A   White Oak          50.66 350  P       P          02 46 42.8   0.0
           baz=168,SNR=9.6
BIRD   Birdtown, Kers     50.71 351  eP      P          02 46 45.1  +1.9
           comp=Z,182nm,1.4s
BIRD                                 LR      LR
           comp=Z,14µm,22.0s
X55A   Gracelyn & Ava     50.74 349  P       P          02 46 43.7  +0.2
           baz=168,SNR=8.6
W60A   Pink Hill          50.76 354  P       P          02 46 43.4  -0.1
           baz=173,SNR=6.3
W61A   Ground Anchor      50.81 354  P       P          02 46 43.5  -0.4
           baz=174
VBMS   Vicksburg          50.90 339  eP      P          02 46 43.9  -0.7
           comp=Z,110nm,1.3s
VBMS   Vicksburg          50.90 339  P       P          02 46 43.9  -0.7
           baz=156
Y51A   Rockmart           50.90 346  P       P          02 46 43.5  -1.1
           baz=163,SNR=21
W58A   Raeford            50.91 352  P       P          02 46 44.7  +0.1
           baz=171,SNR=58
X54A   Belton             50.95 349  P       P          02 46 45.0   0.0
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           baz=167,SNR=11
W59A   Clinton            50.95 353  P       P          02 46 45.1  +0.1
           baz=172,SNR=5.5
HKT    Hockley            50.95 333  eP      P          02 46 45.5  +0.5
           comp=Z,75nm,1.5s
HKT    Hockley            50.95 333  eP      P          02 46 45.5  +0.5
HKT                                  pmax    pmax
           comp=Z,75nm,1.5s
CNNC   Cliffs of the      50.96 354  PFAKE              02 47 00.0  +15
CNNC                                 LR      LR
           comp=Z,7µm,21.0s
CNNC   Cliffs of the      50.96 354  P       P          02 46 45.3  +0.2
           baz=172,SNR=9.4
Y50A   Piedmont           51.05 345  P       P          02 46 43.9  -1.9
           baz=163,SNR=12
X53A   Estanollee         51.09 348  P       P          02 46 44.7  -1.4
           baz=166
V62A   Hyde County Ai     51.10 356  PFAKE              02 47 00.0  +14
V62A                                 LR      LR
           comp=Z,6µm,21.0s
V62A   Hyde County Ai     51.10 356  P       P          02 46 45.3  -0.8
           baz=175
PAULI  Pauline            51.11 349  eP      P          02 46 47.0  +0.8
           comp=Z,54nm,1.2s
PAULI                                LR      LR
           comp=Z,10µm,21.0s
W57A   Gilead             51.14 351  eP      P          02 46 47.0  +0.6
           comp=Z,207nm,1.4s
W57A                                 LR      LR
           comp=Z,9µm,20.0s
W57A   Gilead             51.14 351  P       P          02 46 46.4   0.0
           baz=170,SNR=20
Y49A   Blount Mountai     51.19 344  eP      P          02 46 46.5  -0.4
           comp=Z,103nm,1.4s
Y49A                                 LR      LR
           comp=Z,7µm,19.0s
Y49A   Blount Mountai     51.19 344  P       P          02 46 46.0  -0.9
           baz=162,SNR=6.1
W56A   Indian Trail       51.21 351  P       P          02 46 46.8  -0.2
           baz=169,SNR=18
833A   Chaparral WMA,     51.27 328  eP      P          02 46 48.3  +0.8
           comp=Z,72nm,1.0s
833A                                 LR      LR
           comp=Z,3µm,19.0s
833A   Chaparral WMA,     51.27 328  P       P          02 46 47.8  +0.2
           baz=145,SNR=14
X52A   Dahlonega          51.31 347  P       P          02 46 46.7  -1.0
           baz=165
KMSC   Kings Mountain     51.34 350  eP      P          02 46 48.3  +0.3
           comp=Z,68nm,1.2s
KMSC                                 LR      LR
           comp=Z,12µm,22.0s
KMSC   Kings Mountain     51.34 350  P       P          02 46 48.1  +0.1
           baz=168,SNR=9.7
V61A   Roper              51.38 355  PFAKE              02 47 00.0  +12
V61A                                 LR      LR
           comp=Z,5µm,19.0s
V61A   Roper              51.38 355  P       P          02 46 47.6  -0.6
           baz=174
V60A   Jim Taylor Roa     51.42 354  eP      P          02 46 46.5  -1.9
           comp=Z,108nm,1.5s
V60A                                 LR      LR
           comp=Z,6µm,19.0s
V60A   Jim Taylor Roa     51.42 354  P       P          02 46 48.7  +0.2
           baz=173
W54A   Cherokee Point     51.44 349  P       P          02 46 49.0  +0.3
           baz=167,SNR=14
Y48A   Jasper             51.45 344  P       P          02 46 47.1  -1.7
           baz=161
X51A   Calhoun            51.49 346  eP      P          02 46 50.0  +0.9
           comp=Z,84nm,1.3s
X51A                                 LR      LR
           comp=Z,6µm,20.0s
X51A   Calhoun            51.49 346  P       P          02 46 48.4  -0.6
           baz=164,SNR=8.2
BG3    Lake Jocassee      51.49 348  eP      P          02 46 50.6  +1.5
           comp=Z,21nm,1.2s
BG3                                  LR      LR
           comp=Z,7µm,18.0s
V59A   Middlesex          51.52 353  P       P          02 46 49.6  +0.3
           baz=172,SNR=26
X50B   Fort Payne         51.58 345  P       P          02 46 48.9  -0.9
           baz=163,SNR=8.4
V58A   Windy Hill, Pi     51.65 352  P       P          02 46 50.3  +0.1
           baz=171,SNR=26
W53A   Cullowhee          51.70 348  P       P          02 46 50.6  -0.3
           baz=166,SNR=14
W52A   Murphy             51.79 347  eP      P          02 46 50.2  -1.1
           comp=Z,64nm,1.4s
W52A                                 LR      LR
           comp=Z,13µm,22.0s
W52A   Murphy             51.79 347  P       P          02 46 51.1  -0.3
           baz=165,SNR=6.7
X49A   Woodville          51.79 345  P       P          02 46 50.6  -0.7
           baz=162,SNR=7.6
V57A   Coltrane Farms     51.83 352  P       P          02 46 51.6  -0.1
           baz=170,SNR=26
V56A   Mocksville         51.86 351  eP      P          02 46 52.7  +0.8
           comp=Z,160nm,1.3s
V56A                                 LR      LR
           comp=Z,9µm,22.0s
V56A   Mocksville         51.86 351  P       P          02 46 52.1  +0.3
           baz=169,SNR=29
U61A   Possum Corner      51.91 355  eP      P          02 46 51.7  -0.4
           comp=Z,254nm,1.4s
U61A                                 LR      LR
           comp=Z,6µm,19.0s
U61A   Possum Corner      51.91 355  P       P          02 46 51.1  -1.0
           baz=174
X48A   Hartselle          51.92 344  eP      P          02 46 51.5  -0.8
           comp=Z,168nm,1.4s
X48A                                 LR      LR
           comp=Z,6µm,21.0s
X48A   Hartselle          51.92 344  P       P          02 46 51.4  -0.8
           baz=161,SNR=21
V55A   Taylorsville       52.02 350  P       P          02 46 53.4  +0.4
           baz=168,SNR=11
NATX   Nacogdoches        52.03 335  eP      P          02 46 53.7  +0.5
           comp=Z,159nm,1.5s
NATX                                 LR      LR
           comp=Z,5µm,21.0s
NATX   Nacogdoches        52.03 335  P       P          02 46 53.4  +0.2
           baz=152
W51A   Cleveland          52.03 346  P       P          02 46 52.5  -0.6
           baz=164,SNR=10
U59A   Littleton          52.05 354  eP      P          02 46 52.6  -0.6
           comp=Z,133nm,1.5s
U59A                                 LR      LR
           comp=Z,9µm,22.0s
U59A   Littleton          52.05 354  P       P          02 46 53.2   0.0
           baz=173
V54A   Nebo               52.07 349  P       P          02 46 53.5  +0.1
           baz=168,SNR=14
U60A   Pendleton          52.11 354  P       P          02 46 53.7   0.0
           baz=173
V53A   Saluda             52.12 349  eP      P          02 46 54.0  +0.1
           comp=Z,18nm,0.9s
V53A                                 LR      LR
           comp=Z,9µm,20.0s
V53A   Saluda             52.12 349  P       P          02 46 53.9  +0.1
           baz=166
U58A   Oxford             52.17 353  P       P          02 46 54.2  +0.1
           baz=172,SNR=21
W50A   Signal Mountai     52.20 346  eP      P          02 46 54.4  -0.1
           comp=Z,84nm,1.3s
W50A                                 LR      LR
           comp=Z,7µm,21.0s
W50A   Signal Mountai     52.20 346  P       P          02 46 54.1  -0.3
           baz=163,SNR=11
X47A   Russelville        52.21 343  P       P          02 46 53.0  -1.5
           baz=160,SNR=14
CPCT   Cooper Cave        52.26 347  eP      P          02 46 55.7  +0.9
           comp=Z,24nm,1.1s
CPCT                                 LR      LR
           comp=Z,8µm,22.0s
TKL    Tuckaleechee C     52.30 348  P       P          02 46 54.7  -0.5
           comp=Z,1.6nm,1.0s,baz=169,slow=6.9,SNR=15
TKL                                  S       S          02 54 13.9  -6.3
           comp=Z,0.2nm,0.9s,baz=99,slow=19,SNR=1.5
U57A   Blanch             52.31 352  P       P          02 46 55.1   0.0
           baz=171,SNR=38
W49A   Belvidere          52.35 345  P       P          02 46 54.4  -1.1
           baz=162,SNR=8.1
SWET   Sewanee            52.36 345  eP      P          02 46 55.3  -0.3
           comp=Z,98nm,1.4s
SWET                                 LR      LR
           comp=Z,10µm,20.0s
U56A   King               52.37 351  P       P          02 46 55.9  +0.3
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      baz=170,SNR=11
V52A  Sevierville      52.44 348 eP     P       02 46 56.1  -0.1
      comp=Z,71nm,1.1s
V52A                             LR     LR
      comp=Z,12µm,18.0s
V52A  Sevierville      52.44 348 P      P       02 46 55.5  -0.7
      baz=166,SNR=18
435B  Jarrell          52.45 332 P      P       02 46 56.4 +0.1
      baz=148
X46A  Booneville       52.45 342 P      P       02 46 54.5  -1.7
      baz=160
W48A  Pulaski          52.54 344 P      P       02 46 56.0  -0.9
      baz=162,SNR=11
V51A  Loudon           52.56 347 eP     P       02 46 57.8 +0.8
      comp=Z,53nm,1.2s
V51A                             LR     LR
      comp=Z,12µm,22.0s
V51A  Loudon           52.56 347 P      P       02 46 56.4  -0.7
      baz=165,SNR=6.7
V50A  Pikevile         52.60 346 P      P       02 46 57.0  -0.4
      baz=164,SNR=16
U55A  TA2, Sparta      52.62 351 P      P       02 46 57.7 +0.1
      baz=169,SNR=11
T59A  Double "B" Far   52.64 354 eP     P       02 46 57.8 +0.2
      comp=Z,196nm,1.4s
T59A                             LR     LR
      comp=Z,6µm,19.0s
T59A  Double "B" Far   52.64 354 P      P       02 46 57.7 +0.1
      baz=173,SNR=24
Z41A  Richland Creek   52.64 338 P      P       02 46 57.5  -0.2
      baz=154,SNR=13
OXF   Oxford           52.65 342 eP     P       02 46 57.2  -0.5
      comp=Z,134nm,1.3s
OXF   Oxford           52.65 342 eP     P       02 46 57.2  -0.5
OXF                              pmax   pmax
      comp=Z,134nm,1.3s
OXF   Oxford           52.65 342 P      P       02 46 56.1  -1.6
      baz=158,SNR=10
PLAL  Pickwick Lake    52.70 343 eP     P       02 46 57.2  -0.8
      comp=Z,124nm,1.5s
T58A  Grand View Acr   52.72 353 P      P       02 46 58.4 +0.2
      baz=172,SNR=37
T60A  Surry            52.73 355 PFAKE          02 47 10.0  +12
T60A                             LR     LR
      comp=Z,5µm,22.0s
T60A  Surry            52.73 355 P      P       02 46 57.9  -0.4
      baz=174
U53A  Fall Branch      52.75 349 P      P       02 46 57.9  -0.6
      baz=167,SNR=5.9
U54A  Nelsons Funny    52.77 350 eP     P       02 46 59.1 +0.5
      comp=Z,60nm,1.1s
U54A                             LR     LR
      comp=Z,10µm,22.0s
U54A  Nelsons Funny    52.77 350 P      P       02 46 58.7 +0.1
      baz=168,SNR=9.2
W47A  Westpoint        52.82 344 P      P       02 46 57.6  -1.4
      baz=161,SNR=15
T57A  Hurt             52.86 352 eP     P       02 46 59.7 +0.5
      comp=Z,373nm,1.4s
T57A                             LR     LR
      comp=Z,12µm,22.0s
T57A  Hurt             52.86 352 P      P       02 46 59.3 +0.1
      baz=171,SNR=62
CCAR  Cane Creek       52.87 339 eP     P       02 47 00.0 +0.7
      comp=Z,232nm,1.4s
V49A  McMinnville      52.88 346 P      P       02 46 58.6  -0.8
      baz=163,SNR=15
U52A  Thorn Hill       52.93 348 P      P       02 46 59.5  -0.3
      baz=166
W46A  Michie           52.93 343 P      P       02 46 57.9  -1.9
      baz=160
T56A  Rocky Mt         52.99 352 P      P       02 47 00.8 +0.6
      baz=170,SNR=45
U51A  La Follette      53.05 348 P      P       02 47 00.1  -0.5
      baz=165
V48A  Smith Brothers   53.08 345 eP     P       02 47 00.0  -0.9
      comp=Z,109nm,1.3s
V48A                             LR     LR
      comp=Z,11µm,20.0s
V48A  Smith Brothers   53.08 345 P      P       02 46 59.9  -0.9
      baz=162,SNR=20
TZTN  Tazewell         53.11 348 eP     P       02 47 00.9  -0.2
      comp=Z,33nm,1.0s
TZTN                             LR     LR
      comp=Z,10µm,18.0s
TZTN  Tazewell         53.11 348 P      P       02 47 00.4  -0.7
      baz=166
X43A  Marvell          53.12 340 P      P       02 47 01.0  -0.2
      baz=157
WLAR  White Oak Lake   53.14 338 eP     P       02 47 02.6 +1.2
      comp=Z,243nm,1.1s
T55A  Pulaski          53.19 351 P      P       02 47 02.4 +0.7
      baz=169,SNR=17
S61A  Accomac          53.19 356 PFAKE          02 47 10.0 +8.4
S61A                             LR     LR
      comp=Z,9µm,21.0s
S61A  Accomac          53.19 356 P      P       02 47 01.3  -0.4
      baz=175
BLA   Blacksburg       53.22 351 eP     P       02 47 03.8 +1.8
      comp=Z,158nm,1.3s
BLA                              LR     LR
      comp=Z,7µm,20.0s
BLA   Blacksburg       53.22 351 P      P       02 47 02.7 +0.7
      baz=170,SNR=22
JCT   Junction City    53.24 330 eP     P       02 47 02.1  -0.1
      comp=Z,109nm,1.5s
JCT                              LR     LR
      comp=Z,4µm,22.0s
JCT   Junction City    53.24 330 eP     P       02 47 02.1  -0.1
JCT                              pmax   pmax
      comp=Z,109nm,1.5s
JCT                              MLR    MLR
      comp=Z,4µm,22.0s
JCT   Junction City    53.24 330 P      P       02 47 02.2  -0.1
      baz=146
T54A  Tazewell         53.26 350 P      P       02 47 02.3 +0.1
      baz=168,SNR=11
U50A  Jamestown        53.26 347 P      P       02 47 01.3  -0.9
      baz=164,SNR=14
S60A  Water View       53.29 355 P      P       02 47 01.5  -0.9
      baz=174
CLTN  Cedars of Leba   53.29 345 eP     P       02 47 02.5 +0.1
      comp=Z,39nm,1.3s
CLTN                             LR     LR
      comp=Z,5µm,19.0s
S58A  Poland Farm, P   53.32 354 eP     P       02 47 03.2 +0.6
      comp=Z,73nm,1.2s
S58A                             LR     LR
      comp=Z,7µm,20.0s
S58A  Poland Farm, P   53.32 354 P      P       02 47 02.9 +0.2
      baz=172,SNR=14
T53A  Wise             53.34 349 P      P       02 47 02.1  -0.8
      baz=167
V47A  Nunnelly         53.35 344 P      P       02 47 01.5  -1.3
      baz=161,SNR=8.2
S59A  Mechanicsville   53.40 355 P      P       02 47 03.3 +0.1
      baz=173
WHTX  Lake Whitney,    53.41 333 eP     P       02 47 04.5 +1.1
      comp=Z,233nm,1.5s
WHTX                             LR     LR
      comp=Z,4µm,21.0s
WHTX  Lake Whitney,    53.41 333 P      P       02 47 03.8 +0.4
      baz=149,SNR=14
V46A  Holladay         53.48 343 P      P       02 47 01.7  -2.1
      baz=160,SNR=6.5
T52A  Hallie           53.55 349 eP     P       02 47 04.3  -0.1
      comp=Z,46nm,1.0s
T52A                             LR     LR
      comp=Z,11µm,21.0s
T52A  Hallie           53.55 349 P      P       02 47 03.6  -0.7
      baz=167
U49A  Red Boiling Sp   53.56 346 P      P       02 47 03.3  -1.1
      baz=163,SNR=8.4
S56A  Natural Bridge   53.56 352 P      P       02 47 04.5 +0.1
      baz=171,SNR=17
S57A  Dark Hollow, R   53.57 353 eP     P       02 47 05.0 +0.6
      comp=Z,384nm,1.4s
S57A                             LR     LR
      comp=Z,9µm,22.0s
S57A  Dark Hollow, R   53.57 353 P      P       02 47 04.7 +0.2
      baz=171,SNR=57
T51A  Gray             53.60 348 P      P       02 47 03.8  -0.9
      baz=165,SNR=15
HPIG                   53.65 322 eP     P       02 47 05.7 +0.2
      comp=Z,57nm,1.4s
HPIG                             LR     LR
      comp=Z,6µm,19.0s
R58B  Mineral          53.65 354 eP     P       02 47 07.1 +2.1
      comp=Z,107nm,1.3s
R58B                             LR     LR
      comp=Z,7µm,22.0s
R58B  Mineral          53.65 354 P      P       02 47 05.4 +0.4
      baz=173,SNR=19
WVT   Waverly          53.71 344 eP     P       02 47 04.0  -1.6
      comp=Z,72nm,1.2s
WVT                              LR     LR
      comp=Z,7µm,21.0s
WVT   Waverly          53.71 344 eP     P       02 47 04.0  -1.6
WVT                              pmax   pmax
      comp=Z,72nm,1.2s
WVT                              MLR    MLR
      comp=Z,7µm,21.0s
WVT   Waverly          53.71 344 P      P       02 47 03.9  -1.6
      baz=161
U48A  Cassie Pea, Po   53.74 345 P      P       02 47 04.8  -0.9
      baz=162,SNR=16
X40A  Basin Creek Fa   53.76 338 eP     P       02 47 06.2 +0.3
      comp=Z,17nm,1.1s
X40A  Basin Creek Fa   53.76 338 P      P       02 47 04.9  -1.0
      baz=155,SNR=9.3
S55A  Lewisburg        53.79 351 P      P       02 47 06.2 +0.1
      baz=170,SNR=36
R61A  Willards         53.81 356 P      P       02 47 06.1  -0.1
      baz=176
R59A  King George, V   53.82 355 P      P       02 47 06.3 +0.1
      baz=174
T50A  Nancy            53.84 347 P      P       02 47 05.2  -1.2
      baz=164,SNR=12
R60A  Leonardtown, M   53.84 355 P      P       02 47 06.2  -0.2
      baz=174
CBN   Corbin Frederi   53.84 355 eP     P       02 47 08.3 +1.9
      comp=Z,42nm,1.0s
CBN                              LR     LR
      comp=Z,4µm,20.0s
CBN   Corbin Frederi   53.84 355 P      P       02 47 06.5 +0.1
      baz=173
UALR  University of    53.85 339 eP     P       02 47 06.4  -0.1
      comp=Z,168nm,1.4s
U47A  Clarksville      53.87 344 P      P       02 47 05.2  -1.4
      baz=161,SNR=10.0
HALT  Halls            53.93 342 PFAKE          02 47 20.0  +13
HALT                             LR     LR
      comp=Z,4µm,18.0s
S54A  Dingess, Beckl   53.94 351 P      P       02 47 06.9  -0.3
      baz=169
S53A  Williamson       53.95 350 P      P       02 47 07.2  -0.1
      baz=168
R58A  Rapidan          54.00 354 P      P       02 47 07.8 +0.2
      baz=173,SNR=19
HBAR  Harrisburg       54.00 341 eP     P       02 47 08.9 +1.3
      comp=Z,201nm,1.3s
HBAR                             LR     LR
      comp=Z,7µm,18.0s
U46A  Springville      54.02 344 P      P       02 47 06.1  -1.6
      baz=160
R57A  Stanardsville    54.05 353 P      P       02 47 08.3 +0.3
      baz=172,SNR=45
T49A  Edmonton         54.07 346 eP     P       02 47 07.1  -1.1
      comp=Z,153nm,1.4s
T49A                             LR     LR
      comp=Z,8µm,19.0s
T49A  Edmonton         54.07 346 P      P       02 47 07.1  -1.1
      baz=164,SNR=30
MIAR  Mount Ida        54.08 338 eP     P       02 47 07.8  -0.4
      comp=Z,107nm,1.2s
MIAR  Mount Ida        54.08 338 eP     P       02 47 07.8  -0.4
MIAR                             pmax   pmax
      comp=Z,107nm,1.2s
MIAR  Mount Ida        54.08 338 P      P       02 47 07.7  -0.6
      baz=154,SNR=42
S52A  Salyersville     54.12 349 P      P       02 47 07.6  -0.9
      baz=166
W41B  Gary Mavity, V   54.18 339 P      P       02 47 07.8  -1.1
      baz=156,SNR=22
S51A  Beattyville      54.18 348 eP     P       02 47 08.2  -0.7
      comp=Z,42nm,1.3s
S51A                             LR     LR
      comp=Z,10µm,20.0s
S51A  Beattyville      54.18 348 P      P       02 47 07.1  -1.8
      baz=166
GNAR  Gosnell          54.19 342 eP     P       02 47 11.2 +2.3
      comp=Z,142nm,1.4s
GNAR                             LR     LR
      comp=Z,6µm,19.0s
UTMT  University of    54.20 343 eP     P       02 47 08.3  -0.7
      comp=Z,222nm,1.3s
R55A  Marlinton        54.23 352 eP     P       02 47 11.4 +2.0
      comp=Z,136nm,1.2s
R55A                             LR     LR
      comp=Z,12µm,22.0s
R55A  Marlinton        54.23 352 P      P       02 47 09.5 +0.1
      baz=170,SNR=27
R54A  Victor           54.26 351 P      P       02 47 09.3  -0.3
      baz=169
R56A  Bull Pasture M   54.26 353 P      P       02 47 10.1 +0.5
      baz=171,SNR=22
T48A  Bowling Green    54.28 346 P      P       02 47 09.1  -0.6
      baz=163,SNR=22
WHAR  Wooly Hollow     54.30 339 eP     P       02 47 09.6  -0.2
      comp=Z,70nm,1.1s
LTX   Lajitas          54.33 325 eP     P       02 47 09.0  -1.3
LTX   Lajitas          54.33 325 eP     P       02 47 09.0  -1.3
TXAR  Lajitas Array    54.33 325 P      P       02 47 09.0  -1.3
      comp=Z,9.7nm,0.8s,baz=150,slow=7.8,SNR=24
TXAR                             LR     LR      03 08 38.7
      comp=Z,6µm,20.8s,baz=0.0,slow=34
TX31  Lajitas Ar. Si   54.33 325 eP     P       02 47 10.2  -0.1
      comp=Z,26nm,1.2s
T47A  Sharon Grove     54.34 345 eP     P       02 47 09.5  -0.5
      comp=Z,145nm,1.4s
T47A                             LR     LR
      comp=Z,12µm,20.0s
T47A  Sharon Grove     54.34 345 P      P       02 47 09.1  -0.9
      baz=162,SNR=14
Q61A  Milford          54.36 357 P      P       02 47 09.6  -0.5
      baz=176
S50A  Richmond         54.38 348 P      P       02 47 09.8  -0.5
      baz=165,SNR=15
Q59A  Harwood          54.44 355 P      P       02 47 10.6  -0.1
      baz=174
Q60A  Greensboro       54.52 356 P      P       02 47 11.4 +0.1
      baz=175
R53A  Hurricane        54.56 350 eP     P       02 47 12.3 +0.7
      comp=Z,68nm,1.3s
R53A                             LR     LR
      comp=Z,14µm,22.0s
R53A  Hurricane        54.56 350 P      P       02 47 11.0  -0.7
      baz=168
T46A  Princeton        54.59 344 P      P       02 47 10.7  -1.2
      baz=161,SNR=9.1
LPIG  La Paz           54.59 316 P      P       02 47 11.3  -0.9
      comp=Z,18nm,0.3s,baz=90,slow=1.0,SNR=2.1
Q58A  Fox Den Farm,    54.60 354 P      P       02 47 11.9  -0.1
      baz=173,SNR=33
S49A  Springfield      54.67 347 P      P       02 47 11.5  -1.0
      baz=164,SNR=15
R52A  Catlettsburg     54.68 350 P      P       02 47 11.2  -1.3
      baz=167
S48A  Wiedeman Farm,   54.72 346 P      P       02 47 11.4  -1.5
      baz=163,SNR=15
W39A  Magazine         54.74 338 eP     P       02 47 13.2 +0.2
      comp=Z,152nm,1.3s
W39A  Magazine         54.74 338 P      P       02 47 12.9  -0.1
      baz=154,SNR=26
PARMO Parma            54.75 342 eP     P       02 47 13.1   0.0
      comp=Z,176nm,1.1s
PARMO                            LR     LR
      comp=Z,4µm,18.0s
Q57A  Strasburg        54.77 354 P      P       02 47 13.9 +0.7
      baz=172,SNR=36
T45A  Paducah          54.77 343 P      P       02 47 11.8  -1.4
      baz=160
FCAR  Ozark Folk Cen   54.78 340 eP     P       02 47 12.3  -1.0
      comp=Z,60nm,1.2s
FCAR                             LR     LR
      comp=Z,5µm,18.0s
R51A  Hillsboro        54.82 349 P      P       02 47 12.4  -1.1
      baz=166
S47A  Hartford         54.86 345 P      P       02 47 12.6  -1.3
      baz=162,SNR=18
Q56A  Snyder Ridge,    54.86 353 P      P       02 47 14.3 +0.4
      baz=171,SNR=48
Q55A  Buckhannon       54.93 352 P      P       02 47 15.4 +1.0
      baz=170,SNR=35
ABTX  Abilene, Hawle   54.94 331 eP     P       02 47 14.7 +0.1
      comp=Z,238nm,1.4s
ABTX                             LR     LR
      comp=Z,5µm,22.0s
ABTX  Abilene, Hawle   54.94 331 P      P       02 47 14.4  -0.1
      baz=147,SNR=34
R50A  Paris            54.95 348 eP     P       02 47 14.2  -0.3
      comp=Z,49nm,1.1s
R50A                             LR     LR
      comp=Z,14µm,22.0s
R50A  Paris            54.95 348 P      P       02 47 13.4  -1.1
      baz=165,SNR=12
SDMD  Soldier's Deli   54.99 355 eP     P       02 47 15.1 +0.3
      comp=Z,30nm,1.4s
SDMD                             LR     LR
      comp=Z,3µm,20.0s
Q53A  Leroy            55.01 351 P      P       02 47 14.5  -0.4
      baz=168,SNR=19
Q54A  Coxs Mills       55.02 351 eP     P       02 47 15.3 +0.3
      comp=Z,85nm,1.1s
Q54A                             LR     LR
      comp=Z,8µm,22.0s
Q54A  Coxs Mills       55.02 351 P      P       02 47 14.4  -0.6
      baz=169,SNR=20
PBMO  Poplar Bluff     55.06 342 eP     P       02 47 14.5  -0.8
      comp=Z,58nm,0.9s
PBMO                             LR     LR
      comp=Z,5µm,22.0s
P58A  Pank, Wackersv   55.11 355 P      P       02 47 15.9 +0.3
      baz=174,SNR=16
P61A  Hammonton        55.12 357 P      P       02 47 15.4  -0.3
      baz=176
R49A  Shelbyville      55.13 347 eP     P       02 47 15.3  -0.5
      comp=Z,40nm,1.0s
R49A                             LR     LR
      comp=Z,8µm,18.0s
R49A  Shelbyville      55.13 347 P      P       02 47 14.4  -1.4
      baz=164,SNR=8.3
PTCN  Pitcairn Islan   55.15 250 PFAKE          02 47 30.0  +14
PTCN                             LR     LR
      comp=Z,14µm,20.0s
S46A  Don Dixon Farm   55.15 345 P      P       02 47 14.6  -1.4
      baz=161,SNR=18
P59A  Jarrettsville    55.16 356 P      P       02 47 16.4 +0.4
      baz=174,SNR=11
P57A  Homestead Farm   55.17 354 P      P       02 47 16.6 +0.5
      baz=173,SNR=31
Q52A  Bidwell          55.23 350 P      P       02 47 16.0  -0.5
      baz=168,SNR=8.5
P56A  Dayton Farm, R   55.28 353 P      P       02 47 18.0 +1.2
      baz=172,SNR=30
P60A  Greenville       55.31 356 P      P       02 47 16.7  -0.3
      baz=175
WCI   Wyandotte Cave   55.32 346 eP     P       02 47 16.1  -1.1
      comp=Z,101nm,1.1s
WCI                              LR     LR
      comp=Z,9µm,19.0s
WCI   Wyandotte Cave   55.32 346 eP     P       02 47 16.1  -1.1
WCI                              pmax   pmax
      comp=Z,101nm,1.1s
WCI                              MLR    MLR
      comp=Z,9µm,19.0s
WCI   Wyandotte Cave   55.32 346 P      P       02 47 16.0  -1.1
      baz=163
R48A  Northridge Ran   55.39 347 P      P       02 47 17.1  -0.5
      baz=164,SNR=7.6
P55A  Reedsville       55.40 352 P      P       02 47 18.3 +0.5
      baz=171,SNR=23
USIN  University of    55.40 345 eP     P       02 47 17.2  -0.6
      comp=Z,367nm,1.4s
USIN                             LR     LR
      comp=Z,11µm,20.0s
PSUB  Penn St. - Bra   55.41 357 eP     P       02 47 17.2  -0.6
      comp=Z,35nm,1.3s
PSUB                             LR     LR
      comp=Z,7µm,22.0s
Q50A  Georgetown       55.42 348 P      P       02 47 16.8  -1.1
      baz=166,SNR=5.4
U40A  Yellville        55.45 339 P      P       02 47 17.5  -0.7
      baz=155,SNR=22
Q51A  Peebles          55.48 349 eP     P       02 47 18.2  -0.1
      comp=Z,75nm,1.5s
Q51A                             LR     LR
      comp=Z,11µm,21.0s
Q51A  Peebles          55.48 349 P      P       02 47 17.2  -1.1
      baz=166
O61A  Allentown        55.53 357 P      P       02 47 17.9  -0.7
      baz=177
MVL   Millersville     55.54 356 eP     P       02 47 20.1 +1.4
      comp=Z,22nm,1.0s
MVL                              LR     LR
      comp=Z,8µm,20.0s
MCWV  Mont Chateau     55.55 352 eP     P       02 47 20.1 +1.3
      comp=Z,30nm,0.8s
MCWV                             LR     LR
      comp=Z,6µm,22.0s
MCWV  Mont Chateau     55.55 352 P      P       02 47 19.6 +0.8
      baz=171,SNR=9.8
S44A  Carbondale       55.57 343 P      P       02 47 18.3  -0.7
      baz=160,SNR=16
P53A  Whipple          55.60 351 eP     P       02 47 19.6 +0.4
      comp=Z,128nm,1.1s
P53A                             LR     LR
      comp=Z,6µm,21.0s
P53A  Whipple          55.60 351 P      P       02 47 18.7  -0.5
      baz=169,SNR=19
O58A  Lewisberry       55.71 355 P      P       02 47 20.2 +0.3
      baz=174,SNR=12
Q49A  Aurora           55.76 348 P      P       02 47 19.6  -0.7
      baz=165,SNR=7.9
HHAR  Hobbs            55.77 338 eP     P       02 47 20.0  -0.4
      comp=Z,156nm,1.4s
PAGS  Pennsylvania G   55.80 355 eP     P       02 47 22.8 +2.2
      comp=Z,29nm,1.2s
PAGS                             LR     LR
      comp=Z,6µm,19.0s
O60A  Telford          55.80 357 P      P       02 47 20.5   0.0
      baz=176,SNR=8.2
O59A  Robesonia        55.84 356 P      P       02 47 21.3 +0.4
      baz=175,SNR=8.0
O57A  Amberson         55.86 355 P      P       02 47 21.8 +0.8
      baz=173,SNR=32
P52A  Corning          55.86 350 P      P       02 47 20.4  -0.6
      baz=168
Q48A  North Vernon     55.86 347 P      P       02 47 20.1  -1.0
      baz=164,SNR=16
P51A  Williamsport     55.87 349 eP     P       02 47 21.6 +0.5
      comp=Z,24nm,0.9s
P51A                             LR     LR
      comp=Z,12µm,22.0s
P51A  Williamsport     55.87 349 P      P       02 47 19.6  -1.5
      baz=167
O56A  Blue Knob Stat   56.01 354 eP     P       02 47 23.0 +0.8
      comp=Z,252nm,1.4s
O56A                             LR     LR
      comp=Z,6µm,19.0s
O56A  Blue Knob Stat   56.01 354 P      P       02 47 22.9 +0.8
      baz=172,SNR=35
O55A  Ligonier         56.03 353 P      P       02 47 23.0 +0.8
      baz=171,SNR=31
LUPA  Lehigh Univers   56.08 357 eP     P       02 47 21.4  -1.2
      comp=Z,0.5nm,0.9s
LUPA                             LR     LR
      comp=Z,800nm,22.0s
BRNJ  Basking Ridge    56.12 357 eP     P       02 47 20.2  -2.6
      comp=Z,13nm,0.9s
BRNJ                             LR     LR
      comp=Z,12µm,21.0s
TUL1  Leonard          56.12 337 eP     P       02 47 23.2 +0.2
      comp=Z,158nm,1.3s
TUL1                             LR     LR
      comp=Z,4µm,22.0s
TUL1  Leonard          56.12 337 P      P       02 47 22.7  -0.2
      baz=152,SNR=18
P50A  Jamestown        56.13 349 P      P       02 47 21.9  -1.1
      baz=166,SNR=8.2
O54A  Avella           56.14 352 P      P       02 47 22.8  -0.2
      baz=170,SNR=14
CPNY  Central Park     56.20 358 PFAKE          02 47 40.0  +17
CPNY                             LR     LR
      comp=Z,8µm,20.0s
P49A  Miami Univ. Ec   56.23 348 P      P       02 47 22.3  -1.4
      baz=165,SNR=13
OLIL  Olney            56.24 345 eP     P       02 47 24.0 +0.2
      comp=Z,118nm,1.4s
OLIL                             LR     LR
      comp=Z,9µm,19.0s
BLO   Bloomington      56.27 346 PFAKE          02 47 40.0  +16
BLO                              LR     LR
      comp=Z,11µm,19.0s
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O52A	Adamsville	56.28	351	*e*P	P	02 47 24.9	+0.8
	comp=Z,76nm,1.3s						
O52A				LR	LR		
	comp=Z,8µm,22.0s						
O52A	Adamsville	56.28	351	P	P	02 47 23.0	-1.1
	baz=168						
SSPA	Standing Stone	56.30	354	*e*P	P	02 47 24.5	+0.3
	comp=Z,95nm,1.3s						
SSPA				LR	LR		
	comp=Z,8µm,22.0s						
SSPA	Standing Stone	56.30	354	P	P	02 47 24.2	+0.1
	baz=173						
P48A	Milroy	56.31	347	*e*P	P	02 47 23.0	-1.2
	comp=Z,82nm,1.4s						
P48A				LR	LR		
	comp=Z,5µm,18.0s						
P48A	Milroy	56.31	347	P	P	02 47 22.9	-1.3
	baz=164						
O53A	New Philadelph	56.32	351	P	P	02 47 23.7	-0.6
	baz=169,SNR=8.8						
WMOK	Wichita Mounta	56.33	333	*e*P	P	02 47 24.1	-0.4
	comp=Z,48nm,1.3s						
WMOK	Wichita Mounta	56.33	333	P	P	02 47 23.5	-1.1
	baz=148,SNR=19						
N60A	Cedar Hill Far	56.33	357	P	P	02 47 23.0	-1.4
	baz=176						
N57A	Milroy	56.39	355	P	P	02 47 25.1	+0.3
	baz=173,SNR=22						
N58A	Sunbury	56.41	355	P	P	02 47 24.6	-0.3
	baz=174,SNR=15						
N59A	State Game Lan	56.42	356	*e*P	P	02 47 24.3	-0.7
	comp=Z,25nm,1.3s						
N59A				LR	LR		
	comp=Z,3µm,18.0s						
N59A	State Game Lan	56.42	356	P	P	02 47 24.6	-0.4
	baz=175,SNR=5.8						
PAL	Palisades	56.42	358	*e*P	P	02 47 22.9	-2.0
	comp=Z,36nm,1.4s						
PAL				LR	LR		
	comp=Z,7µm,20.0s						
PAL	Palisades	56.42	358	*e*P	P	02 47 22.9	-2.0
PAL				pmax	pmax		
	comp=Z,36nm,1.4s						
PAL				MLR	MLR		
	comp=Z,7µm,20.0s						
PAL	Palisades	56.42	358	P	P	02 47 24.4	-0.5
	baz=178						
TRIS	Tristan da Cun	56.43	124	PFAKE		02 47 40.0	+15
TRIS				LR	LR		
	comp=Z,6µm,19.0s						
O51A	Pataskala	56.44	350	P	P	02 47 24.5	-0.7
	baz=168						
CCM	Cathedral Cave	56.49	342	*e*P	P	02 47 24.4	-1.2
	comp=Z,108nm,1.4s						
CCM				LR	LR		
	comp=Z,6µm,22.0s						
CCM	Cathedral Cave	56.49	342	*e*P	P	02 47 24.4	-1.2
CCM				pmax	pmax		
	comp=Z,109nm,1.4s						
CCM				MLR	MLR		
	comp=Z,6µm,22.0s						
CCM	Cathedral Cave	56.49	342	P	P	02 47 24.3	-1.2
	baz=157						
ODNJ	Ogdensburg	56.52	357	*e*P	P	02 47 24.0	-1.7
	comp=Z,11nm,1.1s						
ODNJ				LR	LR		
	comp=Z,11µm,21.0s						
ASCN	Ascension	56.56	89	PFAKE		02 47 40.0	+13
ASCN				LR	LR		
	comp=Z,10µm,19.0s						
N55A	Marion Center	56.56	353	*e*P	P	02 47 26.8	+0.8
	comp=Z,457nm,1.4s						
N55A				LR	LR		
	comp=Z,8µm,21.0s						
N55A	Marion Center	56.56	353	P	P	02 47 26.6	+0.6
	baz=172,SNR=64						
ACSO	Alum Creek Sta	56.58	350	*e*P	P	02 47 26.4	+0.2
	comp=Z,136nm,1.5s						
ACSO				LR	LR		
	comp=Z,14µm,22.0s						
ACSO	Alum Creek Sta	56.58	350	P	P	02 47 25.5	-0.7
	baz=167,SNR=8.8						
O50A	Cable	56.62	349	P	P	02 47 25.4	-1.1
	baz=166,SNR=9.8						
N56A	West Decatur	56.62	354	P	P	02 47 26.8	+0.3
	baz=172,SNR=30						
YLE	Yale	56.70	359	*e*P	P	02 47 28.7	+1.8
	comp=Z,71nm,1.1s						
YLE				LR	LR		
	comp=Z,12µm,21.0s						
M61A	Granite Spring	56.72	358	P	P	02 47 26.8	-0.3
	baz=178						
SLM	Saint Louis	56.73	343	*e*P	P	02 47 27.3	+0.1
	comp=Z,154nm,1.4s						
SLM				LR	LR		
	comp=Z,4µm,22.0s						
SLM	Saint Louis	56.73	343	*e*P	P	02 47 27.3	+0.1
SLM				pmax	pmax		
	comp=Z,154nm,1.4s						
SLM				MLR	MLR		
	comp=Z,4µm,22.0s						
O49A	Covington	56.79	348	*e*P	P	02 47 27.0	-0.6
	comp=Z,36nm,1.0s						
O49A				LR	LR		
	comp=Z,11µm,20.0s						
O49A	Covington	56.79	348	P	P	02 47 26.8	-0.9
	baz=166						
N53A	Lisbon	56.81	352	*e*P	P	02 47 28.2	+0.4
	comp=Z,112nm,1.1s						
N53A				LR	LR		
	comp=Z,6µm,20.0s						
N53A	Lisbon	56.81	352	P	P	02 47 27.3	-0.6
	baz=170,SNR=22						
N54A	Moraine State	56.85	353	*e*P	P	02 47 28.6	+0.5
	comp=Z,335nm,1.4s						
N54A				LR	LR		
	comp=Z,7µm,21.0s						
N54A	Moraine State	56.85	353	P	P	02 47 28.5	+0.4
	baz=170,SNR=27						
P46A	Rosedale	56.86	346	P	P	02 47 26.6	-1.6
	baz=162						
M58A	Price’s Panora	56.92	356	P	P	02 47 28.9	+0.4
	baz=175,SNR=28						
N52A	McGinn’s Farm,	56.94	351	P	P	02 47 28.8	0.0
	baz=169						
M65A	Busby, Falmout	56.95	1	P	P	02 47 28.0	-0.7
	baz=181						
O48A	Farmland	57.02	348	P	P	02 47 28.0	-1.3
	baz=165,SNR=19						
M59A	Waymart	57.02	357	P	P	02 47 29.8	+0.5
	baz=176,SNR=11						
KSPA	Keystone Colle	57.05	356	*e*P	P	02 47 28.8	-0.7
	comp=Z,27nm,1.1s						
KSPA				LR	LR		
	comp=Z,5µm,21.0s						
MNTX	Cornudas Mount	57.09	326	*e*P	P	02 47 29.6	-0.3
	comp=Z,30nm,1.0s						
MNTX				LR	LR		
	comp=Z,6µm,22.0s						
MNTX	Cornudas Mount	57.09	326	P	P	02 47 29.0	-1.0
	baz=141,SNR=36						
KSCT	Kent School, K	57.12	358	*e*P	P	02 47 31.4	+1.5
	comp=Z,18nm,1.3s						
KSCT				LR	LR		
	comp=Z,8µm,20.0s						
N50A	Nevada	57.14	350	P	P	02 47 29.3	-0.8
	baz=167,SNR=9.2						
N51A	Ashland	57.15	350	*e*P	P	02 47 30.7	+0.5
	comp=Z,49nm,1.2s						
N51A				LR	LR		
	comp=Z,6µm,20.0s						
N51A	Ashland	57.15	350	P	P	02 47 29.2	-1.1
	baz=168						
M56A	Emporium	57.17	354	P	P	02 47 30.5	+0.1
	baz=173,SNR=45						
M55A	Ridgway	57.22	354	P	P	02 47 30.8	+0.1
	baz=172,SNR=39						
BRYW	Bryant College	57.29	0	*e*P	P	02 47 31.3	+0.1
	comp=Z,61nm,1.2s						
BRYW				LR	LR		
	comp=Z,7µm,21.0s						
M54A	Oil Creek Stat	57.35	353	*e*P	P	02 47 31.9	+0.2
	comp=Z,362nm,1.4s						
M54A				LR	LR		
	comp=Z,9µm,20.0s						
M54A	Oil Creek Stat	57.35	353	P	P	02 47 31.5	-0.1
	baz=171,SNR=32						
M53A	WI Miller and	57.41	352	P	P	02 47 32.1	0.0
	baz=170,SNR=25						
P43A	Skaggs, Pawnee	57.47	344	P	P	02 47 31.2	-1.2
	baz=160,SNR=12						
N49A	Columbus Grove	57.47	349	*e*P	P	02 47 32.0	-0.5
	comp=Z,53nm,0.9s						
N49A				LR	LR		
	comp=Z,11µm,21.0s						
N49A	Columbus Grove	57.47	349	P	P	02 47 31.5	-0.9
	baz=166,SNR=17						
M51A	Elyria	57.53	351	P	P	02 47 32.4	-0.4
	baz=168						
MSTX	Muleshoe	57.53	329	*e*P	P	02 47 33.1	-0.1
	comp=Z,139nm,1.4s						
MSTX				LR	LR		
	comp=Z,4µm,19.0s						
MSTX	Muleshoe	57.53	329	P	P	02 47 32.4	-0.8
	baz=144,SNR=28						
L58A	Harry Jones Me	57.55	356	P	P	02 47 33.1	+0.2
	baz=175,SNR=14						
ALLY	Alegheny Colle	57.55	353	*e*P	P	02 47 33.8	+0.7
	comp=Z,288nm,1.3s						
ALLY				LR	LR		
	comp=Z,8µm,20.0s						
SFIN	Lafayette	57.56	346	*e*P	P	02 47 31.7	-1.3
	comp=Z,40nm,1.0s						
SFIN				LR	LR		
	comp=Z,9µm,18.0s						
SFIN	Lafayette	57.56	346	P	P	02 47 31.4	-1.6
	baz=162,SNR=10						
N48A	Decatur	57.57	348	P	P	02 47 32.3	-0.8
	baz=165,SNR=6.7						
M52A	Chesterland	57.61	351	*e*P	P	02 47 34.5	+1.1
	comp=Z,42nm,1.3s						
M52A				LR	LR		
	comp=Z,5µm,22.0s						
M52A	Chesterland	57.61	351	P	P	02 47 31.9	-1.5
	baz=169						
QUA2	Belchertown	57.66	359	*e*P	P	02 47 34.9	+1.2
	comp=Z,32nm,1.5s						
QUA2				LR	LR		
	comp=Z,9µm,20.0s						
O44A	Mansfield	57.67	345	P	P	02 47 32.3	-1.6
	baz=161						
BINY	Binghamton	57.71	356	*e*P	P	02 47 34.8	+0.7
	comp=Z,200nm,1.4s						
BINY				LR	LR		
	comp=Z,7µm,21.0s						
BINY	Binghamton	57.71	356	P	P	02 47 34.5	+0.4
	baz=175,SNR=15						
BCX	Boston College	57.71	1	PFAKE		02 47 50.0	+16
BCX				LR	LR		
	comp=Z,6µm,20.0s						
N47A	Urbana	57.73	348	P	P	02 47 32.7	-1.5
	baz=164,SNR=14						
M50A	Fremont	57.73	350	*e*P	P	02 47 34.6	+0.3
	comp=Z,82nm,1.3s						
M50A				LR	LR		
	comp=Z,6µm,22.0s						
M50A	Fremont	57.73	350	P	P	02 47 32.4	-1.9
	baz=167						
AMTX	Amarillo	57.76	331	PFAKE		02 47 50.0	+15
AMTX				LR	LR		
	comp=Z,4µm,22.0s						
AMTX	Amarillo	57.76	331	P	P	02 47 33.2	-1.5
	baz=146						
EPT	El Paso	57.76	325	PFAKE		02 47 50.0	+15
EPT				LR	LR		
	comp=Z,9µm,22.0s						
WES	Weston	57.76	0	*e*P	P	02 47 33.8	-0.6
	comp=Z,7.5nm,1.0s						
WES				LR	LR		
	comp=Z,7µm,22.0s						
WES	Weston	57.76	0	*e*P	P	02 47 33.8	-0.6
WES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WES				MLR	MLR		
	comp=Z,7µm,22.0s						
U32A	Winter Ranch,	57.82	334	PFAKE		02 47 50.0	+15
U32A				LR	LR		
	comp=Z,3µm,21.0s						
L53A	Girard	57.87	353	P	P	02 47 34.9	-0.3
	baz=170,SNR=21						
HRV	Adam Dziewonsk	57.88	0	*e*P	P	02 47 35.2	-0.1
	comp=Z,30nm,1.0s						
HRV				LR	LR		
	comp=Z,6µm,20.0s						
HRV	Adam Dziewonsk	57.88	0	*e*P	P	02 47 35.2	-0.1
HRV				pmax	pmax		
	comp=Z,30nm,1.0s						
HRV				MLR	MLR		
	comp=Z,6µm,20.0s						
HRV	Adam Dziewonsk	57.88	0	P	P	02 47 35.2	-0.1
	baz=180						
L55A	Hinsdale	57.89	354	P	P	02 47 35.7	+0.2
	baz=172,SNR=31						
M49A	Liberty Center	57.97	349	P	P	02 47 35.4	-0.6
	baz=166,SNR=9.6						
ERPA	Erie	57.99	353	*e*P	P	02 47 36.3	+0.2
	comp=Z,330nm,1.3s						
ERPA				LR	LR		
	comp=Z,10µm,22.0s						
ERPA	Erie	57.99	353	P	P	02 47 35.6	-0.5
	baz=171,SNR=25						
PLIO	Pelee Island,	58.01	350	P	P	02 47 34.7	-1.4
	baz=168						
L54A	Sinclairville	58.03	353	P	P	02 47 36.8	+0.4
	baz=171,SNR=46						
SRIG	Santa Rosalia	58.04	317	PFAKE		02 47 50.0	+13
SRIG				LR	LR		
	comp=Z,2µm,22.0s						
M48A	Edgerton	58.12	349	*e*P	P	02 47 39.2	+2.2
	comp=Z,22nm,0.8s						
M48A				LR	LR		
	comp=Z,11µm,21.0s						
M48A	Edgerton	58.12	349	P	P	02 47 35.3	-1.7
	baz=165						
TRY	Troy	58.13	358	*e*P	P	02 47 38.1	+1.1
	comp=Z,112nm,1.5s						
TRY				LR	LR		
	comp=Z,11µm,22.0s						
M47A	Cromwell	58.17	348	P	P	02 47 36.1	-1.3
	baz=164						
HDIL	Hopedale	58.26	344	*e*P	P	02 47 36.4	-1.7
	comp=Z,61nm,1.1s						
HDIL				LR	LR		
	comp=Z,8µm,20.0s						
HDIL	Hopedale	58.26	344	P	P	02 47 36.1	-1.9
	baz=160,SNR=7.0						
K54A	Basiliko Farm,	58.34	354	P	P	02 47 39.0	+0.5
	baz=172,SNR=38						
HSIG		58.38	319	*e*P	P	02 47 39.3	+0.2
	comp=Z,47nm,1.4s						
HSIG				LR	LR		
	comp=Z,6µm,20.0s						
MMNY	Mt. Morris Dam	58.38	355	*e*P	P	02 47 39.4	+0.6
	comp=Z,280nm,1.5s						
MMNY				LR	LR		
	comp=Z,10µm,20.0s						
K55A	Perry	58.39	355	P	P	02 47 39.1	+0.2
	baz=173,SNR=20						
L48A	N Adams	58.51	349	P	P	02 47 38.7	-1.0
	baz=166,SNR=13						
L49A	Milan	58.55	350	P	P	02 47 39.3	-0.7
	baz=166,SNR=7.5						
L47A	Sherwood	58.68	348	P	P	02 47 39.6	-1.4
	baz=165,SNR=18						
AAM	Ann Arbor	58.71	350	*e*P	P	02 47 41.6	+0.5
	comp=Z,31nm,1.0s						
AAM				LR	LR		
	comp=Z,14µm,22.0s						
AAM	Ann Arbor	58.71	350	*e*P	P	02 47 41.6	+0.5
AAM				pmax	pmax		
	comp=Z,31nm,1.0s						
AAM				MLR	MLR		
	comp=Z,14µm,22.0s						
AAM	Ann Arbor	58.71	350	P	P	02 47 40.5	-0.6
	baz=167						
M44A	Midewin, Midew	58.74	346	*e*P	P	02 47 40.4	-0.9
	comp=Z,90nm,1.4s						
M44A				LR	LR		
	comp=Z,10µm,18.0s						
M44A	Midewin, Midew	58.74	346	P	P	02 47 39.1	-2.2
	baz=162						
K52A	Tillsonburg	58.74	352	P	P	02 47 41.1	-0.2
	baz=170,SNR=7.8						
ACCN	Adirondack Com	58.78	358	*e*P	P	02 47 43.4	+1.8
	comp=Z,21nm,1.1s						
ACCN				LR	LR		
	comp=Z,10µm,22.0s						
K51A	Iona Station	58.79	352	P	P	02 47 40.4	-1.2
	baz=169						
N41A	Harden Midland	58.83	343	*e*P	P	02 47 41.0	-1.0
	comp=Z,101nm,1.2s						
N41A				LR	LR		
	comp=Z,6µm,19.0s						
N41A	Harden Midland	58.83	343	P	P	02 47 40.6	-1.4
	baz=158,SNR=9.2						
FFD	Franklin Falls	58.84	0	*e*P	P	02 47 41.9	-0.1
	comp=Z,40nm,1.4s						
FFD				LR	LR		
	comp=Z,7µm,21.0s						
MEDO	Medina	58.86	354	*e*P	P	02 47 42.9	+0.7
	comp=Z,332nm,1.4s						
MEDO				LR	LR		
	comp=Z,8µm,20.0s						
MEDO	Medina	58.86	354	P	P	02 47 42.0	-0.1
	baz=172						
J55A	Hilton	58.90	355	*e*P	P	02 47 42.8	+0.4
	comp=Z,323nm,1.5s						
J55A				LR	LR		
	comp=Z,9µm,21.0s						
J55A	Hilton	58.90	355	P	P	02 47 42.3	-0.1
	baz=173,SNR=28						
L46A	Eue Claire	58.94	347	*e*P	P	02 47 41.6	-1.1
	comp=Z,149nm,1.4s						
L46A				LR	LR		
	comp=Z,9µm,22.0s						
L46A	Eue Claire	58.94	347	P	P	02 47 40.6	-2.2
	baz=164						
TYNO	Tyneside	58.94	353	P	P	02 47 42.8	+0.1
	baz=171						
STCO	Saint Catharin	58.98	354	P	P	02 47 42.8	-0.1
	baz=172						
J54A	Appleton	58.99	354	*e*P	P	02 47 43.6	+0.6
	comp=Z,232nm,1.3s						
J54A				LR	LR		
	comp=Z,8µm,21.0s						
J54A	Appleton	58.99	354	P	P	02 47 43.1	+0.1
	baz=172,SNR=12						
K50A	Casco	59.01	351	*e*P	P	02 47 44.0	+0.8
	comp=Z,78nm,1.0s						
K50A				LR	LR		
	comp=Z,6µm,21.0s						
K50A	Casco	59.01	351	P	P	02 47 41.7	-1.4
	baz=168						
121A	Cookes Peak, D	59.05	325	P	P	02 47 44.4	+0.5
	baz=139,SNR=34						
319A	Douglas	59.05	323	*e*P	P	02 47 44.4	+0.5
	comp=Z,51nm,1.0s						
319A				LR	LR		
	comp=Z,11µm,22.0s						
HNH	Hanover	59.08	360	*e*P	P	02 47 42.5	-1.1
	comp=Z,8.6nm,1.1s						
HNH				LR	LR		
	comp=Z,8µm,20.0s						
K49A	Clarkson	59.15	350	P	P	02 47 42.7	-1.5
	baz=167						
J52A	Paris	59.16	353	P	P	02 47 43.9	-0.3
	baz=170,SNR=26						
N40A	Mertquake, Sal	59.20	343	P	P	02 47 43.1	-1.4
	baz=158						
KSU1	Kansas State U	59.23	338	PFAKE		02 48 00.0	+15
KSU1				LR	LR		
	comp=Z,7µm,19.0s						
KSU1	Kansas State U	59.23	338	P	P	02 47 44.0	-0.8
	baz=152,SNR=9.9						
K48A	Perry	59.28	349	P	P	02 47 43.8	-1.2
	baz=166,SNR=11						
K47A	Vermontville	59.31	349	P	P	02 47 43.8	-1.5
	baz=165,SNR=16						
M41A	Milan	59.36	344	P	P	02 47 44.1	-1.6
	baz=159						
NCB	Newcomb	59.39	358	*e*P	P	02 47 47.8	+2.0
	comp=Z,17nm,1.3s						
NCB				LR	LR		
	comp=Z,8µm,21.0s						
TORO	Toronto--Lesli	59.40	354	P	P	02 47 45.7	-0.1
	baz=172						
L44A	Lake County Fo	59.46	346	P	P	02 47 43.9	-2.4
	baz=162						
ACTO	Acton	59.47	353	P	P	02 47 46.2	-0.2
	baz=171,SNR=7.8						
K46A	Dorr	59.48	348	P	P	02 47 44.9	-1.6
	baz=164,SNR=8.2						
PECO	Prince Edward	59.50	356	*e*P	P	02 47 47.0	+0.5
	comp=Z,66nm,1.1s						
PECO				LR	LR		
	comp=Z,5µm,22.0s						
PECO	Prince Edward	59.50	356	P	P	02 47 45.4	-1.1
	baz=174						
DRWO	Darlington Wes	59.59	354	P	P	02 47 47.3	+0.1
	baz=172						
DRCO	St. Marys Ceme	59.59	354	P	P	02 47 47.3	+0.1
	baz=172,SNR=19						
WLVO	Wesleyville	59.61	354	P	P	02 47 47.2	-0.1
	baz=173,SNR=40						
LBNH	Lisbon	59.61	360	*e*P	P	02 47 49.2	+1.9
	comp=Z,33nm,1.1s						
LBNH				LR	LR		
	comp=Z,6µm,20.0s						
LBNH	Lisbon	59.61	360	*e*P	P	02 47 49.2	+1.9
LBNH				pmax	pmax		
	comp=Z,33nm,1.1s						
LBNH				MLR	MLR		
	comp=Z,6µm,20.0s						
LBNH	Lisbon	59.61	360	P	P	02 47 47.7	+0.3
	baz=180,SNR=6.9						
I53A	Kortright Cn E	59.63	353	P	P	02 47 47.4	-0.1
	baz=171						
BNM	Barren Site	59.64	327	*e*P	P	02 47 49.9	+1.9
J49A	Marlette	59.66	350	P	P	02 47 47.1	-0.6
	baz=167						
J48A	Bridge Port	59.70	350	*e*P	P	02 47 47.4	-0.6
	comp=Z,60nm,1.1s						
J48A				LR	LR		
	comp=Z,7µm,20.0s						
J48A	Bridge Port	59.70	350	P	P	02 47 47.0	-1.0
	baz=167,SNR=6.5						
VT1	Waterbury	59.71	359	*e*P	P	02 47 48.4	+0.3
	comp=Z,28nm,1.3s						
VT1				LR	LR		
	comp=Z,9µm,22.0s						
PKRO	Pickering	59.72	354	P	P	02 47 47.9	-0.1
	baz=172						
RKT	Rikitea	59.72	252	*e*S	S	02 55 54.4	-5.1
	comp=Z,9µm,27.5s						
RKT				*e*LQ	LQ	03 02 54.2	
	comp=Z,8µm,39.0s						
RKT				*e*LR	LR	03 05 28.8	
	comp=Z,32µm,26.5s						
L42A	Oliver, Polo	59.72	345	*e*P	P	02 47 47.1	-1.0
	comp=Z,72nm,1.4s						
L42A				LR	LR		
	comp=Z,8µm,18.0s						
L42A	Oliver, Polo	59.72	345	P	P	02 47 46.3	-1.8
	baz=160						
Y22D	IRIS PASSCAL I	59.74	326	PFAKE		02 48 00.0	+11
Y22D				LR	LR		
	comp=Z,5µm,20.0s						
Y22D	IRIS PASSCAL I	59.74	326	P	P	02 47 48.9	+0.2
	baz=140						
I51A	Listowel	59.78	352	P	P	02 47 48.2	-0.3
	baz=170,SNR=30						
J47A	Sunmer	59.83	349	*e*P	P	02 47 48.2	-0.7
	comp=Z,233nm,1.4s						
J47A				LR	LR		
	comp=Z,8µm,21.0s						
J47A	Sunmer	59.83	349	P	P	02 47 47.8	-1.0
	baz=165,SNR=6.7						
I55A	Frankford	59.84	355	P	P	02 47 48.5	-0.3
	baz=173,SNR=30						
LENM	Lemitar	59.84	326	*e*P	P	02 47 50.2	+0.9
I52A	Shelburne	59.94	353	P	P	02 47 49.0	-0.6
	baz=171						
WVL	Waterville	59.97	2	*e*P	P	02 47 51.6	+1.9
	comp=Z,19nm,1.1s						
WVL				LR	LR		
	comp=Z,9µm,22.0s						
LONY	Lake Ozonia	60.05	358	*e*P	P	02 47 50.8	+0.5
	comp=Z,40nm,1.4s						
LONY				LR	LR		
	comp=Z,11µm,21.0s						
LONY	Lake Ozonia	60.05	358	P	P	02 47 50.4	+0.1
	baz=177,SNR=19						
K43A	Burlington	60.05	346	*e*P	P	02 47 49.5	-0.9
	comp=Z,159nm,1.4s						

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K43A                                LR      LR
      comp=Z,10µm,19.0s
K43A  Burlington          60.05 346  P       P       02 47 48.9 -1.5
      baz=162,SNR=12
BASO  Ashfield            60.08 352  P       P       02 47 50.0 -0.6
      baz=169
J46A  Howard City         60.09 348  P       P       02 47 49.2 -1.5
      baz=165
LAZ   Ladron              60.11 326 eP       P       02 47 51.9 +0.7
BWLO  Walkerton           60.11 352  P       P       02 47 50.6 -0.2
      baz=170,SNR=9.6
H56A  Elgin               60.11 356  P       P       02 47 50.2 -0.5
      baz=175
H55A  Tweed               60.13 356  P       P       02 47 50.8 -0.1
      baz=174,SNR=23
DELO  Deloro Mine         60.13 355 eP       P       02 47 51.2 +0.3
      comp=Z,167nm,1.5s
DELO                                LR      LR
      comp=Z,9µm,22.0s
DELO  Deloro Mine         60.13 355  P       P       02 47 50.8 -0.1
      baz=174
ANMO  Albuquerque         60.16 327  P       P       02 47 51.2 -0.4
      comp=Z,9.7nm,0.9s,baz=147,slow=8.3,SNR=26
ANMO  Albuquerque         60.16 327 eP       P       02 47 51.8 +0.1
      comp=Z,24nm,1.2s
ANMO                                LR      LR
      comp=Z,4µm,20.0s
ANMO  Albuquerque         60.16 327diP       P       02 47 51.7 +0.1
ANMO                                pmax    pmax
      comp=Z,138nm,2.5s
ANMO                                MLR     MLR
      comp=Z,3µm,20.0s
ANMO  Albuquerque         60.16 327  P       P       02 47 51.6  0.0
      baz=141
I49A  Point Hope          60.17 351 eP       P       02 47 51.6 +0.4
      comp=Z,96nm,1.2s
I49A                                LR      LR
      comp=Z,7µm,22.0s
I49A  Point Hope          60.17 351  P       P       02 47 50.6 -0.6
      baz=168,SNR=6.3
L40A  Anamosa             60.19 343 eP       P       02 47 50.3 -1.0
      comp=Z,60nm,1.3s
L40A                                LR      LR
      comp=Z,8µm,20.0s
L40A  Anamosa             60.19 343  P       P       02 47 49.7 -1.6
      baz=158
CBKS  Cedar Bluff         60.20 335 eP       P       02 47 52.0 +0.5
      comp=Z,120nm,1.2s
CBKS  Cedar Bluff         60.20 335 eP       P       02 47 52.0 +0.5
CBKS                                pmax    pmax
      comp=Z,120nm,1.2s
CBKS  Cedar Bluff         60.20 335  P       P       02 47 51.4 -0.2
      baz=149,SNR=12
EMMW  East Machias        60.21   4 eP       P       02 47 53.1 +1.7
      comp=Z,34nm,1.2s
EMMW                                LR      LR
      comp=Z,12µm,22.0s
FRNY  Flat Rock           60.23 358 eP       P       02 47 53.8 +2.2
      comp=Z,46nm,1.3s
FRNY                                LR      LR
      comp=Z,9µm,21.0s
BRCO  Bruce Peninsul      60.27 352  P       P       02 47 51.5 -0.3
      baz=169
J45A  Montague            60.32 348  PFAKE           02 48 00.0 +7.8
J45A                                LR      LR
      comp=Z,9µm,21.0s
J45A  Montague            60.32 348  P       P       02 47 49.9 -2.3
      baz=164
CLWO  Collingwood         60.33 353  P       P       02 47 51.9 -0.4
      baz=170,SNR=22
HAL   Halifax             60.47   7 eP       P       02 47 52.0 -1.2
      comp=Z,71nm,1.4s
HAL                                 LR      LR
      comp=Z,5µm,20.0s
HAL   Halifax             60.47   7 eP       P       02 47 52.0 -1.2
HAL                                 pmax    pmax
      comp=Z,71nm,1.4s
HAL                                 MLR     MLR
      comp=Z,5µm,20.0s
H52A  Wyevale             60.47 353  P       P       02 47 52.9 -0.4
      baz=171,SNR=22
SADO  Sadowa              60.52 354  P       P       02 47 53.0 -0.5
      comp=Z,82nm,1.0s,baz=212,slow=2.2,SNR=50
SADO                                 S       S       02 56 05.7 -3.1
      comp=Z,0.7nm,0.3s,baz=91,slow=18,SNR=1.7
SADO  Sadowa              60.52 354 eP       P       02 47 53.2 -0.3
      comp=Z,328nm,1.4s
SADO                                eS       S       02 56 05.7 -3.1
SADO                                LR      LR
      comp=Z,7µm,21.0s
I47A  Gladwin             60.53 349 eP       P       02 47 53.9 +0.2
      comp=Z,46nm,1.1s
I47A                                LR      LR
      comp=Z,10µm,22.0s
I47A  Gladwin             60.53 349  P       P       02 47 52.2 -1.5
      baz=166
I48A  Sherman Twp         60.55 350  P       P       02 47 53.0 -0.7
      baz=167,SNR=14
BMRO  Meriville Lake      60.59 352  P       P       02 47 53.2 -0.8
      baz=170,SNR=12
TUC   Tucson              60.60 322 eP       P       02 47 55.1 +0.6
      comp=Z,28nm,1.4s
TUC                                 LR      LR
      comp=Z,7µm,19.0s
TUC   Tucson              60.60 322  P       P       02 47 54.2 -0.3
      baz=136
PLVO  Plevna              60.61 356 eP       P       02 47 54.5 +0.4
      comp=Z,84nm,1.3s
PLVO                                eS       S       02 56 09.8 -0.1
PLVO                                LR      LR
      comp=Z,6µm,20.0s
PLVO  Plevna              60.61 356  P       P       02 47 53.8 -0.3
      baz=174
SCIA  State Center        60.62 342 eP       P       02 47 54.7 +0.4
      comp=Z,71nm,1.4s
SCIA                                eS       S       02 56 04.6 -5.7
SCIA                                LR      LR
      comp=Z,3µm,20.0s
SCIA  State Center        60.62 342  P       P       02 47 52.2 -2.1
      baz=156
I46A  Reed City           60.63 349  P       P       02 47 52.2 -2.1
      baz=165
BANO  Bancroft            60.66 355  P       P       02 47 53.8 -0.7
      baz=173,SNR=18
GGN   Saint George        60.66   4 eP       P       02 47 53.2 -1.2
      comp=Z,74nm,1.4s
PKME  Peaks-Kenny Pk      60.68   2 eP       P       02 47 55.0 +0.4
      comp=Z,49nm,1.3s
PKME                                LR      LR
      comp=Z,7µm,22.0s
PKME  Peaks-Kenny Pk      60.68   2  P       P       02 47 54.1 -0.5
      baz=183
MOQ   Mont Orford         60.69 360 eP       P       02 47 56.2 +1.5
JFWS  Jewell Farm         60.72 344 eP       P       02 47 54.2 -0.7
      comp=Z,93nm,1.4s
JFWS                                LR      LR
      comp=Z,7µm,18.0s
JFWS  Jewell Farm         60.72 344 eP       P       02 47 54.3 -0.7
JFWS                                pmax    pmax
      comp=Z,93nm,1.4s
JFWS                                MLR     MLR
      comp=Z,7µm,18.0s
JFWS  Jewell Farm         60.72 344  P       P       02 47 53.9 -1.1
      baz=160,SNR=7.7
G55A  Calabogie           60.80 356  P       P       02 47 55.2 -0.2
      baz=174,SNR=25
G53A  Haliburton          60.82 354  P       P       02 47 55.4 -0.1
      baz=172,SNR=64
I45A  Fountain            60.87 348  PFAKE           02 48 10.0  +14
I45A                                LR      LR
      comp=Z,10µm,21.0s
I45A  Fountain            60.87 348  P       P       02 47 54.5 -1.5
      baz=164
T25A  Trinidad            60.87 330  PFAKE           02 48 10.0  +14
T25A                                LR      LR
      comp=Z,3µm,22.0s
T25A  Trinidad            60.87 330  P       P       02 47 56.4  0.0
      baz=144,SNR=27
ORIO  Orleans, Innes      60.92 357  P       P       02 47 55.9 -0.3
      baz=176,SNR=18
ORHO  Orleans, Herit      60.93 357  P       P       02 47 55.8 -0.5
      baz=176
H48A  Harrisville         60.99 351 eP       P       02 47 56.3 -0.5
      comp=Z,86nm,1.4s
H48A                                LR      LR
      comp=Z,10µm,22.0s
H48A  Harrisville         60.99 351  P       P       02 47 55.8 -1.0
      baz=167,SNR=5.3
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H47A  Mio                 61.04 350  P       P       02 47 56.1 -1.0
      baz=166
H46A  Fife Lake           61.16 349  P       P       02 47 56.3 -1.6
      baz=165,SNR=10
BUKO  Buck Lake           61.21 354  P       P       02 47 58.1 -0.1
      baz=172,SNR=60
KLBO  Killbear Provi      61.22 353  P       P       02 47 57.6 -0.7
      baz=171,SNR=34
TOBO  Tobermory, Bru      61.25 352  P       P       02 47 56.6 -1.8
      baz=169
PEMO  Pembroke            61.26 356  P       P       02 47 58.0 -0.6
      baz=174,SNR=7.6
I42A  Draeger Farm,       61.31 346 eP       P       02 47 58.2 -0.7
      comp=Z,100nm,1.3s
I42A                                LR      LR
      comp=Z,12µm,22.0s
I42A  Draeger Farm,       61.31 346  P       P       02 47 58.4 -0.6
      baz=161,SNR=14
GLMI  Grayling            61.33 350  PFAKE           02 48 10.0  +11
GLMI                                LR      LR
      comp=Z,9µm,22.0s
GLMI  Grayling            61.33 350  P       P       02 47 57.6 -1.5
      baz=166
F55A  Otter Lake          61.35 356  P       P       02 47 59.1 -0.1
      baz=175
H45A  Beulah              61.40 348  P       P       02 47 58.0 -1.5
      baz=164
GBN   Guysborough         61.49   8  PFAKE           02 48 10.0  +10
GBN                                 LR      LR
      comp=Z,10µm,22.0s
G47A  Hillman             61.54 350  P       P       02 47 59.5 -1.0
      baz=167,SNR=5.9
LMN   Caledonia Moun      61.55   6 eP       P       02 48 00.3 -0.2
      comp=Z,59nm,1.3s
LMN                                 LR      LR
      comp=Z,5µm,18.0s
F52A  Sundridge           61.55 354  P       P       02 48 00.1 -0.5
      baz=172,SNR=35
214A  Organ Pipe Nat      61.57 321  P       P       02 48 01.8 +0.8
      baz=134,SNR=11
KSCO  Kaye Shedlock'      61.58 333 eP       P       02 48 01.9 +0.8
      comp=Z,224nm,1.4s
KSCO                                LR      LR
      comp=Z,4µm,22.0s
KSCO  Kaye Shedlock'      61.58 333  P       P       02 48 01.2 +0.1
      baz=146,SNR=10
ALGO  Algonquin Park      61.59 355  P       P       02 48 00.6 -0.2
      baz=173,SNR=23
H43A  Windswept, Lux      61.60 347 eP       P       02 48 00.8 -0.1
      comp=Z,110nm,1.4s
H43A                                LR      LR
      comp=Z,8µm,20.0s
H43A  Windswept, Lux      61.60 347  P       P       02 47 59.4 -1.5
      baz=162
TRQ   Mont Tremblant      61.65 358 eP       P       02 48 01.4 +0.1
I41A  Arkdale             61.70 345 eP       P       02 48 01.1 -0.5
      comp=Z,55nm,1.3s
I41A                                LR      LR
      comp=Z,10µm,19.0s
I41A  Arkdale             61.70 345  P       P       02 48 00.7 -0.9
      baz=160
G45A  Suttons Bay         61.73 349  PFAKE           02 48 10.0 +8.3
G45A                                LR      LR
      comp=Z,10µm,21.0s
G45A  Suttons Bay         61.73 349  P       P       02 48 00.0 -1.7
      baz=165
X18A  Snowflake           61.73 325 eP       P       02 48 03.4 +1.1
      comp=Z,53nm,1.2s
X18A                                LR      LR
      comp=Z,8µm,22.0s
F51A  Arnstein            61.75 354  P       P       02 48 01.5 -0.3
      baz=171,SNR=18
BGNE  Belgrade            61.82 338 eP       P       02 48 02.0 -0.5
      comp=Z,251nm,1.2s
BGNE  Belgrade            61.82 338  P       P       02 48 02.0 -0.5
      baz=151,SNR=11
F49A  Sandfield           61.84 352  P       P       02 48 01.5 -1.0
      baz=169
G46A  Petoskey            61.85 350  P       P       02 48 00.8 -1.8
      baz=166,SNR=12
SDCO  Great Sand Dun      61.88 330 eP       P       02 48 03.7 +0.4
      comp=Z,112nm,1.3s
SDCO                                LR      LR
      comp=Z,3µm,20.0s
SDCO  Great Sand Dun      61.88 330  P       P       02 48 03.3  0.0
      baz=143,SNR=78
E52A  Mattawa             61.98 355  P       P       02 48 02.8 -0.6
      baz=172,SNR=28
E53A  Dumoine, Ponti      61.98 355  P       P       02 48 03.3 -0.1
      baz=174,SNR=21
F48A  Evansville          61.99 351  P       P       02 48 02.1 -1.4
      baz=168,SNR=12
E54A  Lac Daplat, Po      62.00 356  P       P       02 48 03.3 -0.2
      baz=174,SNR=22
W18A  Petrified Fore      62.05 325  PFAKE           02 48 20.0  +16
W18A                                LR      LR
      comp=Z,9µm,19.0s
W18A  Petrified Fore      62.05 325  P       P       02 48 05.4 +1.0
      baz=138
PQI   Presque Isle        62.14   3 eP       P       02 48 03.9 -0.5
      comp=Z,70nm,1.5s
PQI                                 LR      LR
      comp=Z,12µm,21.0s
E51A  G1948 Merrick       62.30 354  P       P       02 48 05.3 -0.2
      baz=172,SNR=34
F45A  CMU Biological      62.32 349  P       P       02 48 04.5 -1.2
      baz=165
E50A  Wahnapitae          62.33 353  P       P       02 48 05.0 -0.7
      baz=170,SNR=9.9
X16A  Lo Mia Camp, P      62.50 323 eP       P       02 48 08.3 +1.0
      comp=Z,34nm,1.0s
X16A                                LR      LR
      comp=Z,11µm,22.0s
S22A  4UR Ranch, Cre      62.53 329  PFAKE           02 48 20.0  +12
S22A                                LR      LR
      comp=Z,4µm,21.0s
S22A  4UR Ranch, Cre      62.53 329  P       P       02 48 08.0 +0.3
      baz=142,SNR=24
E48A  Lockeyer            62.57 352  P       P       02 48 06.4 -1.0
      baz=169
D52A  ZEK Kipawa Sen      62.64 355  P       P       02 48 08.0 +0.2
      baz=173,SNR=40
D54A  Lac Fusel, La       62.68 356  P       P       02 48 07.3 -0.8
      baz=175,SNR=21
D53A  Lac Vacive, Po      62.68 355 eP       P       02 48 08.1  0.0
      comp=Z,84nm,1.3s
D53A                                LR      LR
      comp=Z,7µm,18.0s
D53A  Lac Vacive, Po      62.68 355  P       P       02 48 07.3 -0.8
      baz=174,SNR=19
Q24A  Divide              62.69 331  PFAKE           02 48 20.0  +11
Q24A                                LR      LR
      comp=Z,5µm,22.0s
Q24A  Divide              62.69 331  P       P       02 48 08.5 -0.2
      baz=143,SNR=7.8
E47A  Iron Bridge         62.70 351  P       P       02 48 07.5 -0.7
      baz=168,SNR=8.4
LATQ  La Tuque            62.77 359  P       P       02 48 08.8 +0.2
      baz=179
E46A  Sault Ste Mari      62.77 350 eP       P       02 48 08.1 -0.6
      comp=Z,117nm,1.4s
E46A                                LR      LR
      comp=Z,13µm,22.0s
E46A  Sault Ste Mari      62.77 350  P       P       02 48 07.5 -1.2
      baz=166,SNR=15
D51A  Lot 18 Range I      62.84 354  P       P       02 48 08.9 -0.3
      baz=172
BATG  Bathurst New B      62.86   4 eP       P       02 48 10.0 +0.7
      comp=Z,60nm,1.4s
BATG                                LR      LR
      comp=Z,11µm,22.0s
F42A  Maple Grove Fa      62.91 347  P       P       02 48 09.0 -0.6
      baz=162
G40A  Rib Lake            62.92 345 eP       P       02 48 10.8 +1.1
      comp=Z,18nm,0.9s
G40A                                LR      LR
      comp=Z,12µm,21.0s
G40A  Rib Lake            62.92 345  P       P       02 48 08.4 -1.3
      baz=160,SNR=5.6
OGNE  Ogallala            62.94 335 eP       P       02 48 11.3 +1.2
      comp=Z,142nm,1.4s
OGNE                                LR      LR
      comp=Z,3µm,20.0s
OGNE  Ogallala            62.94 335  P       P       02 48 10.1  0.0
      baz=147
MVCO  Mesa Verde          62.96 328 eP       P       02 48 11.1 +0.6
      comp=Z,70nm,1.3s
MVCO                                LR      LR
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      comp=Z,7µm,22.0s
MVCO  Mesa Verde          62.96 328  P       P       02 48 09.9 -0.5
      baz=140,SNR=26
Y14A  Wickenburg          63.07 322 eP       P       02 48 12.1 +1.1
      comp=Z,64nm,1.5s
Y14A                                LR      LR
      comp=Z,5µm,20.0s
G39A  Holcombe            63.17 345  P       P       02 48 10.3 -1.1
      baz=159,SNR=6.8
D48A  Paudash Townsh      63.20 352  P       P       02 48 10.6 -1.0
      baz=169,SNR=7.2
D49A  Beulah Townshi      63.24 353  P       P       02 48 11.2 -0.6
      baz=170,SNR=6.4
D46A  Sault St. Mari      63.24 351  P       P       02 48 10.3 -1.5
      baz=167,SNR=6.1
WUAZ  Wupatki             63.25 324 eP       P       02 48 13.2 +0.8
      comp=Z,96nm,1.3s
WUAZ                                LR      LR
      comp=Z,9µm,22.0s
WUAZ  Wupatki             63.25 324  P       P       02 48 13.2 +0.8
      baz=137,SNR=18
D47A  Chapleau            63.26 351  P       P       02 48 11.1 -0.9
      baz=168,SNR=7.8
E43A  Lone Tree Farm      63.27 348 eP       P       02 48 11.0 -1.0
      comp=Z,36nm,1.0s
E43A                                LR      LR
      comp=Z,11µm,22.0s
E43A  Lone Tree Farm      63.27 348  P       P       02 48 10.8 -1.2
      baz=164,SNR=9.8
E44A  Grand Marais A      63.30 349 eP       P       02 48 13.8 +1.5
      comp=Z,109nm,1.4s
E44A                                LR      LR
      comp=Z,5µm,18.0s
E44A  Grand Marais A      63.30 349  P       P       02 48 11.0 -1.2
      baz=165
ECSD  EROS Data Cent      63.34 340 eP       P       02 48 12.2 -0.4
      comp=Z,159nm,1.3s
ECSD                                LR      LR
      comp=Z,4µm,21.0s
ECSD  EROS Data Cent      63.34 340  P       P       02 48 11.8 -0.8
      baz=153,SNR=37
COWI  Conover             63.45 347 eP       P       02 48 12.6 -0.7
      comp=Z,66nm,1.4s
COWI                                LR      LR
      comp=Z,6µm,21.0s
SPMN  Marine on St.       63.55 344 eP       P       02 48 13.2 -0.7
      comp=Z,38nm,1.0s
SPMN                                LR      LR
      comp=Z,7µm,19.0s
SPMN  Marine on St.       63.55 344  P       P       02 48 13.1 -0.7
      baz=157,SNR=8.7
GLA   Glamis              63.56 320 eP       P       02 48 12.7 -1.6
      comp=Z,47nm,1.4s
GLA                                 LR      LR
      comp=Z,5µm,22.0s
GLA   Glamis              63.56 320 eP       P       02 48 12.7 -1.6
GLA                                 pmax    pmax
      comp=Z,47nm,1.4s
GLA                                 MLR     MLR
      comp=Z,5µm,22.0s
GLA   Glamis              63.56 320  P       P       02 48 14.9 +0.5
      baz=133,SNR=5.7
ISCO  Idaho Springs       63.57 331 eP       P       02 48 14.8 +0.2
      comp=Z,46nm,1.4s
ISCO                                LR      LR
      comp=Z,3µm,20.0s
ISCO  Idaho Springs       63.57 331 eP       P       02 48 14.8 +0.2
ISCO                                pmax    pmax
      comp=Z,46nm,1.4s
ISCO                                MLR     MLR
      comp=Z,3µm,20.0s
ISCO  Idaho Springs       63.57 331  P       P       02 48 15.0 +0.4
      baz=143,SNR=21
VLDQ  Val d'Or            63.69 356 eP       P       02 48 15.4 +0.7
      comp=Z,69nm,1.3s
VLDQ                                LR      LR
      comp=Z,7µm,20.0s
PV01  Paradox Valley      63.70 328 eP       P       02 48 16.4 +1.0
      comp=Z,72nm,1.2s
PV02  Paradox Valley      63.84 328 eP       P       02 48 17.3 +1.0
      comp=Z,76nm,1.4s
PV02                                LR      LR
      comp=Z,6µm,19.0s
PV13  Radium Mtn., P      63.85 328 eP       P       02 48 17.2 +0.8
      comp=Z,82nm,1.4s
PV13                                LR      LR
      comp=Z,5µm,18.0s
Y12C  Blythe              63.85 321 eP       P       02 48 16.9 +0.7
      comp=Z,38nm,1.4s
Y12C                                LR      LR
      comp=Z,5µm,21.0s
Y12C  Blythe              63.85 321  P       P       02 48 16.7 +0.5
      baz=133,SNR=9.4
PV05  Paradox Valley      63.93 328 eP       P       02 48 18.5 +1.6
      comp=Z,56nm,1.3s
PV03  Paradox Valley      63.93 328 eP       P       02 48 17.5 +0.6
      comp=Z,45nm,1.2s
PV12  Saucer Basin,       63.96 328 eP       P       02 48 18.8 +1.8
      comp=Z,80nm,1.4s
PV18  Skein Mesa, Pa      63.96 328 eP       P       02 48 18.3 +1.2
      comp=Z,39nm,1.1s
PV07  Paradox Valley      63.97 328 eP       P       02 48 18.0 +0.9
      comp=Z,53nm,1.4s
PV11  David Mesa, Pa      63.98 328 eP       P       02 48 17.0 -0.1
      comp=Z,86nm,1.4s
PDMCI Parker Dam,Lak      64.00 322  P       P       02 48 17.3 +0.2
      baz=134,SNR=5.5
PV17  East Wray Mesa      64.01 328  PFAKE           02 48 30.0  +13
PV17                                LR      LR
      comp=Z,8µm,22.0s
PV16  Nyswonger Mesa      64.01 328 eP       P       02 48 19.7 +2.3
      comp=Z,52nm,1.3s
PV19  Morning Glory       64.05 328 eP       P       02 48 15.0 -2.6
      comp=Z,42nm,1.5s
PV20  West Nyswonger      64.06 328 eP       P       02 48 16.2 -1.5
      comp=Z,18nm,1.1s
PV04  Paradox Valley      64.07 328 eP       P       02 48 19.5 +1.8
      comp=Z,56nm,1.4s
PV04                                LR      LR
      comp=Z,10µm,22.0s
IKP   In-Ko-Pah, Jac      64.09 319  P       P       02 48 18.1 +0.2
      baz=132,SNR=7.0
SWSC  Sam W. Stewart      64.09 319  P       P       02 48 18.4 +0.6
      baz=132
PV14  Lion Creek, Pa      64.11 328  PFAKE           02 48 30.0  +12
PV14                                LR      LR
      comp=Z,8µm,18.0s
PV22  Blue Mesa, Par      64.12 328 eP       P       02 48 18.9 +0.8
      comp=Z,55nm,1.4s
PV10  Paradox Valley      64.12 328 eP       P       02 48 17.5 -0.7
      comp=Z,81nm,1.5s
PV23  Carpenter Ridg      64.17 328 eP       P       02 48 17.0 -1.5
      comp=Z,29nm,1.3s
PV23                                LR      LR
      comp=Z,8µm,21.0s
D41A  Chassel             64.24 347 eP       P       02 48 18.4  0.0
      comp=Z,50nm,0.9s
D41A                                LR      LR
      comp=Z,6µm,20.0s
D41A  Chassel             64.24 347  P       P       02 48 17.9 -0.5
      baz=162,SNR=9.8
PV09  Paradox Valley      64.27 328 eP       P       02 48 20.2 +1.1
BC3   Big Chuckawall      64.35 320  P       P       02 48 20.5 +0.9
      baz=132,SNR=8.1
W13A  Hualapai Mount      64.40 322 eP       P       02 48 21.4 +1.4
      comp=Z,26nm,1.2s
W13A                                LR      LR
      comp=Z,6µm,22.0s
U15A  North Rim           64.42 324 eP       P       02 48 21.4 +1.2
      comp=Z,40nm,1.1s
U15A                                LR      LR
      comp=Z,10µm,22.0s
MONP2 Monument Peak       64.45 319  P       P       02 48 21.4 +1.0
      baz=132,SNR=6.4
BAR   Barrett             64.47 319 eP       P       02 48 22.6 +2.3
      comp=Z,44nm,1.3s
BAR                                 LR      LR
      comp=Z,3µm,20.0s
E38A  The Farm, Brul      64.50 345 eP       P       02 48 19.8 -0.3
      comp=Z,58nm,1.3s
E38A                                LR      LR
      comp=Z,11µm,22.0s
E38A  The Farm, Brul      64.50 345  P       P       02 48 19.5 -0.6
      baz=159,SNR=8.5
IRM   Iron Mountain       64.50 321  P       P       02 48 21.4 +0.9
      baz=133,SNR=9.3
N23A  Red Feather La      64.60 332  PFAKE           02 48 30.0 +8.8
N23A                                LR      LR
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	comp=Z,5µm,22.0s						
N23A	Red Feather La	64.60	332	P	P	02 48 21.9	+0.7
	baz=143,SNR=13						
LSQQ	Lebel-sur-Quev	64.60	356	P	P	02 48 20.5	-0.3
	baz=174						
PHWY	Pilot Hill	64.70	332	PFAKE		02 48 30.0	+8.0
PHWY				LR	LR		
	comp=Z,2µm,22.0s						
SUSD	Miller	64.76	339	P	P	02 48 21.1	-0.8
	baz=151						
109C	Camp Elliot, M	64.88	319	P	P	02 48 23.3	+0.4
	baz=131						
CPE	Camp Elliot	64.88	319	*e*P	P	02 48 22.0	-0.9
	comp=Z,32nm,1.1s						
CPE				LR	LR		
	comp=Z,3µm,21.0s						
BELC	Belle Mtn. Jos	64.92	320	P	P	02 48 24.1	+0.8
	baz=132,SNR=9.6						
PFO	Pinyon Flats O	64.95	320	P	P	02 48 23.5	0.0
	comp=Z,3.2nm,0.4s,baz=132,slow=7.8,SNR=16						
PFO	Pinyon Flats O	64.95	320	*e*P	P	02 48 23.8	+0.3
	comp=Z,46nm,1.4s						
PFO				LR	LR		
	comp=Z,4µm,21.0s						
PFO	Pinyon Flats O	64.95	320	*e*P	P	02 48 23.8	+0.3
PFO				pmax	pmax		
	comp=Z,46nm,1.4s						
PFO				MLR	MLR		
	comp=Z,4µm,21.0s						
PFO	Pinyon Flats O	64.95	320	P	P	02 48 24.6	+1.1
	baz=132,SNR=7.2						
O20A	White River Ci	65.08	330	*e*P	P	02 48 25.2	+0.9
	comp=Z,93nm,1.4s						
O20A				LR	LR		
	comp=Z,5µm,20.0s						
O20A	White River Ci	65.08	330	P	P	02 48 24.6	+0.3
	baz=141,SNR=24						
LDFC	Landfair	65.11	322	*e*P	P	02 48 26.9	+2.4
	comp=Z,36nm,1.0s						
LDFC				LR	LR		
	comp=Z,3µm,19.0s						
KNB	Kanab	65.14	325	*e*P	P	02 48 26.1	+1.3
	comp=Z,62nm,1.1s						
KNB	Kanab	65.14	325	*e*P	P	02 48 26.1	+1.3
KNB				pmax	pmax		
	comp=Z,62nm,1.1s						
PKCU	Pink Cliffs	65.17	325	*e*P	P	02 48 26.6	+1.5
	comp=Z,92nm,1.3s						
C40A	Isle Royale Na	65.18	347	*e*P	P	02 48 24.5	0.0
	comp=Z,149nm,1.5s						
C40A				LR	LR		
	comp=Z,6µm,21.0s						
C40A	Isle Royale Na	65.18	347	P	P	02 48 24.0	-0.5
	baz=162,SNR=6.7						
GMRC	Granite Mounta	65.24	321	P	P	02 48 26.1	+0.7
	baz=133,SNR=17						
CHGQ	Chibougamau	65.33	358	P	P	02 48 25.1	-0.3
	baz=177,SNR=17						
MATQ	Matagami	65.34	356	P	P	02 48 24.7	-0.9
	baz=174,SNR=17						
LCMT	Little Creek M	65.38	324	*e*P	P	02 48 27.6	+1.4
	comp=Z,26nm,1.1s						
MURC	Murrieta	65.40	319	P	P	02 48 27.1	+0.8
	baz=131						
SRU	San Rafael Swe	65.44	328	*e*P	P	02 48 27.4	+0.7
	comp=Z,38nm,1.1s						
SRU	San Rafael Swe	65.44	328	*e*P	P	02 48 27.4	+0.7
SRU				pmax	pmax		
	comp=Z,38nm,1.1s						
MTPU	Mount Pierson	65.53	326	*e*P	P	02 48 28.3	+0.8
	comp=Z,17nm,0.9s						
Q16A	Castle Valley	65.63	327	*e*P	P	02 48 28.2	+0.3
	comp=Z,28nm,1.0s						
BBRC	Big Bear Solar	65.67	320	P	P	02 48 29.5	+1.2
	baz=132						
HEC	Hector,Ludlow	65.68	321	P	P	02 48 29.2	+1.0
	baz=132,SNR=7.3						
SZCU	Shurtz Canyon	65.70	325	*e*P	P	02 48 29.9	+1.5
	comp=Z,44nm,1.3s						
EYMN	Ely	65.74	346	*e*P	P	02 48 27.3	-0.9
	comp=Z,146nm,1.5s						
EYMN				LR	LR		
	comp=Z,9µm,22.0s						
EYMN	Ely	65.74	346	P	P	02 48 27.0	-1.2
	baz=159,SNR=13						
RWWY	Rawlins	65.81	332	PFAKE		02 48 40.0	+11
RWWY				LR	LR		
	comp=Z,6µm,21.0s						
P17A	Butcher Ranch,	65.82	328	*e*P	P	02 48 30.1	+1.0
	comp=Z,45nm,1.0s						
CCUT	Cedar City	65.83	325	*e*P	P	02 48 30.7	+1.5
	comp=Z,83nm,1.3s						
TUQ	Turquoise Moun	65.84	321	P	P	02 48 30.0	+0.7
	baz=133,SNR=13						
DRLN	Deer Lake	65.86	10	*e*P	P	02 48 28.9	0.0
	comp=Z,126nm,1.1s						
SCI2	San Clemente I	65.87	318	P	P	02 48 29.4	+0.1
	baz=130						
MSU	Marysvale	65.87	326	*e*P	P	02 48 30.4	+0.9
MSU	Marysvale	65.87	326	*e*P	P	02 48 30.4	+0.9
TMUT	Trail Mountain	65.93	327	*e*P	P	02 48 30.9	+0.9
	comp=Z,26nm,1.1s						
CIS	Catalina Islan	66.05	318	P	P	02 48 30.6	+0.1
	baz=130						
BFSC	Mount Baldy Ra	66.11	319	P	P	02 48 31.9	+0.9
	baz=131,SNR=6.0						
SHPR	Sheep Range	66.12	323	*e*P	P	02 48 32.3	+1.2
	comp=Z,24nm,1.1s						
SHPR				LR	LR		
	comp=Z,4µm,21.0s						
RRX	Edison Barstow	66.12	320	P	P	02 48 31.4	+0.4
	baz=132						
FMP	Fort Macarthur	66.17	319	P	P	02 48 31.4	+0.2
	baz=130						
K22A	Casper	66.26	333	*e*P	P	02 48 32.6	+0.8
	comp=Z,74nm,1.3s						
K22A				LR	LR		
	comp=Z,4µm,20.0s						
K22A	Casper	66.26	333	P	P	02 48 31.8	0.0
	baz=143,SNR=14						
GSC	Goldstone, Bar	66.28	321	*e*P	P	02 48 33.5	+1.4
	comp=Z,37nm,1.4s						
GSC				LR	LR		
	comp=Z,6µm,22.0s						
GSC	Goldstone, Bar	66.28	321	P	P	02 48 33.2	+1.1
	baz=132,SNR=11						
MWC	Mount Wilson	66.35	319	*e*P	P	02 48 33.3	+0.7
	comp=Z,63nm,1.5s						
MWC				LR	LR		
	comp=Z,2µm,20.0s						
MWC	Mount Wilson	66.35	319	*e*P	P	02 48 33.3	+0.7
MWC				pmax	pmax		
	comp=Z,63nm,1.5s						
MWC				MLR	MLR		
	comp=Z,2µm,20.0s						
SHOC	Shoshone, Teco	66.36	322	P	P	02 48 33.2	+0.8
	baz=133,SNR=6.7						
PASC	Pasadena Art C	66.40	319	*e*P	P	02 48 32.7	0.0
	comp=Z,64nm,1.5s						
PASC				LR	LR		
	comp=Z,3µm,19.0s						
RSSD	Black Hills	66.40	335	*e*P	P	02 48 33.6	+0.8
	comp=Z,36nm,1.1s						
RSSD	Black Hills	66.40	335	*e*P	P	02 48 33.6	+0.8
RSSD				pmax	pmax		
	comp=Z,36nm,1.1s						
RSSD	Black Hills	66.40	335	P	P	02 48 32.4	-0.3
	baz=146						
VNA3	Neumayer Olymp	66.43	162	P	P	02 48 35.5	+3.1
DECC	Green Verdugo	66.55	319	P	P	02 48 34.9	+1.2
	baz=130						
VNA1	Neumayer--Stat	66.65	161	P	P	02 48 37.5	+3.8
SNCC	San Nicolas Is	66.67	317	PFAKE		02 48 50.0	+16
SNCC				LR	LR		
	comp=Z,2µm,19.0s						
SNCC	San Nicolas Is	66.67	317	P	P	02 48 34.2	-0.3
	baz=129						
MPU	Maple Canyon	66.68	328	*e*P	P	02 48 36.4	+1.7
	comp=Z,42nm,1.2s						
EDW2	Edwards Air Fo	66.74	320	P	P	02 48 35.4	+0.4
	baz=131,SNR=5.5						
PSUT	Pine Spring	66.80	325	*e*P	P	02 48 36.9	+1.4
	comp=Z,40nm,1.0s						
NLU	North Lily Min	66.87	327	*e*P	P	02 48 34.5	-1.4
	comp=Z,54nm,1.3s						
BLG	Laguna Peak, P	66.92	318	P	P	02 48 36.4	+0.4
	baz=130						
LRMC	Laurel Mtn Rad	66.94	320	P	P	02 48 36.6	+0.3
	baz=131						
OSI	Osito Audit: C	67.02	319	PFAKE		02 48 50.0	+13
OSI				LR	LR		
	comp=Z,3µm,22.0s						
OSI	Osito Audit: C	67.02	319	P	P	02 48 37.1	+0.3
	baz=130						
JLU	Jordanelle	67.03	328	*e*P	P	02 48 37.7	+0.8
	comp=Z,61nm,1.2s						
TPNV	Topopah Spring	67.06	322	*e*P	P	02 48 38.8	+1.7
	comp=Z,78nm,1.2s						
TPNV				LR	LR		
	comp=Z,4µm,19.0s						
TPNV	Topopah Spring	67.06	322	*e*P	P	02 48 38.8	+1.7
TPNV				pmax	pmax		
	comp=Z,79nm,1.2s						
TPNV				MLR	MLR		
	comp=Z,4µm,19.0s						
TPNV	Topopah Spring	67.06	322	P	P	02 48 38.3	+1.2
	baz=133,SNR=23						
FURC	Furnace Creek,	67.10	322	P	P	02 48 38.4	+1.3
	baz=132,SNR=8.2						
MPMC	Manual Prospec	67.20	321	P	P	02 48 38.7	+0.6
	baz=132,SNR=19						
AGMN	Agassiz Nation	67.21	343	*e*P	P	02 48 37.6	+0.1
	comp=Z,48nm,1.0s						
AGMN	Agassiz Nation	67.21	343	P	P	02 48 37.2	-0.3
	baz=155,SNR=16						
SCZ2	Santa Cruz Isl	67.21	318	P	P	02 48 38.7	+0.8
	baz=129						
CTU	Camp Tracy	67.25	328	*e*P	P	02 48 39.6	+1.4
	comp=Z,19nm,1.0s						
TCUT	Toone Canyon	67.39	329	*e*P	P	02 48 40.3	+1.1
	comp=Z,71nm,1.0s						
DAC	Darwin (Calif)	67.41	321	*e*P	P	02 48 38.9	-0.4
DAC				LR	LR		
	comp=Z,5µm,22.0s						
DAC	Darwin (Calif)	67.41	321	*e*P	P	02 48 38.9	-0.4
DAC				MLR	MLR		
	comp=Z,5µm,22.0s						
ARVC	Arvin	67.42	319	P	P	02 48 40.1	+0.9
	baz=130						
DUG	Dugway, Tooele	67.43	327	*e*P	P	02 48 40.2	+0.9
	comp=Z,69nm,1.3s						
DUG				LR	LR		
	comp=Z,4µm,18.0s						
DUG	Dugway, Tooele	67.43	327	*e*P	P	02 48 40.2	+0.9
DUG				pmax	pmax		
	comp=Z,69nm,1.3s						
DUG				MLR	MLR		
	comp=Z,4µm,18.0s						
DUG	Dugway, Tooele	67.43	327	P	P	02 48 39.9	+0.6
	baz=137,SNR=29						
SBC	Santa Barbara	67.54	318	P	P	02 48 41.2	+1.3
	baz=129						
ISA	Isabella, Lake	67.55	320	*e*P	P	02 48 41.7	+1.6
	comp=Z,44nm,1.3s						
ISA				LR	LR		
	comp=Z,6µm,22.0s						
ISA	Isabella, Lake	67.55	320	*e*P	P	02 48 41.7	+1.6
ISA				pmax	pmax		
	comp=Z,44nm,1.3s						
ISA				MLR	MLR		
	comp=Z,6µm,22.0s						
ISA	Isabella, Lake	67.55	320	P	P	02 48 40.7	+0.6
	baz=131,SNR=8.5						
R11A	Troy Canyon, C	67.64	324	*e*P	P	02 48 41.9	+1.1
	comp=Z,40nm,1.3s						
R11A				LR	LR		
	comp=Z,8µm,21.0s						
R11A	Troy Canyon, C	67.64	324	P	P	02 48 41.6	+0.9
	baz=134,SNR=47						
ROSA	Rosais	67.70	36	PFAKE		02 48 50.0	+9.1
ROSA				LR	LR		
	comp=Z,16µm,22.0s						
BW06	Boulder Array	67.74	331	*e*P	P	02 48 42.2	+0.9
	comp=Z,62nm,1.5s						
BW06				LR	LR		
	comp=Z,4µm,18.0s						
BW06	Boulder Array	67.74	331	P	P	02 48 41.0	-0.3
	baz=140						
PD31	Pinedale Array	67.74	331	*e*P	P	02 48 40.2	-1.1
PD31				*e*PP	PP	02 51 11.4	+0.5
PDAR	Pinedale Array	67.74	331	P	P	02 48 40.2	-1.1
	comp=Z,2.0nm,0.8s,baz=124,slow=5.9,SNR=12						
PDAR				PP	PP	02 51 11.4	+0.5
	comp=Z,0.7nm,0.4s,baz=122,slow=20,SNR=3.7						
GRAC	Grapevine Rang	67.75	322	P	P	02 48 42.4	+1.1
	baz=132						
CWC	Cottonwood Cre	67.81	321	P	P	02 48 42.6	+0.7
	baz=131						
HWUT	Hardware Ranch	67.83	329	*e*P	P	02 48 41.9	0.0
	comp=Z,59nm,1.3s						
HWUT				LR	LR		
	comp=Z,6µm,20.0s						
PKM	Mcpherson Peak	67.89	319	P	P	02 48 43.4	+1.0
	baz=129						
MDND	Maddock	67.95	340	*e*P	P	02 48 40.8	-1.5
	comp=Z,437nm,1.4s						
MDND	Maddock	67.95	340	P	P	02 48 42.7	+0.4
	baz=151,SNR=16						
VES	Vestal, Richgr	68.04	320	P	P	02 48 43.6	+0.5
	baz=130,SNR=7.3						
BGU	Big Grassy Mou	68.08	327	*e*P	P	02 48 43.5	+0.1
	comp=Z,41nm,1.3s						
SMMC	Simmler	68.27	319	P	P	02 48 45.6	+1.0
	baz=129						
TIN	Tinemaha, Big	68.31	321	P	P	02 48 45.9	+1.0
	baz=131						
AHID	Auburn Hatcher	68.47	330	PFAKE		02 49 00.0	+14
AHID				LR	LR		
	comp=Z,3µm,20.0s						
VOG	Valley Oaks Go	68.53	320	P	P	02 48 46.2	+0.1
	baz=130						
HVU	Hansel Valley	68.57	328	*e*P	P	02 48 48.4	+1.9
	comp=Z,26nm,0.9s						
CMLA	Cha da Macela	68.62	38	PFAKE		02 49 00.0	+13
CMLA				LR	LR		
	comp=Z,16µm,22.0s						
SNAA	Sanae	68.64	162	P	P	02 48 48.7	+2.2
SNAA	Sanae	68.64	162	*e*P	P	02 48 46.8	+0.3
	comp=Z,130nm,1.2s						
SNAA				LR	LR		
	comp=Z,9µm,22.0s						
SNAA	Sanae	68.64	162*c*	*i*P	P	02 48 48.6	+2.2
PAGB	Antelope Grade	68.70	319	*e*P	P	02 48 47.0	-0.2
	comp=Z,65nm,1.4s						
PAGB				LR	LR		
	comp=Z,4µm,20.0s						
SNOW	Snow King Moun	68.83	331	PFAKE		02 49 00.0	+12
SNOW				LR	LR		
	comp=Z,5µm,21.0s						
LOHW	Long Hollow	68.88	331	PFAKE		02 49 00.0	+12
LOHW				LR	LR		
	comp=Z,4µm,19.0s						
TPAW	Teton Pass	68.95	330	PFAKE		02 49 00.0	+11
TPAW				LR	LR		
	comp=Z,4µm,18.0s						
ULM	Lac du Bonnet	68.98	344	P	P	02 48 47.5	-1.2
	comp=Z,26nm,1.0s,baz=154,slow=6.0,SNR=18						
ULM				S	S	02 57 50.5	-2.5
	comp=Z,1.3nm,0.4s,baz=260,slow=6.1,SNR=1.5						
ULM				LR	LR	03 21 30.9	
	comp=Z,4µm,19.7s,baz=147,slow=38						
ULM	Lac du Bonnet	68.98	344	*e*P	P	02 48 48.0	-0.7
	comp=Z,114nm,1.4s						
ULM	Lac du Bonnet	68.98	344	*e*P	P	02 48 48.0	-0.7
ULM				pmax	pmax		
	comp=Z,114nm,1.4s						
MOOW	Moose Ponds	69.05	331	PFAKE		02 49 00.0	+11
MOOW				LR	LR		
	comp=Z,5µm,22.0s						
MLAC	Mammoth, Mammo	69.05	321	P	P	02 48 50.7	+1.1
	baz=131						
ELK	Elko	69.11	326	P	P	02 48 49.3	-0.7
	comp=Z,5.2nm,1.0s,baz=132,slow=6.0,SNR=26						
ELK				PP	PP	02 51 21.5	-1.5
	comp=Z,1.1nm,0.8s,baz=157,slow=7.7,SNR=1.7						
ELK	Elko	69.11	326	*e*P	P	02 48 50.9	+0.9
	comp=Z,16nm,1.0s						
ELK				LR	LR		
	comp=Z,7µm,22.0s						
ELK	Elko	69.11	326	*e*P	P	02 48 50.9	+0.9
ELK				pmax	pmax		
	comp=Z,16nm,1.0s						
ELK				MLR	MLR		
	comp=Z,7µm,22.0s						
OMMB	Old Mammoth Mi	69.14	321	*e*P	P	02 48 51.6	+1.3
	comp=Z,57nm,1.3s						
OMMB				LR	LR		
	comp=Z,5µm,22.0s						
NV11	Mina Array Sit	69.17	323	*e*P	P	02 48 51.6	+1.3
	comp=Z,0.7nm,1.1s						
NV11				LR	LR		
	comp=Z,300nm,20.0s						
MDPB	Devils Postpil	69.20	321	*e*P	P	02 48 52.0	+1.4
	comp=Z,18nm,1.0s						
MDPB				LR	LR		
	comp=Z,3µm,21.0s						
IMW	Indian Meadow	69.25	331	PFAKE		02 49 00.0	+9.2
IMW				LR	LR		
	comp=Z,4µm,20.0s						
NV01	Mina Array Sit	69.26	322	*e*P	P	02 48 51.3	+0.4
NV01				*e*PP	PP	02 51 21.9	-2.4
NVAR	Mina Array Bea	69.26	322	P	P	02 48 51.3	+0.4
	comp=Z,4.9nm,0.8s,baz=142,slow=5.9,SNR=16						
NVAR				PP	PP	02 51 21.9	-2.4
	comp=Z,0.2nm,0.3s,baz=106,slow=6.7,SNR=3.2						
NVAR				S	S	02 57 57.5	+0.3
	comp=Z,0.1nm,0.4s,baz=171,slow=28,SNR=2.0						
FLWY	Flagg Ranch	69.28	331	PFAKE		02 49 00.0	+9.1
FLWY				LR	LR		
	comp=Z,5µm,22.0s						
LAO	LASA Array	69.39	335	*e*P	P	02 48 52.2	+0.9
	comp=Z,88nm,1.4s						
LAO	LASA Array	69.39	335	P	P	02 48 51.8	+0.4
	baz=144,SNR=9.5						
RLMT	Red Lodge	69.43	333	*e*P	P	02 48 52.3	+0.4
	comp=Z,66nm,1.4s						
RLMT	Red Lodge	69.43	333	P	P	02 48 52.1	+0.2
	baz=141,SNR=27						
H17A	Grant Village	69.46	331	*e*P	P	02 48 52.5	+0.4
	comp=Z,55nm,1.4s						
H17A				LR	LR		
	comp=Z,6µm,20.0s						
H17A	Grant Village	69.46	331	P	P	02 48 52.4	+0.4
	baz=140						
YPP	Pitchstone Pla	69.47	331	*e*P	P	02 48 52.6	+0.4
	comp=Z,26nm,1.2s						
LKWY	Lake	69.51	332	*e*P	P	02 48 52.7	+0.3
	comp=Z,72nm,1.0s						
LKWY				LR	LR		
	comp=Z,5µm,19.0s						
LKWY	Lake	69.51	332	*e*P	P	02 48 52.7	+0.3
LKWY				pmax	pmax		
	comp=Z,72nm,1.0s						
LKWY				MLR	MLR		
	comp=Z,5µm,19.0s						
RYN	Ryan	69.52	322	*e*P	P	02 48 54.8	+2.3
	comp=Z,18nm,1.1s						
LIC	Lamto	69.53	77	*e*P	P	02 48 53.0	+0.1
	comp=Z,223nm,1.7s						
KVN	Kaiserville	69.55	323	*e*P	P	02 48 53.3	+0.6
	comp=Z,19nm,1.1s						
KVN	Kaiserville	69.55	323	*e*P	P	02 48 53.3	+0.6
KVN				pmax	pmax		
	comp=Z,19nm,1.1s						
YFT	Old Faithful	69.62	331	*e*P	P	02 48 52.0	-1.1
TIC	Toumodi	69.68	77	*e*P	P	02 48 53.8	0.0
YNR	Norris Junctio	69.75	331	*e*P	P	02 48 52.7	-1.1
	comp=Z,30nm,1.1s						
DBIC	Dimbokro	69.84	77	P	P	02 48 53.7	-1.1
	comp=Z,52nm,1.0s,baz=230,slow=6.9,SNR=18						
DBIC				S	S	02 57 58.7	-5.8
	comp=Z,5.7nm,1.1s,baz=202,slow=16,SNR=1.8						
DBIC				LR	LR	03 18 05.7	
	comp=Z,11µm,19.9s,baz=224,slow=35						
DBIC	Dimbokro	69.84	77	*e*P	P	02 48 55.2	+0.5
	comp=Z,98nm,1.3s						
KIC	Kosan Boka	69.85	77	*e*P	P	02 48 55.1	+0.3
	comp=Z,198nm,1.2s						
YMR	Madison River	69.85	331	*e*P	P	02 48 56.7	+2.3
	comp=Z,129nm,1.4s						
YHH	Holmes Hill	69.89	331	*e*P	P	02 48 55.9	+1.2
	comp=Z,74nm,1.4s						
WAKR	Walker	69.98	322	*e*P	P	02 48 57.2	+1.8
	comp=Z,27nm,1.2s						
WAKR				LR	LR		
	comp=Z,4µm,22.0s						
BMN	Battle Mountai	69.98	325	PFAKE		02 49 10.0	+15
BMN				LR	LR		
	comp=Z,6µm,20.0s						
YHB	Horse Butte	70.02	331	*e*P	P	02 48 57.1	+1.7
	comp=Z,33nm,0.9s						
DGMT	Dagmar	70.08	338	*e*P	P	02 48 56.9	+1.4
	comp=Z,178nm,1.4s						
DGMT				LR	LR		
	comp=Z,3µm,21.0s						
DGMT	Dagmar	70.08	338	P	P	02 48 56.4	+0.9
	baz=147,SNR=10						
SAO	San Andreas Ge	70.10	319	*e*P	P	02 48 53.9	-2.0
	comp=Z,38nm,1.5s						
SAO				LR	LR		
	comp=Z,3µm,22.0s						
SAO	San Andreas Ge	70.10	319	*e*P	P	02 48 53.9	-2.0
SAO				pmax	pmax		
	comp=Z,38nm,1.5s						
SAO				MLR	MLR		
	comp=Z,3µm,22.0s						
GCMT	Greycliff	70.12	333	*e*P	P	02 48 56.6	+0.6
YERR	Yerington	70.18	322	*e*P	P	02 48 56.0	-0.6
	comp=Z,55nm,1.2s						
QLMT	Earthquake Lak	70.19	331	*e*P	P	02 48 55.7	-0.8
CMB	Columbia Colle	70.25	321	*e*P	P	02 48 57.9	+1.1
	comp=Z,14nm,1.2s						
CMB	Columbia Colle	70.25	321	*e*P	P	02 48 57.9	+1.1
CMB				pmax	pmax		
	comp=Z,14nm,1.2s						
SCHQ	Schefferville	70.34	3	P	P	02 48 55.2	-1.7
	comp=Z,3.6nm,0.6s,baz=202,slow=5.3,SNR=2.7						
SCHQ				S	S	02 58 00.9	-7.9
	comp=Z,2.9nm,0.5s,baz=210,slow=14,SNR=2.6						
SCHQ				LR	LR	03 21 50.0	
	comp=Z,5µm,19.6s,baz=194,slow=38						
PNTR	Pine Nut	70.46	322	*e*P	P	02 49 00.2	+1.9
	comp=Z,50nm,1.1s						
VCNR	Virginia City	70.62	322	*e*P	P	02 49 01.1	+1.8
	comp=Z,39nm,1.2s						
HLID	Hailey	70.69	329	*e*P	P	02 49 00.5	+0.9
	comp=Z,46nm,1.4s						
HLID				LR	LR		
	comp=Z,5µm,19.0s						
HLID	Hailey	70.69	329	P	P	02 49 00.3	+0.7
	baz=136,SNR=24						
PAHR	Pah Rah Range	70.73	323	*e*P	P	02 49 01.6	+1.7
	comp=Z,63nm,1.1s						
PAHR				LR	LR		
	comp=Z,3µm,21.0s						
RUBR	Rubicon Trail	70.76	322	PFAKE		02 49 10.0	+10
RUBR				LR	LR		
	comp=Z,4µm,22.0s						
MCMT	McKenzie Canyo	70.85	330	*e*P	P	02 49 01.6	+0.9
BOZ	Bozeman (W)	70.86	332	*e*P	P	02 49 01.0	+0.5
	comp=Z,51nm,1.4s						
BOZ				LR	LR		
	comp=Z,5µm,18.0s						
BOZ	Bozeman (W)	70.86	332	*e*P	P	02 49 01.0	+0.5
BOZ				pmax	pmax		
	comp=Z,51nm,1.4s						
BOZ				MLR	MLR		
	comp=Z,5µm,18.0s						
BOZ	Bozeman (W)	70.86	332	P	P	02 49 00.9	+0.5
	baz=139,SNR=26						
PMOZ	Porto Moniz, M	70.99	47	*e*P	P	02 49 02.1	+0.6
PMOZ				*e*S	S	02 58 21.7	+4.2
PMOZ	Porto Moniz, M	70.99	47	*e*LR	LR	03 11 32.8	
	comp=Z,7µm,20.0s						
FUL	Funchal	71.11	47	*e*P	P	02 49 03.2	+1.1
DLMT	Dillon	71.13	331	PFAKE		02 49 10.0	+7.8
DLMT				LR	LR		
	comp=Z,4µm,21.0s						
AFDM	Forest Hills D	71.18	321	*e*P	P	02 49 03.7	+1.2
	comp=Z,27nm,1.3s						
MFID	Camas Ranch	71.31	328	*e*P	P	02 49 04.2	+0.9
	comp=Z,104nm,1.3s						
MFID				LR	LR		
	comp=Z,5µm,22.0s						
BEKR	Beckworth	71.41	322	*e*P	P	02 49 05.1	+1.1
	comp=Z,26nm,1.1s						
BEKR				LR	LR		
	comp=Z,4µm,22.0s						
PMPS	Porto Santo	71.73	47	*e*P	P	02 49 06.8	+1.0
	comp=Z,95nm,1.6s						
PMPST	Porto Santo, M	71.74	47	*e*P	P	02 49 08.0	+2.1
	comp=Z,101nm,1.7s						

HRY	Holter Researc	71.79	332	*e*P	P	02 49 08.1	+2.0
ORV	Oroville	71.88	322	*e*P	P	02 49 08.5	+1.8
	comp=Z,63nm,1.2s						
EGMT	Eagleton	71.90	334	*e*P	P	02 49 07.3	+0.7
	comp=Z,69nm,1.3s						
EGMT				LR	LR		
	comp=Z,5µm,21.0s						
EGMT	Eagleton	71.90	334	P	P	02 49 06.9	+0.2
	baz=142						
WVOR	Wild Horse Val	72.12	325	*e*P	P	02 49 06.7	-1.5
	comp=Z,49nm,1.5s						
WVOR				LR	LR		
	comp=Z,6µm,20.0s						
WVOR	Wild Horse Val	72.12	325	*e*P	P	02 49 06.7	-1.5
WVOR				pmax	pmax		
	comp=Z,49nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,6µm,20.0s						
GDXM	Geysers	72.20	320	*e*P	P	02 49 10.7	+2.0
	comp=Z,16nm,1.1s						
HOPS	Hopland Field	72.49	320	*e*P	P	02 49 09.4	-0.9
	comp=Z,50nm,1.4s						
O03E	Paynes Creek	72.53	322	P	P	02 49 10.4	-0.2
	baz=129,SNR=6.7						
PLID	Pearl Lake	72.58	329	PFAKE		02 49 20.0	+9.0
PLID				LR	LR		
	comp=Z,5µm,20.0s						
J08A	Circle Bar Ran	72.66	326	*e*P	P	02 49 13.2	+1.9
	comp=Z,18nm,1.1s						
J08A				LR	LR		
	comp=Z,7µm,22.0s						
MOD	Modoc Plateau	72.70	324	*e*P	P	02 49 12.6	+0.9
	comp=Z,46nm,1.2s						
MOD				LR	LR		
	comp=Z,6µm,19.0s						
MSO	Missoula	72.85	331	*e*P	P	02 49 13.7	+1.3
	comp=Z,96nm,1.4s						
MSO				LR	LR		
	comp=Z,5µm,18.0s						
MSO	Missoula	72.85	331	P	P	02 49 13.5	+1.1
	baz=138,SNR=26						
TBI	Tubuai	72.89	250	*e*S	S	02 58 34.4	-5.2
	comp=Z,9µm,28.2s						
TBI				*e*LQ	LQ	03 08 24.2	
	comp=Z,5µm,33.8s						
TBI				*e*LR	LR	03 11 31.8	
	comp=Z,13µm,31.0s,baz=96						
O02D	Mt. Diablo Mer	73.05	321	P	P	02 49 13.4	-0.3
	baz=129						
BMO	Blue Mountains	73.08	328	*e*P	P	02 49 14.4	+0.7
	comp=Z,13nm,0.9s						
BMO				LR	LR		
	comp=Z,3µm,21.0s						
BMO	Blue Mountains	73.08	328	*e*P	P	02 49 14.4	+0.7
BMO				pmax	pmax		
	comp=Z,13nm,0.9s						
BMO				MLR	MLR		
	comp=Z,3µm,21.0s						
WDC	Whiskeytown Da	73.15	322	*e*P	P	02 49 15.6	+1.4
	comp=Z,8.5nm,0.9s						
WDC				LR	LR		
	comp=Z,3µm,22.0s						
WDC	Whiskeytown Da	73.15	322	*e*P	P	02 49 15.6	+1.4
WDC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WDC				MLR	MLR		
	comp=Z,3µm,22.0s						
N02D	Trinity Center	73.49	322	P	P	02 49 16.1	-0.2
	baz=129						
M04C	Macdoel	73.50	323	P	P	02 49 17.2	+0.8
	baz=130,SNR=5.0						
KMRM	Mail Ridge	73.63	321	PFAKE		02 49 30.0	+13
KMRM				LR	LR		
	comp=Z,4µm,22.0s						
JTMT	Jette	73.68	332	PFAKE		02 49 30.0	+13
JTMT				LR	LR		
	comp=Z,4µm,19.0s						
I07A	Izee	73.70	326	*e*P	P	02 49 17.5	0.0
	comp=Z,31nm,1.4s						
I07A				LR	LR		
	comp=Z,6µm,19.0s						
F10A	Beach Ranch, E	73.82	329	*e*P	P	02 49 20.1	+2.0
	comp=Z,35nm,1.3s						
F10A				LR	LR		
	comp=Z,2µm,20.0s						
M02C	Callahan	73.84	322	P	P	02 49 18.5	+0.2
	baz=129						
YBH	Yreka Blue Hor	73.97	323	P	P	02 49 18.6	-0.5
	comp=Z,5.9nm,0.8s,baz=130,slow=3.8,SNR=7.3						
YBH	Yreka Blue Hor	73.97	323	*e*P	P	02 49 19.4	+0.3
	comp=Z,15nm,1.0s						
YBH				LR	LR		
	comp=Z,3µm,21.0s						
YBH	Yreka Blue Hor	73.97	323	*e*P	P	02 49 19.4	+0.3
YBH				pmax	pmax		
	comp=Z,15nm,1.0s						
YBH				MLR	MLR		
	comp=Z,3µm,21.0s						
K04D	Chiloquin, OR	73.98	324	P	P	02 49 19.9	+0.6
	baz=130						
KHMM	Horse Mountain	74.04	322	PFAKE		02 49 30.0	+10
KHMM				LR	LR		
	comp=Z,4µm,22.0s						
L04D	Klamath Falls	74.04	323	P	P	02 49 18.7	-0.9
	baz=129						
PPT2	Papeete2	74.08	256	*e*S	SKiKP	02 58 45.4	-3.2
	comp=Z,4µm,24.8s						
PPT2				*e*SS	SS	03 03 33.4	-5.0
	comp=Z,1µm,23.5s						
PPT2				*e*LQ	LQ	03 08 55.9	
	comp=Z,12µm,39.8s						
PPT2				*e*LR	LR	03 12 02.0	
	comp=Z,15µm,24.0s,baz=101						
PPT	Papeete	74.08	256	LR	LR	03 13 51.2	
	comp=Z,6µm,21.7s,baz=87,slow=29						
J05D	Fort Rock, OR	74.12	325	P	P	02 49 19.6	-0.4
	baz=130						
JCC	Jacoby Creek,	74.19	321	PFAKE		02 49 30.0	+10
JCC				LR	LR		
	comp=Z,4µm,22.0s						
G08A	Pilot Rock	74.23	327	PFAKE		02 49 30.0	+9.4
G08A				LR	LR		
	comp=Z,4µm,22.0s						
PINE	Pine Mountain	74.29	325	*e*P	P	02 49 22.8	+1.7
	comp=Z,43nm,1.0s						
PINE				LR	LR		
	comp=Z,6µm,21.0s						
WALA	Waterton Lakes	74.48	333	*e*P	P	02 49 22.8	+0.8
	comp=Z,27nm,1.1s						
WALA				LR	LR		
	comp=Z,4µm,21.0s						
QSPA	South Pole Qui	74.49	180	*e*P	P	02 49 23.4	+1.5
	comp=Z,58nm,1.1s						
QSPA				LR	LR		
	comp=Z,4µm,19.0s						
KRMB	Red Mountain	74.54	322	PFAKE		02 49 30.0	+7.5
KRMB				LR	LR		
	comp=Z,3µm,20.0s						
J04D	Umpqua Nationa	74.58	324	P	P	02 49 23.3	+0.6
	baz=130						
E09A	Wood Farm, Sta	74.65	329	*e*P	P	02 49 23.9	+1.1
	comp=Z,29nm,1.2s						
E09A				LR	LR		
	comp=Z,2µm,18.0s						
HUMO	Hull Mountain	74.66	323	PFAKE		02 49 40.0	+17
HUMO				LR	LR		
	comp=Z,3µm,22.0s						
FFC	Flin Flon	74.68	342	*e*P	P	02 49 20.9	-1.9
	comp=Z,269nm,1.4s						
FFC				LR	LR		
	comp=Z,5µm,19.0s						
FFC	Flin Flon	74.68	342	*e*P	P	02 49 20.9	-1.9
FFC				pmax	pmax		
	comp=Z,269nm,1.4s						
FFC				MLR	MLR		
	comp=Z,5µm,19.0s						
L02E	Cave Junction	74.76	323	P	P	02 49 24.9	+1.4
	baz=128						
I05D	Terrebonne, OR	74.86	326	P	P	02 49 25.3	+1.1
	baz=131,SNR=8.8						
E08A	Dider Farm, El	75.09	328	*e*P	P	02 49 24.9	-0.5
	comp=Z,7.7nm,0.9s						
E08A				LR	LR		
	comp=Z,3µm,21.0s						
I04A	Tendick Farm,	75.10	325	P	P	02 49 25.7	+0.1
	baz=130						
K02D	Willamette Mer	75.12	323	P	P	02 49 26.7	+1.0
	baz=128,SNR=6.9						
F07A	Phinny Hill Vi	75.14	327	PFAKE		02 49 40.0	+14
F07A				LR	LR		
	comp=Z,6µm,21.0s						
HAWA	Hanford	75.27	328	*e*P	P	02 49 28.0	+1.6
	comp=Z,56nm,1.4s						
HAWA				LR	LR		
	comp=Z,4µm,21.0s						
NEW	Newport	75.38	331	P	P	02 49 26.2	-0.9
	comp=Z,5.2nm,1.0s,baz=124,slow=6.2,SNR=15						
NEW	Newport	75.38	331	*e*P	P	02 49 28.6	+1.6
	comp=Z,20nm,1.5s						
NEW				LR	LR		
	comp=Z,3µm,20.0s						
NEW	Newport	75.38	331	*e*P	P	02 49 28.6	+1.6
NEW				pmax	pmax		
	comp=Z,20nm,1.5s						
NEW				MLR	MLR		
	comp=Z,3µm,20.0s						
NEW	Newport	75.38	331	P	P	02 49 27.4	+0.3
	baz=135						
D08A	Wollman Farm,	75.41	329	*e*P	P	02 49 27.2	0.0
	comp=Z,24nm,1.3s						
D08A				LR	LR		
	comp=Z,3µm,20.0s						
G05D	Wamic, OR	75.44	326	P	P	02 49 28.7	+1.3
	baz=131						
H04A	Detroit Lake	75.55	325	*e*P	P	02 49 27.5	-0.6
	comp=Z,17nm,0.9s						
H04A				LR	LR		
	comp=Z,4µm,22.0s						
J01E	Myrtle Point	75.57	323	P	P	02 49 27.9	-0.3
	baz=128						
I03D	Drain, OR	75.57	324	P	P	02 49 29.0	+0.8
	baz=129						
C09A	Chrisman Ranch	75.60	330	*e*P	P	02 49 29.4	+1.1
	comp=Z,85nm,1.4s						
C09A				LR	LR		
	comp=Z,4µm,20.0s						
KEBM	Edson Butte	75.62	323	PFAKE		02 49 40.0	+11
KEBM				LR	LR		
	comp=Z,3µm,20.0s						
H04D	Lebanon	75.75	325	P	P	02 49 30.0	+0.8
	baz=130						
F05D	White Salmon	75.93	327	P	P	02 49 31.1	+0.9
	baz=131						
COR	Corvallis	76.10	325	PFAKE		02 49 40.0	+8.8
COR				LR	LR		
	comp=Z,4µm,21.0s						
I02D	Swisshome	76.10	324	P	P	02 49 32.0	+0.8
	baz=128						
FCC	Fort Churchill	76.39	348	PFAKE		02 49 40.0	+7.5
FCC				LR	LR		
	comp=Z,8µm,22.0s						
LTY	Liberty	76.43	328	*e*P	P	02 49 34.2	+1.1
	comp=Z,61nm,1.5s						
LTY				LR	LR		
	comp=Z,4µm,22.0s						
G03D	McMinnville, O	76.47	325	P	P	02 49 35.0	+1.7
	baz=129						
LON	Longmire	76.68	327	*e*P	P	02 49 33.6	-1.0
	comp=Z,16nm,1.1s						
LON				LR	LR		
	comp=Z,7µm,22.0s						
LON	Longmire	76.68	327	*e*P	P	02 49 33.6	-1.0
LON				pmax	pmax		
	comp=Z,16nm,1.1s						
LON				MLR	MLR		
	comp=Z,7µm,22.0s						
F04D	Rainier, OR	76.89	326	P	P	02 49 36.9	+1.3
	baz=130						
E04D	Cinebar	76.95	327	P	P	02 49 37.1	+1.1
	baz=130						
C06D	Leavenworth	76.98	329	P	P	02 49 36.4	+0.3
	baz=132						
D05A	Enumclaw	77.06	327	*e*P	P	02 49 38.7	+2.1
	comp=Z,70nm,1.0s						
D05A				LR	LR		
	comp=Z,5µm,21.0s						
D04E	Lakebay	77.46	327	P	P	02 49 39.1	+0.3
	baz=130						
SRHM	Skhour des Reh	77.55	51	P	P	02 49 44.0	+4.2
OUZM	OUZ	77.71	53	P	P	02 49 44.0	+3.2
B05A	Bryant	77.81	328	P	P	02 49 40.8	0.0
	baz=131,SNR=7.8						
D03D	Eldon	77.86	327	P	P	02 49 40.8	-0.2
	baz=130,SNR=5.9						
TOA1	Torodi Ar. Sit	78.06	73	*e*P	P	02 49 41.2	-1.7
TOA1				*e*PP	PP	02 52 39.5	+0.1
TOA0	Torodi Ar. Sit	78.06	73	P	P	02 49 42.1	-0.8
	SNR=14						
TORD	Torodi Ar. Bea	78.06	73	P	P	02 49 41.2	-1.7
	comp=Z,24nm,0.9s,baz=278,slow=3.7,SNR=59						
TORD				PP	PP	02 52 39.5	+0.1
	comp=Z,2.7nm,1.1s,baz=242,slow=5.7,SNR=2.5						
TORD				S	S	02 59 30.1	-7.0
	comp=Z,0.7nm,1.1s,baz=243,slow=2.6,SNR=2.2						
TORD				LR	LR	03 23 22.5	
	comp=Z,8µm,18.5s,baz=300,slow=35						
NLWA	Neilton Lookou	78.17	327	*e*P	P	02 49 44.8	+1.9
	comp=Z,102nm,1.5s						
NLWA				LR	LR		
	comp=Z,7µm,21.0s						
A04D	Lummi Island	78.42	328	P	P	02 49 44.8	+0.8
	baz=130						
PGC	Sidney	78.75	328	*e*P	P	02 49 47.6	+1.7
	comp=Z,63nm,1.3s						
PGC				LR	LR		
	comp=Z,2µm,22.0s						
IVI	Ivigtut	78.89	11	*e*P	P	02 49 46.8	+0.5
	comp=Z,100nm,1.1s						
IVI				LR	LR		
	comp=Z,7µm,21.0s						
ZHG	ZHG	78.94	51	P	P	02 49 51.1	+3.6
RTC	Rabat Centre	79.03	50	PFAKE		02 50 00.0	+12
RTC				LR	LR		
	comp=Z,45µm,21.0s						
PFVI	Vila Bisbo	79.09	46	*e*P	P	02 49 49.2	+1.1
	comp=Z,82nm,1.5s						
PFVI	Vila Bisbo	79.09	46	PFAKE		02 50 00.0	+12
PFVI				LR	LR		
	comp=Z,10µm,22.0s						
FRB	Frobisher Bay	79.20	1	P	P	02 49 47.4	-0.6
	comp=Z,54nm,1.0s,baz=186,slow=6.3,SNR=14						
LLLB	Lillooet	79.25	330	*e*P	P	02 49 47.7	-1.0
	comp=Z,46nm,1.4s						
LLLB				LR	LR		
	comp=Z,3µm,21.0s						
MORF	Marmelete	79.30	46	*e*P	P	02 49 49.1	-0.2
MORF				AMb	AMB	02 49 57.3	
	comp=Z,49nm,2.8s						
MORF				*e*S	S	02 59 50.4	+0.7
MORF	Marmelete	79.30	46	*e*P	P	02 49 50.0	+0.7
	comp=Z,50nm,1.5s						
MORF	Marmelete	79.30	46	*e*P	P	02 49 49.1	-0.2
MORF				*e*S	S	02 59 50.4	+0.7
PTEO	Sao Teotonio	79.37	46	*e*P	P	02 49 51.1	+1.5
	comp=Z,78nm,1.5s						
NRS	Narsarsuaq	79.40	13	PFAKE		02 50 00.0	+11
NRS				LR	LR		
	comp=Z,5µm,20.0s						
LIS	Lisbon	79.65	45	*e*P	P	02 49 51.0	-0.1
LIS				AMb	AMB	02 49 54.8	
	comp=Z,43nm,1.3s						
LIS				*e*S	S	02 59 54.3	+1.2
LIS	Lisbon	79.65	45	*e*P	P	02 49 53.1	+2.0
LIS	Lisbon	79.65	45	*e*P	P	02 49 50.9	-0.1
LIS				*e*S	S	02 59 54.3	+1.2
PMAFR	Mafra	79.68	45	*e*P	P	02 49 51.8	+0.5
	comp=Z,57nm,2.1s						
PBDV	Barranco-do-Ve	79.78	47	*e*P	P	02 49 52.8	+0.9
	comp=Z,52nm,1.7s						
PNCL	Nicolau / Gran	79.78	46	*e*P	P	02 49 52.3	+0.5
	comp=Z,33nm,1.7s						
PCVE	Castro Verde	79.89	46	*e*P	P	02 49 53.4	+1.0
	comp=Z,54nm,1.8s						
PVAQ	Vaqueiros	80.00	47	*e*P	P	02 49 53.5	+0.5
PVAQ	Vaqueiros	80.00	47	*e*S	S	02 59 59.2	+2.2
PVAQ	Vaqueiros	80.00	47	*e*LR	LR	03 16 40.2	
	comp=Z,10µm,20.0s						
PVAQ	Vaqueiros	80.00	47	PFAKE		02 50 00.0	+7.0
PVAQ				LR	LR		
	comp=Z,11µm,21.0s						
PBEJ	Beja	80.19	46	*e*P	P	02 49 56.5	+2.4
	comp=Z,30nm,1.5s						
RSA	Sarsar	80.20	50	P	P	02 49 59.0	+4.7
ALMR	Almeirim	80.25	45	*e*P	P	02 49 54.2	-0.1
ALMR				AMb	AMB	02 50 09.0	
	comp=Z,74nm,2.6s						
ALMR				*e*S	S	03 00 00.6	+1.0
ALMR	Almeirim	80.25	45	*e*P	P	02 49 55.5	+1.2
	comp=Z,75nm,1.4s						
ALMR	Almeirim	80.25	45	*e*P	P	02 49 54.2	-0.1
ALMR				*e*S	S	03 00 00.5	+1.0
PMTG	Montargil	80.45	45	*e*P	P	02 49 55.8	+0.4
	comp=Z,42nm,1.7s						
PTOM	Tomar	80.59	44	*e*P	P	02 49 56.9	+0.7
	comp=Z,30nm,1.8s						
SFS	San Fernando	80.64	48	PFAKE		02 50 10.0	+14
SFS				LR	LR		
	comp=Z,2µm,22.0s						
SFS	San Fernando	80.64	48	*e*P	P	02 49 56.9	+0.4
SFS				*e*S	S	03 00 09.4	+5.8
PCAS	Casmilo, Conde	80.75	44	*e*P	P	02 49 57.8	+0.8
	comp=Z,34nm,2.0s						
SMIR	Smir Dam	80.88	49	P	P	02 50 02.0	+4.2
COI	Coimbra	80.88	44	*e*P	P	02 49 57.4	-0.3
	comp=Z,45nm,1.4s						
COI	Coimbra	80.88	44	PFAKE		02 50 10.0	+12
COI				LR	LR		
	comp=Z,11µm,22.0s						
CEU	Ceuta	80.98	49	*e*P	P	02 49 58.9	+0.6
CEU				*e*S	S	03 00 11.9	+4.7
SBA	Scott Base	81.05	191	*e*P	P	02 49 59.0	+1.0
	comp=Z,33nm,1.2s						
SBA				LR	LR		
	comp=Z,9µm,19.0s						
SBA	Scott Base	81.05	191	*e*P	P	02 49 59.0	+1.0
SBA				pmax	pmax		
	comp=Z,33nm,1.2s						
SBA				MLR	MLR		
	comp=Z,9µm,19.0s						
PMRV	Marv??o	81.19	45	*e*P	P	02 49 59.5	+0.1
	comp=Z,19nm,1.6s						
PMRV	Marv??o	81.19	45	*e*S	S	03 00 12.8	+3.4
PMRV	Marv??o	81.19	45	*e*LR	LR	03 16 37.9	
	comp=Z,6µm,18.0s						
PCBR	Castelo Branco	81.33	45	*e*P	P	02 50 00.6	+0.5
	comp=Z,22nm,1.6s						
PVLZ	Peæn de	81.44	50	*e*P	P	02 49 59.2	-1.6
PVLZ				*e*S	S	03 00 12.6	+0.5
PVIS	Viseu	81.47	44	*e*P	P	02 50 01.7	+0.8
	comp=Z,27nm,2.5s						
AKLM	AKL	81.48	51	P	P	02 50 04.0	+2.8
MTE	Manteigas	81.55	44	*e*P	P	02 50 01.4	0.0
	comp=Z,22nm,1.4s						
MTE	Manteigas	81.55	44	*e*S	S	03 00 15.8	+2.6
MTE	Manteigas	81.55	44	*e*LR	LR	03 17 26.8	
	comp=Z,9µm,22.0s						
MTE	Manteigas	81.55	44	*e*P	P	02 50 02.0	+0.7
	comp=Z,26nm,1.4s						
MTE				LR	LR		
	comp=Z,10µm,21.0s						
PGAV	Gavieira, Arco	81.83	42	*e*P	P	02 50 02.8	-0.1
	comp=Z,42nm,1.7s						
PGAV	Gavieira, Arco	81.83	42	*e*S	S	03 00 14.6	-1.5
PGAV	Gavieira, Arco	81.83	42	*e*LR	LR	03 17 14.0	
	comp=Z,7µm,20.0s						
POLO	Lamas de Olo	81.86	43	*e*P	P	02 50 02.9	-0.1
	comp=Z,16nm,1.8s						
PVRL	Vila Real	81.86	43	*e*P	P	02 50 04.2	+1.3
	comp=Z,32nm,1.8s						
PCAB	Cabril	81.87	43	*e*P	P	02 50 03.8	+0.8
	comp=Z,38nm,1.6s						
EMAL	Malaga-Limoner	82.04	48	*e*P	P	02 50 04.0	0.0
EMAL				*e*S	S	03 00 19.8	+1.5
VNDA	Vanda	82.09	190	P	P	02 50 05.5	+1.9
	comp=Z,21nm,1.1s,baz=127,slow=4.3,SNR=24						
VNDA				S	S	03 00 17.8	+0.2
	comp=Z,0.5nm,1.1s,baz=112,slow=5.4,SNR=1.7						
VNDA				LR	LR	03 21 18.8	
	comp=Z,10µm,18.6s,baz=134,slow=32						
VNDA	Vanda	82.09	190	*e*P	P	02 50 05.0	+1.5
VNDA	Vanda	82.09	190	*e*P	P	02 50 05.1	+1.5
MVO	Moncorvo	82.26	44	*e*P	P	02 50 05.2	+0.1
	comp=Z,32nm,1.4s						
MVO	Moncorvo	82.26	44	*e*S	S	03 00 22.9	+2.4
MVO	Moncorvo	82.26	44	*e*LR	LR	03 18 09.3	
	comp=Z,6µm,18.0s						
JBK	JBK	82.38	51	P	P	02 50 09.0	+3.0
FIGM	Figuig	82.47	54	P	P	02 50 10.0	+3.5
MELI	Melilla	82.50	50	*e*P	P	02 50 05.3	-1.0
MELI				*e*S	S	03 00 23.8	+0.8
SYO	Syowa Base	82.88	160	⇓*e*P	P	02 50 06.0	-1.7
WIN	Windhoek	83.09	111	*e*P	P	02 50 11.7	+1.6
	comp=Z,84nm,1.4s						
WIN				LR	LR		
	comp=Z,4µm,18.0s						
BBB	Bella Bella	83.28	329	P	P	02 50 10.4	+0.5
	comp=Z,15nm,1.0s,baz=170,slow=6.4,SNR=5.7						
BBB	Bella Bella	83.28	329	*e*P	P	02 50 10.4	+0.5
	comp=Z,51nm,1.1s						
BBB				LR	LR		
	comp=Z,2µm,18.0s						
PAB	San Pablo	83.33	46	*e*P	P	02 50 11.5	+0.8
	comp=Z,26nm,1.3s						
PAB				LR	LR		
	comp=Z,7µm,20.0s						
PAB	San Pablo	83.33	46	*e*P	P	02 50 11.5	+0.8
PAB				pmax	pmax		
	comp=Z,27nm,1.3s						
PAB				MLR	MLR		
	comp=Z,7µm,20.0s						
ESDC	Sonseca Array	83.66	46	P	P	02 50 12.3	-0.1
	comp=Z,4.9nm,0.8s,baz=248,slow=5.1,SNR=36						
ESDC				S	S	03 00 36.8	+2.1
	comp=Z,0.1nm,0.6s,baz=255,slow=5.0,SNR=2.8						
ESDC				LR	LR	03 23 24.2	
	comp=Z,5µm,21.7s,baz=245,slow=33						
SUR	Sutherland	83.88	122	*e*P	P	02 50 13.2	-0.7
	comp=Z,97nm,1.1s						
SUR				LR	LR		
	comp=Z,7µm,18.0s						
SUR	Sutherland	83.88	122	P	P	02 50 16.2	+2.2
	SNR=6.0						
SFJD	Kangerlussuaq	83.89	8	P	P	02 50 12.6	-0.1
	comp=Z,11nm,0.7s,baz=210,slow=6.3,SNR=7.0						
SFJD	Kangerlussuaq	83.89	8	*e*P	P	02 50 13.4	+0.6
	comp=Z,29nm,1.1s						
SFJD				LR	LR		
	comp=Z,5µm,20.0s						
SFJD	Kangerlussuaq	83.89	8	⇓*i*P	P	02 50 12.4	-0.4
SFJD				MLR	MLR		
	comp=Z,4µm,22.0s						
SFJD	Kangerlussuaq	83.89	8	⇓*i*P	P	02 50 12.4	-0.4
	comp=Z,4µm,22.0s						
TSUM	Tsumeb	84.35	108	*e*P	P	02 50 16.6	+0.1
	comp=Z,70nm,1.0s						
TSUM				LR	LR		
	comp=Z,6µm,20.0s						
UCM	Universidad Co	84.43	46	*e*P	P	02 50 13.8	-2.5
UCM				*e*S	S	03 00 38.4	-4.0
TAM	Tamanrasset	84.69	65	*e*P	P	02 50 19.2	+1.1
	comp=Z,10nm,1.1s						
TAM				LR	LR		
	comp=Z,8µm,20.0s						
TAM	Tamanrasset	84.69	65	*e*P	P	02 50 19.2	+1.1
TAM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TAM				MLR	MLR		
	comp=Z,8µm,20.0s						
YKA	Yellowknife Ar	84.83	342	P	P	02 50 16.6	-1.0
	comp=Z,17nm,0.8s,baz=136,slow=5.2,SNR=40						
YKA				LR	LR	03 30 01.1	
	comp=Z,489nm,21.9s,baz=134,slow=37						
YKB5	Yellowknife Ar	84.83	342	*e*P	P	02 50 16.6	-1.0
ANGG	Ammassalik, Gr	85.01	14	PFAKE		02 50 30.0	+12
ANGG				LR	LR		
	comp=Z,7µm,21.0s						
MOBC	Moresby Island	85.76	328	PFAKE		02 50 30.0	+7.4
MOBC				LR	LR		
	comp=Z,6µm,22.0s						
ILULI	Ilulissat	85.92	7	*e*P	P	02 50 23.3	+0.3
	comp=Z,115nm,1.3s						
ILULI				LR	LR		
	comp=Z,4µm,20.0s						
ILULI	Ilulissat	85.92	7	⇓*i*P	P	02 50 22.5	-0.5
ILULI				pmax	pmax		
	comp=Z,150nm,1.4s						
ILULI				MLR	MLR		
	comp=Z,4µm,22.0s						
ILULI	Ilulissat	85.92	7	⇓*i*P	P	02 50 22.5	-0.5
	comp=Z,150nm,1.4s						
	comp=Z,4µm,22.0s						

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DIB   Dawson Inlet,    86.05 328 PFAKE             02 50 40.0 +16
DIB                              LR       LR
      comp=Z,4µm,22.0s
XMAS  Kiritimati       86.41 273 PFAKE             02 50 40.0 +13
XMAS                             LR       LR
      comp=Z,5µm,19.0s
CCA1  Carnmenellis     87.64  36 eP       P        02 50 18.1  -14
CCA1                             IAMs_20  IAMs_20  03 23 42.6
      comp=Z,10µm,24.0s
WRAK  Wrangell Islan   87.73 331 eP       P        02 50 31.2 -0.9
      comp=Z,48nm,1.1s
WRAK                             LR       LR
      comp=Z,3µm,18.0s
DLBC  Dease Lake       87.81 333 P        P        02 50 33.2 +0.7
      comp=Z,15nm,0.8s,baz=129,slow=3.8,SNR=22
DLBC  Dease Lake       87.81 333 eP       P        02 50 33.5 +1.0
      comp=Z,49nm,1.1s
HTL   Hartland         88.43  36 eP       P        02 50 22.6  -13
HTL                              IAMs_20  IAMs_20  03 24 53.0
      comp=Z,9µm,22.3s
DSB   Dublin           88.47  33 eP       P        02 50 36.9 +1.3
      comp=Z,21nm,1.3s
DSB                              LR       LR
      comp=Z,4µm,19.0s
BOSA  Boshof           88.59 119 P        P        02 50 37.3 +0.2
      comp=Z,18nm,0.9s,baz=268,slow=3.9,SNR=18
BOSA                             LR       LR       03 26 09.7
      comp=Z,9µm,21.9s,baz=250,slow=33
BOSA  Boshof           88.59 119 eP       P        02 50 37.4 +0.2
      comp=Z,22nm,1.0s
BOSA  Boshof           88.59 119 eP       P        02 50 37.4 +0.2
BOSA                             pmax     pmax
      comp=Z,22nm,1.0s
RSBS  Rosebush, Pemb   88.73  35 eP       P        02 50 24.5  -12
RSBS                             IAMs_20  IAMs_20  03 25 28.0
      comp=Z,5µm,20.9s
BORG  Borgarnes        88.80  19 eP       P        02 50 38.6 +1.6
      comp=Z,68nm,1.3s
BORG                             LR       LR
      comp=Z,6µm,22.0s
BORG  Borgarnes        88.80  19 eP       P        02 50 38.6 +1.6
BORG                             pmax     pmax
      comp=Z,68nm,1.3s
BORG                             MLR      MLR
      comp=Z,6µm,22.0s
JSA   Saint Aubin      88.97  38 eP       P        02 50 26.7  -11
JSA                              IAMs_20  IAMs_20  03 27 01.0
      comp=Z,7µm,18.4s
SIT   Sitka            89.46 331 PFAKE             02 50 50.0 +10
SIT                              LR       LR
      comp=Z,4µm,22.0s
KHU   Kahuku           89.47 290 PFAKE             02 50 50.0 +8.5
KHU                              LR       LR
      comp=Z,3µm,20.0s
CLGH  Cloghs, Cushen   89.49  32 eP       P        02 50 26.9  -14
CLGH                             IAMs_20  IAMs_20  03 26 38.1
      comp=Z,8µm,19.8s
MLOA  Mauna Loa Obse   89.52 290 PFAKE             02 50 50.0 +8.1
MLOA                             LR       LR
      comp=Z,3µm,20.0s
WPS   Cemaes, Angles   89.53  34 eP       P        02 50 27.8  -13
WPS                              IAMs_20  IAMs_20  03 24 23.4
      comp=Z,9µm,24.2s
WLF1  Llynfaes         89.53  34 eP       P        02 50 27.4  -13
WLF1                             IAMs_20  IAMs_20  03 24 23.0
      comp=Z,20µm,25.0s
POHA  Pohakuloa        89.54 291 PFAKE             02 50 50.0 +8.2
POHA                             LR       LR
      comp=Z,3µm,20.0s
MAHO  Mahon            89.56  48 eP       P        02 50 38.1 -3.0
MAHO                             eS       SKSac    03 01 15.9 +4.5
JIS   Juneau Island    89.65 332 eP       P        02 50 42.4 +1.4
      comp=Z,80nm,1.5s
JIS                              LR       LR
      comp=Z,4µm,20.0s
MCH1  Michaelchurch    89.72  35 eP       P        02 50 28.9  -13
MCH1                             IAMs_20  IAMs_20  03 25 54.5
      comp=Z,9µm,21.8s
MONM  Monmouth         89.75  35 eP       P        02 50 29.2  -12
MONM                             IAMs_20  IAMs_20  03 25 55.7
      comp=Z,8µm,20.8s
HPAH  Hawaii Prepara   89.77 291 PFAKE             02 50 50.0 +7.4
HPAH                             LR       LR
      comp=Z,3µm,19.0s
KHLU  Kahalu`u         89.82 290 PFAKE             02 50 50.0 +7.1
KHLU                             LR       LR
      comp=Z,3µm,20.0s
BATH  Bath             89.85  36 eP       P        02 50 29.9  -12
BATH                             IAMs_20  IAMs_20  03 25 24.6
      comp=Z,11µm,23.3s
IOMK  Kirk Michael     89.89  33 eP       P        02 50 29.8  -13
IOMK                             IAMs_20  IAMs_20  03 27 30.8
      comp=Z,11µm,18.5s
LBTB  Lobatse          89.93 116 eP       P        02 50 44.9 +1.4
      comp=Z,40nm,1.1s
LBTB  Lobatse          89.93 116 eP       P        02 50 44.9 +1.4
LBTB                             pmax     pmax
      comp=Z,40nm,1.1s
FOEL  Foel Wylfa       90.00  34 eP       P        02 50 28.9  -14
FOEL                             IAMs_20  IAMs_20  03 26 18.0
      comp=Z,12µm,20.8s
HLM1  Long Mynd        90.01  35 eP       P        02 50 30.6  -12
HLM1                             IAMs_20  IAMs_20  03 26 26.7
      comp=Z,10µm,22.3s
BESE  Bessie Mountai   90.02 332 eP       P        02 50 44.5 +1.6
      comp=Z,82nm,1.2s
BESE                             LR       LR
      comp=Z,4µm,20.0s
STRD  Stroud           90.08  36 eP       P        02 50 29.7  -14
STRD                             IAMs_20  IAMs_20  03 25 43.4
      comp=Z,9µm,22.2s
GAL1  Galloway         90.10  32 eP       P        02 50 29.9  -13
GAL1                             IAMs_20  IAMs_20  03 23 10.5
      comp=Z,3µm,37.0s
SWN1  Swindon          90.18  36 eP       P        02 50 30.4  -13
SWN1                             IAMs_20  IAMs_20  03 25 45.9
      comp=Z,11µm,23.3s
HLK   Haleakala        90.47 291 PFAKE             02 51 00.0 +14
HLK                              LR       LR
      comp=Z,3µm,22.0s
KULLO Kullorsuaq       90.52   4 i P      P        02 50 45.7 +0.9
KULLO                            pmax     pmax
      comp=Z,150nm,1.4s
KULLO                            MLR      MLR
      comp=Z,9µm,22.0s
KULLO Kullorsuaq       90.52   4 i P      P        02 50 45.7 +0.9
      comp=Z,149nm,1.4s
      comp=Z,9µm,22.0s
STNC  Stoke            90.63  34 eP       P        02 50 33.0  -13
STNC                             IAMs_20  IAMs_20  03 26 57.0
      comp=Z,12µm,21.4s
PGBU  Glenifferbraes   90.65  31 eP       P        02 50 32.5  -13
PGBU                             IAMs_20  IAMs_20  03 26 34.3
      comp=Z,8µm,20.8s
MAW   Mawson           90.65 164 P        P        02 50 46.4 +0.6
      comp=Z,25nm,1.0s,baz=226,slow=6.0,SNR=22
MAW                              LR       LR       03 32 54.4
      comp=Z,6µm,18.6s,baz=228,slow=36
MAW   Mawson           90.65 164 eP       P        02 50 47.1 +1.4
      comp=Z,36nm,1.5s
MAW   Mawson           90.65 164 eP       P        02 50 47.1 +1.4
MAW                              pmax     pmax
      comp=Z,36nm,1.5s
KHLH  Kahului Airpor   90.67 291 PFAKE             02 51 00.0 +13
KHLH                             LR       LR
      comp=Z,3µm,22.0s
SKAG  Skagway          90.68 333 eP       P        02 50 44.5 -1.3
      comp=Z,37nm,1.3s
SKAG                             LR       LR
      comp=Z,4µm,21.0s
SUMG  Summit           90.76  10 eP       P        02 50 47.7 +1.2
      comp=Z,330nm,1.5s
SUMG                             LR       LR
      comp=Z,4µm,19.0s
SUMG  Summit           90.76  10 eP       P        02 50 47.7 +1.2
SUMG                             pmax     pmax
      comp=Z,330nm,1.5s
SUMG                             MLR      MLR
      comp=Z,4µm,19.0s
SUMG  Summit           90.76  10⇓iP       P        02 50 47.7 +1.2
      comp=Z,581nm,1.3s
KPL   Plockton         90.79  30 eP       P        02 50 33.3  -13
KPL                              IAMs_20  IAMs_20  03 27 47.7
      comp=Z,6µm,19.7s
CWF   Charnwood Fore   90.97  35 eP       P        02 50 33.9  -13
CWF                              IAMs_20  IAMs_20  03 26 55.2
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      comp=Z,7µm,21.8s
LBWR  Ladybower, Pea   91.02  34 eP       P        02 50 35.6  -12
LBWR                             IAMs_20  IAMs_20  03 27 19.9
      comp=Z,11µm,21.0s
ESK   Eskdalemuir      91.07  32 PFAKE             02 51 00.0 +12
ESK                              LR       LR
      comp=Z,6µm,22.0s
CLF   Chambon-Foret    91.19  40 eP       P        02 50 48.4 -0.1
      comp=Z,57nm,1.3s
CLF                              LR       LR
      comp=Z,8µm,21.0s
RES   Resolute Bay     91.34 354 P        P        02 50 47.3 -1.3
      comp=Z,9.7nm,1.0s,baz=149,slow=5.3,SNR=5.6
RES   Resolute Bay     91.34 354 eP       P        02 50 48.1 -0.5
      comp=Z,27nm,1.4s
RES                              LR       LR
      comp=Z,9µm,21.0s
RES   Resolute Bay     91.34 354 eP       P        02 50 48.1 -0.5
RES                              pmax     pmax
      comp=Z,27nm,1.4s
RES                              MLR      MLR
      comp=Z,9µm,21.0s
EDI   Edinburgh        91.35  32 eP       P        02 50 36.4  -13
EDI                              IAMs_20  IAMs_20  03 27 43.1
      comp=Z,7µm,17.8s
EDMD  Edmundbyers      91.50  33 eP       P        02 50 37.1  -13
EDMD                             IAMs_20  IAMs_20  03 22 13.4
      comp=Z,8µm,37.1s
SSB   Saint Sauveur    91.65  43 eP       P        02 50 52.4 +1.6
      comp=Z,10.0nm,1.2s
SSB                              LR       LR
      comp=Z,5µm,21.0s
SSB   Saint Sauveur    91.65  43 eP       P        02 50 52.4 +1.6
SSB                              pmax     pmax
      comp=Z,10.0nm,1.2s
SSB                              MLR      MLR
      comp=Z,5µm,21.0s
ELSH  Elham, Standar   91.71  37 eP       P        02 50 37.5  -13
ELSH                             IAMs_20  IAMs_20  03 28 33.5
      comp=Z,9µm,19.0s
LMK   Market Rasen     91.81  35 eP       P        02 50 37.7  -14
LMK                              IAMs_20  IAMs_20  03 27 42.5
      comp=Z,11µm,21.4s
KEST  Kesra            91.99  54 P        P        02 50 52.7 +0.1
      comp=Z,3.1nm,0.8s,baz=208,slow=17,SNR=2.5
KEST                             PP       PP       02 54 30.6 -1.9
      comp=Z,3.2nm,0.9s,baz=174,slow=7.0,SNR=4.6
KEST                             LR       LR       03 35 11.9
      comp=Z,4µm,18.1s,baz=206,slow=38
KEST  Kesra            91.99  54 eP       P        02 50 52.7 +0.1
      comp=Z,8.4nm,1.3s
KEST                             ePP      PP       02 54 30.6 -1.9
TULEG Thule            92.03   1 PFAKE             02 51 00.0 +8.2
TULEG                            LR       LR
      comp=Z,5µm,20.0s
WACR  West Acre        92.04  35 eP       P        02 50 39.1  -13
WACR                             IAMs_20  IAMs_20  03 27 05.5
      comp=Z,9µm,22.2s
BIGH  Upper Bighouse   92.15  29 eP       P        02 50 40.7  -12
BIGH                             IAMs_20  IAMs_20  03 28 10.5
      comp=Z,8µm,21.1s
HON   Honolulu         92.20 291 PFAKE             02 51 10.0 +16
HON                              LR       LR
      comp=Z,3µm,20.0s
KIP   Kipapa           92.24 291 PFAKE             02 51 10.0 +16
KIP                              LR       LR
      comp=Z,3µm,22.0s
HYT   Haines Junctio   92.30 333 eP       P        02 50 52.4 -1.1
      comp=Z,25nm,1.3s
HYT                              LR       LR
      comp=Z,3µm,19.0s
OPA   Opana            92.31 292 PFAKE             02 51 10.0 +16
OPA                              LR       LR
      comp=Z,3µm,22.0s
SCO   Scoresbysund     92.51  15 PFAKE             02 51 10.0 +16
SCO                              LR       LR
      comp=Z,3µm,20.0s
SCO   Scoresbysund     92.51  15 i P      P        02 50 55.9 +1.8
SCO                              MLR      MLR
      comp=Z,8µm,25.0s
SCO   Scoresbysund     92.51  15 i P      P        02 50 55.9 +1.8
      comp=Z,8µm,25.0s
BCPM  Bancas Point     92.83 332 PFAKE             02 51 10.0 +14
BCPM                             LR       LR
      comp=Z,4µm,22.0s
BNI   Bardonecchia     93.00  44 eP       P        02 50 57.6 +0.5
      comp=Z,7.6nm,1.3s
BNI                              LR       LR
      comp=Z,11µm,20.0s
BNI   Bardonecchia     93.00  44 eP       P        02 50 57.6 +0.5
BNI                              pmax     pmax
      comp=Z,8.0nm,1.3s
BNI                              MLR      MLR
      comp=Z,11µm,20.0s
PCA   Pinnacle         93.18 332 PFAKE             02 51 10.0 +12
PCA                              LR       LR
      comp=Z,4µm,22.0s
DOU   Dourbes          93.37  39⇑P        P        02 50 58.4 -0.2
UCC   Uccle            93.47  38 PFAKE             02 51 10.0 +11
UCC                              LR       LR
      comp=Z,6µm,20.0s
UCC   Uccle            93.47  38⇓P        P        02 50 58.3 -0.7
SENIN Lac Senin/Sane   93.83  43 PFAKE             02 51 10.0 +8.9
SENIN                            LR       LR
      comp=Z,4µm,19.0s
KEKH  Kekaha           93.91 292 PFAKE             02 51 10.0 +8.3
KEKH                             LR       LR
      comp=Z,4µm,21.0s
WLF   Walferdange      94.17  40 PFAKE             02 51 10.0 +7.7
WLF                              LR       LR
      comp=Z,30µm,19.0s
WLF   Walferdange      94.17  40⇑x        P        02 51 03.5 +1.2
BEBN  Eben Emael       94.26  38⇑P        P        02 51 03.4 +0.8
ECH   Echery           94.33  41 eP       P        02 51 03.0 -0.1
      comp=Z,14nm,1.2s
ECH                              LR       LR
      comp=Z,6µm,20.0s
ECH   Echery           94.33  41 eP       P        02 51 03.0 -0.1
ECH                              pmax     pmax
      comp=Z,14nm,1.2s
ECH                              MLR      MLR
      comp=Z,6µm,20.0s
MEM   Membach          94.39  39⇑P        P        02 51 03.6 +0.3
BALM  Baldy            94.51 333 PFAKE             02 51 20.0 +16
BALM                             LR       LR
      comp=Z,4µm,21.0s
INK   Inuvik           94.58 341 P        P        02 51 02.6 -1.0
      comp=Z,8.1nm,1.0s,baz=83,slow=5.5,SNR=12
INK   Inuvik           94.58 341 eP       P        02 51 04.0 +0.4
      comp=Z,30nm,1.4s
INK                              LR       LR
      comp=Z,7µm,22.0s
INK   Inuvik           94.58 341 eP       P        02 51 04.0 +0.4
INK                              pmax     pmax
      comp=Z,30nm,1.4s
INK                              MLR      MLR
      comp=Z,7µm,22.0s
DAWY  Dawson           94.58 336 eP       P        02 51 04.0 +0.1
      comp=Z,11nm,1.0s
EPYK  Eagle Plains     94.66 339 PFAKE             02 51 20.0 +16
EPYK                             LR       LR
      comp=Z,3µm,20.0s
EPYK  Eagle Plains     94.66 339 P        P        02 51 03.0 -1.2
      baz=119
CRQM  Cirque           94.75 332 PFAKE             02 51 20.0 +15
CRQM                             LR       LR
      comp=Z,6µm,22.0s
HMT   Hamilton         95.10 332 PFAKE             02 51 20.0 +14
HMT                              LR       LR
      comp=Z,4µm,20.0s
BFO   Black Forest     95.11  41 PFAKE             02 51 20.0 +13
BFO                              LR       LR
      comp=Z,5µm,21.0s
LSZ   Lusaka           95.17 107 PFAKE             02 51 20.0 +12
LSZ                              LR       LR
      comp=Z,6µm,20.0s
TUE   Stuetta          95.21  43 eP       P        02 51 07.0 -0.5
      comp=Z,10nm,1.2s
TUE                              LR       LR
      comp=Z,6µm,19.0s
VLC   Villacollemand   95.24  46 PFAKE             02 51 20.0 +13
VLC                              LR       LR
      comp=Z,3µm,22.0s
RAGM  Ragged Mountai   95.31 332 PFAKE             02 51 20.0 +13
RAGM                             LR       LR
      comp=Z,5µm,20.0s
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CLTB  Caltabellotta    95.49  53 PFAKE             02 51 20.0 +11
CLTB                             LR       LR
      comp=Z,4µm,20.0s
EGAK  Eagle            95.58 336 eP       P        02 51 09.3 +0.9
      comp=Z,12nm,1.0s
EGAK                             LR       LR
      comp=Z,2µm,21.0s
MXZ   Matakaoa Point   95.64 229 PFAKE             02 51 20.0 +11
MXZ                              LR       LR
      comp=Z,6µm,22.0s
DAVOX Davos/Dischmat   95.65  43 S        SKSac    03 01 45.8 +0.3
      comp=Z,0.8nm,0.5s,baz=262,slow=6.7,SNR=2.2
BFZ   Birch Farm       95.75 225 PFAKE             02 51 20.0 +10
BFZ                              LR       LR
      comp=Z,8µm,21.0s
STU   Stuttgart        95.79  41 PFAKE             02 51 20.0 +10
STU                              LR       LR
      comp=Z,6µm,21.0s
DAVA  Damuels          95.80  43 epP      P        02 51 11.1 +1.1
      comp=Z,6.5nm,1.1s
EYAK  Cordova Ski Ar   95.86 331 PFAKE             02 51 20.0 +10
EYAK                             LR       LR
      comp=Z,6µm,22.0s
FUORN Ofenpass-Fuorn   95.86  43 PFAKE             02 51 20.0 +10
FUORN                            LR       LR
      comp=Z,6µm,19.0s
WDD   Wied Dalam       96.06  55 PFAKE             02 51 20.0 +8.8
WDD                              LR       LR
      comp=Z,4µm,18.0s
URZ   Urewera          96.20 228 PFAKE             02 51 20.0 +8.0
URZ                              LR       LR
      comp=Z,6µm,21.0s
BKZ   Black Stump Fm   96.25 227 PFAKE             02 51 20.0 +7.8
BKZ                              LR       LR
      comp=Z,10µm,20.0s
FID   Port Fidalgo     96.27 332 PFAKE             02 51 20.0 +8.4
FID                              LR       LR
      comp=Z,5µm,20.0s
FETA  Feichten         96.28  43 ePcP     P        02 51 11.7 -0.5
      comp=Z,8.5nm,1.8s
DOT   Dot Lake         96.29 335 eP       P        02 51 13.1 +1.4
      comp=Z,15nm,1.3s
DOT                              LR       LR
      comp=Z,4µm,20.0s
SCRK  Sand Creek       96.39 335 PFAKE             02 51 20.0 +7.8
SCRK                             LR       LR
      comp=Z,3µm,20.0s
RETA  Reutte           96.43  43 pP       P        02 51 13.7 +0.9
      comp=Z,7.5nm,1.3s
SNZO  South Karori     96.52 224 PFAKE             02 51 20.0 +6.7
SNZO                             LR       LR
      comp=Z,8µm,19.0s
GLI   Glacier Island   96.60 332 PFAKE             02 51 20.0 +6.9
GLI                              LR       LR
      comp=Z,4µm,21.0s
MOTA  Moosalm          96.61  43 epP      P        02 51 14.4 +0.7
      comp=Z,8.5nm,1.0s
PAX   Paxson           96.62 334 eP       P        02 51 13.8 +0.5
      comp=Z,6.8nm,1.0s
PAX                              LR       LR
      comp=Z,4µm,19.0s
RIDG  Independent Ri   96.65 335 PFAKE             02 51 20.0 +6.7
RIDG                             LR       LR
      comp=Z,5µm,22.0s
SQTA  Sankt Quirin     96.65  43 epP      P        02 51 14.8 +1.0
      comp=Z,7.4nm,0.9s
MQZ   McQueen’s Vall   96.72 221 PFAKE             02 51 30.0 +16
MQZ                              LR       LR
      comp=Z,8µm,20.0s
KHZ   Kahutara         96.77 223 PFAKE             02 51 30.0 +16
KHZ                              LR       LR
      comp=Z,4µm,20.0s
CRLZ  Canterbury Las   96.81 221 PFAKE             02 51 30.0 +15
CRLZ                             LR       LR
      comp=Z,8µm,20.0s
AQU   L'Aquila         96.88  48 PFAKE             02 51 30.0 +15
AQU                              LR       LR
      comp=Z,4µm,21.0s
WATA  Walderalm        96.92  43 P        P        02 51 14.5 -0.6
      comp=Z,2.5nm,0.6s
WTTA  Wattenberg       96.94  43 ePcP     P        02 51 15.0 -0.2
      comp=Z,10nm,1.1s
SCM   Sheep Creek Mo   97.03 332 eP       P        02 51 13.0 -2.2
      comp=Z,7.7nm,1.2s
SCM                              LR       LR
      comp=Z,4µm,21.0s
SCM   Sheep Creek Mo   97.03 332 eP       P        02 51 13.0 -2.2
SCM                              pmax     pmax
      comp=Z,8.0nm,1.2s
SCM                              MLR      MLR
      comp=Z,4µm,21.0s
OXZ   Oxford           97.30 221 PFAKE             02 51 30.0 +13
OXZ                              LR       LR
      comp=Z,7µm,20.0s
ODZ   Otahua Downs     97.31 219 PFAKE             02 51 30.0 +13
ODZ                              LR       LR
      comp=Z,9µm,22.0s
GRFO  Grafenberg       97.32  41 PFAKE             02 51 30.0 +13
GRFO                             LR       LR
      comp=Z,5µm,22.0s
GRA1  Grafenberg Arr   97.32  41 PFAKE             02 51 30.0 +13
GRA1                             LR       LR
      comp=Z,6µm,21.0s
DAG   Danmarks Havn    97.35  11⇓iP       P        02 51 15.2 -1.0
DAG                              MLR      MLR
      comp=Z,12µm,21.0s
DAG   Danmarks Havn    97.35  11⇓iP       P        02 51 15.2 -1.0
      comp=Z,11µm,21.0s
ABTA  Abfaltersbach    97.39  44 eP       P        02 51 16.4 -0.7
      comp=Z,7.5nm,1.1s
KNK   Knik Glacier     97.40 332 PFAKE             02 51 30.0 +13
KNK                              LR       LR
      comp=Z,6µm,20.0s
LTZ   Lake Taylor      97.42 222 PFAKE             02 51 30.0 +12
LTZ                              LR       LR
      comp=Z,8µm,22.0s
SEW   Seward           97.44 330 PFAKE             02 51 30.0 +13
SEW                              LR       LR
      comp=Z,4µm,20.0s
SML   Sawmill          97.47 332 eP       Pdif     02 51 19.4 +2.2
      comp=Z,15nm,1.0s
SML                              LR       LR
      comp=Z,4µm,22.0s
SML   Sawmill          97.47 332 eP       Pdif     02 51 19.4 +2.2
SML                              pmax     pmax
      comp=Z,15nm,1.0s
SML                              MLR      MLR
      comp=Z,4µm,22.0s
DHY   Denali Highway   97.47 334 PFAKE             02 51 30.0 +13
DHY                              LR       LR
      comp=Z,4µm,20.0s
THZ   Tophouse         97.50 223 PFAKE             02 51 30.0 +12
THZ                              LR       LR
      comp=Z,5µm,22.0s
PRP   Porcupine Dome   97.57 336 PFAKE             02 51 30.0 +12
PRP                              LR       LR
      comp=Z,4µm,20.0s
HIZ   Hauiti           97.68 227 PFAKE             02 51 30.0 +11
HIZ                              LR       LR
      comp=Z,6µm,19.0s
CEL   Celeste          97.72  53 PFAKE             02 51 30.0 +11
CEL                              LR       LR
      comp=Z,3µm,20.0s
RPZ   Rata Peaks       97.73 221 PFAKE             02 51 30.0 +11
RPZ                              LR       LR
      comp=Z,8µm,20.0s
HDA   Harding Lake     97.75 335 eP       Pdif     02 51 19.2 +0.9
      comp=Z,6.6nm,1.1s
HDA                              LR       LR
      comp=Z,4µm,22.0s
HDA   Harding Lake     97.75 335 P        P        02 51 17.0 -1.2
      baz=110
PMR   Palmer           97.76 332 PFAKE             02 51 30.0 +12
PMR                              LR       LR
      comp=Z,6µm,19.0s
FYU   Fort Yukon       97.84 337 PFAKE             02 51 30.0 +11
FYU                              LR       LR
      comp=Z,5µm,22.0s
ILAR  Eielson Array    97.85 335 P        P        02 51 18.0 -0.7
      comp=Z,1.5nm,0.9s,baz=140,slow=3.4,SNR=11
ILAR                             PP       PP       02 55 13.6 -3.6
      comp=Z,1.2nm,0.9s,baz=107,slow=6.2,SNR=7.8
ILAR                             LR       LR       03 40 30.8
      comp=Z,2µm,19.6s,baz=114,slow=39
ILB   Eielson Array    97.85 335 eP       P        02 51 18.0 -0.7
      comp=Z,4.4nm,1.0s
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ILB				*e*PP	**PP**	**02 55 13.6**	**-3.6**
RC01	**Rabbit Creek A**	**97.88**	**331**	PFAKE		02 51 30.0	+11
RC01				LR	LR		
	comp=Z,5µm,22.0s						
LBZ	**Lake Benmore**	**97.93**	**220**	PFAKE		02 51 30.0	+10
LBZ				LR	LR		
	comp=Z,6µm,21.0s						
TRI	**Trieste**	**97.97**	**45**	PFAKE		02 51 30.0	+10
TRI				LR	LR		
	comp=Z,6µm,22.0s						
MUD	**Monsted U'grnd**	**97.98**	**34**	*e*P	Pdif	02 51 22.3	+2.9
MUD				MLR	MLR		
	comp=Z,6µm,21.0s						
MUD	**Monsted U'grnd**	**97.98**	**34**	*i* P	Pdif	02 51 22.3	+2.9
	comp=Z,6µm,21.0s						
KBA	**Koelnbreinsper**	**98.02**	**43**	*e*PcP	Pdif	02 51 20.3	+0.2
	comp=Z,1.9nm,0.8s						
BRLK	**Bradley Lake**	**98.03**	**330**	PFAKE		02 51 30.0	+10
BRLK				LR	LR		
	comp=Z,3µm,20.0s						
CADS	**Cadrg**	**98.08**	**44**	*e*Pdiff	Pdif	02 51 20.9	+0.7
CADS				*e*SKSac	**SKSac**	**03 02 02.5**	**+4.7**
CNPM	**China Poot**	**98.12**	**330**	PFAKE		02 51 30.0	+10
CNPM				LR	LR		
	comp=Z,3µm,20.0s						
CCB	**Clear Creek Bu**	**98.18**	**335**	*e*P	Pdif	02 51 20.7	+0.6
	comp=Z,7.0nm,1.0s						
CCB				LR	LR		
	comp=Z,3µm,20.0s						
POKR	**Poker Plat Res**	**98.19**	**336**	P	**P**	**02 51 20.0**	**-0.2**
	baz=110						
RND	**Reindeer**	**98.22**	**334**	*e*P	Pdif	02 51 21.9	+1.4
	comp=Z,13nm,1.0s						
NKC	**Novy Kostel**	**98.23**	**40**	*e*P	**P**	**02 51 19.4**	**-1.3**
NKC				MLR	MLR		
	comp=Z,8µm,21.5s						
NKC	**Novy Kostel**	**98.23**	**40**	*e*PDIFF	**P**	**02 51 19.4**	**-1.3**
NKC				*e*SKS	**SKSac**	**03 02 06.8**	**+8.5**
NKC				AMS	AMS	03 31 20.0	
	comp=Z,8µm,21.5s						
WRH	**Wood River Hil**	**98.24**	**335**	*e*P	Pdif	02 51 21.1	+0.7
	comp=Z,6.0nm,0.9s						
WRH				LR	LR		
	comp=Z,4µm,22.0s						
COLA	**College**	**98.27**	**335**	PFAKE		02 51 30.0	+9.4
COLA				LR	LR		
	comp=Z,4µm,22.0s						
COLA	**College**	**98.27**	**335***d*	*i*P	Pdif	02 51 20.6	0.0
COLA				pmax	pmax		
	comp=Z,43nm,2.9s						
COLA				MLR	MLR		
	comp=Z,4µm,22.0s						
TCOL	**CIGO, UAF Yank**	**98.28**	**335**	P	**P**	**02 51 19.8**	**-0.8**
	baz=109						
CASY	**Casey**	**98.28**	**181**	*e*P	Pdif	02 51 22.0	+1.2
	comp=Z,18nm,1.4s						
CASY				LR	LR		
	comp=Z,6µm,21.0s						
KDAK	**Kodiak Island**	**98.30**	**328**	PFAKE		02 51 30.0	+9.1
KDAK				LR	LR		
	comp=Z,2µm,22.0s						
MCK	**McKinley**	**98.35**	**334**	PFAKE		02 51 30.0	+9.0
MCK				LR	LR		
	comp=Z,3µm,20.0s						
HOM	**Homer**	**98.36**	**330**	PFAKE		02 51 30.0	+8.9
HOM				LR	LR		
	comp=Z,3µm,21.0s						
WKZ	**Wanaka**	**98.41**	**219**	PFAKE		02 51 30.0	+8.1
WKZ				LR	LR		
	comp=Z,13µm,22.0s						
MDM	**Murphy Dome**	**98.45**	**335**	PFAKE		02 51 30.0	+8.6
MDM				LR	LR		
	comp=Z,4µm,22.0s						
SUA	**Susitna One**	**98.46**	**332**	PFAKE		02 51 30.0	+8.3
SUA				LR	LR		
	comp=Z,100nm,20.0s						
OHAK	**Old Harbor**	**98.52**	**327**	PFAKE		02 51 30.0	+8.2
OHAK				LR	LR		
	comp=Z,2µm,21.0s						
LJU	**Ljubljana**	**98.57**	**45**	*e*Pdiff	Pdif	02 51 22.4	0.0
LJU				*e*PP	**PP**	**02 55 21.6**	**-1.6**
LJU				*e*SKSac	**SKSac**	**03 02 04.4**	**+4.3**
LJU				*e*SP	**SP**	**03 04 22.6**	**+6.9**
TIP	**Timpagrande**	**98.59**	**52**	PFAKE		02 51 30.0	+7.3
TIP				LR	LR		
	comp=Z,7µm,22.0s						
FOZ	**Fox Glacier**	**98.60**	**220**	PFAKE		02 51 30.0	+7.4
FOZ				LR	LR		
	comp=Z,8µm,18.0s						
MLZ	**Mavora Lakes**	**98.66**	**218**	PFAKE		02 51 30.0	+7.0
MLZ				LR	LR		
	comp=Z,6µm,20.0s						
KHC	**Kasperske Hory**	**98.67**	**41**	PFAKE		02 51 30.0	+7.2
KHC				LR	LR		
	comp=Z,2µm,21.0s						
GEC2	**GERESS Array S**	**98.68**	**42**	*e*P	**P**	**02 51 21.3**	**-1.6**
	comp=Z,3.7nm,1.0s						
GEC2	**GERESS Array S**	**98.68**	**42**	*e*P	**P**	**02 51 21.3**	**-1.6**
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	**GERESS Array B**	**98.68**	**42**	P	**P**	**02 51 21.3**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=249,slow=3.7,SNR=9.2						
GERES				S	**SKSac**	**03 02 00.6**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=346,slow=32,SNR=2.2						
GERES				LR	LR	03 32 49.9	
	comp=Z,3µm,20.8s,baz=241,slow=34						
BWN	**Browne**	**98.71**	**334**	PFAKE		02 51 30.0	+7.4
BWN				LR	LR		
	comp=Z,3µm,19.0s						
MOA	**Molln**	**98.81**	**43**	*e*Pdiff	Pdif	02 51 24.0	+0.5
	comp=Z,3.5nm,0.9s						
SII	**Sitkinak Islan**	**98.82**	**326**	PFAKE		02 51 30.0	+6.8
SII				LR	LR		
	comp=Z,3µm,19.0s						
CLL	**Collm**	**98.83**	**39**	PFAKE		02 51 30.0	+6.6
CLL				LR	LR		
	comp=Z,6µm,21.0s						
CLL	**Collm**	**98.83**	**39**	*e*P	**P**	**02 51 23.0**	**-0.4**
CLL				*e*		02 51 34.0	
CLL				*e*		03 02 03.0	
CLL				pmax	pmax		
	comp=Z,57nm,2.5s						
CLL				MLR	MLR		
	comp=Z,6µm,21.5s						
CLL	**Collm**	**98.83**	**39**	*e*Pdif	**P**	**02 51 23.0**	**-0.4**
	comp=Z,57nm,2.5s						
CLL				*e*		02 51 34.0	
CLL				*e*PP	**PP**	**02 55 25.0**	**-0.1**
CLL				*e*SKSac	**SKSac**	**03 02 03.0**	**+1.8**
CLL				*e*PS	PS	03 04 23.0	+2.6
CLL				*e*PPS	PPS	03 05 06.0	
CLL				*e*		03 10 06.0	
CLL				*e*SSS	SSS	03 13 30.0	
CLL				*e*		03 17 42.0	
CLL				LmV		03 31 00.0	
	comp=Z,6µm,21.5s						
CLL				Lmax		03 34 00.0	
KNTN	**Kanton**	**98.84**	**265**	PFAKE		02 51 40.0	+16
KNTN				LR	LR		
	comp=Z,6µm,19.0s						
BOJS	**Bojanci**	**98.93**	**45**	*e*Pdiff	Pdif	02 51 24.2	+0.2
BOJS				*e*		02 52 02.7	
BOJS				*e*PP	**PP**	**02 55 24.5**	**-1.6**
BOJS				*e*		03 02 48.1	
KONO	**Kongsberg**	**99.06**	**31**	PFAKE		02 51 40.0	+16
KONO				LR	LR		
	comp=Z,4µm,20.0s						
KTH	**Kantishna Hill**	**99.15**	**334**	PFAKE		02 51 40.0	+15
KTH				LR	LR		
	comp=Z,4µm,19.0s						
BRG	**Berggiesshubel**	**99.31**	**40**	*e*P	**Pdif**	**02 51 26.7**	**+1.2**
	comp=Z,19nm,1.7s						
BRG				*e*		02 51 34.1	
	comp=Z,8.4nm,1.3s						
BRG				PP	**PP**	**02 55 21.0**	**-7.8**
BRG				SKS		03 01 10.0	
BRG				S	**S**	**03 02 59.0**	**+1.8**
BRG				SS	SS	03 09 22.0	-25
	comp=N,4µm,18.8s						
	comp=E,3µm,16.3s						
	comp=Z,2µm,18.3s						
BRG	**Berggiesshubel**	**99.31**	**40**	*e*P	**Pdif**	**02 51 26.7**	**+1.2**
BRG				*e*		02 51 34.1	
BRG				S	**S**	**03 02 59.0**	**+1.8**
BRG				pmax	pmax		
	comp=Z,19nm,1.7s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,4µm,18.8s						
BRG				MLR	MLR		
	comp=E,3µm,16.3s						
BRG				MLR	MLR		
	comp=Z,2µm,18.3s						
BPAW	**Bear Paw Mtn.**	**99.33**	**334**	*e*P	**Pdif**	**02 51 25.5**	**+0.2**
	comp=Z,16nm,1.3s						
BPAW				*e*PP	**PP**	**02 55 26.4**	**-2.2**
BPAW				LR	LR		
	comp=Z,2µm,21.0s						
CHIR	**Chirikof Islan**	**99.41**	**325**	PFAKE		02 51 40.0	+14
CHIR				LR	LR		
	comp=Z,2µm,21.0s						
PRU	**Pruhonice**	**99.48**	**41**	*e*P	**Pdif**	**02 51 26.1**	**-0.2**
PRU				MLR	MLR		
	comp=Z,5µm,19.6s						
PRU	**Pruhonice**	**99.48**	**41**	*e*PDIFF	**Pdif**	**02 51 26.1**	**-0.2**
PRU				*e*SKS	**SKSac**	**03 02 11.3**	**+6.8**
PRU				AMS	AMS	03 34 00.0	
	comp=Z,5µm,19.6s						
MLY	**Manley**	**99.49**	**335**	*e*P	**Pdif**	**02 51 26.7**	**+0.6**
	comp=Z,5.6nm,1.0s						
MLY				LR	LR		
	comp=Z,2µm,20.0s						
ARSA	**Arzberg**	**99.51**	**44**	*e*P	**Pdif**	**02 51 27.3**	**+0.7**
	comp=Z,1.2nm,0.7s						
PPLA	**Purkeypile**	**99.51**	**333**	*e*P	**Pdif**	**02 51 24.1**	**-2.3**
	comp=Z,16nm,1.2s						
PPLA				LR	LR		
	comp=Z,3µm,20.0s						
COP	**Copenhagen**	**99.55**	**35**	*e*P	**Pdif**	**02 51 28.3**	**+1.9**
COP				MLR	MLR		
	comp=Z,5µm,21.0s						
COP	**Copenhagen**	**99.55**	**35**	*i* P	**Pdif**	**02 51 28.3**	**+1.9**
	comp=Z,5µm,21.0s						
CAST	**Castle Rocks**	**99.61**	**333**	PFAKE		02 51 40.0	+13
CAST				LR	LR		
	comp=Z,6µm,19.0s						
GOPC	**GO Pecny, Ondr**	**99.62**	**41**	*e*P	**Pdif**	**02 51 27.4**	**+0.4**
GOPC				MLR	MLR		
	comp=Z,4µm,19.6s						
GOPC	**GO Pecny, Ondr**	**99.62**	**41**	*e*PDIFF	**Pdif**	**02 51 27.4**	**+0.4**
GOPC				*e*SKS	**SKSac**	**03 02 12.4**	**+7.1**
GOPC				AMS	AMS	03 34 10.0	
	comp=Z,4µm,19.6s						
PVCC	**Panska Ves**	**99.62**	**40**	*e*SKS	**SKSac**	**03 02 11.7**	**+6.5**
PVCC				AMS	AMS	03 33 10.0	
	comp=Z,7µm,19.9s						
RGN	**Rugen**	**99.78**	**36**	PFAKE		02 51 40.0	+13
RGN				LR	LR		
	comp=Z,10µm,20.0s						
CONA	**Conrad Observa**	**99.88**	**43**	*e*P	**Pdif**	**02 51 29.5**	**+1.2**
	comp=Z,3.6nm,1.2s						
COLD	**Coldfoot**	**99.91**	**337**	PFAKE		02 51 40.0	+12
COLD				LR	LR		
	comp=Z,3µm,21.0s						
TREC	**Trest**	**99.93**	**42**	*e*P	**Pdif**	**02 51 29.4**	**+1.0**
TREC				*e*		02 51 37.9	
TREC				MLR	MLR		
	comp=Z,5µm,21.8s						
TREC	**Trest**	**99.93**	**42**	*e*PDIFF	**Pdif**	**02 51 29.4**	**+1.0**
TREC				*e*x	x	02 51 37.9	
TREC				*e*SKS	**SKSac**	**03 02 13.6**	**+6.8**
TREC				AMS	AMS	03 33 00.0	
	comp=Z,5µm,21.8s						
OUZ	**Omahuta**	**100.08**	**229**	PFAKE		02 51 40.0	+11
OUZ				LR	LR		
	comp=Z,4µm,21.0s						
TOLK	**Toolik Lake Re**	**100.09**	**339**	PFAKE		02 51 40.0	+11
TOLK				LR	LR		
	comp=Z,4µm,22.0s						
TOLK	**Toolik Lake Re**	**100.09**	**339**	P	**Pdif**	**02 51 27.8**	**-0.9**
	baz=107						
BLY	**Banja Luka**	**100.11**	**46**	PFAKE		02 51 40.0	+11
BLY				LR	LR		
	comp=Z,6µm,21.0s						
NOA	**NORSAR Array B**	**100.19**	**29**	P	**Pdif**	**02 51 30.2**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=263,slow=4.3,SNR=2.4						
KRUC	**Moravsky**	**100.46**	**42**	*e*PDIFF	**Pdif**	**02 51 30.4**	**-0.3**
UPC	**Upice**	**100.51**	**40**	*e*SKS	**SKSac**	**03 02 17.0**	**+7.4**
UPC				AMS	AMS	03 32 40.0	
	comp=Z,6µm,21.3s						
CHVC	**Chvalec**	**100.56**	**40**	*e*SKS	**SKSac**	**03 02 17.4**	**+7.5**
CHVC				AMS	AMS	03 32 40.0	
	comp=Z,6µm,21.8s						
VRAC	**Vranov**	**100.64**	**42**	S	**SKSac**	**03 02 12.4**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=252,slow=20,SNR=1.7						
VRAC	**Vranov**	**100.64**	**42**	*e*PDIFF	**Pdif**	**02 51 31.8**	**+0.3**
OSTC	**Ostas**	**100.65**	**40**	*e*SKS	**SKSac**	**03 02 18.2**	**+7.9**
OSTC				AMS	AMS	03 32 40.0	
	comp=Z,6µm,21.3s						
DPC	**Dobruska-Polom**	**100.68**	**41**	*e*P	**Pdif**	**02 51 32.1**	**+0.4**
DPC				MLR	MLR		
	comp=Z,5µm,18.8s						
DPC	**Dobruska-Polom**	**100.68**	**41**	*e*PDIFF	**Pdif**	**02 51 32.1**	**+0.4**
DPC				*e*SKS		03 02 17.5	
DPC				AMS	AMS	03 36 40.0	
	comp=Z,5µm,18.8s						
TTG	**Podgorica**	**101.12**	**49**	PFAKE		02 51 50.0	+16
TTG				LR	LR		
	comp=Z,4µm,22.0s						
JAVC	**Velka Javorina**	**101.25**	**42**	*e*PDIFF	**Pdif**	**02 51 35.4**	**+1.1**
MORC	**Moravsky Berou**	**101.34**	**41**	PFAKE		02 51 50.0	+15
MORC				LR	LR		
	comp=Z,6µm,22.0s						
MORC	**Moravsky Berou**	**101.34**	**41**	*e*PDIFF	**Pdif**	**02 51 33.5**	**-1.1**
TIR	**Tirane**	**101.36**	**50**	PFAKE		02 51 50.0	+15
TIR				LR	LR		
	comp=Z,4µm,22.0s						
JOHN	**Johnston Islan**	**101.64**	**284**	PFAKE		02 51 50.0	+13
JOHN				LR	LR		
	comp=Z,3µm,21.0s						
OKC	**Ostrava-Krasne**	**101.73**	**41**	AMS	AMS	03 35 50.0	
	comp=Z,4µm,20.9s						
MBAR	**Mbarara**	**101.85**	**94**	PFAKE		02 51 50.0	+12
MBAR				LR	LR		
	comp=Z,9µm,19.0s						
VYHS	**Vyhne**	**101.94**	**43**	*e*P	**Pdif**	**02 51 37.4**	**+0.1**
VYHS	**Vyhne**	**101.94**	**43**	*e*PDIF	**Pdif**	**02 51 37.4**	**+0.1**
ITM	**Ithomi**	**102.17**	**55**	PFAKE		02 51 50.0	+11
ITM				LR	LR		
	comp=Z,3µm,21.0s						
PSZ	**Piszkesteto**	**102.54**	**44**	PFAKE		02 51 50.0	+10
PSZ				LR	LR		
	comp=Z,5µm,19.0s						
AGG	**Agios Georgios**	**102.80**	**53**	PFAKE		02 51 50.0	+8.6
AGG				LR	LR		
	comp=Z,3µm,22.0s						
LIT	**Litokhoron**	**103.11**	**52**	PFAKE		02 51 50.0	+7.3
LIT				LR	LR		
	comp=Z,4µm,22.0s						
FALS	**False Pass**	**103.60**	**324**	PFAKE		02 52 00.0	+16
FALS				LR	LR		
	comp=Z,2µm,21.0s						
VTS	**Vitosha**	**104.05**	**49**	PFAKE		02 52 00.0	+13
VTS				LR	LR		
	comp=Z,3µm,21.0s						
KBS	**Kingsbay**	**104.05**	**11**	PFAKE		02 52 00.0	+14
KBS				LR	LR		
	comp=Z,3µm,21.0s						
KWP	**Kalwaria Pacla**	**104.63**	**42**	PFAKE		02 52 00.0	+11
KWP				LR	LR		
	comp=Z,32µm,21.0s						
RDOG	**Red Dog Mine**	**104.83**	**337**	PFAKE		02 52 00.0	+10
RDOG				LR	LR		
	comp=Z,3µm,21.0s						
AKUT	**Akutan**	**104.88**	**323**	PFAKE		02 52 00.0	+10
AKUT				LR	LR		
	comp=Z,2µm,22.0s						
UNV	**Unalaska Valle**	**105.28**	**322**	PFAKE		02 56 20.0	+14
UNV				LR	LR		
	comp=Z,2µm,21.0s						
SUW	**Suwalki**	**105.39**	**38**	PFAKE		02 56 20.0	+14
SUW				LR	LR		
	comp=Z,4µm,22.0s						
ANM	**Nome**	**105.57**	**333**	PFAKE		02 56 20.0	+14
ANM				LR	LR		
	comp=Z,3µm,21.0s						
ALN	**Alexandroupoli**	**105.90**	**51**	PFAKE		02 56 20.0	+12
ALN				LR	LR		
	comp=Z,2µm,22.0s						
KARP	**Karpathos**	**106.08**	**57**	PFAKE		02 56 20.0	+12
KARP				LR	LR		
	comp=Z,3µm,20.0s						
MLR	**Muntele Rosu**	**106.34**	**47**	PFAKE		02 56 20.0	+12
MLR				LR	LR		
	comp=Z,5µm,21.0s						
NIKH	**Nikolski High**	**106.61**	**321**	PFAKE		02 56 20.0	+11
NIKH				LR	LR		
	comp=Z,2µm,21.0s						
ARE0	**ARCESS Array S**	**107.10**	**21**	PFAKE		02 56 20.0	+11
ARE0				LR	LR		
	comp=Z,300nm,22.0s						
BALB	**Balikesir**	**107.15**	**53**	PFAKE		02 56 20.0	+10
BALB				LR	LR		
	comp=Z,10µm,21.0s						
NAI	**Nairobi**	**107.48**	**96**	PFAKE		02 56 20.0	+8.4
NAI				LR	LR		
	comp=Z,6µm,18.0s						
MANT	**Manisa**	**107.55**	**54**	PFAKE		02 56 20.0	+9.0
MANT				LR	LR		
	comp=Z,8µm,22.0s						
NACGM	**Naroch**	**107.55**	**37**	*e*SKS	**SKSac**	**03 02 46.0**	**+4.3**
NACGM				*e*SKKKS		03 04 23.0	
NACGM				*e*PS	PS	03 06 14.0	+22
NACGM				*e*SS	SS	03 11 57.0	+17
NACGM				*e*SSS	SSS	03 15 04.0	
NACGM				*e*LQ	LQ	03 31 14.0	
NACGM				*e*LR	LR	03 38 30.0	
SPIA	**Saint Paul Isl**	**107.62**	**326**	PFAKE		02 56 20.0	+10
SPIA				LR	LR		
	comp=Z,4µm,21.0s						
KMBO	**Kilima Mbogo**	**107.96**	**96**	Pdiff	**Pdif**	**02 52 02.9**	**-2.3**
	comp=Z,1.9nm,0.7s,baz=231,slow=13,SNR=4.8						
KMBO	**Kilima Mbogo**	**107.96**	**96**	*e*Pdif	**Pdif**	**02 52 02.9**	**-2.3**
KMBO				LR	LR		
	comp=Z,6µm,20.0s						
KMBO	**Kilima Mbogo**	**107.96**	**96**	*e*P	**Pdif**	**02 52 02.9**	**-2.3**
KMBO				MLR	MLR		
	comp=Z,6µm,20.0s						
TIRR	**Tirgusor**	**108.00**	**48**	PFAKE		02 56 20.0	+8.7
TIRR				LR	LR		
	comp=Z,8µm,22.0s						
GAMB	**Gambell**	**108.33**	**333**	PFAKE		02 56 20.0	+8.6
GAMB				LR	LR		
	comp=Z,3µm,20.0s						
AKASG	**Malin Array Be**	**108.89**	**41**	PKiKP	**PKiKP**	**02 56 13.3**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=275,slow=2.3,SNR=5.5						
AKASG				PP	**PP**	**02 56 39.1**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=276,slow=4.2,SNR=4.9						
AKBB	**Malin Array Si**	**108.89**	**41**	*e*PKiKP	**PKiKP**	**02 56 13.3**	**+0.5**
AKBB				*e*PP	**PP**	**02 56 39.1**	**-0.9**
ISP	**Isparta**	**109.02**	**55**	PFAKE		02 56 30.0	+16
ISP				LR	LR		
	comp=Z,3µm,22.0s						
MDUB	**Mudurnu**	**109.76**	**52**	PFAKE		02 56 30.0	+15
MDUB				LR	LR		
	comp=Z,8µm,22.0s						
APA	**Apatity**	**110.15**	**23**⇓	*i*P	**Pdif**	**02 52 01.6**	**-12**
APA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LVZ	**Lovozero**	**110.57**	**23**	PFAKE		02 56 30.0	+14
LVZ				LR	LR		
	comp=Z,5µm,21.0s						
ABPO	**Ambohimpanom**	**110.77**	**118**	PFAKE		02 56 30.0	+12
ABPO				LR	LR		
	comp=Z,4µm,20.0s						
MIDW	**Midway**	**110.80**	**295**	PFAKE		02 56 30.0	+13
MIDW				LR	LR		
	comp=Z,2µm,20.0s						
ANTO	**Ankara**	**110.94**	**53**	PFAKE		02 56 30.0	+13
ANTO				LR	LR		
	comp=Z,3µm,22.0s						
CSS	**Mathiatis**	**111.03**	**58**	PFAKE		02 56 30.0	+13
CSS				LR	LR		
	comp=Z,2µm,21.0s						
ADK	**Adak**	**111.38**	**320**	PFAKE		02 56 30.0	+13
ADK				LR	LR		
	comp=Z,2µm,22.0s						
TAU	**Tasmania Unive**	**111.56**	**210**	PFAKE		02 56 30.0	+12
TAU				LR	LR		
	comp=Z,7µm,20.0s						
BR101	**Keskin Array S**	**111.59**	**53**	*e*PKiKP	**PKiKP**	**02 56 19.9**	**+1.4**
BR101				*e*PP	**PP**	**02 57 00.6**	**+0.4**
BRTR	**Keskin Array B**	**111.59**	**53**	PKiKP	**PKiKP**	**02 56 19.9**	**+1.4**
	comp=Z,2.3nm,0.9s,baz=196,slow=3.7,SNR=11						
BRTR				PP	**PP**	**02 57 00.6**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=276,slow=14,SNR=2.9						
ONTNC	**Ouen Toro**	**111.64**	**238**	PFAKE		02 56 30.0	+11
ONTNC				LR	LR		
	comp=Z,3µm,20.0s						
ILGA	**Ilgaz**	**111.70**	**52**	PFAKE		02 56 30.0	+11
ILGA				LR	LR		
	comp=Z,2µm,21.0s						
DZM	**Mont Dzumac**	**111.76**	**238**	*e*PP	**PP**	**02 56 57.3**	**-3.9**
	comp=Z,340nm,26.7s						
DZM				*e*SP	SP	03 06 24.8	-7.8
	comp=Z,1µm,26.4s						
DZM				*e*SS	**SS**	**03 12 33.3**	**-4.2**
	comp=Z,4µm,27.9s						
DZM	**Mont Dzumac**	**111.76**	**238**	*e*LR	LR	03 29 32.7	
	comp=Z,11µm,29.2s,baz=136						
DZM	**Mont Dzumac**	**111.76**	**238**	PFAKE		02 56 30.0	+11
DZM				LR	LR		
	comp=Z,3µm,20.0s						
FURI	**Furi**	**111.93**	**87**	PFAKE		02 56 30.0	+10
FURI				LR	LR		
	comp=Z,4µm,18.0s						
LHI	**Lord Howe Isla**	**112.35**	**226**	PFAKE		02 56 30.0	+10
LHI				LR	LR		
	comp=Z,5µm,20.0s						
OBN	**Obninsk**	**113.18**	**36**	PFAKE		02 56 30.0	+9.2
OBN				LR	LR		
	comp=Z,9µm,22.0s						
OBN	**Obninsk**	**113.18**	**36**⇓	*i*PKIKP	**PKiKP**	**02 56 22.2**	**+1.4**
OBN				*e*		02 57 13.0	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MOS	**Moscow**	**113.70**	**36**	*i* PKIKP	**PKiKP**	**02 56 26.8**	**+5.0**
MOS				*e*		02 57 22.0	
MOS				*e*		03 03 02.5	
MOS				*i*		03 06 46.0	
MOS				*e*SS	SS	03 12 50.4	-12
MOS				MLR	MLR		
	comp=Z,3µm,17.0s						
ANN	**Anapa**	**114.44**	**48**	*i* PKIKP	PKPdf	02 56 22.4	-1.1
ANN				*e*		03 03 13.5	
ANN				*e*SSS	SSS	03 17 29.5	
ANN				pmax	pmax		
	comp=Z,37nm,0.7s						
ANN				MLR	MLR		
	comp=Z,3µm,21.0s						
TARA	**Tarawa**	**114.73**	**264**	PFAKE		02 56 40.0	+15
TARA				LR	LR		
	comp=Z,5µm,22.0s						
LPSR	**Galich'ya Gora**	**114.84**	**39**	*e*PKIKP	PKPdf	02 56 24.5	+0.4
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSR	**Storozhevoye**	**115.14**	**40**	*e*PKIKP	**PKPdf**	**02 56 25.3**	**+0.6**
VSR				*e*SS	SS	03 13 14.7	-6.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORD	**Divnogorie**	**115.25**	**41**	*e*PKIKP	**PKPdf**	**02 56 25.0**	**+0.1**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SOC	**Sochi**	**116.14**	**49**	*i* PKIKP	**PKPdf**	**02 56 25.3**	**-1.6**
SOC				*e*		02 57 28.6	
SOC				*e*PPP	PPP	03 00 05.3	
SOC				*e*PS	PKKPdf	03 07 12.4	-11
SOC				*e*SSS	SSS	03 17 52.4	
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
BILL	**Bilibino**	**116.14**	**339**	PFAKE		02 56 40.0	+14
BILL				LR	LR		
	comp=Z,3µm,22.0s						
BILL	**Bilibino**	**116.14**	**339**⇑	*e*PKIKP	**PKPdf**	**02 56 27.2**	**+1.0**
BILL				*e*		02 57 32.7	
BILL				*e*PPP	PPP	02 59 59.2	
BILL				*i* SS	SS	03 13 34.1	+0.8
BILL				pmax	pmax		
	comp=Z,13nm,2.2s						
BILL				MLR	MLR		
	comp=Z,4µm,26.0s						
CAN	**Canberra**	**116.25**	**217**	PFAKE		02 56 40.0	+12
CAN				LR	LR		
	comp=Z,4µm,22.0s						

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ATD   Arta Tunnel      116.50  85   PFAKE              02 56 40.0 +12
ATD                                 LR       LR
      comp=Z,3µm,20.0s
TOO   Toolangi         116.52 213   PFAKE              02 56 40.0 +12
TOO                                 LR       LR
      comp=Z,4µm,22.0s
PRGR  Permogore        116.57  28  ePKIKP    PKiKP     02 56 28.5 +1.4
PRGR                                pmax     pmax
      comp=Z,6.0nm,0.6s
SMY   Shemya           116.92 322   PFAKE              02 56 40.0 +12
SMY                                 LR       LR
      comp=Z,2µm,20.0s
ARMA  Armidale         118.01 222   PFAKE              02 56 40.0 +8.8
ARMA                                LR       LR
      comp=Z,5µm,20.0s
KIV   Kislovodsk       118.25  48   PFAKE              02 56 40.0 +8.9
KIV                                 LR       LR
      comp=Z,1µm,22.0s
KIV   Kislovodsk       118.25  48  i PKIKP   PKiKP     02 56 34.4 +3.3
KIV                                e                   02 57 52.3
KIV                                eSS       SS        03 14 12.2 +10
KIV                                 pmax     pmax
      comp=Z,25nm,1.1s
KIV                                 MLR      MLR
      comp=Z,5µm,22.0s
NEY   Neytrino         118.34  49⇓iPKIKP     PKiKP     02 56 35.3 +3.9
NEY                                 MLR      MLR
      comp=Z,990nm,21.0s
KBZ   Khabaz           118.43  49   PKP      PKiKP     02 56 31.8 +0.5
      comp=Z,11nm,0.9s,baz=238,slow=1.6,SNR=16
NCK   Nalchik          118.95  49⇑iPKIKP     PKiKP     02 56 34.3 +1.9
NCK                                 MLR      MLR
      comp=Z,2µm,21.0s
AKH   Akhalkalaki      119.06  51   PFAKE              02 56 40.0 +7.1
AKH                                 LR       LR
      comp=Z,1µm,18.0s
GNI   Garni            120.11  52   PFAKE              02 56 50.0 +15
GNI                                 LR       LR
      comp=Z,2µm,20.0s
GNI   Garni            120.11  52⇓iPKIKP     PKiKP     02 56 37.6 +2.6
RAYN  Ar Rayn          120.75  72  ePKPdf    PKiKP     02 56 38.0 +1.5
RAYN                                LR       LR
      comp=Z,4µm,20.0s
RAYN  Ar Rayn          120.75  72  ePKIKP    PKiKP     02 56 38.0 +1.5
RAYN                                MLR      MLR
      comp=Z,4µm,20.0s
EIDS  Eidsvold         121.66 226   PFAKE              02 56 50.0 +12
EIDS                                LR       LR
      comp=Z,5µm,22.0s
KWAJ  Kwajalein Atol   121.74 271   PFAKE              02 56 50.0 +11
KWAJ                                LR       LR
      comp=Z,4µm,21.0s
MAK   Makhachkala      121.86  49  eP        Pdif      02 53 02.6 -3.4
MAK                                e                   02 58 08.0
MAK                                 pmax     pmax
      comp=Z,114nm,1.1s
TIXI  Tiksi            122.69 352  ePKPdf    PKiKP     02 56 38.9 +0.1
TIXI                                LR       LR
      comp=Z,4µm,22.0s
TIXI  Tiksi            122.69 352⇑iPKIKP     PKiKP     02 56 38.8  0.0
TIXI                                pmax     pmax
      comp=Z,5.0nm,1.0s
TIXI                                MLR      MLR
      comp=Z,4µm,21.0s
STKA  Stephens Creek   122.93 214   PKhKP    PKPpre    02 56 35.6
      comp=Z,2.0nm,0.7s,baz=294,slow=14,SNR=2.3
STKA                                PKP      PKiKP     02 56 41.1 +0.5
      comp=Z,4.9nm,0.8s,baz=151,slow=5.2,SNR=5.6
HNR   Honiara          123.06 247   PFAKE              02 56 50.0 +8.7
HNR                                 LR       LR
      comp=Z,3µm,21.0s
SEY   Seymchan         123.71 337⇑iPKIKP     PKiKP     02 56 42.0 +0.9
MSEY  Mahe Island      124.00 107   PFAKE              02 56 50.0 +6.8
MSEY                                LR       LR
      comp=Z,4µm,20.0s
H11N3 WAKE ISLAND Hy124.20 283      T        T         05 12 23.2
      baz=98,slow=74,SNR=4.8
H11N2 WAKE ISLAND Hy124.21 283      T        T         05 12 23.7
      baz=98,slow=74,SNR=4.6
H11N1 WAKE ISLAND Hy124.22 283      T        T         05 12 30.9
      baz=98,slow=74,SNR=4.6
H11S2 WAKE ISLAND Hy124.26 282      T        T         05 12 42.4
      baz=98,slow=74,SNR=13
H11S1 WAKE ISLAND Hy124.27 282      T        T         05 12 36.6
      baz=98,slow=74,SNR=10
H11S3 WAKE ISLAND Hy124.28 282      T        T         05 12 31.0
      baz=98,slow=74,SNR=11
WAKE  Wake Island      124.39 283   PFAKE              02 57 00.0 +16
WAKE                                LR       LR
      comp=Z,4µm,21.0s
ARU   Arti             124.70  31  ePKPdf    PKPdf     02 56 42.5 -0.4
ARU                                 LR       LR
      comp=Z,7µm,20.0s
ARU   Arti             124.70  31  i PKIKP   PKiKP     02 56 43.7 +0.4
ARU                                                    02 58 26.7
ARU                                                    03 03 55.3
ARU                                 SP       SP        03 08 18.4 -8.9
ARU                                 PS       PS        03 08 27.3 -2.8
ARU                                 SS       SS        03 15 18.5 -5.2
ARU                                 MLR      MLR
      comp=Z,7µm,21.0s
BBOO  Buckleboo        124.95 209   PFAKE              02 57 00.0 +15
BBOO                                LR       LR
      comp=Z,4µm,20.0s
PET   Petropavlovsk    125.79 325   PFAKE              02 57 00.0 +15
PET                                 LR       LR
      comp=Z,2µm,21.0s
PEA1  Petropavlovsk-   126.28 325  ePKPdf    PKiKP     02 56 46.5  0.0
PEA0B Petropavlovsk-   126.28 325  ePKPdf    PKiKP     02 56 48.6 +2.1
PETK  Petropavlovsk-   126.28 325   PKP      PKiKP     02 56 46.5  0.0
      comp=Z,4.2nm,0.8s,baz=83,slow=6.1,SNR=9.2
MA2   Magadan          126.33 335   PFAKE              02 57 00.0 +14
MA2                                 LR       LR
      comp=Z,3µm,20.0s
SKR   Severo-Kuril's   128.19 323  i PKIKP   PKPdf     02 56 48.9 -0.8
SKR                                e                   02 58 52.7
SKR                                 pmax     pmax
      comp=Z,49nm,1.1s
CTAO  Charters Tower   128.45 228   PFAKE              02 57 00.0 +8.1
CTAO                                LR       LR
      comp=Z,4µm,21.0s
AB31  Akbulak array    128.50  39  i PKIKP   PKiKP     02 56 51.9 +0.8
AB31                                pmax     pmax
      comp=Z,25nm,0.9s
ABKAR Akbulak array    128.50  39  ePKPdf    PKiKP     02 56 52.3 +1.2
UOSS  Minazif          130.57  70   PFAKE              02 57 10.0 +14
UOSS                                LR       LR
      comp=Z,6µm,21.0s
GEYT  Alibeck          130.73  53   PKP      PKiKP     02 56 55.9 -0.1
      comp=Z,6.8nm,0.9s,baz=260,slow=5.7,SNR=9.4
YAK   Yakutsk          131.26 347   PFAKE              02 57 10.0 +14
YAK                                 LR       LR
      comp=Z,3µm,22.0s
YAK   Yakutsk          131.26 347  i PKIKP   PKiKP     02 56 56.9 +0.7
YAK                                 MLR      MLR
      comp=Z,3.0nm,21.3s
BRVK  Borovoye         132.25  30  ePKPdf    PKiKP     02 56 58.9 +0.4
BRVK                                LR       LR
      comp=Z,6µm,22.0s
BRVK  Borovoye         132.25  30d iPKIKP    PKiKP     02 56 58.6 +0.1
BRVK                                MLR      MLR
      comp=Z,3µm,19.0s
BRVK  Borovoye         132.25  30   P        PKiKP     02 56 59.9 +1.4
      SNR=11
AS31  Alice Springs    133.56 213  ePKPdf    PKiKP     02 57 02.1  0.0
ASAR  Alice Springs    133.56 213   PKP      PKiKP     02 57 01.6 -0.6
      comp=Z,3.5nm,0.7s,baz=131,slow=1.8,SNR=17
PMG   Port Moresby     134.12 240   PFAKE              02 57 10.0 +6.6
PMG                                 LR       LR
      comp=Z,3µm,20.0s
PMG   Port Moresby     134.12 240c iPKIKP    PKiKP     02 57 04.5 +1.1
COEN  Coen             134.63 231   PFAKE              02 57 20.0 +16
COEN                                LR       LR
      comp=Z,3µm,20.0s
NKL   Nikolayevsk      134.75 333  i PKIKP   PKiKP     02 57 04.5 +1.0
NKL                                e                   02 59 37.3
NKL                                eSS       SS        03 17 23.6 -3.4
NKL                                 MLR      MLR
      comp=E,332nm,19.0s
NKL                                 MLR      MLR
      comp=Z,3µm,26.0s
NKL                                 MLR      MLR
      comp=N,1µm,17.0s
OTUK  Ortayu           136.14  34   PKIKP    PKiKP     02 57 06.5 -0.1
OTUK                                pmax     pmax
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      comp=Z,29nm,1.2s
WB2   Warramunga Arr   136.29 217   PFAKE              02 57 20.0 +12
WB2                                 LR       LR
      comp=Z,4µm,20.0s
WR1   Warramunga Arr   136.30 217  ePKPdf    PKPdf     02 57 05.5 -0.6
WRA   Warramunga Arr   136.30 217   PKP      PKPdf     02 57 05.5 -0.6
      comp=Z,16nm,1.0s,baz=169,slow=0.9,SNR=19
WRAB  Tennant Creek    136.30 217  ePKPdf    PKPdf     02 57 06.4 +0.3
WRAB                                LR       LR
      comp=Z,5µm,22.0s
WRAB  Tennant Creek    136.30 217dePKIKP     PKPdf     02 57 04.2 -1.9
WC1   Warramunga Arr   136.31 217   PFAKE              02 57 20.0 +12
WC1                                 LR       LR
      comp=Z,3µm,18.0s
YUK   Yuzh-Kuril'sk    137.42 319  ePKIKP    PKPdf     02 57 07.6 +0.3
YUK                                e                   02 59 52.2
YUK                                e                   03 10 17.5
YUK                                 pmax     pmax
      comp=Z,167nm,1.1s
YUK                                 pmax     pmax
      comp=E,70µm,0.9s
YUK                                 pmax     pmax
      comp=N,125nm,0.9s
MANU  Manus Island     137.52 249   PFAKE              02 57 20.0 +10
MANU                                LR       LR
      comp=Z,2µm,20.0s
ZAA1  Zalesovo Array   137.63  20  ePKPdf    PKPdf     02 57 07.4 -0.1
ZALV  Zalesovo Beam    137.64  20   PKhKP    PKPpre    02 57 00.3
      comp=Z,4.8nm,0.9s,baz=278,slow=4.2,SNR=7.7
ZALV                                PKP      PKPdf     02 57 07.4 -0.1
      comp=Z,40nm,0.9s,baz=316,slow=2.4,SNR=18
YSS   Yuzh-Sakhalins   137.68 325   PFAKE              02 57 20.0 +10
YSS                                 LR       LR
      comp=Z,6µm,21.0s
YSS   Yuzh-Sakhalins   137.68 325dePKIKP     PKiKP     02 57 08.7 -1.0
YSS                                e                   02 59 52.7
YSS                                ePPP      PPP       03 02 51.5
YSS                                e                   03 04 07.9
YSS                                 pmax     pmax
      comp=Z,600nm,3.4s
KURK  Kurchatov        137.68  28  ePKPdf    PKPdf     02 57 08.1 +0.4
KURK                                LR       LR
      comp=Z,3µm,20.0s
KURK  Kurchatov        137.68  28d iPKIKP    PKiKP     02 57 09.6  0.0
KURK  Kurchatov        137.68  28   P        PKiKP     02 57 09.4 -0.2
      SNR=12
KK31  Karatay Array    137.78  42  ePKPdf    PKiKP     02 57 09.3 -0.8
KK31  Karatay Array    137.78  42  ePKIKP    PKiKP     02 57 09.3 -0.8
KKAR  Karatay Array    137.78  42  ePKPdf    PKPdf     02 57 08.7 +0.6
KKAR  Karatay Array    137.78  42  ePKIKP    PKPdf     02 57 08.7 +0.6
GRNR  Gornyy           138.29 333  ePKHKP    PKPpre    02 56 57.3
CHGR  Chuyangaron      138.79  49  ePKPdf    PKPdf     02 57 10.5 +0.3
CHGR                                LR       LR
      comp=Z,8µm,22.0s
ZEA   Zeya             139.20 343  ePKIKP    PKPdf     02 57 06.2 -4.1
ZEA                                e                   03 00 01.0
ZEA                                ePPP      PPP       03 03 02.0
ZEA                                e                   03 18 19.0
ZEA                                 pmax     pmax
      comp=Z,320nm,3.0s
ZEA                                 pmax     pmax
      comp=Z,500nm,4.0s
ZEA                                 pmax     pmax
      comp=Z,400nm,10.0s
ZEA                                 MLR      MLR
      comp=Z,5µm,24.0s
ZEA                                 MLR      MLR
      comp=N,6µm,23.0s
ZEA                                 MLR      MLR
      comp=E,1µm,23.0s
ASAJ  Asahikawa        139.38 321   PKP      PKiKP     02 57 12.8 -0.5
      comp=E,7.7nm,1.0s,baz=280,slow=8.1,SNR=6.8
BTK   Batken           139.38  46   PFAKE              02 57 20.0 +6.4
BTK                                 LR       LR
      comp=Z,5µm,21.0s
GAR   Garm             139.48  48  ePKPdf    PKiKP     02 57 13.2 -0.6
GAR                                 LR       LR
      comp=Z,8µm,20.0s
KBL   Kabul            140.14  55   PFAKE              02 57 30.0 +15
KBL                                 LR       LR
      comp=Z,2µm,20.0s
ERM   Erimo            140.15 318   PFAKE              02 57 20.0 +5.1
ERM                                 LR       LR
      comp=Z,3µm,20.0s
ERM   Erimo            140.15 318cePKIKP     PKPdf     02 57 13.1 +0.7
FRU1  Bishkek          140.53  40   PFAKE              02 57 30.0 +14
FRU1                                LR       LR
      comp=Z,4µm,21.0s
AAK   Ala-Archa        140.54  40  ePKPdf    PKiKP     02 57 15.3 -0.6
AAK                                 LR       LR
      comp=Z,3µm,20.0s
AAK   Ala-Archa        140.54  40d iPKIKP    PKiKP     02 57 15.1 -0.8
AAK   Ala-Archa        140.54  40   P        PKiKP     02 57 16.5 +0.5
      SNR=16
PSAB3 Pilbara Seismi   141.26 197   PFAKE              02 57 30.0 +12
PSAB3                               LR       LR
      comp=Z,5µm,20.0s
KLR   Kul'dur          141.42 335   PKhKP    PKPpre    02 57 10.3
      comp=Z,3.7nm,0.9s,baz=80,slow=5.8,SNR=2.4
KLR                                 PP       PP        03 00 16.4 -0.4
      comp=Z,3.7nm,1.1s,baz=18,slow=6.8,SNR=6.4
KLR   Kul'dur          141.42 335cePKIKP     PKPdf     02 57 14.6 +0.1
KLR                                 MLR      MLR
      comp=Z,4µm,24.0s
BOOM  Boomskoye usch141.51  39     ePKPdf    PKiKP     02 57 17.2 -0.8
BOOM                                LR       LR
      comp=Z,5µm,22.0s
MAKZ  Makanchi         142.03  30  ePKPpre   PKPdf     02 57 11.8 -3.9
MAKZ                                LR       LR
      comp=Z,4µm,22.0s
MAKZ  Makanchi         142.03  30  ePKIKP    PKPdf     02 57 11.8 -3.9
MAKZ                                MLR      MLR
      comp=Z,4µm,22.0s
DGZ   Jazzator, Alta   142.07  22d iPKIKP    PKPdf     02 57 13.7 -2.2
DGZ                                i                   02 57 18.4
NRN   Naryn            142.14  41  ePKPdf    PKPdf     02 57 17.7 +1.2
NRN                                 LR       LR
      comp=Z,4µm,22.0s
MK31  Makanchi Array   142.19  29  ePKPpre   PKPdf     02 57 12.3 -3.7
MK31  Makanchi Array   142.19  29  ePKIKP    PKPdf     02 57 12.3 -3.7
MK32  Makanchi Array   142.19  29  ePKPpre   PKPdf     02 57 12.3 -3.8
MKAR  Makanchi Array   142.19  29   PKhKP    PKPdf     02 57 12.3 -3.8
      comp=Z,9.9nm,0.9s,baz=336,slow=2.7,SNR=35
KDJ   Kajisay          142.48  39  ePKPdf    PKPdf     02 57 15.6 -1.3
KDJ                                 LR       LR
      comp=Z,3µm,22.0s
KDJ   Kajisay          142.48  39  ePKIKP    PKPdf     02 57 15.6 -1.3
KDJ                                 MLR      MLR
      comp=Z,3µm,22.0s
BHJ   Bhuj             142.92  72  eP        PKPdf     02 57 17.2 -0.8
PRZ   Przheval'sk      143.00  38  ePKPdf    PKPdf     02 57 17.8  0.0
PRZ                                 LR       LR
      comp=Z,2µm,21.0s
PRZ   Przheval'sk      143.00  38  ePKIKP    PKPdf     02 57 17.8  0.0
PRZ                                 MLR      MLR
      comp=Z,2µm,21.0s
KSH   Kashi            143.14  44  ePKP      PKPdf     02 57 19.0 +0.9
KSH                                 PP       PP        03 00 32.0 +4.0
KSH                                 SKS      SKSdf     03 04 27.1 -0.7
KSH                                 SKKS     SKKSac    03 07 23.1 +1.8
KSH                                 SS       SS        03 19 08.8 +1.5
KSH                                 AMB      AMB
      comp=Z,630nm,7.7s
KSH                                 LR       LR
      comp=Z,5µm,25.8s
KSH                                 LR       LR
      comp=Z,3µm,19.4s
KSH                                 LR       LR
      comp=Z,5µm,23.3s
IRK   Irkutsk          143.37   4  ePKHKP    PKPpre    02 57 10.5
IRK                                 pmax     pmax
      comp=Z,162nm,3.3s
GENI  Genyem           143.59 243   PKP      PKiKP     02 57 22.8  0.0
MOY   Mondy            143.62   8  ePKIKP    PKPdf     02 57 17.3 -1.2
MOY                                 pmax     pmax
      comp=Z,218nm,3.4s
NIL   Nilore           143.73  54  ePKPdf    PKPdf     02 57 18.3 -0.9
NIL                                 LR       LR
      comp=Z,2µm,19.0s
NIL   Nilore           143.73  54  ePKIKP    PKPdf     02 57 18.3 -0.9
NIL                                 MLR      MLR
      comp=Z,2µm,19.0s
MTN   Manton Dam       143.74 220  ePKPdf    PKPbc     02 57 18.1 +1.0
MTN                                 LR       LR
      comp=Z,4µm,20.0s
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TLY   Talaya           143.88   5   PFAKE              02 57 30.0 +7.7
TLY                                 LR       LR
      comp=Z,2µm,19.0s
TLY   Talaya           143.88   5d iPKIKP    PKPbc     02 57 17.0 +0.5
TLY                                i                   02 57 21.6
TLY                                 MLR      MLR
      comp=Z,6µm,23.0s
TLY   Talaya           143.88   5   P        PKPdf     02 57 18.6 -0.2
      SNR=23
GUMO  Guam             144.54 272  ePKPdf    PKPdf     02 57 20.6 -0.4
GUMO                                LR       LR
      comp=Z,2µm,20.0s
GUMO  Guam             144.54 272  ePKIKP    PKPdf     02 57 20.6 -0.4
GUMO                                MLR      MLR
      comp=Z,2µm,20.0s
ZAK   Zakamensk        145.14   6  ePKIKP    PKPdf     02 57 21.9 +0.7
ZAK                                 pmax     pmax
      comp=Z,84nm,1.5s
USA0B Ussuriysk Arra   145.16 330  ePKPbc    PKPdf     02 57 21.4 +0.2
USA0B Ussuriysk Arra   145.16 330  ePKIKP    PKPdf     02 57 21.5 +0.2
USRK  Ussuriysk Ar.    145.16 330   PKPbc    PKPdf     02 57 21.1 -0.1
      comp=Z,26nm,0.9s,baz=46,slow=2.4,SNR=24
USRK  Ussuriysk Ar.    145.16 330  ePKPbc    PKPab     02 57 20.9 +0.1
USRK  Ussuriysk Ar.    145.16 330  ePKIKP    PKPab     02 57 20.9 +0.1
HIA   Hailar           145.20 347  ePKPbc    PKPdf     02 57 21.6 +0.4
HIA                                 LR       LR
      comp=Z,3µm,21.0s
HIA   Hailar           145.20 347d iPKIKP    PKPab     02 57 21.0 +0.1
MDJ   Mudanjiang       145.96 332   PFAKE              02 57 30.0 +3.2
MDJ                                 LR       LR
      comp=Z,4µm,20.0s
MDJ   Mudanjiang       145.96 332   PKPbc    PKPab     02 57 24.0 +0.2
MDJ                                 AMB      AMB
      comp=Z,3µm,5.8s
MDJ                                 LR       LR
      comp=Z,1µm,23.7s
MDJ                                 LR       LR
      comp=Z,2µm,22.2s
MDJ                                 LR       LR
      comp=Z,4µm,37.8s
VLA   Vladivostok      145.99 328dePKP2      PKPab     02 57 24.1 +0.2
MJAR  Matsushiro Arr   146.23 314   PKPbc    PKPbc     02 57 24.3 -0.1
      comp=Z,67nm,0.9s,baz=96,slow=0.6,SNR=69
MAJO  Matsushiro       146.23 314  ePKPbc    PKPbc     02 57 24.5 +0.1
MAJO                                LR       LR
      comp=Z,5µm,22.0s
MAJO  Matsushiro       146.23 314d iPKP2     PKPbc     02 57 24.1 -0.3
MAJO                                MLR      MLR
      comp=Z,2µm,21.0s
MAT   Matsushiro       146.23 314   PKP      PKPdf     02 57 23.8 +0.4
DHRM  DHARAMSHALA      146.62  55  eP        PKPdf     02 57 23.6 -0.9
MSHR  Mys Shultsa      146.75 328dePKP2      PKPbc     02 57 25.9 +0.2
GOA   Goa              146.86  86  eP        PKPdf     02 57 24.7 -0.2
WMQ   Urumqi           146.93  28   PFAKE              02 57 40.0 +11
WMQ                                 LR       LR
      comp=Z,4µm,20.0s
WMQ   Urumqi           146.93  28  ePKPbc    PKPdf     02 57 24.4  0.0
WMQ                                 PKPab    pPKPdf    02 57 29.3 -1.1
WMQ                                 PP       PP        03 00 54.4 +4.5
WMQ                                 SKKS               03 07 42.6
WMQ                                 LR       LR
      comp=Z,3µm,19.7s
WMQ                                 LR       LR
      comp=Z,2µm,19.7s
WMQ                                 LR       LR
      comp=Z,4µm,25.3s
POO   Poona            147.02  80  eP        PKPdf     02 57 24.5 -0.7
POO   Poona            147.02  80  eP        PKPdf     02 57 25.0 -0.2
INU   Inuyama          147.66 313  ePKPbc    PKPbc     02 57 29.0 +0.5
INU                                 LR       LR
      comp=Z,3µm,21.0s
SMLA  Simla            147.72  56  eP        PKPdf     02 57 25.7 -0.3
ULN   Ulaanbaatar      147.88   2  ePKPbc    PKPbc     02 57 29.3 +0.4
ULN   Ulaanbaatar      147.88   2d iPKIKP    PKPdf     02 57 27.0 +1.0
ULN   Ulaanbaatar      147.88   2   P        PKPbc     02 57 29.7 +0.8
      SNR=79
SONA0 Songino Array    147.89   2  ePKPdf    PKPdf     02 57 26.7 +0.7
SONA0                              ePKPbc    PKPbc     02 57 28.9  0.0
SONA0                              ePP       PP        03 00 55.1  0.0
SONM  Songino Array    147.89   2   PKP      PKPdf     02 57 26.7 +0.7
      comp=Z,50nm,0.9s,baz=332,slow=1.8,SNR=68
SONM                                PKPbc    PKPbc     02 57 28.9  0.0
      comp=Z,46nm,0.7s,baz=332,slow=1.7,SNR=85
SONM                                PP       PP        03 00 55.1  0.0
      comp=Z,2.5nm,1.1s,baz=346,slow=3.0,SNR=3.7
SONM  Songino Array    147.89   2  ePKPdf    PKPdf     02 57 27.3 +1.4
SONM  Songino Array    147.89   2  ePKIKP    PKPdf     02 57 27.3 +1.4
CN2   Changchun        148.37 336  ePKPbc    PKPdf     02 57 25.6 -1.1
CN2                                ePP       PP        03 01 03.0 +4.9
CN2                                 AMB      AMB
      comp=Z,510nm,12.0s
CN2                                 LR       LR
      comp=Z,3µm,22.0s
CN2                                 LR       LR
      comp=Z,2µm,22.0s
CN2                                 LR       LR
      comp=Z,5µm,22.0s
TRD   Trivandrum       148.61  99  eP        PKPdf     02 57 26.8 -1.1
DDI   Dehra Dun        148.73  57  eP        PKPdf     02 57 26.6 -1.1
FAKI  Fak Fak          149.93 234  ePKPdf    PKPdf     02 57 29.3 -0.8
FAKI                               ePKPbc    sPKPdf    02 57 36.5 -1.8
FAKI                                LR       LR
      comp=Z,4µm,21.0s
BHPL  Bhopal           150.01  71  eP        PKPdf     02 57 28.9 -1.1
SOEI  Soe              150.18 213   PFAKE              02 57 40.0 -1.5
SOEI                                LR       LR
      comp=Z,9µm,21.0s
SNY   Shenyang         150.77 336 ⇑PKPbc     PKPdf     02 57 32.5 +2.0
SNY                                 PP       PP        03 01 14.0 +2.0
SNY                                 LR       LR
      comp=Z,2µm,21.6s
SNY                                 LR       LR
      comp=Z,2µm,22.2s
SNY                                 LR       LR
      comp=Z,4µm,28.6s
HYB   Hyderabad        151.49  82  i PKP     PKPdf     02 57 34.0 +1.6
HYB                                epPKP     sPKPdf    02 57 39.5 -0.9
PALK  Pallekele        151.77 104  ePKPbc    PKiKP     02 57 41.2 +1.5
PALK                                LR       LR
      comp=Z,5µm,21.0s
PALK  Pallekele        151.77 104  ePKIKP    PKiKP     02 57 41.2 +1.5
PALK                                MLR      MLR
      comp=Z,5µm,21.0s
NGP   Nagpur           151.78  74  eP        PKPdf     02 57 33.4 +0.7
MMRI  Maumere          152.16 211  ePKPbc    PKPbc     02 57 40.1  0.0
MMRI                                LR       LR
      comp=Z,3µm,21.0s
KSRS  Korea Array      152.18 325   PKP      PKPdf     02 57 34.0 +1.2
      comp=Z,3.5nm,0.9s,baz=90,slow=0.2,SNR=6.8
KSRS                                PKPbc    PKiKP     02 57 40.6 +0.9
      comp=Z,35nm,0.8s,baz=38,slow=1.5,SNR=40
KS15  Wonju Array Si   152.21 325  ePKPdf    PKPdf     02 57 34.0 +1.1
KS15                               ePKPbc    PKiKP     02 57 40.8 +1.0
MDRS  Chennai          152.75  92  eP        PKPdf     02 57 33.1 -1.2
JNU   Nakatsue         153.14 314   PKP      PKPdf     02 57 32.5 -2.0
      comp=Z,5.2nm,1.0s,baz=117,slow=6.8,SNR=2.5
JNU                                 PKPbc    PKiKP     02 57 42.5 +0.4
      comp=Z,27nm,1.0s,baz=60,slow=4.6,SNR=11
JNU   Nakatsue         153.14 314  ePKPdf    PKPdf     02 57 32.5 -2.0
JNU                                ePKPbc    sPKPdf    02 57 41.0 -1.5
JNU                                 LR       LR
      comp=Z,2µm,22.0s
TJN   Taejon           153.26 324⇑iPKIKP     PKiKP     02 57 42.4 +0.3
XMIS  Christmas Isla   153.89 174   PFAKE              02 57 50.0 +6.0
XMIS                                LR       LR
      comp=Z,4µm,22.0s
DL2   Dalian           154.04 336   PKPbc    PKPdf     02 57 18.9  -17
DL2                                 sPKP               02 57 36.3
DL2                                 PKPab    PKiKP     02 57 44.8 +1.2
DL2                                 PP       PP        03 01 29.5 -1.1
HHC   Hu-ho-hao-te     154.74 354   PKPbc    PKPdf     02 57 36.1 -0.5
HHC                                 PP       PP        03 01 37.3 +2.9
HHC                                 AMB      AMB
      comp=Z,250nm,5.5s
BJI   Beijing          154.75 346   PKPbc    PKPdf     02 57 39.3 +2.9
BJI                                 PP       PP        03 01 43.3 +9.0
BJI                                 SS       SS        03 21 16.6 +1.3
BJI                                 LR       LR
      comp=Z,350nm,37.8s
BJI                                 LR       LR
      comp=Z,410nm,36.3s
BJI                                 LR       LR
      comp=Z,870nm,43.6s
BJT   Baijiatuau       154.77 346   PFAKE              02 57 50.0 +4.9
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BJT				LR	LR		
	comp=Z,3µm,20.0s						
BTO	Baotou	155.10	357	ePKP	PKPdf	02 57 39.0	+1.9
GTA	Gaotai	155.22	16	⇑PKP	PKPdf	02 57 40.1	+2.8
GTA				PKPab	PKPab	02 58 02.4	+0.4
GTA				PP	PP	03 01 42.6	+5.4
GTA				SKKS		03 08 29.9	
GTA				SS	SS	03 21 23.0	+2.3
GTA				AMB	AMB		
	comp=Z,400nm,8.6s						
GTA				LR	LR		
	comp=Z,4µm,22.5s						
GTA				LR	LR		
	comp=Z,2µm,23.8s						
GTA				LR	LR		
	comp=Z,5µm,21.9s						
JAGI	Jajag, Banyuwa	155.32	194	PFAKE		02 57 50.0	+12
JAGI				LR	LR		
	comp=Z,3µm,20.0s						
TNTI	Ternate	156.03	234	PFAKE		02 57 50.0	+11
TNTI				LR	LR		
	comp=Z,1µm,20.0s						
KAPI	Kappang	156.51	210	PFAKE		02 57 50.0	+10
KAPI				LR	LR		
	comp=Z,4µm,22.0s						
CISI	Cisompet, Garu	156.92	179	PFAKE		02 57 50.0	+10
CISI				LR	LR		
	comp=Z,3µm,22.0s						
SMRI	Semarang	157.33	186	PFAKE		02 57 50.0	+9.3
SMRI				LR	LR		
	comp=Z,3µm,20.0s						
BOK	Bokaro	157.47	65	eP	PKPdf	02 57 41.0	+0.5
TIY	Taiyuan	157.73	351	ePKP	PKPdf	02 57 42.3	+1.8
TIY				PKPab	PKPab	02 58 12.4	-0.4
TIY				PP	PP	03 01 49.6	-1.3
TIY				SKKS		03 08 39.8	
TIY				AMB	AMB		
	comp=Z,290nm,5.1s						
TIY				LR	LR		
	comp=Z,3µm,19.4s						
TIY				LR	LR		
	comp=Z,310nm,12.8s						
TIY				LR	LR		
	comp=Z,5µm,21.9s						
LUWI	Luwuk	158.06	222	PFAKE		02 57 50.0	+8.5
LUWI				LR	LR		
	comp=Z,2µm,21.0s						
TIA	Tai'an	158.06	341	PKP	PKPdf	02 57 42.1	+1.2
TIA				PP	PP	03 01 51.4	-1.5
TIA				SS	SS	03 21 50.9	-0.3
TIA				AMB	AMB		
	comp=Z,410nm,4.5s						
TIA				LR	LR		
	comp=Z,1µm,22.8s						
TIA				LR	LR		
	comp=Z,2µm,23.5s						
TIA				LR	LR		
	comp=Z,4µm,24.8s						
BWNR	Bhubaneshwar	158.16	75	ex	PKPab	02 58 13.4	-1.8
BWNR				IAMs_20	IAMs_20	04 02 51.6	
	comp=N,2µm,26.1s						
LZH	Lanzhou	159.28	10	ePKP	PKPdf	02 57 44.1	+1.5
LZH				pPKP	sPKPdf	02 57 52.0	+1.4
LZH				PKPab	pPKPab	02 58 22.0	-3.4
LZH				PP	PP	03 02 07.4	+7.8
LZH				SKKS		03 08 51.1	
LZH				AMB	AMB		
	comp=N,560nm,8.2s						
LZH				LR	LR		
	comp=N,1µm,19.0s						
LZH				LR	LR		
	comp=N,910nm,18.5s						
LZH				LR	LR		
	comp=N,1µm,19.5s						
MNAI	Manna	159.42	165	PFAKE		02 57 50.0	+6.8
MNAI				LR	LR		
	comp=Z,3µm,22.0s						
SSE	Sheshan	160.62	325	PKP	PKPdf	02 57 46.4	+2.4
SSE				PP	PP	03 02 06.8	-0.4
SSE				AMB	AMB		
	comp=Z,180nm,5.2s						
SSE				LR	LR		
	comp=Z,810nm,24.8s						
SSE				LR	LR		
	comp=Z,630nm,19.3s						
TAWA	Tawang	160.72	49	eP	PKPdf	02 57 46.5	+1.8
NJ2	Nanjing	161.05	331	ePKP	PKPdf	02 57 45.3	+0.9
NJ2				PKPab	PKPab	02 58 27.0	-0.3
NJ2				PP	PP	03 02 08.8	-0.5
NJ2				SS	SS	03 22 25.5	+2.3
NJ2				AMB	AMB		
	comp=Z,490nm,11.4s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
NJ2				LR	LR		
	comp=Z,2µm,21.3s						
NJ2				LR	LR		
	comp=Z,3µm,22.7s						
XAN	Xi'an	161.69	358	PKP	PKPdf	02 57 47.6	+2.5
XAN				PKPab	PKPab	02 58 30.6	+0.6
XAN				PP	PP	03 02 12.4	+0.1
XAN				SS	SS	03 22 31.8	+2.7
XAN				AMB	AMB		
	comp=Z,570nm,13.5s						
XAN				LR	LR		
	comp=Z,3µm,20.6s						
XAN				LR	LR		
	comp=Z,2µm,18.2s						
XAN				LR	LR		
	comp=Z,5µm,21.6s						
SHL	Shillong	161.80	55	ePKPdf	PKPdf	02 57 45.1	-0.6
SHL	Shillong	161.80	55	ePKIKP	PKPdf	02 57 45.1	-0.6
SHL	Shillong	161.80	55	eP	PKPdf	02 57 46.1	+0.4
SHL	Shillong	161.80	55	eP	PKPdf	02 57 44.0	-1.7
TEZP	TEZPUR	161.95	50	eP	PKPdf	02 57 43.6	-1.9
ZIRO	ZIRO	162.17	46	eP	PKPdf	02 57 46.8	+0.8
ZIRO				IAmb	IAmb	02 57 54.4	
	comp=Z,62nm,1.4s						
MOKO	MOKOCHONG	163.37	48	eP	PKPdf	02 57 46.6	-0.6
MOKO				IAmb	IAmb	02 57 56.1	
	comp=Z,86nm,1.1s						
CMBY	CAMPBELL BAY	163.54	120	eP	PKPdf	02 57 47.6	+0.2
WHN	Wuhan	164.17	340	⇓PKP	PKPdf	02 57 47.3	-0.2
WHN				PP	PP	03 02 25.5	-0.1
WHN				LR	LR		
	comp=Z,5µm,19.5s						
WHN				LR	LR		
	comp=Z,4µm,19.2s						
WHN				LR	LR		
	comp=Z,12µm,26.0s						
PSI	Prapat	164.26	143	ePKPdf	PKPdf	02 57 48.4	+0.1
PSI	Prapat	164.26	143	ePKIKP	PKPdf	02 57 48.4	+0.1
CD2	Chengdu	164.28	14	PKP	PKPdf	02 57 48.5	+0.8
CD2				PP	PP	03 02 34.4	+8.3
CD2				AMB	AMB		
	comp=Z,820nm,15.2s						
CD2				LR	LR		
	comp=Z,3µm,23.0s						
CD2				LR	LR		
	comp=Z,4µm,22.1s						
CD2				LR	LR		
	comp=Z,6µm,22.6s						
QZH	Quanzhou	166.62	315	⇓iPKP	PKPdf	02 57 51.1	+1.4
QZH				ePP	PP	03 02 43.9	+4.6
QZH				LR	LR		
	comp=Z,2µm,22.0s						
QZH				LR	LR		
	comp=Z,1µm,19.8s						
QZH				LR	LR		
	comp=Z,3µm,21.8s						
GYA	Guiyang	169.16	8	i PKP	PKPdf	02 57 53.8	+2.1
GYA				PKS		03 01 24.0	
GYA				SKKS		03 09 40.9	
GYA				AMB	AMB		
	comp=Z,730nm,11.3s						
GYA				LR	LR		
	comp=Z,2µm,21.3s						
GYA				LR	LR		
	comp=Z,2µm,21.8s						
GYA				LR	LR		
	comp=Z,3µm,21.8s						
KMI	Kunming	169.27	28	PKP	PKPdf	02 57 53.0	+1.1
CHTO	Chiang Mai	170.57	69	P	PKPdf	02 57 55.4	+2.9
	SNR=5.1						
CM31	Chiang Mai Arr	170.67	71	ePKPdf	PKPdf	02 57 53.4	+0.8
CM31				ePKPab	PKPab	02 59 11.8	+1.4
CMAR	Chiang Mai Arr	170.67	71	PKP	PKPdf	02 57 53.4	+0.8
	comp=Z,2.1nm,0.3s,baz=283,slow=1.8,SNR=10						
CMAR				PKPab	PKPab	02 59 11.8	+1.4
	comp=Z,2.6nm,0.3s,baz=287,slow=6.1,SNR=5.9						
GZH	Guangzhou	171.19	328	PKP	PKPdf	02 57 52.4	-0.3
GZH				PP	PP	03 03 00.3	-1.6
GZH				SS	SS	03 24 06.4	-0.2
GZH				LR	LR		
	comp=Z,2µm,24.5s						
GZH				LR	LR		
	comp=Z,3µm,22.9s						
PAYA	Payao	171.20	64	PKP	PKPdf	02 57 58.5	+5.6
PHRA	Phrae	171.83	69	PKP	PKPdf	02 57 57.6	+4.5
UTTA	Uttaradit	172.34	73	PKP	PKPdf	02 57 56.7	+3.3
SLVN	Son La	173.01	36	ePKPdf	PKPdf	02 57 55.1	+1.4
CHAI	Chaiyaphum	173.96	87	PKP	PKPdf	02 58 03.3	+9.2
NONG	Nongkai	174.56	63	PKP	PKPdf	02 57 56.7	+2.5
PANO	Nakornpanom	176.21	67	PKP	PKPdf	02 57 57.6	+2.9

BJI ***17*** *03:00:49.2±0.0, 36°.02N×2°.34E, h6^{km}, mb4.9/31, mB5.2/19, Ms5.0/7, Ms7 4.8/7*

IDC ***17*** *03:00:52.8±0.4, 36°.44N×3°.15E, h0^{km}, mb4.5/32, mb1 4.6/42, mb1mx4.5/62, mbtmp4.5/42, ML4.4/9, MS4.5/8, Ms1 4.5/8, ms1mx4.2/49, Error ellipse: s-maj=10.4km s-min=8.9km az=136.0*

CRAAG ***17*** *03:00:53.1, 36°.46N×3°.07E, Ml5.1*

MDD ***17*** *03:00:55.1±0.5, 36°.46N×3°.06E, h8^{km}±4^{km}, mb5.5/61, Error ellipse: s-maj=4.0km s-min=3.5km az=153.0, PRXIMO*

INMG ***17*** *03:00:55.3±1.9, 36°.41N×3°.03E, h16^{km}±16^{km}, ML3.7, Error ellipse: s-maj=15.0km s-min=3.9km az=124.0*

ISCJB ***17*** *03:00:55.7±0.1, 36°.69N±0°.01×2°.93E±0°.01, h14^{km}, mb4.8/223, MS4.7/15, Error ellipse: s-maj=2.1km s-min=1.4km az=158.0*

MED_RC ***17*** *03:00:56.0±0.4, 36°.55N×3°.02E, h10^{km}, MW5.0/13, Moment Tensor Solution.Mantle waves: s13,c19; Duration: 1^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.05±.27; $M_{\theta\theta}$0.04±.26; $M_{\phi\phi}$0.01±.20; $M_{r\theta}$0.35±.54; $M_{\theta\phi}$-3.24±.17; $M_{\phi r}$1.80±.62; Best double couple: $M_0$3.72000×10^{16} NP1:ϕ_s179.00000°, δ86.00000°, λ-29.00000°. NP2:ϕ_s271.00000°, δ61.00000°, λ-176.00000°. Principal axes: T 3.5800, Plg17.0000°, Azm229.0000°; N 0.2700, Plg61.0000°, Azm353.0000°; P -3.8500, Plg23.0000°, Azm131.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

NEIC ***17*** *03:00:56.5±2.4, 36°.53N×3°.09E, h10^{km}±2^{km}, mb4.8/202 Error ellipse: s-maj=10.4km s-min=9.1km az=216.0*

NEIC Eleven people injured and many buildings damaged in the Hammam Melouane area. Felt [III] at Algiers. Also felt at Birkhadem, Blida, Boumerdes and Dar Beida.

IGIL ***17*** *03:00:57.5, 36°.55N×3°.02E, h10^{km}*

LDG ***17*** *03:00:58.2±0.1, 36°.43N×3°.13E, h30^{km}, Ml4.5/25, Error ellipse: s-maj=3.8km s-min=2.5km az=164.0*

MOS ***17*** *03:00:59.1±1.5, 36°.85N×3°.13E, h30^{km}, mb5.0/50, MS4.4/18, Error ellipse: s-maj=5.9km s-min=2.5km az=74.1*

ISC 17 03:00:57.0±0.7**, 36°.53N**±0°.03×**3°.09E**±0°.03**, h17**^{km}±4^{km}**, n1212,** σ**2^{s}11**/1328**, mb4.9**/227**, MS4.6**/16**, 44C-34D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.27	351	P	Pg	03 01 01.6	-1.4
ABA	Alger-Bouzarea	0.27	351	Pg	Pg	03 01 01.6	-1.4
ABMS	Boumerdes	0.38	56	P	Pg	03 01 03.1	-1.8
ABMS	Boumerdes	0.38	56	Pg	Pg	03 01 03.1	-1.8
ADJB	Djebel Djouab	0.47	143	P	Pg	03 01 03.2	-3.4
ADJB	Djebel Djouab	0.47	143	Pg	Pg	03 01 03.2	-3.4
EBNR	Beni Rached	1.28	259	P	Pn	03 01 17.7	-2.5
ECHA	Ech Chlef	1.44	255	P	Pn	03 01 19.6	-2.7
ECHF	Ech Chlef	1.46	256	Pn	Pn	03 01 19.6	-3.0
EANR	'Ain N'Sour	1.71	251	P	Pn	03 01 23.0	-3.1
EANR	'Ain N'Sour	1.71	251	Pn	Pn	03 01 23.0	-3.1
ETRT	Tiaret	1.84	232	P	Pn	03 01 26.0	-2.0
ETRT	Tiaret	1.84	232	Pn	Pn	03 01 26.0	-2.0
SET	Setif	1.90	99	P	Pn	03 01 29.0	+0.3
SET	Setif	1.90	99	Pg	Pn	03 01 29.0	+0.3
CKHR	Kef el Ahmar	2.03	104	P	Pn	03 01 29.3	-1.3
CKHR	Kef el Ahmar	2.03	104	Pn	Pn	03 01 29.3	-1.3
OKGL	Djebel Kef Gue	2.04	257	P	Pn	03 01 30.0	-0.6
OKGL	Djebel Kef Gue	2.04	257	⇑Pn	Pn	03 01 27.1	-3.4
	9µm,0.5s,SNR=18						
OKGL				Sn	Sn	03 01 52.1	-3.5
	99µm,0.7s,SNR=7.9						
OJGS	Djebel Guires	2.15	242	P	Pn	03 01 28.0	-4.3
OJGS	Djebel Guires	2.15	242	Pn	Pn	03 01 28.0	-4.3
DFRA	Djebel Bou Aff	2.25	89	P	Pn	03 01 31.8	-1.8
DFRA	Djebel Bou Aff	2.25	89	Pn	Pn	03 01 31.8	-1.8
CTEI	Djebel Teioual	2.72	99	P	Pn	03 01 39.7	-0.4
CTEI	Djebel Teioual	2.72	99	Pn	Pn	03 01 39.7	-0.4
CASM	Ain Smara	2.76	95	P	Pn	03 01 38.4	-2.2
CASM	Ain Smara	2.76	95	Pn	Pn	03 01 38.4	-2.2
EIBI	Ibiza	2.85	332	⇓Pn	Pn	03 01 40.4	-1.3
	307nm,0.2s,SNR=18						
EIBI				Sn	Sn	03 02 13.8	-1.7
	2µm,0.7s,SNR=14						
CKFL	Kef-Lekhel	2.93	92	P	Pn	03 01 41.1	-1.9
CKFL	Kef-Lekhel	2.93	92	Pn	Pn	03 01 41.1	-1.9
CAEH	'Ain El Ouahch	3.04	84	P	Pn	03 01 42.6	-1.7
CAEH	'Ain El Ouahch	3.04	84	Pn	Pn	03 01 42.6	-1.7
ETOS	Mallorca	3.24	356	⇑Pn	Pn	03 01 45.8	-1.3
	1µm,0.8s,SNR=18						
ETOS				Sn	Sn	03 02 23.5	-1.7
	1µm,0.8s,SNR=7.9						
EBEN2	Beniarda presa	3.37	310	Pn	Pn	03 01 46.6	-2.3
	424nm,0.4s,SNR=7.9						
EBEN2				Sn	Sn	03 02 26.0	-2.5
	747nm,0.5s,SNR=7.9						
OTSS	Djebel Tessala	3.39	249	P	Pn	03 01 43.8	-5.4
ETRV	Los Montesinos	3.41	297	⇑Pn	Pn	03 01 46.7	-2.7
	277nm,0.3s,SNR=18						
ETRV				Sn	Sn	03 02 26.4	-3.1
	1µm,0.3s,SNR=7.9						
MAHO	Mahon	3.48	15	eP	Pn	03 01 47.2	-3.2
MAHO				eS	Sn	03 02 26.2	-5.0
CMAH	Djebel Manchou	3.49	87	P	Pn	03 01 48.0	-2.6
CMAH	Djebel Manchou	3.49	87	Pn	Pn	03 01 48.0	-2.6
ABSA	Djebel Ababsia	3.55	93	P	Pn	03 01 49.6	-1.9
CABS	Djebel Ababsia	3.55	93	Pn	Pn	03 01 49.6	-1.9
EMUR	La Murta	3.69	292	Pn	Pn	03 01 51.3	-2.0
	83nm,0.3s,SNR=116						
EMUR				Sn	Sn	03 02 33.6	-2.9
	283nm,0.5s,SNR=5.3						
ETOB	Tobarra	4.24	301	Pn	Pn	03 01 59.3	-1.6
	432nm,0.4s,SNR=256						
ETOB				Sn	Sn	03 02 46.7	-3.4
	438nm,0.4s,SNR=4.1						
ENIJ	Nijar	4.27	277	Pn	Pn	03 01 58.3	-3.0
	108nm,0.4s,SNR=7.9						
ENIJ				Sn	Sn	03 02 46.6	-4.2
	284nm,0.3s,SNR=7.9						
ECHE	Chera	4.42	315	Pn	Pn	03 02 02.3	-1.0
	337nm,0.4s,SNR=7.9						
ECHE				Sn	Sn	03 02 51.4	-3.1
	436nm,0.8s,SNR=7.9						
EMOS	Mosqueruela	4.74	325	Pn	Pn	03 02 06.8	-1.0
	300nm,0.5s,SNR=236						
EMOS				Sn	Sn	03 02 58.8	-3.6
	268nm,0.5s,SNR=7.9						
EBR	Ebro Roquetas	4.74	335	Pn	Pn	03 02 06.4	-1.2
	1µm,0.8s,SNR=7.9						
EBR				Sn	Sn	03 02 59.0	-3.2
	946nm,0.6s,SNR=7.9						
SESP	Santiago Espad	4.76	291	⇑Pn	Pn	03 02 06.8	-1.3
	478nm,0.6s,SNR=18						
SESP				Sn	Sn	03 02 59.2	-3.8
	160nm,0.2s,SNR=7.9						
SESP	Santiago Espad	4.76	291	P	Pn	03 02 06.9	-1.2
SESP	Santiago Espad	4.76	291	P	Pn	03 02 09.9	+1.8
SESP	Santiago Espad	4.76	291	P	Pn	03 02 06.9	-1.2
SESP	Santiago Espad	4.76	291	P	Pn	03 02 09.9	+1.8
TAF	Taforalt	4.79	251	P	Pn	03 02 09.0	+0.5
TAF	Taforalt	4.79	251	P	Pn	03 02 09.0	+0.5
TAF	Taforalt	4.79	251	P	Pn	03 02 09.0	+0.5
EBER	Berja	4.81	276	Pn	Pn	03 02 05.9	-3.0
	104nm,0.5s,SNR=92						
EBER				Sn	Sn	03 02 59.8	-4.6
	276nm,0.6s,SNR=5.4						
ERTA	Horta de San J	4.91	335	Pn	Pn	03 02 08.8	-1.3
	298nm,0.8s,SNR=40						
ERTA				Sn	Sn	03 03 03.3	-3.2
	245nm,0.4s,SNR=8.6						
EALB	Alboran	4.98	265	Pn	Pn	03 02 08.5	-2.5
	124nm,0.6s,SNR=20						
EALB				Sn	Sn	03 03 02.7	-5.5
	130nm,0.4s,SNR=30						
GORA	Gorafe	4.99	283	Pn	Pn	03 02 09.1	-2.2
	164nm,0.4s,SNR=7.9						
GORA				Sn	Sn	03 03 03.9	-4.8
	612nm,0.6s,SNR=7.9						
MELI	Melilla	5.04	258	Pn	Pn	03 02 09.3	-2.5
	30nm,0.3s						
MELI				Sn	Sn	03 03 04.2	-5.4
	260nm,1.1s						
MELI	Melilla	5.04	258	eP	Pn	03 02 10.9	-0.9
MELI				eS	Sn	03 03 03.4	-6.3
EMEL	Melilla	5.06	258	Pn	Pn	03 02 09.3	-2.8
	106nm,0.4s,SNR=7.9						
EMEL				Sn	Sn	03 03 04.6	-5.5
	231nm,0.3s,SNR=7.9						
EPOB	Poblet	5.06	343	Pn	Pn	03 02 10.9	-1.3
	66nm,0.3s,SNR=27						
EPOB				Sn	Sn	03 03 07.1	-3.1
	136nm,0.6s,SNR=7.9						
EQES	Quesada	5.08	286	Pn	Pn	03 02 10.8	-1.7
	520nm,0.5s,SNR=149						
EQES				Sn	Sn	03 03 06.2	-4.6
	346nm,0.4s,SNR=7.9						
JBK	JBK	5.11	246	P	Pn	03 02 11.1	-1.9
JBK	JBK	5.11	246	P	Pn	03 02 13.0	0.0
JBK	JBK	5.11	246	P	Pn	03 02 13.0	0.0
JBK	JBK	5.11	246	P	Pn	03 02 11.1	-1.9
KEST	Kesra	5.13	97	Pn	Pn	03 02 11.3	-1.8
	16nm,0.3s,baz=249,slow=4.6,SNR=117						
KEST				Sn	Sn	03 03 09.9	-2.1
	0.7nm,0.3s,baz=299,slow=13,SNR=1.5						
KEST				Lg	Lg	03 03 40.2	
	4.8nm,0.3s,baz=336,slow=19,SNR=2.2						
KEST	Kesra	5.13	97	ePn	Pn	03 02 12.4	-0.7
CFON	Fontmartina	5.25	355	⇓Pn	Pn	03 02 13.5	-1.2
	52nm,0.1s,SNR=18						
CFON				Sn	Sn	03 03 11.2	-3.6
	200nm,0.3s,SNR=7.9						
EQUE	Quentar	5.28	279	Pn	Pn	03 02 13.5	-1.7
	93nm,0.5s,SNR=69						
EQUE				Sn	Sn	03 03 10.6	-5.0
	124nm,0.5s,SNR=7.9						
TDRA	Tendrara	5.46	232	P	Pn	03 02 16.0	-1.9
TDRA	Tendrara	5.46	232	P	Pn	03 02 18.0	+0.1
TDRA	Tendrara	5.46	232	P	Pn	03 02 18.0	+0.1
FIGM	Figuig	5.67	221	P	Pn	03 02 19.0	-1.7
FIGM	Figuig	5.67	221	P	Pn	03 02 22.0	+1.3
FIGM	Figuig	5.67	221	P	Pn	03 02 22.0	+1.3
FIGM	Figuig	5.67	221	P	Pn	03 02 22.0	+1.3
EGOR	Sierra Gorda,	5.80	278	Pn	Pn	03 02 20.6	-1.9
	118nm,0.9s,SNR=7.9						
EGOR				Sn	Sn	03 03 23.1	-5.6
	192nm,0.6s,SNR=7.9						
ESAC	San Caprasio	5.87	333	Pn	Pn	03 02 22.0	-1.3
	249nm,0.3s,SNR=40						
ESAC				Sn	Sn	03 03 26.5	-3.7
	611nm,0.5s,SNR=7.9						
ETOR	Torete	5.87	318	Pn	Pn	03 02 21.8	-1.6
	147nm,0.4s,SNR=50						
ETOR				Sn	Sn	03 03 26.1	-4.2
	197nm,0.8s,SNR=7.9						
EJON	La Jonquera	5.91	359	Pn	Pn	03 02 22.9	-0.9
	85nm,0.3s,SNR=177						
EJON				Sn	Sn	03 03 27.4	-3.7
	87nm,0.4s,SNR=7.9						
SJAF	Saint Jean de	5.95	359	Pn	Pn	03 02 23.3	-0.9
	124nm,0.4s,SNR=7.9						
SJAF				Sn	Sn	03 03 28.3	-3.6
	83nm,0.7s,SNR=7.9						
CLLI	Llivia	6.00	352	Pn	Pn	03 02 24.6	-0.6
	134nm,0.6s,SNR=230						
CLLI				Sn	Sn	03 03 29.9	-3.6
	114nm,0.7s,SNR=7.9						
AKLM	AKL	6.01	252	P	Pn	03 02 23.1	-2.2
AKLM	AKL	6.01	252	P	Pn	03 02 27.0	+1.7
AKLM	AKL	6.01	252	P	Pn	03 02 27.0	+1.7
AKLM	AKL	6.01	252	P	Pn	03 02 27.0	+1.7
AKLM	AKL	6.01	252	P	Pn	03 02 23.2	-2.2
AKLM	AKL	6.01	252	P	Pn	03 02 23.1	-2.2
CSOR	Sort	6.03	346	Pn	Pn	03 02 24.8	-0.7
	122nm,0.5s,SNR=116						
CSOR				Sn	Sn	03 03 29.7	-4.4
	184nm,0.4s,SNR=7.9						
EMAL	Malaga-Limoner	6.05	274	Pn	Pn	03 02 25.0	-0.7
EMAL	Malaga-Limoner	6.05	274	eP	Pn	03 02 25.0	-0.7
PVLZ	Peæn de	6.15	259	Pn	Pn	03 02 25.7	-1.4
PVLZ				Sn	Sn	03 03 30.0	-7.0
PVLZ	Peæn de	6.15	259	eP	Pn	03 02 25.7	-1.4
PVLZ				eS	Sn	03 03 30.0	-7.0
UCM	Universidad Co	6.24	309	eP	Pn	03 02 27.4	-0.9
UCM				eS	Sn	03 03 37.0	-2.1
EADA	Adamuz	6.32	287	Pn	Pn	03 02 27.1	-2.3
	31nm,0.5s,SNR=14						
EADA				Sn	Sn	03 03 35.5	-5.7
	14nm,0.2s,SNR=7.9						
EMIJ	Mijas	6.33	273	Pn	Pn	03 02 27.0	-2.5
	56nm,0.6s,SNR=18						
EMIJ				Sn	Sn	03 03 35.5	-5.9
	56nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	6.38	302	Pn	Pn	03 02 27.4	-2.9
	12nm,0.3s,baz=120,slow=13,SNR=126						
ESDC				Sn	Sn	03 03 40.0	-2.8
	14nm,0.3s,baz=115,slow=23,SNR=5.3						
ESDC				LR	LR	03 04 52.9	
	comp=Z,3µm,20.6s,baz=110,slow=37						
ESDC	Sonseca Array	6.38	302	Pn	Pn	03 02 28.6	-1.7
	18nm,0.5s,baz=118,slow=13,SNR=115						
ESDC				Sn	Sn	03 03 37.1	-5.7
	baz=114,slow=24,SNR=7.9						
ECHI	Chisagues Biel	6.52	341	Pn	Pn	03 02 31.5	-0.7
	29nm,0.4s,SNR=7.9						
ECHI				Sn	Sn	03 03 41.3	-5.0
	52nm,0.4s,SNR=7.9						
PAB	San Pablo	6.59	299	ePn	Pn	03 02 30.8	-2.4
PAB				eSn	Sn	03 03 43.9	-4.1
PAB	San Pablo	6.59	299	eP	Pn	03 02 30.8	-2.4
PAB				e		03 03 43.9	
PAB	San Pablo	6.59	299	Pn	Pn	03 02 31.2	-2.1
	145nm,0.7s,SNR=7.9						
PAB				Sn	Sn	03 03 42.2	-5.8
	50nm,0.7s,SNR=7.9						
HORN	Hornachuelos	6.79	284	P	Pn	03 02 34.8	-1.1
HORN	Hornachuelos	6.79	284	P	Pn	03 02 34.8	-1.1
HORN	Hornachuelos	6.79	284	P	Pn	03 02 33.2	-2.7
EPF	Esparros	6.82	343	ePn	Pn	03 02 36.3	-0.1
EPF				eSn	Sn	03 03 46.1	-7.6
	96nm,0.5s						
EPF	Esparros	6.82	343	ePn	Pn	03 02 36.3	-0.1
EPF	Esparros	6.82	343	Pn	Pn	03 02 36.3	-0.1
MTLF	Montolieu	6.83	355	ePn	Pn	03 02 36.1	-0.3
MTLF				eSn	Sn	03 03 46.5	-7.3
	49nm,0.5s						
MTLF	Montolieu	6.83	355	ePn	Pn	03 02 36.1	-0.3
MTLF	Montolieu	6.83	355	eP	Pn	03 02 36.1	-0.3
MTLF	Montolieu	6.83	355	Pn	Pn	03 02 36.1	-0.3
CEU	Ceuta	6.87	267	Sn	Sn	03 03 46.4	-8.3
CEU	Ceuta	6.87	267	eP	Pn	03 02 32.4	-4.5
CEU				eS	Sn	03 03 46.4	-8.3
ECEU	Ceuta	6.87	267	Pn	Pn	03 02 34.3	-2.7
	15nm,0.4s,SNR=7.9						
ECEU				Sn	Sn	03 03 48.0	-6.8
	69nm,0.7s,SNR=7.9						
EJIF	Jimena Fronter	6.89	272	Pn	Pn	03 02 34.7	-2.6
	61nm,0.6s,SNR=7.9						
EJIF				Sn	Sn	03 03 48.4	-7.0
	85nm,1.1s,SNR=7.9						
SMIR	Smir Dam	6.91	265	P	Pn	03 02 39.0	+1.5
SMIR	Smir Dam	6.91	265	P	Pn	03 02 39.0	+1.5
SMIR	Smir Dam	6.91	265	P	Pn	03 02 39.0	+1.5
ETSF	Etsaut	6.95	337	ePn	Pn	03 02 37.4	-0.7
ETSF				eSn	Sn	03 03 48.9	-7.9
	96nm,0.4s						
ETSF	Etsaut	6.95	337	ePn	Pn	03 02 37.4	-0.7
ETSF	Etsaut	6.95	337	eP	Pn	03 02 37.4	-0.7
ETSF	Etsaut	6.95	337	Pn	Pn	03 02 37.4	-0.7
ECAB	El Cabril	6.95	285	Pn	Pn	03 02 35.6	-2.5
	35nm,0.5s,SNR=67						

ECAB				Sn	Sn	03 03 50.4	-6.4
	19nm,0.4s,SNR=7.9						
GUD	Guadarrama	7.00	308	Pn	Pn	03 02 37.8	-1.1
	81nm,0.4s,SNR=46						
GUD				Sn	Sn	03 03 52.1	-6.0
	34nm,0.4s,SNR=7.9						
LCRM	LCR	7.10	249	P	Pn	03 02 39.0	-1.4
LCRM	LCR	7.10	249	P	Pn	03 02 39.0	-1.4
LCRM	LCR	7.10	249	P	Pn	03 02 39.0	-1.4
IUNC	Unciti	7.15	332	Pn	Pn	03 02 40.0	-0.8
	122nm,0.7s,SNR=7.9						
ATE	Arette	7.16	337	Pn	Pn	03 02 40.5	-0.5
	53nm,0.6s,SNR=7.9						
ATE				Sn	Sn	03 03 56.9	-5.1
	128nm,0.6s,SNR=7.9						
ESPR	Espera	7.19	275	Pn	Pn	03 02 39.7	-1.7
	34nm,0.8s,SNR=7.9						
EARA	Aranguren	7.19	331	Pn	Pn	03 02 40.6	-0.8
	96nm,0.7s,SNR=18						
EARA				Sn	Sn	03 03 57.4	-5.3
	93nm,0.6s,SNR=7.9						
EORO	Oroz-Betelu	7.20	333	Pn	Pn	03 02 40.6	-0.9
	28nm,0.3s,SNR=75						
EORO				Sn	Sn	03 03 57.0	-5.8
	69nm,0.5s,SNR=7.9						
IZUN	Zunzarren	7.22	332	Pn	Pn	03 02 40.5	-1.3
	36nm,0.4s,SNR=7.9						
IZUN				Sn	Sn	03 03 58.3	-5.2
	41nm,0.4s,SNR=7.9						
LMR	La Mourre	7.28	20	ePn	Pn	03 02 40.3	-2.3
LMR				eSn	Sn	03 03 57.8	-7.1
	61nm,0.3s						
LMR	La Mourre	7.28	20	ePn	Pn	03 02 40.3	-2.3
LMR	La Mourre	7.28	20	eP	Pn	03 02 40.3	-2.3
LMR	La Mourre	7.28	20	Pn	Pn	03 02 40.3	-2.3
SICH	Sidi Chahed	7.28	253	P	Pn	03 02 43.0	+0.3
SICH	Sidi Chahed	7.28	253	P	Pn	03 02 43.0	+0.3
SICH	Sidi Chahed	7.28	253	P	Pn	03 02 43.0	+0.3
MDT	Midelt	7.34	242	Pn	Pn	03 02 40.6	-3.0
	4.0nm,0.3s,baz=82,slow=14,SNR=144						
MDT				Lg	Lg	03 04 46.2	
	10.0nm,0.3s,baz=40,slow=17,SNR=2.8						
MDT				LR	LR	03 05 37.4	
	comp=Z,3µm,21.1s,baz=60,slow=39						
MDT	Midelt	7.34	242	P	Pn	03 02 42.3	-1.3
MDT	Midelt	7.34	242	P	Pn	03 02 42.3	-1.3
SJPF	Ste Jean	7.36	335	ePn	Pn	03 02 43.7	0.0
SJPF				eSn	Sn	03 03 59.4	-7.4
	118nm,0.6s						
SJPF	Ste Jean	7.36	335	ePn	Pn	03 02 43.7	0.0
SJPF	Ste Jean	7.36	335	eP	Pn	03 02 43.7	0.0
SJPF	Ste Jean	7.36	335	Pn	Pn	03 02 43.7	0.0
SJPF				Sn	Sn	03 03 59.4	-7.4
	59nm,0.6s						
FRF	La Foret Royal	7.53	20	ePn	Pn	03 02 43.9	-2.1
FRF				eSn	Sn	03 04 03.9	-7.1
	114nm,0.3s						
FRF	La Foret Royal	7.53	20	ePn	Pn	03 02 43.9	-2.1
FRF	La Foret Royal	7.53	20	eP	Pn	03 02 43.9	-2.1
FRF	La Foret Royal	7.53	20	Pn	Pn	03 02 43.9	-2.1
FRF				Sn	Sn	03 04 03.9	-7.1
	57nm,0.3s						
CZD	Col de Zad	7.54	245	P	Pn	03 02 47.0	+0.5
CZD	Col de Zad	7.54	245	P	Pn	03 02 47.0	+0.5
CZD	Col de Zad	7.54	245	P	Pn	03 02 47.0	+0.5
PGF	Pioggiola	7.54	35	ePn	Pn	03 02 44.0	-2.3
PGF				eSn	Sn	03 04 03.0	-8.5
	85nm,0.3s						
PGF	Pioggiola	7.54	35	ePn	Pn	03 02 44.0	-2.3
PGF	Pioggiola	7.54	35	eP	Pn	03 02 44.0	-2.3
PGF	Pioggiola	7.54	35	Pn	Pn	03 02 44.0	-2.3
EALK	Alkurruntz	7.55	334	Pn	Pn	03 02 45.6	-0.8
	86nm,0.5s,SNR=40						
EALK				Sn	Sn	03 04 06.3	-5.3
	165nm,0.5s,SNR=7.9						
LASF	Ste Croix	7.56	4	ePn	Pn	03 02 45.1	-1.3
LASF				eSn	Sn	03 04 04.3	-7.4
	123nm,0.7s						
LASF	Ste Croix	7.56	4	ePn	Pn	03 02 45.1	-1.3
LASF	Ste Croix	7.56	4	Pn	Pn	03 02 45.1	-1.3
SMRF	Simiane la Rot	7.67	14	ePn	Pn	03 02 47.2	-0.8
SMRF				eSn	Sn	03 04 07.1	-7.4
	21nm,0.3s						
SMRF	Simiane la Rot	7.67	14	ePn	Pn	03 02 47.2	-0.8
SMRF	Simiane la Rot	7.67	14	Pn	Pn	03 02 47.2	-0.8
EMIN	Mina Concepcio	7.89	282	Pn	Pn	03 02 48.8	-2.1
	30nm,0.5s,SNR=40						
EMIN				Sn	Sn	03 04 12.5	-7.4
	10nm,0.3s,SNR=7.9						
ARF	Arif	7.92	232	P	Pn	03 02 51.0	-0.5
ARF	Arif	7.92	232	P	Pn	03 02 51.0	-0.5
EPLA	Plasencia	8.02	299	Pn	Pn	03 02 51.5	-1.4
	82nm,1.0s,SNR=20						
EPLA				Sn	Sn	03 04 16.4	-6.8
	10nm,0.3s,SNR=7.9						
SBF	Sospel	8.04	23	ePn	Pn	03 02 50.5	-2.6
SBF				eSn	Sn	03 04 16.3	-7.3
	140nm,0.4s						
SBF	Sospel	8.04	23	ePn	Pn	03 02 50.5	-2.6
SBF	Sospel	8.04	23	eP	Pn	03 02 50.5	-2.6
SBF	Sospel	8.04	23	Pn	Pn	03 02 50.5	-2.6
SBF				Sn	Sn	03 04 16.3	-7.3
	70nm,0.4s						
CLTB	Caltabellotta	8.17	80	ePn	Pn	03 02 54.6	-0.3
CLTB				eSn	Sn	03 04 24.7	-2.1
GOLM	Goulmima	8.22	236	P	Pn	03 02 57.0	+1.3
GOLM	Goulmima	8.22	236	P	Pn	03 02 57.0	+1.3
ELAN	Lanestosa	8.36	325	Pn	Pn	03 02 56.6	-0.8
	152nm,1.0s,SNR=31						
VIVF	Saint-Julien-l	8.40	8	ePn	Pn	03 02 57.1	-0.9
VIVF				eSn	Sn	03 04 24.5	-7.9
	11nm,0.3s						
VIVF	Saint-Julien-l	8.40	8	ePn	Pn	03 02 57.1	-0.9
VIVF	Saint-Julien-l	8.40	8	eP	Pn	03 02 57.1	-0.9
VIVF	Saint-Julien-l	8.40	8	Pn	Pn	03 02 57.1	-0.9
VIVF				Sn	Sn	03 04 24.5	-7.9
	5.7nm,0.3s						
CAF	Calviac	8.42	355	ePn	Pn	03 02 57.9	-0.3
CAF	Calviac	8.42	355	ePn	Pn	03 02 57.9	-0.3
CAF	Calviac	8.42	355	eP	Pn	03 02 57.9	-0.3
CAF	Calviac	8.42	355	Pn	Pn	03 02 57.9	-0.3
EGRO	El Granado	8.51	280	Pn	Pn	03 02 56.9	-2.6
	33nm,0.7s,SNR=16						
EGRO				Sn	Sn	03 04 27.3	-7.8
	11nm,0.4s,SNR=7.9						
ZHG	ZHG	8.55	252	P	Pn	03 02 59.0	-1.2
LFF	La Frestale	8.58	349	ePn	Pn	03 03 00.0	-0.4
LFF				eSn	Sn	03 04 28.3	-8.5
	40nm,0.4s						
LFF	La Frestale	8.58	349	ePn	Pn	03 03 00.0	-0.4
LFF	La Frestale	8.58	349	eP	Pn	03 03 00.0	-0.4
LFF	La Frestale	8.58	349	Pn	Pn	03 03 00.0	-0.4
ORIF	Oris-en-Rattie	8.64	13	ePn	Pn	03 03 00.8	-0.5
ORIF	Oris-en-Rattie	8.64	13	ePn	Pn	03 03 00.8	-0.5
ORIF	Oris-en-Rattie	8.64	13	Pn	Pn	03 03 00.8	-0.5
MBDF	Montbardon	8.65	18	ePn	Pn	03 03 00.8	-0.7
MBDF				eSn	Sn	03 04 35.0	-3.7
	24nm,0.5s						
MBDF	Montbardon	8.65	18	ePn	Pn	03 03 00.8	-0.7
MBDF				eSn	Sn	03 04 35.0	-3.7
MBDF	Montbardon	8.65	18	eP	Pn	03 03 00.8	-0.7
MBDF				e		03 04 35.0	
MBDF	Montbardon	8.65	18	Pn	Pn	03 03 00.8	-0.7
PVAQ	Vaqueiros	8.69	279	ePn	Pn	03 02 58.6	-3.4
PVAQ				eSn	Sn	03 04 31.4	-8.1
PVAQ				A	A	03 04 41.0	
	13nm,0.6s						
PVAQ	Vaqueiros	8.69	279	ePn	Pn	03 02 59.0	-3.0
PVAQ				eSn	Sn	03 04 35.3	-4.2
PVAQ	Vaqueiros	8.69	279	Pn	Pn	03 02 58.6	-3.4
PVAQ				Sn	Sn	03 04 31.4	-8.1
	13nm,0.6s						
PVAQ	Vaqueiros	8.69	279	P	Pn	03 02 58.5	-3.4
PMRV	Marv??o	8.76	292	ePn	Pn	03 03 01.2	-1.8
PMRV	Marv??o	8.76	292	Pn	Pn	03 03 01.2	-1.8
SSB	Saint Sauveur	8.81	7	ePn	Pn	03 03 02.7	-0.8
SSB				eSn	Sn	03 04 37.1	-5.3
SSB	Saint Sauveur	8.81	7	eP	Pn	03 03 02.7	-0.8
SSB				e		03 04 37.1	
RJF	Les Rejaudoux	8.84	353	ePn	Pn	03 03 03.5	-0.5
RJF				eSn	Sn	03 04 35.3	-7.9
	46nm,0.7s						
RJF	Les Rejaudoux	8.84	353	ePn	Pn	03 03 03.5	-0.5
RJF	Les Rejaudoux	8.84	353	eP	Pn	03 03 03.5	-0.5
RJF	Les Rejaudoux	8.84	353	Pn	Pn	03 03 03.5	-0.5
RJF				Sn	Sn	03 04 35.3	-7.9
	23nm,0.7s						
PBDV	Barranco-do-Ve	8.86	278	ePn	Pn	03 03 01.9	-2.4
PBDV				eSn	Sn	03 04 38.3	-5.4
PBDV				A	A	03 04 49.3	
	14nm,0.7s						
PBDV	Barranco-do-Ve	8.86	278	Pn	Pn	03 03 01.9	-2.4
PBEJ	Beja	8.86	283	ePn	Pn	03 03 00.9	-3.3
PBEJ	Beja	8.86	283	Pn	Pn	03 03 00.9	-3.3
BNI	Bardonecchia	8.93	17	ePn	Pn	03 03 04.8	-0.5
BNI				eSn	Sn	03 04 44.2	-1.5
BNI	Bardonecchia	8.93	17	eP	Pn	03 03 04.9	-0.5
BNI				e		03 04 44.2	
PCBR	Castelo Branco	8.95	295	ePn	Pn	03 03 03.6	-1.9
PCBR				eSn	Sn	03 04 40.5	-5.3
PCBR	Castelo Branco	8.95	295	Pn	Pn	03 03 03.6	-1.9
PCVE	Castro Verde	8.96	280	ePn	Pn	03 03 03.0	-2.6
PCVE				eSn	Sn	03 04 40.7	-5.4
PCVE	Castro Verde	8.96	280	Pn	Pn	03 03 03.0	-2.6
VAE	Valguarnera	9.11	81	Pn	Pn	03 03 06.5	-1.3
	3.3nm,0.3s,baz=265,slow=17,SNR=8.7						
VAE				Sn	Sn	03 04 57.8	+7.8
	1.2nm,0.3s,baz=155,slow=3.9,SNR=2.8						
MVO	Moncorvo	9.14	303	ePn	Pn	03 03 06.2	-2.0
MVO				eSn	Sn	03 04 43.4	-7.3
MVO				A	A	03 04 51.9	
	19nm,0.5s						
MVO	Moncorvo	9.14	303	Pn	Pn	03 03 06.2	-2.0
	112nm,0.7s,SNR=29						
MVO				Sn	Sn	03 04 42.9	-7.8
	58nm,0.8s,SNR=7.9						
MTE	Manteigas	9.19	298	ePn	Pn	03 03 07.7	-1.1
MTE				eSn	Sn	03 04 46.9	-4.9
MTE				A	A	03 04 55.4	
	28nm,0.6s						
MTE	Manteigas	9.19	298	ePn	Pn	03 03 08.0	-0.8
MTE				eSn	Sn	03 04 47.0	-4.8
MTE	Manteigas	9.19	298	Pn	Pn	03 03 07.7	-1.1
EARI	Arriondas	9.29	319	Pn	Pn	03 03 08.9	-1.3
	226nm,0.9s,SNR=90						
EARI				Sn	Sn	03 04 46.4	-7.7
	53nm,0.9s,SNR=7.9						
PMTG	Montargil	9.30	289	ePn	Pn	03 03 08.3	-2.0
PMTG				eSn	Sn	03 04 46.4	-8.2
PMTG	Montargil	9.30	289	Pn	Pn	03 03 08.3	-2.0
PMTG				Sn	Sn	03 04 46.4	-8.2
ECAL	Calabor	9.34	308	Pn	Pn	03 03 09.4	-1.5
	78nm,0.3s,SNR=6.7						
ECAL				Sn	Sn	03 04 47.9	-7.6
	7.2nm,0.8s,SNR=7.9						
LPG	La Plagne	9.37	16	ePn	Pn	03 03 11.8	+0.3
LPG	La Plagne	9.37	16	ePn	Pn	03 03 11.8	+0.3
LPG	La Plagne	9.37	16	eP	Pn	03 03 11.8	+0.3
LPG	La Plagne	9.37	16	Pn	Pn	03 03 11.8	+0.3
PNCL	Nicolau / Gran	9.38	283	ePn	Pn	03 03 08.4	-3.1
PNCL	Nicolau / Gran	9.38	283	Pn	Pn	03 03 08.4	-3.1
LPL	La Plagne	9.39	16	ePn	Pn	03 03 12.1	+0.4
LPL	La Plagne	9.39	16	ePn	Pn	03 03 12.1	+0.4
LPL	La Plagne	9.39	16	eP	Pn	03 03 12.1	+0.4
LPL	La Plagne	9.39	16	Pn	Pn	03 03 12.1	+0.4
MORF	Marmelete	9.43	278	eP	Pn	03 03 08.7	-3.4
MORF	Marmelete	9.43	278	ePn	Pn	03 03 10.7	-1.5
MORF				eSn	Sn	03 04 49.3	-8.5
MORF				A	A	03 04 55.9	
	7.6nm,0.8s						
MORF	Marmelete	9.43	278	Pn	Pn	03 03 10.7	-1.5
MORF				Sn	Sn	03 04 49.3	-8.5
	7.6nm,0.8s						
VLC	Villacollemand	9.43	34	ePn	Pn	03 03 10.9	-1.3
PTEO	Sao Teotonio	9.50	280	ePn	Pn	03 03 11.4	-1.6
PTEO	Sao Teotonio	9.50	280	Pn	Pn	03 03 11.4	-1.6
PVIS	Viseu	9.55	299	ePn	Pn	03 03 11.1	-2.7
PVIS	Viseu	9.55	299	Pn	Pn	03 03 11.1	-2.7
PFVI	Vila Bisbo	9.57	277	ePn	Pn	03 03 10.2	-3.8
PFVI	Vila Bisbo	9.57	277	ePn	Pn	03 03 11.0	-3.0
PFVI				eSn	Sn	03 04 56.3	-4.8
PFVI	Vila Bisbo	9.57	277	Pn	Pn	03 03 11.0	-3.0
	59nm,0.8s,SNR=7.9						
PFVI				Sn	Sn	03 04 52.0	-9.1
	42nm,1.0s,SNR=7.9						
PTOM	Tomar	9.57	292	ePn	Pn	03 03 12.0	-2.0
PTOM	Tomar	9.57	292	Pn	Pn	03 03 12.0	-2.0
ALMR	Almeirim	9.59	289	eP	Pn	03 03 10.5	-3.8
ALMR	Almeirim	9.59	289	ePn	Pn	03 03 12.8	-1.4
ALMR	Almeirim	9.59	289	Pn	Pn	03 03 12.8	-1.4
PVRL	Vila Real	9.66	303	ePn	Pn	03 03 13.1	-2.1
PVRL	Vila Real	9.66	303	Pn	Pn	03 03 13.1	-2.1
COI	Coimbra	9.74	296	ePn	Pn	03 03 15.1	-1.3
COI	Coimbra	9.74	296	eP	Pn	03 03 15.1	-1.3
POLO	Lamas de Olo	9.75	303	ePn	Pn	03 03 14.6	-2.0
POLO	Lamas de Olo	9.75	303	Pn	Pn	03 03 14.6	-2.0
PCAS	Casmilo, Conde	9.76	295	ePn	Pn	03 03 15.8	-0.8
PCAS	Casmilo, Conde	9.76	295	Pn	Pn	03 03 15.8	-0.8
TCF	Toulx Ste Croi	9.77	356	ePn	Pn	03 03 16.4	-0.3
TCF	Toulx Ste Croi	9.77	356	ePn	Pn	03 03 16.4	-0.3
TCF	Toulx Ste Croi	9.77	356	eP	Pn	03 03 16.4	-0.3
TCF	Toulx Ste Croi	9.77	356	Pn	Pn	03 03 16.4	-0.3
AQU	L'Aquila	9.87	51	ePn	Pn	03 03 19.6	+1.5
AQU	L'Aquila	9.87	51	eP	Pn	03 03 19.6	+1.5
OUZM	OUZ	9.93	238	P	Pn	03 03 19.0	-0.1
LIS	Lisbon	9.95	286	eP	Pn	03 03 14.5	-4.7
BGF	Bois d'Agland	10.02	359	ePn	Pn	03 03 19.7	-0.4
BGF	Bois d'Agland	10.02	359	ePn	Pn	03 03 19.7	-0.4
BGF	Bois d'Agland	10.02	359	eP	Pn	03 03 19.7	-0.4
BGF	Bois d'Agland	10.02	359	Pn	Pn	03 03 19.7	-0.4
PCAB	Cabril	10.06	304	ePn	Pn	03 03 19.6	-1.1
PCAB	Cabril	10.06	304	Pn	Pn	03 03 19.6	-1.1
PMAFR	Mafra	10.09	288	ePn	Pn	03 03 19.4	-1.7
PMAFR	Mafra	10.09	288	Pn	Pn	03 03 18.8	-2.3
	122nm,1.1s,SNR=7.3						
PMAFR				Sn	Sn	03 05 04.9	-9.0
	38nm,0.5s,SNR=7.9						
SMF	Signal de Mont	10.12	3	ePn	Pn	03 03 20.8	-0.7
SMF	Signal de Mont	10.12	3	ePn	Pn	03 03 20.8	-0.7
SMF	Signal de Mont	10.12	3	eP	Pn	03 03 20.8	-0.7
SMF	Signal de Mont	10.12	3	Pn	Pn	03 03 20.8	-0.7
ELOB	Lobios	10.15	305	Pn	Pn	03 03 20.7	-1.4
	26nm,0.3s,SNR=31						
ELOB				Sn	Sn	03 05 07.2	-8.4
	18nm,0.4s,SNR=7.9						
AVF	Avril sur Loir	10.25	1	ePn	Pn	03 03 22.9	-0.4
AVF	Avril sur Loir	10.25	1	ePn	Pn	03 03 22.9	-0.4
AVF	Avril sur Loir	10.25	1	eP	Pn	03 03 22.9	-0.4
AVF	Avril sur Loir	10.25	1	Pn	Pn	03 03 22.9	-0.4
SENIN	Lac Senin/Sane	10.31	17	ePn	Pn	03 03 24.7	+0.3
CABF	La Chapelle	10.32	12	ePn	Pn	03 03 23.8	-0.5
CABF	La Chapelle	10.32	12	ePn	Pn	03 03 23.8	-0.5
CABF	La Chapelle	10.32	12	Pn	Pn	03 03 23.8	-0.5
PGAV	Gavieira, Arco	10.34	305	ePn	Pn	03 03 23.2	-1.4
PGAV	Gavieira, Arco	10.34	305	Pn	Pn	03 03 23.2	-1.4
MFF	Saint Martin d	10.35	348	ePn	Pn	03 03 23.5	-1.1
MFF				eSn	Sn	03 05 10.3	-10
	30nm,0.5s						
MFF	Saint Martin d	10.35	348	ePn	Pn	03 03 23.5	-1.1
MFF	Saint Martin d	10.35	348	eP	Pn	03 03 23.5	-1.1
MFF	Saint Martin d	10.35	348	Pn	Pn	03 03 23.5	-1.1
EPON	Pontenova	10.38	314	Pn	Pn	03 03 23.6	-1.4
	34nm,0.5s,SNR=14						
EPON				Sn	Sn	03 05 12.6	-8.4
	12nm,0.4s,SNR=7.9						
SSF	Saint Saulge	10.52	2	ePn	Pn	03 03 26.6	-0.4
SSF	Saint Saulge	10.52	2	ePn	Pn	03 03 26.6	-0.4
SSF	Saint Saulge	10.52	2	eP	Pn	03 03 26.6	-0.4
SSF	Saint Saulge	10.52	2	Pn	Pn	03 03 26.6	-0.4
EAGO	Agolada(Pontev	10.64	309	Pn	Pn	03 03 27.4	-1.3
	52nm,0.8s,SNR=7.9						
EZAM	Zamans	10.70	305	Pn	Pn	03 03 28.4	-1.1
	72nm,1.1s,SNR=7.9						
HYF	Humbligny	10.73	358	ePn	Pn	03 03 29.6	-0.3
HYF	Humbligny	10.73	358	ePn	Pn	03 03 29.6	-0.3
HYF	Humbligny	10.73	358	Pn	Pn	03 03 29.6	-0.3
LOR	Lormes	10.74	3	ePn	Pn	03 03 29.7	-0.3
	baz=184						
LOR	Lormes	10.74	3	ePn	Pn	03 03 29.7	-0.3
LOR	Lormes	10.74	3	eP	Pn	03 03 29.7	-0.3
LOR	Lormes	10.74	3	Pn	Pn	03 03 29.7	-0.3
TUE	Stuetta	10.98	23	ePn	Pn	03 03 33.1	-0.3
TIP	Timpagrande	11.13	72	ePn	Pn	03 03 35.7	+0.3
EMAZ	Mazaricos	11.28	308	Pn	Pn	03 03 36.1	-1.3
	45nm,0.8s,SNR=7.9						
FUORN	Ofenpass-Fuorn	11.41	26	ePn	Pn	03 03 40.3	+0.8
DAVOX	Davos/Dischmat	11.42	24	Pn	Pn	03 03 38.6	-0.9
	1.4nm,0.3s,baz=214,slow=13,SNR=11						
DAVOX				LR	LR	03 07 48.8	
	comp=Z,4µm,20.3s,baz=182,slow=36						
CLF	Chambon-Foret	11.50	357	ePn	Pn	03 03 39.2	-1.2
HINF	Hinteralfeld	11.61	13	ePn	Pn	03 03 40.3	-1.7
HINF				eSn	Sn	03 05 41.5	-10
	3.1nm,0.3s						
HINF	Hinteralfeld	11.61	13	ePn	Pn	03 03 40.3	-1.7
HINF	Hinteralfeld	11.61	13	eP	Pn	03 03 40.3	-1.7
HINF	Hinteralfeld	11.61	13	Pn	Pn	03 03 40.3	-1.7
HINF				Sn	Sn	03 05 41.5	-10
	1.6nm,0.3s						
HAU	Haudompre	11.71	11	ePn	Pn	03 03 41.9	-1.4
HAU	Haudompre	11.71	11	ePn	Pn	03 03 41.9	-1.4
HAU	Haudompre	11.71	11	eP	Pn	03 03 41.9	-1.4
HAU	Haudompre	11.71	11	Pn	Pn	03 03 41.9	-1.4
SFTF	Sexfontaines	11.75	6	ePn	Pn	03 03 43.5	-0.3
	baz=170						
SFTF	Sexfontaines	11.75	6	ePn	Pn	03 03 43.5	-0.3
SFTF	Sexfontaines	11.75	6	Pn	Pn	03 03 43.5	-0.3
DAVA	Damuels	11.87	23	ePn	Pn	03 03 46.3	+0.7
	18nm,1.1s,SNR=10						
FETA	Feichten	11.92	26	ePn	Pn	03 03 48.7	+2.3
	12nm,1.1s,SNR=8.4						
MEZF	Maizieres J'vi	12.05	6	ePn	Pn	03 03 47.1	-0.8
	baz=188						
MEZF	Maizieres J'vi	12.05	6	ePn	Pn	03 03 47.1	-0.8
MEZF	Maizieres J'vi	12.05	6	Pn	Pn	03 03 47.1	-0.8
ECH	Echery	12.05	13	ePn	Pn	03 03 46.2	-1.8
ECH	Echery	12.05	13	eP	Pn	03 03 46.2	-1.8
PAGF	Fort de Pagny	12.17	8	ePn	Pn	03 03 48.9	-0.6
	baz=191						
PAGF	Fort de Pagny	12.17	8	ePn	Pn	03 03 48.9	-0.6
GRR	Gorron	12.20	347	ePn	Pn	03 03 48.7	-1.2
GRR				eSn	Sn	03 05 54.5	-11
	18nm,0.6s						
GRR	Gorron	12.20	347	ePn	Pn	03 03 48.7	-1.2
GRR	Gorron	12.20	347	eP	Pn	03 03 48.7	-1.2
GRR	Gorron	12.20	347	Pn	Pn	03 03 48.7	-1.2
GRR				Sn	Sn	03 05 54.5	-11
	9.1nm,0.6s						
CDF	Champ du Feu	12.26	13	ePn	Pn	03 03 48.9	-2.0
CDF	Champ du Feu	12.26	13	ePn	Pn	03 03 48.9	-2.0
CDF	Champ du Feu	12.26	13	eP	Pn	03 03 48.9	-2.0
CDF	Champ du Feu	12.26	13	Pn	Pn	03 03 48.9	-2.0
SQTA	Sankt Quirin	12.27	27	ePn	Pn	03 03 52.9	+1.9
	45nm,1.1s,SNR=15						
QUIF	Quistinic	12.28	340	ePn	Pn	03 03 49.6	-1.4
QUIF				eSn	Sn	03 05 56.6	-11
	32nm,0.6s						
QUIF	Quistinic	12.28	340	ePn	Pn	03 03 49.6	-1.4
QUIF	Quistinic	12.28	340	eP	Pn	03 03 49.6	-1.4
QUIF	Quistinic	12.28	340	Pn	Pn	03 03 49.6	-1.4
QUIF				Sn	Sn	03 05 56.6	-11
	16nm,0.6s						
LDF	La Druitiere	12.28	350	ePn	Pn	03 03 49.1	-1.9
LDF				eSn	Sn	03 05 57.1	-10
	9.0nm,0.6s						
LDF	La Druitiere	12.28	350	ePn	Pn	03 03 49.1	-1.9
LDF	La Druitiere	12.28	350	eP	Pn	03 03 49.1	-1.9
MOTA	Moosalm	12.33	26	ePn	Pn	03 03 52.8	+0.9
	17nm,0.9s,SNR=16						
RETA	Reutte	12.34	25	ePn	Pn	03 03 52.6	+0.7
	20nm,1.2s,SNR=8.3						
ABTA	Abfaltersbach	12.39	32	ePn	Pn	03 03 53.2	+0.5
	7.7nm,0.5s						
BFO	Black Forest	12.40	16	ePn	Pn	03 03 50.8	-2.0
BFO	Black Forest	12.40	16	ceP	Pn	03 03 51.1	-1.7
SGMF	Saint Gilles	12.43	342	ePn	Pn	03 03 51.5	-1.5
SGMF				eSn	Sn	03 06 01.1	-10
	51nm,1.0s						
SGMF	Saint Gilles	12.43	342	ePn	Pn	03 03 51.5	-1.5
SGMF	Saint Gilles	12.43	342	eP	Pn	03 03 51.5	-1.5
SGMF	Saint Gilles	12.43	342	Pn	Pn	03 03 51.5	-1.5
SGMF				Sn	Sn	03 06 01.1	-10
	26nm,1.0s						
WTTA	Wattenberg	12.46	28	ePn	Pn	03 03 54.8	+1.2
	12nm,0.9s,SNR=8.3						
FLN	La Foliniere	12.50	349	ePn	Pn	03 03 52.1	-1.9
	baz=168						
FLN				eSn	Sn	03 06 01.9	-11
	9.3nm,0.5s,baz=170						
FLN	La Foliniere	12.50	349	ePn	Pn	03 03 52.1	-1.9
FLN	La Foliniere	12.50	349	eP	Pn	03 03 52.1	-1.9
FLN	La Foliniere	12.50	349	Pn	Pn	03 03 52.1	-1.9
FLN				Sn	Sn	03 06 01.9	-11
	4.7nm,0.5s						
WATA	Walderalm	12.50	28	ePn	Pn	03 03 55.3	+1.2
	16nm,1.0s,SNR=5.9						
ROSF	Rostrenen	12.69	340	ePn	Pn	03 03 55.1	-1.5
ROSF				eSn	Sn	03 06 06.5	-11
	32nm,0.8s						
ROSF	Rostrenen	12.69	340	ePn	Pn	03 03 55.1	-1.5
ROSF	Rostrenen	12.69	340	eP	Pn	03 03 55.1	-1.5
ROSF	Rostrenen	12.69	340	Pn	Pn	03 03 55.1	-1.5
ROSF				Sn	Sn	03 06 06.5	-11
	16nm,0.8s						
MYKA	Terra Mystica	12.80	35	ePn	Pn	03 04 00.5	+2.2
	23nm,1.4s						
KBA	Koelnbreinsper	13.01	33	ePn	Pn	03 04 01.6	+0.5
	15nm,1.0s,SNR=11						
OBKA	Obir	13.14	37	Pn	Pn	03 04 03.7	+0.8
	12nm,1.2s						
JSA	Saint Aubin	13.22	345	eP	Pn	03 04 02.3	-1.5
JVM	Valle D.L. Mar	13.25	345	eP	Pn	03 04 04.0	-0.2
WLF	Walferdange	13.31	9	ePn	Pn	03 04 05.0	-0.1
WLF	Walferdange	13.31	9	eP	Pn	03 04 05.0	-0.1
WLF	Walferdange	13.31	9	⇑P	Pn	03 04 05.6	+0.5
BLY	Banja Luka	13.47	48	⇓iP	Pn	03 04 08.6	+1.2
SOKA	Soboth	13.50	38	ePn	Pn	03 04 07.7	0.0
	8.7nm,0.8s,SNR=12						
BAIF	Baives	13.54	3	eP	Pn	03 04 08.4	+0.1
BAIF	Baives	13.54	3	ePn	Pn	03 04 08.4	+0.1
BAIF	Baives	13.54	3	eP	Pn	03 04 08.4	+0.1
BAIF	Baives	13.54	3	Pn	Pn	03 04 08.4	+0.1
DOU	Dourbes	13.60	4	⇑P	Pn	03 04 09.4	+0.3
	comp=Z,32nm,0.4s						
GIVF	Givet	13.62	5	eP	Pn	03 04 09.5	+0.2
GIVF	Givet	13.62	5	ePn	Pn	03 04 09.5	+0.2
GIVF	Givet	13.62	5	eP	Pn	03 04 09.5	+0.2
GIVF	Givet	13.62	5	Pn	Pn	03 04 09.5	+0.2
TAM	Tamanrasset	13.86	171	ePn	Pn	03 04 12.4	-0.4
TAM	Tamanrasset	13.86	171	eP	Pn	03 04 12.4	-0.4
TIR	Tirane	13.91	65	⇑iP	P	03 04 18.6	-2.9
TIR	Tirane	13.91	65	⇑P	P	03 04 18.6	-2.9
BCLA	Clavier	13.97	6	⇑P	Pn	03 04 14.7	+0.6
	comp=Z,23nm,1.2s						
SNF	Seneffe	14.00	3	⇑P	Pn	03 04 15.1	+0.6
	comp=Z,80nm,0.6s						
MOA	Molln	14.00	33	ePn	Pn	03 04 15.1	+0.5
	comp=Z,20nm,1.1s,SNR=6.9						
ARSA	Arzberg	14.14	37	ePn	Pn	03 04 16.5	+0.1
	comp=Z,7.8nm,0.6s,SNR=12						
MEM	Membach	14.23	8	⇑P	Pn	03 04 18.6	+1.0
	comp=Z,43nm,0.8s						
UCC	Uccle	14.29	3	ePn	Pn	03 04 19.3	+0.9
UCC	Uccle	14.29	3	⇑P	Pn	03 04 18.8	+0.4
HGN	Heimansgroeve	14.37	7	eP	Pn	03 04 20.6	+1.0
	comp=Z,33nm,0.7s						
GRA1	Grafenberg Arr	14.42	22	ePn	Pn	03 04 18.2	-2.1
GRF	Grafenberg Arr	14.42	22	eP	Pn	03 04 18.2	-2.1
GEC2	GERESS Array S	14.55	29	ePn	Pn	03 04 20.0	-2.2
GEC2	GERESS Array S	14.55	29	eP	Pn	03 04 20.0	-2.2
GERES	GERESS Array B	14.55	29	Pn	Pn	03 04 20.0	-2.2
	comp=Z,0.7nm,0.3s,baz=215,slow=11,SNR=51						
GERES				Lg	Lg	03 08 46.7	
	comp=Z,0.2nm,0.3s,baz=214,slow=38,SNR=2.5						
KHC	Kasperske Hory	14.74	28	ePn	Pn	03 04 23.2	-1.4
KHC	Kasperske Hory	14.74	28	eP	Pn	03 04 23.2	-1.4
KHC				MLR	MLR		
	comp=Z,2µm,14.0s						
KHC	Kasperske Hory	14.74	28	eP	Pn	03 04 23.2	-1.4
KHC				epP	P	03 04 32.0	+1.4
KHC				AMS	AMS	03 11 20.0	
	comp=Z,2µm,14.0s						
CONA	Conrad Observa	14.78	36	ePn	Pn	03 04 24.7	-0.6
	comp=Z,12nm,1.0s,SNR=11						
CCA1	Carnmenellis	14.91	339	eP	Pn	03 04 26.8	-0.1
ITM	Ithomi	15.10	82	ePn	Pn	03 04 30.3	+0.8
	comp=Z,33nm,1.1s						
NKC	Novy Kostel	15.27	23	eP	Pn	03 04 32.7	+0.9
NKC				MLR	MLR		
	comp=Z,2µm,17.6s						

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NKC   Novy Kostel        15.27  23  eP      Pn     03 04 32.7 +0.9
NKC                                  AMS    AMS    03 09 50.0
      comp=Z,2µm,17.6s
SWN1  Swindon            15.38 348  eP      Pn     03 04 32.7 -0.4
BATH  Bath               15.40 347  eP      Pn     03 04 32.7 -0.7
AGG   Agios Georgios     15.42  75  ePn     Pn     03 04 34.1 +0.3
      comp=Z,27nm,1.1s
AGG   Agios Georgios     15.42  75  eP      Pn     03 04 34.1 +0.3
AGG                                  pmax   pmax
      comp=Z,27nm,1.1s
TREC  Trest              15.63  31  eP      Pn     03 04 35.2 -1.2
TREC                                 MLR    MLR
      comp=Z,2µm,11.6s
TREC  Trest              15.63  31  eP      Pn     03 04 35.2 -1.2
TREC                                 AMS    AMS    03 12 30.0
      comp=Z,2µm,11.6s
WTSB  Winterswijk        15.65   9  eP      Pn     03 04 37.7 +1.1
      comp=Z,41nm,1.0s
MODS  Modra-Piesok       15.77  37  eP      Pn     03 04 37.0 -1.3
MODS  Modra-Piesok       15.77  37  ePN     Pn     03 04 37.0 -1.3
PRU   Pruhonice          15.80  28  eP      Pn     03 04 37.7 -0.9
PRU                                  MLR    MLR
      comp=Z,2µm,16.5s
PRU   Pruhonice          15.80  28  eP      Pn     03 04 37.7 -0.9
PRU                                 epP     P      03 04 44.0 +1.6
PRU                                  AMS    AMS    03 10 30.0
      comp=Z,2µm,16.5s
GOPC  GO Pecny, Ondr     15.83  29  eP      Pn     03 04 39.3 +0.2
GOPC                                 MLR    MLR
      comp=Z,2µm,13.8s
GOPC  GO Pecny, Ondr     15.83  29  eP      Pn     03 04 39.3 +0.2
GOPC                                epP     pP     03 04 46.2 -1.3
GOPC                                 AMS    AMS    03 12 00.0
      comp=Z,2µm,13.8s
KRUC  Moravsky           15.85  34  ePN     Pn     03 04 38.5 -0.7
MONM  Monmouth           15.87 347  eP      Pn     03 04 39.6 +0.2
MONM                                 IAmb   IAmb   03 04 42.9
      comp=Z,76nm,1.4s
MCH1  Michaelchurch      16.05 346  eP      Pn     03 04 41.2 -0.6
VRAC  Vranov             16.12  33   Pn     Pn     03 04 41.7 -1.0
      comp=Z,0.4nm,0.3s,baz=227,slow=14,SNR=8.1
VRAC                                 Lg     Lg     03 09 30.6
      comp=Z,0.1nm,0.3s,baz=203,slow=15,SNR=2.3
VRAC                                 LR     LR     03 10 29.9
      comp=Z,990nm,21.9s,baz=174,slow=36
VRAC  Vranov             16.12  33⇑iP     Pn     03 04 43.4 +0.7
VRAC  Vranov             16.12  33 ⇑P     Pn     03 04 43.4 +0.7
VRAC  Vranov             16.12  33  ePN     Pn     03 04 42.2 -0.5
PVCC  Panska Ves         16.25  27  eP      Pn     03 04 45.3 +0.9
PVCC                                 MLR    MLR
      comp=Z,2µm,14.5s
PVCC  Panska Ves         16.25  27  eP      Pn     03 04 45.3 +0.9
PVCC                                 AMS    AMS    03 11 10.0
      comp=Z,2µm,14.5s
WACR  West Acre          16.28 355  eP      Pn     03 04 45.0 +0.3
WACR                                 IAmb   IAmb   03 04 53.0
      comp=Z,63nm,1.0s
JAVC  Velka Javorina     16.29  36  ePN     Pn     03 04 45.7 +0.7
BRG   Berggiesshubel     16.32  25  i P     Pn     03 04 45.0 -0.2
      comp=Z,18nm,1.3s
      comp=N,4µm,19.8s
      comp=E,6µm,21.0s
      comp=Z,8µm,21.0s
BRG   Berggiesshubel     16.32  25  i P     Pn     03 04 45.0 -0.2
BRG                                  pmax   pmax
      comp=Z,18nm,1.3s
BRG                                  MLR    MLR
      comp=N,4µm,19.8s
BRG                                  MLR    MLR
      comp=E,6µm,21.0s
BRG                                  MLR    MLR
      comp=Z,8µm,21.0s
MDVR  Moldovita          16.34  54⇑iP     Pn     03 04 44.8 -0.8
CLL   Collm              16.38  23  eP      P      03 04 47.7 -1.1
      comp=Z,22nm,1.2s
CLL   Collm              16.38  23  eP      P      03 04 47.7 -1.1
CLL                                  pmax   pmax
      comp=Z,22nm,1.2s
CLL   Collm              16.38  23  e(P)    Pn     03 04 45.0 -1.0
CLL                                 i pP    P      03 04 49.2 +0.4
      comp=Z,29nm,1.3s
CLL                                 ePP     sP     03 04 58.0 +2.2
CLL                                 e              03 05 02.0
CWF   Charnwood Fore     16.50 351  eP      Pn     03 04 46.6 -0.8
CWF                                  IAmb   IAmb   03 04 55.5
      comp=Z,38nm,0.8s
VYHS  Vyhne              16.62  39  eP      Pn     03 04 49.0 -0.2
VYHS  Vyhne              16.62  39  ePN     Pn     03 04 48.9 -0.2
BZS   Buzias             16.63  51⇓iP     Pn     03 04 48.2 -1.0
BZS   Buzias             16.63  51 ⇓P     Pn     03 04 48.2 -1.0
VTS   Vitosha            16.66  62  eP      P      03 04 51.4 -0.8
      comp=Z,25nm,1.3s
VTS   Vitosha            16.66  62⇑iP     Pn     03 04 49.3 -0.6
VTS   Vitosha            16.66  62 ⇑P     Pn     03 04 49.3 -0.6
UPC   Upice              16.79  30  eP      Pn     03 04 50.8 -0.4
UPC                                  MLR    MLR
      comp=Z,2µm,10.6s
UPC   Upice              16.79  30  eP      Pn     03 04 50.8 -0.4
UPC                                  AMS    AMS    03 13 30.0
      comp=Z,2µm,10.6s
DPC   Dobruska-Polom     16.79  31  eP      Pn     03 04 50.5 -0.8
DPC                                  MLR    MLR
      comp=Z,2µm,12.0s
DPC   Dobruska-Polom     16.79  31  eP      Pn     03 04 50.5 -0.8
DPC                                  AMS    AMS    03 12 30.0
      comp=Z,2µm,12.0s
PSZ   Piszkesteto        16.82  42  ePn     Pn     03 04 51.9 +0.1
      comp=Z,50nm,1.1s
PSZ   Piszkesteto        16.82  42⇓iP     Pn     03 04 52.2 +0.5
PSZ   Piszkesteto        16.82  42 ⇓P     Pn     03 04 52.2 +0.5
HERR  Herculane          16.83  54⇓iP     P      03 04 53.7 -0.2
CHVC  Chvalec            16.86  30  eP      Pn     03 04 51.9 -0.3
CHVC                                 AMS    AMS    03 13 30.0
      comp=Z,2µm,10.2s
MORC  Moravsky Berou     16.88  34  ePn     Pn     03 04 51.3 -1.2
      comp=Z,14nm,1.0s
MORC  Moravsky Berou     16.88  34⇑iP     Pn     03 04 53.2 +0.7
MORC  Moravsky Berou     16.88  34 ⇑P     Pn     03 04 53.2 +0.7
MORC  Moravsky Berou     16.88  34  ePN     Pn     03 04 52.0 -0.5
OSTC  Ostas              16.90  30  eP      Pn     03 04 52.3 -0.4
OSTC                                 AMS    AMS    03 12 10.0
      comp=Z,1µm,12.7s
FOEL  Foel Wylfa         16.94 347  eP      Pn     03 04 53.2 +0.1
FOEL                                 IAmb   IAmb   03 04 59.5
      comp=Z,143nm,1.4s
SIRR  Siria              16.96  49⇑iP     Pn     03 04 51.9 -1.5
STNC  Stoke              16.97 349  eP      Pn     03 04 53.7 +0.3
STNC                                 IAmb   IAmb   03 04 59.7
      comp=Z,200nm,1.4s
PMOZ  Porto Moniz, M     17.09 263   Pn     Pn     03 04 54.7 -0.5
      comp=Z,119nm,1.4s,SNR=7.9
LMK   Market Rasen       17.09 353  eP      Pn     03 04 55.3 +0.3
KSP   Ksiaz              17.16  29  eP      Pn     03 04 53.2 -2.6
KSP                                  LMZ    LR     03 33 06.6
      comp=Z,8µm,21.4s
KSP   Ksiaz              17.16  29  eP      Pn     03 04 53.2 -2.6
LBWR  Ladybower, Pea     17.20 350  eP      Pn     03 04 56.4  0.0
LBWR                                 IAmb   IAmb   03 05 01.2
      comp=Z,113nm,1.5s
OKC   Ostrava-Krasne     17.20  35  eP      Pn     03 04 56.3 -0.1
OKC                                  MLR    MLR
      comp=Z,2µm,9.9s
OKC   Ostrava-Krasne     17.20  35  eP      Pn     03 04 56.3 -0.1
OKC                                  AMS    AMS    03 14 30.0
      comp=Z,2µm,9.9s
GZR   Gura Zlata         17.27  53⇓iP     Pn     03 04 53.7 -3.7
GZR   Gura Zlata         17.27  53 ⇓P     Pn     03 04 53.7 -3.7
YLL   Llanberis          17.37 345  eP      Pn     03 04 58.5 +0.1
LANS  Liptovska Anna     17.37  38  eP      P      03 05 00.5 +0.7
LANS  Liptovska Anna     17.37  38  ePN     P      03 05 00.5 +0.7
WLF1  Llynfaes           17.55 345  eP      Pn     03 05 00.4 -0.3
WLF1                                 IAmb   IAmb   03 05 04.6
      comp=Z,466nm,2.3s
YRC   Rhoscolyn          17.56 345  eP      Pn     03 05 01.4 +0.7
WME   Myndd Eilian       17.64 345  eP      Pn     03 05 01.6 -0.1
WPS   Cemaes, Angles     17.68 345  eP      P      03 05 03.1  0.0
WPS                                  IAmb   IAmb   03 05 05.5
      comp=Z,198nm,1.9s
IDI   Anoyia             17.71  88   P      Pn     03 05 01.1 -1.8
      comp=Z,0.2nm,0.3s,baz=349,slow=16,SNR=2.8
HPK   Haverah Park       17.73 351  eP      Pn     03 05 02.7 -0.2
HPK                                  IAmb   IAmb   03 05 09.1
      comp=Z,127nm,1.6s
DRGR                     17.84  49⇓iP     P      03 05 06.7 +1.6
DRGR                     17.84  49 ⇓P     P      03 05 06.7 +1.6
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PLVB  Pleven             17.85  61⇑iP     P      03 05 06.6 +1.5
LOT   Lotru              17.94  54⇑iP     P      03 05 06.8 +0.6
NIE   Niedzica           17.96  39  eP      P      03 05 07.4 +1.1
NIE                                 eS      S      03 08 35.9 +4.1
NIE                                  LMZ    LR     03 36 15.6
      comp=Z,4µm,22.6s
NIE   Niedzica           17.96  39  eP      P      03 05 07.4 +1.1
DSB   Dublin             17.98 341  ePn     Pn     03 05 05.2 -0.8
      comp=Z,61nm,1.4s
OJC   Ojcow              18.24  36  eP      Pn     03 05 09.3 +0.1
OJC                                  LMZ    LR     03 33 04.4
      comp=Z,4µm,24.5s
OJC   Ojcow              18.24  36  eP      P      03 05 10.7 +1.4
      comp=Z,26nm,1.4s
OJC   Ojcow              18.24  36  eP      P      03 05 10.7 +1.4
OJC                                  pmax   pmax
      comp=Z,26nm,1.4s
TRPA  Tarpa              18.41  45⇓iP     Pn     03 05 15.2 +3.9
WIM   Isle of Man        18.42 345  eP      P      03 05 11.5 +0.2
ALN   Alexandroupoli     18.42  69  eP      P      03 05 11.4  0.0
      comp=Z,22nm,1.3s
ALN   Alexandroupoli     18.42  69  eP      P      03 05 11.5  0.0
ALN                                  pmax   pmax
      comp=Z,22nm,1.3s
IOMK  Kirk Michael       18.50 346  eP      Pn     03 05 14.3 +1.9
UZH   Uzhgorod           18.55  43  eP      P      03 05 11.2 -1.5
UZH                                 eS      Sn     03 08 33.4 -6.3
UZH                                  MLR    MLR
      comp=Z,100nm,15.0s
KESW  Keswick, Cumbr     18.55 349  eP      Pn     03 05 13.3 +0.3
EDMD  Edmundbyers        18.63 351  eP      Pn     03 05 14.2 +0.3
EDMD                                 IAmb   IAmb   03 05 18.8
      comp=Z,145nm,1.9s
ELND  Elena              18.63  63⇓iP     Pn     03 05 18.4 +4.4
VOIR                     18.77  55⇑iP     Pn     03 05 16.7 +0.9
VOIR                     18.77  55 ⇑P     Pn     03 05 16.7 +0.9
ARCR  ARCALIA            18.98  50⇑iP     Pn     03 05 19.7 +1.4
GAL1  Galloway           19.10 346  eP      P      03 05 19.4 +0.6
GAL1                                 IAmb   IAmb   03 05 24.1
      comp=Z,170nm,1.8s
ESK   Eskdalemuir        19.27 349  eP      P      03 05 19.5 -1.1
      comp=Z,47nm,1.4s
ESK   Eskdalemuir        19.27 349  eP      P      03 05 21.2 +0.6
ESK                                  IAmb   IAmb   03 05 26.1
      comp=Z,104nm,1.7s
ESK   Eskdalemuir        19.27 349  i P     Pn     03 05 23.6 +1.9
EKA   Eskdalemuir Ar     19.28 349   P      P      03 05 20.8  0.0
      baz=157,slow=9.3,SNR=278
SECR                     19.32  57⇓iP     Pn     03 05 25.3 +3.0
KWP   Kalwaria Pacla     19.34  41  eP      Pn     03 05 22.5  0.0
KWP                                  LMZ    LR     03 31 49.2
      comp=Z,6µm,28.0s
KWP   Kalwaria Pacla     19.34  41  eP      P      03 05 21.7 +0.3
      comp=Z,525nm,1.0s
KWP   Kalwaria Pacla     19.34  41  eP      Pn     03 05 22.5  0.0
MLR   Muntele Rosu       19.38  55   P      P      03 05 21.5 -0.5
      comp=Z,0.5nm,0.3s,baz=264,slow=10,SNR=12
MLR                                  S      Sn     03 09 00.7 +0.5
      comp=Z,0.5nm,0.3s,baz=261,slow=19,SNR=3.3
MLR   Muntele Rosu       19.38  55  eP      P      03 05 22.7 +0.6
      comp=Z,28nm,0.8s
MLR   Muntele Rosu       19.38  55⇑iP     P      03 05 22.5 +0.4
MLR   Muntele Rosu       19.38  55 ⇑P     P      03 05 22.5 +0.4
GKP   Gorka Klasztor     19.44  26  eP      Pn     03 05 24.1 +0.3
GKP                                  LMZ    LR     03 27 55.2
      comp=Z,4µm,34.5s
GKP   Gorka Klasztor     19.44  26  eP      Pn     03 05 24.1 +0.3
OZUR                     19.49  54⇓iP     P      03 05 23.8 +0.7
EBL   Broad Law          19.69 350  eP      P      03 05 26.1 +0.9
BURAR Bucovina Array     19.74  49⇑iP     Pn     03 05 27.8 +0.3
BURAR Bucovina Array     19.74  49 ⇑P     Pn     03 05 27.8 +0.3
BUR08 Bucovina Ar. S     19.74  49  eP      Pn     03 05 27.4 -0.2
      comp=Z,40nm,1.3s
BALB  Balikesir          19.75  73  eP      Pn     03 05 27.5  0.0
      comp=Z,150nm,1.2s
ESY   Stoneypath         19.77 350  eP      Pn     03 05 27.7  0.0
PGBU  Glenifferbraes     19.96 347  eP      P      03 05 28.6 +0.5
PLOR  Plostina           19.97  55⇑iP     Pn     03 05 31.1 +1.0
PLOR  Plostina           19.97  55 ⇑P     Pn     03 05 31.1 +1.0
BIZ   Bicaz              20.01  52⇑iP     Pn     03 05 34.4 +3.8
VRI   Vrincioaia         20.02  55⇑iP     P      03 05 29.2 +0.2
VRI   Vrincioaia         20.02  55 ⇑P     P      03 05 29.2 +0.2
LVV   L'vov              20.15  42  eP      P      03 05 30.8 +0.5
LVV                                 eS      S      03 09 12.0 -3.8
LVV                                  MLR    MLR
      comp=N,1µm,11.0s
LVV                                  MLR    MLR
      comp=E,800nm,11.0s
LVV                                  MLR    MLR
      comp=Z,800nm,10.0s
ICOR  Ion Corvin         20.26  60⇓iP     P      03 05 32.0 +0.5
MANT  Manisa             20.29  77  eP      P      03 05 30.3 -1.8
      comp=Z,77nm,0.9s
HARR  Harsova            20.49  59⇑iP     P      03 05 34.4 +0.4
HARR  Harsova            20.49  59 ⇑P     P      03 05 34.4 +0.4
TLB   Topalu             20.54  59⇓iP     P      03 05 34.5  0.0
TLB   Topalu             20.54  59 ⇓P     P      03 05 34.5  0.0
MFTR  Murfatlar          20.71  61⇑iP     Pn     03 05 41.2 +2.4
CFR   Carcaliu           20.76  58⇓iP     P      03 05 35.3 -1.6
CFR   Carcaliu           20.76  58 ⇓P     P      03 05 35.3 -1.6
TIRR  Tirgusor           20.77  60⇓iP     Pn     03 05 39.9 +0.5
TIRR  Tirgusor           20.77  60 ⇓P     Pn     03 05 39.9 +0.5
MILM  Milestii Mici      21.73  53⇑iP     P      03 05 47.5 +0.1
KIS   Kishinev           21.76  53  eP      P      03 05 46.0 -1.7
      comp=Z,140nm,1.6s
KIS   Kishinev           21.76  53  ePPP    PPP    03 06 18.0
KIS                                 eS      S      03 09 40.0 -7.7
KIS                                 eSS     SnSn   03 10 14.0 +1.5
KIS                                  LRM    MLR    03 15 28.0
      comp=Z,1µm,16.0s
KIS   Kishinev           21.76  53  eP      P      03 05 46.0 -1.7
KIS                                 e              03 06 18.0
KIS                                 eS      S      03 09 40.0 -7.7
KIS                                 eSS     SnSn   03 10 14.0 +1.5
KIS                                  pmax   pmax
      comp=Z,140nm,1.6s
KIS                                  MLR    MLR
      comp=Z,1µm,16.0s
KIS                                  MLR    MLR
      comp=N,1µm,14.0s
SNART Snartemo           21.98   6  eP      P      03 05 51.1 +1.1
SUW   Suwalki            22.35  32  eP      P      03 05 54.5 +0.6
SUW                                  LMZ    LR     03 30 26.1
      comp=N,5µm,32.9s
SUW   Suwalki            22.35  32  eP      P      03 05 52.9 -1.0
      comp=N,164nm,1.0s
SUW   Suwalki            22.35  32  eP      P      03 05 52.9 -1.0
SUW                                  pmax   pmax
      comp=Z,164nm,1.0s
STAV  Stavanger          22.48   4  eP      P      03 05 54.0 -1.2
KMY   Karmoy             22.74   3  eP      P      03 05 58.6 +0.6
BLS5  Blasjo             23.01   4  eP      P      03 06 00.9 +0.1
TOA1  Torodi Ar. Sit     23.32 183  eP      P      03 06 00.3 -4.0
TOA0  Torodi Ar. Sit     23.32 183  eP      P      03 06 01.9 -2.5
TORD  Torodi Ar. Bea     23.32 183   P      P      03 06 00.3 -4.1
      comp=Z,23nm,1.1s,baz=354,slow=10,SNR=65
TORD                                 Lg     Lg     03 13 20.8
      comp=Z,4.3nm,0.9s,baz=357,slow=24,SNR=3.9
AKASG Malin Array Be     23.48  45   P      P      03 06 02.3 -3.3
      comp=Z,9.6nm,0.5s,baz=243,slow=10,SNR=16
AKASG                                PcP    PcP    03 09 49.0 -2.2
      comp=Z,0.5nm,0.4s,baz=263,slow=2.0,SNR=5.2
AKASG                                S      S      03 10 14.1 -4.2
      comp=Z,0.2nm,0.3s,baz=240,slow=18,SNR=2.7
AKBB  Malin Array Si     23.48  45  eP      P      03 06 02.6 -3.0
      comp=Z,26nm,0.8s
AKBB                                ePcP    PcP    03 09 49.0 -2.2
AKBB                                eS      S      03 10 14.1 -4.2
AKBB  Malin Array Si     23.48  45  eP      P      03 06 02.6 -3.0
AKBB                                e              03 09 49.0
AKBB                                eS      S      03 10 14.1 -4.2
AKBB                                 pmax   pmax
      comp=Z,26nm,0.8s
KONO  Kongsberg          23.51   8  eP      P      03 06 08.0 +2.1
      comp=Z,32nm,1.0s
KONO  Kongsberg          23.51   8⇓eP     P      03 06 08.3 +2.4
KONO                                 pmax   pmax
      comp=Z,41nm,2.5s
ASK   Askoy              24.01   3  eP      P      03 06 11.0 +0.4
BR101 Keskin Array S     24.19  73  eP      P      03 06 09.6 -3.2
BR101                               ePcP    PcP    03 09 50.5 -2.6
BR131 Keskin Array S     24.19  73  eP      P      03 06 13.7 +1.0
      comp=Z,4.1nm,0.8s
BRTR  Keskin Array B     24.19  73   P      P      03 06 09.6 -3.2
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      comp=Z,0.5nm,0.6s,baz=266,slow=8.2,SNR=3.1
BRTR                                 PcP    PcP    03 09 50.5 -2.6
      comp=Z,0.8nm,0.8s,baz=310,slow=7.4,SNR=2.5
CSS   Mathiatis          24.55  85  eP      P      03 06 17.0 +1.1
      comp=Z,19nm,0.9s
HFS   Hagfors            24.58  13   P      P      03 06 14.4 -1.5
      comp=Z,7.0nm,0.5s,baz=198,slow=9.3,SNR=32
HFS                                  LR     LR     03 16 17.5
      comp=Z,1µm,18.3s,baz=176,slow=38
ISAL  Salakas            24.66  32  eP      P      03 06 15.7 -1.0
ISAL                                 IAmb   IAmb   03 06 20.4
      comp=Z,26nm,1.1s
HYA   Hoyanger           24.73   4  eP      P      03 06 20.0 +2.8
IDID  Didziasalis        24.76  33  eP      P      03 06 16.4 -1.2
IDID                                 IAmb   IAmb   03 06 21.4
      comp=Z,28nm,1.1s
MICGM Minsk              24.78  36  eP      P      03 06 15.0 -2.8
MICGM                               ePP     PnPn   03 06 53.0 +3.0
MICGM                               ePPP    PPP    03 07 04.0
MICGM                               eS      S      03 10 33.0 -6.3
MICGM                               eSS     SnSn   03 11 20.0 -6.3
MICGM                               eLR     LR     03 15 14.0
MNK   Minsk              24.78  36  eP      P      03 06 15.0 -2.8
MNK                                 e              03 06 53.0
MNK                                 eS      S      03 10 33.0 -6.3
NC602 NORSAR Array S     24.82  10  eP      P      03 06 19.4 +1.4
      comp=Z,56nm,1.3s
IZAR  Zarasai            24.83  32  eP      P      03 06 20.1 +1.9
IZAR                                 IAmb   IAmb   03 06 20.8
      comp=Z,29nm,1.4s
NAO01 NORSAR Array S     24.83   9  eP      P      03 06 20.5 +2.3
      comp=Z,64nm,1.1s
NAO01 NORSAR Array S     24.83   9  eP      P      03 06 20.1 +2.0
SIM   Simferopol'        24.85  61  eP      P      03 06 18.3 -0.2
SIM                                 eS      S      03 10 34.5 -6.1
SIM                                  SS     SnSn   03 11 30.0 +1.9
SIM                                  pmax   pmax
      comp=Z,8.0nm,0.6s
SIM                                  pmax   pmax
      comp=Z,240nm,12.2s
SIM                                  MLR    MLR
      comp=Z,430nm,12.7s
NBO00 NORSAR Array S     25.00   9  eP      P      03 06 20.5 +0.8
      comp=Z,37nm,0.9s
NB2   NORSAR Subarra     25.06   9   P      P      03 06 21.3 +1.0
      comp=Z,7.2nm,1.1s,baz=205,slow=6.2
NB2   NORSAR Subarra     25.06   9   P      P      03 06 21.3 +1.0
      baz=205,slow=6.2
NB200 NORSAR Array S     25.06   9  eP      P      03 06 18.6 -1.7
NB200                               ePcP    PcP    03 09 53.9 -0.5
NOA   NORSAR Array B     25.06   9   P      P      03 06 18.6 -1.7
      comp=Z,4.6nm,0.8s,baz=195,slow=9.8,SNR=14
NOA                                  PcP    PcP    03 09 53.9 -0.5
      comp=Z,0.8nm,0.8s,baz=182,slow=2.1,SNR=4.0
NB201 NORSAR Array S     25.08   9  eP      P      03 06 22.0 +1.5
      comp=Z,69nm,1.3s
NC405 NORSAR Array S     25.20  10  eP      P      03 06 22.6 +1.1
      comp=Z,46nm,1.3s
NC303 NORSAR Array S     25.26   9  eP      P      03 06 23.8 +1.7
      comp=Z,28nm,1.0s
MMAI  Mount Meron Ar     26.71  88   P      P      03 06 33.5 -2.0
      comp=Z,3.3nm,0.7s,baz=282,slow=8.5,SNR=4.0
KSDI  Kefar Szold        26.86  87   P      P      03 06 49.0  +12
VSU   Vasula             26.87  28  eP      P      03 06 35.0 -1.6
VSU                                  IAmb   IAmb   03 06 48.9
      comp=Z,69nm,1.0s
VSU   Vasula             26.87  28⇑eP     P      03 06 37.1 +0.5
HRFI  Mount Harif        27.40  94   P      P      03 06 43.3 +1.6
EIL   Elat               27.47  95   P      P      03 06 40.2 -2.1
      comp=Z,4.8nm,0.8s,baz=260,slow=19,SNR=2.9
ASF   Jabal al Asfar     28.16  89   P      P      03 06 46.9 -1.7
      comp=Z,0.9nm,0.5s,baz=260,slow=6.1,SNR=3.1
SOC   Sochi              28.73  64  eP      P      03 06 57.8 +4.3
SOC                                 ePPP    PPP    03 07 52.4
SOC                                 eSS     SS     03 13 04.5  -39
FIA0  FINESS Array S     28.83  23  eP      P      03 06 52.6 -1.4
FIA0                                ePcP    PcP    03 10 02.8 -0.5
FIA0  FINESS Array S     28.83  23  eP      P      03 06 52.6 -1.4
FIA0                                e              03 10 02.8
FINES FINESS Array B     28.83  23   P      P      03 06 52.6 -1.4
      comp=Z,3.7nm,0.7s,baz=203,slow=6.4,SNR=8.9
FINES                                PcP    PcP    03 10 02.8 -0.5
      comp=Z,1.4nm,0.6s,baz=186,slow=3.8,SNR=4.7
OBN   Obninsk            29.42  40   LR     LR     03 19 08.6
      comp=Z,186nm,20.6s,baz=202,slow=37
OBN   Obninsk            29.42  40⇑eP     P      03 06 59.6 +0.3
OBN                                 e              03 07 53.6
OBN                                 eS      S      03 11 55.1 +2.7
OBN                                  pmax   pmax
      comp=Z,10.0nm,0.5s
OBN                                  MLR    MLR
      comp=Z,1µm,21.0s
VSR   Storozhevoye       29.52  49  eP      P      03 06 58.8 -1.5
VSR                                  pmax   pmax
      comp=Z,10.0nm,1.3s
LPSR  Galich'ya Gora     29.78  46  eP      P      03 07 04.5 +1.9
LPSR                                 pmax   pmax
      comp=Z,10.0nm,0.8s
DBIC  Dimbokro           30.60 196   P      P      03 07 07.5 -2.7
      comp=Z,4.6nm,0.8s,baz=335,slow=6.7,SNR=4.6
DBIC  Dimbokro           30.60 196  eP      P      03 07 07.5 -2.7
      comp=Z,26nm,1.4s
DBIC  Dimbokro           30.60 196  eP      P      03 07 07.5 -2.7
DBIC                                 pmax   pmax
      comp=Z,26nm,1.4s
TIC   Toumodi            30.66 196  ePKP1   P      03 07 04.3 -6.4
KIC   Kosan Boka         30.88 195  ePKP1   P      03 07 05.0 -7.6
      comp=Z,178nm,1.8s
KIV   Kislovodsk         30.89  64  eP      P      03 07 11.1 -1.6
KIV                                  pmax   pmax
      comp=Z,10.0nm,1.1s
KIV                                  MLR    MLR
      comp=Z,819nm,15.0s
LIC   Lamto              31.07 196  ePKP1   P      03 07 04.2  -10
      comp=Z,88nm,1.3s
MAK   Makhachkala        34.44  65  eP      P      03 07 42.2 -1.3
MAK                                 eS      S      03 13 11.0 +0.1
MAK                                  pmax   pmax
      comp=Z,109nm,1.0s
MAK                                  MLR    MLR
      comp=Z,671nm,17.0s
ARA0  ARCESS Array S     35.24  13  eP      P      03 07 48.7 -1.5
ARCES ARCESS Array B     35.24  13   P      P      03 07 48.7 -1.5
      comp=Z,4.7nm,0.6s,baz=198,slow=7.4,SNR=19
APA   Apatity            35.50  19⇓iP     P      03 07 50.0 -2.4
APA                                  MLR    MLR
      comp=Z,300nm,11.0s
PRGR  Permogore          36.47  33  eP      P      03 07 58.9 -1.9
PRGR                                 pmax   pmax
      comp=Z,20nm,0.9s
RAYN  Ar Rayn            38.65  98  eP      P      03 08 21.7 +1.9
      comp=Z,10nm,1.3s
RAYN  Ar Rayn            38.65  98  eP      P      03 08 21.7 +1.9
RAYN                                 pmax   pmax
      comp=Z,10.0nm,1.3s
SUMG  Summit             41.69 343  eP      P      03 08 45.3 +0.5
      comp=Z,11nm,0.7s
SUMG  Summit             41.69 343  i P     P      03 08 46.3 +1.5
SUMG                                 pmax   pmax
      comp=Z,27nm,0.7s
SUMG  Summit             41.69 343  i P     P      03 08 46.3 +1.5
      comp=Z,27nm,0.7s
ARU   Arti               41.72  43  eP      P      03 08 43.5 -1.2
      comp=Z,23nm,0.7s
ARU   Arti               41.72  43c iP      P      03 08 43.0 -1.8
ARU                                  S      S      03 15 00.3 -0.5
ARU                                  SS     SS     03 18 01.6 -4.7
ARU                                  pmax   pmax
      comp=Z,19nm,0.6s
ARU                                  MLR    MLR
      comp=Z,958nm,18.0s
ABKAR Akbulak array      42.59  54  eP      P      03 08 51.2 -0.7
      comp=Z,8.8nm,1.4s
KBS   Kingsbay           42.66   3d iP      P      03 08 55.2 +3.0
KBS                                  pmax   pmax
      comp=Z,118nm,2.5s
SVE   Sverdlovsk         42.89  43  eP      P      03 08 53.3 -1.0
SVE                                  pmax   pmax
      comp=Z,21nm,0.6s
MBAR  Mbarara            44.99 139   P      P      03 09 07.8 -4.1
      comp=Z,3.1nm,0.7s,baz=327,slow=10,SNR=7.4
MBAR  Mbarara            44.99 139  eP      P      03 09 11.6 -0.3
      comp=Z,5.7nm,0.8s
MBAR  Mbarara            44.99 139  eP      P      03 09 11.6 -0.3
MBAR                                 pmax   pmax
      comp=Z,6.0nm,0.8s
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UOSS	Minazif	46.58	89	*e*P	P	03 09 25.2	+1.0
	comp=Z,18nm,0.8s						
BRVK	Borovoye	48.62	48	*e*P	P	03 09 39.2	-0.5
	comp=Z,9.6nm,0.8s						
BRVK	Borovoye	48.62	48	*e*P	P	03 09 39.2	-0.5
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMBO	Kilima Mbogo	49.10	132	P	P	03 09 41.9	-2.2
	comp=Z,4.6nm,1.0s,baz=25,slow=14,SNR=5.5						
KMBO	Kilima Mbogo	49.10	132	*e*P	P	03 09 45.5	+1.5
	comp=Z,6.3nm,0.9s						
KMBO	Kilima Mbogo	49.10	132	*i* P	P	03 09 46.2	+2.2
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SCHQ	Schefferville	49.95	315	P	P	03 09 47.9	-1.9
	comp=Z,14nm,0.6s,baz=80,slow=5.7,SNR=8.9						
SCHQ	Schefferville	49.95	315	*e*P	P	03 09 47.9	-1.9
	comp=Z,15nm,0.6s						
LMN	Caledonia Moun	50.52	303	*e*P	P	03 09 54.5	+0.2
	comp=Z,13nm,1.0s						
BATG	Bathurst New B	51.00	305	*e*P	P	03 09 58.4	+0.5
	comp=Z,14nm,1.1s						
PQI	Presque Isle	52.45	305	*e*P	P	03 10 08.3	-0.4
	comp=Z,13nm,0.9s						
PKME	Peaks-Kenny Pk	53.71	303	P	P	03 10 17.7	-0.3
	baz=72						
AAK	Ala-Archa	53.88	60⇓	*e*P	P	03 10 21.1	+1.6
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	54.17	49	*e*P	P	03 10 20.1	-1.1
	comp=Z,12nm,0.8s						
KURK	Kurchatov	54.17	49	*de*P	P	03 10 20.3	-0.9
KURK				pmax	pmax		
	comp=Z,19nm,1.3s						
CHGQ	Chibougamau	55.58	310	P	P	03 10 31.0	-0.5
	baz=72						
MOQ	Mont Orford	55.68	304	*e*P	P	03 10 33.6	+1.3
LBNH	Lisbon	55.82	303	*e*P	P	03 10 35.0	+1.7
	comp=Z,13nm,0.8s						
LBNH	Lisbon	55.82	303	*e*P	P	03 10 35.0	+1.7
LBNH				pmax	pmax		
	comp=Z,13nm,0.8s						
LBNH	Lisbon	55.82	303	P	P	03 10 32.8	-0.4
	baz=70,SNR=6.8						
KSH	Kashi	56.02	63	P	P	03 10 36.1	+1.2
KSH				pP	pP	03 10 40.6	+0.2
KSH				sP	sP	03 10 43.5	+1.0
KSH				PcP	PcP	03 11 35.4	+2.2
KSH				S	S	03 18 21.6	-1.1
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
WES	Weston	56.05	301	*e*P	P	03 10 36.2	+1.3
	comp=Z,16nm,1.0s						
WES	Weston	56.05	301	*e*P	P	03 10 36.2	+1.3
WES				pmax	pmax		
	comp=Z,16nm,1.0s						
HRV	Adam Dziewonsk	56.17	301	P	P	03 10 35.6	-0.2
	baz=69						
LSZ	Lusaka	56.72	151	P	P	03 10 38.4	-1.7
	comp=Z,5.5nm,0.9s,baz=350,slow=6.6,SNR=10						
LSZ	Lusaka	56.72	151	*e*P	P	03 10 40.0	0.0
	comp=Z,14nm,1.4s						
LSZ	Lusaka	56.72	151	*e*P	P	03 10 40.0	0.0
LSZ				pmax	pmax		
	comp=Z,14nm,1.4s						
FRNY	Flat Rock	56.73	304	*e*P	P	03 10 40.7	+0.9
	comp=Z,7.8nm,1.1s						
ZAA1	Zalesovo Array	56.87	44	*e*P	P	03 10 38.7	-1.9
ZALV	Zalesovo Beam	56.87	44	P	P	03 10 38.7	-1.9
	comp=Z,9.4nm,0.7s,baz=288,slow=8.9,SNR=23						
TSUM	Tsumeb	57.10	164	P	P	03 10 40.5	-2.2
	comp=Z,2.8nm,0.8s,baz=42,slow=3.5,SNR=4.6						
RES	Resolute Bay	57.20	342	LR	LR	03 32 53.5	
	comp=Z,9µm,21.7s,baz=160,slow=34						
NCB	Newcomb	57.46	303	*e*P	P	03 10 46.6	+1.6
	comp=Z,7.1nm,0.9s						
LSQQ	Lebel-sur-Quev	57.46	310	P	P	03 10 44.9	0.0
	baz=70						
LONY	Lake Ozonia	57.47	304	*e*P	P	03 10 46.2	+1.2
	comp=Z,7.4nm,1.0s						
LONY	Lake Ozonia	57.47	304	P	P	03 10 44.8	-0.2
	baz=69						
MAKZ	Makanchi	57.50	53	*e*P	P	03 10 46.1	+0.9
	comp=Z,3.5nm,0.9s						
MATQ	Matagami	57.63	311	P	P	03 10 46.2	+0.2
	baz=70						
MK31	Makanchi Array	57.70	53	*e*P	P	03 10 45.4	-1.3
	comp=Z,4.6nm,0.7s						
MK31	Makanchi Array	57.70	53	*e*P	P	03 10 45.4	-1.3
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK32	Makanchi Array	57.70	53	*e*P	P	03 10 45.0	-1.6
MKAR	Makanchi Array	57.70	53	P	P	03 10 45.0	-1.6
	comp=Z,5.7nm,0.6s,baz=287,slow=5.8,SNR=38						
MKAR	Makanchi Array	57.70	53	*i* P	P	03 10 45.4	-1.3
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ORIO	Orleans, Innes	57.78	305	P	P	03 10 47.5	+0.3
	baz=69						
KSCT	Kent School, K	57.79	301	*e*P	P	03 10 48.6	+1.3
	comp=Z,7.1nm,1.0s						
D54A	Lac Fusel, La	57.92	308	P	P	03 10 48.4	+0.2
	baz=69						
M61A	Granite Spring	58.14	300	P	P	03 10 50.4	+0.6
	baz=67						
PAL	Palisades	58.36	300	P	P	03 10 51.2	-0.1
	baz=67						
E54A	Lac Daplat, Po	58.52	307	P	P	03 10 52.2	-0.1
	baz=68						
H56A	Elgin	58.59	305	P	P	03 10 53.1	+0.3
	baz=68						
D53A	Lac Vacive, Po	58.61	308	*e*P	P	03 10 53.1	+0.1
	comp=Z,20nm,1.0s						
D53A	Lac Vacive, Po	58.61	308	P	P	03 10 53.1	+0.1
	baz=69						
G55A	Calabogie	58.65	306	P	P	03 10 53.9	+0.6
	baz=68						
ODNJ	Ogdensburg	58.81	300	*e*P	P	03 10 54.6	+0.2
	comp=Z,7.7nm,0.7s						
PEMO	Pembroke	58.84	306	P	P	03 10 54.6	0.0
	baz=68						
E53A	Dumoine, Ponti	58.85	307	P	P	03 10 54.6	0.0
	baz=68						
PLVO	Plevna	58.96	305	P	P	03 10 55.6	+0.1
	baz=68						
D52A	ZEK Kipawa Sen	59.10	308	P	P	03 10 56.3	-0.1
	baz=68						
M59A	Waymart	59.21	301	P	P	03 10 57.3	+0.1
	baz=67,SNR=7.0						
H55A	Tweed	59.22	305	P	P	03 10 57.5	+0.3
	baz=67						
N60A	Cedar Hill Far	59.24	300	P	P	03 10 57.5	0.0
	baz=66						
ALGO	Algonquin Park	59.25	307	P	P	03 10 57.4	-0.1
	baz=68						
L58A	Harry Jones Me	59.30	302	P	P	03 10 58.3	+0.5
	baz=67						
BINY	Binghamton	59.33	302	P	P	03 10 58.0	0.0
	baz=67						
PECO	Prince Edward	59.33	304	*e*P	P	03 10 59.5	+1.5
	comp=Z,9.5nm,0.9s						
PECO	Prince Edward	59.33	304	P	P	03 10 58.2	+0.2
	baz=67						
E52A	Mattawa	59.52	307	P	P	03 10 59.4	+0.1
	baz=68						
DELO	Deloro Mine	59.52	305	P	P	03 10 59.3	0.0
	baz=67						
BANO	Bancroft	59.53	306	P	P	03 10 59.5	+0.1
	baz=67						
D51A	Lot 18 Range I	59.67	308	P	P	03 11 00.3	0.0
	baz=68						
O60A	Telford	59.68	300	P	P	03 11 01.1	+0.6
	baz=66						
I55A	Frankford	59.68	305	P	P	03 11 01.0	+0.6
	baz=67						
N59A	State Game Lan	59.69	301	*e*P	P	03 11 01.4	+0.8
	comp=Z,17nm,1.4s						
N59A	State Game Lan	59.69	301	P	P	03 11 00.7	+0.1
	baz=66						
DGZ	Jazzator, Alta	59.85	48	*de*P	P	03 11 01.4	-0.3
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
G53A	Haliburton	59.95	306	P	P	03 11 02.4	+0.1
	baz=67						
E51A	G1948 Merrick	59.96	308	P	P	03 11 02.3	0.0
	baz=67						
M58A	Price’s Panora	59.98	301	P	P	03 11 02.9	+0.3
	baz=66						
P60A	Greenville	60.05	299	P	P	03 11 03.4	+0.4
	baz=66						
F52A	Sundridge	60.14	307	P	P	03 11 03.8	+0.2
	baz=67						
J55A	Hilton	60.14	304	P	P	03 11 04.1	+0.5
	baz=66						
O59A	Robesonia	60.22	300	P	P	03 11 04.6	+0.4
	baz=66						
WLVO	Wesleyville	60.27	305	P	P	03 11 04.6	+0.2
	baz=66						
BUKO	Buck Lake	60.32	307	P	P	03 11 05.0	+0.1
	baz=67						
N58A	Sunbury	60.38	301	P	P	03 11 05.4	+0.2
	baz=66						
MMNY	Mt. Morris Dam	60.42	303	*e*P	P	03 11 06.9	+1.4
	comp=Z,16nm,1.1s						
SADO	Sadowa	60.42	306	*e*P	P	03 11 06.3	+0.8
	comp=Z,10nm,0.8s						
F51A	Arnstein	60.46	307	P	P	03 11 05.6	-0.2
	baz=67,SNR=6.8						
MVL	Millersville	60.47	300	*e*P	P	03 11 07.4	+1.5
	comp=Z,8.2nm,0.8s						
DRCO	St. Marys Ceme	60.49	305	P	P	03 11 05.9	-0.1
	baz=66						
DRWO	Darlington Wes	60.51	305	P	P	03 11 06.0	-0.1
	baz=66						
K55A	Perry	60.53	303	P	P	03 11 06.5	+0.2
	baz=66						
MEDO	Medina	60.61	304	P	P	03 11 07.3	+0.5
	baz=66						
P59A	Jarrettsville	60.69	299	P	P	03 11 07.7	+0.3
	baz=65						
J54A	Appleton	60.69	304	P	P	03 11 07.8	+0.5
	baz=66						
PKRO	Pickering	60.70	305	P	P	03 11 07.9	+0.5
	baz=66						
E50A	Wahnapitae	60.79	308	P	P	03 11 08.6	+0.6
	baz=66						
D49A	Beulah Townshi	60.84	309	P	P	03 11 08.7	+0.4
	baz=67						
KLBO	Killbear Provi	60.88	307	P	P	03 11 09.0	+0.4
	baz=66						
H52A	Wyevale	60.96	306	P	P	03 11 08.9	-0.3
	baz=66						
N57A	Milroy	60.99	301	P	P	03 11 09.8	+0.4
	baz=65						
K54A	Basiliko Farm,	61.00	303	P	P	03 11 09.8	+0.3
	baz=66						
L55A	Hinsdale	61.00	303	P	P	03 11 09.6	+0.1
	baz=66						
I53A	Kortright Cn E	61.10	305	P	P	03 11 10.4	+0.3
	baz=66						
M56A	Emporium	61.12	302	P	P	03 11 10.1	-0.2
	baz=65,SNR=5.9						
SSPA	Standing Stone	61.27	301	*e*P	P	03 11 11.3	0.0
	comp=Z,33nm,1.4s						
SSPA	Standing Stone	61.27	301	P	P	03 11 11.0	-0.3
	baz=65						
O57A	Amberson	61.27	300	P	P	03 11 11.2	-0.2
	baz=65						
CLWO	Collingwood	61.31	306	P	P	03 11 11.2	-0.3
	baz=66,SNR=6.6						
P58A	Pank, Wackersv	61.35	300	P	P	03 11 12.0	+0.2
	baz=65						
N56A	West Decatur	61.43	301	P	P	03 11 13.0	+0.6
	baz=65						
ACTO	Acton	61.50	305	P	P	03 11 13.1	+0.2
	baz=65						
M55A	Ridgway	61.52	302	P	P	03 11 13.4	+0.3
	baz=65,SNR=7.6						
L54A	Sinclairville	61.57	303	P	P	03 11 13.7	+0.3
	baz=65						
TYNO	Tyneside	61.59	304	P	P	03 11 13.9	+0.5
	baz=65						
S60A	Water View	61.66	298	P	P	03 11 14.3	+0.3
	baz=64						
E48A	Lockeyer	61.67	309	P	P	03 11 14.4	+0.5
	baz=66						
R59A	King George, V	61.77	298	P	P	03 11 14.9	+0.2
	baz=64						
TOBO	Tobermory, Bru	61.78	307	P	P	03 11 15.2	+0.5
	baz=65						
BMRO	Meriville Lake	61.85	306	P	P	03 11 15.3	+0.2
	baz=65						
P57A	Homestead Farm	61.85	300	P	P	03 11 15.5	+0.3
	baz=64						
Q58A	Fox Den Farm,	61.85	299	P	P	03 11 15.8	+0.5
	baz=64						
F49A	Sandfield	61.89	308	P	P	03 11 15.7	+0.3
	baz=65						
O56A	Blue Knob Stat	61.90	301	*e*P	P	03 11 17.0	+1.4
	comp=Z,8.4nm,0.8s						
O56A	Blue Knob Stat	61.90	301	P	P	03 11 15.8	+0.2
	baz=64						
J52A	Paris	61.93	305	P	P	03 11 15.9	+0.1
	baz=65						
N55A	Marion Center	61.97	302	*e*P	P	03 11 17.6	+1.5
	comp=Z,9.6nm,0.7s						
N55A	Marion Center	61.97	302	P	P	03 11 16.1	0.0
	baz=65,SNR=6.0						
D47A	Chapleau	62.02	309	P	P	03 11 16.4	+0.1
	baz=65						
I51A	Listowel	62.05	305	P	P	03 11 16.7	+0.1
	baz=65						
ERPA	Erie	62.08	303	P	P	03 11 17.0	+0.3
	baz=65						
M54A	Oil Creek Stat	62.12	303	P	P	03 11 17.2	+0.1
	baz=65						
BRCO	Bruce Peninsul	62.14	306	P	P	03 11 17.5	+0.4
	baz=65						
F48A	Evansville	62.23	308	P	P	03 11 17.6	-0.1
	baz=65,SNR=5.9						
K52A	Tillsonburg	62.28	304	P	P	03 11 18.5	+0.4
	baz=65						
Q57A	Strasburg	62.32	300	P	P	03 11 18.6	+0.1
	baz=64						
L53A	Girard	62.33	303	P	P	03 11 18.7	+0.2
	baz=64						
R58A	Rapidan	62.35	299	P	P	03 11 18.7	+0.1
	baz=64						
WMQ	Urumqi	62.37	54	*e*P	P	03 11 21.4	+2.6
WMQ				sP	sP	03 11 28.3	+1.8
WMQ				pmax	pmax		
	comp=Z,40nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,230nm,8.9s						
WMQ				LR	LR		
	comp=Z,390nm,18.3s						
WMQ				LR	LR		
	comp=Z,440nm,21.7s						
WMQ				LR	LR		
	comp=Z,650nm,21.7s						
BASO	Ashfield	62.38	306	P	P	03 11 18.7	-0.1
	baz=65,SNR=5.9						
E47A	Iron Bridge	62.38	309	P	P	03 11 18.8	0.0
	baz=65,SNR=6.8						
P56A	Dayton Farm, R	62.41	300	P	P	03 11 19.2	+0.2
	baz=64						
R58B	Mineral	62.41	298	P	P	03 11 17.9	-1.2
	baz=64						
O55A	Ligonier	62.43	301	P	P	03 11 19.5	+0.3
	baz=64						
V61A	Roper	62.45	296	P	P	03 11 19.5	+0.2
	baz=63						
N54A	Moraine State	62.57	302	P	P	03 11 20.6	+0.5
	baz=64						
T59A	Double "B" Far	62.62	297	P	P	03 11 20.9	+0.4
	baz=63						
D46A	Sault St. Mari	62.67	310	P	P	03 11 20.7	0.0
	baz=65						
S58A	Poland Farm, P	62.69	298	P	P	03 11 21.1	+0.2
	baz=64						
R57A	Stanardsville	62.72	299	P	P	03 11 21.3	+0.2
	baz=64						
M53A	WI Miller and	62.83	303	P	P	03 11 22.2	+0.4
	baz=64						
K51A	Iona Station	62.83	304	P	P	03 11 21.8	0.0
	baz=64						
Q56A	Snyder Ridge,	62.86	300	P	P	03 11 22.4	+0.4
	baz=64						
MCWV	Mont Chateau	63.05	301	*e*P	P	03 11 24.9	+1.6
	comp=Z,6.9nm,0.7s						
MCWV	Mont Chateau	63.05	301	P	P	03 11 23.5	+0.3
	baz=64						
E46A	Sault Ste Mari	63.06	309	*e*P	P	03 11 23.4	+0.2
	comp=Z,9.0nm,0.7s						
E46A	Sault Ste Mari	63.06	309	P	P	03 11 23.4	+0.2
	baz=64						
P55A	Reedsville	63.10	301	P	P	03 11 23.8	+0.1
	baz=64						
H48A	Harrisville	63.16	307	P	P	03 11 24.3	+0.4
	baz=64						
I49A	Point Hope	63.17	306	P	P	03 11 24.2	+0.2
	baz=64						
O54A	Avella	63.18	301	P	P	03 11 25.0	+0.8
	baz=64,SNR=5.9						
N53A	Lisbon	63.22	302	*e*P	P	03 11 28.3	+3.9
	comp=Z,7.3nm,0.7s						
N53A	Lisbon	63.22	302	P	P	03 11 24.6	+0.1
	baz=64						
M52A	Chesterland	63.25	303	*e*P	P	03 11 25.8	+1.2
	comp=Z,32nm,1.3s						
M52A	Chesterland	63.25	303	P	P	03 11 24.8	+0.2
	baz=64						
R56A	Bull Pasture M	63.29	299	P	P	03 11 25.3	+0.3
	baz=63						
G47A	Hillman	63.30	308	P	P	03 11 24.9	0.0
	baz=64						
T58A	Grand View Acr	63.34	298	P	P	03 11 25.5	+0.3
	baz=63						
Q55A	Buckhannon	63.50	300	P	P	03 11 26.6	+0.2
	baz=63						
K50A	Casco	63.55	305	P	P	03 11 26.9	+0.4
	baz=64						
U58A	Oxford	63.60	297	P	P	03 11 27.5	+0.5
	baz=63						
W60A	Pink Hill	63.61	295	P	P	03 11 27.7	+0.7
	baz=62						
J49A	Marlette	63.63	306	P	P	03 11 27.4	+0.4
	baz=64						
I48A	Sherman Twp	63.63	307	P	P	03 11 27.4	+0.4
	baz=64						
V59A	Middlesex	63.66	296	P	P	03 11 27.6	+0.2
	baz=63						
O53A	New Philadelph	63.72	302	P	P	03 11 28.1	+0.4
	baz=63						
S56A	Natural Bridge	63.74	299	P	P	03 11 29.0	+1.1
	baz=63						
H47A	Mio	63.77	307	P	P	03 11 28.4	+0.4
	baz=64						
N52A	McGinn’s Farm,	63.80	303	P	P	03 11 28.8	+0.6
	baz=63						
T57A	Hurt	63.83	298	*e*P	P	03 11 29.8	+1.3
	comp=Z,9.9nm,0.9s						
T57A	Hurt	63.83	298	P	P	03 11 28.6	+0.2
	baz=63						
R55A	Marlinton	63.85	299	P	P	03 11 28.9	+0.2
	baz=63						
G46A	Petoskey	63.87	308	P	P	03 11 28.3	-0.3
	baz=64						
M51A	Elyria	63.90	303	P	P	03 11 29.1	+0.3
	baz=63						
GLMI	Grayling	63.94	308	P	P	03 11 29.3	+0.2
	baz=64						
E44A	Grand Marais A	63.96	310	P	P	03 11 29.3	+0.2
	baz=64						
L50A	Kingsville	64.00	304	P	P	03 11 29.6	+0.1
	baz=63						
PLIO	Pelee Island,	64.01	304	P	P	03 11 30.3	+0.7
	baz=63,SNR=8.6						
Q54A	Coxs Mills	64.03	300	*e*P	P	03 11 30.8	+1.0
	comp=Z,18nm,0.8s						
Q54A	Coxs Mills	64.03	300	P	P	03 11 30.3	+0.5
	baz=63,SNR=9.1						
J48A	Bridge Port	64.08	306	P	P	03 11 29.8	-0.2
	baz=63,SNR=6.3						
K49A	Clarkson	64.09	305	P	P	03 11 30.4	+0.3
	baz=63						
F45A	CMU Biological	64.12	309	P	P	03 11 30.4	+0.2
	baz=63						
U57A	Blanch	64.14	297	P	P	03 11 31.1	+0.5
	baz=62						
P53A	Whipple	64.19	301	*e*P	P	03 11 32.4	+1.5
	comp=Z,14nm,0.9s						
P53A	Whipple	64.19	301	P	P	03 11 31.0	+0.2
	baz=63						
O52A	Adamsville	64.21	302	*e*P	P	03 11 32.4	+1.4
	comp=Z,13nm,0.7s						
O52A	Adamsville	64.21	302	P	P	03 11 31.3	+0.4
	baz=63						
N51A	Ashland	64.21	303	*e*P	P	03 11 31.9	+1.0
	comp=Z,23nm,0.6s						
N51A	Ashland	64.21	303	P	P	03 11 31.2	+0.3
	baz=63,SNR=6.0						
I47A	Gladwin	64.23	307	*e*P	P	03 11 32.3	+1.3
	comp=Z,24nm,1.1s						
I47A	Gladwin	64.23	307	P	P	03 11 31.2	+0.3
	baz=63						
V58A	Windy Hill, Pi	64.28	297	P	P	03 11 31.9	+0.4
	baz=62						
S55A	Lewisburg	64.35	299	P	P	03 11 32.3	+0.3
	baz=62						
T56A	Rocky Mt	64.36	298	P	P	03 11 32.2	+0.2
	baz=62						
H46A	Fife Lake	64.44	308	P	P	03 11 32.6	+0.3
	baz=63,SNR=6.2						
M50A	Fremont	64.44	304	P	P	03 11 32.5	+0.1
	baz=63						
G45A	Suttons Bay	64.50	308	P	P	03 11 33.0	+0.3
	baz=63						
K48A	Perry	64.52	305	P	P	03 11 32.9	-0.1
	baz=63,SNR=6.4						
Q53A	Leroy	64.57	301	P	P	03 11 33.7	+0.4
	baz=62,SNR=6.7						
P52A	Corning	64.63	302	P	P	03 11 33.9	+0.2
	baz=63						
V57A	Coltrane Farms	64.71	297	P	P	03 11 34.7	+0.4
	baz=62						
O51A	Pataskala	64.72	302	P	P	03 11 34.6	+0.3
	baz=62,SNR=12						
W58A	Raeford	64.72	296	P	P	03 11 34.4	0.0
	baz=62						
E43A	Lone Tree Farm	64.73	310	*e*P	P	03 11 33.9	-0.3
	comp=Z,20nm,0.6s						
E43A	Lone Tree Farm	64.73	310	P	P	03 11 34.3	0.0
	baz=63,SNR=7.2						
J47A	Sunmer	64.78	306	P	P	03 11 34.7	0.0
	baz=63						
LBTB	Lobatse	64.80	157	*e*P	P	03 11 34.6	-0.3
	comp=Z,22nm,1.3s						
LBTB	Lobatse	64.80	157	*e*P	P	03 11 34.6	-0.3
LBTB				pmax	pmax		
	comp=Z,22nm,1.3s						
N50A	Nevada	64.80	303	P	P	03 11 35.0	+0.2
	baz=63						
T55A	Pulaski	64.86	299	P	P	03 11 35.6	+0.3
	baz=62						
I46A	Reed City	64.86	307	P	P	03 11 35.5	+0.4
	baz=63						
S54A	Dingess, Beckl	64.91	299	P	P	03 11 36.0	+0.3
	baz=62						
H45A	Beulah	64.93	308	P	P	03 11 35.9	+0.3
	baz=63						
ACSO	Alum Creek Sta	64.94	303	*e*P	P	03 11 36.7	+1.0
	comp=Z,21nm,0.6s						
ACSO	Alum Creek Sta	64.94	303	P	P	03 11 36.1	+0.4
	baz=62,SNR=8.2						
Y59A	Loris	64.95	295	P	P	03 11 36.4	+0.6
	baz=62						
M49A	Liberty Center	65.03	304	P	P	03 11 36.7	+0.4
	baz=62						
R53A	Hurricane	65.11	300	*e*P	P	03 11 38.0	+1.1
	comp=Z,18nm,0.6s						
R53A	Hurricane	65.11	300	P	P	03 11 37.2	+0.4
	baz=62						
L48A	N Adams	65.12	305	P	P	03 11 37.1	+0.3
	baz=62,SNR=7.0						
K47A	Vermontville	65.16	306	P	P	03 11 37.0	-0.1
	baz=62,SNR=5.1						
V56A	Mocksville	65.26	297	P	P	03 11 38.2	+0.3
	baz=62						
J46A	Howard City	65.27	307	P	P	03 11 38.2	+0.4
	baz=62						
I45A	Fountain	65.33	307	P	P	03 11 38.4	+0.3
	baz=62						
C40A	Isle Royale Na	65.33	312	P	P	03 11 38.6	+0.5
	baz=62						
U55A	TA2, Sparta	65.33	298	P	P	03 11 38.0	-0.4
	baz=62						
P51A	Williamsport	65.34	302	*e*P	P	03 11 39.2	+0.9
	comp=Z,16nm,0.7s						
P51A	Williamsport	65.34	302	P	P	03 11 38.6	+0.3
	baz=62						
D41A	Chassel	65.37	311	P	P	03 11 38.3	-0.1
	baz=62						

O50A	**Cable** baz=62,SNR=8.3	**65.41**	**303**	P	**P**	**03 11 38.5**	**-0.3**
N49A	**Columbus Grove** baz=62	**65.43**	**304**	P	**P**	**03 11 38.9**	**+0.1**
T54A	**Tazewell** baz=62	**65.44**	**299**	P	**P**	**03 11 39.3**	**+0.2**
S53A	**Williamson** baz=62	**65.54**	**300**	P	**P**	**03 11 39.8**	**+0.1**
R52A	**Catlettsburg** baz=62	**65.59**	**301**	P	**P**	**03 11 39.9**	**-0.1**
TIXI	**Tiksi** comp=Z,16nm,1.5s	**65.60**	**16**	*e*P	**P**	**03 11 41.6**	**+2.1**
TIXI	**Tiksi**	**65.60**	**16⇑**	*e*P	**P**	**03 11 40.4**	**+0.9**
TIXI	comp=Z,7.0nm,1.0s			pmax	pmax		
L47A	**Sherwood** baz=62,SNR=13	**65.61**	**305**	P	**P**	**03 11 40.0**	**-0.1**
W56A	**Indian Trail** baz=61	**65.65**	**297**	P	**P**	**03 11 40.2**	**-0.1**
K46A	**Dorr** baz=62	**65.66**	**306**	P	**P**	**03 11 40.3**	**-0.1**
Q51A	**Peebles** comp=Z,14nm,0.8s	**65.75**	**301**	*e*P	**P**	**03 11 41.9**	**+0.9**
Q51A	**Peebles** baz=62	**65.75**	**301**	P	**P**	**03 11 41.0**	**0.0**
V55A	**Taylorsville** baz=61	**65.76**	**298**	P	**P**	**03 11 41.2**	**+0.1**
P50A	**Jamestown** baz=62	**65.78**	**302**	P	**P**	**03 11 40.8**	**-0.4**
U54A	**Nelsons Funny** baz=61	**65.87**	**298**	P	**P**	**03 11 42.1**	**+0.2**
O49A	**Covington** comp=Z,18nm,0.6s	**65.87**	**303**	*e*P	**P**	**03 11 41.7**	**0.0**
O49A	**Covington** baz=62,SNR=11	**65.87**	**303**	P	**P**	**03 11 41.5**	**-0.3**
N48A	**Decatur** baz=62	**66.02**	**304**	P	**P**	**03 11 42.6**	**-0.1**
H43A	**Windswept, Lux** baz=62	**66.10**	**308**	P	**P**	**03 11 43.4**	**+0.3**
COWI	**Conover**	**66.17**	**311**	*e*P	**P**	**03 11 44.5**	**+0.9**
KMSC	**Kings Mountain** baz=61	**66.18**	**297**	P	**P**	**03 11 44.0**	**+0.2**
R51A	**Hillsboro** baz=61,SNR=5.4	**66.26**	**301**	P	**P**	**03 11 44.4**	**+0.2**
Q50A	**Georgetown** baz=61	**66.27**	**302**	P	**P**	**03 11 44.6**	**+0.3**
X56A	**White Oak** baz=61	**66.28**	**296**	P	**P**	**03 11 44.8**	**+0.3**
V54A	**Nebo** baz=61	**66.32**	**298**	P	**P**	**03 11 45.1**	**+0.4**
O48A	**Farmland** baz=61	**66.39**	**303**	P	**P**	**03 11 44.9**	**-0.2**
T52A	**Hallie** baz=61	**66.41**	**300**	P	**P**	**03 11 45.3**	**0.0**
P49A	**Miami Univ. Ec** baz=61	**66.44**	**303**	P	**P**	**03 11 45.2**	**-0.2**
N47A	**Urbana** baz=61,SNR=7.1	**66.46**	**304**	P	**P**	**03 11 45.3**	**-0.2**
U53A	**Fall Branch** baz=61	**66.48**	**299**	P	**P**	**03 11 45.8**	**0.0**
S51A	**Beattyville** comp=Z,12nm,0.7s	**66.58**	**300**	*e*P	**P**	**03 11 47.5**	**+1.1**
S51A	**Beattyville** baz=61,SNR=7.2	**66.58**	**300**	P	**P**	**03 11 46.7**	**+0.4**
EYMN	**Ely** comp=Z,40nm,1.5s	**66.70**	**313**	*e*P	**P**	**03 11 47.6**	**+0.6**
EYMN	**Ely** baz=61,SNR=6.6	**66.70**	**313**	P	**P**	**03 11 46.9**	**-0.1**
X55A	**Gracelyn & Ava** baz=61	**66.72**	**296**	P	**P**	**03 11 47.4**	**+0.1**
R50A	**Paris** baz=61	**66.78**	**301**	P	**P**	**03 11 47.8**	**+0.2**
Q49A	**Aurora** baz=61	**66.82**	**302**	P	**P**	**03 11 48.0**	**+0.2**
P48A	**Milroy** baz=61	**66.96**	**303**	P	**P**	**03 11 48.3**	**-0.4**
V53A	**Saluda** baz=61	**66.98**	**298**	P	**P**	**03 11 48.9**	**-0.1**
U52A	**Thorn Hill** baz=61	**67.02**	**299**	P	**P**	**03 11 49.3**	**0.0**
TZTN	**Tazewell** baz=61	**67.08**	**299**	P	**P**	**03 11 49.6**	**+0.1**
I42A	**Draeger Farm,** baz=61	**67.10**	**308**	P	**P**	**03 11 49.4**	**-0.1**
S50A	**Richmond** baz=61	**67.12**	**301**	P	**P**	**03 11 50.0**	**+0.2**
157A	**Early Branch** baz=60	**67.14**	**294**	P	**P**	**03 11 50.3**	**+0.4**
Y55A	**Saluda** baz=60	**67.14**	**296**	P	**P**	**03 11 50.2**	**+0.2**
T51A	**Gray** baz=61,SNR=5.9	**67.15**	**300**	P	**P**	**03 11 49.9**	**-0.1**
X54A	**Belton** baz=60	**67.22**	**297**	P	**P**	**03 11 50.4**	**0.0**
G40A	**Rib Lake** comp=Z,6.0nm,0.6s	**67.23**	**310**	*e*P	**P**	**03 11 50.9**	**+0.5**
G40A	**Rib Lake** baz=61,SNR=6.8	**67.23**	**310**	P	**P**	**03 11 50.0**	**-0.3**
L44A	**Lake County Fo** baz=61	**67.29**	**306**	P	**P**	**03 11 50.7**	**-0.1**
K43A	**Burlington** baz=61	**67.30**	**307**	P	**P**	**03 11 50.8**	**-0.1**
R49A	**Shelbyville** comp=Z,6.0nm,0.8s	**67.35**	**302**	*e*P	**P**	**03 11 51.9**	**+0.6**
R49A	**Shelbyville** baz=61	**67.35**	**302**	P	**P**	**03 11 51.3**	**+0.1**
E38A	**The Farm, Brul** comp=Z,24nm,1.3s	**67.39**	**312**	*e*P	**P**	**03 11 51.9**	**+0.5**
E38A	**The Farm, Brul** baz=60	**67.39**	**312**	P	**P**	**03 11 51.4**	**0.0**
Q48A	**North Vernon** baz=61	**67.42**	**302**	P	**P**	**03 11 51.7**	**+0.1**
V52A	**Sevierville** baz=60	**67.45**	**299**	P	**P**	**03 11 52.0**	**+0.1**
W53A	**Cullowhee** baz=60	**67.48**	**298**	P	**P**	**03 11 52.3**	**0.0**
U51A	**La Follette** baz=60,SNR=12	**67.49**	**299**	P	**P**	**03 11 52.5**	**+0.4**
156A	**Sylvania** baz=60	**67.51**	**295**	P	**P**	**03 11 52.8**	**+0.5**
I41A	**Arkdale** comp=Z,11nm,0.6s	**67.62**	**309**	*e*P	**P**	**03 11 53.4**	**+0.5**
I41A	**Arkdale** baz=60	**67.62**	**309**	P	**P**	**03 11 52.8**	**0.0**
SFIN	**Lafayette** baz=60	**67.63**	**304**	P	**P**	**03 11 52.6**	**-0.4**
S49A	**Springfield** baz=60	**67.68**	**301**	P	**P**	**03 11 53.5**	**+0.2**
T50A	**Nancy** baz=60	**67.75**	**300**	P	**P**	**03 11 53.6**	**-0.2**
R48A	**Northridge Ran** baz=60	**67.78**	**302**	P	**P**	**03 11 53.9**	**-0.1**
Y54A	**Tignall** baz=60	**67.78**	**296**	P	**P**	**03 11 54.4**	**+0.3**
G39A	**Holcombe** baz=60,SNR=7.6	**67.81**	**311**	P	**P**	**03 11 54.0**	**-0.1**
X53A	**Estanollee** baz=60	**67.91**	**297**	P	**P**	**03 11 54.5**	**-0.2**
V51A	**Loudon** comp=Z,17nm,1.0s	**68.01**	**299**	*e*P	**P**	**03 11 56.9**	**+1.5**
V51A	**Loudon** baz=60	**68.01**	**299**	P	**P**	**03 11 55.8**	**+0.4**
ULM	**Lac du Bonnet** comp=Z,21nm,0.7s,baz=65,slow=6.1,SNR=28	**68.04**	**317**	P	**P**	**03 11 55.2**	**-0.1**
ULM	**Lac du Bonnet** comp=Z,23nm,0.7s	**68.04**	**317**	*e*P	**P**	**03 11 54.2**	**-1.2**
W52A	**Murphy** comp=Z,7.3nm,0.8s	**68.06**	**298**	*e*P	**P**	**03 11 56.6**	**+0.8**
W52A	**Murphy** baz=60	**68.06**	**298**	P	**P**	**03 11 56.0**	**+0.2**
BOSA	**Boshof** comp=Z,8.7nm,0.9s,baz=357,slow=6.2,SNR=11	**68.08**	**159**	P	**P**	**03 11 54.7**	**-1.1**
BOSA	**Boshof** comp=Z,19nm,1.3s	**68.08**	**159**	*e*P	**P**	**03 11 55.1**	**-0.7**
BOSA	**Boshof**	**68.08**	**159**	*e*P	**P**	**03 11 55.2**	**-0.7**
BOSA	comp=Z,19nm,1.3s			pmax	pmax		
WCI	**Wyandotte Cave** baz=60	**68.15**	**302**	P	**P**	**03 11 56.2**	**0.0**
TLY	**Talaya**	**68.17**	**41⇓**	*e*P	**P**	**03 11 59.0**	**+2.8**
T49A	**Edmonton** baz=60	**68.19**	**301**	P	**P**	**03 11 56.5**	**-0.1**
S48A	**Wiedeman Farm,** baz=60	**68.28**	**301**	P	**P**	**03 11 56.8**	**-0.3**
X52A	**Dahlonega** baz=60,SNR=8.6	**68.28**	**298**	P	**P**	**03 11 57.7**	**+0.5**
CPCT	**Cooper Cave** comp=Z,7.7nm,1.0s	**68.30**	**299**	*e*P	**P**	**03 11 58.3**	**+1.0**
Y53A	**Monroe** baz=60	**68.43**	**297**	P	**P**	**03 11 58.5**	**+0.4**
L42A	**Oliver, Polo** baz=60	**68.51**	**307**	P	**P**	**03 11 58.5**	**0.0**
V50A	**Pikevile** baz=60	**68.60**	**299**	P	**P**	**03 11 59.3**	**+0.2**
ZAK	**Zakamensk**	**68.65**	**43**	*e*P	**P**	**03 12 00.5**	**+1.2**
ZAK	comp=Z,6.0nm,1.4s			pmax	pmax		
U49A	**Red Boiling Sp** baz=60	**68.66**	**300**	P	**P**	**03 11 59.5**	**+0.1**
O44A	**Mansfield** baz=60	**68.66**	**305**	P	**P**	**03 11 59.4**	**+0.1**
Z53A	**Monticello** baz=60	**68.71**	**296**	P	**P**	**03 12 00.5**	**+0.7**
Y52A	**Lilburn** comp=Z,13nm,0.8s	**68.77**	**297**	*e*P	**P**	**03 12 01.6**	**+1.3**
Y52A	**Lilburn** baz=60,SNR=6.0	**68.77**	**297**	P	**P**	**03 12 00.6**	**+0.3**
T48A	**Bowling Green** baz=60	**68.78**	**301**	P	**P**	**03 12 00.4**	**+0.2**
SPMN	**Marine on St.** comp=Z,20nm,0.6s	**68.84**	**311**	*e*P	**P**	**03 12 00.3**	**-0.1**
SPMN	**Marine on St.** baz=59,SNR=11	**68.84**	**311**	P	**P**	**03 12 00.4**	**-0.1**
S47A	**Hartford** baz=60	**68.87**	**302**	P	**P**	**03 12 00.6**	**-0.1**
HDIL	**Hopedale** baz=59	**69.00**	**305**	P	**P**	**03 12 01.3**	**-0.2**
AGMN	**Agassiz Nation** comp=Z,18nm,1.3s	**69.05**	**315**	*e*P	**P**	**03 12 02.4**	**+0.7**
AGMN	**Agassiz Nation** baz=58	**69.05**	**315**	P	**P**	**03 12 02.0**	**+0.3**
PTGA	**Pitinga** comp=Z,17nm,1.2s	**69.06**	**253**	*e*P	**P**	**03 12 04.2**	**+2.0**
V49A	**McMinnville** baz=59	**69.12**	**300**	P	**P**	**03 12 02.4**	**+0.1**
OLIL	**Olney** comp=Z,21nm,0.6s	**69.12**	**303**	*e*P	**P**	**03 12 02.0**	**-0.3**
U48A	**Cassie Pea, Po** baz=59	**69.19**	**300**	P	**P**	**03 12 02.4**	**-0.4**
USIN	**University of** comp=Z,19nm,0.8s	**69.22**	**302**	*e*P	**P**	**03 12 03.0**	**+0.1**
CLTN	**Cedars of Leba** comp=Z,3.0nm,0.8s	**69.25**	**300**	*e*P	**P**	**03 12 03.6**	**+0.4**
T47A	**Sharon Grove** comp=Z,20nm,0.8s	**69.33**	**301**	*e*P	**P**	**03 12 02.8**	**-0.9**
T47A	**Sharon Grove** baz=59,SNR=13	**69.33**	**301**	P	**P**	**03 12 03.4**	**-0.3**
Z52A	**Williamson** baz=59	**69.37**	**296**	P	**P**	**03 12 04.2**	**+0.2**
M41A	**Milan** baz=59	**69.39**	**307**	P	**P**	**03 12 03.8**	**-0.2**
S46A	**Don Dixon Farm** baz=59,SNR=5.1	**69.40**	**302**	P	**P**	**03 12 03.4**	**-0.6**
YKA	**Yellowknife Ar** comp=Z,5.1nm,0.6s,baz=52,slow=6.1,SNR=17	**69.44**	**334**	P	**P**	**03 12 03.5**	**-0.3**
YKB5	**Yellowknife Ar**	**69.44**	**334**	*e*P	**P**	**03 12 03.5**	**-0.3**
L40A	**Anamosa** baz=59	**69.48**	**308**	P	**P**	**03 12 04.2**	**-0.3**
P43A	**Skaggs, Pawnee** baz=59	**69.61**	**305**	P	**P**	**03 12 05.3**	**0.0**
W49A	**Belvidere** baz=59	**69.70**	**299**	P	**P**	**03 12 05.8**	**-0.1**
U47A	**Clarksville** baz=59	**69.74**	**301**	P	**P**	**03 12 06.5**	**+0.3**
V48A	**Smith Brothers** comp=Z,6.0nm,0.8s	**69.77**	**300**	*e*P	**P**	**03 12 06.7**	**+0.3**
V48A	**Smith Brothers** baz=59	**69.77**	**300**	P	**P**	**03 12 06.5**	**+0.1**
T46A	**Princeton** baz=59	**69.85**	**302**	P	**P**	**03 12 07.0**	**+0.2**
152A	**Waverly Hall** comp=Z,8.1nm,0.8s	**69.85**	**296**	*e*P	**P**	**03 12 08.0**	**+1.1**
152A	**Waverly Hall** baz=59	**69.85**	**296**	P	**P**	**03 12 07.3**	**+0.4**
N41A	**Harden Midland** comp=Z,17nm,0.6s	**69.94**	**306**	*e*P	**P**	**03 12 07.3**	**-0.1**
N41A	**Harden Midland** baz=59,SNR=6.5	**69.94**	**306**	P	**P**	**03 12 06.8**	**-0.5**
W48A	**Pulaski** baz=59	**70.16**	**299**	P	**P**	**03 12 08.4**	**-0.4**
WVT	**Waverly** baz=59	**70.27**	**301**	P	**P**	**03 12 09.0**	**-0.5**
N40A	**Mertquake, Sal** baz=58	**70.32**	**307**	P	**P**	**03 12 09.2**	**-0.5**
U46A	**Springville** baz=59	**70.39**	**301**	P	**P**	**03 12 09.9**	**-0.2**
W47A	**Westpoint** baz=58	**70.56**	**300**	P	**P**	**03 12 10.9**	**-0.4**
INK	**Inuvik** comp=Z,3.0nm,1.0s,baz=8.7,slow=15,SNR=4.9	**70.57**	**344**	P	**P**	**03 12 09.9**	**-0.7**
INK	**Inuvik** comp=Z,10.0nm,1.5s	**70.57**	**344**	*e*P	**P**	**03 12 09.9**	**-0.7**
INK	**Inuvik**	**70.57**	**344**	*e*P	**P**	**03 12 10.0**	**-0.7**
INK	comp=Z,10.0nm,1.5s			pmax	pmax		
X48A	**Hartselle** comp=Z,6.0nm,0.9s	**70.59**	**299**	*e*P	**P**	**03 12 11.4**	**0.0**
X48A	**Hartselle** baz=58	**70.59**	**299**	P	**P**	**03 12 11.1**	**-0.3**
V46A	**Holladay** baz=58,SNR=7.1	**70.64**	**301**	P	**P**	**03 12 11.0**	**-0.7**
150A	**Eclectic** baz=58	**70.82**	**297**	P	**P**	**03 12 13.1**	**+0.3**
BDFB	**Brasilia** comp=Z,2.7nm,0.9s,baz=124,slow=4.6,SNR=5.3	**70.82**	**233**	P	**P**	**03 12 12.0**	**-1.0**
PLAL	**Pickwick Lake** comp=Z,9.7nm,0.6s	**71.04**	**300**	*e*P	**P**	**03 12 14.1**	**0.0**
X47A	**Russelville** baz=58,SNR=8.4	**71.13**	**299**	P	**P**	**03 12 14.0**	**-0.7**
LRAL	**Lakeview Retre** comp=Z,4.9nm,0.8s	**71.30**	**298**	*e*P	**P**	**03 12 16.0**	**+0.3**
LRAL	**Lakeview Retre** baz=58	**71.30**	**298**	P	**P**	**03 12 15.8**	**0.0**
CCM	**Cathedral Cave** comp=Z,8.8nm,0.8s	**71.59**	**304**	*e*P	**P**	**03 12 17.1**	**-0.3**
CCM	**Cathedral Cave**	**71.59**	**304**	*e*P	**P**	**03 12 17.1**	**-0.3**
CCM	comp=Z,9.0nm,0.8s			pmax	pmax		
CCM	**Cathedral Cave** baz=58	**71.59**	**304**	P	**P**	**03 12 17.3**	**-0.2**
X46A	**Booneville** baz=58,SNR=5.4	**71.62**	**300**	P	**P**	**03 12 16.9**	**-0.8**
PBMO	**Poplar Bluff** comp=Z,11nm,0.8s	**71.72**	**302**	*e*P	**P**	**03 12 17.9**	**-0.3**
SONM	**Songino Array**	**71.75**	**44**	*e*P	**P**	**03 12 21.6**	**+3.1**
ECSD	**EROS Data Cent** comp=Z,10nm,0.6s	**71.94**	**311**	*e*P	**P**	**03 12 19.7**	**+0.2**
ECSD	**EROS Data Cent** baz=56,SNR=10	**71.94**	**311**	P	**P**	**03 12 19.3**	**-0.2**
OXF	**Oxford** comp=Z,21nm,0.8s	**72.22**	**300**	*e*P	**P**	**03 12 20.3**	**-0.9**
OXF	**Oxford**	**72.22**	**300**	*e*P	**P**	**03 12 20.3**	**-0.9**
OXF	comp=Z,21nm,0.8s			pmax	pmax		
GTA	**Gaotai**	**72.44**	**54**	*e*P	**P**	**03 12 22.1**	**-0.6**
GTA				pP	pP	03 12 27.4	-0.9
GTA				sP	sP	03 12 30.6	+0.2
GTA	comp=Z,5.0nm,0.8s			pmax	pmax		
YAK	**Yakutsk**	**72.76**	**23**	*e*P	**P**	**03 12 25.9**	**+1.9**
YAK	comp=Z,19nm,0.6s			pmax	pmax		
EPYK	**Eagle Plains** comp=Z,5.5nm,0.8s	**72.88**	**344**	*e*P	**P**	**03 12 24.8**	**+0.1**
EPYK	**Eagle Plains** baz=33,SNR=5.0	**72.88**	**344**	P	**P**	**03 12 24.8**	**+0.1**
TOLK	**Toolik Lake Re** baz=23	**73.18**	**350**	P	**P**	**03 12 27.9**	**+1.5**
FCAR	**Ozark Folk Cen** comp=Z,5.7nm,0.7s	**73.35**	**302**	*e*P	**P**	**03 12 27.8**	**-0.1**
U40A	**Yellville** baz=56,SNR=5.4	**73.59**	**303**	P	**P**	**03 12 29.2**	**-0.2**
WHAR	**Wooly Hollow** comp=Z,12nm,0.9s	**73.79**	**302**	*e*P	**P**	**03 12 30.7**	**+0.2**
W41B	**Gary Mavity, V** baz=56	**73.83**	**302**	P	**P**	**03 12 30.4**	**-0.3**
BGNE	**Belgrade** comp=Z,49nm,0.6s	**74.19**	**310**	*e*P	**P**	**03 12 32.8**	**0.0**
BGNE	**Belgrade** baz=55,SNR=6.7	**74.19**	**310**	P	**P**	**03 12 32.5**	**-0.3**
SHL	**Shillong** comp=Z,11nm,0.9s	**74.36**	**70**	*e*P	**P**	**03 12 35.4**	**+1.2**
SHL	**Shillong**	**74.36**	**70**	*e*P	**P**	**03 12 35.4**	**+1.2**
SHL	comp=Z,11nm,0.9s			pmax	pmax		
SHL	**Shillong**	**74.36**	**70**	*e*P	**P**	**03 12 32.0**	**-2.2**
HHAR	**Hobbs** comp=Z,8.7nm,0.8s	**74.36**	**304**	*e*P	**P**	**03 12 33.9**	**0.0**
COLD	**Coldfoot** comp=Z,9.3nm,1.1s	**74.58**	**350**	*e*P	**P**	**03 12 37.0**	**+2.4**
X40A	**Basin Creek Fa** comp=Z,6.3nm,0.8s	**74.61**	**302**	*e*P	**P**	**03 12 35.4**	**+0.1**
X40A	**Basin Creek Fa** baz=56	**74.61**	**302**	P	**P**	**03 12 34.9**	**-0.5**
W39A	**Magazine** comp=Z,9.1nm,0.8s	**74.86**	**303**	*e*P	**P**	**03 12 37.1**	**+0.3**
W39A	**Magazine** baz=56,SNR=5.4	**74.86**	**303**	P	**P**	**03 12 36.8**	**0.0**
BILL	**Bilibino**	**74.98**	**6⇓**	*e*P	**P**	**03 12 38.9**	**+2.0**
BILL				*e*		03 12 51.0	
BILL				*e*		03 15 26.3	
BILL	comp=Z,9.0nm,1.3s			pmax	pmax		
BILL	comp=Z,4µm,22.0s			MLR	MLR		
MIAR	**Mount Ida** comp=Z,7.8nm,0.8s	**75.08**	**302**	*e*P	**P**	**03 12 38.7**	**+0.6**
MIAR	**Mount Ida**	**75.08**	**302**	*e*P	**P**	**03 12 38.7**	**+0.6**
MIAR	comp=Z,8.0nm,0.8s			pmax	pmax		
MIAR	**Mount Ida** baz=56,SNR=5.8	**75.08**	**302**	P	**P**	**03 12 37.8**	**-0.2**
EGAK	**Eagle** comp=Z,6.5nm,0.9s	**75.20**	**345**	*e*P	**P**	**03 12 40.3**	**+2.1**
DAWY	**Dawson** comp=Z,18nm,1.3s	**75.44**	**344**	*e*P	**P**	**03 12 41.8**	**+2.1**
LAO	**LASA Array** comp=Z,11nm,0.8s	**75.72**	**318**	*e*P	**P**	**03 12 43.5**	**+1.8**
LAO	**LASA Array** baz=52	**75.72**	**318**	P	**P**	**03 12 43.1**	**+1.4**
RSSD	**Black Hills** comp=Z,6.2nm,0.8s	**76.09**	**315**	*e*P	**P**	**03 12 45.4**	**+1.4**
RSSD	**Black Hills**	**76.09**	**315**	*e*P	**P**	**03 12 45.4**	**+1.4**
RSSD	comp=Z,6.0nm,0.8s			pmax	pmax		
RSSD	**Black Hills** baz=52	**76.09**	**315**	P	**P**	**03 12 44.7**	**+0.8**
POKR	**Poker Plat Res** baz=24,SNR=17	**76.09**	**348**	P	**P**	**03 12 45.2**	**+1.8**
ILAR	**Eielson Array** comp=Z,2.8nm,0.8s,baz=12,slow=4.4,SNR=36	**76.31**	**347**	P	**P**	**03 12 44.4**	**-0.2**
ILB	**Eielson Array** comp=Z,6.9nm,1.0s	**76.31**	**347**	*e*P	**P**	**03 12 46.5**	**+1.9**
COLA	**College**	**76.39**	**348⇓**	*e*P	**P**	**03 12 47.2**	**+2.3**
COLA	comp=Z,5.0nm,0.7s			pmax	pmax		
CCB	**Clear Creek Bu** comp=Z,3.7nm,0.8s	**76.58**	**348**	*e*P	**P**	**03 12 47.9**	**+1.8**
HDA	**Harding Lake** comp=Z,20nm,0.7s	**76.65**	**347**	*e*P	**P**	**03 12 46.8**	**+0.3**
HDA	**Harding Lake** baz=24	**76.65**	**347**	P	**P**	**03 12 48.0**	**+1.5**
CBKS	**Cedar Bluff** comp=Z,28nm,0.7s	**76.68**	**308**	*e*P	**P**	**03 12 48.0**	**+0.8**
CBKS	**Cedar Bluff**	**76.68**	**308**	*e*P	**P**	**03 12 48.0**	**+0.8**
CBKS	comp=Z,28nm,0.7s			pmax	pmax		
CBKS	**Cedar Bluff** baz=54,SNR=9.0	**76.68**	**308**	P	**P**	**03 12 47.9**	**+0.7**
MLY	**Manley** comp=Z,5.6nm,0.8s	**76.71**	**349**	*e*P	**P**	**03 12 49.0**	**+2.1**
EGMT	**Eagleton** comp=Z,14nm,0.9s	**76.74**	**321**	*e*P	**P**	**03 12 49.1**	**+1.7**
EGMT	**Eagleton** baz=50,SNR=5.1	**76.74**	**321**	P	**P**	**03 12 48.2**	**+0.8**
DOT	**Dot Lake** comp=Z,11nm,0.8s	**76.79**	**346**	*e*P	**P**	**03 12 50.0**	**+2.6**
WRH	**Wood River Hil** comp=Z,9.9nm,0.7s	**76.80**	**348**	*e*P	**P**	**03 12 48.2**	**+0.9**
LZH	**Lanzhou**	**76.95**	**55**	*e*P	**P**	**03 12 50.3**	**+1.4**
LZH				pP	sP	03 12 55.3	-1.4
LZH				sP	PcP	03 12 57.9	-2.1
LZH	comp=Z,23nm,1.0s			pmax	pmax		
MENT	**Mentasta** comp=Z,3.5nm,0.6s	**77.36**	**345**	*e*P	**P**	**03 12 53.4**	**+2.9**
DLBC	**Dease Lake** comp=Z,10.0nm,0.9s	**77.61**	**337**	*e*P	**P**	**03 12 53.4**	**+1.3**
BPAW	**Bear Paw Mtn.** comp=Z,4.1nm,0.8s	**77.62**	**349**	*e*P	**P**	**03 12 53.8**	**+1.8**
MCK	**McKinley** comp=Z,13nm,1.2s	**77.62**	**348**	*e*P	**P**	**03 12 54.4**	**+2.4**
MCK	**McKinley**	**77.62**	**348**	*e*P	**P**	**03 12 54.4**	**+2.4**
MCK	comp=Z,13nm,1.2s			pmax	pmax		
HYT	**Haines Junctio** comp=Z,7.4nm,1.0s	**77.77**	**341**	*e*P	**P**	**03 12 53.8**	**+0.8**
SEY	**Seymchan** comp=Z,2.3nm,0.6s,baz=335,slow=5.4,SNR=5.4	**77.86**	**14**	P	**P**	**03 12 53.5**	**+0.2**
RND	**Reindeer** comp=Z,8.7nm,1.0s	**77.91**	**347**	*e*P	**P**	**03 12 55.1**	**+1.4**
RND	**Reindeer**	**77.91**	**347**	*e*P	**P**	**03 12 55.1**	**+1.4**
RND	comp=Z,9.0nm,1.0s			pmax	pmax		
DHY	**Denali Highway** comp=Z,23nm,0.7s	**77.95**	**347**	*e*P	**P**	**03 12 56.2**	**+2.2**
WALA	**Waterton Lakes** comp=Z,5.9nm,0.8s	**78.12**	**323**	*e*P	**P**	**03 12 56.2**	**+1.0**
KTH	**Kantishna Hill** comp=Z,15nm,0.8s	**78.12**	**348**	*e*P	**P**	**03 12 56.5**	**+1.7**
GCMT	**Greycliff**	**78.14**	**319**	*e*P	**P**	**03 12 56.9**	**+1.5**
K22A	**Casper** comp=Z,9.8nm,0.8s	**78.42**	**315**	*e*P	**P**	**03 12 58.0**	**+0.9**
K22A	**Casper** baz=51,SNR=7.9	**78.42**	**315**	P	**P**	**03 12 57.8**	**+0.7**
WMOK	**Wichita Mounta** comp=Z,3.7nm,0.8s	**78.47**	**305**	*e*P	**P**	**03 12 58.2**	**+0.9**
WMOK	**Wichita Mounta**	**78.47**	**305**	*e*P	**P**	**03 12 58.2**	**+0.9**
WMOK	comp=Z,4.0nm,0.8s			pmax	pmax		
WMOK	**Wichita Mounta** baz=53,SNR=5.6	**78.47**	**305**	P	**P**	**03 12 58.0**	**+0.7**
BALM	**Baldy** comp=Z,8.7nm,0.8s	**78.76**	**344**	*e*P	**P**	**03 13 01.3**	**+2.8**
BALM	**Baldy**	**78.76**	**344**	*e*P	**P**	**03 13 01.3**	**+2.8**
BALM	comp=Z,9.0nm,0.8s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**78.90**	**47**	*e*P	**P**	**03 12 59.4**	**-0.2**
HHC	comp=Z,15nm,1.1s			pmax	pmax		
HHC	comp=Z,110nm,5.4s			pmax	pmax		
PPLA	**Purkeypile** comp=Z,12nm,0.6s	**78.94**	**349**	*e*P	**P**	**03 13 00.2**	**+0.7**
SCM	**Sheep Creek Mo** comp=Z,19nm,0.8s	**79.08**	**346**	*e*P	**P**	**03 13 02.9**	**+2.7**
SCM	**Sheep Creek Mo**	**79.08**	**346**	*e*P	**P**	**03 13 02.9**	**+2.7**
SCM	comp=Z,19nm,0.8s			pmax	pmax		
N23A	**Red Feather La** baz=51,SNR=5.1	**79.19**	**313**	P	**P**	**03 13 02.2**	**+0.7**
BOZ	**Bozeman (W)** comp=Z,8.7nm,0.7s	**79.30**	**320**	*e*P	**P**	**03 13 03.2**	**+1.4**
BOZ	**Bozeman (W)**	**79.30**	**320**	*e*P	**P**	**03 13 03.2**	**+1.4**
BOZ	comp=Z,9.0nm,0.7s			pmax	pmax		
BOZ	**Bozeman (W)** baz=48,SNR=18	**79.30**	**320**	P	**P**	**03 13 02.9**	**+1.1**
YHH	**Holmes Hill** comp=Z,2.9nm,0.8s	**79.43**	**319**	*e*P	**P**	**03 13 04.9**	**+2.2**
TTA	**Tatalina** comp=Z,5.4nm,0.8s	**79.47**	**350**	*e*P	**P**	**03 13 04.7**	**+2.5**
TTA	**Tatalina**	**79.47**	**350**	*e*P	**P**	**03 13 04.7**	**+2.5**
TTA	comp=Z,5.0nm,0.8s			pmax	pmax		
YHB	**Horse Butte** comp=Z,7.1nm,0.8s	**79.64**	**319**	*e*P	**P**	**03 13 03.4**	**-0.3**
PMR	**Palmer** comp=Z,7.7nm,1.0s	**79.64**	**347**	*e*P	**P**	**03 13 05.2**	**+2.1**
MSO	**Missoula** baz=47	**79.65**	**322**	P	**P**	**03 13 04.2**	**+0.6**
KNK	**Knik Glacier** comp=Z,11nm,0.6s	**79.68**	**347**	*e*P	**P**	**03 13 06.0**	**+2.6**
ISCO	**Idaho Springs** comp=Z,4.3nm,0.8s	**79.69**	**312**	*e*P	**P**	**03 13 05.2**	**+1.0**
ISCO	**Idaho Springs**	**79.69**	**312**	*e*P	**P**	**03 13 05.2**	**+1.0**
ISCO	comp=Z,4.0nm,0.8s			pmax	pmax		
ISCO	**Idaho Springs** baz=51,SNR=5.9	**79.69**	**312**	P	**P**	**03 13 04.7**	**+0.4**
CD2	**Chengdu**	**79.94**	**59**	P	**P**	**03 13 07.9**	**+2.5**
CD2	comp=Z,20nm,0.5s			pmax	pmax		

Q24A	Divide	79.94	311	P	P	03 13 06.0	+0.4
	baz=51						
BW06	Boulder Array	80.06	316	*e*P	P	03 13 06.1	0.0
	comp=Z,5.9nm,0.8s						
BW06	Boulder Array	80.06	316	P	P	03 13 06.2	+0.2
	baz=49,SNR=7.3						
PD31	Pinedale Array	80.06	316	*e*P	P	03 13 05.2	-0.8
PDAR	Pinedale Array	80.06	316	P	P	03 13 05.2	-0.8
	comp=Z,3.7nm,0.6s,baz=58,slow=5.3,SNR=30						
NEW	Newport	80.20	324	*e*P	P	03 13 08.2	+1.7
	comp=Z,5.8nm,1.0s						
NEW	Newport	80.20	324	*e*P	P	03 13 08.2	+1.7
NEW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NEW	Newport	80.20	324	P	P	03 13 07.7	+1.2
	baz=45						
ABTX	Abilene, Hawle	80.31	303	P	P	03 13 08.1	+0.7
	baz=53						
MCMT	McKenzie Canyo	80.46	320	*e*P	P	03 13 10.7	+2.5
T25A	Trinidad	80.63	309	P	P	03 13 10.1	+0.9
	baz=51						
SDCO	Great Sand Dun	80.92	310	*e*P	P	03 13 11.9	+1.0
	comp=Z,3.4nm,0.8s						
SDCO	Great Sand Dun	80.92	310	P	P	03 13 11.0	+0.1
	baz=50,SNR=6.1						
O20A	White River Ci	81.03	314	P	P	03 13 11.7	+0.5
	baz=49						
C09A	Chrisman Ranch	81.07	324	*e*P	P	03 13 12.2	+1.1
	comp=Z,5.3nm,0.7s						
SVW2	Sparrevohn	81.16	350	*e*P	P	03 13 13.9	+2.6
	comp=Z,7.1nm,0.8s						
MSTX	Muleshoe	81.56	306	*e*P	P	03 13 15.1	+1.0
	comp=Z,4.6nm,0.8s						
MSTX	Muleshoe	81.56	306	P	P	03 13 14.9	+0.8
	baz=51						
JCT	Junction City	81.72	302	P	P	03 13 15.3	+0.4
	baz=52						
S22A	4UR Ranch, Cre	81.73	311	P	P	03 13 15.7	+0.6
	baz=50						
F10A	Beach Ranch, E	81.88	323	*e*P	P	03 13 16.5	+0.9
	comp=Z,8.8nm,1.1s						
E09A	Wood Farm, Sta	81.94	323	*e*P	P	03 13 17.4	+1.7
	comp=Z,5.4nm,0.8s						
HWUT	Hardware Ranch	81.94	316	*e*P	P	03 13 17.2	+1.1
	comp=Z,5.4nm,0.8s						
HLID	Hailey	82.14	319	*e*P	P	03 13 18.1	+1.1
	comp=Z,3.4nm,0.9s						
HLID	Hailey	82.14	319	P	P	03 13 17.8	+0.7
	baz=46,SNR=7.4						
TCUT	Toone Canyon	82.18	316	*e*P	P	03 13 19.1	+1.6
	comp=Z,6.8nm,0.9s						
PV07	Paradox Valley	82.37	313	*e*P	P	03 13 20.2	+1.8
	comp=Z,4.3nm,0.7s						
PV04	Paradox Valley	82.55	313	*e*P	P	03 13 21.1	+1.8
	comp=Z,17nm,1.3s						
JLU	Jordanelle	82.55	316	*e*P	P	03 13 20.9	+1.5
	comp=Z,6.8nm,1.0s						
PV16	Nyswonger Mesa	82.61	313	*e*P	P	03 13 21.8	+2.2
	comp=Z,12nm,1.0s						
PV09	Paradox Valley	82.62	313	*e*P	P	03 13 21.6	+1.8
PV18	Skein Mesa, Pa	82.65	313	*e*P	P	03 13 21.5	+1.6
	comp=Z,6.5nm,0.9s						
KMI	Kunming	82.66	64	P	P	03 13 21.3	+1.2
KMI				pP	pP	03 13 23.5	-2.3
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI				pmax	pmax		
	comp=Z,520nm,11.0s						
KMI				LR	LR		
	comp=Z,590nm,21.3s						
KMI				LR	LR		
	comp=Z,590nm,22.7s						
KMI				LR	LR		
	comp=Z,1µm,36.6s						
PV13	Radium Mtn., P	82.66	312	*e*P	P	03 13 21.5	+1.6
	comp=Z,6.2nm,0.8s						
BMO	Blue Mountains	82.72	322	*e*P	P	03 13 21.1	+1.1
	comp=Z,9.0nm,0.8s						
MFID	Camas Ranch	82.98	320	*e*P	P	03 13 23.0	+1.6
	comp=Z,2.7nm,0.9s						
SRU	San Rafael Swe	83.03	314	*e*P	P	03 13 23.0	+1.3
	comp=Z,8.0nm,0.8s						
MVCO	Mesa Verde	83.09	312	*e*P	P	03 13 24.0	+1.9
	comp=Z,5.6nm,1.0s						
MVCO	Mesa Verde	83.09	312	P	P	03 13 22.7	+0.5
	baz=49						
KLR	Kul'dur	83.24	31	P	P	03 13 20.8	-1.6
	comp=Z,1.5nm,0.7s,baz=323,slow=9.1,SNR=4.9						
KLR	Kul'dur	83.24	31	⇓*e*P	P	03 13 23.3	+0.9
KLR				pmax	pmax		
	comp=Z,19nm,2.8s						
TMUT	Trail Mountain	83.30	315	*e*P	P	03 13 25.1	+1.8
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	83.30	309	⇓*e*P	P	03 13 24.6	+1.3
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ANMO	Albuquerque	83.30	309	P	P	03 13 23.8	+0.5
	baz=50						
D03D	Eldon	83.47	327	P	P	03 13 24.5	+0.9
	baz=41						
LON	Longmire	83.48	325	*e*P	P	03 13 25.3	+1.5
	comp=Z,10nm,0.7s						
LON	Longmire	83.48	325	*e*P	P	03 13 25.3	+1.5
LON				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DUG	Dugway, Tooele	83.59	316	P	P	03 13 25.1	+0.5
	baz=47						
D04E	Lakebay	83.59	326	P	P	03 13 25.0	+0.7
	baz=41						
CM31	Chiang Mai Arr	83.77	72	*e*P	P	03 13 23.7	-2.0
	comp=Z,7.7nm,0.4s						
CMAR	Chiang Mai Arr	83.77	72	P	P	03 13 23.7	-2.0
	comp=Z,1.2nm,0.3s,baz=296,slow=6.7,SNR=3.1						
CMAR	Chiang Mai Arr	83.77	72	*i* P	P	03 13 27.7	+2.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KDAK	Kodiak Island	83.84	347	*i* P	P	03 13 27.7	+2.4
F05D	White Salmon	83.97	325	P	P	03 13 26.9	+0.7
	baz=42						
LENM	Lemitar	84.13	308	*e*P	P	03 13 29.3	+1.8
J08A	Circle Bar Ran	84.38	321	*e*P	P	03 13 30.2	+1.7
	comp=Z,4.9nm,0.8s						
CN2	Changchun	84.45	38	*e*P	P	03 13 30.1	+1.4
CPUP	Villa Florida	84.53	232	P	P	03 13 28.2	-0.9
	comp=Z,5.0nm,0.8s,baz=49,slow=4.1,SNR=12						
CPUP				LR	LR	03 49 09.6	
	comp=Z,666nm,19.9s,baz=46,slow=34						
ELK	Elko	84.55	318	*e*P	P	03 13 31.8	+2.2
	comp=Z,3.9nm,0.8s						
ELK	Elko	84.55	318	*e*P	P	03 13 31.8	+2.2
ELK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNTX	Cornudas Mount	84.69	306	*e*P	P	03 13 31.5	+1.3
	comp=Z,2.1nm,0.8s						
MTPU	Mount Pierson	84.71	314	*e*P	P	03 13 32.4	+1.8
	comp=Z,14nm,1.3s						
TX31	Lajitas Ar. Si	85.06	303	*e*P	P	03 13 33.9	+1.7
	comp=Z,2.3nm,0.9s						
TXAR	Lajitas Array	85.06	303	P	P	03 13 30.8	-1.4
	comp=Z,1.7nm,0.7s,baz=74,slow=5.9,SNR=15						
TXAR				LR	LR	03 48 36.2	
	comp=Z,494nm,21.8s,baz=0.0,slow=34						
WVOR	Wild Horse Val	85.13	321	*e*P	P	03 13 34.4	+2.1
	comp=Z,4.9nm,0.9s						
PKCU	Pink Cliffs	85.19	314	*e*P	P	03 13 34.5	+1.5
	comp=Z,16nm,1.4s						
LPAZ	La Paz	85.19	246	P	P	03 13 30.7	-2.8
	comp=Z,4.5nm,0.8s,baz=21,slow=8.6,SNR=3.1						
LPAZ	La Paz	85.19	246	*e*P	P	03 13 34.1	+0.6
	comp=Z,4.9nm,0.8s						
LPAZ	La Paz	85.19	246	*e*P	P	03 13 34.1	+0.6
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PSUT	Pine Spring	85.32	315	*e*P	P	03 13 35.7	+2.2
	comp=Z,7.7nm,0.8s						
121A	Cookes Peak, D	85.71	308	P	P	03 13 35.8	+0.3
	baz=49,SNR=5.5						
CCUT	Cedar City	85.72	314	*e*P	P	03 13 37.6	+2.1
	comp=Z,5.0nm,1.0s						
U15A	North Rim	85.87	313	*e*P	P	03 13 37.5	+1.2
	comp=Z,6.1nm,0.7s						
R11A	Troy Canyon, C	86.42	316	*e*P	P	03 13 40.3	+1.4
	comp=Z,11nm,1.4s						
R11A	Troy Canyon, C	86.42	316	P	P	03 13 39.7	+0.8
	baz=45,SNR=9.2						
USRK	Ussuriysk Ar.	87.25	34	P	P	03 13 41.8	-0.8
	comp=Z,2.1nm,0.6s,baz=267,slow=5.9,SNR=6.7						
TUC	Tucson	87.75	309	P	P	03 13 46.0	+0.6
	baz=47						
NV01	Mina Array Sit	87.86	318	*e*P	P	03 13 46.9	+1.0
NVAR	Mina Array Bea	87.86	318	P	P	03 13 46.9	+1.0
	comp=Z,0.7nm,0.6s,baz=56,slow=2.1,SNR=6.1						
GO01	Chusmiza	88.13	244	*e*P	P	03 13 48.7	+1.1
	comp=Z,9.4nm,0.8s						
WAKR	Walker	88.41	319	*e*P	P	03 13 50.9	+2.4
	comp=Z,4.1nm,0.8s						
PDMCI	Parker Dam,Lak	88.43	313	P	P	03 13 49.6	+1.2
	baz=46						
TUQ	Turquoise Moun	88.67	314	P	P	03 13 51.1	+1.4
	baz=45						
GMRC	Granite Mounta	88.98	314	P	P	03 13 52.2	+1.0
	baz=45						
NJ2	Nanjing	89.10	50	*e*P	P	03 13 51.5	-0.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
MPMC	Manual Prospec	89.12	316	P	P	03 13 53.3	+1.4
	baz=44						
YSS	Yuzh-Sakhalins	89.36	26	⇑*e*P	P	03 13 55.9	+3.4
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ISA	Isabella, Lake	89.96	316	*e*P	P	03 13 57.9	+2.2
	comp=Z,5.8nm,0.8s						
ISA	Isabella, Lake	89.96	316	*e*P	P	03 13 57.9	+2.2
ISA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ISA	Isabella, Lake	89.96	316	P	P	03 13 57.1	+1.5
	baz=43						
BFSC	Mount Baldy Ra	90.52	315	P	P	03 13 59.5	+1.1
	baz=44						
STKA	Stephens Creek	145.56	95	*e*PKPdf	PKPab	03 20 35.8	+0.9
STKA	Stephens Creek	145.56	95	*e*PKP2	PKPab	03 20 35.8	+0.9
TOO	Toolangi	150.11	103	*e*PKPbc	PKiKP	03 20 48.7	+1.1
TOO	Toolangi	150.11	103	*e*PKIKP	PKiKP	03 20 48.7	+1.1

ATH 17 03:03:39.3, 38°.22N×22°.09E, h11^{km}±1^{km}, ML0.8/4, Error ellipse: s-maj=1.7km s-min=0.8km az=247.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG2	Aigio	0.02	321	P	Pg	03 03 41.2	-0.1
AIG2				S	Sg	03 03 42.4	-0.1
AIG4	Aigion	0.03	338	P	Pg	03 03 41.3	0.0
AIG4				S	Sg	03 03 42.7	0.0
AIG1	Aigion	0.04	109	P	Pg	03 03 41.4	+0.1
AIG1				S	Sg	03 03 42.5	-0.2
LAKA	Lakka	0.09	281	P	Pg	03 03 41.9	0.0
LAKA				S	Sg	03 03 43.5	-0.2
LAKA				AML	AML	03 03 43.8	
	comp=N,153µm,0.2s						
LAKA				AML	AML	03 03 44.0	
	comp=E,124µm,0.1s						
TRAZ	Trapeza	0.11	120	P	Pg	03 03 42.3	+0.1
TRAZ				S	Sg	03 03 44.9	+0.7
TRAZ				AML	AML	03 03 45.2	
	comp=N,290µm,0.2s						
TRAZ				AML	AML	03 03 45.5	
	comp=E,209µm,0.1s						
TRIZ	Trizonia	0.14	354	P	Pg	03 03 42.6	0.0
TRIZ				S	Sg	03 03 44.8	-0.1
KALE	Kalithea	0.17	13	P	Pg	03 03 43.2	+0.1
KALE				S	Sg	03 03 46.0	+0.2
KLV	Kalavryta, Ach	0.18	165	P	Pg	03 03 43.3	0.0
KLV				S	Sg	03 03 46.4	+0.3
KLV				AML	AML	03 03 47.1	
	comp=E,47µm,0.1s						
KLV				AML	AML	03 03 47.5	
	comp=N,45µm,0.1s						
SERG	Sergoula	0.19	352	P	Pg	03 03 43.4	0.0
SERG				AML	AML	03 03 48.9	
	comp=E,56µm,0.1s						
SERG				AML	AML	03 03 49.2	
	comp=N,94µm,0.2s						
GUR	Goura	0.35	145	P	Pg	03 03 46.1	-0.2
GUR				S	Sg	03 03 51.1	+0.1
DSF	Desfina	0.39	61	P	Pg	03 03 46.5	-0.5
DSF				S	Sg	03 03 52.2	0.0
ANX	Ano Chora	0.39	340	P	Pg	03 03 46.9	-0.2
ANX				S	Sg	03 03 53.1	+0.7

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*NIED **17** 03:07:00, 34°.60N×135°.00E, h8^{km}, Mw3.8 Best double couple: $M_0$5.49000×10^{14} NP1:ϕ_s316.00000°, δ64.00000°, λ25.00000°. NP2:ϕ_s214.00000°, δ67.00000°, λ152.00000°.*

*IDC **17** 03:07:49.4±1.0, 34°.42N×135°.05E, h0^{km}, mb3.8/3, mb1 3.8/7, mb1mx3.6/52, mbtmp3.7/7, ML2.9/4, MS3.6/1, Ms1 3.6/1, ms1mx2.9/43, Error ellipse: s-maj=22.1km s-min=13.2km az=146.0*

*ISCJB **17** 03:07:50.8±0.3, 34°.56N±0°.02×134°.98E±0°.02, h28^{km}±2^{km}, Error ellipse: s-maj=3.3km s-min=3.2km az=145.0*

*JMA **17** 03:07:51.2, 34°.57N×135°.01E, h17^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s201.00000°, δ66.00000°, λ147.00000°. NP2: ϕ_s306.00000°, δ60.00000°, λ28.00000°. Principal axes: T Plg40.0000°, Azm162.0000°; N Plg50.0000°, Azm350.0000°; P Plg4.0000°, Azm255.0000°;*

JMA Felt III J1.

*NEIC **17** 03:07:54.1±2.0, 34°.64N×135°.03E, h59^{km}±11^{km}, mb4.4/8 Error ellipse: s-maj=16.3km s-min=8.0km az=163.0*

NEIC Recorded [3 JMA] in Hyogo.

ISC 17 03:07:50.3±1.1**, 34°.57N**±0°.02×**135°.04E**±0°.02**, h17**^{km}±6^{km}**, n40,** σ1^{s}.**47**/61**, 6C-8D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAJ2	Tsuna	0.20	221	⇓P	Pb	03 07 55.7	+0.3
JAJ2				S	Sb	03 07 58.9	+0.1
JMIK	Miki	0.24	3	⇑P	Pb	03 07 56.7	+0.5
JMIK				S	Sb	03 08 00.5	+0.4
JKS	Kasai	0.45	339	⇑P	Pb	03 07 59.9	+0.2
JKS				S	Sb	03 08 05.9	-0.1
JHE	Heguri	0.54	81	⇓P	Pb	03 08 01.8	+0.5
JHE				S	Sb	03 08 09.5	+0.8
JWY	Kouya	0.57	127	⇓P	Pb	03 08 02.5	+0.6
JWY				S	Sb	03 08 10.5	+0.7
JWM	Minabe	0.76	160	⇑P	Pn	03 08 06.3	+0.1
JWM				S	Sb	03 08 16.8	+1.7
JWT	Wachi	0.77	22	⇓P	Pb	03 08 05.9	+0.6
JWT				S	Sg	03 08 16.0	+0.3
JAD	Aida	0.81	298	⇓P	Pg	03 08 05.7	-0.4
JAD				S	Sg	03 08 16.2	-0.6
JTNC	Tanabenakahech	0.88	147	⇑P	Pb	03 08 08.2	+1.0
JTNC				S	Sn	03 08 20.7	+0.4
JAI	Aioi	0.91	212	⇓P	Pb	03 08 08.3	+0.6
JAI				S	Sb	03 08 20.4	+0.9
JJS	Sakaide	0.94	258	⇓P	Pg	03 08 07.5	-1.0
JJS				S	Sg	03 08 19.8	-1.0
JKY	Yasaka	1.06	3	⇑P	Pb	03 08 10.6	+0.4
JKY				S	Sb	03 08 24.6	+0.8
JKSM	Kasumi	1.06	343	⇑P	Pb	03 08 10.5	+0.3
JKSM				S	Sb	03 08 24.4	+0.6
JKN2	Miekihoku	1.07	107	⇓P	Pb	03 08 10.9	+0.6
JKN2				S	Sg	03 08 25.6	+0.5
INU	Inuyama	1.80	64	*e*Pn	Pb	03 08 22.6	-0.2
INU				*e*Sn	Sn	03 08 43.0	+0.1
MAJO	Matsushiro	3.25	52	*e*Pn	Pn	03 08 42.7	+2.2
MAJO				*e*Sn	Sn	03 09 19.1	+0.3
MAT	Matsushiro	3.25	52	P	Pn	03 08 42.7	+2.2
MAT				S	Sn	03 09 20.8	+2.1
MJB9	Matsu-Tunnel	3.25	52	*e*Pn	Pn	03 08 41.8	+1.4
MJAR	Matsushiro Arr	3.25	52	Pn	Pn	03 08 42.9	+2.4
	0.9nm,0.3s,baz=242,slow=14,SNR=36						
MJAR				Pg	Pg	03 08 50.7	-1.8
	1.3nm,0.3s,baz=235,slow=15,SNR=18						
MJAR				Sn	Sn	03 09 21.7	+2.9
	1.0nm,0.3s,baz=252,slow=16,SNR=4.7						
MJAR				Lg	Lg	03 09 36.5	
	0.6nm,0.3s,baz=228,slow=32,SNR=5.4						
JNU	Nakatsue	3.75	249	Pn	Pn	03 08 49.2	+1.8
	1.9nm,0.3s,baz=84,slow=4.3,SNR=13						
JNU				Pg	Pb	03 08 58.4	+2.4
	10nm,0.3s,baz=54,slow=8.9,SNR=21						
JNU				Lg	Lg	03 09 46.0	
	4.9nm,0.3s,baz=76,slow=19,SNR=3.4						
JNU	Nakatsue	3.75	249	*e*Pn	Pn	03 08 50.1	+2.7
JNU				*e*Sn	Sn	03 09 29.9	-1.3
KSRS	Korea Array	6.45	299	Pn	Pn	03 09 27.4	+3.0
	1.1nm,0.3s,baz=118,slow=14,SNR=5.8						
KSRS				Sn	Sn	03 10 37.8	+0.2
	0.5nm,0.3s,baz=118,slow=24,SNR=4.8						
KS15	Wonju Array Si	6.47	298	*e*Pn	Pn	03 09 27.4	+2.7
KS15				*e*Sn	Sn	03 10 37.8	-0.3
USRK	Ussuriysk Ar.	9.90	347	Pn	Pn	03 10 16.8	+5.0
	0.1nm,0.3s,baz=158,slow=15,SNR=2.9						
ASAJ	Asahikawa	11.18	29	LR	LR	03 14 15.8	
	comp=Z,346nm,21.8s,baz=338,slow=34						
YOJ	Yonaguni jima	14.52	229	*e*Pn	Pn	03 11 18.5	+3.6
SSLB	Suanglung	16.31	233	*e*Pn	Pn	03 11 38.5	-0.1
	5.0nm,0.8s						
TNTI	Ternate	34.38	194	*e*P	P	03 14 34.4	-2.1
	51nm,0.9s						
GSTR	Great Sitkin T	38.81	48	*e*P	P	03 15 12.1	-2.0
SIMRM	Sittwe	39.82	260	*e*P	P	03 15 19.0	-3.7
	90nm,1.4s						
MK32	Makanchi Array	41.10	304	*e*P	P	03 15 34.2	+1.1
MKAR	Makanchi Array	41.10	304	P	P	03 15 34.2	+1.1
	0.4nm,0.7s,baz=95,slow=10,SNR=4.3						
KAPI	Kappang	41.93	203	*e*P	P	03 15 39.7	-0.4
	16nm,1.1s						
MMRI	Maumere	44.65	198	*e*P	P	03 16 00.8	-1.3
	104nm,1.3s						
LHMI	Lhok Sumawe	45.74	239	*e*P	P	03 16 09.9	-0.9
	63nm,1.1s						
JAGI	Jajag, Banyuwa	47.15	209	*e*P	P	03 16 21.5	-0.3
	62nm,0.7s						
WR1	Warramunga Arr	54.21	181	*e*P	P	03 17 15.8	+0.8
WRA	Warramunga Arr	54.21	181	P	P	03 17 15.8	+0.8
	1.8nm,0.5s,baz=356,slow=8.0,SNR=20						
AS31	Alice Springs	57.92	181	*e*P	P	03 17 42.1	+0.6
	2.4nm,1.3s						
ASAR	Alice Springs	57.92	181	P	P	03 17 42.1	+0.6
	0.8nm,0.6s,baz=9.0,slow=13,SNR=10.0						

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*ISCJB **17** 03:14:34.7±0.3, 4°.29S±0°.04×128°.84E±0°.05, h32^{km}, mb4.3/16, MS4.0/1, Error ellipse: s-maj=7.2km s-min=5.5km az=155.8*

*DJA **17** 03:14:35.4±0.7, 4°S±7°×12°9E±°, h10^{km}, M4.2/7, MLv4.2/7*

*IDC **17** 03:14:39.2±3.8, 4°.11S×128°.86E, h45^{km}±35^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.8/30, mbtmp4.1/10, ML4.4/1, MS4.0/2, Ms1 4.0/2, ms1mx3.4/34, Error ellipse: s-maj=40.2km s-min=22.8km az=78.0*

*NEIC **17** 03:14:41.6±1.3, 4°.38S×129°.15E, h87^{km}±7^{km}, mb4.3/13, Error ellipse: s-maj=14.5km s-min=11.6km az=81.0*

ISC 17 03:14:36.3±0.6**, 4°.20S**±0°.06×**128°.83E**±0°.05**, h32**^{km}**, n45,** σ1^{s}.**80**/45**, mb4.2**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.81	308	P	Pn	03 14 49.1	-2.4
MSAI	Masohi	0.85	6	P	Pn	03 14 50.0	-2.0
BNDI	Bandanaira	1.11	107	P	Pn	03 14 55.9	+0.2
NLAI	Namlea	1.98	299	P	Pn	03 15 09.7	+2.2
SANI	Sanana	3.55	307	P	Pn	03 15 29.8	+0.6
FAKI	Fak Fak	3.64	70	*e*Pn	Pn	03 15 32.8	+2.4
FAKI				*e*Sn	Sn	03 16 12.3	0.0
FAKI	Fak Fak	3.64	70	P	Pn	03 15 32.7	+2.3
SIJI	Sorong	4.10	36	P	Pn	03 15 37.9	+1.1
	23nm,0.3s,baz=231,slow=13,SNR=132						
SIJI				S	Sn	03 16 19.1	-4.7
	baz=205,slow=19,SNR=2.5						
SWI	Sorong	4.10	36	P	Pn	03 15 38.3	+1.5
MTN	Manton Dam	8.89	165	*e*Pn	Pn	03 16 44.1	+1.6
WRAB	Tennant Creek	16.54	161	*e*Pn	Pn	03 18 24.9	-1.0
	24nm,1.3s						
WR1	Warramunga Arr	16.54	162	*e*P	Pn	03 18 24.6	-1.4
WRA	Warramunga Arr	16.54	162	P	Pn	03 18 24.6	-1.4
	0.3nm,0.3s,baz=337,slow=13,SNR=12						
WB2	Warramunga Arr	16.55	161	*e*Pn	Pn	03 18 24.4	-1.7
	29nm,1.3s						
COEN	Coen	17.15	125	*e*Pn	Pn	03 18 28.2	-5.5
	9.4nm,0.9s						
PMG	Port Moresby	18.91	107	LR	LR	03 27 10.4	
	comp=Z,459nm,19.8s,baz=350,slow=40						
AS31	Alice Springs	19.96	166	*e*P	P	03 19 05.6	-0.4
	5.2nm,0.8s						
ASAR	Alice Springs	19.96	166	P	Pn	03 19 08.8	+0.9
	9.8nm,0.8s,baz=349,slow=10,SNR=61						
ASAR				PcP	PcP	03 23 23.2	+1.2
	0.8nm,0.6s,baz=353,slow=1.6,SNR=5.7						
ASAR	Alice Springs	19.96	166	*e*Pn	Pn	03 19 07.6	-0.3
FORT	Forrest	26.45	181	*e*P	P	03 20 09.0	-1.4
	28nm,0.8s						
TOO	Toolangi	36.55	158	*e*P	P	03 21 36.1	-3.0
	11nm,1.4s						
CM31	Chiang Mai Arr	37.07	308	*e*P	P	03 21 45.4	+1.6
	6.3nm,1.0s						
CMAR	Chiang Mai Arr	37.07	308	P	P	03 21 45.4	+1.6
	1.0nm,0.3s,baz=147,slow=5.4,SNR=3.4						
JNU	Nakatsue	37.17	3	LR	LR	03 36 21.2	
	comp=Z,285nm,20.9s,baz=278,slow=35						
USRK	Ussuriysk Ar.	48.26	3	P	P	03 23 14.8	+0.6
	1.2nm,0.8s,baz=158,slow=20,SNR=2.6						
SONA0	Songino Array	55.43	342	*e*P	P	03 24 09.4	+1.6
SONM	Songino Array	55.43	342	P	P	03 24 09.4	+1.6
	0.4nm,0.6s,baz=163,slow=5.4,SNR=3.4						
SONM				PcP	PcP	03 25 09.2	+1.3
	0.3nm,0.4s,baz=112,slow=3.9,SNR=3.0						
PETK	Petropavlovsk-	62.06	19	P	P	03 24 55.3	+1.7
	1.4nm,0.8s,baz=229,slow=6.6,SNR=3.3						
PEA1	Petropavlovsk-	62.06	19	*e*P	P	03 24 55.3	+1.6
PET	Petropavlovsk	62.31	20	*e*P	P	03 24 53.0	-2.3
	47nm,1.0s						
MK31	Makanchi Array	65.26	327	*e*P	P	03 25 16.1	+1.2
	1.6nm,0.8s						
MK32	Makanchi Array	65.26	327	*e*P	P	03 25 15.6	+0.7
MKAR	Makanchi Array	65.26	327	P	P	03 25 15.6	+0.7
	1.3nm,0.6s,baz=128,slow=7.9,SNR=14						
ZAA0	Zalesovo Array	68.57	334	*e*P	P	03 25 36.9	+1.1
	8.1nm,1.4s						
ZALV	Zalesovo Beam	68.57	334	P	P	03 25 36.2	+0.4
	1.4nm,0.6s,baz=121,slow=45,SNR=5.3						
ZALV	Zalesovo Beam	68.57	334	*e*P	P	03 25 36.4	+0.6
ZAA1	Zalesovo Array	68.58	334	*e*P	P	03 25 36.2	+0.4
KURK	Kurchatov	69.54	329	*e*P	P	03 25 43.0	+1.1
	4.4nm,0.8s						
ABKAR	Akbulak array	79.61	322	*e*P	P	03 26 41.4	+1.1
	2.6nm,0.9s						
ILAR	Eielson Array	91.32	25	P	P	03 27 38.2	-0.3
	0.4nm,0.9s,baz=242,slow=5.7,SNR=3.1						
ILB	Eielson Array	91.32	25	*e*P	P	03 27 38.2	-0.3
	2.5nm,1.3s						
ARA0	ARCESS Array S	98.56	340	*e*P	Pdif	03 28 13.0	+1.5
ARCES	ARCESS Array B	98.56	340	P	Pdif	03 28 13.0	+1.5
	2.2nm,0.7s,baz=86,slow=6.2,SNR=5.8						
TORD	Torodi Ar. Bea	127.08	283	PKP	PKPdf	03 33 38.7	+0.4
	0.6nm,0.9s,baz=32,slow=2.3,SNR=3.2						
TOA1	Torodi Ar. Sit	127.09	283	*e*PKPdf	PKPdf	03 33 38.7	+0.3

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*IDC **17** 03:29:24.4±0.6, 2°.58S×139°.02E, h0^{km}, mb4.3/14, mb1 4.5/16, mb1mx4.3/32, mbtmp4.4/16, ML4.3/2, MS4.3/2, Ms1 4.3/2, ms1mx3.6/24, Error ellipse: s-maj=22.0km s-min=13.6km az=75.0*

*DJA **17** 03:29:27.9±0.5, 2°S±8°×13°9E±°, h10^{km}, M4.8/6, mb4.9/6, mB5.5/3, MLv4.7/4, Mw(mB)4.9/3*

*ISCJB **17** 03:29:28.3±0.3, 2°.69S±0°.03×138°.71E±0°.04, h32^{km}, mb4.8/40, MS5.2/1, Error ellipse: s-maj=5.1km s-min=4.9km az=150.8*

*NEIC **17** 03:29:31.4±2.3, 2°.73S×138°.69E, h47^{km}±3^{km}, mb4.5/21, Error ellipse: s-maj=10.7km s-min=10.5km az=195.0*

ISC 17 03:29:30.0±0.4**, 2°.72S**±0°.05×**138°.72E**±0°.05**, h32**^{km}**, n76,** σ1^{s}.**62**/85**, mb4.6**/40**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	Genyem	1.45	85	P	Pn	03 29 50.6	-3.4
JAY	Jayapura	1.99	84	Pn	Pn	03 29 53.3	-8.2
	0.9nm,0.3s,baz=266,slow=16,SNR=3.8						
JAY				Sn	Sn	03 30 26.1	+0.7
	46nm,0.3s,baz=120,slow=16,SNR=9.4						
SRPI	Serui, Papua	2.62	289	P	Pn	03 30 10.2	+0.1
BAKI	Biak	3.02	300	P	Pn	03 30 15.4	-0.2
FAKI	Fak Fak	6.47	268	*e*Pn	Pn	03 31 04.2	+1.2
FAKI				*e*Sn	Sn	03 32 15.0	-0.9
FAKI	Fak Fak	6.47	268	P	Pn	03 31 04.4	+1.3
SIJI	Sorong	7.67	284	Pn	Pn	03 31 20.1	+0.4
	3.6nm,0.3s,baz=90,slow=20,SNR=6.0						
SIJI				LR	LR	03 35 23.4	
	comp=Z,584nm,18.7s,baz=194,slow=45						
MANU	Manus Island	8.66	86	*e*Pn	Pn	03 31 34.5	+1.3

BNDI	Bandanaira	8.98	258	P	Pn	03 31 40.2	+2.6
NLAI	Namlea	11.62	267	P	Pn	03 32 15.7	+2.0
COEN	Coen	12.00	159	*e*Pn	Pn	03 32 20.4	+1.4
COEN				*e*Sn	Sn	03 34 29.6	-2.3
MTN	Manton Dam	12.55	216	*e*Pn	Pn	03 32 28.0	+1.5
MTN				*e*Sn	Sn	03 34 44.0	-1.3
SOEI	Soe	15.97	243	*e*P	Pn	03 33 13.4	+0.8
	108nm,0.9s						
SOEI	Soe	15.97	243	P	P	03 33 16.9	+1.0
BATI	Baumata	16.70	243	Pn	P	03 33 26.7	+2.8
	17nm,0.3s,baz=141,slow=1.7,SNR=13						
WRAB	Tennant Creek	17.64	194	*e*P	Pn	03 33 33.0	-0.5
	26nm,0.8s						
WRAB				*e*Sn	Sn	03 36 47.6	-1.4
WB2	Warramunga Arr	17.64	194	*e*Pn	Pn	03 33 32.1	-1.4
	24nm,0.8s						
WR1	Warramunga Arr	17.65	194	*e*P	Pn	03 33 33.4	-0.2
WR1				*e*Sn	Sn	03 36 43.4	-6.0
WRA	Warramunga Arr	17.65	194	P	Pn	03 33 33.4	-0.2
	1.3nm,0.3s,baz=8.9,slow=11,SNR=43						
WRA				S	Sn	03 36 43.4	-6.0
	0.4nm,0.3s,baz=4.9,slow=20,SNR=4.7						
CTA	Charters Tower	18.77	157	LR	LR	03 42 02.2	
	comp=Z,3µm,21.3s,baz=130,slow=40						
AS31	Alice Springs	21.34	192	*e*P	P	03 34 15.7	+1.0
	8.8nm,0.7s						
AS31				*e*S	S	03 38 11.1	+1.0
ASAR	Alice Springs	21.34	192	P	P	03 34 15.3	+0.7
	12nm,0.7s,baz=16,slow=11,SNR=33						
ASAR				S	S	03 38 11.1	+1.0
	3.7nm,0.9s,baz=16,slow=25,SNR=3.4						
ASAR	Alice Springs	21.34	192	*e*P	P	03 34 15.3	+0.7
ASAR				*e*S	S	03 38 09.1	-1.0
TGY	Tagaytay City	24.29	314	P	P	03 34 45.1	+0.3
	98nm,0.3s,baz=156,slow=10.0,SNR=5.0						
EIDS	Eidsvold	25.47	153	*e*P	P	03 34 57.8	+2.5
	12nm,1.0s						
STKA	Stephens Creek	29.13	175	P	P	03 35 28.5	+0.3
	0.8nm,0.4s,baz=345,slow=12,SNR=3.2						
STKA	Stephens Creek	29.13	175	*e*P	P	03 35 28.5	+0.3
	2.5nm,1.4s						
YOJ	Yonaguni jima	31.03	331	*e*P	P	03 35 41.1	-4.0
	73nm,1.0s						
IPM	Ipoh	38.34	281	*e*P	P	03 36 46.5	-1.8
	19nm,1.4s						
MJAR	Matsushiro Arr	39.06	359	P	P	03 36 53.1	-0.9
	0.7nm,0.5s,baz=176,slow=9.6,SNR=3.1						
MAJO	Matsushiro	39.06	359	*e*P	P	03 36 53.1	-0.9
NJ2	Nanjing	39.39	333	*e*P	P	03 36 59.6	+2.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NONG	Nongkai	40.68	302	P	P	03 37 08.0	+0.2
	comp=Z,0.2nm,0.7s						
CHAI	Chaiyaphum	40.76	298	P	P	03 37 08.2	-0.3
	comp=Z,29µm,0.8s						
SLVN	Son La	41.62	307	*e*P	P	03 37 15.7	+0.1
	comp=Z,8.3nm,0.7s						
UTTA	Uttaradit	42.76	300	P	P	03 37 25.6	+0.8
	comp=Z,11µm,0.7s						
PHRA	Phrae	43.36	301	P	P	03 37 30.3	+0.6
	comp=Z,1.7nm,1.0s						
PAYA	Payao	44.03	302	P	P	03 37 35.7	+0.6
	comp=Z,24µm,0.9s,comp=Z,899µm						
CM31	Chiang Mai Arr	44.45	300	*e*P	P	03 37 38.4	-0.1
	comp=Z,12nm,1.2s						
CMAR	Chiang Mai Arr	44.45	300	P	P	03 37 38.4	-0.1
	comp=Z,3.3nm,0.6s,baz=118,slow=6.4,SNR=12						
CMAR	Chiang Mai Arr	44.45	300	*e*P	P	03 37 38.0	-0.5
XAN	Xi'an	46.09	325	P	P	03 37 50.8	-0.5
XAN				pP	pP	03 37 56.1	-4.9
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
CD2	Chengdu	47.19	318	P	P	03 37 59.1	-0.9
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC	Hu-ho-hao-te	49.94	333	*e*P	P	03 38 23.8	+2.7
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,94nm,5.4s						
KLR	Kul'dur	52.09	354	P	P	03 38 36.1	-0.7
	comp=Z,1.9nm,0.6s,baz=174,slow=6.7,SNR=9.6						
GTA	Gaotai	55.08	324	*e*P	P	03 38 59.1	-0.1
GTA				pP	sP	03 39 11.4	-1.9
GTA				sP	pP	03 39 17.1	+7.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONA0	Songino Array	57.73	335	*e*P	P	03 39 17.8	-0.2
SONM	Songino Array	57.73	335	P	P	03 39 17.8	-0.2
	comp=Z,1.3nm,0.7s,baz=157,slow=7.2,SNR=5.9						
WMQ	Urumqi	65.02	322	*e*P	P	03 40 08.8	+1.5
WMQ				pmax	pmax		
	comp=Z,48nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,410nm,7.5s						
MK31	Makanchi Array	69.80	322	*e*P	P	03 40 37.5	+0.1
	comp=Z,5.0nm,0.8s						
MK32	Makanchi Array	69.80	322	*e*P	P	03 40 37.3	-0.1
MKAR	Makanchi Array	69.80	322	P	P	03 40 37.3	-0.1
	comp=Z,6.1nm,0.7s,baz=113,slow=8.0,SNR=51						
MKAR	Makanchi Array	69.80	322	*e*P	P	03 40 36.9	-0.5
MAKZ	Makanchi	70.00	322	*e*P	P	03 40 38.4	-0.2
	comp=Z,11nm,0.7s						
KSH	Kashi	71.10	313	P	P	03 40 46.9	+1.3
KSH				sP	PcP	03 41 06.1	+0.4
KSH				PP	PP	03 43 27.1	+3.5
KSH				pmax	pmax		
	comp=Z,13nm,1.3s						
KSH				pmax	pmax		
	comp=Z,280nm,10.7s						
KSH				LR	LR		
	comp=N,770nm,17.8s						
KSH				LR	LR		
	comp=E,630nm,14.9s						
ZALV	Zalesovo Beam	71.95	330	P	P	03 40 48.9	-1.3
	comp=E,3.1nm,0.7s,baz=120,slow=5.5,SNR=8.5						
ZAA1	Zalesovo Array	71.95	330	*e*P	P	03 40 48.9	-1.3
BOOM	Boomskoye usch	72.17	316	*e*P	P	03 40 52.4	+0.3
	comp=E,4.9nm,0.8s						
KURK	Kurchatov	73.73	325	*e*P	P	03 41 00.4	-0.4
	comp=E,6.0nm,0.8s						
KURBB	Kurchatov Arra	73.74	325	P	P	03 41 00.0	-0.9
	comp=E,4.6nm,0.8s,baz=114,slow=5.7,SNR=38						
GAR	Garm	75.11	311	*e*P	P	03 41 09.7	+0.3
	comp=E,12nm,1.0s						
VNDA	Vanda	75.77	175	P	P	03 41 12.9	+0.7
	comp=E,1.1nm,0.6s,baz=328,slow=6.6,SNR=15						
KKAR	Karatay Array	76.14	316	*e*P	P	03 41 14.2	-0.8
BVAR	Borovoye Array	79.32	325	P	P	03 41 32.1	-0.4
	comp=E,5.1nm,0.7s,baz=108,slow=8.4,SNR=32						
MAW	Mawson	82.12	202	P	P	03 41 48.2	+1.1
	comp=E,1.8nm,0.8s,baz=62,slow=12,SNR=3.7						
ABKAR	Akbulak array	84.73	320	*e*P	P	03 41 59.8	-1.2
ABKAR				*e*P	P	03 42 00.5	-0.5
CCB	Clear Creek Bu	85.42	24	*e*P	P	03 42 03.3	-0.7
	comp=E,3.3nm,0.9s						
HDA	Harding Lake	85.71	25	*e*P	P	03 42 06.9	+1.3
	comp=E,4.7nm,1.2s						
ILAR	Eielson Array	85.83	24	P	P	03 42 04.1	-2.0
	comp=E,1.9nm,0.8s,baz=254,slow=5.2,SNR=13						
ILB	Eielson Array	85.83	24	*e*P	P	03 42 07.1	+0.9
	comp=E,2.8nm,0.9s						
QSPA	South Pole Qui	87.23	180	P	P	03 42 13.7	+0.6
	comp=E,5.2nm,0.7s,baz=303,slow=1.4,SNR=21						
QSPA	South Pole Qui	87.23	180	*e*P	P	03 42 14.3	+1.2
	comp=E,6.1nm,0.7s						
BMAR	Burnt Mountain	87.40	22	*e*P	P	03 42 13.7	-0.1
BCAR	Beaver Creek A	87.65	27	*e*P	P	03 42 13.1	-2.0
VYHS	Vyhne	111.48	322	*e*PDIF	Pdif	03 44 03.4	+0.2
X58A	Rowland	132.51	44	*e*PKPpre	PKPpre	03 48 29.6	

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*ISCJB **17** 03:32:31.6±0.4, 35°.45N±0°.03×32°.93E±0°.05, h33^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=4.7km az=179.2*
*DDA **17** 03:32:31.4, 35°.52N×32°.95E, h7^{km}±4^{km}, ML3.0*
*ISK **17** 03:32:31.4, 35°.46N×32°.95E, h32^{km}, ML2.5/15*
*NIC **17** 03:32:34.7±0.3, 35°.36N×32°.92E, h30^{km}, ML3.0*
ISC 17 03:32:31.1±0.9**, 35°.46N**±0°.02×**32°.94E**±0°.04**, h32**^{km}±8^{km}**, n34, σ0^{s}.68**/43**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDN	Akdeniz- Kıbrı	0.16	172	PG	Pb	03 32 37.1	0.0
LEF	Lefka	0.34	187	PG	Pn	03 32 40.4	+0.6
LEF	Lefka	0.34	187	*i* P	Pn	03 32 40.6	+0.8
LEF				*i* S	Sn	03 32 46.0	+0.5
LEF				IAML_P			
	comp=Z,9µm,0.1s						
ALFC	Alefka	0.41	223	P	Pb	03 32 40.8	+0.5
	baz=52						
ALFC				S	Sb	03 32 46.2	-0.4
CSS	Mathiatis	0.59	147	PG	Pn	03 32 43.6	+0.3
CSS	Mathiatis	0.59	147	P	Pn	03 32 44.0	+0.7
	baz=320						
CSS				S	Sb	03 32 51.0	-0.2
AKIN	Akıncılar- Kıb	0.61	135	PG	Pn	03 32 44.0	+0.4
TEKE	Tekeli-Mersin	0.70	12	PG	Pb	03 32 45.0	+0.1
TEKE				SG	Sn	03 32 54.8	+0.3
SZAC	Souni	0.70	184	P	Pb	03 32 45.2	+0.3
	baz=3.0						
ASGA	Asgata	0.71	159	P	Pb	03 32 45.0	-0.1
	baz=335						
MVOU	Mavrovouni	0.72	128	P	Pn	03 32 45.6	+0.6
	baz=300						
MVOU				S	Sb	03 32 54.6	-0.1
PPCY	Paphos	0.75	221	P	Pb	03 32 46.2	+0.5
	baz=44						
YORU	Yoruktepe-Mers	0.79	28	PG	Pn	03 32 46.4	+0.3
YORU				SG	Sn	03 32 57.4	+0.5
AKK2	Akkuyu-Mersin	0.84	36	PG	Pb	03 32 47.3	+0.1
AKK1	Akkuyu-Mersin	0.84	35	PG	Pn	03 32 47.0	+0.3
AKKU	Akkuyu-Mersin	0.86	35	PG	Pn	03 32 47.4	+0.4
GULN	MERSIN_Gulnar	0.88	34	*i* P	Pb	03 32 48.4	+0.5
GULN				*i* S	Sb	03 32 59.6	+0.4
GULN				IAML_P			
	comp=Z,527nm,0.1s						
BERE	Bereket-Mersin	0.92	14	PG	Pb	03 32 49.0	+0.3
TISA	Tisan-Mersin	0.93	40	PG	Pn	03 32 48.5	+0.6
GAZI	Gazipasa	0.93	327	PG	Pb	03 32 48.9	+0.2
GAZI	Gazipasa	0.93	327	*i* P	Pn	03 32 48.1	+0.2
GAZI				IAML_P			
	comp=Z,1µm,0.2s						
YESI	Yesilovacik-Me	0.93	37	PG	Pn	03 32 48.5	+0.5
KARG	Kargicak-Mersi	0.97	40	PG	Pn	03 32 49.2	+0.6
IKL	Isikli	0.99	38	PG	Pb	03 32 49.7	0.0
EREN	Erenkoy	1.01	85	PG	Pn	03 32 49.7	+0.7
TEVE	Tevekalti-Mers	1.06	22	PG	Pb	03 32 50.8	-0.2
KEBE	Keben-Mersin	1.17	32	PN	Pb	03 32 52.6	-0.2
ERMK	Ermenek	1.18	359	*i* P	Pb	03 32 53.8	+0.6
ERMK				*i* S	Sn	03 33 07.3	+0.5
ERMK				IAML_P			
	comp=Z,2µm,0.1s						
SILI	Silifke-Mersin	1.21	41	PN	Pn	03 32 52.5	+0.7
KEPZ	Antalya-Kepez	1.80	324	*i* P	Pn	03 33 01.3	+1.3
KEPZ				*i* S	Sn	03 33 21.3	-0.6
KEPZ				IAML_P			
	comp=Z,200nm,0.1s						
MERS	Mersin	1.90	42	PN	Pn	03 33 02.5	+1.1
KERG	Konya-Eregli	2.17	26	*i* P	Pb	03 33 09.6	-0.3
KERG				IAML_P			
	comp=Z,357nm,0.3s						
KARA	Karaisali	2.48	43	PN	Pn	03 33 10.6	+1.3
VYHS	Vyhne	16.69	326	*e*PN	Pn	03 36 20.0	-2.4

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*ISCJB **17** 03:40:54.8±0.5, 61°.48S±0°.07×24°.0W±0°.2, h10^{km}, mb4.4/17, Error ellipse: s-maj=15.1km s-min=6.5km az=144.1*
*IDC **17** 03:40:56.4±0.7, 61°.07S×24°.13W, h0^{km}, mb4.1/9, mb1 4.2/10, mb1mx4.0/30, mbtmp4.1/10, ML4.7/1, Error ellipse: s-maj=26.5km s-min=17.1km az=48.0*
*NEIC **17** 03:41:08.7±2.4, 61°.39S×24°.10W, h111^{km}±4^{km}, mb4.6/13, Error ellipse: s-maj=15.9km s-min=10.9km az=214.0*
ISC 17 03:41:01.6±1.0**, 61°.7S**±0°.1×**24°.2W**±0°.2**, h10**^{km}**, n39, σ2^{s}.18**/22**, mb4.5**/17**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	9.83	313	*e*Pn	Pn	03 43 24.3	+1.5
VNA1	Neumayer--Stat	11.05	151	P	Pn	03 43 42.7	+3.3
VNA1				S	Sn	03 45 42.3	-0.6
VNA3	Neumayer Olymp	11.21	155	P	Pn	03 43 44.6	+3.0
VNA3				S	Sn	03 45 44.0	-2.7
SNAA	Sanae	13.04	149	P	Pn	03 44 09.0	+2.3
SNAA				S	Sn	03 46 31.1	-0.4
SNAA	Sanae	13.04	149	Pn	Pn	03 44 09.0	+2.3
	3.9nm,0.3s,baz=312,slow=17,SNR=28						
SNAA				Sn	Sn	03 46 29.4	-2.2
	1.6nm,0.3s,baz=252,slow=23,SNR=6.9						
SNAA	Sanae	13.04	149	*e*Pn	Pn	03 44 08.6	+2.0
SNAA				*e*Sn	Sn	03 46 31.4	-0.2
PMSA	Palmer Station	18.00	243	*e*Pn	Pn	03 45 13.5	+2.0
	34nm,1.3s						
EFI	East Falkland	20.86	283	*e*P	P	03 45 40.7	-2.6
	214nm,1.3s						
QSPA	South Pole Qui	28.58	180	P	P	03 46 59.7	+2.2
	3.3nm,1.1s,baz=209,slow=4.8,SNR=3.3						
QSPA	South Pole Qui	28.58	180	*e*P	P	03 46 55.5	-2.0
	16nm,1.5s						
MAW	Mawson	34.82	138	P	P	03 47 51.8	-0.1
	1.7nm,0.7s,baz=241,slow=11,SNR=4.7						
VNDA	Vanda	41.02	182	P	P	03 48 44.0	-0.1
	0.3nm,0.7s,baz=117,slow=9.0,SNR=3.3						
SUR	Sutherland	41.08	66	*e*P	P	03 48 40.2	-5.2
	24nm,1.5s						
CFA	Coronel Fontan	41.31	296	P	P	03 48 40.6	-6.5
	3.3nm,0.6s,baz=163,slow=7.1,SNR=8.7						
CPUP	Villa Florida	41.71	313	P	P	03 48 42.7	-7.6
	2.4nm,1.0s,baz=154,slow=6.0,SNR=5.5						
CPUP	Villa Florida	41.71	313	*e*P	P	03 48 44.0	-6.3
	11nm,1.5s						
LCO	Las Campanas	44.61	295	*e*P	P	03 49 07.8	-6.3
	15nm,1.4s						
BOSA	Boshof	46.26	68	P	P	03 49 20.6	-6.4
	2.8nm,0.7s,baz=204,slow=6.0,SNR=7.9						
BOSA	Boshof	46.26	68	*e*P	P	03 49 20.6	-6.4
	6.2nm,0.9s						
PB01	IPOC Station P	51.13	302	*e*P	P	03 49 59.3	-5.2
	5.5nm,0.8s						
GO01	Chusmiza	52.25	303	*e*P	P	03 50 08.5	-4.8
	4.4nm,0.7s						
PB11	IPOC Station P	52.35	302	*e*P	P	03 50 08.9	-4.8
	13nm,1.2s						
SIV	San Ignacio	52.56	313	P	P	03 50 09.1	-6.0
	2.5nm,0.5s,baz=175,slow=8.6,SNR=16						
MNMC	Minye Minye	52.90	302	*e*P	P	03 50 14.0	-3.8
	10nm,0.7s						
H10S2	ASCENSION HYDR	53.06	12	T	T	04 46 47.0	
	baz=186,slow=75,SNR=11						
H10S3	ASCENSION HYDR	53.06	12	T	T	04 46 46.8	
	baz=186,slow=75,SNR=11						
H10S1	ASCENSION HYDR	53.08	12	T	T	04 46 47.1	
	baz=186,slow=75,SNR=10						
H10N1	ASCENSION HYDR	54.18	12	T	T	04 48 10.5	
	baz=177						
H10N3	ASCENSION HYDR	54.18	12	T	T	04 48 11.3	
	baz=177						
H10N2	ASCENSION HYDR	54.20	12	T	T	04 48 11.6	
	baz=177						
LPAZ	La Paz	54.89	305	P	P	03 50 28.5	-4.3
	1.0nm,0.4s,baz=96,slow=8.8,SNR=5.9						
KHZ	Kahutara	75.29	194	*e*P	P	03 52 41.5	-2.8
	30nm,1.5s						
TORD	Torodi Ar. Bea	77.31	26	P	P	03 52 49.4	-6.6
	0.5nm,0.5s,baz=179,slow=9.9,SNR=11						
TOA1	Torodi Ar. Sit	77.32	26	*e*P	P	03 52 49.4	-6.6
HIZ	Hauiti	78.99	195	*e*P	P	03 52 59.8	-5.4
	67nm,1.3s						
MK32	Makanchi Array	137.03	75	*e*PKPdf	PKPdf	04 00 21.3	-2.2
MKAR	Makanchi Array	137.03	75	PKP	PKPdf	04 00 21.3	-2.2
	0.5nm,0.8s,baz=205,slow=3.0,SNR=3.5						
SONA0	Songino Array	149.17	94	*e*PKPbc	PKPdf	04 00 46.2	+1.3
SONM	Songino Array	149.17	94	PKPbc	PKPdf	04 00 46.2	+1.3
	0.7nm,0.6s,baz=242,slow=3.1,SNR=4.2						

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*SNET **17** 03:51:07.8±0.8, 13°.03N×90°.05W, h20^{km}±5^{km}, ML3.9*
*GCG **17** 03:51:10.0±0.3, 13°.02N×90°.32W, h50^{km}±211^{km}, MD3.9*
ISC 17 03:51:02.4±2.7**, 12°.7N**±0°.1×**90°.15W**±0°.07**, h29**^{km}**, n20, σ0^{s}.90**/24**, 3C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	1.23	24	⇑*e*P	Pn	03 51 24.6	+0.7
CEVE				IAML		03 51 38.7	
	comp=Z,7µm,0.3s						
SBLS	San Blas	1.24	24	*e*P	Pn	03 51 24.7	+0.6
SNJE	San Jose	1.28	24	*e*P	Pn	03 51 25.1	+0.6
RTR	El Retiro	1.29	22	*e*P	Pn	03 51 25.4	+0.8
CEDA	San Andres	1.32	34	⇑*e*P	Pb	03 51 26.1	-0.5
CEDA				*e*S	Sn	03 51 40.0	-1.6
CEDA				IAML		03 51 49.5	
	comp=Z,6µm,0.4s						
SNET	Serv Nac Est T	1.33	42	*e*P	Pb	03 51 26.3	-0.5
SNET				*e*S	Sn	03 51 41.0	-0.9
SNET				IAML		03 51 47.3	
	comp=Z,1µm,0.4s						
LOMA	Loma Larga	1.34	45	*e*P	Pb	03 51 26.7	-0.2
UEES	Universidad Ev	1.34	41	*e*P	Pb	03 51 26.6	-0.6
LFU	La Fuente	1.45	44	⇑*e*P	Pb	03 51 28.6	-0.2
PAVA	Las Pavas	1.55	49	*e*P	Pb	03 51 30.5	0.0
PAVA				IAML		03 51 55.9	
	comp=Z,2µm,0.4s						
PCG	Pacaya	1.74	345	*e*P	Pb	03 51 34.0	0.0
MTO3	Montecristo	1.86	24	*e*P	Pn	03 51 34.1	+1.6
FUG	Fuego 3	1.87	339	*e*P	Pb	03 51 35.2	-0.8
FUG				*e*S	Sn	03 51 54.9	-0.4
NBG	Las Nubes	1.89	354	*e*P	Pb	03 51 36.3	-0.2
NBG				*e*S	Sn	03 51 55.7	-0.3
VICT	Victoria	1.93	49	*e*P	Pb	03 51 36.0	-1.0
PACA	Pacayal	1.93	66	*e*P	Pb	03 51 37.0	-0.1
LCND	La Caada	2.28	74	*e*P	Pb	03 51 42.5	-0.5
CNCH	Conchagua	2.33	75	*e*P	Pb	03 51 42.9	-0.8
MRL	Marmol	2.41	11	*e*P	Pn	03 51 42.1	+2.0
STG3	Santiaguito 3,	2.44	325	*e*P	Pb	03 51 44.4	-1.2

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*IDC **17** 04:02:20.7±0.9, 13°.45S×111°.62W, h0^{km}, mb3.8/7, mb1 4.1/7, mb1mx3.9/23, mbtmp3.8/7, MS4.0/1, Ms1 4.0/1, ms1mx3.6/17, Error ellipse: s-maj=27.2km s-min=23.5km az=45.0*
*ISCJB **17** 04:02:21.1±0.6, 13°.42S±0°.08×111°.49W±0°.10, h11^{km}, mb4.5/23, Error ellipse: s-maj=14.9km s-min=10.7km az=146.4*
*NEIC **17** 04:02:22.9±1.6, 13°.41S×111°.54W, h10^{km}±2^{km}, mb4.8/18, Error ellipse: s-maj=20.6km s-min=11.3km az=83.0*
ISC 17 04:02:22.6±0.7**, 13°.5S**±0°.1×**111°.5W**±0°.1**, h11**^{km}**, n43, σ1^{s}.27**/35**, mb4.7**/23**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	13.76	172	LR	LR	04 09 28.1	
	comp=Z,673nm,19.1s,baz=345,slow=31						
NNA	Nana	33.84	92	*e*P	P	04 09 06.5	+1.0
	28nm,1.4s						
ESTN	Estel	36.29	44	*e*P	P	04 09 26.9	+0.3
	12nm,0.9s						
PB01	IPOC Station P	40.75	107	*e*P	P	04 10 01.5	-2.7
	34nm,1.9s						
GO02	Mina Guanaco	41.09	113	*e*P	P	04 10 06.1	-1.1
LPAZ	La Paz	41.98	99	P	P	04 10 15.2	+0.4
	2.7nm,1.0s,baz=290,slow=9.8,SNR=8.3						
LPAZ	La Paz	41.98	99	*e*P	P	04 10 14.9	+0.1
	10nm,1.4s						
833A	Chaparral WMA,	43.16	16	*e*P	P	04 10 24.7	+1.3
	55nm,1.6s						
TXAR	Lajitas Array	43.20	10	P	P	04 10 23.9	0.0
	0.6nm,1.0s,baz=206,slow=8.0,SNR=4.0						
TXAR	Lajitas Array	43.20	10	*e*P	P	04 10 24.6	+0.7
MNTX	Cornudas Mount	45.27	7	*e*P	P	04 10 39.4	-1.0
	6.0nm,0.9s						
SDV	Santo Domingo	46.26	64	*e*P	P	04 10 47.5	-1.3
LENM	Lemitar	47.55	5	*e*P	P	04 10 57.2	-1.2
X18A	Snowflake	47.74	2	*e*P	P	04 10 58.7	-1.2
	22nm,1.8s						
MSTX	Muleshoe	47.89	10	*e*P	P	04 11 02.0	+1.1
	15nm,1.2s						
ETX02	Prairie Street	47.99	20	*e*P	P	04 10 58.5	-3.2
GTBY	Guantanamo Bay	48.82	48	*e*P	P	04 11 07.3	-1.0
	48nm,0.9s						
SHPR	Sheep Range	49.80	356	*e*P	P	04 11 17.7	+2.0
	7.7nm,1.2s						
SDCO	Great Sand Dun	51.24	6	*e*P	P	04 11 28.9	+2.2
	4.6nm,0.9s						
NV01	Mina Array Sit	52.00	353	*e*P	P	04 11 32.4	+0.1
NVAR	Mina Array Bea	52.00	353	P	P	04 11 32.4	+0.1
	0.9nm,0.9s,baz=166,slow=8.8,SNR=4.3						
CPUP	Villa Florida	52.21	113	P	P	04 11 34.1	+0.2
	0.9nm,0.7s,baz=282,slow=8.8,SNR=2.4						
WAKR	Walker	52.21	352	*e*P	P	04 11 32.2	-1.7
	5.8nm,1.4s						
PTGA	Pitinga	52.57	80	*e*P	P	04 11 37.7	+0.9
	6.1nm,0.9s						
PD31	Pinedale Array	55.97	2	*e*P	P	04 12 01.1	-0.1
PDAR	Pinedale Array	55.97	2	P	P	04 12 01.1	-0.1
	0.2nm,0.7s,baz=170,slow=5.5,SNR=2.3						
BDFB	Brasilia	61.31	101	P	P	04 12 39.9	+1.0
	1.4nm,0.6s,baz=230,slow=18,SNR=3.3						
URZ	Urewera	67.22	234	P	P	04 13 17.3	+0.1
	5.7nm,0.8s,baz=152,slow=12,SNR=2.8						
H02S1	DAWSON INLET T	68.78	347	T	T	05 28 17.0	
	SNR=16						
QSPA	South Pole Qui	76.65	180	*e*P	P	04 14 14.1	+0.6
	8.7nm,1.0s						
PINNC	Pines Island,	76.79	250	*e*P	P	04 14 15.3	+0.4
	153nm,1.2s						
WRH	Wood River Hil	82.51	345	*e*P	P	04 14 45.3	+0.3
	7.4nm,1.0s						
KTH	Kantishna Hill	82.53	343	*e*P	P	04 14 45.8	+0.6
	16nm,0.9s						
H11S2	WAKE ISLAND Hy	86.60	290	T	T	05 50 29.7	
	baz=106,slow=75,SNR=64						
H11S1	WAKE ISLAND Hy	86.61	290	T	T	05 50 28.5	
	baz=106,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	86.62	290	T	T	05 50 31.2	
	baz=106,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	86.74	291	T	T	05 50 43.1	
	baz=104,slow=74,SNR=9.8						
H11N2	WAKE ISLAND Hy	86.76	291	T	T	05 50 41.3	
	baz=104						
H11N1	WAKE ISLAND Hy	86.76	291	T	T	05 50 44.4	
	baz=104,slow=74,SNR=5.0						
MK32	Makanchi Array	144.79	343	*e*PKPdf	PKPab	04 21 58.4	-0.3
MKAR	Makanchi Array	144.79	343	PKP	PKPab	04 21 58.4	-0.3
	0.4nm,0.8s,baz=29,slow=2.9,SNR=3.6						
CM31	Chiang Mai Arr	150.31	284	*e*PKPbc	PKPbc	04 22 13.0	-2.0
CMAR	Chiang Mai Arr	150.31	284	PKPbc	PKPbc	04 22 13.0	-2.0
	0.9nm,0.3s,baz=64,slow=2.1,SNR=3.0						

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*ATH **17** 04:03:44.8, 38°.98N×26°.05E, h23^{km}±2^{km}, ML2.4/2, Error ellipse: s-maj=2.1km s-min=1.1km az=31.0*
*DDA **17** 04:03:44.2, 38°.97N×26°.05E, h7^{km}±3^{km}, ML2.8*
*ISK **17** 04:03:44.6, 39°.00N×26°.10E, h14^{km}, ML2.5/14*
*ISCJB **17** 04:03:45.0±0.4, 38°.98N±0°.02×26°.10E±0°.04, h8^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=3.3km az=162.8*
*THE **17** 04:03:45.6, 38°.97N×26°.03E, h0^{km}±1^{km}, ML2.2/5, Error ellipse: s-maj=1.3km s-min=0.4km az=263.0*
ISC 17 04:03:44.9±1.0**, 38°.99N**±0°.02×**26°.08E**±0°.03**, h12**^{km}±9^{km}**, n35, σ0^{s}.48**/51**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.28	322	PG	Pg	04 03 51.0	+0.3
SIGR				SG	Sb	04 03 55.8	-0.8
SIGR	SIGRI	0.28	322	P	Pg	04 03 51.0	+0.3
SIGR				S	Sb	04 03 56.1	-0.5
	1µm,0.4s						
SIGR	SIGRI	0.28	322	P	Pg	04 03 51.0	+0.3
SIGR				S	Sb	04 03 55.8	-0.8
SIGR				AML	AML	04 03 56.2	
	comp=E,1564µm,0.3s						
SIGR				AML	AML	04 03 56.5	
	comp=N,2852µm,0.4s						
PRK	Paraskevi	0.30	30	P	Pb	04 03 52.1	0.0
PRK				S	Sb	04 03 57.1	+0.1
	comp=N,935nm,0.4s						
PRK	Paraskevi	0.30	30	P	Pb	04 03 52.1	0.0
PRK				S	Sb	04 03 56.9	-0.1
PRK				AML	AML	04 03 57.7	
	comp=E,1738µm,0.4s						
PRK				AML	AML	04 03 57.7	
	comp=N,1962µm,0.3s						
KRBN	Karaburun	0.54	137	PG	Pg	04 03 55.8	+0.4
KRBN				SG	Sb	04 04 03.8	-0.2
AYVA	Ayvalik	0.57	56	*i* P	Pb	04 03 56.9	+0.1
AYVA				*i* S	Sg	04 04 02.1	-1.5
AYVA				IAML_P			
	comp=Z,770nm,0.1s						
CHOS	Chios island	0.60	182	PG	Pg	04 03 56.9	+0.3
CHOS	Chios island	0.60	182	P	Pb	04 03 57.2	-0.2
CHOS				S	Sb	04 04 05.7	-0.1

	comp=Z,172nm,0.2s						
CHOS	Chios island	0.60	182	P	Pg	04 03 56.4	-0.2
CHOS				S	Sb	04 04 05.2	-0.7
PSRA	Psara	0.60	222	P	Pb	04 03 57.2	-0.1
DKL	Dikili	0.65	82	PG	Pg	04 03 57.5	0.0
URLA	Izmir	0.74	147	PG	Pg	04 03 59.5	+0.2
URLA	Izmir	0.74	147	*i* P	Pg	04 03 58.8	-0.5
ZEDA	zmir-Bergama	0.78	91	*i* P	Pg	04 03 59.6	-0.3
ZEDA				*i* S	Sb	04 04 11.4	+0.6
BAYC	CANAKKALE_Bayr	0.83	25	*i* P	Pn	04 04 02.2	-0.2
BAYC				*i* S	Sg	04 04 12.2	+0.3
BOZC	Bozcaada	0.85	359	PG	Pg	04 04 01.3	-0.1
BOZC	Bozcaada	0.85	359	*i* P	Pb	04 04 01.7	0.0
BOZC				*i* S	Sb	04 04 13.2	+0.2
BOZC				IAML_P			
	comp=Z,1µm,0.2s						
EZN	Ezine	0.86	13	PG	Pg	04 04 01.2	-0.3
EZN	Ezine	0.86	13	P	Pb	04 04 01.6	-0.1
EZN				S	Sn	04 04 15.8	+0.6
BLCB	Balcova	0.96	128	PG	Pg	04 04 02.6	-0.9
LIA	Limnos Island	1.14	323	P	Pg	04 04 06.9	0.0
LIA				S	Sn	04 04 23.1	+0.8
	comp=Z,85nm,0.9s						
LIA	Limnos Island	1.14	323	P	Pb	04 04 06.6	0.0
LIA				S	Sn	04 04 22.3	0.0
STEP	BALIKESIR_Sava	1.33	73	*i* P	Pg	04 04 10.9	+0.4
BALY	Balya	1.41	57	*i* P	Pb	04 04 11.1	0.0
BALY				IAML_P			
	comp=Z,420nm,0.3s						
SMG	Samos	1.41	155	P	Pg	04 04 11.6	-0.3
SMG				S	Sg	04 04 31.7	+1.5
	comp=Z,90nm,0.6s						
SMG	Samos	1.41	155	P	Pb	04 04 11.1	0.0
GELI	Tayfur-Gelibol	1.44	12	PN	Pn	04 04 10.6	-0.2
BALB	Balikesir	1.54	64	PN	Pn	04 04 11.8	-0.3
SMTH	Samothraki Isl	1.54	344	P	Pb	04 04 13.0	-0.4
AYDB	Zeytinkoy-Aydi	1.76	126	PN	Pn	04 04 15.2	-0.1
ALN	Alexandroupoli	1.91	359	PN	Pn	04 04 17.0	-0.2
ALN	Alexandroupoli	1.91	359	P	Pn	04 04 17.9	+0.7
EDC	Edincik	1.93	45	PN	Pn	04 04 17.5	0.0
MRMT	Marmara Adasi	1.99	35	PN	Pn	04 04 18.7	+0.3

IDC 17 04:22:50.6±7.0, 1°.55N×98°.85E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/26, mbtmp3.7/3, Error ellipse: s-maj=369.1km s-min=28.7km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.83	123	P	P	04 30 33.5	-0.9
	0.6nm,0.4s,baz=299,slow=9.4,SNR=6.6						
ASAR	Alice Springs	42.30	129	P	P	04 30 47.3	+0.8
	0.3nm,0.3s,baz=298,slow=8.2,SNR=4.7						
MKAR	Makanchi Array	47.32	345	P	P	04 31 25.9	-0.1
	0.5nm,0.4s,baz=165,slow=8.4,SNR=5.8						

ASRS 17 04:33:43.5±0.7, 48°N±3°×8°9E±°, h8km, MLh3.2/17, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	Jazzator, Alta	2.11	327	Pg	Pg	04 34 23.5	-0.5
DGZ				Sg	Sg	04 34 53.2	+2.0
CUR	Chagan-Uzun	2.23	346	Pg	Pg	04 34 25.5	-0.8
CUR				Sg	Sg	04 34 59.7	+4.5
AKAR	Aktash	2.59	337	Pg	Pg	04 34 33.3	0.0
AKAR				Sg	Sg	04 35 09.3	+2.5
CHBI	Chibit, Altay	2.62	336	Pg	Pg	04 34 33.8	+0.1
CHBI				Sg	Sg	04 35 09.3	+1.6
ULGR	Ulagan, Altay	2.80	344	Pg	Pg	04 34 37.4	+0.2
ULGR				Sg	Sg	04 35 15.4	+1.8
TUNR	Tungur	2.91	321	Pg	Pb	04 34 37.1	+1.4
TUNR				Sg	Sg	04 35 15.6	-1.3
TEL	Teeli	3.15	12	Pg	Pg	04 34 44.5	+0.5
TEL				Sg	Sg	04 35 30.2	+5.4
ARTR	Artybash	4.05	343	Pg	Pg	04 35 01.2	0.0
ARTR				Sg	Sg	04 35 57.7	+4.0
UKR	Ust'-Kan	4.16	318	Pg	Pg	04 35 03.8	+0.7
UKR				Sg	Sg	04 36 01.3	+4.3
TASR	Tashtagol	4.90	351	Sg	Sg	04 36 24.1	+3.4
CERR	Cheremushki	5.12	15	Sg	Sg	04 36 32.0	+4.1
VEH	Verkhnyaya Baz	5.37	7	Sg	Sg	04 36 39.6	+3.8
ELT	Eltsovka	5.65	342	Sg	Sg	04 36 47.4	+2.6
LUZB	Luzhba, Kemero	5.73	358	Sg	Sg	04 36 51.4	+4.0

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*NEIC **17** 04:47:33.0±0.0, 61°.57N×141°.10W, h1km, ML2.3(OTT), ML2.5(AEIC), After AEIC.*

PGC 17 04:47:33.5, 61°.58N×141°.05W, h1km, ML2.3/9, 210km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	25	P	Pg	04 47 37.3	-0.6
YUK2				S	Sg	04 47 40.7	-0.3
YUK1	Sand Pete Hill	0.63	23	P	Pg	04 47 44.2	-1.3
YUK1				S	Sg	04 47 53.0	-0.6
PTPK	Patty Peak	0.79	241	P	Pg	04 47 47.5	-1.1
PTPK				S	Sg	04 47 58.1	-0.6
BALM	Baldy	0.83	230	*e*Pg	Pg	04 47 47.8	-1.5
BALM				*e*Sg	Sg	04 47 58.7	-1.4
BALM	Baldy	0.83	230	P	Pg	04 47 47.8	-1.6
BALM				S	Sg	04 47 59.2	-0.9
BVCY	Beaver Creek	0.84	6	P	Pg	04 47 48.5	-1.1
KIAG	Kiagna River	0.91	225	P	Pg	04 47 49.5	-1.5
KIAG				S	Sg	04 48 01.8	-1.0
GRNC	Granite Creek	0.92	202	P	Pg	04 47 49.4	-1.6
GRNC				S	Sg	04 48 02.0	-0.9
TABL	Table Mountain	1.14	182	P	Pg	04 47 53.7	-1.6
TABL				S	Sg	04 48 09.1	-1.0
YUK4	Talbot Arm	1.18	100	P	Pg	04 47 54.9	-1.1
CRQM	Cirque	1.31	232	*e*Pg	Pg	04 47 56.9	-1.6
CRQM				*e*Sg	Sg	04 48 12.9	-2.5
SAMH	Samovar Hills	1.46	175	Pn	Pn	04 48 00.1	-1.0
SAMH				Sg	Sg	04 48 19.0	-1.3
MESA	MESA	1.47	198	Pn	Pn	04 48 00.3	-1.0
MESA				Sg	Sg	04 48 19.9	-0.9
BCAR	Beaver Creek A	1.53	347	*e*Pn	Pn	04 47 59.3	-2.7
PCA	Pinnacle	1.54	165	*e*Pn	Pn	04 48 01.7	-0.4
PCA				*e*Sn	Sn	04 48 21.3	-1.4
PCA	Pinnacle	1.54	165	Pn	Pn	04 48 01.0	-1.0
PCA				Sg	Sn	04 48 22.4	-0.3
YUK5	Granite Creek	1.60	105	Sg	Sn	04 48 23.1	-1.3
YUK7	Dusty Glacier	1.76	125	Pn	Pn	04 48 05.3	0.0
MENT	Mentasta	1.85	319	*e*Pn	Pn	04 48 06.3	-0.1
MENT				*e*Sn	Sn	04 48 29.5	-0.9
PNL	Peninsula	2.08	156	Pn	Pn	04 48 09.6	+0.1
PNL				Sg	Sb	04 48 37.8	-0.6
PAX	Paxson	2.50	306	Sg	Sb	04 48 48.6	-1.8
DOT	Dot Lake	2.50	327	Pn	Pn	04 48 14.1	-1.2
DOT				Pg	Pb	04 48 18.7	-0.5
DOT				Sg	Sb	04 48 50.5	+0.1
DAWY	Dawson	2.61	16	*e*Pn	Pn	04 48 15.8	-1.0
DAWY				*e*Sn	Sn	04 48 48.6	-0.6
DAWY	Dawson	2.61	16	Pn	Pn	04 48 15.7	-1.2
DAWY				Sg	Sb	04 48 53.7	+0.1
SCRK	Sand Creek	2.76	332	*e*Pn	Pn	04 48 17.7	-1.2
SCRK				*e*Sn	Sn	04 48 51.9	-1.1
PLBC	Pleasant Camp	3.14	131	Pg	Pb	04 48 29.7	-0.4
PLBC				Sg	Sb	04 49 11.6	+2.7
EGAK	Eagle	3.21	359	*e*Pn	Pn	04 48 24.6	-0.4
EGAK				*e*Sn	Sn	04 49 01.6	-2.3
ILB	Eielson Array	4.16	323	*e*Pn	Pn	04 48 36.9	-1.0
ILB				*e*Sn	Sn	04 49 25.5	-1.7
BESE	Bessie Mountai	4.32	131	Sg	Sg	04 49 48.8	-3.3
BMAR	Burnt Mountain	6.07	347	*e*Pn	Pn	04 49 03.9	-0.4
COLD	Coldfoot	6.91	329	Pn	Pn	04 49 14.6	-1.2

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*PGC **17** 04:51:16.3, 61°.58N×141°.06W, h5km, ML2.7/10, 210km Wnw of Haines Jct., Yt Southern Alaska*

NEIC 17 04:51:15.7±0.0, 61°.57N×141°.08W, h1km, ML2.7(OTT), ML2.7(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.24	27	*e*Pg	Pg	04 51 20.1	-0.2
YUK2				*e*Sg	Sg	04 51 23.7	+0.2
YUK2	White River	0.24	27	P	Pg	04 51 20.1	-0.2
YUK2				S	Sg	04 51 23.7	+0.2
YUK3	Moose Creek	0.36	55	*e*Sg	Sg	04 51 27.0	-0.1
YUK3	Moose Creek	0.36	55	S	Sg	04 51 27.0	-0.1
YUK1	Sand Pete Hill	0.64	24	*e*Pg	Pg	04 51 27.0	-0.9
YUK1				*e*Sg	Sg	04 51 35.8	-0.4
YUK1	Sand Pete Hill	0.64	24	P	Pg	04 51 27.0	-0.9
YUK1				S	Sg	04 51 35.8	-0.4
PTPK	Patty Peak	0.77	241	*e*Pg	Pg	04 51 30.2	-0.2
PTPK				*e*Sg	Sg	04 51 41.1	+0.7
PTPK	Patty Peak	0.77	241	P	Pg	04 51 30.2	-0.2
PTPK				S	Sg	04 51 41.1	+0.7
BALM	Baldy	0.81	229	*e*Pg	Pg	04 51 30.6	-0.6
BALM				*e*Sg	Sg	04 51 41.7	-0.1
BALM	Baldy	0.81	229	P	Pg	04 51 30.5	-0.7
BALM				S	Sg	04 51 41.5	-0.3
BVCY	Beaver Creek	0.85	7	*e*Pg	Pg	04 51 31.3	-0.7
BVCY				*e*Sg	Sg	04 51 43.2	+0.2
BVCY	Beaver Creek	0.85	7	P	Pg	04 51 31.3	-0.7
BVCY				S	Sg	04 51 43.2	+0.2
KIAG	Kiagna River	0.90	224	P	Pg	04 51 31.9	-0.9
KIAG				S	Sg	04 51 44.7	+0.2
GRNC	Granite Creek	0.91	202	P	Pg	04 51 32.2	-0.8
GRNC				S	Sg	04 51 44.7	0.0
TABL	Table Mountain	1.14	182	*e*Pg	Pg	04 51 36.4	-1.0
TABL				*e*Sg	Sg	04 51 51.9	-0.2
TABL	Table Mountain	1.14	182	P	Pg	04 51 36.4	-1.0
TABL				S	Sg	04 51 51.9	-0.2
YUK4	Talbot Arm	1.19	100	*e*Pg	Pg	04 51 37.7	-0.7
YUK4				*e*Sg	Sb	04 51 54.6	-0.5
YUK4	Talbot Arm	1.19	100	P	Pg	04 51 37.7	-0.7
YUK4				S	Sb	04 51 54.6	-0.5
CRQM	Cirque	1.29	232	*e*Pg	Pg	04 51 39.0	-1.4
CRQM				*e*Sg	Sg	04 51 55.3	-1.8
SAMH	Samovar Hills	1.46	174	*e*Pn	Pn	04 51 42.9	-0.3
SAMH				*e*Sg	Sg	04 52 02.2	-0.1
SAMH	Samovar Hills	1.46	174	Pn	Pn	04 51 42.9	-0.3
SAMH				Sg	Sg	04 52 02.2	-0.1
YUK6	Outpost Mounta	1.46	114	*e*Pn	Pn	04 51 41.9	-1.4
YUK6				*e*Sg	Sg	04 52 02.2	-0.2
YUK6	Outpost Mounta	1.46	114	Pn	Pn	04 51 41.9	-1.4
YUK6				Sg	Sg	04 52 02.2	-0.2
MESA	MESA	1.46	197	*e*Pn	Pn	04 51 43.1	-0.2
MESA				*e*Sg	Sn	04 52 03.2	0.0
MESA	MESA	1.46	197	Pn	Pn	04 51 43.1	-0.2
MESA				Sg	Sn	04 52 03.2	0.0
CHX	Chaix Hills	1.51	181	*e*Pn	Pb	04 51 44.3	-0.3
PCA	Pinnacle	1.53	164	*e*Pn	Pn	04 51 43.7	-0.5
PCA				*e*Sn	Sn	04 52 04.3	-0.5
PCA	Pinnacle	1.53	164	Pn	Pn	04 51 43.7	-0.5
PCA				Sg	Sn	04 52 04.3	-0.5
BCA3	Beaver Creek A	1.54	348	*e*Pn	Pn	04 51 43.3	-1.0
BCAR	Beaver Creek A	1.54	348	*e*Pn	Pn	04 51 42.8	-1.4
BCAR				*e*Sn	Sn	04 52 02.1	-2.8
YUK5	Granite Creek	1.61	104	*e*Pn	Pn	04 51 44.1	-1.3
YUK5				*e*Sn	Sn	04 52 05.7	-1.1
YUK5	Granite Creek	1.61	104	Pn	Pn	04 51 44.1	-1.3
YUK5				Sg	Sn	04 52 05.7	-1.1
SNH	Sunshine Point	1.64	212	*e*Pn	Pb	04 51 46.4	-0.3
YUK7	Dusty Glacier	1.77	125	*e*Pn	Pn	04 51 48.1	+0.5
YUK7				*e*Sg	Sb	04 52 11.9	+0.2
YUK7	Dusty Glacier	1.77	125	Pn	Pn	04 51 48.1	+0.5
YUK7				Sg	Sb	04 52 11.9	+0.2
MENT	Mentasta	1.85	319	*e*Pn	Pn	04 51 49.0	+0.6
MENT				*e*Sn	Sn	04 52 11.8	-0.7
HYT	Haines Junctio	1.89	112	*e*Pn	Pn	04 51 48.7	-0.4
HYT				*e*Pn	Pb	04 51 49.6	-1.3
HYT				*e*Sn	Sn	04 52 13.8	+0.2
HYT	Haines Junctio	1.89	112	Pn	Pn	04 51 48.7	-0.4
HYT				Sg	Sn	04 52 13.8	+0.2
HMT	Hamilton	1.99	233	*e*Pn	Pb	04 51 52.6	0.0
HMT				*e*Sn	Sn	04 52 14.8	-1.2
PNL	Peninsula	2.08	156	*e*Pn	Pn	04 51 52.2	+0.5
PNL				*e*Sg	Sb	04 52 20.5	0.0
PNL	Peninsula	2.08	156	Pn	Pn	04 51 52.2	+0.5
PNL				Sg	Sb	04 52 20.5	0.0
RAGM	Ragged Mountai	2.12	237	*e*Sn	Sn	04 52 17.3	-1.9
PAX	Paxson	2.49	306	*e*Pn	Pb	04 51 59.3	-1.9
PAX				*e*Pn	Pn	04 51 59.5	+2.2
PAX				*e*Sn	Sn	04 52 27.8	-0.5
PAX				*e*Sg	Sb	04 52 32.6	+0.3
PAX	Paxson	2.49	306	Pg	Pb	04 51 59.3	-1.9
PAX				Sg	Sb	04 52 32.6	+0.3
DOT	Dot Lake	2.50	328	*e*Pn	Pn	04 51 56.9	-0.5
DOT				*e*Sg	Sb	04 52 34.0	+1.5
DOT	Dot Lake	2.50	328	Pn	Pn	04 51 56.9	-0.5
DOT				Sg	Sb	04 52 34.0	+1.5
DAWY	Dawson	2.62	16	*e*Pn	Pn	04 51 58.4	-0.7
DAWY				*e*Sg	Sb	04 52 36.9	+0.9
DAWY	Dawson	2.62	16	Pn	Pn	04 51 58.4	-0.7
DAWY				Sg	Sb	04 52 36.9	+0.9
FID	Port Fidalgo	2.75	255	*e*Pn	Pn	04 52 03.0	+2.2
FID				*e*Pn	Pb	04 52 03.8	-1.7
FID				*e*Sn	Sn	04 52 36.0	+1.5
SCRK	Sand Creek	2.76	332	*e*Pn	Pn	04 52 00.5	-0.6
SCRK				*e*Sn	Sn	04 52 33.4	-1.7
SCM	Sheep Creek Mo	2.99	278	*e*Pg	Pb	04 52 08.8	-0.9
GLI	Glacier Island	2.99	259	*e*Pn	Pn	04 52 05.7	+1.5
PLBC	Pleasant Camp	3.15	130	*e*Pg	Pb	04 52 12.2	-0.2
PLBC				*e*Sg	Sb	04 52 53.7	+2.4
PLBC	Pleasant Camp	3.15	130	Pg	Pb	04 52 12.2	-0.2
PLBC				Sg	Sb	04 52 53.7	+2.4
EGAK	Eagle	3.22	359	*e*Pn	Pn	04 52 07.2	-0.1
EGAK				*e*Sn	Sn	04 52 44.3	-1.9
PMR	Palmer	3.85	274	*e*Pg	Pb	04 52 22.7	-1.5
HDA	Harding Lake	3.91	319	*e*Pn	Pn	04 52 15.3	-1.5
HDA				*e*Sn	Sn	04 53 02.2	-1.0
ILB	Eielson Array	4.15	323	*e*Pn	Pn	04 52 18.6	-1.5
ILB				*e*Sn	Sn	04 53 08.5	-0.7
WRH	Wood River Hil	4.32	315	*e*Pn	Pn	04 52 22.5	+0.1
BESE	Bessie Mountai	4.33	131	*e*Pn	Pn	04 52 22.3	-0.3
BESE	Bessie Mountai	4.33	131	Pn	Pn	04 52 22.3	-0.3
BESE				Sg	Sg	04 53 31.8	-2.7
BM3	Burnt Mountain	6.07	347	*e*Pn	Pn	04 52 46.7	+0.3
BMAR	Burnt Mountain	6.07	347	*e*Pn	Pn	04 52 46.1	-0.3
DLBC	Dease Lake	6.37	115	Sg	Sg	04 54 34.1	-5.9
COLD	Coldfoot	6.91	329	*e*Pn	Pn	04 52 57.4	-0.5
COLD	Coldfoot	6.91	329	Pn	Pn	04 52 57.4	-0.5

SVSA 17 04:52:17.3±0.8, 37°.52N×25°.20W, h5km, MD3.5, ML2.1, Error ellipse: s-maj=3.9km s-min=1.4km az=74.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BART	Pico Bartolome	0.26	5	*e*P	Pg	04 52 21.9	-0.5
BART				*e*S	Sg	04 52 26.2	+0.3
BART				A	A	04 52 28.7	
	471nm,0.6s						
PCALD	Caldeiras da R	0.36	320	*e*P	Pg	04 52 23.5	-0.8
PCALD				*e*S	Sg	04 52 28.7	-0.4
PCALD				A	A	04 52 29.5	
	77nm,0.4s						
PDA	Ponta Delgada	0.44	302	*e*P	Pg	04 52 24.9	-0.8
PDA				*e*S	Sg	04 52 30.8	-0.6
PDA				A	A	04 52 32.6	
	144nm,0.1s						
PSET	Sete Cidades	0.52	306	*e*P	Pg	04 52 26.4	-0.9
PSET				*e*S	Sg	04 52 33.1	-0.9
PSET				A	A	04 52 36.1	
	95nm,0.2s						
PSMN	Pico do Norte,	0.52	168	*e*P	Pg	04 52 26.2	-1.2
PSMN				*e*S	Sg	04 52 33.2	-1.0
PSMN				A	A	04 52 34.5	
	8.8nm,0.1s						
PSMA	Santa Maria	0.52	174	*e*P	Pg	04 52 26.4	-1.0
PSMA				*e*S	Sg	04 52 33.2	-1.0
PSMA				A	A	04 52 34.4	
	15nm,0.2s						

UCR 17 05:00:03.8±2.3, 8°.83N×82°.39W, h6km±11km, MW3.6, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	Volcan	0.30	263	*e*P	Pg	05 00 10.3	+0.6
BRU2				*e*S	Sb	05 00 15.3	-1.5
EDSV	San Vito	0.57	269	*e*P	Pb	05 00 15.9	-0.4
EDSV				*e*S	Sb	05 00 25.8	+1.0
EDBA	Buenos Aires	0.93	291	*e*P	Pb	05 00 22.9	+0.5
EDPN	Palmar Norte	1.06	277	*e*P	Pg	05 00 22.8	-1.3
EDPN				*e*S	Sg	05 00 38.0	+0.1
EDLM	Las Mercedes	1.26	291	*e*P	Pg	05 00 26.7	-1.3
EDLM				*e*S	Sg	05 00 43.1	-1.4
LCR2	La Lucha 2	1.83	300	*e*P	Pn	05 00 36.3	+0.3
LCR2				*e*S	Sn	05 01 00.3	+0.7

KRSC 17 05:10:30.0±1.5, 52°.07N×160°.41E, h51km±22km, ML4.0, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.05	347	*e*P	Pn	05 10 50.1	+1.7
SPN				*e*S	Sn	05 11 04.0	+1.9
RUS	Russkaya	1.22	288	*e*P	Pn	05 10 51.2	+0.6
RUS				*e*S	Sn	05 11 06.9	+0.9
NLC	Nalytchevo	1.28	330	*e*P	Pn	05 10 53.6	+2.2
NLC				*e*S	Sn	05 11 10.0	+2.5
DALK	Dalny	1.40	314	*e*P	Pn	05 10 54.2	+1.2
DALK				*e*S	Sn	05 11 12.0	+1.7
MTVR	Mutnovka	1.43	288	*e*P	Pn	05 10 54.7	+1.1
MTVR				*e*S	Sn	05 11 11.9	+0.6
PET	Petropavlovsk	1.44	312	*i* P	Pn	05 10 55.8	+2.2
KDTR	Khodutka, Kamc	1.47	261	*e*P	Pn	05 10 55.1	+1.1
KDTR				*e*S	Sn	05 11 12.7	+0.7
UGLR	Uglovaya	1.49	320	*e*P	Pn	05 10 56.8	+2.3
SDLR	Sedlovina	1.52	323	*e*P	Pn	05 10 57.1	+2.2
SMAR	Somma	1.54	321	*e*P	Pn	05 10 57.1	+1.8
AVH	Avacha	1.57	320	*e*P	Pn	05 10 57.8	+2.3
ASAK	Asacha	1.57	282	*e*P	Pn	05 10 57.2	+1.6
ASAK				*e*S	Sn	05 11 16.7	+1.9
KRMR	Karymshinskiy	1.59	299	*e*P	Pn	05 10 57.0	+1.3
KRMR				*e*S	Sn	05 11 16.2	+1.2
KRER	Koryakskii	1.59	321	*e*P	Pn	05 10 58.4	+2.4
KOK	Koryaka	1.63	319	*e*P	Pn	05 10 58.8	+2.4
KRX	Arik	1.68	321	*e*P	Pn	05 10 59.1	+2.1
APC	Apacha	2.16	295	*e*P	Pn	05 11 07.0	+3.5
APC				*e*S	Sn	05 11 33.2	+4.1
GNL	Ganaly	2.21	318	*e*P	Pn	05 11 07.6	+3.3
PAU	Pauzhetka	2.31	256	*e*P	Pn	05 11 09.8	+4.2
MKZ	Mys Kozlova	2.61	17	*e*P	Pn	05 11 12.3	+2.6
MKZ				*e*S	Sn	05 11 43.4	+3.3
KZV	Kizimen	3.05	359	*e*P	Pn	05 11 20.3	+4.5
KZV				*e*S	Sn	05 11 56.0	+4.9
TUMD	Tumrok D	3.14	360	*e*P	Pn	05 11 20.7	+3.8
TUMD				*e*S	Sn	05 11 56.5	+3.4
TUMR	Tumrok	3.22	357	*e*P	Pn	05 11 23.0	+4.9
KBTR	Krutoberegovo	4.38	18	*e*P	Pn	05 11 37.8	+3.9
BKI	Bering	4.56	44	*e*P	Pn	05 11 39.2	+2.9
BKI				*e*S	Sn	05 12 28.2	+0.2

SJA 17 05:15:11.9±0.7, 31°.56S×64°.66W, h60km±4km, ML3.5, MW3.8, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCA	Tanti	0.23	13	*e*P	Pn	05 15 22.4	+0.7
TCA				*e*S	Sn	05 15 30.1	+1.4
TCA				IAML		05 15 30.3	
	comp=Z,736nm,0.4s						
MRA	San Martin	1.25	226	*e*P	Pn	05 15 35.0	+1.7
MRA				*e*S	Sn	05 15 51.2	+2.0
MRA				IAML		05 15 56.8	
	comp=Z,689nm,0.2s						
ACAN	Cantantal	2.27	251	*e*P	Pn	05 15 49.3	+2.2
ACAN				*e*S	Sn	05 16 16.1	+2.1
CFA	Coronel Fontan	3.06	268	*e*P	Pn	05 15 59.9	+2.0
CFA				*e*S	Sn	05 16 35.9	+2.7
CYA	Choya	3.26	342	*e*P	Pn	05 16 02.6	+1.9
CYA				IAML		05 16 50.8	
	comp=Z,113nm,0.2s						
AGUA	GUANDACOL	3.90	301	*e*P	Pn	05 16 10.2	+0.8
AGUA				*e*S	Sn	05 16 56.8	+2.7
VCA	Vinchina	4.17	312	*e*P	Pn	05 16 15.7	+2.6
VCA				IAML		05 17 16.4	
	comp=Z,102nm,0.3s						
AHML	Horco Molle	4.79	353	*e*P	Pn	05 16 23.6	+2.0
AHML				IAML		05 17 42.9	
	comp=Z,50nm,0.5s						
FSA	Cafayete	5.55	348	*e*P	Pn	05 16 34.9	+2.7

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*ISCJB **17** 05:28:58.6±0.9, 35°.71N±0°.09×82°.5E±0°.1, h10km, mb3.6/8, Error ellipse: s-maj=16.2km s-min=12.3km az=15.9*

*IDC **17** 05:28:58.1±0.9, 35°.55N×82°.57E, h0km, mb3.7/8, mb1 3.9/13, mb1mx3.7/40, mbtmp3.8/13, ML3.5/5, Error ellipse: s-maj=24.0km s-min=18.2km az=60.0*

*BJI **17** 05:29:01.7±0.0, 35°.82N×82°.52E, h8km, mb3.9/1, ML3.9/6, Ms3.4/2*

ISC 17 05:29:00.5±0.9, 35°.70N±0°.09×82°.34E±0°.08, h10km, n15, σ1s95/17, mb3.7/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	6.33	309	Pg	Pg	05 31 00.3	-1.4
KSH				Sg	Sg	05 32 21.3	-2.3
KSH				smax	smax		
	comp=N,67nm,0.7s						
KSH				smax	smax		
	comp=E,92nm,0.8s						
WMQ	Urumqi	9.09	25	*e*P	Pn	05 31 14.8	+3.0
WMQ				smax	smax		
	comp=N,20nm,1.1s						
WMQ				smax	smax		
	comp=E,14nm,1.1s						
AAK	Ala-Archa	9.22	321	Pn	Pn	05 31 15.9	+2.3
	0.5nm,0.3s,baz=127,slow=1.3,SNR=2.3						
AAK				Pg		05 31 50.2	
	0.7nm,0.3s,baz=131,slow=14,SNR=6.5						
AAK				Lg	Lg	05 33 49.0	
	0.7nm,0.3s,baz=69,slow=22,SNR=3.5						
MKAR	Makanchi Array	11.08	360	Pn	Pn	05 31 38.8	-0.2
	1.0nm,0.3s,baz=184,slow=12,SNR=22						
MKAR				Sn	Sn	05 33 40.1	-2.8
	0.2nm,0.3s,baz=189,slow=24,SNR=3.9						
KURBB	Kurchatov Arra	15.16	351	Pn	Pn	05 32 34.4	-0.3
	0.1nm,0.3s,baz=174,slow=12,SNR=7.8						
ZALV	Zalesovo Beam	18.32	5	P	P	05 33 13.7	-1.1
	0.3nm,0.3s,baz=218,slow=9.4,SNR=8.9						
BVAR	Borovoye Array	19.26	338	P	Pn	05 33 28.4	+2.3
	0.3nm,0.3s,baz=131,slow=10,SNR=19						
SONM	Songino Array	21.55	48	P	P	05 33 49.9	-0.1
	0.8nm,0.6s,baz=240,slow=12,SNR=5.6						
AKTO	Aktyubinsk	22.93	317	P	P	05 34 06.9	+2.3
	1.4nm,0.6s,baz=115,slow=9.3,SNR=7.1						
WSAR	Wadi Sarin	24.02	245	P	P	05 34 15.8	+0.1
	4.7nm,0.7s,baz=93,slow=4.9,SNR=3.8						
NOA	NORSAR Array B	50.53	323	P	P	05 37 59.4	+0.7
	0.3nm,0.6s,baz=87,slow=7.6,SNR=3.4						
ILAR	Eielson Array	72.71	20	P	P	05 40 27.9	-0.5
	0.6nm,0.8s,baz=302,slow=6.0,SNR=8.3						
WRA	Warramunga Arr	74.07	130	P	P	05 40 34.2	-2.8
	2.6nm,1.0s,baz=316,slow=7.0,SNR=3.4						
TORD	Torodi Ar. Bea	74.92	275	P	P	05 40 42.3	+0.3
	0.3nm,0.7s,baz=63,slow=4.6,SNR=2.1						
ASAR	Alice Springs	76.58	132	P	P	05 40 49.5	-1.9
	0.8nm,0.8s,baz=334,slow=6.2,SNR=7.2						

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*CRAAG **17** 06:10:01.2, 36°.45N×3°.06E, Ml3.3*

*ISCJB **17** 06:10:02.5±0.5, 36°.57N±0°.03×3°.00E±0°.04, h18km, Error ellipse: s-maj=5.1km s-min=3.4km az=28.7*

*MDD **17** 06:10:03.7±0.6, 36°.51N×3°.13E, h9km±7km, mb3.7/14, Error ellipse: s-maj=8.5km s-min=5.7km az=80.0, PRXIMO*

ISC 17 06:10:03.1±1.0, 36°.54N±0°.03×3°.13E±0°.05, h18km, n31, σ1s54/51, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.27	344	P	Pg	06 10 09.2	0.0
ABA	Alger-Bouzarea	0.27	344	Pg	Pg	06 10 09.2	0.0
ABMS	Boumerdes	0.35	54	P	Pg	06 10 11.2	+0.7
ABMS	Boumerdes	0.35	54	Pg	Pg	06 10 11.2	+0.7
ADJB	Djebel Djouab	0.46	147	P	Pg	06 10 11.3	-1.2
ADJB	Djebel Djouab	0.46	147	Pg	Pg	06 10 11.3	-1.2
OKGL	Djebel Kef Gue	2.07	257	Pn	Pn	06 10 38.0	+1.0
	14nm,0.2s,SNR=4.0						
OKGL				Sn	Sn	06 11 02.7	+0.3

	42nm,0.1s,SNR=4.0						
EIBI	Ibiza	2.85	331	Pn	Pn	06 10 48.6	+0.8
	1.9nm,0.1s,SNR=7.8						
EIBI				Sn	Sn	06 11 21.0	-0.6
	20nm,0.3s,SNR=7.9						
ETOS	Mallorca	3.23	356	Pn	Pn	06 10 53.6	+0.7
	1.5nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	06 11 29.6	-1.4
	3.8nm,0.2s,SNR=7.9						
EMUR	La Murta	3.72	292	Pn	Pn	06 11 00.5	+0.8
	4.0nm,0.8s,SNR=7.9						
EMUR				Sn	Sn	06 11 42.1	-1.0
	2.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.26	301	Pn	Pn	06 11 07.9	+0.7
	4.2nm,0.2s,SNR=14						
ETOB				Sn	Sn	06 11 55.6	-1.0
	5.2nm,0.3s,SNR=7.9						
ECHE	Chera	4.44	315	Pn	Pn	06 11 10.6	+1.0
	2.6nm,0.3s,SNR=7.9						
ECHE				Sn	Sn	06 11 58.9	-1.9
	0.9nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	4.75	325	Pn	Pn	06 11 14.7	+0.7
	0.5nm,0.1s,SNR=13						
EMOS				Sn	Sn	06 12 07.0	-1.6
	3.1nm,0.4s,SNR=7.9						
SESP	Santiago Espad	4.79	291	Pn	Pn	06 11 15.6	+1.2
	3.0nm,0.3s,SNR=4.0						
SESP				Sn	Sn	06 12 07.7	-1.9
	3.3nm,0.2s,SNR=7.9						
TAF	Taforalt	4.83	251	P	Pn	06 11 14.9	-0.1
TAF				S	Sn	06 12 11.2	+0.7
EBER	Berja	4.85	276	Pn	Pn	06 11 15.8	+0.5
	1.3nm,2.2s,SNR=7.9						
EBER				Sn	Sn	06 12 09.4	-1.7
	2.6nm,0.3s,SNR=7.9						
EPOB	Poblet	5.06	342	Sn	Sn	06 12 14.6	-1.6
	0.6nm,0.2s,SNR=7.9						
EQES	Quesada	5.11	286	Pn	Pn	06 11 19.8	+1.0
	0.7nm,0.1s,SNR=5.1						
EQES				Sn	Sn	06 12 15.3	-2.1
	1.9nm,0.6s,SNR=7.9						
JBK	JBK	5.14	246	P	Pn	06 11 19.6	+0.1
JBK				S	Sn	06 12 20.5	+2.0
CFON	Fontmartina	5.24	354	Pn	Pn	06 11 21.5	+0.9
	1.6nm,0.2s,SNR=5.8						
CFON				Sn	Sn	06 12 18.6	-2.0
	3.6nm,0.2s,SNR=7.9						
TDRA	Tendrara	5.50	232	P	Pn	06 11 24.2	-0.1
TDRA				S	Sn	06 12 23.9	-3.2
FIGM	Figuig	5.70	221	P	Pn	06 11 26.9	-0.2
FIGM				S	Sn	06 12 32.0	-0.1
EJON	La Jonquera	5.90	358	Pn	Pn	06 11 30.8	+1.1
	1.7nm,0.9s,SNR=7.9						
SJAF	Saint Jean de	5.94	358	Pn	Pn	06 11 31.4	+1.3
	6.7nm,2.8s,SNR=7.9						
CLLI	Llivia	6.00	352	Pn	Pn	06 11 32.5	+1.4
	1.9nm,0.4s,SNR=7.9						
CSOR	Sort	6.03	346	Pn	Pn	06 11 32.5	+1.1
	1.0nm,0.3s,SNR=7.9						
CSOR				Sn	Sn	06 12 36.9	-3.1
	0.9nm,0.2s,SNR=7.9						
AKLM	AKL	6.05	252	P	Pn	06 11 33.8	+2.0
AKLM				S	Sn	06 12 45.5	+4.9
PAB	San Pablo	6.62	299	Pn	Pn	06 11 40.3	+0.7
	1.7nm,0.5s,SNR=7.9						
MDT	Midelt	7.38	242	P	Pn	06 11 50.4	+0.4
MDT				S	Sn	06 13 12.9	-0.4
MD31	MD31	7.46	243	P	Pn	06 11 51.2	+0.1
MD31				S	Sn	06 13 13.7	-1.6
CZD	Col de Zad	7.58	245	P	Pn	06 11 55.8	+2.9
CZD				S	Sn	06 13 16.8	-1.8

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*IDC **17** 06:18:52.6±2.3, 32°.98N×139°.99E, h0^{km}, mb4.0/2, mb1 4.2/3, mb1mx3.6/27, mbtmp3.9/3, ML2.8/1, Error ellipse: s-maj=100.3km s-min=25.6km az=77.0*

*ISCJB **17** 06:18:55.3±0.9, 33°.35N±0°.04×140°.91E±0°.09, h63^{km}±10^{km}, mb4.1/2, Error ellipse: s-maj=12.3km s-min=5.6km az=12.3*

*JMA **17** 06:18:55.2±0.1, 33°.36N×140°.93E, h59^{km}±4^{km}, M3.6*

ISC 17 06:18:55.8±1.6**, 33°.32N**±0°.05×**140°.95E**±0°.10**, h45**^{km}±21^{km}**, n24, σ0^{s}.80**/30**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	0.97	258	P	Pn	06 19 13.1	+0.1
JHJ2				S	Sn	06 19 25.6	-0.1
JHCJ	Hachijojimakas	1.00	256	P	Pn	06 19 13.1	-0.3
JMKN	Mikurajimanish	1.27	297	P	Pn	06 19 16.7	-0.4
JAOM	Aogashimamukai	1.31	230	P	Pn	06 19 17.8	+0.1
JAOM				S	Sn	06 19 34.2	+0.1
BSO1	Boso 1	1.33	1	P	Pn	06 19 17.4	-0.1
BSO1				S	Sn	06 19 34.1	+0.3
BSO2	Boso 2	1.44	354	S	Sn	06 19 37.5	+0.8
BSO3	Boso 3	1.52	346	P	Pn	06 19 20.1	-0.3
BSO3				S	Sn	06 19 39.0	+0.1
JKO	Kozu shima	1.74	300	P	Pn	06 19 23.5	-0.1
BSO4	Boso 4	1.74	343	P	Pn	06 19 23.5	0.0
BSO4				S	Sn	06 19 44.6	+0.1
JIM2	Oshima 3	1.88	318	P	Pn	06 19 25.0	-0.5
JIZS	Izushimoda	2.22	310	P	Pn	06 19 30.3	+0.2
JOD2	Odawara 2	2.48	322	P	Pn	06 19 33.4	-0.3
JOD2				S	Sn	06 20 00.3	-2.4
JFNN	Fujinakano	2.65	316	P	Pn	06 19 37.0	+1.0
TK02	Tokai 2	2.74	284	P	Pn	06 19 37.9	+0.9
TK04	Tokai 4	2.77	293	P	Pn	06 19 38.7	+1.1
SHZ3	Shizuoka 3	2.86	308	P	Pn	06 19 40.3	+1.3
JYN	Shimob	2.95	318	P	Pn	06 19 40.9	+0.7
JYN				S	Sn	06 20 14.7	+0.3
MJAR	Matsushiro Arr	3.93	326	Pn	Pn	06 19 53.6	0.0
	0.8nm,0.3s,baz=157,slow=12,SNR=19						
MJAR				Sn	Sn	06 20 37.5	-0.9
	0.5nm,0.3s,baz=157,slow=24,SNR=6.6						
MAT	Matsushiro	3.93	326	P	Pn	06 19 55.3	+1.7
MAT				S	Sn	06 20 38.4	0.0
H11N2	WAKE ISLAND Hy	26.78	114	T	T	06 53 28.3	
	baz=306,slow=75,SNR=47						
H11N1	WAKE ISLAND Hy	26.79	114	T	T	06 53 27.0	
	baz=306,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	26.80	114	T	T	06 53 26.5	
	baz=306,slow=75,SNR=28						
WRA	Warramunga Arr	53.34	188	P	P	06 28 10.0	-0.6
	2.4nm,0.7s,baz=4.8,slow=7.0,SNR=21						
ASAR	Alice Springs	57.06	188	P	P	06 28 37.5	+0.1
	0.9nm,0.7s,baz=3.0,slow=6.6,SNR=14						

MEX 17 06:36:05.2±0.6**, 14°.61N×94°.28W, h16**^{km}±14^{km}**, MD4.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.50	43	eP	Pn	06 36 27.9	-3.6
PCIG				eS	Sn	06 36 45.7	-5.0
THIG		1.98	81	eP	Pn	06 36 35.2	-2.8
THIG				i S	Sn	06 36 57.9	-4.6
TGIG		2.43	27	eP	Pn	06 36 41.7	-2.7
TGIG				i S	Sn	06 37 10.5	-3.3
CMIG	Matias Romero	2.54	347	eP	Pn	06 36 42.7	-3.0
CMIG				i S	Sn	06 37 11.6	-4.7
CCIG	Comitan	2.66	51	eP	Pn	06 36 45.3	-2.3
CCIG				i S	Sn	06 37 14.8	-4.8

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*ISCJB **17** 06:36:18.2±0.2, 69°.19N±0°.02×144°.60W±0°.06, h10^{km}, mb4.0/18, MS3.4/8, Error ellipse: s-maj=3.0km s-min=2.4km az=172.7*

*IDC **17** 06:36:19.3±0.6, 69°.29N×144°.95W, h0^{km}, mb3.9/16, mb1 4.1/20, mb1mx3.9/49, mbtmp3.9/20, ML3.8/4, MS3.4/12, Ms1 3.4/12, ms1mx3.1/41, Error ellipse: s-maj=18.6km s-min=11.9km az=52.0*

*AEIC **17** 06:36:20.1, 69°.19N×144°.49W, h12^{km}, ML4.3, MW4.2(NEIC)*

*NEIC **17** 06:36:20.1±0.0, 69°.19N×144°.49W, h12^{km}, MW4.2, ML4.3(AEIC), Moment Tensor Solution. s9 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.76; M$_{\theta\theta}$-0.11; M$_{\phi\phi}$0.87; M$_{r\theta}$-0.52; M$_{\theta\phi}$-1.62; M$_{\phi r}$-1.11; Best double couple: M$_0$2.20000×10^{15} NP1:ϕ_s2.00000°, δ73.00000°, λ-38.00000°. NP2:ϕ_s105.00000°, δ54.00000°, λ-159.00000°. Principal axes: T 2.2100, Plg12.0000°, Azm57.0000°; N -0.0200, Plg49.0000°, Azm162.0000°; P -2.1900, Plg39.0000°, Azm317.0000°; After AEIC.*

*PGC **17** 06:36:20.0±1.6, 69°.44N×144°.57W, h15^{km}, ML4.1/1, Mw4.3, 170km Ese of Prudhoe Bay, Ak Northern Alaska*

ISC 17 06:36:20.0±0.4**, 69°.21N**±0°.04×**144°.63W**±0°.03**, h10**^{km}**, n146, σ1^{s}.51**/174**, mb4.0**/18**, MS3.5**/8**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PS01	TAPS Pump Stn	1.74	309	ePn	Pb	06 36 50.6	-1.4
PS01				eSg	Sg	06 37 15.4	-0.5
BMAR	Burnt Mountain	1.79	179	ePn	Pn	06 36 49.9	-1.1
BMAR				eSn	Sn	06 37 12.5	-1.3
BM3	Burnt Mountain	1.80	180	ePn	Pn	06 36 50.5	-0.6
BM3				eSn	Sb	06 37 14.3	-1.4
TOLK	Toolik Lake Re	1.88	254	ePn	Pb	06 36 53.0	-1.3
TOLK				eSn	Sn	06 37 15.7	-0.2
TOLK	Toolik Lake Re	1.88	254	P	Pb	06 36 52.6	-1.8
	baz=71						
TOLK				S	Sb	06 37 17.3	-0.5
	baz=71						
PS04	TAPS Pump Stn4	1.89	247	ePn	Pn	06 36 52.1	-0.2
PS04				eSg	Sg	06 37 19.1	-1.6
FYU	Fort Yukon	2.67	185	ePn	Pn	06 37 02.8	-0.2
FYU				eSn	Sn	06 37 36.0	+0.7
COLD	Coldfoot	2.88	229	ePn	Pn	06 37 06.2	+0.3
COLD				eSn	Sn	06 37 41.8	+1.2
COLD	Coldfoot	2.88	229	Pn	Pn	06 37 06.2	+0.3
COLD				Sn	Sn	06 37 40.6	+0.1
PS05	TAPS Pump Stn5	3.31	226	ePn	Pn	06 37 12.5	+0.7
PRP	Porcupine Dome	3.73	186	ePn	Pn	06 37 18.3	+0.6
PRP				eSn	Sn	06 38 01.5	-0.2
PS06	TAPS Pump Stn6	3.90	213	ePn	Pn	06 37 20.3	+0.4
EPYK	Eagle Plains	4.14	130	ePn	Pn	06 37 23.5	+0.3
EPYK				eSn	Sn	06 38 11.4	-0.3
EPYK	Eagle Plains	4.14	130	P	Pn	06 37 23.4	+0.2
	baz=317						
EPYK				S	Sn	06 38 10.3	-1.4
	baz=317						
INK	Inuvik	4.14	97	Pn	Pn	06 37 24.1	+1.0
	3.4nm,0.3s,baz=278,slow=13,SNR=178						
INK				Sn	Sn	06 38 11.3	-0.2
	9.5nm,0.3s,baz=192,slow=9.2,SNR=6.9						
INK				Lg	Lg	06 38 29.5	
	15nm,0.3s,baz=347,slow=25,SNR=8.7						
INK				LR	LR	06 39 33.6	
	comp=Z,438nm,21.5s,baz=262,slow=46						
INK	Inuvik	4.14	97	ePn	Pn	06 37 23.6	+0.4
INK				eSn	Sn	06 38 12.8	+1.2
INK	Inuvik	4.14	97	Pn	Pn	06 37 23.6	+0.4
INK				Sn	Sn	06 38 08.5	-3.1
PS07	TAPS Pump Stn7	4.17	202	ePn	Pn	06 37 23.0	-0.5
POKR	Poker Plat Res	4.26	196	P	Pn	06 37 24.3	-0.5
	baz=14						
POKR				S	Sn	06 38 13.7	-0.8
	baz=14						
MDM	Murphy Dome	4.50	200	ePn	Pn	06 37 27.8	-0.3
MDM				eSn	Sn	06 38 19.0	-1.4
COLA	College	4.54	198	ePn	Pn	06 37 28.4	-0.2
I53US	FAIRBANKS INFR	4.54	198	i		07 02 40.0	
	baz=14,slow=321,SNR=1.4						
TCOL	CIGO, UAF Yank	4.54	198	P	Pn	06 37 28.0	-0.6
	baz=15						
TCOL				S	Sn	06 38 22.0	+0.6
	baz=15						
ILAR	Eielson Array	4.55	192	Pn	Pn	06 37 28.4	-0.4
	6.4nm,0.3s,baz=2.6,slow=12,SNR=91						
ILAR				Sn	Sn	06 38 21.1	-0.6
	14nm,0.3s,baz=6.7,slow=19,SNR=6.5						
ILAR				Lg	Lg	06 38 36.1	
	21nm,0.3s,baz=4.6,slow=34,SNR=12						
ILB	Eielson Array	4.55	192	ePn	Pn	06 37 28.7	-0.1
EGAK	Eagle	4.66	161	ePn	Pn	06 37 30.7	+0.4
CCB	Clear Creek Bu	4.75	197	ePn	Pn	06 37 31.3	-0.3
CCB				eSn	Sn	06 38 25.8	-0.8
IM3	Indian Mountai	4.76	231	ePn	Pn	06 37 31.2	-0.5
IMAR	Indian Mountai	4.76	231	ePn	Pn	06 37 31.9	+0.2
PS08	TAPS Pump Stn8	4.77	191	ePn	Pn	06 37 31.4	-0.4
MLY	Manley	4.83	212	ePn	Pn	06 37 32.6	-0.1
MLY				eSn	Sn	06 38 29.1	+0.5
HDA	Harding Lake	4.91	192	P	Pn	06 37 33.7	-0.1
	baz=10						
HDA				S	Sn	06 38 30.4	-0.2
	baz=10						
WRH	Wood River Hil	4.95	198	eSn	Sn	06 38 29.7	-2.0
SCRK	Sand Creek	5.27	177	ePn	Pn	06 37 39.0	+0.2
SCRK				eSn	Sn	06 38 40.0	+0.5
BWN	Browne	5.41	203	ePn	Pn	06 37 39.7	-1.0
BWN				ePn	Pn	06 37 40.1	-0.6
BWN				eSn	Sn	06 38 40.8	-2.1
RIDG	Independent Ri	5.50	181	ePn	Pn	06 37 43.0	+1.0
DAWY	Dawson	5.57	156	ePn	Pn	06 37 42.8	-0.1
DAWY	Dawson	5.57	156	Pn	Pn	06 37 43.1	+0.2
DAWY				Sn	Sn	06 38 46.1	-0.9
DOT	Dot Lake	5.59	177	ePn	Pn	06 37 44.0	+0.8
DOT	Dot Lake	5.59	177	Pn	Pn	06 37 43.6	+0.4
DOT				Sn	Sn	06 38 48.6	+1.2
BPAW	Bear Paw Mtn.	5.72	209	ePn	Pn	06 37 44.5	-0.4
MCK	McKinley	5.77	199	ePn	Pn	06 37 45.9	+0.3
MCK				eSn	Sn	06 38 48.3	-3.4
PS10	TAPS Pump St10	5.83	185	ePn	Pn	06 37 45.7	-0.8
RND	Reindeer	6.07	198	ePn	Pn	06 37 49.8	-0.1
DHY	Denali Highway	6.26	192	ePn	Pn	06 37 53.2	+0.7
DHY				eSn	Sn	06 39 03.5	-0.6
PAX	Paxson	6.28	184	ePn	Pn	06 37 52.9	+0.3
PAX				eSn	Sn	06 39 00.4	-4.0
PAX	Paxson	6.28	184	Pn	Pn	06 37 53.5	+0.8
PAX				Sn	Sn	06 39 03.6	-0.8
BCA3	Beaver Creek A	6.28	168	ePn	Pn	06 37 52.7	+0.1
BCAR	Beaver Creek A	6.28	168	ePn	Pn	06 37 53.0	+0.4
MENT	Mentasta	6.31	176	ePn	Pn	06 37 53.0	-0.1
MENT				eSn	Sn	06 39 03.8	-1.4
CAST	Castle Rocks	6.54	211	ePn	Pn	06 37 56.2	0.0
RDOG	Red Dog Mine	6.77	269	ePn	Pn	06 37 58.5	-0.8
RDOG				eSn	Sn	06 39 10.8	-5.5
BVCY	Beaver Creek	7.00	165	Pn	Pn	06 38 03.5	+1.0
PPLA	Purkeypile	7.04	209	ePn	Pn	06 38 02.8	-0.4
YUK1	Sand Pete Hill	7.29	165	Pn	Pn	06 38 07.3	+0.8
SCM	Sheep Creek Mo	7.50	190	ePn	Pn	06 38 11.3	+2.0
SML	Sawmill	7.59	193	ePn	Pn	06 38 11.2	+0.6
YUK2	White River	7.62	166	Pn	Pn	06 38 11.8	+0.7
YUK2				Sn	Sn	06 39 36.0	-1.4
YUK3	Moose Creek	7.67	165	Pn	Pn	06 38 12.4	+0.6
SKT	Skwentna	7.80	205	ePn	Pn	06 38 14.1	+0.7
TTA	Tatalina	7.81	222	ePn	Pn	06 38 12.7	-0.9
TT01	Tatalina	7.83	222	ePn	Pn	06 38 12.7	-1.1
PMR	Palmer	7.88	196	ePn	Pn	06 38 14.7	+0.2
KNK	Knik Glacier	7.99	193	ePn	Pn	06 38 16.8	+0.7
KNK				eSn	Sn	06 39 48.6	+2.2
PTPK	Patty Peak	8.11	173	Pn	Pn	06 38 19.7	+1.9
BALM	Baldy	8.27	172	ePn	Pn	06 38 20.2	+0.3
BALM	Baldy	8.27	172	Pn	Pn	06 38 22.2	+2.3
BALM				Sn	Sn	06 39 54.6	+1.3
YUK4	Talbot Arm	8.28	160	Pn	Pn	06 38 19.8	-0.4
KIAG	Kiagna River	8.38	172	Pn	Pn	06 38 24.5	+3.0
KIAG				Sn	Sn	06 39 57.5	+1.3
RC01	Rabbit Creek A	8.43	197	ePn	Pn	06 38 23.1	+1.0
GLI	Glacier Island	8.43	188	ePn	Pn	06 38 23.9	+1.9
GLI				eSn	Sn	06 40 01.8	+4.6
CRQM	Cirque	8.52	175	ePn	Pn	06 38 26.2	+2.8
FID	Port Fidalgo	8.53	186	ePn	Pn	06 38 25.8	+2.4
YUK5	Granite Creek	8.59	157	Pn	Pn	06 38 24.8	+0.4
YUK5				Sn	Sn	06 40 00.2	-1.2
GRNC	Granite Creek	8.60	171	Pn	Pn	06 38 27.5	+2.9
GRNC				Sn	Sn	06 40 03.0	+1.3
YUK6	Outpost Mounta	8.71	159	Pn	Pn	06 38 27.6	+1.5
RAGM	Ragged Mountai	8.86	180	ePn	Pn	06 38 29.3	+1.3
HMT	Hamilton	8.91	179	ePn	Pn	06 38 28.8	+0.1
TABL	Table Mountain	8.93	169	Pn	Pn	06 38 32.1	+3.0
TABL				Sn	Sn	06 40 08.9	-0.8
HYT	Haines Junctio	8.94	157	ePn	Pn	06 38 30.0	+0.9
HYT	Haines Junctio	8.94	157	Pn	Pn	06 38 29.5	+0.4
YUK7	Dusty Glacier	9.14	159	Pn	Pn	06 38 34.2	+2.3
MESA	MESA	9.14	172	Pn	Pn	06 38 36.4	+4.4
SAMH	Samovar Hills	9.27	168	Pn	Pn	06 38 38.1	+4.6
PCA	Pinnacle	9.34	166	ePn	Pn	06 38 34.8	+0.2
PCA	Pinnacle	9.34	166	Pn	Pn	06 38 38.9	+4.3
SVW2	Sparrevohn	9.34	215	ePn	Pn	06 38 34.1	-0.4
SEW	Seward	9.37	195	ePn	Pn	06 38 33.4	-1.5
DHRN	Dharma Camp	9.59	91	Pn	Pn	06 38 37.2	-0.7
DHRN				Sn	Sn	06 40 15.0	-11
CNPM	China Poot	10.13	199	ePn	Pn	06 38 46.6	+1.3
PLBC	Pleasant Camp	10.41	156	Pn	Pn	06 38 51.4	+2.2
KUKN	Kugluktuk,NWT	10.86	83	Pn	Pn	06 38 54.7	-0.6
KUKN				Sn	Sn	06 40 44.9	-12
BESE	Bessie Mountai	11.49	153	ePn	Pn	06 39 02.9	-1.0
BESE	Bessie Mountai	11.49	153	Pn	Pn	06 39 05.0	+1.0
JIS	Juneau Island	11.85	153	ePn	Pn	06 39 09.8	+1.0
KDAK	Kodiak Island	11.99	201	Pn	Pn	06 39 08.4	-2.3
	0.1nm,0.3s,baz=77,slow=14,SNR=2.0						
KDAK				LR	LR	06 44 02.9	
	comp=Z,158nm,18.4s,baz=43,slow=38						
DLBC	Dease Lake	12.54	142	Pn	Pn	06 39 16.7	-1.6
	0.2nm,0.3s,baz=303,slow=17,SNR=3.0						
DLBC				Lg	Lg	06 42 51.9	
	0.2nm,0.3s,baz=62,slow=19,SNR=3.2						
DLBC				LR	LR	06 44 51.6	
	comp=Z,97nm,20.9s,baz=354,slow=40						
DLBC	Dease Lake	12.54	142	ePn	Pn	06 39 18.2	0.0
DLBC	Dease Lake	12.54	142	Pn	Pn	06 39 16.5	-1.8
YKW3	Yellowknife Ar	13.82	104	Pn	Pn	06 39 32.5	-3.2
YKW3				Sn	Sn	06 41 57.9	-11
YKA	Yellowknife Ar	13.87	104	Pn	Pn	06 39 33.1	-3.3
	0.8nm,0.3s,baz=308,slow=13,SNR=41						
YKA				Sn	Sn	06 41 58.7	-12
	0.5nm,0.3s,baz=310,slow=22,SNR=5.3						
YKA				LR	LR	06 45 53.5	
	comp=Z,6.4nm,19.7s,baz=302,slow=41						
YKB5	Yellowknife Ar	13.87	104	ePn	Pn	06 39 33.1	-3.3
YKW1	Yellowknife Ar	13.91	104	Pn	Pn	06 39 33.8	-3.0
YKW1				Sn	Sn	06 41 59.0	-12
FNBB	Fort Nelson	13.92	127	Pn	Pn	06 39 36.3	-0.7
RES	Resolute Bay	15.88	48	Pn	Pn	06 40 00.2	-2.9
	0.5nm,0.3s,baz=266,slow=15,SNR=13						
RES				Sn	Sn	06 42 44.2	-15
	0.5nm,0.3s,baz=313,slow=18,SNR=3.5						
RES	Resolute Bay	15.88	48	Pn	Pn	06 39 56.6	-6.5
RES				Sn	Sn	06 42 40.1	-19
BMBC	Bull Mountain	16.61	131	Pn	P	06 40 15.0	-0.3
BBB	Bella Bella	18.77	147	LR	LR	06 47 31.5	
	comp=Z,27nm,21.3s,baz=288,slow=36						
NEW	Newport	24.97	133	LR	LR	06 51 25.3	
	comp=Z,56nm,18.8s,baz=339,slow=36						
SEY	Seymchan	25.20	287	P	P	06 41 45.4	+0.1
	9.0nm,0.8s,baz=98,slow=6.9,SNR=9.4						
MA2	Magadan	28.11	283	LR	LR	06 55 02.7	
	comp=Z,199nm,18.3s,baz=56,slow=40						
FRB	Frobisher Bay	28.98	63	LR	LR	06 55 00.4	
	comp=Z,148nm,20.7s,baz=265,slow=39						
YBH	Yreka Blue Hor	29.85	146	LR	LR	06 54 28.4	
	comp=Z,70nm,18.1s,baz=357,slow=36						
ULM	Lac du Bonnet	29.85	104	LR	LR	06 55 07.7	
	comp=Z,94nm,18.2s,baz=324,slow=38						
PETK	Petropavlovsk-	30.64	268	LR	LR	06 56 12.7	
	comp=Z,57nm,18.0s,baz=63,slow=39						
PD31	Pinedale Array	32.10	127	eP	P	06 42 49.0	+1.8
PDAR	Pinedale Array	32.10	127	P	P	06 42 49.0	+1.8
	0.8nm,0.6s,baz=18,slow=4.6,SNR=7.1						
NV01	Mina Array Sit	33.95	141	eP	P	06 43 05.8	+2.4
NVAR	Mina Array Bea	33.95	141	P	P	06 43 05.8	+2.4
	2.5nm,1.0s,baz=335,slow=6.6,SNR=9.3						
CCUT	Cedar City	35.96	135	eP	P	06 43 20.8	+0.1
SCHQ	Schefferville	36.34	73	LR	LR	06 58 54.1	
	comp=Z,68nm,19.5s,baz=336,slow=37						
ARA0	ARCESS Array S	41.35	5	eP	P	06 44 04.9	-0.4
ARCES	ARCESS Array B	41.35	5	P	P	06 44 04.9	-0.4
	2.4nm,0.9s,baz=354,slow=7.3,SNR=3.3						
KLR	Kul'dur	42.99	287	P	P	06 44 17.6	-1.3
	3.1nm,0.9s,baz=22,slow=11,SNR=7.4						
MCWV	Mont Chateau	44.67	97	eP	P	06 44 32.6	+0.1
OXF	Oxford	45.97	109	eP	P	06 44 43.4	+0.5
TXAR	Lajitas Array	46.32	128	P	P	06 44 48.1	+2.3
	0.1nm,0.4s,baz=331,slow=5.2,SNR=2.7						
USRK	Ussuriysk Ar.	47.27	283	P	P	06 44 52.9	0.0
	0.8nm,0.6s,baz=45,slow=8.6,SNR=2.7						
FIA0	FINESS Array S	49.46	6	eP	P	06 45 09.7	+0.1
FINES	FINESS Array B	49.46	6	P	P	06 45 09.7	+0.1
	1.6nm,0.5s,baz=1.8,slow=7.8,SNR=14						
ZAA1	Zalesovo Array	51.95	325	eP	P	06 45 28.1	-0.3
ZALV	Zalesovo Beam	51.96	325	P	P	06 45 28.1	-0.3
	1.0nm,0.3s,baz=15,slow=6.8,SNR=3.7						
SONA0	Songino Array	52.26	306	eP	P	06 45 31.6	+0.6
SONM	Songino Array	52.26	306	P	P	06 45 31.6	+0.6
	1.6nm,0.9s,baz=28,slow=7.4,SNR=7.6						
SONM				LR	LR	07 08 33.7	
	comp=Z,46nm,19.6s,baz=58,slow=37						
BVAR	Borovoye Array	55.40	335	P	P	06 45 53.7	-0.1
	0.9nm,0.6s,baz=32,slow=5.9,SNR=9.4						
KURBB	Kurchatov Arra	56.34	328	P	P	06 45 59.7	-0.8
	3.9nm,0.9s,baz=12,slow=7.1,SNR=17						
HHC	Hu-ho-hao-te	57.04	299	eP	P	06 46 07.1	+1.3
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,95nm,5.5s						
MK32	Makanchi Array	59.26	324	eP	P	06 46 20.3	-0.8
MKAR	Makanchi Array	59.26	324	P	P	06 46 20.3	-0.8
	comp=Z,0.8nm,0.6s,baz=40,slow=6.6,SNR=7.3						
AKASG	Malin Array Be	60.32	4	P	P	06 46 28.4	+0.1
	comp=Z,1.0nm,0.6s,baz=355,slow=7.0,SNR=6.2						
WMQ	Urumqi	60.88	319	eP	P	06 46 35.3	+3.0
GTA	Gaotai	61.88	308	eP	P	06 46 40.3	+1.1
GTA				pP	sP	06 46 51.5	+7.3
GTA				sP	pP	06 46 57.8	+15
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSH	Kashi	67.52	327	eP	P	06 47 20.8	+4.8
ESDC	Sonseca Array	67.61	32	P	P	06 47 18.9	+2.4
	comp=Z,0.3nm,0.5s,baz=348,slow=6.8,SNR=3.4						
BR101	Keskin Array S	71.37	1	eP	P	06 47 41.0	+1.1
BRTR	Keskin Array B	71.37	1	P	P	06 47 41.0	+1.1
	comp=Z,0.4nm,0.7s,baz=345,slow=4.9,SNR=2.7						

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*ISCJB **17** 06:40:25.5±0.3, 24°.48N±0°.02×122°.74E±0°.01, h94^{km}±3^{km}, Error ellipse: s-maj=3.2km s-min=2.0km az=173.5*

*JMA **17** 06:40:26.1±0.1, 24°.43N×122°.73E, h89^{km}±1^{km}, M3.4*

*TAP **17** 06:40:26.2, 24°.46N×122°.72E, h88^{km}, ML4.0, B*

ISC 17 06:40:25.7±1.2**, 24°.47N**±0°.03×**122°.73E**±0°.02**, h95**^{km}±6^{km}**, n103, σ0^{s}.94**/194**, 9C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.19	96	P	Pn	06 40 39.1	-0.1
JYNG				S	Sn	06 40 48.7	-0.6
YOJ	Yonaguni jima	0.25	92	⇑eP	Pn	06 40 39.4	-0.1
	baz=87						
YOJ				S	Sn	06 40 49.1	-0.6
	baz=87						
YOJ	Yonaguni jima	0.25	92	P	Pn	06 40 39.3	-0.1
YOJ				S	Sn	06 40 48.6	-1.1
EOS1	EOS1	0.56	278	⇓P	Pn	06 40 41.6	+0.3
	baz=279						
EOS1				S	Sn	06 40 53.5	+0.5
	baz=279						
TWC	Suao	0.82	280	⇑P	Pn	06 40 43.9	+0.1
	baz=280						
TWC				S	Sn	06 40 56.5	-0.8
	baz=280						
NANB	Nanao	0.90	267	P	Pn	06 40 45.0	+0.4
	baz=267						
NANB				S	Sn	06 40 59.1	+0.3
	baz=267						
ENA	Nanau	0.91	268	eP	Pn	06 40 45.2	+0.5
	baz=267						
ENA				S	Sn	06 40 59.3	+0.4
	baz=267						
NTC	Toucheng	0.91	295	eP	Pn	06 40 45.0	+0.4
	baz=295						
NTC				S	Sn	06 40 58.4	-0.5
	baz=295						
IRIF	Iriomote-Funau	0.92	98	P	Pn	06 40 44.9	+0.1
IRIF				S	Sn	06 40 58.8	-0.3
TIPB	Shuangxi	0.96	301	⇓P	Pn	06 40 45.7	+0.4
	baz=302						
TIPB				S	Sn	06 40 59.4	-0.7
	baz=302						
TWE	Neicheng	1.00	285	P	Pn	06 40 46.2	+0.5
	baz=285						
TWE				S	Sn	06 41 00.4	-0.3
	baz=285						
NWF	Wu-fen Shan	1.05	305	eP	Pn	06 40 47.1	+0.8
	baz=305						
NWF				S	Sn	06 41 02.5	+0.5
	baz=305						
WFSB	Wu-fen Shan	1.05	305	eP	Pn	06 40 47.1	+0.9
	baz=305						
WFSB				S	Sn	06 41 02.4	+0.6
	baz=305						

HATJ	**Hateruma jima**	1.06	113	P	Pn	06 40 47.0	+0.6
HATJ				*e*S	Sn	06 41 01.9	0.0
NACB	**Ninganchiao**	1.08	254	⇑P	Pn	06 40 46.4	-0.2
	baz=254						
NACB				S	Sn	06 41 01.4	-0.9
	baz=254						
TWD	**Chiawan**	1.11	250	*e*P	Pn	06 40 46.8	-0.1
	baz=249						
TWD				S	Sn	06 41 02.0	-0.9
	baz=249						
NDT	**Datong Townshi**	1.12	277	P	Pn	06 40 47.9	+0.8
	baz=277						
NDT				S	Sn	06 41 03.6	+0.4
	baz=277						
HWA	**Hwalien**	1.14	245	*e*P	Pn	06 40 47.4	+0.1
	baz=244						
HWA				*e*S	Sn	06 41 03.7	+0.1
	baz=244						
ETLH	**Xiulin Townshi**	1.17	257	*e*P	Pn	06 40 47.9	+0.1
	baz=257						
ETLH				S	Sn	06 41 03.9	-0.5
	baz=257						
ENLB	**Shoufeng**	1.18	242	*e*P	Pn	06 40 49.2	+1.5
	baz=241						
ENLB				*e*S	Sn	06 41 05.2	+0.8
	baz=241						
JKRS	**Kuro-shima**	1.19	101	P	Pn	06 40 48.5	+0.7
JKRS				*e*S	Sn	06 41 04.4	-0.1
NNSB	**Datong**	1.23	268	*e*P	Pn	06 40 48.9	+0.4
	baz=268						
NNSB				S	Sn	06 41 05.5	-0.2
	baz=268						
NNS	**Nan Shan**	1.24	269	*e*P	Pn	06 40 49.2	+0.6
	baz=269						
NNS				*e*S	Sn	06 41 06.0	+0.1
	baz=269						
TATO	**Taipei**	1.24	294	*e*P	Pn	06 40 48.7	+0.2
	baz=294						
TATO				*e*S	Sn	06 41 04.8	-0.8
	baz=294						
TAP	**Taipei**	1.25	297	*e*P	Pn	06 40 49.0	+0.4
	baz=297						
TAP				*e*S	Sn	06 41 05.9	0.0
	baz=297						
YHNB	**Yeheng**	1.25	279	⇑*e*P	Pn	06 40 49.5	+0.9
	baz=279						
YHNB				S	Sn	06 41 06.1	+0.1
	baz=279						
YM01	**YM01**	1.25	303	*e*P	Pn	06 40 49.4	+0.7
	baz=303						
YM01				S	Sn	06 41 05.9	-0.1
	baz=303						
YM08	**YM08**	1.26	305	*e*P	Pn	06 40 49.0	+0.3
	baz=305						
YM08				*e*S	Sn	06 41 05.9	-0.3
	baz=305						
YM05	**YM05**	1.27	303	P	Pn	06 40 49.5	+0.6
	baz=303						
YM05				S	Sn	06 41 06.0	-0.3
	baz=303						
NSK	**Sanguang**	1.27	280	*e*P	Pn	06 40 49.6	+0.8
	baz=279						
NSK				S	Sn	06 41 06.6	+0.2
	baz=279						
YM04	**YM04**	1.28	302	⇑P	Pn	06 40 49.7	+0.6
	baz=302						
YM04				S	Sn	06 41 06.2	-0.5
	baz=302						
JIJ	**Ishigaki jima**	1.29	94	P	Pn	06 40 49.1	+0.1
JIJ				S	Sn	06 41 05.7	-1.0
YM03	**YM03**	1.29	303	*e*P	Pn	06 40 49.4	+0.2
	baz=303						
YM03				*e*S	Sn	06 41 06.5	-0.5
	baz=303						
TWY	**Chenhua**	1.31	308	*e*P	Pn	06 40 49.0	-0.3
	baz=308						
TWY				*e*S	Sn	06 41 07.8	+0.7
	baz=308						
TWS1	**Kuangyinshan**	1.35	298	*e*P	Pn	06 40 50.6	+0.8
	baz=298						
TWS1				*e*S	Sn	06 41 08.4	+0.4
	baz=298						
ESL	**Shilin**	1.36	241	*e*P	Pn	06 40 49.8	-0.1
	baz=241						
ESL				*e*S	Sn	06 41 07.6	-0.6
	baz=241						
NTST	**Danshui**	1.36	301	*e*P	Pn	06 40 50.5	+0.7
	baz=301						
NTST				S	Sn	06 41 08.4	+0.2
	baz=301						
WHF	**Hehuan Shan**	1.38	257	⇑*e*P	Pn	06 40 50.8	+0.2
	baz=256						
WHF				*e*S	Sn	06 41 08.6	-0.7
	baz=256						
WLTB	**Daxi**	1.40	286	*e*S	Sn	06 41 10.4	+1.3
	baz=286						
EGFH	**Guangfu**	1.44	237	*e*P	Pn	06 40 50.7	-0.2
	baz=236						
EGFH				*e*S	Sn	06 41 09.2	-0.7
	baz=236						
JISG	**Ishigakijimahi**	1.44	85	P	Pn	06 40 51.1	+0.2
JISG				S	Sn	06 41 09.3	-0.7
TDCB	**Techi**	1.45	262	*e*P	Pn	06 40 52.3	+1.1
	baz=261						
TDCB				*e*S	Sn	06 41 10.2	-0.3
	baz=261						
CHGB	**Renai**	1.48	254	*e*P	Pn	06 40 52.2	+0.5
	baz=254						
CHGB				S	Sn	06 41 10.8	-0.5
	baz=254						
NCU	**National Centr**	1.49	290	*e*P	Pn	06 40 52.8	+1.2
	baz=290						
NCU				*e*S	Sn	06 41 12.3	+1.2
	baz=290						
NCUH	**Zhongli**	1.49	290	*e*P	Pn	06 40 52.5	+0.9
	baz=289						
NCUH				*e*S	Sn	06 41 11.7	+0.6
	baz=289						
HGSD	**Ruisui**	1.54	231	⇑*e*P	Pn	06 40 52.3	+0.1
	baz=230						
HGSD				*e*S	Sn	06 41 11.7	-0.6
	baz=230						
LIOB	**Emei**	1.57	277	*e*P	Pn	06 40 53.6	+1.0
	baz=276						
LIOB				*e*S	Sn	06 41 13.5	+0.5
	baz=276						
NSTT	**Nanjuang**	1.59	276	*e*P	Pn	06 40 53.7	+1.0
	baz=276						
NSTT				*e*S	Sn	06 41 13.5	+0.3
	baz=276						
EHY	**Hungye**	1.61	234	*e*P	Pn	06 40 53.0	0.0
	baz=233						
EHY				*e*S	Sn	06 41 12.3	-1.5
	baz=233						
VWDT	**VWDT**	1.62	244	⇑P	Pn	06 40 53.8	+0.7
	baz=244						
VWDT				*e*S	Sn	06 41 13.8	-0.2
	baz=244						
SBCB	**Hsinchu**	1.62	282	*e*S	Sn	06 41 14.7	+0.6
	baz=281						
YULB	**Yu-li**	1.70	231	⇑P	Pn	06 40 54.0	-0.2
	baz=230						
YULB				*e*S	Sn	06 41 15.4	-0.4
	baz=230						
SSLB	**Suanglung**	1.76	248	*e*P	Pn	06 40 55.6	+0.6
	baz=247						
SSLB				*e*S	Sn	06 41 17.7	+0.4
	baz=247						
NMLH	**Miaoli**	1.77	273	*e*P	Pn	06 40 56.2	+1.1
	baz=272						
NMLH				*e*S	Sn	06 41 17.9	+0.5
	baz=272						
TWQ1	**Liyutan**	1.79	267	*e*P	Pn	06 40 55.3	0.0
	baz=266						
TWQ1				*e*S	Sn	06 41 18.4	+0.5
	baz=266						
NSY	**Sanyi**	1.80	269	*e*P	Pn	06 40 57.1	+1.6
	baz=268						
NSY				*e*S	Sn	06 41 19.1	+0.9
	baz=268						
JTJ	**Tarama**	1.80	84	P	Pn	06 40 55.9	+0.5
JTJ				S	Sn	06 41 18.2	+0.1
TYC	**Yuchr**	1.80	252	*e*P	Pn	06 40 56.5	+1.1
	baz=251						
TYC				*e*S	Sn	06 41 19.1	+0.9
	baz=251						
PTSB	**Yuanli**	1.85	270	*e*P	Pn	06 40 56.6	+0.6
	baz=269						
PTSB				*e*S	Sn	06 41 20.0	+0.8
	baz=269						
WHYT	**Xinyi Township**	1.88	246	*e*P	Pn	06 40 57.7	+1.2
	baz=246						
WHYT				*e*S	Sn	06 41 20.9	+0.8
	baz=246						
YUS	**Yu-Shan**	1.90	239	*e*P	Pn	06 40 58.0	+0.8
	baz=239						
YUS				*e*S	Sn	06 41 21.2	+0.1
	baz=239						
TCU	**Taichung**	1.91	261	*e*S	Sn	06 41 20.1	-0.4
	baz=260						
WDJ	**Dajia District**	1.91	267	*e*S	Sn	06 41 21.5	+0.8
	baz=266						
WJS	**Zhushan**	1.94	251	*e*P	Pn	06 40 58.8	+1.5
	baz=250						
WJS				*e*S	Sn	06 41 22.8	+1.4
	baz=250						
WNT	**Mingjian**	1.96	253	*e*P	Pn	06 40 59.0	+1.4
	baz=252						
WNT				*e*S	Sn	06 41 23.1	+1.2
	baz=252						
WCHH	**Zhanghua**	2.02	259	*e*S	Sn	06 41 22.9	-0.4
	baz=259						
ELDTW	**Lidau**	2.02	231	*e*P	Pn	06 40 58.5	0.0
	baz=230						
ELDTW				*e*S	Sn	06 41 22.5	-1.0
	baz=230						
CHN5	**Tsauling**	2.07	246	*e*S	Sn	06 41 25.9	+1.4
	baz=245						
WGK	**Gukeng**	2.13	249	*e*S	Sn	06 41 27.0	+1.1
	baz=248						
WDLH	**Douliu**	2.15	249	*e*P	Pn	06 41 01.3	+1.3
	baz=248						
WDLH				*e*S	Sn	06 41 27.2	+0.9
	baz=248						
STYT	**Tauyuan**	2.23	235	*e*P	Pn	06 41 02.4	+1.3
	baz=234						
STYT				*e*S	Sn	06 41 28.9	+0.7
	baz=234						
TWGBT	**Beinan**	2.24	223	*e*P	Pn	06 41 01.4	+0.3
	baz=222						
TWG	**Pinlang**	2.24	223	*e*P	Pn	06 41 01.3	+0.1
	baz=222						
RLNB	**Erlin**	2.24	256	*e*P	Pn	06 41 01.6	+0.5
	baz=255						
RLNB				*e*S	Sn	06 41 28.8	+0.4
	baz=255						
JIRB	**Irabujima**	2.25	80	P	Pn	06 41 01.7	+0.4
JIRB				S	Sn	06 41 28.0	-0.5
TPUB	**Ta-pu**	2.25	239	*e*P	Pn	06 41 03.2	+1.8
	baz=238						
TPUB				*e*S	Sn	06 41 29.4	+0.8
	baz=238						
JIKM	**Ikemajima**	2.33	78	P	Pn	06 41 03.2	+0.9
JIKM				*e*S	Sn	06 41 30.2	-0.3
JMJ	**Miyako jima 2**	2.35	81	*e*P	Pn	06 41 04.2	+1.5
	baz=81						
JMJ				*e*S	Sn	06 41 31.8	+0.8
	baz=81						
JMJ2	**Miyako jima3**	2.38	83	P	Pn	06 41 04.0	+1.0
JMJ2				*e*S	Sn	06 41 32.3	+0.7
TWK	**Hsinying**	2.38	240	*e*P	Pn	06 41 04.3	+1.2
	baz=239						
TWK				*e*S	Sn	06 41 32.6	+0.9
	baz=239						
CHN1	**Nanshi**	2.39	238	*e*P	Pn	06 41 04.5	+1.3
	baz=237						
CHN1				*e*S	Sn	06 41 32.6	+0.6
	baz=237						
SLGT	**Liugui**	2.41	233	*e*P	Pn	06 41 05.2	+1.8
	baz=232						
SLGT				*e*S	Sn	06 41 33.1	+0.7
	baz=232						
SSD	**Sandimen**	2.58	229	*e*P	Pn	06 41 07.1	+1.4
	baz=228						
SSD				*e*S	Sn	06 41 37.4	+1.0
	baz=228						
LAY	**Lan-yu**	2.65	204	*e*P	Pn	06 41 05.8	-0.8
	baz=203						
LAY				*e*S	Sn	06 41 34.7	-3.5
	baz=203						
MASBT	**Mashibuluo**	2.67	227	*e*P	Pn	06 41 08.1	+1.2
	baz=226						
MASBT				*e*S	Sn	06 41 38.6	0.0
	baz=226						
EAST	**Anshuo**	2.71	220	*e*P	Pn	06 41 07.1	-0.3
	baz=219						
EAST				*e*S	Sn	06 41 37.6	-1.8
	baz=219						
SCZT	**Fangliau**	2.85	223	*e*P	Pn	06 41 10.7	+1.4
	baz=222						
SCZT				*e*S	Sn	06 41 43.6	+0.7
	baz=222						
PTTC	**Pingtan**	2.88	291	*e*P	Pn	06 41 09.8	+0.2
	baz=291						
PTTC				*e*S	Sn	06 41 41.5	-2.0
	baz=291						
MATB	**Ma-tsu**	3.03	304	*e*P	Pn	06 41 12.0	+0.4
	baz=303						
MATB				*e*S	Sn	06 41 46.3	-0.8
	baz=303						
PNG	**Penghu**	3.04	253	*e*P	Pn	06 41 11.6	-0.2
	baz=252						
PNG				*e*S	Sn	06 41 46.8	-0.7
	baz=252						
PHUB	**P'eng-hu**	3.04	252	*e*P	Pn	06 41 11.6	-0.2
	baz=251						
PHUB				*e*S	Sn	06 41 46.3	-1.2
	baz=251						
WDGT	**Dungji**	3.06	247	*e*P	Pn	06 41 12.5	+0.4
	baz=246						
WDGT				*e*S	Sn	06 41 46.3	-1.6
	baz=246						
TWKBT	**Hengchun**	3.08	215	*e*P	Pn	06 41 15.9	+3.6
	baz=215						
TWKBT				*e*S	Sn	06 41 47.5	-0.8
	baz=215						
TWK1	**Hengchun**	3.08	216	*e*S	Sn	06 41 47.5	-0.8
	baz=214						
VCHM	**Qimei**	3.28	248	*e*P	Pn	06 41 15.6	+0.6
	baz=247						
VCHM				*e*S	Sn	06 41 52.1	-0.9
	baz=247						
PTMZ	**Houxiangcun**	3.33	281	*e*P	Pn	06 41 15.9	+0.1
	baz=280						
PTMZ				*e*S	Sn	06 41 52.0	-2.4
	baz=280						
XPSS	**Dashiqiu**	3.36	317	*e*P	Pn	06 41 16.1	0.0
	baz=317						
LYJJ	**Jianjiangzhen**	3.39	308	*e*P	Pn	06 41 16.7	+0.2
	baz=307						
LYJJ				*e*S	Sn	06 41 55.8	-0.1
	baz=307						
MHZQ	**Yeshan**	3.73	297	*e*P	Pn	06 41 21.3	+0.3
	baz=296						
MHZQ				*e*S	Sn	06 42 02.6	-1.3
	baz=296						
KNMB	**Chin-men Tao**	3.96	271	*e*P	Pn	06 41 23.8	-0.4
	baz=270						
KNMB				*e*S	Sn	06 42 06.3	-3.3
	baz=270						
AXDP	**Jialang**	4.35	277	*e*P	Pn	06 41 29.9	+0.3
	baz=275						
AXDP				*e*S	Sn	06 42 16.6	-2.6
	baz=275						
ZPLA	**Ao Xicun**	4.58	264	*e*P	Pn	06 41 32.7	+0.1
	baz=263						
ZPLA				*e*S	Sn	06 42 21.4	-3.3
	baz=263						
JOW	**Kunigami**	5.53	64	*e*P	Pn	06 41 44.7	-0.8
	baz=64						

JSN 17 07:01:04.3±2.2, 17°.33N×77°.11W, h9^{km}±17^{km}, MD3.7, 2C-1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJ	**Portland Cotta**	0.41	354	⇑*i*P	Pg	07 01 13.0	+0.7
HOJ	**Hope**	0.75	27	⇓*i*P	Pg	07 01 17.9	-0.9
MCJ	**Malvern**	0.80	317	*i* P	Pg	07 01 18.2	-1.6
MCJ				*i* P	Pb	07 01 19.2	-1.3
GWJ	**Greenwich**	0.82	26	⇑*i*P	Pg	07 01 19.1	-1.1
CVJ	**Coleyville**	0.97	336	*i* P	Pg	07 01 20.9	-2.2
MTDJ	**Mount Denham**	0.97	336	*i* P	Pg	07 01 20.9	-2.2
MTDJ				*i* S	Sg	07 01 33.4	-2.4
BBJ	**Bamboo Saint A**	1.05	352	*i* P	Pg	07 01 22.5	-2.1
CMJ	**Castle Mountai**	1.06	41	*i* P	Pg	07 01 22.9	-1.9

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*ISCJB **17** 07:02:07.2±0.5, 24°.21S±0°.04×67°.17W±0°.04, h192^{km}±6^{km}, mb3.3/1, Error ellipse: s-maj=7.3km s-min=4.2km az=35.2*

*IDC **17** 07:02:07.7±1.2, 24°.18S×66°.99W, h173^{km}±14^{km}, mb3.3/1, mb1 3.5/7, mb1mx3.2/32, mbtmp3.9/7, MS3.1/1, Ms1 3.1/1, ms1mx2.5/11, Error ellipse: s-maj=20.1km s-min=18.0km az=21.0*

*SJA **17** 07:02:08.4±0.5, 24°.22S×67°.12W, h178^{km}±5^{km}, ML3.0, MW3.4*

*GUC **17** 07:02:10.7±0.5, 24°.00S×67°.63W, h216^{km}±6^{km}, ML4.0*

ISC 17 07:02:07.6±0.9**, 24°.22S**±0°.06×**67°.15W**±0°.04**, h187**^{km}±8^{km}**, n33, σ1^{s}.47**/49**, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	1.58	109	*e*P	Pn	07 02 43.0	+1.9
SLA				IAML		07 02 43.9	
	comp=Z,73nm,0.7s						
SLA				*e*S	Sn	07 03 06.1	-1.0
HJA	**Humahuaca**	1.89	58	*e*P	Pn	07 02 45.5	+1.1
HJA				IAML		07 02 46.9	
	comp=Z,142nm,0.5s						
AZAP	**Zapla**	1.90	91	*e*P	Pn	07 02 45.2	+0.8
AZAP				IAML		07 02 46.1	
	comp=Z,189nm,0.3s						
AZAP				*e*S	Sn	07 03 12.3	-0.6
FSA	**Cafayete**	2.17	151	*e*P	Pn	07 02 48.4	+1.2
FSA				*e*S	Sn	07 03 17.2	-0.7
LVC	**Limon Verde**	2.27	314	P	Pn	07 02 49.9	+1.3
	comp=Z,46nm,0.3s,baz=135,slow=5.5,SNR=61						
LVC				S	Sn	07 03 20.4	0.0
	comp=Z,44nm,0.3s,baz=177,slow=12,SNR=18						
LVC	**Limon Verde**	2.27	314	*e*P	Pn	07 02 49.9	+1.3
LVC				IAML		07 02 51.5	
	comp=Z,155nm,0.2s						
LVC	**Limon Verde**	2.27	314	⇑*i*P	Pn	07 02 50.1	+1.5
LVC				*i* S	Sn	07 03 20.5	+0.2
PB15	**IPOC Station P**	2.35	295	*e*P	Pn	07 02 50.5	+1.3
PB15	**IPOC Station P**	2.35	295	*e*P	Pn	07 02 50.7	+1.5
PB15				*i* S	Sn	07 03 21.2	-0.4
PB15				IAML		07 03 26.7	
	comp=E,2µm,0.3s						
YJA	**Yavi**	2.53	37	*e*P	Pn	07 02 52.5	+1.0
YJA				IAML		07 02 53.6	
	comp=Z,32nm,0.7s						
YJA				*e*S	Sn	07 03 26.1	+0.4
PB06	**IPOC Station P**	2.68	304	*e*P	Pn	07 02 54.3	+1.3
PB06				*e*S	Sn	07 03 28.4	+0.1
PB06	**IPOC Station P**	2.68	304	⇑*i*P	Pn	07 02 54.5	+1.5
PB06				*i* S	Sn	07 03 27.0	-1.4
PB06				IAML		07 03 30.5	
	comp=E,360nm,0.3s						
AHML	**Horco Molle**	3.04	148	*e*P	Pn	07 02 58.3	+1.3
AHML				IAML		07 02 59.3	
	comp=Z,23nm,0.7s						
PB09	**IPOC Station P**	3.08	321	⇑*i*P	Pn	07 02 59.4	+1.6
PB09				*i* S	Sn	07 03 36.5	-0.5
PB09				IAML		07 03 38.1	
	comp=E,208nm,0.5s						
PB05	**IPOC Station P**	3.11	295	*e*P	Pn	07 02 59.4	+1.3
PB05	**IPOC Station P**	3.11	295	*e*P	Pn	07 02 59.0	+1.0
PB05				*i* S	Sn	07 03 35.1	-2.4
PB05				IAML		07 03 40.1	
	comp=E,109nm,0.3s						
PB10	**IPOC Station P**	3.19	282	*e*P	Pn	07 03 00.5	+1.5
PB10	**IPOC Station P**	3.19	282	⇑*i*P	Pn	07 03 00.3	+1.4
PB10				*e*S	Sn	07 03 37.1	-1.8
PB03	**IPOC Station P**	3.22	311	*e*P	Pn	07 03 00.2	+0.8
PB03				*i* S	Sn	07 03 38.5	-1.5
PB03				IAML		07 03 42.4	
	comp=N,313nm,0.1s						
PB04	**IPOC Station P**	3.33	304	*e*P	Pn	07 03 02.3	+1.4
PB04	**IPOC Station P**	3.33	304	*e*P	Pn	07 03 01.6	+0.8
PB04				*i* S	Sn	07 03 40.2	-2.2
PB04				IAML		07 03 44.3	
	comp=N,213nm,0.2s						
PB07	**IPOC Station P**	3.54	314	*e*P	Pn	07 03 03.9	+0.6
PB07				*i* S	Sn	07 03 44.8	-2.0
PB07				IAML		07 03 53.2	
	comp=E,356nm,0.3s						
PB02	**IPOC Station P**	3.84	318	*e*P	Pn	07 03 07.2	+0.2
CYA	**Choya**	4.38	164	*e*P	Pn	07 03 14.8	+1.1
CYA				IAML		07 03 17.2	
	comp=Z,3.7nm,0.7s						
CFA	**Coronel Fontan**	7.42	187	P	Pn	07 03 53.8	+0.5
	comp=Z,0.8nm,0.3s,baz=6.5,slow=10,SNR=32						
CFA				S	Sn	07 05 13.8	-3.3
	comp=Z,1.5nm,0.3s,baz=288,slow=20,SNR=10.0						
LPAZ	**La Paz**	7.94	353	P	Pn	07 04 01.6	+0.9
	comp=Z,1.6nm,0.3s,baz=159,slow=9.3,SNR=50						
LPAZ				S	Sn	07 05 26.4	-4.0
	comp=Z,0.1nm,0.3s,baz=270,slow=4.0,SNR=2.6						
CPUP	**Villa Florida**	9.13	105	P	Pn	07 04 14.3	-1.4
	comp=Z,0.1nm,0.3s,baz=288,slow=16,SNR=3.1						
SIV	**San Ignacio**	9.97	36	P	Pn	07 04 25.0	-1.8
	comp=Z,1.2nm,0.3s,baz=232,slow=9.8,SNR=30						
BDFB	**Brasilia**	19.89	68	P	P	07 06 24.7	-0.3
	comp=Z,0.9nm,0.3s,baz=239,slow=11,SNR=20						
ROSC	**El Rosal**	29.71	345	LR	LR	07 20 44.8	
	comp=Z,36nm,18.2s,baz=219,slow=38						
TORD	**Torodi Ar. Bea**	76.77	69	P	P	07 13 39.5	+0.6
	comp=Z,0.5nm,0.6s,baz=276,slow=5.8,SNR=5.9						
ASAR	**Alice Springs**	128.20	205	PKP	PKiKP	07 20 54.1	+1.2
	comp=Z,0.2nm,0.5s,baz=141,slow=1.9,SNR=3.3						
WRA	**Warramunga Arr**	131.37	207	PKP	PKiKP	07 21 00.2	+0.9
	comp=Z,0.5nm,0.5s,baz=174,slow=2.0,SNR=3.4						

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*DDA **17** 07:09:12.8, 37°.01N×28°.44E, h7^{km}±1^{km}, ML2.5*

*ISK **17** 07:09:12.7, 37°.00N×28°.45E, h10^{km}, ML2.3/8*

*ISCJB **17** 07:09:13.2±0.6, 37°.01N±0°.04×28°.41E±0°.05, h15^{km}±5^{km}, Error ellipse: s-maj=7.6km s-min=5.2km az=139.4*

ISC 17 07:09:13.1±0.9**, 37°.00N**±0°.04×**28°.39E**±0°.03**, h14**^{km}±8^{km}**, n12, σ0^{s}.76**/20**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	0.16	327	PG	Pg	07 09 17.0	-0.1
YER				SG	Sg	07 09 20.4	+0.6
TURN	**Turunc**	0.21	127	PG	Pb	07 09 18.8	+0.1
TURN				SG	Sb	07 09 23.2	+0.7
TURN	**Turunc**	0.21	127	*i* P	Pb	07 09 19.1	+0.4
TURN				*i* S	Sb	07 09 23.1	+0.7
DALY	**Dalyan (Mula)**	0.28	131	PG	Pg	07 09 18.2	-0.7
DALY				SG	Sg	07 09 22.3	-0.6
DALY	**Dalyan (Mula)**	0.28	131	*i* P	Pg	07 09 18.7	-0.3
DALY				*i* S	Sg	07 09 23.1	+0.2
DALY				IAML_P			
	comp=Z,3µm,0.2s						
MRSB	**Marmaris-Mugla**	0.32	209	PG	Pg	07 09 19.7	0.0
MRSB				SG	Sb	07 09 25.5	-0.2
DAT	**Datca**	0.71	248	PG	Pb	07 09 27.9	+0.7
DAT	**Datca**	0.71	248	*i* P	Pg	07 09 25.2	-1.6
DAT				*i* S	Sb	07 09 38.5	+1.7
AYDN	**Tasoluk**	0.78	328	*i* P	Pb	07 09 28.4	0.0
AYDN				*i* S	Sg	07 09 37.7	-0.7
AYDN				IAML_P			
	comp=Z,1µm,0.2s						
ARG	**Arkhangelos**	0.81	195	PG	Pb	07 09 29.1	+0.2
BODT	**Bodrum**	0.87	274	PG	Pn	07 09 30.8	-0.1
AKAS	**Kas**	1.24	128	PN	Pb	07 09 36.2	-0.2

NNC 17 07:09:21.4±1.0**, 41°.75N**×**78°.18E, h0**^{km}**, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=7.6km s-min=3.7km az=169.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	1.32	7	P	Pg	07 09 45.5	-1.3
	4.4nm,0.2s						
SATY				S	Sg	07 10 03.8	-0.1
	13nm,0.1s						
UZB	**Uzynbulak**	1.53	24	P	Pn	07 09 49.0	-1.2
	3.8nm,0.2s						
UZB				S	Sg	07 10 09.9	-0.7
	3.4nm,0.3s						
MDOK	**Medeo**	1.65	330	Pg	Pn	07 09 50.7	-1.0
	4.4nm,0.1s						
MDOK				Lg	Lg	07 10 12.8	

	3.4nm,0.3s						
KOTS	**Kotyrbulak**	1.68	332	P	Pn	07 09 52.0	-0.3
	5.2nm,0.3s						
KOTS				S	Sb	07 10 15.3	+0.1
	14nm,0.3s						
IZV	**Izvestkoviy**	1.73	318	P	Pn	07 09 53.6	+0.5
	3.5nm,0.2s						
IZV				S	Sg	07 10 17.6	+0.4
	9.6nm,0.3s						
PDGK	**Podgornoye**	1.85	31	P	Pn	07 09 55.2	+0.6
	1.1nm,0.2s						
PDGK				S	Sg	07 10 20.5	-0.5
	1.9nm,0.4s						
PDGK	**Podgornoye**	1.85	31	⇓Pn	Pn	07 09 54.8	+0.3
	1.4nm,0.3s						
PDGK				⇓Sn	Sb	07 10 20.3	+0.2
	2.5nm,0.7s						
MTBS	**Maitube**	1.90	317	Pg	Pb	07 09 56.4	-0.6
	12nm,0.3s						
MTBS				Lg	Lg	07 10 22.6	
	7.0nm,0.3s						
KST	**Kastek**	2.09	309	Pg	Pb	07 09 59.5	-0.8
	7.7nm,0.4s						
KST				Lg	Lg	07 10 27.6	
TKM2	**Tokmak 2**	2.25	302	⇑Pg	Pb	07 10 02.4	-0.6
	3.3nm,0.3s						
TKM2				⇑Lg	Lg	07 10 34.5	
	3.3nm,0.4s						
KTBS	**Karatobe**	2.25	331	Pg	Pn	07 10 01.5	+1.4
	10nm,0.3s						
KTBS				Lg	Lg	07 10 31.7	
	22nm,0.4s						
CHKK	**Chushkaly**	2.28	338	Pg	Pn	07 10 01.7	+1.3
	26nm,0.2s						
CHKK				Lg	Lg	07 10 32.0	
	15nm,0.3s						
KTMS	**Ketmen**	2.33	43	Pg	Pn	07 10 02.5	+1.3
	4.4nm,0.2s						
KTMS				Lg	Lg	07 10 32.9	
	10nm,0.4s						
MNBS	**Baschi**	2.34	4	Pg	Pb	07 10 03.2	-1.3
	5.0nm,0.2s						
MNBS				Lg	Lg	07 10 34.1	
	8.7nm,0.2s						
DJR	**Jarkent**	2.84	24	Pg	Pb	07 10 11.9	-1.1
	4.8nm,0.3s						
DJR				Lg	Lg	07 10 49.4	
	7.2nm,0.5s						
AAK	**Ala-Archa**	2.88	289	⇑Pg	Pb	07 10 13.5	-0.4
	0.9nm,0.3s						
AAK				⇑Lg	Lg	07 10 51.7	
	3.0nm,0.8s						

IDC 17 07:10:19.6±4.7**, 16°.31S**×**175°.83W, h0**^{km}**, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.7**/38**, mbtmp4.3**/3**, Error ellipse: s-maj=174.5km s-min=94.4km az=155.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	41.56	240	P	P	07 18 09.4	+0.1
	1.8nm,0.5s,baz=90,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	47.37	258	P	P	07 18 55.6	-0.3
	1.0nm,0.4s,baz=92,slow=8.1,SNR=24						
ASAR	**Alice Springs**	47.61	253	P	P	07 18 57.6	-0.2
	6.4nm,0.5s,baz=88,slow=8.4,SNR=120						
ASAR				PcP	PcP	07 20 27.4	-0.3
	0.2nm,0.4s,baz=105,slow=3.8,SNR=3.9						

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*NIED **17** 07:14:00, 43°.50N×147°.50E, h44^{km}, Mw3.6 Best double couple: M$_0$2.51000×10^{14} NP1:ϕ$_s$128.00000°, δ23.00000°, λ-87.00000°. NP2:ϕ$_s$305.00000°, δ67.00000°, λ-91.00000°.*

*JMA **17** 07:14:30.8±0.3, 43°.54N×147°.47E, h13^{km}, M3.6*

*ISCJB **17** 07:14:31.5±1.9, 43°.70N±0°.07×147°.46E±0°.10, h18^{km}±11^{km}, Error ellipse: s-maj=15.1km s-min=7.3km az=135.6*

*SKHL **17** 07:14:34.1±0.7, 43°.68N×147°.43E, h34^{km}±3^{km}, mb4.2/4*

ISC 17 07:14:30.3±2.3**, 43°.8N**±0°.1×**147°.51E**±0°.10**, h14**^{km}±14^{km}**, n14, σ$0^{s}.91$**/22**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	1.22	283	*i* P	Pg	07 14 53.8	0.0
YUK				AMB	AMB	07 14 54.5	
	50nm,0.4s						
YUK				AMB	AMB	07 14 54.5	
	90nm,0.4s						
YUK				AMB	AMB	07 14 54.5	
	110nm,0.4s						
YUK				*i* S	Sb	07 15 08.2	-0.5
YUK				A	A	07 15 09.9	
	1μm,0.5s						
YUK				A	A	07 15 09.9	
	930nm,0.5s						
GRPR	**Tuman**	1.27	281	*e*P	Pb	07 14 54.0	-0.1
GRPR				AMB	AMB	07 14 55.0	
	80nm,0.3s						
GRPR				*i* S	Sn	07 15 09.0	-1.6
GRPR				A	A	07 15 11.0	
	950nm,0.4s						
GRPR				A	A	07 15 11.0	
	340nm,0.4s						
LAGR	**Lagunnoye**	1.28	284	*e*P	Pg	07 14 55.0	+0.2
LAGR				AMB	AMB	07 14 56.0	
	130nm,0.3s						
LAGR				*i* S	Sb	07 15 11.0	+0.6
LAGR				A	A	07 15 15.0	
	770nm,0.4s						
LAGR				A	A	07 15 15.0	
	960nm,0.4s						
NEM2	**Nemuro 2**	1.34	253	P	Pn	07 14 54.1	-0.5
NEM2				*e*S	Sn	07 15 11.1	-1.2
KUR	**Kuril'sk**	1.49	10	*e*P	Pg	07 14 58.9	0.0
KUR				AMB	AMB	07 15 00.4	
	40nm,0.4s						
KUR				AMB	AMB	07 15 00.4	
	60nm,0.4s						
KUR				*i* S	Sg	07 15 18.1	-0.2
KUR				A	A	07 15 19.7	
	170nm,0.4s						
KUR				A	A	07 15 19.7	
	380nm,0.4s						
JRA	**Rausu**	1.73	277	P	Pb	07 15 01.3	-0.6
JNSB	**Nemuroshibetsu**	1.81	271	P	Pb	07 15 02.6	-0.7
JKHN	**Kushirohamanak**	1.84	249	P	Pn	07 15 01.6	+0.1
JKHN				*e*S	Sn	07 15 24.4	-0.1
JNK	**Nakash**	2.03	266	P	Pn	07 15 04.5	+0.4
JNK				*e*S	Sn	07 15 29.0	-0.3
JTKR	**Abashiri--Toko**	2.61	276	P	Pn	07 15 13.9	+1.8
JAR	**Ashorobuto**	2.76	262	P	Pn	07 15 15.4	+1.3
JAR				*e*S	Sn	07 15 48.3	+1.1
JOB	**Onbets**	2.81	253	P	Pn	07 15 15.5	+0.6
JCH	**Churui**	3.24	251	P	Pn	07 15 21.3	+0.6
JNBK	**Urakawa-nobuka**	3.79	249	P	Pn	07 15 29.6	+1.3

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*IDC **17** 07:14:39.5±1.1, 32°.20N×141°.80E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.6/37, mbtmp3.7/8, ML3.1/2, MS2.9/5, Ms1 2.9/5, ms1mx2.7/30, Error ellipse: s-maj=33.2km s-min=18.4km az=69.0*

*JMA **17** 07:14:40.5±0.3, 32°.32N×141°.93E, h14^{km}, M4.1*

*ISCJB **17** 07:14:42.5±0.6, 32°.27N±0°.04×141°.83E±0°.09, h39^{km}, mb3.7/6, MS3.0/2, Error ellipse: s-maj=11.6km s-min=4.9km az=164.8*

ISC 17 07:14:44.5±0.9**, 32°.29N**±0°.05×**141°.83E**±0°.09**, h39**^{km}**, n24, σ$1^{s}.36$**/27**, mb3.8**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	1.76	276	P	Pn	07 15 12.5	0.0
JHJ2	**Mitsune**	1.89	296	P	Pn	07 15 13.7	-0.5
JHJ	**Hachijo jima 2**	1.91	296	Pn	Pn	07 15 13.8	-0.8
	42nm,0.3s,baz=60,slow=20,SNR=39						
JHJ				Sn	Sn	07 15 34.8	-2.7
	28nm,0.3s,baz=90,slow=20,SNR=5.1						
BSO1	**Boso 1**	2.46	343	P	Pn	07 15 21.3	-0.3
BSO1				*e*S	Sn	07 15 51.0	+0.8
BSO3	**Boso 3**	2.73	337	P	Pn	07 15 25.4	-0.3
BSO4	**Boso 4**	2.96	336	P	Pn	07 15 29.4	+0.4
BSO4				S	Sn	07 16 05.3	+2.1
JHO	**Hitachi**	4.43	347	P	Pn	07 15 48.4	-0.8
JRY	**Ryogami san**	4.44	328	P	Pn	07 15 50.2	+0.9
JAG	**Ashikaga**	4.57	335	P	Pn	07 15 51.8	+0.7
JFK	**Kawauchi**	5.12	351	P	Pn	07 15 57.5	-1.2
JFK				S	Sn	07 16 53.1	-3.5
CBIJ	**Chichi jima**	5.19	177	P	Pn	07 15 58.8	-0.8
CBIJ				*e*S	Sn	07 16 58.6	+0.4
MJAR	**Matsushiro Arr**	5.19	326	Pn	Pn	07 16 00.1	+0.4
	0.2nm,0.3s,baz=153,slow=12,SNR=10						
MJAR				Sn	Sn	07 16 58.1	-0.2
	0.1nm,0.3s,baz=158,slow=11,SNR=4.4						
MJAR				LR	LR	07 18 15.5	
	comp=Z,67nm,19.6s,baz=140,slow=41						
JFT	**Otama**	5.36	347	P	Pn	07 16 01.5	-0.4
JFT				*e*S	Sn	07 16 59.0	-3.3
JNU	**Nakatsue**	9.27	278	LR	LR	07 20 42.7	
	comp=Z,84nm,18.7s,baz=172,slow=39						
KSRS	**Korea Array**	12.53	298	LR	LR	07 22 28.8	
	comp=Z,86nm,19.6s,baz=77,slow=37						
KLR	**Kul'dur**	18.53	339	P	Pn	07 18 58.0	0.0
	0.2nm,0.3s,baz=220,slow=3.3,SNR=4.8						
SONM	**Songino Array**	30.93	311	P	P	07 20 58.1	+0.4
	0.7nm,0.5s,baz=108,slow=9.3,SNR=4.5						
HNR	**Honiara**	44.95	154	LR	LR	07 43 39.2	
	comp=Z,10nm,19.3s,baz=170,slow=39						
ZALV	**Zalesovo Beam**	45.46	316	P	P	07 23 00.3	+0.7
	0.4nm,0.3s,baz=94,slow=6.5,SNR=2.5						
MKAR	**Makanchi Array**	47.06	306	P	P	07 23 12.8	+0.6
	1.4nm,0.8s,baz=90,slow=8.7,SNR=7.1						
WRA	**Warramunga Arr**	52.43	189	P	P	07 23 53.0	-0.3
	2.3nm,0.9s,baz=353,slow=7.1,SNR=8.9						
ILAR	**Eielson Array**	53.35	30	P	P	07 24 00.9	+1.3
	0.4nm,1.0s,baz=256,slow=6.3,SNR=4.0						
ASAR	**Alice Springs**	56.16	189	P	P	07 24 20.3	0.0
	0.2nm,0.4s,baz=9.3,slow=5.2,SNR=4.8						
FINES	**FINESS Array B**	73.18	333	LR	LR	08 00 14.6	
	comp=Z,13nm,19.4s,baz=82,slow=37						

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*ISCJB **17** 07:25:42.5±0.6, 61°.10S±0°.10×23°.2W±0°.3, h10^{km}, mb4.0/8, MS3.5/9, Error ellipse: s-maj=20.6km s-min=10.1km az=147.2*

*IDC **17** 07:25:44.6±1.0, 60°.65S×23°.11W, h0^{km}, mb4.1/8, mb1 4.2/9, mb1mx4.1/27, mbtmp4.2/9, ML5.0/1, MS3.4/11, Ms1 3.4/11, ms1mx3.4/17, Error ellipse: s-maj=28.0km s-min=20.7km az=174.0*

ISC 17 07:25:43.9±0.7**, 61°.19S**±0°.09×**22°.8W**±0°.1**, h10**^{km}**, n16, σ$3^{s}.33$**/16**, mb4.2**/8**, MS3.5**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	11.16	154	P	Pn	07 28 27.4	+4.1
VNA1				S	Sn	07 30 25.4	-2.5
VNA3	**Neumayer Olymp**	11.37	158	P	Pn	07 28 29.5	+3.4
VNA3				S	Sn	07 30 28.2	-4.7
SNAA	**Sanae**	13.11	152	P	Pn	07 28 53.4	+3.4
SNAA				S	Sn	07 31 11.8	-3.9
SNAA	**Sanae**	13.11	152	Pn	Pn	07 28 53.0	+3.1
	1.4nm,0.3s,baz=323,slow=13,SNR=29						
SNAA				Sn	Sn	07 31 10.8	-4.9
	0.2nm,0.3s,baz=12,slow=20,SNR=4.5						
SNAA				LR	LR	07 33 04.1	
	comp=Z,124nm,21.4s,baz=332,slow=32						
PMSA	**Palmer Station**	18.81	241	P	Pn	07 30 07.2	+3.6
	4.6nm,0.3s,baz=79,slow=9.9,SNR=51						
PMSA				LR	LR	07 36 15.2	
	comp=Z,73nm,19.7s,baz=102,slow=33						
MAW	**Mawson**	34.72	138	LR	LR	07 44 52.7	
	comp=Z,96nm,20.9s,baz=236,slow=33						
VNDA	**Vanda**	41.51	182	P	P	07 33 36.9	+6.4
	0.9nm,0.9s,baz=183,slow=7.3,SNR=3.7						
VNDA				LR	LR	07 50 27.0	
	comp=Z,32nm,18.0s,baz=76,slow=35						
CFA	**Coronel Fontan**	41.72	294	P	P	07 33 31.1	-1.6
	1.6nm,0.8s,baz=160,slow=6.9,SNR=4.8						
CPUP	**Villa Florida**	41.91	310	P	P	07 33 32.4	-1.9
	2.0nm,0.9s,baz=162,slow=10,SNR=3.7						
CPUP				LR	LR	07 48 00.6	
	comp=Z,39nm,21.0s,baz=178,slow=32						
BOSA	**Boshof**	45.47	67	P	P	07 34 04.7	+1.6
	2.3nm,0.5s,baz=231,slow=5.7,SNR=9.1						
BOSA				LR	LR	07 49 54.7	
	comp=Z,38nm,18.3s,baz=210,slow=32						
LBTB	**Lobatse**	48.74	65	P	P	07 34 30.4	+1.8
	4.2nm,0.9s,baz=272,slow=6.8,SNR=3.7						
BDFB	**Brasilia**	48.95	327	P	P	07 34 29.4	-0.8
	1.8nm,0.6s,baz=183,slow=9.7,SNR=3.0						
BDFB				LR	LR	07 52 12.2	
	comp=Z,53nm,20.2s,baz=155,slow=33						
LPAZ	**La Paz**	55.17	304	P	P	07 35 16.9	-0.3
	0.9nm,0.5s,baz=82,slow=4.8,SNR=8.6						
LPAZ				LR	LR	08 01 05.4	
	comp=Z,26nm,18.4s,baz=152,slow=39						
KMBO	**Kilima Mbogo**	75.01	64	LR	LR	08 06 09.1	
	comp=Z,45nm,20.9s,baz=272,slow=32						
TORD	**Torodi Ar. Bea**	76.61	25	P	P	07 37 33.5	-0.9
	2.3nm,0.9s,baz=218,slow=3.7,SNR=8.3						
TORD				LR	LR	08 03 56.7	
	comp=Z,38nm,21.4s,baz=335,slow=30						
ASAR	**Alice Springs**	93.37	159	LR	LR	08 19 06.5	
	comp=Z,45nm,19.1s,baz=210,slow=34						

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*ISCJB **17** 07:27:58.0±0.6, 29°.60S±0°.05×179°.1W±0°.1, h300^{km}, mb3.8/5, Error ellipse: s-maj=14.5km s-min=6.2km az=11.8*

*IDC **17** 07:28:00.3±3.9, 29°.66S×178°.92W, h324^{km}±35^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.4/28, mbtmp4.3/8, Error ellipse: s-maj=30.8km s-min=24.1km az=40.0*

ISC 17 07:27:58.7±0.6**, 29°.74S**±0°.07×**179°.0W**±0°.1**, h300**^{km}**, n76, σ$1^{s}.75$**/81**, mb3.8**/5**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	1.03	63	P	Pn	07 28 43.1	+3.9
GLKZ				S	S	07 29 11.3	-0.1
RIZ	**Raoul Island**	1.03	62	P	Pn	07 28 43.2	+3.9
MXZ	**Matakaoa Point**	8.13	195	P	Pn	07 29 55.1	+1.4
OUZ	**Omahuta**	8.32	227	P	Pn	07 30 03.9	+7.7
WMGZ	**Waiomatatini S**	8.35	194	P	Pn	07 29 58.2	+1.7
WCZ	**Waipu Caves**	8.36	221	P	Pn	07 30 04.5	+7.9
HAZ	**Te Kaha**	8.44	198	P	Pn	07 29 59.8	+2.2
PKGZ	**Pakihiroa**	8.49	196	P	Pn	07 29 59.6	+1.3
PUZ	**Puketiti**	8.63	195	P	Pn	07 30 01.1	+1.3
RUGZ	**Raukumara Rang**	8.67	198	P	Pn	07 30 02.3	+1.8
TWGZ	**Tauwhareparae**	8.79	196	P	Pn	07 30 04.2	+2.3
CNGZ	**Carnagh Statio**	9.03	194	P	Pn	07 30 06.3	+1.5
MWZ	**Matawai**	9.05	198	P	Pn	07 30 06.1	+1.0
TKGZ	**Te Karaka**	9.07	196	P	Pn	07 30 05.8	+0.5
URZ	**Urewera**	9.10	200	P	Pn	07 30 07.7	+2.1
	13nm,0.3s,baz=333,slow=4.5,SNR=80						
URZ				S	S	07 31 48.7	-0.3
	3.2nm,0.3s,baz=309,slow=18,SNR=5.5						
URZ	**Urewera**	9.10	200	P	Pn	07 30 07.5	+1.8
TOZ	**Tahuroa Road**	9.21	209	P	P	07 30 15.4	+4.0
RAGZ	**Rawiri**	9.24	198	P	Pn	07 30 08.8	+1.4
GRRZ	**Galatos Road**	9.51	204	P	P	07 30 17.7	+2.9
PRGZ	**Paritu Road**	9.53	195	P	P	07 30 14.7	-0.3
ALRZ	**Allen Road**	9.62	203	P	P	07 30 17.2	+1.1
KNZ	**Kokohu**	9.67	196	P	P	07 30 16.4	-0.2
TLZ	**Tolley Road**	9.71	207	P	P	07 30 20.5	+3.4
KUTZ	**Kaahu Road**	9.74	205	P	P	07 30 20.9	+3.5
MHGZ	**Mahia Peninsul**	9.74	194	P	Pn	07 30 14.0	+0.5
WHHZ	**Waihua**	9.83	198	P	P	07 30 19.9	+1.5
MRHZ	**Matea Rd**	9.84	202	P	P	07 30 19.4	+0.8
WATZ	**Wairara**	9.96	205	P	P	07 30 20.9	+1.0
ARHZ	**Aropaoanui**	10.07	198	P	Pn	07 30 18.3	+0.7
HIZ	**Hauiti**	10.14	209	P	P	07 30 25.3	+3.5
RITZ	**Rihia Road**	10.16	203	P	P	07 30 24.4	+2.3
OTVZ	**Oturere**	10.39	204	P	P	07 30 24.3	-0.5
FWVZ	**Far West T-bar**	10.51	204	P	Pn	07 30 25.2	+1.9
BHHZ	**Black Hill Sta**	10.55	201	P	Pn	07 30 25.3	+1.7
BHHZ				S	S	07 32 20.6	-1.4
MOVZ	**Moawhango**	10.58	203	P	Pn	07 30 25.3	+1.4
MOVZ				S	S	07 32 20.6	-2.0
KRHZ	**Kereru**	10.60	200	P	Pn	07 30 24.7	+0.6
PKVZ	**Pokaka**	10.62	205	P	P	07 30 26.8	-0.4
MTVZ	**Mangateitei**	10.66	204	P	P	07 30 27.0	-0.7
VRZ	**Vera Road**	10.70	207	P	P	07 30 29.8	+1.8
PRHZ	**Porangahau**	11.11	198	P	P	07 30 34.7	+2.1
WAZ	**Wanganui**	11.16	205	P	P	07 30 34.0	+0.8
DVHZ	**Dannevirke**	11.27	199	P	P	07 30 33.9	-0.5
ANWZ	**Angora Road**	11.33	198	P	P	07 30 35.2	+0.2
PRWZ	**Pori Road**	11.56	200	P	P	07 30 37.7	+0.1
BFZ	**Birch Farm**	11.60	198	P	P	07 30 38.7	+0.7
MRZ	**Mangatainoka R**	11.77	201	P	Pn	07 30 37.9	-0.4
HOWZ	**Holdsworth Sta**	12.01	200	P	Pn	07 30 41.4	+0.2
OGWZ	**Otaki Gorge**	12.04	202	P	Pn	07 30 40.7	-1.0
TMWZ	**Te Maipa**	12.09	199	P	Pn	07 30 43.2	+1.0
MTW	**Mount Morrison**	12.25	200	P	Pn	07 30 44.0	-0.1
CAW	**Cannon Point**	12.34	202	P	Pn	07 30 44.9	-0.3
TRWZ	**Traveller**	12.42	199	P	P	07 30 48.4	+1.2
DUWZ	**D'Urville Isla**	12.47	206	P	Pn	07 30 47.0	+0.1
PAWZ	**Paruwai Farm**	12.48	200	P	P	07 30 47.8	0.0
MSWZ	**Moikau Station**	12.56	200	P	Pn	07 30 47.6	-0.4
TCW	**Tory Channel**	12.70	204	P	Pn	07 30 49.3	-0.2
PLWZ	**Palliser**	12.70	200	P	Pn	07 30 49.2	-0.4
TUWZ	**Tuamarina**	13.01	204	P	Pn	07 30 53.0	-0.2
NNZ	**Nelson**	13.03	206	P	P	07 30 54.5	+0.6
QRZ	**Quartz Range**	13.05	210	P	P	07 30 55.8	+1.6
BSWZ	**Blackbirch Sta**	13.28	204	P	P	07 30 59.2	+2.5
DZM	**Mont Dzumac**	15.17	297	P	P	07 31 19.7	+1.8
	2.0nm,0.3s,baz=133,slow=12,SNR=18						
RPZ	**Rata Peaks**	16.06	207	P	Pn	07 31 29.3	-0.1
	0.5nm,0.3s,baz=21,slow=1.9,SNR=3.2						
RPZ				S	S	07 34 16.0	-4.4
	0.4nm,0.3s,baz=112,slow=19,SNR=3.8						
CTA	**Charters Tower**	32.86	279	P	P	07 34 04.3	-0.9
	1.6nm,0.5s,baz=120,slow=20,SNR=3.1						
ASAR	**Alice Springs**	42.30	267	P	P	07 35 23.4	-0.4
	1.6nm,0.6s,baz=96,slow=6.6,SNR=27						
ASAR				PcP	PcP	07 37 12.9	+1.5
	0.3nm,0.7s,baz=111,slow=5.1,SNR=3.9						
PETK	**Petropavlovsk-**	84.97	346	P	P	07 39 59.0	-1.0
	2.9nm,0.6s,baz=138,slow=6.9,SNR=3.9						
USRK	**Ussuriysk Ar.**	86.14	327	P	P	07 40 05.1	-0.9
	1.7nm,0.7s,baz=108,slow=9.4,SNR=3.9						
NVAR	**Mina Array Bea**	88.33	43	P	P	07 40 16.0	-0.9
	0.5nm,0.7s,baz=239,slow=9.5,SNR=5.1						
MKAR	**Makanchi Array**	116.70	311	PKP	PKPdf	07 46 04.3	-2.9
	0.3nm,0.6s,baz=163,slow=1.5,SNR=2.7						
ARCES	**ARCESS Array B**	137.76	347	PKP	PKPdf	07 46 43.9	-2.5
	0.6nm,0.6s,baz=78,slow=2.8,SNR=5.5						
FINES	**FINESS Array B**	144.23	340	PKP	PKPab	07 46 55.4	-1.6
	4.8nm,0.5s,baz=52,slow=3.4,SNR=37						
NB2	**NORSAR Subarra**	147.97	351	PKP	PKPdf	07 47 06.2	+1.5
	comp=Z,1.2nm,0.5s,baz=14,slow=2.8						
NOA	**NORSAR Array B**	147.97	351	PKPbc	PKPdf	07 47 06.1	+1.5
	comp=Z,1.7nm,0.6s,baz=16,slow=4.3,SNR=8.3						
AKASG	**Malin Array Be**	150.26	323	PKPbc	PKPbc	07 47 12.7	-1.3
	comp=Z,2.1nm,0.5s,baz=48,slow=3.0,SNR=11						
BRTR	**Keskin Array B**	151.54	299	PKPbc	PKPdf	07 47 14.2	+3.2
	comp=Z,0.7nm,0.5s,baz=117,slow=4.3,SNR=3.7						
BRTR				PKPab	PKPab	07 47 26.4	-1.0
	comp=Z,0.5nm,0.7s,baz=148,slow=2.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	163.48	182	PKPab	PKPab	07 48 18.4	-0.7
	comp=Z,0.7nm,0.6s,baz=176,slow=4.9,SNR=6.6						

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*MOS **17** 07:42:26.6±1.0, 53°.21N×91°.22E, h11^{km}, mb4.4/3, Error ellipse: s-maj=22.5km s-min=16.5km az=73.9*

KRAR 17 07:42:28.4±0.5**, 53°.24N**×**91°.40E, M2.5, 2C, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HVS	**Khovu-Aksy**	2.54	145	*i* PN	Pn	07 43 10.3	-0.6
DGZ	**Jazzator, Alta**	4.33	217	*i* PN	Pn	07 43 32.4	-3.1
BRVK	**Borovoye**	12.67	278	*i* P	Pn	07 45 28.9	-0.8
YAK	**Yakutsk**	21.99	51	*i* P	P	07 47 23.9	+0.3
TIXI	**Tiksi**	24.61	28	*i* P	P	07 47 49.4	-0.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KLR	**Kul'dur**	25.34	83	*i* P	P	07 47 56.2	-0.4
MSHR	**Mys Shultsa**	28.35	96	*i* P	P	07 48 22.5	-1.3
OBN	**Obninsk**	31.46	296	⇑*e*P	P	07 48 49.2	-2.0
OBN				*e*		07 49 49.4	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,25nm,19.0s						
SEY	**Seymchan**	32.43	48	*i* P	P	07 48 57.6	-2.0
KIV	**Kislovodsk**	32.94	274	*e*P	P	07 49 01.5	-3.0
BILL	**Bilibino**	36.91	37	⇑*e*P	P	07 49 36.8	-1.6
BILL				*e*		07 51 08.4	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,234nm,20.0s						

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*IDC **17** 08:00:43.8±3.2, 52°.39N×35°.29E, h0^{km}, mb1 3.6/2, mb1mx3.2/29, mbtmp3.6/2, ML2.8/3, Error ellipse: s-maj=36.6km s-min=12.1km az=116.0*

VLA 17 08:00:44.0, 52°.30N×**35°.43E, M2.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	4.20	250	Pn	Pn	08 01 46.9	-2.2
	0.7nm,0.3s,baz=56,slow=12,SNR=3.0						
AKASG				Pg	Pb	08 01 55.6	-3.0
	1.5nm,0.3s,baz=53,slow=15,SNR=4.1						
AKASG				Sn	Sn	08 02 35.0	-3.9
	0.9nm,0.3s,baz=62,slow=22,SNR=2.8						
AKASG				Lg	Lg	08 02 57.0	
	2.2nm,0.3s,baz=60,slow=28,SNR=6.2						
FINES	**FINESS Array B**	10.48	335	Pn	Pn	08 03 09.2	-6.2
	0.1nm,0.3s,baz=151,slow=13,SNR=3.5						
FINES				Sn	Sn	08 05 00.8	-13
	0.2nm,0.3s,baz=147,slow=21,SNR=3.0						
I26DE	**FREYUNG INFRAS**	14.21	265	*i*		09 23 30.0	
	baz=68,slow=313,SNR=9.4						
ARCES	**ARCESS Array B**	17.91	349	P	Pn	08 04 50.9	-3.3
	0.1nm,0.3s,baz=165,slow=10.0,SNR=4.0						

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*DDA **17** 08:04:03.8, 39°.15N×27°.22E, h7^{km}±1^{km}, ML2.6*

*ISK **17** 08:04:03.9, 39°.13N×27°.22E, h9^{km}, ML2.2/7*

*ISCJB **17** 08:04:04.3±0.5, 39°.14N±0°.03×27°.20E±0°.04, h12^{km}, Error ellipse: s-maj=4.6km s-min=4.2km az=137.2*

ISC 17 08:04:04.2±0.9**, 39°.14N**±0°.03×**27°.22E**±0°.04**, h12**^{km}**, n17, σ$0^{s}.30$**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEDA	**zmir-Bergama**	0.21	213	*i* P	Pg	08 04 09.0	+0.3
ZEDA				*i* S	Sg	08 04 12.1	+0.3
DKL	**Dikili**	0.26	254	PG	Pg	08 04 09.5	-0.1
DKL				SG	Sg	08 04 13.3	+0.1
AYVA	**Ayvalik**	0.45	292	*i* P	Pg	08 04 13.4	+0.4
AYVA				*i* S	Sg	08 04 19.4	+0.4
AYVA				IAML_P			
	comp=Z,673nm,0.1s						
STEP	**BALIKESIR_Sava**	0.45	58	*i* P	Pb	08 04 13.8	-0.4
STEP				IAML_P			
	comp=Z,2μm,0.1s						
AKHS	**Akhisar**	0.53	120	*i* P	Pb	08 04 15.9	+0.4
BLCB	**Balcova**	0.77	191	PG	Pg	08 04 18.7	-0.4
BLCB				SG	Sb	08 04 29.8	-0.1
BAYC	**CANAKKALE_Bayr**	0.80	319	*i* P	Pg	08 04 19.4	-0.3
BAYC				IAML_P			
	comp=Z,555nm,0.1s						
URLA	**Izmir**	0.92	212	PG	Pg	08 04 21.8	-0.2
GONE	**Gonen-Balikesi**	0.97	21	PG	Pb	08 04 23.3	+0.3
SIGR	**SIGRI**	1.07	274	PG	Pg	08 04 24.7	-0.1
DURS	**Dursunbey**	1.07	64	*i* P	Pb	08 04 24.4	-0.4
DURS				IAML_P			
	comp=Z,281nm,0.1s						
DGB	**zmir**	1.12	194	*i* P	Pn	08 04 25.6	-0.2
DGB				IAML_P			
	comp=Z,451nm,0.1s						
DEMI	**Demirci**	1.17	94	*i* P	Pb	08 04 26.3	-0.1
DEMI				IAML_P			
	comp=Z,218nm,0.1s						
CHOS	**Chios island**	1.18	231	PN	Pg	08 04 26.9	-0.1
MANT	**Manisa**	1.23	122	*i* P	Pg	08 04 28.2	+0.3
GELI	**Tayfur-Gelibol**	1.38	336	PN	Pn	08 04 29.5	+0.2
MRMT	**Marmara Adasi**	1.49	11	PN	Pb	08 04 31.5	-0.4

IDC 17 08:16:11.9±3.5**, 15°.87S**×**172°.57W, h0**^{km}**, mb3.9**/4**, mb1 4.2**/4**, mb1mx3.7**/41**, mbtmp3.9**/4**, MS3.1**/2**, Ms1 3.1**/2**,**

ms1mx2.7/27**, Error ellipse: s-maj=183.2km s-min=28.1km az=145.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**20.77**	**249**	LR	LR	08 28 37.6	
	comp=Z,71nm,18.0s,baz=166,slow=36						
PPT	**Papeete**	**22.09**	**98**	LR	LR	08 27 43.3	
	comp=Z,26nm,18.8s,baz=322,slow=31						
H11S2	**WAKE ISLAND Hy**	**39.77**	**328**	T	T	09 06 18.3	
	baz=145						
H11S3	**WAKE ISLAND Hy**	**39.78**	**328**	T	T	09 05 31.6	
	baz=145						
H11S1	**WAKE ISLAND Hy**	**39.79**	**328**	T	T	09 06 31.4	
	baz=145						
H11N3	**WAKE ISLAND Hy**	**40.71**	**330**	T	T	09 07 28.8	
	baz=148						
H11N1	**WAKE ISLAND Hy**	**40.72**	**330**	T	T	09 07 30.2	
	baz=148						
H11N2	**WAKE ISLAND Hy**	**40.73**	**330**	T	T	09 07 35.2	
	baz=148						
WRA	**Warramunga Arr**	**50.52**	**257**	P	P	08 25 12.1	-0.2
	1.8nm,0.8s,baz=89,slow=7.8,SNR=3.0						
ASAR	**Alice Springs**	**50.73**	**252**	P	P	08 25 13.6	-0.3
	2.2nm,0.6s,baz=88,slow=8.1,SNR=23						
NVAR	**Mina Array Bea**	**74.14**	**42**	P	P	08 27 50.6	0.0
	0.4nm,0.7s,baz=223,slow=12,SNR=3.9						
ILAR	**Eielson Array**	**82.75**	**11**	P	P	08 28 36.9	-0.4
	0.7nm,0.7s,baz=225,slow=6.4,SNR=11						
BRTR	**Keskin Array B**	**147.02**	**321**	PKPbc	PKPbc	08 35 57.4	+0.3
	1.3nm,0.9s,baz=11,slow=1.5,SNR=3.8						

NIED ***17*** *08:28:00, 36°.70N×141°.90E, h29km, Mw3.6 Best double couple: $M_0$2.72000×10^{14} NP1:ϕ_s200.00000°, δ43.00000°, λ-79.00000°. NP2:ϕ_s6.00000°, δ48.00000°, λ-100.00000°.*

JMA 17 08:28:20.7±0.2**, 36°.67N×141°.86E, h24**km±3km**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.95**	**297**	P	Pb	08 28 38.1	-0.5
ONAJ				*e*S	Sn	08 28 51.3	-0.2
JHO	**Hitachi**	**1.04**	**267**	P	Pn	08 28 39.5	-0.3
JHO				S	Sn	08 28 53.5	-0.1
JFK	**Kawauchi**	**1.05**	**312**	P	Pb	08 28 40.4	+0.1
JHYU	**Hitachinakayam**	**1.08**	**253**	P	Pn	08 28 40.4	+0.1
JHYU				S	Sn	08 28 54.5	+0.1
JFFD	**Fukushimafurud**	**1.12**	**292**	P	Pn	08 28 40.6	-0.3
JFFD				S	Sn	08 28 55.6	0.0
JMM	**Marumori**	**1.47**	**325**	P	Pn	08 28 45.9	+0.3
JFT	**Otama**	**1.48**	**305**	P	Pb	08 28 47.0	-0.6
JIO	**Ouri**	**1.83**	**347**	P	Pn	08 28 51.3	+0.7
JFY	**Yanaizu**	**1.88**	**294**	P	Pb	08 28 53.1	-1.2
JOU	**Okura**	**1.94**	**331**	P	Pn	08 28 53.8	+1.6
JOU				S	Sn	08 29 17.2	+1.4
JAG	**Ashikaga**	**1.95**	**264**	P	Pn	08 28 53.1	+0.8
JAG				S	Sn	08 29 15.9	-0.2
MAT	**Matsushiro**	**2.94**	**269**	P	Pn	08 29 08.4	+2.4
MAT				S	Sn	08 29 43.1	+2.6

ISCJB ***17*** *08:32:08.9±1.0, 17°.5S±0°.3×178°.8W±0°.2, h539km, mb3.8/11, Error ellipse: s-maj=39.9km s-min=13.7km az=147.6*

IDC ***17*** *08:32:11.6±4.6, 17°.62S×178°.76W, h566km±55km, mb3.4/11, mb1 3.7/12, mb1mx3.4/27, mbtmp4.4/12, Error ellipse: s-maj=37.0km s-min=20.7km az=152.0*

ISC 17 08:32:09.2±1.2**, 17°.6S**±0°.3×**178°.7W**±0°.2**, h539**km**, n16,** σ**0ˢ.77**/16**, mb3.8**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.70**	**250**	P	**P**	**08 35 16.7**	**+0.8**
	1.0nm,0.3s,baz=90,slow=22,SNR=7.9						
STKA	**Stephens Creek**	**38.57**	**241**	P	**P**	**08 38 46.3**	**+0.2**
	3.0nm,0.4s,baz=95,slow=11,SNR=14						
WRA	**Warramunga Arr**	**44.45**	**259**	P	**P**	**08 39 31.7**	**-1.0**
	1.7nm,0.5s,baz=84,slow=10,SNR=20						
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**08 39 34.0**	**-0.3**
	15nm,0.6s,baz=88,slow=8.3,SNR=149						
MJAR	**Matsushiro Arr**	**67.50**	**323**	P	**P**	**08 42 12.3**	**+0.5**
	1.1nm,0.5s,baz=156,slow=5.7,SNR=4.0						
PETK	**Petropavlovsk-**	**73.31**	**345**	P	**P**	**08 42 46.1**	**+0.4**
	2.8nm,0.7s,baz=109,slow=8.1,SNR=6.3						
NVAR	**Mina Array Bea**	**79.36**	**44**	P	**P**	**08 43 20.1**	**+0.4**
	1.3nm,0.7s,baz=224,slow=8.2,SNR=14						
ELK	**Elko**	**82.59**	**43**	P	**P**	**08 43 36.4**	**+0.1**
	1.2nm,0.8s,baz=255,slow=6.2,SNR=5.2						
SEY	**Seymchan**	**83.41**	**347**	P	**P**	**08 43 39.7**	**+0.2**
	3.3nm,0.5s,baz=158,slow=3.8,SNR=9.0						
ILAR	**Eielson Array**	**85.63**	**13**	P	**P**	**08 43 49.7**	**-0.7**
	0.8nm,0.4s,baz=222,slow=5.0,SNR=21						
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**08 43 54.1**	**+0.9**
	1.6nm,0.7s,baz=218,slow=5.7,SNR=17						
PDAR	**Pinedale Array**	**87.29**	**44**	P	**P**	**08 43 59.1**	**+0.1**
	1.1nm,0.6s,baz=214,slow=3.9,SNR=15						
BRTR	**Keskin Array B**	**144.38**	**315**	PKP	**PKPdf**	**08 50 42.9**	**-1.7**
	0.9nm,0.5s,baz=128,slow=2.0,SNR=5.4						
BRG	**Berggiesshubel**	**145.30**	**346**	*e*PKP	**PKPbc**	**08 50 46.4**	**-0.2**
	4.0nm,0.7s						
GERES	**GERESS Array B**	**147.24**	**345**	PKPbc	**PKPbc**	**08 50 51.9**	**-0.4**
	1.5nm,0.5s,baz=25,slow=4.4,SNR=12						
DAVOX	**Davos/Dischmat**	**150.04**	**348**	PKPbc	**PKPbc**	**08 50 58.4**	**-0.9**
	5.0nm,0.6s,baz=281,slow=3.1,SNR=5.4						

MEX 17 08:33:24.6±0.5**, 16°.88N×99°.61W, h16**km±5km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.65**	**285**	*e*P	Pg	08 33 35.3	-2.0
CAIG				*e*S	Sg	08 33 43.1	-2.8
MEIG	**Mezcala**	**1.04**	**360**	*e*P	Pb	08 33 40.5	-3.9
MEIG				*e*S	Sb	08 33 53.6	-4.1
TLIG	**Tlapa**	**1.21**	**56**	*e*P	Pn	08 33 43.3	-3.7
TLIG				*e*S	Sb	08 33 57.9	-4.8
PLIG	**Platanillo**	**1.51**	**4**	*e*P	Pn	08 33 47.6	-3.5
PLIG				*e*S	Sn	08 34 05.0	-5.5
ARIG	**Puente Sto Nin**	**1.56**	**333**	*e*P	Pn	08 33 48.6	-3.2
ARIG				*e*S	Sn	08 34 06.9	-4.7
ZIIG	**Zihuatanejo**	**1.91**	**293**	*e*P	Pn	08 33 53.3	-3.3
ZIIG				*i* S	Sn	08 34 14.9	-5.3

JMA 17 08:44:10.7, 35°.26N×135°.38E, h14km**, M2.6, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.03**	**38**	P	Pg	08 44 13.3	+0.1
JWT				S	Sg	08 44 15.0	+0.1
JKY	**Yasaka**	**0.43**	**329**	P	Pg	08 44 19.4	+0.1
JKY				S	Sg	08 44 25.2	0.0
JKS	**Kasai**	**0.52**	**238**	P	Pg	08 44 20.7	-0.2
JKS				S	Sg	08 44 27.6	-0.3
JHE	**Heguri**	**0.66**	**157**	P	Pg	08 44 23.1	-0.4
JHE				S	Sg	08 44 31.5	-0.7
JKSM	**Kasumi**	**0.67**	**299**	P	Pg	08 44 23.5	-0.3
JKSM				*i* S	Sg	08 44 32.3	-0.3
JAJ2	**Tsuna**	**0.93**	**206**	P	Pb	08 44 27.9	-0.7
JAJ2				S	Sb	08 44 40.4	-0.5
MAT	**Matsushiro**	**2.63**	**60**	P	Pg	08 44 59.9	-1.2
MAT				S	Sg	08 45 33.4	-1.8

IDC ***17*** *09:13:11.4±0.9, 55°.00S×129°.79W, h0km, mb4.0/5, mb1 4.3/5, mb1mx4.0/20, mbtmp4.0/5, MS3.9/11, Ms1 3.9/11, ms1mx3.9/13, Error ellipse: s-maj=42.8km s-min=26.5km az=174.0*

GCMT ***17*** *09:13:13.0±0.2, 55°.23S±0°.01×129°.46W±0°.02, h23km±1km, MW5.0/92, Moment Tensor Solution. s41,c49; s92,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.62±.14; $M_{\theta\theta}$2.69±.15; $M_{\phi\phi}$-2.08±.11; $M_{r\theta}$0.09±.19; $M_{\theta\phi}$2.73±.09; $M_{\phi r}$0.45±.17; Best double couple: $M_0$3.65800×10^{16} NP1:ϕ_s201.00000°, δ87.00000°, λ-172.00000°. NP2: ϕ_s110.00000°, δ82.00000°, λ-3.00000°. Principal axes: T 3.9460, Plg3.0000°, Azm335.0000°; N -0.5820, Plg82.0000°, Azm222.0000°; P -3.3710, Plg8.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 17 09:13:12.4±0.9**, 54°.6S**±0°.2×**130°.0W**±0°.2**, h10**km**, n33,** σ**2ˢ.52**/9**, mb4.0**/5**, MS4.1**/14**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	**Rikitea**	**31.70**	**351**	*e*T	T	09 53 01.4	
	6.1nm,0.2s						
VNDA	**Vanda**	**32.72**	**202**	LR	LR	09 30 01.8	
	comp=Z,105nm,21.9s,baz=84,slow=31						
PMSA	**Palmer Station**	**33.20**	**134**	P	**P**	**09 19 47.1**	**-1.7**
	20nm,0.9s,baz=145,slow=20,SNR=5.1						
TBI	**Tubuai**	**34.47**	**327**	*e*T	T	09 56 22.0	
	36nm,0.3s						
PPT2	**Papeete2**	**39.93**	**330**	*e*S	**S**	**09 26 48.3**	**-3.5**
	119nm,26.2s						
PPT2				*e*LR	LR	09 31 52.7	
	comp=Z,794nm,26.8s,baz=164						
PPT	**Papeete**	**39.95**	**330**	LR	LR	09 34 05.5	
	comp=Z,206nm,18.8s,baz=134,slow=31						
VAH	**Vaihoa**	**41.65**	**334**	*e*T	T	10 05 22.5	
	41nm,0.2s						
PMOR	**Pomariorio Ree**	**41.94**	**334**	*e*T	T	10 05 44.3	
	3.7nm,0.2s						
TAOE	**Nuku Hiva Isla**	**46.38**	**346**	*e*LR	LR	09 34 49.6	
	comp=Z,522nm,26.3s						
DZM	**Mont Dzumac**	**57.04**	**278**	*e*LR	LR	09 39 25.5	
	comp=Z,257nm,28.9s						
MAW	**Mawson**	**57.69**	**186**	LR	LR	09 44 56.2	
	comp=Z,104nm,19.7s,baz=170,slow=33						
CPUP	**Villa Florida**	**59.05**	**93**	LR	LR	09 45 05.2	
	comp=Z,348nm,18.3s,baz=226,slow=32						
LPAZ	**La Paz**	**60.66**	**76**	P	**P**	**09 23 23.4**	**-0.9**
	0.8nm,0.9s,baz=210,slow=6.3,SNR=3.8						
LPAZ				LR	LR	09 43 23.7	
	comp=Z,50nm,21.2s,slow=30						
STKA	**Stephens Creek**	**63.81**	**251**	LR	LR	09 47 54.2	
	comp=Z,117nm,18.1s,baz=197,slow=33						
BDFB	**Brasilia**	**72.78**	**93**	LR	LR	09 53 22.9	
	comp=Z,161nm,19.0s,baz=194,slow=33						
ASAR	**Alice Springs**	**74.44**	**251**	P	**P**	**09 24 50.9**	**+0.2**
	1.6nm,1.1s,baz=128,slow=7.2,SNR=4.4						
ASAR				LR	LR	09 53 51.0	
	comp=Z,107nm,19.4s,baz=112,slow=33						
H01W1	**Cape Leeuwin H**	**75.22**	**230**	T	T	10 48 19.3	
	baz=149						
H01W2	**Cape Leeuwin H**	**75.23**	**230**	T	T	10 48 19.4	
	baz=149,slow=74						
H01W3	**Cape Leeuwin H**	**75.24**	**230**	T	T	10 48 19.4	
	baz=149,slow=74						
WRA	**Warramunga Arr**	**77.17**	**254**	P	**P**	**09 25 08.7**	**+2.4**
	1.3nm,0.9s,baz=143,slow=5.8,SNR=2.3						
TXAR	**Lajitas Array**	**86.66**	**23**	P	**P**	**09 25 59.5**	**+3.6**
	0.4nm,0.9s,baz=193,slow=7.4,SNR=3.1						
JAY	**Jayapura**	**87.56**	**269**	LR	LR	10 01 31.4	
	comp=Z,15nm,19.5s,baz=128,slow=33						
H11S2	**WAKE ISLAND Hy**	**90.49**	**302**	T	T	11 07 00.5	
	baz=144,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**90.50**	**302**	T	T	11 07 05.6	
	baz=144,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**90.51**	**302**	T	T	11 07 24.8	
	baz=144,slow=76,SNR=10.0						
H11N3	**WAKE ISLAND Hy**	**91.44**	**303**	T	T	11 08 13.6	
	baz=148,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**91.44**	**303**	T	T	11 08 03.6	
	baz=148,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**91.45**	**303**	T	T	11 08 05.0	
	baz=148,slow=76,SNR=18						
NVAR	**Mina Array Bea**	**93.25**	**9**	LR	LR	09 59 18.1	
	comp=Z,71nm,19.9s,baz=180,slow=30						
BOSA	**Boshof**	**94.39**	**158**	LR	LR	10 03 07.7	
	comp=Z,100nm,18.9s,slow=32						
ILAR	**Eielson Array**	**119.79**	**352**	PKP	**PKiKP**	**09 32 01.7**	**+0.4**
	0.2nm,0.7s,baz=194,slow=3.3,SNR=2.3						
SONM	**Songino Array**	**144.89**	**283**	PKPbc	**PKPdf**	**09 32 48.9**	**+0.1**
	0.3nm,0.3s,baz=122,slow=1.9,SNR=3.5						
MKAR	**Makanchi Array**	**158.25**	**262**	PKPab	**PKPab**	**09 33 41.2**	**-1.9**
	0.3nm,0.6s,baz=132,slow=4.3,SNR=3.5						

NSSC ***17*** *09:39:58.9±0.8, 32°.68N×35°.86E, h3km±33km, ML1.7*

GRAL ***17*** *09:40:16.7±0.3, 34°.06N×35°.61E, h0km±57km, MD2.5*

JSO 17 09:39:56.0±0.5**, 33°N**±5°×**3°6E**±°**, h0**km**, M1.9**/3**, Mjma2.0**/3**, ML2.3**/1**, MLv1.7**/3**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHMJ	**Saham**	**0.22**	**356**	P	Pg	09 40 00.3	+0.1
MMLI	**Mount Malkishu**	**0.31**	**257**	P	Pg	09 40 02.1	+0.1
BRBR	**Barbar**	**0.91**	**9**	*e*P	Pg	09 40 13.1	-0.4
BRBR				*e*S	Sg	09 40 23.5	-1.8
BRBR				AML	AML	09 40 43.7	
	comp=N,44nm,0.5s						
BRBR				AML	AML	09 40 43.8	
	comp=Z,32nm,0.6s						
BRBR				AML	AML	09 40 44.3	
	comp=E,23nm,0.4s						
RCY	**Rachaya**	**0.98**	**3**	*e*P	Pn	09 40 27.5	+10
ASF	**Jabal al Asfar**	**1.00**	**109**	P	Pg	09 40 14.7	-0.5
TOTH	**TOTAH**	**1.01**	**33**	*e*P	Pg	09 40 15.1	-0.2
TOTH				*e*S	Sg	09 40 26.7	-1.8
TOTH				AML	AML	09 40 34.5	
	comp=Z,13nm,0.4s						
TOTH				AML	AML	09 40 36.8	
	comp=E,15nm,0.4s						
TOTH				AML	AML	09 40 38.1	
	comp=N,17nm,0.3s						
QASN	**Qassioun**	**1.10**	**22**	*e*P	Pg	09 40 17.5	+0.3
QASN				*e*S	Sg	09 40 29.1	-2.3
QASN				AML	AML	09 40 48.8	
	comp=N,78nm,0.4s						
QASN				AML	AML	09 40 50.7	
	comp=E,95nm,0.5s						
DQRL	**Deir Qamar**	**1.21**	**352**	*e*P	Pn	09 40 23.2	+3.0
BHL	**Bhannes**	**1.39**	**356**	*e*P	Pg	09 40 19.6	-3.1
BHL				*e*S	Sg	09 40 21.9	-19
HWQ	**Hawqa**	**1.77**	**4**	*e*P	Pn	09 40 23.1	-4.9
HWQ				*e*S	Sn	09 40 27.8	-23

ISCJB ***17*** *09:47:30.9±0.9, 14°.4N±0°.2×145°.5E±0°.3, h109km, mb3.4/5, Error ellipse: s-maj=46.7km s-min=12.4km az=32.6*

IDC ***17*** *09:47:32.5±1.0, 14°.31N×145°.26E, h115km±13km, mb3.2/5, mb1 3.6/5, mb1mx3.1/46, mbtmp3.6/5, Error ellipse: s-maj=55.7km s-min=29.8km az=112.0*

ISC 17 09:47:32.0±1.0**, 14°.3N**±0°.2×**145°.6E**±0°.3**, h109**km**, n12,** σ**1ˢ.03**/7**, mb3.5**/5**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.94**	**226**	P	**Pn**	**09 47 53.4**	**+0.9**
	406nm,0.3s,baz=114,slow=4.4,SNR=292						
GUMO				S	**Sn**	**09 48 08.0**	**0.0**
	349nm,0.3s,baz=54,slow=23,SNR=30						
H11S3	**WAKE ISLAND Hy**	**20.70**	**75**	T	T	10 14 19.1	
	baz=261,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**20.71**	**75**	T	T	10 14 19.0	
	baz=261,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**20.72**	**75**	T	T	10 14 20.1	
	baz=261,slow=75,SNR=9.6						
H11N1	**WAKE ISLAND Hy**	**21.10**	**72**	T	T	10 15 25.4	
	baz=251						
H11N2	**WAKE ISLAND Hy**	**21.11**	**72**	T	T	10 15 22.9	
	baz=251						
H11N3	**WAKE ISLAND Hy**	**21.12**	**72**	T	T	10 15 26.3	
	baz=251						
WRA	**Warramunga Arr**	**35.73**	**198**	P	**P**	**09 54 19.4**	**-1.0**
	0.9nm,0.8s,baz=5.6,slow=7.2,SNR=1.6						
ILAR	**Eielson Array**	**67.69**	**25**	P	**P**	**09 58 16.3**	**-1.0**
	0.3nm,0.5s,baz=253,slow=6.1,SNR=6.2						
BVAR	**Borovoye Array**	**69.83**	**322**	P	**P**	**09 58 30.5**	**-0.3**
	0.4nm,0.6s,baz=79,slow=7.5,SNR=2.1						
YKA	**Yellowknife Ar**	**81.97**	**28**	P	**P**	**09 59 39.8**	**+0.3**
	0.3nm,0.4s,baz=286,slow=5.1,SNR=7.0						
NVAR	**Mina Array Bea**	**85.98**	**52**	P	**P**	**10 00 01.9**	**+1.1**
	0.1nm,0.4s,baz=258,slow=4.5,SNR=2.2						

IDC 17 09:59:32.6±3.4**, 53°.75N×88°.29E, h0**km**, mb1 2.8**/3**, mb1mx2.8**/46**, mbtmp2.8**/3**, ML2.4**/3**, Error ellipse: s-maj=30.2km s-min=20.1km az=84.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.07**	**277**	*i*		10 11 55.4	
	baz=94,slow=300,SNR=10						
ZALV	**Zalesovo Beam**	**2.07**	**277**	Pn	Pn	10 00 08.2	-0.3
	1.3nm,0.3s,baz=92,slow=12,SNR=18						
ZALV				Sn	Sn	10 00 35.5	+0.5
	5.7nm,0.3s,baz=96,slow=26,SNR=22						
KURBB	**Kurchatov Arra**	**6.77**	**246**	Pn	Pn	10 01 13.3	+0.2
	0.1nm,0.3s,baz=63,slow=14,SNR=4.4						
KURBB				Sn	Sn	10 02 31.1	+0.4
	0.0nm,0.3s,baz=56,slow=43,SNR=1.9						
KURBB				Lg	Lg	10 03 07.0	
	0.0nm,0.3s,baz=69,slow=37,SNR=2.8						
MKAR	**Makanchi Array**	**7.95**	**211**	Pn	Pn	10 01 30.7	+1.4
	0.2nm,0.3s,baz=30,slow=12,SNR=3.4						
MKAR				Sn	Sn	10 02 59.0	-0.9
	0.1nm,0.3s,baz=30,slow=26,SNR=3.5						
MKAR				Lg	Lg	10 03 43.0	
	0.1nm,0.3s,baz=35,slow=30,SNR=2.6						

ISK ***17*** *09:59:46.1, 36°.84N×37°.47E, h2km, ML2.4/3*

DDA ***17*** *09:59:50.7, 37°.13N×37°.44E, h7km±5km, ML2.7*

ISCJB ***17*** *09:59:51.1±0.8, 37°.04N±0°.04×37°.45E±0°.04, h9km±5km, Error ellipse: s-maj=7.4km s-min=4.6km az=12.3*

ISC 17 09:59:50.1±1.2**, 37°.04N**±0°.05×**37°.47E**±0°.03**, h13**km±8km**, n12,** σ**0ˢ.92**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.24**	**303**	PG	**Pg**	**09 59 54.8**	**-0.4**
GAZ				SG	**Sg**	**10 00 01.2**	**+2.4**
GZT	**Gaziantep**	**0.32**	**14**	*i* P	**Pg**	**09 59 55.4**	**-1.3**
GZT				*i* S	**Sb**	**10 00 04.6**	**+1.6**
GZT				IAML_P			
	comp=Z,6μm,0.1s						
KUZU	**Kuzuini**	**0.41**	**230**	*i* P	**Pn**	**10 00 01.4**	**-0.4**
KUZU				IAML_P			
	comp=Z,2μm,0.2s						
KMRS	**Kahramanmaras**	**0.65**	**316**	PG	**Pb**	**10 00 02.7**	**-0.6**
KMRS				SG	**Sn**	**10 00 14.7**	**-0.5**
KAMA	**Osmaniye**	**0.65**	**283**	*i* P	**Pb**	**10 00 03.1**	**-0.3**
KAMA				*i* S	**Sg**	**10 00 11.4**	**0.0**
KAMA				IAML_P			
	comp=Z,765nm,0.1s						
ATAB	**Bozova**	**0.79**	**57**	*i* P	**Pn**	**10 00 06.8**	**-0.2**
ATAB				*i* S	**Sn**	**10 00 18.8**	**+0.2**
ATAB				IAML_P			
	comp=Z,3μm,0.1s						
SURC	**SANLIURFA_SURC**	**0.93**	**100**	*i* P	**Pn**	**10 00 09.4**	**+0.5**
SURC				*i* S	**Sn**	**10 00 23.1**	**+0.9**
SURC				IAML_P			
	comp=Z,449nm,0.3s						
ANDN	**Andirin**	**1.04**	**301**	*i* P	**Pb**	**10 00 10.1**	**0.0**
ANDN				*i* S	**Sn**	**10 00 25.3**	**+0.3**
ANDN				IAML_P			
	comp=Z,910nm,0.2s						
URFA	**Urfa**	**1.15**	**69**	PN	**Pg**	**10 00 10.8**	**-1.5**
URFA				SN	**Sn**	**10 00 28.7**	**+1.0**
AKCD	**Akcadag**	**1.30**	**16**	*i* P	**Pb**	**10 00 14.6**	**+0.1**
AKCD				*i* S	**Sb**	**10 00 31.6**	**+0.4**
AKCD				IAML_P			
	comp=Z,810nm,0.1s						
ELBS	**KAHRAMANMARAS**	**1.31**	**348**	*i* P	**Pn**	**10 00 14.2**	**0.0**
ELBS				*i* S	**Sg**	**10 00 32.0**	**-0.3**
ELBS				IAML_P			
	comp=Z,641nm,0.2s						
SAIM	**ADANA**	**1.44**	**311**	*i* P	**Pg**	**10 00 17.2**	**-0.6**
SAIM				*i* S	**Sg**	**10 00 36.3**	**-0.3**
SAIM				IAML_P			
	comp=Z,632nm,0.3s						

IDC 17 10:39:00.2±5.1**, 18°.72N×143°.22E, h0**km**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.6**/43**, mbtmp3.8**/5**, Error ellipse: s-maj=134.7km s-min=51.0km az=15.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**22.97**	**327**	P	P	10 44 06.7	+0.3
	1.6nm,0.6s,baz=147,slow=9.4,SNR=6.8						
ILAR	**Eielson Array**	**64.67**	**26**	P	P	10 49 38.8	-0.8
	0.2nm,0.6s,baz=272,slow=5.6,SNR=5.0						
YKA	**Yellowknife Ar**	**79.06**	**28**	P	P	10 51 07.3	+1.3
	0.2nm,0.5s,baz=290,slow=5.9,SNR=2.0						
ARCES	**ARCESS Array B**	**81.74**	**342**	P	P	10 51 20.8	+0.4
	2.2nm,0.9s,baz=72,slow=8.6,SNR=4.8						
FINES	**FINESS Array B**	**85.87**	**335**	P	P	10 51 40.9	-0.7
	1.3nm,0.7s,baz=69,slow=6.3,SNR=4.6						

IDC ***17*** *10:45:36.6±1.2, 0°.45S×127°.00E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/32, mbtmp3.9/4, Error ellipse: s-maj=80.4km s-min=21.7km az=74.0*

ISCJB ***17*** *10:45:52.4±0.8, 0°.56S±0°.06×127°.2E±0°.1, h100km, mb3.9/3, Error ellipse: s-maj=21.3km s-min=7.0km az=13.0*

DJA ***17*** *10:45:52.4±0.7, 1°S±3°×12°7E±°, h98km±19km, M4.0/6, mb3.8/2, MLv4.1/6*

ISC 17 10:45:50.2±0.9**, 0°.51S**±0°.06×**127°.1E**±0°.1**, h100**km**, n8,** σ**3ˢ.07**/11**, mb4.2**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.41**	**109**	P	**Pn**	**10 46 08.9**	**+3.5**
TNTI	**Ternate**	**1.29**	**11**	P	**Pn**	**10 46 16.5**	**+2.5**
TNTI				S	**Sn**	**10 46 35.5**	**+3.6**
SANI	**Sanana**	**1.90**	**216**	P	**Pn**	**10 46 24.2**	**+2.6**
SANI				S	**Sn**	**10 46 48.1**	**+2.6**
NLAI	**Namlea**	**2.71**	**180**	P	**Pn**	**10 46 34.3**	**+2.1**
NLAI				S	**Sn**	**10 47 06.0**	**+1.5**
WRA	**Warramunga Arr**	**20.57**	**160**	P	**P**	**10 50 17.9**	**-3.2**
	1.2nm,0.6s,baz=340,slow=13,SNR=2.5						
ASAR	**Alice Springs**	**23.95**	**165**	P	**P**	**10 50 53.6**	**-1.7**
	1.2nm,0.5s,baz=344,slow=12,SNR=17						
USRK	**Ussuriysk Ar.**	**44.72**	**5**	P	**P**	**10 53 50.8**	**-2.6**
	2.0nm,0.5s,baz=172,slow=8.1,SNR=11						
MKAR	**Makanchi Array**	**61.25**	**326**	P	**P**	**10 55 53.1**	**-1.8**
	0.7nm,0.3s,baz=116,slow=8.2,SNR=13						

ISK ***17*** *11:00:55.5, 39°.64N×28°.90E, h5km, ML2.5/15*

DDA ***17*** *11:00:56.4, 39°.62N×28°.86E, h7km±2km, ML2.9*

ISC 17 11:00:57.0±1.0**, 39°.63N**±0°.02×**28°.87E**±0°.02**, h14**km±9km**, n25,** σ**0ˢ.77**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.31**	**264**	*i* P	**Pg**	**11 01 03.4**	**0.0**
DURS				*i* S	**Sg**	**11 01 07.8**	**+0.1**
DURS				IAML_P			
	comp=Z,6μm,0.1s						
ORLT	**Orhaneli**	**0.41**	**3**	PG	**Pg**	**11 01 04.6**	**-0.7**
TVSB	**Tavsanli**	**0.49**	**112**	PG	**Pg**	**11 01 05.8**	**-1.0**
TVSB				SG	**Sg**	**11 01 13.5**	**0.0**
ULDT	**Uludag**	**0.55**	**22**	*i* P	**Pg**	**11 01 07.6**	**-0.3**
ULDT				*i* S	**Sb**	**11 01 15.7**	**-0.7**
DEMI	**Demirci**	**0.60**	**191**	*i* P	**Pg**	**11 01 08.9**	**0.0**
DEMI				IAML_P			
	comp=Z,2μm,0.1s						
GDZ	**Gediz**	**0.72**	**139**	*i* P	**Pg**	**11 01 10.3**	**-0.8**
GDZ				*i* S	**Sb**	**11 01 21.2**	**-0.2**
MDNY	**Mudanya-Bursa**	**0.73**	**1**	PG	**Pg**	**11 01 10.7**	**-0.6**
KCTX	**Karacabey (Bur**	**0.74**	**328**	PG	**Pg**	**11 01 11.1**	**-0.4**
BALB	**Balikesir**	**0.76**	**271**	PG	**Pb**	**11 01 12.1**	**0.0**
STEP	**BALIKESIR_Sava**	**0.93**	**254**	*i* P	**Pb**	**11 01 14.7**	**-0.2**
STEP				*i* S	**Sn**	**11 01 29.6**	**+0.7**
USAK	**Uak-Merkez**	**0.93**	**173**	*i* P	**Pb**	**11 01 14.7**	**-0.2**
ARMT	**Armutlu**	**0.93**	**360**	PG	**Pb**	**11 01 14.7**	**-0.3**
GONE	**Gonen-Balikesi**	**1.00**	**295**	PG	**Pb**	**11 01 16.1**	**0.0**
YLV	**Yalova**	**1.01**	**22**	PG	**Pb**	**11 01 15.6**	**-0.8**
EDC	**Edincik**	**1.05**	**313**	PG	**Pb**	**11 01 16.9**	**-0.1**
KULA	**Kula-Manisa**	**1.13**	**188**	PN	**Pn**	**11 01 18.3**	**-0.3**
BORA	**Eskisehir**	**1.25**	**78**	*i* P	**Pb**	**11 01 20.3**	**-0.1**
BORA				*i* S	**Sg**	**11 01 39.7**	**+2.4**
BORA				IAML_P			
	comp=Z,2μm,0.2s						
HRT	**Hereke**	**1.33**	**27**	PN	**Pb**	**11 01 21.6**	**-0.3**
KHAL	**Karahalli**	**1.35**	**159**	*i* P	**Pb**	**11 01 22.2**	**-0.1**
KHAL				*i* S	**Sg**	**11 01 41.3**	**+0.6**
KHAL				IAML_P			
	comp=Z,592nm,0.2s						
MRMT	**Marmara Adasi**	**1.37**	**315**	PN	**Pb**	**11 01 22.8**	**+0.2**
GEYV	**SAKARYA_Geyve**	**1.39**	**52**	*i* P	**Pg**	**11 01 24.0**	**+0.2**
GEYV				*i* S	**Sg**	**11 01 43.4**	**+1.7**

SRCK	Saricakaya, Es	1.41	73	PN	Pb	11 01 22.8	-0.4
SRCK	Saricakaya, Es	1.41	73	*i* P	Pb	11 01 23.2	0.0
SRCK				*i* S	Sg	11 01 44.1	+1.5
GULT	Gulveren	1.50	57	PN	Pb	11 01 23.9	-0.8
RKY	Sarkoy-Tekirda	1.67	310	PN	Pb	11 01 26.8	-0.8

ISCJB ***17*** *11:05:04.1±0.5, 17°.04N±0°.06×95°.61W±0°.03, h94^{km}±7^{km}, Error ellipse: s-maj=9.3km s-min=5.0km az=10.2*
NEIC ***17*** *11:05:05.8±0.0, 16°.97N×95°.60W, h96^{km}, MD4.1(MEX), After MEX.*
MEX ***17*** *11:05:06.5±1.0, 17°.00N×95°.63W, h87^{km}±9^{km}, MD4.1*
ISC 17 11:05:04.7±1.0,**17°.07N**±0°.05×**95°.64W**±0°.04,**h95**^{km}±10^{km}, **n22**,σ**1^s.66**/36,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.72	89	*e*Pn	Pn	11 05 21.8	-0.1
CMIG				*e*Sn	Sn	11 05 33.7	-1.0
CMIG	Matias Romero	0.72	89	*e*P	Pn	11 05 21.8	-0.1
CMIG				*e*S	Sn	11 05 33.7	-1.0
OXBJ	Oaxaca	1.04	270	*e*P	Pn	11 05 25.5	+0.1
OXBJ				*e*S	Sn	11 05 40.7	-0.3
VHO	Vista Hermosa	1.05	270	*e*Pn	Pn	11 05 26.0	+0.5
VHO				*e*Sn	Sn	11 05 41.6	+0.4
VHO	Vista Hermosa	1.05	270	*e*P	Pn	11 05 26.0	+0.5
VHO				*e*S	Sn	11 05 40.6	-0.5
HUIG	Huatulco	1.37	199	*e*Pn	Pn	11 05 27.6	-1.6
HUIG				*e*Sn	Sn	11 05 45.2	-2.5
HUIG	Huatulco	1.37	199	*e*P	Pn	11 05 27.6	-1.6
HUIG				*e*S	Sn	11 05 45.2	-2.5
TGIG		2.43	97	*e*Pn	Pn	11 05 43.1	+0.3
TGIG				*e*Sn	Sn	11 06 11.4	-0.6
TGIG		2.43	97	*e*P	Pn	11 05 42.5	-0.3
TGIG				*e*S	Sn	11 06 11.4	-0.6
PCIG		2.69	120	*e*Pn	Pn	11 05 46.8	+0.5
PCIG		2.69	120	*e*P	Pn	11 05 46.8	+0.5
PCIG				*i* S	Sn	11 06 17.7	-0.4
LVIG	Laguna Verde	2.74	344	*e*Pn	Pn	11 05 46.4	-0.5
LVIG				*e*Sn	Sn	11 06 13.8	-5.4
TLIG	Tlapa	2.84	280	*e*Pn	Pn	11 05 49.5	+1.1
CCIG	Comitan	3.45	103	*e*Pn	Pn	11 05 57.3	+0.7
CCIG				*e*Pn	Pn	11 05 58.1	+1.6
CCIG	Comitan	3.45	103	*e*P	Pn	11 05 57.2	+0.7
CCIG				*i* S	Sn	11 06 35.9	-0.7
MYIG	Mrida	6.79	54	*e*Pn	Pn	11 06 43.6	+1.9
MYIG				*e*Sn	Sn	11 07 57.0	-0.5
TEIG	Tepich	7.65	65	*e*Pn	Pn	11 06 53.5	0.0
TEIG				*e*Sn	Sn	11 08 14.2	-4.4
TGUH	Tegucigalpa,Un	8.60	109	*e*Pn	Pn	11 07 05.6	-0.8
ZAIG	Zacatecas	8.63	312	*e*Pn	Pn	11 07 09.8	+2.7
ESTN	Estel	9.78	113	*e*Pn	Pn	11 07 22.3	-0.3
JTS	Las Juntas de	12.38	122	*e*Pn	Pn	11 07 58.3	+0.6
O49A	Covington	25.03	21	*e*P	P	11 10 21.4	+1.5

IDC ***17*** *11:19:21.5±1.9, 2°.54S×138°.90E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.7/42, mbtmp3.9/8, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/30, Error ellipse: s-maj=82.8km s-min=21.8km az=80.0*
ISCJB ***17*** *11:19:24.8±1.5, 2°.6S±0°.1×138°.8E±0°.4, h32^{km}, mb3.8/7, Error ellipse: s-maj=62.0km s-min=15.0km az=171.9*
ISC 17 11:19:27.0±1.9,**2°.6S**±0°.2×**138°.7E**±0°.5,**h32**^{km},**n9**,σ**0^s.67**/8, **mb4.0**/7,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	17.22	21	LR	LR	11 28 45.2	
	comp=Z,41nm,19.2s,baz=214,slow=33						
WRA	Warramunga Arr	17.74	194	P	Pn	11 23 31.3	-0.4
	0.3nm,0.3s,baz=14,slow=11,SNR=2.9						
ASAR	Alice Springs	21.43	192	P	P	11 24 12.5	-0.1
	0.8nm,0.5s,baz=19,slow=10,SNR=12						
CMAR	Chiang Mai Arr	44.41	300	P	P	11 27 35.2	+0.1
	0.4nm,0.3s,baz=128,slow=7.3,SNR=4.1						
MKAR	Makanchi Array	69.74	322	P	P	11 30 34.2	+0.3
	1.4nm,0.6s,baz=111,slow=8.0,SNR=14						
ZALV	Zalesovo Beam	71.87	330	P	P	11 30 45.6	-1.1
	1.2nm,0.5s,baz=87,slow=7.7,SNR=2.0						
KURBB	Kurchatov Arra	73.67	325	P	P	11 30 56.7	-0.8
	0.5nm,0.3s,baz=118,slow=4.9,SNR=5.8						
VNDA	Vanda	75.86	175	P	P	11 31 10.1	+0.4
	0.5nm,0.9s,baz=330,slow=7.6,SNR=2.2						
BVAR	Borovoye Array	79.26	325	P	P	11 31 28.9	-0.2
	1.4nm,0.6s,baz=121,slow=7.4,SNR=9.4						

NEIC ***17*** *11:22:58.1±0.0, 61°.54N×141°.09W, h1^{km}, ML3.5(OTT), ML3.5(AEIC), After AEIC.*
IDC ***17*** *11:22:58.8±0.8, 61°.67N×140°.94W, h0^{km}, mb3.6/4, mb1 3.8/10, mb1mx3.5/69, mbtmp3.6/10, ML3.4/6, Error ellipse: s-maj=16.8km s-min=9.8km az=36.0*
AEIC ***17*** *11:22:58.1, 61°.54N×141°.09W, h1^{km}, ML3.5, ML3.5(OTT)*
PGC ***17*** *11:22:58.9, 61°.54N×141°.06W, h1^{km}, ML3.5/11, 209km Wnw of Haines Jct., Yt Southern Alaska*
ISC 17 11:22:58.3±0.9,**61°.55N**±0°.02×**141°.04W**±0°.02,**h10**^{km}±7^{km}, **n107**,σ**1^s.73**/147,**mb3.3**/4,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.26	21	P	Pg	11 23 03.4	-0.3
YUK2				S	Sg	11 23 07.2	-0.1
YUK3	Moose Creek	0.36	50	P	Pg	11 23 05.3	-0.2
YUK3				S	Sg	11 23 10.5	+0.1
CTGM	Chitina Glacie	0.60	194	*e*Pg	Pg	11 23 09.5	-0.5
CTGM	Chitina Glacie	0.60	194	P	Pg	11 23 09.5	-0.5
CTGM				S	Sb	11 23 18.6	-0.9
YUK1	Sand Pete Hill	0.66	21	P	Pg	11 23 10.3	-0.8
YUK1				S	Sg	11 23 19.1	-0.6
PTPK	Patty Peak	0.77	243	P	Pg	11 23 12.6	-0.6
PTPK				S	Sg	11 23 23.0	-0.4
BALM	Baldy	0.81	232	*e*Pg	Pg	11 23 12.9	-1.0
BALM				*e*Sg	Sg	11 23 24.0	-0.5
BALM	Baldy	0.81	232	P	Pg	11 23 12.9	-1.0
BALM				S	Sg	11 23 23.9	-0.6
BVCY	Beaver Creek	0.88	6	P	Pg	11 23 14.5	-0.7
BVCY				S	Sg	11 23 26.0	-0.6
GRNC	Granite Creek	0.89	203	P	Pg	11 23 14.5	-0.9
GRNC				S	Sg	11 23 26.6	-0.3
KIAG	Kiagna River	0.89	226	P	Pg	11 23 14.2	-1.3
KIAG				S	Sg	11 23 26.3	-0.8
TABL	Table Mountain	1.11	183	P	Pg	11 23 18.8	-0.8
TABL				S	Sg	11 23 33.3	-0.8
YUK4	Talbot Arm	1.17	99	P	Pg	11 23 20.2	-0.6
YUK4				S	Sb	11 23 36.5	+0.6
CRQM	Cirque	1.29	233	*e*Pg	Pn	11 23 21.3	-1.2
CRQM				*e*Sg	Sb	11 23 37.9	-1.4
SAMH	Samovar Hills	1.43	175	Pn	Pb	11 23 24.9	-0.1
SAMH				Sg	Sg	11 23 45.0	+0.8
YUK6	Outpost Mounta	1.43	114	Pn	Pn	11 23 24.5	0.0
YUK6				Sg	Sg	11 23 44.2	0.0
MESA	MESA	1.44	198	Pn	Pb	11 23 25.4	+0.1
MESA				Sg	Sg	11 23 44.5	-0.2
CHX	Chaix Hills	1.49	181	*e*Pn	Pg	11 23 26.5	-0.4
PCA	Pinnacle	1.50	165	*e*Pn	Pb	11 23 26.2	-0.1
PCA				*e*Sn	Sg	11 23 47.1	+0.5
PCA	Pinnacle	1.50	165	Pn	Pb	11 23 26.2	-0.1
PCA				Sg	Sg	11 23 46.6	0.0
BCA3	Beaver Creek A	1.56	348	*e*Pn	Pn	11 23 25.9	-0.3
YUK5	Granite Creek	1.59	104	Pn	Pn	11 23 26.9	+0.3
SNH	Sunshine Point	1.63	213	*e*Pn	Pb	11 23 28.4	0.0
YUK7	Dusty Glacier	1.74	125	Pn	Pb	11 23 30.3	-0.1
HYT	Haines Junctio	1.86	111	*e*Pn	Pb	11 23 32.3	0.0
HYT	Haines Junctio	1.86	111	Pn	Pn	11 23 31.2	+1.0
MENT	Mentasta	1.88	319	*e*Pn	Pb	11 23 32.5	-0.2
HMT	Hamilton	1.98	234	*e*Pn	Pb	11 23 35.3	+0.9
PNL	Peninsula	2.05	156	*e*Pn	Pb	11 23 34.7	-0.9
PNL	Peninsula	2.05	156	Pn	Pb	11 23 34.3	-1.2
PNL				Sg	Sg	11 24 02.9	-1.2
RAGM	Ragged Mountai	2.12	238	*e*Pn	Pb	11 23 37.0	+0.2
YKU2	Yakutat	2.15	161	*e*Pn	Pb	11 23 38.0	+0.8
EYAK	Cordova Ski Ar	2.50	248	*e*Pn	Pb	11 23 42.0	-1.1
PAX	Paxson	2.52	307	Pg	Pb	11 23 42.2	-1.4
PAX				Sg	Sb	11 24 15.1	+0.5
DOT	Dot Lake	2.53	328	*e*Pn	Pn	11 23 39.9	+0.5
DOT	Dot Lake	2.53	328	Pn	Pn	11 23 39.5	+0.1
DOT				Pg	Pb	11 23 44.6	+0.8
DOT				Sg	Sb	11 24 16.1	+1.2
DAWY	Dawson	2.64	16	*e*Pn	Pn	11 23 42.0	+1.1
DAWY	Dawson	2.64	16	Pn	Pn	11 23 41.3	+0.4
DAWY				Sg	Sb	11 24 20.1	+2.0
JPK	Jack Peak	2.73	262	*e*Pn	Pn	11 23 44.4	+2.3
FID	Port Fidalgo	2.75	256	*e*Pn	Pb	11 23 45.9	-1.6
FID				*e*Pn	Pn	11 23 46.4	+4.0
SCRK	Sand Creek	2.79	332	*e*Pn	Pn	11 23 43.5	+0.4
RIDG	Independent Ri	2.82	323	*e*Pn	Pn	11 23 44.2	+0.8
GLI	Glacier Island	3.00	260	*e*Pn	Pn	11 23 48.5	+2.6
SCM	Sheep Creek Mo	3.01	278	*e*Pn	Pb	11 23 49.6	-2.4
PLBC	Pleasant Camp	3.12	130	Pn	Pn	11 23 49.2	+1.7
PLBC				Pg	Pb	11 23 55.0	+1.3
PLBC				Sg	Sg	11 24 35.5	-2.9
EGAK	Eagle	3.25	359	*e*Pn	Pn	11 23 50.4	+1.2
DHY	Denali Highway	3.33	300	*e*Pn	Pn	11 23 51.1	+0.6
SML	Sawmill	3.48	278	*e*Pn	Pn	11 23 52.4	-0.2
SKAG	Skagway	3.52	124	*e*Pn	Pn	11 23 55.2	+2.4
KNK	Knik Glacier	3.56	271	*e*Pn	Pb	11 23 58.0	-3.3
PMR	Palmer	3.87	274	*e*Pn	Pn	11 24 00.1	+2.4
HDA	Harding Lake	3.94	319	*e*Pn	Pn	11 23 59.5	+0.8
HDA	Harding Lake	3.94	319	P	Pn	11 23 56.4	-2.3
	baz=134						
HDA				S	Sn	11 24 44.2	-0.7
	baz=134						
RND	Reindeer	4.08	301	*e*Pn	Pn	11 24 05.0	+4.3
ILAR	Eielson Array	4.18	323	Pn	Pn	11 24 01.9	-0.2
	1.5nm,0.3s,baz=146,slow=12,SNR=55						
ILAR				Pg	Pg	11 24 15.4	-3.0
	5.4nm,0.3s,baz=140,slow=17,SNR=39						
ILAR				Lg	Lg	11 25 09.7	
	10nm,0.3s,baz=132,slow=28,SNR=10						
ILB	Eielson Array	4.18	323	*e*Pn	Pn	11 24 02.7	+0.6
ILB				*e*Lg	Lg	11 25 09.7	
RC01	Rabbit Creek A	4.22	268	*e*Pn	Pn	11 24 05.9	+3.4
MCK	McKinley	4.25	305	*e*Pn	Pn	11 24 07.9	+4.9
BESE	Bessie Mountai	4.30	131	*e*Pn	Pn	11 24 04.5	+0.9
BESE	Bessie Mountai	4.30	131	Pn	Pn	11 24 04.8	+1.1
BESE				Sg	Sg	11 25 13.3	-2.8
WRH	Wood River Hil	4.35	316	*e*Pn	Pn	11 24 05.6	+1.3
SEW	Seward	4.36	254	*e*Pn	Pn	11 24 06.5	+2.0
CCB	Clear Creek Bu	4.37	318	*e*Pn	Pn	11 24 05.1	+0.5
PRP	Porcupine Dome	4.46	335	*e*Pn	Pn	11 24 06.9	+0.9
COLA	College	4.54	320	*e*Pg	Pb	11 24 15.7	-2.3
TCOL	CIGO, UAF Yank	4.55	320	P	Pn	11 24 06.0	-1.0
	baz=134						
TCOL				S	Sn	11 24 59.6	-0.2
	baz=134						
POKR	Poker Plat Res	4.60	324	P	Pn	11 24 07.0	-0.8
	baz=138						
POKR				S	Sn	11 25 00.8	-0.3
	baz=138						
BWN	Browne	4.67	308	*e*Pn	Pn	11 24 12.6	+3.9
JIS	Juneau Island	4.69	131	*e*Pn	Pn	11 24 10.1	+1.2
MDM	Murphy Dome	4.72	320	*e*Pg	Pg	11 24 30.4	+1.8
KTH	Kantishna Hill	5.00	298	*e*Pn	Pn	11 24 14.2	+0.9
BRLK	Bradley Lake	5.16	254	*e*Pn	Pn	11 24 17.5	+2.0
EPYK	Eagle Plains	5.20	20	*e*Pn	Pn	11 24 16.8	+0.7
EPYK	Eagle Plains	5.20	20	P	Pn	11 24 16.1	0.0
	baz=204						
EPYK				S	Sn	11 25 16.2	+0.1
	baz=204						
BPAW	Bear Paw Mtn.	5.23	304	*e*Pn	Pn	11 24 18.0	+1.5
FYU	Fort Yukon	5.37	342	*e*Pn	Pn	11 24 19.6	+1.4
PPLA	Purkeypile	5.39	289	*e*Pn	Pn	11 24 24.1	+5.4
CNPM	China Poot	5.42	253	*e*Pn	Pn	11 24 20.9	+1.7
RSO	Redoubt South	5.80	264	*e*Pn	Pn	11 24 26.7	+2.3
BM3	Burnt Mountain	6.09	347	*e*Pn	Pn	11 24 29.4	+1.1
DLBC	Dease Lake	6.34	115	Pn	Pn	11 24 32.8	+1.1
	0.3nm,0.3s,baz=307,slow=12,SNR=3.6						
DLBC				Pg	Pb	11 24 47.8	-0.9
	0.7nm,0.3s,baz=313,slow=18,SNR=4.1						
DLBC				Lg	Lg	11 26 20.2	
	1.7nm,0.3s,baz=68,slow=18,SNR=6.9						
DLBC	Dease Lake	6.34	115	Pn	Pn	11 24 33.1	+1.3
DLBC				Sg	Sg	11 26 16.8	-4.9
WRAK	Wrangell Islan	6.82	135	*e*Pn	Pn	11 24 39.4	+1.1
COLD	Coldfoot	6.94	329	*e*Pn	Pn	11 24 41.0	+1.1
COLD	Coldfoot	6.94	329	Pn	Pn	11 24 40.9	+1.0
COLD				Sn	Sn	11 25 55.0	-3.8
KDAK	Kodiak Island	6.96	242	Pn	Pn	11 24 41.6	+1.6
	3.4nm,0.3s,baz=56,slow=5.7,SNR=113						
KDAK				Sn	Sn	11 25 56.0	-3.1
	baz=106,slow=20,SNR=2.5						
KDAK	Kodiak Island	6.96	242	*e*Pn	Pn	11 24 41.4	+1.3
KDAK				*e*		11 24 42.2	
KDAK				*e*Sn	Sn	11 25 56.0	-3.1
SVW2	Sparrevohn	7.01	273	*e*Pn	Pn	11 24 41.9	+1.0
IM3	Indian Mountai	7.17	314	*e*Pn	Pn	11 24 43.9	+0.9
IMAR	Indian Mountai	7.17	314	*e*Pn	Pn	11 24 44.5	+1.4
INK	Inuvik	7.50	22	Pn	Pn	11 24 47.5	0.0
	0.3nm,0.3s,baz=203,slow=18,SNR=18						
INK				Sn	Sn	11 26 07.8	-4.5
	1.3nm,0.3s,baz=269,slow=22,SNR=3.6						
INK	Inuvik	7.50	22	*e*Pn	Pn	11 24 48.2	+0.8
INK				*e*Sn	Sn	11 26 07.8	-4.5
INK	Inuvik	7.50	22	Pn	Pn	11 24 47.1	-0.3
INK				Sn	Sn	11 26 08.2	-4.1
OHAK	Old Harbor	7.60	241	*e*Pn	Pn	11 24 49.8	+0.9
TOLK	Toolik Lake Re	7.97	337	*e*Pn	Pn	11 24 56.5	+2.5
TOLK	Toolik Lake Re	7.97	337	P	Pn	11 24 52.8	-1.3
	baz=149						
TOLK				S	Sn	11 26 23.9	-0.3
	baz=149						
FNBB	Fort Nelson	9.35	99	Pn	Pn	11 25 13.3	+0.3
FNBB				Sn	Sn	11 26 54.1	-4.0
YKA	Yellowknife Ar	12.42	74	Pn	Pn	11 25 55.0	+0.2
	0.1nm,0.3s,baz=273,slow=13,SNR=6.5						
YKA				Lg	Lg	11 29 30.2	
	0.1nm,0.3s,baz=281,slow=26,SNR=4.7						
YKB5	Yellowknife Ar	12.42	74	*e*Pn	Pn	11 25 55.0	+0.2
NEW	Newport	18.98	124	P	Pn	11 27 22.8	+2.6
	0.1nm,0.3s,baz=353,slow=16,SNR=3.3						
ELK	Elko	26.06	131	P	P	11 28 34.9	+3.1
	0.2nm,0.3s,baz=4.4,slow=13,SNR=3.0						
PD31	Pinedale Array	26.53	121	*e*P	P	11 28 38.6	+2.6
PDAR	Pinedale Array	26.53	121	P	P	11 28 38.6	+2.6
	0.6nm,0.8s,baz=325,slow=7.6,SNR=4.8						
NV01	Mina Array Sit	27.09	138	*e*P	P	11 28 44.6	+3.6
NVAR	Mina Array Bea	27.09	138	P	P	11 28 44.6	+3.6
	0.2nm,0.5s,baz=328,slow=6.6,SNR=2.6						
AKASG	Malin Array Be	67.83	7	P	P	11 33 56.4	+0.4
	1.2nm,0.6s,baz=357,slow=6.0,SNR=5.2						
AKBB	Malin Array Si	67.83	7	*e*P	P	11 33 56.4	+0.4

NIED ***17*** *11:32:00, 35°.50N×136°.90E, h47^{km}, Mw3.9 Best double couple: M$_0$7.05000×10^{14} NP1:φ$_s$86.00000°, δ46.00000°, λ179.00000°. NP2:φ$_s$176.00000°, δ90.00000°, λ44.00000°.*
ISCJB ***17*** *11:32:02.9±0.4, 35°.43N±0°.03×136°.85E±0°.04, h54^{km}±3^{km}, mb4.3/5, MS2.9/1, Error ellipse: s-maj=6.1km s-min=4.8km az=35.7*
JMA ***17*** *11:32:03.9, 35°.44N×136°.88E, h43^{km}, M3.8 Broadband fault plane solution: P waves. NP1:φ$_s$171.00000°, δ85.00000°, λ45.00000°. NP2:φ$_s$76.00000°, δ45.00000°, λ173.00000°. Principal axes: T Plg34.0000°, Azm44.0000°; N Plg45.0000°, Azm176.0000°; P Plg26.0000°, Azm295.0000°;*
JMA Felt II J1.
NEIC ***17*** *11:32:03.5±2.1, 35°.24N×137°.03E, h47^{km}±4^{km}, mb4.2/4 Error ellipse: s-maj=7.7km s-min=6.9km az=46.0*
NEIC Felt at Nagoya and Yokosuka. Recorded [2 JMA] in Aichi, Gifu and Shiga.
IDC ***17*** *11:32:03.2±1.0, 35°.44N×136°.83E, h43^{km}±18^{km}, mb3.6/2, mb1 3.7/5, mb1mx3.2/53, mbtmp3.8/5, ML3.3/3, MS2.7/5, Ms1 2.7/5, ms1mx2.5/34, Error ellipse: s-maj=11.2km s-min=8.2km az=142.0*
ISC 17 11:32:03.7±0.8,**35°.42N**±0°.04×**136°.88E**±0°.04,**h43**^{km}±6^{km}, **n25**,σ**1^s.36**/38,**mb4.3**/5,**3C-1D**,**Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JICN	Ichinomiyachia	0.12	193	P	Pn	11 32 11.1	+0.3
JICN				*e*S	Sn	11 32 16.5	+0.7
INU	Inuyama	0.14	122	*e*Pn	Pn	11 32 11.2	+0.3
INU				*e*Sn	Sn	11 32 16.2	+0.3
JYTA	Yamagatataniai	0.21	326	⇑P	Pn	11 32 11.4	0.0
JYTA				*e*S	Sn	11 32 16.5	-0.3
JAO	Obara	0.35	116	⇓P	Pn	11 32 12.9	+0.1
JAO				*e*S	Sn	11 32 19.7	+0.5
TSUJ	Tsu 2	0.80	208	⇑P	Pn	11 32 19.2	+0.6
TSUJ				*e*S	Sn	11 32 31.0	+1.7
JKG	Kaga	0.96	333	P	Pn	11 32 20.9	+0.2
JKG				*e*S	Sn	11 32 34.3	+1.0
JIE	Ise	1.04	188	⇑P	Pn	11 32 22.7	+1.0
JIE				*e*S	Sn	11 32 36.8	+1.8
MAJO	Matsushiro	1.56	44	*e*Pn	Pn	11 32 29.7	+0.8
MAJO				*e*Sn	Sn	11 32 50.0	+2.1
MAT	Matsushiro	1.56	44	P	Pn	11 32 29.6	+0.7
MAT				S	Sn	11 32 48.7	+0.8
MJAR	Matsushiro Arr	1.56	44	P	Pn	11 32 29.8	+0.9
	15nm,0.3s,baz=239,slow=15,SNR=838						
MJAR				S	Sn	11 32 47.9	0.0
	7.1nm,0.3s,baz=216,slow=16,SNR=33						
JHJ	Hachijo jima 2	3.33	133	P	Pn	11 32 54.1	+0.9
	5.2nm,0.3s,baz=233,slow=20,SNR=4.8						
JHJ				S	Sn	11 33 32.5	+1.1
	8.8nm,0.3s,baz=128,slow=19,SNR=3.0						
JHJ				LR	LR	11 34 26.4	
	comp=Z,91nm,18.8s,baz=304,slow=42						
JHJ2	Mitsune	3.35	133	*e*Pn	Pn	11 32 50.1	-3.4
JNU	Nakatsue	5.47	247	P	Pn	11 33 23.7	+1.1
	1.1nm,0.3s,baz=95,slow=3.9,SNR=14						
JNU				S	Sn	11 34 22.5	-1.9
	0.5nm,0.3s,baz=212,slow=19,SNR=2.9						
JNU				LR	LR	11 35 45.5	
	comp=Z,98nm,19.6s,baz=12,slow=41						
JNU	Nakatsue	5.47	247	*e*Pn	Pn	11 33 24.4	+1.7
JNU				*e*Sn	Sn	11 34 26.7	+2.4
KSRS	Korea Array	7.50	288	P	Pn	11 33 51.2	+0.9
	0.8nm,0.3s,baz=87,slow=14,SNR=6.3						
KSRS				S	Sn	11 35 12.8	-1.2
	0.8nm,0.3s,baz=102,slow=24,SNR=5.1						
KSRS				LR	LR	11 36 52.4	
	comp=Z,34nm,19.0s,baz=103,slow=39						
KS15	Wonju Array Si	7.52	288	*e*Pn	Pn	11 33 52.5	+1.7
ERM	Erimo	8.21	35	*e*Pn	Pn	11 34 01.1	+1.0
ASAJ	Asahikawa	9.73	25	LR	LR	11 38 32.1	
	comp=Z,27nm,18.1s,baz=174,slow=40						
SSLB	Suanglung	18.03	234	*e*P	P	11 36 09.2	-1.9
	9.4nm,0.9s						
WMQ	Urumqi	38.32	298	*e*P	P	11 39 22.3	+2.1
SPIA	Saint Paul Isl	41.20	41	*e*P	P	11 39 43.2	-0.6
	100nm,1.4s						
KURBB	Kurchatov Arra	44.13	309	P	P	11 40 06.3	-1.4
	1.3nm,0.2s,baz=82,slow=8.9,SNR=4.2						
PMR	Palmer	52.09	36	*e*P	P	11 41 07.4	-1.5
	2.2nm,1.0s						
SML	Sawmill	52.44	35	*e*P	P	11 41 11.1	-0.5
	4.6nm,0.6s						
ILAR	Eielson Array	52.80	32	P	P	11 41 13.9	-0.3
	0.2nm,0.5s,baz=280,slow=7.2,SNR=3.6						
ILAR				LR	LR	12 04 04.2	
	comp=Z,13nm,21.5s,baz=87,slow=36						

ISCJB ***17*** *11:33:01.8±1.6, 34°.06N±0°.06×35°.89E±0°.07, h17^{km}±26^{km}, Error ellipse: s-maj=11.5km s-min=7.1km az=44.1*
GRAL ***17*** *11:33:01.2±0.2, 34°.13N×35°.78E, h26^{km}±1^{km}, MD2.9*
NSSC ***17*** *11:33:04.4±0.4, 33°.95N×35°.98E, h16^{km}±2^{km}, ML1.7*
ISC 17 11:33:01.1±2.0,**34°.07N**±0°.07×**35°.90E**±0°.07,**h20**^{km}±8^{km}, **n8**,σ**0^s.50**/15,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	Hawqa	0.21	11	*e*P	Pb	11 33 06.7	0.0
HWQ				*e*S	Sb	11 33 10.8	+0.3
BHL	Bhannes	0.26	230	*e*P	Pb	11 33 07.2	-0.1
BHL				*e*S	Sb	11 33 11.6	+0.1
DQRL	Deir Qamar	0.46	217	*e*P	Pb	11 33 10.1	-0.4
DQRL				*e*S	Sb	11 33 16.7	-0.1
RCY	Rachaya	0.58	185	*e*P	Pb	11 33 12.9	+0.2
RCY				*e*S	Sb	11 33 21.4	+0.9
QASN	Qassioun	0.62	150	*e*P	Pn	11 33 14.7	-0.3
QASN				*e*S	Sb	11 33 21.0	-0.8
QASN				AML	AML	11 33 26.1	
	comp=E,105nm,0.4s						
QASN				AML	AML	11 33 27.1	
	comp=Z,32nm,0.4s						
QASN				AML	AML	11 33 27.9	
	comp=N,85nm,0.4s						
BRBR	Barbar	0.66	176	*e*P	Pb	11 33 14.8	+0.7
BRBR				*e*S	Sb	11 33 23.0	+0.1
BRBR				AML	AML	11 33 26.6	
	comp=E,52nm,0.3s						
BRBR				AML	AML	11 33 26.6	
	comp=Z,77nm,0.2s						
BRBR				AML	AML	11 33 26.8	
	comp=N,86nm,0.4s						
SHBL	Chebaa	0.73	190	*e*P	Pb	11 33 15.2	-0.1
TOTH	TOTAH	0.84	148	*e*P	Pn	11 33 18.1	+0.3
TOTH				*e*S	Sb	11 33 27.2	-0.6
TOTH				AML	AML	11 33 32.0	
	comp=Z,8.5nm,0.1s						
TOTH				AML	AML	11 33 32.0	
	comp=N,32nm,0.1s						
TOTH				AML	AML	11 33 33.1	
	comp=E,30nm,0.3s						

NIC ***17*** *11:44:17.0±0.2, 35°.95N×31°.11E, h0^{km}, mb4.0, ML3.7*
HLW ***17*** *11:44:18.0, 36°.08N×30°.87E, h12^{km}±10^{km}, Md4.1, Ml4.4*
ISK ***17*** *11:44:17.9, 36°.10N×31°.12E, h11^{km}, ML3.9/36*
DDA ***17*** *11:44:18.5, 36°.10N×31°.23E, h31^{km}±3^{km}, ML4.0*
GII ***17*** *11:44:21.0±0.0, 36°.05N×31°.31E, h10^{km}, mb4.1/3, MD3.6/5*
THE ***17*** *11:44:22.4, 36°.07N×31°.11E, h27^{km}±27^{km}, ML3.4/4, Error ellipse: s-maj=28.1km s-min=1.6km az=111.0*
NSSC ***17*** *11:44:29.6±0.7, 35°.83N×31°.96E, h20^{km}±999^{km}, ML3.3*
ISC 17 11:44:18.1±1.1,**36°.05N**±0°.02×**31°.12E**±0°.02,**h9**^{km}±9^{km}, **n125**,σ**1^s.38**/170,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.68	293	*i* P	Pn	11 44 35.0	+1.1
AKUM				*i* S	Sn	11 44 47.7	+3.0
AKUM				IAML_P			
	comp=Z,64µm,0.3s						
KEMT	Kemer-ANTALYA	0.71	321	PG	Pg	11 44 31.7	-0.2
MNVG	Manavgat-Antal	0.78	18	PG	Pg	11 44 32.6	-0.5
MNVG				SG	Sg	11 44 43.4	+0.1
ALAN	Alanya-ANTALYA	0.89	55	PG	Pg	11 44 35.2	-0.1
ANTB	Antalya	0.92	336	PG	Pg	11 44 35.5	-0.4
ANTB				SG	Sb	11 44 48.3	-0.4
KEPZ	Antalya-Kepez	0.93	25	*i* P	Pn	11 44 36.9	-0.6
KEPZ				*i* S	Sg	11 44 47.0	-1.2
KEPZ				IAML_P			
	comp=Z,12µm,0.2s						
GAZI	Gazipasa	0.98	79	PG	Pg	11 44 37.2	+0.1
GAZI	Gazipasa	0.98	79	*i* P	Pg	11 44 37.0	0.0
GAZI				*i* S	Sg	11 44 48.0	-1.9
GAZI				IAML_P			
	comp=Z,56µm,0.4s						
KORT	Korkueli	1.13	327	PN	Pb	11 44 39.2	-0.7
KORT	Korkueli	1.13	327	*i* P	Pb	11 44 39.8	-0.1
KORT				*i* S	Sn	11 44 58.7	+2.7
KORT				IAML_P			
	comp=Z,3µm,0.3s						
ELL	Elmali	1.20	306	PN	Pn	11 44 41.2	0.0
ELL	Elmali	1.20	306	P	Pg	11 44 41.7	+0.5
	baz=128						
ELL				S	Sn	11 45 00.0	+2.4
AKAS	Kas	1.24	279	PN	Pn	11 44 41.7	0.0
AKAS	Kas	1.24	279	*i* P	Pg	11 44 42.1	+0.2
AKAS				IAML_P			
	comp=Z,40µm,0.3s						
KSL	Kastellorizon	1.25	275	P	Pg	11 44 42.4	+0.3
KSL				S	Sb	11 44 58.2	+0.2
	comp=Z,792nm,0.7s						
BCK	Bucak	1.47	343	PN	Pn	11 44 44.4	-0.5
ALFC	Alefka	1.50	126	P	Pn	11 44 44.8	-0.5
	baz=303						
ALFC				S	Sn	11 45 05.3	+0.3
ERMK	Ermenek	1.56	67	*i* P	Pn	11 44 46.0	-0.3
ERMK				*i* S	Sg	11 45 12.1	+3.7
ERMK				IAML_P			
	comp=Z,14µm,0.2s						
TEKE	Tekeli-Mersin	1.62	86	PN	Pn	11 44 46.8	0.0
AKDN	Akdeniz- Kıbrı	1.68	116	PN	Pn	11 44 48.3	+0.6
LEF	Lefka	1.72	122	*i* P	Pn	11 44 47.5	-0.7
LEF				*i* S	Sn	11 45 06.5	-3.7
LEF				IAML_P			
	comp=Z,17µm,0.2s						
GOLH	Golhisar	1.72	314	*i* P	Pg	11 44 51.3	+0.1
GOLH				*i* S	Sg	11 45 13.0	-0.5
GOLH				IAML_P			

	comp=Z,14µm,0.3s						
BERE	**Bereket-Mersin**	**1.73**	**80**	PN	**Pn**	**11 44 48.5**	**0.0**
FETY	**Fethiye**	**1.74**	**290**	PN	**Pn**	**11 44 48.7**	**+0.1**
FETY	**Fethiye**	**1.74**	**290**	P	**Pb**	**11 44 49.6**	**-0.7**
FETY				S	**Sn**	**11 45 09.9**	**-1.0**
FETY	**Fethiye**	**1.74**	**290**	*i* P	**Pb**	**11 44 49.5**	**-0.7**
FETY				*i* S	**Sn**	**11 45 11.3**	**+0.4**
FETY				IAML_P			
	comp=Z,35µm,0.2s						
ISP	**Isparta**	**1.83**	**345**	PN	**Pn**	**11 44 49.5**	**-0.4**
BRDR	**BURDUR-Merkez**	**1.85**	**333**	*i* P	**Pb**	**11 44 52.0**	**-0.2**
BRDR				*i* S	**Sb**	**11 45 14.8**	**-0.6**
BRDR				IAML_P			
	comp=Z,4µm,0.3s						
YORU	**Yoruktepe-Mers**	**1.85**	**86**	PN	**Pn**	**11 44 50.5**	**+0.4**
OREN	**Orenkoy-Mersin**	**1.90**	**85**	PN	**Pn**	**11 44 51.1**	**+0.4**
TEVE	**Tevekalti-Mers**	**1.92**	**78**	PN	**Pn**	**11 44 51.2**	**+0.2**
BAGO	**Egridir - ISPA**	**1.95**	**352**	*i* P	**Pn**	**11 44 52.5**	**+1.0**
BAGO				*i* S	**Sn**	**11 45 16.4**	**+0.2**
BAGO				IAML_P			
	comp=Z,3µm,0.2s						
AKK1	**Akkuyu-Mersin**	**1.96**	**87**	PN	**Pn**	**11 44 52.0**	**+0.4**
GULN	**MERSIN_Gulnar**	**1.97**	**85**	*i* P	**Pb**	**11 44 53.0**	**-1.1**
GULN				*i* S	**Sn**	**11 45 16.8**	**+0.4**
AKK2	**Akkuyu-Mersin**	**1.97**	**87**	PN	**Pn**	**11 44 52.1**	**+0.5**
AKKU	**Akkuyu-Mersin**	**1.97**	**86**	PN	**Pn**	**11 44 52.3**	**+0.6**
KMER	**Konya-Meram**	**1.98**	**30**	*i* P	**Pn**	**11 44 52.3**	**+0.3**
KMER				*i* S	**Sn**	**11 45 16.6**	**-0.4**
KMER				IAML_P			
	comp=Z,2µm,0.2s						
TEPE	**Tepekoy-Mersin**	**1.98**	**84**	PN	**Pn**	**11 44 52.3**	**+0.4**
YESI	**Yesilovacik-Me**	**2.05**	**85**	PN	**Pn**	**11 44 53.2**	**+0.5**
TISA	**Tisan-Mersin**	**2.08**	**86**	PN	**Pn**	**11 44 53.6**	**+0.5**
IKL	**Isikli**	**2.08**	**84**	PN	**Pn**	**11 44 53.8**	**+0.6**
DOGA	**KONYA_Doganhis**	**2.10**	**12**	*i* P	**Pn**	**11 44 54.2**	**+0.7**
DOGA				*i* S	**Sn**	**11 45 18.5**	**-1.3**
DOGA				IAML_P			
	comp=Z,4µm,0.3s						
KARG	**Kargicak-Mersi**	**2.10**	**85**	PN	**Pn**	**11 44 54.1**	**+0.6**
CSS	**Mathiatis**	**2.11**	**120**	P	**Pn**	**11 44 52.7**	**-0.9**
	baz=299						
CSS				S	**Sn**	**11 45 21.0**	**+1.1**
CSS	**Mathiatis**	**2.11**	**120**	Pn	**Pn**	**11 44 52.6**	**-1.0**
CSS	**Mathiatis**	**2.11**	**120**	P	**Pn**	**11 44 52.6**	**-1.0**
DALY	**Dalyan (Mula)**	**2.13**	**292**	PN	**Pn**	**11 44 54.3**	**+0.5**
DALY	**Dalyan (Mula)**	**2.13**	**292**	*i* P	**Pn**	**11 44 55.2**	**+1.3**
DALY				*i* S	**Sn**	**11 45 20.1**	**-0.3**
DALY				IAML_P			
	comp=Z,11µm,0.1s						
KEBE	**Keben-Mersin**	**2.13**	**79**	PN	**Pn**	**11 44 54.6**	**+0.6**
KONT	**Konya--Tatoy**	**2.13**	**27**	PN	**Pn**	**11 44 54.2**	**+0.2**
KONT	**Konya--Tatoy**	**2.13**	**27**	*i* P	**Pn**	**11 44 54.1**	**+0.2**
KONT				*i* S	**Sn**	**11 45 20.0**	**-0.6**
KONT				IAML_P			
	comp=Z,5µm,0.1s						
AKIN	**Akıncılar- Kıb**	**2.18**	**118**	PN	**Pn**	**11 44 55.5**	**+1.0**
TURN	**Turunc**	**2.19**	**293**	PN	**Pb**	**11 44 58.4**	**+0.5**
TURN	**Turunc**	**2.19**	**293**	*i* P	**Pg**	**11 44 59.4**	**-0.7**
TURN				*i* S	**Sb**	**11 45 26.2**	**+1.2**
TURN				IAML_P			
	comp=Z,4µm,0.1s						
SILI	**Silifke-Mersin**	**2.29**	**81**	PN	**Pn**	**11 44 56.7**	**+0.6**
SLFK	**Silifke-Mersin**	**2.31**	**81**	PN	**Pn**	**11 44 56.9**	**+0.6**
KZIL	**AFYON_Kizioren**	**2.33**	**341**	*i* P	**Pn**	**11 44 57.2**	**+0.4**
KZIL				*i* S	**Sn**	**11 45 25.6**	**-0.1**
KZIL				IAML_P			
	comp=Z,3µm,0.2s						
LADK	**Ladik-KONYA**	**2.36**	**25**	PN	**Pn**	**11 44 56.9**	**-0.3**
DENT	**Denizli**	**2.38**	**316**	PN	**Pn**	**11 44 57.6**	**+0.2**
ARG	**Arkhangelos**	**2.43**	**275**	PN	**Pn**	**11 44 58.3**	**+0.3**
ARG	**Arkhangelos**	**2.43**	**275**	P	**Pn**	**11 44 58.3**	**+0.3**
ARG				S	**Sn**	**11 45 27.1**	**-0.7**
	comp=Z,262nm,0.3s						
ARG	**Arkhangelos**	**2.43**	**275**	P	**Pn**	**11 44 58.2**	**+0.3**
	baz=95						
MRSB	**Marmaris-Mugla**	**2.45**	**287**	PN	**Pn**	**11 44 58.9**	**+0.6**
YER	**Yerkesik**	**2.52**	**296**	PN	**Pn**	**11 44 59.8**	**+0.4**
YER	**Yerkesik**	**2.52**	**296**	P	**Pn**	**11 45 00.1**	**+0.7**
YER				S	**Sn**	**11 45 29.4**	**-0.9**
EREN	**Erenkoy**	**2.53**	**101**	PN	**Pn**	**11 45 00.4**	**+1.0**
EREN	**Erenkoy**	**2.53**	**101**	*i* P	**Pn**	**11 45 01.0**	**+1.5**
EREN				*i* S	**Sn**	**11 45 32.6**	**+2.2**
EREN				IAML_P			
	comp=Z,7µm,0.2s						
SHUT	**Suhut-Afyon**	**2.54**	**350**	PN	**Pn**	**11 44 59.5**	**-0.1**
KDHN	**Kadinhani**	**2.59**	**18**	*i* P	**Pn**	**11 45 00.2**	**-0.1**
KDHN				*i* S	**Sn**	**11 45 28.9**	**-3.0**
KDHN				IAML_P			
	comp=Z,769nm,0.2s						
KHAL	**Karahalli**	**2.65**	**331**	*i* P	**Pn**	**11 45 02.2**	**+1.1**
KHAL				*i* S	**Sn**	**11 45 32.4**	**-1.2**
KHAL				IAML_P			
	comp=Z,2µm,0.2s						
KERG	**Konya-Eregli**	**2.77**	**60**	*i* P	**Pn**	**11 45 04.3**	**+1.5**
KERG				*i* S	**Sn**	**11 45 37.1**	**+0.6**
MERS	**Mersin**	**2.86**	**72**	PN	**Pn**	**11 45 04.8**	**+0.8**
SULT	**Sultanhani-AKS**	**2.87**	**41**	PN	**Pn**	**11 45 04.6**	**+0.4**
KIZT	**Kizilcal**	**2.89**	**12**	PN	**Pn**	**11 45 03.9**	**-0.5**
CHBY	**Cihanbeyli**	**2.89**	**29**	PN	**Pn**	**11 45 04.3**	**-0.2**
KULA	**Kula-Manisa**	**3.14**	**322**	P	**Pn**	**11 45 07.6**	**-0.3**
KULA				S	**Sn**	**11 45 44.6**	**-1.0**
BODT	**Bodrum**	**3.23**	**289**	P	**Pn**	**11 45 09.5**	**+0.5**
BODT				S	**Sn**	**11 45 45.5**	**-2.1**
KARP	**Karpathos**	**3.26**	**262**	P	**Pn**	**11 45 10.2**	**+0.8**
KARP				S	**Sn**	**11 45 47.0**	**-1.3**
CIFT	**Cifteler, Eski**	**3.30**	**359**	PN	**Pn**	**11 45 10.6**	**+0.5**
KARA	**Karaisali**	**3.39**	**68**	PN	**Pn**	**11 45 12.4**	**+1.2**
KRTS	**Karatas**	**3.48**	**80**	PN	**Pn**	**11 45 13.6**	**+1.2**
YAYX	**Yaylak**	**3.59**	**36**	PN	**Pn**	**11 45 13.9**	**-0.1**
YURE	**YUREGIR**	**3.72**	**77**	PN	**Pn**	**11 45 16.9**	**+1.1**
CEYT	**Ceyhan**	**3.85**	**74**	PN	**Pn**	**11 45 18.7**	**+1.2**
ZKR	**Zakros**	**4.10**	**258**	P	**Pn**	**11 45 21.8**	**+0.8**
ZKR				S	**Sn**	**11 46 07.7**	**-1.5**
	comp=Z,310nm,0.5s						
HWQ	**Hawqa**	**4.33**	**113**	*e*P	**Pn**	**11 45 25.4**	**+1.1**
HNTI	**Hanita**	**4.47**	**130**	Pn	**Pn**	**11 45 27.8**	**+1.8**
HNTI				Sn	**Sn**	**11 46 17.9**	**-0.3**
RCY	**Rachaya**	**4.64**	**122**	*e*P	**Pn**	**11 45 29.3**	**+0.7**
MMA0B	**Mount Meron ar**	**4.66**	**129**	Pn	**Pn**	**11 45 30.3**	**+1.6**
LAST	**Lasithi**	**4.68**	**261**	P	**Pn**	**11 45 29.8**	**+0.8**
LAST				S	**Sn**	**11 46 22.2**	**-1.3**
	comp=Z,128nm,0.6s						
GEM	**Giv'at Ha'Em**	**4.70**	**126**	Pn	**Pn**	**11 45 31.0**	**+1.8**
GEM				Sn	**Sn**	**11 46 23.9**	**+0.1**
KSDI	**Kefar Szold**	**4.71**	**126**	Pn	**Pn**	**11 45 31.1**	**+1.8**
KSDI				Sn	**Sn**	**11 46 23.5**	**-0.5**
NATI	**Neve Ativ**	**4.71**	**125**	Pn	**Pn**	**11 45 30.6**	**+1.2**
NATI				Sn	**Sn**	**11 46 24.0**	**-0.2**
BRBR	**Barbar**	**4.77**	**122**	*e*P	**Pn**	**11 45 31.7**	**+1.3**
BRBR				*e*S	Sn	11 46 16.4	-10
BRBR				AML	AML	11 46 32.2	
	comp=N,150nm,0.4s						
BRBR				AML	AML	11 46 35.4	
	comp=E,62nm,0.3s						
BRBR				AML	AML	11 46 37.7	
	comp=Z,134nm,0.7s						
KMRS	**Kahramanmaras**	**4.86**	**71**	PN	**Pn**	**11 45 32.8**	**+1.3**
QASN	**Qassioun**	**4.93**	**119**	*e*P	**Pn**	**11 45 34.3**	**+1.8**
QASN				*e*S	Sn	11 46 19.7	-10
QASN				AML	AML	11 46 38.8	
	comp=E,227nm,0.7s						
QASN				AML	AML	11 46 41.2	
	comp=N,181nm,0.6s						
QASN				AML	AML	11 46 44.4	
	comp=Z,86nm,0.5s						
KSHT	**Keshet**	**4.94**	**127**	Pn	**Pn**	**11 45 34.6**	**+2.0**
CORM	**Corum**	**4.96**	**33**	PN	**Pn**	**11 45 34.5**	**+1.6**
GAZ	**Gaziantep**	**5.03**	**75**	PN	**Pn**	**11 45 35.5**	**+1.7**
MMLI	**Mount Malkishu**	**5.07**	**134**	PN	**Pn**	**11 45 36.8**	**+2.5**
MMLI	**Mount Malkishu**	**5.07**	**134**	Pn	**Pn**	**11 45 36.2**	**+1.9**
MMLI				Sn	**Sn**	**11 46 33.0**	**0.0**
SHMJ	**Saham**	**5.08**	**129**	P	**Pn**	**11 45 37.9**	**+3.5**
	comp=Z,95nm,0.5s,comp=Z,0.7nm						
TOTH	**TOTAH**	**5.13**	**120**	*e*P	**Pn**	**11 45 36.6**	**+1.4**
TOTH				*e*S	Sn	11 46 25.1	-9.5
TOTH				AML	AML	11 46 43.2	
	comp=N,174nm,0.5s						
TOTH				AML	AML	11 46 45.4	
	comp=E,92nm,0.6s						
TOTH				AML	AML	11 46 46.8	
	comp=Z,69nm,0.5s						
HMDT	**Nahal Hemdat**	**5.26**	**135**	Pn	**Pn**	**11 45 38.5**	**+1.5**
HMDT				Sn	**Sn**	**11 46 37.5**	**-0.3**
RSH		**5.53**	**156**	P	**Pn**	**11 45 42.2**	**+1.6**
	baz=154						
HBRG	**Burj al `Arab**	**5.57**	**191**	S	**Sn**	**11 46 42.3**	**-3.0**
	baz=190						
DSI	**Dead Sea**	**5.71**	**140**	Pn	**Pn**	**11 45 44.4**	**+1.3**
YTIR	**Yattir**	**5.74**	**143**	Pn	**Pn**	**11 45 45.6**	**+2.0**
KZIT	**Kziot**	**5.82**	**151**	Pn	**Pn**	**11 45 46.6**	**+2.0**
MZDA	**Masada**	**5.91**	**142**	Pn	**Pn**	**11 45 47.2**	**+1.5**
MZDA				Sn	**Sn**	**11 46 54.0**	**+0.5**
WALJ	**Wala**	**5.94**	**138**	P	**Pn**	**11 45 50.4**	**+4.1**
	comp=Z,38nm,0.5s,comp=Z,0.3nm						
LISJ	**El Lisan**	**6.02**	**142**	P	**Pn**	**11 45 51.0**	**+3.7**
	comp=Z,20nm,0.7s,comp=Z,0.1nm						
KOT	**Kottamia**	**6.14**	**174**	P	**Pn**	**11 45 50.0**	**+1.0**
	baz=172						
KOT				S	**Sn**	**11 46 53.8**	**-5.6**
	baz=172						
KOT				AMP		11 47 00.0	
	baz=172						
ASF	**Jabal al Asfar**	**6.16**	**127**	P	Pn	11 45 54.2	+4.8
URFA	**Urfa**	**6.34**	**75**	PN	**Pn**	**11 45 54.2**	**+2.4**
SUZ	**Suez**	**6.36**	**166**	P	**Pn**	**11 45 53.1**	**+1.0**
	baz=164						
HNAT	**Natroun**	**6.42**	**184**	P	**Pn**	**11 45 54.6**	**+1.7**
	baz=182						
HNAT				S	**Sn**	**11 47 02.7**	**-3.5**
	baz=182						
ZFRI	**Zfri**	**6.45**	**147**	Pn	**Pn**	**11 45 55.3**	**+2.0**
GLL	**Jalalah**	**6.48**	**175**	P	**Pn**	**11 45 54.5**	**+0.8**
	baz=173						
PRNI	**Paran**	**6.55**	**149**	Pn	**Pn**	**11 45 56.6**	**+1.9**
PRNI				Sn	**Sn**	**11 47 10.5**	**+1.0**
KRMI	**Paran Flat**	**6.65**	**152**	Pn	**Pn**	**11 45 58.1**	**+2.1**
HRFI	**Mount Harif**	**6.84**	**150**	Pn	**Pn**	**11 46 00.6**	**+1.9**
HRFI				Sn	**Sn**	**11 47 17.8**	**+1.1**
MBRI	**Mt Berech**	**7.01**	**152**	Pn	**Pn**	**11 46 01.8**	**+0.8**
EIL	**Elat**	**7.13**	**152**	Pn	**Pn**	**11 46 04.1**	**+1.4**
SWA2		**8.30**	**217**	P	**Pn**	**11 46 17.9**	**-0.7**
	baz=216						

OMAN **17** *11:55:27.4±1.8, 26°.81N×58°.34E, h28*^{km}*, ml4.4/18, Error ellipse: s-maj=17.4km s-min=7.8km az=16.0*
IDC **17** *11:55:27.5±0.8, 26°.64N×57°.90E, h0*^{km}*, mb3.9/20, mb1 4.0/22, mb1mx3.8/68, mbtmp3.9/22, ML4.3/1, MS3.5/22, Ms1 3.5/22, ms1mx3.3/41, Error ellipse: s-maj=18.2km s-min=15.9km az=2.0*
DSN **17** *11:55:28.5±0.2, 26°.35N×58°.07E, h10*^{km}*, ML4.3/9, Error ellipse: s-maj=4.8km s-min=3.5km az=259.0*
TEH **17** *11:55:28.5, 26°.73N×57°.87E, h13*^{km}*, ML4.3*
ISCJB **17** *11:55:29.9±1.0, 26°.65N±0°.02×57°.93E±0°.03, h31*^{km}*±8*^{km}*, mb4.1/35, MS3.4/24, Error ellipse: s-maj=4.7km s-min=2.9km az=11.8*
THR **17** *11:55:29.1, 26°.74N×57°.94E, h17*^{km}*, ML4.3*
NEIC **17** *11:55:29.1±0.0, 26°.74N×57°.94E, h17*^{km}*, mb4.2/13, ML4.3(THR), MN4.3(TEH), After THR.*
MOS **17** *11:55:32.1±1.2, 26°.90N×57°.98E, h33*^{km}*, mb4.4/13, Error ellipse: s-maj=10.0km s-min=6.2km az=80.3*
ISC 17 11:55:30.5±1.1**, 26°.57N**±0°.03×**57°.88E**±0°.03**, h27**^{km}±9^{km}**, n183,** σ1^{s}.93/178**, mb4.1**/37**, MS3.5**/24**, 1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.93**	**186**	*e*Pg	**Pn**	**11 55 49.6**	**+1.8**
NIAN	**Nian**	**1.36**	**317**	*e*Pn	**Pn**	**11 55 53.8**	**+0.1**
NIAN	**Nian**	**1.36**	**317**	*e*Pg	**Pn**	**11 55 53.5**	**-0.2**
KHNJ	**Kahnooj**	**1.38**	**354**	*e*Pn	**Pn**	**11 55 49.8**	**-4.3**
BANOM	**Banah**	**1.56**	**246**	*e*P	**Pb**	**11 55 57.4**	**-1.4**
	SNR=104						
BANOM	**Banah**	**1.56**	**246**	P	**Pb**	**11 55 57.7**	**-1.0**
	SNR=104						
BANOM				S	**Sb**	**11 56 26.0**	**+8.0**
SHME	**Shamm**	**1.65**	**252**	*e*P	**Pb**	**11 55 59.3**	**-0.9**
	SNR=22						
SHME	**Shamm**	**1.65**	**252**	*e*Pn	**Pb**	**11 55 59.4**	**-0.8**
GENO	**Geno**	**1.74**	**299**	*e*Pn	**Pb**	**11 56 00.1**	**-1.7**
GENO	**Geno**	**1.74**	**299**	*e*Pn	**Pn**	**11 55 59.8**	**+0.7**
GENO				IAMB	IAmb	11 56 30.5	
	comp=Z,0.0nm,0.5s						
MDH	**Madha**	**1.91**	**229**	*e*P	**Pn**	**11 56 01.0**	**-0.2**
	SNR=12						
MDH				S	**Sb**	**11 56 26.0**	**-1.9**
MDH	**Madha**	**1.91**	**229**	P	**Pn**	**11 56 01.5**	**+0.3**
	SNR=12						
MDH	**Madha**	**1.91**	**229**	*e*Pn	**Pn**	**11 56 01.0**	**-0.2**
MSFE	**Esma-Masafi**	**1.96**	**233**	*e*P	**Pn**	**11 56 01.9**	**-0.1**
	SNR=17						
MSFE	**Esma-Masafi**	**1.96**	**233**	*e*Pn	**Pn**	**11 56 02.0**	**0.0**
UOSS	**Minazif**	**2.21**	**223**	*e*Pn	**Pn**	**11 56 05.1**	**-0.4**
UOSS				*e*Sn	**Sn**	**11 56 33.3**	**+1.4**
UOSS	**Minazif**	**2.21**	**223**	*e*P	**Pn**	**11 56 04.6**	**-0.8**
	SNR=25						
UOSS	**Minazif**	**2.21**	**223**	P	**Pn**	**11 56 05.2**	**-0.2**
UOSS	**Minazif**	**2.21**	**223**	*e*Pn	**Pn**	**11 56 05.2**	**-0.2**
UMQ	**Umm Al-Quwin**	**2.25**	**243**	P	**Pb**	**11 56 09.0**	**-1.5**
UMQ	**Umm Al-Quwin**	**2.25**	**243**	*e*Pn	**Pn**	**11 56 07.6**	**+1.7**
HATD	**Hatta, Dubai**	**2.34**	**223**	*e*P	**Pn**	**11 56 07.1**	**-0.2**
	SNR=24						
HATD	**Hatta, Dubai**	**2.34**	**223**	P	**Pn**	**11 56 07.1**	**-0.2**
HATD	**Hatta, Dubai**	**2.34**	**223**	*e*Pn	**Pn**	**11 56 07.2**	**-0.1**
ASHO	**Ashiyiah**	**2.50**	**222**	*e*P	**Pn**	**11 56 09.7**	**+0.3**
	SNR=29						
ASHO	**Ashiyiah**	**2.50**	**222**	P	**Pn**	**11 56 09.8**	**+0.4**
ASHO	**Ashiyiah**	**2.50**	**222**	*e*Pn	**Pn**	**11 56 09.8**	**+0.4**
CHBR	**Chabahar**	**2.53**	**112**	*e*Pn	**Pn**	**11 56 11.0**	**+1.2**
CHBR				*e*Sg	**Sb**	**11 56 48.0**	**+2.1**
CHBR	**Chabahar**	**2.53**	**112**	*e*Pn	**Pn**	**11 56 11.9**	**+2.1**
CHBR	**Chabahar**	**2.53**	**112**	Pn	**Pn**	**11 56 11.9**	**+2.1**
CHBR				Sg	**Sb**	**11 56 48.9**	**+3.0**
NAZ	**Nazwa, Dubai**	**2.54**	**232**	*e*Pg	**Pb**	**11 56 13.1**	**-2.4**
	SNR=26						
NAZ	**Nazwa, Dubai**	**2.54**	**232**	P	**Pb**	**11 56 13.4**	**-2.1**
NAZ	**Nazwa, Dubai**	**2.54**	**232**	*e*Pn	**Pb**	**11 56 13.6**	**-1.9**
FAQ	**Al Faqa, Dubai**	**2.75**	**229**	*e*Pg	**Pb**	**11 56 16.0**	**-3.0**
	SNR=32						
FAQ	**Al Faqa, Dubai**	**2.75**	**229**	P	**Pb**	**11 56 16.2**	**-2.8**
FAQ	**Al Faqa, Dubai**	**2.75**	**229**	*e*Pn	**Pn**	**11 56 14.6**	**+1.8**
ASUD	**Al Ashush, Dub**	**3.01**	**231**	*e*Pg	**Pb**	**11 56 19.8**	**-3.6**
	SNR=78						
ASUD	**Al Ashush, Dub**	**3.01**	**231**	P	**Pb**	**11 56 19.8**	**-3.6**
ASUD	**Al Ashush, Dub**	**3.01**	**231**	*e*Pn	**Pb**	**11 56 19.9**	**-3.5**
HOQ	**Hoqain**	**3.02**	**190**	P	**Pn**	**11 56 16.9**	**+0.3**
HOQ				S	**Sn**	**11 56 53.2**	**+1.4**
HOQ	**Hoqain**	**3.02**	**190**	*e*Pn	**Pn**	**11 56 16.9**	**+0.3**
BIDO	**Bidbid**	**3.04**	**176**	P	**Pn**	**11 56 16.8**	**-0.1**
BIDO				S	**Sn**	**11 56 55.3**	**+2.9**
BIDO	**Bidbid**	**3.04**	**176**	*e*Pn	**Pn**	**11 56 16.7**	**-0.1**
ALNE	**Al Ain**	**3.16**	**218**	*e*Pg	**Pn**	**11 56 21.4**	**+2.9**
	SNR=27						
ALNE	**Al Ain**	**3.16**	**218**	*e*Pn	**Pn**	**11 56 21.3**	**+2.8**
AJN	**Ajban**	**3.29**	**233**	*e*Pn	**Pn**	**11 56 22.5**	**+2.2**
CHMN	**Cheshme madani**	**3.29**	**355**	*e*Pn	**Pn**	**11 56 22.8**	**+2.1**
CHMN	**Cheshme madani**	**3.29**	**355**	*e*Pn	**Pn**	**11 56 23.1**	**+2.4**
CHMN				IAMB	IAmb	11 57 17.9	
	comp=Z,0.0nm,0.9s						
WSAR	**Wadi Sarin**	**3.38**	**168**	Pn	**Pn**	**11 56 22.2**	**+0.6**
	comp=Z,26nm,0.3s,baz=340,slow=6.5,SNR=286						
WSAR				Sn	**Sn**	**11 57 02.0**	**+1.2**
	comp=Z,40nm,0.3s,baz=319,slow=23,SNR=18						
WSAR	**Wadi Sarin**	**3.38**	**168**	P	**Pn**	**11 56 22.7**	**+1.1**
WSAR				S	**Sn**	**11 57 03.4**	**+2.6**
ARQ	**Araqi**	**3.45**	**201**	P	**Pn**	**11 56 25.8**	**+3.4**
ARQ				S	**Sb**	**11 57 10.0**	**-2.3**
SMDO	**Samad**	**3.50**	**177**	P	**Pn**	**11 56 24.4**	**+1.2**
SMDO				S	**Sn**	**11 57 07.1**	**+3.3**
KRBR	**Kerman**	**3.54**	**344**	AML	AML	11 57 27.2	
	comp=E,594nm,0.7s						
KRBR	**Kerman**	**3.54**	**344**	Sg	**Sb**	**11 57 15.0**	**-0.4**
TVBK	**TV Kerman**	**3.55**	**344**	*e*Pn	**Pn**	**11 56 25.8**	**+1.7**
BSY	**Bisya**	**3.86**	**189**	P	**Pn**	**11 56 31.2**	**+3.1**
	SNR=19						
BSY				S	**Sb**	**11 57 20.9**	**-3.2**
SZD1	**Zahaedan-tmp**	**3.92**	**42**	*e*Pn	**Pn**	**11 56 30.9**	**+1.8**
ZHSF	**Zahedan**	**3.96**	**39**	*e*Pn	**Pn**	**11 56 29.0**	**-0.7**
ZHSF	**Zahedan**	**3.96**	**39**	*e*Pn	**Pn**	**11 56 29.2**	**-0.5**
ZHSF	**Zahedan**	**3.96**	**39**	Pn	**Pn**	**11 56 29.2**	**-0.5**
KHGB	**Koh Gabri**	**3.99**	**342**	*e*Pn	**Pn**	**11 56 29.6**	**-0.5**
KHGB				IAMB	IAmb	11 57 45.7	
	comp=Z,0.0nm,1.0s						
WBK	**Wadi Bani Khal**	**4.06**	**166**	P	**Pn**	**11 56 32.7**	**+1.8**
JMDO	**Jabal Madar**	**4.18**	**177**	P	**Pn**	**11 56 35.2**	**+2.6**
JMDO				S	**Sn**	**11 57 24.6**	**+4.0**
JLN	**Jalan Bani Buh**	**4.61**	**162**	P	**Pn**	**11 56 39.5**	**+1.1**
JLN				S	**Sn**	**11 57 29.4**	**-1.8**
GHIR	**Ghir-Karzin**	**4.67**	**293**	*e*Pn	**Pn**	**11 56 40.0**	**+0.6**
GHIR	**Ghir-Karzin**	**4.67**	**293**	*e*Pn	**Pn**	**11 56 40.9**	**+1.5**
GHIR	**Ghir-Karzin**	**4.67**	**293**	Pn	**Pn**	**11 56 40.9**	**+1.5**
MZR	**Muzera**	**5.35**	**229**	P	**Pn**	**11 56 50.2**	**+1.6**
	SNR=8.7						
MZR	**Muzera**	**5.35**	**229**	*e*Pn	**Pn**	**11 56 49.8**	**+1.2**
IBAF	**Bafgh**	**5.40**	**339**	*e*Pn	**Pn**	**11 56 50.1**	**+0.7**
IBAF	**Bafgh**	**5.40**	**339**	*e*Pn	**Pn**	**11 56 50.3**	**+0.9**
BSRN	**Basiran**	**5.49**	**11**	*e*Pn	**Pn**	**11 56 49.8**	**-0.8**
BSRN	**Basiran**	**5.49**	**11**	Pn	**Pn**	**11 56 49.8**	**-0.8**
MHTO	**MHTO**	**5.56**	**179**	P	**Pn**	**11 56 53.5**	**+2.1**
IMEH	**Mehriz**	**5.59**	**330**	*e*Pn	**Pn**	**11 56 52.2**	**0.0**
IKAZ	**Kazeroun**	**6.22**	**302**	*e*Pn	**Pn**	**11 56 59.2**	**-1.6**
YZKH	**Yazd**	**6.47**	**334**	*e*Pn	**Pn**	**11 57 04.3**	**+0.2**
YZKH	**Yazd**	**6.47**	**334**	Pn	**Pn**	**11 57 04.2**	**+0.2**
YZKH				Sg	**Sb**	**11 58 45.1**	**+5.7**
TKDS	**Koohdasht(Taba**	**7.05**	**355**	*e*Pn	**Pn**	**11 57 14.0**	**+1.9**
JHBN	**Jahan bin**	**8.45**	**314**	*e*Pn	**Pn**	**11 57 31.2**	**-0.3**
IMYA	**Miami**	**9.93**	**10**	*e*Pn	**Pn**	**11 57 56.0**	**+4.5**
IAKL	**Akhelmad**	**10.03**	**4**	*e*Pn	**Pn**	**11 57 56.2**	**+3.1**
GEYT	**Alibeck**	**11.33**	**1**	Pn	**Pn**	**11 58 10.9**	**+0.3**
	baz=198,slow=9.1,SNR=2.9						
GEYT				LR	LR	12 03 12.6	
	comp=Z,294nm,18.5s,baz=200,slow=41						
RAYN	**Ar Rayn**	**11.62**	**258**	*e*Pn	**Pn**	**11 58 14.6**	**-0.1**
RAYN	**Ar Rayn**	**11.62**	**258**	*e*P	**Pn**	**11 58 14.6**	**-0.1**
KBL	**Kabul**	**12.47**	**48**	P	**Pn**	**11 58 27.4**	**+1.0**
THW	**Thamme Wali**	**13.55**	**59**	P	**Pn**	**11 58 39.3**	**-1.7**
CEP	**Cherat**	**14.11**	**56**	P	**Pn**	**11 58 47.9**	**-0.9**
NIL	**Nilore**	**15.05**	**58**	*e*Pn	**Pn**	**11 58 59.0**	**-2.3**
NIL	**Nilore**	**15.05**	**58**	*e*P	**Pn**	**11 58 59.0**	**-2.3**
CHCP	**Chirah Chowk**	**15.06**	**58**	P	**Pn**	**11 58 58.9**	**-2.6**
BTK	**Batken**	**17.23**	**35**	*e*Pn	**Pn**	**11 59 26.2**	**-3.1**
	comp=Z,11nm,0.8s						
BTK	**Batken**	**17.23**	**35**	*e*P	**Pn**	**11 59 26.2**	**-3.1**
BTK				pmax	pmax		
	comp=Z,11nm,0.8s						
GNI	**Garni**	**17.41**	**324**	LR	LR	12 07 15.5	
	comp=Z,219nm,18.6s,baz=116,slow=41						
GNI	**Garni**	**17.41**	**324**	*i* P	**Pn**	**11 59 30.4**	**-1.2**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.3s						
BTLR	**Botlikh**	**18.68**	**332**	*e*P	**P**	**11 59 46.3**	**-0.2**
BTLR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KK31	**Karatay Array**	**19.45**	**29**	*e*P	**P**	**11 59 55.0**	**+0.1**
KK31	**Karatay Array**	**19.45**	**29**	*e*P	**P**	**11 59 55.0**	**+0.1**
KSH	**Kashi**	**19.87**	**45**	*e*P	**P**	**11 59 55.6**	**-4.1**
KSH				sP	pP	12 00 05.5	-1.9
KSH				PP	**PnPn**	**12 00 14.3**	**-1.4**
KSH				pmax	pmax		
	comp=Z,14nm,0.7s						
KSH				pmax	pmax		
	comp=Z,130nm,3.8s						
KSH				LR	LR		
	comp=N,540nm,11.7s						
KSH				LR	LR		
	comp=E,490nm,13.0s						
KSH				LR	LR		
	comp=Z,380nm,11.6s						
EIL	**Elat**	**20.45**	**284**	P	Pn	12 00 07.6	-0.7
	comp=Z,14nm,0.8s,baz=86,slow=6.2,SNR=6.6						
EIL				LR	LR	12 09 56.5	
	comp=Z,113nm,18.7s,baz=248,slow=42						
MMAI	**Mount Meron Ar**	**20.52**	**294**	P	Pn	12 00 10.2	+1.1
	comp=Z,1.1nm,0.3s,baz=110,slow=9.8,SNR=5.2						
MMAI				LR	LR	12 08 24.1	
	comp=Z,53nm,20.6s,baz=15,slow=38						
KBZ	**Khabaz**	**21.00**	**328**	P	**P**	**12 00 12.2**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=271,slow=22,SNR=3.6						
AAK	**Ala-Archa**	**21.01**	**36**	P	**P**	**12 00 10.8**	**-1.3**
	comp=Z,5.9nm,0.7s,baz=191,slow=10,SNR=6.6						
AAK				LR	LR	12 09 11.5	
	comp=Z,101nm,18.6s,baz=218,slow=39						
AAK	**Ala-Archa**	**21.01**	**36**	*e*P	**P**	**12 00 10.8**	**-1.3**
	comp=Z,15nm,1.0s						
AAK	**Ala-Archa**	**21.01**	**36**	*e*P	**P**	**12 00 10.8**	**-1.3**
AAK				pmax	pmax		
	comp=Z,15nm,1.0s						
NRN	**Naryn**	**21.04**	**41**	*e*P	**P**	**12 00 11.1**	**-1.5**
	comp=Z,6.9nm,0.7s						
NRN	**Naryn**	**21.04**	**41**	*e*P	**P**	**12 00 11.1**	**-1.5**
NRN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SHA1	**Shidzhatmaz**	**21.12**	**328**	*e*P	**P**	**12 00 14.3**	**+1.0**
KIV	**Kislovodsk**	**21.27**	**329**	*e*P	**P**	**12 00 14.3**	**-0.5**
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV				MLR	MLR		
	comp=Z,83nm,14.0s						
BOOM	**Boomskoye usch**	**21.69**	**38**	*e*P	**P**	**12 00 18.3**	**-1.1**
	comp=Z,22nm,0.8s						
BOOM	**Boomskoye usch**	**21.69**	**38**	*e*P	**P**	**12 00 18.3**	**-1.1**
BOOM				pmax	pmax		
	comp=Z,22nm,0.8s						
KDJ	**Kajisay**	**22.17**	**41**	*e*P	**P**	**12 00 24.4**	**-0.1**
	comp=Z,19nm,1.0s						
KDJ	**Kajisay**	**22.17**	**41**	*e*P	**P**	**12 00 24.4**	**-0.1**
KDJ				pmax	pmax		
	comp=Z,19nm,1.0s						
ABKAR	**Akbulak array**	**22.71**	**4**	*e*P	**P**	**12 00 29.6**	**-0.4**
	comp=Z,10nm,1.2s						
PRZ	**Przheval'sk**	**23.10**	**41**	*e*P	**P**	**12 00 34.1**	**-0.3**
	comp=Z,25nm,1.0s						
PRZ	**Przheval'sk**	**23.10**	**41**	*e*P	**P**	**12 00 34.1**	**-0.3**
PRZ				pmax	pmax		
	comp=Z,25nm,1.0s						
AKTO	**Aktyubinsk**	**23.83**	**0**	P	**P**	**12 00 39.7**	**-1.6**
	comp=Z,3.0nm,0.6s,baz=157,slow=9.5,SNR=11						
AKTO				LR	LR	12 11 29.5	
	comp=Z,90nm,18.1s,baz=168,slow=40						
BR101	**Keskin Array S**	**24.08**	**309**	*e*P	**P**	**12 00 44.0**	**+0.1**
BRTR	**Keskin Array B**	**24.08**	**309**	P	**P**	**12 00 44.0**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=126,slow=9.5,SNR=12						
BRTR				LR	LR	12 12 51.5	
	comp=Z,139nm,19.4s,baz=98,slow=43						
BRTR	**Keskin Array B**	**24.08**	**309**	P	**P**	**12 00 44.0**	**+0.1**
PDGK	**Podgornoye**	**24.25**	**41**	P	**P**	**12 00 46.6**	**+1.2**
OTUK	**Ortayu**	**24.42**	**24**	P	**P**	**12 00 46.3**	**-0.4**
MAKZ	**Makanchi**	**27.76**	**37**	*e*P	**P**	**12 01 17.1**	**+0.1**
	comp=Z,4.1nm,1.0s						
MAKZ	**Makanchi**	**27.76**	**37**	*e*P	**P**	**12 01 17.1**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MKAR	**Makanchi Array**	**27.92**	**37**	P	**P**	**12 01 18.6**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=229,slow=8.8,SNR=7.5						
BVAR	**Borovoye Array**	**28.03**	**16**	P	**P**	**12 01 18.8**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=203,slow=6.4,SNR=9.4						
BRVK	**Borovoye**	**28.04**	**16**	*e*P	**P**	**12 01 19.0**	**-0.3**
	comp=Z,5.4nm,1.3s						
BRVK	**Borovoye**	**28.04**	**16**	*e*P	**P**	**12 01 18.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**28.75**	**28**	P	**P**	**12 01 27.1**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=228,slow=8.7,SNR=9.2						
KURK	**Kurchatov**	**28.85**	**28**	*e*P	**P**	**12 01 23.2**	**-3.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WMQ	**Urumqi**	**29.61**	**47**	*e*P	**P**	**12 01 36.1**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,49nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,81nm,4.5s						
ARU	**Arti**	**29.84**	**1**	LR	LR	12 14 23.2	
	comp=Z,56nm,21.7s,baz=181,slow=38						
ARU	**Arti**	**29.84**	**1**	*e*P	**P**	**12 01 34.7**	**-0.6**
	comp=Z,4.0nm,1.3s						
ARU	**Arti**	**29.84**	**1**	*e*P	**P**	**12 01 34.7**	**-0.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.3s						
DGZ	**Jazzator, Alta**	**32.41**	**37**	*e*P	**P**	**12 01 57.0**	**-1.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
OBN	**Obninsk**	**32.49**	**337⇓**	*e*P	**P**	**12 01 57.2**	**-1.4**
OBN				*e*		12 03 07.1	
OBN				*e*S	**S**	**12 07 05.1**	**-6.6**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,78nm,17.0s						
AKASG	**Malin Array Be**	**32.53**	**325**	P	**P**	**12 01 59.4**	**+0.4**

	comp=Z,0.5nm,0.4s,baz=131,slow=8.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**33.82**	**29**	P	**P**	**12 02 10.0**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=219,slow=11,SNR=9.0						
ZALV				LR	LR	12 16 47.7	
	comp=Z,27nm,20.6s,baz=245,slow=38						
ZALV	**Zalesovo Beam**	**33.82**	**29**	P	**P**	**12 02 10.0**	**-0.3**
KMBO	**Kilima Mbogo**	**33.97**	**219**	LR	LR	12 16 34.3	
	comp=Z,75nm,19.2s,baz=63,slow=37						
KOLS	**Kolonicke sedl**	**35.45**	**319**	*e*P	P	12 02 37.0	+13
GTA	**Gaotai**	**37.11**	**59**	*e*P	**P**	**12 02 41.3**	**+2.4**
GTA				pP	pP	12 02 46.6	-0.7
GTA				sP	sP	12 02 50.1	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	**Liptovska Anna**	**37.22**	**318**	*e*P	**P**	**12 02 43.2**	**+3.6**
LANS	**Liptovska Anna**	**37.22**	**318**	*e*P	**P**	**12 02 43.2**	**+3.6**
VYHS	**Vyhne**	**37.36**	**316**	*e*P	P	12 02 47.6	+6.9
VYHS	**Vyhne**	**37.36**	**316**	*e*P	P	12 02 47.6	+6.9
CMAR	**Chiang Mai Arr**	**38.65**	**93**	LR	LR	12 21 11.7	
	comp=Z,61nm,18.4s,baz=224,slow=40						
PRU	**Pruhonice**	**40.52**	**317**	AMS	AMS	12 23 40.0	
	comp=Z,100nm,18.1s						
GERES	**GERESS Array B**	**40.69**	**315**	P	**P**	**12 03 09.6**	**+0.9**
	comp=Z,0.3nm,0.2s,baz=110,slow=8.8,SNR=2.5						
GERES				LR	LR	12 23 40.5	
	comp=Z,63nm,19.0s,baz=123,slow=42						
KHC	**Kasperske Hory**	**40.85**	**315**	*e*P	P	12 03 17.5	+7.6
KHC	**Kasperske Hory**	**40.85**	**315**	*e*P	**P**	**12 03 10.0**	**+0.1**
KHC				*e*x	x	12 03 17.5	
FIA0	**FINESS Array S**	**40.90**	**337**	*e*P	**P**	**12 03 10.5**	**+0.4**
FIA0	**FINESS Array S**	**40.90**	**337**	*e*P	**P**	**12 03 10.5**	**+0.4**
FINES	**FINESS Array B**	**40.90**	**337**	P	**P**	**12 03 10.5**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=132,slow=16,SNR=4.3						
SONA0	**Songino Array**	**43.24**	**47**	*e*P	**P**	**12 03 29.4**	**-0.2**
SONM	**Songino Array**	**43.24**	**47**	P	**P**	**12 03 29.4**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=255,slow=5.7,SNR=2.4						
SONM				LR	LR	12 23 49.4	
	comp=Z,90nm,20.4s,baz=254,slow=39						
BNI	**Bardonecchia**	**44.64**	**308**	*e*P	**P**	**12 03 40.0**	**-0.9**
	comp=Z,4.4nm,1.1s						
BNI	**Bardonecchia**	**44.64**	**308**	*e*P	**P**	**12 03 40.0**	**-0.9**
BNI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HFS	**Hagfors**	**45.05**	**330**	P	**P**	**12 03 45.8**	**+2.1**
	comp=Z,0.9nm,0.5s,baz=126,slow=7.3,SNR=5.3						
HHC	**Hu-ho-hao-te**	**46.19**	**58**	*e*P	**P**	**12 03 53.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,79nm,5.5s						
NOA	**NORSAR Array B**	**46.55**	**331**	LR	LR	12 25 20.6	
	comp=Z,44nm,21.9s,baz=120,slow=39						
ARA0	**ARCESS Array S**	**46.96**	**345**	*e*P	**P**	**12 04 00.1**	**+1.4**
ARCES	**ARCESS Array B**	**46.97**	**345**	P	**P**	**12 04 00.1**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=142,slow=9.1,SNR=3.6						
ESDC	**Sonseca Array**	**52.48**	**301**	P	**P**	**12 04 41.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=87,slow=9.1,SNR=4.2						
TOA1	**Torodi Ar. Sit**	**54.12**	**267**	*e*P	**P**	**12 04 53.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**54.12**	**267**	P	**P**	**12 04 53.2**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=65,slow=7.0,SNR=8.5						
TIXI	**Tiksi**	**59.04**	**20**	*e*P	**P**	**12 05 25.1**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KSRS	**Korea Array**	**59.16**	**61**	LR	LR	12 33 47.9	
	comp=Z,42nm,20.7s,baz=247,slow=39						
JNU	**Nakatsue**	**62.50**	**65**	LR	LR	12 37 12.6	
	comp=Z,42nm,19.3s,baz=207,slow=40						
DBIC	**Dimbokro**	**62.69**	**264**	LR	LR	12 35 28.2	
	comp=Z,39nm,20.1s,baz=62,slow=38						
BOSA	**Boshof**	**63.18**	**212**	LR	LR	12 34 44.4	
	comp=Z,31nm,18.4s,baz=28,slow=37						
BOSA	**Boshof**	**63.18**	**212**	*i* S	S	12 14 13.0	-13
BOSA	**Boshof**	**63.18**	**212**	*i* S	S	12 14 13.0	-13
MJAR	**Matsushiro Arr**	**67.36**	**59**	LR	LR	12 39 24.6	
	comp=Z,18nm,19.3s,baz=270,slow=39						
JHJ	**Hachijo jima 2**	**69.65**	**62**	LR	LR	12 42 06.5	
	comp=Z,35nm,18.2s,baz=4.5,slow=40						
BILL	**Bilibino**	**72.19**	**22**	*e*P	**P**	**12 06 51.8**	**-0.8**
BILL				*e*		12 07 12.6	
BILL				*e*		12 09 28.4	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,50nm,17.0s						
PETK	**Petropavlovsk-**	**74.76**	**38**	LR	LR	12 42 59.5	
	comp=Z,21nm,19.3s,baz=278,slow=38						
ILAR	**Eielson Array**	**86.94**	**10**	P	**P**	**12 08 15.4**	**+2.6**
	comp=Z,0.3nm,0.7s,baz=328,slow=4.0,SNR=4.7						
ILAR				LR	LR	12 53 02.1	
	comp=Z,30nm,19.0s,baz=304,slow=40						
ILB	**Eielson Array**	**86.94**	**10**	*e*P	**P**	**12 08 13.6**	**+0.9**
	comp=Z,1.4nm,1.2s						
WRA	**Warramunga Arr**	**87.34**	**114**	P	**P**	**12 08 18.3**	**+2.9**
	comp=Z,1.4nm,0.9s						
WR1	**Warramunga Arr**	**87.34**	**114**	*e*P	**P**	**12 08 18.3**	**+2.9**
AS31	**Alice Springs**	**88.81**	**117**	*e*P	**P**	**12 08 22.0**	**-0.4**
	comp=Z,1.0nm,1.0s						
ASAR	**Alice Springs**	**88.81**	**117**	P	**P**	**12 08 23.2**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=310,slow=5.7,SNR=4.5						

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*ISCJB **17** 11:56:04.2±0.3, 45°.53N±0°.01×15°.58E±0°.02, h2^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=2.1km az=44.9*
*LJU **17** 11:56:05.1, 45°.55N×15°.53E, h17^{km}, ML2.6*
*SAR **17** 11:56:05.6±0.2, 45°.52N×15°.58E, h3^{km}±2^{km}, ML2.8/1*
*PRU **17** 11:56:10.9±0.0, 45°.99N×15°.74E, h3^{km}*
ISC 17 11:56:05.6±0.8**, 45°.53N**±0°.02×**15°.55E**±0°.02**, h12**^{km}±6^{km}**, n69,** σ0^{s}.**93**/119**, 1C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OZLJ	**Ozalj**	**0.10**	**327**	*i* Pg	**Pg**	**11 56 08.6**	**+0.2**
OZLJ				Sg	**Sg**	**11 56 10.2**	**-0.3**
BOJS	**Bojanci**	**0.21**	**263**	*i* Pg	**Pg**	**11 56 10.2**	**+0.1**
BOJS				*i* Sg	**Sg**	**11 56 13.5**	**+0.3**
	comp=Z,305nm,0.1s						
CRES	**Cresnjev**	**0.30**	**348**	⇓*i*Pg	**Pg**	**11 56 11.5**	**-0.4**
	comp=Z,407nm,0.1s						
CRES	**Cresnjev**	**0.30**	**348**	*i* Pg	**Pg**	**11 56 11.4**	**-0.4**
CRES				*e*Sg	**Sg**	**11 56 16.1**	**+0.1**
GCIS	**Gornji Cirnik**	**0.34**	**9**	⇓*i*Pg	**Pg**	**11 56 12.3**	**-0.2**
GCIS				*i* Sg	**Sg**	**11 56 16.8**	**-0.4**
	comp=Z,190nm,0.1s						
CESS	**Cesta pri Krsk**	**0.45**	**352**	*i* Pg	**Pg**	**11 56 14.2**	**-0.3**
CESS				*i* Sg	**Sg**	**11 56 20.4**	**0.0**
	comp=Z,102nm,0.1s						
LEGS	**Legarje**	**0.45**	**339**	*i* Pg	**Pg**	**11 56 14.0**	**-0.4**
LEGS				*i* Sg	**Sg**	**11 56 20.0**	**-0.5**
PTJ	**Puntijarka**	**0.48**	**38**	iPg		11 56 14.7	
PTJ				Sg	**Sg**	**11 56 21.2**	**-0.2**
GOLS	**Golise**	**0.48**	**6**	*i* Pg	**Pg**	**11 56 14.8**	**-0.3**
GOLS				*i* Sg	**Sg**	**11 56 21.3**	**-0.3**
	comp=Z,95nm,0.1s						
GBRS	**Gornja Briga**	**0.52**	**270**	*i* Pg	**Pg**	**11 56 15.7**	**0.0**
VISS	**Visnje**	**0.57**	**299**	⇑*i*Pg	**Pg**	**11 56 16.6**	**-0.1**
VISS				*i* Sg	**Sg**	**11 56 23.6**	**-0.6**
	comp=Z,210nm,0.1s						
DOBS	**Dobrina**	**0.62**	**355**	*i* Pg	**Pg**	**11 56 17.5**	**-0.2**
	comp=Z,126nm,0.1s						
PDKS	**Podkum**	**0.66**	**324**	⇓*i*Pg	**Pg**	**11 56 18.4**	**+0.1**
PDKS				*i* Sg	**Sg**	**11 56 25.8**	**-1.2**
	comp=Z,127nm,0.1s						
RIY	**Rijeka**	**0.78**	**255**	iPg		11 56 20.1	
RIY				Sg	**Sg**	**11 56 31.6**	**+0.8**
RIY	**Rijeka**	**0.78**	**255**	*i* Pg	**Pg**	**11 56 20.2**	**-0.4**
RIY				*e*Sg	**Sg**	**11 56 31.5**	**+0.8**
CEY	**Cerknica**	**0.81**	**285**	*i* Pg	**Pg**	**11 56 20.8**	**-0.6**
CEY				*i* Sg	**Sg**	**11 56 32.1**	**+0.1**
	comp=Z,118nm,0.1s						
CEY	**Cerknica**	**0.81**	**285**	*i* Pg	**Pg**	**11 56 20.7**	**-0.6**
CEY				*e*Sg	**Sg**	**11 56 32.0**	**+0.1**
KNDS	**Knezji Dol**	**0.82**	**270**	*i* Pg	**Pg**	**11 56 20.9**	**-0.5**
	comp=Z,47nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.82**	**314**	*i* Pg	**Pg**	**11 56 21.3**	**-0.2**
VNDS				*i* Sg	**Sg**	**11 56 32.6**	**+0.3**
	comp=Z,74nm,0.2s						
GBAS	**Gorenja Brezov**	**0.87**	**298**	*i* Pg	**Pg**	**11 56 22.0**	**-0.5**
GBAS				*i* Sg	**Sg**	**11 56 33.5**	**-0.4**
	comp=Z,80nm,0.1s						
KALN	**Kalnik**	**0.88**	**46**	*i* Pg	**Pg**	**11 56 22.1**	**-0.4**
KALN				Sg	**Sg**	**11 56 33.2**	**-0.7**
LJU	**Ljubljana**	**0.88**	**306**	*i* Pg	**Pg**	**11 56 22.5**	**0.0**
	comp=Z,169nm,0.1s						
LJU	**Ljubljana**	**0.88**	**306**	*e*Pg	**Pg**	**11 56 22.1**	**-0.5**
LJU				*e*Sg	**Sg**	**11 56 34.1**	**0.0**
GROS	**Grobnik**	**0.93**	**358**	*i* Pg	**Pg**	**11 56 23.2**	**-0.4**
	comp=Z,58nm,0.1s						
UDBI	**Udbina**	**1.01**	**171**	*i* Pg	**Pg**	**11 56 23.6**	**-1.5**
UDBI				Sg	**Sg**	**11 56 37.2**	**-1.1**
KOGS	**Kog**	**1.04**	**28**	*i* Pg	**Pg**	**11 56 25.3**	**-0.3**
KOGS				*i* Sg	**Sg**	**11 56 38.8**	**-0.4**
	comp=Z,206nm,0.3s						
CRNS	**Crni Vrh**	**1.05**	**302**	*i* Sg	**Sg**	**11 56 39.8**	**+0.1**
	comp=Z,58nm,0.1s						
SKDS	**Skadanscina**	**1.08**	**271**	*i* Pg	**Pb**	**11 56 25.2**	**-0.9**
SKDS				*i* Sg	**Sb**	**11 56 39.9**	**-0.3**
	comp=Z,34nm,0.1s						
NVLJ	**Novalja**	**1.08**	**207**	*e*Pg	**Pb**	**11 56 25.7**	**-0.4**
NVLJ				Sg	**Sb**	**11 56 40.3**	**+0.2**
MOZS	**Mozjanca**	**1.09**	**315**	*i* Pg	**Pb**	**11 56 26.1**	**-0.2**
MOZS				*i* Sg	**Sb**	**11 56 40.4**	**-0.1**
	comp=Z,184nm,0.3s						
JAVS	**Javornik**	**1.10**	**290**	*i* Pg	**Pb**	**11 56 25.9**	**-0.7**
JAVS				*i* Sg	**Sb**	**11 56 40.7**	**-0.2**
	comp=Z,91nm,0.2s						
PERS	**Pernice**	**1.15**	**345**	*i* Pg	**Pb**	**11 56 26.6**	**-0.8**
	comp=Z,67nm,0.2s						
BISS	**Bistriski jare**	**1.16**	**346**	*i* Pg	**Pb**	**11 56 27.0**	**-0.5**
BISS				*i* Sg	**Sb**	**11 56 42.1**	**-0.3**
	comp=Z,95nm,0.1s						
OBKA	**Obir**	**1.20**	**325**	*e*Pn	**Pb**	**11 56 28.3**	**-0.1**
	comp=Z,31nm,0.2s,SNR=73						
OBKA				Sn	**Sb**	**11 56 44.2**	**+0.3**
	comp=Z,68nm,0.2s						
SOKA	**Soboth**	**1.20**	**343**	*e*Pg	**Pb**	**11 56 27.6**	**-0.8**
	comp=Z,23nm,0.2s,SNR=23						
SOKA				Sg	**Sb**	**11 56 43.9**	**-0.1**
	comp=Z,2.9nm,0.1s						
VOJS	**Vojsko**	**1.27**	**294**	*i* Pg	**Pn**	**11 56 28.7**	**-0.5**
VOJS				*i* Sg	**Sb**	**11 56 45.4**	**-0.4**
	comp=Z,73nm,0.3s						
BEHE	**Becsehely**	**1.27**	**42**	*e*Pg	**Pn**	**11 56 28.2**	**-1.0**
BEHE				*e*Sg	**Sb**	**11 56 46.0**	**+0.2**
BEHE	**Becsehely**	**1.27**	**42**	*e*Pn	**Pn**	**11 56 29.1**	**-0.1**
BEHE				Sn	**Sg**	**11 56 48.0**	**+1.4**
GORS	**Gorjuse**	**1.34**	**307**	*i* Pg	**Pn**	**11 56 29.8**	**-0.4**
GORS				*i* Sg	**Sb**	**11 56 47.2**	**-0.6**
	comp=Z,37nm,0.1s						
BLY	**Banja Luka**	**1.40**	**123**	*e*Pg	**Pn**	**11 56 30.6**	**-0.3**
BLY				*e*Sg	**Sn**	**11 56 48.6**	**-0.6**
CADS	**Cadrg**	**1.45**	**300**	*i* Pg	**Pn**	**11 56 30.8**	**-0.9**
CADS				*i* Sg	**Sn**	**11 56 50.2**	**-0.3**
	comp=Z,125nm,0.3s						
DUGI	**Dugi Otok**	**1.58**	**193**	*i* Pn	**Pb**	**11 56 34.5**	**-0.1**
DUGI				Sn	**Sb**	**11 56 55.5**	**+0.9**
ROBS	**Robic**	**1.59**	**297**	*i* Sg	**Sn**	**11 56 53.6**	**-0.5**
MORI	**Morici**	**1.67**	**176**	*i* Pn	**Pb**	**11 56 35.9**	**-0.3**
MORI				Sn	**Sg**	**11 56 58.7**	**-0.5**
ARSA	**Arzberg**	**1.72**	**359**	Pn	**Pb**	**11 56 36.8**	**-0.4**
	comp=Z,1.6nm,0.2s						
ARSA				Sn	**Sb**	**11 56 59.7**	**+1.0**
	comp=Z,7.3nm,0.3s						
MYKA	**Terra Mystica**	**1.72**	**310**	Pg	**Pb**	**11 56 37.5**	**+0.3**
	comp=Z,3.6nm,0.2s,SNR=7.5						
MYKA				Sn	**Sn**	**11 56 58.5**	**+1.1**
	comp=Z,11nm,0.3s						
ZIRJ	**Zirje**	**1.88**	**178**	*i* Pn	**Pn**	**11 56 38.9**	**+1.5**
TIH	**Tihany**	**2.13**	**49**	Sn	**Sn**	**11 57 08.1**	**+0.8**
KBA	**Koelnbreinsper**	**2.17**	**316**	Pg	**Pb**	**11 56 45.7**	**+0.8**
	comp=Z,0.9nm,0.2s						
KBA				Sg	**Sg**	**11 57 14.1**	**-1.4**
	comp=Z,12nm,0.3s						
SOP	**Sopron**	**2.27**	**18**	*e*Pg	**Pn**	**11 56 43.0**	**+0.2**
SOP				Sn	**Sn**	**11 57 11.1**	**+0.4**
SOP				*e*Sg	**Sg**	**11 57 20.0**	**+1.7**
MORH	**Mrgy, Hungar**	**2.27**	**71**	*e*Pn	**Pn**	**11 56 43.6**	**+0.7**
MORH				*e*Sn	**Sn**	**11 57 11.8**	**+1.1**
MORH	**Mrgy, Hungar**	**2.27**	**71**	*e*Pg	**Pb**	**11 56 47.1**	**+0.6**
MORH				*e*Sg	**Sg**	**11 57 17.0**	**-1.5**
CONA	**Conrad Observa**	**2.41**	**5**	Pn	**Pn**	**11 56 45.2**	**+0.3**
	comp=Z,0.7nm,0.2s						
CONA				Sg	**Sg**	**11 57 25.6**	**+2.6**
	comp=Z,9.9nm,0.7s						
HVAR	**Hvar**	**2.44**	**164**	*e*Pn	**Pn**	**11 56 46.5**	**+1.3**
HVAR				Sn	**Sb**	**11 57 18.8**	**-0.5**
MAKA	**Makarska**	**2.48**	**154**	*e*Pn	**Pn**	**11 56 45.9**	**+0.1**
MOA	**Molln**	**2.48**	**340**	*e*Pn	**Pn**	**11 56 46.5**	**+0.7**
	comp=Z,1.6nm,0.1s,SNR=4.5						
MOA				Sn	**Sn**	**11 57 16.3**	**+0.2**
	comp=Z,7.4nm,0.4s						
HAPS	**Han Pijesak,BI**	**2.82**	**120**	*e*Pn	**Pn**	**11 56 51.7**	**+1.1**
HAPS				*e*Sn	**Sn**	**11 57 25.4**	**+0.9**
TEKS	**Tekeris**	**2.99**	**108**	*e*Sn	**Sn**	**11 57 29.1**	**+0.6**
FRGS	**Fruska Gora**	**3.03**	**96**	*e*Sn	**Sn**	**11 57 30.2**	**+0.7**
STON	**Ston**	**3.08**	**149**	*e*Pn	**Pn**	**11 56 54.5**	**+0.6**
STON				*e*Sn	**Sn**	**11 57 30.9**	**+0.3**
MODS	**Modra-Piesok**	**3.08**	**22**	*e*PN	**Pn**	**11 56 52.0**	**-2.1**
MODS				*e*SG	**Sg**	**11 57 42.1**	**-2.5**
BBLS	**Lazići**	**3.21**	**120**	*e*Sn	**Sn**	**11 57 34.2**	**0.0**
WTTA	**Wattenberg**	**3.21**	**304**	*e*Pn	**Pn**	**11 56 57.7**	**+1.7**
	comp=Z,1.5nm,0.3s						
WTTA				*e*Sn	**Sn**	**11 57 37.6**	**+3.3**
	comp=Z,6.6nm,0.4s						
DIVS	**Divibare**	**3.47**	**113**	*e*Sn	**Sn**	**11 57 41.1**	**+0.5**
KRUC	**Moravsky**	**3.58**	**9**	*e*PN	**Pn**	**11 57 00.3**	**-0.6**
KRUC				*e*SN	**Sb**	**11 57 55.1**	**+2.9**
FETA	**Feichten**	**3.66**	**296**	Pg	**Pg**	**11 57 13.9**	**-1.8**
	comp=Z,0.7nm,0.2s						
FETA				*e*Sn	**Sn**	**11 57 47.8**	**+2.5**
	comp=Z,3.2nm,0.5s						
VYHS	**Vyhne**	**3.72**	**36**	*e*PN	**Pn**	**11 57 02.2**	**-0.7**
KHC	**Kasperske Hory**	**3.84**	**340**	*e*PN	**Pn**	**11 57 04.2**	**-0.4**
KHC				*e*SN	**Sn**	**11 57 46.8**	**-2.9**
CLL	**Collm**	**6.03**	**345**	*e*Sg	**Sg**	**11 59 19.0**	**+0.1**

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*ISCJB **17** 12:33:45.1±0.3, 21°.01N±0°.03×94°.70W±0°.04, h10^{km}, mb3.3/4, Error ellipse: s-maj=5.8km s-min=3.6km az=7.7*
*IDC **17** 12:33:47.6±1.5, 20°.98N×94°.67W, h0^{km}, mb3.5/4, mb1 4.0/7, mb1mx3.7/35, mbtmp3.6/7, ML3.9/3, MS2.0/1, Ms1 2.0/1, ms1mx1.9/27, Error ellipse: s-maj=64.4km s-min=22.4km az=69.0*
*NEIC **17** 12:33:47.7±2.5, 21°.04N×94°.71W, h15^{km}±6^{km}, mb4.2/5, MD4.0(MEX), Error ellipse: s-maj=8.8km s-min=6.8km az=153.0*
*MEX **17** 12:33:52.2±0.5, 20°.91N×94°.74W, h15^{km}, MD4.0*
*ANF **17** 12:34:05.1±2.5, 22°.34N×94°.77W, h15^{km}, Error ellipse: s-maj=26.2km s-min=16.5km az=173.0*
ISC 17 12:33:47.1±0.7**, 20°.99N**±0°.05×**94°.76W**±0°.05**, h10**^{km}**, n52,** σ**1^{s}.94**/63**, mb3.3**/4**, Bay of Campeche**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LVIG	**Laguna Verde**	**2.00**	**231**	*e*Pn	**Pn**	**12 34 21.9**	**+0.9**
LVIG				*e*Pn	**Pn**	**12 34 22.2**	**+1.2**
LVIG				*e*Sn	**Sn**	**12 34 44.4**	**-1.7**
LVIG				*e*Sn	**Sb**	**12 34 44.9**	**-3.7**
LVIG	**Laguna Verde**	**2.00**	**231**	*e*P	**Pn**	**12 34 22.2**	**+1.2**
LVIG				*e*S	**Sn**	**12 34 44.8**	**-1.4**
CMIG	**Matias Romero**	**3.88**	**182**	Pn	**Pn**	**12 34 47.7**	**+0.8**
	6.0nm,0.3s,baz=0.9,slow=7.3,SNR=97						
CMIG				Sn	**Sn**	**12 35 29.8**	**-2.8**
	17nm,0.3s,baz=237,slow=22,SNR=44						
CMIG				LR	LR	12 36 57.6	
	comp=Z,24nm,21.3s,baz=330,slow=49						
CMIG	**Matias Romero**	**3.88**	**182**	*e*P	**Pn**	**12 34 47.7**	**+0.8**
CMIG				*e*S	**Sn**	**12 35 30.6**	**-2.0**
VHO	**Vista Hermosa**	**4.32**	**206**	*e*Pn	**Pn**	**12 34 55.3**	**+2.2**
VHO	**Vista Hermosa**	**4.32**	**206**	*e*P	**Pn**	**12 34 54.5**	**+1.4**
VHO				*i* S	**Sn**	**12 35 43.1**	**-0.6**
MYIG	**Mrida**	**4.69**	**90**	*e*Pn	**Pn**	**12 34 57.5**	**-0.4**
MYIG	**Mrida**	**4.69**	**90**	*i* P	**Pn**	**12 34 59.8**	**+1.8**
TLIG	**Tlapa**	**4.96**	**227**	*e*Pn	**Pn**	**12 35 02.2**	**+0.4**
TLIG				*e*Sn	**Sn**	**12 36 00.0**	**+0.8**
CCIG	**Comitan**	**5.30**	**152**	*e*Pn	**Pn**	**12 35 06.4**	**-0.1**
CCIG				*e*Sn	**Sn**	**12 36 06.7**	**-1.1**
LNIG	**Linares**	**5.83**	**313**	*e*Pn	**Pn**	**12 35 14.4**	**+0.8**
LNIG				*e*Sn	**Sn**	**12 36 17.1**	**-3.3**
TEIG	**Tepich**	**6.12**	**96**	*e*Pn	**Pn**	**12 35 17.9**	**+0.3**
TEIG				*e*Sn	**Sn**	**12 36 23.1**	**-4.6**
APG	**El Apazote**	**7.22**	**145**	Pn	**Pn**	**12 35 34.0**	**+1.0**
	1.6nm,0.3s,baz=323,slow=15,SNR=3.9						
APG				Sn	Sn	12 36 45.9	-9.3
	7.4nm,0.3s,baz=234,slow=20,SNR=17						
ZAIG	**Zacatecas**	**7.46**	**285**	*e*Pn	**Pn**	**12 35 34.2**	**-2.1**
833A	**Chaparral WMA,**	**8.43**	**331**	*e*Pn	**Pn**	**12 35 47.5**	**-1.8**
833A	**Chaparral WMA,**	**8.43**	**331**	P	**Pn**	**12 35 50.8**	**+1.5**
	baz=149						
833A				S	Sn	12 37 13.8	-11
	baz=149						
435B	**Jarrell**	**10.07**	**346**	P	**Pn**	**12 36 13.7**	**+1.8**
	baz=164,SNR=13						
435B				S	Sn	12 37 52.9	-12
	baz=164						
JCT	**Junction City**	**10.48**	**335**	*e*Pn	**Pn**	**12 36 18.0**	**+0.5**
JCT	**Junction City**	**10.48**	**335**	P	**Pn**	**12 36 19.6**	**+2.1**
	baz=153,SNR=12						
WHTX	**Lake Whitney,**	**11.22**	**348**	*e*Pn	**Pn**	**12 36 27.2**	**-0.3**
WHTX	**Lake Whitney,**	**11.22**	**348**	P	**Pn**	**12 36 29.2**	**+1.7**
	baz=167,SNR=14						
TXAR	**Lajitas Array**	**11.57**	**318**	Pn	**Pn**	**12 36 35.9**	**+3.4**
	0.3nm,0.3s,baz=141,slow=16,SNR=17						
TXAR				Sn	**Sn**	**12 38 36.1**	**-5.8**
	0.2nm,0.3s,baz=107,slow=15,SNR=3.8						
TX31	**Lajitas Ar. Si**	**11.57**	**318**	*e*Pn	**Pn**	**12 36 35.8**	**+3.3**
VBMS	**Vicksburg**	**11.80**	**18**	S	Sn	12 38 35.4	-12
	baz=200						
ABTX	**Abilene, Hawle**	**12.38**	**340**	*e*Pn	**Pn**	**12 36 42.9**	**-0.5**
ABTX	**Abilene, Hawle**	**12.38**	**340**	P	**Pn**	**12 36 43.4**	**0.0**
	baz=158,SNR=12						
WLAR	**White Oak Lake**	**12.73**	**6**	*e*Pn	**Pn**	**12 36 48.2**	**0.0**
MIAR	**Mount Ida**	**13.54**	**4**	*e*Pn	**Pn**	**12 36 58.6**	**-0.6**
MIAR	**Mount Ida**	**13.54**	**4**	P	**Pn**	**12 36 58.7**	**-0.5**
	baz=184,SNR=18						
X40A	**Basin Creek Fa**	**13.55**	**7**	*e*Pn	**Pn**	**12 36 58.2**	**-1.2**
X40A	**Basin Creek Fa**	**13.55**	**7**	P	**Pn**	**12 36 58.9**	**-0.5**
	baz=188						
X37A	**Clayton**	**13.56**	**358**	*e*Pn	**Pn**	**12 36 59.2**	**-0.3**
WMOK	**Wichita Mounta**	**14.14**	**346**	*e*Pn	**Pn**	**12 37 07.0**	**-0.5**
WMOK	**Wichita Mounta**	**14.14**	**346**	P	**Pn**	**12 37 06.8**	**-0.8**
	baz=164,SNR=7.5						
W39A	**Magazine**	**14.18**	**3**	*e*Pn	**Pn**	**12 37 08.6**	**+0.7**
W39A	**Magazine**	**14.18**	**3**	P	**Pn**	**12 37 08.1**	**+0.1**
	baz=184,SNR=35						
W41B	**Gary Mavity, V**	**14.30**	**8**	P	**Pn**	**12 37 09.4**	**-0.3**
	baz=189,SNR=14						
WHAR	**Wooly Hollow**	**14.41**	**8**	*e*Pn	**Pn**	**12 37 10.6**	**-0.6**
MSTX	**Muleshoe**	**14.74**	**333**	*e*Pn	**Pn**	**12 37 14.9**	**-0.9**
MSTX	**Muleshoe**	**14.74**	**333**	P	**Pn**	**12 37 15.8**	**-0.1**
	baz=149,SNR=5.2						
456A	**Hilliard**	**15.00**	**47**	*e*Sn	**Sn**	**12 40 02.3**	**-3.2**
FCAR	**Ozark Folk Cen**	**15.02**	**8**	*e*Pn	**Pn**	**12 37 18.9**	**-0.6**
AMTX	**Amarillo**	**15.12**	**338**	*e*Pn	**Pn**	**12 37 20.8**	**-0.1**
	15nm,0.4s						
HHAR	**Hobbs**	**15.25**	**3**	*e*Pn	**Pn**	**12 37 21.8**	**-0.7**
	9.3nm,0.3s						
SDCO	**Great Sand Dun**	**19.11**	**333**	*e*P	**P**	**12 38 08.9**	**-1.6**
	2.2nm,1.3s						
PD31	**Pinedale Array**	**25.01**	**334**	*e*P	**P**	**12 39 13.5**	**+2.1**
PDAR	**Pinedale Array**	**25.01**	**334**	P	**P**	**12 39 13.5**	**+2.1**
	0.3nm,0.4s,baz=144,slow=11,SNR=4.9						
NV01	**Mina Array Sit**	**26.71**	**316**	*e*P	**P**	**12 39 30.2**	**+3.3**
NVAR	**Mina Array Bea**	**26.71**	**316**	P	**P**	**12 39 30.2**	**+3.3**
	0.6nm,0.8s,baz=121,slow=9.3,SNR=5.0						
YKA	**Yellowknife Ar**	**43.65**	**347**	P	**P**	**12 41 52.6**	**+1.0**
	0.7nm,0.5s,baz=151,slow=7.9,SNR=10						
YKB5	**Yellowknife Ar**	**43.65**	**347**	*e*P	**P**	**12 41 52.6**	**+1.0**
ILAR	**Eielson Array**	**55.41**	**336**	P	**P**	**12 43 25.3**	**+3.9**
	0.1nm,0.5s,baz=119,slow=6.6,SNR=4.1						

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*ISCJB **17** 12:34:55.8±0.7, 18°.80N±0°.08×145°.9E±0°.3, h200^{km}, mb3.5/6, Error ellipse: s-maj=33.5km s-min=11.3km az=2.8*
*IDC **17** 12:34:58.3±2.6, 18°.82N×145°.78E, h211^{km}±27^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.2/43, mbtmp4.0/9, Error ellipse: s-maj=41.2km s-min=13.8km az=98.0*
ISC 17 12:34:56.8±0.8**, 18°.72N**±0°.09×**145°.7E**±0°.3**, h200**^{km}**, n15,** σ**1^{s}.85**/10**, mb3.5**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.16**	**189**	P	**Pn**	**12 36 14.6**	**+1.2**
	4.8nm,0.3s,baz=24,slow=20,SNR=5.3						
GUMO				S	**Sn**	**12 37 10.5**	**-3.3**
	7.4nm,0.3s,baz=357,slow=18,SNR=3.5						
JHJ	**Hachijo jima 2**	**15.30**	**341**	P	**P**	**12 38 23.5**	**+0.5**
	5.5nm,0.3s,baz=83,slow=23,SNR=3.4						
MJAR	**Matsushiro Arr**	**18.95**	**341**	P	**P**	**12 39 03.1**	**+0.2**
	0.0nm,0.3s,baz=166,slow=8.9,SNR=3.2						
H11S3	**WAKE ISLAND Hy**	**19.88**	**87**	T	T	13 00 37.8	
	baz=274,slow=75,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**19.89**	**87**	T	T	13 00 34.2	
	baz=274,slow=75,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**19.90**	**87**	T	T	13 00 35.7	
	baz=274,slow=75,SNR=5.2						
H11N1	**WAKE ISLAND Hy**	**20.02**	**84**	T	T	13 00 42.1	
	baz=268						
H11N2	**WAKE ISLAND Hy**	**20.03**	**84**	T	T	13 00 45.0	
	baz=268						
H11N3	**WAKE ISLAND Hy**	**20.04**	**84**	T	T	13 00 45.5	
	baz=268						
WRA	**Warramunga Arr**	**40.01**	**197**	P	**P**	**12 42 14.1**	**+1.7**
	1.2nm,0.3s,baz=1.8,slow=6.8,SNR=63						
ASAR	**Alice Springs**	**43.67**	**196**	P	**P**	**12 42 43.6**	**+1.5**
	0.2nm,0.3s,baz=17,slow=12,SNR=12						
ILAR	**Eielson Array**	**63.62**	**26**	P	**P**	**12 45 05.3**	**-0.9**
	0.7nm,0.8s,baz=273,slow=4.7,SNR=6.2						
YKA	**Yellowknife Ar**	**77.97**	**28**	P	**P**	**12 46 31.3**	**-1.3**
	0.4nm,0.6s,baz=285,slow=5.5,SNR=3.5						
NVAR	**Mina Array Bea**	**83.12**	**52**	P	**P**	**12 47 02.2**	**+1.4**
	0.5nm,0.5s,baz=273,slow=5.8,SNR=7.1						
FINES	**FINESS Array B**	**86.87**	**335**	P	**P**	**12 47 17.4**	**-1.3**
	3.7nm,1.0s,baz=64,slow=8.7,SNR=4.0						

IDC 17 12:42:03.5±7.1**, 3°.76N**×**127°.38E, h109**^{km}±83^{km}**, mb3.6**/3**, mb1 3.7**/4**, mb1mx3.2**/30**, mbtmp3.9**/4**, ML3.7**/1**, MS2.3**/1**, Ms1 2.3**/1**, ms1mx2.1**/21**, Error ellipse: s-maj=152.3km s-min=25.0km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.74**	**331**	LR	LR	12 44 39.3	
	comp=Z,40nm,18.9s,baz=158,slow=42						
SIJI	**Sorong**	**6.02**	**140**	P	Pn	12 43 30.6	+0.5
	1.7nm,0.3s,baz=322,slow=20,SNR=3.7						
SIJI				S	Sn	12 44 38.0	+0.1
	0.6nm,0.3s,baz=319,slow=20,SNR=2.8						
WRA	**Warramunga Arr**	**24.53**	**164**	P	P	12 47 12.5	-0.6
	3.9nm,0.5s,baz=346,slow=13,SNR=7.1						
ASAR	**Alice Springs**	**28.00**	**167**	P	P	12 47 44.9	+0.6
	0.5nm,0.3s,baz=346,slow=12,SNR=7.4						
MKAR	**Makanchi Array**	**57.90**	**325**	P	P	12 51 44.1	-0.1
	0.4nm,0.3s,baz=128,slow=8.6,SNR=5.8						
MKAR				pP	sP	12 52 21.8	-0.2
	0.4nm,0.5s,baz=122,slow=8.6,SNR=3.1						

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*ISCJB **17** 12:52:21.0±0.3, 43°.53N±0°.02×13°.71E±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.7km az=155.5*
*ROM **17** 12:52:21.0±0.3, 43°.51N±0°.01×13°.68E±0°.03, h8^{km}±1^{km}, ML2.8/35, Error ellipse: s-maj=2.5km s-min=0.7km az=55.0*
ISC 17 12:52:21.4±0.8**, 43°.50N**±0°.02×**13°.70E**±0°.02**, h9**^{km}±6^{km}**, n85,** σ**0^{s}.90**/87**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.09**	**307**	P	**Pg**	**12 52 22.9**	**-0.9**
AOI				S	**Sg**	**12 52 24.9**	**-0.6**
AOI				AML	AML		
	comp=E,17500µm,0.6s						
AOI				AML	AML		
	comp=N,19600µm,0.6s						
PCRO	**Pietralacroce**	**0.17**	**313**	P	**Pg**	**12 52 24.4**	**-0.5**
PCRO				S	**Sg**	**12 52 27.5**	**+0.2**
PCRO				AML	AML		
	comp=E,16750µm,0.8s						
PCRO				AML	AML		
	comp=N,12800µm,1.6s						
PCRO				AML	AML		
	comp=E,16750µm,0.8s						
PCRO				AML	AML		
	comp=N,12800µm,1.6s						
PCRO				AML	AML		
	comp=E,16750µm,0.8s						
PCRO				AML	AML		
	comp=N,12765µm,1.6s						
PCRO				AML	AML		
	comp=N,12765µm,1.6s						
PCRO				AML	AML		
	comp=E,16750µm,0.8s						

PCRO			AML	AML		
	comp=N,12805µm,1.6s					
PCRO			AML	AML		
	comp=E,16750µm,0.8s					
CIMA	**Civitanova Mar**	**0.19 186**	P	**Pg**	**12 52 25.9**	**+0.5**
CIMA			S	**Sg**	**12 52 30.9**	**+2.8**
CIMA			AML	AML		
	comp=E,23800µm,0.3s					
CIMA			AML	AML		
	comp=N,21450µm,0.4s					
CIMA			AML	AML		
	comp=E,23850µm,0.3s					
CIMA			AML	AML		
	comp=N,21500µm,0.4s					
CIMA			AML	AML		
	comp=E,23850µm,0.3s					
CIMA			AML	AML		
	comp=N,21500µm,0.4s					
CIMA			AML	AML		
	comp=N,21500µm,0.4s					
CIMA			AML	AML		
	comp=E,23850µm,0.3s					
CADA	**Capodarco di F**	**0.30 171**	P	**Pg**	**12 52 27.8**	**+0.3**
CADA			S	**Sb**	**12 52 34.0**	**-0.1**
CADA			AML	AML		
	comp=E,4640µm,0.7s					
CADA			AML	AML		
	comp=N,3645µm,0.4s					
CADA			AML	AML		
	comp=E,4640µm,0.7s					
CADA			AML	AML		
	comp=N,3645µm,0.4s					
CING	**Cingoli**	**0.39 252**	P	**Pg**	**12 52 28.6**	**-0.4**
CING			S	**Sb**	**12 52 35.3**	**-1.2**
CING			AML	AML		
	comp=E,1175µm,0.6s					
CING			AML	AML		
	comp=N,1240µm,0.2s					
CING			AML	AML		
	comp=E,1175µm,0.6s					
CING			AML	AML		
	comp=N,1240µm,0.2s					
CING			AML	AML		
	comp=E,1175µm,0.6s					
SENI	**Senigallia**	**0.40 302**	P	**Pg**	**12 52 29.4**	**+0.2**
SENI			AML	AML		
	comp=E,7590µm,0.2s					
SENI			AML	AML		
	comp=N,6725µm,0.3s					
SENI			AML	AML		
	comp=E,1182µm,0.3s					
SENI			AML	AML		
	comp=N,1755µm,0.9s					
SENI			AML	AML		
	comp=E,7575µm,0.2s					
SENI			AML	AML		
	comp=N,6730µm,0.3s					
EL6	**Elcito**	**0.47 249**	P	**Pg**	**12 52 30.1**	**-0.4**
EL6			AML	AML		
	comp=E,1500µm,1.0s					
EL6			AML	AML		
	comp=N,1448µm,0.4s					
EL6			AML	AML		
	comp=E,1505µm,1.0s					
EL6			AML	AML		
	comp=N,1446µm,0.4s					
EL6			AML	AML		
	comp=E,1500µm,1.0s					
EL6			AML	AML		
	comp=N,1445µm,0.4s					
EL6			AML	AML		
	comp=N,1445µm,0.4s					
EL6			AML	AML		
	comp=E,1500µm,1.0s					
EL6			AML	AML		
	comp=N,1450µm,0.4s					
GUMA	**Gualdo di Mace**	**0.47 158**	P	**Pb**	**12 52 31.2**	**-0.6**
GUMA			AML	AML		
	comp=E,4100µm,0.5s					
GUMA			AML	AML		
	comp=N,3095µm,0.4s					
GUMA			AML	AML		
	comp=E,3725µm,0.5s					
GUMA			AML	AML		
	comp=N,3110µm,1.3s					
GUMA			AML	AML		
	comp=E,4100µm,0.5s					
GUMA			AML	AML		
	comp=N,3095µm,0.4s					
GUMA			AML	AML		
	comp=E,3725µm,0.5s					
GUMA			AML	AML		
	comp=N,3110µm,1.3s					
GUMA			AML	AML		
	comp=E,3725µm,0.5s					
GUMA			AML	AML		
	comp=E,4100µm,0.5s					
GUMA			AML	AML		
	comp=N,3110µm,1.3s					
GUMA			AML	AML		
	comp=N,3095µm,0.4s					
COR1	**Corinaldo**	**0.53 285**	P	**Pg**	**12 52 31.6**	**0.0**
COR1			AML	AML		
	comp=E,822µm,1.0s					
COR1			AML	AML		
	comp=N,1425µm,1.3s					
COR1			AML	AML		
	comp=E,814µm,1.0s					
COR1			AML	AML		
	comp=N,1430µm,1.3s					
COR1			AML	AML		
	comp=E,2018µm,0.9s					
COR1			AML	AML		
	comp=N,1572µm,1.0s					
COR1			AML	AML		
	comp=N,1572µm,1.0s					
COR1			AML	AML		
	comp=E,2018µm,0.9s					
COR1			AML	AML		
	comp=N,1573µm,1.0s					
COR1			AML	AML		
	comp=E,2014µm,0.9s					
CSP1	**Cessapalombo**	**0.54 222**	P	**Pg**	**12 52 31.4**	**-0.5**
CSP1			AML	AML		
	comp=E,1392µm,0.7s					
CSP1			AML	AML		
	comp=N,1518µm,0.5s					
CSP1			AML	AML		
	comp=E,1397µm,0.7s					
CSP1			AML	AML		
	comp=N,1520µm,0.5s					
CSP1			AML	AML		
	comp=E,1390µm,0.7s					
CSP1			AML	AML		
	comp=N,1520µm,0.5s					
CSP1			AML	AML		
	comp=E,1390µm,0.7s					
CSP1			AML	AML		
	comp=N,1520µm,0.5s					
CSP1			AML	AML		
	comp=E,1390µm,0.7s					
ARVD	**Arcevia**	**0.55 270**	P	**Pg**	**12 52 31.4**	**-0.7**
ARVD			S	**Sb**	**12 52 40.5**	**-0.8**
ARVD			AML	AML		
	comp=E,393µm,0.3s					
ARVD			AML	AML		
	comp=N,460µm,0.6s					
ARVD			AML	AML		
	comp=E,392µm,0.3s					
ARVD			AML	AML		
	comp=N,460µm,0.6s					
ARVD			AML	AML		
	comp=N,460µm,0.6s					
ARVD			AML	AML		
	comp=E,392µm,0.3s					
ARVD			AML	AML		
	comp=N,460µm,0.6s					
FDMO	**Fiordimonte**	**0.64 224**	P	**Pg**	**12 52 33.1**	**-0.7**
FDMO			AML	AML		
	comp=E,1013µm,0.2s					
FDMO			AML	AML		
	comp=N,685µm,0.8s					
FDMO			AML	AML		
	comp=E,1013µm,0.2s					
FDMO			AML	AML		
	comp=N,685µm,0.8s					
FDMO			AML	AML		
	comp=N,685µm,0.8s					
FDMO			AML	AML		
	comp=E,1013µm,0.2s					
FDMO			AML	AML		
	comp=N,685µm,0.8s					
MPAG	**Monte Paganucc**	**0.70 281**	P	**Pg**	**12 52 34.3**	**-0.6**
MPAG			AML	AML		
	comp=E,575µm,0.5s					
MPAG			AML	AML		
	comp=N,528µm,0.3s					
MPAG			AML	AML		
	comp=E,575µm,0.5s					
MPAG			AML	AML		
	comp=N,528µm,0.3s					
MPAG			AML	AML		
	comp=E,575µm,0.5s					
MPAG			AML	AML		
	comp=N,528µm,0.3s					
MPAG			AML	AML		
	comp=E,575µm,0.5s					
FSSB	**Fossombrone**	**0.70 287**	P	**Pg**	**12 52 34.2**	**-0.6**
FSSB			AML	AML		
	comp=E,1205µm,0.4s					
FSSB			AML	AML		
	comp=N,1475µm,0.4s					
FSSB			AML	AML		
	comp=E,1205µm,0.4s					
FSSB			AML	AML		
	comp=N,1470µm,0.4s					
FSSB			AML	AML		
	comp=N,1470µm,0.4s					
FSSB			AML	AML		
	comp=E,1205µm,0.4s					
FSSB			AML	AML		
	comp=N,1470µm,0.4s					
FOSV	**Fossato di Vic**	**0.71 254**	P	**Pg**	**12 52 33.9**	**-1.3**
FOSV			AML	AML		
	comp=E,668µm,0.4s					
FOSV			AML	AML		
	comp=N,734µm,0.3s					
FOSV			AML	AML		
	comp=N,734µm,0.3s					
FOSV			AML	AML		
	comp=E,668µm,0.4s					
FOSV			AML	AML		
	comp=E,668µm,0.4s					
CESI	**CESI - Serrava**	**0.76 230**	P	**Pg**	**12 52 35.3**	**-0.8**
CESI			AML	AML		
	comp=E,296µm,1.4s					
CESI			AML	AML		
	comp=N,542µm,0.3s					
CESI			AML	AML		
	comp=E,296µm,1.4s					
CESI			AML	AML		
	comp=N,542µm,0.3s					
CESI			AML	AML		
	comp=E,296µm,1.4s					
CESI			AML	AML		
	comp=N,542µm,0.3s					
CESI			AML	AML		
	comp=E,296µm,1.4s					
PESA	**Pesaro**	**0.77 306**	P	**Pb**	**12 52 36.4**	**-0.5**
PESA			AML	AML		
	comp=E,1047µm,0.3s					
PESA			AML	AML		
	comp=N,1060µm,0.3s					
PESA			AML	AML		
	comp=E,1047µm,0.3s					
PESA			AML	AML		
	comp=N,1060µm,0.3s					
PESA			AML	AML		
	comp=E,1047µm,0.3s					
PESA			AML	AML		
	comp=N,1060µm,0.3s					
PESA			AML	AML		
	comp=E,1047µm,0.3s					
PESA			AML	AML		
	comp=N,1060µm,0.3s					
NRCA	**Norcia**	**0.79 213**	P	**Pg**	**12 52 35.6**	**-1.0**
NRCA			AML	AML		
	comp=E,1295µm,1.0s					
NRCA			AML	AML		
	comp=N,1505µm,0.6s					
NRCA			AML	AML		
	comp=E,1295µm,1.0s					
NRCA			AML	AML		
	comp=N,1505µm,0.6s					
NRCA			AML	AML		
	comp=N,1505µm,0.6s					
NRCA			AML	AML		
	comp=E,1295µm,1.0s					
NARO	**Abbazia di Nar**	**0.82 278**	AML	AML		
	comp=E,343µm,0.9s					
NARO			AML	AML		
	comp=E,343µm,0.9s					
NARO			AML	AML		
	comp=N,292µm,1.1s					
NARO			AML	AML		
	comp=E,343µm,0.9s					
NARO			AML	AML		
	comp=N,292µm,1.1s					
NARO			AML	AML		
	comp=N,292µm,1.1s					
ATFO	**Monte Foce - G**	**0.83 261**	P	**Pg**	**12 52 36.9**	**-0.5**
ATFO			AML	AML		
	comp=E,742µm,1.1s					
ATFO			AML	AML		
	comp=N,793µm,0.4s					
ATFO			AML	AML		
	comp=E,742µm,1.1s					
ATFO			AML	AML		
	comp=N,794µm,0.4s					
ATFO			AML	AML		
	comp=N,794µm,0.4s					
ATFO			AML	AML		
	comp=E,742µm,1.1s					
ATFO			AML	AML		
	comp=N,794µm,0.4s					
PIEI	**Pieia**	**0.85 273**	P	**Pg**	**12 52 36.5**	**-1.2**
PIEI			AML	AML		
	comp=E,454µm,0.6s					
PIEI			AML	AML		
	comp=N,398µm,1.2s					
PIEI			AML	AML		
	comp=E,454µm,0.6s					
PIEI			AML	AML		
	comp=N,398µm,1.2s					
PIEI			AML	AML		
	comp=N,398µm,1.2s					
PIEI			AML	AML		
	comp=E,454µm,0.6s					
PIEI			AML	AML		
	comp=E,454µm,0.6s					
TERO	**Teramo**	**0.88 185**	P	**Pg**	**12 52 37.6**	**-0.7**
TERO			AML	AML		
	comp=E,1020µm,0.3s					
TERO			AML	AML		
	comp=N,692µm,0.4s					
TERO			AML	AML		
	comp=E,410µm,0.3s					
TERO			AML	AML		
	comp=N,284µm,0.4s					
TERO			AML	AML		
	comp=E,1023µm,0.3s					
TERO			AML	AML		
	comp=N,692µm,0.4s					
TERO			AML	AML		
	comp=E,410µm,0.3s					
TERO			AML	AML		
	comp=N,284µm,0.4s					
TERO			AML	AML		
	comp=E,1023µm,0.3s					
TERO			AML	AML		
	comp=N,284µm,0.4s					
TERO			AML	AML		
	comp=N,692µm,0.4s					
TERO			AML	AML		
	comp=E,410µm,0.3s					
TERO			AML	AML		
	comp=E,1025µm,0.3s					
TERO			AML	AML		
	comp=N,284µm,0.4s					
TERO			AML	AML		
	comp=N,692µm,0.4s					
ASSB	**Assisi San Ben**	**0.89 240**	P	**Pg**	**12 52 37.3**	**-1.1**
ASSB			AML	AML		
	comp=E,1485µm,0.5s					
ASSB			AML	AML		
	comp=N,1265µm,0.4s					
ASSB			AML	AML		
	comp=E,1485µm,0.5s					
ASSB			AML	AML		
	comp=N,1265µm,0.4s					
ASSB			AML	AML		
	comp=N,1265µm,0.4s					
ASSB			AML	AML		
	comp=E,1485µm,0.5s					
ASSB			AML	AML		
	comp=N,1265µm,0.4s					
MURB	**Monte Urbino**	**0.89 255**	AML	AML		
	comp=N,3230µm,1.4s					
MURB			AML	AML		
	comp=E,2545µm,0.3s					
MURB			AML	AML		
	comp=N,3075µm,0.8s					
MURB			AML	AML		
	comp=E,3145µm,0.3s					
MURB			AML	AML		
	comp=E,2545µm,0.3s					
MURB			AML	AML		
	comp=N,3075µm,0.8s					
MURB			AML	AML		
	comp=E,3145µm,0.3s					
MURB			AML	AML		
	comp=N,3230µm,1.4s					
MURB			AML	AML		
	comp=E,2545µm,0.3s					
MURB			AML	AML		
	comp=N,3075µm,0.8s					
MURB			AML	AML		
	comp=N,3230µm,1.4s					
MURB			AML	AML		
	comp=E,3145µm,0.3s					
MURB			AML	AML		
	comp=E,3145µm,0.3s					
MURB			AML	AML		
	comp=E,2540µm,0.3s					
MURB			AML	AML		
	comp=N,3075µm,0.8s					
LNSS	**Leonessa**	**1.01 209**	AML	AML		
	comp=N,1265µm,0.7s					
LNSS			AML	AML		
	comp=E,1220µm,0.5s					
LNSS			AML	AML		
	comp=N,1265µm,0.7s					
LNSS			AML	AML		
	comp=E,1225µm,0.5s					
LNSS			AML	AML		
	comp=N,1265µm,0.7s					
LNSS			AML	AML		
	comp=E,1225µm,0.5s					
LNSS			AML	AML		
	comp=N,1265µm,0.7s					
LNSS			AML	AML		
	comp=E,1225µm,0.5s					
ATTE	**AVT- Monte Tez**	**1.03 254**	AML	AML		
	comp=E,564µm,1.6s					
ATTE			AML	AML		
	comp=E,564µm,1.6s					
ATTE			AML	AML		
	comp=N,473µm,0.4s					
ATTE			AML	AML		
	comp=N,473µm,0.4s					
ATTE			AML	AML		
	comp=N,473µm,0.4s					
ATTE			AML	AML		
	comp=E,564µm,1.6s					
CPGN	**Carpegna, Ital**	**1.05 287**	AML	AML		
	comp=E,565µm,0.5s					
CPGN			AML	AML		
	comp=N,406µm,1.5s					
BADI	**Badiali**	**1.06 271**	P	**Pg**	**12 52 41.4**	**-0.3**
PARC	**Parchiule**	**1.07 279**	P	**Pg**	**12 52 41.5**	**-0.5**
PARC			AML	AML		
	comp=E,344µm,0.3s					
PARC			AML	AML		
	comp=N,456µm,0.4s					
PARC			AML	AML		
	comp=E,344µm,0.3s					
PARC			AML	AML		
	comp=N,456µm,0.4s					
PARC			AML	AML		
	comp=E,344µm,0.3s					
PARC			AML	AML		
	comp=N,456µm,0.4s					
PARC			AML	AML		
	comp=N,456µm,0.4s					
MOMA	**Monte Martano**	**1.08 230**	AML	AML		
	comp=E,577µm,0.5s					
MOMA			AML	AML		
	comp=E,627µm,0.6s					
MOMA			AML	AML		
	comp=N,758µm,1.0s					
MOMA			AML	AML		
	comp=N,1440µm,1.5s					
MOMA			AML	AML		
	comp=E,627µm,0.6s					
MOMA			AML	AML		
	comp=N,758µm,1.0s					
MOMA			AML	AML		
	comp=E,577µm,0.5s					
MOMA			AML	AML		
	comp=N,1440µm,1.5s					
MOMA			AML	AML		
	comp=N,758µm,1.0s					
MOMA			AML	AML		
	comp=E,627µm,0.6s					
MOMA			AML	AML		
	comp=E,577µm,0.5s					
MOMA			AML	AML		
	comp=N,758µm,1.0s					
MOMA			AML	AML		
	comp=N,1438µm,1.5s					
DUGI	**Dugi Otok**	**1.10 63**	*e*Pn	**Pg**	**12 52 41.8**	**-0.8**
VCEL	**Villa Celiera**	**1.11 175**	P	**Pg**	**12 52 42.7**	**0.0**
VCEL			AML	AML		
	comp=E,772µm,0.8s					
VCEL			AML	AML		
	comp=N,720µm,1.2s					
VCEL			AML	AML		
	comp=E,772µm,0.8s					
VCEL			AML	AML		
	comp=N,719µm,1.2s					
VCEL			AML	AML		
	comp=N,719µm,1.2s					
VCEL			AML	AML		
	comp=E,772µm,0.8s					
VCEL			AML	AML		
	comp=N,719µm,1.2s					
VCEL			AML	AML		
	comp=E,772µm,0.8s					
ARRO	**Arrone**	**1.14 217**	AML	AML		
	comp=E,448µm,1.2s					
ARRO			AML	AML		
	comp=E,449µm,1.2s					
ARRO			AML	AML		
	comp=N,343µm,0.2s					
ARRO			AML	AML		
	comp=N,343µm,0.2s					
ARRO			AML	AML		
	comp=N,343µm,0.2s					
ARRO			AML	AML		
	comp=E,448µm,1.2s					
ARRO			AML	AML		
	comp=E,448µm,1.2s					
AQU	**L'Aquila**	**1.16 191**	*e*Pn	**Pn**	**12 52 44.0**	**+0.1**
CAFI	**Castiglion Fio**	**1.27 263**	P	**Pg**	**12 52 46.2**	**+0.4**
CAFI			AML	AML		
	comp=E,208µm,0.8s					
CAFI			AML	AML		
	comp=N,176µm,1.4s					
CAFI			AML	AML		
	comp=E,208µm,0.8s					
CAFI			AML	AML		
	comp=N,176µm,1.4s					
CAFI			AML	AML		
	comp=E,208µm,0.8s					
MGAB	**Montegabbione**	**1.30 244**	P	**Pb**	**12 52 45.9**	**-0.1**
MGAB			AML	AML		
	comp=E,680µm,0.4s					
MGAB			AML	AML		
	comp=N,628µm,0.5s					
MGAB			AML	AML		
	comp=E,680µm,0.4s					
MGAB			AML	AML		
	comp=N,628µm,0.5s					
FIAM	**Fiamignano**	**1.30 199**	P	**Pn**	**12 52 44.0**	**-1.8**

NVLJ	**Novalja**	**1.36**	**38**	*e*Pn	**Pn**	**12 52 45.3**	**-1.2**
NVLJ				Sn	**Sb**	**12 53 03.4**	**-1.2**
SFI	**Santa Sofia**	**1.40**	**288**	P	**Pg**	**12 52 48.2**	**-0.1**
ASQU	**Asqua**	**1.42**	**283**	P	**Pg**	**12 52 48.8**	**+0.2**
ASQU				AML	AML		
	comp=E,188μm,1.2s						
ASQU				AML	AML		
	comp=N,235μm,1.0s						
ASQU				AML	AML		
	comp=E,188μm,1.2s						
ASQU				AML	AML		
	comp=N,235μm,1.0s						
ASQU				AML	AML		
	comp=E,188μm,1.2s						
ZIRJ	**Zirje**	**1.42**	**83**	*e*Pn	**Pn**	**12 52 46.5**	**-0.9**
ZIRJ				Sn	**Sb**	**12 53 06.5**	**+0.2**
SACS	**San Casciano d**	**1.46**	**244**	P	**Pb**	**12 52 48.7**	**-0.1**
SACS				AML	AML		
	comp=E,150μm,1.2s						
SACS				AML	AML		
	comp=N,176μm,1.1s						
SACS				AML	AML		
	comp=E,146μm,0.8s						
SACS				AML	AML		
	comp=N,179μm,1.1s						
SACS				AML	AML		
	comp=N,179μm,1.1s						
SACS				AML	AML		
	comp=N,176μm,1.1s						
SACS				AML	AML		
	comp=E,150μm,1.2s						
SACS				AML	AML		
	comp=E,146μm,0.8s						
SACS				AML	AML		
	comp=N,176μm,1.1s						
SACS				AML	AML		
	comp=E,150μm,1.2s						
SACS				AML	AML		
	comp=E,146μm,0.8s						
INTR	**Introdacqua**	**1.49**	**174**	P	**Pn**	**12 52 48.6**	**+0.2**
INTR				AML	AML		
	comp=E,470μm,0.5s						
INTR				AML	AML		
	comp=N,867μm,0.5s						
INTR				AML	AML		
	comp=E,470μm,0.5s						
INTR				AML	AML		
	comp=N,867μm,0.5s						
INTR				AML	AML		
	comp=E,470μm,0.5s						
INTR				AML	AML		
	comp=N,867μm,0.5s						
LPEL	**Lama dei Pelig**	**1.49**	**166**	P	**Pb**	**12 52 49.3**	**0.0**
LPEL				AML	AML		
	comp=E,336μm,1.0s						
LPEL				AML	AML		
	comp=N,275μm,1.5s						
LPEL				AML	AML		
	comp=N,275μm,1.5s						
LPEL				AML	AML		
	comp=E,336μm,1.0s						
MORI	**Morici**	**1.50**	**75**	*i* Pn	**Pn**	**12 52 47.8**	**-0.7**
MORI				Sn	**Sb**	**12 53 09.1**	**+0.4**
VVLD	**Villa Vallelon**	**1.62**	**182**	P	**Pb**	**12 52 51.3**	**-0.3**
CERT	**Cerreto**	**1.63**	**199**	AML	AML		
	comp=N,174μm,1.2s						
CERT				AML	AML		
	comp=E,236μm,0.5s						
CERT				AML	AML		
	comp=N,174μm,1.2s						
CERT				AML	AML		
	comp=N,174μm,1.2s						
CERT				AML	AML		
	comp=E,236μm,0.5s						
CERT				AML	AML		
	comp=E,236μm,0.5s						
UDBI	**Udbina**	**1.81**	**55**	*i* Pn	**Pn**	**12 52 53.2**	**+0.4**
UDBI				Sn	**Sn**	**12 53 15.2**	**-0.8**
RIY	**Rijeka**	**1.91**	**17**	iPn	**Pn**	**12 52 53.9**	**-0.2**
RIY				Sn	**Sb**	**12 53 19.4**	**-1.0**
RIY	**Rijeka**	**1.91**	**17**	*e*Pn	**Pn**	**12 52 53.2**	**-1.0**
CRMI	**Carmignano**	**2.00**	**279**	P	**Pn**	**12 52 56.2**	**+0.8**
CRMI				AML	AML		
	comp=E,20μm,1.1s						
CRMI				AML	AML		
	comp=N,18μm,1.5s						
CRMI				AML	AML		
	comp=E,20μm,1.1s						
CRMI				AML	AML		
	comp=N,18μm,1.5s						
CRMI				AML	AML		
	comp=E,20μm,1.1s						
CRMI				AML	AML		
	comp=N,18μm,1.5s						
HVAR	**Hvar**	**2.03**	**98**	*i* Pn	**Pn**	**12 52 55.0**	**-0.8**
HVAR				Sn	**Sn**	**12 53 22.2**	**+0.9**
CEY	**Cerknica**	**2.30**	**13**	*e*Pn	**Pn**	**12 52 59.1**	**-0.4**
SGRT	**San Giovanni R**	**2.30**	**138**	AML	AML		
	comp=E,150μm,0.7s						
SGRT				AML	AML		
	comp=E,150μm,0.7s						
SGRT				AML	AML		
	comp=N,130μm,1.6s						
SGRT				AML	AML		
	comp=N,130μm,1.6s						
SGRT				AML	AML		
	comp=N,131μm,1.6s						
SGRT				AML	AML		
	comp=E,150μm,0.7s						
MAKA	**Makarska**	**2.43**	**94**	*i* Pn	**Pn**	**12 53 01.0**	**-0.3**
MAKA				Sn	**Sn**	**12 53 31.4**	**+0.4**
OZLJ	**Ozalj**	**2.47**	**30**	*e*Pn	**Pn**	**12 53 02.4**	**+0.7**
SABO	**M.te Sabotino**	**2.48**	**358**	AML	AML		
	comp=N,162μm,1.0s						
SABO				AML	AML		
	comp=E,112μm,0.6s						
SABO				AML	AML		
	comp=N,162μm,1.0s						
SABO				AML	AML		
	comp=E,112μm,0.6s						
SABO				AML	AML		
	comp=N,162μm,1.0s						
SABO				AML	AML		
	comp=E,112μm,0.6s						
LJU	**Ljubljana**	**2.62**	**13**	*e*Pn	**Pn**	**12 53 03.8**	**0.0**
LJU	**Ljubljana**	**2.62**	**13**	AML	AML		
	comp=N,210μm,0.6s						
LJU				AML	AML		
	comp=E,178μm,1.2s						
LJU				AML	AML		
	comp=N,210μm,0.6s						
LJU				AML	AML		
	comp=E,178μm,1.2s						
CRES	**Cresnjev**	**2.65**	**28**	*e*Pn	**Pn**	**12 53 05.8**	**+1.5**
POLC	**Polcenigo**	**2.67**	**342**	AML	AML		
	comp=N,184μm,0.5s						
POLC				AML	AML		
	comp=E,176μm,0.9s						
POLC				AML	AML		
	comp=N,184μm,0.5s						
POLC				AML	AML		
	comp=E,176μm,0.9s						
POLC				AML	AML		
	comp=N,184μm,0.5s						
CGRP	**Cima Grappa**	**2.74**	**331**	AML	AML		
	comp=N,92μm,0.7s						
CGRP				AML	AML		
	comp=E,115μm,0.6s						
CGRP				AML	AML		
	comp=N,92μm,0.7s						
CGRP				AML	AML		
	comp=E,115μm,0.6s						
BLY	**Banja Luka**	**2.81**	**62**	*e*Pn	**Pb**	**12 53 12.3**	**+0.7**
PTJ	**Puntijarka**	**2.90**	**33**	ePn	**Pn**	**12 53 09.4**	**+1.5**
STON	**Ston**	**2.99**	**101**	*e*Pn	Pn	12 53 01.9	-7.1
ZEN8	**San Zeno di Mo**	**3.01**	**316**	AML	AML		
	comp=N,27400μm,0.6s						
ZEN8				AML	AML		
	comp=E,22060μm,1.5s						
ZEN8				AML	AML		
	comp=N,27450μm,0.6s						
ZEN8				AML	AML		
	comp=N,27450μm,0.6s						
ZEN8				AML	AML		
	comp=E,22060μm,1.5s						
OBKA	**Obir**	**3.07**	**11**	*e*Pn	**Pn**	**12 53 10.0**	**-0.2**
	comp=E,3.1nm,0.2s						
OBKA				Sg	**Sg**	**12 53 60.0**	**-0.1**
	comp=E,29nm,0.8s						
MYKA	**Terra Mystica**	**3.13**	**359**	*e*Pn	**Pn**	**12 53 11.2**	**+0.2**
	comp=E,3.7nm,0.5s						
MYKA				Sg	**Sg**	**12 54 03.9**	**+1.9**
	comp=E,3.7nm,0.3s						
MAGA	**Magasa**	**3.16**	**317**	AML	AML		
	comp=N,125μm,0.2s						
MAGA				AML	AML		
	comp=E,152μm,0.4s						
MAGA				AML	AML		
	comp=E,152μm,0.4s						
MAGA				AML	AML		
	comp=N,125μm,0.2s						
ABTA	**Abfaltersbach**	**3.36**	**346**	*e*Pn	**Pn**	**12 53 14.4**	**+0.3**
	comp=N,1.2nm,0.2s						
ABTA				*e*Sn	**Sn**	**12 53 52.8**	**-1.3**
	comp=N,7.6nm,0.4s						
KOSI	**Kohlern**	**3.39**	**332**	AML	AML		
	comp=E,69μm,0.8s						
KOSI				AML	AML		
	comp=E,69μm,0.8s						
KOSI				AML	AML		
	comp=N,62μm,1.5s						
KOSI				AML	AML		
	comp=N,62μm,1.5s						
KOSI				AML	AML		
	comp=E,69μm,0.8s						
MABI	**Malga Bissina**	**3.42**	**320**	AML	AML		
	comp=N,29μm,0.3s						
MABI				AML	AML		
	comp=E,20μm,1.3s						
MABI				AML	AML		
	comp=N,29μm,0.3s						
MABI				AML	AML		
	comp=E,20μm,1.3s						
MABI				AML	AML		
	comp=N,29μm,0.3s						
MABI				AML	AML		
	comp=E,20μm,1.3s						
TREB	**Trebinje**	**3.49**	**101**	*e*Pn	**Pn**	**12 53 14.8**	**-1.1**
BRY	**Bratogost**	**3.59**	**98**	*e*Pn	**Pn**	**12 53 17.6**	**+0.3**
KBA	**Koelnbreinsper**	**3.59**	**356**	*e*Pn	**Pn**	**12 53 16.6**	**-0.8**
	comp=E,0.6nm,0.3s						
KBA				Sn	**Sn**	**12 53 59.2**	**-0.8**
	comp=E,3.0nm,0.2s						
WTTA	**Wattenberg**	**4.04**	**340**	*e*Pn	**Pn**	**12 53 25.1**	**+1.5**
	comp=E,1.2nm,0.2s						
WTTA				*e*Sn	**Sn**	**12 54 12.2**	**+1.2**
	comp=E,3.6nm,0.3s						
FETA	**Feichten**	**4.10**	**330**	*e*Pn	**Pn**	**12 53 25.2**	**+0.8**
	comp=E,1.4nm,0.5s						
FETA				*e*Sn	**Sn**	**12 54 12.5**	**-0.1**
	comp=E,1.9nm,0.4s						
MUGIO	**Muggio**	**4.11**	**308**	AML	AML		
	comp=N,15μm,0.5s						
MUGIO				AML	AML		
	comp=E,13μm,0.9s						
MUGIO				AML	AML		
	comp=E,13μm,0.9s						
MUGIO				AML	AML		
	comp=N,15μm,0.5s						
MUGIO				AML	AML		
	comp=E,13μm,0.9s						
MUGIO				AML	AML		
	comp=N,15μm,0.5s						
SQTA	**Sankt Quirin**	**4.12**	**336**	*e*Pn	**Pn**	**12 53 26.4**	**+1.8**
	comp=N,5.3nm,0.3s						
SQTA				Sn	**Sn**	**12 54 14.2**	**+1.3**
	comp=N,4.3nm,0.3s						
WATA	**Walderalm**	**4.12**	**339**	*e*Pn	**Pn**	**12 53 25.2**	**+0.6**
	comp=N,1.0nm,0.2s						
DRME	**Dracevica, Mon**	**4.24**	**106**	*e*Pn	**Pn**	**12 53 24.9**	**-1.3**
MOTA	**Moosalm**	**4.26**	**336**	*e*Pn	**Pn**	**12 53 28.4**	**+1.9**
	comp=N,0.5nm,0.1s						
MOA	**Molln**	**4.37**	**5**	*e*Pn	**Pn**	**12 53 28.0**	**+0.1**
	comp=N,0.4nm,0.1s						
MOA				*e*Sn	**Sn**	**12 54 19.0**	**0.0**
	comp=N,7.3nm,0.6s						
ENR	**Entracque**	**4.60**	**281**	AML	AML		
	comp=E,69μm,0.1s						
ENR				AML	AML		
	comp=N,114μm,0.2s						
ENR				AML	AML		
	comp=N,114μm,0.2s						
ENR				AML	AML		
	comp=E,69μm,0.1s						
ENR				AML	AML		
	comp=N,114μm,0.2s						
ENR				AML	AML		
	comp=E,69μm,0.1s						
DAVA	**Damuels**	**4.65**	**326**	*e*Pn	**Pn**	**12 53 33.6**	**+1.7**
	comp=E,1.3nm,0.2s						
DAVA				*e*Sn	**Sn**	**12 54 26.6**	**+0.6**
	comp=E,5.2nm,0.3s						

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*NEIC **17** 12:59:16.0±0.0, 5.°95S×76.°16W, h74km, ML4.6(ARE), After ARE.*
NEIC Felt [II] at Lamas.
*ISCJB **17** 12:59:17.3±0.5, 6.°29S±0.°05×76.°09W±0.°05, h33km, mb4.0/6, MS3.3/2, Error ellipse: s-maj=7.8km s-min=6.0km az=32.2*
*IDC **17** 12:59:21.0±2.0, 6.°35S×76.°22W, h53km±21km, mb3.8/6, mb1 4.0/12, mb1mx3.8/39, mbtmp4.0/12, ML3.6/6, MS3.5/6, Ms1 3.5/6, ms1mx3.2/20, Error ellipse: s-maj=18.0km s-min=13.0km az=17.0*
*BJI **17** 12:59:23.1±0.0, 6.°83S×76.°24W, h62km, mB5.1/1*
ISC 17 12:59:19.2±0.5**, 6.°29S**±0.°06×**76.°14W**±0.°07**, h35**km**, n26, σ1s.29**/28**, mb4.0**/6**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.40**	**249**	P	**Pn**	**12 59 56.8**	**+0.4**
	40nm,0.3s,baz=52,slow=6.8,SNR=99						
ATAH				S	**Sn**	**13 00 25.0**	**+0.3**
	184nm,0.3s,baz=166,slow=21,SNR=9.3						
ATAH				LR	LR	13 01 04.7	
	comp=Z,630nm,18.2s,baz=81,slow=45						
NNA	**Nana**	**5.71**	**187**	P	**Pn**	**13 00 43.2**	**+1.6**
	9.7nm,0.3s,baz=346,slow=13,SNR=5.2						
NNA				S	**Sn**	**13 01 46.5**	**+0.5**
	30nm,0.3s,baz=284,slow=20,SNR=8.3						
NNA				LR	LR	13 03 30.4	
	comp=Z,416nm,20.4s,baz=3.5,slow=44						
NNA	**Nana**	**5.71**	**187**	*e*Pn	**Pn**	**13 00 42.3**	**+0.7**
NNA				*e*Sn	**Sn**	**13 01 46.8**	**+0.9**
ROSC	**El Rosal**	**11.20**	**9**	P	**Pn**	**13 02 00.8**	**+3.5**
	1.7nm,0.3s,baz=202,slow=19,SNR=1.9						
ROSC				LR	LR	13 07 22.6	
	comp=Z,476nm,18.3s,baz=234,slow=43						
ROSC	**El Rosal**	**11.20**	**9**	*e*Pn	Pn	13 01 48.8	-8.5
LPAZ	**La Paz**	**12.66**	**142**	P	**Pn**	**13 02 17.6**	**+0.2**
	0.1nm,0.3s,baz=67,slow=7.7,SNR=2.1						
LPAZ				LR	LR	13 08 22.9	
	comp=Z,191nm,18.8s,baz=338,slow=43						
LPAZ	**La Paz**	**12.66**	**142**	*e*Pn	**Pn**	**13 02 16.7**	**-0.7**
PTGA	**Pitinga**	**17.05**	**72**	P	**P**	**13 03 18.1**	**+1.5**
	0.5nm,0.3s,baz=242,slow=1.1,SNR=4.3						
PTGA				S	**Sn**	**13 06 21.2**	**-2.5**
	0.6nm,0.3s,baz=72,slow=7.1,SNR=4.2						
SIV	**San Ignacio**	**17.63**	**124**	P	**Pn**	**13 03 21.8**	**-0.5**
	0.2nm,0.3s,baz=342,slow=18,SNR=3.2						
CPUP	**Villa Florida**	**26.82**	**140**	LR	LR	13 18 13.8	
	comp=Z,55nm,18.7s,baz=221,slow=42						
PDAR	**Pinedale Array**	**57.49**	**331**	P	**P**	**13 09 04.8**	**-0.5**
	0.5nm,0.3s,baz=140,slow=9.4,SNR=4.6						
PDAR				PcP	**PcP**	**13 09 58.1**	**-0.5**
	0.3nm,0.4s,baz=126,slow=6.1,SNR=2.6						
ULM	**Lac du Bonnet**	**58.85**	**345**	P	**P**	**13 09 13.4**	**-0.8**
	6.2nm,0.7s,baz=148,slow=9.7,SNR=6.6						
ULM				PcP	**PcP**	**13 10 02.7**	**-0.7**
	1.9nm,0.4s,baz=180,slow=3.0,SNR=3.0						
NVAR	**Mina Array Bea**	**59.25**	**322**	P	**P**	**13 09 18.1**	**+0.5**
	1.1nm,0.7s,baz=126,slow=7.3,SNR=12						
YKA	**Yellowknife Ar**	**74.63**	**343**	P	**P**	**13 10 54.2**	**-0.4**
	0.5nm,0.4s,baz=139,slow=6.1,SNR=8.3						
TORD	**Torodi Ar. Bea**	**79.66**	**75**	P	**P**	**13 11 24.8**	**+0.9**
	0.9nm,0.7s,baz=291,slow=7.2,SNR=6.2						
ESDC	**Sonseca Array**	**80.46**	**48**	LR	LR	13 44 16.6	
	comp=Z,23nm,20.0s,baz=145,slow=34						
ILAR	**Eielson Array**	**87.58**	**336**	P	**P**	**13 12 02.6**	**-0.8**
	0.5nm,0.6s,baz=130,slow=4.0,SNR=6.9						
VYHS	**Vyhne**	**97.96**	**42**	*e*PDIFF	Pdif	13 12 55.3	+3.5
ZALV	**Zalesovo Beam**	**130.03**	**15**	PKP	**PKiKP**	**13 18 25.6**	**-0.4**
	0.8nm,0.4s,baz=318,slow=2.0,SNR=3.8						
MKAR	**Makanchi Array**	**135.58**	**21**	PKP	**PKiKP**	**13 18 36.8**	**-0.9**
	0.9nm,0.8s,baz=6.0,slow=2.5,SNR=5.8						
ASAR	**Alice Springs**	**138.21**	**224**	PKP	**PKPdf**	**13 18 39.7**	**-1.9**
	0.5nm,0.9s,baz=127,slow=2.3,SNR=4.0						
WMQ	**Urumqi**	**140.01**	**18**	*e*PKP	**PKiKP**	**13 18 46.3**	**-0.5**
WRA	**Warramunga Arr**	**140.27**	**228**	PKP	**PKPdf**	**13 18 43.4**	**-2.0**
	0.3nm,0.4s,baz=141,slow=1.7,SNR=2.6						
HHC	**Hu-ho-hao-te**	**144.90**	**350**	*e*PKPbc	**PKiKP**	**13 18 56.3**	**-0.7**
NJ2	**Nanjing**	**150.79**	**333**	*e*PKPbc	**PKPdf**	**13 19 04.1**	**+1.1**
CD2	**Chengdu**	**155.50**	**0**	PKP	**PKPdf**	**13 19 09.0**	**-0.9**

NEIC 17 13:01:20.9±0.0**, 19.°19N×155.°51W, h36**km**, ML3.8**(HVO)**, After HVO., Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.11**	**299**	*e*Pn	Pn	13 01 26.7	-6.7
AIN	**Ainahou**	**0.19**	**16**	*e*Pn	Pn	13 01 27.3	-3.2
HLP	**Hilina Pali**	**0.22**	**62**	*e*Pn	Pn	13 01 27.4	-2.2
SDHHI	**Sand Hill**	**0.28**	**46**	*e*Pn	Pn	13 01 27.8	-1.4
WRMHI	**West Rim**	**0.29**	**43**	*e*Pn	Pn	13 01 27.9	-1.4
RIM	**Rim**	**0.30**	**48**	*e*Pn	Pn	13 01 28.0	-1.3
MWH	**Moku‘aweowe**	**0.30**	**344**	*e*Pn	Pn	13 01 28.1	-1.7
UWE	**Uwekahuna**	**0.31**	**42**	*e*Pn	Pn	13 01 28.0	-1.2
NPH	**North Pit**	**0.31**	**45**	*e*Pn	Pn	13 01 27.9	-1.3
KKO	**Keanakako`i**	**0.31**	**48**	*e*Pn	Pn	13 01 28.1	-1.2
OBL	**Observatory Le**	**0.31**	**44**	*e*Pn	Pn	13 01 28.0	-1.3
UWB	**Uwekahuna B**	**0.32**	**44**	*e*Pn	Pn	13 01 28.0	-1.3
BYL	**Byron's Ledge**	**0.32**	**47**	*e*Pn	Pn	13 01 28.1	-1.2
MLH	**Mauna Loa**	**0.32**	**21**	*e*Pn	Pn	13 01 28.4	-1.1
SBLHI	**Steaming Bluff**	**0.33**	**44**	*e*Pn	Pn	13 01 28.0	-1.3
HATHI	**Halema‘uma‘u T**	**0.33**	**46**	*e*Pn	Pn	13 01 28.1	-1.2
PUH	**Pauahi**	**0.33**	**57**	*e*Pn	Pn	13 01 28.2	-1.1
MLOA	**Mauna Loa Obse**	**0.35**	**350**	*e*Pn	Pn	13 01 28.6	-1.3
HMH	**Humu‘ula Sheep**	**0.41**	**4**	*e*Pn	Pn	13 01 29.6	-0.8
STCH	**Steam Cracks**	**0.41**	**62**	*e*Pn	Pn	13 01 29.1	-1.1
NPOC	**North of Pu‘u**	**0.43**	**62**	*e*Pn	Pn	13 01 29.3	-1.1
JCUZ	**Jacuzzi**	**0.43**	**64**	*e*Pn	Pn	13 01 29.4	-1.1
KHLU	**Kahalu`u**	**0.54**	**318**	*e*Pn	Pn	13 01 30.6	-1.7
POHA	**Pohakuloa**	**0.56**	**358**	*e*Pn	Pn	13 01 30.9	-1.9
HUH	**Hualalai**	**0.58**	**328**	*e*Pn	Pn	13 01 31.5	-1.5
KKH	**Kailua Kona**	**0.67**	**314**	*e*Pn	Pn	13 01 32.1	-1.8
LPH	**Laupahoehoe**	**0.81**	**7**	*e*Pn	Pn	13 01 34.4	-1.3
HPAH	**Hawaii Prepara**	**0.85**	**348**	*e*Pn	Pn	13 01 34.5	-1.9
MHA	**Mahukona**	**1.06**	**340**	*e*Pn	Pn	13 01 37.5	-1.7
HLK	**Haleakala**	**1.71**	**336**	*e*Pn	Pn	13 01 46.0	-2.3
KHLH	**Kahului Airpor**	**1.90**	**333**	*e*Pn	Pn	13 01 49.4	-1.4
HON	**Honolulu**	**3.16**	**313**	*e*Pn	Pn	13 02 05.7	-2.3
KIP	**Kipapa**	**3.23**	**314**	*e*Pn	Pn	13 02 06.5	-2.6
OPA	**Opana**	**3.41**	**317**	*e*Pn	Pn	13 02 08.5	-3.1
KEKH	**Kekaha**	**4.82**	**306**	*e*Pn	Pn	13 02 27.9	-3.0

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*IDC **17** 13:02:56.0±2.1, 14.°33N×92.°92W, h0km, mb3.8/3, mb1 4.1/6, mb1mx3.8/36, mbtmp3.7/6, ML3.3/3, MS3.2/10, Ms1 3.2/10, ms1mx3.1/23, Error ellipse: s-maj=56.5km s-min=27.5km az=27.0*
*NEIC **17** 13:02:59.5±0.0, 14.°13N×93.°29W, h20km, mb4.3/8, MD4.0(MEX), After MEX.*
*MEX **17** 13:02:59.5±0.4, 14.°14N×93.°28W, h14km±18km, MD4.0*
ISC 17 13:03:00.4±1.1**, 14.°2N**±0.°1×**93.°14W**±0.°06**, h37**km**, n37, σ1s.37**/38**, mb4.2**/6**, MS3.6**/7**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.12**	**49**	*e*Pn	**Pn**	**13 03 19.0**	**-0.6**
THIG				*e*Sn	**Sn**	**13 03 33.9**	**+0.1**
THIG		**1.12**	**49**	*e*P	**Pn**	**13 03 19.0**	**-0.6**
THIG				*e*S	**Sn**	**13 03 33.9**	**+0.1**
PCIG		**1.52**	**357**	*e*Pn	**Pn**	**13 03 23.2**	**-1.9**
PCIG		**1.52**	**357**	*e*P	**Pn**	**13 03 23.2**	**-1.9**
PCIG				*i* S	**Sn**	**13 03 41.9**	**-1.8**
CCIG	**Comitan**	**2.31**	**25**	*e*Pn	**Pn**	**13 03 37.4**	**+1.3**
CCIG				*e*Pn	Pn	13 03 38.1	+2.0
CCIG	**Comitan**	**2.31**	**25**	*e*P	**Pn**	**13 03 34.9**	**-1.2**
CCIG				*i* S	**Sn**	**13 04 03.8**	**+0.4**
TGIG		**2.59**	**0**	*e*Pn	**Pn**	**13 03 39.9**	**+0.1**
TGIG		**2.59**	**0**	*e*P	**Pn**	**13 03 39.2**	**-0.6**
TGIG				*i* S	**Sn**	**13 04 09.5**	**-0.6**
APG	**El Apazote**	**2.72**	**72**	Pn	**Pn**	**13 03 38.2**	**-3.6**
	1.2nm,0.3s,baz=191,slow=13,SNR=4.8						
APG				LR	LR	13 04 47.0	
	comp=Z,325nm,19.5s,baz=140,slow=45						
CMIG	**Matias Romero**	**3.35**	**330**	Pn	**Pn**	**13 03 48.4**	**-1.9**
	3.6nm,0.3s,baz=145,slow=12,SNR=20						
CMIG				Sn	**Sn**	**13 04 29.2**	**+0.4**
	8.1nm,0.3s,baz=132,slow=22,SNR=6.8						
CMIG				LR	LR	13 04 34.2	
	comp=Z,107nm,20.5s,baz=162,slow=29						
CMIG	**Matias Romero**	**3.35**	**330**	*e*P	**Pn**	**13 03 48.1**	**-2.1**
CMIG				*i* S	**Sn**	**13 04 26.6**	**-2.2**
LVIG	**Laguna Verde**	**6.34**	**331**	*e*Pn	**Pn**	**13 04 31.6**	**+0.2**
TEIG	**Tepich**	**7.61**	**37**	*e*Pn	**Pn**	**13 04 48.6**	**-0.1**
JTS	**Las Juntas de**	**8.89**	**115**	LR	LR	13 07 35.9	
	comp=Z,67nm,18.1s,baz=1.0,slow=32						
H06E1	**SOCORRO T-PHAS**	**17.65**	**287**	T	T	13 25 12.0	
LTX	**Lajitas**	**17.96**	**329**	*e*P	**P**	**13 07 08.3**	**+0.7**
TXAR	**Lajitas Array**	**17.96**	**329**	P	**P**	**13 07 08.3**	**+0.7**
	0.1nm,0.3s,baz=137,slow=16,SNR=10.0						
TXAR				LR	LR	13 14 48.9	
	comp=Z,42nm,19.3s,baz=0.0,slow=40						
TXAR	**Lajitas Array**	**17.96**	**329**	*e*P	**P**	**13 07 07.7**	**0.0**
TX31	**Lajitas Ar. Si**	**17.96**	**329**	*e*Pn	**Pn**	**13 07 05.2**	**-2.2**
	32nm,1.8s						
WHTX	**Lake Whitney,**	**18.17**	**348**	*e*P	**Pn**	**13 07 08.7**	**-1.2**
	19nm,1.3s						
253A	**Americus**	**19.62**	**23**	*e*P	**Pn**	**13 07 27.0**	**-0.3**
	30nm,1.2s						
FCAR	**Ozark Folk Cen**	**21.64**	**2**	*e*P	**P**	**13 07 48.1**	**+0.5**
	6.6nm,1.0s						
NV01	**Mina Array Sit**	**32.85**	**322**	*e*P	**P**	**13 09 33.5**	**+2.6**
NV01				*e*PcP	**PcP**	**13 12 16.2**	**+0.9**
NVAR	**Mina Array Bea**	**32.85**	**322**	P	**P**	**13 09 33.5**	**+2.6**
	0.5nm,0.8s,baz=134,slow=8.9,SNR=4.0						
NVAR				PcP	**PcP**	**13 12 16.2**	**+0.9**
	0.1nm,0.5s,baz=150,slow=3.8,SNR=2.5						
NVAR				LR	LR	13 23 46.1	
	comp=Z,70nm,18.7s,baz=173,slow=38						
ULM	**Lac du Bonnet**	**36.05**	**357**	LR	LR	13 27 40.2	
	comp=Z,40nm,18.1s,baz=140,slow=41						
LPAZ	**La Paz**	**39.08**	**140**	LR	LR	13 24 21.2	
	comp=Z,26nm,18.2s,baz=237,slow=33						
SCHQ	**Schefferville**	**45.45**	**21**	LR	LR	13 31 19.0	
	comp=Z,96nm,19.1s,baz=320,slow=38						
SCHQ	**Schefferville**	**45.45**	**21**	*e*P	**P**	**13 11 14.6**	**-1.1**
	58nm,1.9s						
YKA	**Yellowknife Ar**	**50.61**	**347**	P	**P**	**13 11 55.4**	**0.0**
	3.3nm,0.9s,baz=149,slow=7.5,SNR=14						
YKB5	**Yellowknife Ar**	**50.61**	**347**	*e*P	**P**	**13 11 55.4**	**0.0**
ILAR	**Eielson Array**	**62.24**	**337**	P	**P**	**13 13 18.7**	**+0.5**
	0.8nm,1.0s,baz=150,slow=4.4,SNR=6.6						
ILB	**Eielson Array**	**62.24**	**337**	*e*P	**P**	**13 13 18.5**	**+0.2**
	5.4nm,1.4s						
RND	**Reindeer**	**62.40**	**335**	*e*P	**P**	**13 13 20.3**	**+0.9**
	5.5nm,1.2s						
ARCES	**ARCESS Array B**	**86.32**	**18**	LR	LR	13 54 01.1	
	comp=Z,30nm,20.7s,baz=349,slow=36						
SEY	**Seymchan**	**88.14**	**335**	LR	LR	13 57 01.4	
	comp=Z,214nm,20.6s,baz=330,slow=37						
FINES	**FINESS Array B**	**90.81**	**25**	LR	LR	13 56 02.0	
	comp=Z,23nm,21.0s,baz=42,slow=35						
CMAR	**Chiang Mai Arr**	**145.46**	**339**	PKPbc	**PKPbc**	**13 22 35.5**	**0.0**
	1.9nm,0.9s,baz=352,slow=5.5,SNR=8.4						

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*IDC **17** 13:03:57.0±2.6, 5.°70N×126.°58E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/45, mbtmp3.5/3, Error ellipse: s-maj=216.6km s-min=27.1km az=66.0*
*ISCJB **17** 13:04:05.7±0.9, 5.°06N±0.°07×126.°4E±0.°1, h35km, mb3.3/3, Error ellipse: s-maj=16.2km s-min=7.6km az=156.3*
*MAN **17** 13:04:09.9, 5.°35N×126.°19E, h15km, MS2.5*
ISC 17 13:04:07.0±1.4**, 5.°09N**±0.°09×**126.°4E**±0.°1**, h35**km**, n8, σ1s.09**/11**, mb3.2**/3**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.19**	**327**	*e*P	**Pn**	**13 04 26.4**	**-0.8**
DDMP				*e*S	**Sn**	**13 04 40.2**	**-1.9**
GSPH	**General Santos**	**1.72**	**305**	⇓*i*P	**Pn**	**13 04 35.5**	**+1.0**
MATI	**Mati**	**1.84**	**357**	*e*P	**Pn**	**13 04 36.7**	**+0.5**
MATI				*e*S	**Sn**	**13 04 59.1**	**+0.9**
SKMP	**Bagumbayan, Su**	**2.30**	**308**	*e*P	**Pn**	**13 04 43.3**	**+1.0**

SKMP				eS	Sn	13 05 09.7	+0.3
BUKP	Musuan	3.05	335	eP	Pn	13 04 53.9	+1.1
BUKP				eS	Sn	13 05 27.5	-0.7
WRA	Warramunga Arr	26.09	163	P	P	13 09 37.7	+0.1
	0.2nm,0.3s,baz=344,slow=12,SNR=4.6						
ASAR	Alice Springs	29.52	166	P	P	13 10 07.6	-0.7
	0.2nm,0.5s,baz=334,slow=6.2,SNR=4.1						
MKAR	Makanchi Array	56.23	325	P	P	13 13 36.4	-7.4
	0.3nm,0.4s,baz=116,slow=7.6,SNR=5.6						

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*ISCJB **17** 13:10:08.0±1.9, 43°.0N±0°.1×76°.9E±0°.2, h14^{km}±10^{km}, Error ellipse: s-maj=25.4km s-min=8.7km az=38.3*

*NNC **17** 13:10:08.9±2.0, 43°.07N×76°.86E, h1^{km}±13^{km}, mpv2.5, Error ellipse: s-maj=10.6km s-min=6.4km az=155.0*

*SOME **17** 13:10:08.9, 43°.05N×76°.83E, h10^{km}*

ISC 17 13:10:09.4±1.4**, 43°.09N**±0°.06×**76°.86E**±0°.04**, h6**^{km}±17^{km}**,**
n12, σ0^{s}49/23**, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDOK	Medeo	0.16	63	Pg	Pg	13 10 12.8	+0.2
	6.3nm,0.2s						
MDOK				Lg	Lg	13 10 15.7	
	16nm,0.3s						
MDOK	Medeo	0.16	63	eP	Pg	13 10 12.8	+0.2
	6.3nm,0.2s						
MDOK				eS	Sg	13 10 15.7	+0.9
	16nm,0.3s						
KOTS	Kotyrbulak	0.23	53	P	Pg	13 10 13.4	-0.7
	5.8nm,0.1s						
KOTS				S	Sg	13 10 16.6	-0.5
	19nm,0.3s						
KOTS	Kotyrbulak	0.23	53	eP	Pg	13 10 13.4	-0.7
	5.8nm,0.1s						
KOTS				eS	Sg	13 10 16.6	-0.5
	53nm,0.1s						
KTBS	Karatobe	0.63	348	P	Pb	13 10 22.7	-0.2
	1.4nm,0.1s						
KTBS				S	Sb	13 10 32.6	+0.6
KTBS	Karatobe	0.63	348	eP	Pb	13 10 22.7	-0.2
	1.4nm,0.1s						
KTBS				eS	Sb	13 10 32.6	+0.6
	17nm,0.2s						
KST	Kastek	0.66	266	P	Pg	13 10 21.7	-0.3
	1.2nm,0.3s						
KST				S	Sg	13 10 30.9	+0.2
	2.0nm,0.2s						
KST	Kastek	0.66	266	eP	Pg	13 10 21.7	-0.3
	1.6nm,0.3s						
KST				eS	Sg	13 10 30.9	+0.2
	2.2nm,0.3s						
CHKK	Chushkaly	0.77	7	P	Pg	13 10 23.8	-0.4
	4.1nm,0.2s						
CHKK				S	Sg	13 10 34.4	+0.4
	12nm,0.2s						
CHKK	Chushkaly	0.77	7	eP	Pg	13 10 23.8	-0.4
	4.1nm,0.2s						
CHKK				eS	Sg	13 10 34.5	+0.4
	12nm,0.2s						
KUU	Kurty	0.89	335	P	Pg	13 10 25.9	-0.5
	1.4nm,0.1s						
KUU				S	Sg	13 10 38.1	+0.3
	2.3nm,0.1s						
KUU	Kurty	0.89	335	eP	Pg	13 10 25.9	-0.5
	1.4nm,0.1s						
KUU				eS	Sg	13 10 38.1	+0.3
	2.3nm,0.1s						

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*ISCJB **17** 13:10:49.0±0.6, 42°.06N±0°.03×75°.42E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=5.2km s-min=3.3km az=9.7*

*KRNET **17** 13:10:49.0±0.1, 42°.07N×75°.42E, h20^{km}, mb2.2*

*KNET **17** 13:10:49.2±0.6, 42°.11N×75°.42E, h3^{km}±22^{km}, ml1.2, Error ellipse: s-maj=4.4km s-min=2.3km az=178.0*

ISC 17 13:10:48.7±0.9**, 42°.07N**±0°.03×**75°.42E**±0°.02**, h12**^{km}±6^{km}**,**
n20, σ0^{s}44/39**, 28C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	0.13	275	⇑iP	Pg	13 10 52.4	+0.1
	baz=74						
KZA				⇑iS	Sg	13 10 54.6	-0.2
	baz=74						
KZA	Kyzart	0.13	275	⇑P	Pg	13 10 52.5	+0.2
	128nm,0.1s,SNR=113						
KZA				⇑S	Sg	13 10 54.7	-0.2
	168nm,0.1s						
BOOM	Boomskoye usch	0.57	42	⇑iP	Pg	13 11 00.4	+0.5
	baz=42						
BOOM				⇑iS	Sg	13 11 08.1	+0.6
	baz=42						
ULHL	Ulahol	0.64	73	⇑iP	Pg	13 11 01.2	+0.1
	baz=74						
ULHL				⇑iS	Sg	13 11 09.9	+0.4
	baz=74						
ULHL	Ulahol	0.64	73	P	Pg	13 11 01.4	+0.2
	4.4nm,0.1s,SNR=24						
ULHL				⇑S	Sg	13 11 10.0	+0.4
	13nm,0.1s						
KBK	Karagaybulak	0.69	329	⇓iP	Pb	13 11 02.7	0.0
	baz=29						
KBK				⇓iS	Sb	13 11 11.8	-0.5
	baz=29						
KBK	Karagaybulak	0.69	329	⇓P	Pb	13 11 02.8	0.0
	32nm,0.1s,SNR=63						
KBK				⇓S	Sb	13 11 12.0	-0.3
UCH	Uchtor	0.69	284	⇑iP	Pg	13 11 02.4	+0.1
	baz=83						
UCH				⇑iS	Sg	13 11 12.0	+0.5
	baz=83						
UCH	Uchtor	0.69	284	⇑P	Pg	13 11 02.5	+0.2
	1.5nm,0.1s,SNR=11						
UCH				⇑S	Sg	13 11 12.2	+0.7
	5.1nm,0.2s						
NRN	Naryn	0.77	145	⇑iP	Pg	13 11 03.7	+0.1
	baz=48						
NRN				⇑iS	Sg	13 11 14.2	+0.6
	baz=48						
ARLS	Aral	0.84	256	⇑iP	Pg	13 11 04.8	-0.2
	baz=57						
ARLS				⇑iS	Sg	13 11 16.1	0.0
	baz=57						
TKM2	Tokmak 2	0.86	9	⇑iP	Pg	13 11 05.5	+0.1
	baz=8.0						
TKM2				⇑iS	Sb	13 11 16.8	-0.6
	baz=8.0						
TKM2	Tokmak 2	0.86	9	⇓P	Pb	13 11 05.6	-0.2
	5.9nm,0.2s						
TKM2				⇑S	Sb	13 11 17.0	-0.5
	15nm,0.1s						
AAK	Ala-Archa	0.89	310	⇓P	Pg	13 11 06.2	+0.2
	4.0nm,0.2s						
AAK				⇑S	Sg	13 11 17.9	+0.3
	11nm,0.2s						
CHMS	Chumysh	1.06	332	⇑iP	Pb	13 11 08.9	0.0
	baz=32						
CHMS				⇑iS	Sg	13 11 22.5	-0.3
	baz=32						
CHMS	Chumysh	1.06	332	⇑P	Pg	13 11 09.1	+0.1
	2.3nm,0.1s,SNR=5.2						
KDJ	Kajisay	1.31	87	⇓iP	Pn	13 11 13.5	+0.5
	baz=87						
KDJ				⇓iS	Sb	13 11 30.5	+0.3
	baz=87						
EKS2	Erkin-Say	1.36	297	⇓iP	Pn	13 11 13.7	+0.1
	baz=96						
EKS2				⇓iS	Sn	13 11 32.0	+0.4
	baz=96						
USP	Ospenovka	1.38	331	⇑iP	Pb	13 11 14.3	-0.2
	baz=31						
USP				⇑iS	Sg	13 11 32.7	-0.4
	baz=31						
PRZ	Przheval'sk	2.25	78	⇑eP	Pb	13 11 28.2	-1.2
	baz=78						
PRZ				⇑iS	Sb	13 11 56.2	-1.1
	baz=78						

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*NIED **17** 13:34:00, 35°.50N×139°.00E, h26^{km}, Mw3.7 Best double couple: $M_0$4.33000×10^{14} NP1:ϕ_s329.00000°, δ6.00000°, λ-165.00000°. NP2:ϕ_s224.00000°, δ89.00000°, λ-85.00000°.*

*ISCJB **17** 13:34:18.3±0.4, 35°.54N±0°.03×138°.99E±0°.05, h30^{km}±3^{km}, mb3.7/4, Error ellipse: s-maj=6.3km s-min=4.2km az=173.3*

*JMA **17** 13:34:19.0±0.1, 35°.54N×138°.97E, h24^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s26.00000°, δ88.00000°, λ88.00000°. NP2:ϕ_s251.00000°, δ3.00000°, λ135.00000°. Principal axes: T Plg47.0000°, Azm294.0000°; N Plg2.0000°, Azm26.0000°; P Plg43.0000°, Azm118.0000°;*

JMA Felt III J1.

*IDC **17** 13:34:20.4±0.8, 35°.55N×138°.84E, h58^{km}±9^{km}, mb3.3/4, mb1 3.6/7, mb1mx3.3/34, mbtmp3.7/7, MS2.7/5, Ms1 2.7/5, ms1mx2.5/18 Error ellipse: s-maj=19.7km s-min=6.2km az=69.0*

ISC 17 13:34:18.1±0.8**, 35°.55N**±0°.03×**138°.96E**±0°.04**, h31**^{km}±6^{km}**,**
n27, σ1^{s}28/29**, mb3.8**/4**, 4C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSGW	Sagamiharawaka	0.21	75	⇑P	Pb	13 34 24.4	-0.1
JSGW				eS	Sb	13 34 28.4	-0.5
JOD2	Odawara 2	0.30	160	⇑P	Pb	13 34 25.3	-0.4
JOD2				eS	Sb	13 34 30.2	-0.6
JYN	Shimob	0.35	262	⇓P	Pb	13 34 26.3	0.0
JYN				eS	Sb	13 34 31.9	0.0
JFNN	Fujinakano	0.42	213	⇑P	Pb	13 34 27.5	+0.1
JFNN				eS	Sb	13 34 34.2	+0.5
JRY	Ryogami san	0.47	354	⇓P	Pn	13 34 28.7	-0.1
JRY				eS	Sn	13 34 35.4	-0.7
SHZ3	Shizuoka 3	0.78	232	P	Pn	13 34 33.7	+0.6
SHZ3				eS	Sn	13 34 45.1	+1.3
JIZS	Izushimoda	0.83	185	⇑P	Pb	13 34 33.5	-0.6
JIZS				eS	Sb	13 34 44.2	-0.7
JIM2	Oshima 3	0.91	155	P	Pn	13 34 34.6	-0.2
JIM2				eS	Sb	13 34 47.0	-0.3
JAG	Ashikaga	0.96	24	⇓P	Pb	13 34 36.5	+0.3
MJAR	Matsushiro Arr	1.17	329	P	Pb	13 34 39.6	-0.1
	35nm,0.3s,baz=149,slow=14,SNR=816						
MJAR				S	Sb	13 34 53.9	-0.5
	74nm,0.3s,baz=154,slow=26,SNR=51						
MJAR				LR	LR	13 35 23.9	
	comp=Z,270nm,19.6s,baz=140,slow=58						
MAT	Matsushiro	1.17	328	P	Pb	13 34 40.2	+0.5
MAT				S	Sb	13 34 55.6	+1.1
JHJ	Hachijo jima 2	2.52	164	P	Pn	13 34 59.3	+2.4
	54nm,0.3s,baz=4.9,slow=2.7,SNR=30						
JHJ				S	Sn	13 35 30.0	+3.5
	47nm,0.3s,baz=219,slow=23,SNR=12						
JHJ				LR	LR	13 35 57.0	
	comp=Z,77nm,21.0s,baz=324,slow=38						
JNU	Nakatsue	7.11	252	P	Pn	13 36 00.9	+0.9
	0.3nm,0.3s,baz=68,slow=5.4,SNR=3.3						
JNU				LR	LR	13 39 21.8	
	comp=Z,53nm,18.6s,baz=348,slow=43						
ASAJ	Asahikawa	9.00	17	P	Pn	13 36 28.9	+3.0
	0.3nm,0.3s,baz=184,slow=14,SNR=3.7						
KSRS	Korea Array	9.09	285	LR	LR	13 39 49.0	
	comp=Z,59nm,20.1s,baz=74,slow=36						
USRK	Ussuriysk Ar.	10.16	330	LR	LR	13 40 20.8	
	comp=Z,49nm,21.6s,baz=182,slow=36						
KLR	Kul'dur	14.66	341	LR	LR	13 42 58.5	
	comp=Z,27nm,19.2s,baz=176,slow=35						
H11N2	WAKE ISLAND Hy	29.20	115	T	T	14 10 25.1	
	baz=308,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	29.21	115	T	T	14 10 26.2	
	baz=308,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	29.22	115	T	T	14 10 25.6	
	baz=308,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	29.83	117	T	T	14 11 17.6	
	baz=308						
H11S3	WAKE ISLAND Hy	29.83	117	T	T	14 11 17.5	
	baz=308						
H11S2	WAKE ISLAND Hy	29.84	117	T	T	14 11 15.8	
	baz=308						
MKAR	Makanchi Array	43.25	303	P	P	13 42 14.5	-2.1
	0.2nm,0.5s,baz=87,slow=8.8,SNR=2.5						
WRA	Warramunga Arr	55.36	185	P	P	13 43 49.1	-0.1
	1.4nm,1.0s,baz=5.7,slow=9.2,SNR=8.6						
ASAR	Alice Springs	59.09	185	P	P	13 44 14.5	-1.0
	0.6nm,1.0s,baz=20,slow=12,SNR=4.5						
FINES	FINESS Array B	69.19	332	P	P	13 45 20.3	-1.1
	0.7nm,0.4s,baz=72,slow=6.2,SNR=7.6						

ISC 17 13:38:49.5±1.2**, 48°.77N**±0°.05×**18°.12E**±0°.05**, h12**^{km}±12^{km}**,**
n6, σ0^{s}46/12**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	Kolacno	0.27	135	ePG	Pb	13 38 57.1	+0.9
KOLL				eSG	Sb	13 39 00.6	-0.1
JAVC	Velka Javorina	0.31	287	ePG	Pg	13 38 55.7	-0.1
JAVC				eSG	Sg	13 39 00.3	+0.2
VYHS	Vyhne	0.55	120	ePG	Pb	13 39 00.8	-0.2
VYHS				eSG	Sb	13 39 08.3	-0.5
MODS	Modra-Piesok	0.69	235	ePG	Pg	13 39 02.3	-0.5
MODS				eSG	Sb	13 39 12.7	-0.1
MORC	Moravsky Berou	1.08	340	ePG	Pg	13 39 10.0	-0.2
MORC				eSG	Sn	13 39 25.4	+0.1
VRAC	Vranov	1.14	299	ePG	Pb	13 39 11.1	0.0
VRAC				eSG	Sg	13 39 26.7	+0.4

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*PGC **17** 13:39:02.0, 61°.55N×141°.07W, h1^{km}, ML3.1/11, 209km Wnw of Haines Jct., Yt Southern Alaska*

*NEIC **17** 13:39:01.3±0.0, 61°.54N×141°.08W, h1^{km}, ML3.0(AEIC), ML3.1(OTT), After AEIC.*

*AEIC **17** 13:39:01.3, 61°.54N×141°.08W, h1^{km}, ML3.0, ML3.1(OTT)*

*ANF **17** 13:39:01.2±3.1, 61°.57N×141°.01W, h10^{km}, ML3.7/4, Error ellipse: s-maj=28.7km s-min=18.7km az=4.0*

ISC 17 13:39:00.9±1.1**, 61°.55N**±0°.02×**141°.07W**±0°.02**, h2**^{km}±10^{km}**,**
n82, σ1^{s}21/112**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.27	25	P	Pg	13 39 06.4	+0.4
YUK2				S	Sg	13 39 10.2	+0.7
YUK3	Moose Creek	0.37	52	P	Pg	13 39 08.4	+0.3
YUK3				S	Sg	13 39 13.6	+0.7
YUK1	Sand Pete Hill	0.66	23	P	Pg	13 39 13.2	-0.3
YUK1				S	Sg	13 39 21.9	-0.2
PTPK	Patty Peak	0.76	242	P	Pg	13 39 15.6	+0.1
PTPK				S	Sg	13 39 26.0	+0.7
BALM	Baldy	0.80	231	ePg	Pg	13 39 15.8	-0.4
BALM	Baldy	0.80	231	P	Pg	13 39 15.9	-0.4
BALM				S	Sg	13 39 26.8	+0.2
BVCY	Beaver Creek	0.88	7	P	Pg	13 39 17.5	-0.2
BVCY				S	Sg	13 39 29.6	+0.6
GRNC	Granite Creek	0.88	202	P	Pg	13 39 17.4	-0.3
GRNC				S	Sg	13 39 28.9	-0.3
KIAG	Kiagna River	0.88	225	P	Pg	13 39 17.2	-0.6
KIAG				S	Sg	13 39 29.2	+0.1
TABL	Table Mountain	1.11	182	P	Pg	13 39 21.8	-0.4
TABL				S	Sg	13 39 36.9	+0.4
TGL	Tana Glacier	1.16	228	ePg	Pg	13 39 22.2	-0.9
YUK4	Talbot Arm	1.18	99	P	Pg	13 39 23.4	-0.2
YUK4				S	Sg	13 39 39.6	+0.7
CRQM	Cirque	1.28	233	ePn	Pg	13 39 23.8	-1.6
SAMH	Samovar Hills	1.43	174	Pn	Pn	13 39 28.1	+0.2
SAMH				Sg	Sg	13 39 47.0	+0.3
MESA	MESA	1.44	198	Pn	Pn	13 39 28.3	+0.1
MESA				Sg	Sg	13 39 47.3	+0.2
YUK6	Outpost Mounta	1.44	114	Pn	Pn	13 39 27.4	-0.9
YUK6				Sg	Sg	13 39 47.1	-0.1
CHX	Chaix Hills	1.49	181	ePn	Pn	13 39 29.4	+0.6
PCA	Pinnacle	1.51	164	ePn	Pn	13 39 29.2	+0.2
PCA	Pinnacle	1.51	164	Pn	Pn	13 39 29.3	+0.3
PCA				Sg	Sg	13 39 48.9	-0.4
BCA3	Beaver Creek A	1.56	348	ePn	Pn	13 39 29.1	-0.7
YUK5	Granite Creek	1.60	104	Pn	Pn	13 39 30.0	-0.4
YUK5				Sg	Sn	13 39 51.0	-0.7
SNH	Sunshine Point	1.62	213	ePn	Pn	13 39 31.3	+0.8
YUK7	Dusty Glacier	1.75	124	Pn	Pn	13 39 33.5	+1.0
YUK7				Sg	Sn	13 39 56.1	+0.6
MENT	Mentasta	1.87	320	ePn	Pn	13 39 34.8	+0.9
HYT	Haines Junctio	1.88	111	ePn	Pn	13 39 34.6	+0.5
HYT	Haines Junctio	1.88	111	Pn	Pn	13 39 34.3	+0.2
HYT				Sg	Sb	13 39 59.5	-0.3
HMT	Hamilton	1.97	233	ePn	Pn	13 39 36.9	+1.6
PNL	Peninsula	2.06	156	ePn	Pn	13 39 37.8	+1.3
PNL	Peninsula	2.06	156	Pn	Pn	13 39 37.8	+1.3
PNL				Sg	Sg	13 40 06.4	-0.5
RAGM	Ragged Mountai	2.11	238	ePn	Pb	13 39 39.2	-0.6
SGAM	Sherman Glacie	2.27	244	ePn	Pb	13 39 41.6	-0.9
EYAK	Cordova Ski Ar	2.48	248	ePn	Pb	13 39 44.8	-1.4
PAX	Paxson	2.50	307	ePn	Pn	13 39 44.8	+2.1
PAX	Paxson	2.50	307	Pn	Pn	13 39 44.9	+2.2
PAX				Sg	Sb	13 40 18.2	+0.4
DOT	Dot Lake	2.52	328	ePn	Pn	13 39 43.5	+0.6
DOT	Dot Lake	2.52	328	Pn	Pn	13 39 42.7	-0.2
DOT				Pg	Pb	13 39 47.5	+0.6
DOT				Sg	Sb	13 40 20.3	+2.0
DAWY	Dawson	2.64	16	ePn	Pn	13 39 44.7	+0.1
DAWY	Dawson	2.64	16	Pn	Pn	13 39 44.5	-0.1
DAWY				Sg	Sb	13 40 23.0	+1.2
JPK	Jack Peak	2.71	262	ePn	Pn	13 39 47.6	+2.1
FID	Port Fidalgo	2.74	255	ePn	Pb	13 39 48.8	-1.8
FID				ePn	Pn	13 39 48.9	+3.0
SCRK	Sand Creek	2.78	333	ePn	Pn	13 39 45.4	-1.2
RIDG	Independent Ri	2.81	323	ePn	Pn	13 39 46.6	-0.2
GLI	Glacier Island	2.99	260	ePn	Pn	13 39 51.3	+2.0
SCM	Sheep Creek Mo	2.99	278	ePn	Pn	13 39 48.8	-0.7
PLBC	Pleasant Camp	3.13	130	Pn	Pn	13 39 52.1	+0.9
PLBC				Pg	Pb	13 39 57.9	+0.6
PLBC				Sg	Sg	13 40 39.8	-1.7
EGAK	Eagle	3.24	359	ePn	Pn	13 39 52.8	0.0
DHY	Denali Highway	3.32	300	ePn	Pn	13 39 54.5	+0.6
SML	Sawmill	3.47	278	ePn	Pn	13 39 56.3	+0.4
SKAG	Skagway	3.53	124	ePn	Pn	13 39 56.9	+0.2
KNK	Knik Glacier	3.54	271	ePn	Pn	13 39 58.0	+1.1
PMR	Palmer	3.85	274	ePn	Pn	13 40 01.6	+0.5
HDA	Harding Lake	3.93	320	ePn	Pn	13 40 01.6	-0.6
HDA	Harding Lake	3.93	320	P	Pn	13 40 01.2	-1.0
	baz=134						
HDA				S	Sn	13 40 48.0	-0.8
	baz=134						
RND	Reindeer	4.06	301	ePn	Pn	13 40 06.2	+2.1
ILB	Eielson Array	4.17	323	ePn	Pn	13 40 04.2	-1.3
MCK	McKinley	4.24	305	ePn	Pn	13 40 07.5	+1.1
BESE	Bessie Mountai	4.31	131	ePn	Pn	13 40 08.1	+0.6
BESE	Bessie Mountai	4.31	131	Pn	Pn	13 40 08.1	+0.6
BESE				Sg	Sb	13 41 14.8	+5.0
WRH	Wood River Hil	4.34	316	ePn	Pn	13 40 09.1	+1.3
SEW	Seward	4.35	254	ePn	Pn	13 40 08.9	+1.0
CCB	Clear Creek Bu	4.36	318	ePn	Pn	13 40 07.9	-0.2
PRP	Porcupine Dome	4.46	335	ePn	Pn	13 40 09.5	0.0
TCOL	CIGO, UAF Yank	4.54	320	P	Pn	13 40 09.5	-1.0
	baz=134						
TCOL				S	Sn	13 41 03.8	+0.1
	baz=134						
POKR	Poker Plat Res	4.59	324	S	Sn	13 41 04.8	-0.3
	baz=138						
BWN	Browne	4.66	308	ePn	Pn	13 40 12.7	+0.5
JIS	Juneau Island	4.70	131	ePn	Pn	13 40 13.4	+0.7
EPYK	Eagle Plains	5.21	20	ePn	Pn	13 40 20.7	+0.9
EPYK	Eagle Plains	5.21	20	P	Pn	13 40 18.4	-1.3
	baz=204						
EPYK				S	Sn	13 41 19.0	-1.3
	baz=204						
BPAW	Bear Paw Mtn.	5.21	304	ePn	Pn	13 40 21.4	+1.5
FYU	Fort Yukon	5.36	342	ePn	Pn	13 40 22.7	+1.0
CNPM	China Poot	5.41	252	ePn	Pn	13 40 24.0	+1.4
CAST	Castle Rocks	5.44	295	ePn	Pn	13 40 23.3	+0.4
BM3	Burnt Mountain	6.09	347	ePn	Pn	13 40 32.4	+0.5
DLBC	Dease Lake	6.36	114	Sg	Sg	13 42 20.4	-4.5
COLD	Coldfoot	6.93	329	Sn	Sn	13 41 59.6	-3.1
KDAK	Kodiak Island	6.94	242	ePn	Pn	13 40 44.6	+1.1
SVW2	Sparrevohn	7.00	273	ePn	Pn	13 40 46.1	+1.8
IMAR	Indian Mountai	7.16	314	ePn	Pn	13 40 48.1	+1.6
INK	Inuvik	7.50	22	Pn	Pn	13 40 50.3	-0.8
OHAK	Old Harbor	7.59	241	ePn	Pn	13 40 53.4	+1.0
TOLK	Toolik Lake Re	7.96	337	ePn	Pn	13 40 59.4	+1.8
TOLK	Toolik Lake Re	7.96	337	P	Pn	13 40 58.1	+0.6
	baz=149						
TOLK				S	Sn	13 42 26.9	-1.3
	baz=149						

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*ISK **17** 13:50:45.5, 40°.54N×41°.90E, h5^{km}, ML2.7/8*

*TIF **17** 13:50:45.1, 40°.47N×41°.74E, h25^{km}±1^{km}*

*DDA **17** 13:50:45.8, 40°.51N×41°.93E, h11^{km}±1^{km}, ML3.1*

ISC 17 13:50:46.2±1.1**, 40°.54N**±0°.02×**41°.95E**±0°.03**, h5**^{km}±11^{km}**,**
n25, σ0^{s}54/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SENK	Senkaya-Erzuru	0.31	87	PG	Pg	13 50 52.8	+0.5
SENK				SG	Sb	13 50 58.2	-1.5
HOMI	Horasan	0.50	183	iP	Pg	13 50 55.7	-0.1
HOMI				iS	Sg	13 51 02.9	+0.6
DBAD	Bademkaya	0.51	338	iP	Pb	13 50 57.8	+0.1
DBAD				iS	Sb	13 51 05.1	-0.4
DAGI	Agillar	0.53	358	iP	Pb	13 50 57.6	-0.5
DAGI				iS	Sb	13 51 05.2	-1.0
KOPR	Koprukoy-ERZUR	0.56	187	PG	Pg	13 50 56.1	-0.8
KOPR				SG	Sg	13 51 04.6	+0.5
AKDA	Akdag	0.62	226	iP	Pg	13 50 58.1	-0.2
EATA	Eleskirt	0.80	148	iP	Pg	13 51 01.5	0.0
EATA				iS	Sb	13 51 14.0	+0.1
EATA				IAML_P			
	comp=Z,2μm,0.1s						
KRIK	Erzurum-spir	0.80	255	iP	Pb	13 51 02.4	-0.4
KRIK				iS	Sg	13 51 12.8	+0.7
DBOC	Borcka	0.83	345	iP	Pb	13 51 02.8	-0.3
DBOC				iS	Sb	13 51 15.0	+0.4
BCA	Borcka	0.93	345	PG	Pg	13 51 03.9	-0.2
BCA				SG	Sb	13 51 17.2	-0.3
BATM	Batumi	1.08	350	PG	Pg	13 51 06.6	-0.3
BATM				SG	Sb	13 51 21.7	0.0
BATM	Batumi	1.08	350	P	Pg	13 51 06.6	-0.3
BATM				S	Sb	13 51 21.6	0.0
BATM	Batumi	1.08	350	iP	Pn	13 51 07.7	-0.2
BATM				iS	Sb	13 51 22.0	+0.4
EPOS	Posof	1.13	31	iP	Pn	13 51 08.6	-0.2
EPOS				iS	Sn	13 51 25.3	+0.6
KOPT	Kop Dagi	1.23	245	iP	Pn	13 51 10.2	0.0
KOPT				iS	Sn	13 51 28.2	+1.0
KOPT				IAML_P			
	comp=Z,2μm,0.3s						
AGRB	Hanur-Agry	1.26	140	PN	Pn	13 51 10.3	-0.2
BAYT	Aydıntepe-Bayb	1.38	264	PN	Pn	13 51 11.5	-0.8
AKH	Akhalkalaki	1.46	53	PN	Pb	13 51 13.5	-0.4
AKH	Akhalkalaki	1.46	53	P	Pg	13 51 14.6	+0.4
YEDI	Yedisu-Bingol	1.54	225	PN	Pn	13 51 13.8	-0.6
MACK	Trabzon	1.70	284	iP	Pb	13 51 18.0	0.0
MACK				iS	Sg	13 51 40.6	-0.3
BNGL	BINGOL	1.70	201	iP	Pb	13 51 17.3	-0.8
BNGL				iS	Sg	13 51 41.5	+0.6
TKB	Tkibuli	1.97	23	P	Pb	13 51 22.6	+0.1
TKB				S	Sg	13 51 49.3	-0.2
KELT	Kelkit	2.09	260	iP	Pb	13 51 24.6	-0.1
KELT				iS	Sb	13 51 52.0	+0.9
AKDM	Akdamar-Van	2.35	160	PN	Pn	13 51 25.9	+0.3

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*NIED **17** 13:56:00, 35°.70N×140°.30E, h71^{km}, Mw4.3 Best double couple: $M_0$3.68000×10^{15} NP1:ϕ_s155.00000°, δ31.00000°, λ68.00000°. NP2:ϕ_s360.00000°, δ62.00000°, λ102.00000°.*

*BJI **17** 13:56:18.5±0.0, 35°.51N×140°.74E, h60^{km}, mb4.6/39, mB4.8/22, Ms3.7/6, Ms7 3.7/2*

*MOS **17** 13:56:23.5±1.1, 35°.59N×140°.13E, h69^{km}, mb4.7/19, Error ellipse: s-maj=10.3km s-min=5.9km az=111.0*

*IDC **17** 13:56:24.7±1.3, 35°.61N×140°.19E, h65^{km}±12^{km}, mb3.9/21, mb1 4.1/25, mb1mx4.0/37, mbtmp4.2/25, MS3.0/13, Ms1 3.0/13, ms1mx2.8/40, Error ellipse: s-maj=14.7km s-min=8.7km az=81.0*

*ISCJB **17** 13:56:24.0±0.2, 35°.63N±0°.03×140°.17E±0°.03, h72^{km}±2^{km}, mb4.3/59, Error ellipse: s-maj=4.6km s-min=4.3km az=3.1*

*NEIC **17** 13:56:24.4±2.5, 35°.67N×140°.27E, h63^{km}±5^{km}, mb4.5/27, Error ellipse: s-maj=11.1km s-min=9.5km az=86.0*

NEIC Felt at Uenohara and Zushi. Recorded [1 JMA] in Chiba, Ibaraki, Kanagawa, Saitama and Tokyo.

*JMA **17** 13:56:24.1±0.2, 35°.73N×140°.20E, h67^{km}±2^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s22.00000°, δ87.00000°, λ87.00000°. NP2:ϕ_s251.00000°, δ5.00000°, λ139.00000°. Principal axes: T Plg48.0000°, Azm288.0000°; N Plg3.0000°, Azm22.0000°; P Plg42.0000°, Azm115.0000°;*

JMA Felt I J1.

ISC 17 13:56:25.1±0.6**, 35°.70N**±0°.04×**140°.20E**±0°.04**, h66**^{km}±5^{km}**,**

n163,σ1^{s}21/176,mb4.4/59,3C-12D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	0.21	107	⇑P	Pn	13 56 34.8	-0.4
JSMT				*e*S	Sn	13 56 42.7	+0.1
JCN	**Nagara**	0.28	180	⇓P	Pn	13 56 35.7	0.0
JCN				S	Sn	13 56 44.8	+1.4
TOK	**Tokyo**	0.36	267	P	Pn	13 56 36.5	+0.3
TOK				*e*S	Sn	13 56 44.8	+0.5
JIHU	**Itakohorinouch**	0.37	45	⇑P	Pn	13 56 35.9	-0.4
JIHU				S	Sn	13 56 44.4	-0.1
BSO3	**Boso 3**	0.93	164	⇓P	Pn	13 56 41.5	-0.8
JAG	**Ashikaga**	0.94	320	⇓P	Pn	13 56 42.1	-0.5
JAG				S	Sn	13 56 55.1	-0.5
JOD2	**Odawara 2**	1.01	245	⇓P	Pn	13 56 42.7	-0.8
JOD2				S	Sn	13 56 55.8	-1.4
JRY	**Ryogami san**	1.10	287	⇓P	Pn	13 56 44.8	+0.1
JIM2	**Oshima 3**	1.17	213	P	Pn	13 56 43.9	-1.7
BSO1	**Boso 1**	1.23	149	P	Pn	13 56 44.4	-1.3
JKT	**Katashina**	1.31	324	⇓P	Pn	13 56 47.0	-0.5
JKT				S	Sn	13 57 04.3	0.0
JFNN	**Fujinakano**	1.34	248	⇓P	Pn	13 56 47.2	-0.6
JFNN				S	Sn	13 57 04.3	-0.5
JYN	**Shimob**	1.37	262	⇓P	Pn	13 56 47.7	-0.5
JIZS	**Izushimoda**	1.47	228	⇓P	Pn	13 56 48.4	-1.0
JIZS				S	Sn	13 57 06.4	-1.4
MJAR	**Matsushiro Arr**	1.82	298	P	Pn	13 56 54.1	-0.1
	19nm,0.3s,baz=101,slow=14,SNR=948						
MJAR				LR	LR	13 57 36.7	
	comp=Z,318nm,20.2s,baz=120,slow=40						
MAJO	**Matsushiro**	1.82	298	*e*Pn	Pn	13 56 54.6	+0.4
MAJO	**Matsushiro**	1.82	298	*e*P	Pn	13 56 54.6	+0.4
MAT	**Matsushiro**	1.82	298	P	Pn	13 56 54.7	+0.5
MAT				S	Sn	13 57 15.3	-1.0
MJB9	**Matsu-Tunnel**	1.82	298	*e*Pn	Pn	13 56 54.6	+0.3
JHJ	**Hachijo jima 2**	2.60	188	P	Pn	13 57 03.9	-1.0
	117nm,0.3s,baz=332,slow=11,SNR=66						
JHJ				S	Sn	13 57 32.7	-2.6
	225nm,0.3s,baz=106,slow=20,SNR=10						
JHJ				LR	LR	13 57 41.3	
	comp=Z,73nm,19.8s,baz=332,slow=31						
JHJ2	**Mitsune**	2.60	187	*e*Pn	Pn	13 57 03.8	-1.1
INU	**Inuyama**	2.62	263	*e*Pn	Pn	13 57 04.9	-0.1
ERM	**Erimo**	6.71	19	*e*Pn	Pn	13 57 58.6	-2.3
ERM	**Erimo**	6.71	19	*e*P	Pn	13 58 05.6	+4.7
JNU	**Nakatsue**	8.12	254	P	Pn	13 58 20.6	+0.2
	0.5nm,0.3s,baz=0.8,slow=7.7,SNR=4.7						
JNU	**Nakatsue**	8.12	254	*e*Pn	Pn	13 58 20.8	+0.4
ASAJ	**Asahikawa**	8.60	12	P	Pn	13 58 23.1	-3.6
	1.2nm,0.3s,baz=208,slow=14,SNR=15						
ASAJ				S	Sn	13 59 56.9	-5.2
	0.2nm,0.3s,baz=81,slow=19,SNR=2.3						
ASAJ				LR	LR	14 02 20.5	
	comp=Z,44nm,21.7s,baz=216,slow=41						
YUK	**Yuzh-Kuril'sk**	9.39	26	*e*P	Pn	13 58 43.9	+6.5
KSRS	**Korea Array**	10.03	284	P	Pn	13 58 48.5	+2.2
	0.8nm,0.3s,baz=96,slow=14,SNR=21						
KSRS				LR	LR	14 02 32.0	
	comp=Z,136nm,20.0s,baz=113,slow=36						
KS15	**Wonju Array Si**	10.06	284	*e*Pn	Pn	13 58 48.5	+1.7
USA0B	**Ussuriysk Arra**	10.57	326	*e*Pn	Pn	13 58 54.6	+1.0
USRK	**Ussuriysk Ar.**	10.57	326	P	Pn	13 58 56.2	+2.6
	0.3nm,0.3s,baz=132,slow=12,SNR=9.7						
YSS	**Yuzh-Sakhalins**	11.40	9	*e*Pn	Pn	13 59 05.9	+0.9
YSS	**Yuzh-Sakhalins**	11.40	9	*e*P	Pn	13 59 06.8	+1.9
MDJ	**Mudanjiang**	12.04	321	P	Pn	13 59 15.8	+2.1
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
CN2	**Changchun**	13.92	310	*e*P	Pn	13 59 40.8	+1.7
KLR	**Kul'dur**	14.87	338	P	Pn	13 59 49.1	-2.3
	0.3nm,0.3s,baz=159,slow=10.0,SNR=7.1						
KLR				LR	LR	14 05 19.6	
	comp=Z,38nm,19.5s,baz=145,slow=36						
KLR	**Kul'dur**	14.87	338	*e*P	P	13 59 56.0	+0.3
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DL2	**Dalian**	15.12	288	P	P	13 59 59.3	+0.8
DL2				*e*S	S	14 02 52.6	-2.2
DL2				pmax	pmax		
	comp=Z,22nm,0.7s						
DL2				LR	LR		
	comp=Z,150nm,16.0s						
DL2				LR	LR		
	comp=Z,120nm,14.6s						
TYV	**Tymovskoe**	15.26	6	*e*P	Pn	13 59 56.3	-0.1
TYV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NJ2	**Nanjing**	18.09	265	*e*P	P	14 00 30.9	-0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SKR	**Severo-Kuril's**	18.88	33	*e*P	Pn	14 00 42.8	+1.7
BJT	**Baijiatuau**	19.44	290	*e*P	P	14 00 46.3	+0.2
	comp=Z,6.9nm,0.6s						
BJT	**Baijiatuau**	19.44	290	*e*P	P	14 00 46.3	+0.2
BJT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NACB	**Ninganchiao**	19.76	240	*e*P	P	14 00 48.7	-1.1
	comp=Z,21nm,1.0s						
ZEA	**Zeya**	20.19	337	*e*P	P	14 00 54.2	+0.1
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
PETK	**Petropavlovsk-**	21.32	30	P	P	14 01 05.1	-1.2
	comp=Z,1.2nm,0.7s,baz=198,slow=9.1,SNR=2.7						
PETK				LR	LR	14 09 32.2	
	comp=Z,14nm,21.3s,baz=232,slow=37						
PEA1	**Petropavlovsk-**	21.33	30	*e*P	P	14 01 05.1	-1.3
GUMO	**Guam**	22.42	168	LR	LR	14 07 45.8	
	comp=Z,26nm,19.1s,baz=12,slow=30						
HHC	**Hu-ho-hao-te**	23.01	292	*e*P	P	14 01 24.3	-0.2
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,81nm,5.4s						
MA2	**Magadan**	24.86	13	LR	LR	14 12 45.0	
	comp=Z,26nm,18.4s,baz=178,slow=39						
MA2	**Magadan**	24.86	13	*i* P	P	14 01 41.6	+0.4
ENH	**Enshi**	26.27	267	*e*P	P	14 01 53.1	-1.2
	comp=Z,13nm,0.9s						
YAK	**Yakutsk**	27.17	349	*i* P	P	14 02 03.9	+1.9
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SONA0	**Songino Array**	27.75	306	*e*P	P	14 02 06.8	-0.8
SONM	**Songino Array**	27.75	306	P	P	14 02 06.8	-0.8
	comp=Z,0.6nm,0.3s,baz=108,slow=9.4,SNR=3.6						
SONM				LR	LR	14 13 33.4	
	comp=Z,57nm,19.1s,baz=80,slow=37						
H11N2	**WAKE ISLAND Hy**	28.36	117	T	T	14 31 42.4	
	baz=309,slow=75,SNR=51						
H11N1	**WAKE ISLAND Hy**	28.37	117	T	T	14 31 44.2	
	baz=309,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	28.38	117	T	T	14 31 42.6	
	baz=309,slow=75,SNR=44						
H11S3	**WAKE ISLAND Hy**	29.01	119	T	T	14 32 22.8	
	baz=311,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	29.01	119	T	T	14 32 22.9	
	baz=311,slow=75,SNR=29						
H11S2	**WAKE ISLAND Hy**	29.03	119	T	T	14 32 25.9	
	baz=311,slow=75,SNR=16						
LZH	**Lanzhou**	29.35	282	*e*P	P	14 02 24.5	+2.6
LZH				pP	pP	14 02 39.8	+2.0
LZH				sP	sP	14 02 46.3	+0.8
LZH				pmax	pmax		
	comp=Z,15nm,0.9s						
GTA	**Gaotai**	32.04	289	*e*P	P	14 02 46.3	+0.7
GTA				PcP	PcP	14 05 34.3	+0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,38nm,5.9s						
GTA				LR	LR		
	comp=Z,61nm,15.6s						
GTA				LR	LR		
	comp=Z,52nm,16.5s						
GTA				LR	LR		
	comp=Z,73nm,14.9s						
BILL	**Bilibino**	35.58	17	⇓*e*P	P	14 03 16.9	+1.2
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,22nm,14.0s						
TIXI	**Tiksi**	36.50	354	P	P	14 03 23.3	-0.2
	comp=Z,1.2nm,0.3s,baz=183,slow=4.5,SNR=2.9						
TIXI	**Tiksi**	36.50	354	*i* P	P	14 03 25.3	+1.8
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CM31	**Chiang Mai Arr**	40.22	256	*e*P	P	14 03 54.1	-1.2
	comp=Z,20nm,1.8s						
CM31				*e*PcP	PcP	14 05 58.6	+0.3
CMAR	**Chiang Mai Arr**	40.22	256	P	P	14 03 54.1	-1.2
	comp=Z,0.3nm,0.3s,baz=48,slow=8.6,SNR=3.4						
CMAR				PcP	PcP	14 05 58.6	+0.3
	comp=Z,0.5nm,0.5s,baz=9.2,slow=6.0,SNR=4.4						
CMAR				LR	LR	14 21 03.0	
	comp=Z,24nm,20.1s,baz=325,slow=37						
DGZ	**Jazzator, Alta**	40.40	307	*de*P	P	14 03 57.9	+1.2
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	**Urumqi**	40.58	298	*e*P	P	14 03 59.9	+1.7
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,71nm,4.3s						
ZAA0	**Zalesovo Array**	42.10	313	*e*P	P	14 04 10.5	+0.1
	comp=Z,6.8nm,1.2s						
ZAA1	**Zalesovo Array**	42.10	313	*e*P	P	14 04 10.0	-0.5
ZAA1				*e*PcP	PcP	14 06 04.0	+0.1
ZALV	**Zalesovo Beam**	42.10	313	P	P	14 04 10.0	-0.4
	comp=Z,2.0nm,0.4s,baz=83,slow=4.8,SNR=9.9						
ZALV				PcP	PcP	14 06 04.0	+0.1
	comp=Z,3.5nm,0.6s,baz=98,slow=3.0,SNR=4.7						
ZALV	**Zalesovo Beam**	42.10	313	*e*P	P	14 04 09.7	-0.7
MK31	**Makanchi Array**	44.01	303	*e*P	P	14 04 25.9	0.0
	comp=Z,4.7nm,0.8s						
MK31	**Makanchi Array**	44.01	303	*i* P	P	14 04 26.0	0.0
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK32	**Makanchi Array**	44.01	303	*e*P	P	14 04 26.2	+0.2
MK32				*e*PP	PcP	14 06 10.3	-0.2
MKAR	**Makanchi Array**	44.01	303	P	P	14 04 26.2	+0.2
	comp=Z,3.7nm,0.7s,baz=91,slow=10,SNR=35						
MKAR				PcP	PcP	14 06 10.4	-0.2
	comp=Z,1.6nm,0.8s,baz=81,slow=5.3,SNR=4.0						
MAKZ	**Makanchi**	44.22	303	*e*P	P	14 04 27.8	+0.1
	comp=Z,5.6nm,0.9s						
MAKZ	**Makanchi**	44.22	303	*e*P	P	14 04 27.8	+0.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	45.99	309	*e*P	P	14 04 41.3	-0.3
	comp=Z,13nm,0.8s						
KURK	**Kurchatov**	45.99	309	*e*P	P	14 04 41.8	+0.2
KURK				pmax	pmax		
	comp=Z,12nm,0.9s						
MTN	**Manton Dam**	49.04	192	*e*P	P	14 05 03.8	-1.7
	comp=Z,19nm,0.8s						
KSH	**Kashi**	50.06	295	*e*P	P	14 05 17.4	+4.0
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AAK	**Ala-Archa**	50.27	299	*e*P	P	14 05 14.2	-0.7
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JAGI	**Jajag, Banyuwa**	50.33	214	*e*P	P	14 05 13.9	-1.5
	comp=Z,70nm,0.6s						
OTUK	**Ortayu**	50.42	307	P	P	14 05 15.6	-0.2
OTUK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRVK	**Borovoye**	50.81	313	*e*P	P	14 05 20.5	+1.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	51.14	32	P	P	14 05 21.4	+0.5
	comp=Z,0.9nm,0.8s,baz=263,slow=5.8,SNR=10						
ILB	**Eielson Array**	51.14	32	*e*P	P	14 05 21.4	+0.5
	comp=Z,3.3nm,0.9s						
SVE	**Sverdlovsk**	55.50	319	*e*P	P	14 05 52.4	-0.6
WB2	**Warramunga Arr**	55.62	187	*e*P	P	14 05 52.7	-1.5
	comp=Z,6.9nm,0.6s						
WR1	**Warramunga Arr**	55.62	187	*e*P	P	14 05 52.8	-1.4
WR1				*e*PcP	PcP	14 06 52.7	-0.4
WRA	**Warramunga Arr**	55.62	187	P	P	14 05 52.8	-1.4
	comp=Z,7.7nm,0.6s,baz=356,slow=8.9,SNR=61						
WRA				PcP	PcP	14 06 52.7	-0.4
	comp=Z,1.7nm,0.6s,baz=3.3,slow=4.3,SNR=2.7						
INK	**Inuvik**	56.01	27	P	P	14 05 56.9	+0.4
	comp=Z,2.3nm,1.1s,baz=270,slow=2.0,SNR=3.4						
INK	**Inuvik**	56.01	27	*e*P	P	14 05 56.9	+0.4
	comp=Z,6.4nm,1.4s						
INK	**Inuvik**	56.01	27	*e*P	P	14 05 56.9	+0.4
INK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ARU	**Arti**	56.71	319	*e*P	P	14 06 01.3	-0.3
	comp=Z,9.1nm,0.8s						
ARU	**Arti**	56.71	319	*i* P	P	14 06 01.2	-0.4
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AB31	**Akbulak array**	58.05	310	*i* P	P	14 06 10.7	-0.5
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	58.05	310	*e*P	P	14 06 10.7	-0.4
	comp=Z,6.5nm,1.0s						
AS31	**Alice Springs**	59.35	187	*e*P	P	14 06 19.3	-1.1
	comp=Z,1.8nm,0.8s						
AS31				*e*PcP	PcP	14 07 08.3	+0.6
ASAR	**Alice Springs**	59.35	187	P	P	14 06 19.4	-1.0
	comp=Z,2.4nm,0.6s,baz=13,slow=8.1,SNR=37						
ASAR				PcP	PcP	14 07 08.3	+0.6
	comp=Z,1.4nm,0.8s,baz=0.4,slow=4.3,SNR=4.6						
KIRV	**Kirov**	60.72	323	LR	LR	14 33 06.8	
	comp=Z,22nm,21.3s,baz=186,slow=36						
PRGR	**Permogore**	61.35	327	*e*P	P	14 06 31.8	-1.8
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ARA0	**ARCESS Array S**	64.89	339	*e*P	P	14 06 57.1	+0.1
ARCES	**ARCESS Array B**	64.89	339	P	P	14 06 57.1	+0.1
	comp=Z,2.8nm,0.8s,baz=67,slow=9.5,SNR=5.5						
YKA	**Yellowknife Ar**	65.44	30	P	P	14 07 00.8	+0.2
	comp=Z,0.3nm,0.3s,baz=300,slow=6.0,SNR=3.1						
YKB5	**Yellowknife Ar**	65.44	30	*e*P	P	14 07 00.8	+0.2
STKA	**Stephens Creek**	67.24	179	P	P	14 07 11.5	-0.8
	comp=Z,3.0nm,0.8s,baz=324,slow=5.6,SNR=3.3						
STKA	**Stephens Creek**	67.24	179	*e*P	P	14 07 11.5	-0.8
	comp=Z,6.9nm,1.6s						
STKA	**Stephens Creek**	67.24	179	*e*P	P	14 07 11.5	-0.8
STKA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
OBN	**Obninsk**	68.57	323	⇓*e*P	P	14 07 20.7	+0.1
OBN				*e*		14 09 51.6	
OBN				pmax	pmax		
	comp=Z,12nm,0.5s						
OBN				MLR	MLR		
	comp=Z,21nm,20.0s						
LPSR	**Galich'ya Gora**	68.69	320	*e*P	P	14 07 21.1	-0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	**Storozhevoye**	69.29	319	*e*P	P	14 07 24.1	-1.0
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
FIA0	**FINESS Array S**	69.53	332	*e*P	P	14 07 25.6	-0.8
FIA0	**FINESS Array S**	69.53	332	*e*P	P	14 07 25.6	-0.8
FINES	**FINESS Array B**	69.53	332	P	P	14 07 25.6	-0.8
	comp=Z,5.1nm,0.9s,baz=76,slow=10.0,SNR=7.7						
FINES	**FINESS Array B**	69.53	332	*i* P	P	14 07 26.7	+0.3
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	71.02	311	P	P	14 07 36.5	+0.7
	comp=Z,6.3nm,0.8s,baz=50,slow=1.2,SNR=11						
KVAR	**Kislovodsk Arr**	71.03	311	LR	LR	14 41 09.6	
	comp=Z,40nm,18.3s,baz=90,slow=38						
KIV	**Kislovodsk**	71.04	311	*e*P	P	14 07 36.7	+0.6
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
SHA1	**Shidzhatmaz**	71.17	311	*e*P	P	14 07 37.5	+0.5
GNI	**Garni**	71.71	307	*e*P	P	14 07 39.9	-0.4
GNI				pmax	pmax		
	comp=Z,23nm,1.0s						
AKASG	**Malin Array Be**	74.75	322	P	P	14 07 57.5	-0.3
	comp=Z,4.6nm,0.6s,baz=48,slow=6.1,SNR=13						
AKASG				LR	LR	14 41 44.1	
	comp=Z,21nm,20.2s,baz=50,slow=36						
AKBB	**Malin Array Si**	74.75	322	*e*P	P	14 07 56.9	-0.8
	comp=Z,6.6nm,0.8s						
AKBB	**Malin Array Si**	74.75	322	*e*P	P	14 07 56.9	-0.8
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NB2	**NORSAR Subarra**	75.03	337	P	P	14 07 59.1	-0.1
	comp=Z,1.9nm,0.6s,baz=41,slow=5.9						
NB200	**NORSAR Array S**	75.03	337	*e*P	P	14 07 59.1	-0.1
NOA	**NORSAR Array B**	75.03	337	P	P	14 07 59.1	-0.1
	comp=Z,2.4nm,0.8s,baz=41,slow=5.8,SNR=7.9						
NOA				LR	LR	14 43 39.6	
	comp=Z,4.0nm,20.3s,baz=50,slow=38						
NV01	**Mina Array Sit**	76.57	52	*e*P	P	14 08 09.4	+0.7
NVAR	**Mina Array Bea**	76.57	52	P	P	14 08 09.4	+0.7
	comp=Z,0.3nm,0.5s,baz=275,slow=6.8,SNR=5.6						
BUR08	**Bucovina Ar. S**	78.73	321	*e*P	P	14 08 20.2	-0.2
	comp=Z,16nm,1.9s						
BR101	**Keskin Array S**	79.00	311	*e*P	P	14 08 22.4	+0.4
BRTR	**Keskin Array B**	79.00	311	P	P	14 08 22.4	+0.4
	comp=Z,1.4nm,0.6s,baz=85,slow=4.1,SNR=7.5						
PD31	**Pinedale Array**	79.30	45	*e*P	P	14 08 24.4	+0.7
PDAR	**Pinedale Array**	79.30	45	P	P	14 08 24.4	+0.7
	comp=Z,0.9nm,0.6s,baz=263,slow=2.9,SNR=7.5						
KOLS	**Kolonicke sedl**	79.32	324	*e*P	P	14 08 24.1	+0.6
KOLS	**Kolonicke sedl**	79.32	324	*e*P	P	14 08 24.0	+0.6
LCMT	**Little Creek M**	80.64	51	*e*P	P	14 08 32.9	+1.9
	comp=Z,3.0nm,0.9s						
KNB	**Kanab**	80.90	51	*e*P	P	14 08 34.1	+1.6
	comp=Z,3.9nm,1.0s						
SRU	**San Rafael Swe**	81.02	48	*e*P	P	14 08 33.9	+0.8
	comp=Z,3.3nm,0.8s						
SRU	**San Rafael Swe**	81.02	48	*e*P	P	14 08 33.9	+0.8
SRU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VYHS	**Vyhne**	81.26	325	*e*P	P	14 08 36.1	+2.2
VYHS	**Vyhne**	81.26	325	*e*P	P	14 08 36.1	+2.2
U15A	**North Rim**	81.60	51	*e*P	P	14 08 37.3	+1.0
	comp=Z,17nm,1.9s						
CLL	**Collm**	81.75	330	*e*P	P	14 08 36.0	-0.4
CLL	**Collm**	81.75	330	*e*P	P	14 08 36.0	-0.4
MODS	**Modra-Piesok**	82.07	326	*e*P	P	14 08 39.0	+0.8
MODS	**Modra-Piesok**	82.07	326	*e*P	P	14 08 39.0	+0.8
PV14	**Lion Creek, Pa**	82.40	48	*e*P	P	14 08 41.3	+0.9
	comp=Z,4.9nm,0.9s						
PV13	**Radium Mtn., P**	82.66	48	*e*P	P	14 08 42.8	+1.0
	comp=Z,5.2nm,1.0s						
KHC	**Kasperske Hory**	83.16	328	*e*P	P	14 08 43.5	-0.4
SDCO	**Great Sand Dun**	84.91	46	*e*P	P	14 08 54.1	+0.8
	comp=Z,1.8nm,0.9s						
BFO	**Black Forest**	85.98	330	*i* P	P	14 08 59.1	+1.0
ANMO	**Albuquerque**	86.19	49	*ce*P	P	14 09 01.1	+1.5
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
LTX	**Lajitas**	91.71	52	*e*P	P	14 09 26.4	+0.7
LTX	**Lajitas**	91.71	52	*e*P	P	14 09 26.4	+0.7
TXAR	**Lajitas Array**	91.71	52	P	P	14 09 26.4	+0.8
	comp=Z,0.7nm,0.7s,baz=308,slow=4.2,SNR=8.8						
TOA1	**Torodi Ar. Sit**	117.55	313	*e*PKPdf	PKPdf	14 15 02.5	-1.5
TORD	**Torodi Ar. Bea**	117.55	313	PKP	PKPdf	14 15 02.5	-1.5
	comp=Z,0.7nm,0.6s,baz=341,slow=0.3,SNR=2.9						
LPAZ	**La Paz**	148.21	60	PKPbc	PKPbc	14 16 04.6	-0.2
	comp=Z,1.5nm,0.7s,baz=346,slow=0.6,SNR=6.7						

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*ROM **17** 14:03:42.2±0.3, 43°.56N±0°.01×13°.77E±0°.02, h8^{km}, ML2.6/9, Error ellipse: s-maj=1.9km s-min=0.8km az=235.0*

*ISCJB **17** 14:03:43.3±0.3, 43°.54N±0°.02×13°.71E±0°.03, h7^{km}±3^{km}, Error ellipse: s-maj=4.3km s-min=2.9km az=152.7*

ISC 17 14:03:43.0±0.8**, 43°.54N**±0°.03×**13°.75E**±0°.02**, h12**^{km}±5^{km}**, n35,σ0^{s}91**/47**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	**Ancona**	0.11	277	P	Pg	14 03 45.3	-0.7
AOI				S	Sg	14 03 47.2	-1.0
AOI				AML	AML		
	comp=E,3435µm,0.2s						
AOI				AML	AML		
	comp=N,5095µm,0.9s						
AOI				AML	AML		
	comp=E,3435µm,0.2s						
AOI				AML	AML		
	comp=N,5095µm,0.9s						
AOI				AML	AML		
	comp=E,3435µm,0.2s						
AOI				AML	AML		
	comp=N,5095µm,0.9s						
AOI				AML	AML		
	comp=E,3435µm,0.2s						
AOI				AML	AML		
	comp=N,5095µm,0.9s						
PCRO	**Pietralacroce**	0.17	295	P	Pg	14 03 46.8	-0.1
PCRO				S	Sg	14 03 49.9	+0.2
CIMA	**Civitanova Mar**	0.24	194	P	Pb	14 03 48.3	-1.0
CIMA				S	Sb	14 03 53.4	+2.0
CIMA				AML	AML		
	comp=E,7265µm,0.2s						
CIMA				AML	AML		
	comp=N,6255µm,0.4s						
CADA	**Capodarco di F**	0.34	178	P	Pb	14 03 50.2	-0.9
CADA				S	Sb	14 03 56.6	+0.2
SENI	**Senigallia**	0.41	295	P	Pb	14 03 51.9	-0.3
CING	**Cingoli**	0.43	248	P	Pg	14 03 51.0	-0.6
CING				S	Sg	14 03 57.7	+0.3
CING				AML	AML		
	comp=E,256µm,0.6s						
CING				AML	AML		
	comp=N,274µm,0.2s						
MNTP	**Montappone**	0.45	207	P	Pg	14 03 51.8	-0.1
GUMA	**Gualdo di Mace**	0.49	164	P	Pb	14 03 53.6	0.0
GUMA				AML	AML		
	comp=E,1020µm,0.4s						
GUMA				AML	AML		
	comp=N,782µm,0.7s						
GUMA				AML	AML		
	comp=E,930µm,0.4s						
GUMA				AML	AML		
	comp=N,861µm,1.3s						
GUMA				AML	AML		
	comp=E,930µm,0.4s						
GUMA				AML	AML		
	comp=N,782µm,0.7s						
GUMA				AML	AML		
	comp=E,1020µm,0.4s						
EL6	**Elcito**	0.51	246	P	Pg	14 03 52.4	-0.7
ARVD	**Arcevia**	0.59	267	P	Pg	14 03 53.6	-0.9
ARVD				S	Sb	14 04 03.4	-0.1
ARVD				AML	AML		
	comp=E,93µm,0.3s						
ARVD				AML	AML		
	comp=N,87µm,0.5s						
ARVD				AML	AML		
	comp=E,93µm,0.3s						
ARVD				AML	AML		
	comp=N,87µm,0.5s						
ARVD				AML	AML		
	comp=N,87µm,0.5s						
ARVD				AML	AML		
	comp=E,93µm,0.3s						
CSP1	**Cessapalombo**	0.59	222	P	Pg	14 03 53.8	-0.9
FDMO	**Fiordimonte**	0.69	224	P	Pg	14 03 55.5	-1.0
FDMO				S	Sb	14 04 06.4	-0.2
FDMO				AML	AML		
	comp=E,264µm,0.2s						
FDMO				AML	AML		
	comp=N,185µm,0.8s						
FDMO				AML	AML		
	comp=E,264µm,0.2s						
FDMO				AML	AML		
	comp=N,185µm,0.8s						
FDMO				AML	AML		
	comp=E,264µm,0.2s						
FDMO				AML	AML		
	comp=N,185µm,0.8s						
SSFR	**Montelago di S**	0.71	262	P	Pg	14 03 56.0	-0.8
FSSB	**Fossombrone**	0.72	283	P	Pb	14 03 57.1	-0.5
MPAG	**Monte Paganucc**	0.72	278	P	Pg	14 03 56.7	-0.4
MPAG				AML	AML		
	comp=E,132µm,0.4s						
MPAG				AML	AML		
	comp=N,106µm,0.2s						
MPAG				AML	AML		
	comp=E,132µm,0.4s						
MPAG				AML	AML		
	comp=N,106µm,0.2s						
MPAG				AML	AML		
	comp=N,106µm,0.2s						
MPAG				AML	AML		
	comp=E,132µm,0.4s						
MPAG				AML	AML		
	comp=N,106µm,0.2s						
FOSV	**Fossato di Vic**	0.76	252	P	Pg	14 03 57.3	-0.4
CESI	**CESI - Serrava**	0.81	229	P	Pg	14 03 58.3	-0.4
CESI				S	Sb	14 04 10.8	+0.7
CESI				AML	AML		
	comp=E,76µm,1.4s						

CESI				AML	AML		
	comp=N,152μm,0.4s						
CESI				AML	AML		
	comp=E,76μm,1.4s						
CESI				AML	AML		
	comp=N,152μm,0.4s						
CESI				AML	AML		
	comp=N,152μm,0.4s						
CESI				AML	AML		
	comp=E,76μm,1.4s						
CESI				AML	AML		
	comp=E,76μm,1.4s						
NRCA	Norcia	0.84	214	P	Pg	14 03 58.0	-1.3
NRCA				AML	AML		
	comp=E,434μm,0.1s						
NRCA				AML	AML		
	comp=N,516μm,0.6s						
NRCA				AML	AML		
	comp=N,516μm,0.6s						
ATCC	AVT- Casa Cast	0.88	247	P	Pn	14 04 01.0	-0.3
PIEI	Pieia	0.88	270	P	Pg	14 03 59.7	-0.4
TERO	Teramo	0.92	187	P	Pg	14 04 00.2	-0.6
MURB	Monte Urbino	0.93	253	P	Pb	14 04 01.0	-0.2
ASSB	Assisi San Ben	0.94	239	P	Pg	14 04 00.5	-0.6
ASSB				S	Sb	14 04 14.3	+0.7
ASSB				AML	AML		
	comp=E,354μm,0.5s						
ASSB				AML	AML		
	comp=N,284μm,0.4s						
ASSB				AML	AML		
	comp=N,284μm,0.4s						
ATPI	Pietralunga -	0.98	265	P	Pb	14 04 01.8	-0.2
ATVO	AVT- Monte Val	0.99	261	P	Pg	14 04 01.3	-0.8
DUGI	Dugi Otok	1.05	64	*e*Pg	Pn	14 04 04.1	+0.5
DUGI				Sg	Sn	14 04 20.7	+2.5
MOMA	Monte Martano	1.13	230	AML	AML		
	comp=E,170μm,0.5s						
MOMA				AML	AML		
	comp=E,170μm,0.5s						
MOMA				AML	AML		
	comp=N,189μm,1.0s						
NVLJ	Novalja	1.31	38	*e*Pg	Pg	14 04 07.9	-0.2
NVLJ				Sg	Sn	14 04 25.7	+1.3
CAFI	Castiglion Fio	1.31	262	AML	AML		
	comp=N,48μm,1.3s						
CAFI				AML	AML		
	comp=E,46μm,0.6s						
CAFI				AML	AML		
	comp=E,46μm,0.6s						
ZIRJ	Zirje	1.38	84	*e*Pn	Pg	14 04 08.7	-0.9
ZIRJ				Sn	Sg	14 04 28.9	+1.4
MORI	Morici	1.46	76	*e*Pn	Pg	14 04 10.5	-0.6
MORI				Sn	Sg	14 04 30.7	+0.7
UDBI	Udbina	1.76	55	*e*Pn	Pg	14 04 15.6	-1.3
UDBI				Sn	Sg	14 04 39.9	+0.2
RIY	Rijeka	1.86	16	Sn	Sg	14 04 41.7	-1.3
HVAR	Hvar	2.00	99	*e*Pn	Pb	14 04 17.4	-2.0
HVAR				Sn	Sb	14 04 44.0	-0.3
BOJS	Bojanci	2.24	28	AML	AML		
	comp=E,22μm,1.0s						
BOJS				AML	AML		
	comp=N,18μm,0.5s						

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*IDC **17** 14:32:12.2±0.9, 51.°50N×174.°15W, h0^{km}, mb3.9/14, mb1 4.0/17, mb1mx3.8/62, mbtmp3.9/17, ML3.7/3, MS3.4/1, Ms1 3.3/1, ms1mx2.4/36, Error ellipse: s-maj=27.5km s-min=15.0km az=173.0*

*ISCJB **17** 14:32:17.9±0.6, 51.°44N±0.°08×174.°57W±0.°05, h38^{km}, mb4.1/22, MS3.4/1, Error ellipse: s-maj=11.4km s-min=3.9km az=171.6*

*AEIC **17** 14:32:18.9±0.0, 51.°55N×174.°68W, h18^{km}*

*NEIC **17** 14:32:20.2±1.8, 51.°56N×174.°66W, h44^{km}±7^{km}, mb4.3/9, ML3.8(AEIC), Error ellipse: s-maj=10.7km s-min=6.4km az=164.0*

ISC 17 14:32:19.7±0.8**, 51.°6N**±0.°1×**174.°65W**±0.°04**, h38**^{km}**, n67, σ1**^{s}**.65**/62**, mb4.2**/21**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.74	27	*e*Pn	Pn	14 32 34.5	+0.9
KOKL	Mount Kliuchef	0.76	21	*e*Pn	Pn	14 32 34.8	+0.9
KOSE	Korovin Southe	0.81	27	*e*Pn	Pn	14 32 35.8	+1.2
GSMY	Great Sitkin M	0.97	296	*e*Pn	Pn	14 32 37.2	+0.4
GSTR	Great Sitkin T	0.99	299	*e*Pn	Pn	14 32 38.0	+0.9
GSTD	Great Sitkin T	1.02	296	*e*Pn	Pn	14 32 38.0	+0.5
ETKA	Kagalaska Isla	1.12	283	*e*Pn	Pn	14 32 38.7	-0.1
ETKA				*e*Sn	Sn	14 32 53.2	+0.3
ADAG	Mount Adagdak	1.26	287	*e*Pn	Pn	14 32 41.8	+1.1
ADK	Adak	1.29	283	*e*Sn	Sn	14 32 58.1	+1.0
KIKV	Kanaga Island	1.59	280	*e*Pn	Pn	14 32 45.6	+0.4
KICM	Kanaga Island	1.61	282	*e*Pn	Pn	14 32 46.5	+1.1
KIMD	Kanaga Island	1.61	276	*e*Pn	Pn	14 32 45.7	+0.1
TAFP	Tanaga Falls P	2.09	279	*e*Pn	Pn	14 32 53.2	+1.1
TAFP				*e*Sn	Sn	14 33 20.2	+3.4
TASE	Tanaga Southea	2.12	277	*e*Pn	Pn	14 32 53.7	+1.1
TANO	Tanaga North	2.18	279	*e*Pn	Pn	14 32 54.8	+1.5
GAEA	Gareloi East	2.55	275	*e*Pn	Pn	14 32 59.7	+1.2
NIKH	Nikolski High	3.81	67	*e*Pn	Pn	14 33 18.7	+3.0
OKAK	Okmok	4.31	60	*e*Pn	Pn	14 33 23.7	+1.1
OKWE	Okmok W'ng Wal	4.33	62	*e*Pn	Pn	14 33 24.9	+2.1
OKTU	Okmok Mt. Tuli	4.41	64	*e*Pn	Pn	14 33 26.0	+2.1
MSW	Makushin Switc	5.30	61	*e*Pn	Pn	14 33 38.1	+1.9
UNV	Unalaska Valle	5.43	63	*e*Pn	Pn	14 33 40.4	+2.5
SPIA	Saint Paul Isl	6.13	23	*e*Pn	Pn	14 33 51.7	+4.1
KDAK	Kodiak Island	14.13	56	Pn	Pn	14 35 34.2	-2.7
	0.4nm,0.3s,baz=184,slow=3.4,SNR=9.6						
KDAK				Sn	Sn	14 38 06.0	-6.2
	0.1nm,0.3s,baz=166,slow=16,SNR=2.0						
KDAK	Kodiak Island	14.13	56	*e*Pn	Pn	14 35 38.2	+1.2
SVW2	Sparrevohn	14.15	40	*e*P	Pn	14 35 40.4	+3.2
PEA1	Petropavlovsk-	16.91	286	*e*P	P	14 36 15.9	+1.1
PETK	Petropavlovsk-	16.91	286	P	P	14 36 15.9	+1.1
	0.3nm,0.3s,baz=90,slow=14,SNR=7.0						
BILL	Bilibino	18.90	338	*e*P	P	14 36 37.6	+1.1
	6.0nm,0.8s						
ILAR	Eielson Array	19.46	37	P	P	14 36 41.0	-1.7
	1.0nm,0.3s,baz=226,slow=8.1,SNR=54						
ILB	Eielson Array	19.46	37	*e*P	P	14 36 42.8	0.0
	3.8nm,0.4s						
SEY	Seymchan	20.84	316	P	Pn	14 37 00.3	-0.1
	3.6nm,0.8s,baz=122,slow=11,SNR=6.0						
EGAK	Eagle	21.68	40	*e*P	P	14 37 06.7	0.0
	7.0nm,0.6s						
DAWY	Dawson	22.17	42	*e*P	P	14 37 12.3	+0.3
	1.8nm,0.6s						
H11N2	WAKE ISLAND Hy	34.97	211	T	T	15 16 46.1	
	baz=20,slow=76,SNR=45						
H11N3	WAKE ISLAND Hy	34.98	211	T	T	15 16 44.3	
	baz=20,slow=76,SNR=33						
H11N1	WAKE ISLAND Hy	34.99	211	T	T	15 16 41.1	
	baz=20,slow=76,SNR=40						
USRK	Ussuriysk Ar.	35.83	280	P	P	14 39 14.1	-1.2
	1.5nm,0.5s,baz=59,slow=8.6,SNR=6.3						
H11S1	WAKE ISLAND Hy	36.17	211	T	T	15 18 19.5	
	baz=20,slow=76,SNR=99						
H11S2	WAKE ISLAND Hy	36.19	211	T	T	15 18 20.7	
	baz=20,slow=76,SNR=101						
H11S3	WAKE ISLAND Hy	36.19	211	T	T	15 18 19.3	
	baz=20,slow=76,SNR=41						
KSRS	Korea Array	42.22	274	P	P	14 40 09.5	+0.8
	0.9nm,0.7s,baz=57,slow=8.3,SNR=4.4						
KS15	Wonju Array Si	42.25	274	*e*P	P	14 40 09.5	+0.5
	45nm,1.6s						
PDAR	Pinedale Array	43.75	75	P	P	14 40 16.7	-4.7
	0.6nm,0.4s,baz=303,slow=5.0,SNR=3.9						
HHC	Hu-ho-hao-te	50.10	288	*e*P	P	14 41 10.8	0.0
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,76nm,5.2s						
TXAR	Lajitas Array	56.05	84	P	P	14 41 49.9	-4.8
	comp=Z,0.2nm,0.6s,baz=312,slow=7.2,SNR=2.7						
SCHQ	Schefferville	58.17	40	LR	LR	15 07 25.6	
	comp=Z,29nm,18.6s,baz=12,slow=36						
ARA0	ARCESS Array S	58.26	352	*e*P	P	14 42 08.2	-1.4
ARCES	ARCESS Array B	58.26	352	P	P	14 42 08.2	-1.4
	comp=Z,0.8nm,0.7s,baz=19,slow=7.7,SNR=4.2						
KURK	Kurchatov	60.69	316	*e*P	P	14 42 27.0	+0.3
	comp=Z,3.3nm,0.4s						
KURBB	Kurchatov Arra	60.80	316	P	P	14 42 27.1	-0.3
	comp=Z,2.2nm,0.6s,baz=44,slow=6.6,SNR=27						
KURBB				PcP	PcP	14 43 11.2	+0.3
	comp=Z,0.5nm,0.4s,baz=45,slow=3.0,SNR=5.0						
WMQ	Urumqi	61.35	305	*e*P	P	14 42 34.1	+2.7
MK32	Makanchi Array	61.88	311	*e*P	P	14 42 34.0	-0.9
MKAR	Makanchi Array	61.88	311	P	P	14 42 34.0	-0.9
	comp=Z,0.7nm,0.4s,baz=47,slow=6.3,SNR=11						
BVAR	Borovoye Array	62.34	322	P	P	14 42 38.4	+0.6
	comp=Z,2.1nm,0.4s,baz=58,slow=6.6,SNR=27						
BVAR				PcP	PcP	14 43 17.7	+0.6
	comp=Z,0.9nm,0.5s,baz=78,slow=1.5,SNR=5.2						
FIA0	FINESS Array S	66.07	349	*e*P	P	14 43 00.7	-1.3
FINES	FINESS Array B	66.07	349	P	P	14 43 00.7	-1.3
	comp=Z,2.3nm,0.9s,baz=356,slow=7.7,SNR=3.2						
NB200	NORSAR Array S	67.59	357	*e*P	P	14 43 11.2	-0.6
NOA	NORSAR Array B	67.59	357	P	P	14 43 11.2	-0.6
	comp=Z,0.2nm,0.5s,baz=4.9,slow=7.6,SNR=3.8						
AKTO	Aktyubinsk	68.94	327	P	P	14 43 20.9	+0.5
	comp=Z,0.8nm,0.3s,baz=67,slow=11,SNR=5.4						
ABKAR	Akbulak array	69.27	325	*e*P	P	14 43 22.7	+0.3
	comp=Z,8.9nm,1.9s						
AKASG	Malin Array Be	76.06	345	P	P	14 44 01.4	-1.3
	comp=Z,0.5nm,0.3s,baz=20,slow=6.5,SNR=2.1						
AKBB	Malin Array Si	76.06	345	*e*P	P	14 44 01.4	-1.3
	comp=Z,5.7nm,1.3s						
AS31	Alice Springs	87.47	226	*e*P	P	14 45 02.8	-0.2
	comp=Z,3.7nm,1.4s						
ASAR	Alice Springs	87.47	226	P	P	14 45 02.8	-0.2
	comp=Z,0.5nm,0.8s,baz=22,slow=5.7,SNR=5.3						
LBTB	Lobatse	149.26	322	PKPbc	PKPbc	14 52 04.6	+0.5
	comp=Z,1.7nm,0.5s,baz=353,slow=3.5,SNR=3.5						
BOSA	Boshof	152.61	319	PKPbc	PKPbc	14 52 11.8	-0.1
	comp=Z,1.2nm,0.5s,baz=32,slow=5.2,SNR=4.2						

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*IDC **17** 14:36:14.1±2.0, 51.°57N×176.°17W, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.6/54, mbtmp3.7/6, ML4.2/1, Error ellipse: s-maj=60.7km s-min=21.6km az=4.0*

*ISCJB **17** 14:36:19.6±0.8, 51.°40N±0.°09×176.°08W±0.°05, h47^{km}, mb4.0/5, Error ellipse: s-maj=12.9km s-min=4.3km az=3.5*

*AEIC **17** 14:36:20.2±0.0, 51.°41N×176.°11W, h26^{km}*

*NEIC **17** 14:36:21.4±1.9, 51.°50N×176.°17W, h48^{km}±9^{km}, mb4.3/4, ML4.1(AEIC), Error ellipse: s-maj=14.4km s-min=2.9km az=169.0*

ISC 17 14:36:21.4±0.9**, 51.°5N**±0.°1×**176.°15W**±0.°04**, h47**^{km}**, n42, σ1**^{s}**.43**/39**, mb4.0**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	0.39	336	*e*Pn	Pn	14 36 30.3	-0.9
ADK	Adak	0.50	319	*e*Pn	Pn	14 36 31.9	-0.6
ADK				*e*Sn	Sn	14 36 40.6	+0.2
GSMY	Great Sitkin M	0.54	6	*e*Pn	Pn	14 36 32.8	-0.2
GSTD	Great Sitkin T	0.55	0	*e*Pn	Pn	14 36 33.0	-0.1
ADAG	Mount Adagdak	0.55	330	*e*Pn	Pn	14 36 33.2	+0.1
GSTR	Great Sitkin T	0.59	5	*e*Pn	Pn	14 36 33.7	+0.1
KIWB	Kanaga Island	0.71	299	*e*Pn	Pn	14 36 34.8	-0.3
KIMD	Kanaga Island	0.72	291	*e*Pn	Pn	14 36 34.6	-0.7
KIMD				*e*Sn	Sn	14 36 45.4	+0.1
KIKV	Kanaga Island	0.74	301	*e*Pn	Pn	14 36 35.2	-0.3
KICM	Kanaga Island	0.77	303	*e*Pn	Pn	14 36 35.8	-0.1
TAFP	Tanaga Falls P	1.21	290	*e*Pn	Pn	14 36 41.9	+0.1
TAFP				*e*Sn	Sn	14 36 57.9	+0.8
TASE	Tanaga Southea	1.22	286	*e*Pn	Pn	14 36 42.2	+0.2
TANO	Tanaga North	1.29	289	*e*Pn	Pn	14 36 43.7	+0.7
KOKL	Mount Kliuchef	1.46	55	*e*Pn	Pn	14 36 44.4	-0.9
KOFP	Korovin Flat P	1.49	58	*e*Pn	Pn	14 36 44.7	-1.0
KOSE	Korovin Southe	1.55	56	*e*Pn	Pn	14 36 46.7	+0.2
GAEA	Gareloi East	1.64	281	*e*Pn	Pn	14 36 48.5	+0.7
OKAK	Okmok	5.19	63	*e*Pn	Pn	14 37 38.0	+1.6
OKTU	Okmok Mt. Tuli	5.30	66	*e*Pn	Pn	14 37 39.3	+1.3
MREP	Makushin Rep't	6.17	64	*e*Pn	Pn	14 37 51.1	+1.2
UNV	Unalaska Valle	6.32	64	*e*Pn	Pn	14 37 53.8	+2.0
SPIA	Saint Paul Isl	6.64	29	*e*Pn	Pn	14 37 59.1	+2.8
KDAK	Kodiak Island	14.97	56	Pn	Pn	14 39 47.0	-2.6
	1.0nm,0.3s,baz=273,slow=6.6,SNR=15						
HDA	Harding Lake	19.93	38	*e*P	P	14 40 48.7	-0.2
	7.0nm,0.5s						
PAX	Paxson	19.95	43	*e*P	P	14 40 49.7	+0.4
	12nm,0.6s						
ILAR	Eielson Array	20.12	38	P	P	14 40 49.1	-1.8
	1.0nm,0.5s,baz=225,slow=10,SNR=18						
ILB	Eielson Array	20.12	38	*e*P	P	14 40 51.5	+0.6
	6.9nm,1.4s						
TGL	Tana Glacier	20.53	50	*e*P	P	14 40 56.8	+1.3
	76nm,0.5s						
H11N2	WAKE ISLAND Hy	34.40	209	T	T	15 19 37.1	
	baz=18,slow=76,SNR=35						
H11N3	WAKE ISLAND Hy	34.41	209	T	T	15 19 35.1	
	baz=18,slow=76,SNR=40						
H11N1	WAKE ISLAND Hy	34.42	209	T	T	15 19 35.9	
	baz=18,slow=76,SNR=38						
H11S1	WAKE ISLAND Hy	35.61	209	T	T	15 21 02.5	
	baz=18,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	35.62	209	T	T	15 21 06.8	
	baz=18,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	35.63	209	T	T	15 21 05.0	
	baz=18,slow=76,SNR=9.8						
PD31	Pinedale Array	44.69	74	*e*P	P	14 44 27.3	-2.3
PDAR	Pinedale Array	44.69	74	P	P	14 44 27.3	-2.3
	0.5nm,0.5s,baz=324,slow=5.8,SNR=2.1						
HHC	Hu-ho-hao-te	49.24	287	*e*P	P	14 45 07.4	+2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,74nm,5.5s						
TXAR	Lajitas Array	56.99	83	P	P	14 46 02.5	+0.2
	comp=Z,0.2nm,0.5s,baz=309,slow=5.7,SNR=3.0						
KURBB	Kurchatov Arra	60.22	315	P	P	14 46 23.2	-1.0
	comp=Z,1.6nm,0.6s,baz=43,slow=6.7,SNR=17						
WMQ	Urumqi	60.65	304	*e*P	P	14 46 31.6	+4.2
MK32	Makanchi Array	61.24	310	*e*P	P	14 46 30.1	-1.2
MKAR	Makanchi Array	61.24	310	P	P	14 46 30.1	-1.2
	comp=Z,0.5nm,0.4s,baz=46,slow=5.8,SNR=8.6						

IDC 17 14:44:38.7±1.8**, 14.°58S**×**176.°43W, h0**^{km}**, mb3.8**/5**, mb1 4.1**/5**, mb1mx3.8**/33**, mbtmp3.8**/5**, Error ellipse: s-maj=107.7km s-min=25.5km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.94	238	P	P	14 52 31.6	+0.3
	2.8nm,1.0s,baz=72,slow=9.6,SNR=4.3						
WRA	Warramunga Arr	47.18	256	P	P	14 53 13.3	-0.3
	0.9nm,0.8s,baz=88,slow=7.7,SNR=12						
ASAR	Alice Springs	47.59	251	P	P	14 53 16.4	-0.3
	2.6nm,0.3s,baz=87,slow=7.8,SNR=136						
ILAR	Eielson Array	82.24	12	P	P	14 57 01.5	+0.1
	0.1nm,0.5s,baz=228,slow=6.1,SNR=3.8						
TXAR	Lajitas Array	82.61	57	P	P	14 57 04.3	0.0
	0.4nm,0.8s,baz=242,slow=7.1,SNR=3.6						

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*MDD **17** 14:49:08.7±1.1, 38.°88N×10.°90W, h60^{km}, mb3.5/14, Error ellipse: s-maj=10.3km s-min=5.4km az=84.0, PRXIMO*

*IGIL **17** 14:49:08.7, 38.°90N×10.°94W, h40^{km}, ML2.6*

*INMG **17** 14:49:10.2±1.1, 38.°86N×11.°05W, h10^{km}, ML2.3, Error ellipse: s-maj=4.8km s-min=1.9km az=86.0*

*CNRM **17** 14:49:14.3, 38.°49N×10.°35W, h121^{km}*

ISC 17 14:49:05.3±2.2**, 38.°88N**±0.°03×**10.°90W**±0.°09**, h28**^{km}±13^{km}**, n68, σ1**^{s}**.80**/118**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	1.27	86	*e*P	Pb	14 49 29.8	+1.3
PMAFR				*e*S	Sb	14 49 44.5	+0.2
PMAFR				A	A	14 49 46.7	
	101nm,0.2s						
PMAFR	Mafra	1.27	86	P	Pb	14 49 30.1	+1.6
	14nm,0.3s,SNR=8.6						
PMAFR				S	Sb	14 49 45.1	+0.8
	151nm,0.2s,SNR=27						
LIS	Lisbon	1.38	96	*e*S	Sb	14 49 47.4	-0.2
LIS				AML	AML	14 49 49.4	
	comp=N,84nm,0.2s						
LIS	Lisbon	1.38	96	S	Sb	14 49 47.4	-0.2
	comp=N,84nm,0.2s						
ALMR	Almeirim	1.83	81	*e*P	Pb	14 49 37.3	-0.8
ALMR				*e*S	Sn	14 49 58.2	+1.0
ALMR				AML	AML	14 50 00.3	
	comp=E,49nm,0.3s						
ALMR	Almeirim	1.83	81	*e*Sn	Sb	14 49 59.3	-1.3
ALMR				A	A	14 50 02.3	
	comp=E,32nm,0.3s						
ALMR	Almeirim	1.83	81	P	Pb	14 49 37.3	-0.8
ALMR				S	Sn	14 49 58.2	+1.0
	comp=E,25nm,0.3s						
PNCL	Nicolau / Gran	2.01	112	*e*Pn	Pb	14 49 39.4	-1.8
PNCL				*e*Sn	Sn	14 50 01.4	-0.2
PNCL				A	A	14 50 04.5	
	comp=E,13nm,0.2s						
PNCL	Nicolau / Gran	2.01	112	P	Pb	14 49 39.4	-1.8
PNCL				S	Sn	14 50 01.4	-0.2
	comp=E,13nm,0.2s						
PTOM	Tomar	2.07	68	*e*Pn	Pb	14 49 41.0	-1.1
PTOM				*e*Sn	Sn	14 50 04.3	+1.3
PTOM				A	A	14 50 11.8	
	comp=E,12nm,0.4s						
PTOM	Tomar	2.07	68	P	Pb	14 49 41.0	-1.1
PTOM				S	Sn	14 50 04.3	+1.3
	comp=E,6.1nm,0.4s						
PMTG	Montargil	2.10	84	*e*Pn	Pb	14 49 40.8	-1.8
PMTG				*e*Sn	Sn	14 50 04.4	+0.8
PMTG				A	A	14 50 05.2	
	comp=E,7.0nm,0.1s						
PMTG	Montargil	2.10	84	P	Pb	14 49 40.8	-1.8
PMTG				S	Sn	14 50 04.4	+0.8
	comp=E,7.0nm,0.1s						
PTEO	Sao Teotonio	2.17	127	*e*Pn	Pn	14 49 41.6	+2.1
PTEO				*e*Sn	Sn	14 50 05.3	-0.2
PTEO				A	A	14 50 07.5	
	comp=E,18nm,0.4s						
PTEO	Sao Teotonio	2.17	127	P	Pn	14 49 41.6	+2.1
PTEO				S	Sn	14 50 05.3	-0.2
	comp=E,8.8nm,0.4s						
PCAS	Casmilo, Conde	2.20	57	*e*Pn	Pb	14 49 42.5	-1.8
PCAS				*e*Sn	Sn	14 50 07.0	+0.8
PCAS				A	A	14 50 12.9	
	comp=E,4.2nm,0.6s						
PCAS	Casmilo, Conde	2.20	57	P	Pb	14 49 42.5	-1.8
PCAS				S	Sn	14 50 07.0	+0.8
	comp=E,4.2nm,0.6s						
MORF	Marmelete	2.37	131	*e*P	Pn	14 49 44.4	+2.0
MORF				*e*S	Sn	14 50 10.8	+0.3
MORF				AML	AML	14 50 13.4	
	comp=E,22nm,0.1s						
MORF	Marmelete	2.37	131	*e*Pn	Pn	14 49 44.4	+2.0
MORF				*e*Sn	Sn	14 50 09.8	-0.7
MORF				A	A	14 50 15.3	
	comp=E,16nm,0.1s						
MORF	Marmelete	2.37	131	P	Pn	14 49 44.4	+2.0
MORF				S	Sn	14 50 10.8	+0.3
	comp=E,22nm,0.1s						
PFVI	Vila Bisbo	2.39	136	*e*Pn	Pn	14 49 44.7	+2.1
PFVI				*e*Sn	Sn	14 50 10.4	-0.6
PFVI				A	A	14 50 14.6	
	comp=E,6.6nm,0.1s						
PFVI	Vila Bisbo	2.39	136	P	Pn	14 49 44.7	+2.1
	comp=E,3.1nm,0.1s,SNR=26						
PFVI				S	Sn	14 50 11.4	+0.4
	comp=E,7.6nm,0.1s,SNR=5.9						
PBEJ	Beja	2.53	109	*e*Sn	Sn	14 50 15.1	+0.7
PBEJ				A	A	14 50 18.0	
	comp=E,10nm,0.3s						
PBEJ	Beja	2.53	109	S	Sn	14 50 15.1	+0.7
	comp=E,5.1nm,0.3s						
PCVE	Castro Verde	2.58	118	*e*Pn	Pn	14 49 47.3	+2.2
PCVE				*e*Sn	Sn	14 50 15.5	0.0
PCVE				A	A	14 50 18.4	
	comp=E,8.6nm,0.5s						
PCVE	Castro Verde	2.58	118	P	Pn	14 49 47.3	+2.2
PCVE				S	Sn	14 50 15.5	0.0
	comp=E,8.6nm,0.5s						
PMRV	Marv??o	2.78	78	*e*Pn	Pn	14 49 50.4	+2.4
PMRV				*e*Sn	Sn	14 50 21.0	+0.3
PMRV				A	A	14 50 23.4	
	comp=E,7.7nm,0.4s						
PMRV	Marv??o	2.78	78	P	Pn	14 49 50.4	+2.4
PMRV				S	Sn	14 50 21.0	+0.3
	comp=E,7.7nm,0.4s						
PCBR	Castelo Branco	2.82	69	*e*Sn	Sn	14 50 21.9	+0.3
PCBR				A	A	14 50 24.7	
	comp=E,5.2nm,0.3s						
PCBR	Castelo Branco	2.82	69	S	Sn	14 50 21.9	+0.3
	comp=E,2.6nm,0.3s						
PBDV	Barranco-do-Ve	2.86	124	*e*Pn	Pn	14 49 50.8	+1.8
PBDV				*e*Sn	Sn	14 50 22.9	+0.4
PBDV				A	A	14 50 27.0	
	comp=E,6.5nm,0.2s						
PBDV	Barranco-do-Ve	2.86	124	P	Pn	14 49 50.8	+1.8
PBDV				S	Sn	14 50 22.9	+0.4
	comp=E,6.5nm,0.2s						
PVAQ	Vaqueiros	2.91	119	*e*Pn	Pn	14 49 52.0	+2.3
PVAQ				*e*Sn	Sn	14 50 22.2	-1.6
PVAQ				A	A	14 50 26.4	
	comp=E,12nm,0.1s						
PVAQ	Vaqueiros	2.91	119	P	Pn	14 49 52.0	+2.3
PVAQ				S	Sn	14 50 22.2	-1.6
	comp=E,12nm,0.1s						
PVAQ	Vaqueiros	2.91	119	P	Pn	14 49 51.3	+1.6
PVAQ				S	Sn	14 50 22.2	-1.6
PVIS	Viseu	2.95	51	*e*Sn	Sn	14 50 24.4	-0.5
PVIS				A	A	14 50 26.4	
	comp=E,11nm,0.1s						
PVIS	Viseu	2.95	51	S	Sn	14 50 24.4	-0.5
	comp=E,5.3nm,0.1s						
MTE	Manteigas	3.00	59	*e*Pn	Pn	14 49 52.7	+1.6
MTE				*e*Sn	Sn	14 50 26.2	0.0
MTE				A	A	14 50 27.7	
	comp=E,7.5nm,0.2s						
MTE	Manteigas	3.00	59	P	Pn	14 49 52.7	+1.6
MTE				S	Sn	14 50 26.2	0.0
	comp=E,3.8nm,0.2s						
EGRO	El Granado	3.01	115	P	Pn	14 49 53.3	+2.2
	comp=E,2.9nm,0.4s,SNR=12						
EGRO				S	Sn	14 50 26.2	0.0
	comp=E,7.1nm,0.1s,SNR=11						
PBAR	Barrancos	3.11	102	*e*Sn	Sn	14 50 28.3	-0.4
PBAR				A	A	14 50 34.3	
	comp=E,25nm,0.8s						
PBAR	Barrancos	3.11	102	S	Sn	14 50 28.3	-0.4
	comp=E,25nm,0.8s						
POLO	Lamas de Olo	3.45	43	*e*Pn	Pn	14 49 59.6	+2.4
POLO				*e*Sn	Sn	14 50 35.8	-1.3
POLO				A	A	14 50 36.8	
	comp=E,1.7nm,0.3s						
POLO	Lamas de Olo	3.45	43	P	Pn	14 49 59.6	+2.4
POLO				S	Sn	14 50 35.8	-1.3
	comp=E,1.7nm,0.3s						
EMIN	Mina Concepcio	3.51	107	P	Pn	14 50 00.2	+2.3
	comp=E,1.3nm,0.1s,SNR=15						
EMIN				S	Sn	14 50 38.0	-0.5
	comp=E,4.6nm,0.2s,SNR=11						
PCAB	Cabril	3.58	37	*e*Sn	Sn	14 50 39.6	-0.7
PCAB				A	A	14 50 41.1	
	comp=E,6.0nm,0.1s						
PCAB	Cabril	3.58	37	S	Sn	14 50 39.6	-0.7
	comp=E,3.0nm,0.1s						
PGAV	Gavieira, Arco	3.68	32	*e*Pn	Pn	14 50 02.7	+2.3
PGAV				*e*Sn	Sn	14 50 41.6	-1.2
PGAV				A	A	14 50 44.4	
	comp=E,5.0nm,0.3s						
PGAV	Gavieira, Arco	3.68	32	P	Pn	14 50 02.7	+2.3
PGAV				S	Sn	14 50 41.6	-1.2
	comp=E,5.0nm,0.3s						
ELOB	Lobios	3.69	35	P	Pn	14 50 02.6	+2.1
	comp=E,2.1nm,0.5s,SNR=7.9						
ELOB				S	Sn	14 50 42.1	-1.0
	comp=E,3.3nm,0.1s,SNR=12						
MVO	Moncorvo	3.75	51	*e*Pn	Pn	14 50 03.2	+1.9
MVO				*e*Sn	Sn	14 50 42.8	-1.7
MVO				A	A	14 50 44.6	
	comp=E,5.5nm,0.3s						
MVO	Moncorvo	3.75	51	P	Pn	14 50 03.1	+1.9
	comp=E,4.1nm,0.4s,SNR=7.9						
MVO				S	Sn	14 50 43.1	-1.4
	comp=E,3.8nm,0.1s,SNR=9.3						
EPLA	Plasencia	3.91	71	P	Pn	14 50 05.8	+2.3
	comp=E,3.5nm,0.6s,SNR=7.9						
EPLA				S	Sn	14 50 47.4	-1.2
	comp=E,2.6nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	4.32	19	S	Sn	14 50 55.7	-2.7
	comp=E,3.9nm,0.1s,SNR=7.9						
ECAB	El Cabril	4.38	99	P	Pn	14 50 12.4	+2.5
	comp=E,2.8nm,0.7s,SNR=6.5						
ECAB				S	Sn	14 50 59.3	-0.7
	comp=E,6.1nm,0.3s,SNR=8.2						
ECAL	Calabor	4.41	45	P	Pn	14 50 12.9	+2.5
	comp=E,2.6nm,0.4s,SNR=7.9						
ECAL				S	Sn	14 50 59.8	-1.1

	comp=E,1.6nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	4.46	28	P	Pn	14 50 12.9	+1.9
	comp=E,4.8nm,2.6s,SNR=7.9						
EAGO				S	Sn	14 50 59.5	-2.5
	comp=E,2.1nm,0.1s,SNR=7.9						
ESPR	Espera	4.47	115	P	Pn	14 50 12.8	+1.7
	comp=E,1.4nm,0.3s,SNR=7.9						
ESPR				S	Sn	14 51 00.7	-1.5
	comp=E,13nm,0.4s,SNR=7.9						
HORN	Hornachuelos	4.55	101	P	Pn	14 50 14.0	+1.7
HORN				S	Sn	14 51 02.3	-2.0
EADA	Adamuz	5.01	96	P	Pn	14 50 21.0	+2.4
	comp=E,2.0nm,0.6s,SNR=4.0						
EADA				S	Sn	14 51 14.1	-1.5
	comp=E,3.0nm,0.1s,SNR=7.9						
PAB	San Pablo	5.13	81	P	Pn	14 50 22.4	+2.1
	comp=E,1.1nm,0.3s,SNR=7.9						
PAB				S	Sn	14 51 16.8	-1.9
	comp=E,1.2nm,0.1s,SNR=7.9						
EPON	Pontenova	5.27	31	S	Sn	14 51 19.7	-2.2
	comp=E,1.9nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.44	79	S	Sn	14 51 23.8	-2.5
	baz=265,slow=23,SNR=7.9						
GUD	Guadarrama	5.49	69	P	Pn	14 50 27.5	+2.3
	comp=E,1.2nm,0.4s,SNR=7.9						
GUD				S	Sn	14 51 25.6	-1.9
	comp=E,1.5nm,0.4s,SNR=7.9						
EARI	Arriondas	6.16	42	S	Sn	14 51 40.9	-3.0
	comp=E,8.0nm,1.6s,SNR=7.9						
EQES	Quesada	6.25	97	S	Sn	14 51 43.5	-2.8
	comp=E,6.0nm,3.7s,SNR=7.9						
MD31	MD31	7.80	138	P	Pn	14 50 57.5	+0.5
MD31				S	Sn	14 52 18.3	-6.1
MDT	Midelt	7.92	138	P	Pn	14 51 00.5	+1.9
MDT				S	Sn	14 52 20.8	-6.5

ISCJB ***17*** *15:08:35.1±3.5, 12.°02N±0.°06×142.°70E±0.°05, h21^{km}±24^{km}, mb4.5/54, MS3.5/7, Error ellipse: s-maj=9.9km s-min=8.0km az=163.6*

BJI ***17*** *15:08:38.8±0.0, 12.°07N×142.°86E, h52^{km}, mb4.7/24, mB4.9/13, Ms4.2/5, Ms7 3.9/2*

NEIC ***17*** *15:08:38.7±1.1, 12.°00N×142.°71E, h36^{km}±10^{km}, mb4.7/37, Error ellipse: s-maj=6.2km s-min=6.0km az=106.0*

IDC ***17*** *15:08:39.4±2.4, 12.°04N×142.°81E, h42^{km}±22^{km}, mb4.0/17, mb1 4.1/18, mb1mx4.0/41, mbtmp4.2/18, ML4.4/1, MS3.2/6, Ms1 3.2/6, ms1mx2.9/45, Error ellipse: s-maj=15.6km s-min=13.2km az=82.0*

ISC 17 15:08:39.3±1.7**, 12.°01N**±0.°08×**142.°82E**±0.°09**, h40**^{km}±16^{km}**, n91, σ1^{s}24**/88**, mb4.6**/54**, MS3.4**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.54	52	P	Pn	15 09 18.4	+0.2
	78nm,0.3s,baz=233,slow=4.1,SNR=25						
GUMO				S	Sn	15 09 48.0	+0.2
	63nm,0.3s,baz=55,slow=23,SNR=7.7						
DAV	Davao City (W)	17.69	255	LR	LR	15 17 36.8	
	comp=Z,40nm,21.5s,baz=150,slow=30						
FAKI	Fak Fak	18.18	216	*e*P	Pn	15 12 53.1	+4.3
	29nm,1.1s						
JOW	Kunigami	20.11	319	P	P	15 13 10.0	+0.2
	1.9nm,0.5s,baz=144,slow=16,SNR=6.7						
JOW	Kunigami	20.11	319	*e*P	Pn	15 13 12.4	+0.5
	44nm,1.3s						
JNU	Nakatsue	23.69	334	P	P	15 13 47.6	0.0
	8.6nm,0.8s,baz=175,slow=5.6,SNR=7.3						
JNU	Nakatsue	23.69	334	*e*P	P	15 13 47.3	-0.3
	13nm,0.9s						
H11S3	WAKE ISLAND Hy	23.90	71	T	T	15 38 48.8	
	baz=258,slow=75,SNR=5.1						
H11S1	WAKE ISLAND Hy	23.91	71	T	T	15 38 52.4	
	baz=258,slow=75,SNR=3.5						
H11S2	WAKE ISLAND Hy	23.91	71	T	T	15 38 48.4	
	baz=258,slow=75,SNR=7.4						
H11N1	WAKE ISLAND Hy	24.37	69	T	T	15 39 19.8	
	baz=255,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	24.38	69	T	T	15 39 20.5	
	baz=255,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	24.39	69	T	T	15 39 25.4	
	baz=255,slow=75,SNR=10						
MJAR	Matsushiro Arr	24.78	351	P	P	15 13 56.5	-1.0
	1.9nm,0.6s,baz=114,slow=12,SNR=8.8						
MJAR				LR	LR	15 22 49.3	
	comp=Z,54nm,20.9s,baz=175,slow=34						
MAJO	Matsushiro	24.78	351	*e*P	P	15 13 56.5	-1.0
MAT	Matsushiro	24.78	351	P	P	15 13 56.4	-1.1
MAT				S	S	15 18 24.6	+7.4
KSRS	Korea Array	28.64	335	P	P	15 14 31.6	-0.6
	1.1nm,0.8s,baz=148,slow=9.2,SNR=2.6						
KSRS				LR	LR	15 24 04.4	
	comp=Z,36nm,21.9s,baz=168,slow=32						
KS15	Wonju Array Si	28.65	335	*e*P	P	15 14 31.6	-0.6
	57nm,1.9s						
KSAR	Wonju Array Be	28.65	335	P	P	15 14 31.6	-0.6
NJ2	Nanjing	29.73	316	*e*P	P	15 14 40.8	-1.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
WR1	Warramunga Arr	32.83	195	*e*P	P	15 15 08.0	-1.4
WRA	Warramunga Arr	32.83	195	P	P	15 15 08.0	-1.4
	0.8nm,0.4s,baz=8.1,slow=9.0,SNR=18						
USRK	Ussuriysk Ar.	33.40	346	P	P	15 15 13.0	-1.1
	2.7nm,0.6s,baz=187,slow=10.0,SNR=11						
CN2	Changchun	35.04	338	*e*P	P	15 15 28.4	+0.1
AS31	Alice Springs	36.51	194	*e*P	P	15 15 41.0	-0.2
	8.3nm,1.9s						
AS31				*e*PcP	PcP	15 18 04.5	+0.1
ASAR	Alice Springs	36.51	194	P	P	15 15 41.0	-0.2
	0.6nm,0.5s,baz=25,slow=12,SNR=14						
ASAR				PcP	PcP	15 18 04.5	+0.1
	0.7nm,0.8s,baz=42,slow=3.3,SNR=5.9						
XAN	Xi'an	37.85	311	*e*P	P	15 15 52.0	-0.5
	6.1nm,0.6s						
XAN	Xi'an	37.85	311	P	P	15 15 52.3	-0.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC	Hu-ho-hao-te	39.72	322	*e*P	P	15 16 07.8	-0.3
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
CD2	Chengdu	40.66	304	*e*P	P	15 16 15.0	-1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DZM	Mont Dzumac	41.04	146	P	P	15 16 19.6	+0.4
	5.7nm,0.8s,baz=90,slow=20,SNR=4.0						
DZM	Mont Dzumac	41.04	146	*e*P	P	15 16 19.6	+0.4
	137nm,1.8s						
PETK	Petropavlovsk-	42.69	13	LR	LR	15 31 51.5	
	comp=Z,58nm,21.1s,baz=200,slow=33						
CM31	Chiang Mai Arr	42.73	284	*e*P	P	15 16 33.0	-0.1
	11nm,1.4s						
CM31				*e*PcP	PcP	15 18 25.1	+0.8
CMAR	Chiang Mai Arr	42.73	284	P	P	15 16 33.0	0.0
	1.9nm,0.6s,baz=88,slow=6.3,SNR=11						
CMAR				PcP	PcP	15 18 25.1	+0.8
	1.0nm,0.5s,baz=93,slow=3.2,SNR=4.4						
GTA	Gaotai	46.76	314	*e*P	P	15 17 05.3	+0.3
GTA				pP	pP	15 17 17.3	+2.1
GTA				sP	pwP	15 17 21.8	+1.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,32nm,6.7s						
GTA				LR	LR		
	comp=N,48nm,14.6s						
GTA				LR	LR		
	comp=E,60nm,15.9s						
SONA0	Songino Array	46.91	327	*e*P	P	15 17 06.5	+0.4
SONA0				*e*PcP	PcP	15 18 37.5	-0.8
SONM	Songino Array	46.91	327	P	P	15 17 06.5	+0.4
	0.6nm,0.4s,baz=159,slow=7.2,SNR=3.4						
SONM				PcP	PcP	15 18 37.5	-0.8
	0.3nm,0.3s,baz=119,slow=1.8,SNR=3.0						
SONM				LR	LR	15 38 01.2	
	comp=Z,41nm,18.3s,baz=91,slow=38						
WMQ	Urumqi	56.80	315	*e*P	P	15 18 21.3	+1.5
WMQ				LR	LR		
	comp=N,190nm,20.5s						
WMQ				LR	LR		
	comp=E,220nm,21.5s						
WMQ				LR	LR		
	comp=Z,73nm,17.7s						
MK31	Makanchi Array	61.25	317	*e*P	P	15 18 50.5	-0.1
	1.9nm,0.9s						
MK32	Makanchi Array	61.25	317	*e*P	P	15 18 50.8	+0.2
MKAR	Makanchi Array	61.25	317	P	P	15 18 50.8	+0.2
	2.6nm,0.9s,baz=95,slow=8.5,SNR=19						
ZALV	Zalesovo Beam	61.76	325	P	P	15 18 52.4	-1.3
	0.9nm,0.5s,baz=114,slow=6.7,SNR=4.1						
ZAA1	Zalesovo Array	61.76	325	*e*P	P	15 18 52.4	-1.4
KURK	Kurchatov	64.51	321	*e*P	P	15 19 11.5	-0.6
	5.0nm,0.6s						
SVW2	Sparrevohn	66.00	28	*e*P	P	15 19 22.0	+0.5
NIL	Nilore	66.49	302	*e*P	P	15 19 25.1	-0.2
	6.9nm,0.7s						
CNPM	China Poot	67.60	30	*e*P	P	15 19 31.4	-0.4
	26nm,0.5s						
PPLA	Purkeypile	68.08	27	*e*P	P	15 19 34.9	-0.1
KTH	Kantishna Hill	68.82	26	*e*P	P	15 19 39.5	+0.1
	6.8nm,0.8s						
BPAW	Bear Paw Mtn.	68.95	26	*e*P	P	15 19 40.2	0.0
	5.4nm,0.9s						
MLY	Manley	69.32	25	*e*P	P	15 19 42.1	-0.4
	15nm,1.6s						
BRVK	Borovoye	70.00	322	*e*P	P	15 19 46.1	-0.7
	5.2nm,0.6s						
SCM	Sheep Creek Mo	70.01	28	*e*P	P	15 19 45.9	-0.9
	13nm,0.9s						
FID	Port Fidalgo	70.19	30	*e*P	P	15 19 47.5	-0.4
	9.0nm,0.7s						
HDA	Harding Lake	70.74	26	*e*P	P	15 19 51.3	+0.2
	2.4nm,0.8s						
ILAR	Eielson Array	70.84	25	P	P	15 19 50.5	-1.3
	1.6nm,0.5s,baz=248,slow=5.7,SNR=42						
BALM	Baldy	72.23	30	*e*P	P	15 20 00.8	+0.4
	4.0nm,0.8s						
EGAK	Eagle	73.26	26	*e*P	P	15 20 06.6	+0.4
	3.6nm,1.1s						
DAWY	Dawson	73.94	27	*e*P	P	15 20 10.9	+0.6
	2.8nm,0.8s						
HYT	Haines Junctio	74.57	30	*e*P	P	15 20 14.5	+0.4
	4.1nm,0.8s						
ABKAR	Akbulak array	76.37	318	*e*P	P	15 20 23.6	-0.9
	3.6nm,0.6s						
YKA	Yellowknife Ar	85.17	27	P	P	15 21 11.5	+0.3
	2.7nm,0.6s,baz=287,slow=4.9,SNR=21						
YKB5	Yellowknife Ar	85.17	27	*e*P	P	15 21 11.5	+0.3
D08A	Wollman Farm,	86.86	43	*e*P	P	15 21 20.4	+0.5
C09A	Chrisman Ranch	87.10	42	*e*P	P	15 21 21.4	+0.2
	8.2nm,0.4s						
NEW	Newport	87.73	41	*e*P	P	15 21 24.6	+0.4
	8.1nm,1.1s						
ARA0	ARCESS Array S	87.96	342	*e*P	P	15 21 23.8	-1.0
ARCES	ARCESS Array B	87.96	342	P	P	15 21 23.8	-1.0
	1.3nm,0.6s,baz=77,slow=7.6,SNR=18						
J08A	Circle Bar Ran	88.09	46	*e*P	P	15 21 26.6	+0.5
	6.0nm,1.0s						
WVOR	Wild Horse Val	88.20	47	*e*P	P	15 21 27.0	+0.3
	5.8nm,1.0s						
BMO	Blue Mountains	88.51	45	*e*P	P	15 21 27.6	-0.5
	6.8nm,0.9s						
KVN	Kaiserville	89.46	50	*e*P	P	15 21 33.4	+0.6
	3.2nm,1.1s						
NV01	Mina Array Sit	89.46	51	*e*P	P	15 21 33.9	+1.0
NVAR	Mina Array Bea	89.46	51	P	P	15 21 33.9	+1.0
	4.2nm,0.7s,baz=262,slow=5.9,SNR=39						
NV11	Mina Array Sit	89.58	51	*e*P	P	15 21 33.6	+0.4
	0.3nm,0.9s						
MFID	Camas Ranch	89.93	46	*e*P	P	15 21 35.3	+0.5
	7.7nm,1.1s						
HLID	Hailey	90.87	45	*e*P	P	15 21 39.4	+0.1
	1.8nm,0.9s						
TPNV	Topopah Spring	91.43	52	*e*P	P	15 21 42.5	+0.6
GSC	Goldstone, Bar	91.44	54	*e*P	P	15 21 42.9	+1.0
	6.3nm,1.0s						
FIA0	FINESS Array S	91.73	335	*e*P	P	15 21 40.4	-2.1
FINES	FINESS Array B	91.73	335	P	P	15 21 40.4	-2.1
	3.3nm,0.7s,baz=69,slow=5.9,SNR=11						
YHH	Holmes Hill	92.91	43	*e*P	P	15 21 49.5	+0.7
	6.3nm,1.4s						
IMW	Indian Meadow	93.15	44	*e*P	P	15 21 51.1	+1.2
	14nm,1.8s						
FLWY	Flagg Ranch	93.25	44	*e*P	P	15 21 51.0	+0.8
	4.3nm,0.8s						
RLMT	Red Lodge	93.84	42	*e*P	P	15 21 54.0	+1.0
	12nm,1.8s						
HFS	Hagfors	97.47	337	LR	LR	16 10 17.8	
	comp=Z,17nm,18.0s,baz=60,slow=38						
TOA1	Torodi Ar. Sit	134.05	302	*e*PKPdf	PKPdf	15 27 51.4	-2.1
TORD	Torodi Ar. Bea	134.05	302	PKP	PKPdf	15 27 51.4	-2.1
	0.6nm,0.8s,baz=43,slow=2.4,SNR=2.6						
DBIC	Dimbokro	142.88	298	PKhKP	PKPpre	15 28 05.8	
	2.0nm,0.4s,baz=39,slow=2.1,SNR=4.1						
LPAZ	La Paz	149.71	102	PKPbc	PKPbc	15 28 26.2	-0.4
	1.8nm,0.9s,baz=23,slow=5.8,SNR=6.2						

UCR 17 15:14:31.1±0.5**, 9.°55N×82.°44W, h16**^{km}±6^{km}**, MW3.7, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	Volcan	0.79	198	*e*P	Pb	15 14 45.9	-0.6
BRU2				*e*S	Sg	15 14 56.4	-0.5
DRK0	Durika	0.84	251	*e*P	Pb	15 14 46.6	-0.8
DRK0				*e*S	Sb	15 14 58.4	-0.1

MAN ***17*** *15:26:57.5, 1.°83N×127.°60E, h16^{km}, MS5.0*

BJI ***17*** *15:26:59.3±0.0, 2.°73N×128.°85E, h31^{km}, mb4.7/48, mB4.9/30, Ms4.4/7, Ms7 4.2/7*

NEIC ***17*** *15:27:02.7±0.2, 2.°93N×128.°57E, mb4.7/41, Error ellipse: s-maj=6.0km s-min=3.5km az=86.0*

DJA ***17*** *15:27:02.3±0.9, 3.°N±4.°×12.°9E±.°, h14^{km}±8^{km}, M4.8/9, mB5.0/3, mb5.0/8, MLv4.8/9, Mw(mB)4.3/3*

ISCJB ***17*** *15:27:03.6±0.7, 2.°90N±0.°03×128.°64E±0.°04, h55^{km}±6^{km}, mb4.6/72, MS3.6/4, Error ellipse: s-maj=7.3km s-min=4.7km az=156.7*

IDC ***17*** *15:27:05.8±2.5, 2.°91N×128.°61E, h61^{km}±23^{km}, mb4.2/24, mb1 4.2/27, mb1mx4.1/41, mbtmp4.5/27, ML4.4/3, MS3.5/3, Ms1 3.5/3, ms1mx3.0/27, Error ellipse: s-maj=18.8km s-min=9.8km az=86.0*

ISC 17 15:27:02.6±0.6**, 2.°87N**±0.°04×**128.°71E**±0.°06**, h32**^{km}±4^{km}**, h32^{km}:pP-P, n138, σ1^{s}48**/145**, mb4.7**/72**, MS3.8**/5**, 4C-2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.48	213	*e*Pn	Pn	15 27 42.0	+1.1
TNTI	Ternate	2.48	213	P	Pn	15 27 42.4	+1.6
TNTI				S	Sb	15 28 15.6	-1.0
SGSI	Sangihe	3.28	284	P	Pn	15 27 51.6	-0.3
SGSI				S	Sn	15 28 31.7	+1.8
LBMI	Labuha	3.69	199	P	Pn	15 28 02.0	+4.5
LBMI				S	Sb	15 28 47.1	-4.3
SWI	Sorong	4.50	145	P	Pn	15 28 11.1	+2.5
SIJI	Sorong	4.50	145	P	Pn	15 28 11.1	+2.4
	11nm,0.3s,baz=340,slow=12,SNR=38						
SIJI				S	Sn	15 29 01.1	+1.0
	11nm,0.3s,baz=182,slow=23,SNR=8.5						
SIJI				LR	LR	15 30 14.5	
	comp=Z,686nm,18.7s,baz=284,slow=41						
GSPH	General Santos	4.93	311	⇑*i*P	Pn	15 28 17.6	+2.9
DMPH	Davao City--Mi	5.27	323	*e*P	Pn	15 28 22.6	+3.4
DMPH				*e*S	Sb	15 29 37.0	+0.1
KCP	Kidapawan	5.47	319	⇓*e*P	Pn	15 28 23.3	+1.2
KCP				*i* S	Sb	15 29 43.6	+0.8
SANI	Sanana	5.59	209	P	Pn	15 28 26.0	+2.3
	96nm,0.9s						
CTBH	Cotabato--PC H	6.20	314	⇑*i*P	Pn	15 28 32.0	0.0
FAKI	Fak Fak	6.75	148	*e*Pn	Pn	15 28 42.2	+2.7
LUWI	Luwuk	7.10	237	*e*Pn	Pn	15 28 43.2	-1.1
LUWI	Luwuk	7.10	237	P	Pn	15 28 46.2	+1.9
	127nm,0.8s,1μm						
SRPI	Serui, Papua	8.88	122	P	Pn	15 29 17.1	+8.3
KDI	Kendari	9.11	222	P	Pn	15 29 16.0	+4.0
PCI	Palu	9.63	247	P	Pn	15 29 26.6	+7.4
TTSI	Tana Toraja	10.65	237	P	Pn	15 29 33.9	+0.7
	48nm,0.6s						
SPSI	Sidrap Palu	11.22	233	P	Pn	15 29 42.2	+1.2
	33nm,0.7s						
BNSI	Bone	11.23	230	P	Pn	15 29 42.3	+1.3
	32nm,0.6s						
BKSI	Bulukumba	11.82	227	P	Pn	15 29 52.5	+3.3
KAPI	Kappang	11.89	229	P	Pn	15 29 53.9	+3.8
	3.5nm,0.3s,baz=132,slow=8.6,SNR=4.4						
BATI	Baumata	13.93	201	P	P	15 30 22.2	-3.5
	2.0nm,0.3s,baz=333,slow=2.2,SNR=4.7						
MTN	Manton Dam	15.79	171	*e*Pn	Pn	15 30 44.0	+1.1
	19nm,1.0s						
JAGI	Jajag, Banyuwa	18.38	232	*e*P	Pn	15 31 16.0	+0.8
	60nm,1.0s						
PWJI	Pagerwojo	20.04	237	P	Pn	15 31 45.9	+11
PMG	Port Moresby	22.06	124	P	P	15 31 57.0	+2.0
	13nm,0.9s,baz=290,slow=18,SNR=2.3						
SSLB	Suanglung	22.11	341	*e*P	P	15 31 55.6	+0.1
	26nm,0.8s						
WR1	Warramunga Arr	23.33	167	*e*P	P	15 32 09.4	+1.1
WRA	Warramunga Arr	23.33	167	P	P	15 32 09.4	+1.1
	15nm,0.5s,baz=343,slow=10,SNR=115						
WB2	Warramunga Arr	23.33	167	*e*P	P	15 32 09.5	+1.1
	17nm,0.6s						
KLSI		25.11	253	P	P	15 32 41.1	+16
MDSI	Maura Dua	25.58	253	P	P	15 32 34.2	+5.0
AS31	Alice Springs	26.85	169	*e*P	P	15 32 41.1	+0.5
	2.3nm,0.8s						
AS31				*e*PcP	PcP	15 36 03.1	+0.3
ASAR	Alice Springs	26.85	169	P	P	15 32 41.4	+0.7
	1.3nm,0.5s,baz=349,slow=7.6,SNR=35						
ASAR				PcP	PcP	15 36 03.1	+0.3
	1.1nm,0.5s,baz=355,slow=2.3,SNR=5.9						
PANO	Nakornpanom	27.59	303	P	P	15 32 58.5	+11
	0.3nm,1.2s						
NONG	Nongkai	29.26	303	P	P	15 33 13.5	+11
	0.2nm,1.0s						
CHAI	Chaiyaphum	29.32	298	P	P	15 33 02.0	-0.7
JNU	Nakatsue	30.17	4	*e*P	P	15 33 09.6	-0.5
	13nm,0.9s						
NJ2	Nanjing	30.48	343	*e*P	P	15 33 13.0	+0.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.9s						
WHN	Wuhan	30.70	335	⇓P	P	15 33 16.1	+1.4
WHN				pP	pwP	15 33 25.5	-1.0
WHN				pmax	pmax		
	comp=Z,32nm,0.4s						
WHN				LR	LR		
	comp=Z,380nm,30.0s						
JHJ	Hachijo jima 2	31.83	18	LR	LR	15 44 14.0	
	comp=Z,68nm,20.9s,baz=308,slow=32						
PHRA	Phrae	31.93	301	P	P	15 33 26.3	+0.6
ENH	Enshi	32.78	328	*e*P	P	15 33 32.5	-0.5
	31nm,0.9s						
CM31	Chiang Mai Arr	33.01	300	*e*P	P	15 33 35.0	-0.3
	3.8nm,0.6s						
CMAR	Chiang Mai Arr	33.01	300	P	P	15 33 35.0	-0.3
	2.3nm,0.9s,baz=115,slow=7.3,SNR=13						
CMMT	Chiang Mai	33.16	301	P	P	15 33 46.0	+9.5
CHTO	Chiang Mai	33.16	301	*e*P	P	15 33 35.8	-0.7
	4.8nm,0.8s						
INU	Inuyama	33.23	12	*e*P	P	15 33 37.5	+0.6
	14nm,0.7s						
KMI	Kunming	33.39	314	P	P	15 33 39.8	+1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,65nm,4.1s						
KS15	Wonju Array Si	34.42	359	*e*P	P	15 33 47.4	+0.2
	9.5nm,0.7s						
KSAR	Wonju Array Be	34.42	359	P	P	15 33 47.7	+0.5
KSRS	Korea Array	34.43	359	P	P	15 33 47.7	+0.5
	7.4nm,0.9s,baz=174,slow=9.2,SNR=14						
MJAR	Matsushiro Arr	34.64	14	P	P	15 33 48.0	-1.1
	4.4nm,0.7s,baz=189,slow=9.6,SNR=16						
MJAR				LR	LR	15 45 45.9	
	comp=Z,83nm,21.7s,baz=205,slow=32						
MAJO	Matsushiro	34.64	14	*e*P	P	15 33 48.0	-1.1
MAT	Matsushiro	34.64	14	P	P	15 33 48.3	-0.8
MAT				S	S	15 39 15.4	-1.4
MJB9	Matsu-Tunnel	34.64	14	*e*P	P	15 33 48.8	-0.4
	8.6nm,0.9s						
TIA	Tai'an	34.87	343	P	P	15 33 50.6	-0.5
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN	Xi'an	36.09	331	P	P	15 34 01.4	-0.3
XAN				pP	pP	15 34 11.0	+0.5
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
CD2	Chengdu	36.52	322	P	P	15 34 04.9	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
STKA	Stephens Creek	36.66	161	P	P	15 34 07.0	+0.5
	2.9nm,0.4s,baz=344,slow=8.2,SNR=18						
STKA	Stephens Creek	36.66	161	*e*P	P	15 34 07.0	+0.5
	13nm,1.8s						
NWAO	Narrogin (SRO)	37.22	196	P	P	15 34 10.9	-0.4
	7.1nm,0.7s,baz=36,slow=8.7,SNR=3.3						
BJT	Baijiatuau	38.69	345	*e*P	P	15 34 22.8	-0.8
BJT				*e*pP	pP	15 34 32.5	+0.7
LZH	Lanzhou	40.26	328	*e*P	P	15 34 38.0	+1.0
LZH				pP	sP	15 34 49.6	+0.3
LZH				sP	pwP	15 34 54.4	+6.3
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.2s						
H11S3	WAKE ISLAND Hy	40.29	65	T	T	16 17 46.5	
	baz=252,slow=75,SNR=153						
H11S2	WAKE ISLAND Hy	40.30	65	T	T	16 17 52.6	
	baz=252,slow=75,SNR=94						
H11S1	WAKE ISLAND Hy	40.30	65	T	T	16 17 40.5	
	baz=252,slow=75,SNR=70						
HHC	Hu-ho-hao-te	40.86	340	*e*P	P	15 34 43.8	+2.0
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,75nm,5.3s						
H11N1	WAKE ISLAND Hy	40.86	63	T	T	16 18 30.2	
	baz=250,slow=75,SNR=29						
CN2	Changchun	40.86	356	*e*P	P	15 34 42.8	+1.2
H11N2	WAKE ISLAND Hy	40.87	63	T	T	16 18 32.5	
	baz=250,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	40.88	63	T	T	16 18 26.9	
	baz=250,slow=75,SNR=60						
USA0B	Ussuriysk Arra	41.26	4	*e*P	P	15 34 45.0	+0.1
	17nm,0.9s						
USRK	Ussuriysk Ar.	41.26	4	P	P	15 34 45.2	+0.3
	12nm,0.8s,baz=185,slow=8.1,SNR=24						
USRK				PcP	PcP	15 36 43.8	+0.5
	0.6nm,0.5s,baz=114,slow=2.7,SNR=3.9						
MDJ	Mudanjiang	41.58	1	*e*P	P	15 34 47.9	+0.4
	23nm,1.0s						
MDJ	Mudanjiang	41.58	1	P	P	15 34 57.3	+10
MDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,85nm,3.5s						
ASAJ	Asahikawa	42.88	15	P	P	15 34 59.4	+1.3
	comp=Z,2.0nm,0.4s,baz=246,slow=12,SNR=8.2						
LSA	Lhasa	44.49	311	*e*P	P	15 35 11.7	-0.2
	comp=Z,6.6nm,0.7s						
GTA	Gaotai	44.86	328	⇑P	P	15 35 13.8	-0.5
GTA				pP	pP	15 35 23.3	+0.1
GTA				sP	sP	15 35 27.8	+1.2
GTA				PcP	PcP	15 36 56.6	+0.9
GTA				S	S	15 41 50.8	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,74nm,7.9s						
GTA				LR	LR		
	comp=Z,73nm,19.7s						
GTA				LR	LR		
	comp=Z,81nm,18.4s						
GTA				LR	LR		
	comp=Z,90nm,18.7s						
KLR	Kul'dur	46.27	3	P	P	15 35 24.1	-0.9
	comp=Z,3.1nm,0.5s,baz=202,slow=6.0,SNR=21						
ULN	Ulaanbaatar	48.56	341	*e*P	P	15 35 43.1	-0.1
	comp=Z,15nm,0.8s						
SONA0	Songino Array	48.76	340	*e*P	P	15 35 43.8	-0.8
SONA0				*e*PcP	PcP	15 37 09.6	+0.3
SONM	Songino Array	48.76	340	P	P	15 35 43.8	-0.8
	comp=Z,3.0nm,0.7s,baz=156,slow=8.4,SNR=14						
SONM				PcP	PcP	15 37 09.6	+0.3
	comp=Z,2.0nm,0.8s,baz=154,slow=4.2,SNR=3.8						
HYB	Hyderabad	51.27	290	*i* P	P	15 36 04.0	-0.1
WMQ	Urumqi	54.57	324	*e*P	P	15 36 27.8	-0.2
WMQ				pP	pP	15 36 37.9	+0.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,79nm,4.9s						
PEA0B	Petropavlovsk-	55.50	21	*e*P	P	15 36 35.3	+0.8

	comp=Z,12nm,0.9s						
PETK	Petropavlovsk-	55.50	21	P	P	15 36 35.4	+0.8
	comp=Z,9.7nm,0.9s,baz=183,slow=2.8,SNR=20						
PEA1	Petropavlovsk-	55.51	21	eP	P	15 36 35.4	+0.8
YAK	Yakutsk	59.03	1	eP	P	15 36 59.0	-0.2
YAK				epP	pP	15 37 07.7	-0.4
MK31	Makanchi Array	59.39	325	eP	P	15 37 00.7	-1.4
MK31				epP	pP	15 37 10.9	-0.3
MK32	Makanchi Array	59.39	325	eP	P	15 37 01.4	-0.7
MKAR	Makanchi Array	59.39	325	P	P	15 37 01.4	-0.7
	comp=Z,2.7nm,0.5s,baz=115,slow=8.3,SNR=48						
MAKZ	Makanchi	59.58	325	eP	P	15 37 02.2	-1.2
MAKZ				epP	pP	15 37 12.3	-0.2
KSH	Kashi	60.05	315	eP	P	15 37 09.8	+2.9
KSH				pP	sP	15 37 20.1	+0.7
KSH				sP	pwP	15 37 23.8	+5.0
KSH				PP	PP	15 39 24.4	+4.8
KSH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,110nm,5.4s						
KSH				LR	LR		
	comp=Z,100nm,12.9s						
KSH				LR	LR		
	comp=Z,140nm,9.8s						
ZAA0	Zalesovo Array	62.26	332	eP	P	15 37 19.9	-1.4
	comp=Z,3.8nm,0.8s						
ZALV	Zalesovo Beam	62.26	332	P	P	15 37 19.8	-1.6
	comp=Z,2.3nm,0.6s,baz=139,slow=6.9,SNR=9.4						
ZAA1	Zalesovo Array	62.26	332	eP	P	15 37 19.8	-1.6
SEY	Seymchan	62.44	12	P	P	15 37 22.0	-0.5
	comp=Z,2.8nm,0.7s,baz=250,slow=10,SNR=5.0						
KURK	Kurchatov	63.53	327	eP	P	15 37 28.7	-1.3
KURK				epP	pP	15 37 38.5	-0.6
GAR	Garm	63.96	312	eP	P	15 37 32.3	-0.9
	comp=Z,12nm,1.1s						
TIXI	Tiksi	68.69	0	P	P	15 38 01.9	-0.7
	comp=Z,3.4nm,0.4s,baz=188,slow=5.6,SNR=18						
TIXI	Tiksi	68.69	0	eP	P	15 38 01.8	-0.9
	comp=Z,5.2nm,0.5s						
BRVK	Borovoye	69.19	327	eP	P	15 38 05.3	-0.8
BRVK				epP	pP	15 38 14.6	-0.7
CASY	Casey	70.22	188	eP	P	15 38 11.9	-0.2
	comp=Z,6.0nm,0.8s						
ABKAR	Akbulak array	74.07	321	eP	P	15 38 34.0	-1.6
	comp=Z,2.9nm,0.9s						
ARU	Arti	76.72	328	eP	P	15 38 48.9	-1.8
	comp=Z,9.3nm,0.6s						
VNDA	Vanda	82.33	173	P	P	15 39 20.6	-0.2
	comp=Z,0.8nm,0.3s,baz=307,slow=3.6,SNR=12						
CAST	Castle Rocks	82.61	26	eP	P	15 39 23.0	+0.4
	comp=Z,5.5nm,1.1s						
OPO	Ambohidratompo	82.88	251	P	P	15 39 24.3	-0.7
	comp=Z,2.9nm,0.6s,baz=94,slow=7.9,SNR=4.2						
KTH	Kantishna Hill	83.15	26	eP	P	15 39 26.2	+0.8
	comp=Z,6.9nm,1.0s						
BPAW	Bear Paw Mtn.	83.19	26	eP	P	15 39 26.6	+1.0
	comp=Z,4.2nm,1.0s						
MLY	Manley	83.42	25	eP	P	15 39 27.4	+0.6
	comp=Z,5.0nm,0.9s						
MAW	Mawson	83.64	201	P	P	15 39 27.7	0.0
	comp=Z,3.7nm,0.8s,baz=43,slow=2.1,SNR=8.1						
MAW	Mawson	83.64	201	eP	P	15 39 27.7	0.0
	comp=Z,0.8nm,0.8s						
COLD	Coldfoot	83.91	23	eP	P	15 39 30.3	+1.1
	comp=Z,7.1nm,1.1s						
MCK	McKinley	84.05	26	eP	P	15 39 30.3	+0.3
	comp=Z,8.2nm,0.9s						
RND	Reindeer	84.06	27	eP	P	15 39 29.7	-0.4
	comp=Z,8.8nm,0.8s						
KNK	Knik Glacier	84.06	29	eP	P	15 39 30.4	+0.3
SML	Sawmill	84.15	28	eP	P	15 39 30.9	+0.3
	comp=Z,18nm,0.9s						
WRH	Wood River Hil	84.49	26	eP	P	15 39 32.2	+0.1
	comp=Z,4.4nm,1.0s						
CCB	Clear Creek Bu	84.63	25	eP	P	15 39 32.8	-0.1
	comp=Z,2.1nm,0.6s						
SCM	Sheep Creek Mo	84.63	28	eP	P	15 39 33.3	+0.2
	comp=Z,15nm,0.8s						
GLI	Glacier Island	84.68	29	eP	P	15 39 34.0	+0.8
	comp=Z,10nm,0.7s						
HDA	Harding Lake	84.98	26	eP	P	15 39 34.3	-0.3
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	85.03	25	P	P	15 39 34.3	-0.6
	comp=Z,0.8nm,0.5s,baz=246,slow=5.5,SNR=15						
ILB	Eielson Array	85.03	25	eP	P	15 39 34.3	-0.6
	comp=Z,1.8nm,0.8s						
RIDG	Independent Ri	85.87	26	eP	P	15 39 39.3	+0.1
	comp=Z,3.7nm,0.7s						
ARA0	ARCESS Array S	91.93	340	eP	P	15 40 05.8	-2.0
ARCES	ARCESS Array B	91.93	340	P	P	15 40 05.8	-2.0
	comp=Z,3.5nm,0.8s,baz=85,slow=7.4,SNR=9.5						
SYO	Syowa Base	92.34	201⇑	eP	P	15 40 08.5	-1.0
FIA0	FINESS Array S	93.52	332	eP	P	15 40 13.3	-1.8
FINES	FINESS Array B	93.52	332	P	P	15 40 13.3	-1.8
	comp=Z,0.8nm,0.6s,baz=338,slow=4.5,SNR=7.7						
AKASG	Malin Array Be	93.80	321	P	P	15 40 14.6	-2.1
	comp=Z,0.8nm,0.6s,baz=72,slow=4.8,SNR=4.0						
AKBB	Malin Array Si	93.80	321	eP	P	15 40 14.6	-2.1
	comp=Z,6.9nm,1.3s						
VYHS	Vyhne	100.88	320	ePDIF	Pdif	15 40 49.9	+1.1
TORD	Torodi Ar. Bea	125.07	288	PKP	PKPdf	15 46 00.7	-0.2
	comp=Z,0.7nm,0.6s,baz=102,slow=2.9,SNR=4.3						
TOA1	Torodi Ar. Sit	125.07	288	ePKPdf	PKPdf	15 46 00.7	-0.2

ISCJB **17** *15:30:02.9±0.7, 23°.99N±0°.03×122°.88E±0°.02, h11^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=2.5km az=174.0*

JMA **17** *15:30:04.0±0.1, 24°.04N×122°.92E, h12^{km}±2^{km}, M3.1*

TAP **17** *15:30:04.8, 24°.01N×122°.75E, h15^{km}, ML2.9, C*

ISC 17 15:30:02.5±1.2, **24°.03N**±0°.03×**122°.85E**±0°.02, **h16**^{km}±9^{km}, **n54**, σ**0^{s}.68**/87, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.43	12	P	Pb	15 30 12.0	+0.2
JYNG				S	Sb	15 30 17.8	-0.3
YOJ	Yonaguni jima	0.46	19	P	Pb	15 30 12.5	+0.3
YOJ				eS	Sb	15 30 18.2	-0.6
EOS1	EOS1	0.84	309	i P	Pn	15 30 19.9	+0.2
	baz=313						
EOS1				S	Sn	15 30 31.0	-0.6
	baz=313						
IRIF	Iriomote-Funau	0.86	69	P	Pb	15 30 19.0	-0.1
IRIF				S	Sb	15 30 30.2	-0.2
HATJ	Hateruma jima	0.88	88	P	Pb	15 30 19.2	-0.1
HATJ				eS	Sb	15 30 30.1	-0.7
NANB	Nanao	1.08	292	eP	Pg	15 30 23.5	+0.1
	baz=305						
NANB				eS	Sg	15 30 38.0	+0.5
	baz=305						
TWC	Suao	1.08	303	i P	Pg	15 30 23.6	+0.2
	baz=306						
TWC				S	Sg	15 30 37.9	+0.3
	baz=306						
JKRS	Kuro-shima	1.08	79	P	Pb	15 30 23.1	+0.2
JKRS				eS	Sb	15 30 37.0	+0.3
ENA	Nanau	1.09	292	P	Pg	15 30 23.5	0.0
	baz=305						
ENA				S	Sg	15 30 38.3	+0.5
	baz=305						
TWD	Chiawan	1.15	273	eP	Pg	15 30 24.8	+0.2
	baz=274						
NACB	Ninganchiao	1.16	278	eP	Pg	15 30 25.1	+0.2
	baz=261						
NACB				eS	Sg	15 30 39.5	-0.4
	baz=261						
JIJ	Ishigaki jima	1.23	74	P	Pb	15 30 25.2	-0.2
JIJ				S	Sb	15 30 40.6	-0.4
ETLH	Xiulin Townshi	1.26	278	eP	Pg	15 30 26.9	0.0
	baz=265						
ETLH				eS	Sg	15 30 43.1	-0.3
	baz=265						
TWE	Neicheng	1.28	303	P	Pg	15 30 27.6	+0.4
	baz=306						
TWE				S	Sg	15 30 43.8	-0.1
	baz=306						
ESL	Shilin	1.31	261	P	Pb	15 30 26.6	-0.3
	baz=261						
ENTT	Nioudou	1.32	298	eP	Pg	15 30 28.1	+0.1
	baz=301						
ENTT				eS	Sg	15 30 45.7	+0.5
	baz=301						
SLBB	Yuanshan	1.32	303	eP	Pg	15 30 28.6	+0.6
	baz=306						
SLBB				eS	Sg	15 30 45.8	+0.5
	baz=306						
TIPB	Shuangxi	1.32	316	eP	Pg	15 30 27.9	-0.1
	baz=319						
TIPB				eS	Sg	15 30 45.3	0.0
	baz=319						
NDT	Datong Townshi	1.35	295	eP	Pg	15 30 28.9	+0.4
	baz=303						
NNSB	Datong	1.40	287	eP	Pg	15 30 29.5	0.0
	baz=289						
NNS	Nan Shan	1.41	287	eP	Pg	15 30 29.8	+0.1
	baz=297						
HGSD	Ruisui	1.41	248	eP	Pn	15 30 27.5	0.0
	baz=248						
HGSD				eS	Sn	15 30 45.7	-0.1
	baz=248						
NWF	Wu-fen Shan	1.42	317	eP	Pg	15 30 29.5	-0.4
	baz=320						
WFSB	Wu-fen Shan	1.42	317	eP	Pg	15 30 29.4	-0.6
	baz=320						
JISG	Ishigakijimahi	1.45	67	P	Pb	15 30 28.6	-0.5
JISG				S	Sn	15 30 46.4	-0.3
YHNB	Yeheng	1.49	296	eP	Pg	15 30 31.3	+0.1
	baz=305						
YHNB				eS	Sg	15 30 50.5	0.0
	baz=305						
EHY	Hungye	1.49	250	eP	Pn	15 30 29.1	+0.4
	baz=250						
EHY				eS	Sn	15 30 47.0	-0.8
	baz=250						
TWA	Mucha	1.49	310	eP	Pg	15 30 31.9	+0.6
	baz=327						
NSK	Sanguang	1.50	296	P	Pg	15 30 31.6	0.0
	baz=283						
NSK				eS	Sg	15 30 51.3	+0.2
	baz=283						
CHGB	Renai	1.53	272	eP	Pb	15 30 30.9	+0.2
	baz=259						
CHGB				eS	Sn	15 30 48.6	-0.5
	baz=259						
YULB	Yu-li	1.56	246	eP	Pn	15 30 30.2	+0.6
	baz=246						
YULB				eS	Sb	15 30 49.9	-0.6
	baz=246						
VWDT	VWDT	1.59	260	eP	Pb	15 30 31.4	-0.1
	baz=261						
VWDT				eS	Sn	15 30 49.7	-0.5
	baz=261						
YM01	YM01	1.61	314	eP	Pb	15 30 31.7	-0.2
	baz=331						
YM01				eS	Sg	15 30 52.9	-1.7
	baz=331						
YM10	YM10	1.62	314	eP	Pb	15 30 31.8	-0.3
	baz=330						
YM05	YM05	1.63	314	eP	Pg	15 30 33.2	-0.6
	baz=330						
YM04	YM04	1.64	313	eP	Pb	15 30 32.4	0.0
	baz=330						
YM04				eS	Sb	15 30 53.1	+0.2
	baz=330						
YM03	YM03	1.65	314	eP	Pb	15 30 32.6	-0.1
	baz=330						
ANP	Anpu	1.67	314	eP	Pg	15 30 35.5	+0.9
	baz=330						
SSLB	Suanglung	1.75	263	eP	Pb	15 30 33.5	-0.8
	baz=263						
LIOB	Emei	1.78	291	eP	Pg	15 30 35.9	-0.8
	baz=292						
LIOB				eS	Sg	15 30 59.4	-0.5
	baz=292						
JTJ	Tarama	1.80	70	P	Pb	15 30 34.4	-0.7
JTJ				eS	Sb	15 30 56.3	-1.1
TYC	Yuchr	1.83	267	eP	Pb	15 30 35.3	-0.3
	baz=268						
TYC				eS	Sb	15 30 57.5	-0.7
	baz=268						
WHYT	Xinyi Township	1.86	260	eP	Pb	15 30 35.8	-0.3
	baz=261						
ELDTW	Lidau	1.88	244	eP	Pn	15 30 34.3	+0.3
	baz=244						
TWQ1	Liyutan	1.92	280	eP	Pb	15 30 38.1	+0.9
	baz=281						
WJS	Zhushan	1.95	264	eP	Pb	15 30 38.1	+0.4
	baz=265						
CHN5	Tsauling	2.03	258	eP	Pb	15 30 39.0	-0.1
	baz=259						
CHN5				eS	Sb	15 31 03.7	-0.6
	baz=259						
TPUB	Ta-pu	2.16	251	eP	Pb	15 30 40.1	-1.2
	baz=239						
WTP	Ta-pu	2.19	250	eP	Pb	15 30 41.0	-0.8
	baz=241						
WTP				eS	Sb	15 31 07.2	-1.6
	baz=241						
SLGT	Liugui	2.27	243	eP	Pb	15 30 41.7	-1.4
	baz=235						
TWK	Hsinying	2.29	251	eP	Pb	15 30 42.6	-1.0
	baz=251						
TWK				eS	Sb	15 31 12.2	+0.5
	baz=251						
SSD	Sandimen	2.40	238	eP	Pn	15 30 42.8	+1.6
	baz=229						
MASBT	Mashibuluo	2.48	236	eP	Pn	15 30 43.5	+1.3
	baz=227						
MASBT				eS	Sn	15 31 14.2	+2.1
	baz=227						
SCZT	Fangliau	2.63	232	eP	Pn	15 30 46.6	+2.3
	baz=223						

ISCJB **17** *15:31:20.6±0.7, 42°.1S±0°.1×84°.6E±0°.2, h10^{km}, mb4.1/8, MS4.2/21, Error ellipse: s-maj=19.8km s-min=16.1km az=139.8*

IDC **17** *15:31:21.1±1.1, 42°.01S×84°.55E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.7/30, mbtmp3.9/5, MS4.2/21, Ms1 4.2/21, ms1mx4.1/29, Error ellipse: s-maj=31.3km s-min=25.1km az=162.0*

NEIC **17** *15:31:22.8±0.7, 42°.15S×84°.52E, h15^{km}±5^{km}, mb4.4/4, Error ellipse: s-maj=27.0km s-min=20.0km az=171.0*

GCMT **17** *15:31:23.8±0.2, 41°.98S±0°.01×84°.57E±0°.02, h23^{km}±1^{km}, MW5.2/97, Moment Tensor Solution. s53,c69; s97,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.96±.20; M$_{\theta\theta}$7.00±.20; M$_{\phi\phi}$-6.04±.17; M$_{r\theta}$-0.11±.28; M$_{\theta\phi}$0.25±.17; M$_{\phi r}$1.03±.26; Best double couple: M$_0$6.62600×10^{16} NP1:ϕ$_s$133.00000°, δ83.00000°, λ-8.00000°. NP2: ϕ$_s$224.00000°, δ82.00000°, λ-173.00000°. Principal axes: T 7.0060, Plg1.0000°, Azm179.0000°; N -0.7620, Plg79.0000°, Azm272.0000°; P -6.2460, Plg11.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 15:31:22.4±0.9, **42°.1S**±0°.2×**84°.6E**±0°.2, **h10**^{km}, **n34**, σ**0^{s}.79**/10, **mb4.0**/8, **MS4.2**/21, **Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	24.15	83	T	T	16 01 56.7	
	baz=243,slow=75,SNR=54						
H01W3	Cape Leeuwin H	24.15	82	T	T	16 01 57.2	
	baz=243,slow=75,SNR=35						
H01W1	Cape Leeuwin H	24.16	83	T	T	16 01 56.6	
	baz=243,slow=75,SNR=41						
NWAO	Narrogin (SRO)	27.34	81	LR	LR	15 45 37.5	
	comp=Z,462nm,21.2s,baz=268,slow=31						
MAW	Mawson	28.15	197	P	P	15 37 15.4	+1.0
	1.6nm,1.0s,baz=43,slow=12,SNR=3.1						
MAW				LR	LR	15 45 51.3	
	comp=Z,515nm,21.7s,baz=38,slow=31						
MAW	Mawson	28.15	197	eP	P	15 37 15.4	+1.0
	4.2nm,1.8s						
H08S2	Diego Garcia H	35.91	339	T	T	16 16 17.9	
	baz=165,slow=76						
H08S1	Diego Carcia H	35.92	339	T	T	16 16 11.0	
	baz=165,slow=76						
H08S3	Diego Garcia H	35.93	339	T	T	16 16 05.3	
	baz=165,slow=76						
OPO	Ambohidratompo	39.42	295	P	P	15 38 52.3	-0.4
	0.9nm,0.5s,baz=144,slow=15,SNR=1.8						
LEM	Lembang	40.61	37	LR	LR	15 52 23.9	
	comp=Z,254nm,19.4s,baz=210,slow=31						
ASAR	Alice Springs	44.66	82	P	P	15 39 35.0	-0.4
	1.2nm,0.9s,baz=226,slow=7.2,SNR=6.8						
ASAR				LR	LR	15 56 03.7	
	comp=Z,765nm,20.7s,baz=240,slow=33						
AS31	Alice Springs	44.66	82	eP	P	15 39 35.0	-0.4
	3.3nm,1.4s						
STKA	Stephens Creek	45.93	97	LR	LR	15 55 13.0	
	comp=Z,344nm,21.7s,baz=223,slow=31						
PSI	Prapat	46.52	20	LR	LR	15 54 48.9	
	comp=Z,760nm,21.6s,baz=200,slow=30						
BATI	Baumata	46.66	59	LR	LR	15 56 23.9	
	comp=Z,249nm,21.2s,baz=211,slow=32						
WRA	Warramunga Arr	47.26	78	P	P	15 39 56.3	+0.4
	2.7nm,1.0s,baz=223,slow=5.7,SNR=5.0						
WR1	Warramunga Arr	47.26	78	eP	P	15 39 56.3	+0.4
QSPA	South Pole Qui	48.09	180	eP	P	15 40 00.8	-1.1
	14nm,1.1s						
BOSA	Boshof	49.30	266	LR	LR	15 56 27.1	
	comp=Z,507nm,21.0s,baz=127,slow=31						
KMBO	Kilima Mbogo	58.82	301	LR	LR	16 01 00.7	
	comp=Z,82nm,22.0s,baz=98,slow=30						
CM31	Chiang Mai Arr	61.67	16	eP	P	15 41 40.9	+0.3
	6.6nm,1.0s						
CMAR	Chiang Mai Arr	61.67	16	P	P	15 41 40.9	+0.3
	1.1nm,0.9s,baz=208,slow=7.3,SNR=6.5						
CMAR				LR	LR	16 05 06.8	
	comp=Z,108nm,20.1s,baz=198,slow=33						
EIL	Elat	84.77	318	LR	LR	16 15 35.0	
	comp=Z,138nm,18.8s,baz=68,slow=31						
JNU	Nakatsue	86.07	37	LR	LR	16 17 44.8	
	comp=Z,40nm,21.7s,baz=174,slow=32						
MMAI	Mount Meron Ar	87.30	320	LR	LR	16 17 23.4	
	comp=Z,88nm,20.6s,baz=120,slow=32						
MKAR	Makanchi Array	88.50	358	LR	LR	16 21 32.7	
	comp=Z,175nm,20.2s,baz=186,slow=34						
SONM	Songino Array	91.58	15	LR	LR	16 23 17.7	
	comp=Z,82nm,21.9s,baz=204,slow=34						
TORD	Torodi Ar. Bea	93.49	284	LR	LR	16 24 20.2	
	comp=Z,134nm,19.4s,baz=0.0,slow=34						
BRTR	Keskin Array B	93.61	323	LR	LR	16 23 01.1	
	comp=Z,52nm,19.1s,baz=112,slow=33						
DBIC	Dimbokro	93.99	275	LR	LR	16 22 09.8	
	comp=Z,150nm,18.8s,baz=126,slow=32						
PLCA	Paso Flores	94.55	199	LR	LR	16 26 46.1	
	comp=Z,162nm,20.1s,baz=170,slow=35						
ZALV	Zalesovo Beam	95.64	0	LR	LR	16 25 18.4	
	comp=Z,92nm,21.6s,baz=250,slow=34						
USRK	Ussuriysk Ar.	95.82	32	LR	LR	16 25 50.7	
	comp=Z,60nm,20.2s,baz=202,slow=34						

ISCJB **17** *15:36:31.5±0.7, 47°.7N±0°.1×146°.9E±0°.2, h403^{km}, mb3.4/8, Error ellipse: s-maj=17.6km s-min=11.3km az=140.4*

IDC **17** *15:36:34.6±2.0, 47°.69N×146°.84E, h428^{km}±23^{km}, mb3.1/8, mb1 3.1/13, mb1mx2.9/49, mbtmp3.8/13, Error ellipse: s-maj=18.2km s-min=14.4km az=110.0*

ISC 17 15:36:33.0±0.8, **47°.7N**±0°.1×**147°.0E**±0°.1, **h403**^{km}, **n14**, σ**1^{s}.18**/14, **mb3.4**/8, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	8.73	48	P	P	15 38 37.0	+0.7
	0.2nm,0.3s,baz=241,slow=8.9,SNR=4.9						
KLR	Kul'dur	10.22	284	P	P	15 38 55.0	+2.1
	0.5nm,0.3s,baz=78,slow=8.9,SNR=14						
USRK	Ussuriysk Ar.	11.00	257	P	P	15 39 01.7	+0.2
	0.3nm,0.3s,baz=67,slow=10,SNR=8.5						
MJAR	Matsushiro Arr	12.89	213	P	P	15 39 23.0	+0.5
	0.1nm,0.3s,baz=12,slow=16,SNR=4.8						
KSRS	Korea Array	17.32	241	P	P	15 40 10.9	+0.8
	0.2nm,0.3s,baz=40,slow=11,SNR=6.7						
MKAR	Makanchi Array	42.75	294	P	P	15 43 51.8	-0.8
	0.8nm,0.5s,baz=70,slow=7.7,SNR=12						
FINES	FINESS Array B	61.31	332	P	P	15 46 05.8	-1.2
	1.0nm,0.5s,baz=36,slow=10.0,SNR=6.7						
NB2	NORSAR Subarra	65.88	338	P	P	15 46 35.6	-1.0
	comp=Z,0.3nm,0.4s,baz=30,slow=6.5						
NOA	NORSAR Array B	65.88	338	P	P	15 46 35.8	-0.8
	comp=Z,0.3nm,0.4s,baz=31,slow=6.7,SNR=7.6						
HFS	Hagfors	66.00	336	P	P	15 46 36.0	-1.3
	comp=Z,1.0nm,0.3s,baz=46,slow=4.3,SNR=11						
PDAR	Pinedale Array	67.48	51	P	P	15 46 47.7	+0.4
	comp=Z,0.5nm,0.4s,baz=290,slow=3.5,SNR=2.5						
WRA	Warramunga Arr	68.28	193	P	P	15 46 50.1	-1.9
	comp=Z,0.7nm,0.7s,baz=353,slow=5.9,SNR=4.4						
ASAR	Alice Springs	72.00	193	P	P	15 47 13.8	-0.4
	comp=Z,0.4nm,0.8s,baz=10,slow=5.6,SNR=7.5						
TXAR	Lajitas Array	80.57	57	P	P	15 48 02.5	+0.5
	comp=Z,0.4nm,0.5s,baz=292,slow=3.2,SNR=6.1						

NSSC **17** *15:43:56.7±0.3, 33°.82N×35°.69E, h7^{km}±6^{km}, ML1.6*

ISCJB **17** *15:43:57.6±1.0, 33°.80N±0°.04×35°.75E±0°.06, h11^{km}±13^{km}, Error ellipse: s-maj=8.7km s-min=5.5km az=152.0*

GRAL **17** *15:43:58.2±0.2, 33°.80N×35°.79E, h3^{km}±7^{km}, MD2.8*

ISC 17 15:43:57.4±2.0, **33°.80N**±0°.04×**35°.73E**±0°.08, **h14**^{km}±17^{km}, **n7**, σ**0^{s}.49**/13, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.12	329	eP	Pg	15 44 01.1	+0.1
BHL				eS	Sg	15 44 03.1	-0.2
DQRL	Deir Qamar	0.16	234	eP	Pg	15 44 01.8	+0.3
DQRL				eS	Sg	15 44 04.5	+0.2
RCY	Rachaya	0.32	164	eP	Pg	15 44 03.6	-0.5
RCY				eS	Sg	15 44 07.7	-1.0
BRBR	Barbar	0.43	154	eP	Pg	15 44 05.8	-0.4
BRBR				eS	Sg	15 44 12.4	+0.3
BRBR				AML	AML	15 44 15.1	
	comp=N,58nm,0.3s						
BRBR				AML	AML	15 44 16.4	
	comp=Z,57nm,0.3s						
BRBR				AML	AML	15 44 18.8	
	comp=E,35nm,0.6s						
HWQ	Hawqa	0.51	21	eP	Pg	15 44 07.2	-0.3
QASN	Qassioun	0.53	120	eP	Pg	15 44 08.1	+0.2
QASN				eS	Sg	15 44 15.6	+0.6
QASN				AML	AML	15 44 22.6	
	comp=Z,46nm,0.3s						
QASN				AML	AML	15 44 23.6	
	comp=N,109nm,0.4s						
QASN				AML	AML	15 44 23.8	
	comp=E,123nm,0.3s						
TOTH	TOTAH	0.73	127	eP	Pg	15 44 12.0	+0.3
TOTH				eS	Sb	15 44 22.1	+0.2
TOTH				AML	AML	15 44 30.3	
	comp=Z,12nm,0.4s						
TOTH				AML	AML	15 44 30.7	
	comp=E,15nm,0.4s						
TOTH				AML	AML	15 44 32.7	
	comp=N,17nm,0.6s						

MAN **17** *15:48:46.2, 2°.27N×128°.02E, h3^{km}, MS4.7*

ISCJB **17** *15:48:49.7±0.2, 3°.04N±0°.03×128°.80E±0°.04, h33^{km}, mb4.4/37, MS3.9/3, Error ellipse: s-maj=6.3km s-min=3.5km az=165.1*

BJI **17** *15:48:49.2±0.0, 2°.93N×128°.54E, h24^{km}, mb4.6/29, mB4.9/20, Ms4.2/11, Ms7 4.0/10*

NEIC **17** *15:48:50.8±0.2, 2°.97N×128°.57E, mb4.5/16, Error ellipse: s-maj=10.9km s-min=4.6km az=78.0*

DJA **17** *15:48:50.3±1.3, 3°N±4°×12°9E±°, h18^{km}±16^{km}, M4.6/9, mb4.7/4, mB4.6/1, MLv4.6/9, Mw(mB)3.8/1*

IDC **17** *15:48:52.6±3.0, 2°.93N×128°.56E, h47^{km}±30^{km}, mb4.0/20, mb1 4.1/21, mb1mx4.0/44, mbtmp4.3/21, ML4.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/29, Error ellipse: s-maj=27.5km s-min=11.6km az=79.0*

ISC 17 15:48:51.4±0.4, **2°.97N**±0°.05×**128°.77E**±0°.07, **h35**^{km}, **n86**, σ**1^{s}.44**/96, **mb4.4**/37, **MS4.0**/3, **3C**, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.60	213	ePn	Pn	15 49 30.9	-0.1
TNTI	Ternate	2.60	213	P	Pn	15 49 30.9	-0.1
TNTI				S	Sn	15 50 04.1	+2.7
SGSI	Sangihe	3.32	282	P	Pn	15 49 40.1	-0.8
LBMI	Labuha	3.80	200	P	Pn	15 49 50.7	+3.1
LBMI				S	Sn	15 50 35.7	+4.5
DDMP	Don Marcelino,	4.36	316	eP	Pn	15 49 55.7	+0.5
DDMP				eS	Sn	15 50 49.6	+4.7
SWI	Sorong	4.55	147	P	Pn	15 49 59.9	+2.1
SIJI	Sorong	4.56	147	P	Pn	15 49 59.5	+1.6
	9.4nm,0.3s,baz=197,slow=22,SNR=84						
SIJI				S	Sn	15 50 48.7	-1.0
	5.4nm,0.3s,baz=176,slow=24,SNR=7.6						
SIJI				LR	LR	15 52 02.0	
	comp=Z,375nm,19.3s,baz=260,slow=41						
MATI	Mati	4.68	328	eP	Pn	15 50 03.2	+3.6
MATI				eS	Sn	15 51 02.5	+10

KCP	Kidapawan	5.44	318	⇑iP	Pn	15 50 12.3	+2.2
KCP				i S	Sn	15 51 24.2	+13
SKMP	Bagumbayan, Su	5.50	310	eP	Pn	15 50 10.6	-0.3
SKMP				eS	Sn	15 51 14.6	+1.7
SANI	Sanana	5.71	209	P	Pn	15 50 14.0	+0.2
	51nm,0.9s						
BUKP	Musuan	6.12	323	eP	Pn	15 50 22.1	+2.6
BUKP				eS	Sn	15 51 35.9	+7.6
CTBH	Cotabato--PC H	6.18	313	⇑iP	Pn	15 50 20.9	+0.7
FAKI	Fak Fak	6.80	149	ePn	Pn	15 50 30.6	+1.7
FAKI	Fak Fak	6.80	149	P	Pn	15 50 30.8	+1.9
	25nm,1.1s						
LUWI	Luwuk	7.20	236	P	Pn	15 50 36.1	+1.8
MTN	Manton Dam	15.89	172	ePn	P	15 52 35.3	-0.6
	12nm,0.9s						
YHNB	Yeheng	22.72	342	eP	P	15 53 50.9	+0.4
	69nm,1.3s						
WRAB	Tennant Creek	23.41	167	eP	P	15 53 57.4	-0.1
	15nm,1.1s						
WR1	Warramunga Arr	23.42	167	eP	P	15 53 58.0	+0.5
WRA	Warramunga Arr	23.42	167	P	P	15 53 58.0	+0.5
	5.2nm,0.4s,baz=349,slow=12,SNR=82						
WB2	Warramunga Arr	23.42	167	eP	P	15 53 57.8	+0.3
	9.9nm,0.9s						
QIZ	Qiongzhong	24.45	312	P	P	15 54 04.6	-2.6
QIZ				S	S	15 58 23.9	-1.2
QIZ				LR	LR		
	comp=N,160nm,17.5s						
QIZ				LR	LR		
	comp=E,140nm,13.3s						
QIZ				LR	LR		
	comp=Z,160nm,21.1s						
AS31	Alice Springs	26.94	170	eP	P	15 54 29.5	-0.3
	1.8nm,0.8s						
AS31				ePcP	PcP	15 57 51.3	0.0
ASAR	Alice Springs	26.94	170	P	P	15 54 30.4	+0.6
	0.8nm,0.5s,baz=345,slow=7.5,SNR=16						
ASAR				PcP	PcP	15 57 51.3	0.0
	0.5nm,0.5s,baz=352,slow=2.2,SNR=4.7						
NJ2	Nanjing	30.39	343	eP	P	15 55 01.5	+1.1
NJ2				pmax	pmax		
	comp=Z,26nm,0.6s						
PHRA	Phrae	31.92	301	P	P	15 55 24.0	+10
ENH	Enshi	32.72	328	eP	P	15 55 20.0	-1.0
	17nm,0.9s						
CM31	Chiang Mai Arr	33.01	300	eP	P	15 55 23.2	-0.4
	5.5nm,1.0s						
CMAR	Chiang Mai Arr	33.01	300	P	P	15 55 23.2	-0.4
	1.0nm,0.6s,baz=117,slow=7.6,SNR=6.9						
KS15	Wonju Array Si	34.31	359	eP	P	15 55 34.6	0.0
	43nm,1.6s						
KSAR	Wonju Array Be	34.31	359	P	P	15 55 34.6	0.0
KSRS	Korea Array	34.33	359	P	P	15 55 34.6	-0.1
	2.9nm,0.6s,baz=173,slow=9.2,SNR=9.0						
MJAR	Matsushiro Arr	34.52	13	P	P	15 55 36.1	-0.4
	1.3nm,0.4s,baz=188,slow=9.8,SNR=7.3						
MAJO	Matsushiro	34.52	13	eP	P	15 55 36.1	-0.4
XAN	Xi'an	36.03	331	P	P	15 55 49.6	0.0
XAN				pP	pP	15 55 59.0	+0.4
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CD2	Chengdu	36.47	322	eP	P	15 55 53.0	-0.4
STKA	Stephens Creek	36.74	162	P	P	15 55 55.4	-0.1
	2.0nm,0.4s,baz=350,slow=7.2,SNR=21						
STKA	Stephens Creek	36.74	162	eP	P	15 55 55.4	-0.1
	7.4nm,1.8s						
BJT	Baijiatuau	38.61	344	eP	P	15 56 11.6	+0.3
BJT				epP	pP	15 56 20.5	+0.1
H11S3	WAKE ISLAND Hy	40.19	65	T	T	16 39 29.1	
	baz=252,slow=75,SNR=113						
H11S2	WAKE ISLAND Hy	40.20	65	T	T	16 39 28.6	
	baz=252,slow=75,SNR=69						
H11S1	WAKE ISLAND Hy	40.20	65	T	T	16 39 37.5	
	baz=252,slow=75,SNR=81						
LZH	Lanzhou	40.20	328	eP	P	15 56 26.3	+1.4
LZH				pP	sP	15 56 37.6	-0.1
LZH				sP	pwP	15 56 41.8	+2.8
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
H11N1	WAKE ISLAND Hy	40.76	63	T	T	16 40 26.5	
	baz=250,slow=75,SNR=22						
CN2	Changchun	40.77	356	eP	P	15 56 31.0	+1.9
H11N2	WAKE ISLAND Hy	40.77	63	T	T	16 40 25.0	
	baz=250,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	40.77	63	T	T	16 40 21.2	
	baz=250,slow=75,SNR=34						
HHC	Hu-ho-hao-te	40.78	340	eP	P	15 56 31.8	+2.3
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,27nm,5.5s						
USRK	Ussuriysk Ar.	41.16	4	P	P	15 56 33.6	+1.3
	4.3nm,0.7s,baz=186,slow=7.4,SNR=16						
USRK				PcP	PcP	15 58 31.8	+0.5
	1.2nm,0.8s,baz=205,slow=1.4,SNR=3.6						
MDJ	Mudanjiang	41.48	1	epP	pP	15 56 44.9	+0.7
GTA	Gaotai	44.81	328	⇑P	P	15 57 02.1	-0.1
GTA				pP	pP	15 57 11.9	+0.5
GTA				sP	sP	15 57 15.6	+0.5
GTA				PcP	PcP	15 58 44.8	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,59nm,6.7s						
GTA				LR	LR		
	comp=N,100nm,17.1s						
GTA				LR	LR		
	comp=E,120nm,18.4s						
GTA				LR	LR		
	comp=Z,180nm,17.8s						
ULN	Ulaanbaatar	48.49	341	eP	P	15 57 30.6	-0.3
ULN				epP	pP	15 57 40.1	-0.2
SONA0	Songino Array	48.68	340	eP	P	15 57 32.4	0.0
SONA0				ePcP	PcP	15 58 57.9	+0.6
SONM	Songino Array	48.68	340	P	P	15 57 32.4	0.0
	2.0nm,0.7s,baz=152,slow=8.2,SNR=9.5						
SONM				PcP	PcP	15 58 57.9	+0.6
	1.2nm,0.8s,baz=159,slow=4.5,SNR=3.4						
WMQ	Urumqi	54.52	324	eP	P	15 58 17.3	+1.3
WMQ				LR	LR		
	comp=N,93nm,17.1s						
WMQ				LR	LR		
	comp=E,120nm,17.1s						
WMQ				LR	LR		
	comp=Z,100nm,18.3s						
PETK	Petropavlovsk-	55.38	21	P	P	15 58 23.6	+1.6
	3.3nm,0.5s,baz=181,slow=2.5,SNR=17						
PEA1	Petropavlovsk-	55.39	21	eP	P	15 58 23.6	+1.5
MK31	Makanchi Array	59.34	325	eP	P	15 58 49.3	-0.8
MK31				epP	pP	15 58 57.6	-2.2
MK32	Makanchi Array	59.34	325	eP	P	15 58 49.6	-0.5
MKAR	Makanchi Array	59.34	325	P	P	15 58 49.6	-0.5
	2.1nm,0.4s,baz=110,slow=7.3,SNR=28						
MAKZ	Makanchi	59.53	324	eP	P	15 58 50.3	-1.2
	4.7nm,0.8s						
ZALV	Zalesovo Beam	62.19	332	P	P	15 59 08.1	-1.2
	1.0nm,0.4s,baz=120,slow=9.6,SNR=4.7						
ZAA1	Zalesovo Array	62.20	332	eP	P	15 59 08.1	-1.2
KURK	Kurchatov	63.48	327	eP	P	15 59 16.7	-1.2
KURK				epP	pP	15 59 26.0	-1.7
BVAR	Borovoye Array	69.07	327	P	P	15 59 53.1	-0.6
	2.2nm,0.4s,baz=73,slow=4.9,SNR=30						
BRVK	Borovoye	69.14	327	eP	P	15 59 52.9	-1.3
BRVK				epP	pP	16 00 02.6	-1.4
AKTO	Aktyubinsk	75.52	321	P	P	16 00 31.4	-0.9
	1.1nm,0.4s,baz=106,slow=7.4,SNR=3.2						
ARU	Arti	76.67	328	P	P	16 00 37.1	-1.6
	1.4nm,0.5s,baz=351,slow=23,SNR=5.3						
ARU	Arti	76.67	328	eP	P	16 00 37.3	-1.4
KIRV	Kirov	81.92	329	P	P	16 01 06.8	-0.5
	6.3nm,0.4s,baz=320,slow=7.9,SNR=3.0						
VNDA	Vanda	82.43	173	P	P	16 01 08.7	-0.9
	0.4nm,0.4s,baz=314,slow=7.1,SNR=5.9						
CAST	Castle Rocks	82.50	26	eP	P	16 01 12.1	+1.8
	4.4nm,1.2s						
CAST				epP	pP	16 01 21.9	+1.8
MLY	Manley	83.30	25	eP	P	16 01 16.0	+1.6
	10nm,1.6s						
MAW	Mawson	83.76	201	P	P	16 01 15.8	-0.8
	0.8nm,0.4s,baz=74,slow=7.4,SNR=3.9						
MAW	Mawson	83.76	201	eP	P	16 01 15.8	-0.8
	4.4nm,1.9s						
COLD	Coldfoot	83.80	23	eP	P	16 01 18.7	+1.8
	3.3nm,1.1s						
RND	Reindeer	83.94	27	eP	P	16 01 18.6	+0.8
	3.8nm,0.7s						
ILAR	Eielson Array	84.91	25	P	P	16 01 22.7	+0.1
	0.4nm,0.5s,baz=246,slow=5.4,SNR=8.9						
ILB	Eielson Array	84.91	25	eP	P	16 01 22.7	+0.1
	7.9nm,1.8s						
ARA0	ARCESS Array S	91.86	340	eP	P	16 01 53.9	-1.8
ARCES	ARCESS Array B	91.86	340	P	P	16 01 53.9	-1.8
	1.4nm,0.7s,baz=78,slow=6.4,SNR=7.8						
FIA0	FINESS Array S	93.46	332	eP	P	16 02 01.4	-1.8
FINES	FINESS Array B	93.46	332	P	P	16 02 01.4	-1.8
	3.7nm,0.9s,baz=43,slow=6.5,SNR=6.5						
TORD	Torodi Ar. Bea	125.09	288	PKP	PKPdf	16 07 48.6	-0.6
	0.7nm,0.9s,baz=148,slow=3.2,SNR=3.0						
TOA1	Torodi Ar. Sit	125.09	288	ePKPdf	PKPdf	16 07 48.6	-0.6

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*MAN **17** 16:10:43.3, 1°.58N×127°.58E, h52km, MS4.6*

*BJI **17** 16:10:46.4±0.0, 2°.56N×128°.91E, h37km, mb4.7/35, mB4.9/22, Ms4.4/4, Ms7 4.1/4*

*DJA **17** 16:10:49.0±0.9, 3°N±4°×12°9E±°, h11km±10km, M4.7/9, mb4.8/7, mB4.7/2, MLv4.7/9, Mw(mB)4.0/2*

*NEIC **17** 16:10:50.8±0.2, 2°.94N×128°.53E, h35km, mb4.6/22, Error ellipse: s-maj=9.4km s-min=4.0km az=80.0*

*ISCJB **17** 16:10:50.2±0.2, 2°.95N±0°.03×128°.70E±0°.04, h44km, mb4.5/42, MS3.5/4, Error ellipse: s-maj=6.3km s-min=4.1km az=174.4*

*IDC **17** 16:10:51.4±3.0, 2°.90N×128°.46E, h41km±28km, mb4.0/18, mb1 4.2/20, mb1mx4.0/41, mbtmp4.3/20, ML4.0/2, MS3.4/5, Ms1 3.4/5, ms1mx2.9/31, Error ellipse: s-maj=26.3km s-min=11.5km az=83.0*

ISC 17 16:10:51.7±0.4**, 2°.96N**±0°.05×**128°.78E**±0°.07**, h44**km**, n85, σ1s45**/87**, mb4.5**/42**, MS3.5**/4**, 1C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.59	213	ePn	Pn	16 11 30.4	-0.8
TNTI	Ternate	2.59	213	P	Pn	16 11 30.5	-0.8
TNTI				S	Sn	16 12 04.3	+2.8
SGSI	Sangihe	3.33	283	P	Pn	16 11 39.4	-1.9
SGSI				S	Sn	16 12 20.2	+0.6
LBMI	Labuha	3.80	200	P	Pn	16 11 49.4	+1.6
LBMI				S	Sn	16 12 35.5	+4.3
SIJI	Sorong	4.54	147	P	Pn	16 11 58.2	+0.2
	4.3nm,0.3s,baz=176,slow=22,SNR=47						
SIJI				S	Sn	16 12 48.3	-1.3
	3.7nm,0.3s,baz=308,slow=24,SNR=6.9						
SIJI				LR	LR	16 14 01.5	
	comp=Z,406nm,18.7s,baz=170,slow=41						
KCP	Kidapawan	5.45	318	⇓eP	Pn	16 12 11.2	+0.6
KCP				eS	Sn	16 13 17.9	+5.8
SANI	Sanana	5.71	209	P	Pn	16 12 13.1	-0.9
	59nm,0.9s						
SANI				S	Sn	16 13 19.8	+1.5
	59nm,0.9s						
CTBH	Cotabato--PC H	6.19	313	⇑iP	Pn	16 12 20.2	-0.4
FAKI	Fak Fak	6.79	149	ePn	Pn	16 12 29.5	+0.6
FAKI	Fak Fak	6.79	149	P	Pn	16 12 29.8	+0.9
	33nm,1.2s						
LUWI	Luwuk	7.21	237	ePn	Pn	16 12 36.7	+2.2
LUWI	Luwuk	7.21	237	P	Pn	16 12 35.0	+0.4
	76nm,0.6s						
TTSI	Tana Toraja	10.76	236	P	Pn	16 13 22.6	-0.8
	38nm,0.6s						
BNSI	Bone	11.34	230	P	Pn	16 13 29.7	-1.6
BATI	Baumata	14.04	201	P	Pn	16 14 04.0	-4.1
	1.0nm,0.3s,baz=75,slow=12,SNR=2.1						
MTN	Manton Dam	15.87	172	ePn	Pn	16 14 32.5	+0.2
	15nm,1.0s						
GUMO	Guam	19.08	55	LR	LR	16 21 33.9	
	comp=Z,46nm,20.4s,baz=216,slow=33						
WRAB	Tennant Creek	23.40	167	eP	P	16 15 56.5	-0.4
	10.0nm,0.7s						
WR1	Warramunga Arr	23.41	167	eP	P	16 15 57.1	+0.1
WRA	Warramunga Arr	23.41	167	P	P	16 15 57.1	+0.1
	7.9nm,0.6s,baz=352,slow=12,SNR=79						
WB2	Warramunga Arr	23.41	167	eP	P	16 15 56.9	-0.1
	33nm,1.4s						
AS31	Alice Springs	26.93	170	eP	P	16 16 29.6	+0.5
	1.8nm,0.8s						
AS31				ePcP	PcP	16 19 50.6	+0.2
ASAR	Alice Springs	26.93	170	P	P	16 16 29.5	+0.4
	1.0nm,0.7s,baz=352,slow=10,SNR=14						
ASAR				PcP	PcP	16 19 50.6	+0.2
	0.7nm,0.5s,baz=346,slow=2.3,SNR=5.1						
JNU	Nakatsue	30.07	4	P	P	16 16 58.5	+1.5
	4.6nm,0.8s,baz=154,slow=15,SNR=2.3						
NJ2	Nanjing	30.41	343	eP	P	16 17 01.5	+1.6
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
ENH	Enshi	32.74	328	eP	P	16 17 19.7	-0.8
	9.9nm,0.8s						
CMAR	Chiang Mai Arr	33.03	300	P	P	16 17 21.5	-1.6
	1.5nm,0.3s,baz=123,slow=7.6,SNR=6.8						
KS15	Wonju Array Si	34.33	359	eP	P	16 17 34.8	+0.7
	12nm,0.8s						
KSAR	Wonju Array Be	34.33	359	P	P	16 17 34.8	+0.7
KSRS	Korea Array	34.34	359	P	P	16 17 34.8	+0.6
	3.5nm,0.7s,baz=175,slow=9.7,SNR=12						
MJAR	Matsushiro Arr	34.53	13	P	P	16 17 36.6	+0.6
	3.1nm,0.7s,baz=188,slow=10,SNR=10						
MJAR				LR	LR	16 29 22.2	
	comp=Z,44nm,21.3s,baz=210,slow=32						
MAJO	Matsushiro	34.53	13	eP	P	16 17 36.6	+0.6
XAN	Xi'an	36.05	331	eP	P	16 17 48.2	-0.9
XAN	Xi'an	36.05	331	P	P	16 17 48.9	-0.2
XAN				pP	pP	16 17 58.0	-1.6
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CD2	Chengdu	36.49	322	eP	P	16 17 53.5	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
STKA	Stephens Creek	36.72	162	P	P	16 17 55.5	+0.7
	2.2nm,0.4s,baz=339,slow=9.8,SNR=23						
STKA	Stephens Creek	36.72	162	eP	P	16 17 55.5	+0.7
	9.2nm,1.8s						
H11S3	WAKE ISLAND Hy	40.18	65	T	T	17 01 25.1	
	baz=252,slow=75						
H11S2	WAKE ISLAND Hy	40.20	65	T	T	17 01 26.2	
	baz=252,slow=75						
H11S1	WAKE ISLAND Hy	40.20	65	T	T	17 01 26.3	
	baz=252,slow=75						
LZH	Lanzhou	40.22	328	eP	P	16 18 27.3	+2.9
LZH				pP	pP	16 18 36.0	+0.4
LZH				sP	sP	16 18 39.5	-1.0
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
H11N1	WAKE ISLAND Hy	40.75	63	T	T	17 02 16.1	
	baz=250,slow=75						
H11N2	WAKE ISLAND Hy	40.77	63	T	T	17 02 13.4	
	baz=250,slow=75						
H11N3	WAKE ISLAND Hy	40.77	63	T	T	17 02 11.9	
	baz=250,slow=75						
CN2	Changchun	40.78	356	eP	P	16 18 30.8	+2.2
HHC	Hu-ho-hao-te	40.79	340	eP	P	16 18 30.8	+1.8
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,49nm,5.4s						
USRK	Ussuriysk Ar.	41.16	4	P	P	16 18 32.8	+1.0
	6.4nm,0.8s,baz=184,slow=6.5,SNR=12						
GTA	Gaotai	44.82	328	eP	P	16 19 01.6	-0.1
GTA				pP	pP	16 19 10.6	-2.0
GTA				sP	sP	16 19 15.1	-2.2
GTA				PcP	PcP	16 20 44.1	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,76nm,7.0s						
GTA				LR	LR		
	comp=N,63nm,20.6s						
GTA				LR	LR		
	comp=E,73nm,20.0s						
GTA				LR	LR		
	comp=Z,67nm,20.6s						
ULN	Ulaanbaatar	48.50	341	eP	P	16 19 30.6	+0.3
	6.5nm,0.6s						
SONA0	Songino Array	48.70	340	eP	P	16 19 31.6	-0.3
SONM	Songino Array	48.70	340	P	P	16 19 31.6	-0.3
	2.0nm,0.8s,baz=154,slow=8.4,SNR=9.1						
WMQ	Urumqi	54.53	324	eP	P	16 20 16.8	+1.3
WMQ				pP	pP	16 20 27.3	+0.6
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,44nm,4.5s						
PETK	Petropavlovsk-	55.39	21	P	P	16 20 22.9	+1.5
	6.5nm,0.9s,baz=182,slow=3.4,SNR=9.7						
PEA1	Petropavlovsk-	55.40	21	eP	P	16 20 22.9	+1.4
MK31	Makanchi Array	59.36	325	eP	P	16 20 48.9	-0.6
	2.5nm,0.8s						
MK32	Makanchi Array	59.36	325	eP	P	16 20 48.8	-0.7
MKAR	Makanchi Array	59.36	325	P	P	16 20 48.8	-0.8
	2.5nm,0.6s,baz=113,slow=8.5,SNR=32						
MKAR				LR	LR	16 48 32.5	
	comp=Z,27nm,18.2s,baz=133,slow=38						
MAKZ	Makanchi	59.55	324	eP	P	16 20 49.6	-1.2
	3.6nm,0.7s						
ZALV	Zalesovo Beam	62.21	332	P	P	16 21 07.2	-1.5
	1.1nm,0.7s,baz=114,slow=9.9,SNR=3.9						
ZAA1	Zalesovo Array	62.21	332	eP	P	16 21 07.2	-1.5
KURK	Kurchatov	63.49	327	eP	P	16 21 16.8	-0.5
	5.8nm,0.8s						
TIXI	Tiksi	68.59	0	P	P	16 21 49.0	-0.6
	1.9nm,0.4s,baz=170,slow=4.0,SNR=12						
BRVK	Borovoye	69.15	327	eP	P	16 21 52.8	-0.7
	3.1nm,0.8s						
ARU	Arti	76.68	328	eP	P	16 22 36.8	-1.3
	4.1nm,0.6s						
KDAK	Kodiak Island	81.45	32	P	P	16 23 05.6	+1.6
	4.3nm,0.7s,baz=251,slow=6.3,SNR=6.3						
KDAK	Kodiak Island	81.45	32	eP	P	16 23 05.6	+1.6
	43nm,1.6s						
VNDA	Vanda	82.42	173	P	P	16 23 08.7	-0.1
	0.6nm,0.7s,baz=329,slow=6.5,SNR=5.5						
CAST	Castle Rocks	82.50	26	eP	P	16 23 11.1	+1.5
	16nm,2.0s						
BPAW	Bear Paw Mtn.	83.08	26	eP	P	16 23 14.3	+1.7
	2.7nm,1.0s						
MLY	Manley	83.31	25	eP	P	16 23 15.2	+1.5
	2.6nm,0.8s						
MAW	Mawson	83.75	201	P	P	16 23 14.5	-1.3
	1.4nm,0.7s,baz=97,slow=1.0,SNR=4.5						
MAW	Mawson	83.75	201	eP	P	16 23 14.5	-1.3
	3.0nm,1.8s						
RND	Reindeer	83.94	27	eP	P	16 23 17.7	+0.7
	6.5nm,0.9s						
SML	Sawmill	84.04	28	eP	P	16 23 18.3	+0.8
	8.9nm,0.8s						
SCM	Sheep Creek Mo	84.51	28	eP	P	16 23 21.4	+1.4
	8.1nm,0.8s						
ILAR	Eielson Array	84.92	25	P	P	16 23 21.8	0.0
	0.4nm,0.7s,baz=247,slow=7.5,SNR=5.6						
ILAR				LR	LR	17 01 34.5	
	comp=Z,50nm,19.1s,baz=8.5,slow=36						
ILB	Eielson Array	84.92	25	eP	P	16 23 21.8	0.0
	18nm,1.9s						
ARA0	ARCESS Array S	91.87	340	eP	P	16 23 53.2	-1.8
ARCES	ARCESS Array B	91.87	340	P	P	16 23 53.2	-1.8
	2.7nm,1.0s,baz=79,slow=6.3,SNR=6.7						
TORD	Torodi Ar. Bea	125.11	288	PKP	PKPdf	16 29 47.2	-1.2
	0.3nm,0.6s,baz=81,slow=1.3,SNR=2.3						
TOA1	Torodi Ar. Sit	125.11	288	ePKPdf	PKPdf	16 29 47.2	-1.2
S51A	Beattyville	129.67	34	ePKPdf	PKiKP	16 29 57.3	-0.1
TZTN	Tazewell	130.48	34	ePKPdf	PKiKP	16 29 58.7	-0.3
V53A	Saluda	131.52	35	ePKPdf	PKiKP	16 30 00.7	-0.5
T57A	Hurt	132.45	31	ePKPdf	PKPdf	16 30 00.9	-1.0

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*SJA **17** 16:19:01.3±0.7, 34°.48S×66°.89W, h16km±3km, ML4.4, MW4.3, Fault plane solution: NP1:φs224.03000°, δ37.10000°, λ85.02000°.*

*IDC **17** 16:19:01.4±0.8, 34°.44S×66°.92W, h0km, mb4.0/8, mb1 4.1/14, mb1mx4.0/31, mbtmp3.9/14, ML3.9/6, MS3.0/2, Ms1 3.0/2, ms1mx2.7/19, Error ellipse: s-maj=23.5km s-min=12.5km az=75.0*

*ISCJB **17** 16:19:03.0±1.3, 34°.43S±0°.03×66°.76W±0°.05, h15km±8km, mb4.3/11, Error ellipse: s-maj=6.5km s-min=5.3km az=18.6*

*NEIC **17** 16:19:03.5±1.1, 34°.36S×66°.82W, h12km±4km, mb4.7/8, MD4.3(SJA), Error ellipse: s-maj=14.4km s-min=5.3km az=82.0*

NEIC Felt [III] at San Rafael.

ISC 17 16:19:02.5±2.6**, 34°.42S**±0°.04×**66°.88W**±0°.04**, h5**km±17km**, n68, σ1s20**/88**, mb4.3**/11**, 14C-4D, San Luis Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAGR	Agrelo	2.10	309	⇓iP	Pn	16 19 38.5	+0.1
AAGR				i S	Sn	16 20 06.8	+1.9
ACAN	Cantantal	2.15	353	⇑eP	Pn	16 19 40.5	+1.5
ACAN				i S	Sn	16 20 07.5	+1.4
MRA	San Martin	2.22	26	⇑iP	Pb	16 19 43.1	0.0
MRA				eS	Sb	16 20 10.0	-0.8
MRA				IAML		16 20 27.1	
	comp=Z,997nm,0.2s						
UTNM	Universidad Te	2.24	312	eP	Pb	16 19 43.5	0.0
ARCO	CERRO ARCO	2.33	312	⇑eP	Pn	16 19 41.9	+0.3
ARCO				⇓iPg	Pb	16 19 45.3	+0.3
COIS	El Sosneado	2.34	252	eP	Pn	16 19 41.1	-0.6
COIS				i S	Sn	16 20 12.0	+1.2
PUMA	Malargue	2.37	242	eP	Pb	16 19 45.6	-0.1
PUMA				eS	Sb	16 20 15.1	-0.3
ASAL	Salagasta	2.45	317	⇓iP	Pn	16 19 43.6	+0.5
ASAL				ePg	Pb	16 19 47.2	+0.2
ASAL				i S	Sb	16 20 20.5	+2.9
EDS3	Malargue	2.47	236	eP	Pb	16 19 48.2	+0.7
EDS3				eS	Sb	16 20 19.0	+0.7
RTCV	Cerro Valdivia	2.91	331	eP	Pn	16 19 50.2	+0.8
CFA	Coronel Fontan	3.03	337	Pn	Pn	16 19 51.8	+0.7
	comp=Z,6.0nm,0.3s,baz=159,slow=12,SNR=85						
CFA				Pg	Pb	16 19 57.0	+0.1
	comp=Z,38nm,0.3s,baz=151,slow=18,SNR=58						
CFA				Sn	Sn	16 20 27.1	-0.7
	comp=Z,83nm,0.3s,baz=254,slow=21,SNR=17						
CFA				Lg	Lg	16 20 37.2	
	comp=Z,128nm,0.3s,baz=167,slow=8.8,SNR=12						
CFA				LR	LR	16 21 15.0	
	comp=Z,248nm,20.2s,baz=106,slow=44						
CFA	Coronel Fontan	3.03	337	eP	Pn	16 19 51.6	+0.5
CFA				i S	Sn	16 20 27.5	-0.3
SJA	San Juan	3.21	333	eP	Pb	16 19 58.3	-1.7
SJA				IAML		16 20 46.0	
	comp=Z,459nm,0.4s						
RTLS	Leoncito	3.31	321	⇑eP	Pn	16 19 55.9	+0.6
RTLS				IAML		16 20 52.7	
	comp=Z,432nm,0.5s						
RTLL	Cerro Villicun	3.36	336	⇑eP	Pn	16 19 56.7	+1.0
RTLL				i S	Sn	16 20 35.6	-0.4
RTLL				IAML		16 20 54.2	
	comp=Z,652nm,0.4s						
PEL	Peldehue	3.42	291	ePn	Pn	16 19 57.2	+0.7
PEL	Peldehue	3.42	291	⇑eP	Pn	16 19 57.4	+1.0
TCA	Tanti	3.62	33	⇑iP	Pn	16 20 01.9	+2.6
TCA				i S	Sb	16 20 51.1	-0.2
TCA				IAML		16 21 11.5	
	comp=Z,634nm,0.4s						
AMOG	MOGNA	3.73	338	⇑eP	Pn	16 20 02.2	+1.5
AMOG				i S	Sb	16 20 53.6	-0.8
APLL	PUNTA DE LOS L	4.02	4	⇑eP	Pn	16 20 07.0	+2.2
APLL				eS	Sn	16 20 56.6	+4.3
APLL				IAML		16 21 20.0	
	comp=Z,229nm,0.3s						
GO05	Huala	4.21	260	ePn	Pn	16 20 07.9	+0.7
GO05	Huala	4.21	260	eP	Pn	16 20 08.6	+1.3
ACCO	Cerro Coronel	4.24	334	⇑eP	Pn	16 20 09.5	+1.5
ACCO				eS	Sn	16 20 58.5	+0.4
ACCO				IAML		16 21 17.7	
	comp=Z,9μm,0.4s						
AROD	Rodeo	4.78	332	eP	Pn	16 20 17.3	+2.0
ACLC	CERRO LA CRUZ	4.98	359	⇑eP	Pn	16 20 19.9	+1.9
AGUA	GUANDACOL	5.10	344	⇑eP	Pn	16 20 22.0	+2.3
AGUA				IAML		16 21 51.2	
	comp=Z,106nm,0.4s						
GO04	Tololo Observa	5.38	321	ePn	Pn	16 20 24.3	+0.7
GO04	Tololo Observa	5.38	321	i P	Pn	16 20 24.8	+1.2
VCA	Vinchina	5.78	348	⇑eP	Pn	16 20 31.3	+2.3
VCA				IAML		16 22 12.4	
	comp=Z,286nm,0.3s						
CYA	Choya	6.03	9	⇑iP	Pn	16 20 34.1	+1.8
CYA				IAML		16 22 28.7	
	comp=Z,115nm,0.4s						
LCO	Las Campanas	6.30	328	ePn	Pn	16 20 36.8	+0.6
PLCA	Paso Flores	6.95	204	Pn	Pn	16 20 45.8	+0.9
	comp=Z,0.7nm,0.3s,baz=45,slow=12,SNR=16						
PLCA				Lg	Lg	16 22 39.6	
	comp=Z,5.4nm,0.3s,baz=72,slow=8.1,SNR=5.3						
PLCA	Paso Flores	6.95	204	ePn	Pn	16 20 46.0	+1.0
PLCA	Paso Flores	6.95	204	i P	Pn	16 20 46.3	+1.4

AHML	**Horco Molle**	**7.72**	**10**	⇓*i*P	**Pn**	**16 20 57.6**	**+2.0**
AHML				*i* S	**Sn**	**16 22 23.6**	**+0.1**
GO02	**Mina Guanaco**	**9.52**	**345**	*e*Pn	**Pn**	**16 21 18.8**	**-1.7**
CPUP	**Villa Florida**	**11.52**	**48**	Pn	**Pn**	**16 21 48.9**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=224,slow=10,SNR=5.6						
CPUP				Lg	Lg	16 25 14.7	
	comp=Z,0.6nm,0.3s,baz=149,slow=14,SNR=2.4						
CPUP				LR	LR	16 26 42.6	
	comp=Z,76nm,20.4s,baz=202,slow=40						
CPUP	**Villa Florida**	**11.52**	**48**	*e*Pn	**Pn**	**16 21 46.7**	**-0.9**
LVC	**Limon Verde**	**11.90**	**351**	Pn	**Pn**	**16 21 52.3**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=197,slow=11,SNR=3.8						
LVC				Lg	Lg	16 25 23.2	
	comp=Z,0.6nm,0.3s,baz=25,slow=19,SNR=2.6						
LVC	**Limon Verde**	**11.90**	**351**	*e*Pn	**Pn**	**16 21 52.5**	**-0.6**
PB01	**IPOC Station P**	**13.52**	**350**	*e*Pn	**Pn**	**16 22 12.9**	**-2.2**
PB11	**IPOC Station P**	**14.81**	**350**	*e*Pn	**Pn**	**16 22 30.6**	**-2.1**
GO01	**Chusmiza**	**14.84**	**351**	*e*Pn	**Pn**	**16 22 31.6**	**-1.8**
MNMC	**Minye Minye**	**15.42**	**350**	*e*P	**P**	**16 22 46.3**	**+0.6**
	comp=Z,7.6nm,0.5s						
LPAZ	**La Paz**	**18.09**	**356**	P	**P**	**16 23 16.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=178,slow=5.7,SNR=7.7						
LPAZ	**La Paz**	**18.09**	**356**	*e*P	**P**	**16 23 16.0**	**+0.4**
	comp=Z,8.7nm,1.4s						
SIV	**San Ignacio**	**19.08**	**17**	P	**P**	**16 23 26.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=197,slow=14,SNR=3.3						
MDP	**Montagnes des**	**41.54**	**22**	P	**P**	**16 26 50.8**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=191,slow=10,SNR=3.4						
SNAA	**Sanae**	**49.59**	**158**	P	**P**	**16 27 54.1**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=168,slow=20,SNR=3.4						
SNAA	**Sanae**	**49.59**	**158**	*e*P	**P**	**16 27 54.5**	**+0.3**
	comp=Z,14nm,1.7s						
BIRD	**Birdtown, Kers**	**69.87**	**348**	*e*P	**P**	**16 30 14.9**	**+0.8**
	comp=Z,7.4nm,0.6s						
DBIC	**Dimbokro**	**71.31**	**68**	P	**P**	**16 30 23.0**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=202,slow=5.4,SNR=3.1						
DBIC	**Dimbokro**	**71.31**	**68**	*e*P	**P**	**16 30 23.0**	**-0.4**
	comp=Z,64nm,1.9s						
LTX	**Lajitas**	**72.31**	**327**	*e*P	**P**	**16 30 28.4**	**-0.8**
TXAR	**Lajitas Array**	**72.31**	**327**	P	**P**	**16 30 28.4**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=151,slow=8.0,SNR=4.9						
PSUB	**Penn St. - Bra**	**74.40**	**353**	*e*P	**P**	**16 30 40.9**	**-0.2**
	comp=Z,13nm,0.9s						
P51A	**Williamsport**	**75.04**	**347**	*e*P	**P**	**16 30 45.5**	**+0.6**
	comp=Z,46nm,0.3s						
BOSA	**Boshof**	**76.05**	**115**	P	**P**	**16 30 51.0**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=319,slow=2.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**80.38**	**67**	P	**P**	**16 31 15.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=244,slow=5.8,SNR=6.5						
TOA1	**Torodi Ar. Sit**	**80.38**	**67**	*e*P	**P**	**16 31 15.2**	**-0.1**
PD31	**Pinedale Array**	**86.17**	**330**	*e*P	**P**	**16 31 44.3**	**-0.4**
PDAR	**Pinedale Array**	**86.17**	**330**	P	**P**	**16 31 44.3**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=150,slow=5.1,SNR=6.0						
NV01	**Mina Array Sit**	**86.76**	**322**	*e*P	**P**	**16 31 47.8**	**+0.1**
NVAR	**Mina Array Bea**	**86.76**	**322**	P	**P**	**16 31 47.8**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=151,slow=6.4,SNR=4.2						
ZAA1	**Zalesovo Array**	**152.13**	**37**	*e*PKPbc	**PKPbc**	**16 38 58.2**	**-0.3**
ZALV	**Zalesovo Beam**	**152.13**	**37**	PKPbc	**PKPbc**	**16 38 58.2**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=317,slow=3.9,SNR=8.0						
MK32	**Makanchi Array**	**153.70**	**53**	*e*PKPbc	**PKPbc**	**16 39 01.5**	**-0.7**
MK32				*e*PKPab	**PKPab**	**16 39 15.0**	**0.0**
MKAR	**Makanchi Array**	**153.70**	**53**	PKPbc	**PKPbc**	**16 39 01.5**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=318,slow=3.3,SNR=4.0						
MKAR				PKPab	**PKPab**	**16 39 15.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=262,slow=2.8,SNR=7.6						

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*ISCJB **17** 16:22:50.6±1.2, 2°.9N±0°.1×92°.75E±0°.10, h10^{km}, mb3.9/4, Error ellipse: s-maj=22.7km s-min=11.2km az=23.6*

*NEIC **17** 16:22:56.3±1.1, 3°.07N×92°.85E, h28^{km}±9^{km}, mb4.1/1, Error ellipse: s-maj=43.1km s-min=14.4km az=201.0*

*IDC **17** 16:22:56.0±1.8, 3°.51N×92°.61E, h0^{km}, mb3.9/4, mb1 4.0/6, mb1mx3.6/48, mbtmp3.9/6, ML4.2/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/33, Error ellipse: s-maj=54.2km s-min=26.3km az=50.0*

ISC 17 16:22:52.5±1.5**, 3°.0N**±0°.2×**92°.82E**±0°.10**, h10^{km}, n13, σ1^s.09**/12**, mb3.9**/4**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**5.03**	**109**	*e*Pn	**Pn**	**16 24 08.5**	**+0.5**
PSI	**Prapat**	**6.10**	**91**	Pn	**Pn**	**16 24 24.0**	**+1.1**
	4.9nm,0.3s,baz=320,slow=9.2,SNR=13						
PSI				Sn	**Sn**	**16 25 31.1**	**-1.9**
	2.3nm,0.3s,baz=219,slow=8.9,SNR=4.9						
PSI				LR	LR	16 27 03.0	
	comp=Z,114nm,21.5s,baz=251,slow=39						
PSI	**Prapat**	**6.10**	**91**	*e*Pn	**Pn**	**16 24 24.3**	**+1.4**
PALK	**Pallekele**	**12.81**	**290**	Pn	**Pn**	**16 25 54.1**	**-0.7**
	1.5nm,0.3s,baz=117,slow=12,SNR=9.3						
PALK				Sn	Sn	16 28 03.6	-14
	2.7nm,0.3s,baz=116,slow=11,SNR=10						
PALK				LR	LR	16 30 10.5	
	comp=Z,65nm,18.8s,baz=116,slow=35						
CM31	**Chiang Mai Arr**	**16.54**	**21**	*e*Pn	**Pn**	**16 26 45.3**	**+0.6**
	32nm,1.8s						
CMAR	**Chiang Mai Arr**	**16.54**	**21**	Pn	**Pn**	**16 26 43.4**	**-1.4**
	baz=209,slow=14,SNR=4.6						
MK32	**Makanchi Array**	**44.62**	**350**	*e*P	**P**	**16 31 05.7**	**+0.5**
MKAR	**Makanchi Array**	**44.62**	**350**	P	**P**	**16 31 05.7**	**+0.6**
	1.5nm,0.8s,baz=173,slow=8.2,SNR=11						
WRA	**Warramunga Arr**	**46.68**	**121**	P	P	16 31 30.5	+8.7
	0.4nm,0.5s,baz=295,slow=10,SNR=5.4						
WR1	**Warramunga Arr**	**46.68**	**121**	*e*P	P	16 31 30.5	+8.7
KURBB	**Kurchatov Arra**	**49.02**	**348**	P	**P**	**16 31 39.9**	**+0.4**
	0.5nm,0.2s,baz=175,slow=7.0,SNR=5.0						
ZALV	**Zalesovo Beam**	**51.26**	**354**	P	**P**	**16 31 56.9**	**+0.5**
	0.7nm,0.4s,baz=171,slow=5.8,SNR=4.1						
ZAA1	**Zalesovo Array**	**51.27**	**354**	*e*P	**P**	**16 31 56.9**	**+0.4**

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*IDC **17** 16:54:18.4±1.1, 10°.51S×161°.53E, h0^{km}, mb3.9/9, mb1 4.1/11, mb1mx3.9/26, mbtmp4.0/11, ML3.7/2, MS3.3/8, Ms1 3.4/8, ms1mx3.1/19, Error ellipse: s-maj=26.5km s-min=19.1km az=91.0*

*NEIC **17** 16:54:23.4±1.8, 10°.49S×161°.51E, h37^{km}±11^{km}, mb4.3/10, Error ellipse: s-maj=16.4km s-min=14.8km az=67.0*

*ISCJB **17** 16:54:24.5±0.7, 10°.63S±0°.07×161°.46E±0°.09, h61^{km}, mb4.1/14, Error ellipse: s-maj=13.1km s-min=8.8km az=158.7*

ISC 17 16:54:25.9±0.8**, 10°.60S**±0°.08×**161°.5E**±0°.1**, h61^{km}, n30, σ1^s.57**/28**, mb4.0**/14**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.92**	**307**	Pn	**Pn**	**16 54 52.9**	**-3.3**
	59nm,0.3s,baz=174,slow=7.7,SNR=21						
HNR				Sn	**Sn**	**16 55 18.4**	**-1.0**
	264nm,0.3s,baz=63,slow=20,SNR=9.4						
HNR				LR	LR	16 55 42.0	
	comp=Z,673nm,18.8s,baz=198,slow=44						
HNR	**Honiara**	**1.92**	**307**	*e*Pn	**Pn**	**16 54 52.8**	**-3.5**
DZM	**Mont Dzumac**	**12.35**	**158**	Pn	**Pn**	**16 57 18.0**	**-1.1**
	0.1nm,0.3s,baz=30,slow=7.1,SNR=13						
DZM				Sn	**Sn**	**16 59 31.4**	**-3.8**
	0.4nm,0.3s,baz=104,slow=19,SNR=3.7						
DZM				LR	LR	17 00 41.7	
	comp=Z,112nm,21.0s,baz=328,slow=31						
PMG	**Port Moresby**	**14.17**	**274**	LR	LR	17 02 53.0	
	comp=Z,307nm,19.9s,baz=92,slow=36						
CTA	**Charters Tower**	**17.45**	**235**	P	**Pn**	**16 58 25.6**	**+0.2**
	0.5nm,0.3s,baz=58,slow=12,SNR=7.9						
CTAO	**Charters Tower**	**17.45**	**235**	*e*P	**P**	**16 58 26.4**	**+0.6**
	10.0nm,0.8s						
EIDS	**Eidsvold**	**17.70**	**213**	*e*P	**Pn**	**16 58 28.3**	**0.0**
	13nm,1.3s						
COEN	**Coen**	**18.21**	**258**	*e*P	**Pn**	**16 58 34.8**	**+0.2**
	23nm,1.4s						
WRAB	**Tennant Creek**	**27.75**	**247**	*e*P	**P**	**17 00 08.0**	**-1.0**
	40nm,1.8s						
WB2	**Warramunga Arr**	**27.75**	**247**	*e*P	**P**	**17 00 08.5**	**-0.6**
	17nm,1.4s						
WR1	**Warramunga Arr**	**27.76**	**247**	*e*P	**P**	**17 00 09.8**	**+0.7**
WRA	**Warramunga Arr**	**27.76**	**247**	P	**P**	**17 00 09.8**	**+0.7**
	1.7nm,0.8s,baz=75,slow=9.6,SNR=8.6						
STKA	**Stephens Creek**	**28.05**	**218**	P	**P**	**17 00 14.0**	**+2.4**
	2.2nm,1.0s,baz=38,slow=14,SNR=2.6						
STKA				LR	LR	17 11 36.4	
	comp=Z,112nm,18.6s,baz=29,slow=37						
STKA	**Stephens Creek**	**28.05**	**218**	*e*P	**P**	**17 00 14.0**	**+2.4**
	12nm,1.9s						
GUMO	**Guam**	**29.15**	**325**	LR	LR	17 10 59.6	
	comp=Z,61nm,21.7s,baz=145,slow=34						
AS31	**Alice Springs**	**29.32**	**240**	*e*P	**P**	**17 00 22.1**	**-1.0**
	7.2nm,2.0s						
ASAR	**Alice Springs**	**29.33**	**240**	P	**P**	**17 00 22.1**	**-1.0**
	1.0nm,0.8s,baz=64,slow=9.9,SNR=8.1						
ASAR				LR	LR	17 11 54.3	
	comp=Z,136nm,19.2s,baz=64,slow=36						
FORT	**Forrest**	**36.95**	**232**	*e*P	**P**	**17 01 29.7**	**+0.3**
	56nm,1.0s						
PPT	**Papeete**	**47.85**	**104**	LR	LR	17 21 21.8	
	comp=Z,35nm,19.0s,baz=348,slow=34						
KSRS	**Korea Array**	**57.23**	**328**	LR	LR	17 27 33.6	
	comp=Z,13nm,19.5s,baz=210,slow=35						
USRK	**Ussuriysk Ar.**	**60.76**	**336**	P	**P**	**17 04 32.1**	**+0.8**
	1.2nm,0.7s,baz=152,slow=6.7,SNR=3.2						
CM31	**Chiang Mai Arr**	**68.12**	**295**	*e*P	**P**	**17 05 20.6**	**+0.6**
	26nm,1.9s						
CMAR	**Chiang Mai Arr**	**68.12**	**295**	P	**P**	**17 05 20.6**	**+0.6**
	0.6nm,0.8s,baz=130,slow=5.3,SNR=4.4						
CMAR				LR	LR	17 37 47.2	
	comp=Z,7.7nm,18.0s,baz=230,slow=38						
SONA0	**Songino Array**	**75.88**	**325**	*e*P	**P**	**17 06 06.5**	**+0.5**
SONM	**Songino Array**	**75.88**	**325**	P	**P**	**17 06 06.6**	**+0.6**
	0.3nm,0.4s,baz=123,slow=5.3,SNR=2.4						
MAW	**Mawson**	**83.55**	**202**	P	**P**	**17 06 47.9**	**+0.9**
	0.9nm,0.7s,baz=107,slow=8.1,SNR=4.9						
MAW	**Mawson**	**83.55**	**202**	*e*P	**P**	**17 06 48.1**	**+1.0**
	2.3nm,1.6s						
ILAR	**Eielson Array**	**84.46**	**20**	P	**P**	**17 06 52.7**	**+1.1**
	0.2nm,0.5s,baz=258,slow=4.5,SNR=3.9						
MK32	**Makanchi Array**	**90.36**	**318**	*e*P	**P**	**17 07 20.1**	**-0.4**
MKAR	**Makanchi Array**	**90.36**	**318**	P	**P**	**17 07 20.1**	**-0.4**
	0.5nm,0.5s,baz=99,slow=5.2,SNR=5.6						

IDC 17 17:05:22.6±2.6**, 10°.33S**×**161°.41E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.7**/22**, mbtmp3.8**/4**, ML3.3**/1**, MS3.4**/2**, Ms1 3.3**/2**, ms1mx2.7**/17**, Error ellipse: s-maj=55.2km s-min=43.6km az=76.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.63**	**158**	Pn	Pn	17 08 23.5	-0.3
	0.2nm,0.3s,baz=333,slow=11,SNR=7.9						
WRA	**Warramunga Arr**	**27.79**	**247**	P	P	17 11 15.1	+1.5
	1.0nm,0.7s,baz=75,slow=9.3,SNR=5.5						
STKA	**Stephens Creek**	**28.21**	**218**	LR	LR	17 21 54.2	
	comp=Z,52nm,18.0s,baz=23,slow=35						
ASAR	**Alice Springs**	**29.39**	**240**	P	P	17 11 26.1	-1.8
	0.2nm,0.8s,baz=63,slow=9.7,SNR=4.9						
ASAR				LR	LR	17 22 29.9	
	comp=Z,81nm,18.5s,baz=66,slow=35						
MKAR	**Makanchi Array**	**90.11**	**318**	P	P	17 18 24.7	0.0
	0.3nm,0.5s,baz=99,slow=6.0,SNR=5.1						

NDI 17 17:06:08.1±2.3**, 27°.58N**×**92°.43E, h10^{km}, ML3.6, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAWA	**Tawang**	**0.50**	**272**	*e*P	Pg	17 06 17.7	-0.2
TAWA				*e*S	Sg	17 06 24.3	-0.4
TAWA				IAML		17 06 25.7	
	comp=E,3μm,0.2s						
TAWA				IAML		17 06 26.0	
	comp=N,4μm,0.1s						
TEZP	**TEZPUR**	**1.01**	**161**	*e*P	Pg	17 06 25.3	-2.3
TEZP				*e*S	Sn	17 06 41.9	-0.7
TEZP				IAML		17 06 45.1	
	comp=E,2μm,0.1s						
TEZP				IAML		17 06 45.1	
	comp=N,1μm,0.1s						
ZIRO	**ZIRO**	**1.26**	**92**	*e*P	Pn	17 06 30.3	-1.7
ZIRO				*e*S	Sn	17 06 50.0	+0.9
ZIRO				IAML		17 06 53.0	
	comp=E,2μm,0.1s						
JORH	**JORHAT**	**1.82**	**117**	*e*P	Pb	17 06 40.6	-0.9
JORH				*e*S	Sb	17 07 04.4	0.0
SHL	**Shillong**	**2.06**	**194**	*e*P	Pn	17 06 44.0	+1.0
SHL				*e*S	Sn	17 07 09.8	+1.0
SHL				IAML		17 07 11.6	
	comp=E,552nm,0.1s						
SHL				IAML		17 07 11.7	
	comp=N,409nm,0.1s						
MOKO	**MOKOCHONG**	**2.24**	**123**	*e*P	Pn	17 06 45.6	+0.1
MOKO				*e*S	Sn	17 07 13.7	+0.4
MOKO				IAML		17 07 18.8	
	comp=E,644nm,0.2s						
MOKO				IAML		17 07 19.4	
	comp=N,316nm,0.3s						
GTK	**Tadong**	**3.41**	**267**	*e*P	Pn	17 07 02.1	+0.6
GTK				*e*S	Sn	17 07 41.9	-0.2

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*GEN **17** 17:11:01.1, 44°.18N×10°.19E, h4^{km}±1^{km}, Ml0.8*

ROM 17 17:11:00.5±0.1**, 44°.186N**±0°.004×**10°.188E**±0°.005**, h8^{km}, ML1.1**/5**, Error ellipse: s-maj=0.5km s-min=0.4km az=346.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T0912	**Minucciano (LU**	**0.02**	**138**	P	Pg	17 11 02.2	+0.2
T0912				S	Sg	17 11 03.1	0.0
T0912				AML	AML		
	comp=E,3645μm,0.9s						
T0912				AML	AML		
	comp=N,4455μm,0.4s						
T0912				AML	AML		
	comp=E,3635μm,0.9s						
T0912				AML	AML		
	comp=N,4360μm,0.4s						
T0912				AML	AML		
	comp=E,3645μm,0.8s						
T0912				AML	AML		
	comp=N,4450μm,0.4s						
T0912				AML	AML		
	comp=E,3630μm,0.8s						
T0912				AML	AML		
	comp=N,4360μm,0.4s						
T0912				AML	AML		
	comp=N,4450μm,0.4s						
T0912				AML	AML		
	comp=N,4360μm,0.4s						
T0912				AML	AML		
	comp=E,3645μm,0.8s						
T0912				AML	AML		
	comp=E,3630μm,0.8s						
T0912				AML	AML		
	comp=N,4450μm,0.4s						
T0912				AML	AML		
	comp=N,4360μm,0.4s						
T0912				AML	AML		
	comp=E,3645μm,0.8s						
T0912				AML	AML		
	comp=E,3630μm,0.8s						
EQUI	**Equi**	**0.03**	**232**	P	Pg	17 11 02.3	+0.3
EQUI				S	Sg	17 11 03.0	-0.2
EQUI	**Equi**	**0.03**	**232**	P	Pg	17 11 02.2	+0.2
EQUI				S	Sg	17 11 03.1	0.0
EQUI				AML	AML		
	comp=E,450μm,0.4s						
EQUI				AML	AML		
	comp=N,445μm,0.4s						
EQUI				AML	AML		
	comp=E,450μm,0.4s						
EQUI				AML	AML		
	comp=N,445μm,0.4s						
EQUI				AML	AML		
	comp=E,450μm,0.4s						
EQUI				AML	AML		
	comp=N,445μm,0.4s						
EQUI				AML	AML		
	comp=E,450μm,0.4s						
EQUI				AML	AML		
	comp=N,445μm,0.4s						
FIVI	**Fivizzano**	**0.07**	**321**	P	Pg	17 11 02.7	+0.2
FIVI				S	Sg	17 11 03.9	+0.1
T0911	**Castelpoggio (**	**0.11**	**228**	P	Pg	17 11 03.8	+0.7
T0911				S	Sg	17 11 05.5	+0.7
VLC	**Villacollemand**	**0.14**	**100**	P	Pg	17 11 04.4	+0.8
VLC				S	Sg	17 11 07.0	+1.2
VLC				AML	AML		
	comp=E,94μm,0.2s						
VLC				AML	AML		
	comp=N,119μm,0.1s						
VLC				AML	AML		
	comp=E,94μm,0.2s						
VLC				AML	AML		
	comp=N,119μm,0.1s						
VLC				AML	AML		
	comp=E,94μm,0.2s						
VLC				AML	AML		
	comp=N,119μm,0.1s						
VLC				AML	AML		
	comp=E,94μm,0.2s						
VLC				AML	AML		
	comp=N,119μm,0.1s						
SARO	**Sassorosso**	**0.15**	**91**	P	Pg	17 11 04.5	+0.7
SARO				S	Sg	17 11 06.9	+0.9
FOSD	**Fosdinovo**	**0.16**	**240**	P	Pg	17 11 04.7	+0.9
FOSD				S	Sg	17 11 07.3	+1.3
CARD	**Cardoso**	**0.27**	**127**	P	Pg	17 11 06.4	+0.6
CARD				S	Sg	17 11 10.0	+0.7
CARD	**Cardoso**	**0.27**	**127**	P	Pb	17 11 06.7	-0.8
CARD				S	Sg	17 11 10.7	+1.4
CARD				AML	AML		
	comp=E,49μm,0.1s						
CARD				AML	AML		
	comp=N,74μm,0.4s						
CARD				AML	AML		
	comp=E,49μm,0.1s						
CARD				AML	AML		
	comp=N,74μm,0.4s						
CARD				AML	AML		
	comp=N,74μm,0.4s						
CARD				AML	AML		
	comp=E,49μm,0.1s						
CARD				AML	AML		
	comp=N,74μm,0.4s						
CARD				AML	AML		
	comp=E,49μm,0.1s						
PLMA	**Palmaria, Port**	**0.28**	**241**	P	Pg	17 11 06.8	+0.9
PLMA				S	Sg	17 11 10.8	+1.1
ERBM	**Eremo**	**0.28**	**35**	P	Pb	17 11 07.3	-0.6
ERBM				S	Sb	17 11 12.1	-0.7
GRAM	**Graiana**	**0.32**	**344**	P	Pb	17 11 07.7	-0.7
GRAM				S	Sg	17 11 12.2	+1.2
GRAM	**Graiana**	**0.32**	**344**	P	Pb	17 11 07.7	-0.7
GRAM				S	Sb	17 11 12.5	-1.3
GRAM				AML	AML		
	comp=E,132μm,0.2s						
GRAM				AML	AML		
	comp=N,122μm,0.2s						
GRAM				AML	AML		
	comp=E,132μm,0.2s						
GRAM				AML	AML		
	comp=N,122μm,0.2s						
GRAM				AML	AML		
	comp=N,122μm,0.2s						
GRAM				AML	AML		
	comp=E,132μm,0.2s						
GRAM				AML	AML		
	comp=N,122μm,0.2s						
GRAM				AML	AML		
	comp=E,132μm,0.2s						
BDI	**Bagni Di Lucca**	**0.32**	**113**	P	Pg	17 11 07.5	+0.7
BDI				S	Sb	17 11 12.7	-1.1
BDI				AML	AML		
	comp=E,23μm,0.5s						
BDI				AML	AML		
	comp=N,27μm,0.9s						
BDI				AML	AML		
	comp=E,23μm,0.5s						
BDI				AML	AML		
	comp=N,36μm,0.1s						
BDI				AML	AML		
	comp=E,23μm,0.5s						
BDI				AML	AML		
	comp=N,36μm,0.1s						
BDI				AML	AML		
	comp=E,23μm,0.5s						
BDI				AML	AML		
	comp=N,36μm,0.1s						
MAIM	**Mastiano**	**0.35**	**141**	P	Pg	17 11 07.7	+0.5
MAIM				S	Sg	17 11 12.8	+0.9
MAIM	**Mastiano**	**0.35**	**141**	P	Pb	17 11 08.3	-0.6
MAIM				S	Sb	17 11 13.2	-1.3
POPM	**Popiglio**	**0.43**	**109**	P	Pg	17 11 09.5	+0.7
POPM				S	Sb	17 11 16.0	-1.0
POPM	**Popiglio**	**0.43**	**109**	P	Pg	17 11 09.6	+0.7
POPM				S	Sb	17 11 16.2	-0.9
POPM				AML	AML		
	comp=E,36μm,0.3s						
POPM				AML	AML		
	comp=N,33μm,0.9s						
POPM				AML	AML		
	comp=E,36μm,0.3s						
POPM				AML	AML		
	comp=N,33μm,0.9s						
POPM				AML	AML		
	comp=E,36μm,0.3s						
POPM				AML	AML		
	comp=N,33μm,0.9s						
POPM				AML	AML		
	comp=E,36μm,0.3s						
POPM				AML	AML		
	comp=N,33μm,0.9s						
GROG	**Isola di Gorgo**	**0.79**	**196**	P	Pb	17 11 16.6	+0.2
GROG				S	Sb	17 11 27.6	+0.4

ZUR 17 17:12:52.2, 47°.42N×**9°.32E, h4^{km}**±1^{km}**, MLh0.5**/2**, 1C-1D, Error ellipse: s-maj=1.9km s-min=0.9km az=240.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGT00	**Sennhlsen**	**0.01**	**284**	⇑Pg	Pg	17 12 53.2	+0.1
SGT00				Sg	Sg	17 12 53.9	+0.2
SGT01	**Gaiserwald**	**0.01**	**345**	Pg	Pg	17 12 53.3	+0.2
SGT01				Sg	Sg	17 12 54.2	+0.4
SGT04	**Schlatt-Haslen**	**0.08**	**166**	⇓Pg	Pg	17 12 54.5	+0.6
SGT04				Sg	Sg	17 12 56.5	+1.4
SGT03	**Degersheim**	**0.10**	**236**	Pg	Pg	17 12 54.7	+0.4
SGT03				Sg	Sg	17 12 56.8	+1.0

IDC 17 17:25:36.3±1.9**, 6°.27S**×**129°.12E, h0^{km}, mb3.5**/1**, mb1 3.6**/4**, mb1mx3.4**/29**, mbtmp3.5**/4**, ML3.4**/3**, Error ellipse: s-maj=65.6km s-min=28.8km az=81.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.77**	**22**	Pn	Pn	17 27 04.7	+1.3
	2.2nm,0.3s,baz=210,slow=23,SNR=29						
SIJI				Sn	Sn	17 28 00.6	-10
	1.4nm,0.3s,baz=240,slow=23,SNR=7.1						
WRA	**Warramunga Arr**	**14.51**	**160**	Pn	Pn	17 29 03.9	+0.8
	0.1nm,0.3s,baz=348,slow=12,SNR=14						
WRA				Sn	Sn	17 31 31.6	-13
	0.2nm,0.3s,baz=348,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**17.90**	**166**	P	Pn	17 29 46.5	-0.5
	0.1nm,0.3s,baz=359,slow=11,SNR=6.9						
MKAR	**Makanchi Array**	**67.14**	**327**	P	P	17 36 31.6	-0.4
	0.3nm,0.6s,baz=116,slow=7.9,SNR=3.5						

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*IDC **17** 17:25:30.4±1.9, 5°.40S×152°.78E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.8/29, mbtmp3.9/6, ML1.7/1, MS2.6/2, Ms1 2.6/2, ms1mx2.4/25, Error ellipse: s-maj=73.4km s-min=22.4km az=121.0*

ISC 17 17:25:36.6±1.9**, 5°.4S**±0°.3×**152°.6E**±0°.4**, h37^{km}, n8, σ0^s.83**/8**, mb3.8**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.67**	**233**	Pn	**Pn**	**17 27 12.8**	**+0.8**
	0.8nm,0.3s,baz=45,slow=13,SNR=3.6						
PMG				Sn	**Sn**	**17 28 25.7**	**-1.1**
	6.8nm,0.3s,baz=186,slow=20,SNR=9.9						
PMG				LR	LR	17 28 48.6	
	comp=Z,25nm,21.9s,baz=66,slow=29						
DZM	**Mont Dzumac**	**21.36**	**142**	LR	LR	17 37 42.9	
	comp=Z,41nm,21.3s,baz=323,slow=35						
WRA	**Warramunga Arr**	**22.87**	**229**	P	**P**	**17 30 37.1**	**0.0**
	1.3nm,0.6s,baz=57,slow=10,SNR=8.7						
ASAR	**Alice Springs**	**25.55**	**223**	P	**P**	**17 31 02.6**	**+0.5**
	1.1nm,0.6s,baz=62,slow=8.6,SNR=13						
SONM	**Songino Array**	**66.68**	**328**	P	**P**	**17 36 24.7**	**+0.8**
	0.5nm,0.5s,baz=144,slow=5.3,SNR=2.7						

```
ZALV  Zalesovo Beam     81.50 326  P        P         17 37 49.4 -0.6
      0.8nm,0.4s,baz=122,slow=4.7,SNR=4.2
ILAR  Eielson Array     82.79  22  P        P         17 37 56.0 -0.6
      0.7nm,0.7s,baz=251,slow=5.6,SNR=10.0
TORD  Torodi Ar. Bea   150.24 287  PKPbc    PKPbc     17 45 24.7 -0.1
      0.3nm,0.6s,baz=68,slow=3.9,SNR=2.1
```

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   IDC 17 18:30:33.4±0.9,5°.50S×152°.64E,h0km,mb4.0/7,
          mb1 4.1/8,mb1mx3.8/37,mbtmp4.0/8,ML1.8/1,MS2.8/1,
          Ms1 2.8/1,ms1mx2.4/24,Error ellipse: s-maj=31.2km
          s-min=21.3km az=107.0
  NEIC 17 18:30:34.2±1.1,5°.51S×153°.03E,h13km±6km,mb4.4/6,
          Error ellipse: s-maj=16.8km s-min=9.2km az=141.0
   ISC 17 18:30:33.6±0.7,5°.58S±0°.08×152°.88E±0°.09,h10km,n23,
          σ1ˢ.68/22,mb4.2/11,New Britain region
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
RABL  Rabaul             1.55 332  ePn      Pn        18 31 01.9 +0.6
PMG   Port Moresby       6.83 236  Pn       Pn        18 32 14.8 +0.9
      1.0nm,0.3s,baz=56,slow=8.1,SNR=4.2
PMG                                Sn       Sn        18 33 28.0 -3.8
      6.5nm,0.3s,baz=162,slow=21,SNR=8.8
PMG   Port Moresby       6.83 236  ePn      Pn        18 32 16.3 +2.4
HNR   Honiara            7.98 119  LR       LR        18 36 05.2
      comp=Z,64nm,19.6s,baz=274,slow=40
HNR   Honiara            7.98 119  ePg      Pb        18 32 50.6 -1.5
WR1   Warramunga Arr    23.00 230  eP       P         18 35 38.2 -0.6
WRA   Warramunga Arr    23.00 230  P        P         18 35 38.2 -0.6
      2.1nm,0.8s,baz=53,slow=9.8,SNR=13
AS31  Alice Springs     25.64 224  eP       P         18 36 04.1 +0.5
      2.3nm,1.2s
ASAR  Alice Springs     25.64 224  P        P         18 36 03.5 -0.1
      1.7nm,0.6s,baz=58,slow=8.9,SNR=31
URZ   Urewera           39.28 149  P        P         18 38 05.5 +2.9
      2.9nm,0.5s,baz=259,slow=19,SNR=3.4
SONA0 Songino Array     67.02 328  eP       P         18 41 26.8 -0.2
SONM  Songino Array     67.02 328  P        P         18 41 26.8 -0.2
      0.7nm,0.7s,baz=160,slow=4.7,SNR=3.7
MK32  Makanchi Array    80.96 319  eP       P         18 42 49.1 +0.7
MKAR  Makanchi Array    80.96 319  P        P         18 42 49.1 +0.7
      0.4nm,0.7s,baz=126,slow=4.4,SNR=4.6
MLY   Manley            81.58  21  eP       P         18 42 53.2 +1.8
      1.9nm,0.6s
ZALV  Zalesovo Beam     81.84 326  P        P         18 42 53.1 +0.2
      1.3nm,0.4s,baz=115,slow=6.0,SNR=5.5
ZAA1  Zalesovo Array    81.84 326  eP       P         18 42 53.1 +0.2
ILAR  Eielson Array     82.84  22  P        P         18 42 59.7 +1.7
      1.1nm,0.7s,baz=250,slow=5.8,SNR=14
ILB   Eielson Array     82.84  22  eP       P         18 42 57.7 -0.3
      4.9nm,1.4s
MAW   Mawson            84.89 203  eP       P         18 43 03.6 -4.7
      3.1nm,1.8s
R11A  Troy Canyon, C    94.62  52  eP       P         18 43 51.8 -3.5
      6.5nm,1.6s
TORD  Torodi Ar. Bea   150.62 287  PKPbc    PKPbc     18 50 27.6 +0.6
      0.5nm,0.8s,baz=62,slow=5.0,SNR=3.6
TOA1  Torodi Ar. Sit   150.62 287  ePKPbc   PKPbc     18 50 27.6 +0.6
```

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  NIED 17 18:38:00,38°.30N×142°.00E,h62km,Mw3.7   Best double
          couple: M0 4.09000×10^14   NP1:φs256.00000°,δ22.00000°,
          λ-15.00000°.   NP2:φs360.00000°,δ84.00000°,
          λ-111.00000°.
   IDC 17 18:38:02.9±0.7,38°.28N×142°.36E,h0km,mb3.6/10,
          mb1 3.8/15,mb1mx3.6/38,mbtmp3.6/15,ML3.1/4,MS2.7/4,
          Ms1 2.7/4,ms1mx2.4/39,Error ellipse: s-maj=20.5km
          s-min=15.3km az=130.0
 ISCJB 17 18:38:07.9±0.8,38°.32N±0°.04×142°.13E±0°.08,h49km±7km,
          mb3.5/10,MS3.4/1,Error ellipse: s-maj=11.0km
          s-min=5.4km az=19.0
   JMA 17 18:38:09.8,38°.35N×142°.01E,h48km±1km,M3.6
   JMA Felt I J1.
   ISC 17 18:38:07.6±1.7,38°.28N±0°.04×142°.18E±0°.07,h32km±11km,
          n38,σ1ˢ.49/46,mb3.7/10,Near east coast of eastern
          Honshu
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
JIKH  Ishinomakikobu     0.56 274  P        Pn        18 38 20.1 +0.8
JIKH                               S        Sb        18 38 27.1 +0.2
JIO   Ouri               0.67 285  P        Pb        18 38 21.3 +0.4
JIO                                S        Sb        18 38 29.2 -0.8
JKMT  Kesennumamotoy     0.77 314  P        Pn        18 38 22.6 +0.4
JKMT                               S        Sb        18 38 31.4 -1.2
OFUJ  Ofunato            0.89 334  P        Pn        18 38 24.5 +0.5
OFUJ                               S        Sn        18 38 34.9 -0.9
JMK   Ichinoseki         1.01 312  P        Pn        18 38 25.9 +0.4
JMK                                S        Sn        18 38 37.5 -1.1
JMM   Marumori           1.17 250  P        Pn        18 38 28.1 +0.4
JMM                               eS        Sn        18 38 41.4 -1.1
JOU   Okura              1.19 275  P        Pn        18 38 28.6 +0.5
JOU                                S        Sn        18 38 42.4 -0.8
JFK   Kawauchi           1.37 229  P        Pn        18 38 31.6 +1.0
JFK                               eS        Sn        18 38 47.8 +0.1
JOM   Ohasama            1.38 330  P        Pn        18 38 31.4 +0.8
JOM                                S        Sn        18 38 47.6 -0.2
JYK   Kaneyama           1.56 295  P        Pn        18 38 33.6 +0.5
JYK                                S        Sn        18 38 51.2 -1.1
JFT   Otama              1.64 243  P        Pn        18 38 35.6 +1.4
JFT                                S        Sn        18 38 55.0 +0.7
JRG   Rokugo             1.64 313  P        Pn        18 38 34.8 +0.6
JYS   Shirataka          1.66 269  P        Pn        18 38 35.3 +0.8
JYS                                S        Sn        18 38 54.4 -0.4
MJAR  Matsushiro Arr     3.60 242  Pn       Pn        18 39 02.6 +1.4
      0.5nm,0.3s,baz=53,slow=8.5,SNR=25
MJAR                               Sn       Sb        18 39 49.9 -3.9
      0.5nm,0.3s,baz=134,slow=7.2,SNR=4.8
MJAR                               LR       LR        18 40 42.2
      comp=Z,70nm,19.4s,baz=85,slow=43
MAT   Matsushiro         3.60 242  P        Pn        18 39 05.8 +4.6
MAT                                S        Sb        18 39 49.3 -4.6
JHJ   Hachijo jima 2     5.50 201  Pn       Pn        18 39 27.6 +0.2
      4.7nm,0.3s,baz=52,slow=20,SNR=3.4
JHJ                                Sn       Sn        18 40 28.1 -1.4
      17nm,0.3s,baz=74,slow=23,SNR=6.9
ASAJ  Asahikawa          5.84   3  Pn       Pn        18 39 32.6 +0.7
      0.6nm,0.3s,baz=201,slow=14,SNR=13
ASAJ                               Sn       Sn        18 40 36.5 -1.2
      0.3nm,0.3s,baz=97,slow=13,SNR=2.2
USRK  Ussuriysk Ar.      9.68 311  Pn       Pn        18 40 25.3 +0.7
      0.1nm,0.3s,baz=126,slow=14,SNR=2.8
KSRS  Korea Array       11.30 270  Pn       Pn        18 40 50.1 +3.3
      0.1nm,0.3s,baz=79,slow=14,SNR=3.4
KSRS                               LR       LR        18 43 57.9
      comp=Z,12nm,20.1s,baz=75,slow=31
KLR   Kul'dur           13.28 329  LR       LR        18 46 36.2
      comp=Z,25nm,18.1s,baz=161,slow=38
H11N2 WAKE ISLAND Hy    28.30 124  T        T         19 14 28.0
      baz=316,slow=75,SNR=144
H11N1 WAKE ISLAND Hy    28.31 124  T        T         19 14 27.0
      baz=316,slow=75,SNR=130
H11N3 WAKE ISLAND Hy    28.32 124  T        T         19 14 31.9
      baz=316,slow=75,SNR=178
H11S1 WAKE ISLAND Hy    29.06 126  T        T         19 15 15.1
      baz=318,slow=76,SNR=44
H11S3 WAKE ISLAND Hy    29.06 126  T        T         19 15 34.4
      baz=318,slow=76,SNR=48
H11S2 WAKE ISLAND Hy    29.08 126  T        T         19 15 37.0
      baz=318,slow=76,SNR=40
ZALV  Zalesovo Beam     41.54 311  P        P         18 45 51.9 +0.1
      0.6nm,0.4s,baz=76,slow=7.9,SNR=2.2
CMAR  Chiang Mai Arr    42.40 255  P        P         18 46 00.4 +1.1
      0.3nm,0.8s,baz=45,slow=9.0,SNR=3.8
MKAR  Makanchi Array    43.98 301  P        P         18 46 11.3 -0.4
      0.3nm,0.6s,baz=92,slow=8.2,SNR=3.8
ILAR  Eielson Array     48.12  33  P        P         18 46 44.1  0.0
      0.4nm,0.6s,baz=270,slow=4.5,SNR=4.6
INK   Inuvik            53.01  28  P        P         18 47 20.6 -0.2
      0.9nm,0.4s,baz=200,slow=21,SNR=4.1
WRA   Warramunga Arr    58.38 189  P        P         18 47 59.8  0.0
      0.6nm,0.6s,baz=356,slow=7.9,SNR=11
ASAR  Alice Springs     62.10 189  P        P         18 48 25.9 +0.5
      0.5nm,0.7s,baz=1.8,slow=4.6,SNR=9.6
GNI   Garni             71.45 307  LR       LR        19 21 41.0
      comp=Z,18nm,18.7s,baz=88,slow=37
NVAR  Mina Array Bea    73.76  54  P        P         18 49 38.1 -0.9
      0.3nm,0.7s,baz=292,slow=4.8,SNR=2.7
PDAR  Pinedale Array    76.37  46  P        P         18 49 54.4 +0.4
      0.3nm,0.4s,baz=24,slow=2.5,SNR=4.0
TXAR  Lajitas Array     88.89  53  P        P         18 50 58.5 -0.5
      0.1nm,0.5s,baz=308,slow=4.4,SNR=2.6
LPAZ  La Paz           145.54  59  PKPbc    PKPdf     18 57 42.8 -0.9
      0.5nm,0.5s,baz=338,slow=5.4,SNR=2.8
```

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 ISCJB 17 18:42:09.6±0.4,38°.57N±0°.03×31°.43E±0°.03,h6km±6km,
          Error ellipse: s-maj=5.3km s-min=3.9km az=16.4
   DDA 17 18:42:09.3,38°.56N×31°.43E,h7km±3km,ML2.7
   ISK 17 18:42:09.1,38°.56N×31°.43E,h6km,ML2.4/11
   ISC 17 18:42:09.7±1.1,38°.57N±0°.03×31°.43E±0°.02,h10km±12km,
          n21,σ0ˢ.61/26,Turkey
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
BOLV  Bolvadin           0.41 292  i P      Pg        18 42 17.9 +0.1
BOLV                               i S      Sg        18 42 23.8 +0.6
BOLV                                 IAML_P
      comp=Z,5µm,0.2s
KIZT  Kizilcal           0.47  48    PG     Pg        18 42 18.9 -0.1
KIZT                                 SG     Sg        18 42 25.9 +0.7
DOGA  KONYA_Doganhis     0.49 158  i P      Pb        18 42 19.8 -0.8
DOGA                                 IAML_P
      comp=Z,4µm,0.1s
KDHN  Kadinhani          0.54  94  i P      Pb        18 42 20.6 -0.7
KDHN                               i S      Sb        18 42 28.7 -0.5
KDHN                                 IAML_P
      comp=Z,1µm,0.2s
SHUT  Suhut-Afyon        0.69 269    PG     Pg        18 42 22.8 -0.3
SHUT                                 SG     Sb        18 42 32.9 -0.7
BAGO  Egridir - ISPA     0.77 222  i P      Pb        18 42 25.4 +0.2
LADK  Ladik-KONYA        0.82 116    PG     Pg        18 42 25.3 -0.3
CIFT  Cifteler, Eski     0.84 340    PG     Pg        18 42 25.9 -0.2
CIFT                                 SG     Sb        18 42 38.2 +0.2
CIFT  Cifteler, Eski     0.84 340  i P      Pg        18 42 24.7 -1.4
SVRH  Sivrihisar-ESK     0.88   5    PG     Pb        18 42 27.1 -0.1
AFYO  Afyonkarahisar     0.91 284  i P      Pb        18 42 27.2 -0.6
KONT  Konya--Tatoy       0.96 130    PG     Pg        18 42 27.6 -0.6
KONT  Konya--Tatoy       0.96 130  i P      Pb        18 42 28.4 -0.1
KONT                                 IAML_P
      comp=Z,903nm,0.1s
ISP   Isparta            1.03 224    PG     Pb        18 42 29.3 -0.4
KZIL  AFYON_Kizioren     1.06 254  i P      Pb        18 42 29.7 -0.5
KZIL                                 IAML_P
      comp=Z,444nm,0.2s
KMER  Konya-Meram        1.08 137  i P      Pn        18 42 32.0 +0.9
CHBY  Cihanbeyli         1.14  89    PN     Pb        18 42 31.4 -0.3
SRCK  Saricakaya, Es     1.60 337    PN     Pb        18 42 38.8 -0.6
KEPZ  Antalya-Kepez      1.67 175  i P      Pb        18 42 40.3 -0.2
KEPZ                                 IAML_P
      comp=Z,119nm,0.2s
TVSB  Tavsanli           1.77 301    PN     Pn        18 42 41.1 +0.6
GULT  Gulveren           2.00 339    PN     Pn        18 42 44.4 +0.8
```

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   LJU 17 18:47:11.0,45°.86N×15°.61E,h4km,ML0.1,1C,
          Northwestern Balkan Peninsula
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
GCIS  Gornji Cirnik      0.02  50⇑ i Pg     Pg        18 47 11.8  0.0
GCIS                               i Sg     Sg        18 47 12.3  0.0
      comp=Z,16nm,0.1s
CRES  Cresnjev           0.11 254  i Pg     Pg        18 47 13.3  0.0
CRES                               i Sg     Sg        18 47 15.0 +0.2
      comp=Z,2.0nm,0.1s
GOLS  Golise             0.15   4  i Sg     Sg        18 47 16.4 +0.2
```

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   ZUR 17 18:48:31.1,47°.42N×9°.32E,h4km±1km,MLh0.7/3,2C-1D,
          Error ellipse: s-maj=1.9km s-min=1.0km az=67.0,
          Germany
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
SGT00 Sennhlsen          0.01 289  ⇑Pg      Pg        18 48 32.1 +0.1
SGT00                                Sg     Sg        18 48 32.9 +0.2
SGT01 Gaiserwald         0.01 349  ⇑Pg      Pg        18 48 32.2 +0.2
SGT01                                Sg     Sg        18 48 33.1 +0.4
SGT04 Schlatt-Haslen     0.07 166  ⇓Pg      Pg        18 48 33.4 +0.6
SGT04                                Sg     Sg        18 48 35.3 +1.3
SGT03 Degersheim         0.10 236    Sg     Sg        18 48 35.6 +1.0
```

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   IDC 17 18:49:21.7±2.1,6°.46S×125°.34E,h0km,mb3.3/1,
          mb1 3.5/3,mb1mx3.3/22,mbtmp3.3/3,ML3.6/2,Error
          ellipse: s-maj=453.8km s-min=31.6km az=61.0,Banda
          Sea
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
WRA   Warramunga Arr    16.00 148  Pn       P         18 53 10.6 -1.4
      0.3nm,0.3s,baz=332,slow=14,SNR=2.3
WRA                                Sn       S         18 56 25.0 +4.1
      0.1nm,0.3s,baz=323,slow=23,SNR=1.3
ASAR  Alice Springs     18.99 155  P        P         18 53 44.1 -0.9
      0.1nm,0.3s,baz=340,slow=12,SNR=6.5
MKAR  Makanchi Array    65.31 329  P        P         19 00 05.6  0.0
      0.3nm,0.7s,baz=134,slow=6.2,SNR=2.7
```

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   IDC 17 18:53:46.4±2.3,8°.12S×127°.02E,h0km,mb3.1/1,
          mb1 3.6/3,mb1mx3.4/24,mbtmp3.4/3,ML3.4/2,MS3.3/1,
          Ms1 3.5/1,ms1mx2.8/5,Error ellipse: s-maj=279.2km
          s-min=34.7km az=62.0,Timor region
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
WRA   Warramunga Arr    13.73 150  Pn       Pn        18 57 01.0 -1.6
      0.2nm,0.3s,baz=325,slow=13,SNR=2.1
WRA                                Sn       Sn        18 59 22.8  -13
      0.2nm,0.3s,baz=329,slow=37,SNR=2.4
ASAR  Alice Springs     16.81 158  Pn       P         18 57 45.0 -0.8
      0.1nm,0.3s,baz=337,slow=10,SNR=2.6
ASAR                               Sn       Sn        19 00 44.0 -7.0
      0.0nm,0.3s,baz=336,slow=22,SNR=2.1
CMAR  Chiang Mai Arr    38.27 314  LR       LR        19 19 51.6
      comp=Z,38nm,19.1s,baz=192,slow=41
MKAR  Makanchi Array    67.58 328  P        P         19 04 44.9  0.0
      0.1nm,0.4s,baz=135,slow=7.9,SNR=1.5
```

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 ISCJB 17 19:07:17.1±0.4,59°.84N±0°.03×23°.08E±0°.04,h0km,Error
          ellipse: s-maj=4.0km s-min=2.8km az=161.9
   HEL 17 19:07:19.1±0.1,59°.78N×23°.04E,h0km,ML1.8,Explosion
   EST 17 19:07:19.0±0.1,59°.78N×23°.03E,h0km,ML1.8(HEL),
          Explosion
   IDC 17 19:07:20.8±1.8,59°.97N×22°.91E,h0km,mb1 2.8/4,
          mb1mx2.7/45,mbtmp2.7/4,ML2.1/4,Error ellipse:
          s-maj=23.6km s-min=5.9km az=159.0
   UPP 17 19:07:21.2±1.1,59°.85N×22°.68E,h0km,ML2.1,Suspected
          explosion
   ISC 17 19:07:18.0±0.8,59°.83N±0°.03×23°.01E±0°.03,h0km,n25,
          σ1ˢ.18/42,Baltic States-Belarus-Northwestern Russia
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
MEF   Metsahovi          0.80  60  eP       Pg        19 07 33.9 +0.7
MEF                                eS       Sb        19 07 44.7 -1.3
MTSE  Matsula            1.19 159  ePB      Pg        19 07 39.9 -0.9
MTSE                               eSB      Sg        19 07 54.7 -1.6
RAF   Rauma              1.35 333  ePG      Pg        19 07 44.2 +0.4
RAF                                 MSG               19 08 01.4
      comp=Z,6.7nm,0.2s
RAF                                eSB      Sn        19 08 02.6 +0.1
AAL   Aland              1.56 284   P       Pn        19 07 46.7 -0.2
AAL                                 S       Sn        19 08 06.6 -1.2
ARBE  Arbavere           1.56 103  eP       Pn        19 07 46.1 -0.8
ARBE                               eSN      Sn        19 08 08.1 +0.2
PVF   Pernaja            1.59  62  ePN      Pb        19 07 48.4 +0.2
PVF                                 MSG               19 08 07.0
      comp=Z,7.4nm,0.2s
PVF                                eSN      Sg        19 08 09.9 +0.8
FIA0  FINESS Array S     2.21  42  ePG      Pb        19 07 58.8  0.0
FIA0                               eSG      Sg        19 08 28.5 -0.5
FIA0                                MSG               19 08 29.9
      comp=Z,5.0nm,0.2s
FINES FINESS Array B     2.21  42   Pn      Pb        19 07 59.1 +0.2
      comp=Z,1.6nm,0.3s,baz=226,slow=15,SNR=85
FINES                               Lg      Lg        19 08 27.9
      comp=Z,4.0nm,0.3s,baz=231,slow=24,SNR=60
FIA1  FINESS Array S     2.21  42  ePG      Pb        19 07 59.2 +0.3
FIA1                               eSG      Sg        19 08 28.5 -0.6
FIA1                                MSG               19 08 29.9
      comp=Z,4.5nm,0.1s
NRTU  Norrtaelje         2.22 268   P       Pn        19 07 56.8 +0.7
NRTU                                S       Sn        19 08 25.0 +0.9
SLIT  Slitere, Latvi     2.24 190  ePB      Pn        19 07 57.2 +0.9
SLIT                               eSG      Sn        19 08 27.0 +2.5
GRAU  Graesoe            2.30 285   P       Pn        19 07 57.7 +0.6
GRAU                                S       Sn        19 08 26.8 +0.7
VSU   Vasula             2.36 124  eSG      Sb        19 08 31.0 +0.1
VJF   Virojoki           2.38  71  eP       Pn        19 07 59.4 +1.3
VJF                                 MSG               19 08 29.6
      comp=Z,6.4nm,0.2s
VJF                                eSG      Sg        19 08 33.2 -1.1
KEF   Keuruu             2.51  20  ePG      Pb        19 08 04.3 +0.4
KEF                                eSG      Sg        19 08 37.8 -0.9
KEF                                 MSG               19 08 38.8
      comp=Z,4.1nm,0.1s
FLYU  Flymyra            2.59 279   P       Pn        19 08 03.1 +1.9
NYNU  Nynaeshamn         2.69 254   P       Pn        19 08 03.8 +1.4
BACU  Backbrunna         2.98 273   P       Pn        19 08 08.1 +1.6
VAF   Ylistaro           3.23 357  ePB      Pb        19 08 15.1 -1.0
SUF   Sumiainen          3.27  26  ePB      Pb        19 08 15.3 -1.5
SUF                                eSB      Sb        19 08 57.0 -0.1
ARNU  Arnoeviken         3.34 306   P       Pn        19 08 12.9 +1.5
UMAU  Umeaa              4.21 346  eP       Pn        19 08 25.7 +2.3
HFS   Hagfors            4.69 278   Pn      Pn        19 08 31.3 +1.4
      comp=Z,0.1nm,0.3s,baz=94,slow=11,SNR=8.6
HFS                                 Pg      Pb        19 08 40.9 -0.1
      comp=Z,0.2nm,0.3s,baz=90,slow=17,SNR=6.7
HFS                                 Sn      Sn        19 09 24.8 -0.2
      comp=Z,0.3nm,0.3s,baz=93,slow=29,SNR=7.0
HFS                                 Lg      Lg        19 09 41.6
      comp=Z,0.5nm,0.3s,baz=90,slow=29,SNR=7.5
NOA   NORSAR Array B     5.97 287   Pn      Pn        19 08 47.1 -0.4
      comp=Z,0.0nm,0.3s,baz=94,slow=14,SNR=1.5
NOA                                 Sn      Sn        19 09 53.2 -3.3
      comp=Z,0.0nm,0.3s,baz=104,slow=7.1,SNR=1.4
NOA                                 Lg      Lg        19 10 25.3
      comp=Z,0.0nm,0.3s,baz=306,slow=24,SNR=3.1
ARCES ARCESS Array B     9.80   5   Pn      Pn        19 09 39.6 -0.4
      comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=6.6
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  SNET 17 19:28:16.6±1.3,13°.98N×91°.09W,h26km±93km,ML4.2
 ISCJB 17 19:28:19.0±0.3,14°.08N±0°.03×90°.80W±0°.02,h112km±2km,
          mb4.2/64,Error ellipse: s-maj=5.6km s-min=3.2km
          az=28.0
   MEX 17 19:28:18.0±0.6,13°.80N×90°.83W,h62km±34km,MD4.2
  NEIC 17 19:28:20.6±1.7,14°.18N×90°.80W,h99km±11km,mb4.4/75,
          Error ellipse: s-maj=18.9km s-min=1.1km az=214.0
   IDC 17 19:28:21.9±0.7,14°.43N×90°.37W,h117km±3km,mb3.6/14,
          mb1 3.8/16,mb1mx3.7/35,mbtmp4.0/16,MS3.1/6,
          Ms1 3.0/6,ms1mx2.8/30,Error ellipse: s-maj=25.5km
          s-min=9.3km az=53.0
   GCG 17 19:28:21.2±0.5,14°.16N×90°.93W,h75km±5km,MD4.2
   ISC 17 19:28:18.9±0.6,14°.04N±0°.05×90°.90W±0°.04,h101km±5km,
          h101km:pP-P,n366,σ1ˢ.04/395,mb4.3/64,Guatemala
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC      h  m  s   ISC
FUG   Fuego 3            0.41   8  eP       Pn        19 28 33.5 -0.9
PCG   Pacaya             0.45  39  eP       Pn        19 28 34.2 -0.5
NBG   Las Nubes          0.77  44  eP       Pn        19 28 37.9 +0.6
NBG                                eS       Sn        19 28 50.4 -0.7
STG3  Santiaguito 3,     0.93 316  eP       Pn        19 28 38.6 -0.3
APG   El Apazote         1.05  24   P       Pn        19 28 39.9 -0.3
      280nm,0.3s,baz=209,slow=6.7,SNR=870
APG                                 LR      LR        19 28 48.1
      comp=Z,160nm,21.8s,baz=246,slow=45
APG                                 S       Sn        19 28 55.9 -0.3
      283nm,0.3s,baz=354,slow=17,SNR=22
RTR   El Retiro          1.23  96  eP       Pn        19 28 41.3 -0.8
SBLS  San Blas           1.26  99  eP       Pn        19 28 41.9 -0.6
SBLS                               eS       Sn        19 29 00.5 +0.1
CEVE  Cerro Verde        1.26  99  eP       Pn        19 28 41.9 -0.7
CEVE                               eS       Sn        19 29 01.2 +0.8
SNJE  San Jose           1.27  97  eP       Pn        19 28 41.9 -0.8
CEDA  San Andres         1.48  99  eS       Sn        19 29 06.1 +1.3
CEDA                                IAML              19 29 14.4
      comp=Z,3µm,0.5s
MTO3  Montecristo        1.54  76  eP       Pn        19 28 45.0 -0.9
MRL   Marmol             1.57  48  i P      Pn        19 28 46.3  0.0
MRL                                eS       Sn        19 29 07.7 +0.6
MRL   Marmol             1.57  48  eP       Pn        19 28 47.5 +1.2
MRL                                eS       Sn        19 29 07.9 +0.8
THIG                     1.58 303  ePn      Pn        19 28 45.1 -1.1
THIG                               eSn      Sn        19 29 05.8 -1.1
THIG                     1.58 303  eP       Pn        19 28 44.7 -1.4
THIG                               eS       Sn        19 29 06.4 -0.4
UEES  Universidad Ev     1.65 101   IAML              19 29 14.2
      comp=Z,2µm,0.2s
SNET  Serv Nac Est T     1.66 102  eP       Pn        19 28 46.6 -0.6
SNET                               eS       Sn        19 29 09.4 +0.6
SNET                                IAML              19 29 14.6
      comp=Z,2µm,0.2s
CUSC  Alcaldia de Cu     1.70 100  eS       Sn        19 29 10.6 +1.2
CUSC                                IAML              19 29 16.2
      comp=Z,2µm,0.3s
LOMA  Loma Larga         1.73 103  eP       Pn        19 28 47.3 -0.6
LOMA                               eS       Sn        19 29 11.3 +1.2
LOMA                                IAML              19 29 14.3
      comp=Z,3µm,0.2s
LFU   La Fuente          1.76  99  eP       Pn        19 28 47.9 -0.6
PAVA  Las Pavas          1.94  99  eP       Pn        19 28 50.3 -0.4
PAVA                                IAML              19 29 12.4
      comp=Z,1µm,0.3s
VICT  Victoria           2.20  92  eP       Pn        19 28 53.7 -0.5
CCIG  Comitan            2.53 332  ePn      Pn        19 28 59.9 +1.3
CCIG                               ePn      Pn        19 29 00.0 +1.4
CCIG  Comitan            2.53 332  eP       Pn        19 28 59.2 +0.6
CCIG                               i S      Sn        19 29 30.6 +1.5
PACA  Pacayal            2.57 102  eP       Pn        19 28 58.9 -0.1
VSM   San Miguel         2.62 103  eP       Pn        19 28 59.5 -0.4
PCIG                     2.79 307  ePn      Pn        19 29 02.2 +0.4
PCIG                     2.79 307  eP       Pn        19 29 02.2 +0.4
PCIG                               i S      Sn        19 29 35.7 +0.8
LCND  La Caada           3.02 104  eP       Pn        19 29 04.5 -0.4
CSGN  Cosiguina Volc     3.42 108  ePn      Pn        19 29 11.9 +1.6
TGIG                     3.47 322  ePn      Pn        19 29 11.2 +0.3
TGIG                     3.47 322  eP       Pn        19 29 11.2 +0.3
TGIG                               eS       Sn        19 29 54.2 +3.0
TGUH  Tegucigalpa,Un     3.52  89  ePn      Pn        19 29 11.5 -0.1
ESTN  Estel              4.50 101  ePn      Pn        19 29 25.6 +0.6
CMIG  Matias Romero      4.89 309   P       Pn        19 29 30.5 +0.3
      comp=Z,5.6nm,0.3s,baz=95,slow=9.9,SNR=30
CMIG                                S       Sn        19 30 27.1 +1.5
      comp=Z,8.7nm,0.3s,baz=258,slow=22,SNR=7.1
CMIG                                LR      LR        19 31 38.2
      comp=Z,53nm,19.1s,baz=32,slow=39
CMIG  Matias Romero      4.89 309  ePn      Pn        19 29 30.2 +0.1
CMIG  Matias Romero      4.89 309  eP       Pn        19 29 30.7 +0.5
CMIG                               eS       Sn        19 30 28.6 +2.9
ACON  Acoyapa            5.95 110  ePn      Pn        19 29 44.9 +0.4
TEIG  Tepich             6.65  22  ePn      Pn        19 29 54.5 +0.5
JTS   Las Juntas de      6.91 122   P       Pn        19 29 58.2 +0.6
      comp=Z,4.2nm,0.3s,baz=353,slow=22,SNR=9.6
JTS                                 S       Sn        19 31 14.9 +0.3
      comp=Z,1.0nm,0.3s,baz=273,slow=20,SNR=1.6
JTS   Las Juntas de      6.91 122  ePn      Pn        19 29 59.4 +1.9
MYIG  Mrida              6.97   9  ePn      Pn        19 29 58.4  0.0
TLIG  Tlapa              8.17 296  ePn      Pn        19 30 17.0 +2.2
058A  Arcadia           15.49  32   P       Pn        19 31 52.6 +0.8
      baz=215
757A  Oxford            16.94  28   P       Pn        19 32 10.0 +0.3
      baz=211
656A  Willston          17.11  26   P       P         19 32 12.4 +0.5
      baz=208
553A  Crawfordville     17.15  19   P       P         19 32 13.8 +1.5
      baz=202
451A  Vernon            17.17  15   P       P         19 32 15.0 +2.5
      baz=197
554A  Perry             17.30  21   P       P         19 32 16.4 +2.4
      baz=204
452A  Marianna          17.54  17   P       Pn        19 32 19.0 +2.0
      baz=198
349A  Repton            17.57  11   P       Pn        19 32 19.5 +2.2
      baz=192
555A  McAlpin           17.60  23   P       Pn        19 32 18.8 +1.1
      baz=206
658A  Bunnell           17.72  29   P       P         19 32 18.4 -0.2
      baz=212
454A  Quitman           17.90  21   P       Pn        19 32 22.0 +0.7
      baz=203
352A  Blakely           18.21  17   P       Pn        19 32 25.9 +1.0
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	baz=199						
252A	Lumpkin	18.75	16	P	Pn	19 32 31.3	-0.2
	baz=199						
148A	Greensboro	18.77	9	P	Pn	19 32 32.4	+0.7
	baz=190						
WHTX	Lake Whitney,	18.85	343	*e*P	P	19 32 31.6	+0.6
	comp=Z,31nm,0.5s						
149A	Jones	18.85	11	P	Pn	19 32 33.2	+0.5
	baz=192						
150A	Eclectic	19.01	13	P	P	19 32 33.9	+1.1
	baz=194,SNR=11						
151A	Opelika	19.10	15	P	Pn	19 32 35.5	-0.1
	baz=196,SNR=13						
254A	Abbeville	19.14	20	P	P	19 32 35.5	+1.3
	baz=203						
TX31	Lajitas Ar. Si	19.27	324	*e*P	Pn	19 32 38.3	+0.5
	comp=Z,2.5nm,0.8s						
TXAR	Lajitas Array	19.27	324	P	Pn	19 32 37.8	0.0
	comp=Z,1.1nm,0.3s,baz=145,slow=11,SNR=39						
TXAR				PcP	PcP	19 36 56.3	+1.6
	comp=Z,0.2nm,0.3s,baz=158,slow=3.3,SNR=7.0						
TXAR				ScP	ScP	19 40 19.5	-2.0
	comp=Z,0.2nm,0.3s,baz=148,slow=5.2,SNR=3.5						
152A	Waverly Hall	19.39	16	P	P	19 32 38.0	+1.1
	baz=198,SNR=6.8						
Z49A	Columbiana	19.48	11	P	Pn	19 32 39.5	-0.6
	baz=193,SNR=14						
Z50A	Ashland	19.66	12	*e*P	P	19 32 41.1	+1.2
	comp=Z,29nm,0.6s						
Z50A	Ashland	19.66	12	P	P	19 32 41.2	+1.4
	baz=194,SNR=18						
256A	Glennville	19.67	23	P	P	19 32 40.6	+0.6
	baz=207						
Z51A	Franklin	19.89	14	P	P	19 32 43.4	+1.1
	baz=196,SNR=7.4						
Z52A	Williamson	19.96	16	P	P	19 32 43.4	+0.4
	baz=198						
155A	Kite	20.04	21	P	P	19 32 45.0	+1.1
	baz=204						
Y48A	Jasper	20.08	9	P	P	19 32 46.0	+1.7
	baz=190						
Y49A	Blount Mountai	20.15	11	*e*P	P	19 32 46.2	+1.1
	comp=Z,12nm,0.7s						
Y49A	Blount Mountai	20.15	11	P	P	19 32 46.7	+1.6
	baz=192,SNR=5.7						
Z53A	Monticello	20.29	18	P	P	19 32 47.7	+1.2
	baz=201						
Y50A	Piedmont	20.32	12	P	P	19 32 48.4	+1.5
	baz=194						
OXF	Oxford	20.43	4	*e*P	P	19 32 48.2	+0.1
	comp=Z,43nm,1.1s						
X40A	Basin Creek Fa	20.44	355	P	P	19 32 49.8	+1.7
	baz=174						
GOGA	Godfrey	20.44	18	*e*P	P	19 32 47.6	-0.6
	comp=Z,14nm,0.5s						
GOGA	Godfrey	20.44	18	P	P	19 32 48.9	+0.7
	baz=201,SNR=5.2						
Y51A	Rockmart	20.47	14	P	P	19 32 50.0	+1.4
	baz=196,SNR=15						
X46A	Booneville	20.54	5	P	Pn	19 32 51.5	-0.8
	baz=186						
MIAR	Mount Ida	20.56	354	*e*P	P	19 32 49.6	+0.1
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	20.56	354	P	P	19 32 50.0	+0.5
	baz=172						
X47A	Russelville	20.58	7	P	P	19 32 51.2	+1.5
	baz=188						
X48A	Hartselle	20.62	9	*e*P	P	19 32 51.1	+1.0
	comp=Z,10nm,0.7s						
X48A	Hartselle	20.62	9	P	P	19 32 50.9	+0.7
	baz=190						
Y52A	Lilburn	20.69	16	*e*P	P	19 32 50.5	-0.4
	comp=Z,21nm,0.8s						
Y52A	Lilburn	20.69	16	P	P	19 32 52.3	+1.3
	baz=199						
X49A	Woodville	20.80	11	P	P	19 32 53.3	+1.2
	baz=192						
Y53A	Monroe	20.82	17	P	P	19 32 53.6	+1.3
	baz=200,SNR=5.1						
X50B	Fort Payne	20.88	12	P	P	19 32 54.1	+1.1
	baz=194,SNR=7.5						
W41B	Gary Mavity, V	21.08	357	P	P	19 32 55.9	+0.8
	baz=176						
Y54A	Tignall	21.10	19	P	P	19 32 55.5	+0.2
	baz=202						
X51A	Calhoun	21.16	14	*e*P	P	19 32 56.7	+0.8
	comp=Z,15nm,1.0s						
X51A	Calhoun	21.16	14	P	P	19 32 56.9	+1.0
	baz=196						
WHAR	Wooly Hollow	21.20	357	*e*P	P	19 32 56.7	+0.4
	comp=Z,9.4nm,0.7s						
W39A	Magazine	21.23	353	*e*P	P	19 32 57.5	+0.9
	comp=Z,10.0nm,0.6s						
W39A	Magazine	21.23	353	P	P	19 32 57.8	+1.1
	baz=172						
Z57A	Bowman	21.30	24	P	P	19 32 56.5	-0.9
	baz=208						
W48A	Pulaski	21.31	9	P	P	19 32 58.3	+0.7
	baz=190,SNR=5.2						
W47A	Westpoint	21.33	7	P	P	19 32 58.6	+0.8
	baz=189						
W49A	Belvidere	21.40	10	P	P	19 32 59.1	+0.6
	baz=192						
X52A	Dahlonega	21.43	16	P	P	19 32 59.6	+0.6
	baz=199,SNR=10						
Y55A	Saluda	21.44	21	P	P	19 32 58.7	-0.2
	baz=204						
SWET	Sewanee	21.56	11	*e*P	P	19 33 01.1	+0.9
	comp=Z,13nm,0.8s						
HODGE	Hodges	21.58	20	*e*P	P	19 33 01.8	+1.4
	comp=Z,14nm,0.9s						
W50A	Signal Mountai	21.67	12	*e*P	P	19 33 01.8	+0.4
W50A				*e*pP	pP	19 33 21.4	0.0
W50A	Signal Mountai	21.67	12	P	P	19 33 01.9	+0.5
	baz=195,SNR=5.9						
Z58A	St. Stephen	21.70	26	P	P	19 33 00.3	-1.4
	baz=210						
W51A	Cleveland	21.75	14	P	P	19 33 02.5	+0.3
	baz=196,SNR=10						
FCAR	Ozark Folk Cen	21.79	357	*e*P	P	19 33 02.1	-0.5
FCAR				*e*pP	pP	19 33 21.2	-1.4
WMOK	Wichita Mounta	21.81	342	P	P	19 33 03.9	+1.0
	baz=159						
V46A	Holladay	21.82	6	P	P	19 33 02.4	-0.5
	baz=187						
X54A	Belton	21.83	19	P	P	19 33 03.7	+0.7
	baz=203,SNR=7.0						
W52A	Murphy	21.89	15	*e*P	P	19 33 04.5	+0.7
W52A				*e*pP	pP	19 33 22.5	-1.2
W52A	Murphy	21.89	15	P	P	19 33 04.3	+0.6
	baz=198,SNR=5.1						
V47A	Nunnelly	21.91	7	P	P	19 33 04.3	+0.4
	baz=189						
V48A	Smith Brothers	21.92	9	*e*P	P	19 33 04.4	+0.4
V48A				*e*pP	pP	19 33 22.4	-1.6
V48A	Smith Brothers	21.92	9	P	P	19 33 04.7	+0.7
	baz=190						
X55A	Gracelyn & Ava	22.00	21	P	P	19 33 04.5	-0.4
	baz=204						
MNTX	Cornudas Mount	22.03	325	*e*P	P	19 33 05.9	+0.7
	comp=Z,14nm,0.8s						
MNTX	Cornudas Mount	22.03	325	P	P	19 33 06.6	+1.4
	baz=139,SNR=26						
Y57A	Sumter	22.06	24	P	P	19 33 04.8	-0.6
	baz=208						
BG3	Lake Jocassee	22.07	18	*e*P	P	19 33 06.7	+1.1
	comp=Z,15nm,0.9s						
BG3				*e*pP	pP	19 33 25.6	0.0
CPCT	Cooper Cave	22.08	14	*e*P	P	19 33 06.4	+0.7
	comp=Z,11nm,0.9s						
V49A	McMinnville	22.10	11	P	P	19 33 06.1	+0.2
	baz=193,SNR=5.7						
V50A	Pikevile	22.16	13	P	P	19 33 07.4	+0.8
	baz=195						
W53A	Cullowhee	22.17	17	P	P	19 33 06.3	-0.5
	baz=200						
WVT	Waverly	22.17	7	*e*P	P	19 33 06.4	-0.2
WVT				*e*pP	pP	19 33 27.2	+0.5
WVT	Waverly	22.17	7	P	P	19 33 07.2	+0.5
	baz=188						
X56A	White Oak	22.24	22	P	P	19 33 07.2	-0.1
	baz=206						
U40A	Yellville	22.30	356	P	P	19 33 07.6	-0.3
	baz=175,SNR=7.4						
HHAR	Hobbs	22.32	354	*e*P	P	19 33 07.5	-0.7
	comp=Z,9.9nm,0.9s						
CLTN	Cedars of Leba	22.34	10	*e*P	P	19 33 08.6	+0.2
CLTN				*e*pP	pP	19 33 26.4	-2.1
W54A	Cherokee Point	22.38	19	P	P	19 33 10.0	+1.1
	baz=202,SNR=8.2						
TKL	Tuckaleechee C	22.46	15	P	P	19 33 10.4	+0.7
	comp=Z,9.4nm,0.5s,baz=191,slow=11,SNR=22						
TKL				LR	LR	19 42 36.3	
	comp=Z,38nm,21.0s,baz=177,slow=39						
U47A	Clarksville	22.54	8	P	P	19 33 10.6	+0.1
	baz=189						
MSTX	Muleshoe	22.58	334	P	P	19 33 11.3	+0.3
	baz=148						
PBMO	Poplar Bluff	22.65	1	*e*P	P	19 33 11.0	-0.6
	comp=Z,11nm,0.6s						
V52A	Sevierville	22.68	16	*e*P	P	19 33 12.8	+0.8
	comp=Z,24nm,1.1s						
V52A	Sevierville	22.68	16	P	P	19 33 12.4	+0.4
	baz=198,SNR=7.1						
KMSC	Kings Mountain	22.72	21	*e*P	P	19 33 12.7	+0.4
	comp=Z,13nm,0.8s						
KMSC				*e*pP	pP	19 33 32.7	+0.2
KMSC	Kings Mountain	22.72	21	P	P	19 33 12.9	+0.6
	baz=204						
U48A	Cassie Pea, Po	22.72	9	P	P	19 33 12.4	+0.1
	baz=191						
V53A	Saluda	22.74	17	*e*P	P	19 33 13.1	+0.6
V53A				*e*pP	pP	19 33 33.0	+0.3
V53A	Saluda	22.74	17	P	P	19 33 13.0	+0.4
	baz=200,SNR=7.4						
U49A	Red Boiling Sp	22.85	11	P	P	19 33 13.7	+0.1
	baz=193,SNR=8.0						
AMTX	Amarillo	22.93	337	P	P	19 33 14.8	+0.3
	baz=152						
W56A	Indian Trail	22.98	22	P	P	19 33 14.7	-0.2
	baz=206						
T46A	Princeton	23.07	6	P	P	19 33 15.4	-0.3
	baz=187						
U51A	La Follette	23.09	14	P	P	19 33 16.1	+0.2
	baz=197,SNR=16						
V54A	Nebo	23.09	19	P	P	19 33 16.1	+0.1
	baz=202,SNR=5.4						
T47A	Sharon Grove	23.11	8	*e*P	P	19 33 16.0	0.0
T47A				*e*pP	pP	19 33 36.3	-0.5
T47A	Sharon Grove	23.11	8	P	P	19 33 15.8	-0.3
	baz=189,SNR=9.6						
W57A	Gilead	23.21	23	P	P	19 33 16.7	-0.4
	baz=208						
U52A	Thorn Hill	23.26	16	P	P	19 33 17.3	-0.3
	baz=199						
T48A	Bowling Green	23.33	9	P	P	19 33 17.9	-0.2
	baz=191						
TZTN	Tazewell	23.36	15	*e*P	P	19 33 18.8	+0.3
	comp=Z,21nm,0.8s						
TZTN	Tazewell	23.36	15	P	P	19 33 18.8	+0.3
	baz=198,SNR=11						
W58A	Raeford	23.39	25	P	P	19 33 18.5	-0.3
	baz=209						
V55A	Taylorsville	23.40	20	P	P	19 33 18.6	-0.2
	baz=204						
U53A	Fall Branch	23.45	17	P	P	19 33 19.2	-0.2
	baz=200,SNR=15						
T49A	Edmonton	23.47	11	*e*P	P	19 33 19.4	0.0
	comp=Z,29nm,1.1s						
T49A	Edmonton	23.47	11	P	P	19 33 19.4	0.0
	baz=193						
T50A	Nancy	23.52	12	P	P	19 33 19.7	-0.2
	baz=195,SNR=8.3						
X60A	Albert Glenn T	23.55	28	P	P	19 33 19.4	-0.8
	baz=213						
V56A	Mocksville	23.61	22	*e*P	P	19 33 20.8	0.0
	comp=Z,13nm,0.9s						
V56A	Mocksville	23.61	22	P	P	19 33 20.7	0.0
	baz=206						
T51A	Gray	23.66	14	P	P	19 33 21.1	-0.1
	baz=197,SNR=8.8						
U54A	Nelsons Funny	23.82	18	*e*P	P	19 33 22.8	+0.1
	comp=Z,40nm,0.5s						
U54A	Nelsons Funny	23.82	18	P	P	19 33 22.8	+0.1
	baz=202,SNR=15						
S48A	Wiedeman Farm,	23.92	10	P	P	19 33 23.3	-0.2
	baz=191						
CCM	Cathedral Cave	23.92	359	*e*P	P	19 33 24.1	+0.6
	comp=Z,5.8nm,0.8s						
CCM	Cathedral Cave	23.92	359	P	P	19 33 23.8	+0.3
	baz=179						
V57A	Coltrane Farms	23.94	23	P	P	19 33 22.9	-0.8
	baz=207,SNR=6.3						
121A	Cookes Peak, D	24.01	323	P	P	19 33 26.6	+2.1
	baz=136,SNR=13						
T52A	Hallie	24.04	16	P	P	19 33 24.3	-0.2
	baz=199						
T53A	Wise	24.04	17	P	P	19 33 24.3	-0.3
	baz=200						
U55A	TA2, Sparta	24.05	20	P	P	19 33 24.7	0.0
	baz=204,SNR=5.3						
V58A	Windy Hill, Pi	24.11	24	P	P	19 33 24.6	-0.6
	baz=209,SNR=6.8						
S49A	Springfield	24.17	11	P	P	19 33 26.0	+0.3
	baz=193						
S50A	Richmond	24.25	13	P	P	19 33 26.8	+0.4
	baz=195						
S51A	Beattyville	24.39	14	*e*P	P	19 33 27.9	+0.1
	comp=Z,10.0nm,0.8s						
S51A	Beattyville	24.39	14	P	P	19 33 28.0	+0.3
	baz=197						
T54A	Tazewell	24.39	18	P	P	19 33 27.9	+0.1
	baz=202						
ATAH	Atahualpa	24.42	149	P	P	19 33 30.6	+2.0
	comp=Z,4.4nm,0.6s,baz=311,slow=20,SNR=2.7						
WCI	Wyandotte Cave	24.44	9	*e*P	P	19 33 28.2	0.0
	comp=Z,24nm,0.6s						
WCI	Wyandotte Cave	24.44	9	P	P	19 33 28.2	0.0
	baz=191						
V59A	Middlesex	24.45	26	P	P	19 33 28.1	-0.1
	baz=211						
BNM	Barren Site	24.57	327	*e*P	P	19 33 31.2	+1.5
U57A	Blanch	24.59	23	P	P	19 33 29.4	-0.1
	baz=208,SNR=5.5						
T55A	Pulaski	24.70	20	P	P	19 33 30.8	+0.2
	baz=204						
LENM	Lemitar	24.77	327	*e*P	P	19 33 32.5	+1.1
R50A	Paris	24.84	12	*e*P	P	19 33 32.7	+0.8
	comp=Z,13nm,1.0s						
R50A	Paris	24.84	12	P	P	19 33 32.2	+0.4
	baz=195						
U58A	Oxford	24.86	24	P	P	19 33 31.5	-0.6
	baz=209						
R51A	Hillsboro	25.02	14	P	P	19 33 33.3	-0.1
	baz=197						
ANMO	Albuquerque	25.11	329	P	P	19 33 34.9	+0.4
	comp=Z,1.1nm,0.7s,baz=146,slow=11,SNR=3.4						
ANMO	Albuquerque	25.11	329	P	P	19 33 35.6	+1.1
	baz=142						
T57A	Hurt	25.12	22	P	P	19 33 33.3	-1.1
	baz=207						
V61A	Roper	25.20	28	P	P	19 33 35.1	0.0
	baz=214						
Q48A	North Vernon	25.21	9	P	P	19 33 35.8	+0.6
	baz=192						
T58A	Grand View Acr	25.35	24	P	P	19 33 36.1	-0.3
	baz=209						
Q50A	Georgetown	25.45	13	P	P	19 33 37.6	+0.2
	baz=196						
R53A	Hurricane	25.46	17	*e*P	P	19 33 36.1	-1.4
	comp=Z,74nm,1.2s						
R53A	Hurricane	25.46	17	P	P	19 33 37.0	-0.5
	baz=200						
TUC	Tucson	25.70	318	P	P	19 33 41.9	+2.1
	baz=130						
T59A	Double "B" Far	25.76	25	*e*P	P	19 33 40.2	0.0
	comp=Z,12nm,0.8s						
T59A	Double "B" Far	25.76	25	P	P	19 33 39.6	-0.6
	baz=211,SNR=5.6						
Q51A	Peebles	25.77	14	*e*P	P	19 33 40.5	+0.3
	comp=Z,13nm,0.8s						
Q51A	Peebles	25.77	14	P	P	19 33 40.5	+0.3
	baz=197						
Q52A	Bidwell	25.97	16	P	P	19 33 42.0	-0.1
	baz=199						
R57A	Stanardsville	26.54	22	P	P	19 33 46.9	-0.3
	baz=208						
O48A	Farmland	26.60	10	P	P	19 33 47.1	-0.7
	baz=192						
P53A	Whipple	26.70	17	P	P	19 33 48.3	-0.3
	baz=201						
O50A	Cable	26.78	12	P	P	19 33 49.1	-0.3
	baz=196						
214A	Organ Pipe Nat	26.83	315	P	P	19 33 51.7	+1.7
	baz=126						
R59A	King George, V	26.99	24	P	P	19 33 50.7	-0.5
	baz=210						
P54A	Burton	27.07	18	P	P	19 33 51.7	-0.2
	baz=202						
N47A	Urbana	27.13	9	P	P	19 33 51.8	-0.6
	baz=191						
M44A	Midewin, Midew	27.36	5	P	P	19 33 54.5	0.0
	baz=186						
Q58A	Fox Den Farm,	27.42	23	P	P	19 33 54.8	-0.2
	baz=209						
O53A	New Philadelph	27.46	16	P	P	19 33 55.2	-0.2
	baz=201						
X16A	Lo Mia Camp, P	27.51	321	*e*P	P	19 33 58.8	+2.6
	comp=Z,3.2nm,0.7s						
O54A	Avella	27.63	18	P	P	19 33 56.8	-0.1
	baz=202						
P57A	Homestead Farm	27.77	22	P	P	19 33 58.4	+0.2
	baz=208						
N52A	McGinn’s Farm,	27.86	15	P	P	19 33 58.8	-0.2
	baz=199						
P58A	Pank, Wackersv	28.04	23	P	P	19 34 00.5	-0.1
	baz=209						
N53A	Lisbon	28.08	16	P	P	19 34 00.8	-0.2
	baz=201						
O56A	Blue Knob Stat	28.28	20	P	P	19 34 02.3	-0.5
	baz=206						
L48A	N Adams	28.37	10	P	P	19 34 02.5	-0.9
	baz=193						
N54A	Moraine State	28.46	18	P	P	19 34 04.1	-0.2
	baz=202						
P59A	Jarrettsville	28.48	24	P	P	19 34 03.7	-0.8
	baz=210						
N55A	Marion Center	28.61	19	P	P	19 34 05.1	-0.5
	baz=205						
M52A	Chesterland	28.63	15	P	P	19 34 05.6	-0.2
	baz=199						
M53A	WI Miller and	28.72	16	P	P	19 34 06.3	-0.2
	baz=201						
SSPA	Standing Stone	28.84	21	P	P	19 34 07.5	-0.2
	baz=207						
N56A	West Decatur	28.95	20	P	P	19 34 08.7	0.0
	baz=206						
PDMCI	Parker Dam,Lak	29.14	318	P	P	19 34 12.9	+2.4
	baz=128						
M55A	Ridgway	29.30	19	P	P	19 34 11.6	-0.2
	baz=204						
NNA	Nana	29.37	151	LR	LR	19 45 08.5	
	comp=Z,119nm,21.0s,baz=112,slow=34						
M56A	Emporium	29.50	20	P	P	19 34 12.8	-0.8
	baz=206						
BC3	Big Chuckawall	29.63	315	P	P	19 34 17.0	+2.1
	baz=125						
IRM	Iron Mountain	29.71	317	P	P	19 34 18.0	+2.4
	baz=126						
LUPA	Lehigh Univers	29.74	24	*e*P	P	19 34 15.7	0.0
	comp=Z,1.0nm,0.6s						
N59A	State Game Lan	29.86	23	P	P	19 34 16.9	+0.1
	baz=210						
J49A	Marlette	29.97	11	P	P	19 34 17.4	-0.3
	baz=195						
M58A	Price’s Panora	30.00	22	P	P	19 34 17.4	-0.5
	baz=209						
ECSD	EROS Data Cent	30.00	352	P	P	19 34 18.3	+0.4
	baz=169						
L55A	Hinsdale	30.05	19	P	P	19 34 17.7	-0.8
	baz=205						
N60A	Cedar Hill Far	30.08	24	P	P	19 34 18.2	-0.4
	baz=212						
KNB	Kanab	30.10	323	*e*P	P	19 34 21.3	+2.1
	comp=Z,5.8nm,0.7s						
BELC	Belle Mtn. Jos	30.20	316	P	P	19 34 21.8	+1.9
	baz=125						
LCMT	Little Creek M	30.34	323	*e*P	P	19 34 22.9	+1.7
	comp=Z,2.6nm,0.8s						
K54A	Basiliko Farm,	30.36	18	P	P	19 34 21.0	-0.2
	baz=204						
GMRC	Granite Mounta	30.43	317	P	P	19 34 23.8	+1.8
	baz=126						
J52A	Paris	30.45	15	P	P	19 34 19.9	-2.1
	baz=200						
MTPU	Mount Pierson	30.46	326	*e*P	P	19 34 25.4	+2.9
	comp=Z,6.1nm,0.8s						
M59A	Waymart	30.53	23	P	P	19 34 22.0	-0.6
	baz=210,SNR=5.6						
I49A	Point Hope	30.59	12	P	P	19 34 22.1	-1.0
	baz=195						
SZCU	Shurtz Canyon	30.66	324	*e*P	P	19 34 25.9	+1.8
	comp=Z,5.0nm,0.8s						
K55A	Perry	30.66	19	P	P	19 34 23.1	-0.7
	baz=205						
PAL	Palisades	30.69	26	P	P	19 34 23.7	-0.3
	baz=214						
L58A	Harry Jones Me	30.80	22	P	P	19 34 24.7	-0.3
	baz=209						
I51A	Listowel	30.85	14	P	P	19 34 25.2	-0.3
	baz=199						
BINY	Binghamton	30.89	22	P	P	19 34 25.6	-0.2
	baz=209						
M61A	Granite Spring	31.00	26	P	P	19 34 26.2	-0.5
	baz=214						
SPMN	Marine on St.	31.13	357	P	P	19 34 27.5	-0.4
	baz=176						
G39A	Holcombe	31.15	360	P	P	19 34 27.9	-0.2
	baz=179						
KSCT	Kent School, K	31.46	25	*e*P	P	19 34 30.6	-0.1
	comp=Z,8.2nm,0.6s						
WLVO	Wesleyville	31.65	17	P	P	19 34 32.1	-0.3
	baz=203						
EDW2	Edwards Air Fo	32.05	315	P	P	19 34 37.8	+1.7
	baz=123						
I55A	Frankford	32.13	18	P	P	19 34 35.8	-0.8
	baz=204						
MPMC	Manual Prospec	32.38	317	P	P	19 34 39.7	+0.5
	baz=126,SNR=5.7						
E43A	Lone Tree Farm	32.40	5	P	P	19 34 38.6	-0.5
	baz=187						
DELO	Deloro Mine	32.42	18	*e*P	P	19 34 38.8	-0.4
	comp=Z,9.5nm,0.8s						
DELO	Deloro Mine	32.42	18	P	P	19 34 38.4	-0.8
	baz=204						
E38A	The Farm, Brul	32.47	359	P	P	19 34 38.9	-0.7
	baz=179						
F49A	Sandfield	32.50	12	P	P	19 34 38.4	-1.4
	baz=196						
H55A	Tweed	32.58	18	P	P	19 34 39.9	-0.7
	baz=205						
R11A	Troy Canyon, C	32.62	322	P	P	19 34 42.9	+1.7
	baz=131,SNR=5.3						
G53A	Haliburton	32.69	16	P	P	19 34 40.9	-0.6
	baz=202						
BUKO	Buck Lake	32.78	15	P	P	19 34 41.8	-0.6
	baz=201						
BANO	Bancroft	32.79	17	P	P	19 34 41.9	-0.6
	baz=204						
H56A	Elgin	32.91	19	P	P	19 34 42.8	-0.6
	baz=207						
D41A	Chassel	32.98	3	P	P	19 34 44.4	+0.4
	baz=184						
BGU	Big Grassy Mou	33.02	328	*e*P	P	19 34 46.8	+2.1
	comp=Z,2.2nm,1.0s						
PLVO	Plevna	33.06	18	P	P	19 34 44.2	-0.6
	baz=205						
NCB	Newcomb	33.07	22	*e*P	P	19 34 44.0	-0.9
	comp=Z,5.2nm,0.6s						
D46A	Sault St. Mari	33.25	9	P	P	19 34 45.5	-0.9
	baz=192						
G55A	Calabogie	33.36	18	P	P	19 34 47.1	-0.2
	baz=206						
LONY	Lake Ozonia	33.50	21	P	P	19 34 48.1	-0.5
	baz=210						
D47A	Chapleau	33.56	10	P	P	19 34 47.8	-1.3
	baz=194						
PEMO	Pembroke	33.59	17	P	P	19 34 48.6	-0.7
	baz=204						
ALGO	Algonquin Park	33.61	16	P	P	19 34 49.0	-0.5
	baz=203						
E52A	Mattawa	33.76	15	P	P	19 34 50.8	0.0
	baz=202						
E51A	G1948 Merrick	33.78	14	P	P	19 34 50.3	-0.7
	baz=200						
C40A	Isle Royale Na	33.81	2	P	P	19 34 50.0	-1.2
	baz=183						
EYMN	Ely	33.81	359	P	P	19 34 50.0	-1.2
	baz=179						
D48A	Paudash Townsh	33.90	11	P	P	19 34 50.8	-1.2
	baz=196						
ORIO	Orleans, Innes	33.92	20	P	P	19 34 51.2	-1.0
	baz=207						
PTGA	Pitinga	33.97	113	P	P	19 34 50.9	-2.1
	comp=Z,1.9nm,0.8s,baz=294,slow=19,SNR=3.9						

ELK	Elko	34.05	326	eP	P	19 34 54.8	+1.1
	comp=Z,2.1nm,0.8s						
D49A	Beulah Townshi	34.08	12	P	P	19 34 52.9	-0.7
	baz=196						
E53A	Dumoine, Ponti	34.11	16	P	P	19 34 53.2	-0.7
	baz=203						
LBNH	Lisbon	34.18	25	P	P	19 34 53.2	-1.4
	baz=214						
NV11	Mina Array Sit	34.23	320	eP	P	19 34 56.5	+1.3
	comp=Z,0.4nm,0.8s						
E54A	Lac Daplat, Po	34.29	17	P	P	19 34 54.8	-0.6
	baz=204						
NVAR	Mina Array Bea	34.32	320	P	P	19 34 58.9	+2.9
	comp=Z,6.4nm,0.7s,baz=132,slow=8.6,SNR=62						
NVAR				PcP	PcP	19 37 31.7	+1.6
	comp=Z,2.5nm,0.7s,baz=132,slow=3.8,SNR=17						
NVAR				ScP	ScP	19 41 06.6	+0.5
	comp=Z,0.2nm,0.4s,baz=145,slow=3.3,SNR=3.8						
D52A	ZEK Kipawa Sen	34.46	15	P	P	19 34 56.4	-0.5
	baz=202						
KVN	Kaiserville	34.58	321	eP	P	19 35 00.9	+2.6
	comp=Z,7.0nm,1.1s						
D53A	Lac Vacive, Po	34.74	16	P	P	19 34 59.2	-0.1
	baz=203						
BMN	Battle Mountai	34.94	324	eP	P	19 35 03.8	+2.5
	comp=Z,4.3nm,0.8s						
WAKR	Walker	35.08	319	eP	P	19 35 05.6	+3.0
	comp=Z,2.6nm,0.8s						
D54A	Lac Fusel, La	35.10	17	P	P	19 35 01.8	-0.5
	baz=204						
YERR	Yerington	35.24	320	eP	P	19 35 06.8	+2.9
	comp=Z,4.3nm,0.6s						
MCMT	McKenzie Canyo	35.91	333	eP	P	19 35 12.0	+2.3
BOZ	Bozeman (W)	36.01	335	P	P	19 35 12.3	+2.0
	baz=144						
PKME	Peaks-Kenny Pk	36.11	26	P	P	19 35 09.5	-1.5
	baz=217						
ULM	Lac du Bonnet	36.34	355	P	P	19 35 11.5	-1.4
	comp=Z,4.8nm,0.6s,baz=163,slow=8.3,SNR=4.6						
ULM				LR	LR	19 50 35.5	
	comp=Z,33nm,20.7s,baz=198,slow=37						
BEKR	Beckworth	36.46	320	eP	P	19 35 16.8	+2.5
	comp=Z,4.4nm,0.9s						
LSQQ	Lebel-sur-Quev	36.76	15	P	P	19 35 15.8	-0.6
	baz=203						
MATQ	Matagami	37.24	14	P	P	19 35 19.7	-0.8
	baz=201						
J08A	Circle Bar Ran	37.59	326	eP	P	19 35 25.2	+1.4
	comp=Z,6.5nm,0.7s						
LPAZ	La Paz	37.60	142	P	P	19 35 25.9	+1.2
	comp=Z,0.7nm,0.6s,baz=297,slow=6.8,SNR=3.4						
O03E	Paynes Creek	37.61	320	P	P	19 35 25.8	+1.8
	baz=125						
CHGQ	Chibougamau	38.24	17	P	P	19 35 28.0	-1.0
	baz=206						
M04C	Macdoel	38.50	322	P	P	19 35 32.8	+1.3
	baz=127						
F10A	Beach Ranch, E	38.80	330	eP	P	19 35 34.7	+0.8
	comp=Z,4.2nm,0.6s						
M02C	Callahan	38.89	321	P	P	19 35 35.2	+0.5
	baz=125						
YBH	Yreka Blue Hor	39.00	321	eP	P	19 35 36.1	+0.6
	comp=Z,16nm,1.8s						
L04D	Klamath Falls	39.04	322	P	P	19 35 37.4	+1.4
	baz=126						
KHMM	Horse Mountain	39.15	319	eP	P	19 35 38.5	+1.6
	comp=Z,10nm,0.8s						
PINE	Pine Mountain	39.23	325	eP	P	19 35 38.9	+1.3
	comp=Z,6.9nm,0.9s						
J04D	Umpqua Nationa	39.55	324	P	P	19 35 41.4	+1.2
	baz=128						
L02E	Cave Junction	39.79	321	P	P	19 35 43.1	+1.0
	baz=125						
I04A	Tendick Farm,	40.06	324	P	P	19 35 45.1	+0.8
	baz=128						
G05D	Wamic, OR	40.37	326	P	P	19 35 48.3	+1.5
	baz=130						
H04A	Detroit Lake	40.49	325	eP	P	19 35 48.8	+1.0
	comp=Z,13nm,0.7s						
I03D	Drain, OR	40.54	323	P	P	19 35 49.9	+1.7
	baz=127						
J01E	Myrtle Point	40.57	322	P	P	19 35 50.5	+2.1
	baz=125						
C09A	Chrisman Ranch	40.62	332	eP	P	19 35 50.2	+1.4
	comp=Z,3.8nm,0.6s						
H04D	Lebanon	40.69	325	P	P	19 35 50.2	+0.7
	baz=128						
I02D	Swisshome	41.07	323	P	P	19 35 54.5	+2.0
	baz=126						
G03D	McMinnville, O	41.41	325	P	P	19 35 56.3	+0.9
	baz=128						
SIV	San Ignacio	41.95	134	P	P	19 36 00.7	+0.6
	comp=Z,1.4nm,0.6s,baz=319,slow=9.6,SNR=8.7						
SIV				pP	pP	19 36 22.9	-0.6
	comp=Z,2.9nm,0.8s,baz=322,slow=10,SNR=12						
SIV				PcP	PcP	19 37 54.4	+0.6
	comp=Z,1.2nm,0.7s,baz=292,slow=6.1,SNR=3.8						
SCHQ	Schefferville	44.82	20	P	P	19 36 20.5	-2.2
	comp=Z,19nm,0.6s,baz=221,slow=7.5,SNR=10						
SCHQ				LR	LR	19 55 00.6	
	comp=Z,28nm,19.2s,baz=360,slow=36						
SCHQ	Schefferville	44.82	20	eP	P	19 36 21.8	-0.9
	comp=Z,22nm,0.8s						
YKA	Yellowknife Ar	51.24	346	P	P	19 37 11.2	-0.7
	comp=Z,0.4nm,0.3s,baz=148,slow=7.9,SNR=5.0						
YKA				PcP	PcP	19 38 25.0	-0.8
	comp=Z,0.4nm,0.4s,baz=147,slow=3.5,SNR=3.5						
ILAR	Eielson Array	63.23	337	P	P	19 38 35.7	-0.6
	comp=Z,0.5nm,0.4s,baz=164,slow=5.2,SNR=10						
ILB	Eielson Array	63.23	337	eP	P	19 38 36.0	-0.2
	comp=Z,7.2nm,1.7s						
POKR	Poker Plat Res	63.59	337	P	P	19 38 38.3	-0.3
	baz=115						
MLY	Manley	64.83	336	eP	P	19 38 46.3	-0.5
	comp=Z,3.3nm,0.5s						
ESDC	Sonseca Array	78.86	52	P	P	19 40 08.7	-2.5
	comp=Z,0.3nm,0.5s,baz=288,slow=5.0,SNR=3.4						
NOA	NORSAR Array B	83.60	29	LR	LR	20 15 39.4	
	comp=Z,6.2nm,20.4s,baz=200,slow=34						
ARCES	ARCESS Array B	85.77	18	P	P	19 40 44.9	-1.7
	comp=Z,1.3nm,0.7s,baz=286,slow=4.9,SNR=6.1						
GERES	GERESS Array B	88.89	40	P	P	19 41 00.3	-1.8
	comp=Z,0.1nm,0.3s,baz=309,slow=4.9,SNR=2.4						
TORD	Torodi Ar. Bea	89.33	77	P	P	19 41 02.9	-1.8
	comp=Z,0.4nm,0.8s,baz=294,slow=7.2,SNR=3.8						
PETK	Petropavlovsk-	91.22	326	P	P	19 41 12.4	-0.4
	comp=Z,0.8nm,0.7s,baz=69,slow=7.9,SNR=3.2						
KSRS	Korea Array	117.11	326	PKP	PKPdf	19 46 53.1	+0.6
	comp=Z,1.1nm,0.7s,baz=4.8,slow=1.6,SNR=3.0						
MAW	Mawson	123.80	168	PKP	PKiKP	19 47 06.0	+1.3
	comp=Z,0.7nm,0.6s,baz=210,slow=17,SNR=2.5						
WRA	Warramunga Arr	136.44	256	PKP	PKiKP	19 47 32.9	+1.3
	comp=Z,1.6nm,0.6s,baz=84,slow=2.2,SNR=15						
ASAR	Alice Springs	136.68	250	PKP	PKiKP	19 47 33.1	+1.1
	comp=Z,0.4nm,0.5s,baz=84,slow=2.3,SNR=6.3						
CMAR	Chiang Mai Arr	146.28	343	PKPbc	PKPdf	19 47 48.0	+0.6
	comp=Z,2.6nm,0.6s,baz=336,slow=3.3,SNR=20						

SVSA 17 19:42:57.5±0.8, 39°.42N×29°.76W, h10^{km}, MD3.5, ML2.6,
Error ellipse: s-maj=14.2km s-min=6.2km az=45.0,
Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	Cedros	1.14	134	eP	Pb	19 43 14.6	-4.7
PCED				eS	Sb	19 43 27.5	-6.7
PCED				A	A	19 43 30.5	
	78nm,0.4s						
CALA	Caldeira	1.17	135	eP	Pb	19 43 15.7	-4.2
CALA				eS	Sb	19 43 28.9	-6.3
ROSA	Rosais	1.37	120	eP	Pn	19 43 18.0	-4.7
ROSA				eS	Sb	19 43 33.3	-7.5
ROSA				A	A	19 43 36.6	
	32nm,0.2s						
PGRA	Graciosa	1.43	105	eP	Pg	19 43 34.2	+9.2
PPNO	Prainha do Nor	1.50	129	eP	Pn	19 43 19.8	-4.7
PPNO				eS	Sn	19 43 37.0	-7.2
PPNO				A	A	19 43 39.5	
	41nm,0.3s						
PMAN	Manadas	1.52	121	eS	Sn	19 43 37.0	-7.5
PMAN				A	A	19 43 39.4	
	28nm,0.1s						

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*ISCJB **17** 19:46:08.5±0.1, 6°.33S±0°.02×130°.09E±0°.03, h146^{km}, mb5.0/110, Error ellipse: s-maj=4.0km s-min=2.6km az=158.6*

*BJI **17** 19:46:08.1±0.0, 6°.63S×130°.24E, h173^{km}, mb4.9/64, mB4.8/42*

*MOS **17** 19:46:10.8±0.9, 6°.35S×129°.97E, h170^{km}, mb5.0/42, Error ellipse: s-maj=13.2km s-min=6.6km az=121.3*

*IDC **17** 19:46:11.9±1.2, 6°.37S×129°.97E, h166^{km}±10^{km}, mb4.4/34, mb1 4.5/40, mb1mx4.4/56, mbtmp4.9/40, MS3.4/5, Ms1 3.4/5, ms1mx2.9/26, Error ellipse: s-maj=10.9km s-min=7.5km az=78.0*

*NEIC **17** 19:46:12.3±1.6, 6°.39S×130°.02E, h171^{km}±5^{km}, mb5.0/61, Error ellipse: s-maj=10.7km s-min=9.3km az=194.0*

*GCMT **17** 19:46:13.3±0.3, 6°.27S±0°.03×130°.23E±0°.03, h188^{km}±4^{km}, MW5.0/69, Moment Tensor Solution. s17,c19; s69,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55±.17; $M_{\theta\theta}$-0.04±.17; $M_{\phi\phi}$0.59±.22; $M_{r\theta}$1.14±.12; $M_{\theta\phi}$0.42±.17; $M_{\phi r}$3.09±.15; Best double couple: $M_0$3.36300×10^{16} NP1:ϕ_s200.00000°, δ84.00000°, λ-92.00000°. NP2: ϕ_s38.00000°, δ6.00000°, λ-72.00000°. Principal axes: T 3.4820, Plg39.0000°, Azm292.0000°; N -0.2380, Plg2.0000°, Azm200.0000°; P -3.2440, Plg51.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **17** 19:46:13.5±0.2, 6°S±2°×13°0E±°, h166^{km}±3^{km}, M4.8/32, mB5.3/26, mb5.1/32, MLv5.3/13, Mw(mB)4.7/26*

ISC 17 19:46:09.4±0.2, **6°.48S**±0°.03×**130°.10E**±0°.04, **h146^{km}, n335,** σ**2^{s}.07**/356, **mb4.9**/109, **13C-5D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.91	142	ePn	Pn	19 46 49.4	+6.1
SAUI	Saumlaki	1.91	142	P	Pn	19 46 49.0	+5.7
BNDI	Bandanaira	1.95	354	P	Pn	19 46 48.0	+4.2
BNDI				S	Sn	19 47 16.1	+6.0
MSAI	Masohi	3.32	339	P	Pn	19 47 03.9	+3.1
MSAI				S	Sn	19 47 43.0	+2.4
FAKI	Fak Fak	4.13	31	ePn	Pn	19 47 12.3	+1.0
FAKI	Fak Fak	4.13	31	P	Pn	19 47 12.3	+1.0
NLAI	Namlea	4.39	317	P	Pn	19 47 18.7	+3.9
NLAI				S	Sn	19 48 11.9	+6.3
SIJI	Sorong	5.69	12	P	Pn	19 47 32.3	+0.3
	60nm,0.3s,baz=254,slow=24,SNR=76						
SIJI				S	Sn	19 48 31.7	-4.8
	199nm,0.3s,baz=318,slow=22,SNR=24						
SWI	Sorong	5.69	12	P	Pn	19 47 32.2	+0.2
SANI	Sanana	6.01	317	P	Pn	19 47 38.8	+2.5
	365nm,0.9s,3µm1.2nm						
LBMI	Labuha	6.36	336	P	Pn	19 47 42.5	+1.6
	391nm,1.0s,4µm6.0nm						
MTN	Manton Dam	6.41	171	ePn	Pn	19 47 44.9	+3.4
MTN	Manton Dam	6.41	171	P	Pn	19 47 45.0	+3.4
	baz=6.5,SNR=276						
KDU	Kakadu	6.60	159	P	Pn	19 47 47.6	+3.5
	baz=6.7,SNR=3.7						
SOEI	Soe	6.63	240	ePn	Pn	19 47 47.4	+2.6
SOEI	Soe	6.63	240	P	Pn	19 47 47.3	+2.6
	338nm,0.8s,3µm						
BATI	Baumata	7.37	239	P	Pn	19 47 56.8	+2.3
	65nm,0.3s,baz=85,slow=1.6,SNR=136						
BATI				S	Sn	19 49 15.9	-1.0
	62nm,0.3s,baz=156,slow=24,SNR=11						
BATI				LR	LR	19 51 00.2	
	comp=Z,206nm,19.0s,baz=67,slow=39						
BATI	Baumata	7.37	239	ePn	Pn	19 47 56.8	+2.3
BATI				ePn	Pn	19 47 56.8	+2.3
BATI				eSn	Sn	19 49 15.9	-1.0
BATI				eSn	Sn	19 49 15.9	-1.0
BATI	Baumata	7.37	239	P	Pn	19 47 56.9	+2.4
	142nm,0.5s,2µm						
BBSI	Bau Bau	7.56	277	P	Pn	19 48 01.3	+4.4
	61nm,1.1s,597nm						
SRPI	Serui, Papua	7.64	53	P	Pn	19 48 00.8	+2.7
KDI	Kendari	7.86	288	P	Pn	19 48 05.6	+4.6
BAKI	Biak	7.96	49	P	Pn	19 48 05.8	+3.4
	633nm,0.6s,6µm						
MMRI	Maumere	8.09	254	ePn	Pn	19 48 07.1	+3.0
MMRI	Maumere	8.09	254	P	Pn	19 48 07.5	+3.4
	80nm,0.8s						
EDFI	Ende, Flores	8.64	254	P	Pn	19 48 14.8	+3.3
	28nm,0.7s,864nm						
LUWI	Luwuk	9.09	306	ePn	Pn	19 48 20.4	+2.9
LUWI	Luwuk	9.09	306	P	Pn	19 48 20.1	+2.7
	283nm,1.4s,3µm						
KNRA	Kununurra	9.24	188	P	Pn	19 48 22.0	+2.6
	baz=9.4,SNR=67						
BKSI	Bulukumba	9.99	276	P	Pn	19 48 32.3	+2.8
BNSI	Bone	10.16	281	P	Pn	19 48 36.1	+4.4
	136nm,1.2s,1µm						
MMPI	Merauke	10.38	102	P	Pn	19 48 38.5	+3.9
	470nm,0.5s,9µm						
KAPI	Kappang	10.40	277	P	Pn	19 48 35.6	+0.8
	1.0nm,0.3s,baz=90,slow=20,SNR=5.3						
KAPI	Kappang	10.40	277	ePn	Pn	19 48 34.7	-0.2
KAPI	Kappang	10.40	277	ceP	Pn	19 48 39.0	+4.1
KAPI				pmax	pmax		
	comp=Z,60nm,1.7s						
SPSI	Sidrap Palu	10.59	283	P	Pn	19 48 41.1	+3.7
	comp=Z,43nm,1.0s,comp=Z,657nm						
GENI	Genyem	10.75	69	P	Pn	19 48 42.4	+2.9
	comp=Z,76nm,0.5s						
TTSI	Tana Toraja	10.80	288	P	Pn	19 48 44.9	+4.7
WBSI	Waikabubak, Su	11.06	253	P	Pn	19 48 44.3	+0.6
SGSI	Sangihe	11.08	336	P	Pn	19 48 44.1	+0.2
WRAB	Tennant Creek	14.00	163	eP	Pn	19 49 21.2	-0.3
WRAB	Tennant Creek	14.00	163	eP	Pn	19 49 21.2	-0.3
WR1	Warramunga Arr	14.00	163	eP	Pn	19 49 21.9	+0.3
WRA	Warramunga Arr	14.00	163	P	Pn	19 49 21.9	+0.3
	comp=Z,5.0nm,0.3s,baz=341,slow=12,SNR=126						
WRA				S	Sn	19 51 49.5	-7.3
	comp=Z,22nm,0.3s,baz=337,slow=22,SNR=14						
WB2	Warramunga Arr	14.01	163	ePn	Pn	19 49 21.2	-0.5
BKB	Balikpapan	14.15	291	P	P	19 49 28.9	+2.3
SMKI	Samarinda	14.19	294	P	P	19 49 28.5	+1.5
DAV	Davao City (W)	14.19	341	P	Pn	19 49 23.1	-1.0
	comp=Z,59nm,0.3s,baz=190,slow=11,SNR=2.6						
DAV				S	S	19 52 14.7	+3.5
	comp=Z,28nm,0.3s,baz=321,slow=7.6,SNR=1.3						
KCP	Kidapawan	14.30	339	⇓eP	Pn	19 49 26.4	+0.9
PALU	Palau	14.40	18	P	P	19 49 29.6	+0.2
	baz=14,SNR=7.9						
CTBH	Cotabato--PC H	14.81	337	⇑eP	Pn	19 49 32.4	+0.7
COEN	Coen	14.85	121	ePn	P	19 49 34.9	+0.5
COEN	Coen	14.85	121	P	P	19 49 34.6	+0.2
	baz=15,SNR=153						
SRBI	Singaraja	14.86	263	P	P	19 49 34.0	-0.4
JAGI	Jajag, Banyuwa	15.94	262	ePn	Pn	19 49 44.8	-0.9
	comp=Z,87nm,1.1s						
KMMI	Kalianget	16.04	267	P	P	19 49 51.7	+4.2
MTKI	Muara Teweh, K	16.14	289	P	P	19 49 51.5	+2.9
QIS	Mount Isa	16.76	148	P	Pn	19 49 58.2	+2.5
	baz=17,SNR=87						
PMG	Port Moresby	17.14	101	P	Pn	19 50 01.3	+1.0
	comp=Z,1.6nm,0.3s,baz=282,slow=8.1,SNR=7.9						
PMG				S	S	19 53 08.0	-3.1
	comp=Z,2.4nm,0.3s,baz=167,slow=18,SNR=2.0						
PMG	Port Moresby	17.14	101	eP	Pn	19 50 01.2	+0.9
	comp=Z,95nm,1.0s						
PMG				eS	S	19 53 08.0	-3.1
PMG	Port Moresby	17.14	101	i P	Pn	19 50 04.1	+3.8
PMG				pmax	pmax		
	comp=Z,425nm,1.2s						
AS31	Alice Springs	17.48	168	eP	Pn	19 50 06.3	+2.0
	comp=Z,83nm,0.6s						
AS31				eS	S	19 53 16.8	-1.2
ASAR	Alice Springs	17.48	168	P	Pn	19 50 06.5	+2.2
	comp=Z,19nm,0.3s,baz=344,slow=9.0,SNR=658						
ASAR				S	S	19 53 16.8	-1.2
	comp=Z,9.1nm,0.3s,baz=354,slow=26,SNR=7.4						
GRJI	Gresik	17.51	268	P	Pn	19 50 07.9	+3.1
SPMM	Sapulut	17.57	309	P	Pn	19 50 09.0	+3.4
MANU	Manus Island	17.77	76	ePn	Pn	19 50 09.8	+2.0
	comp=Z,126nm,0.9s						
PSA00	Pilbara Seismi	17.99	212	eP	Pn	19 50 11.5	+1.1
	comp=Z,30nm,0.8s						
MTSU	Mount Surprise	18.07	131	P	Pn	19 50 13.3	+1.9
	baz=18,SNR=121						
PWJI	Pagerwojo	18.22	264	P	Pn	19 50 18.7	+5.5
NGJI	Ngawi	18.53	266	P	Pn	19 50 22.8	+6.0
WRKA	Warakurna	18.54	185	P	Pn	19 50 17.9	+1.0
	baz=19,SNR=47						
KKM	Kota Kinabalu	18.62	312	P	Pn	19 50 18.0	0.0
PBKI	Pangkalan Bun	18.75	281	P	Pn	19 50 20.1	+0.7
STKI	Sintang	19.69	289	P	Pn	19 50 30.5	+0.1
SBUM	Sibu	19.93	296	P	Pn	19 50 32.0	-1.3
CTA	Charters Tower	20.71	132	P	Pn	19 50 41.8	-0.7
	comp=Z,53nm,0.8s,baz=302,slow=12,SNR=65						
CTAO	Charters Tower	20.71	132	eP	Pn	19 50 41.4	-1.1
	comp=Z,198nm,1.4s						
CTAO	Charters Tower	20.71	132	eP	Pn	19 50 41.4	-1.1
CTAO				pmax	pmax		
	comp=Z,198nm,1.4s						
CISI	Cisompet, Garu	22.15	266	eP	P	19 50 53.1	-0.6
	comp=Z,406nm,1.1s						
CISI	Cisompet, Garu	22.15	266	P	P	19 50 54.6	+0.9
LEM	Lembang	22.34	268	P	P	19 50 55.7	+0.1
	comp=Z,59nm,0.7s,baz=29,slow=2.5,SNR=6.8						
TGY	Tagaytay City	22.38	336	P	P	19 50 55.3	-0.5
	comp=Z,186nm,0.4s,baz=229,slow=1.2,SNR=17						
TPI	Tanjungpandan	22.68	278	P	P	19 51 03.6	+4.9
MEEK	Meekatharra	22.84	207	P	P	19 51 02.2	+2.0
	baz=23,SNR=6.6						
CGJI	Cibinong	24.25	268	P	P	19 51 14.3	+1.2
FORT	Forrest	24.25	184	eP	P	19 51 13.8	+0.9
	comp=Z,77nm,0.8s						
FORT	Forrest	24.25	184	P	P	19 51 14.8	+1.9
	baz=24,SNR=13						
PPBI	Pangkal Pinang	24.27	279	P	P	19 51 15.2	+1.8
MDSI	Maura Dua	25.88	273	P	P	19 51 31.5	+3.6
KMBL	Kambalda	25.93	196	P	P	19 51 29.7	+1.5
	baz=26,SNR=18						
LHSI	Lahat	26.60	274	P	P	19 51 41.4	+7.0
RMQ	Roma	26.68	140	P	P	19 51 37.2	+2.2
	baz=27,SNR=7.7						
BBOO	Buckleboo	26.78	169	eP	P	19 51 37.0	+1.3
	comp=Z,47nm,0.6s						
BBOO	Buckleboo	26.78	169	P	P	19 51 37.3	+1.5
	baz=27,SNR=40						
BLDU	Ballidu	27.11	206	P	P	19 51 40.1	+1.4
	baz=27,SNR=6.2						
STKA	Stephens Creek	27.46	158	P	P	19 51 43.8	+1.9
	comp=Z,14nm,0.5s,baz=332,slow=9.2,SNR=51						
STKA				LR	LR	20 04 08.7	
	comp=Z,109nm,20.4s,baz=7.7,slow=39						
STKA	Stephens Creek	27.46	158	eP	P	19 51 43.6	+1.8
	comp=Z,5.8nm,0.7s						
STKA	Stephens Creek	27.46	158	P	P	19 51 43.8	+1.9
	baz=28,SNR=38						
STKA	Stephens Creek	27.46	158	eP	P	19 51 43.6	+1.8
STKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KLBR	Kellerberrin	27.53	203	P	P	19 51 44.0	+1.6
	baz=28,SNR=21						
HTT	Hallett	28.04	164	P	P	19 51 49.2	+2.2
	baz=28,SNR=21						
CMSA	Cobar Meteorol	28.89	152	P	P	19 51 56.9	+2.4
	baz=29,SNR=60						
NWAO	Narrogin (SRO)	28.91	203	P	P	19 51 55.3	+0.5
	comp=Z,11nm,0.7s,baz=40,slow=8.2,SNR=8.7						
PDSI	Padang	30.08	279	P	P	19 52 05.9	+0.6
ARMA	Armidale	31.24	142	eP	P	19 52 17.9	+2.4
	comp=Z,28nm,1.1s						
ARMA	Armidale	31.24	142	P	P	19 52 18.2	+2.8
	baz=31,SNR=11						
MNSI	Mandailing Nat	31.31	282	P	P	19 52 15.5	-0.6
ARPS	Mount Arapiles	32.00	162	P	P	19 52 24.6	+2.7
	baz=32,SNR=18						
QIZ	Qiongzhong	32.27	322	P	P	19 52 22.6	-1.8
QIZ				S	S	19 57 26.1	-1.1
QIZ				pmax	pmax		
	comp=Z,13nm,1.2s						
YNG	Young	32.44	151	P	P	19 52 28.7	+2.9
	baz=33,SNR=39						
PSI	Prapat	32.47	286	P	P	19 52 23.7	-2.7
	comp=Z,14nm,0.7s,baz=80,slow=4.6,SNR=11						
PSI	Prapat	32.47	286	eP	P	19 52 23.8	-2.6
	comp=Z,26nm,0.8s						
PSI	Prapat	32.47	286	eP	P	19 52 23.8	-2.6
PSI				pmax	pmax		
	comp=Z,26nm,0.8s						
MGCD	Mangrove Creek	32.99	146	P	P	19 52 34.0	+3.5
	baz=33,SNR=10						
JOW	Kunigami	33.16	357	eP	P	19 52 31.9	-0.2
	comp=Z,33nm,0.7s						
GSI	Gunungsitoli	33.38	282	eP	P	19 52 32.0	-2.2
	comp=Z,70nm,1.3s						
GSI	Gunungsitoli	33.38	282	P	P	19 52 34.6	+0.4
CAN	Canberra	33.56	151	eP	P	19 52 37.5	+1.9
	comp=Z,50nm,0.8s						
CAN	Canberra	33.56	151	eP	P	19 52 37.5	+1.9
CAN				pmax	pmax		
	comp=Z,50nm,0.8s						
CHBT	CHBT	33.57	305	P	P	19 52 37.5	+1.7
	comp=Z,43nm,0.5s,comp=Z,585nm						
CNB	Canberra Magne	33.73	151	P	P	19 52 40.0	+2.9
	baz=34,SNR=14						
TOO	Toolangi	33.97	158	eP	P	19 52 41.5	+2.5
	comp=Z,62nm,1.3s						
TOO	Toolangi	33.97	158	P	P	19 52 42.6	+3.6
	baz=34,SNR=17						
TOO	Toolangi	33.97	158	eP	P	19 52 41.6	+2.5
TOO				pmax	pmax		
	comp=Z,62nm,1.3s						
PANO	Nakornpanom	34.44	313	P	P	19 52 42.9	-0.3
	comp=Z,1.2nm,1.1s						
MILA	Mila	35.05	153	P	P	19 52 51.4	+3.1
	baz=35,SNR=3.6						
MLSI	Meulaboh, Aceh	35.30	287	P	P	19 52 51.5	+0.8
CHAI	Chaiyaphum	35.63	309	P	P	19 52 52.7	-0.8
	comp=Z,46µm,0.7s,comp=Z,495µm						
PHET	Kaeng Krachan	35.88	302	P	P	19 52 55.5	-0.2
	comp=Z,66µm,0.8s,comp=Z,607µm						
PBKT	Sadao Pong	36.81	309	P	P	19 53 03.6	+0.1
	comp=Z,5.8nm,1.4s						
SRDT	SRDT	37.05	304	P	P	19 53 05.8	+0.2
	comp=Z,35nm,0.9s,comp=Z,2µm						
UTHA	Uthaitani	37.44	306	P	P	19 53 08.3	-0.5
	comp=Z,98µm,0.6s,comp=Z,877µm						
SLVN	Son La	37.75	318	eP	P	19 53 11.2	-0.2
	comp=Z,20nm,1.0s						
UTTA	Uttaradit	37.82	310	P	P	19 53 11.8	-0.2
	comp=Z,76µm,0.8s,comp=Z,629µm						
UMPA	Umpang Tak	38.26	306	P	P	19 53 15.9	+0.1
	comp=Z,49µm,0.8s,comp=Z,540µm						
DZM	Mont Dzumac	38.34	118	P	P	19 53 18.4	+1.9
	comp=Z,24nm,1.1s,baz=169,slow=16,SNR=5.6						
DZM	Mont Dzumac	38.34	118	eP	P	19 53 18.4	+1.9
	comp=Z,61nm,1.4s						
PHRA	Phrae	38.52	311	P	P	19 53 18.3	+0.4
	comp=Z,4.9nm,1.1s,comp=Z,1µm						
MOO	Moorlands	38.88	160	P	P	19 53 24.2	+3.6
	baz=39,SNR=5.1						
LAMP	Lampang	38.99	310	P	P	19 53 22.4	+0.6
	comp=Z,53µm,0.9s						
PAYA	Payao	39.32	311	P	P	19 53 24.3	-0.2
	comp=Z,39µm,1.2s,comp=Z,360µm						
JNU	Nakatsue	39.39	1	P	P	19 53 24.3	-0.6
	comp=Z,14nm,0.8s,baz=218,slow=3.4,SNR=9.0						
JNU	Nakatsue	39.39	1	eP	P	19 53 24.1	-0.8
	comp=Z,17nm,0.9s						
CM31	Chiang Mai Arr	39.48	309	eP	P	19 53 25.1	-0.8
	comp=Z,45nm,1.3s						
CM31				ePcP	PcP	19 55 30.0	-0.9
CM31				eScP	ScP	19 59 03.1	-3.1
CM31	Chiang Mai Arr	39.48	309	P	P	19 53 26.0	+0.1
	SNR=7.2						
CMAR	Chiang Mai Arr	39.48	309	P	P	19 53 25.7	-0.2
	comp=Z,12nm,0.8s,baz=137,slow=7.4,SNR=95						
CMAR				PcP	PcP	19 55 30.0	-0.9
	comp=Z,2.0nm,0.6s,baz=154,slow=3.3,SNR=5.2						
CMAR				ScP	ScP	19 59 03.1	-3.1
	comp=Z,2.1nm,0.9s,baz=155,slow=3.1,SNR=8.1						
CMAR	Chiang Mai Arr	39.48	309	i P	P	19 53 25.7	-0.2
CMAR				pmax	pmax		
	comp=Z,13nm,0.8s						
CMMT	Chiang Mai	39.68	310	P	P	19 53 27.2	-0.4
	comp=Z,25nm,1.1s,comp=Z,268nm						
CHTO	Chiang Mai	39.69	310	eP	P	19 53 27.0	-0.6
	comp=Z,33nm,0.8s						
CHTO	Chiang Mai	39.69	310	eP	P	19 53 27.0	-0.6
CHTO				pmax	pmax		
	comp=Z,33nm,0.8s						
CHTO	Chiang Mai	39.69	310	P	P	19 53 27.7	+0.1
	SNR=7.7						
WHN	Wuhan	39.79	339	⇓P	P	19 53 28.6	+0.4
WHN				pmax	pmax		
	comp=Z,48nm,0.8s						
NJ2	Nanjing	39.79	345	eP	P	19 53 28.3	+0.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						

GYA	Guiyang	39.86	326	⇑iP	P	19 53 28.3	-0.7
GYA				pP	sP	19 54 10.8	-4.9
GYA				PcP	PcP	19 55 32.3	+0.2
GYA				S	S	19 59 20.3	-2.7
GYA				sS	sS	20 00 22.6	+5.8
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,4.9s						
KMI	Kunming	41.18	321	P	P	19 53 40.8	+0.8
KMI				pP	pwP	19 54 18.0	+1.1
KMI				pmax	pmax		
	comp=Z,29nm,1.2s						
KMI				pmax	pmax		
	comp=Z,130nm,4.5s						
ENH	Enshi	41.55	333	eP	P	19 53 41.6	-1.1
	comp=Z,16nm,0.7s						
TJN	Taejon	42.70	357	i P	P	19 53 51.8	-0.1
MJAR	Matsushiro Arr	43.46	10	P	P	19 53 56.8	-1.3
	comp=Z,11nm,0.7s,baz=193,slow=10,SNR=31						
MAJO	Matsushiro	43.46	9	eP	P	19 53 56.5	-1.5
	comp=Z,18nm,0.8s						
MAJO	Matsushiro	43.46	9	ceP	P	19 53 57.3	-0.8
MAJO				pmax	pmax		
	comp=Z,15nm,0.7s						
MAT	Matsushiro	43.46	9	P	P	19 53 56.3	-1.8
MJB9	Matsu-Tunnel	43.46	9	eP	P	19 53 56.5	-1.6
	comp=Z,18nm,0.8s						
KS15	Wonju Array Si	43.74	357	eP	P	19 54 00.1	-0.1
	comp=Z,66nm,1.9s						
KSRS	Korea Array	43.75	357	P	P	19 54 00.1	-0.2
	comp=Z,3.8nm,0.6s,baz=172,slow=9.0,SNR=19						
CD2	Chengdu	44.92	327	P	P	19 54 08.9	-0.9
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
XAN	Xi'an	45.01	335	eP	P	19 54 09.0	-1.4
	comp=Z,29nm,1.0s						
XAN	Xi'an	45.01	335	P	P	19 54 09.1	-1.4
XAN				pmax	pmax		
	comp=Z,24nm,0.9s						
XAN	Xi'an	45.01	335	eP	P	19 54 09.0	-1.4
XAN				pmax	pmax		
	comp=Z,29nm,1.0s						
BJT	Baijiatuau	48.02	346	eP	P	19 54 32.6	-1.1
	comp=Z,24nm,0.9s						
BJT	Baijiatuau	48.02	346	eP	P	19 54 32.7	-1.1
BJT				pmax	pmax		
	comp=Z,24nm,0.9s						
SHL	Shillong	48.93	312	eP	P	19 54 39.0	-2.2
LZH	Lanzhou	48.99	332	eP	P	19 54 41.6	+0.1
LZH				pP	pwP	19 55 18.3	-0.6
LZH				sP	sP	19 55 36.8	+7.6
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,160nm,4.5s						
HHC	Hu-ho-hao-te	50.08	342	eP	P	19 54 52.6	+3.0
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,48nm,5.3s						
CN2	Changchun	50.22	356	eP	P	19 54 51.8	+1.4
USRK	Ussuriysk Ar.	50.47	2	P	P	19 54 52.1	-0.1
	comp=Z,7.6nm,0.5s,baz=184,slow=7.7,SNR=37						
MDJ	Mudanjiang	50.86	360	P	P	19 54 55.4	+0.2
MDJ				pmax	pmax		
	comp=Z,20nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.4s						
PALK	Pallekele	51.14	285	P	P	19 54 56.5	-1.4
	comp=Z,9.7nm,0.7s,baz=115,slow=7.7,SNR=5.6						
PALK	Pallekele	51.14	285	eP	P	19 54 56.5	-1.4
	comp=Z,99nm,1.8s						
PALK	Pallekele	51.14	285	P	P	19 54 56.8	-1.1
PALK	Pallekele	51.14	285	eP	P	19 54 56.5	-1.4
PALK				pmax	pmax		
	comp=Z,99nm,1.8s						
ASAJ	Asahikawa	51.61	11	P	P	19 55 00.4	-0.4
	comp=Z,9.5nm,0.8s,baz=220,slow=9.0,SNR=8.6						
LSA	Lhasa	51.90	316	eP	P	19 55 04.0	+0.2
	comp=Z,30nm,0.6s						
LSA	Lhasa	51.90	316	i P	P	19 55 03.9	+0.2
	SNR=30						
LSA	Lhasa	51.90	316	eP	P	19 55 04.0	+0.2
LSA				pmax	pmax		
	comp=Z,30nm,0.6s						
BKZ	Black Stump Fm	52.89	135	eP	P	19 55 11.3	+0.8
	comp=Z,15nm,0.9s						
GTA	Gaotai	53.57	331	⇑P	P	19 55 15.3	-0.2
GTA				pP	pwP	19 55 51.3	-1.4
GTA				sP	sP	19 56 09.6	+5.7
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA				pmax	pmax		
	comp=Z,90nm,7.3s						
GTA				LR	LR		
	comp=Z,60nm,18.7s						
GTA				LR	LR		
	comp=Z,53nm,17.5s						
GTA				LR	LR		
	comp=Z,89nm,18.1s						
JIRN	Jiri	54.32	311	eP	P	19 55 21.0	-0.5
	comp=Z,168nm,0.7s						
YSS	Yuzh-Sakhalins	54.37	11	eP	P	19 55 20.6	-0.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PKI	Pulchoki	54.87	310	eP	P	19 55 24.4	-1.0
	comp=Z,69nm,0.6s						
PKIN	Phulchoki	54.88	310	eP	P	19 55 24.4	-1.0
	comp=Z,51nm,0.6s						
KKN	Kakani	55.08	310	eP	P	19 55 26.1	-0.6
	comp=Z,98nm,0.7s						
DMN	Daman	55.12	310	eP	P	19 55 26.5	-0.6
	comp=Z,135nm,0.9s						
KLR	Kul'dur	55.49	1	P	P	19 55 29.0	0.0
	comp=Z,5.7nm,0.8s,baz=192,slow=3.4,SNR=23						
KLR	Kul'dur	55.49	1	⇑eP	P	19 55 28.6	-0.4
KLR				pmax	pmax		
	comp=Z,14nm,1.1s						
GKN	Gorkha	55.67	310	eP	P	19 55 30.4	-0.5
	comp=Z,157nm,0.6s						
HYB	Hyderabad	56.18	296	i P	P	19 55 33.5	-1.0
KOLN	Koldanda	56.35	309	eP	P	19 55 35.4	-0.4
	comp=Z,178nm,0.9s						
DANN	Dangsing	56.52	310	eP	P	19 55 36.5	-0.6
	comp=Z,138nm,0.9s						
ULN	Ulaanbaatar	57.80	342	eP	P	19 55 45.7	+0.1
	comp=Z,26nm,0.7s						
ULN	Ulaanbaatar	57.80	342	ceP	P	19 55 45.8	+0.2
ULN				pmax	pmax		
	comp=Z,30nm,0.8s						
ULN	Ulaanbaatar	57.80	342	P	P	19 55 46.2	+0.7
	SNR=11						
SONA0	Songino Array	57.98	341	eP	P	19 55 47.0	+0.2
SONM	Songino Array	57.98	341	P	P	19 55 47.0	+0.2
	comp=Z,6.4nm,0.6s,baz=157,slow=6.9,SNR=45						
ZAK	Zakamensk	61.21	341	eP	P	19 56 08.4	-0.4
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	Talaya	62.21	342	P	P	19 56 15.7	+0.3
	comp=Z,8.5nm,0.9s,baz=294,slow=18,SNR=7.3						
TLY	Talaya	62.21	342	eP	P	19 56 15.7	+0.3
	comp=Z,6.0nm,0.7s						
TLY	Talaya	62.21	342	ceP	P	19 56 16.1	+0.7
TLY				pmax	pmax		
	comp=Z,25nm,1.7s						
WMQ	Urumqi	63.02	327	P	P	19 56 21.5	+0.6
WMQ				pP	pwP	19 56 59.3	+0.1
WMQ				pmax	pmax		
	comp=Z,42nm,0.9s						
MOY	Mondy	63.06	340	eP	P	19 56 21.6	+0.5
MOY				pmax	pmax		
	comp=Z,26nm,1.6s						
PETK	Petropavlovsk-	63.80	18	P	P	19 56 26.3	+0.5
	comp=Z,6.6nm,0.7s,baz=170,slow=4.6,SNR=16						
PEA1	Petropavlovsk-	63.80	18	eP	P	19 56 26.3	+0.5
NIL	Nilore	66.95	311	eP	P	19 56 46.1	-0.5
	comp=Z,26nm,0.7s						
NIL	Nilore	66.95	311	eP	P	19 56 46.1	-0.5
NIL				pmax	pmax		
	comp=Z,26nm,0.7s						
DGZ	Jazzator, Alta	67.10	331	i P	P	19 56 47.0	-0.3
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH	Kashi	67.70	317	P	P	19 56 52.1	+0.8
KSH				pP	sP	19 57 36.8	-3.7
KSH				sP	pwP	19 57 55.4	+25
KSH				PP	PP	19 59 29.0	+6.4
KSH				S	S	20 05 30.0	-7.3
KSH				ScS	SKiKP	20 06 26.5	-7.4
KSH				SS	SS	20 09 57.8	-3.8
KSH				pmax	pmax		
	comp=Z,22nm,0.9s						
KSH				pmax	pmax		
	comp=Z,120nm,6.2s						
MK31	Makanchi Array	67.85	327	eP	P	19 56 51.9	0.0
	comp=Z,33nm,0.8s						
MK31	Makanchi Array	67.85	327	eP	P	19 56 51.9	0.0
MK31				pmax	pmax		
	comp=Z,33nm,0.8s						
MK32	Makanchi Array	67.85	327	eP	P	19 56 52.0	+0.1
MKAR	Makanchi Array	67.85	327	P	P	19 56 52.0	+0.1
	comp=Z,39nm,0.6s,baz=123,slow=8.0,SNR=437						
MAKZ	Makanchi	68.03	327	eP	P	19 56 52.9	-0.1
	comp=Z,31nm,0.7s						
MAKZ	Makanchi	68.03	327	eP	P	19 56 52.9	-0.1
MAKZ				pmax	pmax		
	comp=Z,31nm,0.7s						
KDJ	Kajisay	68.24	320	eP	P	19 56 55.1	+0.4
	comp=Z,21nm,0.8s						
YAK	Yakutsk	68.31	360	eP	P	19 56 54.0	-0.4
	comp=Z,53nm,0.7s						
YAK	Yakutsk	68.31	360	eP	P	19 56 53.9	-0.4
YAK				e		19 57 17.0	
YAK				e*PP	pwP	19 57 33.6	+0.2
YAK				eS	S	20 05 38.5	-4.7
YAK				e		20 06 34.0	
YAK				eSS	SS	20 10 07.1	-2.5
YAK				pmax	pmax		
	comp=Z,35nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				smax	smax		
	comp=E,66nm,1.8s						
YAK				smax	smax		
	comp=N,37nm,1.4s						
NRN	Naryn	68.64	319	eP	P	19 56 57.3	0.0
	comp=N,15nm,0.8s						
NRN	Naryn	68.64	319	eP	P	19 56 57.3	0.0
NRN				pmax	pmax		
	comp=Z,15nm,0.8s						
BOOM	Boomskoye usch	69.21	320	eP	P	19 57 01.0	+0.3
	comp=Z,34nm,0.9s						
BOOM	Boomskoye usch	69.21	320	eP	P	19 57 01.0	+0.3
BOOM				pmax	pmax		
	comp=Z,34nm,0.9s						
AAK	Ala-Archa	70.21	320	P	P	19 57 06.8	0.0
	comp=Z,26nm,0.9s,baz=118,slow=5.4,SNR=40						
AAK	Ala-Archa	70.21	320	eP	P	19 57 07.2	+0.4
	comp=Z,31nm,0.9s						
AAK	Ala-Archa	70.21	320	i P	P	19 57 07.5	+0.7
	SNR=20						
AAK	Ala-Archa	70.21	320	eP	P	19 57 07.2	+0.4
AAK				pmax	pmax		
	comp=Z,31nm,0.9s						
AAK	Ala-Archa	70.21	320	P	P	19 57 07.8	+1.0
	SNR=12						
KBL	Kabul	70.51	310	eP	P	19 57 08.3	-0.5
	comp=Z,24nm,0.9s						
KBL	Kabul	70.51	310	eP	P	19 57 08.3	-0.5
KBL				pmax	pmax		
	comp=Z,24nm,0.9s						
ARSB	Arslanbob	70.57	318	eP	P	19 57 09.0	+0.1
	comp=Z,64nm,0.8s						
ZAA0	Zalesovo Array	71.16	334	eP	P	19 57 10.9	-1.1
	comp=Z,23nm,1.3s						
ZALV	Zalesovo Beam	71.16	334	P	P	19 57 11.0	-1.0
	comp=Z,11nm,0.7s,baz=128,slow=5.4,SNR=35						
ZALV	Zalesovo Beam	71.16	334	i P	P	19 57 11.0	-1.0
ZALV				pmax	pmax		
	comp=Z,11nm,0.7s						
ZAA1	Zalesovo Array	71.17	334	eP	P	19 57 11.0	-1.1
SEY	Seymchan	71.28	11	P	P	19 57 12.7	+0.2
	comp=Z,6.1nm,0.7s,baz=225,slow=4.0,SNR=10						
SEY	Seymchan	71.28	11	i P	P	19 57 12.4	-0.1
GAR	Garm	71.37	315	eP	P	19 57 13.6	-0.3
	comp=Z,145nm,1.2s						
GAR	Garm	71.37	315	eP	P	19 57 13.6	-0.3
GAR				pmax	pmax		
	comp=Z,145nm,1.2s						
BTK	Batken	71.47	316	eP	P	19 57 14.4	0.0
	comp=Z,19nm,0.9s						
BTK	Batken	71.47	316	eP	P	19 57 14.4	0.0
BTK				pmax	pmax		
	comp=Z,19nm,0.9s						
KURBB	Kurchatov Arra	72.12	328	P	P	19 57 17.5	-0.3
	comp=Z,9.0nm,0.5s,baz=128,slow=5.0,SNR=139						
KURK	Kurchatov	72.13	328	eP	P	19 57 17.6	-0.3
	comp=Z,53nm,1.6s						
KURK	Kurchatov	72.13	328	c iP	P	19 57 17.4	-0.5
KURK				pmax	pmax		
	comp=Z,31nm,1.5s						
KURK	Kurchatov	72.13	328	P	P	19 57 17.9	0.0
	SNR=9.8						
VNDA	Vanda	72.95	173	P	P	19 57 23.5	+1.1
	comp=Z,7.2nm,0.8s,baz=320,slow=6.5,SNR=40						
VNDA				LR	LR	20 28 49.8	
	comp=Z,30nm,19.2s,baz=326,slow=35						
KK31	Karatay Array	73.02	319	eP	P	19 57 23.2	-0.2
	comp=Z,23nm,1.0s						
KK31	Karatay Array	73.02	319	eP	P	19 57 23.2	-0.2
KK31				pmax	pmax		
	comp=Z,23nm,1.0s						
KKAR	Karatay Array	73.02	319	eP	P	19 57 23.4	0.0
	comp=Z,23nm,1.0s						
KKAR	Karatay Array	73.02	319	eP	P	19 57 23.4	0.0
KKAR				pmax	pmax		
	comp=Z,23nm,1.0s						
SBA	Scott Base	73.84	172	eP	P	19 57 29.3	+1.8
	comp=Z,8.4nm,0.9s						
SBA	Scott Base	73.84	172	eP	P	19 57 29.3	+1.8
SBA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAW	Mawson	75.47	201	P	P	19 57 38.0	+0.9
	comp=Z,6.5nm,0.9s,baz=85,slow=5.7,SNR=15						
MAW	Mawson	75.47	201	eP	P	19 57 38.3	+1.2
	comp=Z,1.4nm,0.9s						
MAW	Mawson	75.47	201	P	P	19 57 38.5	+1.5
	baz=76,SNR=11						
MAW	Mawson	75.47	201	eP	P	19 57 38.3	+1.2
MAW				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WSAR	Wadi Sarin	75.73	296	P	P	19 57 39.6	+0.2
	comp=Z,11nm,0.7s,baz=146,slow=3.7,SNR=10						
BVAR	Borovoye Array	77.68	328	P	P	19 57 49.2	-0.5
	comp=Z,4.8nm,0.6s,baz=130,slow=9.3,SNR=50						
BRVK	Borovoye	77.75	328	eP	P	19 57 49.7	-0.5
	comp=Z,8.8nm,0.8s						
BRVK	Borovoye	77.75	328	c iP	P	19 57 49.5	-0.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRVK	Borovoye	77.75	328	P	P	19 57 50.0	-0.2
	SNR=5.1						
TIXI	Tiksi	77.97	360	P	P	19 57 50.4	-0.6
	comp=Z,9.0nm,0.5s,baz=173,slow=5.3,SNR=36						
TIXI	Tiksi	77.97	360	d iP	P	19 57 50.6	-0.4
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
UOSS	Minazif	78.28	297	P	P	19 57 53.3	-0.4
HATD	Hatta, Dubai	78.31	297	P	P	19 57 54.1	+0.2
MSFE	Esma-Masafi	78.41	297	P	P	19 57 55.0	+0.6
ALNE	Al Ain	78.49	296	P	P	19 57 55.1	+0.2
SHME	Shamm	78.58	298	i P	P	19 57 55.4	0.0
	SNR=8.5						
BILL	Bilibino	78.58	13	⇓eP	P	19 57 53.4	-1.0
BILL				e		20 00 56.5	
BILL				eS	S	20 08 34.1	+55
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NAZ	Nazwa, Dubai	78.77	297	P	P	19 57 56.4	0.0
FAQ	Al Faqa, Dubai	78.78	297	P	P	19 57 56.3	-0.1
ASUD	Al Ashush, Dub	78.98	297	P	P	19 57 57.4	-0.1
GEYT	Alibeck	79.96	310	LR	LR	20 41 58.4	
	comp=Z,9.2nm,18.8s,baz=160,slow=42						
GYA0B	ALIBECK ARRAY	79.96	310	eP	P	19 58 02.3	-0.3
	comp=Z,12nm,1.1s						
ABKAR	Akbulak array	82.17	322	eP	P	19 58 13.2	-0.8
	comp=Z,4.8nm,0.6s						
QSPA	South Pole Qui	83.50	180	eP	P	19 58 20.9	+0.2
	comp=Z,12nm,0.9s						
AKTO	Aktyubinsk	83.72	322	P	P	19 58 21.6	-0.4
	comp=Z,4.5nm,0.7s,baz=116,slow=7.7,SNR=16						
SYO	Syowa Base	84.18	201	⇑eP	P	19 58 23.2	-0.7
SVE	Sverdlovsk	84.38	329	eP	P	19 58 24.9	-0.2
SVE				pmax	pmax		
	comp=Z,15nm,0.8s						
ARU	Arti	85.32	328	P	P	19 58 28.6	-1.3
	comp=Z,3.2nm,0.5s,baz=106,slow=2.4,SNR=24						
ARU	Arti	85.32	328	eP	P	19 58 28.9	-0.9
	comp=Z,10nm,0.6s						
ARU	Arti	85.32	328	eP	P	19 58 28.9	-0.9
ARU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RAYN	Ar Rayn	87.63	294	eP	P	19 58 41.5	-0.4
	comp=Z,17nm,0.9s						
RAYN	Ar Rayn	87.63	294	i P	P	19 58 41.9	0.0
	SNR=17						
RAYN	Ar Rayn	87.63	294	eP	P	19 58 41.5	-0.4
RAYN				pmax	pmax		
	comp=Z,17nm,0.9s						
KDAK	Kodiak Island	88.72	32	P	P	19 58 47.5	+1.3
	comp=Z,5.3nm,0.8s,baz=331,slow=22,SNR=9.1						
KDAK				LR	LR	20 38 16.0	
	comp=Z,23nm,19.6s,baz=314,slow=35						
KDAK	Kodiak Island	88.72	32	eP	P	19 58 47.5	+1.3
	comp=Z,44nm,1.5s						
KDAK	Kodiak Island	88.72	32	eP	P	19 58 47.5	+1.3
KDAK				pmax	pmax		
	comp=Z,44nm,1.5s						
AKH	Akhalkalaki	91.70	311	eP	P	19 58 59.8	-0.9
	comp=Z,5.5nm,1.0s						
AKH	Akhalkalaki	91.70	311	eP	P	19 58 59.8	-0.9
AKH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	Kislovodsk	92.59	314	eP	P	19 59 03.1	-1.5
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ILAR	Eielson Array	92.83	25	P	P	19 59 03.5	-1.6
	comp=Z,0.6nm,0.7s,baz=267,slow=4.3,SNR=6.1						
ILB	Eielson Array	92.83	25	eP	P	19 59 03.5	-1.6
	comp=Z,12nm,1.9s						
PRGR	Permogore	93.03	332	eP	P	19 59 02.7	-3.4
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ASF	Jabal al Asfar	96.11	302	P	P	19 59 21.0	0.0
	comp=Z,2.3nm,0.9s,baz=328,slow=1.4,SNR=4.6						
SNAA	Sanae	96.19	193	P	P	19 59 21.2	+0.6
OBN	Obninsk	97.29	325	⇓eP	Pdif	19 59 25.8	+0.1
OBN				e*PP	sP	20 00 12.5	-4.1
OBN				e		20 03 21.5	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MMAI	Mount Meron Ar	97.42	302	P	P	19 59 26.5	-0.4
	comp=Z,0.6nm,0.4s,baz=79,slow=7.8,SNR=3.2						
VNA3	Neumayer Olymp	98.01	192	Pdiff	Pdif	19 59 29.3	+0.6
BR101	Keskin Array S	99.07	309	eP	Pdif	19 59 32.6	-1.7
BRTR	Keskin Array B	99.07	309	P	Pdif	19 59 32.6	-1.7
	comp=Z,0.8nm,0.8s,baz=76,slow=5.2,SNR=3.9						
ARA0	ARCESS Array S	101.13	340	ePdif	Pdif	19 59 40.9	-1.7
ARCES	ARCESS Array B	101.13	340	P	Pdif	19 59 40.9	-1.7
	comp=Z,1.5nm,0.6s,baz=87,slow=7.4,SNR=10						
FIA0	FINESS Array S	102.36	331	ePdif	Pdif	19 59 46.0	-2.2
FIA0	FINESS Array S	102.36	331	eP	Pdif	19 59 46.0	-2.2
FINES	FINESS Array B	102.36	331	P	Pdif	19 59 46.0	-2.2
	comp=Z,0.9nm,0.6s,baz=101,slow=10,SNR=4.3						
FINES	FINESS Array B	102.36	331	i P	Pdif	19 59 47.0	-1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GZR	Gura Zlata	106.74	315	⇑iP	Pdif	20 00 16.6	+8.5
BZS	Buzias	107.52	316	⇑iP	Pdif	20 00 18.3	+6.8
MDVR	Moldovita	107.57	315	S	Pdif	20 00 09.6	-2.2
VYHS	Vyhne	108.87	319	eP	Pdif	20 00 19.1	+1.6
VYHS	Vyhne	108.87	319	ePDIF	Pdif	20 00 19.1	+1.6
CLL	Collm	111.80	323	ePP	PP	20 05 11.0	-0.6
GEC2	GERESS Array S	112.09	320	ePKiKP	PKiKP	20 04 27.0	-0.7
GEC2	GERESS Array S	112.09	320	ePKIKP	PKiKP	20 04 27.0	-0.7
GERES	GERESS Array B	112.09	320	PKiKP	PKiKP	20 04 27.0	-0.7
	comp=Z,0.2nm,0.4s,baz=52,slow=2.2,SNR=4.2						
PD31	Pinedale Array	116.45	45	ePKPdf	PKiKP	20 04 36.7	+0.2
PDAR	Pinedale Array	116.45	45	PKP	PKiKP	20 04 36.7	+0.2
	comp=Z,0.2nm,0.3s,baz=225,slow=1.1,SNR=3.3						
ESDC	Sonseca Array	127.20	316	PKP	PKPdf	20 04 56.3	-0.6
	comp=Z,0.1nm,0.4s,baz=0.0,slow=2.6,SNR=3.2						
ESDC				PP	PP	20 06 58.5	+0.9
	comp=Z,0.1nm,0.3s,baz=66,slow=6.8,SNR=7.4						
TORD	Torodi Ar. Bea	128.81	282	PKP	PKPdf	20 05 00.4	-0.2
	comp=Z,0.8nm,0.7s,baz=127,slow=2.1,SNR=7.0						
TORD				SKPab	SKPab	20 08 01.6	
	comp=Z,5.2nm,0.9s,baz=56,slow=2.4,SNR=16						
TOA1	Torodi Ar. Sit	128.81	282	ePKPdf	PKPdf	20 05 00.4	-0.2
PLCA	Paso Flores	129.33	160	PKP	PKPdf	20 05 01.3	+0.2
	comp=Z,3.8nm,1.1s,baz=223,slow=5.7,SNR=2.7						
PLCA				SKPab	SKPab	20 08 03.5	-5.1
	comp=Z,3.1nm,0.8s,baz=106,slow=7.7,SNR=3.0						
SCHQ	Schefferville	129.89	13	SKPab	SKPab	20 08 06.5	-3.9
	comp=Z,14nm,0.9s,baz=314,slow=2.3,SNR=6.9						
DBIC	Dimbokro	135.27	273	PKP	PKPdf	20 05 11.4	-1.4
	comp=Z,3.1nm,0.8s,baz=117,slow=2.3,SNR=2.6						
DBIC				SKPbc	SKPbc	20 08 26.4	-4.0
	comp=Z,9.5nm,0.8s,baz=54,slow=3.4,SNR=7.9						
T52A	Hallie	137.13	40	ePKPdf	PKPdf	20 05 15.9	+0.2
MCWV	Mont Chateau	137.38	35	ePKPdf	PKPdf	20 05 15.3	-0.8
GO02	Mina Guanaco	143.17	149	ePKPdf	PKPbc	20 05 25.6	+0.9
CPUP	Villa Florida	146.60	168	PKPbc	PKPbc	20 05 34.2	-0.4
	comp=Z,11nm,0.9s,baz=191,slow=2.8,SNR=21						
CPUP				SKPbc	SKPbc	20 08 57.2	-2.6
	comp=Z,2.8nm,0.7s,baz=225,slow=1.7,SNR=4.8						
NNA	Nana	147.53	124	i PKP2	PKiKP	20 05 38.9	-0.7
LPAZ	La Paz	151.06	142	PKPbc	PKiKP	20 05 48.0	+0.5
	comp=Z,5.4nm,0.8s,baz=178,slow=1.5,SNR=16						

ANF ***17*** *20:10:31.4±0.5, 35°.63N×90°.62W, h3^{km}±4^{km}, ML3.9/36,*
Error ellipse: s-maj=1.5km s-min=1.2km az=2.0
ISCJB ***17*** *20:10:32.2±0.2, 35°.66N±0°.02×90°.56W±0°.02, h10^{km}, Error ellipse: s-maj=3.1km s-min=2.0km az=163.6*
NEIC ***17*** *20:10:33.0±0.0, 35°.63N×90°.56W, h14^{km}, MD3.2(CERI), After CERI.*
NEIC Felt [II] at Lepanto and Trumann. Also felt at Marked Tree and Stuttgart.
CERI ***17*** *20:10:33.0, 35°.63N×90°.56W, h14^{km}, MD3.2*
ISC 17 20:10:32.9±0.7**, 35°.64N**±0°.02×**90°.56W**±0°.02**, h10**^{km}**, n75,** σ**0**^{s}**.76**/94**, Arkansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HBAR	Harrisburg	0.11	222	ePg	Pg	20 10 36.2	+0.6
HBAR				eSg	Sg	20 10 37.9	+0.3
GNAR	Gosnell	0.55	54	ePg	Pg	20 10 44.0	+0.4
GNAR				eSg	Sg	20 10 51.1	+0.2
MET	Memphis--Engin	0.73	135	ePg	Pg	20 10 46.3	-0.6
PVMO	Portageville	1.04	42	ePg	Pg	20 10 52.6	-0.4
PVMO				eSn	Sg	20 11 05.6	-0.9
PBMO	Poplar Bluff	1.14	5	ePn	Pb	20 10 54.1	-0.7
X43A	Marvell	1.15	193	Pb	Pb	20 10 53.9	-0.9
	baz=13						
X43A				Sb	Sg	20 11 09.9	0.0
	baz=13						
FCAR	Ozark Folk Cen	1.29	282	ePn	Pn	20 10 56.5	-0.5
FCAR				eSn	Sb	20 11 13.6	-0.4
WHAR	Wooly Hollow	1.45	257	ePn	Pn	20 10 59.0	-0.1
WHAR				eSn	Sn	20 11 17.7	-0.5
W41B	Gary Mavity, V	1.45	252	Pb	Pn	20 10 59.1	0.0
	baz=71						
W41B				Sb	Sn	20 11 18.1	-0.1
	baz=71						
OXF	Oxford	1.47	140	ePn	Pn	20 10 58.6	-0.8
OXF				eSn	Sn	20 11 17.6	-1.1
UTMT	University of	1.55	62	ePn	Pn	20 11 00.4	-0.1
UTMT				eSn	Sn	20 11 20.8	+0.2
UALR	University of	1.69	240	ePn	Pn	20 11 01.8	-0.7
W46A	Michie	1.86	105	P	Pn	20 11 04.1	-0.6
	baz=286,SNR=35						
W46A				S	Sb	20 11 29.7	-0.4
	baz=286						
X46A	Booneville	1.95	123	P	Pn	20 11 05.8	-0.2
	baz=304,SNR=28						
X46A				S	Sb	20 11 31.7	-1.1
	baz=304						
CCAR	Cane Creek	1.98	210	ePn	Pn	20 11 07.0	+0.5
U40A	Yellville	1.99	292	Pb	Pn	20 11 07.4	+0.8
	baz=111						
U40A				Sb	Sb	20 11 33.5	-0.5
	baz=111						

V46A	**Holladay**	2.00	85	P	Pn	20 11 06.3	-0.4
	baz=266,SNR=83						
V46A				S	Sn	20 11 33.1	+1.4
	baz=266						
U46A	**Springville**	2.06	69	P	Pn	20 11 07.4	-0.2
	baz=250						
U46A				S	Sn	20 11 34.9	+1.5
	baz=250						
T45A	**Paducah**	2.07	48	*e*Pn	Pn	20 11 07.0	-0.7
T45A	**Paducah**	2.07	48	S	Sb	20 11 35.4	-1.0
	baz=228						
PLAL	**Pickwick Lake**	2.14	107	*e*Pn	Pn	20 11 08.2	-0.5
X40A	**Basin Creek Fa**	2.19	239	*e*Pn	Pn	20 11 09.5	+0.2
X40A	**Basin Creek Fa**	2.19	239	Pb	Pn	20 11 10.0	+0.7
	baz=58						
X40A				Sb	Sb	20 11 39.7	0.0
	baz=58						
WVT	**Waverly**	2.27	77	*e*Pn	Pn	20 11 10.4	-0.1
WVT	**Waverly**	2.27	77	P	Pn	20 11 10.2	-0.3
	baz=258						
S44A	**Carbondale**	2.31	27	P	Pn	20 11 10.8	-0.1
	baz=207						
S44A				S	Sn	20 11 40.9	+1.5
	baz=207						
W47A	**Westpoint**	2.46	98	P	Pn	20 11 12.3	-0.7
	baz=280,SNR=79						
CCM	**Cathedral Cave**	2.47	347	*e*Pn	Pn	20 11 13.8	+0.6
CCM	**Cathedral Cave**	2.47	347	Pb	Pb	20 11 15.8	-1.6
	baz=167						
V47A	**Nunnelly**	2.48	85	P	Pn	20 11 12.9	-0.5
	baz=266,SNR=51						
X47A	**Russelville**	2.49	116	P	Pn	20 11 13.3	-0.1
	baz=297,SNR=13						
T46A	**Princeton**	2.57	56	P	Pn	20 11 14.7	+0.1
	baz=237,SNR=8.7						
W39A	**Magazine**	2.67	261	*e*Pn	Pn	20 11 17.5	+1.6
W39A	**Magazine**	2.67	261	Pb	Pb	20 11 19.1	-1.6
	baz=80						
W39A				Sb	Sb	20 11 54.1	+0.6
	baz=80						
MIAR	**Mount Ida**	2.70	247	*e*Pn	Pn	20 11 16.6	+0.2
MIAR	**Mount Ida**	2.70	247	P	Pn	20 11 16.6	+0.2
	baz=66						
U47A	**Clarksville**	2.77	72	P	Pn	20 11 17.3	0.0
	baz=254,SNR=19						
HHAR	**Hobbs**	2.81	284	*e*Pn	Pn	20 11 18.1	+0.2
WLAR	**White Oak Lake**	2.86	228	*e*Pn	Pn	20 11 18.8	+0.2
SLM	**Saint Louis**	3.00	5	*e*Pn	Pn	20 11 20.5	0.0
W48A	**Pulaski**	3.01	98	P	Pn	20 11 20.2	-0.4
	baz=280,SNR=39						
V48A	**Smith Brothers**	3.05	87	*e*Pn	Pn	20 11 21.1	-0.1
V48A	**Smith Brothers**	3.05	87	P	Pn	20 11 21.1	-0.1
	baz=269						
S46A	**Don Dixon Farm**	3.07	47	P	Pn	20 11 21.5	+0.1
	baz=229						
S46A				Sb	Sb	20 12 07.8	+2.7
	baz=229						
T47A	**Sharon Grove**	3.10	63	*e*Pn	Pn	20 11 22.1	+0.2
T47A	**Sharon Grove**	3.10	63	P	Pn	20 11 22.4	+0.5
	baz=245,SNR=8.3						
X48A	**Hartselle**	3.12	111	*e*Pn	Pn	20 11 21.9	-0.2
X48A	**Hartselle**	3.12	111	P	Pn	20 11 22.2	+0.1
	baz=293						
Y48A	**Jasper**	3.28	121	P	Pn	20 11 24.6	+0.3
	baz=302						
Y48A				Sb	Sb	20 12 13.7	+2.5
	baz=302						
U48A	**Cassie Pea, Po**	3.37	74	P	Pn	20 11 26.0	+0.4
	baz=256						
CLTN	**Cedars of Leba**	3.47	81	*e*Pn	Pn	20 11 26.9	0.0
147A	**Livingston**	3.52	147	Sb	Sb	20 12 20.0	+2.1
	baz=328						
S47A	**Hartford**	3.55	56	P	Pn	20 11 28.6	+0.5
	baz=238						
W49A	**Belvidere**	3.55	97	P	Pn	20 11 28.5	+0.4
	baz=279,SNR=12						
X49A	**Woodville**	3.65	107	P	Pn	20 11 29.3	-0.1
	baz=289,SNR=12						
T48A	**Bowling Green**	3.67	65	P	Pn	20 11 30.0	+0.3
	baz=247						
V49A	**McMinnville**	3.80	87	P	Pn	20 11 31.6	+0.2
	baz=269						
SWET	**Sewanee**	3.81	95	*e*Pn	Pn	20 11 32.4	+0.8
Y49A	**Blount Mountai**	3.85	116	*e*Pn	Pn	20 11 32.1	-0.1
Y49A	**Blount Mountai**	3.85	116	P	Pn	20 11 32.1	-0.1
	baz=299						
LRAL	**Lakeview Retre**	3.93	130	*e*Pn	Pn	20 11 33.5	+0.2
X37A	**Clayton**	4.08	257	*e*Pb	Pb	20 11 45.5	+0.8
TUL1	**Leonard**	4.26	275	*e*Pn	Pn	20 11 37.6	-0.2
WCI	**Wyandotte Cave**	4.29	52	*e*Pn	Pn	20 11 38.8	+0.6
W50A	**Signal Mountai**	4.31	94	*e*Pn	Pn	20 11 39.1	+0.6
T49A	**Edmonton**	4.32	69	*e*Pn	Pn	20 11 38.8	+0.3
V50A	**Pikevile**	4.45	88	P	Pn	20 11 40.2	-0.2
	baz=271						
Z50A	**Ashland**	4.51	120	*e*Pn	Pn	20 11 40.7	-0.6
Z50A	**Ashland**	4.51	120	P	Pn	20 11 41.0	-0.4
	baz=303						
CPCT	**Cooper Cave**	4.93	90	*e*Pn	Pn	20 11 47.0	0.0
V51A	**Loudon**	5.06	86	*e*Pn	Pn	20 11 47.4	-1.4
N41A	**Harden Midland**	5.07	357	*e*Pn	Pn	20 11 48.6	-0.3
N41A	**Harden Midland**	5.07	357	P	Pn	20 11 48.6	-0.3
	baz=177						
SFIN	**Lafayette**	5.47	29	*e*Pn	Pn	20 11 54.1	-0.2
S51A	**Beattyville**	5.95	68	*e*Pn	Pn	20 12 00.8	-0.2

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*JMA **17** 20:11:45.6±0.2, 43°.49N×147°.48E, h37^{km}, M2.8*

SKHL 17 20:11:41.5±0.5**, 43°.45N×147°.73E, h39**^{km}±2^{km}**, mb3.5**/1**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	1.45	267	P	Pn	20 12 07.6	+2.4
NEM2				*e*S	Sn	20 12 23.9	+1.0
YUK	**Yuzh-Kuril'sk**	1.48	294	*e*P	Pn	20 12 05.0	-0.5
YUK				*e*S	Sn	20 12 23.0	-0.5
YUK				A	A	20 12 24.0	
	70nm,0.2s						
YUK				A	A	20 12 24.0	
	60nm,0.2s						
YUK	**Yuzh-Kuril'sk**	1.48	294	*e*P	Pn	20 12 05.0	-0.5
YUK				*e*S	Sn	20 12 23.0	-0.5
YUK				A	A	20 12 24.0	
	70nm,0.2s						
YUK				A	A	20 12 24.0	
	60nm,0.2s						
GRPR	**Tuman**	1.52	292	*e*P	Pn	20 12 06.0	-0.1
GRPR				*e*S	Sn	20 12 24.0	-0.7
GRPR				A	A	20 12 25.0	
	120nm,0.3s						
GRPR				A	A	20 12 25.0	
	100nm,0.3s						
GRPR	**Tuman**	1.52	292	*e*P	Pn	20 12 06.0	-0.1
GRPR				*e*S	Sn	20 12 24.0	-0.7
GRPR				A	A	20 12 25.0	
	120nm,0.3s						
GRPR				A	A	20 12 25.0	
	100nm,0.3s						
LAGR	**Lagunnoye**	1.53	294	*e*S	Sn	20 12 23.0	-2.0
LAGR	**Lagunnoye**	1.53	294	*e*S	Sn	20 12 23.0	-2.0
KUR	**Kuril'sk**	1.79	3	*e*P	Pn	20 12 10.0	+0.2
KUR				AMB	AMB	20 12 10.0	
	6.0nm,0.2s						
KUR				AMB	AMB	20 12 10.0	
	10.0nm,0.2s						
KUR				*e*S	Sn	20 12 30.0	-1.2
KUR				A	A	20 12 31.0	
	120nm,0.3s						
KUR				A	A	20 12 31.0	
	70nm,0.3s						
KUR	**Kuril'sk**	1.79	3	*e*P	Pn	20 12 10.0	+0.2
KUR				AMB	AMB	20 12 10.0	
	6.0nm,0.2s						
KUR				AMB	AMB	20 12 10.0	
	10.0nm,0.2s						
KUR				*e*S	Sn	20 12 30.0	-1.2
KUR				A	A	20 12 31.0	
	120nm,0.3s						
KUR				A	A	20 12 31.0	
	70nm,0.3s						
JKHN	**Kushirohamanak**	1.91	260	P	Pn	20 12 14.5	+3.0
JKHN				*e*S	Sn	20 12 36.1	+1.8
JRA	**Rausu**	1.95	285	P	Pn	20 12 14.4	+2.3
JRA				*e*S	Sn	20 12 36.2	+0.9
JNSB	**Nemuroshibetsu**	2.01	280	P	Pn	20 12 15.7	+2.9
JNSB				*e*S	Sn	20 12 37.8	+1.2
JNK	**Nakash**	2.19	275	P	Pn	20 12 18.2	+2.8
JNK				*e*S	Sn	20 12 41.7	+0.4
JAR	**Ashorobuto**	2.89	268	P	Pn	20 12 28.4	+3.4
JAR				*e*S	Sn	20 13 00.1	+1.6
JOB	**Onbets**	2.90	260	*e*S	Sn	20 13 00.4	+1.7
JCH	**Churui**	3.31	257	P	Pn	20 12 34.0	+3.3
JCH				*e*S	Sn	20 13 09.3	+0.5
JNBK	**Urakawa-nobuka**	3.84	254	P	Pn	20 12 41.0	+3.0
JNBK				*e*S	Sn	20 13 23.1	+1.2

MEX 17 20:15:41.6±0.3**, 17°.10N×99°.76W, h40**^{km}±13^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.49	263	*e*P	Pn	20 15 50.6	-1.5
CAIG				*e*S	Sn	20 15 57.5	-2.1
MEIG	**Mezcala**	0.83	9	*i* P	Pn	20 15 55.7	-1.2
MEIG				*i* S	Sn	20 16 06.2	-1.8
TLIG	**Tlapa**	1.23	68	*i* P	Pn	20 16 00.5	-1.9
TLIG				*i* S	Sn	20 16 15.1	-2.8
ARIG	**Puente Sto Nin**	1.30	335	*e*P	Pn	20 16 01.6	-1.7
ARIG				*e*S	Sn	20 16 16.8	-2.6
PLIG	**Platanillo**	1.30	11	*e*P	Pn	20 16 01.7	-1.7
PLIG				*i* S	Sn	20 16 17.9	-1.8

ZUR 17 20:37:41.2, 47°.42N×9°.32E, h4^{km}**, MLh0.6**/6**, 2C-2D, Error ellipse: s-maj=1.6km s-min=0.9km az=43.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGT00	**Sennhlsen**	0.01	273	⇑Pg	Pg	20 37 42.2	+0.1
SGT00				Sg	Sg	20 37 42.9	+0.3
SGT01	**Gaiserwald**	0.01	342	Pg	Pg	20 37 42.3	+0.2
SGT01				Sg	Sg	20 37 43.2	+0.4
SGT04	**Schlatt-Haslen**	0.08	166	⇓Pg	Pg	20 37 43.4	+0.5
SGT05	**Eggersriet**	0.09	79	⇑Pg	Pg	20 37 43.6	+0.5
SGT03	**Degersheim**	0.10	235	Pg	Pg	20 37 43.5	+0.2
SGT03				Sg	Sg	20 37 45.7	+1.0
SGT02	**Zihlschlacht**	0.10	331	⇓Pg	Pg	20 37 43.8	+0.4
SGT02				Sg	Sg	20 37 45.8	+1.0
LIENZ	**Kamor/St.Gall**	0.17	138	Pg	Pg	20 37 45.9	+1.3
WILA	**Wila**	0.28	268	Pg	Pg	20 37 47.3	+0.6

ROM 17 20:39:12.5±0.2**, 42°.485N**±0°.009×**13°.30E**±0°.01**, h8**^{km}±1^{km}**, ML0.8**/3**, Error ellipse: s-maj=1.0km s-min=0.7km az=41.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0104	**Madonna delle**	0.13	166	P	Pg	20 39 15.8	+0.5
T0104				S	Sg	20 39 18.4	+1.0
T0104				AML	AML		
	comp=E,38μm,1.1s						
T0104				AML	AML		
	comp=N,39μm,0.3s						
T0104				AML	AML		
	comp=E,38μm,1.1s						
T0104				AML	AML		
	comp=N,39μm,0.3s						
T0104				AML	AML		
	comp=E,38μm,1.1s						
T0104				AML	AML		
	comp=N,39μm,0.3s						
SMA1	**SAN MARTINO**	0.15	11	P	Pg	20 39 16.6	+0.8
SMA1				S	Sg	20 39 19.7	+1.7
SMA1				AML	AML		
	comp=E,280μm,0.3s						
SMA1				AML	AML		
	comp=N,246μm,0.3s						
SMA1				AML	AML		
	comp=N,246μm,0.3s						
SMA1				AML	AML		
	comp=E,280μm,0.3s						
SMA1				AML	AML		
	comp=N,246μm,0.3s						
SMA1				AML	AML		
	comp=E,280μm,0.3s						
LNSS	**Leonessa**	0.22	302	P	Pg	20 39 17.4	+0.4
LNSS				S	Sg	20 39 21.3	+1.2
LNSS				AML	AML		
	comp=E,45μm,0.2s						
LNSS				AML	AML		
	comp=N,36μm,0.3s						
LNSS				AML	AML		
	comp=N,36μm,0.3s						
LNSS				AML	AML		
	comp=E,45μm,0.2s						
LNSS				AML	AML		
	comp=N,36μm,0.3s						
LNSS				AML	AML		
	comp=E,45μm,0.2s						
TERO	**Teramo**	0.27	59	P	Pg	20 39 18.0	+0.2
TERO				S	Sg	20 39 22.5	+1.1
NRCA	**Norcia**	0.37	339	S	Sg	20 39 26.0	+1.2
ARRO	**Arrone**	0.40	284	S	Sg	20 39 26.0	+0.4
VCEL	**Villa Celiera**	0.41	102	P	Pg	20 39 21.3	+0.7
VCEL				S	Sb	20 39 28.1	-0.5
FDMO	**Fiordimonte**	0.57	345	P	Pg	20 39 22.5	-1.0
MOMA	**Monte Martano**	0.62	301	S	Sb	20 39 34.0	-0.6
SNTG	**Esanatoglia**	0.81	341	S	Sb	20 39 40.0	0.0
FSSB	**Fossombrone**	1.27	343	S	Sb	20 39 53.0	0.0
MELA	**Melanico ??? S**	1.57	119	S	Sn	20 39 58.0	-3.1

MEX 17 20:40:38.3±0.3**, 16°.90N×100°.34W, h24**^{km}±3^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.17	25	*e*P	Pb	20 40 42.4	-1.1
CAIG				*e*S	Sb	20 40 45.5	-1.5
MEIG	**Mezcala**	1.23	34	*i* P	Pn	20 40 56.9	-3.2
MEIG				*i* S	Sn	20 41 12.2	-3.9
ARIG	**Puente Sto Nin**	1.38	360	*e*P	Pn	20 40 59.2	-2.8
ARIG				*e*S	Sn	20 41 15.6	-3.9
PLIG	**Platanillo**	1.69	28	*e*P	Pn	20 41 03.8	-2.6
PLIG				*e*S	Sn	20 41 23.8	-3.5

IDC 17 20:44:55.1±2.4**, 3°.44S×126°.74E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.3**/41**, mbtmp3.4**/4**, ML3.0**/1**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.4**/17**, Error ellipse: s-maj=362.2km s-min=24.6km az=66.0, Buru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	18.00	156	P	Pn	20 49 07.2	+0.2
	0.1nm,0.3s,baz=334,slow=12,SNR=1.7						
ASAR	**Alice Springs**	21.27	162	P	P	20 49 43.2	-0.1
	1.7nm,0.7s,baz=343,slow=12,SNR=18						
PSI	**Prapat**	28.48	282	LR	LR	21 05 43.1	
	comp=Z,85nm,18.4s,baz=216,slow=44						
MKAR	**Makanchi Array**	63.49	327	P	P	20 55 27.1	-0.1
	0.3nm,0.5s,baz=122,slow=7.3,SNR=2.5						
KURBB	**Kurchatov Arra**	67.80	329	P	P	20 55 54.9	0.0
	0.2nm,0.6s,baz=129,slow=5.9,SNR=3.3						

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*ISCJB **17** 20:46:12.4±0.7, 29°.30N±0°.06×139°.6E±0°.2, h450^{km}, mb3.4/2, Error ellipse: s-maj=18.1km s-min=6.7km az=164.9*

*IDC **17** 20:46:12.8±1.5, 29°.26N×139°.17E, h432^{km}±36^{km}, mb3.1/2, mb1 3.2/5, mb1mx2.6/53, mbtmp3.9/5, Error ellipse: s-maj=157.9km s-min=22.4km az=83.0*

*JMA **17** 20:46:12.2±0.1, 29°.39N×139°.85E, h464^{km}, M3.6*

ISC 17 20:46:13.3±1.0**, 29°.33N**±0°.08×**139°.7E**±0°.2**, h450**^{km}**, n15, σ0**^{s}**.90**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	3.15	134	P	**P**	**20 47 21.3**	**-0.2**
CBIJ				S	**S**	**20 48 15.9**	**-1.0**
JHH2	**Haha-jima-NKT2**	3.49	140	S	**S**	**20 48 21.5**	**-0.3**
JHJ	**Hachijo jima 2**	3.78	2	P	**P**	**20 47 27.1**	**+0.7**
	3.7nm,0.3s,baz=204,slow=2.4,SNR=3.6						
JHJ				S	**S**	**20 48 24.1**	**-2.0**
	8.9nm,0.3s,baz=70,slow=21,SNR=2.0						
BSO1	**Boso 1**	5.43	12	S	**S**	**20 48 53.4**	**+0.4**
BSO3	**Boso 3**	5.51	7	S	**S**	**20 48 54.7**	**-0.2**
JIE	**Ise**	5.63	334	P	**P**	**20 47 44.9**	**+1.2**
JKN2	**Miekihoku**	5.68	330	P	**P**	**20 47 45.0**	**+0.8**
BSO4	**Boso 4**	5.68	6	S	**S**	**20 48 57.5**	**-0.8**
JRY	**Ryogami san**	6.70	355	P	**P**	**20 47 54.8**	**+0.1**
JAG	**Ashikaga**	7.08	359	P	**P**	**20 47 57.6**	**-1.1**
MJAR	**Matsushiro Arr**	7.30	351	P	**P**	**20 48 00.2**	**-0.8**
	0.2nm,0.3s,baz=175,slow=11,SNR=11						
JHO	**Hitachi**	7.31	6	P	**P**	**20 48 01.9**	**+0.8**
USRK	**Ussuriysk Ar.**	16.05	340	P	**P**	**20 49 35.4**	**0.0**
	0.6nm,0.3s,baz=145,slow=8.9,SNR=12						
WRA	**Warramunga Arr**	49.25	187	P	**P**	**20 54 19.1**	**-0.3**
	1.9nm,1.1s,baz=358,slow=6.9,SNR=10						
ARCES	**ARCESS Array B**	70.70	340	P	**P**	**20 56 42.7**	**+0.6**
	1.3nm,0.8s,baz=64,slow=8.1,SNR=4.1						

ISC 17 20:47:26.8±1.2**, 50°.14N**±0°.06×**19°.22E**±0°.05**, h0**^{km}**, n5, σ0**^{s}**.71**/10**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.38	78	*e*Pg	**Pg**	**20 47 34.2**	**+0.1**
OJC				*e*Sg	**Sg**	**20 47 39.0**	**-0.1**
LANS	**Liptovska Anna**	1.00	171	*e*PG	**Pg**	**20 47 46.3**	**+0.3**
LANS				*e*SG	**Sg**	**20 47 59.0**	**+0.1**
NIE	**Niedzica**	1.01	135	*e*Pg	**Pb**	**20 47 47.3**	**+0.2**
NIE				*e*Sg	**Sb**	**20 48 01.9**	**+1.0**
MORC	**Moravsky Berou**	1.14	252	*e*PG	**Pb**	**20 47 49.8**	**+0.4**
MORC				*e*SG	**Sb**	**20 48 05.2**	**+0.4**
VYHS	**Vyhne**	1.66	189	*e*PN	**Pn**	**20 47 56.7**	**-0.5**
VYHS				*e*SN	**Sn**	**20 48 18.0**	**-1.3**

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*NEIC **17** 21:28:43.6±0.0, 54°.93N×135°.55W, h10^{km}, ML2.6(OTT), After OTT.*

PGC 17 21:28:43.6±0.1**, 54°.93N×135°.55W, h10**^{km}**, ML2.6**/6**, 236km south of Sitka, Ak West Of Vancouver Island, West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDB	**Naden**	1.81	122	*e*Pn	Pn	21 29 14.7	-0.2
NDB				*e*Sg	Sb	21 29 40.5	+0.8
NDB	**Naden**	1.81	122	Pn	Pn	21 29 14.7	-0.2
NDB				Sg	Sb	21 29 40.5	+0.8
WRAK	**Wrangell Islan**	2.35	49	*e*Pn	Pn	21 29 21.6	-0.6
DIB	**Dawson Inlet,**	2.51	132	*e*Pn	Pn	21 29 25.0	+0.6
DIB				*e*Pn	Pb	21 29 25.3	-3.4
DIB				*e*Sn	Sn	21 29 53.9	-1.1
DIB				*e*Sn	Sb	21 29 54.4	-5.2
DIB				*e*Sg	Sg	21 30 01.8	-2.4
DIB	**Dawson Inlet,**	2.51	132	Pn	Pn	21 29 25.0	+0.6
DIB				Sn	Sn	21 29 53.9	-1.1
DIB				Sg	Sb	21 30 01.8	+2.2
MOBC	**Moresby Island**	2.77	129	*e*Pn	Pn	21 29 29.8	+1.7
MOBC				*e*Sn	Sn	21 30 00.0	-1.6
MOBC				*e*Sg	Sb	21 30 09.1	+1.9
HG1B	**Mitchell Dam**	2.85	133	Sg	Sg	21 30 13.3	-1.7
BNB	**Barry Inlet**	3.27	135	*e*Sg	Sb	21 30 24.7	+3.3
BNB	**Barry Inlet**	3.27	135	Sg	Sb	21 30 24.7	+3.3
HG3B	**Hotspring**	3.40	132	Sg	Sb	21 30 28.3	+3.2
HG4B	**Hotspring**	3.71	134	Sg	Sg	21 30 38.4	-4.1

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*NEIC **17** 21:51:51.4±3.0, 13°.07N×91°.83W, h36^{km}±6^{km}, mb4.0/29, Error ellipse: s-maj=12.3km s-min=7.8km az=73.0*

*IDC **17** 21:51:52.3±1.8, 13°.55N×91°.64W, h0^{km}, mb3.9/6, mb1 4.2/9, mb1mx3.8/43, mbtmp3.9/9, ML3.8/3, MS3.2/6, Ms1 3.2/6, ms1mx2.9/31, Error ellipse: s-maj=33.8km s-min=23.8km az=6.0*

*GCG **17** 21:51:52.1±1.0, 13°.39N×91°.87W, h25^{km}±392^{km}, MD4.3*

*SNET **17** 21:51:57.0±1.5, 13°.54N×91°.51W, h30^{km}, ML4.1*

*MEX **17** 21:51:58.8±0.9, 13°.70N×92°.58W, h2^{km}±164^{km}, MD4.2*

ISC 17 21:51:53.2±1.9**, 13°.61N**±0°.09×**91°.60W**±0°.06**, h27**^{km}±13^{km}**, n67, σ2**^{s}**.57**/66**, mb4.1**/16**, MS3.1**/6**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	1.09	2	*e*P	**Pn**	**21 52 15.9**	**+2.9**
FUG	**Fuego 3**	1.11	42	*e*P	**Pb**	**21 52 16.9**	**+2.9**
PCG	**Pacaya**	1.24	51	*e*P	**Pb**	**21 52 18.9**	**+2.7**
THIG		1.44	334	*e*Pn	**Pb**	**21 52 20.4**	**+1.0**
THIG		1.44	334	*e*P	**Pb**	**21 52 20.2**	**+0.7**
THIG				*i* S	**Sb**	**21 52 35.3**	**-2.1**
NBG	**Las Nubes**	1.56	51	*e*P	**Pb**	**21 52 24.3**	**+2.6**
NBG				*e*S	Sb	21 52 48.6	+7.5
APG	**El Apazote**	1.77	38	Pn	**Pb**	**21 52 26.6**	**+1.3**
	79nm,0.3s,baz=178,slow=23,SNR=150						
APG				Sn	**Sb**	**21 52 52.0**	**+4.9**
	67nm,0.3s,baz=72,slow=20,SNR=8.3						
RTR	**El Retiro**	1.92	81	*e*P	**Pb**	**21 52 27.1**	**-0.7**
CEVE	**Cerro Verde**	1.94	83	*e*P	**Pb**	**21 52 27.3**	**-0.8**
CEVE				*e*S	**Sb**	**21 52 51.6**	**-0.2**
CEVE				IAML		21 53 01.3	
	comp=Z,2μm,0.5s						
SBLS	**San Blas**	1.94	83	*e*P	**Pb**	**21 52 27.1**	**-1.0**
SNJE	**San Jose**	1.96	82	*e*P	**Pb**	**21 52 27.4**	**-1.0**
CEDA	**San Andres**	2.16	85	*e*P	**Pb**	**21 52 30.8**	**-0.8**
CEDA				IAML		21 53 11.6	
	comp=Z,1μm,0.7s						
MTO3	**Montecristo**	2.31	70	*e*P	**Pb**	**21 52 33.1**	**-1.4**
LOMA	**Loma Larga**	2.37	89	*e*S	**Sb**	**21 53 02.4**	**-1.6**
MRL	**Marmol**	2.37	52	*e*P	**Pb**	**21 52 34.8**	**-0.6**
MRL	**Marmol**	2.37	52	*e*P	**Pb**	**21 52 36.0**	**+0.7**
PAVA	**Las Pavas**	2.59	87	*e*P	**Pb**	**21 52 36.6**	**-2.5**
PCIG		2.60	323	*e*Pn	**Pn**	**21 52 35.7**	**+2.1**
PCIG		2.60	323	*e*P	**Pn**	**21 52 31.9**	**-1.6**
PCIG				*e*S	**Sn**	**21 52 56.2**	**-8.1**
CCIG	**Comitan**	2.71	349	*e*Pn	**Pb**	**21 52 40.8**	**-0.3**
CCIG				*e*Pn	Pn	21 52 41.0	+5.9
CCIG				*e*		21 52 58.8	
CCIG	**Comitan**	2.71	349	*e*P	**Pb**	**21 52 39.7**	**-1.4**
CCIG				*i* S	**Sb**	**21 53 09.6**	**-4.3**
CSGN	**Cosiguina Volc**	3.99	99	*e*Pn	**Pn**	**21 52 55.9**	**+3.1**
CSGN				*e*Sn	Sn	21 53 30.1	-8.6
TGUH	**Tegucigalpa,Un**	4.23	83	*e*Pn	**Pn**	**21 52 56.3**	**+0.3**
CMIG	**Matias Romero**	4.69	318	Pn	**Pn**	**21 53 05.2**	**+2.9**
	comp=Z,2.4nm,0.3s,baz=139,slow=10,SNR=16						
CMIG				Sn	**Sn**	**21 53 57.9**	**+2.1**
	comp=Z,2.9nm,0.3s,baz=70,slow=17,SNR=3.5						
CMIG	**Matias Romero**	4.69	318	*e*Pn	**Pn**	**21 53 05.0**	**+2.7**
CMIG	**Matias Romero**	4.69	318	*i* P	**Pn**	**21 52 59.6**	**-2.7**
CMIG				*e*S	Sn	21 53 45.7	-10
ESTN	**Estel**	5.12	95	*e*Pn	**Pn**	**21 53 09.3**	**+1.0**
ESPN	**Las Esperanzas**	7.26	100	*e*Pn	**Pn**	**21 53 36.8**	**-0.8**
JTS	**Las Juntas de**	7.30	116	Pn	**Pn**	**21 53 41.2**	**+3.1**
	comp=Z,1.0nm,0.3s,baz=351,slow=21,SNR=6.5						
JTS				Sn	**Sn**	**21 54 59.8**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=331,slow=19,SNR=1.8						
JTS				Lg	Lg	21 55 35.1	
	comp=Z,0.4nm,0.3s,baz=300,slow=20,SNR=3.8						
JTS	**Las Juntas de**	7.30	116	*e*Pn	Pn	21 53 34.3	-3.9
JTS				*e*Sn	Sn	21 54 52.6	-7.6
TEIG	**Tepich**	7.31	25	*e*Pn	Pn	21 53 43.0	+4.7
TLIG	**Tlapa**	7.77	301	*e*Pn	**Pn**	**21 53 45.9**	**+1.1**
059A	**Moore Haven**	16.50	35	*e*Pn	**Pn**	**21 55 38.4**	**-4.5**
	comp=Z,50nm,0.9s						
JCT	**Junction City**	18.41	337	*e*P	**P**	**21 56 01.8**	**-4.7**
	comp=Z,2.6nm,0.8s						
658A	**Bunnell**	18.43	30	*e*P	**Pn**	**21 56 03.2**	**-3.6**
	comp=Z,77nm,1.1s						
HPIG		18.68	317	*e*P	**P**	**21 56 10.1**	**+0.4**
	comp=Z,4.3nm,1.0s						
WHTX	**Lake Whitney,**	19.07	345	*e*P	**P**	**21 56 11.0**	**-2.7**
	comp=Z,5.4nm,0.7s						
TIGA	**Tifton**	19.21	21	*e*P	**P**	**21 56 11.2**	**-4.1**
	comp=Z,10nm,0.9s						
TXAR	**Lajitas Array**	19.23	326	P	**Pn**	**21 56 20.5**	**+3.8**
	comp=Z,0.2nm,0.3s,baz=151,slow=11,SNR=9.5						
TX31	**Lajitas Ar. Si**	19.23	326	*e*P	**P**	**21 56 13.9**	**-1.7**
	comp=Z,3.8nm,1.0s						
H06E1	**SOCORRO T-PHAS**	19.25	288	T	T	22 16 14.1	
	SNR=9.2						
LRAL	**Lakeview Retre**	19.79	11	*e*P	**P**	**21 56 18.5**	**-3.0**
	comp=Z,3.6nm,0.6s						
152A	**Waverly Hall**	19.99	17	*e*P	**P**	**21 56 21.0**	**-2.7**
	comp=Z,6.0nm,0.8s						
Y49A	**Blount Mountai**	20.70	12	*e*P	**P**	**21 56 28.6**	**-2.9**
	comp=Z,3.3nm,0.8s						
MIAR	**Mount Ida**	20.92	355	*e*P	**P**	**21 56 31.7**	**-2.1**
	comp=Z,4.9nm,1.1s						

X37A	Clayton	21.16	351	eP	P	21 56 36.8	+0.3
	comp=Z,9.9nm,1.1s						
W39A	Magazine	21.58	355	eP	P	21 56 38.9	-2.0
	comp=Z,3.3nm,0.8s						
MNTX	Cornudas Mount	22.00	327	eP	P	21 56 46.1	+0.7
	comp=Z,5.3nm,0.8s						
WMOK	Wichita Mounta	22.02	344	eP	P	21 56 45.7	+0.1
	comp=Z,2.6nm,1.0s						
UTMT	University of	22.77	6	eP	P	21 56 52.6	-1.0
	comp=Z,115nm,0.5s						
TKL	Tuckaleechee C	23.06	16	P	P	21 56 59.1	+2.5
	comp=Z,5.6nm,0.7s,baz=180,slow=8.1,SNR=4.6						
TKL				LR	LR	22 06 35.6	
	comp=Z,71nm,21.5s,baz=228,slow=38						
PBMO	Poplar Bluff	23.09	2	eP	P	21 56 56.4	-0.6
	comp=Z,7.5nm,1.0s						
V53A	Saluda	23.35	18	eP	P	21 56 57.2	-2.4
	comp=Z,3.6nm,0.8s						
KMSC	Kings Mountain	23.36	22	eP	P	21 56 58.3	-1.4
	comp=Z,23nm,0.4s						
CCM	Cathedral Cave	24.35	1	eP	P	21 57 07.5	-1.5
	comp=Z,6.1nm,0.6s						
OBIP	Obispado Ponce	24.44	76	eP	P	21 57 08.4	-1.6
	comp=Z,16nm,1.0s						
SJG	San Juan	24.88	76	LR	LR	22 07 52.4	
	comp=Z,92nm,19.7s,baz=216,slow=38						
ANMO	Albuquerque	25.13	330	P	P	21 57 21.2	+4.9
	comp=Z,1.0nm,0.6s,baz=121,slow=5.9,SNR=3.7						
ANMO	Albuquerque	25.13	330	eP	P	21 57 14.6	-1.7
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	32.93	335	P	P	21 58 27.3	+1.5
	comp=Z,0.3nm,0.3s,baz=137,slow=9.4,SNR=2.9						
NVAR	Mina Array Bea	34.21	321	P	P	21 58 42.0	+5.0
	comp=Z,1.2nm,0.7s,baz=129,slow=7.7,SNR=8.4						
NVAR				LR	LR	22 14 56.9	
	comp=Z,33nm,20.6s,baz=103,slow=40						
ULM	Lac du Bonnet	36.70	355	LR	LR	22 15 54.3	
	comp=Z,21nm,18.2s,baz=227,slow=39						
SCHQ	Schefferville	45.45	20	LR	LR	22 20 01.1	
	comp=Z,89nm,20.2s,baz=278,slow=37						
YKA	Yellowknife Ar	51.49	347	P	P	22 00 58.2	+2.0
	comp=Z,1.0nm,0.5s,baz=147,slow=8.4,SNR=6.6						
ILAR	Eielson Array	63.35	337	P	P	22 02 22.1	+2.3
	comp=Z,2.1nm,0.9s,baz=160,slow=4.5,SNR=14						
NOA	NORSAR Array B	84.30	28	LR	LR	22 42 01.5	
	comp=Z,6.5nm,18.4s,baz=345,slow=36						
CMAR	Chiang Mai Arr	146.48	342	PKPbc	PKiKP	22 11 36.3	+0.4
	comp=Z,2.4nm,0.6s,baz=336,slow=3.5,SNR=12						

MEX 17 21:59:33.4±0.4**, 16°.40N×98°.38W, h13**^{km}±4^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.17	351	eP	Pb	21 59 51.6	-3.9
TLIG				eS	Sb	22 00 05.9	-4.7
VHO	Vista Hermosa	1.71	67	i P	Pn	22 00 00.2	-2.9
VHO				i S	Sn	22 00 19.5	-5.5
CAIG	El Cayaco	1.92	290	eP	Pn	22 00 02.2	-3.6
CAIG				eS	Sn	22 00 24.9	-4.9
MEIG	Mezcala	1.92	322	i P	Pn	22 00 03.3	-2.7
MEIG				i S	Sn	22 00 25.4	-4.7
PLIG	Platanillo	2.25	332	i P	Pn	22 00 06.7	-3.7
PLIG				i S	Sn	22 00 33.1	-5.1
YAIG	Yautepec	2.53	345	i P	Pn	22 00 11.0	-3.4
YAIG				i S	Sn	22 00 41.4	-3.8

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*IDC **17** 22:00:04.2±0.9, 37°.00N×27°.97E, h0^{km}, mb3.8/6, mb1 3.9/12, mb1mx3.6/45, mbtmp3.8/12, ML3.9/6, MS2.9/3, Ms1 2.9/3, ms1mx2.3/38, Error ellipse: s-maj=18.3km s-min=15.3km az=137.0*

*ISK **17** 22:00:05.4, 37°.07N×27°.97E, h10^{km}, ML3.8/19*

*THE **17** 22:00:05.9, 37°.05N×27°.97E, h3^{km}±1^{km}, ML3.7/7, Error ellipse: s-maj=1.8km s-min=0.6km az=117.0*

*DDA **17** 22:00:05.4, 37°.06N×27°.96E, h24^{km}±1^{km}, ML3.9*

*ISCJB **17** 22:00:05.7±0.3, 37°.07N±0°.01×27°.99E±0°.02, h13^{km}±2^{km}, mb3.6/6, MS2.8/1, Error ellipse: s-maj=2.5km s-min=2.1km az=5.4*

*ATH **17** 22:00:06.3, 37°.06N×27°.92E, h26^{km}±1^{km}, ML3.5/12, Error ellipse: s-maj=1.2km s-min=0.6km az=222.0*

*NIC **17** 22:00:08.1±0.3, 37°.04N×27°.94E, h32^{km}, mb4.3, ML3.9*

ISC 17 22:00:06.0±0.9**, 37°.05N**±0°.02×**28°.00E**±0°.02**, h12**^{km}±6^{km}**, n169,** σ1^{s}**15**/195**, mb3.8**/6**, 9C-10D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.25	69	PG	Pg	22 00 11.3	+0.1
YER				SG	Sg	22 00 15.2	+0.4
YER	Yerkesik	0.25	69	P	Pg	22 00 11.8	+0.6
YER				S	Sg	22 00 15.0	+0.2
MRSB	Marmaris-Mugla	0.37	154	PG	Pg	22 00 13.3	-0.1
DATC	Datca-Mugla	0.39	223	PG	Pg	22 00 13.6	-0.2
BDRM	Kayabasi	0.44	273	i P	Pg	22 00 15.0	+0.2
BDRM				i S	Sb	22 00 21.6	-0.7
BDRM				IAML_P			
	comp=Z,81µm,0.2s						
DAT	Datca	0.46	227	PG	Pg	22 00 14.8	-0.3
DAT	Datca	0.46	227	i P	Pg	22 00 15.8	+0.6
DAT				IAML_P			
	comp=Z,27µm,0.2s						
TURN	Turunc	0.52	109	PG	Pg	22 00 13.1	-3.0
TURN				SG	Sg	22 00 18.7	-4.3
BODT	Bodrum	0.55	272	PG	Pg	22 00 16.2	-0.6
BODT	Bodrum	0.55	272	P	Pg	22 00 16.4	-0.4
BODT				S	Sg	22 00 24.1	+0.1
DALY	Dalyan (Mula)	0.57	113	PG	Pg	22 00 17.6	+0.4
DALY	Dalyan (Mula)	0.57	113	i P	Pg	22 00 17.9	+0.7
DALY				i S	Sb	22 00 27.4	+1.3
DALY				IAML_P			
	comp=Z,39µm,0.3s						
AYDN	Tasoluk	0.62	351	i P	Pg	22 00 18.2	+0.1
AYDN				i S	Sb	22 00 26.4	-1.2
NISR	Nisiros	0.82	238	P	Pg	22 00 21.5	-0.4
NISR				S	Sg	22 00 33.3	+0.7
	comp=Z,7µm,0.3s						
NISR	Nisiros	0.82	238	P	Pg	22 00 21.9	0.0
NISR				S	Sg	22 00 33.1	+0.5
NISR				AML	AML	22 00 35.3	
	comp=E,19981µm,0.3s						
NISR				AML	AML	22 00 41.6	
	comp=N,8046µm,0.4s						
ARG	Arkhangelos	0.83	173	PG	Pg	22 00 22.3	+0.2
ARG	Arkhangelos	0.83	173	P	Pg	22 00 21.7	-0.4
ARG				S	Sn	22 00 35.5	-0.3
	comp=N,10µm,0.5s						
ARG	Arkhangelos	0.83	173	P	Pg	22 00 22.1	0.0
ARG				S	Sn	22 00 35.6	-0.1
ARG				AML	AML	22 00 38.5	
	comp=N,25314µm,0.6s						
ARG				AML	AML	22 00 42.0	
	comp=E,16808µm,0.4s						
TAVA	DENIZLI_Tavas	0.84	60	i P	Pg	22 00 22.4	+0.1
TAVA				IAML_P			
	comp=Z,32µm,0.2s						
GCAM	G?zelcaml?	0.89	317	PG	Pg	22 00 22.7	-0.6
GCAM	G?zelcaml?	0.89	317	i P	Pn	22 00 23.7	-0.7
GCAM				i S	Sb	22 00 34.8	-0.4
GCAM				IAML_P			
	comp=Z,4µm,0.1s						
AYDB	Zeytinkoy-Aydi	0.90	355	PG	Pg	22 00 23.2	-0.3
FETY	Fethiye	0.96	115	PG	Pb	22 00 24.9	+0.2
FETY	Fethiye	0.96	115	P	Pb	22 00 24.8	+0.1
FETY				S	Sn	22 00 38.7	-0.3
FETY	Fethiye	0.96	115	i P	Pn	22 00 25.8	+0.5
FETY				IAML_P			
	comp=Z,8µm,0.4s						
DENT	Denizli	1.09	49	PN	Pb	22 00 26.2	-0.6
SMG	Samos	1.14	306	P	Pb	22 00 27.1	-0.5
SMG				S	Sb	22 00 41.4	-0.9
	comp=Z,3µm,0.4s						
SMG	Samos	1.14	306	P	Pb	22 00 27.0	-0.5
SMG				S	Sb	22 00 41.8	-0.6
SMG				AML	AML	22 00 46.0	
	comp=E,4486µm,0.6s						
SMG				AML	AML	22 00 46.6	
	comp=N,8355µm,0.4s						
GOLH	Golhisar	1.27	81	i P	Pg	22 00 31.9	+1.5
GOLH				IAML_P			
	comp=Z,7µm,0.2s						
MANT	Manisa	1.51	17	i P	Pb	22 00 33.9	-0.2
AKAS	Kas	1.53	122	i P	Pg	22 00 36.3	+0.9
AKAS				IAML_P			
	comp=Z,54µm,0.3s						
BLCB	Balcova	1.54	331	PN	Pn	22 00 32.5	-0.7
KSL	Kastellorizon	1.56	124	P	Pg	22 00 36.1	+0.2
KSL				AML	AML	22 01 06.7	
	comp=E,2734µm,0.4s						
KSL				AML	AML	22 01 08.9	
	comp=N,1730µm,1.1s						
KULA	Kula-Manisa	1.56	20	PN	Pn	22 00 33.7	+0.1
KULA	Kula-Manisa	1.56	20	P	Pn	22 00 33.6	0.0
KULA				S	Sb	22 00 53.9	-0.7
KARP	Karpathos	1.64	205	PN	Pn	22 00 34.9	+0.2
KARP	Karpathos	1.64	205	P	Pn	22 00 34.9	+0.2
KARP				S	Sn	22 00 55.1	-0.6
	comp=N,3µm,0.4s						
KARP	Karpathos	1.64	205	P	Pn	22 00 34.9	+0.2
KARP				AML	AML	22 00 56.4	
	comp=E,5696µm,0.5s						
KARP				AML	AML	22 01 00.5	
	comp=N,6437µm,0.4s						
AMGA	Amorgos Island	1.70	263	P	Pn	22 00 35.0	-0.5
AMGA				S	Sn	22 00 57.0	-0.1
	comp=N,802nm,0.5s						
AMGA	Amorgos Island	1.70	263	P	Pn	22 00 35.0	-0.5
AMGA				AML	AML	22 01 10.0	
	comp=E,1182µm,0.6s						
AMGA				AML	AML	22 01 12.7	
	comp=N,1608µm,0.6s						
URLA	Izmir	1.72	320	PN	Pn	22 00 35.8	0.0
BRDR	BURDUR-Merkez	1.77	68	i P	Pb	22 00 38.4	0.0
BRDR				IAML_P			
	comp=Z,6µm,0.2s						
KHAL	Karahalli	1.78	41	i P	Pn	22 00 37.1	+0.4
KHAL				IAML_P			
	comp=Z,3µm,0.2s						
AKHS	Akhisar	1.84	356	i P	Pn	22 00 37.7	+0.3
AKHS				IAML_P			
	comp=Z,13µm,0.1s						
USAK	Uak-Merkez	1.85	26	i P	Pb	22 00 38.8	-1.0
KORT	Korkueli	1.89	91	i P	Pg	22 00 42.3	+0.1
KORT				IAML_P			
	comp=Z,5µm,0.3s						
APE	Apeiranthos	1.97	271	P	Pn	22 00 38.8	-0.5
APE	Apeiranthos	1.97	271	⇑iP	Pn	22 00 39.2	-0.1
APE	Apeiranthos	1.97	271	S	Sn	22 01 04.1	+0.2
APE	Apeiranthos	1.97	271	P	Pn	22 00 39.0	-0.3
AKUM	Antalya-Kumluc	2.02	110	i P	Pg	22 00 44.9	+0.2
AKUM				IAML_P			
	comp=Z,8µm,0.2s						
CHOS	Chios island	2.04	312	P	Pn	22 00 40.1	-0.1
CHOS	Chios island	2.04	312	P	Pn	22 00 40.1	-0.1
CHOS				AML	AML	22 01 19.5	
	comp=N,714µm,0.6s						
CHOS				AML	AML	22 01 22.2	
	comp=E,1086µm,0.5s						
ZEDA	zmir-Bergama	2.05	340	i P	Pn	22 00 40.5	+0.2
DEMI	Demirci	2.07	16	i P	Pn	22 00 41.5	+0.8
KZIL	AFYON_Kizioren	2.09	54	i P	Pn	22 00 42.2	+1.2
THR8	Santorini-Mono	2.12	253	P	Pn	22 00 41.9	+0.7
ISP	Isparta	2.16	68	PN	Pn	22 00 42.6	+0.7
ISP	Isparta	2.16	68	⇑iP	Pn	22 00 43.2	+1.3
ISP	Isparta	2.16	68	S	Sb	22 01 11.5	-0.3
ISP	Isparta	2.16	68	P	Pb	22 00 43.4	-1.6
ISP				AML	AML	22 01 25.2	
	comp=E,481µm,0.9s						
ISP				AML	AML	22 01 30.1	
	comp=N,730µm,1.0s						
SNT2	Vlychada, Sant	2.18	252	P	Pn	22 00 42.1	+0.1
THR3	Thira Island,	2.18	254	P	Pn	22 00 42.9	+0.8
THR6	Thira Island,	2.20	253	P	Pn	22 00 43.1	+0.8
DKL	Dikili	2.20	337	PN	Pn	22 00 41.9	-0.4
THR5	Thira Island,	2.22	254	P	Pn	22 00 43.3	+0.7
STEP	BALIKESIR_Sava	2.34	355	i P	Pn	22 00 44.6	+0.3
GDZ	Gediz	2.35	29	i P	Pn	22 00 45.6	+1.0
ZKR	Zakros	2.41	217	PN	Pn	22 00 45.9	+0.7
ZKR	Zakros	2.41	217	P	Pn	22 00 45.8	+0.6
ZKR				S	Sn	22 01 16.0	+1.4
	comp=N,562nm,0.5s						
ZKR	Zakros	2.41	217	P	Pn	22 00 45.8	+0.6
ZKR				AML	AML	22 01 21.1	
	comp=N,688µm,0.4s						
ZKR				AML	AML	22 01 21.4	
	comp=E,1596µm,0.6s						
SHUT	Suhut-Afyon	2.52	53	PN	Pn	22 00 47.8	+0.9
DURS	Dursunbey	2.58	8	i P	Pn	22 00 47.9	+0.2
PRK	Paraskevi	2.58	329	P	Pn	22 00 48.7	+1.0
PRK				AML	AML	22 01 35.5	
	comp=E,1186µm,0.6s						
PRK				AML	AML	22 01 37.1	
	comp=N,1589µm,0.7s						
NPS	Neapolis	2.62	228	P	Pn	22 00 48.6	+0.4
NPS				S	Sn	22 01 20.3	+0.3
	comp=N,432nm,0.6s						
NPS	Neapolis	2.62	228	P	Pn	22 00 48.6	+0.4
NPS				AML	AML	22 01 25.4	
	comp=E,908µm,0.4s						
NPS				AML	AML	22 01 27.6	
	comp=N,631µm,0.4s						
SIGR	SIGRI	2.74	323	P	Pn	22 00 50.0	+0.2
SIGR	SIGRI	2.74	323	P	Pn	22 00 50.0	+0.2
SIGR				AML	AML	22 01 40.5	
	comp=E,459µm,0.7s						
SIGR				AML	AML	22 01 44.2	
	comp=N,455µm,0.7s						
LAST	Lasithi	2.77	228	P	Pn	22 00 51.0	+0.7
LAST	Lasithi	2.77	228	P	Pn	22 00 51.2	+0.9
BAYC	CANAKKALE_Bayr	2.92	338	i P	Pn	22 00 52.9	+0.6
KARY	Karystos	3.00	290	P	Pn	22 00 53.7	+0.4
IDI	Anoyia	3.06	236	Pn	Pn	22 00 54.6	+0.3
	comp=N,4.9nm,0.3s,baz=51,slow=8.7,SNR=27						
IDI				Sn	Sn	22 01 32.5	+1.6
	comp=N,9.5nm,0.3s,baz=150,slow=19,SNR=4.6						
IDI	Anoyia	3.06	236	P	Pn	22 00 55.2	+0.9
EZN	Ezine	3.07	335	⇓iP	Pn	22 00 54.2	-0.1
SIVA	Sivas	3.28	233	P	Pn	22 00 58.3	+1.1
DION	Dionisos Attik	3.39	289	P	Pn	22 00 59.3	+0.6
PTL	Penteli	3.43	288	P	Pn	22 00 59.8	+0.5
VLY	Voula,Athens	3.44	285	P	Pn	22 00 59.9	+0.5
VLY	Voula,Athens	3.44	285	P	Pn	22 00 60.0	+0.5
ATHU	Athens Univers	3.47	287	P	Pn	22 01 00.4	+0.5
VAM	Vamos	3.48	243	P	Pn	22 01 01.0	+1.1
ATH	Athens Observa	3.53	287	P	Pn	22 01 01.5	+0.9
LIA	Limnos Island	3.60	323	P	Pn	22 01 02.0	+0.4
IMMV	Iera Moni Meta	3.61	245	P	Pn	22 01 03.0	+1.3
YLV	Yalova	3.68	17	⇑iP	Pn	22 01 03.1	+0.4
DID	Didima	3.82	278	P	Pn	22 01 04.9	+0.2
MRKA	Markates	3.86	297	P	Pn	22 01 06.0	+0.8
SMTH	Samothraki Isl	3.93	331	P	Pn	22 01 06.2	0.0
SMTH	Samothraki Isl	3.93	331	P	Pn	22 01 06.1	0.0
VIL2	Platees	3.93	289	P	Pn	22 01 06.5	+0.3
KTHA	Kythira Island	4.04	260	P	Pn	22 01 09.2	+1.5
VLI	Veliai	4.07	267	P	Pn	22 01 08.7	+0.6
LOUT	Loutraki	4.10	285	P	Pn	22 01 09.4	+0.9
PPCY	Paphos	4.13	120	P	Pn	22 01 10.4	+1.5
	baz=302						
ALN	Alexandroupoli	4.14	339	P	Pn	22 01 09.0	0.0
ALN	Alexandroupoli	4.14	339	P	Pn	22 01 08.9	-0.1
ACOR	Acrocorinthos	4.17	283	P	Pn	22 01 10.4	+1.0
ALFC	Alefka	4.18	115	P	Pn	22 01 10.8	+1.2
	baz=297						
ALFC				S	Sn	22 01 59.8	+1.5
SMIA	Simia	4.20	297	P	Pn	22 01 11.5	+1.6
PROD	Prodromos	4.22	288	P	Pn	22 01 11.3	+1.1
THAS	Thassos island	4.38	325	P	Pn	22 01 12.4	+0.1
LEF	Lefka	4.41	114	⇑iP	Pn	22 01 13.2	+0.5
RDO	Rodhopi	4.52	336	P	Pn	22 01 14.4	+0.2
RDO	Rodhopi	4.52	336	P	Pn	22 01 14.6	+0.4
OUR	Ouranopolis	4.54	318	P	Pn	22 01 15.3	+0.8
DSF	Desfina	4.54	289	P	Pn	22 01 15.7	+1.0
SZAC	Souni	4.58	118	P	Pn	22 01 16.3	+1.2
	baz=301						
SZAC				S	Sn	22 02 09.3	+1.1
GUR	Goura	4.58	283	P	Pn	22 01 16.2	+1.0
KLV	Kalavryta, Ach	4.75	284	P	Pn	22 01 18.8	+1.3
KAVA	Kavala	4.79	327	P	Pn	22 01 18.1	+0.2
CSS	Mathiatis	4.80	114	P	Pn	22 01 18.9	+0.8
	baz=296						
CSS				S	Sn	22 02 15.5	+1.9
KALE	Kalithea	4.83	288	P	Pn	22 01 20.0	+1.4
ITM	Ithomi	4.85	273	P	Pn	22 01 20.0	+1.1
TRIZ	Trizonia	4.88	287	P	Pn	22 01 21.0	+1.8
AGG	Agios Georgios	4.89	296	P	Pn	22 01 20.8	+1.4
SERG	Sergoula	4.90	288	P	Pn	22 01 21.3	+1.8
LAKA	Lakka	4.92	286	P	Pn	22 01 21.2	+1.4
PYL	PYLOS	5.01	270	P	Pn	22 01 22.0	+1.0
ANX	Ano Chora	5.05	290	P	Pn	22 01 22.9	+1.2
BRTR	Keskin Array B	5.18	57	Pn	Pn	22 01 25.6	+2.1
	comp=N,6.5nm,0.3s,baz=238,slow=16,SNR=206						
BRTR				Sn	Sn	22 02 22.8	-0.4
	comp=N,1.3nm,0.3s,baz=233,slow=27,SNR=5.9						
HORT	Hortiatis	5.21	314	P	Pn	22 01 25.0	+1.1
EVR	Evrytania	5.23	293	P	Pn	22 01 26.0	+1.9
LIT	Litokhoron	5.28	307	P	Pn	22 01 25.9	+1.1
SRS	Serrai	5.32	321	P	Pn	22 01 25.7	+0.5
THL	Klokotos Trika	5.33	300	P	Pn	22 01 27.4	+2.0
PVO	Paravola	5.36	289	P	Pn	22 01 27.6	+1.9
ELND	Elena	6.10	345	⇑iP	Pn	22 01 35.7	-0.2
VTS	Vitosha	6.66	328	⇑iP	Pn	22 01 44.6	+0.8
MMAI	Mount Meron Ar	7.28	121	Pn	Pn	22 01 51.8	-0.5
	comp=N,12nm,0.3s,baz=300,slow=12,SNR=89						
MMAI				Sn	Sn	22 03 10.4	-4.6
	comp=N,8.5nm,0.3s,baz=316,slow=21,SNR=6.0						
TIRR	Tirgusor	7.41	2	⇓iP	Pn	22 01 53.5	-0.4
TLB	Topalu	7.53	0	⇓iP	Pn	22 01 55.1	-0.5
SHMJ	Saham	7.70	122	P	Pn	22 01 59.1	+1.1
	comp=N,36nm,0.7s,comp=N,0.3nmcomp=N,0.5nm						
KZIT	Kziot	8.11	137	P	Pn	22 02 06.8	+3.3
CFR	Carcaliu	8.13	1	⇓iP	Pn	22 02 03.1	-0.6
WALJ	Wala	8.47	128	P	Pn	22 02 09.5	+1.1
	comp=N,32nm,0.7s,comp=N,393nm						
MLR	Muntele Rosu	8.58	350	Pn	Pn	22 02 10.9	+0.8
	comp=N,0.2nm,0.3s,baz=135,slow=20,SNR=6.2						
MLR	Muntele Rosu	8.58	350	⇑iP	Pn	22 02 10.9	+0.8
SEVA	Sevastopol	8.63	28	⇓iP	Pn	22 02 11.8	+1.2
VOIR		8.67	346	⇑iP	Pn	22 02 11.6	+0.3
ASF	Jabal al Asfar	8.80	121	Pn	Pn	22 02 14.2	+1.1
	comp=N,1.0nm,0.3s,baz=286,slow=4.2,SNR=10.0						
ASF				Sn	Sn	22 03 50.3	-2.0
	comp=N,0.4nm,0.3s,baz=270,slow=18,SNR=2.3						
ASF	Jabal al Asfar	8.80	121	P	Pn	22 02 12.5	-0.6
PLOR	Plostina	8.86	354	⇓iP	Pn	22 02 14.8	+1.0
VRI	Vrincioaia	8.87	354	⇓iP	Pn	22 02 13.8	-0.1
LOT	Lotru	8.98	341	⇓iP	Pn	22 02 15.9	+0.4
DOPR	Dopca	9.13	348	⇓iP	Pn	22 02 17.7	+0.2
EIL	Elat	9.37	140	Pn	Pn	22 02 20.1	-0.8
	comp=N,1.3nm,0.3s,baz=322,slow=2.6,SNR=26						
EIL				Sn	Sn	22 04 00.9	-5.3
	comp=N,2.6nm,0.3s,baz=311,slow=19,SNR=7.0						
TESR	Tescani	9.51	354	⇓iP	Pn	22 02 22.9	+0.1
BIZ	Bicaz	9.99	353	⇑iP	Pn	22 02 29.9	+0.6
VYHS	Vyhne	13.26	333	ePN	Pn	22 03 11.6	-2.4
GNI	Garni	13.46	72	LR	LR	22 09 27.7	
	comp=N,56nm,18.4s,baz=275,slow=42						
VRAC	Vranov	14.79	330	LR	LR	22 10 09.3	
	comp=N,41nm,18.3s,baz=128,slow=41						
CLL	Collm	17.81	328	e(PKP)	P	22 04 20.0	+5.8
FINES	FINESS Array B	24.45	358	P	P	22 05 24.5	+0.1
	comp=N,2.2nm,0.8s,baz=164,slow=9.9,SNR=5.6						
HFS	Hagfors	24.86	343	P	P	22 05 29.1	+1.0
	comp=N,1.3nm,0.8s,baz=162,slow=12,SNR=2.6						
HFS				LR	LR	22 16 46.6	
	comp=N,31nm,20.2s,baz=221,slow=40						
ESDC	Sonseca Array	25.13	286	P	P	22 05 31.4	+0.5
	comp=N,0.5nm,0.5s,baz=84,slow=8.9,SNR=8.5						
TORD	Torodi Ar. Bea	33.46	232	P	P	22 06 43.6	-1.4
	comp=N,0.9nm,0.4s,baz=41,slow=6.8,SNR=29						
MKAR	Makanchi Array	40.83	59	P	P	22 07 47.9	+0.5
	comp=N,0.4nm,0.6s,baz=284,slow=6.0,SNR=3.6						
DBIC	Dimbokro	42.53	233	P	P	22 08 00.7	-0.9
	comp=N,1.6nm,0.5s,baz=2.2,slow=9.7,SNR=2.7						

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*NEIC **17** 22:07:26.0±2.1, 5°.89S×153°.04E, h36^{km}±3^{km}, mb4.4/14, Error ellipse: s-maj=16.6km s-min=6.0km az=162.0*

*IDC **17** 22:07:26.1±1.9, 5°.48S×152°.69E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.8/29, mbtmp3.9/7, ML1.8/1, Error ellipse: s-maj=68.2km s-min=21.8km az=119.0*

*ISCJB **17** 22:07:27.4±0.8, 5°.65S±0°.06×152°.8E±0°.1, h37^{km}, mb4.1/16, Error ellipse: s-maj=15.1km s-min=7.1km az=20.4*

ISC 17 22:07:29.5±1.2**, 5°.59S**±0°.08×**152°.7E**±0°.2**, h37**^{km}**, n26,** σ1^{s}**97**/28**, mb4.2**/16**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.50	338	ePn	Pn	22 07 54.4	+0.5
RABL				eSn	Sn	22 08 11.6	-0.6
PMG	Port Moresby	6.70	235	Pn	Pn	22 09 08.2	+2.8
	1.2nm,0.3s,baz=32,slow=7.3,SNR=2.5						
PMG				Sn	Sn	22 10 20.3	-0.2
	8.8nm,0.3s,baz=82,slow=14,SNR=8.4						
PMG	Port Moresby	6.70	235	ePn	Pn	22 09 03.7	-1.7
PMG				eSn	Sn	22 10 21.2	+0.7
HNR	Honiara	8.11	119	ePn	Pn	22 09 13.9	-11
GUMO	Guam	20.59	338	eP	P	22 12 04.3	-1.1
	76nm,1.0s						
MTN	Manton Dam	22.49	250	eP	P	22 12 27.0	+1.0
	6.8nm,0.6s						
WC3	Warramunga Arr	22.86	230	eP	P	22 12 30.4	+0.5
	10nm,1.1s						
WRAB	Tennant Creek	22.87	230	eP	P	22 12 27.5	-2.4
	4.9nm,0.8s						
WB2	Warramunga Arr	22.87	230	eP	P	22 12 26.6	-3.3
	8.5nm,1.0s						
WRA	Warramunga Arr	22.88	230	P	P	22 12 31.8	+1.8
	1.1nm,0.4s,baz=56,slow=9.3,SNR=16						
SARN	Sarigan	23.19	343	eP	P	22 12 32.5	-0.6
	23nm,1.0s						
AS31	Alice Springs	25.53	223	eP	P	22 12 51.6	-3.2
	1.2nm,0.5s						
ASAR	Alice Springs	25.53	223	P	P	22 12 56.6	+1.8
	1.6nm,0.7s,baz=56,slow=9.3,SNR=16						
TNTI	Ternate	26.11	283	eP	P	22 12 59.9	-0.3
	18nm,0.8s						
SOEI	Soe	28.50	260	eP	P	22 13 18.8	-3.0
	14nm,0.6s						
SONA0	Songino Array	66.95	328	eP	P	22 18 19.9	+1.4
SONM	Songino Array	66.95	328	P	P	22 18 19.9	+1.4
	0.6nm,0.6s,baz=133,slow=6.3,SNR=4.5						
MKAR	Makanchi Array	80.87	319	P	P	22 19 41.9	+2.0
	0.4nm,0.6s,baz=96,slow=6.2,SNR=4.9						
MLY	Manley	81.64	21	eP	P	22 19 41.4	-2.2
	3.1nm,0.8s						
ZALV	Zalesovo Beam	81.77	326	P	P	22 19 46.0	+1.6
	0.6nm,0.5s,baz=113,slow=5.3,SNR=2.4						
ZAA1	Zalesovo Array	81.77	326	eP	P	22 19 46.0	+1.6
CCB	Clear Creek Bu	82.51	22	eP	P	22 19 45.7	-2.3
	3.9nm,1.2s						
ILAR	Eielson Array	82.91	22	P	P	22 19 52.5	+2.3
	1.5nm,0.8s,baz=248,slow=4.9,SNR=11						
ILB	Eielson Array	82.91	22	eP	P	22 19 47.4	-2.7
	2.2nm,0.9s						
HYT	Haines Junctio	85.16	27	epP	pP	22 20 08.6	-3.0
TORD	Torodi Ar. Bea	150.48	287	PKPbc	PKiKP	22 27 20.3	+1.3
	1.4nm,0.8s,baz=68,slow=2.2,SNR=4.3						
TORD				PKPab	PKPab	22 27 26.2	+1.3
	1.5nm,0.8s,baz=68,slow=3.7,SNR=8.9						

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*NEIC **17** 22:15:40.3±2.5, 16°.49S×177°.38E, h7^{km}±5^{km}, mb4.6/20, Error ellipse: s-maj=25.7km s-min=6.6km az=104.0*

*IDC **17** 22:15:41.1±1.1, 16°.25S×177°.23E, h0^{km}, mb4.1/11, mb1 4.4/11, mb1mx4.2/29, mbtmp4.1/11, MS3.8/18, Ms1 3.8/18, ms1mx3.8/20, Error ellipse: s-maj=45.3km s-min=19.7km az=148.0*

*ISCJB **17** 22:15:42.1±0.5, 16°.35S±0°.10×177°.28E±0°.10, h24^{km}, mb4.4/25, MS3.8/16, Error ellipse: s-maj=16.8km s-min=10.1km az=136.7*

*GCMT **17** 22:15:45.3±0.3, 16°.34S±0°.02×177°.39E±0°.02, h18^{km}±1^{km}, MW4.9/86, Moment Tensor Solution. s22,c23; s86,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.81±.12; $M_{\theta\theta}$-1.63±.09; $M_{\phi\phi}$2.44±.10; $M_{r\theta}$-0.56±.23; $M_{\theta\phi}$1.09±.07; $M_{\phi r}$-0.14±.20; Best double couple: $M_0$2.42000×10^{16} NP1:ϕ_s57.00000°, δ78.00000°, λ-19.00000°. NP2: ϕ_s151.00000°, δ72.00000°, λ-167.00000°. Principal axes: T 2.7340, Plg4.0000°, Azm105.0000°; N -0.6340, Plg68.0000°, Azm205.0000°; P -2.1050, Plg22.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 22:15:43.7±0.6**, 16°.5S**±0°.1×**177°.4E**±0°.1**, h24**^{km}**, n61,** σ1^{s}**28**/49**, mb4.5**/25**, MS3.8**/16**, Fiji Islands**

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

FUNA	**Funafuti**	**8.08**	**13**	*e*P	Pn	22 17 24.6	-15
DZM	**Mont Dzumac**	**11.72**	**240**	LR	LR	22 22 13.1	
	comp=Z,453nm,19.3s,baz=68,slow=34						
KNTN	**Kanton**	**17.32**	**39**	*e*Pn	**Pn**	**22 19 42.9**	**-1.1**
	108nm,1.1s						
TARA	**Tarawa**	**18.23**	**346**	*e*Pn	**P**	**22 19 53.2**	**-2.1**
	57nm,0.9s						
HNR	**Honiara**	**18.34**	**290**	LR	LR	22 26 06.9	
	comp=Z,617nm,19.0s,baz=102,slow=34						
OUZ	**Omahuta**	**18.99**	**190**	*e*P	**P**	**22 20 01.4**	**-2.2**
	5.2nm,1.0s						
URZ	**Urewera**	**21.73**	**181**	LR	LR	22 27 07.7	
	comp=Z,318nm,18.3s,baz=7.5,slow=31						
RPZ	**Rata Peaks**	**27.70**	**190**	LR	LR	22 31 23.7	
	comp=Z,256nm,19.9s,baz=12,slow=34						
PMG	**Port Moresby**	**30.23**	**280**	LR	LR	22 32 22.5	
	comp=Z,390nm,18.4s,baz=84,slow=33						
PPT	**Papeete**	**31.62**	**97**	LR	LR	22 33 17.9	
	comp=Z,116nm,18.3s,baz=192,slow=33						
STKA	**Stephens Creek**	**35.87**	**238**	P	**P**	**22 22 44.4**	**+2.5**
	6.2nm,0.9s,baz=60,slow=10,SNR=4.9						
STKA				LR	LR	22 35 52.3	
	comp=Z,181nm,19.5s,baz=53,slow=34						
STKA	**Stephens Creek**	**35.87**	**238**	*e*P	**P**	**22 22 41.4**	**-0.5**
	1.8nm,1.0s						
WR1	**Warramunga Arr**	**40.94**	**258**	*e*P	**P**	**22 23 23.9**	**-0.8**
WRA	**Warramunga Arr**	**40.94**	**258**	P	**P**	**22 23 23.9**	**-0.8**
	3.6nm,1.0s,baz=84,slow=8.5,SNR=5.2						
ASAR	**Alice Springs**	**41.32**	**253**	P	**P**	**22 23 27.6**	**-0.3**
	5.4nm,0.9s,baz=80,slow=8.8,SNR=26						
ASAR				LR	LR	22 39 37.9	
	comp=Z,362nm,18.5s,baz=90,slow=35						
VNDA	**Vanda**	**61.59**	**184**	LR	LR	22 48 16.9	
	comp=Z,115nm,21.6s,baz=11,slow=32						
MJAR	**Matsushiro Arr**	**64.38**	**326**	P	**P**	**22 26 18.1**	**+0.3**
	2.4nm,1.0s,baz=152,slow=5.5,SNR=3.5						
MAJO	**Matsushiro**	**64.38**	**326**	*e*P	**P**	**22 26 18.1**	**+0.3**
CASY	**Casey**	**65.78**	**204**	*e*P	**P**	**22 26 25.9**	**-0.6**
	6.9nm,1.0s						
KSRS	**Korea Array**	**70.96**	**320**	LR	LR	22 57 13.3	
	comp=Z,29nm,18.3s,baz=141,slow=35						
PETK	**Petropavlovsk-**	**71.32**	**348**	P	**P**	**22 27 01.3**	**+0.1**
	6.6nm,1.0s,baz=106,slow=11,SNR=4.7						
PETK				LR	LR	22 51 00.3	
	comp=Z,37nm,21.9s,baz=149,slow=30						
PEA1	**Petropavlovsk-**	**71.33**	**348**	*e*P	**P**	**22 27 01.3**	**+0.1**
QSPA	**South Pole Qui**	**73.59**	**180**	*e*P	**P**	**22 27 15.1**	**+0.2**
	12nm,1.0s						
NV01	**Mina Array Sit**	**81.25**	**46**	*e*P	**P**	**22 27 58.8**	**+0.7**
NVAR	**Mina Array Bea**	**81.25**	**46**	P	**P**	**22 27 58.8**	**+0.7**
	0.5nm,0.8s,baz=222,slow=7.6,SNR=4.6						
NV11	**Mina Array Sit**	**81.35**	**46**	*e*P	**P**	**22 27 57.1**	**-1.5**
	0.3nm,1.1s						
TTA	**Tatalina**	**81.83**	**12**	*e*P	**P**	**22 28 01.4**	**+1.0**
	5.8nm,1.1s						
CAST	**Castle Rocks**	**83.08**	**13**	*e*P	**P**	**22 28 05.7**	**-1.3**
	7.4nm,1.1s						
MAW	**Mawson**	**83.83**	**201**	LR	LR	23 01 07.5	
	comp=Z,83nm,21.8s,baz=76,slow=32						
DHY	**Denali Highway**	**83.91**	**15**	*e*P	**P**	**22 28 09.3**	**-2.1**
	3.9nm,1.2s						
MCK	**McKinley**	**84.08**	**14**	*e*P	**P**	**22 28 10.0**	**-2.0**
	9.8nm,1.0s						
ELK	**Elko**	**84.42**	**45**	*e*P	**P**	**22 28 13.0**	**-1.6**
	1.5nm,0.8s						
CM31	**Chiang Mai Arr**	**84.59**	**291**	*e*P	**P**	**22 28 13.9**	**-1.8**
	6.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**84.59**	**291**	P	**P**	**22 28 16.6**	**+0.9**
	2.3nm,0.8s,baz=115,slow=2.8,SNR=12						
CMAR				LR	LR	23 06 00.4	
	comp=Z,31nm,19.6s,baz=160,slow=36						
U15A	**North Rim**	**84.61**	**50**	*e*P	**P**	**22 28 15.2**	**-0.5**
	7.2nm,1.1s						
WRH	**Wood River Hil**	**84.90**	**14**	*e*P	**P**	**22 28 14.0**	**-2.2**
	4.1nm,1.0s						
RIDG	**Independent Ri**	**85.11**	**16**	*e*P	**P**	**22 28 17.0**	**-0.3**
	8.5nm,1.2s						
HDA	**Harding Lake**	**85.13**	**15**	*e*P	**P**	**22 28 17.5**	**+0.2**
	7.4nm,1.1s						
DOT	**Dot Lake**	**85.24**	**16**	*e*P	**P**	**22 28 18.0**	**0.0**
	6.6nm,1.2s						
ILAR	**Eielson Array**	**85.44**	**15**	P	**P**	**22 28 18.9**	**0.0**
	3.0nm,1.0s,baz=210,slow=5.2,SNR=11						
ILAR				LR	LR	22 59 10.8	
	comp=Z,102nm,21.8s,baz=236,slow=31						
ILB	**Eielson Array**	**85.44**	**15**	*e*P	**P**	**22 28 16.8**	**-2.1**
	7.2nm,1.0s						
TXAR	**Lajitas Array**	**88.68**	**59**	P	**P**	**22 28 36.9**	**+1.3**
	0.5nm,0.8s,baz=218,slow=5.7,SNR=3.0						
TXAR				LR	LR	23 01 14.4	
	comp=Z,33nm,20.2s,baz=0.0,slow=31						
PDAR	**Pinedale Array**	**89.13**	**45**	P	**P**	**22 28 39.5**	**+1.9**
	0.2nm,0.3s,baz=233,slow=4.7,SNR=3.5						
SONA0	**Songino Array**	**89.83**	**320**	*e*P	**P**	**22 28 40.3**	**-0.3**
SONM	**Songino Array**	**89.83**	**320**	P	**P**	**22 28 40.3**	**-0.3**
	2.0nm,1.0s,baz=128,slow=3.9,SNR=8.4						
SONM				LR	LR	23 10 26.0	
	comp=Z,27nm,18.0s,baz=102,slow=37						
YKA	**Yellowknife Ar**	**94.74**	**26**	LR	LR	23 03 28.0	
	comp=Z,7.5nm,22.0s,baz=233,slow=30						
PLCA	**Paso Flores**	**95.24**	**135**	LR	LR	23 02 15.5	
	comp=Z,44nm,21.6s,baz=272,slow=29						
GERES	**GERESS Array B**	**145.04**	**341**	PKP	**PKPbc**	**22 35 19.4**	**+0.8**
	1.6nm,1.0s,baz=37,slow=3.3,SNR=8.0						
MOA	**Molln**	**145.73**	**340**	*i* pPKPbc	**PKPdf**	**22 35 21.3**	**+1.0**
	6.0nm,1.2s						
ARSA	**Arzberg**	**145.81**	**338**	*i* P	**PKPab**	**22 35 22.8**	**+1.5**
	3.8nm,1.1s						
SOKA	**Soboth**	**146.47**	**338**	*i* P	**PKPab**	**22 35 25.2**	**+1.3**
	2.7nm,1.1s						
KBA	**Koelnbreinsper**	**146.71**	**340**	*e*pPKPab	**PKPab**	**22 35 25.8**	**+0.8**
	5.3nm,1.1s						
MYKA	**Terra Mystica**	**147.00**	**339**	*i* PKiKP	**PKPbc**	**22 35 25.9**	**+1.3**
	4.1nm,0.8s						
WATA	**Walderalm**	**147.03**	**342**	*i* P	**PKPab**	**22 35 27.4**	**+1.2**
	2.5nm,0.7s						
WTTA	**Wattenberg**	**147.08**	**342**	*i* pPKPab	**PKPbc**	**22 35 26.5**	**+1.6**
	3.8nm,0.7s						
RETA	**Reutte**	**147.13**	**343**	*i* PKiKP	**PKPbc**	**22 35 26.1**	**+1.2**
	6.0nm,1.3s						
MOTA	**Moosalm**	**147.16**	**343**	*i* P	**PKPab**	**22 35 27.7**	**+1.0**
	4.2nm,0.9s						
SQTA	**Sankt Quirin**	**147.25**	**342**	*i* pPKPab	**PKPab**	**22 35 27.4**	**+0.4**
	3.4nm,0.8s						
ABTA	**Abfaltersbach**	**147.27**	**341**	*i* PKiKP	**PKPbc**	**22 35 26.4**	**+1.1**
	4.6nm,1.1s						
DAVA	**Damuels**	**147.55**	**344**	*i* pPKPab	**PKiKP**	**22 35 28.6**	**+0.3**
	6.3nm,1.0s						
FETA	**Feichten**	**147.56**	**343**	*i* pPKPab	**PKPbc**	**22 35 28.1**	**+1.9**
	7.4nm,1.1s						

IDC 17 22:34:55.6±9.8**, 30°.98S**×**179°.09W, h0^{km}, mb4.1**/2**, mb1 4.4**/2**, mb1mx3.8**/17**, mbtmp4.1**/2**, Error ellipse: s-maj=425.4km s-min=57.6km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.15**	**268**	P	P	22 42 49.6	-0.4
	0.8nm,0.5s,baz=105,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**43.19**	**273**	P	P	22 42 58.7	+0.2
	1.8nm,0.3s,baz=112,slow=8.4,SNR=22						
FINES	**FINESS Array B**	**145.36**	**339**	PKPbc	PKPbc	22 54 33.6	-0.9
	1.8nm,0.8s,baz=57,slow=5.1,SNR=6.3						

UCR 17 22:47:57.9±1.8**, 9°.66N**×**84°.65W, h26^{km}**±5^{km}**, MW3.6, 1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.46**	**21**	⇓*i*P	Pb	22 48 07.5	0.0
SRA1				*e*S	Sb	22 48 14.7	+0.5
HDC	**Heredia**	**0.63**	**57**	*e*P	Pb	22 48 10.3	-0.1
HDC				*e*S	Sn	22 48 20.1	-0.5
LCR2	**La Lucha 2**	**0.64**	**82**	*e*P	Pb	22 48 10.5	-0.2
LCR2				*e*S	Sb	22 48 20.1	+0.7
JTS	**Las Juntas de**	**0.70**	**335**	*e*P	Pb	22 48 10.7	-0.8
JTS				*e*S	Sb	22 48 20.6	-0.2
ARE1	**Arenal 1**	**0.80**	**355**	*e*P	Pb	22 48 12.9	-0.4
ARE1				*e*S	Sn	22 48 24.3	-0.5
CEDE	**Laguna Cedeo**	**0.83**	**356**	*e*P	Pb	22 48 12.4	-1.4
CEDE				*e*S	Sb	22 48 24.0	-0.6
CVTR	**Volcan Turrial**	**0.95**	**67**	*e*P	Pn	22 48 15.9	-0.1
MESS	**Mesas**	**1.21**	**334**	*e*P	Pn	22 48 18.7	-0.5
MESS				*e*S	Sn	22 48 34.5	-0.2
BUEV	**Buena Vista**	**1.36**	**327**	*e*P	Pn	22 48 21.3	0.0
GB1A	**Borinquen Arri**	**1.37**	**328**	*e*P	Pn	22 48 21.6	+0.1
GB1A				*e*S	Sb	22 48 39.9	-0.3
DRK0	**Durika**	**1.44**	**106**	*e*P	Pn	22 48 20.6	-2.0
DRK0				*e*S	Sb	22 48 41.9	-0.2

ISCJB ***17*** *22:57:07.8±0.4, 2°.14N±0°.04×98°.05E±0°.05, h82^{km}±4^{km}, mb4.1/25, Error ellipse: s-maj=8.2km s-min=5.5km az=149.2*
NEIC ***17*** *22:57:08.2±1.0, 2°.08N×98°.09E, h74^{km}±6^{km}, mb4.1/12, Error ellipse: s-maj=15.4km s-min=9.2km az=128.0*
IDC ***17*** *22:57:09.7±1.2, 2°.25N×98°.21E, h82^{km}±10^{km}, mb3.9/17, mb1 4.0/19, mb1mx3.8/35, mbtmp4.2/19, MS3.2/1, Ms1 3.2/1, ms1mx2.6/28, Error ellipse: s-maj=20.3km s-min=12.7km az=52.0*
DJA ***17*** *22:57:09.5±0.3, 2°N±2°×9°8E±°, h49^{km}±11^{km}, M4.2/10, MLv4.2/10*
ISC 17 22:57:07.8±0.8**, 2°.14N**±0°.04×**98°.08E**±0°.04**, h66^{km}**±8^{km}**, n53, σ1.^{s}24**/65**, mb4.2**/25**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.97**	**211**	*e*Pn	**Pn**	**22 57 26.0**	**+0.3**
GSI				*e*Sn	**Sn**	**22 57 36.4**	**-2.5**
GSI	**Gunungsitoli**	**0.97**	**211**	P	**Pn**	**22 57 26.0**	**+0.3**
GSI				S	**Sn**	**22 57 39.2**	**+0.3**
PSI	**Prapat**	**1.07**	**52**	P	**Pn**	**22 57 28.2**	**+1.0**
	53nm,0.3s,baz=204,slow=5.6,SNR=92						
PSI				S	**Sn**	**22 57 41.0**	**-0.5**
	104nm,0.3s,baz=321,slow=14,SNR=30						
PSI	**Prapat**	**1.07**	**52**	*e*Pn	**Pn**	**22 57 28.4**	**+1.2**
PSI				*e*Sn	**Sn**	**22 57 37.9**	**-3.7**
KCSI	**Kotacane, Aceh**	**1.41**	**348**	P	**Pn**	**22 57 32.4**	**+0.9**
KCSI				S	**Sn**	**22 57 50.3**	**+1.1**
SNSI	**Sinabang, Aceh**	**1.77**	**279**	P	**Pn**	**22 57 37.1**	**+0.9**
SNSI				S	**Sn**	**22 57 57.2**	**-0.6**
MNSI	**Mandailing Nat**	**2.01**	**132**	P	**Pn**	**22 57 41.8**	**+2.3**
MNSI				S	**Sn**	**22 58 06.6**	**+3.0**
MLSI	**Meulaboh, Aceh**	**2.70**	**322**	P	**Pn**	**22 57 50.3**	**+1.5**
LHMI	**Lhok Sumawe**	**3.27**	**340**	*e*Pn	**Pn**	**22 57 58.7**	**+2.0**
LHMI	**Lhok Sumawe**	**3.27**	**340**	P	**Pn**	**22 57 57.9**	**+1.2**
LHMI				S	**Sn**	**22 58 36.7**	**+2.2**
SISI	**Saibi**	**3.59**	**164**	P	**Pn**	**22 58 03.2**	**+2.2**
CM31	**Chiang Mai Arr**	**16.24**	**3**	*e*Pn	**P**	**23 00 52.9**	**-1.1**
	6.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**16.24**	**3**	P	**Pn**	**23 00 52.0**	**+0.1**
	0.7nm,0.3s,baz=193,slow=11,SNR=6.5						
PALK	**Pallekele**	**18.05**	**287**	P	**Pn**	**23 01 16.8**	**+2.6**
	0.5nm,0.3s,baz=117,slow=8.2,SNR=3.4						
PALK	**Pallekele**	**18.05**	**287**	*e*P	**P**	**23 01 13.1**	**-0.9**
	7.7nm,0.9s						
WR1	**Warramunga Arr**	**41.80**	**123**	*e*P	**P**	**23 04 50.5**	**-0.8**
WR1				*e*PcP	**PcP**	**23 06 46.8**	**+0.2**
WRA	**Warramunga Arr**	**41.80**	**123**	P	**P**	**23 04 50.5**	**-0.8**
	4.5nm,0.5s,baz=297,slow=9.3,SNR=38						
WRA				PcP	**PcP**	**23 06 46.8**	**+0.2**
	0.5nm,0.5s,baz=287,slow=2.8,SNR=4.1						
AS31	**Alice Springs**	**43.27**	**128**	*e*P	**P**	**23 05 02.5**	**-0.8**
	1.6nm,1.1s						
ASAR	**Alice Springs**	**43.27**	**128**	P	**P**	**23 05 02.5**	**-0.8**
	1.0nm,0.5s,baz=300,slow=7.7,SNR=10						
ASAR				PcP	**PcP**	**23 06 51.9**	**+0.5**
	0.6nm,0.6s,baz=313,slow=3.1,SNR=3.7						
KSRS	**Korea Array**	**44.59**	**34**	LR	LR	23 23 43.4	
	comp=Z,29nm,20.4s,baz=218,slow=36						
ARSB	**Arslanbob**	**45.09**	**333**	*e*P	**P**	**23 05 17.6**	**0.0**
	4.5nm,0.8s						
SONA0	**Songino Array**	**46.09**	**8**	*e*P	**P**	**23 05 25.2**	**-0.2**
SONA0				*e*PcP	**PcP**	**23 07 01.1**	**+0.4**
SONM	**Songino Array**	**46.09**	**8**	P	**P**	**23 05 25.2**	**-0.2**
	0.5nm,0.3s,baz=190,slow=9.6,SNR=6.1						
SONM				PcP	**PcP**	**23 07 01.1**	**+0.4**
	0.9nm,0.6s,baz=197,slow=3.8,SNR=4.4						
MK31	**Makanchi Array**	**46.56**	**345**	*e*P	**P**	**23 05 29.1**	**+0.1**
	2.6nm,0.8s						
MK32	**Makanchi Array**	**46.56**	**345**	*e*P	**P**	**23 05 29.1**	**+0.1**
MKAR	**Makanchi Array**	**46.56**	**345**	P	**P**	**23 05 29.1**	**+0.1**
	2.7nm,0.5s,baz=156,slow=7.4,SNR=38						
MAKZ	**Makanchi**	**46.65**	**345**	*e*P	**P**	**23 05 29.3**	**-0.5**
	3.6nm,0.6s						
GEYT	**Alibeck**	**51.07**	**319**	P	**P**	**23 06 04.2**	**+0.4**
	1.0nm,0.5s,baz=148,slow=8.7,SNR=4.3						
KURK	**Kurchatov**	**51.13**	**344**	*e*P	**P**	**23 06 04.0**	**+0.1**
	3.4nm,0.8s						
ZAA0	**Zalesovo Array**	**52.78**	**350**	*e*P	**P**	**23 06 15.8**	**-0.3**
	3.6nm,0.9s						
ZALV	**Zalesovo Beam**	**52.78**	**350**	P	**P**	**23 06 15.7**	**-0.4**
	1.9nm,0.3s,baz=181,slow=6.8,SNR=12						
ZAA1	**Zalesovo Array**	**52.79**	**350**	*e*P	**P**	**23 06 15.7**	**-0.4**
STKA	**Stephens Creek**	**53.34**	**133**	P	**P**	**23 06 20.4**	**-0.2**
	2.6nm,0.7s,baz=274,slow=7.4,SNR=4.4						
STKA	**Stephens Creek**	**53.34**	**133**	*e*P	**P**	**23 06 17.4**	**-3.2**
	0.7nm,1.0s						
OPO	**Ambohidratompo**	**54.11**	**245**	P	**P**	**23 06 28.7**	**+2.0**
	0.8nm,0.4s,baz=91,slow=10.0,SNR=2.4						
KBZ	**Khabaz**	**63.95**	**319**	P	**P**	**23 07 34.2**	**0.0**
	2.5nm,0.9s,baz=90,slow=8.1,SNR=4.1						
BR101	**Keskin Array S**	**69.14**	**312**	*e*P	**P**	**23 08 06.7**	**-0.9**
BRTR	**Keskin Array B**	**69.14**	**312**	P	**P**	**23 08 06.7**	**-0.9**
	1.0nm,0.7s,baz=130,slow=8.3,SNR=6.2						
AKASG	**Malin Array Be**	**75.06**	**322**	P	**P**	**23 08 41.3**	**-1.2**
	1.6nm,0.5s,baz=88,slow=5.6,SNR=6.1						
AKBB	**Malin Array Si**	**75.06**	**322**	*e*P	**P**	**23 08 40.6**	**-1.9**
	2.3nm,1.1s						
BOSA	**Boshof**	**76.00**	**240**	P	**P**	**23 08 49.4**	**+0.8**
	6.1nm,1.1s,baz=45,slow=4.3,SNR=3.7						
BUR08	**Bucovina Ar. S**	**76.92**	**318**	*e*P	**P**	**23 08 53.3**	**0.0**
	1.5nm,0.9s						
FIA0	**FINESS Array S**	**79.58**	**332**	*e*P	**P**	**23 09 07.3**	**-0.2**
FINES	**FINESS Array B**	**79.58**	**332**	P	**P**	**23 09 07.3**	**-0.2**
	2.1nm,0.4s,baz=102,slow=6.5,SNR=27						
ARA0	**ARCESS Array S**	**81.96**	**340**	*e*P	**P**	**23 09 20.1**	**0.0**
ARCES	**ARCESS Array B**	**81.96**	**340**	P	**P**	**23 09 20.1**	**0.0**
	1.3nm,0.4s,baz=99,slow=5.2,SNR=29						
GERES	**GERESS Array B**	**84.69**	**319**	P	**P**	**23 09 34.6**	**-0.1**
	0.4nm,0.5s,baz=98,slow=5.1,SNR=4.0						
NB2	**NORSAR Subarra**	**86.62**	**331**	P	**P**	**23 09 43.6**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=96,slow=4.6						
NOA	**NORSAR Array B**	**86.62**	**331**	P	**P**	**23 09 42.9**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=94,slow=4.8,SNR=6.8						
KEST	**Kesra**	**87.73**	**306**	P	**P**	**23 09 50.3**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=45,slow=1.4,SNR=3.5						
NV01	**Mina Array Sit**	**127.52**	**36**	*e*PKPdf	**PKiKP**	**23 16 06.5**	**-0.2**
NVAR	**Mina Array Bea**	**127.52**	**36**	PKP	**PKiKP**	**23 16 06.5**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=292,slow=2.4,SNR=1.6						
CPUP	**Villa Florida**	**146.28**	**222**	PKPbc	**PKPab**	**23 16 42.1**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=90,slow=5.1,SNR=4.6						

ISCJB ***17*** *23:27:50.4±0.5, 24°.11S±0°.03×67°.16W±0°.04, h194^{km}±6^{km}, mb3.4/1, Error ellipse: s-maj=6.1km s-min=4.4km az=41.4*
SJA ***17*** *23:27:50.5±0.8, 24°.11S×67°.07W, h197^{km}±7^{km}, ML2.9, MW3.5*
GUC ***17*** *23:27:53.0±0.5, 24°.06S×67°.51W, h204^{km}±7^{km}, ML4.2*
NEIC ***17*** *23:27:53.0±0.0, 24°.06S×67°.51W, h204^{km}, ML4.2(GUC), After GUC.*
IDC ***17*** *23:27:57.6±3.4, 23°.57S×66°.97W, h234^{km}±26^{km}, mb3.2/1, mb1 3.5/4, mb1mx3.2/19, mbtmp4.0/4, Error ellipse: s-maj=37.4km s-min=20.0km az=34.0*
ISC 17 23:27:50.9±0.8**, 24°.08S**±0°.05×**67°.15W**±0°.04**, h188^{km}**±8^{km}**, n46, σ1.^{s}63**/61**, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.63**	**114**	*e*P	**Pn**	**23 28 25.6**	**+0.7**
SLA				*e*S	**Sn**	**23 28 51.1**	**-0.2**
SLA				IAML		23 28 52.4	
	comp=Z,72nm,0.5s						
AZAP	**Zapla**	**1.91**	**95**	*e*P	**Pn**	**23 28 27.9**	**+0.1**
AZAP				IAML		23 28 28.3	
	comp=Z,116nm,0.3s						
AZAP				*e*S	**Sn**	**23 28 55.9**	**-0.5**
LVC	**Limon Verde**	**2.18**	**312**	*e*Pn	**Pn**	**23 28 32.5**	**+1.7**
LVC				*e*Sn	**Sn**	**23 28 59.3**	**-2.6**
LVC	**Limon Verde**	**2.18**	**312**	*e*P	**Pn**	**23 28 32.6**	**+1.7**
LVC				*e*S	**Sn**	**23 29 03.5**	**+1.7**
LVC				IAML		23 29 05.6	
	comp=Z,106nm,0.7s						
LVC	**Limon Verde**	**2.18**	**312**	*i* P	**Pn**	**23 28 32.6**	**+1.7**
LVC				*e*S	**Sn**	**23 29 03.0**	**+1.1**
FSA	**Cafayete**	**2.29**	**153**	*e*P	**Pn**	**23 28 32.1**	**+0.3**
FSA				IAML		23 28 33.0	
	comp=Z,11nm,0.3s						
FSA				*e*S	**Sn**	**23 29 02.5**	**-1.3**
PB15	**IPOC Station P**	**2.30**	**292**	*e*P	**Pn**	**23 28 33.8**	**+1.8**
YJA	**Yavi**	**2.42**	**39**	*e*P	**Pn**	**23 28 34.6**	**+1.1**
YJA				IAML		23 29 09.4	
	comp=Z,13nm,0.6s						
GO02	**Mina Guanaco**	**2.47**	**244**	*e*Pn	**Pn**	**23 28 35.3**	**+1.3**
GO02	**Mina Guanaco**	**2.47**	**244**	*i* P	**Pn**	**23 28 35.4**	**+1.4**
GO02				*e*S	**Sn**	**23 29 08.3**	**+0.6**
GO02				IAML		23 29 10.0	
	comp=N,986nm,0.4s						
PB06	**IPOC Station P**	**2.61**	**301**	*e*P	**Pn**	**23 28 37.2**	**+1.7**
PB06	**IPOC Station P**	**2.61**	**301**	*i* P	**Pn**	**23 28 37.0**	**+1.5**
PB06				*e*S	**Sn**	**23 29 10.2**	**0.0**
PB06				IAML		23 29 12.9	
	comp=E,577nm,0.4s						
PB09	**IPOC Station P**	**2.98**	**319**	*e*P	**Pn**	**23 28 42.0**	**+2.1**
PB14	**IPOC Station P**	**3.02**	**259**	*e*P	**Pn**	**23 28 41.9**	**+1.4**
PB14	**IPOC Station P**	**3.02**	**259**	⇑*i*P	**Pn**	**23 28 41.4**	**+1.0**
PB14				*e*S	**Sn**	**23 29 18.3**	**-0.8**
PB14				IAML		23 29 24.7	
	comp=E,292nm,0.5s						
PB05	**IPOC Station P**	**3.06**	**293**	*e*P	**Pn**	**23 28 41.9**	**+1.2**
PB05	**IPOC Station P**	**3.06**	**293**	*i* P	**Pn**	**23 28 42.0**	**+1.2**
PB05				*e*S	**Sn**	**23 29 18.6**	**-1.1**
PB05				IAML		23 29 20.6	
	comp=E,257nm,0.4s						
PB03	**IPOC Station P**	**3.13**	**310**	*e*P	**Pn**	**23 28 43.0**	**+1.3**
AHML	**Horco Molle**	**3.16**	**149**	*e*P	**Pn**	**23 28 42.0**	**+0.2**
PB10	**IPOC Station P**	**3.17**	**279**	*e*Pn	**Pn**	**23 28 43.1**	**+1.1**
PB10	**IPOC Station P**	**3.17**	**279**	*e*P	**Pn**	**23 28 43.6**	**+1.6**
PB10	**IPOC Station P**	**3.17**	**279**	*i* P	**Pn**	**23 28 42.9**	**+0.9**
PB10				*e*S	**Sn**	**23 29 20.6**	**-1.3**
PB04	**IPOC Station P**	**3.26**	**302**	*e*Pn	**Pn**	**23 28 43.8**	**+0.6**
PB04	**IPOC Station P**	**3.26**	**302**	*e*P	**Pn**	**23 28 44.6**	**+1.3**
PB04	**IPOC Station P**	**3.26**	**302**	*i* P	**Pn**	**23 28 44.6**	**+1.3**
PB04				*e*S	**Sn**	**23 29 23.3**	**-0.9**
PB04				IAML		23 29 29.6	
	comp=N,435nm,0.2s						
PB07	**IPOC Station P**	**3.44**	**312**	*i* P	**Pn**	**23 28 46.4**	**+1.0**
PB07				*e*S	**Sn**	**23 29 26.9**	**-1.2**
PB07				IAML		23 29 28.9	
	comp=N,437nm,0.2s						
PB01	**IPOC Station P**	**3.71**	**324**	*e*Pn	**Pn**	**23 28 49.5**	**+0.7**
PB01				*e*Sn	**Sn**	**23 29 31.9**	**-2.2**
PB02	**IPOC Station P**	**3.74**	**317**	*e*P	**Pn**	**23 28 50.4**	**+1.3**
GO03	**Copiap**	**4.47**	**218**	*e*Pn	**Pn**	**23 28 57.4**	**-0.9**
VCA	**Vinchina**	**4.74**	**191**	*e*P	**Pn**	**23 29 03.9**	**+2.2**
GO01	**Chusmiza**	**4.78**	**336**	*e*Pn	**Pn**	**23 29 03.6**	**+0.9**
PB11	**IPOC Station P**	**4.88**	**331**	*e*Pn	**Pn**	**23 29 03.6**	**-0.1**
PB11				*e*Sn	**Sn**	**23 29 54.2**	**-6.7**
MNMC	**Minye Minye**	**5.42**	**335**	*e*Pn	**Pn**	**23 29 10.9**	**+0.1**
LCO	**Las Campanas**	**5.86**	**212**	*e*Pn	**Pn**	**23 29 15.0**	**-1.3**
GO04	**Tololo Observa**	**6.89**	**207**	*e*Pn	**Pn**	**23 29 27.6**	**-2.2**
GO04				*e*Sn	**Sn**	**23 30 44.4**	**-3.7**
LPAZ	**La Paz**	**7.80**	**353**	P	**Pn**	**23 29 42.9**	**+0.7**
	comp=N,1.0nm,0.3s,baz=162,slow=7.1,SNR=27						
LPAZ				S	**Sn**	**23 31 07.7**	**-2.7**
	comp=N,0.1nm,0.3s,baz=68,slow=19,SNR=2.1						
LPAZ	**La Paz**	**7.80**	**353**	*e*Pn	**Pn**	**23 29 43.3**	**+1.1**
CPUP	**Villa Florida**	**9.17**	**106**	P	Pn	23 30 06.7	+7.3
	comp=N,0.4nm,0.3s,baz=272,slow=12,SNR=5.4						
BDFB	**Brasilia**	**19.84**	**69**	P	**P**	**23 32 07.1**	**-0.5**
	comp=N,1.3nm,0.3s,baz=246,slow=11,SNR=25						
BDFB	**Brasilia**	**19.84**	**69**	*e*P	**P**	**23 32 07.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.72**	**69**	P	**P**	**23 39 21.9**	**+0.1**
	comp=N,0.4nm,0.5s,baz=255,slow=5.6,SNR=10						
ASAR	**Alice Springs**	**128.33**	**205**	PKP	**PKiKP**	**23 46 36.8**	**+0.5**
	comp=N,0.4nm,0.5s,baz=163,slow=2.0,SNR=4.9						
WRA	**Warramunga Arr**	**131.50**	**207**	PKP	**PKiKP**	**23 46 43.4**	**+0.6**
	comp=N,0.8nm,0.5s,baz=142,slow=2.4,SNR=6.5						
ZALV	**Zalesovo Beam**	**143.52**	**28**	PKP	PKPbc	23 47 01.8	+1.2
	comp=N,0.3nm,0.3s,baz=343,slow=4.5,SNR=2.7						
MKAR	**Makanchi Array**	**146.67**	**39**	PKPbc	**PKPbc**	**23 47 10.1**	**-0.2**
	comp=N,1.0nm,0.6s,baz=297,slow=2.8,SNR=7.9						
KLR	**Kul'dur**	**150.84**	**334**	PKPbc	**PKPbc**	**23 47 21.2**	**+0.4**
	comp=N,0.4nm,0.4s,baz=333,slow=9.0,SNR=4.9						

IDC 18 00:13:52.6±3.3**, 6°.00S**×**147°.45E, h0^{km}, mb3.4**/1**, mb1 3.8**/3**, mb1mx3.4**/29**, mbtmp3.7**/3**, ML3.0**/2**, Error ellipse: s-maj=86.6km s-min=40.1km az=96.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.39**	**185**	Pn	Pn	00 14 47.4	+0.6
	16nm,0.3s,baz=350,slow=6.1,SNR=14						
PMG				Sn	Sn	00 15 24.5	-3.3
	4.3nm,0.3s,baz=18,slow=20,SNR=2.7						
WRA	**Warramunga Arr**	**18.83**	**221**	P	P	00 18 13.9	-0.1
	0.2nm,0.3s,baz=46,slow=12,SNR=5.2						
ASAR	**Alice Springs**	**21.87**	**215**	P	P	00 18 47.2	0.0
	1.3nm,0.5s,baz=52,slow=8.9,SNR=18						
TORD	**Torodi Ar. Bea**	**145.53**	**284**	PKPbc	PKPdf	00 33 32.9	-1.0
	0.6nm,0.6s,baz=71,slow=3.9,SNR=6.3						

IDC 18 00:26:26.2±8.1**, 7°.61S**×**128°.39E, h142^{km}**±87^{km}**, mb2.9**/1**, mb1 3.4**/4**, mb1mx3.2**/26**, mbtmp3.8**/4**, Error ellipse: s-maj=80.0km s-min=26.8km az=34.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.33**	**241**	P	Pn	00 27 44.7	+0.7
	6.4nm,0.3s,baz=75,slow=16,SNR=2.6						
BATI				S	Sn	00 28 44.9	+0.2
	6.7nm,0.3s,baz=127,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**13.55**	**155**	P	Pn	00 29 31.4	-1.5
	0.7nm,0.3s,baz=332,slow=14,SNR=26						
WRA				S	Sn	00 31 54.1	-8.7
	0.4nm,0.3s,baz=334,slow=22,SNR=5.3						
ASAR	**Alice Springs**	**16.82**	**162**	P	Pn	00 30 14.3	+0.9
	0.3nm,0.3s,baz=341,slow=10,SNR=16						
ASAR				S	S	00 33 15.1	-6.1
	0.1nm,0.3s,baz=346,slow=23,SNR=3.0						
MKAR	**Makanchi Array**	**67.87**	**328**	P	P	00 37 09.2	0.0
	0.2nm,0.5s,baz=128,slow=6.9,SNR=3.8						

TAP 18 00:28:23.3, 22°.97N×**120°.91E, h4^{km}, ML3.5, 10C-8D, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TWG	**Pinlang**	**0.21**	**134**	⇓*i*P	Pg	00 28 28.6	+1.2
	baz=134						
TWG				*i* S	Sg	00 28 31.9	+1.8
	baz=134						
TWGBT	**Beinan**	**0.21**	**133**	⇓P	Pg	00 28 28.6	+1.1
	baz=134						
TWGBT				S	Sg	00 28 31.8	+1.5
	baz=134						
STYT	**Tauyuan**	**0.24**	**325**	⇓*i*P	Pg	00 28 28.7	+0.7
	baz=327						
STYT				*i* S	Sg	00 28 32.1	+0.9
	baz=327						
ELDTW	**Lidau**	**0.24**	**24**	⇑*i*P	Pg	00 28 28.6	+0.5
	baz=23						
ELDTW				*i* S	Sg	00 28 32.1	+0.8
	baz=23						
SLGT	**Liugui**	**0.24**	**277**	⇑*i*P	Pg	00 28 28.6	+0.6
	baz=277						
SLGT				S	Sg	00 28 32.0	+0.8
	baz=277						
TTN	**Taitung**	**0.30**	**134**	⇓*i*P	Pb	00 28 31.0	-0.2
	baz=135						
TTN				S	Sb	00 28 36.5	-0.1
	baz=135						
SGST	**Jiashian**	**0.32**	**291**	⇑*i*P	Pb	00 28 30.8	-0.8
	baz=297						
SGST				S	Sb	00 28 35.6	-1.5
	baz=297						
SSD	**Sandimen**	**0.34**	**230**	⇑*i*P	Pg	00 28 30.0	+0.2
	baz=228						
SSD				*i* S	Sg	00 28 33.9	-0.2
	baz=228						
ECL	**Taimali**	**0.37**	**174**	⇓*i*P	Pg	00 28 31.0	+0.7
	baz=175						
ECL				S	Sg	00 28 35.3	+0.1
	baz=175						
WTP	**Ta-pu**	**0.39**	**316**	⇓*i*P	Pb	00 28 32.1	-0.6
	baz=321						
WTP				S	Sb	00 28 38.0	-1.2
	baz=321						
CHN1	**Nanshi**	**0.41**	**302**	P	Pb	00 28 32.9	-0.3

	baz=309						
CHN1				S	Sb	00 28 38.9	-0.9
	baz=309						
TPUB	**Ta-pu**	**0.42**	**322**	⇓P	Pb	00 28 32.7	-0.6
	baz=323						
TPUB				S	Sb	00 28 39.1	-1.0
	baz=323						
MASBT	**Mashibuluo**	**0.43**	**216**	⇑P	Pg	00 28 31.9	+0.2
	baz=216						
MASBT				*e*S	Sg	00 28 37.3	0.0
	baz=216						
CHKT	**Chengkung**	**0.44**	**72**	⇑*i*P	Pb	00 28 33.5	-0.1
	baz=58						
CHKT				S	Sb	00 28 40.8	+0.3
	baz=58						
SGLT	**Jiouru**	**0.45**	**238**	*e*P	Pb	00 28 33.5	-0.2
	baz=237						
CHN4	**Tsaushan**	**0.48**	**323**	⇓*i*P	Pb	00 28 34.1	-0.2
	baz=324						
CHN3	**Shinhua**	**0.51**	**283**	*e*P	Pn	00 28 36.2	-1.1
	baz=285						
YUS	**Yu-Shan**	**0.52**	**4**	⇑*i*P	Pg	00 28 33.8	+0.4
	baz=5.0						
YUS				*e*S	Sg	00 28 40.7	+0.4
	baz=5.0						
YULB	**Yu-li**	**0.56**	**40**	⇑P	Pg	00 28 34.1	+0.1
	baz=48						
YULB				*e*S	Sg	00 28 40.8	-0.4
	baz=48						
SNJT	**Kaohsiung City**	**0.57**	**248**	*e*P	Pn	00 28 37.5	-0.6
	baz=248						
EAST	**Anshuo**	**0.58**	**186**	⇑*i*P	Pg	00 28 35.2	+0.7
	baz=187						
EAST				*e*S	Sg	00 28 42.8	+0.8
	baz=187						
TAW	**Tawu**	**0.60**	**181**	*e*P	Pg	00 28 35.4	+0.5
	baz=183						
TAW				*e*S	Sg	00 28 43.3	+0.5
	baz=183						
SCZT	**Fangliau**	**0.65**	**204**	*i* P	Pg	00 28 36.0	+0.3
	baz=199						
SCZT				*e*S	Sg	00 28 43.7	-0.5
	baz=199						
EHY	**Hungye**	**0.66**	**35**	*e*P	Pg	00 28 36.2	+0.2
	baz=33						
EHY				*e*S	Sg	00 28 44.1	-0.4
	baz=33						
SCLT	**Jiali**	**0.69**	**288**	*e*P	Pn	00 28 39.1	-0.7
	baz=303						
SCLT				S	Sn	00 28 51.6	+0.7
	baz=303						
CHY	**Chiayi**	**0.69**	**320**	*e*P	Pb	00 28 38.6	+0.8
	baz=321						
HGSD	**Ruisui**	**0.71**	**42**	⇑P	Pb	00 28 37.8	-0.4
	baz=31						
HGSD				S	Sb	00 28 48.2	0.0
	baz=31						
WHYT	**Xinyi Township**	**0.73**	**356**	*e*P	Pb	00 28 38.0	-0.6
	baz=6.0						
CHN8	**Yiju**	**0.75**	**301**	*e*P	Pn	00 28 39.8	-0.8
	baz=316						
CHN8				*e*S	Sn	00 28 52.5	+0.2
	baz=316						
WLCH	**Liuqiu**	**0.78**	**219**	*e*P	Pn	00 28 41.9	+0.8
	baz=221						
WGK	**Gukeng**	**0.79**	**336**	*e*P	Pn	00 28 41.0	-0.1
	baz=337						
TWP	**Hsiaoliuchiu**	**0.80**	**219**	*e*P	Pn	00 28 42.5	+1.3
	baz=222						
WDLH	**Douliu**	**0.80**	**335**	*e*P	Pn	00 28 40.8	-0.5
	baz=335						
VWDT	**VWDT**	**0.81**	**15**	P	Pg	00 28 38.4	-0.5
	baz=10.0						
VWDT				*e*S	Sb	00 28 52.1	+0.8
	baz=10.0						
SSLB	**Suanglung**	**0.82**	**3**	P	Pg	00 28 38.5	-0.6
	baz=3.0						
EGFH	**Guangfu**	**0.85**	**34**	*e*P	Pg	00 28 39.4	-0.2
	baz=25						
WJS	**Zhushan**	**0.87**	**349**	*e*P	Pn	00 28 42.4	+0.1
	baz=358						
WSF	**Szhu**	**0.92**	**317**	*e*P	Pb	00 28 42.0	+0.2
	baz=318						
WNT	**Mingjian**	**0.93**	**347**	*e*P	Pn	00 28 44.2	+1.1
	baz=349						
HEN	**Hengchun**	**0.97**	**189**	*e*P	Pn	00 28 43.7	+0.1
	baz=191						
ESL	**Shilin**	**0.97**	**30**	*e*P	Pg	00 28 41.5	-0.4
	baz=41						
TWK1	**Hengchun**	**1.02**	**185**	*e*P	Pn	00 28 44.5	+0.2
	baz=196						
TWKBT	**Hengchun**	**1.02**	**185**	*e*P	Pb	00 28 43.6	+0.1
	baz=196						
TSEB	**Hengchuen, Pin**	**1.06**	**180**	*e*P	Pn	00 28 46.1	+1.3
	baz=194						
CHGB	**Renai**	**1.12**	**13**	*e*P	Pg	00 28 44.2	-0.5
	baz=11						
ENLB	**Shoufeng**	**1.13**	**34**	*e*P	Pn	00 28 46.7	+0.8
	baz=33						
WDGT	**Dungji**	**1.19**	**285**	P	Pg	00 28 46.0	0.0
	baz=283						
WDGT				*e*S	Sb	00 29 02.4	+0.4
	baz=283						
HWA	**Hwalien**	**1.19**	**32**	*e*P	Pn	00 28 47.9	+1.2
	baz=41						
TWD	**Chiawan**	**1.28**	**29**	*e*P	Pg	00 28 47.3	-0.4
	baz=39						
TDCB	**Techi**	**1.30**	**10**	*e*P	Pb	00 28 48.7	+0.3
	baz=10.0						
ETLH	**Xiulin Townshi**	**1.34**	**23**	*e*P	Pn	00 28 48.3	-0.6
	baz=39						
PHUB	**P'eng-hu**	**1.34**	**294**	P	Pn	00 28 47.9	-0.9
	baz=294						
PHUB				S	Sg	00 29 06.4	-0.2
	baz=294						
PNG	**Penghu**	**1.38**	**296**	*e*P	Pn	00 28 48.9	-0.4
	baz=297						
TWQ1	**Liyutan**	**1.38**	**355**	*e*P	Pg	00 28 50.5	+0.7
	baz=356						
TWQ1				*e*S	Sn	00 29 11.6	+3.5
	baz=356						
VCHM	**Qimei**	**1.38**	**280**	*e*P	Pn	00 28 48.4	-0.9
	baz=295						
NSY	**Sanyi**	**1.45**	**355**	*e*P	Pg	00 28 52.3	+1.2
	baz=359						
PTSB	**Yuanli**	**1.49**	**353**	*e*P	Pg	00 28 52.0	+0.2
	baz=357						
NNSB	**Datong**	**1.52**	**17**	*e*P	Pn	00 28 51.4	+0.1
	baz=23						
NNSB				*e*S	Sg	00 29 12.9	+0.7
	baz=23						
NNS	**Nan Shan**	**1.53**	**16**	*e*P	Pn	00 28 51.8	+0.4
	baz=27						
NMLH	**Miaoli**	**1.57**	**356**	*e*P	Pg	00 28 55.2	+1.9
	baz=1.0						
NANB	**Nanao**	**1.65**	**28**	*e*P	Pn	00 28 52.4	-0.5
	baz=27						
NSTT	**Nanjuang**	**1.66**	**3**	*e*P	Pg	00 28 56.2	+1.1
	baz=5.0						
LIOB	**Emei**	**1.68**	**3**	*e*P	Pg	00 28 55.8	+0.4
	baz=6.0						
NDT	**Datong Townshi**	**1.72**	**19**	*e*P	Pb	00 28 55.7	+0.3
	baz=32						
YHNB	**Yeheng**	**1.75**	**14**	*e*P	Pb	00 28 55.3	-0.7
	baz=11						
YHNB				*e*S	Sg	00 29 20.4	+0.8
	baz=11						
NSK	**Sanguang**	**1.75**	**13**	*e*P	Pb	00 28 55.8	-0.3
	baz=14						
TWC	**Suao**	**1.85**	**28**	*e*P	Pb	00 28 57.0	-0.6
	baz=27						
TWE	**Neicheng**	**1.88**	**22**	*e*P	Pg	00 28 58.9	-0.4
	baz=35						
EOS1	**EOS1**	**1.93**	**35**	*e*P	Pb	00 28 58.2	-0.8
	baz=49						
TATO	**Taipei**	**2.07**	**15**	*e*P	Pg	00 29 03.2	+0.3
	baz=15						
YM04	**YM04**	**2.25**	**15**	*e*P	Pb	00 29 05.0	+0.5
	baz=3.0						
YM01	**YM01**	**2.25**	**15**	*e*P	Pb	00 29 04.4	-0.1
	baz=2.0						
YM10	**YM10**	**2.26**	**15**	*e*P	Pb	00 29 05.5	+0.8
	baz=2.0						
YM05	**YM05**	**2.27**	**15**	*e*P	Pb	00 29 04.5	-0.3
	baz=2.0						
YM03	**YM03**	**2.28**	**15**	*e*P	Pb	00 29 05.9	+0.9
	baz=3.0						
YOJ	**Yonaguni jima**	**2.44**	**52**	*e*P	Pn	00 29 03.1	-0.6
	baz=63						
PTMZ	**Houxiangcun**	**2.63**	**322**	*e*P	Pn	00 29 07.5	+1.0
	baz=326						
KNMB	**Chin-men Tao**	**2.75**	**303**	*e*P	Pn	00 29 10.5	+2.3
	baz=306						

MEX 18 00:29:10.9±0.4**, 16°.00N**×**97°.71W, h5^{km}**±5^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.42**	**41**	*e*P	Pn	00 29 34.1	-3.4
VHO				*e*S	Sb	00 29 52.2	-4.2
HUIG	**Huatulco**	**1.56**	**98**	*e*P	Pn	00 29 35.7	-3.6
HUIG				*e*S	Sn	00 29 54.5	-5.5
TLIG	**Tlapa**	**1.75**	**332**	*e*P	Pn	00 29 39.1	-3.0
TLIG				*i* S	Sn	00 29 59.8	-5.1
CMIG	**Matias Romero**	**2.92**	**68**	*i* P	Pn	00 29 54.8	-3.2
CMIG				*i* S	Sn	00 30 30.1	-3.4

IDC 18 00:31:17.0±2.9**, 6°.72S**×**128°.69E, h0^{km}, mb3.8**/1**, mb1 4.1**/3**, mb1mx3.5**/33**, mbtmp3.9**/3**, ML3.6**/2**, Error ellipse: s-maj=317.1km s-min=31.0km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.24**	**158**	Pn	Pn	00 34 39.9	-0.2
	0.2nm,0.3s,baz=334,slow=12,SNR=3.7						
WRA				Sn	Sn	00 37 07.8	-11
	0.5nm,0.3s,baz=341,slow=23,SNR=6.8						
ASAR	**Alice Springs**	**17.58**	**164**	P	Pn	00 35 23.6	0.0
	0.9nm,0.3s,baz=347,slow=10,SNR=22						
ASAR				S	Sn	00 38 31.1	-9.1
	0.1nm,0.3s,baz=344,slow=22,SNR=3.5						
MKAR	**Makanchi Array**	**67.28**	**327**	P	P	00 42 13.6	0.0
	0.4nm,0.3s,baz=127,slow=6.6,SNR=7.1						

IDC ***18*** *00:42:37.9±1.3, 31°.98N×47°.69E, h0^{km}, mb3.8/13, mb1 3.9/20, mb1mx3.8/45, mbtmp3.8/20, ML3.5/7, MS2.6/9, Ms1 2.6/9, ms1mx2.5/38, Error ellipse: s-maj=27.0km s-min=13.3km az=167.0*

ISCJB ***18*** *00:42:38.4±0.4, 31°.89N±0°.04×47°.52E±0°.03, h10^{km}, mb3.8/19, MS2.7/5, Error ellipse: s-maj=5.8km s-min=3.2km az=2.3*

TEH ***18*** *00:42:41.5, 32°.06N×47°.69E, h11^{km}, ML3.9*

THR ***18*** *00:42:41.8, 32°.07N×47°.71E, h14^{km}, ML3.3*

ISN ***18*** *00:42:44.0±0.8, 32°.13N×47°.47E, h4^{km}±4^{km}, ML4.0*

ISC 18 00:42:39.9±0.6**, 32°.01N**±0°.05×**47°.62E**±0°.04**, h10^{km}, n95,** σ**1.^{s}79**/96**, mb4.0**/19**, MS2.8**/4**, 6C-6D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.01**	**84**	*e*Pg	**Pg**	**00 42 59.2**	**0.0**
SHGR	**Shooshtar-Gavs**	**1.01**	**84**	Pg	**Pg**	**00 42 59.2**	**0.0**
AHWZ	**Ahwaz**	**1.11**	**128**	*e*Sg	**Sn**	**00 43 19.3**	**+2.6**
IKFM	**Kafar-mosalman**	**1.52**	**7**	*e*Sg	**Sg**	**00 43 30.7**	**+2.0**
IKFM				*e*Pn	**Pn**	**00 43 08.3**	**+1.2**
IKFM				IAMB	IAmb	00 43 36.8	
	comp=Z,0.0nm,0.8s						
IKMR	**Kamar-syah**	**1.63**	**23**	*e*Pn	**Pb**	**00 43 10.1**	**+0.1**
IKMR				IAMB	IAmb	00 43 40.1	
	comp=Z,0.0nm,1.0s						
IBDR	**Badra**	**1.80**	**308**	*e*Pg	**Pn**	**00 43 12.9**	**+1.9**
IBDR				*e*Sg	**Sn**	**00 43 35.0**	**+1.2**
IDOB	**Doab**	**1.83**	**15**	*e*Pn	**Pn**	**00 43 13.2**	**+1.6**
IDOB				IAMB	IAmb	00 43 52.0	
	comp=Z,0.0nm,0.9s						
IKOM	**Komasi**	**2.16**	**358**	*e*Pn	**Pn**	**00 43 18.0**	**+2.0**
IKOM				IAMB	IAmb	00 43 53.1	
	comp=Z,0.0nm,0.8s						
KCHF	**Cheshme Sefid,**	**2.31**	**348**	*e*Pn	**Pn**	**00 43 19.9**	**+1.8**
KCHF				IAMB	IAmb	00 43 56.3	
	comp=Z,0.0nm,0.4s						
HSAM	**Samen**	**2.34**	**20**	*e*Pn	**Pn**	**00 43 20.4**	**+1.7**
HSAM				IAMB	IAmb	00 43 56.5	
	comp=Z,0.0nm,0.6s						
IBZA	**Bozab**	**2.46**	**5**	*e*Pn	**Pn**	**00 43 22.2**	**+1.9**
IBZA				IAMB	IAmb	00 44 01.9	
	comp=Z,0.0nm,0.8s						
IGHG	**Ghaleghazi**	**2.47**	**339**	*e*Pn	**Pn**	**00 43 22.7**	**+2.3**
IGHG				IAMB	IAmb	00 44 08.4	
	comp=Z,9µm,0.8s						
IVIS	**Veis**	**2.59**	**346**	*e*Pn	**Pn**	**00 43 23.4**	**+1.5**
IVIS				IAMB	IAmb	00 44 07.4	
	comp=Z,5µm,0.8s						
JHBN	**Jahan bin**	**2.59**	**84**	*e*Pn	**Pn**	**00 43 23.4**	**+1.2**
JHBN				IAMB	IAmb	00 44 07.2	
	comp=Z,0.0nm,0.7s						
KHMZ	**Khomeyn**	**2.61**	**48**	*e*Pn	**Pn**	**00 43 24.7**	**+2.3**
KHMZ	**Khomeyn**	**2.61**	**48**	Pn	**Pn**	**00 43 24.7**	**+2.3**
KHMZ				Sg	**Sg**	**00 44 01.1**	**-2.8**
ZNGN	**Zangian**	**2.75**	**87**	*e*Pn	**Pn**	**00 43 25.5**	**+1.2**
ZNGN				IAMB	IAmb	00 44 08.0	
	comp=Z,0.0nm,0.7s						
IPIR	**Pirpir**	**2.85**	**76**	*e*Pn	**Pn**	**00 43 27.8**	**+2.1**
IDHR	**Dehrash**	**2.87**	**339**	*e*Pn	**Pn**	**00 43 27.8**	**+1.9**
IDHR				IAMB	IAmb	00 44 13.7	
	comp=Z,0.0nm,0.6s						
ROKH	**ROKH**	**2.91**	**83**	*e*Pn	**Pn**	**00 43 28.0**	**+1.5**
ROKH				IAMB	IAmb	00 44 11.7	
	comp=Z,0.0nm,0.8s						
ILIN	**Lien**	**2.95**	**349**	*e*Pn	**Pn**	**00 43 29.0**	**+2.0**
ILIN				IAMB	IAmb	00 44 09.2	
	comp=Z,3µm,0.2s						
BHD	**Baghdad**	**3.01**	**295**	*e*Pn	**Pn**	**00 43 28.5**	**+1.0**
BHD				*e*Sn	**Sn**	**00 44 01.0**	**-2.6**
HAGD	**Aghdareh**	**3.08**	**24**	*e*Pn	**Pn**	**00 43 31.9**	**+3.2**
HAGD				IAMB	IAmb	00 43 38.9	
	comp=Z,0.0nm,0.6s						
SNGE	**Sanandaj**	**3.08**	**356**	*e*Pn	**Pn**	**00 43 31.4**	**+2.7**
SNGE	**Sanandaj**	**3.08**	**356**	Pn	**Pn**	**00 43 31.4**	**+2.7**
ASAO	**Ashtian**	**3.23**	**38**	*e*Pn	**Pn**	**00 43 33.2**	**+2.3**
ASAO	**Ashtian**	**3.23**	**38**	Pn	**Pn**	**00 43 33.2**	**+2.3**
HSRG	**Sareghieh**	**3.27**	**10**	*e*Pn	**Pn**	**00 43 34.5**	**+3.1**
HSRG				IAMB	IAmb	00 44 27.4	
	comp=Z,0.0nm,0.8s						
IKLH	**Kolahrood**	**3.58**	**68**	*e*Pn	**Pn**	**00 43 37.9**	**+2.2**
IKLH				IAMB	IAmb	00 44 59.2	
	comp=Z,851nm,0.6s						
IGAR	**Gharneh**	**3.77**	**83**	*e*Pn	**Pn**	**00 43 39.5**	**+1.3**
IRAZ	**Razeghan**	**3.89**	**29**	*e*Pn	**Pn**	**00 43 42.3**	**+2.4**
IRAZ				IAMB	IAmb	00 43 55.8	
	comp=Z,2µm,0.8s						
GHVR	**GHOM**	**3.94**	**50**	*e*Pn	**Pn**	**00 43 42.3**	**+1.8**
GHVR	**GHOM**	**3.94**	**50**	AML	AML	00 44 51.0	
	comp=N,41nm,0.7s						
GHVR	**GHOM**	**3.94**	**50**	Pn	**Pn**	**00 43 42.2**	**+1.8**
QABG	**Abgarm-Qazvin**	**4.03**	**23**	*e*Pn	**Pn**	**00 43 44.6**	**+2.7**
QABG				IAMB	IAmb	00 43 57.2	
	comp=Z,0.0nm,0.8s						
IQOM	**Qom**	**4.03**	**45**	*e*Pn	**Pn**	**00 43 43.8**	**+1.9**
IQOM				IAMB	IAmb	00 43 57.7	
	comp=Z,842nm,0.5s						
IRAM	**Ramesheh**	**4.05**	**92**	*e*Pn	**Pn**	**00 43 43.1**	**+0.9**
IZEF	**Zefreh**	**4.08**	**76**	*e*Pn	**Pn**	**00 43 44.1**	**+1.6**
KRSH	**Karshahi**	**4.27**	**62**	*e*Pn	**Pn**	**00 43 46.5**	**+1.5**
KRSH				IAMB	IAmb	00 45 03.5	
	comp=Z,0.0nm,0.8s						
ISFB	**Sefidab**	**4.52**	**58**	*e*Pn	**Pn**	**00 43 49.5**	**+1.0**
IGZV	**Ghazvin**	**4.86**	**26**	*e*Pn	**Pn**	**00 43 53.7**	**+0.4**
MAHB	**Mahabad**	**5.00**	**342**	*e*Pn	**Pn**	**00 43 56.9**	**+1.8**
MAHB				IAMB	IAmb	00 44 57.3	
	comp=Z,0.0nm,0.4s						
QALM	**Alamut, Qazvin**	**5.07**	**29**	*e*Pn	**Pn**	**00 43 57.6**	**+1.4**
QALM				IAMB	IAmb	00 45 36.7	
	comp=Z,0.0nm,0.8s						
IDMV	**Damavand**	**5.11**	**45**	*e*Pn	**Pn**	**00 43 58.9**	**+2.1**
IDMV				IAMB	IAmb	00 45 54.2	
	comp=Z,435nm,1.0s						
ISAD	**Sadrabad**	**5.16**	**90**	*e*Pn	**Pn**	**00 43 58.2**	**+0.8**
ANAR	**Anarak**	**5.29**	**76**	*e*Pn	**Pn**	**00 44 00.1**	**+1.1**
IBST	**Bostanabad**	**5.70**	**354**	*e*Pn	**Pn**	**00 44 06.4**	**+1.5**
MSL	**Mosul**	**5.75**	**321**	*e*Pn	**Pn**	**00 44 07.0**	**+1.7**
MSL				*e*Sn	**Sn**	**00 45 06.5**	**-4.9**
ISRB	**Sarab**	**5.80**	**0**	*e*Pn	**Pn**	**00 44 08.1**	**+2.0**
IAZR	**Azarshahr**	**5.81**	**347**	*e*Pn	**Pn**	**00 44 08.1**	**+1.8**
ISHB	**Shabestar**	**6.47**	**346**	*e*Pn	**Pn**	**00 44 17.7**	**+2.4**
GNI	**Garni**	**8.45**	**345**	LR	LR	00 47 54.8	
	comp=Z,10nm,21.2s,baz=163,slow=37						
ASF	**Jabal al Asfar**	**9.10**	**274**	Pn	**Pn**	**00 44 51.8**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=42,slow=7.4,SNR=11						
ASF				Sn	Sn	00 46 27.5	-6.4
	comp=Z,0.3nm,0.3s,baz=63,slow=18,SNR=2.3						
ASF				Lg	Lg	00 47 28.6	
	comp=Z,0.9nm,0.3s,baz=137,slow=19,SNR=4.1						
MMAI	**Mount Meron Ar**	**10.37**	**279**	Pn	**Pn**	**00 45 10.0**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=90,slow=18,SNR=4.1						
MMAI				Sn	**Sn**	**00 47 04.6**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=105,slow=20,SNR=3.4						
MMAI				Lg	Lg	00 48 08.9	
	comp=Z,0.5nm,0.3s,baz=98,slow=32,SNR=3.5						
GEYT	**Alibeck**	**10.44**	**53**	LR	LR	00 49 27.0	
	comp=Z,29nm,21.4s,baz=200,slow=39						
EIL	**Elat**	**11.14**	**261**	Pn	**Pn**	**00 45 20.3**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=38,slow=19,SNR=3.8						
EIL				Lg	Lg	00 48 36.3	
	comp=Z,0.3nm,0.3s,baz=135,slow=20,SNR=2.0						
EIL				LR	LR	00 50 34.0	
	comp=Z,37nm,19.9s,baz=332,slow=43						
KBZ	**Khabaz**	**12.27**	**344**	LR	LR	00 50 56.1	
	comp=Z,39nm,21.9s,baz=166,slow=40						
WSAR	**Wadi Sarin**	**13.09**	**129**	Pn	**Pn**	**00 45 44.0**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=330,slow=8.1,SNR=5.1						
WSAR				Sn	Sn	00 48 03.5	-8.2
	comp=Z,0.2nm,0.3s,baz=12,slow=20,SNR=2.5						
BRTR	**Keskin Array B**	**13.69**	**308**	Pn	**Pn**	**00 45 56.8**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=127,slow=11,SNR=2.6						
IDI	**Anoyia**	**19.20**	**286**	Pn	**P**	**00 47 06.5**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=114,slow=18,SNR=2.5						
AKTO	**Aktyubinsk**	**19.96**	**20**	P	**P**	**00 47 11.1**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=3.3						
AKTO				LR	LR	00 57 31.0	
	comp=Z,14nm,19.4s,baz=235,slow=45						
CFR	**Carcaliu**	**20.05**	**317**	⇑*i*P	**P**	**00 47 13.6**	**+0.6**
MILM	**Milestii Mici**	**20.72**	**321**	⇓*i*P	**P**	**00 47 20.5**	**+0.2**
VRI	**Vrincioaia**	**21.26**	**317**	⇑*i*P	**P**	**00 47 27.5**	**+1.4**
PLOR	**Plostina**	**21.29**	**316**	⇓*i*P	**P**	**00 47 28.2**	**+1.6**
MLR	**Muntele Rosu**	**21.52**	**315**	P	**P**	**00 47 30.2**	**+1.1**
	comp=Z,6.5nm,0.8s,baz=181,slow=2.7,SNR=13						
MLR	**Muntele Rosu**	**21.52**	**315**	⇓*i*P	**P**	**00 47 30.8**	**+1.7**
TESR	**Tescani**	**21.66**	**318**	⇑*i*P	**P**	**00 47 31.1**	**+0.6**
VOIR		**22.04**	**314**	⇑*i*P	**P**	**00 47 36.0**	**+1.4**
DOPR	**Dopca**	**22.10**	**315**	⇑*i*P	**P**	**00 47 36.0**	**+0.8**
BIZ	**Bicaz**	**22.21**	**318**	⇓*i*P	**P**	**00 47 36.3**	**-0.1**
BURAR	**Bucovina Array**	**23.09**	**319**	⇑*i*P	**P**	**00 47 46.7**	**+0.9**
AKASG	**Malin Array Be**	**23.11**	**329**	P	**P**	**00 47 45.3**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=136,slow=10,SNR=7.6						
GZR	**Gura Zlata**	**23.43**	**312**	⇓*i*P	**P**	**00 47 49.6**	**+0.4**
AAK	**Ala-Archa**	**23.76**	**56**	LR	LR	00 58 47.1	
	comp=Z,36nm,18.2s,baz=238,slow=41						
KOLS	**Kolonicke sedl**	**25.46**	**319**	*e*P	**P**	**00 48 10.0**	**+2.1**
ARU	**Arti**	**25.57**	**14**	P	**P**	**00 48 08.7**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=167,slow=12,SNR=3.4						
TIP	**Timpagrande**	**26.01**	**295**	⇓*i*P	**P**	**00 48 13.0**	**-0.1**
BVAR	**Borovoye Array**	**26.67**	**31**	P	**P**	**00 48 19.0**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=221,slow=7.9,SNR=10						
VYHS	**Vyhne**	**27.23**	**316**	*e*P	**P**	**00 48 29.9**	**+6.0**
KURBB	**Kurchatov Arra**	**29.43**	**42**	P	**P**	**00 48 43.2**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=245,slow=9.5,SNR=5.7						
MOA	**Molln**	**29.79**	**312**	*i* P	**P**	**00 48 47.7**	**+1.0**
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**30.30**	**51**	P	**P**	**00 48 51.0**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=238,slow=6.7,SNR=4.4						
GERES	**GERESS Array B**	**30.49**	**313**	P	**P**	**00 48 53.1**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=101,slow=5.2,SNR=3.5						
GERES				LR	LR	01 04 40.0	
	comp=Z,27nm,18.9s,baz=140,slow=43						
SQTA	**Sankt Quirin**	**31.57**	**309**	*i* P	**P**	**00 49 02.6**	**0.0**
	comp=Z,1.9nm,0.4s						
MOTA	**Moosalm**	**31.67**	**310**	*i* P	**P**	**00 49 03.6**	**+0.1**
	comp=Z,3.0nm,0.6s						
FETA	**Feichten**	**31.83**	**309**	*i* P	**P**	**00 49 05.6**	**+0.7**
	comp=Z,2.2nm,0.7s						
RETA	**Reutte**	**31.93**	**310**	*i* P	**P**	**00 49 05.4**	**-0.3**
	comp=Z,1.2nm,0.3s						
DAVA	**Damuels**	**32.46**	**309**	*i* P	**P**	**00 49 10.5**	**+0.1**
	comp=Z,6.8nm,0.8s						
FINES	**FINESS Array B**	**32.61**	**341**	P	**P**	**00 49 10.9**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=138,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	**34.36**	**39**	P	**P**	**00 49 25.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=257,slow=10,SNR=3.4						
ZALV				LR	LR	01 06 07.2	
	comp=Z,14nm,20.1s,baz=64,slow=41						
NOA	**NORSAR Array B**	**37.47**	**332**	P	**P**	**00 49 52.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=127,slow=8.5,SNR=2.9						
NOA				LR	LR	01 07 18.3	
	comp=Z,8.5nm,18.8s,baz=235,slow=39						
ARCES	**ARCESS Array B**	**39.59**	**348**	P	**P**	**00 50 10.8**	**-0.2**
	comp=Z,2.0nm,1.0s,baz=148,slow=9.4,SNR=4.2						
ESDC	**Sonseca Array**	**42.02**	**295**	P	**P**	**00 50 31.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=74,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**45.98**	**257**	P	**P**	**00 51 02.7**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=42,slow=8.7,SNR=14						

IDC 18 00:49:09.8±2.6**, 10°.67S**×**123°.60E, h0^{km}, mb3.7**/1**, mb1 3.6**/3**, mb1mx3.3**/22**, mbtmp3.5**/3**, ML3.3**/2**, Error ellipse: s-maj=269.4km s-min=34.1km az=52.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.86**	**133**	Pn	Pn	00 52 26.5	-1.2
	0.2nm,0.3s,baz=308,slow=13,SNR=8.3						
WRA				Sn	Sn	00 54 53.8	-8.7
	0.1nm,0.3s,baz=307,slow=24,SNR=5.3						
ASAR	**Alice Springs**	**16.24**	**144**	Pn	Pn	00 53 00.7	+1.2
	0.1nm,0.3s,baz=318,slow=12,SNR=4.3						
ASAR				Sn	Sn	00 55 55.7	-4.7
	0.1nm,0.3s,baz=323,slow=23,SNR=2.8						
MKAR	**Makanchi Array**	**68.06**	**331**	P	P	01 00 11.2	0.0
	0.5nm,0.6s,baz=134,slow=6.2,SNR=4.1						

ISCJB ***18*** *01:16:10.0±0.4, 38°.77N±0°.02×122°.84W±0°.04, h10^{km}, Error ellipse: s-maj=5.0km s-min=2.8km az=147.7*

NEIC ***18*** *01:16:10.2±0.0, 38°.81N×122°.82W, h2^{km}, MW3.5(BRK), After NCEDC.*

NEIC Felt [III] at Cloverdale. Also felt at Saint Helena.

NCEDC ***18*** *01:16:10.2, 38°.81N×122°.82W, h2^{km}, MW3.5(BRK)*

IDC ***18*** *01:16:11.7±2.7, 38°.89N×122°.74W, h0^{km}, mb1 3.9/4, mb1mx3.4/49, mbtmp3.4/4, ML3.5/4, Error ellipse: s-maj=34.6km s-min=13.0km az=40.0*

ANF ***18*** *01:16:11.4±2.3, 38°.92N×122°.51W, ML2.9/11, Error ellipse: s-maj=35.7km s-min=9.7km az=58.0*

ISC 18 01:16:09.6±0.8**, 38°.75N**±0°.03×**122°.90W**±0°.04**, h10^{km}, n50,** σ**1.^{s}70**/62**, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.10**	**54**	*e*Pg	**Pg**	**01 16 10.8**	**-1.4**
HOPS	**Hopland Field**	**0.28**	**330**	*e*Pg	**Pb**	**01 16 16.1**	**-0.7**
HOPS				*e*Sg	**Sg**	**01 16 18.2**	**-0.8**
MCCM	**Marconi Confer**	**0.60**	**179**	*e*Pg	**Pn**	**01 16 23.9**	**-0.3**
MCCM				*e*Sg	**Sb**	**01 16 30.9**	**+0.1**
KCPM	**Cahto Peak**	**1.08**	**330**	*e*Pn	**Pn**	**01 16 31.4**	**+0.5**
KCPM				*e*Sg	**Sg**	**01 16 40.1**	**-4.3**
O02D	**Mt. Diablo Mer**	**1.43**	**3**	P	**Pg**	**01 16 36.0**	**-1.0**
	baz=181						
AFDM	**Forest Hills D**	**1.52**	**82**	*e*Pn	**Pn**	**01 16 35.4**	**-1.4**
AFDM				*e*Sg	**Sn**	**01 16 55.2**	**-1.4**
KMRM	**Mail Ridge**	**1.60**	**337**	*e*Pn	**Pb**	**01 16 38.7**	**-0.6**
O03E	**Paynes Creek**	**1.76**	**28**	P	**Pn**	**01 16 39.2**	**-1.0**
	baz=208						
O03E				S	**Sn**	**01 17 01.1**	**-1.6**
	baz=208						
WDC	**Whiskeytown Da**	**1.85**	**8**	*e*Pn	**Pn**	**01 16 41.5**	**+0.2**
WDC				*e*Sn	**Sb**	**01 17 05.2**	**-1.5**
CMB	**Columbia Colle**	**2.10**	**109**	*e*Pn	**Pn**	**01 16 44.9**	**+0.1**
CMB				*e*Sn	**Sn**	**01 17 11.1**	**+0.1**
RUBR	**Rubicon Trail**	**2.16**	**81**	*e*Pn	**Pb**	**01 16 47.0**	**-1.9**
RUBR				*e*Sn	**Sn**	**01 17 11.5**	**-1.3**
KHMM	**Horse Mountain**	**2.22**	**343**	*e*Pn	**Pn**	**01 16 46.2**	**-0.3**
N02D	**Trinity Center**	**2.23**	**4**	P	**Pn**	**01 16 47.4**	**+0.7**
	baz=182						
JCC	**Jacoby Creek,**	**2.24**	**337**	*e*Pn	**Pb**	**01 16 48.6**	**-1.5**
BEKR	**Beckworth**	**2.26**	**60**	*e*Pn	**Pn**	**01 16 47.9**	**+0.7**
BEKR				*e*Sn	**Sn**	**01 17 15.3**	**0.0**
SAO	**San Andreas Ge**	**2.29**	**149**	*e*Pn	**Pn**	**01 16 47.9**	**+0.4**
VCNR	**Virginia City**	**2.59**	**77**	*e*Pn	**Pn**	**01 16 52.9**	**+1.2**
PNTR	**Pine Nut**	**2.59**	**81**	*e*Pn	**Pn**	**01 16 53.4**	**+1.6**
M02C	**Callahan**	**2.64**	**1**	P	**Pn**	**01 16 53.7**	**+1.4**
	baz=179						

WAKR	Walker	2.72	94	ePn	Pb	01 16 55.6	-2.8
YERR	Yerington	2.86	84	ePn	Pn	01 16 56.8	+1.3
PAHR	Pah Rah Range	2.89	70	ePn	Pn	01 16 56.8	+0.9
YBH	Yreka Blue Hor 0.4nm,0.3s,baz=173,slow=13,SNR=6.5	2.98	3	Pn	Pn	01 16 59.1	+2.1
M04C	Macdoel baz=194	3.13	15	Pb	Pb	01 17 04.6	-0.9
MDPB	Devils Postpil	3.21	109	ePn	Pb	01 17 02.9	-3.9
OMMB	Old Mammoth Mi	3.27	109	ePn	Pn	01 17 03.3	+2.1
MLAC	Mammoth, Mammo baz=292	3.39	108	Pb	Pb	01 17 08.9	-1.0
MLAC	baz=292			Sb	Sb	01 17 54.1	+2.8
RYN	Ryan	3.42	91	ePn	Pn	01 17 04.5	+1.3
L02E	Cave Junction baz=170	3.45	351	P	Pn	01 17 05.5	+2.1
L02E	baz=170			Sb	Sb	01 17 54.1	+1.5
L04D	Klamath Falls baz=187	3.49	7	Pb	Pb	01 17 11.0	-0.6
NV01	Mina Array Sit	3.61	94	ePn	Pn	01 17 06.7	+0.9
NV01				ePg	Pb	01 17 13.2	-0.5
NV01				eLg	Lg	01 18 00.6	
NVAR	Mina Array Bea 0.8nm,0.3s,baz=271,slow=15,SNR=28	3.61	94	Pn	Pn	01 17 06.7	+0.9
NVAR	3.0nm,0.3s,baz=267,slow=18,SNR=58			Pg	Pb	01 17 13.2	-0.5
NVAR	1.1nm,0.3s,baz=276,slow=30,SNR=1.9			Lg	Lg	01 18 00.6	
PAGB	Antelope Grade	3.68	144	ePn	Pn	01 17 06.8	+0.3
MOD	Modoc Plateau	3.72	31	ePg	Pb	01 17 15.1	-0.4
NV11	Mina Array Sit	3.73	93	ePn	Pn	01 17 07.5	+0.1
KVN	Kaiserville	3.75	84	ePn	Pn	01 17 08.2	+0.4
HUMO	Hull Mountain	3.85	359	ePn	Pn	01 17 08.8	-0.2
K02D	Willamette Mer baz=170	3.98	352	P	Pn	01 17 14.1	+3.3
TIN	Tinemaha, Big baz=297	4.06	113	Pb	Pb	01 17 20.6	-0.7
VES	Vestal, Richgr baz=316	4.20	133	P	Pn	01 17 14.6	+0.9
CWC	Cottonwood Cre baz=304	4.46	120	Pb	Pb	01 17 27.5	-0.7
CWC	baz=304			Sb	Sb	01 18 23.3	+1.1
ISA	Isabella, Lake	4.69	130	ePn	Pn	01 17 18.9	-1.5
DAC	Darwin (Calif)	4.88	119	ePn	Pn	01 17 22.7	-0.5
TPNV	Topopah Spring	5.56	107	ePn	Pn	01 17 31.1	-1.4
R11A	Troy Canyon, C	5.74	92	ePn	Pn	01 17 35.3	+0.2
ELK	Elko 0.2nm,0.3s,baz=261,slow=16,SNR=12	6.23	69	Pn	Pn	01 17 43.3	+1.6
PD31	Pinedale Array	10.88	64	ePn	Pn	01 18 51.6	+6.1
PDAR	Pinedale Array 0.2nm,0.3s,baz=245,slow=11,SNR=11	10.88	64	Pn	Pn	01 18 51.6	+6.1
LTX	Lajitas	18.47	115	ePn	Pn	01 20 30.5	+4.8
TXAR	Lajitas Array 0.0nm,0.3s,baz=307,slow=11,SNR=11	18.47	115	Pn	Pn	01 20 30.5	+4.8

MEX 18 01:19:13.2±0.6, 16°.99N×99°.69W, h27km±21km, MD3.7,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.56	276	eP	Pb	01 19 22.4	-2.0
CAIG				i S	Sb	01 19 30.0	-2.0
MEIG	Mezcala	0.94	4	eP	Pn	01 19 27.5	-3.2
MEIG				i S	Sb	01 19 39.5	-3.4
TLIG	Tlapa	1.22	62	eP	Pn	01 19 32.4	-2.2
TLIG				eS	Sn	01 19 47.0	-3.2
PLIG	Platanillo	1.41	7	eP	Pn	01 19 35.0	-2.1
PLIG				eS	Sn	01 19 52.0	-2.9
ARIG	Puente Sto Nin	1.43	334	eP	Pn	01 19 35.0	-2.3
ARIG				eS	Sn	01 19 52.3	-3.0
ZIIG	Zihuatanejo	1.80	290	eP	Pn	01 19 41.0	-1.5
ZIIG				i S	Sn	01 20 02.3	-2.2

SOME 18 01:38:56.8, 42°.28N×79°.82E, h10km
KRNET 18 01:38:56.5±0.1, 42°.31N×79°.94E, h1km, mb4.0
NNC 18 01:38:57.6±1.0, 42°.36N×79°.91E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=6.8km s-min=4.5km az=142.0
ISCJB 18 01:38:58.0±0.7, 42°.31N±0°.04×80°.01E±0°.04, h10km, Error ellipse: s-maj=6.0km s-min=3.3km az=141.0
ISC 18 01:38:56.9±1.3, 42°.30N±0°.05×79°.96E±0°.05, h10km, n90, σ1s82/150, 35C-34D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye 14nm,0.1s	1.09	341	P	Pb	01 39 17.3	-0.6
PDGK	36nm,0.2s			S	Sb	01 39 31.8	-0.4
PDGK	Podgornoye 12nm,0.4s	1.09	341	⇑P	Pg	01 39 17.0	-0.8
PDGK	128nm,0.5s			⇑S	Sb	01 39 31.4	-0.8
PDGK	Podgornoye baz=42	1.09	341	⇓iP	Pg	01 39 17.0	-0.8
PDGK	baz=42			⇓iS	Sb	01 39 31.6	-0.6
UZB	Uzynbulak 96nm,0.2s	1.09	321	P	Pg	01 39 17.2	-0.8
UZB	242nm,0.4s			S	Sb	01 39 31.9	-0.5
UZB	Uzynbulak baz=21	1.09	321	⇑iP	Pg	01 39 17.2	-0.8
UZB	baz=21			⇓iS	Sb	01 39 31.9	-0.5
UZB	Uzynbulak 96nm,0.2s	1.09	321	⇑iP	Pg	01 39 17.2	-0.8
UZB	242nm,0.4s			⇓iS	Sb	01 39 31.9	-0.5
PRZ	Przheval'sk baz=79	1.17	280	⇑iP	Pb	01 39 18.0	-1.4
PRZ	baz=79			⇑iS	Sg	01 39 33.7	-1.0
KTMS	Ketmen 103nm,0.2s	1.18	14	P	Pb	01 39 19.0	-0.6
KTMS	362nm,0.3s			S	Sn	01 39 34.8	-1.1
KTMS	Ketmen baz=14	1.18	14	⇓iP	Pb	01 39 19.0	-0.6
KTMS	baz=14			⇓iS	Sn	01 39 35.0	-0.9
KTMS	Ketmen 102nm,0.2s	1.18	14	⇓iP	Pb	01 39 19.0	-0.6
KTMS	369nm,0.3s			⇓iS	Sn	01 39 35.0	-0.9
SATY	Saty 110nm,0.1s	1.38	304	P	Pn	01 39 22.0	-0.4
SATY	238nm,0.1s			S	Sg	01 39 40.3	-0.9
SATY	Saty 110nm,0.1s	1.38	304	⇓iP	Pg	01 39 22.6	-0.7
SATY	238nm,0.1s			eS	Sg	01 39 40.5	-0.7
KPKS	Kokpek baz=21	1.50	322	⇑iP	Pb	01 39 24.4	-0.5
KPKS	baz=21			⇓iS	Sg	01 39 44.2	-0.9
KPKS	Kokpek 185nm,0.2s	1.50	322	⇑iP	Pb	01 39 24.4	-0.5
KPKS	913nm,0.2s			⇓iS	Sg	01 39 44.2	-0.9
KURS	Kuram 85nm,0.2s	1.77	313	S	Sg	01 39 53.5	-0.5
KURS	Kuram baz=13	1.77	313	⇓iP	Pg	01 39 29.8	-1.2
KURS	baz=13			⇓eS	Sg	01 39 53.3	-0.7
KURS	Kuram 66nm,0.4s	1.77	313	⇓iP	Pg	01 39 29.8	-1.2
KURS	85nm,0.2s			eS	Sg	01 39 53.3	-0.7
DJR	Jarkent 49nm,0.4s	2.04	357	eP	Pb	01 39 33.6	-0.4
DJR	457nm,0.3s			eS	Sg	01 40 01.1	-1.2
KDJ	Kajisay baz=66	2.07	266	⇓iP	Pb	01 39 34.0	-0.8
KDJ	baz=66			⇓iS	Sg	01 40 01.6	-2.0
MNBS	Baschi 48nm,0.2s	2.11	328	Pg	Pb	01 39 35.2	-0.2
MNBS	Baschi baz=28	2.11	328	eP	Pb	01 39 35.2	-0.2
MNBS	baz=28			eS	Sg	01 40 02.8	-2.1
MNBS	Baschi 48nm,0.2s	2.11	328	eP	Pb	01 39 35.2	-0.2
MNBS	631nm,0.3s			eS	Sg	01 40 02.8	-2.1
KOTS	Kotyrbulak 45nm,0.2s	2.30	295	Pg	Pb	01 39 38.0	-0.6
KOTS	491nm,0.3s			Lg	Lg	01 40 07.5	
KOTS	Kotyrbulak baz=95	2.30	295	eP	Pb	01 39 38.0	-0.6
KOTS	baz=95			eS	Sb	01 40 07.5	+0.4
KOTS	Kotyrbulak 45nm,0.2s	2.30	295	eP	Pb	01 39 38.0	-0.6
KOTS	491nm,0.3s			eS	Sb	01 40 07.5	+0.4
MDOK	Medeo 44nm,0.6s	2.31	293	Pg	Pb	01 39 37.7	-1.1
MDOK	49nm,0.5s			Lg	Lg	01 40 07.2	
MDOK	Medeo baz=93	2.31	293	eP	Pb	01 39 37.7	-1.1
MDOK	baz=93			eS	Sb	01 40 07.1	-0.4
MDOK	Medeo 44nm,0.6s	2.31	293	eP	Pb	01 39 37.7	-1.1
MDOK	49nm,0.5s			eS	Sb	01 40 07.2	-0.4
TNSS	Tian-Shan 70nm,0.2s	2.34	289	Pg	Pb	01 39 38.3	-1.2
TNSS	80nm,0.4s			Lg	Lg	01 40 08.9	
TNSS	Tian-Shan baz=89	2.34	289	eP	Pb	01 39 38.3	-1.2
TNSS	baz=89			eS	Sb	01 40 09.0	+0.3
TNSS	Tian-Shan 70nm,0.2s	2.34	289	eP	Pb	01 39 38.2	-1.2
TNSS	80nm,0.4s			eS	Sb	01 40 08.9	+0.3
KNDC	Almaty 40nm,0.3s	2.39	294	⇑Pn	Pb	01 39 39.7	-0.3
KNDC	82nm,0.3s			⇓Sn	Sg	01 40 12.3	-1.4
AAA	Alma-Ata 65nm,0.1s	2.42	293	Pg	Pb	01 39 41.0	+0.4
AAA	102nm,0.2s			Lg	Lg	01 40 12.6	
AAA	Alma-Ata baz=93	2.42	293	eP	Pb	01 39 41.0	+0.4
AAA	baz=93			eS	Sg	01 40 12.6	-2.1
AAA	Alma-Ata 65nm,0.1s	2.42	293	eP	Pb	01 39 41.0	+0.4
AAA	102nm,0.2s			eS	Sg	01 40 12.6	-2.1
IZV	Izvestkoviy 40nm,0.2s	2.58	288	Pg	Pb	01 39 42.6	-0.7
IZV	155nm,0.4s			Lg	Lg	01 40 15.3	
IZV	Izvestkoviy baz=88	2.58	288	eP	Pb	01 39 42.6	-0.7
IZV	baz=88			eS	Sb	01 40 15.3	+0.2
IZV	Izvestkoviy 40nm,0.2s	2.58	288	eP	Pb	01 39 42.6	-0.7
IZV	155nm,0.4s			eS	Sb	01 40 15.3	+0.2
CHKK	Chushkaly 22nm,0.2s	2.68	306	Pg	Pb	01 39 44.2	-0.7
CHKK	263nm,0.2s			Lg	Lg	01 40 18.6	
CHKK	Chushkaly baz=7.0	2.68	306	eP	Pb	01 39 44.3	-0.7
CHKK	baz=7.0			eS	Sb	01 40 18.7	+0.8
CHKK	Chushkaly 22nm,0.2s	2.68	306	eP	Pb	01 39 44.2	-0.7
CHKK	263nm,0.2s			eS	Sb	01 40 18.6	+0.8
MTBS	Maitube 43nm,0.2s	2.73	289	Pg	Pb	01 39 44.7	-1.3
MTBS	86nm,0.3s			Lg	Lg	01 40 19.0	
MTBS	Maitube baz=89	2.73	289	eP	Pb	01 39 44.7	-1.3
MTBS	baz=89			eS	Sb	01 40 19.1	-0.5
MTBS	Maitube 43nm,0.2s	2.73	289	eP	Pb	01 39 44.7	-1.3
MTBS	86nm,0.3s			eS	Sb	01 40 19.0	-0.5
ULHL	Ulahol baz=70	2.76	270	⇑iP	Pb	01 39 43.7	-2.8
ULHL	baz=70			⇑iS	Sb	01 40 17.9	-2.6
ULHL	Ulahol SNR=30	2.76	270	P	Pb	01 39 44.7	-1.8
KTBS	Karatobe 31nm,0.3s	2.79	302	Pg	Pb	01 39 46.5	-0.4
KTBS	194nm,0.4s			Lg	Lg	01 40 22.0	
KTBS	Karatobe baz=0.0	2.79	302	eP	Pb	01 39 46.5	-0.4
KTBS	baz=0.0			eS	Sb	01 40 22.0	+0.9
KTBS	Karatobe 31nm,0.3s	2.79	302	eP	Pb	01 39 46.5	-0.4
KTBS	194nm,0.4s			eS	Sb	01 40 22.0	+0.9
BOOM	Boomskoye usch baz=75	2.99	275	⇑iP	Pn	01 39 46.6	+2.1
BOOM	baz=75			⇑iS	Sb	01 40 23.3	-3.6
KAPS	Kapalarasan 7.1nm,0.2s	3.02	352	Pg	Pb	01 39 50.8	0.0
KAPS	66nm,0.5s			Lg	Lg	01 40 29.3	
KAPS	Kapalarasan 7.1nm,0.2s	3.02	352	eP	Pb	01 39 50.8	0.0
KAPS	66nm,0.5s			eS	Sb	01 40 29.4	+1.7
KST	Kastek 40nm,0.3s	3.04	285	Pg	Pb	01 39 49.3	-2.0
KST	56nm,0.3s			Lg	Lg	01 40 26.8	
KST	Kastek baz=85	3.04	285	eP	Pb	01 39 50.5	-0.7
KST	baz=85			eS	Sb	01 40 29.4	+1.0
KST	Kastek 40nm,0.3s	3.04	285	eP	Pb	01 39 50.5	-0.7
KST	77nm,0.4s			eS	Sb	01 40 29.4	+1.0
NRN	Naryn baz=55	3.08	255	⇑iP	Pn	01 39 48.4	+2.4
NRN	baz=55			⇑iS	Sn	01 40 26.0	+2.9
KUU	Kurty 6.1nm,0.2s	3.10	302	Pg	Pb	01 39 51.7	-0.3
KUU	76nm,0.3s			Lg	Lg	01 40 31.2	
KUU	Kurty baz=2.0	3.10	302	eP	Pb	01 39 52.2	+0.1
KUU	baz=2.0			eS	Sb	01 40 31.6	+1.7
KUU	Kurty 6.1nm,0.2s	3.10	302	eP	Pb	01 39 52.2	+0.1
KUU	99nm,0.3s			eS	Sb	01 40 31.7	+1.7
TKM2	Tokmak 2 10.0nm,0.5s	3.28	282	⇓Pn	Pb	01 39 51.9	-3.5
TKM2	53nm,0.6s			⇑Lg	Lg	01 40 37.4	
TKM2	Tokmak 2 baz=82	3.28	282	⇑iP	Pn	01 39 50.6	+2.0
TKM2	baz=82			⇑iS	Sn	01 40 30.4	+2.6
TKM2	Tokmak 2 SNR=33	3.28	282	P	Pb	01 39 51.7	-3.7
KZA	Kyzart baz=68	3.51	268	⇓eP	Pn	01 39 54.0	+2.1
KZA	baz=68			⇓iS	Sn	01 40 36.2	+2.5
KZA	Kyzart SNR=9.2	3.51	268	P	Pb	01 39 56.0	-3.4
KBK	Karagaybulak baz=77	3.73	277	⇓eP	Pn	01 39 57.1	+2.4
KBK	baz=77			⇓iS	Sn	01 40 41.3	+2.6
KBK	Karagaybulak SNR=13	3.73	277	P	Pn	01 39 58.1	+3.4
CHMS	Chumysh baz=82	3.91	282	⇑iP	Pn	01 39 59.3	+2.3
CHMS	baz=82			⇑iS	Sn	01 40 45.3	+2.3
FRU1	Bishkek baz=79	3.97	279	⇓eP	Pn	01 40 00.2	+2.2
FRU1	baz=79			⇓iS	Sn	01 40 47.0	+2.4
UCH	Uchtor baz=71	4.04	271	⇓eP	Pn	01 40 01.5	+2.2
UCH	baz=71			⇓iS	Sn	01 40 48.9	+1.9
UCH	Uchtor SNR=7.1	4.04	271	P	Pn	01 40 02.9	+3.6
AAK	Ala-Archa 1.9nm,0.4s	4.06	277	⇑Pn	Pn	01 40 01.0	+1.8
AAK	6.6nm,0.3s			⇑Pg	Pg	01 40 12.0	-2.7
AAK	17nm,0.5s			⇑Lg	Lg	01 40 59.0	
AAK	Ala-Archa baz=76	4.06	277	⇓eP	Pn	01 40 01.6	+2.4
AAK	baz=76			⇓iS	Sn	01 40 49.6	+2.7
AAK	Ala-Archa SNR=7.3	4.06	277	P	Pg	01 40 13.0	-1.7
SGDS	Sogindy 13nm,0.4s	4.08	288	Pg	Pb	01 40 09.7	+0.7
SGDS	19nm,0.3s			Lg	Lg	01 41 02.3	
USP	Ospenovka baz=85	4.14	285	⇑eP	Pn	01 40 02.5	+2.3
USP	baz=85			⇑iS	Sn	01 40 50.6	+2.0
ARLS	Aral baz=66	4.22	266	⇓iP	Pn	01 40 03.2	+1.7
ARLS	baz=66			⇓iS	Sn	01 40 52.3	+1.4
EKS2	Erkin-Say baz=76	4.59	277	⇓iP	Pn	01 40 08.7	+2.2
EKS2	baz=76			⇓iS	Sn	01 41 01.6	+1.7
EKS2	Erkin-Say SNR=6.4	4.59	277	P	Pb	01 40 20.5	+2.9
MAKZ	Makanchi 1.3nm,0.2s	4.73	17	⇑Pn	Pn	01 40 10.0	+1.6
MAKZ	1.7nm,0.5s			⇑Sn	Sn	01 41 03.7	+0.4
MAKZ	9.0nm,0.8s			⇑Lg	Lg	01 41 22.3	
MK31	Makanchi Array 1.6nm,0.2s,baz=200,slow=13,SNR=146	4.79	20	Pn	Pn	01 40 11.1	+1.9
MK31	2.3nm,0.3s			⇑Sn	Sn	01 41 06.3	+1.5
MK31	6.8nm,0.5s			⇓Lg	Lg	01 41 24.3	
MRKS	Merke 12nm,0.4s	5.00	277	Pg	Pb	01 40 27.8	+3.2
MRKS	Merke baz=77	5.00	277	eP	Pb	01 40 27.8	+3.2
MRKS	baz=77			eS	Sg	01 41 33.0	-4.4
MRKS	Merke 12nm,0.4s	5.00	277	eP	Pb	01 40 27.8	+3.2
MRKS	18nm,0.4s			eS	Sg	01 41 33.0	-4.4
BTLS	Baital 4.6nm,0.4s	5.09	305	Pg	Pb	01 40 29.0	+2.9
BTLS	7.0nm,0.5s			Lg	Lg	01 41 34.7	
BTLS	Baital baz=5.0	5.09	305	eP	Pb	01 40 29.0	+2.9
BTLS	baz=5.0			eS	Sg	01 41 34.8	-5.6
BTLS	Baital 4.6nm,0.4s	5.09	305	eP	Pb	01 40 29.0	+2.9
BTLS	7.0nm,0.5s			eS	Sg	01 41 34.7	-5.6
KK31	Karatay Array 0.3nm,0.5s,baz=93,slow=16,SNR=11	7.01	280	⇓Pn	Pb	01 41 00.2	+1.4
KK31	0.5nm,0.3s,baz=91,slow=16,SNR=7.2			⇑Pg	Pg	01 41 05.6	-5.4
KK31	3.2nm,0.5s			⇑Lg	Lg	01 42 34.3	
OTUK	Ortayu 1.6nm,0.7s	8.01	320	⇑Sn	Sn	01 42 22.5	-1.6
OTUK	7.3nm,0.8s			⇑Lg	Lg	01 43 06.4	
KURBB	Kurchatov Arra 6.3nm,0.7s	8.38	354	⇑Lg	Lg	01 43 17.0	
KURK	Kurchatov 9.9nm,0.8s	8.47	354	⇑Lg	Lg	01 43 21.9	

IDC 18 02:07:24.7±4.0, 21°.50S×70°.09W, h0km, mb4.1/1, mb1 3.9/2, mb1mx3.5/17, mbtmp3.8/2, ML3.4/1, Error ellipse: s-maj=126.9km s-min=60.9km az=91.0
ISCJB 18 02:07:29.4±0.6, 20°.71S±0°.02×70°.66W±0°.07, h59km±8km, mb4.4/3, Error ellipse: s-maj=11.0km s-min=4.0km az=4.8
SJA 18 02:07:29.0±0.6, 20°.69S×70°.56W, h32km±2km, ML3.3, MW3.7
NEIC 18 02:07:30.0±0.0, 20°.68S×70°.50W, h48km, mb4.5/2, ML3.9(GUC), After GUC.
NEIC Felt [II] at Iquique.
GUC 18 02:07:30.2±0.8, 20°.67S×70°.51W, h48km±276km, ML3.9
ISC 18 02:07:29.9±1.2, 20°.70S±0°.03×70°.64W±0°.07, h51km±13km, n51, σ1s10/64, mb4.0/3, 3C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.93	132	eP	Pn	02 07 46.7	0.0
PB02				eS	Sn	02 07 59.5	+0.4
PB02	IPOC Station P	0.93	132	⇓iP	Pn	02 07 46.9	+0.1
PB02				i S	Sn	02 07 59.0	-0.1
PB02	comp=E,10µm,0.5s			IAML		02 08 01.0	
PB01	IPOC Station P	1.13	108	ePn	Pn	02 07 49.1	-0.3
PB01				eSn	Sn	02 08 01.2	-2.8
PB01	IPOC Station P	1.13	108	⇓iP	Pn	02 07 49.2	-0.3
PB01				i S	Sn	02 08 02.9	-1.1
PB01	comp=N,4µm,0.3s			IAML		02 08 04.6	
PSGC	Pisagua	1.20	24	⇑iP	Pn	02 07 50.1	-0.4
PSGC				i S	Sn	02 08 04.4	-1.4
PSGC	comp=N,3µm,0.2s			IAML		02 08 06.2	
PB07	IPOC Station P	1.24	146	eP	Pn	02 07 51.6	+0.5
PB07				eS	Sn	02 08 08.5	+1.8
PB07	IPOC Station P	1.24	146	eP	Pn	02 07 51.5	+0.5
PB07				i S	Sn	02 08 07.5	+0.7
PB11	IPOC Station P	1.32	45	ePn	Pn	02 07 52.2	+0.1
PB11				eSn	Sn	02 08 08.5	-0.2
PB11	IPOC Station P	1.32	45	eP	Pn	02 07 52.4	+0.3
PB11				eS	Sn	02 08 09.5	+0.8
PB11	IPOC Station P	1.32	45	eP	Pn	02 07 51.8	-0.3
PB11				i S	Sn	02 08 07.8	-0.9
PB11	comp=N,6µm,0.4s			IAML		02 08 11.1	
PB08	IPOC Station P	1.50	68	eP	Pn	02 07 55.2	+0.4
PB08				eS	Sn	02 08 14.1	+0.7
PB08	IPOC Station P	1.50	68	eP	Pn	02 07 54.8	0.0
PB08				i S	Sn	02 08 12.7	-0.8
PB08	comp=E,4µm,0.3s			IAML		02 08 14.1	
PB03	IPOC Station P	1.57	148	⇓eP	Pn	02 07 56.6	+1.0
PB03	IPOC Station P	1.57	148	eP	Pn	02 07 56.5	+0.9
PB04	IPOC Station P	1.69	164	ePn	Pn	02 07 57.9	+0.8
PB04				eSn	Sn	02 08 19.4	+1.8
PB04	IPOC Station P	1.69	164	eP	Pn	02 07 58.3	+1.1
PB04	IPOC Station P	1.69	164	⇑iP	Pn	02 07 57.7	+0.6
PB04	comp=E,2µm,0.4s			IAML		02 08 25.5	
PB09	IPOC Station P	1.70	130	eP	Pn	02 07 58.6	+1.3
PB09	IPOC Station P	1.70	130	eP	Pn	02 07 56.8	-0.5
PB09				i S	Sn	02 08 20.5	+2.5
GO01	Chusmiza	1.70	53	ePn	Pn	02 07 58.0	+0.4
GO01				eSn	Sn	02 08 18.5	0.0

GO01	Chusmiza	1.70	53	⇑iP	Pn	02 07 57.7	0.0
GO01				eS	Sn	02 08 18.2	-0.4
MNMC	Minye Minye	1.85	32	ePn	Pn	02 07 59.8	+0.4
MNMC				eSn	Sn	02 08 23.1	+1.4
MNMC	Minye Minye	1.85	32	⇓eP	Pn	02 08 00.3	+0.8
MNMC				eS	Sn	02 08 21.8	0.0
MNMC				IAML		02 08 27.9	
	comp=E,2μm,0.2s						
MNMCX	Minye Minye	1.85	32	eP	Pn	02 08 00.2	+0.8
PB12	IPOC Station P	2.10	8	eP	Pn	02 08 03.6	+0.9
PB12	IPOC Station P	2.10	8	eP	Pn	02 08 02.9	+0.2
PB05	IPOC Station P	2.18	169	eP	Pn	02 08 04.4	+0.6
PB06	IPOC Station P	2.23	154	eP	Pn	02 08 05.7	+1.2
LVC	Limon Verde	2.49	140	ePn	Pn	02 08 10.2	+2.0
LVC				eSn	Sn	02 08 35.7	-1.9
LVC	Limon Verde	2.49	140	eP	Pn	02 08 09.9	+1.7
LVC				IAML		02 08 54.3	
	comp=Z,136nm,0.3s						
PB16	IPOC Station P	2.59	25	eP	Pn	02 08 11.1	+1.3
PB10	IPOC Station P	2.80	178	ePn	Pn	02 08 12.2	0.0
PB10				eSn	Sn	02 08 44.0	-0.8
PB10	IPOC Station P	2.80	178	eP	Pn	02 08 12.3	+0.1
GO02	Mina Guanaco	4.54	168	ePn	Pn	02 08 33.8	-2.6
GO02				eSn	Sn	02 09 26.6	-1.5
LPAZ	La Paz	5.00	29	Pn	Pn	02 08 48.5	+5.6
	comp=Z,0.6nm,0.3s,baz=195,slow=7.4,SNR=31						
LPAZ	La Paz	5.00	29	ePn	Pn	02 08 47.2	+4.3
LPAZ	La Paz	5.00	29	eP	Pn	02 08 45.6	+2.7
GO03	Copiap	6.87	177	ePn	Pn	02 09 08.4	+0.3
PTGA	Pitinga	22.42	29	eP	P	02 12 23.6	-0.9
	comp=Z,6.2nm,1.4s						
BCIP	Isla Barro Col	31.03	342	eP	P	02 13 42.7	-0.2
	comp=Z,67nm,1.4s						
TGUH	Tegucigalpa,Un	38.22	333	eP	P	02 14 45.5	+0.3
TOA1	Torodi Ar. Sit	78.62	71	eP	P	02 19 27.7	+0.8
TORD	Torodi Ar. Bea	78.62	71	P	P	02 19 27.7	+0.8
	comp=Z,0.9nm,0.5s,baz=244,slow=5.4,SNR=19						
H11S2	WAKE ISLAND Hy	126.17	278	T	T	04 45 36.8	
	baz=103,slow=75,SNR=225						
H11S1	WAKE ISLAND Hy	126.18	278	T	T	04 45 38.2	
	baz=103,slow=75,SNR=122						
H11S3	WAKE ISLAND Hy	126.19	278	T	T	04 45 39.2	
	baz=103,slow=75,SNR=117						
H11N3	WAKE ISLAND Hy	126.24	280	T	T	04 45 41.0	
	baz=102,slow=75,SNR=89						
H11N2	WAKE ISLAND Hy	126.25	280	T	T	04 45 42.2	
	baz=102,slow=75,SNR=97						
H11N1	WAKE ISLAND Hy	126.25	280	T	T	04 45 40.3	
	baz=102,slow=75,SNR=50						
MK32	Makanchi Array	145.91	34	ePKPbc	PKiKP	02 27 06.4	-0.8
MKAR	Makanchi Array	145.91	34	PKPbc	PKiKP	02 27 06.4	-0.8
	comp=Z,1.1nm,0.8s,baz=328,slow=4.3,SNR=6.4						

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*IDC **18** 02:45:36.1±0.7, 55°.58N×162°.93E, h0km, mb3.9/14, mb1 4.2/16, mb1mx4.0/39, mbtmp4.0/16, ML3.6/2, MS3.3/9, Ms1 3.3/9, ms1mx3.0/35, Error ellipse: s-maj=24.9km s-min=13.9km az=142.0*

*KRSC **18** 02:45:37.6±0.9, 55°.41N×163°.22E, h45km±19km, ML4.4*

*ISCJB **18** 02:45:39.0±0.7, 55°.44N±0°.02×163°.20E±0°.03, h33km±5km, mb4.2/39, MS3.4/7, Error ellipse: s-maj=3.8km s-min=2.8km az=142.1*

*NEIC **18** 02:45:39.3±2.5, 55°.56N×163°.05E, h22km±5km, mb4.3/22, Error ellipse: s-maj=11.9km s-min=7.9km az=126.0*

*MOS **18** 02:45:39.9±1.1, 55°.45N×163°.08E, h45km, mb4.3/17, Error ellipse: s-maj=6.7km s-min=4.5km az=76.2*

ISC 18 02:45:38.9±1.5, 55°.46N±0°.03×163°.16E±0°.03, h22km±11km, n171, σ1.s39/201, mb4.2/39, MS3.4/7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.78	346	eP	Pn	02 45 52.9	-1.6
KBTR				eS	Sb	02 46 04.6	+0.8
KBTR	Krutoberegovo	0.78	346	PN	Pn	02 45 52.9	-1.6
KBTR				S	Sb	02 46 04.6	+0.8
KBG	Krutoberegovo	0.84	342	eP	Pn	02 45 53.9	-1.4
KBG				eS	Sb	02 46 05.6	0.0
KBG	Krutoberegovo	0.84	342	PN	Pn	02 45 53.9	-1.4
KBG				S	Sb	02 46 05.6	0.0
MKZ	Mys Kozlova	1.22	223	eP	Pn	02 45 59.8	-0.8
MKZ				eS	Sn	02 46 16.1	-0.3
MKZ	Mys Kozlova	1.22	223	PN	Pn	02 45 59.8	-0.8
MKZ				S	Sn	02 46 16.1	-0.3
SMKR	Semkarok	1.48	321	eP	Pn	02 46 04.3	+0.1
SMKR				eS	Sn	02 46 23.6	+0.8
SMKR	Semkarok	1.48	321	PN	Pn	02 46 04.3	+0.1
SMKR				S	Sn	02 46 23.6	+0.8
BZGR	Bezymyannyi-Gr	1.48	290	eP	Pn	02 46 03.3	-0.9
BZGR	Bezymyannyi-Gr	1.48	290	PN	Pn	02 46 03.3	-0.9
CIRR	Tsirk	1.52	297	eP	Pn	02 46 04.9	+0.1
CIRR	Tsirk	1.52	297	PN	Pn	02 46 04.9	+0.1
LGNR	Loginova	1.53	295	eP	Pn	02 46 05.4	+0.3
LGNR	Loginova	1.53	295	PN	Pn	02 46 05.4	+0.3
BDR	Baidarnaya	1.56	316	eP	Pn	02 46 05.8	+0.4
BDR				eS	Sn	02 46 25.1	+0.1
BDR	Baidarnaya	1.56	316	PN	Pn	02 46 05.8	+0.4
BDR				S	Sn	02 46 25.1	+0.1
BZWR	Bezymyannyi-We	1.59	290	eP	Pn	02 46 05.7	-0.2
BZWR	Bezymyannyi-We	1.59	290	PN	Pn	02 46 05.7	-0.2
TUMD	Tumrok D	1.60	262	eP	Pn	02 46 06.2	+0.4
TUMD				eS	Sn	02 46 26.8	+1.0
BKI	Bering	1.62	98	eP	Pn	02 46 05.6	-0.5
BKI				eS	Sn	02 46 25.9	-0.4
BKI	Bering	1.62	98	PN	Pn	02 46 05.6	-0.5
BKI				S	Sn	02 46 25.9	-0.4
SRKR	Sorokina	1.64	318	eP	Pn	02 46 07.0	+0.6
SRKR	Sorokina	1.64	318	PN	Pn	02 46 07.0	+0.6
KRSR	Krestovskiy	1.65	299	eP	Pn	02 46 06.0	-0.6
KRSR				eS	Sn	02 46 27.2	0.0
KRSR	Krestovskiy	1.65	299	PN	Pn	02 46 06.0	-0.6
KRSR				S	Sn	02 46 27.2	0.0
KLY	Klyuchi	1.65	302	eP	Pn	02 46 04.9	-1.6
KLY				eS	Sn	02 46 24.4	-2.7
KLY	Klyuchi	1.65	302	PN	Pn	02 46 04.9	-1.6
KLY				S	Sn	02 46 24.4	-2.7
KIRR	Kirishev	1.67	288	eP	Pn	02 46 07.5	+0.6
KIRR				eS	Sn	02 46 28.4	+0.7
KIRR	Kirishev	1.67	288	PN	Pn	02 46 07.5	+0.6
KIRR				S	Sn	02 46 28.4	+0.7
KZV	Kizimen	1.68	259	eP	Pn	02 46 07.3	+0.3
KZV				eS	Sn	02 46 28.8	+0.9
KZV	Kizimen	1.68	259	PN	Pn	02 46 07.3	+0.3
KZV				S	Sn	02 46 28.8	+0.9
KMNR	Kamenistaya	1.69	281	eP	Pn	02 46 08.1	+1.0
KMNR				eS	Sn	02 46 29.5	+1.5
KMNR	Kamenistaya	1.69	281	PN	Pn	02 46 08.1	+1.0
KMNR				S	Sn	02 46 29.5	+1.5
TUMR	Tumrok	1.73	265	eP	Pn	02 46 08.7	+1.0
TUMR	Tumrok	1.73	265	PN	Pn	02 46 06.2	-1.5
TUMR				S	Sn	02 46 26.8	-2.3
KPT	Kopyto	1.74	288	eP	Pn	02 46 08.5	+0.7
KPT				eS	Sn	02 46 30.6	+1.3
KPT	Kopyto	1.74	288	PN	Pn	02 46 08.5	+0.7
KPT				S	Sn	02 46 30.6	+1.3
KOZ	Kozyrevsk	1.95	289	eP	Pn	02 46 12.2	+1.5
KOZ				eS	Sb	02 46 37.1	-0.6
KOZ	Kozyrevsk	1.95	289	PN	Pn	02 46 12.2	+1.5
KOZ				S	Sb	02 46 37.1	-0.6
SRDR	Sredinnyy	2.12	295	iP	Pn	02 46 14.5	+1.4
SRDR	Sredinnyy	2.12	295	PN	Pn	02 46 14.5	+1.4
ESO	Esso	2.57	282	eP	Pn	02 46 21.1	+2.0
ESO	Esso	2.57	282	PN	Pn	02 46 21.1	+2.0
SPN	Mys Shipunski	3.00	219	eP	Pn	02 46 23.8	-1.2
SPN				eS	Sn	02 46 57.3	-2.8
SPN	Mys Shipunski	3.00	219	PN	Pn	02 46 23.8	-1.2
SPN				S	Sn	02 46 57.3	-2.8
NLC	Nalytchevo	3.20	226	eP	Pn	02 46 28.2	+0.4
NLC				eS	Sn	02 47 04.5	-0.7
NLC	Nalytchevo	3.20	226	PN	Pn	02 46 28.2	+0.4
NLC				S	Sn	02 47 04.5	-0.7
SDLR	Sedlovina	3.32	231	eP	Pn	02 46 30.7	+1.1
SDLR	Sedlovina	3.32	231	PN	Pn	02 46 30.7	+1.1
KRER	Koryakskii	3.36	232	eP	Pn	02 46 31.3	+1.1
KRER	Koryakskii	3.36	232	PN	Pn	02 46 31.3	+1.1
SMAR	Somma	3.37	231	eP	Pn	02 46 31.3	+1.0
SMAR	Somma	3.37	231	PN	Pn	02 46 31.3	+1.0
KRX	Arik	3.37	233	eP	Pn	02 46 31.2	+0.9
KRX	Arik	3.37	233	PN	Pn	02 46 31.2	+0.9
AVH	Avacha	3.40	231	eP	Pn	02 46 31.7	+1.2
AVH	Avacha	3.40	231	PN	Pn	02 46 31.7	+1.2
UGLR	Uglovaya	3.40	230	eP	Pn	02 46 31.8	+1.2
UGLR	Uglovaya	3.40	230	PN	Pn	02 46 31.8	+1.2
KOK	Koryaka	3.42	233	eP	Pn	02 46 32.0	+1.1
KOK	Koryaka	3.42	233	PN	Pn	02 46 32.0	+1.1
GNL	Ganaly	3.51	242	eP	Pn	02 46 33.6	+1.4
GNL	Ganaly	3.51	242	PN	Pn	02 46 33.6	+1.4
DALK	Dalny	3.55	229	eP	Pn	02 46 33.7	+1.1
DALK	Dalny	3.55	229	PN	Pn	02 46 33.7	+1.1
PET	Petropavlovsk	3.60	229	ePn	Pn	02 46 34.0	+0.8
PET				eSn	Sn	02 47 14.6	-0.4
PET	Petropavlovsk	3.60	229	ePN	Pn	02 46 34.3	+1.1
PET				eS	Sn	02 47 17.1	+2.1
PET				pmax	pmax		
	comp=Z,161nm,0.7s						
PET				smax	smax		
	comp=E,210nm,0.9s						
PET				smax	smax		
	comp=N,263nm,0.9s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET				MLR	MLR		
	comp=Z,400nm,12.0s						
OSSR	Ossora	3.80	359	eP	Pn	02 46 40.0	+4.0
OSSR	Ossora	3.80	359	PN	Pn	02 46 40.0	+4.0
KRMR	Karymshinskiy	3.96	230	eP	Pn	02 46 40.4	+2.2
KRMR				eS	Sn	02 47 25.6	+1.7
KRMR	Karymshinskiy	3.96	230	PN	Pn	02 46 40.4	+2.2
KRMR				S	Sn	02 47 25.6	+1.7
PEA1	Petropavlovsk-	3.97	236	ePn	Pn	02 46 39.8	+1.4
PEA1				eSn	Sn	02 47 27.9	+3.7
PEA0B	Petropavlovsk-	3.97	236	ePn	Pn	02 46 38.8	+0.3
PEA0B				eSn	Sn	02 47 24.2	-0.1
PETK	Petropavlovsk-	3.97	236	Pn	Pn	02 46 39.8	+1.4
	comp=Z,4.5nm,0.3s,baz=66,slow=18,SNR=33						
PETK				Sn	Sn	02 47 27.9	+3.7
	baz=54,slow=24,SNR=2.5						
PALN	Palana	4.03	336	eP	Pn	02 46 41.2	+2.0
PALN	Palana	4.03	336	PN	Pn	02 46 41.2	+2.0
RUS	Russkaya	4.09	224	eP	Pn	02 46 41.4	+1.4
RUS	Russkaya	4.09	224	PN	Pn	02 46 41.4	+1.4
MTVR	Mutnovka	4.19	227	eP	Pn	02 46 42.7	+1.2
MTVR				eS	Sn	02 47 30.0	+0.3
MTVR	Mutnovka	4.19	227	PN	Pn	02 46 42.7	+1.2
MTVR				S	Sn	02 47 30.0	+0.3
ASAK	Asacha	4.38	227	eP	Pn	02 46 46.3	+2.3
ASAK	Asacha	4.38	227	PN	Pn	02 46 46.3	+2.3
KDTR	Khodutka, Kamc	4.74	222	eP	Pn	02 46 49.4	+0.4
KDTR				eS	Sn	02 47 44.8	+1.6
KDTR	Khodutka, Kamc	4.74	222	PN	Pn	02 46 49.4	+0.4
KDTR				S	Sn	02 47 44.8	+1.6
TILK	Tilichiki	5.25	16	eP	Pn	02 46 59.3	+3.4
TILK	Tilichiki	5.25	16	PN	Pn	02 46 59.3	+3.4
SKR	Severo-Kuril's	6.39	224	ePN	Pn	02 47 12.5	+0.9
SMY	Shemya	6.99	108	ePn	Pn	02 47 21.1	+1.3
SMY	Shemya	6.99	108	ePN	Pn	02 47 21.1	+1.3
MA2	Magadan	7.84	307	LR	LR	02 50 46.7	
	comp=Z,109nm,18.8s,baz=188,slow=40						
BILL	Bilibino	12.71	5	ePN	Pn	02 48 36.9	-1.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KUR	Kuril'sk	14.11	230	iP	Pn	02 48 57.5	+0.3
ASAJ	Asahikawa	17.39	238	Pn	Pn	02 49 39.8	-0.1
	comp=Z,0.7nm,0.3s,baz=51,slow=13,SNR=7.4						
ASAJ				LR	LR	02 56 13.5	
	comp=Z,64nm,20.7s,baz=44,slow=37						
YAK	Yakutsk	18.41	305	iP	P	02 49 51.4	-0.7
ERM	Erimo	18.75	232	eP	P	02 49 54.5	-1.5
	comp=Z,46nm,1.3s						
ERM	Erimo	18.75	232	eP	P	02 49 54.5	-1.5
ERM				pmax	pmax		
	comp=Z,45nm,1.3s						
KLR	Kul'dur	20.06	265	LR	LR	02 58 57.7	
	comp=Z,118nm,18.8s,baz=87,slow=40						
KLR	Kul'dur	20.06	265	iP	P	02 50 08.4	-1.9
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	Tiksi	21.77	331	iP	P	02 50 29.0	+0.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RSO	Redoubt South	23.56	60	eP	P	02 50 48.4	+0.9
BPAW	Bear Paw Mtn.	24.12	50	eP	P	02 50 53.1	+0.4
	comp=Z,4.2nm,1.1s						
KDAK	Kodiak Island	24.13	66	P	P	02 50 53.0	+0.3
	comp=Z,3.1nm,0.6s,baz=277,slow=4.9,SNR=6.7						
KDAK	Kodiak Island	24.13	66	eP	P	02 50 53.0	+0.3
	comp=Z,27nm,1.3s						
KDAK	Kodiak Island	24.13	66	iP	P	02 50 54.9	+2.1
CNPM	China Poot	24.46	62	eP	P	02 50 55.4	-0.4
	comp=Z,31nm,1.4s						
TOLK	Toolik Lake Re	24.99	40	eP	P	02 51 01.6	+1.1
	comp=Z,3.0nm,0.6s						
MJB9	Matsu-Tunnel	25.42	232	eP	P	02 51 05.4	+0.7
	comp=Z,27nm,1.1s						
MAJO	Matsushiro	25.42	232	eP	P	02 51 05.1	+0.4
	comp=Z,25nm,1.1s						
MAJO	Matsushiro	25.42	232	eP	P	02 51 05.1	+0.4
MAJO				pmax	pmax		
	comp=Z,25nm,1.1s						
MAT	Matsushiro	25.42	232	P	P	02 51 04.3	-0.4
MJAR	Matsushiro Arr	25.42	232	P	P	02 51 04.3	-0.4
	comp=Z,9.0nm,0.8s,baz=16,slow=8.2,SNR=14						
CCB	Clear Creek Bu	25.50	49	eP	P	02 51 04.6	-0.5
	comp=Z,4.7nm,1.2s						
ILAR	Eielson Array	25.88	49	P	P	02 51 07.9	-0.8
	comp=Z,0.7nm,0.7s,baz=267,slow=9.3,SNR=7.3						
ILB	Eielson Array	25.88	49	eP	P	02 51 07.9	-0.8
	comp=Z,1.8nm,0.9s						
EGAK	Eagle	28.33	48	eP	P	02 51 29.5	-1.1
	comp=Z,3.0nm,1.1s						
KSRS	Korea Array	29.78	248	LR	LR	03 03 45.1	
	comp=Z,35nm,18.2s,baz=55,slow=37						
INK	Inuvik	30.89	40	P	P	02 51 55.2	+2.1
	comp=Z,1.8nm,0.6s,baz=255,slow=4.1,SNR=2.9						
TLY	Talaya	34.61	289	LR	LR	03 07 39.5	
	comp=Z,117nm,19.2s,baz=3.0,slow=38						
DLBC	Dease Lake	35.21	57	eP	P	02 52 31.9	+0.8
	comp=Z,2.6nm,1.0s						
H11N2	WAKE ISLAND Hy	35.78	174	T	T	03 31 46.9	
	baz=358,slow=76,SNR=67						
H11N3	WAKE ISLAND Hy	35.79	174	T	T	03 32 02.5	
	baz=358,slow=76,SNR=61						
H11N1	WAKE ISLAND Hy	35.80	174	T	T	03 31 49.8	
	baz=358,slow=76,SNR=59						
HHC	Hu-ho-hao-te	36.49	268	P	P	02 52 41.8	-0.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,5.3s						
H11S1	WAKE ISLAND Hy	36.98	174	T	T	03 33 27.4	
	baz=359						
H11S3	WAKE ISLAND Hy	36.99	174	T	T	03 33 28.9	
	baz=359						
H11S2	WAKE ISLAND Hy	37.00	174	T	T	03 33 35.9	
	baz=359						
BBB	Bella Bella	39.20	65	eP	P	02 53 03.1	-1.7
	comp=Z,55nm,1.3s						
YKA	Yellowknife Ar	40.21	45	P	P	02 53 13.7	+0.6
	comp=Z,1.1nm,0.7s,baz=302,slow=8.9,SNR=3.6						
YKB5	Yellowknife Ar	40.21	45	eP	P	02 53 13.7	+0.6
LZH	Lanzhou	44.16	270	eP	P	02 53 44.5	-1.3
LZH				pP	pP	02 53 52.3	+0.9
LZH				sP	sP	02 53 55.8	+2.2
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
NLWA	Neilton Lookou	44.24	69	eP	P	02 53 46.1	-0.1
	comp=Z,13nm,1.4s						
DGZ	Jazzator, Alta	44.25	296	iP	P	02 53 44.6	-1.8
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MHA	Mahukona	46.67	122	eP	P	02 54 05.4	-0.2
MHA	Mahukona	46.67	122	eP	P	02 54 05.4	-0.2
KURK	Kurchatov	48.02	302	eP	P	02 54 13.8	-2.0
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MK32	Makanchi Array	48.76	296	eP	P	02 54 21.0	-0.6
MKAR	Makanchi Array	48.76	296	P	P	02 54 21.0	-0.6
	comp=Z,0.5nm,0.4s,baz=66,slow=9.4,SNR=3.9						
MKAR				LR	LR	03 15 56.3	
	comp=Z,55nm,18.3s,baz=34,slow=38						
BRVK	Borovoye	50.35	308	eP	P	02 54 32.0	-1.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PD31	Pinedale Array	54.83	64	eP	P	02 55 08.8	+1.6
PDAR	Pinedale Array	54.83	64	P	P	02 55 08.8	+1.6
	comp=Z,0.7nm,0.4s,baz=352,slow=2.9,SNR=9.1						
SRU	San Rafael Swe	56.98	68	eP	P	02 55 22.3	-0.4
	comp=Z,4.2nm,0.7s						
SRU	San Rafael Swe	56.98	68	eP	P	02 55 22.3	-0.4
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABKAR	Akbulak array	57.62	311	eP	P	02 55 25.4	-1.3
	comp=Z,0.9nm,0.7s						
FIA0	FINESS Array S	58.64	337	eP	P	02 55 32.2	-1.4
FIA0	FINESS Array S	58.64	337	eP	P	02 55 32.3	-1.4
FINES	FINESS Array B	58.64	337	P	P	02 55 32.2	-1.4
	comp=Z,1.7nm,0.9s,baz=27,slow=11,SNR=4.6						
ISCO	Idaho Springs	59.03	64	eP	P	02 55 39.8	+2.7
	comp=Z,2.4nm,0.9s						
ISCO	Idaho Springs	59.03	64	eP	P	02 55 39.8	+2.7
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	60.41	259	LR	LR	03 24 58.8	
	comp=Z,33nm,19.8s,baz=175,slow=39						
OBN	Obninsk	61.47	328	eP	P	02 55 52.4	-0.7
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB2	NORSAR Subarra	61.75	345	P	P	02 55 54.2	-0.8
	comp=Z,0.6nm,0.5s,baz=18,slow=6.9						
NB200	NORSAR Array S	61.75	345	eP	P	02 55 54.4	-0.6
NOA	NORSAR Array B	61.75	345	P	P	02 55 54.4	-0.6
	comp=Z,0.9nm,0.6s,baz=18,slow=6.8,SNR=6.2						
MNTX	Cornudas Mount	65.33	70	eP	P	02 56 21.8	+2.7
	comp=Z,5.1nm,1.4s						
WMOK	Wichita Mounta	66.39	63	eP	P	02 56 27.8	+1.9
	comp=Z,2.4nm,0.8s						
WMOK	Wichita Mounta	66.39	63	eP	P	02 56 27.8	+1.9
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LTX	Lajitas	68.09	70	eP	P	02 56 38.6	+1.8
LTX	Lajitas	68.09	70	eP	P	02 56 38.6	+1.8
TX31	Lajitas Ar. Si	68.09	70	eP	P	02 56 38.8	+1.9
	comp=Z,1.4nm,0.7s						
TXAR	Lajitas Array	68.09	70	P	P	02 56 38.6	+1.8
	comp=Z,1.1nm,0.6s,baz=299,slow=4.4,SNR=14						
KIV	Kislovodsk	68.91	318	eP	P	02 56 39.4	-2.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	Khabaz	69.02	318	LR	LR	03 31 48.0	
	comp=Z,23nm,18.9s,baz=1.5,slow=40						
CLL	Collm	70.75	341	eP	P	02 56 55.0	+2.2
CLL	Collm	70.75	341	eP	P	02 56 55.0	+2.2
GERES	GERESS Array B	72.97	339	P	P	02 57 06.5	+0.2
	comp=Z,0.3nm,0.6s,baz=52,slow=7.9,SNR=2.9						
BRTR	Keskin Array B	75.90	322	LR	LR	03 37 06.9	
	comp=Z,14nm,19.4s,baz=87,slow=41						
WR1	Warramunga Arr	79.00	208	eP	P	02 57 41.6	+0.9
WRA	Warramunga Arr	79.00	208	P	P	02 57 41.6	+0.9
	comp=Z,0.7nm,0.6s,baz=7.1,slow=6.7,SNR=4.4						
AS31	Alice Springs	82.67	207	eP	P	02 58 01.1	+0.8
	comp=Z,2.7nm,1.4s						
ASAR	Alice Springs	82.67	207	P	P	02 58 01.1	+0.8
	comp=Z,1.2nm,0.8s,baz=6.1,slow=6.0,SNR=6.8						
ESDC	Sonseca Array	84.60	350	P	P	02 58 10.8	+0.5
	comp=Z,0.1nm,0.3s,baz=18,slow=5.3,SNR=4.7						

TRN 18 02:45:44.4, 10°.99N×62°.00W, h109km, MD3.8, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.68	120	eP	Pn	02 46 03.1	+0.7
TRN				eS	Sn	02 46 15.5	-0.6
TPP	Pointe-a-Pierr	0.86	141	eP	Pn	02 46 04.8	+0.7
TPP				eS	Sn	02 46 18.4	-0.6
TBH	Brigand Hill	1.05	118	eP	Pn	02 46 06.4	+0.4
TBH				eS	Sn	02 46 21.8	-0.5
GRGR	Grenville	1.19	17	eP	Pn	02 46 07.0	-0.5
GRGR				eS	Sn	02 46 24.2	-0.9
GRHS	Sauteurs	1.28	16	eP	Pn	02 46 09.2	+0.6
GRHS				eS	Sn	02 46 26.8	-0.1
GRSS	Sisters	1.36	16	eP	Pn	02 46 10.2	+0.7
GRSS				eS	Sn	02 46 29.0	+0.5
TOSP	Speyside	1.47	78	eP	Pn	02 46 10.8	0.0
TOSP				eS	Sn	02 46 30.3	-0.6
FCV	Fort Charlotte	2.28	19	eP	Pn	02 46 21.0	+0.1
FCV				eS	Sn	02 46 47.4	-1.6
SVB	Belmont	2.39	18	eP	Pn	02 46 22.1	-0.2
SVB				eS	Sn	02 46 49.5	-1.9
SVV	Soufriere Volc	2.44	18	eP	Pn	02 46 23.0	-0.1
SVV				eS	Sn	02 46 51.0	-1.7
SSV	Crater Summit	2.46	19	eP	Pn	02 46 23.4	+0.1
SSV				eS	Sn	02 46 51.5	-1.6
SFAN	Fancy Village	2.52	19	eP	Pn	02 46 24.8	+0.8
SFAN				eS	Sn	02 46 54.0	-0.5
MCLT	Moule a Chique	2.90	21	eP	Pn	02 46 28.8	-0.3
MCLT				eS	Sn	02 47 02.2	-1.2
SLDE	Delcer	2.95	18	eP	Pn	02 46 29.9	+0.2
SLDE				eS	Sn	02 47 03.3	-1.3
SLB	Belfond	2.98	18	eP	Pn	02 46 30.3	+0.2
SLB				eS	Sn	02 47 03.8	-1.5
SLPA	Patience	3.04	20	eP	Pn	02 46 32.0	+1.1
SLPA				eS	Sn	02 47 04.7	-2.1
SLBI	Saint Lucia, B	3.18	18	eP	Pn	02 46 32.2	-0.5
SLBI				eS	Sn	02 47 08.5	-1.6
SLW	Petit Monier	3.19	19	eP	Pn	02 46 32.7	-0.2
SLW				eS	Sn	02 47 09.4	-1.0
BBGH	Gun Hill	3.21	48	eP	Pn	02 46 33.6	+0.4
BBGH				eS	Sn	02 47 09.6	-1.3
LPMF	Morne Lapointe	3.71	16	eP	Pn	02 46 39.6	-0.2
FDF	Fort de France	3.81	12	eP	Pn	02 46 40.7	-0.7
FDF				eS	Sn	02 47 24.0	-1.4
PCM	Pelee Case Pet	3.88	11	eP	Pn	02 46 41.9	-0.3

MEX 18 03:11:16.3±0.5, 15°.95N×97°.75W, h15km±6km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.48	41	eP	Pn	03 11 39.6	-3.1
VHO				eS	Sn	03 11 57.1	-4.8
HUIG	Huatulco	1.59	96	eP	Pn	03 11 40.0	-3.9
HUIG				iS	Sn	03 11 59.6	-4.6
TLIG	Tlapa	1.79	334	eP	Pn	03 11 43.6	-3.1
TLIG				eS	Sn	03 12 04.0	-5.3
MEIG	Mezcala	2.66	318	iP	Pn	03 11 55.9	-2.9
MEIG				iS	Sn	03 12 26.6	-4.1
PLIG	Platanillo	2.95	326	iP	Pn	03 12 01.0	-1.8
PLIG				iS	Sn	03 12 34.2	-3.8
CMIG	Matias Romero	2.97	67	eP	Pn	03 11 59.5	-3.5
CMIG				iS	Sn	03 12 35.1	-3.3
ARIG	Puente Sto Nin	3.40	313	iP	Pn	03 12 06.9	-2.0
ARIG				iS	Sn	03 12 45.8	-3.2

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*ISCJB **18** 03:15:31.7±0.5, 38°.35S±0°.03×175°.87E±0°.05, h228km±4km, mb5.2/2, Error ellipse: s-maj=6.0km s-min=4.2km az=17.4*

*NEIC **18** 03:15:32.0±0.0, 38°.33S×175°.92E, h230km, mb4.4/2, ML4.1(WEL), After WEL.*

*WEL **18** 03:15:34.3, 38°S±2°×17°6E±°, h204km±4km, M3.4/95, MLv3.4/95, Error ellipse: s-maj=0.0km s-min=0.0km az=42.7*

ISC 18 03:15:30.5±1.0, 38°.34S±0°.05×175°.93E±0°.05, h225km±6km, n148, σ2.s02/170, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRRZ	Galatos Road	0.14	93	P	Pn	03 16 01.0	+1.1
KUTZ	Kaahu Road	0.17	209	P	Pn	03 16 01.5	+1.7
HSRZ	Hossack Road	0.25	83	P	Pn	03 16 01.1	+1.1
HSRZ				S	S	03 16 21.4	-1.6
TLZ	Tolley Road	0.30	272	P	Pn	03 16 01.7	+1.6
TLZ				S	S	03 16 21.7	-1.5
ALRZ	Allen Road	0.39	124	P	Pn	03 16 01.4	+1.1
WATZ	Wairara	0.40	202	P	Pn	03 16 02.0	+1.7
KARZ	Kaharoa	0.41	38	P	Pn	03 16 01.3	+0.9
OMRZ	Omania	0.42	56	P	Pn	03 16 01.2	+0.8
KMRZ	Kaimai	0.50	1	P	Pn	03 16 01.8	+1.1
RATZ	Rangitukua	0.54	193	P	Pn	03 16 02.3	+1.5
HATZ	Hinemaiaia	0.56	167	P	Pn	03 16 02.2	+1.4
HATZ				S	S	03 16 22.0	-2.6
MRHZ	Matea Rd	0.62	142	P	Pn	03 16 02.4	+1.4
MRHZ				S	S	03 16 21.9	-3.1
RITZ	Rihia Road	0.64	185	P	Pn	03 16 03.2	+2.1
KATZ	Kakaramea	0.66	196	P	Pn	03 16 03.2	+1.8
TGRZ	Tauranga	0.67	23	P	Pn	03 16 01.3	+0.1

MUGZ	**Murupara**	**0.68**	**102**	P	**Pn**	**03 16 02.3**	**+1.0**
MARZ	**Manawahe**	**0.69**	**59**	P	**Pn**	**03 16 02.6**	**+1.2**
TOZ	**Tahuroa Road**	**0.70**	**331**	P	**Pn**	**03 16 02.7**	**+1.3**
TOZ				S	**S**	**03 16 23.6**	**-1.7**
OPRZ	**Ohinepanea**	**0.70**	**45**	P	**Pn**	**03 16 02.2**	**+0.8**
KRVZ	**Karewarewa**	**0.78**	**196**	P	**Pn**	**03 16 03.7**	**+1.8**
WTVZ	**West Tongariro**	**0.81**	**199**	P	**Pn**	**03 16 03.8**	**+1.8**
TWVZ	**Taurewa**	**0.82**	**208**	P	**Pn**	**03 16 03.8**	**+1.8**
HIZ	**Hauiti**	**0.86**	**258**	*e*Pn	**Pn**	**03 16 04.1**	**+1.9**
HIZ				*e*S	**S**	**03 16 27.5**	**+0.8**
HIZ	**Hauiti**	**0.86**	**258**	P	**Pn**	**03 16 04.0**	**+1.9**
NGZ	**Ngauruhoe**	**0.87**	**197**	P	**Pn**	**03 16 04.1**	**+1.8**
RTZ	**Ruatahuna**	**0.87**	**109**	P	**Pn**	**03 16 03.6**	**+1.4**
MTHZ	**Maungataniwha**	**0.88**	**126**	P	**Pn**	**03 16 03.8**	**+1.6**
BKZ	**Black Stump Fm**	**0.93**	**152**	*e*Pn	**Pn**	**03 16 04.1**	**+1.5**
BKZ				*e*S	**S**	**03 16 25.4**	**-2.4**
BKZ	**Black Stump Fm**	**0.93**	**152**	P	**Pn**	**03 16 04.3**	**+1.7**
URZ	**Urewera**	**0.94**	**85**	*e*Pn	**Pn**	**03 16 03.2**	**+0.7**
URZ				*e*S	**S**	**03 16 24.0**	**-3.5**
URZ	**Urewera**	**0.94**	**85**	P	**Pn**	**03 16 03.2**	**+0.7**
TUVZ	**Tukino**	**0.95**	**193**	P	**Pn**	**03 16 04.7**	**+1.9**
FWVZ	**Far West T-bar**	**0.96**	**198**	P	**Pn**	**03 16 04.6**	**+1.7**
WHRZ	**Whale Island**	**0.96**	**60**	P	**Pn**	**03 16 04.1**	**+1.4**
DRZ	**Dome Shelter**	**0.97**	**197**	P	**Pn**	**03 16 05.1**	**+2.0**
WHVZ	**Whangaehu Hut**	**0.97**	**196**	P	**Pn**	**03 16 04.9**	**+1.8**
PKVZ	**Pokaka**	**1.05**	**205**	P	**Pn**	**03 16 05.2**	**+2.0**
MOVZ	**Moawhango**	**1.07**	**187**	P	**Pn**	**03 16 05.1**	**+1.6**
RAHZ	**Arahi**	**1.07**	**123**	P	**Pn**	**03 16 05.7**	**+2.3**
MTVZ	**Mangateitei**	**1.10**	**199**	P	**Pn**	**03 16 05.7**	**+2.1**
KWHZ	**Kaweka Forest**	**1.15**	**160**	P	**Pn**	**03 16 06.5**	**+2.6**
BHHZ	**Black Hill Sta**	**1.15**	**175**	P	**Pn**	**03 16 05.8**	**+1.8**
RAGZ	**Rawiri**	**1.18**	**98**	P	**Pn**	**03 16 05.8**	**+1.6**
SNGZ	**Shannon Statio**	**1.19**	**112**	P	**Pn**	**03 16 06.3**	**+2.1**
VRZ	**Vera Road**	**1.20**	**229**	P	**Pn**	**03 16 06.5**	**+2.3**
ARHZ	**Aropaoanui**	**1.24**	**138**	P	**Pn**	**03 16 07.1**	**+2.6**
MCHZ	**McNeill Hill**	**1.25**	**152**	P	**Pn**	**03 16 07.5**	**+2.9**
WHHZ	**Waihua**	**1.26**	**126**	P	**Pn**	**03 16 07.0**	**+2.3**
MWZ	**Matawai**	**1.26**	**90**	P	**Pn**	**03 16 06.0**	**+1.3**
KRHZ	**Kereru**	**1.34**	**165**	P	**Pn**	**03 16 07.6**	**+2.3**
MKAZ	**Moumakai**	**1.38**	**334**	P	**Pn**	**03 16 07.2**	**+1.6**
RUGZ	**Raukumara Rang**	**1.43**	**75**	P	**Pn**	**03 16 06.4**	**+0.3**
RIGZ	**Rimuhau**	**1.48**	**105**	P	**Pn**	**03 16 08.7**	**+2.3**
KBAZ	**Karaka Road Bo**	**1.49**	**326**	P	**Pn**	**03 16 08.0**	**+1.5**
TKGZ	**Te Karaka**	**1.51**	**94**	P	**Pn**	**03 16 09.3**	**+2.7**
KNZ	**Kokohu**	**1.53**	**117**	P	**Pn**	**03 16 09.0**	**+2.4**
HAZ	**Te Kaha**	**1.58**	**69**	P	**Pn**	**03 16 07.8**	**+0.7**
PNHZ	**Pukenui**	**1.58**	**172**	P	**Pn**	**03 16 09.5**	**+2.3**
WAZ	**Wanganui**	**1.59**	**207**	P	**Pn**	**03 16 09.7**	**+2.4**
CKHZ	**Cape Kidnapper**	**1.59**	**146**	P	**Pn**	**03 16 10.1**	**+2.9**
ETAZ	**East Tamaki Re**	**1.60**	**330**	P	**Pn**	**03 16 09.2**	**+1.8**
KUZ	**Kuaotunu**	**1.60**	**354**	P	**Pn**	**03 16 08.7**	**+1.3**
TWGZ	**Tauwhareparae**	**1.63**	**85**	P	**Pn**	**03 16 09.8**	**+2.1**
KAHZ	**Kahuranaki**	**1.63**	**153**	P	**Pn**	**03 16 10.4**	**+2.8**
LREZ	**Lake Rotokare**	**1.63**	**226**	P	**Pn**	**03 16 10.6**	**+3.0**
AWAZ	**Awhitu Peninsu**	**1.63**	**321**	P	**Pn**	**03 16 09.7**	**+2.0**
PRGZ	**Paritu Road**	**1.64**	**111**	P	**Pn**	**03 16 10.3**	**+2.6**
WIAZ	**Waiheke Island**	**1.67**	**338**	P	**Pn**	**03 16 09.8**	**+1.8**
PREZ	**Palmer Road**	**1.70**	**234**	P	**Pn**	**03 16 11.0**	**+2.8**
PKE	**Pukeiti**	**1.74**	**240**	P	**Pn**	**03 16 11.5**	**+2.9**
MHGZ	**Mahia Peninsul**	**1.75**	**118**	P	**Pn**	**03 16 11.3**	**+2.7**
PKGZ	**Pakihiroa**	**1.76**	**76**	P	**Pn**	**03 16 10.3**	**+1.5**
WPHZ	**Waipukurau**	**1.77**	**167**	P	**Pn**	**03 16 11.3**	**+2.5**
KHEZ	**Kahui Hut**	**1.77**	**237**	P	**Pn**	**03 16 11.8**	**+2.9**
WTAZ	**Waiatarua**	**1.77**	**322**	P	**Pn**	**03 16 11.2**	**+2.3**
MBAZ	**Motutapu North**	**1.77**	**332**	P	**Pn**	**03 16 10.7**	**+1.8**
CNGZ	**Carnagh Statio**	**1.80**	**95**	P	**Pn**	**03 16 11.8**	**+2.7**
PXZ	**Pawanui**	**1.84**	**157**	P	**Pn**	**03 16 12.0**	**+2.7**
NBEZ	**Newall Road No**	**1.85**	**239**	P	**Pn**	**03 16 12.3**	**+2.8**
PUZ	**Puketiti**	**1.86**	**82**	P	**Pn**	**03 16 11.6**	**+2.0**
OHWZ	**Ohakea**	**1.92**	**194**	P	**Pn**	**03 16 13.2**	**+3.0**
NMEZ	**Namu Road**	**1.92**	**236**	P	**Pn**	**03 16 12.9**	**+2.8**
ABAZ	**Army Bay**	**1.94**	**333**	P	**Pn**	**03 16 12.8**	**+2.3**
DVHZ	**Dannevirke**	**1.96**	**175**	P	**Pn**	**03 16 12.8**	**+2.2**
PRHZ	**Porangahau**	**2.00**	**164**	P	**Pn**	**03 16 13.7**	**+2.8**
WMGZ	**Waiomatatini S**	**2.03**	**76**	P	**Pn**	**03 16 13.0**	**+1.7**
MXZ	**Matakaoa Point**	**2.04**	**68**	*e*Pn	**Pn**	**03 16 12.9**	**+1.5**
MXZ				*e*S	**S**	**03 16 42.1**	**-1.0**
MXZ	**Matakaoa Point**	**2.04**	**68**	P	**Pn**	**03 16 13.2**	**+1.8**
POWZ	**Post Office Ro**	**2.05**	**183**	P	**Pn**	**03 16 13.7**	**+2.3**
GRZ	**Great Barrier**	**2.12**	**350**	P	**Pn**	**03 16 14.0**	**+1.8**
PRWZ	**Pori Road**	**2.21**	**179**	P	**Pn**	**03 16 15.5**	**+2.5**
MRZ	**Mangatainoka R**	**2.33**	**187**	P	**Pn**	**03 16 16.3**	**+2.1**
BFZ	**Birch Farm**	**2.35**	**174**	*e*Pn	**Pn**	**03 16 16.6**	**+2.2**
BFZ				*e*S	**S**	**03 16 49.1**	**+0.3**
BFZ	**Birch Farm**	**2.35**	**174**	P	**Pn**	**03 16 16.8**	**+2.4**
TIWZ	**Tintock**	**2.43**	**181**	P	**Pn**	**03 16 17.8**	**+2.5**
OGWZ	**Otaki Gorge**	**2.54**	**193**	P	**Pn**	**03 16 18.7**	**+2.3**
HOWZ	**Holdsworth Sta**	**2.57**	**187**	P	**Pn**	**03 16 18.7**	**+1.9**
WCZ	**Waipu Caves**	**2.71**	**332**	P	**Pn**	**03 16 20.8**	**+2.4**
TMWZ	**Te Maipa**	**2.76**	**181**	P	**Pn**	**03 16 21.0**	**+2.2**
MTW	**Mount Morrison**	**2.83**	**186**	P	**Pn**	**03 16 21.3**	**+1.7**
CAW	**Cannon Point**	**2.84**	**193**	P	**Pn**	**03 16 21.7**	**+2.0**
DUWZ	**D’Urville Isla**	**2.90**	**212**	P	**Pn**	**03 16 22.2**	**+1.8**
TRWZ	**Traveller**	**3.06**	**183**	P	**Pn**	**03 16 24.0**	**+1.9**
PAWZ	**Paruwai Farm**	**3.06**	**187**	P	**Pn**	**03 16 23.9**	**+1.7**
SNZO	**South Karori**	**3.11**	**197**	*e*Pn	**Pn**	**03 16 24.5**	**+1.8**
SNZO				*e*S	**S**	**03 17 02.4**	**-1.3**
MSWZ	**Moikau Station**	**3.11**	**189**	P	**Pn**	**03 16 24.4**	**+1.6**
TCW	**Tory Channel**	**3.13**	**203**	P	**Pn**	**03 16 24.9**	**+2.0**
BHW	**Baring Head**	**3.17**	**195**	P	**Pn**	**03 16 25.1**	**+1.8**
PLWZ	**Palliser**	**3.26**	**189**	P	**Pn**	**03 16 26.0**	**+1.5**
TUWZ	**Tuamarina**	**3.44**	**206**	P	**Pn**	**03 16 28.2**	**+1.7**
NNZ	**Nelson**	**3.48**	**214**	P	**Pn**	**03 16 28.7**	**+1.7**
QRZ	**Quartz Range**	**3.61**	**226**	P	**Pn**	**03 16 29.5**	**+0.9**
OUZ	**Omahuta**	**3.63**	**328**	*e*Pn	**Pn**	**03 16 31.9**	**+3.0**
OUZ				*e*S	**S**	**03 17 12.9**	**-1.8**
OUZ	**Omahuta**	**3.63**	**328**	P	**Pn**	**03 16 32.0**	**+3.0**
CMWZ	**Cape Campbell**	**3.65**	**201**	P	**Pn**	**03 16 31.8**	**+2.9**
BSWZ	**Blackbirch Sta**	**3.72**	**204**	P	**Pn**	**03 16 31.9**	**+2.0**
THZ	**Tophouse**	**4.13**	**213**	*e*Pn	**Pn**	**03 16 37.0**	**+2.2**
THZ				*e*S	**S**	**03 17 27.1**	**+1.6**
THZ	**Tophouse**	**4.13**	**213**	P	**Pn**	**03 16 36.3**	**+1.5**
KHZ	**Kahutara**	**4.46**	**203**	*e*Pn	**Pn**	**03 16 41.0**	**+2.3**
KHZ				*e*S	**S**	**03 17 31.2**	**-1.4**
KHZ	**Kahutara**	**4.46**	**203**	P	**Pn**	**03 16 41.0**	**+2.3**
GVZ	**Greta Valley S**	**5.12**	**205**	P	**Pn**	**03 16 48.9**	**+1.9**
LTZ	**Lake Taylor**	**5.24**	**211**	*e*Pn	**Pn**	**03 16 49.2**	**+0.8**
LTZ				*e*S	**S**	**03 17 47.5**	**-2.7**
LTZ	**Lake Taylor**	**5.24**	**211**	P	**Pn**	**03 16 50.0**	**+1.6**
AMCZ	**Amberley**	**5.43**	**206**	P	**Pn**	**03 16 52.7**	**+1.8**
INZ	**Inchbonnie**	**5.55**	**217**	P	**Pn**	**03 16 53.5**	**+1.1**
OXZ	**Oxford**	**5.79**	**209**	*e*Pn	**Pn**	**03 16 56.5**	**+1.2**
OXZ				*e*S	**S**	**03 18 00.4**	**-2.4**
OXZ	**Oxford**	**5.79**	**209**	P	**Pn**	**03 16 56.2**	**+0.9**
CRLZ	**Canterbury Las**	**5.79**	**205**	*e*Pn	**Pn**	**03 16 55.6**	**+0.2**
CRLZ				*e*S	**S**	**03 18 01.1**	**-1.8**
CRLZ	**Canterbury Las**	**5.79**	**205**	P	**Pn**	**03 16 56.5**	**+1.1**
OKCZ	**Okains Bay**	**5.80**	**201**	P	**Pn**	**03 16 57.2**	**+1.7**
MQZ	**McQueen’s Vall**	**5.90**	**204**	*e*Pn	**Pn**	**03 16 57.7**	**+0.9**
MQZ				*e*S	**S**	**03 18 02.9**	**-2.5**
MQZ	**McQueen’s Vall**	**5.90**	**204**	P	**Pn**	**03 16 57.7**	**+0.9**
RPZ	**Rata Peaks**	**6.51**	**213**	*e*Pn	**Pn**	**03 17 06.6**	**+2.1**
RPZ				*e*S	**S**	**03 18 16.4**	**-3.1**
RPZ	**Rata Peaks**	**6.51**	**213**	P	**Pn**	**03 17 05.9**	**+1.3**
FOZ	**Fox Glacier**	**6.95**	**220**	*e*Pn	**Pn**	**03 17 11.3**	**+1.1**
FOZ				*e*S	**S**	**03 18 25.3**	**-4.3**
FOZ	**Fox Glacier**	**6.95**	**220**	P	**Pn**	**03 17 11.9**	**+1.8**
LBZ	**Lake Benmore**	**7.42**	**214**	*e*Pn	**Pn**	**03 17 17.3**	**+1.0**
LBZ				*e*S	**S**	**03 18 37.2**	**-3.6**
LBZ	**Lake Benmore**	**7.42**	**214**	P	**Pn**	**03 17 17.0**	**+0.8**
ODZ	**Otahua Downs**	**7.77**	**209**	*e*Pn	**Pn**	**03 17 23.2**	**+2.5**
ODZ				*e*S	**S**	**03 18 47.7**	**-1.3**
ODZ	**Otahua Downs**	**7.77**	**209**	P	**Pn**	**03 17 23.0**	**+2.2**
JCZ	**Jackson Bay**	**7.86**	**221**	P	**Pn**	**03 17 22.2**	**+0.3**
WKZ	**Wanaka**	**8.29**	**216**	P	**Pn**	**03 17 27.4**	**-0.1**
HHSZ	**Highcliff Hill**	**8.51**	**206**	P	**Pn**	**03 17 33.4**	**+3.1**
TUZ	**Tuapeka**	**8.93**	**210**	P	**Pn**	**03 17 37.6**	**+2.1**
SYZ	**Scrubby Hill**	**9.60**	**209**	P	**Pn**	**03 17 46.7**	**+2.6**
APZ	**The Paps**	**10.30**	**212**	P	**Pn**	**03 17 55.0**	**+1.9**
WRAB	**Tennant Creek** 20nm,1.5s	**40.29**	**285**	*e*P	**P**	**03 22 45.7**	**-0.3**
ANA2	**Anatahan** 160nm,0.3s	**61.34**	**327**	*e*P	**P**	**03 25 22.3**	**-0.2**

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*NEIC **18** 03:52:59.3±0.0, 58°.16N×156°.38W, h2^{km}, mb4.6/66, After AEIC.*

*AEIC **18** 03:52:59.3, 58°.16N×156°.38W, h2^{km}, MB4.6(NEIC)*

*ISCJB **18** 03:53:00.2±0.5, 58°.20N±0°.02×156°.41W±0°.04, h26^{km}±3^{km}, mb4.4/75, MS3.1/7, Error ellipse: s-maj=3.4km s-min=2.5km az=39.1*

*IDC **18** 03:53:05.1±2.3, 58°.36N×156°.27W, h40^{km}±19^{km}, mb3.9/20, mb1 4.1/23, mb1mx4.0/37, mbtmp4.1/23, ML4.0/3, MS3.1/7, Ms1 3.1/7, ms1mx2.8/25, Error ellipse: s-maj=23.0km s-min=10.9km az=30.0*

ISC 18 03:52:59.9±1.2, **58°.18N**±0°.03×**156°.37W**±0°.03, **h9**^{km}±8^{km}, **n460**, σ0^{s}.**89**/487, **mb4.5**/75, **MS3.2**/7, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELA	**Mount Kelaz**	**0.43**	**51**	*e*Pg	**Pg**	**03 53 07.5**	**-0.7**
ACHA	**Angle Creek He**	**0.56**	**86**	*e*Pg	**Pg**	**03 53 09.7**	**-0.9**
KABU	**Katmai Buttres**	**0.59**	**80**	*e*Pg	**Pg**	**03 53 10.3**	**-0.9**
KABU				*e*Sg	**Sg**	**03 53 19.7**	**+0.8**
KAHC	**Katmai Hardscr**	**0.86**	**56**	*e*Pg	**Pg**	**03 53 15.7**	**-0.8**
KAHG	**Katmai Hook Gl**	**1.02**	**71**	*e*Pg	**Pg**	**03 53 18.3**	**-1.1**
FONW	**Fourpeaked Sta**	**1.45**	**62**	*e*Pn	**Pn**	**03 53 25.5**	**-0.8**
ANNW	**Aniakchak Nort**	**1.57**	**220**	*e*Pn	**Pn**	**03 53 27.7**	**-0.2**
ANNW				*e*Sn	**Sg**	**03 53 50.6**	**+0.4**
AZAC	**Aniakchak**	**1.63**	**219**	*e*Pn	**Pn**	**03 53 28.3**	**-0.5**
OHAK	**Old Harbor**	**1.91**	**119**	*e*Pn	**Pn**	**03 53 32.3**	**-0.2**
OHAK				*e*Sn	**Sb**	**03 53 58.2**	**-0.6**
AUI	**Augustine Isla**	**1.93**	**52**	*e*Pn	**Pn**	**03 53 32.9**	**+0.1**
AUI				*e*Sg	**Sb**	**03 53 59.8**	**+0.5**
AUW	**Augustine West**	**1.93**	**50**	*e*Pn	**Pn**	**03 53 33.0**	**+0.2**
AUH	**Augustine H**	**1.94**	**51**	*e*Pn	**Pn**	**03 53 33.4**	**+0.4**
AUE	**Augustine Isla**	**1.96**	**52**	*e*Pn	**Pn**	**03 53 33.6**	**+0.3**
SII	**Sitkinak Islan**	**2.01**	**143**	*e*Pn	**Pn**	**03 53 34.6**	**+0.7**
SII				*e*Sn	**Sn**	**03 53 59.3**	**+0.1**
KDAK	**Kodiak Island** 88nm,0.3s,baz=291,slow=7.0,SNR=910	**2.06**	**99**	P	**Pn**	**03 53 34.9**	**+0.4**
KDAK	95nm,0.3s,baz=160,slow=22,SNR=20			S	**Sn**	**03 54 01.4**	**+1.1**
KDAK	**Kodiak Island**	**2.06**	**99**	*e*Pn	**Pn**	**03 53 35.1**	**+0.5**
KDAK				*e*Sg	**Sb**	**03 54 02.5**	**-0.4**
CHGN	**Chignik**	**2.18**	**211**	*e*Pn	**Pn**	**03 53 36.2**	**-0.1**
CHGN				*e*Sg	**Sb**	**03 54 05.8**	**-0.7**
CHIA	**Chirikof Islan**	**2.38**	**169**	*e*Pn	**Pn**	**03 53 39.3**	**+0.2**
CHIA				*e*Sn	**Sn**	**03 54 08.6**	**+0.2**
CHIR	**Chirikof Islan**	**2.40**	**170**	*e*Pn	**Pn**	**03 53 39.4**	**+0.2**
CHIR				*e*Sg	**Sb**	**03 54 12.1**	**-0.6**
ILS	**Iliamna Low So**	**2.47**	**42**	*e*Pn	**Pn**	**03 53 40.9**	**+0.5**
VNHG	**Veniaminof 1**	**2.48**	**219**	*e*Pn	**Pn**	**03 53 40.3**	**-0.2**
IVE	**Iliamna Volcan**	**2.53**	**42**	*e*Pn	**Pn**	**03 53 41.9**	**+0.7**
HOM	**Homer**	**2.87**	**57**	*e*Pn	**Pn**	**03 53 46.0**	**+0.3**
RSO	**Redoubt South**	**2.95**	**37**	*e*Pn	**Pn**	**03 53 48.1**	**+1.1**
SVW2	**Sparrevohn**	**2.96**	**7**	*e*Pn	**Pn**	**03 53 46.8**	**-0.2**
SVW2				*e*Sn	**Sn**	**03 54 24.1**	**+1.6**
CNPM	**China Poot**	**2.99**	**61**	*e*Pn	**Pn**	**03 53 48.5**	**+1.0**
CNPM				*e*Sn	**Sn**	**03 54 23.4**	**0.0**
RDJH	**Redoubt Jeurge**	**3.03**	**36**	*e*Pn	**Pn**	**03 53 48.8**	**+0.7**
BRLK	**Bradley Lake**	**3.26**	**58**	*e*Pn	**Pn**	**03 53 52.2**	**+1.1**
BRLK				*e*Sn	**Sn**	**03 54 29.7**	**-0.3**
BRSE	**Bradley Lake S**	**3.31**	**59**	*e*Pn	**Pn**	**03 53 52.0**	**+0.2**
SDPT	**Sand Point**	**3.62**	**220**	*e*Pn	**Pn**	**03 53 56.3**	**+0.3**
SDPT				*e*Sn	**Sn**	**03 54 39.0**	**+0.1**
SPWE	**Spurr West**	**3.66**	**30**	*e*Pn	**Pn**	**03 53 58.1**	**+1.4**
SPU	**Mount Spurr**	**3.73**	**34**	*e*Pn	**Pn**	**03 53 58.6**	**+1.0**
SPU				*e*Sn	**Sn**	**03 54 41.4**	**-0.2**
SEW	**Seward**	**4.06**	**59**	*e*Pn	**Pn**	**03 54 03.3**	**+1.3**
PS4A	**Pavlof South-4**	**4.14**	**229**	*e*Pn	**Pn**	**03 54 03.5**	**+0.3**
DOL	**Dolgoi Island**	**4.29**	**227**	*e*Pn	**Pn**	**03 54 05.2**	**-0.1**
RC01	**Rabbit Creek A**	**4.46**	**46**	*e*Pn	**Pn**	**03 54 09.7**	**+2.1**
RC01				*e*Sn	**Sn**	**03 54 58.9**	**-0.6**
TT01	**Tatalina**	**4.75**	**2**	*e*Pn	**Pn**	**03 54 11.6**	**0.0**
TTA	**Tatalina**	**4.77**	**2**	*e*Pn	**Pn**	**03 54 11.8**	**-0.1**
PMR	**Palmer**	**5.00**	**44**	*e*Pn	**Pn**	**03 54 15.5**	**+0.4**
FALS	**False Pass**	**5.13**	**233**	*e*Pn	**Pn**	**03 54 16.2**	**-0.5**
KNK	**Knik Glacier**	**5.15**	**48**	*e*Pn	**Pn**	**03 54 18.9**	**+1.8**
PPLA	**Purkeypile**	**5.17**	**22**	*e*Pn	**Pn**	**03 54 18.4**	**+1.0**
PPLA				*e*Sn	**Sn**	**03 55 15.8**	**-1.4**
SML	**Sawmill**	**5.43**	**45**	*e*Pn	**Pn**	**03 54 22.4**	**+1.4**
SML				*e*Sn	**Sn**	**03 55 22.4**	**-1.2**
GLI	**Glacier Island**	**5.44**	**56**	*e*Pn	**Pn**	**03 54 21.2**	**+0.1**
CAST	**Castle Rocks**	**5.66**	**20**	*e*Pn	**Pn**	**03 54 23.9**	**-0.2**
FID	**Port Fidalgo**	**5.67**	**59**	*e*Pn	**Pn**	**03 54 23.7**	**-0.5**
FID				*e*Pn	**Pn**	**03 54 25.0**	**+0.8**
JPK	**Jack Peak**	**5.74**	**56**	*e*Pn	**Pn**	**03 54 25.7**	**+0.5**
SCM	**Sheep Creek Mo**	**5.83**	**47**	*e*Pn	**Pn**	**03 54 27.6**	**+1.1**
SCM				*e*Sn	**Sn**	**03 55 33.3**	**-0.2**
EYAK	**Cordova Ski Ar**	**5.93**	**62**	*e*Pn	**Pn**	**03 54 28.1**	**+0.4**
KTH	**Kantishna Hill**	**6.01**	**24**	*e*Pn	**Pn**	**03 54 30.5**	**+1.6**
RAGM	**Ragged Mountai**	**6.39**	**65**	*e*Pn	**Pn**	**03 54 34.9**	**+0.8**
RND	**Reindeer**	**6.41**	**32**	*e*Pn	**Pn**	**03 54 35.1**	**+0.8**
RND				*e*Sn	**Sn**	**03 55 48.9**	**+1.4**
BPAW	**Bear Paw Mtn.**	**6.49**	**21**	*e*Pn	**Pn**	**03 54 35.6**	**+0.2**
BPAW				*e*Sn	**Sn**	**03 55 48.3**	**-1.2**
HMT	**Hamilton**	**6.58**	**66**	*e*Pn	**Pn**	**03 54 37.3**	**+0.6**
DHY	**Denali Highway**	**6.61**	**38**	*e*Pn	**Pn**	**03 54 39.0**	**+1.7**
AKUT	**Akutan**	**6.63**	**236**	*e*Pn	**Pn**	**03 54 37.8**	**+0.5**
MCK	**McKinley**	**6.64**	**30**	*e*Pn	**Pn**	**03 54 41.2**	**+3.6**
BWN	**Browne**	**6.88**	**26**	*e*Pn	**Pn**	**03 54 43.0**	**+2.2**
UNV	**Unalaska Valle**	**7.14**	**237**	*e*Pn	**Pn**	**03 54 44.6**	**+0.2**
PAX	**Paxson**	**7.20**	**44**	*e*Pn	**Pn**	**03 54 46.6**	**+1.3**
CRQM	**Cirque**	**7.22**	**63**	*e*Pn	**Pn**	**03 54 46.4**	**+0.8**
MSW	**Makushin Switc**	**7.22**	**238**	*e*Pn	**Pn**	**03 54 45.3**	**-0.2**
SNH	**Sunshine Point**	**7.24**	**68**	*e*Pn	**Pn**	**03 54 46.0**	**+0.3**
MREP	**Makushin Rep’t**	**7.28**	**237**	*e*Pn	**Pn**	**03 54 46.2**	**-0.1**
MLY	**Manley**	**7.38**	**19**	*e*Pn	**Pn**	**03 54 49.2**	**+1.5**
WRH	**Wood River Hil**	**7.46**	**29**	*e*Pn	**Pn**	**03 54 51.5**	**+2.7**
SPIA	**Saint Paul Isl**	**7.51**	**268**	*e*Pn	**Pn**	**03 54 50.0**	**+0.7**
BALM	**Baldy**	**7.67**	**62**	*e*Pn	**Pn**	**03 54 52.3**	**+0.5**
CCB	**Clear Creek Bu**	**7.68**	**29**	*e*Pn	**Pn**	**03 54 54.2**	**+2.5**
HDA	**Harding Lake**	**7.72**	**32**	*e*Pn	**Pn**	**03 54 54.3**	**+2.0**
ANM	**Nome**	**7.72**	**330**	*e*Pn	**Pn**	**03 54 53.4**	**+1.1**
MENT	**Mentasta**	**7.85**	**47**	*e*Pn	**Pn**	**03 54 56.6**	**+2.6**
TCOL	**CIGO, UAF Yank** baz=215	**7.85**	**28**	P	**Pn**	**03 54 56.3**	**+2.2**
COLA	**College**	**7.85**	**28**	*e*Pn	**Pn**	**03 54 56.0**	**+1.9**
RIDG	**Independent Ri**	**7.90**	**40**	*e*Pn	**Pn**	**03 54 57.0**	**+2.1**
IM3	**Indian Mountai**	**7.93**	**8**	*e*Pn	**Pn**	**03 54 55.1**	**-0.1**
ILAR	**Eielson Array** 1.6nm,0.3s,baz=215,slow=13,SNR=102	**8.02**	**30**	P	**Pn**	**03 54 57.5**	**+1.1**
ILAR	0.4nm,0.3s,baz=226,slow=30,SNR=3.5			Lg	Lg	03 57 07.8	
ILB	**Eielson Array**	**8.02**	**30**	*e*Pn	**Pn**	**03 54 58.3**	**+1.9**
CHX	**Chaix Hills**	**8.07**	**70**	*e*Pn	**Pn**	**03 54 57.4**	**+0.1**
DOT	**Dot Lake**	**8.12**	**42**	*e*Pn	**Pn**	**03 54 58.8**	**+1.0**
OKTU	**Okmok Mt. Tuli**	**8.14**	**239**	*e*Pn	**Pn**	**03 54 58.0**	**-0.1**
POKR	**Poker Plat Res** baz=215	**8.15**	**28**	P	**Pn**	**03 55 00.4**	**+2.2**
SCRK	**Sand Creek**	**8.35**	**41**	*e*Pn	**Pn**	**03 55 02.0**	**+1.0**
PCA	**Pinnacle**	**8.51**	**70**	*e*Pn	**Pn**	**03 55 05.3**	**+2.1**
BCA3	**Beaver Creek A**	**8.68**	**49**	*e*Pn	**Pn**	**03 55 06.6**	**+1.1**
NIKH	**Nikolski High**	**8.78**	**239**	*e*Pn	**Pn**	**03 55 08.2**	**+1.4**
BCPM	**Bancas Point**	**8.80**	**71**	*e*Pn	**Pn**	**03 55 08.0**	**+0.9**
PNL	**Peninsula**	**8.91**	**73**	*e*Pn	**Pn**	**03 55 08.8**	**+0.2**
PRP	**Porcupine Dome**	**8.96**	**30**	*e*Pn	**Pn**	**03 55 12.3**	**+2.9**
COLD	**Coldfoot**	**9.51**	**15**	*e*Pn	**Pn**	**03 55 17.2**	**+0.4**
EGAK	**Eagle**	**9.81**	**41**	*e*Pn	**Pn**	**03 55 21.8**	**+0.8**
HYT	**Haines Junctio**	**9.95**	**67**	*e*Pn	**Pn**	**03 55 24.6**	**+1.6**
TOLK	**Toolik Lake Re**	**10.93**	**13**	*e*Pn	**Pn**	**03 55 38.0**	**+1.7**
SKAG	**Skagway**	**10.98**	**74**	*e*Pn	**Pn**	**03 55 39.9**	**+3.0**
WHY	**Whitehorse**	**11.21**	**68**	*e*Pn	**Pn**	**03 55 41.3**	**+1.1**
EPYK	**Eagle Plains**	**12.24**	**40**	*e*Pn	**Pn**	**03 55 56.7**	**+2.6**
EPYK	**Eagle Plains** baz=237,SNR=9.0	**12.24**	**40**	P	**Pn**	**03 55 56.4**	**+2.2**
GSTR	**Great Sitkin T**	**12.78**	**250**	*e*Pn	**Pn**	**03 55 58.1**	**-3.5**
INK	**Inuvik** 0.4nm,0.3s,baz=190,slow=11,SNR=4.6	**14.34**	**36**	P	**Pn**	**03 56 24.6**	**+1.8**
YKW3	**Yellowknife Ar** 19nm,1.4s	**20.82**	**60**	*e*P	**P**	**03 57 40.3**	**-1.0**
YKA	**Yellowknife Ar** 6.9nm,0.9s,baz=272,slow=9.6,SNR=12	**20.83**	**60**	P	**P**	**03 57 41.6**	**+0.3**
YKA	0.7nm,0.7s,baz=290,slow=1.9,SNR=3.7			PcP	**PcP**	**04 01 49.6**	**+0.2**
YKA	comp=Z,6.8nm,18.5s,baz=258,slow=38			LR	LR	04 06 02.2	
YKB5	**Yellowknife Ar**	**20.83**	**60**	*e*P	**P**	**03 57 41.6**	**+0.3**
YKB5				*e*PcP	**PcP**	**04 01 49.6**	**+0.2**
D03D	**Eldon** baz=311	**22.51**	**104**	P	**P**	**03 57 59.3**	**-0.2**
B05A	**Bryant** baz=309	**22.55**	**101**	P	**P**	**03 57 59.6**	**-0.4**
PEA1	**Petropavlovsk-**	**25.99**	**279**	*e*P	**P**	**03 58 33.6**	**+1.0**
PEA0B	**Petropavlovsk-** 24nm,1.4s	**26.00**	**279**	*e*P	**P**	**03 58 30.7**	**-2.0**
PETK	**Petropavlovsk-** 2.8nm,0.5s,baz=75,slow=13,SNR=8.2	**26.00**	**279**	P	**P**	**03 58 33.6**	**+1.0**
HUMO	**Hull Mountain** 4.9nm,1.4s	**26.03**	**112**	*e*P	**P**	**03 58 32.7**	**-0.4**
YBH	**Yreka Blue Hor** 1.3nm,0.9s,baz=290,slow=1.2,SNR=4.3	**26.81**	**113**	P	**P**	**03 58 42.3**	**+2.0**
O03E	**Paynes Creek** baz=321	**28.35**	**114**	P	**P**	**03 58 54.4**	**+0.4**
HRY	**Holter Researc**	**28.93**	**94**	*e*P	**P**	**03 58 59.7**	**+0.5**
EGMT	**Eagleton** baz=308	**29.20**	**90**	P	**P**	**03 59 01.7**	**+0.2**
BOZ	**Bozeman (W)** baz=311	**29.76**	**95**	P	**P**	**03 59 06.9**	**+0.4**
PAHR	**Pah Rah Range** 3.6nm,0.8s	**29.99**	**112**	*e*P	**P**	**03 59 09.2**	**+0.5**
WAKR	**Walker** 8.4nm,1.4s	**30.89**	**113**	*e*P	**P**	**03 59 19.5**	**+2.8**
YPP	**Pitchstone Pla** 2.4nm,1.1s	**31.08**	**96**	*e*P	**P**	**03 59 18.5**	**+0.1**
KVN	**Kaiserville** 3.2nm,1.0s	**31.13**	**111**	*e*P	**P**	**03 59 21.9**	**+3.1**
RLMT	**Red Lodge** baz=312	**31.32**	**94**	P	**P**	**03 59 21.0**	**+0.6**
NV01	**Mina Array Sit**	**31.51**	**112**	*e*P	**P**	**03 59 23.5**	**+1.4**
NV01				*e*PcP	**PcP**	**04 02 14.5**	**-0.3**
NVAR	**Mina Array Bea** 2.1nm,0.7s,baz=308,slow=9.3,SNR=15	**31.51**	**112**	P	**P**	**03 59 23.5**	**+1.4**
NVAR	0.7nm,0.7s,baz=325,slow=1.3,SNR=5.2			PcP	**PcP**	**04 02 14.5**	**-0.3**
NV11	**Mina Array Sit** 0.4nm,1.4s	**31.58**	**112**	*e*P	**P**	**03 59 23.4**	**+0.7**
MDPB	**Devils Postpil** 3.3nm,0.8s	**31.75**	**114**	*e*P	**P**	**03 59 27.4**	**+3.0**
OMMB	**Old Mammoth Mi** 4.6nm,0.9s	**31.81**	**114**	*e*P	**P**	**03 59 24.3**	**-0.6**
TIXI	**Tiksi** 3.7nm,0.5s,baz=19,slow=2.7,SNR=3.7	**31.95**	**325**	P	**P**	**03 59 25.7**	**+0.3**
BW06	**Boulder Array** baz=314	**32.78**	**97**	P	**P**	**03 59 33.8**	**+0.6**
PD31	**Pinedale Array**	**32.78**	**97**	*e*P	**P**	**03 59 34.1**	**+0.8**
PDAR	**Pinedale Array** 0.5nm,0.5s,baz=307,slow=4.0,SNR=6.1	**32.78**	**97**	P	**P**	**03 59 34.1**	**+0.8**
R11A	**Troy Canyon, C** 3.5nm,1.3s	**32.92**	**109**	*e*P	**P**	**03 59 34.0**	**-0.5**
R11A	**Troy Canyon, C** baz=320,SNR=5.3	**32.92**	**109**	P	**P**	**03 59 35.0**	**+0.5**
GRAC	**Grapevine Rang** baz=322	**33.09**	**113**	P	**P**	**03 59 36.6**	**+0.8**
CWC	**Cottonwood Cre** baz=323	**33.19**	**114**	P	**P**	**03 59 37.5**	**+0.7**
JLU	**Jordanelle** 1.3nm,0.9s	**33.34**	**102**	*e*P	**P**	**03 59 38.1**	**-0.1**
PKM	**Mcpherson Peak** baz=325	**33.62**	**118**	P	**P**	**03 59 41.1**	**+0.5**
ISA	**Isabella, Lake** baz=324	**33.62**	**115**	P	**P**	**03 59 41.7**	**+1.2**
TPNV	**Topopah Spring** 3.3nm,0.9s	**33.68**	**111**	*e*P	**P**	**03 59 43.1**	**+2.0**
TPNV	**Topopah Spring** baz=322	**33.68**	**111**	P	**P**	**03 59 41.9**	**+0.8**
FURC	**Furnace Creek,** baz=323	**33.76**	**113**	P	**P**	**03 59 42.8**	**+1.3**
MPMC	**Manual Prospec** baz=323	**33.78**	**114**	P	**P**	**03 59 43.0**	**+1.0**
LRMC	**Laurel Mtn Rad** baz=324	**34.15**	**115**	P	**P**	**03 59 46.5**	**+1.3**
RSSD	**Black Hills** 7.7nm,0.6s	**34.76**	**91**	*e*P	**P**	**03 59 52.0**	**+1.5**
SRU	**San Rafael Swe** 13nm,1.5s	**34.92**	**103**	*e*P	**P**	**03 59 54.0**	**+2.2**
TUQ	**Turquoise Moun** baz=323	**35.04**	**113**	P	**P**	**03 59 53.2**	**+0.4**
ULM	**Lac du Bonnet** 3.0nm,0.6s,baz=293,slow=8.4,SNR=5.9	**35.14**	**76**	P	**P**	**03 59 54.3**	**+0.9**
CIS	**Catalina Islan** baz=326	**35.49**	**118**	P	**P**	**03 59 58.0**	**+1.4**
BELC	**Belle Mtn. Jos** baz=324	**36.16**	**114**	P	**P**	**04 00 03.3**	**+0.8**
PFO	**Pinyon Flats O** baz=325	**36.25**	**115**	P	**P**	**04 00 04.1**	**+0.9**
AGMN	**Agassiz Nation** 8.1nm,0.8s	**36.34**	**79**	*e*P	**P**	**04 00 05.0**	**+1.2**
AGMN	**Agassiz Nation** baz=309	**36.34**	**79**	P	**P**	**04 00 03.9**	**+0.2**
IRM	**Iron Mountain** baz=324	**36.44**	**113**	P	**P**	**04 00 05.0**	**+0.2**
PV13	**Radium Mtn., P** 3.6nm,0.9s	**36.51**	**102**	*e*P	**P**	**04 00 03.6**	**-2.0**
Y12C	**Blythe** baz=324	**37.08**	**113**	P	**P**	**04 00 09.4**	**-0.8**
IKP	**In-Ko-Pah, Jac** baz=326	**37.21**	**116**	P	**P**	**04 00 11.9**	**+0.5**
SDCO	**Great Sand Dun** baz=319	**38.55**	**99**	P	**P**	**04 00 23.1**	**+0.1**
EYMN	**Ely** 10nm,0.8s	**38.83**	**76**	*e*P	**P**	**04 00 25.7**	**+0.9**
EYMN	**Ely** baz=310,SNR=6.1	**38.83**	**76**	P	**P**	**04 00 24.9**	**+0.1**
ECSD	**EROS Data Cent** baz=313	**38.95**	**85**	P	**P**	**04 00 25.9**	**0.0**
E38A	**The Farm, Brul** 13nm,0.6s	**39.67**	**78**	*e*P	**P**	**04 00 32.4**	**+0.5**
E38A	**The Farm, Brul** baz=311,SNR=7.7	**39.67**	**78**	P	**P**	**04 00 31.9**	**+0.1**
BGNE	**Belgrade** baz=315	**39.76**	**89**	P	**P**	**04 00 33.1**	**+0.5**
SPMN	**Marine on St.** 11nm,0.6s	**39.94**	**80**	*e*P	**P**	**04 00 35.2**	**+1.1**
SPMN	**Marine on St.** baz=312,SNR=6.6	**39.94**	**80**	P	**P**	**04 00 34.5**	**+0.4**
C40A	**Isle Royale Na** baz=311	**40.05**	**75**	P	**P**	**04 00 35.3**	**+0.4**
ANMO	**Albuquerque** baz=321	**40.19**	**103**	P	**P**	**04 00 37.0**	**+0.4**
G39A	**Holcombe** baz=313,SNR=6.7	**40.75**	**79**	P	**P**	**04 00 41.1**	**+0.3**
G40A	**Rib Lake** 8.5nm,0.7s	**41.27**	**78**	*e*P	**P**	**04 00 45.8**	**+0.7**
G40A	**Rib Lake** baz=313,SNR=7.6	**41.27**	**78**	P	**P**	**04 00 44.8**	**-0.3**
F42A	**Maple Grove Fa** baz=313	**42.00**	**76**	P	**P**	**04 00 51.4**	**+0.4**
SCIA	**State Center** baz=315	**42.02**	**84**	P	**P**	**04 00 51.1**	**-0.1**
E43A	**Lone Tree Farm** baz=312	**42.17**	**75**	P	**P**	**04 00 52.8**	**+0.4**
I41A	**Arkdale** 13nm,0.8s	**42.27**	**79**	*e*P	**P**	**04 00 54.2**	**+1.0**
I41A	**Arkdale** baz=314	**42.27**	**79**	P	**P**	**04 00 53.7**	**+0.4**
JFWS	**Jewell Farm** 9.2nm,0.6s	**42.87**	**81**	*e*P	**P**	**04 00 58.2**	**0.0**
JFWS	**Jewell Farm** baz=315	**42.87**	**81**	P	**P**	**04 00 57.9**	**-0.2**
I42A	**Draeger Farm,** baz=314	**42.88**	**79**	P	**P**	**04 00 58.2**	**0.0**
L40A	**Anamosa** 8.2nm,0.6s	**42.96**	**83**	*e*P	**P**	**04 00 59.2**	**+0.4**
L40A	**Anamosa** baz=315	**42.96**	**83**	P	**P**	**04 00 59.0**	**+0.1**
H43A	**Windswept, Lux** baz=314	**43.07**	**77**	P	**P**	**04 00 59.8**	**0.0**
MNTX	**Cornudas Mount** 5.5nm,1.4s	**43.30**	**105**	*e*P	**P**	**04 01 03.5**	**+1.7**
MNTX	**Cornudas Mount** baz=323	**43.30**	**105**	P	**P**	**04 01 02.5**	**+0.7**
D46A	**Sault St. Mari** baz=313	**43.33**	**72**	P	**P**	**04 01 01.9**	**+0.1**
E46A	**Sault Ste Mari** baz=313	**43.55**	**73**	P	**P**	**04 01 03.9**	**+0.3**
D47A	**Chapleau** baz=313	**43.68**	**71**	P	**P**	**04 01 04.8**	**+0.1**
L42A	**Oliver, Polo** baz=315	**43.81**	**81**	P	**P**	**04 01 05.8**	**0.0**
H45A	**Beulah** baz=314	**43.86**	**76**	P	**P**	**04 01 05.5**	**-0.5**
G46A	**Petoskey** baz=314	**43.98**	**74**	P	**P**	**04 01 06.9**	**-0.2**
E47A	**Iron Bridge** baz=313	**44.01**	**72**	P	**P**	**04 01 06.9**	**-0.4**
K43A	**Burlington** baz=315	**44.02**	**80**	P	**P**	**04 01 07.4**	**0.0**
D48A	**Paudash Townsh** baz=313	**44.25**	**70**	P	**P**	**04 01 09.3**	**0.0**
H46A	**Fife Lake** baz=314	**44.35**	**76**	P	**P**	**04 01 09.8**	**-0.2**
WMOK	**Wichita Mounta** 4.6nm,1.4s	**44.36**	**96**	*e*P	**P**	**04 01 11.3**	**+1.0**
WMOK	**Wichita Mounta** baz=320	**44.36**	**96**	P	**P**	**04 01 10.2**	**-0.1**
D49A	**Beulah Townshi**	**44.41**	**70**	P	**P**	**04 01 10.4**	**-0.1**

	baz=313						
GLMI	Grayling	44.45	75	P	P	04 01 10.6	-0.2
	baz=314						
MATQ	Matagami	44.55	65	P	P	04 01 11.1	-0.5
	baz=312						
L44A	Lake County Fo	44.61	80	P	P	04 01 12.7	+0.5
	baz=316						
I46A	Reed City	44.64	76	P	P	04 01 12.5	+0.1
	baz=315						
HDIL	Hopedale	45.05	83	*e*P	P	04 01 15.8	+0.1
	16nm,0.8s						
HDIL	Hopedale	45.05	83	P	P	04 01 15.3	-0.3
	baz=316						
M44A	Midewin, Midew	45.10	81	P	P	04 01 16.2	+0.1
	baz=316						
E50A	Wahnapitae	45.30	71	P	P	04 01 17.1	-0.5
	baz=314						
LSQQ	Lebel-sur-Quev	45.34	65	P	P	04 01 17.3	-0.6
	baz=313						
I48A	Sherman Twp	45.36	75	P	P	04 01 17.3	-0.8
	baz=315						
D51A	Lot 18 Range I	45.52	69	P	P	04 01 18.9	-0.4
	baz=314						
ABTX	Abilene, Hawle	45.55	99	*e*P	P	04 01 20.4	+0.6
	3.6nm,0.6s						
ABTX	Abilene, Hawle	45.55	99	P	P	04 01 19.1	-0.6
	baz=322						
P43A	Skaggs, Pawnee	45.59	84	P	P	04 01 19.8	-0.2
	baz=317						
TOBO	Tobermory, Bru	45.74	72	P	P	04 01 20.5	-0.6
	baz=314						
HHAR	Hobbs	45.75	90	*e*P	P	04 01 21.3	0.0
	2.7nm,0.6s						
O44A	Mansfield	45.78	82	P	P	04 01 21.1	-0.3
	baz=317						
E51A	G1948 Merrick	45.85	70	P	P	04 01 21.4	-0.6
	baz=314						
CCM	Cathedral Cave	45.85	87	P	P	04 01 21.4	-0.7
	baz=318						
CHGQ	Chibougamau	46.00	63	P	P	04 01 22.4	-0.7
	baz=313						
SCHQ	Schefferville	46.04	53	P	P	04 01 23.1	-0.3
	6.3nm,0.5s,baz=310,slow=7.7,SNR=6.5						
SCHQ	Schefferville	46.04	53	*e*P	P	04 01 23.1	-0.3
	10nm,1.0s						
F51A	Arnstein	46.06	70	P	P	04 01 22.7	-0.9
	baz=314						
D52A	ZEK Kipawa Sen	46.07	68	P	P	04 01 22.7	-1.0
	baz=314						
TX31	Lajitas Ar. Si	46.08	105	*e*P	P	04 01 25.1	+1.0
	3.0nm,1.2s						
LTX	Lajitas	46.08	105	*e*P	P	04 01 24.8	+0.8
LTX				*e*PcP	PcP	04 03 00.9	+0.6
TXAR	Lajitas Array	46.08	105	P	P	04 01 24.8	+0.8
	0.7nm,0.7s,baz=294,slow=4.6,SNR=9.1						
TXAR				PcP	PcP	04 03 00.9	+0.6
	0.3nm,0.6s,baz=316,slow=2.5,SNR=2.5						
TXAR				LR	LR	04 19 24.7	
	comp=Z,27nm,18.6s,baz=0.0,slow=34						
K48A	Perry	46.13	76	P	P	04 01 23.2	-1.0
	baz=316						
L47A	Sherwood	46.16	78	P	P	04 01 23.7	-0.8
	baz=316						
J49A	Marlette	46.24	75	P	P	04 01 24.5	-0.6
	baz=316						
U40A	Yellville	46.27	89	P	P	04 01 25.0	-0.4
	baz=319						
KLBO	Killbear Provi	46.31	71	P	P	04 01 24.8	-0.7
	baz=315						
SFIN	Lafayette	46.33	81	*e*P	P	04 01 26.2	+0.4
	8.2nm,0.6s						
SFIN	Lafayette	46.33	81	P	P	04 01 25.1	-0.7
	baz=317						
BMRO	Meriville Lake	46.34	73	P	P	04 01 25.1	-0.7
	baz=315						
D53A	Lac Vacive, Po	46.35	68	*e*P	P	04 01 26.1	+0.2
	6.9nm,0.8s						
D53A	Lac Vacive, Po	46.35	68	P	P	04 01 25.4	-0.5
	baz=314						
E52A	Mattawa	46.44	69	P	P	04 01 26.7	+0.1
	baz=314						
F52A	Sundridge	46.45	70	P	P	04 01 26.7	0.0
	baz=315						
BASO	Ashfield	46.52	74	P	P	04 01 27.0	-0.3
	baz=315						
L48A	N Adams	46.58	78	P	P	04 01 27.2	-0.5
	baz=316						
W39A	Magazine	46.66	91	P	P	04 01 28.3	-0.1
	baz=320						
BUKO	Buck Lake	46.66	71	P	P	04 01 27.6	-0.7
	baz=315						
N47A	Urbana	46.70	79	P	P	04 01 27.5	-1.2
	baz=317,SNR=5.7						
L49A	Milan	46.81	77	P	P	04 01 29.3	-0.2
	baz=316						
D54A	Lac Fusel, La	46.81	67	P	P	04 01 29.2	-0.3
	baz=314						
P46A	Rosedale	46.83	82	P	P	04 01 30.1	+0.4
	baz=317						
E53A	Dumoine, Ponti	46.86	69	P	P	04 01 29.6	-0.2
	baz=315						
I51A	Listowel	47.00	73	P	P	04 01 30.8	-0.2
	baz=316						
FCAR	Ozark Folk Cen	47.01	89	*e*P	P	04 01 31.2	0.0
	3.4nm,0.9s						
E54A	Lac Daplat, Po	47.06	68	P	P	04 01 30.8	-0.6
	baz=315,SNR=6.0						
N48A	Decatur	47.06	79	P	P	04 01 30.6	-1.0
	baz=317						
JCT	Junction City	47.16	101	*e*P	P	04 01 32.9	+0.5
	6.0nm,0.8s						
JCT	Junction City	47.16	101	P	P	04 01 32.2	-0.2
	baz=323						
M49A	Liberty Center	47.16	78	P	P	04 01 31.5	-0.7
	baz=317						
S44A	Carbondale	47.17	85	P	P	04 01 31.8	-0.6
	baz=318						
PBMO	Poplar Bluff	47.24	87	*e*P	P	04 01 32.4	-0.5
	11nm,0.7s						
MIAR	Mount Ida	47.26	92	*e*P	P	04 01 34.0	+0.9
	7.4nm,1.0s						
MIAR	Mount Ida	47.26	92	P	P	04 01 32.9	-0.2
	baz=320						
G53A	Haliburton	47.27	70	P	P	04 01 32.9	-0.2
	baz=315						
L50A	Kingsville	47.35	76	P	P	04 01 32.6	-1.1
	baz=316						
O48A	Farmland	47.43	80	P	P	04 01 33.6	-0.8
	baz=317						
N49A	Columbus Grove	47.45	78	P	P	04 01 33.7	-0.9
	baz=317						
W41B	Gary Mavity, V	47.49	90	P	P	04 01 34.5	-0.4
	baz=320						
ACTO	Acton	47.63	73	P	P	04 01 36.1	+0.2
	baz=316						
BANO	Bancroft	47.69	70	P	P	04 01 36.1	-0.2
	baz=316						
X40A	Basin Creek Fa	47.70	91	P	P	04 01 37.1	+0.6
	baz=320						
PKRO	Pickering	47.87	72	P	P	04 01 37.9	+0.2
	baz=316						
P48A	Milroy	47.88	81	*e*P	P	04 01 36.6	-1.3
	7.7nm,0.5s						
TYNO	Tyneside	48.09	73	P	P	04 01 39.2	-0.3
	baz=316						
Q48A	North Vernon	48.11	81	P	P	04 01 38.8	-0.9
	baz=318						
G55A	Calabogie	48.12	69	P	P	04 01 38.7	-1.0
	baz=316						
DELO	Deloro Mine	48.20	70	P	P	04 01 39.7	-0.7
	baz=316						
O50A	Cable	48.31	79	P	P	04 01 40.4	-0.9
	baz=317						
WCI	Wyandotte Cave	48.33	82	P	P	04 01 40.6	-0.8
	baz=318						
T46A	Princeton	48.38	85	P	P	04 01 41.2	-0.6
	baz=319						
H55A	Tweed	48.40	70	P	P	04 01 41.2	-0.7
	baz=316						
ORIO	Orleans, Innes	48.58	68	P	P	04 01 41.8	-1.4
	baz=316						
J54A	Appleton	48.59	72	P	P	04 01 42.8	-0.5
	baz=316						
P50A	Jamestown	48.62	79	P	P	04 01 43.3	-0.3
	baz=318						
L53A	Girard	48.72	74	P	P	04 01 43.9	-0.5
	baz=317						
U46A	Springville	48.74	86	P	P	04 01 44.2	-0.3
	baz=319						
MEDO	Medina	48.76	72	P	P	04 01 44.6	0.0
	baz=316						
N52A	McGinn’s Farm,	48.82	77	P	P	04 01 44.3	-0.9
	baz=317						
H56A	Elgin	48.83	69	P	P	04 01 44.3	-0.8
	baz=316						
T47A	Sharon Grove	48.83	84	P	P	04 01 45.2	0.0
	baz=319						
O51A	Pataskala	48.84	78	P	P	04 01 44.9	-0.4
	baz=318						
R49A	Shelbyville	48.88	81	P	P	04 01 45.0	-0.6
	baz=318						
S48A	Wiedeman Farm,	48.88	83	P	P	04 01 45.2	-0.4
	baz=319						
M53A	WI Miller and	48.89	75	P	P	04 01 45.3	-0.4
	baz=317						
L54A	Sinclairville	49.00	74	P	P	04 01 46.2	-0.3
	baz=317						
J55A	Hilton	49.01	72	P	P	04 01 46.2	-0.3
	baz=317						
K54A	Basiliko Farm,	49.04	73	P	P	04 01 46.4	-0.4
	baz=317						
WVT	Waverly	49.10	85	P	P	04 01 46.9	-0.5
	baz=319						
T48A	Bowling Green	49.12	83	P	P	04 01 46.9	-0.5
	baz=319						
U47A	Clarksville	49.15	85	P	P	04 01 47.3	-0.4
	baz=319						
S49A	Springfield	49.19	82	P	P	04 01 47.2	-0.8
	baz=319						
V46A	Holladay	49.20	86	P	P	04 01 47.4	-0.7
	baz=320,SNR=16						
O52A	Adamsville	49.26	77	P	P	04 01 48.1	-0.4
	baz=318						
N53A	Lisbon	49.27	76	P	P	04 01 48.0	-0.6
	baz=318						
Q51A	Peebles	49.28	79	*e*P	P	04 01 48.8	0.0
	8.5nm,0.6s						
Q51A	Peebles	49.28	79	P	P	04 01 48.2	-0.5
	baz=318						
R50A	Paris	49.33	81	*e*P	P	04 01 49.2	+0.2
	11nm,0.7s						
R50A	Paris	49.33	81	P	P	04 01 48.1	-0.9
	baz=318,SNR=5.8						
M54A	Oil Creek Stat	49.35	74	P	P	04 01 48.6	-0.6
	baz=317						
L55A	Hinsdale	49.48	73	P	P	04 01 49.6	-0.7
	baz=317						
V47A	Nunnelly	49.49	85	P	P	04 01 50.2	-0.1
	baz=320						
U48A	Cassie Pea, Po	49.49	84	P	P	04 01 50.3	-0.1
	baz=319						
OXF	Oxford	49.49	88	*e*P	P	04 01 50.9	+0.6
	40nm,0.8s						
OXF	Oxford	49.49	88	P	P	04 01 50.5	+0.1
	baz=320,SNR=12						
W46A	Michie	49.57	87	P	P	04 01 50.1	-0.8
	baz=320,SNR=6.2						
T49A	Edmonton	49.57	83	P	P	04 01 50.9	-0.1
	baz=319						
N54A	Moraine State	49.59	75	P	P	04 01 50.9	-0.1
	baz=318						
LONY	Lake Ozonia	49.63	68	P	P	04 01 50.8	-0.5
	baz=317						
R51A	Hillsboro	49.70	80	P	P	04 01 51.6	-0.2
	baz=318						
S50A	Richmond	49.74	81	P	P	04 01 51.7	-0.5
	baz=319						
M55A	Ridgway	49.84	74	P	P	04 01 52.8	-0.2
	baz=318,SNR=6.0						
PLAL	Pickwick Lake	49.84	87	*e*P	P	04 01 53.4	+0.4
	16nm,0.5s						
W47A	Westpoint	49.89	86	P	P	04 01 53.5	+0.1
	baz=320,SNR=7.1						
U49A	Red Boiling Sp	49.89	83	P	P	04 01 53.0	-0.4
	baz=319						
Q52A	Bidwell	49.89	79	P	P	04 01 52.4	-0.9
	baz=318						
X46A	Booneville	49.90	87	P	P	04 01 53.4	-0.1
	baz=320,SNR=29						
CLTN	Cedars of Leba	49.92	84	*e*P	P	04 01 54.8	+1.2
	5.9nm,1.0s						
V48A	Smith Brothers	49.93	85	*e*P	P	04 01 53.9	+0.2
	4.1nm,0.6s						
V48A	Smith Brothers	49.93	85	P	P	04 01 53.2	-0.5
	baz=320						
P53A	Whipple	49.96	78	P	P	04 01 53.0	-0.9
	baz=318						
O54A	Avella	49.96	76	P	P	04 01 53.0	-0.9
	baz=318						
T50A	Nancy	50.00	82	P	P	04 01 54.0	-0.2
	baz=319						
M56A	Emporium	50.12	73	P	P	04 01 54.7	-0.4
	baz=318						
S51A	Beattyville	50.19	81	P	P	04 01 55.4	-0.2
	baz=319						
N55A	Marion Center	50.23	75	P	P	04 01 55.6	-0.4
	baz=318						
X47A	Russelville	50.31	87	P	P	04 01 56.6	0.0
	baz=320						
W48A	Pulaski	50.33	86	P	P	04 01 56.1	-0.6
	baz=320						
Q53A	Leroy	50.35	78	P	P	04 01 56.2	-0.6
	baz=318						
V49A	McMinnville	50.39	84	P	P	04 01 56.7	-0.5
	baz=320						
U50A	Jamestown	50.46	83	P	P	04 01 57.1	-0.6
	baz=319						
N56A	West Decatur	50.48	74	P	P	04 01 57.1	-0.8
	baz=318						
O55A	Ligonier	50.50	75	P	P	04 01 57.2	-0.7
	baz=318						
T51A	Gray	50.51	82	P	P	04 01 57.5	-0.6
	baz=319						
R53A	Hurricane	50.53	79	P	P	04 01 57.6	-0.6
	baz=319						
Q54A	Coxs Mills	50.62	78	P	P	04 01 58.4	-0.4
	baz=318						
MCWV	Mont Chateau	50.63	76	P	P	04 01 58.6	-0.3
	baz=318						
VBMS	Vicksburg	50.68	91	P	P	04 01 59.2	-0.2
	baz=321						
W49A	Belvidere	50.69	85	P	P	04 01 59.1	-0.4
	baz=320						
BINY	Binghamton	50.71	71	*e*P	P	04 02 00.7	+1.2
	10nm,0.8s						
BINY	Binghamton	50.71	71	P	P	04 01 59.0	-0.4
	baz=318						
P55A	Reedsville	50.75	76	P	P	04 01 59.4	-0.5
	baz=318						
X48A	Hartselle	50.79	86	*e*P	P	04 02 00.1	-0.2
	5.3nm,0.7s						
X48A	Hartselle	50.79	86	P	P	04 01 60.0	-0.2
	baz=320						
SWET	Sewanee	50.80	85	*e*P	P	04 02 00.7	+0.5
	6.3nm,0.8s						
O56A	Blue Knob Stat	50.83	75	P	P	04 02 00.1	-0.4
	baz=318						
V50A	Pikevile	50.89	84	P	P	04 02 00.6	-0.3
	baz=320						
L58A	Harry Jones Me	50.89	71	P	P	04 02 00.4	-0.4
	baz=318						
SSPA	Standing Stone	50.90	74	P	P	04 02 00.8	-0.1
	baz=318						
U51A	La Follette	50.92	82	P	P	04 02 01.0	-0.2
	baz=320						
N57A	Milroy	50.98	74	P	P	04 02 01.4	-0.1
	baz=318						
Q55A	Buckhannon	51.00	77	P	P	04 02 01.5	-0.3
	baz=319						
TZTN	Tazewell	51.04	82	P	P	04 02 02.1	0.0
	baz=320						
M58A	Price’s Panora	51.08	72	P	P	04 02 01.8	-0.5
	baz=318						
X49A	Woodville	51.12	86	P	P	04 02 02.4	-0.3
	baz=320						
W50A	Signal Mountai	51.13	84	*e*P	P	04 02 03.3	+0.5
	5.2nm,0.8s						
W50A	Signal Mountai	51.13	84	P	P	04 02 02.4	-0.4
	baz=320						
V51A	Loudon	51.18	83	P	P	04 02 02.5	-0.6
	baz=320						
T53A	Wise	51.24	81	P	P	04 02 03.1	-0.5
	baz=319						
U52A	Thorn Hill	51.25	82	P	P	04 02 03.8	+0.1
	baz=320						
P56A	Dayton Farm, R	51.26	76	P	P	04 02 03.3	-0.3
	baz=319						
S54A	Dingess, Beckl	51.26	79	P	P	04 02 03.7	-0.1
	baz=319						
N58A	Sunbury	51.34	73	P	P	04 02 04.2	0.0
	baz=318						
O57A	Amberson	51.35	74	P	P	04 02 04.3	0.0
	baz=318						
Q56A	Snyder Ridge,	51.43	76	P	P	04 02 04.7	-0.2
	baz=319						
W51A	Cleveland	51.45	84	P	P	04 02 04.9	-0.3
	baz=320						
M59A	Waymart	51.47	71	P	P	04 02 04.8	-0.4
	baz=318						
X50B	Fort Payne	51.52	85	P	P	04 02 05.3	-0.4
	baz=320						
V52A	Sevierville	51.55	82	P	P	04 02 05.5	-0.4
	baz=320						
Y49A	Blount Mountai	51.58	86	*e*P	P	04 02 05.6	-0.7
	7.5nm,0.7s						
Y49A	Blount Mountai	51.58	86	P	P	04 02 05.5	-0.7
	baz=321,SNR=5.2						
T54A	Tazewell	51.68	80	P	P	04 02 06.7	-0.2
	baz=319						
U53A	Fall Branch	51.69	81	P	P	04 02 06.5	-0.5
	baz=320						
P57A	Homestead Farm	51.70	75	P	P	04 02 06.6	-0.3
	baz=319						
S55A	Lewisburg	51.70	78	P	P	04 02 06.5	-0.6
	baz=319						
N59A	State Game Lan	51.77	72	P	P	04 02 06.8	-0.7
	baz=318						
O58A	Lewisberry	51.77	74	P	P	04 02 06.9	-0.6
	baz=319						
Q57A	Strasburg	51.83	76	P	P	04 02 07.4	-0.6
	baz=319						
KSRS	Korea Array	51.85	281	LR	LR	04 25 39.2	
	comp=Z,6.5nm,18.2s,baz=215,slow=38						
X51A	Calhoun	51.86	84	*e*P	P	04 02 08.6	+0.4
	16nm,1.2s						
X51A	Calhoun	51.86	84	P	P	04 02 07.6	-0.6
	baz=320						
LRAL	Lakeview Retre	51.91	87	P	P	04 02 08.1	-0.5
	baz=321						
Y50A	Piedmont	51.91	86	P	P	04 02 08.1	-0.6
	baz=321						
W52A	Murphy	51.95	83	P	P	04 02 08.1	-0.8
	baz=320						
O59A	Robesonia	52.01	73	P	P	04 02 08.3	-1.0
	baz=319						
Z49A	Columbiana	52.03	87	P	P	04 02 08.8	-0.7
	baz=321						
V53A	Saluda	52.09	82	*e*P	P	04 02 10.6	+0.6
	5.8nm,0.8s						
V53A	Saluda	52.09	82	P	P	04 02 09.0	-0.9
	baz=320						
BLA	Blacksburg	52.17	79	P	P	04 02 09.4	-1.1
	baz=320						
LUPA	Lehigh Univers	52.20	72	*e*P	P	04 02 12.0	+1.3
	1.0nm,0.8s						
Y51A	Rockmart	52.26	85	P	P	04 02 10.2	-1.0
	baz=321						
Q58A	Fox Den Farm,	52.27	75	P	P	04 02 10.5	-0.8
	baz=319,SNR=5.8						
W53A	Cullowhee	52.29	83	P	P	04 02 10.8	-0.8
	baz=320						
Z50A	Ashland	52.31	86	P	P	04 02 10.7	-0.9
	baz=321						
R57A	Stanardsville	52.33	76	P	P	04 02 10.7	-1.0
	baz=319						
X52A	Dahlonega	52.34	84	P	P	04 02 10.8	-1.0
	baz=320,SNR=9.1						
149A	Jones	52.36	88	P	P	04 02 10.9	-1.0
	baz=321,SNR=7.9						
U55A	TA2, Sparta	52.38	80	P	P	04 02 11.1	-1.0
	baz=320,SNR=5.3						
O60A	Telford	52.40	72	P	P	04 02 11.5	-0.6
	baz=319						
V54A	Nebo	52.46	81	P	P	04 02 12.0	-0.7
	baz=320						
T56A	Rocky Mt	52.51	79	P	P	04 02 12.6	-0.4
	baz=320						
R58A	Rapidan	52.59	76	P	P	04 02 13.0	-0.6
	baz=319						
PAL	Palisades	52.63	71	P	P	04 02 13.5	-0.4
	baz=319						
Z51A	Franklin	52.65	86	P	P	04 02 13.4	-0.8
	baz=321						
249A	Camden	52.67	88	P	P	04 02 13.8	-0.5
	baz=322						
150A	Eclectic	52.76	87	P	P	04 02 14.2	-0.7
	baz=321						
Y52A	Lilburn	52.82	84	P	P	04 02 14.6	-0.7
	baz=321						
U56A	King	52.84	79	P	P	04 02 14.7	-0.8
	baz=320						
W54A	Cherokee Point	52.87	82	P	P	04 02 15.2	-0.5
	baz=320						
R58B	Mineral	52.91	76	P	P	04 02 15.0	-1.0
	baz=320						
T57A	Hurt	52.93	78	P	P	04 02 15.4	-0.7
	baz=320						
Y53A	Monroe	53.08	84	P	P	04 02 16.4	-0.8
	baz=321						
Z52A	Williamson	53.15	85	P	P	04 02 16.7	-1.1
	baz=321						
X54A	Belton	53.18	82	P	P	04 02 17.0	-1.0
	baz=321						
V56A	Mocksville	53.20	80	*e*P	P	04 02 18.2	+0.1
	5.9nm,0.8s						
V56A	Mocksville	53.20	80	P	P	04 02 16.8	-1.2
	baz=320						
KMSC	Kings Mountain	53.27	81	P	P	04 02 18.5	-0.2
	baz=320						
U57A	Blanch	53.32	78	P	P	04 02 18.7	-0.3
	baz=320						
T58A	Grand View Acr	53.35	77	P	P	04 02 18.8	-0.4
	baz=320						
GOGA	Godfrey	53.48	84	P	P	04 02 19.4	-0.8
	baz=321						
HODGE	Hodges	53.48	83	*e*P	P	04 02 20.4	+0.1
	6.1nm,0.6s						
V57A	Coltrane Farms	53.51	79	P	P	04 02 19.6	-0.8
	baz=320						
Z53A	Monticello	53.53	84	P	P	04 02 19.3	-1.2
	baz=321						
Y54A	Tignall	53.54	83	P	P	04 02 19.9	-0.7
	baz=321,SNR=5.2						
X55A	Gracelyn & Ava	53.63	82	P	P	04 02 20.4	-0.8
	baz=321						
U58A	Oxford	53.76	78	P	P	04 02 21.4	-0.8
	baz=320						
Y55A	Saluda	53.92	82	P	P	04 02 22.8	-0.6
	baz=321						
V58A	Windy Hill, Pi	53.93	79	P	P	04 02 22.8	-0.7
	baz=320						
R61A	Willards	53.93	74	P	P	04 02 22.7	-0.8
	baz=320						
Z54A	Sparta	53.95	84	P	P	04 02 22.6	-1.0
	baz=321						
W57A	Gilead	53.96	80	P	P	04 02 22.8	-0.9
	baz=321						
U59A	Littleton	54.18	77	P	P	04 02 24.5	-0.8
	baz=320						
V59A	Middlesex	54.40	78	P	P	04 02 26.6	-0.3
	baz=320						
U60A	Pendleton	54.42	77	P	P	04 02 26.8	-0.2
	baz=320						
SONA0	Songino Array	54.42	305	*e*P	P	04 02 28.1	+1.0
SONM	Songino Array	54.42	305	P	P	04 02 28.1	+1.0
	3.1nm,0.5s,baz=44,slow=7.1,SNR=16						
SONM				LR	LR	04 27 07.0	
	comp=Z,55nm,19.6s,baz=60,slow=38						
W58A	Raeford	54.46	80	P	P	04 02 27.3	-0.1
	baz=321						
155A	Kite	54.62	84	P	P	04 02 28.3	-0.2
	baz=322						
552A	Lynn Haven	55.08	88	P	P	04 02 31.3	-0.5
	baz=322						
255A	Hazlehurst	55.16	84	P	P	04 02 31.5	-1.0
	baz=322						
X60A	Albert Glenn T	55.46	79	P	P	04 02 33.9	-0.6
	baz=321						
ZAA1	Zalesovo Array	57.78	322	*e*P	P	04 02 51.6	+0.8
ZALV	Zalesovo Beam	57.78	322	P	P	04 02 51.6	+0.8
	1.5nm,0.4s,baz=42,slow=6.0,SNR=9.7						
ZALV				LR	LR	04 33 01.8	
	comp=Z,26nm,18.3s,baz=70,slow=42						
FIA0	FINESS Array S	60.70	359	*e*P	P	04 03 09.9	-1.0
FINES	FINESS Array B	60.70	359	P	P	04 03 09.9	-1.0

	2.7nm,1.0s,baz=4.3,slow=7.6,SNR=4.5						
NB200	NORSAR Array S	60.73	7	eP	P	04 03 09.6	-1.6
NOA	NORSAR Array B	60.73	7	P	P	04 03 09.6	-1.6
	0.7nm,0.7s,baz=352,slow=6.8,SNR=3.2						
MK32	Makanchi Array	64.73	320	eP	P	04 03 38.2	+0.2
MKAR	Makanchi Array	64.73	320	P	P	04 03 38.2	+0.2
	1.0nm,0.6s,baz=41,slow=7.8,SNR=9.3						
MKAR				LR	LR	04 33 52.3	
	comp=Z,20nm,19.5s,baz=20,slow=38						
ABKAR	Akbulak array	68.84	335	eP	P	04 04 04.8	+0.7
	1.4nm,0.6s						
AKASG	Malin Array Be	71.39	356	P	P	04 04 18.4	-1.3
	2.3nm,0.6s,baz=7.0,slow=5.9,SNR=9.8						
AKBB	Malin Array Si	71.39	356	eP	P	04 04 18.4	-1.3
	3.7nm,0.7s						
JTS	Las Juntas de	71.54	100	eP	P	04 04 19.9	-1.3
	17nm,1.4s						
GEC2	GERESS Array S	73.03	7	eP	P	04 04 28.9	-0.8
	1.9nm,0.9s						
GERES	GERESS Array B	73.03	7	P	P	04 04 28.9	-0.8
	0.4nm,0.5s,baz=343,slow=4.2,SNR=5.6						
ESDC	Sonseca Array	79.81	21	P	P	04 05 07.6	-0.7
	0.6nm,0.5s,baz=341,slow=6.3,SNR=8.1						
CM31	Chiang Mai Arr	81.99	292	eP	P	04 05 20.2	+0.1
	6.9nm,0.4s						
CMAR	Chiang Mai Arr	81.99	292	P	P	04 05 20.2	+0.1
	1.5nm,0.3s,baz=32,slow=5.3,SNR=4.6						
CMAR				LR	LR	04 48 33.1	
	comp=Z,9.3nm,18.6s,baz=200,slow=41						
BR101	Keskin Array S	82.10	352	eP	P	04 05 20.3	-0.3
BRTR	Keskin Array B	82.10	352	P	P	04 05 20.3	-0.3
	0.7nm,0.8s,baz=345,slow=3.3,SNR=3.6						
KEST	Kesra	85.68	12	P	P	04 05 38.8	-0.1
	3.2nm,0.9s,baz=293,slow=7.7,SNR=3.8						
KEST	Kesra	85.68	12	eP	P	04 05 38.8	-0.1
	4.4nm,0.9s						
BOSA	Boshof	150.43	357	PKPbc	PKPbc	04 12 50.4	-1.0
	3.5nm,1.0s,baz=351,slow=4.0,SNR=3.3						

MEX 18 04:16:14.8±0.8**, 16°.12N×97°.55W, h13**^{km}±8^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.23	39	eP	Pn	04 16 34.5	-3.3
VHO				eS	Sb	04 16 49.3	-4.5
HUIG	Huatulco	1.43	104	i P	Pn	04 16 37.4	-3.1
HUIG				i S	Sn	04 16 53.9	-5.1
TLIG	Tlapa	1.74	326	eP	Pn	04 16 41.1	-3.7
TLIG				i S	Sn	04 17 01.9	-5.0

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*SOME **18** 04:19:26.7, 41°.92N×77°.17E, h10^{km}*
*KRNET **18** 04:19:26.4±0.1, 41°.85N×77°.13E, h14^{km}, mb3.3*
*NNC **18** 04:19:27.4±0.6, 41°.92N×77°.14E, h0^{km}, mb3.9, mpv4.1, Error ellipse: s-maj=4.4km s-min=2.7km az=176.0*
*KNET **18** 04:19:27.8±0.4, 41°.91N×77°.03E, h10^{km}±2^{km}, ml3.1, Error ellipse: s-maj=3.7km s-min=2.7km az=26.0*
ISC 18 04:19:26.8±1.1**, 41°.89N**±0°.03×**77°.14E**±0°.02**, h9**^{km}±9^{km}**, n72,** σ0^{s}.96/122**, 42C-35D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	0.24	7	⇑iP	Pg	04 19 32.3	+0.5
	baz=10.0						
KDJ				⇑iS	Sg	04 19 36.3	+1.1
	baz=10.0						
ULHL	Ulahol	0.76	298	⇓iP	Pg	04 19 41.1	-0.4
	baz=1.0						
ULHL				⇓iS	Sg	04 19 51.8	+0.4
	baz=1.0						
ULHL	Ulahol	0.76	298	⇑P	Pg	04 19 41.1	-0.4
	62nm,0.1s,SNR=374						
ULHL				⇑S	Sg	04 19 51.8	+0.4
	1µm,0.2s						
NRN	Naryn	0.97	242	⇑iP	Pg	04 19 44.9	-0.5
	baz=44						
NRN				⇑iS	Sg	04 19 57.9	-0.1
	baz=44						
BOOM	Boomskoye usch	1.08	304	⇓iP	Pg	04 19 46.7	-0.8
	baz=6.0						
BOOM				⇓iS	Sg	04 20 01.4	-0.1
	baz=6.0						
PRZ	Przheval'sk	1.11	57	⇑iP	Pg	04 19 48.0	-0.1
	baz=56						
PRZ				⇑iS	Sb	04 20 03.2	+0.2
	baz=56						
TNSS	Tian-Shan	1.16	353	⇑iP	Pg	04 19 48.7	-0.4
	293nm,0.3s						
TNSS				⇓iS	Sb	04 20 04.4	-0.2
	325nm,0.3s						
IZV	Izvestkoviy	1.21	341	P	Pb	04 19 49.5	-0.6
	94nm,0.1s						
IZV				S	Sg	04 20 06.0	+0.1
	519nm,0.1s						
IZV	Izvestkoviy	1.21	341	⇓iP	Pb	04 19 49.5	-0.6
	217nm,0.3s						
IZV				⇑iS	Sn	04 20 06.4	-0.4
	519nm,0.1s						
MDOK	Medeo	1.28	357	Pg	Pn	04 19 50.6	-0.5
	131nm,0.2s						
MDOK				Lg	Lg	04 20 07.9	
	169nm,0.2s						
MDOK	Medeo	1.28	357	⇑iP	Pn	04 19 50.6	-0.5
	131nm,0.4s						
MDOK				⇓iS	Sn	04 20 08.1	-0.4
	222nm,0.5s						
AAA	Alma-Ata	1.33	353	P	Pb	04 19 52.0	0.0
	855nm,0.1s						
AAA				S	Sg	04 20 10.3	+0.6
	318nm,0.2s						
AAA	Alma-Ata	1.33	353	⇓iP	Pg	04 19 52.1	-0.2
	844nm,0.2s						
AAA				⇑iS	Sg	04 20 10.3	+0.6
	372nm,0.3s						
KNDC	Almaty	1.34	354	⇑Pg	Pg	04 19 52.3	-0.1
	139nm,0.3s						
KNDC				⇑S	Sg	04 20 10.5	+0.7
	387nm,0.3s						
KOTS	Kotyrbulak	1.35	359	P	Pn	04 19 51.9	-0.1
	510nm,0.2s						
KOTS				S	Sg	04 20 10.1	0.0
	309nm,0.3s						
KOTS	Kotyrbulak	1.35	359	⇓iP	Pn	04 19 52.0	-0.1
	510nm,0.2s						
KOTS				⇑iS	Sg	04 20 10.3	+0.1
	536nm,0.4s						
MTBS	Maitube	1.35	337	P	Pn	04 19 51.8	-0.2
	118nm,0.2s						
MTBS				S	Sg	04 20 10.1	-0.1
	255nm,0.1s						
MTBS	Maitube	1.35	337	⇓iP	Pn	04 19 51.9	-0.1
	118nm,0.2s						
MTBS				⇑iS	Sg	04 20 10.0	-0.3
	260nm,0.2s						
KZA	Kyzart	1.42	278	⇓iP	Pn	04 19 53.1	-0.1
	baz=80						
KZA				⇓iS	Sg	04 20 12.4	-0.2
	baz=80						
KZA	Kyzart	1.42	278	⇑P	Pn	04 19 53.1	-0.1
	69nm,0.3s,SNR=30						
KZA				⇑S	Sg	04 20 13.5	+0.8
	38nm,0.1s						
KST	Kastek	1.45	323	P	Pb	04 19 53.6	-0.5
	72nm,0.2s						
KST				S	Sg	04 20 12.9	-0.5
	185nm,0.2s						
KST	Kastek	1.45	323	⇓iP	Pb	04 19 53.5	-0.5
	65nm,0.2s						
KST				⇓iS	Sg	04 20 13.1	-0.3
	197nm,0.4s						
SATY	Saty	1.50	38	P	Pn	04 19 54.2	+0.1
	162nm,0.6s						
SATY				S	Sb	04 20 14.3	+0.1
	260nm,0.1s						
SATY	Saty	1.50	38	⇓iP	Pn	04 19 54.2	+0.1
	162nm,0.5s						
SATY				⇑eS	Sg	04 20 14.6	-0.4
	320nm,0.2s						
TKM2	Tokmak 2	1.54	313	⇓P	Pb	04 19 55.2	-0.4
	12nm,0.3s						
TKM2				⇑S	Sb	04 20 15.4	-0.1
	84nm,0.2s						
TKM2	Tokmak 2	1.54	313	⇓iP	Pb	04 19 55.3	-0.4
	baz=14						
TKM2				⇓iS	Sg	04 20 16.3	-0.1
	baz=14						
TKM2	Tokmak 2	1.54	313	⇓P	Pb	04 19 55.3	-0.4
	36nm,0.1s,SNR=44						
TKM2				⇓S	Sg	04 20 16.5	+0.1
	382nm,0.1s						
KURS	Kuram	1.77	25	P	Pb	04 19 59.1	-0.5
	29nm,0.5s						
KURS				S	Sb	04 20 22.4	+0.5
	56nm,0.3s						
KURS	Kuram	1.77	25	⇑iP	Pb	04 19 59.0	-0.5
	31nm,0.5s						
KURS				⇓iS	Sb	04 20 22.5	+0.6
	56nm,0.5s						
KBK	Karagaybulak	1.80	296	⇑iP	Pb	04 20 00.1	0.0
	baz=97						
KBK				⇑iS	Sg	04 20 24.2	-0.5
	baz=97						
KBK	Karagaybulak	1.80	296	⇓P	Pb	04 20 00.1	0.0
	28nm,0.2s,SNR=13						
KBK				⇓S	Sg	04 20 24.4	-0.3
	138nm,0.2s						
KTBS	Karatobe	1.86	350	P	Pb	04 20 00.6	-0.4
	33nm,0.1s						
KTBS				S	Sb	04 20 25.0	+0.7
	551nm,0.3s						
KTBS	Karatobe	1.86	350	eP	Pb	04 20 00.6	-0.4
	33nm,0.1s						
KTBS				eS	Sg	04 20 25.3	-1.2
	551nm,0.3s						
UZB	Uzynbulak	1.88	47	P	Pb	04 20 00.4	-1.0
	24nm,0.3s						
UZB				S	Sb	04 20 25.1	0.0
	124nm,0.3s						
UZB	Uzynbulak	1.88	47	eP	Pb	04 20 00.4	-1.0
	24nm,0.3s						
UZB				eS	Sb	04 20 25.1	0.0
	140nm,0.3s						
KPKS	Kokpek	1.95	35	eP	Pb	04 20 02.0	-0.6
	114nm,0.1s						
KPKS				eS	Sb	04 20 27.3	+0.4
	284nm,0.2s						
CHKK	Chushkaly	1.97	357	Pg	Pb	04 20 02.8	-0.1
	26nm,0.1s						
CHKK				Lg	Lg	04 20 28.8	
	346nm,0.3s						
CHKK	Chushkaly	1.97	357	eP	Pb	04 20 02.8	-0.1
	26nm,0.1s						
CHKK				eS	Sg	04 20 28.8	-1.4
	346nm,0.3s						
UCH	Uchtor	1.99	281	⇓iP	Pb	04 20 03.0	-0.4
	baz=82						
UCH				⇓iS	Sg	04 20 29.6	-1.1
	baz=82						
UCH	Uchtor	1.99	281	⇓P	Pb	04 20 03.5	0.0
	18nm,0.4s,SNR=40						
FRU1	Bishkek	2.08	297	⇑iP	Pb	04 20 04.0	-0.8
	baz=98						
FRU1				⇑iS	Sb	04 20 31.1	+0.4
	baz=98						
CHMS	Chumysh	2.09	303	⇑iP	Pb	04 20 04.3	-0.6
	baz=4.0						
CHMS				⇑iS	Sb	04 20 31.8	+0.8
	baz=4.0						
CHMS	Chumysh	2.09	303	⇑P	Pb	04 20 04.4	-0.5
	29nm,0.3s,SNR=15						
KUU	Kurty	2.09	344	Pg	Pb	04 20 04.5	-0.4
	23nm,0.2s						
KUU				Lg	Lg	04 20 31.8	
	206nm,0.4s						
KUU	Kurty	2.09	344	eP	Pb	04 20 04.5	-0.4
	23nm,0.2s						
KUU				eS	Sb	04 20 31.8	+0.7
	306nm,0.3s						
AAK	Ala-Archa	2.10	292	⇓Pn	Pb	04 20 05.3	+0.1
	24nm,0.4s						
AAK				⇑Sn	Sg	04 20 32.8	-1.6
	60nm,0.5s						
AAK	Ala-Archa	2.10	292	⇓iP	Pb	04 20 04.5	-0.7
	baz=93						
AAK				⇓iS	Sb	04 20 32.1	+0.6
	baz=93						
AAK	Ala-Archa	2.10	292	⇑P	Pb	04 20 04.8	-0.4
	51nm,0.4s,SNR=11						
ARLS	Aral	2.10	270	⇓iP	Pb	04 20 04.0	-1.3
	baz=71						
ARLS				⇓iS	Sb	04 20 31.1	-0.5
	baz=71						
PDGK	Podgornoye	2.25	49	Pg	Pb	04 20 06.4	-1.4
	11nm,0.3s						
PDGK				Lg	Lg	04 20 35.1	
	77nm,0.4s						
PDGK	Podgornoye	2.25	49	⇑Pn	Pb	04 20 06.1	-1.7
	8.4nm,0.3s						
PDGK				⇓Sn	Sb	04 20 35.8	-0.1
	120nm,0.6s						
PDGK	Podgornoye	2.25	49	⇑iP	Pb	04 20 06.4	-1.4
	baz=49						
PDGK				⇑iS	Sb	04 20 36.5	+0.6
	baz=49						
MNBS	Baschi	2.38	22	Pg	Pb	04 20 10.0	+0.1
	25nm,0.1s						
MNBS	Baschi	2.38	22	eP	Pb	04 20 10.0	+0.1
	25nm,0.1s						
MNBS				eS	Sg	04 20 41.2	-2.0
	238nm,0.4s						
USP	Ospenovka	2.39	306	⇑iP	Pb	04 20 08.5	-1.6
	baz=7.0						
USP				⇑iS	Sb	04 20 39.1	-0.6
	baz=7.0						
USP	Ospenovka	2.39	306	⇓P	Pb	04 20 09.1	-0.9
	11nm,0.2s,SNR=20						
SGDS	Sogindy	2.42	311	Pg	Pb	04 20 10.2	-0.4
	20nm,0.2s						
SGDS				Lg	Lg	04 20 41.8	
	140nm,0.3s						
EKS2	Erkin-Say	2.61	288	⇑iP	Pb	04 20 11.6	-2.3
	baz=89						
EKS2				⇑iS	Sb	04 20 44.2	-2.0
	baz=89						
KTMS	Ketmen	2.83	56	Pg	Pb	04 20 17.2	-0.5
	8.9nm,0.2s						
KTMS				Lg	Lg	04 20 53.5	
	68nm,0.6s						
KTMS	Ketmen	2.83	56	eP	Pb	04 20 17.2	-0.5
	8.9nm,0.2s						
KTMS				eS	Sb	04 20 53.5	+0.9
	68nm,0.6s						
MRKS	Merke	3.03	288	Pg	Pb	04 20 22.1	+1.1
	9.7nm,0.3s						
MRKS				Lg	Lg	04 21 02.0	
	94nm,0.3s						
MRKS	Merke	3.03	288	eP	Pb	04 20 22.1	+1.1
	9.7nm,0.3s						
MRKS				eS	Sg	04 21 02.0	-2.1
	94nm,0.3s						
DJR	Jarkent	3.12	38	eP	Pb	04 20 22.5	0.0
	15nm,0.5s						
DJR				eS	Sb	04 21 02.2	+1.5
	41nm,0.4s						
ARSB	Arslanbob	3.17	261	⇑iP	Pn	04 20 18.6	+1.6
	baz=62						
ARSB				⇑iS	Sn	04 20 57.4	+2.3
	baz=62						
KAPS	Kapalarasan	3.76	25	Lg	Lg	04 21 21.9	
	14nm,0.4s						
KAPS	Kapalarasan	3.76	25	eP	Pb	04 20 33.8	+0.4
	11nm,0.3s						
KAPS				eS	Sb	04 21 21.9	+2.8
	14nm,0.4s						
BTLS	Baital	3.88	325	Pg	Pb	04 20 36.7	+1.4
	2.9nm,0.2s						
BTLS				Lg	Lg	04 21 26.9	
	20nm,0.5s						
BTLS	Baital	3.88	325	eP	Pb	04 20 36.7	+1.4
	2.9nm,0.2s						
BTLS				eS	Sg	04 21 26.9	-4.3
	42nm,0.4s						
KK31	Karatay Array	5.05	286	Pn	Pb	04 20 58.5	+3.1
	1.2nm,0.5s,baz=97,slow=16,SNR=13						
KK31				⇓Lg	Lg	04 22 03.3	
	14nm,0.6s,baz=100,slow=28						
MK31	Makanchi Array	6.14	35	⇓Pn	Pn	04 21 05.1	+7.4
	1.4nm,0.6s,baz=215,slow=16,SNR=8.8						
MK31				⇑Lg	Lg	04 22 35.1	
	3.6nm,0.7s,baz=219,slow=28						
OTUK	Ortayu	7.21	334	⇑Lg	Lg	04 23 09.4	
	16nm,0.9s						
KURBB	Kurchatov Arra	8.79	6	⇑Lg	Lg	04 24 02.0	
	7.9nm,0.6s						

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*SOME **18** 04:37:37.7, 39°.85N×74°.30E, h15^{km}*
*KRNET **18** 04:37:39.2±0.1, 39°.98N×74°.42E, h18^{km}, mb3.1*
*NNC **18** 04:37:44.4±4.6, 40°.19N×74°.36E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=37.8km s-min=35.1km az=30.0*
ISC 18 04:37:37.1±1.6**, 39°.93N**±0°.06×**74°.50E**±0°.04**, h4**^{km}±17^{km}**, n35,** σ1^{s}.25/58**, 18C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	1.81	321	⇓iP	Pg	04 38 11.8	0.0
	baz=21						
ARSB				⇓iS	Sg	04 38 35.4	+0.1
	baz=21						
NRN	Naryn	1.89	37	⇓iP	Pg	04 38 13.9	+0.6
	baz=39						
NRN				⇓iS	Sg	04 38 39.6	+1.8
	baz=39						
ARLS	Aral	1.94	356	⇓eP	Pg	04 38 14.3	+0.1
	baz=58						
ARLS				⇓iS	Sg	04 38 40.3	+1.0
	baz=58						
DRK	Karamyk	2.13	259	⇓iP	Pg	04 38 17.9	0.0
	baz=57						
DRK				⇓iS	Sg	04 38 45.4	-0.1
	baz=57						
KZA	Kyzart	2.22	15	⇓iP	Pg	04 38 20.0	+0.3
	baz=17						
KZA				⇓iS	Sg	04 38 51.7	+3.2
	baz=17						
KZA	Kyzart	2.22	15	P	Pg	04 38 20.0	+0.3
	SNR=12						
UCH	Uchtor	2.30	0	⇓iP	Pg	04 38 21.4	+0.2
	baz=2.0						
UCH				⇓iS	Sg	04 38 54.0	+3.0
	baz=2.0						
UCH	Uchtor	2.30	0	P	Pg	04 38 21.6	+0.4
	SNR=32						
ULHL	Ulahol	2.66	29	⇑iP	Pb	04 38 25.8	+0.3
	baz=31						
ULHL				⇑iS	Sg	04 39 00.8	-1.9
	baz=31						
ULHL	Ulahol	2.66	29	P	Pg	04 38 27.8	-0.4
	SNR=15						
AAK	Ala-Archa	2.71	360	⇓Pn	Pg	04 38 27.7	-1.4
	7.5nm,0.5s						
AAK				⇓Sn	Sg	04 39 05.3	+1.2
	14nm,0.9s						
AAK	Ala-Archa	2.71	360	⇑iP	Pg	04 38 27.6	-1.4
	baz=1.0						
AAK				⇑iS	Sg	04 39 03.6	-0.5
	baz=1.0						
AAK	Ala-Archa	2.71	360	P	Pg	04 38 28.5	-0.5
	SNR=12						
KBK	Karagaybulak	2.75	7	⇑iP	Pb	04 38 27.9	+1.0
	baz=8.0						
KBK				⇑iS	Sg	04 39 04.1	-1.3
	baz=8.0						
BOOM	Boomskoye usch	2.78	23	⇑iP	Pb	04 38 26.8	-0.7
	baz=24						
BOOM				⇑iS	Sb	04 39 01.9	0.0
	baz=24						
EKS2	Erkin-Say	2.78	349	⇑iP	Pb	04 38 28.6	+1.1
	baz=50						
EKS2				⇑iS	Sg	04 39 05.5	-1.1
	baz=50						
EKS2	Erkin-Say	2.78	349	P	Pg	04 38 29.4	-1.1
	SNR=5.8						
MRKS	Merke	2.97	342	Pg	Pb	04 38 31.3	+0.7
	6.0nm,0.4s						
MRKS				Lg	Lg	04 39 10.5	
	5.2nm,0.7s						
MRKS	Merke	2.97	342	eP	Pb	04 38 32.1	+1.4
	6.5nm,0.3s						
MRKS				eS	Sg	04 39 11.0	-1.6
	5.2nm,0.7s						
KDJ	Kajisay	2.99	42	⇑iP	Pb	04 38 30.5	-0.6
	baz=44						
KDJ				⇑iS	Sb	04 39 07.3	-0.7
	baz=44						
TKM2	Tokmak 2	3.10	15	⇑Pn	Pb	04 38 31.8	-1.2
	3.6nm,0.3s						
TKM2				⇑Sn	Sg	04 39 15.2	-1.6
	9.6nm,0.7s						
TKM2	Tokmak 2	3.10	15	⇑iP	Pb	04 38 32.3	-0.7
	baz=16						
TKM2				⇑iS	Sb	04 39 12.1	+0.9
	baz=16						
TKM2	Tokmak 2	3.10	15	P	Pg	04 38 35.6	-1.0
	SNR=10						
KST	Kastek	3.30	19	Pg	Pb	04 38 36.9	+0.6
	12nm,0.3s						
KST	Kastek	3.30	19	eP	Pg	04 38 39.1	-1.3
	12nm,0.3s						
KST				eS	Sg	04 39 23.4	+0.2
	15nm,0.7s						
USP	Ospenovka	3.34	0	⇑iP	Pb	04 38 35.5	-1.3
	baz=1.0						
USP				⇑iS	Sb	04 39 18.5	+0.7
	baz=1.0						
USP	Ospenovka	3.34	0	P	Pg	04 38 39.7	-1.3
	SNR=7.0						
IZV	Izvestkoviy	3.49	26	Pg	Pg	04 38 43.0	-1.0
	4.6nm,0.4s						
IZV				Lg	Lg	04 39 29.9	
	8.8nm,0.3s						
IZV	Izvestkoviy	3.49	26	eP	Pg	04 38 44.1	+0.1
	4.3nm,0.5s						
IZV				eS	Sg	04 39 31.9	+2.7
	14nm,0.3s						
SGDS	Sogindy	3.52	2	Pg	Pg	04 38 43.0	-1.6
	3.1nm,0.3s						
SGDS				Lg	Lg	04 39 30.2	
	6.3nm,1.0s						
TNSS	Tian-Shan	3.61	30	eP	Pg	04 38 45.2	-1.1
	5.4nm,0.3s						
TNSS				eS	Sg	04 39 33.8	+0.7
	12nm,0.6s						
MDOK	Medeo	3.76	30	eP	Pg	04 38 48.3	-0.8
	3.2nm,0.3s						
MDOK				eS	Sg	04 39 39.5	+1.7
	5.7nm,0.6s						
KUU	Kurty	4.19	19	Pg	Pg	04 38 55.7	-1.8
	1.8nm,0.2s						
KUU				Lg	Lg	04 39 51.7	
	6.0nm,0.6s						
KUU	Kurty	4.19	19	eP	Pg	04 38 55.6	-1.8
	2.1nm,0.3s						
KUU				eS	Sg	04 39 51.7	-0.1
	4.4nm,0.7s						
SATY	Saty	4.29	42	eP	Pg	04 38 58.3	-1.0
	3.6nm,0.5s						
SATY				eS	Sg	04 39 56.1	+1.2
	4.1nm,0.3s						

UCR 18 04:43:01.5±1.3**, 10°.37N×84°.76W, h102**^{km}±7^{km}**, MW3.6, 2C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE1	Arenal 1	0.10	24	⇑iP	Pn	04 43 15.6	-0.2
CEDE	Laguna Cedeo	0.13	26	eP	Pn	04 43 15.9	0.0
JTS	Las Juntas de	0.21	247	⇑iP	Pn	04 43 15.5	-0.5
JTS				eS	Sn	04 43 26.4	-0.6
MESS	Mesas	0.56	311	eP	Pn	04 43 18.1	0.0
MESS				eS	Sn	04 43 32.9	+2.4
BUEV	Buena Vista	0.77	304	eP	Pn	04 43 19.7	-0.2
BUEV				eS	Sn	04 43 33.4	-0.2
GB1A	Borinquen Arri	0.77	305	eP	Pn	04 43 19.9	0.0
GB1A				eS	Sn	04 43 33.9	+0.2
LCR2	La Lucha 2	0.97	130	eP	Pn	04 43 22.2	+0.1
LCR2				eS	Sn	04 43 37.7	+0.2
DRK0	Durika	1.85	126	eP	Pn	04 43 32.8	+0.3
DRK0				eS	Sn	04 43 55.7	-0.4

UCR 18 04:44:33.7±0.8**, 11°.52N×86°.14W, h9**^{km}±60^{km}**, MW3.7, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	Buena Vista	1.02	135	eP	Pg	04 44 52.1	-1.2
BUEV				eS	Sg	04 45 06.4	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MESS	**Mesas**	**1.21**	**130**	*e*P	Pb	04 44 55.8	-1.0
CUI	**Cuipilapa**	**1.29**	**132**	*e*P	Pn	04 44 56.1	-1.7
CUI				*e*S	Sb	04 45 13.6	-1.1
CRIN	**San Cristobal**	**1.47**	**323**	*e*P	Sn	04 45 15.4	-4.4

IDC ***18*** *04:55:24.5±1.0,26°.76N×57°.85E,h0^{km},mb3.7/18, mb1 3.8/20,mb1mx3.7/57,mbtmp3.7/20,ML3.8/2,MS3.4/15, Ms1 3.4/15,ms1mx3.2/35,Error ellipse: s-maj=22.1km s-min=16.8km az=163.0*

DSN ***18*** *04:55:25.5±1.5,26°.27N×58°.27E,h10^{km},ML4.2/9,Error ellipse: s-maj=18.1km s-min=10.7km az=4.0*

THR ***18*** *04:55:27.4,26°.79N×57°.88E,h15^{km},ML4.0*

NEIC ***18*** *04:55:27.4±0.0,26°.79N×57°.88E,h15^{km},mb4.0/16, ML4.0(THR),MN4.3(TEH),After THR.*

TEH ***18*** *04:55:27.2,26°.71N×57°.87E,h18^{km},ML4.2*

ISCJB ***18*** *04:55:29.2±0.3,26°.64N±0°.03×57°.91E±0°.04,h60^{km}±5^{km}, mb3.8/23,Error ellipse: s-maj=5.9km s-min=4.4km az=12.5*

OMAN ***18*** *04:55:30.7±1.3,26°.58N×58°.30E,h34^{km}±28^{km},ml4.2/15, Error ellipse: s-maj=54.7km s-min=4.6km az=27.0*

ISC 18 04:55:29.9±1.0,**26°.65N**±0°.03×**57°.90E**±0°.04,**h46**^{km}±11^{km}, **n117,**σ**2ˢ.22**/115,**mb3.7**/23,**MS3.3**/13,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	**Jask**	**1.02**	**187**	*e*Pg	**Pn**	**04 55 48.7**	**+0.9**
KHNJ	**Kahnooj**	**1.30**	**352**	*e*Pg	**Pn**	**04 55 47.7**	**-4.0**
NIAN	**Nian**	**1.31**	**314**	*e*Pn	**Pn**	**04 55 51.8**	**0.0**
NIAN				*e*Sg	**Sn**	**04 56 11.0**	**+2.8**
NIAN	**Nian**	**1.31**	**314**	*e*Pg	**Pn**	**04 55 51.8**	**0.0**
NIAN				IAMB	IAmb	04 56 16.4	
	comp=E,0.0nm,0.4s						
BANOM	**Banah**	**1.61**	**244**	*e*P	**Pn**	**04 55 55.7**	**-0.2**
	SNR=73						
BANOM	**Banah**	**1.61**	**244**	P	**Pn**	**04 55 59.2**	**+3.2**
	SNR=73						
BANOM				S	**Sn**	**04 56 22.5**	**+7.0**
SHME	**Shamm**	**1.69**	**250**	*e*P	**Pn**	**04 55 57.5**	**+0.5**
	SNR=29						
SHME				S	**Sn**	**04 56 24.5**	**+7.0**
SHME	**Shamm**	**1.69**	**250**	*e*Pn	**Pn**	**04 55 57.5**	**+0.5**
GENO	**Geno**	**1.71**	**296**	*e*Pn	**Pn**	**04 55 57.6**	**+0.1**
GENO	**Geno**	**1.71**	**296**	*e*Pn	**Pn**	**04 55 57.8**	**+0.3**
GENO				*e*Sg	**Sn**	**04 56 23.5**	**+5.2**
GENO				IAMB	IAmb	04 56 33.7	
	comp=Z,0.0nm,0.4s						
BNDS	**Bandar-Abbas**	**1.71**	**296**	AML	AML	04 56 28.2	
	comp=N,2μm,0.7s						
MDH	**Madha**	**1.98**	**227**	*e*P	**Pn**	**04 55 59.0**	**-1.9**
	SNR=28						
MDH				S	**Sn**	**04 56 25.2**	**+0.8**
MDH	**Madha**	**1.98**	**227**	P	**Pn**	**04 55 59.1**	**-1.8**
	SNR=37						
MDH	**Madha**	**1.98**	**227**	*e*Pn	**Pn**	**04 55 59.1**	**-1.8**
MSFE	**Esma-Masafi**	**2.03**	**231**	*e*P	**Pn**	**04 55 59.8**	**-1.9**
	SNR=14						
MSFE	**Esma-Masafi**	**2.03**	**231**	*e*Pn	**Pn**	**04 56 00.4**	**-1.3**
UOSS	**Minazif**	**2.29**	**222**	*e*Sn	**Sn**	**04 56 28.4**	**-3.8**
UOSS	**Minazif**	**2.29**	**222**	*e*P	**Pn**	**04 56 03.0**	**-2.2**
	SNR=23						
UOSS	**Minazif**	**2.29**	**222**	*e*Pn	**Pn**	**04 56 03.1**	**-2.1**
HATD	**Hatta, Dubai**	**2.42**	**222**	P	**Pn**	**04 56 06.0**	**-1.0**
HATD	**Hatta, Dubai**	**2.42**	**222**	P	**Pn**	**04 56 11.0**	**+4.0**
	SNR=8.7						
HATD	**Hatta, Dubai**	**2.42**	**222**	*e*Pn	**Pn**	**04 56 05.3**	**-1.7**
CHBR	**Chabahar**	**2.55**	**114**	*e*Pn	**Pn**	**04 56 11.1**	**+2.4**
CHBR	**Chabahar**	**2.55**	**114**	*e*Pn	**Pn**	**04 56 11.1**	**+2.4**
CHBR	**Chabahar**	**2.55**	**114**	Pn	**Pn**	**04 56 11.1**	**+2.4**
ASHO	**Ashiyiah**	**2.57**	**221**	*e*P	**Pn**	**04 56 08.0**	**-1.1**
	SNR=8.5						
ASHO	**Ashiyiah**	**2.57**	**221**	P	**Pn**	**04 56 11.2**	**+2.1**
	SNR=14						
NAZ	**Nazwa, Dubai**	**2.61**	**231**	*e*P	**Pn**	**04 56 09.3**	**-0.3**
	SNR=26						
NAZ	**Nazwa, Dubai**	**2.61**	**231**	P	**Pn**	**04 56 13.0**	**+3.3**
	SNR=26						
FAQ	**Al Faqa, Dubai**	**2.82**	**228**	*e*Pn	**Pn**	**04 56 12.2**	**-0.3**
	SNR=17						
FAQ	**Al Faqa, Dubai**	**2.82**	**228**	P	**Pn**	**04 56 15.0**	**+2.5**
	SNR=6.4						
ASUD	**Al Ashush, Dub**	**3.08**	**230**	*i* Pn	**Pn**	**04 56 14.7**	**-1.3**
	SNR=16						
ASUD	**Al Ashush, Dub**	**3.08**	**230**	P	**Pn**	**04 56 18.5**	**+2.5**
	SNR=16						
HOQ	**Hoqain**	**3.10**	**190**	P	**Pn**	**04 56 16.0**	**-0.4**
	SNR=7.1						
BIDO	**Bidbid**	**3.12**	**176**	P	**Pn**	**04 56 16.2**	**-0.5**
	SNR=10						
NGRK	**Negar Kerman**	**3.15**	**341**	*e*Pn	**Pn**	**04 56 18.3**	**+0.9**
NGRK	**Negar Kerman**	**3.15**	**341**	*e*Pn	**Pn**	**04 56 18.9**	**+1.5**
NGRK				IAMB	IAmb	04 57 12.3	
	comp=Z,0.0nm,0.8s						
CHMN	**Cheshme madani**	**3.21**	**354**	*e*Pn	**Pn**	**04 56 19.4**	**+1.2**
CHMN	**Cheshme madani**	**3.21**	**354**	*e*Pn	**Pn**	**04 56 19.7**	**+1.5**
CHMN				IAMB	IAmb	04 57 22.0	
	comp=N,0.0nm,0.6s						
WSAR	**Wadi Sarin**	**3.46**	**169**	Pn	**Pn**	**04 56 20.0**	**-1.3**
	comp=N,18nm,0.3s,baz=337,slow=5.7,SNR=155						
WSAR				Sn	**Sn**	**04 56 59.0**	**-2.1**
	comp=N,40nm,0.3s,baz=337,slow=17,SNR=15						
WSAR	**Wadi Sarin**	**3.46**	**169**	P	**Pn**	**04 56 21.4**	**+0.1**
	SNR=12						
KRBR	**Kerman**	**3.47**	**343**	*e*Pn	**Pn**	**04 56 21.4**	**-0.2**
KRBR	**Kerman**	**3.47**	**343**	AML	AML	04 57 22.4	
	comp=E,330nm,0.8s						
KRBR	**Kerman**	**3.47**	**343**	Pn	**Pn**	**04 56 21.4**	**-0.2**
TVBK	**TV Kerman**	**3.47**	**343**	*e*Pn	**Pn**	**04 56 23.3**	**+1.6**
TVBK				IAMB	IAmb	04 57 26.2	
	comp=Z,0.0nm,0.6s						
ARQ	**Araqi**	**3.53**	**201**	P	**Pn**	**04 56 26.1**	**+3.9**
	SNR=13						
SMDO	**Samad**	**3.58**	**178**	P	**Pn**	**04 56 24.0**	**+1.0**
	SNR=15						
SMDO				P		04 56 24.0	
	SNR=8.7						
SZD1	**Zahaedan-tmp**	**3.85**	**42**	*e*Pn	**Pn**	**04 56 29.1**	**+2.4**
ZHSF	**Zahedan**	**3.89**	**40**	*e*Pn	**Pn**	**04 56 28.1**	**+0.8**
ZHSF	**Zahedan**	**3.89**	**40**	*e*Pn	**Pn**	**04 56 28.1**	**+0.8**
ZHSF	**Zahedan**	**3.89**	**40**	Pn	**Pn**	**04 56 28.1**	**+0.8**
KHGB	**Koh Gabri**	**3.92**	**342**	*e*Pn	**Pn**	**04 56 29.0**	**+1.3**
KHGB				IAMB	IAmb	04 57 38.7	
	comp=Z,0.0nm,0.6s						
BSY	**Bisya**	**3.94**	**189**	P	**Pn**	**04 56 30.0**	**+2.0**
	SNR=31						
BSY				S	**Sn**	**04 57 18.1**	**+5.1**
WBK	**Wadi Bani Khal**	**4.14**	**166**	P	**Pn**	**04 56 32.6**	**+2.0**
	SNR=7.0						
GHIR	**Ghir-Karzin**	**4.66**	**292**	*e*Pn	**Pn**	**04 56 38.9**	**+1.0**
GHIR	**Ghir-Karzin**	**4.66**	**292**	*e*Pn	**Pn**	**04 56 38.9**	**+1.0**
GHIR	**Ghir-Karzin**	**4.66**	**292**	Pn	**Pn**	**04 56 38.9**	**+1.0**
BSRN	**Basiran**	**5.40**	**11**	*e*Pn	**Pn**	**04 56 47.4**	**-0.7**
BSRN	**Basiran**	**5.40**	**11**	Pn	**Pn**	**04 56 47.4**	**-0.7**
IKOO	**Kooshah**	**5.83**	**9**	*e*Pn	**Pn**	**04 56 53.7**	**-0.3**
YZKH	**Yazd**	**6.40**	**334**	*e*Pn	**Pn**	**04 57 01.5**	**-0.2**
YZKH	**Yazd**	**6.40**	**334**	Pn	**Pn**	**04 57 01.5**	**-0.2**
IRAM	**Ramesheh**	**7.05**	**318**	*e*Pn	**Pn**	**04 57 12.5**	**+1.8**
GEYT	**Alibeck**	**11.25**	**1**	Pn	**Pn**	**04 58 10.7**	**+2.7**
	baz=176,slow=8.7,SNR=2.2						
GEYT				LR	LR	05 03 11.0	
	comp=Z,192nm,18.8s,baz=180,slow=42						
RAYN	**Ar Rayn**	**11.66**	**257**	*e*Pn	**Pn**	**04 58 10.8**	**-3.0**
RAYN				*e*Sn	**Sn**	**05 00 14.3**	**-8.3**
NIL	**Nilore**	**14.99**	**59**	*e*Pn	**Pn**	**04 58 59.7**	**+0.9**
CHGR	**Chuyangaron**	**15.25**	**36**	*e*Pn	**Pn**	**04 58 56.6**	**-5.6**
	comp=Z,5.7nm,0.8s						
GAR	**Garm**	**16.12**	**37**	*e*Pn	**Pn**	**04 59 10.8**	**-2.6**
	comp=Z,7.1nm,0.7s						
BTK	**Batken**	**17.15**	**36**	*e*Pn	**Pn**	**04 59 24.1**	**-2.2**
	comp=Z,6.0nm,0.6s						
GNI	**Garni**	**17.35**	**324**	LR	LR	05 07 13.2	
	comp=Z,134nm,18.4s,baz=116,slow=41						
ASF	**Jabal al Asfar**	**19.10**	**292**	P	**P**	**04 59 49.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=51,slow=6.5,SNR=2.9						
KK31	**Karatay Array**	**19.36**	**29**	*e*P	**P**	**04 59 51.6**	**0.0**
	comp=Z,2.6nm,0.8s						
KKAR	**Karatay Array**	**19.36**	**29**	*e*P	**P**	**04 59 51.6**	**0.0**
	comp=Z,2.6nm,0.8s						
EIL	**Elat**	**20.45**	**284**	P	Pn	05 00 04.9	-1.1
	comp=Z,9.2nm,0.7s,baz=50,slow=7.6,SNR=5.9						
EIL				LR	LR	05 08 42.3	
	comp=Z,68nm,18.6s,baz=324,slow=39						
MMAI	**Mount Meron Ar**	**20.50**	**293**	LR	LR	05 09 46.1	
	comp=Z,85nm,18.2s,baz=125,slow=42						
AAK	**Ala-Archa**	**20.93**	**36**	P	**P**	**05 00 08.3**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=211,slow=8.1,SNR=4.5						
AAK				LR	LR	05 09 18.8	
	comp=Z,63nm,18.0s,baz=214,slow=40						
AAK	**Ala-Archa**	**20.93**	**36**	*e*P	**P**	**05 00 08.4**	**-0.4**
	comp=Z,5.3nm,0.8s						
NRN	**Naryn**	**20.97**	**41**	*e*P	**P**	**05 00 04.7**	**-4.6**
	comp=Z,8.0nm,1.1s						
BOOM	**Boomskoye usch**	**21.61**	**38**	*e*P	**P**	**05 00 15.5**	**-0.7**
	comp=Z,7.8nm,0.8s						
KDJ	**Kajisay**	**22.09**	**41**	*e*P	**P**	**05 00 21.4**	**+0.1**
	comp=Z,14nm,1.1s						
ABKAR	**Akbulak array**	**22.62**	**3**	*e*P	**P**	**05 00 27.2**	**+0.6**
	comp=Z,4.4nm,0.9s						
AKTO	**Aktyubinsk**	**23.75**	**0**	P	**P**	**05 00 36.6**	**-1.1**
	comp=Z,2.0nm,0.5s,baz=144,slow=10,SNR=4.4						
AKTO				LR	LR	05 10 28.2	
	comp=Z,100nm,21.0s,baz=169,slow=38						
BR101	**Keskin Array S**	**24.04**	**309**	*e*P	**P**	**05 00 40.2**	**-0.5**
BR131	**Keskin Array S**	**24.04**	**309**	*e*P	**P**	**05 00 39.9**	**-0.8**
	comp=Z,2.8nm,0.8s						
BRTR	**Keskin Array B**	**24.04**	**309**	P	**P**	**05 00 40.2**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=120,slow=9.5,SNR=2.7						
BRTR				LR	LR	05 12 11.1	
	comp=Z,88nm,18.2s,baz=102,slow=42						
MK32	**Makanchi Array**	**27.84**	**37**	*e*P	**P**	**05 01 14.3**	**-0.6**
MKAR	**Makanchi Array**	**27.84**	**37**	P	**P**	**05 01 14.3**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=242,slow=7.4,SNR=3.9						
MKAR				LR	LR	05 12 44.3	
	comp=Z,53nm,19.1s,baz=224,slow=37						
BVAR	**Borovoye Array**	**27.95**	**16**	P	**P**	**05 01 14.7**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=189,slow=8.5,SNR=3.4						
BALB	**Balikesir**	**28.14**	**305**	*e*P	**P**	**05 01 14.0**	**-3.5**
	comp=Z,112nm,1.4s						
KURBB	**Kurchatov Arra**	**28.66**	**28**	P	**P**	**05 01 22.7**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=220,slow=8.5,SNR=3.6						
AKASG	**Malin Array Be**	**32.48**	**325**	P	**P**	**05 01 55.1**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=131,slow=8.3,SNR=2.5						
AKBB	**Malin Array Si**	**32.48**	**325**	*e*P	**P**	**05 01 55.1**	**-0.7**
	comp=Z,4.4nm,1.0s						
ZAA0	**Zalesovo Array**	**33.74**	**29**	*e*P	**P**	**05 02 05.9**	**-0.8**
	comp=Z,4.0nm,1.2s						
ZALV	**Zalesovo Beam**	**33.74**	**29**	P	**P**	**05 02 07.1**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=245,slow=9.6,SNR=4.9						
ZAA1	**Zalesovo Array**	**33.74**	**29**	*e*P	**P**	**05 02 07.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**38.64**	**93**	LR	LR	05 20 26.0	
	comp=Z,65nm,20.1s,baz=222,slow=39						
GEC2	**GERESS Array S**	**40.64**	**315**	*e*P	**P**	**05 03 05.1**	**-0.4**
	comp=Z,1.7nm,1.0s						
GERES	**GERESS Array B**	**40.64**	**315**	P	**P**	**05 03 05.1**	**-0.4**
	comp=Z,0.3nm,0.2s,baz=103,slow=4.4,SNR=3.5						
KHC	**Kasperske Hory**	**40.80**	**315**	*e*P	**P**	**05 03 05.8**	**-0.9**
	comp=Z,1.0nm,0.9s						
FIA0	**FINESS Array S**	**40.83**	**337**	*e*P	**P**	**05 03 05.7**	**-1.0**
FINES	**FINESS Array B**	**40.83**	**337**	P	**P**	**05 03 05.7**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=142,slow=7.0,SNR=2.8						
KEST	**Kesra**	**42.15**	**295**	LR	LR	05 24 23.0	
	comp=Z,39nm,19.1s,baz=315,slow=41						
SONA0	**Songino Array**	**43.17**	**48**	*e*P	**P**	**05 03 28.1**	**+1.9**
SONM	**Songino Array**	**43.17**	**48**	P	**P**	**05 03 28.1**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=235,slow=6.8,SNR=2.6						
SONM				LR	LR	05 25 11.6	
	comp=Z,70nm,20.4s,baz=108,slow=41						
NB200	**NORSAR Array S**	**46.48**	**331**	*e*P	**P**	**05 03 52.1**	**-0.1**
NOA	**NORSAR Array B**	**46.48**	**331**	P	**P**	**05 03 52.1**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=115,slow=7.7,SNR=2.3						
NOA				LR	LR	05 27 06.6	
	comp=Z,11nm,18.3s,baz=120,slow=41						
ARA0	**ARCESS Array S**	**46.89**	**345**	*e*P	**P**	**05 03 55.4**	**+0.1**
ARCES	**ARCESS Array B**	**46.89**	**345**	P	**P**	**05 03 55.4**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=137,slow=9.2,SNR=5.0						
ESDC	**Sonseca Array**	**52.45**	**301**	P	**P**	**05 04 39.5**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=70,slow=7.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**54.15**	**267**	P	**P**	**05 04 50.8**	**0.0**
	comp=Z,0.7nm,0.6s,baz=69,slow=7.6,SNR=14						
TOA1	**Torodi Ar. Sit**	**54.15**	**267**	*e*P	**P**	**05 04 50.8**	**0.0**
KSRS	**Korea Array**	**59.10**	**61**	LR	LR	05 34 26.0	
	comp=Z,37nm,19.1s,baz=236,slow=40						
BOSA	**Boshof**	**63.26**	**212**	LR	LR	05 36 12.0	
	comp=Z,36nm,19.5s,baz=36,slow=39						
PETK	**Petropavlovsk-**	**74.68**	**38**	LR	LR	05 41 08.1	
	comp=Z,28nm,18.5s,baz=277,slow=37						
ILAR	**Eielson Array**	**86.85**	**10**	P	**P**	**05 08 10.2**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=316,slow=3.8,SNR=2.9						
WR1	**Warramunga Arr**	**87.35**	**114**	*e*P	**P**	**05 08 14.7**	**+2.3**
WRA	**Warramunga Arr**	**87.35**	**114**	P	**P**	**05 08 14.7**	**+2.3**
	comp=Z,1.1nm,0.9s,baz=282,slow=5.4,SNR=3.2						

IDC ***18*** *05:00:46.5±3.6,52°.08N×159°.45E,h0^{km},mb3.6/3, mb1 4.1/3,mb1mx3.4/41,mbtmp3.6/3,Error ellipse: s-maj=98.1km s-min=27.0km az=22.0*

KRSC ***18*** *05:00:53.1±1.1,52°.23N×158°.55E,h101^{km}±10^{km},ML3.8*

ISCJB ***18*** *05:00:54.3±0.5,52°.25N±0°.04×158°.49E±0°.09, h101^{km}±4^{km},mb3.6/3,Error ellipse: s-maj=10.2km s-min=4.3km az=33.4*

ISC 18 05:00:55.2±0.9,**52°.25N**±0°.05×**158°.53E**±0°.06,**h97**^{km}±6^{km}, **n36,**σ**1ˢ.09**/50,**mb3.7**/3,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.18**	**357**	*e*P	**Pn**	**05 01 08.8**	**0.0**
RUS				*e*S	**Sn**	**05 01 19.3**	**+0.3**
MTVR	**Mutnovka**	**0.31**	**318**	*e*P	**Pn**	**05 01 09.0**	**-0.6**
MTVR				*e*S	**Sn**	**05 01 20.3**	**0.0**
ASAK	**Asacha**	**0.41**	**289**	*e*P	**Pn**	**05 01 09.7**	**-0.3**
ASAK				*e*S	**Sn**	**05 01 21.0**	**-0.1**
KDTR	**Khodutka, Kamc**	**0.53**	**212**	*e*P	**Pn**	**05 01 10.3**	**-0.4**
KDTR				*e*S	**Sn**	**05 01 22.1**	**-0.2**
KRMR	**Karymshinskiy**	**0.63**	**337**	*i* P	**Pn**	**05 01 10.9**	**-0.7**
KRMR				*e*S	**Sn**	**05 01 23.3**	**-0.5**
PET	**Petropavlovsk**	**0.78**	**6**	*i* P	**Pn**	**05 01 12.7**	**-0.2**
DALK	**Dalny**	**0.79**	**10**	*e*P	**Pn**	**05 01 13.0**	**-0.1**
DALK				*e*S	**Sn**	**05 01 26.2**	**-0.3**
UGLR	**Uglovaya**	**0.97**	**11**	*e*P	**Pn**	**05 01 15.6**	**+0.5**
UGLR				*e*S	**Sn**	**05 01 31.1**	**+1.0**
PETK	**Petropavlovsk-**	**0.99**	**330**	Pn	**Pn**	**05 01 14.4**	**-0.8**
	24nm,0.3s,baz=131,slow=13,SNR=285						
PETK				Sn	**Sn**	**05 01 29.6**	**-0.8**
	25nm,0.3s,baz=116,slow=36,SNR=29						
PETK				LR	LR	05 02 06.6	
	comp=Z,28nm,19.3s,baz=180,slow=54						
AVH	**Avacha**	**1.02**	**7**	*e*P	**Pn**	**05 01 16.1**	**+0.5**
AVH				*e*S	**Sn**	**05 01 32.6**	**+1.6**
SMAR	**Somma**	**1.02**	**9**	*e*P	**Pn**	**05 01 15.8**	**0.0**
SMAR				*e*S	**Sn**	**05 01 31.8**	**+0.5**
KOK	**Koryaka**	**1.04**	**4**	*i* P	**Pn**	**05 01 16.4**	**+0.5**
KOK				*e*S	**Sn**	**05 01 32.7**	**+1.2**
NLC	**Nalytchevo**	**1.04**	**28**	*e*P	**Pn**	**05 01 14.9**	**-0.9**
NLC				*e*S	**Sn**	**05 01 30.2**	**-1.1**
SDLR	**Sedlovina**	**1.05**	**12**	*i* P	**Pn**	**05 01 16.0**	**0.0**
SDLR				*e*S	**Sn**	**05 01 32.0**	**+0.4**
KRER	**Koryakskii**	**1.06**	**7**	*e*P	**Pn**	**05 01 16.8**	**+0.6**
KRER				*e*S	**Sn**	**05 01 32.7**	**+0.7**
APC	**Apacha**	**1.07**	**309**	*e*P	**Pn**	**05 01 15.0**	**-1.1**
APC				*e*S	**Sn**	**05 01 30.5**	**-1.3**
KRX	**Arik**	**1.11**	**4**	*e*P	**Pn**	**05 01 16.7**	**0.0**
SPN	**Mys Shipunski**	**1.24**	**47**	*e*P	**Pn**	**05 01 18.8**	**+0.7**
SPN				*e*S	**Sn**	**05 01 36.1**	**+0.7**
PAU	**Pauzhetka**	**1.32**	**234**	*e*P	**Pn**	**05 01 18.7**	**-0.3**
PAU				*e*S	**Sn**	**05 01 36.4**	**-0.7**
GNL	**Ganaly**	**1.49**	**346**	*e*P	**Pn**	**05 01 20.2**	**-1.0**
GNL				*e*S	**Sn**	**05 01 40.0**	**-0.8**
SKR	**Severo-Kuril's**	**2.18**	**225**	*e*P	**Pn**	**05 01 30.0**	**+0.1**
SKR				*e*S	**Sn**	**05 01 55.9**	**-0.5**
ALID	**Alaid**	**2.32**	**234**	*e*P	**Pn**	**05 01 33.1**	**+1.2**
MKZ	**Mys Kozlova**	**3.00**	**38**	*e*S	**Sn**	**05 02 14.7**	**-1.1**
KZV	**Kizimen**	**3.05**	**19**	*e*P	**Pn**	**05 01 42.6**	**+1.0**
TUMR	**Tumrok**	**3.18**	**17**	*e*P	**Pn**	**05 01 44.2**	**+0.9**
KBTR	**Krutoberegovo**	**4.69**	**31**	*e*P	**Pn**	**05 02 04.0**	**+0.4**
BKI	**Bering**	**5.32**	**53**	*e*P	**Pn**	**05 02 11.7**	**-0.3**
BKI				*e*S	**Sn**	**05 03 06.3**	**-5.6**
H11N2	**WAKE ISLAND Hy**	**33.11**	**165**	T	T	05 42 39.7	
	baz=351,slow=76,SNR=29						
H11N3	**WAKE ISLAND Hy**	**33.13**	**165**	T	T	05 42 40.2	
	baz=351,slow=76,SNR=23						
H11N1	**WAKE ISLAND Hy**	**33.13**	**165**	T	T	05 42 39.7	
	baz=351,slow=76,SNR=18						
H11S1	**WAKE ISLAND Hy**	**34.28**	**166**	T	T	05 44 05.5	
	baz=351,slow=76,SNR=9.8						
H11S3	**WAKE ISLAND Hy**	**34.29**	**166**	T	T	05 44 08.4	
	baz=351,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	**34.30**	**166**	T	T	05 44 05.5	
	baz=351,slow=76,SNR=7.3						
NVAR	**Mina Array Bea**	**56.93**	**69**	P	**P**	**05 10 30.6**	**+0.3**
	0.6nm,0.7s,baz=300,slow=6.6,SNR=4.9						
PDAR	**Pinedale Array**	**58.77**	**59**	P	**P**	**05 10 43.8**	**+0.7**
	0.4nm,0.6s,baz=355,slow=3.4,SNR=5.1						
TXAR	**Lajitas Array**	**71.85**	**66**	P	**P**	**05 12 07.9**	**+0.3**
	0.5nm,0.6s,baz=288,slow=4.0,SNR=5.8						

ISCJB ***18*** *05:11:40.4±0.7,57°.5S±0°.1×27°.7W±0°.3,h250^{km},mb3.6/6, Error ellipse: s-maj=26.4km s-min=12.3km az=151.7*

IDC ***18*** *05:11:41.3±9.3,57°.32S×27°.85W,h233^{km}±91^{km},mb3.4/6, mb1 3.5/6,mb1mx3.3/20,mbtmp4.0/6,Error ellipse: s-maj=26.3km s-min=19.3km az=75.0*

ISC 18 05:11:42.3±0.8,**57°.5S**±0°.1×**27°.7W**±0°.2,**h250**^{km}**,n10,** σ**1ˢ.21**/10,**mb3.6**/6,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.62**	**156**	P	**P**	**05 15 07.6**	**-0.9**
VNA3	**Neumayer Olymp**	**15.78**	**158**	P	**P**	**05 15 09.2**	**-1.1**
SNAA	**Sanae**	**17.60**	**154**	P	**P**	**05 15 29.0**	**-1.1**
PLCA	**Paso Flores**	**31.98**	**283**	P	**P**	**05 17 45.5**	**+0.4**
	1.8nm,0.8s,baz=165,slow=12,SNR=5.2						
VNDA	**Vanda**	**45.16**	**183**	P	**P**	**05 19 34.8**	**+1.3**
	0.8nm,0.5s,baz=160,slow=6.6,SNR=13						
SIV	**San Ignacio**	**48.34**	**315**	P	**P**	**05 19 56.8**	**-2.0**
	0.4nm,0.5s,baz=198,slow=20,SNR=5.0						
LPAZ	**La Paz**	**50.95**	**307**	P	**P**	**05 20 19.1**	**-0.1**
	0.7nm,0.3s,baz=87,slow=7.4,SNR=8.8						
DBIC	**Dimbokro**	**66.57**	**25**	P	**P**	**05 22 06.5**	**+1.0**
	6.3nm,1.2s,baz=197,slow=12,SNR=3.7						
TORD	**Torodi Ar. Bea**	**74.43**	**30**	P	**P**	**05 22 52.8**	**0.0**
	1.5nm,0.5s,baz=200,slow=5.7,SNR=18						
ILAR	**Eielson Array**	**150.80**	**310**	PKPbc	**PKiKP**	**05 31 03.9**	**0.0**
	0.5nm,0.5s,baz=115,slow=3.7,SNR=9.4						

IDC 18 05:16:19.8±5.6,**4°.31S**×**148°.96E,h0**^{km}**,mb3.3**/3, **mb1 3.6**/3,**mb1mx3.4**/18,**mbtmp3.4**/3,**Error ellipse: s-maj=174.4km s-min=33.8km az=102.0,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.08**	**221**	P	P	05 21 05.0	-1.0
	1.2nm,0.8s,baz=46,slow=10,SNR=9.0						
ASAR	**Alice Springs**	**24.11**	**216**	P	P	05 21 38.1	+0.6
	0.3nm,0.4s,baz=51,slow=7.8,SNR=4.8						
MKAR	**Makanchi Array**	**77.46**	**320**	P	P	05 28 17.3	+0.1
	0.3nm,0.7s,baz=108,slow=6.5,SNR=2.6						

MEX 18 05:37:08.7±0.6,**16°.32N**×**98°.09W,h15**^{km}±8^{km}**,MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.32**	**340**	*e*P	Pn	05 37 29.4	-3.2
TLIG				*e*S	Sb	05 37 44.8	-5.2
VHO	**Vista Hermosa**	**1.50**	**60**	*e*P	Pn	05 37 30.9	-4.3
VHO				*i* S	Sn	05 37 48.9	-5.7
HUIG	**Huatulco**	**1.98**	**106**	*e*P	Pn	05 37 38.3	-3.5
HUIG				*e*S	Sn	05 38 00.8	-5.5

IDC 18 05:50:45.9±2.6,**15°.42S**×**178°.36W,h0**^{km}**,mb3.7**/3, **mb1 4.0**/3,**mb1mx3.6**/22,**mbtmp3.7**/3,**Error ellipse: s-maj=266.6km s-min=31.3km az=156.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.18**	**257**	P	P	05 59 05.4	+0.5
	0.4nm,0.5s,baz=92,slow=7.6,SNR=5.5						
ASAR	**Alice Springs**	**45.56**	**252**	P	P	05 59 07.8	-0.2
	1.2nm,0.6s,baz=90,slow=8.4,SNR=16						
TXAR	**Lajitas Array**	**84.63**	**58**	P	P	06 03 22.8	+0.9
	0.3nm,0.7s,baz=205,slow=5.5,SNR=4.4						
ARCES	**ARCESS Array B**	**123.89**	**350**	PKP	PKPdf	06 09 43.9	-1.5
	1.6nm,0.8s,baz=332,slow=1.5,SNR=4.1						
BRTR	**Keskin Array B**	**143.03**	**317**	PKP	PKPbc	06 10 20.4	+1.4
	0.7nm,0.8s,baz=48,slow=2.1,SNR=3.3						

NIED ***18*** *06:09:00,37°.30N×141°.90E,h32^{km},Mw3.5 Best double couple: $M_0$2.27000×10^{14} NP1:ϕ_s131.00000°,δ9.00000°, λ-36.00000°. NP2:ϕ_s256.00000°,δ85.00000°, λ-97.00000°.*

JMA 18 06:09:56.9±0.2,**37°.28N**×**141°.87E,h42**^{km}±3^{km}**,M3.9, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.80**	**277**	P	Pn	06 10 11.9	+0.1
JFK				S	Sn	06 10 22.1	-0.4
ONAJ	**Iwakimizuishiy**	**0.87**	**259**	P	Pn	06 10 13.0	+0.2
ONAJ				S	Sn	06 10 24.1	-0.3
JMST	**Minamisoumatoc**	**0.90**	**300**	P	Pn	06 10 13.3	+0.2
JMST				S	Sn	06 10 24.7	-0.2
JMM	**Marumori**	**1.04**	**305**	P	Pn	06 10 15.4	+0.4
JMM				S	Sn	06 10 28.5	+0.2
JFFD	**Fukushimafurud**	**1.06**	**260**	P	Pn	06 10 15.6	+0.3
JFFD				*e*S	Sn	06 10 28.9	0.0
JIKH	**Ishinomakikobu**	**1.08**	**343**	P	Pn	06 10 15.5	0.0
JIKH				S	Sn	06 10 28.7	-0.6
JHO	**Hitachi**	**1.24**	**238**	P	Pn	06 10 17.6	-0.1
JHO				S	Sn	06 10 32.4	-0.8
JIO	**Ouri**	**1.24**	**341**	P	Pn	06 10 18.1	+0.3
JIO				S	Sn	06 10 32.9	-0.4
JFT	**Otama**	**1.24**	**281**	P	Pn	06 10 19.3	+1.5
JFT				S	Sn	06 10 34.6	+1.2
JOU	**Okura**	**1.44**	**319**	P	Pn	06 10 22.0	+1.4
JOU				S	Sn	06 10 40.1	+1.8
JYS	**Shirataka**	**1.71**	**304**	P	Pn	06 10 27.0	+2.8
JYS				*e*S	Sn	06 10 48.5	+3.6
JFY	**Yanaizu**	**1.73**	**275**	S	Sn	06 10 47.9	+2.5
JMK	**Ichinoseki**	**1.75**	**343**	P	Pn	06 10 25.8	+1.1
MAT	**Matsushiro**	**3.03**	**257**	P	Pn	06 10 44.4	+2.1
MAT				S	Sn	06 11 21.3	+4.0

ISCJB ***18*** *06:24:41.7±0.6,38°.35N±0°.07×135°.43E±0°.08,h358^{km}, mb2.7/2,Error ellipse: s-maj=9.8km s-min=8.1km az=12.1*

JMA ***18*** *06:24:41.9±0.4,38°.28N×135°.52E,h374^{km}±4^{km},M3.2*

IDC ***18*** *06:24:41.7±1.3,38°.38N×135°.36E,h357^{km}±25^{km},mb2.6/2, mb1 2.9/5,mb1mx2.7/40,mbtmp3.6/5,Error ellipse: s-maj=51.1km s-min=20.2km az=167.0*

ISC 18 06:24:41.7±1.0,**38°.30N**±0°.09×**135°.48E**±0°.08,**h358**^{km}**,n18,** σ**1ˢ.27**/22,**Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHG	**Hegura jima**	**1.23**	**111**	P	**Pn**	**06 25 31.1**	**+1.9**
JSD	**Sado**	**2.21**	**96**	P	**Pn**	**06 25 36.8**	**+1.6**
MAT	**Matsushiro**	**2.79**	**128**	P	**Pn**	**06 25 41.0**	**+1.1**
MJAR	**Matsushiro Arr**	**2.80**	**128**	P	**Pn**	**06 25 40.8**	**+0.8**
	0.2nm,0.3s,baz=310,slow=10,SNR=23						
JNG	**Nsakai**	**2.82**	**131**	P	**Pn**	**06 25 41.8**	**+1.6**
JHS	**Saijyo**	**3.81**	**211**	P	**Pn**	**06 25 50.5**	**+1.2**
JFT	**Otama**	**3.92**	**100**	P	**Pn**	**06 25 52.4**	**+2.0**
JRG	**Rokugo**	**4.17**	**73**	P	**Pn**	**06 25 54.3**	**+1.5**
JRG				*e*S	**S**	**06 26 51.4**	**+1.1**
JOD2	**Odawara 2**	**4.20**	**135**	P	**Pn**	**06 25 54.2**	**+1.0**
JOD2				S	**S**	**06 26 50.9**	**-0.1**
JMM	**Marumori**	**4.22**	**94**	P	**Pn**	**06 25 54.7**	**+1.4**
JFK	**Kawauchi**	**4.37**	**101**	P	**Pn**	**06 25 55.6**	**+0.6**
JFK				S	**S**	**06 26 53.7**	**-0.6**
JMK	**Ichinoseki**	**4.54**	**80**	P	**Pn**	**06 25 58.2**	**+1.5**
BSO1	**Boso 1**	**5.74**	**128**	P	**Pn**	**06 26 09.2**	**-0.1**
BSO1				S	**S**	**06 27 19.5**	**-0.9**
KSRS	**Korea Array**	**6.04**	**264**	P	**Pn**	**06 26 14.0**	**+0.9**
	0.6nm,0.3s,baz=78,slow=12,SNR=15						
JCH	**Churui**	**7.39**	**52**	P	**P**	**06 26 28.8**	**-1.1**
ASAJ	**Asahikawa**	**7.91**	**40**	P	**Pn**	**06 26 34.5**	**-0.1**
	3.5nm,0.3s,baz=238,slow=13,SNR=7.9						
MKAR	**Makanchi Array**	**39.43**	**300**	P	**P**	**06 31 36.7**	**-1.6**
	0.3nm,0.5s,baz=83,slow=9.6,SNR=3.0						
ILAR	**Eielson Array**	**50.96**	**33**	P	**P**	**06 33 07.9**	**+0.4**
	0.2nm,0.5s,baz=268,slow=6.4,SNR=5.8						

ISCJB ***18*** *06:27:35.3±0.3,38°.40N±0°.02×118°.38W±0°.03,h10^{km},*

Error ellipse: s-maj=3.0km s-min=2.3km az=159.7
ANF 18 06:27:35.2±1.3, 38°.37N×118°.35W, h11^{km}±10^{km}, ML3.1/11, Error ellipse: s-maj=12.4km s-min=6.3km az=126.0
REN 18 06:27:35.0, 38°.37N×118°.34W, h10^{km}, ML2.8
NEIC 18 06:27:35.0±0.0, 38°.37N×118°.34W, h10^{km}, ML2.8(REN), After REN.
ISC 18 06:27:35.0±0.8, 38°.38N±0°.02×118°.33W±0°.02, h10^{km}, n32, σ$0^{s}.79$/50, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NV11	Mina Array Sit	0.15	68	ePg	Pg	06 27 38.8	+0.3
NV11				eSg	Sg	06 27 40.4	-0.5
RYN	Ryan	0.29	330	ePg	Pg	06 27 41.2	+0.2
RYN				eSg	Sg	06 27 44.8	-0.1
KVN	Kaiserville	0.70	15	ePg	Pg	06 27 48.5	-0.1
KVN				eSg	Sg	06 27 58.2	+0.5
MLAC	Mammoth, Mammo	0.84	208	P	Pg	06 27 51.3	+0.1
	baz=28						
MLAC				S	Sb	06 28 02.9	-0.4
	baz=28						
WAKR	Walker	0.88	279	ePg	Pg	06 27 51.5	-0.4
WAKR				eSg	Sg	06 28 02.9	-0.5
OMMB	Old Mammoth Mi	0.93	215	ePg	Pg	06 27 52.5	-0.3
OMMB				eSg	Sg	06 28 04.6	-0.3
YERR	Yerington	0.94	311	ePg	Pg	06 27 52.7	-0.4
YERR				eSg	Sb	06 28 05.9	-0.1
MDPB	Devils Postpil	0.95	219	ePg	Pg	06 27 52.8	-0.4
MDPB				eSg	Sg	06 28 05.1	-0.4
PNTR	Pine Nut	1.22	306	ePn	Pb	06 27 57.7	-0.6
TIN	Tinemaha, Big	1.32	176	P	Pb	06 27 59.9	0.0
	baz=356						
TIN				S	Sg	06 28 17.9	+0.4
	baz=356						
VCNR	Virginia City	1.38	312	ePn	Pn	06 28 00.6	+0.1
PAHR	Pah Rah Range	1.56	329	ePn	Pn	06 28 03.1	+0.1
PAHR				eSn	Sb	06 28 24.6	+0.7
GRAC	Grapevine Rang	1.58	151	P	Pb	06 28 04.1	-0.1
	baz=331						
GRAC				Sb	Sg	06 28 26.0	+0.3
	baz=331						
RUBR	Rubicon Trail	1.58	296	ePn	Pn	06 28 03.6	+0.4
CMB	Columbia Colle	1.65	259	ePn	Pn	06 28 04.2	+0.1
CMB				eSn	Sb	06 28 26.4	0.0
CWC	Cottonwood Cre	1.94	174	P	Pn	06 28 08.5	+0.3
	baz=354						
CWC				Sb	Sg	06 28 36.5	-0.9
	baz=354						
AFDM	Forest Hills D	2.14	286	ePn	Pn	06 28 11.3	+0.5
R11A	Troy Canyon, C	2.16	90	P	Pn	06 28 11.1	-0.1
	baz=271						
R11A				Sb	Sg	06 28 43.3	-1.1
	baz=271						
BEKR	Beckworth	2.17	314	ePn	Pn	06 28 12.1	+0.8
TPNV	Topopah Spring	2.18	130	ePn	Pb	06 28 15.3	+0.7
TPNV	Topopah Spring	2.18	130	P	Pn	06 28 11.4	-0.1
	baz=311						
TPNV				Sb	Sg	06 28 44.0	-1.1
	baz=311						
BMN	Battle Mountai	2.23	22	ePn	Pn	06 28 12.2	+0.1
FURC	Furnace Creek,	2.23	148	Pb	Pb	06 28 15.8	+0.4
	baz=329						
FURC				Sb	Sg	06 28 45.8	-1.0
	baz=329						
MPMC	Manual Prospec	2.41	163	P	Pn	06 28 15.1	+0.4
	baz=344						
MPMC				Sb	Sg	06 28 50.9	-1.4
	baz=344						
VES	Vestal, Richgr	2.60	194	Pb	Pb	06 28 22.1	+0.5
	baz=13						
VES				Sb	Sb	06 28 55.8	+2.1
	baz=13						
ISA	Isabella, Lake	2.71	182	Pb	Pb	06 28 24.6	+1.0
	baz=2.3						
ISA				Sb	Sg	06 28 59.5	-2.5
	baz=2.3						
LRMC	Laurel Mtn Rad	2.94	170	Pb	Pb	06 28 27.6	+0.1
	baz=350						
SHPR	Sheep Range	3.14	125	ePn	Pn	06 28 25.2	+0.6
ELK	Elko	3.37	44	ePn	Pn	06 28 28.2	+0.4
SZCU	Shurtz Canyon	4.22	99	eSn	Sg	06 29 49.4	-1.0
BGU	Big Grassy Mou	4.82	56	eSn	Sg	06 30 07.8	-2.0
MPU	Maple Canyon	5.46	70	eLg	Lg	06 30 27.9	

IDC 18 06:40:09.6±1.4, 5°.43S×133°.69E, h0^{km}, mb3.6/1, mb1 4.0/4, mb1mx3.6/38, mbtmp3.8/4, ML3.7/3, Error ellipse: s-maj=102.2km s-min=25.1km az=71.0
ISC 18 06:40:14.0±1.3, 5°.7S±0°.2×132°.7E±0°.8, h35^{km}, n6, σ$3^{s}.28$/8, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.01	343	Pn	Pn	06 41 27.1	+0.3
	5.3nm,0.3s,baz=170,slow=21,SNR=12						
SIJI				Sn	Sn	06 42 18.9	-4.6
	3.1nm,0.3s,baz=137,slow=19,SNR=2.6						
WRA	Warramunga Arr	14.25	174	Pn	Pn	06 43 33.8	+0.4
	0.2nm,0.3s,baz=3.7,slow=14,SNR=9.0						
WRA				Sn	Sn	06 46 06.0	-4.4
	0.5nm,0.3s,baz=358,slow=25,SNR=3.3						
ASAR	Alice Springs	17.90	176	P	P	06 44 22.6	+1.8
	0.4nm,0.3s,baz=5.8,slow=12,SNR=18						
ASAR				S	Sn	06 47 27.5	-12
	0.1nm,0.3s,baz=358,slow=23,SNR=2.9						
MKAR	Makanchi Array	68.66	325	P	P	06 51 17.0	+3.1
	0.4nm,0.6s,baz=131,slow=7.4,SNR=3.2						
CPUP	Villa Florida	146.71	163	PKPbc	PKPab	06 59 53.9	-0.2
	2.6nm,0.8s,baz=206,slow=3.8,SNR=5.8						
LPAZ	La Paz	149.96	137	PKPbc	PKPbc	07 00 02.3	-0.3
	1.9nm,1.1s,baz=240,slow=20,SNR=4.9						

IDC 18 06:43:34.2±3.6, 10°.74S×165°.78E, h0^{km}, mb4.2/5, mb1 4.4/5, mb1mx3.8/44, mbtmp4.1/5, Error ellipse: s-maj=127.9km s-min=35.4km az=143.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.62	249	P	P	06 49 58.3	-0.9
	1.6nm,0.6s,baz=75,slow=9.9,SNR=3.0						
CMAR	Chiang Mai Arr	72.02	293	P	P	06 55 02.2	+1.7
	1.0nm,0.3s,baz=136,slow=5.0,SNR=6.3						
ILAR	Eielson Array	83.22	19	P	P	06 56 02.0	0.0
	0.5nm,0.5s,baz=241,slow=5.1,SNR=13						
MKAR	Makanchi Array	93.32	317	P	P	06 56 50.1	-1.0
	0.9nm,0.7s,baz=90,slow=5.6,SNR=5.4						
ZALV	Zalesovo Beam	93.33	324	P	P	06 56 50.3	-0.6
	0.9nm,0.5s,baz=125,slow=9.0,SNR=3.2						

MAN 18 06:52:00.4, 12°.48N×124°.82E, h24^{km}, MS2.2, 2C, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	Catarman	0.15	282	eP	Pn	06 52 07.2	-0.1
CNP				eS	Sb	06 52 12.9	+4.1
BESP	Borongan	1.06	145	eP	Pn	06 52 19.0	-0.7
BESP				eS	Sn	06 52 34.2	+0.4
PVCP	Virac	1.29	330	eP	Pn	06 52 22.0	-0.8
PVCP				eS	Sb	06 52 40.0	0.0
PLP	Palo	1.31	173	⇑eP	Pn	06 52 22.6	-0.7
PLP				eS	Sb	06 52 40.5	-0.4
RCP	Roxas	2.22	246	⇑eP	Pn	06 52 36.8	+1.0

IDC 18 06:59:45.8±1.9, 13°.72N×92°.12W, h0^{km}, mb3.7/6, mb1 4.1/10, mb1mx3.8/39, mbtmp3.8/10, ML3.8/4, MS3.2/4, Ms1 3.2/4, ms1mx2.6/37, Error ellipse: s-maj=36.9km s-min=21.3km az=14.0
GCG 18 06:59:47.7±1.6, 13°.75N×92°.38W, h35^{km}±118^{km}, MD4.2
SNET 18 06:59:51.6±1.1, 13°.98N×91°.97W, h86^{km}±65^{km}, ML4.3
MEX 18 06:59:53.4±0.5, 14°.13N×92°.07W, h79^{km}±10^{km}, MD3.9
ISC 18 06:59:51.0±2.1, 13°.91N±0°.08×92°.09W±0°.06, h30^{km}±14^{km}, n35, σ$1^{s}.90$/44, mb3.9/6, MS3.0/4, 1D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	Entre ros, C	0.73	44	eP	Pn	07 00 07.1	+1.8
ERG				eS	Sn	07 00 19.8	+4.4
STG3	Santiaguito 3,	0.94	32	⇓eP	Pb	07 00 08.8	-0.1
THIG		1.00	350	eP	Pn	07 00 08.6	-0.4
THIG				eS	Sn	07 00 20.6	-1.6
FUG	Fuego 3	1.32	66	eP	Pn	07 00 14.0	+0.5
PCG	Pacaya	1.51	72	eP	Pn	07 00 17.2	+0.9
NBG	Las Nubes	1.82	68	eP	Pb	07 00 22.7	-1.1
NBG				eS	Sb	07 00 48.9	+2.6
APG	El Apazote	1.91	55	Pn	Pn	07 00 23.6	+1.8
	52nm,0.3s,baz=228,slow=7.4,SNR=260						
APG				Sn	Sb	07 00 48.2	-0.7
	54nm,0.3s,baz=324,slow=17,SNR=6.4						
PCIG		2.09	329	eP	Pn	07 00 23.1	-0.8
PCIG				i S	Sn	07 00 46.3	-2.6
CCIG	Comitan	2.35	359	i P	Pn	07 00 26.2	-1.6
CCIG				i S	Sn	07 00 51.2	-4.6
RTR	El Retiro	2.37	90	eP	Pn	07 00 28.0	-0.1
RTR				eS	Sn	07 00 57.2	+0.9
SNJE	San Jose	2.41	91	eP	Pn	07 00 28.0	-0.6
MRL	Marmol	2.60	63	eP	Pb	07 00 35.9	-1.2
MTO3	Montecristo	2.69	79	eP	Pn	07 00 32.5	0.0
MTO3				eS	Sn	07 01 03.6	-0.6
SNET	Serv Nac Est T	2.79	94	eP	Pn	07 00 33.7	+0.1
LFU	La Fuente	2.90	93	eP	Pn	07 00 35.0	-0.1
LFU				eS	Sn	07 01 08.8	-0.2
TGIG		3.02	341	eP	Pn	07 00 35.4	-1.4
TGIG				i S	Sn	07 01 08.2	-3.8
TECA	Tecapa	3.51	96	eP	Pn	07 00 43.5	-0.2
PACA	Pacayal	3.69	96	eP	Pn	07 00 46.1	0.0
PACA				IAML		07 01 44.5	
	comp=Z,622nm,0.6s						
CMIG	Matias Romero	4.15	320	Pn	Pn	07 00 52.7	+0.3
	comp=Z,3.3nm,0.3s,baz=136,slow=10,SNR=16						
CMIG				Sn	Sn	07 01 42.2	+2.3
	comp=Z,6.2nm,0.3s,baz=108,slow=8.9,SNR=5.7						
CMIG	Matias Romero	4.15	320	i P	Pn	07 00 50.9	-1.5
CMIG				i S	Sn	07 01 36.4	-3.5
CNCH	Conchagua	4.19	98	eP	Pn	07 00 52.9	-0.1
CNCH				IAML		07 02 02.4	
	comp=Z,290nm,0.6s						
TGUH	Tegucigalpa,Un	4.68	88	eP	Pn	07 00 59.3	-0.2
JTS	Las Juntas de	7.85	117	Pn	Pn	07 01 40.7	-2.6
	comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=5.9						
JTS				Sn	Sn	07 03 06.7	-4.6
	comp=Z,0.3nm,0.3s,baz=255,slow=19,SNR=1.8						
H06E1	SOCORRO T-PHAS	18.71	288	T	T	07 23 18.8	
	SNR=36						
TXAR	Lajitas Array	18.72	327	P	Pn	07 04 09.8	+1.9
	comp=Z,0.1nm,0.3s,baz=158,slow=13,SNR=19						
H06N1	SOCORRO T-PHAS	18.78	288	T	T	07 23 23.1	
	SNR=3.8						
TKL	Tuckaleechee C	22.91	18	P	P	07 04 51.9	-0.5
	comp=Z,1.3nm,0.6s,baz=205,slow=14,SNR=4.6						
TKL				LR	LR	07 15 09.5	
	comp=Z,57nm,19.2s,baz=174,slow=40						
ANMO	Albuquerque	24.63	331	P	P	07 05 10.1	+1.0
	comp=Z,2.4nm,0.6s,baz=149,slow=13,SNR=19						
SJG	San Juan	25.27	77	LR	LR	07 15 25.2	
	comp=Z,23nm,19.4s,baz=274,slow=37						
PDAR	Pinedale Array	32.46	336	P	P	07 06 20.2	+1.2
	comp=Z,0.1nm,0.3s,baz=134,slow=6.5,SNR=2.6						
NVAR	Mina Array Bea	33.68	321	P	P	07 06 29.9	+0.2
	comp=Z,1.2nm,0.8s,baz=133,slow=8.5,SNR=10						
NVAR				LR	LR	07 20 34.5	
	comp=Z,33nm,19.2s,baz=318,slow=37						
SCHQ	Schefferville	45.33	20	LR	LR	07 28 06.9	
	comp=Z,54nm,21.1s,baz=41,slow=37						
YKA	Yellowknife Ar	51.09	347	P	P	07 08 50.3	-0.1
	comp=Z,0.9nm,0.6s,baz=150,slow=7.4,SNR=4.1						
ILAR	Eielson Array	62.88	337	P	P	07 10 14.4	+0.4
	comp=Z,1.5nm,1.1s,baz=124,slow=4.5,SNR=8.6						
CMAR	Chiang Mai Arr	146.04	341	PKPbc	PKPdf	07 19 28.0	-0.1
	comp=Z,1.7nm,0.3s,baz=339,slow=3.8,SNR=8.9						

IDC 18 07:14:27.4±0.7, 12°.57N×143°.80E, h0^{km}, mb4.0/10, mb1 4.3/10, mb1mx3.9/47, mbtmp3.9/10, MS3.3/4, Ms1 3.3/4, ms1mx2.7/42, Error ellipse: s-maj=27.2km s-min=17.3km az=117.0
NEIC 18 07:14:29.0±1.4, 12°.63N×143°.79E, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=22.4km s-min=10.6km az=133.0
ISCJB 18 07:14:30.1±0.4, 12°.58N±0°.07×143°.73E±0°.09, h27^{km}, mb4.3/17, MS3.3/2, Error ellipse: s-maj=14.3km s-min=7.2km az=36.2
ISC 18 07:14:31.6±0.7, 12°.6N±0°.1×143°.8E±0°.1, h27^{km}, n41, σ$0^{s}.91$/35, mb4.2/17, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.41	48	Pn	Pn	07 14 55.2	-0.3
	40nm,0.3s,baz=194,slow=6.9,SNR=17						
GUMO				Sn	Sn	07 15 13.3	+0.1
	58nm,0.3s,baz=207,slow=17,SNR=19						
GUMO	Guam	1.41	48	ePn	Pn	07 14 54.9	-0.6
GUMO				eSn	Sn	07 15 13.6	+0.4
SARN	Sarigan	4.47	25	ePn	Pn	07 15 36.3	-1.4
SIJI	Sorong	18.30	224	LR	LR	07 24 51.1	
	comp=Z,104nm,19.9s,baz=102,slow=34						
DAV	Davao City (W)	18.78	255	LR	LR	07 24 39.1	
	comp=Z,76nm,21.7s,baz=160,slow=33						
H11S3	WAKE ISLAND Hy	22.80	72	T	T	07 43 22.5	
	baz=248,slow=74,SNR=8.1						
H11S1	WAKE ISLAND Hy	22.81	72	T	T	07 43 21.5	
	baz=248,slow=74,SNR=5.4						
H11S2	WAKE ISLAND Hy	22.81	72	T	T	07 43 24.2	
	baz=248,slow=74,SNR=6.6						
H11N1	WAKE ISLAND Hy	23.25	69	T	T	07 43 48.6	
	baz=257,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	23.26	69	T	T	07 43 54.2	
	baz=257						
H11N3	WAKE ISLAND Hy	23.27	69	T	T	07 43 52.8	
	baz=257,slow=75,SNR=25						
WRAB	Tennant Creek	33.68	196	eP	P	07 21 09.9	-0.6
	9.9nm,0.6s						
WB2	Warramunga Arr	33.69	196	eP	P	07 21 09.8	-0.8
	6.3nm,0.6s						
WR1	Warramunga Arr	33.69	196	eP	P	07 21 10.0	-0.7
WRA	Warramunga Arr	33.69	196	P	P	07 21 10.0	-0.7
	4.3nm,0.6s,baz=6.5,slow=9.6,SNR=36						
AS31	Alice Springs	37.36	195	eP	P	07 21 42.3	+0.2
	6.5nm,1.7s						
ASAR	Alice Springs	37.36	195	P	P	07 21 40.5	-1.7
	1.1nm,0.6s,baz=20,slow=11,SNR=15						
ASAR				PcP	PcP	07 24 01.3	+0.2
	0.5nm,0.8s,baz=29,slow=3.1,SNR=3.5						
ASAR				LR	LR	07 36 31.0	
	comp=Z,44nm,20.3s,baz=310,slow=36						
CMAR	Chiang Mai Arr	43.51	284	P	P	07 22 34.1	+0.9
	1.3nm,0.3s,baz=82,slow=6.5,SNR=4.2						
SONA0	Songino Array	46.91	326	eP	P	07 22 59.5	-0.4
SONM	Songino Array	46.91	326	P	P	07 22 59.5	-0.4
	0.4nm,0.4s,baz=140,slow=7.6,SNR=2.0						
MK32	Makanchi Array	61.45	317	eP	P	07 24 47.0	+1.2
MKAR	Makanchi Array	61.45	317	P	P	07 24 47.0	+1.2
	0.4nm,0.6s,baz=116,slow=6.6,SNR=2.6						
ILAR	Eielson Array	69.87	25	P	P	07 25 39.5	-0.3
	0.4nm,0.6s,baz=254,slow=6.1,SNR=6.4						
ILB	Eielson Array	69.87	25	eP	P	07 25 39.5	-0.3
	10.0nm,1.9s						
YKA	Yellowknife Ar	84.18	27	P	P	07 27 00.6	+0.3
	0.7nm,0.7s,baz=285,slow=5.6,SNR=2.8						
YKB5	Yellowknife Ar	84.18	27	eP	P	07 27 00.6	+0.4
BEKR	Beckworth	86.43	50	eP	P	07 27 13.5	+1.3
	3.3nm,0.6s						
NEW	Newport	86.63	41	LR	LR	07 57 44.0	
	comp=Z,15nm,21.3s,baz=292,slow=30						
NEW	Newport	86.63	41	eP	P	07 27 14.2	+1.2
	2.8nm,0.8s						
NV01	Mina Array Sit	88.33	51	eP	P	07 27 22.8	+1.3
NVAR	Mina Array Bea	88.33	51	P	P	07 27 22.8	+1.3
	2.2nm,0.7s,baz=264,slow=5.3,SNR=8.8						
ELK	Elko	89.98	48	eP	P	07 27 30.6	+1.3
	2.2nm,0.8s						
TPNV	Topopah Spring	90.29	52	eP	P	07 27 32.1	+1.4
	7.5nm,0.8s						
FIA0	FINESS Array S	91.57	335	eP	P	07 27 34.5	-1.4
FINES	FINESS Array B	91.57	335	P	P	07 27 34.5	-1.4
	1.0nm,0.8s,baz=91,slow=6.3,SNR=3.3						
PD31	Pinedale Array	93.37	45	eP	P	07 27 44.9	0.0
PDAR	Pinedale Array	93.37	45	P	P	07 27 44.9	0.0
	0.2nm,0.6s,baz=339,slow=1.3,SNR=2.8						
TOA1	Torodi Ar. Sit	134.52	303	ePKPdf	PKPdf	07 33 48.6	+0.1
TORD	Torodi Ar. Bea	134.52	303	PKP	PKPdf	07 33 48.6	+0.1
	0.6nm,1.0s,baz=19,slow=3.3,SNR=2.4						
LPAZ	La Paz	148.89	101	PKPbc	PKPbc	07 34 18.8	+0.1
	1.1nm,0.8s,baz=307,slow=4.0,SNR=6.9						
LPAZ	La Paz	148.89	101	ePKPbc	PKiKP	07 34 19.6	-0.4

IDC 18 07:15:44.4±1.0, 12°.72N×143°.61E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.5/47, mbtmp3.8/4, Error ellipse: s-maj=43.2km s-min=20.7km az=117.0
NEIC 18 07:15:45.9±2.0, 12°.70N×143°.70E, h10^{km}±1^{km}, mb4.2/5, Error ellipse: s-maj=19.7km s-min=5.7km az=155.0
ISCJB 18 07:15:46.5±0.5, 12°.67N±0°.09×143°.7E±0°.1, h27^{km}, mb4.0/8, Error ellipse: s-maj=19.7km s-min=6.8km az=36.0
ISC 18 07:15:48.2±0.8, 12°.6N±0°.1×143°.8E±0°.2, h27^{km}, n25, σ$0^{s}.86$/21, mb4.1/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.41	47	Pn	Pn	07 16 12.3	+0.2
	42nm,0.3s,baz=109,slow=2.4,SNR=7.7						
GUMO				Sn	Sn	07 16 30.2	+0.5
	68nm,0.3s,baz=354,slow=23,SNR=10						
GUMO	Guam	1.41	47	ePn	Pn	07 16 12.2	+0.2
GUMO				eSn	Sb	07 16 31.0	-0.4
SARN	Sarigan	4.47	25	ePn	Pn	07 16 54.5	+0.3
H11S3	WAKE ISLAND Hy	22.79	72	T	T	07 44 32.8	
	baz=251						
H11S1	WAKE ISLAND Hy	22.80	72	T	T	07 44 30.5	
	baz=251						
H11S2	WAKE ISLAND Hy	22.81	72	T	T	07 44 31.1	
	baz=251						
H11N1	WAKE ISLAND Hy	23.25	69	T	T	07 45 08.8	
	baz=255,slow=75,SNR=22						
H11N2	WAKE ISLAND Hy	23.26	69	T	T	07 45 09.4	
	baz=255,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	23.27	69	T	T	07 45 09.4	
	baz=255,slow=75,SNR=7.7						
WRAB	Tennant Creek	33.67	196	eP	P	07 22 27.6	+0.5
	5.5nm,0.8s						
WB2	Warramunga Arr	33.68	196	eP	P	07 22 27.9	+0.7
	5.5nm,0.8s						
WR1	Warramunga Arr	33.69	196	eP	P	07 22 27.0	-0.2
WRA	Warramunga Arr	33.69	196	P	P	07 22 27.0	-0.2
	3.0nm,0.6s,baz=12,slow=9.2,SNR=8.0						
WC3	Warramunga Arr	33.69	196	eP	P	07 22 26.7	-0.6
	2.3nm,0.6s						
AS31	Alice Springs	37.35	195	eP	P	07 23 00.4	+1.7
	0.9nm,0.8s						
ASAR	Alice Springs	37.36	195	P	P	07 22 58.9	+0.2
	0.7nm,0.8s,baz=18,slow=10.0,SNR=5.0						
PSAA2	Pilbara Seismi	41.33	215	eP	P	07 23 30.7	-1.2
PSAA3	Pilbara Seismi	41.34	215	eP	P	07 23 31.5	-0.5
PSAA1	Pilbara Seismi	41.35	215	eP	P	07 23 33.3	+1.3
ZALV	Zalesovo Beam	61.80	325	P	P	07 26 04.8	+0.2
	0.3nm,0.2s,baz=104,slow=6.1,SNR=1.8						
ZAA1	Zalesovo Array	61.80	325	eP	P	07 26 04.8	+0.2
ILAR	Eielson Array	69.87	25	P	P	07 26 56.0	-0.4
	0.2nm,0.6s,baz=259,slow=7.5,SNR=3.0						
ILB	Eielson Array	69.87	25	eP	P	07 26 56.0	-0.4
	0.4nm,0.8s						
LPAZ	La Paz	148.88	101	PKPbc	PKiKP	07 35 37.5	+1.0
	1.3nm,0.8s,baz=270,slow=2.0,SNR=2.9						
LPAZ	La Paz	148.88	101	ePKPdf	PKPdf	07 35 29.2	-2.0

NNC 18 07:52:31.5±4.8, 54°.26N×87°.47E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=61.7km s-min=28.9km az=175.0, Suspected Mining explosion.
IDC 18 07:52:32.1±3.0, 54°.34N×87°.18E, h0^{km}, mb1 3.0/2, mb1mx2.9/56, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=25.9km s-min=18.0km az=55.0
ISC 18 07:52:29.4±3.6, 54°.5N±0°.2×87°.4E±0°.1, h0^{km}, n7, σ$2^{s}.18$/9, 6C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.62	252	i		08 01 00.0	
	baz=78,slow=296,SNR=1.2						
ZAA0	Zalesovo Array	1.62	252	⇑P	Pg	07 52 59.6	-0.9
	0.6nm,0.6s						
ZAA0				⇓S	Sg	07 53 22.5	+1.0
	0.9nm,0.3s						
ZALV	Zalesovo Beam	1.62	252	Pg	Pb	07 52 58.3	-1.9
	1.6nm,0.3s,baz=72,slow=16,SNR=10						
ZALV				Lg	Lg	07 53 17.7	
	2.6nm,0.3s,baz=69,slow=26,SNR=7.8						
KURK	Kurchatov	6.55	239	⇑Pn	Pn	07 54 10.6	+3.7
	1.1nm,0.6s						
KURK				⇑Sn	Sn	07 55 24.9	+2.6
	2.0nm,1.2s						
KURK				⇑Lg	Lg	07 55 55.3	
	4.1nm,1.1s						
KURBB	Kurchatov Arra	6.66	238	Pn	Pn	07 54 09.0	+0.7
	0.1nm,0.3s,baz=55,slow=14,SNR=7.1						
KURBB				Lg	Lg	07 55 58.0	
	0.0nm,0.3s,baz=56,slow=31,SNR=3.7						
KURBB	Kurchatov Arra	6.66	238	⇓Pn	Pn	07 54 11.5	+3.1
	2.8nm,0.8s,baz=54,slow=14						
KURBB				⇑Sn	Sn	07 55 23.0	-1.9
	2.0nm,0.5s						
KURBB				⇑Lg	Lg	07 55 56.2	
	5.6nm,0.7s						
MKAR	Makanchi Array	8.35	205	Pn	Pn	07 54 32.9	+1.3
	0.2nm,0.3s,baz=27,slow=14,SNR=5.8						
MKAR				Sn	Sn	07 56 05.4	-1.1
	0.1nm,0.3s,baz=33,slow=27,SNR=3.1						

NDI 18 08:05:10.1±1.9, 33°.72N×73°.86E, h10^{km}, ML3.1
ISCJB 18 08:05:11.7±1.1, 33°.42N±0°.08×74°.0E±0°.1, h10^{km}, Error ellipse: s-maj=16.9km s-min=8.3km az=150.3
ISC 18 08:05:11.5±1.6, 33°.55N±0°.09×73°.9E±0°.1, h10^{km}, n9, σ$1^{s}.36$/12, 1C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	Jammu	1.17	135	eP	Pn	08 05 34.0	+0.1
JMU				ex	x	08 06 00.0	
DHRM	DHARAMSHALA	2.39	122	eP	Pn	08 05 52.0	+1.1
DHRM				eS	Sn	08 06 22.6	+2.3
DHRM				IAML		08 06 28.0	
	comp=E,401nm,0.5s						
DHRM				IAML		08 06 28.1	
	comp=N,238nm,0.4s						
SMLA	Simla	3.66	130	eP	Pn	08 06 08.5	+0.3
SMLA				eS	Sn	08 06 50.0	-1.3
SMLA				IAML		08 06 56.6	
	comp=E,130nm,0.2s						
SMLA				IAML		08 06 56.6	
	comp=N,137nm,0.4s						
JOSI	Joshimath	5.64	120	eP	Pn	08 06 35.5	-0.2
JOSI				eS	Sn	08 07 39.5	-1.1
JOSI				IAML		08 07 52.9	
	comp=N,55nm,0.3s						
JOSI				IAML		08 07 53.8	
	comp=E,48nm,0.2s						
KHET	Khetri	5.69	163	eP	Pn	08 06 37.1	+0.9
KHET				ex	x	08 07 47.2	
KHET				IAML		08 08 30.9	
	comp=E,8.4nm,0.0s						
KHET				IAML		08 08 31.0	
	comp=N,10nm,0.2s						
KALG	Kalgarh	5.77	133	ex	x	08 06 27.2	
KALG				ex	x	08 07 16.6	
KUDL	Kundal	5.82	157	eP	Pn	08 06 39.3	+1.4
KUDL				eS	Sn	08 07 43.3	-1.5
KUDL				IAML		08 08 18.4	
	comp=N,6.1nm,0.5s						
KUDL				IAML		08 08 19.8	
	comp=E,8.4nm,0.5s						
SONA	Sohna	5.94	152	eS	Sn	08 07 46.4	-1.3
KK31	Karatay Array	9.91	345	P	Pn	08 07 37.9	+3.9
	comp=E,3.6nm,0.7s,baz=150,slow=12,SNR=27						
KK31				⇑S	Sn	08 09 24.7	-0.5
	comp=E,1.1nm,0.4s,baz=149,slow=21						

ISCJB 18 08:09:30.4±0.3, 8°.48S±0°.03×117°.17E±0°.03, h10^{km}, mb4.1/12, MS3.3/4, Error ellipse: s-maj=4.8km s-min=4.2km az=15.0
IDC 18 08:09:31.0±0.9, 8°.35S×117°.16E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx3.8/59, mbtmp4.1/9, ML3.9/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/33, Error ellipse: s-maj=31.1km s-min=17.5km az=76.0
NEIC 18 08:09:32.5±1.7, 8°.47S×117°.20E, h10^{km}±2^{km}, mb4.3/10, Error ellipse: s-maj=9.9km s-min=1.6km az=159.0
DJA 18 08:09:34.4±0.5, 9°S±6°×11°7E±°, h28^{km}±8^{km}, M4.4/11, mb4.8/1, mB4.8/1, MLv4.3/11, Mw(mB)4.0/1

ISC 18 08:09:32.1±0.5,**8°.47S**±0°.04×**117°.19E**±0°.04,**h10km,n64,σ1s.11**/64,**mb4.1**/12,**MS3.4**/4,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.68	122	P	Pn	08 09 47.9	+0.2
PLAI				S	Sn	08 09 58.0	-0.4
DNP	Denpasar	1.97	264	P	Pn	08 10 04.3	-1.2
SRBI	Singaraja	2.00	281	P	Pn	08 10 06.1	+0.2
WBSI	Waikabubak, Su	2.46	118	P	Pn	08 10 14.0	+1.6
JAGI	Jajag, Banyuwa	3.01	270	*e*Pn	Pn	08 10 20.9	+1.0
JAGI				*e*Sn	Sn	08 10 55.1	-0.9
JAGI	Jajag, Banyuwa	3.01	270	P	Pn	08 10 19.0	-0.8
WSI	Waingapu	3.29	111	P	Pg	08 10 33.7	-1.5
KMMI	Kalianget	3.50	294	P	Pn	08 10 28.4	+1.9
BKSI	Bulukumba	4.27	43	P	Pn	08 10 37.2	0.0
KAPI	Kappang	4.27	37	Pn	Pn	08 10 37.2	0.0
	6.9nm,0.3s,baz=212,slow=4.9,SNR=26						
KAPI				Sn	Sn	08 11 25.5	-1.7
	7.0nm,0.3s,baz=164,slow=2.9,SNR=6.5						
KAPI	Kappang	4.27	37	*e*Pn	Pn	08 10 37.3	0.0
KAPI				*e*Sn	Sn	08 11 26.4	-0.8
EDFI	Ende, Flores	4.46	94	P	Pn	08 10 41.5	+1.7
BNSI	Bone	4.97	36	P	Pn	08 10 49.6	+2.8
MMRI	Maumere	4.99	92	*e*Pn	Pn	08 10 47.0	-0.2
MMRI	Maumere	4.99	92	P	Pb	08 11 00.8	+1.2
SPSI	Sidrap Palu	5.16	30	P	Pg	08 11 09.5	-1.4
UGM	Wanagama	6.63	274	*e*Pn	Pn	08 11 09.9	+0.3
UGM				*e*Sn	Sn	08 12 24.9	-0.4
SOEI	Soe	7.10	101	*e*Pn	Pn	08 11 16.7	+0.5
SOEI	Soe	7.10	101	P	Pb	08 11 29.1	-6.5
LUWI	Luwuk	9.24	37	*e*Pn	Pn	08 11 45.7	+0.3
CISI	Cisompet, Garu	9.33	275	*e*Pn	Pn	08 11 47.4	+0.6
PSAD1	Pilbara Seismi	13.16	169	*e*Pn	Pn	08 12 40.2	+1.1
PSAC1	Pilbara Seismi	13.23	169	*e*Pn	Pn	08 12 41.9	+1.8
PSAB2	Pilbara Seismi	13.26	169	*e*Pn	Pn	08 12 40.6	0.0
PSAA2	Pilbara Seismi	13.27	169	*e*Pn	Pn	08 12 39.7	-0.9
PSAB1	Pilbara Seismi	13.27	169	*e*Pn	Pn	08 12 38.6	-2.0
PSA00	Pilbara Seismi	13.28	169	*e*Pn	Pn	08 12 40.5	-0.3
PSA00				*e*Sn	Sn	08 15 05.0	-3.6
PSAC2	Pilbara Seismi	13.28	169	*e*Pn	Pn	08 12 40.7	0.0
PSAA1	Pilbara Seismi	13.28	169	*e*Pn	Pn	08 12 40.9	+0.1
PSAA3	Pilbara Seismi	13.28	169	*e*Pn	Pn	08 12 41.0	+0.2
PSAB3	Pilbara Seismi	13.30	169	*e*Pn	Pn	08 12 41.6	+0.5
PSAC3	Pilbara Seismi	13.32	169	*e*Pn	Pn	08 12 42.1	+0.8
PSAD3	Pilbara Seismi	13.33	170	*e*Pn	Pn	08 12 42.0	+0.4
PSAD2	Pilbara Seismi	13.34	169	*e*Pn	Pn	08 12 42.0	+0.3
MTN	Manton Dam	14.37	109	*e*Pn	Pn	08 12 54.9	-0.8
GIRL	Giralia	14.38	191	*e*Pn	Pn	08 12 56.7	+0.9
FAKI	Fak Fak	15.96	71	*e*P	P	08 13 19.6	-0.9
	21nm,1.1s						
WR1	Warramunga Arr	20.13	126	*e*P	Pn	08 14 08.1	-0.3
WRA	Warramunga Arr	20.13	126	P	Pn	08 14 08.0	-0.3
	9.1nm,0.6s,baz=293,slow=13,SNR=80						
WRAB	Tennant Creek	20.14	126	*e*P	P	08 14 07.7	+1.2
	10nm,0.6s						
WB2	Warramunga Arr	20.14	126	*e*P	P	08 14 07.5	+0.9
	10nm,0.6s						
WC3	Warramunga Arr	20.17	126	*e*P	P	08 14 07.6	+0.7
	10nm,0.6s						
AS31	Alice Springs	22.01	135	*e*P	P	08 14 27.6	+0.8
	2.2nm,0.6s						
ASAR	Alice Springs	22.01	135	P	P	08 14 28.1	+1.3
	4.8nm,0.6s,baz=313,slow=8.8,SNR=36						
NWAO	Narrogin (SRO)	24.34	180	*e*P	P	08 14 50.5	+0.3
FORT	Forrest	24.41	157	*e*P	P	08 14 48.9	-1.9
	38nm,0.9s						
COEN	Coen	26.05	104	*e*P	P	08 15 06.5	+0.6
	14nm,1.1s						
PMG	Port Moresby	29.61	94	*e*P	P	08 15 37.8	0.0
	21nm,1.1s						
STKA	Stephens Creek	32.51	139	P	P	08 16 04.1	+0.9
	1.5nm,0.5s,baz=297,slow=9.5,SNR=3.6						
STKA	Stephens Creek	32.51	139	*e*P	P	08 16 02.9	-0.3
	1.6nm,1.0s						
KSRS	Korea Array	46.77	12	LR	LR	08 38 27.7	
	comp=Z,18nm,18.8s,baz=212,slow=37						
USRK	Ussuriysk Ar.	54.11	13	P	P	08 18 57.1	0.0
	1.7nm,0.8s,baz=186,slow=4.3,SNR=4.0						
SONA0	Songino Array	56.87	351	*e*P	P	08 19 17.4	+0.3
SONM	Songino Array	56.87	351	P	P	08 19 17.4	+0.3
	1.0nm,0.6s,baz=174,slow=8.5,SNR=4.1						
MK32	Makanchi Array	63.19	334	*e*P	P	08 19 59.1	-1.3
MKAR	Makanchi Array	63.19	334	P	P	08 19 59.1	-1.3
	0.4nm,0.6s,baz=137,slow=6.9,SNR=3.5						
MKAR				LR	LR	08 50 27.7	
	comp=Z,20nm,18.8s,baz=147,slow=39						
AAK	Ala-Archa	64.04	326	LR	LR	08 52 08.2	
	comp=Z,29nm,18.6s,baz=146,slow=40						
VNDA	Vanda	72.79	171	P	P	08 21 01.9	+1.6
	0.7nm,0.8s,baz=328,slow=5.5,SNR=3.8						
VNDA	Vanda	72.79	171	*e*P	P	08 21 01.1	+0.8
AKTO	Aktyubinsk	77.78	326	LR	LR	08 58 36.2	
	comp=Z,21nm,18.1s,baz=175,slow=38						
QSPA	South Pole Qui	81.52	180	*e*P	P	08 21 50.8	+1.1
	1.5nm,1.0s						
SNAA	Sanae	91.02	196	P	P	08 22 37.5	+1.1
	0.9nm,0.7s,baz=144,slow=5.5,SNR=8.1						
CPUP	Villa Florida	145.00	189	PKPbc	PKPdf	08 29 10.6	+0.1
	3.6nm,0.8s,baz=152,slow=3.5,SNR=7.5						
CPUP	Villa Florida	145.00	189	*e*PKPbc	PKPdf	08 29 10.8	+0.3

MEX 18 08:10:35.0±0.4,**16°.83N**×**100°.17W,h3km**±5km,**MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.24	338	*e*P	Pg	08 10 39.3	-0.4
CAIG				*e*S	Sg	08 10 43.0	+0.2
MEIG	Mezcala	1.22	26	*e*P	Pg	08 10 55.1	-3.3
MEIG				*e*S	Sg	08 11 10.9	-3.2
ARIG	Puente Sto Nin	1.46	353	*e*P	Pn	08 10 58.8	-3.5
ARIG				*i* S	Sb	08 11 16.4	-5.4
TLIG	Tlapa	1.70	64	*e*P	Pn	08 11 02.0	-3.8
TLIG				*i* S	Sn	08 11 23.3	-4.9

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*IDC **18** 08:11:52.2±0.7,8°.37S×116°.98E,h0km,mb4.1/12, mb1 4.2/13,mb1mx4.0/57,mbtmp4.1/13,ML4.2/1,MS3.0/2, Ms1 3.0/2,ms1mx2.6/32,Error ellipse: s-maj=29.0km s-min=14.7km az=74.0*

*ISCJB **18** 08:11:55.3±0.3,8°.37S±0°.04×117°.19E±0°.03,h33km, mb4.2/18,Error ellipse: s-maj=5.8km s-min=4.1km az=13.3*

*NEIC **18** 08:11:56.8±1.4,8°.38S×117°.20E,h30km±5km,mb4.4/12, Error ellipse: s-maj=12.3km s-min=5.7km az=146.0*

*DJA **18** 08:11:56.1±0.6,8°S±7°×11°7E±°,h20km±9km,M4.4/9, MLv4.4/9*

ISC 18 08:11:57.4±0.5,**8°.42S**±0°.05×**117°.20E**±0°.04,**h35km,n44,σ0s.88**/48,**mb4.2**/18,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.70	126	P	Pn	08 12 09.5	-1.3
PLAI				S	Sn	08 12 19.8	-0.7
DNP	Denpasar	1.98	262	P	Pn	08 12 28.2	-0.3
SRBI	Singaraja	1.99	279	P	Pn	08 12 28.1	-0.5
WBSI	Waikabubak, Su	2.48	120	P	Pn	08 12 36.5	+1.1
JAGI	Jajag, Banyuwa	3.02	269	*e*Pn	Pn	08 12 42.5	-0.1
JAGI				*e*Sn	Sn	08 13 17.2	-0.4
JAGI	Jajag, Banyuwa	3.02	269	P	Pn	08 12 41.8	-0.9
KMMI	Kalianget	3.48	293	P	Pn	08 12 49.6	+0.6
KAPI	Kappang	4.22	37	Pn	Pn	08 12 58.7	-0.6
	12nm,0.3s,baz=238,slow=3.0,SNR=10						
KAPI				Sn	Sn	08 13 47.0	-0.4
	7.9nm,0.3s,baz=214,slow=22,SNR=6.1						
KAPI				LR	LR	08 14 29.8	
	comp=Z,73nm,20.5s,baz=260,slow=36						
KAPI	Kappang	4.22	37	*e*Pn	Pn	08 12 58.8	-0.6
KAPI				*e*Sn	Sn	08 13 46.5	-0.9
BKSI	Bulukumba	4.23	44	P	Pn	08 12 58.8	-0.5
UGM	Wanagama	6.63	274	*e*Pn	Pn	08 13 32.1	-0.3
UGM				*e*Sn	Sn	08 14 47.0	+0.2
LEM	Lembang	9.63	279	LR	LR	08 18 29.4	
	comp=Z,172nm,18.5s,baz=101,slow=42						
PSA00	Pilbara Seismi	13.33	169	*e*Pn	Pn	08 15 03.2	-1.0
MTN	Manton Dam	14.38	109	*e*Pn	Pn	08 15 17.5	-1.1
GIRL	Giralia	14.43	191	*e*Pn	Pn	08 15 17.8	-1.4
FAKI	Fak Fak	15.94	71	*e*Pn	Pn	08 15 39.0	-0.2
	36nm,1.1s						
WR1	Warramunga Arr	20.16	126	*e*P	P	08 16 29.6	+0.7
WRA	Warramunga Arr	20.16	126	P	P	08 16 29.6	+0.7
	12nm,0.6s,baz=294,slow=12,SNR=27						
WRAB	Tennant Creek	20.16	126	*e*P	P	08 16 29.8	+0.8
	13nm,0.8s						
WB2	Warramunga Arr	20.17	126	*e*P	P	08 16 29.8	+0.8
	14nm,0.6s						
AS31	Alice Springs	22.05	135	*e*P	P	08 16 50.2	+1.0
	2.9nm,0.8s						
ASAR	Alice Springs	22.05	135	P	P	08 16 49.6	+0.4
	6.2nm,0.6s,baz=313,slow=8.9,SNR=15						
NWAO	Narrogin (SRO)	24.39	180	*e*P	P	08 17 12.6	+0.1
	40nm,1.4s						
FORT	Forrest	24.45	157	*e*P	P	08 17 13.8	+0.7
	143nm,1.4s						
COEN	Coen	26.06	105	*e*P	P	08 17 27.9	+0.1
	9.8nm,0.9s						
BBOO	Buckleboo	29.91	147	*e*P	P	08 18 01.6	-0.4
	60nm,1.4s						
STKA	Stephens Creek	32.54	139	P	P	08 18 26.3	+1.1
	4.7nm,0.8s,baz=328,slow=8.8,SNR=5.2						
STKA	Stephens Creek	32.54	139	*e*P	P	08 18 26.1	+0.9
	1.2nm,0.9s						
KSRS	Korea Array	46.72	12	P	P	08 20 24.0	+1.0
	1.5nm,0.8s,baz=192,slow=8.6,SNR=4.9						
USRK	Ussuriysk Ar.	54.05	13	P	P	08 21 18.8	+0.5
	2.5nm,0.7s,baz=177,slow=6.1,SNR=6.8						
SONA0	Songino Array	56.81	351	*e*P	P	08 21 38.8	+0.5
SONM	Songino Array	56.81	351	P	P	08 21 38.8	+0.5
	1.5nm,0.5s,baz=170,slow=8.3,SNR=7.0						
MK32	Makanchi Array	63.14	334	*e*P	P	08 22 20.5	-1.1
MKAR	Makanchi Array	63.14	334	P	P	08 22 20.5	-1.1
	0.8nm,0.5s,baz=116,slow=6.6,SNR=5.3						
KURBB	Kurchatov Arra	67.67	335	P	P	08 22 49.0	-1.8
	0.1nm,0.3s,baz=124,slow=4.9,SNR=3.3						
MAW	Mawson	69.18	199	P	P	08 22 59.1	-1.0
	1.6nm,0.7s,baz=50,slow=8.1,SNR=4.9						
VNDA	Vanda	72.84	171	P	P	08 23 23.7	+1.5
	1.4nm,0.9s,baz=295,slow=6.5,SNR=4.9						
VNDA	Vanda	72.84	171	*e*P	P	08 23 23.5	+1.3
BVAR	Borovoye Array	72.95	333	P	P	08 23 21.7	-1.4
	0.7nm,0.7s,baz=142,slow=7.3,SNR=3.1						
SBA	Scott Base	73.86	170	*e*P	P	08 23 29.1	+1.0
	1.2nm,0.8s						
QSPA	South Pole Qui	81.58	180	*e*P	P	08 24 11.9	+0.5
	2.4nm,0.9s						
SNAA	Sanae	91.08	196	P	P	08 24 59.4	+1.4
	1.3nm,0.7s,baz=150,slow=3.7,SNR=11						
SNAA	Sanae	91.08	196	*e*P	P	08 24 58.1	+0.1
	6.9nm,1.4s						
CPUP	Villa Florida	145.06	189	PKPbc	PKPdf	08 31 32.2	+0.4
	6.9nm,0.8s,baz=170,slow=3.5,SNR=15						

IDC 18 08:13:50.6±4.0,**3°.58S**×**11°.94W,h0km,mb4.0**/6, **mb1 4.1**/6,**mb1mx3.6**/61,**mbtmp4.0**/6,**MS3.3**/11, **Ms1 3.3**/11,**ms1mx3.1**/32,**Error ellipse: s-maj=94.7km s-min=41.1km az=63.0,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	4.92	211	T	T	08 19 37.2	
	baz=30,slow=74,SNR=822						
H10N1	ASCENSION HYDR	4.93	211	T	T	08 19 35.6	
	baz=30,slow=74,SNR=1112						
H10N3	ASCENSION HYDR	4.94	211	T	T	08 19 38.5	
	baz=30,slow=74,SNR=864						
H10S1	ASCENSION HYDR	5.97	207	T	T	08 20 53.5	
	baz=26,slow=74,SNR=333						
H10S2	ASCENSION HYDR	5.98	207	T	T	08 20 56.0	
	baz=26,slow=74,SNR=321						
H10S3	ASCENSION HYDR	5.98	207	T	T	08 20 55.7	
	baz=26,slow=74,SNR=310						
DBIC	Dimbokro	12.40	35	LR	LR	08 20 50.0	
	comp=Z,130nm,20.0s,baz=196,slow=34						
TORD	Torodi Ar. Bea	21.44	39	P	P	08 18 40.0	-0.6
	4.9nm,0.9s,baz=214,slow=12,SNR=16						
TORD				LR	LR	08 26 12.6	
	comp=Z,61nm,20.1s,baz=285,slow=35						
MDT	Midelt	36.86	10	LR	LR	08 35 16.2	
	comp=Z,48nm,19.6s,baz=162,slow=35						
LSZ	Lusaka	41.17	109	P	P	08 21 37.0	-0.3
	2.1nm,0.5s,baz=284,slow=12,SNR=3.6						
BOSA	Boshof	43.24	129	LR	LR	08 37 45.7	
	comp=Z,36nm,20.9s,baz=204,slow=33						
KEST	Kesra	43.90	25	LR	LR	08 40 06.1	
	comp=Z,53nm,19.4s,baz=302,slow=36						
CPUP	Villa Florida	48.97	238	LR	LR	08 41 00.1	
	comp=Z,30nm,18.6s,baz=42,slow=33						
LPAZ	La Paz	56.59	253	LR	LR	08 46 33.8	
	comp=Z,37nm,19.9s,baz=81,slow=35						
GERES	GERESS Array B	56.78	20	P	P	08 23 36.5	-0.1
	1.2nm,0.7s,baz=197,slow=5.1,SNR=9.0						
BRTR	Keskin Array B	60.05	39	P	P	08 24 01.0	+1.3
	1.3nm,0.9s,baz=222,slow=5.4,SNR=5.8						
AKASG	Malin Array Be	64.54	28	P	P	08 24 28.7	-0.6
	0.5nm,0.5s,baz=228,slow=6.2,SNR=4.6						
NOA	NORSAR Array B	66.89	12	LR	LR	08 54 57.6	
	comp=Z,6.2nm,18.3s,baz=90,slow=37						
FINES	FINESS Array B	71.13	18	P	P	08 25 10.4	-0.3
	2.4nm,1.0s,baz=254,slow=13,SNR=3.8						
GEYT	Alibeck	76.63	50	LR	LR	08 59 36.7	
	comp=Z,18nm,20.1s,baz=80,slow=36						
ULM	Lac du Bonnet	88.84	320	LR	LR	09 02 54.9	
	comp=Z,17nm,19.4s,baz=332,slow=33						
TXAR	Lajitas Array	93.24	299	LR	LR	09 05 05.3	
	comp=Z,14nm,19.7s,baz=0.0,slow=33						

NNC 18 08:18:55.6±1.8,**41°.86N**×**78°.24E,h0km,mb3.6,mpv3.4, 2C-4D,Error ellipse: s-maj=15.1km s-min=6.1km az=168.0,Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	1.52	321	P	Pn	08 19 23.0	-1.4
	20nm,0.2s						
TNSS				S	Sb	08 19 44.8	0.0
	10nm,0.2s						
ULHL	Ulahol	1.54	285	P	Pn	08 19 22.5	-2.1
	SNR=6.6						
MDOK	Medeo	1.57	326	Pg	Pn	08 19 23.5	-1.4
	8.5nm,0.2s						
MDOK				Lg	Lg	08 19 45.3	
	9.2nm,0.5s						
IZV	Izvestkoviy	1.68	315	P	Pn	08 19 25.8	-0.6
PDGK	Podgornoye	1.73	32	P	Pn	08 19 26.5	-0.6
	3.4nm,0.3s						
PDGK				S	Sb	08 19 50.3	-0.3
	2.4nm,0.4s						
PDGK	Podgornoye	1.73	32	⇓Pn	Pn	08 19 25.3	-1.8
	2.3nm,0.3s						
PDGK				⇓Sn	Sg	08 19 51.8	+0.6
	7.1nm,0.5s						
MTBS	Maitube	1.84	314	Pg	Pn	08 19 28.7	+0.1
	12nm,0.3s						
MTBS				Lg	Lg	08 19 54.2	
	9.2nm,0.3s						
KST	Kastek	2.06	306	Pg	Pn	08 19 31.4	-0.2
	17nm,0.3s						
KST				Lg	Lg	08 19 58.9	
	15nm,0.4s						
KTMS	Ketmen	2.22	44	Pg	Pb	08 19 36.3	-0.3
	10nm,0.3s						
KTMS				Lg	Lg	08 20 07.3	
	8.9nm,0.4s						
MNBS	Baschi	2.22	3	Pg	Pb	08 19 35.8	-0.8
	10nm,0.2s						
MNBS				Lg	Lg	08 20 06.7	
	14nm,0.2s						
TKM2	Tokmak 2	2.23	299	⇑Pn	Pn	08 19 34.7	+0.7
	5.7nm,0.2s						
TKM2				⇓Sn	Sn	08 20 02.6	+0.3
	6.1nm,0.5s						
TKM2	Tokmak 2	2.23	299	P	Pn	08 19 35.0	+1.0
	SNR=22						
KZA	Kyzart	2.24	276	P	Pb	08 19 37.5	+0.2
	SNR=8.5						
KBK	Karagaybulak	2.57	289	P	Pb	08 19 40.9	-1.9
	SNR=5.2						
UCH	Uchtor	2.80	279	P	Pb	08 19 45.9	-1.0
	SNR=8.6						
AAK	Ala-Archa	2.89	287	⇑Pn	Pn	08 19 45.3	+2.3
	1.7nm,0.3s						
AAK				⇓Sn	Sb	08 20 21.8	-2.3
	4.7nm,0.6s						
SGDS	Sogindy	3.10	302	Lg	Lg	08 20 27.7	
	5.1nm,0.3s						

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*ISCJB **18** 08:52:43.7±0.9,21°.8N±0°.1×144°.0E±0°.2,h105km, mb3.9/12,Error ellipse: s-maj=26.2km s-min=17.6km az=164.1*

*IDC **18** 08:52:54.8±4.9,21°.93N×143°.87E,h192km±44km, mb3.5/13,mb1 3.7/14,mb1mx3.4/41,mbtmp4.0/14,Error ellipse: s-maj=24.9km s-min=17.9km az=89.0*

ISC 18 08:52:45.4±1.0,**21°.9N**±0°.2×**144°.0E**±0°.2,**h105km,n14, σ1s.44**/15,**mb3.8**/12,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	15.43	342	P	P	08 56 19.7	+0.2
	0.1nm,0.3s,baz=166,slow=9.1,SNR=5.4						
KSRS	Korea Array	20.81	322	P	P	08 57 21.3	+2.9
	6.0nm,0.6s,baz=147,slow=8.5,SNR=32						
USRK	Ussuriysk Ar.	24.35	339	P	P	08 57 55.8	+2.3
	1.9nm,0.7s,baz=147,slow=8.6,SNR=6.4						
KLR	Kul'dur	28.95	343	P	P	08 58 35.4	+0.7
	6.0nm,0.6s,baz=158,slow=7.2,SNR=20						
SONM	Songino Array	39.66	320	P	P	09 00 07.2	0.0
	0.7nm,0.5s,baz=126,slow=8.1,SNR=4.6						
WRA	Warramunga Arr	42.65	193	P	P	09 00 32.3	+0.6
	1.9nm,1.1s,baz=4.2,slow=7.9,SNR=13						
ZALV	Zalesovo Beam	54.52	321	P	P	09 02 01.1	-1.2
	2.2nm,0.5s,baz=126,slow=15,SNR=9.7						
MKAR	Makanchi Array	55.11	312	P	P	09 02 06.3	-0.4
	0.9nm,0.6s,baz=90,slow=8.7,SNR=7.7						
MKAR				PcP	PcP	09 03 05.7	-1.1
	0.4nm,0.4s,baz=65,slow=4.2,SNR=5.8						
ILAR	Eielson Array	61.52	27	P	P	09 02 50.1	-0.8
	0.6nm,0.8s,baz=275,slow=5.0,SNR=6.2						
YKA	Yellowknife Ar	75.92	28	P	P	09 04 20.6	+0.2
	0.5nm,0.5s,baz=292,slow=5.8,SNR=2.6						
ARCES	ARCESS Array B	78.97	342	P	P	09 04 36.5	-0.7
	0.9nm,0.6s,baz=82,slow=8.7,SNR=3.8						
NVAR	Mina Array Bea	82.43	52	P	P	09 04 57.9	+1.3
	0.4nm,0.6s,baz=33,slow=11,SNR=3.7						
KBZ	Khabaz	82.77	314	P	P	09 04 57.7	-0.2
	2.7nm,0.7s,baz=66,slow=10.0,SNR=6.3						
FINES	FINESS Array B	83.32	335	P	P	09 04 58.3	-2.1
	0.8nm,0.5s,baz=72,slow=6.2,SNR=9.6						

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*ISCJB **18** 08:53:31.6±0.7,59°.19S±0°.09×23°.0W±0°.2,h10km,mb4.2/6, Error ellipse: s-maj=18.6km s-min=9.7km az=147.5*

*IDC **18** 08:53:31.7±1.3,59°.04S×23°.18W,h0km,mb4.0/2, mb1 4.1/2,mb1mx3.7/17,mbtmp4.0/2,Error ellipse: s-maj=103.5km s-min=32.7km az=101.0*

*NEIC **18** 08:53:37.2±1.9,59°.19S×23°.02W,h35km±2km,mb4.5/4, Error ellipse: s-maj=29.4km s-min=13.7km az=223.0*

ISC 18 08:53:33.7±0.8,**59°.2S**±0°.1×**23°.0W**±0°.2,**h10km,n18, σ1s.19**/20,**mb4.2**/6,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.87	298	*e*Pn	Pn	08 55 42.7	+1.0
VNA1	Neumayer--Stat	13.06	158	P	Pn	08 56 38.7	-0.3
VNA1				S	Sn	08 58 52.6	-12
VNA3	Neumayer Olymp	13.31	161	P	Pn	08 56 41.6	-0.8
VNA3				S	Sn	08 58 56.6	-14
SNAA	Sanae	14.98	155	P	Pn	08 57 04.7	-0.5
SNAA				S	Sn	08 59 36.8	-14
SNAA	Sanae	14.98	155	*e*Pn	Pn	08 57 04.2	-1.0
EFI	East Falkland	21.05	275	*e*P	P	08 58 17.2	-0.3
	48nm,1.2s						
QSPA	South Pole Qui	31.08	180	*e*P	P	08 59 52.6	+0.8
	1.9nm,0.8s						
GO04	Tololo Observa	43.25	291	*e*P	P	09 01 34.5	-0.9
	21nm,1.1s						
VNDA	Vanda	43.54	182	P	P	09 01 38.0	+1.2
	1.2nm,0.9s,baz=178,slow=6.5,SNR=5.7						
VNDA	Vanda	43.54	182	*e*P	P	09 01 36.6	-0.3
TOA0	Torodi Ar. Sit	74.80	25	*e*P	P	09 05 13.9	0.0
	1.9nm,0.8s						
TORD	Torodi Ar. Bea	74.80	25	P	P	09 05 13.9	+0.1
	1.5nm,0.5s,baz=200,slow=6.5,SNR=16						
TOA1	Torodi Ar. Sit	74.80	25	*e*P	P	09 05 13.9	0.0
MK31	Makanchi Array	135.74	72	*e*PKPdf	PKPdf	09 12 53.5	+0.1
SONA0	Songino Array	148.62	88	*e*PKPbc	PKPdf	09 13 17.6	+1.4
SONM	Songino Array	148.62	88	PKPbc	PKPdf	09 13 17.6	+1.4
	1.2nm,0.6s,baz=225,slow=2.8,SNR=5.7						
ILAR	Eielson Array	153.82	306	PKPbc	PKPbc	09 13 30.1	-1.3
	0.7nm,0.9s,baz=90,slow=0.9,SNR=5.2						
ILB	Eielson Array	153.82	306	*e*PKPdf	PKPdf	09 13 25.4	+1.9
ILB				*e*PKPbc	PKPbc	09 13 29.0	-2.4
ILB				*e*PKPab	PKPab	09 13 42.9	-1.8

IDC 18 09:00:05.3±1.9,**1°.21N**×**125°.74E,h0km,mb3.7**/4, **mb1 3.9**/4,**mb1mx3.5**/29,**mbtmp3.7**/4,**Error ellipse: s-maj=178.1km s-min=25.5km az=64.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.66	159	P	P	09 05 09.1	+0.8
	1.4nm,0.4s,baz=337,slow=13,SNR=30						
ASAR	Alice Springs	25.98	163	P	P	09 05 40.3	+0.4
	0.2nm,0.6s,baz=337,slow=8.5,SNR=5.5						
STKA	Stephens Creek	36.18	157	P	P	09 07 08.4	-1.4
	1.3nm,0.4s,baz=343,slow=7.4,SNR=3.2						
MKAR	Makanchi Array	59.07	327	P	P	09 10 07.4	0.0
	0.4nm,0.4s,baz=113,slow=8.7,SNR=4.5						

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*ISCJB **18** 09:04:33.1±0.3,33°.20N±0°.02×35°.61E±0°.04,h10km±3km, Error ellipse: s-maj=5.7km s-min=2.6km az=25.3*

*GII **18** 09:04:33.3±0.2,33°.17N×35°.58E,h6km,MD2.9/4*

*JSO **18** 09:04:34.0±0.8,33°N±6°×3°6E±°,h2km±5km,M3.2/10, Mjma3.1/10,ML3.4/6,MLv3.2/10*

*GRAL **18** 09:04:34.3±0.3,33°.20N×35°.60E,h6km±1km,MD3.4*

*NSSC **18** 09:04:34.4±0.9,33°.30N×35°.66E,h16km±4km,ML2.9*

ISC 18 09:04:32.5±0.9,**33°.18N**±0°.02×**35°.66E**±0°.03,**h18km**±5km, **n34,σ0s.91**/46,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.01	5	Pg	Pg	09 04 35.7	+0.1
KSDI	Kefar Szold	0.01	5	P	Pg	09 04 35.7	+0.1
GEM	Giv'at Ha'Em	0.03	9	Pg	Pg	09 04 36.0	+0.3
NATI	Neve Ativ	0.10	39	Pg	Pg	09 04 36.9	+0.7
SHBL	Chebaa	0.18	23	*e*P	Pb	09 04 37.9	+0.7
SHBL				*e*S	Sb	09 04 40.6	+0.2
MMA0B	Mount Meron ar	0.27	232	Pg	Pb	09 04 38.7	-0.2
BRBR	Barbar	0.34	47	*e*P	Pb	09 04 39.8	-0.4
BRBR				*e*S	Sb	09 04 44.9	-0.3
BRBR				AML	AML	09 04 46.1	
	comp=E,959nm,0.3s						
BRBR				AML	AML	09 04 46.2	
	comp=N,1µm,0.4s						
RCY	Rachaya	0.35	25	*e*P	Pb	09 04 40.6	+0.2
RCY				*e*S	Sb	09 04 45.6	0.0
QRWL	Qaraoun	0.37	3	*e*P	Pb	09 04 40.8	+0.2
HNTI	Hanita	0.42	257	Pg	Pb	09 04 41.2	-0.2
SHMJ	Saham	0.46	169	P	Pn	09 04 43.3	-1.0
DQRL	Deir Qamar	0.53	352	*e*P	Pb	09 04 43.5	+0.1
DQRL				*e*S	Sb	09 04 50.2	-0.5
BLGI	Bet Lehem HaGe	0.59	221	Pg	Pb	09 04 44.6	+0.2
QASN	Qassioun	0.62	56	*e*P	Pn	09 04 46.4	-0.2
QASN				*e*S	Sb	09 04 53.2	-0.3
QASN				AML	AML	09 04 57.8	
	comp=N,816nm,0.2s						
QASN				AML	AML	09 05 01.0	
	comp=E,1µm,0.3s						
TOTH	TOTAH	0.67	74	*e*P	Pn	09 04 47.2	-0.1
TOTH				*e*S	Sb	09 04 55.7	+1.0
TOTH				AML	AML	09 04 57.4	
	comp=N,638nm,0.2s						
TOTH				AML	AML	09 04 57.4	
	comp=E,560nm,0.2s						
BEYL	Beirut	0.70	349	*e*P	Pn	09 04 46.4	-1.2
BHL	Bhannes	0.72	360	*e*P	Pn	09 04 47.0	-1.0
BHL				*e*S	Sb	09 04 56.4	+0.1
MMLI	Mount Malkishu	0.77	195	Pg	Pg	09 04 47.7	+0.1
MMLI	Mount Malkishu	0.77	195	P	Pg	09 04 47.9	+0.3
OFRI	`Ofer	0.80	226	Pg	Pg	09 04 48.1	0.0
OFRI				Sg	Sg	09 04 58.9	+0.3
HMDT	Nahal Hemdat	0.93	187	Pg	Pg	09 04 50.6	-0.1
HMDT				Sg	Sn	09 05 04.3	+0.6
SLTI	Sal'it	1.07	209	Pg	Pg	09 04 52.9	-0.4
SLTI				Sg	Sg	09 05 08.1	+0.7
HWQ	Hawqa	1.12	12	*e*P	Pg	09 04 54.1	-0.2

HWQ				eS	Sg	09 05 08.7	-0.3
HSUJ	Al Zarqa	1.16	157	P	Pg	09 04 56.1	+1.0
ASF	Jabal al Asfar	1.45	134	P	Pg	09 05 00.3	-0.2
DSI	Dead Sea	1.62	188	Pn	Pb	09 05 01.8	-0.2
AMAZ	Amatzia	1.76	201	Pn	Pb	09 05 04.1	-0.2
AMAZ	Amatzia	1.76	201	P	Pb	09 05 04.9	+0.6
YTIR	Yattir	1.87	194	Pn	Pb	09 05 05.9	-0.3
YTIR				Sn	Sg	09 05 31.2	-1.6
LISJ	El Lisan	1.94	184	P	Pb	09 05 07.4	+0.1
KZIT	Kziot	2.51	206	P	Pb	09 05 15.0	-2.1
CSS	Mathiatis	2.62	313	Pn	Pn	09 05 15.6	+1.5
PRNI	Paran	2.88	191	Pn	Pb	09 05 20.8	-2.5
HRFI	Mount Harif	3.18	190	P	Pn	09 05 24.8	+3.1

IDC 18 09:24:09.3±3.5**, 53.°58N×87.°79E, h0^{km}, mb1 3.1**/2**, mb1mx3.0**/60**, mbtmp3.1**/2**, ML2.9**/2**, Error ellipse: s-maj=35.6km s-min=16.4km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.80	283	i		09 35 11.2	
	baz=99,slow=298,SNR=1.8						
ZALV	Zalesovo Beam	1.80	283	Pg	Pn	09 24 41.8	+0.2
	3.9nm,0.3s,baz=100,slow=14,SNR=19						
ZALV				Lg	Lg	09 25 06.5	
	6.4nm,0.3s,baz=104,slow=26,SNR=14						
KURBB	Kurchatov Arra	6.43	246	Pn	Pn	09 25 45.7	+0.5
	0.1nm,0.3s,baz=64,slow=14,SNR=9.7						
MKAR	Makanchi Array	7.66	210	Pn	Pn	09 26 03.2	+1.2
	0.3nm,0.3s,baz=29,slow=14,SNR=12						

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*IDC **18** 09:25:19.6±3.0, 53.°58N×87.°87E, h0^{km}, mb1 3.5/2, mb1mx3.2/62, mbtmp3.5/2, ML3.0/2, Error ellipse: s-maj=28.7km s-min=16.3km az=52.0*

ASRS 18 09:25:17.1, 53.°58N×87.°96E, M2.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.90	283	i		09 36 55.5	
	baz=96,slow=307						
ZALV	Zalesovo Beam	1.90	283	Pg	Pb	09 25 52.5	-0.1
	5.0nm,0.3s,baz=98,slow=16,SNR=17						
ZALV				Lg	Lg	09 26 18.2	
	8.3nm,0.3s,baz=103,slow=25,SNR=17						
KURBB	Kurchatov Arra	6.52	247	Pn	Pn	09 26 56.6	+2.5
	0.3nm,0.3s,baz=62,slow=14,SNR=23						
KURBB				Lg	Lg	09 28 44.4	
	0.1nm,0.3s,baz=64,slow=33,SNR=7.8						
MKAR	Makanchi Array	7.70	210	Pn	Pn	09 27 14.0	+3.6
	0.3nm,0.3s,baz=28,slow=13,SNR=8.8						
MKAR				Lg	Lg	09 29 22.0	
	0.3nm,0.3s,baz=33,slow=29,SNR=5.6						

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*ISCJB **18** 09:31:32.7±0.3, 35.°58N±0.°03×69.°79E±0.°05, h90^{km}, mb3.8/14, Error ellipse: s-maj=5.3km s-min=3.9km az=1.9*

*IDC **18** 09:31:32.2±5.6, 35.°43N×69.°66E, h75^{km}±50^{km}, mb3.7/10, mb1 3.8/13, mb1mx3.4/60, mbtmp4.1/13, ML4.4/4, MS2.8/2, Ms1 2.8/2, ms1mx2.3/35, Error ellipse: s-maj=33.5km s-min=16.9km az=12.0*

*NNC **18** 09:31:34.4±1.8, 37.°09N×71.°51E, h0^{km}, mb4.7, mpv4.6, Error ellipse: s-maj=15.3km s-min=9.4km az=154.0*

*NEIC **18** 09:31:34.3±2.1, 35.°56N×69.°71E, h96^{km}±9^{km}, mb4.0/6, Error ellipse: s-maj=8.6km s-min=5.5km az=186.0*

ISC 18 09:31:33.6±0.6**, 35.°54N**±0.°06×**69.°76E**±0.°06**, h90^{km}, n75, σ1.ˢ31**/81**, mb3.9**/14**, 7C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	1.16	211	ePn	Pn	09 31 56.0	+0.6
KBL				eSn	Sn	09 32 12.9	+1.1
CEP	Cherat	2.47	133	P	Pn	09 32 13.1	+1.0
CHGR	Chuyangaron	3.14	351	eP	Pn	09 32 34.7	+14
THW	Thamme Wali	3.20	148	P	Pn	09 32 22.0	+0.2
NIL	Nilore	3.45	122	ePn	Pn	09 32 26.0	+0.8
CHCP	Chirah Chowk	3.45	122	P	Pn	09 32 24.9	-0.3
GAR	Garm	3.48	7	ePn	Pn	09 32 27.4	+1.7
BTK	Batken	4.58	10	ePn	Pn	09 32 43.2	+2.6
ARSB	Arslanbob	6.30	23	ePn	Pn	09 33 04.2	+0.2
IUG	Iuzhnay	6.60	2	Pg	Pn	09 33 08.7	+0.7
	18nm,0.4s						
IUG				Lg	Lg	09 34 19.2	
	165nm,0.5s						
KK31	Karatay Array	7.57	4	ePn	Pn	09 33 21.4	+0.2
KK31	Karatay Array	7.57	4	P	Pn	09 33 21.3	+0.1
	20nm,0.6s,baz=196,slow=18,SNR=176						
KK31				⇑S	Sn	09 34 42.9	-2.5
	35nm,0.7s						
KKAR	Karatay Array	7.57	4	ePn	Pn	09 33 21.4	+0.2
UCH	Uchtor	7.63	28	P	Pn	09 33 22.7	+0.2
	SNR=60						
NRN	Naryn	7.65	38	ePn	Pn	09 33 23.0	+0.5
EKS2	Erkin-Say	7.76	23	P	Pn	09 33 24.6	+0.7
	SNR=39						
KZA	Kyzart	7.80	32	P	Pn	09 33 25.3	+0.6
	SNR=12						
AAK	Ala-Archa	7.98	26	P	Pn	09 33 28.3	+1.4
	23nm,0.3s,baz=192,slow=4.7,SNR=66						
AAK				S	Sn	09 34 53.9	-1.7
	4.1nm,0.3s,baz=276,slow=22,SNR=9.2						
AAK	Ala-Archa	7.98	26	ePn	Pn	09 33 27.8	+0.9
AAK				eSn	Sn	09 34 53.8	-1.9
AAK	Ala-Archa	7.98	26	⇑P	Pn	09 33 28.2	+1.2
	41nm,0.5s						
AAK				⇑S	Sn	09 34 53.7	-2.0
	124nm,1.1s						
AAK	Ala-Archa	7.98	26	P	Pn	09 33 27.8	+0.9
	SNR=49						
KBK	Karagaybulak	8.17	28	P	Pn	09 33 31.5	+2.0
	SNR=28						
FRU1	Bishkek	8.18	26	ePn	Pn	09 33 31.6	+2.0
ULHL	Ulahol	8.38	35	P	Pn	09 33 34.3	+1.8
	SNR=5.6						
CHMS	Chumysh	8.39	26	P	Pn	09 33 33.7	+1.3
	SNR=24						
BOOM	Boomskoye usch	8.44	33	ePn	Pn	09 33 34.8	+1.6
BOOM				eSn	Sn	09 35 06.2	-0.6
USP	Ospenovka	8.54	24	P	Pn	09 33 35.0	+0.6
	SNR=72						
TKM2	Tokmak 2	8.65	30	⇑P	Pn	09 33 36.2	+0.2
	15nm,0.4s						
TKM2				⇑S	Sn	09 35 09.9	-2.0
	21nm,0.9s						
TKM2	Tokmak 2	8.65	30	P	Pn	09 33 36.5	+0.4
	SNR=34						
SGDS	Sogindy	8.75	24	Pg	Pn	09 33 37.1	-0.2
	131nm,0.6s						
SGDS				Lg	Lg	09 35 09.3	
	24nm,0.3s						
KST	Kastek	8.90	31	Pg	Pn	09 33 40.0	+0.6
	29nm,0.5s						
KST				Lg	Lg	09 35 13.3	
	26nm,0.6s						
MTBS	Maitube	9.17	32	Pg	Pn	09 33 44.1	+1.1
	10nm,0.3s						
MTBS				Lg	Lg	09 35 21.6	
	22nm,0.6s						
GYA0B	ALIBECK ARRAY	9.64	288	ePn	Pn	09 33 49.1	-0.4
DANN	Dangsing	13.88	117	eP	Pn	09 34 45.1	-1.5
	16nm,0.3s						
KOLN	Koldanda	14.10	120	eP	Pn	09 34 46.5	-2.9
MAKZ	Makanchi	14.52	35	ePn	Pn	09 34 55.2	+0.7
MAKZ	Makanchi	14.52	35	⇓P	P	09 34 58.6	0.0
	11nm,1.1s						
MK31	Makanchi Array	14.65	36	ePn	Pn	09 34 56.9	+0.6
MK31	Makanchi Array	14.65	36	⇓P	Pn	09 34 56.4	+0.2
	8.2nm,1.1s,baz=215,slow=10,SNR=5.0						
MK32	Makanchi Array	14.65	36	ePn	Pn	09 34 55.6	-0.7
MKAR	Makanchi Array	14.65	36	P	Pn	09 34 55.6	-0.7
	0.3nm,0.3s,baz=222,slow=16,SNR=9.0						
MKAR				LR	LR	09 40 38.6	
	comp=Z,33nm,18.4s,baz=166,slow=37						
DMN	Daman	15.28	117	eP	Pn	09 35 03.1	-1.4
	20nm,0.6s						
AB31	Akbulak array	15.48	335	P	Pn	09 35 05.3	-1.4
	5.1nm,0.5s,baz=151,slow=13,SNR=124						
ABKAR	Akbulak array	15.48	335	ePn	Pn	09 35 05.4	-1.3
	7.7nm,0.5s						
PKIN	Phulchoki	15.51	116	eP	Pn	09 35 05.8	-1.6
	19nm,0.6s						
PKI	Pulchoki	15.52	116	eP	Pn	09 35 05.8	-1.9
	17nm,0.6s						
JIRN	Jiri	16.04	115	eP	Pn	09 35 14.2	-0.1
	20nm,0.3s						
KURBB	Kurchatov Arra	16.36	20	P	Pn	09 35 15.7	-1.9
	0.2nm,0.3s,baz=211,slow=11,SNR=17						
KURBB	Kurchatov Arra	16.36	20	⇓P	Pn	09 35 14.9	-2.7
	6.3nm,0.6s						
KURK	Kurchatov	16.47	20	eP	Pn	09 35 17.1	-1.8
	4.7nm,1.0s						
KURK	Kurchatov	16.47	20	⇑P	Pn	09 35 15.3	-3.6
	8.0nm,1.5s						
AKTO	Aktyubinsk	17.15	334	P	P	09 35 27.7	+0.1
	1.2nm,0.3s,baz=140,slow=13,SNR=30						
AKTO	Aktyubinsk	17.15	334	⇑P	Pn	09 35 26.6	-0.8
	11nm,0.6s						
BVAR	Borovoye Array	17.48	1	P	P	09 35 31.1	-0.2
	1.5nm,0.3s,baz=173,slow=11,SNR=12						
BRVK	Borovoye	17.52	1	eP	Pn	09 35 33.2	+1.4
	11nm,0.7s						
BRVK	Borovoye	17.52	1	⇓P	Pn	09 35 31.9	+0.1
	9.6nm,0.7s						
ZAA0	Zalesovo Array	21.20	25	eP	P	09 36 12.1	+0.4
	6.5nm,0.7s						
ZALV	Zalesovo Beam	21.20	25	P	P	09 36 11.6	-0.1
	6.8nm,0.5s,baz=222,slow=11,SNR=18						
ZALV				LR	LR	09 45 06.7	
	comp=Z,22nm,19.1s,baz=254,slow=38						
ZAA1	Zalesovo Array	21.21	25	eP	P	09 36 11.6	-0.1
KBZ	Khabaz	22.17	300	P	P	09 36 23.4	+1.3
	1.7nm,0.6s,baz=136,slow=12,SNR=3.0						
ARU	Arti	22.23	343	P	P	09 36 23.9	+1.3
	2.3nm,0.2s,baz=180,slow=10,SNR=4.9						
SONA0	Songino Array	29.71	54	eP	P	09 37 32.8	+1.6
SONM	Songino Array	29.71	54	P	P	09 37 32.7	+1.6
	0.6nm,0.4s,baz=253,slow=9.9,SNR=3.7						
AKASG	Malin Array Be	32.78	310	P	P	09 37 58.8	+0.9
	1.0nm,0.5s,baz=110,slow=8.4,SNR=7.9						
AKBB	Malin Array Si	32.78	310	eP	P	09 37 58.8	+0.9
	2.6nm,0.9s						
ARA0	ARCESS Array S	41.65	338	eP	P	09 39 13.3	+0.6
ARCES	ARCESS Array B	41.65	338	P	P	09 39 13.3	+0.6
	1.5nm,0.8s,baz=112,slow=9.7,SNR=5.0						
HFS	Hagfors	43.20	323	P	P	09 39 25.9	+0.6
	2.1nm,0.7s,baz=123,slow=11,SNR=4.6						
NB2	NORSAR Subarra	44.55	324	P	P	09 39 35.8	-0.3
	comp=Z,0.9nm,0.6s,baz=100,slow=8.6						
TOA1	Torodi Ar. Sit	64.69	268	eP	P	09 42 00.9	-1.5
TORD	Torodi Ar. Bea	64.69	268	P	P	09 42 00.9	-1.5
	comp=Z,1.1nm,0.5s,baz=51,slow=5.6,SNR=21						
WR1	Warramunga Arr	82.35	121	eP	P	09 43 45.8	+0.1
WRA	Warramunga Arr	82.35	121	P	P	09 43 45.8	0.0
	comp=Z,0.9nm,0.8s,baz=300,slow=5.7,SNR=3.6						
ASAR	Alice Springs	84.55	124	P	P	09 43 58.6	+1.7
	comp=Z,0.2nm,0.4s,baz=308,slow=4.8,SNR=3.9						
AS31	Alice Springs	84.55	124	eP	P	09 43 58.6	+1.6
	comp=Z,1.0nm,1.0s						

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*DDA **18** 09:31:41.0, 40.°09N×31.°82E, h7^{km}±3^{km}, ML2.6*

*ISK **18** 09:31:42.9, 40.°09N×31.°63E, h9^{km}, ML2.4/9*

ISC 18 09:31:41.6±1.2**, 40.°10N**±0.°03×**31.°77E**±0.°03**, h1^{km}**±11^{km}**, n17, σ0.ˢ81**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMIH	MIHALICIK	0.32	224	i P	Pb	09 31 48.6	-1.6
AUMIH				i S	Sg	09 31 53.0	+1.2
KIBS	BOLU	0.33	11	i P	Pg	09 31 48.1	+0.2
KIBS				i S	Sg	09 31 53.1	+0.9
KIBS				IAML_P			
	comp=Z,4μm,0.4s						
MDUB	Mudurnu	0.57	311	PG	Pg	09 31 53.3	+0.7
MDUB				SG	Sg	09 32 00.9	+0.8
CMDR	Camlidere-ANKA	0.67	54	i P	Pg	09 31 54.5	+0.1
CMDR				i S	Sb	09 32 05.6	-0.4
CMDR				IAML_P			
	comp=Z,6μm,0.3s						
SVRH	Sivrihisar-ESK	0.68	196	PG	Pb	09 31 55.8	-0.5
SVRH				SG	Sb	09 32 05.2	-1.0
BCAM	Yenicaga	0.75	17	i P	Pg	09 31 55.7	-0.3
BCAM				i S	Sg	09 32 04.5	-1.3
BCAM				IAML_P			
	comp=Z,1μm,0.4s						
BTAS	Taskesti	0.75	309	i P	Pb	09 31 56.6	-0.9
BTAS				i S	Sg	09 32 06.3	+0.4
BTAS				IAML_P			
	comp=Z,2μm,0.4s						
LOD	Lodumlu	0.79	105	PG	Pn	09 32 00.6	+0.6
LOD				SG	Sn	09 32 13.4	+0.9
ANTO	Ankara	0.82	106	PG	Pn	09 32 01.0	+0.6
SRCK	Saricakaya, Es	0.88	267	PG	Pg	09 31 58.4	-0.1
SRCK	Saricakaya, Es	0.88	267	i P	Pb	09 31 60.0	+0.3
SRCK				i S	Sn	09 32 15.2	+0.7
SRCK				IAML_P			
	comp=Z,2μm,0.5s						
CIFT	Cifteler, Eski	0.92	217	PG	Pb	09 31 59.4	-0.9
CIFT				SG	Sb	09 32 11.9	-1.1
GULT	Gulveren	1.02	290	PG	Pg	09 32 01.1	0.0
SAHE	Sakarya_HENDEK	1.03	317	i P	Pg	09 32 01.2	-0.1
SAHE				i S	Sn	09 32 18.8	+0.6
SAHE				IAML_P			
	comp=Z,750nm,0.3s						
GEYV	SAKARYA_Geyve	1.19	289	i P	Pn	09 32 05.5	+0.1
GEYV				i S	Sn	09 32 23.0	+0.8
GEYV				IAML_P			
	comp=Z,1μm,0.6s						
KIZT	Kizilcal	1.22	176	PN	Pn	09 32 06.9	+1.0
TVSB	Tavsanli	1.89	251	PN	Pn	09 32 14.9	-0.3

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*BJI **18** 09:32:26.7±0.0, 18.°78N×147.°43E, h28^{km}, mb4.8/13, mB4.9/12, Ms4.2/2, Ms7 4.0/3*

*NEIC **18** 09:32:33.5±0.8, 19.°20N×147.°21E, h48^{km}±10^{km}, mb4.6/53, Error ellipse: s-maj=31.5km s-min=13.6km az=109.0*

*ISCJB **18** 09:32:37.2±0.3, 19.°05N±0.°04×145.°58E±0.°10, h150^{km}, mb4.3/43, Error ellipse: s-maj=13.1km s-min=5.2km az=179.0*

*IDC **18** 09:32:41.4±2.0, 19.°12N×145.°59E, h171^{km}±20^{km}, mb3.8/22, mb1 3.9/24, mb1mx3.8/53, mbtmp4.3/24, MS3.2/2, Ms1 3.2/2, ms1mx2.5/36, Error ellipse: s-maj=16.6km s-min=10.8km az=83.0*

ISC 18 09:32:39.4±0.6**, 19.°10N**±0.°06×**145.°6E**±0.°2**, h150^{km}, n60, σ1.ˢ44**/47**, mb4.4**/43**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	2.39	177	ePn	Pn	09 33 16.2	-3.0
SARN				eSn	Sn	09 33 46.4	-3.5
ANA2	Anatahan	2.74	179	ePn	Pn	09 33 21.2	-2.4
ANA2				eSn	Sn	09 33 53.6	-4.1
GUMO	Guam	5.53	188	P	Pn	09 34 00.5	+0.6
	29nm,0.3s,baz=111,slow=2.8,SNR=17						
GUMO				S	Sn	09 35 07.8	+5.1
	25nm,0.3s,baz=360,slow=22,SNR=4.2						
GUMO	Guam	5.53	188	ePn	Pn	09 33 59.9	0.0
MJAR	Matsushiro Arr	18.57	341	P	P	09 36 44.5	-0.3
	0.1nm,0.3s,baz=170,slow=8.4,SNR=6.5						
MAJO	Matsushiro	18.57	341	eP	P	09 36 44.5	-0.3
JNU	Nakatsue	19.22	320	LR	LR	09 42 39.7	
	comp=Z,28nm,20.6s,baz=202,slow=31						
H11S3	WAKE ISLAND Hy	19.94	88	T	T	09 57 49.6	
	baz=275,slow=74,SNR=21						
H11S1	WAKE ISLAND Hy	19.95	88	T	T	09 57 50.2	
	baz=275,slow=74,SNR=20						
H11S2	WAKE ISLAND Hy	19.95	88	T	T	09 57 51.8	
	baz=275,slow=74,SNR=18						
H11N1	WAKE ISLAND Hy	20.06	85	T	T	09 58 08.5	
	baz=272,slow=74,SNR=4.6						
H11N2	WAKE ISLAND Hy	20.06	85	T	T	09 58 16.7	
	baz=272,slow=74,SNR=6.1						
H11N3	WAKE ISLAND Hy	20.07	85	T	T	09 58 25.1	
	baz=272						
KSRS	Korea Array	23.96	323	P	P	09 37 39.4	-0.5
	2.7nm,0.6s,baz=148,slow=8.7,SNR=12						
ASAJ	Asahikawa	25.07	355	P	P	09 37 51.1	+1.2
	5.5nm,0.5s,baz=218,slow=2.2,SNR=6.0						
NJ2	Nanjing	27.30	303	eP	P	09 38 26.4	+16
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
USRK	Ussuriysk Ar.	27.52	338	P	P	09 38 12.2	+0.4
	1.4nm,0.7s,baz=165,slow=12,SNR=7.1						
CN2	Changchun	29.89	330	eP	P	09 38 43.1	+10
CN2				esP	pP	09 38 56.0	-7.8
CN2				eS	S	09 43 41.8	+23
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,12.0s						
KLR	Kul'dur	32.07	343	P	P	09 38 52.0	+0.1
	7.5nm,0.5s,baz=141,slow=7.6,SNR=38						
PETK	Petropavlovsk-	35.21	13	P	P	09 39 19.6	+0.5
	1.6nm,0.6s,baz=165,slow=7.7,SNR=3.7						
PEA1	Petropavlovsk-	35.22	13	eP	P	09 39 19.6	+0.5
HHC	Hu-ho-hao-te	36.28	314	P	P	09 39 41.3	+13
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
CD2	Chengdu	39.52	296	eP	P	09 40 10.0	+14
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WRA	Warramunga Arr	40.35	197	P	P	09 40 02.6	+0.1
	4.4nm,0.8s,baz=13,slow=8.1,SNR=46						
SONM	Songino Array	42.80	321	P	P	09 40 22.5	+0.2
	1.1nm,0.4s,baz=125,slow=6.4,SNR=5.1						
ASAR	Alice Springs	44.02	196	P	P	09 40 32.4	+0.1
	0.4nm,0.4s,baz=16,slow=6.9,SNR=16						
SEY	Seymchan	44.04	4	P	P	09 40 32.6	+0.7
	1.7nm,0.5s,baz=160,slow=12,SNR=5.5						
WMQ	Urumqi	54.01	311	eP	P	09 42 03.8	+16
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,72nm,3.7s						
ZALV	Zalesovo Beam	57.67	322	P	P	09 42 12.5	-1.4
	1.2nm,0.4s,baz=103,slow=6.5,SNR=3.6						
MKAR	Makanchi Array	58.15	314	P	P	09 42 17.4	-0.1
	0.3nm,0.3s,baz=82,slow=9.7,SNR=7.9						
KDAK	Kodiak Island	59.06	33	P	P	09 42 23.3	-0.2
	11nm,1.2s,baz=231,slow=4.0,SNR=5.6						
CAST	Castle Rocks	60.77	27	eP	P	09 42 35.3	+0.2
	6.6nm,0.8s						
KURBB	Kurchatov Arra	60.99	318	P	P	09 42 36.2	-0.6
	1.0nm,0.4s,baz=92,slow=7.7,SNR=14						
BPAW	Bear Paw Mtn.	61.42	27	eP	P	09 42 39.8	+0.3
	9.7nm,0.9s						
MLY	Manley	61.78	26	eP	P	09 42 42.2	+0.3
	6.0nm,1.0s						
SML	Sawmill	62.05	29	eP	P	09 42 43.9	+0.1
	11nm,0.8s						
HDA	Harding Lake	63.21	27	eP	P	09 42 50.4	-1.0
	3.9nm,1.0s						
ILAR	Eielson Array	63.31	26	P	P	09 42 50.5	-1.6
	3.2nm,0.8s,baz=261,slow=5.3,SNR=31						
ILB	Eielson Array	63.31	26	eP	P	09 42 50.7	-1.3
	4.3nm,0.9s						
PAX	Paxson	63.58	28	eP	P	09 42 54.0	0.0
	3.3nm,0.7s						
RIDG	Independent Ri	63.99	28	eP	P	09 42 56.3	-0.3
	5.7nm,0.8s						
DOT	Dot Lake	64.32	28	eP	P	09 42 58.7	0.0
	4.6nm,0.7s						
SCRK	Sand Creek	64.41	27	eP	P	09 42 59.3	0.0
	7.6nm,1.0s						
EGAK	Eagle	65.73	27	eP	P	09 43 08.3	+0.6
	1.8nm,0.9s						
BVAR	Borovoye Array	66.13	320	P	P	09 43 10.1	-0.4
	1.0nm,0.3s,baz=95,slow=6.7,SNR=8.6						
DAWY	Dawson	66.43	28	eP	P	09 43 12.6	+0.4
	3.1nm,0.8s						
BTK	Batken	66.51	306	eP	P	09 43 27.6	+14
	16nm,0.3s						
HYT	Haines Junctio	67.12	31	eP	P	09 43 16.9	+0.1
	8.0nm,0.8s						
INK	Inuvik	69.03	23	P	P	09 43 28.2	-0.2
	6.7nm,0.7s,baz=304,slow=9.8,SNR=9.1						
DLBC	Dease Lake	70.99	34	LR	LR	10 15 27.1	
	comp=Z,35nm,18.0s,baz=307,slow=36						
YKA	Yellowknife Ar	77.66	28	P	P	09 44 18.7	-0.3
	4.3nm,0.6s,baz=291,slow=5.4,SNR=22						
WVOR	Wild Horse Val	81.44	48	eP	P	09 44 40.4	+0.3
	4.3nm,0.8s						
ARCES	ARCESS Array B	82.10	342	P	P	09 44 42.3	-0.5
	3.7nm,0.7s,baz=72,slow=7.8,SNR=12						
NVAR	Mina Array Bea	82.94	52	P	P	09 44 48.3	+0.2
	6.0nm,0.7s,baz=267,slow=5.9,SNR=57						
YHB	Horse Butte	85.72	44	eP	P	09 45 03.2	+1.3
	8.7nm,0.9s						
YMR	Madison River	85.90	44	eP	P	09 45 04.3	+1.5
	10nm,0.8s						
FINES	FINESS Array B	86.50	335	P	P	09 45 03.2	-1.9
	2.9nm,0.4s,baz=72,slow=4.5,SNR=45						
PDAR	Pinedale Array	87.59	45	P	P	09 45 10.3	-0.7
	0.3nm,0.4s,baz=93,slow=1.4,SNR=4.4						
HFS	Hagfors	91.99	338	P	P	09 45 28.8	-2.2
	0.8nm,0.3s,baz=84,slow=4.6,SNR=8.2						
LPAZ	La Paz	147.74	90	PKPbc	PKPdf	09 52 08.3	+3.3
	1.1nm,0.4s,baz=294,slow=3.7,SNR=8.1						

TRN 18 09:44:26.7, 10.°98N×62.°12W, h115^{km}, MD3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.78	115	eP	Pn	09 44 46.5	+0.4
TRN	Trinidad (W)	0.78	115	e	Pn	09 44 57.1	+11
TRN				eS	Sn	09 45 00.4	-0.5
TPP	Pointe-a-Pierr	0.94	135	eP	Pn	09 44 48.5	+0.8
TPP				eS	Sn	09 45 02.8	-0.7
TBH	Brigand Hill	1.15	115	eP	Pn	09 44 50.7	+0.8
TBH				eS	Sn	09 45 05.9	-1.5
GRGR	Grenville	1.23	22	eP	Pn	09 44 49.9	-0.9
GRGR				eS	Sn	09 45 08.4	-0.5
GRHS	Sauteurs	1.32	21	eP	Pn	09 44 52.0	+0.3
GRHS				eS	Sn	09 45 10.8	0.0
GRSS	Sisters	1.40	21	eP	Pn	09 44 53.2	+0.5
GRSS				eS	Sn	09 45 11.9	-0.4
TOSP	Speyside	1.59	78	eP	Pn	09 44 54.8	0.0
TOSP				eS	Sn	09 45 16.5	+0.3
FCV	Fort Charlotte	2.33	22	eP	Pn	09 45 04.2	+0.1
FCV				eS	Sn	09 45 32.0	-0.7
SVB	Belmont	2.43	20	eP	Pn	09 45 05.8	+0.4
SVB				eS	Sn	09 45 33.8	-1.3
SVV	Soufriere Volc	2.48	21	eP	Pn	09 45 06.4	+0.3
SVV				eS	Sn	09 45 34.7	-1.7
SSV	Crater Summit	2.50	21	eP	Pn	09 45 06.5	+0.1
SSV				eS	Sn	09 45 35.8	-1.1
SFAN	Fancy Village	2.56	21	eP	Pn	09 45 07.3	+0.2
SFAN				eS	Sn	09 45 37.2	-0.9
MCLT	Moule a Chique	2.95	23	eP	Pn	09 45 12.0	-0.2
MCLT				eS	Sn	09 45 46.0	-1.2
SLDE	Delcer	2.99	20	eP	Pn	09 45 12.8	0.0
SLDE				eS	Sn	09 45 47.0	-1.2
SLB	Belfond	3.02	20	eP	Pn	09 45 13.1	0.0
SLB				eS	Sn	09 45 47.0	-2.0
SLPA	Patience	3.09	22	eP	Pn	09 45 15.0	+1.0
SLPA				eS	Sn	09 45 48.0	-2.4
SLBI	Saint Lucia, B	3.22	20	eP	Pn	09 45 15.5	-0.3
SLBI				eS	Sn	09 45 52.0	-1.7
SLW	Petit Monier	3.23	21	eP	Pn	09 45 15.5	-0.5
SLW				eS	Sn	09 45 51.9	-2.1
FDF	Fort de France	3.85	14	eP	Pn	09 45 23.6	-0.5
FDF				eS	Sn	09 46 05.9	-2.7
DLPL	La Plaine	4.41	11	eP	Pn	09 45 32.1	+0.5
DLPL	La Plaine	4.41	11	eS	Sn	09 46 19.6	-2.5
MDVC	Dominica, Viel	4.66	9	eS	Sn	09 46 28.2	+0.2

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*DSN **18** 09:53:23.1±3.3, 26.°71N×58.°20E, h10^{km}, ML3.7/7, Error ellipse: s-maj=47.4km s-min=15.1km az=5.0*

*ISCJB **18** 09:53:24.6±0.8, 26.°77N±0.°04×58.°05E±0.°07, h10^{km}, Error ellipse: s-maj=9.2km s-min=5.4km az=176.0*

*TEH **18** 09:53:26.9, 26.°78N×57.°72E, h8^{km}, ML3.5*

*OMAN **18** 09:53:28.4±4.4, 26.°95N×58.°01E, h34^{km}, ml3.5/12, Error ellipse: s-maj=46.7km s-min=17.1km az=5.0*

*THR **18** 09:53:29.7, 26.°67N×57.°69E, h18^{km}, ML3.5*

ISC 18 09:53:26.2±0.9**, 26.°61N**±0.°04×**57.°93E**±0.°04**, h10^{km}, n52, σ1.ˢ92**/49**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	0.98	189	ePg	Pn	09 53 49.1	+3.1
KHNJ	Kahnooj	1.35	352	ePg	Pn	09 53 49.3	-1.9
NIAN	Nian	1.36	314	ePg	Pn	09 53 51.7	+0.4
NIAN				IAMB	IAmb	09 54 15.4	
	comp=Z,0.0nm,0.4s						
BANOM	Banah	1.61	245	eP	Pb	09 53 55.7	-0.5
	SNR=86						
BANOM	Banah	1.61	245	P	Pg	09 53 57.4	+0.2
	SNR=30						
BANOM				S	Sg	09 54 19.5	+1.3
SHME	Shamm	1.70	251	eP	Pb	09 53 56.7	-0.9
	SNR=30						
SHME				S	Sg	09 54 22.0	+1.2
SHME	Shamm	1.70	251	ePn	Pb	09 53 56.9	-0.7
BNDS	Bandar-Abbas	1.76	297	AML	AML	09 54 21.9	
	comp=N,455nm,0.3s						
BNDS				AML	AML	09 54 25.0	
	comp=E,686nm,0.3s						
GENO	Geno	1.76	297	ePg	Pn	09 53 57.7	+0.8
GENO				IAMB	IAmb	09 54 26.9	
	comp=Z,0.0nm,0.4s						
MDH	Madha	1.96	229	eP	Pn	09 53 58.5	-1.1
	SNR=14						
MDH	Madha	1.96	229	P	Pn	09 53 59.8	+0.3
MDH	Madha	1.96	229	ePn	Pn	09 53 58.5	-1.1
MSFE	Esma-Masafi	2.02	232	P	Pn	09 53 59.4	-1.0
MSFE	Esma-Masafi	2.02	232	ePn	Pn	09 53 59.4	-1.0
UOSS	Minazif	2.27	224	eP	Pn	09 54 03.0	-0.9
	SNR=6.6						
UOSS	Minazif	2.27	224	P	Pb	09 54 06.9	-0.4
UOSS	Minazif	2.27	224	ePn	Pn	09 54 03.0	-0.9
HATD	Hatta, Dubai	2.40	223	P	Pn	09 54 06.6	+0.9
HATD	Hatta, Dubai	2.40	223	P	Pb	09 54 08.9	-0.7
	SNR=5.5						
HATD	Hatta, Dubai	2.40	223	ePn	Pb	09 54 07.7	-1.9
CHBR	Chabahar	2.51	113	ePn	Pg	09 54 14.7	+0.4
CHBR	Chabahar	2.51	113	Pn	Pg	09 54 14.7	+0.4
ASHO	Ashiyiah	2.56	222	P	Pb	09 54 11.4	-0.8
ASHO	Ashiyiah	2.56	222	ePn	Pn	09 54 07.8	+0.1
NAZ	Nazwa, Dubai	2.60	232	ePn	Pn	09 54 09.8	+1.4
FAQ	Al Faqa, Dubai	2.81	229	P	Pn	09 54 12.8	+1.6
FAQ	Al Faqa, Dubai	2.81	229	P	Pb	09 54 16.3	-0.2
FAQ	Al Faqa, Dubai	2.81	229	ePn	Pn	09 54 13.0	+1.8
HOQ	Hoqain	3.06	191	P	Pn	09 54 15.3	+0.5
	SNR=6.2						
ASUD	Al Ashush, Dub	3.07	231	iP	Pn	09 54 16.6	+1.9
	SNR=17						
ASUD	Al Ashush, Dub	3.07	231	P	Pb	09 54 18.0	-2.9
	SNR=17						
NGRK	Negar Kerman	3.21	341	IAMB	IAmb	09 55 14.1	
	comp=Z,0.0nm,0.5s						
ALNE	Al Ain	3.22	218	iP	Pn	09 54 17.0	+0.2
	SNR=14						
ALNE	Al Ain	3.22	218	ePn	Pn	09 54 18.9	+2.1
CHMN	Cheshme madani	3.26	354	IAMB	IAmb	09 54 29.3	
	comp=Z,0.0nm,0.4s						
WSAR	Wadi Sarin	3.41	169	P	Pn	09 54 21.3	+1.8
	SNR=7.5						
KRBR	Kerman	3.52	343	ePn	Pn	09 54 24.4	+3.2
KRBR	Kerman	3.52	343	AML	AML	09 55 29.1	
	comp=E,126nm,0.8s						
KRBR	Kerman	3.52	343	Pn	Pn	09 54 24.4	+3.2
SMDO	Samad	3.54	178	P	Pn	09 54 23.1	+1.8
	SNR=7.4						
BSY	Bisya	3.90	190	P	Pb	09 54 31.0	-4.2
	SNR=8.0						
ZHSF	Zahedan	3.91	39	ePn	Pn	09 54 32.4	+5.9
ZHSF	Zahedan	3.91	39	Pn	Pn	09 54 32.4	+5.9
GHIR	Ghir-Karzin	4.70	292	ePn	Pn	09 54 38.9	+1.6
GHIR	Ghir-Karzin	4.70	292	Pn	Pn	09 54 38.9	+1.6
MZR	Muzera	5.41	229	ePn	Pn	09 54 47.3	+0.3
BSRN	Basiran	5.44	11	ePn	Pn	09 54 51.7	+4.2
BSRN	Basiran	5.44	11	Pn	Pn	09 54 51.7	+4.2
BSRN				Sg	Sg	09 56 17.4	-3.5
IKAZ	Kazeroun	6.23	302	ePn	Pn	09 54 57.3	-1.3
YZKH	Yazd	6.45	334	ePn	Pn	09 55 04.1	+2.7
YZKH	Yazd	6.45	334	Pn	Pn	09 55 04.1	+2.7
IRAM	Ramesheh	7.10	318	ePn	Pn	09 55 11.0	+0.7

IDC ***18*** *09:59:30.1±0.7, 17°.38S×167°.71E, h0^{km}, mb4.5/18, mb1 4.7/20, mb1mx4.5/45, mbtmp4.6/20, ML4.5/2, MS4.5/20, Ms1 4.5/20, ms1mx4.5/24, Error ellipse: s-maj=21.5km s-min=14.6km az=92.0*

BJI ***18*** *09:59:31.9±0.0, 17°.50S×167°.80E, h19^{km}, mb4.9/48, mB5.4/44, Ms5.1/38, Ms7 4.7/36*

NEIC ***18*** *09:59:32.8±1.8, 17°.41S×167°.78E, h18^{km}±4^{km}, mb5.1/56, Error ellipse: s-maj=16.9km s-min=10.5km az=77.0*

ISCJB ***18*** *09:59:32.7±0.2, 17°.49S±0°.03×167°.76E±0°.04, h27^{km}, mb5.1/82, MS4.7/50, Error ellipse: s-maj=5.2km s-min=3.8km az=18.6*

MOS ***18*** *09:59:34.1±1.3, 17°.36S×167°.56E, h33^{km}, mb5.0/36, MS4.6/11, Error ellipse: s-maj=10.8km s-min=8.8km az=120.4*

GCMT ***18*** *09:59:35.8±0.1, 17°.39S±0°.01×167°.50E±0°.01, h16^{km}, MW5.4/118, Moment Tensor Solution. s109,c182; s118,c199; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.91±.02; $M_{\theta\theta}$0.01±.01; $M_{\phi\phi}$-0.92±.01; $M_{r\theta}$0.32±.04; $M_{\theta\phi}$0.12±.01; $M_{\phi r}$-1.06±.05; Best double couple: $M_0$1.44000×10^{17} NP1:ϕ_s165.00000°, δ70.00000°, λ85.00000°. NP2:ϕ_s1.00000°, δ20.00000°, λ104.00000°. Principal axes: T 1.4340, Plg64.0000°, Azm67.0000°; N 0.0120, Plg5.0000°, Azm167.0000°; P -1.4450, Plg25.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 09:59:34.1±0.3**, 17°.49S**±0°.04×**167°.84E**±0°.06**, h27**^{km}**, n259, σ1^{s}92**/261**, mb5.1**/82**, MS4.8**/51**, 14C-6D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.97	177	ePn	Pn	10 00 33.1	-0.2
MARNC				eSn	Sn	10 01 14.4	-4.5
DZM	Mont Dzumac	4.74	196	ePn	Pn	10 00 42.8	-1.1
	52nm,0.3s						
DZM				eSn	Sn	10 01 32.4	-5.7
	73nm,0.3s						
DZM	Mont Dzumac	4.74	196	Pn	Pn	10 00 41.8	-2.1
	6.3nm,0.3s,baz=66,slow=8.6,SNR=100						
DZM				Sn	Sn	10 01 36.0	-2.1
	25nm,0.3s,baz=310,slow=21,SNR=7.5						
DZM	Mont Dzumac	4.74	196	ePn	Pn	10 00 43.8	-0.1
DZM				eSn	Sn	10 01 36.0	-2.1
ONTNC	Ouen Toro	4.96	195	ePn	Pn	10 00 47.2	+0.3
ONTNC				eSn	Sn	10 01 42.1	-1.4
PINNC	Pines Island,	5.11	184	ePn	Pn	10 00 50.8	+1.9
PINNC				eSn	Sn	10 01 45.8	-1.2
HNR	Honiara	11.09	315	Pn	Pn	10 02 08.0	-3.0
	11nm,0.3s,baz=167,slow=3.3,SNR=5.8						
HNR				LR	LR	10 05 49.0	
	comp=Z,4µm,18.2s,baz=141,slow=35						
HNR	Honiara	11.09	315	ePn	Pn	10 02 09.0	-2.0
HNR	Honiara	11.09	315	P	Pn	10 02 08.0	-3.0
HNR				pmax	pmax		
	comp=Z,11nm,0.3s						
HNR				MLR	MLR		
	comp=Z,4µm,18.2s						
HNR	Honiara	11.09	315	eP	Pn	10 02 08.0	-3.0
EIDS	Eidsvold	17.44	240	eP	P	10 03 35.9	-0.7
	comp=Z,259nm,1.9s						
EIDS	Eidsvold	17.44	240	P	Pn	10 03 35.3	-0.3
	baz=17,SNR=4.0						
OUZ	Omahuta	18.39	165	eP	Pn	10 03 48.4	+1.3
	comp=Z,68nm,1.3s						
ARMA	Armidale	19.59	226	eP	Pn	10 04 01.4	-0.3
	comp=Z,63nm,1.4s						
ARMA	Armidale	19.59	226	P	Pn	10 04 01.7	-0.1
	baz=20,SNR=5.2						
RMQ	Roma	19.80	240	P	Pn	10 04 03.7	-0.6
	baz=20,SNR=20						
CTA	Charters Tower	20.59	259	P	P	10 04 10.8	-0.5
	comp=Z,18nm,0.7s,baz=77,slow=13,SNR=10						
CTA				LR	LR	10 10 52.5	
	comp=Z,2µm,21.5s,baz=97,slow=33						
CTA	Charters Tower	20.59	259	P	P	10 04 10.8	-0.5
	baz=20						
CTAO	Charters Tower	20.59	259	eP	P	10 04 10.5	-0.8
	comp=Z,128nm,1.3s						
CTAO	Charters Tower	20.59	259	eP	P	10 04 10.5	-0.8
CTAO				pmax	pmax		
	comp=Z,128nm,1.3s						
PMG	Port Moresby	21.64	289	LR	LR	10 11 23.9	
	comp=Z,2µm,18.0s,baz=99,slow=33						
PMG	Port Moresby	21.64	289	⇑eP	P	10 04 21.5	-1.0
PMG				pmax	pmax		
	comp=Z,65nm,1.2s						
HIZ	Hauiti	21.82	165	eP	P	10 04 27.6	+3.3
	comp=Z,167nm,1.3s						
MXZ	Matakaoa Point	22.01	157	eP	P	10 04 28.2	+1.9
	comp=Z,151nm,1.6s						
URZ	Urewera	22.23	160	P	P	10 04 30.7	+2.0
	comp=Z,26nm,1.0s,baz=13,slow=4.2,SNR=13						
URZ				LR	LR	10 11 23.2	
	comp=Z,2µm,19.6s,baz=350,slow=32						
URZ	Urewera	22.23	160	eP	P	10 04 31.2	+2.5
	comp=Z,237nm,1.6s						
MTSU	Mount Surprise	22.40	265	P	P	10 04 29.8	-0.9
	baz=22,SNR=13						
BKZ	Black Stump Fm	22.88	162	eP	P	10 04 37.3	+1.7
	comp=Z,117nm,1.6s						
COEN	Coen	23.99	275	eP	P	10 04 46.3	-0.4
	comp=Z,199nm,1.8s						
COEN	Coen	23.99	275	P	P	10 04 46.5	-0.2
	baz=24,SNR=6.1						
YNG	Young	24.13	222	P	P	10 04 48.4	+0.5
	baz=24,SNR=6.5						
CNB	Canberra Magne	24.19	219	P	P	10 04 48.9	+0.4
	baz=24,SNR=7.9						
BFZ	Birch Farm	24.22	164	eP	P	10 04 46.3	-2.3
	comp=Z,141nm,1.5s						
CAN	Canberra	24.42	220	eP	P	10 04 51.2	+0.7
	comp=Z,90nm,1.4s						
CAN	Canberra	24.42	220	eP	P	10 04 51.2	+0.7
CAN				pmax	pmax		
	comp=Z,90nm,1.4s						
CMSA	Cobar Meteorol	24.46	231	P	P	10 04 50.9	0.0
	baz=24,SNR=21						
THZ	Tophouse	24.58	171	eP	P	10 04 54.9	+3.0
	comp=Z,180nm,1.8s						
KHZ	Kahutara	25.32	170	eP	P	10 04 59.6	+1.1
	comp=Z,36nm,1.1s						
RPZ	Rata Peaks	26.28	175	LR	LR	10 15 16.6	
	comp=Z,2µm,18.6s,baz=1.0,slow=36						
QIS	Mount Isa	26.85	259	P	P	10 05 12.3	-0.4
	baz=27,SNR=5.1						
STKA	Stephens Creek	27.72	234	P	P	10 05 21.1	+0.8
	comp=Z,14nm,0.8s,baz=48,slow=8.6,SNR=8.9						
STKA				LR	LR	10 15 03.2	
	comp=Z,1µm,20.4s,baz=64,slow=34						
STKA	Stephens Creek	27.72	234	eP	P	10 05 20.3	0.0
	comp=Z,13nm,1.2s						
STKA	Stephens Creek	27.72	234	P	P	10 05 21.8	+1.4
	baz=28,SNR=8.8						
STKA	Stephens Creek	27.72	234	eP	P	10 05 20.3	0.0
STKA				pmax	pmax		
	comp=Z,13nm,1.2s						
WB2	Warramunga Arr	31.78	260	eP	P	10 05 54.8	-1.7
	comp=Z,66nm,1.5s						
WRAB	Tennant Creek	31.78	260	eP	P	10 05 54.1	-2.4
	comp=Z,77nm,1.6s						
WRAB	Tennant Creek	31.78	260	eP	P	10 05 54.1	-2.4
WRAB				pmax	pmax		
	comp=Z,77nm,1.6s						
WRA	Warramunga Arr	31.79	260	P	P	10 05 53.9	-2.7
	comp=Z,5.5nm,0.9s,baz=84,slow=8.5,SNR=14						
WRA	Warramunga Arr	31.79	260	P	P	10 05 53.9	-2.7
WRA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ASAR	Alice Springs	32.30	253	P	P	10 05 58.5	-2.6
	comp=Z,9.4nm,0.8s,baz=80,slow=8.3,SNR=113						
ASAR				LR	LR	10 18 15.0	
	comp=Z,2µm,20.8s,baz=86,slow=35						
ASAR	Alice Springs	32.30	253	P	P	10 05 58.5	-2.6
ASAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ASAR				MLR	MLR		
	comp=Z,2µm,20.8s						
BBOO	Buckleboo	32.40	236	eP	P	10 06 01.5	-0.3
	comp=Z,79nm,1.4s						
KDU	Kakadu	34.44	273	P	P	10 06 17.2	-2.5
	baz=34,SNR=4.8						
MTN	Manton Dam	35.69	272	P	P	10 06 31.6	+1.1
	baz=36,SNR=3.3						
KNRA	Kununurra	37.45	267	P	P	10 06 43.0	-2.5
	baz=37,SNR=8.4						
WRKA	Warakurna	37.50	252	P	P	10 06 44.1	-1.8
	baz=37,SNR=9.5						
TBI	Tubuai	40.33	106	eS	S	10 13 15.8	-0.2
	comp=Z,686nm,26.0s						
TBI				eLQ	LQ	10 16 35.1	
	comp=Z,3µm,26.8s						
TBI				eLR	LR	10 18 18.0	
	comp=Z,1µm,28.8s,baz=283						
PPT2	Papeete2	40.55	97	eS	S	10 13 19.0	-0.4
	comp=Z,828nm,24.8s						
PPT2				eLQ	LQ	10 16 41.1	
	comp=Z,1µm,24.8s						
PPT2				eLR	LR	10 18 24.3	
	comp=Z,2µm,25.2s,baz=252						
PPT	Papeete	40.55	97	LR	LR	10 19 43.2	
	comp=Z,1µm,21.4s,baz=262,slow=30						
SOEI	Soe	42.95	274	eP	P	10 07 32.9	+1.5
	comp=Z,97nm,1.3s						
PSA00	Pilbara Seismi	45.27	257	eP	P	10 07 52.9	+3.2
	comp=Z,111nm,1.4s						
MEEK	Meekatharra	46.28	250	P	P	10 07 57.0	-0.7
	baz=46,SNR=14						
MORW	Morawa	48.62	246	eP	P	10 08 14.7	-1.1
	comp=Z,116nm,1.6s						
MORW	Morawa	48.62	246	P	P	10 08 15.8	0.0
	baz=48,SNR=4.1						
TAOE	Nuku Hiva Isla	51.24	87	eS	S	10 15 51.7	-1.7
	comp=Z,972nm,25.5s						
TAOE				eLR	LR	10 23 21.5	
	comp=Z,2µm,25.3s						
KSM	Kuching	59.70	282	eP	P	10 09 39.1	+2.3
	comp=Z,31nm,1.1s						
VNDA	Vanda	60.13	181	P	P	10 09 39.2	+0.4
	comp=Z,1.7nm,0.8s,baz=347,slow=8.7,SNR=8.2						
VNDA				LR	LR	10 31 03.9	
	comp=Z,151nm,20.8s,baz=16,slow=31						
VNDA	Vanda	60.13	181	eP	P	10 09 39.4	+0.7
MJAR	Matsushiro Arr	60.59	333	P	P	10 09 40.9	-1.5
	comp=Z,7.5nm,0.9s,baz=162,slow=7.4,SNR=9.5						
MJAR				LR	LR	10 36 29.1	
	comp=Z,111nm,18.7s,baz=220,slow=37						
MAJO	Matsushiro	60.60	333	⇓eP	P	10 09 44.6	+2.1
MAJO				pmax	pmax		
	comp=Z,18nm,1.2s						
MAT	Matsushiro	60.60	333	P	P	10 09 40.7	-1.8
MAT				S	S	10 17 58.4	+1.4
KUR	Kuril'sk	65.01	345	eP	P	10 10 12.7	+1.0
KUR				ePPP	PPP	10 14 14.1	
KUR				pmax	pmax		
	comp=Z,98nm,1.5s						
KUR				MLR	MLR		
	comp=Z,400nm,14.0s						
TJN	Taejon	65.83	325	⇓eP	P	10 10 18.8	+1.7
KSRS	Korea Array	66.32	326	P	P	10 10 19.8	-0.4
	comp=Z,0.8nm,0.7s,baz=161,slow=7.7,SNR=3.2						
QIZ	Qiongzhong	67.56	300	P	P	10 10 30.1	+1.5
QIZ				S	S	10 19 31.3	+7.3
QIZ				SS	SS	10 23 46.6	+1.4
QIZ				LR	LR		
	comp=Z,180nm,16.2s						
QIZ				LR	LR		
	comp=Z,200nm,16.7s						
QIZ				LR	LR		
	comp=Z,320nm,15.7s						
YSS	Yuzh-Sakhalins	68.01	342	eP	P	10 10 29.8	-1.0
	comp=Z,24nm,0.8s						
YSS	Yuzh-Sakhalins	68.01	342	ceP	P	10 10 30.3	-0.5
YSS				e		10 10 54.0	
YSS				eS	S	10 19 29.8	+1.6
YSS				ePPS	PPS	10 20 27.7	
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				pmax	pmax		
	comp=Z,300nm,5.0s						
YSS				smax	smax		
	comp=E,300nm,7.0s						
YSS				MLR	MLR		
	comp=Z,600nm,19.0s						
YSS				MLR	MLR		
	comp=N,400nm,18.0s						
YSS				MLR	MLR		
	comp=E,300nm,17.0s						
NJ2	Nanjing	68.03	316	P	P	10 10 34.9	+3.6
NJ2				pmax	pmax		
	comp=E,16nm,0.9s						
USA0B	Ussuriysk Arra	69.58	333	eP	P	10 10 41.3	+0.7
	comp=E,68nm,1.6s						
USRK	Ussuriysk Ar.	69.58	333	P	P	10 10 40.6	0.0
	comp=E,5.3nm,0.9s,baz=134,slow=5.5,SNR=12						
USRK				LR	LR	10 37 24.9	
	comp=E,152nm,21.2s,baz=136,slow=33						
PET	Petropavlovsk	70.67	354	c iP	P	10 10 45.7	-1.4
PET				eS	S	10 19 55.4	-4.0
PET				pmax	pmax		
	comp=Z,100nm,15.2s						
PSI	Prapat	70.82	279	P	P	10 10 48.8	-0.3
	comp=Z,20nm,1.0s,baz=160,slow=5.7,SNR=11						
PSI	Prapat	70.82	279	eP	P	10 10 49.9	+0.8
	comp=Z,37nm,1.1s						
DL2	Dalian	70.83	323	P	P	10 10 49.3	+0.9
DL2				sP	pwP	10 11 03.3	+3.0
DL2				S	S	10 20 02.6	+0.8
DL2				pmax	pmax		
	comp=Z,34nm,1.0s						
DL2				pmax	pmax		
	comp=Z,130nm,7.0s						
DL2				LR	LR		
	comp=Z,380nm,18.1s						
DL2				LR	LR		
	comp=Z,350nm,14.6s						
DL2				LR	LR		
	comp=Z,440nm,16.6s						
PEA0B	Petropavlovsk-	70.85	354	eP	P	10 10 46.1	-2.2
	comp=Z,70nm,1.7s						
PETK	Petropavlovsk-	70.85	354	P	P	10 10 47.0	-1.3
	comp=Z,4.1nm,0.8s,baz=143,slow=8.7,SNR=6.7						
PETK				LR	LR	10 38 26.5	
	comp=Z,412nm,19.7s,baz=161,slow=33						
PETK	Petropavlovsk-	70.85	354	P	P	10 10 47.0	-1.3
PETK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDJ	Mudanjiang	70.96	332	P	P	10 10 49.1	0.0
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,340nm,5.1s						
TYV	Tymovskoe	71.57	343	eP	P	10 10 52.5	-0.1
TYV				eS	S	10 20 01.4	-8.5
TYV				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TYV				pmax	pmax		
	comp=Z,200nm,5.6s						
TYV				smax	smax		
	comp=E,300nm,8.5s						
CN2	Changchun	72.28	329	eP	P	10 10 57.3	+0.2
CN2				eS	S	10 20 18.6	+0.2
CN2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=E,200nm,4.0s						
CN2				LR	LR		
	comp=E,300nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=E,400nm,14.0s						
QSPA	South Pole Qui	72.55	180	eP	P	10 10 59.2	+0.6
	comp=E,56nm,1.3s						
NONG	Nongkai	72.78	296	P	P	10 11 04.2	+3.6
	comp=E,0.6nm,1.3s						
GRNR	Gornyy	73.36	340	eP	P	10 11 03.1	-0.2
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
GYA	Guiyang	73.73	305	eP	P	10 11 09.3	+3.1
GYA				S	S	10 20 35.4	-0.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,5.3s						
GYA				LR	LR		
	comp=Z,190nm,14.0s						
GYA				LR	LR		
	comp=Z,220nm,19.3s						
GYA				LR	LR		
	comp=Z,300nm,17.7s						
KLR	Kul'dur	73.74	336	P	P	10 11 04.8	-0.8
	comp=Z,6.3nm,1.0s,baz=131,slow=5.9,SNR=16						
KLR	Kul'dur	73.74	336	deP	P	10 11 06.1	+0.5
KLR				pmax	pmax		
	comp=Z,12nm,1.1s						
NKL	Nikolayevsk	74.16	343	eP	P	10 11 05.8	-2.1
NKL				e		10 11 22.3	
NKL				e		10 13 54.5	
NKL				eS	S	10 20 38.0	-1.3
NKL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NKL				pmax	pmax		
	comp=N,7.0nm,1.1s						
NKL				pmax	pmax		
	comp=E,19nm,1.3s						
NKL				pmax	pmax		
	comp=Z,37nm,1.9s						
UTTA	Uttaradit	74.89	294	P	P	10 11 17.2	+4.3
	comp=Z,19µm,1.2s,comp=Z,247µm						
UTHA	Uthaitani	74.98	292	P	P	10 11 18.5	+5.0
	comp=Z,35µm,1.3s,comp=Z,450µm						
PHRA	Phrae	75.47	295	P	P	10 11 19.9	+3.6
	comp=Z,4.2nm,1.4s,comp=Z,487nm						
UMPA	Umpang Tak	75.75	292	P	P	10 11 23.3	+5.3
	comp=Z,34µm,1.2s						
XAN	Xi'an	75.95	313	P	P	10 11 21.9	+3.1
XAN				pP	pP	10 11 26.8	+0.5
XAN				PP	PP	10 14 08.5	-1.2
XAN				S	S	10 21 00.3	+0.1
XAN				SS	SS	10 25 50.0	-3.6
XAN				pmax	pmax		
	comp=Z,16nm,1.8s						
XAN				pmax	pmax		
	comp=Z,290nm,3.9s						
XAN				LR	LR		
	comp=Z,350nm,18.0s						
XAN				LR	LR		
	comp=Z,230nm,16.9s						
XAN				LR	LR		
	comp=Z,380nm,22.0s						
PAYA	Payao	76.14	296	P	P	10 11 24.9	+4.8
	comp=Z,31µm,1.2s						
KMI	Kunming	76.22	302	P	P	10 11 24.6	+3.8
KMI				pP	pP	10 11 29.0	+0.7
KMI				sP	PcP	10 11 32.3	-0.4
KMI				PP	PP	10 14 16.1	+3.7
KMI				S	S	10 21 06.9	+3.0
KMI				sS	sS	10 21 15.0	-1.1
KMI				SKS	SKSac	10 21 29.8	-0.8
KMI				SS	SS	10 26 00.0	+1.7
KMI				pmax	pmax		
	comp=Z,34nm,0.8s						
KMI				pmax	pmax		
	comp=Z,180nm,3.1s						
KMI				LR	LR		
	comp=Z,320nm,16.6s						
KMI				LR	LR		
	comp=Z,220nm,13.8s						
KMI				LR	LR		
	comp=Z,310nm,17.5s						
CMAR	Chiang Mai Arr	76.57	294	P	P	10 11 23.6	+1.0
	comp=Z,12nm,1.0s,baz=130,slow=4.1,SNR=4.6						
CMMT	Chiang Mai	76.71	295	P	P	10 11 27.5	+4.1
	comp=Z,13nm,1.4s,comp=Z,281nm						
HHC	Hu-ho-hao-te	78.03	320	P	P	10 11 32.8	+2.3
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,6.2s						
CD2	Chengdu	78.12	308	eP	P	10 11 32.0	+0.9
CD2				S	S	10 21 24.0	0.0
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,350nm,5.3s						
CD2				LR	LR		
	comp=Z,780nm,15.5s						
CD2				LR	LR		
	comp=Z,760nm,17.6s						
CD2				LR	LR		
	comp=Z,730nm,14.7s						
ZEA	Zeya	79.03	337	eP	P	10 11 35.8	+0.3

ZEA				*e*S	S	10 21 36.0	+3.3
ZEA				pmax	pmax		
	comp=Z,28nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,300nm,8.0s						
ZEA				smax	smax		
	comp=N,400nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,18.0s						
ZEA				MLR	MLR		
	comp=N,300nm,17.0s						
MAW	Mawson	79.54	202	P	P	10 11 39.8	+1.6
	comp=N,4.3nm,1.0s,baz=83,slow=7.5,SNR=6.5						
MAW				LR	LR	10 43 34.8	
	comp=N,369nm,19.2s,baz=95,slow=33						
MAW	Mawson	79.54	202	*e*P	P	10 11 39.8	+1.6
	comp=N,1.8nm,1.4s						
LZH	Lanzhou	80.57	312	*e*P	P	10 11 47.4	+2.9
LZH				pP	sP	10 11 52.8	-2.0
LZH				sP	pwP	10 11 55.3	-1.3
LZH				*e*S	S	10 21 53.0	+2.9
LZH				pmax	pmax		
	comp=N,74nm,1.1s						
LZH				pmax	pmax		
	comp=N,300nm,4.3s						
LZH				LR	LR		
	comp=N,1µm,16.8s						
LZH				LR	LR		
	comp=N,1µm,15.5s						
LZH				LR	LR		
	comp=N,1µm,17.3s						
SEY	Seymchan	81.08	353	⇑*e*P	P	10 11 46.7	+0.4
YAK	Yakutsk	84.82	343	*e*P	P	10 12 04.9	-0.8
YAK				*e*		10 15 21.2	
YAK				*e*S	S	10 22 25.8	-6.0
YAK				*e*SS	SS	10 28 08.2	+3.3
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,79nm,3.1s						
YAK				pmax	pmax		
	comp=N,47nm,2.7s						
YAK				pmax	pmax		
	comp=E,32nm,2.3s						
YAK				smax	smax		
	comp=N,97nm,5.3s						
YAK				smax	smax		
	comp=E,55nm,5.3s						
YAK				MLR	MLR		
	comp=Z,276nm,17.0s						
YAK				MLR	MLR		
	comp=N,220nm,16.0s						
YAK				MLR	MLR		
	comp=E,73nm,13.0s						
GTA	Gaotai	84.96	314	⇑P	P	10 12 08.0	+0.8
GTA				pP	pP	10 12 15.3	+0.5
GTA				sP	pwP	10 12 18.6	-0.7
GTA				SKS	S	10 22 26.9	-7.7
GTA				S	SKKSac	10 22 33.3	-3.0
GTA				sS	pS	10 22 44.0	-0.1
GTA				SS	SS	10 28 05.9	-2.4
GTA				pmax	pmax		
	comp=E,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=E,140nm,6.4s						
GTA				LR	LR		
	comp=E,220nm,17.5s						
GTA				LR	LR		
	comp=E,230nm,18.4s						
GTA				LR	LR		
	comp=E,350nm,19.7s						
TTA	Tatalina	85.02	16	*e*P	P	10 12 07.0	+0.2
	comp=E,19nm,1.7s						
TTA	Tatalina	85.02	16	*e*P	P	10 12 07.0	+0.2
TTA				pmax	pmax		
	comp=Z,19nm,1.7s						
SONM	Songino Array	85.03	324	P	P	10 12 06.8	-0.6
	comp=Z,4.4nm,1.0s,baz=132,slow=4.6,SNR=14						
SONM				LR	LR	10 51 36.5	
	comp=Z,172nm,18.1s,baz=102,slow=37						
BILL	Bilibino	85.30	359	⇑*i*P	P	10 12 06.9	-1.1
BILL				*e*		10 15 24.6	
BILL				*i* S	S	10 22 33.3	-3.1
BILL				pmax	pmax		
	comp=Z,15nm,1.3s						
BILL				MLR	MLR		
	comp=Z,155nm,17.0s						
SHL	Shillong	85.35	298	*e*P	P	10 12 10.0	+0.5
SYO	Syowa Base	86.23	196	⇓*i*P	P	10 12 11.6	-1.2
SYO	Syowa Base	86.23	196	⇑*e*PKiKP	PKiKP	10 17 18.0	-2.5
O02D	Mt. Diablo Mer	86.24	46	P	P	10 12 13.1	-0.4
	baz=244						
L02E	Cave Junction	86.58	44	P	P	10 12 16.4	+1.4
	baz=243						
N02D	Trinity Center	86.65	45	P	P	10 12 15.6	+0.1
	baz=244						
M02C	Callahan	86.74	45	P	P	10 12 17.0	+1.1
	baz=243						
K02D	Willamette Mer	86.79	43	P	P	10 12 18.1	+2.0
	baz=243						
O03E	Paynes Creek	86.97	46	P	P	10 12 16.1	-0.9
	baz=244						
YBH	Yreka Blue Hor	86.99	45	*e*P	P	10 12 17.2	+0.1
	comp=Z,19nm,1.6s						
YBH	Yreka Blue Hor	86.99	45	*e*P	P	10 12 17.2	+0.1
YBH				pmax	pmax		
	comp=Z,19nm,1.6s						
I02D	Swisshome	87.32	42	P	P	10 12 21.3	+2.8
	baz=243						
ISA	Isabella, Lake	87.43	51	P	P	10 12 20.3	+0.9
	baz=246						
L04D	Klamath Falls	87.47	44	P	P	10 12 19.1	-0.5
	baz=244						
EDW2	Edwards Air Fo	87.48	52	P	P	10 12 17.9	-1.8
	baz=247						
BFSC	Mount Baldy Ra	87.48	53	P	P	10 12 18.2	-1.5
	baz=247						
OMMB	Old Mammoth Mi	87.83	50	*e*P	P	10 12 21.8	+0.2
	comp=Z,9.3nm,1.3s						
WAKR	Walker	87.87	49	*e*P	P	10 12 21.9	+0.3
	comp=Z,21nm,1.5s						
I04A	Tendick Farm,	88.10	43	P	P	10 12 22.0	-0.3
	baz=244						
ZAK	Zakamensk	88.11	325	*e*P	P	10 12 21.1	-1.2
ZAK				pmax	pmax		
	comp=Z,15nm,1.8s						
SWSC	Sam W. Stewart	88.43	55	P	P	10 12 24.8	+0.7
	baz=248						
IRK	Irkutsk	88.53	327	*e*P	P	10 12 22.0	-2.1
IRK				pmax	pmax		
	comp=Z,30nm,3.0s						
TLY	Talaya	88.57	326	P	P	10 12 24.4	0.0
	comp=Z,0.6nm,0.3s,baz=156,slow=4.6,SNR=6.8						
TLY				LR	LR	10 53 01.2	
	comp=Z,135nm,18.3s,baz=138,slow=36						
TLY	Talaya	88.57	326	*ce*P	P	10 12 23.0	-1.4
J05D	Fort Rock, OR	88.65	44	P	P	10 12 25.3	+0.2
	baz=244						
NVAR	Mina Array Bea	88.66	49	P	P	10 12 24.9	-0.4
	comp=Z,2.2nm,1.0s,baz=227,slow=7.9,SNR=8.1						
NVAR				LR	LR	10 47 03.6	
	comp=Z,433nm,18.6s,baz=232,slow=32						
BELC	Belle Mtn. Jos	88.67	54	P	P	10 12 25.5	+0.1
	baz=248						
COLA	College	88.77	17	⇑*e*P	P	10 12 25.0	+0.1
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR	Eielson Array	88.97	18	P	P	10 12 22.9	-3.1
	comp=Z,0.5nm,0.7s,baz=241,slow=5.6,SNR=9.2						
ILAR				LR	LR	10 47 20.6	
	comp=Z,427nm,20.4s,baz=243,slow=32						
I05D	Terrebonne, OR	89.03	43	P	P	10 12 26.6	-0.2
	baz=244						
PINE	Pine Mountain	89.06	43	*e*P	P	10 12 26.9	-0.2
	comp=Z,11nm,1.1s						
SHOC	Shoshone, Teco	89.17	52	P	P	10 12 28.8	+1.3
	baz=248						
E04D	Cinebar	89.23	40	P	P	10 12 28.5	+1.0
	baz=244						
TUQ	Turquoise Moun	89.26	52	P	P	10 12 27.7	-0.5
	baz=248						
D03D	Eldon	89.36	39	P	P	10 12 28.9	+0.8
	baz=243						
IRM	Iron Mountain	89.38	54	P	P	10 12 29.3	+0.7
	baz=248						
G05D	Wamic, OR	89.44	42	P	P	10 12 29.6	+1.0
	baz=244						
TPNV	Topopah Spring	89.58	51	*e*P	P	10 12 29.7	0.0
	comp=Z,10nm,1.3s						
TPNV	Topopah Spring	89.58	51	P	P	10 12 29.9	+0.3
	baz=248						
D05A	Enumclaw	89.87	40	*e*P	P	10 12 30.7	+0.2
	comp=Z,36nm,1.4s						
WVOR	Wild Horse Val	90.03	45	*e*P	P	10 12 29.4	-2.2
	comp=Z,14nm,1.3s						
WVOR	Wild Horse Val	90.03	45	*e*P	P	10 12 29.4	-2.2
WVOR				pmax	pmax		
	comp=Z,14nm,1.3s						
PDMCI	Parker Dam,Lak	90.21	54	P	P	10 12 32.8	+0.4
	baz=249						
BMN	Battle Mountai	90.22	47	*e*P	P	10 12 32.5	0.0
	comp=Z,14nm,1.4s						
BMN	Battle Mountai	90.22	47	*e*P	P	10 12 32.5	0.0
BMN				pmax	pmax		
	comp=Z,14nm,1.4s						
B05A	Bryant	90.28	39	P	P	10 12 31.4	-1.0
	baz=244						
J08A	Circle Bar Ran	90.51	44	*e*P	P	10 12 33.0	-0.8
	comp=Z,6.9nm,1.1s						
R11A	Troy Canyon, C	90.60	50	P	P	10 12 34.6	+0.2
	baz=248						
SNAA	Sanae	90.83	183	P	P	10 12 34.5	-0.3
SNAA	Sanae	90.83	183	*e*P	P	10 12 34.7	-0.1
	comp=Z,35nm,1.4s						
SNAA	Sanae	90.83	183	*ce*P	P	10 12 34.5	-0.3
G08A	Pilot Rock	90.97	43	*e*P	P	10 12 35.1	-0.7
	comp=Z,9.4nm,1.0s						
HAWA	Hanford	91.06	41	*e*P	P	10 12 35.8	-0.3
	comp=Z,8.9nm,0.9s						
TOLK	Toolik Lake Re	91.18	14	P	P	10 12 37.9	+1.7
	baz=220						
VNA3	Neumayer Olymp	91.47	181	P	P	10 12 37.5	-0.3
LCMT	Little Creek M	91.85	52	*e*P	P	10 12 40.1	-0.1
	comp=Z,3.3nm,1.0s						
VNA1	Neumayer--Stat	92.05	181	P	P	10 12 41.5	+1.2
TUC	Tucson	92.17	57	P	P	10 12 42.3	+0.7
	baz=251						
TIXI	Tiksi	92.77	348	⇑*e*P	P	10 12 43.0	-0.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HLID	Hailey	93.32	45	P	P	10 12 47.2	+0.3
	baz=249						
WMQ	Urumqi	95.04	314	*e*P	P	10 12 56.6	+2.0
WMQ				sP	sP	10 13 05.0	+0.1
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.7s						
WMQ				LR	LR		
	comp=Z,310nm,18.3s						
WMQ				LR	LR		
	comp=Z,190nm,19.9s						
WMQ				LR	LR		
	comp=Z,310nm,22.7s						
TXAR	Lajitas Array	97.11	62	LR	LR	10 51 20.3	
	comp=Z,309nm,18.0s,baz=0.0,slow=32						
DGZ	Jazzator, Alta	97.12	320	⇑*e*P	Pdif	10 13 05.6	+1.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK32	Makanchi Array	99.56	316	*e*P	Pdif	10 13 14.7	-0.2
MKAR	Makanchi Array	99.56	316	P	Pdif	10 13 14.7	-0.2
	comp=Z,0.3nm,0.6s,baz=92,slow=8.0,SNR=2.7						
MKAR				LR	LR	10 56 46.7	
	comp=Z,104nm,21.8s,baz=94,slow=35						
YKA	Yellowknife Ar	99.74	27	LR	LR	10 51 55.1	
	comp=Z,14nm,20.1s,baz=260,slow=32						
ZALV	Zalesovo Beam	99.93	323	LR	LR	10 58 48.8	
	comp=Z,121nm,19.2s,baz=70,slow=36						
KSH	Kashi	102.32	308	*e*P	Pdif	10 13 31.1	+3.6
ARA0	ARCESS Array S	123.05	345	*e*PKPdf	PKPdf	10 18 26.6	-0.8
ARCES	ARCESS Array B	123.05	345	PKP	PKPdf	10 18 26.6	-0.8
	comp=Z,0.9nm,0.4s,baz=73,slow=1.3,SNR=15						
LPSR	Galich'ya Gora	127.04	324	*e*PKIKP	PKiKP	10 18 36.9	+0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIV	Kislovodsk	127.12	312	*i* PKIKP	PKPdf	10 18 33.3	-2.8
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
OBN	Obninsk	127.31	327	*i* PKIKP	PKiKP	10 18 36.1	-0.4
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VSR	Storozhevoye	127.39	322	*e*PKIKP	PKiKP	10 18 36.1	-0.7
VSR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FIA0	FINESS Array S	128.47	338	*e*PKPdf	PKiKP	10 18 38.0	-0.7
FIA0	FINESS Array S	128.47	338	*e*PKIKP	PKiKP	10 18 38.0	-0.7
FINES	FINESS Array B	128.47	338	PKP	PKiKP	10 18 38.0	-0.7
	comp=Z,0.8nm,0.5s,baz=56,slow=7.1,SNR=5.2						
FINES	FINESS Array B	128.47	338	PKIKP	PKiKP	10 18 38.0	-0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	133.30	325	PKP	PKiKP	10 18 47.8	-0.9
	comp=Z,0.4nm,0.3s,baz=55,slow=2.5,SNR=4.6						
KOLS	Kolonicke sedl	138.04	326	*e*PKIKP	PKiKP	10 18 59.3	+0.8
KOLS	Kolonicke sedl	138.04	326	*e*PKP	PKiKP	10 18 59.3	+0.8
UZH	Uzhgorod	138.21	326	*e*PKIKP	PKPdf	10 18 51.5	-5.2
UZH				*e*		10 18 57.9	
UZH				*i*		10 19 04.0	
OKC	Ostrava-Krasne	139.56	330	AMS	AMS	11 23 30.0	
	comp=Z,200nm,18.7s						
OSTC	Ostas	139.97	332	AMS	AMS	11 27 30.0	
	comp=Z,300nm,17.7s						
CHVC	Chvalec	140.01	332	AMS	AMS	11 27 30.0	
	comp=Z,200nm,17.5s						
DPC	Dobruska-Polom	140.06	332	AMS	AMS	11 26 40.0	
	comp=Z,200nm,16.9s						
UPC	Upice	140.09	332	AMS	AMS	11 27 40.0	
	comp=Z,300nm,19.6s						
PVCC	Panska Ves	140.71	333	AMS	AMS	11 24 30.0	
	comp=Z,200nm,20.3s						
BRG	Berggiesshubel	140.72	334	*e*PKP	PKPdf	10 19 01.4	+0.2
	comp=Z,16nm,1.7s comp=N,142nm,19.4s comp=E,175nm,15.4s comp=Z,240nm,20.5s						
BRG	Berggiesshubel	140.72	334	*e*PKIKP	PKPdf	10 19 01.4	+0.2
BRG				pmax	pmax		
	comp=Z,17nm,1.7s						
BRG				MLR	MLR		
	comp=N,142nm,19.4s						
BRG				MLR	MLR		
	comp=E,175nm,15.4s						
BRG				MLR	MLR		
	comp=Z,240nm,20.5s						
CLL	Collm	140.78	335	*e*PKIKP	PKiKP	10 19 07.0	+3.1
CLL				*e*		10 22 07.0	
CLL	Collm	140.78	335	*e*PKiKP	PKiKP	10 19 07.0	+3.1
CLL				*e*PP	PP	10 22 07.0	+6.0
CLL				*e*SS	SS	10 40 36.0	+11
CLL				Lm	MLR	11 21 00.0	
	comp=Z,200nm,22.0s						
GOPC	GO Pecny, Ondr	141.06	332	AMS	AMS	11 25 10.0	
	comp=Z,300nm,19.0s						
PRU	Pruhonice	141.12	332	AMS	AMS	11 25 30.0	
	comp=Z,300nm,14.6s						
TREC	Trest	141.19	331	AMS	AMS	11 25 20.0	
	comp=Z,300nm,21.1s						
NKC	Novy Kostel	141.83	334	AMS	AMS	11 27 30.0	
	comp=Z,200nm,15.7s						
CONA	Conrad Observa	141.97	329	*e*PKiKP	PKPdf	10 19 03.9	+0.2
	comp=Z,4.3nm,1.2s						
KHC	Kasperske Hory	142.18	332	*e*PKIKP	PKPdf	10 19 03.8	-0.2
KHC				*e*		10 19 18.5	
KHC				MLR	MLR		
	comp=Z,300nm,19.3s						
KHC	Kasperske Hory	142.18	332	*e*PKP	PKPdf	10 19 03.8	-0.2
KHC				*e*x	x	10 19 18.5	
KHC				AMS	AMS	11 26 10.0	
	comp=Z,300nm,19.3s						
ARSA	Arzberg	142.60	329	*i* PKiKP	PKPdf	10 19 05.1	+0.3
	comp=Z,3.2nm,0.7s						
MOA	Molln	142.79	330	*i* PKPdf	PKPdf	10 19 02.0	-3.1
	comp=Z,3.7nm,0.7s						
SOKA	Soboth	143.24	328	*i* PKPdf	PKPbc	10 19 02.5	-0.5
	comp=Z,0.1nm,0.3s						
KBA	Koelnbreinsper	143.78	330	*i* PKPdf	PKPbc	10 19 04.0	-0.6
	comp=Z,6.0nm,1.0s						
MEM	Membach	143.90	340	⇑PKP	PKPdf	10 19 05.4	-1.5
BOJS	Bojanci	143.91	327	*e*PKPdf	PKPbc	10 19 04.3	-0.5
LJU	Ljubljana	143.92	328	*e*PKPdf	PKPab	10 19 03.7	-0.6
MYKA	Terra Mystica	143.96	329	*i* PKPdf	PKPbc	10 19 04.6	-0.4
	comp=Z,15nm,1.7s						
CADS	Cadrg	144.19	329	*i* PKPdf	PKPab	10 19 04.2	-1.2
UCC	Uccle	144.24	342	⇓PKP	PKPbc	10 19 05.9	+0.2
WATA	Walderalm	144.41	332	*i* PKPdf	PKPdf	10 19 07.4	-0.7
	comp=Z,2.9nm,0.5s						
ABTA	Abfaltersbach	144.41	330	*i* PKPdf	PKPab	10 19 05.6	-0.6
	comp=Z,28nm,1.4s,SNR=10						
WTTA	Wattenberg	144.43	332	*i* PKPdf	PKPdf	10 19 07.2	-1.0
	comp=Z,27nm,1.4s,SNR=10.0						
MOTA	Moosalm	144.61	332	*i* PKiKP	PKPdf	10 19 08.8	+0.3
	comp=Z,19nm,1.1s						
RETA	Reutte	144.65	333	*i* PKPdf	PKPdf	10 19 07.4	-1.1
	comp=Z,21nm,1.7s,SNR=11						
SQTA	Sankt Quirin	144.66	332	*i* PKPdf	PKPdf	10 19 07.8	-0.7
	comp=Z,35nm,1.7s,SNR=8.7						
WLF	Walferdange	144.66	339	⇑PKP	PKPdf	10 19 07.6	-0.7
DOU	Dourbes	144.79	341	⇓PKP	PKPbc	10 19 07.2	-0.2
BFO	Black Forest	144.99	336	*e*PKPdf	PKPbc	10 19 07.8	-0.4
BFO	Black Forest	144.99	336	*e*PKIKP	PKPbc	10 19 07.8	-0.4
FETA	Feichten	145.02	332	*i* PKPdf	PKPdf	10 19 08.7	-0.5
	comp=Z,46nm,1.1s,SNR=23						
DAVA	Damuels	145.19	333	*i* PKPdf	PKPdf	10 19 09.4	-0.1
	comp=Z,49nm,1.4s,SNR=21						
TIP	Timpagrande	146.85	317	*e*PKPbc	PKPbc	10 19 14.2	0.0
SENIN	Lac Senin/Sane	147.00	335	*e*PKPbc	PKPbc	10 19 14.5	-0.1
BNI	Bardonecchia	148.31	334	*e*PKPbc	PKiKP	10 19 18.8	-1.1
BNI	Bardonecchia	148.31	334	*e*PKP2	PKiKP	10 19 18.8	-1.1
KEST	Kesra	153.65	318	PKPbc	PKiKP	10 19 31.9	+0.9
	comp=Z,2.7nm,0.9s,baz=355,slow=1.3,SNR=5.1						
PBRG	Braganca	155.33	350	*e*PKPab	PKPab	10 19 50.6	+0.2
PGAV	Gavieira, Arco	155.38	353	*e*LR	LR	11 23 56.9	
	comp=Z,216nm,18.0s						
POLO	Lamas de Olo	155.91	352	*e*PKPab	PKPab	10 19 53.2	+0.3
MVO	Moncorvo	156.00	350	*e*PKPab	PKPab	10 19 54.0	+0.7
PVIS	Viseu	156.56	352	*e*PKPab	PKPab	10 19 56.9	+1.2
ESDC	Sonseca Array	156.78	344	PKPab	PKPab	10 19 55.9	-0.8
	comp=Z,1.0nm,0.6s,baz=0.0,slow=1.5,SNR=4.2						
MTE	Manteigas	156.82	351	*e*LR	LR	11 28 51.9	
	comp=Z,254nm,18.0s						
PMRV	Marv??o	157.75	350	*e*LR	LR	11 26 32.5	
	comp=Z,160nm,18.0s						
PMTG	Montargil	158.23	352	*e*PKPab	PKPab	10 20 03.7	+0.8
PBEJ	Beja	159.20	350	*e*PKPab	PKPab	10 20 08.3	+1.2
PCVE	Castro Verde	159.61	351	*e*PKPab	PKPab	10 20 10.1	+1.2
PVAQ	Vaqueiros	159.78	350	*e*LR	LR	11 24 13.9	
	comp=Z,202nm,20.0s						
TORD	Torodi Ar. Bea	165.95	254	PKP	PKPdf	10 19 37.3	-0.3
	comp=Z,1.5nm,0.9s,baz=26,slow=1.5,SNR=6.4						
TORD				PKPab	PKPab	10 20 37.3	-0.3
	comp=Z,2.0nm,1.2s,baz=113,slow=2.1,SNR=4.6						
TOA1	Torodi Ar. Sit	165.96	254	*e*PKPdf	PKPdf	10 19 37.3	-0.3
TOA1				*e*PKPab	PKPab	10 20 37.3	-0.3

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*ANF **18** 10:02:29.9±1.1, 41°.22N×124°.74W, ML3.0/17, Error ellipse: s-maj=12.3km s-min=6.4km az=67.0*

*NCEDC **18** 10:02:30.4, 41°.09N×125°.06W, h22^{km}, MW3.5(BRK)*

*IDC **18** 10:02:30.9±4.7, 41°.12N×124°.69W, h0^{km}, mb3.0/1, mb1 3.6/4, mb1mx3.3/45, mbtmp3.2/4, ML3.4/3, Error ellipse: s-maj=53.7km s-min=21.3km az=112.0*

*NEIC **18** 10:02:30.4±0.0, 41°.09N×125°.06W, h22^{km}, MW3.5(BRK), After NCEDC.*

ISC 18 10:02:28.3±2.1**, 41°.10N**±0°.04×**125°.11W**±0°.08**, h12^{km}**±11^{km}**, n49, σ1^{s}.76**/65**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCC	Jacoby Creek,	0.86	109	*e*Pn	Pg	10 02 44.6	-0.3
KHMM	Horse Mountain	1.07	102	*e*Pn	Pg	10 02 47.9	-0.9
KHMM				*e*Sg	Sg	10 03 01.9	-0.8
KMRM	Mail Ridge	1.38	129	*e*Pn	Pn	10 02 52.8	-0.6
L02E	Cave Junction	1.54	46	P	Pn	10 02 54.6	-1.0
	baz=226,SNR=181						
L02E				S	Sn	10 03 12.1	-3.5
	baz=226						
M02C	Callahan	1.72	80	P	Pn	10 02 57.2	-1.0
	baz=260,SNR=794						
M02C				S	Sn	10 03 16.9	-3.3
	baz=260						
N02D	Trinity Center	1.82	93	P	Pn	10 02 58.4	-1.1
	baz=275,SNR=165						
KCPM	Cahto Peak	1.83	140	*e*Pn	Pn	10 02 59.0	-0.7
KCPM				*e*Sn	Sn	10 03 19.5	-3.4
KEBM	Edson Butte	1.86	18	*e*Pn	Pn	10 02 58.9	-1.1
YBH	Yreka Blue Hor	1.91	70	Pn	Pn	10 03 00.2	-0.5
	16nm,0.3s,baz=266,slow=13,SNR=502						
YBH				LR	LR	10 03 10.8	
	comp=Z,19nm,21.8s,baz=230,slow=25						
YBH				Sn	Sn	10 03 22.5	-2.2
	10nm,0.3s,baz=319,slow=22,SNR=20						
YBH	Yreka Blue Hor	1.91	70	*e*Pn	Pn	10 03 00.4	-0.3
YBH				*e*Sn	Sn	10 03 22.9	-1.8
K02D	Willamette Mer	1.92	34	P	Pn	10 03 00.1	-0.8
	baz=213,SNR=347						
K02D				S	Sn	10 03 21.5	-3.5
	baz=213						
O02D	Mt. Diablo Mer	1.99	117	P	Pn	10 03 01.0	-0.9
	baz=299,SNR=312						
O02D				S	Sn	10 03 24.9	-1.9
	baz=299						
WDC	Whiskeytown Da	2.02	104	*e*Pn	Pn	10 03 01.5	-0.6
HUMO	Hull Mountain	2.20	46	*e*Pn	Pn	10 03 04.3	-0.4
HUMO				*e*Sn	Sn	10 03 30.0	-1.8
J01E	Myrtle Point	2.23	23	P	Pn	10 03 04.2	-0.9
	baz=202,SNR=67						
J01E				S	Sn	10 03 28.9	-3.7
	baz=202						
L04D	Klamath Falls	2.38	61	P	Pn	10 03 07.8	+0.6
	baz=242,SNR=66						
L04D				Sb	Sn	10 03 36.3	-0.1
	baz=242						
M04C	Macdoel	2.55	74	P	Pn	10 03 10.1	+0.5
	baz=255,SNR=123						
M04C				Sb	Sn	10 03 40.9	+0.3
	baz=255						
HOPS	Hopland Field	2.62	143	*e*Pn	Pn	10 03 09.7	-0.8
O03E	Paynes Creek	2.64	107	P	Pn	10 03 09.7	-1.1
	baz=289,SNR=49						
I03D	Drain, OR	2.90	26	P	Pn	10 03 13.8	-0.4
	baz=206,SNR=105						
K04D	Chiloquin, OR	2.93	58	P	Pn	10 03 15.2	+0.4
	baz=239,SNR=10						
J04D	Umpqua Nationa	3.09	45	P	Pn	10 03 17.9	+0.8
	baz=226,SNR=9.5						
I02D	Swisshome	3.14	17	P	Pn	10 03 17.1	-0.5
	baz=197,SNR=130						
I02D				S	Sn	10 03 52.4	-2.5
	baz=197						
I04A	Tendick Farm,	3.35	36	P	Pn	10 03 21.7	+1.2
	baz=217,SNR=8.7						
J05D	Fort Rock, OR	3.61	52	P	Pn	10 03 24.8	+0.6
	baz=234,SNR=35						
MOD	Modoc Plateau	3.69	76	*e*Pn	Pn	10 03 24.9	-0.4
BEKR	Beckworth	3.83	107	*e*Pn	Pn	10 03 27.5	+0.3
AFDM	Forest Hills D	3.84	123	*e*Pn	Pn	10 03 26.9	-0.3
AFDM				*e*Sn	Sn	10 04 09.4	-2.8
H04D	Lebanon	3.84	26	P	Pn	10 03 27.9	+0.7
	baz=207,SNR=16						
PINE	Pine Mountain	4.09	48	*e*Pn	Pn	10 03 31.8	+1.0
H04A	Detroit Lake	4.17	30	*e*Pn	Pn	10 03 32.8	+1.0
H04A				*e*Sn	Sn	10 04 19.3	-1.1
I05D	Terrebonne, OR	4.26	39	P	Pn	10 03 33.7	+0.7
	baz=221,SNR=7.0						
RUBR	Rubicon Trail	4.32	117	*e*Pn	Pn	10 03 35.1	+1.1
G03D	McMinnville, O	4.32	18	P	Pn	10 03 34.6	+0.8
	baz=198,SNR=6.4						
G03D				S	Sn	10 04 21.6	-2.5
	baz=198						
VCNR	Virginia City	4.55	112	*e*Pn	Pn	10 03 37.7	+0.5
CMB	Columbia Colle	4.76	129	*e*Pn	Pn	10 03 40.6	+0.7
YERR	Yerington	4.97	113	*e*Pn	Pn	10 03 43.7	+0.7
G05D	Wamic, OR	4.98	33	P	Pn	10 03 44.3	+1.4
	baz=215,SNR=11						
WVOR	Wild Horse Val	5.02	73	*e*Pn	Pn	10 03 42.8	-0.7
NVAR	Mina Array Bea	5.88	115	Pn	Pn	10 03 56.0	+0.5
	1.3nm,0.3s,baz=293,slow=14,SNR=31						
D03D	Eldon	6.59	12	P	Pn	10 04 05.9	+0.9
	baz=193,SNR=13						
B05A	Bryant	7.47	16	P	Pn	10 04 18.7	+1.7
	baz=197,SNR=9.5						
ELK	Elko	7.48	90	Pn	Pn	10 04 20.3	+2.8

	0.1nm,0.3s,baz=266,slow=7.1,SNR=4.0						
ISA	Isabella, Lake	7.53	134	*e*Pn	Pn	10 04 19.2	+1.3
R11A	Troy Canyon, C	7.84	107	P	Pn	10 04 23.3	+1.1
	baz=294						
PD31	Pinedale Array	11.70	77	*e*Pn	Pn	10 05 19.4	+4.1
PDAR	Pinedale Array	11.70	77	Pn	Pn	10 05 19.4	+4.1
	0.1nm,0.3s,baz=260,slow=7.4,SNR=4.2						
LTX	Lajitas	21.03	117	*e*Pn	P	10 07 15.0	+3.0
TXAR	Lajitas Array	21.03	117	P	P	10 07 15.0	+3.0
	0.6nm,0.7s,baz=308,slow=10,SNR=8.0						

TRN 18 10:13:05.6, 18°.31N×62°.42W, h17km, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT	St. Maarten	0.68	248	*e*P	Pn	10 13 20.6	+0.2
SMRT				*e*S	Sn	10 13 31.4	+0.8
ANWB	Willy Bob	0.88	137	*e*P	Pn	10 13 24.0	+0.8
ANWB				*e*S	Sn	10 13 37.9	+2.3
SEUS	St. Eustatius	0.97	214	*e*P	Pg	10 13 26.1	+1.5
SEUS				*e*S	Sn	10 13 42.1	+4.2
SKDB	Saint Kitts 2	0.98	202	*e*P	Pg	10 13 27.2	+2.6
SKI	Saint Kitts	1.02	198	*e*P	Pg	10 13 27.6	+2.2
SKI				*e*S	Sn	10 13 43.0	+3.9
BSK	Brimstone Hill	1.04	203	*e*P	Pg	10 13 27.1	+1.4
SABA	Saba	1.04	229	*e*P	Pg	10 13 26.4	+0.6
SABA	Saba	1.04	229	*e*	Pg	10 13 39.5	+14
NVRH	Round Hill, Ne	1.13	189	*e*P	Pg	10 13 28.8	+1.3
NEV	Hard Times	1.18	187	*e*P	Pg	10 13 29.9	+1.5
NEV				*e*S	Sg	10 13 45.6	+1.9
NVBH	Bath Hotel, Ne	1.20	189	*e*P	Pg	10 13 29.9	+1.1
NVBH				*e*S	Sg	10 13 46.3	+1.8
BPA	Boggy Peak	1.36	157	*e*P	Pg	10 13 32.3	+0.4
BPA				*e*S	Sg	10 13 49.9	+0.1
MLYT	Lee's Yard	1.59	172	*e*P	Pg	10 13 35.5	-0.8
MLYT				*e*S	Sb	10 13 55.8	+1.3
MDPO	Dominica; Chan	2.87	161	*e*P	Pn	10 13 52.3	+1.7
MDPO				*e*S	Sn	10 14 27.7	+2.9
DWS	Wesley	2.92	159	*e*S	Sn	10 14 28.9	+2.8

NNC 18 10:16:54.5±1.4, 51°.69N×75°.49E, h0km, mb3.6, mpv3.4, 4C-4D, Error ellipse: s-maj=76.2km s-min=10.2km az=26.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.19	118	⇓Pn	Pn	10 17 31.3	-0.9
	12nm,0.8s,baz=300,slow=17						
KURBB				⇓Sn	Sb	10 18 02.0	-0.6
	39nm,0.6s						
KURK	Kurchatov	2.19	115	⇓Pn	Pn	10 17 31.7	-0.5
	4.1nm,0.6s						
KURK				⇑Sn	Sn	10 18 00.4	+0.4
	42nm,1.0s						
BVA0	Borovoye Array	3.40	295	⇑Pn	Pn	10 17 48.8	0.0
	10nm,0.8s,baz=100,slow=17,SNR=12						
BVA0				⇑Lg	Lg	10 18 34.9	
	30nm,1.1s						
BRVK	Borovoye	3.48	295	⇓Pn	Pn	10 17 50.6	+0.8
	5.3nm,1.3s						
BRVK				⇑Lg	Lg	10 18 37.0	
	15nm,1.0s						
MNBS	Baschi	7.86	164	Pg	Pg	10 19 41.4	+16
	0.5nm,0.2s						
DJR	Jarkent	7.90	157	Pg	Pg	10 19 45.1	+19
	0.8nm,0.1s						
DJR				Lg	Lg	10 21 05.1	
	1.9nm,0.4s						
KST	Kastek	8.65	178	Pg	Pg	10 19 56.9	+17
	3.1nm,0.5s						
KST				Lg	Lg	10 21 26.0	
	5.9nm,0.6s						
PDGK	Podgornoye	8.79	161	Pg	Pg	10 19 58.6	+16
	0.4nm,0.3s						
PDGK				Lg	Lg	10 21 27.9	
	1.6nm,1.0s						

ISCJB ***18*** *10:17:20.7±0.5, 24°.79N±0°.04×122°.94E±0°.02, h130km±4km, Error ellipse: s-maj=6.9km s-min=2.4km az=171.2*

JMA ***18*** *10:17:20.6±0.2, 24°.76N×122°.91E, h136km±3km, M2.5*

TAP ***18*** *10:17:20.1, 24°.87N×122°.94E, h137km, ML3.2, C*

ISC 18 10:17:21.0±1.5, 24°.80N±0°.06×122°.93E±0°.03, h132km±9km, n58, σ0ˢ.70/110, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.34	168	P	Pn	10 17 39.8	+0.3
	baz=167						
YOJ				S	Sn	10 17 54.2	+0.6
	baz=167						
JYNG	Yonagunijimaku	0.34	178	P	Pn	10 17 39.7	+0.1
JYNG				*e*S	Sn	10 17 54.1	+0.5
EOS1	EOS1	0.77	252	P	Pn	10 17 42.0	0.0
	baz=240						
EOS1				S	Sn	10 17 58.7	+0.7
	baz=240						
IRIF	Iriomote-Funau	0.86	122	P	Pn	10 17 43.6	+0.8
IRIF				*e*S	Sn	10 17 59.6	+0.2
TWC	Suao	1.00	259	P	Pn	10 17 43.5	-0.5
	baz=250						
TWC				S	Sn	10 18 00.5	-1.1
	baz=250						
TIPB	Shuangxi	1.02	280	*i* P	Pn	10 17 44.3	0.0
	baz=271						
TIPB				S	Sn	10 18 01.3	-0.6
	baz=271						
HATJ	Hateruma jima	1.08	133	*e*S	Sn	10 18 03.4	+0.4
JKRS	Kuro-shima	1.13	119	P	Pn	10 17 46.0	+0.7
JKRS				S	Sn	10 18 04.2	+0.5
NANB	Nanao	1.14	251	P	Pn	10 17 45.0	-0.4
	baz=248						
NANB				S	Sn	10 18 03.9	0.0
	baz=248						
ENA	Nanau	1.15	252	P	Pn	10 17 45.6	+0.2
	baz=248						
ENA				S	Sn	10 18 04.0	0.0
	baz=248						
TWE	Neicheng	1.15	267	P	Pn	10 17 45.5	0.0
	baz=258						
TWE				*e*S	Sn	10 18 04.7	+0.5
	baz=258						
JIJ	Ishigaki jima	1.18	111	P	Pn	10 17 45.9	+0.1
JIJ				S	Sn	10 18 03.9	-0.8
ENTT	Nioudou	1.25	263	*i* P	Pn	10 17 46.8	+0.3
	baz=256						
ENTT				*e*S	Sn	10 18 06.0	-0.1
	baz=256						
JISG	Ishigakijimahi	1.27	99	P	Pn	10 17 46.6	-0.1
JISG				*e*S	Sn	10 18 05.5	-0.8
YM01	YM01	1.28	286	P	Pn	10 17 46.9	0.0
	baz=283						
YM01				S	Sn	10 18 06.4	-0.3
	baz=283						
NDT	Datong Townshi	1.30	262	P	Pn	10 17 47.6	+0.5
	baz=255						
NDT				*e*S	Sn	10 18 07.1	+0.1
	baz=255						
NACB	Ninganchiao	1.37	243	P	Pn	10 17 46.9	-0.9
	baz=241						
NACB				S	Sn	10 18 07.4	-0.7
	baz=241						
TWD	Chiawan	1.41	240	P	Pn	10 17 47.4	-0.9
	baz=234						
TWD				S	Sn	10 18 08.1	-0.9
	baz=234						
YHNB	Yeheng	1.42	265	*i* P	Pn	10 17 48.5	+0.1
	baz=263						
YHNB				S	Sn	10 18 09.1	-0.2
	baz=263						
ETLH	Xiulin Townshi	1.45	246	P	Pn	10 17 48.3	-0.4
	baz=240						
ETLH				S	Sn	10 18 09.1	-0.7
	baz=240						
NNSB	Datong	1.46	256	P	Pn	10 17 48.9	0.0
	baz=254						
NNSB				*e*S	Sn	10 18 09.6	-0.6
	baz=254						
HWA	Hwalien	1.46	236	*e*P	Pn	10 17 48.8	+0.1
	baz=234						
HWA				*e*S	Sn	10 18 10.6	+0.7
	baz=234						
NNS	Nan Shan	1.46	256	*e*P	Pn	10 17 48.9	-0.1
	baz=249						
NNS				*e*S	Sn	10 18 09.7	-0.6
	baz=249						
ENLB	Shoufeng	1.50	234	*e*P	Pn	10 17 49.7	+0.4
	baz=232						
ENLB				*e*S	Sn	10 18 11.7	+0.9
	baz=232						
WLTB	Daxi	1.53	272	*e*P	Pn	10 17 48.9	-0.6
	baz=272						
WLTB				*e*S	Sn	10 18 11.8	+0.6
	baz=272						
JTJ	Tarama	1.62	95	P	Pn	10 17 50.8	+0.3
JTJ				S	Sn	10 18 12.4	-0.7
WHF	Hehuan Shan	1.65	247	*i* P	Pn	10 17 51.1	-0.3
	baz=245						
WHF				S	Sn	10 18 13.6	-1.0
	baz=245						
ESL	Shilin	1.68	235	P	Pn	10 17 50.5	-0.8
	baz=233						
ESL				*e*S	Sn	10 18 13.1	-1.4
	baz=233						
TWT	Tachien	1.69	252	*e*P	Pn	10 17 52.3	+0.7
	baz=244						
TWT				*e*S	Sn	10 18 14.8	0.0
	baz=244						
TDCB	Techi	1.70	252	P	Pn	10 17 52.2	+0.5
	baz=245						
TDCB				*e*S	Sn	10 18 14.7	-0.5
	baz=245						
LIOB	Emei	1.75	265	P	Pn	10 17 51.9	-0.2
	baz=264						
LIOB				S	Sn	10 18 15.1	-0.8
	baz=264						
CHGB	Renai	1.76	246	P	Pn	10 17 52.6	+0.2
	baz=240						
CHGB				S	Sn	10 18 15.7	-0.8
	baz=240						
NSTT	Nanjuang	1.76	265	*e*P	Pn	10 17 51.7	-0.5
	baz=263						
NSTT				S	Sn	10 18 14.8	-1.3
	baz=263						
EGFH	Guangfu	1.77	231	P	Pn	10 17 52.0	-0.4
	baz=230						
EGFH				*e*S	Sn	10 18 16.6	+0.2
	baz=230						
HGSD	Ruisui	1.89	227	P	Pn	10 17 53.7	-0.1
	baz=221						
HGSD				S	Sn	10 18 18.8	0.0
	baz=221						
VWDT	VWDT	1.94	238	P	Pn	10 17 54.8	+0.5
	baz=237						
VWDT				S	Sn	10 18 19.2	-0.6
	baz=237						
EHY	Hungye	1.95	229	P	Pn	10 17 53.8	-0.7
	baz=228						
EHY				*e*S	Sn	10 18 18.8	-1.4
	baz=228						
TWQ1	Liyutan	2.02	258	*e*P	Pn	10 17 55.3	+0.1
	baz=257						
JIRB	Irabujima	2.04	89	*e*S	Sn	10 18 20.8	-1.1
YULB	Yu-li	2.05	227	P	Pn	10 17 54.8	-0.8
	baz=232						
YULB				*e*S	Sn	10 18 20.8	-1.4
	baz=232						
SSLB	Suanglung	2.07	241	P	Pn	10 17 56.6	+0.7
	baz=239						
SSLB				*e*S	Sn	10 18 23.0	+0.3
	baz=239						
TYC	Yuchr	2.09	245	P	Pn	10 17 57.1	+1.0
	baz=247						
TYC				S	Sn	10 18 24.3	+1.2
	baz=247						
JIKM	Ikemajima	2.11	86	*e*S	Sn	10 18 22.9	-0.6
JMJ	Miyako jima 2	2.15	89	*e*P	Pn	10 17 57.3	+0.4
	baz=93						
JMJ				*e*S	Sn	10 18 23.6	-0.7
	baz=93						
JMJ2	Miyako jima3	2.18	91	P	Pn	10 17 57.7	+0.5
JMJ2				*e*S	Sn	10 18 24.7	-0.3
WHYT	Xinyi Township	2.19	240	*e*P	Pn	10 17 58.5	+1.0
	baz=237						
WHYT				S	Sn	10 18 26.9	+1.4
	baz=237						
CHKT	Chengkung	2.22	221	*e*P	Pn	10 17 56.9	-0.9
	baz=213						
CHKT				*e*S	Sn	10 18 25.4	-0.4
	baz=213						
WJS	Zhushan	2.23	245	*e*P	Pn	10 17 59.0	+1.0
	baz=244						
WJS				*e*S	Sn	10 18 27.8	+1.5
	baz=244						
WNT	Mingjian	2.25	246	*e*S	Sn	10 18 27.4	+0.8
	baz=246						
JOGS	Gusukube	2.25	90	P	Pn	10 17 58.7	+0.6
JOGS				*e*S	Sn	10 18 26.5	-0.1
ELDTW	Lidau	2.37	228	*e*P	Pn	10 17 59.4	-0.4
	baz=225						
ELDTW				*e*S	Sn	10 18 28.5	-1.1
	baz=225						
CHN5	Tsauling	2.38	240	*e*P	Pn	10 18 00.8	+0.9
	baz=249						
CHN5				*e*S	Sn	10 18 30.6	+0.9
	baz=249						
TPUB	Ta-pu	2.58	235	*e*P	Pn	10 18 02.7	+0.4
	baz=235						
TPUB				*e*S	Sn	10 18 34.7	+0.6
	baz=235						
TWGBT	Beinan	2.60	221	*e*P	Pn	10 18 01.3	-1.3
	baz=221						
TWG	Pinlang	2.60	221	*e*P	Pn	10 18 02.0	-0.6
	baz=220						
TWG				*e*S	Sn	10 18 33.5	-1.1
	baz=220						
WTP	Ta-pu	2.62	234	*e*P	Pn	10 18 02.7	-0.2
	baz=234						
WTP				*e*S	Sn	10 18 35.8	+0.6
	baz=234						
CHN1	Nanshi	2.72	234	*e*P	Pn	10 18 04.7	+0.5
	baz=234						
CHN1				*e*S	Sn	10 18 37.8	+0.5
	baz=234						
SLGT	Liugui	2.76	230	P	Pn	10 18 05.8	+1.2
	baz=237						
SLGT				*e*S	Sn	10 18 39.4	+1.3
	baz=237						

ISCJB ***18*** *11:39:09.4±0.3, 19°.90S±0°.03×133°.84E±0°.02, h12km, mb4.3/7, Error ellipse: s-maj=5.0km s-min=3.2km az=4.2*

IDC ***18*** *11:39:10.4±1.0, 19°.73S×134°.76E, h0km, mb4.3/4, mb1 4.4/6, mb1mx4.1/17, mbtmp4.3/6, ML4.6/2, MS3.0/2, Ms1 2.9/2, ms1mx2.7/20, Error ellipse: s-maj=22.9km s-min=9.3km az=146.0*

AUST ***18*** *11:39:11.0±0.0, 19°.82S×133°.89E, h10km, Error ellipse: s-maj=0.2km s-min=0.1km az=229.0*

NEIC ***18*** *11:39:11.8±2.4, 19°.78S×133°.95E, h10km±2km, mb4.4/10, Error ellipse: s-maj=8.4km s-min=4.2km az=202.0*

ISC 18 11:39:11.2±0.5, 19°.82S±0°.04×133°.94E±0°.04, h12km, n53, σ2ˢ.28/67, mb4.5/7, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WC1	Warramunga Arr	0.40	106	P	Pg	11 39 19.3	+0.2
	baz=0.4						
WC1				S	Sg	11 39 24.8	+0.4
	baz=0.4						
WRA	Warramunga Arr	0.40	108	Pg	Pb	11 39 19.8	-0.5
	333nm,0.3s,baz=70,slow=8.1						
WRA				Lg	Lg	11 39 24.9	
WR1	Warramunga Arr	0.40	108	*e*Pg	Pb	11 39 19.8	-0.5
WR1				*e*Sg	Sg	11 39 24.9	+0.3
WRAB	Tennant Creek	0.41	106	*e*Pg	Pb	11 39 20.2	-0.2
WB2	Warramunga Arr	0.41	108	*e*Pg	Pb	11 39 20.5	0.0
WB2				*e*Sg	Sg	11 39 25.0	+0.2
AS31	Alice Springs	3.83	180	*e*Pn	Pn	11 40 13.4	+3.3
AS31				*e*Sn	Sn	11 40 58.5	+3.4
ASAR	Alice Springs	3.83	180	Pn	Pn	11 40 13.4	+3.3
	31nm,0.3s,baz=12,slow=8.0,SNR=436						
ASAR				Sn	Sn	11 40 59.0	+3.9
	74nm,0.3s,baz=2.5,slow=29,SNR=10.0						
ASAR				LR	LR	11 41 05.5	
	comp=Z,140nm,21.0s,baz=1.0,slow=29						
QIS	Mount Isa	5.38	99	P	Pn	11 40 33.6	+2.3
	baz=5.4,SNR=34						
QIS				S	Sn	11 41 33.3	+0.1
	baz=5.4						
KNRA	Kununurra	6.42	309	P	Pn	11 40 45.8	+0.2
	baz=6.4,SNR=33						
KNRA				S	Sn	11 41 58.7	-0.2
	baz=6.4						
KDU	Kakadu	7.23	349	P	Pn	11 40 58.0	+1.3
	baz=7.3,SNR=231						
KDU				S	Sn	11 42 17.5	-1.3
	baz=7.3						
WRKA	Warakurna	7.36	224	P	Pn	11 40 58.4	-0.2
	baz=7.3,SNR=20						
WRKA				S	Sn	11 42 21.4	-0.7
	baz=7.3						
MTN	Manton Dam	7.44	338	*e*Pn	Pn	11 41 00.1	+0.5
MTN				*e*Sn	Sn	11 42 21.7	-2.3
OOD	Oodnadatta	8.10	169	P	Pn	11 41 09.7	+1.1
	baz=8.1,SNR=14						
MTSU	Mount Surprise	9.96	82	P	Pn	11 41 35.7	+1.4
	baz=10.0,SNR=9.5						
INKA	Innaminka	10.05	143	P	Pn	11 41 35.4	0.0
	baz=10,SNR=17						
MULG	Mulgathing	10.42	179	P	Pn	11 41 41.1	+0.6
	baz=10,SNR=12						
MULG				S	Sn	11 43 32.1	-5.1
	baz=10						
COEN	Coen	10.59	58	*e*Pn	Pn	11 41 43.1	+0.3
COEN				*e*Sn	Sn	11 43 36.3	-5.2
COEN	Coen	10.59	58	P	Pn	11 41 43.1	+0.3
	baz=11,SNR=30						
COEN				S	Sn	11 43 35.8	-5.7
	baz=11						
LCRK	Leigh Creek	11.27	161	P	Pn	11 41 52.0	-0.1
	baz=11,SNR=7.0						
QLP	Quilpie	11.62	127	P	Pn	11 41 56.7	-0.2
	baz=12						
QLP				S	Sn	11 44 02.1	-4.4
	baz=12						
FORT	Forrest	12.14	205	*e*Pn	Pn	11 42 03.7	-0.3
FORT	Forrest	12.14	205	P	Pn	11 42 02.9	-1.0
	baz=12,SNR=74						
FORT				S	Sn	11 44 13.8	-5.4
	baz=12						
BBOO	Buckleboo	13.08	172	*e*Pn	Pn	11 42 15.4	-1.5
BBOO	Buckleboo	13.08	172	P	Pn	11 42 15.1	-1.8
	baz=13,SNR=8.5						
PSA00	Pilbara Seismi	13.30	260	*e*Pn	Pn	11 42 18.2	-1.7
STKA	Stephens Creek	13.84	152	Pn	Pn	11 42 25.1	-2.2
	1.9nm,0.3s,baz=328,slow=15,SNR=13						
STKA				Sn	Sn	11 44 51.9	-9.1
	2.3nm,0.3s,baz=26,slow=12,SNR=4.1						
STKA				LR	LR	11 47 34.7	
	comp=Z,74nm,19.8s,baz=25,slow=37						
STKA	Stephens Creek	13.84	152	P	Pn	11 42 25.6	-1.6
	baz=14,SNR=7.5						
HTT	Hallett	14.27	163	P	Pn	11 42 32.4	-0.8
	baz=14,SNR=3.8						
MEEK	Meekatharra	15.63	241	P	Pn	11 42 47.9	-3.5
	baz=16,SNR=18						
KMBL	Kambalda	15.81	221	P	Pn	11 42 50.8	-2.9
	baz=16,SNR=11						
FAKI	Fak Fak	16.88	354	*e*Pn	P	11 43 08.2	-1.3
	29nm,1.0s						
ARPS	Mount Arapiles	18.25	159	P	P	11 43 25.3	+0.8
	baz=18,SNR=5.1						
GIRL	Giralia	18.58	258	*e*P	P	11 43 28.2	0.0
	52nm,0.9s						
MORW	Morawa	18.70	237	*e*P	P	11 43 26.7	-2.8
	16nm,0.8s						
MORW	Morawa	18.70	237	P	P	11 43 24.8	-4.7
	baz=19,SNR=4.9						
BLDU	Ballidu	18.91	232	P	P	11 43 29.2	-2.6
	baz=19,SNR=17						
ARMA	Armidale	19.16	127	*e*P	Pn	11 43 36.5	+0.9
	9.9nm,1.1s						
ARMA	Armidale	19.16	127	P	Pn	11 43 36.5	+0.9
	baz=19,SNR=4.7						
NWAO	Narrogin (SRO)	19.82	225	*e*P	P	11 43 39.7	-2.1
	30nm,0.9s						
MUN	Mundaring	19.99	229	P	P	11 43 44.0	+0.4
	baz=20,SNR=5.3						
TOO	Toolangi	20.36	153	*e*P	Pn	11 43 50.2	+0.5
	18nm,0.9s						
CAN	Canberra	20.38	142	*e*P	P	11 43 48.9	+1.1
	17nm,0.9s						
BKZ	Black Stump Fm	41.31	127	*e*P	P	11 46 58.7	+1.8
	5.5nm,0.8s						
VNDA	Vanda	59.34	173	P	P	11 49 13.5	+0.9
	0.7nm,0.6s,baz=329,slow=6.3,SNR=12						
QSPA	South Pole Qui	70.23	180	*e*P	P	11 50 25.7	+1.7
	6.6nm,1.1s						
SONA0	Songino Array	71.73	341	*e*P	P	11 50 36.5	+3.2
SONM	Songino Array	71.73	341	P	P	11 50 36.5	+3.2
	0.6nm,0.4s,baz=153,slow=8.2,SNR=5.0						
MK31	Makanchi Array	80.99	327	*e*P	P	11 51 26.4	+0.7
	4.4nm,0.8s						
MKAR	Makanchi Array	80.99	327	P	P	11 51 28.9	+3.1
	5.9nm,0.8s,baz=132,slow=5.8,SNR=28						
ZALV	Zalesovo Beam	84.70	333	P	P	11 51 46.4	+1.7
	2.6nm,0.6s,baz=134,slow=4.4,SNR=8.2						
ZAA1	Zalesovo Array	84.70	333	*e*P	P	11 51 46.4	+1.7
TORD	Torodi Ar. Bea	133.84	269	PKP	PKiKP	11 58 30.6	+0.2
	0.7nm,0.7s,baz=121,slow=1.8,SNR=4.2						
TOA1	Torodi Ar. Sit	133.85	269	*e*PKPdf	PKiKP	11 58 30.6	+0.2

ROM 18 12:21:54.5±0.1, 42°.514N±0°.003×13°.220E±0°.004, h10km, ML2.6/25, Error ellipse: s-maj=0.3km s-min=0.2km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNSS	Leonessa	0.16	304	P	Pg	12 21 58.6	+0.5
LNSS				S	Sg	12 22 01.4	+0.8
LNSS				AML	AML		
	comp=E,9425μm,0.2s						
LNSS				AML	AML		
	comp=N,10530μm,0.5s						
LNSS				AML	AML		
	comp=E,9420μm,0.2s						
LNSS				AML	AML		
	comp=N,10525μm,0.5s						
LNSS				AML	AML		
	comp=E,9425μm,0.2s						
LNSS				AML	AML		
	comp=N,10530μm,0.5s						
LNSS				AML	AML		
	comp=E,9425μm,0.2s						
LNSS				AML	AML		
	comp=N,10530μm,0.5s						
LNSS				AML	AML		
	comp=E,9425μm,0.2s						
LNSS				AML	AML		
	comp=N,10530μm,0.5s						
T0104	Madonna delle	0.18	150	P	Pg	12 21 59.0	+0.7
T0104				S	Sg	12 22 02.1	+1.2
T0104				AML	AML		
	comp=E,4090μm,0.3s						
T0104				AML	AML		
	comp=N,3910μm,0.4s						
T0104				AML	AML		
	comp=E,4090μm,0.3s						
T0104				AML	AML		
	comp=N,3940μm,0.3s						
T0104				AML	AML		
	comp=E,4085μm,0.3s						
T0104				AML	AML		
	comp=N,3910μm,0.4s						
T0104				AML	AML		
	comp=E,4090μm,0.3s						
T0104				AML	AML		
	comp=N,3940μm,0.3s						
T0104				AML	AML		
	comp=N,3910μm,0.4s						
T0104				AML	AML		
	comp=N,3940μm,0.3s						
T0104				AML	AML		
	comp=E,4085μm,0.3s						
T0104				AML	AML		
	comp=E,4090μm,0.3s						
T0104				AML	AML		
	comp=N,3910μm,0.4s						
T0104				AML	AML		
	comp=N,3940μm,0.3s						
T0104				AML	AML		
	comp=E,4085μm,0.3s						
T0104				AML	AML		
	comp=E,4090μm,0.3s						

AQU	**L'Aquila**	**0.21**	**140**	P	Pb	12 22 00.0	-0.4
AQU				S	Sg	12 22 03.7	+1.8
AQU	comp=E,1730μm,0.9s			AML	AML		
AQU	comp=N,1780μm,0.3s			AML	AML		
AQU	comp=E,1700μm,1.5s			AML	AML		
AQU	comp=N,1770μm,0.3s			AML	AML		
AQU	comp=E,1725μm,0.9s			AML	AML		
AQU	comp=N,1785μm,0.3s			AML	AML		
AQU	comp=E,1700μm,1.5s			AML	AML		
AQU	comp=N,1770μm,0.3s			AML	AML		
AQU	comp=E,1725μm,0.9s			AML	AML		
AQU	comp=N,1780μm,0.3s			AML	AML		
AQU	comp=E,1700μm,1.5s			AML	AML		
AQU	comp=N,1770μm,0.3s			AML	AML		
AQU	comp=E,1700μm,1.5s			AML	AML		
AQU	comp=E,1725μm,0.9s			AML	AML		
AQU	comp=N,1770μm,0.3s			AML	AML		
AQU	comp=N,1780μm,0.3s			AML	AML		
AQU	comp=E,1700μm,1.5s			AML	AML		
AQU	comp=E,1725μm,0.9s			AML	AML		
AQU	comp=N,1770μm,0.3s			AML	AML		
AQU	comp=N,1780μm,0.3s			AML	AML		
FIAM	**Fiamignano**	**0.26**	**197**	P	Pg	12 22 00.4	+0.6
FIAM				S	Sb	12 22 04.7	-1.1
FIAM	comp=E,2310μm,0.6s			AML	AML		
FIAM	comp=N,1705μm,1.1s			AML	AML		
FIAM	comp=E,2310μm,0.6s			AML	AML		
FIAM	comp=N,1705μm,1.1s			AML	AML		
FIAM	comp=E,2310μm,0.6s			AML	AML		
FIAM	comp=N,1705μm,1.1s			AML	AML		
FIAM	comp=N,1705μm,1.1s			AML	AML		
FIAM	comp=E,2310μm,0.6s			AML	AML		
FIAM	comp=N,1705μm,1.1s			AML	AML		
FIAM	comp=E,2310μm,0.6s			AML	AML		
TERO	**Teramo**	**0.30**	**69**	P	Pg	12 22 00.6	0.0
TERO				S	Sg	12 22 05.4	+0.7
TERO	comp=E,1135μm,0.1s			AML	AML		
TERO	comp=N,1304μm,0.1s			AML	AML		
TERO	comp=E,2665μm,0.7s			AML	AML		
TERO	comp=N,2900μm,0.1s			AML	AML		
TERO	comp=E,1135μm,0.1s			AML	AML		
TERO	comp=N,1304μm,0.1s			AML	AML		
TERO	comp=N,1304μm,0.1s			AML	AML		
TERO	comp=N,2900μm,0.1s			AML	AML		
TERO	comp=E,1135μm,0.1s			AML	AML		
TERO	comp=E,2665μm,0.7s			AML	AML		
TERO	comp=N,1304μm,0.1s			AML	AML		
TERO	comp=N,2900μm,0.1s			AML	AML		
TERO	comp=E,1135μm,0.1s			AML	AML		
TERO	comp=E,2665μm,0.7s			AML	AML		
NRCA	**Norcia**	**0.33**	**346**	P	Pg	12 22 01.1	0.0
NRCA				S	Sb	12 22 06.9	-1.0
NRCA	comp=E,4185μm,0.1s			AML	AML		
NRCA	comp=N,2710μm,0.1s			AML	AML		
NRCA	comp=E,4445μm,0.1s			AML	AML		
NRCA	comp=N,2965μm,0.1s			AML	AML		
NRCA	comp=E,4445μm,0.1s			AML	AML		
NRCA	comp=N,2960μm,0.1s			AML	AML		
NRCA	comp=N,2960μm,0.1s			AML	AML		
NRCA	comp=E,4445μm,0.1s			AML	AML		
NRCA	comp=N,2960μm,0.1s			AML	AML		
NRCA	comp=E,4445μm,0.1s			AML	AML		
ARRO	**Arrone**	**0.34**	**281**	P	Pg	12 22 01.7	+0.4
ARRO				S	Sg	12 22 07.0	+1.2
ARRO	comp=E,1230μm,0.2s			AML	AML		
ARRO	comp=N,1385μm,0.7s			AML	AML		
ARRO	comp=E,1225μm,0.2s			AML	AML		
ARRO	comp=N,1385μm,0.7s			AML	AML		
ARRO	comp=E,1225μm,0.2s			AML	AML		
ARRO	comp=N,1385μm,0.7s			AML	AML		
ARRO	comp=E,1225μm,0.2s			AML	AML		
ARRO	comp=N,1385μm,0.7s			AML	AML		
ARRO	comp=E,1225μm,0.2s			AML	AML		
ARRO	comp=N,1385μm,0.7s			AML	AML		
FAGN	**Fagnano**	**0.37**	**132**	P	Pb	12 22 02.5	-0.6
FAGN				S	Sb	12 22 08.1	-0.9
FAGN	comp=E,2665μm,0.7s			AML	AML		
FAGN	comp=N,2150μm,0.3s			AML	AML		
FAGN	comp=E,2665μm,0.7s			AML	AML		
FAGN	comp=N,2150μm,0.3s			AML	AML		
FAGN	comp=E,2665μm,0.7s			AML	AML		
FAGN	comp=N,2150μm,0.3s			AML	AML		
FAGN	comp=E,2665μm,0.7s			AML	AML		
FAGN	comp=N,2150μm,0.3s			AML	AML		
FAGN	comp=E,2665μm,0.7s			AML	AML		
FAGN	comp=N,2150μm,0.3s			AML	AML		
VCEL	**Villa Celiera**	**0.47**	**104**	P	Pg	12 22 03.8	0.0
VCEL				S	Sb	12 22 11.7	-0.4
VCEL	comp=E,1170μm,1.4s			AML	AML		
VCEL	comp=N,1585μm,0.4s			AML	AML		
VCEL	comp=E,1175μm,1.4s			AML	AML		
VCEL	comp=N,1585μm,0.4s			AML	AML		
VCEL	comp=E,1175μm,1.4s			AML	AML		
VCEL	comp=N,1585μm,0.4s			AML	AML		
VCEL	comp=N,1585μm,0.4s			AML	AML		
VCEL	comp=E,1175μm,1.4s			AML	AML		
VCEL	comp=N,1585μm,0.4s			AML	AML		
VCEL	comp=E,1175μm,1.4s			AML	AML		
CESX	**Cesi**	**0.48**	**282**	P	Pg	12 22 04.0	+0.1
CESX				S	Sb	12 22 11.5	-0.7
CESX	comp=E,700μm,0.3s			AML	AML		
CESX	comp=N,582μm,0.3s			AML	AML		
CESX	comp=E,700μm,0.3s			AML	AML		
CESX	comp=N,582μm,0.3s			AML	AML		
CESX	comp=E,700μm,0.3s			AML	AML		
CESX	comp=N,582μm,0.3s			AML	AML		
CESX	comp=N,582μm,0.3s			AML	AML		
CESX	comp=E,700μm,0.3s			AML	AML		
CESX	comp=N,582μm,0.3s			AML	AML		
CESX	comp=E,700μm,0.3s			AML	AML		
PTQR	**Pietraquaria**	**0.51**	**165**	P	Pg	12 22 04.5	0.0
PTQR				S	Sb	12 22 12.2	-0.8
FDMO	**Fiordimonte**	**0.53**	**349**	P	Pg	12 22 04.7	-0.1
FDMO				S	Sg	12 22 12.7	+0.8
FDMO	comp=E,504μm,0.2s			AML	AML		
FDMO	comp=N,599μm,0.2s			AML	AML		
FDMO	comp=E,504μm,0.2s			AML	AML		
FDMO	comp=N,599μm,0.2s			AML	AML		
FDMO	comp=N,599μm,0.2s			AML	AML		
FDMO	comp=E,504μm,0.2s			AML	AML		
FDMO	comp=N,599μm,0.2s			AML	AML		
FDMO	comp=E,504μm,0.2s			AML	AML		
CESI	**CESI - Serrava**	**0.54**	**335**	P	Pg	12 22 05.0	-0.1
CESI				S	Sb	12 22 13.3	-0.7
CESI	comp=E,192μm,0.2s			AML	AML		
CESI	comp=N,240μm,0.2s			AML	AML		
CESI	comp=E,192μm,0.2s			AML	AML		
CESI	comp=N,240μm,0.2s			AML	AML		
CESI	comp=E,192μm,0.2s			AML	AML		
CESI	comp=N,240μm,0.2s			AML	AML		
CESI	comp=E,192μm,0.2s			AML	AML		
CESI	comp=N,240μm,0.2s			AML	AML		
MOMA	**Monte Martano**	**0.56**	**301**	P	Pg	12 22 05.3	-0.1
MOMA				S	Sb	12 22 14.0	-0.6
MOMA	comp=E,992μm,0.2s			AML	AML		
MOMA	comp=N,1333μm,1.1s			AML	AML		
MOMA	comp=E,1060μm,0.1s			AML	AML		
MOMA	comp=N,1088μm,0.2s			AML	AML		
MOMA	comp=E,995μm,0.2s			AML	AML		
MOMA	comp=N,1870μm,1.6s			AML	AML		
MOMA	comp=E,1060μm,0.1s			AML	AML		
MOMA	comp=N,1088μm,0.2s			AML	AML		
MOMA	comp=E,1060μm,0.1s			AML	AML		
MOMA	comp=N,1870μm,1.6s			AML	AML		
MOMA	comp=E,995μm,0.2s			AML	AML		
MOMA	comp=N,1088μm,0.2s			AML	AML		
MOMA	comp=E,1060μm,0.1s			AML	AML		
MOMA	comp=N,1870μm,1.6s			AML	AML		
MOMA	comp=E,995μm,0.2s			AML	AML		
MOMA	comp=N,1088μm,0.2s			AML	AML		
CSP1	**Cessapalombo**	**0.58**	**359**	P	Pg	12 22 05.5	-0.2
CSP1				S	Sb	12 22 14.3	-0.8
CSP1	comp=E,773μm,1.3s			AML	AML		
CSP1	comp=N,675μm,1.4s			AML	AML		
TRTR	**Tortoreto Alta**	**0.59**	**60**	P	Pb	12 22 06.6	-0.3
TRTR				S	Sg	12 22 14.5	+0.8
TRTR	comp=E,942μm,0.4s			AML	AML		
TRTR	comp=N,1054μm,0.4s			AML	AML		
TRTR	comp=E,942μm,0.4s			AML	AML		
TRTR	comp=N,1055μm,0.4s			AML	AML		
TRTR	comp=N,1055μm,0.4s			AML	AML		
TRTR	comp=E,942μm,0.4s			AML	AML		
TRTR	comp=N,1055μm,0.4s			AML	AML		
TRTR	comp=E,942μm,0.4s			AML	AML		
CERT	**Cerreto**	**0.59**	**197**	P	Pg	12 22 06.3	+0.4
CERT				S	Sb	12 22 14.6	-0.8
CERT	comp=E,514μm,1.2s			AML	AML		
CERT	comp=N,321μm,0.3s			AML	AML		
CERT	comp=E,514μm,1.2s			AML	AML		
CERT	comp=N,321μm,0.3s			AML	AML		
CERT	comp=N,321μm,0.3s			AML	AML		
CERT	comp=E,514μm,1.2s			AML	AML		
CERT	comp=N,321μm,0.3s			AML	AML		
CERT	comp=E,514μm,1.2s			AML	AML		
MTCE	**Montecelio**	**0.60**	**216**	P	Pg	12 22 06.0	-0.2
MTCE	comp=E,402μm,0.6s			AML	AML		
MTCE	comp=N,300μm,0.6s			AML	AML		
MTCE	comp=E,401μm,0.6s			AML	AML		
MTCE	comp=N,300μm,0.6s			AML	AML		
MTCE	comp=N,300μm,0.6s			AML	AML		
MTCE	comp=E,401μm,0.6s			AML	AML		
MTCE	comp=N,300μm,0.6s			AML	AML		
MTCE	comp=E,401μm,0.6s			AML	AML		
ASSB	**Assisi San Ben**	**0.67**	**322**	P	Pg	12 22 07.4	-0.1
ASSB				S	Sb	12 22 17.3	-0.4
ASSB	comp=E,280μm,0.3s			AML	AML		
ASSB	comp=N,390μm,1.1s			AML	AML		
ASSB	comp=E,280μm,0.3s			AML	AML		
ASSB	comp=N,390μm,1.1s			AML	AML		
ASSB	comp=E,280μm,0.3s			AML	AML		
ASSB	comp=N,390μm,1.1s			AML	AML		
ASSB	comp=E,280μm,0.3s			AML	AML		
ASSB	comp=N,390μm,1.1s			AML	AML		
INTR	**Introdacqua**	**0.71**	**134**	P	Pg	12 22 08.1	-0.2
INTR	comp=E,248μm,0.9s			AML	AML		
INTR	comp=N,392μm,0.8s			AML	AML		
INTR	comp=E,248μm,0.9s			AML	AML		
INTR	comp=N,392μm,0.8s			AML	AML		
INTR	comp=E,248μm,0.9s			AML	AML		
INTR	comp=N,392μm,0.8s			AML	AML		
INTR	comp=E,248μm,0.9s			AML	AML		
INTR	comp=N,392μm,0.8s			AML	AML		
GUMA	**Gualdo di Mace**	**0.76**	**44**	P	Pg	12 22 05.5	-3.7
GUMA				S	Sg	12 22 14.2	-5.0
GUMA	comp=E,2425μm,0.3s			AML	AML		
GUMA	comp=N,2610μm,0.3s			AML	AML		
GUMA	comp=E,3610μm,0.2s			AML	AML		
GUMA	comp=N,2130μm,0.4s			AML	AML		
GUMA	comp=E,2430μm,0.3s			AML	AML		
GUMA	comp=N,2605μm,0.3s			AML	AML		
GUMA	comp=E,3615μm,0.2s			AML	AML		
GUMA	comp=N,2130μm,0.4s			AML	AML		
GUMA	comp=N,2130μm,0.4s			AML	AML		
GUMA	comp=E,3615μm,0.2s			AML	AML		
GUMA	comp=E,2430μm,0.3s			AML	AML		
GUMA	comp=N,2605μm,0.3s			AML	AML		
GUMA	comp=N,2130μm,0.4s			AML	AML		
GUMA	comp=E,3615μm,0.2s			AML	AML		
GUMA	comp=E,2430μm,0.3s			AML	AML		
GUMA	comp=N,2605μm,0.3s			AML	AML		
SNTG	**Esanatoglia**	**0.77**	**345**	P	Pg	12 22 09.0	-0.4
SNTG				S	Sb	12 22 20.4	-0.2
SNTG	comp=E,160μm,0.2s			AML	AML		
SNTG	comp=N,203μm,0.8s			AML	AML		
SNTG	comp=E,160μm,0.2s			AML	AML		
SNTG	comp=N,203μm,0.8s			AML	AML		
SNTG	comp=N,203μm,0.8s			AML	AML		
SNTG	comp=E,160μm,0.2s			AML	AML		
SNTG	comp=N,203μm,0.8s			AML	AML		
SNTG	comp=E,160μm,0.2s			AML	AML		
ATCC	**AVT- Casa Cast**	**0.80**	**328**	P	Pg	12 22 09.9	+0.1
ATCC				S	Sb	12 22 20.9	-0.3
ATCC	comp=E,322μm,0.3s			AML	AML		
ATCC	comp=N,277μm,1.1s			AML	AML		
ATCC	comp=E,322μm,0.3s			AML	AML		
ATCC	comp=N,276μm,1.1s			AML	AML		
ATCC	comp=E,322μm,0.3s			AML	AML		
ATCC	comp=N,276μm,1.1s			AML	AML		
ATCC	comp=E,322μm,0.3s			AML	AML		
ATCC	comp=N,276μm,1.1s			AML	AML		
EL6	**Elcito**	**0.82**	**354**	P	Pg	12 22 09.9	-0.4
EL6				S	Sb	12 22 21.7	-0.3
EL6	comp=E,420μm,0.8s			AML	AML		
EL6	comp=N,508μm,0.7s			AML	AML		
EL6	comp=N,508μm,0.7s			AML	AML		
EL6	comp=E,420μm,0.8s			AML	AML		
EL6	comp=N,508μm,0.7s			AML	AML		
EL6	comp=E,420μm,0.8s			AML	AML		
LPEL	**Lama dei Pelig**	**0.85**	**123**	P	Pg	12 22 10.5	-0.4
LPEL				S	Sb	12 22 22.7	-0.2
LPEL	comp=E,216μm,0.5s			AML	AML		
LPEL	comp=N,186μm,0.7s			AML	AML		
LPEL	comp=E,216μm,0.5s			AML	AML		
LPEL	comp=N,186μm,0.7s			AML	AML		
LPEL	comp=N,186μm,0.7s			AML	AML		
LPEL	comp=E,216μm,0.5s			AML	AML		
LPEL	comp=N,186μm,0.7s			AML	AML		
LPEL	comp=E,216μm,0.5s			AML	AML		
CING	**Cingoli**	**0.86**	**359**	P	Pg	12 22 10.9	-0.2
CING				S	Sb	12 22 23.1	-0.1
MGAB	**Montegabbione**	**0.91**	**296**	P	Pg	12 22 12.0	0.0
MGAB				S	Sb	12 22 24.3	-0.2
MGAB	comp=E,400μm,0.4s			AML	AML		
MGAB	comp=N,472μm,0.4s			AML	AML		
MGAB	comp=E,419μm,0.3s			AML	AML		
MGAB	comp=N,521μm,0.4s			AML	AML		
MGAB	comp=E,419μm,0.3s			AML	AML		
MGAB	comp=N,521μm,0.4s			AML	AML		
MGAB	comp=E,419μm,0.3s			AML	AML		
MGAB	comp=N,521μm,0.4s			AML	AML		
MGAB	comp=E,419μm,0.3s			AML	AML		
MGAB	comp=N,521μm,0.4s			AML	AML		
SENI	**Senigallia**	**1.19**	**0**	P	Pb	12 22 15.8	-1.4
DUGI	**Dugi Otok**	**2.00**	**42**	*e*Pn	Pn	12 22 28.7	+0.5
DUGI				Sn	Sn	12 22 52.5	-0.8
ZIRJ	**Zirje**	**2.11**	**56**	*e*Pn	Pn	12 22 30.2	+0.3
ZIRJ				Sn	Sn	12 22 55.1	-1.0
MORI	**Morici**	**2.27**	**53**	*e*Pn	Pb	12 22 33.7	-1.7

MORI				Sn	Sn	12 23 01.3	+1.3
NVLJ	Novalja	2.38	30	*e*Pn	Pn	12 22 32.9	-0.6
NVLJ				Sn	Sn	12 23 03.1	+0.5
HVAR	Hvar	2.47	73	Sn	Sn	12 23 06.0	+1.1
FIU	Minerbio Fiu	2.47	330	P	Pb	12 22 38.5	-0.4
UDBI	Udbina	2.73	42	*e*Pn	Pn	12 22 38.8	+0.3
T0912	Minucciano (LU	2.75	308	P	Pg	12 22 47.7	+0.5
PLMA	Palmaria, Port	2.90	303	P	Pg	12 22 51.3	+1.2
MSSA	Maissana	3.24	305	S	Sg	12 23 36.0	-2.7
STON	Ston	3.32	82	P	Pg	12 23 00.3	+2.1
SALO	Salr	3.66	329	S	Sn	12 23 36.0	+1.6
FINB	Finale Ligure	3.94	297	P	Pn	12 22 55.4	+0.5
CAR1	CAROLEI	3.97	144	P	Pn	12 22 58.9	+3.5
PIPA	Pietrapaola	4.07	137	P	Pb	12 23 03.0	-3.3
BERNI	Berninapass	4.52	331	P	Pn	12 23 00.9	-2.3
BERNI				AML	AML		
	comp=E,11µm,0.1s						
BERNI				AML	AML		
	comp=N,26µm,0.1s						
BERNI				AML	AML		
	comp=E,11µm,0.1s						
BERNI				AML	AML		
	comp=N,26µm,0.1s						
BERNI				AML	AML		
	comp=E,11µm,0.1s						
BERNI				AML	AML		
	comp=N,26µm,0.1s						
MCPD	Capo d'Orlando	4.54	165	P	Pb	12 23 13.5	-0.7
FUORN	Ofenpass-Fuorn	4.62	334	P	Pn	12 23 01.0	-3.5
RESU	Resuttano	4.90	172	P	Pn	12 23 07.6	-0.7
FUSIO	Fusio	5.11	322	P	Pg	12 23 30.8	-1.6

GEN 18 12:22:45.7, 44°.21N×10°.16E, h5^{km}±2^{km}, Ml0.8, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	Equi	0.05	182	P	Pg	12 22 47.4	+0.5
EQUI				S	Sg	12 22 48.4	+0.6
EQUI	Equi	0.05	182	P	Pg	12 22 47.4	+0.5
SARO	Sassorosso	0.18	99	P	Pg	12 22 49.7	+0.5
SARO				S	Sg	12 22 52.5	+0.9
GRAM	Graiana	0.29	347	P	Pg	12 22 51.5	+0.3
GRAM				S	Sg	12 22 56.1	+1.0
GRAM	Graiana	0.29	347	P	Pg	12 22 51.7	+0.4
POPM	Popiglio	0.46	111	P	Pg	12 22 53.7	-0.9
POPM				S	Sg	12 23 01.3	+0.7

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*PAS **18** 12:49:40.9±0.0, 31°.93N×115°.01W, h10^{km}*

*ANF **18** 12:49:40.4±0.8, 32°.03N×114°.94W, h22^{km}±5^{km}, ML3.0/13, Error ellipse: s-maj=6.3km s-min=2.8km az=12.0*

*ISCJB **18** 12:49:40.5±0.6, 31°.95N±0°.03×114°.97W±0°.03, h26^{km}±4^{km}, Error ellipse: s-maj=5.3km s-min=4.0km az=4.9*

*MEX **18** 12:49:41.8±0.3, 31°.95N×114°.94W, h10^{km}±5^{km}, MD3.7*

*NEIC **18** 12:49:41.2±0.0, 31°.93N×115°.01W, h13^{km}, ML3.2(PAS), ML3.6(ECX), After ECX.*

*ECX **18** 12:49:41.2±0.5, 31°.92N×115°.00W, h12^{km}, MD3.4, ML3.6*

ISC 18 12:49:40.4±0.9, **31°.92N**±0°.03×**114°.99W**±0°.03, **h20**^{km}±9^{km}, **n50**, σ**1^{s}48**/69, **3C, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBIG	Mexicali	0.51	340	*e*Pg	Pb	12 49 50.9	+0.2
MBIG				*e*Sg	Sb	12 49 59.1	+1.3
MBIG	Mexicali	0.51	340	*e*P	Pb	12 49 50.9	+0.2
MBIG				*i* S	Sb	12 49 57.9	+0.2
CPBX	Cerro Prieto	0.56	331	*e*P	Pb	12 49 51.4	-0.2
CPBX				*e*S	Sb	12 49 59.4	+0.2
CPBX				⇑*e*		12 50 02.1	
CPBX				IAML		12 50 02.1	
	comp=N,12µm,0.1s						
DREC	Desert Rsrch C	0.96	336	*e*P	Pb	12 49 57.8	-0.5
SPIG	San Pedro Mart	0.97	205	*e*Pg	Pb	12 49 58.5	-0.1
SPIG				*e*Sg	Sb	12 50 11.5	+0.4
SPIG	San Pedro Mart	0.97	205	*e*P	Pb	12 49 58.5	-0.1
SPIG				*e*S	Sb	12 50 11.5	+0.4
SPIG	San Pedro Mart	0.97	205	*e*P	Pb	12 49 58.0	-0.6
GLA	Glamis	1.13	7	*e*Pn	Pn	12 49 59.7	-1.4
GLA	Glamis	1.13	7	P	Pn	12 49 59.6	-1.4
	baz=188,SNR=350						
GLA				S	Sb	12 50 13.1	-2.4
	baz=188						
RMX	La Rumorosa	1.15	306	*e*P	Pn	12 50 00.3	-1.1
RMX				*e*S	Sb	12 50 14.4	-1.7
RMX				⇑*e*		12 50 15.5	
RMX				IAML		12 50 15.5	
	comp=E,1µm,0.2s						
IKP	In-Ko-Pah, Jac	1.20	308	P	Pn	12 50 02.1	+0.1
	baz=128,SNR=96						
IKP				S	Sb	12 50 17.0	-0.4
	baz=128						
IKP	In-Ko-Pah, Jac	1.20	308	*e*P	Pn	12 50 01.4	-0.6
SWSC	Sam W. Stewart	1.23	326	P	Pn	12 50 01.8	-0.6
	baz=146,SNR=31						
CBX	Cerro Bola	1.48	286	*e*Pn	Pn	12 50 05.2	-0.7
CBX				*e*Sn	Sn	12 50 24.0	-0.7
CBX	Cerro Bola	1.48	286	*e*P	Pn	12 50 05.2	-0.7
CBX				*i* S	Sn	12 50 24.0	-0.7
CBX	Cerro Bola	1.48	286	*e*P	Pn	12 50 05.8	-0.1
CBX				IAML		12 50 28.7	
	comp=E,954nm,0.5s						
CBX				⇑*e*		12 50 28.7	
TJIG	Tijuana	1.52	290	*e*S	Sn	12 50 24.2	-1.4
MONP2	Monument Peak	1.55	309	P	Pn	12 50 06.8	-0.2
	baz=129,SNR=63						
MONP2				Sb	Sb	12 50 27.6	-0.3
	baz=129						
MONP2	Monument Peak	1.55	309	*e*P	Pn	12 50 07.1	+0.1
BAR	Barrett	1.61	298	*e*Pn	Pb	12 50 09.2	-0.3
BAR				*e*Sn	Sb	12 50 29.7	+0.2
BC3	Big Chuckawall	1.77	347	P	Pn	12 50 08.7	-1.2
	baz=168,SNR=12						
BC3				S	Sn	12 50 29.6	-2.3
	baz=168						
EML	El Monte Cty P	1.84	302	*e*P	Pn	12 50 11.9	+1.0
214A	Organ Pipe Nat	1.85	88	*e*P	Pn	12 50 09.9	-1.1
214A				*e*S	Sn	12 50 31.4	-2.3
214A	Organ Pipe Nat	1.85	88	P	Pn	12 50 09.9	-1.1
	baz=270,SNR=25						
214A				S	Sn	12 50 32.6	-1.1
	baz=270						
Y12C	Blythe	1.86	12	*e*Pn	Pn	12 50 10.4	-0.7
Y12C	Blythe	1.86	12	P	Pn	12 50 10.2	-0.9
	baz=193,SNR=38						
109C	Camp Elliot, M	2.04	299	P	Pn	12 50 13.5	0.0
	baz=118,SNR=14						
109C				S	Sn	12 50 38.4	+0.1
	baz=118						
CPE	Camp Elliot	2.04	299	*e*Pn	Pn	12 50 13.5	+0.1
CPE				*e*Sn	Sb	12 50 42.0	+0.5
PFO	Pinyon Flats O	2.09	324	*e*Pn	Pn	12 50 15.8	+1.5
PFO				*e*Sg	Sb	12 50 44.3	+1.1
PFO	Pinyon Flats O	2.09	324	Pb	Pb	12 50 16.3	-1.4
	baz=144						
PFO				Sb	Sb	12 50 44.1	+0.8
	baz=144						
IRM	Iron Mountain	2.23	357	P	Pn	12 50 15.1	-1.1
	baz=177,SNR=51						
MURC	Murrieta	2.50	312	Sb	Sb	12 50 56.6	+1.6
	baz=132						
GMRC	Granite Mounta	2.91	349	S	Sn	12 50 57.8	-2.2
	baz=169						
LDFC	Landfair	3.15	358	*e*Pn	Pn	12 50 29.8	+0.9
CIS	Catalina Islan	3.25	298	Sb	Sb	12 51 18.1	+1.6
	baz=116						
W13A	Hualapai Mount	3.30	16	*e*Pn	Pn	12 50 31.1	+0.1
X16A	Lo Mia Camp, P	3.88	49	*e*Pn	Pn	12 50 39.8	+0.9
SHPR	Sheep Range	4.57	358	*e*Pn	Pn	12 50 49.6	+1.1
WUAZ	Wupatki	4.68	39	*e*Pn	Pn	12 50 51.8	+1.8
X18A	Snowflake	4.96	57	*e*Pn	Pn	12 50 55.2	+1.4
U15A	North Rim	5.02	26	*e*Pn	Pn	12 50 56.7	+2.0
LCMT	Little Creek M	5.28	15	*e*Pn	Pn	12 50 59.9	+1.8
KNB	Kanab	5.38	19	*e*Pn	Pn	12 51 01.7	+2.1
W18A	Petrified Fore	5.42	53	*e*Pn	Pn	12 51 01.9	+1.8
R11A	Troy Canyon, C	6.43	356	*e*Pn	Pn	12 51 16.1	+2.1
PV13	Radium Mtn., P	8.01	37	*e*Pn	Pn	12 51 38.6	+2.8
PV17	East Wray Mesa	8.03	36	*e*Pn	Pn	12 51 38.0	+1.9
PV03	Paradox Valley	8.07	37	*e*Pn	Pn	12 51 40.4	+3.8
PV16	Nyswonger Mesa	8.08	36	*e*Pn	Pn	12 51 40.8	+4.0
PV12	Saucer Basin,	8.14	37	*e*Pn	Pn	12 51 41.7	+4.2

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*IDC **18** 12:58:05.5±1.0, 43°.61N×40°.39E, h0^{km}, mb3.4/1, mb1 3.4/3, mb1mx3.1/38, mbtmp3.5/3, ML3.3/2, MS2.4/2, Ms1 2.4/2, ms1mx2.0/33, Error ellipse: s-maj=25.2km s-min=9.1km az=169.0*

*ISCJB **18** 12:58:07.0±0.3, 43°.74N±0°.03×40°.41E±0°.02, h10^{km}, mb3.4/5, Error ellipse: s-maj=4.7km s-min=2.2km az=5.5*

*MOS **18** 12:58:06.7±0.0, 43°.67N×40°.42E, h2^{km}, MPVA4.3, FELT I=II-III MSK at Krasnaya Polyana*

ISC 18 12:58:07.6±0.6, **43°.67N**±0°.04×**40°.40E**±0°.02, **h10**^{km}, **n52**, σ**1^{s}33**/71, **mb3.4**/5, **11C-1D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPOR	Krasnaya Polya	0.10	287*c*	*i*PG	Pg	12 58 09.0	-1.2
RPOR	Krasnaya Polya	0.10	287	*i* Pg	Pg	12 58 09.0	-1.2
RPOR				*e*Sg	Sg	12 58 10.1	-2.0
SOC	Sochi	0.50	260*c*	*i*PG	Pg	12 58 16.4	-1.0
SOC				*e*		12 58 23.4	
SOC				pmax	pmax		
	comp=Z,223nm,0.3s						
SOC				smax	smax		
	comp=E,2µm,0.4s						
SOC				smax	smax		
	comp=N,3µm,0.4s						
SOC	Sochi	0.50	260	*e*Pg	Pg	12 58 16.6	-0.8
SOC				*e*Sg	Sg	12 58 23.7	-0.3
ARXR	Arkhyz	0.65	99	*i* Pg	Pg	12 58 19.6	-0.6
ARXR				*e*Sg	Sb	12 58 28.8	-1.5
LZRR	Lazarevskoye	0.78	290	*e*Pg	Pg	12 58 22.2	-0.5
LZRR				*e*Sg	Sb	12 58 34.1	+0.2
DOMR	Dombai	0.97	113*c*	*e*PG	Pn	12 58 26.6	-0.9
DOMR	Dombai	0.97	113	*e*Pg	Pn	12 58 26.4	-1.1
DOMR				*e*Sg	Sb	12 58 39.6	0.0
AGYR	Agha	1.09	296	*e*Pg	Pn	12 58 29.3	+0.3
AGYR				*e*Sg	Sn	12 58 45.5	+1.4
NVNR	Nevinnomyssk	1.47	50	*e*Pg	Pg	12 58 35.0	-0.9
NVNR				*e*Sg	Sg	12 58 54.4	-0.5
SHA1	Shidzhatmaz	1.64	87	*i* PN	Pb	12 58 37.1	-1.0
SHA1	Shidzhatmaz	1.64	87	*e*Pg	Pb	12 58 37.1	-1.0
SHA1				*e*Sg	Sg	12 59 00.6	+0.1
KIV	Kislovodsk	1.68	80	*i* PN	Pb	12 58 37.7	-1.0
KIV0	Kislovodsk Arr	1.69	80	*e*Pg	Pb	12 58 37.7	-1.1
KIV0				*e*Sg	Sg	12 59 00.4	-1.5
KVAR	Kislovodsk Arr	1.69	80	Pn	Pb	12 58 38.3	-0.6
	baz=270,slow=20,SNR=63						
KVAR				Lg	Lg	12 59 00.2	
	baz=352,slow=19,SNR=10						
NEY	Neytrino	1.75	103*c*	*i*PN	Pg	12 58 39.9	-1.2
NEY	Neytrino	1.75	103	*e*Pg	Pg	12 58 40.1	-1.0
NEY				*e*Sg	Sg	12 59 02.8	-1.0
KBZ	Khabaz	1.82	87	Pn	Pb	12 58 40.2	-0.7
	comp=N,11nm,0.3s,baz=263,slow=7.9,SNR=63						
KBZ				Lg	Lg	12 59 04.7	
	comp=N,20nm,0.3s,baz=6.0,slow=22,SNR=13						
PYA1	Pyatigorsk	1.99	78	⇑*i*PN	Pb	12 58 43.4	-0.6
PYA1	Pyatigorsk	1.99	78	*e*Pg	Pb	12 58 43.4	-0.6
PYA1				*e*Sg	Sg	12 59 09.8	-1.8
ERBR	Yeremizino-Bor	2.04	2	*e*Pg	Pb	12 58 43.8	-1.0
ERBR				*e*Sg	Sb	12 59 10.3	0.0
ALER	Alexandrovskoy	2.11	58	*e*Pg	Pb	12 58 45.7	-0.3
ALER				*e*Sg	Sg	12 59 14.8	-0.7
KBTC	Kuba-Taba	2.19	85	PN	Pg	12 58 49.0	-0.6
KBTC				S	Sg	12 59 19.9	+2.0
KBTC	Kuba-Taba	2.19	85	*e*Pg	Pb	12 58 46.4	-0.9
KBTC				*e*Sg	Sb	12 59 15.2	+0.7
NCK	Nalchik	2.33	93	⇑*e*PN	Pb	12 58 49.4	-0.4
NCK	Nalchik	2.33	93	*e*Pn	Pb	12 58 48.3	-1.5
NCK				*e*Sn	Sb	12 59 16.7	-1.9
GOF	Gofitskoye	2.35	53	⇑*e*PN	Pg	12 58 52.1	-0.6
GOF				*e*S	Sg	12 59 21.9	-1.2
GOF				pmax	pmax		
	comp=Z,83nm,0.5s						
GOF				smax	smax		
	comp=E,370nm,0.6s						
GOF				smax	smax		
	comp=N,364nm,0.6s						
GOF	Gofitskoye	2.35	53	*e*Pn	Pb	12 58 48.9	-1.1
GOF				*e*Sn	Sb	12 59 18.4	-0.7
ANN	Anapa	2.41	299	*i* PN	Pb	12 58 50.2	-0.9
ANN				*i*		12 59 22.0	
ANN				pmax	pmax		
	comp=Z,27nm,0.4s						
ANN				smax	smax		
	comp=E,13nm,0.3s						
ANN				smax	smax		
	comp=N,50nm,0.3s						
ANN	Anapa	2.41	299	*e*Pn	Pb	12 58 50.1	-0.9
ANN				*e*Sn	Sg	12 59 22.9	-2.1
KORR	Kora	2.74	101	*e*Pn	Pn	12 58 53.2	+1.5
KORR				*e*Sn	Sn	12 59 26.9	+2.0
LACR	Lac	2.97	105	*e*Pn	Pn	12 58 56.6	+1.6
LACR				*e*Sn	Sb	12 59 33.3	-3.8
DVE	Vedeno	4.24	98	*i* PN	Pn	12 59 09.5	-2.8
GNI	Garni	4.79	136	LR	LR	13 01 31.3	
	comp=N,35nm,19.8s,baz=298,slow=43						
GNI	Garni	4.79	136	*i* PN	Pn	12 59 21.0	+1.1
MAK	Makhachkala	5.24	95	*i* PN	Pn	12 59 24.8	-1.1
AKT	Akhty	5.84	110	*e*P	Pn	12 59 34.7	+0.3
BRTR	Keskin Array B	6.41	234	Pn	Pn	12 59 42.8	+0.6
	comp=N,0.4nm,0.3s,baz=44,slow=12,SNR=8.2						
AKASG	Malin Array Be	10.35	317	*i* P	Pn	13 00 36.4	+0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MLR	Muntele Rosu	10.47	285	LR	LR	13 05 39.5	
	comp=Z,24nm,19.6s,baz=139,slow=43						
OBN	Obninsk	11.72	349	*i* P	Pn	13 00 55.3	+0.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KLNR	Kaliningrad	17.08	317	⇑*e*P	P	13 02 07.2	-0.8
ARU	Arti	17.22	36	⇓*e*P	P	13 02 11.1	+1.5
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KHC	Kasperske Hory	19.23	296	⇑*e*P	Pn	13 02 32.1	-0.7
KHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	19.73	339	P	Pn	13 02 37.7	-0.9
	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=12						
FINES	FINESS Array B	19.73	339	*i* P	Pn	13 02 37.7	-0.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	Borovoye	21.82	54	⇑*e*P	P	13 03 01.3	+1.5
HFS	Hagfors	23.05	325	P	P	13 03 12.5	-0.3
	comp=Z,0.4nm,0.3s,baz=125,slow=13,SNR=4.9						
AAK	Ala-Archa	24.80	80	⇑*e*P	P	13 03 32.9	+3.0
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURBB	Kurchatov Arra	26.62	61	P	P	13 03 48.1	+2.1
	comp=Z,0.5nm,0.5s,baz=274,slow=9.5,SNR=6.7						
KURK	Kurchatov	26.68	61	P	P	13 03 48.1	+1.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	29.42	69	P	P	13 04 13.9	+2.8
	comp=Z,0.4nm,0.7s,baz=276,slow=8.6,SNR=3.5						

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*ISCJB **18** 13:26:18.9±2.1, 14°.67N±0°.07×94°.33W±0°.04, h22^{km}±17^{km}, mb4.0/13, MS3.7/12, Error ellipse: s-maj=12.4km s-min=6.1km az=0.7*

*NEIC **18** 13:26:20.8±0.0, 14°.53N×94°.31W, h20^{km}, mb4.3/17, MD4.3(MEX), After MEX.*

*MEX **18** 13:26:20.0±0.7, 14°.53N×94°.33W, h10^{km}±9^{km}, MD4.3*

*IDC **18** 13:26:21.6±2.6, 15°.01N×94°.22W, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.9/45, mbtmp3.8/9, ML3.8/3, MS3.6/13, Ms1 3.6/13, ms1mx3.4/35, Error ellipse: s-maj=65.3km s-min=26.5km az=36.0*

ISC 18 13:26:16.7±2.0, **14°.63N**±0°.07×**94°.17W**±0°.05, **h4**^{km}±12^{km}, **n55**, σ**1^{s}75**/50, **mb4.1**/13, **MS3.6**/12, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.41	40	*e*Pn	Pg	13 26 44.5	+0.6
PCIG				*e*Sn	Sg	13 27 02.3	+0.1
PCIG		1.41	40	*e*P	Pg	13 26 44.5	+0.6
PCIG				*i* S	Sg	13 27 03.1	+1.0
THIG		1.86	81	*e*Pn	Pb	13 26 50.6	-0.8
THIG				*e*Sn	Sn	13 27 10.3	-3.2
THIG		1.86	81	*e*P	Pb	13 26 50.6	-0.8
THIG				*i* S	Sg	13 27 15.9	-0.8
HUIG	Huatulco	2.19	302	*e*Pn	Pn	13 26 52.2	-1.7
HUIG	Huatulco	2.19	302	*e*P	Pn	13 26 52.2	-1.7
HUIG				*i* S	Sn	13 27 17.4	-4.1
TGIG		2.37	25	*e*Pn	Pb	13 26 59.2	-0.8
TGIG				*e*Sn	Sb	13 27 28.1	-1.5
TGIG		2.37	25	*e*P	Pb	13 26 58.6	-1.4
TGIG				*i* S	Sb	13 27 28.4	-1.3
CMIG	Matias Romero	2.54	344	Pn	Pn	13 26 59.1	+0.2
	28nm,0.3s,baz=169,slow=13,SNR=126						
CMIG				Sn	Sn	13 27 27.6	-2.7
	105nm,0.3s,baz=153,slow=15,SNR=7.3						
CMIG				LR	LR	13 27 30.4	
	comp=Z,369nm,19.3s,baz=250,slow=32						
CMIG	Matias Romero	2.54	344	*e*Pn	Pn	13 26 59.0	+0.2
CMIG				*e*Sn	Sn	13 27 26.0	-4.3
CMIG	Matias Romero	2.54	344	*e*P	Pn	13 26 59.0	+0.2
CMIG				*i* S	Sn	13 27 29.1	-1.3
CCIG	Comitan	2.56	50	*e*Pn	Pb	13 27 02.8	-0.5
CCIG				*e*Pn	Pb	13 27 02.9	-0.5
CCIG	Comitan	2.56	50	*e*P	Pb	13 27 02.1	-1.3
CCIG				*i* S	Sb	13 27 34.0	-1.3
APG	El Apazote	3.60	84	Pn	Pb	13 27 18.6	-2.6
	4.6nm,0.3s,baz=354,slow=12,SNR=15						
TLIG	Tlapa	5.14	305	*e*Pn	Pn	13 27 33.2	-1.4
TEIG	Tepich	7.92	44	*e*Pn	Pn	13 28 13.8	+1.1
LNIG	Linares	11.37	335	*e*Pn	Pn	13 29 03.1	+3.1
JCT	Junction City	16.61	343	*e*P	P	13 30 12.3	-0.8
	11nm,1.1s						
LTX	Lajitas	17.07	331	*e*P	P	13 30 19.0	+0.7
TXAR	Lajitas Array	17.07	331	Pn	P	13 30 19.0	+0.7
	0.1nm,0.3s,baz=152,slow=11,SNR=9.9						
WHTX	Lake Whitney,	17.55	351	*e*P	P	13 30 22.1	-1.4
	16nm,0.9s						
ABTX	Abilene, Hawle	18.60	345	*e*P	Pn	13 30 34.6	-0.7
	11nm,0.8s						
MIAR	Mount Ida	19.84	1	*e*P	Pn	13 30 48.6	-1.7
	6.9nm,0.8s						
MNTX	Cornudas Mount	19.85	331	*e*P	Pn	13 30 48.8	-1.6
	6.8nm,1.4s						
WMOK	Wichita Mounta	20.45	349	*e*P	P	13 30 54.4	-1.0
	9.4nm,1.2s						
W39A	Magazine	20.48	1	*e*P	Pn	13 30 56.9	-1.0
	14nm,1.4s						
MSTX	Muleshoe	20.77	339	*e*P	Pn	13 30 60.0	-1.4
	41nm,1.6s						
FCAR	Ozark Folk Cen	21.25	5	*e*P	P	13 31 05.1	+1.1
	8.3nm,0.9s						
HHAR	Hobbs	21.57	1	*e*P	P	13 31 08.7	+1.3
	5.8nm,0.7s						
ANMO	Albuquerque	23.06	333	P	P	13 31 26.2	+2.6
	1.8nm,0.7s,baz=139,slow=12,SNR=5.3						
CCM	Cathedral Cave	23.48	6	*e*P	P	13 31 27.0	-0.6
	5.8nm,0.8s						
L40A	Anamosa	27.46	5	*e*P	P	13 32 04.1	+0.2
	9.0nm,0.8s						
ECSD	EROS Data Cent	29.08	356	*e*P	P	13 32 19.3	+0.8
	8.4nm,1.2s						
PDAR	Pinedale Array	31.01	338	P	P	13 32 38.0	+2.2
	0.3nm,0.5s,baz=126,slow=7.5,SNR=5.1						
ELK	Elko	31.85	329	LR	LR	13 47 41.0	
	comp=Z,92nm,20.5s,baz=144,slow=41						
NVAR	Mina Array Bea	31.88	323	P	P	13 32 46.8	+3.3
	1.3nm,0.8s,baz=141,slow=8.8,SNR=8.0						
NVAR				LR	LR	13 45 27.9	
	comp=Z,111nm,18.1s,baz=142,slow=36						
SADO	Sadowa	32.64	20	LR	LR	13 48 04.6	
	comp=Z,95nm,18.2s,baz=338,slow=40						
LRM	Limekiln Ridge	34.70	337	*e*P	P	13 33 14.7	+6.7
ULM	Lac du Bonnet	35.55	358	LR	LR	13 49 48.3	
	comp=Z,55nm,18.6s,baz=246,slow=40						
LPAZ	La Paz	40.06	139	LR	LR	13 49 03.1	
	comp=Z,66nm,20.4s,baz=282,slow=34						
LVC	Limon Verde	44.52	146	LR	LR	13 51 50.9	
	comp=Z,601nm,20.5s,baz=250,slow=34						
SCHQ	Schefferville	45.40	22	LR	LR	13 54 57.8	
	comp=Z,96nm,20.2s,baz=273,slow=38						
YKA	Yellowknife Ar	49.95	348	P	P	13 35 12.7	+1.1
	0.6nm,0.5s,baz=153,slow=7.3,SNR=3.8						
YKB5	Yellowknife Ar	49.95	348	*e*P	P	13 35 12.7	+1.1
FRB	Frobisher Bay	52.20	14	LR	LR	13 59 00.1	
	comp=Z,82nm,19.2s,baz=194,slow=38						
CFA	Coronel Fontan	52.27	152	LR	LR	13 53 02.6	
	comp=Z,80nm,18.9s,baz=323,slow=30						
ILAR	Eielson Array	61.44	337	P	P	13 36 35.6	+1.5
	1.3nm,0.9s,baz=133,slow=5.1,SNR=11						
ILAR				LR	LR	14 04 20.7	
	comp=Z,53nm,18.7s,baz=99,slow=37						
ILB	Eielson Array	61.44	337	*e*P	P	13 36 35.7	+1.5
	11nm,1.6s						
MLY	Manley	63.03	337	*e*P	P	13 36 46.7	+1.8
	3.4nm,1.0s						
NB2	NORSAR Subarra	84.59	28	P	P	13 39 02.3	+11
	comp=Z,1.1nm,0.7s,baz=294,slow=5.3						
NOA	NORSAR Array B	84.59	28	LR	LR	14 16 29.5	
	comp=Z,13nm,18.6s,baz=285,slow=36						
ARA0	ARCESS Array S	86.20	18	*e*P	P	13 39 04.6	+5.5
ARCES	ARCESS Array B	86.20	18	P	P	13 39 04.6	+5.5
	comp=Z,0.5nm,0.4s,baz=281,slow=6.2,SNR=7.1						
FINES	FINESS Array B	90.82	25	LR	LR	14 20 43.1	
	comp=Z,25nm,19.4s,baz=314,slow=36						
CMAR	Chiang Mai Arr	144.68	338	PKhKP	PKPpre	13 45 56.9	
	comp=Z,1.0nm,0.8s,baz=323,slow=3.1,SNR=6.5						

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*NEIC **18** 13:28:16.8±0.0, 69°.18N×144°.38W, h10^{km}, ML3.2(AEIC), After AEIC.*

*AEIC **18** 13:28:16.8, 69°.18N×144°.38W, h10^{km}, ML3.2*

*ISCJB **18** 13:28:17.0±0.6, 69°.09N±0°.04×144°.50W±0°.09, h10^{km}, Error ellipse: s-maj=5.6km s-min=4.8km az=179.1*

*ANF **18** 13:28:18.4±2.6, 69°.12N×144°.61W, h10^{km}, ML3.8/5, Error ellipse: s-maj=27.3km s-min=15.9km az=20.0*

ISC 18 13:28:17.3±1.1, **69°.21N**±0°.05×**144°.51W**±0°.04, **h10**^{km}, **n35**, σ**0^{s}90**/52, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PS01	TAPS Pump Stn	1.77	308	*e*Pn	Pn	13 28 48.0	+0.1
PS01				*e*Sg	Sb	13 29 13.1	+1.0
BM3	Burnt Mountain	1.80	181	*e*Pn	Pn	13 28 48.1	-0.3
TOLK	Toolik Lake Re	1.92	255	*e*Pn	Pn	13 28 50.8	+0.7
TOLK				*e*Sn	Sn	13 29 14.5	+0.3
TOLK	Toolik Lake Re	1.92	255	P	Pn	13 28 49.8	-0.2
	baz=71						
TOLK				S	Sn	13 29 14.7	+0.4
	baz=71						
PS04	TAPS Pump Stn4	1.93	248	*e*Pn	Pn	13 28 49.9	-0.3
PS04				*e*Sn	Sn	13 29 15.9	+1.3
FYU	Fort Yukon	2.67	186	*e*Pn	Pn	13 29 01.4	+1.0
COLD	Coldfoot	2.91	230	*e*Pn	Pn	13 29 04.0	+0.3
PS05	TAPS Pump Stn5	3.34	227	*e*Pn	Pn	13 29 09.0	-0.5
INK	Inuvik	4.10	98	*e*Pn	Pn	13 29 18.0	-1.9
INK				*e*Sn	Sn	13 30 05.8	-1.9
EPYK	Eagle Plains	4.11	130	*e*Pn	Pn	13 29 21.3	+1.2
EPYK	Eagle Plains	4.11	130	P	Pn	13 29 21.0	+0.9
	baz=318						
EPYK				S	Sn	13 30 07.4	-0.7
	baz=318						
POKR	Poker Plat Res	4.27	197	P	Pn	13 29 22.4	+0.1
	baz=14						
POKR				S	Sn	13 30 10.8	-1.2
	baz=14						
TCOL	CIGO, UAF Yank	4.55	198	P	Pn	13 29 26.1	0.0
	baz=16						
TCOL				S	Sn	13 30 18.6	-0.3
	baz=16						
ILB	Eielson Array	4.56	193	*e*Pn	Pn	13 29 26.3	+0.1
EGAK	Eagle	4.64	162	*e*Pn	Pn	13 29 28.3	+0.9
CCB	Clear Creek Bu	4.76	197	*e*Pn	Pn	13 29 29.0	0.0
IM3	Indian Mountai	4.79	232	*e*Pn	Pn	13 29 28.8	-0.7
MLY	Manley	4.85	213	*e*Pn	Pn	13 29 30.2	-0.1
MLY				*e*Sn	Sn	13 30 25.4	-1.0
HDA	Harding Lake	4.92	192	*e*Pn	Pn	13 29 31.5	+0.3
HDA				*e*Sn	Sn	13 30 27.4	-0.7
HDA	Harding Lake	4.92	192	P	Pn	13 29 31.0	-0.2
	baz=10						
HDA				S	Sn	13 30 26.9	-1.2
	baz=10						
WRH	Wood River Hil	4.97	198	*e*Pn	Pn	13 29 31.6	-0.2
SCRK	Sand Creek	5.26	178	*e*Pn	Pn	13 29 37.5	+1.4
BWN	Browne	5.43	204	*e*Pn	Pn	13 29 36.9	-1.3
BWN				*e*Pn	Pn	13 29 37.7	-0.5
RIDG	Independent Ri	5.50	182	*e*Pn	Pn	13 29 40.5	+1.3
DAWY	Dawson	5.55	156	*e*Pn	Pn	13 29 40.8	+0.8
BPAW	Bear Paw Mtn.	5.74	210	*e*Pn	Pn	13 29 42.0	-0.5
BPAW				*e*Sn	Sn	13 30 46.9	-1.4
MCK	McKinley	5.78	200	*e*Pn	Pn	13 29 42.7	-0.4

MCK				*e*Sn	**Sn**	13 30 49.9	+0.6
RND	**Reindeer**	6.09	199	*e*Pn	**Pn**	13 29 48.1	+0.8
RND				*e*Sn	**Sn**	13 30 55.1	-1.8
KTH	**Kantishna Hill**	6.24	207	*e*Pn	**Pn**	13 29 49.1	-0.2
BCA3	**Beaver Creek A**	6.27	169	*e*Pn	**Pn**	13 29 49.9	+0.1
PAX	**Paxson**	6.28	184	*e*Pn	**Pn**	13 29 51.3	+1.4
PAX				*e*Sn	**Sn**	13 31 02.0	+0.3
MENT	**Mentasta**	6.31	177	*e*Pn	**Pn**	13 29 51.3	+1.0
MENT				*e*Sn	**Sn**	13 31 03.5	+1.2
CAST	**Castle Rocks**	6.56	211	*e*Pn	**Pn**	13 29 53.5	-0.3
PPLA	**Purkeypile**	7.07	210	*e*Pn	**Pn**	13 30 00.1	-0.6
RES	**Resolute Bay**	15.85	48	*e*P	**P**	13 32 03.5	-0.2

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*SOME **18** 13:32:41.3, 44°.62N×82°.30E, h20^{km}*
*NNC **18** 13:32:42.4±1.3, 44°.64N×82°.06E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=14.1km s-min=4.6km az=123.0*
ISC 18 13:32:39.6±2.0**, 44°.46N**±0°.10×**82°.4E**±0°.1**, h3**^{km}±17^{km}**, n22, σ0^{s}79**/36**, 3C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	1.78	236	*e*P	**Pg**	13 33 13.7	0.0
	8.2nm,0.2s						
KTMS				*e*S	**Sg**	13 33 37.1	+0.3
	38nm,0.5s						
DJR	**Jarkent**	1.86	267	P	**Pn**	13 33 13.2	+0.7
	5.4nm,0.2s						
DJR				S	**Sn**	13 33 36.4	-0.2
	8.4nm,0.4s						
DJR	**Jarkent**	1.86	267	*e*P	**Pn**	13 33 13.2	+0.7
	5.4nm,0.2s						
DJR				*e*S	**Sn**	13 33 36.4	-0.2
	8.4nm,0.4s						
KAPS	**Kapalarasan**	2.30	292	Pg	**Pn**	13 33 19.4	+0.9
	1.6nm,0.1s						
KAPS				Lg	Lg	13 33 46.5	
	26nm,0.4s						
KAPS	**Kapalarasan**	2.30	292	*e*P	**Pn**	13 33 19.9	+1.3
	1.7nm,0.1s						
KAPS				*e*S	**Sn**	13 33 47.3	-0.2
	26nm,0.4s						
MK31	**Makanchi Array**	2.34	358	Pn	**Pn**	13 33 19.9	+0.9
	7.1nm,0.4s,baz=183,slow=16,SNR=179						
MK31				⇑Sn	**Sn**	13 33 48.3	+0.1
	3.9nm,0.2s,baz=187,slow=26						
MAKZ	**Makanchi**	2.37	353	⇓Pn	**Pn**	13 33 19.6	+0.2
	4.2nm,0.4s						
MAKZ				⇓Sn	**Sn**	13 33 48.2	-0.7
	9.7nm,0.5s						
PDGK	**Podgornoye**	2.38	243	Pg	**Pb**	13 33 22.8	-0.3
	3.0nm,0.2s						
PDGK				Lg	Lg	13 33 52.8	
	6.9nm,0.4s						
PDGK	**Podgornoye**	2.38	243	⇑Pn	**Pb**	13 33 22.0	-1.1
	1.8nm,0.3s						
PDGK				⇑Sn	**Sb**	13 33 52.9	0.0
	15nm,0.5s						
UZB	**Uzynbulak**	2.76	243	Pg	**Pb**	13 33 28.9	-0.8
	6.1nm,0.3s						
UZB				Lg	Lg	13 34 02.7	
	6.4nm,0.2s						
UZB	**Uzynbulak**	2.76	243	*e*P	**Pb**	13 33 28.9	-0.8
	6.1nm,0.2s						
UZB				*e*S	**Sb**	13 34 02.8	-1.3
	5.8nm,0.3s						
KPKS	**Kokpek**	2.85	251	*e*P	**Pb**	13 33 30.2	-0.9
	17nm,0.3s						
KPKS				*e*S	**Sb**	13 34 05.8	-0.6
	37nm,0.5s						
MNBS	**Baschi**	2.88	264	Pg	**Pb**	13 33 31.4	-0.4
	4.3nm,0.3s						
MNBS	**Baschi**	2.88	264	*e*P	**Pb**	13 33 31.4	-0.4
	4.3nm,0.3s						
MNBS				*e*S	**Sb**	13 34 07.2	-0.3
	16nm,0.3s						
SATY	**Saty**	3.20	245	Pg	**Pb**	13 33 36.2	-0.9
	6.4nm,0.3s						
SATY				Lg	Lg	13 34 17.1	
	12nm,0.3s						
SATY	**Saty**	3.20	245	*e*P	**Pb**	13 33 36.5	-0.7
	7.5nm,0.2s						
SATY				*e*S	**Sb**	13 34 17.6	+0.9
	11nm,0.3s						
ARXS	**Arharly**	3.28	267	Pg	**Pb**	13 33 37.5	-0.9
	1.7nm,0.3s						
ARXS				Lg	Lg	13 34 17.6	
	8.5nm,0.4s						
ARXS	**Arharly**	3.28	267	*e*P	**Pb**	13 33 37.5	-0.9
	1.7nm,0.3s						
ARXS				*e*S	**Sb**	13 34 17.6	-1.2
	8.5nm,0.4s						
CHKK	**Chushkaly**	3.93	263	Pg	**Pb**	13 33 49.0	-0.5
	1.0nm,0.2s						
CHKK				Lg	Lg	13 34 37.2	
	5.8nm,0.5s						
CHKK	**Chushkaly**	3.93	263	*e*P	**Pb**	13 33 49.0	-0.5
	1.0nm,0.2s						
CHKK				*e*S	**Sb**	13 34 37.2	-0.2
	5.8nm,0.5s						
KOTS	**Kotyrbulak**	4.00	254	Pg	**Pb**	13 33 51.4	+0.5
	1.5nm,0.2s						
KOTS				Lg	Lg	13 34 41.3	
	5.4nm,0.5s						
KOTS	**Kotyrbulak**	4.00	254	*e*P	**Pb**	13 33 51.4	+0.5
	1.5nm,0.2s						
KOTS				*e*S	**Sb**	13 34 41.3	+1.5
	5.4nm,0.5s						

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*ISCJB **18** 13:37:51.8±2.0, 14°.85N±0°.07×94°.08W±0°.04, h14^{km}±15^{km}, mb3.9/6, Error ellipse: s-maj=11.7km s-min=6.7km az=6.7*
*IDC **18** 13:37:51.7±2.5, 14°.98N×94°.16W, h0^{km}, mb3.8/4, mb1 4.0/7, mb1mx3.7/51, mbtmp3.8/7, ML3.9/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/33, Error ellipse: s-maj=62.1km s-min=26.1km az=34.0*
*MEX **18** 13:37:54.4±0.8, 14°.76N×94°.13W, h16^{km}±17^{km}, MD4.1*
*NEIC **18** 13:37:56.3±0.0, 14°.76N×93°.98W, h20^{km}, mb3.9/11, MD4.1(MEX), After MEX.*
ISC 18 13:37:51.1±2.4**, 14°.81N**±0°.08×**94°.06W**±0°.05**, h2**^{km}±13^{km}**, n34, σ1^{s}64**/41**, mb4.0**/6**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.20	42	*e*Pn	**Pg**	13 38 14.8	+0.6
PCIG				*e*Sn	**Sg**	13 38 28.7	-1.1
PCIG		1.20	42	*e*P	**Pg**	13 38 14.8	+0.6
PCIG				*e*S	**Sg**	13 38 28.7	-1.1
THIG		1.74	87	*e*Pn	**Pn**	13 38 20.6	-1.7
THIG				*e*Sn	**Sn**	13 38 41.1	-3.9
THIG		1.74	87	*e*P	**Pn**	13 38 20.6	-1.7
THIG				*i* S	**Sn**	13 38 42.3	-2.7
TGIG		2.15	25	*e*Pn	**Pn**	13 38 29.1	+1.1
TGIG		2.15	25	*i* P	**Pn**	13 38 28.3	+0.2
TGIG				*i* S	**Sn**	13 38 53.5	-1.9
CCIG	**Comitan**	2.36	51	*e*Pn	**Pn**	13 38 32.5	+1.5
CCIG				*e*Pn	**Pb**	13 38 33.3	-1.2
CCIG	**Comitan**	2.36	51	*e*P	**Pn**	13 38 31.4	+0.4
CCIG				*i* S	**Sn**	13 38 59.2	-1.4
CMIG	**Matias Romero**	2.40	341	Pn	**Pn**	13 38 29.4	-2.1
	24nm,0.3s,baz=164,slow=11,SNR=121						
CMIG				LR	LR	13 38 50.9	
	comp=Z,82nm,20.8s,baz=88,slow=27						
CMIG				Sn	**Sn**	13 38 59.2	-2.2
	51nm,0.3s,baz=150,slow=17,SNR=7.7						
CMIG	**Matias Romero**	2.40	341	*e*P	**Pn**	13 38 29.7	-1.7
CMIG				*i* S	**Sn**	13 38 58.4	-3.0
APG	**El Apazote**	3.48	86	Pn	**Pn**	13 38 46.8	+0.3
	7.7nm,0.3s,baz=333,slow=12,SNR=25						
TLIG	**Tlapa**	5.12	303	*e*Pn	**Pn**	13 39 07.6	-1.4
LVIG	**Laguna Verde**	5.38	336	*e*Pn	**Pn**	13 39 11.8	-0.6
TEIG	**Tepich**	7.71	45	*e*Pn	**Pn**	13 39 44.9	+0.5
MTDJ	**Mount Denham**	16.20	76	*e*Pn	**Pn**	13 41 40.9	+0.8
	76nm,1.2s						
LTX	**Lajitas**	16.96	330	*e*Pn	**Pn**	13 41 50.2	+0.5
TXAR	**Lajitas Array**	16.96	330	Pn	**Pn**	13 41 50.2	+0.5
	0.1nm,0.3s,baz=153,slow=13,SNR=7.1						
TX31	**Lajitas Ar. Si**	16.96	330	*e*P	**P**	13 41 55.1	+3.4
	5.2nm,1.0s						
WHTX	**Lake Whitney,**	17.38	350	*e*Pn	**P**	13 41 57.7	+1.5
	8.5nm,0.6s						
ABTX	**Abilene, Hawle**	18.45	345	*e*P	**Pn**	13 42 08.6	+0.5
	7.3nm,0.8s						
MNTX	**Cornudas Mount**	19.74	330	*e*P	**Pn**	13 42 24.6	+0.9
	9.3nm,1.8s						
Z50A	**Ashland**	19.79	21	*e*P	**Pn**	13 42 24.7	+0.5
	9.0nm,0.8s						
WMOK	**Wichita Mounta**	20.29	349	*e*P	Pn	13 42 29.8	-0.4
	4.6nm,1.0s						
MSTX	**Muleshoe**	20.64	339	*e*P	**P**	13 42 33.5	+1.4
	5.5nm,0.8s						
FCAR	**Ozark Folk Cen**	21.06	4	*e*P	**P**	13 42 37.3	+0.8
	4.7nm,0.8s						
AMTX	**Amarillo**	21.13	342	*e*P	**P**	13 42 37.5	+0.1
	12nm,0.7s						
X16A	**Lo Mia Camp, P**	25.04	324	*e*pP	P	13 43 26.7	+10
NV01	**Mina Array Sit**	31.80	322	*e*P	**P**	13 44 16.9	-0.4
NVAR	**Mina Array Bea**	31.80	322	P	**P**	13 44 16.9	-0.4
	0.4nm,0.7s,baz=133,slow=8.5,SNR=5.5						
ILAR	**Eielson Array**	61.31	337	P	**P**	13 48 05.7	-2.2
	0.3nm,0.7s,baz=165,slow=4.2,SNR=5.0						
NB200	**NORSAR Array S**	84.38	28	*e*P	**P**	13 50 26.5	+1.6
NOA	**NORSAR Array B**	84.38	28	P	**P**	13 50 26.5	+1.6
	0.7nm,0.6s,baz=292,slow=5.1,SNR=3.8						
ARA0	**ARCESS Array S**	85.99	18	*e*P	**P**	13 50 34.3	+1.6
ARCES	**ARCESS Array B**	85.99	18	P	**P**	13 50 34.3	+1.6
	1.7nm,0.8s,baz=296,slow=6.9,SNR=3.8						

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*ISCJB **18** 13:47:23.1±1.0, 2°.94N±0°.04×128°.61E±0°.07, h47^{km}±10^{km}, mb4.3/32, MS2.9/2, Error ellipse: s-maj=12.0km s-min=5.9km az=158.4*
*IDC **18** 13:47:23.7±0.7, 2°.96N×128°.51E, h33^{km}±4^{km}, mb4.0/14, mb1 4.1/15, mb1mx3.8/30, mbtmp4.1/15, ML4.0/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/33, Error ellipse: s-maj=28.1km s-min=11.1km az=76.0*
*NEIC **18** 13:47:24.6±2.1, 2°.95N×128°.55E, h43^{km}±8^{km}, mb4.4/25, Error ellipse: s-maj=13.1km s-min=9.5km az=197.0*
ISC 18 13:47:23.6±0.7**, 2°.95N**±0°.05×**128°.54E**±0°.08**, h33**^{km}±2^{km}**, h33**^{km}**:pP-P, n61, σ1^{s}39**/62**, mb4.3**/31**, 1C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	2.46	208	*e*Pn	**Pn**	13 48 03.6	+2.2
SIJI	**Sorong**	4.67	144	Pn	**Pn**	13 48 31.8	-0.1
	6.5nm,0.3s,baz=130,slow=7.3,SNR=24						
SIJI				Sn	**Sn**	13 49 23.4	-1.7
	3.4nm,0.3s,baz=177,slow=23,SNR=5.6						
KCP	**Kidapawan**	5.29	320	⇑*i*P	**Pn**	13 48 44.1	+3.7
KCP				*i* S	**Sb**	13 49 52.3	-6.3
CTBH	**Cotabato--PC H**	6.02	315	⇓*i*P	**Pn**	13 48 53.3	+3.0
FAKI	**Fak Fak**	6.91	147	*e*Pn	**Pn**	13 49 02.9	+0.3
SAUI	**Saumlaki**	11.21	166	*e*Pn	**Pn**	13 49 59.3	-2.3
KAPI	**Kappang**	11.82	228	*e*Pn	**Pn**	13 50 11.5	+1.6
BATI	**Baumata**	13.94	200	LR	LR	13 56 10.5	
	comp=Z,166nm,19.1s,baz=12,slow=38						
MTN	**Manton Dam**	15.90	171	*e*P	**P**	13 51 08.8	+0.5
	8.9nm,1.1s						
GUMO	**Guam**	19.29	56	LR	LR	13 58 09.7	
	comp=Z,19nm,20.6s,baz=232,slow=34						
UGM	**Wanagama**	20.96	239	*e*P	**P**	13 52 03.2	-0.8
	115nm,1.1s						
YULB	**Yu-li**	21.50	342	*e*P	**P**	13 52 07.5	-2.2
	5.6nm,0.8s						
TPUB	**Ta-pu**	21.63	340	*e*P	**P**	13 52 09.6	-1.5
	17nm,0.7s						
SSLB	**Suanglung**	21.97	341	*e*P	**P**	13 52 14.5	-0.3
	10nm,0.7s						
COEN	**Coen**	22.20	140	*e*P	**P**	13 52 15.9	-1.5
	6.5nm,1.0s						
WRAB	**Tennant Creek**	23.45	166	*e*P	**P**	13 52 30.5	+0.3
	5.2nm,0.8s						
WR1	**Warramunga Arr**	23.45	166	*e*P	**P**	13 52 30.3	+0.1
WRA	**Warramunga Arr**	23.45	166	P	**P**	13 52 30.3	+0.1
	4.1nm,0.5s						
WB2	**Warramunga Arr**	23.46	166	*e*P	**P**	13 52 30.5	+0.2
	5.5nm,0.8s						
AS31	**Alice Springs**	26.97	169	*e*P	**P**	13 53 02.5	+0.1
	1.1nm,0.9s						
ASAR	**Alice Springs**	26.97	169	P	**P**	13 53 02.5	+0.1
	0.3nm,0.3s,baz=344,slow=7.5,SNR=14						
ASAR				pP	**pP**	13 53 12.8	+1.1
	2.4nm,0.8s,baz=350,slow=11,SNR=10						
ASAR				PcP	**PcP**	13 56 23.4	-0.4
	0.4nm,0.5s,baz=358,slow=2.1,SNR=6.0						
ASAR				LR	LR	14 06 24.3	
	comp=Z,61nm,19.1s,baz=355,slow=42						
CTAO	**Charters Tower**	28.75	144	*e*P	**P**	13 53 17.0	-1.3
	11nm,1.1s						
JNU	**Nakatsue**	30.09	4	*e*P	**P**	13 53 30.9	+0.8
	6.5nm,0.9s						
CMAR	**Chiang Mai Arr**	32.82	300	P	**P**	13 53 55.3	+1.0
	0.7nm,0.8s,baz=118,slow=7.7,SNR=4.1						
INU	**Inuyama**	33.18	13	*e*P	**P**	13 53 55.8	-1.4
FORT	**Forrest**	33.55	181	*e*P	**P**	13 54 00.2	-0.2
	48nm,1.0s						
MORW	**Morawa**	34.02	200	*e*P	**P**	13 54 03.8	-0.8
	12nm,1.1s						
KSRS	**Korea Array**	34.34	359	P	**P**	13 54 07.5	+0.3
	1.9nm,0.6s,baz=174,slow=9.7,SNR=8.7						
KSRS				pP	**pP**	13 54 17.4	+1.2
	2.8nm,0.8s,baz=178,slow=9.9,SNR=6.5						
KSRS				LR	LR	14 07 21.4	
	comp=Z,15nm,21.6s,baz=245,slow=35						
MJAR	**Matsushiro Arr**	34.60	14	P	**P**	13 54 09.3	-0.2
	1.2nm,0.5s,baz=185,slow=10,SNR=4.9						
MAJO	**Matsushiro**	34.60	14	*e*P	**P**	13 54 09.3	-0.2
MAJO				*e*pP	**P**	13 54 10.4	+0.9
MJB9	**Matsu-Tunnel**	34.60	14	*e*P	**P**	13 54 10.5	+0.9
	7.2nm,1.1s						
BBOO	**Buckleboo**	36.27	169	*e*P	**P**	13 54 24.6	+0.6
	28nm,1.1s						
STKA	**Stephens Creek**	36.79	161	P	**P**	13 54 29.2	+0.8
	1.5nm,0.4s,baz=343,slow=12,SNR=8.4						
STKA	**Stephens Creek**	36.79	161	*e*P	**P**	13 54 29.2	+0.8
	0.9nm,0.9s						
H11S3	**WAKE ISLAND Hy**	40.41	65	T	T	14 38 01.5	
	baz=252,slow=75,SNR=64						
H11S2	**WAKE ISLAND Hy**	40.43	65	T	T	14 38 11.6	
	baz=252,slow=75,SNR=41						
H11S1	**WAKE ISLAND Hy**	40.43	65	T	T	14 38 11.1	
	baz=252,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	40.98	63	T	T	14 38 52.1	
	baz=239,slow=78,SNR=22						
H11N2	**WAKE ISLAND Hy**	40.99	63	T	T	14 38 59.3	
	baz=239,slow=78,SNR=15						
H11N3	**WAKE ISLAND Hy**	41.00	63	T	T	14 38 49.2	
	baz=239,slow=78,SNR=26						
USA0B	**Ussuriysk Arra**	41.19	4	*e*P	**P**	13 55 05.6	+0.6
	5.4nm,0.9s						
USRK	**Ussuriysk Ar.**	41.19	4	P	**P**	13 55 05.3	+0.3
	3.3nm,0.6s,baz=194,slow=9.8,SNR=9.6						
USRK				pP	**pP**	13 55 15.1	+1.0
	3.7nm,0.7s,baz=176,slow=6.9,SNR=7.0						
SONA0	**Songino Array**	48.62	340	*e*P	**P**	13 56 04.8	+0.5
SONM	**Songino Array**	48.62	340	P	**P**	13 56 04.8	+0.5
	1.3nm,0.6s,baz=152,slow=7.4,SNR=6.8						
SONM				pP	**pP**	13 56 13.6	+0.3
	1.5nm,0.8s,baz=145,slow=9.0,SNR=4.7						
PETK	**Petropavlovsk-**	55.49	21	P	**P**	13 56 55.8	+0.6
	2.2nm,0.5s,baz=192,slow=5.0,SNR=10.0						
PEA1	**Petropavlovsk-**	55.49	21	*e*P	**P**	13 56 55.8	+0.6
MK31	**Makanchi Array**	59.22	325	*e*P	**P**	13 57 21.8	+0.1
	1.9nm,0.7s						
MK32	**Makanchi Array**	59.22	325	*e*P	**P**	13 57 21.6	-0.1
MKAR	**Makanchi Array**	59.22	325	P	**P**	13 57 21.6	-0.1
	1.2nm,0.3s,baz=110,slow=7.3,SNR=29						
MKAR				pP	**pP**	13 57 31.4	+0.5
	3.4nm,0.7s,baz=120,slow=8.5,SNR=14						
MAKZ	**Makanchi**	59.41	325	*e*P	**P**	13 57 23.6	+0.6
	3.6nm,0.8s						
KURK	**Kurchatov**	63.37	327	*e*P	**P**	13 57 49.3	-0.2
	5.5nm,0.8s						
KDAK	**Kodiak Island**	81.58	32	P	**P**	13 59 38.5	+0.5
	7.7nm,0.9s,baz=276,slow=2.8,SNR=8.0						
KDAK	**Kodiak Island**	81.58	32	*e*P	**P**	13 59 38.5	+0.5
	11nm,1.1s						
MCK	**McKinley**	84.05	26	*e*pP	pP	14 00 04.2	+3.8
RND	**Reindeer**	84.06	27	*e*P	**P**	13 59 50.9	+0.1
RND				*e*pP	**pP**	14 00 00.2	-0.4
ILAR	**Eielson Array**	85.03	25	P	**P**	13 59 55.1	-0.5
	0.4nm,0.5s,baz=251,slow=5.1,SNR=8.9						
ILB	**Eielson Array**	85.03	25	*e*P	**P**	13 59 55.1	-0.5
	1.2nm,1.0s						
ARA0	**ARCESS Array S**	91.79	340	*e*P	**P**	14 00 26.5	-1.3
ARCES	**ARCESS Array B**	91.79	340	P	**P**	14 00 26.5	-1.3
	1.6nm,0.7s,baz=72,slow=7.8,SNR=5.6						
FIA0	**FINESS Array S**	93.36	332	*e*P	**P**	14 00 33.6	-1.5
FINES	**FINESS Array B**	93.36	332	P	**P**	14 00 33.6	-1.5
	2.4nm,0.9s,baz=78,slow=13,SNR=6.0						

ROM 18 13:52:17.7±0.0**, 43°.363N**±0°.002×**12°.537E**±0°.003**, h9**^{km}**, ML2.3**/25**, Error ellipse: s-maj=0.2km s-min=0.1km az=6.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	0.03	81	P	Pg	13 52 19.5	0.0
ATFO				S	Sg	13 52 20.4	-0.2
ATFO				AML	AML		
	comp=E,33000µm,0.2s						
ATFO				AML	AML		
	comp=N,30600µm,0.2s						
ATFO				AML	AML		
	comp=E,33000µm,0.2s						
ATFO				AML	AML		
	comp=N,30600µm,0.2s						
ATFO				AML	AML		
	comp=N,30600µm,0.2s						
ATFO				AML	AML		
	comp=E,33000µm,0.2s						
ATFO				AML	AML		
	comp=N,30600µm,0.2s						
ATFO				AML	AML		
	comp=E,33000µm,0.2s						
ATVO	**AVT- Monte Val**	0.10	282	*i* P	Pg	13 52 20.5	+0.4
ATVO				S	Sg	13 52 22.3	+0.5
ATVO				AML	AML		
	comp=E,9770µm,0.1s						
ATVO				AML	AML		
	comp=N,15100µm,0.2s						
ATVO				AML	AML		
	comp=E,9770µm,0.1s						
ATVO				AML	AML		
	comp=N,15100µm,0.2s						
ATVO				AML	AML		
	comp=E,9770µm,0.1s						
ATVO				AML	AML		
	comp=N,15100µm,0.2s						
ATVO				AML	AML		
	comp=N,15100µm,0.2s						
ATVO				AML	AML		
	comp=E,9770µm,0.1s						
ATVO				AML	AML		
	comp=N,15100µm,0.2s						
ATVO				AML	AML		
	comp=E,9770µm,0.1s						
MURB	**Monte Urbino**	0.10	185	P	Pg	13 52 20.7	+0.5
MURB				S	Sg	13 52 22.7	+0.8
MURB				AML	AML		
	comp=E,12300µm,0.4s						
MURB				AML	AML		
	comp=N,11300µm,0.3s						
MURB				AML	AML		
	comp=E,13700µm,0.4s						
MURB				AML	AML		
	comp=N,11950µm,0.3s						
MURB				AML	AML		
	comp=E,12250µm,0.4s						
MURB				AML	AML		
	comp=N,11300µm,0.2s						
MURB				AML	AML		
	comp=E,13700µm,0.4s						
MURB				AML	AML		
	comp=N,11950µm,0.3s						
MURB				AML	AML		
	comp=E,12250µm,0.4s						
MURB				AML	AML		
	comp=N,11300µm,0.3s						
MURB				AML	AML		
	comp=E,13700µm,0.4s						
MURB				AML	AML		
	comp=N,11950µm,0.3s						
MURB				AML	AML		
	comp=N,11950µm,0.3s						
MURB				AML	AML		
	comp=N,11300µm,0.3s						
MURB				AML	AML		
	comp=E,13700µm,0.4s						
MURB				AML	AML		
	comp=E,12250µm,0.4s						
MURB				AML	AML		
	comp=N,11950µm,0.3s						
MURB				AML	AML		
	comp=N,11300µm,0.3s						
MURB				AML	AML		
	comp=E,13700µm,0.4s						
MURB				AML	AML		
	comp=E,12250µm,0.4s						
ATPI	**Pietralunga -**	0.13	312	P	Pg	13 52 21.2	+0.5
ATPI				S	Sg	13 52 23.7	+0.9
ATPI				AML	AML		
	comp=E,2105µm,0.5s						
ATPI				AML	AML		
	comp=N,1755µm,0.3s						
ATPI				AML	AML		
	comp=E,2105µm,0.5s						
ATPI				AML	AML		
	comp=N,1755µm,0.3s						
ATPI				AML	AML		
	comp=E,2105µm,0.5s						
ATPI				AML	AML		
	comp=N,1755µm,0.3s						
ATPI				AML	AML		
	comp=N,1755µm,0.3s						
ATPI				AML	AML		
	comp=E,2105µm,0.5s						
ATPI				AML	AML		
	comp=N,1755µm,0.3s						
ATPI				AML	AML		
	comp=E,2105µm,0.5s						
PIEI	**Pieia**	0.17	360	P	Pg	13 52 22.0	+0.7
PIEI				S	Sg	13 52 25.2	+1.3
PIEI				AML	AML		
	comp=E,3405µm,0.2s						
PIEI				AML	AML		
	comp=N,2400µm,0.2s						
PIEI				AML	AML		
	comp=E,3405µm,0.2s						
PIEI				AML	AML		
	comp=N,2400µm,0.2s						
PIEI				AML	AML		
	comp=E,3405µm,0.2s						
PIEI				AML	AML		
	comp=N,2400µm,0.2s						
PIEI				AML	AML		
	comp=E,3405µm,0.2s						
PIEI				AML	AML		
	comp=N,2400µm,0.2s						
FOSV	**Fossato di Vic**	0.18	112	P	Pg	13 52 22.0	+0.6
FOSV				S	Sg	13 52 25.1	+1.2
ATCC	**AVT- Casa Cast**	0.19	157	P	Pg	13 52 22.5	+0.8
ATCC				S	Sg	13 52 25.9	+1.5
ATCC				AML	AML		
	comp=E,2115µm,0.1s						
ATCC				AML	AML		
	comp=N,1375µm,0.3s						
ATCC				AML	AML		
	comp=E,2115µm,0.1s						
ATCC				AML	AML		
	comp=N,1375µm,0.3s						
ATCC				AML	AML		
	comp=E,2110µm,0.1s						
ATCC				AML	AML		
	comp=N,1370µm,0.3s						
ATCC				AML	AML		
	comp=N,1370µm,0.3s						
ATCC				AML	AML		
	comp=E,2110µm,0.1s						
ATCC				AML	AML		
	comp=N,1370µm,0.3s						
ATCC				AML	AML		
	comp=E,2110µm,0.1s						
SSFR	**Montelago di S**	0.19	68	P	Pg	13 52 22.3	+0.6
SSFR				S	Sg	13 52 25.8	+1.3
SSFR				AML	AML		
	comp=E,3260µm,0.3s						
SSFR				AML	AML		
	comp=N,2405µm,1.0s						
SSFR				AML	AML		
	comp=E,3045µm,0.3s						
SSFR				AML	AML		
	comp=N,1830µm,1.0s						
SSFR				AML	AML		
	comp=E,3260µm,0.3s						
SSFR				AML	AML		
	comp=N,2405µm,1.0s						
SSFR				AML	AML		

	comp=E,3045µm,0.3s						
SSFR				AML	AML		
	comp=N,1830µm,1.0s						
SSFR				AML	AML		
	comp=E,3260µm,0.3s						
SSFR				AML	AML		
	comp=N,2410µm,1.0s						
SSFR				AML	AML		
	comp=E,3045µm,0.3s						
SSFR				AML	AML		
	comp=N,1830µm,1.0s						
SSFR				AML	AML		
	comp=N,2410µm,1.0s						
SSFR				AML	AML		
	comp=E,3045µm,0.3s						
SSFR				AML	AML		
	comp=E,3260µm,0.3s						
SSFR				AML	AML		
	comp=N,1830µm,1.0s						
SSFR				AML	AML		
	comp=N,2410µm,1.0s						
SSFR				AML	AML		
	comp=E,3045µm,0.3s						
SSFR				AML	AML		
	comp=E,3260µm,0.3s						
SSFR				AML	AML		
	comp=N,1830µm,1.0s						
ATMI	**Monte Miggiano**	**0.20**	**262**	P	Pg	13 52 22.4	+0.6
ATMI				S	Sg	13 52 25.7	+1.2
ATMI				AML	AML		
	comp=E,2130µm,0.6s						
ATMI				AML	AML		
	comp=N,1710µm,0.6s						
ATMI				AML	AML		
	comp=E,2130µm,0.6s						
ATMI				AML	AML		
	comp=N,1710µm,0.6s						
ATMI				AML	AML		
	comp=E,2130µm,0.6s						
ATMI				AML	AML		
	comp=N,1710µm,0.6s						
ATMI				AML	AML		
	comp=E,2130µm,0.6s						
ATMI				AML	AML		
	comp=N,1710µm,0.6s						
FRON	**Frontone**	**0.21**	**41**	P	Pg	13 52 22.6	+0.6
FRON				S	Sg	13 52 26.2	+1.3
FRON				AML	AML		
	comp=E,811µm,0.5s						
FRON				AML	AML		
	comp=N,1570µm,0.8s						
FRON				AML	AML		
	comp=E,810µm,0.5s						
FRON				AML	AML		
	comp=N,1570µm,0.8s						
FRON				AML	AML		
	comp=N,1570µm,0.8s						
FRON				AML	AML		
	comp=E,810µm,0.5s						
FRON				AML	AML		
	comp=N,1570µm,0.8s						
FRON				AML	AML		
	comp=E,810µm,0.5s						
ATTE	**AVT- Monte Tez**	**0.21**	**219**	P	Pg	13 52 22.9	+0.9
ATTE				S	Sg	13 52 26.5	+1.5
ATTE				AML	AML		
	comp=E,1132µm,1.0s						
ATTE				AML	AML		
	comp=N,1040µm,1.6s						
ATTE				AML	AML		
	comp=E,1132µm,1.0s						
ATTE				AML	AML		
	comp=N,1040µm,1.6s						
ATTE				AML	AML		
	comp=E,1132µm,1.0s						
ATTE				AML	AML		
	comp=N,1040µm,1.6s						
ATTE				AML	AML		
	comp=E,1132µm,1.0s						
ATTE				AML	AML		
	comp=N,1040µm,1.6s						
ATTE				AML	AML		
	comp=E,1132µm,1.0s						
ATTE				AML	AML		
	comp=N,1040µm,1.6s						
CDCA	**Citt' di Caste**	**0.24**	**294**	P	Pg	13 52 23.8	+1.2
CDCA				S	Sg	13 52 27.1	+1.3
CDCA				AML	AML		
	comp=E,530µm,0.8s						
CDCA				AML	AML		
	comp=N,776µm,0.4s						
NARO	**Abbazia di Nar**	**0.25**	**7**	P	Pg	13 52 23.3	+0.5
NARO				S	Sb	13 52 27.6	-1.4
NARO				AML	AML		
	comp=E,778µm,0.1s						
NARO				AML	AML		
	comp=N,670µm,0.2s						
NARO				AML	AML		
	comp=E,777µm,0.1s						
NARO				AML	AML		
	comp=N,670µm,0.2s						
NARO				AML	AML		
	comp=N,670µm,0.2s						
NARO				AML	AML		
	comp=E,777µm,0.1s						
NARO				AML	AML		
	comp=N,670µm,0.2s						
NARO				AML	AML		
	comp=E,777µm,0.1s						
BADI	**Badiali**	**0.26**	**305**	P	Pg	13 52 23.6	+0.7
BADI				S	Sb	13 52 28.1	-1.1
BADI				AML	AML		
	comp=E,4580µm,0.2s						
BADI				AML	AML		
	comp=N,4405µm,0.2s						
BADI				AML	AML		
	comp=E,4580µm,0.2s						
BADI				AML	AML		
	comp=N,4405µm,0.2s						
BADI				AML	AML		
	comp=N,4405µm,0.2s						
BADI				AML	AML		
	comp=E,4580µm,0.2s						
BADI				AML	AML		
	comp=N,4405µm,0.2s						
BADI				AML	AML		
	comp=E,4580µm,0.2s						
MPAG	**Monte Paganucc**	**0.31**	**31**	P	Pg	13 52 24.5	+0.6
MPAG				S	Sb	13 52 29.8	-1.0
MPAG				AML	AML		
	comp=E,410µm,1.4s						
MPAG				AML	AML		
	comp=N,288µm,0.6s						
MPAG				AML	AML		
	comp=E,410µm,1.4s						
MPAG				AML	AML		
	comp=N,288µm,0.6s						
MPAG				AML	AML		
	comp=N,288µm,0.6s						
MPAG				AML	AML		
	comp=E,410µm,1.4s						
MPAG				AML	AML		
	comp=N,288µm,0.6s						
MPAG				AML	AML		
	comp=E,410µm,1.4s						
SNTG	**Esanatoglia**	**0.31**	**110**	P	Pg	13 52 24.5	+0.6
SNTG				S	Sb	13 52 29.7	-1.1
SNTG				AML	AML		
	comp=E,632µm,0.6s						
SNTG				AML	AML		
	comp=N,1175µm,0.3s						
SNTG				AML	AML		
	comp=E,631µm,0.6s						
SNTG				AML	AML		
	comp=N,1175µm,0.3s						
SNTG				AML	AML		
	comp=E,631µm,0.6s						
SNTG				AML	AML		
	comp=N,1175µm,0.3s						
SNTG				AML	AML		
	comp=E,631µm,0.6s						
SNTG				AML	AML		
	comp=N,1175µm,0.3s						
ARVD	**Arcevia**	**0.33**	**65**	P	Pg	13 52 24.8	+0.6
ARVD				S	Sb	13 52 30.5	-0.6
ARVD				AML	AML		
	comp=E,323µm,1.4s						
ARVD				AML	AML		
	comp=N,270µm,1.1s						
ARVD				AML	AML		
	comp=E,323µm,1.4s						
ARVD				AML	AML		
	comp=N,270µm,1.1s						
ARVD				AML	AML		
	comp=E,323µm,1.4s						
ARVD				AML	AML		
	comp=N,270µm,1.1s						
ARVD				AML	AML		
	comp=E,323µm,1.4s						
ARVD				AML	AML		
	comp=N,270µm,1.1s						
ASSB	**Assisi San Ben**	**0.33**	**164**	P	Pg	13 52 24.7	+0.4
ASSB				S	Sb	13 52 30.1	-1.2
ASSB				AML	AML		
	comp=E,520µm,1.3s						
ASSB				AML	AML		
	comp=N,715µm,0.7s						
ASSB				AML	AML		
	comp=E,520µm,1.3s						
ASSB				AML	AML		
	comp=N,715µm,0.7s						
ASSB				AML	AML		
	comp=E,520µm,1.3s						
ASSB				AML	AML		
	comp=N,715µm,0.7s						
ASSB				AML	AML		
	comp=E,520µm,1.3s						
ASSB				AML	AML		
	comp=N,715µm,0.7s						
MMUR	**Monte Murano**	**0.34**	**77**	P	Pg	13 52 25.1	+0.5
MMUR				S	Sb	13 52 30.9	-0.8
PARC	**Parchiule**	**0.36**	**323**	P	Pb	13 52 25.7	-0.7
PARC				S	Sb	13 52 31.4	-0.8
PARC				AML	AML		
	comp=E,682µm,0.4s						
PARC				AML	AML		
	comp=N,295µm,1.3s						
PARC				AML	AML		
	comp=E,682µm,0.4s						
PARC				AML	AML		
	comp=N,295µm,1.3s						
PARC				AML	AML		
	comp=E,682µm,0.4s						
PARC				AML	AML		
	comp=N,295µm,1.3s						
PARC				AML	AML		
	comp=E,682µm,0.4s						
PARC				AML	AML		
	comp=N,295µm,1.3s						
SSP9	**Sansepolcro**	**0.36**	**306**	P	Pg	13 52 25.4	+0.6
SSP9				S	Sb	13 52 31.6	-0.6
FSSB	**Fossombrone**	**0.37**	**28**	P	Pg	13 52 25.7	+0.6
FSSB				S	Sb	13 52 31.9	-0.6
FSSB				AML	AML		
	comp=E,1110µm,0.1s						
FSSB				AML	AML		
	comp=N,792µm,0.2s						
FSSB				AML	AML		
	comp=E,1110µm,0.1s						
FSSB				AML	AML		
	comp=N,792µm,0.2s						
FSSB				AML	AML		
	comp=N,792µm,0.2s						
FSSB				AML	AML		
	comp=E,1110µm,0.1s						
FSSB				AML	AML		
	comp=N,792µm,0.2s						
FSSB				AML	AML		
	comp=E,1110µm,0.1s						
EL6	**Elcito**	**0.41**	**94**	P	Pg	13 52 26.3	+0.5
EL6				S	Sb	13 52 33.3	-0.4
CAFI	**Castiglion Fio**	**0.42**	**266**	P	Pg	13 52 26.4	+0.6
CAFI				S	Sb	13 52 32.8	-0.9
CAFI				AML	AML		
	comp=E,242µm,0.2s						
CAFI				AML	AML		
	comp=N,296µm,0.5s						
CAFI				AML	AML		
	comp=E,242µm,0.2s						
CAFI				AML	AML		
	comp=N,296µm,0.5s						
CAFI				AML	AML		
	comp=E,242µm,0.2s						
CAFI				AML	AML		
	comp=N,296µm,0.5s						
CAFI				AML	AML		
	comp=E,242µm,0.2s						
CAFI				AML	AML		
	comp=N,296µm,0.5s						
COR1	**Corinaldo**	**0.43**	**51**	P	Pb	13 52 27.2	-0.3
COR1				AML	AML		
	comp=E,503µm,0.2s						
COR1				AML	AML		
	comp=N,884µm,0.2s						
CESI	**CESI - Serrava**	**0.45**	**143**	P	Pg	13 52 26.9	+0.5
CESI				S	Sb	13 52 33.7	-1.0
CESI				AML	AML		
	comp=E,64µm,0.3s						
CESI				AML	AML		
	comp=N,130µm,0.3s						
CESI				AML	AML		
	comp=E,64µm,0.3s						
CESI				AML	AML		
	comp=N,130µm,0.3s						
CESI				AML	AML		
	comp=E,64µm,0.3s						
CESI				AML	AML		
	comp=N,130µm,0.3s						
CESI				AML	AML		
	comp=E,64µm,0.3s						
CESI				AML	AML		
	comp=N,130µm,0.3s						
CPGN	**Carpegna, Ital**	**0.47**	**340**	P	Pb	13 52 27.9	-0.3
CPGN				S	Sb	13 52 34.2	-1.1
CING	**Cingoli**	**0.48**	**88**	P	Pg	13 52 27.5	+0.5
CING				S	Sb	13 52 35.2	-0.4
CING				AML	AML		
	comp=E,170µm,0.9s						
CING				AML	AML		
	comp=N,182µm,1.6s						
CING				AML	AML		
	comp=E,170µm,0.9s						
CING				AML	AML		
	comp=N,182µm,1.6s						
CING				AML	AML		
	comp=E,170µm,0.9s						
CING				AML	AML		
	comp=N,182µm,1.6s						
FDMO	**Fiordimonte**	**0.52**	**129**	P	Pg	13 52 28.1	+0.3
FDMO				S	Sb	13 52 36.5	-0.2
FDMO				AML	AML		
	comp=E,270µm,0.2s						
FDMO				AML	AML		
	comp=N,288µm,1.3s						
FDMO				AML	AML		
	comp=E,270µm,0.2s						
FDMO				AML	AML		
	comp=N,288µm,1.3s						
FDMO				AML	AML		
	comp=E,270µm,0.2s						
FDMO				AML	AML		
	comp=N,288µm,1.3s						
FDMO				AML	AML		
	comp=E,270µm,0.2s						
FDMO				AML	AML		
	comp=N,288µm,1.3s						
MGAB	**Montegabbione**	**0.55**	**215**	P	Pg	13 52 28.8	+0.5
MGAB				S	Sb	13 52 36.8	-0.6
MGAB				AML	AML		
	comp=E,531µm,0.5s						
MGAB				AML	AML		
	comp=N,813µm,0.2s						
MGAB				AML	AML		
	comp=E,563µm,0.5s						
MGAB				AML	AML		
	comp=N,863µm,0.2s						
MGAB				AML	AML		
	comp=E,531µm,0.5s						
MGAB				AML	AML		
	comp=N,812µm,0.2s						
MGAB				AML	AML		
	comp=E,563µm,0.5s						
MGAB				AML	AML		
	comp=N,862µm,0.2s						
MGAB				AML	AML		
	comp=N,862µm,0.2s						
MGAB				AML	AML		
	comp=N,812µm,0.2s						
MGAB				AML	AML		
	comp=E,531µm,0.5s						
MGAB				AML	AML		
	comp=E,563µm,0.5s						
MGAB				AML	AML		
	comp=N,862µm,0.2s						
MGAB				AML	AML		
	comp=N,812µm,0.2s						
MGAB				AML	AML		
	comp=E,531µm,0.5s						
MGAB				AML	AML		
	comp=E,563µm,0.5s						
CSP1	**Cessapalombo**	**0.56**	**119**	P	Pg	13 52 28.8	+0.3
CSP1				S	Sb	13 52 37.4	-0.5
NRCA	**Norcia**	**0.68**	**141**	P	Pg	13 52 30.9	+0.1
NRCA				S	Sb	13 52 41.1	-0.2
NRCA				AML	AML		
	comp=E,228µm,0.2s						
NRCA				AML	AML		
	comp=N,204µm,0.6s						
NRCA				AML	AML		
	comp=E,228µm,0.2s						
NRCA				AML	AML		
	comp=N,205µm,0.6s						
NRCA				AML	AML		
	comp=N,205µm,0.6s						
NRCA				AML	AML		
	comp=E,228µm,0.2s						
NRCA				AML	AML		
	comp=N,205µm,0.6s						
NRCA				AML	AML		
	comp=E,228µm,0.2s						
SACS	**San Casciano d**	**0.69**	**222**	P	Pg	13 52 31.3	+0.3
SACS				AML	AML		
	comp=E,212µm,0.5s						
SACS				AML	AML		
	comp=N,225µm,1.5s						
SACS				AML	AML		
	comp=E,212µm,0.5s						
SACS				AML	AML		
	comp=N,225µm,1.5s						
SACS				AML	AML		
	comp=E,212µm,0.5s						
SACS				AML	AML		
	comp=N,225µm,1.5s						
SACS				AML	AML		
	comp=E,212µm,0.5s						
SACS				AML	AML		
	comp=N,225µm,1.5s						
ASQU	**Asqua**	**0.69**	**309**	P	Pb	13 52 31.6	-0.5
ASQU				S	Sb	13 52 41.6	-0.2
ASQU				AML	AML		
	comp=E,100µm,0.5s						
ASQU				AML	AML		
	comp=N,149µm,0.8s						
ASQU				AML	AML		
	comp=N,149µm,0.8s						
ASQU				AML	AML		
	comp=E,100µm,0.5s						
ASQU				AML	AML		
	comp=N,149µm,0.8s						
ASQU				AML	AML		
	comp=E,100µm,0.5s						

ROM ***18*** *13:52:19.4±0.1, 44.°171N±0.°004×10.°202E±0.°005, h8^{km}, ML1.2/3, Error ellipse: s-maj=0.5km s-min=0.1km az=190.0*

GEN ***18*** *13:52:19.9, 44.°17N×10.°21E, h2^{km}±1^{km}, Ml0.8*

ISCJB ***18*** *13:52:20.5±0.5, 44.°17N±0.°03×10.°20E±0.°03, h4^{km}±6^{km}, Error ellipse: s-maj=4.6km s-min=3.1km az=17.7*

ISC 18 13:52:19.8±1.0**, 44.°18N**±0.°03×**10.°20E**±0.°02**, h6**^{km}±6^{km}**,**
n16, σ**0.^{s}98**/32**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.01**	**153**	P	**Pg**	**13 52 21.0**	**0.0**
T0912				S	**Sg**	**13 52 21.8**	**+0.1**
T0912				AML	AML		
	comp=E,6880µm,0.4s						
T0912				AML	AML		
	comp=N,10360µm,0.2s						
T0912				AML	AML		
	comp=E,6845µm,0.4s						
T0912				AML	AML		
	comp=N,10400µm,0.2s						
T0912				AML	AML		
	comp=N,10360µm,0.2s						
T0912				AML	AML		
	comp=N,10400µm,0.2s						
T0912				AML	AML		
	comp=E,6880µm,0.4s						
T0912				AML	AML		
	comp=E,6845µm,0.4s						
T0912				AML	AML		
	comp=N,10400µm,0.2s						
T0912				AML	AML		
	comp=N,10360µm,0.2s						
T0912				AML	AML		
	comp=E,6845µm,0.4s						
T0912				AML	AML		
	comp=E,6880µm,0.4s						
FIVI	**Fivizzano**	**0.08**	**319**	P	**Pg**	**13 52 21.9**	**+0.2**
FIVI				S	**Sg**	**13 52 23.4**	**+0.4**
T0911	**Castelpoggio (**	**0.11**	**235**	P	**Pg**	**13 52 22.8**	**+0.6**
T0911				S	**Sg**	**13 52 24.8**	**+1.0**
VLC	**Villacollemand**	**0.13**	**98**	P	**Pg**	**13 52 23.1**	**+0.6**
VLC				S	**Sg**	**13 52 25.4**	**+1.0**
VLC				AML	AML		
	comp=E,106µm,0.6s						
VLC				AML	AML		
	comp=N,107µm,0.6s						
VLC				AML	AML		
	comp=E,106µm,0.6s						
VLC				AML	AML		
	comp=N,107µm,0.6s						
VLC				AML	AML		
	comp=E,106µm,0.6s						
VLC				AML	AML		
	comp=N,107µm,0.6s						
SARO	**Sassorosso**	**0.14**	**87**	P	**Pg**	**13 52 23.2**	**+0.5**
SARO				S	**Sg**	**13 52 25.5**	**+0.7**
CARD	**Cardoso**	**0.25**	**127**	P	**Pg**	**13 52 25.1**	**+0.4**
CARD				S	**Sg**	**13 52 29.1**	**+1.0**
PLMA	**Palmaria, Port**	**0.28**	**243**	P	**Pg**	**13 52 26.0**	**+0.7**
PLMA				S	**Sg**	**13 52 30.2**	**+1.1**
ERBM	**Eremo**	**0.28**	**32**	P	**Pg**	**13 52 26.3**	**+0.9**
ERBM				S	**Sb**	**13 52 31.3**	**-1.2**
ERBM				AML	AML		
	comp=E,53µm,0.7s						
ERBM				AML	AML		
	comp=N,65µm,1.0s						
ERBM				AML	AML		
	comp=E,53µm,0.7s						
ERBM				AML	AML		
	comp=N,65µm,1.0s						
ERBM				AML	AML		
	comp=E,53µm,0.7s						
ERBM				AML	AML		
	comp=N,65µm,1.0s						
BDI	**Bagni Di Lucca**	**0.31**	**112**	P	**Pg**	**13 52 26.2**	**+0.5**
BDI				S	**Sg**	**13 52 31.0**	**+1.2**
GRAM	**Graiana**	**0.33**	**343**	P	**Pg**	**13 52 27.1**	**+0.9**
GRAM				S	**Sg**	**13 52 32.1**	**+1.5**
GRAM	**Graiana**	**0.33**	**343**	P	**Pb**	**13 52 27.2**	**-0.9**
GRAM				S	**Sg**	**13 52 32.2**	**+1.5**
MAIM	**Mastiano**	**0.34**	**142**	P	**Pg**	**13 52 26.6**	**+0.3**
MAIM				S	**Sg**	**13 52 32.0**	**+1.3**
MAIM	**Mastiano**	**0.34**	**142**	P	**Pg**	**13 52 27.0**	**+0.7**
MAIM				S	**Sg**	**13 52 32.0**	**+1.3**
POPM	**Popiglio**	**0.42**	**108**	P	**Pg**	**13 52 28.3**	**+0.4**
POPM				S	**Sb**	**13 52 34.8**	**-1.5**
POPM	**Popiglio**	**0.42**	**108**	P	**Pg**	**13 52 28.5**	**+0.5**
POPM				S	**Sb**	**13 52 35.1**	**-1.2**
POPM				AML	AML		
	comp=E,77µm,1.2s						
POPM				AML	AML		
	comp=N,85µm,0.9s						
POPM				AML	AML		
	comp=E,77µm,1.2s						
POPM				AML	AML		

	comp=N,85µm,0.9s						
POPM				AML	AML		
	comp=E,77µm,1.2s						
POPM				AML	AML		
	comp=N,85µm,0.9s						
MSSA	**Maissana**	**0.51**	**286**	P	**Pg**	**13 52 30.2**	**+0.5**
MSSA				S	**Sb**	**13 52 37.7**	**-1.3**

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*IDC **18** 14:07:48.0±0.6, 30.°13N×108.°09E, h0^{km}, mb4.3/17, mb1 4.4/20, mb1mx4.2/41, mbtmp4.3/20, ML3.9/3, MS3.0/7, Ms1 3.1/7, ms1mx2.9/36, Error ellipse: s-maj=18.8km s-min=13.2km az=39.0*

*ISCJB **18** 14:07:48.0±0.2, 30.°21N±0.°02×108.°11E±0.°03, h10^{km}, mb4.4/58, MS3.4/6, Error ellipse: s-maj=3.5km s-min=3.1km az=38.1*

*BJI **18** 14:07:50.2±0.0, 30.°23N×108.°23E, h7^{km}, mb4.6/34, mB4.7/24, ML4.5/26, Ms4.3/40, Ms7 4.0/37*

*MOS **18** 14:07:51.6±1.0, 30.°20N×108.°16E, h37^{km}, mb4.6/41, Error ellipse: s-maj=8.8km s-min=5.6km az=103.9*

*NEIC **18** 14:07:54.4±1.4, 30.°25N×108.°16E, h44^{km}±7^{km}, mb4.4/31, Error ellipse: s-maj=16.0km s-min=9.2km az=117.0*

ISC 18 14:07:50.9±0.3, **30.°26N**±0.°03×**108.°16E**±0.°03, **h10**^{km}, **n162**, σ**2**^{s}**08**/164, **mb4.5**/58, **MS3.4**/6, **9C-6D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XAN	**Xi'an**	**3.83**	**10**	*e*Pn	**Pn**	**14 08 49.9**	**0.0**
XAN	**Xi'an**	**3.83**	**10**	Pn	**Pn**	**14 08 50.0**	**0.0**
XAN				Pg	**Pb**	**14 08 59.0**	**+0.5**
XAN				Sg	**Sg**	**14 09 55.1**	**+1.3**
XAN				smax	smax		
	comp=N,1µm,1.0s						
XAN				smax	smax		
	comp=E,1µm,1.2s						
XAN				LR	LR		
	comp=N,3µm,4.5s						
XAN				LR	LR		
	comp=E,8µm,5.5s						
XAN				LR	LR		
	comp=Z,2µm,9.6s						
XAN	**Xi'an**	**3.83**	**10**	*e*P	**Pn**	**14 08 49.9**	**0.0**
CD2	**Chengdu**	**3.85**	**281**	Pn	**Pn**	**14 08 49.5**	**-0.7**
CD2				Pg	**Pb**	**14 09 02.8**	**+3.9**
CD2				Sn	**Sn**	**14 09 35.6**	**0.0**
CD2				Sg	**Sg**	**14 09 53.4**	**-1.1**
CD2				smax	smax		
	comp=N,2µm,1.0s						
CD2				smax	smax		
	comp=E,2µm,1.0s						
GYA	**Guiyang**	**4.00**	**200**	⇓*i*Pn	**Pn**	**14 08 53.1**	**+0.7**
GYA				Pg	**Pb**	**14 09 05.4**	**+3.8**
GYA				Sn	**Sn**	**14 09 38.4**	**-1.1**
GYA				Sg	**Sb**	**14 09 53.8**	**+3.6**
GYA				smax	smax		
	comp=N,1µm,1.0s						
GYA				smax	smax		
	comp=E,1µm,0.9s						
GYA				LR	LR		
	comp=N,1µm,3.5s						
GYA				LR	LR		
	comp=E,2µm,3.6s						
GYA				LR	LR		
	comp=Z,1µm,3.7s						
WHN	**Wuhan**	**5.36**	**85**	Pn	**Pn**	**14 09 10.3**	**-0.6**
WHN				Pg	**Pb**	**14 09 28.4**	**+3.8**
WHN				Sg	**Sb**	**14 10 27.3**	**-1.6**
WHN				smax	smax		
	comp=N,2µm,1.3s						
WHN				smax	smax		
	comp=E,1µm,1.4s						
LZH	**Lanzhou**	**6.85**	**329**	*e*Pn	**Pn**	**14 09 32.4**	**+0.9**
LZH				Pg	**Pb**	**14 09 50.9**	**+0.9**
LZH				Sn	**Sn**	**14 10 50.1**	**+0.5**
LZH				Sg	Sb	14 11 22.8	+11
LZH				smax	smax		
	comp=N,400nm,1.3s						
LZH				smax	smax		
	comp=E,760nm,1.5s						
LZH				LR	LR		
	comp=N,3µm,5.4s						
LZH				LR	LR		
	comp=E,2µm,4.6s						
LZH				LR	LR		
	comp=Z,2µm,7.1s						
KMI	**Kunming**	**7.01**	**224**	*e*Pn	**Pn**	**14 09 34.2**	**+0.3**
KMI				*e*Sn	**Sn**	**14 10 52.6**	**-1.2**
KMI	**Kunming**	**7.01**	**224**	Pn	**Pn**	**14 09 34.4**	**+0.5**
KMI				Sn	**Sn**	**14 10 49.3**	**-4.5**
KMI				smax	smax		
	comp=N,110nm,1.5s						
KMI				smax	smax		
	comp=E,210nm,0.9s						
KMI				LR	LR		
	comp=N,1µm,6.9s						
KMI				LR	LR		
	comp=E,2µm,7.3s						
KMI				LR	LR		
	comp=Z,730nm,5.9s						
KMI	**Kunming**	**7.01**	**224**	*e*P	**Pn**	**14 09 34.2**	**+0.3**
KMI				*e*		14 10 52.6	
GZH	**Guangzhou**	**8.51**	**146**	P	Pn	14 09 46.8	-7.4
GZH				S	Sn	14 11 17.3	-13
GZH				LR	LR		
	comp=N,2µm,5.0s						
GZH				LR	LR		
	comp=E,3µm,4.8s						
NJ2	**Nanjing**	**9.34**	**76**	*e*P	**Pn**	**14 10 09.6**	**+4.1**
NJ2				S	**Sn**	**14 11 54.1**	**+3.5**
NJ2				pmax	pmax		
	comp=E,17nm,0.5s						
NJ2				LR	LR		
	comp=E,1µm,5.0s						
NJ2				LR	LR		
	comp=E,2µm,6.6s						
NJ2				LR	LR		
	comp=E,1µm,7.8s						
TIA	**Tai'an**	**9.57**	**49**	P	**Pn**	**14 10 11.4**	**+2.7**
TIA				pmax	pmax		
	comp=E,16nm,0.7s						
TIA				pmax	pmax		
	comp=E,120nm,2.6s						
TIA				LR	LR		
	comp=E,120nm,5.5s						
TIA				LR	LR		
	comp=E,400nm,5.0s						
TIA				LR	LR		
	comp=E,150nm,4.0s						
BTO	**Baotou**	**10.44**	**8**	*e*P	Pn	14 10 32.3	+12
HHC	**Hu-ho-hao-te**	**10.93**	**14**	P	**Pn**	**14 10 31.9**	**+4.5**
HHC				pmax	pmax		
	comp=E,14nm,0.8s						
HHC				pmax	pmax		
	comp=E,110nm,5.1s						
QIZ	**Qiongzhong**	**11.28**	**172**	P	Pn	14 10 29.9	-2.3
QIZ				S	**Sn**	**14 12 39.3**	**+0.9**
QIZ				LR	LR		
	comp=E,740nm,8.6s						
QIZ				LR	LR		
	comp=E,880nm,6.5s						
QIZ				LR	LR		
	comp=E,690nm,9.2s						
GTA	**Gaotai**	**11.41**	**325**	*e*P	**Pn**	**14 10 34.8**	**+0.7**
GTA				pP		14 10 38.1	
GTA				sP		14 10 41.3	
GTA				S	**Sn**	**14 12 50.3**	**+8.6**
GTA				pmax	pmax		
	comp=E,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=E,70nm,6.5s						
GTA				LR	LR		
	comp=E,310nm,10.8s						
GTA				LR	LR		
	comp=E,590nm,10.8s						
GTA				LR	LR		
	comp=E,870nm,12.4s						
BJT	**Baijiatuau**	**11.73**	**32**	*e*Pn	**Pn**	**14 10 39.4**	**+1.1**
BJT	**Baijiatuau**	**11.73**	**32**	*e*P	**Pn**	**14 10 39.4**	**+1.1**
NONG	**Nongkai**	**12.97**	**202**	P	Pn	14 11 09.0	+14
	comp=E,0.3nm,1.4s						
PANO	**Nakornpanom**	**13.45**	**195**	P	P	14 11 17.3	+6.1
	comp=E,0.2nm,1.1s,comp=E,25nm						
CHTO	**Chiang Mai**	**14.13**	**218**	*e*P	**P**	**14 11 18.8**	**-0.1**
CHTO				*e*Sn	**Sn**	**14 13 47.3**	**-0.9**
CHTO	**Chiang Mai**	**14.13**	**218**	*e*P	**P**	**14 11 18.8**	**-0.1**
CHTO				*e*		14 13 47.3	
CMAR	**Chiang Mai Arr**	**14.43**	**218**	Pn	**Pn**	**14 11 15.5**	**+0.2**
	comp=E,0.1nm,0.3s,baz=32,slow=12,SNR=6.3						
CMAR				LR	LR	14 17 09.2	
	comp=E,35nm,20.6s,baz=200,slow=39						
LSA	**Lhasa**	**14.75**	**272**	P	**Pn**	**14 11 18.0**	**-2.1**
LSA				LR	LR		
	comp=E,500nm,9.1s						
LSA				LR	LR		
	comp=E,840nm,8.1s						
LSA				LR	LR		
	comp=E,1µm,8.1s						
SHL	**Shillong**	**15.12**	**256**	*e*P	**Pn**	**14 11 26.0**	**+1.2**
PBKT	**Sadao Pong**	**15.13**	**207**	P	P	14 11 38.3	+8.4
	comp=E,3.6nm,1.8s						
CHAI	**Chaiyaphum**	**15.37**	**203**	P	**P**	**14 11 34.6**	**+2.0**
	comp=E,18µm,0.8s						
UTHA	**Uthaitani**	**16.67**	**211**	P	P	14 11 56.7	+10
	comp=E,17µm,1.0s						
SNY	**Shenyang**	**16.97**	**43**	⇓P	Pn	14 11 43.4	-4.9
SNY				S	**Sn**	**14 14 59.8**	**+3.0**
SNY				pmax	pmax		
	comp=Z,16nm,0.5s						
SNY				pmax	pmax		
	comp=Z,98nm,3.6s						
SNY				LR	LR		
	comp=N,200nm,5.7s						
SNY				LR	LR		
	comp=E,260nm,8.8s						
SNY				LR	LR		
	comp=Z,270nm,8.0s						
TJN	**Taejon**	**17.16**	**64**	⇓*e*P	**P**	**14 11 55.3**	**+2.9**
ULN	**Ulaanbaatar**	**17.61**	**358**	*e*P	**Pn**	**14 11 57.8**	**+1.4**
	comp=Z,11nm,0.8s						
ULN				*e*Sn	**Sn**	**14 15 11.0**	**-1.5**
ULN	**Ulaanbaatar**	**17.61**	**358**	⇑*i*P	**Pn**	**14 11 55.7**	**-0.7**
ULN				pmax	pmax		
	comp=Z,24nm,1.3s						
SONA0	**Songino Array**	**17.61**	**356**	*e*P	**Pn**	**14 11 55.3**	**-1.0**
SONM	**Songino Array**	**17.61**	**356**	P	**Pn**	**14 11 55.3**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=178,slow=11,SNR=20						
SONM				LR	LR	14 18 21.2	
	comp=Z,21nm,20.4s,baz=134,slow=36						
KS15	**Wonju Array Si**	**17.87**	**61**	*e*P	**Pn**	**14 11 59.7**	**+0.2**
	comp=Z,8.3nm,0.9s						
KSRS	**Korea Array**	**17.90**	**61**	P	**Pn**	**14 11 59.7**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=247,slow=12,SNR=16						
KSRS				LR	LR	14 19 36.1	
	comp=Z,88nm,18.4s,baz=242,slow=39						
CN2	**Changchun**	**19.27**	**41**	*e*P	Pn	14 12 27.6	+11
CN2				*e*sP	sP	14 12 37.5	+17
CN2				*e*S	**Sn**	**14 15 55.3**	**+2.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
JNU	**Nakatsue**	**19.54**	**76**	P	**P**	**14 12 19.3**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=243,slow=3.2,SNR=6.8						
JNU				LR	LR	14 19 42.2	
	comp=Z,103nm,19.1s,baz=256,slow=36						
JNU	**Nakatsue**	**19.54**	**76**	*e*P	**P**	**14 12 19.3**	**+0.6**
	comp=Z,12nm,0.9s						
GUN	**Gumba**	**19.61**	**269**	*e*P	**P**	**14 12 19.7**	**-0.1**
	comp=Z,32nm,0.4s						
PKI	**Pulchoki**	**20.09**	**268**	*e*P	**P**	**14 12 23.7**	**-1.3**
	comp=Z,12nm,0.4s						
PKIN	**Phulchoki**	**20.10**	**268**	*e*P	**P**	**14 12 23.6**	**-1.5**
	comp=Z,7.5nm,0.4s						
KKN	**Kakani**	**20.15**	**269**	*e*P	**P**	**14 12 24.1**	**-1.5**
	comp=Z,24nm,0.6s						
DMN	**Daman**	**20.34**	**268**	*e*P	**P**	**14 12 27.1**	**-0.6**
	comp=Z,23nm,0.8s						
ZAK	**Zakamensk**	**20.44**	**351**	*e*P	**P**	**14 12 28.6**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,74nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
GKN	**Gorkha**	**20.66**	**270**	*e*P	**P**	**14 12 29.8**	**-1.3**
	comp=Z,50nm,0.4s						
WMQ	**Urumqi**	**21.14**	**315**	*e*P	**P**	**14 12 36.6**	**+0.6**
WMQ				pP	pP	14 12 40.5	+1.5
WMQ				sP	sP	14 12 46.6	+6.3
WMQ				S	**S**	**14 16 32.8**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,28nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,58nm,3.7s						
WMQ				LR	LR		
	comp=Z,270nm,11.9s						
WMQ				LR	LR		
	comp=Z,210nm,8.9s						
WMQ				LR	LR		
	comp=Z,140nm,13.7s						
DANN	**Dangsing**	**21.35**	**271**	*e*P	**P**	**14 12 37.3**	**-1.4**
	comp=Z,64nm,0.7s						
KOLN	**Koldanda**	**21.61**	**270**	*e*P	**P**	**14 12 39.2**	**-2.1**
	comp=Z,62nm,0.9s						
TLY	**Talaya**	**21.67**	**352**	P	**P**	**14 12 42.6**	**+1.1**
	comp=Z,4.1nm,0.8s,baz=208,slow=12,SNR=9.2						
TLY				LR	LR	14 21 31.7	
	comp=Z,21nm,18.8s,baz=182,slow=38						
TLY	**Talaya**	**21.67**	**352**	*e*P	**P**	**14 12 42.1**	**+0.6**
TLY				*e*S	**S**	**14 16 34.7**	**-6.6**
TLY				pmax	pmax		
	comp=Z,13nm,0.9s						
TLY				MLR	MLR		
	comp=Z,364nm,11.0s						
MOY	**Mondy**	**22.04**	**348**	*e*P	**P**	**14 12 50.9**	**+5.2**
MOY				pmax	pmax		
	comp=Z,17nm,1.6s						
IRK	**Irkutsk**	**22.16**	**354**	*e*P	**P**	**14 12 47.4**	**+0.7**
IRK				pmax	pmax		
	comp=Z,42nm,1.5s						
USA0B	**Ussuriysk Arra**	**23.43**	**47**	*e*P	**P**	**14 12 59.8**	**-0.3**
	comp=Z,14nm,0.8s						
USRK	**Ussuriysk Ar.**	**23.43**	**47**	P	**P**	**14 12 59.1**	**-1.0**
	comp=Z,16nm,0.8s,baz=248,slow=8.0,SNR=28						
INU	**Inuyama**	**24.74**	**71**	*e*P	**P**	**14 13 11.9**	**-0.6**
	comp=Z,19nm,1.1s						
DGZ	**Jazzator, Alta**	**24.94**	**327**	*c i*P	**P**	**14 13 14.8**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAJO	**Matsushiro**	**25.79**	**68**	*e*P	**P**	**14 13 22.2**	**+0.1**
MAJO	**Matsushiro**	**25.79**	**68**	*e*P	**P**	**14 13 22.2**	**+0.1**
MJAR	**Matsushiro Arr**	**25.80**	**68**	P	**P**	**14 13 22.2**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=263,slow=11,SNR=7.6						
MJAR				LR	LR	14 23 37.2	
	comp=Z,58nm,18.7s,baz=230,slow=37						
MK31	**Makanchi Array**	**25.95**	**317**	*e*P	**P**	**14 13 23.0**	**-0.4**
	comp=Z,4.7nm,0.8s						
MK31	**Makanchi Array**	**25.95**	**317**	*e*P	**P**	**14 13 23.0**	**-0.4**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK32	**Makanchi Array**	**25.95**	**317**	*e*P	**P**	**14 13 22.6**	**-0.8**
MKAR	**Makanchi Array**	**25.95**	**317**	P	**P**	**14 13 22.6**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=122,slow=10.0,SNR=26						
KLR	**Kul'dur**	**26.05**	**37**	P	**P**	**14 13 24.6**	**+0.3**
	comp=Z,7.0nm,0.8s,baz=255,slow=9.4,SNR=20						
KLR				PcP	**PcP**	**14 16 50.8**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=284,slow=3.5,SNR=3.7						
KLR	**Kul'dur**	**26.05**	**37**	*ce*P	**P**	**14 13 24.4**	**+0.1**
KLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAKZ	**Makanchi**	**26.14**	**317**	*e*P	**P**	**14 13 24.9**	**-0.3**
	comp=Z,5.3nm,0.8s						
MAKZ	**Makanchi**	**26.14**	**317**	*e*P	**P**	**14 13 24.9**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZEA	**Zeya**	**27.25**	**25**	*e*P	**P**	**14 13 34.8**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,9.0s						
KSH	**Kashi**	**27.85**	**298**	P	**P**	**14 13 44.1**	**+3.4**
KSH				pP	sP	14 13 56.6	+11
KSH				S	**S**	**14 18 25.5**	**+1.4**
KSH				SS	**SnSn**	**14 19 51.4**	**+14**
KSH				ScS	**ScS**	**14 24 25.5**	**-4.3**
KSH				pmax	pmax		
	comp=Z,11nm,1.2s						
KSH				pmax	pmax		
	comp=Z,110nm,4.8s						
DAV	**Davao City (W)**	**28.28**	**141**	LR	LR	14 26 44.2	
	comp=Z,48nm,18.3s,baz=104,slow=40						
ZAA0	**Zalesovo Array**	**29.07**	**331**	*e*P	**P**	**14 13 50.7**	**-0.6**
	comp=Z,4.4nm,1.0s						
ZALV	**Zalesovo Beam**	**29.07**	**331**	P	**P**	**14 13 50.0**	**-1.3**
	comp=Z,2.0nm,0.6s,baz=126,slow=8.8,SNR=8.2						
AAK	**Ala-Archa**	**29.57**	**304**	⇑*e*P	**P**	**14 13 54.6**	**-1.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**30.05**	**321**	*e*P	**P**	**14 13 59.1**	**-0.9**
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**30.05**	**321**	⇓*e*P	**P**	**14 13 59.9**	**-0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GAR	**Garm**	**32.15**	**296**	*e*P	**P**	**14 14 17.5**	**-1.3**
	comp=Z,8.3nm,0.7s						
GAR	**Garm**	**32.15**	**296**	*e*P	**P**	**14 14 17.5**	**-1.3**
GAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KK31	**Karatay Array**	**32.53**	**304**	*e*P	**P**	**14 14 20.8**	**-1.2**
	comp=Z,6.4nm,1.1s						
KK31	**Karatay Array**	**32.53**	**304**	*e*P	**P**	**14 14 20.8**	**-1.2**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KKAR	**Karatay Array**	**32.53**	**304**	*e*P	**P**	**14 14 20.9**	**-1.1**
	comp=Z,6.4nm,1.1s						
KKAR	**Karatay Array**	**32.53**	**304**	*e*P	**P**	**14 14 20.9**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBL	**Kabul**	**33.16**	**288**	*e*P	**P**	**14 14 26.6**	**-1.1**
	comp=Z,9.2nm,0.7s						
KBL	**Kabul**	**33.16**	**288**	*e*P	**P**	**14 14 26.7**	**-1.1**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	**Borovoye**	**35.71**	**321**	*e*P	**P**	**14 14 49.7**	**+0.3**
	comp=Z,3.9nm,0.9s						
BRVK	**Borovoye**	**35.71**	**321**	⇑*e*P	**P**	**14 14 49.2**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ABKAR	**Akbulak array**	**40.84**	**312**	*e*P	**P**	**14 15 32.0**	**-0.7**
	comp=Z,5.0nm,1.0s						
GEYT	**Alibeck**	**41.73**	**294**	P	**P**	**14 15 40.4**	**+0.3**
	comp=Z,4.8nm,0.7s,baz=98,slow=3.1,SNR=4.7						
SVE	**Sverdlovsk**	**42.27**	**323**	⇓*e*P	**P**	**14 15 44.3**	**+0.1**
SVE				pmax	pmax		
	comp=Z,11nm,0.9s						
TIXI	**Tiksi**	**42.96**	**9**	*e*P	**P**	**14 15 48.1**	**-1.6**
	comp=Z,8.2nm,0.8s						
TIXI	**Tiksi**	**42.96**	**9**	⇑*e*P	**P**	**14 15 48.0**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARU	**Arti**	**43.25**	**322**	*e*P	**P**	**14 15 51.2**	**-1.0**
	comp=Z,10nm,1.1s						
ARU	**Arti**	**43.25**	**322**	*de*P	**P**	**14 15 51.4**	**-0.8**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PRGR	**Permogore**	**50.87**	**327**	*e*P	P	14 16 46.9	-4.7
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KBZ	**Khabaz**	**52.57**	**304**	P	**P**	**14 17 04.1**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=80,slow=8.0,SNR=6.1						
KIV	**Kislovodsk**	**52.69**	**304**	*e*P	**P**	**14 17 07.0**	**+1.4**
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
KIV				MLR	MLR		
	comp=Z,63nm,16.0s						
NEY	**Neytrino**	**52.76**	**303**	⇑*e*P	**P**	**14 17 06.9**	**+0.6**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VSR	**Storozhevoye**	**54.21**	**314**	*e*P	**P**	**14 17 15.3**	**-1.2**
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
LPSR	**Galich'ya Gora**	**54.24**	**315**	*e*P	**P**	**14 17 15.8**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,20nm,0.6s						
PMG	**Port Moresby**	**54.40**	**130**	*ce*P	P	14 17 25.4	+7.1
PMG				pmax	pmax		
	comp=Z,112nm,1.3s						
MOS	**Moscow**	**54.79**	**319**	*e*P	P	14 17 18.1	-2.6
OBN	**Obninsk**	**55.44**	**319**	*i* P	**P**	**14 17 23.9**	**-1.4**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,35nm,16.0s						
WRAB	**Tennant Creek**	**55.91**	**150**	*e*P	**P**	**14 17 27.5**	**-1.6**
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**55.91**	**150**	*e*P	**P**	**14 17 27.5**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s						
WR1	**Warramunga Arr**	**55.91**	**150**	*e*P	P	14 17 26.8	-2.4
WRA	**Warramunga Arr**	**55.91**	**150**	P	P	14 17 26.8	-2.4
	comp=Z,10nm,0.8s,baz=331,slow=7.8,SNR=58						
WB2	**Warramunga Arr**	**55.91**	**150**	*e*P	P	14 17 27.1	-2.1
	comp=Z,15nm,0.9s						
AS31	**Alice Springs**	**59.04**	**152**	*e*P	**P**	**14 17 49.5**	**-1.6**
	comp=Z,2.2nm,0.4s						
ASAR	**Alice Springs**	**59.04**	**152**	P	P	14 17 48.8	-2.3
	comp=Z,4.0nm,0.5s,baz=333,slow=7.0,SNR=100						
ARA0	**ARCESS Array S**	**59.45**	**336**	*e*P	**P**	**14 17 52.6**	**-0.9**
ARCES	**ARCESS Array B**	**59.45**	**336**	P	**P**	**14 17 52.6**	**-0.9**
	comp=Z,3.7nm,0.6s,baz=76,slow=8.5,SNR=20						
ARE0	**ARCESS Array S**	**59.45**	**336**	*e*P	**P**	**14 17 53.6**	**+0.1**
HAMF	**Hammerfest**	**59.97**	**337**	*e*P	**P**	**14 17 56.7**	**-0.3**
BR101	**Keskin Array S**	**60.18**	**301**	*e*P	**P**	**14 17 58.0**	**-1.1**
BR131	**Keskin Array S**	**60.18**	**301**	*e*P	P	14 17 56.7	-2.5
	comp=Z,6.4nm,1.1s						
BRTR	**Keskin Array B**	**60.18**	**301**	P	**P**	**14 17 58.1**	**-1.1**
	comp=Z,2.6nm,0.8s,baz=96,slow=7.4,SNR=12						
BRTR	**Keskin Array B**	**60.18**	**301**	*i* P	**P**	**14 17 58.2**	**-1.0**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FIA0	**FINESS Array S**	**60.20**	**327**	*e*P	**P**	**14 17 57.4**	**-1.3**
FIA0	**FINESS Array S**	**60.20**	**327**	*e*P	**P**	**14 17 57.4**	**-1.3**
FINES	**FINESS Array B**	**60.20**	**327**	P	**P**	**14 17 57.4**	**-1.3**
	comp=Z,2.7nm,0.6s,baz=97,slow=8.5,SNR=15						
KTK1	**Kautokeino**	**60.31**	**336**	*e*P	**P**	**14 17 58.4**	**-1.0**
VSU	**Vasula**	**60.38**	**323**	⇑*e*P	**P**	**14 17 59.0**	**-0.9**
VSU				pmax	pmax		
	comp=Z,29nm,0.8s						
AKASG	**Malin Array Be**	**60.49**	**314**	P	**P**	**14 17 59.4**	**-1.5**
	comp=Z,1.2nm,0.4s,baz=64,slow=6.8,SNR=7.0						
AKBB	**Malin Array Si**	**60.49**	**314**	*e*P	**P**	**14 18 00.6**	**-0.3**
	comp=Z,3.7nm,0.9s						
AKBB	**Malin Array Si**	**60.49**	**314**	*e*P	**P**	**14 18 00.6**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HSPB	**Hornsund (broa**	**61.36**	**345**	*e*P	**P**	**14 18 05.6**	**-0.8**
TRO	**Tromso**	**61.73**	**337**	*e*P	**P**	**14 18 08.0**	**-0.9**
STEI	**Steigen**	**63.41**	**335**	*e*P	P	14 18 17.4	-2.8
LOF	**Lofoten**	**63.98**	**335**	*e*P	**P**	**14 18 23.1**	**-0.9**
MOR8	**Moi Rana**	**64.19**	**333**	*e*P	P	14 18 22.9	-2.6
NSS	**Namsos**	**65.69**	**332**	*e*P	**P**	**14 18 34.1**	**-1.0**
TTA	**Tatalina**	**66.07**	**30**	*e*P	**P**	**14 18 36.1**	**-1.7**
	comp=Z,3.5nm,1.2s						
TTA	**Tatalina**	**66.07**	**30**	*e*P	**P**	**14 18 36.1**	**-1.7**
TTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TOLK	**Toolik Lake Re**	**66.48**	**23**	*e*P	**P**	**14 18 38.3**	**-2.0**
	comp=Z,3.8nm,0.9s						
NC602	**NORSAR Array S**	**67.19**	**328**	*e*P	**P**	**14 18 43.9**	**-1.0**
NB2	**NORSAR Subarra**	**67.23**	**328**	P	P	14 18 42.9	-2.3
	comp=Z,3.0nm,0.8s,baz=68,slow=6.9						
NB2	**NORSAR Subarra**	**67.23**	**328**	P	P	14 18 42.9	-2.3
	baz=68,slow=6.9						
NB200	**NORSAR Array S**	**67.23**	**328**	*e*P	**P**	**14 18 43.2**	**-1.9**
NOA	**NORSAR Array B**	**67.23**	**328**	P	**P**	**14 18 43.2**	**-1.9**
	comp=Z,1.0nm,0.5s,baz=68,slow=6.2,SNR=6.2						
MLY	**Manley**	**67.47**	**27**	*e*P	**P**	**14 18 45.9**	**-0.7**
	comp=Z,1.8nm,0.7s						
VYHS	**Vyhne**	**67.59**	**314**	*e*P	**P**	**14 18 48.9**	**+1.2**
VYHS	**Vyhne**	**67.59**	**314**	*e*P	**P**	**14 18 48.9**	**+1.2**
DOMB	**Dombas**	**67.81**	**330**	*e*P	**P**	**14 18 47.6**	**-1.2**
SKAR	**Skarslia**	**68.68**	**329**	*e*P	**P**	**14 18 52.6**	**-1.7**
STKA	**Stephens Creek**	**69.46**	**150**	P	**P**	**14 18 58.3**	**-1.1**
	comp=Z,2.5nm,0.3s,baz=14,slow=3.6,SNR=4.4						
PMR	**Palmer**	**69.56**	**30**	*e*P	P	14 18 57.3	-2.3
	comp=Z,4.1nm,0.8s						
PMR	**Palmer**	**69.56**	**30**	*e*P	P	14 18 57.3	-2.3
PMR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SML	**Sawmill**	**69.81**	**29**	*e*P	**P**	**14 19 00.4**	**-0.9**
	comp=Z,7.2nm,0.8s						
SML	**Sawmill**	**69.81**	**29**	*e*P	**P**	**14 19 00.4**	**-0.9**

SML				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	**Collm**	70.03	318	*e*P	P	14 19 01.0	-1.8
CLL	**Collm**	70.03	318	*e*P	P	14 19 01.0	-1.8
BLS5	**Blasjo**	70.05	328	*e*P	P	14 19 01.9	-0.9
SCRK	**Sand Creek**	70.56	26	*e*P	P	14 19 04.6	-1.3
	comp=Z,2.0nm,0.9s						
GERES	**GERESS Array B**	70.61	316	P	P	14 19 05.8	-0.7
	comp=Z,0.4nm,0.2s,baz=78,slow=9.1,SNR=4.9						
GERES	**GERESS Array B**	70.61	316	P	P	14 19 05.8	-0.7
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	**Kilima Mbogo**	74.14	259	*i* P	P	14 19 29.3	+1.0
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SUMG	**Summit**	74.91	350	*e*P	P	14 19 31.3	-0.7
	comp=Z,6.0nm,0.9s						
SUMG	**Summit**	74.91	350	*i* P	P	14 19 31.2	-0.7
SUMG				pmax	pmax		
	comp=Z,12nm,0.8s						
SUMG	**Summit**	74.91	350	*i* P	P	14 19 31.2	-0.7
	comp=Z,12nm,0.8s						
YKA	**Yellowknife Ar**	81.43	19	P	P	14 20 05.1	-2.7
	comp=Z,1.4nm,0.8s,baz=327,slow=4.8,SNR=4.4						
FFC	**Flin Flon**	91.47	17	*i* P	P	14 20 57.3	0.0

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*ISCJB **18** 14:41:06.4±1.0, 69°.19N±0°.03×144°.59W±0°.08, h8^{km}±7^{km}, mb4.0/7, MS3.1/9, Error ellipse: s-maj=4.9km s-min=4.5km az=160.5*

*AEIC **18** 14:41:08.9, 69°.16N×144°.61W, h14^{km}, ML4.2, MB3.9(NEIC), MW4.1(NEIC)*

*NEIC **18** 14:41:08.9±0.0, 69°.16N×144°.61W, h14^{km}, mb3.9/1, MW4.1, ML4.2(AEIC), Moment Tensor Solution. s35 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.13; M$_{\theta\theta}$-0.49; M$_{\phi\phi}$0.61; M$_{r\theta}$-0.24; M$_{\theta\phi}$-1.12; M$_{\phi r}$-0.79; Best double couple: M$_0$1.50000×10^{15} NP1:ϕ_s12.00000°, δ86.00000°, λ-34.00000°. NP2:ϕ_s104.00000°, δ56.00000°, λ-175.00000°. Principal axes: T 1.5100, Plg20.0000°, Azm63.0000°; N -0.0200, Plg56.0000°, Azm186.0000°; P -1.5000, Plg26.0000°, Azm323.0000°; After AEIC.*

*IDC **18** 14:41:08.4±0.9, 69°.35N×144°.77W, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.8/35, mbtmp3.8/9, ML3.8/3, MS3.1/13, Ms1 3.1/13, ms1mx2.9/48 Error ellipse: s-maj=23.3km s-min=15.9km az=50.0*

*ANF **18** 14:41:10.5±1.5, 69°.06N×144°.62W, h13^{km}, ML4.8/5, Error ellipse: s-maj=14.6km s-min=9.6km az=111.0*

ISC 18 14:41:06.6±2.2, **69°.20N**±0°.04×**144°.52W**±0°.04, **h1**^{km}±15^{km}, **n82**, σ**1^{s}80**/80, **mb4.0**/7, **MS3.2**/9, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	**TAPS Pump Stn**	1.78	309	*e*Pn	Pb	14 41 39.0	-0.8
PS01				*e*Sg	Sg	14 42 04.3	+0.7
BM3	**Burnt Mountain**	1.79	181	*e*Pn	Pb	14 41 39.1	-1.1
TOLK	**Toolik Lake Re**	1.91	255	*e*Pn	Pb	14 41 42.0	-0.2
TOLK	**Toolik Lake Re**	1.91	255	P	Pb	14 41 41.4	-0.9
	baz=72						
TOLK				S	Sb	14 42 05.3	-1.2
	baz=72						
PS04	**TAPS Pump Stn4**	1.92	248	*e*Pn	Pb	14 41 40.5	-1.9
PS04				*e*Sg	Sb	14 42 05.8	-1.0
FYU	**Fort Yukon**	2.66	186	*e*Pn	Pn	14 41 51.1	+0.6
FYU				*e*Sn	Sn	14 42 23.8	+0.5
COLD	**Coldfoot**	2.90	230	*e*Pn	Pn	14 41 54.2	+0.4
COLD				*e*Sn	Sn	14 42 29.3	+0.1
PS05	**TAPS Pump Stn5**	3.33	227	*e*Pn	Pn	14 42 00.4	+0.7
PRP	**Porcupine Dome**	3.72	186	*e*Pn	Pn	14 42 06.5	+1.3
PS06	**TAPS Pump Stn6**	3.91	213	*e*Pn	Pn	14 42 08.5	+0.8
INK	**Inuvik**	4.10	97	Pn	Pn	14 42 12.9	+2.7
	3.3nm,0.3s,baz=287,slow=12,SNR=44						
INK				Sn	Sn	14 43 01.6	+2.9
	5.5nm,0.3s,baz=258,slow=7.7,SNR=5.7						
INK				LR	LR	14 43 34.0	
	comp=Z,90nm,20.1s,baz=264,slow=35						
INK	**Inuvik**	4.10	97	*e*Pn	Pn	14 42 12.7	+2.5
INK				*e*Sn	Sn	14 43 01.4	+2.6
EPYK	**Eagle Plains**	4.10	130	*e*Pn	Pn	14 42 11.6	+1.2
EPYK	**Eagle Plains**	4.10	130	P	Pn	14 42 11.6	+1.2
	baz=317						
EPYK				S	Sn	14 42 59.2	+0.3
	baz=317						
POKR	**Poker Plat Res**	4.26	197	P	Pn	14 42 12.8	+0.3
	baz=14						
POKR				S	Sn	14 43 01.4	-1.3
	baz=14						
MDM	**Murphy Dome**	4.50	201	*e*Pn	Pn	14 42 16.1	+0.3
COLA	**College**	4.54	198	*e*Pn	Pn	14 42 16.9	+0.7
TCOL	**CIGO, UAF Yank**	4.54	198	P	Pn	14 42 16.8	+0.5
	baz=15						
TCOL				S	Sn	14 43 08.4	-1.1
	baz=15						
ILAR	**Eielson Array**	4.54	193	Pn	Pn	14 42 16.8	+0.4
	4.3nm,0.3s,baz=1.5,slow=11,SNR=97						
ILAR				Sn	Sn	14 43 10.4	+0.7
	8.7nm,0.3s,baz=8.4,slow=22,SNR=8.0						
ILB	**Eielson Array**	4.54	193	*e*Pn	Pn	14 42 17.1	+0.7
ILB				*e*Sn	Sn	14 43 10.4	+0.7
EGAK	**Eagle**	4.63	162	*e*Pn	Pn	14 42 18.3	+0.7
CCB	**Clear Creek Bu**	4.75	197	*e*Pn	Pn	14 42 19.3	+0.1
PS08	**TAPS Pump Stn8**	4.77	192	*e*Pn	Pn	14 42 20.5	+1.1
IM3	**Indian Mountai**	4.78	232	*e*Pn	Pn	14 42 19.2	-0.4
MLY	**Manley**	4.84	213	*e*Pn	Pn	14 42 20.6	+0.2
HDA	**Harding Lake**	4.91	192	*e*Pn	Pn	14 42 22.5	+1.1
HDA	**Harding Lake**	4.91	192	P	Pn	14 42 22.1	+0.8
	baz=9.9						
HDA				S	Sn	14 43 18.3	-0.4
	baz=9.9						
WRH	**Wood River Hil**	4.96	198	*e*Pn	Pn	14 42 22.4	+0.4
SCRK	**Sand Creek**	5.25	177	*e*Pn	Pn	14 42 27.3	+1.1
PS09	**TAPS Pump Stn9**	5.32	186	*e*Pn	Pn	14 42 28.7	+1.8
BWN	**Browne**	5.42	204	*e*Pn	Pn	14 42 28.9	+0.6
DAWY	**Dawson**	5.54	156	*e*Pn	Pn	14 42 31.3	+1.1
DOT	**Dot Lake**	5.58	178	*e*Pn	Pn	14 42 32.0	+1.4
BPAW	**Bear Paw Mtn.**	5.73	210	*e*Pn	Pn	14 42 32.5	-0.1
MCK	**McKinley**	5.77	200	*e*Pn	Pn	14 42 33.2	0.0
RND	**Reindeer**	6.08	199	*e*Pn	Pn	14 42 38.0	+0.6
DHY	**Denali Highway**	6.26	192	*e*Pn	Pn	14 42 41.8	+1.8
BCA3	**Beaver Creek A**	6.26	169	*e*Pn	Pn	14 42 41.6	+1.6
PAX	**Paxson**	6.27	184	*e*Pn	Pn	14 42 42.0	+1.8
MENT	**Mentasta**	6.30	177	*e*Pn	Pn	14 42 40.2	-0.3
CAST	**Castle Rocks**	6.55	211	*e*Pn	Pn	14 42 44.6	+0.6
RDOG	**Red Dog Mine**	6.81	269	*e*Pn	Pn	14 42 47.0	-0.4
PPLA	**Purkeypile**	7.05	210	*e*Pn	Pn	14 42 51.5	+0.6
SCM	**Sheep Creek Mo**	7.49	190	*e*Pn	Pn	14 42 59.9	+3.0
SML	**Sawmill**	7.59	194	*e*Pn	Pn	14 43 00.2	+2.1
TTA	**Tatalina**	7.83	222	*e*Pn	Pn	14 43 02.0	+0.6
TT01	**Tatalina**	7.85	222	*e*Pn	Pn	14 43 02.0	+0.3
PMR	**Palmer**	7.88	196	*e*Pn	Pn	14 43 03.9	+1.9
KNK	**Knik Glacier**	7.99	194	*e*Pn	Pn	14 43 07.0	+3.3
RC01	**Rabbit Creek A**	8.43	198	*e*Pn	Pn	14 43 12.9	+3.2
CRQM	**Cirque**	8.50	175	*e*Pn	Pn	14 43 15.0	+4.2
SVW2	**Sparrevohn**	9.35	215	*e*Pn	Pn	14 43 22.8	+0.5
WHY	**Whitehorse**	9.48	150	*e*Pn	Pn	14 43 22.3	-1.9
KDAK	**Kodiak Island**	12.00	201	LR	LR	14 48 50.6	
	comp=Z,110nm,21.1s,baz=75,slow=38						
DLBC	**Dease Lake**	12.50	143	LR	LR	14 49 23.0	
	comp=Z,86nm,18.8s,baz=286,slow=39						
YKW3	**Yellowknife Ar**	13.78	104	*e*Pn	Pn	14 44 21.5	-1.2
YKA	**Yellowknife Ar**	13.83	104	Pn	Pn	14 44 21.5	-1.9
	0.7nm,0.3s,baz=307,slow=13,SNR=7.0						
YKA				Sn	Sn	14 46 47.1	-10
	0.5nm,0.3s,baz=311,slow=22,SNR=4.3						
YKB5	**Yellowknife Ar**	13.83	104	*e*Pn	Pn	14 44 21.6	-1.9
RES	**Resolute Bay**	15.86	48	Pn	Pn	14 44 49.2	-1.3
	0.3nm,0.3s,baz=261,slow=15,SNR=9.2						
RES				Sn	Sn	14 47 36.1	-10
	0.8nm,0.3s,baz=145,slow=14,SNR=4.4						
RES	**Resolute Bay**	15.86	48	*e*Pn	Pn	14 44 51.1	+0.6
	7.1nm,0.8s						
BBB	**Bella Bella**	18.74	147	LR	LR	14 52 01.2	
	comp=Z,36nm,20.8s,baz=89,slow=34						
NEW	**Newport**	24.93	133	LR	LR	14 58 01.0	
	comp=Z,7.5nm,18.1s,baz=338,slow=40						
SEY	**Seymchan**	25.24	287	P	P	14 46 35.8	+2.3
	3.8nm,0.8s,baz=80,slow=6.8,SNR=5.8						
MA2	**Magadan**	28.16	283	LR	LR	14 59 49.7	
	comp=Z,75nm,18.3s,baz=52,slow=40						
FRB	**Frobisher Bay**	28.95	63	LR	LR	15 00 08.0	
	comp=Z,46nm,19.7s,baz=200,slow=39						
YBH	**Yreka Blue Hor**	29.82	146	LR	LR	15 00 29.4	
	comp=Z,33nm,18.8s,baz=324,slow=39						
PETK	**Petropavlovsk-**	30.68	268	LR	LR	15 00 53.9	
	comp=Z,35nm,18.3s,baz=97,slow=39						
PD31	**Pinedale Array**	32.06	127	*e*P	P	14 47 38.7	+3.9
PDAR	**Pinedale Array**	32.06	127	P	P	14 47 38.7	+3.9
	0.6nm,0.8s,baz=11,slow=3.0,SNR=4.5						
NV01	**Mina Array Sit**	33.92	142	*e*P	P	14 47 56.0	+5.0
NVAR	**Mina Array Bea**	33.92	142	P	P	14 47 56.0	+5.0
	0.9nm,0.7s,baz=327,slow=8.9,SNR=8.9						
NVAR				LR	LR	15 02 34.7	
	comp=Z,61nm,19.0s,baz=192,slow=38						
SCHQ	**Schefferville**	36.30	73	LR	LR	15 02 38.2	
	comp=Z,45nm,20.8s,baz=102,slow=36						
TXAR	**Lajitas Array**	46.28	128	LR	LR	15 08 30.2	
	comp=Z,38nm,20.2s,baz=0.0,slow=35						
FIA0	**FINESS Array S**	49.47	6	*e*P	P	14 49 58.3	+0.7
FINES	**FINESS Array B**	49.47	6	P	P	14 49 58.3	+0.7
	0.9nm,0.4s,baz=13,slow=8.7,SNR=7.7						
ZAA1	**Zalesovo Array**	51.98	325	*e*P	P	14 50 17.1	+0.4
ZALV	**Zalesovo Beam**	51.99	325	P	P	14 50 17.1	+0.4
	0.8nm,0.4s,baz=19,slow=9.2,SNR=2.1						
SONM	**Songino Array**	52.30	306	LR	LR	15 16 32.7	
	comp=Z,41nm,18.1s,baz=45,slow=41						
HHC	**Hu-ho-hao-te**	57.08	299	P	P	14 50 55.4	+1.4
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
MK32	**Makanchi Array**	59.29	324	*e*P	P	14 51 08.9	-0.3
MKAR	**Makanchi Array**	59.29	324	P	P	14 51 08.9	-0.4
	comp=Z,0.3nm,0.6s,baz=55,slow=6.5,SNR=3.7						
WMQ	**Urumqi**	60.92	319	*e*P	P	14 51 22.3	+1.8

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*ISK **18** 15:01:30.8, 39°.46N×28°.79E, h10^{km}, ML2.1/8*

*DDA **18** 15:01:31.1, 39°.52N×28°.81E, h7^{km}±3^{km}, ML2.5*

ISC 18 15:01:31.4±1.2, **39°.50N**±0°.03×**28°.81E**±0°.03, **h9**^{km}±11^{km}, **n20**, σ**0^{s}96**/27, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	0.28	292	*i* P	Pb	15 01 37.4	-1.2
DURS				*i* S	Sb	15 01 42.0	-1.6
DURS				IAML_P			
	comp=Z,2μm,0.1s						
DEMI	**Demirci**	0.46	189	*i* P	Pb	15 01 40.6	-1.1
DEMI				IAML_P			
	comp=Z,1μm,0.1s						
TVSB	**Tavsanli**	0.51	95	PG	Pg	15 01 41.6	+0.3
TVSB				SG	Sb	15 01 49.2	-0.9
GDZ	**Gediz**	0.66	128	*i* P	Pb	15 01 44.8	-0.4
GDZ				IAML_P			
	comp=Z,2μm,0.1s						
ULDT	**Uludag**	0.69	21	*i* P	Pg	15 01 45.0	+0.1
ULDT				*i* S	Sg	15 01 54.1	+0.1
ULDT				IAML_P			
	comp=Z,410nm,0.2s						
BALB	**Balikesir**	0.73	282	PG	Pb	15 01 45.4	-0.9
BALB				SG	Sb	15 01 56.2	-0.2
USAK	**Uak-Merkez**	0.80	168	*i* P	Pn	15 01 47.8	-1.1
USAK				IAML_P			
	comp=Z,618nm,0.2s						
KCTX	**Karacabey (Bur**	0.84	336	PG	Pb	15 01 48.1	-0.2
STEP	**BALIKESIR_Sava**	0.85	262	*i* P	Pb	15 01 48.0	-0.4
KULA	**Kula-Manisa**	0.99	187	PG	Pg	15 01 49.4	-1.0
AKHS	**Akhisar**	0.99	232	*i* P	Pn	15 01 52.1	+0.6
MANT	**Manisa**	1.02	191	*i* P	Pn	15 01 52.3	+0.2
MANT				*i* S	Sn	15 02 08.0	+1.4
GONE	**Gonen-Balikesi**	1.03	303	PG	Pb	15 01 51.0	-0.3
ARMT	**Armutlu**	1.07	2	PN	Pn	15 01 52.6	0.0
YLV	**Yalova**	1.16	22	PN	Pn	15 01 54.1	+0.3
KHAL	**Karahalli**	1.24	154	*i* P	Pg	15 01 56.4	+1.1
KHAL				*i* S	Sn	15 02 13.4	+1.4
KHAL				IAML_P			
	comp=Z,309nm,0.2s						
ZEDA	**zmir-Bergama**	1.45	249	*i* P	Pg	15 01 59.1	0.0
ZEDA				*i* S	Sg	15 02 19.8	+1.9
ZEDA				IAML_P			
	comp=Z,415nm,0.1s						
MRMT	**Marmara Adasi**	1.45	320	PN	Pb	15 01 57.9	-0.7
GULT	**Gulveren**	1.61	54	PN	Pb	15 02 00.6	-0.8
GOLH	**Golhisar**	2.33	165	*i* P	Pb	15 02 12.6	-1.1
GOLH				IAML_P			
	comp=Z,219nm,0.1s						

RSNC 18 15:03:43.4±1.0, **6°.81N**×**73°.15W**, **h142**^{km}±4^{km}, **ML3.2, Mw3.5, 5C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	0.22	189	⇓*i*P	Pn	15 04 02.7	-0.3
BARC				*e*S	Sn	15 04 17.6	-0.4
BARC				*i*		15 04 19.1	
	comp=Z,362nm,0.3s						
GIRC	**Giron, Santand**	0.27	350	⇑*e*P	Pn	15 04 02.8	-0.3
GIRC				*e*S	Sn	15 04 18.4	+0.3
GIRC				*i*		15 04 20.7	
	comp=Z,104nm,0.4s						
BRRC	**Barranca, Sant**	0.63	298	⇑*i*P	Pn	15 04 04.6	0.0
BRRC				*e*S	Sn	15 04 20.2	-0.5
BRRC				*e*S		15 04 20.5	
BRRC				*i*		15 04 22.3	
	comp=Z,237nm,0.3s						
RUSC	**La Rusia**	0.92	176	⇑*e*P	Pn	15 04 06.6	-0.6
RUSC				*e*S	Sn	15 04 24.6	-0.7
RUSC				*i*		15 04 26.4	
	comp=Z,193nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.33	258	⇓*e*P	Pn	15 04 09.3	-1.2
PTBC				*e*S	Sn	15 04 30.3	-1.0
PTBC				*i*		15 04 35.8	
	comp=Z,218nm,0.3s						
TAMC	**Tame, Arauca**	1.40	105	⇑*i*P	Pn	15 04 11.1	-0.2
TAMC				*e*S	Sn	15 04 31.4	-1.1
TAMC				*i*		15 04 40.3	
	comp=Z,106nm,0.3s						
OCAC	**Ocana**	1.43	353	*e*P	Pn	15 04 10.9	-0.9
OCAC				*e*S	Sn	15 04 32.5	-1.0
OCAC				*i*		15 04 37.9	
	comp=Z,163nm,0.3s						
SPBC	**San Pablo de B**	1.47	219	*e*P	Pn	15 04 11.7	-0.5
SPBC				*e*S	Sn	15 04 33.6	-0.5
YOPC	**Yopal, Colombi**	1.62	153	*e*P	Pn	15 04 13.5	-0.3
YOPC				*e*S	Sn	15 04 36.1	-0.9
YOPC				*i*		15 04 39.4	
	comp=Z,106nm,0.3s						
ZARC	**Zaragoza, Cauc**	1.83	292	*e*P	Pn	15 04 15.3	-0.8
ZARC				*e*S	Sn	15 04 41.8	+0.7
ZARC				*i*		15 04 46.7	
	comp=Z,374nm,0.3s						
CTAB	**Cerro Tablazo,**	2.08	211	*e*P	Pn	15 04 21.2	+1.7
CTAB				*e*S	Sn	15 04 49.0	+2.0
CTAB				*i*		15 04 57.4	
	comp=Z,174nm,0.5s						
NORC	**Norcasia**	2.12	234	⇑*i*P	Pn	15 04 19.2	-0.2
NORC				*e*S	Sn	15 04 46.3	-0.9
NORC				*i*		15 04 48.5	
	comp=Z,137nm,0.2s						
SMLC	**San Martn de**	2.18	335	⇓*e*P	Pn	15 04 19.1	-1.1
SMLC				*e*S	Sn	15 04 50.3	+1.7
SMLC				*i*		15 04 56.5	
	comp=Z,179nm,0.3s						
HELC	**Santa Helena**	2.45	256	*e*P	Pn	15 04 23.6	-0.2
HELC				*e*S	Sn	15 04 56.4	+1.6
HELC				*i*		15 05 01.9	
	comp=Z,143nm,0.3s						
GUY2C	**Guyana, Caldas**	2.71	235	*e*P	Pn	15 04 27.2	-0.1
GUY2C				*e*S	Sn	15 05 00.4	-0.6
GUY2C				*i*		15 05 07.4	
	comp=Z,88nm,0.5s						
VILC	**Villavicencio,**	2.74	192	*e*P	Pn	15 04 27.1	-0.2
VILC				*e*S	Sn	15 05 00.8	-0.3
VILC				*i*		15 05 06.7	
	comp=Z,110nm,0.4s						
RREF	**El Recreo**	2.90	229	*e*P	Pn	15 04 30.3	+0.6
RREF				*e*S	Sn	15 05 07.8	+2.4
RREF				*i*		15 05 12.9	
	comp=Z,112nm,0.3s						
DBBC	**Dabeiba**	3.05	274	⇓*e*P	Pn	15 04 30.5	-0.6
DBBC				*e*S	Sn	15 05 06.1	-1.9
DBBC				*i*		15 05 23.5	
	comp=Z,69nm,0.7s						
PRAC	**Prado**	3.53	209	*e*P	Pn	15 04 36.8	-0.6
PRAC				*e*S	Sn	15 05 17.9	-1.3
PRAC				*i*		15 05 26.3	
	comp=Z,66nm,0.7s						
ORTC	**Ortega, Tolima**	3.56	216	*e*P	Pn	15 04 37.4	-0.4
ORTC				*e*S	Sn	15 05 20.1	+0.2
ORTC				*i*		15 05 27.7	
	comp=Z,40nm,0.3s						
SJCC	**San Jacinto, C**	3.67	327	*e*P	Pn	15 04 37.5	-1.7
SJCC				*e*S	Sn	15 05 18.2	-4.2
SJCC				*i*		15 05 22.0	
	comp=Z,30nm,0.5s						
BBAC	**Balboa, Cauca**	6.27	221	*e*P	Pn	15 05 13.9	0.0
BBAC				*e*S	Sn	15 06 21.9	-2.8
BBAC				*i*		15 06 26.7	
	comp=Z,7.5nm,0.4s						

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*IDC **18** 15:07:06.5±1.1, 12°.67N×143°.50E, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.5/35, mbtmp3.7/5, MS2.9/2, Ms1 2.9/2, ms1mx2.5/33, Error ellipse: s-maj=55.6km s-min=20.7km az=120.0*

*ISCJB **18** 15:07:09.4±0.9, 12°.5N±0°.2×143°.8E±0°.3, h27^{km}, mb3.7/5, MS2.9/2, Error ellipse: s-maj=45.6km s-min=9.8km az=35.5*

ISC 18 15:07:11.0±1.1, **12°.5N**±0°.2×**144°.0E**±0°.3, **h27**^{km}, **n14**, σ**1^{s}33**/7, **mb3.9**/5, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	1.39	39	Pn	Pb	15 07 35.2	-1.0
	53nm,0.3s,baz=196,slow=8.0,SNR=77						
GUMO				Sn	Sb	15 07 53.8	+0.3
	60nm,0.3s,baz=186,slow=23,SNR=15						
H11S3	**WAKE ISLAND Hy**	22.67	72	T	T	15 35 37.1	
	baz=258,slow=75,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	22.69	72	T	T	15 35 42.7	
	baz=258,slow=75,SNR=9.2						
H11S2	**WAKE ISLAND Hy**	22.69	72	T	T	15 35 40.2	
	baz=258,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	23.14	69	T	T	15 36 09.7	
	baz=255,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	23.15	69	T	T	15 36 12.1	
	baz=255,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	23.16	69	T	T	15 36 12.8	
	baz=255,slow=75,SNR=13						
MJAR	**Matsushiro Arr**	24.49	349	LR	LR	15 21 15.5	
	comp=Z,28nm,19.0s,baz=135,slow=35						
WRA	**Warramunga Arr**	33.61	197	P	P	15 13 48.4	-1.0
	1.8nm,1.0s,baz=3.4,slow=7.8,SNR=4.7						
ASAR	**Alice Springs**	37.28	195	P	P	15 14 20.6	-0.2
	0.6nm,0.8s,baz=20,slow=10,SNR=5.2						
PETK	**Petropavlovsk-**	41.96	12	LR	LR	15 31 43.8	
	comp=Z,16nm,18.9s,baz=223,slow=35						
ILAR	**Eielson Array**	69.91	25	P	P	15 18 18.8	-0.6
	0.2nm,0.7s,baz=252,slow=5.4,SNR=4.5						
NVAR	**Mina Array Bea**	88.27	51	P	P	15 20 02.8	+2.2
	0.5nm,0.7s,baz=275,slow=5.2,SNR=3.7						
FINES	**FINESS Array B**	91.77	335	P	P	15 20 16.2	+0.1
	0.9nm,0.8s,baz=66,slow=9.4,SNR=3.4						

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*NIED **18** 15:35:00, 37°.80N×142°.00E, h44^{km}, Mw3.5 Best double couple: M$_0$1.87000×10^{14} NP1:ϕ_s27.00000°, δ27.00000°, λ-100.00000°. NP2:ϕ_s217.00000°, δ63.00000°, λ-85.00000°.*

JMA 18 15:35:28.2±0.1, **37°.78N**×**142°.00E**, **h36**^{km}±2^{km}, **M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.68	322	P	Pn	15 35 41.2	-0.1
JIKH				S	Sn	15 35 50.1	-0.5
JIO	**Ouri**	0.85	323	P	Pn	15 35 43.8	+0.2
JIO				S	Sn	15 35 54.4	-0.4
JMST	**Minamisoumatoc**	0.88	267	P	Pn	15 35 44.2	+0.1
JMST				S	Sn	15 35 55.5	-0.2
JMM	**Marumori**	0.96	276	P	Pn	15 35 45.4	+0.3
JMM				S	Sn	15 35 57.7	+0.2
JFK	**Kawauchi**	0.98	246	P	Pn	15 35 45.7	+0.2
JFK				S	Sn	15 35 58.3	+0.1
JKMT	**Kesennumamotoy**	1.11	338	P	Pn	15 35 47.3	+0.1
JKMT				S	Sn	15 36 00.5	-0.7
JOU	**Okura**	1.21	299	P	Pn	15 35 49.5	+1.0
JOU				S	Sn	15 36 04.8	+1.2
JMK	**Ichinoseki**	1.32	333	P	Pn	15 35 50.7	+0.6
JMK				*e*S	Sn	15 36 06.7	+0.3
JFT	**Otama**	1.35	259	P	Pn	15 35 51.8	+1.4
JFT				S	Sn	15 36 08.8	+1.7
JYS	**Shirataka**	1.59	287	S	Sn	15 36 16.9	+3.8
JYK	**Kaneyama**	1.72	312	P	Pn	15 35 56.9	+1.3
JOM	**Ohasama**	1.78	342	P	Pn	15 35 57.5	+1.1
JOM				S	Sn	15 36 18.8	+1.1
JFY	**Yanaizu**	1.86	259	S	Sn	15 36 22.3	+2.5
JRG	**Rokugo**	1.94	327	P	Pn	15 36 00.2	+1.6
JRG				S	Sn	15 36 24.1	+2.5
JYA	**Atsumi**	1.98	295	P	Pn	15 36 00.9	+1.8
JYA				*e*S	Sn	15 36 25.8	+3.2

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*MOS **18** 15:43:09.4±1.1, 8°.24S×117°.21E, h33^{km}, mb5.0/48, MS4.0/11, Error ellipse: s-maj=10.2km s-min=5.8km az=105.7*

*ISCJB **18** 15:43:09.7±0.4, 8°.34S±0°.02×117°.22E±0°.02, h37^{km}±3^{km}, mb5.0/101, MS4.1/33, Error ellipse: s-maj=4.1km s-min=2.9km az=29.9*

*GCMT **18** 15:43:09.9±0.3, 8°.35S±0°.02×117°.11E±0°.03, h28^{km}, MW5.0/71, Moment Tensor Solution. s47,c63; s71,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.70±.15; M$_{\theta\theta}$-2.76±.09; M$_{\phi\phi}$0.06±.11; M$_{r\theta}$-1.75±.14; M$_{\theta\phi}$-0.36±.07; M$_{\phi r}$-0.68±.21; Best double couple: M$_0$3.33300×10^{16} NP1:ϕ_s255.00000°, δ62.00000°, λ82.00000°. NP2: ϕ_s91.00000°, δ29.00000°, λ104.00000°. Principal axes: T 3.3090, Plg72.0000°, Azm147.0000°; N 0.0500, Plg7.0000°, Azm258.0000°; P -3.3580, Plg17.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **18** 15:43:10.2±0.4, 8°S±2°×11°7E±°, h22^{km}±4^{km}, M5.0/33, mB5.4/11, mb5.1/33, MLv5.2/24, Mw(mB)4.8/11*

*NEIC **18** 15:43:10.9±1.9, 8°.32S×117°.17E, h34^{km}±3^{km}, mb5.0/74, Error ellipse: s-maj=9.1km s-min=8.1km az=171.0*

*IDC **18** 15:43:11.4±5.2, 8°.30S×117°.19E, h33^{km}±39^{km}, mb4.6/19, mb1 4.7/22, mb1mx4.5/40, mbtmp4.8/22, ML4.8/3, MS4.0/26, Ms1 4.0/26, ms1mx4.0/32, Error ellipse: s-maj=22.8km s-min=10.3km az=81.0*

ISC 18 15:43:09.9±0.7, **8°.38S**±0°.04×**117°.18E**±0°.03, **h27**^{km}±4^{km}, **h28**^{km}**:pP-P**, **n296**, σ**1^{s}44**/291, **mb4.9**/101, **MS4.1**/33, **15C-7D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	0.74	127	P	Pn	15 43 23.2	-1.4
PLAI				S	Sn	15 43 33.5	-1.5
SRBI	**Singaraja**	1.97	278	P	Pn	15 43 41.4	-0.1
DNP	**Denpasar**	1.97	261	P	Pn	15 43 41.8	+0.3
DNP				S	Sn	15 44 07.8	+2.4
WBSI	**Waikabubak, Su**	2.52	120	P	Pn	15 43 49.9	+0.7
WBSI				S	Sn	15 44 20.7	+1.7
JAGI	**Jajag, Banyuwa**	3.00	268	*e*Pn	Pn	15 43 56.0	+0.3
JAGI	**Jajag, Banyuwa**	3.00	268	P	Pn	15 43 56.0	+0.3
JAGI				S	Sn	15 44 32.6	+1.8
WSI	**Waingapu**	3.34	113	P	Pn	15 44 03.3	+2.9
KMMI	**Kalianget**	3.45	292	P	Pn	15 44 03.5	+1.7
KMMI				S	Sb	15 44 45.5	-6.3
KAPI	**Kappang**	4.20	38	Pn	Pn	15 44 12.4	+0.2
	44nm,0.3s,baz=171,slow=4.0,SNR=144						
KAPI				Sn	Sn	15 45 00.5	0.0
	103nm,0.3s,baz=275,slow=18,SNR=8.9						
KAPI				LR	LR	15 46 07.7	
	comp=Z,3μm,20.9s,baz=119,slow=43						
KAPI	**Kappang**	4.20	38	*e*Pn	Pn	15 44 12.6	+0.3
KAPI				*e*Sn	Sn	15 45 00.0	-0.5
KAPI	**Kappang**	4.20	38	*e*P	Pn	15 44 12.6	+0.3
KAPI				*e*		15 45 00.0	
BKSI	**Bulukumba**	4.21	44	P	Pn	15 44 12.3	-0.1
EDFI	**Ende, Flores**	4.48	95	P	Pn	15 44 17.2	+1.1
EDFI				S	Sn	15 45 11.5	+4.1
GRJI	**Gresik**	4.88	287	P	Pn	15 44 22.2	+0.6
BNSI	**Bone**	4.90	37	P	Pn	15 44 23.9	+2.0
MMRI	**Maumere**	5.01	93	*e*Pn	Pn	15 44 23.8	+0.4
MMRI	**Maumere**	5.01	93	P	Pn	15 44 23.8	+0.4

	856nm,0.8s,7µm4.4nm						
SPSI	**Sidrap Palu**	**5.08**	**31**	P	**Pn**	**15 44 24.9**	**+0.5**
PWJI	**Pagerwojo**	**5.33**	**273**	P	**Pn**	**15 44 28.0**	**+0.2**
NGJI	**Ngawi**	**5.75**	**280**	P	**Pn**	**15 44 35.8**	**+2.2**
TTSI	**Tana Toraja**	**5.91**	**27**	P	**Pn**	**15 44 37.5**	**+1.8**
BBSI	**Bau Bau**	**6.07**	**62**	P	**Pn**	**15 44 38.1**	**+0.1**
WOJI	**Wonogiri, Jawa**	**6.22**	**274**	P	**Pn**	**15 44 42.5**	**+2.5**
UGM	**Wanagama**	**6.61**	**274**	*e*Pn	**Pn**	**15 44 46.1**	**+0.7**
UGM				*e*Sn	**Sn**	**15 46 04.7**	**+4.8**
UGM	**Wanagama**	**6.61**	**274**	P	**Pn**	**15 44 47.1**	**+1.7**
BATI	**Baumata**	**6.65**	**106**	Pn	**Pn**	**15 44 47.9**	**+1.9**
	49nm,0.3s,baz=267,slow=4.4,SNR=29						
BATI				LR	LR	15 47 43.3	
	comp=Z,2µm,18.7s,baz=298,slow=41						
BATI	**Baumata**	**6.65**	**106**	*e*Pn	**Pn**	**15 44 47.9**	**+1.9**
BATI				*e*Pn	**Pn**	**15 44 47.9**	**+1.9**
BATI	**Baumata**	**6.65**	**106**	P	**Pn**	**15 44 47.6**	**+1.6**
	148nm,0.5s,2µm						
SMRI	**Semarang**	**6.81**	**281**	*e*Pn	**Pn**	**15 44 49.3**	**+1.2**
SOEI	**Soe**	**7.13**	**102**	*e*Pn	**Pn**	**15 44 54.6**	**+1.9**
SOEI	**Soe**	**7.13**	**102**	P	**Pn**	**15 44 56.2**	**+3.5**
	370nm,1.0s,3µm						
MTKI	**Muara Teweh, K**	**7.73**	**343**	P	**Pn**	**15 44 59.3**	**-1.4**
PBKI	**Pangkalan Bun**	**7.86**	**315**	P	**Pn**	**15 45 02.9**	**+0.3**
LUWI	**Luwuk**	**9.17**	**38**	*e*Pn	**Pn**	**15 45 18.7**	**-1.8**
CISI	**Cisompet, Garu**	**9.31**	**274**	*e*Pn	**Pn**	**15 45 21.8**	**-0.7**
CISI	**Cisompet, Garu**	**9.31**	**274**	P	**Pn**	**15 45 22.4**	**-0.1**
LEM	**Lembang**	**9.60**	**279**	LR	LR	15 49 43.0	
	comp=Z,2µm,18.0s,baz=88,slow=41						
STKI	**Sintang**	**10.13**	**326**	P	**Pn**	**15 45 35.9**	**+2.2**
SANI	**Sanana**	**10.79**	**55**	P	Pn	15 45 55.1	+12
CGJI	**Cibinong**	**11.52**	**278**	P	**Pn**	**15 45 53.0**	**+0.2**
SBUM	**Sibu**	**11.84**	**335**	*e*Pn	**Pn**	**15 45 58.8**	**+1.7**
KSM	**Kuching**	**11.94**	**325**	*e*Pn	Pn	15 46 01.4	+2.9
PPBI	**Pangkal Pinang**	**12.61**	**299**	P	**Pn**	**15 46 09.2**	**+1.6**
LBMI	**Labuha**	**12.84**	**54**	P	**Pn**	**15 46 07.0**	**-3.8**
PSA00	**Pilbara Seismi**	**13.37**	**169**	*e*Pn	**Pn**	**15 46 16.3**	**-1.8**
KNRA	**Kununurra**	**13.45**	**124**	P	**Pn**	**15 46 18.2**	**-0.9**
	baz=13,SNR=14						
MDSI	**Maura Dua**	**13.48**	**286**	P	P	15 46 36.7	+8.2
SAUI	**Saumlaki**	**13.98**	**89**	*e*Pn	**Pn**	**15 46 24.3**	**-2.1**
LHSI	**Lahat**	**14.31**	**288**	P	P	15 46 41.8	+4.1
MTN	**Manton Dam**	**14.41**	**109**	*e*Pn	**Pn**	**15 46 29.6**	**-2.8**
MTN	**Manton Dam**	**14.41**	**109**	P	**Pn**	**15 46 29.9**	**-2.4**
	baz=14,SNR=20						
GIRL	**Giralia**	**14.47**	**191**	*e*Pn	**Pn**	**15 46 30.5**	**-2.5**
GIRL	**Giralia**	**14.47**	**191**	P	**Pn**	**15 46 31.3**	**-1.7**
	baz=14,SNR=28						
MNAI	**Manna**	**14.69**	**285**	*e*Pn	**Pn**	**15 46 35.9**	**-0.1**
KDU	**Kakadu**	**15.63**	**107**	P	**Pn**	**15 46 46.7**	**-1.8**
	baz=16,SNR=7.4						
SWI	**Sorong**	**15.89**	**63**	P	**P**	**15 46 57.4**	**+2.1**
SIJI	**Sorong**	**15.89**	**63**	Pn	**P**	**15 46 54.1**	**-1.2**
	1.8nm,0.3s,baz=246,slow=4.5,SNR=20						
SIJI				LR	LR	15 53 34.7	
	comp=Z,368nm,19.8s,baz=239,slow=39						
FAKI	**Fak Fak**	**15.94**	**71**	*e*Pn	**Pn**	**15 46 51.9**	**-0.7**
	87nm,1.1s						
FAKI	**Fak Fak**	**15.94**	**71**	P	**Pn**	**15 46 51.6**	**-0.9**
DAV	**Davao City (W)**	**17.48**	**29**	LR	LR	15 54 35.3	
	comp=Z,708nm,20.6s,baz=188,slow=39						
MEEK	**Meekatharra**	**18.21**	**176**	P	**Pn**	**15 47 21.8**	**+0.9**
	baz=18,SNR=40						
WRKA	**Warakurna**	**19.67**	**149**	P	**Pn**	**15 47 38.5**	**-0.1**
	baz=20,SNR=68						
WRA	**Warramunga Arr**	**20.20**	**127**	P	**P**	**15 47 42.7**	**-0.1**
	40nm,0.4s,baz=294,slow=13,SNR=210						
WRAB	**Tennant Creek**	**20.20**	**126**	*e*P	**P**	**15 47 43.1**	**+0.2**
	51nm,0.5s						
WRAB				*e*S	**S**	**15 51 24.1**	**-4.3**
WRAB	**Tennant Creek**	**20.20**	**126**	*e*P	**P**	**15 47 43.1**	**+0.2**
WRAB				*e*S	**S**	**15 51 24.1**	**-4.3**
WRAB				pmax	pmax		
	comp=Z,51nm,0.5s						
WB2	**Warramunga Arr**	**20.21**	**126**	*e*P	**P**	**15 47 42.7**	**-0.2**
	comp=Z,60nm,0.4s						
IPM	**Ipoh**	**20.56**	**308**	*e*P	Pn	15 47 49.0	-0.1
	comp=Z,89nm,1.8s						
MORW	**Morawa**	**20.61**	**183**	*e*P	Pn	15 47 49.4	-0.2
	comp=Z,120nm,1.6s						
MORW	**Morawa**	**20.61**	**183**	P	**P**	**15 47 47.9**	**+0.7**
	baz=21,SNR=16						
PSI	**Prapat**	**21.32**	**301**	*e*P	**P**	**15 47 55.9**	**+0.8**
	comp=Z,27nm,1.0s						
PSI	**Prapat**	**21.32**	**301**	*e*P	**P**	**15 47 55.9**	**+0.8**
PSI				pmax	pmax		
	comp=Z,27nm,1.0s						
KULM	**Kulim**	**21.36**	**309**	*e*P	**P**	**15 47 53.5**	**-1.8**
	comp=Z,24nm,1.1s						
GSI	**Gunungsitoli**	**21.78**	**295**	*e*P	**P**	**15 47 57.6**	**-2.2**
	comp=Z,23nm,1.0s						
AS31	**Alice Springs**	**22.09**	**135**	*e*P	**P**	**15 48 03.7**	**+0.5**
	comp=Z,9.0nm,0.8s						
ASAR	**Alice Springs**	**22.09**	**135**	P	**P**	**15 48 03.2**	**+0.1**
	comp=Z,13nm,0.6s,baz=310,slow=9.6,SNR=224						
ASAR				LR	LR	15 57 22.9	
	comp=Z,684nm,18.5s,baz=312,slow=38						
BLDU	**Ballidu**	**22.13**	**181**	P	**P**	**15 48 03.6**	**+0.1**
	baz=22,SNR=9.3						
TGY	**Tagaytay City**	**22.64**	**10**	LR	LR	15 59 41.4	
	comp=Z,250nm,18.2s,baz=140,slow=44						
KMBL	**Kambalda**	**23.29**	**170**	P	**P**	**15 48 15.4**	**-0.3**
	baz=23,SNR=8.7						
GENI	**Genyem**	**23.58**	**77**	P	**P**	**15 48 17.6**	**-1.1**
LHMI	**Lhok Sumawe**	**24.29**	**303**	*e*P	**P**	**15 48 24.8**	**-0.4**
	comp=Z,59nm,0.8s						
NWAO	**Narrogin (SRO)**	**24.43**	**180**	P	**P**	**15 48 28.3**	**+1.9**
	comp=Z,15nm,0.5s,baz=12,slow=8.3,SNR=22						
NWAO				LR	LR	15 58 26.3	
	comp=Z,697nm,20.1s,baz=328,slow=37						
NWAO	**Narrogin (SRO)**	**24.43**	**180**	*e*P	**P**	**15 48 27.3**	**+0.9**
	comp=Z,144nm,1.5s						
NWAO	**Narrogin (SRO)**	**24.43**	**180**	P	**P**	**15 48 27.4**	**+1.0**
	baz=24,SNR=18						
FORT	**Forrest**	**24.50**	**157**	*e*P	**P**	**15 48 27.0**	**-0.1**
	comp=Z,63nm,0.8s						
QIS	**Mount Isa**	**24.82**	**122**	P	**P**	**15 48 30.1**	**0.0**
	baz=25,SNR=32						
COEN	**Coen**	**26.09**	**105**	*e*P	**P**	**15 48 41.5**	**-0.1**
	comp=Z,28nm,0.8s						
COEN	**Coen**	**26.09**	**105**	P	**P**	**15 48 41.3**	**-0.3**
	baz=26,SNR=28						
MTSU	**Mount Surprise**	**28.10**	**113**	P	**P**	**15 48 59.4**	**-0.3**
	baz=28,SNR=18						
QIZ	**Qiongzhong**	**28.18**	**345**	P	**P**	**15 49 01.3**	**+1.0**
QIZ				S	S	15 53 51.0	+6.7
QIZ				LR	LR		
	comp=Z,230nm,17.3s						
QIZ				LR	LR		
	comp=Z,270nm,16.7s						
QIZ				LR	LR		
	comp=Z,310nm,14.9s						
CHAI	**Chaiyaphum**	**28.43**	**328**	P	P	15 49 05.9	+3.3
	comp=Z,32µm,0.7s						
PBKT	**Sadao Pong**	**29.52**	**327**	P	P	15 49 15.8	+3.5
UTHA	**Uthaitani**	**29.57**	**323**	P	P	15 49 15.6	+2.9
	comp=Z,49µm,0.9s,comp=Z,405µm						
PMG	**Port Moresby**	**29.63**	**94**	*e*P	**P**	**15 49 13.9**	**+0.5**
	comp=Z,44nm,1.1s						
PMG	**Port Moresby**	**29.63**	**94**	*e*P	**P**	**15 49 13.9**	**+0.5**
PMG				pmax	pmax		
	comp=Z,44nm,1.1s						
BBOO	**Buckleboo**	**29.95**	**147**	*e*P	**P**	**15 49 16.0**	**0.0**
	comp=Z,188nm,1.8s						
BBOO	**Buckleboo**	**29.95**	**147**	P	**P**	**15 49 16.6**	**+0.6**
	baz=30,SNR=7.4						
CTAO	**Charters Tower**	**30.43**	**116**	*e*P	**P**	**15 49 21.6**	**+1.2**
	comp=Z,50nm,1.8s						
CTAO	**Charters Tower**	**30.43**	**116**	*e*P	**P**	**15 49 21.6**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,50nm,1.8s						
PHRA	**Phrae**	**31.51**	**328**	P	P	15 49 36.0	+6.2
	comp=Z,0.9nm,1.0s						
HTT	**Hallett**	**32.01**	**144**	P	**P**	**15 49 34.7**	**+0.4**
	baz=32,SNR=5.2						
CM31	**Chiang Mai Arr**	**32.17**	**326**	*e*P	**P**	**15 49 35.4**	**-0.2**
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**32.17**	**326**	P	**P**	**15 49 37.3**	**+1.7**
	comp=Z,5.6nm,0.8s,baz=152,slow=6.4,SNR=38						
CMAR				LR	LR	16 04 21.0	
	comp=Z,470nm,18.8s,baz=155,slow=40						
CMAR	**Chiang Mai Arr**	**32.17**	**326**	P	**P**	**15 49 37.3**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,470nm,18.8s						
SLVN	**Son La**	**32.27**	**336**	*e*P	**P**	**15 49 35.4**	**-1.2**
	comp=Z,5.5nm,1.0s						
PAYA	**Payao**	**32.41**	**328**	P	P	15 49 41.4	+3.6
	comp=Z,31µm,0.8s,comp=Z,315µm						
CHTO	**Chiang Mai**	**32.46**	**326**	*e*P	**P**	**15 49 40.6**	**+2.5**
	comp=Z,5.2nm,0.8s						
STKA	**Stephens Creek**	**32.59**	**139**	P	**P**	**15 49 39.8**	**+0.6**
	comp=Z,13nm,0.7s,baz=309,slow=10,SNR=27						
STKA				PcP	**PcP**	**15 52 25.5**	**+0.1**
	comp=Z,3.6nm,0.6s,baz=312,slow=3.5,SNR=2.9						
STKA				LR	LR	16 03 50.6	
	comp=Z,422nm,19.4s,baz=298,slow=38						
STKA	**Stephens Creek**	**32.59**	**139**	*e*P	**P**	**15 49 39.6**	**+0.4**
	comp=Z,3.4nm,0.8s						
STKA				*e*PcP	**PcP**	**15 52 25.1**	**-0.2**
STKA	**Stephens Creek**	**32.59**	**139**	P	**P**	**15 49 39.8**	**+0.6**
	baz=32,SNR=18						
RMQ	**Roma**	**34.95**	**125**	P	**P**	**15 50 01.0**	**+1.2**
	baz=35,SNR=4.8						
CMSA	**Cobar Meteorol**	**35.14**	**135**	P	**P**	**15 50 02.6**	**+1.1**
	baz=35,SNR=7.4						
GYA	**Guiyang**	**36.10**	**344**⇑	*i*P	P	15 50 12.8	+3.0
GYA				PP	**PP**	**15 51 35.8**	**+3.5**
GYA				S	S	15 55 55.3	+7.5
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,3.9s						
GYA				LR	LR		
	comp=Z,270nm,15.5s						
GYA				LR	LR		
	comp=Z,200nm,14.3s						
GYA				LR	LR		
	comp=Z,370nm,16.5s						
KMI	**Kunming**	**36.15**	**337**	*e*P	**P**	**15 50 11.3**	**+1.0**
	comp=Z,57nm,0.3s						
KMI	**Kunming**	**36.15**	**337**	P	P	15 50 13.6	+3.3
KMI				S	S	15 55 55.8	+7.0
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,37nm,3.1s						
KMI				LR	LR		
	comp=Z,160nm,15.4s						
KMI				LR	LR		
	comp=Z,490nm,15.4s						
KMI				LR	LR		
	comp=Z,340nm,14.8s						
KMI	**Kunming**	**36.15**	**337**	*e*P	**P**	**15 50 11.3**	**+1.0**
KMI				pmax	pmax		
	comp=Z,57nm,0.3s						
YNG	**Young**	**38.58**	**137**	P	**P**	**15 50 32.2**	**+1.5**
	baz=38,SNR=5.0						
TOO	**Toolangi**	**38.74**	**143**	*e*P	**P**	**15 50 34.1**	**+2.1**
	comp=Z,29nm,1.1s						
TOO	**Toolangi**	**38.74**	**143**	P	**P**	**15 50 33.4**	**+1.4**
	baz=39,SNR=5.0						
TOO	**Toolangi**	**38.74**	**143**	*e*P	**P**	**15 50 34.1**	**+2.1**
TOO				pmax	pmax		
	comp=Z,29nm,1.1s						
WHN	**Wuhan**	**38.79**	**356**	⇓P	P	15 50 41.0	+8.6
WHN				S	**S**	**15 56 30.6**	**+2.3**
WHN				LR	LR		
	comp=Z,740nm,13.7s						
ARMA	**Armidale**	**38.95**	**129**	*e*P	**P**	**15 50 35.6**	**+1.6**
	comp=Z,68nm,1.8s						
ARMA	**Armidale**	**38.95**	**129**	P	**P**	**15 50 35.6**	**+1.6**
	baz=39,SNR=8.2						
CAN	**Canberra**	**39.57**	**137**	*e*P	**P**	**15 50 40.0**	**+1.0**
	comp=Z,28nm,1.3s						
CAN	**Canberra**	**39.57**	**137**	*e*P	**P**	**15 50 40.0**	**+1.0**
CAN				pmax	pmax		
	comp=Z,28nm,1.3s						
NJ2	**Nanjing**	**40.23**	**2**	*e*P	P	15 50 47.0	+2.6
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
CD2	**Chengdu**	**41.13**	**342**	P	**P**	**15 50 53.0**	**+1.1**
CD2				S	**S**	**15 57 05.4**	**+1.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,190nm,5.3s						
CD2				LR	LR		
	comp=Z,470nm,16.2s						
CD2				LR	LR		
	comp=Z,480nm,16.2s						
CD2				LR	LR		
	comp=Z,590nm,16.7s						
SHL	**Shillong**	**41.76**	**325**	*e*P	**P**	**15 50 58.5**	**+1.2**
HNR	**Honiara**	**42.25**	**95**	LR	LR	16 11 50.6	
	comp=Z,95nm,18.8s,baz=212,slow=41						
XAN	**Xi'an**	**42.90**	**350**	*e*P	**P**	**15 51 07.3**	**+1.0**
	comp=Z,6.6nm,0.6s						
XAN	**Xi'an**	**42.90**	**350**	P	**P**	**15 51 07.3**	**+1.0**
XAN				pP	sP	15 51 16.5	-1.3
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN	**Xi'an**	**42.90**	**350**	*e*P	**P**	**15 51 07.3**	**+1.0**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
JNU	**Nakatsue**	**43.28**	**17**	*e*P	**P**	**15 51 09.9**	**+0.5**
	comp=Z,22nm,0.9s						
TAU	**Tasmania Unive**	**43.38**	**148**	*e*P	**P**	**15 51 10.7**	**+0.6**
	comp=Z,54nm,1.1s						
TAU	**Tasmania Unive**	**43.38**	**148**	*e*P	**P**	**15 51 10.7**	**+0.6**
TAU				pmax	pmax		
	comp=Z,54nm,1.1s						
LSA	**Lhasa**	**45.39**	**328**	*e*P	**P**	**15 51 27.2**	**+0.3**
	comp=Z,16nm,1.0s						
LSA	**Lhasa**	**45.39**	**328**	*e*P	**P**	**15 51 27.2**	**+0.3**
LSA				pmax	pmax		
	comp=Z,16nm,1.0s						
TJN	**Taejon**	**45.53**	**12**⇑	*i*P	**P**	**15 51 27.7**	**+0.4**
LZH	**Lanzhou**	**45.97**	**345**	*e*P	P	15 51 34.1	+3.1
LZH				pP	sP	15 51 44.1	+1.6
LZH				sP	pP	15 51 48.1	+8.8
LZH				*e*S	**S**	**15 58 14.6**	**+0.2**
LZH				sS	sS	15 58 32.0	+4.3
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,5.7s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,14.4s						
KS15	**Wonju Array Si**	**46.67**	**12**	*e*P	**P**	**15 51 37.6**	**+1.4**
	comp=Z,15nm,0.8s						
KSRS	**Korea Array**	**46.69**	**12**	P	**P**	**15 51 37.3**	**+1.0**
	comp=Z,12nm,0.9s,baz=190,slow=8.5,SNR=24						
KSRS				LR	LR	16 13 10.5	
	comp=Z,97nm,19.7s,baz=198,slow=39						
BJT	**Baijiatuau**	**48.16**	**359**	*e*P	**P**	**15 51 48.5**	**+0.7**
	comp=Z,13nm,0.9s						
BJT	**Baijiatuau**	**48.16**	**359**	*e*P	**P**	**15 51 48.5**	**+0.7**
BJT				pmax	pmax		
	comp=Z,13nm,0.9s						
MAJO	**Matsushiro**	**48.85**	**23**	*e*P	**P**	**15 51 53.1**	**-0.2**
MAJO	**Matsushiro**	**48.85**	**23**⇑	*e*P	**P**	**15 51 53.0**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,25nm,2.2s						
MJAR	**Matsushiro Arr**	**48.85**	**23**	P	**P**	**15 51 53.1**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=200,slow=8.4,SNR=9.5						
MJAR				LR	LR	16 11 55.1	
	comp=Z,120nm,21.0s,baz=205,slow=35						
BTO	**Baotou**	**49.18**	**353**	*e*P	**P**	**15 51 57.8**	**+2.0**
DZM	**Mont Dzumac**	**49.23**	**112**	*e*P	**P**	**15 51 57.8**	**+1.3**
	comp=Z,59nm,1.4s						
DZM	**Mont Dzumac**	**49.23**	**112**	*e*LR	LR	16 06 04.6	
	comp=Z,250nm,23.4s						
DZM	**Mont Dzumac**	**49.23**	**112**	*e*P	**P**	**15 51 56.8**	**+0.3**
	comp=Z,58nm,1.5s						
HHC	**Hu-ho-hao-te**	**49.25**	**354**	P	P	15 52 00.4	+4.1
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
ONTNC	**Ouen Toro**	**49.27**	**112**	*e*P	**P**	**15 51 57.6**	**+0.8**
	comp=Z,37nm,0.9s						
GTA	**Gaotai**	**50.20**	**342**	⇑P	**P**	**15 52 05.3**	**+1.7**
GTA				pP	pP	15 52 10.4	-1.5
GTA				S	**S**	**15 59 17.5**	**+3.4**
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,72nm,6.8s						
GTA				LR	LR		
	comp=Z,160nm,15.2s						
GTA				LR	LR		
	comp=Z,170nm,15.9s						
GTA				LR	LR		
	comp=Z,200nm,19.4s						
MSHR	**Mys Shultsa**	**52.29**	**13**⇑	*e*P	**P**	**15 52 17.9**	**-1.1**
CN2	**Changchun**	**52.47**	**8**	*e*P	P	15 52 23.0	+2.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VLA	**Vladivostok**	**52.97**	**13**⇑	*e*P	**P**	**15 52 23.4**	**-0.6**
VLA				pmax	pmax		
	comp=Z,19nm,0.9s						
MDJ	**Mudanjiang**	**53.92**	**11**	*e*P	**P**	**15 52 31.3**	**+0.3**
	comp=Z,44nm,0.8s						
MDJ	**Mudanjiang**	**53.92**	**11**	P	**P**	**15 52 32.0**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,61nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,190nm,3.6s						
USA0B	**Ussuriysk Arra**	**54.02**	**13**	*e*P	**P**	**15 52 32.3**	**+0.5**
	comp=Z,24nm,0.8s						
USRK	**Ussuriysk Ar.**	**54.02**	**13**	P	**P**	**15 52 32.0**	**+0.3**
	comp=Z,22nm,0.9s,baz=188,slow=7.1,SNR=75						
TEY	**Ternei**	**55.97**	**17**⇓	*e*P	**P**	**15 52 46.5**	**+0.7**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	**Ulaanbaatar**	**56.71**	**352**	*e*P	**P**	**15 52 51.5**	**+0.2**
	comp=Z,13nm,1.2s						
ULN	**Ulaanbaatar**	**56.71**	**352**	*ce*P	**P**	**15 52 51.8**	**+0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SONM	**Songino Array**	**56.77**	**351**	P	**P**	**15 52 52.1**	**+0.4**
	comp=Z,12nm,1.0s,baz=171,slow=7.9,SNR=44						
SONM				LR	LR	16 20 02.0	
	comp=Z,79nm,18.2s,baz=193,slow=39						
WHZ	**Wether Hill Ro**	**57.27**	**140**	*e*P	**P**	**15 52 55.9**	**+0.7**
	comp=Z,82nm,1.7s						
HIA	**Hailar**	**57.44**	**2**	*e*P	**P**	**15 52 55.5**	**-0.8**
	comp=Z,8.9nm,1.0s						
HIA	**Hailar**	**57.44**	**2**	*e*P	**P**	**15 52 55.5**	**-0.8**
HIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WKZ	**Wanaka**	**57.54**	**138**	*e*P	**P**	**15 52 58.1**	**+1.0**
	comp=Z,98nm,1.6s						
FOZ	**Fox Glacier**	**57.59**	**137**	*e*P	**P**	**15 52 57.1**	**-0.3**
	comp=Z,71nm,1.2s						
CASY	**Casey**	**58.00**	**183**	*e*P	**P**	**15 53 00.1**	**+0.1**
	comp=Z,7.1nm,0.6s						
LBZ	**Lake Benmore**	**58.15**	**138**	*e*P	**P**	**15 53 01.9**	**+0.5**
	comp=Z,71nm,1.6s						
YUK	**Yuzh-Kuril'sk**	**58.27**	**24**⇑	*e*P	**P**	**15 53 01.8**	**-0.3**
WMQ	**Urumqi**	**58.42**	**335**	*e*P	**P**	**15 53 03.0**	**-0.3**
	comp=Z,17nm,0.6s						
WMQ	**Urumqi**	**58.42**	**335**	*e*P	**P**	**15 53 05.3**	**+2.0**
WMQ				pP	pP	15 53 10.8	-1.0
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,74nm,4.7s						
WMQ				LR	LR		
	comp=Z,170nm,13.9s						
WMQ				LR	LR		
	comp=Z,110nm,13.1s						
WMQ				LR	LR		
	comp=Z,140nm,14.5s						
WMQ	**Urumqi**	**58.42**	**335**	*e*P	**P**	**15 53 03.0**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,17nm,0.6s						
RPZ	**Rata Peaks**	**58.49**	**137**	P	**P**	**15 53 04.6**	**+0.7**
	comp=Z,36nm,1.0s,baz=316,slow=4.7,SNR=7.9						
RPZ	**Rata Peaks**	**58.49**	**137**	*e*P	**P**	**15 53 04.9**	**+1.0**
	comp=Z,49nm,1.1s						
ODZ	**Otahua Downs**	**58.69**	**138**	*e*P	**P**	**15 53 06.2**	**+1.1**
	comp=Z,61nm,1.9s						
KLR	**Kul'dur**	**58.77**	**11**	*ce*P	**P**	**15 53 04.9**	**-0.6**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OXZ	**Oxford**	**59.03**	**136**	*e*P	**P**	**15 53 07.5**	**-0.1**
	comp=Z,137nm,1.9s						
MQZ	**McQueen’s Vall**	**59.58**	**136**	*e*P	**P**	**15 53 12.4**	**+1.1**
	comp=Z,99nm,2.0s						
YSS	**Yuzh-Sakhalins**	**59.60**	**20**	*e*P	P	15 53 15.8	+4.5
YSS				MLR	MLR		
	comp=Z,100nm,17.0s						
ZAK	**Zakamensk**	**59.75**	**350**	*e*P	**P**	**15 53 12.1**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KSH	**Kashi**	**61.05**	**324**	P	**P**	**15 53 24.1**	**+2.6**
BKZ	**Black Stump Fm**	**61.08**	**130**	*e*P	**P**	**15 53 22.6**	**+0.8**
	comp=Z,12nm,0.6s						
GRNR	**Gornyy**	**61.22**	**14**	*e*P	**P**	**15 53 23.2**	**+0.9**
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
BFZ	**Birch Farm**	**61.26**	**132**	*e*P	**P**	**15 53 24.7**	**+1.8**
	comp=Z,28nm,1.1s						
URZ	**Urewera**	**61.35**	**129**	*e*P	**P**	**15 53 24.3**	**+0.8**
	comp=Z,74nm,1.0s						
MOY	**Mondy**	**61.41**	**349**	*e*P	**P**	**15 53 24.4**	**+0.7**
MXZ	**Matakaoa Point**	**62.13**	**128**	*e*P	**P**	**15 53 29.0**	**+0.2**
	comp=Z,130nm,1.5s						
KDJ	**Kajisay**	**62.15**	**327**	*e*P	**P**	**15 53 27.9**	**-1.1**
	comp=Z,9.2nm,0.8s						
KDJ	**Kajisay**	**62.15**	**327**	*e*P	**P**	**15 53 27.9**	**-1.1**
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NRN	**Naryn**	**62.32**	**326**	*e*P	**P**	**15 53 29.3**	**-1.0**
	comp=Z,5.2nm,1.0s						
NRN	**Naryn**	**62.32**	**326**	*e*P	**P**	**15 53 29.3**	**-1.0**
NRN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBL	**Kabul**	**62.39**	**316**	*e*P	**P**	**15 53 29.6**	**-1.2**
	comp=Z,3.4nm,0.6s						
KBL	**Kabul**	**62.39**	**316**	*e*P	**P**	**15 53 29.6**	**-1.2**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZEA	**Zeya**	**62.46**	**7**	*e*P	**P**	**15 53 30.4**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
TYV	**Tymovskoe**	**62.99**	**18**	*e*P	P	15 53 46.2	+12
TYV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOOM	**Boomskoye usch**	**63.07**	**327**	*e*P	**P**	**15 53 35.1**	**0.0**
	comp=Z,12nm,1.0s						
MK31	**Makanchi Array**	**63.10**	**334**	*e*P	**P**	**15 53 34.8**	**-0.2**
	comp=Z,7.7nm,0.8s						
MK31	**Makanchi Array**	**63.10**	**334**	*e*P	**P**	**15 53 34.8**	**-0.2**
MK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	**Makanchi Array**	**63.10**	**334**	P	**P**	**15 53 33.9**	**-1.1**
	comp=Z,6.9nm,0.9s,baz=146,slow=6.1,SNR=37						
MKAR	**Makanchi Array**	**63.10**	**334**	*i* P	**P**	**15 53 34.4**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAKZ	**Makanchi**	**63.24**	**334**	*e*P	**P**	**15 53 35.6**	**-0.4**
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**63.24**	**334**	*e*P	**P**	**15 53 35.6**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DGZ	**Jazzator, Alta**	**63.40**	**339**	*ce*P	**P**	**15 53 36.8**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,12nm,0.9s						
ARSB	**Arslanbob**	**63.95**	**324**	*e*P	**P**	**15 53 40.0**	**-1.0**
	comp=Z,18nm,1.2s						
AAK	**Ala-Archa**	**63.96**	**326**	*e*P	**P**	**15 53 40.3**	**-0.7**
	comp=Z,7.1nm,0.9s						
AAK	**Ala-Archa**	**63.96**	**326**⇓	*i*P	**P**	**15 53 40.0**	**-1.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GAR	**Garm**	**64.12**	**321**	*e*P	**P**	**15 53 40.3**	**-1.8**
	comp=Z,14nm,0.9s						
GAR	**Garm**	**64.12**	**321**	*e*P	**P**	**15 53 40.3**	**-1.8**
GAR				pmax	pmax		
	comp=Z,14nm,0.9s						
BTK	**Batken**	**64.45**	**322**	*e*P	**P**	**15 53 42.8**	**-1.4**
	comp=Z,5.8nm,1.0s						
BTK	**Batken**	**64.45**	**322**	*e*P	**P**	**15 53 42.8**	**-1.4**
BTK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHGR	**Chuyangaron**	**64.65**	**320**	*e*P	**P**	**15 53 46.6**	**+1.0**
	comp=Z,22nm,1.1s						
KURK	**Kurchatov**	**67.66**	**335**	*e*P	**P**	**15 54 03.0**	**-1.4**
	comp=Z,5.2nm,0.8s						
KURK	**Kurchatov**	**67.66**	**335**⇑	*e*P	**P**	**15 54 02.8**	**-1.6**
KURK				pmax	pmax		

	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	67.83	340	P	P	15 54 03.7	-1.7
	comp=Z,1.2nm,0.6s,baz=150,slow=4.4,SNR=5.6						
ZALV				LR	LR	16 27 13.5	
	comp=Z,85nm,18.2s,baz=68,slow=39						
ZALV	Zalesovo Beam	67.83	340	i P	P	15 54 04.0	-1.4
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAW	Mawson	69.22	199	P	P	15 54 15.3	+1.4
	comp=Z,4.9nm,0.7s,baz=55,slow=11,SNR=8.2						
MAW				LR	LR	16 17 52.4	
	comp=Z,176nm,21.7s,baz=57,slow=30						
MAW	Mawson	69.22	199	eP	P	15 54 15.0	+1.1
	comp=Z,1.6nm,0.6s						
MAW	Mawson	69.22	199	P	P	15 54 15.5	+1.6
	baz=69,SNR=7.3						
PETK	Petropavlovsk-	70.24	25	P	P	15 54 20.4	-0.1
	comp=Z,4.3nm,0.9s,baz=174,slow=4.5,SNR=6.6						
PETK				LR	LR	16 24 27.8	
	comp=Z,44nm,21.0s,baz=196,slow=35						
YAK	Yakutsk	70.86	6	⇓eP	P	15 54 23.0	-1.0
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GEYT	Alibeck	71.72	314	LR	LR	16 30 23.3	
	comp=Z,84nm,18.7s,baz=115,slow=40						
VNDA	Vanda	72.88	171	P	P	15 54 37.1	+1.1
	comp=Z,7.2nm,1.1s,baz=322,slow=5.8,SNR=19						
VNDA				LR	LR	16 25 17.8	
	comp=Z,180nm,19.4s,baz=334,slow=35						
VNDA	Vanda	72.88	171	eP	P	15 54 37.2	+1.1
VNDA				epP	P	15 54 37.5	+1.4
BRVK	Borovoye	72.98	333	⇓eP	P	15 54 35.8	-1.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SBA	Scott Base	73.90	170	eP	P	15 54 43.7	+1.7
	comp=Z,7.6nm,1.0s						
SBA	Scott Base	73.90	170	eP	P	15 54 43.7	+1.7
SBA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ABKAR	Akbulak array	76.02	325	eP	P	15 54 52.8	-2.0
	comp=Z,3.9nm,0.9s						
SEY	Seymchan	76.04	16	⇑eP	P	15 54 53.7	-0.8
SYO	Syowa Base	77.78	201	⇑iP	P	15 55 04.0	-0.3
SYO	Syowa Base	77.78	201	⇓ePcP	PcP	15 55 14.0	-0.2
KMBO	Kilima Mbogo	79.87	270	LR	LR	16 23 14.3	
	comp=Z,71nm,21.8s,baz=78,slow=30						
KMBO	Kilima Mbogo	79.87	270	i P	P	15 55 17.8	+0.6
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	Tiksi	80.23	4	eP	P	15 55 17.3	-0.3
	comp=Z,4.6nm,0.8s						
TIXI	Tiksi	80.23	4	⇓eP	P	15 55 18.3	+0.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARU	Arti	80.45	331	P	P	15 55 16.9	-2.2
ARU						15 58 17.9	
ARU				S	S	16 05 24.4	+0.9
ARU				SS	SS	16 10 30.8	-5.2
QSPA	South Pole Qui	81.62	180	P	P	15 55 25.9	+0.6
	comp=Z,8.0nm,0.9s,baz=286,slow=2.1,SNR=20						
QSPA	South Pole Qui	81.62	180	eP	P	15 55 25.6	+0.2
	comp=Z,13nm,1.1s						
BILL	Bilibino	83.70	17	⇑eP	P	15 55 35.0	-0.9
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KBZ	Khabaz	84.57	315	LR	LR	16 40 54.3	
	comp=Z,32nm,18.3s,baz=136,slow=41						
MBAR	Mbarara	86.39	270	eP	P	15 55 50.5	-0.4
	comp=Z,6.5nm,0.8s						
MBAR	Mbarara	86.39	270	eP	P	15 55 50.5	-0.4
MBAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LSZ	Lusaka	86.86	255	eP	P	15 55 52.8	-0.2
	comp=Z,18nm,1.4s						
LSZ	Lusaka	86.86	255	eP	P	15 55 52.8	-0.2
LSZ				pmax	pmax		
	comp=Z,18nm,1.4s						
BOSA	Boshof	87.72	242	P	P	15 55 57.1	+0.2
	comp=Z,8.0nm,0.9s,baz=66,slow=4.8,SNR=5.3						
BOSA				LR	LR	16 28 04.1	
	comp=Z,133nm,21.8s,baz=34,slow=31						
BOSA	Boshof	87.72	242	eP	P	15 55 57.0	0.0
	comp=Z,86nm,1.9s						
LBTB	Lobatse	87.93	245	P	P	15 55 58.6	+0.6
	comp=Z,9.1nm,0.8s,baz=106,slow=5.8,SNR=6.4						
LBTB	Lobatse	87.93	245	eP	P	15 55 59.0	+0.9
	comp=Z,12nm,0.8s						
LBTB	Lobatse	87.93	245	eP	P	15 55 59.0	+0.9
LBTB				pmax	pmax		
	comp=Z,12nm,0.8s						
TBI	Tubuai	89.79	113	eLR	LR	16 25 01.5	
	comp=Z,87nm,24.0s						
BRTR	Keskin Array B	90.36	310	LR	LR	16 41 38.6	
	comp=Z,45nm,19.6s,baz=100,slow=39						
PPT2	Papeete2	90.57	108	eLR	LR	16 25 18.8	
	comp=Z,121nm,23.8s						
SNAA	Sanae	91.11	196	P	P	15 56 13.3	+1.4
SNAA	Sanae	91.11	196	P	P	15 56 12.9	+1.0
	comp=Z,5.8nm,0.7s,baz=161,slow=5.0,SNR=36						
SNAA	Sanae	91.11	196	eP	P	15 56 12.8	+0.9
	comp=Z,7.0nm,0.8s						
SNAA	Sanae	91.11	196	ceP	P	15 56 12.6	+0.7
OBN	Obninsk	91.47	325	i P	P	15 56 13.6	-0.1
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNA1	Neumayer--Stat	93.14	196	P	P	15 56 22.6	+1.4
VNA3	Neumayer Olymp	93.16	195	P	P	15 56 22.2	+0.9
AKASG	Malin Array Be	95.12	320	LR	LR	16 47 00.1	
	comp=Z,50nm,18.5s,baz=110,slow=40						
FINES	FINESS Array B	97.82	331	LR	LR	16 45 21.0	
	comp=Z,103nm,20.4s,baz=102,slow=38						
ARCES	ARCESS Array B	98.37	339	LR	LR	16 46 53.5	
	comp=Z,84nm,18.2s,baz=94,slow=39						
KOLS	Kolonicke sedl	99.47	318	eP	Pdif	15 56 51.9	+1.5
KOLS	Kolonicke sedl	99.47	318	ePDIF	Pdif	15 56 51.9	+1.5
ILAR	Eielson Array	100.05	26	PKKPbc	PKKPbc	16 13 11.1	-2.7
	comp=Z,0.4nm,0.6s,baz=111,slow=1.7,SNR=5.2						
TORD	Torodi Ar. Bea	116.58	281	PKP	PKPdf	16 01 51.0	-1.5
	comp=Z,1.1nm,0.8s,baz=20,slow=4.0,SNR=5.2						
TOA1	Torodi Ar. Sit	116.58	281	ePKPdf	PKPdf	16 01 51.0	-1.5
NV01	Mina Array Sit	122.00	50	ePKPdf	PKiKP	16 02 02.6	-0.2
NVAR	Mina Array Bea	122.00	50	PKP	PKiKP	16 02 02.6	-0.2
	comp=Z,0.4nm,0.6s,baz=0.0,slow=1.5,SNR=3.9						
PLCA	Paso Flores	130.62	172	PKP	PKiKP	16 02 20.4	+0.7
	comp=Z,3.3nm,1.1s,baz=16,slow=22,SNR=3.0						
CFA	Coronel Fontan	139.91	173	PKP	PKiKP	16 02 37.0	-1.9
	comp=Z,4.5nm,0.8s,baz=214,slow=1.6,SNR=6.1						
CLTN	Cedars of Leba	145.06	34	ePKPbc	PKPbc	16 02 42.9	-1.8
CPUP	Villa Florida	145.09	189	PKPbc	PKPdf	16 02 45.7	0.0
	comp=Z,32nm,0.9s,baz=165,slow=2.7,SNR=39						
SSPA	Standing Stone	145.18	20	ePKPbc	PKPbc	16 02 42.9	-2.0
KSCT	Kent School, K	145.47	14	ePKPbc	PKPdf	16 02 44.1	-1.7
N59A	State Game Lan	145.61	17	ePKPdf	PKPab	16 02 44.7	-1.9
Y49A	Blount Mountai	146.60	37	ePKPdf	PKPdf	16 02 46.6	-1.4
TKL	Tuckaleechee C	146.77	32	PKPbc	PKPbc	16 02 48.7	-1.3
	comp=Z,2.6nm,0.5s,baz=126,slow=4.3,SNR=4.7						
LRAL	Lakeview Retre	146.80	39	ePKPdf	PKPbc	16 02 48.2	-1.9
V53A	Saluda	147.26	31	ePKPdf	PKPbc	16 02 49.8	-1.6
Z50A	Ashland	147.31	37	ePKPdf	PKPbc	16 02 49.5	-2.1
T59A	Double "B" Far	148.54	23	ePKPdf	PKPbc	16 02 52.3	-2.4
LVC	Limon Verde	148.63	169	PKPbc	PKiKP	16 02 57.0	-0.4
	comp=Z,12nm,0.9s,baz=42,slow=16,SNR=5.3						
LVC	Limon Verde	148.63	169	ePKPbc	PKiKP	16 02 56.4	-1.0
PB01	IPOC Station P	150.04	167	ePKPbc	PKiKP	16 02 58.8	-1.2
PB11	IPOC Station P	151.24	167	ePKPdf	PKPbc	16 02 58.0	-4.0
GO01	Chusmiza	151.44	167	ePKPbc	PKiKP	16 03 02.8	-0.5
MNMC	Minye Minye	151.86	166	ePKPbc	PKiKP	16 03 04.2	+0.1
MNMC				ePKPab	pPKPbc	16 03 12.9	+0.1
BDFB	Brasilia	151.99	212	PKPbc	PKiKP	16 03 04.0	-0.2
	comp=Z,7.2nm,0.7s,baz=289,slow=0.8,SNR=7.7						
BDFB				PKPab	pPKPbc	16 03 14.5	+1.6
	comp=Z,8.8nm,0.7s,baz=21,slow=7.5,SNR=8.3						
BDFB	Brasilia	151.99	212	ePKPdf	PKPdf	16 02 55.5	-1.8
BDFB				ePKPbc	PKiKP	16 03 04.1	-0.1
BDFB				ePKPab	pPKPbc	16 03 13.7	+0.9
BDFB				epPKPbc	pPKPbc	16 03 14.5	+1.6
BDFB	Brasilia	151.99	212	ePKIKP	PKPdf	16 02 55.5	-1.8
BDFB				e		16 03 04.1	
BDFB				e		16 03 13.7	
LPAZ	La Paz	154.94	168	PKPbc	PKPdf	16 03 11.8	+10
	comp=Z,0.7nm,0.4s,baz=130,slow=8.7,SNR=3.9						
LPAZ				PKPab	PKPab	16 03 27.4	+1.5
	comp=Z,4.1nm,0.9s,baz=122,slow=2.4,SNR=7.3						
LPAZ	La Paz	154.94	168	ePKPdf	PKPdf	16 03 02.6	+0.5
LPAZ				ePKPbc	pPKPdf	16 03 10.9	-0.4
LPAZ				ePKPab	PKPab	16 03 26.8	+0.9
LPAZ				e		16 03 27.1	
LPAZ	La Paz	154.94	168	ePKIKP	PKPdf	16 03 02.6	+0.5
LPAZ				e		16 03 10.9	
SIV	San Ignacio	155.73	184	PKP	PKPdf	16 03 03.0	+0.6
	comp=Z,2.1nm,0.9s,baz=194,slow=2.9,SNR=6.8						
SIV				PKPbc	pPKPdf	16 03 12.1	+0.5
	comp=Z,2.6nm,0.8s,baz=162,slow=0.8,SNR=8.1						
SIV				PKPab	PKPab	16 03 29.7	+1.1
	comp=Z,4.2nm,1.0s,baz=164,slow=3.0,SNR=6.8						

WEL 18 15:53:18.5±1.5, 35˚S±16˚×17˚9E±1˚3, h182km±21km, M3.5/28, ML4.0/8, MLv3.5/28, Error ellipse: s-maj=0.0km s-min=0.0km az=36.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.21	191	P	Pn	15 53 58.0	0.0
MXZ				S	Sn	15 54 28.4	-0.4
WMGZ	Waiomatatini S	2.45	188	P	Pn	15 54 01.3	+0.7
HAZ	Te Kaha	2.51	200	P	Pn	15 54 01.4	0.0
PKGZ	Pakihiroa	2.57	194	P	Pn	15 54 02.4	+0.3
PUZ	Puketiti	2.72	190	P	Pn	15 54 03.9	+0.1
PUZ				S	Sn	15 54 39.1	-0.2
RUGZ	Raukumara Rang	2.73	200	P	Pn	15 54 04.5	+0.3
RUGZ				S	Sn	15 54 39.6	-0.2
TWGZ	Tauwhareparae	2.87	194	P	Pn	15 54 06.2	+0.5
TWGZ				S	Sn	15 54 44.2	+1.7
KUZ	Kuaotunu	2.87	241	P	Pn	15 54 05.2	-0.4
OPRZ	Ohinepanea	3.07	216	P	Pn	15 54 08.8	+0.8
MWZ	Matawai	3.12	200	P	Pn	15 54 09.1	+0.4
CNGZ	Carnagh Statio	3.13	189	P	Pn	15 54 09.2	+0.4
TKGZ	Te Karaka	3.15	195	P	Pn	15 54 08.8	-0.1
URZ	Urewera	3.18	206	P	Pn	15 54 09.1	-0.3
RAGZ	Rawiri	3.30	200	P	Pn	15 54 11.1	+0.1
WIAZ	Waiheke Island	3.32	244	P	Pn	15 54 11.5	+0.3
RIGZ	Rimuhau	3.42	194	P	Pn	15 54 11.8	-0.6
MKAZ	Moumakai	3.44	239	P	Pn	15 54 11.8	-0.7
MBAZ	Motutapu North	3.48	246	P	Pn	15 54 13.1	0.0
MUGZ	Murupara	3.50	208	P	Pn	15 54 13.7	+0.4
RTZ	Ruatahuna	3.55	204	P	Pn	15 54 13.1	-0.9
TOZ	Tahuroa Road	3.57	228	P	Pn	15 54 13.9	-0.3
SNGZ	Shannon Statio	3.59	199	P	Pn	15 54 13.8	-0.7
PRGZ	Paritu Road	3.61	192	P	Pn	15 54 13.9	-0.8
PRRZ	Plateau Road	3.67	212	P	Pn	15 54 16.1	+0.5
MTHZ	Maungataniwha	3.81	204	P	Pn	15 54 16.9	-0.3
BKZ	Black Stump Fm	4.21	206	P	Pn	15 54 21.4	-0.9
HIZ	Hauiti	4.46	225	P	Pn	15 54 27.3	+1.7
NGZ	Ngauruhoe	4.58	214	P	Pn	15 54 27.4	+0.2
TUVZ	Tukino	4.63	212	P	Pn	15 54 27.1	-0.7
BHHZ	Black Hill Sta	4.65	208	P	Pn	15 54 26.7	-1.4
KAHZ	Kahuranaki	4.67	199	P	Pn	15 54 26.7	-1.5
FWVZ	Far West T-bar	4.67	213	P	Pn	15 54 28.0	-0.4
WHVZ	Whangaehu Hut	4.67	213	P	Pn	15 54 27.5	-1.0
KRHZ	Kereru	4.68	204	P	Pn	15 54 27.0	-1.4
MTVZ	Mangateitei	4.81	213	P	Pn	15 54 29.2	-0.8
PXZ	Pawanui	4.89	198	P	Pn	15 54 28.7	-2.3
VRZ	Vera Road	4.95	220	P	Pn	15 54 33.7	+1.9

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*ISCJB **18** 16:05:08.9±0.5, 2˚.95N±0˚.04×124˚.89E±0˚.06, h10km, mb4.0/6, Error ellipse: s-maj=8.7km s-min=5.6km az=16.6*

*DJA **18** 16:05:08.7±0.4, 3˚N±3˚×12˚5E±˚, h10km, M4.0/6, MLv4.0/6*

*IDC **18** 16:05:09.2±1.8, 2˚.98N×125˚.22E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/30, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=62.9km s-min=27.8km az=68.0*

*NEIC **18** 16:05:17.4±1.8, 2˚.66N×124˚.92E, h65km±11km, mb4.5/3, Error ellipse: s-maj=13.1km s-min=12.2km az=91.0*

ISC 18 16:05:09.2±0.8, 3˚.08N±0˚.04×124˚.87E±0˚.06, h10km, n20, σ2ˢ.66/24, mb4.1/6, 2C-1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.89	47	P	Pg	16 05 27.2	+0.8
SGSI				S	Sg	16 05 38.4	+0.3
GSPH	General Santos	2.99	2	⇑iP	Pb	16 06 02.6	-0.1
TNTI	Ternate	3.39	132	ePn	Pn	16 06 03.6	+1.5
TNTI				eSn	Sn	16 06 41.3	-1.1
TNTI	Ternate	3.39	132	P	Pn	16 06 03.0	+0.8
KCP	Kidapawan	3.91	3	eS	Sb	16 07 05.5	-0.2
CTBH	Cotabato--PC H	4.16	351	⇑iP	Pn	16 06 14.8	+2.0
LBMI	Labuha	4.53	144	P	Pn	16 06 20.1	+2.2
LBMI				S	Sn	16 07 04.8	-5.9
LUWI	Luwuk	4.60	207	ePn	Pn	16 06 19.9	+1.1
LUWI				eSn	Sn	16 07 10.7	-1.6
LUWI	Luwuk	4.60	207	P	Pn	16 06 18.5	-0.3
LUWI				S	Sn	16 07 10.9	-1.4
CGP	Cagayan de Oro	5.34	358	⇓eP	Sn	16 07 23.4	-7.4
KAPI	Kappang	9.53	212	Pn	Pn	16 07 28.6	+2.1
	2.0nm,0.3s,baz=45,slow=8.6,SNR=5.8						
KAPI	Kappang	9.53	212	ePn	Pn	16 07 27.1	+0.6
WRAB	Tennant Creek	24.69	158	eP	P	16 10 28.3	-2.3
	19nm,1.5s						
WR1	Warramunga Arr	24.70	158	eP	P	16 10 30.2	-0.5
WRA	Warramunga Arr	24.70	158	P	P	16 10 30.2	-0.5
	1.6nm,0.7s,baz=338,slow=12,SNR=13						
WB2	Warramunga Arr	24.70	158	eP	P	16 10 28.7	-2.0
	15nm,1.5s						
ASAR	Alice Springs	28.00	162	P	P	16 11 00.7	+0.2
	0.6nm,0.8s,baz=350,slow=14,SNR=7.1						
INU	Inuyama	34.03	18	eP	P	16 12 00.3	+6.8
	39nm,1.6s						
MK32	Makanchi Array	57.05	326	eP	P	16 14 59.0	+3.5
MKAR	Makanchi Array	57.05	326	P	P	16 14 59.0	+3.5
	0.4nm,0.7s,baz=123,slow=8.8,SNR=3.8						

MAN 18 16:06:09.5, 6˚.80N×125˚.55E, h61km, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.50	294	⇓eP	Pn	16 06 23.5	+1.9
DDMP	Don Marcelino,	0.71	167	eP	Pn	16 06 25.2	+1.1
DDMP				eS	Sn	16 06 37.8	+3.2
SKMP	Bagumbayan, Su	1.04	254	eP	Pn	16 06 29.4	+1.3
SKMP				eS	Sn	16 06 43.3	+1.3

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*ISCJB **18** 16:12:13.9±0.6, 37˚.70N±0˚.03×26˚.62E±0˚.04, h4km±8km, Error ellipse: s-maj=5.6km s-min=4.2km az=38.9*

*ISK **18** 16:12:13.6, 37˚.67N×26˚.62E, h15km, ML2.6/6*

*ATH **18** 16:12:13.2, 37˚.70N×26˚.73E, h20km±7km, ML2.3/1, Error ellipse: s-maj=9.4km s-min=1.6km az=86.0*

*DDA **18** 16:12:14.0, 37˚.75N×26˚.68E, h7km±3km, ML2.2*

*THE **18** 16:12:14.1, 37˚.70N×26˚.63E, h4km±15km, ML2.2/4, Error ellipse: s-maj=16.0km s-min=1.1km az=57.0*

ISC 18 16:12:13.7±0.9, 37˚.70N±0˚.02×26˚.67E±0˚.03, h12km±6km, n23, σ0ˢ.46/36, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.14	86	P	Pg	16 12 16.9	-0.2
SMG				S	Sg	16 12 19.5	0.0
	2μm,0.2s						
SMG	Samos	0.14	86	P	Pg	16 12 16.9	-0.2
SMG				S	Sg	16 12 19.7	+0.2
SMG				AML	AML	16 12 20.0	
	comp=E,2454μm,0.2s						
SMG				AML	AML	16 12 20.4	
	comp=N,3890μm,0.2s						
DGB	zmir	0.39	26	i P	Pb	16 12 22.1	-0.5
DGB				i S	Sg	16 12 26.5	-0.2
DGB				IAML_P			
	comp=Z,2μm,0.1s						
GCAM	G?zelcaml?	0.45	90	PG	Pb	16 12 23.6	0.0
GCAM				SG	Sb	16 12 31.2	+1.0
GCAM	G?zelcaml?	0.45	90	i P	Pb	16 12 23.2	-0.4
GCAM				i S	Sb	16 12 29.6	-0.6
URLA	Izmir	0.66	355	PG	Pb	16 12 27.5	+0.3
URLA				SG	Sb	16 12 37.5	+1.1
URLA	Izmir	0.66	355	i P	Pb	16 12 26.9	-0.3
URLA				i S	Sn	16 12 38.1	-1.2
URLA				IAML_P			
	comp=Z,401nm,0.2s						
BLCB	Balcova	0.75	23	PG	Pb	16 12 29.3	+0.7
BODT	Bodrum	0.82	141	PG	Pb	16 12 30.1	+0.2
BODT	Bodrum	0.82	141	P	Pn	16 12 30.6	-0.5
BODT				S	Sn	16 12 42.8	-0.3
CHOS	Chios island	0.84	325	PG	Pb	16 12 30.2	-0.1
CHOS	Chios island	0.84	325	P	Pg	16 12 29.7	-0.2
CHOS				S	Sb	16 12 42.2	+0.7
	comp=Z,150nm,0.3s						
CHOS	Chios island	0.84	325	P	Pg	16 12 29.9	0.0
CHOS				S	Sb	16 12 42.2	+0.7
BDRM	Kayabasi	0.89	135	i P	Pn	16 12 32.2	+0.1
BDRM				i S	Sn	16 12 45.0	+0.2
AYDN	Tasoluk	0.96	92	i P	Pn	16 12 33.3	+0.2
AMGA	Amorgos Island	1.06	216	P	Pg	16 12 34.3	+0.1
AMGA				S	Sg	16 12 48.2	+0.2
	comp=Z,240nm,0.4s						
AMGA	Amorgos Island	1.06	216	P	Pg	16 12 34.1	-0.1
APE	Apeiranthos	1.10	235	PG	Pb	16 12 34.3	-0.4
APE	Apeiranthos	1.10	235	P	Pb	16 12 34.7	0.0
APE				S	Sb	16 12 49.0	-0.1
	comp=Z,78nm,0.3s						
APE	Apeiranthos	1.10	235	P	Pb	16 12 34.8	0.0
DAT	Datca	1.21	143	PN	Pn	16 12 36.5	-0.1
DAT	Datca	1.21	143	i P	Pg	16 12 37.1	+0.1
ZEDA	zmir-Bergama	1.30	14	i P	Pb	16 12 38.1	-0.1
ZEDA				IAML_P			
	comp=Z,329nm,0.2s						

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*ISCJB **18** 16:24:50.6±1.0, 26˚.78N±0˚.05×58˚.00E±0˚.08, h10km, Error ellipse: s-maj=10.3km s-min=6.5km az=161.1*

*OMAN **18** 16:24:50.8±4.7, 26˚.96N×58˚.15E, h36km±999km, ml3.2/6, Error ellipse: s-maj=209.8km s-min=23.5km az=5.0*

*TEH **18** 16:24:52.0, 26˚.75N×57˚.82E, h8km, ML3.2*

ISC 18 16:24:50.7±1.4, 26˚.72N±0˚.04×57˚.93E±0˚.08, h10km, n13, σ1ˢ.43/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	1.09	188	ePg	Pn	16 25 13.7	+1.7
KHNJ	Kahnooj	1.24	351	ePg	Pn	16 25 15.0	+0.9
NIAN	Nian	1.28	311	ePg	Pg	16 25 16.6	+1.2
NIAN				IAMB	IAmb	16 25 40.2	
	comp=Z,0.0nm,0.3s						
BANOM	Banah	1.67	242	P	Pb	16 25 21.7	+0.2
	SNR=6.7						
BANOM				S	Sg	16 25 43.4	-0.9
	SNR=7.4						
GENO	Geno	1.71	294	ePn	Pg	16 25 22.8	-0.7
GENO				eSg	Sg	16 25 46.3	+0.7
GENO				IAMB	IAmb	16 25 53.6	
	comp=Z,0.0nm,0.3s						
MDH	Madha	2.04	226	P	Pn	16 25 23.6	-1.5
UOSS	Minazif	2.36	222	P	Pn	16 25 31.0	+1.5
HATD	Hatta, Dubai	2.49	221	P	Pb	16 25 34.2	-1.3
ASHO	Ashiyiah	2.64	220	P	Pn	16 25 36.1	+2.7
ASHO				S	Sb	16 26 10.1	-0.5
NGRK	Negar Kerman	3.10	340	ePn	Pb	16 25 44.5	-1.6
NGRK				IAMB	IAmb	16 26 32.1	
	comp=Z,0.0nm,0.2s						
BIDO	Bidbid	3.19	177	P	Pn	16 25 40.8	-0.2
WSAR	Wadi Sarin	3.53	169	P	Pn	16 25 46.2	+0.7
	SNR=99						
KHGB	Koh Gabri	3.86	341	IAMB	IAmb	16 27 12.9	
	comp=Z,0.0nm,0.8s						

MEX 18 16:27:03.5±0.3, 14˚.58N×94˚.31W, h16km±999km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.54	43	eP	Pn	16 27 26.8	-3.4
PCIG				i S	Sn	16 27 45.0	-4.9
TGIG		2.47	27	i P	Pn	16 27 40.8	-2.3
TGIG				i S	Sn	16 28 09.5	-3.4
CMIG	Matias Romero	2.56	348	eP	Pn	16 27 41.5	-2.8
CMIG				i S	Sn	16 28 10.8	-4.2
CCIG	Comitan	2.69	51	eP	Pn	16 27 44.0	-2.3
CCIG				i S	Sn	16 28 14.4	-4.2

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*DDA **18** 16:36:30.5, 38˚.76N×25˚.97E, h27km, ML3.5*

*ATH **18** 16:36:30.5, 38˚.74N×25˚.99E, h29km±1km, ML3.3/7, Error ellipse: s-maj=2.1km s-min=0.9km az=88.0*

*ISK **18** 16:36:30.6, 38˚.77N×25˚.99E, h9km, ML3.5/18*

*ISCJB **18** 16:36:31.4±0.3, 38˚.77N±0˚.01×25˚.94E±0˚.02, h22km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=173.3*

*THE **18** 16:36:31.6, 38˚.77N×25˚.96E, h12km±1km, ML3.2/7, Error ellipse: s-maj=1.5km s-min=0.6km az=86.0*

ISC 18 16:36:31.0±0.9, 38˚.78N±0˚.02×26˚.04E±0˚.02, h17km±7km, n129, σ0ˢ.87/155, 19C-3D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	0.39	178	PG	Pg	16 36 39.0	0.0
CHOS				SG	Sg	16 36 44.7	+0.2
CHOS	Chios island	0.39	178	P	Pg	16 36 39.1	0.0
CHOS				S	Sg	16 36 44.5	0.0
	14μm,0.2s						
CHOS	Chios island	0.39	178	P	Pg	16 36 39.1	0.0
CHOS				S	Sg	16 36 44.6	0.0
CHOS				AML	AML	16 36 45.8	
	comp=E,36829μm,0.2s						
CHOS				AML	AML	16 36 46.1	
	comp=N,18557μm,0.3s						
KRBN	Karaburun	0.44	115	PG	Pb	16 36 40.4	+0.1
SIGR	SIGRI	0.46	342	PG	Pb	16 36 40.6	0.0
SIGR				SG	Sg	16 36 46.5	+0.1
SIGR	SIGRI	0.46	342	P	Pb	16 36 40.5	0.0
SIGR				S	Sg	16 36 46.6	+0.1
	comp=N,4μm,0.2s						
SIGR	SIGRI	0.46	342	P	Pb	16 36 40.5	0.0
SIGR				S	Sb	16 36 47.5	+0.6
SIGR				AML	AML	16 36 47.6	
	comp=N,8436μm,0.2s						
SIGR				AML	AML	16 36 50.2	
	comp=E,7572μm,0.2s						
CESE	eme	0.49	156	PG	Pg	16 36 40.3	-0.5
PRK	Paraskevi	0.50	21	P	Pn	16 36 42.5	-0.8
PRK				S	Sn	16 36 50.1	-1.4
	comp=E,2μm,0.6s						
PRK	Paraskevi	0.50	21	P	Pn	16 36 42.6	-0.7
PRK				S	Sn	16 36 50.3	-1.2
PRK				AML	AML	16 36 53.3	
	comp=E,4116μm,0.4s						
PRK				AML	AML	16 36 54.1	
	comp=N,5129μm,0.2s						
FOCM	Foa	0.54	97	PG	Pb	16 36 42.4	+0.4
URLA	Izmir	0.60	134	PG	Pb	16 36 43.2	+0.2
URLA	Izmir	0.60	134	i P	Pn	16 36 43.8	-0.9
URLA				i S	Sn	16 36 53.8	-0.3
URLA				IAML_P			
	comp=Z,61μm,0.2s						
AYVA	Ayvalik	0.73	44	i P	Pn	16 36 46.7	+0.3
AYVA				i S	Sn	16 36 57.9	+0.7
DKL	Dikili	0.73	66	PG	Pn	16 36 46.1	-0.4
ZEDA	zmir-Bergama	0.83	77	i P	Pn	16 36 48.3	+0.4
ZEDA				i S	Sn	16 36 59.3	-0.4
ZEDA				IAML_P			
	comp=Z,12μm,0.2s						
BLCB	Balcova	0.88	116	PG	Pn	16 36 48.7	+0.2
DGB	zmir	0.98	137	i P	Pn	16 36 50.1	+0.2
DGB				i S	Sn	16 37 03.4	0.0
BAYC	CANAKKALE_Bayr	1.04	22	i P	Pg	16 36 51.7	+0.6
BAYC				i S	Sn	16 37 05.5	+0.7
BAYC				IAML_P			
	comp=Z,11μm,0.2s						
BOZC	Bozcaada	1.06	1	PG	Pg	16 36 51.3	-0.2
BOZC	Bozcaada	1.06	1	i P	Pg	16 36 51.5	-0.1
BOZC				i S	Sg	16 37 05.0	-0.5
EZN	Ezine	1.07	12	PN	Pg	16 36 51.8	+0.1
EZN	Ezine	1.07	12	P	Pg	16 36 51.7	+0.1
EZN				S	Sn	16 37 06.5	+1.0
EZN	Ezine	1.07	12	⇑iP	Pg	16 36 51.7	+0.1
SKY	Skiros Island	1.17	275	P	Pn	16 36 52.8	+0.4
SMG	Samos	1.24	149	P	Pb	16 36 53.6	-0.3
SMG				S	Sg	16 37 12.0	+0.9
	comp=Z,4μm,0.5s						
SMG	Samos	1.24	149	P	Pb	16 36 53.7	-0.1
SMG				AML	AML	16 37 14.2	
	comp=E,9429μm,0.4s						
SMG				AML	AML	16 37 14.2	
	comp=N,4740μm,0.6s						
LIA	Limnos Island	1.30	330	P	Pb	16 36 55.0	+0.1
LIA				S	Sn	16 37 11.1	-0.1
	comp=N,2μm,0.5s						

LIA	Limnos Island	1.30	330	P	Pb	16 36 55.0	+0.1
LIA				AML	AML	16 37 15.6	
	comp=N,3301µm,0.6s						
LIA				AML	AML	16 37 15.8	
	comp=E,3474µm,0.6s						
AKHS	Akhisar	1.39	85	iP	Pg	16 36 58.6	+0.9
AKHS				iS	Sg	16 37 16.5	+0.6
AKHS				IAML_P			
	comp=Z,5µm,0.2s						
GOKC	Gokceada-Canak	1.42	356	PN	Pb	16 36 57.2	+0.2
GCAM	G?zelcaml?	1.43	139	PN	Pg	16 36 57.8	-0.7
GCAM	G?zelcaml?	1.43	139	iP	Pb	16 36 57.1	0.0
GCAM				iS	Sg	16 37 18.9	+1.8
GCAM				IAML_P			
	comp=Z,7µm,0.3s						
STEP	BALIKESIR_Sava	1.44	65	iP	Pg	16 36 58.0	-0.7
STEP				iS	Sg	16 37 15.8	-1.6
KARY	Karystos	1.46	240	P	Pn	16 36 56.0	-0.6
KARY				S	Sn	16 37 14.2	-1.1
	comp=Z,348nm,0.2s						
KARY	Karystos	1.46	240	P	Pn	16 36 55.9	-0.6
KARY				AML	AML	16 37 19.1	
	comp=E,829µm,0.3s						
KARY				AML	AML	16 37 19.9	
	comp=N,552µm,0.2s						
GELI	Tayfur-Gelibol	1.65	12	PN	Pb	16 37 00.7	-0.2
BALB	Balikesir	1.67	58	PN	Pb	16 37 01.2	0.0
EREA	Eretria	1.69	258	P	Pn	16 36 59.8	+0.1
EREA				S	Sn	16 37 19.9	-1.0
	comp=N,362nm,0.4s						
EREA	Eretria	1.69	258	P	Pn	16 36 59.8	+0.1
SMTH	Samothraki Isl	1.74	347	P	Pn	16 37 00.8	+0.5
SMTH	Samothraki Isl	1.74	347	P	Pn	16 37 00.8	+0.5
SMTH				AML	AML	16 37 28.5	
	comp=E,596µm,0.6s						
SMTH				AML	AML	16 37 31.4	
	comp=N,484µm,0.4s						
APE	Apeiranthos	1.75	193	PN	Pn	16 37 01.5	+0.9
APE	Apeiranthos	1.75	193	P	Pn	16 37 00.1	-0.5
APE	Apeiranthos	1.75	193	⇑iP	Pn	16 37 00.1	-0.5
APE	Apeiranthos	1.75	193	S	Sb	16 37 25.8	+1.4
APE	Apeiranthos	1.75	193	P	Pn	16 37 00.1	-0.5
DION	Dionisos Attik	1.80	248	P	Pn	16 37 01.1	-0.1
DION	Dionisos Attik	1.80	248	P	Pn	16 37 01.0	-0.1
GONE	Gonen-Balikesi	1.80	45	PN	Pb	16 37 03.2	-0.2
AYDN	Tasoluk	1.83	127	iP	Pb	16 37 03.0	-1.0
AYDN				iS	Sg	16 37 30.5	+0.6
MRKA	Markates	1.92	269	P	Pn	16 37 03.1	+0.3
MRKA	Markates	1.92	269	P	Pn	16 37 03.2	+0.3
AMGA	Amorgos Island	1.95	183	P	Pn	16 37 03.4	+0.2
AMGA	Amorgos Island	1.95	183	P	Pn	16 37 03.2	0.0
BODT	Bodrum	1.99	149	PN	Pn	16 37 04.4	+0.7
BODT	Bodrum	1.99	149	P	Pn	16 37 04.4	+0.7
MANT	Manisa	1.99	98	iP	Pg	16 37 10.6	+1.4
MANT				iS	Sg	16 37 34.9	-0.2
VLY	Voula,Athens	1.99	243	P	Pn	16 37 03.8	-0.1
VLY	Voula,Athens	1.99	243	P	Pn	16 37 03.8	-0.1
BDRM	Kayabasi	2.04	147	iP	Pn	16 37 05.1	+0.6
DURS	Dursunbey	2.06	66	iP	Pb	16 37 07.9	-0.1
DURS				IAML_P			
	comp=Z,230nm,0.2s						
KULA	Kula-Manisa	2.07	97	PN	Pb	16 37 07.3	-0.8
THAS	Thassos island	2.09	331	P	Pn	16 37 05.7	+0.5
THAS	Thassos island	2.09	331	P	Pn	16 37 05.7	+0.5
SART	Tekirdag	2.10	24	iP	Pb	16 37 08.3	-0.3
SART				IAML_P			
	comp=Z,3µm,0.1s						
KESN	Edirne-Kesan	2.10	13	iP	Pb	16 37 07.9	-1.0
KESN				iS	Sg	16 37 37.5	-1.3
KESN				IAML_P			
	comp=Z,1µm,0.3s						
ALN	Alexandroupoli	2.12	0	P	Pn	16 37 06.4	+0.9
ALN	Alexandroupoli	2.12	0	P	Pn	16 37 06.3	+0.9
OUR	Ouranopolis	2.22	315	P	Pn	16 37 07.9	+0.9
VILL	Villia	2.23	255	P	Pn	16 37 07.3	+0.2
VIL2	Platees	2.25	256	P	Pn	16 37 07.3	0.0
USAK	Uak-Merkez	2.33	91	iP	Pb	16 37 11.0	-1.5
USAK				IAML_P			
	comp=Z,199nm,0.2s						
ATAL	Atalanti	2.36	269	P	Pn	16 37 09.3	+0.4
ATAL	Atalanti	2.36	269	P	Pn	16 37 09.3	+0.4
DAT	Datca	2.38	149	PN	Pn	16 37 10.9	+1.6
DAT	Datca	2.38	149	iP	Pn	16 37 10.2	+0.9
LKR	Lokris	2.38	268	P	Pn	16 37 09.1	-0.1
RDO	Rodhopi	2.40	351	P	Pn	16 37 10.4	+1.1
RDO	Rodhopi	2.40	351	P	Pn	16 37 10.4	+1.1
KAVA	Kavala	2.51	333	P	Pn	16 37 11.7	+0.8
KAVA	Kavala	2.51	333	P	Pn	16 37 11.6	+0.7
DID	Didima	2.55	241	P	Pn	16 37 11.9	+0.4
TAVA	DENIZLI_Tavas	2.62	119	iP	Pn	16 37 09.7	-2.8
GDZ	Gediz	2.70	82	iP	Pg	16 37 22.4	-0.3
KHAL	Karahalli	2.73	97	iP	Pb	16 37 18.7	-0.7
KHAL				IAML_P			
	comp=Z,146nm,0.1s						
ULDT	Uludag	2.76	59	iP	Pb	16 37 19.3	-0.6
ULDT				iS	Sg	16 38 00.3	+0.7
DSF	Desfina	2.78	264	P	Pn	16 37 14.1	-0.6
TURN	Turunc	2.78	132	iP	Pn	16 37 14.5	-0.2
TURN				IAML_P			
	comp=Z,324nm,0.1s						
DALY	Dalyan (Mula)	2.85	133	iP	Pn	16 37 17.6	+2.0
DALY				IAML_P			
	comp=Z,319nm,0.2s						
AGG	Agios Georgios	2.91	276	P	Pn	16 37 16.3	-0.1
SRS	Serrai	3.00	322	P	Pn	16 37 18.6	+0.9
GUR	Goura	3.03	255	P	Pn	16 37 18.1	-0.1
NVR	Nevrokopi	3.06	328	P	Pn	16 37 19.7	+1.1
NVR	Nevrokopi	3.06	328	P	Pn	16 37 19.6	+1.0
PHSR	Pinarhisar	3.07	21	⇑iP	Pn	16 37 20.1	+1.5
PHSR	Pinarhisar	3.07	21	S	Sb	16 38 00.2	-1.9
KALE	Kalithea	3.08	264	P	Pn	16 37 19.6	+0.8
EDRB	Edirne	3.11	10	P	Pn	16 37 20.0	+0.8
YLV	Yalova	3.13	54	⇑iP	Pb	16 37 24.4	-1.8
KLV	Kalavryta, Ach	3.14	258	P	Pn	16 37 20.2	+0.5
VLI	Veliai	3.21	231	P	Pn	16 37 20.6	+0.1
LAKA	Lakka	3.23	262	P	Pn	16 37 22.0	+1.1
MMB	Musomiste	3.32	328	eP	Pn	16 37 23.2	+1.1
KARP	Karpathos	3.35	164	P	Pn	16 37 23.0	+0.5
KLYT	Kilyos	3.38	42	⇑iP	Pn	16 37 26.0	+3.2
KTHA	Kythira Island	3.46	224	P	Pn	16 37 23.8	-0.2
LAST	Lasithi	3.64	187	P	Pn	16 37 26.0	-0.5
KKB	Krupnik	3.82	325	eP	Pn	16 37 30.8	+1.8
PGB	Panagyurishte	4.03	340	eP	Pn	16 37 32.7	+0.9
ELND	Elena	4.15	358	⇑iP	Pn	16 37 34.7	+1.3
VTS	Vitosha	4.39	332	⇑iP	Pn	16 37 34.9	-2.0
VTS	Vitosha	4.39	332	eP	Pn	16 37 38.6	+1.7
PRD	Provadia	4.54	13	eP	Pn	16 37 39.4	+0.7
PLVB	Pleven	4.73	347	⇑iP	Pn	16 37 40.9	-0.5
RAZG	Razgrad	4.80	4	⇑iP	Pn	16 37 44.0	+1.6
BLKB	Belogradchik	5.46	333	⇑iP	Pn	16 37 51.8	+0.2
TIRR	Tirgusor	5.95	17	⇑iP	Pn	16 37 59.4	+1.3
TLB	Topalu	5.99	14	⇑iP	Pn	16 37 59.8	+1.1
HARR	Harsova	6.07	13	⇑iP	Pn	16 38 01.1	+1.2
CFR	Carcaliu	6.58	13	⇑iP	Pn	16 38 07.7	+0.9
VOIR		6.70	354	⇑iP	Pn	16 38 08.7	+0.2
MLR	Muntele Rosu	6.71	359	⇑iP	Pn	16 38 09.3	+0.6
LOT	Lotru	6.88	347	⇑iP	Pn	16 38 11.6	+0.6
PLOR	Plostina	7.08	3	⇓iP	Pn	16 38 14.9	+1.1
VRI	Vrincioaia	7.10	4	⇓iP	Pn	16 38 15.7	+1.7
DOPR	Dopca	7.20	356	⇑iP	Pn	16 38 15.7	+0.3
BZS	Buzias	7.58	336	⇓iP	Pn	16 38 19.4	-1.1
BIZ	Bicaz	8.16	0	⇑iP	Pn	16 38 29.2	+0.7

ISC 18 16:44:10.9±1.2, 50°.13N±0°.06×19°.25E±0°.04, h0^{km}, n5, σ0^{s}.72/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.36	75	ePg	Pg	16 44 18.1	+0.2
OJC				eSg	Sg	16 44 23.1	+0.5
NIE	Niedzica	0.98	136	ePg	Pb	16 44 30.8	0.0
NIE				eSg	Sb	16 44 44.7	+0.4
LANS	Liptovska Anna	0.99	172	ePG	Pg	16 44 30.4	+0.6
LANS				eSG	Sg	16 44 43.1	+0.5
LANS				eLG	Lg	16 44 46.3	
MORC	Moravsky Berou	1.16	253	ePG	Pg	16 44 33.6	+0.5
MORC				eSG	Sb	16 44 49.7	+0.3
VYHS	Vyhne	1.66	190	ePN	Pn	16 44 40.5	-0.7
VYHS				eSN	Sn	16 45 01.9	-1.3

DJA 18 16:58:25.0±0.5, 8°S±3°×11°7E±°, h23^{km}±6^{km}, M3.7/7, MLv3.7/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.72	135	P	Pb	16 58 38.2	-0.8
PLAI				S	Sb	16 58 48.0	-0.5
SRBI	Singaraja	2.04	276	P	Pn	16 58 58.8	+0.9
SRBI				S	Sn	16 59 23.4	+0.7
WBSI	Waikabubak, Su	2.49	122	P	Pn	16 59 04.3	+0.2
WBSI				S	Sn	16 59 35.4	+1.6
KMMI	Kalianget	3.50	291	P	Pn	16 59 18.4	+0.4
BKSI	Bulukumba	4.11	44	P	Pn	16 59 27.7	+1.3
BKSI				S	Sn	17 00 16.4	+2.6

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*BJI **18** 17:05:00.4±0.0, 38°.26N×142°.07E, h54^{km}, mb4.7/54, mB4.8/34, Ms3.8/13, Ms7 3.6/14*

*NIED **18** 17:05:00, 38°.30N×141°.90E, h50^{km}, Mw4.3 Best double couple: $M_0$3.25000×10^{15} NP1:ϕ_s245.00000°, δ23.00000°, λ142.00000°. NP2:ϕ_s10.00000°, δ76.00000°, λ71.00000°.*

*MOS **18** 17:05:01.9±1.0, 38°.41N×141°.87E, h42^{km}, mb4.8/36, Error ellipse: s-maj=8.2km s-min=5.0km az=101.3*

*ISCJB **18** 17:05:02.2±0.5, 38°.31N±0°.03×141°.92E±0°.04, h51^{km}±2^{km}, mb4.6/72, MS3.4/15, Error ellipse: s-maj=6.4km s-min=3.9km az=31.6*

*JMA **18** 17:05:03.5±0.1, 38°.32N×141°.87E, h47^{km}±1^{km}, M4.3*

JMA Felt II J1.

*IDC **18** 17:05:04.2±0.7, 38°.28N×141°.84E, h51^{km}±6^{km}, mb4.0/19, mb1 4.3/23, mb1mx4.1/34, mbtmp4.3/23, MS3.3/16, Ms1 3.3/16, ms1mx3.2/32, Error ellipse: s-maj=15.6km s-min=12.1km az=112.0*

*NEIC **18** 17:05:04.2±1.3, 38°.31N×141°.79E, h50^{km}±5^{km}, mb4.6/30, Error ellipse: s-maj=16.5km s-min=7.0km az=124.0*

NEIC Recorded [2 JMA] in Iwate and Miyagi.

ISC 18 17:05:03.6±0.6, 38°.39N±0°.05×141°.89E±0°.05, h45^{km}±4^{km}, h45^{km}:pP-P, n210, σ1^{s}.21/225, mb4.6/79, MS3.5/15, 11C-20D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.34	257	⇓P	Pn	17 05 12.5	-0.2
JIKH				S	Sn	17 05 18.7	-0.4
JIO	Ouri	0.43	279	⇓P	Pn	17 05 13.8	+0.1
JIO				S	Sn	17 05 20.8	0.0
JKMT	Kesennumamotoy	0.53	322	⇓P	Pn	17 05 15.7	+0.8
JKMT				S	Sn	17 05 23.9	+0.9
OFUJ	Ofunato	0.71	346	⇓P	Pn	17 05 18.1	+0.8
OFUJ				S	Sn	17 05 28.3	+1.1
JMK	Ichinoseki	0.77	317	⇓P	Pn	17 05 18.9	+0.8
JMK				S	Sn	17 05 29.8	+1.3
JOFO	Osakifurukawao	0.80	286	⇓P	Pn	17 05 19.0	+0.6
JOFO				eS	Sn	17 05 30.3	+1.1
JOU	Okura	0.96	269	⇓P	Pn	17 05 20.8	+0.1
JOU				S	Sn	17 05 33.7	+0.4
JMM	Marumori	1.01	239	⇓P	Pn	17 05 20.2	-1.1
JMM				S	Sn	17 05 31.6	-2.8
JOM	Ohasama	1.18	337	⇓P	Pn	17 05 24.8	+1.2
JOM				eS	Sn	17 05 40.3	+1.8
JFK	Kawauchi	1.30	218	⇓P	Pn	17 05 23.9	-1.4
JFK				eS	Sn	17 05 39.1	-2.4
JYK	Kaneyama	1.31	294	⇓P	Pn	17 05 26.0	+0.6
JRG	Rokugo	1.40	316	⇓P	Pn	17 05 27.8	+1.1
JYS	Shirataka	1.44	264	⇓P	Pn	17 05 27.3	0.0
JFT	Otama	1.50	235	⇓P	Pn	17 05 27.7	-0.4
MJAR	Matsushiro Arr	3.46	239	P	Pn	17 05 55.8	+0.8
	4.0nm,0.3s,baz=52,slow=10,SNR=95						
MJAR				LR	LR	17 07 29.0	
	comp=Z,538nm,19.6s,baz=60,slow=43						
MAJO	Matsushiro	3.46	239	ePn	Pn	17 05 53.5	-1.5
MAJO	Matsushiro	3.46	239	d iP	Pn	17 05 55.7	+0.7
MAT	Matsushiro	3.46	239	P	Pn	17 05 55.9	+0.9
MAT				S	Sn	17 06 40.6	+5.9
MJB9	Matsu-Tunnel	3.46	239	ePn	Pn	17 05 53.5	-1.4
ERM	Erimo	3.75	15	ePn	Pn	17 05 59.5	+0.7
ERM	Erimo	3.75	15	ceP	Pn	17 06 00.2	+1.3
INU	Inuyama	4.95	234	ePn	Pn	17 06 14.5	-0.8
ASAJ	Asahikawa	5.75	5	P	Pn	17 06 27.5	+1.2
	4.5nm,0.3s,baz=211,slow=11,SNR=34						
GRPR	Tuman	6.32	26	eP	Pn	17 06 34.0	-0.1
GRPR				eS	Sn	17 07 40.9	-4.0
GRPR				pmax	pmax		
	comp=Z,67nm,0.3s						
GRPR				pmax	pmax		
	comp=E,33nm,0.2s						
GRPR				smax	smax		
	comp=E,442nm,0.5s						
GRPR				smax	smax		
	comp=N,304nm,0.4s						
LAGR	Lagunnoye	6.38	26	eP	Pn	17 06 35.4	+0.5
LAGR				eS	Sn	17 07 43.3	-3.1
LAGR				pmax	pmax		
	comp=N,120nm,0.1s						
LAGR				pmax	pmax		
	comp=E,75nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,137nm,0.1s						
LAGR				smax	smax		
	comp=N,508nm,0.5s						
LAGR				smax	smax		
	comp=E,652nm,0.5s						
YUK	Yuzh-Kuril'sk	6.38	27	eP	Pn	17 06 34.5	-0.5
YUK				eS	Sn	17 07 42.8	-3.8
YUK				pmax	pmax		
	comp=Z,77nm,0.3s						
YUK				pmax	pmax		
	comp=N,14nm,0.2s						
YUK				pmax	pmax		
	comp=E,16nm,0.3s						
YUK				smax	smax		
	comp=E,195nm,0.3s						
YUK				smax	smax		
	comp=N,459nm,0.4s						
TEY	Ternei	7.73	331	⇑iP	Pn	17 06 59.4	+6.0
TEY				pmax	pmax		
	comp=N,120nm,0.6s						
TEY				pmax	pmax		
	comp=E,70nm,0.6s						
TEY				pmax	pmax		
	comp=Z,120nm,0.6s						
KUR	Kuril'sk	8.16	31	eP	Pn	17 06 59.0	-0.4
KUR				eS	Sn	17 08 26.7	-3.6
KUR				pmax	pmax		
	comp=Z,31nm,0.5s						
KUR				pmax	pmax		
	comp=N,12nm,0.3s						
KUR				pmax	pmax		
	comp=E,10.0nm,0.3s						
KUR				smax	smax		
	comp=E,77nm,0.6s						
KUR				smax	smax		
	comp=N,73nm,0.5s						
YSS	Yuzh-Sakhalins	8.58	4	ePn	Pn	17 07 05.7	+0.5
YSS	Yuzh-Sakhalins	8.58	4	⇓eP	Pn	17 07 05.8	+0.7
YSS				eS	Sn	17 08 35.0	-5.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
YSS				MLR	MLR		
	comp=E,100nm,14.0s						
USA0B	Ussuriysk Arra	9.44	311	ePn	Pn	17 07 18.1	+1.2
USRK	Ussuriysk Ar.	9.44	311	P	Pn	17 07 18.3	+1.4
	comp=E,3.4nm,0.3s,baz=128,slow=13,SNR=52						
USRK				LR	LR	17 10 47.0	
	comp=E,166nm,20.2s,baz=136,slow=36						
JNU	Nakatsue	10.37	243	P	Pn	17 07 30.4	+0.6
	comp=E,0.6nm,0.3s,baz=199,slow=1.3,SNR=13						
JNU				LR	LR	17 11 59.5	
	comp=E,239nm,18.4s,baz=36,slow=40						
JNU	Nakatsue	10.37	243	ePn	Pn	17 07 29.9	+0.1
KSRS	Korea Array	11.07	269	P	Pn	17 07 42.5	+3.3
	comp=E,0.9nm,0.3s,baz=78,slow=14,SNR=12						
KSRS				LR	LR	17 11 35.5	
	comp=E,168nm,20.0s,baz=100,slow=35						
KS15	Wonju Array Si	11.11	269	ePn	Pn	17 07 40.0	+0.2
MDJ	Mudanjiang	11.12	308	ePn	Pn	17 07 40.6	+0.8
MDJ	Mudanjiang	11.12	308	P	Pn	17 07 45.8	+5.9
TYV	Tymovskoe	12.48	2	eP	Pn	17 07 59.0	+0.5
TYV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR	Gornyy	12.97	344	eP	Pn	17 08 06.2	+1.1
KLR	Kul'dur	13.06	329	⇑eP	Pn	17 08 05.7	-0.7
CN2	Changchun	13.52	299	eP	Pn	17 08 10.3	-2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SNY	Shenyang	14.43	290	⇑P	Pn	17 08 27.3	+2.4
SNY				S	Sn	17 11 04.4	+0.9
SNY				pmax	pmax		
	comp=Z,11nm,0.5s						
SNY				pmax	pmax		
	comp=Z,92nm,3.5s						
SNY				LR	LR		
	comp=Z,110nm,12.2s						
SNY				LR	LR		
	comp=Z,250nm,12.3s						
SNY				LR	LR		
	comp=Z,280nm,19.0s						
DL2	Dalian	15.84	278	P	P	17 08 45.3	-1.3
DL2				sP	sP	17 09 00.5	-2.3
DL2				eS	Sn	17 11 37.4	-0.5
DL2				pmax	pmax		
	comp=Z,26nm,1.0s						
DL2				pmax	pmax		
	comp=Z,120nm,3.5s						
DL2				LR	LR		
	comp=Z,96nm,23.0s						
DL2				LR	LR		
	comp=Z,110nm,18.1s						
DL2				LR	LR		
	comp=Z,160nm,21.5s						
PETK	Petropavlovsk-	18.33	31	LR	LR	17 17 26.3	
	comp=Z,35nm,18.1s,baz=219,slow=40						
ZEA	Zeya	18.35	332	eP	P	17 09 13.0	-1.2
ZEA				pmax	pmax		
	comp=Z,17nm,0.6s						
NJ2	Nanjing	19.83	258	eP	Pn	17 09 32.3	-0.1
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
MA2	Magadan	21.95	12	P	P	17 09 56.4	+3.3
	comp=Z,12nm,0.8s,baz=192,slow=9.2,SNR=6.5						
MA2	Magadan	21.95	12	⇑eP	P	17 09 54.9	+1.7
MA2				pmax	pmax		
	comp=Z,65nm,2.5s						
HHC	Hu-ho-hao-te	23.43	286	P	P	17 10 07.5	-1.4
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,6.0s						
WHN	Wuhan	23.95	259	⇓P	P	17 10 12.5	-1.2
WHN				pmax	pmax		
	comp=Z,28nm,0.8s						
YAK	Yakutsk	24.84	346	eP	P	17 10 20.4	-1.0
	comp=Z,16nm,0.7s						
YAK	Yakutsk	24.84	346	eP	P	17 10 20.3	-1.0
YAK				e*PP	pP	17 10 30.8	-2.3
YAK				e		17 11 02.2	
YAK				eS	S	17 14 38.6	-2.3
YAK				eSS	SnSn	17 15 59.9	+29
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,35nm,2.7s						
YAK				pmax	pmax		
	comp=N,23nm,2.4s						
YAK				pmax	pmax		
	comp=E,33nm,2.8s						
YAK				smax	smax		
	comp=N,26nm,1.9s						
YAK				smax	smax		
	comp=E,20nm,2.1s						
SEY	Seymchan	25.39	11	P	P	17 10 28.5	+2.1
	comp=E,5.5nm,0.9s,baz=247,slow=7.2,SNR=7.2						
SEY	Seymchan	25.39	11	⇓eP	P	17 10 28.4	+2.0
XAN	Xi'an	26.87	271	eP	P	17 10 37.5	-2.6
	comp=E,8.1nm,0.6s						
XAN	Xi'an	26.87	271	P	P	17 10 39.3	-0.9
XAN				pmax	pmax		
	comp=E,8.0nm,0.5s						
XAN	Xi'an	26.87	271	eP	P	17 10 37.5	-2.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ULN	Ulaanbaatar	26.93	302	eP	P	17 10 39.3	-1.5
	comp=Z,4.9nm,1.1s						
ULN	Ulaanbaatar	26.93	302	ceP	P	17 10 41.8	+1.1
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONA0	Songino Array	27.37	302	eP	P	17 10 45.2	+0.6
SONM	Songino Array	27.37	302	P	P	17 10 45.2	+0.6
	comp=Z,1.7nm,0.6s,baz=119,slow=8.5,SNR=9.5						
SONM				LR	LR	17 22 01.8	
	comp=Z,55nm,18.7s,baz=126,slow=37						
ENH	Enshi	27.85	263	eP	P	17 10 47.5	-1.4
	comp=Z,27nm,0.6s						
H11N2	WAKE ISLAND Hy	28.55	124	T	T	17 41 04.3	
	baz=316,slow=75,SNR=388						
H11N1	WAKE ISLAND Hy	28.56	124	T	T	17 41 05.8	
	baz=316,slow=75,SNR=5508						
H11N3	WAKE ISLAND Hy	28.57	124	T	T	17 41 08.3	
	baz=316,slow=75,SNR=6845						
H11S1	WAKE ISLAND Hy	29.31	126	T	T	17 42 01.2	
	baz=318,slow=76,SNR=1606						
H11S3	WAKE ISLAND Hy	29.31	126	T	T	17 42 01.3	
	baz=318,slow=76,SNR=2183						
H11S2	WAKE ISLAND Hy	29.33	126	T	T	17 42 03.4	
	baz=318,slow=76,SNR=1210						
ZAK	Zakamensk	29.75	306	eP	P	17 11 05.2	-0.5
ZAK				pmax	pmax		
	comp=Z,30nm,0.9s						
TLY	Talaya	29.75	309	P	P	17 11 06.6	+1.0
	comp=Z,3.3nm,0.5s,baz=76,slow=6.6,SNR=3.8						
TLY	Talaya	29.75	309	deP	P	17 11 06.2	+0.6
LZH	Lanzhou	30.24	278	eP	P	17 11 09.9	-0.4
LZH				pP	pP	17 11 23.4	+1.2
LZH				sP	sP	17 11 29.3	+1.8
LZH				pmax	pmax		
	comp=Z,26nm,1.4s						
MOY	Mondy	31.37	308	eP	P	17 11 20.2	+0.2
GYA	Guiyang	31.84	259	⇑iP	P	17 11 24.1	-0.3
GYA				pP	pP	17 11 36.5	+0.2
GYA				S	S	17 16 19.8	-12
GYA				sS	sS	17 16 51.5	-0.4
GYA				pmax	pmax		
	comp=Z,20nm,0.6s						
GYA				pmax	pmax		
	comp=Z,80nm,6.1s						
GYA				LR	LR		
	comp=Z,100nm,15.9s						
GYA				LR	LR		
	comp=Z,120nm,15.7s						
GYA				LR	LR		
	comp=Z,110nm,15.4s						
CD2	Chengdu	32.07	268	eP	P	17 11 25.0	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	32.55	285	eP	P	17 11 30.8	+0.3
GTA				pP	pP	17 11 43.1	+0.7
GTA				sP	sP	17 11 48.3	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,69nm,5.9s						
GTA				LR	LR		
	comp=Z,48nm,14.6s						
GTA				LR	LR		
	comp=Z,89nm,15.2s						
GTA				LR	LR		
	comp=Z,150nm,17.1s						
KMI	Kunming	35.55	260	P	P	17 11 56.5	-0.3
KMI				pP	sP	17 12 12.3	-1.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DGZ	Jazzator, Alta	39.92	305	c iP	P	17 12 34.2	+0.9
DGZ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ	Urumqi	40.58	296	eP	P	17 12 39.5	+0.7
WMQ				sP	sP	17 13 01.3	+5.1
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,94nm,3.9s						
ZAA0	Zalesovo Array	41.29	311	eP	P	17 12 44.2	-0.2
	comp=Z,7.1nm,0.8s						
ZAA1	Zalesovo Array	41.29	311	eP	P	17 12 44.7	+0.3
ZAA1				ePcP	PcP	17 14 42.0	-0.3

ZALV	Zalesovo Beam	41.29	311	P	P	17 12 44.7	+0.3
	comp=Z,8.5nm,0.5s,baz=96,slow=8.1,SNR=16						
ZALV				PcP	PcP	17 14 42.0	-0.3
	comp=Z,1.6nm,0.5s,baz=107,slow=2.5,SNR=5.0						
ZALV				LR	LR	17 30 28.8	
	comp=Z,34nm,19.6s,baz=70,slow=37						
CHTO	Chiang Mai	42.00	255	*e*P	P	17 12 49.7	-0.9
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	42.00	255	*e*P	P	17 12 49.7	-0.9
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	42.22	254	P	P	17 12 51.9	-0.5
	comp=Z,0.9nm,0.7s,baz=42,slow=8.5,SNR=7.9						
CMAR				PcP	PcP	17 14 46.1	+0.3
	comp=Z,0.7nm,0.5s,baz=35,slow=2.2,SNR=5.2						
CMAR				LR	LR	17 30 17.3	
	comp=Z,13nm,21.6s,baz=45,slow=36						
LSA	Lhasa	42.48	274	*e*P	P	17 12 55.4	+0.5
	comp=Z,8.3nm,1.2s						
LSA	Lhasa	42.48	274	*e*P	P	17 12 55.4	+0.5
LSA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MK31	Makanchi Array	43.73	301	*e*P	P	17 13 04.2	-0.2
	comp=Z,6.8nm,0.8s						
MK31	Makanchi Array	43.73	301	*e*P	P	17 13 04.2	-0.2
MK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK32	Makanchi Array	43.73	301	*e*P	P	17 13 04.3	-0.1
MKAR	Makanchi Array	43.73	301	P	P	17 13 04.3	-0.1
	comp=Z,6.7nm,0.7s,baz=85,slow=9.9,SNR=57						
MKAR				LR	LR	17 32 02.7	
	comp=Z,33nm,18.9s,baz=52,slow=37						
MAKZ	Makanchi	43.94	301	*e*P	P	17 13 06.0	0.0
	comp=Z,6.8nm,0.8s						
MAKZ	Makanchi	43.94	301	*e*P	P	17 13 06.0	0.0
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KURK	Kurchatov	45.40	307	*e*P	P	17 13 17.1	-0.5
	comp=Z,23nm,0.8s						
KURK	Kurchatov	45.40	307	*c i*P	P	17 13 17.1	-0.5
KURK				pmax	pmax		
	comp=Z,19nm,0.6s						
PDGK	Podgornoye	46.48	297	P	P	17 13 25.2	-1.2
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKN	Kakani	47.93	275	*e*P	P	17 13 37.7	-0.3
	comp=Z,38nm,0.8s						
PKI	Pulchoki	47.94	275	*e*P	P	17 13 37.5	-0.6
	comp=Z,12nm,0.6s						
PKIN	Phulchoki	47.94	275	*e*P	P	17 13 37.5	-0.6
	comp=Z,9.4nm,0.5s						
ILAR	Eielson Array	48.15	33	P	P	17 13 39.6	+0.8
	comp=Z,0.6nm,0.6s,baz=263,slow=6.7,SNR=9.1						
ILAR				pP	pP	17 13 53.0	+1.9
	comp=Z,1.3nm,0.6s,baz=272,slow=6.3,SNR=9.0						
ILB	Eielson Array	48.15	33	*e*P	P	17 13 38.8	-0.1
	comp=Z,7.8nm,1.8s						
GKN	Gorkha	48.34	275	*e*P	P	17 13 40.8	-0.2
	comp=Z,34nm,0.7s						
PRP	Porcupine Dome	48.69	32	*e*P	P	17 13 44.1	+0.9
	comp=Z,19nm,0.5s						
DANN	Dangsing	48.86	276	*e*P	P	17 13 45.4	+0.2
	comp=Z,95nm,0.7s						
KOLN	Koldanda	49.26	276	*e*P	P	17 13 48.0	-0.1
	comp=Z,37nm,1.0s						
TKM2	Tokmak 2	49.33	298	*i* P	P	17 13 48.2	-0.3
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OTUK	Ortayu	49.95	305	P	P	17 13 52.2	-0.7
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	50.00	312	*e*P	P	17 13 53.2	0.0
	comp=Z,4.7nm,1.0s						
BRVK	Borovoye	50.00	312	*d i*P	P	17 13 53.4	+0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSH	Kashi	50.21	293	*e*P	P	17 13 59.8	+4.7
KSH				sP	sP	17 14 21.1	+8.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,84nm,5.1s						
SVE	Sverdlovsk	54.39	318	*e*P	P	17 14 25.5	-0.2
SVE				pmax	pmax		
	comp=Z,14nm,0.9s						
NIL	Nilore	54.56	288	*e*P	P	17 14 27.7	+0.3
	comp=Z,8.8nm,0.6s						
NIL	Nilore	54.56	288	*e*P	P	17 14 27.7	+0.3
NIL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARU	Arti	55.60	318	LR	LR	17 40 54.4	
	comp=Z,60nm,18.3s,baz=58,slow=39						
ARU	Arti	55.60	318	*e*P	P	17 14 34.5	0.0
	comp=Z,7.7nm,0.6s						
ARU	Arti	55.60	318	*ce*P	P	17 14 34.4	0.0
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KBL	Kabul	57.29	290	*e*P	P	17 14 47.1	0.0
	comp=Z,7.3nm,0.9s						
KBL	Kabul	57.29	290	*e*P	P	17 14 47.1	0.0
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AB31	Akbulak array	57.36	310	*i* P	P	17 14 46.0	-1.1
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	57.36	310	*e*P	P	17 14 46.7	-0.4
	comp=Z,3.7nm,0.6s						
AKTO	Aktyubinsk	58.05	311	LR	LR	17 41 29.7	
	comp=Z,20nm,18.7s,baz=50,slow=38						
WR1	Warramunga Arr	58.45	188	*e*P	P	17 14 53.7	-1.2
WR1				*e*pP	pP	17 15 08.0	+0.4
WRA	Warramunga Arr	58.45	188	P	P	17 14 53.7	-1.2
	comp=Z,4.1nm,0.5s,baz=360,slow=8.5,SNR=28						
WRA				pP	pP	17 15 08.0	+0.4
	comp=Z,5.9nm,0.7s,baz=356,slow=7.8,SNR=7.6						
SPA0	Spitsbergen Ar	59.27	349	*e*P	P	17 15 00.5	+0.5
KIRV	Kirov	59.40	323	LR	LR	17 42 26.0	
	comp=Z,18nm,18.6s,baz=156,slow=38						
PRGR	Permogore	59.84	327	*e*P	P	17 15 03.2	-0.9
PRGR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AS31	Alice Springs	62.18	188	*e*P	P	17 15 19.4	-1.1
	comp=Z,1.4nm,0.7s						
ASAR	Alice Springs	62.18	188	P	P	17 15 19.4	-1.1
	comp=Z,2.6nm,0.7s,baz=345,slow=3.4,SNR=49						
ARA0	ARCESS Array S	62.86	339	*e*P	P	17 15 24.8	+0.4
ARCES	ARCESS Array B	62.86	339	P	P	17 15 24.8	+0.4
	comp=Z,2.2nm,0.6s,baz=53,slow=7.6,SNR=22						
ARE0	ARCESS Array S	62.86	339	*e*P	P	17 15 25.2	+0.8
GEYT	Alibeck	63.51	299	P	P	17 15 29.1	-0.2
	comp=Z,1.9nm,0.7s,baz=55,slow=6.0,SNR=4.5						
KTK1	Kautokeino	63.82	339	*e*P	P	17 15 31.6	+0.8
TRO	Tromso	64.56	341	*e*P	P	17 15 35.8	+0.3
STEI	Steigen	66.71	341	*e*P	P	17 15 49.5	0.0
LOF	Lofoten	67.00	341	*e*P	P	17 15 51.7	+0.4
OBN	Obninsk	67.24	323	*i* P	P	17 15 51.2	-1.8
OBN				*i*		17 16 17.9	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,24nm,15.0s						
FIA0	FINESS Array S	67.79	332	*e*P	P	17 15 56.2	-0.2
FIA0	FINESS Array S	67.79	332	*e*P	P	17 15 56.2	-0.2
FINES	FINESS Array B	67.79	332	P	P	17 15 56.2	-0.2
	comp=Z,5.3nm,0.6s,baz=40,slow=8.1,SNR=20						
FINES				LR	LR	17 47 33.7	
	comp=Z,22nm,18.7s,baz=34,slow=38						
MOR8	Moi Rana	68.22	340	*e*P	P	17 15 58.1	-1.0
NSS	Namsos	70.15	339	*e*P	P	17 16 11.5	+0.5
KIV	Kislovodsk	70.31	311	*e*P	P	17 16 13.4	+0.9
KIV				pmax	pmax		
	comp=Z,52nm,1.1s						
KIV				MLR	MLR		
	comp=Z,56nm,17.0s						
KBZ	Khabaz	70.31	310	P	P	17 16 13.1	+0.8
	comp=Z,5.4nm,0.9s,baz=54,slow=4.2,SNR=8.3						
KBZ				LR	LR	17 49 09.3	
	comp=Z,27nm,20.9s,baz=80,slow=38						
DOMB	Dombas	72.92	339	*e*P	P	17 16 28.2	+0.4
NC204	NORSAR Array S	73.03	338	*e*P	P	17 16 28.9	+0.4
	comp=Z,25nm,0.8s						
NB2	NORSAR Subarra	73.08	337	P	P	17 16 28.5	-0.3
	comp=Z,3.0nm,0.7s,baz=38,slow=6.2						
NB2	NORSAR Subarra	73.08	337	P	P	17 16 28.5	-0.3
	baz=38,slow=6.2						
NB200	NORSAR Array S	73.08	337	*e*P	P	17 16 28.9	+0.1
NOA	NORSAR Array B	73.08	337	P	P	17 16 28.9	+0.1
	comp=Z,5.2nm,0.7s,baz=38,slow=6.0,SNR=18						
NOA				LR	LR	17 51 12.1	
	comp=Z,25nm,21.6s,baz=290,slow=38						
NC602	NORSAR Array S	73.22	337	*e*P	P	17 16 30.1	+0.6
AKASG	Malin Array Be	73.46	322	P	P	17 16 30.7	-0.4
	comp=Z,3.2nm,0.4s,baz=45,slow=6.3,SNR=20						
AKASG				LR	LR	17 51 34.0	
	comp=Z,26nm,18.2s,baz=265,slow=38						
AKBB	Malin Array Si	73.46	322	*e*P	P	17 16 30.4	-0.7
	comp=Z,7.3nm,0.8s						
AKBB	Malin Array Si	73.46	322	*e*P	P	17 16 30.4	-0.7
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NV01	Mina Array Sit	73.88	54	*e*pP	pP	17 16 49.6	+2.6
NVAR	Mina Array Bea	73.88	54	pP	pP	17 16 49.6	+2.6
	comp=Z,2.2nm,1.0s,baz=282,slow=7.9,SNR=7.4						
SKAR	Skarslia	74.23	338	*e*P	P	17 16 35.8	+0.3
HWUT	Hardware Ranch	76.04	48	*e*P	P	17 16 48.4	+1.9
	comp=Z,20nm,0.6s						
HOMB	Homborsund	76.13	337	*e*P	P	17 16 47.0	+0.7
TCUT	Toone Canyon	76.44	48	*e*P	P	17 16 51.5	+2.6
	comp=Z,38nm,0.7s						
PD31	Pinedale Array	76.45	46	*e*P	P	17 16 49.3	+0.5
PDAR	Pinedale Array	76.45	46	P	P	17 16 49.3	+0.5
	comp=Z,0.4nm,0.5s,baz=255,slow=1.2,SNR=5.7						
BUR08	Bucovina Ar. S	77.47	322	*e*P	P	17 16 54.8	+0.5
	comp=Z,3.4nm,0.7s						
KOLS	Kolonicke sedl	77.95	324	*e*P	P	17 16 57.9	+1.1
KOLS	Kolonicke sedl	77.95	324	*e*P	P	17 16 57.8	+1.0
OJC	Ojcow	78.12	326	*e*P	P	17 16 58.3	+0.5
	comp=Z,6.1nm,0.7s						
OJC	Ojcow	78.12	326	*e*P	P	17 16 58.3	+0.5
OJC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BR101	Keskin Array S	78.23	312	*e*P	P	17 16 58.6	-0.1
BR131	Keskin Array S	78.23	312	*e*P	P	17 16 58.9	+0.2
	comp=Z,7.1nm,1.4s						
BRTR	Keskin Array B	78.24	312	P	P	17 16 58.6	-0.1
	comp=Z,1.1nm,0.6s,baz=96,slow=3.6,SNR=8.6						
DPC	Dobruska-Polom	79.51	328	*e*P	P	17 17 06.3	+0.9
DPC	Dobruska-Polom	79.51	328	*e*P	P	17 17 06.3	+0.9
VYHS	Vyhne	79.82	325	*e*P	P	17 17 07.7	+0.6
VYHS	Vyhne	79.82	325	*e*P	P	17 17 07.7	+0.6
BRG	Berggiesshubel	80.08	330	*e*P	P	17 17 08.7	+0.3
	comp=Z,4.2nm,1.0s						
BRG	Berggiesshubel	80.08	330	*e*P	P	17 17 08.7	+0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	Collm	80.11	330	*i* P	P	17 17 08.5	-0.1
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	Collm	80.11	330	*i* P	P	17 17 08.5	-0.1
	comp=Z,6.0nm,0.8s						
GOPC	GO Pecny, Ondr	80.48	328	*e*P	P	17 17 11.0	+0.3
GOPC	GO Pecny, Ondr	80.48	328	*e*P	P	17 17 11.0	+0.3
PRU	Pruhonice	80.52	329	*e*P	P	17 17 11.3	+0.5
PRU	Pruhonice	80.52	329	*e*P	P	17 17 11.3	+0.5
CONA	Conrad Observa	81.56	327	*i* P	P	17 17 17.6	+1.1
	comp=Z,3.5nm,0.9s						
KHC	Kasperske Hory	81.58	329	⇑*e*P	P	17 17 16.7	+0.2
KHC				pmax	pmax		
	comp=Z,13nm,1.1s						
KHC	Kasperske Hory	81.58	329	*e*P	P	17 17 16.8	+0.2
GEC2	GERESS Array S	81.76	328	*e*P	P	17 17 17.3	-0.3
	comp=Z,4.0nm,1.2s						
GEC2	GERESS Array S	81.76	328	*e*P	P	17 17 17.3	-0.3
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GERES	GERESS Array B	81.76	328	P	P	17 17 17.3	-0.3
	comp=Z,1.0nm,0.4s,baz=28,slow=6.0,SNR=10						
VTS	Vitosha	82.00	319	*e*P	P	17 17 20.0	+1.0
	comp=Z,4.1nm,0.8s						
VTS	Vitosha	82.00	319	*e*P	P	17 17 20.0	+1.0
VTS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SOKA	Soboth	82.88	326	*i* P	P	17 17 24.0	+0.6
	comp=Z,7.0nm,1.1s						
KBA	Koelnbreinsper	83.29	327	*i* PcP	P	17 17 26.6	+0.9
	comp=Z,3.9nm,0.8s						
MYKA	Terra Mystica	83.52	327	*i* P	P	17 17 26.4	-0.3
	comp=Z,2.8nm,0.5s						
WTTA	Wattenberg	83.86	328	*i* PcP	P	17 17 28.9	+0.3
	comp=Z,4.8nm,1.1s						
ABTA	Abfaltersbach	83.90	328	*i* PcP	P	17 17 29.1	+0.4
	comp=Z,2.8nm,0.8s						
RETA	Reutte	84.03	329	*i* PcP	P	17 17 30.0	+0.6
	comp=Z,8.3nm,1.2s						
TTG	Podgorica	84.15	321	*e*P	P	17 17 29.6	-0.3
	comp=Z,9.6nm,1.0s						
TTG	Podgorica	84.15	321	*e*P	P	17 17 29.6	-0.3
TTG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BFO	Black Forest	84.31	331	*i* P	P	17 17 31.4	+0.7
FETA	Feichten	84.42	329	*i* PcP	P	17 17 31.8	+0.4
	comp=Z,5.8nm,1.0s						
DAVA	Damuels	84.55	329	*i* PcP	P	17 17 32.5	+0.4
	comp=Z,7.9nm,1.0s						
ECH	Echery	84.84	332	*e*P	P	17 17 32.9	-0.5
	comp=Z,4.3nm,0.9s						
ECH	Echery	84.84	332	*e*P	P	17 17 32.9	-0.5
ECH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FUORN	Ofenpass-Fuorn	84.94	329	*e*P	P	17 17 34.4	+0.2
	comp=Z,10.0nm,0.8s						
LTX	Lajitas	89.00	53	*e*P	P	17 17 54.7	+0.7
LTX				*e*pP	pP	17 18 08.9	+1.7
LTX	Lajitas	89.00	53	*e*P	P	17 17 54.7	+0.7
LTX				*e**PP	pP	17 18 08.9	+1.7
TXAR	Lajitas Array	89.00	53	P	P	17 17 54.7	+0.7
	comp=Z,0.3nm,0.6s,baz=289,slow=2.8,SNR=2.6						
TXAR				pP	pP	17 18 08.9	+1.7
	comp=Z,1.6nm,0.6s,baz=310,slow=3.2,SNR=12						
LPAZ	La Paz	145.67	58	PKPbc	PKPab	17 24 39.0	0.0
	comp=Z,1.3nm,0.6s,baz=311,slow=1.3,SNR=6.4						
LPAZ	La Paz	145.67	58	PKP2	PKPab	17 24 39.0	0.0
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						

DJA 18 17:42:41.8±0.3, 8°S±5°×11°7E±°, h10^{km}, M3.5/8, MLv3.5/8, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PLAI	Plampang	0.69	122	P	Pg	17 42 54.2	-0.9
PLAI				S	Sg	17 43 03.8	-0.3
SRBI	Singaraja	1.99	281	P	Pb	17 43 17.0	-1.2
WBSI	Waikabubak, Su	2.47	119	P	Pn	17 43 22.0	-0.2
WBSI				S	Sn	17 43 52.1	-0.4
JAGI	Jajag, Banyuwa	3.00	270	P	Pn	17 43 27.2	-2.3
JAGI				S	Sn	17 44 02.6	-3.0
WSI	Waingapu	3.30	112	P	Pn	17 43 33.5	0.0
BKSI	Bulukumba	4.27	43	P	Pn	17 43 43.4	-3.5

SVSA 18 17:48:12.2±0.6, 38°.65N×29°.68W, h5^{km}, MD3.5, ML2.6, 1C, Error ellipse: s-maj=11.0km s-min=5.3km az=9.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PCED	Cedros	0.77	92	⇑*i*P	Pg	17 48 24.7	-2.2
PCED				*e*S	Sg	17 48 34.1	-2.8
PCED				A	A	17 48 36.8	
	80nm,0.2s						
CALA	Caldeira	0.77	95	*e*S	Sg	17 48 34.1	-2.9
HOR	Horta	0.83	98	*e*S	Sg	17 48 35.9	-3.1
HOR				A	A	17 48 37.4	
	183nm,0.2s						
PCAN	Candelaria	0.96	101	*e*P	Pg	17 48 27.3	-3.2
PCAN				*e*S	Sg	17 48 38.8	-4.1
PCAN				A	A	17 48 42.7	
	98nm,0.2s						
PICO	Pico	0.99	98	*e*P	Pg	17 48 27.9	-3.4
PICO				*e*S	Sg	17 48 39.8	-4.4
PICO				A	A	17 48 41.7	
	211nm,0.2s						
PPNO	Prainha do Nor	1.12	99	*e*S	Sg	17 48 43.1	-5.3
PPNO				A	A	17 48 47.4	
	100nm,0.2s						
ROSA	Rosais	1.13	86	*e*P	Pg	17 48 30.0	-3.8
ROSA				*e*S	Sg	17 48 42.7	-5.8
ROSA				A	A	17 48 45.0	
	40nm,0.2s						
PMAN	Manadas	1.25	90	*e*S	Sg	17 48 46.0	-6.2
PMAN				A	A	17 48 48.1	
	22nm,0.1s						

GCG 18 17:53:34.2±0.4, 14°.16N×91°.68W, h56^{km}±88^{km}, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.56	11	*e*P	Pn	17 53 47.4	+0.6
STG3				*e*S	Sn	17 53 57.3	+1.5
FUG	Fuego 3	0.86	70	*e*P	Pn	17 53 50.7	+0.3
FUG				*e*S	Sn	17 54 03.9	+1.6
PCG	Pacaya	1.06	77	*e*P	Pn	17 53 53.9	+0.8
PCG				*e*S	Sn	17 54 09.1	+2.0

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*ANF **18** 18:06:23.3±1.0, 43°.78N×105°.27W, ML3.6/8, Error ellipse: s-maj=10.9km s-min=8.8km az=155.0*

*IDC **18** 18:06:24.1±1.6, 44°.02N×105°.66W, h0^{km}, mb3.8/2, mb1 3.8/5, mb1mx3.5/46, mbtmp3.6/5, ML3.3/3, MS3.1/2, Ms1 3.1/2, ms1mx2.4/49, Error ellipse: s-maj=53.0km s-min=8.0km az=146.0*

*NEIC **18** 18:06:35.7±0.6, 44°.63N×106°.04W, h0^{km}, ML3.1, Error ellipse: s-maj=7.6km s-min=5.0km az=70.0, Suspected Mining explosion.*

NEIC 57 km [36 miles] NW of Gillette.

ISC 18 18:06:24.4±0.7, 43°.88N±0°.04×105°.27W±0°.04, h0^{km}, n57, σ1^{s}.81/61, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RSSD	Black Hills	0.92	74	P	Pb	18 06 41.8	-1.6
	baz=249						
RSSD				S	Sb	18 06 55.0	-1.3
	baz=249						
K22A	Casper	1.54	217	P	Pn	18 06 50.3	-3.0
	baz=39						
K22A				S	Sn	18 07 11.4	-2.6
	baz=39						
LAO	LASA Array	2.89	347	*e*Pn	Pn	18 07 11.6	-0.2
LAO	LASA Array	2.89	347	P	Pn	18 07 12.4	+0.6
	baz=167						
LAO				Sb	Sg	18 07 56.5	-0.8
	baz=167						
N23A	Red Feather La	3.03	190	P	Pn	18 07 12.3	-1.5
	baz=9.6						
N23A				S	Sn	18 07 48.0	-2.8
	baz=9.6						
RLMT	Red Lodge	3.12	295	*e*Pn	Pn	18 07 15.3	+0.2
RLMT	Red Lodge	3.12	295	P	Pn	18 07 15.4	+0.4
	baz=114						
BW06	Boulder Array	3.32	252	P	Pn	18 07 16.6	-1.3
	baz=70						
PD31	Pinedale Array	3.32	252	*e*Pn	Pb	18 07 22.8	-1.6
PD31				*e*Sn	Sn	18 08 01.8	+3.5
PDAR	Pinedale Array	3.32	252	Pn	Pn	18 07 17.9	0.0
	4.0nm,0.3s,baz=61,slow=17,SNR=34						
PDAR				Pg	Pb	18 07 22.8	-1.6
	12nm,0.3s,baz=69,slow=20,SNR=51						
PDAR				Lg	Lg	18 08 01.8	
	9.2nm,0.3s,baz=71,slow=34,SNR=5.8						
GCMT	Greycliff	3.67	303	*e*Pn	Pn	18 07 23.1	+0.5
OGNE	Ogallala	3.79	140	P	Pn	18 07 22.0	-2.1
	baz=321						
OGNE				Sb	Sb	18 08 19.0	+0.4
	baz=321						
H17A	Grant Village	3.86	280	*e*Pn	Pn	18 07 26.8	+1.5
H17A	Grant Village	3.86	280	Pb	Pb	18 07 32.6	-0.9
	baz=97						
H17A				Sb	Sb	18 08 23.6	+2.8
	baz=97						
LOHW	Long Hollow	3.88	268	*e*Pn	Pn	18 07 26.7	+1.2
FLWY	Flagg Ranch	3.93	275	*e*Pn	Pn	18 07 25.3	-0.8
MOOW	Moose Ponds	3.97	270	*e*Pn	Pb	18 07 32.1	-3.3
YNR	Norris Junctio	3.98	284	*e*Pn	Pn	18 07 27.6	+0.8
SNOW	Snow King Moun	4.00	266	*e*Pn	Pb	18 07 34.4	-1.6
YPP	Pitchstone Pla	4.01	278	*e*Pn	Pn	18 07 27.7	+0.3
YFT	Old Faithful	4.05	280	*e*Pn	Pn	18 07 30.1	+2.2
IMW	Indian Meadow	4.10	272	*e*Pn	Pn	18 07 31.1	+2.5
YHH	Holmes Hill	4.11	285	*e*Pn	Pn	18 07 30.7	+2.0
TPAW	Teton Pass	4.14	267	*e*Pn	Pn	18 07 34.4	+5.2
FXWY	Fox Creek	4.18	269	*e*Pn	Pb	18 07 35.4	-3.6
YHB	Horse Butte	4.34	284	*e*Pn	Pn	18 07 35.2	+3.3
DGMT	Dagmar	4.65	9	*e*Pn	Pn	18 07 37.9	+2.0
BOZ	Bozeman (W)	4.85	293	*e*Pn	Pn	18 07 38.6	-0.1
HRY	Holter Researc	5.43	304	*e*Pn	Pn	18 07 47.2	+0.5
DLMT	Dillon	5.44	288	*e*Pn	Pn	18 07 47.5	+0.6
LRM	Limekiln Ridge	5.46	293	*e*Pn	Pn	18 07 47.7	+0.4
MCMT	McKenzie Canyo	5.52	283	*e*Pn	Pn	18 07 51.3	+3.2
PV22	Blue Mesa, Par	5.96	208	*e*Pn	Pb	18 08 10.6	+1.3
PV21	Cone Mtn., Par	6.00	209	*e*Pn	Pb	18 08 11.1	+1.0
P17A	Butcher Ranch,	6.01	225	*e*Pn	Pb	18 08 10.7	+0.5
PV23	Carpenter Ridg	6.12	209	*e*Pn	Pb	18 08 13.7	+1.7
PV04	Paradox Valley	6.13	208	*e*Pn	Pb	18 08 13.1	+0.9
PV12	Saucer Basin,	6.17	207	*e*Pn	Pb	18 08 15.5	+2.7
PV14	Lion Creek, Pa	6.19	209	*e*Pn	Pb	18 08 14.9	+1.7
PV20	West Nyswonger	6.20	208	*e*Pn	Pb	18 08 15.6	+2.3
PV19	Morning Glory	6.23	208	*e*Pn	Pb	18 08 16.4	+2.5
PV03	Paradox Valley	6.24	207	*e*Pn	Pb	18 08 15.5	+1.5
PV02	Paradox Valley	6.25	206	*e*Pn	Pb	18 08 14.3	+0.2
PV17	East Wray Mesa	6.25	208	*e*Pn	Pb	18 08 15.9	+1.6
PV01	Paradox Valley	6.26	205	*e*Pn	Pb	18 08 15.7	+1.2
ECSD	EROS Data Cent	6.26	88	*e*Pn	Pb	18 08 17.4	+3.1
PV18	Skein Mesa, Pa	6.26	207	*e*Pn	Pb	18 08 16.5	+2.0
PV13	Radium Mtn., P	6.32	206	*e*Pn	Pb	18 08 17.3	+1.9
HLID	Hailey	6.64	270	*e*Pn	Pn	18 08 02.6	-0.8
WALA	Waterton Lakes	7.90	314	*e*Pn	Pn	18 08 20.2	-0.4
ULM	Lac du Bonnet	9.03	42	Pn	Pn	18 08 34.9	-1.0
	1.0nm,0.3s,baz=230,slow=9.6,SNR=6.1						
ULM				Lg	Lg	18 11 03.6	
	0.3nm,0.3s,baz=156,slow=20,SNR=2.2						
I56US	NEWPORT INFRAS	9.34	302	*i*		18 58 20.0	
	baz=115,slow=307,SNR=3.9						
NVAR	Mina Array Bea	11.23	245	Pn	Pn	18 09 06.7	+0.3
	0.1nm,0.3s,baz=49,slow=12,SNR=4.4						
FRB	Frobisher Bay	28.78	34	LR	LR	18 23 17.4	
	comp=Z,29nm,18.3s,baz=14,slow=35						
JMIC	Jan Mayen	51.34	25	LR	LR	18 38 54.3	
	comp=Z,17nm,18.7s,baz=52,slow=38						
ARCES	ARCESS Array B	61.28	18	P	P	18 16 40.2	-0.8
	1.2nm,0.8s,baz=335,slow=6.3,SNR=4.0						
MKAR	Makanchi Array	89.46	355	P	P	18 19 22.4	-0.8
	0.3nm,0.7s,baz=12,slow=4.5,SNR=3.9						

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*GCG **18** 18:13:55.9±0.8, 13°.39N×90°.28W, h50^{km}±70^{km}, MD3.6*

*SNET **18** 18:13:55.1±0.6, 13°.42N×89°.99W, h42^{km}±21^{km}, MD3.0*

ISC 18 18:13:52.6±3.1, 13°.2N±0°.2×90°.08W±0°.08, h29^{km}±17^{km}, n9, σ0^{s}.95/14, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SBLS	San Blas	0.74	37	*e*P	Pb	18 14 07.2	+0.1
SBLS				*e*S	Sb	18 14 16.8	-0.3
SNJE	San Jose	0.77	37	*e*P	Pb	18 14 07.7	0.0
RTR	El Retiro	0.78	33	*e*P	Pb	18 14 07.6	-0.1
LFU	La Fuente	1.07	62	*e*P	Pn	18 14 12.2	+0.4
PCG	Pacaya	1.25	336	*e*P	Pn	18 14 15.3	+0.9
PCG				*e*S	Sn	18 14 30.3	-0.1
MTO3	Montecristo	1.34	31	*e*P	Pn	18 14 15.3	-0.3
NBG	Las Nubes	1.36	349	*e*P	Pn	18 14 17.2	+1.2
NBG				*e*S	Sn	18 14 34.1	+1.0
FUG	Fuego 3	1.41	328	*e*P	Pn	18 14 16.2	-0.3
FUG				*e*S	Sn	18 14 32.5	-1.6
STG3	Santiaguito 3,	2.05	315	*e*P	Pn	18 14 26.3	+0.9
STG3				*e*S	Sn	18 14 48.9	-1.3

IDC 18 18:26:54.5±1.4, 33°.06N×39°.46W, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.6/42, mbtmp3.6/7, MS3.3/13, Ms1 3.3/13, ms1mx3.1/31, Error ellipse: s-maj=53.4km s-min=21.8km az=2.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SJG	San Juan	28.19	245	LR	LR	18 41 22.6	
	comp=Z,29nm,20.5s,baz=84,slow=31						
SCHQ	Schefferville	29.04	327	LR	LR	18 43 11.7	
	comp=Z,52nm,21.6s,baz=104,slow=34						
MDT	Midelt	29.18	81	LR	LR	18 41 49.4	
	comp=Z,48nm,20.7s,baz=305,slow=31						
DBIC	Dimbokro	41.48	122	LR	LR	18 48 46.4	

	comp=Z,34nm,20.3s,baz=308,slow=32						
GERES	GERESS Array B	42.25	52	P	P	18 34 50.2	+0.8
	0.4nm,0.7s,baz=259,slow=9.9,SNR=2.6						
TORD	Torodi Ar. Bea	42.39	108	P	P	18 34 50.8	0.0
	0.5nm,0.5s,baz=299,slow=7.5,SNR=6.8						
TORD				LR	LR	18 51 13.5	
	comp=Z,58nm,18.4s,baz=310,slow=34						
NOA	NORSAR Array B	42.84	34	LR	LR	18 51 28.6	
	comp=Z,7.1nm,18.2s,baz=265,slow=34						
ULM	Lac du Bonnet	44.39	310	LR	LR	18 53 55.2	
	comp=Z,66nm,18.2s,baz=112,slow=36						
H10N2	ASCENSION HYDR	47.10	145	T	T	19 25 27.8	
	baz=331,slow=75,SNR=386						
H10N3	ASCENSION HYDR	47.10	145	T	T	19 25 28.2	
	baz=331,slow=75,SNR=322						
H10N1	ASCENSION HYDR	47.12	145	T	T	19 25 29.3	
	baz=331,slow=75,SNR=428						
H10S1	ASCENSION HYDR	47.99	146	T	T	19 26 54.8	
	baz=332,slow=75,SNR=54						
H10S3	ASCENSION HYDR	47.99	146	T	T	19 26 56.3	
	baz=332,slow=75,SNR=56						
H10S2	ASCENSION HYDR	48.01	146	T	T	19 26 38.1	
	baz=332,slow=75,SNR=50						
BDFB	Brasilia	49.11	191	LR	LR	18 53 43.2	
	comp=Z,26nm,19.8s,baz=204,slow=33						
AKASG	Malin Array Be	52.18	49	P	P	18 36 07.1	+0.3
	1.4nm,0.6s,baz=273,slow=6.7,SNR=4.6						
AKASG				LR	LR	18 55 52.8	
	comp=Z,14nm,20.0s,baz=300,slow=33						
TXAR	Lajitas Array	54.29	284	P	P	18 36 23.2	+0.5
	0.3nm,0.7s,baz=113,slow=6.9,SNR=3.3						
TXAR				LR	LR	18 57 20.5	
	comp=Z,43nm,20.5s,baz=0.0,slow=34						
PDAR	Pinedale Array	54.70	302	P	P	18 36 25.0	-0.7
	1.1nm,0.9s,baz=85,slow=9.1,SNR=6.3						
BRTR	Keskin Array B	57.73	61	P	P	18 36 46.1	-1.3
	1.2nm,0.8s,baz=272,slow=7.0,SNR=5.5						
NVAR	Mina Array Bea	62.37	300	LR	LR	19 05 02.0	
	comp=Z,61nm,18.2s,baz=98,slow=37						
YBH	Yreka Blue Hor	64.28	304	LR	LR	19 05 48.5	
	comp=Z,35nm,19.0s,baz=104,slow=36						
KMBO	Kilima Mbogo	79.49	98	LR	LR	19 15 08.1	
	comp=Z,28nm,18.3s,baz=95,slow=36						
MKAR	Makanchi Array	84.79	36	P	P	18 39 30.6	-0.1
	1.1nm,1.0s,baz=316,slow=6.0,SNR=6.2						

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*ISCJB **18** 18:42:20.0±0.7, 18.°60S±0.°09×168.°9E±0.°1, h200^{km}, mb4.3/13, Error ellipse: s-maj=19.2km s-min=9.9km az=26.9*

*NEIC **18** 18:42:22.0±2.1, 18.°88S×169.°12E, h217^{km}±11^{km}, mb4.7/9, Error ellipse: s-maj=34.1km s-min=6.3km az=124.0*

*IDC **18** 18:42:22.4±2.7, 18.°90S×169.°23E, h225^{km}±29^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.5/32, mbtmp4.3/7, MS3.2/3, Ms1 3.2/3, ms1mx2.8/23, Error ellipse: s-maj=63.0km s-min=23.9km az=144.0*

ISC 18 18:42:20.5±0.9**, 18.°7S**±0.°1×**169.°1E**±0.°2**, h200^{km}, n26, σ1^{s}14**/25**, mb4.5**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.99	200	ePn	Pn	18 43 09.5	-0.5
DZM	Mont Dzumac	4.22	216	P	Pn	18 43 25.9	+0.7
	8.9nm,0.3s,baz=52,slow=2.6,SNR=83						
DZM				S	Sn	18 44 17.6	+1.5
	1.7nm,0.3s,baz=164,slow=16,SNR=4.6						
DZM				LR	LR	18 44 41.8	
	comp=Z,195nm,18.8s,baz=26,slow=34						
PINNC	Pines Island,	4.23	201	ePn	Pn	18 43 24.8	-0.4
HNR	Honiara	12.78	315	LR	LR	18 50 03.6	
	comp=Z,52nm,19.8s,baz=174,slow=35						
STKA	Stephens Creek	28.06	237	P	P	18 47 53.7	+0.2
	2.9nm,0.7s,baz=53,slow=8.1,SNR=7.1						
STKA	Stephens Creek	28.06	237	eP	P	18 47 53.3	-0.2
	14nm,2.0s						
BBOO	Buckleboo	32.79	238	eP	P	18 48 34.5	-0.6
	119nm,1.6s						
WB2	Warramunga Arr	32.81	262	eP	P	18 48 34.3	-1.1
	41nm,1.9s						
WRAB	Tennant Creek	32.81	262	eP	P	18 48 34.2	-1.2
	37nm,1.9s						
WR1	Warramunga Arr	32.82	262	eP	P	18 48 34.8	-0.7
WRA	Warramunga Arr	32.82	262	P	P	18 48 34.8	-0.7
	1.4nm,0.3s,baz=90,slow=7.6,SNR=50						
ASAR	Alice Springs	33.16	255	P	P	18 48 37.9	-0.5
	12nm,0.4s,baz=81,slow=8.7,SNR=470						
MTN	Manton Dam	36.97	273	eP	P	18 49 11.8	+0.9
	30nm,1.6s						
QSPA	South Pole Qui	71.39	180	LR	LR	19 20 04.3	
	comp=Z,45nm,21.7s,baz=346,slow=32						
PETK	Petropavlovsk-	72.15	353	P	P	18 53 24.8	+1.8
	2.5nm,0.6s,baz=116,slow=6.8,SNR=3.8						
PEA1	Petropavlovsk-	72.16	353	eP	P	18 53 24.8	+1.7
ENH	Enshi	75.22	309	eP	P	18 53 39.4	-2.1
	85nm,1.5s						
SONA0	Songino Array	86.69	323	eP	P	18 54 43.0	+1.2
SONM	Songino Array	86.69	323	P	P	18 54 43.0	+1.2
	0.5nm,0.5s,baz=139,slow=5.1,SNR=6.0						
PINE	Pine Mountain	89.07	43	eP	P	18 54 54.5	+1.3
	6.9nm,1.1s						
ILAR	Eielson Array	89.72	17	P	P	18 54 54.1	-1.4
	0.5nm,0.6s,baz=226,slow=4.9,SNR=3.9						
ILB	Eielson Array	89.72	17	eP	P	18 54 54.1	-1.4
G08A	Pilot Rock	91.01	42	eP	P	18 55 02.6	+0.5
	3.7nm,1.1s						
ARA0	ARCESS Array S	124.48	345	ePKPdf	PKPdf	19 00 54.5	-0.8
ARCES	ARCESS Array B	124.48	345	PKP	PKPdf	19 00 54.5	-0.8
	2.7nm,1.0s,baz=66,slow=4.1,SNR=7.1						
GERES	GERESS Array B	143.93	332	PKP	PKPab	19 01 30.5	+0.6
	0.4nm,0.5s,baz=49,slow=4.1,SNR=7.2						

SVSA 18 18:45:01.8±1.0**, 38.°93N×29.°05W, h1**^{km}±9^{km}**, MD3.5, ML2.8, Error ellipse: s-maj=13.6km s-min=4.4km az=88.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	Cedros	0.40	138	eP	Pg	18 45 09.2	-0.3
PCED				eS	Sg	18 45 14.8	+0.1
PCED				A	A	18 45 16.6	
	308nm,0.7s						
CALA	Caldeira	0.44	142	eS	Sg	18 45 15.5	-0.3
HOR	Horta	0.52	141	eP	Pg	18 45 10.8	-0.8
HOR				eS	Sg	18 45 17.8	-0.5
HOR				A	A	18 45 19.3	
	524nm,0.3s						
PCAN	Candelaria	0.64	136	eP	Pg	18 45 12.8	-1.2
PCAN				eS	Sg	18 45 21.5	-0.7
PCAN				A	A	18 45 24.8	
	191nm,0.2s						
PICO	Pico	0.65	131	eP	Pg	18 45 13.1	-1.1
PICO				eS	Sg	18 45 22.0	-0.5
PICO				A	A	18 45 24.0	
	396nm,0.2s						
ROSA	Rosais	0.66	108	eP	Pg	18 45 13.5	-1.0
ROSA				eS	Sg	18 45 21.6	-1.4
ROSA				A	A	18 45 24.9	
	94nm,0.2s						
PPNO	Prainha do Nor	0.76	126	eP	Pg	18 45 14.5	-1.9
PPNO				eS	Sg	18 45 24.9	-1.4
PPNO				A	A	18 45 29.6	
	189nm,0.2s						
PMAN	Manadas	0.80	111	eP	Pg	18 45 15.2	-2.0
PMAN				eS	Sg	18 45 25.4	-2.2
PMAN				A	A	18 45 26.2	
	101nm,0.1s						
CMLA	Cha da Macela	3.00	112	eP	Pn	18 45 46.1	-4.4
PSMA	Santa Maria	3.65	121	eP	Pn	18 45 54.7	-4.7
PSMA				eS	Sn	18 46 34.2	-8.8
PSMA				A	A	18 46 37.0	
	4.7nm,0.2s						
PSMN	Pico do Norte,	3.69	120	eP	Pn	18 45 55.4	-4.5
PSMN				eS	Sn	18 46 35.1	-8.9
PSMN				A	A	18 46 36.2	
	3.2nm,0.1s						

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*NNC **18** 18:52:55.2±3.7, 45.°01N×80.°15E, h0^{km}, mb2.5, mpv2.3, Error ellipse: s-maj=38.6km s-min=24.1km az=103.0*

SOME 18 18:52:54.4, 42.°03N×81.°05E, h0^{km}, 2C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.50	340	P	Pg	18 53 23.2	0.0
	0.9nm,0.2s						
KTMS				S	Sn	18 53 44.5	+1.3
	2.3nm,0.2s						
KTMS	Ketmen	1.50	340	eP	Pg	18 53 23.2	0.0
	0.9nm,0.2s						
KTMS				eS	Sn	18 53 44.5	+1.3
	2.9nm,0.3s						
PDGK	Podgornoye	1.73	319	P	Pb	18 53 27.3	+0.1
	0.5nm,0.3s						
PDGK				S	Sg	18 53 51.3	+1.3
	1.6nm,0.4s						
PDGK	Podgornoye	1.73	319	⇑P	Pb	18 53 27.2	0.0
	1.7nm,0.9s						
PDGK				⇑S	Sg	18 53 50.9	+0.9
	1.1nm,0.4s						
UZB	Uzynbulak	1.87	307	P	Pg	18 53 30.1	-0.1
	1.0nm,0.3s						
UZB				S	Sg	18 53 55.9	+1.6
	1.5nm,0.3s						
UZB	Uzynbulak	1.87	307	eP	Pg	18 53 30.1	-0.1
	1.0nm,0.3s						
UZB				eS	Sg	18 53 55.9	+1.6
	1.5nm,0.3s						
SATY	Saty	2.21	299	eP	Pb	18 53 35.3	0.0
	1.0nm,0.2s						
SATY				eS	Sg	18 54 04.5	-0.8
	2.8nm,0.1s						
KPKS	Kokpek	2.26	310	eP	Pb	18 53 36.6	+0.6
	3.6nm,0.3s						
KPKS				eS	Sg	18 54 06.2	-0.7
	7.9nm,0.4s						

IDC 18 19:06:19.2±2.2**, 5.°15N×125.°25E, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.6**/32**, mbtmp4.0**/3**, Error ellipse: s-maj=208.1km s-min=23.9km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.48	161	P	P	19 11 59.3	+0.9
	1.5nm,0.3s,baz=341,slow=11,SNR=28						
ASAR	Alice Springs	29.86	164	P	P	19 12 27.9	-0.7
	0.5nm,0.5s,baz=336,slow=7.8,SNR=24						
MKAR	Makanchi Array	55.56	325	P	P	19 15 56.4	-0.1
	0.8nm,0.4s,baz=124,slow=7.6,SNR=18						

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*SIK **18** 19:08:15.5, 42.°63N×20.°42E, h50^{km}, M2.4*

*BEO **18** 19:08:17.4±0.6, 42.°42N×20.°19E, h5^{km}, ML2.3/11*

*PDG **18** 19:08:17.9±0.4, 42.°46N×20.°13E, h5^{km}±1^{km}, MD2.4/1, ML2.3/10, Error ellipse: s-maj=0.7km s-min=1.4km az=0.0*

*TIR **18** 19:08:17.1, 42.°49N×20.°16E, h8^{km}, Md2.6/4*

*SKO **18** 19:08:19.3, 42.°51N×20.°06E, h6^{km}, M1.5, ML2.5*

ISC 18 19:08:17.7±1.0**, 42.°49N**±0.°02×**20.°16E**±0.°02**, h6**^{km}±8^{km}**, n70, σ1^{s}44**/110**, 11C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCI	Bajram Curri	0.14	208	i PG	Pg	19 08 20.6	+0.1
BCI				i SG	Sg	19 08 23.2	+0.7
PVY	Plav	0.18	306	⇑iPg	Pg	19 08 21.4	0.0
PVY				i Sg	Sg	19 08 24.9	+1.0
BEY	Berane	0.43	333	i Pg	Pg	19 08 25.8	-0.3
IVA	Berane	0.43	333	⇓iPg	Pg	19 08 26.0	-0.1
IVA				i Sg	Sg	19 08 32.9	+1.1
PUK	Puka	0.48	204	i PG	Pg	19 08 27.1	0.0
PUK				i SG	Sb	19 08 34.8	-1.3
KOME	Kolasin	0.60	308	⇑iPg	Pg	19 08 28.9	-0.3
KOME				i Sg	Sb	19 08 38.2	-1.2
PDG	Podgorica	0.67	265	⇓iP	Pg	19 08 29.5	-1.1
PDG	Podgorica	0.67	265	S	Sg	19 08 39.8	+0.5
PDG	Podgorica	0.67	265	i Pg	Pg	19 08 29.5	-1.1
PDG				i Sg	Sg	19 08 39.7	+0.4
PDG	Podgorica	0.67	265	ePn	Pg	19 08 29.3	-1.3
TTG	Podgorica	0.67	265	⇑iPg	Pg	19 08 29.5	-1.1
TTG				i Sg	Sg	19 08 40.0	+0.7
DRME	Dracevica, Mon	0.78	248	⇓iPg	Pg	19 08 31.6	-1.1
DRME				i Sg	Sb	19 08 43.9	-0.7
DRME	Dracevica, Mon	0.78	248	ePn	Pg	19 08 31.0	-1.7
SJES	Sjenica	0.79	350	ePg	Pg	19 08 32.5	-0.3
SJES				eSg	Sb	19 08 43.8	-1.0
PHP	Peshkopia	0.83	165	i PG	Pg	19 08 33.9	+0.3
PHP				i SG	Sb	19 08 46.1	+0.1
ULC	Ulcinj	0.85	233	⇓iPg	Pg	19 08 33.0	-1.2
ULC				i Sg	Sb	19 08 47.1	+0.4
ULC	Ulcinj	0.85	233	i Pg	Pg	19 08 34.1	0.0
CEME	Cevo	0.92	274	⇑iPg	Pg	19 08 34.2	-1.1
CEME				i Sg	Sb	19 08 48.8	+0.2
NKY	Niksic	0.92	291	⇓iPg	Pb	19 08 35.9	-0.2
NKY				i Sg	Sb	19 08 49.3	+0.7
NKME	Niksic	0.93	288	⇑iPg	Pb	19 08 36.0	-0.3
NKME				i Sg	Sn	19 08 49.8	-1.3
BUM	Brajici-Budva	0.95	259	⇓iPg	Pg	19 08 35.1	-0.9
BUM				i Sg	Sb	19 08 49.9	+0.3
PLE	Pljevlja	1.01	326	⇓iPg	Pb	19 08 37.7	-0.1
PLE				i Sg	Sg	19 08 50.2	-0.2
SELS	Selova	1.02	44	ePg	Pg	19 08 37.2	-0.1
SELS				eSg	Sg	19 08 49.9	-0.6
SKO	Skopje	1.08	118	ePg	Pn	19 08 40.2	+0.7
SKO				i Sg	Sn	19 08 55.9	+1.1
SKO				eLg	Lg	19 08 57.5	
	comp=E,4.5nm,0.8s						
SKO				eLg	Lg	19 08 58.7	
	comp=N,3.5nm,0.4s						
IVAS	Ivanjica	1.09	360	ePg	Pg	19 08 37.3	-1.3
IVAS				eSg	Sn	19 08 54.9	-0.1
TIR	Tirane	1.16	191	⇑iP	Pg	19 08 38.1	-1.9
TIR	Tirane	1.16	191	S	Sg	19 08 51.7	-3.3
TIR	Tirane	1.16	191	i Pg	Pg	19 08 39.2	-0.8
TIR	Tirane	1.16	191	i PG	Pb	19 08 40.1	-0.1
TIR				i SG	Sn	19 08 57.5	+0.8
UPM	Unac-Piva	1.17	308	⇑iPg	Pg	19 08 39.9	-0.2
UPM				i Sg	Sn	19 08 57.8	+0.7
UPM	Unac-Piva	1.17	308	ePn	Pg	19 08 39.9	-0.2
HCY	Herceg Novi	1.23	269	⇓iPg	Pg	19 08 41.2	-0.1
HCY				i Sg	Sn	19 08 59.4	+1.0
HCY	Herceg Novi	1.23	269	ePn	Pg	19 08 40.8	-0.5
BRY	Bratogost	1.26	290	⇓iPg	Pg	19 08 41.1	-0.8
BRY				i Sg	Sn	19 09 00.9	+1.5
BRY	Bratogost	1.26	290	ePn	Pg	19 08 41.2	-0.7
BARS	Barje	1.27	74	ePg	Pn	19 08 41.0	-1.0
BARS	Barje	1.27	74	ePg	Sg	19 08 55.6	-2.9
BARS				eSg	Sb	19 08 57.5	-1.1
BARS				eSg	Sn	19 09 25.3	+26
RUDO	Rudo	1.27	333	ePn	Pn	19 08 40.3	-1.7
TREB	Trebinje	1.35	280	ePn	Pn	19 08 40.6	-2.6
OHR	Ohrid	1.46	161	ePg	Pg	19 08 47.0	+1.3
OHR				i Sg	Sg	19 09 06.7	+2.2
OHR				eLg	Lg	19 09 07.9	
	comp=N,65nm,0.7s						
OHR				eLg	Lg	19 09 15.2	
	comp=E,123nm,0.7s						
GRUS	Gruza	1.46	16	ePg	Pb	19 08 44.9	-0.4
GRUS				eSg	Sg	19 09 06.3	+1.7
BBLS	Lazići	1.48	339	ePg	Pb	19 08 45.6	-0.2
BBLS				eSg	Sg	19 09 06.1	+0.7
BBLS	Lazići	1.48	339	ePn	Pn	19 08 45.1	+0.1
DBRK	Dubrovnik	1.50	278	ePn	Pg	19 08 46.4	0.0
DBRK				Sn	Sg	19 09 08.8	+3.0
BOVS	Bovan	1.61	44	ePg	Pb	19 08 47.2	-0.8
BOVS				eSg	Sb	19 09 08.8	+0.2
DIVS	Divibare	1.61	356	ePg	Pn	19 08 47.2	+0.3
DIVS				eSg	Sg	19 09 11.3	+1.7
DIVS	Divibare	1.61	356	ePn	Pn	19 08 47.1	+0.2
TRUS	Trudelj	1.75	6	ePg	Pb	19 08 49.3	-0.9
TRUS				eSg	Sg	19 09 15.4	+1.6
HAPS	Han Pijesak,Bl	1.82	332	ePg	Pn	19 08 50.2	+0.4
HAPS				eSg	Sg	19 09 18.3	+1.9
HAPS	Han Pijesak,Bl	1.82	332	ePn	Pn	19 08 46.3	-3.5
STON	Ston	1.85	283	ePn	Pb	19 08 52.2	+0.2
STON				Sn	Sg	19 09 18.0	+0.8
STON	Ston	1.85	283	ePn	Pb	19 08 51.9	-0.1
ZAPS	Zavoj	1.98	66	ePg	Pb	19 08 53.1	-1.2
ZAPS				eSg	Sg	19 09 20.9	-0.6
ZAGS	Zajecar	2.02	48	ePg	Pn	19 08 53.1	+0.8
TEKS	Tekeris	2.11	348	ePg	Pb	19 08 57.0	+0.6
TEKS				eSg	Sg	19 09 26.0	+0.4
KUBS	Kucevo	2.22	29	ePg	Pb	19 08 58.3	0.0
KUBS				eSg	Sg	19 09 29.3	+0.3
VTS	Vitosha	2.28	86	⇑iP	Pn	19 08 56.3	+0.2
VTS	Vitosha	2.28	86	S	Sb	19 09 27.5	-0.4
VTS	Vitosha	2.28	86	i Pn	Pb	19 08 58.7	-0.7
MAKA	Makarska	2.44	290	ePn	Pb	19 09 01.5	-0.5
MAKA				Sn	Sg	19 09 34.8	-1.3
MDVR	Moldovita	2.56	26	⇑iP	Pn	19 09 00.4	+0.6
HVAR	Hvar	2.81	285	ePn	Pn	19 09 02.4	-0.8
BZS	Buzias	3.30	18	⇑iP	Pn	19 09 11.4	+1.4
GZR	Gura Zlata	3.47	32	⇑iP	Pn	19 09 13.8	+1.5
ZIRJ	Zirje	3.50	291	ePn	Pn	19 09 15.4	+2.7
ZIRJ				Sn	Sb	19 09 58.6	-4.3
MORI	Morici	3.53	294	ePn	Pn	19 09 16.6	+3.4
MORI				Sn	Sb	19 09 59.9	-3.9
UDBI	Udbina	3.79	304	ePn	Pb	19 09 22.2	-2.9
MORH	Mrgy, Hungar	3.88	344	ePn	Pn	19 09 17.4	-0.5
DUGI	Dugi Otok	4.02	294	ePn	Pn	19 09 22.4	+2.6
DUGI				Sn	Sn	19 10 11.5	+4.3
NVLJ	Novalja	4.37	300	ePn	Pn	19 09 27.5	+2.9

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*SJA **18** 19:11:40.6±0.8, 22.°29S×69.°22W, h79^{km}±2^{km}, ML3.3, MW3.5*

*GUC **18** 19:11:40.9±0.4, 22.°29S×69.°23W, h83^{km}±2^{km}, ML3.2*

*ISCJB **18** 19:11:41.5±0.8, 22.°28S±0.°03×69.°23W±0.°06, h84^{km}±7^{km}, Error ellipse: s-maj=8.8km s-min=5.5km az=176.5*

ISC 18 19:11:42.8±1.5**, 22.°29S**±0.°03×**69.°24W**±0.°05**, h72**^{km}±10^{km}**, n24, σ0^{s}70**/36**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.45	137	eP	Pn	19 11 54.7	-1.0
LVC				eS	Sn	19 12 05.3	+0.1
LVC				IAML		19 12 06.0	
	comp=Z,992nm,0.2s						
PB09	IPOC Station P	0.49	360	eP	Pn	19 11 55.5	-0.4
PB09				eS	Sn	19 12 06.5	+1.0
PB09	IPOC Station P	0.49	360	i P	Pn	19 11 55.5	-0.4
PB09				eS	Sn	19 12 06.4	+1.0
PB09				IAML		19 12 07.9	
	comp=E,1μm,0.5s						
PB06	IPOC Station P	0.52	216	eP	Pn	19 11 55.5	-0.7
PB06				eS	Sn	19 12 06.8	+0.8
PB06	IPOC Station P	0.52	216	i P	Pn	19 11 55.5	-0.7
PB06				eS	Sn	19 12 06.8	+0.8
PB03	IPOC Station P	0.53	296	eP	Pn	19 11 55.8	-0.5
PB03	IPOC Station P	0.53	296	i P	Pn	19 11 55.8	-0.5
PB03				eS	Sn	19 12 07.1	+1.0
PB03				IAML		19 12 07.5	
	comp=E,2μm,0.1s						
PB07	IPOC Station P	0.82	313	eP	Pn	19 11 58.9	-0.5
PB07	IPOC Station P	0.82	313	i P	Pn	19 11 58.9	-0.5
PB07				eS	Sn	19 12 12.1	+0.4
PB07				IAML		19 12 13.2	
	comp=E,861nm,0.2s						
PB04	IPOC Station P	0.84	267	eP	Pn	19 11 58.9	-0.8
PB04	IPOC Station P	0.84	267	i P	Pn	19 11 58.9	-0.8
PB04				eS	Sn	19 12 13.0	+0.8
PB04				IAML		19 12 17.7	
	comp=N,619nm,0.1s						
PB15	IPOC Station P	0.94	193	eP	Pn	19 12 00.1	-0.9
PB15	IPOC Station P	0.94	193	i P	Pn	19 12 00.0	-0.9
PB15				eS	Sn	19 12 14.7	+0.3
PB05	IPOC Station P	1.05	237	eP	Pn	19 12 01.4	-0.8
PB05	IPOC Station P	1.05	237	i P	Pn	19 12 01.3	-0.9
PB05				eS	Sn	19 12 17.0	+0.3
PB05				IAML		19 12 19.7	
	comp=N,955nm,0.3s						
PB02	IPOC Station P	1.14	327	eP	Pn	19 12 02.6	-0.7
PB02	IPOC Station P	1.14	327	i P	Pn	19 12 02.6	-0.7
PB02				eS	Sn	19 12 18.7	+0.2
PB01	IPOC Station P	1.26	349	i P	Pn	19 12 03.9	-0.9
PB01				eS	Sn	19 12 21.4	+0.2
PB01				IAML		19 12 22.7	
	comp=E,1μm,0.3s						
PB10	IPOC Station P	1.72	224	eP	Pn	19 12 11.0	+0.2
PB11	IPOC Station P	2.54	351	eP	Pn	19 12 21.6	-0.4
PB14	IPOC Station P	2.56	204	eP	Pn	19 12 22.7	+0.2
PSGCX	Pisagua	2.80	343	eP	Pn	19 12 25.0	-0.4
MNMCX	Minye Minye	3.15	354	eP	Pn	19 12 29.7	-0.8
HJA	Humahuaca	3.65	105	eP	Pn	19 12 37.4	+0.1

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*NEIC **18** 19:14:01.0±1.1, 57.°29S×25.°87W, h44^{km}±7^{km}, mb4.7/11, Error ellipse: s-maj=28.6km s-min=17.9km az=57.0*

*ISCJB **18** 19:14:01.3±0.5, 57.°28S±0.°08×25.°8W±0.°2, h65^{km}, mb4.5/11, Error ellipse: s-maj=20.5km s-min=8.9km az=154.9*

*IDC **18** 19:14:01.7±6.0, 57.°26S×25.°55W, h50^{km}±56^{km}, mb4.3/5, mb1 4.3/6, mb1mx3.9/23, mbtmp4.4/6, ML3.9/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/27, Error ellipse: s-maj=35.6km s-min=20.2km az=72.0*

ISC 18 19:14:03.2±0.6**, 57.°3S**±0.°1×**25.°8W**±0.°2**, h65^{km}, n59, σ0^{s}69**/53**, mb4.6**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.34	158	P	Pn	19 17 34.7	-0.7
VNA3	Neumayer Olymp	15.55	160	P	Pn	19 17 36.6	-1.4
SNAA	Sanae	17.28	155	P	Pn	19 17 59.5	-0.3
SNAA	Sanae	17.28	155	P	Pn	19 17 59.4	-0.3
	0.4nm,0.3s,baz=319,slow=15,SNR=15						
SNAA	Sanae	17.28	155	eP	Pn	19 17 59.3	-0.4
	11nm,1.3s						
QSPA	South Pole Qui	32.94	180	P	P	19 20 31.3	+0.1
	6.8nm,0.6s,baz=199,slow=1.4,SNR=88						
QSPA	South Pole Qui	32.94	180	eP	P	19 20 31.1	0.0
	8.2nm,0.7s						
PLCA	Paso Flores	32.98	281	LR	LR	19 33 02.5	
	comp=Z,34nm,18.2s,baz=184,slow=34						
CPUP	Villa Florida	38.21	311	LR	LR	19 34 23.8	
	comp=Z,15nm,21.4s,baz=200,slow=32						
GO02	Mina Guanaco	44.75	297	eP	P	19 22 07.7	-2.6
	34nm,1.6s						
BDFB	Brasilia	44.84	329	P	P	19 22 12.4	+1.6
	3.1nm,0.5s,baz=242,slow=3.6,SNR=4.3						
BDFB	Brasilia	44.84	329	eP	P	19 22 10.5	-0.3
	36nm,2.0s						
BDFB				eP	P	19 22 12.4	+1.6
SBA	Scott Base	44.87	184	eP	P	19 22 11.8	+1.5
	17nm,1.8s						
VNDA	Vanda	45.35	182	P	P	19 22 14.7	+0.6
	3.5nm,0.6s,baz=185,slow=7.0,SNR=40						
BOSA	Boshof	45.57	73	LR	LR	19 37 06.2	
	comp=Z,54nm,18.1s,baz=206,slow=30						
LVC	Limon Verde	46.59	300	eP	P	19 22 24.7	-0.2
	8.3nm,1.1s						
H10S2	ASCENSION HYDR	49.01	15	T	T	20 16 27.7	
	baz=188,slow=75,SNR=5.5						
H10S3	ASCENSION HYDR	49.01	15	T	T	20 16 29.9	
	baz=188,slow=75,SNR=33						
H10S1	ASCENSION HYDR	49.02	15	T	T	20 16 28.1	
	baz=188,slow=75,SNR=30						
GO01	Chusmiza	49.26	301	eP	P	19 22 45.0	-0.6
	34nm,2.0s						
MNMC	Minye Minye	49.91	301	eP	P	19 22 49.8	-0.6
	8.8nm,1.0s						
LPAZ	La Paz	51.72	305	P	P	19 23 04.4	0.0
	5.2nm,0.6s,baz=150,slow=5.6,SNR=22						
LPAZ	La Paz	51.72	305	eP	P	19 23 04.2	-0.2
	5.0nm,0.5s						
MBAR	Mbarara	72.07	61	LR	LR	19 53 23.2	
	comp=Z,59nm,20.5s,baz=136,slow=33						
TOA0	Torodi Ar. Sit	73.80	28	eP	P	19 25 30.9	+0.5
	3.9nm,0.8s						
TORD	Torodi Ar. Bea	73.80	28	P	P	19 25 29.6	-0.7
	2.1nm,0.5s,baz=196,slow=6.5,SNR=21						
TOA1	Torodi Ar. Sit	73.80	28	eP	P	19 25 29.6	-0.8
NV01	Mina Array Sit	122.58	291	ePKPdf	PKiKP	19 32 51.9	+1.0
NVAR	Mina Array Bea	122.58	291	PKP	PKiKP	19 32 51.9	+1.0
	0.4nm,0.6s,baz=112,slow=3.1,SNR=6.0						
FIA0	FINESS Array S	125.15	28	ePKPdf	PKiKP	19 32 54.5	-0.3
FINES	FINESS Array B	125.15	28	PKP	PKiKP	19 32 54.5	-0.3
	1.2nm,0.6s,baz=222,slow=2.6,SNR=7.3						
BMO	Blue Mountains	126.90	297	ePKPdf	PKiKP	19 32 59.0	-0.1
YKA	Yellowknife Ar	137.62	316	PKP	PKPdf	19 33 18.3	+0.2
	1.0nm,0.4s,baz=132,slow=2.0,SNR=7.4						
YKB5	Yellowknife Ar	137.62	316	ePKPdf	PKPdf	19 33 18.3	+0.2
HYT	Haines Junctio	146.15	305	ePKPdf	PKPab	19 33 35.2	-0.3
INK	Inuvik	147.26	319	ePKPdf	PKPbc	19 33 37.3	-0.1
EPYK	Eagle Plains	147.86	315	ePKPbc	PKPbc	19 33 39.1	-0.1
DAWY	Dawson	148.19	310	ePKPbc	PKPbc	19 33 39.9	-0.2
EGAK	Eagle	149.15	311	ePKPbc	PKPbc	19 33 42.0	-0.5
SONA0	Songino Array	150.03	88	ePKPbc	PKPbc	19 33 45.2	-0.2
SONM	Songino Array	150.03	88	PKPbc	PKPbc	19 33 45.2	-0.2

	1.5nm,0.6s,baz=223,slow=3.2,SNR=11						
DOT	Dot Lake	150.03	308	*e*PKPbc	PKiKP	19 33 45.4	-0.2
SCRK	Sand Creek	150.09	309	*e*PKPbc	PKiKP	19 33 45.5	-0.3
RIDG	Independent Ri	150.39	308	*e*PKPbc	PKiKP	19 33 46.5	+0.2
PAX	Paxson	150.44	306	*e*PKPbc	PKiKP	19 33 46.0	-0.5
SCM	Sheep Creek Mo	150.92	304	*e*PKPbc	PKiKP	19 33 47.7	+0.1
DHY	Denali Highway	151.31	306	*e*PKPbc	PKiKP	19 33 48.3	-0.1
SML	Sawmill	151.37	303	*e*PKPbc	PKiKP	19 33 48.2	-0.2
HDA	Harding Lake	151.46	309	*e*PKPbc	PKiKP	19 33 49.0	+0.6
ILAR	Eielson Array	151.52	310	PKPbc	PKiKP	19 33 48.3	-0.2
	6.0nm,0.7s,baz=147,slow=3.1,SNR=53						
ILB	Eielson Array	151.52	310	*e*PKPbc	PKiKP	19 33 48.3	-0.2
CCB	Clear Creek Bu	151.87	309	*e*PKPbc	PKPbc	19 33 48.7	-0.2
WRH	Wood River Hil	151.96	309	*e*PKPbc	PKiKP	19 33 49.2	-0.2
RND	Reindeer	152.04	306	*e*PKPbc	PKiKP	19 33 50.2	+0.4
MCK	McKinley	152.15	307	*e*PKPbc	PKiKP	19 33 49.7	-0.2
BWN	Browne	152.47	308	*e*PKPbc	PKiKP	19 33 50.8	+0.2
BPAW	Bear Paw Mtn.	153.12	307	*e*PKPbc	PKPbc	19 33 51.6	-0.1
TOLK	Toolik Lake Re	153.13	318	*e*PKPbc	PKiKP	19 33 52.3	+0.5
CAST	Castle Rocks	153.46	306	*e*PKPbc	PKPbc	19 33 52.3	-0.2

IDC ***18*** *19:32:53.3±1.0, 8°.34S×117°.12E, h0^{km}, mb4.1/7, mb1 4.3/9, mb1mx3.9/42, mbtmp4.2/9, ML4.2/2, Error ellipse: s-maj=29.7km s-min=17.1km az=71.0*

ISCJB ***18*** *19:32:56.0±0.3, 8°.33S±0°.04×117°.20E±0°.02, h33^{km}, mb4.0/8, Error ellipse: s-maj=5.5km s-min=3.2km az=11.4*

DJA ***18*** *19:32:56.3±0.5, 8°S±3°×11°7E±°, h22^{km}±6^{km}, M4.3/16, mb4.5/7, mB5.2/1, MLv4.3/16, Mw(mB)4.6/1*

NEIC ***18*** *19:32:58.2±2.3, 8°.34S×117°.19E, h41^{km}±12^{km}, mb4.3/3, Error ellipse: s-maj=14.1km s-min=10.1km az=178.0*

ISC 18 19:32:57.7±0.6**, 8°.38S**±0°.05×**117°.18E**±0°.04**, h35^{km}, n39, σ1^s.22**/48**, mb4.1**/8**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.74	127	P	Pn	19 33 10.1	-1.6
PLAI				S	Sn	19 33 20.3	-1.5
SRBI	Singaraja	1.97	278	P	Pn	19 33 28.6	0.0
SRBI				S	Sn	19 33 51.4	-0.7
DNP	Denpasar	1.97	261	P	Pn	19 33 29.1	+0.5
WBSI	Waikabubak, Su	2.52	120	P	Pn	19 33 36.8	+0.6
WBSI				S	Sn	19 34 08.2	+2.4
JAGI	Jajag, Banyuwa	3.00	268	*e*Pn	Pn	19 33 42.9	+0.2
JAGI	Jajag, Banyuwa	3.00	268	P	Pn	19 33 43.0	+0.2
JAGI				S	Sn	19 34 17.5	0.0
WSI	Waingapu	3.34	113	P	Pn	19 33 47.9	+0.5
KMMI	Kalianget	3.45	292	P	Pn	19 33 50.1	+1.1
KMMI				S	Sn	19 34 30.0	+1.4
KAPI	Kappang	4.21	38	Pn	Pn	19 33 59.3	-0.1
	11nm,0.3s,baz=204,slow=4.9,SNR=24						
KAPI				Sn	Sn	19 34 47.0	-0.4
	19nm,0.3s,baz=24,slow=22,SNR=8.5						
BKSI	Bulukumba	4.21	44	P	Pn	19 33 59.4	-0.1
BKSI				S	Sn	19 34 46.0	-1.6
EDFI	Ende, Flores	4.48	95	P	Pn	19 34 03.6	+0.4
GRJI	Gresik	4.88	287	P	Pn	19 34 09.3	+0.6
GRJI				S	Sn	19 35 04.6	+0.6
BNSI	Bone	4.91	37	P	Pn	19 34 10.6	+1.5
MMRI	Maumere	5.01	93	*e*Pn	Pn	19 34 10.3	-0.2
MMRI	Maumere	5.01	93	P	Pn	19 34 10.5	0.0
SPSI	Sidrap Palu	5.09	31	P	Pn	19 34 09.0	-2.5
PWJI	Pagerwojo	5.33	273	P	Pn	19 34 14.1	-0.8
BATI	Baumata	6.65	106	Pn	Pn	19 34 35.0	+1.9
	4.9nm,0.3s,baz=290,slow=12,SNR=12						
BATI	Baumata	6.65	106	*e*Pn	Pn	19 34 35.0	+1.9
BATI				*e*Pn	Pn	19 34 35.0	+1.9
BATI	Baumata	6.65	106	P	Pn	19 34 34.9	+1.8
SOEI	Soe	7.13	102	*e*Pn	Pn	19 34 38.0	-1.8
SOEI	Soe	7.13	102	P	Pn	19 34 41.0	+1.2
PSA00	Pilbara Seismi	13.37	169	*e*Pn	Pn	19 36 02.9	-2.2
MTN	Manton Dam	14.41	109	*e*Pn	Pn	19 36 16.6	-2.8
WRA	Warramunga Arr	20.20	126	P	P	19 37 30.3	+0.6
	7.2nm,0.3s,baz=292,slow=13,SNR=29						
WR1	Warramunga Arr	20.20	126	*e*P	P	19 37 30.3	+0.6
WRAB	Tennant Creek	20.20	126	*e*P	P	19 37 30.3	+0.5
	11nm,0.4s						
WB2	Warramunga Arr	20.21	126	*e*P	P	19 37 30.0	+0.2
AS31	Alice Springs	22.08	135	*e*P	P	19 37 48.5	-1.5
	3.2nm,1.1s						
ASAR	Alice Springs	22.08	135	P	P	19 37 50.1	+0.1
	3.5nm,0.4s,baz=313,slow=8.7,SNR=28						
NWAO	Narrogin (SRO)	24.43	180	P	P	19 38 14.2	+1.1
	3.4nm,0.5s,baz=5.0,slow=9.9,SNR=6.0						
COEN	Coen	26.09	105	*e*P	P	19 38 28.5	0.0
	14nm,1.0s						
STKA	Stephens Creek	32.58	139	P	P	19 39 27.0	+1.0
	2.0nm,0.5s,baz=311,slow=12,SNR=3.6						
USRK	Ussuriysk Ar.	54.02	13	P	P	19 42 19.5	+1.0
	1.6nm,0.8s,baz=165,slow=5.2,SNR=4.2						
SONA0	Songino Array	56.78	351	*e*P	P	19 42 39.2	+0.7
SONM	Songino Array	56.78	351	P	P	19 42 39.2	+0.7
	1.0nm,0.5s,baz=168,slow=8.7,SNR=6.7						
MK32	Makanchi Array	63.10	334	*e*P	P	19 43 21.4	-0.3
MKAR	Makanchi Array	63.10	334	P	P	19 43 21.4	-0.3
	0.4nm,0.5s,baz=151,slow=7.8,SNR=5.9						
CPUP	Villa Florida	145.09	189	PKPbc	PKPdf	19 52 32.8	+0.5
	2.7nm,0.7s,baz=108,slow=3.2,SNR=4.3						

NIED ***18*** *19:38:00, 28°.10N×130°.40E, h11^{km}, Mw4.0 Best double couple: M$_0$1.15000×10^{15} NP1:φ$_s$172.00000°, δ52.00000°, λ28.00000°. NP2:φ$_s$64.00000°, δ68.00000°, λ139.00000°.*

IDC ***18*** *19:38:28.8±2.2, 28°.34N×130°.13E, h0^{km}, mb3.7/8, mb1 3.8/8, mb1mx3.6/49, mbtmp3.7/8, ML2.5/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/43, Error ellipse: s-maj=54.7km s-min=23.9km az=131.0*

JMA ***18*** *19:38:29.9±0.1, 28°.15N×130°.37E, h24^{km}±1^{km}, M3.5*

JMA Felt I J1.

ISC 18 19:38:28.1±1.5**, 28°.19N**±0°.03×**130°.32E**±0°.04**, h4^{km}**±9^{km}**, n37, σ1^s.16**/49**, mb3.8**/8**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	0.33	292	P	Pn	19 38 38.1	-1.5
JZK				*e*S	Sb	19 38 44.0	+1.9
JAM	Amami Oshima	0.66	289	P	Pn	19 38 43.6	-0.6
JAM				*e*S	Sn	19 38 52.8	-2.3
JAMN	Amaminishikomi	1.01	273	P	Pn	19 38 49.0	0.0
JAMN				*e*S	Sn	19 39 03.1	-0.5
JTK	Tokunoshima	1.27	252	P	Pg	19 38 53.1	+0.6
JTK				*e*S	Sg	19 39 09.9	+0.9
JTAJ	Takarajima	1.37	315	P	Pg	19 38 54.7	+0.3
JNN	Nakanoshima	1.69	347	P	Pb	19 38 59.7	0.0
JNN				*e*S	Sg	19 39 21.1	-1.3
JOKE	Okinoerabujima	1.75	242	P	Pn	19 38 59.7	+0.4
JOKE				S	Sn	19 39 21.7	-0.3
JYRO	Yoronjima	2.02	235	P	Pn	19 39 03.4	+0.5
JYRO				*e*S	Sn	19 39 27.4	-1.2
JYAK	Yakushimahirau	2.04	5	P	Pb	19 39 05.2	-0.6
JYAK				*e*S	Sb	19 39 30.6	-1.0
JMTN	Minamitane	2.26	13	P	Pb	19 39 08.1	-1.3
JMTN				*e*S	Sb	19 39 36.5	-1.2
JOW	Kunigami	2.26	234	Pn	Pn	19 39 06.7	+0.4
	2.3nm,0.3s,baz=98,slow=17,SNR=48						
JOW				Sn	Sn	19 39 34.6	0.0
	7.5nm,0.3s,baz=61,slow=30,SNR=12						
JOW	Kunigami	2.26	234	P	Pn	19 39 06.7	+0.4
JOW				*e*S	Sn	19 39 33.9	-0.7
JKC	Kuchinoerabu	2.26	357	P	Pb	19 39 08.5	-1.0
JKC				*e*S	Sb	19 39 36.2	-1.7
JIH	Iheya	2.38	242	P	Pn	19 39 08.2	+0.3
JIH				*e*S	Sn	19 39 36.2	-1.3
JKDJ	Kitadaitoujima	2.40	158	P	Pn	19 39 08.5	+0.4
JKDJ				S	Sn	19 39 36.5	-1.5
JMZ	Minamidaito 2	2.50	161	P	Pn	19 39 09.5	0.0
JMZ				*e*S	Sn	19 39 38.5	-1.9
JTN	Tanegashima 3	2.52	13	P	Pn	19 39 11.7	+1.9
JTN				*e*S	Sb	19 39 43.0	-2.3
JNTH	Nagotoyohara	2.63	231	P	Pn	19 39 11.7	+0.3
JNTH				*e*S	Sn	19 39 42.5	-1.3
JAGN	Aguni-jima	3.17	240	P	Pn	19 39 18.9	+0.2
JAGN				*e*S	Sn	19 39 55.6	-1.2
JKE	Kume jima 2	3.65	240	P	Pn	19 39 25.5	+0.2
JKE				*e*S	Sn	19 40 08.4	-0.4
JNU	Nakatsue	4.94	6	Pn	Pn	19 39 45.6	+2.5
	2.1nm,0.3s,baz=324,slow=3.8,SNR=20						
JNU				Sn	Sn	19 40 41.5	+0.9
	0.4nm,0.3s,baz=100,slow=19,SNR=3.6						
ASAJ	Asahikawa	18.70	29	LR	LR	19 50 37.6	
	comp=Z,78nm,19.8s,baz=186,slow=39						
PETK	Petropavlovsk-	32.06	31	LR	LR	19 58 41.7	
	comp=Z,33nm,19.0s,baz=211,slow=38						
H11N2	WAKE ISLAND Hy	34.37	96	T	T	20 21 43.8	
	baz=290,slow=74,SNR=9.1						
H11N1	WAKE ISLAND Hy	34.37	96	T	T	20 21 44.4	
	baz=290,slow=74,SNR=7.9						
H11N3	WAKE ISLAND Hy	34.39	96	T	T	20 21 44.6	
	baz=290,slow=74,SNR=8.5						
H11S3	WAKE ISLAND Hy	34.65	98	T	T	20 22 10.1	
	baz=296,SNR=4.6						
H11S1	WAKE ISLAND Hy	34.66	98	T	T	20 22 16.7	
	baz=296						
H11S2	WAKE ISLAND Hy	34.67	98	T	T	20 22 07.0	
	baz=296						
MKAR	Makanchi Array	41.66	310	P	P	19 46 16.6	-1.0
	0.1nm,0.4s,baz=94,slow=10,SNR=2.8						
KURBB	Kurchatov Arra	44.76	315	P	P	19 46 41.1	-1.4
	0.2nm,0.5s,baz=100,slow=8.8,SNR=4.8						
ILAR	Eielson Array	61.83	29	P	P	19 48 48.3	+0.3
	0.3nm,0.6s,baz=279,slow=5.9,SNR=5.1						
FINES	FINESS Array B	72.07	331	P	P	19 49 52.6	-0.6
	0.8nm,0.4s,baz=68,slow=5.2,SNR=14						
AKASG	Malin Array Be	75.24	320	P	P	19 50 12.8	+0.9
	0.9nm,0.5s,baz=57,slow=6.5,SNR=6.8						
BRTR	Keskin Array B	77.29	308	P	P	19 50 25.6	+1.5
	0.5nm,0.7s,baz=84,slow=6.7,SNR=3.0						
NOA	NORSAR Array B	78.37	334	P	P	19 50 29.9	+0.4
	0.6nm,0.6s,baz=51,slow=5.6,SNR=2.7						
GERES	GERESS Array B	84.74	324	P	P	19 51 04.6	+1.0
	0.4nm,0.7s,baz=42,slow=2.2,SNR=3.8						

GCG ***18*** *19:48:08.6±0.4, 13°.69N×91°.60W, h0^{km}±106^{km}, MD4.9*

IDC ***18*** *19:48:09.1±0.7, 13°.72N×91°.46W, h19^{km}±3^{km}, mb4.3/15, mb1 4.6/17, mb1mx4.3/47, mbtmp4.5/17, ML4.6/2, MS4.3/27, Ms1 4.3/27, ms1mx4.2/37, Error ellipse: s-maj=14.3km s-min=12.8km az=69.0*

MEX ***18*** *19:48:10.8±0.6, 13°.66N×91°.48W, h15^{km}±16^{km}, MD5.1*

ISCJB ***18*** *19:48:10.2±0.2, 13°.89N±0°.02×91°.34W±0°.02, h35^{km}, mb4.8/208, MS4.4/27, Error ellipse: s-maj=3.7km s-min=2.2km az=19.3*

NEIC ***18*** *19:48:13.2±1.8, 13°.93N×91°.28W, h43^{km}±5^{km}, mb4.8/238, MD5.1(SNET), MD5.1(MEX), Error ellipse: s-maj=13.5km s-min=7.2km az=218.0*

NEIC Felt at Antigua Guatemala, Guatemala, Mixco, Retalhuleu and San Pablo La Laguna. Felt [II] at San Salvador, El Salvador.

SNET ***18*** *19:48:13.6±1.2, 13°.94N×91°.29W, h17^{km}±13^{km}, ML5.1*

GCMT ***18*** *19:48:15.2±0.2, 13°.78N±0°.01×91°.93W±0°.01, h32^{km}, MW5.3/99, Moment Tensor Solution. s99, c153; s94, c154; Duration: 1^s.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.77±.02; M$_{\theta\theta}$-0.68±.01; M$_{\phi\phi}$-0.09±.02; M$_{r\theta}$0.44±.02; M$_{\theta\phi}$0.34±.01; M$_{\phi r}$-0.31±.03; Best double couple: M$_0$0.96800×10^{17} NP1:φ$_s$121.00000°, δ62.00000°, λ96.00000°. NP2:φ$_s$288.00000°, δ29.00000°, λ79.00000°. Principal axes: T 0.9400, Plg72.0000°, Azm45.0000°; N 0.0550, Plg5.0000°, Azm298.0000°; P -0.9950, Plg17.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 19:48:12.3±0.4**, 13°.94N**±0°.06×**91°.40W**±0°.05**, h35^{km}, n760, σ1^s.34**/745**, mb4.8**/208**, MS4.3**/27**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.74	47	*e*P	Pn	19 48 29.4	+3.0
STG3	Santiaguito 3,	0.79	348	*e*P	Pn	19 48 28.7	+1.6
PCG	Pacaya	0.89	59	*e*P	Pn	19 48 31.6	+3.1
NBG	Las Nubes	1.21	57	*e*P	Pn	19 48 37.1	+4.2
THIG		1.28	319	*e*Pn	Pn	19 48 33.4	-0.3
THIG				*e*Sn	Sn	19 48 50.9	+1.3
THIG		1.28	319	*e*P	Pn	19 48 33.4	-0.3
THIG				*e*S	Sn	19 48 50.9	+1.3
APG	El Apazote	1.39	40	Pg	Pn	19 48 39.5	+4.0
	459nm,0.3s,baz=194,slow=12,SNR=1327						
APG				Lg	Lg	19 49 01.7	
	950nm,0.3s,baz=152,slow=8.0,SNR=13						
APG				LR	LR	19 49 15.0	
	comp=Z,13µm,19.5s,baz=146,slow=41						
RTR	El Retiro	1.70	91	*e*P	Pn	19 48 41.2	+1.6
SBLS	San Blas	1.73	93	*e*P	Pn	19 48 40.9	+0.8
SNJE	San Jose	1.74	92	*e*P	Pn	19 48 41.3	+1.1
CEDA	San Andres	1.95	94	*e*P	Pn	19 48 44.6	+1.7
CEDA				IAML		19 49 24.0	
	comp=Z,18µm,0.4s						
MRL	Marmol	2.01	55	*e*P	Pn	19 48 48.7	+4.7
MTO3	Montecristo	2.03	77	*e*P	Pn	19 48 46.4	+2.2
SNET	Serv Nac Est T	2.12	96	*e*P	Pn	19 48 46.8	+1.5
SNET				IAML		19 49 27.3	
	comp=Z,13µm,0.3s						
OPAM	Oficina de Pla	2.15	96	*e*P	Pn	19 48 47.4	+1.8
CUSC	Alcaldia de Cu	2.16	95	*e*P	Pn	19 48 47.9	+2.1
CUSC				IAML		19 49 23.4	
	comp=Z,10µm,0.2s						
LOMA	Loma Larga	2.18	97	*e*P	Pn	19 48 47.6	+1.5
LOMA				IAML		19 49 25.8	
	comp=Z,20µm,0.4s						
LFU	La Fuente	2.23	95	*e*P	Pn	19 48 48.6	+1.9
CCIG	Comitan	2.44	343	*e*Pn	Pn	19 48 52.1	+2.3
PCIG		2.49	315	*e*Pn	Pn	19 48 49.3	-1.0
PCIG		2.49	315	*e*P	Pn	19 48 49.7	-0.6
PCIG				*e*S	Sn	19 49 21.0	+1.5
LCY	Lacayo	3.06	99	*e*P	Pn	19 48 60.0	+1.7
TGIG		3.28	330	*e*P	Pn	19 49 02.6	+1.3
TGIG				*i* S	Sn	19 49 41.5	+2.4
CNCH	Conchagua	3.53	100	*e*P	Pn	19 49 05.9	+1.2
CSGN	Cosiguina Volc	3.85	104	*e*Pn	Pn	19 49 08.5	-0.7
CSGN	Cosiguina Volc	3.85	104	*e*P	Pn	19 49 11.0	+1.8
TGUH	Tegucigalpa,Un	4.01	88	*e*Pn	Pn	19 49 10.5	-0.9
CMIG	Matias Romero	4.60	313	Pn	Pn	19 49 18.9	-0.4
	comp=Z,23nm,0.3s,baz=123,slow=11,SNR=152						
CMIG				LR	LR	19 50 25.6	
	comp=Z,917nm,21.1s,baz=120,slow=29						
CMIG	Matias Romero	4.60	313	*e*Pn	Pn	19 49 18.8	-0.5
CMIG	Matias Romero	4.60	313	*e*P	Pn	19 49 18.8	-0.5
CMIG				*i* S	Sn	19 50 13.2	+1.7
HUIG	Huatulco	4.91	292	*e*Pn	Pn	19 49 21.7	-1.8
HUIG	Huatulco	4.91	292	*e*P	Pn	19 49 21.7	-1.8
HUIG				*e*S	Sn	19 50 17.7	-1.4
ESTN	Estel	4.96	99	*e*Pn	Pn	19 49 24.8	+0.4
ACON	Acoyapa	6.38	107	*e*Pn	Pn	19 49 42.6	-1.1
TEIG	Tepich	6.93	25	*e*Pn	Pn	19 49 53.5	+2.1
ESPN	Las Esperanzas	7.13	103	*e*Pn	Pn	19 49 52.4	-1.8
MYIG	Mrida	7.16	13	*e*Pn	Pn	19 49 54.4	-0.1
JTS	Las Juntas de	7.27	119	Pn	Pn	19 49 58.1	+2.0
	comp=Z,4.2nm,0.3s,baz=321,slow=6.5,SNR=23						
JTS	Las Juntas de	7.27	119	*e*Pn	Pn	19 49 56.0	-0.2
LVIG	Laguna Verde	7.50	321	*e*Pn	Pn	19 49 57.0	-2.1
TLIG	Tlapa	7.79	299	*e*Pn	Pn	19 50 03.4	+0.1
HDC	Heredia	8.13	118	*e*Pn	Pn	19 50 05.9	-2.1
LNIG	Linares	13.29	326	*e*Pn	Pn	19 51 16.5	-2.0
MTDJ	Mount Denham	13.99	70	*e*Pn	Pn	19 51 30.3	+2.1
059A	Moore Haven	16.12	35	P	P	19 51 59.2	0.0
	baz=218						
833A	Chaparral WMA,	16.13	334	P	P	19 52 00.1	+0.8
	baz=151						
958A	Wauchula	16.29	32	P	P	19 52 01.0	-0.1
	baz=215						
959A	Okeechobee	16.70	34	P	P	19 52 06.9	+1.2
	baz=218						
DWPF	Disney Wildern	16.88	32	P	P	19 52 08.8	+1.2
	baz=215						
859A	Kempfer Cattle	17.12	33	P	P	19 52 11.1	+0.9
	baz=216						
449A	Pace	17.18	12	P	P	19 52 12.9	+1.9
	baz=193						
655A	Horseshoe Beac	17.23	25	P	P	19 52 12.5	+0.9
	baz=207						
757A	Oxford	17.26	29	P	P	19 52 12.3	+0.5
	baz=212						
PLMC	San Jos del P	17.39	120	*e*P	Pn	19 52 12.8	+0.3
451A	Vernon	17.40	16	P	P	19 52 15.4	+2.0
	baz=198						
553A	Crawfordville	17.41	21	P	P	19 52 15.1	+1.7
	baz=203,SNR=6.2						
HELC	Santa Helena	17.41	115	*e*P	Pn	19 52 10.1	-2.8
656A	Willston	17.41	27	*e*P	Pn	19 52 10.4	-2.1
	comp=Z,62nm,0.6s						
656A	Willston	17.41	27	P	P	19 52 14.3	+0.8
	baz=210,SNR=5.8						
ZARC	Zaragoza, Cauc	17.46	110	*e*P	Pn	19 52 11.4	-1.8
554A	Perry	17.58	23	P	P	19 52 17.5	+2.2
	baz=205						
BRAL	Brewton	17.61	12	P	P	19 52 18.4	+2.7
	baz=194						
758A	Lake Helen	17.69	31	P	P	19 52 18.9	+2.3
	baz=214						
435B	Jarrell	17.71	342	P	P	19 52 18.3	+1.5
	baz=160						
349A	Repton	17.76	12	P	P	19 52 20.1	+2.8
	baz=193						
452A	Marianna	17.78	18	P	P	19 52 20.1	+2.5
	baz=200						
YOTC	Yotoco, Valle	17.84	122	*e*P	Pn	19 52 15.4	-2.6
555A	McAlpin	17.89	24	*e*P	Pn	19 52 17.9	-0.5
	comp=Z,103nm,0.8s						
555A	McAlpin	17.89	24	P	P	19 52 20.0	+1.3
	baz=207,SNR=12						
657A	Interlachen	17.90	28	P	P	19 52 20.5	+1.7
	baz=211						
NATX	Nacogdoches	17.99	351	*e*P	Pn	19 52 18.3	-1.3
	comp=Z,44nm,0.7s						
NATX	Nacogdoches	17.99	351	P	P	19 52 20.9	+1.1
	baz=169						
350A	Dozier	18.01	14	P	P	19 52 22.2	+2.1
	baz=196						
GUY2C	Guyana, Caldas	18.01	117	*e*P	Pn	19 52 19.4	-1.1
556A	Lake Butler	18.02	26	P	P	19 52 21.9	+1.8
	baz=209						
658A	Bunnell	18.04	30	P	P	19 52 21.9	+1.4
	baz=213						
453A	Whigham	18.05	20	*e*P	P	19 52 22.2	+1.6
	comp=Z,85nm,0.9s						
453A	Whigham	18.05	20	P	P	19 52 23.6	+3.0
	baz=202						
454A	Quitman	18.17	22	P	P	19 52 24.4	+2.5
	baz=204,SNR=6.9						
RREF	El Recreo	18.19	118	*e*P	P	19 52 24.8	+1.9
JCT	Junction City	18.20	336	*e*P	P	19 52 23.9	+1.7
	comp=Z,53nm,1.4s						
JCT	Junction City	18.20	336	P	P	19 52 24.0	+1.7
	baz=153,SNR=7.5						
VBMS	Vicksburg	18.21	2	*e*P	P	19 52 22.4	+0.1
	comp=Z,71nm,0.9s						
VBMS	Vicksburg	18.21	2	P	Pn	19 52 23.7	+1.3
	baz=182						
NORC	Norcasia	18.28	115	*e*P	Pn	19 52 24.1	+0.7
557A	Orange Park	18.32	28	P	Pn	19 52 25.0	+1.2
	baz=211						
BBAC	Balboa, Cauca	18.33	129	*e*P	Pn	19 52 28.8	+4.7
249A	Camden	18.38	12	P	Pn	19 52 26.2	+1.8
	baz=193						
455A	Stateville	18.42	23	P	Pn	19 52 26.2	+1.4
	baz=206						
352A	Blakely	18.44	18	*e*P	P	19 52 23.0	-1.9
	comp=Z,84nm,0.9s						
352A	Blakely	18.44	18	P	Pn	19 52 27.1	+1.9
	baz=200,SNR=5.3						
353A	Camilla	18.54	20	P	Pn	19 52 27.2	+0.8
	baz=202						
HPIG		18.58	316	*e*P	Pn	19 52 27.4	+0.3
	comp=Z,14nm,0.8s						
SOTA	Rioblanco	18.74	127	*e*P	Pn	19 52 34.7	+5.3
PCON	Cinco Dias	18.78	127	*e*P	Pn	19 52 36.7	+6.8
ORTC	Ortega, Tolima	18.80	121	*e*P	P	19 52 27.4	-1.5
456A	Hilliard	18.81	26	P	Pn	19 52 30.5	+0.9
	baz=209						
WHTX	Lake Whitney,	18.81	344	*e*P	P	19 52 28.6	-0.3
	comp=Z,38nm,1.1s						
WHTX	Lake Whitney,	18.81	344	P	Pn	19 52 30.8	+1.2
	baz=161,SNR=7.0						
TIGA	Tifton	18.84	21	*e*P	P	19 52 28.5	-0.7
	comp=Z,91nm,0.7s						
TIGA	Tifton	18.84	21	P	P	19 52 29.9	+0.7
	baz=204						
251A	Midway	18.89	16	P	Pn	19 52 32.3	+1.8
	baz=198						
457A	Yulee	18.92	27	P	Pn	19 52 32.4	+1.5
	baz=210						
SPBC	San Pablo de B	18.94	114	*e*P	P	19 52 30.8	+0.2
148A	Greensboro	18.95	10	P	Pn	19 52 32.3	+1.1
	baz=191						
252A	Lumpkin	18.98	18	P	Pn	19 52 32.3	+0.6
	baz=200,SNR=7.6						
355A	Pearson	19.02	23	P	Pn	19 52 32.2	0.0
	baz=206						
149A	Jones	19.05	12	P	Pn	19 52 33.6	+1.1
	baz=193						
LTX	Lajitas	19.07	325	*e*P	Pn	19 52 34.2	+1.3
LTX				*e*ScP	ScP	20 00 35.5	+6.3
TXAR	Lajitas Array	19.07	325	P	Pn	19 52 34.2	+1.3
	comp=Z,0.5nm,0.3s,baz=154,slow=11,SNR=134						
TXAR				ScP	ScP	20 00 35.5	+6.3
	comp=Z,0.0nm,0.3s,baz=147,slow=2.7,SNR=10						
TXAR				LR	LR	20 01 12.0	
	comp=Z,382nm,20.6s,baz=0.0,slow=41						
TX31	Lajitas Ar. Si	19.08	325	*e*Pn	Pn	19 52 34.4	+1.5
	comp=Z,17nm,0.8s						
ROSC	El Rosal	19.11	117	LR	LR	20 00 36.1	
	comp=Z,584nm,21.9s,baz=330,slow=39						
ROSC	El Rosal	19.11	117	*e*Pn	P	19 52 32.8	+0.1
	comp=Z,89nm,1.5s						
CTAB	Cerro Tablazo,	19.12	116	*e*P	Pn	19 52 34.1	+0.1
PRAC	Prado	19.20	120	*e*P	Pn	19 52 34.7	+0.2
150A	Eclectic	19.22	14	P	Pn	19 52 35.8	+1.2
	baz=196,SNR=18						
253A	Americus	19.23	19	*e*P	P	19 52 34.3	+0.8
	comp=Z,178nm,1.5s						
253A	Americus	19.23	19	P	Pn	19 52 35.4	+0.7
	baz=202						
Z41A	Richland Creek	19.28	356	P	Pn	19 52 35.4	+0.2
	baz=176						
356A	Blackshear	19.29	25	P	Pn	19 52 35.8	+0.5
	baz=208						
151A	Opelika	19.32	16	P	Pn	19 52 36.3	+0.5
	baz=198,SNR=12						
BARC	Barichara	19.34	110	*e*P	P	19 52 35.4	+0.3
H06E1	SOCORRO T-PHAS	19.34	287	T	T	20 12 40.8	
	SNR=43						
254A	Abbeville	19.40	21	P	Pn	19 52 36.9	+0.2
	baz=204						
LRAL	Lakeview Retre	19.43	11	*e*P	P	19 52 36.5	+0.8
LRAL	Lakeview Retre	19.43	11	P	Pn	19 52 37.5	+0.4
	baz=192,SNR=8.6						
152A	Waverly Hall	19.62	17	*e*P	Pn	19 52 38.9	-0.4
	comp=Z,99nm,1.4s						
152A	Waverly Hall	19.62	17	P	Pn	19 52 39.5	+0.2
	baz=199,SNR=16						
Z49A	Columbiana	19.68	12	P	Pn	19 52 40.7	+0.7
	baz=194,SNR=27						
CAPV	Capacho	19.68	106	*e*P	Pn	19 52 40.1	-0.3
255A	Hazlehurst	19.68	23	P	Pn	19 52 39.6	-0.4
	baz=206						
RUSC	La Rusia	19.72	112	*e*P	P	19 52 39.4	-0.1
WLAR	White Oak Lake	19.72	356	*e*P	Pn	19 52 40.3	-0.2
	comp=Z,63nm,0.9s						
FLOC	Florencia	19.83	127	*e*P	Pn	19 52 43.4	+1.4
Z50A	Ashland	19.87	14	*e*P	Pn	19 52 42.5	+0.3
	comp=Z,38nm,0.8s						
Z50A	Ashland	19.87	14	P	Pn	19 52 42.4	+0.2
	baz=195,SNR=14						
256A	Glennville	19.96	24	P	Pn	19 52 43.3	0.0
	baz=208						
VILC	Villavicencio,	20.01	118	*e*P	Pn	19 52 44.1	-0.1
ABTX	Abilene, Hawle	20.07	339	*e*P	Pn	19 52 44.1	-0.6
	comp=Z,116nm,1.5s						
ABTX	Abilene, Hawle	20.07	339	P	Pn	19 52 45.2	+0.5
	baz=156,SNR=10						
154A	Montrose	20.07	21	*e*P	Pn	19 52 44.5	-0.2
	comp=Z,162nm,0.8s						
154A	Montrose	20.07	21	P	P	19 52 43.9	+1.2
	baz=204						
Z51A	Franklin	20.11	15	P	Pn	19 52 44.9	-0.2
	baz=197						
Z52A	Williamson	20.19	17	P	Pn	19 52 45.7	-0.4
	baz=200						
Y48A	Jasper	20.25	10	P	Pn	19 52 46.2	-0.6
	baz=192						
155A	Kite	20.31	22	P	P	19 52 46.7	+1.4
	baz=205						
Y49A	Blount Mountai	20.34	12	*e*P	P	19 52 46.5	+0.8
	comp=Z,36nm,0.8s						
Y49A	Blount Mountai	20.34	12	P	Pn	19 52 47.4	-0.4
	baz=194,SNR=11						
X43A	Marvell	20.50	1	P	P	19 52 48.2	+1.0
	baz=181						
X40A	Basin Creek Fa	20.50	357	*e*P	P	19 52 47.5	+0.2

	comp=Z,45nm,1.4s						
X40A	Basin Creek Fa	20.50	357	P	P	19 52 48.1	+0.8
	baz=176						
Y50A	Piedmont	20.52	14	P	P	19 52 49.1	+1.5
	baz=196						
Z53A	Monticello	20.53	19	P	P	19 52 49.2	+1.5
	baz=202,SNR=11						
OXF	Oxford	20.56	5	*e*P	Pn	19 52 49.7	-0.6
	comp=Z,97nm,1.1s						
MIAR	Mount Ida	20.61	355	*e*P	P	19 52 48.8	+0.2
	comp=Z,67nm,1.4s						
MIAR	Mount Ida	20.61	355	P	P	19 52 49.1	+0.6
	baz=174,SNR=11						
BANI	BANI	20.68	75	*e*P	P	19 52 49.2	-0.3
GOGA	Godfrey	20.69	19	*e*P	P	19 52 50.5	+1.2
	comp=Z,35nm,0.9s						
GOGA	Godfrey	20.69	19	P	P	19 52 50.5	+1.2
	baz=202						
X46A	Booneville	20.69	7	P	P	19 52 50.5	+1.2
	baz=187						
Y51A	Rockmart	20.69	15	P	Pn	19 52 51.0	-0.8
	baz=197,SNR=14						
156A	Sylvania	20.71	24	P	P	19 52 51.0	+1.4
	baz=208						
Z54A	Sparta	20.73	21	P	P	19 52 50.9	+1.1
	baz=204,SNR=6.7						
X47A	Russelville	20.74	8	P	Pn	19 52 51.7	-0.7
	baz=189,SNR=5.2						
UALR	University of	20.77	358	*e*P	P	19 52 50.0	-0.2
	comp=Z,67nm,1.3s						
X48A	Hartselle	20.80	10	*e*P	P	19 52 50.1	-0.5
	comp=Z,27nm,0.8s						
X48A	Hartselle	20.80	10	P	P	19 52 51.4	+0.8
	baz=192,SNR=6.3						
X37A	Clayton	20.87	351	*e*P	P	19 52 51.7	+0.4
	comp=Z,66nm,1.0s						
Y52A	Lilburn	20.93	17	*e*P	P	19 52 51.0	-0.9
	comp=Z,73nm,0.9s						
Y52A	Lilburn	20.93	17	P	P	19 52 53.5	+1.5
	baz=200						
Z55A	Blythe	20.97	22	P	P	19 52 53.5	+1.1
	baz=206						
X49A	Woodville	20.99	12	P	P	19 52 53.9	+1.2
	baz=194,SNR=12						
Y53A	Monroe	21.06	18	P	P	19 52 54.5	+1.1
	baz=201						
X50B	Fort Payne	21.09	13	P	P	19 52 54.9	+1.2
	baz=195,SNR=6.6						
W41B	Gary Mavity, V	21.16	358	P	P	19 52 54.5	+0.1
	baz=177,SNR=7.1						
PLAL	Pickwick Lake	21.17	8	*e*P	P	19 52 52.5	-2.0
	comp=Z,18nm,0.8s						
W39A	Magazine	21.28	355	*e*P	P	19 52 56.1	+0.4
	comp=Z,41nm,1.3s						
W39A	Magazine	21.28	355	P	P	19 52 56.4	+0.8
	baz=173						
WHAR	Wooly Hollow	21.28	358	*e*P	P	19 52 56.4	+0.7
	comp=Z,38nm,1.2s						
W46A	Michie	21.28	7	P	P	19 52 56.7	+1.0
	baz=188						
Z56A	Williston	21.35	24	P	P	19 52 57.2	+0.7
	baz=207						
Y54A	Tignall	21.35	20	P	P	19 52 57.8	+1.2
	baz=203						
X51A	Calhoun	21.37	15	P	P	19 52 57.8	+1.0
	baz=197						
W48A	Pulaski	21.49	10	P	P	19 52 58.8	+0.8
	baz=192						
W47A	Westpoint	21.50	9	P	P	19 52 58.7	+0.6
	baz=190						
CLNB	Carlsbad	21.52	330	*e*P	P	19 52 58.8	+0.4
Z57A	Bowman	21.59	25	P	P	19 52 59.5	+0.4
	baz=209						
W49A	Belvidere	21.59	11	P	P	19 53 00.2	+1.1
	baz=193						
NHSC	New Hope	21.65	26	*e*P	P	19 52 59.9	+0.2
	comp=Z,99nm,1.1s						
NHSC	New Hope	21.65	26	P	P	19 53 01.3	+1.6
	baz=210						
X52A	Dahlonega	21.67	17	P	P	19 53 00.8	+0.8
	baz=200						
GDL2	Guadalupe Moun	21.71	329	*e*P	P	19 53 02.0	+1.5
Y55A	Saluda	21.71	22	P	P	19 53 00.5	+0.1
	baz=205						
X53A	Estanollee	21.75	18	P	P	19 53 01.5	+0.7
	baz=201,SNR=6.4						
SWET	Sewanee	21.75	12	*e*P	P	19 52 56.5	-4.4
	comp=Z,42nm,0.8s						
WMOK	Wichita Mounta	21.76	343	*e*P	P	19 53 01.3	+0.4
	comp=Z,27nm,1.3s						
WMOK	Wichita Mounta	21.76	343	P	P	19 53 02.6	+1.6
	baz=160,SNR=12						
Y56A	Pelion	21.79	23	P	P	19 53 01.4	+0.3
	baz=207						
HODGE	Hodges	21.84	21	*e*P	P	19 53 02.6	+0.9
	comp=Z,43nm,1.2s						
MNTX	Cornudas Mount	21.84	326	*e*P	P	19 53 02.1	+0.3
	comp=Z,45nm,0.9s						
MNTX	Cornudas Mount	21.84	326	P	P	19 53 02.1	+0.3
	baz=141,SNR=85						
FCAR	Ozark Folk Cen	21.87	358	*e*P	P	19 53 01.3	-0.7
	comp=Z,12nm,0.6s						
W50A	Signal Mountai	21.87	13	P	P	19 53 02.3	+0.2
	baz=196						
W51A	Cleveland	21.96	15	P	P	19 53 02.6	-0.4
	baz=197						
V46A	Holladay	21.97	7	P	P	19 53 02.7	-0.4
	baz=188,SNR=6.3						
Z58A	St. Stephen	22.00	27	P	P	19 53 03.7	+0.2
	baz=211						
V47A	Nunnelly	22.07	8	P	P	19 53 04.1	-0.2
	baz=190						
X54A	Belton	22.09	20	P	P	19 53 04.5	+0.1
	baz=204						
V48A	Smith Brothers	22.10	10	*e*P	P	19 53 04.6	+0.1
	comp=Z,35nm,0.9s						
V48A	Smith Brothers	22.10	10	P	P	19 53 05.1	+0.6
	baz=192						
W52A	Murphy	22.12	16	*e*P	P	19 53 04.8	+0.1
	comp=Z,24nm,0.7s						
W52A	Murphy	22.12	16	P	P	19 53 06.0	+1.3
	baz=199						
Z59A	Georgetown, SC	22.16	28	P	P	19 53 05.2	0.0
	baz=212						
TUL1	Leonard	22.23	351	*e*P	P	19 53 05.6	-0.4
	comp=Z,29nm,0.8s						
TUL1	Leonard	22.23	351	P	P	19 53 06.5	+0.5
	baz=168						
JSC	Jenkinsville	22.24	23	*e*P	P	19 53 04.6	-1.5
	comp=Z,26nm,1.2s						
X55A	Gracelyn & Ava	22.27	22	P	P	19 53 07.1	+0.7
	baz=205						
V49A	McMinnville	22.29	12	P	P	19 53 06.2	-0.4
	baz=194						
CPCT	Cooper Cave	22.30	15	*e*P	P	19 53 09.1	+2.4
	comp=Z,32nm,0.9s						
BG3	Lake Jocassee	22.31	19	*e*P	P	19 53 03.5	-3.3
	comp=Z,78nm,1.6s						
WVT	Waverly	22.33	8	*e*P	P	19 53 05.5	-1.4
	comp=Z,19nm,0.9s						
WVT	Waverly	22.33	8	P	P	19 53 06.3	-0.7
	baz=189						
Y57A	Sumter	22.34	25	P	P	19 53 07.6	+0.5
	baz=209						
U40A	Yellville	22.36	357	P	P	19 53 07.2	-0.2
	baz=176						
HHAR	Hobbs	22.37	355	*e*P	P	19 53 05.8	-1.6
	comp=Z,13nm,0.9s						
V50A	Pikevile	22.37	14	P	P	19 53 07.5	+0.1
	baz=196						
W53A	Cullowhee	22.41	18	P	P	19 53 08.3	+0.3
	baz=201						
MSTX	Muleshoe	22.45	335	*e*P	P	19 53 08.7	+0.2
	comp=Z,36nm,0.8s						
MSTX	Muleshoe	22.45	335	P	P	19 53 08.5	0.0
	baz=150,SNR=16						
X56A	White Oak	22.51	23	P	P	19 53 09.2	+0.2
	baz=207						
U46A	Springville	22.51	7	P	P	19 53 09.0	0.0
	baz=188						
PAULI	Pauline	22.52	21	*e*P	P	19 53 08.0	-1.1
	comp=Z,30nm,1.1s						
CLTN	Cedars of Leba	22.52	11	*e*P	P	19 53 09.8	+0.8
	comp=Z,22nm,1.0s						
Y58A	Scranton	22.55	26	P	P	19 53 09.8	+0.4
	baz=211						
W54A	Cherokee Point	22.64	20	P	P	19 53 11.5	+1.2
	baz=203,SNR=5.2						
V51A	Loudon	22.68	15	*e*P	P	19 53 11.6	+0.8
	comp=Z,60nm,1.3s						
V51A	Loudon	22.68	15	P	P	19 53 11.2	+0.5
	baz=198						
TKL	Tuckaleechee C	22.69	16	P	P	19 53 12.3	+1.5
	comp=Z,15nm,0.7s,baz=196,slow=8.2,SNR=12						
U47A	Clarksville	22.71	9	P	P	19 53 10.2	-0.8
	baz=190						
PBMO	Poplar Bluff	22.76	2	*e*P	P	19 53 11.0	-0.6
	comp=Z,36nm,0.8s						
AMTX	Amarillo	22.83	338	*e*P	P	19 53 11.9	-0.5
	comp=Z,66nm,0.8s						
AMTX	Amarillo	22.83	338	P	P	19 53 11.4	-1.0
	baz=153						
X57A	Johnson Farm,	22.86	25	P	P	19 53 12.7	+0.1
	baz=209						
BIRD	Birdtown, Kers	22.87	24	*e*P	P	19 53 12.6	-0.1
	comp=Z,36nm,1.3s						
U48A	Cassie Pea, Po	22.90	10	P	P	19 53 12.5	-0.5
	baz=192						
V52A	Sevierville	22.91	16	*e*P	P	19 53 14.0	+0.9
	comp=Z,70nm,1.1s						
V52A	Sevierville	22.91	16	P	P	19 53 13.9	+0.7
	baz=199						
Y59A	Loris	22.97	27	P	P	19 53 13.4	-0.3
	baz=212						
V53A	Saluda	22.98	18	*e*P	P	19 53 13.3	-0.6
	comp=Z,252nm,1.8s						
V53A	Saluda	22.98	18	P	P	19 53 14.3	+0.4
	baz=201						
KMSC	Kings Mountain	22.98	22	*e*P	P	19 53 13.3	-0.6
	comp=Z,34nm,0.8s						
KMSC	Kings Mountain	22.98	22	P	P	19 53 14.1	+0.2
	baz=205,SNR=6.4						
U49A	Red Boiling Sp	23.04	12	P	P	19 53 14.3	-0.2
	baz=194						
T45A	Paducah	23.12	6	P	P	19 53 14.5	-0.8
	baz=186						
U50A	Jamestown	23.14	14	P	P	19 53 15.2	-0.4
	baz=196						
T46A	Princeton	23.22	7	P	P	19 53 15.7	-0.6
	baz=188						
X58A	Rowland	23.25	26	P	P	19 53 16.5	0.0
	baz=211						
W56A	Indian Trail	23.25	23	P	P	19 53 16.5	-0.1
	baz=207,SNR=6.6						
T47A	Sharon Grove	23.27	9	*e*P	P	19 53 15.8	-1.0
	comp=Z,40nm,0.8s						
T47A	Sharon Grove	23.27	9	P	P	19 53 16.4	-0.4
	baz=190						
Y60A	Bolivia	23.28	29	P	P	19 53 16.7	-0.2
	baz=214						
U51A	La Follette	23.31	15	P	P	19 53 17.6	+0.4
	baz=198,SNR=5.9						
V54A	Nebo	23.35	20	P	P	19 53 18.1	+0.6
	baz=203						
U52A	Thorn Hill	23.49	16	P	P	19 53 18.4	-0.6
	baz=200						
W57A	Gilead	23.50	24	*e*P	P	19 53 18.7	-0.3
	comp=Z,25nm,1.0s						
W57A	Gilead	23.50	24	P	P	19 53 18.0	-0.9
	baz=208						
T48A	Bowling Green	23.50	10	P	P	19 53 18.9	-0.1
	baz=192						
X59A	McDuffie Farm,	23.58	27	P	P	19 53 19.6	-0.2
	baz=212						
TZTN	Tazewell	23.58	16	*e*P	P	19 53 19.2	-0.7
	comp=Z,64nm,1.1s						
TZTN	Tazewell	23.58	16	P	P	19 53 20.1	+0.2
	baz=199						
T49A	Edmonton	23.66	12	P	P	19 53 20.1	-0.5
	baz=194						
V55A	Taylorsville	23.66	21	P	P	19 53 20.7	+0.1
	baz=205						
W58A	Raeford	23.69	25	P	P	19 53 20.2	-0.6
	baz=210						
U53A	Fall Branch	23.69	18	P	P	19 53 21.0	+0.1
	baz=201						
T50A	Nancy	23.72	13	P	P	19 53 20.9	-0.2
	baz=196						
S44A	Carbondale	23.74	4	P	P	19 53 21.1	-0.1
	baz=185						
121A	Cookes Peak, D	23.80	324	P	P	19 53 24.1	+1.9
	baz=137,SNR=14						
X60A	Albert Glenn T	23.87	28	P	P	19 53 22.7	+0.2
	baz=214						
S46A	Don Dixon Farm	23.88	7	P	P	19 53 22.1	-0.5
	baz=188						
T51A	Gray	23.88	15	P	P	19 53 22.2	-0.4
	baz=198						
V56A	Mocksville	23.88	22	*e*P	P	19 53 22.5	-0.1
	comp=Z,23nm,0.8s						
V56A	Mocksville	23.88	22	P	P	19 53 22.4	-0.3
	baz=207						
319A	Douglas	23.89	320	*e*P	P	19 53 23.8	+0.9
	comp=Z,80nm,1.4s						
S47A	Hartford	23.90	9	P	P	19 53 22.7	-0.1
	baz=191						
CCM	Cathedral Cave	24.02	0	*e*P	P	19 53 22.8	-1.1
	comp=Z,59nm,1.0s						
CCM	Cathedral Cave	24.02	0	P	P	19 53 22.8	-1.1
	baz=180						
U54A	Nelsons Funny	24.07	19	*e*P	P	19 53 25.0	+0.5
	comp=Z,57nm,1.0s						
U54A	Nelsons Funny	24.07	19	P	P	19 53 23.8	-0.7
	baz=203						
W59A	Clinton	24.15	27	P	P	19 53 24.7	-0.4
	baz=212						
V57A	Coltrane Farms	24.22	23	P	P	19 53 25.5	-0.3
	baz=208,SNR=9.7						
T52A	Hallie	24.27	17	P	P	19 53 25.4	-0.8
	baz=200						
T53A	Wise	24.28	17	P	P	19 53 25.9	-0.5
	baz=201						
U55A	TA2, Sparta	24.31	21	P	P	19 53 26.3	-0.4
	baz=205						
S49A	Springfield	24.36	12	P	P	19 53 26.1	-0.9
	baz=194						
W60A	Pink Hill	24.38	28	P	P	19 53 26.8	-0.4
	baz=213						
BNM	Barren Site	24.40	328	*e*P	P	19 53 29.4	+1.6
U56A	King	24.40	22	P	P	19 53 27.6	+0.2
	baz=206						
V58A	Windy Hill, Pi	24.41	25	P	P	19 53 26.9	-0.5
	baz=210,SNR=11						
S50A	Richmond	24.45	14	P	P	19 53 28.0	+0.1
	baz=196						
CNNC	Cliffs of the	24.46	28	P	P	19 53 27.8	-0.1
	baz=213						
Y22D	IRIS PASSCAL I	24.49	328	P	P	19 53 30.2	+1.7
	baz=141						
LENM	Lemitar	24.59	328	*e*P	P	19 53 31.1	+1.7
ATAH	Atahualpa	24.59	148	LR	LR	20 01 51.9	
	comp=Z,931nm,20.4s,baz=328,slow=34						
S51A	Beattyville	24.61	15	P	P	19 53 29.6	+0.3
	baz=198						
SJG	San Juan	24.61	77	LR	LR	20 04 25.7	
	comp=Z,588nm,19.2s,baz=277,slow=40						
WCI	Wyandotte Cave	24.61	10	*e*P	P	19 53 29.0	-0.3
	comp=Z,36nm,0.8s						
WCI	Wyandotte Cave	24.61	10	P	P	19 53 28.6	-0.8
	baz=192						
SLM	Saint Louis	24.62	2	*e*P	P	19 53 29.6	+0.2
	comp=Z,45nm,0.8s						
T54A	Tazewell	24.64	19	P	P	19 53 28.6	-1.1
	baz=203						
V59A	Middlesex	24.75	26	P	P	19 53 30.1	-0.4
	baz=212						
S52A	Salyersville	24.78	16	P	P	19 53 29.6	-1.2
	baz=199						
W61A	Ground Anchor	24.82	29	P	P	19 53 31.0	-0.2
	baz=215						
R48A	Northridge Ran	24.85	10	P	P	19 53 30.5	-1.0
	baz=192						
LAZ	Ladron	24.86	328	*e*P	P	19 53 31.6	-0.3
U57A	Blanch	24.87	24	P	P	19 53 31.1	-0.6
	baz=208						
R49A	Shelbyville	24.88	12	P	P	19 53 31.1	-0.6
	baz=194						
ANMO	Albuquerque	24.95	330	P	P	19 53 33.8	+1.2
	comp=Z,6.5nm,0.8s,baz=153,slow=12,SNR=17						
ANMO				LR	LR	20 04 53.4	
	comp=Z,455nm,20.6s,baz=132,slow=40						
ANMO	Albuquerque	24.95	330	*e*P	P	19 53 34.0	+1.4
	comp=Z,6.6nm,0.8s						
ANMO	Albuquerque	24.95	330	P	P	19 53 32.4	-0.3
	baz=143						
T55A	Pulaski	24.95	20	P	P	19 53 31.6	-0.8
	baz=205						
R50A	Paris	25.05	13	P	P	19 53 33.3	0.0
	baz=196						
S53A	Williamson	25.05	18	P	P	19 53 33.5	+0.2
	baz=201						
T56A	Rocky Mt	25.14	22	P	P	19 53 34.5	+0.4
	baz=206						
U58A	Oxford	25.15	25	P	P	19 53 34.2	-0.1
	baz=210						
BLA	Blacksburg	25.16	21	P	P	19 53 34.3	-0.1
	baz=205						
V60A	Jim Taylor Roa	25.18	28	P	P	19 53 34.6	+0.1
	baz=214						
R51A	Hillsboro	25.24	15	P	P	19 53 34.7	-0.2
	baz=198						
Q48A	North Vernon	25.39	10	P	P	19 53 36.1	-0.3
	baz=193						
T57A	Hurt	25.40	23	*e*P	P	19 53 36.4	-0.1
	comp=Z,30nm,1.4s						
T57A	Hurt	25.40	23	P	P	19 53 36.8	+0.4
	baz=208						
S54A	Dingess, Beckl	25.40	19	P	P	19 53 35.9	-0.7
	baz=203						
U59A	Littleton	25.43	26	*e*P	P	19 53 36.1	-0.6
	comp=Z,18nm,1.2s						
TUC	Tucson	25.46	319	*e*P	P	19 53 38.3	+1.1
	comp=Z,14nm,0.9s						
TUC	Tucson	25.46	319	P	P	19 53 37.2	0.0
	baz=131						
R52A	Catlettsburg	25.51	16	P	P	19 53 36.4	-1.1
	baz=200						
V61A	Roper	25.51	29	P	P	19 53 37.0	-0.5
	baz=215						
T58A	Grand View Acr	25.63	24	P	P	19 53 38.3	-0.3
	baz=210						
S55A	Lewisburg	25.64	20	P	P	19 53 37.8	-1.0
	baz=205						
P43A	Skaggs, Pawnee	25.66	3	P	P	19 53 38.5	-0.3
	baz=184						
Q50A	Georgetown	25.66	13	P	P	19 53 37.7	-1.1
	baz=196						
R53A	Hurricane	25.70	17	P	P	19 53 38.0	-1.2
	baz=201						
U60A	Pendleton	25.81	27	P	P	19 53 39.6	-0.5
	baz=213						
P46A	Rosedale	25.85	7	P	P	19 53 41.9	+1.4
	baz=189						
CBKS	Cedar Bluff	25.85	345	P	P	19 53 41.1	+0.5
	baz=161						
R54A	Victor	25.85	19	P	P	19 53 40.3	-0.3
	baz=203						
T25A	Trinidad	25.86	336	P	P	19 53 40.8	-0.2
	baz=150						
S56A	Natural Bridge	25.88	22	P	P	19 53 41.0	+0.2
	baz=207						
P48A	Milroy	25.96	11	P	P	19 53 42.1	+0.5
	baz=193						
Q51A	Peebles	25.98	14	P	P	19 53 40.9	-0.9
	baz=198						
U61A	Possum Corner	26.02	28	P	P	19 53 41.6	-0.5
	baz=214						
T59A	Double "B" Far	26.06	26	*e*P	P	19 53 41.9	-0.6
	comp=Z,24nm,0.8s						
T59A	Double "B" Far	26.06	26	P	P	19 53 42.1	-0.4
	baz=212,SNR=9.4						
P49A	Miami Univ. Ec	26.17	12	P	P	19 53 42.5	-0.9
	baz=194						
S57A	Dark Hollow, R	26.18	23	P	P	19 53 43.7	+0.1
	baz=208						
Q52A	Bidwell	26.20	16	P	P	19 53 43.3	-0.4
	baz=200						
R55A	Marlinton	26.23	20	P	P	19 53 44.3	+0.2
	baz=205						
O44A	Mansfield	26.24	5	P	P	19 53 43.2	-0.9
	baz=186						
Q53A	Leroy	26.31	18	P	P	19 53 44.6	-0.2
	baz=202						
S58A	Poland Farm, P	26.40	24	P	P	19 53 44.9	-0.7
	baz=210						
P50A	Jamestown	26.43	13	P	P	19 53 44.6	-1.3
	baz=196						
P51A	Williamsport	26.48	15	*e*P	P	19 53 42.9	-3.4
	comp=Z,41nm,1.0s						
P51A	Williamsport	26.48	15	P	P	19 53 45.3	-1.0
	baz=198						
X18A	Snowflake	26.49	324	*e*P	P	19 53 46.9	+0.3
	comp=Z,12nm,1.1s						
T60A	Surry	26.55	27	P	P	19 53 46.5	-0.4
	baz=213						
214A	Organ Pipe Nat	26.57	316	P	P	19 53 48.2	+1.0
	baz=128						
HDIL	Hopedale	26.58	4	P	P	19 53 45.9	-1.3
	baz=184						
R56A	Bull Pasture M	26.59	21	P	P	19 53 47.3	-0.1
	baz=206						
SFIN	Lafayette	26.61	7	P	P	19 53 46.8	-0.6
	baz=189						
Q54A	Coxs Mills	26.64	19	*e*pP	pP	19 53 55.6	-2.1
Q54A	Coxs Mills	26.64	19	P	P	19 53 47.5	-0.1
	baz=203						
N41A	Harden Midland	26.67	1	*e*P	P	19 53 46.1	-1.9
	comp=Z,14nm,0.6s						
N41A	Harden Midland	26.67	1	P	P	19 53 47.3	-0.6
	baz=181						
R58B	Mineral	26.77	24	P	P	19 53 48.3	-0.6
	baz=210						
O48A	Farmland	26.79	11	P	P	19 53 47.6	-1.3
	baz=193						
W18A	Petrified Fore	26.80	325	*e*P	P	19 53 48.8	-0.6
	comp=Z,29nm,1.3s						
W18A	Petrified Fore	26.80	325	P	P	19 53 50.8	+1.4
	baz=137						
R57A	Stanardsville	26.82	23	P	P	19 53 48.9	-0.4
	baz=208						
SDCO	Great Sand Dun	26.83	335	*e*P	P	19 53 50.2	+0.4
	comp=Z,8.0nm,1.1s						
SDCO	Great Sand Dun	26.83	335	P	P	19 53 49.7	0.0
	baz=148,SNR=6.3						
S59A	Mechanicsville	26.84	25	P	P	19 53 46.3	-3.2
	baz=211						
N40A	Mertquake, Sal	26.85	360	P	P	19 53 48.3	-1.2
	baz=179						
P52A	Corning	26.86	16	P	P	19 53 49.4	-0.4
	baz=200						
Q55A	Buckhannon	26.89	20	P	P	19 53 50.0	0.0
	baz=205						
P53A	Whipple	26.93	17	P	P	19 53 50.3	-0.1
	baz=202						
O50A	Cable	26.99	13	P	P	19 53 49.8	-1.1
	baz=196						
R58A	Rapidan	27.02	24	P	P	19 53 51.0	-0.1
	baz=209						
ACSO	Alum Creek Sta	27.21	14	P	P	19 53 52.7	-0.1
	baz=198						
O51A	Pataskala	27.23	15	P	P	19 53 52.6	-0.3
	baz=199						
Q56A	Snyder Ridge,	27.23	21	P	P	19 53 53.2	+0.2
	baz=206						
R59A	King George, V	27.29	25	P	P	19 53 53.3	-0.2
	baz=211						
X16A	Lo Mia Camp, P	27.29	322	*e*P	P	19 53 54.7	+0.9
	comp=Z,11nm,0.8s						
M41A	Milan	27.35	1	P	P	19 53 52.9	-1.1
	baz=182						
O52A	Adamsville	27.40	16	*e*P	P	19 53 54.6	+0.1
	comp=Z,37nm,1.1s						
O52A	Adamsville	27.40	16	P	P	19 53 54.0	-0.5
	baz=200						
S22A	4UR Ranch, Cre	27.40	333	P	P	19 53 55.4	+0.5
	baz=146,SNR=7.2						
MCWV	Mont Chateau	27.57	20	P	P	19 53 55.2	-0.8
	baz=204						
O53A	New Philadelph	27.69	17	P	P	19 53 56.9	-0.2
	baz=201						
MVCO	Mesa Verde	27.75	330	*e*P	P	19 53 59.0	+1.0
	comp=Z,26nm,1.1s						
MVCO	Mesa Verde	27.75	330	P	P	19 53 59.2	+1.3
	baz=142,SNR=8.9						
P56A	Dayton Farm, R	27.77	21	P	P	19 53 58.1	+0.3
	baz=207						
Y14A	Wickenburg	27.93	319	*e*P	P	19 54 00.2	+0.7
	comp=Z,5.6nm,0.8s						
L42A	Oliver, Polo	28.00	3	P	P	19 53 59.3	-0.6
	baz=183						
N51A	Ashland	28.01	15	P	P	19 54 00.0	+0.1
	baz=199						
WUAZ	Wupatki	28.01	324	*e*P	P	19 54 01.9	+1.6
	comp=Z,10nm,0.8s						

WUAZ	Wupatki baz=135,SNR=5.6	28.01	324	P	P	19 54 01.4	+1.1
L40A	Anamosa comp=Z,15nm,0.8s	28.02	0	*e*P	P	19 53 59.4	-0.7
L40A	Anamosa baz=180	28.02	0	P	P	19 53 59.6	-0.4
P57A	Homestead Farm baz=208	28.05	22	P	P	19 54 00.3	0.0
N52A	McGinn's Farm, baz=200	28.09	16	P	P	19 54 00.3	-0.3
O55A	Ligonier baz=205	28.24	20	P	P	19 54 01.2	-0.8
N53A	Lisbon comp=Z,25nm,1.0s	28.32	17	*e*P	P	19 54 02.5	-0.2
N53A	Lisbon baz=202	28.32	17	P	P	19 54 02.1	-0.6
P58A	Pank, Wackersv baz=210	28.32	23	P	P	19 54 02.4	-0.4
SDMD	Soldier's Deli comp=Z,5.6nm,0.7s	28.43	24	*e*P	P	19 54 03.2	-0.5
M51A	Elyria baz=199	28.45	15	P	P	19 54 03.3	-0.6
OGNE	Ogallala baz=158	28.46	343	P	P	19 54 03.6	-0.5
PV01	Paradox Valley comp=Z,37nm,1.9s	28.51	331	*e*P	P	19 54 04.7	-0.1
O56A	Blue Knob Stat baz=206	28.54	21	P	P	19 54 04.3	-0.4
L48A	N Adams baz=194	28.55	11	P	P	19 54 03.4	-1.4
GLA	Glamis comp=Z,22nm,1.3s	28.58	316	*e*P	P	19 54 06.6	+1.4
GLA	Glamis baz=126	28.58	316	P	P	19 54 06.2	+1.0
PV02	Paradox Valley comp=Z,22nm,1.2s	28.65	331	*e*P	P	19 54 07.1	+1.1
PV13	Radium Mtn., P comp=Z,31nm,1.1s	28.65	331	*e*P	P	19 54 06.9	+0.9
SMCO	Snowmass comp=Z,28nm,1.9s	28.65	334	*e*P	P	19 54 06.6	+0.4
N54A	Moraine State comp=Z,27nm,1.1s	28.71	18	*e*P	P	19 54 05.9	-0.3
N54A	Moraine State baz=203	28.71	18	P	P	19 54 06.0	-0.2
PV05	Paradox Valley comp=Z,32nm,1.2s	28.72	330	*e*P	P	19 54 06.9	+0.3
PV03	Paradox Valley comp=Z,24nm,1.2s	28.74	331	*e*P	P	19 54 08.1	+1.3
PV18	Skein Mesa, Pa comp=Z,31nm,1.3s	28.76	331	*e*P	P	19 54 08.2	+1.2
P59A	Jarrettsville baz=211	28.77	24	P	P	19 54 07.1	+0.4
PV12	Saucer Basin, comp=Z,24nm,1.1s	28.77	331	*e*P	P	19 54 08.6	+1.6
PV11	David Mesa, Pa comp=Z,56nm,1.5s	28.79	331	*e*P	P	19 54 08.7	+1.5
PV07	Paradox Valley comp=Z,15nm,1.2s	28.79	331	*e*P	P	19 54 08.3	+1.1
Y12C	Blythe baz=128	28.80	317	P	P	19 54 08.3	+1.2
PV17	East Wray Mesa comp=Z,21nm,1.0s	28.82	330	*e*P	P	19 54 08.7	+1.3
PV16	Nyswonger Mesa comp=Z,31nm,1.3s	28.82	331	*e*P	P	19 54 08.8	+1.3
O57A	Amberson baz=208	28.82	22	P	P	19 54 07.1	-0.1
PV19	Morning Glory comp=Z,38nm,1.5s	28.85	330	*e*P	P	19 54 08.3	+0.5
M52A	Chesterland baz=200	28.86	16	P	P	19 54 06.8	-0.7
PV20	West Nyswonger comp=Z,19nm,1.3s	28.87	331	*e*P	P	19 54 09.1	+1.2
PV04	Paradox Valley comp=Z,51nm,1.6s	28.88	331	*e*P	P	19 54 09.1	+1.1
JFWS	Jewell Farm baz=182	28.89	2	P	P	19 54 06.4	-1.4
PDMCI	Parker Dam,Lak baz=129	28.89	319	P	P	19 54 08.9	+1.0
PV14	Lion Creek, Pa comp=Z,28nm,1.2s	28.92	331	*e*P	P	19 54 09.6	+1.2
PV10	Paradox Valley comp=Z,29nm,1.1s	28.93	331	*e*P	P	19 54 09.0	+0.5
PV22	Blue Mesa, Par comp=Z,9.4nm,0.9s	28.94	331	*e*P	P	19 54 10.2	+1.7
PV23	Carpenter Ridg comp=Z,14nm,0.8s	28.98	331	*e*P	P	19 54 10.5	+1.6
O58A	Lewisberry baz=210	29.01	23	P	P	19 54 08.4	-0.5
PV21	Cone Mtn., Par comp=Z,5.6nm,0.7s	29.05	331	*e*P	P	19 54 10.3	+0.8
PV09	Paradox Valley	29.07	331	*e*P	P	19 54 11.6	+1.8
SSPA	Standing Stone comp=Z,8.9nm,0.8s	29.11	21	*e*P	P	19 54 09.8	+0.1
SSPA	Standing Stone baz=208	29.11	21	P	P	19 54 09.7	-0.1
U15A	North Rim comp=Z,12nm,1.2s	29.18	324	*e*P	P	19 54 12.1	+1.3
SWSC	Sam W. Stewart baz=125	29.19	315	P	P	19 54 11.6	+1.1
N56A	West Decatur baz=206	29.21	21	P	P	19 54 10.7	0.0
W13A	Hualapai Mount comp=Z,12nm,1.1s	29.24	320	*e*P	P	19 54 13.1	+1.8
P60A	Greenville baz=212	29.26	25	P	P	19 54 11.3	+0.2
M54A	Oil Creek Stat baz=204	29.31	18	P	P	19 54 10.8	-0.7
N57A	Milroy baz=208	29.33	22	P	P	19 54 11.1	-0.6
BC3	Big Chuckawall baz=126,SNR=7.1	29.36	316	P	P	19 54 12.7	+0.5
IRM	Iron Mountain baz=127	29.46	317	P	P	19 54 14.0	+1.0
O59A	Robesonia baz=211	29.46	24	P	P	19 54 13.3	+0.4
NNA	Nana comp=Z,194nm,21.4s,baz=321,slow=34	29.52	150	LR	LR	20 04 48.9	
M55A	Ridgway baz=205	29.55	19	P	P	19 54 13.5	-0.2
MONP2	Monument Peak baz=124	29.59	314	P	P	19 54 15.7	+1.3
J47A	Sunmer baz=193	29.74	10	P	P	19 54 15.6	+0.3
M56A	Emporium baz=206	29.76	20	P	P	19 54 14.6	-1.0
KNB	Kanab comp=Z,12nm,0.9s	29.90	324	*e*P	P	19 54 18.2	+1.2
PKCU	Pink Cliffs comp=Z,70nm,1.6s	29.91	325	*e*P	P	19 54 18.1	+0.8
BELC	Belle Mtn. Jos baz=126	29.93	316	P	P	19 54 18.6	+1.3
O20A	White River Ci baz=146	29.99	334	P	P	19 54 17.4	-0.4
LDFC	Landfair comp=Z,27nm,1.0s	30.00	319	*e*P	P	19 54 19.9	+2.1
PFO	Pinyon Flats O baz=125	30.02	315	P	P	19 54 18.6	+0.5
ECSD	EROS Data Cent baz=170	30.03	352	P	P	19 54 17.5	-0.4
LUPA	Lehigh Univers comp=Z,1.3nm,1.0s	30.03	25	*e*P	P	19 54 17.9	-0.1
LCMT	Little Creek M comp=Z,7.9nm,1.0s	30.14	324	*e*P	P	19 54 20.9	+1.8
N59A	State Game Lan baz=211	30.14	24	P	P	19 54 18.6	-0.3
GMRC	Granite Mounta baz=127,SNR=6.2	30.17	318	P	P	19 54 20.1	+0.7
SRU	San Rafael Swe comp=Z,15nm,1.3s	30.23	330	*e*P	P	19 54 20.9	+1.0
M58A	Price's Panora baz=210	30.27	23	P	P	19 54 19.9	-0.2
MTPU	Mount Pierson comp=Z,37nm,1.5s	30.28	326	*e*P	P	19 54 22.2	+1.6
L55A	Hinsdale baz=205	30.30	19	P	P	19 54 19.9	-0.5
N60A	Cedar Hill Far baz=212	30.37	25	P	P	19 54 20.7	-0.2
Q16A	Castle Valley comp=Z,19nm,1.0s	30.40	329	*e*P	P	19 54 21.8	+0.3
SZCU	Shurtz Canyon comp=Z,20nm,1.3s	30.45	325	*e*P	P	19 54 22.4	+0.5
CCUT	Cedar City comp=Z,20nm,1.3s	30.58	324	*e*P	P	19 54 24.0	+0.9
H43A	Windswept, Lux baz=187	30.59	5	P	P	19 54 22.5	-0.3
K54A	Basiliko Farm, baz=204	30.61	19	P	P	19 54 22.9	-0.1
P17A	Butcher Ranch, comp=Z,14nm,0.9s	30.61	330	*e*P	P	19 54 24.7	+1.5
HEC	Hector,Ludlow baz=126	30.64	317	P	P	19 54 25.0	+1.5
J52A	Paris baz=201	30.68	16	P	P	19 54 22.8	-0.8
TYNO	Tyneside baz=202	30.70	17	P	P	19 54 23.6	-0.2
TMUT	Trail Mountain comp=Z,14nm,1.2s	30.71	329	*e*P	P	19 54 24.7	+0.4
TUQ	Turquoise Moun baz=128	30.74	318	P	P	19 54 25.9	+1.5
M59A	Waymart baz=211	30.81	24	P	P	19 54 24.9	+0.1
TCRU	Three Creeks R comp=Z,23nm,1.2s	30.83	327	*e*P	P	19 54 27.4	+2.1
RWWY	Rawlins comp=Z,8.4nm,0.6s	30.88	337	*e*P	P	19 54 26.4	+0.7
K55A	Perry baz=206	30.91	19	P	P	19 54 24.9	-0.8
SHPR	Sheep Range comp=Z,22nm,1.6s	30.94	321	*e*P	P	19 54 27.6	+1.4
PAL	Palisades baz=214	30.99	26	P	P	19 54 25.9	-0.4
I51A	Listowel baz=200	31.06	15	P	P	19 54 25.9	-1.1
L58A	Harry Jones Me baz=210	31.08	23	P	P	19 54 26.9	-0.3
BASO	Ashfield baz=198	31.11	14	P	P	19 54 26.5	-0.9
BINY	Binghamton baz=210	31.16	22	P	P	19 54 27.8	-0.1
MEDO	Medina baz=204	31.18	18	P	P	19 54 28.2	+0.1
BFSC	Mount Baldy Ra baz=124	31.20	315	P	P	19 54 29.5	+1.0
G40A	Rib Lake baz=182	31.25	2	P	P	19 54 27.9	-0.7
G39A	Holcombe baz=180	31.25	0	P	P	19 54 27.8	-0.8
BWLO	Walkerton baz=199	31.33	14	P	P	19 54 28.7	-0.6
G45A	Suttons Bay baz=190	31.38	8	P	P	19 54 29.5	-0.3
K22A	Casper comp=Z,6.0nm,0.8s	31.45	338	*e*P	P	19 54 31.3	+0.6
K22A	Casper baz=151	31.45	338	P	P	19 54 31.0	+0.4
J55A	Hilton baz=206	31.48	19	P	P	19 54 29.8	-0.8
PSUT	Pine Spring comp=Z,18nm,1.3s	31.55	325	*e*P	P	19 54 32.7	+1.1
DRWO	Darlington Wes baz=204	31.75	18	P	P	19 54 32.3	-0.7
DRCO	St. Marys Ceme baz=204	31.76	18	P	P	19 54 32.4	-0.7
KSCT	Kent School, K comp=Z,14nm,0.8s	31.76	26	*e*P	P	19 54 32.0	-1.2
EDW2	Edwards Air Fo baz=124	31.79	316	P	P	19 54 34.4	+0.8
WLVO	Wesleyville baz=204	31.89	18	P	P	19 54 33.6	-0.6
TPNV	Topopah Spring comp=Z,31nm,1.8s	31.89	320	*e*P	P	19 54 35.6	+1.0
TPNV	Topopah Spring baz=129	31.89	320	P	P	19 54 34.4	-0.2
LRMC	Laurel Mtn Rad baz=126	31.92	317	P	P	19 54 35.3	+0.5
FURC	Furnace Creek, baz=128	31.98	319	P	P	19 54 35.8	+0.7
CTU	Camp Tracy comp=Z,18nm,1.0s	32.04	330	*e*P	P	19 54 37.3	+1.4
MPMC	Manual Prospec baz=127,SNR=14	32.13	318	P	P	19 54 37.0	+0.2
DUG	Dugway, Tooele comp=Z,7.5nm,0.9s	32.20	328	*e*P	P	19 54 38.5	+1.4
DUG	Dugway, Tooele baz=138	32.20	328	P	P	19 54 37.1	-0.1
TCUT	Toone Canyon comp=Z,30nm,0.9s	32.21	331	*e*P	P	19 54 39.0	+1.6
PECO	Prince Edward baz=207	32.34	20	P	P	19 54 37.5	-0.7
I55A	Frankford baz=205,SNR=5.8	32.37	19	P	P	19 54 37.2	-1.3
R11A	Troy Canyon, C comp=Z,25nm,1.8s	32.41	323	*e*P	P	19 54 40.9	+1.8
R11A	Troy Canyon, C baz=132,SNR=8.9	32.41	323	P	P	19 54 39.4	+0.3
SADO	Sadowa comp=Z,1µm,20.9s,baz=184,slow=38	32.45	16	LR	LR	20 08 49.4	
SADO	Sadowa comp=Z,22nm,1.2s	32.45	16	*e*P	P	19 54 37.5	-1.6
E43A	Lone Tree Farm baz=188	32.55	6	P	P	19 54 39.0	-1.0
F48A	Evansville baz=196	32.64	11	P	P	19 54 40.3	-0.5
DELO	Deloro Mine comp=Z,34nm,1.0s	32.66	18	*e*P	P	19 54 40.4	-0.7
DELO	Deloro Mine baz=205,SNR=6.4	32.66	18	P	P	19 54 39.9	-1.1
HWUT	Hardware Ranch comp=Z,16nm,1.0s	32.67	331	*e*P	P	19 54 42.1	+0.7
F49A	Sandfield baz=197	32.69	12	P	P	19 54 39.8	-1.4
BW06	Boulder Array baz=146	32.72	335	P	P	19 54 42.0	+0.1
KLBO	Killbear Provi baz=200	32.72	15	P	P	19 54 40.9	-0.7
PD31	Pinedale Array	32.72	335	*e*P	P	19 54 42.4	+0.5
PD31				*e*ScP	ScP	20 01 12.9	+4.5
PDAR	Pinedale Array comp=Z,0.6nm,0.3s,baz=129,slow=12,SNR=10	32.72	335	P	P	19 54 42.4	+0.5
PDAR	comp=Z,1.2nm,0.9s,baz=144,slow=6.4,SNR=6.3			ScP	ScP	20 01 12.9	+4.5
H55A	Tweed baz=206	32.83	19	P	P	19 54 41.4	-1.1
BGU	Big Grassy Mou comp=Z,11nm,1.0s	32.85	329	*e*P	P	19 54 44.3	+1.3
SPUT	South Promonto comp=Z,26nm,1.3s	32.86	330	*e*P	P	19 54 44.3	+1.3
E46A	Sault Ste Mari baz=192	32.87	9	P	P	19 54 41.9	-1.0
G53A	Haliburton baz=203	32.92	17	P	P	19 54 42.3	-1.0
BUKO	Buck Lake baz=202	33.01	16	P	P	19 54 43.0	-1.0
BANO	Bancroft baz=204	33.03	18	P	P	19 54 43.7	-0.5
PKM	Mcpherson Peak baz=122	33.04	314	P	P	19 54 45.1	+0.3
ACCN	Adirondack Com comp=Z,30nm,1.7s	33.06	24	*e*P	P	19 54 44.1	-0.4
E47A	Iron Bridge baz=194	33.13	10	P	P	19 54 43.2	-1.9
H56A	Elgin baz=207	33.17	20	P	P	19 54 44.9	-0.5
PLVO	Plevna comp=Z,21nm,1.2s	33.30	19	*e*P	P	19 54 45.3	-1.3
PLVO	Plevna baz=206	33.30	19	P	P	19 54 46.1	-0.6
F51A	Arnstein baz=200	33.33	15	P	P	19 54 45.0	-1.8
NCB	Newcomb comp=Z,11nm,0.9s	33.35	23	*e*P	P	19 54 45.4	-1.6
E48A	Lockeyer baz=196	33.36	12	P	P	19 54 46.5	-0.6
HVU	Hansel Valley comp=Z,36nm,1.3s	33.37	330	*e*P	P	19 54 47.5	0.0
D46A	Sault St. Mari baz=193	33.43	9	P	P	19 54 46.8	-0.9
E50A	Wahnapitae baz=199	33.60	13	P	P	19 54 47.5	-1.7
G55A	Calabogie baz=206	33.61	19	P	P	19 54 48.6	-0.7
D47A	Chapleau baz=194	33.74	10	P	P	19 54 48.7	-1.7
LONY	Lake Ozonia comp=Z,28nm,1.3s	33.77	22	*e*P	P	19 54 50.0	-0.7
LONY	Lake Ozonia baz=210,SNR=5.9	33.77	22	P	P	19 54 49.8	-0.9
SNOW	Snow King Moun comp=Z,22nm,0.8s	33.79	334	*e*P	P	19 54 51.9	+0.7
PEMO	Pembroke baz=205	33.83	18	P	P	19 54 50.1	-1.1
ALGO	Algonquin Park baz=204	33.84	17	P	P	19 54 50.3	-1.0
LOHW	Long Hollow comp=Z,8.0nm,0.9s	33.85	335	*e*P	P	19 54 52.2	+0.5
ELK	Elko comp=Z,730nm,21.2s,baz=150,slow=39	33.86	327	LR	LR	20 10 30.4	
ELK	Elko comp=Z,6.1nm,0.9s	33.86	327	*e*P	P	19 54 53.6	+1.7
TPAW	Teton Pass comp=Z,16nm,0.9s	33.90	334	*e*P	P	19 54 53.2	+1.1
EYMN	Ely baz=180	33.91	360	P	P	19 54 50.1	-1.8
E52A	Mattawa baz=202	33.98	16	P	P	19 54 51.1	-1.4
NV11	Mina Array Sit comp=Z,3.8nm,1.6s	34.00	321	*e*P	P	19 54 54.5	+1.5
E51A	G1948 Merrick baz=201,SNR=5.9	34.00	15	P	P	19 54 51.4	-1.3
MOOW	Moose Ponds comp=Z,4.6nm,0.8s	34.02	335	*e*P	P	19 54 53.5	+0.4
OMMB	Old Mammoth Mi comp=Z,6.2nm,1.0s	34.03	319	*e*P	P	19 54 55.0	+1.5
FXWY	Fox Creek comp=Z,6.6nm,1.0s	34.05	334	*e*P	P	19 54 54.2	+0.8
NV01	Mina Array Sit	34.09	321	*e*P	P	19 54 55.9	+2.0
NV01				*e*PcP	PcP	19 57 30.7	-0.2
NV01				*e*ScP	ScP	20 01 18.9	+5.6
NVAR	Mina Array Bea comp=Z,9.9nm,0.8s,baz=135,slow=8.6,SNR=40	34.09	321	P	P	19 54 55.8	+2.0
NVAR	comp=Z,1.1nm,0.6s,baz=131,slow=3.7,SNR=5.2			PcP	PcP	19 57 30.7	-0.2
NVAR	comp=Z,0.9nm,0.8s,baz=133,slow=4.6,SNR=5.8			ScP	ScP	20 01 18.9	+5.6
NVAR	comp=Z,602nm,19.1s,baz=138,slow=39			LR	LR	20 10 32.0	
ORIO	Orleans, Innes baz=208	34.17	20	P	P	19 54 53.8	-0.4
VT1	Waterbury comp=Z,46nm,1.7s	34.22	24	*e*P	P	19 54 53.8	-0.8
IMW	Indian Meadow comp=Z,6.1nm,0.6s	34.22	335	*e*P	P	19 54 55.2	+0.1
F55A	Otter Lake baz=206	34.24	19	P	P	19 54 53.8	-0.9
D49A	Beulah Townshi baz=197	34.28	12	P	P	19 54 53.7	-1.4
FLWY	Flagg Ranch comp=Z,5.5nm,0.6s	34.28	335	*e*P	P	19 54 55.8	+0.4
FRNY	Flat Rock comp=Z,26nm,1.4s	34.32	23	*e*P	P	19 54 54.7	-0.8
E53A	Dumoine, Ponti baz=204	34.34	17	P	P	19 54 54.3	-1.4
RYN	Ryan comp=Z,21nm,1.5s	34.35	321	*e*P	P	19 54 57.8	+1.8
KVN	Kaiserville comp=Z,15nm,1.1s	34.35	322	*e*P	P	19 54 57.9	+1.8
PTGA	Pitinga comp=Z,17nm,0.8s,baz=307,slow=8.7,SNR=25	34.37	113	P	P	19 54 55.5	-0.8
PTGA	Pitinga comp=Z,28nm,0.8s	34.37	113	*e*P	P	19 54 55.4	-0.8
E54A	Lac Daplat, Po baz=205,SNR=6.7	34.53	17	P	P	19 54 56.3	-0.9
RLMT	Red Lodge comp=Z,3.5nm,0.6s	34.59	337	*e*P	P	19 54 57.8	-0.2
RLMT	Red Lodge baz=148	34.59	337	P	P	19 54 57.5	-0.5
D52A	ZEK Kipawa Sen baz=202	34.69	16	P	P	19 54 58.2	-0.4
BMN	Battle Mountai comp=Z,13nm,0.9s	34.74	324	*e*P	P	19 55 01.2	+1.9
D53A	Lac Vacive, Po comp=Z,12nm,0.9s	34.97	16	*e*P	P	19 55 00.5	-0.6
D53A	Lac Vacive, Po baz=203	34.97	16	P	P	19 55 00.7	-0.4
YERR	Yerington comp=Z,8.7nm,0.7s	35.01	321	*e*P	P	19 55 02.9	+1.1
CMB	Columbia Colle comp=Z,19nm,1.7s	35.17	318	*e*P	P	19 55 04.2	+1.3
TRQ	Mont Tremblant	35.17	20	*e*P	P	19 55 02.9	0.0
PNTR	Pine Nut comp=Z,13nm,0.8s	35.29	320	*e*P	P	19 55 05.4	+1.2
D54A	Lac Fusel, La baz=205,SNR=6.4	35.33	17	P	P	19 55 03.2	-1.0
HLID	Hailey comp=Z,12nm,1.0s	35.51	331	*e*P	P	19 55 07.2	+1.1
HLID	Hailey baz=139,SNR=18	35.51	331	P	P	19 55 06.7	+0.6
PAHR	Pah Rah Range comp=Z,5.5nm,0.9s	35.54	321	*e*P	P	19 55 07.6	+1.3
MCMT	McKenzie Canyo	35.79	334	*e*P	P	19 55 10.2	+1.8
BOZ	Bozeman (W) comp=Z,14nm,1.4s	35.90	336	*e*P	P	19 55 10.0	+0.8
BOZ	Bozeman (W) baz=145,SNR=6.8	35.90	336	P	P	19 55 09.8	+0.5
MFID	Camas Ranch comp=Z,16nm,1.1s	36.09	329	*e*P	P	19 55 11.7	+0.8
DLMT	Dillon comp=Z,26nm,1.4s	36.10	334	*e*P	P	19 55 12.5	+1.5
BEKR	Beckworth comp=Z,11nm,1.1s	36.23	321	*e*P	P	19 55 14.3	+2.1
ULM	Lac du Bonnet comp=Z,569nm,18.7s,baz=177,slow=43	36.40	355	LR	LR	20 14 10.0	
WVOR	Wild Horse Val comp=Z,13nm,0.6s	36.87	326	*e*P	P	19 55 19.5	+1.9
LSQQ	Lebel-sur-Quev baz=203	36.98	16	P	P	19 55 17.5	-0.7
O03E	Paynes Creek baz=126	37.37	320	P	P	19 55 22.4	+0.5
J08A	Circle Bar Ran comp=Z,97nm,1.3s	37.41	327	*e*P	P	19 55 23.2	+1.1
PLID	Pearl Lake comp=Z,34nm,1.1s	37.41	331	*e*P	P	19 55 22.8	+0.6
MATQ	Matagami baz=202	37.46	15	P	P	19 55 21.8	-0.4
MOD	Modoc Plateau comp=Z,26nm,1.7s	37.46	324	*e*P	P	19 55 23.6	+1.0
LPAZ	La Paz comp=Z,1.3nm,0.7s,baz=337,slow=5.6,SNR=4.6	37.82	142	P	P	19 55 25.5	-1.0
LPAZ	comp=Z,480nm,21.4s,baz=324,slow=36			LR	LR	20 10 38.5	
LPAZ	La Paz comp=Z,5.4nm,1.2s	37.82	142	*e*P	P	19 55 25.0	-1.5
MSO	Missoula comp=Z,24nm,1.3s	37.84	335	*e*P	P	19 55 26.8	+1.1
MSO	Missoula baz=143	37.84	335	P	P	19 55 25.9	+0.2
BMO	Blue Mountains comp=Z,14nm,1.0s	37.87	330	*e*P	P	19 55 26.0	+0.1
O02D	Mt. Diablo Mer baz=125	37.92	320	P	P	19 55 26.9	+0.4
M04C	Macdoel baz=127	38.28	322	P	P	19 55 30.3	+0.8
I07A	Izee comp=Z,12nm,1.3s	38.45	327	*e*P	P	19 55 32.6	+1.7
CHGQ	Chibougamau baz=207	38.48	18	P	P	19 55 30.3	-0.6
F10A	Beach Ranch, E comp=Z,55nm,0.8s	38.65	331	*e*P	P	19 55 32.8	+0.3
M02C	Callahan baz=126	38.66	321	P	P	19 55 33.2	+0.5
K04D	Chiloquin, OR baz=128	38.75	323	P	P	19 55 33.9	+0.5
YBH	Yreka Blue Hor comp=Z,441nm,20.1s,baz=146,slow=39	38.78	322	LR	LR	20 13 39.6	
L04D	Klamath Falls baz=127	38.83	323	P	P	19 55 34.0	-0.1
J05D	Fort Rock, OR baz=130	38.87	325	P	P	19 55 34.6	+0.1
G08A	Pilot Rock comp=Z,3.8nm,0.9s	39.00	329	*e*P	P	19 55 35.6	+0.1
PINE	Pine Mountain comp=Z,12nm,0.8s	39.03	325	*e*P	P	19 55 37.3	+1.4
E09A	Wood Farm, Sta comp=Z,11nm,0.8s	39.48	331	*e*P	P	19 55 39.6	+0.3
I05D	Terrebonne, OR baz=130	39.61	326	P	P	19 55 41.2	+0.7
WALA	Waterton Lakes	39.62	337	*e*P	P	19 55 41.3	+0.7
I04A	Tendick Farm, baz=129	39.86	324	P	P	19 55 42.8	+0.2
G05D	Wamic, OR baz=131	40.19	327	P	P	19 55 46.2	+1.0
D08A	Wollman Farm, comp=Z,18nm,1.2s	40.24	331	*e*P	P	19 55 46.1	+0.5
H04A	Detroit Lake comp=Z,61nm,1.2s	40.29	326	*e*P	P	19 55 47.0	+0.8
NEW	Newport comp=Z,5.2nm,0.8s,baz=122,slow=7.8,SNR=6.5	40.31	333	P	P	19 55 46.4	+0.1
NEW	comp=Z,422nm,18.8s,baz=133,slow=40			LR	LR	20 15 27.4	
NEW	Newport comp=Z,7.1nm,0.8s	40.31	333	*e*P	P	19 55 46.1	-0.1
NEW	Newport baz=139	40.31	333	P	P	19 55 46.3	0.0
I03D	Drain, OR	40.33	324	P	P	19 55 47.0	+0.5

	baz=127						
J01E	**Myrtle Point**	**40.35**	**323**	P	**P**	**19 55 47.1**	**+0.5**
	baz=126						
C09A	**Chrisman Ranch**	**40.48**	**332**	*e*P	**P**	**19 55 48.3**	**+0.7**
	comp=Z,26nm,0.9s						
H04D	**Lebanon**	**40.50**	**325**	P	**P**	**19 55 47.9**	**+0.1**
	baz=129						
F05D	**White Salmon**	**40.69**	**328**	P	**P**	**19 55 50.7**	**+1.3**
	baz=132						
I02D	**Swisshome**	**40.87**	**324**	P	**P**	**19 55 52.6**	**+1.8**
	baz=127						
G03D	**McMinnville, O**	**41.22**	**326**	P	**P**	**19 55 55.4**	**+1.6**
	baz=129						
LTY	**Liberty**	**41.22**	**330**	*e*P	**P**	**19 55 54.4**	**+0.6**
	comp=Z,59nm,1.6s						
B08A	**Colville Reser**	**41.37**	**332**	*e*P	**P**	**19 55 55.5**	**+0.5**
	comp=Z,12nm,1.0s						
LON	**Longmire**	**41.45**	**328**	*e*P	**P**	**19 55 56.4**	**+0.7**
	comp=Z,24nm,1.0s						
F04D	**Rainier, OR**	**41.64**	**327**	P	**P**	**19 55 58.1**	**+1.0**
	baz=130						
E04D	**Cinebar**	**41.71**	**328**	P	**P**	**19 55 57.8**	**0.0**
	baz=131						
C06D	**Leavenworth**	**41.80**	**330**	P	**P**	**19 55 58.9**	**+0.4**
	baz=134						
D05A	**Enumclaw**	**41.83**	**329**	*e*P	**P**	**19 56 00.6**	**+1.8**
	comp=Z,29nm,1.1s						
SIV	**San Ignacio**	**42.22**	**134**	P	**P**	**19 56 00.6**	**-1.7**
	comp=Z,1.3nm,0.4s,baz=312,slow=7.9,SNR=8.0						
B05A	**Bryant**	**42.62**	**330**	P	**P**	**19 56 05.1**	**0.0**
	baz=133						
D03D	**Eldon**	**42.62**	**328**	P	**P**	**19 56 04.8**	**-0.4**
	baz=131,SNR=5.9						
NLWA	**Neilton Lookou**	**42.93**	**328**	*e*P	**P**	**19 56 08.5**	**+0.8**
	comp=Z,53nm,1.2s						
A04D	**Lummi Island**	**43.22**	**330**	P	**P**	**19 56 09.5**	**-0.5**
	baz=132,SNR=6.1						
PGC	**Sidney**	**43.54**	**329**	*e*P	**P**	**19 56 13.6**	**+1.0**
	comp=Z,33nm,0.9s						
LLLB	**Lillooet**	**44.14**	**332**	*e*P	**P**	**19 56 17.9**	**+0.4**
SCHQ	**Schefferville**	**45.08**	**20**	P	**P**	**19 56 23.6**	**-1.3**
	comp=Z,15nm,1.0s,baz=207,slow=5.1,SNR=5.5						
SCHQ				LR	LR	20 16 29.2	
	comp=Z,1µm,19.1s,baz=228,slow=38						
SCHQ	**Schefferville**	**45.08**	**20**	*e*P	**P**	**19 56 22.5**	**-2.3**
YKA	**Yellowknife Ar**	**51.22**	**346**	P	**P**	**19 57 11.1**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=146,slow=7.7,SNR=25						
YKA				pP	**pP**	**19 57 17.7**	**-4.9**
	comp=Z,3.8nm,0.5s,baz=153,slow=7.7,SNR=13						
YKA				PcP	**PcP**	**19 58 26.2**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=149,slow=4.2,SNR=4.0						
YKB5	**Yellowknife Ar**	**51.22**	**346**	*e*P	**P**	**19 57 11.1**	**-1.0**
YKB5				*e*pP	**pP**	**19 57 17.7**	**-4.9**
YKB5				*e*PcP	**PcP**	**19 58 26.2**	**-0.8**
YKW3	**Yellowknife Ar**	**51.28**	**346**	*e*P	**P**	**19 57 11.9**	**-0.6**
	comp=Z,22nm,1.2s						
CPUP	**Villa Florida**	**51.96**	**140**	LR	LR	20 20 42.2	
	comp=Z,408nm,18.3s,baz=336,slow=38						
BDFB	**Brasilia**	**52.00**	**123**	LR	LR	20 20 06.0	
	comp=Z,231nm,21.5s,baz=299,slow=37						
FRB	**Frobisher Bay**	**52.24**	**13**	LR	LR	20 20 38.7	
	comp=Z,446nm,21.5s,baz=202,slow=37						
DLBC	**Dease Lake**	**52.95**	**336**	P	**P**	**19 57 26.6**	**+1.5**
	comp=Z,13nm,0.9s,baz=147,slow=4.5,SNR=24						
DLBC	**Dease Lake**	**52.95**	**336**	*e*P	**P**	**19 57 26.6**	**+1.5**
	comp=Z,22nm,1.0s						
TAOE	**Nuku Hiva Isla**	**53.41**	**248**	*e*T	T	20 54 20.9	
	comp=Z,72nm,0.2s						
RKT	**Rikitea**	**56.35**	**230**	*e*T	T	20 58 01.3	
	comp=Z,13nm,0.3s						
HYT	**Haines Junctio**	**57.42**	**335**	*e*P	**P**	**19 57 58.4**	**+1.0**
	comp=Z,13nm,1.2s						
PLCA	**Paso Flores**	**57.73**	**161**	LR	LR	20 17 57.8	
	comp=Z,416nm,18.6s,baz=22,slow=31						
PCA	**Pinnacle**	**58.18**	**334**	*e*P	**P**	**19 58 03.9**	**+1.2**
	comp=Z,18nm,1.0s						
CRQM	**Cirque**	**59.75**	**333**	*e*P	**P**	**19 58 14.2**	**+0.4**
	comp=Z,20nm,1.0s						
DAWY	**Dawson**	**59.95**	**338**	*e*P	**P**	**19 58 14.0**	**-0.9**
	comp=Z,3.7nm,0.8s						
EPYK	**Eagle Plains**	**60.38**	**341**	P	**P**	**19 58 16.3**	**-1.4**
	baz=127						
INK	**Inuvik**	**60.66**	**343**	P	**P**	**19 58 19.2**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=118,slow=9.2,SNR=6.1						
INK	**Inuvik**	**60.66**	**343**	*e*P	**P**	**19 58 18.9**	**-0.6**
	comp=Z,6.9nm,0.8s						
EGAK	**Eagle**	**60.99**	**338**	*e*P	**P**	**19 58 21.3**	**-0.6**
	comp=Z,5.6nm,0.8s						
MENT	**Mentasta**	**61.03**	**336**	*e*P	**P**	**19 58 22.5**	**+0.2**
	comp=Z,4.8nm,0.7s						
FID	**Port Fidalgo**	**61.22**	**333**	*e*P	**P**	**19 58 24.5**	**+1.0**
	comp=Z,45nm,1.2s						
GLI	**Glacier Island**	**61.55**	**333**	*e*P	**P**	**19 58 25.7**	**0.0**
	comp=Z,13nm,1.0s						
SCRK	**Sand Creek**	**61.64**	**337**	*e*P	**P**	**19 58 26.6**	**+0.1**
	comp=Z,17nm,1.4s						
PAX	**Paxson**	**61.76**	**335**	*e*P	**P**	**19 58 27.2**	**0.0**
	comp=Z,21nm,1.2s						
RIDG	**Independent Ri**	**61.86**	**336**	*e*P	**P**	**19 58 28.1**	**+0.3**
	comp=Z,15nm,1.0s						
SCM	**Sheep Creek Mo**	**62.05**	**334**	*e*P	**P**	**19 58 29.3**	**+0.1**
	comp=Z,51nm,1.4s						
SEW	**Seward**	**62.32**	**331**	*e*P	**P**	**19 58 31.2**	**+0.3**
	comp=Z,22nm,0.9s						
KNK	**Knik Glacier**	**62.37**	**333**	*e*P	**P**	**19 58 31.4**	**+0.2**
	comp=Z,24nm,0.9s						
SML	**Sawmill**	**62.47**	**333**	*e*P	**P**	**19 58 32.0**	**0.0**
	comp=Z,38nm,1.0s						
PMR	**Palmer**	**62.74**	**333**	*e*P	**P**	**19 58 33.8**	**+0.2**
	comp=Z,37nm,1.3s						
RC01	**Rabbit Creek A**	**62.82**	**332**	*e*P	**P**	**19 58 34.4**	**+0.1**
	comp=Z,26nm,0.9s						
PMOR	**Pomariorio Ree**	**62.85**	**245**	*e*T	T	21 06 07.9	
	comp=Z,5.5nm,0.2s						
BRLK	**Bradley Lake**	**62.88**	**331**	*e*P	**P**	**19 58 35.4**	**+0.7**
	comp=Z,65nm,1.2s						
HDA	**Harding Lake**	**62.99**	**336**	*e*P	**P**	**19 58 35.0**	**-0.3**
	comp=Z,29nm,1.3s						
ILAR	**Eielson Array**	**63.13**	**337**	P	**P**	**19 58 35.8**	**-0.5**
	comp=Z,10nm,1.0s,baz=120,slow=4.8,SNR=64						
ILAR				pP	**pP**	**19 58 42.4**	**-4.5**
	comp=Z,11nm,0.9s,baz=133,slow=4.8,SNR=15						
ILB	**Eielson Array**	**63.13**	**337**	*e*P	**P**	**19 58 35.8**	**-0.5**
ILB				*e*pP	**pP**	**19 58 42.4**	**-4.5**
RND	**Reindeer**	**63.33**	**335**	*e*P	**P**	**19 58 37.9**	**+0.2**
	comp=Z,66nm,1.2s						
CCB	**Clear Creek Bu**	**63.43**	**336**	*e*P	**P**	**19 58 37.2**	**-0.9**
	comp=Z,6.6nm,1.0s						
WRH	**Wood River Hil**	**63.47**	**336**	*e*P	**P**	**19 58 37.9**	**-0.5**
	comp=Z,7.4nm,0.8s						
POKR	**Poker Plat Res**	**63.49**	**337**	P	**P**	**19 58 38.1**	**-0.5**
	baz=116						
MCK	**McKinley**	**63.50**	**335**	*e*P	**P**	**19 58 38.7**	**0.0**
	comp=Z,38nm,1.2s						
TCOL	**CIGO, UAF Yank**	**63.55**	**337**	P	**P**	**19 58 37.6**	**-1.3**
	baz=115						
BWN	**Browne**	**63.89**	**336**	*e*P	**P**	**19 58 40.8**	**-0.5**
	comp=Z,108nm,1.2s						
RSO	**Redoubt South**	**63.99**	**331**	*e*P	**P**	**19 58 42.7**	**+0.5**
MEH	**Mehetia**	**64.21**	**242**	*e*T	T	21 07 49.1	
	comp=Z,26nm,0.3s						
KTH	**Kantishna Hill**	**64.25**	**335**	*e*P	**P**	**19 58 43.5**	**-0.2**
	comp=Z,35nm,1.0s						
BPAW	**Bear Paw Mtn.**	**64.48**	**335**	*e*P	**P**	**19 58 44.6**	**-0.6**
	comp=Z,21nm,0.9s						
PPLA	**Purkeypile**	**64.55**	**334**	*e*P	**P**	**19 58 45.0**	**-0.8**
	comp=Z,58nm,1.3s						
CAST	**Castle Rocks**	**64.68**	**334**	*e*P	**P**	**19 58 45.7**	**-0.8**
	comp=Z,36nm,1.2s						
MLY	**Manley**	**64.73**	**336**	*e*P	**P**	**19 58 46.4**	**-0.4**
	comp=Z,28nm,0.9s						
PPT	**Papeete**	**65.38**	**243**	LR	LR	20 18 56.8	
	comp=Z,438nm,20.7s,baz=6.0,slow=28						
PPT2	**Papeete2**	**65.39**	**243**	*e*S	**S**	**20 07 39.8**	**+5.6**
	comp=Z,151nm,25.2s						
PPT2	**Papeete2**	**65.39**	**243**	*e*LR	LR	20 18 25.7	
	comp=Z,681nm,24.2s,baz=56						
COLD	**Coldfoot**	**65.40**	**339**	*e*P	**P**	**19 58 51.7**	**+0.6**
	comp=Z,13nm,1.2s						
SVW2	**Sparrevohn**	**65.50**	**331**	*e*P	**P**	**19 58 51.1**	**-0.8**
	comp=Z,11nm,0.7s						
SUMG	**Summit**	**66.14**	**15**	*e*P	**P**	**19 58 54.1**	**-2.1**
	comp=Z,27nm,1.5s						
SUMG	**Summit**	**66.14**	**15**	*i* P	**P**	**19 58 54.4**	**-1.8**
	comp=Z,13nm,0.7s						
TTA	**Tatalina**	**66.22**	**333**	*e*P	**P**	**19 58 55.5**	**-1.0**
	comp=Z,22nm,1.0s						
TBI	**Tubuai**	**67.81**	**237**	*e*S	**S**	**20 08 06.7**	**+3.6**
	comp=Z,129nm,24.8s						
TBI	**Tubuai**	**67.81**	**237**	*e*LR	LR	20 19 33.7	
	comp=Z,663nm,27.8s,baz=67						
DAG	**Danmarks Havn**	**72.59**	**13**	*i* P	**P**	**19 59 33.6**	**-1.9**
ADK	**Adak**	**76.27**	**321**	*e*P	**P**	**19 59 57.4**	**0.0**
	comp=Z,54nm,1.4s						
ESDC	**Sonseca Array**	**79.30**	**52**	P	**P**	**20 00 13.6**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=272,slow=6.0,SNR=4.6						
NOA	**NORSAR Array B**	**83.92**	**29**	LR	LR	20 36 13.8	
	comp=Z,119nm,21.4s,baz=290,slow=34						
DBIC	**Dimbokro**	**85.08**	**84**	LR	LR	20 36 40.9	
	comp=Z,96nm,19.4s,baz=262,slow=34						
ARA0	**ARCESS Array S**	**86.01**	**18**	*e*P	**P**	**20 00 48.4**	**-0.5**
ARCES	**ARCESS Array B**	**86.01**	**18**	P	**P**	**20 00 48.4**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=292,slow=3.8,SNR=6.7						
ARCES				LR	LR	20 40 05.4	
	comp=Z,337nm,19.6s,baz=313,slow=36						
GERES	**GERESS Array B**	**89.28**	**40**	LR	LR	20 37 30.7	
	comp=Z,121nm,20.9s,baz=291,slow=33						
TOA1	**Torodi Ar. Sit**	**89.82**	**77**	*e*P	**P**	**20 01 04.5**	**-3.6**
TORD	**Torodi Ar. Bea**	**89.82**	**77**	P	**P**	**20 01 04.5**	**-3.6**
	comp=Z,0.5nm,0.6s,baz=280,slow=4.7,SNR=7.1						
TORD				LR	LR	20 39 11.5	
	comp=Z,117nm,20.7s,baz=320,slow=34						
FINES	**FINESS Array B**	**90.31**	**25**	LR	LR	20 42 49.7	
	comp=Z,160nm,18.6s,baz=298,slow=36						
PETK	**Petropavlovsk-**	**91.03**	**326**	LR	LR	20 40 16.3	
	comp=Z,35nm,21.7s,baz=63,slow=34						
KURBB	**Kurchatov Arra**	**115.11**	**7**	PKP	**PKiKP**	**20 06 49.1**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=346,slow=2.3,SNR=6.0						
MK32	**Makanchi Array**	**119.28**	**5**	*e*PKPdf	**PKPdf**	**20 06 56.8**	**-1.3**
MKAR	**Makanchi Array**	**119.28**	**5**	PKP	**PKPdf**	**20 06 56.8**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=307,slow=3.0,SNR=5.8						
MKAR				pPKP	**PKiKP**	**20 07 02.8**	**+4.7**
	comp=Z,0.6nm,0.5s,baz=302,slow=3.6,SNR=8.1						
HHC	**Hu-ho-hao-te**	**121.48**	**340**	PKP	**PKiKP**	**20 07 04.9**	**+2.2**
WMQ	**Urumqi**	**122.52**	**1**	*e*PKP	**PKPdf**	**20 07 03.4**	**-1.0**
WMQ				LR	LR		
	comp=Z,230nm,21.1s						
WMQ				LR	LR		
	comp=Z,150nm,23.9s						
WMQ				LR	LR		
	comp=Z,290nm,20.5s						
KSH	**Kashi**	**125.53**	**12**	*e*PKP	**PKiKP**	**20 07 11.9**	**+1.1**
NJ2	**Nanjing**	**125.86**	**328**	*e*PKP	**PKPdf**	**20 07 08.4**	**-2.6**
GTA	**Gaotai**	**125.91**	**349**	*e*PKP	**PKiKP**	**20 07 11.8**	**+0.2**
LZH	**Lanzhou**	**128.20**	**344**	*e*PKP	**PKiKP**	**20 07 16.8**	**+0.5**
AS31	**Alice Springs**	**136.19**	**250**	*e*PKPdf	**PKPdf**	**20 07 30.1**	**-0.7**
ASAR	**Alice Springs**	**136.19**	**250**	PKP	**PKPdf**	**20 07 30.3**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=92,slow=2.1,SNR=9.9						
CHTO	**Chiang Mai**	**145.90**	**342**	*e*PKPdf	**PKPdf**	**20 07 47.3**	**-1.1**
CM31	**Chiang Mai Arr**	**146.23**	**342**	*e*PKPbc	**PKPdf**	**20 07 49.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**146.23**	**342**	PKPbc	**PKPdf**	**20 07 49.2**	**+0.3**
	comp=Z,14nm,0.8s,baz=335,slow=3.6,SNR=75						
CMAR				pPKPbc	**PKiKP**	**20 07 56.0**	**+2.8**
	comp=Z,20nm,0.8s,baz=341,slow=3.6,SNR=23						

GCG 18 19:52:06.6±0.3, 14°.09N×91°.55W, h122^{km}±56^{km}, MD4.0, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**0.62**	**358**	*e*P	Pn	19 52 26.4	+0.6
FUG	**Fuego 3**	**0.77**	**62**	*e*P	Pn	19 52 27.4	+0.5
FUG				*e*S	Sn	19 52 43.7	+1.5
PCG	**Pacaya**	**0.96**	**71**	*e*P	Pn	19 52 29.6	+0.9
PCG				*e*S	Sn	19 52 47.3	+1.9

JMA 18 19:52:24.6±0.1, 37°.33N×141°.64E, h43^{km}±2^{km}, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.61**	**274**	P	Pn	19 52 37.0	0.0
JFK				S	Sn	19 52 45.6	-0.2
ONAJ	**Iwakimizuishiy**	**0.71**	**252**	P	Pn	19 52 38.3	0.0
ONAJ				S	Sn	19 52 47.7	-0.4
JMST	**Minamisoumatoc**	**0.72**	**304**	P	Pn	19 52 38.2	-0.1
JMST				S	Sn	19 52 47.8	-0.4
JMM	**Marumori**	**0.86**	**309**	P	Pn	19 52 40.3	0.0
JMM				S	Sn	19 52 51.4	-0.3
JFFD	**Fukushimafurud**	**0.89**	**255**	P	Pn	19 52 40.8	0.0
JFT	**Otama**	**1.05**	**281**	P	Pn	19 52 44.0	+1.1
JHO	**Hitachi**	**1.12**	**230**	P	Pn	19 52 43.4	-0.4
JHO				S	Sn	19 52 56.9	-1.1
JIO	**Ouri**	**1.15**	**348**	P	Pn	19 52 44.0	-0.2
JIO				S	Sn	19 52 57.7	-1.0
JOU	**Okura**	**1.29**	**324**	P	Pn	19 52 47.2	+1.0
JYS	**Shirataka**	**1.53**	**306**	P	Pn	19 52 51.1	+1.6
JFY	**Yanaizu**	**1.54**	**273**	P	Pn	19 52 50.8	+1.1
MAT	**Matsushiro**	**2.86**	**255**	P	Pn	19 53 11.3	+3.6
MAT				S	Sn	19 53 46.1	+5.2

VIE 18 19:59:55.4±0.8, 47°.26N×11°.30E, h14^{km}±4^{km}, ml0.8/4, Error ellipse: s-maj=4.5km s-min=2.0km az=8.0, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SQTA	**Sankt Quirin**	**0.07**	**238**	*i* Pg	Pg	19 59 58.5	+0.2
	2.1nm,0.1s						
SQTA				*i* Sg	Sg	20 00 00.8	+0.5
	5.7nm,0.1s						
MOTA	**Moosalm**	**0.16**	**304**	*e*Pg	Pg	19 59 59.3	-0.1
	0.4nm,0.1s						
MOTA				*e*Sg	Sg	20 00 02.6	+0.4
	1.2nm,0.1s						
WATA	**Walderalm**	**0.21**	**67**	*e*Pg	Pg	20 00 00.2	0.0
	0.9nm,0.2s						
WATA				Sg	Sg	20 00 03.8	+0.4
	3.7nm,0.1s						
WTTA	**Wattenberg**	**0.23**	**88**	*e*Pg	Pg	20 00 00.8	+0.2
	0.2nm,0.1s						
WTTA				*e*Sg	Sg	20 00 04.5	+0.4
	4.2nm,0.2s						

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*ISCJB **18** 20:04:23.2±0.8, 6°.15S±0°.05×145°.36E±0°.06, h83^{km}±8^{km}, mb4.3/20, Error ellipse: s-maj=9.4km s-min=8.0km az=7.1*

*IDC **18** 20:04:24.1±0.7, 6°.11S×145°.50E, h78^{km}±7^{km}, mb4.1/10, mb1 4.2/13, mb1mx4.0/32, mbtmp4.4/13, MS2.9/1, Ms1 2.9/1, ms1mx2.4/21, Error ellipse: s-maj=21.2km s-min=9.4km az=70.0*

*NEIC **18** 20:04:25.0±1.9, 6°.13S×145°.40E, h86^{km}±6^{km}, mb4.4/16, Error ellipse: s-maj=15.5km s-min=8.5km az=98.0*

*DJA **18** 20:04:27.1±0.4, 6°S±4°×14°5E±°, h66^{km}±12^{km}, M4.8/9, mB5.5/2, mb4.7/9, MLv4.9/6, Mw(mB)5.0/2*

ISC 18 20:04:24.1±0.6, 6°.16S±0°.06×145°.32E±0°.07, h74^{km}±6^{km}, h74^{km}:pP-P, n49, σ1^s.19/54, mb4.5/21, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.70**	**151**	P	**Pn**	**20 05 20.4**	**+1.4**
	21nm,0.3s,baz=2.8,slow=6.9,SNR=63						
PMG				S	**Sn**	**20 06 01.0**	**-0.4**
	44nm,0.3s,baz=314,slow=23,SNR=33						
MANU	**Manus Island**	**4.58**	**27**	*e*Pn	**Pn**	**20 05 31.2**	**+0.3**
MMPI	**Merauke**	**5.40**	**245**	P	**Pn**	**20 05 41.8**	**-0.3**
MMPI				S	**Sn**	**20 06 40.1**	**-2.9**
GENI	**Genyem**	**6.24**	**304**	P	**Pn**	**20 05 54.6**	**+1.0**
RABL	**Rabaul**	**7.10**	**74**	*e*Pn	**Pn**	**20 06 06.2**	**+0.8**
COEN	**Coen**	**8.03**	**195**	*e*Pn	**Pn**	**20 06 20.1**	**+2.1**
CTA	**Charters Tower**	**13.87**	**176**	P	**P**	**20 07 42.2**	**-1.1**
	3.2nm,0.3s,baz=360,slow=14,SNR=38						
CTAO	**Charters Tower**	**13.87**	**176**	*e*P	**P**	**20 07 41.9**	**-1.4**
SIJI	**Sorong**	**14.97**	**290**	P	**Pn**	**20 07 52.3**	**+0.5**
	0.4nm,0.3s,baz=86,slow=7.9,SNR=5.2						
MTN	**Manton Dam**	**15.48**	**244**	*e*Pn	**Pn**	**20 07 57.3**	**-0.9**
	68nm,1.4s						
WB2	**Warramunga Arr**	**17.35**	**217**	*e*P	**P**	**20 08 22.2**	**+0.3**
	9.5nm,0.8s						
WR1	**Warramunga Arr**	**17.36**	**217**	*e*P	**P**	**20 08 22.3**	**+0.3**
WRA	**Warramunga Arr**	**17.36**	**217**	P	**P**	**20 08 22.3**	**+0.3**
	1.4nm,0.3s,baz=40,slow=11,SNR=32						
GUMO	**Guam**	**19.63**	**359**	LR	LR	20 15 10.2	
	comp=Z,32nm,18.7s,baz=180,slow=33						
AS31	**Alice Springs**	**20.57**	**211**	*e*P	**P**	**20 08 57.8**	**+0.7**
	4.7nm,0.6s						
AS31				*e*PcP	**PcP**	**20 13 06.2**	**+0.4**
ASAR	**Alice Springs**	**20.58**	**211**	P	**P**	**20 08 57.1**	**0.0**
	4.3nm,0.4s,baz=40,slow=8.3,SNR=54						
ASAR				PcP	**PcP**	**20 13 06.2**	**+0.4**
	1.0nm,0.5s,baz=68,slow=1.0,SNR=5.1						
BATI	**Baumata**	**21.80**	**258**	P	**P**	**20 09 12.4**	**+2.1**
	38nm,0.6s,baz=141,slow=2.6,SNR=14						
BATI	**Baumata**	**21.80**	**258**	*e*P	**P**	**20 09 12.4**	**+2.1**
BATI				*e*P	**P**	**20 09 12.4**	**+2.1**
STKA	**Stephens Creek**	**25.82**	**187**	P	**P**	**20 09 48.8**	**+0.3**
	6.6nm,0.9s,baz=355,slow=10,SNR=7.4						
STKA	**Stephens Creek**	**25.82**	**187**	*e*P	**P**	**20 09 48.8**	**+0.3**
	2.6nm,1.0s						
USRK	**Ussuriysk Ar.**	**51.55**	**348**	P	**P**	**20 13 22.3**	**-0.3**
	1.8nm,0.5s,baz=169,slow=7.8,SNR=11						
USRK				pP	**pP**	**20 13 40.3**	**-1.6**
	1.5nm,0.7s,baz=174,slow=5.0,SNR=3.7						
CM31	**Chiang Mai Arr**	**51.86**	**299**	*e*P	**P**	**20 13 26.2**	**+0.9**
	6.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.86**	**299**	P	**P**	**20 13 26.1**	**+0.7**
	4.2nm,0.5s,baz=119,slow=5.9,SNR=42						
PETK	**Petropavlovsk-**	**59.97**	**9**	pP	pP	20 14 40.6	-1.2
	3.0nm,0.7s,baz=158,slow=8.6,SNR=5.3						
PEA1	**Petropavlovsk-**	**59.98**	**9**	*e*pP	pP	20 14 40.6	-1.2
LSA	**Lhasa**	**63.01**	**308**	*e*P	**P**	**20 14 45.0**	**+0.8**
	4.0nm,0.7s						
SONA0	**Songino Array**	**63.74**	**332**	*e*P	**P**	**20 14 48.6**	**+0.3**
SONM	**Songino Array**	**63.74**	**332**	P	**P**	**20 14 48.6**	**+0.3**
	1.1nm,0.7s,baz=156,slow=6.4,SNR=8.9						
VNDA	**Vanda**	**71.85**	**176**	P	**P**	**20 15 38.6**	**-0.1**
	1.0nm,0.8s,baz=312,slow=6.5,SNR=5.8						
MK31	**Makanchi Array**	**76.56**	**321**	*e*P	**P**	**20 16 06.8**	**+0.2**
	3.0nm,1.1s						
MK32	**Makanchi Array**	**76.56**	**321**	*e*P	**P**	**20 16 06.8**	**+0.2**
MK32				*e*pP	**pP**	**20 16 28.0**	**+0.8**
MKAR	**Makanchi Array**	**76.56**	**321**	P	**P**	**20 16 06.8**	**+0.2**
	1.3nm,0.4s,baz=97,slow=8.9,SNR=37						
MKAR				pP	**pP**	**20 16 28.0**	**+0.8**
	0.7nm,0.5s,baz=106,slow=6.8,SNR=4.1						
MAKZ	**Makanchi**	**76.77**	**321**	*e*P	**P**	**20 16 07.8**	**+0.1**
	3.6nm,0.5s						
ZALV	**Zalesovo Beam**	**78.26**	**328**	P	**P**	**20 16 15.0**	**-0.8**
	1.9nm,0.5s,baz=126,slow=8.8,SNR=7.0						
ZAA1	**Zalesovo Array**	**78.27**	**328**	*e*P	**P**	**20 16 15.0**	**-0.9**
NIL	**Nilore**	**78.66**	**306**	*e*P	**P**	**20 16 18.7**	**+0.2**
	12nm,0.8s						
KURK	**Kurchatov**	**80.34**	**324**	*e*P	**P**	**20 16 27.0**	**-0.2**
	4.8nm,1.0s						
CHGR	**Chuyangaron**	**83.11**	**310**	*e*PcP	**PcP**	**20 16 49.1**	**+2.4**
RND	**Reindeer**	**84.95**	**24**	*e*P	**P**	**20 16 49.8**	**-1.3**
	5.0nm,0.6s						
WRH	**Wood River Hil**	**85.70**	**24**	*e*P	**P**	**20 16 53.2**	**-1.4**
	3.6nm,0.8s						
CCB	**Clear Creek Bu**	**85.88**	**23**	*e*P	**P**	**20 16 53.9**	**-1.6**
	3.7nm,0.8s						
BRVK	**Borovoye**	**85.99**	**324**	*e*P	**P**	**20 16 55.5**	**-0.8**
	1.9nm,0.8s						
ILAR	**Eielson Array**	**86.29**	**23**	P	**P**	**20 16 55.5**	**-2.0**
	2.5nm,0.6s,baz=249,slow=4.9,SNR=29						
ILAR				pP	**pP**	**20 17 17.4**	**-0.9**
	2.2nm,0.9s,baz=261,slow=4.8,SNR=5.5						
ILB	**Eielson Array**	**86.29**	**23**	*e*P	**P**	**20 16 55.5**	**-2.0**
ILB				*e*pP	**pP**	**20 17 17.4**	**-0.9**
ABKAR	**Akbulak array**	**91.61**	**319**	*e*P	**P**	**20 17 21.4**	**-1.6**
	2.6nm,1.1s						
GERES	**GERESS Array B**	**121.08**	**325**	PKP	**PKiKP**	**20 23 07.9**	**-0.8**
	0.4nm,0.6s,baz=85,slow=2.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**143.50**	**284**	PKP	PKPbc	20 23 48.1	-0.7
	0.8nm,0.6s,baz=59,slow=4.5,SNR=12						
TOA1	**Torodi Ar. Sit**	**143.51**	**284**	*e*PKPdf	PKPbc	20 23 48.1	-0.7
DBIC	**Dimbokro**	**150.36**	**273**	PKPbc	**PKiKP**	**20 24 07.4**	**-1.6**
	3.7nm,0.7s,baz=66,slow=3.8,SNR=4.3						

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*IDC **18** 20:06:57.8±2.3, 43°.44N×105°.31W, h0^{km}, mb4.1/2, mb1 4.1/4, mb1mx3.6/36, mbtmp4.0/4, ML3.8/2, Error ellipse: s-maj=59.2km s-min=8.6km az=154.0*

*ISCJB **18** 20:06:59.2±0.4, 43°.67N±0°.03×105°.29W±0°.05, h0^{km}, mb4.3/2, Error ellipse: s-maj=4.8km s-min=3.6km az=10.9*

*ANF **18** 20:06:59.4±1.3, 43°.69N×105°.35W, ML3.7/6, Error ellipse: s-maj=22.1km s-min=10.2km az=133.0*

*NEIC **18** 20:07:07.3±0.4, 43°.45N×106°.01W, h0^{km}, ML3.4, Error ellipse: s-maj=5.0km s-min=4.2km az=199.0, Suspected Mining explosion.*

NEIC 23 km [14 miles] E of Midwest.

ISC 18 20:06:59.3±0.8, 43°.68N±0°.04×105°.21W±0°.05, h0^{km}, n81, σ1^s.32/76, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.95**	**62**	P	**Pb**	**20 07 19.1**	**+0.3**
	baz=246						
RSSD				S	**Sn**	**20 07 34.1**	**-0.5**
	baz=246						
K22A	**Casper**	**1.41**	**224**	*e*Pg	**Pn**	**20 07 24.0**	**-2.4**
K22A	**Casper**	**1.41**	**224**	P	**Pn**	**20 07 24.6**	**-1.8**
	baz=39						
K22A				S	**Sg**	**20 07 43.7**	**-0.8**
	baz=39						
PHWY	**Pilot Hill**	**2.38**	**185**	*e*Pn	**Pn**	**20 07 40.5**	**+0.6**
RWWY	**Rawlins**	**2.48**	**217**	*e*Pn	**Pn**	**20 07 42.3**	**+1.1**
N23A	**Red Feather La**	**2.84**	**191**	P	**Pn**	**20 07 47.3**	**+1.3**
	baz=8.7						
N23A				S	**Sn**	**20 08 22.9**	**+1.8**
	baz=8.7						
LAO	**LASA Array**	**3.09**	**347**	P	**Pn**	**20 07 49.3**	**-0.1**
	baz=168						
LAO				S	**Sn**	**20 08 27.0**	**-0.1**
	baz=168						
RLMT	**Red Lodge**	**3.25**	**298**	*e*Pn	**Pn**	**20 07 51.5**	**-0.2**
RLMT	**Red Lodge**	**3.25**	**298**	P	**Pn**	**20 07 51.5**	**-0.2**
	baz=116						
BW06	**Boulder Array**	**3.31**	**255**	P	**Pn**	**20 07 53.1**	**+0.6**
	baz=72						
PD31	**Pinedale Array**	**3.31**	**255**	*e*Pn	**Pn**	**20 07 52.3**	**-0.2**
PDAR	**Pinedale Array**	**3.31**	**255**	Pn	**Pn**	**20 07 52.3**	**-0.2**
	7.3nm,0.3s,baz=80,slow=18,SNR=57						
PDAR				Lg	Lg	20 08 37.5	
	76nm,0.3s,baz=73,slow=28,SNR=27						
OGNE	**Ogallala**	**3.61**	**138**	*e*Pn	**Pg**	**20 08 07.8**	**-0.6**
GCMT	**Greycliff**	**3.81**	**305**	*e*Pn	**Pn**	**20 08 01.5**	**+2.1**
LOHW	**Long Hollow**	**3.92**	**271**	*e*Pn	**Pn**	**20 08 01.8**	**+0.9**
H17A	**Grant Village**	**3.94**	**282**	*e*Pn	**Pn**	**20 08 03.1**	**+2.0**
FLWY	**Flagg Ranch**	**3.99**	**278**	*e*Pn	**Pn**	**20 08 04.0**	**+2.1**
MOOW	**Moose Ponds**	**4.01**	**273**	*e*Pn	**Pn**	**20 08 03.8**	**+1.5**
SNOW	**Snow King Moun**	**4.04**	**269**	*e*Pn	**Pn**	**20 08 03.7**	**+1.1**
YFT	**Old Faithful**	**4.13**	**283**	*e*Pn	**Pn**	**20 08 03.6**	**-0.2**
IMW	**Indian Meadow**	**4.16**	**275**	*e*Pn	**Pn**	**20 08 05.6**	**+1.3**
TPAW	**Teton Pass**	**4.18**	**269**	*e*Pn	**Pn**	**20 08 05.7**	**+1.2**
O20A	**White River Ci**	**4.20**	**214**	*e*Pn	**Pn**	**20 08 05.7**	**+0.8**
YHH	**Holmes Hill**	**4.20**	**287**	*e*Pn	**Pn**	**20 08 05.9**	**+1.0**
FXWY	**Fox Creek**	**4.22**	**271**	*e*Pn	**Pn**	**20 08 06.2**	**+1.1**
AHID	**Auburn Hatcher**	**4.40**	**260**	*e*Pn	**Pn**	**20 08 05.5**	**-2.0**
SMCO	**Snowmass**	**4.69**	**197**	*e*Pn	**Pn**	**20 08 13.3**	**+1.6**
BOZ	**Bozeman (W)**	**4.97**	**295**	*e*Pn	**Pn**	**20 08 15.0**	**-0.2**
HWUT	**Hardware Ranch**	**5.13**	**248**	*e*Pn	**Pn**	**20 08 17.4**	**0.0**
TCUT	**Toone Canyon**	**5.26**	**243**	*e*Pn	**Pn**	**20 08 18.5**	**-0.9**
DLMT	**Dillon**	**5.54**	**290**	*e*Pn	**Pn**	**20 08 25.4**	**+2.3**
JLU	**Jordanelle**	**5.57**	**239**	*e*Pn	**Pn**	**20 08 21.2**	**-2.4**
HRY	**Holter Researc**	**5.58**	**305**	*e*Pn	**Pn**	**20 08 24.9**	**+1.3**
MCMT	**McKenzie Canyo**	**5.61**	**284**	*e*Pn	**Pn**	**20 08 26.0**	**+1.8**
PV22	**Blue Mesa, Par**	**5.81**	**209**	*e*Pn	**Pn**	**20 08 28.0**	**+1.2**
PV07	**Paradox Valley**	**5.85**	**208**	*e*Pn	**Pn**	**20 08 29.2**	**+1.9**
PV21	**Cone Mtn., Par**	**5.85**	**210**	*e*Pn	**Pn**	**20 08 28.8**	**+1.3**
SPUT	**South Promonto**	**5.85**	**249**	*e*Pn	**Pn**	**20 08 28.1**	**+0.6**
HVU	**Hansel Valley**	**5.89**	**254**	*e*Pn	**Pn**	**20 08 28.1**	**+0.2**
P17A	**Butcher Ranch,**	**5.91**	**226**	*e*Pn	**Pn**	**20 08 30.2**	**+2.0**
SDCO	**Great Sand Dun**	**5.93**	**182**	*e*Pn	**Pn**	**20 08 30.0**	**+1.4**
PV23	**Carpenter Ridg**	**5.96**	**210**	*e*Pn	**Pn**	**20 08 30.9**	**+1.9**
PV09	**Paradox Valley**	**5.96**	**211**	*e*Pn	**Pn**	**20 08 30.5**	**+1.4**
PV04	**Paradox Valley**	**5.97**	**209**	*e*Pn	**Pn**	**20 08 30.3**	**+1.2**
PV12	**Saucer Basin,**	**6.01**	**208**	*e*Pn	**Pn**	**20 08 31.1**	**+1.5**
MPU	**Maple Canyon**	**6.04**	**235**	*e*Pn	**Pn**	**20 08 28.9**	**-1.1**
PV14	**Lion Creek, Pa**	**6.04**	**210**	*e*Pn	**Pn**	**20 08 31.4**	**+1.4**
PV10	**Paradox Valley**	**6.04**	**210**	*e*Pn	**Pn**	**20 08 32.4**	**+2.3**
PV20	**West Nyswonger**	**6.04**	**209**	*e*Pn	**Pn**	**20 08 31.6**	**+1.5**
PV11	**David Mesa, Pa**	**6.05**	**209**	*e*Pn	**Pn**	**20 08 32.0**	**+1.9**
PV16	**Nyswonger Mesa**	**6.05**	**209**	*e*Pn	**Pn**	**20 08 31.6**	**+1.3**
SRU	**San Rafael Swe**	**6.07**	**223**	*e*Pn	**Pn**	**20 08 31.3**	**+0.9**
PV19	**Morning Glory**	**6.08**	**209**	*e*Pn	**Pn**	**20 08 32.1**	**+1.5**
PV03	**Paradox Valley**	**6.08**	**208**	*e*Pn	**Pn**	**20 08 32.2**	**+1.6**
PV02	**Paradox Valley**	**6.08**	**207**	*e*Pn	**Pn**	**20 08 32.5**	**+1.8**
PV17	**East Wray Mesa**	**6.09**	**209**	*e*Pn	**Pn**	**20 08 32.2**	**+1.4**
PV01	**Paradox Valley**	**6.10**	**206**	*e*Pn	**Pn**	**20 08 32.3**	**+1.4**
PV18	**Skein Mesa, Pa**	**6.11**	**209**	*e*Pn	**Pn**	**20 08 32.4**	**+1.4**
PV13	**Radium Mtn., P**	**6.16**	**208**	*e*Pn	**Pn**	**20 08 32.5**	**+0.9**
ECSD	**EROS Data Cent**	**6.23**	**87**	*e*Pn	**Pb**	**20 08 47.5**	**-1.1**
TMUT	**Trail Mountain**	**6.28**	**228**	*e*Pn	**Pn**	**20 08 34.1**	**+0.6**

PV05	Paradox Valley	6.33	209	*e*Pn	Pn	20 08 33.8	-0.2
Q16A	Castle Valley	6.54	225	*e*Pn	Pn	20 08 36.9	0.0
DUG	Dugway, Tooele	6.65	241	*e*Pn	Pn	20 08 38.2	-0.2
HLID	Hailey	6.68	272	*e*Pn	Pn	20 08 40.8	+2.0
MTPU	Mount Pierson	7.72	226	*e*Pn	Pn	20 08 53.8	+0.5
PSUT	Pine Spring	8.31	235	*e*Pn	Pn	20 09 02.1	+1.0
U15A	North Rim	9.05	219	*e*Pn	Pn	20 09 12.3	+0.9
ULM	Lac du Bonnet	9.15	41	Pn	Pn	20 09 12.2	-0.3
	2.7nm,0.3s,baz=236,slow=12,SNR=9.3						
ULM				Lg	Lg	20 11 46.9	
	0.6nm,0.3s,baz=303,slow=15,SNR=2.5						
WUAZ	Wupatki	9.44	212	*e*Pn	Pn	20 09 15.7	-0.9
I56US	NEWPORT INFRAS	9.48	303	*i*		21 04 40.0	
	baz=117,slow=308,SNR=5.4						
WCI	Wyandotte Cave	15.28	104	*e*P	P	20 10 53.1	+12
P48A	Milroy	15.39	99	*e*P	P	20 10 51.5	+9.1
O49A	Covington	15.91	95	*e*Pn	P	20 11 00.5	+12
CLTN	Cedars of Leba	16.33	111	*e*Pn	P	20 11 03.8	+11
SWET	Sewanee	17.09	113	*e*Pn	P	20 11 12.8	+11
N53A	Lisbon	18.25	91	*e*P	P	20 11 28.0	+14
N54A	Moraine State	18.82	90	*e*P	Pn	20 11 36.9	+16
O56A	Blue Knob Stat	20.07	91	*e*P	Pn	20 11 50.4	+15
ARCES	ARCESS Array B	61.46	18	P	P	20 17 16.7	-0.4
	0.9nm,0.6s,baz=339,slow=6.5,SNR=6.4						
FINES	FINESS Array B	68.07	23	P	P	20 18 00.5	+0.3
	2.8nm,1.0s,baz=335,slow=6.2,SNR=3.4						

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*NNC **18** 20:07:04.1±4.7, 44°.59N×80°.59E, h0^{km}, mb2.5, mpv2.4, Error ellipse: s-maj=33.3km s-min=28.1km az=106.0*

SOME 18 20:07:02.7, 42°.30N×81°.08E, h15^{km}, 2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.27	335	P	Pn	20 07 26.0	0.0
KTMS				S	Sb	20 07 42.6	+0.1
KTMS	Ketmen	1.27	335	*e*P	Pn	20 07 26.2	+0.2
	1.0nm,0.2s						
KTMS				*e*S	Sn	20 07 42.9	+0.1
	1.3nm,0.3s						
PDGK	Podgornoye	1.56	312	P	Pb	20 07 31.6	+0.3
	0.4nm,0.3s						
PDGK				S	Sg	20 07 53.1	+0.1
	1.5nm,0.3s						
PDGK	Podgornoye	1.56	312	⇓P	Pb	20 07 31.0	-0.4
	3.3nm,1.5s						
PDGK				⇓S	Sb	20 07 50.8	-0.1
	3.0nm,0.7s						
UZB	Uzynbulak	1.74	300	*e*P	Pb	20 07 34.5	+0.1
	0.9nm,0.3s						
UZB				*e*S	Sb	20 07 57.3	+1.1
	1.4nm,0.3s						
KPKS	Kokpek	2.11	304	*e*P	Pb	20 07 39.7	-1.1
	3.9nm,0.3s						
KPKS				*e*S	Sb	20 08 06.2	-0.7
	7.3nm,0.3s						
DJR	Jarkent	2.24	336	*e*P	Pb	20 07 43.5	+0.5
	1.1nm,0.3s						
DJR				*e*S	Sg	20 08 13.2	-1.5
	1.4nm,0.5s						
MNBS	Baschi	2.65	313	Pg	Pb	20 07 49.5	-0.4
	0.8nm,0.2s						
MNBS	Baschi	2.65	313	*e*P	Pb	20 07 49.5	-0.4
	0.8nm,0.2s						
MNBS				*e*S	Sb	20 08 23.6	+1.4
	4.5nm,0.5s						
MDOK	Medeo	3.10	288	Pg	Pb	20 07 56.4	-1.1
	0.9nm,0.3s						
MDOK				Lg	Lg	20 08 35.3	
	2.2nm,0.3s						
MDOK	Medeo	3.10	288	*e*P	Pb	20 07 58.5	+0.9
	0.7nm,0.3s						
MDOK				*e*S	Sb	20 08 38.2	+3.1
	2.2nm,0.4s						

GCG 18 20:08:59.5±0.3**, 13°.55N×91°.71W, h35^{km}**±999^{km}**, MD3.8, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.16	7	*e*P	Pn	20 09 19.8	+0.4
FUG	Fuego 3	1.23	43	*e*P	Pn	20 09 20.6	+0.3
PCG	Pacaya	1.36	52	*e*P	Pn	20 09 22.8	+0.6
PCG				*e*S	Sn	20 09 41.0	+1.9

GCG 18 20:12:24.1±0.8**, 13°.68N×91°.58W, h24^{km}**±6^{km}**, MD3.6, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.02	1	*e*P	Pn	20 12 43.0	-0.1
FUG	Fuego 3	1.05	43	*e*P	Pn	20 12 43.6	+0.1
FUG				*e*S	Sn	20 12 58.3	+0.8
PCG	Pacaya	1.18	53	*e*P	Pn	20 12 45.6	+0.2
PCG				*e*S	Sb	20 13 02.3	+1.4
NBG	Las Nubes	1.50	53	*e*P	Pb	20 12 52.3	+0.9
NBG				*e*S	Sb	20 13 11.3	+1.1

GCG 18 20:13:30.7±0.7**, 13°.64N×91°.61W, h41^{km}**±167^{km}**, MD3.7, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.07	2	*e*P	Pn	20 13 49.9	+0.4
FUG	Fuego 3	1.10	43	*e*P	Pn	20 13 50.1	+0.3
PCG	Pacaya	1.23	52	*e*P	Pn	20 13 52.4	+0.7
PCG				*e*S	Sn	20 14 09.0	+1.8
NBG	Las Nubes	1.55	52	*e*P	Pn	20 13 58.2	+2.1
NBG				*e*S	Sn	20 14 17.9	+2.8

GCG 18 20:19:38.0±0.4**, 15°.45N×91°.02W, h49^{km}**±999^{km}**, MD3.5, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.91	216	*e*P	Pn	20 19 55.1	+0.5
STG3				*e*S	Sn	20 20 08.3	+1.5
FUG	Fuego 3	1.01	170	*e*P	Pn	20 19 55.3	-0.8
FUG				*e*S	Sn	20 20 10.9	+1.6
PCG	Pacaya	1.13	159	*e*P	Pn	20 19 58.2	+0.6
PCG				*e*S	Sn	20 20 14.0	+1.8

GCG 18 20:32:42.1±0.3**, 13°.65N×91°.61W, h24^{km}**±4^{km}**, MD3.5, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.05	2	*e*P	Pn	20 33 01.6	0.0
FUG	Fuego 3	1.09	43	*e*P	Pn	20 33 02.1	0.0
PCG	Pacaya	1.22	53	*e*P	Pb	20 33 04.5	-0.2
NBG	Las Nubes	1.54	53	*e*P	Pb	20 33 10.6	+0.5
NBG				*e*S	Sb	20 33 29.9	+0.5

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*THR **18** 20:49:34.2, 26°.79N×57°.57E, h15^{km}, ML3.2*

*TEH **18** 20:49:35.6, 26°.83N×57°.88E, h10^{km}, ML3.5*

*ISCJB **18** 20:49:36.9±0.6, 26°.64N±0°.03×57°.91E±0°.08, h10^{km}, Error ellipse: s-maj=10.0km s-min=4.8km az=178.0*

*OMAN **18** 20:49:38.5±3.9, 26°.48N×58°.05E, h1^{km}, ml3.4/9, Error ellipse: s-maj=54.5km s-min=22.7km az=58.0*

ISC 18 20:49:35.5±0.9**, 26°.74N**±0°.03×**57°.80E**±0°.05**, h10^{km}, n23,** σ**1^{s}96**/26**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	1.10	181	*e*Pg	Pn	20 49 58.4	+1.4
NIAN	Nian	1.18	314	*e*Pg	Pg	20 50 00.9	+2.7
NIAN				IAMB	IAmb	20 50 28.3	
	comp=Z,0.0nm,0.4s						
KHNJ	Kahnooj	1.20	356	*e*Pg	Pb	20 49 57.2	-1.3
BNDS	Bandar-Abbas	1.59	295	AML	AML	20 50 35.1	
	comp=N,407nm,0.6s						
BNDS				Pn	Pn	20 50 01.1	-2.9
BNDS				AML	AML	20 50 37.3	
	comp=E,403nm,0.4s						
GENO	Geno	1.59	295	IAMB	IAmb	20 50 41.0	
	comp=Z,0.0nm,0.4s						
GENO				*e*Pn	Pg	20 50 07.4	+1.3
MDH	Madha	1.97	223	P	Pn	20 50 09.0	0.0
	SNR=11						
UOSS	Minazif	2.29	219	P	Pn	20 50 14.9	+1.4
HATD	Hatta, Dubai	2.43	219	P	Pn	20 50 16.7	+1.4
CHBR	Chabahar	2.67	115	*e*Pn	Pb	20 50 21.5	-2.0
CHBR	Chabahar	2.67	115	Pn	Pb	20 50 21.5	-2.0
FAQ	Al Faqa, Dubai	2.81	225	P	Pn	20 50 23.6	+3.1
NGRK	Negar Kerman	3.04	342	*e*Pn	Pb	20 50 28.6	-1.4
NGRK				IAMB	IAmb	20 51 21.6	
	comp=Z,0.0nm,0.8s						
ASUD	Al Ashush, Dub	3.06	227	P	Pb	20 50 27.9	-2.3
	SNR=13						
CHMN	Cheshme madani	3.11	356	*e*Pn	Pb	20 50 30.2	-1.1
CHMN				IAMB	IAmb	20 51 27.7	
	comp=Z,0.0nm,1.0s						
TVBK	TV Kerman	3.36	344	*e*Pn	Pb	20 50 34.1	-1.3
TVBK				IAMB	IAmb	20 51 37.4	
	comp=Z,0.0nm,1.0s						
WSAR	Wadi Sarin	3.57	168	P	Pn	20 50 29.9	-1.1
WSAR				S	Sn	20 51 10.0	-3.3
SMDO	Samad	3.67	176	P	Pn	20 50 33.0	+0.5
SMDO				S	Sn	20 51 15.6	-0.5
KHGB	Koh Gabri	3.80	343	IAMB	IAmb	20 48 00.2	
	comp=Z,0.0nm,1.1s						
KHGB				*e*Pn	Pb	20 50 39.7	-3.2
ZHSF	Zahedan	3.88	42	*e*Pn	Pn	20 50 37.0	+1.5
ZHSF	Zahedan	3.88	42	Pn	Pn	20 50 37.0	+1.5
BSY	Bisya	4.02	188	P	Pn	20 50 38.5	+1.3
BSY				S	Sn	20 51 27.0	+2.6
BSRN	Basiran	5.33	12	*e*Pn	Pn	20 50 55.8	+0.4
BSRN	Basiran	5.33	12	Pn	Pn	20 50 55.8	+0.4

NNC 18 20:50:29.4±2.9**, 41°.82N×87°.20E, h12^{km}**±12^{km}**, mb3.8, mpv3.4, 5C-3D, Error ellipse: s-maj=25.8km s-min=14.7km az=157.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	5.87	344	Pg	Pn	20 51 56.9	+0.8
	1.4nm,0.4s						
ZSN				Lg	Lg	20 53 05.2	
	6.4nm,0.4s						
PDGK	Podgornoye	5.89	287	Pg	Pb	20 52 16.4	+4.4
	2.4nm,0.3s						
PDGK				Lg	Lg	20 53 38.1	
	16nm,0.7s						
PDGK	Podgornoye	5.89	287	⇑Pn	Pn	20 51 56.7	+0.2
	2.1nm,0.7s						
PDGK				⇑Sn	Sn	20 53 04.9	+1.0
	10nm,0.7s						
PDGK				⇓Lg	Lg	20 53 35.5	
	41nm,0.9s						
MK31	Makanchi Array	6.09	326	Pn	Pn	20 51 59.2	0.0
	0.3nm,0.2s,baz=146,slow=14,SNR=94						
MK31				⇑Pg	Pb	20 52 04.9	-10
	0.8nm,0.2s,baz=147,slow=14,SNR=19						
MK31				⇓Sn	Sn	20 53 09.7	+0.9
	2.0nm,0.5s						
MK31				⇑Lg	Lg	20 53 44.3	
	3.0nm,0.5s,baz=141,slow=28						
UZB	Uzynbulak	6.19	285	Pg	Pb	20 52 21.1	+3.9
	2.9nm,0.4s						
UZB				Lg	Lg	20 53 46.6	
	15nm,0.6s						
MAKZ	Makanchi	6.24	325	⇓Pn	Pn	20 52 01.5	+0.3
	0.6nm,0.5s						
MAKZ				⇑Lg	Lg	20 53 45.7	
	5.6nm,0.8s						
SATY	Saty	6.62	284	Pg	Pg	20 52 31.0	-5.2
	6.3nm,0.4s						
SATY				Lg	Lg	20 54 02.5	
	16nm,0.3s						

GCG 18 20:58:27.6±0.4**, 13°.70N×92°.44W, h20^{km}**±354^{km}**, MD3.9, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	1.31	40	*e*P	Pn	20 58 51.2	+0.3
FUG	Fuego 3	1.72	64	*e*P	Pn	20 58 56.8	+0.2
PCG	Pacaya	1.90	69	*e*P	Pn	20 58 59.8	+0.6
PCG				*e*S	Sb	20 59 24.8	-0.5

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*ISCJB **18** 21:05:47.2±0.2, 56°.08S±0°.04×27°.35W±0°.09, h112^{km}, mb5.2/47, Error ellipse: s-maj=8.0km s-min=4.9km az=145.2*

*NEIC **18** 21:05:49.6±1.3, 56°.07S×27°.40W, h120^{km}±5^{km}, mb5.2/45, Error ellipse: s-maj=15.7km s-min=11.6km az=204.0*

*IDC **18** 21:05:50.5±4.6, 56°.03S×27°.23W, h126^{km}±42^{km}, mb4.3/10, mb1 4.4/12, mb1mx4.0/41, mbtmp4.7/12, Error ellipse: s-maj=20.8km s-min=12.6km az=50.0*

ISC 18 21:05:48.6±0.3**, 56°.12S**±0°.06×**27°.39W**±0°.06**, h112^{km}, n95,** σ**1^{s}29**/93**, mb5.2**/46**, 1C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.52	286	*e*Pn	Pn	21 07 08.6	+0.2
HOPE				*e*Sn	Sn	21 08 07.7	-2.9
VNA1	Neumayer--Stat	16.78	158	P	Pn	21 09 36.9	+0.5
VNA1				S	Sn	21 12 36.0	-6.5
VNA3	Neumayer Olymp	16.97	160	P	Pn	21 09 39.1	+0.4
VNA3				S	Sn	21 12 34.8	-12
EFI	East Falkland	18.52	271	*e*P	P	21 09 56.3	+0.3
	184nm,1.5s						
SNAA	Sanae	18.73	156	P	P	21 09 58.7	+0.4
SNAA				S	S	21 13 20.9	-4.3
SNAA	Sanae	18.73	156	P	P	21 09 58.6	+0.4
	14nm,0.3s,baz=305,slow=10,SNR=1128						
SNAA	Sanae	18.73	156	*e*P	P	21 09 58.6	+0.4
	53nm,0.5s						
PMSA	Palmer Station	19.77	229	P	P	21 10 11.7	+2.3
	2.4nm,0.3s,baz=52,slow=6.7,SNR=18						
PMSA	Palmer Station	19.77	229	*e*P	P	21 10 10.7	+1.2
	20nm,0.6s						
SYO	Syowa Base	31.61	141	⇓*i*P	P	21 12 04.0	+3.9
SYO	Syowa Base	31.61	141	⇑*e*P	P	21 12 04.1	+3.9
QSPA	South Pole Qui	34.14	180	P	P	21 12 23.3	+0.8
	8.5nm,0.5s,baz=204,slow=2.6,SNR=170						
QSPA	South Pole Qui	34.14	180	*e*P	P	21 12 23.2	+0.8
	9.5nm,0.6s						
CPUP	Villa Florida	36.77	312	P	P	21 12 45.1	0.0
	2.9nm,0.7s,baz=152,slow=8.1,SNR=4.3						
CPUP	Villa Florida	36.77	312	*e*P	P	21 12 45.1	0.0
	38nm,1.8s						
GO05	Huala	36.79	286	*e*P	P	21 12 45.6	+0.3
	51nm,1.5s						
PEL	Peldehue	37.55	289	*e*P	P	21 12 51.4	-0.4
	89nm,1.8s						
MAW	Mawson	40.16	144	P	P	21 13 13.8	+0.8
	8.9nm,0.6s,baz=237,slow=9.9,SNR=23						
MAW	Mawson	40.16	144	*e*P	P	21 13 13.7	+0.6
	1.9nm,0.8s						
BDFB	Brasilia	43.36	330	*e*P	P	21 13 39.8	0.0
	26nm,1.7s						
GO02	Mina Guanaco	43.42	298	*e*P	P	21 13 40.4	-0.1
	15nm,0.7s						
LVC	Limon Verde	45.23	300	P	P	21 13 55.9	+0.9
	17nm,0.5s,baz=136,slow=3.9,SNR=16						
LVC	Limon Verde	45.23	300	*e*P	P	21 13 55.2	+0.2
	20nm,0.6s						
PB10	IPOC Station P	45.28	298	*e*P	P	21 13 55.3	+0.4
	44nm,1.1s						
SBA	Scott Base	46.01	184	*e*P	P	21 14 01.7	+1.8
	54nm,1.4s						
PB04	IPOC Station P	46.07	299	*e*P	P	21 14 00.0	-1.3
	51nm,1.2s						
BOSA	Boshof	46.09	76	P	P	21 14 01.8	+0.4
	2.5nm,0.7s,baz=159,slow=5.0,SNR=5.7						
BOSA	Boshof	46.09	76	*e*P	P	21 14 01.9	+0.4
	58nm,1.8s						
VNDA	Vanda	46.50	183	P	P	21 14 05.2	+1.4
	11nm,0.8s,baz=179,slow=4.4,SNR=21						
PB01	IPOC Station P	46.85	301	*e*P	P	21 14 07.8	+0.5
	33nm,0.7s						
SIV	San Ignacio	47.54	314	P	P	21 14 12.6	0.0
	1.3nm,0.5s,baz=153,slow=7.6,SNR=6.7						
GO01	Chusmiza	47.88	302	*e*P	P	21 14 16.5	+0.7
	24nm,0.8s						
PB11	IPOC Station P	48.02	302	*e*P	P	21 14 17.0	+0.5
	18nm,0.8s						
H10S2	ASCENSION HYDR	48.09	17	T	T	22 07 19.7	
	baz=189,slow=75,SNR=9.7						
H10S3	ASCENSION HYDR	48.10	17	T	T	22 07 25.3	
	baz=189,slow=75,SNR=5.5						
H10S1	ASCENSION HYDR	48.11	17	T	T	22 07 22.7	
	baz=189,slow=75,SNR=8.0						
MNMC	Minye Minye	48.54	302	*e*P	P	21 14 20.5	-0.1
	35nm,0.6s						
LBTB	Lobatse	49.13	73	*e*P	P	21 14 25.0	+0.1
	54nm,1.9s						
ASCN	Ascension	49.15	17	*e*P	P	21 14 24.9	0.0
	153nm,1.1s						
TSUM	Tsumeb	49.81	61	*e*P	P	21 14 30.3	+0.2
	45nm,2.0s						
LPAZ	La Paz	50.32	305	P	P	21 14 35.3	+0.8
	6.4nm,0.5s,baz=146,slow=5.3,SNR=29						
LPAZ	La Paz	50.32	305	*e*P	P	21 14 35.0	+0.4
	24nm,1.4s						
CASY	Casey	53.89	160	*e*P	P	21 14 59.2	-0.4
	25nm,0.8s						
NNA	Nana	58.18	299	*e*P	P	21 15 30.1	-0.8
	26nm,1.3s						
LSZ	Lusaka	58.50	69	*e*P	P	21 15 33.8	+0.6
	10.0nm,1.0s						
LIC	Lamto	64.80	25	*e*P	P	21 16 19.9	+4.7
	53nm,1.4s						
KIC	Kosan Boka	65.00	25	*e*P	P	21 16 17.2	+0.7
	164nm,1.9s						
TIC	Toumodi	65.21	25	*e*P	P	21 16 18.3	+0.4
DBIC	Dimbokro	65.27	25	*e*P	P	21 16 18.8	+0.6
	37nm,1.4s						
RER	Riviere de l'E	68.92	97	*e*P	P	21 16 41.2	-0.3
	520nm,2.0s						
SACV	Santiago Islan	70.88	4	*e*P	P	21 16 53.3	0.0
	50nm,1.1s						
TOA0	Torodi Ar. Sit	73.17	30	*e*P	P	21 17 07.5	+0.6
	7.4nm,0.8s						
TORD	Torodi Ar. Bea	73.17	30	P	P	21 17 06.1	-0.8
	7.0nm,0.7s,baz=203,slow=5.2,SNR=46						
TOA1	Torodi Ar. Sit	73.17	30	*e*P	P	21 17 06.1	-0.8
MTP	Monte Pirata	80.61	323	*e*P	P	21 17 49.0	+0.4
	42nm,1.1s						
CUPR	Culebra, Puert	80.72	324	*e*P	P	21 17 49.4	+0.3
	64nm,1.1s						
ABVI	Anegada Island	80.80	325	*e*P	P	21 17 49.3	-0.3
	124nm,1.0s						
MSEY	Mahe Island	82.16	87	*e*P	P	21 17 56.0	-1.0
	51nm,1.0s						
HIZ	Hauiti	83.86	197	*e*S	S	21 28 22.3	+3.0
MACI	Morro de la Ar	84.54	10	*e*P	P	21 18 07.9	-1.0
	371nm,1.7s						
MTDJ	Mount Denham	85.20	313	*e*P	P	21 18 12.3	0.0
	62nm,1.1s						
GTBY	Guantanamo Bay	85.76	316	*e*P	P	21 18 15.0	0.0
	243nm,1.6s						
NWAO	Narrogin (SRO)	86.33	151	*e*P	P	21 18 17.0	-0.8
	118nm,1.6s						
TOO	Toolangi	86.48	174	*e*P	P	21 18 18.4	-0.2
	67nm,1.7s						
CBCY	The Bluff, Cay	87.47	312	*e*P	P	21 18 23.6	+0.3
	118nm,1.1s						
FSCY	Frank Sound, G	87.70	310	*e*P	P	21 18 24.4	0.0
	357nm,1.3s						
PMOZ	Porto Moniz, M	89.01	9	*e*P	P	21 18 30.5	+0.1
CCIG	Comitan	90.08	300	*e*P	P	21 18 34.1	-1.7
BBOO	Buckleboo	90.31	166	*e*P	P	21 18 37.8	+1.1
	152nm,1.7s						
FORT	Forrest	90.95	159	*e*P	P	21 18 39.6	-0.1
	67nm,1.1s						
STKA	Stephens Creek	91.86	171	*e*P	P	21 18 44.3	+0.4
	14nm,1.9s						
ASAR	Alice Springs	98.96	163	P	Pdif	21 19 15.6	-0.8
	1.3nm,0.6s,baz=186,slow=3.8,SNR=6.6						
NV01	Mina Array Sit	121.32	293	*e*PKPdf	PKiKP	21 24 28.5	+0.4
NVAR	Mina Array Bea	121.32	293	PKP	PKiKP	21 24 28.5	+0.4
	0.5nm,0.5s,baz=116,slow=2.1,SNR=4.8						
CMB	Columbia Colle	122.10	291	*e*PKPdf	PKiKP	21 24 31.1	+1.6
FIA0	FINESS Array S	124.49	28	*e*PKPdf	PKPdf	21 24 32.5	-0.5
FINES	FINESS Array B	124.49	28	PKP	PKPdf	21 24 32.5	-0.5
	2.2nm,0.6s,baz=221,slow=5.5,SNR=13						
CMAR	Chiang Mai Arr	125.15	111	PKP	PKPdf	21 24 35.2	-0.4
	1.8nm,0.8s,baz=230,slow=3.6,SNR=7.2						
GAR	Garm	125.29	71	*e*PKPdf	PKPdf	21 24 35.4	-0.1
ARA0	ARCESS Array S	131.04	22	*e*PKPdf	PKPdf	21 24 45.0	-0.3
ARCES	ARCESS Array B	131.04	22	PKP	PKPdf	21 24 45.0	-0.3
	1.1nm,0.8s,baz=162,slow=1.2,SNR=5.8						
YKA	Yellowknife Ar	136.14	318	PKP	PKPdf	21 24 54.8	-0.2
	1.3nm,0.6s,baz=121,slow=2.6,SNR=7.1						
YKB5	Yellowknife Ar	136.14	318	*e*PKPdf	PKPdf	21 24 54.9	-0.2
MK32	Makanchi Array	137.01	72	*e*PKPdf	PKPdf	21 24 56.1	-1.2
MKAR	Makanchi Array	137.01	72	PKP	PKPdf	21 24 56.1	-1.2
	0.8nm,0.6s,baz=228,slow=1.5,SNR=7.1						
ZALV	Zalesovo Beam	142.50	64	PKhKP	PKPpre	21 25 02.5	
	1.6nm,0.5s,baz=231,slow=5.1,SNR=7.2						
ZAA1	Zalesovo Array	142.50	64	*e*PKPpre	PKPpre	21 25 02.5	
INK	Inuvik	145.78	321	*e*PKPdf	PKPbc	21 25 13.2	+0.3
DAWY	Dawson	146.75	312	*e*PKPdf	PKPdf	21 25 12.7	-1.4
DAWY				*e*PKPbc	PKPbc	21 25 15.8	-0.2
DOT	Dot Lake	148.60	310	*e*PKPbc	PKPbc	21 25 21.4	+0.5
ILAR	Eielson Array	150.07	312	PKPbc	PKPbc	21 25 24.2	-0.3
	8.5nm,0.8s,baz=133,slow=1.6,SNR=24						
WRH	Wood River Hil	150.52	311	*e*PKPbc	PKPbc	21 25 25.6	0.0
SONA0	Songino Array	150.84	87	*e*PKPbc	PKPbc	21 25 26.7	-0.3
SONM	Songino Array	150.84	87	PKPbc	PKPbc	21 25 26.7	-0.3
	8.5nm,0.6s,baz=222,slow=3.1,SNR=54						
ULN	Ulaanbaatar	151.23	87	*e*PKPbc	PKPbc	21 25 27.8	-0.2

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*IDC **18** 21:06:36.0±0.5, 41°.37S×174°.37E, h0^{km}, mb4.9/14, mb1 5.0/16, mb1mx4.8/29, mbtmp4.9/16, ML4.5/2, MS4.9/15, Ms1 4.9/15, ms1mx4.8/16, Error ellipse: s-maj=19.0km s-min=13.5km az=57.0*

*BJI **18** 21:06:36.8±0.0, 42°.02S×173°.88E, h9^{km}, mb5.4/17, mB5.7/14, Ms5.1/15, Ms7 4.8/13*

*ISCJB **18** 21:06:39.0±0.3, 41°.61S±0°.02×174°.38E±0°.02, h31^{km}±1^{km}, mb5.6/96, MS5.1/502, Error ellipse: s-maj=4.2km s-min=2.4km az=145.6*

*MOS **18** 21:06:38.9±1.4, 41°.53S×174°.26E, h22^{km}, mb5.3/21, MS4.9/17, Error ellipse: s-maj=12.2km s-min=9.7km az=115.1*

*NEIC **18** 21:06:39.0±0.0, 41°.56S×174°.36E, h17^{km}, Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}0.92; $M_{\theta\theta}$0.40; $M_{\phi\phi}$-1.32; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.37; $M_{\phi r}$2.01; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s0.00000°, δ75.00000°, λ82.00000°. NP2:ϕ_s211.00000°, δ17.00000°, λ119.00000°. Principal axes: T 2.1200, Plg58.0000°, Azm258.0000°; N 0.4200, Plg8.0000°, Azm2.0000°; P -2.5400, Plg30.0000°, Azm97.0000°;*

*WEL **18** 21:06:39.1, 41°.6S±0°.5×174°.4E±0°.6, h21^{km}±1^{km}, M5.7/23, ML6.0/19, MLv5.7/23 Error ellipse: s-maj=0.0km s-min=0.0km az=122.8*

*NEIC **18** 21:06:39.0±0.0, 41°.55S×174°.41E, h18^{km}, mb5.7/98, MS5.1/522, MW5.5, MW5.5, ML5.7(WEL), Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}1.15; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-1.48; $M_{r\theta}$0.72; $M_{\theta\phi}$-0.32; $M_{\phi r}$1.21; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s27.00000°, δ69.00000°, λ106.00000°. NP2:ϕ_s168.00000°, δ26.00000°, λ54.00000°. Principal axes: T 1.8400, Plg62.0000°, Azm321.0000°; N 0.2500, Plg15.0000°, Azm201.0000°; P -2.0900, Plg23.0000°, Azm105.0000°; After WEL.*

NEIC Felt [IV] at Wellington. Also felt at New Plymouth, Palmerston North, Picton, Seddon, Te Horo and Upper Hutt.

*GCMT **18** 21:06:42.0±0.1, 41°.58S±0°.01×174°.37E±0°.01, h17^{km}, MW5.4/115, Moment Tensor Solution. s88,c141; s115,c203; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.68±.02; $M_{\theta\theta}$0.42±.02; $M_{\phi\phi}$-1.10±.02; $M_{r\theta}$-0.90±.05; $M_{\theta\phi}$-0.23±.01; $M_{\phi r}$0.99±.05; Best double couple: $M_0$1.65600×10^{17} NP1:ϕ_s331.00000°, δ77.00000°, λ61.00000°. NP2:ϕ_s219.00000°, δ32.00000°, λ154.00000°. Principal axes: T 1.7560, Plg50.0000°, Azm209.0000°; N -0.1990, Plg29.0000°, Azm339.0000°; P -1.5570, Plg26.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 21:06:38.8±0.6**, 41°.57S**±0°.02×**174°.38E**±0°.02**, h16^{km}**±3^{km}**, h16^{km}:pP-P, n919,** σ**1^{s}38**/483**, mb5.6**/96**, MS5.1**/502**, 20C-13D, Cook Strait**

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

CMWZ	**Cape Campbell**	0.22	216	P	Pb	21 06 45.1	+0.6
CMWZ				S	Sb	21 06 50.2	+2.0
SNZO	**South Karori**	0.36	43	*e*Pg	Pb	21 06 46.9	+0.1
SNZO				*e*Sg	Sb	21 06 52.1	-0.1
TUWZ	**Tuamarina**	0.36	293	P	Pb	21 06 47.2	+0.3
TUWZ				S	Sb	21 06 52.7	+0.5
TCW	**Tory Channel**	0.37	348	P	Pb	21 06 47.1	+0.1
TCW				S	Sb	21 06 52.9	+0.3
BHW	**Baring Head**	0.40	66	P	Pb	21 06 47.4	-0.1
BHW				S	Sb	21 06 53.6	+0.1
BSWZ	**Blackbirch Sta**	0.41	249	P	Pb	21 06 48.2	+0.5
BSWZ				S	Sb	21 06 55.1	+1.5
PLWZ	**Palliser**	0.65	90	P	Pb	21 06 52.1	+0.2
PLWZ				S	Sb	21 07 01.7	+0.9
MSWZ	**Moikau Station**	0.67	77	P	Pb	21 06 52.3	+0.2
MSWZ				S	Sb	21 07 01.7	+0.5
CAW	**Cannon Point**	0.69	48	P	Pb	21 06 52.5	0.0
CAW				S	Sb	21 07 02.2	+0.3
PAWZ	**Paruwai Farm**	0.81	77	P	Pb	21 06 54.7	+0.2
NNZ	**Nelson**	0.83	295	P	Pn	21 06 55.5	-0.4
DUWZ	**D’Urville Isla**	0.84	336	P	Pn	21 06 55.7	-0.4
MTW	**Mount Morrison**	0.94	64	P	Pn	21 06 57.1	-0.2
OGWZ	**Otaki Gorge**	0.96	38	P	Pb	21 06 57.1	0.0
TRWZ	**Traveller**	1.00	80	P	Pb	21 06 57.7	0.0
KHZ	**Kahutara**	1.05	216	*e*Pn	Pg	21 06 59.2	0.0
KHZ	**Kahutara**	1.05	216	P	Pg	21 06 59.2	0.0
HOWZ	**Holdsworth Sta**	1.09	52	P	Pn	21 06 59.4	0.0
THZ	**Tophouse**	1.12	260	*e*Pn	Pg	21 07 00.4	-0.1
THZ	**Tophouse**	1.12	260	P	Pg	21 07 00.4	-0.1
TMWZ	**Te Maipa**	1.23	68	P	Pn	21 07 00.8	-0.5
MRZ	**Mangatainoka R**	1.28	45	P	Pb	21 07 02.4	-0.2
TIWZ	**Tintock**	1.39	55	P	Pn	21 07 03.2	-0.4
CPWZ	**Castlepoint**	1.52	65	P	Pn	21 07 05.1	-0.3
OHWZ	**Ohakea**	1.54	28	P	Pg	21 07 07.8	-0.6
PRWZ	**Pori Road**	1.57	50	P	Pn	21 07 06.0	-0.1
POWZ	**Post Office Ro**	1.58	42	P	Pn	21 07 06.4	+0.2
QRZ	**Quartz Range**	1.58	297	P	Pb	21 07 08.0	+0.3
BFZ	**Birch Farm**	1.67	58	*e*Pn	Pn	21 07 07.3	0.0
BFZ	**Birch Farm**	1.67	58	P	Pn	21 07 06.4	-0.9
GVZ	**Greta Valley S**	1.72	215	P	Pn	21 07 07.9	-0.2
DVHZ	**Dannevirke**	1.86	47	P	Pn	21 07 09.4	-0.6
WAZ	**Wanganui**	1.87	14	P	Pb	21 07 12.4	-0.3
ANWZ	**Angora Road**	1.94	56	P	Pn	21 07 10.0	-1.1
DSZ	**Denniston Nort**	1.94	264	P	Pb	21 07 12.9	-0.9
LTZ	**Lake Taylor**	1.98	232	*e*Pn	Pn	21 07 11.9	+0.2
LTZ	**Lake Taylor**	1.98	232	P	Pn	21 07 12.0	+0.2
AMCZ	**Amberley**	2.05	218	P	Pn	21 07 12.2	-0.5
LREZ	**Lake Rotokare**	2.11	0	P	Pb	21 07 17.0	+0.3
PRHZ	**Porangahau**	2.15	53	P	Pn	21 07 12.9	-1.1
PNHZ	**Pukenui**	2.16	40	P	Pn	21 07 13.9	-0.3
WPHZ	**Waipukurau**	2.17	47	P	Pn	21 07 14.0	-0.3
NMEZ	**Namu Road**	2.19	350	P	Pb	21 07 18.1	0.0
PREZ	**Palmer Road**	2.23	356	P	Pb	21 07 19.3	+0.5
KHEZ	**Kahui Hut**	2.29	353	P	Pb	21 07 19.3	-0.6
MTVZ	**Mangateitei**	2.34	21	P	Pb	21 07 18.9	-1.7
OKCZ	**Okains Bay**	2.36	204	P	Pn	21 07 15.7	-1.2
DREZ	**Durham Road**	2.38	357	P	Pb	21 07 21.0	-0.4
CRLZ	**Canterbury Las**	2.39	212	*e*Pn	Pn	21 07 15.7	-1.5
CRLZ	**Canterbury Las**	2.39	212	P	Pn	21 07 15.9	-1.3
PKE	**Pukeiti**	2.40	353	P	Pb	21 07 20.6	-1.0
MOVZ	**Moawhango**	2.40	26	P	Pn	21 07 18.7	+1.1
PXZ	**Pawanui**	2.43	52	P	Pn	21 07 16.4	-1.5
KRHZ	**Kereru**	2.45	39	P	Pn	21 07 17.7	-0.4
DRZ	**Dome Shelter**	2.47	22	P	Pb	21 07 20.9	-2.1
OXZ	**Oxford**	2.47	224	*e*Pn	Pn	21 07 17.1	-1.2
OXZ	**Oxford**	2.47	224	P	Pn	21 07 17.2	-1.2
WHVZ	**Whangaehu Hut**	2.47	22	P	Pn	21 07 20.2	+1.6
MQZ	**McQueen’s Vall**	2.48	210	*e*Pn	Pn	21 07 16.8	-1.8
MQZ	**McQueen’s Vall**	2.48	210	P	Pn	21 07 16.8	-1.8
TUVZ	**Tukino**	2.50	23	P	Pn	21 07 20.7	+1.7
AKCZ	**Akaroa Harbour**	2.54	205	P	Pn	21 07 17.9	-1.5
KAHZ	**Kahuranaki**	2.60	48	P	Pn	21 07 19.1	-1.2
TWVZ	**Taurewa**	2.63	18	P	Pn	21 07 22.8	+2.1
KRVZ	**Karewarewa**	2.66	22	P	Pn	21 07 23.0	+1.9
CKHZ	**Cape Kidnapper**	2.81	48	P	Pn	21 07 21.8	-1.2
BKZ	**Black Stump Fm**	2.90	35	*e*Pn	Pn	21 07 23.7	-0.6
HIZ	**Hauiti**	3.08	7	*e*Pn	Pn	21 07 29.6	+2.8
RPZ	**Rata Peaks**	3.26	228	Pn	Pn	21 07 28.0	-1.3
	71nm,0.3s,baz=82,slow=3.3,SNR=222						
RPZ				Sn	Sn	21 08 05.5	-2.2
	286nm,0.3s,baz=142,slow=21,SNR=9.8						
RPZ				LR	LR	21 08 35.4	
	comp=Z,10µm,18.3s,baz=52,slow=35						
FOZ	**Fox Glacier**	3.90	238	*e*Pn	Pn	21 07 38.3	+0.2
URZ	**Urewera**	3.92	33	Pn	Pn	21 07 36.1	-2.2
	29nm,0.3s,baz=234,slow=3.6,SNR=59						
URZ				Sn	Sn	21 08 23.7	-0.2
	98nm,0.3s,baz=352,slow=17,SNR=3.8						
URZ	**Urewera**	3.92	33	*e*Pn	Pn	21 07 38.3	0.0
LBZ	**Lake Benmore**	4.17	226	*e*Pn	Pn	21 07 40.9	-0.9
ODZ	**Otahua Downs**	4.41	217	*e*Pn	Pn	21 07 43.5	-1.6
MXZ	**Matakaoa Point**	5.02	38	*e*Pn	Pn	21 07 51.4	-2.1
WKZ	**Wanaka**	5.09	229	*e*Pn	Pn	21 07 53.2	-1.3
WHZ	**Wether Hill Ro**	6.35	225	*e*Pn	Pn	21 08 11.3	-0.5
OUZ	**Omahuta**	6.37	354	*e*Pn	Pn	21 08 13.6	+1.5
I36NZ	**CHATHAM INFRAS**	7.12	112	*i*		21 46 00.0	
	baz=294,slow=310,SNR=0.4						
LHI	**Lord Howe Isla**	15.86	304	*e*Pn	Pn	21 10 22.5	+1.1
	125nm,1.2s						
MCQ	**Macquarie Isla**	16.49	213	*e*Pn	Pn	21 10 29.2	-0.1
	499nm,1.7s						
MCQ	**Macquarie Isla**	16.49	213	*e*P	Pn	21 10 29.2	-0.1
MCQ				pmax	pmax		
	comp=Z,499nm,1.7s						
PINNC	**Pines Island,**	19.78	341	*e*P	P	21 11 08.7	+0.4
	comp=Z,370nm,1.5s						
MILA	**Mila**	20.01	275	P	Pn	21 11 15.8	+3.3
	baz=20						
TAU	**Tasmania Unive**	20.05	257	*e*P	P	21 11 11.2	0.0
	comp=Z,254nm,1.8s						
TAU				LR	LR		
	comp=Z,6µm,18.0s						
TAU	**Tasmania Unive**	20.05	257	*e*P	P	21 11 11.2	0.0
TAU				pmax	pmax		
	comp=Z,254nm,1.8s						
TAU				MLR	MLR		
	comp=Z,6µm,18.0s						
ONTNC	**Ouen Toro**	20.33	338	*e*P	P	21 11 12.8	-1.5
	comp=Z,109nm,1.0s						
ONTNC				LR	LR		
	comp=Z,3µm,20.0s						
CNB	**Canberra Magne**	20.53	280	P	Pn	21 11 17.9	-0.9
	baz=20,SNR=7.8						
DZM	**Mont Dzumac**	20.56	339	*e*P	Pn	21 11 23.3	+4.1
	comp=Z,173nm,1.2s						
DZM	**Mont Dzumac**	20.56	339	LR	LR	21 19 00.6	
	comp=Z,3µm,18.9s,baz=178,slow=37						
DZM	**Mont Dzumac**	20.56	339	*e*P	P	21 11 17.2	+0.3
	comp=Z,67nm,1.0s						
CAN	**Canberra**	20.80	279	*e*P	P	21 11 20.0	+0.6
	comp=Z,36nm,0.9s						
CAN				LR	LR		
	comp=Z,5µm,18.0s						
CAN	**Canberra**	20.80	279	*e*P	P	21 11 20.0	+0.6
CAN				pmax	pmax		
	comp=Z,36nm,0.9s						
CAN				MLR	MLR		
	comp=Z,5µm,18.0s						
ARMA	**Armidale**	21.45	294	*e*P	P	21 11 28.8	+2.3
	comp=Z,57nm,1.3s						
ARMA				LR	LR		
	comp=Z,5µm,20.0s						
ARMA	**Armidale**	21.45	294	P	P	21 11 28.4	+1.9
	baz=21,SNR=7.2						
TOO	**Toolangi**	22.58	271	*e*P	P	21 11 39.4	+0.9
	comp=Z,89nm,1.3s						
TOO				LR	LR		
	comp=Z,4µm,19.0s						
TOO	**Toolangi**	22.58	271	P	P	21 11 40.7	+2.2
	baz=22,SNR=4.4						
TOO	**Toolangi**	22.58	271	*e*P	P	21 11 39.4	+0.9
TOO				pmax	pmax		
	comp=Z,89nm,1.3s						
TOO				MLR	MLR		
	comp=Z,4µm,19.0s						
CMSA	**Cobar Meteorol**	25.03	284	P	P	21 12 02.5	+0.4
	baz=25,SNR=8.7						
EIDS	**Eidsvold**	25.16	303	PFAKE		21 12 10.0	+6.6
EIDS				LR	LR		
	comp=Z,6µm,19.0s						
EIDS	**Eidsvold**	25.16	303	P	P	21 12 03.9	+0.6
	baz=25,SNR=4.9						
RMQ	**Roma**	25.90	297	P	P	21 12 11.2	+1.2
	baz=26,SNR=4.5						
NIUE	**Niue**	26.11	36	*e*P	P	21 12 12.0	0.0
	comp=Z,730nm,1.6s						
STKA	**Stephens Creek**	27.86	280	P	P	21 12 27.8	+0.1
	comp=Z,13nm,0.7s,baz=107,slow=9.8,SNR=18						
STKA				LR	LR	21 22 55.3	
	comp=Z,3µm,18.5s,baz=123,slow=35						
STKA	**Stephens Creek**	27.86	280	*e*P	P	21 12 27.1	-0.6
	comp=Z,11nm,1.4s						
STKA				LR	LR		
	comp=Z,700nm,18.0s						
STKA	**Stephens Creek**	27.86	280	P	P	21 12 27.8	+0.1
	baz=28,SNR=11						
STKA	**Stephens Creek**	27.86	280	*e*P	P	21 12 27.1	-0.6
STKA				pmax	pmax		
	comp=Z,11nm,1.4s						
STKA				MLR	MLR		
	comp=Z,700nm,18.0s						
HTT	**Hallett**	29.12	275	P	P	21 12 39.4	+0.4
	baz=29,SNR=5.4						
RAR	**Rarotonga**	29.79	55	LR	LR	21 23 22.6	
	comp=Z,1µm,21.6s,baz=216,slow=34						
BBOO	**Buckleboo**	31.55	274	*e*P	P	21 13 00.5	+0.1
	comp=Z,159nm,1.7s						
BBOO				LR	LR		
	comp=Z,4µm,19.0s						
BBOO	**Buckleboo**	31.55	274	P	P	21 12 60.0	-0.4
	baz=31,SNR=6.9						
CTA	**Charters Tower**	32.04	303	P	P	21 13 06.1	+1.3
	comp=Z,12nm,0.8s,baz=138,slow=11,SNR=11						
CTAO	**Charters Tower**	32.04	303	*e*P	P	21 13 05.4	+0.6
	comp=Z,27nm,1.0s						
CTAO				LR	LR		
	comp=Z,4µm,18.0s						
CTAO	**Charters Tower**	32.04	303	*e*P	P	21 13 05.4	+0.6
CTAO				pmax	pmax		
	comp=Z,27nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,4µm,18.0s						
HNR	**Honiara**	34.46	334	LR	LR	21 26 59.7	
	comp=Z,956nm,19.1s,baz=160,slow=36						
HNR	**Honiara**	34.46	334	*e*P	P	21 13 26.5	+0.7
	comp=Z,130nm,1.0s						
HNR				LR	LR		
	comp=Z,1µm,21.0s						
HNR	**Honiara**	34.46	334	*e*P	P	21 13 26.5	+0.7
HNR				pmax	pmax		
	comp=Z,130nm,1.0s						
HNR				MLR	MLR		
	comp=Z,1µm,21.0s						
MTSU	**Mount Surprise**	34.71	303	P	P	21 13 28.4	+0.2
	baz=35,SNR=11						
TBI	**Tubuai**	35.18	70	*e*S	S	21 19 06.2	+1.5
	comp=Z,574nm,28.8s						
TBI				*e*LQ	LQ	21 21 26.4	
	comp=Z,2µm,25.0s						
TBI				*e*LR	LR	21 22 59.4	
	comp=Z,2µm,26.8s,baz=223						
TBI	**Tubuai**	35.18	70	*e*T	T	21 50 36.2	
	comp=Z,44nm,0.3s						
QIS	**Mount Isa**	36.07	295	P	P	21 13 39.9	+0.2
	baz=36,SNR=14						
VNDA	**Vanda**	36.43	185	P	P	21 13 44.0	+1.8
	comp=Z,3.6nm,0.8s,baz=11,slow=8.4,SNR=22						
VNDA				ScP	ScP	21 19 53.7	+2.0
	comp=Z,1.0nm,0.9s,baz=345,slow=8.7,SNR=3.6						
VNDA				LR	LR	21 26 38.7	
	comp=Z,2µm,20.1s,baz=22,slow=33						
VNDA	**Vanda**	36.43	185	*e*P	P	21 13 43.1	+1.0
VNDA				*e*pP	P	21 13 43.7	+1.5
VNDA				*e*ScP	ScP	21 19 53.7	+2.0
VNDA	**Vanda**	36.43	185	*e*P	P	21 13 43.2	+1.0
SBA	**Scott Base**	36.52	183	*e*P	P	21 13 44.5	+1.5
	comp=Z,74nm,1.4s						
SBA				LR	LR		
	comp=Z,2µm,18.0s						
SBA	**Scott Base**	36.52	183	*e*P	P	21 13 44.5	+1.5
SBA				pmax	pmax		
	comp=Z,74nm,1.4s						
SBA				MLR	MLR		
	comp=Z,2µm,18.0s						
AS31	**Alice Springs**	38.08	285	PFAKE		21 14 10.0	+13
AS31				LR	LR		
	comp=Z,100nm,18.0s						
ASAR	**Alice Springs**	38.08	285	P	P	21 13 55.6	-1.2
	comp=Z,17nm,0.7s,baz=125,slow=6.6,SNR=162						
ASAR				LR	LR	21 29 58.5	
	comp=Z,3µm,18.1s,baz=134,slow=37						
FORT	**Forrest**	38.50	271	*e*P	P	21 13 59.7	-0.6
	comp=Z,95nm,0.8s						
FORT				LR	LR		
	comp=Z,4µm,19.0s						
FORT	**Forrest**	38.50	271	P	P	21 14 00.4	+0.1
	baz=38,SNR=11						
COEN	**Coen**	38.60	306	*e*P	P	21 14 01.0	-0.3
	comp=Z,106nm,1.6s						
COEN				LR	LR		
	comp=Z,3µm,18.0s						
COEN	**Coen**	38.60	306	P	P	21 14 01.5	+0.3
	baz=38,SNR=11						
PAE	**Paea**	38.94	63	*e*T	T	21 55 21.6	
	comp=Z,8.0nm,0.4s						
PPT2	**Papeete2**	38.99	63	*e*P	P	21 14 06.0	+1.4
	comp=Z,148nm,1.5s						
PPT2				*e*S	S	21 20 05.5	+2.6
	comp=Z,620nm,26.2s						
PPT2				*e*LQ	LQ	21 23 05.0	
	comp=Z,2µm,27.0s						
PPT2				*e*LR	LR	21 24 44.0	
	comp=Z,3µm,27.2s,baz=214						
PPT2	**Papeete2**	38.99	63	*e*T	T	21 55 26.7	
	comp=Z,9.8nm,0.3s						
PPTF	**Pamatai, Papee**	39.00	63	*e*P	P	21 14 04.1	-0.6
	comp=Z,343nm,1.5s						
PPT	**Papeete**	39.01	63	LR	LR	21 26 01.9	
	comp=Z,1µm,20.5s,baz=220,slow=30						
PPT	**Papeete**	39.01	63	*e*P	P	21 14 04.0	-0.6
PPT	**Papeete**	39.01	63	*e*P	P	21 14 04.0	-0.6
TIAR	**Tiarei**	39.17	63	*e*T	T	21 55 39.1	
	comp=Z,3.1nm,0.3s						
PMG	**Port Moresby**	40.03	315	P	P	21 14 14.2	+1.0
	comp=Z,28nm,0.7s,baz=101,slow=7.0,SNR=7.4						
PMG	**Port Moresby**	40.03	315	*e*P	P	21 14 13.6	+0.4
	comp=Z,108nm,1.1s						
PMG				LR	LR		
	comp=Z,2µm,18.0s						
PMG	**Port Moresby**	40.03	315*c*	*i*P	P	21 14 14.2	+1.0
PMG				pmax	pmax		
	comp=Z,177nm,1.0s						
WB2	**Warramunga Arr**	40.13	290	*e*P	P	21 14 13.1	-0.9
	comp=Z,107nm,0.7s						
WB2				LR	LR		
	comp=Z,4µm,18.0s						
WRAB	**Tennant Creek**	40.13	290	*e*P	P	21 14 13.2	-0.9
	comp=Z,106nm,0.6s						
WRAB				LR	LR		
	comp=Z,4µm,18.0s						
WRAB	**Tennant Creek**	40.13	290*c*	*i*P	P	21 14 12.7	-1.3
WRAB				pmax	pmax		
	comp=Z,57nm,0.7s						
WRA	**Warramunga Arr**	40.13	290	P	P	21 14 13.1	-0.9
	comp=Z,118nm,0.7s,baz=129,slow=7.6,SNR=398						
WC1	**Warramunga Arr**	40.15	290	PFAKE		21 14 30.0	+16
WC1				LR	LR		
	comp=Z,2µm,19.0s						
KNTN	**Kanton**	40.60	22	*e*P	P	21 14 17.6	-0.2
	comp=Z,709nm,1.9s						
WRKA	**Warakurna**	41.38	279	P	P	21 14 23.2	-1.1
	baz=41,SNR=107						
PMOR	**Pomariorio Ree**	41.96	62	*e*T	T	21 59 08.8	
	comp=Z,3.8nm,0.3s						
RABL	**Rabaul**	42.20	326	*e*P	P	21 14 31.0	-0.1
	comp=Z,237nm,1.0s						
CASY	**Casey**	42.41	213	*e*P	P	21 14 32.2	+0.1
	comp=Z,35nm,0.8s						
CASY				LR	LR		
	comp=Z,5µm,19.0s						
KMBL	**Kambalda**	42.85	266	P	P	21 14 35.6	-0.7
	baz=43,SNR=19						
NWAO	**Narrogin (SRO)**	45.58	262	P	P	21 14 56.9	-1.2
	comp=Z,22nm,0.7s,baz=111,slow=4.8,SNR=16						
NWAO	**Narrogin (SRO)**	45.58	262	*e*P	P	21 14 56.6	-1.4
	comp=Z,26nm,0.8s						
NWAO				*e*P	P	21 14 56.9	-1.2
NWAO				LR	LR		
	comp=Z,2µm,21.0s						
NWAO	**Narrogin (SRO)**	45.58	262	P	P	21 14 56.6	-1.4
	baz=45,SNR=8.3						
NWAO	**Narrogin (SRO)**	45.58	262	*e*P	P	21 14 56.7	-1.4
NWAO				pmax	pmax		
	comp=Z,26nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,2µm,21.0s						
RKT	**Rikitea**	45.88	83	*e*S	S	21 21 45.9	+1.6
	comp=Z,824nm,38.0s						
RKT				*e*LQ	LQ	21 25 59.6	
	comp=Z,2µm,32.0s						
RKT				*e*LR	LR	21 27 53.7	
	comp=Z,2µm,25.0s						
MANU	**Manus Island**	46.26	321	*e*P	P	21 15 04.1	+0.6
	comp=Z,150nm,1.6s						
MANU				LR	LR		
	comp=Z,900nm,19.0s						
KDU	**Kakadu**	46.43	296	P	P	21 15 04.6	-0.3
	baz=46,SNR=8.9						
MUN	**Mundaring**	46.79	262	P	P	21 15 06.6	-1.0
	baz=46,SNR=27						
KNRA	**Kununurra**	46.92	290	P	P	21 15 08.6	-0.1
	baz=47,SNR=12						
BLDU	**Ballidu**	47.09	264	P	P	21 15 07.5	-2.5
	baz=47,SNR=20						
MTN	**Manton Dam**	47.23	294	*e*P	P	21 15 10.6	-0.6
	comp=Z,98nm,1.2s						
MTN	**Manton Dam**	47.23	294	P	P	21 15 10.6	-0.6
	baz=47,SNR=29						
MEEK	**Meekatharra**	47.73	270	P	P	21 15 13.6	-1.4
	baz=48,SNR=77						
MORW	**Morawa**	48.37	265	*e*P	P	21 15 19.2	-0.8
	comp=Z,58nm,1.0s						
MORW				LR	LR		
	comp=Z,3µm,18.0s						
MORW	**Morawa**	48.37	265	P	P	21 15 18.7	-1.2
	baz=48,SNR=20						
PTCN	**Pitcairn Islan**	48.41	88	*e*P	P	21 15 19.4	-0.9
	comp=Z,425nm,1.0s						
QSPA	**South Pole Qui**	48.55	180	P	P	21 15 23.1	+2.1
	comp=Z,56nm,0.9s,baz=28,slow=2.9,SNR=27						
QSPA	**South Pole Qui**	48.55	180	*e*P	P	21 15 22.3	+1.2
	comp=Z,69nm,0.9s						
QSPA				LR	LR		
	comp=Z,1µm,21.0s						
PSAC2	**Pilbara Seismi**	49.66	276	PFAKE		21 15 40.0	+10
PSAC2				LR	LR		
	comp=Z,6µm,18.0s						
PSAB3	**Pilbara Seismi**	49.68	276	PFAKE		21 15 40.0	+10
PSAB3				LR	LR		
	comp=Z,5µm,18.0s						
PSAC3	**Pilbara Seismi**	49.68	276	PFAKE		21 15 40.0	+10
PSAC3				LR	LR		
	comp=Z,5µm,18.0s						
PSAB2	**Pilbara Seismi**	49.69	276	PFAKE		21 15 40.0	+10
PSAB2				LR	LR		
	comp=Z,5µm,19.0s						
PSA00	**Pilbara Seismi**	49.70	276	*e*P	P	21 15 28.8	-1.4
	comp=Z,44nm,0.6s						
PSA00				LR	LR		
	comp=Z,5µm,18.0s						
PSAA1	**Pilbara Seismi**	49.70	276	PFAKE		21 15 40.0	+10
PSAA1				LR	LR		
	comp=Z,6µm,19.0s						
PSAA2	**Pilbara Seismi**	49.70	276	PFAKE		21 15 40.0	+10
PSAA2				LR	LR		
	comp=Z,6µm,19.0s						
PSAD3	**Pilbara Seismi**	49.70	276	PFAKE		21 15 40.0	+10
PSAD3				LR	LR		
	comp=Z,6µm,18.0s						
PSAB1	**Pilbara Seismi**	49.72	276	PFAKE		21 15 40.0	+10
PSAB1				LR	LR		
	comp=Z,6µm,18.0s						
PSAC1	**Pilbara Seismi**	49.75	276	PFAKE		21 15 40.0	+9.4
PSAC1				LR	LR		
	comp=Z,6µm,18.0s						
PSAD1	**Pilbara Seismi**	49.78	276	PFAKE		21 15 40.0	+9.2
PSAD1				LR	LR		
	comp=Z,6µm,18.0s						
MBWA	**Marble Bar**	50.03	277	PFAKE		21 15 40.0	+7.3
MBWA				LR	LR		
	comp=Z,5µm,19.0s						
PATS	**Pohnpei**	50.37	339	*e*P	P	21 15 34.7	-0.5
	comp=Z,118nm,1.3s						
XMAS	**Kiritimati**	50.39	38	*e*P	P	21 15 35.4	+0.1
	comp=Z,130nm,1.2s						
KWAJ	**Kwajalein Atol**	50.51	351	*e*P	P	21 15 36.5	+0.3
	comp=Z,177nm,1.0s						
KWAJ	**Kwajalein Atol**	50.51	351	*e*P	P	21 15 36.5	+0.3
KWAJ				pmax	pmax		
	comp=Z,177nm,1.0s						
SAUI	**Saumlaki**	50.66	299	*e*P	P	21 15 37.5	0.0
	comp=Z,561nm,1.2s						
TAOE	**Nuku Hiva Isla**	51.60	64	*e*S	S	21 23 06.4	+1.2
	comp=Z,701nm,27.9s						
TAOE				*e*LR	LR	21 30 32.4	
	comp=Z,2µm,25.3s,baz=228						
GIRL	**Giralia**	53.27	271	*e*P	P	21 15 57.1	+0.2
	comp=Z,813nm,1.7s						
GIRL				LR	LR		
	comp=Z,3µm,20.0s						
GIRL	**Giralia**	53.27	271	P	P	21 15 57.0	+0.2
	baz=53,SNR=6.2						
FAKI	**Fak Fak**	53.90	304	*e*P	P	21 16 01.3	-0.3
	comp=Z,34nm,0.8s						
FAKI				LR	LR		
	comp=Z,3µm,20.0s						
SOEI	**Soe**	54.16	291	PFAKE		21 16 20.0	+16
SOEI				LR	LR		
	comp=Z,2µm,18.0s						
BATI	**Baumata**	54.27	290	P	P	21 16 04.8	+0.5
	comp=Z,35nm,0.8s,baz=197,slow=3.4,SNR=4.6						
SIJI	**Sorong**	56.11	305	P	P	21 16 16.5	-1.0
	comp=Z,17nm,0.8s,baz=109,slow=4.7,SNR=12						
MMRI	**Maumere**	56.37	290	*e*P	P	21 16 18.6	-0.8
	comp=Z,205nm,1.5s						
MAW	**Mawson**	59.66	204	P	P	21 16 42.6	+0.9
	comp=Z,6.8nm,0.8s,baz=116,slow=9.2,SNR=12						
MAW				LR	LR	21 42 02.4	
	comp=Z,5µm,18.4s,baz=102,slow=36						
MAW	**Mawson**	59.66	204	*e*P	P	21 16 42.6	+0.9
	comp=Z,4.6nm,1.0s						
MAW				LR	LR		
	comp=Z,1µm,19.0s						
MAW	**Mawson**	59.66	204	P	P	21 16 42.6	+0.9
	baz=59,SNR=8.5						
TNTI	**Ternate**	59.82	302	*e*P	P	21 16 43.2	-0.4
	comp=Z,32nm,0.9s						
JOHN	**Johnston Islan**	59.89	18	*e*P	P	21 16 43.7	-0.2
	comp=Z,180nm,1.0s						
KAPI	**Kappang**	60.66	291	P	P	21 16 48.9	-0.4
	comp=Z,9.6nm,0.9s,baz=168,slow=7.0,SNR=4.7						
KAPI	**Kappang**	60.66	291	*e*P	P	21 16 49.6	+0.3
	comp=Z,73nm,1.3s						
KAPI				LR	LR		
	comp=Z,2µm,19.0s						
KAPI	**Kappang**	60.66	291	*e*P	P	21 16 49.6	+0.3
KAPI				pmax	pmax		
	comp=Z,73nm,1.3s						
KAPI				MLR	MLR		
	comp=Z,2µm,19.0s						
GUMO	**Guam**	61.28	327	*e*P	P	21 16 53.5	+0.1
	comp=Z,166nm,1.2s						
GUMO				LR	LR		
	comp=Z,500nm,22.0s						
GUMO	**Guam**	61.28	327	*e*P	P	21 16 53.5	+0.1
GUMO				pmax	pmax		
	comp=Z,166nm,1.2s						
GUMO				MLR	MLR		
	comp=Z,500nm,22.0s						
LUWI	**Luwuk**	61.46	297	*e*P	P	21 16 54.6	-0.2
	comp=Z,168nm,1.1s						
LUWI				LR	LR		
	comp=Z,800nm,19.0s						
JAGI	**Jajag, Banyuwa**	62.27	284	*e*P	P	21 16 59.7	-0.6
	comp=Z,182nm,1.7s						
SARN	**Sarigan**	63.74	329	*e*P	P	21 17 09.3	-0.5
	comp=Z,28nm,1.1s						
PMSA	**Palmer Station**	64.60	156	P	P	21 17 16.2	+1.3
	comp=Z,8.4nm,0.8s,baz=218,slow=5.9,SNR=6.8						
PMSA	**Palmer Station**	64.60	156	*e*P	P	21 17 15.6	+0.7
	comp=Z,25nm,1.1s						
SYO	**Syowa Base**	64.77	196⇓	*e*P	P	21 17 14.0	-2.0
SYO	**Syowa Base**	64.77	196⇑	*i*pP	pP	21 17 19.0	-2.1
DAV	**Davao City (W)**	65.82	305	PFAKE		21 17 40.0	+17
DAV				LR	LR		
	comp=Z,700nm,21.0s						
KCP	**Kidapawan**	66.07	305⇑	*e*P	P	21 17 19.9	-5.3
KHU	**Kahuku**	66.59	31	*e*P	P	21 17 28.1	-0.4

	comp=Z,310nm,1.5s						
KHU	**Kahuku**	**66.59**	**31**	*e*P	**P**	**21 17 28.2**	**-0.4**
KHU				pmax	pmax		
	comp=Z,311nm,1.5s						
HLP	**Hilina Pali**	**66.75**	**31**	*e*P	**P**	**21 17 29.9**	**+0.5**
	comp=Z,253nm,1.1s						
KHLU	**Kahalu`u**	**66.80**	**31**	*e*P	**P**	**21 17 30.1**	**+0.4**
	comp=Z,164nm,1.4s						
PUH	**Pauahi**	**66.86**	**31**	*e*P	**P**	**21 17 29.5**	**-0.7**
	comp=Z,123nm,1.0s						
MLOA	**Mauna Loa Obse**	**66.87**	**31**	*e*P	**P**	**21 17 29.8**	**-0.8**
	comp=Z,215nm,1.5s						
OBL	**Observatory Le**	**66.87**	**31**	*e*P	**P**	**21 17 29.1**	**-1.1**
UWE	**Uwekahuna**	**66.87**	**31**	*e*P	**P**	**21 17 29.8**	**-0.4**
	comp=Z,288nm,1.2s						
BYL	**Byron's Ledge**	**66.88**	**31**	*e*P	**P**	**21 17 30.0**	**-0.3**
	comp=Z,996nm,1.9s						
HATHI	**Halema‘uma‘u T**	**66.89**	**31**	*e*P	**P**	**21 17 28.8**	**-1.6**
	comp=Z,342nm,1.3s						
SBLHI	**Steaming Bluff**	**66.89**	**31**	*e*P	**P**	**21 17 29.4**	**-1.0**
	comp=Z,790nm,1.9s						
HUH	**Hualalai**	**66.90**	**31**	*e*P	**P**	**21 17 30.0**	**-0.6**
	comp=Z,245nm,1.6s						
MLH	**Mauna Loa**	**66.90**	**31**	*e*P	**P**	**21 17 30.2**	**-0.4**
	comp=Z,278nm,1.5s						
MLH	**Mauna Loa**	**66.90**	**31**	*e*P	**P**	**21 17 30.2**	**-0.4**
MLH				pmax	pmax		
	comp=Z,278nm,1.5s						
HMH	**Humu‘ula Sheep**	**66.97**	**31**	*e*P	**P**	**21 17 31.0**	**0.0**
	comp=Z,223nm,1.2s						
SNAA	**Sanae**	**67.05**	**181**	P	**P**	**21 17 31.1**	**+0.4**
SNAA	**Sanae**	**67.05**	**181**	P	P	21 17 36.5	+5.8
SNAA	**Sanae**	**67.05**	**181**	P	**P**	**21 17 31.1**	**+0.4**
	comp=Z,16nm,0.8s,baz=188,slow=6.1,SNR=78						
SNAA	**Sanae**	**67.05**	**181**	*e*P	**P**	**21 17 31.2**	**+0.5**
	comp=Z,27nm,0.9s						
SNAA				LR	LR		
	comp=Z,1μm,19.0s						
SNAA	**Sanae**	**67.05**	**181**	*c i*P	**P**	**21 17 30.9**	**+0.2**
VNA3	**Neumayer Olymp**	**67.45**	**179**	P	**P**	**21 17 33.9**	**+0.7**
VNA3	**Neumayer Olymp**	**67.45**	**179**	P	P	21 17 24.8	-8.4
KEKH	**Kekaha**	**67.64**	**26**	*e*P	**P**	**21 17 34.4**	**-0.4**
	comp=Z,137nm,1.0s						
KIP	**Kipapa**	**67.70**	**28**	*e*P	**P**	**21 17 35.9**	**+0.7**
	comp=Z,411nm,1.9s						
OPA	**Opana**	**67.94**	**28**	*e*P	**P**	**21 17 35.5**	**-1.3**
	comp=Z,307nm,1.8s						
OPA	**Opana**	**67.94**	**28**	*e*P	**P**	**21 17 35.5**	**-1.3**
OPA				pmax	pmax		
	comp=Z,307nm,1.8s						
VNA1	**Neumayer--Stat**	**68.07**	**179**	P	**P**	**21 17 38.1**	**+1.1**
MIDW	**Midway**	**69.86**	**8**	*e*P	**P**	**21 17 48.6**	**+0.1**
	comp=Z,52nm,0.9s						
KKM	**Kota Kinabalu**	**71.07**	**297**	*e*P	**P**	**21 17 56.3**	**-0.2**
	comp=Z,254nm,2.0s						
SBUM	**Sibu**	**71.22**	**291**	*e*P	**P**	**21 17 56.7**	**-0.6**
	comp=Z,9.8nm,1.0s						
SBUM				LR	LR		
	comp=Z,400nm,20.0s						
KSM	**Kuching**	**71.88**	**289**	*e*P	**P**	**21 18 00.4**	**-0.9**
	comp=Z,55nm,1.4s						
KSM				LR	LR		
	comp=Z,900nm,19.0s						
MNAI	**Manna**	**73.25**	**279**	*e*P	**P**	**21 18 09.1**	**-0.4**
	comp=Z,584nm,1.5s						
EFI	**East Falkland**	**76.56**	**149**	*e*P	**P**	**21 18 27.8**	**-0.3**
	comp=Z,148nm,1.4s						
EFI	**East Falkland**	**76.56**	**149**	*e*P	**P**	**21 18 27.8**	**-0.3**
EFI				pmax	pmax		
	comp=Z,149nm,1.4s						
MYKOM	**Kota Tinggi**	**76.74**	**284**	*e*P	**P**	**21 18 29.0**	**-0.6**
	comp=Z,110nm,2.0s						
MYKOM				LR	LR		
	comp=Z,1μm,19.0s						
BKNI	**Bangkinang**	**77.80**	**281**	*e*P	**P**	**21 18 34.5**	**-1.1**
	comp=Z,55nm,0.6s						
BKNI				LR	LR		
	comp=Z,1μm,19.0s						
PLCA	**Paso Flores**	**79.16**	**136**	P	**P**	**21 18 44.3**	**+1.4**
	comp=Z,3.1nm,0.6s,baz=239,slow=9.1,SNR=6.7						
PLCA				LR	LR	21 47 30.6	
	comp=Z,405nm,18.4s,baz=242,slow=31						
PLCA	**Paso Flores**	**79.16**	**136**	*e*P	**P**	**21 18 44.5**	**+1.7**
	comp=Z,62nm,1.8s						
JOW	**Kunigami**	**80.33**	**319**	PFAKE		21 19 00.0	+11
JOW				LR	LR		
	comp=Z,600nm,20.0s						
IPM	**Ipoh**	**80.62**	**284**	*e*P	**P**	**21 18 50.9**	**-0.1**
	comp=Z,29nm,1.2s						
IPM				LR	LR		
	comp=Z,1μm,20.0s						
JHJ2	**Mitsune**	**80.84**	**331**	*e*P	**P**	**21 18 51.6**	**-0.1**
	comp=Z,448nm,1.3s						
HOPE	**Hope Point**	**80.92**	**162**	*e*P	**P**	**21 18 51.0**	**-0.9**
	comp=Z,359nm,1.9s						
GSI	**Gunungsitoli**	**81.01**	**280**	*e*P	**P**	**21 18 52.7**	**-0.4**
	comp=Z,48nm,0.9s						
YOJ	**Yonaguni jima**	**81.11**	**314**	*e*P	**P**	**21 18 53.3**	**0.0**
	comp=Z,133nm,1.2s						
YOJ	**Yonaguni jima**	**81.11**	**314**	*e*P	**P**	**21 18 53.3**	**0.0**
YOJ				pmax	pmax		
	comp=Z,133nm,1.2s						
KULM	**Kulim**	**81.44**	**285**	*e*P	**P**	**21 18 54.6**	**-0.8**
	comp=Z,43nm,1.4s						
KULM				LR	LR		
	comp=Z,1μm,19.0s						
NACB	**Ninganchiao**	**81.65**	**313**	*e*P	**P**	**21 18 55.8**	**-0.3**
	comp=Z,22nm,1.0s						
INU	**Inuyama**	**83.87**	**330**	*e*P	**P**	**21 19 07.8**	**+0.4**
	comp=Z,44nm,1.5s						
INU				LR	LR		
	comp=Z,400nm,22.0s						
LHMI	**Lhok Sumawe**	**84.11**	**282**	*e*P	**P**	**21 19 09.1**	**-0.1**
	comp=Z,82nm,0.9s						
JNU	**Nakatsue**	**84.42**	**325**	*e*P	**P**	**21 19 09.3**	**-1.0**
	comp=Z,103nm,2.0s						
JNU				LR	LR		
	comp=Z,300nm,20.0s						
PEL	**Peldehue**	**84.58**	**130**	*e*P	**P**	**21 19 10.6**	**-0.9**
	comp=Z,42nm,1.2s						
PEL	**Peldehue**	**84.58**	**130**	*e*P	**P**	**21 19 10.6**	**-0.9**
PEL				pmax	pmax		
	comp=Z,42nm,1.2s						
QIZ	**Qiongzhong**	**84.78**	**301**	P	**P**	**21 19 14.4**	**+1.9**
QIZ				S	**S**	**21 29 41.5**	**+1.5**
QIZ				SS	**SS**	**21 35 09.0**	**-3.7**
QIZ				LR	LR		
	comp=Z,220nm,13.7s						
QIZ				LR	LR		
	comp=Z,230nm,19.1s						
QIZ				LR	LR		
	comp=Z,270nm,15.2s						
SSE	**Sheshan**	**87.37**	**317**	PFAKE		21 19 40.0	+15
SSE				LR	LR		
	comp=Z,500nm,20.0s						
ERM	**Erimo**	**87.86**	**337**	PFAKE		21 19 40.0	+13
ERM				LR	LR		
	comp=Z,700nm,19.0s						
NONG	**Nongkai**	**88.52**	**296**	P	**P**	**21 19 31.0**	**+0.3**
GO03	**Copiap**	**88.90**	**127**	PFAKE		21 19 40.0	+7.3
GO03				LR	LR		
	comp=Z,600nm,19.0s						
PBKT	**Sadao Pong**	**88.97**	**293**	P	P	21 19 41.4	+8.6
PBKT	**Sadao Pong**	**88.97**	**293**	P	P	21 19 41.4	+8.6
NJ2	**Nanjing**	**89.34**	**316**	*e*P	P	21 19 39.8	+5.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KSRS	**Korea Array**	**89.37**	**325**	P	**P**	**21 19 34.0**	**-0.2**
	comp=Z,7.4nm,1.0s,baz=152,slow=5.6,SNR=9.5						
KS15	**Wonju Array Si**	**89.38**	**325**	*e*P	**P**	**21 19 34.0**	**-0.2**
	comp=Z,34nm,1.4s						
KUR	**Kuril'sk**	**89.62**	**342**	*e*P	**P**	**21 19 39.5**	**+4.3**
KUR				S	**S**	**21 30 21.4**	**-3.9**
KUR				MLR	MLR		
	comp=Z,300nm,15.0s						
ASAJ	**Asahikawa**	**89.95**	**338**	LR	LR	21 56 15.2	
	comp=Z,603nm,20.7s,baz=183,slow=33						
SLVN	**Son La**	**90.31**	**299**	*e*P	**P**	**21 19 38.1**	**-1.0**
	comp=Z,19nm,1.4s						
GO02	**Mina Guanaco**	**91.08**	**125**	*e*P	**P**	**21 19 44.0**	**+0.8**
	comp=Z,20nm,0.8s						
CMAR	**Chiang Mai Arr**	**91.66**	**293**	P	**P**	**21 19 45.2**	**-0.2**
	comp=Z,6.6nm,0.4s,baz=152,slow=3.9,SNR=29						
CMAR				PP	**PP**	**21 23 23.3**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=144,slow=6.5,SNR=5.3						
CMAR				LR	LR	22 04 52.5	
	comp=Z,404nm,18.5s,baz=151,slow=38						
CHTO	**Chiang Mai**	**91.90**	**293**	*e*P	**P**	**21 19 46.1**	**-0.5**
	comp=Z,27nm,1.5s						
CHTO				LR	LR		
	comp=Z,500nm,20.0s						
CHTO	**Chiang Mai**	**91.90**	**293**	*e*P	**P**	**21 19 46.1**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,27nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,500nm,20.0s						
GYA	**Guiyang**	**92.17**	**304**	P	**P**	**21 19 45.4**	**-2.4**
GYA				PP	**PP**	**21 23 29.6**	**+1.2**
GYA				SKS	**SKSac**	**21 30 17.4**	**-3.0**
GYA				S	**S**	**21 30 47.6**	**-2.3**
GYA				SS	**SS**	**21 37 01.4**	**+0.9**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,5.7s						
GYA				LR	LR		
	comp=Z,220nm,15.7s						
GYA				LR	LR		
	comp=Z,220nm,17.4s						
GYA				LR	LR		
	comp=Z,340nm,17.4s						
YSS	**Yuzh-Sakhalins**	**92.52**	**339**	PFAKE		21 20 00.0	+11
YSS				LR	LR		
	comp=Z,700nm,20.0s						
YSS	**Yuzh-Sakhalins**	**92.52**	**339⇑**	*e*P	**P**	**21 19 45.5**	**-3.1**
YSS				*e*S	**S**	**21 30 43.4**	**-8.3**
YSS				*e*		21 36 59.0	
ENH	**Enshi**	**93.22**	**308**	*e*P	**P**	**21 19 51.4**	**-1.1**
ENH				*e*PcP	**PcP**	**21 19 51.5**	**-1.5**
ADK	**Adak**	**93.40**	**6**	PFAKE		21 20 00.0	+7.4
ADK				LR	LR		
	comp=Z,700nm,22.0s						
USA0B	**Ussuriysk Arra**	**93.48**	**331**	*e*P	**P**	**21 19 53.7**	**+0.6**
	comp=Z,5.9nm,1.0s						
USRK	**Ussuriysk Ar.**	**93.48**	**331**	LR	LR	21 58 52.7	
	comp=Z,154nm,21.3s,baz=145,slow=34						
PAYG	**Puerto Ayora**	**93.55**	**94**	PFAKE		21 20 10.0	+16
PAYG				LR	LR		
	comp=Z,400nm,18.0s						
GSTR	**Great Sitkin T**	**93.66**	**6**	*e*P	**P**	**21 19 53.7**	**-0.1**
KMI	**Kunming**	**93.72**	**300**	PFAKE		21 20 10.0	+15
KMI				LR	LR		
	comp=Z,300nm,19.0s						
KMI	**Kunming**	**93.72**	**300**	P	**P**	**21 19 55.4**	**+0.3**
KMI				pP	pP	21 20 00.5	+0.1
KMI				sP	sP	21 20 02.6	+0.4
KMI				PP	**PP**	**21 23 47.1**	**+6.4**
KMI				SKS	**SKSac**	**21 30 29.4**	**+0.1**
KMI				S	**S**	**21 31 03.5**	**-0.4**
KMI				sS	sS	21 31 13.0	+0.3
KMI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,120nm,4.3s						
KMI				LR	LR		
	comp=Z,230nm,20.2s						
KMI				LR	LR		
	comp=Z,310nm,19.2s						
KMI				LR	LR		
	comp=Z,340nm,21.2s						
SMY	**Shemya**	**93.93**	**360**	PFAKE		21 20 10.0	+15
SMY				LR	LR		
	comp=Z,900nm,21.0s						
MDJ	**Mudanjiang**	**94.73**	**330**	PFAKE		21 20 10.0	+11
MDJ				LR	LR		
	comp=Z,300nm,21.0s						
PET	**Petropavlovsk**	**95.20**	**351**	PFAKE		21 20 10.0	+9.2
PET				LR	LR		
	comp=Z,400nm,21.0s						
PET	**Petropavlovsk**	**95.20**	**351**	*e*P	**P**	**21 20 02.8**	**+2.0**
PET				*e*S	**S**	**21 31 14.7**	**-0.2**
PET				pmax	pmax		
	comp=Z,100nm,15.2s						
NIKH	**Nikolski High**	**95.28**	**10**	PFAKE		21 20 10.0	+8.8
NIKH				LR	LR		
	comp=Z,900nm,22.0s						
PEA0B	**Petropavlovsk-**	**95.40**	**350**	PFAKE		21 20 10.0	+8.2
PEA0B				LR	LR		
	comp=Z,600nm,20.0s						
PETK	**Petropavlovsk-**	**95.40**	**350**	LR	LR	21 57 38.6	
	comp=Z,636nm,20.9s,baz=158,slow=32						
CN2	**Changchun**	**95.69**	**327**	*e*P	**P**	**21 20 04.8**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NNA	**Nana**	**95.73**	**111**	PFAKE		21 20 20.0	+16
NNA				LR	LR		
	comp=Z,1μm,18.0s						
UNV	**Unalaska Valle**	**96.45**	**11**	PFAKE		21 20 20.0	+13
UNV				LR	LR		
	comp=Z,700nm,20.0s						
BJT	**Baijiatuau**	**96.89**	**319**	PFAKE		21 20 20.0	+11
BJT				LR	LR		
	comp=Z,300nm,20.0s						
CD2	**Chengdu**	**97.12**	**305**	*e*P	Pdif	21 20 11.0	+0.6
CD2				S	**S**	**21 31 34.3**	**+1.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,230nm,13.2s						
CD2				LR	LR		
	comp=Z,230nm,12.8s						
CD2				LR	LR		
	comp=Z,400nm,16.2s						
CPUP	**Villa Florida**	**97.22**	**135**	LR	LR	21 58 59.0	
	comp=Z,292nm,18.3s,baz=213,slow=32						
CPE	**Camp Elliot**	**97.24**	**52**	PFAKE		21 20 20.0	+9.2
CPE				LR	LR		
	comp=Z,500nm,18.0s						
BAR	**Barrett**	**97.35**	**53**	PFAKE		21 20 20.0	+8.7
BAR				LR	LR		
	comp=Z,500nm,18.0s						
PAGB	**Antelope Grade**	**97.46**	**48**	PFAKE		21 20 20.0	+8.3
PAGB				LR	LR		
	comp=Z,500nm,18.0s						
PASC	**Pasadena Art C**	**97.52**	**51**	PFAKE		21 20 20.0	+8.0
PASC				LR	LR		
	comp=Z,600nm,18.0s						
OSI	**Osito Audit: C**	**97.53**	**50**	PFAKE		21 20 20.0	+7.9
OSI				LR	LR		
	comp=Z,700nm,18.0s						
SAO	**San Andreas Ge**	**97.55**	**47**	PFAKE		21 20 20.0	+7.9
SAO				LR	LR		
	comp=Z,600nm,19.0s						
MWC	**Mount Wilson**	**97.63**	**51**	PFAKE		21 20 20.0	+7.3
MWC				LR	LR		
	comp=Z,600nm,20.0s						
MCCM	**Marconi Confer**	**97.79**	**45**	PFAKE		21 20 20.0	+7.0
MCCM				LR	LR		
	comp=Z,700nm,21.0s						
FALS	**False Pass**	**97.91**	**13**	PFAKE		21 20 20.0	+6.9
FALS				LR	LR		
	comp=Z,700nm,21.0s						
PFO	**Pinyon Flats O**	**98.13**	**52**	PFAKE		21 20 30.0	+15
PFO				LR	LR		
	comp=Z,800nm,18.0s						
HOPS	**Hopland Field**	**98.32**	**44**	PFAKE		21 20 30.0	+15
HOPS				LR	LR		
	comp=Z,900nm,20.0s						
GDXM	**Geysers**	**98.33**	**45**	PFAKE		21 20 30.0	+14
GDXM				LR	LR		
	comp=Z,900nm,19.0s						
HSIG		**98.35**	**59**	PFAKE		21 20 30.0	+14
HSIG				LR	LR		
	comp=Z,500nm,18.0s						
ISA	**Isabella, Lake**	**98.42**	**49**	PFAKE		21 20 30.0	+14
ISA				LR	LR		
	comp=Z,800nm,21.0s						
KCPM	**Cahto Peak**	**98.57**	**44**	PFAKE		21 20 30.0	+13
KCPM				LR	LR		
	comp=Z,700nm,19.0s						
GLA	**Glamis**	**98.71**	**53**	PFAKE		21 20 30.0	+13
GLA				LR	LR		
	comp=Z,500nm,20.0s						
NKL	**Nikolayevsk**	**98.73**	**340**	*e*P	Pdif	21 20 19.0	+2.2
NKL				pmax	pmax		
	comp=Z,11nm,1.3s						
NKL				pmax	pmax		
	comp=E,12nm,1.4s						
NKL				pmax	pmax		
	comp=N,22nm,1.5s						
KMRM	**Mail Ridge**	**98.90**	**43**	PFAKE		21 20 30.0	+12
KMRM				LR	LR		
	comp=Z,600nm,19.0s						
CMB	**Columbia Colle**	**99.06**	**47**	PFAKE		21 20 30.0	+11
CMB				LR	LR		
	comp=Z,501nm,18.0s						
GSC	**Goldstone, Bar**	**99.12**	**51**	PFAKE		21 20 30.0	+11
GSC				LR	LR		
	comp=Z,600nm,19.0s						
JCC	**Jacoby Creek,**	**99.18**	**43**	PFAKE		21 20 30.0	+11
JCC				LR	LR		
	comp=Z,500nm,19.0s						
SPIA	**Saint Paul Isl**	**99.23**	**8**	PFAKE		21 20 30.0	+11
SPIA				LR	LR		
	comp=Z,1μm,22.0s						
DAC	**Darwin (Calif)**	**99.36**	**49**	PFAKE		21 20 30.0	+10
DAC				LR	LR		
	comp=Z,900nm,19.0s						
KHMM	**Horse Mountain**	**99.37**	**43**	PFAKE		21 20 30.0	+10
KHMM				LR	LR		
	comp=Z,500nm,20.0s						
Y12C	**Blythe**	**99.38**	**53**	PFAKE		21 20 30.0	+10
Y12C				LR	LR		
	comp=Z,500nm,18.0s						
AFDM	**Forest Hills D**	**99.40**	**46**	PFAKE		21 20 30.0	+10
AFDM				LR	LR		
	comp=Z,500nm,21.0s						
MDPB	**Devils Postpil**	**99.48**	**48**	PFAKE		21 20 30.0	+9.0
MDPB				LR	LR		
	comp=Z,600nm,18.0s						
OMMB	**Old Mammoth Mi**	**99.51**	**48**	PFAKE		21 20 30.0	+8.8
OMMB				LR	LR		
	comp=Z,700nm,19.0s						
ORV	**Oroville**	**99.56**	**45**	PFAKE		21 20 30.0	+9.1
ORV				LR	LR		
	comp=Z,500nm,21.0s						
WDC	**Whiskeytown Da**	**99.76**	**44**	PFAKE		21 20 30.0	+8.2
WDC				LR	LR		
	comp=Z,500nm,21.0s						
HHC	**Hu-ho-hao-te**	**99.83**	**317**	P	**Pdif**	**21 20 25.5**	**+3.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,51nm,5.9s						
WAKR	**Walker**	**99.91**	**47**	PFAKE		21 20 30.0	+7.2
WAKR				LR	LR		
	comp=Z,600nm,18.0s						
RUBR	**Rubicon Trail**	**99.91**	**46**	PFAKE		21 20 30.0	+7.2
RUBR				LR	LR		
	comp=Z,700nm,22.0s						
LDFC	**Landfair**	**99.95**	**52**	PFAKE		21 20 30.0	+7.1
LDFC				LR	LR		
	comp=Z,600nm,18.0s						
CHGN	**Chignik**	**100.19**	**15**	PFAKE		21 20 30.0	+6.8
CHGN				LR	LR		
	comp=Z,500nm,21.0s						
PNTR	**Pine Nut**	**100.24**	**46**	PFAKE		21 20 40.0	+16
PNTR				LR	LR		
	comp=Z,600nm,22.0s						
CHIR	**Chirikof Islan**	**100.31**	**17**	PFAKE		21 20 40.0	+16
CHIR				LR	LR		
	comp=Z,700nm,20.0s						
VCNR	**Virginia City**	**100.36**	**46**	PFAKE		21 20 40.0	+15
VCNR				LR	LR		
	comp=Z,600nm,18.0s						
YERR	**Yerington**	**100.36**	**47**	PFAKE		21 20 40.0	+15
YERR				LR	LR		
	comp=Z,600nm,21.0s						
BEKR	**Beckworth**	**100.39**	**45**	PFAKE		21 20 40.0	+15
BEKR				LR	LR		
	comp=Z,600nm,21.0s						
Y14A	**Wickenburg**	**100.43**	**54**	PFAKE		21 20 40.0	+15
Y14A				LR	LR		
	comp=Z,800nm,18.0s						
HPIG		**100.43**	**63**	PFAKE		21 20 40.0	+15
HPIG				LR	LR		
	comp=Z,800nm,20.0s						
RYN	**Ryan**	**100.50**	**47**	PFAKE		21 20 40.0	+15
RYN				LR	LR		
	comp=Z,400nm,19.0s						
YBH	**Yreka Blue Hor**	**100.52**	**43**	PFAKE		21 20 40.0	+15
YBH				LR	LR		
	comp=Z,400nm,20.0s						
LZH	**Lanzhou**	**100.67**	**309**	*e*P	**Pdif**	**21 20 30.9**	**+4.7**
LZH				pP	sP	21 20 35.8	+2.4
LZH				sP	sPdif	21 20 39.0	+5.7
LZH				*e*S	**Sdif**	**21 32 06.8**	**+4.0**
LZH				SS	**SS**	**21 38 59.0**	**-1.6**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,91nm,5.7s						
LZH				LR	LR		
	comp=Z,1μm,13.8s						
LZH				LR	LR		
	comp=Z,1μm,16.8s						
LZH				LR	LR		
	comp=Z,1μm,20.1s						
TUC	**Tucson**	**100.69**	**56**	PFAKE		21 20 40.0	+14
TUC				LR	LR		
	comp=Z,500nm,19.0s						
W13A	**Hualapai Mount**	**100.69**	**52**	PFAKE		21 20 40.0	+14
W13A				LR	LR		
	comp=Z,700nm,18.0s						
PAHR	**Pah Rah Range**	**100.80**	**46**	PFAKE		21 20 40.0	+13
PAHR				LR	LR		
	comp=Z,600nm,20.0s						
SHPR	**Sheep Range**	**100.91**	**51**	PFAKE		21 20 40.0	+13
SHPR				LR	LR		
	comp=Z,600nm,18.0s						
319A	**Douglas**	**101.01**	**58**	PFAKE		21 20 40.0	+12
319A				LR	LR		
	comp=Z,500nm,19.0s						
KVN	**Kaiserville**	**101.03**	**47**	PFAKE		21 20 40.0	+12
KVN				LR	LR		
	comp=Z,400nm,18.0s						
HUMO	**Hull Mountain**	**101.04**	**42**	PFAKE		21 20 40.0	+13
HUMO				LR	LR		
	comp=Z,499nm,20.0s						
SII	**Sitkinak Islan**	**101.31**	**17**	PFAKE		21 20 40.0	+12
SII				LR	LR		
	comp=Z,700nm,20.0s						
X16A	**Lo Mia Camp, P**	**101.70**	**54**	PFAKE		21 20 40.0	+9.2
X16A				LR	LR		
	comp=Z,500nm,19.0s						
MOD	**Modoc Plateau**	**101.88**	**44**	PFAKE		21 20 40.0	+8.6
MOD				LR	LR		
	comp=Z,600nm,20.0s						
R11A	**Troy Canyon, C**	**101.95**	**49**	PFAKE		21 20 40.0	+8.2
R11A				LR	LR		
	comp=Z,700nm,18.0s						
OHAK	**Old Harbor**	**102.11**	**17**	PFAKE		21 20 40.0	+8.2
OHAK				LR	LR		
	comp=Z,700nm,20.0s						
COR	**Corvallis**	**102.32**	**40**	PFAKE		21 20 40.0	+7.0
COR				LR	LR		
	comp=Z,900nm,21.0s						
ABPO	**Ambohimpanom**	**102.39**	**231**	PFAKE		21 20 50.0	+16
ABPO				LR	LR		
	comp=Z,1μm,18.0s						
HIA	**Hailar**	**102.42**	**327**	PFAKE		21 20 40.0	+6.6
HIA				LR	LR		
	comp=Z,300nm,20.0s						
WUAZ	**Wupatki**	**102.48**	**54**	PFAKE		21 20 50.0	+16
WUAZ				LR	LR		
	comp=Z,500nm,19.0s						
BMN	**Battle Mountai**	**102.48**	**47**	PFAKE		21 20 50.0	+16
BMN				LR	LR		
	comp=Z,500nm,18.0s						
U15A	**North Rim**	**102.55**	**52**	PFAKE		21 20 50.0	+15
U15A				LR	LR		
	comp=Z,400nm,19.0s						
MA2	**Magadan**	**102.66**	**348**	PFAKE		21 20 50.0	+16
MA2				LR	LR		
	comp=Z,500nm,20.0s						
X18A	**Snowflake**	**102.69**	**55**	PFAKE		21 20 50.0	+15
X18A				LR	LR		
	comp=Z,600nm,20.0s						
KDAK	**Kodiak Island**	**102.78**	**17**	PFAKE		21 20 50.0	+15
KDAK				LR	LR		
	comp=Z,600nm,20.0s						
PINE	**Pine Mountain**	**102.91**	**42**	PFAKE		21 20 50.0	+14
PINE				LR	LR		
	comp=Z,600nm,20.0s						
H04A	**Detroit Lake**	**102.94**	**41**	PFAKE		21 20 50.0	+14
H04A				LR	LR		
	comp=Z,700nm,22.0s						

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WVOR  Wild Horse Val    103.13  44  PFAKE             21 20 50.0 +13
WVOR                                LR       LR
      comp=Z,700nm,19.0s
W18A  Petrified Fore    103.21  55  PFAKE             21 20 50.0 +12
W18A                                LR       LR
      comp=Z,500nm,20.0s
TXAR  Lajitas Array     103.32  63  PKKPbc   PKKPbc   21 36 32.3 +0.6
      comp=Z,0.2nm,0.5s,baz=81,slow=4.6,SNR=4.0
MNTX  Cornudas Mount    103.72  60  PFAKE             21 20 50.0 +10
MNTX                                LR       LR
      comp=Z,500nm,18.0s
ELK   Elko              103.79  47  PFAKE             21 20 50.0 +10
ELK                                 LR       LR
      comp=Z,500nm,18.0s
J08A  Circle Bar Ran    103.87  44  PFAKE             21 20 50.0 +10
J08A                                LR       LR
      comp=Z,600nm,19.0s
NLWA  Neilton Lookou    104.11  38  PFAKE             21 20 50.0 +9.0
NLWA                                LR       LR
      comp=Z,700nm,20.0s
Y22D  IRIS PASSCAL I    104.28  57  PFAKE             21 20 50.0 +7.8
Y22D                                LR       LR
      comp=Z,600nm,18.0s
LSA   Lhasa             104.42 297  PFAKE             21 20 50.0 +6.6
LSA                                 LR       LR
      comp=Z,300nm,20.0s
LON   Longmire          104.61  40  PFAKE             21 20 50.0 +6.7
LON                                 LR       LR
      comp=Z,600nm,19.0s
CNPM  China Poot        104.66  17  PFAKE             21 20 50.0 +6.9
CNPM                                LR       LR
      comp=Z,800nm,20.0s
HOM   Homer             104.69  17  PFAKE             21 20 50.0 +6.8
HOM                                 LR       LR
      comp=Z,900nm,21.0s
DUG   Dugway, Tooele    104.78  49  PFAKE             21 21 00.0 +16
DUG                                 LR       LR
      comp=Z,400nm,22.0s
D05A  Enumclaw          104.84  39  PFAKE             21 21 00.0 +16
D05A                                LR       LR
      comp=Z,500nm,18.0s
DIB   Dawson Inlet,     104.91  30  PFAKE             21 21 00.0 +16
DIB                                 LR       LR
      comp=Z,400nm,20.0s
BRLK  Bradley Lake      104.96  17  PFAKE             21 21 00.0 +16
BRLK                                LR       LR
      comp=Z,700nm,21.0s
G08A  Pilot Rock        104.97  42  PFAKE             21 21 00.0 +15
G08A                                LR       LR
      comp=Z,400nm,20.0s
ANMO  Albuquerque       105.13  57  PFAKE             21 25 10.0 +10
ANMO                                LR       LR
      comp=Z,700nm,18.0s
SVW2  Sparrevohn        105.20  15  PFAKE             21 25 10.0 +10
SVW2                                LR       LR
      comp=Z,300nm,20.0s
GTA   Gaotai            105.27 309  eP       PKiKP    21 25 06.9 +6.4
GTA                                 pP       PP       21 25 10.3 +1.9
GTA                                 sP                21 25 13.1
GTA                                 pmax     pmax
      comp=Z,2.0nm,1.0s
MFID  Camas Ranch       105.30  45  PFAKE             21 25 10.0 +10
MFID                                LR       LR
      comp=Z,400nm,21.0s
ESTN  Estel             105.45  86  PFAKE             21 25 10.0 +8.5
ESTN                                LR       LR
      comp=Z,300nm,21.0s
HAWA  Hanford           105.46  41  PFAKE             21 25 10.0 +10
HAWA                                LR       LR
      comp=Z,600nm,21.0s
BMO   Blue Mountains    105.51  43  PFAKE             21 25 10.0 +9.3
BMO                                 LR       LR
      comp=Z,600nm,20.0s
LTY   Liberty           105.52  40  PFAKE             21 25 10.0 +9.4
LTY                                 LR       LR
      comp=Z,600nm,18.0s
GAMB  Gambell           105.59   6  PFAKE             21 25 10.0 +10
GAMB                                LR       LR
      comp=Z,500nm,21.0s
SEW   Seward            105.59  18  PFAKE             21 25 10.0 +10
SEW                                 LR       LR
      comp=Z,500nm,20.0s
ACON  Acoyapa           105.62  88  PFAKE             21 25 10.0 +8.3
ACON                                LR       LR
      comp=Z,400nm,21.0s
PV17  East Wray Mesa    105.76  53  PFAKE             21 25 10.0 +8.5
PV17                                LR       LR
      comp=Z,2µm,21.0s
E08A  Dider Farm, El    105.77  41  PFAKE             21 25 10.0 +9.0
E08A                                LR       LR
      comp=Z,700nm,22.0s
PV14  Lion Creek, Pa    105.78  53  PFAKE             21 25 10.0 +8.4
PV14                                LR       LR
      comp=Z,600nm,20.0s
PV16  Nyswonger Mesa    105.80  53  PFAKE             21 25 10.0 +8.4
PV16                                LR       LR
      comp=Z,600nm,18.0s
BBB   Bella Bella       105.83  33  PFAKE             21 25 10.0 +9.1
BBB                                 LR       LR
      comp=Z,400nm,21.0s
PV23  Carpenter Ridg    105.84  53  PFAKE             21 25 10.0 +8.2
PV23                                LR       LR
      comp=Z,900nm,22.0s
PV12  Saucer Basin,     105.88  53  PFAKE             21 25 10.0 +8.2
PV12                                LR       LR
      comp=Z,700nm,20.0s
PV07  Paradox Valley    106.05  53  PFAKE             21 25 10.0 +7.9
PV07                                LR       LR
      comp=Z,900nm,21.0s
KVTX  Kingsville        106.12  67  PFAKE             21 25 10.0 +7.8
KVTX                                LR       LR
      comp=Z,700nm,18.0s
HLID  Hailey            106.15  46  PFAKE             21 25 10.0 +7.9
HLID                                LR       LR
      comp=Z,400nm,18.0s
D08A  Wollman Farm,     106.23  41  PFAKE             21 25 10.0 +8.2
D08A                                LR       LR
      comp=Z,700nm,21.0s
E09A  Wood Farm, Sta    106.23  42  PFAKE             21 25 10.0 +8.1
E09A                                LR       LR
      comp=Z,400nm,20.0s
F10A  Beach Ranch, E    106.32  43  PFAKE             21 25 10.0 +7.8
F10A                                LR       LR
      comp=Z,400nm,18.0s
RC01  Rabbit Creek A    106.40  17  PFAKE             21 25 10.0 +8.3
RC01                                LR       LR
      comp=Z,500nm,22.0s
ESPN  Las Esperanzas    106.42  88  PFAKE             21 25 10.0 +6.9
ESPN                                LR       LR
      comp=Z,300nm,19.0s
HWUT  Hardware Ranch    106.42  49  PFAKE             21 25 10.0 +7.4
HWUT                                LR       LR
      comp=Z,500nm,19.0s
JCT   Junction City     106.64  64  PFAKE             21 25 10.0 +6.8
JCT                                 LR       LR
      comp=Z,700nm,22.0s
TTA   Tatalina          106.82  14  PFAKE             21 25 10.0 +7.5
TTA                                 LR       LR
      comp=Z,400nm,20.0s
GLI   Glacier Island    106.83  19  PFAKE             21 25 10.0 +7.5
GLI                                 LR       LR
      comp=Z,400nm,21.0s
MSTX  Muleshoe          106.86  59  PFAKE             21 25 20.0 +16
MSTX                                LR       LR
      comp=Z,500nm,20.0s
FID   Port Fidalgo      106.86  19  PFAKE             21 25 10.0 +7.4
FID                                 LR       LR
      comp=Z,500nm,20.0s
B08A  Colville Reser    106.94  40  PFAKE             21 25 10.0 +6.8
B08A                                LR       LR
      comp=Z,500nm,18.0s
KNK   Knik Glacier      106.98  18  PFAKE             21 25 10.0 +7.2
KNK                                 LR       LR
      comp=Z,400nm,20.0s
PMR   Palmer            106.98  17  PFAKE             21 25 10.0 +7.3
PMR                                 LR       LR
      comp=Z,400nm,20.0s
ANM   Nome              106.99   9  PFAKE             21 25 10.0 +7.3
ANM                                 LR       LR
      comp=Z,400nm,21.0s
RAGM  Ragged Mountai    107.00  20  PFAKE             21 25 10.0 +7.1
RAGM                                LR       LR
      comp=Z,700nm,20.0s
HMT   Hamilton          107.06  20  PFAKE             21 25 10.0 +7.0
HMT                                 LR       LR
      comp=Z,700nm,21.0s
C09A  Chrisman Ranch    107.06  41  PFAKE             21 25 10.0 +6.6
C09A                                LR       LR
      comp=Z,800nm,22.0s
ULN   Ulaanbaatar       107.10 319  PFAKE             21 25 20.0 +16
ULN                                 LR       LR
      comp=Z,200nm,20.0s
LLLB  Lillooet          107.33  37  PFAKE             21 25 20.0 +16
LLLB                                LR       LR
      comp=Z,500nm,20.0s
SML   Sawmill           107.35  18  PFAKE             21 25 10.0 +6.5
SML                                 LR       LR
      comp=Z,400nm,20.0s
AHID  Auburn Hatcher    107.44  48  PFAKE             21 25 20.0 +15
AHID                                LR       LR
      comp=Z,600nm,18.0s
WRAK  Wrangell Islan    107.47  28  PFAKE             21 25 20.0 +16
WRAK                                LR       LR
      comp=Z,600nm,20.0s
PPLA  Purkeypile        107.51  15  PFAKE             21 25 20.0 +16
PPLA                                LR       LR
      comp=Z,400nm,19.0s
SDCO  Great Sand Dun    107.51  55  PFAKE             21 25 20.0 +15
SDCO                                LR       LR
      comp=Z,500nm,18.0s
SMCO  Snowmass          107.52  53  PFAKE             21 25 20.0 +15
SMCO                                LR       LR
      comp=Z,600nm,19.0s
SCM   Sheep Creek Mo    107.61  18  PFAKE             21 25 20.0 +16
SCM                                 LR       LR
      comp=Z,400nm,20.0s
CRQM  Cirque            107.71  20  PFAKE             21 25 20.0 +16
CRQM                                LR       LR
      comp=Z,600nm,20.0s
PCA   Pinnacle          107.94  22  PFAKE             21 25 20.0 +15
PCA                                 LR       LR
      comp=Z,600nm,19.0s
NEW   Newport           107.94  41  PFAKE             21 25 20.0 +15
NEW                                 LR       LR
      comp=Z,800nm,22.0s
BCPM  Bancas Point      107.99  22  PFAKE             21 25 20.0 +15
BCPM                                LR       LR
      comp=Z,500nm,19.0s
TPAW  Teton Pass        108.00  48  PFAKE             21 25 20.0 +14
TPAW                                LR       LR
      comp=Z,500nm,21.0s
CAST  Castle Rocks      108.00  15  PFAKE             21 25 20.0 +15
CAST                                LR       LR
      comp=Z,400nm,19.0s
ABTX  Abilene, Hawle    108.07  62  PFAKE             21 25 20.0 +14
ABTX                                LR       LR
      comp=Z,600nm,18.0s
SNOW  Snow King Moun    108.09  48  PFAKE             21 25 20.0 +14
SNOW                                LR       LR
      comp=Z,600nm,19.0s
JIS   Juneau Island     108.24  26  PFAKE             21 25 20.0 +15
JIS                                 LR       LR
      comp=Z,800nm,21.0s
IMW   Indian Meadow     108.27  47  PFAKE             21 25 20.0 +14
IMW                                 LR       LR
      comp=Z,400nm,19.0s
MOOW  Moose Ponds       108.28  47  PFAKE             21 25 20.0 +14
MOOW                                LR       LR
      comp=Z,500nm,18.0s
BW06  Boulder Array     108.31  49  PFAKE             21 25 20.0 +14
BW06                                LR       LR
      comp=Z,600nm,18.0s
PDAR  Pinedale Array    108.31  49  PP       PP       21 25 32.6 +1.8
      comp=Z,1.8nm,1.1s,baz=216,slow=4.8,SNR=4.3
PDAR                                PKKPab   PKKPab   21 36 29.4 +1.5
      comp=Z,1.0nm,0.8s,baz=74,slow=6.3,SNR=7.0
BESE  Bessie Mountai    108.33  25  PFAKE             21 25 20.0 +15
BESE                                LR       LR
      comp=Z,600nm,20.0s
KTH   Kantishna Hill    108.35  16  PFAKE             21 25 20.0 +15
KTH                                 LR       LR
      comp=Z,700nm,21.0s
FLWY  Flagg Ranch       108.52  47  PFAKE             21 25 20.0 +14
FLWY                                LR       LR
      comp=Z,400nm,22.0s
MSO   Missoula          108.58  43  PFAKE             21 25 20.0 +14
MSO                                 LR       LR
      comp=Z,800nm,20.0s
RND   Reindeer          108.65  17  PFAKE             21 25 20.0 +14
RND                                 LR       LR
      comp=Z,700nm,20.0s
DHY   Denali Highway    108.68  17  PFAKE             21 25 20.0 +14
DHY                                 LR       LR
      comp=Z,300nm,20.0s
H17A  Grant Village     108.79  47  PFAKE             21 25 20.0 +13
H17A                                LR       LR
      comp=Z,600nm,19.0s
BPAW  Bear Paw Mtn.     108.83  15  PFAKE             21 25 20.0 +14
BPAW                                LR       LR
      comp=Z,400nm,20.0s
SKAG  Skagway           108.88  25  PFAKE             21 25 20.0 +14
SKAG                                LR       LR
      comp=Z,600nm,19.0s
MCK   McKinley          108.92  16  PFAKE             21 25 20.0 +14
MCK                                 LR       LR
      comp=Z,700nm,20.0s
RWWY  Rawlins           108.97  51  PFAKE             21 25 20.0 +13
RWWY                                LR       LR
      comp=Z,600nm,18.0s
BOZ   Bozeman (W)       108.99  46  PFAKE             21 25 20.0 +13
BOZ                                 LR       LR
      comp=Z,400nm,21.0s
LKWY  Lake              108.99  47  PFAKE             21 25 20.0 +13
LKWY                                LR       LR
      comp=Z,800nm,18.0s
JTMT  Jette             109.01  43  PFAKE             21 25 20.0 +13
JTMT                                LR       LR
      comp=Z,600nm,22.0s
HKT   Hockley           109.02  67  PFAKE             21 25 20.0 +13
HKT                                 LR       LR
      comp=Z,400nm,20.0s
BWN   Browne            109.20  16  PFAKE             21 25 20.0 +13
BWN                                 LR       LR
      comp=Z,1µm,20.0s
HYT   Haines Junctio    109.32  23  PFAKE             21 25 20.0 +13
HYT                                 LR       LR
      comp=Z,400nm,19.0s
MENT  Mentasta          109.42  19  PFAKE             21 25 20.0 +13
MENT                                LR       LR
      comp=Z,500nm,20.0s
BILL  Bilibino          109.46 357  PFAKE             21 25 20.0 +13
BILL                                LR       LR
      comp=Z,400nm,22.0s
WRH   Wood River Hil    109.75  16  PFAKE             21 25 20.0 +12
WRH                                 LR       LR
      comp=Z,700nm,20.0s
PHWY  Pilot Hill        109.76  52  PFAKE             21 25 20.0 +11
PHWY                                LR       LR
      comp=Z,400nm,19.0s
DLBC  Dease Lake        109.83  27  PFAKE             21 25 20.0 +12
DLBC                                LR       LR
      comp=Z,700nm,21.0s
WMOK  Wichita Mounta    109.93  61  PFAKE             21 25 20.0 +11
WMOK                                LR       LR
      comp=Z,500nm,21.0s
DOT   Dot Lake          109.94  18  PFAKE             21 25 20.0 +12
DOT                                 LR       LR
      comp=Z,500nm,21.0s
HDA   Harding Lake      109.94  17  PFAKE             21 25 20.0 +12
HDA                                 LR       LR
      comp=Z,300nm,19.0s
CCB   Clear Creek Bu    109.97  16  PFAKE             21 25 20.0 +12
CCB                                 LR       LR
      comp=Z,600nm,20.0s
WHY   Whitehorse        109.97  24  PFAKE             21 25 20.0 +11
WHY                                 LR       LR
      comp=Z,600nm,19.0s
RLMT  Red Lodge         109.97  47  PFAKE             21 25 20.0 +11
RLMT                                LR       LR
      comp=Z,500nm,19.0s
K22A  Casper            109.97  50  PFAKE             21 25 20.0 +11
K22A                                LR       LR
      comp=Z,500nm,19.0s
COLA  College           110.15  16  PFAKE             21 25 20.0 +11
COLA                                LR       LR
      comp=Z,600nm,20.0s
SCRK  Sand Creek        110.24  18  PFAKE             21 25 20.0 +11
SCRK                                LR       LR
      comp=Z,400nm,20.0s
RDOG  Red Dog Mine      110.64   9  PFAKE             21 25 20.0 +11
RDOG                                LR       LR
      comp=Z,500nm,22.0s
NATX  Nacogdoches       110.91  66  PFAKE             21 25 20.0 +8.9
NATX                                LR       LR
      comp=Z,600nm,21.0s
PRP   Porcupine Dome    111.21  17  PFAKE             21 25 20.0 +9.2
PRP                                 LR       LR
      comp=Z,200nm,20.0s
TLY   Talaya            111.30 321  PFAKE             21 25 20.0 +8.8
TLY                                 LR       LR
      comp=Z,200nm,20.0s
DAWY  Dawson            111.44  20  PFAKE             21 25 20.0 +8.9
DAWY                                LR       LR
      comp=Z,400nm,20.0s
EGAK  Eagle             111.58  19  PFAKE             21 25 20.0 +8.7
EGAK                                LR       LR
      comp=Z,500nm,21.0s
OGNE  Ogallala          111.60  54  PFAKE             21 25 20.0 +7.8
OGNE                                LR       LR
      comp=Z,600nm,18.0s
CBKS  Cedar Bluff       111.75  57  PFAKE             21 25 20.0 +7.5
CBKS                                LR       LR
      comp=Z,400nm,20.0s
COLD  Coldfoot          111.77  14  PFAKE             21 25 20.0 +8.4
COLD                                LR       LR
      comp=Z,500nm,21.0s
X37A  Clayton           112.10  63  PFAKE             21 25 20.0 +6.7
X37A                                LR       LR
      comp=Z,700nm,20.0s
FYU   Fort Yukon        112.17  16  PFAKE             21 25 20.0 +7.7
FYU                                 LR       LR
      comp=Z,500nm,20.0s
RSSD  Black Hills       112.30  50  PFAKE             21 25 30.0 +16
RSSD                                LR       LR
      comp=Z,700nm,19.0s
TUL1  Leonard           112.59  62  PFAKE             21 25 30.0 +16
TUL1                                LR       LR
      comp=Z,600nm,21.0s
LAO   LASA Array        112.61  47  PFAKE             21 25 30.0 +16
LAO                                 LR       LR
      comp=Z,400nm,21.0s
WIN   Windhoek          112.80 203  PFAKE             21 25 30.0 +15
WIN                                 LR       LR
      comp=Z,2µm,18.0s
WLAR  White Oak Lake    113.10  65  PFAKE             21 25 30.0 +15
WLAR                                LR       LR
      comp=Z,700nm,21.0s
TOLK  Toolik Lake Re    113.13  14  PFAKE             21 25 30.0 +16
TOLK                                LR       LR
      comp=Z,500nm,20.0s
MIAR  Mount Ida         113.28  64  PFAKE             21 25 30.0 +14
MIAR                                LR       LR
      comp=Z,400nm,20.0s
W39A  Magazine          113.51  63  PFAKE             21 25 30.0 +14
W39A                                LR       LR
      comp=Z,800nm,21.0s
X40A  Basin Creek Fa    113.75  64  PFAKE             21 25 30.0 +14
X40A                                LR       LR
      comp=Z,500nm,19.0s
KSU1  Kansas State U    113.90  58  PFAKE             21 25 30.0 +13
KSU1                                LR       LR
      comp=Z,400nm,20.0s
EPYK  Eagle Plains      113.96  19  PFAKE             21 25 30.0 +14
EPYK                                LR       LR
      comp=Z,400nm,21.0s
CCAR  Cane Creek        114.14  65  PFAKE             21 25 30.0 +13
CCAR                                LR       LR
      comp=Z,700nm,22.0s
BGNE  Belgrade          114.25  56  PFAKE             21 25 30.0 +13
BGNE                                LR       LR
      comp=Z,600nm,18.0s
SDV   Santo Domingo     114.50 100  PFAKE             21 25 30.0 +11
SDV                                 LR       LR
      comp=Z,500nm,19.0s
WHAR  Wooly Hollow      114.57  64  PFAKE             21 25 30.0 +12
WHAR                                LR       LR
      comp=Z,500nm,19.0s
FCAR  Ozark Folk Cen    115.02  63  PFAKE             21 25 30.0 +11
FCAR                                LR       LR
      comp=Z,700nm,20.0s
WMQ   Urumqi            115.14 307  ePKP     PKiKP    21 25 19.5 +0.6
WMQ                                 LR       LR
      comp=Z,130nm,21.5s
WMQ                                 LR       LR
      comp=Z,120nm,19.1s
WMQ                                 LR       LR
      comp=Z,160nm,22.1s
PTGA  Pitinga           115.40 116  PFAKE             21 25 30.0 +10
PTGA                                LR       LR
      comp=Z,700nm,18.0s
HBAR  Harrisburg        115.82  64  PFAKE             21 25 30.0 +10
HBAR                                LR       LR
      comp=Z,1µm,19.0s
MET   Memphis--Engin    116.07  65  PFAKE             21 25 30.0 +9.2
MET                                 LR       LR
      comp=Z,500nm,20.0s
OXF   Oxford            116.09  66  PFAKE             21 25 30.0 +9.1
OXF                                 LR       LR
      comp=Z,300nm,20.0s
INK   Inuvik            116.25  19  PFAKE             21 25 30.0 +10
INK                                 LR       LR
      comp=Z,500nm,20.0s
ECSD  EROS Data Cent    116.48  54  PFAKE             21 25 30.0 +8.6
ECSD                                LR       LR
      comp=Z,400nm,20.0s
GNAR  Gosnell           116.48  64  PFAKE             21 25 30.0 +8.4
GNAR                                LR       LR
      comp=Z,500nm,20.0s
PBMO  Poplar Bluff      116.65  63  PFAKE             21 25 30.0 +8.1
PBMO                                LR       LR
      comp=Z,600nm,20.0s
CCM   Cathedral Cave    116.81  62  PFAKE             21 25 30.0 +7.8
CCM                                 LR       LR
      comp=Z,500nm,20.0s
HALT  Halls             116.91  65  PFAKE             21 25 30.0 +7.6
HALT                                LR       LR
      comp=Z,500nm,18.0s
PVMO  Portageville      116.94  64  PFAKE             21 25 30.0 +7.5
PVMO                                LR       LR
      comp=Z,500nm,21.0s
MDND  Maddock           116.97  49  PFAKE             21 25 30.0 +7.8
MDND                                LR       LR
      comp=Z,500nm,18.0s
PARMO Parma             117.04  64  PFAKE             21 25 30.0 +7.3
PARMO                               LR       LR
      comp=Z,500nm,21.0s
GLAT  Glass             117.14  65  PFAKE             21 25 30.0 +7.1
GLAT                                LR       LR
      comp=Z,500nm,22.0s
PLAL  Pickwick Lake     117.27  66  PFAKE             21 25 30.0 +6.8
PLAL                                LR       LR
      comp=Z,400nm,21.0s
TIXI  Tiksi             117.42 345  PFAKE             21 25 30.0 +7.7
TIXI                                LR       LR
      comp=Z,200nm,20.0s
SCIA  State Center      117.61  57  PFAKE             21 25 40.0 +16
SCIA                                LR       LR
      comp=Z,500nm,18.0s
X48A  Hartselle         117.69  67  PFAKE             21 25 40.0 +16
X48A                                LR       LR
      comp=Z,200nm,22.0s
SLM   Saint Louis       117.79  62  PFAKE             21 25 40.0 +16
SLM                                 LR       LR
      comp=Z,900nm,22.0s
Y49A  Blount Mountai    117.81  68  PFAKE             21 25 40.0 +16
Y49A                                LR       LR
      comp=Z,400nm,21.0s
Z50A  Ashland           117.82  69  PFAKE             21 25 40.0 +16
Z50A                                LR       LR
      comp=Z,200nm,20.0s
T45A  Paducah           117.98  64  PFAKE             21 25 40.0 +16
T45A                                LR       LR
      comp=Z,400nm,18.0s
WVT   Waverly           118.06  65  PFAKE             21 25 40.0 +15
WVT                                 LR       LR
      comp=Z,400nm,20.0s
YKA   Yellowknife Ar    118.17  30  PKP      PKPdf    21 25 23.0 -1.0
      comp=Z,2.8nm,0.6s,baz=258,slow=1.6,SNR=22
YKA                                 PP       PP       21 26 43.9 +3.7
      comp=Z,0.3nm,0.3s,baz=242,slow=6.0,SNR=4.2
YKA                                 PKKPab   PKKPab   21 35 42.9 -0.3
      comp=Z,3.1nm,0.7s,baz=47,slow=4.4,SNR=15
YKB5  Yellowknife Ar    118.17  30  ePKPdf   PKPdf    21 25 23.0 -1.0
YKW3  Yellowknife Ar    118.21  30  ePKPdf   PKPdf    21 25 23.6 -0.4
YKW3                                LR       LR
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      comp=Z,600nm,20.0s
N41A  Harden Midland   118.48  60  PFAKE              21 25 40.0  +15
N41A                               LR       LR
      comp=Z,500nm,18.0s
DGZ   Jazzator, Alta   118.48 312⇑iPKIKP    PKPdf     21 25 24.1 -1.1
V48A  Smith Brothers   118.54  66  PFAKE              21 25 40.0  +14
V48A                               LR       LR
      comp=Z,400nm,22.0s
SWET  Sewanee          118.87  67  PFAKE              21 25 40.0  +14
SWET                               LR       LR
      comp=Z,300nm,19.0s
L40A  Anamosa          118.95  58  PFAKE              21 25 40.0  +14
L40A                               LR       LR
      comp=Z,500nm,18.0s
T47A  Sharon Grove     119.01  65  PFAKE              21 25 40.0  +14
T47A                               LR       LR
      comp=Z,300nm,19.0s
CLTN  Cedars of Leba   119.06  66  PFAKE              21 25 40.0  +13
CLTN                               LR       LR
      comp=Z,200nm,20.0s
USIN  University of    119.14  64  PFAKE              21 25 40.0  +13
USIN                               LR       LR
      comp=Z,500nm,21.0s
W50A  Signal Mountai   119.29  68  PFAKE              21 25 40.0  +13
W50A                               LR       LR
      comp=Z,300nm,19.0s
AGMN  Agassiz Nation   119.34  50  PFAKE              21 25 40.0  +13
AGMN                               LR       LR
      comp=Z,600nm,20.0s
FFC   Flin Flon        119.36  41  PFAKE              21 25 40.0  +13
FFC                                LR       LR
      comp=Z,400nm,19.0s
FFC   Flin Flon        119.36  41 i PKIKP   PKiKP     21 25 27.0 +0.4
HDIL  Hopedale         119.41  60  PFAKE              21 25 40.0  +13
HDIL                               LR       LR
      comp=Z,500nm,18.0s
Y52A  Lilburn          119.45  69  PFAKE              21 25 40.0  +13
Y52A                               LR       LR
      comp=Z,300nm,20.0s
154A  Montrose         119.46  71  PFAKE              21 25 40.0  +13
154A                               LR       LR
      comp=Z,200nm,20.0s
SPMN  Marine on St.    119.59  54  PFAKE              21 25 40.0  +13
SPMN                               LR       LR
      comp=Z,500nm,18.0s
GOGA  Godfrey          119.63  70  PFAKE              21 25 40.0  +12
GOGA                               LR       LR
      comp=Z,300nm,19.0s
L42A  Oliver, Polo     119.92  59  PFAKE              21 25 40.0  +12
L42A                               LR       LR
      comp=Z,600nm,19.0s
MKAR  Makanchi Array   119.94 308  PKP      PKPdf     21 25 25.9 -2.1
      comp=Z,1.3nm,0.5s,baz=207,slow=2.0,SNR=22
MKAR                               PKKPab   PKKPbc    21 35 38.6 +1.8
      comp=Z,0.3nm,0.6s,baz=313,slow=3.5,SNR=3.7
CPCT  Cooper Cave      119.97  68  PFAKE              21 25 40.0  +12
CPCT                               LR       LR
      comp=Z,300nm,18.0s
JFWS  Jewell Farm      120.01  58  PFAKE              21 25 40.0  +12
JFWS                               LR       LR
      comp=Z,400nm,20.0s
MAKZ  Makanchi         120.14 307 ePKPdf    PKPdf     21 25 26.5 -1.9
MAKZ  Makanchi         120.14 307 ePKIKP    PKPdf     21 25 26.5 -1.9
T49A  Edmonton         120.14  66  PFAKE              21 25 40.0  +11
T49A                               LR       LR
      comp=Z,400nm,20.0s
W52A  Murphy           120.20  68  PFAKE              21 25 40.0  +11
W52A                               LR       LR
      comp=Z,300nm,19.0s
WCI   Wyandotte Cave   120.21  64  PFAKE              21 25 40.0  +11
WCI                                LR       LR
      comp=Z,500nm,18.0s
KSH   Kashi            120.25 298 ePKP      PKiKP     21 25 29.4 +0.4
KSH                                PKS      PKSdf     21 29 03.5 -2.2
V51A  Loudon           120.28  67  PFAKE              21 25 40.0  +11
V51A                               LR       LR
      comp=Z,300nm,20.0s
ULM   Lac du Bonnet    120.31  48  PKP      PKiKP     21 25 28.9 +0.3
      comp=Z,2.1nm,0.5s,baz=297,slow=1.5,SNR=3.1
ULM   Lac du Bonnet    120.31  48  PFAKE              21 25 40.0  +11
ULM                                LR       LR
      comp=Z,400nm,18.0s
SDDR  Presa de Saban   120.42  91  PFAKE              21 25 40.0  +10
SDDR                               LR       LR
      comp=Z,1µm,22.0s
BLO   Bloomington      120.54  63  PFAKE              21 25 40.0  +11
BLO                                LR       LR
      comp=Z,600nm,20.0s
M44A  Midewin, Midew   120.65  60  PFAKE              21 25 40.0  +10
M44A                               LR       LR
      comp=Z,500nm,18.0s
SFIN  Lafayette        120.77  62  PFAKE              21 25 40.0  +10
SFIN                               LR       LR
      comp=Z,500nm,21.0s
KDJ   Kajisay          120.78 301  PFAKE              21 25 40.0  +10
KDJ                                LR       LR
      comp=Z,200nm,19.0s
I41A  Arkdale          120.82  57  PFAKE              21 25 40.0  +10
I41A                               LR       LR
      comp=Z,500nm,18.0s
V52A  Sevierville      120.82  68  PFAKE              21 25 40.0  +10
V52A                               LR       LR
      comp=Z,300nm,18.0s
BG3   Lake Jocassee    120.84  69  PFAKE              21 25 40.0  +10
BG3                                LR       LR
      comp=Z,200nm,18.0s
HODGE Hodges           120.92  70  PFAKE              21 25 40.0  +10
HODGE                              LR       LR
      comp=Z,400nm,18.0s
R49A  Shelbyville      121.00  65  PFAKE              21 25 40.0  +10
R49A                               LR       LR
      comp=Z,400nm,19.0s
E38A  The Farm, Brul   121.03  53  PFAKE              21 25 40.0  +10
E38A                               LR       LR
      comp=Z,800nm,19.0s
K43A  Burlington       121.12  59  PFAKE              21 25 40.0  +10
K43A                               LR       LR
      comp=Z,500nm,20.0s
NRN   Naryn            121.20 300  PFAKE              21 25 40.0 +8.9
NRN                                LR       LR
      comp=Z,300nm,20.0s
G40A  Rib Lake         121.20  55  PFAKE              21 25 40.0 +9.4
G40A                               LR       LR
      comp=Z,400nm,18.0s
TZTN  Tazewell         121.22  67  PFAKE              21 25 40.0 +9.1
TZTN                               LR       LR
      comp=Z,400nm,21.0s
I42A  Draeger Farm,    121.33  57  PFAKE              21 25 40.0 +9.2
I42A                               LR       LR
      comp=Z,400nm,18.0s
P48A  Milroy           121.42  63  PFAKE              21 25 40.0 +8.9
P48A                               LR       LR
      comp=Z,600nm,20.0s
PAULI Pauline          121.54  70  PFAKE              21 25 40.0 +8.5
PAULI                              LR       LR
      comp=Z,300nm,22.0s
R50A  Paris            121.56  65  PFAKE              21 25 40.0 +8.5
R50A                               LR       LR
      comp=Z,400nm,18.0s
JSC   Jenkinsville     121.65  70  PFAKE              21 25 40.0 +8.3
JSC                                LR       LR
      comp=Z,300nm,18.0s
EYMN  Ely              121.71  52 ePKPdf    PKiKP     21 25 31.8 +0.4
EYMN                               LR       LR
      comp=Z,400nm,20.0s
S51A  Beattyville      121.74  66  PFAKE              21 25 40.0 +8.2
S51A                               LR       LR
      comp=Z,400nm,20.0s
T52A  Hallie           121.89  67  PFAKE              21 25 40.0 +7.8
T52A                               LR       LR
      comp=Z,400nm,20.0s
ZAA0  Zalesovo Array   122.00 316  PFAKE              21 25 40.0 +8.2
ZAA0                               LR       LR
      comp=Z,200nm,19.0s
ZALV  Zalesovo Beam    122.00 316  PKP      PKPdf     21 25 29.5 -2.1
      comp=Z,0.9nm,0.4s,baz=170,slow=3.6,SNR=4.5
KMSC  Kings Mountain   122.04  70  PFAKE              21 25 40.0 +7.5
KMSC                               LR       LR
      comp=Z,300nm,21.0s
L46A  Eue Claire       122.10  60  PFAKE              21 25 40.0 +7.6
L46A                               LR       LR
      comp=Z,400nm,19.0s
Y57A  Sumter           122.13  71  PFAKE              21 25 40.0 +7.3
Y57A                               LR       LR
      comp=Z,400nm,20.0s
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COWI  Conover          122.26  55  PFAKE              21 25 40.0 +7.4
COWI                               LR       LR
      comp=Z,700nm,20.0s
H43A  Windswept, Lux   122.33  57  PFAKE              21 25 40.0 +7.2
H43A                               LR       LR
      comp=Z,400nm,18.0s
BIRD  Birdtown, Kers   122.40  70  PFAKE              21 25 40.0 +6.8
BIRD                               LR       LR
      comp=Z,300nm,19.0s
U54A  Nelsons Funny    122.40  68  PFAKE              21 25 40.0 +6.7
U54A                               LR       LR
      comp=Z,200nm,20.0s
KMBO  Kilima Mbogo     122.47 234  PKP      PKiKP     21 25 34.6 +0.2
      comp=Z,2.7nm,0.6s,baz=78,slow=2.6,SNR=10.0
KMBO  Kilima Mbogo     122.47 234 ePKPdf    PKiKP     21 25 34.6 +0.2
KMBO                               LR       LR
      comp=Z,800nm,18.0s
O49A  Covington        122.50  63  PFAKE              21 25 40.0 +6.7
O49A                               LR       LR
      comp=Z,700nm,21.0s
Y58A  Scranton         122.58  72  PFAKE              21 25 40.0 +6.4
Y58A                               LR       LR
      comp=Z,400nm,19.0s
Q51A  Peebles          122.60  65  PFAKE              21 25 40.0 +6.5
Q51A                               LR       LR
      comp=Z,500nm,18.0s
J45A  Montague         122.72  59  PFAKE              21 25 40.0 +6.4
J45A                               LR       LR
      comp=Z,500nm,18.0s
FRU1  Bishkek          122.76 300  PFAKE              21 25 50.0  +16
FRU1                               LR       LR
      comp=Z,300nm,21.0s
AAK   Ala-Archa        122.77 300  PFAKE              21 25 50.0  +16
AAK                                LR       LR
      comp=Z,300nm,20.0s
AAK   Ala-Archa        122.77 300cePKIKP    PKiKP     21 25 34.2 +0.3
AAK                                pmax     pmax
      comp=Z,5.0nm,1.7s
M48A  Edgerton         122.88  61  PFAKE              21 25 50.0  +16
M48A                               LR       LR
      comp=Z,500nm,20.0s
N49A  Columbus Grove   122.96  62  PFAKE              21 25 50.0  +16
N49A                               LR       LR
      comp=Z,600nm,19.0s
V56A  Mocksville       122.97  69  PFAKE              21 25 50.0  +16
V56A                               LR       LR
      comp=Z,400nm,20.0s
W57A  Gilead           122.99  70  PFAKE              21 25 50.0  +16
W57A                               LR       LR
      comp=Z,300nm,19.0s
P51A  Williamsport     123.02  64  PFAKE              21 25 50.0  +16
P51A                               LR       LR
      comp=Z,400nm,21.0s
D41A  Chassel          123.05  54  PFAKE              21 25 50.0  +16
D41A                               LR       LR
      comp=Z,700nm,18.0s
C40A  Isle Royale Na   123.09  53  PFAKE              21 25 50.0  +16
C40A                               LR       LR
      comp=Z,500nm,21.0s
I45A  Fountain         123.10  58  PFAKE              21 25 50.0  +16
I45A                               LR       LR
      comp=Z,600nm,19.0s
X58A  Rowland          123.15  71  PFAKE              21 25 50.0  +15
X58A                               LR       LR
      comp=Z,300nm,20.0s
R53A  Hurricane        123.21  66  PFAKE              21 25 50.0  +15
R53A                               LR       LR
      comp=Z,500nm,18.0s
ACSO  Alum Creek Sta   123.43  64  PFAKE              21 25 50.0  +15
ACSO                               LR       LR
      comp=Z,700nm,22.0s
J47A  Sunmer           123.64  60  PFAKE              21 25 50.0  +15
J47A                               LR       LR
      comp=Z,500nm,19.0s
E43A  Lone Tree Farm   123.70  55  PFAKE              21 25 50.0  +15
E43A                               LR       LR
      comp=Z,500nm,19.0s
BLA   Blacksburg       123.72  68  PFAKE              21 25 50.0  +14
BLA                                LR       LR
      comp=Z,300nm,18.0s
GAR   Garm             123.81 295  PFAKE              21 25 50.0  +14
GAR                                LR       LR
      comp=Z,500nm,20.0s
KURK  Kurchatov        123.93 310 ePKPdf    PKPdf     21 25 33.5 -1.9
KURK  Kurchatov        123.93 310⇓iPKIKP    PKPdf     21 25 33.8 -1.6
G45A  Suttons Bay      123.93  57  PFAKE              21 25 50.0  +14
G45A                               LR       LR
      comp=Z,500nm,18.0s
M50A  Fremont          123.95  62  PFAKE              21 25 50.0  +14
M50A                               LR       LR
      comp=Z,600nm,20.0s
AAM   Ann Arbor        123.96  61  PFAKE              21 25 50.0  +14
AAM                                LR       LR
      comp=Z,400nm,20.0s
BTK   Batken           123.97 296  PFAKE              21 25 50.0  +14
BTK                                LR       LR
      comp=Z,200nm,20.0s
O52A  Adamsville       124.15  64  PFAKE              21 25 50.0  +13
O52A                               LR       LR
      comp=Z,500nm,18.0s
P53A  Whipple          124.15  65  PFAKE              21 25 50.0  +13
P53A                               LR       LR
      comp=Z,300nm,20.0s
N51A  Ashland          124.17  63  PFAKE              21 25 50.0  +13
N51A                               LR       LR
      comp=Z,600nm,21.0s
I47A  Gladwin          124.20  59  PFAKE              21 25 50.0  +14
I47A                               LR       LR
      comp=Z,500nm,18.0s
Q54A  Coxs Mills       124.29  66  PFAKE              21 25 50.0  +13
Q54A                               LR       LR
      comp=Z,400nm,18.0s
J48A  Bridge Port      124.34  60  PFAKE              21 25 50.0  +13
J48A                               LR       LR
      comp=Z,500nm,21.0s
T57A  Hurt             124.43  69  PFAKE              21 25 50.0  +13
T57A                               LR       LR
      comp=Z,400nm,20.0s
CHGR  Chuyangaron      124.44 294  PFAKE              21 25 50.0  +13
CHGR                               LR       LR
      comp=Z,700nm,20.0s
R55A  Marlinton        124.45  67  PFAKE              21 25 50.0  +13
R55A                               LR       LR
      comp=Z,400nm,18.0s
E44A  Grand Marais A   124.48  56  PFAKE              21 25 50.0  +13
E44A                               LR       LR
      comp=Z,500nm,19.0s
GLMI  Grayling         124.49  58  PFAKE              21 25 50.0  +13
GLMI                               LR       LR
      comp=Z,500nm,21.0s
K50A  Casco            124.86  61  PFAKE              21 25 50.0  +12
K50A                               LR       LR
      comp=Z,1µm,19.0s
S57A  Dark Hollow, R   125.00  68  PFAKE              21 25 50.0  +12
S57A                               LR       LR
      comp=Z,300nm,19.0s
FCC   Fort Churchill   125.08  40  PFAKE              21 25 50.0  +12
FCC                                LR       LR
      comp=Z,600nm,20.0s
M52A  Chesterland      125.13  63  PFAKE              21 25 50.0  +12
M52A                               LR       LR
      comp=Z,600nm,20.0s
U59A  Littleton        125.14  70  PFAKE              21 25 50.0  +11
U59A                               LR       LR
      comp=Z,400nm,18.0s
N53A  Lisbon           125.14  64  PFAKE              21 25 50.0  +12
N53A                               LR       LR
      comp=Z,600nm,21.0s
V60A  Jim Taylor Roa   125.23  71  PFAKE              21 25 50.0  +11
V60A                               LR       LR
      comp=Z,300nm,21.0s
I49A  Point Hope       125.25  60  PFAKE              21 25 50.0  +11
I49A                               LR       LR
      comp=Z,400nm,21.0s
H48A  Harrisville      125.26  59  PFAKE              21 25 50.0  +11
H48A                               LR       LR
      comp=Z,400nm,20.0s
MCWV  Mont Chateau     125.29  66  PFAKE              21 25 50.0  +11
MCWV                               LR       LR
      comp=Z,200nm,18.0s
RCBR  Riachuelo        125.31 142  PFAKE              21 25 50.0  +10
RCBR                               LR       LR
      comp=Z,400nm,20.0s
E46A  Sault Ste Mari   125.37  56  PFAKE              21 25 50.0  +11
E46A                               LR       LR
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      comp=Z,600nm,18.0s
S58A  Poland Farm, P   125.56  69  PFAKE              21 25 50.0  +11
S58A                               LR       LR
      comp=Z,200nm,19.0s
SABA  Saba             125.59  98  PFAKE              21 25 50.0  +10
SABA                               LR       LR
      comp=Z,400nm,22.0s
T59A  Double "B" Far   125.61  69  PFAKE              21 25 50.0  +11
T59A                               LR       LR
      comp=Z,300nm,20.0s
V61A  Roper            125.73  71  PFAKE              21 25 50.0  +10
V61A                               LR       LR
      comp=Z,300nm,19.0s
N54A  Moraine State    125.79  64  PFAKE              21 25 50.0  +10
N54A                               LR       LR
      comp=Z,500nm,19.0s
SKI   Saint Kitts      125.79  99  PFAKE              21 25 50.0  +10
SKI                                LR       LR
      comp=Z,200nm,22.0s
R58B  Mineral          125.85  68  PFAKE              21 25 50.0  +10
R58B                               LR       LR
      comp=Z,300nm,20.0s
SMRT  St. Maarten      125.99  98  PFAKE              21 25 50.0 +9.2
SMRT                               LR       LR
      comp=Z,400nm,22.0s
U61A  Possum Corner    126.08  71  PFAKE              21 25 50.0  +10
U61A                               LR       LR
      comp=Z,400nm,18.0s
M54A  Oil Creek Stat   126.25  64  PFAKE              21 25 50.0 +9.3
M54A                               LR       LR
      comp=Z,600nm,21.0s
T60A  Surry            126.26  70  PFAKE              21 25 50.0 +9.2
T60A                               LR       LR
      comp=Z,300nm,21.0s
ERPA  Erie             126.31  63  PFAKE              21 25 50.0 +9.3
ERPA                               LR       LR
      comp=Z,500nm,21.0s
CBN   Corbin Frederi   126.31  68  PFAKE              21 25 50.0 +9.2
CBN                                LR       LR
      comp=Z,300nm,22.0s
N55A  Marion Center    126.39  65  PFAKE              21 25 50.0 +9.0
N55A                               LR       LR
      comp=Z,600nm,21.0s
O56A  Blue Knob Stat   126.44  65  PFAKE              21 25 50.0 +8.9
O56A                               LR       LR
      comp=Z,300nm,18.0s
MBAR  Mbarara          126.68 228  PFAKE              21 25 50.0 +7.4
MBAR                               LR       LR
      comp=Z,1µm,19.0s
SSPA  Standing Stone   127.07  65  PFAKE              21 25 50.0 +7.7
SSPA                               LR       LR
      comp=Z,400nm,19.0s
J54A  Appleton         127.70  62  PFAKE              21 25 50.0 +6.5
J54A                               LR       LR
      comp=Z,600nm,21.0s
MEDO  Medina           127.78  62  PFAKE              21 25 50.0 +6.4
MEDO                               LR       LR
      comp=Z,600nm,18.0s
MVL   Millersville     127.84  67  PFAKE              21 25 50.0 +6.2
MVL                                LR       LR
      comp=Z,400nm,19.0s
MMNY  Mt. Morris Dam   127.96  63  PFAKE              21 25 50.0 +6.0
MMNY                               LR       LR
      comp=Z,600nm,21.0s
SADO  Sadowa           127.99  60  PFAKE              21 25 50.0 +6.0
SADO                               LR       LR
      comp=Z,700nm,18.0s
J55A  Hilton           128.25  62  PFAKE              21 26 00.0  +15
J55A                               LR       LR
      comp=Z,600nm,18.0s
N59A  State Game Lan   128.64  66  PFAKE              21 26 00.0  +15
N59A                               LR       LR
      comp=Z,300nm,18.0s
DELO  Deloro Mine      128.89  61  PFAKE              21 26 00.0  +14
DELO                               LR       LR
      comp=Z,500nm,18.0s
KSPA  Keystone Colle   128.91  65  PFAKE              21 26 00.0  +14
KSPA                               LR       LR
      comp=Z,500nm,18.0s
BINY  Binghamton       129.03  64  PFAKE              21 26 00.0  +14
BINY                               LR       LR
      comp=Z,500nm,20.0s
FURI  Furi             129.22 243  PFAKE              21 26 00.0  +12
FURI                               LR       LR
      comp=Z,600nm,22.0s
PLVO  Plevna           129.45  61  PFAKE              21 26 00.0  +13
PLVO                               LR       LR
      comp=Z,400nm,19.0s
ODNJ  Ogdensburg       129.50  66  PFAKE              21 26 00.0  +13
ODNJ                               LR       LR
      comp=Z,300nm,19.0s
BRVK  Borovoye         129.60 311 ePKPdf    PKPdf     21 25 44.9 -1.4
BRVK  Borovoye         129.60 311⇓iPKIKP    PKPdf     21 25 44.8 -1.4
RES   Resolute Bay     129.78  20  PFAKE              21 26 00.0  +13
RES                                LR       LR
      comp=Z,400nm,19.0s
D53A  Lac Vacive, Po   129.82  58  PFAKE              21 26 00.0  +12
D53A                               LR       LR
      comp=Z,600nm,18.0s
PAL   Palisades        129.95  67  PFAKE              21 26 00.0  +12
PAL                                LR       LR
      comp=Z,400nm,18.0s
VLDQ  Val d'Or         130.35  57  PFAKE              21 26 00.0  +11
VLDQ                               LR       LR
      comp=Z,500nm,18.0s
KSCT  Kent School, K   130.54  66  PFAKE              21 26 00.0  +11
KSCT                               LR       LR
      comp=Z,500nm,18.0s
TRY   Troy             130.81  65  PFAKE              21 26 00.0  +10
TRY                                LR       LR
      comp=Z,600nm,21.0s
NCB   Newcomb          130.92  63  PFAKE              21 26 00.0  +10
NCB                                LR       LR
      comp=Z,400nm,20.0s
LONY  Lake Ozonia      130.93  62  PFAKE              21 26 00.0  +10
LONY                               LR       LR
      comp=Z,400nm,18.0s
ACCN  Adirondack Com   131.07  64  PFAKE              21 26 00.0  +10
ACCN                               LR       LR
      comp=Z,600nm,19.0s
QUA2  Belchertown      131.53  66  PFAKE              21 26 00.0 +8.8
QUA2                               LR       LR
      comp=Z,600nm,18.0s
FRNY  Flat Rock        131.66  62  PFAKE              21 26 00.0 +8.6
FRNY                               LR       LR
      comp=Z,500nm,18.0s
GEYT  Alibeck          131.85 288  SKPbc    SKPbc     21 29 14.7 -1.5
      comp=Z,2.7nm,0.9s,baz=219,slow=3.8,SNR=4.6
BRYW  Bryant College   131.95  66  PFAKE              21 26 00.0 +7.9
BRYW                               LR       LR
      comp=Z,500nm,18.0s
VT1   Waterbury        132.04  63  PFAKE              21 26 00.0 +7.8
VT1                                LR       LR
      comp=Z,500nm,20.0s
HNH   Hanover          132.12  64  PFAKE              21 26 00.0 +7.7
HNH                                LR       LR
      comp=Z,600nm,20.0s
HRV   Adam Dziewonsk   132.16  66  PFAKE              21 26 00.0 +7.5
HRV                                LR       LR
      comp=Z,500nm,18.0s
WES   Weston           132.28  66  PFAKE              21 26 00.0 +7.3
WES                                LR       LR
      comp=Z,500nm,18.0s
FFD   Franklin Falls   132.46  64  PFAKE              21 26 00.0 +7.0
FFD                                LR       LR
      comp=Z,700nm,21.0s
LBNH  Lisbon           132.56  63  PFAKE              21 26 00.0 +6.8
LBNH                               LR       LR
      comp=Z,500nm,20.0s
WVL   Waterville       134.19  64  PFAKE              21 26 10.0  +14
WVL                                LR       LR
      comp=Z,500nm,20.0s
PKME  Peaks-Kenny Pk   134.67  63  PFAKE              21 26 10.0  +13
PKME                               LR       LR
      comp=Z,500nm,19.0s
EMMW  East Machias     135.72  64  PFAKE              21 26 10.0  +10
EMMW                               LR       LR
      comp=Z,800nm,22.0s
SVE   Sverdlovsk       135.91 314 ePKIKP    PKPdf     21 25 57.7 -0.3
PQI   Presque Isle     135.95  61  PFAKE              21 26 10.0  +10
PQI                                LR       LR
      comp=Z,600nm,19.0s
TULEG Thule            136.21  18  PFAKE              21 26 10.0  +10
TULEG                              LR       LR
      comp=Z,300nm,20.0s
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GGN	Saint George	136.27	64	PFAKE		21 26 10.0	+9.3
GGN				LR	LR		
	comp=Z,700nm,21.0s						
ARU	Arti	136.99	313	*e*PKPdf	PKPdf	21 25 59.7	-0.3
ARU	Arti	136.99	313	*i* PKIKP	PKPdf	21 26 00.0	0.0
BATG	Bathurst New B	137.41	61	PFAKE		21 26 10.0	+7.0
BATG				LR	LR		
	comp=Z,600nm,19.0s						
LMN	Caledonia Moun	137.85	63	PFAKE		21 26 10.0	+6.1
LMN				LR	LR		
	comp=Z,700nm,20.0s						
AKT	Akhty	140.60	288	*e*PKIKP	PKPdf	21 26 07.1	-0.2
AKT				*e*		21 29 09.2	
AKT				pmax	pmax		
	comp=Z,13nm,1.3s						
MAK	Makhachkala	141.21	290	*i* PKIKP	PKPdf	21 26 07.6	-0.5
MAK				*e*		21 29 05.7	
MAK				pmax	pmax		
	comp=Z,94nm,1.5s						
KBS	Kingsbay	141.90	355	PFAKE		21 26 20.0	+8.7
KBS				LR	LR		
	comp=Z,300nm,21.0s						
KBS	Kingsbay	141.90	355	*e*PKPdf	PKPdf	21 26 08.9	+0.6
SPA0	Spitsbergen Ar	142.22	353	*e*PKPdf	PKPdf	21 26 09.5	+0.5
HSPB	Hornsund (broa	143.35	352	*e*PKPdf	PKPdf	21 26 11.8	+0.8
AKH	Akhalkalaki	143.62	287	⇑*i*P	PKPbc	21 26 10.1	-0.1
PRGR	Permogore	143.62	321	*e*PKIKP	PKPdf	21 26 11.9	+0.1
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ILULI	Ilulissat	143.64	25	PFAKE		21 26 20.0	+5.0
ILULI				LR	LR		
	comp=Z,400nm,21.0s						
ZEI	Tsey	143.71	289	*e*PKIKP	PKiKP	21 26 23.0	+6.7
NCK	Nalchik	144.11	290	⇑*e*PKIKP	PKPbc	21 26 11.3	-0.1
DAG	Danmarks Havn	144.26	5	*i* PKHKP	PKPpre	21 26 08.8	
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DAG	Danmarks Havn	144.26	5	*i* P	PKPab	21 26 08.8	-1.7
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	144.65	290	PKP	PKPab	21 26 11.3	-1.6
	comp=Z,8.4nm,0.7s,baz=107,slow=4.2,SNR=13						
NEY	Neytrino	144.66	289	⇓*e*PKIKP	PKPdf	21 26 14.8	+0.3
SFJD	Kangerlussuaq	144.72	29	PFAKE		21 26 30.0	+13
SFJD				LR	LR		
	comp=Z,500nm,19.0s						
LIC	Lamto	144.80	181	*e*P	PKPab	21 26 11.6	-2.7
	comp=Z,76nm,0.6s						
GOF	Gofitskoye	144.85	292	⇓*i*PKIKP	PKPab	21 26 11.7	-1.9
GOF				pmax	pmax		
	comp=Z,93nm,1.4s						
KIV	Kislovodsk	144.86	290	*i* PKIKP	PKPab	21 26 13.1	-0.7
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIC	Kosan Boka	144.93	182	*e*P	PKPab	21 26 12.9	-1.8
	comp=Z,155nm,1.1s						
BCA	Borcka	144.97	286	⇓*i*P	PKPbc	21 26 13.6	-0.6
ASF	Jabal al Asfar	145.02	268	PKPbc	PKPbc	21 26 14.4	-0.3
	comp=Z,5.3nm,1.0s,baz=57,slow=3.7,SNR=9.6						
SUMG	Summit	145.11	17	*e*PKPbc	PKPbc	21 26 13.3	-0.9
SUMG				LR	LR		
	comp=Z,500nm,21.0s						
SUMG	Summit	145.11	17	*e*PKIKP	PKPbc	21 26 13.3	-0.9
SUMG				MLR	MLR		
	comp=Z,500nm,21.0s						
SUMG	Summit	145.11	17	*i* P	PKPbc	21 26 13.6	-0.6
TIC	Toumodi	145.22	181	*e*P	PKPbc	21 26 14.5	-1.2
DBIC	Dimbokro	145.24	181	PKPbc	PKPbc	21 26 15.7	0.0
	comp=Z,27nm,0.6s,baz=158,slow=4.0,SNR=49						
EIL	Elat	145.25	263	PKPbc	PKPbc	21 26 14.8	-0.7
	comp=Z,8.1nm,0.9s,baz=39,slow=1.8,SNR=7.7						
HAMF	Hammerfest	147.29	342	*e*PKPdf	PKPdf	21 26 18.4	+0.5
ARA0	ARCESS Array S	147.64	340	*e*PKPdf	PKPdf	21 26 19.6	+1.0
ARCES	ARCESS Array B	147.64	340	PKPbc	PKPdf	21 26 19.5	+1.0
	comp=Z,13nm,0.7s,baz=63,slow=1.8,SNR=35						
ARE0	ARCESS Array S	147.65	340	*e*PKPbc	PKPdf	21 26 19.9	+1.3
ARE0	ARCESS Array S	147.65	340	*e*PKPdf	PKPdf	21 26 19.4	+0.8
IVI	Ivigtut	147.78	38	*e*PKPbc	PKPbc	21 26 20.6	-1.2
VORD	Divnogorie	148.01	303	*e*PKIKP	PKPdf	21 26 20.7	+1.1
VORD				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VSR	Storozhevoye	148.09	303	*e*PKIKP	PKPdf	21 26 20.9	+1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LPSR	Galich'ya Gora	148.22	306	*e*PKIKP	PKPdf	21 26 20.9	+1.0
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
KTK1	Kautokeino	148.59	341	*e*PKPbc	PKPbc	21 26 23.1	-0.7
MOS	Moscow	148.68	312	*e*PKHKP	PKPpre	21 26 18.8	
MOS				*e*		21 29 51.4	
ANN	Anapa	148.71	291	*i* PKIKP	PKPbc	21 26 23.1	-1.7
ANN				pmax	pmax		
	comp=Z,42nm,1.3s						
CSS	Mathiatis	148.91	271	PFAKE		21 26 30.0	+0.2
CSS				LR	LR		
	comp=Z,300nm,21.0s						
NRS	Narsarsuaq	149.06	37	*i* PKP2	PKPbc	21 26 24.6	-0.5
NRS				pmax	pmax		
	comp=Z,92nm,1.2s						
NRS	Narsarsuaq	149.06	37	*i* P	PKPbc	21 26 24.6	-0.5
	comp=Z,92nm,1.2s						
TRO	Tromso	149.11	344	*e*PKPdf	PKPdf	21 26 22.0	+1.1
TRO				*e*PKPab	pPKPbc	21 26 29.9	-0.6
OBN	Obninsk	149.37	311	*e*PKPbc	PKPbc	21 26 25.1	-1.0
OBN				LR	LR		
	comp=Z,300nm,18.0s						
OBN	Obninsk	149.37	311	⇑*i*P	PKPbc	21 26 24.9	-1.2
OBN	Obninsk	149.37	311	⇓*i*PKIKP	PKPdf	21 26 20.8	-0.9
OBN				*i*		21 26 31.2	
OBN				pmax	pmax		
	comp=Z,29nm,1.1s						
BR131	Keskin Array S	150.33	280	*e*PKPbc	PKPbc	21 26 28.0	-1.2
BRTR	Keskin Array B	150.33	280	PKPbc	PKPbc	21 26 27.5	-1.7
	comp=Z,4.7nm,0.7s,baz=143,slow=6.4,SNR=18						
ILGA	Ilgaz	150.62	282	PFAKE		21 26 40.0	+3.1
ILGA				LR	LR		
	comp=Z,300nm,18.0s						
TOC4	Torodi Ar. Sit	150.94	195	PFAKE		21 26 40.0	+1.6
TOC4				LR	LR		
	comp=Z,900nm,19.0s						
TOC3	Torodi Ar. Sit	150.96	195	PFAKE		21 26 40.0	+1.6
TOC3				LR	LR		
	comp=Z,800nm,19.0s						
TOC5	Torodi Ar. Sit	150.96	195	PFAKE		21 26 40.0	+1.5
TOC5				LR	LR		
	comp=Z,900nm,19.0s						
TOB3	Torodi Ar. Sit	150.96	195	PFAKE		21 26 40.0	+1.5
TOB3				LR	LR		
	comp=Z,800nm,19.0s						
TOB4	Torodi Ar. Sit	150.96	195	PFAKE		21 26 40.0	+1.5
TOB4				LR	LR		
	comp=Z,800nm,19.0s						
TOA3	Torodi Ar. Sit	150.97	195	PFAKE		21 26 40.0	+1.5
TOA3				LR	LR		
	comp=Z,800nm,19.0s						
TOA0	Torodi Ar. Sit	150.97	195	*e*PKPdf	PKPdf	21 26 25.7	+0.2
TOA0				LR	LR		
	comp=Z,800nm,19.0s						
TORD	Torodi Ar. Bea	150.97	195	PKP	PKPdf	21 26 25.2	-0.3
	comp=Z,20nm,1.1s,baz=234,slow=0.3,SNR=16						
TORD				PKPbc	pPKPdf	21 26 30.8	-0.1
	comp=Z,21nm,1.1s,baz=144,slow=1.2,SNR=34						
TOB2	Torodi Ar. Sit	150.97	195	PFAKE		21 26 40.0	+1.5
TOB2				LR	LR		
	comp=Z,800nm,19.0s						
TOC2	Torodi Ar. Sit	150.97	195	PFAKE		21 26 40.0	+1.5
TOC2				LR	LR		
	comp=Z,900nm,19.0s						
TOA1	Torodi Ar. Sit	150.98	195	*e*PKPbc	PKPbc	21 26 30.8	-0.5
TOA1				LR	LR		
	comp=Z,800nm,19.0s						
TOB5	Torodi Ar. Sit	150.98	195	PFAKE		21 26 40.0	+1.5
TOB5				LR	LR		
	comp=Z,900nm,19.0s						
TOC7	Torodi Ar. Sit	150.99	195	PFAKE		21 26 40.0	+1.4
TOC7				LR	LR		
	comp=Z,800nm,18.0s						
TOC1	Torodi Ar. Sit	150.99	195	PFAKE		21 26 40.0	+1.4
TOC1				LR	LR		
	comp=Z,1µm,18.0s						
SIM	Simferopol'	151.07	290	*i* PKIKP	PKPbc	21 26 29.4	-1.2
SIM				*e*		21 30 11.0	
SIM				*e*PPP	PPP	21 33 33.0	
SIM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SIM				pmax	pmax		
	comp=Z,40nm,7.8s						
STEI	Steigen	151.28	344	*e*pPKPdf	pPKPdf	21 26 29.3	-0.4
LOF	Lofoten	151.46	345	*e*PKPbc	PKiKP	21 26 31.4	+0.2
ISP	Isparta	152.07	274	PFAKE		21 26 40.0	-2.9
ISP				LR	LR		
	comp=Z,300nm,22.0s						
FIA1	FINESS Array S	152.44	327	*e*PKPdf	PKPdf	21 26 26.9	+0.7
FIA1				*e*PKPbc	pPKPbc	21 26 38.1	-0.5
FIA0	FINESS Array S	152.44	327	*e*PKPbc	PKPbc	21 26 31.4	-1.7
FIA0	FINESS Array S	152.44	327	*e*PKIKP	PKPbc	21 26 31.5	-1.7
FINES	FINESS Array B	152.44	327	PKPbc	PKPbc	21 26 31.5	-1.7
	comp=Z,8.1nm,0.6s,baz=65,slow=3.9,SNR=39						
MOR8	Moi Rana	152.92	342	*e*pPKPdf	pPKPdf	21 26 32.6	+0.3
KONS	Konsvik	152.94	344	*e*PKPdf	PKPdf	21 26 27.2	+0.4
VSU	Vasula	153.58	321	*i* PKIKP	PKPdf	21 26 29.8	+1.8
YLV	Yalova	153.71	280	⇑*i*P	PKPab	21 26 48.7	-0.9
YLV	Yalova	153.71	280	⇑PKP2	PKPab	21 26 48.7	-0.9
AKASG	Malin Array Be	154.40	303	PKP	PKPdf	21 26 27.9	-1.5
	comp=Z,0.2nm,0.3s,baz=158,slow=0.5,SNR=4.5						
AKASG				PKPbc	sPKPdf	21 26 36.1	-0.5
	comp=Z,2.2nm,0.6s,baz=67,slow=2.6,SNR=11						
AKBB	Malin Array Si	154.40	303	PFAKE		21 26 40.0	+2.2
AKBB				LR	LR		
	comp=Z,300nm,20.0s						
BALB	Balikesir	154.58	277	PFAKE		21 26 40.0	+1.5
BALB				LR	LR		
	comp=Z,900nm,20.0s						
NSS	Namsos	154.87	342	*e*pPKPdf	pPKPdf	21 26 34.3	-0.7
TIRR	Tirgusor	155.06	288	PFAKE		21 26 40.0	+9.5
TIRR				LR	LR		
	comp=Z,800nm,20.0s						
CFR	Carcaliu	155.31	290	⇑*i*P	PKPab	21 26 53.3	-2.9
TLB	Topalu	155.33	288	⇑*i*P	PKPdf	21 26 40.3	+9.4
ALN	Alexandroupoli	156.24	279	PFAKE		21 26 40.0	+7.8
ALN				LR	LR		
	comp=Z,200nm,20.0s						
VRI	Vrincioaia	156.33	291	⇑*i*P	PKPab	21 26 59.1	-1.5
PLOR	Plostina	156.38	291	⇑*i*P	PKPab	21 27 05.4	+4.5
MLR	Muntele Rosu	156.87	290	PFAKE		21 26 40.0	+6.9
MLR				LR	LR		
	comp=Z,400nm,20.0s						
MLR	Muntele Rosu	156.87	290	⇑*i*P	PKPab	21 26 50.6	-12
BURAR	Bucovina Array	157.32	296	⇓*i*P	PKPab	21 27 05.3	+0.4
MOL	Molde	157.56	344	*e*PKPdf	PKPdf	21 26 33.3	+0.1
PLVB	Pleven	157.68	285	⇑*i*P	PKPab	21 27 02.9	-3.6
ARR	Arges	157.79	290	⇓*i*P	PKPdf	21 26 32.9	-1.3
NB2	NORSAR Subarra	157.98	338	P	PKPab	21 27 10.1	+2.9
	comp=Z,1.4nm,0.6s,baz=44,slow=4.8						
NB200	NORSAR Array S	157.98	338	*e*PKPab	PKPab	21 27 04.9	-2.2
NOA	NORSAR Array B	157.98	338	PKP	PKPdf	21 26 32.4	-1.5
	comp=Z,1.1nm,1.0s,baz=62,slow=1.5,SNR=2.4						
NOA				PKPab	PKPab	21 27 04.9	-2.2
	comp=Z,1.3nm,0.9s,baz=38,slow=4.5,SNR=3.0						
NC602	NORSAR Array S	158.13	337	*e*PKPab	PKPab	21 27 08.3	+0.5
ITM	Ithomi	158.30	267	PFAKE		21 26 50.0	+15
ITM				LR	LR		
	comp=Z,400nm,20.0s						
AGG	Agios Georgios	158.57	272	PFAKE		21 26 50.0	+15
AGG				LR	LR		
	comp=Z,300nm,19.0s						
VTS	Vitosha	158.60	282	PFAKE		21 26 50.0	+15
VTS				LR	LR		
	comp=Z,300nm,20.0s						
VTS	Vitosha	158.60	282	⇓*i*P	PKPab	21 27 08.5	-2.2
LIT	Litokhoron	158.72	275	PFAKE		21 26 50.0	+15
LIT				LR	LR		
	comp=Z,300nm,20.0s						
SKAR	Skarslia	159.05	341	*e*PKPdf	PKPdf	21 26 35.3	+0.1
SKAR				*e*pPKPdf	sPKPdf	21 26 41.5	-0.9
TAM	Tamanrasset	159.07	210	*e*PKPdf	PKPdf	21 26 37.5	+1.0
TAM				LR	LR		
	comp=Z,500nm,18.0s						
TAM	Tamanrasset	159.07	210	*e*PKIKP	PKPdf	21 26 37.5	+1.0
TAM				MLR	MLR		
	comp=Z,500nm,18.0s						
KOLS	Kolonicke sedl	159.11	300	*e*PKP	PKPab	21 27 13.9	+1.4
UZH	Uzhgorod	159.15	299	*e*PKIKP	PKPdf	21 26 38.4	+2.8
UZH				*e*		21 26 46.5	
UZH				*i*		21 27 07.6	
BLS5	Blasjo	160.61	341	*e*PKPdf	PKPdf	21 26 36.8	-0.2
HOMB	Homborsund	161.04	337	*e*PKPab	PKPab	21 27 20.1	-0.4
VYHS	Vyhne	161.43	300	*e*PKP	PKPab	21 27 21.0	-1.7
PDG	Podgorica	161.51	281	⇑*i*P	PKPab	21 27 21.8	-1.4
TTG	Podgorica	161.51	281	*e*PKPab	PKPab	21 27 21.2	-1.9
OKC	Ostrava-Krasne	161.52	305	*e*PKPAB	PKPab	21 27 22.9	-0.1
OKC				AMS	AMS	22 39 20.0	
	comp=Z,300nm,20.6s						
MORC	Moravsky Berou	161.91	305	⇓*i*P	PKPab	21 27 24.7	0.0
MORC	Moravsky Berou	161.91	305	*e*PKP	PKPdf	21 26 37.3	-1.4
MORC				*e*		21 27 24.2	
JAVC	Velka Javorina	162.09	302	*e*PKP	PKPdf	21 26 37.8	-1.1
JAVC				*e*		21 27 25.7	
OSTC	Ostas	162.44	308	*e*PKPAB	PKPab	21 27 26.6	-0.4
OSTC				AMS	AMS	22 49 30.0	
	comp=Z,200nm,18.7s						
DPC	Dobruska-Polom	162.45	307	*e*PKIKP	PKPdf	21 26 38.1	-1.1
DPC				*e*		21 27 26.7	
DPC	Dobruska-Polom	162.45	307	*e*PKPDF	PKPdf	21 26 38.1	-1.1
DPC				*e*PKPAB	PKPab	21 27 26.7	-0.4
CHVC	Chvalec	162.52	308	AMS	AMS	22 47 50.0	
	comp=Z,300nm,22.5s						
UPC	Upice	162.58	308	AMS	AMS	22 40 20.0	
	comp=Z,300nm,24.2s						
VRAC	Vranov	162.64	304	*e*PKP	PKPdf	21 26 38.2	-1.2
VRAC				*e*		21 27 27.5	
KRUC	Moravsky	162.84	303	*e*PKP	PKPdf	21 26 37.8	-1.8
KRUC				*e*		21 27 28.2	
TREC	Trest	163.33	305	*e*PKPAB	PKPab	21 27 30.7	-0.3
TREC				AMS	AMS	22 41 20.0	
	comp=Z,400nm,23.9s						
PVCC	Panska Ves	163.41	310	*e*PKPAB	PKPab	21 27 31.8	+0.6
PVCC				AMS	AMS	22 50 10.0	
	comp=Z,300nm,16.0s						
CONA	Conrad Observa	163.50	300	*i* PKPdf	PKPdf	21 26 39.5	-0.8
	comp=Z,5.0nm,1.7s						
GOPC	GO Pecny, Ondr	163.53	307	AMS	AMS	22 44 20.0	
	comp=Z,200nm,15.7s						
BRG	Berggiesshubel	163.62	311	*e*PKP	PKPab	21 27 30.6	-1.5
	comp=Z,18nm,1.8s						
PRU	Pruhonice	163.65	308	*e*PKPAB	PKPab	21 27 31.4	-0.9
PRU				AMS	AMS	22 50 10.0	
	comp=Z,300nm,20.6s						
CLL	Collm	163.93	314	⇓*i*PKIKP	PKPdf	21 26 39.4	-1.1
CLL				*e*		21 27 34.0	
CLL				pmax	pmax		
	comp=Z,21nm,1.8s						
CLL				MLR	MLR		
	comp=Z,300nm,20.0s						
CLL	Collm	163.93	314	⇓*i*PKPdf	PKPdf	21 26 39.4	-1.1
	comp=Z,21nm,1.8s						
CLL				*e*		21 26 58.0	
CLL				*e*PKPab	PKPab	21 27 34.0	+0.5
CLL				*e*PP	PP	21 31 16.0	-3.5
CLL				*e*PSKS		21 41 44.0	
CLL				*e*PPS	PPS	21 44 57.0	
CLL				*e*		21 47 42.0	
CLL				*e*SS	SS	21 51 47.0	-0.9
CLL				*e*(SSrev)		21 57 07.0	
CLL				*e*SSS	SSS	21 58 02.0	
CLL				*e*		22 00 48.0	
CLL				*e*SSSS		22 03 24.0	
CLL				LmH		22 49 00.0	
	comp=N,200nm,21.0s						
CLL				LmH		22 49 00.0	
	comp=E,200nm,19.5s						
CLL				LmV		22 51 00.0	
	comp=Z,300nm,20.0s						
SOKA	Soboth	164.33	296	*i* PKPdf	PKPdf	21 26 39.9	-1.2
	comp=Z,7.4nm,1.9s						
BOJS	Bojanci	164.37	292	*e*PKPdf	PKPdf	21 26 38.6	-2.5
BOJS				*i* PKPab	PKPab	21 27 34.9	-0.8
BOJS				*e*PP	PP	21 31 20.1	-2.2
PDKS	Podkum	164.47	294	*i* PKPdf	PKPdf	21 26 39.5	-1.8
KHC	Kasperske Hory	164.56	306	*e*PKPdf	PKPdf	21 26 41.4	+0.2
KHC	Kasperske Hory	164.56	306	*e*PKIKP	PKPdf	21 26 41.4	+0.2
KHC	Kasperske Hory	164.56	306	*e*PKPAB	PKPab	21 27 35.9	-0.5
KHC				AMS	AMS	22 49 30.0	
	comp=Z,300nm,17.8s						
GERES	GERESS Array B	164.59	305	PKP	PKPdf	21 26 41.6	+0.3
	comp=Z,0.4nm,0.7s,baz=76,slow=1.7,SNR=4.8						
GERES				PKPab	PKPab	21 27 35.9	-0.7
	comp=Z,1.4nm,0.9s,baz=35,slow=4.9,SNR=6.6						
OBKA	Obir	164.69	296	*i* PKPdf	PKPdf	21 26 41.7	+0.2
	comp=Z,3.5nm,0.9s						
NKC	Novy Kostel	164.76	311	AMS	AMS	22 51 00.0	
	comp=Z,300nm,17.2s						
LJU	Ljubljana	164.79	294	*e*PKPdf	PKPdf	21 26 39.9	-1.5
LJU				*i* PKPab	PKPab	21 27 36.8	-0.7
KBA	Koelnbreinsper	165.37	298	*i* PKPdf	PKPdf	21 26 40.5	-1.6
	comp=Z,6.1nm,1.5s						
ABTA	Abfaltersbach	166.00	298	*i* PKPdf	PKPdf	21 26 41.2	-1.4
	comp=Z,7.4nm,1.6s						
WTTA	Wattenberg	166.43	301	*i* PKPdf	PKPdf	21 26 40.5	-2.5
	comp=Z,13nm,1.8s						
SQTA	Sankt Quirin	166.72	301	*i* PKPdf	PKPdf	21 26 41.3	-1.8
MOTA	Moosalm	166.74	301	*i* PKPdf	PKPdf	21 26 41.6	-1.6
	comp=Z,1.6nm,0.8s						
RETA	Reutte	166.91	302	*i* PKPdf	PKPdf	21 26 42.1	-1.1
	comp=Z,5.1nm,1.5s						
KEST	Kesra	166.94	248	PKPab	PKPab	21 27 47.3	0.0
	comp=Z,4.4nm,0.8s,baz=77,slow=2.8,SNR=6.6						
KEST	Kesra	166.94	248	*e*PKPdf	PKPdf	21 26 43.3	-0.4
KEST				*e*PKPab	PKPab	21 27 47.4	0.0
PMOZ	Porto Moniz, M	167.30	130	*e*LR	LR	22 32 48.2	
	comp=Z,441nm,20.0s						
FUORN	Ofenpass-Fuorn	167.52	299	*e*PKPdf	PKPdf	21 26 43.7	-0.2
DAVA	Damuels	167.54	303	*i* PKPdf	PKPdf	21 26 44.3	+0.5
	comp=Z,6.3nm,1.2s						
TUE	Stuetta	168.17	299	*e*PKPdf	PKPdf	21 26 43.8	-0.5
TUE				*e*PKPab	PKPab	21 27 52.5	-0.1
SENIN	Lac Senin/Sane	169.53	302	*e*PKPdf	PKPdf	21 26 45.0	-0.2
BNI	Bardonecchia	170.39	295	*e*PKPdf	PKPdf	21 26 45.0	-0.6
BNI	Bardonecchia	170.39	295	*e*PKIKP	PKPdf	21 26 45.1	-0.6
CLF	Chambon-Foret	171.46	322	*e*PKPdf	PKPdf	21 26 45.6	-0.3
PFVI	Vila Bisbo	174.92	150	*e*PKPdf	PKPdf	21 26 47.1	-0.5
PFVI	Vila Bisbo	174.92	150	*e*PKPab	PKPab	21 28 23.7	+1.3
MORF	Marmelete	175.13	150	*e*PKPdf	PKPdf	21 26 47.8	0.0
MORF				AMS	AMS	22 47 54.8	
	comp=N,612nm,13.8s						
MORF	Marmelete	175.13	150	*e*PKPdf	PKPdf	21 26 47.3	-0.5
MORF	Marmelete	175.13	150	*e*PKPab	PKPab	21 28 25.2	+1.8
MORF	Marmelete	175.13	150	*e*PKIKP	PKPdf	21 26 47.7	0.0
PBDV	Barranco-do-Ve	175.32	157	*e*PKPab	PKPab	21 28 27.1	+2.9
PVAQ	Vaqueiros	175.53	158	*e*PKPdf	PKPdf	21 26 49.0	+1.2
PVAQ	Vaqueiros	175.53	158	*e*PKPab	PKPab	21 28 26.2	+1.1
PVAQ	Vaqueiros	175.53	158	*e*LR	LR	22 32 07.0	
	comp=N,475nm,22.0s						
PCVE	Castro Verde	175.64	154	*e*PKPdf	PKPdf	21 26 48.2	+0.4
PCVE	Castro Verde	175.64	154	*e*PKPab	PKPab	21 28 26.5	+0.9
PNCL	Nicolau / Gran	175.88	146	*e*PKPdf	PKPdf	21 26 48.8	+1.0
PNCL	Nicolau / Gran	175.88	146	*e*PKPab	PKPab	21 28 28.4	+1.8
PBEJ	Beja	176.06	153	*e*PKPdf	PKPdf	21 26 49.2	+1.3
PBEJ	Beja	176.06	153	*e*PKPab	PKPab	21 28 30.4	+3.0
ALMR	Almeirim	176.69	136	*e*PKPdf	PKPdf	21 26 48.1	+0.1
ALMR				AMS	AMS	22 55 18.8	
	comp=Z,802nm,17.1s						
ALMR	Almeirim	176.69	136	*e*PKPdf	PKPdf	21 26 48.9	+0.9
ALMR	Almeirim	176.69	136	*e*PKIKP	PKPdf	21 26 48.1	+0.1
PMTG	Montargil	176.80	141	*e*PKPdf	PKPdf	21 26 47.7	-0.3
PMTG	Montargil	176.80	141	*e*PKPab	PKPab	21 28 32.2	+1.4
PTOM	Tomar	177.11	132	*e*PKPdf	PKPdf	21 26 48.4	+0.3
PCAS	Casmilo, Conde	177.34	124	*e*PKPdf	PKPdf	21 26 48.2	+0.1
PCAS	Casmilo, Conde	177.34	124	*e*PP	PP	21 32 26.9	+0.2
PMRV	Marv??o	177.47	147	*e*PKPdf	PKPdf	21 26 47.9	-0.3
PMRV	Marv??o	177.47	147	*e*LR	LR	22 31 08.0	
	comp=Z,575nm,20.0s						
ESDC	Sonseca Array	177.72	214	PKP	PKPdf	21 26 48.2	0.0
	comp=Z,2.5nm,1.0s,baz=10.0,slow=1.2,SNR=22						
ESDC				PKPab	PKPab	21 28 34.6	-0.3
	comp=Z,1.6nm,0.7s,baz=115,slow=3.3,SNR=11						
ESLA	Sonseca Array	177.72	214	*e*PKPab	PKPab	21 28 35.6	+0.8
PAB	San Pablo	177.76	206	*e*PKPdf	PKPdf	21 26 49.1	+0.8
PAB	San Pablo	177.76	206	*e*PKIKP	PKPdf	21 26 49.1	+0.8
PCBR	Castelo Branco	177.76	140	*e*PKPdf	PKPdf	21 26 48.8	+0.7
PGAV	Gavieira, Arco	177.98	78	*e*PKPdf	PKPdf	21 26 48.3	+0.1
PGAV	Gavieira, Arco	177.98	78	*e*PP	PP	21 32 30.2	0.0
PGAV	Gavieira, Arco	177.98	78	*e*LR	LR	22 34 29.7	
	comp=Z,840nm,18.0s						
PVIS	Viseu	178.08	116	*e*PKPdf	PKPdf	21 26 48.6	+0.4
MTE	Manteigas	178.13	128	*e*PKPdf	PKPdf	21 26 48.1	-0.2
MTE	Manteigas	178.13	128	*e*LR	LR	22 35 37.2	
	comp=Z,616nm,18.0s						
PCAB	Cabril	178.19	85	*e*PKPdf	PKPdf	21 26 48.4	+0.2
PCAB	Cabril	178.19	85	*e*PP	PP	21 32 38.7	+7.5
POLO	Lamas de Olo	178.35	96	*e*PKPdf	PKPdf	21 26 48.6	+0.3
POLO	Lamas de Olo	178.35	96	*e*PP	PP	21 32 32.8	+0.7
PVRL	Vila Real	178.39	100	*e*PKPdf	PKPdf	21 26 49.2	+1.0
MVO	Moncorvo	178.86	111	*e*PKPdf	PKPdf	21 26 48.3	0.0
MVO	Moncorvo	178.86	111	*e*PP	PP	21 32 35.0	+0.8
MVO	Moncorvo	178.86	111	*e*LR	LR	22 36 25.5	
	comp=Z,615nm,18.0s						

JMA 18 21:15:11.1±0.1, 28°.51N×129°.09E, h12^{km}±2^{km}, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAMN	Amaminishikomi	0.28	164	P	Pg	21 15 16.8	0.0
JAMN				S	Sg	21 15 20.9	+0.3
JAM	Amami Oshima	0.46	102	P	Pg	21 15 20.1	-0.1
JAM				*e*S	Sg	21 15 26.3	-0.1
JTK	Tokunoshima	0.73	190	P	Pg	21 15 25.0	-0.3
JTK				S	Sg	21 15 34.9	0.0

IDC 18 21:26:26.4±2.5, 7°.37S×127°.87E, h0^{km}, mb3.3/1, mb1 3.8/3, mb1mx3.4/27, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=288.1km s-min=32.4km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.98	154	Pn	Pn	21 29 44.8	-1.2
	0.2nm,0.3s,baz=332,slow=14,SNR=12						
WRA				Sn	Sn	21 32 06.2	-16
	0.4nm,0.3s,baz=324,slow=23,SNR=11						
ASAR	Alice Springs	17.21	161	P	P	21 30 29.2	-0.8
	0.3nm,0.3s,baz=336,slow=9.6,SNR=23						
MKAR	Makanchi Array	67.40	328	P	P	21 37 23.7	0.0
	0.2nm,0.5s,baz=142,slow=5.8,SNR=4.2						

WEL 18 21:27:27.6, 41°.5S±0°.7×174°.4E±0°.8, h17^{km}±2^{km}, M3.5/23, ML3.8/19, MLv3.5/23, Error ellipse: s-maj=0.0km s-min=0.0km az=122.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.26	215	P	Pb	21 27 33.9	+0.1
CMWZ				S	Sb	21 27 38.4	+0.5
TCW	Tory Channel	0.34	343	P	Pb	21 27 35.6	+0.4
TCW				S	Sb	21 27 40.6	+0.1
TUWZ	Tuamarina	0.37	287	P	Pb	21 27 35.7	+0.1
TUWZ				S	Sb	21 27 41.1	0.0
BHW	Baring Head	0.37	69	P	Pb	21 27 36.0	+0.3
BHW				S	Sb	21 27 41.5	+0.3
BSWZ	Blackbirch Sta	0.44	246	P	Pb	21 27 36.8	0.0
PLWZ	Palliser	0.64	93	P	Pb	21 27 40.7	+0.5
MSWZ	Moikau Station	0.64	79	P	Pb	21 27 40.9	+0.5
CAW	Cannon Point	0.66	49	P	Pb	21 27 41.1	+0.4
PAWZ	Paruwai Farm	0.78	79	P	Pg	21 27 43.4	+0.5
DUWZ	D’Urville Isla	0.82	333	P	Pn	21 27 44.3	-0.1
NNZ	Nelson	0.84	292	P	Pg	21 27 44.1	+0.1
MTW	Mount Morrison	0.91	65	P	Pn	21 27 45.6	+0.1
OGWZ	Otaki Gorge	0.92	39	P	Pg	21 27 45.5	0.0
TRWZ	Traveller	0.97	82	P	Pb	21 27 46.2	+0.2
HOWZ	Holdsworth Sta	1.05	53	P	Pg	21 27 48.0	0.0
KHZ	Kahutara	1.09	216	P	Pb	21 27 47.7	-0.2
THZ	Tophouse	1.15	258	P	Pb	21 27 49.1	+0.1
TMWZ	Te Maipa	1.20	69	P	Pn	21 27 49.4	-0.2
MRZ	Mangatainoka R	1.25	46	P	Pb	21 27 50.8	+0.2
TIWZ	Tintock	1.35	56	P	Pn	21 27 51.9	+0.2
PRWZ	Pori Road	1.54	51	P	Pn	21 27 54.4	+0.1
POWZ	Post Office Ro	1.54	42	P	Pn	21 27 54.8	+0.5
QRZ	Quartz Range	1.59	296	P	Pb	21 27 56.6	+0.1
BFZ	Birch Farm	1.63	59	P	Pn	21 27 54.8	-0.7
GVZ	Greta Valley S	1.75	215	P	Pn	21 27 56.6	-0.6
DVHZ	Dannevirke	1.82	48	P	Pn	21 27 57.7	-0.5
WAZ	Wanganui	1.84	14	P	Pg	21 28 02.0	-0.9
ANWZ	Angora Road	1.90	56	P	Pn	21 27 58.9	-0.3
LTZ	Lake Taylor	2.02	231	P	Pn	21 28 00.7	-0.2
LREZ	Lake Rotokare	2.08	360	P	Pg	21 28 12.9	+5.4
AMCZ	Amberley	2.09	218	P	Pn	21 28 00.8	-1.0
PNHZ	Pukenui	2.12	41	P	Pn	21 28 02.2	-0.1
NMEZ	Namu Road	2.16	349	P	Pg	21 28 14.1	+4.9
KHEZ	Kahui Hut	2.26	352	P	Pb	21 28 08.6	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTVZ	Mangateitei	2.30	21	P	Pb	21 28 10.2	+1.5
NBEZ	Newall Road No	2.31	349	P	Pg	21 28 12.7	+0.8
PKVZ	Pokaka	2.36	18	P	Pb	21 28 08.8	-0.9
MOVZ	Moawhango	2.37	26	P	Pb	21 28 08.2	-1.6
PKE	Pukeiti	2.37	352	P	Pg	21 28 13.2	+0.2
BHHZ	Black Hill Sta	2.41	32	P	Pn	21 28 07.6	+1.4
KRHZ	Kereru	2.41	39	P	Pn	21 28 06.1	-0.2
DRZ	Dome Shelter	2.43	22	P	Pg	21 28 14.3	0.0
VRZ	Vera Road	2.43	6	P	Pb	21 28 09.8	-1.0
WHVZ	Whangaehu Hut	2.43	22	P	Pb	21 28 09.0	-1.9
TUVZ	Tukino	2.46	23	P	Pg	21 28 15.5	+0.7
INZ	Inchbonnie	2.50	241	P	Pn	21 28 07.4	-0.1
OXZ	Oxford	2.50	224	P	Pn	21 28 05.7	-1.9
MQZ	McQueen's Vall	2.52	210	P	Pn	21 28 05.4	-2.4
NGZ	Ngauruhoe	2.53	21	P	Pb	21 28 13.1	+0.4
KAHZ	Kahuranaki	2.56	48	P	Pn	21 28 07.7	-0.7
AKCZ	Akaroa Harbour	2.58	205	P	Pn	21 28 06.3	-2.2
WTVZ	West Tongariro	2.58	21	P	Pb	21 28 13.4	-0.1
TWVZ	Taurewa	2.59	18	P	Pb	21 28 14.1	+0.5
KWHZ	Kaweka Forest	2.61	37	P	Pg	21 28 16.9	-0.9
KRVZ	Karewarewa	2.62	21	P	Pb	21 28 14.0	-0.1
BKZ	Black Stump Fm	2.86	35	P	Pg	21 28 20.5	-1.9
HIZ	Hauiti	3.04	7	P	Pb	21 28 19.1	-2.2
WVZ	Waitaha Valley	3.12	239	P	Pn	21 28 18.0	+2.0
RPZ	Rata Peaks	3.29	228	P	Pn	21 28 17.3	-1.1
UTU	Utuhina	3.63	23	P	Pn	21 28 14.2	-8.9
URZ	Urewera	3.88	33	P	Pn	21 28 21.9	-4.5
FOZ	Fox Glacier	3.94	238	P	Pn	21 28 27.8	+0.6
ODZ	Otahua Downs	4.45	217	P	Pn	21 28 32.3	-2.0
JCZ	Jackson Bay	4.85	237	P	Pn	21 28 41.7	+1.9

WEL 18 21:38:24.5, 41°.6S±0°.7×174°.4E±0°.8, h18^{km}±2^{km}, M3.7/24, ML4.0/18, MLv3.7/24, Error ellipse: s-maj=0.0km s-min=0.0km az=127.2, Cook Strait

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.23	216	P	Pb	21 38 30.2	+0.2
CMWZ				S	Sb	21 38 34.8	+1.1
TCW	Tory Channel	0.36	346	P	Pb	21 38 32.7	+0.3
TCW				S	Sb	21 38 38.2	+0.4
TUWZ	Tuamarina	0.36	291	P	Pb	21 38 32.5	+0.1
TUWZ				S	Sb	21 38 38.1	+0.3
BHW	Baring Head	0.39	67	P	Pb	21 38 33.1	+0.2
BHW				S	Sb	21 38 38.7	+0.2
BSWZ	Blackbirch Sta	0.42	248	P	Pb	21 38 33.3	0.0
PLWZ	Palliser	0.65	91	P	Pg	21 38 37.7	+0.5
MSWZ	Moikau Station	0.66	77	P	Pg	21 38 38.0	+0.5
CAW	Cannon Point	0.68	48	P	Pg	21 38 38.2	+0.4
PAWZ	Paruwai Farm	0.80	77	P	Pg	21 38 40.4	+0.4
NNZ	Nelson	0.84	294	P	Pg	21 38 40.8	0.0
DUWZ	D'Urville Isla	0.84	335	P	Pn	21 38 41.2	-0.2
MTW	Mount Morrison	0.93	65	P	Pn	21 38 42.7	+0.2
OGWZ	Otaki Gorge	0.95	38	P	Pn	21 38 42.7	-0.1
TRWZ	Traveller	0.98	81	P	Pn	21 38 43.2	-0.2
KHZ	Kahutara	1.07	217	P	Pb	21 38 44.3	0.0
HOWZ	Holdsworth Sta	1.07	52	P	Pg	21 38 45.1	-0.2
THZ	Tophouse	1.13	259	P	Pb	21 38 45.7	+0.1
TMWZ	Te Maipa	1.21	69	P	Pn	21 38 46.5	-0.1
MRZ	Mangatainoka R	1.27	45	P	Pb	21 38 48.0	+0.2
TIWZ	Tintock	1.37	56	P	Pn	21 38 49.0	+0.3
CPWZ	Castlepoint	1.51	65	P	Pg	21 38 55.1	+1.6
OHWZ	Ohakea	1.52	28	P	Pg	21 38 54.7	+0.9
PRWZ	Pori Road	1.56	50	P	Pn	21 38 51.6	+0.4
POWZ	Post Office Ro	1.56	42	P	Pb	21 38 52.3	-0.5
QRZ	Quartz Range	1.59	297	P	Pb	21 38 53.4	+0.1
BFZ	Birch Farm	1.65	58	P	Pn	21 38 52.2	-0.4
GVZ	Greta Valley S	1.73	215	P	Pn	21 38 53.1	-0.6
DVHZ	Dannevirke	1.84	47	P	Pn	21 38 55.1	-0.1
WAZ	Wanganui	1.86	14	P	Pg	21 38 59.6	-0.6
DSZ	Denniston Nort	1.95	264	P	Pg	21 39 00.7	-1.2
LTZ	Lake Taylor	2.00	232	P	Pn	21 38 57.2	-0.1
AMCZ	Amberley	2.07	218	P	Pn	21 38 57.5	-0.7
LREZ	Lake Rotokare	2.10	0	P	Pg	21 39 05.8	+1.0
PRHZ	Porangahau	2.13	53	P	Pg	21 39 05.9	+0.5
PNHZ	Pukenui	2.14	40	P	Pn	21 38 59.6	+0.3
WPHZ	Waipukurau	2.16	47	P	Pn	21 39 00.9	+1.4
NMEZ	Namu Road	2.18	349	P	Pg	21 39 06.7	+0.4
PREZ	Palmer Road	2.22	355	P	Pg	21 39 07.8	+0.7
KHEZ	Kahui Hut	2.28	353	P	Pb	21 39 06.6	+1.4
MTVZ	Mangateitei	2.32	21	P	Pg	21 39 08.0	-1.0
OKCZ	Okains Bay	2.38	204	P	Pn	21 39 00.9	-1.6
PKVZ	Pokaka	2.38	18	P	Pb	21 39 08.1	+1.2
PKE	Pukeiti	2.39	352	P	Pb	21 39 08.3	+1.5
MOVZ	Moawhango	2.39	26	P	Pb	21 39 07.8	+0.8
PXZ	Pawanui	2.42	52	P	Pg	21 39 09.5	-1.3
BHHZ	Black Hill Sta	2.43	32	P	Pn	21 39 04.9	+1.6
KRHZ	Kereru	2.44	39	P	Pn	21 39 03.4	+0.1
VRZ	Vera Road	2.45	7	P	Pb	21 39 08.4	+0.5
WHVZ	Whangaehu Hut	2.45	22	P	Pb	21 39 08.7	+0.5
FWVZ	Far West T-bar	2.47	21	P	Pb	21 39 09.9	+1.5
OXZ	Oxford	2.48	224	P	Pn	21 39 02.6	-1.4
INZ	Inchbonnie	2.48	241	P	Pn	21 39 04.2	+0.2
MQZ	McQueen's Vall	2.50	210	P	Pn	21 39 02.1	-2.1
NGZ	Ngauruhoe	2.56	22	P	Pb	21 39 09.0	-0.9
AKCZ	Akaroa Harbour	2.56	205	P	Pn	21 39 03.3	-1.7
KAHZ	Kahuranaki	2.58	48	P	Pn	21 39 05.2	-0.2
WTVZ	West Tongariro	2.61	21	P	Pb	21 39 11.7	+0.9
TWVZ	Taurewa	2.61	18	P	Pg	21 39 12.8	-1.8
KRVZ	Karewarewa	2.64	22	P	Pb	21 39 12.6	+1.3
HIZ	Hauiti	3.06	7	P	Pb	21 39 18.1	-0.4
RPZ	Rata Peaks	3.27	228	P	Pn	21 39 14.0	-0.8
MTHZ	Maungataniwha	3.29	35	P	Pb	21 39 21.9	-0.5
FOZ	Fox Glacier	3.92	238	P	Pn	21 39 23.9	+0.2
LBZ	Lake Benmore	4.18	226	P	Pn	21 39 27.1	-0.2
ODZ	Otahua Downs	4.43	217	P	Pn	21 39 29.1	-1.6
MBAZ	Motutapu North	4.80	5	P	Pn	21 39 40.8	+4.9
JCZ	Jackson Bay	4.83	237	P	Pn	21 39 38.7	+2.3
HHSZ	Highcliff Hill	5.12	211	P	Pn	21 39 39.0	-1.3
TUZ	Tuapeka	5.58	217	P	Pn	21 39 46.7	+0.1
SYZ	Scrubby Hill	6.25	216	P	Pn	21 39 55.5	-0.2
CTZ	Chatham Island	6.97	111	P	Pn	21 40 04.7	-0.9

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*IDC **18** 21:41:04.6±1.0, 27°.56N×102°.28E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.5/29, mbtmp3.6/7, Error ellipse: s-maj=75.5km s-min=18.6km az=60.0*

*ISCJB **18** 21:41:07.4±0.9, 27°.6N±0°.2×102°.5E±0°.4, h33^{km}, mb3.7/6, Error ellipse: s-maj=51.4km s-min=17.2km az=153.0*

ISC 18 21:41:09.8±1.2, 27°.6N±0°.2×102°.4E±0°.4, h35^{km}, n7, σ0^{s}51/7, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array 0.5nm,0.5s,baz=191,slow=12,SNR=4.4	20.43	8	P	P	21 45 44.3	+0.1
MKAR	Makanchi Array 0.4nm,0.7s,baz=135,slow=11,SNR=4.5	24.83	326	P	P	21 46 29.2	+0.4
WRA	Warramunga Arr 0.6nm,0.6s,baz=329,slow=8.2,SNR=5.1	56.50	143	P	P	21 50 48.3	-0.4
ASAR	Alice Springs 0.2nm,0.3s,baz=323,slow=7.3,SNR=3.3	59.37	146	P	P	21 51 09.3	+0.6
FINES	FINESS Array B 2.9nm,0.8s,baz=106,slow=7.4,SNR=3.9	59.65	327	P	P	21 51 10.3	+0.1
ARCES	ARCESS Array B 1.7nm,0.8s,baz=93,slow=7.2,SNR=3.1	59.84	337	P	P	21 51 11.5	+0.1
NOA	NORSAR Array B 0.2nm,0.5s,baz=77,slow=6.1,SNR=2.4	66.80	328	P	P	21 51 57.1	-0.6

WEL 18 21:50:44.4, 41°.5S±0°.6×174°.5E±0°.7, h16^{km}±1^{km}, M3.3/28, ML3.5/22, MLv3.3/28, Error ellipse: s-maj=0.0km s-min=0.0km az=120.7, Cook Strait

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.28	218	P	Pb	21 50 50.9	-0.1
CMWZ				S	Sb	21 50 55.9	+0.4
BHW	Baring Head	0.34	70	P	Pb	21 50 52.2	+0.2
BHW				S	Sb	21 50 57.6	+0.4
TCW	Tory Channel	0.34	338	P	Pb	21 50 52.3	+0.3
TCW				S	Sb	21 50 57.6	+0.4
TUWZ	Tuamarina	0.39	284	P	Pb	21 50 52.8	0.0
TUWZ				S	Sb	21 50 58.6	-0.1
BSWZ	Blackbirch Sta	0.47	246	P	Pb	21 50 54.0	-0.2
PLWZ	Palliser	0.61	94	P	Pb	21 50 56.9	+0.3
MSWZ	Moikau Station	0.61	80	P	Pb	21 50 57.1	+0.4
CAW	Cannon Point	0.63	48	P	Pb	21 50 57.3	+0.4
PAWZ	Paruwai Farm	0.75	79	P	Pb	21 50 59.5	+0.4
DUWZ	D'Urville Isla	0.83	331	P	Pn	21 51 01.0	-0.4
NNZ	Nelson	0.86	291	P	Pg	21 51 01.3	+0.2
MTW	Mount Morrison	0.88	65	P	Pn	21 51 01.9	-0.1
OGWZ	Otaki Gorge	0.90	38	P	Pg	21 51 01.9	+0.1
TRWZ	Traveller	0.94	83	P	Pg	21 51 02.7	+0.1
HOWZ	Holdsworth Sta	1.02	52	P	Pg	21 51 04.2	0.0
KHZ	Kahutara	1.12	217	P	Pb	21 51 04.9	-0.3
TMWZ	Te Maipa	1.17	69	P	Pn	21 51 05.9	-0.1
THZ	Tophouse	1.18	258	P	Pb	21 51 06.5	+0.1
MRZ	Mangatainoka R	1.22	45	P	Pg	21 51 07.4	-0.4
TIWZ	Tintock	1.32	56	P	Pn	21 51 08.3	+0.1
CPWZ	Castlepoint	1.46	66	P	Pn	21 51 10.1	+0.1
OHWZ	Ohakea	1.48	27	P	Pg	21 51 12.6	-0.1
PRWZ	Pori Road	1.51	50	P	Pn	21 51 10.9	+0.2
POWZ	Post Office Ro	1.51	42	P	Pb	21 51 11.8	-0.2
BFZ	Birch Farm	1.60	59	P	Pn	21 51 11.6	-0.4
QRZ	Quartz Range	1.61	295	P	Pb	21 51 14.1	+0.5
GVZ	Greta Valley S	1.78	216	P	Pn	21 51 13.7	-0.8
DVHZ	Dannevirke	1.79	47	P	Pn	21 51 14.4	-0.2
WAZ	Wanganui	1.82	13	P	Pb	21 51 18.2	+1.0
ANWZ	Angora Road	1.87	56	P	Pn	21 51 16.4	+0.7
DSZ	Denniston Nort	1.99	263	P	Pn	21 51 18.6	+1.1
LTZ	Lake Taylor	2.05	232	P	Pn	21 51 17.7	-0.4
PNHZ	Pukenui	2.09	40	P	Pn	21 51 18.9	+0.1
WPHZ	Waipukurau	2.10	47	P	Pn	21 51 20.1	+1.2
KHEZ	Kahui Hut	2.25	351	P	Pb	21 51 25.0	+0.3
MTVZ	Mangateitei	2.28	20	P	Pg	21 51 27.0	-1.0
PKVZ	Pokaka	2.34	17	P	Pb	21 51 26.8	+0.7
MOVZ	Moawhango	2.34	26	P	Pb	21 51 26.0	-0.2
PKE	Pukeiti	2.36	351	P	Pb	21 51 26.4	-0.1
BHHZ	Black Hill Sta	2.38	32	P	Pn	21 51 23.8	+1.1
KRHZ	Kereru	2.38	39	P	Pn	21 51 22.7	-0.1
WHVZ	Whangaehu Hut	2.41	22	P	Pb	21 51 25.3	-2.1
VRZ	Vera Road	2.41	6	P	Pb	21 51 26.6	-0.7
FWVZ	Far West T-bar	2.42	21	P	Pb	21 51 26.4	-1.3
OKCZ	Okains Bay	2.42	205	P	Pn	21 51 21.5	-1.8
NGZ	Ngauruhoe	2.51	21	P	Pb	21 51 27.1	-2.0
KAHZ	Kahuranaki	2.53	48	P	Pn	21 51 24.5	-0.4
OXZ	Oxford	2.53	224	P	Pn	21 51 22.9	-1.9
INZ	Inchbonnie	2.53	241	P	Pn	21 51 24.8	0.0
MQZ	McQueen's Vall	2.55	211	P	Pn	21 51 22.7	-2.3
WTVZ	West Tongariro	2.56	20	P	Pb	21 51 28.1	-1.9
AKCZ	Akaroa Harbour	2.60	205	P	Pn	21 51 23.7	-2.0
BKZ	Black Stump Fm	2.83	34	P	Pn	21 51 30.7	+1.8
RATZ	Rangitukua	2.84	21	P	Pb	21 51 36.4	+1.6
WATZ	Wairara	2.98	20	P	Pb	21 51 37.8	+0.7
HIZ	Hauiti	3.03	6	P	Pb	21 51 36.4	-1.5
TLZ	Tolley Road	3.30	15	P	Pb	21 51 42.4	-0.1
ODZ	Otahua Downs	4.48	217	P	Pn	21 51 49.7	-1.9
JCZ	Jackson Bay	4.88	237	P	Pn	21 52 00.6	+3.5

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*NNC **18** 21:51:11.5±2.6, 44°.66N×80°.23E, h0^{km}, mb2.4, mpv2.3, Error ellipse: s-maj=20.4km s-min=16.0km az=111.0*

SOME 18 21:51:11.1, 42°.33N×81°.08E, h15^{km}, 1C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.23	334	P	Pn	21 51 33.8	-0.2
KTMS				S	Sb	21 51 50.2	+0.1
KTMS	Ketmen 0.5nm,0.1s	1.23	334	*e*P	Pn	21 51 33.8	-0.2
KTMS	1.9nm,0.3s			*e*S	Sb	21 51 50.2	+0.1
PDGK	Podgornoye 0.5nm,0.3s	1.54	311	P	Pb	21 51 38.9	-0.5
PDGK	1.4nm,0.2s			S	Sb	21 51 59.0	+0.3
PDGK	Podgornoye 1.5nm,1.2s	1.54	311	⇑P	Pn	21 51 38.4	+0.3
PDGK	2.5nm,0.7s			⇓S	Sn	21 51 58.2	+0.3
UZB	Uzynbulak 1.6nm,0.3s	1.72	299	P	Pb	21 51 42.3	-0.3
UZB	2.1nm,0.3s			S	Sb	21 52 04.9	+0.8
UZB	Uzynbulak 0.8nm,0.2s	1.72	299	*e*P	Pb	21 51 42.2	-0.3
UZB	2.1nm,0.3s			*e*S	Sb	21 52 04.9	+0.9
KPKS	Kokpek 2.6nm,0.2s	2.10	304	*e*P	Pn	21 51 47.3	+1.5
KPKS	8.5nm,0.4s			*e*S	Sb	21 52 13.6	-1.2
SATY	Saty 1.8nm,0.3s	2.10	291	Pg	Pb	21 51 49.1	+0.1
SATY	5.6nm,0.3s			Lg	Lg	21 52 15.8	
SATY	Saty 1.1nm,0.1s	2.10	291	*e*P	Pb	21 51 48.9	-0.1
SATY	5.6nm,0.3s			*e*S	Sb	21 52 16.1	+1.1
DJR	Jarkent 1.2nm,0.4s	2.21	335	*e*P	Pb	21 51 51.8	+1.0
DJR	1.3nm,0.4s			*e*S	Sg	21 52 20.9	-1.2
KAPS	Kapalarasan 0.3nm,0.1s	3.21	338	*e*P	Pb	21 52 08.7	+1.0
KAPS	1.0nm,0.3s			*e*S	Sb	21 52 50.0	+3.3

WEL 18 22:08:30.2, 41°.6S±0°.6×174°.4E±0°.7, h18^{km}±1^{km}, M3.5/24, ML3.7/18, MLv3.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=121.8, Cook Strait

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.23	215	P	Pg	22 08 35.9	+0.3
CMWZ				S	Sg	22 08 40.5	+1.1
TCW	Tory Channel	0.36	346	P	Pb	22 08 38.4	+0.4
TCW				S	Sb	22 08 43.9	+0.5
TUWZ	Tuamarina	0.36	291	P	Pb	22 08 38.2	+0.1
TUWZ				S	Sb	22 08 43.7	+0.2
BHW	Baring Head	0.39	67	P	Pb	22 08 38.9	+0.3
BHW				S	Sb	22 08 44.9	+0.6
BSWZ	Blackbirch Sta	0.42	248	P	Pb	22 08 39.0	0.0
BSWZ				S	Sb	22 08 45.5	+0.5
PLWZ	Palliser	0.65	91	P	Pg	22 08 43.6	+0.6
MSWZ	Moikau Station	0.66	78	P	Pg	22 08 43.8	+0.6
CAW	Cannon Point	0.68	49	P	Pg	22 08 44.0	+0.4
PAWZ	Paruwai Farm	0.80	77	P	Pn	22 08 46.2	-0.3
NNZ	Nelson	0.83	294	P	Pg	22 08 46.5	+0.1
DUWZ	D'Urville Isla	0.84	335	P	Pn	22 08 46.9	-0.1
MTW	Mount Morrison	0.93	65	P	Pn	22 08 48.5	+0.3
OGWZ	Otaki Gorge	0.95	39	P	Pn	22 08 48.5	0.0
TRWZ	Traveller	0.99	81	P	Pn	22 08 49.1	0.0
KHZ	Kahutara	1.06	216	P	Pb	22 08 50.0	0.0
HOWZ	Holdsworth Sta	1.08	52	P	Pg	22 08 50.8	-0.2
THZ	Tophouse	1.13	259	P	Pb	22 08 51.4	+0.2
TMWZ	Te Maipa	1.22	69	P	Pn	22 08 52.3	+0.1
MRZ	Mangatainoka R	1.27	45	P	Pb	22 08 53.7	+0.2
TIWZ	Tintock	1.37	56	P	Pn	22 08 54.7	+0.2
CPWZ	Castlepoint	1.51	65	P	Pn	22 08 56.8	+0.5
OHWZ	Ohakea	1.52	28	P	Pg	22 08 59.1	-0.4
PRWZ	Pori Road	1.56	50	P	Pn	22 08 57.3	+0.4
POWZ	Post Office Ro	1.57	42	P	Pn	22 08 57.6	+0.6
QRZ	Quartz Range	1.58	297	P	Pb	22 08 59.1	+0.2
BFZ	Birch Farm	1.65	59	P	Pn	22 08 57.8	-0.4
GVZ	Greta Valley S	1.73	215	P	Pn	22 08 58.8	-0.5
DVHZ	Dannevirke	1.84	47	P	Pn	22 09 00.7	-0.2
WAZ	Wanganui	1.86	14	P	Pb	22 09 04.3	+0.7
ANWZ	Angora Road	1.92	56	P	Pn	22 09 01.3	-0.6
DSZ	Denniston Nort	1.95	264	P	Pb	22 09 03.9	-1.2
LTZ	Lake Taylor	1.99	232	P	Pn	22 09 02.7	-0.2
LREZ	Lake Rotokare	2.10	0	P	Pb	22 09 08.0	+0.3
PRHZ	Porangahau	2.14	53	P	Pn	22 09 03.9	-1.0
PNHZ	Pukenui	2.14	40	P	Pn	22 09 05.1	+0.1
WPHZ	Waipukurau	2.16	47	P	Pn	22 09 05.0	-0.1
PREZ	Palmer Road	2.22	355	P	Pb	22 09 08.3	-1.5
KHEZ	Kahui Hut	2.28	353	P	Pb	22 09 11.0	+0.2
MTVZ	Mangateitei	2.33	21	P	Pb	22 09 10.2	-1.4
NBEZ	Newall Road No	2.33	350	P	Pb	22 09 12.4	+0.9
OKCZ	Okains Bay	2.37	204	P	Pn	22 09 06.6	-1.5
PKVZ	Pokaka	2.38	18	P	Pb	22 09 10.9	-1.6
PKE	Pukeiti	2.38	352	P	Pb	22 09 12.6	+0.1
MOVZ	Moawhango	2.39	26	P	Pn	22 09 09.5	+1.1
PXZ	Pawanui	2.42	52	P	Pn	22 09 07.6	-1.1
BHHZ	Black Hill Sta	2.43	32	P	Pn	22 09 10.0	+1.0
KRHZ	Kereru	2.44	39	P	Pn	22 09 09.1	0.0
VRZ	Vera Road	2.45	7	P	Pb	22 09 12.6	-1.0
DRZ	Dome Shelter	2.45	22	P	Pb	22 09 15.4	+1.5
WHVZ	Whangaehu Hut	2.45	22	P	Pb	22 09 11.7	-2.1
FWVZ	Far West T-bar	2.47	21	P	Pb	22 09 12.1	-2.0
INZ	Inchbonnie	2.48	241	P	Pn	22 09 09.8	+0.2
TUVZ	Tukino	2.48	23	P	Pn	22 09 11.8	+2.0
MQZ	McQueen's Vall	2.50	210	P	Pn	22 09 07.5	-2.3
AKCZ	Akaroa Harbour	2.56	205	P	Pn	22 09 08.9	-1.7
NGZ	Ngauruhoe	2.56	22	P	Pb	22 09 13.2	-2.3
KAHZ	Kahuranaki	2.59	48	P	Pn	22 09 10.4	-0.7
WTVZ	West Tongariro	2.61	21	P	Pb	22 09 15.1	-1.3
TWVZ	Taurewa	2.61	18	P	Pb	22 09 15.9	-0.6
KRVZ	Karewarewa	2.64	22	P	Pn	22 09 14.2	+2.3
MCHZ	McNeill Hill	2.75	40	P	Pn	22 09 13.2	-0.1
KATZ	Kakaramea	2.77	22	P	Pb	22 09 19.9	+0.7
BKZ	Black Stump Fm	2.88	35	P	Pn	22 09 14.9	-0.2
RATZ	Rangitukua	2.89	22	P	Pb	22 09 20.6	-0.6
WATZ	Wairara	3.03	20	P	Pb	22 09 23.1	-0.4
ARHZ	Aropaoanui	3.04	42	P	Pn	22 09 16.3	-0.9
HIZ	Hauiti	3.06	7	P	Pb	22 09 20.9	-3.2
RPZ	Rata Peaks	3.27	228	P	Pn	22 09 20.0	-0.5
MTHZ	Maungataniwha	3.29	36	P	Pn	22 09 20.3	-0.5
RAGZ	Rawiri	3.84	38	P	Pn	22 09 26.6	-1.8
ODZ	Otahua Downs	4.43	217	P	Pn	22 09 34.3	-2.0
MKAZ	Moumakai	4.49	8	P	Pn	22 09 40.8	+3.6
HAZ	Te Kaha	4.61	36	P	Pn	22 09 37.0	-1.9
PKGZ	Pakihiroa	4.64	39	P	Pn	22 09 37.4	-1.9
WIAZ	Waiheke Island	4.80	7	P	Pn	22 09 45.6	+4.2
JCZ	Jackson Bay	4.83	237	P	Pn	22 09 45.3	+3.4
WMGZ	Waiomatatini S	4.86	41	P	Pn	22 09 39.3	-2.9

GCG 18 22:19:44.0±0.3, 15°.27N×90°.99W, h58^{km}, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.79	225	*e*P	Pn	22 19 59.9	+0.4
STG3				*e*S	Sn	22 20 12.4	+1.5
FUG	Fuego 3	0.83	170	*e*P	Pn	22 20 00.4	+0.4
PCG	Pacaya	0.95	157	*e*P	Pn	22 20 02.2	+0.5

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*JMA **18** 22:34:03.4, 24°.03N×121°.71E, h48^{km}±1^{km}, M2.4*

*ISCJB **18** 22:34:04.2±0.2, 24°.10N±0°.01×121°.74E±0°.01, h47^{km}±3^{km}, Error ellipse: s-maj=2.5km s-min=1.6km az=33.8*

*TAP **18** 22:34:04.1, 24°.10N×121°.71E, h42^{km}, ML2.9, C*

ISC 18 22:34:04.8±1.0, 24°.10N±0°.02×121°.73E±0°.02, h33^{km}±2^{km}, n99, σ0^{s}60/194, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWD	Chiawan baz=258	0.12	260	P	Pb	22 34 11.4	+0.7
TWD	baz=258			*e*S	Sb	22 34 16.0	+1.2
NACB	Ninganchiao baz=303	0.14	301	*i* P	Pb	22 34 11.4	+0.5
NACB	baz=303			*e*S	Sb	22 34 17.1	+2.0
HWA	Hwalien baz=215	0.17	222	*e*P	Pb	22 34 11.3	+0.3
HWA	baz=215			*e*S	Sb	22 34 16.9	+1.5
ETLH	Xiulin Townshi baz=296	0.25	295	P	Pn	22 34 12.1	+0.4
ETLH	baz=296			*e*S	Sb	22 34 17.9	+1.0
ENA	Nanau baz=5.0	0.33	2	P	Pb	22 34 13.0	+0.1
ENA	baz=5.0			*e*S	Sn	22 34 19.5	+1.2
NANB	Nanao baz=5.0	0.33	3	P	Pb	22 34 13.0	+0.1
NANB	baz=5.0			*e*S	Sn	22 34 19.5	+1.2
ESL	Shilin baz=220	0.39	223	*e*P	Pb	22 34 13.0	-0.8
ESL	baz=220			*e*S	Sn	22 34 20.9	+0.6
WHF	Hehuan Shan baz=275	0.43	276	P	Pb	22 34 14.3	-0.4
WHF	baz=275			*e*S	Sb	22 34 21.5	+0.1
NNSB	Datong baz=317	0.45	316	*e*P	Pb	22 34 14.5	-0.3
NNSB	baz=317			*e*S	Sb	22 34 22.1	+0.4
NNS	Nan Shan baz=317	0.47	316	*i* P	Pb	22 34 14.7	-0.3
NNS	baz=317			*e*S	Sn	22 34 22.8	+0.3
CHGB	Renai baz=265	0.51	266	*i* P	Pb	22 34 15.4	-0.3
CHGB	baz=265			*e*S	Sb	22 34 23.4	+0.2
EGFH	Guangfu baz=211	0.51	213	*e*P	Pb	22 34 15.4	-0.2
EGFH	baz=211			*e*S	Sn	22 34 23.7	+0.4
TWC	Suao baz=14	0.52	12	*i* P	Pb	22 34 15.9	+0.2
TWC	baz=14			*e*S	Sn	22 34 24.1	+0.6
TWT	Tachien baz=286	0.53	287	*e*P	Pb	22 34 15.8	-0.1
TWT	baz=286			*e*S	Sb	22 34 24.0	+0.4
NDT	Datong Townshi baz=339	0.54	339	P	Pb	22 34 15.6	-0.4
NDT	baz=339			*e*S	Sn	22 34 24.5	+0.6
TDCB	Techi baz=286	0.54	286	*i* P	Pb	22 34 16.0	-0.1
TDCB	baz=286			*e*S	Sb	22 34 23.9	-0.1
ENTT	Nioudou baz=346	0.56	345	P	Pb	22 34 15.8	-0.5
ENTT	baz=346			*e*S	Sn	22 34 24.8	+0.3
EOS1	EOS1 baz=40	0.58	39	*e*P	Pb	22 34 17.1	+0.6
EOS1	baz=40			*e*S	Sn	22 34 25.8	+0.9
TWE	Neicheng baz=357	0.62	355	P	Pn	22 34 16.8	-0.3
TWE	baz=357			*e*S	Sn	22 34 26.3	+0.4
VWDT	VWDT baz=236	0.64	237	P	Pn	22 34 16.9	-0.5
VWDT	baz=236			*e*S	Sb	22 34 26.6	+0.2
YHNB	Yeheng baz=331	0.65	330	P	Pn	22 34 17.2	-0.5
YHNB	baz=331			*e*S	Sb	22 34 26.9	+0.1
ILA	Ilan baz=3.0	0.66	2	P	Pn	22 34 17.5	-0.2
ILA	baz=3.0			*e*S	Sn	22 34 27.4	+0.4
NSK	Sanguang baz=330	0.67	330	P	Pn	22 34 17.3	-0.6
NSK	baz=330			*e*S	Sb	22 34 27.3	+0.1
HGSD	Ruisui baz=203	0.67	205	P	Pn	22 34 17.5	-0.3
HGSD	baz=203			*e*S	Sb	22 34 27.5	+0.4
EHY	Hungye baz=210	0.70	212	*e*P	Pn	22 34 17.8	-0.5
EHY	baz=210			*e*S	Sn	22 34 28.3	+0.4
DPDB	Guoxing baz=264	0.74	265	*e*P	Pn	22 34 18.6	-0.3
DPDB	baz=264			*e*S	Sn	22 34 29.2	+0.3
NTC	Toucheng baz=8.0	0.76	7	*e*P	Pn	22 34 19.2	+0.1
NTC	baz=8.0			*e*S	Sb	22 34 30.1	+0.5
SSLB	Suanglung baz=245	0.77	246	P	Pn	22 34 19.1	-0.2
SSLB	baz=245			*e*S	Sn	22 34 30.1	+0.3
SMLT	Sun Moon Lake baz=253	0.79	254	P	Pn	22 34 19.1	-0.5
SMLT	baz=253			*e*S	Sn	22 34 30.3	0.0

YULB	**Yu-li** baz=208	0.81	209	*e*P	Pn	22 34 19.7	-0.1
YULB	baz=208			*e*S	Sn	22 34 30.8	+0.2
TYC	**Yuchr** baz=255	0.82	256	*e*P	Pn	22 34 19.9	-0.1
TYC	baz=255			*e*S	Sn	22 34 31.0	+0.1
LIOB	**Emei** baz=310	0.85	310	*e*P	Pn	22 34 20.4	+0.1
LIOB	baz=310			*e*S	Sn	22 34 31.9	+0.4
NSTT	**Nanjuang** baz=309	0.85	309	*e*P	Pn	22 34 20.8	+0.4
NSTT	baz=309			*e*S	Sn	22 34 31.8	+0.2
WLTB	**Daxi** baz=330	0.86	330	*e*P	Pn	22 34 20.3	-0.2
WLTB	baz=330			*e*S	Sn	22 34 32.3	+0.3
TIPB	**Shuangxi** baz=6.0	0.87	6	*e*P	Pn	22 34 20.8	+0.1
TIPB	baz=6.0			*e*S	Sn	22 34 32.7	+0.5
NHDH	**Xindian Distri** baz=348	0.88	348	*e*P	Pn	22 34 20.7	0.0
NHDH	baz=348			*e*S	Sn	22 34 32.6	+0.2
TWA	**Mucha** baz=352	0.89	351	*e*P	Pn	22 34 20.8	-0.1
TWA	baz=352			*e*S	Sn	22 34 32.7	+0.2
WHYT	**Xinyi Township** baz=242	0.90	243	P	Pn	22 34 20.9	-0.1
WHYT	baz=242			*e*S	Sn	22 34 33.2	+0.3
TATO	**Taipei** baz=347	0.90	346	*e*P	Pn	22 34 20.6	-0.4
TATO	baz=347			*e*S	Sn	22 34 33.2	+0.3
TWQ1	**Liyutan** baz=285	0.91	286	*e*P	Pn	22 34 21.3	+0.1
TWQ1	baz=285			*e*S	Sn	22 34 33.4	+0.3
YUS	**Yu-Shan** baz=228	0.94	230	*e*P	Pn	22 34 21.2	-0.8
YUS	baz=228			*e*S	Sn	22 34 34.2	-0.2
NSY	**Sanyi** baz=289	0.94	290	*e*P	Pn	22 34 20.8	-0.8
NSY	baz=289			*e*S	Sn	22 34 34.0	+0.2
TAP	**Taipei** baz=348	0.96	348	*e*P	Pn	22 34 21.7	-0.1
TAP	baz=348			*e*S	Sn	22 34 34.7	+0.5
WJS	**Zhushan** baz=252	0.96	253	*e*P	Pn	22 34 22.3	+0.5
WJS	baz=252			*e*S	Sn	22 34 34.6	+0.4
NMLH	**Miaoli** baz=297	0.96	297	*e*P	Pn	22 34 21.7	-0.2
NMLH	baz=297			*e*S	Sn	22 34 34.7	+0.3
TCU	**Taichung** baz=272	0.96	273	*e*P	Pn	22 34 21.4	-0.5
TCU	baz=272			*e*S	Sn	22 34 34.8	+0.4
SBCB	**Hsinchu** baz=315	0.97	316	*e*P	Pn	22 34 21.6	-0.4
SBCB	baz=315			*e*S	Sn	22 34 34.8	+0.3
NWF	**Wu-fen Shan** baz=3.0	0.97	3	*e*P	Pn	22 34 21.8	-0.2
NWF	baz=3.0			*e*S	Sn	22 34 34.8	+0.1
WFSB	**Wu-fen Shan** baz=3.0	0.97	3	*e*P	Pn	22 34 22.0	0.0
WFSB	baz=3.0			*e*S	Sn	22 34 34.8	+0.2
WNT	**Mingjian** baz=256	0.98	257	*e*P	Pn	22 34 21.9	-0.2
WNT	baz=256			*e*S	Sn	22 34 35.1	+0.2
PTSB	**Yuanli** baz=290	1.00	290	*e*P	Pn	22 34 22.1	-0.2
PTSB	baz=290			*e*S	Sn	22 34 35.4	+0.1
WDJ	**Dajia District** baz=283	1.02	284	*e*P	Pn	22 34 22.6	-0.2
WDJ	baz=283			*e*S	Sn	22 34 36.0	+0.1
ALS	**Alishan** baz=234	1.03	235	P	Pn	22 34 23.1	0.0
ALS	baz=234			*e*S	Sn	22 34 36.4	-0.1
CHKT	**Chengkung** baz=197	1.05	199	*e*P	Pn	22 34 21.6	-1.5
CHKT	baz=197			*e*S	Sn	22 34 36.9	+0.3
YM01	**YM01** baz=352	1.05	352	*e*P	Pn	22 34 23.2	0.0
YM01	baz=352			*e*S	Sn	22 34 36.8	+0.1
YM10	**YM10** baz=352	1.06	352	*e*P	Pn	22 34 23.1	-0.2
YM10	baz=352			*e*S	Sn	22 34 37.2	+0.2
YM04	**YM04** baz=351	1.06	351	*e*P	Pn	22 34 23.2	-0.2
YM04	baz=351			*e*S	Sn	22 34 37.5	+0.5
YM05	**YM05** baz=352	1.07	352	*e*P	Pn	22 34 22.9	-0.6
YM05	baz=352			*e*S	Sn	22 34 37.0	-0.2
WCHH	**Zhanghua** baz=268	1.07	269	*e*P	Pn	22 34 23.3	-0.1
WCHH	baz=268			*e*S	Sn	22 34 37.4	+0.3
CHN5	**Tsauling** baz=242	1.08	243	*e*P	Pn	22 34 23.5	-0.2
CHN5	baz=242			*e*S	Sn	22 34 37.8	+0.2
YM08	**YM08** baz=354	1.09	353	*e*P	Pn	22 34 23.6	-0.1
YM08	baz=354			*e*S	Sn	22 34 37.8	+0.2
ANP	**Anpu** baz=351	1.10	350	*e*P	Pn	22 34 23.6	-0.2
ANP	baz=351			*e*S	Sn	22 34 37.9	-0.1
ELDTW	**Lidau** baz=214	1.12	216	*e*P	Pn	22 34 22.5	-1.7
WGK	**Gukeng** baz=248	1.15	249	*e*P	Pn	22 34 24.1	-0.3
WGK	baz=248			*e*S	Sn	22 34 39.1	+0.1
JYNG	**Yonagunijimaku**	1.16	72	P	Pn	22 34 24.2	-0.5
JYNG				*e*S	Sn	22 34 39.2	-0.2
WDLH	**Douliu** baz=249	1.16	250	*e*P	Pn	22 34 24.5	-0.2
WDLH	baz=249			*e*S	Sn	22 34 39.7	+0.3
TWY	**Chenhua** baz=355	1.18	354	*e*P	Pn	22 34 24.8	-0.1
TWY	baz=355			*e*S	Sn	22 34 40.1	+0.4
YOJ	**Yonaguni jima**	1.22	73	P	Pn	22 34 24.8	-0.7
YOJ				*e*S	Sn	22 34 40.4	-0.5
RLNB	**Erlin** baz=260	1.27	261	*e*P	Pn	22 34 25.7	-0.4
RLNB	baz=260			*e*S	Sn	22 34 42.6	+0.6
TPUB	**Ta-pu** baz=231	1.28	232	*e*P	Pn	22 34 26.4	0.0
TPUB	baz=231			*e*S	Sn	22 34 42.7	+0.3
STYT	**Tauyuan** baz=222	1.29	224	*e*P	Pn	22 34 26.4	-0.1
STYT	baz=222			*e*S	Sn	22 34 42.8	+0.1
WTP	**Ta-pu** baz=229	1.33	230	*e*P	Pn	22 34 26.8	-0.2
WTP	baz=229			*e*S	Sn	22 34 43.9	+0.3
CHY	**Chiayi** baz=242	1.34	244	*e*P	Pn	22 34 26.7	-0.3
CHY	baz=242			*e*S	Sn	22 34 44.0	+0.3
TWK	**Hsinying** baz=233	1.41	234	*e*P	Pn	22 34 28.3	+0.2
TWK	baz=233			*e*S	Sn	22 34 47.0	+1.4
TWGBT	**Beinan** baz=204	1.41	205	*e*P	Pn	22 34 28.1	0.0
TWGBT	baz=204			*e*S	Sn	22 34 45.7	+0.2
TWG	**Pinlang** baz=204	1.41	205	*e*P	Pn	22 34 27.7	-0.4
TWG	baz=204			*e*S	Sn	22 34 45.8	+0.3
CHN1	**Nanshi** baz=229	1.43	231	*e*P	Pn	22 34 28.4	0.0
CHN1	baz=229			*e*S	Sn	22 34 46.2	+0.2
SNST	**Tainan City** baz=231	1.43	232	*e*P	Pn	22 34 28.6	+0.2
SNST	baz=231			*e*S	Sn	22 34 46.2	+0.3
SLGT	**Liugui** baz=221	1.48	222	*e*P	Pn	22 34 29.6	+0.5
SLGT	baz=221			*e*S	Sn	22 34 48.2	+0.9
ECL	**Taimali** baz=204	1.66	206	*e*P	Pn	22 34 31.9	+0.4
ECL	baz=204			*e*S	Sn	22 34 51.7	+0.1
SSD	**Sandimen** baz=216	1.68	217	*e*P	Pn	22 34 32.0	+0.2
SSD	baz=216			*e*S	Sn	22 34 52.6	+0.3
MASBT	**Mashibuluo** baz=213	1.79	214	*e*P	Pn	22 34 33.4	+0.1
MASBT	baz=213			*e*S	Sn	22 34 55.1	+0.2
IRIF	**Iriomote-Funau**	1.84	82	P	Pn	22 34 33.2	-0.8
IRIF				*e*S	Sn	22 34 55.8	-0.4
EAST	**Anshuo** baz=204	1.89	206	*e*P	Pn	22 34 36.4	+1.7
EAST	baz=204			*e*S	Sn	22 34 57.3	-0.1
HATJ	**Hateruma jima**	1.90	91	*e*S	Sn	22 34 57.3	-0.2
SCZT	**Fangliau** baz=210	2.00	211	*e*P	Pn	22 34 36.3	+0.1
SCZT	baz=210			*e*S	Sn	22 34 60.0	-0.1
PNG	**Penghu** baz=254	2.06	255	*e*P	Pn	22 34 36.2	-0.8
PNG	baz=254			*e*S	Sn	22 34 59.8	-1.7
WDGT	**Dungji** baz=245	2.07	247	*e*P	Pn	22 34 37.3	+0.1
WDGT	baz=245			*e*S	Sn	22 35 01.0	-0.8
JKRS	**Kuro-shima**	2.09	86	P	Pn	22 34 37.3	-0.1
JKRS				*e*S	Sn	22 35 02.4	+0.2
JIJ	**Ishigaki jima**	2.22	83	P	Pn	22 34 38.5	-0.7
JIJ				S	Sn	22 35 04.7	-0.8
VCHM	**Qimei** baz=246	2.29	248	*e*P	Pn	22 34 39.5	-0.6
VCHM	baz=246			*e*S	Sn	22 35 06.8	-0.4
JISG	**Ishigakijimahi**	2.41	78	P	Pn	22 34 41.0	-0.7
JISG				*e*S	Sn	22 35 09.1	-0.9
PTMZ	**Houxiangcun** baz=291	2.55	292	*e*P	Pn	22 34 43.4	-0.4
MATB	**Ma-tsu** baz=321	2.60	322	*e*P	Pn	22 34 43.3	-1.2
MATB	baz=321			*e*S	Sn	22 35 13.0	-1.9
JTJ	**Tarama**	2.76	78	P	Pn	22 34 46.3	-0.4
JTJ				S	Sn	22 35 18.9	0.0
LYJJ	**Jianjiangzhen** baz=324	3.02	324	*e*P	Pn	22 34 50.1	-0.1
LYJJ	baz=324			*e*S	Sn	22 35 23.3	-2.0
KNMB	**Chin-men Tao** baz=276	3.07	277	*e*P	Pn	22 34 50.3	-0.6
XPSS	**Dashiqiu** baz=333	3.14	334	*e*P	Pn	22 34 52.0	+0.1
XPSS	baz=333			*e*S	Sn	22 35 26.2	-2.1
MHZQ	**Yeshan** baz=309	3.15	310	*e*P	Pn	22 34 52.6	+0.5
MHZQ	baz=309			*e*S	Sn	22 35 26.3	-2.3

IDC 18 22:34:57.8±1.9, 7°.29S×151°.38E, h0^{km}, mb3.7/3, mb1 4.1/4, mb1mx3.7/28, mbtmp3.9/4, ML1.8/1, Error ellipse: s-maj=108.8km s-min=26.1km az=132.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby** 3.2nm,0.3s,baz=52,slow=9.4,SNR=6.3	4.68	243	Pn	Pn	22 36 10.4	+0.6
PMG	3.0nm,0.3s,baz=219,slow=22,SNR=4.4			Sn	Sn	22 36 58.4	-6.4
WRA	**Warramunga Arr** 3.5nm,0.7s,baz=57,slow=11,SNR=16	20.77	231	P	P	22 39 39.8	-0.8
ASAR	**Alice Springs** 0.8nm,0.6s,baz=57,slow=9.4,SNR=7.9	23.38	224	P	P	22 40 08.6	+0.2
ILAR	**Eielson Array** 0.8nm,0.7s,baz=258,slow=5.2,SNR=8.7	84.98	22	P	P	22 47 35.0	+0.2
ILAR	0.7nm,0.8s,baz=244,slow=5.8,SNR=3.8			pP	PcP	22 47 45.7	+7.6
TORD	**Torodi Ar. Bea** 0.3nm,0.5s,baz=45,slow=3.8,SNR=5.9	149.62	284	PKPbc	PKPbc	22 54 49.9	-0.7
TORD	0.3nm,0.5s,baz=54,slow=3.0,SNR=2.3			pPKPbc	PKPab	22 55 02.3	+6.7

SOME ***18*** *23:06:38.8, 40°.17N×77°.70E, h10^{km}*
KRNET ***18*** *23:06:41.6±0.1, 40°.26N×77°.48E, mb3.1*
NNC ***18*** *23:06:42.8±1.5, 40°.33N×77°.76E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=11.2km s-min=9.7km az=47.0*
ISC 18 23:06:42.9±2.0, 40°.28N±0°.09×77°.63E±0°.05, h10^{km}, n42, σ1^{s}.56/71, 17C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn** baz=16	1.69	314	⇑*i*P	Pn	23 07 12.4	-0.4
NRN	baz=16			⇑*i*S	Sn	23 07 34.6	0.0
KDJ	**Kajisay** baz=53	1.88	350	⇑*e*P	Pb	23 07 16.3	-1.1
KDJ	baz=53			⇑*i*S	Sg	23 07 42.5	-0.8
ULHL	**Ulahol** baz=35	2.22	332	⇓*i*P	Pb	23 07 21.8	-1.5
ULHL	baz=35			⇓*i*S	Sb	23 07 51.0	0.0
PRZ	**Przheval'sk** baz=17	2.27	15	⇑*e*P	Pb	23 07 23.5	-0.7
PRZ	baz=17			⇑*i*S	Sb	23 07 53.5	+1.0
KZA	**Kyzart** baz=18	2.54	316	⇓*i*P	Pn	23 07 25.8	+1.2
KZA	baz=18			⇓*i*S	Sb	23 07 57.8	-2.4
TNSS	**Tian-Shan** 24nm,0.6s	2.80	350	*e*P	Pb	23 07 33.1	-0.2
TNSS	38nm,0.6s			*e*S	Sg	23 08 12.3	-0.6
SATY	**Saty** 24nm,0.8s	2.83	12	*e*P	Pb	23 07 33.7	0.0
SATY	28nm,0.6s			*e*S	Sg	23 08 13.4	-0.6
IZV	**Izvestkoviy** 12nm,0.5s	2.85	345	Pg	Pb	23 07 34.2	+0.2
IZV	41nm,0.4s			Lg	Lg	23 08 14.3	
IZV	**Izvestkoviy** 12nm,0.5s	2.85	345	*e*P	Pb	23 07 34.3	+0.2
IZV	41nm,0.4s			*e*S	Sg	23 08 14.2	-0.4
MDOK	**Medeo** 11nm,0.5s	2.91	352	Pg	Pb	23 07 34.8	-0.3
MDOK	46nm,0.7s			Lg	Lg	23 08 15.1	
MDOK	**Medeo** 11nm,0.5s	2.91	352	*e*P	Pb	23 07 34.8	-0.3
MDOK	46nm,0.7s			*e*S	Sg	23 08 15.1	-1.4
ARLS	**Aral** baz=5.0	2.95	303	⇑*i*P	Pn	23 07 30.8	+0.7
ARLS	baz=5.0			⇑*i*S	Sn	23 08 06.8	+1.2
KOTS	**Kotyrbulak** 5.4nm,0.2s	2.97	353	Pg	Pb	23 07 36.3	+0.2
KOTS	54nm,0.5s			Lg	Lg	23 08 17.9	
KOTS	**Kotyrbulak** 5.4nm,0.2s	2.97	353	*e*P	Pb	23 07 36.4	+0.2
KOTS	54nm,0.5s			*e*S	Sg	23 08 17.9	-0.6
KST	**Kastek** 6.9nm,0.3s	3.03	336	Pg	Pb	23 07 37.1	+0.1
KST	32nm,0.8s			Lg	Lg	23 08 19.0	
KST	**Kastek** 6.9nm,0.3s	3.03	336	*e*P	Pb	23 07 37.1	+0.1
KST	32nm,0.8s			*e*S	Sg	23 08 19.0	-1.2
TKM2	**Tokmak 2** 4.1nm,0.5s	3.04	331	⇑Pn	Pb	23 07 33.9	-3.5
TKM2	16nm,0.6s			⇓Lg	Lg	23 08 19.8	
TKM2	**Tokmak 2** baz=33	3.04	331	⇑*i*P	Pn	23 07 33.0	+1.7
TKM2	baz=33			⇑*i*S	Sn	23 08 10.3	+2.4
UCH	**Uchtor** baz=12	3.05	311	⇓*i*P	Pn	23 07 33.0	+1.4
UCH	baz=12			⇓*i*S	Sn	23 08 10.0	+1.6
UZB	**Uzynbulak** 6.3nm,0.5s	3.05	20	*e*P	Pb	23 07 35.4	-2.0
UZB	12nm,0.5s			*e*S	Sb	23 08 15.7	+1.0
KBK	**Karagaybulak** baz=22	3.11	321	⇑*e*P	Pn	23 07 33.5	+1.3
KBK	baz=22			⇑*i*S	Sn	23 08 11.7	+2.2
KURS	**Kuram** 7.5nm,0.6s	3.23	7	Pg	Pb	23 07 40.5	+0.1
KURS	12nm,0.6s			Lg	Lg	23 08 24.8	
KURS	**Kuram** 7.5nm,0.6s	3.23	7	*e*P	Pb	23 07 40.5	+0.1
KURS	12nm,0.6s			*e*S	Sg	23 08 24.8	-1.8
KPKS	**Kokpek** 15nm,0.2s	3.28	14	*e*P	Pb	23 07 40.9	-0.3
KPKS	54nm,0.5s			*e*S	Sg	23 08 25.5	-2.7
AAK	**Ala-Archa** baz=18	3.33	316	⇓*i*P	Pn	23 07 36.3	+1.1
AAK	baz=18			⇓*i*S	Sn	23 08 16.7	+1.8
PDGK	**Podgornoye** 7.0nm,0.5s	3.35	24	⇓Pn	Pn	23 07 36.1	+0.7
PDGK	**Podgornoye** baz=25	3.35	24	⇑*i*P	Pb	23 07 38.5	-4.0
PDGK	baz=25			⇑*i*S	Sb	23 08 20.3	-3.0
FRU1	**Bishkek** baz=21	3.38	319	⇓*i*P	Pn	23 07 37.3	+1.4
FRU1	baz=21			⇓*i*S	Sn	23 08 18.1	+2.0
KTBS	**Karatobe** 4.4nm,0.4s	3.50	349	Pg	Pb	23 07 45.5	+0.5
KTBS	37nm,0.4s			Lg	Lg	23 08 33.6	
KTBS	**Karatobe** 4.4nm,0.4s	3.50	349	*e*P	Pb	23 07 45.5	+0.5
KTBS	37nm,0.4s			*e*S	Sg	23 08 33.6	-1.7
CHKK	**Chushkaly** 3.5nm,0.4s	3.60	353	Pg	Pb	23 07 46.9	+0.2
CHKK	26nm,0.3s			Lg	Lg	23 08 36.0	
CHKK	**Chushkaly** 3.5nm,0.4s	3.60	353	*e*P	Pb	23 07 46.9	+0.2
CHKK	26nm,0.3s			*e*S	Sg	23 08 36.0	-2.5
ARSB	**Arslanbob** baz=89	3.67	288	⇓*i*P	Pn	23 07 40.9	+0.9
ARSB	baz=89			⇓*i*S	Sn	23 08 23.9	+0.5
KUU	**Kurty** 2.6nm,0.7s	3.73	346	Pg	Pb	23 07 48.6	-0.4
KUU	10nm,0.5s			Lg	Lg	23 08 39.1	
KUU	**Kurty** 2.6nm,0.7s	3.73	346	*e*P	Pb	23 07 48.6	-0.4
KUU	10nm,0.5s			*e*S	Sg	23 08 39.1	-3.7
KTMS	**Ketmen** 1.2nm,0.2s	3.76	32	Pg	Pb	23 07 48.5	-1.0
KTMS	9.5nm,0.4s			Lg	Lg	23 08 38.5	
KTMS	**Ketmen** 1.2nm,0.2s	3.76	32	*e*P	Pb	23 07 48.5	-1.0
KTMS	9.5nm,0.4s			*e*S	Sb	23 08 38.5	+3.4
USP	**Ospenovka** baz=24	3.79	323	⇑*e*P	Pn	23 07 42.9	+1.5
USP	baz=24			⇑*i*S	Sn	23 08 27.6	+1.5
MNBS	**Baschi** 3.6nm,0.5s	3.84	8	Pg	Pb	23 07 52.2	+1.4
MNBS	**Baschi** 3.6nm,0.5s	3.84	8	*e*P	Pb	23 07 52.2	+1.4
MNBS	11nm,0.2s			*e*S	Sg	23 08 44.9	-1.2
ARXS	**Arharly** 2.7nm,0.6s	3.93	2	Pg	Pb	23 07 52.6	+0.2
ARXS	13nm,0.6s			Lg	Lg	23 08 45.4	
ARXS	**Arharly** 2.7nm,0.6s	3.93	2	*e*P	Pb	23 07 52.6	+0.2
ARXS	13nm,0.6s			*e*S	Sg	23 08 45.4	-3.7

ISCJB ***18*** *23:29:38.7±0.2, 20°.69S±0°.04×113°.78W±0°.05, h10^{km}, mb4.9/163, MS4.2/20, Error ellipse: s-maj=6.5km s-min=5.8km az=43.2*
NEIC ***18*** *23:29:40.1±1.2, 20°.68S×113°.74W, h9^{km}±3^{km}, mb4.8/165, Error ellipse: s-maj=15.4km s-min=14.2km az=168.0*
IDC ***18*** *23:29:40.2±0.8, 20°.51S×113°.67W, h0^{km}, mb4.1/13, mb1 4.3/13, mb1mx4.2/30, mbtmp4.1/13, MS4.3/16, Ms1 4.2/16, ms1mx4.2/19, Error ellipse: s-maj=28.4km s-min=17.9km az=46.0*
GCMT ***18*** *23:29:43.1±0.3, 20°.94S±0°.02×113°.91W±0°.02, h12^{km}, MW4.9/89, Moment Tensor Solution. s26,c27; s89,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.55±.09; M$_{\theta\theta}$-1.70±.08; M$_{\phi\phi}$2.25±.07; M$_{r\theta}$-0.58±.25; M$_{\theta\phi}$1.43±.07; M$_{\phi r}$1.05±.25; Best double couple: M$_0$2.74300×10^{16} NP1:ϕ$_s$156.00000°,δ83.00000°,λ-152.00000°. NP2: ϕ$_s$62.00000°,δ62.00000°,λ-8.00000°. Principal axes: T 2.9160, Plg14.0000°, Azm286.0000°; N -0.3490, Plg61.0000°, Azm169.0000°; P -2.5700, Plg25.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 18 23:29:40.4±0.3, 20°.74S±0°.08×113°.76W±0°.07, h10^{km}, n305, σ1^{s}.43/246, mb4.8/163, MS4.4/21, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui** comp=Z,2μm,18.2s,baz=323,slow=32	7.54	148	LR	LR	23 33 42.3	
RKT	**Rikitea** 2μm,27.8s	19.82	259	*e*LQ	LQ	23 37 49.1	
RKT	comp=Z,2μm,25.2s			*e*LR	LR	23 38 39.2	
RKT	**Rikitea** 6.9nm,0.3s	19.82	259	*e*T	T	23 54 03.0	
TAOE	**Nuku Hiva Isla** comp=Z,2μm,25.5s	28.06	291	*e*LR	LR	23 42 08.4	
TBI	**Tubuai** comp=Z,1μm,26.8s,baz=89	33.14	259	*e*LR	LR	23 44 52.6	
PPT2	**Papeete2** 75nm,25.0s	33.93	269	*e*S	S	23 41 34.4	-15

PPT2				eLR	LR	23 45 09.0	
	comp=Z,1µm,26.8s,baz=100						
PPT	Papeete	33.94	269	LR	LR	23 46 01.9	
	comp=Z,422nm,18.4s,baz=126,slow=29						
NNA	Nana	36.41	82	LR	LR	23 47 30.8	
	comp=Z,274nm,20.9s,baz=251,slow=30						
ATAH	Atahualpa	36.79	74	LR	LR	23 47 56.2	
	comp=Z,592nm,20.6s,baz=242,slow=30						
GO04	Tololo Observa	39.72	113	eP	P	23 37 13.6	+0.1
	57nm,1.4s						
GO03	Copiap	40.14	109	eP	P	23 37 17.3	+0.4
	23nm,1.2s						
PB04	IPOC Station P	40.50	100	eP	P	23 37 20.9	+0.9
	60nm,1.4s						
GO02	Mina Guanaco	40.78	105	eP	P	23 37 22.4	0.0
	16nm,1.0s						
TLIG	Tlapa	40.88	22	eP	P	23 37 22.0	-0.9
	8.2nm,0.9s						
TLIG	Tlapa	40.88	22	eP	P	23 37 25.4	+2.4
	8.2nm,0.9s						
PB11	IPOC Station P	41.30	97	eP	P	23 37 25.9	-0.7
	26nm,1.2s						
MNMC	Minye Minye	41.46	96	eP	P	23 37 27.9	-0.2
	9.0nm,0.9s						
LVC	Limon Verde	41.61	101	P	P	23 37 29.7	+0.3
	4.7nm,0.8s,baz=241,slow=11,SNR=2.7						
LVC				LR	LR	23 50 29.2	
	comp=Z,515nm,18.5s,baz=256,slow=30						
LVC	Limon Verde	41.61	101	eP	P	23 37 29.0	-0.4
	30nm,1.7s						
PLCA	Paso Flores	41.65	128	LR	LR	23 50 14.2	
	comp=Z,572nm,20.7s,baz=306,slow=30						
CFA	Coronel Fontan	42.00	115	P	P	23 37 32.9	+0.7
	5.1nm,0.8s,baz=271,slow=7.4,SNR=7.5						
CFA				LR	LR	23 50 36.1	
	comp=Z,588nm,19.2s,baz=272,slow=30						
RAR	Rarotonga	42.85	261	eP	P	23 37 39.0	-0.1
	116nm,1.4s						
SOTA	Rioblanco	42.91	62	eP	P	23 37 43.2	+3.0
PTLC	Puerto Leguiza	43.39	66	eP	P	23 37 43.7	+0.1
LPAZ	La Paz	43.39	92	P	P	23 37 45.8	+1.5
	3.5nm,1.0s,baz=275,slow=6.5,SNR=9.6						
LPAZ				LR	LR	23 51 35.6	
	comp=Z,674nm,21.4s,baz=260,slow=30						
LPAZ	La Paz	43.39	92	eP	P	23 37 43.4	-0.8
LPAZ				epP	pP	23 37 44.0	-2.4
LPAZ				esP	sP	23 37 44.3	-2.9
LVIG	Laguna Verde	43.65	24	eP	P	23 37 45.3	-0.1
	26nm,1.0s						
ORTC	Ortega, Tolima	45.02	61	eP	P	23 37 59.0	+2.4
PRAC	Prado	45.21	62	eP	P	23 37 59.2	+1.1
RREF	El Recreo	45.50	60	eP	P	23 38 03.9	+2.7
GUY2C	Guyana, Caldas	45.67	60	eP	P	23 38 02.4	+0.1
ROSC	El Rosal	46.31	61	LR	LR	23 53 46.2	
	comp=Z,169nm,18.2s,baz=114,slow=31						
VILC	Villavicencio,	46.42	62	eP	P	23 38 07.5	-0.3
PTBC	PUERTO BERRIO,	47.17	59	eP	P	23 38 13.1	-0.5
TRQA	Tornquist	47.69	123	eP	P	23 38 17.0	-0.4
	0.2nm,0.6s						
TEIG	Tepich	47.74	33	eP	P	23 38 17.9	+0.1
	20nm,0.8s						
TEIG	Tepich	47.74	33	eP	P	23 38 23.7	+5.9
	20nm,0.8s						
SRIG	Santa Rosalia	47.80	2	eP	P	23 38 17.6	-0.5
	84nm,1.1s						
USHA	Ushuaia	48.10	146	LR	LR	23 53 54.3	
	comp=Z,316nm,18.3s,baz=194,slow=30						
YOPC	Yopal, Colombi	48.16	62	eP	P	23 38 22.7	+1.3
SMLC	San Martn de	48.82	57	eP	P	23 38 28.6	+2.3
SIV	San Ignacio	50.06	94	P	P	23 38 36.6	+0.8
	2.4nm,1.0s,baz=270,slow=8.1,SNR=7.1						
KVTX	Kingsville	50.40	18	eP	P	23 38 36.8	-1.2
	45nm,0.7s						
KVTX	Kingsville	50.40	18	eP	P	23 38 40.0	+2.0
	45nm,0.7s						
LTX	Lajitas	50.72	11	eP	P	23 38 40.6	0.0
LTX				ePcP	PcP	23 39 56.8	-1.0
TXAR	Lajitas Array	50.72	11	P	P	23 38 40.6	0.0
	0.4nm,0.9s,baz=215,slow=6.2,SNR=3.3						
TXAR				PcP	PcP	23 39 56.8	-1.0
	0.2nm,0.8s,baz=169,slow=5.3,SNR=2.1						
TXAR				LR	LR	23 56 21.3	
	comp=Z,160nm,18.4s,baz=0.0,slow=32						
CPUP	Villa Florida	51.70	108	P	P	23 38 48.7	+0.7
	4.8nm,1.0s,baz=259,slow=8.4,SNR=3.3						
CPUP				LR	LR	23 57 15.5	
	comp=Z,272nm,18.1s,baz=223,slow=32						
CPUP	Villa Florida	51.70	108	eP	P	23 38 48.7	+0.7
	18nm,1.4s						
319A	Douglas	51.99	5	eP	P	23 38 49.9	-0.3
	5.7nm,0.6s						
319A	Douglas	51.99	5	eP	P	23 38 50.5	+0.4
	5.7nm,0.6s						
CBCY	The Bluff, Cay	52.21	42	eP	P	23 38 50.3	-1.5
	90nm,1.0s						
NIUE	Niue	52.61	261	eP	P	23 38 55.1	+0.2
	455nm,1.3s						
JCT	Junction City	52.66	15	eP	P	23 38 53.7	-1.3
	18nm,0.9s						
JCT	Junction City	52.66	15	eP	P	23 38 57.3	+2.3
	18nm,0.9s						
MNTX	Cornudas Mount	52.75	9	eP	P	23 38 55.7	+0.1
	5.8nm,1.2s						
MNTX	Cornudas Mount	52.75	9	eP	P	23 38 57.5	+1.9
	5.8nm,1.2s						
TUC	Tucson	52.82	3	eP	P	23 38 56.0	-0.3
	2.1nm,0.9s						
TUC	Tucson	52.82	3	eP	P	23 38 57.7	+1.5
	2.1nm,0.9s						
HKT	Hockley	53.27	19	eP	P	23 38 58.9	-0.4
	7.6nm,1.1s						
HKT	Hockley	53.27	19	eP	P	23 39 03.0	+3.7
	7.6nm,1.1s						
ABTX	Abilene, Hawle	54.75	15	eP	P	23 39 08.7	-1.6
	4.2nm,0.9s						
ABTX	Abilene, Hawle	54.75	15	eP	P	23 39 13.1	+2.8
	4.2nm,0.9s						
BNM	Barren Site	55.00	7	eP	P	23 39 10.7	-1.7
BNM	Barren Site	55.00	7	eP	P	23 39 14.3	+2.0
X18A	Snowflake	55.08	4	eP	P	23 39 11.9	-0.9
	11nm,1.5s						
X18A	Snowflake	55.08	4	eP	P	23 39 15.0	+2.2
	11nm,1.5s						
LAZ	Ladron	55.19	7	eS	S	23 46 39.4	-18
W13A	Hualapai Mount	55.53	360	eP	P	23 39 15.5	-0.6
	4.4nm,1.1s						
W13A	Hualapai Mount	55.53	360	eP	P	23 39 18.6	+2.6
	4.4nm,1.1s						
PTGA	Pitinga	56.13	76	P	P	23 39 20.6	-0.1
	6.6nm,0.8s,baz=213,slow=8.8,SNR=10						
PTGA	Pitinga	56.13	76	eP	P	23 39 20.7	+0.1
	6.9nm,0.9s						
PAGB	Antelope Grade	56.49	354	eP	P	23 39 21.2	-1.5
	46nm,1.7s						
DAC	Darwin (Calif)	56.82	356	eP	P	23 39 24.7	-0.5
DAC	Darwin (Calif)	56.82	356	eP	P	23 39 28.1	+2.9
PUH	Pauahi	56.89	312	eP	P	23 39 26.7	+0.7
	89nm,1.1s						
HLP	Hilina Pali	56.91	312	eP	P	23 39 26.4	+0.4
	250nm,1.2s						
HLP	Hilina Pali	56.91	312	eP	P	23 39 33.2	+7.2
	250nm,1.2s						
SHPR	Sheep Range	56.95	359	eP	P	23 39 26.2	+0.1
	5.1nm,1.0s						
SHPR	Sheep Range	56.95	359	eP	P	23 39 28.9	+2.8
	5.1nm,1.0s						
WMOK	Wichita Mounta	56.98	15	eP	P	23 39 26.9	+0.7
	6.4nm,1.4s						
WMOK	Wichita Mounta	56.98	15	eP	P	23 39 31.1	+4.9
	6.4nm,1.4s						
HMH	Humu'ula Sheep	57.23	312	eP	P	23 39 28.2	-0.4
	272nm,1.8s						
SAO	San Andreas Ge	57.65	353	eP	P	23 39 30.4	-0.5
	12nm,0.9s						
SAO	San Andreas Ge	57.65	353	eP	P	23 39 32.5	+1.7
	12nm,0.9s						
CCUT	Cedar City	57.98	0	eP	P	23 39 37.2	+3.8
	6.3nm,1.4s						
147A	Livingston	58.44	25	eP	P	23 39 36.3	-0.2
	3µm,1.1s						
147A	Livingston	58.44	25	eP	P	23 39 42.5	+6.1
	3µm,1.1s						
250A	Grady	58.66	27	eP	P	23 39 37.9	-0.2
	8.5nm,0.6s						
PV05	Paradox Valley	58.66	4	eP	P	23 39 38.0	-0.3
	19nm,1.8s						
PV05	Paradox Valley	58.66	4	eP	P	23 39 41.5	+3.2
	19nm,1.8s						
SDCO	Great Sand Dun	58.69	8	eP	P	23 39 37.8	-0.7
	5.4nm,1.2s						
SDCO	Great Sand Dun	58.69	8	eP	P	23 39 40.5	+2.0
	5.4nm,1.2s						
R11A	Troy Canyon, C	58.80	358	eP	P	23 39 38.8	-0.3
	8.5nm,1.6s						
R11A	Troy Canyon, C	58.80	358	eP	P	23 39 42.5	+3.4
	8.5nm,1.6s						
PSUT	Pine Spring	58.96	360	eP	P	23 39 39.9	-0.3
	14nm,1.9s						
PSUT	Pine Spring	58.96	360	eP	P	23 39 43.3	+3.1
	14nm,1.9s						
NV11	Mina Array Sit	59.00	356	eP	P	23 39 40.0	-0.5
	0.5nm,1.1s						
NV11	Mina Array Sit	59.00	356	eP	P	23 39 43.6	+3.2
	0.5nm,1.1s						
NV01	Mina Array Sit	59.01	356	eP	P	23 39 41.0	+0.4
NVAR	Mina Array Bea	59.01	356	P	P	23 39 41.0	+0.4
	3.3nm,1.0s,baz=187,slow=9.3,SNR=13						
NVAR				LR	LR	23 59 24.2	
	comp=Z,147nm,20.4s,baz=174,slow=30						
KNTN	Kanton	59.14	279	eP	P	23 39 41.7	-0.1
	401nm,1.6s						
WHAR	Wooly Hollow	59.33	20	eP	P	23 39 42.1	-0.5
	8.1nm,1.3s						
WHAR	Wooly Hollow	59.33	20	eP	P	23 39 48.3	+5.7
	8.1nm,1.3s						
SRU	San Rafael Swe	59.61	3	eP	P	23 39 42.1	-2.6
	10nm,1.2s						
SRU	San Rafael Swe	59.61	3	eP	P	23 39 47.5	+2.8
	10nm,1.2s						
KVN	Kaiserville	59.61	356	eP	P	23 39 43.4	-1.4
	2.6nm,1.0s						
KVN	Kaiserville	59.61	356	eP	P	23 39 47.2	+2.5
	2.6nm,1.0s						
YERR	Yerington	59.63	355	eP	P	23 39 44.2	-0.6
	4.0nm,0.8s						
YERR	Yerington	59.63	355	eP	P	23 39 48.4	+3.5
	4.0nm,0.8s						
PNTR	Pine Nut	59.76	355	eP	P	23 39 45.9	+0.1
	11nm,1.3s						
CRPR	Cabo Rojo, PR	59.78	53	eP	P	23 39 47.2	+1.1
	78nm,1.4s						
HON	Honolulu	60.13	311	eP	P	23 39 48.8	+0.4
	296nm,1.3s						
HON	Honolulu	60.13	311	eP	P	23 39 55.2	+6.8
	296nm,1.3s						
DUG	Dugway, Tooele	60.62	1	eP	P	23 39 51.0	-0.6
	6.5nm,1.4s						
DUG	Dugway, Tooele	60.62	1	eP	P	23 39 53.8	+2.2
	6.5nm,1.4s						
BMN	Battle Mountai	60.94	357	eP	P	23 39 54.1	+0.4
	2.1nm,0.8s						
GOGA	Godfrey	61.11	29	eP	P	23 39 54.2	-0.6
	4.3nm,0.8s						
ELK	Elko	61.18	359	eP	P	23 39 55.1	-0.4
	7.2nm,1.5s						
ELK	Elko	61.18	359	eP	P	23 39 58.5	+3.0
	7.2nm,1.5s						
URZ	Urewera	61.34	237	eP	P	23 39 55.6	-0.9
	28nm,1.5s						
SWET	Sewanee	61.60	26	eP	P	23 39 57.9	-0.3
	5.1nm,0.9s						
SWET	Sewanee	61.60	26	eP	P	23 40 04.5	+6.3
	5.1nm,0.9s						
STVI	Saint Thomas	61.62	54	eP	P	23 39 57.7	-0.9
	25nm,0.9s						
WVT	Waverly	61.65	24	eP	P	23 39 58.3	-0.2
	13nm,1.6s						
WVT	Waverly	61.65	24	eP	P	23 40 04.1	+5.7
	13nm,1.6s						
V48A	Smith Brothers	61.70	25	eP	P	23 39 58.4	-0.4
	4.7nm,0.8s						
SPUT	South Promonto	61.74	1	eP	P	23 39 58.0	-1.2
	3.4nm,1.0s						
SPUT	South Promonto	61.74	1	eP	P	23 40 03.1	+3.9
	3.4nm,1.0s						
KEKH	Kekaha	61.77	311	eP	P	23 39 58.9	-0.6
	176nm,1.2s						
W50A	Signal Mountai	61.84	26	eP	P	23 39 59.2	-0.6
	3.4nm,0.8s						
W50A	Signal Mountai	61.84	26	eP	P	23 40 05.4	+5.6
	3.4nm,0.8s						
HWUT	Hardware Ranch	62.06	2	eP	P	23 40 00.4	-1.0
	3.8nm,1.2s						
HWUT	Hardware Ranch	62.06	2	eP	P	23 40 05.7	+4.3
	3.8nm,1.2s						
CCM	Cathedral Cave	62.19	20	eP	P	23 40 01.6	-0.5
	4.7nm,0.8s						
CCM	Cathedral Cave	62.19	20	eP	P	23 40 08.5	+6.4
	4.7nm,0.8s						
BDFB	Brasilia	62.31	97	LR	LR	00 03 30.9	
	comp=Z,283nm,21.9s,baz=285,slow=33						
ABVI	Anegada Island	62.32	54	eP	P	23 40 02.0	-1.2
	135nm,1.0s						
CSU	Charleston Sou	62.37	32	eP	P	23 40 02.3	-1.0
CPCT	Cooper Cave	62.38	27	eP	P	23 40 03.0	-0.5
	7.8nm,1.2s						
MOD	Modoc Plateau	62.62	355	eP	P	23 40 04.2	-0.8
	3.8nm,0.8s						
MOD	Modoc Plateau	62.62	355	eP	P	23 40 07.8	+2.8
	3.8nm,0.8s						
SKI	Saint Kitts	62.73	57	eP	P	23 40 04.9	-1.3
	117nm,0.9s						
SKI	Saint Kitts	62.73	57	eP	P	23 40 19.9	+14
	117nm,0.9s						
V51A	Loudon	62.76	27	eP	P	23 40 05.5	-0.4
	5.0nm,0.7s						
V51A	Loudon	62.76	27	eP	P	23 40 12.6	+6.7
	5.0nm,0.7s						
V53A	Saluda	63.30	28	eP	P	23 40 09.5	-0.1
	5.0nm,0.8s						
PD31	Pinedale Array	63.30	3	eP	P	23 40 09.6	-0.1
PDAR	Pinedale Array	63.30	3	P	P	23 40 09.6	-0.1
	0.5nm,0.4s,baz=163,slow=6.2,SNR=4.6						
Y58A	Scranton	63.31	31	eP	P	23 40 09.1	-0.5
	37nm,0.6s						
HUMO	Hull Mountain	63.59	352	eP	P	23 40 10.7	-0.7
	14nm,1.4s						
HUMO	Hull Mountain	63.59	352	eP	P	23 40 14.6	+3.3
	14nm,1.4s						
ANWB	Willy Bob	63.67	57	eP	P	23 40 11.7	-0.6
	76nm,0.9s						
ANWB	Willy Bob	63.67	57	eP	P	23 40 26.8	+14
	65nm,0.8s						
TZTN	Tazewell	63.72	27	eP	P	23 40 09.4	-2.9
	8.3nm,1.0s						
TZTN	Tazewell	63.72	27	eP	P	23 40 18.4	+6.0
	8.3nm,1.0s						
MFID	Camas Ranch	63.86	358	eP	P	23 40 12.3	-1.0
	10nm,1.5s						
J08A	Circle Bar Ran	63.92	356	eP	P	23 40 13.0	-0.6
	5.7nm,0.9s						
J08A	Circle Bar Ran	63.92	356	eP	P	23 40 16.1	+2.4
	5.7nm,0.9s						
TPAW	Teton Pass	63.96	2	eP	P	23 40 17.0	+2.9
	6.1nm,1.2s						
HLID	Hailey	63.98	359	eP	P	23 40 13.5	-0.6
	5.0nm,1.0s						
HLID	Hailey	63.98	359	eP	P	23 40 15.9	+1.8
	5.0nm,1.0s						
V56A	Mocksville	64.46	30	eP	P	23 40 15.9	-1.3
	6.0nm,0.9s						
V56A	Mocksville	64.46	30	eP	P	23 40 23.3	+6.1
	6.0nm,0.9s						
OUZ	Omahuta	64.49	240	eP	P	23 40 17.3	-0.2
	25nm,1.5s						
R49A	Shelbyville	64.56	25	eP	P	23 40 16.6	-1.2
	12nm,1.4s						
R49A	Shelbyville	64.56	25	eP	P	23 40 23.5	+5.7
	12nm,1.4s						
R50A	Paris	64.89	25	eP	P	23 40 20.2	+0.3
	7.3nm,1.0s						
RSSD	Black Hills	65.15	8	eP	P	23 40 21.4	-0.4
	3.8nm,1.0s						
RSSD	Black Hills	65.15	8	eP	P	23 40 24.1	+2.3
	3.8nm,1.0s						
MCMT	McKenzie Canyo	65.25	1	eP	P	23 40 23.2	+0.8
MCMT	McKenzie Canyo	65.25	1	eP	P	23 40 26.3	+3.8
YHH	Holmes Hill	65.26	2	eP	P	23 40 22.4	-0.2
	3.0nm,1.1s						
YHH	Holmes Hill	65.26	2	eP	P	23 40 25.2	+2.7
	3.0nm,1.1s						
BMO	Blue Mountains	65.35	357	eP	P	23 40 22.4	-0.5
	6.4nm,1.4s						
H04A	Detroit Lake	65.56	353	eP	P	23 40 24.1	-0.1
	8.2nm,0.9s						
HOPE	Hope Point	66.04	141	eP	P	23 40 27.7	+0.4
	281nm,1.7s						
ECSD	EROS Data Cent	66.06	14	eP	P	23 40 26.2	-1.2
	6.6nm,1.3s						
ECSD	EROS Data Cent	66.06	14	eP	P	23 40 31.4	+4.0
	6.6nm,1.3s						
U61A	Possum Corner	66.83	32	eP	P	23 40 31.3	-1.2
	62nm,1.0s						
U61A	Possum Corner	66.83	32	eP	P	23 40 39.3	+6.8
	62nm,1.0s						
N49A	Columbus Grove	67.22	24	eP	P	23 40 34.5	-0.3
	7.1nm,1.0s						
N49A	Columbus Grove	67.22	24	eP	P	23 40 39.2	+4.3
	7.1nm,1.0s						
MSO	Missoula	67.25	360	eP	P	23 40 34.3	-0.7
	3.3nm,1.0s						
T60A	Surry	67.32	31	eP	P	23 40 35.8	+0.2
	15nm,0.6s						
NLWA	Neilton Lookou	68.42	353	eP	P	23 40 41.6	-0.7
	6.8nm,1.1s						
N53A	Lisbon	68.45	26	eP	P	23 40 41.1	-1.5
	19nm,1.3s						
VNDA	Vanda	68.69	193	P	P	23 40 47.5	+3.8
	1.3nm,0.9s,baz=95,slow=3.5,SNR=6.0						
VNDA				LR	LR	00 04 20.6	
	comp=Z,141nm,18.8s,baz=102,slow=30						
VNDA	Vanda	68.69	193	eP	P	23 40 44.6	+0.9
NEW	Newport	68.75	358	eP	P	23 40 44.6	+0.3
	5.0nm,1.0s						
N54A	Moraine State	68.94	27	eP	P	23 40 50.4	+4.7
	17nm,1.1s						
B08A	Colville Reser	68.96	356	eP	P	23 40 44.8	-0.9
	3.3nm,0.9s						
O56A	Blue Knob Stat	68.98	28	eP	P	23 40 46.6	+0.6
	12nm,1.0s						
QSPA	South Pole Qui	69.41	180	eP	P	23 40 49.0	+0.6
	13nm,0.9s						
SSPA	Standing Stone	69.58	28	eP	P	23 40 49.5	-0.2
	6.7nm,1.0s						
MMNY	Mt. Morris Dam	71.28	27	eP	P	23 40 59.7	-0.3
	19nm,1.3s						
LLLB	Lillooet	71.39	355	eP	P	23 40 59.1	-1.4
	3.0nm,0.8s						
MEDO	Medina	71.40	26	eP	P	23 40 58.7	-2.0
	14nm,0.8s						
J54A	Appleton	71.41	26	eP	P	23 40 59.9	-0.8
	9.9nm,0.6s						
ODNJ	Ogdensburg	71.44	30	eP	P	23 41 00.3	-0.7
	6.6nm,0.8s						
ODNJ	Ogdensburg	71.44	30	eP	P	23 41 07.5	+6.5
	6.6nm,0.8s						
BINY	Binghamton	71.69	29	eP	P	23 41 02.5	0.0
	9.5nm,0.9s						
BINY	Binghamton	71.69	29	eP	P	23 41 08.6	+6.0
	9.5nm,0.9s						
PAL	Palisades	71.72	31	eP	P	23 41 01.4	-1.2
	12nm,0.9s						
PAL	Palisades	71.72	31	eP	P	23 41 11.1	+8.4
	12nm,0.9s						
J55A	Hilton	71.75	27	eP	P	23 41 01.1	-1.7
	7.5nm,0.9s						
C40A	Isle Royale Na	71.82	17	eP	P	23 41 02.4	-0.8
	21nm,1.1s						
C40A	Isle Royale Na	71.82	17	eP	P	23 41 09.6	+6.5
	21nm,1.1s						
E46A	Sault Ste Mari	71.92	21	eP	P	23 41 04.1	+0.4
	26nm,1.4s						
ULM	Lac du Bonnet	72.42	12	P	P	23 41 07.9	+1.2
	4.0nm,0.7s,baz=207,slow=2.3,SNR=3.8						
ULM				LR	LR	00 08 05.7	
	comp=Z,42nm,18.7s,baz=38,slow=32						
ULM	Lac du Bonnet	72.42	12	eP	P	23 41 06.8	+0.1
	9.5nm,1.3s						
ULM	Lac du Bonnet	72.42	12	eP	P	23 41 11.7	+5.0
	9.5nm,1.3s						
SADO	Sadowa	72.45	25	eP	P	23 41 06.2	-0.8
	22nm,1.5s						
SADO	Sadowa	72.45	25	eP	P	23 41 12.9	+6.0
	22nm,1.5s						
PECO	Prince Edward	72.64	27	eP	P	23 41 07.3	-0.8
	8.5nm,1.0s						
PECO	Prince Edward	72.64	27	eP	P	23 41 15.8	+7.7
	8.5nm,1.0s						
DZM	Mont Dzumac	73.42	252	eLR	LR	00 03 31.4	
	comp=Z,235nm,23.1s						
ACCN	Adirondack Com	73.67	29	eP	P	23 41 14.2	0.0
	10nm,1.0s						
ACCN	Adirondack Com	73.67	29	eP	P	23 41 21.6	+7.3
	10nm,1.0s						
BBB	Bella Bella	73.68	351	eP	P	23 41 13.5	-0.6
	23nm,1.5s						
BBB	Bella Bella	73.68	351	eP	P	23 41 18.9	+4.9
	23nm,1.5s						
NCB	Newcomb	73.88	29	eP	P	23 41 15.0	-0.4
	6.6nm,1.0s						
WES	Weston	74.02	31	eP	P	23 41 15.9	-0.3
	14nm,1.2s						
WES	Weston	74.02	31	eP	P	23 41 25.0	+8.8
	14nm,1.2s						
LONY	Lake Ozonia	74.23	28	eP	P	23 41 17.6	+0.1
	8.4nm,1.0s						
VNA3	Neumayer Olymp	74.97	161	P	P	23 41 20.8	-0.8
DIB	Dawson Inlet,	75.40	348	eP	P	23 41 24.7	+0.7
TRQ	Mont Tremblant	75.51	27	eP	P	23 41 23.9	-1.0
TRQ	Mont Tremblant	75.51	27	eP	P	23 41 30.7	+5.7
VNA1	Neumayer--Stat	75.61	161	P	P	23 41 25.2	0.0
MOQ	Mont Orford	75.81	29	eP	P	23 41 27.0	+0.3
MOQ	Mont Orford	75.81	29	eP	P	23 41 32.9	+6.3
FFC	Flin Flon	75.83	7	eP	P	23 41 26.8	+0.3
	102nm,1.3s						
VLDQ	Val d'Or	75.86	24	eP	P	23 41 26.7	-0.1
	11nm,1.3s						
RCBR	Riachuelo	76.62	91	eP	P	23 41 31.9	-0.1
	46nm,1.3s						
SNAA	Sanae	76.81	162	P	P	23 41 32.5	+0.4
SNAA	Sanae	76.81	162	eP	P	23 41 32.5	+0.4
	9.2nm,1.5s						
LHI	Lord Howe Isla	77.14	241	eP	P	23 41 33.9	-0.7
	381nm,1.9s						
HAL	Halifax	79.54	34	eP	P	23 41 47.8	+0.4
	120nm,1.9s						
HAL	Halifax	79.54	34	eP	P	23 41 55.4	+8.0
	120nm,1.9s						
LMN	Caledonia Moun	79.76	32	eP	P	23 41 48.0	-0.6
	71nm,1.9s						
DLBC	Dease Lake	80.02	351	eP	P	23 41 49.5	-0.3
	8.3nm,1.1s						
DLBC	Dease Lake	80.02	351	eP	P	23 41 56.0	+6.2
	8.3nm,1.1s						
FCC	Fort Churchill	80.86	10	eP	P	23 41 53.9	-0.2
	23nm,1.3s						
FCC	Fort Churchill	80.86	10	eP	P	23 42 01.7	+7.5
	23nm,1.3s						
BESE	Bessie Mountai	80.93	349	eP	P	23 41 54.1	-0.6
	7.4nm,0.8s						
BESE	Bessie Mountai	80.93	349	eP	P	23 42 00.9	+6.3
	7.4nm,0.8s						
TAU	Tasmania Unive	82.40	227	eP	P	23 42 02.5	-0.5
	298nm,1.9s						
KWAJ	Kwajalein Atol	82.59	282	eP	P	23 42 03.0	-1.3
	348nm,1.3s						
WHY	Whitehorse	82.90	350	eP	P	23 42 05.1	0.0
	17nm,1.9s						
WHY	Whitehorse	82.90	350	eP	P	23 42 12.2	+7.1
	17nm,1.9s						
YKA	Yellowknife Ar	82.95	360	P	P	23 42 05.4	+0.3
	0.7nm,0.8s,baz=180,slow=5.7,SNR=5.5						
YKA				LR	LR	00 14 45.4	
	comp=Z,9.1nm,19.4s,baz=189,slow=33						
YKB5	Yellowknife Ar	82.95	360	eP	P	23 42 05.4	+0.3
YKW3	Yellowknife Ar	83.02	360	eP	P	23 42 05.4	-0.1
	6.6nm,1.3s						
HYT	Haines Junctio	83.51	349	eP	P	23 42 08.0	-0.2
	8.0nm,1.4s						
ARMA	Armidale	83.55	240	eP	P	23 42 09.1	-0.2
	65nm,1.9s						
CHIR	Chirikof Islan	84.10	338	eP	P	23 42 10.4	-0.8
	108nm,1.1s						
KDAK	Kodiak Island	84.64	340	eP	P	23 42 13.6	-0.3
	54nm,1.6s						
RAGM	Ragged Mountai	84.65	345	eP	P	23 42 13.5	-0.5
	34nm,1.3s						
SCHQ	Schefferville	85.25	25	eP	P	23 42 17.0	-0.1
	52nm,1.8s						
FID	Port Fidalgo	85.40	345	eP	P	23 42 16.7	-1.0
	16nm,1.1s						
FID	Port Fidalgo	85.40	345	eP	P	23 42 26.6	+9.0
	16nm,1.1s						

CHGN	Chignik	85.47	337	*e*P	P	23 42 17.7	-0.3
	44nm,1.2s						
CHGN	Chignik	85.47	337	*e*P	P	23 42 26.3	+8.2
	44nm,1.2s						
SDPT	Sand Point	85.55	335	*e*P	P	23 42 18.4	-0.1
	59nm,0.9s						
SDPT	Sand Point	85.55	335	*e*P	P	23 42 27.8	+9.3
	59nm,0.9s						
SEW	Seward	85.63	343	*e*P	P	23 42 17.3	-1.5
	15nm,1.0s						
TOO	Toolangi	85.70	232	*e*P	P	23 42 19.4	-0.6
	41nm,1.4s						
H11S2	WAKE ISLAND Hy	87.11	291	T	T	01 18 40.2	
	baz=115,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	87.12	291	T	T	01 18 39.8	
	baz=115,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	87.13	291	T	T	01 18 41.4	
	baz=115,slow=75,SNR=15						
DOT	Dot Lake	87.38	347	*e*P	P	23 42 27.9	+0.5
	4.8nm,1.1s						
DOT	Dot Lake	87.38	347	*e*P	P	23 42 34.6	+7.3
	4.8nm,1.1s						
DHY	Denali Highway	87.62	345	*e*P	P	23 42 28.7	0.0
	6.3nm,1.3s						
RIDG	Independent Ri	87.63	347	*e*P	P	23 42 28.8	+0.2
	5.8nm,0.8s						
RIDG	Independent Ri	87.63	347	*e*P	P	23 42 37.6	+9.0
	5.8nm,0.8s						
SCRK	Sand Creek	87.66	347	*e*P	P	23 42 29.2	+0.4
	3.6nm,1.1s						
SCRK	Sand Creek	87.66	347	*e*P	P	23 42 37.5	+8.7
	3.6nm,1.1s						
SVW2	Sparrevohn	88.21	341	*e*P	P	23 42 31.7	+0.3
	4.1nm,0.7s						
PPLA	Purkeypile	88.69	343	*e*P	P	23 42 33.5	-0.2
	6.0nm,0.7s						
ILAR	Eielson Array	88.97	346	P	P	23 42 34.9	0.0
	0.3nm,0.8s,baz=190,slow=4.4,SNR=4.4						
ILB	Eielson Array	88.97	346	*e*P	P	23 42 34.9	0.0
	5.5nm,1.6s						
WRH	Wood River Hil	88.98	346	*e*P	P	23 42 35.7	+0.7
	6.3nm,1.1s						
BWN	Browne	89.05	345	*e*P	P	23 42 35.4	+0.1
	71nm,1.3s						
CCB	Clear Creek Bu	89.07	346	*e*P	P	23 42 35.5	+0.2
	9.9nm,1.7s						
CAST	Castle Rocks	89.08	344	*e*P	P	23 42 36.0	+0.5
	3.1nm,0.8s						
CAST	Castle Rocks	89.08	344	*e*P	P	23 42 42.5	+7.1
	3.1nm,0.8s						
MLY	Manley	90.08	345	*e*P	P	23 42 40.2	+0.1
	2.6nm,1.0s						
MLY	Manley	90.08	345	*e*P	P	23 42 49.5	+9.4
	2.6nm,1.0s						
ADK	Adak	90.69	327	*e*P	P	23 42 43.5	+0.4
	17nm,1.0s						
SONA0	Songino Array	137.91	320	*e*PKPdf	PKiKP	23 49 06.7	-0.7
SONM	Songino Array	137.91	320	PKP	PKiKP	23 49 06.7	-0.7
	0.6nm,0.7s,baz=112,slow=1.6,SNR=3.6						
AKASG	Malin Array Be	138.32	35	PKP	PKiKP	23 49 07.5	-0.4
	1.3nm,0.7s,baz=289,slow=3.0,SNR=4.1						
LZH	Lanzhou	143.81	303	*e*PKP	PKiKP	23 49 30.3	+10
LZH				sPKP		23 49 42.3	
LZH				SKKS		23 59 16.6	
ZAA1	Zalesovo Array	143.93	341	*e*pPKPdf	pPKPdf	23 49 18.3	+0.1
ZALV	Zalesovo Beam	143.94	341	PKhKP	PKPpre	23 49 13.4	
	2.0nm,0.7s,baz=12,slow=3.3,SNR=7.1						
ZALV				PKP	pPKPdf	23 49 18.3	+0.1
	6.0nm,0.8s,baz=40,slow=1.7,SNR=13						
BR101	Keskin Array S	146.33	49	*e*PKPbc	PKPbc	23 49 21.9	0.0
BRTR	Keskin Array B	146.33	49	PKPbc	PKPbc	23 49 21.9	0.0
	3.3nm,1.1s,baz=258,slow=3.4,SNR=6.4						
KURBB	Kurchatov Arra	148.64	345	PKP	PKPdf	23 49 23.9	-0.1
	4.2nm,0.8s,baz=17,slow=2.2,SNR=14						
KURBB				PKPbc	sPKPdf	23 49 27.2	+0.1
	4.4nm,0.8s,baz=22,slow=2.1,SNR=36						
AKTO	Aktyubinsk	149.66	10	PKPbc	PKPbc	23 49 30.3	+0.1
	1.0nm,0.6s,baz=270,slow=3.0,SNR=3.0						
KBZ	Khabaz	149.94	35	PKPbc	PKiKP	23 49 32.3	+0.3
	3.4nm,0.9s,baz=218,slow=3.9,SNR=4.6						
WMQ	Urumqi	150.86	327	*e*PKPbc	PKPab	23 49 50.1	+9.5
WMQ				LR	LR		
	comp=N,120nm,28.7s						
WMQ				LR	LR		
	comp=Z,87nm,23.5s						
MK32	Makanchi Array	150.90	337	*e*PKPbc	PKPbc	23 49 32.9	-0.5
MKAR	Makanchi Array	150.90	337	PKPbc	PKPbc	23 49 32.9	-0.5
	5.9nm,0.7s,baz=30,slow=1.8,SNR=38						
MAKZ	Makanchi	151.00	337	*e*PKPbc	PKPbc	23 49 33.0	-0.6
ABKAR	Akbulak array	151.10	9	*e*PKPbc	PKPbc	23 49 33.8	+0.1

NNC 18 23:30:41.2±3.9**, 43°.19N×87°.72E, h0^{km}, mb3.8, mpv3.4, 9C-3D, Error ellipse: s-maj=31.3km s-min=21.5km az=121.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	4.71	336	Pg	Pg	23 32 10.8	-0.7
	2.6nm,0.3s						
ZSN				Lg	Lg	23 33 14.1	
	4.3nm,0.7s						
MK31	Makanchi Array	5.28	315	Pn	Pn	23 32 02.7	+1.4
	0.6nm,0.2s,baz=126,slow=14,SNR=51						
MK31				⇑Sn	Sn	23 33 04.3	+1.5
	2.4nm,0.4s						
MK31				⇑Lg	Lg	23 33 23.9	
	26nm,0.8s						
KTMS	Ketmen	5.38	275	Pg	Pb	23 32 15.2	-1.0
	5.2nm,0.5s						
KTMS				Lg	Lg	23 33 21.3	
	14nm,0.7s						
MAKZ	Makanchi	5.45	314	⇑Pn	Pn	23 32 05.0	+1.3
	1.5nm,0.3s						
MAKZ				⇑Lg	Lg	23 33 30.4	
	8.8nm,0.8s						
PDGK	Podgornoye	6.01	274	Pg	Pb	23 32 27.3	+0.5
	1.0nm,0.5s						
PDGK				Lg	Lg	23 33 42.2	
	9.1nm,0.9s						
PDGK	Podgornoye	6.01	274	⇓Pn	Pn	23 32 10.9	-0.6
	1.6nm,0.3s						
PDGK				⇓Sn	Sn	23 33 22.7	+1.6
	5.8nm,0.5s						
PDGK				⇑Lg	Lg	23 33 52.2	
	29nm,0.9s						
KURBB	Kurchatov Arra	9.73	323	⇓Pn	Pn	23 33 01.3	-1.1
	1.3nm,0.6s						
KURBB				⇑Sn	Sn	23 34 52.1	-0.3
	5.2nm,0.7s						
KURBB				⇑Lg	Lg	23 35 43.2	
	9.7nm,0.8s						
KURK	Kurchatov	9.76	324	⇑Pn	Pn	23 33 01.2	-1.5
	3.0nm,1.1s						
KURK				⇑Lg	Lg	23 35 40.5	
	5.2nm,0.8s						

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*IDC **18** 23:34:34.8±0.9, 10°.18S×161°.24E, h0^{km}, mb3.8/11, mb1 4.0/11, mb1mx3.8/44, mbtmp3.8/11, MS3.1/1, Ms1 3.1/1, ms1mx2.7/23, Error ellipse: s-maj=23.2km s-min=19.7km az=82.0*

*ISCJB **18** 23:34:41.7±0.3, 10°.12S±0°.05×161°.10E±0°.05, h67^{km}, mb4.5/32, Error ellipse: s-maj=7.3km s-min=5.7km az=139.0*

*NEIC **18** 23:34:42.1±1.8, 10°.06S×161°.10E, h53^{km}±7^{km}, mb4.6/23, Error ellipse: s-maj=14.6km s-min=10.8km az=221.0*

ISC 18 23:34:43.3±0.4**, 10°.09S**±0°.07×**161°.08E**±0°.07**, h67^{km}, n50, σ1^{s}.20**/52**, mb4.7**/32**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.29	300	Pn	Pn	23 35 03.8	-1.6
	793nm,0.3s,baz=153,slow=4.5,SNR=128						
HNR				Sn	Sn	23 35 22.2	+0.1
	880nm,0.3s,baz=189,slow=23,SNR=14						
HNR				LR	LR	23 35 30.2	
	comp=Z,214nm,19.6s,baz=226,slow=38						
HNR	Honiara	1.29	300	*i* P	Pn	23 35 04.0	-1.5
HNR				*i* S	Sn	23 35 22.0	-0.1
RABL	Rabaul	10.61	303	*e*Pn	Pn	23 37 11.7	-1.0
DZM	Mont Dzumac	12.98	157	Pn	Pn	23 37 43.5	-1.5
	0.3nm,0.3s,baz=18,slow=13,SNR=10						
DZM				LR	LR	23 42 11.0	
	comp=Z,89nm,19.4s,baz=0.5,slow=36						
MARNC	Mare, Loyalty	13.15	150	*e*Pn	Pn	23 37 45.6	-1.6
ONTNC	Ouen Toro	13.20	158	*e*Pn	Pn	23 37 46.0	-1.9
PMG	Port Moresby	13.74	272	*e*Pn	Pn	23 37 54.8	-0.4
PINNC	Pines Island,	13.87	155	*e*Pn	Pn	23 37 55.6	-1.2
CTA	Charters Tower	17.42	233	P	P	23 38 45.0	+2.7
	0.4nm,0.3s,baz=53,slow=10,SNR=3.3						
KWAJ	Kwajalein Atol	19.86	19	*e*P	P	23 39 08.2	-0.8
	305nm,1.1s						
ARMA	Armidale	22.07	202	*e*P	P	23 39 32.9	0.0
	35nm,1.6s						
OUZ	Omahuta	27.50	157	*e*P	P	23 40 21.9	-1.5
	25nm,1.5s						
WB2	Warramunga Arr	27.58	246	*e*P	P	23 40 24.8	+0.4
	18nm,1.5s						
WR1	Warramunga Arr	27.59	246	*e*P	P	23 40 25.1	+0.7
WRA	Warramunga Arr	27.59	246	P	P	23 40 25.1	+0.7
	1.4nm,0.7s,baz=81,slow=9.1,SNR=6.0						
KNTN	Kanton	27.97	77	*e*P	P	23 40 27.0	-0.8
	401nm,1.6s						
ASAR	Alice Springs	29.23	239	P	P	23 40 37.8	-1.3
	0.3nm,0.4s,baz=64,slow=11,SNR=6.4						
FAKI	Fak Fak	29.50	282	*e*P	P	23 40 40.5	-1.0
	56nm,1.4s						
SNZO	South Karori	33.34	161	*e*P	P	23 41 16.0	+1.0
	76nm,0.8s						
DCZ	Deep Cove	35.64	173	*e*P	P	23 41 36.1	+1.4
MLZ	Mavora Lakes	35.67	171	*e*P	P	23 41 36.1	+1.0
	71nm,0.7s						
JAGI	Jajag, Banyuwa	46.31	268	*e*P	P	23 43 02.4	-0.6
	58nm,1.0s						
PPT	Papeete	48.37	105	*e*P	P	23 43 18.4	-0.5
NACB	Ninganchiao	51.45	312	*e*P	P	23 43 40.7	-1.3
	19nm,0.7s						
HLP	Hilina Pali	51.95	56	*e*P	P	23 43 45.4	-0.6
	195nm,1.1s						
BYL	Byron's Ledge	52.05	56	*e*P	P	23 43 47.2	+0.4
	143nm,0.9s						
SBLHI	Steaming Bluff	52.05	56	*e*P	P	23 43 47.5	+0.7
	813nm,2.0s						
USRK	Ussuriysk Ar.	60.13	336	P	P	23 44 45.7	+1.9
	0.4nm,0.4s,baz=151,slow=3.3,SNR=4.5						
PETK	Petropavlovsk-	63.01	358	P	P	23 45 05.3	+2.2
	0.4nm,0.5s,baz=180,slow=6.6,SNR=2.4						
PEA1	Petropavlovsk-	63.01	358	*e*P	P	23 45 05.3	+2.2
KLR	Kul'dur	64.44	339	P	P	23 45 14.6	+2.1
	0.9nm,0.5s,baz=184,slow=15,SNR=3.9						
VNDA	Vanda	67.42	180	P	P	23 45 32.3	+1.0
	0.4nm,0.5s,baz=2.4,slow=3.7,SNR=5.3						
SONA0	Songino Array	75.23	325	*e*P	P	23 46 19.9	+0.9
SONM	Songino Array	75.23	325	P	P	23 46 19.9	+0.9
	0.5nm,0.6s,baz=133,slow=7.9,SNR=3.4						
QSPA	South Pole Qui	79.91	180	*e*P	P	23 46 45.7	+0.8
	3.1nm,0.8s						
SML	Sawmill	81.73	22	*e*P	P	23 46 54.3	-0.1
	29nm,1.6s						
FID	Port Fidalgo	81.76	23	*e*P	P	23 46 55.2	+0.6
	15nm,0.9s						
WRH	Wood River Hil	83.53	20	*e*P	P	23 47 04.2	+0.6
	15nm,1.9s						
MAW	Mawson	83.87	202	P	P	23 47 06.2	+0.8
	0.9nm,0.7s,baz=80,slow=6.6,SNR=5.9						
MAW	Mawson	83.87	202	*e*P	P	23 47 06.2	+0.8
	3.1nm,1.6s						
ILAR	Eielson Array	84.12	20	P	P	23 47 06.9	+0.3
	0.3nm,0.4s,baz=243,slow=4.9,SNR=5.6						
HYT	Haines Junctio	85.46	26	*e*P	P	23 47 14.1	+0.5
	15nm,1.7s						
BESE	Bessie Mountai	85.56	28	*e*P	P	23 47 13.8	-0.2
	16nm,1.2s						
SAO	San Andreas Ge	86.11	52	*e*P	P	23 47 16.4	-0.8
	9.5nm,0.9s						
WHY	Whitehorse	86.51	26	*e*P	P	23 47 20.3	+1.5
	19nm,1.9s						
NV01	Mina Array Sit	88.94	51	*e*P	P	23 47 29.9	-1.2
NVAR	Mina Array Bea	88.94	51	P	P	23 47 29.9	-1.2
	0.2nm,0.5s,baz=291,slow=5.3,SNR=2.5						
MK32	Makanchi Array	89.71	318	*e*P	P	23 47 34.4	+0.2
MKAR	Makanchi Array	89.71	318	P	P	23 47 34.4	+0.2
	0.3nm,0.7s,baz=96,slow=5.8,SNR=4.0						
KDJ	Kajisay	92.20	312	*e*P	P	23 47 44.2	-2.0
	13nm,1.4s						

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*SJA **18** 23:38:46.6±0.8, 24°.15S×66°.91W, h208^{km}±8^{km}, ML2.7, MW3.3*

*IDC **18** 23:38:46.7±1.2, 24°.26S×66°.89W, h185^{km}±20^{km}, mb3.3/1, mb1 3.3/6, mb1mx3.1/27, mbtmp3.7/6, MS2.9/1, Ms1 2.9/1, ms1mx2.4/11, Error ellipse: s-maj=28.6km s-min=14.4km az=87.0*

*ISCJB **18** 23:38:48.5±0.4, 24°.18S±0°.05×66°.99W±0°.05, h181^{km}, mb3.3/1, Error ellipse: s-maj=8.5km s-min=4.8km az=39.1*

ISC 18 23:38:47.1±0.9**, 24°.22S**±0°.06×**66°.99W**±0°.05**, h181^{km}, n25, σ1^{s}.94**/28**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.44	111	*e*P	Pn	23 39 21.4	+2.6
SLA				*e*S	Sn	23 39 46.2	+3.0
SLA				IAML		23 39 47.2	
	comp=Z,28nm,0.6s						
AZAP	Zapla	1.75	91	*e*P	Pn	23 39 23.4	+1.4
AZAP				IAML		23 39 24.0	
	comp=Z,24nm,0.2s						
AZAP				*e*S	Sn	23 39 51.0	+2.2
FSA	Cafayete	2.09	154	*e*P	Pn	23 39 27.5	+2.0
FSA				IAML		23 39 30.2	
	comp=Z,15nm,0.3s						
FSA				*e*S	Sn	23 39 58.5	+3.1
LVC	Limon Verde	2.39	312	P	Pn	23 39 30.9	+1.9
	comp=Z,7.2nm,0.3s,baz=123,slow=7.9,SNR=145						
LVC				S	Sn	23 40 03.2	+1.8
	comp=Z,21nm,0.3s,baz=331,slow=15,SNR=40						
LVC	Limon Verde	2.39	312	*e*P	Pn	23 39 31.1	+2.1
LVC				IAML		23 40 05.1	
	comp=Z,38nm,0.1s						
YJA	Yavi	2.44	34	*e*P	Pn	23 39 30.8	+1.1
PB15	IPOC Station P	2.49	293	*e*P	Pn	23 39 32.3	+2.3
PB06	IPOC Station P	2.81	302	*e*P	Pn	23 39 35.5	+1.7
AHML	Horco Molle	2.96	150	*e*P	Pn	23 39 37.2	+1.9
AHML				IAML		23 39 37.9	
	comp=Z,22nm,0.4s						
PB14	IPOC Station P	3.14	262	*e*P	Pn	23 39 39.8	+2.0
PB09	IPOC Station P	3.18	319	*e*P	Pn	23 39 40.2	+1.9
PB05	IPOC Station P	3.25	294	*e*P	Pn	23 39 40.4	+1.3
PB03	IPOC Station P	3.34	310	*e*P	Pn	23 39 41.5	+1.2
PB10	IPOC Station P	3.34	281	*e*P	Pn	23 39 42.3	+2.2
PB04	IPOC Station P	3.46	302	*e*P	Pn	23 39 43.2	+1.4
PB07	IPOC Station P	3.65	312	*e*P	Pn	23 39 44.9	+0.9
PB02	IPOC Station P	3.94	316	*e*P	Pn	23 39 48.7	+1.0
CYA	Choya	4.34	166	*e*P	Pn	23 39 54.4	+1.8
CFA	Coronel Fontan	7.44	188	P	Pn	23 40 33.5	+0.4
	comp=Z,1.1nm,0.3s,baz=10,slow=15,SNR=41						
CFA				S	Sn	23 41 54.7	-2.2
	comp=Z,1.1nm,0.3s,baz=103,slow=22,SNR=9.2						
LPAZ	La Paz	7.96	352	P	Pn	23 40 39.9	-0.7
	comp=Z,1.0nm,0.3s,baz=176,slow=9.5,SNR=28						
SIV	San Ignacio	9.89	35	P	Pn	23 41 05.8	+0.5
	comp=Z,0.1nm,0.3s,baz=225,slow=17,SNR=3.0						
BDFB	Brasilia	19.75	68	P	P	23 43 02.2	-1.3
	comp=Z,0.4nm,0.3s,baz=230,slow=9.1,SNR=6.4						
PTGA	Pitinga	24.32	17	LR	LR	23 52 58.3	
	comp=Z,30nm,21.7s,baz=249,slow=35						
TORD	Torodi Ar. Bea	76.63	69	P	P	23 50 15.6	-2.7
	comp=Z,0.9nm,1.1s,baz=245,slow=5.2,SNR=5.7						
MKAR	Makanchi Array	146.68	40	PKPbc	PKPab	23 58 07.3	-1.8
	comp=Z,0.6nm,0.5s,baz=295,slow=3.5,SNR=6.0						

WEL 18 23:40:32.0, 43°S±1°×**17°2E**±°**, h9^{km}**±1^{km}**, M3.8**/23**, ML4.0**/16**, MLv3.8**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=126.7, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OXZ	Oxford	0.14	150	P	Pg	23 40 36.3	+1.3
OXZ				S	Sg	23 40 39.2	+2.1
EYCZ	Eyrewell	0.37	125	P	Pb	23 40 40.8	+0.1
MHCZ	Mount Hutt	0.42	220	P	Pb	23 40 42.0	+0.3
LTZ	Lake Taylor	0.49	29	P	Pg	23 40 41.8	+0.3
LTZ				S	Sg	23 40 48.5	+0.6
AMCZ	Amberley	0.52	87	P	Pb	23 40 43.4	+0.2
AMCZ				S	Sb	23 40 50.7	-0.2
INZ	Inchbonnie	0.61	323	P	Pg	23 40 44.1	+0.3
CRLZ	Canterbury Las	0.61	127	P	Pb	23 40 45.5	+0.6
MQZ	McQueen's Vall	0.72	134	P	Pb	23 40 47.0	+0.4
WACZ	Wakanui South	0.74	186	P	Pn	23 40 48.2	-0.4
RPZ	Rata Peaks	0.82	232	P	Pn	23 40 49.2	-0.6
GVZ	Greta Valley S	0.83	74	P	Pn	23 40 49.3	-0.6
GVZ				S	Sn	23 41 01.4	-0.9
WVZ	Waitaha Valley	0.89	278	P	Pb	23 40 49.9	+0.2
OKCZ	Okains Bay	0.96	123	P	Pn	23 40 51.3	-0.4
AKCZ	Akaroa Harbour	0.96	134	P	Pn	23 40 51.4	-0.4
DSZ	Denniston Nort	1.47	356	P	Pb	23 40 59.7	+0.2
FOZ	Fox Glacier	1.59	258	*e*P	Pg	23 41 02.5	+0.1
	496nm,0.9s						
FOZ	Fox Glacier	1.59	258	P	Pg	23 41 02.2	-0.2
THZ	Tophouse	1.61	26	P	Pb	23 41 01.3	-0.6
LBZ	Lake Benmore	1.73	227	P	Pn	23 41 02.7	+0.3
ODZ	Otahua Downs	2.06	207	P	Pn	23 41 06.6	-0.2
BSWZ	Blackbirch Sta	2.07	44	P	Pn	23 41 07.6	+0.7
NNZ	Nelson	2.26	29	P	Pn	23 41 10.9	+1.4
TUWZ	Tuamarina	2.31	40	P	Pn	23 41 12.0	+1.8
QRZ	Quartz Range	2.42	11	P	Pn	23 41 12.4	+0.6
JCZ	Jackson Bay	2.45	248	P	Pn	23 41 13.4	+1.1
TCW	Tory Channel	2.64	42	P	Pn	23 41 15.5	+0.7
WKZ	Wanaka	2.66	232	P	Pn	23 41 14.9	-0.2
EAZ	Earnscleugh	2.77	222	P	Pn	23 41 16.4	-0.1
BHW	Baring Head	2.82	51	P	Pn	23 41 18.5	+1.3
DUWZ	D'Urville Isla	2.82	32	P	Pn	23 41 18.9	+1.7
HHSZ	Highcliff Hill	2.84	199	P	Pn	23 41 16.8	-0.8
PLWZ	Palliser	2.95	57	P	Pn	23 41 17.3	-1.8
TUZ	Tuapeka	3.20	210	P	Pn	23 41 22.6	+0.1
MTW	Mount Morrison	3.34	53	P	Pn	23 41 23.3	-1.1
OGWZ	Otaki Gorge	3.39	46	P	Pn	23 41 24.8	-0.2
MLZ	Mavora Lakes	3.49	231	P	Pn	23 41 27.0	+0.5
MRZ	Mangatainoka R	3.72	48	P	Pn	23 41 27.8	-1.8
SYZ	Scrubby Hill	3.88	210	P	Pn	23 41 31.6	-0.1
BFZ	Birch Farm	4.08	53	P	Pn	23 41 33.9	-0.7
NBEZ	Newall Road No	4.20	21	P	Pn	23 41 37.3	+1.2
KHEZ	Kahui Hut	4.21	22	P	Pn	23 41 38.7	+2.2
PKE	Pukeiti	4.30	22	P	Pn	23 41 40.0	+2.4
APZ	The Paps	4.58	216	P	Pn	23 41 39.9	-1.5
VRZ	Vera Road	4.60	28	P	Pn	23 41 45.7	+4.0
WHVZ	Whangaehu Hut	4.79	36	P	Pn	23 41 46.7	+2.1

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*NIED **18** 23:44:00, 39°.00N×142°.10E, h56^{km}, Mw4.8 Best double couple: M$_{0}$1.71000×10^{16} NP1:ϕ$_{s}$51.00000°, δ44.00000°, λ124.00000°. NP2:ϕ$_{s}$188.00000°, δ55.00000°, λ61.00000°.*

*BJI **18** 23:44:07.8±0.0, 38°.91N×142°.52E, h45^{km}, mb5.0/58, mB4.9/33, Ms4.3/46, Ms7 4.1/43*

*MOS **18** 23:44:08.7±1.0, 38°.92N×142°.12E, h31^{km}, mb5.0/51, Error ellipse: s-maj=7.2km s-min=4.1km az=100.1*

*ISCJB **18** 23:44:12.7±0.3, 39°.05N±0°.02×142°.06E±0°.03, h60^{km}±2^{km}, mb4.8/110, MS4.0/26, Error ellipse: s-maj=4.2km s-min=2.8km az=143.3*

*JMA **18** 23:44:12.9, 39°.01N×142°.15E, h52^{km}±1^{km}, M4.9 Broadband fault plane solution: P waves. NP1: ϕ$_{s}$166.00000°, δ68.00000°, λ40.00000°. NP2:ϕ$_{s}$59.00000°, δ54.00000°, λ153.00000°. Principal axes: T Plg43.0000°, Azm28.0000°; N Plg46.0000°, Azm190.0000°; P Plg9.0000°, Azm289.0000°;*

JMA Felt III J1.

*GCMT **18** 23:44:13.7±0.5, 39°.09N±0°.03×142°.14E±0°.04, h44^{km}±1^{km}, MW4.8/62, Moment Tensor Solution. s21,c24; s62,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.63±.16; M$_{\theta\theta}$-0.09±.11; M$_{\phi\phi}$-1.54±.11; M$_{r\theta}$0.61±.08; M$_{\theta\phi}$-0.95±.07; M$_{\phi r}$-1.04±.08; Best double couple: M$_{0}$2.20700×10^{16} NP1:ϕ$_{s}$180.00000°, δ61.00000°, λ59.00000°. NP2: ϕ$_{s}$51.00000°, δ41.00000°, λ133.00000°. Principal axes: T 2.2710, Plg61.0000°, Azm42.0000°; N -0.1290, Plg27.0000°, Azm196.0000°; P -2.1430, Plg11.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 23:44:13.7±1.8, 39°.06N×142°.18E, h55^{km}±3^{km}, mb5.0/224 Error ellipse: s-maj=13.8km s-min=7.5km az=122.0*

NEIC Felt at Furukawa and Morioka. Recorded [3 JMA] in Aomori, Iwate and Miyagi.

*IDC **18** 23:44:15.2±1.4, 39°.02N×142°.01E, h72^{km}±12^{km}, mb4.4/36, mb1 4.6/42, mb1mx4.5/55, mbtmp4.7/42, MS3.9/19, Ms1 3.9/19, ms1mx3.8/27, Error ellipse: s-maj=11.3km s-min=8.7km az=150.0*

ISC 18 23:44:13.0±0.6**, 39°.06N**±0°.03×**142°.12E**±0°.04**, h52^{km}**±4^{km}**, h52^{km}:pP-P, n588, σ1^{s}.25**/631**, mb4.8**/116**, MS4.1**/28**, 37C-23D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.35	274	⇑P	Pn	23 44 23.0	+0.3
OFUJ				S	Sn	23 44 30.1	+0.4
JKMT	Kesennumamotoy	0.56	244	⇑P	Pn	23 44 24.8	-0.2
JKMT				S	Sn	23 44 33.3	-0.4
MIYJ	Miyakonagasawa	0.56	336	⇓P	Pn	23 44 25.6	+0.5
MIYJ				S	Sn	23 44 34.5	+0.6
JMK	Ichinoseki	0.71	262	⇓P	Pn	23 44 27.0	+0.2
JMK				S	Sn	23 44 37.3	+0.4
JOM	Ohasama	0.76	303	⇓P	Pn	23 44 28.1	+0.5
JOM				S	Sn	23 44 39.4	+1.2
JIO	Ouri	0.85	225	⇑P	Pn	23 44 28.2	-0.5
JIO				S	Sn	23 44 39.3	-1.0
JTH	Tanohata	0.90	348	⇓P	Pn	23 44 29.9	+0.5
JTH				S	Sn	23 44 43.2	+1.7
JRG	Rokugo	1.20	287	⇓P	Pn	23 44 33.9	+0.5
JRG				*e*S	Sn	23 44 50.1	+1.5
JOU	Okura	1.33	239	⇓P	Pn	23 44 35.2	0.0
JOU				S	Sn	23 44 52.8	+1.0
JYK	Kaneyama	1.38	265	⇓P	Pn	23 44 36.2	+0.4
JYK				*e*S	Sn	23 44 53.8	+0.9
JANG	Nango	1.39	341	⇑P	Pn	23 44 36.8	+0.8
JANG				S	Sn	23 44 54.5	+1.2
JMM	Marumori	1.58	221	⇑P	Pn	23 44 37.8	-0.8
JMM				S	Sn	23 44 57.4	-0.5
ERM	Erimo	3.06	15	*e*Pn	Pn	23 44 58.2	-0.5
ERM	Erimo	3.06	15	c*e*P	Pn	23 44 59.5	+0.7
ERM				pmax	pmax		
	comp=Z,105nm,1.0s						
MAJO	Matsushiro	3.99	232	*e*Pn	Pn	23 45 12.6	+1.0
MAJO				*e*Sn	Sn	23 45 57.2	+0.1
MAJO	Matsushiro	3.99	232	*e*P	Pn	23 45 12.6	+1.0
MAJO				*e*		23 45 57.2	
MAT	Matsushiro	3.99	232	P	Pn	23 45 13.6	+2.0
MAT				S	Sn	23 45 57.8	+0.8
MJAR	Matsushiro Arr	3.99	232	P	Pn	23 45 13.6	+2.0
	comp=Z,6.3nm,0.3s,baz=38,slow=11,SNR=325						
MJAR				S	Sn	23 45 57.2	+0.1
	comp=Z,1.9nm,0.3s,baz=68,slow=31,SNR=4.2						
MJAR				LR	LR	23 46 58.7	
	comp=Z,2µm,20.4s,baz=55,slow=42						
MJB9	Matsu-Tunnel	3.99	232	*e*Pn	Pn	23 45 12.9	+1.3
ASAJ	Asahikawa	5.07	4	P	Pn	23 45 28.0	+1.7
	comp=Z,12nm,0.3s,baz=203,slow=13,SNR=21						
ASAJ				S	Sn	23 46 21.4	-2.1
	comp=Z,16nm,0.3s,baz=72,slow=20,SNR=3.5						
GLVR	Golovnino	5.33	28	⇓*i*P	Pn	23 45 28.9	-1.0
GLVR				*i* S	Sn	23 46 26.8	-3.1
GLVR				pmax	pmax		
	comp=Z,736nm,0.5s						
GLVR				pmax	pmax		
	comp=E,90nm,0.3s						
GLVR				pmax	pmax		
	comp=N,106nm,0.2s						
GLVR				smax	smax		
	comp=N,3µm,0.3s						
GLVR				smax	smax		
	comp=E,950nm,0.2s						
INU	Inuyama	5.50	229	*e*Pn	Pn	23 45 34.0	+1.6
GRPR	Tuman	5.64	28	⇓*i*P	Pn	23 45 32.7	-1.5
GRPR				*i* S	Sn	23 46 32.7	-4.9
GRPR				pmax	pmax		
	comp=N,240nm,0.2s						
GRPR				pmax	pmax		
	comp=E,169nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,525nm,0.2s						
GRPR				smax	smax		
	comp=E,2µm,0.4s						
GRPR				smax	smax		
	comp=N,969nm,0.3s						
LAGR	Lagunnoye	5.70	28	⇑*i*P	Pn	23 45 34.1	-0.9
LAGR				*i* S	Sn	23 46 36.0	-3.0
LAGR				pmax	pmax		

	comp=Z,753nm,0.3s						
LAGR				pmax	pmax		
	comp=N,306nm,0.4s						
LAGR				pmax	pmax		
	comp=E,515nm,0.4s						
LAGR				smax	smax		
	comp=E,3µm,0.3s						
LAGR				smax	smax		
	comp=N,3µm,0.7s						
YUK	Yuzh-Kuril'sk	5.71	28	iP	Pn	23 45 33.5	-1.6
YUK				iS	Sn	23 46 35.0	-4.3
YUK				pmax	pmax		
	comp=N,407nm,0.2s						
YUK				pmax	pmax		
	comp=E,238nm,0.2s						
YUK				pmax	pmax		
	comp=Z,531nm,0.2s						
YUK				smax	smax		
	comp=N,3µm,0.5s						
YUK				smax	smax		
	comp=E,1µm,0.5s						
TEY	Ternei	7.24	327	⇑eP	Pn	23 45 59.3	+3.2
TEY				pmax	pmax		
	comp=N,20nm,0.6s						
TEY				pmax	pmax		
	comp=Z,30nm,0.5s						
KUR	Kuril'sk	7.50	33	⇑iP	Pn	23 45 58.6	-1.1
KUR				iS	Sn	23 47 19.7	-3.6
KUR				pmax	pmax		
	comp=Z,199nm,0.4s						
KUR				pmax	pmax		
	comp=E,39nm,0.1s						
KUR				pmax	pmax		
	comp=N,63nm,0.5s						
KUR				smax	smax		
	comp=E,485nm,0.5s						
KUR				smax	smax		
	comp=N,270nm,0.7s						
YSS	Yuzh-Sakhalins	7.90	3	ePn	Pn	23 46 06.4	+1.2
YSS	Yuzh-Sakhalins	7.90	3	eP	Pn	23 46 05.6	+0.4
YSS				iS	Sn	23 47 33.3	+0.1
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,12.0s						
VLA	Vladivostok	8.72	301	deP	Pn	23 46 18.3	+1.9
MSHR	Mys Shultsa	9.02	296	⇑eP	Pn	23 46 21.0	+0.5
USA0B	Ussuriysk Arra	9.15	307	ePn	Pn	23 46 24.0	+1.7
USRK	Ussuriysk Ar.	9.15	307	P	Pn	23 46 24.0	+1.7
	comp=E,9.1nm,0.3s,baz=120,slow=15,SNR=120						
USRK				LR	LR	23 49 43.7	
	comp=E,894nm,20.6s,baz=117,slow=36						
JNU	Nakatsue	10.85	240	P	Pn	23 46 46.9	+1.3
	comp=E,1.4nm,0.3s,baz=46,slow=2.1,SNR=9.0						
JNU				LR	LR	23 51 17.4	
	comp=E,567nm,20.0s,baz=44,slow=39						
JNU	Nakatsue	10.85	240	ePn	Pn	23 46 44.2	-1.4
MDJ	Mudanjiang	10.86	305	P	Pn	23 46 49.9	+4.2
MDJ				pP		23 46 59.6	
MDJ				sP		23 47 07.1	
MDJ				pmax	pmax		
	comp=E,58nm,1.4s						
MDJ				LR	LR		
	comp=E,370nm,20.6s						
MDJ				LR	LR		
	comp=E,640nm,17.7s						
MDJ				LR	LR		
	comp=E,1µm,16.7s						
KSRS	Korea Array	11.28	266	P	Pn	23 46 54.5	+3.2
	comp=E,0.9nm,0.3s,baz=77,slow=13,SNR=27						
KSRS				LR	LR	23 50 44.4	
	comp=E,614nm,21.9s,baz=70,slow=35						
KS15	Wonju Array Si	11.31	266	ePn	Pn	23 46 50.8	-1.0
TJN	Taejon	11.99	262	⇑eP	Pn	23 47 00.0	-1.0
GRNR	Gornyy	12.38	343	eP	Pn	23 47 08.8	+2.5
KLR	Kul'dur	12.59	327	P	Pn	23 47 09.8	+0.7
	comp=E,0.4nm,0.3s,baz=128,slow=13,SNR=15						
KLR				LR	LR	23 52 06.1	
	comp=E,712nm,18.3s,baz=140,slow=37						
KLR	Kul'dur	12.59	327	deP	Pn	23 47 10.0	+0.8
SNY	Shenyang	14.38	287	⇑P	P	23 47 38.4	-0.8
SNY				S	S	23 50 23.3	-5.9
SNY				pmax	pmax		
	comp=E,16nm,0.5s						
SNY				pmax	pmax		
	comp=E,190nm,5.8s						
SNY				LR	LR		
	comp=E,320nm,21.0s						
SNY				LR	LR		
	comp=E,420nm,20.0s						
SNY				LR	LR		
	comp=E,940nm,22.9s						
SKR	Severo-Kuril's	15.25	36	⇑eP	Pn	23 47 45.1	+0.3
DL2	Dalian	15.93	276	P	Pn	23 47 53.3	-0.4
DL2				S	Sn	23 50 46.9	-2.3
DL2				pmax	pmax		
	comp=E,99nm,1.3s						
DL2				pmax	pmax		
	comp=E,190nm,10.1s						
DL2				LR	LR		
	comp=E,220nm,24.6s						
DL2				LR	LR		
	comp=E,420nm,17.1s						
DL2				LR	LR		
	comp=E,530nm,19.0s						
PETK	Petropavlovsk-	17.67	32	P	Pn	23 48 11.7	-3.5
	comp=E,0.6nm,0.3s,baz=201,slow=9.2,SNR=13						
PETK				PcP	PcP	23 52 51.0	-0.3
	comp=E,0.0nm,0.3s,baz=48,slow=2.1,SNR=3.9						
PETK				LR	LR	23 55 50.5	
	comp=E,206nm,18.2s,baz=219,slow=39						
PEA1	Petropavlovsk-	17.67	32	eP	Pn	23 48 11.7	-3.5
PEA1				ePcP	PcP	23 52 51.0	-0.3
ZEA	Zeya	17.85	330	eP	Pn	23 48 15.2	-2.2
ZEA				e		23 51 34.0	
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
PET	Petropavlovsk	18.02	34	eP	Pn	23 48 20.4	+1.0
PET				eS	Sn	23 51 40.8	+1.5
PET				pmax	pmax		
	comp=Z,100nm,3.6s						
PET				pmax	pmax		
	comp=Z,100nm,12.4s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
HIA	Hailar	18.95	310	diP	P	23 48 30.1	+0.4
TIA	Tai'an	19.98	270	P	P	23 48 39.4	-1.6
TIA				pmax	pmax		
	comp=Z,21nm,0.8s						
TIA				LR	LR		
	comp=Z,370nm,14.7s						
TIA				LR	LR		
	comp=Z,250nm,28.0s						
TIA				LR	LR		
	comp=Z,390nm,20.3s						
BJI	Beijing	20.01	281	P	P	23 48 39.3	-2.0
BJI				S	S	23 52 13.4	-10
BJI				pmax	pmax		
	comp=Z,16nm,1.3s						
BJI				LR	LR		
	comp=Z,92nm,13.5s						
BJI				LR	LR		
	comp=Z,130nm,16.0s						
NJ2	Nanjing	20.14	257	eP	P	23 48 43.6	+0.8
NJ2				S	Sn	23 52 34.0	+3.0
NJ2				pmax	pmax		
	comp=Z,36nm,1.3s						
NJ2				LR	LR		
	comp=Z,500nm,13.7s						
NJ2				LR	LR		
	comp=Z,390nm,13.7s						
NJ2				LR	LR		
	comp=Z,460nm,19.4s						
MA2	Magadan	21.26	12	P	P	23 48 55.0	+0.4
	comp=Z,27nm,0.6s,baz=202,slow=9.0,SNR=15						
MA2				LR	LR	23 57 25.6	
	comp=Z,175nm,19.1s,baz=173,slow=37						
MA2	Magadan	21.26	12	eP	P	23 48 55.0	+0.4
	comp=Z,39nm,0.7s						
MA2	Magadan	21.26	12	diP	P	23 48 55.4	+0.8
MA2				pmax	pmax		
	comp=Z,46nm,1.3s						
HHC	Hu-ho-hao-te	23.43	284	P	P	23 49 17.1	-0.5
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,92nm,5.5s						
SSLB	Suanglung	23.54	236	eP	P	23 49 19.7	+1.0
	comp=Z,100nm,1.8s						
YAK	Yakutsk	24.23	346	eP	P	23 49 24.8	+0.2
YAK				eS	S	23 53 36.5	-2.8
YAK				pmax	pmax		
	comp=Z,32nm,1.1s						
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				smax	smax		
	comp=N,313nm,2.7s						
YAK				smax	smax		
	comp=E,136nm,2.8s						
YAK				MLR	MLR		
	comp=Z,189nm,22.0s						
YAK				MLR	MLR		
	comp=N,247nm,23.0s						
YAK				MLR	MLR		
	comp=E,90nm,23.0s						
WHN	Wuhan	24.26	258	⇑P	P	23 49 24.5	-0.7
WHN				S	S	23 53 33.9	-6.4
WHN				pmax	pmax		
	comp=E,66nm,1.0s						
WHN				LR	LR		
	comp=E,300nm,10.4s						
WHN				LR	LR		
	comp=E,790nm,7.9s						
WHN				LR	LR		
	comp=E,930nm,17.5s						
BTO	Baotou	24.63	284	eP	P	23 49 28.3	-0.3
SEY	Seymchan	24.70	11	P	P	23 49 29.9	+1.1
	comp=E,16nm,0.7s,baz=198,slow=6.7,SNR=34						
SEY	Seymchan	24.70	11	⇓iP	P	23 49 30.4	+1.5
BOD	Bodaibo	26.15	325	eP	P	23 49 43.3	+1.2
ULN	Ulaanbaatar	26.74	301	eP	P	23 49 47.9	+0.2
	comp=E,6.8nm,0.9s						
ULN	Ulaanbaatar	26.74	301	⇓eP	P	23 49 48.5	+0.8
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN	Xi'an	27.04	270	P	P	23 49 47.8	-2.6
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SONA0	Songino Array	27.17	301	eP	P	23 49 51.3	-0.3
SONM	Songino Array	27.17	301	P	P	23 49 51.3	-0.3
	comp=Z,2.8nm,0.6s,baz=97,slow=9.4,SNR=12						
SONM				LR	LR	00 01 12.6	
	comp=Z,244nm,18.2s,baz=77,slow=38						
H11N2	WAKE ISLAND Hy	28.78	125	T	T	00 20 33.3	
	baz=317,slow=75,SNR=5581						
H11N1	WAKE ISLAND Hy	28.79	125	T	T	00 20 28.0	
	baz=317,slow=75,SNR=8641						
H11N3	WAKE ISLAND Hy	28.80	125	T	T	00 20 43.3	
	baz=317,slow=75,SNR=4963						
TLY	Talaya	29.47	308	P	P	23 50 12.3	+0.5
	comp=Z,6.0nm,0.7s,baz=114,slow=9.4,SNR=7.1						
TLY	Talaya	29.47	308	eP	P	23 50 12.3	+0.5
	comp=Z,9.2nm,0.8s						
TLY	Talaya	29.47	308	eP	P	23 50 11.8	0.0
TLY				eS	S	23 55 04.5	+2.1
TLY				eSSS	SSS	23 56 52.7	
TLY				pmax	pmax		
	comp=Z,25nm,0.9s						
TLY				MLR	MLR		
	comp=Z,602nm,15.0s						
ZAK	Zakamensk	29.50	305	eP	P	23 50 12.1	-0.1
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
H11S1	WAKE ISLAND Hy	29.56	127	T	T	00 21 28.6	
	baz=319,slow=76,SNR=955						
H11S3	WAKE ISLAND Hy	29.56	127	T	T	00 21 26.4	
	baz=319,slow=76,SNR=1735						
H11S2	WAKE ISLAND Hy	29.58	127	T	T	00 21 32.1	
	baz=319,slow=76,SNR=1006						
LZH	Lanzhou	30.33	277	eP	P	23 50 22.9	+3.1
LZH				pP	pP	23 50 32.0	-1.2
LZH				sP	sP	23 50 38.4	-0.9
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
MOY	Mondy	31.10	308	eP	P	23 50 26.4	+0.1
MOY				pmax	pmax		
	comp=Z,22nm,2.6s						
BILL	Bilibino	31.93	17	diP	P	23 50 33.6	+0.3
BILL				e		23 50 43.5	
BILL				i		23 51 38.7	
BILL				i		23 53 21.5	
BILL				iS	S	23 55 41.7	+1.2
BILL				pmax	pmax		
	comp=Z,16nm,1.3s						
BILL				MLR	MLR		
	comp=Z,80nm,18.0s						
GYA	Guiyang	32.15	258	⇑iP	P	23 50 37.8	+2.0
GYA				pP	pP	23 50 49.6	+0.5
GYA				PP	PnPn	23 51 45.0	+1.9
GYA				S	S	23 55 39.1	-5.9
GYA				sS	sS	23 56 04.8	-2.4
GYA				SS	SnSn	23 57 39.5	+0.2
GYA				pmax	pmax		
	comp=Z,40nm,1.1s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,420nm,15.7s						
GYA				LR	LR		
	comp=Z,390nm,17.0s						
GYA				LR	LR		
	comp=Z,440nm,17.2s						
CD2	Chengdu	32.27	267	eP	P	23 50 36.5	-0.3
CD2				S	S	23 55 47.0	+0.3
CD2				LR	LR		
	comp=Z,290nm,14.2s						
CD2				LR	LR		
	comp=Z,400nm,13.2s						
GTA	Gaotai	32.55	284	eP	P	23 50 38.4	-0.8
GTA				pP	pP	23 50 50.9	-1.7
GTA				sP	sP	23 50 56.3	-2.5
GTA				PcP	PcP	23 53 25.0	+0.2
GTA				S	S	23 55 50.5	-0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,55nm,7.5s						
GTA				LR	LR		
	comp=Z,230nm,15.6s						
GTA				LR	LR		
	comp=Z,580nm,18.1s						
GTA				LR	LR		
	comp=Z,600nm,18.4s						
TIXI	Tiksi	33.35	352	P	P	23 50 44.9	-0.7
	comp=Z,3.7nm,0.8s,baz=126,slow=3.8,SNR=2.9						
TIXI	Tiksi	33.35	352	⇓eP	P	23 50 47.4	+1.7
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
QIZ	Qiongzhong	34.29	244	P	P	23 50 55.3	+0.9
QIZ				S	S	23 56 18.3	+0.2
QIZ				LR	LR		
	comp=Z,210nm,15.1s						
QIZ				LR	LR		
	comp=Z,250nm,13.7s						
QIZ				LR	LR		
	comp=Z,300nm,16.7s						
KMI	Kunming	35.85	259	P	P	23 51 07.9	-0.2
KMI				pP	pP	23 51 20.3	-1.2
KMI				sP	sP	23 51 25.1	-2.6
KMI				S	S	23 56 47.3	+4.9
KMI				pmax	pmax		
	comp=Z,23nm,1.0s						
KMI				pmax	pmax		
	comp=Z,77nm,5.0s						
KMI				LR	LR		
	comp=Z,170nm,18.4s						
KMI				LR	LR		
	comp=Z,280nm,17.7s						
KMI				LR	LR		
	comp=Z,320nm,20.6s						
ANM	Nome	39.59	33	eP	P	23 51 41.4	+2.5
	comp=Z,30nm,1.0s						
ANM	Nome	39.59	33	eP	P	23 51 41.4	+2.5
ANM				pmax	pmax		
	comp=Z,30nm,1.0s						
DGZ	Jazzator, Alta	39.69	304	diP	P	23 51 41.0	+0.9
DGZ				pmax	pmax		
	comp=Z,16nm,0.8s						
WMQ	Urumqi	40.46	295	eP	P	23 51 47.3	+0.9
WMQ				pP	pP	23 51 59.5	-0.6
WMQ				pmax	pmax		
	comp=Z,41nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.5s						
WMQ				LR	LR		
	comp=Z,270nm,15.9s						
WMQ				LR	LR		
	comp=Z,200nm,11.3s						
WMQ				LR	LR		
	comp=Z,180nm,17.3s						
ZALV	Zalesovo Beam	40.99	311	P	P	23 51 50.6	+0.1
	comp=Z,27nm,0.8s,baz=94,slow=8.7,SNR=20						
ZALV				LR	LR	00 09 34.2	
	comp=Z,210nm,18.3s,baz=70,slow=37						
ZALV	Zalesovo Beam	40.99	311	P	P	23 51 50.7	+0.1
ZALV				pmax	pmax		
	comp=Z,28nm,0.8s						
ZALV				MLR	MLR		
	comp=Z,210nm,18.3s						
CM31	Chiang Mai Arr	42.57	254	eP	P	23 52 03.9	0.0
	comp=Z,17nm,1.6s						
CMAR	Chiang Mai Arr	42.57	254	P	P	23 52 03.9	0.0
	comp=Z,2.8nm,0.9s,baz=46,slow=8.2,SNR=3.0						
CMAR				LR	LR	00 09 47.3	
	comp=Z,83nm,18.7s,baz=36,slow=36						
MK31	Makanchi Array	43.54	300	⇑eP	P	23 52 11.7	+0.2
MK31				pmax	pmax		
	comp=Z,18nm,0.6s						
MKAR	Makanchi Array	43.54	300	P	P	23 52 11.6	+0.1
	comp=Z,24nm,0.9s,baz=87,slow=11,SNR=36						
MKAR				LR	LR	00 11 01.9	
	comp=Z,167nm,20.8s,baz=86,slow=37						
MKAR	Makanchi Array	43.54	300	ceP	P	23 52 11.6	+0.1
MKAR				pmax	pmax		
	comp=Z,19nm,0.8s						
MAKZ	Makanchi	43.75	301	eP	P	23 52 13.4	+0.3
	comp=Z,22nm,0.8s						
MAKZ	Makanchi	43.75	301	eP	P	23 52 13.4	+0.3
MAKZ				pmax	pmax		
	comp=Z,22nm,0.8s						
RSO	Redoubt South	44.98	39	eP	P	23 52 24.4	+1.4
KURK	Kurchatov	45.14	307	eP	P	23 52 24.1	0.0
	comp=Z,42nm,0.8s						
KURK	Kurchatov	45.14	307	diP	P	23 52 23.9	-0.3
KURK				pmax	pmax		
	comp=Z,35nm,0.6s						
PPLA	Purkeypile	45.20	36	eP	P	23 52 25.6	+1.0
	comp=Z,102nm,1.6s						
KURBB	Kurchatov Arra	45.22	307	P	P	23 52 24.2	-0.6
	comp=Z,43nm,0.8s,baz=80,slow=8.2,SNR=131						
KURBB				S	S	23 58 58.9	-1.9
	comp=Z,0.8nm,0.9s,baz=75,slow=14,SNR=5.5						
KDAK	Kodiak Island	45.23	43	P	P	23 52 25.3	+0.5
	comp=Z,47nm,0.7s,baz=296,slow=5.9,SNR=38						
KDAK	Kodiak Island	45.23	43	eP	P	23 52 25.2	+0.5
	comp=Z,61nm,0.8s						
KDAK	Kodiak Island	45.23	43	ceP	P	23 52 25.1	+0.3
CNPM	China Poot	45.80	41	eP	P	23 52 30.7	+1.5
	comp=Z,28nm,1.0s						
TOLK	Toolik Lake Re	46.42	28	P	P	23 52 35.6	+1.5
	baz=267						
PMR	Palmer	46.68	38	eP	P	23 52 36.8	+0.7
	comp=Z,29nm,1.1s						
PMR	Palmer	46.68	38	eP	P	23 52 36.8	+0.7
PMR				pmax	pmax		
	comp=Z,29nm,1.1s						
TCOL	CIGO, UAF Yank	47.07	33	P	P	23 52 40.5	+1.3
	baz=272						
COLA	College	47.08	33	ciP	P	23 52 40.5	+1.4
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
POKR	Poker Plat Res	47.25	33	P	P	23 52 42.1	+1.6
	baz=272						
HDA	Harding Lake	47.49	34	P	P	23 52 42.7	+0.3
	baz=273						
ILAR	Eielson Array	47.49	33	P	P	23 52 43.0	+0.6
	comp=Z,14nm,0.7s,baz=268,slow=6.4,SNR=196						
ILAR				LR	LR	00 14 11.4	
	comp=Z,55nm,19.5s,baz=272,slow=38						
ILAR	Eielson Array	47.49	33	P	P	23 52 43.0	+0.6
ILAR				pmax	pmax		
	comp=Z,13nm,0.7s						
ILAR				MLR	MLR		
	comp=Z,55nm,19.5s						
KKN	Kakani	48.06	274	eP	P	23 52 47.6	0.0
	comp=Z,51nm,0.6s						
PKI	Pulchoki	48.06	274	eP	P	23 52 48.8	+1.1
	comp=Z,10.0nm,0.6s						
PKIN	Phulchoki	48.07	274	eP	P	23 52 49.0	+1.3
	comp=Z,11nm,0.6s						
PAX	Paxson	48.26	36	eP	P	23 52 50.7	+2.2
PAX				ePcP	PcP	23 54 16.0	+1.2
PAX	Paxson	48.26	36	eP	P	23 52 50.7	+2.2
PAX				e		23 54 16.0	
DMN	Daman	48.28	274	eP	P	23 52 50.7	+1.4
	comp=Z,9.2nm,0.5s						
GKN	Gorkha	48.45	275	eP	P	23 52 50.4	-0.1
DANN	Dangsing	48.97	276	eP	P	23 52 54.8	+0.2
	comp=Z,88nm,0.7s						
KOLN	Koldanda	49.37	275	eP	P	23 52 57.5	-0.1
	comp=Z,11nm,0.4s						
BVAR	Borovoye Array	49.64	311	P	P	23 52 59.0	0.0
	comp=Z,11nm,0.6s,baz=72,slow=8.0,SNR=28						
BVAR				PcP	PcP	23 54 19.7	-0.1
	comp=Z,3.6nm,0.6s,baz=73,slow=4.9,SNR=2.5						
BVAR				S	S	00 00 02.4	-1.3
	comp=Z,2.3nm,1.0s,baz=62,slow=14,SNR=6.9						
BRVK	Borovoye	49.69	311	eP	P	23 52 59.7	+0.2
	comp=Z,13nm,0.8s						
BRVK	Borovoye	49.69	311	eP	P	23 52 59.7	+0.2
BRVK				pmax	pmax		
	comp=Z,13nm,0.8s						
AAK	Ala-Archa	50.04	297	P	P	23 53 02.3	-0.1
	comp=Z,6.0nm,0.5s,baz=128,slow=6.9,SNR=9.1						
AAK	Ala-Archa	50.04	297	eP	P	23 53 02.6	+0.2
	comp=Z,7.7nm,0.8s						
AAK	Ala-Archa	50.04	297	⇑eP	P	23 53 02.8	+0.3
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH	Kashi	50.11	293	P	P	23 53 07.1	+4.1
KSH				pP	pP	23 53 19.3	+2.3
KSH				sP	sP	23 53 25.0	+2.0
KSH				S	S	00 00 14.5	+3.7
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,59nm,4.5s						
EPYK	Eagle Plains	51.50	31	P	P	23 53 14.6	+1.7
	baz=280,SNR=23						
INK	Inuvik	52.34	28	P	P	23 53 19.6	+0.6
	comp=Z,12nm,0.9s,baz=284,slow=6.3,SNR=12						
KK31	Karatay Array	52.61	299	⇑eP	P	23 53 21.2	-0.3
KK31				pmax	pmax		
	comp=Z,16nm,0.9s						
MTN	Manton Dam	52.64	194	eP	P	23 53 21.5	-0.4
	comp=Z,19nm,1.1s						
COEN	Coen	52.75	179	eP	P	23 53 23.0	+0.3
	comp=Z,14nm,0.9s						
SVE	Sverdlovsk	54.01	318	ceP	P	23 53 32.1	+0.6
SVE				pmax	pmax		
	comp=Z,43nm,0.8s						
SVE				MLR	MLR		
	comp=Z,233nm,17.0s						
NIL	Nilore	54.53	287	eP	P	23 53 36.7	+1.0
	comp=Z,32nm,0.7s						
NIL	Nilore	54.53	287	eP	P	23 53 36.7	+1.0
NIL				pmax	pmax		
	comp=Z,32nm,0.7s						
JIS	Juneau Island	54.59	40	eP	P	23 53 38.3	+2.5
	comp=Z,9.6nm,0.8s						
GSI	Gunungsitoli	55.32	239	eP	P	23 53 43.2	+1.7
	comp=Z,36nm,1.1s						
DLBC	Dease Lake	56.70	39	P	P	23 53 53.2	+2.3
	comp=Z,8.9nm,1.0s,baz=279,slow=6.9,SNR=13						
AB31	Akbulak array	57.07	309	⇑eP	P	23 53 53.3	-0.3
AB31				pmax	pmax		
	comp=Z,12nm,0.5s						

KBL	Kabul	57.23	290	eP	P	23 53 56.6	+1.4
	comp=Z,12nm,0.9s						
KBL	Kabul	57.23	290	eP	P	23 53 56.6	+1.4
KBL				pmax	pmax		
	comp=Z,13nm,0.9s						
AKTO	Aktyubinsk	57.75	311	P	P	23 53 58.5	+0.1
	comp=Z,14nm,0.7s,baz=67,slow=10.0,SNR=27						
KBS	Kingsbay	58.76	350	eP	P	23 54 06.0	+1.0
	comp=Z,11nm,0.8s						
KBS	Kingsbay	58.76	350	d iP	P	23 54 06.0	+1.0
KBS				pmax	pmax		
	comp=Z,112nm,2.5s						
KIRV	Kirov	58.98	322	P	P	23 54 06.8	0.0
	comp=Z,19nm,0.7s,baz=78,slow=1.7,SNR=8.7						
WRAB	Tennant Creek	59.13	189	d iP	P	23 54 07.3	-1.0
WRAB				pmax	pmax		
	comp=Z,29nm,2.5s						
WB2	Warramunga Arr	59.14	189	eP	P	23 54 06.9	-1.5
	comp=Z,13nm,0.6s						
WRA	Warramunga Arr	59.14	189	P	P	23 54 07.1	-1.3
	comp=Z,11nm,0.6s,baz=359,slow=8.3,SNR=74						
PRGR	Permogore	59.38	327	eP	P	23 54 08.8	-0.7
PRGR				e*PP	pP	23 54 22.4	-1.3
PRGR				e		23 54 54.8	
PRGR				pmax	pmax		
	comp=Z,16nm,0.9s						
RES	Resolute Bay	60.50	15	P	P	23 54 17.1	0.0
	comp=Z,11nm,0.8s,baz=318,slow=7.4,SNR=7.1						
YKA	Yellowknife Ar	61.78	31	P	P	23 54 26.2	+0.4
	comp=Z,5.6nm,0.9s,baz=299,slow=6.7,SNR=21						
YKA				PcP	PcP	23 55 07.2	+0.7
	comp=Z,1.8nm,0.8s,baz=309,slow=3.9,SNR=4.7						
YKB5	Yellowknife Ar	61.78	31	ePcP	PcP	23 55 07.2	+0.7
ARCES	ARCESS Array B	62.30	339	P	P	23 54 29.0	-0.3
	comp=Z,1.5nm,0.5s,baz=56,slow=7.7,SNR=12						
ARCES	ARCESS Array B	62.30	339	P	P	23 54 29.0	-0.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AS31	Alice Springs	62.87	188	eP	P	23 54 33.1	-0.5
	comp=Z,1.9nm,0.7s						
ASAR	Alice Springs	62.87	188	P	P	23 54 32.9	-0.7
	comp=Z,5.4nm,0.6s,baz=11,slow=5.7,SNR=53						
GEYT	Alibeck	63.35	298	P	P	23 54 36.7	-0.2
	comp=Z,4.9nm,0.6s,baz=64,slow=3.4,SNR=8.7						
GEYT				LR	LR	00 23 38.8	
	comp=Z,90nm,21.3s,baz=215,slow=37						
GYA0B	ALIBECK ARRAY	63.35	298	eP	P	23 54 38.8	+2.0
	comp=Z,9.3nm,0.9s						
DAG	Danmarks Havn	63.81	355	⇑iP	P	23 54 38.8	-0.3
DAG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DAG	Danmarks Havn	63.81	355	⇑iP	P	23 54 38.8	-0.3
	comp=Z,11nm,0.9s						
NLWA	Neilton Lookou	64.95	48	eP	P	23 54 49.1	+1.9
	comp=Z,30nm,1.0s						
D03D	Eldon	65.33	48	P	P	23 54 51.4	+1.9
	baz=301,SNR=10						
B05A	Bryant	65.52	47	P	P	23 54 51.9	+1.2
	baz=302						
D04E	Lakebay	65.70	48	P	P	23 54 53.8	+1.9
	baz=302						
MOS	Moscow	65.96	323	eP	P	23 55 05.0	+12
E04D	Cinebar	66.15	49	P	P	23 54 56.5	+1.7
	baz=302,SNR=7.8						
OBN	Obninsk	66.81	323	i P	P	23 55 00.9	+2.0
OBN				i		23 55 30.6	
OBN				i SS	SS	00 08 10.8	+5.8
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s						
LPSR	Galich'ya Gora	67.11	320	eP	P	23 55 00.0	-0.8
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
J01E	Myrtle Point	67.14	52	P	P	23 55 02.7	+1.5
	baz=303						
F05D	White Salmon	67.16	49	P	P	23 55 02.2	+0.9
	baz=303						
I03D	Drain, OR	67.21	52	P	P	23 55 03.0	+1.4
	baz=303						
FINES	FINESS Array B	67.28	332	P	P	23 55 01.6	-0.2
	comp=Z,7.6nm,0.6s,baz=32,slow=8.7,SNR=30						
K02D	Willamette Mer	67.56	53	P	P	23 55 05.3	+1.4
	baz=303						
G05D	Wamic, OR	67.59	49	P	P	23 55 05.2	+1.1
	baz=303						
I04A	Tendick Farm,	67.73	51	P	P	23 55 05.9	+0.9
	baz=303						
VSR	Storozhevoye	67.78	319	eP	P	23 55 04.0	-1.1
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VORD	Divnogorie	67.86	318	eP	P	23 55 02.9	-2.7
VORD				pmax	pmax		
	comp=Z,9.0nm,0.5s						
L02E	Cave Junction	67.89	53	P	P	23 55 06.1	+0.1
	baz=303						
I05D	Terrebonne, OR	68.07	50	P	P	23 55 08.2	+1.0
	baz=304						
J04D	Umpqua Nationa	68.21	52	P	P	23 55 09.4	+1.1
	baz=304						
NEW	Newport	68.30	45	P	P	23 55 09.4	+0.8
	comp=Z,7.4nm,0.8s,baz=292,slow=8.0,SNR=11						
NEW	Newport	68.30	45	P	P	23 55 09.3	+0.8
	baz=305						
AKT	Akhty	68.32	306	eP	P	23 55 07.9	-0.9
AKT				e		23 55 32.9	
AKT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
L04D	Klamath Falls	68.66	53	P	P	23 55 12.3	+1.3
	baz=304						
SUMG	Summit	68.66	0	⇑iP	P	23 55 11.5	+0.7
SUMG				pmax	pmax		
	comp=Z,63nm,1.2s						
SUMG	Summit	68.66	0	⇑iP	P	23 55 11.5	+0.7
	comp=Z,63nm,1.2s						
J05D	Fort Rock, OR	68.72	51	P	P	23 55 13.0	+1.6
	baz=304						
M02C	Callahan	68.78	54	P	P	23 55 13.2	+1.6
	baz=304						
N02D	Trinity Center	69.10	54	P	P	23 55 15.3	+1.6
	baz=304						
GOF	Gofitskoye	69.16	312	⇑eP	P	23 55 16.4	+2.5
GOF				pmax	pmax		
	comp=Z,25nm,0.7s						
M04C	Macdoel	69.19	53	P	P	23 55 15.7	+1.4
	baz=304						
O02D	Mt. Diablo Mer	69.50	55	P	P	23 55 17.6	+1.5
	baz=304						
NCK	Nalchik	69.73	310	⇓eP	P	23 55 18.4	+1.0
NCK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KIV	Kislovodsk	70.00	311	eP	P	23 55 20.5	+1.3
	comp=Z,20nm,0.8s						
KIV	Kislovodsk	70.00	311	eP	P	23 55 20.2	+1.0
KIV				pmax	pmax		
	comp=Z,79nm,1.0s						
KIV				MLR	MLR		
	comp=Z,127nm,17.0s						
KBZ	Khabaz	70.01	310	P	P	23 55 19.6	+0.6
	comp=Z,6.3nm,0.7s,baz=91,slow=3.2,SNR=9.7						
KBZ				LR	LR	00 29 19.9	
	comp=Z,50nm,19.4s,baz=52,slow=39						
O03E	Paynes Creek	70.05	54	P	P	23 55 20.2	+0.7
	baz=305						
MOD	Modoc Plateau	70.07	52	ePcP	PcP	23 55 42.5	+1.0
NEY	Neytrino	70.39	310	⇑eP	P	23 55 23.0	+1.3
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MSO	Missoula	70.89	45	P	P	23 55 24.9	+0.4
	baz=307						
GNI	Garni	70.94	306	⇑eP	P	23 55 26.2	+1.1
GNI				pmax	pmax		
	comp=Z,19nm,1.2s						
FFC	Flin Flon	71.71	33	eP	P	23 55 30.0	+0.8
	comp=Z,173nm,0.9s						
FFC	Flin Flon	71.71	33	ceP	P	23 55 30.2	+1.0
EGMT	Eagleton	72.39	42	P	P	23 55 34.1	+0.6
	baz=309						
NC204	NORSAR Array S	72.48	338	eP	P	23 55 34.1	+0.3
	comp=Z,127nm,1.8s						
NB2	NORSAR Subarra	72.53	337	P	P	23 55 33.3	-0.8
	comp=Z,1.7nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.53	337	P	P	23 55 33.8	-0.3
	comp=Z,2.4nm,0.6s,baz=39,slow=6.0,SNR=14						
HLID	Hailey	72.59	48	P	P	23 55 36.0	+1.1
	baz=308						
BOZ	Bozeman (W)	72.91	45	P	P	23 55 37.6	+0.8
	baz=309						
AKASG	Malin Array Be	73.04	322	P	P	23 55 36.6	-0.6
	comp=Z,3.7nm,0.5s,baz=45,slow=6.1,SNR=15						
AKASG				LR	LR	00 30 38.2	
	comp=Z,120nm,18.7s,baz=45,slow=38						
NVAR	Mina Array Bea	73.34	54	P	P	23 55 40.7	+1.2
	comp=Z,6.9nm,0.8s,baz=287,slow=6.2,SNR=44						
VES	Vestal, Richgr	74.39	56	P	P	23 55 45.9	+0.5
	baz=307						
PKM	Mcpherson Peak	74.49	58	P	P	23 55 47.4	+1.2
	baz=307						
RLMT	Red Lodge	74.50	44	P	P	23 55 47.3	+1.1
	baz=310						
ISA	Isabella, Lake	74.89	56	P	P	23 55 48.6	+0.2
	baz=307						
R11A	Troy Canyon, C	75.09	53	P	P	23 55 50.6	+1.0
	baz=308						
LAO	LASA Array	75.09	41	P	P	23 55 50.3	+1.0
	baz=312						
MPMC	Manual Prospec	75.29	55	P	P	23 55 51.5	+0.7
	baz=308,SNR=8.2						
FURC	Furnace Creek,	75.44	55	P	P	23 55 52.6	+1.2
	baz=308,SNR=8.4						
LRMC	Laurel Mtn Rad	75.52	56	P	P	23 55 52.8	+0.7
	baz=308						
TPNV	Topopah Spring	75.53	54	P	P	23 55 53.1	+0.9
	baz=308,SNR=12						
DUG	Dugway, Tooele	75.62	50	P	P	23 55 53.8	+1.2
	baz=309,SNR=10						
EDW2	Edwards Air Fo	75.68	57	P	P	23 55 53.9	+1.0
	baz=308						
BW06	Boulder Array	75.86	46	P	P	23 55 54.6	+0.5
	baz=310						
PDAR	Pinedale Array	75.86	46	P	P	23 55 54.5	+0.5
	comp=Z,3.3nm,0.6s,baz=262,slow=1.9,SNR=11						
CUKAN	kangal_SIVAS	75.92	309	i P	P	23 55 55.8	+1.4
SHOC	Shoshone, Teco	76.16	55	P	P	23 55 56.4	+0.8
	baz=308						
GSC	Goldstone, Bar	76.19	56	P	P	23 55 56.6	+0.8
	baz=308						
FMP	Fort Macarthur	76.20	58	P	P	23 55 56.6	+0.8
	baz=308						
BFSC	Mount Baldy Ra	76.29	57	P	P	23 55 57.2	+0.6
	baz=308						
CIS	Catalina Islan	76.31	58	P	P	23 55 57.5	+1.1
	baz=308						
SCI2	San Clemente I	76.48	59	P	P	23 55 58.3	+0.9
	baz=308						
TUQ	Turquoise Moun	76.67	55	P	P	23 55 59.5	+0.8
	baz=309,SNR=5.5						
HEC	Hector,Ludlow	76.79	56	P	P	23 56 00.0	+0.8
	baz=308,SNR=5.6						
MURC	Murrieta	76.99	57	P	P	23 56 00.9	+0.6
	baz=308						
GMRC	Granite Mounta	77.25	56	P	P	23 56 02.6	+0.7
	baz=309,SNR=5.6						
PFO	Pinyon Flats O	77.46	57	P	P	23 56 04.0	+0.8
	baz=309						
KOLS	Kolonicke sedl	77.51	324	eP	P	23 56 03.7	+0.8
KOLS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KOLS	Kolonicke sedl	77.51	324	eP	P	23 56 03.7	+0.8
ULM	Lac du Bonnet	77.51	34	P	P	23 56 02.8	-0.1
	comp=Z,3.7nm,0.6s,baz=346,slow=6.1,SNR=4.5						
ULM	Lac du Bonnet	77.51	34	P	P	23 56 02.8	-0.1
ULM				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BELC	Belle Mtn. Jos	77.52	56	P	P	23 56 03.6	+0.1
	baz=309						
CDAG	Cicekdag	77.56	311	i P	P	23 56 04.2	+0.6
CDAG				IAML_P			
	comp=Z,192nm,0.5s						
DELI	KIRIKKALE	77.58	312	i P	P	23 56 04.5	+0.9
DELI				IAML_P			
	comp=Z,125nm,0.5s						
K22A	Casper	77.62	45	P	P	23 56 04.2	+0.3
	baz=312						
OJC	Ojcow	77.67	326	eP	P	23 56 04.0	+0.2
OJC	Ojcow	77.67	326	eP	P	23 56 04.0	+0.2
ANDN	Andirin	77.70	309	i P	P	23 56 07.6	+3.3
ANDN				IAML_P			
	comp=Z,210nm,0.4s						
UZH	Uzhgorod	77.72	324	eP	P	23 56 08.7	+4.6
UZH				e		23 56 17.2	
BR131	Keskin Array S	77.92	312	eP	P	23 56 06.0	+0.4
	comp=Z,12nm,1.4s						
BRTR	Keskin Array B	77.92	312	P	P	23 56 05.3	-0.2
	comp=Z,1.7nm,0.4s,baz=65,slow=4.5,SNR=21						
BRTR	Keskin Array B	77.92	312	ceP	P	23 56 05.6	0.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MONP2	Monument Peak	77.94	57	P	P	23 56 06.4	+0.5
	baz=309						
RSSD	Black Hills	77.95	42	eP	P	23 56 06.4	+0.6
	comp=Z,40nm,1.0s						
RSSD	Black Hills	77.95	42	eP	P	23 56 06.4	+0.6
RSSD				pmax	pmax		
	comp=Z,40nm,1.0s						
RSSD	Black Hills	77.95	42	P	P	23 56 06.1	+0.3
	baz=313						
TRPA	Tarpa	77.97	323	eP	P	23 56 06.0	+0.6
IRM	Iron Mountain	77.97	56	P	P	23 56 06.6	+0.7
	baz=309,SNR=5.7						
NIE	Niedzica	78.04	325	eP	P	23 56 06.4	+0.5
NIE	Niedzica	78.04	325	eP	P	23 56 06.4	+0.5
BC3	Big Chuckawall	78.09	56	P	P	23 56 07.1	+0.5
	baz=309						
IKP	In-Ko-Pah, Jac	78.29	58	P	P	23 56 08.2	+0.6
	baz=309						
O20A	White River Ci	78.33	48	P	P	23 56 08.2	+0.3
	baz=312						
Y12C	Blythe	78.63	56	P	P	23 56 10.3	+0.8
	baz=310						
KSP	Ksiaz	78.67	328	eP	P	23 56 10.0	+0.7
KSP	Ksiaz	78.67	328	eP	P	23 56 10.0	+0.7
KKUL	Konya-Kulu	78.71	312	i P	P	23 56 13.6	+3.7
KKUL				IAML_P			
	comp=Z,93nm,0.7s						
GULE	Gulek	78.84	309	i P	P	23 56 09.6	-1.2
GULE				IAML_P			
	comp=Z,30nm,0.1s						
GLA	Glamis	78.88	56	P	P	23 56 11.8	+1.0
	baz=310						
OSTC	Ostas	78.92	328	eP	P	23 56 11.5	+0.8
AGMN	Agassiz Nation	78.96	35	P	P	23 56 10.3	-0.6
	baz=318						
CHVC	Chvalec	78.96	328	eP	P	23 56 11.6	+0.6
MORC	Moravsky Berou	78.96	327	eP	P	23 56 11.4	+0.4
DPC	Dobruska-Polom	79.04	328	eP	P	23 56 11.5	+0.1
DPC				e		23 56 26.4	
DPC	Dobruska-Polom	79.04	328	eP	P	23 56 11.5	+0.1
DPC				epP	pP	23 56 26.4	+0.3
UPC	Upice	79.04	328	eP	P	23 56 12.0	+0.6
UPC	Upice	79.04	328	eP	P	23 56 12.0	+0.6
N23A	Red Feather La	79.12	46	P	P	23 56 13.5	+1.1
	baz=313						
PSZ	Piszkesteto	79.33	325	eP	P	23 56 18.0	+4.9
VYHS	Vyhne	79.37	326	eP	P	23 56 14.4	+1.2
VYHS	Vyhne	79.37	326	eP	P	23 56 14.3	+1.1
WUAZ	Wupatki	79.49	53	P	P	23 56 15.4	+1.1
	baz=311,SNR=5.8						
BRG	Berggiesshubel	79.59	330	eP	P	23 56 14.2	-0.1
	comp=Z,4.4nm,0.8s						
BRG	Berggiesshubel	79.59	330	eP	P	23 56 14.2	-0.1
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JAVC	Velka Javorina	79.61	326	eP	P	23 56 15.8	+1.3
PVCC	Panska Ves	79.61	329	eP	P	23 56 15.3	+0.8
PVCC	Panska Ves	79.61	329	eP	P	23 56 15.3	+0.8
CLL	Collm	79.61	330	⇑iP	P	23 56 14.0	-0.5
CLL				e*PP	pP	23 56 28.0	-1.2
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL	Collm	79.61	330	⇑iP	P	23 56 14.0	-0.5
	comp=Z,8.0nm,0.9s						
CLL				e(pP)	pP	23 56 28.0	-1.2
CLL				epPcP		23 56 39.0	
CLL				e		00 15 12.0	
VRAC	Vranov	79.72	327	eP	P	23 56 15.6	+0.5
KRUC	Moravsky	80.00	327	eP	P	23 56 17.0	+0.4
GOPC	GO Pecny, Ondr	80.00	329	eP	P	23 56 16.9	+0.3
GOPC	GO Pecny, Ondr	80.00	329	eP	P	23 56 16.9	+0.3
PRU	Pruhonice	80.04	329	eP	P	23 56 17.2	+0.4
PRU				e		23 56 31.7	
PRU	Pruhonice	80.04	329	eP	P	23 56 17.2	+0.4
PRU				epP	pP	23 56 31.7	+0.2
MVCO	Mesa Verde	80.12	50	P	P	23 56 18.7	+1.0
	baz=312,SNR=8.0						
MODS	Modra-Piesok	80.14	326	eP	P	23 56 17.1	-0.3
MODS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MODS	Modra-Piesok	80.14	326	eP	P	23 56 17.1	-0.3
TREC	Trest	80.19	328	eP	P	23 56 18.2	+0.5
TREC				e		23 56 32.3	
TREC	Trest	80.19	328	eP	P	23 56 18.2	+0.5
TREC				epP	pP	23 56 32.3	-0.1
NKC	Novy Kostel	80.68	330	eP	P	23 56 21.0	+0.7
NKC	Novy Kostel	80.68	330	eP	P	23 56 21.0	+0.7
S22A	4UR Ranch, Cre	80.75	49	P	P	23 56 22.3	+1.1
	baz=313,SNR=7.8						
W18A	Petrified Fore	80.76	52	P	P	23 56 22.3	+1.1
	baz=312						
Q24A	Divide	80.88	47	P	P	23 56 22.6	+0.6
	baz=313						
214A	Organ Pipe Nat	80.88	56	P	P	23 56 22.3	+0.6
	baz=310						
SOP	Sopron	80.98	326	eP	P	23 56 22.1	+0.2
CONA	Conrad Observa	81.09	327	i P	P	23 56 23.2	+0.6
	comp=Z,5.7nm,1.0s						
KHC	Kasperske Hory	81.11	329	d iP	P	23 56 23.0	+0.4
KHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KHC	Kasperske Hory	81.11	329	eP	P	23 56 22.7	+0.1
KHC				epP	pP	23 56 36.4	-0.9
EYMN	Ely	81.14	33	P	P	23 56 22.5	-0.2
	baz=321						
MMAI	Mount Meron Ar	81.24	305	P	P	23 56 23.8	+0.2
	comp=Z,1.8nm,0.5s,baz=35,slow=3.5,SNR=4.1						
GERES	GERESS Array B	81.28	328	P	P	23 56 23.5	-0.1
	comp=Z,1.1nm,0.7s,baz=34,slow=5.0,SNR=11						
GERES				LR	LR	00 35 29.7	
	comp=Z,127nm,19.2s,baz=28,slow=38						
SDCO	Great Sand Dun	81.52	48	P	P	23 56 26.2	+0.9
	baz=313,SNR=8.2						
MOA	Molln	81.83	327	i PcP	P	23 56 27.8	+1.4
	comp=Z,6.6nm,1.6s						
TUC	Tucson	81.95	55	eP	P	23 56 28.6	+1.2
	comp=Z,4.9nm,1.0s						
TUC	Tucson	81.95	55	eP	P	23 56 28.6	+1.2
TUC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUC	Tucson	81.95	55	P	P	23 56 28.2	+0.8
	baz=311						
ECSD	EROS Data Cent	81.99	39	P	P	23 56 27.2	-0.2
	baz=318						
KSCO	Kaye Shedlock'	82.26	45	P	P	23 56 29.2	+0.2
	baz=315						
PERS	Pernice	82.42	326	i P	P	23 56 29.7	+0.1
SOKA	Soboth	82.42	326	i P	P	23 56 29.7	+0.1
	comp=Z,4.2nm,0.7s,SNR=10						
T25A	Trinidad	82.56	48	P	P	23 56 31.4	+0.7
	baz=314,SNR=5.7						
KBA	Koelnbreinsper	82.82	328	i PcP	P	23 56 32.9	+1.1
	comp=Z,5.8nm,0.8s,SNR=5.9						
ANMO	Albuquerque	82.87	50	eP	P	23 56 33.8	+1.5
	comp=Z,12nm,1.1s						
ANMO	Albuquerque	82.87	50	c iP	P	23 56 33.1	+0.8
ANMO				pmax	pmax		
	comp=Z,13nm,1.3s						
ANMO	Albuquerque	82.87	50	P	P	23 56 33.4	+1.1
	baz=313						
PDKS	Podkum	82.92	326	i P	P	23 56 31.5	-0.6
BGNE	Belgrade	82.93	41	P	P	23 56 32.1	-0.2
	baz=317						
MYKA	Terra Mystica	83.05	327	i P	P	23 56 32.5	-0.3
	comp=Z,4.8nm,0.9s						
WATA	Walderalm	83.35	329	i PcP	P	23 56 36.4	+1.9
	comp=Z,2.7nm,0.6s						
WTTA	Wattenberg	83.38	329	i P	P	23 56 34.5	-0.2
	comp=Z,5.9nm,1.4s						
ABTA	Abfaltersbach	83.43	328	i P	P	23 56 34.3	-0.6
	comp=Z,4.5nm,1.2s						
MOTA	Moosalm	83.53	329	i PcP	P	23 56 36.1	+0.6
	comp=Z,7.4nm,1.0s						
RETA	Reutte	83.55	329	i P	P	23 56 35.6	+0.2
	comp=Z,11nm,1.1s,SNR=8.7						
SQTA	Sankt Quirin	83.59	329	i PcP	P	23 56 36.0	+0.3
	comp=Z,8.9nm,1.5s						
121A	Cookes Peak, D	83.69	53	P	P	23 56 37.6	+1.0
	baz=313						
G40A	Rib Lake	83.78	34	P	P	23 56 36.1	-0.5
	baz=322						
BFO	Black Forest	83.81	331	eP	P	23 56 37.5	+0.8
	comp=Z,14nm,1.4s						
BFO	Black Forest	83.81	331	ceP	P	23 56 37.5	+0.8
FETA	Feichten	83.94	329	i P	P	23 56 37.5	0.0
	comp=Z,6.3nm,1.0s						
CBKS	Cedar Bluff	83.98	44	P	P	23 56 37.4	-0.4
	baz=316						
DAVA	Damuels	84.06	330	i PcP	P	23 56 38.3	+0.2
	comp=Z,12nm,0.9s,SNR=6.5						
FUORN	Ofenpass-Fuorn	84.45	329	eP	P	23 56 40.4	+0.1
	comp=Z,12nm,0.9s						
SCIA	State Center	85.01	38	P	P	23 56 43.2	+0.3
	baz=320						
D46A	Sault St. Mari	85.02	30	P	P	23 56 42.3	-0.4
	baz=326						
PPT	Papeete	85.05	117	LR	LR	00 25 40.3	
	comp=Z,86nm,21.6s,baz=333,slow=29						
D47A	Chapleau	85.24	29	P	P	23 56 43.3	-0.6
	baz=326						
E46A	Sault Ste Mari	85.35	30	P	P	23 56 43.9	-0.6
	baz=326						
F45A	CMU Biological	85.43	31	P	P	23 56 44.8	0.0
	baz=325						
KSU1	Kansas State U	85.43	42	P	P	23 56 44.7	-0.3
	baz=318						
I42A	Draeger Farm,	85.44	34	P	P	23 56 44.9	0.0
	baz=323						
JFWS	Jewell Farm	85.61	36	P	P	23 56 45.2	-0.6
	baz=322						
E47A	Iron Bridge	85.67	30	P	P	23 56 45.5	-0.5
	baz=326						
LSQQ	Lebel-sur-Quev	85.69	25	P	P	23 56 45.4	-0.7
	baz=330						
AMTX	Amarillo	85.72	48	P	P	23 56 47.2	+0.6
	baz=316						
MSTX	Muleshoe	85.73	49	P	P	23 56 46.9	+0.2
	baz=315						
MNTX	Cornudas Mount	85.75	52	P	P	23 56 47.3	+0.6
	baz=314,SNR=5.9						
CHGQ	Chibougamau	85.75	23	P	P	23 56 45.6	-0.8
	baz=332						
L40A	Anamosa	85.83	37	P	P	23 56 46.6	-0.3
	baz=321						
E48A	Lockeyer	86.08	29	P	P	23 56 47.5	-0.6
	baz=327						
H46A	Fife Lake	86.49	32	P	P	23 56 50.2	+0.1
	baz=325						
G47A	Hillman	86.51	31	P	P	23 56 50.0	-0.2
	baz=326						
D51A	Lot 18 Range I	86.58	27	P	P	23 56 49.6	-0.9
	baz=329						
N40A	Mertquake, Sal	86.58	38	P	P	23 56 50.6	0.0
	baz=321						
K43A	Burlington	86.64	35	P	P	23 56 50.3	-0.6
	baz=323						
M41A	Milan	86.69	37	P	P	23 56 50.9	-0.2
	baz=322						
D52A	ZEK Kipawa Sen	87.01	26	P	P	23 56 51.6	-1.0
	baz=330						
E51A	G1948 Merrick	87.01	27	P	P	23 56 51.5	-1.2
	baz=329						
N41A	Harden Midland	87.06	37	P	P	23 56 52.5	-0.5
	baz=322						
H48A	Harrisville	87.11	31	P	P	23 56 53.1	-0.1
	baz=326						
D53A	Lac Vacive, Po	87.17	26	P	P	23 56 52.6	-0.8
	baz=330						
D54A	Lac Fusel, La	87.45	25	P	P	23 56 53.8	-0.9
	baz=331						
WMOK	Wichita Mounta	87.47	46	P	P	23 56 54.9	-0.2
	baz=317						
F52A	Sundridge	87.70	28	P	P	23 56 55.1	-0.9
	baz=329						
J47A	Sunmer	87.72	32	P	P	23 56 56.6	+0.5
	baz=325						
KLBO	Killbear Provi	87.75	28	P	P	23 56 55.7	-0.5
	baz=328						
E53A	Dumoine, Ponti	87.79	26	P	P	23 56 55.3	-1.0
	baz=330						
M44A	Midewin, Midew	87.82	35	P	P	23 56 56.1	-0.5
	baz=323						

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E54A  Lac Daplat, Po     87.90  26  P        P        23 56 55.7 -1.1
      baz=330
HDIL  Hopedale           87.91  37  P        P        23 56 57.1 +0.1
      baz=323
BUKO  Buck Lake          87.98  28  P        P        23 56 56.7 -0.6
      baz=329
ALGO  Algonquin Park     88.02  27  P        P        23 56 56.7 -0.8
      baz=330
BMRO  Meriville Lake     88.02  29  P        P        23 56 57.5  0.0
      baz=328
J48A  Bridge Port        88.09  32  P        P        23 56 58.3 +0.4
      baz=326
TUL1  Leonard            88.24  43  P        P        23 56 58.0 -0.7
      baz=319
J49A  Marlette           88.30  31  P        P        23 56 58.8 -0.1
      baz=326
BASO  Ashfield           88.34  30  P        P        23 56 59.5 +0.5
      baz=327
K48A  Perry              88.36  32  P        P        23 56 59.3 +0.2
      baz=326
TXAR  Lajitas Array      88.45  53  P        P        23 57 00.3 +0.3
      comp=Z,3.7nm,0.7s,baz=293,slow=3.2,SNR=37
BWLO  Walkerton          88.46  30  P        P        23 57 00.1 +0.5
      baz=328
CLWO  Collingwood        88.49  29  P        P        23 56 59.8  0.0
      baz=328,SNR=5.6
ABTX  Abilene, Hawle     88.52  48  P        P        23 57 00.5 +0.4
      baz=317
P43A  Skaggs, Pawnee     88.53  37  P        P        23 56 59.5 -0.5
      baz=322
G53A  Haliburton         88.53  28  P        P        23 56 59.2 -0.7
      baz=330
PEMO  Pembroke           88.54  26  P        P        23 56 59.2 -0.7
      baz=330
L47A  Sherwood           88.59  33  P        P        23 57 00.2 -0.1
      baz=325
K49A  Clarkson           88.65  32  P        P        23 57 00.6  0.0
      baz=326
I51A  Listowel           88.77  30  P        P        23 57 01.2 +0.1
      baz=328
BANO  Bancroft           88.87  27  P        P        23 57 01.2 -0.4
      baz=330
CCM   Cathedral Cave     88.94  39 eP        P        23 57 02.1 +0.1
      comp=Z,23nm,0.9s
CCM   Cathedral Cave     88.94  39 eP        P        23 57 02.1 +0.1
CCM                                 pmax     pmax
      comp=Z,23nm,0.9s
CCM   Cathedral Cave     88.94  39  P        P        23 57 01.9  0.0
      baz=321
L48A  N Adams            88.94  33  P        P        23 57 01.7 -0.2
      baz=326,SNR=5.3
K50A  Casco              89.00  31  P        P        23 57 02.2  0.0
      baz=327
SFIN  Lafayette          89.06  35  P        P        23 57 02.2 -0.3
      baz=324
G55A  Calabogie          89.09  26  P        P        23 57 02.1 -0.5
      baz=331
PLVO  Plevna             89.15  27  P        P        23 57 02.6 -0.2
      baz=331
N47A  Urbana             89.27  34  P        P        23 57 03.2 -0.3
      baz=325,SNR=6.5
ORIO  Orleans, Innes     89.33  25  P        P        23 57 03.1 -0.5
      baz=332
DELO  Deloro Mine        89.42  27  P        P        23 57 03.9 -0.2
      baz=330
U40A  Yellville          89.45  41  P        P        23 57 04.3 -0.1
      baz=320,SNR=18
J52A  Paris              89.45  30  P        P        23 57 04.4 +0.1
      baz=328
M49A  Liberty Center     89.52  33  P        P        23 57 04.2 -0.4
      baz=326
L50A  Kingsville         89.53  32  P        P        23 57 04.8 +0.2
      baz=327
H55A  Tweed              89.54  27  P        P        23 57 04.5 -0.1
      baz=330
DRWO  Darlington Wes     89.57  28  P        P        23 57 04.5 -0.3
      baz=329
DRCO  St. Marys Ceme     89.58  28  P        P        23 57 04.7 -0.1
      baz=329
N48A  Decatur            89.58  34  P        P        23 57 04.9  0.0
      baz=325
P46A  Rosedale           89.62  36  P        P        23 57 05.3 +0.2
      baz=324,SNR=6.7
WLVO  Wesleyville        89.65  28  P        P        23 57 05.4 +0.2
      baz=330
I55A  Frankford          89.66  27  P        P        23 57 04.9 -0.3
      baz=330
K52A  Tillsonburg        89.75  30  P        P        23 57 05.9 +0.2
      baz=328
TYNO  Tyneside           89.81  29  P        P        23 57 06.1 +0.2
      baz=329
H56A  Elgin              89.83  26  P        P        23 57 05.6 -0.4
      baz=331
W39A  Magazine           89.85  43  P        P        23 57 06.0 -0.3
      baz=320
N49A  Columbus Grove     89.89  33 eP        P        23 57 07.0 +0.6
      comp=Z,18nm,0.9s
N49A  Columbus Grove     89.89  33  P        P        23 57 06.4 +0.1
      baz=326
M50A  Fremont            89.97  32  P        P        23 57 06.6 -0.1
      baz=327
STCO  Saint Catharin     89.98  29  P        P        23 57 06.8 +0.1
      baz=329
JCT   Junction City      89.98  50  P        P        23 57 06.9 -0.2
      baz=317
O48A  Farmland           90.02  34  P        P        23 57 06.8 -0.2
      baz=325
J54A  Appleton           90.12  28  P        P        23 57 07.0 -0.4
      baz=330
PECO  Prince Edward      90.15  27  P        P        23 57 07.2 -0.3
      baz=331
S44A  Carbondale         90.20  38  P        P        23 57 08.1 +0.2
      baz=323,SNR=5.1
WHTX  Lake Whitney,      90.24  47  P        P        23 57 08.4 +0.2
      baz=318
MEDO  Medina             90.28  28  P        P        23 57 08.2 +0.1
      baz=330
LONY  Lake Ozonia        90.37  25  P        P        23 57 08.2 -0.3
      baz=332
J55A  Hilton             90.43  28  P        P        23 57 08.8  0.0
      baz=330
O49A  Covington          90.43  34  P        P        23 57 09.1 +0.2
      baz=326
N50A  Nevada             90.45  33  P        P        23 57 09.2 +0.2
      baz=326
MIAR  Mount Ida          90.46  43  P        P        23 57 09.5 +0.4
      baz=320,SNR=11
M52A  Chesterland        90.55  31  P        P        23 57 09.9 +0.5
      baz=328
P48A  Milroy             90.55  35  P        P        23 57 09.4 -0.1
      baz=325
ERPA  Erie               90.60  30  P        P        23 57 09.8 +0.1
      baz=329
L53A  Girard             90.63  30  P        P        23 57 10.4 +0.6
      baz=328
N51A  Ashland            90.65  32  P        P        23 57 09.8 -0.1
      baz=327
K54A  Basiliko Farm,     90.67  29  P        P        23 57 10.2 +0.2
      baz=330
W41B  Gary Mavity, V     90.67  42  P        P        23 57 09.9 -0.2
      baz=321,SNR=5.1
L54A  Sinclairville      90.76  29  P        P        23 57 10.6 +0.2
      baz=329
O50A  Cable              90.77  33  P        P        23 57 10.5  0.0
      baz=326,SNR=5.6
K55A  Perry              90.80  28  P        P        23 57 10.7 +0.1
      baz=330
P49A  Miami Univ. Ec     90.80  34  P        P        23 57 10.6 -0.1
      baz=326,SNR=5.6
Q48A  North Vernon       90.85  35  P        P        23 57 11.0 +0.2
      baz=325
X40A  Basin Creek Fa     90.89  43  P        P        23 57 11.4 +0.2
      baz=320
S46A  Don Dixon Farm     90.94  37  P        P        23 57 11.3  0.0
      baz=324
ACSO  Alum Creek Sta     90.97  33  P        P        23 57 11.5 +0.1
      baz=327
T45A  Paducah            91.03  38  P        P        23 57 11.9 +0.2
      baz=323
435B  Jarrell            91.06  48  P        P        23 57 12.1 +0.1
      baz=318
L55A  Hinsdale           91.14  29  P        P        23 57 12.2  0.0
      baz=330
P50A  Jamestown          91.14  34  P        P        23 57 12.2 -0.1
      baz=326
Q49A  Aurora             91.16  35  P        P        23 57 12.6 +0.3
      baz=325
WCI   Wyandotte Cave     91.16  36  P        P        23 57 12.6 +0.3
      baz=324
M54A  Oil Creek Stat     91.24  30  P        P        23 57 12.9 +0.3
      baz=329
T46A  Princeton          91.37  38  P        P        23 57 13.7 +0.4
      baz=323
O52A  Adamsville         91.55  32  P        P        23 57 13.8 -0.3
      baz=327
P51A  Williamsport       91.57  33  P        P        23 57 14.1 -0.1
      baz=326
LBNH  Lisbon             91.57  24  P        P        23 57 14.5 +0.4
      baz=334
N54A  Moraine State      91.58  31  P        P        23 57 14.3  0.0
      baz=329
R49A  Shelbyville        91.62  35  P        P        23 57 14.5 +0.1
      baz=325
M55A  Ridgway            91.63  29  P        P        23 57 14.8 +0.4
      baz=329
O53A  New Philadelph     91.69  32  P        P        23 57 14.7  0.0
      baz=328
T47A  Sharon Grove       91.79  37  P        P        23 57 15.5 +0.3
      baz=324
Q51A  Peebles            91.82  34  P        P        23 57 15.4 +0.1
      baz=326
M56A  Emporium           91.83  29  P        P        23 57 15.7 +0.2
      baz=330
S49A  Springfield        91.98  36  P        P        23 57 16.4 +0.3
      baz=325
R50A  Paris              92.01  35  P        P        23 57 16.3 +0.1
      baz=326
BINY  Binghamton         92.02  27  P        P        23 57 15.9 -0.3
      baz=331
O54A  Avella             92.09  31  P        P        23 57 16.8 +0.2
      baz=328
N55A  Marion Center      92.13  30  P        P        23 57 16.6 -0.2
      baz=329
WVT   Waverly            92.13  38  P        P        23 57 16.8  0.0
      baz=324
L58A  Harry Jones Me     92.20  27  P        P        23 57 17.0 -0.1
      baz=331
V46A  Holladay           92.26  39  P        P        23 57 17.4  0.0
      baz=323
P53A  Whipple            92.27  32  P        P        23 57 17.3 -0.1
      baz=328
N56A  West Decatur       92.28  29  P        P        23 57 16.6 -0.9
      baz=330
R51A  Hillsboro          92.32  34  P        P        23 57 17.7 +0.1
      baz=326
U48A  Cassie Pea, Po     92.44  37  P        P        23 57 17.8 -0.5
      baz=324
S50A  Richmond           92.47  35  P        P        23 57 18.3 -0.1
      baz=326
O55A  Ligonier           92.50  30  P        P        23 57 18.2 -0.3
      baz=329
V47A  Nunnelly           92.52  38  P        P        23 57 18.6 -0.1
      baz=324,SNR=5.2
M58A  Price's Panora     92.57  28  P        P        23 57 18.9 +0.1
      baz=331
OXF   Oxford             92.64  40  P        P        23 57 18.8 -0.4
      baz=322
N57A  Milroy             92.70  29  P        P        23 57 19.2 -0.2
      baz=330
O56A  Blue Knob Stat     92.73  30  P        P        23 57 19.1 -0.5
      baz=330
Q53A  Leroy              92.74  33  P        P        23 57 19.9 +0.3
      baz=328
M59A  Waymart            92.80  27  P        P        23 57 19.6 -0.3
      baz=332
U49A  Red Boiling Sp     92.80  37  P        P        23 57 19.9  0.0
      baz=325,SNR=6.0
T50A  Nancy              92.81  36  P        P        23 57 19.9 -0.1
      baz=325
S51A  Beattyville        92.86  35  P        P        23 57 19.9 -0.3
      baz=326
P55A  Reedsville         92.89  31  P        P        23 57 20.4 +0.1
      baz=329
Q54A  Coxs Mills         92.92  32  P        P        23 57 20.6 +0.2
      baz=328
V48A  Smith Brothers     92.93  38  P        P        23 57 20.5 -0.1
      baz=324
N58A  Sunbury            92.94  28  P        P        23 57 20.2 -0.3
      baz=331
W47A  Westpoint          92.95  39  P        P        23 57 20.6 -0.1
      baz=324
R53A  Hurricane          93.00  33  P        P        23 57 20.7 -0.1
      baz=327
Q55A  Buckhannon         93.22  32  P        P        23 57 21.2 -0.7
      baz=328
N59A  State Game Lan     93.22  28  P        P        23 57 21.8  0.0
      baz=331
T51A  Gray               93.26  35  P        P        23 57 22.1  0.0
      baz=326
P56A  Dayton Farm, R     93.28  31  P        P        23 57 22.4 +0.3
      baz=329
U50A  Jamestown          93.31  36  P        P        23 57 22.2 -0.1
      baz=325
V49A  McMinnville        93.34  37  P        P        23 57 22.4 -0.1
      baz=325
W48A  Pulaski            93.36  38  P        P        23 57 22.5  0.0
      baz=324,SNR=6.6
X47A  Russelville        93.41  39  P        P        23 57 22.2 -0.6
      baz=323
R54A  Victor             93.53  33  P        P        23 57 22.9 -0.4
      baz=328
T52A  Hallie             93.57  35  P        P        23 57 23.6 +0.1
      baz=326
W49A  Belvidere          93.70  38  P        P        23 57 24.1  0.0
      baz=324
U51A  La Follette        93.72  36  P        P        23 57 24.4 +0.2
      baz=326
KEST  Kesra              93.74 323  LR       LR       00 43 11.5
      comp=Z,74nm,18.8s,baz=264,slow=38
TZTN  Tazewell           93.79  35  P        P        23 57 24.2 -0.3
      baz=326
V50A  Pikevile           93.80  37  P        P        23 57 24.4 -0.1
      baz=325
R55A  Marlinton          93.81  32  P        P        23 57 24.6  0.0
      baz=328
Q57A  Strasburg          93.86  30  P        P        23 57 24.5 -0.3
      baz=330
U52A  Thorn Hill         94.00  35  P        P        23 57 25.2 -0.3
      baz=326
V51A  Loudon             94.04  36  P        P        23 57 25.3 -0.3
      baz=326
W50A  Signal Mountai     94.08  37  P        P        23 57 25.6 -0.3
      baz=325
X49A  Woodville          94.16  38  P        P        23 57 25.9 -0.3
      baz=324
T54A  Tazewell           94.23  34  P        P        23 57 26.5 -0.1
      baz=327
P60A  Greenville         94.24  28  P        P        23 57 26.1 -0.3
      baz=332
V52A  Sevierville        94.35  36  P        P        23 57 26.6 -0.5
      baz=326
U53A  Fall Branch        94.37  35  P        P        23 57 27.0 -0.2
      baz=327
W51A  Cleveland          94.38  37  P        P        23 57 26.7 -0.5
      baz=325
R57A  Stanardsville      94.45  31  P        P        23 57 27.3 -0.2
      baz=330
T55A  Pulaski            94.52  33  P        P        23 57 27.9  0.0
      baz=328
BLA   Blacksburg         94.59  33  P        P        23 57 27.9 -0.3
      baz=328
Y49A  Blount Mountai     94.65  39  P        P        23 57 27.9 -0.6
      baz=324
V53A  Saluda             94.85  35  P        P        23 57 29.1 -0.3
      baz=327
U55A  TA2, Sparta        94.93  34  P        P        23 57 29.4 -0.4
      baz=328
Y50A  Piedmont           94.95  38  P        P        23 57 29.6 -0.3
      baz=325
R58B  Mineral            94.99  31  P        P        23 57 29.7 -0.3
      baz=330
W53A  Cullowhee          95.10  36  P        P        23 57 30.4 -0.3
      baz=326
Z49A  Columbiana         95.13  39  P        P        23 57 30.8 +0.1
      baz=324
T57A  Hurt               95.26  32  P        P        23 57 31.2  0.0
      baz=329
Y51A  Rockmart           95.27  38  P        P        23 57 30.9 -0.4
      baz=325
Z50A  Ashland            95.38  39  P        P        23 57 31.4 -0.4
      baz=324,SNR=6.5
X53A  Estanollee         95.59  36  P        P        23 57 32.9 +0.2
      baz=326
T58A  Grand View Acr     95.60  32  P        P        23 57 32.5 -0.3
      baz=329
W54A  Cherokee Point     95.62  35  P        P        23 57 32.7 -0.2
      baz=327
U57A  Blanch             95.71  32  P        P        23 57 33.2  0.0
      baz=329
ESDC  Sonseca Array      95.71 334  P        P        23 57 32.5 -0.8
      comp=Z,0.2nm,0.5s,baz=22,slow=5.1,SNR=3.6
ESDC                                LR       LR       00 45 57.4
      comp=Z,78nm,18.1s,baz=345,slow=39
Y52A  Lilburn            95.77  37  P        P        23 57 33.8 +0.2
      baz=326
249A  Camden             95.81  40  P        P        23 57 34.1 +0.3
      baz=324
T59A  Double "B" Far     95.98  31  P        P        23 57 34.1 -0.4
      baz=330
X54A  Belton             95.98  36  P        P        23 57 34.4 -0.2
      baz=327
V57A  Coltrane Farms     95.99  33  P        P        23 57 33.9 -0.6
      baz=329
Y53A  Monroe             96.00  37  P        P        23 57 34.8 +0.2
      baz=326
U58A  Oxford             96.07  32  P        P        23 57 34.9  0.0
      baz=329
W56A  Indian Trail       96.28  34  P        P        23 57 35.6 -0.3
      baz=328
Y54A  Tignall            96.41  36  P        P        23 57 36.6 +0.2
      baz=327,SNR=6.5
Z53A  Monticello         96.48  37  P        P        23 57 36.9 +0.1
      baz=326
X56A  White Oak          96.63  35  P        P        23 57 36.9 -0.5
      baz=328
Y55A  Saluda             96.72  36  P        P        23 57 37.8 -0.1
      baz=327
V59A  Middlesex          96.74  32  P        P        23 57 37.8 -0.1
      baz=330
W58A  Raeford            96.96  33  P        P        23 57 38.4 -0.6
      baz=329
TOA1  Torodi Ar. Sit    116.27 316 ePKPdf    PKPdf    00 02 49.9 -1.2
TORD  Torodi Ar. Bea    116.28 316  PKP      PKPdf    00 02 49.9 -1.2
      comp=Z,0.7nm,0.7s,baz=33,slow=0.7,SNR=4.0
SDV   Santo Domingo     123.42  40 ePKPdf    PKPdf    00 03 05.1  0.0
QSPA  South Pole Qui    128.80 180 ePKPdf    PKPdf    00 03 12.6 -0.9
SYO   Syowa Base        130.26 207⇑eX        PKiKP    00 03 23.3 +6.3
SNAA  Sanae             142.84 198  PKPdf    PKPdf    00 03 34.6 -4.8
SNAA  Sanae             142.84 198 ePKPpre   PKPdf    00 03 34.7 -4.8
SNAA  Sanae             142.84 198 ePKIKP    PKPdf    00 03 34.7 -4.8
VNA3  Neumayer Olymp    144.66 195  PKPdf    PKPab    00 03 40.6 -0.8
VNA1  Neumayer--Stat    144.81 197  PKPdf    PKPab    00 03 41.1 -0.8
LPAZ  La Paz            145.17  58  PKPbc    PKPbc    00 03 45.0 -0.5
      comp=Z,6.3nm,0.6s,baz=321,slow=2.0,SNR=27
LPAZ  La Paz            145.17  58 ePKPbc    PKPbc    00 03 45.5  0.0
LPAZ  La Paz            145.17  58 ePKIKP    PKPbc    00 03 45.5  0.0
PB11  IPOC Station P    146.54  64 ePKPbc    PKPab    00 03 49.7 -0.4
GO01  Chusmiza          146.81  63 ePKPdf    PKPdf    00 03 47.4 -1.1
CPUP  Villa Florida     159.34  58  PKPab    PKPab    00 04 43.0 -0.4
      comp=Z,2.3nm,0.7s,baz=350,slow=6.1,SNR=4.5
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*ISCJB **18** 23:45:52.1±0.7, 25°.80N±0°.07×98°.96E±0°.05, h10^{km}, mb4.1/7, MS3.5/2, Error ellipse: s-maj=10.4km s-min=5.7km az=12.9*

*IDC **18** 23:45:53.7±1.0, 27°.83N×102°.22E, h0^{km}, mb4.1/6, mb1 4.3/7, mb1mx3.7/52, mbtmp4.1/7, ML5.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/32, Error ellipse: s-maj=63.4km s-min=18.2km az=61.0*

*BJI **18** 23:45:53.5±0.0, 25°.89N×98°.95E, h9^{km}, mb4.0/5, ML4.0/11, Ms3.9/9, Ms7 3.7/9*

ISC 18 23:45:54.0±0.6**, 25°.90N**±0°.05×**98°.97E**±0°.05**, h10^{km}, n19, σ3^{s}18**/25**, mb4.1**/7**, 1C, Myanmar-China border region**

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Code  Station Name          Δ°  AZ°   Phase ID           Time     Res
                                    Op       ISC       h  m  s   ISC
KMI   Kunming             3.50 102  Pn       Pb       23 46 52.3 -3.8
KMI                                 Pg       Pg       23 47 00.3 -0.7
KMI                                 Sg       Sg       23 47 48.1 +1.8
KMI                                 smax     smax
      comp=N,910nm,1.0s
KMI                                 smax     smax
      comp=E,370nm,1.1s
KMI                                 LR       LR
      comp=N,2μm,4.3s
KMI                                 LR       LR
      comp=Z,1μm,7.1s
SHL   Shillong            6.40 269 eP        Pn       23 47 30.0 +1.5
SHL                                ex        x        23 49 22.0
CD2   Chengdu             6.53  39  Pn       Pn       23 47 33.3 +3.1
CD2                                 Sn       Sn       23 48 53.6 +8.8
CD2                                 Sg       Sg       23 49 23.8 +0.1
CD2                                 smax     smax
      comp=N,80nm,0.9s
CD2                                 smax     smax
      comp=E,60nm,1.2s
GYA   Guiyang             6.94  84⇑iPn       Pn       23 47 37.8 +1.9
GYA                                 Sn       Sn       23 48 57.0 +2.1
GYA                                 smax     smax
      comp=N,20nm,1.0s
GYA                                 smax     smax
      comp=E,20nm,1.0s
GYA                                 LR       LR
      comp=N,300nm,6.4s
GYA                                 LR       LR
      comp=E,330nm,9.1s
GYA                                 LR       LR
      comp=Z,440nm,8.9s
CMAR  Chiang Mai Arr      7.41 180  Pn       Pg       23 48 16.5 +0.5
      3.8nm,0.3s,baz=358,slow=17,SNR=35
CMAR                                Sn       Sg       23 49 52.6 +0.7
      2.5nm,0.3s,baz=3.0,slow=30,SNR=9.9
XAN   Xi'an              11.83  44  P        Pn       23 48 41.9 -1.0
XAN                                 pP                23 48 50.4
XAN                                 pmax     pmax
      comp=Z,5.0nm,1.1s
GTA   Gaotai             13.49   3 eP        P        23 49 14.3 -0.6
GTA                                 pP       Pn       23 49 17.5  +12
GTA                                 sP                23 49 20.8
GTA                                 S        S        23 51 51.1 -8.3
GTA                                 pmax     pmax
      comp=Z,4.0nm,1.0s
GTA                                 pmax     pmax
      comp=Z,52nm,5.1s
GTA                                 LR       LR
      comp=N,92nm,14.6s
GTA                                 LR       LR
      comp=E,340nm,13.0s
GTA                                 LR       LR
      comp=Z,100nm,15.6s
HHC   Hu-ho-hao-te       18.21  32  P        P        23 50 08.8 +1.5
HHC                                 S        Sn       23 53 28.5 -1.9
HHC                                 LR       LR
      comp=Z,620nm,13.9s
WMQ   Urumqi             20.09 336 eP        Pn       23 50 29.3 -0.3
WMQ                                 pP       sP       23 50 33.3 +0.2
WMQ                                 pmax     pmax
      comp=Z,10.0nm,0.7s
WMQ                                 LR       LR
      comp=Z,140nm,13.3s
WMQ                                 LR       LR
      comp=Z,130nm,12.1s
MDRS  Chennai            21.75 238 ex        P        23 50 43.4 -2.4
MDRS                               ex        x        23 56 17.4
MDRS                               ex        x        00 02 07.4
MDRS                               ex        x        00 04 13.4
MKAR  Makanchi Array     24.70 332  P        P        23 51 16.1 +0.9
      comp=Z,4.1nm,0.9s,baz=131,slow=11,SNR=11
AAK   Ala-Archa          26.09 316  P        P        23 51 32.6 +4.6
      comp=Z,2.1nm,0.5s,baz=124,slow=7.3,SNR=8.6
KURBB Kurchatov Arra     29.25 333  P        P        23 51 56.4 +0.4
      comp=Z,0.7nm,0.7s,baz=136,slow=9.8,SNR=6.4
BVAR  Borovoye Array     34.51 329  P        P        23 52 42.7 +0.4
      comp=Z,1.8nm,0.8s,baz=119,slow=8.4,SNR=4.3
ASAJ  Asahikawa          39.56  51  LR       LR       00 07 20.9
      comp=Z,42nm,21.1s,baz=120,slow=36
WRA   Warramunga Arr     57.07 140  P        P        23 55 40.3 -0.4
      comp=Z,4.1nm,0.6s,baz=331,slow=7.0,SNR=4.7
ASAR  Alice Springs      59.76 143  P        P        23 55 59.0 -0.4
      comp=Z,1.6nm,0.6s,baz=333,slow=6.8,SNR=4.1
NB2   NORSAR Subarra     66.63 328  P        P        23 56 43.3 -1.2
      comp=Z,1.1nm,0.6s,baz=79,slow=6.5
NOA   NORSAR Array B     66.63 328  P        P        23 56 43.5 -1.0
      comp=Z,1.7nm,0.7s,baz=79,slow=6.4,SNR=5.1
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*ISCJB **18** 23:56:13.9±1.2, 25°.88N±0°.03×98°.97E±0°.03, h9^{km}±7^{km}, mb4.8/102, MS3.4/6, Error ellipse: s-maj=5.1km s-min=4.4km az=25.4*

*IDC **18** 23:56:14.1±0.6, 25°.90N×98°.99E, h0^{km}, mb4.2/20, mb1 4.3/21, mb1mx4.1/40, mbtmp4.2/21, ML3.7/1, MS3.3/5,* *Ms1 3.4/5, ms1mx3.0/35, Error ellipse: s-maj=18.2km s-min=13.0km az=52.0*

BJI ***18*** *23:56:16.0±0.0, 25.°89N×98.°96E, h8^{km}, mb4.3/18, mB4.4/3, ML4.1/12, Ms3.9/22, Ms7 3.8/20*

MOS ***18*** *23:56:17.9±1.1, 25.°87N×99.°05E, h37^{km}, mb4.7/39, Error ellipse: s-maj=8.4km s-min=5.5km az=116.3*

NEIC ***18*** *23:56:19.9±1.7, 25.°90N×99.°01E, h39^{km}±4^{km}, mb4.7/83, Error ellipse: s-maj=11.0km s-min=9.3km az=224.0*

ISC 18 23:56:15.9±1.4, **25.°86N**±0.°04×**98.°99E**±0.°04, **h10**^{km}±8^{km}, **n201**, σ**2.^{s}01**/210, **mb4.7**/102, **MS3.5**/6, **8C-6D, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.47**	**101**	Pn	**Pn**	**23 57 12.9**	**+2.7**
KMI				Pg	**Pg**	**23 57 22.4**	**0.0**
KMI				Sg	**Sg**	**23 58 10.3**	**+2.9**
KMI				smax	smax		
	comp=N,1µm,1.0s						
KMI				smax	smax		
	comp=E,460nm,1.1s						
KMI				LR	LR		
	comp=N,2µm,4.6s						
KMI				LR	LR		
	comp=E,3µm,4.4s						
KMI				LR	LR		
	comp=Z,1µm,4.9s						
SLVN	**Son La**	**6.37**	**134**	*e*Pn	**Pn**	**23 57 51.8**	**+1.7**
SHL	**Shillong**	**6.42**	**269**	*e*P	Pn	23 57 58.0	+7.3
SHL				*e*S	Sg	23 59 53.0	+11
PAYA	**Payao**	**6.52**	**173**	P	**Pg**	**23 58 21.9**	**+1.1**
CD2	**Chengdu**	**6.55**	**39**	Pn	**Pn**	**23 57 54.9**	**+2.4**
CD2				Sn	**Sn**	**23 59 09.4**	**+2.0**
CD2				Sg	**Sg**	**23 59 45.6**	**-0.8**
CD2				smax	smax		
	comp=N,110nm,1.2s						
CD2				smax	smax		
	comp=E,120nm,1.4s						
GYA	**Guiyang**	**6.92**	**83⇑**	*i*Pn	**Pn**	**23 57 59.9**	**+2.3**
GYA				Sn	**Sn**	**23 59 25.1**	**+8.5**
GYA				Sg	**Sg**	**23 59 54.4**	**-3.8**
GYA				smax	smax		
	comp=N,30nm,1.1s						
GYA				smax	smax		
	comp=E,30nm,1.1s						
GYA				LR	LR		
	comp=E,440nm,8.1s						
GYA				LR	LR		
	comp=Z,530nm,9.8s						
CHTO	**Chiang Mai**	**7.01**	**180**	*e*Pn	**Pn**	**23 58 00.8**	**+2.0**
CHTO	**Chiang Mai**	**7.01**	**180**	*e*P	**Pn**	**23 58 00.8**	**+2.0**
CM31	**Chiang Mai Arr**	**7.37**	**180**	*e*Pn	**Pn**	**23 58 05.6**	**+1.9**
CM31				*e*		00 00 15.1	
CMAR	**Chiang Mai Arr**	**7.37**	**180**	Pn	**Pn**	**23 58 05.2**	**+1.6**
	0.3nm,0.3s,baz=356,slow=12,SNR=4.4						
CMAR				Pg	**Pg**	**23 58 35.1**	**-1.9**
	0.8nm,0.3s,baz=14,slow=16,SNR=5.9						
CMAR				Lg	Lg	00 00 14.2	
	3.1nm,0.3s,baz=359,slow=30,SNR=11						
CMAR				LR	LR	00 01 16.1	
	comp=Z,89nm,18.8s,baz=5.5,slow=41						
PHRA	**Phrae**	**7.41**	**171**	P	Pg	23 58 44.5	+6.6
LSA	**Lhasa**	**7.93**	**301**	*e*Pn	**Pn**	**23 58 12.8**	**+1.0**
LSA	**Lhasa**	**7.93**	**301**	P	**Pn**	**23 58 13.8**	**+2.1**
LSA	**Lhasa**	**7.93**	**301**	*e*P	**Pn**	**23 58 12.8**	**+1.0**
NONG	**Nongkai**	**8.66**	**153**	P	**Pg**	**23 59 04.2**	**+2.4**
ENH	**Enshi**	**10.26**	**62**	*e*Pn	**Pn**	**23 58 44.3**	**+0.9**
LZH	**Lanzhou**	**11.01**	**21**	*e*P	**Pn**	**23 58 50.8**	**-2.9**
LZH	**Lanzhou**	**11.01**	**21**	pP	Pn	23 58 53.4	-0.3
XAN	**Xi'an**	**11.85**	**44**	P	**Pn**	**23 59 03.4**	**-1.7**
XAN				pP		23 59 09.5	
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PKI	**Pulchoki**	**12.26**	**281**	*e*P	**Pn**	**23 59 08.2**	**-2.8**
	comp=Z,35nm,0.9s						
PKIN	**Phulchoki**	**12.27**	**281**	*e*P	**Pn**	**23 59 08.8**	**-2.3**
	comp=Z,18nm,0.6s						
KKN	**Kakani**	**12.39**	**282**	*e*P	**Pn**	**23 59 10.5**	**-2.2**
	comp=Z,72nm,0.7s						
DMN	**Daman**	**12.53**	**281**	*e*P	**Pn**	**23 59 12.8**	**-1.8**
	comp=Z,13nm,0.7s						
GKN	**Gorkha**	**12.98**	**283**	*e*P	**Pn**	**23 59 18.7**	**-2.0**
	comp=Z,35nm,0.8s						
GTA	**Gaotai**	**13.53**	**3**	*e*P	**P**	**23 59 32.8**	**-4.6**
GTA				pP	Pn	23 59 36.6	+8.5
GTA				sP		23 59 39.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KOLN	**Koldanda**	**13.88**	**281**	*e*P	**Pn**	**23 59 30.6**	**-2.3**
	comp=Z,16nm,0.7s						
HKPS	**Hong Kong Po S**	**14.29**	**101**	*e*P	**P**	**23 59 46.1**	**+0.4**
WHN	**Wuhan**	**14.32**	**67**	P	**Pn**	**23 59 37.8**	**-1.1**
WHN				S	**Sn**	**00 02 12.9**	**-4.9**
WHN				LR	LR		
	comp=Z,920nm,6.3s						
HHC	**Hu-ho-hao-te**	**18.24**	**32**	P	**P**	**00 00 35.1**	**+5.5**
WMQ	**Urumqi**	**20.14**	**336**	*e*P	Pn	00 00 56.5	+4.4
WMQ				pP	sP	00 01 04.0	+8.9
WMQ				sP	pP	00 01 08.8	+15
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.3s						
WMQ				LR	LR		
	comp=N,180nm,10.1s						
WMQ				LR	LR		
	comp=E,160nm,11.9s						
WMQ				LR	LR		
	comp=Z,170nm,16.5s						
WMQ	**Urumqi**	**20.14**	**336**	*e*P	**P**	**00 00 50.5**	**+0.2**
WMQ				pP	sP	00 00 56.4	+1.3
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				LR	LR		
	comp=Z,150nm,15.9s						
WMQ				LR	LR		
	comp=Z,180nm,17.9s						
YHNB	**Yeheng**	**20.28**	**88**	*e*P	**P**	**00 00 53.1**	**+1.2**
	comp=Z,26nm,0.9s						
YULB	**Yu-li**	**20.43**	**92**	*e*P	Pn	00 00 56.3	+0.7
	comp=Z,18nm,0.9s						
KULM	**Kulim**	**20.51**	**175**	*e*P	Pn	00 00 56.3	-0.3
	comp=Z,85nm,1.8s						
NACB	**Ninganchiao**	**20.55**	**90**	*e*P	Pn	00 00 56.9	-0.2
	comp=Z,43nm,0.9s						
LHMI	**Lhok Sumawe**	**20.61**	**186**	*e*P	**P**	**00 00 55.8**	**+0.4**
	comp=Z,77nm,1.0s						
YOJ	**Yonaguni jima**	**21.78**	**88**	*e*P	**P**	**00 01 09.1**	**+1.0**
	comp=Z,157nm,1.5s						
YOJ	**Yonaguni jima**	**21.78**	**88**	*e*P	**P**	**00 01 09.1**	**+1.0**
YOJ				pmax	pmax		
	comp=Z,157nm,1.5s						
SONA0	**Songino Array**	**22.70**	**13**	*e*P	**P**	**00 01 17.4**	**-0.5**
SONM	**Songino Array**	**22.70**	**13**	P	**P**	**00 01 17.4**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=196,slow=11,SNR=9.8						
ULN	**Ulaanbaatar**	**22.87**	**14**	*e*P	**P**	**00 01 19.5**	**-0.2**
	comp=Z,4.3nm,1.0s						
ULN	**Ulaanbaatar**	**22.87**	**14**	*de*P	**P**	**00 01 20.0**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PSI	**Prapat**	**22.93**	**180**	P	**P**	**00 01 22.1**	**+1.7**
	comp=Z,12nm,0.9s,baz=13,slow=2.3,SNR=3.7						
PSI	**Prapat**	**22.93**	**180**	*e*P	**P**	**00 01 21.6**	**+1.2**
	comp=Z,16nm,1.0s						
PSI	**Prapat**	**22.93**	**180**	*e*P	**P**	**00 01 21.6**	**+1.2**
PSI				pmax	pmax		
	comp=Z,16nm,1.0s						
KSH	**Kashi**	**23.59**	**311**	P	**P**	**00 01 31.3**	**+4.2**
KSH				PP	**PnPn**	**00 02 03.8**	**+10**
KSH				S	**S**	**00 05 40.9**	**-0.7**
KSH				SS	**SnSn**	**00 06 31.4**	**+13**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				LR	LR		
	comp=Z,85nm,5.9s						
KSH				LR	LR		
	comp=Z,70nm,8.0s						
NIL	**Nilore**	**23.61**	**295**	*e*P	**P**	**00 01 26.9**	**-0.3**
NIL				*e*pP	**P**	**00 01 27.6**	**+0.4**
NIL	**Nilore**	**23.61**	**295**	*e*P	**P**	**00 01 26.9**	**-0.3**
KDJ	**Kajisay**	**24.19**	**318**	*e*P	**P**	**00 01 33.7**	**+0.8**
	comp=Z,12nm,1.1s						
KDJ	**Kajisay**	**24.19**	**318**	*e*P	**P**	**00 01 33.7**	**+0.8**
KDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
MYKOM	**Kota Tinggi**	**24.38**	**168**	*e*P	**P**	**00 01 35.1**	**+0.6**
	comp=Z,53nm,1.6s						
NRN	**Naryn**	**24.54**	**315**	*e*P	**P**	**00 01 38.1**	**+1.9**
	comp=Z,8.1nm,0.8s						
NRN	**Naryn**	**24.54**	**315**	*e*P	**P**	**00 01 38.1**	**+1.9**
NRN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZAK	**Zakamensk**	**24.71**	**7**	*e*P	**P**	**00 01 37.7**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK32	**Makanchi Array**	**24.75**	**332**	*e*PcP	**PcP**	**00 05 12.7**	**-1.6**
MKAR	**Makanchi Array**	**24.75**	**332**	P	**P**	**00 01 38.0**	**+0.3**
	comp=Z,11nm,0.8s,baz=143,slow=8.9,SNR=27						
MKAR				PcP	**PcP**	**00 05 12.7**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=132,slow=4.3,SNR=4.0						
MAKZ	**Makanchi**	**24.90**	**331**	*e*P	**P**	**00 01 39.2**	**+0.2**
	comp=Z,7.7nm,1.0s						
MAKZ	**Makanchi**	**24.90**	**331**	*e*P	**P**	**00 01 39.2**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BOOM	**Boomskoye usch**	**25.16**	**317**	*e*P	**P**	**00 01 41.2**	**-0.4**
	comp=Z,5.5nm,0.8s						
BOOM	**Boomskoye usch**	**25.16**	**317**	*e*P	**P**	**00 01 41.2**	**-0.4**
BOOM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PALK	**Pallekele**	**25.41**	**227**	*e*P	**P**	**00 01 43.7**	**-0.2**
	comp=Z,41nm,1.1s						
PALK	**Pallekele**	**25.41**	**227**	*e*P	**P**	**00 01 43.7**	**-0.2**
PALK				pmax	pmax		
	comp=Z,41nm,1.1s						
DGZ	**Jazzator, Alta**	**25.43**	**342⇑**	*e*P	**P**	**00 01 47.7**	**+3.7**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKM	**Kota Kinabalu**	**25.68**	**137**	*e*P	**P**	**00 01 45.8**	**-0.6**
	comp=Z,79nm,1.2s						
AAK	**Ala-Archa**	**26.13**	**316**	P	**P**	**00 01 53.4**	**+3.0**
	comp=Z,5.3nm,0.8s,baz=161,slow=2.8,SNR=9.8						
AAK				LR	LR	00 14 09.3	
	comp=Z,64nm,19.3s,baz=74,slow=41						
AAK	**Ala-Archa**	**26.13**	**316**	*e*P	**P**	**00 01 51.0**	**+0.6**
	comp=Z,11nm,1.0s						
AAK	**Ala-Archa**	**26.13**	**316**	*e*P	**P**	**00 01 51.0**	**+0.6**
AAK				pmax	pmax		
	comp=Z,11nm,1.0s						
KS15	**Wonju Array Si**	**27.07**	**58**	*e*P	**P**	**00 01 59.1**	**+0.4**
	comp=Z,76nm,2.0s						
KSRS	**Korea Array**	**27.10**	**58**	P	**P**	**00 01 59.7**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=252,slow=10,SNR=2.7						
KSRS				LR	LR	00 13 39.3	
	comp=Z,85nm,18.8s,baz=256,slow=39						
KBL	**Kabul**	**27.21**	**296**	*e*P	**P**	**00 02 01.6**	**+1.3**
	comp=Z,10nm,0.6s						
KBL	**Kabul**	**27.21**	**296**	*e*P	**P**	**00 02 01.6**	**+1.3**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GAR	**Garm**	**27.39**	**306**	*e*P	**P**	**00 02 02.3**	**+0.5**
	comp=Z,14nm,0.7s						
GAR	**Garm**	**27.39**	**306**	*e*P	**P**	**00 02 02.3**	**+0.5**
GAR				pmax	pmax		
	comp=Z,14nm,0.7s						
BTK	**Batken**	**27.41**	**308**	*e*P	**P**	**00 02 02.0**	**+0.1**
	comp=Z,9.2nm,0.9s						
BTK	**Batken**	**27.41**	**308**	*e*P	**P**	**00 02 02.1**	**+0.1**
BTK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CN2	**Changchun**	**27.96**	**43**	*e*P	**P**	**00 02 13.4**	**+6.7**
CN2				LR	LR		
	comp=Z,130nm,15.0s						
CN2				LR	LR		
	comp=Z,120nm,17.0s						
HIA	**Hailar**	**28.40**	**29⇓**	*e*P	**P**	**00 02 12.3**	**+1.8**
HIA				pmax	pmax		
	comp=Z,25nm,0.8s						
JNU	**Nakatsue**	**28.61**	**68**	LR	LR	00 13 25.6	
	comp=Z,76nm,18.8s,baz=258,slow=36						
KURBB	**Kurchatov Arra**	**29.30**	**333**	P	**P**	**00 02 18.6**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=136,slow=9.9,SNR=13						
KURBB				PcP	**PcP**	**00 05 23.7**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=142,slow=1.3,SNR=6.9						
KURK	**Kurchatov**	**29.33**	**333**	*e*P	**P**	**00 02 19.9**	**+1.2**
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**29.33**	**333**	P	**P**	**00 02 18.6**	**-0.1**
KURK						00 05 23.7	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZAA0	**Zalesovo Array**	**29.97**	**343**	*e*P	**P**	**00 02 24.1**	**-0.2**
	comp=Z,3.9nm,0.8s						
ZALV	**Zalesovo Beam**	**29.97**	**343**	P	**P**	**00 02 24.1**	**-0.3**
	comp=Z,4.5nm,0.9s,baz=158,slow=9.5,SNR=9.0						
MNAI	**Manna**	**30.28**	**172**	*e*P	**P**	**00 02 26.8**	**-0.7**
	comp=Z,305nm,1.2s						
USA0B	**Ussuriysk Arra**	**32.34**	**47**	*e*P	**P**	**00 02 44.8**	**-0.6**
	comp=Z,6.9nm,1.0s						
USRK	**Ussuriysk Ar.**	**32.34**	**47**	P	**P**	**00 02 43.6**	**-1.7**
	comp=Z,3.2nm,0.8s,baz=227,slow=8.2,SNR=7.7						
KLR	**Kul'dur**	**34.48**	**39⇓**	*e*P	**P**	**00 03 02.8**	**-1.2**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**34.56**	**329**	P	**P**	**00 03 04.8**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=132,slow=10,SNR=13						
BVAR				PcP	**PcP**	**00 05 38.0**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=134,slow=4.2,SNR=6.2						
BRVK	**Borovoye**	**34.63**	**329**	*e*P	**P**	**00 03 05.7**	**+0.4**
	comp=Z,5.5nm,0.8s						
BRVK	**Borovoye**	**34.63**	**329**	*ce*P	**P**	**00 03 07.4**	**+2.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAJO	**Matsushiro**	**34.98**	**63**	*e*P	**P**	**00 03 08.0**	**-0.5**
MAJO	**Matsushiro**	**34.98**	**63**	*e*P	**P**	**00 03 08.0**	**-0.5**
MJAR	**Matsushiro Arr**	**34.98**	**63**	P	**P**	**00 03 08.0**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=276,slow=8.7,SNR=4.7						
MJAR	**Matsushiro Arr**	**34.98**	**63**	P	**P**	**00 03 08.0**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LUWI	**Luwuk**	**35.26**	**136**	*e*P	**P**	**00 03 11.2**	**+0.2**
	comp=Z,42nm,1.0s						
GEYT	**Alibeck**	**36.46**	**299**	P	**P**	**00 03 22.5**	**+1.3**
	comp=Z,4.8nm,0.7s,baz=123,slow=7.8,SNR=9.0						
GYA0B	**ALIBECK ARRAY**	**36.46**	**299**	*e*P	**P**	**00 03 21.8**	**+0.5**
	comp=Z,4.4nm,0.7s						
XMIS	**Christmas Isla**	**36.70**	**169**	*e*P	**P**	**00 03 23.4**	**+0.1**
	comp=Z,160nm,1.3s						
KAPI	**Kappang**	**36.71**	**144**	*e*P	**P**	**00 03 24.5**	**+1.1**
	comp=Z,94nm,1.9s						
KAPI	**Kappang**	**36.71**	**144**	*e*P	**P**	**00 03 24.5**	**+1.1**
KAPI				pmax	pmax		
	comp=Z,95nm,1.9s						
JAGI	**Jajag, Banyuwa**	**37.17**	**155**	*e*P	**P**	**00 03 28.1**	**+0.8**
	comp=Z,77nm,1.0s						
ERM	**Erimo**	**39.57**	**55**	*e*P	**P**	**00 03 46.2**	**-1.1**
	comp=Z,44nm,1.2s						
ERM	**Erimo**	**39.57**	**55**	*e*P	**P**	**00 03 46.2**	**-1.1**
ERM				pmax	pmax		
	comp=Z,44nm,1.2s						
SVE	**Sverdlovsk**	**41.34**	**329**	*e*P	**P**	**00 04 02.4**	**+0.6**
SVE				pmax	pmax		
	comp=Z,16nm,0.8s						
ARU	**Arti**	**42.12**	**328**	*e*P	**P**	**00 04 08.2**	**0.0**
	comp=Z,11nm,0.7s						
ARU	**Arti**	**42.12**	**328**	*d i*P	**P**	**00 04 11.1**	**+2.9**
ARU						00 05 48.7	
ARU				PPP	PPP	00 06 20.2	
ARU				S	**S**	**00 10 32.4**	**+4.7**
ARU				pmax	pmax		
	comp=Z,12nm,0.8s						
SOEI	**Soe**	**43.10**	**142**	*e*P	**P**	**00 04 16.7**	**-0.1**
	comp=Z,45nm,0.9s						
SARN	**Sarigan**	**44.35**	**92**	*e*P	**P**	**00 04 25.7**	**-1.1**
	comp=Z,90nm,1.5s						
SAUI	**Saumlaki**	**46.02**	**133**	*e*P	**P**	**00 04 39.3**	**-0.7**
	comp=Z,382nm,0.8s						
GNI	**Garni**	**46.99**	**302**	*e*P	**P**	**00 04 45.6**	**-2.0**
	comp=Z,42nm,1.6s						
GNI	**Garni**	**46.99**	**302⇑**	*e*P	**P**	**00 04 48.5**	**+0.9**
GNI				pmax	pmax		
	comp=Z,25nm,1.0s						
NCK	**Nalchik**	**47.94**	**306⇓**	*e*P	**P**	**00 04 56.5**	**+1.8**
NCK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	**Ar Rayn**	**48.38**	**279**	*e*P	**P**	**00 04 59.8**	**+1.4**
	comp=Z,23nm,1.8s						
RAYN	**Ar Rayn**	**48.38**	**279**	*e*P	**P**	**00 04 59.8**	**+1.4**
RAYN				pmax	pmax		
	comp=Z,23nm,1.8s						
NEY	**Neytrino**	**48.57**	**306⇑**	*e*P	**P**	**00 05 01.8**	**+2.0**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	**Kislovodsk**	**48.62**	**307**	*e*P	**P**	**00 04 59.8**	**-0.2**
	comp=Z,4.4nm,0.7s						
KIV	**Kislovodsk**	**48.62**	**307**	*e*P	**P**	**00 05 02.5**	**+2.4**
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
TIXI	**Tiksi**	**48.78**	**12⇑**	*e*P	**P**	**00 05 00.5**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MTN	**Manton Dam**	**49.59**	**137**	*e*P	**P**	**00 05 07.8**	**+0.2**
	comp=Z,15nm,1.3s						
PRGR	**Permogore**	**50.37**	**330**	*e*P	**P**	**00 05 12.0**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PEA0B	**Petropavlovsk-**	**51.08**	**41**	*e*P	**P**	**00 05 17.8**	**-0.7**
	comp=Z,10nm,1.1s						
PEA1	**Petropavlovsk-**	**51.08**	**41**	*e*P	**P**	**00 05 17.4**	**-1.1**
PETK	**Petropavlovsk-**	**51.08**	**41**	P	**P**	**00 05 17.4**	**-1.1**
	comp=Z,6.2nm,1.1s,baz=237,slow=5.0,SNR=4.3						
PET	**Petropavlovsk**	**51.64**	**42⇑**	*e*P	**P**	**00 05 23.5**	**+0.8**
PET				pmax	pmax		
	comp=Z,12nm,1.3s						
BR101	**Keskin Array S**	**55.53**	**302**	*e*P	**P**	**00 05 50.4**	**-1.3**
BR131	**Keskin Array S**	**55.53**	**302**	*e*P	**P**	**00 05 51.4**	**-0.3**
	comp=Z,1.9nm,0.8s						
BR131	**Keskin Array S**	**55.53**	**302**	P	**P**	**00 05 53.3**	**+1.6**
BRTR	**Keskin Array B**	**55.53**	**302**	P	**P**	**00 05 50.4**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=114,slow=9.0,SNR=9.2						
WRA	**Warramunga Arr**	**57.02**	**140**	P	**P**	**00 06 02.4**	**+0.2**
	comp=Z,6.2nm,0.6s,baz=325,slow=7.1,SNR=40						
WRAB	**Tennant Creek**	**57.02**	**140**	*e*P	**P**	**00 06 02.7**	**+0.5**
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**57.02**	**140⇓**	*e*P	**P**	**00 06 03.1**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,38nm,2.5s						
WB2	**Warramunga Arr**	**57.03**	**140**	*e*P	**P**	**00 06 02.1**	**-0.2**
	comp=Z,14nm,1.1s						
AKASG	**Malin Array Be**	**57.80**	**315**	P	**P**	**00 06 05.9**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=77,slow=6.4,SNR=5.9						
BILL	**Bilibino**	**57.80**	**24⇑**	*e*P	**P**	**00 06 07.0**	**-0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIRR	**Tirgusor**	**58.85**	**308**	*e*P	**P**	**00 06 13.6**	**-1.2**
	comp=Z,32nm,1.1s						
TIRR	**Tirgusor**	**58.85**	**308**	*e*P	**P**	**00 06 13.6**	**-1.2**
TIRR				pmax	pmax		
	comp=Z,32nm,1.1s						
FIA1	**FINESS Array S**	**59.49**	**328**	*e*P	**P**	**00 06 18.4**	**-0.6**
	comp=Z,26nm,1.4s						
FIA0	**FINESS Array S**	**59.49**	**328**	*e*P	**P**	**00 06 18.7**	**-0.3**
FIA0	**FINESS Array S**	**59.49**	**328**	*e*P	**P**	**00 06 18.7**	**-0.3**
FINES	**FINESS Array B**	**59.49**	**328**	P	**P**	**00 06 18.7**	**-0.3**
	comp=Z,4.6nm,0.8s,baz=108,slow=6.2,SNR=9.5						
ASAR	**Alice Springs**	**59.72**	**143**	P	**P**	**00 06 21.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=327,slow=6.8,SNR=20						
ARA0	**ARCESS Array S**	**60.25**	**337**	*e*P	**P**	**00 06 24.8**	**+0.6**
ARA0				*e*PcP	**PcP**	**00 07 08.4**	**-1.0**
ARCES	**ARCESS Array B**	**60.25**	**337**	P	**P**	**00 06 24.8**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=69,slow=6.6,SNR=4.6						
ARCES				PcP	**PcP**	**00 07 08.4**	**-1.0**
	comp=Z,3.3nm,0.9s,baz=83,slow=3.7,SNR=4.2						
ARE0	**ARCESS Array S**	**60.25**	**337**	*e*P	**P**	**00 06 24.8**	**+0.7**
	comp=Z,1.6nm,1.4s						
MLR	**Muntele Rosu**	**60.45**	**309**	*e*P	**P**	**00 06 25.9**	**-0.1**
	comp=Z,3.2nm,0.8s						
MLR	**Muntele Rosu**	**60.45**	**309**	*e*P	**P**	**00 06 25.9**	**-0.1**
MLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SUW	**Suwalki**	**61.28**	**319**	*e*P	**P**	**00 06 30.4**	**-1.0**
	comp=Z,13nm,1.0s						
SUW	**Suwalki**	**61.28**	**319**	*e*P	**P**	**00 06 30.4**	**-1.0**
SUW				pmax	pmax		
	comp=Z,13nm,1.0s						
KARP	**Karpathos**	**61.30**	**298**	*e*P	**P**	**00 06 31.8**	**-0.1**
	comp=Z,106nm,1.2s						
RER	**Riviere de l'E**	**62.81**	**226**	*e*P	**P**	**00 06 42.6**	**+0.4**
	comp=Z,520nm,2.0s						
FORT	**Forrest**	**62.81**	**152**	*e*P	**P**	**00 06 41.5**	**-0.3**
	comp=Z,70nm,1.1s						
VTS	**Vitosha**	**62.85**	**306**	*e*P	**P**	**00 06 40.8**	**-1.5**
	comp=Z,10nm,1.8s						
VTS	**Vitosha**	**62.85**	**306**	*e*P	**P**	**00 06 40.8**	**-1.5**
VTS				pmax	pmax		
	comp=Z,10.0nm,1.8s						
NC303	**NORSAR Array S**	**66.56**	**328**	*e*P	**P**	**00 07 07.0**	**+1.0**
	comp=Z,123nm,1.7s						
NC602	**NORSAR Array S**	**66.58**	**328**	*e*P	**P**	**00 07 05.9**	**-0.2**
	comp=Z,161nm,1.9s						
NB201	**NORSAR Array S**	**66.63**	**328**	*e*P	**P**	**00 07 06.4**	**-0.1**
	comp=Z,133nm,1.8s						
NB2	**NORSAR Subarra**	**66.67**	**328**	P	**P**	**00 07 05.6**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=80,slow=6.5						
NB200	**NORSAR Array S**	**66.67**	**328**	*e*P	**P**	**00 07 05.0**	**-1.8**
NOA	**NORSAR Array B**	**66.67**	**328**	P	**P**	**00 07 05.0**	**-1.8**
	comp=Z,2.1nm,0.7s,baz=80,slow=6.3,SNR=11						
NOA	**NORSAR Array B**	**66.67**	**328**	P	**P**	**00 07 05.0**	**-1.8**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NC204	**NORSAR Array S**	**66.84**	**328**	*e*P	**P**	**00 07 07.3**	**-0.6**
	comp=Z,82nm,1.6s						
NAO01	**NORSAR Array S**	**66.87**	**328**	*e*P	**P**	**00 07 07.3**	**-0.7**
	comp=Z,172nm,2.0s						
NBO00	**NORSAR Array S**	**66.88**	**328**	*e*P	**P**	**00 07 07.6**	**-0.5**
	comp=Z,108nm,1.8s						
KWAJ	**Kwajalein Atol**	**67.01**	**91**	*e*P	**P**	**00 07 08.4**	**-1.2**
	comp=Z,209nm,1.0s						
KWAJ	**Kwajalein Atol**	**67.01**	**91**	*e*P	**P**	**00 07 08.4**	**-1.2**
KWAJ				pmax	pmax		
	comp=Z,209nm,1.0s						
GEC2	**GERESS Array S**	**68.00**	**315**	*e*P	**P**	**00 07 14.2**	**-1.2**
	comp=Z,1.4nm,0.8s						
GEC2	**GERESS Array S**	**68.00**	**315**	*e*P	**P**	**00 07 14.3**	**-1.2**
GEC2				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**68.00**	**315**	P	**P**	**00 07 14.3**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=63,slow=5.9,SNR=9.3						
ANM	**Nome**	**69.33**	**27**	*e*P	**P**	**00 07 21.7**	**-1.7**
	comp=Z,12nm,1.0s						
ANM	**Nome**	**69.33**	**27**	*e*P	**P**	**00 07 21.7**	**-1.7**
ANM				pmax	pmax		
	comp=Z,12nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**70.85**	**313**	*e*P	**P**	**00 07 33.2**	**-0.2**
	comp=Z,13nm,1.9s						
TUE	**Stuetta**	**71.50**	**313**	*e*P	**P**	**00 07 36.5**	**-0.7**
	comp=Z,2.5nm,0.8s						
WLF	**Walferdange**	**72.50**	**317**	*e*P	**P**	**00 07 43.0**	**+0.1**
	comp=Z,22nm,0.9s						
WLF	**Walferdange**	**72.50**	**317**	*e*P	**P**	**00 07 43.0**	**+0.1**
WLF				pmax	pmax		
	comp=Z,23nm,0.9s						
MLY	**Manley**	**74.92**	**24**	*e*P	**P**	**00 07 56.6**	**-0.2**
	comp=Z,5.5nm,1.1s						
SSB	**Saint Sauveur**	**75.06**	**313**	*e*P	**P**	**00 07 58.6**	**+0.6**
	comp=Z,16nm,2.0s						
SSB	**Saint Sauveur**	**75.06**	**313**	*e*P	**P**	**00 07 58.7**	**+0.6**
SSB				pmax	pmax		
	comp=Z,16nm,2.0s						
KEST	**Kesra**	**75.12**	**303**	*e*P	**P**	**00 07 57.3**	**-1.3**
	comp=Z,5.3nm,1.2s						
CHGN	**Chignik**	**75.49**	**34**	*e*P	**P**	**00 08 00.1**	**-0.1**
	comp=Z,37nm,1.2s						
INK	**Inuvik**	**78.53**	**18**	*e*P	**P**	**00 08 17.2**	**+0.1**
	comp=Z,3.7nm,0.9s						
INK	**Inuvik**	**78.53**	**18**	*e*P	**P**	**00 08 17.2**	**+0.1**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DZM	**Mont Dzumac**	**80.89**	**120**	*e*P	**P**	**00 08 29.4**	**-1.4**
	comp=Z,56nm,1.6s						
WHY	**Whitehorse**	**83.35**	**24**	*e*P	**P**	**00 08 41.4**	**-1.8**
	comp=Z,14nm,1.9s						
PAB	**San Pablo**	**83.43**	**311**	*e*P	**P**	**00 08 43.2**	**-0.8**
	comp=Z,7.4nm,1.4s						
PAB	**San Pablo**	**83.43**	**311**	*e*P	**P**	**00 08 43.2**	**-0.8**
PAB				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MTE	**Manteigas**	**85.17**	**313**	*e*P	**P**	**00 08 50.8**	**-1.9**
	comp=Z,8.6nm,1.2s						
SFS	**San Fernando**	**86.20**	**309**	*e*P	**P**	**00 08 56.0**	**-1.9**
	comp=Z,143nm,1.2s						
SFS	**San Fernando**	**86.20**	**309**	*e*P	**P**	**00 08 56.0**	**-1.9**
SFS				pmax	pmax		
	comp=Z,143nm,1.2s						
PVAQ	**Vaqueiros**	**86.78**	**310**	*e*P	**P**	**00 08 59.8**	**-0.9**
	comp=Z,22nm,1.4s						
IVI	**Ivigtut**	**89.25**	**345**	*e*P	**P**	**00 09 13.0**	**+1.0**

	comp=Z,26nm,1.2s						
FRB	Frobisher Bay	90.16	354	LR	LR	00 50 47.8	
	comp=Z,24nm,19.8s,baz=232,slow=36						
TOA1	Torodi Ar. Sit	90.77	285	*e*P	P	00 09 18.6	-1.3
TORD	Torodi Ar. Bea	90.77	285	P	P	00 09 18.6	-1.3
	comp=Z,0.9nm,0.8s,baz=62,slow=4.6,SNR=4.1						
FOZ	Fox Glacier	94.73	136	*e*P	P	00 09 38.4	+0.9
	comp=Z,105nm,1.4s						
HMH	Humu‘ula Sheep	94.75	66	*e*P	P	00 09 37.6	-1.0
	comp=Z,153nm,1.2s						
KHU	Kahuku	94.81	66	*e*P	P	00 09 37.6	-1.3
	comp=Z,622nm,2.0s						
KHU	Kahuku	94.81	66	*e*P	P	00 09 37.6	-1.3
KHU				pmax	pmax		
	comp=Z,622nm,2.0s						
LENM	Lemitar	115.42	24	*e*PKPdf	PKiKP	00 14 58.3	-0.4
LTX	Lajitas	120.97	23	*e*PKPdf	PKPdf	00 15 08.3	-1.1
LTX	Lajitas	120.97	23	*e*PKIKP	PKPdf	00 15 08.3	-1.1
TXAR	Lajitas Array	120.97	23	PKP	PKPdf	00 15 08.3	-1.1
	comp=Z,0.3nm,0.7s,baz=222,slow=1.2,SNR=4.2						

DJA 19 00:24:09.8±1.1**,9°S**±11°×**12°0E**±°**,h53**km±21km**,M3.7**/6**,**
MLv3.7/6**,Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	0.23	153	P	Pn	00 24 21.1	+2.4
WBSI	Waikabubak, Su	0.81	257	P	Pn	00 24 23.8	-1.3
EDFI	Ende, Flores	1.64	65	P	Pn	00 24 34.0	-2.4
MMRI	Maumere	2.18	68	P	Pn	00 24 45.6	+1.9
KDI	Kendari	5.97	24	P	Pn	00 25 45.0	+9.3

*ISCJB **19** 00:24:36.5±0.5,24°.78N±0°.02×122°.26E±0°.02,h10km±2km,*
Error ellipse: s-maj=3.3km s-min=2.5km az=30.7
*JMA **19** 00:24:36.2,24°.73N×122°.27E,h0km,M2.4*
*TAP **19** 00:24:36.5,24°.78N×122°.22E,h14km±1km,ML3.0,C*
ISC 19 00:24:36.6±1.0**,24°.78N**±0°.03×**122°.25E**±0°.02**,h17**km±7km**,**
n49,σ**0s.60**/90**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.26	206	P	Pg	00 24 42.5	+0.2
	baz=200						
EOS1				S	Sg	00 24 47.5	+1.3
	baz=200						
NTC	Toucheng	0.39	281	P	Pb	00 24 44.7	-0.4
	baz=282						
NTC				*e*S	Sb	00 24 50.6	-0.2
	baz=282						
TWC	Suao	0.40	245	P	Pg	00 24 44.0	-0.9
	baz=242						
TWC				*e*S	Sb	00 24 50.8	-0.4
	baz=242						
TIPB	Shuangxi	0.43	296	*e*P	Pb	00 24 45.4	-0.4
	baz=298						
TIPB				S	Sb	00 24 52.0	-0.1
	baz=298						
ILA	Ilan	0.46	268	*e*P	Pb	00 24 45.6	-0.6
	baz=268						
ILA				*e*S	Sb	00 24 52.5	-0.3
	baz=268						
NWF	Wu-fen Shan	0.52	304	P	Pb	00 24 47.2	-0.1
	baz=306						
NWF				*e*S	Sb	00 24 54.6	+0.1
	baz=306						
WFSB	Wu-fen Shan	0.52	304	*i* P	Pb	00 24 47.4	+0.1
	baz=306						
WFSB				S	Sb	00 24 54.5	0.0
	baz=306						
TWE	Neicheng	0.53	264	P	Pb	00 24 46.9	-0.7
	baz=263						
TWE				*e*S	Sb	00 24 55.0	0.0
	baz=263						
NANB	Nanao	0.57	233	*e*P	Pg	00 24 47.1	-0.9
	baz=230						
NANB				*e*S	Sb	00 24 56.3	+0.1
	baz=230						
ENA	Nanau	0.58	233	*e*P	Pb	00 24 47.8	-0.5
	baz=230						
ENA				*e*S	Sb	00 24 56.5	+0.2
	baz=230						
ENTT	Nioudou	0.64	258	P	Pb	00 24 49.1	-0.2
	baz=256						
ENTT				*e*S	Sb	00 24 58.0	0.0
	baz=256						
TWA	Mucha	0.64	288	*e*P	Pb	00 24 48.9	-0.4
	baz=289						
TWA				S	Sb	00 24 58.3	+0.3
	baz=289						
NHDH	Xindian Distri	0.68	286	*e*P	Pb	00 24 50.5	+0.4
	baz=286						
NHDH				*e*S	Sb	00 24 59.7	+0.4
	baz=286						
NDT	Datong Townshi	0.69	255	P	Pb	00 24 50.0	-0.3
	baz=254						
NDT				S	Sb	00 24 59.8	+0.2
	baz=254						
JYNG	Yonagunijimaku	0.71	117	P	Pg	00 24 49.7	-0.9
JYNG				S	Sb	00 25 00.0	-0.1
YM01	YM01	0.72	301	*e*P	Pb	00 24 50.6	-0.1
	baz=301						
YM01				S	Sb	00 25 00.4	+0.1
	baz=301						
TATO	Taipei	0.72	286	P	Pb	00 24 50.6	-0.1
	baz=286						
TATO				*e*S	Sb	00 25 00.7	+0.4
	baz=286						
YM08	YM08	0.72	304	P	Pg	00 24 50.0	-0.8
	baz=305						
YM08				S	Sb	00 25 00.2	-0.3
	baz=305						
YM10	YM10	0.73	301	*e*P	Pb	00 24 50.8	-0.2
	baz=302						
YM10				*e*S	Sb	00 25 01.3	+0.6
	baz=302						
YM05	YM05	0.73	302	*e*P	Pg	00 24 50.3	-0.7
	baz=302						
YM05				*e*S	Sb	00 25 00.4	-0.3
	baz=302						
YM04	YM04	0.75	300	*e*P	Pb	00 24 50.7	-0.6
	baz=301						
YM04				*e*S	Sb	00 25 00.9	-0.3
	baz=301						
YM03	YM03	0.76	302	*e*P	Pb	00 24 51.4	-0.1
	baz=302						
YM03				*e*S	Sb	00 25 01.9	+0.4
	baz=302						
YOJ	Yonaguni jima	0.76	114	*e*P	Pg	00 24 50.9	-0.6
	baz=113						
YOJ				*e*S	Sn	00 25 03.1	-0.5
	baz=113						
YOJ	Yonaguni jima	0.76	114	P	Pg	00 24 50.5	-1.0
YOJ				*e*S	Sg	00 25 00.8	-0.8
TWY	Chenhua	0.77	310	*e*P	Pb	00 24 51.6	0.0
	baz=311						
TWY				S	Sb	00 25 02.6	+0.8
	baz=311						
ANP	Anpu	0.78	302	*e*P	Pg	00 24 50.7	-1.1
	baz=302						
YHNB	Yeheng	0.80	262	P	Pb	00 24 52.2	0.0
	baz=261						
YHNB				*e*S	Sb	00 25 03.4	+0.6
	baz=261						
NSK	Sanguang	0.82	263	P	Pb	00 24 52.5	+0.1
	baz=262						
NSK				*e*S	Sb	00 25 03.7	+0.5
	baz=262						
TWS1	Kuangyinshan	0.82	293	*e*S	Sb	00 25 04.1	+0.9
	baz=293						
NACB	Ninganchiao	0.85	225	*e*P	Pb	00 24 52.5	-0.4
	baz=223						
NACB				*e*S	Sb	00 25 04.6	+0.6
	baz=223						
NNSB	Datong	0.86	246	P	Pb	00 24 52.9	-0.4
	baz=245						
NNSB				*e*S	Sb	00 25 04.4	-0.2
	baz=245						
NNS	Nan Shan	0.87	247	*e*P	Pg	00 24 52.1	-1.5
	baz=246						
NNS				*e*S	Sb	00 25 05.8	+1.1
	baz=246						
ETLH	Xiulin Townshi	0.90	231	P	Pb	00 24 53.5	-0.4
	baz=229						
ETLH				*e*S	Sb	00 25 05.8	+0.1
	baz=229						
TWD	Chiawan	0.92	221	*e*P	Pg	00 24 53.2	-1.3
	baz=218						
TWD				*e*S	Sb	00 25 05.7	-0.3
	baz=218						
WHF	Hehuan Shan	1.10	235	P	Pg	00 24 56.9	-1.1
	baz=233						
WHF				*e*S	Sb	00 25 12.3	+0.6
	baz=233						
TDCB	Techi	1.12	242	*e*P	Pn	00 24 57.7	0.0
	baz=241						
TDCB				*e*S	Sn	00 25 13.1	+0.2
	baz=241						
LIOB	Emei	1.13	263	*e*P	Pn	00 24 58.2	+0.4
	baz=263						
LIOB				*e*S	Sn	00 25 13.3	+0.4
	baz=263						
NSTT	Nanjuang	1.15	263	*e*P	Pn	00 24 59.5	+1.6
	baz=262						
NSTT				*e*S	Sn	00 25 13.2	-0.1
	baz=262						
CHGB	Renai	1.22	234	*e*P	Pg	00 24 59.6	-0.6
	baz=233						
CHGB				*e*S	Sn	00 25 15.5	+0.2
	baz=233						
ESL	Shilin	1.22	218	*e*P	Pg	00 24 59.7	-0.5
	baz=216						
ESL				*e*S	Sn	00 25 16.0	+1.0
	baz=216						
EGFH	Guangfu	1.34	214	*e*P	Pg	00 25 02.1	-0.3
	baz=213						
HGSD	Ruisui	1.49	211	*e*P	Pn	00 25 03.0	+0.4
	baz=209						
EHY	Hungye	1.53	214	*e*P	Pb	00 25 03.7	-0.8
	baz=212						
SSLB	Suanglung	1.54	230	*e*P	Pn	00 25 03.6	+0.2
	baz=229						
SSLB				*e*S	Sb	00 25 23.7	-0.3
	baz=229						
YULB	Yu-li	1.63	212	*e*P	Pn	00 25 04.8	+0.1
	baz=211						
WHYT	Xinyi Township	1.67	230	*e*P	Pn	00 25 05.8	+0.6
	baz=229						
JKRS	Kuro-shima	1.69	108	P	Pb	00 25 07.2	-0.1
JKRS				*e*S	Sb	00 25 29.1	+0.9
JIJ	Ishigaki jima	1.77	103	P	Pb	00 25 08.6	-0.1
JIJ				*e*S	Sb	00 25 31.3	+0.7
ELDTW	Lidau	1.94	216	*e*P	Pn	00 25 10.2	+1.2
	baz=214						

*ANF **19** 00:26:36.4±3.7,69°.12N×144°.68W,h10km,ML3.7/4,Error*
ellipse: s-maj=46.4km s-min=18.0km az=15.0
*ISCJB **19** 00:26:37.8±0.6,69°.09N±0°.04×144°.80W±0°.09,h10km,*
Error ellipse: s-maj=6.1km s-min=4.3km az=19.9
*NEIC **19** 00:26:37.5±0.0,69°.16N×144°.65W,h1km,ML3.1(AEIC),*
After AEIC.
*AEIC **19** 00:26:37.5,69°.16N×144°.65W,h1km,ML3.1*
ISC 19 00:26:37.6±1.1**,69°.18N**±0°.05×**144°.71W**±0°.04**,h10**km**,n40,**
σ**1s.36**/52**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	TAPS Pump Stn	1.74	310	*e*Pn	Pn	00 27 08.6	+0.9
PS01				*e*Sn	Sb	00 27 32.9	+1.6
BM3	Burnt Mountain	1.77	179	*e*Pn	Pn	00 27 08.7	+0.3
BM3				*e*Sn	Sg	00 27 33.4	-1.1
TOLK	Toolik Lake Re	1.84	255	*e*Pn	Pb	00 27 10.7	-0.7
TOLK				*e*Sn	Sn	00 27 33.7	+1.1
TOLK				*e*Sg	Sb	00 27 34.9	+0.6
TOLK	Toolik Lake Re	1.84	255	Pb	Pb	00 27 10.4	-0.9
	baz=72						
TOLK				S	Sn	00 27 30.5	-2.1
	baz=72						
PS04	TAPS Pump Stn4	1.85	248	*e*Pn	Pb	00 27 11.0	-0.5
PS04				*e*Sg	Sg	00 27 36.5	-0.6
FYU	Fort Yukon	2.64	185	*e*Pn	Pn	00 27 21.5	+1.4
FYU				*e*Sg	Sb	00 27 57.8	+0.6
COLD	Coldfoot	2.84	229	*e*Pn	Pn	00 27 24.1	+1.2
PRP	Porcupine Dome	3.69	185	*e*Pn	Pn	00 27 36.8	+2.0
PRP				*e*Sn	Sn	00 28 19.7	+1.3
EPYK	Eagle Plains	4.15	129	*e*Pn	Pn	00 27 41.8	+0.9
EPYK	Eagle Plains	4.15	129	P	Pn	00 27 38.7	-2.2
	baz=316						
EPYK				S	Sn	00 28 27.3	-2.1
	baz=316						
INK	Inuvik	4.17	97	*e*Pn	Pn	00 27 41.8	+0.6
INK				*e*Sn	Sn	00 28 30.2	+0.4
POKR	Poker Plat Res	4.22	196	P	Pn	00 27 39.7	-2.2
	baz=14						
POKR				S	Sn	00 28 30.1	-1.0
	baz=14						
MDM	Murphy Dome	4.46	200	*e*Pn	Pn	00 27 45.4	+0.2
COLA	College	4.50	197	*e*Pn	Pn	00 27 46.9	+1.2
TCOL	CIGO, UAF Yank	4.50	197	S	Sn	00 28 36.2	-1.8
	baz=15						
ILB	Eielson Array	4.51	192	*e*Pn	Pn	00 27 46.8	+0.9
EGAK	Eagle	4.64	161	*e*Pn	Pn	00 27 49.5	+1.8
CCB	Clear Creek Bu	4.71	196	*e*Pn	Pn	00 27 49.1	+0.5
IM3	Indian Mountai	4.72	231	*e*Pn	Pn	00 27 48.9	+0.2
MLY	Manley	4.79	212	*e*Pn	Pn	00 27 50.1	+0.4
HDA	Harding Lake	4.88	191	*e*Pn	Pn	00 27 51.8	+0.9
SCRK	Sand Creek	5.24	176	*e*Pn	Pn	00 27 57.9	+2.0
BWN	Browne	5.37	203	*e*Pn	Pn	00 27 58.6	+0.9
RIDG	Independent Ri	5.47	181	*e*Pn	Pn	00 28 00.6	+1.5
DAWY	Dawson	5.56	155	*e*Pn	Pn	00 28 02.0	+1.7
DOT	Dot Lake	5.56	177	*e*Pn	Pn	00 28 02.1	+1.8
BPAW	Bear Paw Mtn.	5.68	209	*e*Pn	Pn	00 28 02.1	+0.2
MCK	McKinley	5.73	199	*e*Pn	Pn	00 28 03.3	+0.7
RND	Reindeer	6.04	198	*e*Pn	Pn	00 28 08.3	+1.4
CHUM	Lake Minchumin	6.12	213	*e*Pn	Pn	00 28 08.6	+0.6
KTH	Kantishna Hill	6.18	207	*e*Pn	Pn	00 28 09.6	+0.8
DHY	Denali Highway	6.23	191	*e*Pn	Pn	00 28 11.6	+2.0
PAX	Paxson	6.25	183	*e*Pn	Pn	00 28 11.0	+1.2
MENT	Mentasta	6.29	176	*e*Pn	Pn	00 28 12.4	+2.1
CAST	Castle Rocks	6.50	211	*e*Pn	Pn	00 28 13.6	+0.4
RDOG	Red Dog Mine	6.74	269	*e*Pn	Pn	00 28 14.9	-1.5
PPLA	Purkeypile	7.00	209	*e*Pn	Pn	00 28 20.2	0.0
SCM	Sheep Creek Mo	7.46	190	*e*Pn	Pn	00 28 28.7	+2.3
SML	Sawmill	7.56	193	*e*Pn	Pn	00 28 30.3	+2.6
TT01	Tatalina	7.79	221	*e*Pn	Pn	00 28 31.7	+0.9
TT01				*e*Pn	Pn	00 28 31.7	+0.9

*ISCJB **19** 00:35:03.4±0.8,15°.59S±0°.08×71°.63W±0°.09,h100km,*
mb3.4/3,Error ellipse: s-maj=15.3km s-min=7.6km
az=137.2
*IDC **19** 00:35:03.0±2.3,15°.43S×71°.70W,h71km±22km,mb3.3/3,*
mb1 3.6/7,mb1mx3.4/34,mbtmp3.6/7,MS3.0/3,Ms1 3.1/3,
ms1mx2.7/12,Error ellipse: s-maj=31.3km s-min=21.1km
az=39.0
ISC 19 00:35:04.2±0.8**,15°.5S**±0°.1×**71°.7W**±0°.1**,h100**km**,n12,**
σ**2s.03**/11**,mb3.4**/3**,Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.47	103	P	Pn	00 35 58.1	+1.3
	0.5nm,0.3s,baz=261,slow=12,SNR=11						
LPAZ				LR	LR	00 37 14.2	
	comp=Z,80nm,21.2s,baz=258,slow=37						
NNA	Nana	6.15	304	P	Pn	00 36 29.8	-2.8
	1.0nm,0.3s,baz=130,slow=18,SNR=3.0						
NNA				S	Sn	00 37 44.2	+2.5
	0.5nm,0.3s,baz=61,slow=23,SNR=4.0						
LVC	Limon Verde	7.50	160	S	Sn	00 38 13.1	-1.8
	1.0nm,0.3s,baz=149,slow=16,SNR=4.1						
LVC				LR	LR	00 39 31.1	
	comp=Z,132nm,21.7s,baz=324,slow=35						
SIV	San Ignacio	10.20	94	P	Pn	00 37 26.1	-1.6
	0.2nm,0.3s,baz=285,slow=14,SNR=8.4						
CFA	Coronel Fontan	16.30	170	P	Pn	00 38 47.2	0.0
	0.2nm,0.3s,baz=344,slow=12,SNR=4.5						
PLCA	Paso Flores	25.12	178	P	P	00 40 22.5	+2.6
	2.4nm,0.8s,baz=5.4,slow=11,SNR=4.1						
APG	El Apazote	35.58	328	LR	LR	00 56 45.9	
	comp=Z,77nm,18.0s,baz=105,slow=37						
TXAR	Lajitas Array	54.27	325	P	P	00 44 20.6	+0.4
	0.2nm,0.5s,baz=138,slow=6.5,SNR=3.5						
TORD	Torodi Ar. Bea	77.94	73	P	P	00 46 53.2	+1.3
	0.3nm,0.7s,baz=253,slow=5.8,SNR=5.3						
ZALV	Zalesovo Beam	137.49	20	PKhKP	PKPpre	00 54 12.3	
	0.8nm,0.5s,baz=298,slow=3.1,SNR=4.4						
MJAR	Matsushiro Arr	146.20	314	PKPbc	PKiKP	00 54 35.0	-1.5
	1.1nm,0.3s,baz=67,slow=3.2,SNR=4.8						
SONM	Songino Array	147.75	2	PKPbc	PKPab	00 54 40.1	0.0
	1.0nm,0.4s,baz=326,slow=2.0,SNR=7.9						

*SNET **19** 00:44:32.5±1.1,13°.67N×91°.11W,h7km±11km,ML3.3*
*GCG **19** 00:44:36.3±0.3,15°.09N×90°.81W,h50km,MD3.7*
ISC 19 00:44:31.2±2.9**,13°.7N**±0°.2×**91°.2W**±0°.1**,h10**km**,n9,**
σ**0s.56**/11**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.85	22	*e*P	Pn	00 44 49.8	+0.4
PCG	Pacaya	0.91	37	*e*P	Pn	00 44 51.2	+0.8
STG3	Santiaguito 3,	1.11	340	*e*P	Pg	00 44 52.3	-0.4
RTR	El Retiro	1.50	81	*e*S	Sg	00 45 19.8	0.0
CEVE	Cerro Verde	1.52	83	*e*P	Pn	00 44 59.1	+0.4
CEVE				*e*S	Sg	00 45 19.3	-0.9
CEVE				IAML		00 45 27.5	
	comp=Z,420nm,0.2s						
SBLS	San Blas	1.52	83	*e*P	Pn	00 44 58.8	+0.1
SNJE	San Jose	1.54	82	*e*P	Pn	00 44 59.6	+0.6
MTO3	Montecristo	1.91	67	*e*P	Pn	00 45 04.3	+0.2
MTO3				*e*S	Sb	00 45 30.5	+0.2
MRL	Marmol	2.02	45	*e*P	Pn	00 45 06.1	+0.4

*IDC **19** 00:46:25.2±0.7,20°.10S×70°.66W,h0km,mb3.9/10,*
mb1 4.1/13,mb1mx4.0/34,mbtmp4.0/13,ML4.0/3,MS3.8/9,
Ms1 3.7/9,ms1mx3.5/18,Error ellipse: s-maj=19.0km
s-min=13.3km az=66.0
*ISCJB **19** 00:46:26.2±1.0,20°.24S±0°.02×70°.97W±0°.03,h29km±7km,*
mb5.0/98,MS3.8/7,Error ellipse: s-maj=5.1km
s-min=3.8km az=169.6
*GUC **19** 00:46:27.9±0.5,20°.23S×70°.80W,h40km±1km,ML4.2*
*NEIC **19** 00:46:28.0±0.0,20°.23S×70°.79W,h41km,mb4.7/102,*
ML4.2(GUC),After GUC.
ISC 19 00:46:27.0±0.6**,20°.25S**±0°.03×**70°.88W**±0°.05**,h22**km±5km**,**
n179,σ**1s.11**/184**,mb4.9**/98**,MS3.8**/7**,2C,Near coast of**
northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.96	48	*i* P	Pn	00 46 44.4	-1.0
PSGC				*e*S	Sn	00 46 57.2	-1.2
PSGC				IAML		00 47 00.0	
	comp=N,14µm,0.3s						
PSGCX	Pisagua	0.96	48	*e*P	Pn	00 46 43.9	-1.4
PSGCX				*e*S	Sb	00 46 58.9	+1.5
PB11	IPOC Station P	1.25	67	*e*Pn	Pn	00 46 49.1	-0.3
PB11	IPOC Station P	1.25	67	*e*P	Pn	00 46 49.3	0.0
PB11				*e*S	Sn	00 47 05.5	-0.1
PB11	IPOC Station P	1.25	67	*i* P	Pn	00 46 48.9	-0.4
PB11				*e*P	Pn	00 46 49.2	-0.2
PB11				*e*S	Sn	00 47 04.9	-0.7
PB11				IAML		00 47 07.7	
	comp=E,9µm,0.4s						
PB02	IPOC Station P	1.41	139	*e*P	Pn	00 46 51.5	0.0
PB02				*e*S	Sb	00 47 11.5	+1.2
PB02	IPOC Station P	1.41	139	*i* P	Pn	00 46 51.9	+0.4
PB02				*e*S	Sn	00 47 10.6	+1.2
PB02				IAML		00 47 16.5	
	comp=N,7µm,0.6s						
PB02				IAML		00 47 18.0	
	comp=E,8µm,0.2s						
PB01	IPOC Station P	1.52	122	*e*Pn	Pn	00 46 53.4	+0.4
PB01	IPOC Station P	1.52	122	*i* P	Pn	00 46 53.5	+0.4
PB01				*e*S	Sn	00 47 13.1	+0.7
PB01				IAML		00 47 20.8	
	comp=E,10µm,0.3s						
PB08	IPOC Station P	1.62	87	*i* P	Pn	00 46 55.4	+0.7
PB08				*e*S	Sn	00 47 15.4	+0.3
PB08				IAML		00 47 20.0	
	comp=E,3µm,0.4s						
MNMC	Minye Minye	1.64	48	*e*Pn	Pn	00 46 54.9	+0.1
MNMC	Minye Minye	1.64	48	⇑*i*P	Pn	00 46 55.5	+0.6
MNMC				*e*S	Sn	00 47 16.4	+1.0
GO01	Chusmiza	1.69	70	*e*Pn	Pn	00 46 55.7	0.0
GO01	Chusmiza	1.69	70	⇑*i*P	Pn	00 46 56.1	+0.5
GO01				*e*S	Sn	00 47 17.7	+0.9
PB12	IPOC Station P	1.71	18	*e*P	Pn	00 46 56.1	+0.5
PB12	IPOC Station P	1.71	18	*i* P	Pn	00 46 56.3	+0.7
PB12				*e*S	Sn	00 47 17.6	+0.9
PB12				IAML		00 47 25.6	
	comp=E,5µm,0.5s						
PB07	IPOC Station P	1.74	148	*e*P	Pn	00 46 56.1	0.0
PB03	IPOC Station P	2.08	150	*e*P	Pn	00 47 01.0	+0.2
PB09	IPOC Station P	2.17	135	*e*P	Pn	00 47 03.1	+1.0
PB04	IPOC Station P	2.19	162	*e*Pn	Pn	00 47 01.6	-0.7
PB16	IPOC Station P	2.30	34	*e*P	Pn	00 47 05.5	+1.3
PB05	IPOC Station P	2.67	166	*e*P	Pn	00 47 08.4	-0.5
LVC	Limon Verde	2.98	142	Pn	Pn	00 47 15.0	+1.6
	comp=E,14nm,0.3s,baz=341,slow=8.8,SNR=157						
LVC				Sn	Sn	00 47 50.9	+2.3
	comp=E,42nm,0.3s,baz=317,slow=9.5,SNR=6.5						
LVC				Lg	Lg	00 47 59.4	
	comp=E,54nm,0.3s,baz=241,slow=4.5,SNR=12						
LVC	Limon Verde	2.98	142	*e*Pn	Pn	00 47 13.9	+0.5
LVC	Limon Verde	2.98	142	*e*P	Pn	00 47 14.6	+1.2
LVC				IAML		00 48 05.5	
	comp=Z,389nm,0.6s						
PB15	IPOC Station P	3.22	156	*e*P	Pn	00 47 16.9	+0.4
PB10	IPOC Station P	3.26	175	*e*Pn	Pn	00 47 16.0	-1.0
PB10	IPOC Station P	3.26	175	*e*P	Pn	00 47 16.5	-0.4
LPAZ	La Paz	4.72	34	Pn	Pn	00 47 42.3	+4.7
	comp=Z,3.0nm,0.3s,baz=222,slow=6.6,SNR=70						
LPAZ				Pg	Pb	00 47 48.5	-1.1
	comp=Z,8.3nm,0.3s,baz=198,slow=8.3,SNR=31						
LPAZ				Lg	Lg	00 48 46.7	
	baz=22,slow=15,SNR=1.5						
LPAZ	La Paz	4.72	34	*e*Pn	Pn	00 47 40.7	+3.1
LPAZ				*e*		00 47 40.8	
LPAZ	La Paz	4.72	34	*e*P	Pn	00 47 39.4	+1.8
GO02	Mina Guanaco	5.04	167	*e*Pn	Pn	00 47 41.7	+0.1
NNA	Nana	10.01	324	Pn	Pn	00 48 50.4	+0.7
	comp=Z,1.4nm,0.3s,baz=210,slow=13,SNR=2.0						
NNA				Sn	Sn	00 50 36.6	-4.8
	comp=Z,1.1nm,0.3s,baz=240,slow=13,SNR=1.7						
NNA				Lg	Lg	00 51 26.4	
	baz=226,slow=20,SNR=1.4						
SIV	San Ignacio	10.24	67	Pn	Pn	00 48 51.5	-1.3
	comp=Z,2.6nm,0.3s,baz=274,slow=9.8,SNR=32						
CFA	Coronel Fontan	11.56	169	LR	LR	00 53 51.5	
	comp=Z,259nm,19.3s,baz=24,slow=38						
CPUP	Villa Florida	13.84	118	Pn	P	00 49 47.9	-2.3
	comp=Z,0.1nm,0.3s,baz=284,slow=8.3,SNR=4.5						
CPUP				LR	LR	00 56 22.9	
	comp=Z,200nm,18.4s,baz=296,slow=44						
CPUP	Villa Florida	13.84	118	*e*Pn	Pn	00 49 41.8	-0.2
GO05	Huala	14.74	183	*e*Pn	Pn	00 49 53.9	-0.3
TRQA	Tornquist	19.36	158	*e*P	P	00 50 50.3	-0.8
	comp=Z,0.1nm,0.8s						
PLCA	Paso Flores	20.42	179	P	Pn	00 51 04.7	-0.3
	comp=Z,2.5nm,0.9s,baz=23,slow=9.9,SNR=4.3						
PLCA				LR	LR	00 58 39.1	
	comp=Z,135nm,18.1s,baz=2.5,slow=36						
PLCA	Paso Flores	20.42	179	*e*P	P	00 51 03.5	+0.7
	comp=Z,42nm,1.8s						
PTGA	Pitinga	22.14	30	P	P	00 51 19.3	-2.1
	comp=Z,5.4nm,0.5s,baz=231,slow=13,SNR=13						
PTGA	Pitinga	22.14	30	*e*P	P	00 51 20.7	-0.7
	comp=Z,7.5nm,0.8s						
BDFB	Brasilia	22.22	82	P	P	00 51 23.3	+0.8
	comp=Z,7.3nm,0.9s,baz=254,slow=15,SNR=6.7						
BDFB				LR	LR	01 01 27.7	
	comp=Z,378nm,20.4s,baz=263,slow=41						
BDFB	Brasilia	22.22	82	*e*P	P	00 51 22.7	+0.2
	comp=Z,12nm,1.1s						
BDFB				*e*P	P	00 51 23.3	+0.8
ROSC	El Rosal	25.16	352	LR	LR	01 03 03.1	
	comp=Z,234nm,19.0s,baz=95,slow=40						
PAYG	Puerto Ayora	27.18	313	*e*P	P	00 52 10.1	+0.8
	comp=Z,34nm,1.0s						
EFI	East Falkland	32.93	165	*e*P	P	00 52 58.3	-1.4
	comp=Z,102nm,1.3s						
JTS	Las Juntas de	33.36	334	*e*P	P	00 53 04.8	+0.9
	comp=Z,36nm,1.7s						
GRGR	Grenville	33.43	17	*e*P	P	00 53 05.0	+0.6
	comp=Z,234nm,1.1s						
ESPN	Las Esperanzas	34.84	337	*e*P	P	00 53 17.9	+1.2
	comp=Z,28nm,1.2s						
RCBR	Riachuelo	36.86	72	*e*P	P	00 53 33.0	-1.2
	comp=Z,50nm,1.4s						
SKI	Saint Kitts	38.19	13	*e*P	P	00 53 45.8	+0.5

	comp=Z,112nm,1.0s						
CRPR	Cabo Rojo, PR	38.20	6	eP	P	00 53 47.0	+1.7
	comp=Z,47nm,1.1s						
OBIP	Obispado Ponce	38.28	7	eP	P	00 53 47.0	+1.0
	comp=Z,22nm,1.1s						
SJG	San Juan	38.40	7	eP	P	00 53 46.7	-0.3
	comp=Z,31nm,1.4s						
BANI	BANI	38.40	1	eP	P	00 53 47.3	+0.1
CBYP	Canovanas	38.60	8	eP	P	00 53 47.0	-1.7
	comp=Z,26nm,1.1s						
CUPR	Culebra, Puert	38.71	9	eP	P	00 53 49.2	-0.4
	comp=Z,32nm,1.0s						
EMPR	Esperanza - Ma	38.72	7	eP	P	00 53 50.1	+0.5
	comp=Z,106nm,1.1s						
ANWB	Willy Bob	38.72	14	eP	P	00 53 50.3	+0.7
	comp=Z,77nm,0.8s						
CBCY	The Bluff, Cay	40.68	347	eP	P	00 54 05.3	-0.6
	comp=Z,111nm,1.2s						
GRTK	Grand Turk	41.50	360	eP	P	00 54 11.2	-1.5
	comp=Z,255nm,1.3s						
HOPE	Hope Point	42.86	151	eP	P	00 54 22.9	-0.6
	comp=Z,278nm,1.8s						
TEIG	Tepich	43.68	336	eP	P	00 54 30.9	+0.4
	comp=Z,81nm,1.9s						
CSU	Charleston Sou	53.66	350	eP	P	00 55 46.9	-0.1
250A	Grady	53.98	344	eP	P	00 55 48.7	-0.6
	comp=Z,19nm,0.6s						
KVTX	Kingsville	54.23	330	eP	P	00 55 50.3	-1.0
	comp=Z,48nm,0.6s						
GOGA	Godfrey	54.69	347	eP	P	00 55 55.1	+0.5
	comp=Z,5.0nm,1.1s						
JSC	Jenkinsville	55.12	350	eP	P	00 55 56.3	-1.3
	comp=Z,22nm,1.8s						
W57A	Gilead	55.77	351	eP	P	00 56 00.8	-1.4
	comp=Z,25nm,1.8s						
W50A	Signal Mountai	56.82	346	eP	P	00 56 11.2	+1.3
	comp=Z,5.3nm,0.9s						
V52A	Sevierville	57.07	348	eP	P	00 56 11.6	+0.1
	comp=Z,12nm,1.5s						
V51A	Loudon	57.19	347	eP	P	00 56 12.9	+0.5
	comp=Z,26nm,1.8s						
T59A	Double "B" Far	57.26	354	eP	P	00 56 12.8	0.0
	comp=Z,3.9nm,0.6s						
LTX	Lajitas	58.56	326	eP	P	00 56 22.7	+0.4
TXAR	Lajitas Array	58.56	326	P	P	00 56 22.7	+0.4
	comp=Z,0.2nm,0.6s,baz=147,slow=5.4,SNR=3.0						
WHAR	Wooly Hollow	58.85	340	eP	P	00 56 24.7	+0.6
	comp=Z,20nm,1.8s						
R55A	Marlinton	58.86	352	eP	P	00 56 25.1	+0.9
	comp=Z,12nm,1.3s						
T47A	Sharon Grove	58.95	345	eP	P	00 56 24.8	+0.1
	comp=Z,23nm,1.8s						
R53A	Hurricane	59.19	350	eP	P	00 56 26.4	+0.1
	comp=Z,14nm,1.3s						
SDMD	Soldier's Deli	59.61	355	eP	P	00 56 29.9	+0.7
	comp=Z,5.4nm,1.2s						
Q51A	Peebles	60.11	349	eP	P	00 56 33.1	+0.5
	comp=Z,5.0nm,0.6s						
P53A	Whipple	60.23	351	eP	P	00 56 33.8	+0.3
	comp=Z,24nm,1.8s						
O56A	Blue Knob Stat	60.63	353	eP	P	00 56 36.7	+0.4
	comp=Z,18nm,1.5s						
CCM	Cathedral Cave	61.07	342	eP	P	00 56 39.0	-0.3
	comp=Z,7.8nm,1.4s						
N55A	Marion Center	61.18	353	eP	P	00 56 40.9	+0.9
	comp=Z,28nm,1.7s						
ACSO	Alum Creek Sta	61.22	349	eP	P	00 56 39.8	-0.4
	comp=Z,6.3nm,0.8s						
YLE	Yale	61.28	358	eP	P	00 56 39.1	-1.5
	comp=Z,17nm,0.9s						
N53A	Lisbon	61.44	351	eP	P	00 56 42.2	+0.5
	comp=Z,6.1nm,0.9s						
N54A	Moraine State	61.48	352	eP	P	00 56 42.9	+0.9
	comp=Z,32nm,1.8s						
N51A	Ashland	61.78	350	eP	P	00 56 44.7	+0.7
	comp=Z,6.3nm,0.7s						
N49A	Columbus Grove	62.10	349	eP	P	00 56 46.8	+0.7
	comp=Z,26nm,1.7s						
319A	Douglas	63.18	323	eP	P	00 56 53.7	0.0
	comp=Z,4.6nm,0.9s						
SNAA	Sanae	64.06	161	eP	P	00 56 60.0	+1.1
	comp=Z,8.9nm,1.5s						
PECO	Prince Edward	64.11	355	eP	P	00 56 59.2	-0.1
	comp=Z,14nm,1.4s						
LONY	Lake Ozonia	64.64	357	eP	P	00 57 04.1	+1.2
	comp=Z,15nm,1.6s						
EMMW	East Machias	64.72	3	eP	P	00 57 03.8	+0.5
	comp=Z,21nm,1.3s						
HAL	Halifax	64.91	6	eP	P	00 57 05.3	+0.7
	comp=Z,49nm,1.5s						
MOQ	Mont Orford	65.25	359	eP	P	00 57 07.3	+0.4
I42A	Draeger Farm,	65.93	346	eP	P	00 57 09.7	-1.6
	comp=Z,11nm,1.0s						
TRQ	Mont Tremblant	66.24	357	eP	P	00 57 13.5	+0.2
W18A	Petrified Fore	66.27	326	eP	P	00 57 14.2	+0.3
	comp=Z,6.6nm,0.6s						
G45A	Suttons Bay	66.36	349	eP	P	00 57 14.6	+0.7
	comp=Z,33nm,0.6s						
ECSD	EROS Data Cent	67.91	340	eP	P	00 57 24.6	+0.8
	comp=Z,7.0nm,1.4s						
E44A	Grand Marais A	67.93	349	eP	P	00 57 23.7	-0.2
	comp=Z,191nm,0.9s						
DBIC	Dimbokro	70.17	75	LR	LR	01 26 51.6	
	comp=Z,92nm,20.0s,baz=236,slow=35						
PSUT	Pine Spring	71.01	326	eP	P	00 57 44.5	+1.0
	comp=Z,2.4nm,1.0s						
TPNV	Topopah Spring	71.18	323	eP	P	00 57 44.1	-0.4
	comp=Z,12nm,1.8s						
MACI	Morro de la Ar	71.30	49	eP	P	00 57 44.7	-0.7
	comp=Z,111nm,1.1s						
JLU	Jordanelle	71.33	328	eP	P	00 57 45.1	-0.3
	comp=Z,2.9nm,0.7s						
DAC	Darwin (Calif)	71.49	322	eP	P	00 57 45.8	-0.6
DUG	Dugway, Tooele	71.71	327	eP	P	00 57 48.7	+1.2
	comp=Z,2.2nm,1.0s						
PD31	Pinedale Array	72.12	331	eP	P	00 57 51.4	+1.3
PDAR	Pinedale Array	72.12	331	P	P	00 57 51.4	+1.3
	comp=Z,0.2nm,0.3s,baz=122,slow=3.3,SNR=2.4						
NV01	Mina Array Sit	73.38	323	eP	P	00 58 00.5	+2.9
NVAR	Mina Array Bea	73.38	323	P	P	00 58 00.5	+2.9
	comp=Z,0.5nm,0.7s,baz=118,slow=5.0,SNR=4.0						
PMOZ	Porto Moniz, M	73.58	45	eP	P	00 57 58.6	-0.2
ULM	Lac du Bonnet	73.59	344	P	P	00 57 58.6	+0.3
	comp=Z,1.7nm,0.5s,baz=191,slow=3.2,SNR=3.3						
ULM				LR	LR	01 32 02.1	
	comp=Z,34nm,21.2s,baz=96,slow=37						
ULM	Lac du Bonnet	73.59	344	eP	P	00 57 58.6	+0.3
	comp=Z,30nm,1.8s						
KVN	Kaiserville	73.70	323	eP	P	00 58 01.1	+1.6
	comp=Z,2.3nm,1.1s						
RLMT	Red Lodge	73.85	333	eP	P	00 58 01.3	+1.0
	comp=Z,15nm,1.9s						
SAO	San Andreas Ge	74.10	320	eP	P	00 58 01.3	-0.4
	comp=Z,16nm,1.1s						
SCHQ	Schefferville	74.85	2	eP	P	00 58 06.4	+0.9
	comp=Z,8.9nm,0.7s						
RUBR	Rubicon Trail	74.86	322	eP	P	00 58 06.3	0.0
	comp=Z,79nm,0.7s						
PAHR	Pah Rah Range	74.87	323	eP	P	00 58 06.8	+0.5
	comp=Z,7.4nm,1.6s						
HLID	Hailey	75.01	329	eP	P	00 58 07.7	+0.7
	comp=Z,4.9nm,1.5s						
MCMT	McKenzie Canyo	75.22	331	eP	P	00 58 08.0	-0.2
BOZ	Bozeman (W)	75.26	332	eP	P	00 58 07.8	-0.6
	comp=Z,2.9nm,1.2s						
BEKR	Beckworth	75.53	323	eP	P	00 58 10.5	+0.5
	comp=Z,2.2nm,0.7s						
LRM	Limekiln Ridge	75.80	331	eP	P	00 58 16.1	+4.5
HRY	Holter Researc	76.21	332	eP	P	00 58 13.1	-0.6
HOPS	Hopland Field	76.53	321	eP	P	00 58 16.8	+1.3
	comp=Z,98nm,1.8s						
WDC	Whiskeytown Da	77.25	322	eP	P	00 58 19.0	-0.6
	comp=Z,21nm,1.9s						
KMRM	Mail Ridge	77.70	321	eP	P	00 58 22.0	-0.2
JTMT	Jette	78.08	332	eP	P	00 58 23.3	-0.9
	comp=Z,2.9nm,0.9s						
KHMM	Horse Mountain	78.13	322	eP	P	00 58 24.9	+0.2
	comp=Z,24nm,1.2s						
TOA1	Torodi Ar. Sit	78.69	71	eP	P	00 58 27.1	-1.0
TOA0	Torodi Ar. Sit	78.69	71	eP	P	00 58 28.1	0.0
	comp=Z,8.4nm,0.9s						
TORD	Torodi Ar. Bea	78.69	71	P	P	00 58 27.1	-1.0
	comp=Z,5.9nm,0.8s,baz=251,slow=5.3,SNR=34						
TORD				LR	LR	01 32 06.4	
	comp=Z,87nm,19.1s,baz=285,slow=35						
WALA	Waterton Lakes	78.91	333	eP	P	00 58 28.5	-0.3
HAWA	Hanford	79.57	328	eP	P	00 58 32.7	+0.4
	comp=Z,3.7nm,0.8s						
H04A	Detroit Lake	79.77	326	eP	P	00 58 31.4	-2.0
	comp=Z,7.4nm,1.0s						
MTE	Manteigas	84.28	43	eP	P	00 58 57.5	+0.2
	comp=Z,10nm,1.2s						
TAM	Tamanrasset	85.92	64	eP	P	00 59 06.2	+0.2
	comp=Z,4.5nm,1.0s						
ESDC	Sonseca Array	86.25	45	P	P	00 59 08.0	+0.9
	comp=Z,0.1nm,0.3s,baz=240,slow=4.3,SNR=2.8						
XMAS	Kiritimati	87.48	273	eP	P	00 59 13.8	+0.1
	comp=Z,105nm,1.0s						
BBB	Bella Bella	87.61	329	eP	P	00 59 11.9	-1.3
	comp=Z,7.7nm,0.8s						
YKA	Yellowknife Ar	89.41	341	P	P	00 59 22.2	+0.6
	comp=Z,1.2nm,0.8s,baz=137,slow=4.6,SNR=10						
YKB5	Yellowknife Ar	89.41	341	eP	P	00 59 22.2	+0.6
YKW3	Yellowknife Ar	89.46	341	eP	P	00 59 22.3	+0.4
	comp=Z,12nm,1.7s						
MOBC	Moresby Island	90.07	328	eP	P	00 59 25.6	+0.6
PUH	Pauahi	91.49	290	eP	P	00 59 32.6	+0.1
	comp=Z,119nm,1.3s						
BYL	Byron's Ledge	91.54	290	eP	P	00 59 31.8	-0.9
	comp=Z,111nm,1.0s						
KKO	Keanakako`i	91.54	290	eP	P	00 59 31.2	-1.5
	comp=Z,123nm,1.0s						
HLP	Hilina Pali	91.54	290	eP	P	00 59 31.1	-1.6
	comp=Z,278nm,1.3s						
HATHI	Halema‘uma‘u T	91.55	290	eP	P	00 59 32.3	-0.5
	comp=Z,334nm,1.6s						
SBLHI	Steaming Bluff	91.55	290	eP	P	00 59 31.9	-0.9
	comp=Z,305nm,1.6s						
HUH	Hualalai	92.14	290	eP	P	00 59 35.7	0.0
	comp=Z,352nm,1.7s						
KHLU	Kahalu`u	92.16	290	eP	P	00 59 35.8	+0.2
	comp=Z,116nm,1.2s						
URZ	Urewera	93.72	227	eP	P	00 59 41.4	-0.9
	comp=Z,34nm,1.7s						
KEST	Kesra	94.03	53	LR	LR	01 42 54.6	
	comp=Z,51nm,19.2s,baz=262,slow=36						
H11S2	WAKE ISLAND Hy	125.88	279	T	T	03 24 46.2	
	baz=101,slow=75,SNR=104						
H11S1	WAKE ISLAND Hy	125.89	279	T	T	03 24 46.9	
	baz=101,slow=75,SNR=68						
H11S3	WAKE ISLAND Hy	125.90	279	T	T	03 24 54.8	
	baz=101,slow=75,SNR=65						
H11N3	WAKE ISLAND Hy	125.94	280	T	T	03 25 02.7	
	baz=102,slow=74,SNR=81						
H11N2	WAKE ISLAND Hy	125.95	280	T	T	03 25 02.4	
	baz=102,slow=74,SNR=82						
H11N1	WAKE ISLAND Hy	125.95	280	T	T	03 25 02.2	
	baz=102,slow=74,SNR=57						
WR1	Warramunga Arr	133.04	213	ePKPdf	PKiKP	01 05 43.5	+0.6
WRA	Warramunga Arr	133.04	213	PKP	PKiKP	01 05 43.5	+0.6
	comp=Z,1.3nm,0.8s,baz=130,slow=3.3,SNR=3.9						
ZAA1	Zalesovo Array	141.56	23	ePKPdf	PKPdf	01 05 56.8	+0.5
ZALV	Zalesovo Beam	141.57	23	PKP	PKPdf	01 05 56.8	+0.5
	comp=Z,1.0nm,0.6s,baz=265,slow=1.6,SNR=3.6						
MAKZ	Makanchi	145.48	34	ePKPbc	PKPab	01 06 03.9	+0.1
MK32	Makanchi Array	145.66	33	ePKPbc	PKPab	01 06 05.0	+0.7
MKAR	Makanchi Array	145.66	33	PKPbc	PKPab	01 06 05.0	+0.6
	comp=Z,3.4nm,0.7s,baz=329,slow=3.9,SNR=26						
KLR	Kul'dur	145.89	333	PKPbc	PKiKP	01 06 07.5	-0.7
	comp=Z,0.7nm,0.5s,baz=153,slow=4.5,SNR=3.2						
USRK	Ussuriysk Ar.	149.46	327	PKPbc	PKiKP	01 06 16.6	+1.0
	comp=Z,1.4nm,0.7s,baz=248,slow=1.6,SNR=3.5						
SONA0	Songino Array	152.39	4	ePKPbc	PKiKP	01 06 22.9	+1.1
SONM	Songino Array	152.39	4	PKPbc	PKiKP	01 06 22.9	+1.1
	comp=Z,0.5nm,0.4s,baz=300,slow=1.2,SNR=4.1						

*ISCJB **19** 01:02:52.2±0.6, 30°.64N±0°.06×141°.1E±0°.1, h35^{km}, mb3.9/14, MS3.3/2, Error ellipse: s-maj=16.5km s-min=7.5km az=168.4*

*IDC **19** 01:02:55.9±3.0, 30°.72N×140°.99E, h52^{km}±24^{km}, mb3.6/13, mb1 3.8/16, mb1mx3.7/41, mbtmp3.9/16, ML3.7/3, MS3.1/4, Ms1 3.2/4, ms1mx2.8/29, Error ellipse: s-maj=27.3km s-min=16.6km az=83.0*

*JMA **19** 01:03:00.2±0.3, 31°.49N×140°.99E, h0^{km}, M4.0*

ISC 19 01:02:54.7±0.9**, 30°.82N**±0°.10×**141°.1E**±0°.1**, h35**^{km}**, n37, σ1^{s}98**/33**, mb3.9**/14**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.00	325	P	Pn	01 03 27.3	+1.3
JHCJ	Hachijojimakas	2.51	334	P	Pn	01 03 33.8	+0.9
JHCJ				eS	Sn	01 03 58.4	-3.9
JHJ2	Mitsune	2.54	335	P	Pn	01 03 34.7	+1.4
JHJ	Hachijo jima 2	2.55	334	P	Pn	01 03 34.9	+1.3
	244nm,0.3s,baz=92,slow=11,SNR=4.2						
JHJ				S	Sn	01 04 02.8	-0.7
	157nm,0.3s,baz=268,slow=23,SNR=2.3						
BSO1	Boso 1	3.82	358	P	Pn	01 03 52.7	+2.2
BSO3	Boso 3	4.00	353	P	Pn	01 03 55.3	+2.1
BSO4	Boso 4	4.21	351	P	Pn	01 03 59.2	+3.0
TK02	Tokai 2	4.22	319	P	Pn	01 03 59.9	+3.7
JOD2	Odawara 2	4.74	340	P	Pn	01 04 05.4	+1.7
JNY	Yasuok	5.28	330	P	Pn	01 04 15.1	+3.9
JRY	Ryogami san	5.50	341	P	Pn	01 04 17.0	+2.9
JAG	Ashikaga	5.76	347	P	Pn	01 04 18.6	+1.0
JHO	Hitachi	5.79	356	P	Pn	01 04 17.3	-0.8
MJAR	Matsushiro Arr	6.20	338	P	Pn	01 04 26.3	+2.7
	0.3nm,0.3s,baz=145,slow=12,SNR=7.9						
MJAR				S	Sn	01 05 34.1	+0.8
	baz=129,slow=15,SNR=0.9						
MAT	Matsushiro	6.20	338	P	Pn	01 04 25.7	+2.0
MAT				S	Sn	01 05 31.1	-2.2
JNU	Nakatsue	8.99	287	LR	LR	01 08 25.1	
	comp=Z,77nm,19.5s,baz=132,slow=37						
KSRS	Korea Array	12.77	305	P	Pn	01 05 56.5	+2.9
	0.3nm,0.3s,baz=118,slow=13,SNR=9.5						
KSRS				LR	LR	01 10 23.4	
	comp=Z,51nm,19.8s,baz=116,slow=35						
H11N2	WAKE ISLAND Hy	25.73	109	T	T	01 35 17.1	
	baz=300,slow=75,SNR=8.6						
H11N1	WAKE ISLAND Hy	25.74	109	T	T	01 35 17.1	
	baz=300,slow=75,SNR=4.9						
H11N3	WAKE ISLAND Hy	25.75	109	T	T	01 35 17.1	
	baz=300,slow=75,SNR=6.8						
H11S3	WAKE ISLAND Hy	26.21	112	T	T	01 35 51.0	
H11S1	WAKE ISLAND Hy	26.21	112	T	T	01 35 56.2	
	baz=25,slow=74,SNR=21						
H11S2	WAKE ISLAND Hy	26.23	112	T	T	01 35 52.4	
	baz=305,slow=74,SNR=14						
SONM	Songino Array	31.44	313	P	P	01 09 13.3	+0.5
	0.6nm,0.7s,baz=99,slow=9.1,SNR=3.5						
CMAR	Chiang Mai Arr	40.04	262	P	P	01 10 25.4	-1.2
	0.5nm,0.3s,baz=46,slow=11,SNR=3.0						
CMAR				LR	LR	01 28 11.5	
	comp=Z,18nm,18.1s,baz=270,slow=38						
ZALV	Zalesovo Beam	46.10	317	P	P	01 11 15.5	+0.4
	0.6nm,0.4s,baz=134,slow=4.2,SNR=2.4						
ZALV				PcP	PcP	01 12 49.2	-1.7
	1.2nm,0.5s,baz=88,slow=4.1,SNR=4.4						
MKAR	Makanchi Array	47.44	307	P	P	01 11 24.8	-1.0
	0.6nm,0.6s,baz=88,slow=11,SNR=6.3						
WRA	Warramunga Arr	50.89	188	P	P	01 11 50.2	-2.1
	0.5nm,0.3s,baz=356,slow=6.3,SNR=7.9						
WRA				PcP	PcP	01 13 09.1	+0.5
	1.3nm,0.9s,baz=347,slow=3.4,SNR=2.5						
ASAR	Alice Springs	54.62	188	P	P	01 12 17.0	-2.9
	0.2nm,0.4s,baz=4.8,slow=5.3,SNR=4.8						
ARCES	ARCESS Array B	69.73	340	P	P	01 14 00.5	-0.1
	3.7nm,1.0s,baz=53,slow=7.2,SNR=5.2						
FINES	FINESS Array B	74.21	333	P	P	01 14 26.6	-0.9
	1.2nm,0.5s,baz=70,slow=5.7,SNR=26						
FINES				LR	LR	01 48 23.8	
	comp=Z,35nm,18.3s,baz=243,slow=37						
KBZ	Khabaz	74.81	312	P	P	01 14 28.6	-2.7
	4.2nm,0.9s,baz=126,slow=2.6,SNR=4.6						
NVAR	Mina Array Bea	78.96	52	P	P	01 14 56.1	+0.9
	0.2nm,0.5s,baz=276,slow=5.8,SNR=3.8						
AKASG	Malin Array Be	79.08	323	P	P	01 14 54.4	-0.9
	0.5nm,0.3s,baz=50,slow=6.1,SNR=5.0						
NOA	NORSAR Array B	79.82	338	P	P	01 14 57.5	-1.7
	1.3nm,0.9s,baz=70,slow=4.3,SNR=3.2						
BRTR	Keskin Array B	82.80	312	P	P	01 15 15.2	-0.3
	1.2nm,0.7s,baz=92,slow=4.3,SNR=7.0						
TXAR	Lajitas Array	94.10	52	P	P	01 16 10.7	+0.7
	0.3nm,0.6s,baz=266,slow=3.0,SNR=4.8						

*ISCJB **19** 01:13:51.2±0.6, 20°.9S±0°.1×178°.7W±0°.1, h579^{km}, mb3.9/13, Error ellipse: s-maj=17.2km s-min=12.1km az=138.9*

*IDC **19** 01:13:55.0±2.3, 20°.80S×178°.72W, h610^{km}±29^{km}, mb3.3/13, mb1 3.6/13, mb1mx3.4/28, mbtmp4.3/13, Error ellipse: s-maj=19.8km s-min=11.4km az=156.0*

ISC 19 01:13:52.2±0.7**, 20°.8S**±0°.1×**178°.7W**±0°.1**, h579**^{km}**, n19, σ1^{s}10**/22**, mb3.8**/13**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	17.79	191	P	P	01 17 24.4	-2.2
	1.5nm,0.3s,baz=9.0,slow=6.9,SNR=9.9						
RPZ	Rata Peaks	24.42	198	P	P	01 18 25.9	-0.3
	3.7nm,0.6s,baz=156,slow=5.3,SNR=4.0						
CTA	Charters Tower	32.84	265	P	P	01 19 40.5	+1.0
	4.0nm,0.4s,baz=89,slow=11,SNR=8.0						
STKA	Stephens Creek	37.10	244	P	P	01 20 15.8	+1.2
	2.4nm,0.6s,baz=97,slow=13,SNR=3.3						
ASAR	Alice Springs	43.85	257	P	P	01 21 08.9	+0.5
	5.9nm,0.5s,baz=95,slow=7.6,SNR=66						
ASAR				PcP	PcP	01 22 41.3	-0.5
	0.5nm,0.4s,baz=104,slow=4.5,SNR=4.6						
ASAR				S	S	01 26 56.8	-1.6
	1.7nm,0.8s,baz=92,slow=16,SNR=7.3						
WRA	Warramunga Arr	43.95	262	P	P	01 21 09.0	-0.2
	3.3nm,0.3s,baz=91,slow=8.3,SNR=80						
WRA				S	S	01 26 57.8	-1.9
	2.8nm,1.0s,baz=83,slow=21,SNR=3.9						
VNDA	Vanda	57.57	185	P	P	01 22 47.9	+1.0
	0.9nm,0.7s,baz=356,slow=7.2,SNR=9.6						
PETK	Petropavlovsk-	76.39	346	P	P	01 24 41.7	-0.8
	2.3nm,0.6s,baz=126,slow=7.7,SNR=6.0						
USRK	Ussuriysk Ar.	78.85	326	P	P	01 24 57.2	+1.2
	1.9nm,0.7s,baz=83,slow=7.9,SNR=5.6						
NVAR	Mina Array Bea	81.66	44	P	P	01 25 11.3	+0.3
	1.0nm,0.7s,baz=225,slow=8.1,SNR=9.8						
TXAR	Lajitas Array	87.73	58	P	P	01 25 41.2	+0.6
	1.0nm,0.8s,baz=217,slow=6.0,SNR=12						
ILAR	Eielson Array	88.73	13	P	P	01 25 43.0	-1.2
	1.4nm,1.0s,baz=225,slow=5.5,SNR=9.2						
PDAR	Pinedale Array	89.59	43	P	P	01 25 49.2	+0.1
	0.7nm,0.6s,baz=264,slow=1.5,SNR=6.3						
CMAR	Chiang Mai Arr	89.62	290	P	P	01 25 50.8	+1.3
	1.0nm,0.5s,baz=113,slow=2.1,SNR=6.5						
ARCES	ARCESS Array B	129.09	349	PKP	PKPdf	01 31 54.1	-0.2
	1.2nm,0.6s,baz=46,slow=3.5,SNR=6.3						
AKASG	Malin Array Be	142.96	330	PKhKP	PKPpre	01 32 17.0	
	3.6nm,0.5s,baz=41,slow=4.4,SNR=25						
BRTR	Keskin Array B	146.56	312	PKPbc	PKPbc	01 32 29.1	-0.8
	1.1nm,0.6s,baz=148,slow=5.8,SNR=7.3						
CLL	Collm	148.19	346 ⇓	iPKPbc	PKPbc	01 32 32.9	-0.5
	comp=Z,5.0nm,0.9s						
CLL				i PKPab	PKPab	01 32 38.1	-0.5
GERES	GERESS Array B	150.30	343	PKPbc	PKPbc	01 32 37.8	-0.9
	comp=Z,0.8nm,0.6s,baz=48,slow=2.2,SNR=7.5						

*NEIC **19** 01:43:11.5±0.0, 14°.52N×93°.94W, h75^{km}, MD4.0(MEX), After MEX.*

MEX 19 01:43:11.5±0.5**, 14°.54N×93°.92W, h81**^{km}±34^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.34	30	ePn	Pn	01 43 33.5	-1.4
PCIG				eSn	Sn	01 43 50.7	-1.7
PCIG		1.34	30	eP	Pn	01 43 33.5	-1.4
PCIG				eS	Sn	01 43 50.7	-1.7
THIG		1.64	77	i P	Pn	01 43 36.8	-1.9
THIG				i S	Sn	01 43 57.9	-1.5
TGIG		2.35	19	ePn	Pn	01 43 46.5	-1.7
TGIG		2.35	19	eP	Pn	01 43 46.5	-1.7
TGIG				i S	Sn	01 44 14.8	-1.5
CCIG	Comitan	2.44	45	ePn	Pn	01 43 49.4	-0.1
CCIG	Comitan	2.44	45	eP	Pn	01 43 48.3	-1.2
CCIG				i S	Sn	01 44 16.7	-1.9
CMIG	Matias Romero	2.70	340	ePn	Pn	01 43 52.4	-0.4
CMIG	Matias Romero	2.70	340	eP	Pn	01 43 52.4	-0.4
CMIG				i S	Sn	01 44 23.1	-1.4
TEIG	Tepich	7.81	43	ePn	Pn	01 45 04.7	+2.2

GCG 19 01:48:32.0±0.5**, 15°.23N×90°.83W, h62**^{km}±999^{km}**, MD3.5, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.78	181	eP	Pn	01 48 48.9	+1.4
PCG	Pacaya	0.86	166	eP	Pn	01 48 49.2	+0.5
STG3	Santiaguito 3,	0.88	234	eP	Pn	01 48 49.3	+0.5
STG3				eS	Sn	01 49 02.8	+1.6

*ISCJB **19** 01:53:50.4±0.4, 19°.48N±0°.05×94°.69E±0°.05, h33^{km}, mb4.4/33, MS3.0/2, Error ellipse: s-maj=8.8km s-min=4.2km az=35.4*

*NEIC **19** 01:53:52.1±0.9, 19°.46N×94°.74E, h35^{km}±4^{km}, mb4.6/22, Error ellipse: s-maj=24.5km s-min=8.6km az=201.0*

*NDI **19** 01:53:53.6±3.2, 19°.34N×94°.63E, h57^{km}±71^{km}, ML3.7*

*IDC **19** 01:53:54.7±2.2, 19°.46N×94°.76E, h58^{km}±17^{km}, mb3.8/13, mb1 4.0/15, mb1mx3.7/41, mbtmp4.1/15, MS3.1/3, Ms1 3.1/3, ms1mx2.6/48, Error ellipse: s-maj=29.4km s-min=9.6km az=39.0*

ISC 19 01:53:52.8±0.6**, 19°.55N**±0°.08×**94°.74E**±0°.07**, h35**^{km}**, n73, σ1^{s}54**/80**, mb4.5**/33**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIMRM	Sittwe	1.84	289	ePn	Pn	01 54 24.4	+2.5
SAIH	SAIHA	3.35	331	eP	Pn	01 54 48.6	+5.7
SAIH				eS	Sn	01 55 26.3	+4.7
SAIH				IAML		01 55 45.8	
	comp=N,159nm,0.7s						
SAIH				IAML		01 55 48.4	
	comp=E,180nm,0.4s						
CHTO	Chiang Mai	4.04	100	ePn	Pn	01 54 54.4	+2.1
CM31	Chiang Mai Arr	4.12	105	ePn	Pn	01 54 56.1	+2.7
CM31				eSn	Sn	01 55 40.9	+0.4
CMAR	Chiang Mai Arr	4.12	105	P	Pn	01 54 56.1	+2.7
	comp=E,8.0nm,0.3s,baz=276,slow=14,SNR=39						
CMAR				S	Sn	01 55 40.9	+0.4
	comp=E,20nm,0.3s,baz=260,slow=18,SNR=3.2						
BRDH	Bariadhala	4.25	318	P	Pn	01 54 59.8	+4.7
	comp=E,38nm,0.3s,baz=296,slow=12,SNR=1.8						
BRDH				S	Sn	01 55 47.2	+3.8
	comp=E,33nm,0.3s,baz=292,slow=23,SNR=1.9						
BELO	BELONIA	4.79	321	eP	Pn	01 55 05.8	+3.3
BELO				ex	x	01 55 59.0	
BELO				IAML		01 56 01.6	
	comp=E,334nm,0.3s						
BELO				IAML		01 56 02.1	
	comp=N,380nm,0.5s						
KOHI	KOHIMA	6.17	355	eP	Pn	01 55 23.4	+1.8
KOHI				eS	Sn	01 56 31.7	+0.6
KOHI				IAML		01 56 35.1	
	comp=N,59nm,0.2s						
SHL	Shillong	6.54	337	eP	Pn	01 55 30.5	+3.7
SHL				eS	Sn	01 56 38.1	-2.2
SHL				IAML		01 56 38.5	
	comp=E,54nm,0.1s						
SHL				IAML		01 56 38.6	
	comp=N,58nm,0.1s						
MOKO	MOKOCHONG	6.75	358	eP	Pn	01 55 31.7	+2.1
MOKO				eS	Sn	01 56 44.9	-0.3
MOKO				IAML		01 56 57.0	
	comp=E,80nm,0.5s						
MOKO				IAML		01 56 58.1	
	comp=N,59nm,0.5s						
GUWA	GUWAHATI	7.18	338	eP	Pn	01 55 36.5	+1.1
GUWA				eS	Sn	01 56 53.0	-2.8
GUWA				IAML		01 56 58.3	
	comp=N,30nm,0.3s						
TEZP	TEZPUR	7.26	346	eP	Pn	01 55 38.8	+2.4
TEZP				eS	Sn	01 56 55.5	-2.1
TEZP				IAML		01 56 59.2	
	comp=E,64nm,0.2s						
TEZP				IAML		01 56 59.5	
	comp=N,99nm,0.1s						
ZIRO	ZIRO	7.98	354	eP	Pn	01 55 47.3	+0.7
ZIRO				eS	Sn	01 57 14.4	-1.4
ZIRO				IAML		01 57 21.9	
	comp=E,288nm,0.2s						
ZIRO				IAML		01 57 24.2	
	comp=N,571nm,0.9s						
BOK	Bokaro	9.25	299	eP	Pn	01 56 05.1	+1.3
BOK				eS	Sn	01 57 37.7	-9.0
BOK				IAML		01 57 37.9	
	comp=N,16nm,0.3s						
BOK				IAML		01 57 38.1	

	comp=E,8.9nm,0.1s						
JIRN	Jiri	11.25	317	eP	Pn	01 56 32.9	+1.4
	comp=E,33nm,0.2s						
PKI	Pulchoki	11.70	315	eP	Pn	01 56 38.3	+0.7
	comp=E,23nm,0.4s						
PKIN	Phulchoki	11.71	315	eP	Pn	01 56 38.4	+0.7
	comp=E,20nm,0.3s						
DMN	Daman	11.93	314	eP	Pn	01 56 41.5	+0.8
	comp=E,13nm,0.3s						
KKN	Kakani	11.93	315	eP	Pn	01 56 41.9	+1.3
GKN	Gorkha	12.50	314	eP	Pn	01 56 48.7	+0.3
	comp=E,67nm,0.3s						
KOLN	Koldanda	13.07	311	eP	Pn	01 56 56.3	0.0
	comp=E,28nm,0.3s						
DANN	Dangsing	13.31	313	eP	Pn	01 56 57.8	-1.9
	comp=E,35nm,0.5s						
BHPL	Bhopal	16.53	286	eP	Pn	01 57 41.2	-1.0
PALK	Pallekele	18.29	230	LR	LR	02 06 00.7	
	comp=E,47nm,18.4s,baz=118,slow=40						
NIL	Nilore	23.73	311	eP	P	01 59 01.4	-0.5
	comp=E,14nm,0.8s						
MK32	Makanchi Array	29.03	342	eP	P	01 59 49.6	+0.1
MKAR	Makanchi Array	29.03	342	P	P	01 59 49.6	+0.1
	comp=E,1.9nm,0.7s,baz=156,slow=9.2,SNR=11						
SONA0	Songino Array	29.77	16	eP	P	01 59 57.1	+0.9
SONM	Songino Array	29.77	16	P	P	01 59 57.1	+0.9
	comp=E,0.6nm,0.3s,baz=198,slow=8.9,SNR=3.6						
TLY	Talaya	32.82	10	LR	LR	02 14 37.8	
	comp=E,33nm,20.6s,baz=183,slow=38						
KURBB	Kurchatov Arra	33.57	341	P	P	02 00 29.6	+0.3
	comp=E,3.7nm,0.8s,baz=150,slow=8.6,SNR=27						
KURBB				PcP	PcP	02 03 08.8	-0.5
	comp=E,0.1nm,0.4s,baz=165,slow=3.5,SNR=5.1						
KURK	Kurchatov	33.62	341	eP	P	02 00 29.8	0.0
	comp=E,4.8nm,0.8s						
KSRS	Korea Array	33.95	51	LR	LR	02 15 47.2	
	comp=E,29nm,18.8s,baz=242,slow=39						
ZAA0	Zalesovo Array	35.17	350	eP	P	02 00 43.5	+0.2
	comp=E,6.1nm,0.9s						
ZALV	Zalesovo Beam	35.17	350	P	P	02 00 43.5	+0.2
	comp=E,5.0nm,0.4s,baz=170,slow=8.2,SNR=13						
ZAA1	Zalesovo Array	35.18	350	eP	P	02 00 43.5	+0.2
BVAR	Borovoye Array	38.37	336	PcP	PcP	02 03 23.2	-0.4
	comp=E,0.3nm,0.6s,baz=175,slow=3.7,SNR=4.0						
USRK	Ussuriysk Ar.	39.56	43	P	P	02 01 21.8	+1.3
	comp=E,0.7nm,0.4s,baz=267,slow=5.9,SNR=4.2						
ABKAR	Akbulak array	40.65	325	eP	P	02 01 29.8	+0.2
	comp=E,11nm,1.8s						
AKTO	Aktyubinsk	42.34	325	P	P	02 01 43.6	+0.2
	comp=E,0.7nm,0.3s,baz=128,slow=11						
WR1	Warramunga Arr	55.19	133	eP	P	02 03 21.0	-1.5
WRA	Warramunga Arr	55.19	133	P	P	02 03 21.0	-1.5
	comp=E,3.5nm,0.7s,baz=306,slow=7.1,SNR=8.0						
AS31	Alice Springs	57.48	137	eP	P	02 03 37.6	-1.1
	comp=E,2.2nm,1.3s						
ASAR	Alice Springs	57.48	137	P	P	02 03 37.6	-1.1
	comp=E,1.7nm,0.6s,baz=318,slow=7.1,SNR=17						
FIA0	FINESS Array S	62.83	330	eP	P	02 04 14.1	-0.7
FINES	FINESS Array B	62.83	330	P	P	02 04 14.1	-0.7
	comp=E,1.2nm,0.7s,baz=100,slow=6.6,SNR=7.6						
ARA0	ARCESS Array S	64.60	339	eP	P	02 04 25.9	-0.4
ARCES	ARCESS Array B	64.60	339	P	P	02 04 25.9	-0.4
	comp=E,1.7nm,0.7s,baz=88,slow=8.7,SNR=7.2						
GEC2	GERESS Array S	69.71	316	eP	P	02 04 58.8	-0.5
	comp=E,13nm,2.0s						
GERES	GERESS Array B	69.71	316	P	P	02 04 59.0	-0.3
	comp=E,0.3nm,0.5s,baz=60,slow=7.9,SNR=3.8						
NB200	NORSAR Array S	69.98	329	eP	P	02 04 59.6	-1.1
NOA	NORSAR Array B	69.98	329	P	P	02 04 59.6	-1.1
	comp=E,0.5nm,0.6s,baz=86,slow=6.2,SNR=2.0						
TOLK	Toolik Lake Re	80.81	20	eP	P	02 06 02.5	-0.2
	comp=E,5.5nm,0.6s						
MLY	Manley	82.24	23	eP	P	02 06 10.1	-0.2
	comp=E,8.2nm,0.8s						
BPAW	Bear Paw Mtn.	82.62	24	eP	P	02 06 11.8	-0.5
	comp=E,8.6nm,0.6s						
SUMG	Summit	82.95	347	eP	P	02 06 13.8	-0.5
	comp=E,5.5nm,0.7s						
FYU	Fort Yukon	83.33	20	eP	P	02 06 16.2	+0.4
	comp=E,6.8nm,1.0s						
WRH	Wood River Hil	83.50	23	eP	P	02 06 15.8	-1.0
	comp=E,3.0nm,0.6s						
CCB	Clear Creek Bu	83.51	23	eP	P	02 06 15.9	-0.9
	comp=E,2.7nm,0.8s						
MCK	McKinley	83.58	24	eP	P	02 06 17.2	-0.1
	comp=E,7.3nm,0.7s						
ILAR	Eielson Array	83.78	22	P	P	02 06 16.9	-1.3
	comp=E,3.5nm,0.7s,baz=303,slow=5.0,SNR=38						
ILB	Eielson Array	83.78	22	eP	P	02 06 16.9	-1.3
	comp=E,4.0nm,0.6s						
RND	Reindeer	83.79	24	eP	P	02 06 17.7	-0.7
	comp=E,4.8nm,0.6s						
PRP	Porcupine Dome	83.84	21	eP	P	02 06 18.6	-0.1
	comp=E,12nm,0.9s						
HDA	Harding Lake	83.95	23	eP	P	02 06 17.7	-1.5
	comp=E,3.5nm,0.7s						
RIDG	Independent Ri	85.10	23	eP	P	02 06 24.1	-0.9
	comp=E,6.6nm,0.8s						
SCRK	Sand Creek	85.27	22	eP	P	02 06 24.9	-1.0
	comp=E,6.5nm,0.8s						
DOT	Dot Lake	85.43	23	eP	P	02 06 25.4	-1.2
	comp=E,3.5nm,0.8s						
INK	Inuvik	85.68	16	eP	P	02 06 27.1	-0.5
	comp=E,11nm,1.4s						
NV01	Mina Array Sit	114.52	28	ePKiKP	PKiKP	02 12 29.6	-0.3
NVAR	Mina Array Bea	114.52	28	PKP	PKiKP	02 12 29.6	-0.3
	comp=E,0.2nm,0.4s,baz=264,slow=2.9,SNR=2.2						
LTX	Lajitas	128.26	21	ePKPdf	PKPdf	02 12 56.0	-0.3
TXAR	Lajitas Array	128.26	21	PKP	PKPdf	02 12 56.0	-0.3
	comp=E,0.3nm,0.5s,baz=121,slow=0.5,SNR=7.1						

MAN 19 01:55:47.4, 11°.61N×125°.41E, h20^{km}, mb3.9, ML2.6, MS2.6, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.03	114	eP	Pb	01 55 51.7	+0.8
BESP				eS	Sb	01 55 57.5	+4.2
PLP	Palo	0.61	224	⇓eP	Pb	01 55 59.4	-0.1
PLP				eS	Sn	01 56 11.4	+1.0
MSLP	Maasin	1.57	200	eP	Pn	01 56 14.7	+0.6
MSLP				eS	Sb	01 56 38.3	+3.2

ISCJB ***19*** *02:02:09.3±0.7, 31°.50S±0°.05×179°.2W±0°.1, h250^{km}, mb4.1/7, Error ellipse: s-maj=15.5km s-min=6.4km az=7.8*

IDC ***19*** *02:02:13.0±5.5, 31°.46S×179°.59W, h240^{km}±48^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.4/28, mbtmp4.4/5, Error ellipse: s-maj=51.6km s-min=26.0km az=24.0*

NEIC ***19*** *02:02:13.7±2.1, 31°.47S×179°.71W, h245^{km}±9^{km}, mb4.2/4, Error ellipse: s-maj=23.7km s-min=15.6km az=179.0*

WEL ***19*** *02:02:13.8±0.7, 32°S±12°×18°0W±2°1, h33^{km}, M4.2/15, mB4.7/13, ML4.9/15, MLv4.6/15, Mw(mB)4.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=117.7*

ISC 19 02:02:11.7±0.8**, 31°.62S**±0°.08×**179°.2W**±0°.1**, h250^{km}, n60, σ2s.09**/63**, mb4.1**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.60	26	P	Pn	02 02 57.1	-3.0
GLKZ				S	S	02 03 32.6	-5.6
MXZ	Matakaoa Point	6.27	198	ePn	Pn	02 03 46.1	+3.0
MXZ	Matakaoa Point	6.27	198	P	Pn	02 03 44.0	+0.9
MXZ				S	S	02 04 52.7	-3.6
WMGZ	Waiomatatini S	6.49	197	P	Pn	02 03 46.0	+0.3
HAZ	Te Kaha	6.60	201	P	Pn	02 03 46.1	-1.2
HAZ				S	S	02 04 59.2	-4.7
PKGZ	Pakihiroa	6.64	199	P	Pn	02 03 46.2	-1.6
PUZ	Puketiti	6.76	197	P	Pn	02 03 48.1	-1.2
RUGZ	Raukumara Rang	6.83	201	P	Pn	02 03 50.6	+0.4
TWGZ	Tauwhareparae	6.94	199	P	Pn	02 03 54.3	+2.8
MWZ	Matawai	7.21	201	P	Pn	02 03 53.6	-1.4
TKGZ	Te Karaka	7.22	199	P	Pn	02 03 56.9	+1.9
URZ	Urewera	7.28	203	P	Pn	02 03 57.5	+1.7
	2.5nm,0.3s,baz=265,slow=4.7,SNR=25						
URZ				S	S	02 05 13.8	-5.5
	3.1nm,0.3s,baz=41,slow=22,SNR=6.9						
URZ	Urewera	7.28	203	ePn	Pn	02 03 57.3	+1.5
URZ	Urewera	7.28	203	P	Pn	02 03 56.4	+0.7
RAGZ	Rawiri	7.39	201	P	Pn	02 03 58.5	+1.2
RIGZ	Rimuhau	7.49	198	P	Pn	02 04 00.8	+2.3
MUGZ	Murupara	7.59	204	P	Pn	02 04 00.8	+1.1
RTZ	Ruatahuna	7.64	203	P	Pn	02 04 01.0	+0.5
SNGZ	Shannon Statio	7.68	200	P	Pn	02 04 02.4	+1.5
KNZ	Kokohu	7.81	198	P	Pn	02 04 03.5	+1.1
MTHZ	Maungataniwha	7.90	203	P	Pn	02 04 05.1	+1.4
TLZ	Tolley Road	7.96	211	P	Pn	02 04 08.2	+3.9
ARHZ	Aropaoanui	8.23	201	P	Pn	02 04 08.9	+1.1
HIZ	Hauiti	8.42	214	ePn	Pn	02 04 12.3	+2.2
HIZ	Hauiti	8.42	214	P	Pn	02 04 13.7	+3.6
KWHZ	Kaweka Forest	8.56	203	P	Pn	02 04 12.2	+0.2
OTVZ	Oturere	8.61	208	P	Pn	02 04 13.3	+0.6
TUVZ	Tukino	8.70	207	P	Pn	02 04 14.0	+0.1
WHVZ	Whangaehu Hut	8.74	207	P	Pn	02 04 13.0	-1.4
BHHZ	Black Hill Sta	8.74	205	P	Pn	02 04 12.7	-1.7
MOVZ	Moawhango	8.78	206	P	Pn	02 04 12.3	-2.6
PXZ	Pawanui	8.98	200	P	Pn	02 04 15.6	-1.6
PNHZ	Pukenui	9.07	203	P	Pn	02 04 17.5	-1.0
PRHZ	Porangahau	9.26	200	P	Pn	02 04 20.4	-0.4
PRWZ	Pori Road	9.73	202	P	Pn	02 04 26.4	-0.3
BFZ	Birch Farm	9.76	201	ePn	Pn	02 04 26.6	-0.5
MRZ	Mangatainoka R	9.95	203	P	Pn	02 04 27.9	-1.6
HOWZ	Holdsworth Sta	10.19	203	P	Pn	02 04 29.1	-3.4
THZ	Tophouse	11.93	210	ePn	Pn	02 04 53.1	-1.2
RPZ	Rata Peaks	14.31	210	S	S	02 07 47.9	-14
	0.3nm,0.3s,baz=102,slow=7.4,SNR=2.1						
CTA	Charters Tower	32.98	282	P	P	02 08 23.2	-0.3
	1.3nm,0.4s,baz=270,slow=4.0,SNR=1.9						
STKA	Stephens Creek	33.19	259	P	P	02 08 25.1	-0.1
	1.9nm,0.4s,baz=108,slow=12,SNR=4.4						
STKA	Stephens Creek	33.19	259	eP	P	02 08 25.1	-0.1
	11nm,1.8s						
AS31	Alice Springs	42.01	269	eP	P	02 09 38.2	-0.7
	1.8nm,0.4s						
ASAR	Alice Springs	42.01	269	P	P	02 09 38.2	-0.7
	3.8nm,0.5s,baz=105,slow=7.4,SNR=40						
WB2	Warramunga Arr	43.10	274	eP	P	02 09 46.4	-1.3
	7.4nm,0.6s						
WR1	Warramunga Arr	43.11	274	eP	P	02 09 47.1	-0.6
WRA	Warramunga Arr	43.11	274	P	P	02 09 47.1	-0.7
	5.4nm,0.5s,baz=102,slow=8.8,SNR=15						
QSPA	South Pole Qui	58.50	180	eP	P	02 11 46.2	+4.5
	8.7nm,0.8s						
ARA0	ARCESS Array S	139.54	347	ePKPdf	PKiKP	02 21 12.1	+1.2
ARCES	ARCESS Array B	139.54	347	PKP	PKiKP	02 21 12.0	+1.2
	1.7nm,0.9s,baz=34,slow=21,SNR=1.2						
FIA0	FINESS Array S	145.90	339	ePKPdf	PKPab	02 21 21.7	-0.2
FINES	FINESS Array B	145.90	339	PKPbc	PKPab	02 21 21.7	-0.2
	2.1nm,0.4s,baz=56,slow=4.4,SNR=30						
NB200	NORSAR Array S	149.77	350	ePKPbc	PKiKP	02 21 32.2	0.0
NOA	NORSAR Array B	149.77	350	PKPbc	PKiKP	02 21 32.2	0.0
	0.5nm,0.8s,baz=43,slow=1.0,SNR=1.3						
MMAI	Mount Meron Ar	150.77	282	PKPbc	PKiKP	02 21 36.8	+1.6
	1.3nm,0.4s,baz=76,slow=7.8,SNR=7.7						
BR101	Keskin Array S	152.22	296	ePKPbc	PKiKP	02 21 39.0	+1.0
BRTR	Keskin Array B	152.22	296	PKPbc	PKiKP	02 21 39.0	+1.0
	0.4nm,0.5s,baz=308,slow=42,SNR=2.9						
TORD	Torodi Ar. Bea	161.60	183	PKPab	PKPab	02 22 31.6	+2.4
	0.2nm,0.5s,baz=162,slow=7.2,SNR=4.9						
TOA1	Torodi Ar. Sit	161.60	183	ePKPab	PKPab	02 22 31.6	+2.3

IDC ***19*** *02:03:49.5±5.3, 36°.38N×71°.37E, h172^{km}±41^{km}, mb3.1/6, mb1 3.2/11, mb1mx3.0/46, mbtmp3.7/11, Error ellipse: s-maj=51.7km s-min=32.2km az=147.0*

ISCJB ***19*** *02:03:53.5±1.2, 36°.75N±0°.10×71°.3E±0°.1, h200^{km}, mb3.2/6, Error ellipse: s-maj=15.1km s-min=9.8km az=145.6*

NNC ***19*** *02:03:59.1±3.0, 37°.14N×71°.13E, h204^{km}±52^{km}, mb2.6, mpv3.6, Error ellipse: s-maj=30.0km s-min=18.3km az=24.0*

ISC 19 02:03:54.9±1.3**, 36°.9N**±0°.1×**71°.2E**±0°.1**, h200^{km}, n15, σ1s.62**/20**, mb3.2**/6**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.27	355	P	Pn	02 05 26.6	+1.0
	2.1nm,0.3s,baz=179,slow=12,SNR=98						
KK31				S	Sn	02 06 35.1	-2.4
	4.2nm,0.3s,baz=180,slow=19,SNR=18						
AAK	Ala-Archa	6.31	23	P	Pn	02 05 27.5	+1.3
	1.3nm,0.3s,baz=190,slow=5.7,SNR=7.9						
AAK				S	Sn	02 06 39.1	+0.4
	0.5nm,0.3s,baz=313,slow=23,SNR=21						
AAK	Ala-Archa	6.31	23	⇑P	Pn	02 05 27.1	+0.9
	3.7nm,0.7s						
AAK				⇓S	Sn	02 06 38.7	0.0
	10.0nm,0.6s						
TKM2	Tokmak 2	6.94	28	⇓P	Pn	02 05 34.9	+0.4
	3.3nm,0.8s						
TKM2				⇑S	Sn	02 06 52.6	-1.0
	3.7nm,1.1s						
MKAR	Makanchi Array	12.91	36	P	P	02 06 51.7	-2.8
	0.1nm,0.3s,baz=203,slow=7.9,SNR=4.9						
KURBB	Kurchatov Arra	14.74	19	P	P	02 07 15.3	+0.7
	0.0nm,0.3s,baz=205,slow=10,SNR=2.1						
AB31	Akbulak array	14.86	330	P	P	02 07 17.5	+1.5
	1.4nm,0.6s,baz=147,slow=12,SNR=18						
AB31				⇑S	S	02 09 56.9	-3.2
	0.2nm,0.3s						
AKTO	Aktyubinsk	16.56	329	P	Pn	02 07 37.2	+1.4
	0.3nm,0.3s,baz=149,slow=4.8,SNR=4.4						
ZALV	Zalesovo Beam	19.53	25	P	P	02 08 07.0	0.0
	0.7nm,0.3s,baz=220,slow=9.6,SNR=4.5						
FINES	FINESS Array B	37.29	326	P	P	02 10 48.5	+1.3
	3.5nm,1.0s,baz=116,slow=13,SNR=4.0						
ARCES	ARCESS Array B	40.89	337	P	P	02 11 18.3	+1.4
	0.7nm,0.5s,baz=113,slow=8.0,SNR=6.2						
NOA	NORSAR Array B	44.20	323	P	P	02 11 44.5	+0.8
	0.4nm,0.6s,baz=103,slow=6.3,SNR=2.2						
ESDC	Sonseca Array	57.44	298	P	P	02 13 23.0	+0.2
	0.2nm,0.5s,baz=47,slow=8.5,SNR=4.3						
TORD	Torodi Ar. Bea	65.89	269	P	P	02 14 16.7	-2.7
	0.2nm,0.5s,baz=43,slow=4.9,SNR=5.0						
YKA	Yellowknife Ar	80.89	3	P	P	02 15 46.4	+0.2
	0.4nm,0.6s,baz=352,slow=6.1,SNR=3.8						

NSSC ***19*** *02:09:59.9±10.0, 33°.08N×36°.58E, h1^{km}±234^{km}, ML2.2*

ISCJB ***19*** *02:10:07.6±0.5, 33°.69N±0°.02×35°.81E±0°.04, h7^{km}±4^{km}, Error ellipse: s-maj=5.0km s-min=3.7km az=168.4*

GII ***19*** *02:10:07.0±0.8, 33°.63N×35°.87E, h2^{km}±1^{km}, MD1.8/3*

GRAL ***19*** *02:10:08.5±0.2, 33°.68N×35°.81E, h1^{km}±7^{km}, MD3.1*

ISC 19 02:10:07.6±1.0**, 33°.68N**±0°.03×**35°.82E**±0°.04**, h10^{km}**±7^{km}**, n21, σ0s.51**/37**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRWL	Qaraoun	0.17	222	eP	Pg	02 10 11.6	+0.2
QRWL				eS	Sg	02 10 13.8	-0.2
RCY	Rachaya	0.18	176	eP	Pg	02 10 11.7	+0.2
RCY				eS	Sg	02 10 14.2	-0.1
DQRL	Deir Qamar	0.21	278	eP	Pg	02 10 12.1	+0.1
DQRL				eS	Sg	02 10 14.8	-0.3
BHL	Bhannes	0.27	328	eP	Pg	02 10 13.1	0.0
BHL				eS	Sg	02 10 16.7	0.0
BRBR	Barbar	0.29	158	eP	Pg	02 10 14.0	+0.5
BRBR				eS	Sb	02 10 18.8	-1.1
BRBR				AML	AML	02 10 19.4	
	comp=N,460nm,0.5s						
BRBR				AML	AML	02 10 20.6	
	comp=E,268nm,0.5s						
BEYL	Beirut	0.34	305	eP	Pg	02 10 14.4	+0.1
SHBL	Chebaa	0.34	191	eP	Pg	02 10 14.4	+0.1
QASN	Qassioun	0.41	111	eP	Pg	02 10 15.5	-0.1
QASN				eS	Sb	02 10 22.5	-0.7
QASN				AML	AML	02 10 24.5	
	comp=N,539nm,0.2s						
QASN				AML	AML	02 10 25.1	
	comp=E,744nm,0.4s						
NATI	Neve Ativ	0.42	190	Pg	Pg	02 10 15.8	0.0
NATI				Sg	Sb	02 10 22.7	-0.8
GEM	Giv'at Ha'Em	0.48	196	Pg	Pg	02 10 16.9	-0.1
GEM				Sg	Sb	02 10 25.1	-0.3
KSDI	Kefar Szold	0.50	196	Pg	Pg	02 10 17.4	0.0
KSDI				Sg	Sb	02 10 25.3	-0.6
HWQ	Hawqa	0.61	10	eP	Pg	02 10 19.6	+0.1
KSHT	Keshet	0.69	181	Pg	Pg	02 10 21.2	+0.2
KSHT				Sg	Sb	02 10 31.2	-0.3
MMA0B	Mount Meron ar	0.75	208	Pg	Pg	02 10 22.0	0.0
HNTI	Hanita	0.80	223	Pg	Pg	02 10 23.2	+0.1
HNTI				Sg	Sn	02 10 36.3	-0.8
BLGI	Bet Lehem HaGe	1.08	209	Pg	Pg	02 10 28.1	-0.3
BLGI				Sg	Sn	02 10 44.3	+0.4
OFRI	`Ofer	1.27	214	Pg	Pn	02 10 30.9	-0.5
OFRI				Sg	Sn	02 10 49.5	+1.0
MMLI	Mount Malkishu	1.28	195	Pg	Pn	02 10 31.2	-0.4
MMLI				Sg	Sn	02 10 49.7	+0.8
HMDT	Nahal Hemdat	1.44	190	Pn	Pn	02 10 34.1	+0.3
HMDT				Sn	Sg	02 10 53.7	-0.3
SLTI	Sal'it	1.58	205	Pn	Pb	02 10 36.9	0.0
SLTI				Sn	Sb	02 10 57.6	+0.7
DSI	Dead Sea	2.13	190	Pn	Pn	02 10 44.5	+1.2

ISC 19 02:15:30.1±1.3**, 41°.5N**±0°.1×**45°.46E**±0°.03**, h14^{km}**±13^{km}**, n10, σ0s.89**/17**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDFL	Dedoflistskaro	0.50	100	P	Pg	02 15 39.5	-0.5
DDFL				S	Sn	02 15 50.6	-0.8
BTNK	Botanikuri	0.52	287	P	Pn	02 15 43.2	0.0
BTNK				S	Sn	02 15 51.7	-0.1
BTNK	Botanikuri	0.52	287	i P	Pn	02 15 43.4	+0.3
BTNK				i S	Sn	02 15 52.3	+0.5
SEAG	Tbilisi Sea	0.54	295	P	Sn	02 15 52.4	0.0
TBLG	Delisi	0.58	290	P	Sn	02 15 53.5	+0.3
TBLG	Delisi	0.58	290	i P	Pn	02 15 44.3	+0.3
TBLG				i S	Sn	02 15 53.9	+0.7
LGD	Lagodekhi	0.66	63	P	Pn	02 15 46.1	+1.1
LGD				S	Sn	02 15 56.9	+1.7
KZRT	Kazreti	0.81	260	P	Pb	02 15 45.0	-1.0
KZRT				S	Sg	02 15 56.8	+0.3
KZRT	Kazreti	0.81	260	i P	Pg	02 15 46.6	+0.7
KZRT				i S	Sg	02 15 57.2	+0.7
GUDG	Gudauri	1.18	322	P	Pn	02 15 50.9	-1.5

BJI ***19*** *02:20:39.5±0.0, 16°.39S×167°.69E, h19^{km}, mb5.3/63, mB5.3/49, Ms5.2/62, Ms7 5.1/59*

IDC ***19*** *02:20:40.1±2.2, 16°.67S×167°.73E, h21^{km}±12^{km}, mb4.8/22, mb1 4.9/24, mb1mx4.9/29, mbtmp5.0/24, ML5.7/2, MS5.1/32, Ms1 5.1/32, ms1mx5.0/37, Error ellipse: s-maj=14.7km s-min=11.8km az=86.0*

NEIC ***19*** *02:20:40.8±1.5, 16°.76S×167°.69E, h25^{km}±1^{km}, mb5.4/142, MS5.5/683, MW5.5, Error ellipse: s-maj=11.6km s-min=9.7km az=75.0, Moment Tensor Solution. s57 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.08; M$_{\theta\theta}$0.24; M$_{\phi\phi}$-0.32; M$_{r\theta}$0.52; M$_{\theta\phi}$0.80; M$_{\phi r}$-2.07; Best double couple: M$_0$2.30000×10^{17} NP1:ϕ_s171.00000°, δ86.00000°, λ107.00000°. NP2:ϕ_s273.00000°, δ17.00000°, λ13.00000°. Principal axes: T 1.9800, Plg46.0000°, Azm98.0000°; N 0.5500, Plg17.0000°, Azm350.0000°; P -2.5200, Plg39.0000°, Azm245.0000°;*

NEIC Broadband depth 25 km.

ISCJB ***19*** *02:20:40.3±1.0, 16°.74S±0°.03×167°.67E±0°.03, h33^{km}±8^{km}, mb5.3/104, MS5.4/691 Error ellipse: s-maj=5.2km s-min=4.8km az=41.3*

MOS ***19*** *02:20:41.0±1.3, 16°.65S×167°.57E, h33^{km}, mb5.3/59, MS5.2/41, Error ellipse: s-maj=9.0km s-min=7.3km az=120.1*

GCMT ***19*** *02:20:43.8±0.1, 16°.71S±0°.01×167°.61E±0°.01, h27^{km}, MW5.7/121, Moment Tensor Solution. s113, c185; s121, c217; Duration: 1s.7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.16±.03; M$_{\theta\theta}$-0.21±.03; M$_{\phi\phi}$-0.94±.02; M$_{r\theta}$1.46±.07; M$_{\theta\phi}$0.72±.02; M$_{\phi r}$-3.52±.12; Best double couple: M$_0$4.01900×10^{17} NP1:ϕ_s157.00000°, δ81.00000°, λ93.00000°. NP2:ϕ_s316.00000°, δ10.00000°, λ70.00000°. Principal axes: T 3.9240, Plg54.0000°, Azm71.0000°; N 0.1940, Plg3.0000°, Azm337.0000°; P -4.1150, Plg36.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 02:20:41.9±0.5**, 16°.77S**±0°.04×**167°.75E**±0°.04**, h34^{km}**±1^{km}**, h33^{km}:pP-P, n1141, σ1s.68**/577**, mb5.4**/103**, MS5.5**/692**, 44C-33D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	4.69	177	ePn	Pn	02 21 49.1	-1.3
DZM	Mont Dzumac	5.41	193	ePn	Pn	02 21 59.7	-0.7
	420nm,0.3s						
DZM				eSn	Sn	02 22 59.2	-2.3
	457nm,0.2s						
DZM				eLR	LR	02 23 11.2	
	comp=Z,58µm,24.1s						
DZM	Mont Dzumac	5.41	193	Pn	Pn	02 21 59.9	-0.4
	178nm,0.3s,baz=14,slow=12,SNR=483						
DZM				Sn	Sn	02 23 02.1	+0.6
	82nm,0.3s,baz=306,slow=18,SNR=6.5						
DZM				LR	LR	02 23 13.1	
	comp=Z,3µm,19.0s,baz=16,slow=28						
PINNC	Pines Island,	5.82	183	ePn	Pn	02 22 06.5	+0.7
HNR	Honiara	10.53	313	Pn	Pn	02 23 10.7	+0.1
	72nm,0.3s,baz=160,slow=3.4,SNR=5.9						
HNR				Sn	Sn	02 25 07.0	-0.4
	26nm,0.3s,baz=181,slow=24,SNR=3.8						
HNR				LR	LR	02 26 51.9	
	comp=Z,7µm,19.3s,baz=150,slow=36						
HNR	Honiara	10.53	313	ePn	Pn	02 23 11.4	+0.8
HNR	Honiara	10.53	313	eP	Pn	02 23 09.0	-1.6
EIDS	Eidsvold	17.73	238	eP	P	02 24 46.9	0.0
	523nm,1.4s						
EIDS	Eidsvold	17.73	238	P	P	02 24 47.2	+0.3
	baz=18,SNR=14						
TARA	Tarawa	18.72	16	eP	P	02 24 58.0	+0.2
	1µm,1.6s						
OUZ	Omahuta	19.10	165	eP	Pn	02 25 02.9	0.0
	337nm,1.8s						
RABL	Rabaul	19.75	308	eP	Pn	02 25 10.8	0.0
	138nm,0.8s						
ARMA	Armidale	20.03	224	eP	Pn	02 25 13.2	-0.9
	252nm,1.1s						
ARMA				LR	LR		
	comp=Z,13µm,21.0s						
ARMA	Armidale	20.03	224	P	P	02 25 12.6	+0.4
	baz=20,SNR=15						
RMQ	Roma	20.10	238	P	P	02 25 13.1	+0.2
	baz=20,SNR=55						
CTA	Charters Tower	20.65	258	P	P	02 25 19.8	+0.9
	comp=Z,128nm,0.8s,baz=83,slow=12,SNR=71						
CTA				LR	LR	02 32 45.2	
	comp=Z,12µm,18.1s,baz=86,slow=35						
CTAO	Charters Tower	20.65	258	eP	P	02 25 19.7	+0.8
	comp=Z,193nm,0.9s						
CTAO				LR	LR		
	comp=Z,12µm,19.0s						
CTAO	Charters Tower	20.65	258	eP	P	02 25 19.7	+0.8
CTAO				pmax	pmax		
	comp=Z,193nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,12µm,19.0s						
PMG	Port Moresby	21.33	288	P	P	02 25 26.6	+0.4
	comp=Z,32nm,0.7s,baz=49,slow=8.2,SNR=8.1						
PMG				LR	LR	02 33 09.7	
	comp=Z,17µm,18.2s,baz=110,slow=35						
PMG	Port Moresby	21.33	288	eP	P	02 25 26.4	+0.2
	comp=Z,197nm,1.4s						
PMG				LR	LR		
	comp=Z,20µm,19.0s						
PMG	Port Moresby	21.33	288	d iP	P	02 25 26.5	+0.2
PMG				pmax	pmax		
	comp=Z,173nm,0.9s						
MGCD	Mangrove Creek	22.20	219	P	P	02 25 37.9	+2.4
	baz=22,SNR=5.1						
MTSU	Mount Surprise	22.39	263	P	P	02 25 38.3	+0.6
	baz=22,SNR=73						
HIZ	Hauiti	22.54	165	PFAKE		02 25 50.0	+11
HIZ				LR	LR		
	comp=Z,7µm,20.0s						
RIV	Riverview	22.60	218	P	P	02 25 40.7	+1.0
	baz=22,SNR=3.6						
MXZ	Matakaoa Point	22.71	158	PFAKE		02 25 50.0	+9.2
MXZ				LR	LR		
	comp=Z,3µm,20.0s						
URZ	Urewera	22.93	161	P	P	02 25 44.8	+1.7
	comp=Z,18nm,0.6s,baz=353,slow=6.2,SNR=7.4						
URZ	Urewera	22.93	161	eP	P	02 25 44.7	+1.6
	comp=Z,67nm,1.0s						
URZ				LR	LR		
	comp=Z,6µm,19.0s						
BKZ	Black Stump Fm	23.58	163	eP	P	02 25 51.4	+1.8
	comp=Z,66nm,0.9s						
BKZ				LR	LR		
	comp=Z,5µm,22.0s						
COEN	Coen	23.85	273	eP	P	02 25 52.0	-0.4

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      comp=Z,729nm,2.0s
COEN                              LR     LR
      comp=Z,11µm,19.0s
COEN  Coen             23.85 273  P      P          02 25 52.0  -0.4
      baz=24,SNR=19
KNTN  Kanton           24.51  58  eP     P          02 26 00.9 +2.4
      comp=Z,794nm,1.8s
KNTN                              LR     LR
      comp=Z,9µm,20.0s
YNG   Young            24.61 221  P      P          02 25 59.5 +0.3
      baz=24,SNR=6.3
CNB   Canberra Magne   24.70 218  P      P          02 26 01.1 +1.0
      baz=24,SNR=20
MANU  Manus Island     24.82 304  eP     P          02 26 02.0 +0.7
      comp=Z,243nm,1.4s
MANU                              LR     LR
      comp=Z,7µm,22.0s
CMSA  Cobar Meteorol   24.85 230  P      P          02 26 01.5 +0.1
      baz=25,SNR=34
CAN   Canberra         24.92 219  eP     P          02 26 02.7 +0.7
      comp=Z,55nm,1.0s
CAN                               LR     LR
      comp=Z,10µm,20.0s
CAN   Canberra         24.92 219  eP     P          02 26 02.7 +0.7
CAN                               pmax   pmax
      comp=Z,55nm,1.0s
CAN                               MLR    MLR
      comp=Z,10µm,20.0s
BFZ   Birch Farm       24.93 165  PFAKE             02 26 10.0 +8.0
BFZ                               LR     LR
      comp=Z,7µm,19.0s
SNZO  South Karori     25.18 168  PFAKE             02 26 20.0  +16
SNZO                              LR     LR
      comp=Z,4µm,21.0s
PATS  Pohnpei          25.25 338  eP     P          02 26 05.2 +0.1
      comp=Z,145nm,0.9s
THZ   Tophouse         25.30 171  PFAKE             02 26 20.0  +15
THZ                               LR     LR
      comp=Z,3µm,18.0s
KWAJ  Kwajalein Atol   25.41 360  PFAKE             02 26 20.0  +13
KWAJ                              LR     LR
      comp=Z,3µm,18.0s
KHZ   Kahutara         26.03 170  PFAKE             02 26 20.0 +8.1
KHZ                               LR     LR
      comp=Z,4µm,18.0s
LTZ   Lake Taylor      26.21 172  eP     P          02 26 15.8 +2.2
      comp=Z,58nm,1.2s
LTZ                               LR     LR
      comp=Z,4µm,21.0s
OXZ   Oxford           26.72 173  PFAKE             02 26 30.0  +12
OXZ                               LR     LR
      comp=Z,3µm,19.0s
FOZ   Fox Glacier      26.73 177  PFAKE             02 26 30.0  +12
FOZ                               LR     LR
      comp=Z,6µm,20.0s
QIS   Mount Isa        26.91 258  P      P          02 26 19.9  -0.2
      baz=27,SNR=76
RPZ   Rata Peaks       27.00 175  P      P          02 26 22.5 +1.7
      comp=Z,14nm,1.0s,baz=73,slow=3.0,SNR=4.9
RPZ                               LR     LR         02 35 57.0
      comp=Z,5µm,20.9s,baz=358,slow=34
RPZ   Rata Peaks       27.00 175  PFAKE             02 26 30.0 +9.3
RPZ                               LR     LR
      comp=Z,5µm,18.0s
CRLZ  Canterbury Las   27.04 172  PFAKE             02 26 30.0 +9.0
CRLZ                              LR     LR
      comp=Z,2µm,19.0s
MQZ   McQueen’s Vall   27.17 172  PFAKE             02 26 30.0 +7.8
MQZ                               LR     LR
      comp=Z,4µm,18.0s
LBZ   Lake Benmore     27.60 176  PFAKE             02 26 40.0  +14
LBZ                               LR     LR
      comp=Z,6µm,19.0s
WKZ   Wanaka           27.99 178  PFAKE             02 26 40.0  +10
WKZ                               LR     LR
      comp=Z,8µm,21.0s
STKA  Stephens Creek   28.07 233  P      P          02 26 30.8 +0.3
      comp=Z,187nm,0.8s,baz=56,slow=8.0,SNR=122
STKA                              PcP    PcP        02 29 44.4  -0.1
      comp=Z,8.1nm,0.8s,baz=82,slow=6.9,SNR=3.2
STKA                              LR     LR         02 36 53.5
      comp=Z,7µm,20.9s,baz=60,slow=35
STKA  Stephens Creek   28.07 233  eP     P          02 26 30.3  -0.2
      comp=Z,54nm,0.9s
STKA                              ePcP   PcP        02 29 44.4  -0.1
STKA                              LR     LR
      comp=Z,1µm,20.0s
STKA  Stephens Creek   28.07 233  P      P          02 26 30.8 +0.3
      baz=28,SNR=69
STKA  Stephens Creek   28.07 233  eP     P          02 26 30.3  -0.2
STKA                              e                 02 29 44.4
STKA                              pmax   pmax
      comp=Z,54nm,0.9s
STKA                              MLR    MLR
      comp=Z,1µm,20.0s
ODZ   Otahua Downs     28.29 176  PFAKE             02 26 40.0 +7.8
ODZ                               LR     LR
      comp=Z,5µm,19.0s
MLZ   Mavora Lakes     28.51 179  PFAKE             02 26 50.0  +16
MLZ                               LR     LR
      comp=Z,8µm,22.0s
TOO   Toolangi         28.52 219  eP     P          02 26 35.1 +0.7
      comp=Z,121nm,1.3s
TOO                               LR     LR
      comp=Z,11µm,21.0s
TOO   Toolangi         28.52 219  P      P          02 26 35.9 +1.5
      baz=28,SNR=6.1
TOO   Toolangi         28.52 219  eP     P          02 26 35.1 +0.7
TOO                               pmax   pmax
      comp=Z,121nm,1.3s
TOO                               MLR    MLR
      comp=Z,11µm,21.0s
DCZ   Deep Cove        28.61 181  PFAKE             02 26 50.0  +15
DCZ                               LR     LR
      comp=Z,4µm,22.0s
WHZ   Wether Hill Ro   29.03 180  PFAKE             02 26 50.0  +11
WHZ                               LR     LR
      comp=Z,6µm,22.0s
ARPS  Mount Arapiles   30.36 224  P      P          02 26 51.7 +1.1
      baz=30,SNR=12
GENI  Genyem           30.55 295  P      P          02 26 54.3 +1.7
HTT   Hallett          30.78 232  P      P          02 26 54.5   0.0
      baz=31,SNR=19
RAR   Rarotonga        31.00 103  LR     LR         02 36 55.4
      comp=Z,3µm,21.4s,baz=268,slow=31
TAU   Tasmania Unive   31.33 210  PFAKE             02 27 10.0  +11
TAU                               LR     LR
      comp=Z,8µm,18.0s
WB2   Warramunga Arr   31.82 259  PFAKE             02 27 20.0  +16
WB2                               LR     LR
      comp=Z,9µm,22.0s
WRAB  Tennant Creek    31.82 259  eP     P          02 27 02.2  -1.6
      comp=Z,36nm,0.8s
WRAB                              LR     LR
      comp=Z,8µm,21.0s
WRAB  Tennant Creek    31.82 259d iP     P          02 27 01.9  -1.9
WRAB                              pmax   pmax
      comp=Z,36nm,1.0s
WC1   Warramunga Arr   31.83 259  PFAKE             02 27 20.0  +16
WC1                               LR     LR
      comp=Z,6µm,22.0s
WRA   Warramunga Arr   31.83 259  P      P          02 27 02.5  -1.4
      comp=Z,26nm,0.8s,baz=83,slow=9.3,SNR=94
AS31  Alice Springs    32.43 252  eP     P          02 27 08.2  -0.9
      comp=Z,146nm,0.6s
AS31                              eScP   ScP        02 33 39.2 +1.7
AS31                              LR     LR
      comp=Z,200nm,18.0s
ASAR  Alice Springs    32.43 252  P      P          02 27 08.1  -1.1
      comp=Z,396nm,0.7s,baz=78,slow=8.7,SNR=745
ASAR                              ScP    ScP        02 33 39.2 +1.7
      comp=Z,0.3nm,0.5s,baz=90,slow=4.6,SNR=2.5
ASAR                              LR     LR         02 39 51.2
      comp=Z,15µm,18.7s,baz=72,slow=36
ASAR  Alice Springs    32.43 252  P      P          02 27 08.1  -1.1
ASAR                              pmax   pmax
      comp=Z,403nm,0.7s
ASAR                              MLR    MLR
      comp=Z,15µm,18.7s
BBOO  Buckleboo        32.74 235  PFAKE             02 27 20.0 +8.3
BBOO                              LR     LR
      comp=Z,6µm,20.0s
BBOO  Buckleboo        32.74 235  P      P          02 27 11.4  -0.3
      baz=32,SNR=44
KDU   Kakadu           34.33 272  P      P          02 27 25.0  -0.6
      baz=34,SNR=16
MTN   Manton Dam       35.58 271  PFAKE             02 27 50.0  +14
MTN                               LR     LR
      comp=Z,7µm,19.0s
MTN   Manton Dam       35.58 271  P      P          02 27 35.5  -1.0
      baz=35,SNR=14
WAKE  Wake Island      35.85 358  PFAKE             02 27 50.0  +11
WAKE                              LR     LR
      comp=Z,3µm,19.0s
SAUI  Saumlaki         36.60 279  PFAKE             02 28 00.0  +15
SAUI                              LR     LR
      comp=Z,4µm,19.0s
KNRA  Kununurra        37.41 266  P      P          02 27 50.6  -1.5
      baz=37,SNR=57
FAKI  Fak Fak          37.49 288  eP     P          02 27 51.5  -1.3
      comp=Z,178nm,0.9s
FAKI                              LR     LR
      comp=Z,8µm,21.0s
WRKA  Warakurna        37.65 251  P      P          02 27 53.2  -0.9
      baz=37,SNR=72
GUMO  Guam             37.70 322  LR     LR         02 41 46.1
      comp=Z,3µm,21.9s,baz=141,slow=34
GUMO  Guam             37.70 322  PFAKE             02 28 10.0  +16
GUMO                              LR     LR
      comp=Z,3µm,20.0s
FORT  Forrest          38.69 242  eP     P          02 28 01.6  -1.1
      comp=Z,252nm,0.7s
FORT  Forrest          38.69 242  P      P          02 28 02.4  -0.4
      baz=38,SNR=56
XMAS  Kiritimati       39.11  65  PFAKE             02 28 20.0  +14
XMAS                              LR     LR
      comp=Z,9µm,20.0s
SIJI  Sorong           39.24 290  P      P          02 28 06.6  -0.9
      comp=Z,80nm,0.7s,baz=98,slow=7.2,SNR=30
SIJI                              LR     LR         02 45 35.1
      comp=Z,8µm,18.2s,baz=114,slow=38
ANA2  Anatahan         39.43 325  eP     P          02 28 09.4 +0.4
      comp=Z,107nm,0.6s
JOHN  Johnston Islan   40.13  35  PFAKE             02 28 30.0  +15
JOHN                              LR     LR
      comp=Z,4µm,21.0s
TBI   Tubuai           40.61 106  eS     S          02 34 26.3  -0.2
      comp=Z,1µm,26.8s
TBI                               eLQ    LQ         02 37 45.5
      comp=Z,6µm,28.0s
TBI                               eLR    LR         02 39 32.7
      comp=Z,8µm,27.8s,baz=276
PALU  Palau            40.71 303  P      P          02 28 20.0 +0.3
      baz=41,SNR=18
PPT2  Papeete2         40.72  98  eS     S          02 34 27.3  -1.1
      comp=Z,1µm,25.8s
PPT2                              eLQ    LQ         02 37 48.3
      comp=Z,4µm,26.8s
PPT2                              eLR    LR         02 39 36.1
      comp=Z,10µm,26.5s,baz=254
PPT   Papeete          40.72  98  LR     LR         02 41 25.6
      comp=Z,3µm,21.0s,baz=266,slow=31
SOEI  Soe              42.82 274  eP     P          02 28 36.5  -0.7
      comp=Z,124nm,1.0s
SOEI                              LR     LR
      comp=Z,4µm,18.0s
BATI  Baumata          43.29 273  P      P          02 28 41.0 +0.2
      comp=Z,273nm,0.8s,baz=5.7,slow=0.4,SNR=28
TNTI  Ternate          43.46 290  PFAKE             02 28 50.0 +7.8
TNTI                              LR     LR
      comp=Z,2µm,20.0s
KMBL  Kambalda         44.01 242  P      P          02 28 45.8  -0.7
      baz=44,SNR=23
MMRI  Maumere          45.04 275  PFAKE             02 29 10.0  +15
MMRI                              LR     LR
      comp=Z,2µm,19.0s
PSAD2 Pilbara Seismi   45.25 256  PFAKE             02 29 10.0  +14
PSAD2                             LR     LR
      comp=Z,6µm,20.0s
PSAC2 Pilbara Seismi   45.31 256  PFAKE             02 29 10.0  +13
PSAC2                             LR     LR
      comp=Z,6µm,19.0s
PSAB2 Pilbara Seismi   45.34 256  PFAKE             02 29 10.0  +13
PSAB2                             LR     LR
      comp=Z,7µm,21.0s
PSAB3 Pilbara Seismi   45.35 256  PFAKE             02 29 10.0  +13
PSAB3                             LR     LR
      comp=Z,6µm,21.0s
PSAA3 Pilbara Seismi   45.35 256  PFAKE             02 29 10.0  +13
PSAA3                             LR     LR
      comp=Z,7µm,21.0s
PSAA2 Pilbara Seismi   45.36 256  PFAKE             02 29 10.0  +13
PSAA2                             LR     LR
      comp=Z,6µm,20.0s
PSA00 Pilbara Seismi   45.36 256  PFAKE             02 29 10.0  +13
PSA00                             LR     LR
      comp=Z,6µm,20.0s
PSAA1 Pilbara Seismi   45.37 256  PFAKE             02 29 10.0  +13
PSAA1                             LR     LR
      comp=Z,7µm,21.0s
PSAC3 Pilbara Seismi   45.37 256  PFAKE             02 29 10.0  +13
PSAC3                             LR     LR
      comp=Z,6µm,20.0s
PSAD1 Pilbara Seismi   45.38 256  PFAKE             02 29 10.0  +13
PSAD1                             LR     LR
      comp=Z,6µm,19.0s
PSAB1 Pilbara Seismi   45.38 256  PFAKE             02 29 10.0  +12
PSAB1                             LR     LR
      comp=Z,6µm,19.0s
PSAC1 Pilbara Seismi   45.40 256  PFAKE             02 29 10.0  +12
PSAC1                             LR     LR
      comp=Z,7µm,21.0s
PSAD3 Pilbara Seismi   45.42 256  PFAKE             02 29 10.0  +12
PSAD3                             LR     LR
      comp=Z,6µm,20.0s
MBWA  Marble Bar       45.49 257  PFAKE             02 29 10.0  +12
MBWA                              LR     LR
      comp=Z,5µm,19.0s
MEEK  Meekatharra      46.45 249  P      P          02 29 05.5  -0.4
      baz=46,SNR=39
LUWI  Luwuk            46.94 285  eP     P          02 29 10.0 +0.1
      comp=Z,208nm,1.0s
LUWI                              LR     LR
      comp=Z,2µm,20.0s
MIDW  Midway           46.99  18  PFAKE             02 29 20.0  +10
MIDW                              LR     LR
      comp=Z,4µm,21.0s
DAV   Davao City (W)   47.96 296  PFAKE             02 29 30.0  +12
DAV                               LR     LR
      comp=Z,2µm,21.0s
NWAO  Narrogin (SRO)   48.12 241  eP     P          02 29 18.0  -0.8
      comp=Z,89nm,0.8s
NWAO                              LR     LR
      comp=Z,6µm,20.0s
NWAO  Narrogin (SRO)   48.12 241  eP     P          02 29 18.0  -0.8
NWAO                              pmax   pmax
      comp=Z,89nm,0.8s
NWAO                              MLR    MLR
      comp=Z,6µm,20.0s
BLDU  Ballidu          48.34 244  P      P          02 29 20.4  -0.1
      baz=48,SNR=7.7
KCP   Kidapawan        48.35 296⇑ iP     P          02 29 20.3  -0.5
KAPI  Kappang          48.43 278  eP     P          02 29 21.0  -0.4
      comp=Z,195nm,0.8s
KAPI                              LR     LR
      comp=Z,3µm,21.0s
KAPI  Kappang          48.43 278  eP     P          02 29 21.0  -0.4
KAPI                              pmax   pmax
      comp=Z,195nm,0.8s
KAPI                              MLR    MLR
      comp=Z,3µm,21.0s
RKGY  Rocky Gully      48.55 238  P      P          02 29 21.7  -0.4
      baz=48,SNR=9.4
MORW  Morawa           48.83 246  PFAKE             02 29 40.0  +16
MORW                              LR     LR
      comp=Z,9µm,21.0s
MORW  Morawa           48.83 246  P      P          02 29 23.6  -0.7
      baz=48,SNR=15
MUN   Mundaring        48.89 242  P      P          02 29 25.1 +0.4
      baz=49,SNR=4.1
KEKH  Kekaha           50.00  41  PFAKE             02 29 50.0  +17
KEKH                              LR     LR
      comp=Z,2µm,20.0s
GIRL  Giralia          50.50 254  PFAKE             02 29 50.0  +13
GIRL                              LR     LR
      comp=Z,5µm,19.0s
HON   Honolulu         50.61  43  PFAKE             02 29 50.0  +12
HON                               LR     LR
      comp=Z,4µm,21.0s
KIP   Kipapa           50.67  43  PFAKE             02 29 50.0  +12
KIP                               LR     LR
      comp=Z,3µm,20.0s
KHU   Kahuku           50.78  47  PFAKE             02 29 50.0  +11
KHU                               LR     LR
      comp=Z,2µm,20.0s
KHLU  Kahalu`u         50.82  46  PFAKE             02 29 50.0  +10
KHLU                              LR     LR
      comp=Z,2µm,20.0s
OPA   Opana            50.87  42  PFAKE             02 29 50.0  +10
OPA                               LR     LR
      comp=Z,3µm,19.0s
MLOA  Mauna Loa Obse   51.00  46  PFAKE             02 29 50.0 +8.6
MLOA                              LR     LR
      comp=Z,2µm,20.0s
HMH   Humu‘ula Sheep   51.11  46  eP     P          02 29 42.9 +0.9
      comp=Z,147nm,1.1s
POHA  Pohakuloa        51.18  46  PFAKE             02 29 50.0 +7.5
POHA                              LR     LR
      comp=Z,3µm,21.0s
HPAH  Hawaii Prepara   51.25  46  PFAKE             02 30 00.0  +17
HPAH                              LR     LR
      comp=Z,3µm,22.0s
TAOE  Nuku Hiva Isla   51.29  88  eS     S          02 36 58.4  -2.1
      comp=Z,2µm,26.6s
TAOE                              eLR    LR         02 44 26.0
      comp=Z,8µm,26.1s,baz=260
TAOE  Nuku Hiva Isla   51.29  88  PFAKE             02 30 00.0  +17
TAOE                              LR     LR
      comp=Z,4µm,21.0s
KHLH  Kahului Airpor   51.35  44  PFAKE             02 30 00.0  +17
KHLH                              LR     LR
      comp=Z,4µm,20.0s
HLK   Haleakala        51.38  45  PFAKE             02 30 00.0  +16
HLK                               LR     LR
      comp=Z,4µm,22.0s
RCP   Roxas            52.65 299⇓ eP     P          02 29 53.9 +0.7
JAGI  Jajag, Banyuwa   52.81 272  PFAKE             02 30 10.0  +15
JAGI                              LR     LR
      comp=Z,2µm,21.0s
RKT   Rikitea          53.94 107  eS     S          02 37 34.2  -2.0
      comp=Z,2µm,29.8s
RKT                               eLR    LR         02 45 39.0
      comp=Z,6µm,28.0s
JOW   Kunigami         57.86 318  eP     P          02 30 30.4  -0.2
      comp=Z,22nm,0.6s
CISI  Cisompet, Garu   59.11 271  PFAKE             02 30 50.0  +10
CISI                              LR     LR
      comp=Z,2µm,21.0s
KSM   Kuching          59.46 282  PFAKE             02 30 50.0 +8.0
KSM                               LR     LR
      comp=Z,1µm,19.0s
INU   Inuyama          59.47 331  PFAKE             02 30 50.0 +8.4
INU                               LR     LR
      comp=Z,900nm,21.0s
YOJ   Yonaguni jima    59.86 312  eP     P          02 30 44.1  -0.4
      comp=Z,104nm,1.0s
YOJ                               LR     LR
      comp=Z,2µm,22.0s
YOJ   Yonaguni jima    59.86 312  eP     P          02 30 44.1  -0.4
YOJ                               pmax   pmax
      comp=Z,104nm,1.0s
YOJ                               MLR    MLR
      comp=Z,2µm,22.0s
MJAR  Matsushiro Arr   59.92 333  P      P          02 30 43.0  -1.8
      comp=Z,24nm,0.8s,baz=173,slow=8.7,SNR=27
MJAR                              LR     LR         02 54 39.4
      comp=Z,676nm,21.8s,baz=165,slow=34
MJAR  Matsushiro Arr   59.92 333  P      P          02 30 43.0  -1.8
MJAR                              pmax   pmax
      comp=Z,20nm,0.9s
MAJO  Matsushiro       59.92 333  eP     P          02 30 44.4  -0.4
      comp=Z,33nm,0.8s
MAJO                              LR     LR
      comp=Z,1µm,21.0s
MAJO  Matsushiro       59.92 333⇑ eP     P          02 30 44.1  -0.7
MAJO                              pmax   pmax
      comp=Z,35nm,0.8s
MAT   Matsushiro       59.92 333  P      P          02 30 42.6  -2.2
MAT                               S      S          02 38 52.0  -2.6
MJB9  Matsu-Tunnel     59.93 333  eP     P          02 30 44.8   0.0
      comp=Z,34nm,0.8s
MJB9                              LR     LR
      comp=Z,1µm,21.0s
TWG   Pinlang          60.27 309  PFAKE             02 31 00.0  +13
TWG                               LR     LR
      comp=Z,4µm,22.0s
YULB  Yu-li            60.45 310  eP     P          02 30 48.4  -0.2
      comp=Z,95nm,1.7s
YULB                              LR     LR
      comp=Z,2µm,22.0s
XMIS  Christmas Isla   60.47 267  PFAKE             02 31 00.0  +11
XMIS                              LR     LR
      comp=Z,3µm,20.0s
NACB  Ninganchiao      60.70 311  PFAKE             02 31 00.0  +10
NACB                              LR     LR
      comp=Z,1µm,19.0s
VNDA  Vanda            60.84 181  P      P          02 30 50.9 +0.4
      comp=Z,7.0nm,1.1s,baz=348,slow=7.1,SNR=14
VNDA                              LR     LR         02 54 03.8
      comp=Z,799nm,21.0s,baz=16,slow=33
VNDA  Vanda            60.84 181  eP     P          02 30 50.6 +0.2
      comp=Z,64nm,1.8s
JNU   Nakatsue         60.84 325  eP     P          02 30 50.5  -0.7
      comp=Z,58nm,1.2s
JNU                               LR     LR
      comp=Z,1µm,21.0s
TPUB  Ta-pu            60.88 310  eP     P          02 30 50.6  -1.0
      comp=Z,112nm,0.8s
TPUB                              LR     LR
      comp=Z,1µm,20.0s
SSLB  Suanglung        60.94 310  PFAKE             02 31 00.0 +8.0
SSLB                              LR     LR
      comp=Z,2µm,22.0s
SBA   Scott Base       61.10 180  eP     P          02 30 52.6 +0.3
      comp=Z,166nm,1.9s
SBA   Scott Base       61.10 180  eP     P          02 30 52.6 +0.3
SBA                               pmax   pmax
      comp=Z,166nm,1.9s
YHNB  Yeheng           61.16 311  PFAKE             02 31 10.0  +16
YHNB                              LR     LR
      comp=Z,2µm,21.0s
TATO  Taipei           61.27 312  eP     P          02 30 54.5 +0.4
      comp=Z,79nm,0.8s
TATO                              LR     LR
      comp=Z,2µm,21.0s
CASY  Casey            61.82 203  eP     P          02 30 57.4 +0.1
      comp=Z,176nm,1.8s
CASY                              LR     LR
      comp=Z,2µm,20.0s
ERM   Erimo            62.75 340  eP     P          02 31 04.8 +1.1
      comp=Z,41nm,0.8s
ERM                               LR     LR
      comp=Z,2µm,20.0s
ERM   Erimo            62.75 340⇑ eP     P          02 31 05.4 +1.7
ERM                               pmax   pmax
      comp=Z,25nm,0.8s
KNMB  Chin-men Tao     63.23 309  PFAKE             02 31 20.0  +13
KNMB                              LR     LR
      comp=Z,1µm,20.0s
QZH   Quanzhou         63.35 310  P      P          02 31 08.1   0.0
QZH                               sP     sP         02 31 21.0  -0.7
QZH                               S      S          02 39 39.8 +1.3
QZH                               sS     sS         02 39 54.3  -0.8
QZH                               LR     LR
      comp=Z,820nm,22.7s
QZH                               LR     LR
      comp=Z,590nm,24.6s
QZH                               LR     LR
      comp=Z,930nm,21.8s
KUR   Kuril'sk         64.30 345⇓ iP     P          02 31 13.9   0.0
KUR                               eS     S          02 39 48.1  -1.4
KUR                               pmax   pmax
      comp=Z,99nm,1.2s
KUR                               MLR    MLR
      comp=N,2µm,18.0s
KUR                               MLR    MLR
      comp=Z,1µm,18.0s
KUR                               MLR    MLR
      comp=E,792nm,19.0s
ASAJ  Asahikawa        64.81 340  P      P          02 31 17.4 +0.1
      comp=E,36nm,0.6s,baz=208,slow=6.7,SNR=25
TJN   Taejon           65.19 325⇑ eP     P          02 31 21.0 +1.1
HKPS  Hong Kong Po S   65.27 305  PFAKE             02 31 30.0 +9.3
HKPS                              LR     LR
      comp=Z,1µm,20.0s
SSE   Sheshan          65.31 317  PFAKE             02 31 30.0 +9.2
SSE                               LR     LR
      comp=Z,900nm,22.0s
MYKOM Kota Tinggi      65.64 280  PFAKE             02 31 40.0  +17
MYKOM                             LR     LR
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      comp=Z,1µm,21.0s
KSRS  Korea Array     65.68 326  P      P      02 31 22.2 -0.8
      comp=Z,7.7nm,0.8s,baz=144,slow=7.0,SNR=17
QIZ   Qiongzhong      67.13 300  P      P      02 31 33.8 +1.1
QIZ                              S      S      02 40 27.6 +2.5
QIZ                              sS     pS     02 40 37.4 -0.2
QIZ                              SS     SS     02 44 47.9 +2.9
QIZ                              pmax   pmax
      comp=Z,180nm,7.8s
QIZ                              LR     LR
      comp=Z,410nm,19.6s
QIZ                              LR     LR
      comp=Z,600nm,20.6s
QIZ                              LR     LR
      comp=Z,1µm,29.4s
YSS   Yuzh-Sakhalins  67.30 342  eP     P      02 31 33.6 +0.5
      comp=Z,68nm,0.7s
YSS                              LR     LR
      comp=Z,2µm,20.0s
YSS   Yuzh-Sakhalins  67.30 342⇓iP      P      02 31 33.8 +0.6
YSS                             e*SP    pwP    02 31 45.4 +2.0
YSS                             e              02 32 07.7
YSS                             eS      S      02 40 24.5 -1.5
YSS                             ePPS    PPS    02 40 52.3
YSS                             eSSS    SSS    02 47 43.9
YSS                              pmax   pmax
      comp=Z,300nm,3.1s
YSS                              pmax   pmax
      comp=N,100nm,3.3s
YSS                              pmax   pmax
      comp=Z,80nm,0.7s
YSS                              MLR    MLR
      comp=Z,1µm,16.0s
NJ2   Nanjing         67.46 316  eP     P      02 31 35.9 +1.4
NJ2                              S      S      02 40 29.1 +0.6
NJ2                              sS     sS     02 40 45.3 +0.4
NJ2                              pmax   pmax
      comp=Z,15nm,0.5s
NJ2                              pmax   pmax
      comp=Z,290nm,5.1s
NJ2                              LR     LR
      comp=Z,1µm,22.7s
NJ2                              LR     LR
      comp=Z,700nm,22.7s
NJ2                              LR     LR
      comp=Z,1µm,19.9s
TEY   Ternei          67.72 337  eP     P      02 31 35.6 -0.3
BKNI  Bangkinang      67.84 277  PFAKE         02 31 50.0  +13
BKNI                             LR     LR
      comp=Z,2µm,20.0s
SKR   Severo-Kuril’s  67.94 352  eP     P      02 31 30.3 -6.8
SKR                              e             02 32 02.0
SKR                              e             02 34 08.3
SKR                              eS     S      02 40 31.5 -1.9
SKR                              e             02 41 26.4
SKR                              eSSS   SSS    02 48 01.7
SKR                              pmax   pmax
      comp=Z,200nm,3.7s
SKR                              pmax   pmax
      comp=Z,100nm,8.7s
SKR                              MLR    MLR
      comp=Z,600nm,16.0s
SKR                              MLR    MLR
      comp=Z,600nm,18.0s
USRK  Ussuriysk Ar.   68.91 333  P      P      02 31 43.0 -0.3
      comp=Z,19nm,0.7s,baz=127,slow=7.0,SNR=32
USRK                             LR     LR     02 59 08.7
      comp=Z,523nm,20.4s,baz=134,slow=34
IPM   Ipoh            69.19 282  PFAKE         02 32 00.0  +14
IPM                              LR     LR
      comp=Z,1µm,20.0s
SMY   Shemya          69.43   4  PFAKE         02 32 00.0  +14
SMY                              LR     LR
      comp=Z,1µm,20.0s
WHN   Wuhan           69.65 312 ⇑P      P      02 31 47.9 -0.3
WHN                              S      S      02 40 53.6 -1.0
WHN                              SS     SS     02 45 25.3 +1.8
WHN                              pmax   pmax
      comp=Z,54nm,0.9s
WHN                              LR     LR
      comp=Z,970nm,18.7s
WHN                              LR     LR
      comp=Z,2µm,19.0s
WHN                              LR     LR
      comp=Z,3µm,18.3s
ADK   Adak            69.70  10  PFAKE         02 32 00.0  +12
ADK                              LR     LR
      comp=Z,2µm,21.0s
KULM  Kulim           69.82 282  PFAKE         02 32 00.0  +10
KULM                             LR     LR
      comp=Z,1µm,18.0s
PET   Petropavlovsk   69.95 354  PFAKE         02 32 00.0  +10
PET                              LR     LR
      comp=Z,800nm,22.0s
PET   Petropavlovsk   69.95 354  eP     P      02 31 50.8 +1.2
PET                              eS     S      02 40 56.2 -1.0
PET                              pmax   pmax
      comp=Z,100nm,6.9s
PEA0B Petropavlovsk-  70.13 354  PFAKE         02 32 00.0 +9.3
PEA0B                            LR     LR
      comp=Z,900nm,20.0s
PETK  Petropavlovsk-  70.13 354  P      P      02 31 49.8 -1.0
      comp=Z,7.5nm,0.6s,baz=147,slow=7.8,SNR=12
PETK                             LR     LR     03 01 25.2
      comp=Z,535nm,18.3s,baz=166,slow=35
DL2   Dalian          70.20 323  P      P      02 31 52.3 +0.9
DL2                              S      S      02 41 00.4 -0.3
DL2                              pmax   pmax
      comp=Z,96nm,1.1s
DL2                              pmax   pmax
      comp=Z,120nm,5.7s
DL2                              LR     LR
      comp=Z,500nm,19.8s
DL2                              LR     LR
      comp=Z,520nm,22.4s
DL2                              LR     LR
      comp=Z,820nm,24.0s
MDJ   Mudanjiang      70.29 332  PFAKE         02 32 00.0 +8.1
MDJ                              LR     LR
      comp=Z,900nm,21.0s
MDJ   Mudanjiang      70.29 332  P      P      02 31 53.5 +1.6
MDJ                              pP     pwP    02 32 02.8 -1.2
MDJ                              sP     sP     02 32 05.4 +0.1
MDJ                              S      S      02 41 01.8 +0.2
MDJ                              sS     sS     02 41 16.1 -1.6
MDJ                              SS     SS     02 45 32.0 -0.9
MDJ                              pmax   pmax
      comp=Z,30nm,1.3s
MDJ                              pmax   pmax
      comp=Z,240nm,7.1s
MDJ                              LR     LR
      comp=Z,630nm,27.5s
MDJ                              LR     LR
      comp=Z,680nm,25.2s
MDJ                              LR     LR
      comp=Z,910nm,26.7s
PSI   Prapat          70.62 279  eP     P      02 31 53.5 -1.3
      comp=Z,37nm,0.9s
PSI                              LR     LR
      comp=Z,2µm,20.0s
PSI   Prapat          70.62 279  eP     P      02 31 53.5 -1.3
PSI                              pmax   pmax
      comp=Z,37nm,0.9s
PSI                              MLR    MLR
      comp=Z,2µm,20.0s
PANO  Nakornpanom     70.74 295  P      P      02 31 56.2 +1.0
      comp=Z,0.4nm,1.6s,comp=Z,21nm
TYV   Tymovskoe       70.86 343  eP     P      02 31 54.4 -0.8
TYV                              e             02 41 07.2
TYV                              pmax   pmax
      comp=Z,15nm,1.5s
TYV                              pmax   pmax
      comp=Z,200nm,4.7s
SNY   Shenyang        71.16 327 ⇓P      P      02 31 58.3 +1.1
SNY                              S      S      02 41 12.1 +0.4
SNY                              pmax   pmax
      comp=Z,12nm,0.8s
SNY                              pmax   pmax
      comp=Z,240nm,5.4s
SNY                              LR     LR
      comp=Z,950nm,20.5s
SNY                              LR     LR
      comp=Z,500nm,16.5s
SNY                              LR     LR
      comp=Z,2µm,20.9s
TIA   Tai'an          71.17 319  P      P      02 31 59.4 +2.0
GSI   Gunungsitoli    71.43 277  eP     P      02 31 58.9 -0.6
      comp=Z,76nm,1.0s
GSI                              LR     LR
      comp=Z,5µm,22.0s
CN2   Changchun       71.62 329  eP     P      02 31 59.4 -0.6
CN2                              epP    pP     02 32 07.3 -2.7
CN2                              PcP    PcP    02 32 18.6 -0.5
CN2                              eS     S      02 41 17.8 +0.7
CN2                              pmax   pmax
      comp=Z,40nm,0.6s
CN2                              pmax   pmax
      comp=Z,200nm,3.0s
CN2                              LR     LR
      comp=Z,700nm,18.0s
CN2                              LR     LR
      comp=Z,600nm,18.0s
CN2                              LR     LR
      comp=Z,600nm,20.0s
NIKH  Nikolski High   72.34  15  PFAKE         02 32 20.0  +16
NIKH                             LR     LR
      comp=Z,2µm,22.0s
NONG  Nongkai         72.39 296  P      P      02 32 05.4 +0.3
      comp=Z,0.4nm,1.6s
CHAI  Chaiyaphum      72.52 293  P      P      02 32 06.0 +0.1
      comp=Z,31µm,0.7s
GRNR  Gornyy          72.66 340  eP     P      02 32 06.0  0.0
GRNR                             pmax   pmax
      comp=Z,21nm,1.0s
KLR   Kul'dur         73.05 336  LR     LR     03 03 34.9
      comp=Z,550nm,18.6s,baz=154,slow=35
KLR   Kul'dur         73.05 336deP      P      02 32 06.5 -1.9
KLR                              pmax   pmax
      comp=Z,7.0nm,0.9s
SLVN  Son La          73.14 299  PFAKE         02 32 20.0  +10
SLVN                             LR     LR
      comp=Z,600nm,21.0s
GYA   Guiyang         73.25 305⇓iP      P      02 32 09.5 -0.8
GYA                              pP     pP     02 32 18.3 -1.9
GYA                              PP     PP     02 34 57.6 +3.7
GYA                              S      S      02 41 36.6 -0.1
GYA                              SS     SS     02 46 19.6 +0.4
GYA                              pmax   pmax
      comp=Z,30nm,0.9s
GYA                              pmax   pmax
      comp=Z,110nm,5.2s
GYA                              LR     LR
      comp=Z,700nm,26.1s
GYA                              LR     LR
      comp=Z,480nm,24.9s
GYA                              LR     LR
      comp=Z,880nm,26.1s
QSPA  South Pole Qui  73.27 180  eP     P      02 32 10.3 +0.5
      comp=Z,49nm,0.9s
QSPA                             LR     LR
      comp=Z,2µm,21.0s
NKL   Nikolayevsk     73.45 343  eP     P      02 32 10.0 -0.6
PBKT  Sadao Pong      73.68 293  P      P      02 32 13.5 +0.7
      comp=Z,12nm,0.7s
UNV   Unalaska Valle  73.72  16  PFAKE         02 32 20.0 +7.8
UNV                              LR     LR
      comp=Z,3µm,20.0s
BJT   Baijiatuau      74.13 321  PFAKE         02 32 30.0  +15
BJT                              LR     LR
      comp=Z,900nm,22.0s
AKUT  Akutan          74.18  16  PFAKE         02 32 30.0  +15
AKUT                             LR     LR
      comp=Z,3µm,22.0s
TIY   Taiyuan         75.07 318  eP     P      02 32 22.0 +1.4
TIY                              S      S      02 41 56.9 +0.3
TIY                              SS     SS     02 46 43.1 -3.3
TIY                              pmax   pmax
      comp=Z,190nm,5.0s
TIY                              LR     LR
      comp=Z,150nm,8.9s
TIY                              LR     LR
      comp=Z,650nm,17.8s
TIY                              LR     LR
      comp=Z,780nm,20.1s
PHRA  Phrae           75.09 295  P      P      02 32 21.9 +0.9
      comp=Z,3.0nm,0.9s
XAN   Xi'an           75.40 313  PFAKE         02 32 30.0 +7.5
XAN                              LR     LR
      comp=Z,1µm,21.0s
XAN   Xi'an           75.40 313  P      P      02 32 22.6 +0.1
XAN                              pP     sP     02 32 35.8 -0.5
XAN                              PP     PP     02 35 09.3 -2.7
XAN                              S      S      02 41 59.0 -1.4
XAN                              ScS    SKSac  02 42 29.8 -0.2
XAN                              SS     SS     02 46 52.8 +1.2
XAN                              pmax   pmax
      comp=Z,25nm,0.8s
XAN                              pmax   pmax
      comp=Z,97nm,6.0s
XAN                              LR     LR
      comp=Z,810nm,23.9s
XAN                              LR     LR
      comp=Z,760nm,20.1s
XAN                              LR     LR
      comp=Z,1µm,21.4s
FALS  False Pass      75.45  17  PFAKE         02 32 30.0 +7.8
FALS                             LR     LR
      comp=Z,4µm,21.0s
LAMP  Lampang         75.62 295  P      P      02 32 25.3 +1.2
      comp=Z,83µm,0.7s
PAYA  Payao           75.75 296  P      P      02 32 25.2 +0.4
      comp=Z,50µm,0.7s
KMI   Kunming         75.77 302  PFAKE         02 32 40.0  +15
KMI                              LR     LR
      comp=Z,500nm,21.0s
KMI   Kunming         75.77 302  P      P      02 32 24.9 -0.1
KMI                              pP     pwP    02 32 36.1 -1.3
KMI                              sP     sP     02 32 41.5 +2.7
KMI                              S      S      02 42 06.9 +1.8
KMI                              pmax   pmax
      comp=Z,30nm,1.0s
KMI                              pmax   pmax
      comp=Z,200nm,6.5s
KMI                              LR     LR
      comp=Z,500nm,22.8s
KMI                              LR     LR
      comp=Z,750nm,22.8s
KMI                              LR     LR
      comp=Z,1µm,25.9s
SPIA  Saint Paul Isl  75.93  12  PFAKE         02 32 40.0  +15
SPIA                             LR     LR
      comp=Z,2µm,20.0s
CMAR  Chiang Mai Arr  76.20 294  P      P      02 32 27.6 +0.2
      comp=Z,13nm,0.7s,baz=132,slow=4.7,SNR=31
CMAR                             LR     LR     03 03 44.1
      comp=Z,388nm,21.8s,baz=180,slow=34
CHTO  Chiang Mai      76.34 295  eP     P      02 32 27.9 -0.2
      comp=Z,17nm,0.7s
CHTO                             LR     LR
      comp=Z,500nm,22.0s
CHTO  Chiang Mai      76.34 295  eP     P      02 32 27.9 -0.2
CHTO                             pmax   pmax
      comp=Z,17nm,0.7s
CHTO                             MLR    MLR
      comp=Z,500nm,22.0s
SDPT  Sand Point      76.72  18  PFAKE         02 32 40.0  +11
SDPT                             LR     LR
      comp=Z,3µm,21.0s
MA2   Magadan         77.33 351  LR     LR     03 01 14.1
      comp=Z,1µm,21.9s,baz=170,slow=32
MA2   Magadan         77.33 351  PFAKE         02 32 40.0 +7.2
MA2                              LR     LR
      comp=Z,2µm,22.0s
HHC   Hu-ho-hao-te    77.43 320  eP     P      02 32 38.4 +4.4
CD2   Chengdu         77.61 308  P      P      02 32 35.4 +0.3
CD2                              sP     sP     02 32 49.5 +0.6
CD2                              PP     PP     02 35 31.4 +0.7
CD2                              S      S      02 42 24.4 -0.3
CD2                              sS     sS     02 42 42.3 +0.7
CD2                              SS     SS     02 47 26.3 +1.1
CD2                              pmax   pmax
      comp=Z,30nm,0.8s
CD2                              pmax   pmax
      comp=Z,250nm,6.5s
CD2                              LR     LR
      comp=Z,1µm,17.7s
CD2                              LR     LR
      comp=Z,2µm,23.0s
CD2                              LR     LR
      comp=Z,2µm,24.0s
CHGN  Chignik         78.15  18  PFAKE         02 32 50.0  +13
CHGN                             LR     LR
      comp=Z,2µm,21.0s
BTO   Baotou          78.26 319  eP     P      02 32 42.8 +4.2
HIA   Hailar          78.28 330  PFAKE         02 32 50.0  +12
HIA                              LR     LR
      comp=Z,900nm,21.0s
HIA   Hailar          78.28 330deP      P      02 32 38.9 +0.5
HIA                              pmax   pmax
      comp=Z,119nm,1.1s
ZEA   Zeya            78.34 337  eP     P      02 32 39.0 +0.4
ZEA                              eS     S      02 42 32.0 +0.5
ZEA                              pmax   pmax
      comp=Z,58nm,1.0s
ZEA                              pmax   pmax
      comp=Z,400nm,8.0s
ZEA                              smax   smax
      comp=N,600nm,11.0s
ZEA                              smax   smax
      comp=E,700nm,11.0s
ZEA                              MLR    MLR
      comp=E,500nm,18.0s
ZEA                              MLR    MLR
      comp=Z,800nm,18.0s
CHIR  Chirikof Islan  78.63  20  PFAKE         02 32 50.0  +10
CHIR                             LR     LR
      comp=Z,2µm,22.0s
SII   Sitkinak Islan  79.71  20  PFAKE         02 33 00.0  +14
SII                              LR     LR
      comp=Z,1µm,22.0s
LZH   Lanzhou         80.03 312  eP     P      02 32 50.6 +2.2
LZH                              pP     pP     02 32 57.8 -0.7
LZH                              sP     sP     02 33 00.9 -0.8
LZH                              eS     S      02 42 52.3 +1.7
LZH                              sS     SKKSac 02 43 05.0 -0.4
LZH                              SS     SS     02 47 58.8 -2.7
LZH                              pmax   pmax
      comp=Z,48nm,1.4s
LZH                              pmax   pmax
      comp=Z,220nm,5.2s
LZH                              LR     LR
      comp=Z,580nm,18.7s
LZH                              LR     LR
      comp=Z,630nm,17.9s
LZH                              LR     LR
      comp=Z,1µm,21.7s
MAW   Mawson          80.17 202  P      P      02 32 50.2 +1.7
      comp=Z,7.9nm,0.9s,baz=110,slow=8.1,SNR=9.8
MAW                              LR     LR     03 03 24.5
      comp=Z,2µm,21.2s,baz=98,slow=32
MAW   Mawson          80.17 202  eP     P      02 32 49.1 +0.7
      comp=Z,19nm,1.8s
MAW                              LR     LR
      comp=Z,500nm,20.0s
MAW   Mawson          80.17 202  eP     P      02 32 49.1 +0.7
MAW                              pmax   pmax
      comp=Z,19nm,1.8s
MAW                              MLR    MLR
      comp=Z,500nm,20.0s
SEY   Seymchan        80.36 353  LR     LR     03 04 09.7
      comp=Z,933nm,18.6s,baz=152,slow=32
SEY   Seymchan        80.36 353⇓iP      P      02 32 48.4 -0.9
KDAK  Kodiak Island   81.21  20  LR     LR     03 07 53.3
      comp=Z,1µm,18.0s,baz=216,slow=35
KDAK  Kodiak Island   81.21  20  PFAKE         02 33 10.0  +16
KDAK                             LR     LR
      comp=Z,1µm,18.0s
GAMB  Gambell         81.86   9  PFAKE         02 33 10.0  +13
GAMB                             LR     LR
      comp=Z,800nm,19.0s
SVW2  Sparrevohn      82.96  17  PFAKE         02 33 10.0 +6.8
SVW2                             LR     LR
      comp=Z,3µm,21.0s
HOM   Homer           82.99  19  PFAKE         02 33 10.0 +6.7
HOM                              LR     LR
      comp=Z,1µm,22.0s
CNPM  China Poot      83.01  20  eP     P      02 33 04.3 +0.8
      comp=Z,77nm,1.7s
CNPM                             LR     LR
      comp=Z,700nm,19.0s
BRLK  Bradley Lake    83.31  20  PFAKE         02 33 20.0  +15
BRLK                             LR     LR
      comp=Z,1µm,19.0s
ANM   Nome            83.67  11  PFAKE         02 33 20.0  +13
ANM                              LR     LR
      comp=Z,2µm,20.0s
SEW   Seward          84.04  20  PFAKE         02 33 20.0  +11
SEW                              LR     LR
      comp=Z,1µm,20.0s
ULN   Ulaanbaatar     84.05 324  eP     P      02 33 09.3 +0.1
      comp=Z,24nm,0.9s
ULN   Ulaanbaatar     84.05 324deP      P      02 33 08.0 -1.3
ULN                              pmax   pmax
      comp=Z,36nm,1.3s
YAK   Yakutsk         84.11 343  PFAKE         02 33 20.0  +11
YAK                              LR     LR
      comp=Z,1µm,20.0s
YAK   Yakutsk         84.11 343  eP     P      02 33 08.0 -1.0
YAK                              e*PP   sP     02 33 22.7 +0.1
YAK                              eS     S      02 43 28.3 -2.7
YAK                              e             02 44 43.0
YAK                              pmax   pmax
      comp=Z,26nm,1.0s
YAK                              pmax   pmax
      comp=N,14nm,1.4s
YAK                              pmax   pmax
      comp=E,9.0nm,1.1s
YAK                              pmax   pmax
      comp=Z,8.0nm,5.1s
YAK                              pmax   pmax
      comp=N,7.0nm,6.1s
YAK                              pmax   pmax
      comp=E,4.0nm,5.8s
YAK                              smax   smax
      comp=N,99nm,3.8s
YAK                              smax   smax
      comp=E,68nm,3.8s
TTA   Tatalina        84.35  16  PFAKE         02 33 20.0  +10
TTA                              LR     LR
      comp=Z,3µm,21.0s
SONM  Songino Array   84.40 324  P      P      02 33 10.4 -0.6
      comp=Z,9.6nm,0.8s,baz=150,slow=5.8,SNR=37
SONM                             LR     LR     03 09 49.2
      comp=Z,522nm,20.9s,baz=120,slow=35
GTA   Gaotai          84.41 314  eP     P      02 33 10.3 -0.9
GTA                              pP     PcP    02 33 14.3 -0.6
GTA                              sP     pP     02 33 17.3 -4.2
GTA                              S      S      02 43 32.6 -2.7
GTA                              sS     ScS    02 43 46.4 -0.5
GTA                              SS     SS     02 49 04.8 -1.6
GTA                              pmax   pmax
      comp=Z,12nm,1.4s
GTA                              pmax   pmax
      comp=Z,130nm,5.8s
GTA                              LR     LR
      comp=Z,420nm,20.3s
GTA                              LR     LR
      comp=Z,480nm,24.8s
GTA                              LR     LR
      comp=Z,1µm,23.7s
BILL  Bilibino        84.58 359  eP     P      02 33 11.2 -0.1
      comp=Z,33nm,1.2s
BILL                             LR     LR
      comp=Z,700nm,20.0s
BILL  Bilibino        84.58 359ceP      P      02 33 10.1 -1.2
BILL                             e             02 33 18.1
BILL                             e             02 33 26.2
BILL                             PPP    PPP    02 38 22.0
BILL                             PS            02 44 38.0
BILL                             SS     SS     02 49 12.0 +4.5
BILL                             pmax   pmax
      comp=Z,34nm,1.3s
BILL                             MLR    MLR
      comp=Z,548nm,18.0s
RC01  Rabbit Creek A  84.70  19  PFAKE         02 33 20.0 +8.0
RC01                             LR     LR
      comp=Z,1µm,19.0s
MCCM  Marconi Confer  84.86  48  PFAKE         02 33 20.0 +6.7
MCCM                             LR     LR
      comp=Z,3µm,19.0s
SHL   Shillong        84.94 298  eP     P      02 33 13.0 -1.3
KCPM  Cahto Peak      85.04  46  PFAKE         02 33 30.0  +16
KCPM                             LR     LR
      comp=Z,2µm,20.0s
HOPS  Hopland Field   85.09  47  PFAKE         02 33 30.0  +15
HOPS                             LR     LR
      comp=Z,4µm,20.0s
KMRM  Mail Ridge      85.19  46  PFAKE         02 33 30.0  +15
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KMRM                              LR      LR
      comp=Z,3µm,20.0s
JCC   Jacoby Creek,     85.24  45 PFAKE           02 33 30.0 +15
JCC                               LR      LR
      comp=Z,2µm,19.0s
PMR   Palmer            85.27  19 eP      P       02 33 16.2 +1.4
      comp=Z,44nm,1.8s
PMR                               LR      LR
      comp=Z,1µm,18.0s
PMR   Palmer            85.27  19 eP      P       02 33 16.2 +1.4
PMR                               pmax    pmax
      comp=Z,44nm,1.8s
PMR                               MLR     MLR
      comp=Z,1µm,18.0s
SAO   San Andreas Ge    85.30  50 PFAKE           02 33 30.0 +14
SAO                               LR      LR
      comp=Z,2µm,20.0s
KNK   Knik Glacier      85.35  20 PFAKE           02 33 30.0 +15
KNK                               LR      LR
      comp=Z,1µm,19.0s
PPLA  Purkeypile        85.36  17 PFAKE           02 33 30.0 +14
PPLA                              LR      LR
      comp=Z,2µm,21.0s
GLI   Glacier Island    85.40  20 PFAKE           02 33 30.0 +14
GLI                               LR      LR
      comp=Z,1µm,22.0s
KHMM  Horse Mountain    85.47  45 PFAKE           02 33 30.0 +13
KHMM                              LR      LR
      comp=Z,2µm,20.0s
FID   Port Fidalgo      85.51  21 PFAKE           02 33 30.0 +14
FID                               LR      LR
      comp=Z,1µm,19.0s
SBC   Santa Barbara     85.64  52 P       P       02 33 17.5 +0.1
      baz=246
KRMB  Red Mountain      85.64  44 PFAKE           02 33 30.0 +13
KRMB                              LR      LR
      comp=Z,1µm,19.0s
SML   Sawmill           85.68  19 PFAKE           02 33 30.0 +13
SML                               LR      LR
      comp=Z,1µm,19.0s
PKM   Mcpherson Peak    85.74  52 P       P       02 33 18.0 -0.1
      baz=246
PAGB  Antelope Grade    85.75  51 PFAKE           02 33 30.0 +12
PAGB                              LR      LR
      comp=Z,3µm,19.0s
SMMC  Simmler           85.78  51 P       P       02 33 18.0 -0.1
      baz=246
CAST  Castle Rocks      85.80  17 PFAKE           02 33 30.0 +12
CAST                              LR      LR
      comp=Z,2µm,22.0s
O02D  Mt. Diablo Mer    85.81  46 P       P       02 33 17.9 -0.3
      baz=244
RAGM  Ragged Mountai    85.87  22 PFAKE           02 33 30.0 +12
RAGM                              LR      LR
      comp=Z,2µm,18.0s
KEBM  Edson Butte       85.97  43 PFAKE           02 33 30.0 +11
KEBM                              LR      LR
      comp=Z,1µm,22.0s
HMT   Hamilton          85.98  22 PFAKE           02 33 30.0 +12
HMT                               LR      LR
      comp=Z,2µm,20.0s
SCM   Sheep Creek Mo    86.02  20 PFAKE           02 33 30.0 +11
SCM                               LR      LR
      comp=Z,900nm,22.0s
WDC   Whiskeytown Da    86.15  46 PFAKE           02 33 30.0 +10
WDC                               LR      LR
      comp=Z,3µm,22.0s
N02D  Trinity Center    86.21  45 P       P       02 33 21.5 +1.4
      baz=244
CIS   Catalina Islan    86.22  54 P       P       02 33 21.0 +0.7
      baz=247
KTH   Kantishna Hill    86.24  17 PFAKE           02 33 30.0 +10
KTH                               LR      LR
      comp=Z,2µm,21.0s
M02C  Callahan          86.29  45 P       P       02 33 20.8 +0.2
      baz=244
K02D  Willamette Mer    86.33  43 P       P       02 33 21.0 +0.3
      baz=243
ORV   Oroville          86.43  47 PFAKE           02 33 30.0 +8.8
ORV                               LR      LR
      comp=Z,2µm,20.0s
OSI   Osito Audit: C    86.46  52 PFAKE           02 33 30.0 +8.5
OSI                               LR      LR
      comp=Z,4µm,20.0s
DIB   Dawson Inlet,     86.50  31 PFAKE           02 33 30.0 +8.9
DIB                               LR      LR
      comp=Z,2µm,20.0s
BOD   Bodaibo           86.51 334 eP      P       02 33 22.4 +1.3
O03E  Paynes Creek      86.54  46 P       P       02 33 22.6 +0.9
      baz=245
YBH   Yreka Blue Hor    86.54  45 P       P       02 33 22.0 +0.2
      comp=Z,2.0nm,0.8s,baz=160,slow=3.6,SNR=3.6
YBH   Yreka Blue Hor    86.54  45 PFAKE           02 33 30.0 +8.2
YBH                               LR      LR
      comp=Z,1µm,20.0s
AFDM  Forest Hills D    86.55  48 PFAKE           02 33 30.0 +8.2
AFDM                              LR      LR
      comp=Z,2µm,22.0s
ARVC  Arvin             86.58  52 P       P       02 33 21.8 -0.2
      baz=247
CMB   Columbia Colle    86.59  49 PFAKE           02 33 30.0 +7.9
CMB                               LR      LR
      comp=Z,2µm,19.0s
BPAW  Bear Paw Mtn.     86.64  17 PFAKE           02 33 30.0 +8.3
BPAW                              LR      LR
      comp=Z,2µm,21.0s
VES   Vestal, Richgr    86.67  51 P       P       02 33 23.0 +0.6
      baz=247
CRQM  Cirque            86.67  22 PFAKE           02 33 30.0 +7.9
CRQM                              LR      LR
      comp=Z,2µm,20.0s
PASC  Pasadena Art C    86.69  53 PFAKE           02 33 30.0 +7.4
PASC                              LR      LR
      comp=Z,4µm,21.0s
RND   Reindeer          86.72  18 PFAKE           02 33 30.0 +7.9
RND                               LR      LR
      comp=Z,2µm,22.0s
HUMO  Hull Mountain     86.76  44 PFAKE           02 33 30.0 +7.3
HUMO                              LR      LR
      comp=Z,2µm,22.0s
TGL   Tana Glacier      86.78  22 PFAKE           02 33 30.0 +7.5
TGL                               LR      LR
      comp=Z,2µm,20.0s
MWC   Mount Wilson      86.81  53 PFAKE           02 33 30.0 +6.6
MWC                               LR      LR
      comp=Z,4µm,22.0s
SYO   Syowa Base        86.89 196⇑eP      P       02 33 21.1 -1.8
SYO   Syowa Base        86.89 196⇓iPcP    PcP     02 33 24.5 -0.6
SYO   Syowa Base        86.89 196⇓iX      P       02 33 28.0 +5.1
DHY   Denali Highway    86.92  19 PFAKE           02 33 30.0 +6.8
DHY                               LR      LR
      comp=Z,2µm,22.0s
MCK   McKinley          86.95  18 PFAKE           02 33 30.0 +6.8
MCK                               LR      LR
      comp=Z,2µm,22.0s
LSA   Lhasa             87.03 302 eP      P       02 33 24.5 -0.4
      comp=Z,9.3nm,0.6s
LSA                               LR      LR
      comp=Z,500nm,21.0s
LSA   Lhasa             87.03 302 eP      P       02 33 24.5 -0.4
LSA                               pmax    pmax
      comp=Z,9.0nm,0.6s
LSA                               MLR     MLR
      comp=Z,500nm,21.0s
109C  Camp Elliot, M    87.04  55 P       P       02 33 23.8 -0.6
      baz=248
CPE   Camp Elliot       87.04  55 PFAKE           02 33 40.0 +16
CPE                               LR      LR
      comp=Z,3µm,20.0s
ISA   Isabella, Lake    87.05  52 PFAKE           02 33 40.0 +16
ISA                               LR      LR
      comp=Z,5µm,20.0s
ISA   Isabella, Lake    87.05  52 P       P       02 33 24.1 -0.3
      baz=247,SNR=7.9
EDW2  Edwards Air Fo    87.11  52 P       P       02 33 24.3 -0.4
      baz=247
BFSC  Mount Baldy Ra    87.12  53 P       P       02 33 24.1 -0.8
      baz=248
BWN   Browne            87.13  17 PFAKE           02 33 40.0 +16
BWN                               LR      LR
      comp=Z,2µm,22.0s
RUBR  Rubicon Trail     87.17  48 PFAKE           02 33 40.0 +15
RUBR                              LR      LR
      comp=Z,3µm,21.0s
MURC  Murrieta          87.24  54 P       P       02 33 24.8 -0.5
      baz=248
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RDOG  Red Dog Mine      87.24  11 PFAKE           02 33 40.0 +16
RDOG                              LR      LR
      comp=Z,1µm,21.0s
PCA   Pinnacle          87.29  23 PFAKE           02 33 40.0 +15
PCA                               LR      LR
      comp=Z,2µm,20.0s
BAR   Barrett           87.31  55 PFAKE           02 33 40.0 +14
BAR                               LR      LR
      comp=Z,3µm,20.0s
BEKR  Beckworth         87.36  47 PFAKE           02 33 40.0 +14
BEKR                              LR      LR
      comp=Z,3µm,21.0s
SIT   Sitka             87.40  27 PFAKE           02 33 40.0 +15
SIT                               LR      LR
      comp=Z,1µm,19.0s
COR   Corvallis         87.41  42 PFAKE           02 33 40.0 +14
COR                               LR      LR
      comp=Z,900nm,20.0s
OMMB  Old Mammoth Mi    87.43  50 PFAKE           02 33 40.0 +14
OMMB                              LR      LR
      comp=Z,2µm,20.0s
BCPM  Bancas Point      87.43  24 PFAKE           02 33 40.0 +14
BCPM                              LR      LR
      comp=Z,1µm,20.0s
MLY   Manley            87.43  16 PFAKE           02 33 40.0 +14
MLY                               LR      LR
      comp=Z,2µm,20.0s
PAX   Paxson            87.45  19 PFAKE           02 33 40.0 +14
PAX                               LR      LR
      comp=Z,1µm,21.0s
WAKR  Walker            87.47  49 PFAKE           02 33 40.0 +13
WAKR                              LR      LR
      comp=Z,3µm,22.0s
ZAK   Zakamensk         87.48 325 eP      P       02 33 25.9 -0.2
ZAK                               pmax    pmax
      comp=Z,10.0nm,1.7s
MLAC  Mammoth, Mammo87.56  50 P       P       02 33 26.8 -0.2
      baz=247
LRMC  Laurel Mtn Rad    87.58  52 P       P       02 33 26.7 -0.3
      baz=248
MONP2 Monument Peak     87.58  55 P       P       02 33 26.8 -0.4
      baz=248
PNTR  Pine Nut          87.58  48 PFAKE           02 33 40.0 +13
PNTR                              LR      LR
      comp=Z,3µm,20.0s
CWC   Cottonwood Cre    87.65  51 P       P       02 33 26.8 -0.6
      baz=247
IKP   In-Ko-Pah, Jac    87.73  55 P       P       02 33 27.6 -0.2
      baz=248
WRH   Wood River Hil    87.75  18 eP      P       02 33 26.8 -0.2
      comp=Z,5.5nm,1.0s
YERR  Yerington         87.80  48 PFAKE           02 33 40.0 +12
YERR                              LR      LR
      comp=Z,2µm,19.0s
PFO   Pinyon Flats O    87.81  54 eP      P       02 33 27.9 -0.3
      comp=Z,37nm,1.8s
PFO                               LR      LR
      comp=Z,4µm,20.0s
PFO   Pinyon Flats O    87.81  54 eP      P       02 33 27.9 -0.3
PFO                               pmax    pmax
      comp=Z,37nm,1.8s
PFO                               MLR     MLR
      comp=Z,4µm,20.0s
PFO   Pinyon Flats O    87.81  54 P       P       02 33 27.8 -0.4
      baz=248
TLY   Talaya            87.93 326 LR      LR      03 11 31.8
      comp=Z,258nm,20.4s,baz=120,slow=35
TLY   Talaya            87.93 326 PFAKE           02 33 40.0 +12
TLY                               LR      LR
      comp=Z,500nm,20.0s
MPMC  Manual Prospec    87.94  51 P       P       02 33 28.1 -0.7
      baz=248,SNR=10
DAC   Darwin (Calif)    87.95  51 PFAKE           02 33 40.0 +11
DAC                               LR      LR
      comp=Z,3µm,20.0s
CCB   Clear Creek Bu    87.96  18 PFAKE           02 33 40.0 +12
CCB                               LR      LR
      comp=Z,2µm,22.0s
PAHR  Pah Rah Range     87.98  48 PFAKE           02 33 40.0 +11
PAHR                              LR      LR
      comp=Z,3µm,21.0s
MENT  Mentasta          87.99  20 PFAKE           02 33 40.0 +12
MENT                              LR      LR
      comp=Z,900nm,20.0s
HDA   Harding Lake      88.04  18 PFAKE           02 33 40.0 +12
HDA                               LR      LR
      comp=Z,2µm,22.0s
HDA   Harding Lake      88.04  18 P       P       02 33 28.7 +0.3
      baz=223
MDM   Murphy Dome       88.07  17 PFAKE           02 33 40.0 +11
MDM                               LR      LR
      comp=Z,1µm,20.0s
SWSC  Sam W. Stewart    88.08  55 P       P       02 33 29.1 -0.2
      baz=249
COLA  College           88.12  17 PFAKE           02 33 40.0 +11
COLA                              LR      LR
      comp=Z,2µm,21.0s
COLA  College           88.12  17⇓eP      P       02 33 27.8 -0.9
COLA                              pmax    pmax
      comp=Z,4.0nm,0.8s
H04A  Detroit Lake      88.17  42 PFAKE           02 33 40.0 +11
H04A                              LR      LR
      comp=Z,1µm,22.0s
RYN   Ryan              88.17  49 PFAKE           02 33 40.0 +10
RYN                               LR      LR
      comp=Z,2µm,20.0s
GSC   Goldstone, Bar    88.17  52 PFAKE           02 33 40.0 +10
GSC                               LR      LR
      comp=Z,4µm,21.0s
GSC   Goldstone, Bar    88.17  52 P       P       02 33 29.5 -0.3
      baz=248
J05D  Fort Rock, OR     88.19  44 P       P       02 33 29.5 -0.2
      baz=245
RIDG  Independent Ri    88.19  19 PFAKE           02 33 40.0 +11
RIDG                              LR      LR
      comp=Z,1µm,19.0s
BBB   Bella Bella       88.21  34 LR      LR      03 04 06.1
      comp=Z,1µm,21.8s,baz=242,slow=30
BBB   Bella Bella       88.21  34 PFAKE           02 33 40.0 +11
BBB                               LR      LR
      comp=Z,2µm,22.0s
MOD   Modoc Plateau     88.24  45 PFAKE           02 33 40.0 +10
MOD                               LR      LR
      comp=Z,2µm,20.0s
NVAR  Mina Array Bea    88.25  49 P       P       02 33 30.1 -0.2
      comp=Z,19nm,1.2s,baz=240,slow=3.4,SNR=30
NVAR                              PP      PP      02 36 58.3 +0.2
      comp=Z,0.9nm,0.9s,baz=238,slow=10,SNR=4.2
NVAR                              LR      LR      03 07 39.1
      comp=Z,3µm,19.0s,baz=268,slow=32
BELC  Belle Mtn. Jos    88.31  54 P       P       02 33 29.9 -0.6
      baz=248,SNR=19
NLWA  Neilton Lookou    88.32  39 PFAKE           02 33 40.0 +10
NLWA                              LR      LR
      comp=Z,1µm,18.0s
ILAR  Eielson Array     88.32  18 P       P       02 33 26.3 -3.4
      comp=Z,1.8nm,0.7s,baz=239,slow=5.0,SNR=16
ILAR                              LR      LR      03 06 32.2
      comp=Z,2µm,21.9s,baz=246,slow=31
HEC   Hector,Ludlow     88.36  53 P       P       02 33 30.0 -0.6
      baz=248,SNR=8.7
NV11  Mina Array Sit    88.36  49 PFAKE           02 33 40.0 +9.3
NV11                              LR      LR
      comp=Z,200nm,19.0s
WRAK  Wrangell Islan    88.37  29 PFAKE           02 33 40.0 +10
WRAK                              LR      LR
      comp=Z,2µm,20.0s
DOT   Dot Lake          88.38  19 PFAKE           02 33 40.0 +10
DOT                               LR      LR
      comp=Z,1µm,21.0s
GRAC  Grapevine Rang    88.39  51 P       P       02 33 30.4 -0.3
      baz=248
BESE  Bessie Mountai    88.51  26 PFAKE           02 33 40.0 +9.2
BESE                              LR      LR
      comp=Z,1µm,21.0s
JIS   Juneau Island     88.53  27 PFAKE           02 33 40.0 +9.3
JIS                               LR      LR
      comp=Z,1µm,20.0s
FURC  Furnace Creek,    88.57  51 P       P       02 33 31.2 -0.2
      baz=248,SNR=12
PINE  Pine Mountain     88.60  43 eP      P       02 33 31.6 -0.1
      comp=Z,9.3nm,1.0s
PINE                              LR      LR
      comp=Z,1µm,21.0s
BC3   Big Chuckawall    88.61  54 P       P       02 33 31.6 -0.4
      baz=249,SNR=8.8
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SCRK  Sand Creek        88.63  19 PFAKE           02 33 40.0 +8.7
SCRK                              LR      LR
      comp=Z,1µm,19.0s
KVN   Kaiserville       88.64  49 PFAKE           02 33 40.0 +7.9
KVN                               LR      LR
      comp=Z,2µm,20.0s
E04D  Cinebar           88.75  40 P       P       02 33 31.5 -0.6
      baz=244
SHOC  Shoshone, Teco    88.80  52 P       P       02 33 32.1 -0.6
      baz=248
SKAG  Skagway           88.83  25 PFAKE           02 33 40.0 +7.8
SKAG                              LR      LR
      comp=Z,2µm,22.0s
GMRC  Granite Mounta    88.86  53 P       P       02 33 32.6 -0.5
      baz=249
GLA   Glamis            88.89  55 PFAKE           02 33 40.0 +6.8
GLA                               LR      LR
      comp=Z,2µm,20.0s
GLA   Glamis            88.89  55 P       P       02 33 33.3 +0.1
      baz=249
TUQ   Turquoise Moun    88.89  53 P       P       02 33 32.3 -1.0
      baz=249,SNR=15
IRM   Iron Mountain     89.03  54 P       P       02 33 33.4 -0.4
      baz=249,SNR=13
SRIG  Santa Rosalia     89.03  61 PFAKE           02 33 50.0 +16
SRIG                              LR      LR
      comp=Z,1µm,18.0s
TPNV  Topopah Spring    89.20  51 PFAKE           02 33 50.0 +15
TPNV                              LR      LR
      comp=Z,2µm,19.0s
TPNV  Topopah Spring    89.20  51 P       P       02 33 34.2 -0.5
      baz=248,SNR=20
PRP   Porcupine Dome    89.26  18 PFAKE           02 33 50.0 +16
PRP                               LR      LR
      comp=Z,2µm,21.0s
COLD  Coldfoot          89.27  15 PFAKE           02 33 50.0 +16
COLD                              LR      LR
      comp=Z,3µm,22.0s
LON   Longmire          89.30  40 PFAKE           02 33 50.0 +15
LON                               LR      LR
      comp=Z,900nm,20.0s
MOY   Mondy             89.36 325 eP      P       02 33 34.5 -0.6
Y12C  Blythe            89.37  55 PFAKE           02 33 50.0 +15
Y12C                              LR      LR
      comp=Z,3µm,20.0s
Y12C  Blythe            89.37  55 P       P       02 33 35.0 -0.4
      baz=249,SNR=12
D05A  Enumclaw          89.38  40 PFAKE           02 33 50.0 +15
D05A                              LR      LR
      comp=Z,900nm,20.0s
LDFC  Landfair          89.39  53 PFAKE           02 33 50.0 +14
LDFC                              LR      LR
      comp=Z,4µm,21.0s
WVOR  Wild Horse Val    89.59  45 PFAKE           02 33 50.0 +14
WVOR                              LR      LR
      comp=Z,1µm,19.0s
113A  Mohawk Valley,    89.62  56 PFAKE           02 33 50.0 +13
113A                              LR      LR
      comp=Z,2µm,22.0s
WHY   Whitehorse        89.73  25 PFAKE           02 33 50.0 +13
WHY                               LR      LR
      comp=Z,1µm,20.0s
BMN   Battle Mountai    89.80  48 eP      P       02 33 37.0 -0.3
      comp=Z,28nm,1.4s
BMN                               LR      LR
      comp=Z,2µm,19.0s
BMN   Battle Mountai    89.80  48 eP      P       02 33 37.1 -0.3
BMN                               pmax    pmax
      comp=Z,28nm,1.4s
BMN                               MLR     MLR
      comp=Z,2µm,19.0s
PDMCI Parker Dam,Lak    89.86  54 P       P       02 33 36.9 -0.7
      baz=250,SNR=9.2
J08A  Circle Bar Ran    90.06  44 PFAKE           02 33 50.0 +11
J08A                              LR      LR
      comp=Z,1µm,22.0s
EGAK  Eagle             90.08  19 PFAKE           02 33 50.0 +12
EGAK                              LR      LR
      comp=Z,1µm,20.0s
FYU   Fort Yukon        90.10  17 PFAKE           02 33 50.0 +12
FYU                               LR      LR
      comp=Z,1µm,21.0s
214A  Organ Pipe Nat    90.11  57 P       P       02 33 38.5 -0.4
      baz=250,SNR=11
R11A  Troy Canyon, C    90.20  50 PFAKE           02 33 50.0 +11
R11A                              LR      LR
      comp=Z,1µm,20.0s
R11A  Troy Canyon, C    90.20  50 P       P       02 33 38.7 -0.7
      baz=249
LTY   Liberty           90.22  40 PFAKE           02 33 50.0 +11
LTY                               LR      LR
      comp=Z,900nm,20.0s
W13A  Hualapai Mount    90.33  53 PFAKE           02 33 50.0 +10
W13A                              LR      LR
      comp=Z,3µm,20.0s
TOLK  Toolik Lake Re    90.51  14 PFAKE           02 33 50.0 +10
TOLK                              LR      LR
      comp=Z,4µm,21.0s
DLBC  Dease Lake        90.52  28 LR      LR      03 08 18.1
      comp=Z,2µm,19.9s,baz=250,slow=32
HAWA  Hanford           90.58  41 PFAKE           02 33 50.0 +9.3
HAWA                              LR      LR
      comp=Z,800nm,20.0s
Y14A  Wickenburg        90.62  55 eP      P       02 33 41.4 +0.1
      comp=Z,23nm,1.6s
Y14A                              LR      LR
      comp=Z,3µm,20.0s
HSIG                    90.67  60 PFAKE           02 33 50.0 +8.5
HSIG                              LR      LR
      comp=Z,800nm,19.0s
E08A  Dider Farm, El    90.92  41 PFAKE           02 33 50.0 +7.7
E08A                              LR      LR
      comp=Z,900nm,20.0s
LLLB  Lillooet          90.92  37 PFAKE           02 33 50.0 +7.8
LLLB                              LR      LR
      comp=Z,1µm,20.0s
D08A  Wollman Farm,     91.23  41 PFAKE           02 34 00.0 +16
D08A                              LR      LR
      comp=Z,1µm,21.0s
ELK   Elko              91.31  48 PFAKE           02 34 00.0 +15
ELK                               LR      LR
      comp=Z,2µm,20.0s
BMO   Blue Mountains    91.41  43 PFAKE           02 34 00.0 +15
BMO                               LR      LR
      comp=Z,1µm,19.0s
E09A  Wood Farm, Sta    91.51  42 PFAKE           02 34 00.0 +15
E09A                              LR      LR
      comp=Z,900nm,20.0s
SNAA  Sanae             91.54 183 P       P       02 33 44.7 -0.2
SNAA  Sanae             91.54 183 eP      P       02 33 45.0 +0.1
      comp=Z,29nm,1.2s
SNAA                              LR      LR
      comp=Z,1µm,21.0s
SNAA  Sanae             91.54 183ceP      P       02 33 45.2 +0.3
TUC   Tucson            91.85  57 eP      P       02 33 47.7 +0.6
      comp=Z,15nm,1.0s
TUC                               LR      LR
      comp=Z,1µm,20.0s
TUC   Tucson            91.85  57 eP      P       02 33 47.7 +0.6
TUC                               pmax    pmax
      comp=Z,15nm,1.0s
TUC                               MLR     MLR
      comp=Z,1µm,20.0s
TUC   Tucson            91.85  57 P       P       02 33 47.1 +0.1
      baz=251
MFID  Camas Ranch       91.87  45 PFAKE           02 34 00.0 +13
MFID                              LR      LR
      comp=Z,1µm,22.0s
F10A  Beach Ranch, E    91.89  42 PFAKE           02 34 00.0 +13
F10A                              LR      LR
      comp=Z,900nm,20.0s
C09A  Chrisman Ranch    91.93  40 PFAKE           02 34 00.0 +13
C09A                              LR      LR
      comp=Z,800nm,20.0s
U15A  North Rim         92.00  53 PFAKE           02 34 00.0 +12
U15A                              LR      LR
      comp=Z,3µm,20.0s
X16A  Lo Mia Camp, P    92.00  55 PFAKE           02 34 00.0 +12
X16A                              LR      LR
      comp=Z,3µm,20.0s
TIXI  Tiksi             92.05 349 PFAKE           02 34 00.0 +13
TIXI                              LR      LR
      comp=Z,800nm,20.0s
TIXI  Tiksi             92.05 349⇓eP      P       02 33 44.9 -2.0
TIXI                              pmax    pmax
      comp=Z,9.0nm,1.1s
```

VNA3	**Neumayer Olymp**	**92.19**	**181**	P	**P**	**02 33 47.1**	**-0.7**
PLID	**Pearl Lake**	**92.36**	**44**	PFAKE		02 34 00.0	+11
PLID				LR	LR		
	comp=Z,2µm,21.0s						
WUAZ	**Wupatki**	**92.41**	**54**	PFAKE		02 34 00.0	+10
WUAZ				LR	LR		
	comp=Z,3µm,21.0s						
WUAZ	**Wupatki**	**92.41**	**54**	P	**P**	**02 33 49.1**	**-0.5**
	baz=251						
EPYK	**Eagle Plains**	**92.52**	**19**	PFAKE		02 34 00.0	+11
EPYK				LR	LR		
	comp=Z,1µm,22.0s						
VNA1	**Neumayer--Stat**	**92.76**	**181**	P	**P**	**02 33 51.9**	**+1.4**
319A	**Douglas**	**92.77**	**58**	PFAKE		02 34 00.0	+8.6
319A				LR	LR		
	comp=Z,1µm,19.0s						
NEW	**Newport**	**92.82**	**40**	PFAKE		02 34 00.0	+8.9
NEW				LR	LR		
	comp=Z,700nm,20.0s						
DUG	**Dugway, Tooele**	**92.86**	**49**	*e*P	**P**	**02 33 51.0**	**-0.6**
	comp=Z,9.5nm,1.4s						
DUG				LR	LR		
	comp=Z,3µm,20.0s						
DUG	**Dugway, Tooele**	**92.86**	**49**	*e*P	**P**	**02 33 51.0**	**-0.6**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
DUG				MLR	MLR		
	comp=Z,3µm,20.0s						
DUG	**Dugway, Tooele**	**92.86**	**49**	P	**P**	**02 33 51.6**	**0.0**
	baz=250						
HLID	**Hailey**	**92.88**	**45**	PFAKE		02 34 00.0	+8.3
HLID				LR	LR		
	comp=Z,2µm,20.0s						
HLID	**Hailey**	**92.88**	**45**	P	**P**	**02 33 53.0**	**+1.3**
	baz=250						
DGAR	**Diego Garcia**	**92.92**	**261**	PFAKE		02 34 00.0	+7.7
DGAR				LR	LR		
	comp=Z,4µm,21.0s						
X18A	**Snowflake**	**93.21**	**55**	PFAKE		02 34 00.0	+6.6
X18A				LR	LR		
	comp=Z,2µm,20.0s						
W18A	**Petrified Fore**	**93.56**	**55**	PFAKE		02 34 10.0	+15
W18A				LR	LR		
	comp=Z,2µm,20.0s						
HWUT	**Hardware Ranch**	**94.22**	**48**	PFAKE		02 34 10.0	+12
HWUT				LR	LR		
	comp=Z,900nm,20.0s						
MSO	**Missoula**	**94.32**	**42**	PFAKE		02 34 10.0	+12
MSO				LR	LR		
	comp=Z,1µm,18.0s						
121A	**Cookes Peak, D**	**94.33**	**57**	P	**P**	**02 33 58.0**	**-0.6**
	baz=253						
JTMT	**Jette**	**94.41**	**41**	PFAKE		02 34 10.0	+11
JTMT				LR	LR		
	comp=Z,900nm,19.0s						
WMQ	**Urumqi**	**94.48**	**314**	PFAKE		02 34 10.0	+11
WMQ				LR	LR		
	comp=Z,700nm,21.0s						
WMQ	**Urumqi**	**94.48**	**314**	*e*P	**P**	**02 33 58.9**	**0.0**
WMQ				pP	pP	02 34 07.9	-1.3
WMQ				PP	**PP**	**02 37 48.8**	**+1.8**
WMQ				SKS	**SKSac**	**02 44 30.8**	**-0.9**
WMQ				S	**ScS**	**02 45 12.0**	**+1.9**
WMQ				SS	**SS**	**02 51 32.6**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,61nm,3.8s						
WMQ				LR	LR		
	comp=Z,310nm,20.9s						
WMQ				LR	LR		
	comp=Z,330nm,23.9s						
WMQ				LR	LR		
	comp=Z,890nm,24.9s						
HPIG		**94.49**	**63**	PFAKE		02 34 10.0	+10
HPIG				LR	LR		
	comp=Z,3µm,18.0s						
INK	**Inuvik**	**94.67**	**19**	LR	LR	03 10 20.9	
	comp=Z,2µm,22.0s,baz=205,slow=32						
INK	**Inuvik**	**94.67**	**19**	PFAKE		02 34 10.0	+11
INK				LR	LR		
	comp=Z,2µm,22.0s						
DLMT	**Dillon**	**94.71**	**44**	PFAKE		02 34 10.0	+10
DLMT				LR	LR		
	comp=Z,1µm,19.0s						
AHID	**Auburn Hatcher**	**94.91**	**47**	PFAKE		02 34 10.0	+8.9
AHID				LR	LR		
	comp=Z,2µm,20.0s						
PV05	**Paradox Valley**	**94.94**	**52**	PFAKE		02 34 10.0	+8.7
PV05				LR	LR		
	comp=Z,3µm,21.0s						
PV14	**Lion Creek, Pa**	**95.08**	**52**	PFAKE		02 34 10.0	+8.0
PV14				LR	LR		
	comp=Z,4µm,21.0s						
WALA	**Waterton Lakes**	**95.09**	**40**	PFAKE		02 34 10.0	+8.4
WALA				LR	LR		
	comp=Z,700nm,20.0s						
PV19	**Morning Glory**	**95.09**	**52**	PFAKE		02 34 10.0	+8.0
PV19				LR	LR		
	comp=Z,3µm,20.0s						
PV20	**West Nyswonger**	**95.11**	**52**	PFAKE		02 34 10.0	+7.9
PV20				LR	LR		
	comp=Z,3µm,21.0s						
PV23	**Carpenter Ridg**	**95.11**	**52**	PFAKE		02 34 10.0	+7.8
PV23				LR	LR		
	comp=Z,4µm,22.0s						
PV18	**Skein Mesa, Pa**	**95.13**	**52**	PFAKE		02 34 10.0	+7.8
PV18				LR	LR		
	comp=Z,3µm,20.0s						
PV16	**Nyswonger Mesa**	**95.14**	**52**	PFAKE		02 34 10.0	+7.7
PV16				LR	LR		
	comp=Z,3µm,20.0s						
PV04	**Paradox Valley**	**95.18**	**52**	PFAKE		02 34 10.0	+7.6
PV04				LR	LR		
	comp=Z,4µm,22.0s						
PV12	**Saucer Basin,**	**95.23**	**52**	PFAKE		02 34 10.0	+7.3
PV12				LR	LR		
	comp=Z,4µm,21.0s						
TPAW	**Teton Pass**	**95.24**	**46**	PFAKE		02 34 10.0	+7.4
TPAW				LR	LR		
	comp=Z,2µm,20.0s						
PV01	**Paradox Valley**	**95.35**	**52**	PFAKE		02 34 10.0	+6.7
PV01				LR	LR		
	comp=Z,3µm,20.0s						
SNOW	**Snow King Moun**	**95.36**	**46**	PFAKE		02 34 10.0	+6.8
SNOW				LR	LR		
	comp=Z,2µm,20.0s						
IMW	**Indian Meadow**	**95.37**	**46**	PFAKE		02 34 10.0	+6.7
IMW				LR	LR		
	comp=Z,2µm,19.0s						
PV07	**Paradox Valley**	**95.38**	**52**	PFAKE		02 34 10.0	+6.6
PV07				LR	LR		
	comp=Z,3µm,22.0s						
BOZ	**Bozeman (W)**	**95.43**	**44**	PFAKE		02 34 10.0	+6.7
BOZ				LR	LR		
	comp=Z,2µm,18.0s						
BOZ	**Bozeman (W)**	**95.43**	**44**	P	**P**	**02 34 05.3**	**+2.0**
	baz=252						
MOOW	**Moose Ponds**	**95.46**	**46**	PFAKE		02 34 20.0	+16
MOOW				LR	LR		
	comp=Z,2µm,20.0s						
Y22D	**IRIS PASSCAL I**	**95.47**	**56**	PFAKE		02 34 20.0	+16
Y22D				LR	LR		
	comp=Z,2µm,20.0s						
LOHW	**Long Hollow**	**95.52**	**46**	PFAKE		02 34 20.0	+16
LOHW				LR	LR		
	comp=Z,2µm,21.0s						
FLWY	**Flagg Ranch**	**95.59**	**46**	PFAKE		02 34 20.0	+16
FLWY				LR	LR		
	comp=Z,2µm,19.0s						
H17A	**Grant Village**	**95.77**	**45**	PFAKE		02 34 20.0	+15
H17A				LR	LR		
	comp=Z,3µm,20.0s						
BW06	**Boulder Array**	**95.99**	**47**	PFAKE		02 34 20.0	+14
BW06				LR	LR		
	comp=Z,1µm,19.0s						
BW06	**Boulder Array**	**95.99**	**47**	P	**P**	**02 34 07.2**	**+1.1**
	baz=253						
PDAR	**Pinedale Array**	**95.99**	**47**	P	**P**	**02 34 05.2**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=273,slow=2.7,SNR=6.8						
PDAR				PP	**PP**	**02 37 57.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=255,slow=4.5,SNR=7.1						
MNTX	**Cornudas Mount**	**96.05**	**59**	PFAKE		02 34 20.0	+14
MNTX				LR	LR		
	comp=Z,1µm,18.0s						
MNTX	**Cornudas Mount**	**96.05**	**59**	P	**P**	**02 34 06.8**	**+0.5**
	baz=254						
ZAIG	**Zacatecas**	**96.06**	**68**	PFAKE		02 34 20.0	+13
ZAIG				LR	LR		
	comp=Z,4µm,19.0s						
ANMO	**Albuquerque**	**96.08**	**55**	*e*P	**P**	**02 34 06.1**	**-0.5**
	comp=Z,8.1nm,1.4s						
ANMO				LR	LR		
	comp=Z,2µm,20.0s						
ANMO	**Albuquerque**	**96.08**	**55**	⇓*e*P	**P**	**02 34 05.9**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ANMO	**Albuquerque**	**96.08**	**55**	P	**P**	**02 34 07.2**	**+0.6**
	baz=254						
O20A	**White River Ci**	**96.17**	**50**	PFAKE		02 34 20.0	+13
O20A				LR	LR		
	comp=Z,4µm,21.0s						
O20A	**White River Ci**	**96.17**	**50**	P	**P**	**02 34 07.3**	**+0.4**
	baz=253						
DGZ	**Jazzator, Alta**	**96.52**	**320**	c*e*P	**P**	**02 34 07.1**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
S22A	**4UR Ranch, Cre**	**96.56**	**53**	P	**P**	**02 34 09.1**	**+0.2**
	baz=254						
TXAR	**Lajitas Array**	**96.84**	**62**	P	**P**	**02 34 09.4**	**-0.7**
	comp=Z,1.8nm,1.0s,baz=227,slow=4.4,SNR=15						
TXAR				PP	**PP**	**02 38 07.8**	**+2.0**
	comp=Z,2.9nm,1.2s,baz=247,slow=6.4,SNR=8.4						
TXAR				LR	LR	03 11 09.4	
	comp=Z,1µm,19.1s,baz=0.0,slow=31						
SMCO	**Snowmass**	**96.85**	**51**	PFAKE		02 34 20.0	+10
SMCO				LR	LR		
	comp=Z,3µm,21.0s						
RLMT	**Red Lodge**	**96.88**	**45**	PFAKE		02 34 20.0	+10
RLMT				LR	LR		
	comp=Z,2µm,20.0s						
RWWY	**Rawlins**	**97.36**	**49**	PFAKE		02 34 20.0	+7.6
RWWY				LR	LR		
	comp=Z,2µm,19.0s						
EGMT	**Eagleton**	**97.39**	**42**	PFAKE		02 34 20.0	+7.9
EGMT				LR	LR		
	comp=Z,800nm,18.0s						
SDCO	**Great Sand Dun**	**97.58**	**53**	PFAKE		02 34 20.0	+6.5
SDCO				LR	LR		
	comp=Z,3µm,20.0s						
SDCO	**Great Sand Dun**	**97.58**	**53**	P	**P**	**02 34 13.1**	**-0.3**
	baz=255						
N23A	**Red Feather La**	**98.07**	**50**	P	Pdif	02 34 16.3	+0.8
	baz=255						
K22A	**Casper**	**98.11**	**48**	PFAKE		02 34 30.0	+14
K22A				LR	LR		
	comp=Z,1µm,21.0s						
TLIG	**Tlapa**	**98.33**	**74**	PFAKE		02 34 30.0	+13
TLIG				LR	LR		
	comp=Z,2µm,20.0s						
PHWY	**Pilot Hill**	**98.53**	**50**	PFAKE		02 34 30.0	+12
PHWY				LR	LR		
	comp=Z,3µm,19.0s						
MSTX	**Muleshoe**	**98.76**	**57**	PFAKE		02 34 30.0	+11
MSTX				LR	LR		
	comp=Z,1µm,18.0s						
MK32	**Makanchi Array**	**98.99**	**316**	*e*P	**P**	**02 34 17.9**	**-1.3**
MK32				*e*PP	**PP**	**02 38 23.1**	**+1.4**
MKAR	**Makanchi Array**	**98.99**	**316**	P	**P**	**02 34 17.9**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=98,slow=5.0,SNR=11						
MKAR				PP	**PP**	**02 38 23.1**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=101,slow=6.4,SNR=4.4						
MKAR				PKKPbc	**PKKPbc**	**02 50 46.2**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=71,slow=30,SNR=4.1						
MKAR				LR	LR	03 19 09.7	
	comp=Z,305nm,20.2s,baz=102,slow=36						
YKA	**Yellowknife Ar**	**99.14**	**27**	P	**Pdif**	**02 34 18.2**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=237,slow=4.2,SNR=4.4						
YKA				PP	**PP**	**02 38 25.6**	**+3.3**
	comp=Z,1.4nm,1.1s,baz=249,slow=7.3,SNR=4.8						
YKA				LR	LR	03 16 33.6	
	comp=Z,82nm,18.0s,baz=252,slow=34						
YKW3	**Yellowknife Ar**	**99.16**	**27**	PFAKE		02 34 30.0	+10
YKW3				LR	LR		
	comp=Z,900nm,18.0s						
MAKZ	**Makanchi**	**99.20**	**316**	*e*P	**Pdif**	**02 34 19.4**	**-0.7**
	comp=Z,26nm,2.0s						
MAKZ				LR	LR		
	comp=Z,400nm,20.0s						
MAKZ	**Makanchi**	**99.20**	**316**	*e*P	**Pdif**	**02 34 19.4**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,26nm,2.0s						
MAKZ				MLR	MLR		
	comp=Z,400nm,20.0s						
ZAA0	**Zalesovo Array**	**99.30**	**324**	PFAKE		02 34 30.0	+10
ZAA0				LR	LR		
	comp=Z,400nm,20.0s						
ZALV	**Zalesovo Beam**	**99.30**	**324**	P	**Pdif**	**02 34 19.0**	**-1.4**
	comp=Z,1.0nm,0.4s,baz=122,slow=4.5,SNR=5.7						
ZALV				LR	LR	03 19 27.9	
	comp=Z,239nm,20.3s,baz=71,slow=36						
ZALV	**Zalesovo Beam**	**99.30**	**324**	P	**Pdif**	**02 34 19.0**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV				MLR	MLR		
	comp=Z,239nm,20.3s						
LAO	**LASA Array**	**99.35**	**44**	PFAKE		02 34 30.0	+9.2
LAO				LR	LR		
	comp=Z,900nm,18.0s						
LNIG	**Linares**	**99.35**	**67**	PFAKE		02 34 30.0	+8.7
LNIG				LR	LR		
	comp=Z,3µm,20.0s						
AMTX	**Amarillo**	**99.86**	**57**	PFAKE		02 34 40.0	+17
AMTX				LR	LR		
	comp=Z,1µm,20.0s						
RSSD	**Black Hills**	**100.23**	**47**	PFAKE		02 34 40.0	+15
RSSD				LR	LR		
	comp=Z,2µm,18.0s						
JCT	**Junction City**	**100.38**	**61**	PFAKE		02 34 40.0	+14
JCT				LR	LR		
	comp=Z,1µm,19.0s						
PRZ	**Przheval'sk**	**100.66**	**311**	PFAKE		02 34 40.0	+13
PRZ				LR	LR		
	comp=Z,700nm,21.0s						
LVIG	**Laguna Verde**	**100.84**	**73**	PFAKE		02 34 40.0	+12
LVIG				LR	LR		
	comp=Z,2µm,20.0s						
OGNE	**Ogallala**	**100.96**	**50**	PFAKE		02 34 40.0	+12
OGNE				LR	LR		
	comp=Z,2µm,22.0s						
ABTX	**Abilene, Hawle**	**101.00**	**59**	PFAKE		02 34 40.0	+12
ABTX				LR	LR		
	comp=Z,1µm,20.0s						
DGMT	**Dagmar**	**101.10**	**43**	PFAKE		02 34 40.0	+11
DGMT				LR	LR		
	comp=Z,900nm,20.0s						
PAYG	**Puerto Ayora**	**101.26**	**94**	PFAKE		02 34 40.0	+10
PAYG				LR	LR		
	comp=Z,2µm,20.0s						
PLCA	**Paso Flores**	**101.31**	**139**	PKKPbc	PKKPbc	02 50 38.8	-1.2
	comp=Z,2.9nm,1.0s,baz=106,slow=4.3,SNR=2.9						
KVTX	**Kingsville**	**101.34**	**65**	PFAKE		02 34 40.0	+10
KVTX				LR	LR		
	comp=Z,2µm,20.0s						
KDJ	**Kajisay**	**101.46**	**311**	PFAKE		02 34 40.0	+9.5
KDJ				LR	LR		
	comp=Z,400nm,22.0s						
KSH	**Kashi**	**101.81**	**308**	*e*P	**Pdif**	**02 34 34.9**	**+2.8**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.2s						
WMOK	**Wichita Mounta**	**102.15**	**57**	PFAKE		02 34 50.0	+16
WMOK				LR	LR		
	comp=Z,1µm,18.0s						
NRN	**Naryn**	**102.18**	**310**	PFAKE		02 34 50.0	+16
NRN				LR	LR		
	comp=Z,600nm,21.0s						
CBKS	**Cedar Bluff**	**102.23**	**53**	PFAKE		02 34 50.0	+16
CBKS				LR	LR		
	comp=Z,2µm,21.0s						
KURK	**Kurchatov**	**102.25**	**319**	*e*Pdif	**Pdif**	**02 34 34.1**	**+0.5**
KURK				LR	LR		
	comp=Z,600nm,20.0s						
KURK	**Kurchatov**	**102.25**	**319**	⇑*e*P	**Pdif**	**02 34 33.8**	**+0.3**
KURBB	**Kurchatov Arra**	**102.28**	**319**	PKKPbc	PKKPbc	02 50 37.5	-0.1
	comp=Z,0.8nm,0.8s,baz=279,slow=3.5,SNR=8.2						
U32A	**Winter Ranch,**	**102.31**	**56**	PFAKE		02 34 50.0	+16
U32A				LR	LR		
	comp=Z,1µm,19.0s						
BOOM	**Boomskoye usch**	**102.44**	**311**	PFAKE		02 34 50.0	+15
BOOM				LR	LR		
	comp=Z,700nm,22.0s						
WHTX	**Lake Whitney,**	**102.67**	**60**	PFAKE		02 34 50.0	+14
WHTX				LR	LR		
	comp=Z,2µm,19.0s						
NIL	**Nilore**	**102.76**	**302**	PFAKE		02 34 50.0	+14
NIL				LR	LR		
	comp=Z,200nm,20.0s						
FRU1	**Bishkek**	**103.44**	**311**	PFAKE		02 34 50.0	+11
FRU1				LR	LR		
	comp=Z,500nm,20.0s						
AAK	**Ala-Archa**	**103.51**	**311**	PFAKE		02 34 50.0	+10
AAK				LR	LR		
	comp=Z,500nm,19.0s						
HKT	**Hockley**	**103.62**	**63**	PFAKE		02 34 50.0	+10
HKT				LR	LR		
	comp=Z,4µm,18.0s						
FFC	**Flin Flon**	**103.67**	**37**	PFAKE		02 34 50.0	+10
FFC				LR	LR		
	comp=Z,1µm,19.0s						
CCIG	**Comitan**	**103.98**	**77**	PFAKE		02 34 50.0	+7.8
CCIG				LR	LR		
	comp=Z,1µm,21.0s						
MDND	**Maddock**	**104.00**	**44**	PFAKE		02 34 50.0	+8.6
MDND				LR	LR		
	comp=Z,1µm,20.0s						
KSU1	**Kansas State U**	**104.68**	**53**	PFAKE		02 35 00.0	+15
KSU1				LR	LR		
	comp=Z,2µm,20.0s						
TUL1	**Leonard**	**104.78**	**57**	PFAKE		02 35 00.0	+15
TUL1				LR	LR		
	comp=Z,2µm,20.0s						
NATX	**Nacogdoches**	**104.96**	**61**	PFAKE		02 35 00.0	+14
NATX				LR	LR		
	comp=Z,2µm,18.0s						
ETX06	**Route 59 and C**	**105.15**	**61**	PFAKE		02 39 10.0	+8.7
ETX06				LR	LR		
	comp=Z,700nm,20.0s						
ECSD	**EROS Data Cent**	**105.42**	**48**	PFAKE		02 39 10.0	+8.5
ECSD				LR	LR		
	comp=Z,2µm,18.0s						
ECSD	**EROS Data Cent**	**105.42**	**48**	P	**PKiKP**	**02 39 02.0**	**+0.5**
	baz=262						
BTK	**Batken**	**105.81**	**308**	PFAKE		02 39 10.0	+7.6
BTK				LR	LR		
	comp=Z,300nm,19.0s						
GAR	**Garm**	**106.04**	**306**	PFAKE		02 39 10.0	+7.1
GAR				LR	LR		
	comp=Z,1µm,22.0s						
W39A	**Magazine**	**106.27**	**58**	PFAKE		02 39 20.0	+17
W39A				LR	LR		
	comp=Z,1µm,20.0s						
HHAR	**Hobbs**	**106.32**	**56**	PFAKE		02 39 20.0	+17
HHAR				LR	LR		
	comp=Z,2µm,20.0s						
MIAR	**Mount Ida**	**106.33**	**58**	PFAKE		02 39 20.0	+17
MIAR				LR	LR		
	comp=Z,1µm,18.0s						
KBL	**Kabul**	**106.35**	**302**	PFAKE		02 39 20.0	+16
KBL				LR	LR		
	comp=Z,300nm,20.0s						
AGMN	**Agassiz Nation**	**106.54**	**44**	PFAKE		02 39 20.0	+17
AGMN				LR	LR		
	comp=Z,1µm,20.0s						
WLAR	**White Oak Lake**	**106.58**	**59**	PFAKE		02 39 20.0	+16
WLAR				LR	LR		
	comp=Z,2µm,19.0s						
ULM	**Lac du Bonnet**	**106.75**	**42**	PFAKE		02 39 20.0	+16
ULM				LR	LR		
	comp=Z,1µm,19.0s						
X40A	**Basin Creek Fa**	**106.93**	**58**	PFAKE		02 39 20.0	+15
X40A				LR	LR		
	comp=Z,1µm,20.0s						
MYIG	**Mrida**	**107.22**	**73**	PFAKE		02 39 20.0	+15
MYIG				LR	LR		
	comp=Z,1µm,21.0s						
UALR	**University of**	**107.37**	**58**	PFAKE		02 39 20.0	+15
UALR				LR	LR		
	comp=Z,2µm,18.0s						
WHAR	**Wooly Hollow**	**107.49**	**58**	PFAKE		02 39 20.0	+14
WHAR				LR	LR		
	comp=Z,1µm,19.0s						
SCIA	**State Center**	**107.65**	**51**	PFAKE		02 39 20.0	+14
SCIA				LR	LR		
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**107.69**	**321**	PFAKE		02 39 20.0	+15
BRVK				LR	LR		
	comp=Z,700nm,22.0s						
FCAR	**Ozark Folk Cen**	**107.71**	**57**	PFAKE		02 39 20.0	+14
FCAR				LR	LR		
	comp=Z,1µm,18.0s						
CCAR	**Cane Creek**	**107.71**	**59**	PFAKE		02 39 20.0	+14
CCAR				LR	LR		
	comp=Z,1µm,19.0s						
RES	**Resolute Bay**	**108.00**	**16**	PFAKE		02 39 20.0	+15
RES				LR	LR		
	comp=Z,2µm,21.0s						
TGUH	**Tegucigalpa,Un**	**108.03**	**80**	PFAKE		02 39 20.0	+13
TGUH				LR	LR		
	comp=Z,700nm,20.0s						
SPMN	**Marine on St.**	**108.31**	**47**	PFAKE		02 39 20.0	+13
SPMN				LR	LR		
	comp=Z,2µm,20.0s						
FCC	**Fort Churchill**	**108.41**	**33**	PFAKE		02 39 20.0	+14
FCC				LR	LR		
	comp=Z,2µm,20.0s						
TEIG	**Tepich**	**108.41**	**74**	PFAKE		02 39 20.0	+12
TEIG				LR	LR		
	comp=Z,1µm,20.0s						
VBMS	**Vicksburg**	**108.50**	**61**	PFAKE		02 39 20.0	+12
VBMS				LR	LR		
	comp=Z,2µm,22.0s						
CCM	**Cathedral Cave**	**108.69**	**55**	PFAKE		02 39 20.0	+12
CCM				LR	LR		
	comp=Z,2µm,18.0s						
L40A	**Anamosa**	**109.14**	**51**	PFAKE		02 39 20.0	+12
L40A				LR	LR		
	comp=Z,2µm,20.0s						
PBMO	**Poplar Bluff**	**109.18**	**56**	PFAKE		02 39 20.0	+11
PBMO				LR	LR		
	comp=Z,1µm,22.0s						
N41A	**Harden Midland**	**109.29**	**52**	PFAKE		02 39 20.0	+11
N41A				LR	LR		
	comp=Z,3µm,22.0s						
E38A	**The Farm, Brul**	**109.29**	**46**	PFAKE		02 39 20.0	+11
E38A				LR	LR		
	comp=Z,1µm,19.0s						
MET	**Memphis--Engin**	**109.38**	**58**	PFAKE		02 39 20.0	+11
MET				LR	LR		
	comp=Z,1µm,19.0s						
GNAR	**Gosnell**	**109.42**	**57**	PFAKE		02 39 20.0	+11
GNAR				LR	LR		
	comp=Z,2µm,19.0s						
EYMN	**Ely**	**109.42**	**44**	PFAKE		02 39 20.0	+11
EYMN				LR	LR		
	comp=Z,1µm,18.0s						
PARMO	**Parma**	**109.71**	**56**	PFAKE		02 39 20.0	+10
PARMO				LR	LR		
	comp=Z,1µm,22.0s						
PVMO	**Portageville**	**109.72**	**57**	PFAKE		02 39 20.0	+10
PVMO				LR	LR		
	comp=Z,1µm,22.0s						
OXF	**Oxford**	**109.73**	**59**	PFAKE		02 39 20.0	+10
OXF				LR	LR		
	comp=Z,1µm,18.0s						
MSEY	**Mahe Island**	**109.79**	**259**	PFAKE		02 39 20.0	+9.4
MSEY				LR	LR		
	comp=Z,2µm,22.0s						
JFWS	**Jewell Farm**	**109.94**	**50**	PFAKE		02 39 20.0	+10
JFWS				LR	LR		
	comp=Z,4µm,21.0s						
HALT	**Halls**	**109.96**	**57**	PFAKE		02 39 20.0	+10
HALT				LR	LR		
	comp=Z,2µm,19.0s						
NNA	**Nana**	**110.06**	**110**	PFAKE		02 39 20.0	+8.9
NNA				LR	LR		
	comp=Z,900nm,20.0s						
HDC	**Heredia**	**110.08**	**85**	PFAKE		02 39 20.0	+8.8
HDC				LR	LR		
	comp=Z,1µm,20.0s						
G40A	**Rib Lake**	**110.14**	**47**	PFAKE		02 39 20.0	+10
G40A				LR	LR		
	comp=Z,1µm,18.0s						
L42A	**Oliver, Polo**	**110.29**	**51**	PFAKE		02 39 20.0	+9.4
L42A				LR	LR		
	comp=Z,2µm,22.0s						
I41A	**Arkdale**	**110.30**	**49**	PFAKE		02 39 20.0	+9.4
I41A				LR	LR		

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           comp=Z,2µm,22.0s
ESPN  Las Esperanzas  110.42  83  PFAKE            02 39 20.0 +8.4
ESPN                              LR      LR
           comp=Z,700nm,21.0s
T45A  Paducah         110.63  56  PFAKE            02 39 20.0 +8.6
T45A                              LR      LR
           comp=Z,1µm,20.0s
PLAL  Pickwick Lake   110.88  58  PFAKE            02 39 20.0 +8.1
PLAL                              LR      LR
           comp=Z,1µm,20.0s
COWI  Conover         110.93  47  PFAKE            02 39 20.0 +8.3
COWI                              LR      LR
           comp=Z,3µm,20.0s
I42A  Draeger Farm,   110.98  49  PFAKE            02 39 20.0 +8.1
I42A                              LR      LR
           comp=Z,2µm,20.0s
C40A  Isle Royale Na  111.00  45  PFAKE            02 39 20.0 +8.3
C40A                              LR      LR
           comp=Z,1µm,19.0s
WVT   Waverly         111.20  57  PFAKE            02 39 20.0 +7.5
WVT                               LR      LR
           comp=Z,2µm,18.0s
OLIL  Olney           111.22  54  PFAKE            02 39 20.0 +7.5
OLIL                              LR      LR
           comp=Z,1µm,20.0s
BRAL  Brewton         111.29  63  PFAKE            02 39 20.0 +7.2
BRAL                              LR      LR
           comp=Z,1µm,21.0s
K43A  Burlington      111.33  50  PFAKE            02 39 20.0 +7.4
K43A                              LR      LR
           comp=Z,4µm,21.0s
D41A  Chassel         111.36  46  PFAKE            02 39 20.0 +7.5
D41A                              LR      LR
           comp=Z,1µm,20.0s
M44A  Midewin, Midew  111.46  52  PFAKE            02 39 20.0 +7.2
M44A                              LR      LR
           comp=Z,2µm,21.0s
USIN  University of   111.50  55  PFAKE            02 39 20.0 +7.0
USIN                              LR      LR
           comp=Z,2µm,19.0s
ABPO  Ambohimpanom    111.55 241  PFAKE            02 39 30.0  +16
ABPO                              LR      LR
           comp=Z,3µm,19.0s
LRAL  Lakeview Retre  111.55  61  PFAKE            02 39 30.0  +17
LRAL                              LR      LR
           comp=Z,1µm,20.0s
X48A  Hartselle       111.67  59  PFAKE            02 39 30.0  +17
X48A                              LR      LR
           comp=Z,1µm,20.0s
H43A  Windswept, Lux  111.83  48  PFAKE            02 39 30.0  +17
H43A                              LR      LR
           comp=Z,2µm,19.0s
T47A  Sharon Grove    111.86  56  PFAKE            02 39 30.0  +16
T47A                              LR      LR
           comp=Z,1µm,19.0s
V48A  Smith Brothers  111.97  58  PFAKE            02 39 30.0  +16
V48A                              LR      LR
           comp=Z,1µm,21.0s
250A  Grady           112.05  62  PFAKE            02 39 30.0  +16
250A                              LR      LR
           comp=Z,700nm,20.0s
SFIN  Lafayette       112.11  53  PFAKE            02 39 30.0  +16
SFIN                              LR      LR
           comp=Z,1µm,20.0s
Y49A  Blount Mountai  112.13  60  PFAKE            02 39 30.0  +16
Y49A                              LR      LR
           comp=Z,1µm,21.0s
451A  Vernon          112.33  63  PFAKE            02 39 30.0  +15
451A                              LR      LR
           comp=Z,1µm,20.0s
CLTN  Cedars of Leba  112.40  57  PFAKE            02 39 30.0  +15
CLTN                              LR      LR
           comp=Z,700nm,20.0s
E43A  Lone Tree Farm  112.43  46  PFAKE            02 39 30.0  +15
E43A                              LR      LR
           comp=Z,3µm,20.0s
Z50A  Ashland         112.47  60  PFAKE            02 39 30.0  +15
Z50A                              LR      LR
           comp=Z,800nm,20.0s
BLO   Bloomington     112.48  54  PFAKE            02 39 30.0  +15
BLO                               LR      LR
           comp=Z,2µm,20.0s
WCI   Wyandotte Cave  112.59  55  PFAKE            02 39 30.0  +15
WCI                               LR      LR
           comp=Z,2µm,18.0s
SWET  Sewanee         112.65  58  PFAKE            02 39 30.0  +15
SWET                              LR      LR
           comp=Z,1µm,18.0s
J45A  Montague        112.79  49  PFAKE            02 39 30.0  +15
J45A                              LR      LR
           comp=Z,3µm,20.0s
L46A  Eue Claire      112.80  51  PFAKE            02 39 30.0  +15
L46A                              LR      LR
           comp=Z,1µm,18.0s
I45A  Fountain        112.92  49  PFAKE            02 39 30.0  +14
I45A                              LR      LR
           comp=Z,3µm,20.0s
T49A  Edmonton        113.12  56  PFAKE            02 39 30.0  +14
T49A                              LR      LR
           comp=Z,1µm,20.0s
352A  Blakely         113.13  62  PFAKE            02 39 30.0  +14
352A                              LR      LR
           comp=Z,1µm,20.0s
W50A  Signal Mountai  113.16  58  PFAKE            02 39 30.0  +14
W50A                              LR      LR
           comp=Z,1µm,18.0s
E44A  Grand Marais A  113.17  46  PFAKE            02 39 30.0  +14
E44A                              LR      LR
           comp=Z,2µm,20.0s
P48A  Milroy          113.34  54  PFAKE            02 39 30.0  +13
P48A                              LR      LR
           comp=Z,2µm,19.0s
G45A  Suttons Bay     113.35  48  PFAKE            02 39 30.0  +14
G45A                              LR      LR
           comp=Z,2µm,18.0s
152A  Waverly Hall    113.42  61  PFAKE            02 39 30.0  +13
152A                              LR      LR
           comp=Z,600nm,19.0s
X51A  Calhoun         113.48  59  PFAKE            02 39 30.0  +13
X51A                              LR      LR
           comp=Z,1µm,18.0s
R49A  Shelbyville     113.48  55  PFAKE            02 39 30.0  +13
R49A                              LR      LR
           comp=Z,2µm,19.0s
453A  Whigham         113.58  63  PFAKE            02 39 30.0  +13
453A                              LR      LR
           comp=Z,1µm,20.0s
TULEG Thule           113.73  12  PFAKE            02 39 30.0  +14
TULEG                             LR      LR
           comp=Z,1µm,21.0s
CPCT  Cooper Cave     113.82  58  PFAKE            02 39 30.0  +12
CPCT                              LR      LR
           comp=Z,1µm,18.0s
253A  Americus        113.86  62  PFAKE            02 39 30.0  +12
253A                              LR      LR
           comp=Z,1µm,21.0s
J47A  Sunmer          113.92  50  PFAKE            02 39 30.0  +13
J47A                              LR      LR
           comp=Z,3µm,20.0s
M48A  Edgerton        113.96  52  PFAKE            02 39 30.0  +12
M48A                              LR      LR
           comp=Z,2µm,20.0s
V51A  Loudon          113.98  58  PFAKE            02 39 30.0  +12
V51A                              LR      LR
           comp=Z,1µm,20.0s
Y52A  Lilburn         114.08  60  PFAKE            02 39 30.0  +12
Y52A                              LR      LR
           comp=Z,2µm,20.0s
R50A  Paris           114.14  55  PFAKE            02 39 30.0  +12
R50A                              LR      LR
           comp=Z,1µm,19.0s
I47A  Gladwin         114.16  49  PFAKE            02 39 30.0  +12
I47A                              LR      LR
           comp=Z,3µm,20.0s
O49A  Covington       114.22  53  PFAKE            02 39 30.0  +12
O49A                              LR      LR
           comp=Z,1µm,18.0s
TIGA  Tifton          114.26  63  PFAKE            02 39 30.0  +12
TIGA                              LR      LR
           comp=Z,1µm,20.0s
W52A  Murphy          114.28  59  PFAKE            02 39 30.0  +12
W52A                              LR      LR
           comp=Z,900nm,20.0s
E46A  Sault Ste Mari  114.29  46  PFAKE            02 39 30.0  +12
E46A                              LR      LR
           comp=Z,2µm,20.0s
N49A  Columbus Grove  114.35  52  PFAKE            02 39 30.0  +12
N49A                              LR      LR
           comp=Z,2µm,21.0s
ARU   Arti            114.42 325  PKP     PKPdf    02 39 17.1  -0.9
           comp=Z,1.4nm,0.3s,baz=4.2,slow=1.5,SNR=8.3
ARU   Arti            114.42 325 ePKiKP   PKiKP    02 39 18.9 +0.9
ARU                               LR      LR
           comp=Z,600nm,21.0s
ARU   Arti            114.42 325 i PKIKP  PKiKP    02 39 19.1 +1.1
ARU                                                02 40 17.8
ARU                                                02 46 28.6
ARU                               SP      SP       02 49 47.3  -0.8
ARU                               MLR     MLR
           comp=Z,544nm,21.0s
GOGA  Godfrey         114.54  61  PFAKE            02 39 30.0  +11
GOGA                              LR      LR
           comp=Z,800nm,19.0s
V52A  Sevierville     114.60  58  PFAKE            02 39 30.0  +11
V52A                              LR      LR
           comp=Z,1µm,19.0s
555A  McAlpin         114.67  64  PFAKE            02 39 30.0  +11
555A                              LR      LR
           comp=Z,900nm,18.0s
TZTN  Tazewell        114.67  57  PFAKE            02 39 30.0  +11
TZTN                              LR      LR
           comp=Z,1µm,20.0s
J48A  Bridge Port     114.68  50  PFAKE            02 39 30.0  +11
J48A                              LR      LR
           comp=Z,3µm,20.0s
S51A  Beattyville     114.69  56  PFAKE            02 39 30.0  +11
S51A                              LR      LR
           comp=Z,2µm,18.0s
AAM   Ann Arbor       114.77  51  PFAKE            02 39 30.0  +11
AAM                               LR      LR
           comp=Z,2µm,22.0s
154A  Montrose        114.78  61  PFAKE            02 39 30.0  +11
154A                              LR      LR
           comp=Z,700nm,20.0s
Q51A  Peebles         114.94  54  PFAKE            02 39 30.0  +10
Q51A                              LR      LR
           comp=Z,2µm,20.0s
656A  Willston        114.97  65  PFAKE            02 39 30.0  +10
656A                              LR      LR
           comp=Z,900nm,20.0s
H48A  Harrisville     115.00  48  PFAKE            02 39 30.0  +10
H48A                              LR      LR
           comp=Z,3µm,19.0s
957A  Wimauma         115.05  67  PFAKE            02 39 30.0  +10
957A                              LR      LR
           comp=Z,1µm,20.0s
BG3   Lake Jocassee   115.09  59  PFAKE            02 39 30.0  +10
BG3                               LR      LR
           comp=Z,800nm,22.0s
T52A  Hallie          115.15  56  PFAKE            02 39 30.0  +10
T52A                              LR      LR
           comp=Z,2µm,20.0s
P51A  Williamsport    115.18  54  PFAKE            02 39 30.0  +10
P51A                              LR      LR
           comp=Z,2µm,20.0s
M50A  Fremont         115.22  52  PFAKE            02 39 30.0  +10
M50A                              LR      LR
           comp=Z,2µm,20.0s
V53A  Saluda          115.22  58  PFAKE            02 39 30.0  +10
V53A                              LR      LR
           comp=Z,1µm,21.0s
255A  Hazlehurst      115.25  62  PFAKE            02 39 30.0  +10
255A                              LR      LR
           comp=Z,1µm,18.0s
ACSO  Alum Creek Sta  115.25  53  PFAKE            02 39 30.0  +10
ACSO                              LR      LR
           comp=Z,2µm,22.0s
AKTO  Aktyubinsk      115.30 318  PKP     PKiKP    02 39 19.3  -0.6
           comp=Z,2.3nm,0.6s,baz=72,slow=3.7,SNR=11
I49A  Point Hope      115.38  49  PFAKE            02 39 30.0  +10
I49A                              LR      LR
           comp=Z,3µm,20.0s
GEYT  Alibeck         115.47 304  PKP     PKPdf    02 39 19.9  -0.8
           comp=Z,2.6nm,0.8s,baz=14,slow=1.8,SNR=4.4
GYA0B ALIBECK ARRAY   115.47 304  PFAKE            02 39 30.0 +9.3
GYA0B                             LR      LR
           comp=Z,700nm,19.0s
K50A  Casco           115.53  50  PFAKE            02 39 30.0 +9.4
K50A                              LR      LR
           comp=Z,2µm,20.0s
456A  Hilliard        115.54  64  PFAKE            02 39 30.0 +9.1
456A                              LR      LR
           comp=Z,1µm,20.0s
HODGE Hodges          115.60  60  PFAKE            02 39 30.0 +9.0
HODGE                             LR      LR
           comp=Z,2µm,19.0s
N51A  Ashland         115.72  52  PFAKE            02 39 30.0 +9.0
N51A                              LR      LR
           comp=Z,2µm,21.0s
DWPF  Disney Wildern  115.80  67  PFAKE            02 39 30.0 +8.5
DWPF                              LR      LR
           comp=Z,700nm,19.0s
LPAZ  La Paz          115.86 118  PKP     PKPdf    02 39 22.1  -0.6
           comp=Z,1.4nm,0.8s,baz=145,slow=2.0,SNR=3.9
LPAZ  La Paz          115.86 118 ePKPdf   PKiKP    02 39 23.2 +0.4
059A  Moore Haven     115.93  68  PFAKE            02 39 30.0 +8.2
059A                              LR      LR
           comp=Z,1µm,22.0s
PAULI Pauline         116.00  59  PFAKE            02 39 30.0 +8.3
PAULI                             LR      LR
           comp=Z,1µm,20.0s
R53A  Hurricane       116.01  55  PFAKE            02 39 30.0 +8.3
R53A                              LR      LR
           comp=Z,2µm,20.0s
061Z  Ochoppi         116.02  69  PFAKE            02 39 30.0 +8.0
061Z                              LR      LR
           comp=Z,1µm,21.0s
U54A  Nelsons Funny   116.06  57  PFAKE            02 39 30.0 +8.1
U54A                              LR      LR
           comp=Z,2µm,20.0s
UOSS  Minazif         116.08 290  PFAKE            02 39 30.0 +7.8
UOSS                              LR      LR
           comp=Z,400nm,21.0s
O52A  Adamsville      116.13  53  PFAKE            02 39 30.0 +8.2
O52A                              LR      LR
           comp=Z,2µm,22.0s
KMSC  Kings Mountain  116.41  59  PFAKE            02 39 30.0 +7.5
KMSC                              LR      LR
           comp=Z,2µm,21.0s
JSC   Jenkinsville    116.42  60  PFAKE            02 39 30.0 +7.4
JSC                               LR      LR
           comp=Z,1µm,20.0s
P53A  Whipple         116.47  54  PFAKE            02 39 30.0 +7.5
P53A                              LR      LR
           comp=Z,2µm,18.0s
257A  Skidaway Islan  116.48  62  PFAKE            02 39 30.0 +7.3
257A                              LR      LR
           comp=Z,1µm,20.0s
M52A  Chesterland     116.49  52  PFAKE            02 39 30.0 +7.5
M52A                              LR      LR
           comp=Z,2µm,20.0s
060A  Indiantown      116.63  68  PFAKE            02 39 40.0  +17
060A                              LR      LR
           comp=Z,1µm,19.0s
KBS   Kingsbay        116.77 355  PFAKE            02 39 30.0 +8.0
KBS                               LR      LR
           comp=Z,500nm,20.0s
N53A  Lisbon          116.89  52  PFAKE            02 39 40.0  +17
N53A                              LR      LR
           comp=Z,2µm,21.0s
Q54A  Coxs Mills      116.90  54  PFAKE            02 39 40.0  +17
Q54A                              LR      LR
           comp=Z,1µm,21.0s
SPA0  Spitsbergen Ar  117.00 354 ePKPdf   PKiKP    02 39 22.7 +0.2
BIRD  Birdtown, Kers  117.10  59  PFAKE            02 39 40.0  +16
BIRD                              LR      LR
           comp=Z,2µm,20.0s
V56A  Mocksville      117.11  58  PFAKE            02 39 40.0  +16
V56A                              LR      LR
           comp=Z,1µm,19.0s
Y57A  Sumter          117.13  60  PFAKE            02 39 40.0  +16
Y57A                              LR      LR
           comp=Z,2µm,20.0s
BLA   Blacksburg      117.20  56  PFAKE            02 39 40.0  +16
BLA                               LR      LR
           comp=Z,1µm,19.0s
NHSC  New Hope        117.27  61  PFAKE            02 39 40.0  +16
NHSC                              LR      LR
           comp=Z,1µm,19.0s
ALLY  Alegheny Colle  117.39  51  PFAKE            02 39 40.0  +16
ALLY                              LR      LR
           comp=Z,1µm,20.0s
R55A  Marlinton       117.45  55  PFAKE            02 39 40.0  +15
R55A                              LR      LR
           comp=Z,2µm,20.0s
ERPA  Erie            117.50  51  PFAKE            02 39 40.0  +16
ERPA                              LR      LR
           comp=Z,1µm,18.0s
W57A  Gilead          117.50  59  PFAKE            02 39 40.0  +15
W57A                              LR      LR
           comp=Z,1µm,21.0s
N54A  Moraine State   117.53  52  PFAKE            02 39 40.0  +15
N54A                              LR      LR
           comp=Z,1µm,21.0s
N54A  Moraine State   117.53  52  P       PKPdf    02 39 23.8  -0.7
           baz=271
MCWV  Mont Chateau    117.66  54  PFAKE            02 39 40.0  +15
MCWV                              LR      LR
           comp=Z,800nm,20.0s
Y58A  Scranton        117.73  60  PFAKE            02 39 40.0  +15
Y58A                              LR      LR
           comp=Z,2µm,21.0s
M54A  Oil Creek Stat  117.76  52  PFAKE            02 39 40.0  +15
M54A                              LR      LR
           comp=Z,2µm,21.0s
M54A  Oil Creek Stat  117.76  52  P       PKPdf    02 39 24.9  -0.1
           baz=272
SADO  Sadowa          117.98  48  PFAKE            02 39 40.0  +15
SADO                              LR      LR
           comp=Z,2µm,20.0s
X58A  Rowland         118.02  59  PFAKE            02 39 40.0  +14
X58A                              LR      LR
           comp=Z,2µm,20.0s
HSPB  Hornsund (broa  118.11 353 ePKPdf   PKiKP    02 39 25.2 +0.6
T57A  Hurt            118.14  57  PFAKE            02 39 40.0  +14
T57A                              LR      LR
           comp=Z,1µm,21.0s
N55A  Marion Center   118.29  52  PFAKE            02 39 40.0  +14
N55A                              LR      LR
           comp=Z,2µm,21.0s
D52A  ZEK Kipawa Sen  118.31  45  P       PKPdf    02 39 25.8   0.0
           baz=276
S57A  Dark Hollow, R  118.38  56  PFAKE            02 39 40.0  +14
S57A                              LR      LR
           comp=Z,1µm,18.0s
M55A  Ridgway         118.44  52  P       PKiKP    02 39 27.2 +0.9
           baz=272
J54A  Appleton        118.44  50  PFAKE            02 39 40.0  +14
J54A                              LR      LR
           comp=Z,3µm,20.0s
MEDO  Medina          118.58  50  PFAKE            02 39 40.0  +14
MEDO                              LR      LR
           comp=Z,3µm,20.0s
MEDO  Medina          118.58  50  P       PKiKP    02 39 26.5 +0.1
           baz=274
O56A  Blue Knob Stat  118.63  53  PFAKE            02 39 40.0  +13
O56A                              LR      LR
           comp=Z,2µm,21.0s
O56A  Blue Knob Stat  118.63  53  P       PKPdf    02 39 26.4  -0.3
           baz=272
L55A  Hinsdale        118.65  51  P       PKPdf    02 39 26.2  -0.5
           baz=273
U58A  Oxford          118.70  57  P       PKPdf    02 39 25.2  -1.7
           baz=270
D53A  Lac Vacive, Po  118.78  45  PFAKE            02 39 40.0  +13
D53A                              LR      LR
           comp=Z,2µm,19.0s
D53A  Lac Vacive, Po  118.78  45  P       PKPdf    02 39 26.2  -0.5
           baz=276
BANO  Bancroft        118.82  48  P       PKPdf    02 39 26.2  -0.7
           baz=275
M56A  Emporium        118.87  52  P       PKPdf    02 39 26.1  -1.0
           baz=273
E53A  Dumoine, Ponti  118.88  46  P       PKiKP    02 39 27.1 +0.1
           baz=276
Y60A  Bolivia         118.94  60  PFAKE            02 39 40.0  +13
Y60A                              LR      LR
           comp=Z,1µm,20.0s
MMNY  Mt. Morris Dam  119.01  50  PFAKE            02 39 40.0  +13
MMNY                              LR      LR
           comp=Z,2µm,21.0s
LSQQ  Lebel-sur-Quev  119.02  43  P       PKPdf    02 39 26.4  -0.7
           baz=278
J55A  Hilton          119.04  50  PFAKE            02 39 40.0  +13
J55A                              LR      LR
           comp=Z,3µm,22.0s
DELO  Deloro Mine     119.08  48  PFAKE            02 39 40.0  +13
DELO                              LR      LR
           comp=Z,3µm,20.0s
S58A  Poland Farm, P  119.09  56  PFAKE            02 39 40.0  +12
S58A                              LR      LR
           comp=Z,1µm,19.0s
S58A  Poland Farm, P  119.09  56  P       PKPdf    02 39 26.7  -0.9
           baz=271
R58A  Rapidan         119.12  55  P       PKPdf    02 39 27.2  -0.4
           baz=271
SSPA  Standing Stone  119.13  53  PFAKE            02 39 40.0  +12
SSPA                              LR      LR
           comp=Z,2µm,21.0s
E54A  Lac Daplat, Po  119.20  46  P       PKPdf    02 39 26.7  -0.9
           baz=276
R58B  Mineral         119.22  56  PFAKE            02 39 40.0  +12
R58B                              LR      LR
           comp=Z,1µm,22.0s
R58B  Mineral         119.22  56  P       PKPdf    02 39 26.8  -1.0
           baz=271
CNNC  Cliffs of the   119.23  59  PFAKE            02 39 40.0  +12
CNNC                              LR      LR
           comp=Z,2µm,20.0s
U59A  Littleton       119.31  57  PFAKE            02 39 40.0  +12
U59A                              LR      LR
           comp=Z,2µm,22.0s
O57A  Amberson        119.34  53  P       PKPdf    02 39 27.1  -1.0
           baz=272
N57A  Milroy          119.39  52  P       PKPdf    02 39 27.4  -0.7
           baz=273
PLVO  Plevna          119.42  47  P       PKPdf    02 39 27.6  -0.5
           baz=276
D54A  Lac Fusel, La   119.48  45  P       PKPdf    02 39 27.5  -0.5
           baz=277
T59A  Double "B" Far  119.50  57  PFAKE            02 39 40.0  +12
T59A                              LR      LR
           comp=Z,1µm,18.0s
PECO  Prince Edward   119.58  49  PFAKE            02 39 40.0  +12
PECO                              LR      LR
           comp=Z,3µm,20.0s
CBN   Corbin Frederi  119.62  55  PFAKE            02 39 40.0  +11
CBN                               LR      LR
           comp=Z,1µm,21.0s
G55A  Calabogie       119.65  47  P       PKPdf    02 39 27.9  -0.5
           baz=276
PRGR  Permogore       119.69 332 ePKIKP   PKPdf    02 39 27.5  -0.5
PRGR                              pmax    pmax
           comp=Z,10.0nm,0.6s
V60A  Jim Taylor Roa  119.74  58  PFAKE            02 39 40.0  +11
V60A                              LR      LR
           comp=Z,1µm,20.0s
O58A  Lewisberry      119.89  53  P       PKPdf    02 39 28.8  -0.3
           baz=273
SDMD  Soldier's Deli  119.99  54  PFAKE            02 39 40.0  +11
SDMD                              LR      LR
           comp=Z,700nm,18.0s
N58A  Sunbury         120.01  52  P       PKPdf    02 39 28.6  -0.7
           baz=274
PAGS  Pennsylvania G  120.04  53  PFAKE            02 39 40.0  +11
PAGS                              LR      LR
           comp=Z,2µm,20.0s
T60A  Surry           120.15  57  PFAKE            02 39 40.0  +10
T60A                              LR      LR
           comp=Z,1µm,19.0s
M58A  Price's Panora  120.17  52  P       PKPdf    02 39 29.2  -0.4
           baz=274
V61A  Roper           120.30  58  PFAKE            02 39 40.0  +10
V61A                              LR      LR
           comp=Z,1µm,19.0s
MVL   Millersville    120.34  53  PFAKE            02 39 40.0  +10
MVL                               LR      LR
           comp=Z,2µm,22.0s
U61A  Possum Corner   120.40  57  PFAKE            02 39 40.0  +10
U61A                              LR      LR
           comp=Z,1µm,21.0s
BINY  Binghamton      120.46  51  PFAKE            02 39 40.0  +10
BINY                              LR      LR
           comp=Z,1µm,20.0s
ORIO  Orleans, Innes  120.48  47  P       PKPdf    02 39 29.4  -0.5
           baz=277
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CHGQ  Chibougamau      120.56  42   P         PKPdf    02 39 30.0  0.0
      baz=281
L58A  Harry Jones Me   120.58  51   P         PKPdf    02 39 29.9 -0.5
      baz=275
KSPA  Keystone Colle   120.68  51   PFAKE              02 39 40.0 +9.4
KSPA                                LR        LR
      comp=Z,2µm,18.0s
N59A  State Game Lan   120.72  52   PFAKE              02 39 40.0 +9.2
N59A                                LR        LR
      comp=Z,2µm,19.0s
N59A  State Game Lan   120.72  52   P         PKPdf    02 39 30.6 -0.1
      baz=274
V62A  Hyde County Ai   120.81  58   PFAKE              02 39 40.0 +9.0
V62A                                LR        LR
      comp=Z,2µm,20.0s
LVZ   Lovozero         120.88 341   PFAKE              02 39 40.0  +10
LVZ                                 LR        LR
      comp=Z,701nm,20.0s
M59A  Waymart          120.93  51   P         PKPdf    02 39 30.6 -0.5
      baz=275
S61A  Accomac          120.98  56   PFAKE              02 39 40.0 +8.7
S61A                                LR        LR
      comp=Z,1µm,20.0s
PSUB  Penn St. - Bra   121.03  53   PFAKE              02 39 40.0 +8.6
PSUB                                LR        LR
      comp=Z,2µm,22.0s
LUPA  Lehigh Univers   121.05  52   PFAKE              02 39 40.0 +8.6
LUPA                                LR        LR
      comp=Z,200nm,21.0s
LONY  Lake Ozonia      121.23  48   PFAKE              02 39 40.0 +8.3
LONY                                LR        LR
      comp=Z,2µm,19.0s
LONY  Lake Ozonia      121.23  48   P         PKPdf    02 39 31.3 -0.2
      baz=277
APA   Apatity          121.45 341⇓iPKIKP    PKiKP    02 39 41.5  +10
APA                                 pmax      pmax
      comp=Z,2.0nm,0.8s
NCB   Newcomb          121.57  48   PFAKE              02 39 40.0 +7.6
NCB                                 LR        LR
      comp=Z,2µm,20.0s
ODNJ  Ogdensburg       121.59  52   PFAKE              02 39 40.0 +7.6
ODNJ                                LR        LR
      comp=Z,2µm,19.0s
BRNJ  Basking Ridge    121.65  52   PFAKE              02 39 40.0 +7.4
BRNJ                                LR        LR
      comp=Z,2µm,20.0s
FRNY  Flat Rock        121.91  47   PFAKE              02 39 40.0 +7.1
FRNY                                LR        LR
      comp=Z,2µm,18.0s
HAMF  Hammerfest       121.94 347  ePKPdf     PKPdf    02 39 31.7 -0.4
ACCN  Adirondack Com   122.04  49   PFAKE              02 39 40.0 +6.7
ACCN                                LR        LR
      comp=Z,3µm,20.0s
CPNY  Central Park     122.10  52   PFAKE              02 39 50.0  +17
CPNY                                LR        LR
      comp=Z,3µm,22.0s
BOSA  Boshof           122.11 219   PKP       PKPdf    02 39 33.8 -0.1
      comp=Z,6.1nm,1.0s,baz=130,slow=9.3,SNR=3.8
TRY   Troy             122.12  50   PFAKE              02 39 50.0  +17
TRY                                 LR        LR
      comp=Z,2µm,22.0s
PAL   Palisades        122.12  52   PFAKE              02 39 50.0  +17
PAL                                 LR        LR
      comp=Z,2µm,19.0s
PAL   Palisades        122.12  52   P         PKPdf    02 39 32.6 -0.7
      baz=276
SUMG  Summit           122.17   9   PFAKE              02 39 40.0 +6.8
SUMG                                LR        LR
      comp=Z,800nm,20.0s
M61A  Granite Spring   122.20  51   P         PKPdf    02 39 33.4  0.0
      baz=276
ILULI Ilulissat        122.29  15   PFAKE              02 39 40.0 +7.0
ILULI                               LR        LR
      comp=Z,1µm,22.0s
ARCES ARCESS Array B   122.33 345   PKP       PKPdf    02 39 31.8 -1.1
      comp=Z,7.0nm,0.6s,baz=60,slow=1.9,SNR=28
ARE0  ARCESS Array S   122.33 345  ePKPdf     PKiKP    02 39 33.4 +0.3
ARE0  ARCESS Array S   122.33 345  ePKPdf     PKPdf    02 39 32.4 -0.6
VT1   Waterbury        122.57  48   PFAKE              02 39 50.0  +16
VT1                                 LR        LR
      comp=Z,2µm,19.0s
SDV   Santo Domingo    122.71  90  ePKPdf     PKPdf    02 39 34.7 -0.8
SDV                                 LR        LR
      comp=Z,700nm,19.0s
HNH   Hanover          122.99  49   PFAKE              02 39 50.0  +15
HNH                                 LR        LR
      comp=Z,3µm,20.0s
QUA2  Belchertown      123.14  50   PFAKE              02 39 50.0  +15
QUA2                                LR        LR
      comp=Z,2µm,22.0s
LBNH  Lisbon           123.17  48   PFAKE              02 39 50.0  +15
LBNH                                LR        LR
      comp=Z,2µm,20.0s
LBNH  Lisbon           123.17  48   P         PKPdf    02 39 34.7 -0.6
      baz=279
KTK1  Kautokeino       123.27 346  ePKPdf     PKiKP    02 39 35.0  0.0
MAK   Makhachkala      123.29 311  eP         Pdif     02 36 04.9 -2.4
MAK                                i                   02 39 34.0
MAK                                e                   02 41 14.2
MAK                                 pmax      pmax
      comp=Z,97nm,1.1s
AKT   Akhty            123.32 309  ePKIKP     PKiKP    02 39 38.1 +2.1
AKT                                e                   02 41 17.2
AKT                                 pmax      pmax
      comp=Z,17nm,1.0s
FFD   Franklin Falls   123.48  49   PFAKE              02 39 50.0  +14
FFD                                 LR        LR
      comp=Z,3µm,20.0s
HRV   Adam Dziewonsk   123.69  50   PFAKE              02 39 50.0  +13
HRV                                 LR        LR
      comp=Z,2µm,21.0s
SCHQ  Schefferville    123.72  35   PFAKE              02 39 50.0  +14
SCHQ                                LR        LR
      comp=Z,2µm,20.0s
TRO   Tromso           123.75 347  ePKPdf     PKiKP    02 39 36.3 +0.5
BRYW  Bryant College   123.79  51   PFAKE              02 39 50.0  +13
BRYW                                LR        LR
      comp=Z,1µm,20.0s
WES   Weston           123.88  50   PFAKE              02 39 50.0  +13
WES                                 LR        LR
      comp=Z,2µm,21.0s
SFJD  Kangerlussuaq    123.98  17   PFAKE              02 39 50.0  +14
SFJD                                LR        LR
      comp=Z,1µm,19.0s
BCX   Boston College   124.00  50   PFAKE              02 39 50.0  +13
BCX                                 LR        LR
      comp=Z,2µm,21.0s
SDDR  Presa de Saban   124.00  78   PFAKE              02 39 50.0  +12
SDDR                                LR        LR
      comp=Z,1µm,20.0s
WVL   Waterville       124.72  47   PFAKE              02 39 50.0  +12
WVL                                 LR        LR
      comp=Z,2µm,19.0s
PKME  Peaks-Kenny Pk   124.83  46  ePKPdf     PKPdf    02 39 38.3  0.0
PKME                                LR        LR
      comp=Z,3µm,20.0s
PKME  Peaks-Kenny Pk   124.83  46   P         PKPdf    02 39 38.4  0.0
      baz=282
PQI   Presque Isle     125.39  44  ePKPdf     PKPdf    02 39 39.5 +0.1
PQI                                 LR        LR
      comp=Z,2µm,19.0s
RAYN  Ar Rayn          125.66 287  ePKPdf     PKiKP    02 39 41.6 +0.5
RAYN                                LR        LR
      comp=Z,600nm,19.0s
RAYN  Ar Rayn          125.66 287  ePKIKP     PKiKP    02 39 41.6 +0.5
RAYN                                MLR       MLR
      comp=Z,600nm,19.0s
GNI   Garni            125.75 308   PFAKE              02 39 50.0 +9.1
GNI                                 LR        LR
      comp=Z,300nm,19.0s
GNI   Garni            125.75 308⇑iPKIKP    PKiKP    02 39 41.7 +0.8
MOS   Moscow           125.85 328  i PKIKP    PKPdf    02 39 35.1 -4.9
STEI  Steigen          125.92 348  ePKPdf     PKiKP    02 39 40.3 +0.1
ZEI   Tsey             125.94 311  i PKIKP    PKiKP    02 39 41.8 +0.5
SCO   Scoresbysund     125.98   4   PFAKE              02 39 50.0  +10
SCO                                 LR        LR
      comp=Z,700nm,20.0s
LOF   Lofoten          126.09 348  ePKPdf     PKPdf    02 39 40.1  0.0
EMMW  East Machias     126.22  47   PFAKE              02 39 50.0 +8.5
EMMW                                LR        LR
      comp=Z,2µm,19.0s
LPSR  Galich'ya Gora   126.41 324  ePKIKP     PKiKP    02 39 42.1 +0.5
LPSR                                pmax      pmax
      comp=Z,20nm,1.0s
ATD   Arta Tunnel      126.45 272   PFAKE              02 39 50.0 +7.1
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ATD                                 LR        LR
      comp=Z,2µm,21.0s
KBZ   Khabaz           126.47 312   PKP       PKPdf    02 39 41.7 +0.1
      comp=Z,4.1nm,0.8s,baz=146,slow=3.6,SNR=5.2
AKH   Akhalkalaki      126.48 309  ePKPdf     PKiKP    02 39 43.0 +0.6
AKH                                 LR        LR
      comp=Z,500nm,20.0s
AKH   Akhalkalaki      126.48 309⇓iP        PKiKP    02 39 45.6 +3.2
AKH   Akhalkalaki      126.48 309  ePKIKP     PKiKP    02 39 43.0 +0.6
AKH                                 MLR       MLR
      comp=Z,500nm,20.0s
BATG  Bathurst New B   126.53  43  ePKPdf     PKiKP    02 39 42.2 +0.1
KIV   Kislovodsk       126.57 313   PFAKE              02 39 50.0 +7.6
KIV                                 LR        LR
      comp=Z,300nm,21.0s
KIV   Kislovodsk       126.57 313  i PKIKP    PKiKP    02 39 43.5 +1.1
KIV                                e                   02 41 38.5
KIV                                eSS        SS       02 58 41.2 -0.3
KIV                                 pmax      pmax
      comp=Z,24nm,1.1s
KIV                                 MLR       MLR
      comp=Z,776nm,23.0s
OBN   Obninsk          126.66 327   PKP       PKiKP    02 39 42.2 +0.2
      comp=Z,2.8nm,0.5s,baz=179,slow=12,SNR=4.2
OBN   Obninsk          126.66 327  ePKPdf     PKiKP    02 39 42.2 +0.2
OBN                                 LR        LR
      comp=Z,700nm,21.0s
OBN   Obninsk          126.66 327c iPKIKP     PKiKP    02 39 42.8 +0.8
OBN                                e                   02 39 49.5
OBN                                e                   02 39 56.1
OBN                                ePS        PS       02 51 30.6  -12
OBN                                eSS        SS       02 58 37.1 -4.3
OBN                                 pmax      pmax
      comp=Z,24nm,1.3s
NEY   Neytrino         126.69 312⇓iPKIKP    PKiKP    02 39 44.7 +2.0
VSR   Storozhevoye     126.78 322  ePKIKP     PKiKP    02 39 42.5 +0.1
VSR                                 pmax      pmax
      comp=Z,8.0nm,0.6s
SPB   Sao Paulo        127.17 138   PFAKE              02 40 00.0  +16
SPB                                 LR        LR
      comp=Z,700nm,20.0s
MOR8  Moi Rana         127.58 347  ePKPdf     PKPdf    02 39 43.2 +0.1
KONS  Konsvik          127.58 347  ePKPdf     PKPdf    02 39 43.0  0.0
LMN   Caledonia Moun   127.75  45   PFAKE              02 40 00.0  +15
LMN                                 LR        LR
      comp=Z,2µm,19.0s
FINES FINESS Array B   127.78 338   PKP       PKPdf    02 39 42.0 -1.5
      comp=Z,2.6nm,0.5s,baz=64,slow=2.7,SNR=23
KMBO  Kilima Mbogo     128.05 255   PFAKE              02 40 00.0  +14
KMBO                                LR        LR
      comp=Z,2µm,22.0s
ANGG  Ammassalik, Gr   128.34  13   PFAKE              02 40 00.0  +15
ANGG                                LR        LR
      comp=Z,1µm,21.0s
SJG   San Juan         128.72  80   PFAKE              02 40 00.0  +13
SJG                                 LR        LR
      comp=Z,500nm,22.0s
SOC   Sochi            128.75 313  i PKIKP    PKPdf    02 39 45.3 -0.6
SOC                                e                   02 41 47.8
SOC                                ePPP       PPP      02 44 39.2
SOC                                ePS        PS       02 51 57.9 -3.5
SOC                                 MLR       MLR
      comp=Z,471nm,22.0s
IVI   Ivigtut          128.80  21   PFAKE              02 40 00.0  +14
IVI                                 LR        LR
      comp=Z,1µm,20.0s
HAL   Halifax          128.91  46   PFAKE              02 40 00.0  +13
HAL                                 LR        LR
      comp=Z,2µm,20.0s
NSS   Namsos           129.52 347  ePKPdf     PKPdf    02 39 46.4 -0.3
NRS   Narsarsuaq       129.77  20   PFAKE              02 40 00.0  +12
NRS                                 LR        LR
      comp=Z,2µm,21.0s
FURI  Furi             129.84 268   PFAKE              02 40 00.0  +10
FURI                                LR        LR
      comp=Z,1µm,22.0s
PTGA  Pitinga          129.86 105  ePKPdf     PKPdf    02 39 49.1 +0.2
PTGA                                LR        LR
      comp=Z,500nm,20.0s
BBSR  BB Station       130.31  62   PFAKE              02 40 00.0  +10
BBSR                                LR        LR
      comp=Z,700nm,22.0s
SMRT  St. Maarten      131.62  81   PFAKE              02 40 00.0 +6.9
SMRT                                LR        LR
      comp=Z,600nm,22.0s
DOMB  Dombas           132.34 347  epPKPdf    pPKPdf   02 40 00.6 -2.2
AKASG Malin Array Be   132.67 325   PKP       PKPdf    02 39 53.2 +0.1
      comp=Z,2.4nm,0.6s,baz=59,slow=2.1,SNR=9.9
AKASG                               SKPbc     SKPbc    02 43 18.1 +0.2
      comp=Z,2.9nm,0.7s,baz=48,slow=4.6,SNR=10
AKBB  Malin Array Si   132.67 325   PFAKE              02 40 00.0 +5.8
AKBB                                LR        LR
      comp=Z,700nm,21.0s
NB2   NORSAR Subarra   132.71 345   PKPdf     PKiKP    02 39 53.8 -0.3
      comp=Z,2.0nm,0.7s,baz=31,slow=1.9
NB200 NORSAR Array S   132.71 345  ePKPdf     PKPdf    02 39 52.7 -0.3
NOA   NORSAR Array B   132.71 345   PKP       PKPdf    02 39 52.7 -0.3
      comp=Z,2.0nm,0.7s,baz=33,slow=2.0,SNR=9.1
NOA                                 SKPbc     SKPbc    02 43 18.0 +0.3
      comp=Z,3.1nm,0.8s,baz=30,slow=3.1,SNR=11
HFS   Hagfors          132.80 343   PKP       PKiKP    02 39 53.9 -0.3
      comp=Z,4.8nm,0.7s,baz=164,slow=2.8,SNR=6.1
NC602 NORSAR Array S   132.88 344  ePKPdf     PKPdf    02 39 53.3  0.0
SKAR  Skarslia         133.72 346  ePKPdf     PKPdf    02 39 53.3 -1.6
ILGA  Ilgaz            133.72 311   PFAKE              02 40 10.0  +13
ILGA                                LR        LR
      comp=Z,500nm,21.0s
TSUM  Tsumeb           133.75 221   PFAKE              02 40 10.0  +12
TSUM                                LR        LR
      comp=Z,2µm,20.0s
SUW   Suwalki          133.81 332   PFAKE              02 40 10.0  +14
SUW                                 LR        LR
      comp=Z,500nm,20.0s
BRTR  Keskin Array B   134.17 309   PKP       PKPdf    02 39 54.8 -1.7
      comp=Z,0.8nm,0.7s,baz=132,slow=3.7,SNR=9.0
BRTR  Keskin Array B   134.17 309   PKIKP     PKPdf    02 39 54.8 -1.7
BRTR                                pmax      pmax
      comp=Z,2.0nm,0.8s
MBAR  Mbarara          134.24 252   PFAKE              02 40 10.0  +11
MBAR                                LR        LR
      comp=Z,2µm,20.0s
MMAI  Mount Meron Ar   134.24 300   PKP       PKPdf    02 39 56.9 +0.2
      comp=Z,1.0nm,0.5s,baz=147,slow=6.4,SNR=2.6
KONO  Kongsberg        134.32 345   PFAKE              02 40 10.0  +13
KONO                                LR        LR
      comp=Z,700nm,22.0s
KIS   Kishinev         134.70 321  ePKP       PKPdf    02 39 57.0 -0.1
KIS   Kishinev         134.70 321  ePP        PP       02 42 40.0 +9.4
KIS                                eSKP                02 43 29.0
KIS                                eLR        LR       03 30 50.0
      comp=Z,700nm,20.0s
KIS   Kishinev         134.70 321  ePKIKP     PKPdf    02 39 57.0 -0.1
KIS                                e                   02 42 40.0
MILM  Milestii Mici    134.74 321⇑iP        PKiKP    02 39 58.2 -0.4
ANTO  Ankara           134.75 310   PFAKE              02 40 10.0  +11
ANTO                                LR        LR
      comp=Z,400nm,20.0s
ANTO  Ankara           134.75 310⇓iP        PKiKP    02 40 02.1 +3.2
ANTO  Ankara           134.75 310 ⇓PKIKP     PKiKP    02 40 02.1 +3.2
TLCR                   135.52 318⇑iP        PKiKP    02 40 02.2 +2.0
TLCR                   135.52 318 ⇑PKIKP     PKiKP    02 40 02.2 +2.0
CSS   Mathiatis        135.58 303   PFAKE              02 40 10.0 +9.3
CSS                                 LR        LR
      comp=Z,1µm,21.0s
MDUB  Mudurnu          135.72 311   PFAKE              02 40 10.0 +9.1
MDUB                                LR        LR
      comp=Z,1µm,20.0s
LVV   L'vov            135.95 327  ePKIKP     PKiKP    02 40 03.9 +2.9
CFR   Carcaliu         135.96 319⇑iP        PKiKP    02 40 02.3 +1.2
CFR   Carcaliu         135.96 319 ⇑PKIKP     PKiKP    02 40 02.3 +1.2
TIRR  Tirgusor         136.10 318   PFAKE              02 40 10.0 +8.6
TIRR                                LR        LR
      comp=Z,2µm,20.0s
TLB   Topalu           136.28 318⇑iP        PKiKP    02 40 03.5 +1.7
TLB   Topalu           136.28 318 ⇑PKIKP     PKiKP    02 40 03.5 +1.7
HARR  Harsova          136.31 318⇓iP        PKiKP    02 40 04.0 +2.2
HARR  Harsova          136.31 318 ⇓PKIKP     PKiKP    02 40 04.0 +2.2
BEL   Belsk            136.32 331  ePKP       PKiKP    02 40 04.1 +2.5
BEL   Belsk            136.32 331  ePKIKP     PKiKP    02 40 04.1 +2.5
BIZ   Bicaz            136.35 322⇓iP        PKiKP    02 40 01.3 -0.6
VRI   Vrincioaia       136.51 320⇓iP        PKiKP    02 40 02.0 -0.3
VRI   Vrincioaia       136.51 320 ⇓PKIKP     PKiKP    02 40 02.0 -0.3
BUR08 Bucovina Ar. S   136.51 323  ePKPdf     PKPdf    02 40 00.8 +0.2
BURAR Bucovina Array   136.52 323⇑iP        PKiKP    02 40 03.4 +1.1
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BURAR Bucovina Array   136.52 323 ⇑PKIKP     PKiKP    02 40 03.4 +1.1
PLOR  Plostina         136.57 320⇑iP        PKiKP    02 40 10.8 +8.4
PLOR  Plostina         136.57 320 ⇑PKIKP     PKiKP    02 40 10.8 +8.4
KWP   Kalwaria Pacla   136.75 327  ePKP       PKiKP    02 40 04.2 +1.6
KWP   Kalwaria Pacla   136.75 327   PFAKE              02 40 10.0 +7.4
KWP                                 LR        LR
      comp=Z,6µm,22.0s
KWP   Kalwaria Pacla   136.75 327  ePKIKP     PKiKP    02 40 04.2 +1.6
ISP   Isparta          137.05 308   PFAKE              02 40 10.0 +6.3
ISP                                 LR        LR
      comp=Z,700nm,21.0s
MLR   Muntele Rosu     137.17 320   PKP       PKPdf    02 39 59.2 -2.7
      comp=Z,1.5nm,0.7s,baz=295,slow=3.3,SNR=5.2
MLR   Muntele Rosu     137.17 320  ePKPdf     PKPdf    02 40 02.8 +0.9
MLR                                 LR        LR
      comp=Z,600nm,20.0s
MLR   Muntele Rosu     137.17 320⇑iP        PKiKP    02 40 03.3 -0.5
MLR   Muntele Rosu     137.17 320 ⇑PKIKP     PKiKP    02 40 03.4 -0.4
KOLS  Kolonicke sedl   137.40 326  ePKIKP     PKiKP    02 40 05.1 +1.1
KOLS  Kolonicke sedl   137.40 326  ePKP       PKiKP    02 40 05.1 +1.1
RGN   Rugen            137.44 338   PFAKE              02 40 10.0 +6.2
RGN                                 LR        LR
      comp=Z,700nm,19.0s
UZH   Uzhgorod         137.57 326  ePKIKP     PKiKP    02 40 03.8 -0.5
UZH                                e                   02 40 14.3
TRPA  Tarpa            137.73 325⇑iP        PKiKP    02 40 05.9 +1.3
VOIR                   137.75 321⇑iP        PKiKP    02 40 04.3 -0.6
VOIR                   137.75 321 ⇑PKIKP     PKiKP    02 40 04.3 -0.6
OJC   Ojcow            137.85 329  ePKP       PKiKP    02 40 04.9 +0.1
OJC   Ojcow            137.85 329  ePKIKP     PKiKP    02 40 04.9 +0.1
ARR   Arges            138.03 321⇓iP        PKiKP    02 40 06.1 +0.7
NIE   Niedzica         138.12 328  ePKP       PKiKP    02 40 07.6 +2.2
NIE   Niedzica         138.12 328  ePKIKP     PKiKP    02 40 07.6 +2.2
BALB  Balikesir        138.40 311   PFAKE              02 40 20.0  +14
BALB                                LR        LR
      comp=Z,1µm,21.0s
ELND  Elena            138.43 317⇓iP        PKiKP    02 40 05.8 -0.4
OKC   Ostrava-Krasne   138.90 330   AMS       AMS      03 40 20.0
      comp=Z,700nm,20.1s
PLVB  Pleven           139.03 318⇑iP        PKiKP    02 40 09.4 +2.0
GZR   Gura Zlata       139.13 322⇓iP        PKPdf    02 40 06.2 +0.8
GZR   Gura Zlata       139.13 322 ⇓PKIKP     PKPdf    02 40 06.2 +0.8
ALN   Alexandroupoli   139.20 314   PFAKE              02 40 20.0  +12
ALN                                 LR        LR
      comp=Z,300nm,21.0s
MORC  Moravsky Berou   139.23 330  ePKPdf     PKPdf    02 40 06.4 +1.0
MORC                                LR        LR
      comp=Z,800nm,22.0s
MORC  Moravsky Berou   139.23 330⇓iP        PKPdf    02 40 04.9 -0.5
MORC  Moravsky Berou   139.23 330 ⇓PKIKP     PKPdf    02 40 04.9 -0.5
MORC  Moravsky Berou   139.23 330  ePKP       PKiKP    02 40 07.2 -0.5
PSZ   Piszkesteto      139.27 327   PFAKE              02 40 20.0  +12
PSZ                                 LR        LR
      comp=Z,900nm,20.0s
OSTC  Ostas            139.29 332  ePKPDF     PKPdf    02 39 59.4 -6.1
OSTC                               ex         x        02 40 07.8
OSTC                                AMS       AMS      03 42 10.0
      comp=Z,1µm,21.5s
SIRR  Siria            139.30 324⇑iP        PKiKP    02 40 09.9 +2.0
CHVC  Chvalec          139.34 332  ePKP       PKPdf    02 39 59.7 -5.9
CHVC                               ex         x        02 40 09.1
CHVC                                AMS       AMS      03 42 10.0
      comp=Z,1µm,20.9s
DPC   Dobruska-Polom   139.39 332   AMS       AMS      03 42 10.0
      comp=Z,1µm,20.9s
UPC   Upice            139.42 332   AMS       AMS      03 42 10.0
      comp=Z,1µm,22.2s
VYHS  Vyhne            139.45 328  ePKIKP     PKPdf    02 40 06.4 +0.5
VYHS  Vyhne            139.45 328  ePKP       PKPdf    02 40 06.4 +0.5
BZS   Buzias           139.69 323⇑iP        PKPdf    02 40 07.2 +0.9
BZS   Buzias           139.69 323 ⇑PKIKP     PKPdf    02 40 07.2 +0.9
JAVC  Velka Javorina   139.79 329  ePKP       PKiKP    02 40 08.6 -0.3
VRAC  Vranov           140.00 331   PKP       PKPdf    02 40 04.0 -2.8
      comp=Z,1.7nm,0.7s,baz=67,slow=22,SNR=1.5
VRAC  Vranov           140.00 331   PKIKP     PKPdf    02 40 04.0 -2.8
VRAC                                pmax      pmax
      comp=Z,2.0nm,0.7s
VRAC  Vranov           140.00 331  ePKP       PKiKP    02 40 08.1 -1.2
PVCC  Panska Ves       140.03 333  ePKHKP     PKPpre   02 40 01.1
PVCC                                MLR       MLR
      comp=Z,800nm,22.7s
PVCC  Panska Ves       140.03 333  ePKPpre    PKPpre   02 40 01.1
PVCC                                AMS       AMS      03 41 10.0
      comp=Z,800nm,22.7s
BRG   Berggiesshubel   140.04 334  ePKP       PKPdf    02 40 01.2 -5.6
      comp=Z,5.3nm,0.7s
BRG                                e                   02 40 09.7
      comp=Z,8.0nm,1.1s
BRG                                 PKS       PKSdf    02 43 44.0 +1.4
      comp=Z,5.2nm,1.3s
BRG                                 SS        SS       03 01 30.0 +7.1
      comp=N,411nm,19.7s
      comp=E,226nm,23.1s
      comp=Z,668nm,20.8s
BRG   Berggiesshubel   140.04 334  ePKIKP     PKPdf    02 40 01.2 -5.6
BRG                                e                   02 40 09.7
BRG                                 pmax      pmax
      comp=Z,5.0nm,0.7s
BRG                                 pmax      pmax
      comp=Z,8.0nm,1.1s
BRG                                 pmax      pmax
      comp=Z,5.0nm,1.3s
BRG                                 MLR       MLR
      comp=N,411nm,19.7s
BRG                                 MLR       MLR
      comp=E,226nm,23.1s
BRG                                 MLR       MLR
      comp=Z,668nm,20.8s
CLL   Collm            140.09 335   PFAKE              02 40 20.0  +11
CLL                                 LR        LR
      comp=Z,500nm,20.0s
CLL   Collm            140.09 335  ePKIKP     PKPdf    02 40 06.0 -0.9
CLL                                 MLR       MLR
      comp=Z,500nm,19.6s
CLL   Collm            140.09 335  ePKPpre    PKPpre   02 40 01.0
CLL                                ePKPdf     PKPdf    02 40 06.0 -0.9
CLL                                i PKiKP    PKiKP    02 40 09.9 +0.5
      comp=Z,10.0nm,0.8s
CLL                                e                   02 42 51.0
CLL                                ePP        PP       02 43 03.0 -0.7
CLL                                eSKPdf     SKPbc    02 43 40.0 -0.5
CLL                                eSdif      Sdif     02 51 30.0 -0.3
CLL                                e(PPS)              02 55 48.0
CLL                                eSS        SS       03 01 30.0 +6.6
CLL                                eSKSSKSaS'S'ac      03 03 12.0 +7.7
CLL                                eSSS       SSS      03 06 30.0
CLL                                eSSSS               03 10 06.0
CLL                                 Lm        MLR      03 43 00.0
      comp=N,500nm,21.5s
CLL                                 Lm        MLR      03 43 00.0
      comp=E,200nm,21.1s
CLL                                 LmV                03 58 00.0
      comp=Z,500nm,19.6s
MDVR  Moldovita        140.10 322⇓iP        PKiKP    02 40 08.8 -0.9
KRUC  Moravsky         140.26 330  ePKP       PKiKP    02 40 09.1 -0.7
VTS   Vitosha          140.29 318   PFAKE              02 40 20.0  +10
VTS                                 LR        LR
      comp=Z,500nm,20.0s
VTS   Vitosha          140.29 318⇑iP        PKPdf    02 40 02.8 -4.9
VTS   Vitosha          140.29 318 ⇑PKIKP     PKPdf    02 40 02.8 -4.9
MODS  Modra-Piesok     140.31 329  ePKIKP     PKPdf    02 40 08.0 +0.5
MODS  Modra-Piesok     140.31 329  ePKP       PKPdf    02 40 07.9 +0.5
GOPC  GO Pecny, Ondr   140.39 333  ePKIKP     PKPdf    02 40 02.8 -4.7
GOPC                               e                   02 40 11.6
GOPC                               eSS        SS       03 01 21.7 -5.4
GOPC                                MLR       MLR
      comp=Z,900nm,20.9s
GOPC  GO Pecny, Ondr   140.39 333  ePKPpre    PKPpre   02 40 02.8
GOPC                               ePKPDF     PKiKP    02 40 11.6 +1.5
GOPC                               eSS        SS       03 01 21.7 -5.4
GOPC                                AMS       AMS      03 46 10.0
      comp=Z,900nm,20.9s
PRU   Pruhonice        140.45 333  ePKIKP     PKPdf    02 40 03.6 -4.0
PRU                                e                   02 40 09.2
PRU                                eSS        SS       03 01 25.9 -1.8
PRU                                 MLR       MLR
      comp=Z,800nm,20.8s
PRU   Pruhonice        140.45 333  ePKPpre    PKPdf    02 40 03.6 -4.0
PRU                                ePKPDF     PKiKP    02 40 09.2 -0.9
PRU                                eSS        SS       03 01 25.9 -1.8
PRU                                 AMS       AMS      03 46 10.0
      comp=Z,800nm,20.8s
TREC  Trest            140.52 331  ePKIKP     PKPdf    02 40 03.6 -4.2
TREC                                MLR       MLR
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	comp=Z,800nm,21.6s						
TREC	**Trest**	**140.52**	**331**	*e*PKPpre	**PKPdf**	**02 40 03.6**	**-4.2**
TREC				AMS	AMS	03 42 40.0	
	comp=Z,800nm,21.6s						
EKA	**Eskdalemuir Ar**	**140.88**	**352**	PKhKP	PKPpre	02 40 00.8	
	comp=Z,0.6nm,0.4s,baz=1.9,slow=2.5,SNR=8.0						
EKA				SKPbc	**SKPbc**	**02 43 41.3**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=336,slow=1.8,SNR=5.2						
ESK	**Eskdalemuir**	**140.91**	**352**	PFAKE		02 40 20.0	+9.1
ESK				LR	LR		
	comp=Z,600nm,21.0s						
MORH	**Mrgy, Hungar**	**141.00**	**325**	*e*P	**PKPdf**	**02 40 02.8**	**-5.9**
NKC	**Novy Kostel**	**141.15**	**335**	*e*PKIKP	**PKPdf**	**02 40 05.5**	**-3.4**
NKC				*e*SS	SS	03 01 37.8	+1.9
NKC				MLR	MLR		
	comp=Z,800nm,19.9s						
NKC	**Novy Kostel**	**141.15**	**335**	*e*PKPpre	**PKPdf**	**02 40 05.5**	**-3.4**
NKC				*e*SS	SS	03 01 37.8	+1.9
NKC				AMS	AMS	03 44 10.0	
	comp=Z,800nm,19.9s						
CONA	**Conrad Observa**	**141.31**	**330**	*i* PKPdf	**PKPdf**	**02 40 04.7**	**-4.6**
	comp=Z,5.9nm,0.5s						
KHC	**Kasperske Hory**	**141.50**	**333**	PFAKE		02 40 20.0	+7.6
KHC				LR	LR		
	comp=Z,400nm,20.0s						
KHC	**Kasperske Hory**	**141.50**	**333**	*e*PKHKP	PKPpre	02 40 04.5	
KHC				*e*SS	SS	03 01 39.2	-0.9
KHC				MLR	MLR		
	comp=Z,1µm,19.3s						
KHC	**Kasperske Hory**	**141.50**	**333**	*e*PKPpre	PKPpre	02 40 04.5	
KHC				*e*PKPDF	**PKiKP**	**02 40 12.8**	**+0.4**
KHC				*e*SS	SS	03 01 39.2	-0.9
KHC				AMS	AMS	03 46 40.0	
	comp=Z,1µm,19.3s						
DIVS	**Divibare**	**141.50**	**322**	*e*P	**PKPdf**	**02 40 05.0**	**-4.8**
GEC2	**GERESS Array S**	**141.66**	**332**	PFAKE		02 40 20.0	+7.2
GEC2				LR	LR		
	comp=Z,700nm,20.0s						
GERES	**GERESS Array B**	**141.66**	**332**	PKhKP	PKPpre	02 40 05.1	
	comp=Z,2.5nm,0.6s,baz=46,slow=3.9,SNR=13						
GERES				SKPbc	**SKPbc**	**02 43 45.0**	**+0.2**
	comp=Z,1.9nm,1.0s,baz=48,slow=4.0,SNR=4.3						
ARSA	**Arzberg**	**141.94**	**329**	*i* PKiKP	**PKiKP**	**02 40 12.6**	**-0.7**
	comp=Z,4.9nm,0.8s						
LIT	**Litokhoron**	**141.98**	**315**	PFAKE		02 40 20.0	+6.4
LIT				LR	LR		
	comp=Z,400nm,20.0s						
BBLS	**Lazići**	**141.98**	**322**	*e*P	**PKPdf**	**02 40 06.5**	**-4.1**
GRA1	**Grafenberg Arr**	**142.07**	**335**	PFAKE		02 40 20.0	+6.5
GRA1				LR	LR		
	comp=Z,600nm,21.0s						
HAPS	**Han Pijesak,BI**	**142.12**	**323**	*e*P	PKPdf	02 40 02.8	-8.1
MOA	**Molln**	**142.12**	**331**	*i* PKPdf	**PKPdf**	**02 40 08.3**	**-2.4**
	comp=Z,7.4nm,0.9s						
RUDO	**Rudo**	**142.15**	**322**	*e*P	**PKPdf**	**02 40 04.1**	**-6.8**
KALN	**Kalnik**	**142.22**	**327**	P	**PKPdf**	**02 40 07.5**	**-3.5**
PERS	**Pernice**	**142.57**	**329**	*e*PKPdf	**PKPdf**	**02 40 09.8**	**-1.8**
SOKA	**Soboth**	**142.58**	**329**	*i* PKPdf	**PKPdf**	**02 40 08.2**	**-3.4**
	comp=Z,13nm,1.0s						
AGG	**Agios Georgios**	**142.58**	**313**	*e*PKPdf	**PKPdf**	**02 40 12.0**	**+0.2**
AGG				LR	LR		
	comp=Z,500nm,19.0s						
AGG	**Agios Georgios**	**142.58**	**313**	*e*PKIKP	**PKPdf**	**02 40 12.0**	**+0.2**
AGG				MLR	MLR		
	comp=Z,500nm,19.0s						
BLY	**Banja Luka**	**142.72**	**325**	PFAKE		02 40 20.0	+5.0
BLY				LR	LR		
	comp=Z,700nm,20.0s						
BLY	**Banja Luka**	**142.72**	**325**	⇑*i*P	**PKPdf**	**02 40 11.1**	**-0.7**
BLY	**Banja Luka**	**142.72**	**325**	*e*P	**PKPdf**	**02 40 08.0**	**-3.8**
PDG	**Podgorica**	**142.89**	**320**	⇑*i*P	**PKPdf**	**02 40 07.7**	**-4.5**
PDG	**Podgorica**	**142.89**	**320**	*e*P	**PKPdf**	**02 40 06.8**	**-5.4**
TTG	**Podgorica**	**142.89**	**320**	PFAKE		02 40 20.0	+4.6
TTG				LR	LR		
	comp=Z,500nm,20.0s						
OBKA	**Obir**	**142.94**	**329**	*i* PKPdf	**PKPdf**	**02 40 08.9**	**-3.4**
	comp=Z,9.8nm,0.9s						
CRES	**Cresnjev**	**142.95**	**327**	*e*P	**PKPdf**	**02 40 08.3**	**-3.9**
BRY	**Bratogost**	**143.06**	**321**	*e*P	PKPab	02 40 07.4	-0.6
DRME	**Dracevica, Mon**	**143.07**	**320**	*e*P	PKPab	02 40 07.3	-0.6
TIR	**Tirane**	**143.10**	**318**	PFAKE		02 40 20.0	+4.2
TIR				LR	LR		
	comp=Z,800nm,22.0s						
KBA	**Koelnbreinsper**	**143.12**	**331**	*i* PKPdf	PKPab	02 40 08.1	-0.1
	comp=Z,22nm,1.0s						
MEM	**Membach**	**143.20**	**341**	⇑PKP	**PKPdf**	**02 40 12.0**	**-0.4**
BOJS	**Bojanci**	**143.27**	**327**	*i* PKPdf	PKPab	02 40 09.0	+0.4
LJU	**Ljubljana**	**143.27**	**328**	*e*PKPdf	PKPab	02 40 09.0	+0.4
LJU				*e*PP	PP	02 43 49.0	+26
LJU	**Ljubljana**	**143.27**	**328**	*e*P	PKPab	02 40 08.7	+0.1
TREB	**Trebinje**	**143.28**	**321**	*e*P	PKPab	02 40 08.9	+0.2
MYKA	**Terra Mystica**	**143.30**	**330**	*i* PKPdf	PKPab	02 40 09.3	+0.5
	comp=Z,8.5nm,0.8s						
DBRK	**Dubrovnik**	**143.43**	**321**	P	PKPbc	02 40 09.9	-0.5
CEY	**Cerknica**	**143.53**	**328**	*e*P	PKPab	02 40 09.1	-0.6
UCC	**Uccle**	**143.53**	**342**	PFAKE		02 40 20.0	+3.6
UCC				LR	LR		
	comp=Z,800nm,19.0s						
UCC	**Uccle**	**143.53**	**342**	⇑PKP	**PKPdf**	**02 40 13.0**	**-0.1**
STON	**Ston**	**143.57**	**322**	P	PKPab	02 40 09.6	-0.2
STON	**Ston**	**143.57**	**322**	*e*P	PKPab	02 40 08.8	-1.0
BCLA	**Clavier**	**143.58**	**341**	⇑PKP	**PKPdf**	**02 40 13.2**	**+0.1**
STU	**Stuttgart**	**143.61**	**336**	PFAKE		02 40 30.0	+13
STU				LR	LR		
	comp=Z,500nm,21.0s						
UDBI	**Udbina**	**143.64**	**325**	P	PKPbc	02 40 11.8	+0.8
ITM	**Ithomi**	**143.66**	**311**	PFAKE		02 40 30.0	+13
ITM				LR	LR		
	comp=Z,400nm,20.0s						
MAKA	**Makarska**	**143.72**	**323**	P	PKPab	02 40 09.5	-0.9
WATA	**Walderalm**	**143.74**	**332**	*i* PKPdf	PKPbc	02 40 12.4	+1.1
	comp=Z,6.5nm,0.5s						
ABTA	**Abfaltersbach**	**143.75**	**331**	*i* PKPdf	PKPab	02 40 09.9	-0.6
	comp=Z,40nm,0.7s,SNR=42						
WTTA	**Wattenberg**	**143.76**	**332**	*i* PKPdf	PKPbc	02 40 12.5	+1.1
	comp=Z,14nm,0.6s,SNR=16						
RIY	**Rijeka**	**143.79**	**328**	*e*P	PKPbc	02 40 12.3	+1.0
SNF	**Seneffe**	**143.81**	**342**	⇑PKP	**PKPdf**	**02 40 14.4**	**+0.9**
TRI	**Trieste**	**143.89**	**329**	*e*PKPdf	PKPbc	02 40 12.6	+1.0
TRI				LR	LR		
	comp=Z,500nm,21.0s						
TRI	**Trieste**	**143.89**	**329**	*e*PKIKP	PKPbc	02 40 12.6	+1.0
TRI				MLR	MLR		
	comp=Z,500nm,21.0s						
MOTA	**Moosalm**	**143.94**	**333**	*i* PKPdf	PKPbc	02 40 11.8	-0.1
	comp=Z,10nm,0.6s,SNR=16						
WLF	**Walferdange**	**143.96**	**340**	*e*PKPdf	**PKPdf**	**02 40 12.9**	**-1.0**
WLF				LR	LR		
	comp=Z,3µm,20.0s						
WLF	**Walferdange**	**143.96**	**340**	⇑PKP	**PKPdf**	**02 40 13.7**	**-0.1**
RETA	**Reutte**	**143.98**	**333**	*i* PKPdf	PKPbc	02 40 12.9	+1.0
	comp=Z,9.3nm,0.6s,SNR=11						
SQTA	**Sankt Quirin**	**143.99**	**333**	*i* PKPdf	PKPab	02 40 11.4	-0.1
	comp=Z,27nm,0.6s,SNR=26						
DOU	**Dourbes**	**144.09**	**341**	⇑PKP	**PKPab**	**02 40 11.3**	**-0.3**
NVLJ	**Novalja**	**144.10**	**326**	P	PKPbc	02 40 12.6	+0.3
MORI	**Morici**	**144.10**	**325**	P	**PKPab**	**02 40 10.9**	**-0.9**
HVAR	**Hvar**	**144.12**	**323**	P	**PKPab**	**02 40 09.6**	**-2.3**
ZIRJ	**Zirje**	**144.27**	**324**	P	**PKPab**	**02 40 11.3**	**-1.1**
BFO	**Black Forest**	**144.30**	**336**	*e*PKPdf	PKPbc	02 40 12.7	-0.1
BFO				LR	LR		
	comp=Z,700nm,21.0s						
BFO	**Black Forest**	**144.30**	**336**	*e*PKIKP	PKPbc	02 40 12.7	-0.1
BFO				MLR	MLR		
	comp=Z,700nm,21.0s						
FETA	**Feichten**	**144.35**	**333**	*i* PKPdf	**PKPab**	**02 40 12.9**	**0.0**
	comp=Z,30nm,0.6s,SNR=28						
DUGI	**Dugi Otok**	**144.38**	**325**	P	**PKPab**	**02 40 11.9**	**-1.0**
DAVA	**Damuels**	**144.51**	**334**	*i* PKPdf	**PKPab**	**02 40 13.6**	**+0.1**
	comp=Z,24nm,0.6s,SNR=14						
ECH	**Echery**	**144.84**	**337**	PFAKE		02 40 30.0	+11
ECH				LR	LR		
	comp=Z,600nm,20.0s						
FUORN	**Ofenpass-Fuorn**	**144.86**	**333**	*e*PKPdf	PKPbc	02 40 15.1	+0.1
FUORN				LR	LR		
	comp=Z,600nm,20.0s						
DAVOX	**Davos/Dischmat**	**144.91**	**333**	PKP	PKPbc	02 40 15.1	+0.1
	comp=Z,47nm,0.6s,baz=82,slow=0.8,SNR=53						
TUE	**Stuetta**	**145.38**	**333**	PFAKE		02 40 30.0	+9.4
TUE				LR	LR		
	comp=Z,700nm,20.0s						
MATE	**Matera**	**145.47**	**319**	⇑*i*P	**PKPab**	**02 40 17.0**	**0.0**
TIP	**Timpagrande**	**146.26**	**317**	*e*PKPdf	**PKPdf**	**02 40 18.6**	**+0.3**
TIP				LR	LR		
	comp=Z,600nm,22.0s						
TIP	**Timpagrande**	**146.26**	**317**	⇑*i*P	**PKPab**	**02 40 19.8**	**-0.4**
SENIN	**Lac Senin/Sane**	**146.31**	**335**	PFAKE		02 40 30.0	+7.4
SENIN				LR	LR		
	comp=Z,700nm,22.0s						
AQU	**L'Aquila**	**146.37**	**325**	PFAKE		02 40 30.0	+7.4
AQU				LR	LR		
	comp=Z,900nm,21.0s						
AQU	**L'Aquila**	**146.37**	**325**	*e*P	**PKPbc**	**02 40 19.1**	**-0.5**
CLF	**Chambon-Foret**	**146.63**	**342**	*e*PKPbc	**PKPbc**	**02 40 20.6**	**+0.5**
CLF				LR	LR		
	comp=Z,800nm,20.0s						
VLC	**Villacollemand**	**146.67**	**330**	PFAKE		02 40 30.0	+6.9
VLC				LR	LR		
	comp=Z,600nm,19.0s						
CEL	**Celeste**	**147.33**	**317**	*e*PKPbc	**PKPbc**	**02 40 22.9**	**+0.4**
CEL				LR	LR		
	comp=Z,400nm,20.0s						
RCBR	**Riachuelo**	**147.58**	**132**	*e*PKPbc	**PKPbc**	**02 40 24.1**	**+0.3**
RCBR				LR	LR		
	comp=Z,13µm,21.0s						
RCBR	**Riachuelo**	**147.58**	**132**	*e*PKP2	**PKPbc**	**02 40 24.1**	**+0.3**
RCBR				MLR	MLR		
	comp=Z,13µm,21.0s						
BNI	**Bardonecchia**	**147.63**	**335**	*e*PKPbc	**PKPbc**	**02 40 23.2**	**0.0**
BNI				LR	LR		
	comp=Z,900nm,22.0s						
BNI	**Bardonecchia**	**147.63**	**335**	*e*PKP2	**PKPbc**	**02 40 23.2**	**0.0**
BNI				MLR	MLR		
	comp=Z,900nm,22.0s						
SSB	**Saint Sauveur**	**148.28**	**337**	PFAKE		02 40 30.0	+2.2
SSB				LR	LR		
	comp=Z,500nm,20.0s						
VAE	**Valguarnera**	**148.74**	**317**	PKPbc	**PKiKP**	**02 40 27.6**	**0.0**
	comp=Z,5.4nm,0.8s,baz=76,slow=5.7,SNR=3.7						
CLTB	**Caltabellotta**	**149.46**	**318**	PFAKE		02 40 40.0	+7.0
CLTB				LR	LR		
	comp=Z,700nm,20.0s						
WDD	**Wied Dalam**	**149.55**	**314**	PFAKE		02 40 40.0	+6.8
WDD				LR	LR		
	comp=Z,600nm,20.0s						
KEST	**Kesra**	**153.06**	**319**	PKPbc	**PKiKP**	**02 40 36.6**	**0.0**
	comp=Z,11nm,0.8s,baz=285,slow=2.1,SNR=10						
KEST				PKPab	**sPKPbc**	**02 40 49.1**	**-1.7**
	comp=Z,14nm,0.7s,baz=252,slow=6.1,SNR=8.5						
KEST	**Kesra**	**153.06**	**319**	*e*PKPbc	**PKPbc**	**02 40 36.5**	**0.0**
KEST				LR	LR		
	comp=Z,800nm,20.0s						
PGAV	**Gavieira, Arco**	**154.66**	**353**	*e*PKPdf	**PKPdf**	**02 40 33.2**	**+1.9**
PGAV	**Gavieira, Arco**	**154.66**	**353**	*e*LR	LR	03 38 50.3	
	comp=Z,798nm,18.0s						
POLO	**Lamas de Olo**	**155.19**	**352**	*e*PKPdf	**PKPdf**	**02 40 38.9**	**+6.9**
MVO	**Moncorvo**	**155.28**	**351**	*e*PKPdf	**PKPdf**	**02 40 35.5**	**+3.4**
MVO	**Moncorvo**	**155.28**	**351**	*e*SS	SS	03 04 23.8	+10
MVO	**Moncorvo**	**155.28**	**351**	*e*LR	LR	03 39 22.0	
	comp=Z,531nm,20.0s						
ASCN	**Ascension**	**155.36**	**175**	PFAKE		02 40 40.0	+7.1
ASCN				LR	LR		
	comp=Z,73µm,22.0s						
CMLA	**Cha da Macela**	**156.05**	**27**	PFAKE		02 40 40.0	+6.9
CMLA				LR	LR		
	comp=Z,1µm,20.0s						
ESDC	**Sonseca Array**	**156.07**	**344**	PKP	**PKPdf**	**02 40 33.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=133,slow=40,SNR=2.4						
ESDC				PKPab	**PKPab**	**02 41 01.1**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=11,slow=3.8,SNR=8.8						
ESLA	**Sonseca Array**	**156.07**	**344**	PFAKE		02 40 40.0	+6.8
ESLA				LR	LR		
	comp=Z,700nm,21.0s						
MTE	**Manteigas**	**156.11**	**351**	*e*PKPdf	**PKPdf**	**02 40 34.6**	**+1.4**
MTE	**Manteigas**	**156.11**	**351**	*e*SS	SS	03 04 30.7	+7.7
MTE	**Manteigas**	**156.11**	**351**	*e*LR	LR	03 43 07.5	
	comp=Z,763nm,18.0s						
MTE	**Manteigas**	**156.11**	**351**	*e*PKPdf	**PKPdf**	**02 40 33.8**	**+0.6**
MTE				*e*PKPab	**PKPab**	**02 41 00.3**	**-0.3**
MTE				LR	LR		
	comp=Z,800nm,20.0s						
PAB	**San Pablo**	**156.29**	**345**	PFAKE		02 40 40.0	+6.5
PAB				LR	LR		
	comp=Z,600nm,19.0s						
COI	**Coimbra**	**156.41**	**353**	*e*PKPdf	**PKPdf**	**02 40 36.3**	**+2.8**
COI	**Coimbra**	**156.41**	**353**	PFAKE		02 40 40.0	+6.5
COI				LR	LR		
	comp=Z,900nm,19.0s						
PCAS	**Casmilo, Conde**	**156.58**	**353**	*e*PKPdf	**PKPdf**	**02 40 39.1**	**+5.3**
PMRV	**Marv??o**	**157.03**	**350**	*e*PKPdf	**PKPdf**	**02 40 35.5**	**+1.1**
PMRV	**Marv??o**	**157.03**	**350**	*e*LR	LR	03 40 18.5	
	comp=Z,664nm,20.0s						
PMTG	**Montargil**	**157.51**	**352**	*e*PKPdf	**PKPdf**	**02 40 36.1**	**+1.2**
PNCL	**Nicolau / Gran**	**158.49**	**352**	*e*PKPdf	PKPdf	02 40 44.5	+8.3
PVAQ	**Vaqueiros**	**159.06**	**350**	*e*PKPdf	**PKPdf**	**02 40 40.3**	**+3.4**
PVAQ	**Vaqueiros**	**159.06**	**350**	*e*SS	SS	03 05 11.6	+17
PVAQ	**Vaqueiros**	**159.06**	**350**	*e*LR	LR	03 36 59.1	
	comp=Z,770nm,20.0s						
PVAQ	**Vaqueiros**	**159.06**	**350**	PFAKE		02 40 50.0	+13
PVAQ				LR	LR		
	comp=Z,900nm,19.0s						
PBDV	**Barranco-do-Ve**	**159.25**	**350**	*e*PKPdf	**PKPdf**	**02 40 41.1**	**+3.9**
PFVI	**Vila Bisbo**	**159.50**	**352**	*e*PKPdf	**PKPdf**	**02 40 37.5**	**+0.1**
PFVI	**Vila Bisbo**	**159.50**	**352**	PFAKE		02 40 50.0	+13
PFVI				LR	LR		
	comp=Z,1µm,20.0s						
SFS	**San Fernando**	**159.66**	**346**	PFAKE		02 40 50.0	+12
SFS				LR	LR		
	comp=Z,900nm,21.0s						
MDT	**Midelt**	**162.60**	**338**	PKP	**PKPdf**	**02 40 41.4**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=93,slow=3.3,SNR=4.0						
MDT				PKPab	**PKPab**	**02 41 28.7**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=48,slow=4.0,SNR=5.0						
PMOZ	**Porto Moniz, M**	**163.41**	**15**	*e*PKPdf	**PKPdf**	**02 40 45.4**	**+3.6**
PMOZ	**Porto Moniz, M**	**163.41**	**15**	*e*LR	LR	03 42 24.5	
	comp=Z,798nm,22.0s						
TORD	**Torodi Ar. Bea**	**166.05**	**257**	PKP	**PKPdf**	**02 40 44.5**	**0.0**
	comp=Z,1.9nm,0.9s,baz=176,slow=1.2,SNR=7.6						
TORD				PKPab	**PKPab**	**02 41 44.0**	**-0.9**
	comp=Z,4.7nm,0.8s,baz=102,slow=4.9,SNR=6.4						
TOA1	**Torodi Ar. Sit**	**166.05**	**257**	*e*PKPdf	**PKPdf**	**02 40 44.5**	**0.0**
TOA1				*e*PKPab	**PKPab**	**02 41 44.0**	**-0.9**
DBIC	**Dimbokro**	**167.62**	**217**	PKPab	**PKPab**	**02 41 52.1**	**+0.6**
	comp=Z,7.4nm,1.0s,baz=197,slow=8.7,SNR=2.5						

IDC 19 02:29:49.4±2.4**, 5°.14S**×**152°.39E, h0^{km}, mb3.5**/3**,**
mb1 3.9/3**, mb1mx3.5**/37**, mbtmp3.6**/3**, Error ellipse:**
s-maj=170.7km s-min=30.3km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.70**	**230**	Sn	Sn	02 32 42.0	-4.2
	1.4nm,0.3s,baz=271,slow=8.9,SNR=2.6						
WRA	**Warramunga Arr**	**22.91**	**228**	P	P	02 34 54.6	-0.6
	1.9nm,1.0s,baz=54,slow=9.8,SNR=1.9						
ASAR	**Alice Springs**	**25.62**	**222**	P	P	02 35 21.2	+0.4
	0.5nm,0.6s,baz=53,slow=9.4,SNR=2.8						
ILAR	**Eielson Array**	**82.63**	**22**	P	P	02 42 14.6	+0.3
	0.3nm,0.6s,baz=241,slow=5.3,SNR=6.5						
TORD	**Torodi Ar. Bea**	**150.02**	**287**	PKPbc	PKPbc	02 49 42.4	-0.7
	0.4nm,0.7s,baz=96,slow=3.9,SNR=1.5						

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*IDC **19** 02:34:58.5±1.3, 9°.87S×154°.74E, h0^{km}, mb3.9/7,*
mb1 4.1/7, mb1mx3.8/34, mbtmp3.9/7, MS4.2/1, Ms1 4.1/1,
ms1mx3.2/33, Error ellipse: s-maj=57.2km s-min=21.4km az=122.0

*ISCJB **19** 02:35:00.1±1.1, 9°.8S±0°.2×154°.7E±0°.3, h18^{km}, mb3.8/7,*
MS4.0/1, Error ellipse: s-maj=45.3km s-min=16.7km az=34.9

ISC 19 02:35:01.4±1.1**, 9°.9S**±0°.2×**154°.7E**±0°.3**, h18^{km}, n8, σ0^{s}.85**/8**,**
mb3.9/7**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.04**	**241**	P	**P**	**02 39 56.3**	**+0.9**
	3.3nm,1.0s,baz=71,slow=8.3,SNR=4.9						
ASAR	**Alice Springs**	**24.12**	**233**	P	**P**	**02 40 16.9**	**+0.4**
	3.1nm,0.8s,baz=61,slow=8.8,SNR=16						
STKA	**Stephens Creek**	**25.04**	**207**	P	**P**	**02 40 23.8**	**-0.9**
	3.7nm,0.6s,baz=44,slow=14,SNR=7.1						
STKA				LR	LR	02 50 17.6	
	comp=Z,531nm,19.9s,baz=11,slow=37						
PETK	**Petropavlovsk-**	**62.78**	**2**	P	**P**	**02 45 25.4**	**-0.2**
	1.3nm,0.7s,baz=167,slow=7.0,SNR=4.4						
SONM	**Songino Array**	**71.58**	**328**	P	**P**	**02 46 21.7**	**-0.1**
	0.5nm,0.3s,baz=120,slow=5.7,SNR=3.6						
ILAR	**Eielson Array**	**86.14**	**21**	P	**P**	**02 47 40.7**	**-0.4**
	0.3nm,0.7s,baz=233,slow=5.5,SNR=2.0						
NVAR	**Mina Array Bea**	**93.73**	**52**	P	**P**	**02 48 18.8**	**+1.1**
	0.1nm,0.5s,baz=213,slow=6.5,SNR=1.8						
ESDC	**Sonseca Array**	**144.75**	**331**	PKP	**PKPdf**	**02 54 37.0**	**-0.7**
	0.2nm,0.4s,baz=9.5,slow=1.6,SNR=2.6						

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*SOME **19** 02:35:10.5, 40°.77N×79°.92E, h0^{km}*

*NNC **19** 02:35:11.8±1.0, 40°.72N×79°.85E, h0^{km}, mb3.6, mpv3.4,*
Error ellipse: s-maj=6.9km s-min=6.1km az=140.0

ISC 19 02:35:14.8±3.5**, 40°.9N**±0°.1×**79°.78E**±0°.08**, h10^{km}, n19,**
σ1^{s}.07/29**, 3C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**2.34**	**346**	Pg	**Pb**	**02 35 57.8**	**+0.7**
	4.8nm,0.3s						
UZB				Lg	Lg	02 36 32.1	
	7.8nm,0.5s						
UZB	**Uzynbulak**	**2.34**	**346**	*e*P	**Pb**	**02 35 57.8**	**+0.7**
	3.2nm,0.3s						
UZB				*e*S	**Sg**	**02 36 32.1**	**+2.0**
	7.8nm,0.5s						
SATY	**Saty**	**2.41**	**335**	Pg	**Pb**	**02 35 58.8**	**+0.4**
	6.8nm,0.2s						
SATY				Lg	Lg	02 36 34.0	
	26nm,0.5s						
SATY	**Saty**	**2.41**	**335**	*e*P	**Pb**	**02 35 58.8**	**+0.4**
	6.8nm,0.2s						
SATY				*e*S	**Sg**	**02 36 33.6**	**+1.3**
	26nm,0.5s						
PDGK	**Podgornoye**	**2.46**	**355**	Pg	**Pb**	**02 35 59.5**	**+0.2**
	7.1nm,0.3s						
PDGK				Lg	Lg	02 36 35.0	
	5.9nm,0.5s						
PDGK	**Podgornoye**	**2.46**	**355**	⇓Pg	**Pb**	**02 35 59.3**	**+0.1**
	7.1nm,0.4s						
PDGK				⇑Lg	Lg	02 36 35.0	
	8.7nm,0.5s						
KTMS	**Ketmen**	**2.61**	**9**	Pg	**Pb**	**02 36 02.1**	**+0.4**
	14nm,0.3s						
KTMS				Lg	Lg	02 36 38.9	
	9.5nm,0.5s						
KTMS	**Ketmen**	**2.61**	**9**	*e*P	**Pb**	**02 36 02.1**	**+0.4**
	14nm,0.3s						
KTMS				*e*S	**Sg**	**02 36 39.4**	**+0.9**
	9.5nm,0.5s						
KPKS	**Kokpek**	**2.72**	**343**	*e*P	**Pb**	**02 36 03.7**	**+0.1**
	14nm,0.1s						
KPKS				*e*S	**Sg**	**02 36 42.0**	**0.0**
	24nm,0.3s						
KURS	**Kuram**	**2.87**	**336**	Pg	**Pg**	**02 36 08.1**	**-1.8**
	6.2nm,0.7s						
KURS				Lg	Lg	02 36 49.2	
	9.4nm,0.6s						
KURS	**Kuram**	**2.87**	**336**	*e*P	**Pb**	**02 36 07.8**	**+1.6**
	6.2nm,0.7s						
KURS				*e*S	**Sg**	**02 36 49.1**	**+2.1**
	9.4nm,0.6s						
TNSS	**Tian-Shan**	**3.02**	**317**	Pg	**Pb**	**02 36 09.8**	**+0.9**
	2.8nm,0.3s						
TNSS				Lg	Lg	02 36 52.6	
	5.6nm,0.6s						
TNSS	**Tian-Shan**	**3.02**	**317**	⇓*i*P	**Pb**	**02 36 09.8**	**+0.9**
	4.2nm,0.3s						
TNSS				⇑*i*S	**Sg**	**02 36 52.6**	**+0.7**
	5.0nm,0.4s						
MDOK	**Medeo**	**3.06**	**319**	Pg	**Pb**	**02 36 09.6**	**+0.2**
	2.0nm,0.3s						
MDOK				Lg	Lg	02 36 52.2	
	1.8nm,0.2s						
MDOK	**Medeo**	**3.06**	**319**	*e*P	**Pb**	**02 36 09.6**	**+0.2**
	2.0nm,0.3s						
MDOK				*e*S	**Sg**	**02 36 52.2**	**-0.9**
	5.5nm,0.7s						
KOTS	**Kotyrbulak**	**3.08**	**321**	*e*P	**Pb**	**02 36 10.4**	**+0.6**
	3.6nm,0.5s						
KOTS				*e*S	**Sg**	**02 36 53.7**	**-0.1**
	8.3nm,0.5s						
CHKK	**Chushkaly**	**3.63**	**326**	*e*P	**Pb**	**02 36 19.8**	**+0.8**
	1.6nm,0.2s						
CHKK				*e*S	**Sg**	**02 37 09.9**	**-1.3**
	6.9nm,0.6s						
KTBS	**Karatobe**	**3.65**	**322**	*e*P	**Pb**	**02 36 20.4**	**+0.9**
	0.9nm,0.3s						
KTBS				*e*S	**Sg**	**02 37 10.8**	**-1.2**
	4.3nm,0.4s						
TKM2	**Tokmak 2**	**3.73**	**305**	⇑Pg	**Pb**	**02 36 22.8**	**+1.9**
	0.7nm,0.5s						
TKM2				⇓Lg	Lg	02 37 13.3	
	1.8nm,0.7s						

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*IDC **19** 02:42:49.8±6.7, 7°.60S×128°.16E, h186^{km}±76^{km}, mb3.5/2,*
mb1 3.6/5, mb1mx3.2/34, mbtmp4.1/5, Error ellipse:
s-maj=122.5km s-min=18.9km az=76.0

ISC 19 02:42:47.4±1.1**, 7°.73S**±0°.07×**128°.3E**±0°.2**, h142^{km}, n6,**
σ3^{s}.31/9**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**7.43**	**23**	P	**Pn**	**02 44 34.8**	**+1.6**
	4.7nm,0.3s,baz=234,slow=22,SNR=28						
SIJI				S	**Sn**	**02 45 53.8**	**-2.4**
	0.8nm,0.3s,baz=183,slow=23,SNR=1.9						
WRA	**Warramunga Arr**	**13.47**	**155**	P	**Pn**	**02 45 54.9**	**+1.9**
	1.2nm,0.3s,baz=323,slow=14,SNR=40						
WRA				S	**Sn**	**02 48 18.7**	**-3.2**
KCP	**Kidapawan**	**14.99**	**348**	⇓*i*P	**P**	**02 46 17.3**	**+3.1**
ASAR	**Alice Springs**	**16.73**	**162**	P	**Pn**	**02 46 36.5**	**+3.1**
	0.4nm,0.3s,baz=342,slow=11,SNR=20						
ASAR				S	**S**	**02 49 40.6**	**+0.5**
	0.7nm,0.3s,baz=344,slow=24,SNR=8.3						
MKAR	**Makanchi Array**	**67.93**	**328**	P	**P**	**02 53 27.4**	**-3.4**
	0.5nm,0.4s,baz=112,slow=9.0,SNR=7.2						
KURBB	**Kurchatov Arra**	**72.27**	**329**	P	**P**	**02 53 53.5**	**-3.6**
	1.6nm,0.8s,baz=132,slow=5.0,SNR=15						

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*GUC **19** 02:46:02.7±0.7, 21°.88S×68°.69W, h122^{km}±4^{km}, ML3.5*

*SJA **19** 02:46:02.4±0.5, 21°.90S×68°.67W, h128^{km}±3^{km}, ML3.0, MW3.3*

*ISCJB **19** 02:46:03.2±1.0, 21°.88S±0°.04×68°.75W±0°.09, h129^{km}±9^{km},*
Error ellipse: s-maj=14.5km s-min=5.8km az=3.5

ISC 19 02:46:03.3±2.0**, 21°.89S**±0°.04×**68°.68W**±0°.09**,**
h124^{km}±13^{km}**, n24, σ0^{s}.43**/41**, 6C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.53**	**280**	*e*P	**Pn**	**02 46 22.4**	**+0.3**
PB09				*e*S	**Sn**	**02 46 37.1**	**+0.7**
PB09	**IPOC Station P**	**0.53**	**280**	⇑*i*P	**Pn**	**02 46 22.1**	**-0.1**
PB09				*i* S	**Sn**	**02 46 36.6**	**+0.3**
PB09				IAML		02 46 38.4	
	comp=E,1µm,0.1s						
LVC	**Limon Verde**	**0.75**	**197**	*e*P	**Pn**	**02 46 23.5**	**-0.4**
LVC				IAML		02 46 39.3	
	comp=Z,219nm,0.3s						
LVC				*e*S	**Sn**	**02 46 39.9**	**+0.4**
LVC	**Limon Verde**	**0.75**	**197**	*e*P	**Pn**	**02 46 23.4**	**-0.5**
LVC				*i* S	**Sn**	**02 46 38.5**	**-0.9**
PB03	**IPOC Station P**	**1.01**	**261**	*e*P	**Pn**	**02 46 26.1**	**+0.1**
PB03	**IPOC Station P**	**1.01**	**261**	⇑*i*P	**Pn**	**02 46 25.9**	**-0.1**
PB03				*i* S	**Sn**	**02 46 42.7**	**-0.4**
PB03				IAML		02 46 43.4	
	comp=E,1µm,0.2s						
PB01	**IPOC Station P**	**1.13**	**318**	⇑*i*P	**Pn**	**02 46 26.7**	**-0.4**
PB01				*i* S	**Sn**	**02 46 44.9**	**-0.3**
PB01				IAML		02 46 46.4	
	comp=N,1µm,0.2s						
PB07	**IPOC Station P**	**1.13**	**278**	*e*P	**Pn**	**02 46 27.5**	**+0.3**
PB07				*e*S	**Sn**	**02 46 45.8**	**+0.5**
PB07	**IPOC Station P**	**1.13**	**278**	⇑*i*P	**Pn**	**02 46 27.2**	**0.0**
PB07				*i* S	**Sn**	**02 46 45.3**	**-0.1**
PB07				IAML		02 46 47.2	
	comp=N,836nm,0.2s						
PB06	**IPOC Station P**	**1.16**	**225**	*e*P	**Pn**	**02 46 27.8**	**+0.3**
PB06				*e*S	**Sn**	**02 46 46.2**	**+0.4**
PB06	**IPOC Station P**	**1.16**	**225**	⇓*i*P	**Pn**	**02 46 27.5**	**+0.1**
PB06				*i* S	**Sn**	**02 46 45.8**	**+0.1**
PB06				IAML		02 46 47.2	
	comp=N,891nm,0.1s						
PB02	**IPOC Station P**	**1.27**	**296**	*e*P	**Pn**	**02 46 28.5**	**-0.1**

PB02	IPOC Station P	1.27	296	⇑iP	Pn	02 46 28.4	-0.1
PB02				iS	Sn	02 46 47.4	-0.3
PB02				IAML		02 46 50.8	
	comp=E,777nm,0.1s						
PB04	IPOC Station P	1.43	252	eP	Pn	02 46 30.7	+0.3
PB04	IPOC Station P	1.43	252	eP	Pn	02 46 30.4	0.0
PB04				iS	Sn	02 46 50.5	-0.5
PB04				IAML		02 46 54.0	
	comp=N,679nm,0.1s						
PB15	IPOC Station P	1.50	209	eP	Pn	02 46 31.4	+0.2
PB15	IPOC Station P	1.50	209	⇓iP	Pn	02 46 31.3	0.0
PB15				iS	Sn	02 46 53.2	+0.6
PB05	IPOC Station P	1.70	236	eP	Pn	02 46 33.7	+0.2
PB05	IPOC Station P	1.70	236	⇓iP	Pn	02 46 33.4	-0.1
PB05				iS	Sn	02 46 56.0	-0.5
PB05				IAML		02 46 57.6	
	comp=E,276nm,0.3s						
PB08	IPOC Station P	1.80	346	eP	Pn	02 46 35.4	+0.5
PB08	IPOC Station P	1.80	346	⇑iP	Pn	02 46 35.4	+0.5
PB08				iS	Sn	02 46 59.4	+0.5
PB08				IAML		02 47 01.4	
	comp=E,347nm,0.3s						
GO01	Chusmiza	2.26	348	⇓iP	Pn	02 46 40.9	+0.1
GO01				iS	Sn	02 47 09.4	+0.1
GO01				IAML		02 47 12.3	
	comp=E,570nm,0.1s						
PB11	IPOC Station P	2.31	337	⇓iP	Pn	02 46 40.3	-0.7
PB11				iS	Sn	02 47 08.9	-1.0
PB11				IAML		02 47 10.5	
	comp=N,615nm,0.5s						
PSGCX	Pisagua	2.65	329	eP	Pn	02 46 45.8	+0.4

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*ISCJB **19** 02:59:14.7±0.3, 14°.91S±0°.04×167°.39E±0°.08, h129^{km}, mb4.5/40, Error ellipse: s-maj=10.3km s-min=5.4km az=174.3*

*NEIC **19** 02:59:16.9±1.8, 14°.93S×167°.45E, h136^{km}±7^{km}, mb4.5/30, Error ellipse: s-maj=21.6km s-min=13.2km az=88.0*

*IDC **19** 02:59:17.2±3.0, 14°.94S×167°.40E, h136^{km}±27^{km}, mb4.1/19, mb1 4.2/20, mb1mx4.0/38, mbtmp4.5/20, Error ellipse: s-maj=19.7km s-min=12.9km az=79.0*

ISC 19 02:59:15.8±0.5, **14°.92S**±0°.06×**167°.5E**±0°.1, **h129^{km}, n66,** σ1^{s}**10**/67, **mb4.6**/39, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	6.55	176	ePn	Pn	03 00 49.4	-0.3
MARNC				eSn	Sn	03 01 60.0	-3.0
DZM	Mont Dzumac	7.19	188	P	Pn	03 00 58.4	0.0
	18nm,0.3s,baz=32,slow=7.2,SNR=108						
DZM				S	Sn	03 02 18.6	-0.1
	11nm,0.3s,baz=280,slow=23,SNR=9.4						
DZM	Mont Dzumac	7.19	188	ePn	Pn	03 00 59.5	+1.1
PINNC	Pines Island,	7.65	180	ePn	Pn	03 01 05.5	+1.0
EIDS	Eidsvold	18.58	233	eP	Pn	03 03 24.4	-0.4
	13nm,0.6s						
CTA	Charters Tower	20.91	253	P	P	03 03 48.3	+0.2
	2.6nm,0.5s,baz=74,slow=15,SNR=5.7						
OUZ	Omahuta	20.94	166	eP	P	03 03 50.2	+1.8
	19nm,0.9s						
ARMA	Armidale	21.24	221	eP	P	03 03 53.7	+2.0
	29nm,1.4s						
HIZ	Hauiti	24.38	166	eP	P	03 04 22.1	+0.1
	61nm,1.3s						
URZ	Urewera	24.75	162	P	P	03 04 27.4	+2.1
	13nm,0.7s,baz=54,slow=4.9,SNR=7.7						
URZ	Urewera	24.75	162	eP	P	03 04 26.3	+1.0
	14nm,0.8s						
BKZ	Black Stump Fm	25.41	164	eP	P	03 04 32.4	+0.9
	11nm,0.5s						
BFZ	Birch Farm	26.77	165	eP	P	03 04 43.3	-0.3
	17nm,1.1s						
THZ	Tophouse	27.15	171	eP	P	03 04 48.7	+1.7
	90nm,2.0s						
KHZ	Kahutara	27.89	170	eP	P	03 04 53.8	+0.3
	180nm,2.0s						
LTZ	Lake Taylor	28.07	173	eP	P	03 04 56.4	+1.3
	19nm,0.6s						
RPZ	Rata Peaks	28.86	175	P	P	03 05 03.2	+1.1
	10nm,0.7s,baz=316,slow=1.9,SNR=6.8						
RPZ	Rata Peaks	28.86	175	eP	P	03 05 03.4	+1.3
	66nm,1.7s						
STKA	Stephens Creek	29.05	230	P	P	03 05 04.8	+0.9
	15nm,0.6s,baz=44,slow=8.2,SNR=39						
STKA	Stephens Creek	29.05	230	eP	P	03 05 04.8	+0.9
	3.1nm,0.6s						
WB2	Warramunga Arr	32.00	256	eP	P	03 05 28.2	-1.8
	40nm,2.0s						
WR1	Warramunga Arr	32.01	256	eP	P	03 05 29.0	-1.1
WRA	Warramunga Arr	32.01	256	P	P	03 05 29.0	-1.1
	1.6nm,0.5s,baz=78,slow=8.6,SNR=21						
AS31	Alice Springs	32.82	249	eP	P	03 05 36.2	-1.1
	2.3nm,0.4s						
AS31				ePcP	PcP	03 08 19.4	-0.1
ASAR	Alice Springs	32.82	249	P	P	03 05 36.2	-1.0
	4.4nm,0.5s,baz=79,slow=9.0,SNR=61						
ASAR				PcP	PcP	03 08 19.4	-0.1
	1.0nm,0.8s,baz=104,slow=3.3,SNR=5.4						
BBOO	Buckleboo	33.65	232	eP	P	03 05 44.6	+0.3
	155nm,1.8s						
FORT	Forrest	39.40	239	eP	P	03 06 32.9	-0.2
	93nm,1.4s						
MORW	Morawa	49.40	244	eP	P	03 07 51.9	-0.7
	52nm,1.6s						
JOW	Kunigami	56.34	317	P	P	03 08 44.2	+0.6
	0.8nm,0.5s,baz=182,slow=11,SNR=3.7						
JOW	Kunigami	56.34	317	eP	P	03 08 44.2	+0.6
	59nm,2.0s						
JNU	Nakatsue	59.21	324	P	P	03 09 03.3	-0.3
	6.5nm,0.8s,baz=95,slow=5.0,SNR=6.5						
JNU	Nakatsue	59.21	324	eP	P	03 09 03.7	+0.2
	7.5nm,0.9s						
VNDA	Vanda	62.68	181	P	P	03 09 26.9	+0.6
	3.3nm,0.5s,baz=356,slow=8.0,SNR=36						
VNDA	Vanda	62.68	181	eP	P	03 09 27.2	+0.9
	3.4nm,0.6s						
ASAJ	Asahikawa	63.00	340	P	P	03 09 29.1	+0.3
	3.5nm,0.4s,baz=245,slow=9.2,SNR=6.1						
CASY	Casey	63.44	202	eP	P	03 09 31.8	+0.3
	42nm,1.8s						
USRK	Ussuriysk Ar.	67.16	333	P	P	03 09 56.9	+1.2
	2.0nm,0.8s,baz=150,slow=5.9,SNR=4.9						
PETK	Petropavlovsk-	68.27	354	P	P	03 10 04.0	+1.5
	5.7nm,0.8s,baz=142,slow=8.6,SNR=14						
PEA1	Petropavlovsk-	68.28	354	eP	P	03 10 04.0	+1.4
XAN	Xi'an	73.99	312	P	P	03 10 35.4	-2.1
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,160nm,5.1s						
QSPA	South Pole Qui	75.11	180	eP	P	03 10 43.9	+0.4
	comp=Z,7.4nm,0.8s						
CM31	Chiang Mai Arr	75.24	294	eP	P	03 10 46.2	+1.3
	comp=Z,9.2nm,0.4s						
CMAR	Chiang Mai Arr	75.24	294	P	P	03 10 46.2	+1.3
	comp=Z,2.0nm,0.6s,baz=134,slow=5.0,SNR=7.7						
HHC	Hu-ho-hao-te	75.88	320	eP	P	03 10 41.5	-6.8
SEY	Seymchan	78.50	353	P	P	03 11 02.9	+0.7
	comp=Z,2.5nm,0.6s,baz=156,slow=3.4,SNR=7.0						
MAW	Mawson	81.80	202	P	P	03 11 19.9	-0.1
	comp=Z,1.5nm,0.6s,baz=145,slow=1.1,SNR=5.4						
SONA0	Songino Array	82.79	324	eP	P	03 11 26.4	+0.8
SONM	Songino Array	82.79	324	P	P	03 11 26.4	+0.8
	comp=Z,1.9nm,0.6s,baz=149,slow=7.1,SNR=10						
CAST	Castle Rocks	84.11	17	eP	P	03 11 32.0	+0.1
	comp=Z,4.6nm,0.6s						
KTH	Kantishna Hill	84.54	17	eP	P	03 11 34.2	+0.1
	comp=Z,21nm,1.9s						
WRH	Wood River Hil	86.06	18	eP	P	03 11 42.0	+0.5
	comp=Z,16nm,2.0s						
TLY	Talaya	86.28	326	P	P	03 11 43.4	+0.4
	comp=Z,2.6nm,0.7s,baz=21,slow=8.7,SNR=4.6						
ILAR	Eielson Array	86.63	18	P	P	03 11 43.7	-0.7
	comp=Z,1.2nm,0.7s,baz=238,slow=5.6,SNR=14						
ILB	Eielson Array	86.63	18	eP	P	03 11 44.2	-0.1
	comp=Z,10nm,2.0s						
MOD	Modoc Plateau	87.10	45	eP	P	03 11 45.5	-1.8
	comp=Z,8.4nm,0.3s						
WMQ	Urumqi	93.03	314	eP	P	03 12 06.8	-8.1
MK31	Makanchi Array	97.50	316	eP	P	03 12 35.3	+0.1
	comp=Z,1.6nm,0.7s						
MK32	Makanchi Array	97.50	316	eP	Pdif	03 12 35.9	+0.6
MKAR	Makanchi Array	97.50	316	P	Pdif	03 12 35.9	+0.6
	comp=Z,1.9nm,0.6s,baz=92,slow=5.8,SNR=19						
ZALV	Zalesovo Beam	97.68	324	P	P	03 12 34.4	-1.4
	comp=Z,1.0nm,0.5s,baz=136,slow=5.0,SNR=4.3						
ZAA1	Zalesovo Array	97.68	324	eP	P	03 12 34.4	-1.4
ARCES	ARCESS Array B	120.49	345	PKP	PKPdf	03 17 50.8	-0.7
	comp=Z,1.0nm,0.4s,baz=80,slow=2.5,SNR=6.6						
FINES	FINESS Array B	125.98	338	PKP	PKPdf	03 18 01.3	-0.9
	comp=Z,1.0nm,0.8s,baz=160,slow=6.1,SNR=3.6						
KEST	Kesra	151.50	321	PKPbc	PKPbc	03 18 55.5	+0.4
	comp=Z,2.5nm,0.7s,baz=324,slow=22,SNR=4.1						
ESDC	Sonseca Array	154.23	345	PKPab	PKPab	03 19 15.2	-0.1
	comp=Z,0.6nm,0.6s,baz=9.6,slow=4.7,SNR=7.3						
TORD	Torodi Ar. Bea	166.12	264	PKP	PKPdf	03 19 04.9	-1.6
	comp=Z,0.5nm,0.8s,baz=130,slow=16,SNR=3.2						
TORD				PKPab	PKPab	03 20 05.5	-2.4
	comp=Z,0.5nm,0.7s,baz=90,slow=4.7,SNR=5.0						

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*ISCJB **19** 03:13:00.2±0.4, 45°.14N±0°.05×150°.89E±0°.05, h35^{km}, mb3.8/26, MS3.9/1, Error ellipse: s-maj=8.8km s-min=3.1km az=147.0*

*JMA **19** 03:13:00.1±0.6, 45°.37N×150°.98E, h30^{km}, M4.6*

*SKHL **19** 03:13:01.9±0.9, 44°.99N×151°.04E, h72^{km}, mb4.5/4*

*MOS **19** 03:13:03.8±1.0, 45°.23N×150°.71E, h69^{km}, mb4.1/15, Error ellipse: s-maj=9.3km s-min=7.2km az=74.6*

*IDC **19** 03:13:06.6±2.6, 45°.29N×150°.74E, h74^{km}±23^{km}, mb3.5/16, mb1 3.7/20, mb1mx3.6/49, mbtmp3.8/20, MS3.1/1, Ms1 3.1/1, ms1mx2.8/28, Error ellipse: s-maj=20.1km s-min=14.2km az=153.0*

ISC 19 03:13:01.3±0.6, **45°.02N**±0°.07×**150°.92E**±0°.06, **h35^{km}, n92,** σ1^{s}**81**/102, **mb3.9**/26, **7C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.17	277	ePN	Pn	03 13 36.1	+1.2
KUR				eS	Sn	03 14 02.0	+1.4
KUR				pmax	pmax		
	comp=Z,285nm,0.3s						
KUR				pmax	pmax		
	comp=N,74nm,0.2s						
KUR				pmax	pmax		
	comp=E,56nm,0.2s						
KUR				smax	smax		
	comp=N,372nm,0.3s						
KUR				smax	smax		
	comp=E,595nm,0.3s						
KUR	Kuril'sk	2.17	277	eP	Pn	03 13 36.6	+1.7
KUR				AMB	AMB	03 13 36.8	
	comp=E,70nm,0.3s						
KUR				AMB	AMB	03 13 36.8	
	comp=E,60nm,0.3s						
KUR				eS	Sn	03 14 02.9	+2.3
KUR				A	A	03 14 06.4	
	comp=E,370nm,0.5s						
KUR				A	A	03 14 06.4	
	comp=E,600nm,0.5s						
YUK	Yuzh-Kuril'sk	3.75	257	ePN	Pn	03 13 59.2	+2.6
YUK				S	Sn	03 14 39.8	+0.2
YUK				pmax	pmax		
	comp=Z,202nm,0.2s						
YUK	Yuzh-Kuril'sk	3.75	257	eP	Pn	03 13 59.5	+2.9
YUK				AMB	AMB	03 14 00.0	
	comp=Z,40nm,0.2s						
YUK				eS	Sn	03 14 39.7	+0.2
LAGR	Lagunnoye	3.80	257	ePN	Pn	03 13 59.1	+1.8
LAGR				eS	Sn	03 14 41.3	+0.7
LAGR				smax	smax		
	comp=E,735nm,0.5s						
LAGR				smax	smax		
	comp=N,754nm,0.6s						
LAGR	Lagunnoye	3.80	257	eP	Pn	03 13 59.0	+1.8
LAGR				eS	Sn	03 14 41.0	+0.4
LAGR				A	A	03 15 08.5	
	comp=N,180nm,0.4s						
LAGR				A	A	03 15 08.5	
	comp=N,90nm,0.4s						
GRPR	Tuman	3.83	256	eS	Sn	03 14 41.0	-0.3
NEM2	Nemuro 2	4.08	248	P	Pn	03 14 01.9	+0.8
NEM2				eS	Sn	03 14 48.7	+1.2
JRA	Rausu	4.29	257	P	Pn	03 14 06.2	+2.2
JRA				eS	Sn	03 14 56.9	+4.1
JNK	Nakash	4.68	254	P	Pn	03 14 11.6	+2.2
JNK				eS	Sn	03 15 03.7	+1.3
JAK	Akkeshi	4.92	248	P	Pn	03 14 13.6	+0.9
JAK				eS	Sn	03 15 08.0	-0.4
JTKR	Abashiri--Toko	5.13	261	P	Pn	03 14 18.2	+2.7
JAR	Ashorobuto	5.43	254	P	Pn	03 14 22.4	+2.8
JMP	Maruseppu	5.50	262	P	Pn	03 14 23.9	+3.2
JOB	Onbets	5.54	250	P	Pn	03 14 22.8	+1.7
JOB				eS	Sn	03 15 24.5	+1.0
JKK2	Kamakawa 2	5.96	262	P	Pn	03 14 30.1	+3.1
JCH	Churui	5.97	249	P	Pn	03 14 28.8	+1.6
JCH				eS	Sn	03 15 34.2	-0.1
YSS	Yuzh-Sakhalins	6.01	292	ePN	Pn	03 14 30.3	+2.7
YSS	Yuzh-Sakhalins	6.01	292	eP	Pn	03 14 30.3	+2.7
YSS				eS	Sn	03 15 36.1	+0.9
JKA	Kamikawa-asahi	6.01	264	eP	Pn	03 14 31.1	+3.4
ASAJ	Asahikawa	6.02	264	P	Pn	03 14 31.1	+3.3
	comp=N,2.5nm,0.3s,baz=70,slow=20,SNR=13						
ASAJ				S	Sn	03 15 46.6	+11
	baz=137,slow=19,SNR=1.5						
ASAJ				LR	LR	03 16 53.6	
	comp=N,183nm,20.2s,baz=164,slow=38						
ASAJ	Asahikawa	6.02	264	P	Pn	03 14 31.4	+3.7
ERM	Erimo	6.39	245	iPN	Pn	03 14 35.9	+3.0
JEM	Erimo	6.39	245	P	Pn	03 14 35.8	+2.9
JNBK	Urakawa-nobuka	6.53	248	P	Pn	03 14 35.6	+0.8
JBT2	Biratori 2	6.58	253	P	Pn	03 14 36.7	+1.3
SKR	Severo-Kuril's	6.66	30	ePN	Pn	03 14 37.3	+0.8
SKR				pmax	pmax		
	comp=Z,28nm,0.6s						
SKR				MLR	MLR		
	comp=Z,200nm,14.0s						
SKR	Severo-Kuril's	6.66	30	eP	Pn	03 14 37.0	+0.5
SKR				AMB	AMB	03 14 39.0	
	comp=Z,30nm,0.6s						
SKR				eS	Sn	03 15 49.6	-1.4
SKR				A	A	03 16 04.0	
	comp=Z,40nm,6.0s						
SKR				A	A	03 16 04.0	
	comp=Z,50nm,6.0s						
JNB	Noboribetsu	7.60	254	P	Pn	03 14 51.0	+1.6
JKB	Kayabe	7.85	250	P	Pn	03 14 53.6	+0.8
JKB				eS	Sn	03 16 16.8	-3.6
JANG	Nango	8.34	239	eS	Sn	03 16 26.8	-5.7
JTM	Tenmabayashi	8.38	243	P	Pn	03 15 00.5	+0.4
JSR	Shiriuchi	8.42	249	P	Pn	03 15 01.8	+1.1
JOSM	Okushiri--Mats	8.82	255	P	Pn	03 15 07.2	+1.1
PETK	Petropavlovsk-	9.23	26	P	Pn	03 15 15.4	+3.6
	comp=Z,0.5nm,0.3s,baz=194,slow=11,SNR=8.0						
PET	Petropavlovsk	9.48	30	iPN	Pn	03 15 20.3	+5.1
PET	Petropavlovsk	9.48	30	eP	Pn	03 15 16.0	+0.8
PET				AMB	AMB	03 15 16.6	
	comp=Z,6.0nm,0.3s						
MAJO	Matsushiro	12.81	233	⇑iPN	Pn	03 16 05.0	+4.1
USRK	Ussuriysk Ar.	13.52	273	P	Pn	03 16 12.4	+1.9
	comp=Z,0.2nm,0.3s,baz=80,slow=9.8,SNR=2.9						
KLR	Kul'dur	13.71	295	P	Pn	03 16 13.2	+0.2
	comp=Z,0.1nm,0.3s,baz=156,slow=18,SNR=2.4						
KLR	Kul'dur	13.71	295	⇑iPN	Pn	03 16 13.1	+0.1
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KLR	Kul'dur	13.71	295	eP	Pn	03 16 13.1	+0.1
MA2	Magadan	14.58	360	eP	Pn	03 16 24.8	0.0
MA2	Magadan	14.58	360	eP	Pn	03 16 24.9	+0.1
SEY	Seymchan	17.97	2	eP	P	03 17 08.5	+0.2
SEY	Seymchan	17.97	2	eP	P	03 17 08.5	+0.2
BILL	Bilibino	24.43	14	⇑eP	P	03 18 16.3	+0.1
BILL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL				MLR	MLR		
	comp=Z,336nm,17.0s						
BILL	Bilibino	24.43	14	eP	P	03 18 16.4	+0.2
H11N2	WAKE ISLAND Hy	28.49	147	T	T	03 49 28.0	
	baz=340						
H11N1	WAKE ISLAND Hy	28.50	147	T	T	03 49 49.2	
	baz=340						
H11N3	WAKE ISLAND Hy	28.51	147	T	T	03 49 38.4	
	baz=340						
TIXI	Tiksi	28.73	346	⇑iP	P	03 18 54.0	-0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI	Tiksi	28.73	346	eP	P	03 18 54.0	-0.9
H11S1	WAKE ISLAND Hy	29.53	148	T	T	03 50 58.1	
	baz=332						
H11S3	WAKE ISLAND Hy	29.54	148	T	T	03 50 55.8	
	baz=332,slow=74						
H11S2	WAKE ISLAND Hy	29.55	148	T	T	03 50 53.9	
	baz=332,slow=74						
ULN	Ulaanbaatar	30.06	291	iP	P	03 19 06.7	-0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,2.2s						
ULN	Ulaanbaatar	30.06	291	eP	P	03 19 06.7	-0.4
SONM	Songino Array	30.50	291	P	P	03 19 11.7	+0.7
	comp=Z,0.3nm,0.4s,baz=55,slow=7.6,SNR=2.9						
TLY	Talaya	31.65	299	eP	P	03 19 19.3	-1.7
TLY				pmax	pmax		
	comp=Z,12nm,2.3s						
TLY	Talaya	31.65	299	eP	P	03 19 19.3	-1.7
COLA	College	38.44	37	⇑iP	P	03 20 17.7	-1.4
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	38.85	37	P	P	03 20 22.6	0.0
	comp=Z,0.2nm,0.4s,baz=269,slow=8.1,SNR=4.1						
INK	Inuvik	43.93	31	P	P	03 21 04.6	+0.5
	comp=Z,0.5nm,0.6s,baz=248,slow=5.5,SNR=3.5						
MKAR	Makanchi Array	46.39	298	P	P	03 21 24.1	0.0
	comp=Z,0.8nm,0.5s,baz=72,slow=6.6,SNR=8.5						
KURK	Kurchatov	47.06	304	⇑iP	P	03 21 28.5	-0.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	47.06	304	eP	P	03 21 28.5	-0.7
BRVK	Borovoye	50.83	310	⇓iP	P	03 21 56.5	-1.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BRVK	Borovoye	50.83	310	eP	P	03 21 56.5	-1.5
YKA	Yellowknife Ar	53.22	35	P	P	03 22 15.4	-0.2
	comp=Z,0.3nm,0.6s,baz=300,slow=6.6,SNR=3.1						
AAK	Ala-Archa	53.23	296	⇑iP	P	03 22 14.8	-1.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	53.23	296	eP	P	03 22 14.8	-1.5
ARU	Arti	55.26	318	iP	P	03 22 28.4	-2.2
ARU				pmax	pmax		
	comp=Z,2.0nm,1.2s						
NVAR	Mina Array Bea	64.61	60	P	P	03 23 35.6	+0.3
	comp=Z,0.3nm,0.6s,baz=299,slow=9.2,SNR=3.0						
FINES	FINESS Array B	64.94	334	P	P	03 23 34.8	-2.0
	comp=Z,1.4nm,0.7s,baz=46,slow=8.8,SNR=5.5						
WRA	Warramunga Arr	66.39	197	P	P	03 23 48.6	+2.0
	comp=Z,0.6nm,0.3s,baz=20,slow=9.9,SNR=2.3						
PDAR	Pinedale Array	67.01	52	P	P	03 23 52.2	+1.4
	comp=Z,0.3nm,0.3s,baz=350,slow=4.6,SNR=2.7						
NB2	NORSAR Subarra	69.36	340	P	P	03 24 03.5	-1.4
	comp=Z,0.7nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	69.36	340	P	P	03 24 03.7	-1.2
	comp=Z,1.0nm,0.5s,baz=29,slow=6.6,SNR=7.9						
NOA	NORSAR Array B	69.36	340	eP	P	03 24 03.7	-1.2
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	Alice Springs	70.10	197	P	P	03 24 12.9	+3.1
	comp=Z,0.8nm,0.8s,baz=353,slow=5.0,SNR=4.6						
KBZ	Khabaz	70.94	313	P	P	03 24 15.2	+0.3
	comp=Z,3.8nm,0.8s,baz=45,slow=4.8,SNR=5.8						
AKASG	Malin Array Be	72.12	325	P	P	03 24 20.2	-1.5
	comp=Z,0.7nm,0.4s,baz=28,slow=4.4,SNR=4.2						
CLL	Collm	77.39	334	⇓iP	P	03 24 51.5	-0.8
CLL				e*PP	pwP	03 25 08.0	+0.7
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	Collm	77.39	334	⇓iP	P	03 24 51.5	-0.8
	comp=Z,5.0nm,1.0s						
CLL				epP	pwP	03 25 08.0	+0.7
BRTR	Keskin Array B	78.58	316	P	P	03 24 58.5	-0.8
	comp=Z,0.9nm,1.0s,baz=46,slow=8.3,SNR=3.8						
KHC	Kasperske Hory	79.11	333	eP	P	03 25 01.7	-0.2
KHC	Kasperske Hory	79.11	333	eP	P	03 25 01.7	-0.2
GERES	GERESS Array B	79.32	333	P	P	03 25 02.5	-0.7
	comp=Z,0.5nm,0.6s,baz=347,slow=5.5,SNR=5.2						
GERES	GERESS Array B	79.32	333	eP	P	03 25 01.8	-1.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	79.69	59	P	P	03 25 06.2	+0.8
	comp=Z,0.2nm,0.5s,baz=288,slow=4.2,SNR=6.0						
TORD	Torodi Ar. Bea	115.74	326	PKP	PKiKP	03 31 39.5	-0.8
	comp=Z,0.1nm,0.4s,baz=28,slow=1.4,SNR=2.8						

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*IDC **19** 03:21:11.5±0.7, 41°.38S×174°.36E, h0^{km}, mb4.3/6, mb1 4.4/8, mb1mx4.2/24, mbtmp4.3/8, ML3.6/2, MS3.8/2, Ms1 3.8/2, ms1mx3.3/22, Error ellipse: s-maj=24.3km s-min=19.0km az=87.0*

*ISCJB **19** 03:21:14.1±0.5, 41°.75S±0°.03×174°.48E±0°.04, h25^{km}±3^{km}, mb4.8/15, MS4.3/1, Error ellipse: s-maj=5.9km s-min=3.2km az=43.0*

*NEIC **19** 03:21:14.0±0.0, 41°.54S×174°.43E, h15^{km}, mb4.5/8, MW4.4, ML4.6(WEL), Moment Tensor Solution. s39 Moment tensor: Scale 10^{15}Nm; M$_{rr}$4.37; M$_{\theta\theta}$-0.25; M$_{\phi\phi}$-4.12; M$_{r\theta}$-0.41; M$_{\theta\phi}$-0.58; M$_{\phi r}$1.45; Best double couple: M$_0$4.50000×10^{15} NP1:φ$_s$195.00000°, δ37.00000°, λ102.00000°. NP2:φ$_s$1.00000°, δ54.00000°, λ82.00000°. Principal axes: T 4.6600, Plg79.0000°, Azm239.0000°; N -0.2400, Plg7.0000°, Azm6.0000°; P -4.4200, Plg9.0000°, Azm97.0000°; After WEL.*

NEIC Felt [III] at Wellington. Also felt at Porirua.

*WEL **19** 03:21:15.0, 41°.5S±0°.5×174°.4E±0°.7, h15^{km}±2^{km}, M4.7/23, ML4.9/7, MLv4.7/23 Error ellipse: s-maj=0.0km s-min=0.0km az=123.3*

ISC 19 03:21:12.4±1.4, **41°.59S**±0°.03×**174°.54E**±0°.03, **h8^{km}**±8^{km}, **n143,** σ1^{s}**62**/138, **mb4.9**/15, **1D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.29	236	P	Pb	03 21 21.3	+1.5
SNZO	South Karori	0.31	25	ePg	Pb	03 21 22.0	+1.9
BHW	Baring Head	0.31	55	P	Pn	03 21 23.1	-0.2
BHW				S	Sb	03 21 28.6	+3.2
TCW	Tory Channel	0.42	333	P	Pb	03 21 22.8	+0.6
TCW				S	Sb	03 21 27.8	-0.9
TUWZ	Tuamarina	0.47	290	P	Pb	03 21 23.0	+0.1
TUWZ				S	Sb	03 21 28.4	-1.7
BSWZ	Blackbirch Sta	0.51	256	P	Pb	03 21 24.3	+0.7
BSWZ				S	Sb	03 21 31.5	+0.3
PLWZ	Palliser	0.54	88	P	Pn	03 21 27.7	+1.3
MSWZ	Moikau Station	0.56	72	P	Pn	03 21 27.8	+1.0
CAW	Cannon Point	0.63	40	P	Pn	03 21 27.8	+0.2
PAWZ	Paruwai Farm	0.70	73	P	Pn	03 21 30.4	+1.7
TRWZ	Traveller	0.89	78	P	Pb	03 21 26.8	-3.2
HOWZ	Holdsworth Sta	1.01	47	P	Pb	03 21 28.5	-3.7
KHZ	Kahutara	1.11	222	ePn	Pg	03 21 34.6	+1.0
KHZ	Kahutara	1.11	222	P	Pb	03 21 28.7	-5.1
TMWZ	Te Maipa	1.13	65	P	Pn	03 21 30.2	-4.3
MRZ	Mangatainoka R	1.22	41	P	Pn	03 21 31.4	-4.4
THZ	Tophouse	1.23	261	ePn	Pb	03 21 35.7	-0.2
THZ	Tophouse	1.23	261	P	Pn	03 21 30.2	-5.8
TIWZ	Tintock	1.30	52	P	Pn	03 21 33.0	-4.0
CPWZ	Castlepoint	1.43	62	P	Pn	03 21 39.2	+0.6
PRWZ	Pori Road	1.50	47	P	Pn	03 21 35.7	-3.9
OHWZ	Ohakea	1.50	23	P	Pg	03 21 43.3	+2.1
POWZ	Post Office Ro	1.52	38	P	Pn	03 21 39.6	-0.3
BFZ	Birch Farm	1.58	56	ePn	Pn	03 21 41.8	+1.0
BFZ	Birch Farm	1.58	56	P	Pn	03 21 36.1	-4.6
QRZ	Quartz Range	1.69	296	P	Pg	03 21 45.0	+0.2
QRZ				S	Sg	03 22 05.5	-1.3
GVZ	Greta Valley S	1.77	218	P	Pn	03 21 37.5	-5.8
DVHZ	Dannevirke	1.79	44	P	Pn	03 21 43.6	0.0
ANWZ	Angora Road	1.85	53	P	Pn	03 21 45.6	+1.1
WAZ	Wanganui	1.86	11	P	Pn	03 21 43.0	-1.6
LTZ	Lake Taylor	2.06	234	ePn	Pn	03 21 47.3	-0.1
LTZ	Lake Taylor	2.06	234	P	Pn	03 21 48.2	+0.8
PRHZ	Porangahau	2.07	51	P	Pn	03 21 48.3	+0.9
PNHZ	Pukenui	2.10	38	P	Pn	03 21 44.9	-3.0
WPHZ	Waipukurau	2.10	44	P	Pn	03 21 49.5	+1.6
AMCZ	Amberley	2.11	221	P	Pn	03 21 48.3	+0.3
LREZ	Lake Rotokare	2.13	357	P	Pg	03 21 52.9	-0.2
NMEZ	Namu Road	2.23	347	P	Pb	03 21 53.6	+0.7
PREZ	Palmer Road	2.26	353	P	Pg	03 21 54.8	-0.9
MTVZ	Mangateitei	2.31	18	P	Pb	03 21 55.9	+1.5
MOVZ	Moawhango	2.37	23	P	Pn	03 21 51.0	-0.6
NBEZ	Newall Road No	2.37	347	P	Pb	03 21 55.5	+0.1
PKVZ	Pokaka	2.38	15	P	Pb	03 21 55.0	-0.5
OKCZ	Okains Bay	2.40	207	P	Pn	03 21 45.3	-6.6
DREZ	Durham Road	2.41	354	P	Pb	03 21 56.8	+0.8
PKE	Pukeiti	2.43	350	P	Pb	03 21 56.5	+0.1
CRLZ	Canterbury Las	2.44	215	ePn	Pn	03 21 51.9	-0.6
DRZ	Dome Shelter	2.44	19	P	Pb	03 21 56.4	-0.3

FWVZ	Far West T-bar	2.46	19	P	Pb	03 21 57.4	+0.4
VRZ	Vera Road	2.47	4	P	Pb	03 21 56.2	-0.8
TUVZ	Tukino	2.47	21	P	Pb	03 21 56.3	-0.8
MHEZ	Mangahewa	2.52	356	P	Pg	03 22 00.7	+0.1
MQZ	McQueen's Vall	2.53	213	ePn	Pn	03 21 52.4	-1.4
MQZ	McQueen's Vall	2.53	213	P	Pn	03 21 46.5	-7.3
OXZ	Oxford	2.54	226	ePn	Pn	03 21 53.0	-0.9
AKCZ	Akaroa Harbour	2.58	207	P	Pn	03 21 48.0	-6.4
TWVZ	Taurewa	2.61	16	P	Pb	03 21 58.0	-1.4
KATZ	Kakaramea	2.76	19	P	Pb	03 22 01.9	-0.1
BKZ	Black Stump Fm	2.84	32	ePn	Pn	03 21 58.7	+0.5
RATZ	Rangitukua	2.88	20	P	Pb	03 22 05.2	+1.2
HATZ	Hinemaiaia	2.95	24	P	Pg	03 22 07.8	-1.0
WATZ	Wairara	3.02	18	P	Pb	03 22 06.9	+0.5
HIZ	Hauiti	3.08	5	ePn	Pn	03 22 03.8	+2.4
MRHZ	Matea Rd	3.11	28	P	Pg	03 22 11.1	-0.8
KUTZ	Kaahu Road	3.25	18	P	Pg	03 22 14.2	-0.4
ALRZ	Allen Road	3.33	25	P	Pb	03 22 11.9	+0.2
RPZ	Rata Peaks	3.33	229	Pn	Pn	03 22 04.5	-0.4
	18nm,0.3s,baz=77,slow=1.4,SNR=31						
RPZ				Sn	Sn	03 22 41.5	-3.1
	35nm,0.3s,baz=7.2,slow=19,SNR=3.7						
RPZ				LR	LR	03 23 11.7	
	comp=Z,465nm,21.2s,baz=70,slow=36						
RPZ	Rata Peaks	3.33	229	ePn	Pn	03 22 03.5	-1.3
TLZ	Tolley Road	3.35	14	P	Pn	03 22 08.6	+3.6
PRRZ	Plateau Road	3.40	25	P	Pb	03 22 12.8	0.0
GRRZ	Galatos Road	3.45	21	P	Pb	03 22 14.4	+0.5
HRRZ	Handcock Road	3.47	23	P	Pb	03 22 15.3	+1.3
HSRZ	Hossack Road	3.53	22	P	Pb	03 22 15.7	+0.6
MUGZ	Murupara	3.55	30	P	Pg	03 22 21.2	+0.8
RRRZ	Republican Roa	3.58	26	P	Pb	03 22 16.4	+0.3
OMRZ	Omania	3.75	23	P	Pb	03 22 20.2	+1.2
URZ	Urewera	3.87	32	Pn	Pn	03 22 12.1	-0.1
	1.5nm,0.3s,baz=68,slow=8.0,SNR=3.1						
URZ				Sn	Sn	03 22 58.2	+0.4
	33nm,0.3s,baz=196,slow=16,SNR=3.0						
URZ	Urewera	3.87	32	ePn	Pn	03 22 12.7	+0.5
KMRZ	Kaimai	3.89	17	P	Pb	03 22 21.3	0.0
TOZ	Tahuroa Road	3.92	11	P	Pb	03 22 18.1	-3.7
FOZ	Fox Glacier	3.99	239	ePn	Pn	03 22 12.7	-1.1
OPRZ	Ohinepanea	4.05	23	P	Pb	03 22 27.3	+3.3
LBZ	Lake Benmore	4.24	227	ePn	Pn	03 22 17.0	-0.4
ODZ	Otahua Downs	4.47	218	ePn	Pn	03 22 19.6	-0.9
KBAZ	Karaka Road Bo	4.50	4	P	Pb	03 22 30.7	-0.9
MKAZ	Moumakai	4.50	6	P	Pn	03 22 24.2	+3.3
AWAZ	Awhitu Peninsu	4.52	1	P	Pn	03 22 25.4	+4.3
ETAZ	East Tamaki Re	4.64	4	P	Pb	03 22 28.4	-5.6
WTAZ	Waiatarua	4.65	0	P	Pn	03 22 28.2	+5.3
WMGZ	Waiomatatini S	4.81	40	P	Pb	03 22 34.2	-2.7
WIAZ	Waiheke Island	4.81	6	P	Pn	03 22 29.1	+3.9
MBAZ	Motutapu North	4.82	3	P	Pn	03 22 30.6	+5.3
KUZ	Kuaotunu	4.92	11	P	Pn	03 22 31.5	+4.9
MXZ	Matakaoa Point	4.97	37	ePn	Pn	03 22 28.1	+0.9
ABAZ	Army Bay	4.99	3	P	Pn	03 22 32.2	+4.7
WKZ	Wanaka	5.17	229	ePn	Pn	03 22 29.6	-0.4
WCZ	Waipu Caves	5.64	358	P	Pn	03 22 41.0	+4.4
MLZ	Mavora Lakes	6.00	229	ePn	Pn	03 22 41.0	-0.5
OUZ	Omahuta	6.40	353	ePn	Pn	03 22 46.9	-0.1
OUZ	Omahuta	6.40	353	P	Pn	03 22 50.3	+3.3
WHZ	Wether Hill Ro	6.42	226	ePn	Pn	03 22 46.5	-0.8
DCZ	Deep Cove	6.62	232	ePn	Pn	03 22 49.5	-0.4
CTA	Charters Tower	32.15	303	P	P	03 27 39.3	-1.3
	4.0nm,0.7s,baz=105,slow=2.8,SNR=3.2						
VNDA	Vanda	36.42	185	P	P	03 28 18.6	+1.7
	0.4nm,0.4s,baz=83,slow=18,SNR=5.1						
AS31	Alice Springs	38.19	285	eP	P	03 28 30.8	-1.8
	1.9nm,0.5s						
ASAR	Alice Springs	38.19	285	P	P	03 28 31.7	-1.0
	4.6nm,0.5s,baz=124,slow=6.3,SNR=55						
WB2	Warramunga Arr	40.24	290	eP	P	03 28 48.5	-1.3
	22nm,0.8s						
WRAB	Tennant Creek	40.25	290	eP	P	03 28 48.5	-1.4
	21nm,0.8s						
WR1	Warramunga Arr	40.25	290	eP	P	03 28 49.2	-0.6
WRA	Warramunga Arr	40.25	290	P	P	03 28 49.2	-0.6
	26nm,0.7s,baz=128,slow=8.0,SNR=117						
MTN	Manton Dam	47.34	294	eP	P	03 29 46.0	-0.9
	32nm,1.2s						
QSPA	South Pole Qui	48.54	180	P	P	03 29 59.0	+3.3
	4.8nm,0.6s,baz=16,slow=0.9,SNR=47						
QSPA	South Pole Qui	48.54	180	eP	P	03 29 56.8	+1.0
	31nm,1.5s						
SYO	Syowa Base	64.79	196⇓	eP	P	03 31 49.8	-1.2
SNAA	Sanae	67.03	181	P	P	03 32 07.1	+1.6
SNAA	Sanae	67.03	181	eP	P	03 32 06.1	+0.6
	17nm,1.5s						
VNA3	Neumayer Olymp	67.44	179	P	P	03 32 09.8	+1.7
VNA1	Neumayer--Stat	68.05	179	P	P	03 32 13.8	+2.0
USHA	Ushuaia	69.99	147	LR	LR	03 54 43.3	
	comp=Z,192nm,21.4s,baz=169,slow=29						
NJ2	Nanjing	89.43	315	eP	P	03 34 10.9	+1.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KSRS	Korea Array	89.45	325	P	P	03 34 09.8	+0.2
	comp=Z,2.1nm,0.9s,baz=145,slow=5.4,SNR=4.8						
KS15	Wonju Array Si	89.45	325	eP	P	03 34 09.8	+0.2
	comp=Z,21nm,1.3s						
CM31	Chiang Mai Arr	91.77	293	eP	P	03 34 21.1	+0.3
	comp=Z,9.9nm,0.6s						
CMAR	Chiang Mai Arr	91.77	293	P	P	03 34 21.1	+0.3
	comp=Z,1.1nm,0.5s,baz=191,slow=2.9,SNR=4.4						
HHC	Hu-ho-hao-te	99.92	317	eP	Pdif	03 34 59.0	+1.4
WMQ	Urumqi	115.24	307	eP	PKiKP	03 39 54.8	+0.8
YKA	Yellowknife Ar	118.13	30	PKP	PKPdf	03 39 58.9	+0.1
	comp=Z,1.4nm,0.6s,baz=262,slow=1.7,SNR=12						
YKB5	Yellowknife Ar	118.13	30	ePKPdf	PKPdf	03 39 58.9	+0.1
MK32	Makanchi Array	120.04	308	ePKPdf	PKPdf	03 40 01.8	-1.3
MKAR	Makanchi Array	120.04	308	PKP	PKPdf	03 40 01.8	-1.3
	comp=Z,0.6nm,0.5s,baz=225,slow=2.9,SNR=8.5						
KBZ	Khabaz	144.77	290	PKP	PKPab	03 40 47.4	-0.9
	comp=Z,1.7nm,0.7s,baz=104,slow=4.2,SNR=3.1						
DBIC	Dimbokro	145.22	181	PKPbc	PKPdf	03 40 51.6	+0.5
	comp=Z,6.8nm,0.6s,baz=162,slow=3.5,SNR=15						
ARA0	ARCESS Array S	147.70	340	ePKPdf	PKPbc	03 40 55.4	-1.0
ARCES	ARCESS Array B	147.70	340	PKPbc	PKPbc	03 40 55.4	-1.0
	comp=Z,3.3nm,0.6s,baz=59,slow=1.8,SNR=21						
BR101	Keskin Array S	150.44	280	ePKPbc	PKPbc	03 41 03.5	-0.9
BRTR	Keskin Array B	150.44	280	PKPbc	PKPbc	03 41 03.5	-0.9
	comp=Z,1.6nm,0.8s,baz=144,slow=6.0,SNR=8.4						
TORD	Torodi Ar. Bea	150.98	194	PKP	PKPdf	03 41 01.5	+1.0
	comp=Z,2.4nm,0.9s,baz=180,slow=4.0,SNR=5.3						
TORD				PKPbc	PKPbc	03 41 06.4	+0.2
	comp=Z,4.1nm,0.9s,baz=160,slow=2.1,SNR=10						
TOA1	Torodi Ar. Sit	150.99	194	ePKPdf	PKPdf	03 41 01.5	+1.0
TOA1				ePKPbc	PKPbc	03 41 06.4	+0.2
FIA0	FINESS Array S	152.51	327	ePKPbc	PKPbc	03 41 07.3	-1.0
FINES	FINESS Array B	152.51	327	PKPbc	PKPbc	03 41 07.3	-1.0
	comp=Z,2.7nm,0.6s,baz=29,slow=3.7,SNR=12						
AKASG	Malin Array Be	154.50	303	PKPbc	PKPbc	03 41 11.0	-1.9
	comp=Z,0.8nm,0.5s,baz=64,slow=2.7,SNR=4.0						
AKBB	Malin Array Si	154.50	303	ePKPbc	PKPbc	03 41 11.0	-1.9
ESDC	Sonseca Array	177.77	211	PKP	PKPdf	03 41 23.8	+0.6
	comp=Z,0.7nm,0.8s,baz=326,slow=2.0,SNR=6.2						
ESDC				PKPab	PKPab	03 43 10.7	+0.7
	comp=Z,0.0nm,0.2s,baz=134,slow=3.1,SNR=4.4						

MAN 19 03:21:15.8, 10°.04N×123°.12E, h23^{km}, mb4.7, ML3.6, MS3.6, 2C, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.70	171⇑	iP	Pn	03 21 30.2	-0.2
SNPH				i S	Sn	03 21 41.1	+0.5
GUIM	Jordan	0.78	318	eP	Pb	03 21 30.5	-0.2
GUIM				eS	Sn	03 21 43.3	+0.9
RCP	Roxas	1.55	346⇑	eP	Pb	03 21 44.8	+0.9
RCP				eS	Sb	03 22 07.9	+4.8
MSLP	Maasin	1.71	87	eP	Pn	03 21 43.3	-0.9
MSLP				eS	Sb	03 22 06.8	-1.0

IDC 19 03:27:21.3±14.0, 16°.86S×167°.39E, h0^{km}, mb4.3/3, mb1 4.5/4, mb1mx3.8/29, mbtmp4.3/4, ML4.3/1, Error ellipse: s-maj=241.5km s-min=39.5km az=69.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.26	190	Pn	Pn	03 28 41.6	+0.2
	11nm,0.3s,baz=322,slow=19,SNR=78						
DZM				Sn	Sn	03 29 41.8	-1.0
	3.6nm,0.3s,baz=300,slow=20,SNR=2.2						
STKA	Stephens Creek	27.76	233	P	P	03 33 12.6	+0.7
	2.6nm,0.8s,baz=66,slow=11,SNR=5.8						
WRA	Warramunga Arr	31.49	259	P	P	03 33 44.6	-0.5
	0.9nm,0.9s,baz=90,slow=6.8,SNR=2.9						
ASAR	Alice Springs	32.09	252	P	P	03 33 50.2	-0.1
	7.9nm,0.6s,baz=78,slow=8.7,SNR=66						

ISCJB 19 03:43:38.8±0.3, 16°.33N±0°.04×94°.46W±0°.03, h97^{km}±3^{km}, mb4.0/24, Error ellipse: s-maj=6.4km s-min=3.5km az=30.5

IDC 19 03:43:39.0±1.0, 16°.37N×94°.31W, h82^{km}±7^{km}, mb3.7/11, mb1 3.9/14, mb1mx3.7/44, mbtmp4.0/14, MS2.5/1, Ms1 2.5/1, ms1mx2.4/32, Error ellipse: s-maj=45.9km s-min=11.5km az=49.0

GCG 19 03:43:39.6±3.2, 16°.84N×94°.38W, h35^{km}±999^{km}, MD4.8

MEX 19 03:43:40.5±0.9, 16°.31N×94°.51W, h91^{km}±11^{km}, MD4.0

NEIC 19 03:43:40.4±0.0, 16°.31N×94°.53W, h94^{km}, mb4.1/33, MD4.3(MEX), After MEX.

ISC 19 03:43:39.3±0.7, 16°.35N±0°.04×94°.51W±0°.03, h89^{km}±7^{km}, n118, σ1^{s}57/130, mb4.0/24, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.82	334	P	Pn	03 43 57.6	+0.7
	205nm,0.3s,baz=145,slow=7.1,SNR=919						
CMIG				S	Sn	03 44 11.0	+0.8
	620nm,0.3s,baz=255,slow=20,SNR=169						
CMIG				LR	LR	03 44 28.1	
	comp=Z,317nm,21.2s,baz=184,slow=54						
CMIG	Matias Romero	0.82	334	eP	Pn	03 43 57.7	+0.7
CMIG				i S	Sn	03 44 11.1	+0.9
TGIG		1.40	72	ePn	Pn	03 44 03.9	+0.1
TGIG				eSn	Sn	03 44 21.2	-1.1
TGIG		1.40	72	i P	Pn	03 44 03.9	+0.1
TGIG				i S	Sn	03 44 21.4	-0.8
PCIG		1.40	117	ePn	Pn	03 44 04.1	+0.3
PCIG				eSn	Sn	03 44 22.1	-0.1
PCIG		1.40	117	eP	Pn	03 44 04.1	+0.3
PCIG				eS	Sn	03 44 21.8	-0.4
HUIG	Huatulco	1.64	250	ePn	Pn	03 44 06.1	-0.8
HUIG				eSn	Sn	03 44 27.0	-0.8
HUIG	Huatulco	1.64	250	eP	Pn	03 44 06.1	-0.8
HUIG				eS	Sn	03 44 27.0	-0.8
TUIG	Tuzandepetl	1.67	3	i S	Sn	03 44 28.7	+0.2
VHO	Vista Hermosa	2.25	289	ePn	Pn	03 44 16.9	+1.9
VHO	Vista Hermosa	2.25	289	eP	Pn	03 44 16.1	+1.2
VHO				eS	Sn	03 44 42.9	+0.6
CCIG	Comitan	2.28	91	ePn	Pn	03 44 14.6	-0.8
CCIG	Comitan	2.28	91	eP	Pn	03 44 15.2	-0.2
CCIG				i S	Sn	03 44 42.4	-0.5
THIG		2.60	123	ePn	Pn	03 44 20.4	+0.9
THIG		2.60	123	i P	Pn	03 44 18.9	-0.5
THIG				eS	Sn	03 44 48.9	-1.3
STG3	Santiaguito 3,	3.27	120	eP	Pn	03 44 30.2	+1.6
LVIG	Laguna Verde	3.81	332	ePn	Pn	03 44 34.2	-1.7
FUG	Fuego 3	4.01	118	eP	Pn	03 44 40.9	+2.2
FUG				eS	Sn	03 45 29.2	+4.5
TLIG	Tlapa	4.07	288	ePn	Pn	03 44 40.9	+1.6
APG	El Apazote	4.12	108	P	Pn	03 44 39.4	-0.9
	17nm,0.3s,baz=268,slow=23,SNR=85						
APG				S	Sn	03 45 25.8	-1.6
	80nm,0.3s,baz=52,slow=18,SNR=10						
APG				LR	LR	03 46 15.6	
	comp=Z,58nm,20.4s,baz=103,slow=40						
PCG	Pacaya	4.24	117	eP	Pn	03 44 44.8	+2.9
NBG	Las Nubes	4.38	113	eP	Pn	03 44 46.5	+2.7
MRL	Marmol	4.82	105	eP	Pn	03 44 50.1	+0.4
MYIG	Mrida	6.44	44	ePn	Pn	03 45 13.1	+1.6
TEIG	Tepich	7.06	56	ePn	Pn	03 45 18.6	-1.5
TGUH	Tegucigalpa,Un	7.35	107	ePn	Pn	03 45 24.3	+0.3
ESTN	Estel	8.51	111	ePn	Pn	03 45 40.8	+0.9
JTS	Las Juntas de	11.08	122	P	Pn	03 46 14.4	-0.5
	5.0nm,0.3s,baz=21,slow=17,SNR=16						
JTS				S	Sn	03 48 16.2	-0.7
	0.4nm,0.3s,baz=324,slow=19,SNR=2.1						
833A	Chaparral WMA,	12.74	340	P	Pn	03 46 41.1	+4.0
	baz=158						
833A				S	Sn	03 48 52.8	-4.4
	baz=158						
CBCY	The Bluff, Cay	14.43	74	ePn	Pn	03 47 00.8	+1.5
435B	Jarrell	14.64	349	P	P	03 47 05.1	-0.7
	baz=168						
435B				S	Sn	03 49 36.2	-6.9
	baz=168						
JCT	Junction City	14.87	342	ePn	Pn	03 47 06.0	+1.1
JCT	Junction City	14.87	342	S	Sn	03 49 42.6	-6.3
	baz=160						
NATX	Nacogdoches	15.34	360	S	Sn	03 49 47.8	-12
	baz=180						
TX31	Lajitas Ar. Si	15.42	328	ePn	Pn	03 47 13.3	+1.3
	8.9nm,1.4s						
TXAR	Lajitas Array	15.42	328	P	P	03 47 14.8	+0.1
	0.1nm,0.3s,baz=146,slow=13,SNR=10						
WHTX	Lake Whitney,	15.80	351	ePn	Pn	03 47 18.2	+1.6
	12nm,0.6s						
WHTX	Lake Whitney,	15.80	351	P	P	03 47 19.4	+0.7
	baz=170						
WHTX				S	Sn	03 49 59.9	-11
	baz=170						
ABTX	Abilene, Hawle	16.86	345	eP	Pn	03 47 30.8	+1.1
	9.7nm,0.8s						
ABTX	Abilene, Hawle	16.86	345	P	P	03 47 31.2	+0.8
	baz=163,SNR=6.1						
ABTX				S	Sn	03 50 25.7	-11
	baz=163						
Z41A	Richland Creek	16.90	5	S	Sn	03 50 23.9	-14
	baz=186						
251A	Midway	17.72	26	P	Pn	03 47 40.8	+0.5
	baz=210						
252A	Lumpkin	17.93	28	P	Pn	03 47 43.0	+0.2
	baz=212						
LRAL	Lakeview Retre	17.95	21	P	P	03 47 42.2	-0.2
	baz=204						
MIAR	Mount Ida	18.14	2	eP	P	03 47 44.4	-0.1
	5.1nm,0.7s						
MIAR	Mount Ida	18.14	2	P	P	03 47 44.5	+0.1
	baz=183						
UALR	University of	18.45	6	eP	P	03 47 48.1	+0.3
	8.9nm,0.6s						
WMOK	Wichita Mounta	18.70	349	eP	Pn	03 47 52.3	+0.1
	4.5nm,0.8s						
W39A	Magazine	18.78	2	P	P	03 47 52.1	+0.6
	baz=182						
X46A	Booneville	18.89	15	P	P	03 47 52.8	0.0
	baz=198						
MSTX	Muleshoe	19.05	339	eP	Pn	03 47 56.8	+0.4
	14nm,0.8s						
MSTX	Muleshoe	19.05	339	P	P	03 47 56.0	+1.3
	baz=155,SNR=11						
AMTX	Amarillo	19.54	342	eP	P	03 48 00.7	+0.8
	10nm,0.7s						
AMTX	Amarillo	19.54	342	P	P	03 48 00.6	+0.7
	baz=159						
FCAR	Ozark Folk Cen	19.57	6	eP	P	03 47 59.8	-0.4
	3.9nm,0.6s						
Y52A	Lilburn	19.81	26	eP	Pn	03 48 04.3	-0.9
	11nm,0.8s						
HHAR	Hobbs	19.86	1	eP	P	03 48 04.4	+1.1
	6.5nm,1.0s						
U40A	Yellville	19.98	4	P	P	03 48 04.4	-0.2
	baz=185						
121A	Cookes Peak, D	20.11	326	P	P	03 48 07.7	+1.5
	baz=140,SNR=8.2						
319A	Douglas	20.12	321	eP	P	03 48 07.1	+0.9
	8.6nm,1.0s						
V46A	Holladay	20.19	15	P	P	03 48 05.4	-1.5
	baz=198						
W50A	Signal Mountai	20.49	22	eP	P	03 48 11.5	+1.3
	8.4nm,0.9s						
WVT	Waverly	20.58	16	P	P	03 48 11.4	+0.4
	baz=198						
V49A	McMinnville	20.80	20	P	P	03 48 15.3	+1.8
	baz=204						
Y55A	Saluda	20.89	31	P	P	03 48 15.8	+1.5
	baz=216						
LENM	Lemitar	20.98	330	eP	P	03 48 16.3	+0.7
LAZ	Ladron	21.25	330	eP	P	03 48 18.6	+0.1
BG3	Lake Jocassee	21.26	27	eP	P	03 48 20.3	+1.9
	4.1nm,0.7s						
ANMO	Albuquerque	21.39	332	P	P	03 48 21.4	+1.5
	1.4nm,0.6s,baz=148,slow=11,SNR=9.5						
ANMO	Albuquerque	21.39	332	eP	P	03 48 21.3	+1.3
	5.5nm,1.4s						
ANMO	Albuquerque	21.39	332	P	P	03 48 21.3	+1.3
	baz=147						
TKL	Tuckaleechee C	21.48	24	S	S	03 52 17.0	+2.9
	1.0nm,0.4s,baz=332,slow=15,SNR=2.8						
TUC	Tucson	21.69	320	eP	P	03 48 25.2	+2.1
	6.9nm,0.9s						
TUC	Tucson	21.69	320	P	P	03 48 26.0	+3.0
	baz=134						
V53A	Saluda	21.89	26	eP	P	03 48 26.2	+1.1
	5.3nm,0.9s						
V53A	Saluda	21.89	26	P	P	03 48 26.2	+1.1
	baz=211						
KMSC	Kings Mountain	22.11	30	epP	pP	03 48 41.0	-4.4
T25A	Trinidad	22.48	339	P	P	03 48 33.4	+1.7
	baz=155,SNR=6.9						
U54A	Nelsons Funny	23.03	27	epP	pP	03 48 57.6	+2.4
SDCO	Great Sand Dun	23.41	338	eP	P	03 48 42.5	+1.7
	7.4nm,1.1s						
SDCO	Great Sand Dun	23.41	338	P	P	03 48 41.3	+0.4
	baz=153,SNR=11						
X16A	Lo Mia Camp, P	23.55	323	eP	P	03 48 42.7	+0.7
	2.7nm,0.9s						
KSCO	Kaye Shedlock'	23.67	344	eP	P	03 48 44.1	+1.2
	7.2nm,0.9s						
BLO	Bloomington	23.79	16	eP	P	03 48 43.6	-0.2
	14nm,0.7s						
S22A	4UR Ranch, Cre	23.92	335	P	P	03 48 45.7	+0.3
	baz=150						
Y14A	Wickenburg	24.16	320	eP	P	03 48 48.9	+1.6
	6.5nm,1.3s						
MVCO	Mesa Verde	24.18	332	eP	P	03 48 48.2	+0.6
	22nm,1.7s						
MVCO	Mesa Verde	24.18	332	P	P	03 48 47.7	0.0
	baz=146						
WUAZ	Wupatki	24.31	325	eP	P	03 48 49.8	+1.1
	6.7nm,1.0s						
WUAZ	Wupatki	24.31	325	P	P	03 48 49.4	+0.7
	baz=138						
P48A	Milroy	24.35	17	eP	P	03 48 49.5	+0.6
	9.5nm,0.8s						
R53A	Hurricane	24.52	24	eP	P	03 48 51.0	+0.6
	8.3nm,0.8s						
PV04	Paradox Valley	25.34	333	eP	P	03 48 58.1	0.0
	13nm,1.1s						
BC3	Big Chuckawall	25.55	316	P	P	03 49 02.6	+2.6
	baz=128						
L40A	Anamosa	25.78	6	P	P	03 49 01.6	-0.2
	baz=187						
GMRC	Granite Mounta	26.38	318	P	P	03 49 08.3	+0.8
	baz=129						
ECSD	EROS Data Cent	27.35	357	P	P	03 49 14.8	-1.2
	baz=176						
MPMC	Manual Prospec	28.34	318	P	P	03 49 26.4	+1.3
	baz=128						
PDAR	Pinedale Array	29.30	337	P	P	03 49 34.4	+0.8
	0.3nm,0.5s,baz=144,slow=9.9,SNR=3.5						
NVAR	Mina Array Bea	30.33	321	P	P	03 49 45.9	+3.1
	2.7nm,0.8s,baz=134,slow=9.0,SNR=21						
KLBO	Killbear Provi	31.31	20	P	P	03 49 51.2	+0.2
	baz=207						
DELO	Deloro Mine	31.49	23	P	P	03 49 51.6	-1.0
	baz=212						
EYMN	Ely	31.60	4	P	P	03 49 52.8	-0.7
	baz=186						
G53A	Haliburton	31.64	22	P	P	03 49 53.8	-0.1
	baz=210						
AGMN	Agassiz Nation	31.88	358	P	P	03 49 54.9	-1.0
	baz=178						
M04C	Macdoel	34.55	323	P	P	03 50 21.2	+1.7
	baz=129						
H04D	Lebanon	36.81	326	P	P	03 50 39.1	+0.5
	baz=131						
SIV	San Ignacio	46.06	133	P	P	03 51 53.2	-1.3
	2.0nm,0.5s,baz=318,slow=7.9,SNR=24						
YKA	Yellowknife Ar	48.21	348	P	P	03 52 10.5	-0.1
	0.8nm,0.7s,baz=150,slow=7.3,SNR=9.4						
CFA	Coronel Fontan	53.94	152	P	P	03 52 53.2	-0.8
	2.0nm,0.7s,baz=297,slow=6.8,SNR=3.7						
BDFB	Brasilia	55.82	122	P	P	03 53 07.6	-0.3
	2.2nm,0.6s,baz=313,slow=8.2,SNR=5.1						
EPYK	Eagle Plains	57.13	341	P	P	03 53 16.1	-0.3
	baz=130						
HDA	Harding Lake	59.59	336	P	P	03 53 33.4	-0.1
	baz=118						
ILAR	Eielson Array	59.74	337	P	P	03 53 35.2	+0.8
	0.7nm,0.5s,baz=157,slow=4.8,SNR=6.5						
NB2	NORSAR Subarra	83.23	28	P	P	03 55 55.8	0.0
	comp=Z,0.8nm,0.6s,baz=293,slow=5.3						
NOA	NORSAR Array B	83.23	28	P	P	03 55 56.0	+0.2
	comp=Z,1.4nm,0.7s,baz=294,slow=5.3,SNR=5.6						
ARCES	ARCESS Array B	84.66	18	P	P	03 56 03.2	+0.3
	comp=Z,1.0nm,0.6s,baz=323,slow=3.8,SNR=5.7						
TORD	Torodi Ar. Bea	92.17	76	P	P	03 56 37.6	-2.1
	comp=Z,0.5nm,1.0s,baz=320,slow=5.6,SNR=3.5						

TAP 19 03:51:51.8, 24°.15N×121°.65E, h4^{km}±1^{km}, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.05	297	P	Pg	03 51 53.8	+0.6
	baz=296						
NACB				eS	Sg	03 51 54.5	+0.5
	baz=296						
TWD	Chiawan	0.08	214	P	Pg	03 51 54.4	+0.8
	baz=209						
TWD				S	Sg	03 51 55.6	+0.9
	baz=209						
ETLH	Xiulin Townshi	0.16	291	eP	Pg	03 51 56.3	+1.3
	baz=290						
ETLH				eS	Sg	03 51 59.3	+2.1
	baz=290						
ENA	Nanau	0.29	17	eS	Sb	03 52 03.7	-1.1
	baz=18						
NANB	Nanao	0.29	19	eP	Pg	03 51 58.5	+1.0
	baz=18						
NANB				eS	Sb	03 52 03.4	-1.5
	baz=18						
WHF	Hehuan Shan	0.35	269	eP	Pb	03 52 00.2	-0.6
	baz=268						
NNSB	Datong	0.37	319	eP	Pb	03 52 00.4	-0.6
	baz=319						
NNSB				eS	Sb	03 52 06.0	-1.1
	baz=319						
CHGB	Renai	0.44	259	eP	Pb	03 52 01.5	-0.7
	baz=258						
CHGB				eS	Sb	03 52 09.0	-0.3
	baz=258						
NDT	Datong Townshi	0.47	345	eP	Pb	03 52 02.5	-0.2
	baz=344						
NDT				eS	Sb	03 52 10.1	+0.2
	baz=344						
YHNB	Yeheng	0.57	335	eP	Pb	03 52 04.9	+0.4
	baz=334						
YHNB				eS	Sb	03 52 13.1	+0.1
	baz=334						
VWDT	VWDT	0.61	230	eP	Pb	03 52 04.6	-0.4
	baz=229						

ISCJB 19 03:52:09.4±1.4, 20°.25S±0°.03×70°.96W±0°.05, h10^{km}±10^{km}, mb3.8/6, Error ellipse: s-maj=7.3km s-min=4.6km az=4.6

GUC 19 03:52:12.0±0.6, 20°.23S×70°.84W, h33^{km}±4^{km}, ML3.9

IDC 19 03:52:16.2±4.0, 19°.94S×70°.51W, h38^{km}±36^{km}, mb3.5/7, mb1 3.8/10, mb1mx3.6/30, mbtmp3.8/10, ML3.7/3, MS3.3/3, Ms1 3.3/3, ms1mx3.1/19, Error ellipse: s-maj=30.7km s-min=23.9km az=110.0

ISC 19 03:52:10.2±1.7, 20°.26S±0°.03×70°.87W±0°.06, h9^{km}±10^{km}, n45, σ1^{s}17/51, mb3.8/6, 8C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.96	47⇓	iP	Pg	03 52 28.8	0.0
PSGC				i S	Sg	03 52 41.0	-0.2
PSGC				IAML		03 52 47.5	
	comp=E,3µm,0.6s						
PB11	IPOC Station P	1.25	67	eP	Pn	03 52 33.4	-0.6
PB11				eS	Sn	03 52 51.3	+0.3
PB11	IPOC Station P	1.25	67⇓	iP	Pn	03 52 33.5	-0.5
PB11				i S	Sb	03 52 49.7	-0.5
PB11				IAML		03 52 54.9	
	comp=N,4µm,0.5s						
PB02	IPOC Station P	1.40	139	eP	Pn	03 52 36.5	+0.5
PB02				eS	Sg	03 52 56.7	+1.4
PB02	IPOC Station P	1.40	139⇑	iP	Pn	03 52 36.4	+0.3

PB02				*i* S	Sn	03 52 53.7	-1.0
PB02				IAML		03 53 02.3	
	comp=E,7µm,0.4s						
PB01	**IPOC Station P**	1.52	121	⇓*i*P	Pn	03 52 38.2	+0.6
PB01				*i* S	Sn	03 52 57.6	0.0
PB01				IAML		03 53 05.5	
	comp=E,4µm,0.3s						
PB08	**IPOC Station P**	1.62	86	⇓*e*P	Pn	03 52 39.8	+0.4
PB08				*e*S	Sg	03 53 02.5	+0.2
PB08	**IPOC Station P**	1.62	86	⇑*i*P	Pn	03 52 39.7	+0.4
PB08				*i* S	Sn	03 53 01.1	+0.6
PB08				IAML		03 53 04.5	
	comp=E,1µm,0.3s						
MNMC	**Minye Minye**	1.64	47	⇑*i*P	Pn	03 52 39.7	+0.1
MNMC				*e*S	Sb	03 53 01.8	0.0
MNMC				IAML		03 53 09.4	
	comp=E,6µm,0.4s						
MNMCX	**Minye Minye**	1.64	47	*e*P	Pn	03 52 40.1	+0.6
GO01	**Chusmiza**	1.68	70	⇑*i*P	Pn	03 52 40.5	+0.2
GO01				*i* S	Sb	03 53 03.5	+0.4
GO01				IAML		03 53 04.2	
	comp=N,5µm,0.3s						
PB12	**IPOC Station P**	1.71	18	*e*P	Pn	03 52 40.0	-0.4
PB12	**IPOC Station P**	1.71	18	⇑*i*P	Pn	03 52 39.8	-0.5
PB12				*i* S	Sb	03 53 03.5	-0.1
PB12				IAML		03 53 13.8	
	comp=E,2µm,0.4s						
PB07	**IPOC Station P**	1.73	148	*e*P	Pn	03 52 40.9	+0.2
PB07	**IPOC Station P**	1.73	148	⇑*i*P	Pn	03 52 40.9	+0.2
PB07				*i* S	Sn	03 53 03.3	+0.3
PB07				IAML		03 53 20.8	
	comp=N,1µm,0.6s						
PB03	**IPOC Station P**	2.07	150	*e*P	Pn	03 52 45.6	+0.3
PB03	**IPOC Station P**	2.07	150	⇑*i*P	Pn	03 52 45.5	+0.2
PB03				IAML		03 53 27.1	
	comp=E,870nm,0.6s						
PB09	**IPOC Station P**	2.16	135	*e*P	Pn	03 52 47.7	+1.1
PB09	**IPOC Station P**	2.16	135	⇑*i*P	Pn	03 52 48.2	+1.6
PB09				*i* S	Sn	03 53 15.1	+1.5
PB09				IAML		03 53 29.9	
	comp=E,2µm,0.5s						
PB04	**IPOC Station P**	2.17	162	*e*P	Pn	03 52 46.7	-0.1
PB05	**IPOC Station P**	2.66	167	*e*P	Pn	03 52 53.5	+0.1
PB06	**IPOC Station P**	2.72	154	*e*P	Pn	03 52 54.8	+0.5
LVC	**Limon Verde**	2.97	142	Pn	Pn	03 52 59.9	+2.0
	comp=E,9.8nm,0.3s,baz=323,slow=11,SNR=95						
LVC				Sn	Sg	03 53 44.3	-1.4
	comp=E,60nm,0.3s,baz=180,slow=5.6,SNR=11						
LVC				LR	LR	03 54 20.3	
	comp=E,425nm,18.3s,baz=322,slow=41						
LVC	**Limon Verde**	2.97	142	*e*P	Pn	03 52 59.0	+1.1
LVC				IAML		03 53 50.6	
	comp=Z,252nm,0.8s						
PB15	**IPOC Station P**	3.21	156	*e*P	Pn	03 53 01.9	+0.8
PB10	**IPOC Station P**	3.26	175	*e*P	Pn	03 53 01.0	-0.5
PB14	**IPOC Station P**	4.37	174	*e*P	Pn	03 53 16.2	-0.9
LPAZ	**La Paz**	4.73	34	Pn	Pn	03 53 27.0	+4.7
	comp=Z,1.4nm,0.3s,baz=215,slow=5.1,SNR=46						
LPAZ				LR	LR	03 55 29.2	
	comp=Z,352nm,18.2s,baz=300,slow=45						
LPAZ	**La Paz**	4.73	34	*e*P	Pn	03 53 23.7	+1.4
SIV	**San Ignacio**	10.23	67	Pn	Pn	03 54 35.9	-1.6
	comp=Z,0.9nm,0.3s,baz=267,slow=9.8,SNR=16						
SIV				LR	LR	03 58 31.5	
	comp=Z,155nm,18.6s,baz=302,slow=38						
CFA	**Coronel Fontan**	11.55	169	Pn	Pn	03 55 02.2	+6.9
	comp=Z,0.3nm,0.3s,baz=331,slow=13,SNR=4.4						
CFA				Sn	Sn	03 57 24.4	+20
	comp=Z,0.2nm,0.3s,baz=270,slow=16,SNR=2.1						
PLCA	**Paso Flores**	20.41	179	P	Pn	03 56 54.9	+5.1
	comp=Z,2.2nm,0.9s,baz=305,slow=5.6,SNR=4.3						
PTGA	**Pitinga**	22.14	30	P	P	03 57 03.9	-2.6
	comp=Z,2.7nm,0.4s,baz=210,slow=14,SNR=9.2						
BDFB	**Brasilia**	22.22	82	P	P	03 57 06.5	-0.9
	comp=Z,1.2nm,0.4s,baz=238,slow=9.5,SNR=3.6						
TXAR	**Lajitas Array**	58.57	326	P	P	04 02 09.9	+2.4
	comp=Z,0.2nm,0.6s,baz=129,slow=7.1,SNR=2.7						
PDAR	**Pinedale Array**	72.13	331	P	P	04 03 36.2	+0.8
	comp=Z,0.2nm,0.4s,baz=141,slow=4.5,SNR=2.1						
TORD	**Torodi Ar. Bea**	78.68	71	P	P	04 04 12.2	-1.2
	comp=Z,2.6nm,0.7s,baz=254,slow=5.1,SNR=31						
YKA	**Yellowknife Ar**	89.42	341	P	P	04 05 06.1	-0.8
	comp=Z,0.5nm,0.7s,baz=141,slow=5.2,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	125.89	279	T	T	06 30 43.6	
	baz=102,slow=74,SNR=26						
H11S1	**WAKE ISLAND Hy**	125.90	279	T	T	06 30 44.3	
	baz=102,slow=74,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	125.91	279	T	T	06 30 35.4	
	baz=102,slow=74,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	125.94	280	T	T	06 30 30.5	
	baz=102,slow=75,SNR=9.0						
H11N2	**WAKE ISLAND Hy**	125.96	280	T	T	06 30 43.9	
	baz=102,slow=75,SNR=8.0						
H11N1	**WAKE ISLAND Hy**	125.96	280	T	T	06 30 46.9	
	baz=102,slow=75,SNR=5.4						
MKAR	**Makanchi Array**	145.66	33	PKPbc	PKPab	04 11 49.7	0.0
	comp=Z,2.2nm,0.8s,baz=320,slow=3.6,SNR=9.2						

JMA 19 03:52:38.4, 24°.55N×123°.38E, h28^{km}±2^{km}, M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	0.35	255	P	Pb	03 52 46.1	-0.3
YOJ				*e*S	Sb	03 52 51.9	+0.1
IRIF	**Iriomote-Funau**	0.38	124	P	Pb	03 52 46.6	-0.3
IRIF				S	Sb	03 52 52.7	0.0
HATJ	**Hateruma jima**	0.63	142	*e*S	Sb	03 52 58.8	-0.5
JKRS	**Kuro-shima**	0.65	118	P	Pb	03 52 51.0	-0.3
JKRS				S	Sb	03 52 59.8	-0.2
JIJ	**Ishigaki jima**	0.72	105	P	Pb	03 52 52.1	-0.3
JIJ				S	Sb	03 53 01.2	-0.7
JISG	**Ishigakijimahi**	0.85	87	S	Sb	03 53 05.4	-0.2

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*IDC **19** 03:55:17.8±2.8, 36°.31N×70°.83E, h186^{km}±24^{km}, mb3.5/11, mb1 3.7/16, mb1mx3.3/56, mbtmp4.1/16, MS3.8/2, Ms1 3.8/2, ms1mx3.0/37, Error ellipse: s-maj=20.8km s-min=14.4km az=178.0*

*ISCJB **19** 03:55:19.1±0.3, 36°.55N±0°.03×70°.79E±0°.04, h200^{km}, mb3.8/13, Error ellipse: s-maj=4.2km s-min=3.6km az=176.1*

*NNC **19** 03:55:20.8±2.0, 36°.69N×70°.68E, h178^{km}±26^{km}, mb3.4, mpv4.2, Error ellipse: s-maj=19.8km s-min=10.4km az=160.0*

*NEIC **19** 03:55:20.4±1.8, 36°.53N×70°.83E, h206^{km}±8^{km}, mb4.1/8, Error ellipse: s-maj=10.0km s-min=4.4km az=47.0*

ISC 19 03:55:19.9±0.5, 36°.54N±0°.05×70°.78E±0°.05, h200^{km}, n82, $\sigma 1^{s}.02$/91, mb3.8/13, 10C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	2.45	216	*e*Pn	Pn	03 56 05.1	+1.6
KBL				*e*Sn	Sn	03 56 38.1	+0.7
GAR	**Garm**	2.48	352	*e*Pn	Pn	03 56 04.8	+1.1
GAR				*e*Sn	Sn	03 56 37.4	-0.5
CEP	**Cherat**	2.87	161	P	Pn	03 56 10.0	+1.8
BTK	**Batken**	3.51	0	*e*Pn	Pn	03 56 18.0	+2.4
BTK				*e*Sn	Sn	03 57 00.7	+1.1
CHCP	**Chirah Chowk**	3.53	144	P	Pn	03 56 18.0	+2.1
NIL	**Nilore**	3.53	144	*e*Pn	Pn	03 56 17.2	+1.3
THW	**Thamme Wali**	3.82	168	P	Pn	03 56 20.9	+1.3
SARP	**Sargodha**	4.87	161	P	Pn	03 56 33.3	+0.6
ARSB	**Arslanbob**	5.07	19	*e*Pn	Pn	03 56 35.6	+0.3
NRN	**Naryn**	6.35	38	*e*Pn	Pn	03 56 51.4	-0.6
UCH	**Uchtor**	6.37	26	P	Pn	03 56 53.0	+0.7
	SNR=67						
KZA	**Kyzart**	6.52	31	P	Pn	03 56 54.3	+0.1
	SNR=11						
EKS2	**Erkin-Say**	6.53	20	P	Pn	03 56 54.9	+0.8
	SNR=11						
KK31	**Karatay Array**	6.55	358	*e*Pn	Pn	03 56 54.6	+0.4
KK31	**Karatay Array**	6.55	358	⇑P	Pn	03 56 54.6	+0.4
	3.8nm,0.3s,baz=184,slow=12,SNR=79						
KK31				⇑S	Sn	03 58 05.5	-3.6
	39nm,0.5s						
KKAR	**Karatay Array**	6.55	358	*e*Pn	Pn	03 56 54.6	+0.4
AAK	**Ala-Archa**	6.73	24	P	Pn	03 56 57.5	+0.9
	6.2nm,0.3s,baz=192,slow=7.9,SNR=28						
AAK				S	Sn	03 58 12.3	-1.0
	4.4nm,0.3s,baz=128,slow=23,SNR=26						
AAK	**Ala-Archa**	6.73	24	*e*Pn	Pn	03 56 57.0	+0.4
AAK	**Ala-Archa**	6.73	24	⇓P	Pn	03 56 57.0	+0.4
	11nm,0.6s						
AAK				⇑S	Sn	03 58 11.7	-1.6
	36nm,0.7s						
AAK	**Ala-Archa**	6.73	24	P	Pn	03 56 57.2	+0.6
	SNR=14						
KBK	**Karagaybulak**	6.90	27	P	Pn	03 56 59.9	+1.0
	SNR=7.2						
ULHL	**Ulahol**	7.09	35	P	Pn	03 57 02.3	+0.9
	SNR=8.7						
CHMS	**Chumysh**	7.13	24	P	Pn	03 57 02.3	+0.5
	SNR=5.9						
BOOM	**Boomskoye usch**	7.15	32	*e*Pn	Pn	03 57 02.4	+0.2
USP	**Ospenovka**	7.30	22	P	Pn	03 57 03.8	-0.2
	SNR=11						
TKM2	**Tokmak 2**	7.37	29	⇑P	Pn	03 57 05.4	+0.4
	8.0nm,0.4s						
TKM2				⇑S	Sn	03 58 26.8	-1.8
	11nm,0.7s						
TKM2	**Tokmak 2**	7.37	29	P	Pn	03 57 05.7	+0.6
	SNR=28						
KDJ	**Kajisay**	7.46	40	*e*Pn	Pn	03 57 06.3	+0.1
PRZ	**Przheval'sk**	8.36	42	*e*Pn	Pn	03 57 18.3	+0.4
GEYT	**Alibeck**	10.19	282	P	Pn	03 57 41.1	-0.5
	0.9nm,0.3s,baz=110,slow=13,SNR=7.0						
GEYT				S	Sn	03 59 34.0	-1.4
	1.2nm,0.3s,baz=89,slow=20,SNR=3.7						
GYA0B	**ALIBECK ARRAY**	10.19	282	⇑P	Pn	03 57 40.4	-1.2
GYA0B				⇑S	Sn	03 59 33.1	-2.4
MAKZ	**Makanchi**	13.22	36	*e*Pn	Pn	03 58 19.5	-0.5
MAKZ	**Makanchi**	13.22	36	⇑P	Pn	03 58 19.7	-0.3
	9.6nm,0.5s						
MK31	**Makanchi Array**	13.36	36	*e*Pn	Pn	03 58 21.9	+0.2
MK31	**Makanchi Array**	13.36	36	P	Pn	03 58 21.6	-0.2
	2.0nm,0.4s,baz=221,slow=15,SNR=55						
MK32	**Makanchi Array**	13.36	36	*e*Pn	Pn	03 58 21.8	0.0
MKAR	**Makanchi Array**	13.36	36	P	Pn	03 58 21.8	0.0
	1.6nm,0.3s,baz=223,slow=18,SNR=25						
DANN	**Dangsing**	13.66	123	*e*P	Pn	03 58 25.5	-0.5
	18nm,0.3s						
KOLN	**Koldanda**	13.93	125	*e*P	Pn	03 58 28.4	-0.9
	15nm,0.3s						
GKN	**Gorkha**	14.48	122	*e*P	Pn	03 58 35.4	-0.5
	32nm,0.2s						
AB31	**Akbulak array**	14.96	331	P	Pn	03 58 40.9	-0.5
	2.0nm,0.5s,baz=145,slow=10,SNR=47						
AB31				⇓S	S	04 01 28.6	+1.1
	0.8nm,0.5s,baz=155,slow=23,SNR=3.0						
ABKAR	**Akbulak array**	14.96	331	*e*P	Pn	03 58 41.2	-0.3
DMN	**Daman**	15.05	122	*e*P	Pn	03 58 42.3	-0.7
	22nm,0.5s						
KKN	**Kakani**	15.05	121	*e*P	Pn	03 58 42.3	-0.7
	33nm,0.5s						
KURBB	**Kurchatov Arra**	15.14	19	P	Pn	03 58 42.7	-0.9
	0.2nm,0.3s,baz=209,slow=10,SNR=14						
KURBB	**Kurchatov Arra**	15.14	19	⇑P	Pn	03 58 42.2	-1.4
	4.0nm,0.5s						
KURK	**Kurchatov**	15.25	19	*e*P	Pn	03 58 45.2	+0.3
	3.6nm,0.9s						
PKIN	**Phulchoki**	15.27	122	*e*P	Pn	03 58 44.8	-0.9
	18nm,0.3s						
PKI	**Pulchoki**	15.28	122	*e*P	Pn	03 58 44.9	-1.0
	29nm,0.5s						
JIRN	**Jiri**	15.76	120	*e*P	P	03 58 50.9	-0.7
	68nm,0.3s						
BVAR	**Borovoye Array**	16.48	359	P	Pn	03 59 00.4	+0.6
	2.3nm,0.3s,baz=176,slow=10,SNR=22						
BRVK	**Borovoye**	16.52	359	*e*P	P	03 58 59.5	+0.3
	16nm,1.8s						
BRVK	**Borovoye**	16.52	359	⇓P	P	03 59 00.2	+0.9
	1.9nm,0.6s						
AKTO	**Aktyubinsk**	16.65	330	P	Pn	03 59 02.5	+0.7
	0.5nm,0.3s,baz=136,slow=10,SNR=15						
AKTO	**Aktyubinsk**	16.65	330	⇑P	Pn	03 59 02.2	+0.4
	4.6nm,0.8s						
ZAA0	**Zalesovo Array**	19.95	25	*e*P	P	03 59 36.4	-0.1
	51nm,0.9s						
ZALV	**Zalesovo Beam**	19.95	25	P	P	03 59 36.8	+0.3
	11nm,0.5s,baz=220,slow=12,SNR=36						
ZAA1	**Zalesovo Array**	19.95	25	*e*P	P	03 59 36.8	+0.3
SONA0	**Songino Array**	28.45	55	*e*P	P	04 00 57.0	+0.8
SONM	**Songino Array**	28.45	55	P	P	04 00 57.0	+0.8
	0.7nm,0.7s,baz=260,slow=8.6,SNR=3.4						
MLR	**Muntele Rosu**	34.60	299	P	P	04 01 50.8	+0.8
	1.6nm,0.7s,baz=203,slow=7.7,SNR=3.4						
MLR	**Muntele Rosu**	34.60	299	*e*P	P	04 01 50.8	+0.8
	14nm,1.6s						
FIA0	**FINESS Array S**	37.35	326	*e*P	P	04 02 14.0	+1.3
FINES	**FINESS Array B**	37.35	326	P	P	04 02 14.0	+1.3
	3.0nm,0.9s,baz=116,slow=8.7,SNR=4.5						
FINES				LR	LR	04 19 03.0	
	comp=Z,151nm,20.7s,baz=226,slow=38						
ARA0	**ARCESS Array S**	41.04	338	*e*P	P	04 02 44.6	+1.4
ARCES	**ARCESS Array B**	41.04	338	P	P	04 02 44.6	+1.4
	1.3nm,0.6s,baz=105,slow=7.6,SNR=8.2						
NB2	**NORSAR Subarra**	44.24	323	P	P	04 03 09.3	+0.2
	comp=Z,14nm,2.0s,baz=94,slow=7.9						
NB200	**NORSAR Array S**	44.24	323	*e*P	P	04 03 09.3	+0.2
NOA	**NORSAR Array B**	44.24	323	P	P	04 03 09.3	+0.2
	comp=Z,0.7nm,0.7s,baz=96,slow=7.8,SNR=4.6						
TIXI	**Tiksi**	45.80	22	*e*P	P	04 03 21.3	+0.2
	comp=Z,12nm,0.3s						
USRK	**Ussuriysk Ar.**	46.30	61	LR	LR	04 25 50.5	
	comp=Z,92nm,18.7s,baz=335,slow=40						
TOA1	**Torodi Ar. Sit**	65.54	268	*e*P	P	04 05 41.7	-0.6
TORD	**Torodi Ar. Bea**	65.54	268	P	P	04 05 41.7	-0.6
	comp=Z,0.6nm,0.4s,baz=48,slow=6.2,SNR=14						
TOLK	**Toolik Lake Re**	70.92	15	*e*P	P	04 06 15.5	+0.5
	comp=Z,2.9nm,0.5s						
INK	**Inuvik**	73.89	9	P	P	04 06 33.3	+1.0
	comp=Z,1.4nm,0.5s,baz=340,slow=6.7,SNR=11						
INK	**Inuvik**	73.89	9	*e*P	P	04 06 33.3	+1.0
	comp=Z,1.9nm,0.6s						
YKA	**Yellowknife Ar**	81.21	3	P	P	04 07 13.2	+0.3
	comp=Z,0.6nm,0.6s,baz=352,slow=4.9,SNR=7.1						
YKB5	**Yellowknife Ar**	81.21	3	*e*P	P	04 07 13.2	+0.3
WRA	**Warramunga Arr**	82.16	122	P	P	04 07 17.2	-1.4
	comp=Z,0.7nm,0.3s,baz=308,slow=5.4,SNR=8.2						
WR1	**Warramunga Arr**	82.17	122	*e*P	P	04 07 17.2	-1.3
AS31	**Alice Springs**	84.42	125	*e*P	P	04 07 28.6	-1.4
	comp=Z,2.7nm,1.3s						
ASAR	**Alice Springs**	84.42	125	P	P	04 07 28.6	-1.4
	comp=Z,0.8nm,0.5s,baz=310,slow=4.8,SNR=5.5						

TAP 19 04:00:50.9, 24°.45N×121°.82E, h24^{km}, ML2.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	**Nanao**	0.07	255	P	Pb	04 00 55.6	+0.4
	baz=254						
NANB				*e*S	Sb	04 00 58.9	+0.8
	baz=254						
ENA	**Nanau**	0.07	257	P	Pb	04 00 55.7	+0.4
	baz=254						
ENA				S	Sb	04 00 59.0	+0.8
	baz=254						
TWC	**Suao**	0.17	9	P	Pb	04 00 56.4	+0.3
	baz=12						
TWC				S	Sb	04 01 00.2	+0.6
	baz=12						
EOS1	**EOS1**	0.30	70	*e*P	Pb	04 00 58.3	+0.5
	baz=69						
EOS1				*e*S	Sn	04 01 04.2	-1.3
	baz=69						
ENTT	**Nioudou**	0.30	310	*e*P	Pb	04 00 58.5	+0.6
	baz=310						
ENTT				*e*S	Sb	04 01 04.0	+1.2
	baz=310						
TWE	**Neicheng**	0.31	333	*e*P	Pb	04 00 58.4	+0.4
	baz=335						
TWE				*e*S	Sb	04 01 03.8	+1.0
	baz=335						
NDT	**Datong Townshi**	0.32	299	*e*P	Pb	04 00 58.8	+0.5
	baz=299						
NDT				*e*S	Sb	04 01 04.5	+1.3
	baz=299						
ILA	**Ilan**	0.33	348	*e*P	Pb	04 00 58.5	+0.2
	baz=349						
ILA				*e*S	Sb	04 01 04.6	+1.3
	baz=349						
NACB	**Ninganchiao**	0.34	217	*e*P	Pb	04 00 58.6	+0.1
	baz=217						
NACB				*e*S	Sb	04 01 04.4	+0.8
	baz=217						
SLBB	**Yuanshan**	0.35	331	*e*P	Pb	04 00 59.3	+0.6
	baz=331						
SLBB				*e*S	Sb	04 01 05.4	+1.4
	baz=331						
ETLH	**Xiulin Townshi**	0.39	233	*e*P	Pb	04 00 59.8	+0.5
	baz=232						
ETLH				*e*S	Sb	04 01 06.3	+1.2
	baz=232						
NNSB	**Datong**	0.40	268	*e*P	Pb	04 01 00.0	+0.5
	baz=267						
NNSB				*e*S	Sb	04 01 06.4	+1.0
	baz=267						
TWD	**Chiawan**	0.42	209	*e*P	Pb	04 00 59.9	+0.2
	baz=208						
TWD				*e*S	Sb	04 01 06.7	+1.0
	baz=208						
YHNB	**Yeheng**	0.46	299	*e*P	Pb	04 01 01.0	+0.5
	baz=298						
YHNB				*e*S	Sb	04 01 08.1	+1.0
	baz=298						
NSK	**Sanguang**	0.48	299	*e*P	Pb	04 01 01.2	+0.4
	baz=298						
NSK				*e*S	Sb	04 01 08.3	+0.8
	baz=298						
TIPB	**Shuangxi**	0.53	1	*e*P	Pb	04 01 02.2	+0.6
TIPB				*e*S	Sb	04 01 09.3	+0.5
WHF	**Hehuan Shan**	0.59	240	*e*P	Pb	04 01 03.4	+0.5
	baz=239						
WHF				*e*S	Sb	04 01 12.0	+1.0
	baz=239						
TWT	**Tachien**	0.62	252	*e*P	Pb	04 01 03.4	+0.1
	baz=252						
TWT				*e*S	Sn	04 01 13.3	-0.4
	baz=252						
CHGB	**Renai**	0.70	237	*e*P	Pn	04 01 05.5	-0.1
	baz=236						
CHGB				*e*S	Sn	04 01 16.1	+0.2
	baz=236						
VWDT	**VWDT**	0.93	222	*e*P	Pn	04 01 08.7	+0.2
	baz=222						
VWDT				*e*S	Sn	04 01 21.6	+0.6
	baz=222						

JMA 19 04:01:37.2±0.1, 24°.59N×123°.37E, h21^{km}, M0.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.41	250	S	Sb	04 01 51.8	+0.4
IRIF	**Iriomote-Funau**	0.41	128	P	Pb	04 01 45.6	-0.1
IRIF				S	Sb	04 01 51.4	-0.1
JIJ	**Ishigaki jima**	0.74	108	P	Pb	04 01 51.2	-0.2
JIJ				*e*S	Sb	04 02 00.5	-0.5
JISG	**Ishigakijimahi**	0.86	90	S	Sb	04 02 04.4	0.0

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*IDC **19** 04:03:38.6±0.9, 12°.55N×143°.84E, h0^{km}, mb3.8/6, mb1 4.2/6, mb1mx3.7/41, mbtmp3.8/6, MS3.6/8, Ms1 3.6/8, ms1mx3.2/35, Error ellipse: s-maj=42.2km s-min=17.5km az=120.0*

*NEIC **19** 04:03:40.3±0.9, 12°.55N×143°.89E, h10^{km}±3^{km}, mb4.1/7, Error ellipse: s-maj=58.0km s-min=4.4km az=131.0*

*ISCJB **19** 04:03:41.1±0.5, 12°.5N±0°.1×143°.8E±0°.2, h27^{km}, mb4.2/12, MS3.6/7, Error ellipse: s-maj=29.5km s-min=8.2km az=35.0*

ISC 19 04:03:42.6±0.8, 12°.5N±0°.2×143°.9E±0°.2, h27^{km}, n30, $\sigma 0^{s}.59$/19, mb4.4/12, MS3.6/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	1.43	42	Pn	Pn	04 04 06.0	-0.8
	140nm,0.3s,baz=229,slow=2.6,SNR=6.5						
GUMO				Sn	Sn	04 04 24.7	0.0
	206nm,0.3s,baz=160,slow=23,SNR=18						
DAV	**Davao City (W)**	18.84	255	LR	LR	04 14 38.0	
	comp=Z,60nm,20.8s,baz=334,slow=35						
H11S3	**WAKE ISLAND Hy**	22.74	72	T	T	04 32 32.0	
	baz=258,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	22.76	72	T	T	04 32 27.4	
	baz=258,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	22.76	72	T	T	04 32 24.6	
	baz=258,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	23.21	69	T	T	04 33 03.9	
	baz=255,slow=75,SNR=54						
H11N2	**WAKE ISLAND Hy**	23.22	69	T	T	04 32 57.5	
	baz=255,slow=75,SNR=76						
H11N3	**WAKE ISLAND Hy**	23.23	69	T	T	04 33 03.9	
	baz=255,slow=75,SNR=53						
MJAR	**Matsushiro Arr**	24.46	349	LR	LR	04 17 59.8	
	comp=Z,174nm,18.9s,baz=150,slow=35						
KAPI	**Kappang**	29.65	235	LR	LR	04 23 23.5	
	comp=Z,46nm,18.1s,baz=112,slow=40						
WR1	**Warramunga Arr**	33.60	196	*e*P	P	04 10 20.2	-0.6
WRA	**Warramunga Arr**	33.60	196	P	P	04 10 20.2	-0.6
	2.8nm,0.7s,baz=14,slow=11,SNR=7.3						
AS31	**Alice Springs**	37.26	195	*e*P	P	04 10 52.5	+0.2
	2.4nm,1.3s						
ASAR	**Alice Springs**	37.27	195	P	P	04 10 52.5	+0.2
	2.5nm,1.2s,baz=21,slow=8.0,SNR=5.7						
ASAR				LR	LR	04 26 02.8	
	comp=Z,102nm,20.1s,baz=340,slow=36						
KLR	**Kul'dur**	37.96	347	LR	LR	04 25 33.1	
	comp=Z,119nm,20.4s,baz=24,slow=35						
PETK	**Petropavlovsk-**	41.97	12	LR	LR	04 26 14.1	
	comp=Z,112nm,21.4s,baz=200,slow=32						
STKA	**Stephens Creek**	44.20	183	LR	LR	04 31 21.9	
	comp=Z,76nm,20.7s,baz=21,slow=38						
KURBB	**Kurchatov Arra**	64.83	320	P	P	04 14 18.9	-0.2
	0.2nm,0.3s,baz=97,slow=7.6,SNR=4.2						
ILAR	**Eielson Array**	69.94	25	P	P	04 14 51.8	+0.6
	0.2nm,0.6s,baz=261,slow=5.4,SNR=2.3						
ILAR				LR	LR	04 46 01.1	
	comp=Z,70nm,18.9s,baz=88,slow=36						
ILB	**Eielson Array**	69.94	25	*e*P	P	04 14 51.8	+0.6
	9.3nm,2.0s						
YKA	**Yellowknife Ar**	84.24	27	P	P	04 16 11.4	-0.1
	0.2nm,0.4s,baz=289,slow=5.6,SNR=3.4						
YKB5	**Yellowknife Ar**	84.24	27	*e*P	P	04 16 11.4	-0.1
BMO	**Blue Mountains**	87.42	45	*e*P	P	04 16 27.9	+0.1
	4.6nm,1.0s						
KVN	**Kaiserville**	88.33	50	*e*P	P	04 16 33.0	+0.6
	4.1nm,1.3s						
NV01	**Mina Array Sit**	88.33	51	*e*P	P	04 16 33.0	+0.6
NVAR	**Mina Array Bea**	88.33	51	P	P	04 16 33.0	+0.6
	1.8nm,0.8s,baz=262,slow=5.3,SNR=13						
MFID	**Camas Ranch**	88.83	46	*e*P	P	04 16 34.9	+0.3
	5.2nm,1.0s						
ELK	**Elko**	89.99	48	*e*P	P	04 16 40.7	+0.4
	3.1nm,1.1s						
R11A	**Troy Canyon, C**	90.41	51	*e*P	P	04 16 43.6	+1.4
	9.8nm,1.8s						
LPAZ	**La Paz**	148.78	101	PKPbc	PKiKP	04 23 30.4	-0.4
	2.9nm,1.1s,baz=344,slow=7.4,SNR=2.8						

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*IDC **19** 04:12:20.1±0.8, 12°.62N×143°.75E, h0^{km}, mb4.0/9, mb1 4.2/9, mb1mx3.8/36, mbtmp3.9/9, Error ellipse: s-maj=36.7km s-min=19.2km az=117.0*

*NEIC **19** 04:12:21.0±0.9, 12°.59N×143°.86E, h6^{km}±5^{km}, mb4.1/9, Error ellipse: s-maj=31.7km s-min=8.6km az=121.0*

*ISCJB **19** 04:12:22.7±0.4, 12°.55N±0°.08×143°.8E±0°.1, h27^{km}, mb4.3/17, Error ellipse: s-maj=18.6km s-min=7.5km az=33.6*

ISC 19 04:12:24.0±0.8, 12°.6N±0°.2×143°.9E±0°.2, h27^{km}, n34, $\sigma 0^{s}.84$/29, mb4.4/17, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	1.35	43	Pn	Pb	04 12 47.9	-0.7
	58nm,0.3s,baz=319,slow=0.5,SNR=14						
GUMO				LR	LR	04 13 03.3	
	comp=Z,150nm,18.5s,baz=169,slow=30						
GUMO				Sn	Sb	04 13 05.1	-0.3
	52nm,0.3s,baz=180,slow=20,SNR=16						
GUMO	**Guam**	1.35	43	*e*Pn	Pn	04 12 47.4	+0.4
H11S3	**WAKE ISLAND Hy**	22.68	72	T	T	04 41 22.8	
	baz=258,slow=74,SNR=9.3						
H11S1	**WAKE ISLAND Hy**	22.70	72	T	T	04 41 15.4	
	baz=258,slow=74,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	22.70	72	T	T	04 41 25.7	
	baz=258,slow=74,SNR=11						
H11N1	**WAKE ISLAND Hy**	23.14	69	T	T	04 41 44.0	
	baz=255,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	23.16	69	T	T	04 41 47.2	
	baz=255,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	23.16	69	T	T	04 41 50.6	
	baz=255,slow=75,SNR=17						

WRAB	Tennant Creek	33.67	196	eP	P	04 19 02.3	-0.6
	25nm,1.8s						
WB2	Warramunga Arr	33.68	196	eP	P	04 19 02.6	-0.4
	38nm,1.9s						
WR1	Warramunga Arr	33.68	196	eP	P	04 19 02.6	-0.4
WRA	Warramunga Arr	33.68	196	P	P	04 19 02.6	-0.4
	2.7nm,0.6s,baz=10,slow=9.6,SNR=7.6						
AS31	Alice Springs	37.35	195	eP	P	04 19 34.2	-0.3
	2.6nm,1.3s						
ASAR	Alice Springs	37.35	195	P	P	04 19 34.2	-0.3
	0.3nm,0.5s,baz=19,slow=14,SNR=5.7						
MK32	Makanchi Array	61.57	317	eP	P	04 22 39.4	+0.3
MKAR	Makanchi Array	61.57	317	P	P	04 22 39.4	+0.3
	0.2nm,0.4s,baz=98,slow=6.3,SNR=2.3						
ILAR	Eielson Array	69.85	25	P	P	04 23 31.7	-0.4
	0.2nm,0.5s,baz=251,slow=6.5,SNR=5.0						
ILB	Eielson Array	69.85	25	eP	P	04 23 31.7	-0.4
	10nm,1.9s						
YKA	Yellowknife Ar	84.16	27	P	P	04 24 52.7	+0.2
	0.4nm,0.7s,baz=288,slow=4.7,SNR=4.0						
YKB5	Yellowknife Ar	84.16	27	eP	P	04 24 52.7	+0.2
BMO	Blue Mountains	87.33	45	eP	P	04 25 09.1	+0.2
	2.2nm,0.8s						
ARA0	ARCESS Array S	87.74	342	eP	P	04 25 10.6	+0.4
ARCES	ARCESS Array B	87.74	342	P	P	04 25 10.6	+0.4
	6.7nm,1.2s,baz=57,slow=6.6,SNR=2.2						
NV01	Mina Array Sit	88.25	51	eP	P	04 25 15.2	+1.6
NVAR	Mina Array Bea	88.25	51	P	P	04 25 15.2	+1.6
	1.4nm,0.6s,baz=261,slow=5.4,SNR=15						
MFID	Camas Ranch	88.75	46	eP	P	04 25 16.8	+1.1
	4.4nm,1.0s						
HLID	Hailey	89.69	45	eP	P	04 25 21.2	+1.0
	8.2nm,1.9s						
ELK	Elko	89.91	48	eP	P	04 25 22.3	+0.9
	1.6nm,0.8s						
TPNV	Topopah Spring	90.21	52	eP	P	04 25 24.5	+1.8
	9.3nm,1.8s						
FIA0	FINESS Array S	91.67	335	eP	P	04 25 27.6	-1.1
FINES	FINESS Array B	91.67	335	P	P	04 25 27.6	-1.1
	1.5nm,0.8s,baz=48,slow=2.8,SNR=4.0						
PD31	Pinedale Array	93.31	45	eP	P	04 25 37.9	+0.8
PDAR	Pinedale Array	93.31	45	P	P	04 25 37.9	+0.8
	0.2nm,0.5s,baz=224,slow=5.0,SNR=2.8						
LPAZ	La Paz	148.75	101	PKPbc	PKiKP	04 32 11.5	-0.7
	1.4nm,0.8s,baz=274,slow=2.8,SNR=5.4						

MEX 19 04:51:01.0±0.6**, 17°.22N×100°.15W, h36^{km}**±10^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.20	212	eP	Pn	04 51 06.2	-3.9
CAIG				eS	Sn	04 51 11.3	-7.6
MEIG	Mezcala	0.86	36	eP	Pn	04 51 14.6	-2.2
MEIG				eS	Sn	04 51 25.9	-2.3
ARIG	Puente Sto Nin	1.07	350	eP	Pn	04 51 18.1	-1.4
ARIG				i S	Sn	04 51 30.2	-2.9
PLIG	Platanillo	1.32	28	eP	Pn	04 51 21.6	-1.4
PLIG				i S	Sn	04 51 37.9	-1.4
TLIG	Tlapa	1.55	77	eP	Pn	04 51 25.0	-1.2
TLIG				i S	Sn	04 51 42.8	-2.4

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*IDC **19** 04:59:35.5±0.8, 12°.59N×143°.74E, h0^{km}, mb3.8/8, mb1 4.1/8, mb1mx3.7/36, mbtmp3.8/8, MS3.2/2, Ms1 3.2/2, ms1mx2.7/37, Error ellipse: s-maj=28.3km s-min=17.1km az=123.0*

*NEIC **19** 04:59:37.8±1.2, 12°.52N×143°.66E, h15^{km}±5^{km}, mb4.2/13, Error ellipse: s-maj=19.9km s-min=13.7km az=97.0*

*ISCJB **19** 04:59:38.4±0.4, 12°.57N±0°.09×143°.64E±0°.10, h27^{km}, mb4.3/20, MS3.1/2, Error ellipse: s-maj=16.6km s-min=8.3km az=40.1*

ISC 19 04:59:39.7±0.7**, 12°.6N**±0°.1×**143°.8E**±0°.1**, h27^{km}, n42,** σ**1^s.03**/35**, mb4.5**/20**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.48	47	Pn	Pn	05 00 04.0	-0.6
	128nm,0.3s,baz=200,slow=2.4,SNR=13						
GUMO				Sn	Sn	05 00 22.6	-0.5
	143nm,0.3s,baz=300,slow=18,SNR=16						
GUMO				LR	LR	05 00 33.2	
	comp=Z,177nm,18.3s,baz=172,slow=39						
GUMO	Guam	1.48	47	ePn	Pn	05 00 04.9	+0.3
H11S3	WAKE ISLAND Hy	22.86	72	T	T	05 28 30.1	
	baz=258,slow=75,SNR=4.2						
H11S1	WAKE ISLAND Hy	22.87	72	T	T	05 28 20.7	
	baz=258,slow=75,SNR=4.2						
H11S2	WAKE ISLAND Hy	22.87	72	T	T	05 28 20.1	
	baz=258,slow=75,SNR=3.5						
H11N1	WAKE ISLAND Hy	23.32	69	T	T	05 28 54.6	
	baz=255,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	23.33	69	T	T	05 28 55.2	
	baz=255,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	23.34	69	T	T	05 28 55.9	
	baz=255,slow=75,SNR=11						
MJAR	Matsushiro Arr	24.37	349	LR	LR	05 13 57.6	
	comp=Z,47nm,18.3s,baz=155,slow=35						
ASAJ	Asahikawa	31.44	358	LR	LR	05 18 53.5	
	comp=Z,53nm,19.4s,baz=102,slow=37						
WR1	Warramunga Arr	33.62	196	eP	P	05 06 18.6	+0.5
WRA	Warramunga Arr	33.62	196	P	P	05 06 18.5	+0.4
	4.0nm,0.6s,baz=9.2,slow=11,SNR=25						
AS31	Alice Springs	37.29	195	eP	P	05 06 48.5	-1.2
	2.1nm,1.2s						
ASAR	Alice Springs	37.29	195	P	P	05 06 48.5	-1.2
	0.8nm,0.8s,baz=25,slow=9.5,SNR=5.9						
SONA0	Songino Array	46.94	326	eP	P	05 08 06.4	-1.8
SONM	Songino Array	46.94	326	P	P	05 08 06.4	-1.8
	0.3nm,0.5s,baz=146,slow=10,SNR=2.9						
MK32	Makanchi Array	61.46	317	eP	P	05 09 55.6	+1.6
MKAR	Makanchi Array	61.46	317	P	P	05 09 55.6	+1.6
	0.3nm,0.7s,baz=90,slow=4.8,SNR=3.1						
PPLA	Purkeypile	67.17	27	eP	P	05 10 32.5	+1.3
	18nm,1.3s						
ILAR	Eielson Array	69.94	25	P	P	05 10 47.1	-1.1
	0.3nm,0.6s,baz=251,slow=5.9,SNR=5.3						
ILB	Eielson Array	69.94	25	eP	P	05 10 47.1	-1.1
	11nm,1.9s						
YKA	Yellowknife Ar	84.25	27	P	P	05 12 09.1	+0.4
	0.5nm,0.6s,baz=281,slow=5.0,SNR=8.1						
YKB5	Yellowknife Ar	84.25	27	eP	P	05 12 09.1	+0.4
NEW	Newport	86.70	41	eP	P	05 12 21.8	+0.5
	3.2nm,0.8s						
WVOR	Wild Horse Val	87.15	47	eP	P	05 12 24.1	+0.4
	4.6nm,1.3s						
BMO	Blue Mountains	87.47	45	eP	P	05 12 25.0	-0.2
	3.9nm,0.9s						
KVN	Kaiserville	88.39	50	eP	P	05 12 30.4	+0.5
	3.6nm,1.0s						
NV01	Mina Array Sit	88.40	51	eP	P	05 12 31.6	+1.7
NVAR	Mina Array Bea	88.40	51	P	P	05 12 31.6	+1.7
	2.3nm,0.7s,baz=261,slow=5.6,SNR=18						
NV11	Mina Array Sit	88.51	51	eP	P	05 12 31.2	+0.9
	0.6nm,1.2s						
MFID	Camas Ranch	88.88	46	eP	P	05 12 32.6	+0.7
	6.3nm,1.1s						
HLID	Hailey	89.83	45	eP	P	05 12 37.0	+0.6
	2.3nm,0.9s						
ELK	Elko	90.06	48	eP	P	05 12 38.6	+1.0
	2.6nm,0.9s						
TPNV	Topopah Spring	90.36	52	eP	P	05 12 40.1	+1.0
	3.3nm,0.9s						
RLMT	Red Lodge	92.81	43	eP	P	05 12 51.3	+1.0
	8.5nm,1.6s						
PD31	Pinedale Array	93.44	45	eP	P	05 12 53.9	+0.6
PDAR	Pinedale Array	93.44	45	P	P	05 12 53.9	+0.6
	0.2nm,0.5s,baz=261,slow=10.0,SNR=2.7						
KEST	Kesra	115.46	320	PKP	PKiKP	05 18 19.1	-0.7
	3.8nm,0.6s,baz=108,slow=3.2,SNR=6.3						
KEST	Kesra	115.46	320	ePKPdf	PKiKP	05 18 19.2	-0.5
TOA1	Torodi Ar. Sit	134.51	303	ePKPdf	PKPdf	05 18 57.0	+0.4
TORD	Torodi Ar. Bea	134.51	303	PKP	PKPdf	05 18 57.0	+0.5
	0.6nm,1.0s,baz=123,slow=5.3,SNR=2.5						
LPAZ	La Paz	148.93	101	PKPbc	PKPbc	05 19 26.0	-0.8
	0.7nm,0.7s,baz=313,slow=1.6,SNR=5.4						

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*IDC **19** 05:05:44.8±1.1, 21°.09S×114°.21W, h0^{km}, mb3.9/8, mb1 4.2/8, mb1mx4.0/27, mbtmp3.9/8, MS4.0/6, Ms1 4.0/6, ms1mx3.7/16, Error ellipse: s-maj=43.8km s-min=26.3km az=50.0*

*ISCJB **19** 05:05:48.0±0.4, 20°.91S±0°.06×113°.41W±0°.10, h10^{km}, mb4.4/60, MS4.0/5, Error ellipse: s-maj=13.4km s-min=9.2km az=170.8*

*NEIC **19** 05:05:49.4±2.9, 21°.02S×113°.43W, h9^{km}±3^{km}, mb4.6/54, Error ellipse: s-maj=24.6km s-min=18.0km az=85.0*

*GCMT **19** 05:05:53.4±0.4, 20°.80S±0°.03×113°.76W±0°.02, h30^{km}±1^{km}, MW5.0/64, Moment Tensor Solution. s21,c22; s64,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.52±.23; M$_{\theta\theta}$-1.03±.18; M$_{\phi\phi}$1.55±.18; M$_{r\theta}$-0.70±.24; M$_{\theta\phi}$3.12±.13; M$_{\phi r}$-0.57±.26; Best double couple: M$_0$3.47600×10^{16} NP1:φ$_s$259.00000°, δ86.00000°, λ12.00000°. NP2: φ$_s$168.00000°, δ78.00000°, λ176.00000°. Principal axes: T 3.8090, Plg11.0000°, Azm124.0000°; N -0.6640, Plg77.0000°, Azm276.0000°; P -3.1430, Plg6.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 05:05:48.9±0.5**, 21°.0S**±0°.1×**113°.6W**±0°.1**, h10^{km}, n103,** σ**1^s.75**/97**, mb4.5**/60**, MS4.0**/5**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	7.29	148	LR	LR	05 09 50.1	
	comp=Z,3μm,18.2s,baz=346,slow=33						
PTCN	Pitcairn Islan	15.71	252	ePn	P	05 09 33.7	-0.7
	291nm,1.0s						
PLCA	Paso Flores	41.41	128	LR	LR	05 26 22.4	
	comp=Z,307nm,20.5s,baz=298,slow=30						
LVC	Limon Verde	41.44	101	eP	P	05 13 34.1	-2.3
	7.8nm,1.1s						
CFA	Coronel Fontan	41.80	114	P	P	05 13 39.5	+0.6
	3.0nm,0.9s,baz=271,slow=10.0,SNR=4.4						
JTS	Las Juntas de	41.93	45	eP	P	05 13 39.5	-0.5
	11nm,1.4s						
LPAZ	La Paz	43.25	92	P	P	05 13 52.6	+1.0
	1.0nm,0.8s,baz=231,slow=6.5,SNR=3.8						
LPAZ				LR	LR	05 27 34.8	
	comp=Z,201nm,21.6s,baz=250,slow=30						
LPAZ	La Paz	43.25	92	eP	P	05 13 51.8	+0.3
ROSC	El Rosal	46.30	61	LR	LR	05 29 21.3	
	comp=Z,99nm,18.1s,baz=118,slow=30						
TEIG	Tepich	47.85	33	eP	P	05 14 26.4	-0.6
	27nm,1.3s						
LTX	Lajitas	50.91	11	eP	P	05 14 50.0	-0.5
TXAR	Lajitas Array	50.91	11	P	P	05 14 50.0	-0.5
	0.5nm,0.9s,baz=206,slow=8.0,SNR=2.4						
CPUP	Villa Florida	51.51	107	LR	LR	05 33 13.0	
	comp=Z,108nm,18.2s,baz=256,slow=32						
319A	Douglas	52.20	5	eP	P	05 15 02.0	+1.9
	6.2nm,1.0s						
JCT	Junction City	52.84	15	eP	P	05 15 03.9	-0.8
	20nm,1.2s						
MNTX	Cornudas Mount	52.95	9	eP	P	05 15 05.5	0.0
	4.9nm,1.1s						
TUC	Tucson	53.03	3	eP	P	05 15 08.3	+2.1
	4.7nm,1.3s						
PMSA	Palmer Station	54.48	156	eP	P	05 15 16.0	-0.3
	27nm,1.0s						
LENM	Lemitar	55.18	7	eP	P	05 15 21.3	-0.6
X18A	Snowflake	55.28	4	eP	P	05 15 23.2	+0.5
	5.7nm,1.1s						
LAZ	Ladron	55.39	7	eP	P	05 15 24.2	+0.7
MSTX	Muleshoe	55.59	11	eP	P	05 15 25.6	+0.7
	5.2nm,1.1s						
LDFC	Landfair	55.74	359	eP	P	05 15 27.2	+1.2
	6.9nm,1.0s						
SHPR	Sheep Range	57.16	359	eP	P	05 15 36.7	+0.6
	7.1nm,1.2s						
CCUT	Cedar City	58.19	0	eP	P	05 15 45.8	+2.4
	6.3nm,1.1s						
SDCO	Great Sand Dun	58.88	8	eP	P	05 15 47.6	-0.7
	3.7nm,1.0s						
R11A	Troy Canyon, C	59.02	358	eP	P	05 15 50.8	+1.7
	4.9nm,1.4s						
PV12	Saucer Basin,	59.13	4	eP	P	05 15 50.5	+0.6
	7.0nm,1.5s						
PSUT	Pine Spring	59.17	360	eP	P	05 15 53.4	+3.2
	4.1nm,1.0s						
NV11	Mina Array Sit	59.22	356	eP	P	05 15 53.8	+3.3
	0.6nm,1.2s						
NVAR	Mina Array Bea	59.23	356	P	P	05 15 48.7	-1.9
	1.9nm,0.9s,baz=191,slow=9.8,SNR=13						
KVN	Kaiserville	59.84	356	eP	P	05 15 58.0	+3.3
	3.5nm,1.2s						
YERR	Yerington	59.85	355	eP	P	05 15 58.0	+3.1
	9.8nm,1.3s						
PNTR	Pine Nut	59.99	355	eP	P	05 15 59.1	+3.3
	8.0nm,0.9s						
SMCO	Snowmass	60.14	6	eP	P	05 16 00.9	+3.8
	5.2nm,1.3s						
P17A	Butcher Ranch,	60.17	3	eP	P	05 15 56.6	-0.4
	8.1nm,1.2s						
JLU	Jordanelle	61.27	2	eP	P	05 16 06.2	+1.6
	4.1nm,1.1s						
ELK	Elko	61.40	359	eP	P	05 16 06.8	+1.3
	3.4nm,1.1s						
WDC	Whiskeytown Da	61.78	352	eP	P	05 16 10.1	+2.4
	8.9nm,1.3s						
BDFB	Brasilia	62.15	97	LR	LR	05 40 30.4	
	comp=Z,90nm,18.1s,baz=267,slow=33						
T47A	Sharon Grove	62.83	24	eP	P	05 16 15.4	+0.6
	4.7nm,0.9s						
WVOR	Wild Horse Val	63.24	356	eP	P	05 16 18.8	+1.2
	3.4nm,1.0s						
PDAR	Pinedale Array	63.51	3	P	P	05 16 16.9	-2.6
	0.5nm,0.6s,baz=168,slow=6.0,SNR=11						
K22A	Casper	63.62	6	eP	P	05 16 21.1	+0.9
	8.6nm,1.2s						
HUMO	Hull Mountain	63.83	352	eP	P	05 16 22.2	+0.9
	16nm,1.4s						
MFID	Camas Ranch	64.08	358	eP	P	05 16 23.6	+0.5
	5.7nm,1.1s						
J08A	Circle Bar Ran	64.15	356	eP	P	05 16 24.7	+1.1
	8.4nm,1.1s						
TPAW	Teton Pass	64.17	2	eP	P	05 16 23.4	-0.5
	11nm,1.4s						
HLID	Hailey	64.20	359	eP	P	05 16 25.3	+1.3
	7.9nm,1.1s						
LOHW	Long Hollow	64.31	2	eP	P	05 16 27.4	+2.7
	4.5nm,1.3s						
FXWY	Fox Creek	64.31	2	eP	P	05 16 24.8	0.0
	1.4nm,0.8s						
IMW	Indian Meadow	64.58	2	eP	P	05 16 27.2	+0.7
	3.2nm,1.1s						
MCMT	McKenzie Canyo	65.46	1	eP	P	05 16 33.5	+1.2
YHH	Holmes Hill	65.47	2	eP	P	05 16 35.1	+2.7
	4.5nm,1.2s						
BMO	Blue Mountains	65.57	357	eP	P	05 16 34.2	+1.4
	5.0nm,1.1s						
RLMT	Red Lodge	65.88	3	eP	P	05 16 35.8	+0.9
	6.1nm,1.4s						
G08A	Pilot Rock	66.10	356	eP	P	05 16 37.1	+0.9
	9.5nm,1.2s						
HRY	Holter Researc	67.36	1	eP	P	05 16 44.5	+0.3
C09A	Chrisman Ranch	68.56	357	eP	P	05 16 52.3	+0.7
	8.0nm,1.0s						
QSPA	South Pole Qui	69.19	180	eP	P	05 16 56.9	+1.3
	12nm,1.0s						
DGMT	Dagmar	69.62	7	eP	P	05 16 59.2	+1.0
	9.1nm,0.9s						
SSPA	Standing Stone	69.71	28	eP	P	05 16 57.4	-1.5
ULM	Lac du Bonnet	72.61	12	P	P	05 17 17.1	+0.9
	1.7nm,0.4s,baz=261,slow=2.2,SNR=3.1						
VNA3	Neumayer Olymp	74.72	161	P	P	05 17 29.4	+0.8
SNAA	Sanae	76.57	162	P	P	05 17 40.3	+1.1
DLBC	Dease Lake	80.26	351	eP	P	05 17 59.6	+0.1
	4.2nm,0.9s						
YKA	Yellowknife Ar	83.16	360	P	P	05 18 12.3	-2.4
	0.6nm,0.9s,baz=176,slow=5.6,SNR=6.6						
CRQM	Cirque	84.86	346	eP	P	05 18 23.1	-0.5
	12nm,1.0s						
DAWY	Dawson	87.09	349	eP	P	05 18 33.9	-0.5
	2.7nm,0.9s						
H11S2	WAKE ISLAND Hy	87.31	291	T	T	06 54 44.5	
	baz=115,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	87.32	291	T	T	06 54 43.3	
	baz=115,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	87.33	291	T	T	06 54 43.7	
	baz=115,slow=75,SNR=10						
DOT	Dot Lake	87.62	347	eP	P	05 18 36.0	-1.0
	3.0nm,1.0s						
RIDG	Independent Ri	87.87	347	eP	P	05 18 37.0	-1.2
	7.0nm,0.8s						
SCRK	Sand Creek	87.90	347	eP	P	05 18 41.1	+2.7
	2.6nm,1.0s						
ILAR	Eielson Array	89.21	346	P	P	05 18 41.7	-2.8
	0.5nm,0.9s,baz=167,slow=4.3,SNR=3.0						
WRH	Wood River Hil	89.23	346	eP	P	05 18 45.7	+1.2
	4.7nm,1.0s						
CCB	Clear Creek Bu	89.31	346	eP	P	05 18 43.6	-1.3
	3.3nm,1.1s						
TWG	Pinlang	129.46	283	ePKPdf	PKPdf	05 24 58.1	-0.5
NJ2	Nanjing	132.16	295	ePKP	PKiKP	05 25 05.9	+1.4
HHC	Hu-ho-hao-te	137.00	308	ePKP	PKPdf	05 25 09.1	-3.3
SONA0	Songino Array	138.16	320	ePKPpre	PKPpre	05 25 07.3	
SONM	Songino Array	138.16	320	PKhKP	PKPpre	05 25 07.4	
	0.5nm,0.7s,baz=55,slow=5.5,SNR=3.3						
AKASG	Malin Array Be	138.43	35	PKP	PKPdf	05 25 12.2	-2.3
	0.3nm,0.4s,baz=280,slow=2.5,SNR=2.9						
ZALV	Zalesovo Beam	144.18	341	PKP	PKPab	05 25 21.4	-1.0
	5.9nm,0.8s,baz=72,slow=4.8,SNR=11						
GTA	Gaotai	146.00	310	ePKPbc	PKPdf	05 25 24.8	-3.8
GTA				pPKP	PKPbc	05 25 28.8	-0.5
GTA				sPKP		05 25 32.1	
KMI	Kunming	146.35	284	PKPbc	PKiKP	05 25 34.1	+0.1
BR101	Keskin Array S	146.37	49	ePKPdf	PKPdf	05 25 30.1	+0.9
BRTR	Keskin Array B	146.37	49	PKPbc	PKPdf	05 25 30.1	+0.9
	3.9nm,1.0s,baz=286,slow=0.7,SNR=7.6						
BRVK	Borovoye	147.81	356	ePKPbc	PKPbc	05 25 33.4	-0.4
BVAR	Borovoye Array	147.84	355	PKPbc	PKPdf	05 25 31.1	+0.1
	4.6nm,0.8s,baz=0.0,slow=1.8,SNR=16						
KURK	Kurchatov	148.77	345	ePKPdf	PKPdf	05 25 33.4	+0.8
KURK				ePKPbc	PKiKP	05 25 38.1	+0.3
KURK				ePKPab	pPKPab	05 25 42.9	+0.4
CM31	Chiang Mai Arr	149.27	271	ePKPdf	PKPdf	05 25 32.3	-2.1
CMAR	Chiang Mai Arr	149.27	271	PKPbc	PKPdf	05 25 34.1	-0.3
	1.6nm,0.4s,baz=208,slow=3.1,SNR=6.7						
CHTO	Chiang Mai	149.33	272	ePKPdf	PKPbc	05 25 37.4	-1.4
AKTO	Aktyubinsk	149.85	11	PKPbc	PKPdf	05 25 37.2	+2.9
	2.1nm,1.0s,baz=336,slow=2.7,SNR=3.4						
KBZ	Khabaz	150.04	35	PKP	PKPdf	05 25 31.6	-3.2
	3.1nm,1.0s,baz=225,slow=1.4,SNR=2.3						
KBZ				PKPbc	sPKPdf	05 25 39.2	+1.2
	7.1nm,0.9s,baz=282,slow=2.2,SNR=8.2						
WMQ	Urumqi	151.11	327	ePKPbc	PKiKP	05 25 45.1	+2.1
WMQ	Urumqi	151.11	327	ePKPbc	PKPdf	05 25 37.9	+1.3
MK31	Makanchi Array	151.15	337	ePKPdf	PKPdf	05 25 39.5	+3.0
MKAR	Makanchi Array	151.15	337	PKPbc	PKPdf	05 25 39.4	+2.8
	4.9nm,0.7s,baz=33,slow=2.9,SNR=19						
MAKZ	Makanchi	151.25	337	ePKPdf	PKPdf	05 25 39.7	+3.0
ABKAR	Akbulak array	151.30	9	ePKPdf	PKPdf	05 25 40.1	+3.4
ABKAR				ePKPbc	pPKPbc	05 25 45.5	+0.6

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*OSPL **19** 05:09:55.3±2.7, 17°.62N×68°.77W, h0^{km}±95^{km}, ML2.2*

*ISCJB **19** 05:09:56.1±1.0, 17°.67N±0°.10×68°.82W±0°.04, h95^{km}, Error ellipse: s-maj=14.0km s-min=4.7km az=13.5*

*RSPR **19** 05:09:57.2, 18°.50N×68°.69W, h142^{km}±1^{km}, MD3.4/5*

ISC 19 05:09:58.5±1.8**, 17°.9N**±0°.1×**68°.77W**±0°.05**, h95^{km}, n21,** σ**1^s.72**/24**, 9C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	Punta Cana, DR	0.74	30	⇑eP	Pn	05 10 16.1	+0.4
PCDR	Punta Cana, DR	0.74	30	eS	Sn	05 10 31.8	+3.1
DR12	Loma Pena Alta	1.08	327	⇓iP	Pn	05 10 18.8	-0.7
DR12				eS	Sn	05 10 35.1	-0.2
SDD	Santo Domingo	1.24	298	i P	Pn	05 10 20.0	-1.2
BANI	BANI	1.60	289	i P	Pn	05 10 25.6	-0.3
BANI				IAML		05 10 53.9	
	comp=Z,14nm,0.4s						
LSP	Las Mesas	1.63	79	⇑eP	Pn	05 10 27.1	+1.0
LSP	Las Mesas	1.63	79	eS	Sn	05 10 49.3	+2.2
MLPR	Magueyes Islan	1.64	86	eS	Sn	05 10 51.2	+3.9
AGPR	Aguadilla, PR	1.68	69	⇑eP	Pn	05 10 25.6	-1.2
AGPR	Aguadilla, PR	1.68	69	eS	Sn	05 10 48.7	+0.5
AGPR	Aguadilla, PR	1.68	69	i P	Pn	05 10 23.8	-3.0
AGPR				eS	Sn	05 10 49.0	+0.8
AGPR				IAML		05 10 51.8	
	comp=Z,30nm,0.2s						
AOPR	Arecibo Observ	1.97	76	⇑eP	Pn	05 10 29.7	-0.8
AOPR	Arecibo Observ	1.97	76	eS	Sn	05 10 54.2	-0.7
OBIP	Obispado Ponce	2.06	85	⇑eP	Pn	05 10 30.7	-0.9
OBIP	Obispado Ponce	2.06	85	eS	Sn	05 10 58.5	+1.4
EMPR	Esperanza - Ma	2.21	74	eS	Sn	05 10 58.5	-2.0
SC01	Santiago de lo	2.42	310	i P	Pn	05 10 35.6	-0.8
SC01				eS	Sn	05 11 06.5	+1.1
SC01				IAML		05 11 10.1	
	comp=Z,15nm,0.4s						
SJG	San Juan	2.50	84	⇑eP	Pn	05 10 35.8	-1.7
IGPR	InterUniversit	2.53	87	⇑eP	Pn	05 10 37.8	-0.1
PDPR	Patillas Dam,	2.62	86	⇑eP	Pn	05 10 38.4	-0.6
MTP	Monte Pirata	3.07	85	⇑eP	Pn	05 10 42.7	-2.3

IDC 19 05:14:30.3±0.9**, 13°.37N×142°.00E, h0^{km}, mb4.1**/5**, mb1 4.4**/5**, mb1mx3.7**/48**, mbtmp4.1**/5**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.7**/31**, Error ellipse: s-maj=50.0km s-min=23.0km az=100.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	17.70	218	LR	LR	05 24 00.4	
	comp=Z,66nm,20.8s,baz=159,slow=32						
H11N1	WAKE ISLAND Hy	24.66	72	T	T	05 43 49.8	
	baz=255,slow=75,SNR=15						
H11N2	WAKE ISLAND Hy	24.67	72	T	T	05 43 53.9	
	baz=255,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	24.68	72	T	T	05 43 51.0	
	baz=255,slow=75,SNR=12						
WRA	Warramunga Arr	33.95	193	P	P	05 21 14.8	-0.7
	4.1nm,0.6s,baz=5.2,slow=10.0,SNR=35						
ASAR	Alice Springs	37.65	192	P	P	05 21 47.0	-0.3
	0.5nm,0.6s,baz=24,slow=11,SNR=7.7						
ASAR				PcP	PcP	05 24 07.4	+2.4
	0.5nm,0.7s,baz=29,slow=2.3,SNR=5.7						
ZALV	Zalesovo Beam	60.19	325	P	P	05 24 39.3	-0.6
	2.2nm,0.3s,baz=114,slow=11,SNR=6.8						
YKA	Yellowknife Ar	84.33	27	P	P	05 27 05.5	+1.4
	0.3nm,0.6s,baz=289,slow=5.1,SNR=4.5						
NVAR	Mina Array Bea	89.23	51	P	P	05 27 27.8	-1.0
	1.2nm,0.6s,baz=265,slow=5.8,SNR=10						
LPAZ	La Paz	150.74	99	PKP	PKPdf	05 34 19.9	-1.0
	0.6nm,0.8s,baz=231,slow=6.5,SNR=3.0						
LPAZ				PKPbc	PKPbc	05 34 25.1	-1.2
	0.6nm,0.7s,baz=252,slow=6.4,SNR=3.5						

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*NIED **19** 05:18:00, 33°.40N×131°.80E, h80^{km}, Mw3.8 Best double couple: M$_0$4.93000×10^{14} NP1:φ$_s$338.00000°, δ68.00000°, λ-175.00000°. NP2:φ$_s$246.00000°, δ85.00000°, λ-22.00000°.*

JMA 19 05:18:42.5, 33°.35N×131°.76E, h75^{km}±1^{km}**, M3.5, 5C-5D Broadband fault plane solution: P waves. NP1:** φ$_s$68.00000°**,** δ87.00000°**,** λ36.00000°. **NP2:**φ$_s$336.00000°**,** δ54.00000°**,** λ176.00000°. **Principal axes:** T Plg27.0000°, Azm298.0000°; N Plg54.0000°, Azm72.0000°; P Plg22.0000°, Azm196.0000°; **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JUS	Usuki	0.28	182	⇑P	Pn	05 18 54.4	+0.3
JUS				S	Sn	05 19 02.7	0.0
JBEP	Beppuamama	0.30	267	P	Pn	05 18 54.4	+0.2
JKI	Kunimi	0.32	331	⇓P	Pn	05 18 54.6	+0.2
JKI				S	Sn	05 19 03.1	0.0
JNA	Nagahama	0.64	71	⇑P	Pn	05 18 57.3	+0.2
JNA				S	Sn	05 19 08.0	+0.1
UWA2	Uwa jima 2	0.74	100	⇑P	Pn	05 18 57.9	-0.3
UWA2				S	Sn	05 19 09.3	-0.6
JTO	Tosashimizu	1.00	119	⇑P	Pn	05 19 00.9	-0.4
JTO				S	Sn	05 19 14.6	-0.7
JHM	Kurahashi	1.01	39	⇓P	Pn	05 19 01.6	+0.2
JHM				S	Sn	05 19 16.0	+0.4
JKU	Kubokawa	1.09	92	⇑P	Pn	05 19 02.0	-0.4
JKU				S	Sn	05 19 16.9	-0.4
JIU3	Izumi3	1.13	225	⇓P	Pn	05 19 02.8	-0.1
JIU3				S	Sn	05 19 18.2	+0.1
JET	Tanbara	1.16	68	P	Pn	05 19 03.1	-0.1
JET				S	Sn	05 19 18.3	-0.5
JHT	Toyohira	1.42	23	⇓P	Pn	05 19 06.9	+0.3
JHT				S	Sn	05 19 25.8	+1.0
JTZ	Takazaki	1.55	202	⇓P	Pn	05 19 08.9	+0.6

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*IDC **19** 05:20:08.2±0.4, 10°.82S×165°.88E, h0^{km}, mb4.7/26, mb1 4.9/28, mb1mx4.8/39, mbtmp4.8/28, ML5.3/2, MS4.5/16, Ms1 4.5/16, ms1mx4.5/20 Error ellipse: s-maj=16.7km s-min=11.7km az=90.0*

BJI ***19*** *05:20:09.0±0.0, 10°.80S×166°.36E, h26^{km}, mb4.9/44, mB5.2/34, Ms4.9/31, Ms7 4.6/34*

MOS ***19*** *05:20:12.3±0.8, 10°.76S×165°.69E, h33^{km}, mb5.1/51, MS4.7/8, Error ellipse: s-maj=8.9km s-min=8.1km az=95.5*

GCMT ***19*** *05:20:13.3±0.2, 10°.82S±0°.01×165°.55E±0°.02, h85^{km}±3^{km}, MW5.3/89, Moment Tensor Solution. s9,c9; s89,c148; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.99±.03; M$_{\theta\theta}$0.04±.03; M$_{\phi\phi}$-1.03±.02; M$_{r\theta}$0.08±.02; M$_{\theta\phi}$-0.30±.02; M$_{\phi r}$0.19±.03; Best double couple: M$_0$1.07100×10^{17} NP1:φ$_s$17.00000°, δ51.00000°, λ92.00000°. NP2:φ$_s$193.00000°, δ39.00000°, λ87.00000°. Principal axes: T 1.0100, Plg84.0000°, Azm302.0000°; N 0.1170, Plg2.0000°, Azm195.0000°; P -1.1310, Plg6.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *05:20:15.3±1.9, 10°.87S×165°.80E, h49^{km}±5^{km}, mb5.1/210 Error ellipse: s-maj=14.3km s-min=7.8km az=60.0*

ISCJB ***19*** *05:20:15.1±0.1, 10°.95S±0°.02×165°.69E±0°.03, h61^{km}, mb5.0/101, Error ellipse: s-maj=4.0km s-min=2.9km az=0.7*

ISC 19 05:20:16.6±0.2**, 10°.94S**±0°.04×**165°.87E**±0°.05**, h61^{km}, n409, σ1^{s}35**/421**, mb5.0**/101**, 6C-5D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.02**	**284**	Pn	**Pn**	**05 21 40.1**	**-3.0**
	71nm,0.3s,baz=141,slow=4.2,SNR=9.1						
HNR				Sn	**Sn**	**05 22 47.5**	**-3.3**
	baz=72,slow=20,SNR=2.5						
HNR				LR	LR	05 24 05.3	
	comp=Z,13μm,19.2s,baz=108,slow=40						
HNR	**Honiara**	**6.02**	**284**	*e*Pn	**Pn**	**05 21 39.6**	**-3.6**
HNR				*e*Sn	**Sn**	**05 22 48.8**	**-2.0**
HNR	**Honiara**	**6.02**	**284**	*e*P	**Pn**	**05 21 39.6**	**-3.6**
HNR				*e*		05 22 48.8	
HNR	**Honiara**	**6.02**	**284**	*e*P	**Pn**	**05 21 40.0**	**-3.1**
HNR				*e*S	**Sn**	**05 22 53.0**	**+2.2**
MARNC	**Mare, Loyalty**	**10.69**	**169**	*e*Pn	**Pn**	**05 22 45.9**	**-1.1**
MARNC				*e*Sn	**Sn**	**05 24 42.3**	**-2.8**
DZM	**Mont Dzumac**	**11.09**	**177**	*e*Pn	**Pn**	**05 22 51.2**	**-1.3**
	82nm,0.2s						
DZM				*e*Sn	Sn	05 24 45.0	-10
	35nm,0.3s						
DZM				*e*LR	LR	05 25 28.5	
	comp=Z,4μm,26.2s						
DZM	**Mont Dzumac**	**11.09**	**177**	Pn	**Pn**	**05 22 51.5**	**-1.0**
	21nm,0.3s,baz=347,slow=14,SNR=116						
DZM				Sn	**Sn**	**05 24 52.3**	**-2.6**
	5.0nm,0.3s,baz=128,slow=19,SNR=6.2						
DZM	**Mont Dzumac**	**11.09**	**177**	*e*Pn	**Pn**	**05 22 51.7**	**-0.8**
DZM				*e*Sn	**Sn**	**05 24 53.1**	**-1.8**
ONTNC	**Ouen Toro**	**11.32**	**177**	*e*Pn	**Pn**	**05 22 54.8**	**-0.9**
ONTNC				*e*Sn	**Sn**	**05 24 57.5**	**-3.1**
PINNC	**Pines Island,**	**11.71**	**173**	*e*Pn	**Pn**	**05 23 00.3**	**-0.6**
PINNC				*e*Sn	**Sn**	**05 25 09.9**	**-0.1**
TARA	**Tarawa**	**14.08**	**30**	*e*Pn	**Pn**	**05 23 30.2**	**-2.9**
TARA				*e*Sn	**Sn**	**05 26 04.0**	**-4.0**
PMG	**Port Moresby**	**18.48**	**273**	LR	LR	05 31 31.2	
	comp=Z,5μm,18.7s,baz=122,slow=37						
PMG	**Port Moresby**	**18.48**	**273**	*i* P	**P**	**05 24 24.2**	**-3.6**
PMG				pmax	pmax		
	comp=Z,99nm,1.1s						
PATS	**Pohnpei**	**19.19**	**337**	*e*P	**P**	**05 24 34.8**	**-0.8**
	comp=Z,116nm,1.3s						
EIDS	**Eidsvold**	**20.06**	**222**	*e*P	**P**	**05 24 45.5**	**+0.5**
	comp=Z,59nm,1.1s						
EIDS	**Eidsvold**	**20.06**	**222**	P	**P**	**05 24 45.3**	**+0.3**
	baz=20,SNR=6.5						
MANU	**Manus Island**	**20.39**	**294**	*e*P	**P**	**05 24 47.3**	**-1.3**
	comp=Z,131nm,0.9s						
CTA	**Charters Tower**	**20.96**	**242**	P	**P**	**05 24 55.0**	**+0.2**
	comp=Z,30nm,1.0s,baz=63,slow=12,SNR=14						
CTAO	**Charters Tower**	**20.96**	**242**	*e*P	**P**	**05 24 55.4**	**+0.6**
	comp=Z,79nm,0.8s						
CTAO	**Charters Tower**	**20.96**	**242**	*e*P	**P**	**05 24 55.4**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,79nm,0.8s						
MTSU	**Mount Surprise**	**22.05**	**249**	P	**P**	**05 25 05.6**	**-0.9**
	baz=22,SNR=16						
RMQ	**Roma**	**22.36**	**224**	P	**P**	**05 25 10.0**	**+0.3**
	baz=22,SNR=26						
COEN	**Coen**	**22.36**	**260**	*e*P	**P**	**05 25 07.5**	**-2.4**
	comp=Z,22nm,0.8s						
ARMA	**Armidale**	**23.48**	**212**	*e*P	**P**	**05 25 21.4**	**+0.3**
	comp=Z,67nm,1.4s						
ARMA	**Armidale**	**23.48**	**212**	P	**P**	**05 25 21.6**	**+0.6**
	baz=24,SNR=12						
OUZ	**Omahuta**	**25.18**	**165**	*e*P	**P**	**05 25 38.1**	**+1.8**
	comp=Z,18nm,0.9s						
OUZ	**Omahuta**	**25.18**	**165**	P	**P**	**05 25 38.2**	**+1.9**
QIS	**Mount Isa**	**26.99**	**246**	P	**P**	**05 25 52.5**	**-0.5**
	baz=27,SNR=5.9						
KUZ	**Kuaotunu**	**27.19**	**163**	P	P	05 26 05.9	+11
MKAZ	**Moumakai**	**27.37**	**164**	P	**P**	**05 25 56.8**	**+0.8**
CMSA	**Cobar Meteorol**	**27.73**	**219**	P	**P**	**05 25 59.4**	**0.0**
	baz=28,SNR=13						
TOZ	**Tahuroa Road**	**28.05**	**164**	P	**P**	**05 26 05.0**	**+2.9**
WHRZ	**Whale Island**	**28.60**	**161**	P	P	05 26 13.6	+6.5
HIZ	**Hauiti**	**28.61**	**165**	P	**P**	**05 26 08.7**	**+1.6**
TLZ	**Tolley Road**	**28.62**	**164**	P	**P**	**05 26 08.8**	**+1.5**
MARZ	**Manawahe**	**28.62**	**162**	P	**P**	**05 26 09.6**	**+2.3**
OMRZ	**Omania**	**28.64**	**163**	P	**P**	**05 26 10.8**	**+3.3**
CAN	**Canberra**	**28.72**	**210**	*e*P	**P**	**05 26 09.2**	**+1.0**
	comp=Z,16nm,1.0s						
CAN	**Canberra**	**28.72**	**210**	*e*P	**P**	**05 26 09.2**	**+1.0**
CAN				pmax	pmax		
	comp=Z,16nm,1.0s						
EDRZ	**Edgecumbe**	**28.75**	**162**	P	P	05 26 15.4	+6.8
HAZ	**Te Kaha**	**28.77**	**160**	P	**P**	**05 26 10.7**	**+2.1**
MXZ	**Matakaoa Point**	**28.77**	**159**	*e*P	**P**	**05 26 09.3**	**+0.7**
	comp=Z,29nm,0.8s						
MXZ	**Matakaoa Point**	**28.77**	**159**	P	**P**	**05 26 08.5**	**-0.1**
RUGZ	**Raukumara Rang**	**28.92**	**160**	P	**P**	**05 26 10.3**	**+0.2**
PKGZ	**Pakihiroa**	**28.99**	**160**	P	**P**	**05 26 11.1**	**+0.5**
URZ	**Urewera**	**29.01**	**162**	P	**P**	**05 26 11.0**	**+0.3**
	comp=Z,8.1nm,0.3s,baz=261,slow=3.1,SNR=14						
URZ				S	**S**	**05 31 01.9**	**+4.3**
	comp=Z,3.3nm,0.8s,baz=342,slow=18,SNR=3.7						
URZ	**Urewera**	**29.01**	**162**	*e*P	**P**	**05 26 10.8**	**+0.2**
	comp=Z,17nm,0.7s						
URZ	**Urewera**	**29.01**	**162**	P	**P**	**05 26 10.9**	**+0.2**
WMGZ	**Waiomatatini S**	**29.04**	**159**	P	**P**	**05 26 12.0**	**+1.0**
MUGZ	**Murupara**	**29.11**	**162**	P	**P**	**05 26 13.5**	**+2.0**
NEZ	**North Egmont**	**29.15**	**167**	P	P	05 26 20.4	+8.4
VRZ	**Vera Road**	**29.17**	**166**	P	**P**	**05 26 16.4**	**+4.3**
MWZ	**Matawai**	**29.21**	**161**	P	**P**	**05 26 12.5**	**0.0**
TWGZ	**Tauwhareparae**	**29.21**	**160**	P	**P**	**05 26 12.2**	**-0.4**
H11S2	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	05 56 33.0	
	baz=181,slow=76,SNR=727						
H11S3	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	05 56 22.5	
	baz=181,slow=76,SNR=330						
H11S1	**WAKE ISLAND Hy**	**29.27**	**2**	T	T	05 56 23.5	
	baz=181,slow=76,SNR=647						
TWVZ	**Taurewa**	**29.29**	**165**	P	**P**	**05 26 14.6**	**+1.3**
RTZ	**Ruatahuna**	**29.30**	**162**	P	**P**	**05 26 12.9**	**-0.4**
RAGZ	**Rawiri**	**29.32**	**161**	P	**P**	**05 26 13.5**	**-0.1**
WTVZ	**West Tongariro**	**29.37**	**164**	P	**P**	**05 26 16.0**	**+2.0**
TKGZ	**Te Karaka**	**29.41**	**161**	P	**P**	**05 26 15.3**	**+1.1**
NGZ	**Ngauruhoe**	**29.43**	**164**	P	**P**	**05 26 16.3**	**+1.7**
FWVZ	**Far West T-bar**	**29.49**	**165**	P	**P**	**05 26 16.3**	**+1.1**
SNGZ	**Shannon Statio**	**29.56**	**162**	P	**P**	**05 26 16.2**	**+0.6**
RAHZ	**Arahi**	**29.61**	**162**	P	**P**	**05 26 16.3**	**+0.3**
RIGZ	**Rimuhau**	**29.62**	**161**	P	**P**	**05 26 17.0**	**+0.8**
BKZ	**Black Stump Fm**	**29.66**	**163**	*e*P	**P**	**05 26 16.1**	**-0.4**
	comp=Z,37nm,0.6s						
BKZ	**Black Stump Fm**	**29.66**	**163**	P	**P**	**05 26 17.4**	**+0.8**
MOVZ	**Moawhango**	**29.69**	**164**	P	**P**	**05 26 17.3**	**+0.6**
WAZ	**Wanganui**	**29.82**	**166**	P	**P**	**05 26 21.4**	**+3.5**
PRGZ	**Paritu Road**	**29.86**	**161**	P	**P**	**05 26 20.0**	**+1.7**
KNZ	**Kokohu**	**29.88**	**161**	P	**P**	**05 26 20.2**	**+1.8**
ARHZ	**Aropaoanui**	**29.90**	**163**	P	**P**	**05 26 19.5**	**+0.9**
MCHZ	**McNeill Hill**	**29.98**	**163**	P	**P**	**05 26 20.6**	**+1.3**
KRHZ	**Kereru**	**30.07**	**164**	P	**P**	**05 26 20.6**	**+0.5**
MHGZ	**Mahia Peninsul**	**30.08**	**161**	P	**P**	**05 26 21.2**	**+1.0**
H11N1	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	05 58 06.5	
	baz=182,slow=76,SNR=373						
H11N3	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	05 58 09.6	
	baz=182,slow=76,SNR=356						
WPHZ	**Waipukurau**	**30.49**	**164**	P	**P**	**05 26 23.8**	**0.0**
H11N2	**WAKE ISLAND Hy**	**30.49**	**2**	T	T	05 57 55.0	
	baz=182,slow=76,SNR=392						
STKA	**Stephens Creek**	**30.61**	**223**	P	**P**	**05 26 25.4**	**+0.5**
	comp=Z,7.6nm,0.9s,baz=47,slow=9.3,SNR=13						
STKA				PcP	**PcP**	**05 29 23.9**	**+1.6**
	comp=Z,4.8nm,0.9s,baz=54,slow=6.7,SNR=2.8						
STKA				LR	LR	05 38 19.9	
	comp=Z,2μm,18.7s,baz=48,slow=36						
STKA	**Stephens Creek**	**30.61**	**223**	*e*P	**P**	**05 26 25.7**	**+0.8**
	comp=Z,3.6nm,1.1s						
STKA	**Stephens Creek**	**30.61**	**223**	P	**P**	**05 26 24.4**	**-0.5**
	baz=31,SNR=5.9						
POWZ	**Post Office Ro**	**30.62**	**165**	P	**P**	**05 26 25.1**	**+0.2**
OGWZ	**Otaki Gorge**	**30.87**	**166**	P	**P**	**05 26 27.3**	**+0.1**
NNZ	**Nelson**	**30.88**	**169**	P	**P**	**05 26 29.1**	**+2.0**
BFZ	**Birch Farm**	**31.01**	**165**	*e*P	**P**	**05 26 27.5**	**-0.9**
	comp=Z,32nm,0.7s						
SNZO	**South Karori**	**31.24**	**167**	*e*P	**P**	**05 26 30.9**	**+0.5**
	comp=Z,47nm,0.8s						
THZ	**Tophouse**	**31.32**	**170**	*e*P	**P**	**05 26 31.8**	**+0.7**
	comp=Z,104nm,1.2s						
WRAB	**Tennant Creek**	**31.63**	**250**	*ce*P	**P**	**05 26 33.6**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,24nm,1.3s						
WB2	**Warramunga Arr**	**31.63**	**250**	*e*P	**P**	**05 26 32.4**	**-1.8**
	comp=Z,23nm,0.8s						
WRA	**Warramunga Arr**	**31.64**	**250**	P	**P**	**05 26 32.7**	**-1.5**
	comp=Z,11nm,0.8s,baz=75,slow=9.6,SNR=27						
TOO	**Toolangi**	**32.23**	**211**	P	**P**	**05 26 40.0**	**+0.8**
	baz=32,SNR=8.0						
FOZ	**Fox Glacier**	**32.66**	**175**	*e*P	**P**	**05 26 44.5**	**+1.7**
	comp=Z,50nm,1.1s						
KDU	**Kakadu**	**32.73**	**264**	P	**P**	**05 26 43.9**	**+0.2**
	baz=33,SNR=4.3						
AS31	**Alice Springs**	**32.95**	**243**	*e*P	**P**	**05 26 43.9**	**-1.8**
	comp=Z,8.7nm,0.8s						
ASAR	**Alice Springs**	**32.95**	**243**	P	**P**	**05 26 44.0**	**-1.7**
	comp=Z,11nm,0.8s,baz=64,slow=10,SNR=63						
ASAR				PcP	**PcP**	**05 29 29.1**	**+0.2**
	comp=Z,8.6nm,1.1s,baz=87,slow=3.3,SNR=9.3						
ASAR				ScP	**ScP**	**05 33 15.8**	**+7.8**
	comp=Z,3.0nm,1.1s,baz=85,slow=3.1,SNR=10						
ASAR				LR	LR	05 39 18.1	
	comp=Z,1μm,19.1s,baz=72,slow=35						
RPZ	**Rata Peaks**	**32.97**	**173**	P	**P**	**05 26 44.6**	**-0.9**
	comp=Z,30nm,0.7s,baz=300,slow=3.0,SNR=19						
MQZ	**McQueen's Vall**	**33.17**	**171**	*e*P	**P**	**05 26 47.4**	**+0.1**
	comp=Z,49nm,1.0s						
HTT	**Hallett**	**33.34**	**224**	P	**P**	**05 26 49.0**	**+0.1**
	baz=33,SNR=5.4						
LBZ	**Lake Benmore**	**33.53**	**174**	*e*P	**P**	**05 26 50.8**	**+0.3**
	comp=Z,27nm,1.2s						
ODZ	**Otahua Downs**	**34.23**	**174**	*e*P	**P**	**05 26 57.0**	**+0.6**
	comp=Z,51nm,1.5s						
BBOO	**Buckleboo**	**34.99**	**227**	*e*P	**P**	**05 27 03.0**	**-0.3**
	comp=Z,34nm,0.9s						
BBOO	**Buckleboo**	**34.99**	**227**	P	**P**	**05 27 02.9**	**-0.3**
	baz=35,SNR=10						
WRKA	**Warakurna**	**38.25**	**243**	P	**P**	**05 27 29.9**	**-1.2**
	baz=38,SNR=17						
FORT	**Forrest**	**40.21**	**235**	*e*P	**P**	**05 27 48.5**	**+1.2**
	comp=Z,65nm,0.9s						
PPT	**Papeete**	**43.60**	**104**	LR	LR	05 42 25.2	
	comp=Z,691nm,19.6s,baz=270,slow=31						
PPT2	**Papeete2**	**43.60**	**104**	*e*S	**S**	**05 34 39.8**	**-0.9**
	comp=Z,163nm,24.0s						
PPT2				*e*LQ	LQ	05 38 35.4	
	comp=Z,911nm,24.8s						
PPT2				*e*LR	LR	05 40 26.6	
	comp=Z,1μm,22.0s,baz=267						
TBI	**Tubuai**	**44.26**	**112**	*e*S	**S**	**05 34 51.0**	**+1.1**
	comp=Z,187nm,28.2s						
TBI				*e*LQ	LQ	05 38 52.4	
	comp=Z,814nm,29.0s						
TBI				*e*LR	LR	05 40 45.3	
	comp=Z,2μm,26.5s,baz=288						
PSA00	**Pilbara Seismi**	**45.29**	**251**	*e*P	**P**	**05 28 28.8**	**+0.1**
	comp=Z,54nm,1.4s						
MEEK	**Meekatharra**	**47.11**	**244**	P	**P**	**05 28 43.1**	**+0.1**
	baz=47,SNR=15						
HMH	**Humu'ula Sheep**	**48.68**	**52**	*e*P	**P**	**05 28 57.3**	**+1.9**
	comp=Z,153nm,1.1s						
NWAO	**Narrogin (SRO)**	**49.63**	**236**	*e*P	**P**	**05 29 02.7**	**+0.5**
NWAO	**Narrogin (SRO)**	**49.63**	**236**	*e*P	**P**	**05 29 02.7**	**+0.5**
MORW	**Morawa**	**49.79**	**241**	*e*P	**P**	**05 29 04.0**	**+0.5**
	comp=Z,46nm,1.2s						
MORW	**Morawa**	**49.79**	**241**	P	**P**	**05 29 03.6**	**+0.2**
	baz=50,SNR=4.6						
TAOE	**Nuku Hiva Isla**	**53.16**	**93**	*e*LR	LR	05 44 27.9	
	comp=Z,501nm,26.5s						
MJAR	**Matsushiro Arr**	**53.93**	**332**	P	**P**	**05 29 32.6**	**-1.5**
	comp=Z,15nm,1.1s,baz=165,slow=6.4,SNR=15						
MAJO	**Matsushiro**	**53.94**	**332**	*e*P	**P**	**05 29 32.9**	**-1.3**
	comp=Z,25nm,1.3s						
MAJO	**Matsushiro**	**53.94**	**332**	*i* P	**P**	**05 29 32.4**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,21nm,1.3s						
MAT	**Matsushiro**	**53.94**	**332**	P	**P**	**05 29 32.4**	**-1.7**
MAT				S	**S**	**05 37 08.8**	**+3.6**
MJB9	**Matsu-Tunnel**	**53.94**	**332**	*e*P	**P**	**05 29 31.8**	**-2.3**
	comp=Z,26nm,1.3s						
JNU	**Nakatsue**	**55.07**	**324**	P	**P**	**05 29 41.6**	**-0.8**
	comp=Z,16nm,1.0s,baz=151,slow=2.5,SNR=7.8						
JNU	**Nakatsue**	**55.07**	**324**	*e*P	**P**	**05 29 41.6**	**-0.8**
	comp=Z,41nm,1.3s						
RKT	**Rikitea**	**57.51**	**110**	*e*LR	LR	05 46 55.8	
	comp=Z,2μm,26.8s						
QZH	**Quanzhou**	**58.28**	**308**	*e*P	**P**	**05 30 06.6**	**+1.3**
QZH				S	**S**	**05 38 06.9**	**+3.6**
QZH				LR	LR		
	comp=Z,310nm,17.1s						
ASAJ	**Asahikawa**	**58.73**	**341**	P	**P**	**05 30 08.1**	**0.0**
	comp=Z,23nm,1.0s,baz=221,slow=14,SNR=6.8						
KSRS	**Korea Array**	**59.86**	**326**	P	**P**	**05 30 14.7**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=124,slow=6.7,SNR=5.8						
YSS	**Yuzh-Sakhalins**	**61.22**	**342**	*e*P	**P**	**05 30 25.5**	**+0.4**
	comp=Z,74nm,1.3s						
YSS	**Yuzh-Sakhalins**	**61.22**	**342**	*e*P	**P**	**05 30 25.1**	**0.0**
YSS				*e*		05 40 13.6	
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=N,300nm,15.0s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
TEY	**Ternei**	**61.67**	**337**	⇓*e*P	**P**	**05 30 27.6**	**-0.6**
TEY				pmax	pmax		
	comp=Z,20nm,1.3s						
SKR	**Severo-Kuril's**	**61.95**	**353**	*e*P	P	05 30 20.7	-9.2
SKR				*e*S	**S**	**05 38 43.3**	**-6.0**
SKR				pmax	pmax		
	comp=Z,100nm,12.2s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
SKR				MLR	MLR		
	comp=Z,300nm,19.0s						
NJ2	**Nanjing**	**62.03**	**315**	*e*P	**P**	**05 30 32.3**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
QIZ	**Qiongzhong**	**62.74**	**298**	P	**P**	**05 30 35.0**	**-0.9**
QIZ				S	**S**	**05 39 04.8**	**+4.3**
QIZ				pmax	pmax		
	comp=Z,180nm,3.7s						
QIZ				LR	LR		
	comp=Z,230nm,23.5s						
QIZ				LR	LR		
	comp=Z,330nm,22.6s						
QIZ				LR	LR		
	comp=Z,500nm,22.6s						
USRK	**Ussuriysk Ar.**	**62.91**	**333**	P	**P**	**05 30 36.5**	**0.0**
	comp=Z,16nm,1.1s,baz=141,slow=6.4,SNR=19						
USRK				LR	LR	05 55 12.9	
	comp=Z,164nm,20.8s,baz=130,slow=34						
USA0B	**Ussuriysk Arra**	**62.91**	**333**	*e*P	**P**	**05 30 36.8**	**+0.3**
	comp=Z,22nm,1.0s						
PET	**Petropavlovsk**	**64.00**	**355**	*e*P	**P**	**05 30 43.2**	**-0.3**
PET				*e*S	**S**	**05 39 16.0**	**+1.1**
PET				*e*SS	**SS**	**05 43 29.3**	**+4.3**
PET				pmax	pmax		
	comp=Z,100nm,7.6s						
PET				pmax	pmax		
	comp=Z,100nm,16.2s						
PETK	**Petropavlovsk-**	**64.17**	**355**	P	**P**	**05 30 43.3**	**-1.4**
	comp=Z,6.7nm,1.0s,baz=134,slow=6.4,SNR=8.8						
PETK				LR	LR	05 54 12.1	
	comp=Z,341nm,20.1s,baz=157,slow=32						
ADK	**Adak**	**64.35**	**12**	*e*P	**P**	**05 30 46.8**	**+1.0**
	comp=Z,26nm,1.3s						
ADK	**Adak**	**64.35**	**12**	*e*P	**P**	**05 30 46.8**	**+1.0**
ADK				pmax	pmax		
	comp=Z,26nm,1.3s						
WHN	**Wuhan**	**64.42**	**312**	P	P	05 30 54.5	+7.8
WHN				S	S	05 39 29.9	+9.0
WHN				LR	LR		
	comp=N,890nm,17.9s						
WHN				LR	LR		
	comp=E,940nm,16.3s						
WHN				LR	LR		
	comp=Z,1μm,16.0s						
CN2	**Changchun**	**65.71**	**329**	*e*P	**P**	**05 30 54.5**	**-0.3**
CN2				*e*pP	pP	05 30 59.4	-12
CN2				*e*S	**S**	**05 39 39.3**	**+2.9**
CN2				SS	**SS**	**05 43 56.3**	**+4.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CASY	**Casey**	**66.53**	**201**	*e*P	**P**	**05 31 00.0**	**+0.3**
	comp=Z,38nm,1.4s						
GRNR	**Gornyy**	**66.58**	**340**	*e*P	**P**	**05 31 01.3**	**+1.0**
GRNR				pmax	pmax		
	comp=Z,50nm,1.4s						
VNDA	**Vanda**	**66.60**	**181**	P	**P**	**05 31 00.9**	**+0.9**
	comp=Z,7.1nm,1.1s,baz=350,slow=5.6,SNR=8.5						
VNDA				LR	LR	05 56 32.0	
	comp=Z,460nm,19.5s,baz=354,slow=33						
VNDA	**Vanda**	**66.60**	**181**	*e*P	**P**	**05 31 00.6**	**+0.5**
	comp=Z,15nm,1.4s						
VNDA	**Vanda**	**66.60**	**181**	*e*P	**P**	**05 31 00.6**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,15nm,1.4s						
SBA	**Scott Base**	**66.91**	**180**	*e*P	**P**	**05 31 03.1**	**+1.1**
	comp=Z,8.8nm,0.9s						
SBA	**Scott Base**	**66.91**	**180**	*e*P	**P**	**05 31 03.1**	**+1.1**
SBA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLR	**Kul'dur**	**67.01**	**336**	P	**P**	**05 31 03.1**	**+0.1**
	comp=Z,11nm,1.1s,baz=117,slow=4.3,SNR=16						
KLR	**Kul'dur**	**67.01**	**336**	*d i*P	**P**	**05 31 02.5**	**-0.5**
KLR				pmax	pmax		
	comp=Z,13nm,1.1s						
NIKH	**Nikolski High**	**67.23**	**16**	*e*P	**P**	**05 31 05.2**	**+0.9**
	comp=Z,124nm,1.4s						
GYA	**Guiyang**	**68.46**	**304**	*e*P	**P**	**05 31 12.4**	**-0.4**
GYA				PP	**PP**	**05 33 43.8**	**-0.9**
GYA				S	**S**	**05 40 10.5**	**+0.1**
GYA				SS	**SS**	**05 44 34.8**	**-0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,150nm,19.6s						
GYA				LR	LR		
	comp=Z,250nm,19.4s						
GYA				LR	LR		
	comp=Z,380nm,22.1s						
UNV	**Unalaska Valle**	**68.67**	**17**	*e*P	**P**	**05 31 13.7**	**+0.4**
	comp=Z,58nm,1.5s						
AKUT	**Akutan**	**69.13**	**17**	*e*P	**P**	**05 31 16.6**	**+0.4**
	comp=Z,80nm,1.4s						
XAN	**Xi'an**	**70.14**	**312**	P	P	05 31 17.9	-5.0
XAN				pP	pP	05 31 28.3	-11
XAN				sP	pwP	05 31 32.5	-7.0
XAN				PP	**PP**	**05 34 00.0**	**+1.0**
XAN				S	**S**	**05 40 35.9**	**+6.1**
XAN				sS	sS	05 40 53.8	-2.4
XAN	**Xi'an**	**70.14**	**312**	SS	SS	05 45 14.3	+13
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,75nm,4.1s						
XAN				LR	LR		
	comp=N,140nm,17.6s						
XAN				LR	LR		
	comp=E,210nm,20.1s						
XAN				LR	LR		
	comp=Z,290nm,18.2s						
KMI	**Kunming**	**71.17**	**301**	*e*P	**P**	**05 31 29.6**	**0.0**
	comp=Z,20nm,1.4s						
KMI	**Kunming**	**71.17**	**301**	P	**P**	**05 31 29.9**	**+0.3**
KMI				pP	pP	05 31 41.5	-4.8
KMI				sP	PcP	05 31 45.3	-4.1
KMI				S	**S**	**05 40 46.8**	**+4.3**
KMI				sS	SKiKP	05 41 03.4	-2.1
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,94nm,4.0s						
KMI				LR	LR		
	comp=Z,260nm,19.8s						
KMI				LR	LR		
	comp=Z,220nm,23.0s						
KMI				LR	LR		
	comp=Z,320nm,21.2s						
KMI	**Kunming**	**71.17**	**301**	*e*P	**P**	**05 31 29.6**	**0.0**
KMI				pmax	pmax		
	comp=Z,20nm,1.4s						
HHC	**Hu-ho-hao-te**	**71.83**	**320**	*e*P	**P**	**05 31 34.3**	**+1.2**
CMAR	**Chiang Mai Arr**	**72.19**	**293**	P	**P**	**05 31 35.7**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=118,slow=5.0,SNR=6.7						
CMAR				LR	LR	06 05 11.2	
	comp=Z,93nm,18.2s,baz=120,slow=38						
ZEA	**Zeya**	**72.29**	**337**	*e*P	**P**	**05 31 35.8**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						
HIA	**Hailar**	**72.34**	**330**	*e*P	**P**	**05 31 35.4**	**-0.5**
	comp=Z,16nm,1.2s						
HIA	**Hailar**	**72.34**	**330**	*i* P	**P**	**05 31 35.2**	**-0.7**
HIA				pmax	pmax		
	comp=Z,34nm,1.0s						
CD2	**Chengdu**	**72.64**	**307**	*e*P	**P**	**05 31 37.9**	**-0.2**
CD2				S	**SKiKP**	**05 41 03.6**	**-3.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,150nm,6.5s						
CD2				LR	LR		
	comp=Z,480nm,14.2s						
CD2				LR	LR		
	comp=Z,320nm,15.7s						
CD2				LR	LR		
	comp=Z,360nm,15.7s						
SEY	**Seymchan**	**74.38**	**354**	*i* P	**P**	**05 31 45.8**	**-1.7**
LZH	**Lanzhou**	**74.78**	**312**	*e*P	**P**	**05 31 48.8**	**-1.9**
LZH				SS	SS	05 46 15.8	+3.7
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,5.2s						
LZH				LR	LR		
	comp=Z,1μm,16.0s						
LZH				LR	LR		
	comp=Z,1μm,17.9s						
LZH				LR	LR		
	comp=Z,1μm,17.9s						
SVW2	**Sparrevohn**	**77.97**	**18**	*e*P	**P**	**05 32 08.5**	**+0.5**
	comp=Z,37nm,1.2s						
SONM	**Songino Array**	**78.65**	**324**	P	**P**	**05 32 11.9**	**-0.3**
	comp=Z,4.0nm,0.9s,baz=132,slow=5.2,SNR=20						
BILL	**Bilibino**	**78.77**	**0**	*e*P	**P**	**05 32 12.2**	**0.0**
	comp=Z,37nm,1.1s						
BILL	**Bilibino**	**78.77**	**0**	*d i*P	**P**	**05 32 12.2**	**0.0**
BILL						05 32 21.0	
BILL				*e*		05 35 09.1	
BILL				S	S	05 42 17.0	+12
BILL				pmax	pmax		
	comp=Z,35nm,1.0s						
QSPA	**South Pole Qui**	**79.07**	**180**	*e*P	**P**	**05 32 14.6**	**+0.3**
	comp=Z,37nm,1.3s						
GTA	**Gaotai**	**79.07**	**314**	*e*P	**P**	**05 32 15.4**	**+0.7**
GTA				pP	PcP	05 32 19.5	-3.5
GTA				sP	pP	05 32 22.8	-8.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,6.5s						
GTA				LR	LR		
	comp=Z,190nm,21.6s						

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GTA                                 LR       LR
      comp=Z,220nm,19.6s
GTA                                 LR       LR
      comp=Z,290nm,19.9s
TTA   Tatalina          79.29  17  eP       P        05 32 15.8 +0.6
      comp=Z,28nm,1.1s
TTA   Tatalina          79.29  17  eP       P        05 32 15.8 +0.6
TTA                                 pmax     pmax
      comp=Z,28nm,1.1s
SML   Sawmill           80.83  20  eP       P        05 32 24.0 +0.4
      comp=Z,35nm,1.2s
SML   Sawmill           80.83  20  eP       P        05 32 24.0 +0.4
SML                                 pmax     pmax
      comp=Z,35nm,1.2s
ZAK   Zakamensk         81.69 325  eP       P        05 32 26.8 -1.6
ZAK                                 pmax     pmax
      comp=Z,6.0nm,1.1s
TLY   Talaya            82.10 326   P       P        05 32 29.9 -0.6
      comp=Z,3.1nm,0.6s,baz=142,slow=23,SNR=4.3
TLY   Talaya            82.10 326  eP       P        05 32 30.5  0.0
TLY                                eS       S        05 42 42.6 +2.2
TLY                                 pmax     pmax
      comp=Z,13nm,0.8s
TLY                                 MLR      MLR
      comp=Z,496nm,17.0s
TGL   Tana Glacier      82.11  23  eP       P        05 32 30.0 -0.4
      comp=Z,34nm,1.1s
H02S1 DAWSON INLET T    82.53  32   T       T        07 03 13.8
      SNR=6.8
HDA   Harding Lake      83.10  19   P       P        05 32 35.3 -0.1
      baz=227
O02D  Mt. Diablo Mer    83.13  47   P       P        05 32 37.4 +1.2
      baz=250
TCOL  CIGO, UAF Yank    83.14  18   P       P        05 32 34.7 -0.8
      baz=226
COLA  College           83.14  18  eP       P        05 32 34.6 -1.0
      comp=Z,43nm,0.9s
COLA  College           83.14  18d iP       P        05 32 34.4 -1.1
COLA                                pmax     pmax
      comp=Z,40nm,1.0s
L02E  Cave Junction     83.26  45   P       P        05 32 38.3 +1.6
      baz=249
ILAR  Eielson Array     83.37  18   P       P        05 32 36.4 -0.4
      comp=Z,13nm,0.9s,baz=227,slow=6.1,SNR=66
ILAR                                LR       LR      06 06 37.0
      comp=Z,197nm,19.3s,baz=256,slow=34
K02D  Willamette Mer    83.41  44   P       P        05 32 36.6 -0.9
      baz=249
POKR  Poker Plat Res    83.44  18   P       P        05 32 36.3 -0.8
      baz=226
N02D  Trinity Center    83.47  46   P       P        05 32 39.0 +1.1
      baz=250
M02C  Callahan          83.51  46   P       P        05 32 39.1 +1.0
      baz=249
PKM   Mcpherson Peak    83.63  53   P       P        05 32 39.8 +0.8
      baz=252
O03E  Paynes Creek      83.88  47   P       P        05 32 40.4 +0.3
      baz=250,SNR=12
I03D  Drain, OR         83.99  44   P       P        05 32 41.9 +1.5
      baz=249
L04D  Klamath Falls     84.18  45   P       P        05 32 42.1 +0.6
      baz=250,SNR=6.8
M04C  Macdoel           84.36  46   P       P        05 32 42.7 +0.2
      baz=250,SNR=7.4
ARVC  Arvin             84.47  53   P       P        05 32 43.6 +0.6
      baz=253
VES   Vestal, Richgr    84.49  52   P       P        05 32 43.3 +0.2
      baz=252
G03D  McMinnville, O    84.59  42   P       P        05 32 44.4 +1.0
      baz=249
I04A  Tendick Farm,     84.66  44   P       P        05 32 44.2 +0.4
      baz=250
J04D  Umpqua Nationa    84.67  44   P       P        05 32 44.7 +0.6
      baz=250
H04D  Lebanon           84.69  43   P       P        05 32 44.8 +0.9
      baz=249
MAW   Mawson            84.87 202   P       P        05 32 45.9 +1.6
      comp=Z,16nm,1.0s,baz=99,slow=6.8,SNR=18
MAW                                 LR       LR      06 08 09.7
      comp=Z,155nm,18.0s,baz=99,slow=34
MAW   Mawson            84.87 202  eP       P        05 32 45.8 +1.4
      comp=Z,10nm,1.4s
MAW   Mawson            84.87 202   P       P        05 32 46.0 +1.6
      baz=85,SNR=9.3
MAW   Mawson            84.87 202  eP       P        05 32 45.8 +1.4
MAW                                 pmax     pmax
      comp=Z,10.0nm,1.4s
ISA   Isabella, Lake    84.91  52  eP       P        05 32 46.1 +0.8
      comp=Z,15nm,1.0s
ISA   Isabella, Lake    84.91  52  eP       P        05 32 46.1 +0.8
ISA                                 pmax     pmax
      comp=Z,15nm,1.0s
ISA   Isabella, Lake    84.91  52   P       P        05 32 45.9 +0.6
      baz=253,SNR=6.6
EDW2  Edwards Air Fo    85.05  53   P       P        05 32 46.7 +0.7
      baz=253,SNR=9.3
VCNR  Virginia City     85.12  49  eP       P        05 32 47.4 +0.9
      comp=Z,8.0nm,1.1s
BFSC  Mount Baldy Ra    85.14  54   P       P        05 32 46.9 +0.3
      baz=253
109C  Camp Elliot, M    85.20  55   P       P        05 32 47.2 +0.5
      baz=254
MLAC  Mammoth, Mammo85.22  50   P       P        05 32 47.7 +0.7
      baz=252
J05D  Fort Rock, OR     85.28  44   P       P        05 32 48.0 +0.9
      baz=250,SNR=14
MURC  Murrieta          85.32  55   P       P        05 32 47.8 +0.4
      baz=254
TOLK  Toolik Lake Re    85.36  15   P       P        05 32 47.6 +0.9
      baz=224
CWC   Cottonwood Cre    85.44  52   P       P        05 32 48.8 +0.7
      baz=253
PAHR  Pah Rah Range     85.44  48  eP       P        05 32 48.8 +0.8
      comp=Z,17nm,1.1s
LRMC  Laurel Mtn Rad    85.47  53   P       P        05 32 48.8 +0.6
      baz=253
TIN   Tinemaha, Big     85.51  51   P       P        05 32 49.2 +0.9
      baz=253
E04D  Cinebar           85.53  41   P       P        05 32 49.0 +1.0
      baz=249
D03D  Eldon             85.55  40   P       P        05 32 48.9 +0.8
      baz=249
I05D  Terrebonne, OR    85.57  43   P       P        05 32 48.9 +0.5
      baz=250
D04E  Lakebay           85.62  40   P       P        05 32 49.8 +1.3
      baz=249
MONP2 Monument Peak     85.75  56   P       P        05 32 50.4 +0.7
      baz=254
MPMC  Manual Prospec    85.79  52   P       P        05 32 50.4 +0.5
      baz=253,SNR=10
NVAR  Mina Array Bea    85.86  50   P       P        05 32 50.9 +0.7
      comp=Z,14nm,1.1s,baz=235,slow=6.7,SNR=50
NVAR                                LR       LR      06 05 28.0
      comp=Z,520nm,19.1s,baz=262,slow=32
G05D  Wamic, OR         85.89  43   P       P        05 32 50.7 +0.8
      baz=250
PFO   Pinyon Flats O    85.92  55  eP       P        05 32 50.1 -0.3
      comp=Z,12nm,1.1s
PFO   Pinyon Flats O    85.92  55  eP       P        05 32 50.2 -0.3
PFO                                 pmax     pmax
      comp=Z,12nm,1.1s
PFO   Pinyon Flats O    85.92  55   P       P        05 32 50.8 +0.4
      baz=254
IKP   In-Ko-Pah, Jac    85.94  56   P       P        05 32 51.5 +0.9
      baz=254
TIXI  Tiksi             86.01 349   P       P        05 32 49.3 -0.6
      comp=Z,1.8nm,0.4s,baz=150,slow=4.6,SNR=11
TIXI  Tiksi             86.01 349  eP       P        05 32 48.1 -1.7
      comp=Z,13nm,1.2s
TIXI  Tiksi             86.01 349ceP       P        05 32 48.5 -1.4
TIXI                                pmax     pmax
      comp=Z,11nm,1.7s
F05D  White Salmon      86.02  42   P       P        05 32 50.9 +0.3
      baz=250
GSC   Goldstone, Bar    86.11  53   P       P        05 32 52.0 +0.6
      baz=254
GRAC  Grapevine Rang    86.15  51   P       P        05 32 52.0 +0.6
      baz=253,SNR=15
A04D  Lummi Island      86.22  39   P       P        05 32 52.3 +1.0
      baz=249
DLBC  Dease Lake        86.25  28  eP       P        05 32 51.1 -0.4
      comp=Z,5.8nm,1.0s
SWSC  Sam W. Stewart    86.27  56   P       P        05 32 53.0 +0.9
      baz=255
HEC   Hector,Ludlow     86.35  54   P       P        05 32 53.2 +0.6
      baz=254
FURC  Furnace Creek,    86.39  52   P       P        05 32 53.2 +0.7
      baz=254,SNR=13
BELC  Belle Mtn. Jos    86.39  55   P       P        05 32 53.3 +0.5
      baz=254,SNR=12
B05A  Bryant            86.43  40   P       P        05 32 53.2 +0.7
      baz=249
SHOC  Shoshone, Teco    86.69  53   P       P        05 32 54.5 +0.4
      baz=254,SNR=5.4
BC3   Big Chuckawall    86.74  55   P       P        05 32 55.2 +0.7
      baz=255,SNR=6.3
TUQ   Turquoise Moun    86.84  53   P       P        05 32 55.5 +0.5
      baz=254,SNR=6.0
GMRC  Granite Mounta    86.87  54   P       P        05 32 55.5 +0.4
      baz=254,SNR=8.3
TPNV  Topopah Spring    87.00  52   P       P        05 32 56.1 +0.4
      baz=254,SNR=6.5
GLA   Glamis            87.09  56   P       P        05 32 57.0 +0.9
      baz=255,SNR=5.1
IRM   Iron Mountain     87.12  55   P       P        05 32 56.7 +0.5
      baz=255,SNR=14
HAWA  Hanford           87.45  42  eP       P        05 32 57.5  0.0
      comp=Z,15nm,1.1s
Y12C  Blythe            87.51  55  eP       P        05 32 59.1 +1.1
      comp=Z,15nm,1.0s
Y12C  Blythe            87.51  55   P       P        05 32 58.2 +0.1
      baz=255,SNR=8.1
EPYK  Eagle Plains      87.67  20   P       P        05 32 58.2 +0.1
      baz=236
R11A  Troy Canyon, C    87.88  50   P       P        05 33 00.4 +0.4
      baz=254,SNR=14
PDMCI Parker Dam,Lak    87.96  55   P       P        05 33 01.3 +1.1
      baz=255
D08A  Wollman Farm,     88.06  41  eP       P        05 33 01.1 +0.7
      comp=Z,12nm,1.3s
214A  Organ Pipe Nat    88.47  57   P       P        05 33 03.9 +1.2
      baz=256
Y14A  Wickenburg        88.78  55  eP       P        05 33 05.1 +0.9
      comp=Z,14nm,1.4s
WMQ   Urumqi            89.11 315  eP       P        05 33 05.3 -0.2
WMQ                                 pP       PcP     05 33 10.4 +3.5
WMQ                                 pmax     pmax
      comp=Z,14nm,0.7s
WMQ                                 LR       LR
      comp=Z,550nm,28.8s
WMQ                                 LR       LR
      comp=Z,740nm,28.9s
WMQ                                 LR       LR
      comp=Z,220nm,23.7s
CCUT  Cedar City        89.38  52  eP       P        05 33 08.4 +1.3
      comp=Z,18nm,1.2s
NEW   Newport           89.58  41   P       P        05 33 07.8 +0.3
      baz=253
INK   Inuvik            89.76  19  eP       P        05 33 06.9 -0.9
      comp=Z,7.4nm,1.1s
INK   Inuvik            89.76  19  eP       P        05 33 06.9 -0.9
INK                                 pmax     pmax
      comp=Z,7.0nm,1.1s
TUC   Tucson            90.22  57  eP       P        05 33 11.8 +0.8
      comp=Z,9.8nm,1.1s
TUC   Tucson            90.22  57  eP       P        05 33 11.8 +0.8
TUC                                 pmax     pmax
      comp=Z,10.0nm,1.1s
TUC   Tucson            90.22  57   P       P        05 33 11.6 +0.7
      baz=257
DUG   Dugway, Tooele    90.43  49   P       P        05 33 12.7 +0.8
      baz=256
WUAZ  Wupatki           90.45  54   P       P        05 33 13.4 +1.3
      baz=257
HVU   Hansel Valley     90.84  48  eP       P        05 33 14.6 +0.9
      comp=Z,20nm,1.1s
HVU   Hansel Valley     90.84  48  eP       P        05 33 14.6 +0.9
HVU                                 pmax     pmax
      comp=Z,20nm,1.1s
DGZ   Jazzator, Alta    90.89 320d iP       P        05 33 12.7 -1.1
DGZ                                 pmax     pmax
      comp=Z,3.0nm,1.1s
MSO   Missoula          91.27  43   P       P        05 33 15.4 -0.2
      baz=256
JTMT  Jette             91.27  42  eP       P        05 33 15.0 -0.6
      comp=Z,5.2nm,1.0s
CTU   Camp Tracy        91.34  49  eP       P        05 33 16.8 +0.7
      comp=Z,14nm,1.1s
W18A  Petrified Fore    91.68  55   P       P        05 33 18.8 +1.0
      baz=258
TCUT  Toone Canyon      91.69  49  eP       P        05 33 18.4 +0.6
      comp=Z,17nm,1.1s
SYO   Syowa Base        91.92 197⇑eP       P        05 33 16.6 -1.4
LRM   Limekiln Ridge    92.02  44  eP       P        05 33 19.6 +0.3
BOZ   Bozeman (W)       92.53  44   P       P        05 33 22.1 +0.6
      baz=257
IMW   Indian Meadow     92.64  46  eP       P        05 33 21.9 -0.3
      comp=Z,6.1nm,1.2s
121A  Cookes Peak, D    92.75  58   P       P        05 33 23.3 +0.5
      baz=259
PV04  Paradox Valley    93.00  52  eP       P        05 33 24.5 +0.7
      comp=Z,8.0nm,1.1s
H17A  Grant Village     93.00  46   P       P        05 33 24.3 +0.5
      baz=258
BW06  Boulder Array     93.39  47   P       P        05 33 25.8 +0.2
      baz=258
PDAR  Pinedale Array    93.39  47   P       P        05 33 25.6  0.0
      comp=Z,5.2nm,1.1s,baz=236,slow=1.6,SNR=19
MK31  Makanchi Array    93.53 317  eP       P        05 33 25.3 -0.6
      comp=Z,10nm,1.3s
MK31  Makanchi Array    93.53 317  eP       P        05 33 25.3 -0.6
MK31                                pmax     pmax
      comp=Z,10.0nm,1.3s
MKAR  Makanchi Array    93.53 317   P       P        05 33 24.9 -1.0
      comp=Z,3.1nm,0.7s,baz=97,slow=5.6,SNR=23
MKAR                                PKKPbc   PKKPdf  05 50 31.2 -1.0
      comp=Z,1.9nm,0.8s,baz=281,slow=3.2,SNR=12
MKAR                                LR       LR      06 17 08.4
      comp=Z,94nm,18.0s,baz=86,slow=37
ZALV  Zalesovo Beam     93.54 324   P       P        05 33 24.8 -0.9
      comp=Z,3.5nm,0.7s,baz=124,slow=4.8,SNR=10.0
ZALV                                LR       LR      06 12 18.1
      comp=Z,129nm,21.9s,baz=70,slow=34
ZALV  Zalesovo Beam     93.54 324  i P      P        05 33 24.3 -1.4
ZALV                                pmax     pmax
      comp=Z,4.0nm,0.7s
MAKZ  Makanchi          93.74 317  eP       P        05 33 26.3 -0.6
      comp=Z,9.8nm,1.1s
MAKZ  Makanchi          93.74 317  eP       P        05 33 26.3 -0.6
MAKZ                                pmax     pmax
      comp=Z,10.0nm,1.1s
O20A  White River Ci    93.84  50   P       P        05 33 28.0 +0.3
      baz=259
RLMT  Red Lodge         94.06  45   P       P        05 33 29.4 +0.8
      baz=259
ANMO  Albuquerque       94.28  55  eP       P        05 33 30.1 +0.2
      comp=Z,3.4nm,1.1s
ANMO  Albuquerque       94.28  55ceP       P        05 33 29.6 -0.3
ANMO                                pmax     pmax
      comp=Z,3.0nm,1.1s
ANMO  Albuquerque       94.28  55   P       P        05 33 30.2 +0.3
      baz=260
EGMT  Eagleton          94.30  42   P       P        05 33 29.8 +0.3
      baz=259
S22A  4UR Ranch, Cre    94.48  53   P       P        05 33 31.9 +1.0
      baz=260
MNTX  Cornudas Mount    94.60  59   P       P        05 33 31.4 +0.3
      baz=260
YKA   Yellowknife Ar    94.82  27   P       P        05 33 29.6 -1.8
      comp=Z,0.9nm,0.5s,baz=255,slow=4.5,SNR=19
YKA                                 PKiKP    PKiKP   05 38 13.4 +0.2
      comp=Z,0.2nm,0.7s,baz=250,slow=1.4,SNR=4.2
YKA                                 LR       LR      06 10 29.1
      comp=Z,39nm,19.8s,baz=262,slow=32
SDCO  Great Sand Dun    95.52  53   P       P        05 33 35.7 +0.2
      baz=261
TXAR  Lajitas Array     95.67  61   P       P        05 33 36.8 +0.6
      comp=Z,0.9nm,1.0s,baz=233,slow=5.5,SNR=7.2
TXAR                                PP       PP      05 37 29.3 +0.8
      comp=Z,2.0nm,1.1s,baz=250,slow=7.4,SNR=12
TXAR                                LR       LR      06 13 06.3
      comp=Z,399nm,18.0s,baz=0.0,slow=33
T25A  Trinidad          96.28  54   P       P        05 33 40.0 +1.0
      baz=261
KURK  Kurchatov         96.64 320ceP       P        05 33 37.5 -2.4
KURK                                pmax     pmax
      comp=Z,3.0nm,1.3s
MSTX  Muleshoe          97.13  57   P       P        05 33 43.2 +0.5
      baz=262
SNAA  Sanae             97.23 184   P       P        05 33 42.9 +0.5
VNA3  Neumayer Olymp    97.95 181   P       P        05 33 45.3 -0.3
DGMT  Dagmar            98.04  42  eP       P        05 33 46.5 +0.1
      comp=Z,11nm,1.1s
DGMT  Dagmar            98.04  42   P       P        05 33 46.8 +0.4
      baz=263
TZTN  Tazewell         112.94  55   P       PKiKP    05 38 47.2  0.0
      baz=273
E48A  Lockeyer         112.96  44   P       PKiKP    05 38 47.4 +0.5
      baz=279
554A  Perry            113.04  62   P       PKiKP    05 38 46.9 -0.6
      baz=271
T53A  Wise             113.72  54   P       PKiKP    05 38 48.5 -0.2
      baz=274
U53A  Fall Branch      113.73  55   P       PKiKP    05 38 48.9 +0.2
      baz=274
556A  Lake Butler      114.14  62   P       PKPdf    05 38 49.2 -0.4
      baz=271
256A  Glennville       114.53  60   P       PKPdf    05 38 50.2 -0.1
      baz=272
R54A  Victor           114.84  53   P       PKiKP    05 38 51.4 +0.6
      baz=276
BLA   Blacksburg       115.39  54   P       PKPdf    05 38 51.4 -0.5
      baz=276
L54A  Sinclairville    115.61  48   P       PKPdf    05 38 52.0 -0.2
      baz=279
O55A  Ligonier         115.91  51   P       PKPdf    05 38 52.7 -0.1
      baz=278
ARCES ARCESS Array B   116.26 346   PKP     PKiKP    05 38 52.0 -0.6
      comp=Z,1.7nm,0.5s,baz=75,slow=2.0,SNR=30
ARCES                               PKKPbc  PKKPbc   05 49 21.9 -2.8
      comp=Z,3.1nm,1.0s,baz=222,slow=1.2,SNR=4.9
ARCES ARCESS Array B   116.26 346   PKIKP   PKiKP    05 38 52.0 -0.6
ARCES                               pmax    pmax
      comp=Z,2.0nm,0.5s
ARCES                               pmax    pmax
      comp=Z,3.0nm,1.0s
L55A  Hinsdale         116.27  48   P       PKPdf    05 38 53.5 +0.1
      baz=279
J55A  Hilton           116.53  47   P       PKPdf    05 38 53.7 -0.1
      baz=280
D54A  Lac Fusel, La    116.55  43   P       PKPdf    05 38 53.2 -0.6
      baz=283
M56A  Emporium         116.56  49   P       PKPdf    05 38 54.0  0.0
      baz=279
N56A  West Decatur     116.57  50   P       PKPdf    05 38 54.1 +0.1
      baz=279
Q57A  Strasburg        116.75  52   P       PKPdf    05 38 53.9 -0.5
      baz=278
SSPA  Standing Stone   116.92  50   P       PKPdf    05 38 54.3 -0.4
      baz=279
ORIO  Orleans, Innes   117.71  44   P       PKPdf    05 38 55.8 -0.2
      baz=283
O58A  Lewisberry       117.73  50   P       PKPdf    05 38 56.0 -0.3
      baz=280
N58A  Sunbury          117.76  50   P       PKPdf    05 38 55.8 -0.5
      baz=280
M58A  Price’s Panora   117.86  49   P       PKPdf    05 38 56.0 -0.5
      baz=280
BINY  Binghamton       118.05  48   P       PKPdf    05 38 56.8 -0.1
      baz=281
L58A  Harry Jones Me   118.18  48   P       PKPdf    05 38 56.5 -0.6
      baz=281
W61A  Ground Anchor    118.36  56   P       PKPdf    05 38 57.1 -0.5
      baz=277
M59A  Waymart          118.59  49   P       PKiKP    05 38 58.5 +0.5
      baz=281
M61A  Granite Spring   119.86  49   P       PKPdf    05 39 00.6 +0.2
      baz=282
LPAZ  La Paz           120.12 116   PKP     PKPdf    05 39 02.6 +0.3
      comp=Z,3.1nm,0.8s,baz=167,slow=2.7,SNR=8.7
LPAZ  La Paz           120.12 116  ePKPdf   PKPdf    05 39 02.5 +0.2
LPAZ  La Paz           120.12 116  ePKIKP   PKPdf    05 39 02.5 +0.2
KIV   Kislovodsk       121.24 315  i PKIKP  PKPdf    05 39 01.8 -1.2
KIV                                 pmax    pmax
      comp=Z,16nm,1.1s
FINES FINESS Array B   121.72 339   PKP     PKPdf    05 39 02.4 -0.8
      comp=Z,1.8nm,0.5s,baz=39,slow=1.4,SNR=13
FINES FINESS Array B   121.72 339c iPKIKP   PKPdf    05 39 03.4 +0.1
FINES                               pmax    pmax
      comp=Z,2.0nm,0.5s
PKME  Peaks-Kenny Pk   121.98  43   P       PKiKP    05 39 04.9 +0.5
      baz=288
SOC   Sochi            123.41 315  i PKIKP  PKiKP    05 39 09.8 +2.5
SOC                                e                 05 40 52.3
SOC                                ePPP     PPP      05 43 30.8
SOC                                 MLR     MLR
      comp=Z,187nm,17.0s
CPUP  Villa Florida    124.01 132   PKP     PKPdf    05 39 09.2 +0.4
      comp=Z,4.0nm,0.9s,baz=233,slow=3.4,SNR=5.9
NB2   NORSAR Subarra126.63 345   PKPdf   PKPdf    05 39 12.3 -0.5
      comp=Z,2.1nm,0.8s,baz=31,slow=1.9
NOA   NORSAR Array B 126.63 345   PKP     PKPdf    05 39 12.4 -0.3
      comp=Z,1.6nm,0.9s,baz=33,slow=2.0,SNR=4.6
AKASG Malin Array Be   126.84 327   PKP     PKPdf    05 39 12.8 -0.6
      comp=Z,0.8nm,0.6s,baz=61,slow=1.5,SNR=7.2
BR101 Keskin Array S   128.98 313  ePKPdf   PKPdf    05 39 18.1 +0.1
BRTR  Keskin Array B   128.98 313   PKP     PKPdf    05 39 18.1 +0.1
      comp=Z,0.7nm,0.5s,baz=131,slow=5.1,SNR=3.9
HUMP  Col San Antoni   129.56  76  ePKPdf   PKPdf    05 39 19.1 -0.4
PTGA  Pitinga          132.98 101  ePKPdf   PKPdf    05 39 26.4 +0.2
BRG   Berggiesshubel   134.02 336  ePKP     PKiKP    05 39 29.6 +1.2
      comp=Z,8.5nm,1.4s
BRG   Berggiesshubel   134.02 336  ePKIKP   PKiKP    05 39 29.6 +1.2
BRG                                 pmax    pmax
      comp=Z,9.0nm,1.4s
CLL   Collm            134.06 337  ePKIKP   PKiKP    05 39 29.0 +0.6
CLL                                 MLR     MLR
      comp=Z,300nm,19.0s
CLL   Collm            134.06 337  ePKiKP   PKiKP    05 39 29.0 +0.6
CLL                                ePP      PP       05 41 56.0 -1.5
CLL                                ePKSbc   PKSbc    05 42 56.0 -1.5
CLL                                ePPS     PPS      05 53 54.0
CLL                                e                 05 55 12.0
CLL                                eSS      SS       05 59 42.0 +1.2
CLL                                eSKSSKSac         06 01 48.0
CLL                                eSSS     SSS      06 04 42.0
CLL                                eSSSS             06 08 36.0
CLL                                 Lm      MLR      06 43 00.0
      comp=N,200nm,19.4s
CLL                                 Lm      MLR      06 43 00.0
      comp=E,100nm,18.4s
CLL                                 Lm      MLR      06 43 00.0
      comp=Z,300nm,19.0s
KHC   Kasperske Hory   135.50 334  ePKPdf   PKPdf    05 39 30.7 +0.8
GEC2  GERESS Array S   135.66 334  ePKPdf   PKPdf    05 39 30.4 +0.1
GERES GERESS Array B   135.66 334   PKP     PKPdf    05 39 30.9 +0.6
      comp=Z,0.8nm,0.4s,baz=45,slow=0.6,SNR=9.0
GRFO  Grafenberg       136.03 336  ePKPdf   PKPdf    05 39 28.4 -2.5
GRFO  Grafenberg       136.03 336  ePKIKP   PKPdf    05 39 28.4 -2.5
BDFB  Brasilia         137.30 128   PKP     PKPdf    05 39 34.6 +0.3
      comp=Z,6.7nm,0.9s,baz=244,slow=6.7,SNR=7.8
BDFB  Brasilia         137.30 128  ePKPdf   PKPdf    05 39 34.5 +0.2
BDFB                               ePKPdf   PKPdf    05 39 34.6 +0.3
BDFB  Brasilia         137.30 128  ePKIKP   PKPdf    05 39 34.5 +0.2
BFO   Black Forest     138.25 337  i PKIKP  PKiKP    05 39 38.9 +1.8
TIP   Timpagrande      140.69 321  ePKPdf   PKiKP    05 39 42.3 -0.1
BNI   Bardonecchia     141.60 336  ePKPdf   PKPdf    05 39 41.9 +0.5
BNI   Bardonecchia     141.60 336  ePKIKP   PKPdf    05 39 41.9 +0.5
KEST  Kesra            147.41 323   PKPbc   PKPbc    05 39 53.9 -0.2
      comp=Z,11nm,0.9s,baz=53,slow=1.6,SNR=12
KEST  Kesra            147.41 323  ePKPbc   PKPbc    05 39 53.4 -0.7
PGAV  Gavieira, Arco   148.67 352  ePKPbc   PKPbc    05 39 57.3  0.0
PGAV  Gavieira, Arco   148.67 352  eLR      LR       06 39 15.0
      comp=Z,244nm,18.0s
PCAB  Cabril           148.88 351  ePKPbc   PKPbc    05 39 57.9 +0.1
POLO  Lamas de Olo     149.17 351  ePKPbc   PKPbc    05 39 58.8 +0.2
MVO   Moncorvo         149.25 349  ePKPbc   PKPbc    05 39 59.0 +0.2
MVO   Moncorvo         149.25 349  eLR      LR       06 41 33.6
      comp=Z,240nm,18.0s
PVRL  Vila Real        149.26 351  ePKPbc   PKPbc    05 39 59.0 +0.2
PVIS  Viseu            149.83 351  ePKPbc   PKPbc    05 40 00.3 +0.1
ESDC  Sonseca Array    149.99 344   PKPbc   PKPbc    05 40 00.8 +0.1
      comp=Z,4.2nm,0.8s,baz=17,slow=2.7,SNR=22
ESLA  Sonseca Array    149.99 344  ePKPbc   PKPbc    05 39 59.5 -1.1
MTE   Manteigas        150.08 350  ePKPbc   PKPbc    05 40 01.4 +0.6
MTE   Manteigas        150.08 350  eLR      LR       06 39 42.7
      comp=Z,198nm,20.0s
MTE   Manteigas        150.08 350  ePKPbc   PKPbc    05 40 01.0 +0.2
PAB   San Pablo        150.21 345  ePKPbc   PKPbc    05 40 01.5 +0.3
COI   Coimbra          150.41 351  ePKPbc   PKPbc    05 40 01.4 -0.1
COI   Coimbra          150.41 351  ePKIKP   PKPbc    05 40 01.4 -0.1
PCAS  Casmilo, Conde   150.57 351  ePKPbc   PKPbc    05 40 02.3 +0.3
PCBR  Castelo Branco   150.61 350  ePKPbc   PKPbc    05 40 02.1 +0.1
PTOM  Tomar            150.99 351  ePKPbc   PKPbc    05 40 03.3 +0.4
PMRV  Marv??o          151.00 349  ePKPbc   PKPbc    05 40 03.4 +0.4
PMRV  Marv??o          151.00 349  eLR      LR       06 40 11.4
      comp=Z,218nm,18.0s
ALMR  Almeirim         151.47 351  ePKPbc   PKiKP    05 40 05.1 +0.6
PMTG  Montargil        151.49 350  ePKPbc   PKPbc    05 40 04.2 +0.1
PNCL  Nicolau / Gran   152.48 350  ePKPbc   PKiKP    05 40 07.3 +0.7
PVAQ  Vaqueiros        153.02 349  ePKPbc   PKiKP    05 40 08.3 +0.5
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PVAQ	Vaqueiros	153.02	349	eLR	LR	06 39 51.7	
	comp=Z,169nm,18.0s						
TORD	Torodi Ar. Bea	164.37	280	PKP	PKPdf	05 40 12.7	-1.6
	comp=Z,2.6nm,1.0s,baz=219,slow=0.9,SNR=9.1						
TORD				PKPab	PKPab	05 41 07.6	-1.4
	comp=Z,2.7nm,1.1s,baz=39,slow=3.2,SNR=5.0						
TOA1	Torodi Ar. Sit	164.37	280	ePKPdf	PKPdf	05 40 12.7	-1.6
TOA1				ePKPab	PKPab	05 41 07.6	-1.4

UCR 19 05:23:19.5±1.4, 11°.47N×86°.22W, h14^{km}±11^{km}, MW3.5, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GB1A	Borinquen Arri	1.03	129	eP	Pb	05 23 38.7	-0.5
BUEV	Buena Vista	1.04	130	⇓iP	Pb	05 23 38.4	-1.0
ESTN	Estel	1.62	355	⇑iP	Pn	05 23 47.7	-0.2
JTS	Las Juntas de	1.71	133	eP	Pn	05 23 48.0	-1.0
CEDE	Laguna Cedeo	1.78	123	eP	Pn	05 23 49.3	-0.7
ARE1	Arenal 1	1.78	124	eP	Pn	05 23 49.3	-0.6
CSGN	Cosiguina Volc	1.99	319	eP	Pn	05 23 52.8	0.0
DRK0	Durika	3.66	127	eP	Pn	05 24 14.7	-1.2
DRK0				eS	Sn	05 24 57.9	-1.1

UCR 19 05:48:29.7±0.7, 8°.26N×83°.05W, h1^{km}±5^{km}, MD4.0, MW3.3, 1C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDSV	San Vito	0.56	8	⇓iP	Pb	05 48 41.8	-0.6
EDSV				eS	Sb	05 48 50.7	-0.2
BRU2	Volcan	0.64	34	⇓iP	Pb	05 48 43.1	-0.6
BRU2				eS	Sb	05 48 52.9	-0.3
EDPN	Palmar Norte	0.80	330	eP	Pg	05 48 45.1	0.0
EDPN				⇓iP	Pb	05 48 45.3	-1.1
DRK0	Durika	1.01	349	⇓iP	Pg	05 48 48.8	-0.3
DRK0				eS	Sb	05 49 03.4	-0.6
EDLM	Las Mercedes	1.14	332	⇑iP	Pg	05 48 51.5	0.0
EDLM				eS	Sb	05 49 07.2	-0.3
LCR2	La Lucha 2	1.74	328	eP	Pn	05 49 01.4	+0.1

KRSC 19 06:11:20.6±2.2, 51°.40N×161°.57E, h62^{km}±42^{km}, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.95	331	eP	Pn	06 11 53.3	+1.9
SPN				eS	Sn	06 12 16.7	+2.0
RUS	Russkaya	2.16	300	P	Pn	06 11 56.4	+2.2
RUS				eS	Sn	06 12 21.3	+1.5
KDTR	Khodutka, Kamc	2.22	282	eP	Pn	06 11 56.0	+1.0
KDTR				eS	Sn	06 12 21.2	-0.1
NLC	Nalytchevo	2.24	323	eS	Sn	06 12 26.2	+4.4
MTVR	Mutnovka	2.36	299	P	Pn	06 11 59.3	+2.2
MTVR				eS	Sn	06 12 26.5	+1.5
DALK	Dalny	2.38	314	eP	Pn	06 12 00.3	+3.1
PET	Petropavlovsk	2.42	313	P	Pn	06 12 00.4	+2.6
PET				eS	Sn	06 12 28.3	+2.0
UGLR	Uglovaya	2.47	318	eP	Pn	06 12 02.6	+4.0
UGLR				S	Sn	06 12 30.9	+3.2
ASAK	Asacha	2.48	295	eP	Pn	06 12 01.1	+2.4
SDLR	Sedlovina	2.50	320	P	Pn	06 12 00.9	+1.9
SMAR	Somma	2.52	319	eP	Pn	06 12 03.0	+3.6
AVH	Avacha	2.55	318	P	Pn	06 12 04.0	+4.4
AVH				eS	Sn	06 12 33.7	+4.1
KRMR	Karymshinskiy	2.56	305	eP	Pn	06 12 02.8	+3.1
KRMR				eS	Sn	06 12 31.8	+2.2
MKZ	Mys Kozlova	3.16	2	eP	Pn	06 12 10.5	+2.6
MKZ				eS	Sn	06 12 46.9	+2.6
GNL	Ganaly	3.19	317	eP	Pn	06 12 13.0	+4.6
KZV	Kizimen	3.80	349	eP	Pn	06 12 21.2	+4.5
KZV				eS	Sn	06 13 03.6	+3.5
TUMD	Tumrok D	3.87	350	eP	Pn	06 12 21.8	+4.2
TUMD				eS	Sn	06 13 05.9	+4.1
TUMR	Tumrok	3.98	348	P	Pn	06 12 24.0	+4.8
BKI	Bering	4.63	33	eP	Pn	06 12 31.0	+3.0
BKI				eS	Sn	06 13 19.4	-0.9
KBTR	Krutoberegovo	4.87	8	P	Pn	06 12 34.8	+3.6

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*ISCJB **19** 06:36:21.3±0.2, 2°.38N±0°.03×98°.83E±0°.03, h152^{km}±2^{km}, mb4.2/33, Error ellipse: s-maj=6.0km s-min=4.0km az=147.8*

*IDC **19** 06:36:21.5±0.6, 2°.33N×98°.84E, h142^{km}±3^{km}, mb3.8/18, mb1 3.9/19, mb1mx3.8/49, mbtmp4.3/19, Error ellipse: s-maj=16.7km s-min=12.0km az=51.0*

*NEIC **19** 06:36:22.7±2.5, 2°.43N×98°.90E, h146^{km}±5^{km}, mb4.2/15, Error ellipse: s-maj=12.8km s-min=8.3km az=68.0*

*DJA **19** 06:36:22.6±0.4, 2°N±2°×9°9E±°, h138^{km}±4^{km}, M4.0/13, MLv4.0/13*

ISC 19 06:36:22.4±0.5, 2°.38N±0°.04×98°.88E±0°.04, h142^{km}±4^{km}, n89, σ1°45/107, mb4.1/33, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	0.42	6	P	Pn	06 36 42.8	+0.1
	baz=348,slow=8.8						
PSI				S	Sn	06 36 57.9	-0.1
	61nm,0.3s,baz=15,slow=20,SNR=87						
PSI	Prapat	0.42	6	ePn	Pn	06 36 42.6	-0.1
PSI				eSn	Sn	06 36 57.1	-0.9
TSI	Tuntungan	1.16	344	P	Pn	06 36 48.8	+0.9
TSI				S	Sn	06 37 09.1	+1.7
KCSI	Kotacane, Aceh	1.59	316	P	Pn	06 36 52.5	+0.1
KCSI				S	Sn	06 37 14.7	-0.6
GSI	Gunungsitoli	1.69	231	ePn	Pn	06 36 54.1	+0.7
GSI				eSn	Sn	06 37 17.4	+0.2
GSI	Gunungsitoli	1.69	231	P	Pn	06 36 54.0	+0.6
GSI				S	Sn	06 37 17.0	-0.2
MNSI	Mandailing Nat	1.72	156	P	Pn	06 36 54.5	+0.7
TPTI		1.91	297	P	Pn	06 36 56.1	+0.1
TPTI				S	Sn	06 37 21.2	-0.6
PBSI	Pulau Batu	2.49	194	P	Pn	06 37 02.6	-0.5
PBSI				S	Sn	06 37 34.1	-0.2
SNSI	Sinabang, Aceh	2.55	271	P	Pn	06 37 04.3	+0.5
SNSI				S	Sn	06 37 34.4	-1.3
BKNI	Bangkinang	2.97	133	ePn	Pn	06 37 09.8	+0.8
BKNI				eSn	Sn	06 37 45.6	+0.5
BKNI	Bangkinang	2.97	133	P	Pn	06 37 10.4	+1.3
IPM	Ipoh	2.99	46	ePn	Pn	06 37 09.9	+0.5
MLSI	Meulaboh, Aceh	3.10	307	P	Pn	06 37 10.5	-0.3
MLSI				S	Sn	06 37 46.5	-1.8
KULM	Kulim	3.39	31	ePn	Pn	06 37 14.0	-0.5
KULM				eSn	Sn	06 37 51.9	-3.0
LHMI	Lhok Sumawe	3.43	326	ePn	Pn	06 37 15.2	+0.2
LHMI				eSn	Sn	06 37 55.8	+0.1
LHMI	Lhok Sumawe	3.43	326	P	Pn	06 37 15.5	+0.5
PDSI	Padang	3.63	154	P	Pn	06 37 18.1	+0.4
MYKOM	Kota Tinggi	5.00	97	ePn	Pn	06 37 36.2	+0.4
MYKOM				eSn	Sn	06 38 42.8	+10
SKLT	Songkhla	5.07	20	P	Pn	06 37 36.1	-0.5
	29nm,0.7s,0.1nm						
TRTT	Trang	5.48	8	P	Pn	06 37 41.8	-0.4
	56nm,1.1s,1µm0.2nm						
LHSI	Lahat	7.71	143	P	Pn	06 38 12.5	+0.4
MNAI	Manna	7.83	149	ePn	Pn	06 38 11.9	-1.8
MNAI				eSn	Sn	06 39 36.1	-5.0
MDSI	Maura Dua	8.63	142	P	Pn	06 38 23.9	-0.5
KLSI		9.13	140	P	Pn	06 38 30.5	-0.6
DLV	T Lat	13.45	45	eP	P	06 39 33.5	+1.2
CHAI	Chaiyaphum	13.78	13	P	P	06 39 36.9	+1.1
PBKT	Sadao Pong	14.25	8	P	P	06 39 41.8	+0.8
	18nm,0.7s						
PANO	Nakornpanom	15.72	21	P	P	06 39 56.9	-0.4
	0.6nm,1.0s						
CMAR	Chiang Mai Arr	15.98	0	P	Pn	06 39 58.2	-1.2
	1.7nm,0.3s,baz=188,slow=12,SNR=6.8						
NONG	Nongkai	16.14	15	P	P	06 40 03.0	+1.1
	0.2nm,1.0s						
KKM	Kota Kinabalu	17.66	78	eP	Pn	06 40 20.7	+0.7
	25nm,0.8s						
SLVN	Son La	19.47	14	eP	P	06 40 38.5	0.0
	13nm,0.8s						
KAPI	Kappang	22.11	109	P	P	06 41 07.5	+0.9
	14nm,0.7s,baz=328,slow=7.1,SNR=7.7						
BNSI	Bone	22.25	108	P	P	06 41 12.0	+4.0
BKSI	Bulukumba	22.55	110	P	P	06 41 12.2	+1.2
KMI	Kunming	22.92	9	P	P	06 41 14.8	+0.3
KMI				pP	pP	06 41 45.3	+4.0
KMI				sP	sP	06 42 01.3	+2.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,35nm,4.4s						
LUWI	Luwuk	24.13	98	eP	P	06 41 26.7	+1.3
	comp=Z,92nm,1.2s						
WHN	Wuhan	31.61	26	P	P	06 42 34.8	+2.8
XAN	Xi'an	32.87	15	P	P	06 42 40.8	-2.1
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
XAN				pmax	pmax		
	comp=Z,72nm,4.6s						
LZH	Lanzhou	33.86	7	eP	P	06 42 56.0	+4.4
LZH				pP	pP	06 43 27.8	+5.6
LZH				sP	sP	06 43 41.4	+2.9
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC	Hu-ho-hao-te	39.98	15	eP	P	06 43 45.1	+1.8
WRA	Warramunga Arr	41.26	124	P	P	06 43 52.4	-1.7
	comp=Z,2.6nm,0.3s,baz=296,slow=9.8,SNR=73						
WRA				ScP	ScP	06 49 24.9	-2.2
	comp=Z,0.9nm,0.9s,baz=311,slow=3.2,SNR=3.0						
WR1	Warramunga Arr	41.27	124	eScP	ScP	06 49 24.9	-2.2
WRAB	Tennant Creek	41.27	124	eP	P	06 43 53.0	-1.0
	comp=Z,4.4nm,0.8s						
WB2	Warramunga Arr	41.27	124	eP	P	06 43 52.6	-1.5
	comp=Z,6.1nm,0.9s						
WMQ	Urumqi	42.45	348	eP	P	06 44 02.8	-0.5
WMQ				pP	pP	06 44 35.8	+0.8
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				LR	LR		
	comp=N,190nm,29.0s						
WMQ				LR	LR		
	comp=E,210nm,29.2s						
WMQ				LR	LR		
	comp=Z,43nm,29.2s						
MMPI	Merauke	42.76	105	P	P	06 44 10.9	+4.7
ASAR	Alice Springs	42.80	129	P	P	06 44 04.7	-1.8
	comp=Z,3.5nm,0.8s,baz=297,slow=7.2,SNR=16						
ASAR				ScP	ScP	06 49 30.9	-2.3
	comp=Z,0.7nm,0.7s,baz=309,slow=4.2,SNR=8.4						
AS31	Alice Springs	42.80	129	eP	P	06 44 07.2	+0.7
	comp=Z,1.4nm,0.8s						
KS15	Wonju Array Si	43.91	34	eP	P	06 44 12.6	-2.5
	comp=Z,27nm,1.4s						
KSRS	Korea Array	43.94	34	P	P	06 44 13.8	-1.4
	comp=Z,2.8nm,0.8s,baz=218,slow=9.3,SNR=9.4						
KSRS				pP	pP	06 44 47.0	-0.2
	comp=Z,3.7nm,0.9s,baz=222,slow=9.4,SNR=4.9						
SONA0	Songino Array	45.75	7	eP	P	06 44 29.5	-0.1
SONM	Songino Array	45.75	7	P	P	06 44 29.5	-0.1
	comp=Z,0.8nm,0.4s,baz=189,slow=11,SNR=3.8						
SONM				pP	pP	06 45 01.6	-0.1
	comp=Z,1.3nm,0.7s,baz=185,slow=8.0,SNR=3.2						
MK31	Makanchi Array	46.54	344	eP	P	06 44 35.5	-0.2
	comp=Z,3.3nm,1.3s						
MKAR	Makanchi Array	46.54	344	P	P	06 44 35.3	-0.5
	comp=Z,1.4nm,0.5s,baz=152,slow=9.0,SNR=24						
MAJO	Matsushiro	49.70	42	eP	P	06 44 60.0	-0.2
MJAR	Matsushiro Arr	49.70	42	P	P	06 44 60.0	-0.2
	comp=Z,1.2nm,0.6s,baz=251,slow=16,SNR=4.0						
USRK	Ussuriysk Ar.	50.91	30	P	P	06 45 08.1	-1.0
	comp=Z,3.5nm,0.9s,baz=236,slow=4.7,SNR=6.8						
KURBB	Kurchatov Arra	51.06	343	P	P	06 45 09.7	-0.5
	comp=Z,1.4nm,0.6s,baz=162,slow=7.1,SNR=11						
KURK	Kurchatov	51.12	344	eP	P	06 45 10.3	-0.2
	comp=Z,4.3nm,1.2s						
ZALV	Zalesovo Beam	52.69	350	P	P	06 45 21.2	-0.9
	comp=Z,3.5nm,0.4s,baz=177,slow=6.6,SNR=5.9						
KLR	Kul'dur	54.46	26	P	P	06 45 34.6	-0.5
	comp=Z,4.5nm,0.8s,baz=248,slow=7.0,SNR=18						
BVAR	Borovoye Array	55.72	340	P	P	06 45 43.0	-1.1
	comp=Z,1.1nm,0.5s,baz=140,slow=10.0,SNR=7.3						
BVAR				pP	pP	06 46 16.6	-1.1
	comp=Z,0.7nm,0.3s,baz=196,slow=10,SNR=1.6						
ABKAR	Akbulak array	57.29	331	eP	P	06 45 53.8	-1.5
	comp=Z,1.6nm,0.9s						
KMBO	Kilima Mbogo	61.71	267	P	P	06 46 24.9	-1.7
	comp=Z,2.5nm,0.9s,baz=68,slow=11,SNR=5.3						
KMBO	Kilima Mbogo	61.71	267	eP	P	06 46 27.8	+1.3
	comp=Z,2.2nm,0.8s						
KBZ	Khabaz	64.31	318	P	P	06 46 41.6	-1.2
	comp=Z,3.1nm,0.8s,baz=135,slow=10.0,SNR=3.7						
BR101	Keskin Array S	69.58	312	eP	P	06 47 14.7	-1.8
BRTR	Keskin Array B	69.58	312	P	P	06 47 14.7	-1.8
	comp=Z,1.5nm,0.7s,baz=125,slow=6.8,SNR=5.4						
TIXI	Tiksi	71.75	10	eP	P	06 47 27.4	-1.3
	comp=Z,5.8nm,0.7s						
SEY	Seymchan	72.03	23	P	P	06 47 30.3	-0.3
	comp=Z,2.7nm,0.7s,baz=222,slow=12,SNR=5.9						
MAW	Mawson	74.24	194	P	P	06 47 45.4	+2.0
	comp=Z,2.5nm,0.8s,baz=360,slow=9.5,SNR=4.2						
MAW	Mawson	74.24	194	eP	P	06 47 44.7	+1.2
	comp=Z,1.0nm,1.0s						
BOSA	Boshof	76.82	240	eP	P	06 48 00.2	+1.0
FIA0	FINESS Array S	79.74	332	eP	P	06 48 13.7	-0.7
FINES	FINESS Array B	79.74	332	P	P	06 48 13.7	-0.7
	comp=Z,2.1nm,0.8s,baz=93,slow=12,SNR=7.0						
BKZ	Black Stump Fm	81.91	130	eP	P	06 48 25.3	-1.1
	comp=Z,5.5nm,0.8s						
ARA0	ARCESS Array S	82.00	340	eP	P	06 48 25.5	-0.8
ARCES	ARCESS Array B	82.00	340	P	P	06 48 25.5	-0.8
	comp=Z,2.4nm,0.9s,baz=97,slow=3.0,SNR=4.6						
SPUT	South Promonto	128.01	30	ePKPdf	PKPdf	06 55 09.3	-2.9
LTX	Lajitas	141.78	33	ePKPpre	PKPpre	06 55 32.4	
LTX				ePKPdf	PKPdf	06 55 39.0	+0.9
TXAR	Lajitas Array	141.78	33	PKhKP	PKPpre	06 55 32.4	
	comp=Z,0.1nm,0.4s,baz=289,slow=2.8,SNR=3.3						
TXAR				PKP	PKPdf	06 55 39.0	+0.9
	comp=Z,0.2nm,0.6s,baz=329,slow=1.2,SNR=4.9						
BDFB	Brasilia	144.82	246	PKP	PKPbc	06 55 43.3	+0.1
	comp=Z,3.7nm,0.7s,baz=107,slow=6.8,SNR=4.9						
BDFB	Brasilia	144.82	246	ePKPbc	PKPbc	06 55 43.3	+0.1
BDFB				ePKPbc	PKPab	06 55 43.5	+0.4
CPUP	Villa Florida	147.00	222	PKPbc	PKPbc	06 55 48.4	-0.9
	comp=Z,1.6nm,0.8s,baz=308,slow=5.8,SNR=4.2						
GO01	Chusmiza	159.23	213	ePKPab	PKPab	06 56 44.7	+1.6
PB11	IPOC Station P	159.41	212	ePKPab	PKPab	06 56 44.5	+1.1
LPAZ	La Paz	161.17	222	PKPab	PKPab	06 56 51.0	-0.8
	comp=Z,0.7nm,0.7s,baz=125,slow=2.6,SNR=3.6						

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*IDC **19** 06:44:00.4±2.0, 51°.47N×160°.21E, h0^{km}, mb3.9/7, mb1 3.9/8, mb1mx3.6/43, mbtmp3.8/8, ML2.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/30, Error ellipse: s-maj=56.6km s-min=24.7km az=19.0*

*KRSC **19** 06:44:03.7±1.5, 52°.07N×160°.88E, h60^{km}±27^{km}, ML4.1*

ISC 19 06:44:03.8±2.5, 52°.09N±0°.08×160°.79E±0°.05, h10^{km}±14^{km}, n27, σ1°25/35, mb4.0/7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.11	335	eP	Pg	06 44 24.8	-0.4
NLC	Nalytchevo	1.39	321	eP	Pn	06 44 29.2	-0.1
NLC				eS	Sb	06 44 47.0	-0.8
RUS	Russkaya	1.44	285	eP	Pn	06 44 29.7	-0.3
RUS				eS	Sn	06 44 47.4	-1.6
DALK	Dalny	1.56	308	eP	Pn	06 44 31.7	+0.1
PET	Petropavlovsk	1.60	306	eP	Pn	06 44 32.4	+0.2
UGLR	Uglovaya	1.64	314	eP	Pn	06 44 33.6	+0.8
MTVR	Mutnovka	1.65	285	eP	Pn	06 44 33.1	+0.1
MTVR				eS	Sn	06 44 54.3	0.0
SDLR	Sedlovina	1.66	316	eP	Pn	06 44 33.7	+0.6
SMAR	Somma	1.69	315	eP	Pn	06 44 33.7	+0.1
KDTR	Khodutka, Kamc	1.70	261	eP	Pn	06 44 33.2	-0.4
KDTR				eS	Sn	06 44 53.3	-2.1
AVH	Avacha	1.71	314	eP	Pn	06 44 34.9	+1.0
KRER	Koryakskii	1.74	315	eP	Pn	06 44 35.0	+0.7
KOK	Koryaka	1.78	313	eP	Pn	06 44 35.4	+0.7
KRMR	Karymshinskiy	1.79	295	eP	Pn	06 44 35.0	+0.2
KRMR				eS	Sn	06 44 58.1	+0.6
ASAK	Asacha	1.80	280	eP	Pn	06 44 35.5	+0.5
KRX	Arik	1.82	315	eP	Pn	06 44 36.0	+0.7
PETK	Petropavlovsk-	2.14	300	Pn	Pn	06 44 40.5	+0.8
	9.8nm,0.3s,baz=103,slow=18,SNR=123						
PETK				Sn	Sb	06 45 10.2	+0.8
	10nm,0.3s,baz=98,slow=19,SNR=9.8						
PETK				LR	LR	06 45 12.5	
	comp=Z,64nm,19.7s,baz=56,slow=32						
GNL	Ganaly	2.36	314	eP	Pn	06 44 44.4	+1.7
MKZ	Mys Kozlova	2.53	12	eP	Pn	06 44 45.2	+0.2
MKZ				eS	Sn	06 45 13.9	-1.9
BKI	Bering	4.38	43	eP	Pn	06 45 10.8	+0.4
BKI				eS	Sn	06 45 58.6	-2.9
SPITS	Spitsbergen Ar	48.19	351	P	P	06 52 44.7	+0.9
	1.0nm,0.5s,baz=0.0,slow=16,SNR=6.2						
KURBB	Kurchatov Arra	48.73	303	P	P	06 52 46.1	-2.2
	0.5nm,0.5s,baz=59,slow=7.4,SNR=4.2						
MKAR	Makanchi Array	48.98	297	P	P	06 52 48.4	-1.9
	0.4nm,0.5s,baz=56,slow=7.2,SNR=5.9						
BVAR	Borovoye Array	51.35	309	P	P	06 53 06.6	-1.5
	0.8nm,0.4s,baz=36,slow=5.7,SNR=5.2						
ARCES	ARCESS Array B	54.37	342	P	P	06 53 31.7	+1.5
	2.1nm,0.9s,baz=20,slow=8.6,SNR=3.0						
FINES	FINESS Array B	61.21	337	P	P	06 54 19.2	+0.9
	2.8nm,0.8s,baz=31,slow=7.9,SNR=9.6						
FINES				LR	LR	07 24 31.2	
	comp=Z,40nm,18.2s,baz=236,slow=39						
TXAR	Lajitas Array	70.64	67	P	P	06 55 22.0	+2.4
	0.1nm,0.5s,baz=299,slow=4.0,SNR=2.9						

KRSC 19 06:44:55.0±1.6, 52°.04N×160°.71E, h14^{km}±26^{km}, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.14	339	eP	Pb	06 45 15.6	-0.8
NLC	Nalytchevo	1.40	324	eP	Pn	06 45 19.8	-0.3
RUS	Russkaya	1.41	287	eP	Pb	06 45 20.6	-0.4
RUS				eS	Sn	06 45 38.1	-0.3
PET	Petropavlovsk	1.59	309	eP	Pn	06 45 23.3	+0.5
MTVR	Mutnovka	1.61	287	eP	Pb	06 45 24.5	-0.1
MTVR				eS	Sn	06 45 43.2	-0.6
KDTR	Khodutka, Kamc	1.65	263	eS	Sn	06 45 44.0	-0.4
SDLR	Sedlovina	1.66	319	eP	Pn	06 45 24.3	+0.5
KRMR	Karymshinskiy	1.77	298	eP	Pb	06 45 26.5	-0.6
KRMR				eS	Sb	06 45 49.7	+0.6
KOK	Koryaka	1.78	316	eP	Pb	06 45 27.0	-0.4

IDC 19 06:53:19.2±3.1, 53°.65N×88°.03E, h0^{km}, mb1 2.7/2, mb1mx2.6/36, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=24.9km s-min=17.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.93	280	i		07 05 03.0	
	baz=98,slow=305,SNR=14						
ZALV	Zalesovo Beam	1.93	280	Pn	Pn	06 53 53.5	+0.3
	1.0nm,0.3s,baz=104,slow=11,SNR=7.3						
ZALV				Lg	Lg	06 54 19.7	
	2.7nm,0.3s,baz=94,slow=26,SNR=8.4						
KURBB	Kurchatov Arra	6.59	246	Pn	Pn	06 54 57.6	+0.4
	0.0nm,0.3s,baz=60,slow=14,SNR=3.6						
KURBB				Sn	Sn	06 56 12.9	0.0
	0.0nm,0.3s,baz=47,slow=19,SNR=2.5						
KURBB				Lg	Lg	06 56 48.4	
	0.0nm,0.3s,baz=62,slow=33,SNR=5.0						
MKAR	Makanchi Array	7.79	210	Pn	Pn	06 55 14.8	+1.1
	0.1nm,0.3s,baz=27,slow=14,SNR=5.2						
MKAR				Sn	Sn	06 56 42.1	-0.4
	0.1nm,0.3s,baz=30,slow=29,SNR=2.1						
MKAR				Lg	Lg	06 57 25.1	
	0.0nm,0.3s,baz=28,slow=29,SNR=3.8						

MAN 19 07:04:04.8, 6°.85N×124°.24E, h32^{km}, mb3.7, ML2.4, MS1.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.37	1	⇑iP	Pn	07 04 14.6	+0.7
CTBH				i S	Sn	07 04 20.3	+0.3
SKMP	Bagumbayan, Su	0.45	138	eP	Pn	07 04 16.0	+1.0
SKMP				eS	Sn	07 04 23.1	+1.1
KCP	Kidapawan	0.86	80	⇓iP	Pb	07 04 27.8	+6.5
KCP				i S	Sb	07 04 54.0	+21
PAGZ	Pagadian	1.30	319	eP	Pn	07 04 26.6	-0.3
PAGZ				eS	Sb	07 04 47.0	+1.8

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*DDA **19** 07:28:33.7, 39°.48N×27°.96E, h7^{km}±6^{km}, ML2.6*

*ISCJB **19** 07:28:34.3±0.4, 39°.49N±0°.02×27°.95E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=3.7km s-min=3.4km az=25.2*

*ISK **19** 07:28:34.4, 39°.50N×27°.95E, h9^{km}, ML2.5/16*

ISC 19 07:28:34.0±1.0, 39°.47N±0°.02×27°.98E±0°.02, h7^{km}±9^{km}, n26, σ0°86/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.19	337	PG	Pg	07 28 38.6	+0.8
BALB				SG	Sg	07 28 41.6	+1.3
STEP	BALIKESIR_Sava	0.22	245	i P	Pg	07 28 36.2	-2.1
STEP				i S	Sg	07 28 42.6	+1.2
STEP				IAML_P			
	comp=Z,3µm,0.2s						
DURS	Dursunbey	0.41	71	i P	Pg	07 28 40.2	-1.8
DURS				i S	Sb	07 28 49.3	-0.8
DURS				IAML_P			
	comp=Z,722nm,0.3s						
AKHS	Akhisar	0.60	192	i P	Pg	07 28 45.2	-0.4
AKHS				i S	Sb	07 28 56.8	+1.2
AKHS				IAML_P			
	comp=Z,2µm,0.2s						
GONE	Gonen-Balikesi	0.62	339	PG	Pg	07 28 46.3	+0.4
GONE				SG	Sg	07 28 54.4	+0.4
DEMI	Demirci	0.72	126	i P	Pg	07 28 47.7	0.0
DEMI				i S	Sb	07 28 59.1	+0.2
DEMI				IAML_P			
	comp=Z,653nm,0.1s						
KCTX	Karacabey (Bur	0.85	20	PG	Pb	07 28 50.7	-0.4
ZEDA	zmir-Bergama	0.86	235	i P	Pb	07 28 51.4	+0.2
ZEDA				i S	Sb	07 29 03.3	+0.4
ZEDA				IAML_P			
	comp=Z,1µm,0.1s						
EDC	Edincik	0.88	354	PG	Pg	07 28 50.8	-0.1
DKL	Dikili	0.92	245	PG	Pn	07 28 53.0	-0.3
KULA	Kula-Manisa	1.09	151	PN	Pn	07 28 55.9	+0.1
USAK	Uak-Merkez	1.11	133	i P	Pn	07 28 56.8	+0.9
USAK				i S	Sn	07 29 11.6	+0.1
USAK				IAML_P			
	comp=Z,397nm,0.2s						
ULDT	Uludag	1.12	53	i P	Pg	07 28 55.5	0.0
ULDT				i S	Sn	07 29 11.5	-0.5
ULDT				IAML_P			
	comp=Z,1µm,0.1s						
BAYC	CANAKKALE_Bayr	1.14	284	i P	Pb	07 28 54.0	-1.9
BAYC				i S	Sn	07 29 11.2	-1.0
BAYC				IAML_P			
	comp=Z,570nm,0.1s						
MDNY	Mudanya-Bursa	1.14	38	PN	Pn	07 28 57.1	+0.7
TVSB	Tavsanli	1.15	90	PN	Pn	07 28 57.3	+0.7
MRMT	Marmara Adasi	1.17	346	PN	Pg	07 28 56.3	-0.2
MRMT				SN	Sn	07 29 12.9	-0.2
GDZ	Gediz	1.23	108	i P	Pn	07 28 56.5	-1.2
GDZ				i S	Sn	07 29 15.9	+1.3
GDZ				IAML_P			
	comp=Z,352nm,0.2s						
ARMT	Armutlu	1.29	32	PN	Pg	07 28 58.8	+0.1
EZN	Ezine	1.32	286	PN	Pg	07 28 59.9	+0.5
RKY	Sarkoy-Tekirda	1.36	334	PN	Pn	07 28 59.2	-0.3
GELI	Tayfur-Gelibol	1.48	309	PN	Pb	07 29 01.3	-0.5
BOZC	Bozcaada	1.53	285	PN	Pn	07 29 01.7	0.0
SIGR	SIGRI	1.66	262	PN	Pn	07 29 03.7	+0.1
CHOS	Chios island	1.85	235	PN	Pn	07 29 06.6	+0.4
ALN	Alexandroupoli	2.05	315	PN	Pn	07 29 09.1	+0.2

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*BJI **19** 07:28:47.6±0.0, 3°.65S×139°.85E, h57^{km}, mb4.7/32, mB4.9/18, Ms4.7/4, Ms7 4.7/1*

*ISCJB **19** 07:28:50.0±0.8, 3°.51S±0°.03×139°.43E±0°.05, h57^{km}±7^{km}, mb4.6/56, MS3.5/14, Error ellipse: s-maj=7.5km s-min=5.5km az=173.9*

*IDC **19** 07:28:50.7±0.7, 3°.48S×139°.40E, h48^{km}±6^{km}, mb4.2/13, mb1 4.4/17, mb1mx4.3/35, mbtmp4.6/17, MS3.4/16, Ms1 3.4/16, ms1mx3.3/27, Error ellipse: s-maj=22.9km s-min=12.2km az=76.0*

*NEIC **19** 07:28:50.8±2.0, 3°.56S×139°.35E, h51^{km}±5^{km}, mb4.8/50, Error ellipse: s-maj=11.3km s-min=10.5km az=210.0*

*DJA **19** 07:28:55.0±0.5, 2°S±8°×13°9E±°, h10^{km}, M5.3/6, mb5.4/3, mB5.7/2, MLv5.3/6, Mw(mB)5.2/2*

ISC 19 07:28:51.0±0.6, 3°.54S±0°.05×139°.39E±0°.07, h49^{km}±5^{km},

h49^{km}:pP-P,n113,σ1^{s}41/113**,mb4.7**/56**,MS3.5**/15**,1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	1.22	40	P	Pn	07 29 09.9	-1.8
SRPI	Serui, Papua	3.56	298	P	Pn	07 29 45.4	+1.7
BAKI	Biak	4.03	305	P	Pn	07 29 51.7	+1.6
FAKI	Fak Fak	7.16	275	*e*Pn	Pn	07 30 35.2	+2.0
FAKI	Fak Fak	7.16	275	P	Pn	07 30 37.5	+4.4
	82nm,0.8s,931nm0.4nm						
MANU	Manus Island	8.10	80	*e*Pn	Pn	07 30 49.7	+3.6
SIJI	Sorong	8.54	288	P	Pn	07 30 53.4	+1.2
	23nm,0.3s,baz=109,slow=9.5,SNR=39						
PMG	Port Moresby	9.67	127	P	Pn	07 31 09.3	+1.7
	3.0nm,0.3s,baz=289,slow=13,SNR=8.2						
PMG	Port Moresby	9.67	127	*e*Pn	Pn	07 31 10.2	+2.6
COEN	Coen	11.01	160	*e*Pn	Pn	07 31 23.6	-2.3
MTN	Manton Dam	12.33	221	*e*Pn	Pn	07 31 41.2	-2.8
SOEI	Soe	16.23	247	*e*Pn	Pn	07 32 32.8	-3.2
	118nm,0.8s						
LUWI	Luwuk	16.79	278	*e*P	Pn	07 32 42.5	-0.3
	137nm,1.0s						
BATI	Baumata	16.95	246	P	Pn	07 32 45.5	+0.5
	5.9nm,0.3s,baz=188,slow=8.2,SNR=3.8						
BATI	Baumata	16.95	246	*e*P	Pn	07 32 45.5	+0.5
BATI				*e*P	Pn	07 32 45.5	+0.5
WRAB	Tennant Creek	17.02	196	*e*Pn	Pn	07 32 41.7	-4.0
	109nm,0.8s						
WB2	Warramunga Arr	17.03	196	*e*Pn	Pn	07 32 41.7	-4.1
	111nm,0.8s						
WR1	Warramunga Arr	17.03	196	*e*P	Pn	07 32 43.6	-2.2
WR1				*e*Sn	Sn	07 35 54.2	-0.2
WRA	Warramunga Arr	17.03	196	P	Pn	07 32 43.6	-2.2
	12nm,0.3s,baz=9.0,slow=11,SNR=98						
WRA				S	Sn	07 35 54.2	-0.3
	2.1nm,0.3s,baz=5.1,slow=22,SNR=4.8						
DAV	Davao City (W)	17.35	307	LR	LR	07 39 20.9	
	comp=Z,45nm,20.6s,baz=135,slow=36						
CTA	Charters Tower	17.76	158	P	Pn	07 32 54.1	-0.7
	0.7nm,0.3s,baz=338,slow=13,SNR=11						
CTAO	Charters Tower	17.76	158	*e*P	P	07 32 55.9	+0.8
	14nm,0.9s						
GUMO	Guam	17.86	18	LR	LR	07 40 40.1	
	comp=Z,74nm,18.0s,baz=202,slow=40						
KAPI	Kappang	19.64	265	LR	LR	07 42 47.0	
	comp=Z,86nm,19.2s,baz=118,slow=42						
AS31	Alice Springs	20.70	194	*e*P	P	07 33 27.4	+0.2
	28nm,0.7s						
ASAR	Alice Springs	20.70	194	P	P	07 33 26.4	-0.8
	79nm,0.8s,baz=22,slow=9.3,SNR=485						
ASAR				S	S	07 37 17.6	+1.8
	16nm,1.1s,baz=15,slow=21,SNR=6.9						
ASAR				LR	LR	07 41 54.3	
	comp=Z,379nm,19.1s,baz=22,slow=38						
EIDS	Eidsvold	24.44	154	*e*P	P	07 34 06.0	+0.7
	15nm,0.9s						
PSA00	Pilbara Seismi	26.11	225	*e*P	P	07 34 20.2	-0.3
	17nm,0.8s						
STKA	Stephens Creek	28.27	176	P	P	07 34 39.5	-0.2
	3.5nm,0.7s,baz=265,slow=18,SNR=3.4						
STKA				LR	LR	07 46 56.1	
	comp=Z,299nm,18.5s,baz=355,slow=38						
STKA	Stephens Creek	28.27	176	*e*P	P	07 34 41.5	+1.8
	1.4nm,0.8s						
DZM	Mont Dzumac	32.06	127	LR	LR	07 47 55.4	
	comp=Z,95nm,20.2s,baz=316,slow=36						
MORW	Morawa	33.71	219	*e*P	P	07 35 27.5	-0.2
	28nm,1.3s						
NWAO	Narrogin (SRO)	35.84	213	*e*P	P	07 35 48.1	+2.1
	39nm,1.3s						
JHJ	Hachijo jima 2	36.46	1	LR	LR	07 47 14.9	
	comp=Z,118nm,21.9s,baz=138,slow=30						
JNU	Nakatsue	37.34	348	LR	LR	07 51 43.8	
	comp=Z,39nm,18.1s,baz=168,slow=37						
JNU	Nakatsue	37.34	348	*e*P	P	07 35 58.4	-0.4
	13nm,0.9s						
MJAR	Matsushiro Arr	39.89	359	LR	LR	07 50 59.1	
	comp=Z,34nm,21.2s,baz=215,slow=33						
NJ2	Nanjing	40.42	333	*e*P	P	07 36 25.4	+0.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
PSI	Prapat	40.93	278	*e*P	P	07 36 28.9	-0.4
	32nm,0.9s						
WHN	Wuhan	41.48	327	P	P	07 36 41.3	+8.0
NONG	Nongkai	41.68	302	P	P	07 36 35.0	-0.1
	0.4nm,0.9s						
CHAI	Chaiyaphum	41.74	299	P	P	07 36 35.4	-0.2
	59µm,0.7s						
KS15	Wonju Array Si	42.15	346	*e*P	P	07 36 39.0	+0.2
	17nm,1.2s						
KS15				*e*pP	pP	07 36 51.9	0.0
KSRS	Korea Array	42.16	346	P	P	07 36 39.0	+0.2
	4.1nm,0.6s,baz=157,slow=8.5,SNR=14						
KSRS				pP	pP	07 36 51.9	0.0
	2.0nm,0.6s,baz=160,slow=8.8,SNR=3.7						
KSRS				LR	LR	07 53 01.1	
	comp=Z,42nm,19.5s,baz=172,slow=34						
UTTA	Uttaradit	43.75	300	P	P	07 36 52.5	+0.6
	31µm,0.8s						
PHRA	Phrae	44.35	301	P	P	07 36 57.4	+0.6
	4.3nm,1.0s						
PAYA	Payao	45.03	302	P	P	07 37 02.4	+0.2
	58µm,0.8s,944µm						
CM31	Chiang Mai Arr	45.44	300	*e*P	P	07 37 05.6	+0.1
	12nm,0.8s						
CM31				*e*PcP	PcP	07 38 41.8	-2.3
CMAR	Chiang Mai Arr	45.44	300	P	P	07 37 05.2	-0.2
	8.7nm,0.6s,baz=121,slow=6.2,SNR=32						
CMAR				PcP	PcP	07 38 41.8	-2.3
	2.0nm,0.5s,baz=146,slow=1.9,SNR=5.6						
CMAR				LR	LR	07 57 33.9	
	comp=Z,51nm,18.1s,baz=162,slow=38						
KMI	Kunming	45.57	311	P	P	07 37 07.8	+1.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CMMT	Chiang Mai	45.58	301	P	P	07 37 07.2	+0.6
CHTO	Chiang Mai	45.59	301	*e*P	P	07 37 06.6	0.0
	12nm,1.0s						
ASAJ	Asahikawa	47.53	3	LR	LR	07 58 17.4	
	comp=Z,23nm,18.4s,baz=166,slow=37						
USRK	Ussuriysk Ar.	47.99	353	P	P	07 37 23.2	-1.7
	4.4nm,0.8s,baz=172,slow=6.6,SNR=9.1						
USRK				LR	LR	07 55 11.3	
	comp=Z,47nm,20.9s,baz=170,slow=33						
CD2	Chengdu	48.25	318	*e*P	P	07 37 27.0	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2	Changchun	48.77	347	*e*P	P	07 37 30.4	-0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RPZ	Rata Peaks	48.84	150	*e*P	P	07 37 32.2	+0.6
	25nm,1.3s						
LBZ	Lake Benmore	48.89	151	*e*P	P	07 37 32.3	+0.3
	16nm,1.2s						
HHC	Hu-ho-hao-te	50.97	333	*e*P	P	07 37 49.0	+1.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				LR	LR		
	comp=N,100nm,10.2s						
HHC				LR	LR		
	comp=E,110nm,11.1s						
PETK	Petropavlovsk-	58.51	13	P	P	07 38 41.8	-0.3
	2.2nm,0.6s,baz=164,slow=5.8,SNR=5.2						
PETK				LR	LR	07 59 44.8	
	comp=Z,18nm,21.5s,baz=199,slow=32						
PEA1	Petropavlovsk-	58.51	13	*e*P	P	07 38 41.8	-0.3
SONA0	Songino Array	58.75	335	*e*P	P	07 38 43.9	-0.2
SONM	Songino Array	58.75	335	P	P	07 38 43.9	-0.2
	0.5nm,0.4s,baz=139,slow=6.8,SNR=3.3						
SONM				LR	LR	08 05 26.6	
	comp=Z,59nm,18.7s,baz=95,slow=37						
WMQ	Urumqi	66.08	322	*e*P	P	07 39 34.8	+1.8
MK31	Makanchi Array	70.86	322	*e*P	P	07 40 02.4	-0.4
	3.0nm,0.9s						
MK32	Makanchi Array	70.86	322	*e*pP	pP	07 40 16.2	-0.6
MKAR	Makanchi Array	70.86	322	P	P	07 40 02.9	+0.1
	1.8nm,0.6s,baz=103,slow=8.1,SNR=16						
MKAR				pP	pP	07 40 16.2	-0.6
	3.5nm,0.6s,baz=129,slow=7.0,SNR=12						
MAKZ	Makanchi	71.05	322	*e*P	P	07 40 03.8	-0.2
	5.9nm,0.6s						
KSH	Kashi	72.14	313	P	P	07 40 12.9	+2.1
KSH				pP	PcP	07 40 28.6	-0.4
KSH				PP	PP	07 42 55.6	+3.9
KSH				S	S	07 49 28.6	-1.2
KSH				sS	sS	07 49 54.8	+1.4
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
KSH				pmax	pmax		
	comp=Z,110nm,7.5s						
KSH				LR	LR		
	comp=E,280nm,14.6s						
NIL	Nilore	72.36	307	*e*P	P	07 40 12.0	-0.2
	21nm,0.7s						
NRN	Naryn	72.80	315	*e*P	P	07 40 16.1	+1.1
	3.3nm,0.6s						
ZALV	Zalesovo Beam	72.99	330	P	P	07 40 14.2	-1.1
	2.1nm,0.5s,baz=111,slow=6.2,SNR=7.1						
ZALV				pP	pP	07 40 28.0	-1.5
	1.4nm,0.5s,baz=128,slow=6.1,SNR=2.9						
ZAA1	Zalesovo Array	72.99	330	*e*pP	pP	07 40 28.0	-1.5
KURK	Kurchatov	74.78	325	*e*P	P	07 40 25.0	-0.9
	3.4nm,0.6s						
VNDA	Vanda	74.90	175	P	P	07 40 26.2	0.0
	1.0nm,0.5s,baz=3.3,slow=2.3,SNR=7.8						
VNDA	Vanda	74.90	175	*e*P	P	07 40 26.4	+0.2
	2.3nm,0.9s						
KBL	Kabul	75.97	307	*e*P	P	07 40 32.8	-0.5
	12nm,0.8s						
GAR	Garm	76.15	311	*e*P	P	07 40 34.2	0.0
	28nm,0.9s						
KK31	Karatay Array	77.19	316	*e*P	P	07 40 39.9	0.0
	2.1nm,0.7s						
KKAR	Karatay Array	77.19	316	*e*P	P	07 40 39.9	0.0
	2.1nm,0.7s						
BVAR	Borovoye Array	80.38	325	P	P	07 40 57.0	-0.1
	5.8nm,0.7s,baz=113,slow=7.6,SNR=31						
BVAR				pP	pP	07 41 10.8	-0.6
	5.6nm,0.6s,baz=113,slow=7.1,SNR=14						
BRVK	Borovoye	80.45	325	*e*P	P	07 40 56.9	-0.6
	6.5nm,0.6s						
MAW	Mawson	81.62	202	P	P	07 41 04.4	+1.0
	2.2nm,0.6s,baz=41,slow=5.0,SNR=5.6						
MAW	Mawson	81.62	202	*e*P	P	07 41 04.4	+1.0
	0.6nm,0.8s						
RC01	Rabbit Creek A	83.95	27	*e*P	P	07 41 14.8	-0.8
	8.8nm,1.0s						
PMR	Palmer	84.39	27	*e*P	P	07 41 16.9	-0.9
	4.9nm,0.8s						
MLY	Manley	84.82	24	*e*P	P	07 41 19.1	-0.9
	4.9nm,0.9s						
RND	Reindeer	85.07	25	*e*P	P	07 41 19.5	-1.9
	8.4nm,0.9s						
MCK	McKinley	85.14	25	*e*P	P	07 41 20.0	-1.6
	6.6nm,0.9s						
DHY	Denali Highway	85.61	26	*e*P	P	07 41 23.3	-0.9
	5.5nm,0.8s						
WRH	Wood River Hil	85.72	24	*e*P	P	07 41 22.9	-1.6
	5.8nm,0.8s						
ABKAR	Akbulak array	85.79	320	*e*P	P	07 41 24.0	-1.1
	3.2nm,0.8s						
CCB	Clear Creek Bu	85.89	24	*e*P	P	07 41 23.3	-1.9
	8.2nm,0.8s						
ILAR	Eielson Array	86.30	24	P	P	07 41 25.1	-2.2
	4.8nm,0.7s,baz=261,slow=4.7,SNR=64						
ILAR				LR	LR	08 17 11.7	
	comp=Z,14nm,19.6s,baz=75,slow=34						
ILB	Eielson Array	86.30	24	*e*P	P	07 41 24.9	-2.4
	5.2nm,0.7s						
QSPA	South Pole Qui	86.41	180	*e*P	P	07 41 27.0	-1.1
	5.4nm,0.9s						
TOLK	Toolik Lake Re	86.46	20	*e*P	P	07 41 27.7	-0.4
	6.0nm,0.6s						
FYU	Fort Yukon	87.44	23	*e*P	P	07 41 32.4	-0.4
	8.4nm,0.8s						
EGAK	Eagle	88.69	25	*e*P	P	07 41 38.1	-0.7
	5.0nm,0.9s						
DAWY	Dawson	89.32	26	*e*P	P	07 41 41.5	-0.3
	3.1nm,0.9s						
HYT	Haines Junctio	89.70	29	*e*P	P	07 41 43.6	-0.2
	5.2nm,0.9s						
SYO	Syowa Base	90.23	201	⇓*e*X	P	07 41 40.0	-5.9
TORD	Torodi Ar. Bea	137.13	285	PKP	PKPdf	07 48 09.5	-0.3
	1.5nm,0.7s,baz=70,slow=2.6,SNR=7.1						
TOA1	Torodi Ar. Sit	137.14	285	*e*PKPdf	PKPdf	07 48 09.5	-0.3
MNMC	Minye Minye	143.66	129	*e*PKPdf	PKPbc	07 48 20.1	+0.7
KIC	Kosan Boka	144.16	276	*e*PKP1	PKPab	07 48 20.5	+0.2
	121nm,1.7s						
DBIC	Dimbokro	144.26	276	PKP	PKPab	07 48 20.6	0.0
	7.7nm,0.6s,baz=83,slow=2.1,SNR=12						
DBIC	Dimbokro	144.26	276	*e*PKPdf	PKPab	07 48 20.8	+0.2
TIC	Toumodi	144.42	276	*e*PKP1	PKPab	07 48 21.4	+0.1
LIC	Lamto	144.45	276	*e*PKP1	PKPab	07 48 21.4	+0.1
	67nm,1.3s						
CPUP	Villa Florida	146.18	152	PKPbc	PKPab	07 48 27.1	-0.2
	2.1nm,0.8s,baz=195,slow=1.7,SNR=4.4						
LPAZ	La Paz	146.41	127	PKPbc	PKPab	07 48 29.5	+0.2
	5.7nm,1.0s,baz=322,slow=0.3,SNR=18						
LPAZ	La Paz	146.41	127	*e*PKPbc	PKPab	07 48 29.6	+0.4

ISCJB ***19*** *07:39:25.3±0.5, 25°.35N±0°.09×124°.52E±0°.05, h117^{km}±7^{km}, mb3.7/6, Error ellipse: s-maj=15.2km s-min=5.5km az=156.6*

IDC ***19*** *07:39:26.2±3.5, 25°.51N×124°.59E, h107^{km}±32^{km}, mb3.4/6, mb1 3.5/6, mb1mx3.3/46, mbtmp3.7/6, Error ellipse: s-maj=31.6km s-min=23.1km az=46.0*

JMA ***19*** *07:39:26.9±0.2, 25°.32N×124°.51E, h108^{km}±4^{km}, M3.2*

ISC 19 07:39:26.2±0.9**, 25°.38N**±0°.10×**124°.52E**±0°.06**, h111**^{km}±10^{km}**, n20, σ0^{s}65**/33**, mb3.7**/6**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	Tarama	0.75	168	P	Pn	07 39 45.3	+0.2
JTJ				S	Sn	07 39 59.3	0.0
JIKM	Ikemajima	0.80	124	P	Pn	07 39 45.7	+0.2
JIKM				S	Sn	07 40 00.3	+0.3
JIRB	Irabujima	0.81	133	P	Pn	07 39 45.6	0.0
JIRB				S	Sn	07 39 59.7	-0.4
JISG	Ishigakijimahi	0.81	194	P	Pn	07 39 45.7	+0.1
JISG				S	Sn	07 39 59.8	-0.4
JMJ2	Miyako jima3	0.97	131	P	Pn	07 39 47.6	+0.5
JMJ2				S	Sn	07 40 03.1	+0.2
JOGS	Gusukube	1.01	127	P	Pn	07 39 48.1	+0.5
JOGS				S	Sn	07 40 04.0	+0.3
JIJ	Ishigaki jima	1.07	199	P	Pn	07 39 47.8	-0.4
JIJ				S	Sn	07 40 03.2	-1.6
JKRS	Kuro-shima	1.23	202	P	Pn	07 39 49.8	-0.1
JKRS				S	Sn	07 40 07.3	-0.6
IRIF	Iriomote-Funau	1.27	215	P	Pn	07 39 50.2	-0.1
IRIF				S	Sn	07 40 08.2	-0.4
HATJ	Hateruma jima	1.47	207	P	Pn	07 39 52.7	0.0
HATJ				S	Sn	07 40 12.4	-0.4
YOJ	Yonaguni jima	1.65	237	P	Pn	07 39 55.7	+0.8
YOJ				S	Sn	07 40 16.7	0.0
JYNG	Yonagunijimaku	1.70	238	P	Pn	07 39 56.5	+1.0
JYNG				*e*S	Sn	07 40 18.2	+0.3
JKE	Kume jima 2	2.25	65	P	Pn	07 40 02.8	+0.4
JKE				*e*S	Sn	07 40 31.2	+1.1
JOW	Kunigami	3.67	66	P	Pn	07 40 19.7	-1.4
	0.9nm,0.3s,baz=160,slow=13,SNR=20						
MKAR	Makanchi Array	39.66	314	P	P	07 46 47.0	-0.2
	1.2nm,0.5s,baz=100,slow=10,SNR=14						
ZALV	Zalesovo Beam	40.96	325	P	P	07 46 57.4	-0.4
	1.1nm,0.3s,baz=100,slow=8.6,SNR=3.0						
BVAR	Borovoye Array	48.71	319	P	P	07 47 59.2	-0.1
	0.4nm,0.3s,baz=106,slow=7.9,SNR=4.1						
ASAR	Alice Springs	49.59	169	P	P	07 48 07.5	+1.2
	0.2nm,0.6s,baz=353,slow=13,SNR=4.4						
ILAR	Eielson Array	66.75	28	P	P	07 50 04.4	-0.9
	0.2nm,0.5s,baz=261,slow=4.7,SNR=4.9						
YKA	Yellowknife Ar	80.68	24	P	P	07 51 26.7	+0.1
	0.8nm,0.5s,baz=302,slow=5.4,SNR=15						

ISCJB ***19*** *08:29:48.0±0.6, 52°.87S±0°.08×11°.4E±0°.2, h10^{km}, mb4.5/10, MS3.8/14, Error ellipse: s-maj=19.8km s-min=11.2km az=3.8*

IDC ***19*** *08:29:48.2±0.8, 52°.84S×11°.46E, h0^{km}, mb4.4/8, mb1 4.5/9, mb1mx4.2/27, mbtmp4.4/9, ML4.2/1, MS3.8/15, Ms1 3.8/15, ms1mx3.6/25, Error ellipse: s-maj=28.6km s-min=18.6km az=77.0*

NEIC ***19*** *08:29:49.9±1.7, 52°.86S×11°.68E, h10^{km}, mb4.8/8, Error ellipse: s-maj=33.2km s-min=6.8km az=99.0*

ISC 19 08:29:49.8±0.6**, 52°.8S**±0°.1×**11°.5E**±0°.2**, h10**^{km}**, n46, σ0^{s}61**/32**, mb4.7**/10**, MS3.7**/14**, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.92	193	P	P	08 34 21.6	+0.2
SNAA	Sanae	19.92	193	P	P	08 34 21.4	+0.1
	0.6nm,0.3s,baz=23,slow=10,SNR=77						
SNAA				S	S	08 37 48.7	-17
	0.0nm,0.3s,baz=33,slow=7.4,SNR=3.0						
SNAA				LR	LR	08 40 38.3	
	comp=Z,313nm,18.0s,baz=38,slow=33						
SNAA	Sanae	19.92	193	*e*P	P	08 34 21.4	+0.1
	26nm,0.9s						
VNA1	Neumayer--Stat	19.97	199	P	P	08 34 22.0	+0.3
VNA3	Neumayer Olymp	20.72	199	P	P	08 34 29.6	-0.3
SUR	Sutherland	21.54	22	P	P	08 34 39.2	0.0
	35nm,1.1s,baz=151,slow=7.8,SNR=6.8						
SUR				LR	LR	08 40 42.8	
	comp=Z,370nm,21.2s,baz=180,slow=30						
SUR	Sutherland	21.54	22	*e*P	P	08 34 39.9	+0.7
	45nm,1.1s						
BOSA	Boshof	26.27	28	LR	LR	08 43 43.6	
	comp=Z,229nm,21.3s,baz=206,slow=32						
MAW	Mawson	28.43	141	P	P	08 35 44.3	+0.2
	4.1nm,1.1s,baz=276,slow=16,SNR=4.1						
MAW				LR	LR	08 45 22.4	
	comp=Z,90nm,18.8s,baz=282,slow=33						
MAW	Mawson	28.43	141	*e*P	P	08 35 43.5	-0.7
	1.1nm,1.1s						
LBTB	Lobatse	29.77	26	LR	LR	08 46 07.3	
	comp=Z,185nm,18.4s,baz=194,slow=33						
QSPA	South Pole Qui	37.39	180	P	P	08 37 02.5	0.0
	12nm,1.0s,baz=234,slow=3.3,SNR=25						
QSPA	South Pole Qui	37.39	180	*e*P	P	08 37 02.6	+0.2
	13nm,0.9s						
VNDA	Vanda	48.60	172	P	P	08 38 33.1	+0.3
	8.2nm,0.8s,baz=228,slow=8.3,SNR=42						
VNDA				LR	LR	08 57 46.7	
	comp=Z,247nm,21.6s,baz=192,slow=34						
VNDA	Vanda	48.60	172	*e*P	P	08 38 33.2	+0.5
	12nm,1.0s						
SBA	Scott Base	48.68	173	*e*P	P	08 38 34.8	+1.4
	9.8nm,1.1s						
CPUP	Villa Florida	56.80	269	P	P	08 39 33.0	-1.0
	3.4nm,0.9s,baz=92,slow=6.5,SNR=4.2						
CPUP				LR	LR	08 59 57.4	
	comp=Z,36nm,20.5s,baz=202,slow=32						
BDFB	Brasilia	59.35	285	LR	LR	09 00 34.4	
	comp=Z,52nm,20.5s,baz=129,slow=31						
DBIC	Dimbokro	60.89	341	LR	LR	09 01 18.3	
	comp=Z,98nm,19.5s,baz=152,slow=31						
TORD	Torodi Ar. Bea	66.26	350	P	P	08 40 38.5	+0.6
	2.2nm,1.1s,baz=180,slow=8.9,SNR=4.6						
TORD				LR	LR	09 06 52.7	
	comp=Z,37nm,18.6s,baz=300,slow=34						
TOA1	Torodi Ar. Sit	66.26	350	*e*P	P	08 40 38.5	+0.5
H08N3	Diego Garcia H	66.85	69	T	T	09 53 33.7	
	baz=217,slow=76,SNR=7.2						
H08N1	Diego Carcia H	66.87	69	T	T	09 53 30.7	
	baz=217,slow=76,SNR=9.5						
H08N2	Diego Garcia H	66.88	69	T	T	09 53 28.1	
	baz=217,slow=76,SNR=8.0						
H01W2	Cape Leeuwin H	69.91	121	T	T	09 58 03.7	
	baz=219,slow=75,SNR=7.1						
H01W3	Cape Leeuwin H	69.92	121	T	T	09 58 13.0	
	baz=219,slow=75,SNR=7.8						
H01W1	Cape Leeuwin H	69.92	121	T	T	09 58 10.5	
	baz=219,slow=75,SNR=7.4						
LPAZ	La Paz	70.93	268	P	P	08 41 08.5	+0.5
	6.2nm,0.9s,baz=138,slow=5.1,SNR=24						
LPAZ				LR	LR	09 09 47.2	
	comp=Z,23nm,18.4s,baz=141,slow=34						
LPAZ	La Paz	70.93	268	*e*P	P	08 41 08.9	+1.0
	9.9nm,0.9s						
MMAI	Mount Meron Ar	88.01	20	LR	LR	09 20 52.2	
	comp=Z,148nm,21.3s,baz=225,slow=35						
ASAR	Alice Springs	88.91	129	P	P	08 42 43.8	-0.7
	0.7nm,0.8s,baz=196,slow=5.4,SNR=4.9						
WRAB	Tennant Creek	92.31	128	*e*P	P	08 42 59.7	-0.5
	7.2nm,0.9s						
BRTR	Keskin Array B	94.18	17	LR	LR	09 27 49.4	
	comp=Z,26nm,18.4s,baz=238,slow=37						
GEYT	Alibeck	99.06	36	LR	LR	09 30 24.5	
	comp=Z,39nm,18.7s,baz=85,slow=37						
KBZ	Khabaz	99.93	23	LR	LR	09 29 49.6	
	comp=Z,54nm,18.1s,baz=194,slow=36						
LTX	Lajitas	127.77	270	*e*PKPdf	PKPdf	08 48 54.5	-0.7
TXAR	Lajitas Array	127.77	270	PKP	PKPdf	08 48 54.5	-0.7
	0.6nm,0.9s,baz=132,slow=5.2,SNR=4.2						
PSUT	Pine Spring	140.20	271	*e*PKPdf	PKPdf	08 49 18.0	-0.4
FXWY	Fox Creek	141.56	280	*e*PKPdf	PKPdf	08 49 20.8	+0.2
WVOR	Wild Horse Val	145.46	273	*e*PKPdf	PKPdf	08 49 27.2	-0.2
JTMT	Jette	145.68	284	*e*PKPdf	PKPdf	08 49 27.7	+0.1
J08A	Circle Bar Ran	145.89	274	*e*PKPdf	PKPab	08 49 30.4	+1.1
WALA	Waterton Lakes	146.08	286	*e*PKPdf	PKPab	08 49 29.5	-0.3
G08A	Pilot Rock	147.23	277	*e*PKPdf	PKPbc	08 49 31.9	-0.7
YKA	Yellowknife Ar	150.46	310	PKPbc	PKPbc	08 49 39.6	-0.4
	0.9nm,0.7s,baz=97,slow=2.4,SNR=11						
YKB5	Yellowknife Ar	150.46	310	*e*PKPbc	PKPbc	08 49 39.6	-0.4

WEL 19 08:31:13.1±1.3**, 31°S**±10°×**17°9E**±1°3**, h33**^{km}**, M4.1**/11**, mB4.4**/4**, ML4.4**/11**, MLv4.3**/11**, Mw(mB)3.5**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.6, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.44	65	S	Sn	08 32 44.7	+0.6
MXZ	Matakaoa Point	6.77	181	P	Pn	08 32 50.8	+0.6
MXZ				S	Sn	08 34 06.8	+0.7
HAZ	Te Kaha	6.99	185	P	Pn	08 32 54.8	+1.6
HAZ				S	Sn	08 34 15.0	+3.5
WMGZ	Waiomatatini S	7.03	181	P	Pn	08 32 54.5	+0.8
RUGZ	Raukumara Rang	7.21	185	P	Pn	08 32 57.2	+1.0
PUZ	Puketiti	7.28	182	P	Pn	08 32 58.2	+0.9
PUZ				S	Sn	08 34 16.9	-1.8
MARZ	Manawahe	7.35	191	P	Pn	08 32 56.1	-2.0
TWGZ	Tauwhareparae	7.40	183	P	Pn	08 32 59.6	+0.8
URZ	Urewera	7.56	188	P	Pn	08 33 01.6	+0.6
MWZ	Matawai	7.59	186	P	Pn	08 33 00.7	-0.7
TKGZ	Te Karaka	7.67	184	P	Pn	08 33 01.9	-0.5
RAGZ	Rawiri	7.76	186	P	Pn	08 33 04.1	+0.3
RTZ	Ruatahuna	7.92	189	P	Pn	08 33 05.2	-0.9
RIGZ	Rimuhau	7.94	184	P	Pn	08 33 07.1	+0.9
RAHZ	Arahi	8.21	188	P	Pn	08 33 09.8	-0.2
ARHZ	Aropaoanui	8.56	188	P	Pn	08 33 14.5	-0.3
KWHZ	Kaweka Forest	8.80	191	P	Pn	08 33 17.7	-0.4
KAHZ	Kahuranaki	9.10	188	P	Pn	08 33 20.6	-1.5

NNC ***19*** *08:44:12.7±4.4, 53°.50N×87°.67E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=38.0km s-min=15.4km az=60.0, Suspected Mining explosion.*

IDC 19 08:44:11.3±2.5**, 53°.59N**×**87°.88E, h0**^{km}**, mb1 3.4**/3**, mb1mx3.2**/50**, mbtmp3.4**/3**, ML3.3**/3**, 5C-3D, Error ellipse: s-maj=22.9km s-min=14.7km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.85	282	*i*		08 54 12.3	
	baz=96,slow=303,SNR=3.7						
ZAA0	Zalesovo Array	1.85	282	⇑Pg	Pn	08 44 44.0	-0.3
	0.7nm,0.2s						
ZAA0				⇓Lg	Lg	08 45 09.6	
	2.5nm,0.4s						
ZALV	Zalesovo Beam	1.85	282	Pn	Pn	08 44 43.9	-0.4
	8.8nm,0.3s,baz=100,slow=12,SNR=37						
ZALV				Lg	Lg	08 45 10.0	
	2.9nm,0.3s,baz=108,slow=26,SNR=5.6						
KURBB	Kurchatov Arra	6.48	247	Pn	Pn	08 45 48.5	+0.7
	0.3nm,0.3s,baz=60,slow=14,SNR=10						
KURBB				Sn	Sn	08 47 01.8	-0.6
	0.1nm,0.3s,baz=176,slow=13,SNR=4.2						
KURBB				Lg	Lg	08 47 36.6	
	0.1nm,0.3s,baz=64,slow=33,SNR=9.6						
KURBB	Kurchatov Arra	6.48	247	⇑Pn	Pn	08 45 48.1	+0.2
	2.7nm,0.4s						
KURBB				⇑Sn	Sn	08 46 59.2	-3.3
	5.7nm,0.5s						
KURBB				⇑Lg	Lg	08 47 35.9	
	6.5nm,0.6s						
MK31	Makanchi Array	7.69	210	⇓Pn	Pn	08 46 05.9	+1.5
	0.2nm,0.3s,baz=29,slow=13,SNR=15						
MK31				⇓Sn	Sn	08 47 30.3	-1.9
	4.4nm,1.1s						
MK31				⇑Lg	Lg	08 48 09.6	
	1.3nm,0.5s						
MKAR	Makanchi Array	7.69	210	Pn	Pn	08 46 05.7	+1.2

	0.4nm,0.3s,baz=28,slow=14,SNR=18						
MKAR				Sn	Sn	08 47 31.6	-0.6
	0.2nm,0.3s,baz=30,slow=22,SNR=5.1						
MKAR				Lg	Lg	08 48 14.0	
	0.3nm,0.3s,baz=28,slow=31,SNR=6.7						
BVAR	**Borovoye Array**	**10.49**	**274**	Pn	Pn	08 46 41.4	-1.4
	0.4nm,0.3s,baz=79,slow=14,SNR=6.7						

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*ISCJB **19** 08:44:15.5±0.6,23.°71N±0.°08×64.°46E±0.°05,h12^{km}, mb3.9/18,MS2.9/3,Error ellipse: s-maj=12.3km s-min=5.7km az=164.5*

*IDC **19** 08:44:15.3±1.1,23.°62N×64.°55E,h0^{km},mb4.0/13, mb1 4.1/14,mb1mx3.8/51,mbtmp4.0/14,ML3.9/1,MS3.0/3, Ms1 3.0/3,ms1mx2.5/50,Error ellipse: s-maj=25.8km s-min=20.3km az=45.0*

*NEIC **19** 08:44:16.6±2.2,23.°66N×64.°48E,h9^{km}±4^{km},mb4.1/11, Error ellipse: s-maj=20.8km s-min=8.2km az=148.0*

*DSN **19** 08:44:31.5±1.4,24.°36N×63.°49E,h10^{km},ML4.0/6,Error ellipse: s-maj=43.4km s-min=12.1km az=6.0*

ISC 19 08:44:16.9±1.1,**23.°7N**±0.°1×**64.°33E**±0.°07,**h12**^{km},**n47,** σ**2.^{s}20**/48,**mb3.9**/18,**MS2.9**/3,**Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**5.25**	**267**	Pn	**Pn**	**08 45 37.0**	**+1.8**
	3.5nm,0.3s,baz=122,slow=8.4,SNR=61						
WSAR				Sn	**Sn**	**08 46 32.1**	**-3.6**
	9.6nm,0.3s,baz=80,slow=7.3,SNR=9.1						
UOSS	**Minazif**	**7.53**	**282**	*e*Pn	**Pn**	**08 46 07.0**	**+0.5**
UOSS				*e*Sn	**Sn**	**08 47 26.1**	**-5.6**
UOSS	**Minazif**	**7.53**	**282**	*i* P	**Pn**	**08 46 07.0**	**+0.5**
	SNR=24						
HATD	**Hatta, Dubai**	**7.57**	**281**	P	**Pn**	**08 46 09.9**	**+2.7**
ASHO	**Ashiyiah**	**7.62**	**279**	*i* P	**Pn**	**08 46 11.4**	**+3.5**
	SNR=23						
ASHO				S	**Sn**	**08 47 29.1**	**-5.2**
MSFE	**Esma-Masafi**	**7.63**	**285**	P	**Pn**	**08 46 09.1**	**+1.0**
MSFE				S	Sn	08 47 28.1	-6.4
BANOM	**Banah**	**7.64**	**289**	*i* P	**Pn**	**08 46 09.7**	**+1.6**
	SNR=23						
SHME	**Shamm**	**7.81**	**290**	P	**Pn**	**08 46 13.1**	**+2.7**
ALNE	**Al Ain**	**7.86**	**275**	P	**Pn**	**08 46 15.2**	**+4.0**
FAQ	**Al Faqa, Dubai**	**8.05**	**280**	*i* P	**Pn**	**08 46 17.4**	**+3.7**
	SNR=14						
ASUD	**Al Ashush, Dub**	**8.28**	**279**	*i* P	**Pn**	**08 46 21.1**	**+4.3**
	SNR=23						
KBL	**Kabul**	**11.61**	**20**	*e*Pn	**Pn**	**08 47 05.0**	**+2.4**
NIL	**Nilore**	**12.67**	**36**	*e*Pn	**Pn**	**08 47 12.7**	**-4.3**
CHGR	**Chuyangaron**	**15.52**	**14**	*e*Pn	Pn	08 47 47.6	-8.1
	17nm,0.9s						
KK31	**Karatay Array**	**20.07**	**13**	*e*P	**P**	**08 48 48.3**	**-1.8**
	3.5nm,0.7s						
NRN	**Naryn**	**20.25**	**26**	*e*P	**P**	**08 48 51.7**	**-0.7**
	5.7nm,0.9s						
AAK	**Ala-Archa**	**20.73**	**22**	P	**P**	**08 48 57.3**	**-0.2**
	3.4nm,0.6s,baz=202,slow=10,SNR=8.2						
AAK				LR	LR	08 58 42.7	
	comp=Z,37nm,19.6s,baz=172,slow=42						
AAK	**Ala-Archa**	**20.73**	**22**	*e*P	**P**	**08 48 57.3**	**-0.2**
	7.7nm,1.0s						
FRU1	**Bishkek**	**20.93**	**22**	*e*P	**P**	**08 48 59.8**	**+0.3**
	31nm,0.4s						
BOOM	**Boomskoye usch**	**21.12**	**24**	*e*P	**P**	**08 49 00.9**	**-0.8**
KDJ	**Kajisay**	**21.31**	**27**	*e*P	**P**	**08 49 02.4**	**-1.4**
ABKAR	**Akbulak array**	**25.79**	**353**	*e*P	**P**	**08 49 48.3**	**+0.7**
	2.8nm,1.0s						
KBZ	**Khabaz**	**26.68**	**324**	P	**P**	**08 49 59.2**	**+3.5**
	2.6nm,0.9s,baz=191,slow=5.2,SNR=3.3						
MAKZ	**Makanchi**	**27.11**	**27**	*e*P	**P**	**08 49 58.3**	**-1.3**
	9.8nm,0.9s						
AKTO	**Aktyubinsk**	**27.19**	**351**	P	**P**	**08 50 02.9**	**+2.7**
	0.9nm,0.5s,baz=170,slow=4.7,SNR=4.3						
MK31	**Makanchi Array**	**27.23**	**28**	*e*P	**P**	**08 50 00.2**	**-0.5**
	6.8nm,0.7s						
MK32	**Makanchi Array**	**27.23**	**28**	*e*P	**P**	**08 49 59.8**	**-1.0**
MKAR	**Makanchi Array**	**27.23**	**28**	P	**P**	**08 49 59.8**	**-1.0**
	7.1nm,0.8s,baz=214,slow=9.2,SNR=22						
MKAR				LR	LR	09 03 42.7	
	comp=Z,32nm,18.1s,baz=214,slow=43						
KURBB	**Kurchatov Arra**	**29.11**	**19**	P	**P**	**08 50 17.1**	**-0.3**
	0.7nm,0.5s,baz=213,slow=8.6,SNR=5.8						
BVAR	**Borovoye Array**	**29.69**	**7**	P	**P**	**08 50 23.7**	**+1.1**
	0.7nm,0.5s,baz=193,slow=26,SNR=5.7						
ARU	**Arti**	**33.02**	**354**	LR	LR	09 04 47.3	
	comp=Z,25nm,20.2s,baz=156,slow=37						
ZAA0	**Zalesovo Array**	**33.96**	**22**	*e*P	**P**	**08 50 58.9**	**-1.1**
	2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**33.96**	**22**	P	**P**	**08 50 59.1**	**-0.9**
	1.9nm,0.4s,baz=230,slow=12,SNR=6.2						
ZAA1	**Zalesovo Array**	**33.96**	**22**	*e*P	**P**	**08 50 59.1**	**-0.9**
SONA0	**Songino Array**	**41.11**	**43**	*e*P	**P**	**08 52 00.7**	**-0.1**
SONM	**Songino Array**	**41.11**	**43**	P	**P**	**08 52 00.7**	**-0.1**
	0.4nm,0.4s,baz=236,slow=10.0,SNR=3.7						
FIA0	**FINESS Array S**	**45.91**	**336**	*e*P	**P**	**08 52 39.8**	**+0.7**
FINES	**FINESS Array B**	**45.91**	**336**	P	**P**	**08 52 39.8**	**+0.7**
	0.7nm,0.3s,baz=123,slow=7.0,SNR=5.1						
ARA0	**ARCESS Array S**	**51.34**	**344**	*e*P	**P**	**08 53 20.3**	**-0.6**
ARCES	**ARCESS Array B**	**51.34**	**344**	P	**P**	**08 53 20.3**	**-0.6**
	4.9nm,0.8s,baz=140,slow=8.9,SNR=16						
ARE0	**ARCESS Array S**	**51.34**	**344**	*e*P	**P**	**08 53 22.2**	**+1.3**
	0.8nm,1.1s						
NB200	**NORSAR Array S**	**51.95**	**330**	*e*P	**P**	**08 53 26.3**	**+0.7**
NOA	**NORSAR Array B**	**51.95**	**330**	P	**P**	**08 53 26.3**	**+0.7**
	0.6nm,0.7s,baz=108,slow=7.3,SNR=3.0						
WRA	**Warramunga Arr**	**80.81**	**116**	P	**P**	**08 56 30.6**	**-0.4**
	0.9nm,0.9s,baz=292,slow=5.8,SNR=4.3						
WR1	**Warramunga Arr**	**80.81**	**116**	*e*P	**P**	**08 56 30.6**	**-0.4**
ASAR	**Alice Springs**	**82.28**	**120**	P	**P**	**08 56 38.4**	**-0.4**
	0.2nm,0.5s,baz=304,slow=5.1,SNR=4.3						
AS31	**Alice Springs**	**82.29**	**120**	*e*P	**P**	**08 56 38.4**	**-0.4**
	1.6nm,1.2s						

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*ISCJB **19** 08:45:38.3±1.0,5.°63S±0.°09×146.°1E±0.°2,h69^{km},mb3.7/5, Error ellipse: s-maj=26.1km s-min=10.6km az=162.8*

*IDC **19** 08:45:41.0±4.8,5.°62S×146.°12E,h83^{km}±48^{km},mb3.5/5, mb1 3.8/8,mb1mx3.5/34,mbtmp4.0/8,ML4.2/2,Error ellipse: s-maj=39.3km s-min=29.1km az=110.0*

ISC 19 08:45:39.7±1.1,**5.°6S**±0.°1×**146.°1E**±0.°2,**h69**^{km},**n8,** σ**1.^{s}14**/9, **mb3.7**/5,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.93**	**165**	P	**Pn**	**08 46 38.4**	**+0.8**
	7.2nm,0.3s,baz=339,slow=5.1,SNR=13						
PMG				S	**Sn**	**08 47 20.4**	**-2.1**
	14nm,0.3s,baz=174,slow=22,SNR=15						
CTA	**Charters Tower**	**14.41**	**179**	P	**Pn**	**08 49 01.7**	**+1.5**
	1.2nm,0.3s,baz=358,slow=14,SNR=14						
WRA	**Warramunga Arr**	**18.30**	**218**	P	**P**	**08 49 47.9**	**-0.4**
	0.5nm,0.3s,baz=42,slow=11,SNR=23						
ASAR	**Alice Springs**	**21.48**	**212**	P	**P**	**08 50 22.5**	**-0.3**
	1.5nm,0.7s,baz=51,slow=8.3,SNR=18						
STKA	**Stephens Creek**	**26.49**	**189**	P	**P**	**08 51 10.4**	**-0.3**
	1.2nm,0.5s,baz=6.5,slow=12,SNR=2.8						
CMAR	**Chiang Mai Arr**	**52.28**	**298**	P	**P**	**08 54 44.5**	**-0.1**
	1.1nm,0.3s,baz=108,slow=5.8,SNR=3.3						
ILAR	**Eielson Array**	**85.45**	**23**	P	**P**	**08 58 09.5**	**0.0**
	0.5nm,0.6s,baz=251,slow=5.4,SNR=8.1						
BVAR	**Borovoye Array**	**85.92**	**324**	P	**P**	**08 58 11.6**	**-0.5**
	0.2nm,0.3s,baz=64,slow=3.4,SNR=3.2						

MEX 19 08:55:10.9±0.4,**15.°92N**×**97.°29W**,**h10**^{km}±3^{km},**MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.15**	**97**	*i* P	Pb	08 55 29.5	-3.4
HUIG				*i* S	Sb	08 55 43.3	-4.6
VHO	**Vista Hermosa**	**1.27**	**25**	*e*P	Pn	08 55 31.6	-3.3
VHO				*e*S	Sb	08 55 46.5	-5.1
TLIG	**Tlapa**	**2.04**	**324**	*e*P	Pn	08 55 42.7	-2.8
TLIG				*i* S	Sn	08 56 06.9	-4.2

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*NIED **19** 09:05:00,38.°60N×142.°00E,h53^{km},Mw4.3 Best double couple: $M_0$2.78000×10^{15} NP1:ϕ_s68.00000°,δ72.00000°, λ-169.00000°. NP2:ϕ_s334.00000°,δ80.00000°, λ-18.00000°.*

*MOS **19** 09:05:06.1±0.9,38.°68N×142.°07E,h53^{km},mb4.5/22,Error ellipse: s-maj=8.8km s-min=5.4km az=90.8*

*ISCJB **19** 09:05:06.0±0.4,38.°61N±0.°02×142.°13E±0.°04,h57^{km}±3^{km}, mb4.5/59,Error ellipse: s-maj=5.8km s-min=3.2km az=29.6*

*BJI **19** 09:05:06.0±0.0,38.°46N×142.°07E,h61^{km},mb4.6/42, mB4.8/23,Ms4.7/4*

*NEIC **19** 09:05:07.2±1.8,38.°59N×142.°08E,h49^{km}±4^{km},mb4.5/32, Error ellipse: s-maj=12.1km s-min=6.8km az=112.0*

NEIC Recorded [3 JMA] in Iwate.

*JMA **19** 09:05:08.1,38.°61N×142.°02E,h53^{km}±1^{km},M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s167.00000°,δ82.00000°,λ55.00000°. NP2:ϕ_s67.00000°, δ36.00000°,λ167.00000°. Principal axes: T Plg42.0000°, Azm44.0000°; N Plg35.0000°, Azm172.0000°; P Plg29.0000°, Azm285.0000°;*

JMA Felt III J1.

*IDC **19** 09:05:08.0±0.7,38.°58N×142.°03E,h54^{km}±6^{km},mb3.8/19, mb1 4.0/25,mb1mx3.9/55,mbtmp4.1/25,MS2.9/8, Ms1 2.9/8,ms1mx2.7/49 Error ellipse: s-maj=12.8km s-min=8.3km az=120.0*

ISC 19 09:05:07.4±0.6,**38.°62N**±0.°04×**142.°09E**±0.°05,**h51**^{km}±5^{km}, **h51**^{km}**:pP-P,n152,** σ**1.^{s}34**/172,**mb4.5**/59,**11C-10D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.52**	**292**	⇑P	**Pn**	**09 05 19.3**	**+0.4**
JKMT				S	**Sn**	**09 05 27.2**	**0.0**
OFUJ	**Ofunato**	**0.57**	**325**	⇓P	**Pn**	**09 05 20.2**	**+0.7**
OFUJ				S	**Sn**	**09 05 28.7**	**+0.4**
JIKH	**Ishinomakikobu**	**0.58**	**238**	⇑P	**Pn**	**09 05 19.9**	**+0.3**
JIKH				S	**Sn**	**09 05 28.0**	**-0.4**
JIO	**Ouri**	**0.60**	**255**	⇑P	**Pn**	**09 05 20.1**	**+0.2**
JIO				S	**Sn**	**09 05 28.6**	**-0.4**
JMK	**Ichinoseki**	**0.76**	**296**	⇓P	**Pn**	**09 05 22.3**	**+0.4**
JMK				S	**Sn**	**09 05 32.5**	**0.0**
JOM	**Ohasama**	**1.06**	**324**	⇓P	**Pn**	**09 05 26.7**	**+0.8**
JOM				S	**Sn**	**09 05 40.2**	**+0.6**
JOU	**Okura**	**1.15**	**258**	P	**Pn**	**09 05 27.3**	**+0.2**
JOU				S	**Sn**	**09 05 41.5**	**-0.3**
JMM	**Marumori**	**1.27**	**234**	⇑P	**Pn**	**09 05 28.6**	**-0.1**
JMM				S	**Sn**	**09 05 43.7**	**-0.9**
JRG	**Rokugo**	**1.38**	**305**	⇓P	**Pn**	**09 05 30.6**	**+0.4**
JRG				*e*S	**Sn**	**09 05 47.3**	**0.0**
JYK	**Kaneyama**	**1.39**	**283**	⇓P	**Pn**	**09 05 30.7**	**+0.3**
JYK				*e*S	**Sn**	**09 05 47.3**	**-0.3**
JFK	**Kawauchi**	**1.57**	**218**	⇑P	**Pn**	**09 05 33.1**	**+0.1**
JFK				S	**Sn**	**09 05 51.6**	**-0.6**
JYS	**Shirataka**	**1.64**	**257**	P	**Pn**	**09 05 34.3**	**+0.5**
JYS				S	**Sn**	**09 05 54.0**	**+0.2**
ERM	**Erimo**	**3.49**	**13**	*e*Pn	**Pn**	**09 05 59.5**	**+0.4**
ERM				*e*Sn	**Sn**	**09 06 40.6**	**+1.4**
ERM	**Erimo**	**3.49**	**13**	*ce*P	**Pn**	**09 05 59.3**	**+0.2**
ERM				pmax	pmax		
	comp=Z,45nm,0.5s						
MJAR	**Matsushiro Arr**	**3.71**	**237**	P	**Pn**	**09 06 03.6**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=47,slow=11,SNR=54						
MJAR				S	**Sn**	**09 06 47.7**	**+2.9**
	comp=Z,1.2nm,0.3s,baz=85,slow=14,SNR=4.3						
MJAR				LR	LR	09 07 43.3	
	comp=Z,248nm,19.9s,baz=55,slow=43						
MAJO	**Matsushiro**	**3.71**	**237**	*e*Pn	**Pn**	**09 06 03.8**	**+1.5**
MAJO				*e*Sn	**Sn**	**09 06 44.6**	**-0.1**
MAJO	**Matsushiro**	**3.71**	**237**	*e*P	**Pn**	**09 06 03.8**	**+1.5**
MAJO				*e*		09 06 44.7	
MAT	**Matsushiro**	**3.71**	**237**	P	**Pn**	**09 06 04.4**	**+2.1**
MAT				S	**Sn**	**09 06 49.7**	**+4.9**
INU	**Inuyama**	**5.21**	**233**	*e*Pn	**Pn**	**09 06 24.8**	**+2.1**
INU				*e*Sn	**Sn**	**09 07 17.7**	**-3.8**
ASAJ	**Asahikawa**	**5.51**	**4**	P	**Pn**	**09 06 27.4**	**+0.6**
	comp=Z,22nm,0.3s,baz=207,slow=9.7,SNR=54						
ASAJ				S	**Sn**	**09 07 31.4**	**+2.6**
	comp=Z,5.4nm,0.3s,baz=134,slow=32,SNR=4.1						
JHJ2	**Mitsune**	**5.79**	**199**	*e*Pn	**Pn**	**09 06 29.8**	**-1.0**
JHJ2				*e*Sn	**Sn**	**09 07 35.0**	**-0.9**
JHJ	**Hachijo jima 2**	**5.80**	**200**	P	**Pn**	**09 06 30.2**	**-0.6**
	comp=Z,62nm,0.3s,baz=71,slow=23,SNR=10						
JHJ				S	**Sn**	**09 07 32.3**	**-3.7**
	comp=Z,20nm,0.3s,baz=246,slow=20,SNR=3.3						
GRPR	**Tuman**	**6.04**	**26**	⇓*i*P	**Pn**	**09 06 33.2**	**-0.9**
GRPR				*i* S	**Sn**	**09 07 37.5**	**-4.4**
GRPR				pmax	pmax		
	comp=N,253nm,0.3s						
GRPR				pmax	pmax		
	comp=E,221nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,493nm,0.3s						
GRPR				smax	smax		
	comp=N,381nm,0.3s						
GRPR				smax	smax		
	comp=E,828nm,0.3s						
LAGR	**Lagunnoye**	**6.10**	**26**	⇑*i*P	**Pn**	**09 06 34.7**	**-0.3**
LAGR				*i* S	**Sn**	**09 07 39.6**	**-3.8**
LAGR				pmax	pmax		
	comp=Z,681nm,0.4s						
LAGR				pmax	pmax		
	comp=N,259nm,0.3s						
LAGR				pmax	pmax		
	comp=E,351nm,0.4s						
LAGR				smax	smax		
	comp=N,348nm,0.5s						
LAGR				smax	smax		
	comp=E,474nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.11**	**26**	⇑*i*P	**Pn**	**09 06 33.9**	**-1.2**
YUK				*i* S	**Sn**	**09 07 39.2**	**-4.4**
YUK				pmax	pmax		
	comp=N,144nm,0.3s						
YUK				pmax	pmax		
	comp=E,212nm,0.3s						
YUK				pmax	pmax		
	comp=Z,341nm,0.3s						
YUK				smax	smax		
	comp=N,527nm,0.4s						
YUK				smax	smax		
	comp=E,594nm,0.3s						
TEY	**Ternei**	**7.61**	**329**	⇓*e*P	Pn	09 07 01.4	+5.8
TEY				pmax	pmax		
	comp=N,20nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
KUR	**Kuril'sk**	**7.89**	**31**	⇑*i*P	**Pn**	**09 06 59.5**	**+0.1**
KUR				*i* S	**Sn**	**09 08 22.9**	**-4.3**
KUR				pmax	pmax		
	comp=Z,96nm,0.4s						
KUR				pmax	pmax		
	comp=N,32nm,0.2s						
KUR				pmax	pmax		
	comp=E,58nm,0.2s						
KUR				smax	smax		
	comp=N,147nm,0.5s						
KUR				smax	smax		
	comp=E,69nm,0.3s						
YSS	**Yuzh-Sakhalins**	**8.35**	**3**	*e*Pn	**Pn**	**09 07 06.1**	**+0.4**
YSS	**Yuzh-Sakhalins**	**8.35**	**3**	*e*P	**Pn**	**09 07 06.1**	**+0.4**
YSS				*e*S	**Sn**	**09 08 37.3**	**-1.2**
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
VLA	**Vladivostok**	**8.94**	**303**	*i* P	**Pn**	**09 07 14.4**	**+0.6**
USA0B	**Ussuriysk Arra**	**9.41**	**310**	*e*Pn	**Pn**	**09 07 21.4**	**+1.1**
USA0B				*e*Sn	**Sn**	**09 09 04.4**	**-0.3**
USRK	**Ussuriysk Ar.**	**9.41**	**310**	P	**Pn**	**09 07 20.9**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=121,slow=15,SNR=32						
USRK				LR	LR	09 10 53.2	
	comp=Z,83nm,18.8s,baz=140,slow=37						
USRK	**Ussuriysk Ar.**	**9.41**	**310**	P	**Pn**	**09 07 21.0**	**+0.7**
JNU	**Nakatsue**	**10.62**	**242**	LR	LR	09 12 05.3	
	comp=Z,121nm,21.9s,baz=33,slow=40						
JNU	**Nakatsue**	**10.62**	**242**	*e*Pn	**Pn**	**09 07 35.4**	**-1.5**
KSRS	**Korea Array**	**11.24**	**268**	P	**Pn**	**09 07 46.9**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=81,slow=14,SNR=16						
KSRS				LR	LR	09 11 46.1	
	comp=Z,61nm,20.4s,baz=85,slow=36						
KS15	**Wonju Array Si**	**11.27**	**268**	*e*Pn	**Pn**	**09 07 46.8**	**+1.1**
TYV	**Tymovskoe**	**12.25**	**2**	*e*P	**Pn**	**09 08 00.5**	**+1.5**
TYV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KLR	**Kul'dur**	**12.95**	**328**	P	**Pn**	**09 08 08.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=138,slow=13,SNR=3.8						
KLR				LR	LR	09 12 45.5	
	comp=Z,57nm,20.9s,baz=166,slow=35						
KLR	**Kul'dur**	**12.95**	**328**	*i* P	**Pn**	**09 08 08.1**	**-0.5**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CN2	**Changchun**	**13.55**	**298**	*e*P	**P**	**09 08 21.6**	**-2.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JOW	**Kunigami**	**16.51**	**229**	*e*P	**Pn**	**09 08 56.1**	**+0.6**
	comp=Z,9.9nm,0.8s						
PEA0B	**Petropavlovsk-**	**18.06**	**32**	*e*P	**P**	**09 09 11.3**	**-3.0**
	comp=Z,18nm,1.4s						
PETK	**Petropavlovsk-**	**18.06**	**32**	P	**P**	**09 09 12.2**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=196,slow=11,SNR=6.5						
PETK				LR	LR	09 16 42.5	
	comp=Z,21nm,19.5s,baz=245,slow=38						
PEA1	**Petropavlovsk-**	**18.06**	**32**	*e*P	**P**	**09 09 12.2**	**-2.1**
ZEA	**Zeya**	**18.23**	**331**	*e*P	**P**	**09 09 15.4**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
TIA	**Tai'an**	**19.96**	**271**	P	**P**	**09 09 33.3**	**-2.0**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NJ2	**Nanjing**	**20.03**	**258**	*e*P	Pn	09 09 37.3	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MA2	**Magadan**	**21.70**	**12**	*i* P	**P**	**09 09 54.0**	**+0.3**
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YULB	**Yu-li**	**23.33**	**235**	*e*P	**P**	**09 10 11.6**	**+0.5**
	comp=Z,36nm,1.7s						
HHC	**Hu-ho-hao-te**	**23.53**	**285**	*e*P	**P**	**09 10 13.3**	**+0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				LR	LR		
	comp=Z,110nm,7.7s						
HHC				LR	LR		
	comp=Z,100nm,8.3s						
TPUB	**Ta-pu**	**23.83**	**236**	*e*P	**P**	**09 10 16.1**	**+0.3**
	comp=Z,68nm,1.7s						
TWG	**Pinlang**	**23.88**	**235**	*e*P	**P**	**09 10 18.1**	**+1.8**
	comp=Z,47nm,0.7s						
WHN	**Wuhan**	**24.15**	**259**	P	**P**	**09 10 17.8**	**-0.9**
YAK	**Yakutsk**	**24.66**	**346**	*e*P	**P**	**09 10 23.0**	**0.0**
	comp=Z,22nm,0.4s						
YAK	**Yakutsk**	**24.66**	**346**	*e*P	**P**	**09 10 23.0**	**0.0**
YAK				pmax	pmax		
	comp=Z,22nm,0.4s						
SEY	**Seymchan**	**25.14**	**11**	P	**P**	**09 10 27.9**	**+0.5**
	comp=Z,5.6nm,0.6s,baz=213,slow=7.4,SNR=14						
SEY	**Seymchan**	**25.14**	**11**	*i* P	**P**	**09 10 26.5**	**-0.8**
XAN	**Xi'an**	**27.02**	**271**	P	**P**	**09 10 41.9**	**-2.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,73nm,4.8s						
SONM	**Songino Array**	**27.39**	**301**	LR	LR	09 21 26.2	
	comp=Z,30nm,21.1s,baz=111,slow=36						
ENH	**Enshi**	**28.03**	**263**	*e*P	**P**	**09 10 53.1**	**-0.7**
	comp=Z,23nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.54**	**124**	T	T	09 41 16.0	
	baz=316,slow=75,SNR=668						
H11N1	**WAKE ISLAND Hy**	**28.55**	**124**	T	T	09 41 20.3	
	baz=316,slow=75,SNR=1521						
H11N3	**WAKE ISLAND Hy**	**28.56**	**124**	T	T	09 41 21.0	
	baz=316,slow=75,SNR=1280						
H11S1	**WAKE ISLAND Hy**	**29.31**	**126**	T	T	09 42 18.2	
	baz=318,slow=76,SNR=419						
H11S3	**WAKE ISLAND Hy**	**29.32**	**126**	T	T	09 42 18.4	
	baz=318,slow=76,SNR=714						
H11S2	**WAKE ISLAND Hy**	**29.33**	**126**	T	T	09 42 16.5	
	baz=318,slow=76,SNR=465						
TLY	**Talaya**	**29.73**	**309**	P	**P**	**09 11 07.7**	**-0.9**
	comp=Z,5.2nm,0.7s,baz=122,slow=8.1,SNR=4.4						
TLY	**Talaya**	**29.73**	**309**	*e*P	**P**	**09 11 08.1**	**-0.6**
	comp=Z,6.2nm,0.8s						
TLY	**Talaya**	**29.73**	**309**	*e*P	**P**	**09 11 09.3**	**+0.7**
TLY				pmax	pmax		
	comp=Z,14nm,0.8s						
TLY				MLR	MLR		
	comp=Z,151nm,13.0s						
LZH	**Lanzhou**	**30.36**	**277**	*e*P	**P**	**09 11 14.0**	**-0.6**
LZH				pP	pP	09 11 24.5	-3.1
LZH				sP	sP	09 11 32.1	-1.6
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
GYA	**Guiyang**	**32.04**	**258**	⇓*i*P	**P**	**09 11 29.3**	**-0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**32.24**	**268**	*e*P	**P**	**09 11 30.5**	**-0.5**
BILL	**Bilibino**	**32.36**	**17**	⇓*e*P	**P**	**09 11 32.6**	**+1.0**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KMI	**Kunming**	**35.75**	**260**	P	**P**	**09 11 59.0**	**-2.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DGZ	**Jazzator, Alta**	**39.92**	**304**	*i* P	**P**	**09 12 37.1**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ	**Urumqi**	**40.63**	**295**	*e*P	**P**	**09 12 42.9**	**+0.6**
WMQ				pP	sP	09 12 59.6	-2.1
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,3.6s						
WMQ				LR	LR		
	comp=Z,2µm,25.1s						
WMQ				LR	LR		
	comp=Z,2µm,26.5s						
ZAA0	**Zalesovo Array**	**41.26**	**311**	*e*P	**P**	**09 12 47.5**	**+0.2**
	comp=Z,4.8nm,0.6s						
ZAA1	**Zalesovo Array**	**41.26**	**311**	*e*P	**P**	**09 12 47.5**	**+0.2**
ZALV	**Zalesovo Beam**	**41.26**	**311**	P	**P**	**09 12 47.5**	**+0.2**
	comp=Z,5.3nm,0.5s,baz=87,slow=8.1,SNR=14						
LSA	**Lhasa**	**42.62**	**274**	*e*P	**P**	**09 13 00.3**	**+1.0**
	comp=Z,4.9nm,0.7s						
LSA	**Lhasa**	**42.62**	**274**	*e*P	**P**	**09 13 00.3**	**+1.0**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	**Makanchi Array**	**43.75**	**301**	*e*P	**P**	**09 13 07.4**	**-0.3**
	comp=Z,3.2nm,0.7s						
MK31	**Makanchi Array**	**43.75**	**301**	*e*P	**P**	**09 13 07.4**	**-0.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK32	**Makanchi Array**	**43.75**	**301**	*e*P	**P**	**09 13 07.7**	**0.0**
MKAR	**Makanchi Array**	**43.75**	**301**	P	**P**	**09 13 07.7**	**0.0**
	comp=Z,2.1nm,0.5s,baz=86,slow=9.9,SNR=26						
KURK	**Kurchatov**	**45.39**	**307**	*e*P	**P**	**09 13 20.3**	**-0.4**
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**45.39**	**307**	*ce*P	**P**	**09 13 20.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,18nm,0.7s						
KURBB	**Kurchatov Arra**	**45.47**	**307**	P	**P**	**09 13 21.1**	**-0.2**
	comp=Z,19nm,0.6s,baz=81,slow=8.1,SNR=119						
MLY	**Manley**	**46.23**	**33**	*e*P	**P**	**09 13 26.3**	**-0.9**
	comp=Z,5.4nm,1.6s						
COLD	**Coldfoot**	**46.51**	**30**	*e*P	**P**	**09 13 28.8**	**-0.5**
	comp=Z,4.4nm,1.4s						
ILAR	**Eielson Array**	**47.88**	**33**	P	**P**	**09 13 41.2**	**+1.4**
	comp=Z,1.5nm,0.6s,baz=264,slow=6.1,SNR=32						
ILAR				pP	**pP**	**09 13 55.7**	**+2.4**
	comp=Z,1.3nm,0.7s,baz=269,slow=6.8,SNR=7.1						
ILB	**Eielson Array**	**47.88**	**33**	*e*P	**P**	**09 13 40.5**	**+0.6**
	comp=Z,2.2nm,0.6s						
SCRK	**Sand Creek**	**49.20**	**34**	*e*P	**P**	**09 13 51.0**	**+0.8**
	comp=Z,2.5nm,0.5s						
BOOM	**Boomskoye usch**	**49.26**	**297**	*e*P	**P**	**09 13 51.8**	**+0.7**
	comp=Z,6.6nm,1.3s						
BOOM	**Boomskoye usch**	**49.26**	**297**	*e*P	**P**	**09 13 51.8**	**+0.7**
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BVAR	**Borovoye Array**	**49.92**	**311**	P	**P**	**09 13 55.5**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=72,slow=9.5,SNR=9.5						
BRVK	**Borovoye**	**49.97**	**312**	*e*P	**P**	**09 13 55.2**	**-0.9**
	comp=Z,5.8nm,0.9s						
BRVK	**Borovoye**	**49.97**	**312**	*e*P	**P**	**09 13 55.2**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AAK	**Ala-Archa**	**50.22**	**297**	*ce*P	**P**	**09 13 57.1**	**-1.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
EGAK	**Eagle**	**50.32**	**33**	*e*P	**P**	**09 13 57.0**	**-1.5**
	comp=Z,1.6nm,0.6s						
ARSB	**Arslanbob**	**51.74**	**296**	*e*P	**P**	**09 14 09.5**	**-0.2**
	comp=Z,5.0nm,0.9s						
EPYK	**Eagle Plains**	**51.89**	**30**	*e*P	**P**	**09 14 12.6**	**+2.2**
	comp=Z,18nm,1.7s						
MTN	**Manton Dam**	**52.21**	**194**	*e*P	**P**	**09 14 14.9**	**+1.7**
	comp=Z,22nm,1.4s						
INK	**Inuvik**	**52.74**	**28**	P	**P**	**09 14 18.1**	**+1.6**

	comp=Z,0.9nm,0.5s,baz=324,slow=6.9,SNR=9.2						
INK				pP	pP	09 14 31.2	+1.0
	comp=Z,1.2nm,0.4s,baz=305,slow=9.4,SNR=5.4						
INK	Inuvik	52.74	28	*e*P	P	09 14 18.1	+1.6
	comp=Z,14nm,2.0s						
KK31	Karatay Array	52.81	299	*e*P	P	09 14 17.3	-0.2
	comp=Z,2.7nm,0.8s						
KK31	Karatay Array	52.81	299	*e*P	P	09 14 17.3	-0.2
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GAR	Garm	54.52	295	*e*P	P	09 14 29.9	-0.3
	comp=Z,6.1nm,0.9s						
GAR	Garm	54.52	295	*e*P	P	09 14 29.9	-0.3
GAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	Nilore	54.64	287	*e*P	P	09 14 31.0	0.0
	comp=Z,17nm,1.2s						
NIL	Nilore	54.64	287	*e*P	P	09 14 31.0	0.0
NIL				pmax	pmax		
	comp=Z,17nm,1.2s						
ARU	Arti	55.54	318	*d i*P	P	09 14 37.0	-0.1
ARU				*PP	pP	09 14 52.1	+1.1
ARU						09 15 35.7	
ARU				S	S	09 22 18.3	-0.3
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ABKAR	Akbulak array	57.34	310	*e*P	P	09 14 49.8	-0.2
	comp=Z,3.7nm,0.6s						
AKTO	Aktyubinsk	58.02	311	P	P	09 14 53.7	-1.1
	comp=Z,2.0nm,0.7s,baz=67,slow=10,SNR=7.8						
WB2	Warramunga Arr	58.70	189	*e*P	P	09 14 59.0	-0.8
	comp=Z,46nm,1.9s						
WR1	Warramunga Arr	58.70	189	*e*P	P	09 14 59.3	-0.5
WR1				*e*pP	pP	09 15 13.2	-0.6
WRA	Warramunga Arr	58.70	189	P	P	09 14 59.3	-0.5
	comp=Z,1.3nm,0.5s,baz=357,slow=8.4,SNR=8.6						
WRA				pP	pP	09 15 13.2	-0.6
	comp=Z,2.6nm,0.7s,baz=0.0,slow=8.5,SNR=4.5						
YKA	Yellowknife Ar	62.17	31	P	P	09 15 23.3	+0.3
	comp=Z,0.4nm,0.5s,baz=302,slow=6.2,SNR=5.6						
YKB5	Yellowknife Ar	62.17	31	*e*P	P	09 15 23.3	+0.3
AS31	Alice Springs	62.43	188	*e*P	P	09 15 23.7	-1.4
	comp=Z,9.1nm,1.9s						
ASAR	Alice Springs	62.43	188	P	P	09 15 25.4	+0.3
	comp=Z,0.6nm,0.7s,baz=10,slow=8.8,SNR=7.8						
ARA0	ARCESS Array S	62.71	339	*e*P	P	09 15 27.0	+0.5
ARCES	ARCESS Array B	62.71	339	P	P	09 15 27.0	+0.5
	comp=Z,3.2nm,1.0s,baz=52,slow=7.9,SNR=4.7						
ARCES	ARCESS Array B	62.71	339	P	P	09 15 27.0	+0.5
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FIA0	FINESS Array S	67.67	332	*e*P	P	09 15 58.9	+0.2
FIA0	FINESS Array S	67.67	332	*e*P	P	09 15 58.9	+0.2
FINES	FINESS Array B	67.67	332	P	P	09 15 58.9	+0.2
	comp=Z,1.9nm,0.7s,baz=38,slow=9.6,SNR=5.4						
KIV	Kislovodsk	70.28	311	*e*P	P	09 16 13.9	-1.5
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
FFC	Flin Flon	72.09	33	*e*P	P	09 16 27.3	+1.3
	comp=Z,144nm,1.7s						
FFC	Flin Flon	72.09	33	*e*P	P	09 16 27.3	+1.3
FFC				pmax	pmax		
	comp=Z,144nm,1.7s						
NB200	NORSAR Array S	72.94	337	*e*P	P	09 16 30.6	-0.4
NOA	NORSAR Array B	72.94	337	P	P	09 16 30.6	-0.4
	comp=Z,0.8nm,0.7s,baz=41,slow=5.9,SNR=3.1						
NOA				LR	LR	09 52 26.1	
	comp=Z,7.1nm,19.1s,baz=180,slow=39						
AKASG	Malin Array Be	73.38	322	P	P	09 16 33.7	0.0
	comp=Z,1.2nm,0.5s,baz=46,slow=5.9,SNR=5.1						
NV01	Mina Array Sit	73.62	54	*e*P	P	09 16 37.9	+2.2
NVAR	Mina Array Bea	73.62	54	P	P	09 16 37.9	+2.2
	comp=Z,0.6nm,0.7s,baz=321,slow=4.7,SNR=4.5						
PD31	Pinedale Array	76.18	46	*e*P	P	09 16 51.6	+1.3
PDAR	Pinedale Array	76.18	46	P	P	09 16 51.6	+1.3
	comp=Z,0.8nm,0.6s,baz=271,slow=1.8,SNR=12						
BR101	Keskin Array S	78.20	312	*e*P	P	09 17 02.0	+0.3
BRTR	Keskin Array B	78.20	312	P	P	09 17 02.0	+0.3
	comp=Z,0.6nm,0.4s,baz=109,slow=4.9,SNR=5.4						
VYHS	Vyhne	79.73	326	*e*P	P	09 17 14.7	+5.0
VYHS	Vyhne	79.73	326	*e*P	P	09 17 14.7	+5.0
PV01	Paradox Valley	79.77	49	*e*P	P	09 17 08.9	-1.5
	comp=Z,4.9nm,1.3s						
WUAZ	Wupatki	79.77	53	*e*P	P	09 17 08.7	-1.7
	comp=Z,2.9nm,1.1s						
CLL	Collm	79.99	330	*e*P	P	09 17 11.0	0.0
LTX	Lajitas	88.73	53	*e*P	P	09 17 56.4	+0.6
LTX	Lajitas	88.73	53	*e*P	P	09 17 56.4	+0.6
TXAR	Lajitas Array	88.73	53	P	P	09 17 56.4	+0.6
	comp=Z,0.3nm,0.8s,baz=315,slow=3.5,SNR=5.5						
LPAZ	La Paz	145.42	58	PKPbc	PKPab	09 24 41.4	+0.3
	comp=Z,0.8nm,0.7s,baz=54,slow=4.0,SNR=5.0						
LPAZ	La Paz	145.42	58	*e*PKPdf	PKPab	09 24 41.8	+0.7
LPAZ	La Paz	145.42	58	*e*PKIKP	PKPab	09 24 41.8	+0.7
SIV	San Ignacio	149.64	48	PKPbc	PKPbc	09 24 52.1	+0.3
	comp=Z,0.6nm,0.8s,baz=251,slow=14,SNR=3.1						

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*IDC **19** 09:18:14.2±3.0, 36°.42N×71°.30E, h156^{km}±26^{km}, mb3.5/7, mb1 3.6/14, mb1mx3.3/47, mbtmp4.0/14, MS2.9/1, Ms1 2.9/1, ms1mx2.2/35, Error ellipse: s-maj=22.1km s-min=17.5km az=8.0*

*ISCJB **19** 09:18:17.9±0.3, 36°.70N±0°.03×71°.31E±0°.04, h200^{km}, mb3.6/8, Error ellipse: s-maj=4.5km s-min=3.5km az=171.0*

*NEIC **19** 09:18:17.7±2.2, 36°.70N×71°.29E, h216^{km}±13^{km}, mb4.0/4, Error ellipse: s-maj=15.7km s-min=10.5km az=103.0*

*NNC **19** 09:18:23.9±2.0, 37°.12N×71°.24E, h181^{km}±25^{km}, mb3.5, mpv4.2, Error ellipse: s-maj=18.8km s-min=13.8km az=35.0*

ISC 19 09:18:18.3±0.6, **36°.74N**±0°.05×**71°.32E**±0°.05, **h200**^{km}, **n51,** σ**1ˢ.75**/69, **mb3.7**/8, **6C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.39	341	*e*Pn	Pn	09 19 01.9	+0.8
GAR				*e*S	Sn	09 19 34.8	+0.2
KBL	Kabul	2.87	221	*e*Pn	Pn	09 19 06.6	-0.1
KBL				*e*		09 19 43.4	
KBL				*e*S	Sn	09 19 43.5	-0.9
BTK	Batken	3.34	353	*e*Pn	Pn	09 19 13.5	+1.5
BTK				*e*S	Sn	09 19 55.5	+1.2
NIL	Nilore	3.46	152	*e*Pn	Pn	09 19 14.4	+0.8
NIL				*e*S	Sn	09 19 56.5	-0.4
ARSB	Arslanbob	4.76	15	*e*Pn	Pn	09 19 30.6	+0.8
ARSB				*e*S	Sn	09 20 24.4	-1.6
NRN	Naryn	5.94	36	*e*Pn	Pn	09 19 44.9	-0.1
NRN				*e*S	Sn	09 20 54.6	+1.1
UCH	Uchtor	6.01	23	P	Pn	09 19 47.2	+1.1
	SNR=16						
KZA	Kyzart	6.14	29	P	Pn	09 19 48.3	+0.6
	SNR=10						
EKS2	Erkin-Say	6.21	17	P	Pn	09 19 50.0	+1.7
	SNR=11						
AAK	Ala-Archa	6.38	22	P	Pn	09 19 51.1	+0.6
	3.7nm,0.3s,baz=202,slow=6.1,SNR=15						
AAK				S	Sn	09 21 01.6	-2.1
	2.0nm,0.3s,baz=304,slow=23,SNR=28						
AAK	Ala-Archa	6.38	22	*e*Pn	Pn	09 19 52.3	+1.8
AAK				*e*S	Sn	09 21 05.0	+1.4
AAK	Ala-Archa	6.38	22	⇑P	Pn	09 19 51.9	+1.3
	8.6nm,0.6s						
AAK				⇑S	Sn	09 21 01.1	-2.6
	47nm,0.7s						
AAK	Ala-Archa	6.38	22	P	Pn	09 19 52.4	+1.8
	SNR=9.4						
KK31	Karatay Array	6.39	355	*e*Pn	Pn	09 19 51.4	+0.8
KK31				*e*S	Sn	09 21 00.7	-3.0
KK31	Karatay Array	6.39	355	⇑P	Pn	09 19 51.3	+0.8
	15nm,0.3s,baz=171,slow=12,SNR=256						
KK31				S	Sn	09 20 59.9	-3.7
	20nm,0.5s,baz=191,slow=23,SNR=25						
BOOM	Boomskoye usch	6.76	30	*e*Pn	Pn	09 19 56.5	+1.0
BOOM				*e*S	Sn	09 21 10.8	-1.9
TKM2	Tokmak 2	7.00	27	⇑P	Pn	09 20 00.1	+1.5
	11nm,0.7s						
TKM2				⇓S	Sn	09 21 16.5	-1.8
	11nm,0.7s						
TKM2	Tokmak 2	7.00	27	P	Pn	09 20 00.7	+2.1
	SNR=17						
KDJ	Kajisay	7.04	38	*e*Pn	Pn	09 19 57.5	-1.7
GEYT	Alibeck	10.58	280	P	Pn	09 20 43.4	-1.7
	1.6nm,0.3s,baz=113,slow=11,SNR=7.1						
GYA0B	ALIBECK ARRAY	10.58	280	*e*Pn	Pn	09 20 44.7	-0.3
GYA0B				*e*S	Sn	09 22 41.8	-1.3
MK31	Makanchi Array	12.95	36	*e*Pn	Pn	09 21 14.3	-0.7
MK31				*e*S	S	09 23 38.6	-0.7
MKAR	Makanchi Array	12.95	36	P	P	09 21 17.6	-0.7
	0.3nm,0.3s,baz=219,slow=9.4,SNR=8.6						
DANN	Dangsing	13.41	125	*e*P	Pn	09 21 19.1	-2.1
	33nm,0.3s						
KOLN	Koldanda	13.70	127	*e*P	Pn	09 21 23.9	-0.9
	17nm,0.3s						
GKN	Gorkha	14.22	124	*e*P	Pn	09 21 30.7	-0.4
	44nm,0.2s						
KKN	Kakani	14.79	123	*e*P	P	09 21 38.2	-0.9
	37nm,0.4s						
DMN	Daman	14.79	124	*e*P	P	09 21 38.7	-0.5
	28nm,0.4s						
KURBB	Kurchatov Arra	14.82	18	P	P	09 21 40.9	+2.0
	0.1nm,0.3s,baz=208,slow=10,SNR=6.3						
AB31	Akbulak array	15.00	330	P	P	09 21 40.5	-0.6
	5.3nm,0.5s,baz=144,slow=11,SNR=107						
AB31				⇑S	S	09 24 25.4	-1.4
	4.8nm,0.6s,baz=154,slow=23,SNR=11						
ABKAR	Akbulak array	15.00	330	*e*P	P	09 21 40.9	-0.1
	12nm,0.7s						
ABKAR				*e*S	S	09 24 20.2	-6.6
PKIN	Phulchoki	15.01	123	*e*P	P	09 21 41.1	-0.5
	35nm,0.4s						
PKI	Pulchoki	15.02	123	*e*P	P	09 21 41.6	-0.2
	39nm,0.4s						
GUN	Gumba	15.12	121	*e*P	P	09 21 42.7	-0.2
	27nm,0.3s						
JIRN	Jiri	15.49	122	*e*P	P	09 21 48.0	+1.0
	116nm,0.4s						
BVAR	Borovoye Array	16.30	358	P	Pn	09 21 58.5	+2.5
	0.8nm,0.3s,baz=171,slow=12,SNR=16						
BRVK	Borovoye	16.34	358	*e*P	P	09 21 54.3	-1.3
	3.7nm,0.8s						
AKTO	Aktyubinsk	16.70	329	P	Pn	09 22 02.8	+1.9
	4.2nm,0.3s,baz=135,slow=10,SNR=50						
AKTO				S	S	09 25 04.8	+0.9
	0.2nm,0.3s,baz=17,slow=19,SNR=4.0						
AKTO	Aktyubinsk	16.70	329	⇓P	Pn	09 22 02.5	+1.6
	9.6nm,0.4s						
AKTO				⇑S	S	09 25 05.9	+2.0
	3.5nm,0.7s						
ZAA0	Zalesovo Array	19.59	24	*e*P	P	09 22 29.9	-1.1
	3.0nm,0.5s						
ZALV	Zalesovo Beam	19.59	24	P	Pn	09 22 33.4	-1.5
	1.8nm,0.3s,baz=225,slow=12,SNR=11						
RAYN	Ar Rayn	25.83	247	*e*P	P	09 23 29.2	-2.2
	3.7nm,1.3s						
FINES	FINESS Array B	37.43	326	P	P	09 25 14.2	+2.4
	1.0nm,0.6s,baz=110,slow=12,SNR=4.4						
ARCES	ARCESS Array B	41.02	337	P	P	09 25 44.5	+2.9
	2.8nm,0.9s,baz=113,slow=8.8,SNR=5.4						
NB2	NORSAR Subarra	44.34	323	P	P	09 26 10.7	+2.3
	comp=Z,0.3nm,0.4s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.34	323	P	P	09 26 10.9	+2.5
	comp=Z,0.4nm,0.5s,baz=99,slow=8.1,SNR=3.4						
DAVOX	Davos/Dischmat	45.85	303	LR	LR	09 49 45.1	
	comp=Z,14nm,18.5s,baz=71,slow=41						
TORD	Torodi Ar. Bea	65.98	269	P	P	09 28 42.6	-0.9
	comp=Z,0.9nm,0.5s,baz=62,slow=5.2,SNR=8.5						
YKA	Yellowknife Ar	81.00	3	P	P	09 30 12.6	+2.4
	comp=Z,1.0nm,0.7s,baz=349,slow=5.4,SNR=15						
WRA	Warramunga Arr	81.90	122	P	P	09 30 15.4	-0.2
	comp=Z,1.6nm,0.8s,baz=309,slow=5.0,SNR=9.4						
ASAR	Alice Springs	84.18	125	P	P	09 30 27.8	+0.5
	comp=Z,0.7nm,0.7s,baz=314,slow=5.4,SNR=9.3						

IDC 19 09:45:23.4±9.6, **12°.62S**×**166°.35E, h275**^{km}±106^{km}, **mb3.1**/4, **mb1 3.4**/5, **mb1mx3.1**/30, **mbtmp3.8**/5, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.8**/8, **Error ellipse: s-maj=103.3km s-min=27.6km az=164.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.40	179	P	Pn	09 47 34.2	-0.2
	0.4nm,0.3s,baz=319,slow=20,SNR=3.7						
CTA	Charters Tower	20.65	246	P	P	09 49 44.5	+1.7
	3.5nm,0.7s,baz=62,slow=10,SNR=6.7						
WRA	Warramunga Arr	31.53	252	P	P	09 51 18.9	-1.7
	1.1nm,1.0s,baz=90,slow=8.5,SNR=2.3						
ASAR	Alice Springs	32.65	246	P	P	09 51 29.9	-0.4
	0.7nm,0.7s,baz=70,slow=8.8,SNR=8.3						
ASAR				LR	LR	10 03 57.3	
	comp=Z,38nm,18.1s,baz=320,slow=34						
RAR	Rarotonga	33.46	109	LR	LR	10 04 25.7	
	comp=Z,68nm,18.7s,baz=172,slow=34						
ILAR	Eielson Array	84.81	18	P	P	09 57 26.0	-0.8
	0.3nm,0.5s,baz=239,slow=5.6,SNR=5.5						
ARCES	ARCESS Array B	118.00	345	PKP	PKiKP	10 03 38.5	+1.5
	1.9nm,0.9s,baz=70,slow=1.4,SNR=5.1						

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*SJA **19** 09:53:27.8±0.7, 24°.13S×69°.75W, h84^{km}±6^{km}, ML3.3, MW3.3*

*ISCJB **19** 09:53:28.4±1.0, 24°.16S±0°.03×69°.75W±0°.08, h89^{km}±13^{km}, Error ellipse: s-maj=12.2km s-min=5.4km az=2.2*

*GUC **19** 09:53:28.7±0.6, 24°.15S×69°.69W, h72^{km}±7^{km}, ML3.6*

ISC 19 09:53:29.4±1.7, **24°.14S**±0°.04×**69°.73W**±0°.07, **h78**^{km}±18^{km}, **n19,** σ**0ˢ.54**/33, **7C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.78	232	*e*P	Pn	09 53 46.1	0.0
PB14				*e*S	Sn	09 53 59.0	+0.5
PB14	IPOC Station P	0.78	232	⇓*i*P	Pn	09 53 46.1	0.0
PB14				*i* S	Sn	09 53 58.8	+0.3
PB14				IAML		09 54 00.1	
	comp=E,3µm,0.4s						
PB15	IPOC Station P	0.96	14	*e*P	Pn	09 53 47.8	-0.3
PB15				*e*S	Sn	09 54 02.4	+0.5
PB15	IPOC Station P	0.96	14	⇑*i*P	Pn	09 53 47.7	-0.3
PB15				*i* S	Sn	09 54 01.8	-0.1
PB15				IAML		09 54 06.5	
	comp=N,13µm,0.2s						
PB10	IPOC Station P	0.98	309	*e*P	Pn	09 53 48.1	0.0
PB10				*e*S	Sn	09 54 02.2	+0.1
PB10	IPOC Station P	0.98	309	⇑*i*P	Pn	09 53 48.1	0.0
PB10				*i* S	Sn	09 54 02.2	+0.1
PB10				IAML		09 54 05.4	
	comp=N,1µm,0.3s						
GO02	Mina Guanaco	1.02	173	⇑*i*P	Pn	09 53 48.4	-0.6
GO02				*i* S	Sn	09 54 03.2	-0.3
GO02				IAML		09 54 04.7	
	comp=N,3µm,0.1s						
PB05	IPOC Station P	1.35	341	*e*P	Pn	09 53 52.4	-0.5
PB05				*e*S	Sn	09 54 10.9	+0.3
PB05	IPOC Station P	1.35	341	⇑*i*P	Pn	09 53 52.5	-0.5
PB05				*i* S	Sn	09 54 11.3	+0.8
PB05				IAML		09 54 14.8	
	comp=E,1µm,0.4s						
PB06	IPOC Station P	1.44	6	*e*P	Pn	09 53 54.0	-0.1
PB06	IPOC Station P	1.44	6	⇑*i*P	Pn	09 53 53.5	-0.5
PB06				*i* S	Sn	09 54 12.1	-0.4
PB06				IAML		09 54 13.9	
	comp=E,3µm,0.2s						
LVC	Limon Verde	1.70	26	*e*P	Pn	09 53 57.5	-0.1
LVC				*e*S	Sn	09 54 19.7	+0.7
LVC				IAML		09 54 21.2	
	comp=Z,179nm,0.2s						
PB04	IPOC Station P	1.84	348	*e*P	Pn	09 53 58.6	-0.7
PB04	IPOC Station P	1.84	348	⇑*i*P	Pn	09 53 58.5	-0.9
PB04				*i* S	Sn	09 54 22.3	+0.3
PB04				IAML		09 54 28.2	
	comp=N,678nm,0.4s						
PB03	IPOC Station P	2.08	359	*e*P	Pn	09 54 02.0	-0.6
PB03	IPOC Station P	2.08	359	⇑*i*P	Pn	09 54 01.6	-0.9
PB03				*i* S	Sn	09 54 27.1	-0.7
PB03				IAML		09 54 33.4	
	comp=N,392nm,0.4s						
PB09	IPOC Station P	2.38	11	*e*P	Pn	09 54 06.9	+0.4
PB09	IPOC Station P	2.38	11	*e*P	Pn	09 54 06.8	+0.2
PB09				*i* S	Sn	09 54 36.1	+1.3
PB09				IAML		09 54 43.3	
	comp=E,255nm,0.4s						
VCA	Vinchina	4.78	164	*e*P	Pn	09 54 39.2	+0.1
VCA				IAML		09 54 43.6	
	comp=Z,32nm,0.8s						

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*NIED **19** 09:55:00, 26°.40N×130°.10E, h5^{km}, Mw3.7 Best double couple: M$_0$3.70000×10^{14} NP1:ϕ_s53.00000°, δ37.00000°, λ-60.00000°. NP2:ϕ_s198.00000°, δ59.00000°, λ-110.00000°.*

JMA 19 09:55:35.6, 26°.45N×130°.09E, h51^{km}**, M4.0, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKDJ	Kitadaitoujima	1.19	114	P	Pn	09 55 56.5	+0.6
JKDJ				*e*S	Sn	09 56 12.2	+1.1
JMZ	Minamidaito 2	1.20	121	P	Pn	09 55 56.0	0.0
JMZ				*e*S	Sn	09 56 10.6	-0.5
JYRO	Yoronjima	1.57	292	P	Pn	09 56 01.7	+0.6
JYRO				*e*S	Sn	09 56 20.4	0.0
JOKE	Okinoerabujima	1.63	304	P	Pn	09 56 02.9	+1.0
JOW	Kunigami	1.67	284	P	Pn	09 56 03.2	+0.8
JOW				*e*S	Sn	09 56 23.3	+0.6
JTK	Tokunoshima	1.67	323	P	Pn	09 56 03.6	+1.1
JTK				*e*S	Sn	09 56 23.6	+0.8
JNTH	Nagotoyohara	1.85	273	P	Pn	09 56 05.7	+0.7
JNTH				*e*S	Sn	09 56 27.7	+0.5
JZK	Kikaishima	1.86	357	P	Pn	09 56 06.2	+1.1
JZK				S	Sn	09 56 28.6	+1.2
JAMN	Amaminishikomi	1.96	336	P	Pn	09 56 06.9	+0.5
JAMN				S	Sn	09 56 29.6	-0.3
JIH	Iheya	1.99	288	P	Pn	09 56 07.8	+1.1
JIH				*e*S	Sn	09 56 31.5	+1.1
JAM	Amami Oshima	2.00	348	P	Pn	09 56 07.6	+0.6
JAM				S	Sn	09 56 30.2	-0.6
JJT3	Tamagusuku3	2.09	262	P	Pn	09 56 09.4	+1.2
JJT3				*e*S	Sn	09 56 34.3	+1.2
JAGN	Aguni-jima	2.56	274	P	Pn	09 56 15.6	+1.1
JAGN				*e*S	Sn	09 56 45.0	+0.6
JTAJ	Takarajima	2.81	344	P	Pn	09 56 18.4	+0.4
JTAJ				S	Sn	09 56 49.3	-1.3
JKE	Kume jima 2	2.97	268	P	Pn	09 56 20.4	+0.2
JKE				*e*S	Sn	09 56 55.1	+0.5
JNN	Nakanoshima	3.38	357	*e*S	Sn	09 57 03.6	-1.2
JKC	Kuchinoerabu	4.00	1	S	Sn	09 57 18.2	-1.7

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*ASRS **19** 10:02:20.5, 53°.56N×91°.43E, M3.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 19 10:02:26.2±1.6, **53°.68N**×**91°.03E, h0**^{km}±5^{km}**, mb3.6, mpv3.4, 7C-3D, Error ellipse: s-maj=12.7km s-min=9.1km az=53.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.69	277	⇓Pg	Pb	10 03 33.6	+1.3
	1.2nm,0.6s						
ZAA0				⇓Lg	Lg	10 04 23.6	
	11nm,0.9s						
KURBB	Kurchatov Arra	8.28	253	⇓Pn	Pn	10 04 27.4	+0.1
	1.8nm,0.5s						
KURBB				⇑Sn	Sn	10 06 02.8	+1.3
	15nm,0.8s						
KURBB				⇑Lg	Lg	10 06 49.1	
	20nm,0.8s						
MK31	Makanchi Array	8.88	223	Pn	Pn	10 04 35.8	+0.2
	1.4nm,0.8s,baz=35,slow=13,SNR=3.8						
MK31				⇑Pg	Pg	10 05 09.3	-6.9
	1.3nm,0.7s						
MK31				⇑Sn	Sn	10 06 17.0	+0.7
	1.9nm,0.9s,baz=46,slow=17,SNR=3.8						
MK31				⇑Lg	Lg	10 07 09.8	
	5.3nm,0.9s,baz=45,slow=29,SNR=3.5						
MAKZ	Makanchi	8.99	224	⇑Pg	Pg	10 05 08.8	-10
	0.8nm,0.3s						
MAKZ				⇑Lg	Lg	10 07 11.9	
	5.3nm,0.8s						

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*JMA **19** 10:06:26.6±0.2, 21°.49N×121°.74E, h9^{km}, M4.1*

*ISCJB **19** 10:06:27.3±0.4, 21°.42N±0°.02×121°.58E±0°.02, h103^{km}±4^{km}, mb3.8/2, Error ellipse: s-maj=4.4km s-min=3.4km az=139.4*

*TAP **19** 10:06:28.6, 21°.45N×121°.50E, h98^{km}, ML4.1, D*

ISC 19 10:06:27.5±1.0, **21°.38N**±0°.04×**121°.53E**±0°.03, **h106**^{km}±7^{km}, **n101,** σ**1ˢ.21**/182, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.66	1	P	Pn	10 06 44.9	-0.2
	baz=12						
LAY				S	Sn	10 06 56.7	-1.7
	baz=12						
TSEB	Hengchuen, Pin	0.79	311	*e*P	Pn	10 06 46.8	+0.6
	baz=302						
TSEB				*e*S	Sn	10 07 00.7	+0.4
	baz=302						
TWKBT	Hengchun	0.87	310	*e*P	Pn	10 06 47.3	+0.3
	baz=304						
TWKBT				*e*S	Sn	10 07 00.9	-0.9
	baz=304						
TWK1	Hengchun	0.88	310	P	Pn	10 06 47.3	+0.2
	baz=304						
TWK1				*e*S	Sn	10 07 01.0	-0.9
	baz=304						
HEN	Hengchun	0.97	310	*e*P	Pn	10 06 48.8	+0.8
	baz=300						
HEN				*e*S	Sn	10 07 04.0	+0.5
	baz=300						
TAW	Tawu	1.14	329	*e*P	Pn	10 06 49.4	-0.5
	baz=334						
TAW				*e*S	Sn	10 07 04.6	-2.2
	baz=334						
EAST	Anshuo	1.19	328	P	Pn	10 06 50.0	-0.4
	baz=334						
EAST				*e*S	Sn	10 07 07.2	-0.5
	baz=334						
SCZT	Fangliau	1.30	320	P	Pn	10 06 51.9	+0.2
	baz=326						
SCZT				*e*S	Sn	10 07 09.2	-0.8
	baz=326						
ECL	Taimali	1.33	336	*e*P	Pn	10 06 51.0	-1.0
	baz=337						
ECL				*e*S	Sn	10 07 08.4	-2.1
	baz=337						
TTN	Taitung	1.42	345	*e*P	Pn	10 06 53.1	+0.1
	baz=338						
TTN				*e*S	Sn	10 07 13.2	+0.8
	baz=338						
WLCH	Liuqiu	1.45	312	*e*P	Pn	10 06 55.2	+1.9
	baz=311						
WLCH				*e*S	Sn	10 07 15.1	+2.1
	baz=311						
TWP	Hsiaoliuchiu	1.45	312	*e*P	Pn	10 06 55.2	+1.7
	baz=311						
TWP				*e*S	Sn	10 07 14.8	+1.7
	baz=311						
MASBT	Mashibuluo	1.48	326	*e*P	Pn	10 06 54.1	+0.2
	baz=330						
MASBT				*e*S	Sn	10 07 13.4	-0.5
	baz=330						
TWGBT	Beinan	1.49	344	*e*P	Pn	10 06 53.4	-0.6
	baz=338						
TWGBT				*e*S	Sn	10 07 11.8	-2.3
	baz=338						
TWG	Pinlang	1.50	343	*e*P	Pn	10 06 53.3	-0.7
	baz=338						
TWG				*e*S	Sn	10 07 11.8	-2.4
	baz=338						
SSD	Sandimen	1.60	329	*e*P	Pn	10 06 55.5	+0.2
	baz=328						
SSD				*e*S	Sn	10 07 15.7	-0.7
	baz=328						
SGLT	Jiouru	1.65	324	*e*P	Pn	10 06 57.3	+1.4
	baz=324						
CHKT	Chengkung	1.72	355	*e*P	Pn	10 06 56.7	-0.1
	baz=348						
CHKT				*e*S	Sn	10 07 17.7	-1.3
	baz=348						
SLGT	Liugui	1.81	333	*e*P	Pn	10 06 58.4	+0.6
	baz=333						
SLGT				*e*S	Sn	10 07 20.5	-0.5
	baz=333						
ELDTW	Lidau	1.86	345	*e*P	Pn	10 06 58.4	-0.3
	baz=348						
ELDTW				*e*S	Sn	10 07 20.9	-1.5
	baz=348						
SGST	Jiashian	1.91	333	*e*P	Pn	10 06 59.9	+0.7
	baz=333						
SGST				*e*S	Sn	10 07 22.7	-0.6

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           baz=333
YULB  Yu-li                2.02 354 eP         Pn         10 07 00.0 -0.5
           baz=347
YULB                                eS         Sn         10 07 25.2 -0.5
           baz=347
CHN1  Nanshi               2.02 333 eP         Pn         10 07 01.0 +0.3
           baz=333
CHN1                                eS         Sn         10 07 24.8 -1.2
           baz=333
WTP   Ta-pu                2.04 336 eP         Pn         10 07 01.2 +0.3
           baz=336
WTP                                 eS         Sn         10 07 25.6 -0.9
           baz=336
SNST  Tainan City          2.07 333 eP         Pn         10 07 01.7 +0.6
           baz=332
SNST                                eS         Sn         10 07 26.4 -0.6
           baz=332
TPUB  Ta-pu                2.09 337 eP         Pn         10 07 01.7 +0.3
           baz=337
TPUB                                eS         Sn         10 07 26.5 -0.9
           baz=337
HGSD  Ruisui               2.11 357 eP         Pn         10 07 01.5 -0.2
           baz=4.0
HGSD                                eS         Sn         10 07 26.4 -1.4
           baz=4.0
TWK   Hsinying             2.11 333 eP         Pn         10 07 02.2 +0.4
           baz=333
TWK                                 eS         Sn         10 07 26.9 -1.2
           baz=333
EHY   Hungye               2.13 355 eP         Pn         10 07 01.7 -0.3
           baz=349
EHY                                 eS         Sn         10 07 26.9 -1.4
           baz=349
YUS   Yu-Shan              2.17 346 eS         Sn         10 07 30.1 +0.1
           baz=346
SCLT  Jiali                2.18 325 eP         Pn         10 07 03.3 +0.7
           baz=316
SCLT                                eS         Sn         10 07 28.9 -0.5
           baz=316
EGFH  Guangfu              2.28 358 eP         Pn         10 07 04.7 +0.7
           baz=350
EGFH                                eS         Sn         10 07 30.9 -0.9
           baz=350
CHN8  Yiju                 2.31 328 eP         Pn         10 07 04.7 +0.4
           baz=336
CHN8                                eS         Sn         10 07 31.6 -0.9
           baz=336
CHN5  Tsauling             2.35 340 eP         Pn         10 07 05.2 +0.4
           baz=341
CHN5                                eS         Sn         10 07 33.0 -0.4
           baz=341
CHY   Chiayi               2.35 334 eP         Pn         10 07 05.0 +0.2
           baz=334
CHY                                 eS         Sn         10 07 32.2 -1.1
           baz=334
WHYT  Xinyi Township       2.39 345 eP         Pn         10 07 06.2 +0.8
           baz=336
WHYT                                eS         Sn         10 07 34.4  0.0
           baz=336
VWDT  VWDT                 2.39 351 eP         Pn         10 07 06.4 +1.1
           baz=352
VWDT                                eS         Sn         10 07 34.5 +0.2
           baz=352
ESL   Shilin               2.43 358 eP         Pn         10 07 06.5 +0.6
           baz=352
ESL                                 eS         Sn         10 07 34.5 -0.7
           baz=352
SSLB  Suanglung            2.46 348 eP         Pn         10 07 06.9 +0.6
           baz=338
SSLB                                eS         Sn         10 07 36.2 +0.2
           baz=338
WGK   Gukeng               2.47 339 eS         Sn         10 07 35.9 -0.2
           baz=339
WDLH  Douliu               2.48 338 eP         Pn         10 07 07.0 +0.6
           baz=338
WDLH                                eS         Sn         10 07 36.2 -0.2
           baz=338
WJS   Zhushan              2.54 343 eS         Sn         10 07 37.6 -0.3
           baz=343
WDGT  Dungji               2.55 318 eP         Pn         10 07 07.3 -0.1
           baz=317
WSF   Szhu                 2.56 332 eS         Sn         10 07 37.2 -1.0
           baz=332
SMLT  Sun Moon Lake        2.56 347 eP         Pn         10 07 08.1 +0.4
           baz=339
SMLT                                eS         Sn         10 07 37.9 -0.7
           baz=339
TYC   Yuchr                2.59 346 eP         Pn         10 07 08.6 +0.6
           baz=347
TYC                                 eS         Sn         10 07 38.4 -0.7
           baz=347
WNT   Mingjian             2.61 343 eP         Pn         10 07 08.6 +0.4
           baz=343
WNT                                 eS         Sn         10 07 38.8 -0.7
           baz=343
VCHM  Qimei                2.67 313 eP         Pn         10 07 09.0 +0.1
           baz=313
VCHM                                eS         Sn         10 07 38.1 -2.7
           baz=313
TWD   Chiawan              2.69   1 eP         Pn         10 07 09.7 +0.5
           baz=353
TWD                                 eS         Sn         10 07 40.5 -0.9
           baz=353
CHGB  Renai                2.69 353 eP         Pn         10 07 11.1 +1.6
           baz=343
CHGB                                eS         Sn         10 07 42.4 +0.6
           baz=343
DPDB  Guoxing              2.70 348 eP         Pn         10 07 10.5 +1.0
           baz=340
DPDB                                eS         Sn         10 07 40.6 -1.1
           baz=340
WHF   Hehuan Shan          2.77 355 eP         Pn         10 07 11.7 +1.0
           baz=347
WHF                                 eS         Sn         10 07 44.5 +0.7
           baz=347
NACB  Ninganchiao          2.78   1 eP         Pn         10 07 10.9 +0.5
           baz=354
NACB                                eS         Sn         10 07 42.6 -1.0
           baz=354
PHUB  P'eng-hu             2.79 320 eP         Pn         10 07 10.3 -0.3
           baz=319
PHUB                                eS         Sn         10 07 41.3 -2.5
           baz=319
ETLH  Xiulin Townshi       2.82 359 eP         Pn         10 07 12.0 +1.0
           baz=360
ETLH                                eS         Sn         10 07 42.8 -1.7
           baz=360
WCHH  Zhanghua             2.83 342 eS         Sn         10 07 44.7 -0.1
           baz=342
PNG   Penghu               2.84 320 eP         Pn         10 07 11.3  0.0
           baz=320
PNG                                 eS         Sn         10 07 43.2 -1.8
           baz=320
TDCB  Techi                2.88 353 eP         Pn         10 07 13.3 +1.4
           baz=346
TDCB                                eS         Sn         10 07 46.7 +0.5
           baz=346
TWQ1  Liyutan              3.04 347 eP         Pn         10 07 14.8 +1.0
           baz=340
TWQ1                                eS         Sn         10 07 49.9 +0.2
           baz=340
NNSB  Datong               3.04 357 eP         Pn         10 07 15.6 +1.6
           baz=3.0
NNSB                                eS         Sn         10 07 49.7 -0.2
           baz=3.0
ENA   Nanau                3.04   4 eP         Pn         10 07 14.7 +0.7
           baz=4.0
NANB  Nanao                3.04   4 eP         Pn         10 07 14.6 +0.7
           baz=4.0
NANB                                eS         Sn         10 07 48.5 -1.3
           baz=4.0
NNS   Nan Shan             3.05 357 eP         Pn         10 07 16.4 +2.2
           baz=3.0
NNS                                 eS         Sn         10 07 50.0 -0.1
           baz=3.0
EOS1  EOS1                 3.20  10 eP         Pn         10 07 17.6 +1.6
           baz=18
EOS1                                eS         Sn         10 07 53.7 +0.2
           baz=18
NDT   Datong Townshi       3.21 360 eP         Pn         10 07 16.9 +0.7
NDT                                 eS         Sn         10 07 54.8 +1.0
TWC   Suao                 3.23   5 eP         Pn         10 07 17.9 +1.5
           baz=15
TWC                                 eS         Sn         10 07 54.2  0.0
           baz=15
ENTT  Nioudou              3.25   1 eP         Pn         10 07 18.2 +1.5
           baz=357
ENTT                                eS         Sn         10 07 54.3 -0.3
           baz=357
YHNB  Yeheng               3.28 357 eP         Pn         10 07 19.2 +2.1
           baz=349
YHNB                                eS         Sn         10 07 56.2 +0.7
           baz=349
NSK   Sanguang             3.29 357 eP         Pn         10 07 19.4 +2.1
           baz=358
LIOB  Emei                 3.29 352 eP         Pn         10 07 18.8 +1.5
           baz=352
JYNG  Yonagunijimaku       3.32  23  P         Pn         10 07 17.0 -0.7
JYNG                                 S         Sn         10 07 55.4 -1.0
YOJ   Yonaguni jima        3.36  24 eP         Pn         10 07 18.9 +0.7
           baz=25
YOJ   Yonaguni jima        3.36  24  P         Pn         10 07 18.8 +0.7
YOJ                                 eS         Sn         10 07 56.8 -0.4
HATJ  Hateruma jima        3.39  38  P         Pn         10 07 18.8 +0.2
HATJ                                 S         Sn         10 07 56.8 -1.3
APYP  Conner               3.51 185 eP         Pn         10 07 21.1 +0.9
APYP                                eS         Sn         10 07 58.7 -2.2
IRIF  Iriomote-Funau       3.57  34  P         Pn         10 07 21.5 +0.5
IRIF                                eS         Sn         10 08 02.6 +0.2
JKRS  Kuro-shima           3.65  38  P         Pn         10 07 22.4 +0.4
JKRS                                 S         Sn         10 08 03.1 -1.1
CVP   Callao Caves         3.67 176⇓iP         Pn         10 07 23.0 +0.7
CVP                                 i S        Sn         10 08 03.1 -1.6
YM01  YM01                 3.75   0 eP         Pn         10 07 26.6 +3.2
           baz=1.0
YM04  YM04                 3.76   0 eP         Pn         10 07 25.3 +1.8
           baz=1.0
YM10  YM10                 3.76   0 eP         Pn         10 07 25.7 +2.1
           baz=1.0
JIJ   Ishigaki jima        3.82  39  P         Pn         10 07 24.1 -0.3
JIJ                                  S         Sn         10 08 07.0 -1.4
JISG  Ishigakijimahi       4.09  38  P         Pn         10 07 27.9 -0.1
JISG                                 S         Sn         10 08 13.1 -1.8
KNMB  Chin-men Tao         4.22 317 eP         Pn         10 07 30.0 +0.3
           baz=317
KNMB                                eS         Sn         10 08 15.8 -2.3
           baz=317
PTMZ  Houxiangcun          4.27 329 eP         Pn         10 07 30.3  0.0
           baz=329
PTMZ                                eS         Sn         10 08 15.4 -3.8
           baz=329
ZPLA  Ao Xicun             4.32 307 eP         Pn         10 07 31.8 +0.7
           baz=306
ZPLA                                eS         Sn         10 08 19.2 -1.2
           baz=306
JTJ   Tarama               4.37  41  P         Pn         10 07 31.7  0.0
JTJ                                  S         Sn         10 08 20.5 -1.0
PTTC  Pingtan              4.41 339 eP         Pn         10 07 32.4 +0.1
           baz=339
PTTC                                eS         Sn         10 08 18.8 -3.8
           baz=339
ZZJH  Jiuhuzhen            4.74 311 eP         Pn         10 07 37.5 +0.9
           baz=310
ZZJH                                eS         Sn         10 08 29.5 -0.9
           baz=310
JIRB  Irabujima            4.80  44  P         Pn         10 07 37.1 -0.4
JIRB                                 S         Sn         10 08 31.1 -0.8
AXDP  Jialang              4.80 318 eP         Pn         10 07 37.9 +0.4
           baz=317
AXDP                                eS         Sn         10 08 29.3 -2.8
           baz=317
JMJ2  Miyako jima3         4.84  46  P         Pn         10 07 37.9 -0.1
JMJ2                                eS         Sn         10 08 32.0 -0.9
JMJ   Miyako jima 2        4.87  45 eP         Pn         10 07 37.8 -0.6
           baz=46
JMJ                                 eS         Sn         10 08 32.0 -1.6
           baz=46
JIKM  Ikemajima            4.91  43  S         Sn         10 08 34.4 -0.3
MATB  Ma-tsu               4.97 343 eP         Pn         10 07 39.3 -0.6
           baz=349
MATB                                eS         Sn         10 08 31.7 -4.5
           baz=349
MHZQ  Yeshan               5.23 334 eP         Pn         10 07 43.4 +0.1
           baz=334
MHZQ                                eS         Sn         10 08 39.3 -3.2
           baz=334
LYJJ  Jianjiangzhen        5.40 343 eP         Pn         10 07 45.4 -0.3
           baz=343
XPSS  Dashiqiu             5.66 348 eP         Pn         10 07 49.2  0.0
           baz=348
JOW   Kunigami             8.21  47  P         Pn         10 08 23.1 -0.7
WRA   Warramunga Arr      42.94 162  P         P          10 14 16.6 +0.6
           2.1nm,0.7s,baz=346,slow=11,SNR=18
ASAR  Alice Springs       46.37 164  P         P          10 14 45.5 +2.2
           0.4nm,0.4s,baz=351,slow=7.4,SNR=11
```

NNC 19 10:18:26.4±0.9, 51°.76N×75°.32E, h0km, mb3.7, mpv3.5, 2C-4D, Error ellipse: s-maj=8.6km s-min=5.0km az=8.0, Suspected Mining explosion., Eastern Kazakhstan

```
Code   Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op        ISC     h  m  s    ISC
KURBB  Kurchatov Arra      2.32 118 ⇓Pg         Pb      10 19 08.7  -0.4
            14nm,1.0s
KURBB                               ⇓Lg         Lg      10 19 40.3
            79nm,0.9s
BRVK   Borovoye            3.34 295 ⇓Pg         Pb      10 19 27.4  +0.9
            6.9nm,0.9s
BRVK                                ⇓Lg         Lg      10 20 10.3
            18nm,0.9s
OTUK   Ortayu              4.01 210  Pg         Pb      10 19 39.5  +1.6
            0.6nm,0.4s
OTUK                                 Lg         Lg      10 20 33.5
            3.2nm,0.7s
OTUK   Ortayu              4.01 210 ⇑Pg         Pg      10 19 41.3  -1.9
            0.7nm,0.4s
OTUK                                ⇑Lg         Lg      10 20 35.1
            11nm,0.9s
MK31   Makanchi Array      6.75 135  Pn         Pn      10 20 06.0  -0.6
            0.1nm,0.2s,baz=312,slow=11,SNR=4.2
MK31                                 Sn         Sn      10 21 27.4  +3.3
            1.9nm,0.8s,baz=321,slow=24,SNR=4.5
MK31                                 Lg         Lg      10 22 01.1
            4.0nm,0.7s,baz=317,slow=25,SNR=10
BTLS   Baital              6.78 188  Pg         Pb      10 20 29.6  +4.6
            0.7nm,0.1s
BTLS                                 Lg         Lg      10 21 58.3
            5.8nm,0.9s
KAPS   Kapalarasan         7.01 156  Pg         Pb      10 20 32.3  +3.2
            0.6nm,0.2s
KAPS                                 Lg         Lg      10 22 03.0
            6.9nm,0.7s
KUU    Kurty               7.90 175  Pg         Pb      10 20 49.1  +4.9
KUU                                  Lg         Lg      10 22 33.1
DJR    Jarkent             8.01 156  Pg         Pb      10 20 51.6  +5.5
            1.6nm,0.1s
DJR                                  Lg         Lg      10 22 35.9
            3.4nm,0.6s
KTBS   Karatobe            8.11 173  Pg         Pb      10 20 54.3  +6.7
            2.1nm,1.0s
KTBS                                 Lg         Lg      10 22 40.8
            4.9nm,0.8s
SGDS   Sogindy             8.33 183  Pg         Pb      10 20 57.8  +6.4
            4.4nm,0.8s
KURS   Kuram               8.50 166  Pg         Pb      10 21 00.5  +6.2
            3.3nm,0.5s
KURS                                 Lg         Lg      10 22 51.2
            4.3nm,0.7s
MDOK   Medeo               8.68 172  Pg         Pg      10 21 04.9  -7.7
            1.6nm,0.2s
MDOK                                 Lg         Lg      10 22 59.3
            4.5nm,0.5s
```

ISCJB ***19*** *10:43:26.3±0.6, 29°.74N±0°.05×138°.8E±0°.1, h450km, mb2.8/3, Error ellipse: s-maj=12.3km s-min=7.0km az=178.0*

IDC ***19*** *10:43:27.0±1.2, 29°.72N×138°.75E, h444km±14km, mb2.6/4, mb1 2.8/9, mb1mx2.7/35, mbtmp3.7/9, Error ellipse: s-maj=26.8km s-min=18.0km az=106.0*

JMA ***19*** *10:43:27.1±0.2, 29°.85N×139°.17E, h466km, M3.3*

ISC 19 10:43:26.8±0.9**, 29°.75N**±0°.07×**138°.9E**±0°.1**, h450**km**, n20,** σ**2ˢ.09**/24**, mb2.6**/3**, Southeast of Honshu**

```
Code   Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op        ISC     h  m  s    ISC
JHJ    Hachijo jima 2      3.44  12  P          P       10 44 39.0  +1.9
            10nm,0.3s,baz=73,slow=19,SNR=6.5
JHJ                                  S          S       10 45 34.3  -0.1
            9.4nm,0.3s,baz=75,slow=20,SNR=3.8
CBIJ   Chichi jima         3.92 132  P          P       10 44 42.3  +0.9
CBIJ                                 S          S       10 45 40.9  -1.0
JIE    Ise                 4.99 339  P          P       10 44 53.4  +2.5
BSO1   Boso 1              5.19  19  S          S       10 46 03.3  +1.0
BSO3   Boso 3              5.21  15  S          S       10 46 03.5  +0.3
BSO4   Boso 4              5.36  13 eS          S       10 46 05.9  -0.2
JEG    Eigenji             5.77 339  P          P       10 45 01.5  +2.8
JHU    Hanno               6.09   3 eS          S       10 46 17.0  -2.7
JRY    Ryogami san         6.25 360  P          P       10 45 04.6  +1.0
JYT    Yasato              6.55   9 eS          S       10 46 24.0  -4.3
JAG    Ashikaga            6.67   4  P          P       10 45 07.4  -0.5
JAG                                 eS          S       10 46 25.5  -5.2
MJAR   Matsushiro Arr      6.79 355  P          P       10 45 09.4  +0.1
            0.2nm,0.3s,baz=176,slow=11,SNR=7.1
JHO    Hitachi             6.98  11  P          P       10 45 12.0  +0.8
JHO                                  S          S       10 46 34.0  -2.7
KSRS   Korea Array        11.94 313  P          P       10 46 05.1  +0.1
            0.2nm,0.3s,baz=127,slow=9.1,SNR=4.1
ASAJ   Asahikawa          14.63  11  P          P       10 46 36.0  +2.2
            0.4nm,0.3s,baz=222,slow=14,SNR=4.8
USRK   Ussuriysk Ar.      15.43 341  P          P       10 46 43.0  +0.6
            0.7nm,0.3s,baz=145,slow=10,SNR=14
KLR    Kul'dur            20.20 346  P          P       10 47 30.3  +0.5
            1.2nm,0.7s,baz=158,slow=9.5,SNR=5.3
CMAR   Chiang Mai Arr     38.00 262  P          P       10 50 04.0  -1.0
            0.8nm,0.5s,baz=61,slow=7.3,SNR=4.5
ASAR   Alice Springs      53.33 186  P          P       10 52 02.9  +0.2
            0.1nm,0.3s,baz=12,slow=5.7,SNR=3.3
ILAR   Eielson Array      56.80  30  P          P       10 52 27.7  +1.1
            0.1nm,0.6s,baz=270,slow=8.1,SNR=3.3
```

ISCJB ***19*** *10:52:32.4±0.7, 6°.85N±0°.02×73°.13W±0°.04, h153km±5km, Error ellipse: s-maj=6.2km s-min=4.1km az=3.9*

IDC ***19*** *10:52:32.8±7.5, 6°.48N×76°.31W, h102km±76km, mb1 3.6/2, mb1mx3.0/24, mbtmp4.2/2, ML2.7/2, Error ellipse: s-maj=95.8km s-min=33.3km az=85.0*

RSNC ***19*** *10:52:33.7±1.1, 6°.81N×73°.14W, h150km±4km, ML2.9, Mw3.3*

ISC 19 10:52:32.4±1.0**, 6°.84N**±0°.03×**73°.10W**±0°.04**, h158**km±6km**, n28,** σ**1ˢ.46**/53**, 5C-4D, Northern Colombia**

```
Code   Station Name          Δ°   AZ°    Phase ID           Time      Res
                                        Op        ISC     h  m  s    ISC
GIRC   Giron, Santand      0.25 339⇑iP          Pn      10 52 54.0  +0.1
GIRC                               eS           Sn      10 53 09.8  -0.5
GIRC                               i                    10 53 11.2
            comp=Z,139nm,0.1s
BARC   Barichara           0.26 198⇓iP          Pn      10 52 53.9  -0.1
BARC                               eS           Sn      10 53 09.1  -1.4
BARC                               i                    10 53 10.8
            comp=Z,280nm,0.4s
BRRC   Barranca, Sant      0.66 294⇑iP          Pn      10 52 55.8  +0.4
BRRC                               eS           Sn      10 53 13.1   0.0
BRRC                               i                    10 53 18.8
            comp=Z,156nm,0.2s
RUSC   La Rusia            0.94 179⇓eP          Pn      10 52 57.7  -0.3
RUSC                               eS           Sn      10 53 16.3  -1.3
RUSC                               i                    10 53 17.6
            comp=Z,101nm,0.4s
TAMC   Tame, Arauca        1.36 107⇓iP          Pn      10 53 02.1  +0.9
TAMC                               eS           Sn      10 53 23.6  +0.3
TAMC                               i                    10 53 25.2
            comp=Z,44nm,0.5s
PTBC   PUERTO BERRIO,      1.38 258 eP          Pn      10 53 00.5  -0.9
PTBC                               eS           Sn      10 53 21.9  -1.5
PTBC                               i                    10 53 29.2
            comp=Z,159nm,0.4s
OCAC   Ocana               1.41 351 eP          Pn      10 53 02.0  +0.2
OCAC                               eS           Sn      10 53 24.7  +0.3
OCAC                               i                    10 53 33.9
            comp=Z,101nm,0.2s
SPBC   San Pablo de B      1.53 219⇑iP          Pn      10 53 02.9   0.0
SPBC                               eS           Sn      10 53 24.9  -1.4
SPBC                               i                    10 53 27.7
            comp=Z,188nm,0.3s
YOPC   Yopal, Colombi      1.63 155 eP          Pn      10 53 04.3  +0.4
YOPC                               eS           Sn      10 53 28.0  -0.2
YOPC                               i                    10 53 30.2
            comp=Z,52nm,0.4s
ZARC   Zaragoza, Cauc      1.86 290 eP          Pn      10 53 06.6  +0.2
ZARC                               eS           Sn      10 53 32.3  -0.3
ZARC                               i                    10 53 39.0
            comp=Z,208nm,0.3s
NORC   Norcasia            2.17 234 eP          Pn      10 53 09.6  -0.4
NORC                               eS           Sn      10 53 37.8  -1.2
NORC                               i                    10 53 47.5
            comp=Z,52nm,0.2s
SMLC   San Martn de        2.17 334 eP          Pn      10 53 09.9  -0.1
SMLC                               eS           Sn      10 53 39.6  +0.6
SMLC                               i                    10 53 46.3
            comp=Z,119nm,0.4s
CHIC   Chingaza            2.29 196 eP          Pn      10 53 11.8  +0.1
CHIC                               eS           Sn      10 53 41.2  -0.8
CHIC                               i                    10 53 45.2
            comp=Z,28nm,0.4s
ROSC   El Rosal            2.33 211  P          Pn      10 53 13.3  +1.1
            comp=Z,9.2nm,0.3s,baz=34,slow=16,SNR=15
ROSC                                 S          Sn      10 53 44.7  +1.8
            comp=Z,11nm,0.3s,baz=90,slow=20,SNR=6.5
ROSC   El Rosal            2.33 211 eP          Pn      10 53 13.5  +1.2
ROSC                               eS           Sn      10 53 44.7  +1.8
HELC   Santa Helena        2.50 255 eP          Pn      10 53 15.3  +1.1
HELC                               eS           Sn      10 53 48.1  +1.6
HELC                               i                    10 53 52.4
            comp=Z,61nm,0.4s
GUY2C  Guyana, Caldas      2.77 235 eP          Pn      10 53 18.6  +0.9
GUY2C                              eS           Sn      10 53 51.9  -0.7
GUY2C                              i                    10 54 00.4
            comp=Z,28nm,0.4s
DBBC   Dabeiba             3.09 273 eP          Pn      10 53 21.2   0.0
DBBC                               eS           Sn      10 53 57.6  -1.5
DBBC                               i                    10 54 12.2
            comp=Z,40nm,0.5s
CODC   Agustn Codazz       3.09 354⇑eP          Pn      10 53 21.1  -0.1
CODC                               eS           Sn      10 53 57.4  -1.8
CODC                               i                    10 54 10.8
            comp=Z,18nm,0.7s
SDV    Santo Domingo       3.18  50  P          Sn      10 54 00.9  -0.4
            comp=Z,8.1nm,0.3s,baz=46,slow=22,SNR=14
ARGC   Ariguani, Magd      3.20 339 eP          Pn      10 53 23.6  +0.9
ARGC                               eS           Sn      10 54 02.6  +0.9
ARGC                               i                    10 54 11.3
            comp=Z,29nm,0.2s
PRAC   Prado               3.58 210⇓eP          Pn      10 53 27.4  -0.1
PRAC                               eS           Sn      10 54 10.3  -0.1
PRAC                               i                    10 54 17.9
            comp=Z,24nm,0.4s
ORTC   Ortega, Tolima      3.61 216 eP          Pn      10 53 28.6  +0.7
ORTC                               eS           Sn      10 54 12.0  +1.0
ORTC                               i                    10 54 17.4
            comp=Z,22nm,0.5s
SJCC   San Jacinto, C      3.67 326⇑iP          Pn      10 53 28.1  -0.5
SJCC                               eS           Sn      10 54 09.0  -3.3
SJCC                               i                    10 54 15.3
            comp=Z,17nm,0.3s
SMRC   Santa Marta, M      4.43 346 eP          Pn      10 53 39.0  +0.5
SMRC                               eS           Sn      10 54 26.9  -3.3
SMRC                               i                    10 54 33.2
            comp=Z,12nm,0.2s
MACC   Macarena, Meta      4.72 189 eP          Pn      10 53 40.6  -1.8
MACC                               i                    10 54 30.9
            comp=Z,5.3nm,0.4s
MACC                               eS           Sn      10 54 31.2  -5.8
ASAR   Alice Springs     149.14 234  PKPbc      PKPdf   11 12 01.6  +2.9
            comp=Z,0.4nm,0.7s,baz=122,slow=3.7,SNR=2.8
WRA    Warramunga Arr    150.36 241  PKPbc      PKPbc   11 12 05.2  -0.9
            comp=Z,1.3nm,1.0s,baz=98,slow=2.9,SNR=3.6
```

ISCJB ***19*** *10:58:06.7±0.1, 47°.55N±0°.02×88°.85E±0°.02, h10km, mb4.6/116, MS3.4/23, Error ellipse: s-maj=2.3km s-min=2.2km az=39.5*

IDC ***19*** *10:58:06.8±0.4, 47°.49N×88°.98E, h0km, mb4.4/35, mb1 4.5/41, mb1mx4.4/55, mbtmp4.4/41, ML3.9/6, MS3.4/20, Ms1 3.4/20, ms1mx3.3/36, Error ellipse: s-maj=11.6km s-min=7.3km az=7.0*

BJI ***19*** *10:58:07.5±0.0, 47°.51N×89°.03E, h10km, mb4.5/35, mB4.5/23, ML4.7/9, Ms4.2/36, Ms7 3.9/32*

NEIC ***19*** *10:58:08.2±1.9, 47°.47N×88°.96E, h10km±1km, mb4.7/93, Error ellipse: s-maj=8.1km s-min=7.4km az=138.0*

MOS ***19*** *10:58:09.2±1.2, 47°.44N×88°.89E, h29km, mb4.8/44, Error ellipse: s-maj=6.0km s-min=5.7km az=95.4*

NNC ***19*** *10:58:11.9±2.4, 47°.65N×88°.53E, h11km±10km, mb4.9,* *mpv4.6, Error ellipse: s-maj=17.4km s-min=12.0km az=112.0*

*ASRS **19** 10:58:16.3±0.4, 48°N±2°×8°9E±°, h3^{km}, MLh5.2/21, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

ISC 19 10:58:08.6±0.3, **47°.45N**±0°.03×**88°.94E**±0°.03, **h10**^{km}, **n335**, σ**2^{s}00**/380, **mb4.7**/116, **MS3.4**/23, **29C-26D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	**2.46**	**337**	*d i*PN	**Pn**	**10 58 52.1**	**+3.1**
DGZ	**Jazzator, Alta**	**2.46**	**337**	Pg	**Pn**	**10 58 51.7**	**+2.8**
DGZ				Sg	**Sn**	**10 59 22.6**	**+3.4**
CUR	**Chagan-Uzun**	**2.68**	**352**	Pn	**Pn**	**10 58 53.7**	**+1.8**
CUR				Pg	**Pb**	**10 58 57.2**	**+0.5**
CUR				Sg	**Sn**	**10 59 28.7**	**+4.2**
ZSN	**Zaisan**	**2.76**	**271**	Pg	**Pg**	**10 59 05.3**	**+3.8**
	88nm,0.8s						
ZSN				Lg	Lg	10 59 46.2	
	1µm,0.5s						
AKAR	**Aktash**	**3.00**	**344**	Pn	**Pn**	**10 58 58.8**	**+2.5**
AKAR				Pg	**Pb**	**10 59 02.8**	**+0.6**
AKAR				Sg	**Sb**	**10 59 38.6**	**-0.3**
CHBI	**Chibit, Altay**	**3.02**	**342**	Pn	**Pn**	**10 58 59.4**	**+2.9**
CHBI				Pg	**Pb**	**10 59 03.2**	**+0.8**
CHBI				Sg	**Sb**	**10 59 38.8**	**-0.5**
TUNR	**Tungur**	**3.21**	**328**	Pn	**Pn**	**10 59 02.0**	**+2.8**
TUNR				Pg	**Pb**	**10 59 06.8**	**+1.1**
TUNR				Sg	**Sb**	**10 59 46.4**	**+1.5**
TEL	**Teeli**	**3.66**	**13**	Pn	**Pn**	**10 59 07.1**	**+1.7**
TEL				Sg	**Sb**	**10 59 58.7**	**+0.7**
WMQ	**Urumqi**	**3.74**	**194**	*e*Pn	**Pn**	**10 59 09.1**	**+2.7**
WMQ				*e*Sn	**Sn**	**10 59 48.5**	**-1.9**
WMQ	**Urumqi**	**3.74**	**194**	Pn	**Pn**	**10 59 09.3**	**+2.9**
WMQ				Sn	**Sn**	**10 59 54.8**	**+4.3**
WMQ				smax	smax		
	comp=N,1µm,0.7s						
WMQ				smax	smax		
	comp=E,960nm,0.9s						
WMQ				LR	LR		
	comp=N,2µm,11.3s						
WMQ				LR	LR		
	comp=E,1µm,9.1s						
WMQ				LR	LR		
	comp=Z,1µm,10.1s						
WMQ	**Urumqi**	**3.74**	**194**	*e*PN	**Pn**	**10 59 09.1**	**+2.7**
UKR	**Ust'-Kan**	**4.43**	**323**	Pn	**Pn**	**10 59 18.0**	**+2.1**
UKR				Pg	**Pg**	**10 59 32.3**	**-1.1**
UKR				Sg	**Sg**	**11 00 29.4**	**-1.4**
ARTR	**Artybash**	**4.48**	**347**	Pn	**Pn**	**10 59 19.4**	**+2.8**
ARTR				Pg	**Pb**	**10 59 31.9**	**+4.6**
ARTR				Sg	**Sb**	**11 00 25.3**	**+3.9**
MK31	**Makanchi Array**	**4.59**	**264**	*e*Pn	**Pn**	**10 59 19.6**	**+1.6**
MK31				*e*Sn	**Sn**	**11 00 09.7**	**-1.6**
MK31	**Makanchi Array**	**4.59**	**264**	⇑Pn	**Pn**	**10 59 19.2**	**+1.2**
	14nm,0.6s,baz=90,slow=13,SNR=310						
MK31				Pg	**Pb**	**10 59 29.9**	**+0.8**
	165nm,0.7s,baz=81,slow=20,SNR=52						
MK31				⇓Lg	Lg	11 00 27.8	
	2µm,1.1s						
MK31	**Makanchi Array**	**4.59**	**264**	*e*PN	**Pn**	**10 59 19.6**	**+1.6**
MK32	**Makanchi Array**	**4.59**	**264**	*e*Pn	**Pn**	**10 59 19.2**	**+1.2**
MK32				*e*Pg	**Pb**	**10 59 30.1**	**+0.9**
MK32				*e*Sn	**Sn**	**11 00 07.6**	**-3.8**
MKAR	**Makanchi Array**	**4.59**	**264**	Pn	**Pn**	**10 59 19.2**	**+1.2**
	4.4nm,0.3s,baz=91,slow=13,SNR=151						
MKAR				Pg	**Pb**	**10 59 30.1**	**+0.9**
	21nm,0.3s,baz=81,slow=18,SNR=80						
MKAR				Sn	**Sn**	**11 00 07.6**	**-3.8**
	36nm,0.3s,baz=91,slow=18,SNR=5.8						
MKAR				Lg	Lg	11 00 29.1	
	67nm,0.3s,baz=77,slow=36,SNR=13						
MKAR				LR	LR	11 01 17.8	
	comp=Z,391nm,21.5s,baz=79,slow=41						
MKAR	**Makanchi Array**	**4.59**	**264**	Pg	**Pb**	**10 59 29.5**	**+0.4**
MKAR				Sg	**Sb**	**11 00 27.7**	**+3.3**
MAKZ	**Makanchi**	**4.79**	**265**	*e*Pn	**Pn**	**10 59 22.2**	**+1.3**
MAKZ				*e*Sn	**Sn**	**11 00 12.3**	**-4.2**
MAKZ	**Makanchi**	**4.79**	**265**	⇑Pn	**Pn**	**10 59 22.2**	**+1.3**
	35nm,0.9s						
MAKZ				⇓Pg	**Pb**	**10 59 31.6**	**-1.1**
	288nm,0.8s						
MAKZ				⇓Lg	Lg	11 00 35.4	
	766nm,0.9s						
MAKZ	**Makanchi**	**4.79**	**265**	*e*PN	**Pn**	**10 59 22.2**	**+1.3**
MAKZ	**Makanchi**	**4.79**	**265**	Pg	**Pb**	**10 59 32.4**	**-0.4**
MAKZ				Sg	**Sb**	**11 00 37.1**	**+6.7**
GALT	**Gorno-Altaysk,**	**4.91**	**338**	Pg	**Pb**	**10 59 39.3**	**+4.6**
GALT				Sg	**Sb**	**11 00 38.7**	**+5.0**
TASR	**Tashtagol**	**5.36**	**353**	Pg	**Pb**	**10 59 45.7**	**+3.4**
TASR				Sg	**Sb**	**11 00 50.8**	**+4.3**
DJO	**Djoy, Khakassi**	**5.53**	**15**	Pn	**Pn**	**10 59 32.4**	**+1.4**
DJO				Pg	**Pb**	**10 59 49.3**	**+4.0**
DJO				Sg	**Sb**	**11 00 56.9**	**+5.3**
KZLR	**Kyzyl**	**5.56**	**38**	Pg	**Pb**	**10 59 48.0**	**+2.2**
KZLR				Sg	**Sb**	**11 01 00.0**	**+7.5**
DJOS	**Djoyskaya Sosn**	**5.58**	**16**	Pg	**Pb**	**10 59 50.7**	**+4.7**
DJOS				Sg	**Sb**	**11 00 58.3**	**+5.4**
CERR	**Cheremushki**	**5.64**	**15**	Pn	**Pn**	**10 59 33.6**	**+1.2**
CERR				Pg	**Pb**	**10 59 46.2**	**-0.8**
CERR				Sg	**Sb**	**11 00 59.2**	**+4.6**
VEH	**Verkhnyaya Baz**	**5.87**	**8**	Pn	**Pn**	**10 59 37.9**	**+2.1**
VEH				Pg	**Pb**	**10 59 55.4**	**+4.3**
VEH				Sg	**Sb**	**11 01 09.3**	**+7.8**
ELT	**Eltsovka**	**6.07**	**344**	Pn	**Pn**	**10 59 39.3**	**+1.0**
ELT				Pg	**Pb**	**10 59 53.8**	**-0.5**
ELT				Sg	**Sb**	**11 01 15.6**	**+8.7**
LUZB	**Luzhba, Kemero**	**6.22**	**360**	Pg	**Pb**	**11 00 00.9**	**+4.1**
LUZB				Sg	**Sb**	**11 01 20.1**	**+8.9**
SEM	**Semipalatinsk**	**6.44**	**301**	Pg	Pb	10 59 56.4	-4.4
	9.1nm,0.7s						
SEM				Lg	Lg	11 01 16.5	
	953nm,0.9s						
ABNR	**Abakan**	**6.48**	**13**	Pg	Pb	11 00 06.4	+5.2
ABNR				Sg	Sb	11 01 28.6	+10
KAPS	**Kapalarasan**	**6.97**	**255**	Pg	**Pn**	**10 59 51.9**	**+1.0**
	42nm,0.5s						
KAPS				Lg	Lg	11 01 08.9	
	308nm,0.7s						
ZAA0	**Zalesovo Array**	**7.01**	**340**	*e*Pn	**Pn**	**10 59 51.3**	**+0.1**
ZAA0				*e*Sn	**Sn**	**11 01 10.1**	**-0.8**
ZAA0	**Zalesovo Array**	**7.01**	**340**	⇓Pn	**Pn**	**10 59 51.2**	**+0.1**
	3.3nm,0.8s						
ZAA0				⇑Pg	Pb	11 00 15.9	+5.6
	9.0nm,1.1s						
ZAA0				⇓Lg	Lg	11 01 45.8	
	78nm,0.9s						
ZALV	**Zalesovo Beam**	**7.01**	**340**	Pn	**Pn**	**10 59 51.5**	**+0.3**
	3.9nm,0.3s,baz=157,slow=14,SNR=76						
ZALV				Sn	**Sn**	**11 01 10.0**	**-0.8**
	5.4nm,0.3s,baz=161,slow=27,SNR=7.6						
ZALV				Lg	Lg	11 01 43.2	
	9.0nm,0.3s,baz=157,slow=27,SNR=5.7						
ZALV				LR	LR	11 02 45.9	
	comp=Z,358nm,21.5s,baz=251,slow=40						
ZAA1	**Zalesovo Array**	**7.01**	**340**	*e*Pn	**Pn**	**10 59 51.5**	**+0.3**
ZAA1				*e*Sn	**Sn**	**11 01 10.0**	**-0.9**
DJR	**Jarkent**	**7.11**	**247**	Pg	**Pn**	**10 59 53.9**	**+1.2**
	75nm,1.0s						
DJR				Lg	Lg	11 01 11.6	
	103nm,0.9s						
SALR	**Pechorkino, Sa**	**7.26**	**345**	Sg	**Sg**	**11 01 54.9**	**-6.7**
KURK	**Kurchatov**	**7.52**	**300**	*e*Pn	**Pn**	**10 59 57.6**	**-0.6**
KURK				*e*Sn	**Sn**	**11 01 23.2**	**-0.3**
KURK	**Kurchatov**	**7.52**	**300**	*ce*P	**Pn**	**10 59 57.6**	**-0.6**
KURK				pmax	pmax		
	comp=Z,32nm,0.6s						
KURK	**Kurchatov**	**7.52**	**300**	Pg	Pb	11 00 28.1	+9.0
KURK				Sg	**Sg**	**11 02 06.6**	**-3.2**
KURBB	**Kurchatov Arra**	**7.54**	**299**	Pn	**Pn**	**10 59 58.1**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=106,slow=14,SNR=63						
KURBB				Sn	**Sn**	**11 01 23.4**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=99,slow=29,SNR=7.1						
KURBB				Lg	Lg	11 01 55.3	
	comp=Z,1.8nm,0.3s,baz=256,slow=24,SNR=5.6						
KURBB	**Kurchatov Arra**	**7.54**	**299**	⇑Pn	**Pn**	**10 59 58.2**	**-0.3**
	comp=Z,41nm,0.7s						
KURBB				⇑Pg	**Pb**	**11 00 21.7**	**+2.3**
	comp=Z,68nm,0.8s						
KURBB				⇑Sn	**Sn**	**11 01 18.7**	**-5.2**
	comp=Z,271nm,0.7s						
KURBB				⇑Lg	Lg	11 02 01.9	
	comp=Z,1µm,0.7s						
TDK	**Taldyqorghan**	**7.71**	**255**	P	**Pn**	**11 00 01.3**	**+0.4**
	comp=Z,116nm,0.5s						
PDGK	**Podgornoye**	**7.82**	**242**	Pg	**Pn**	**11 00 02.8**	**+0.3**
	comp=Z,20nm,0.8s						
PDGK				Lg	Lg	11 01 27.7	
	comp=Z,80nm,0.8s						
PDGK	**Podgornoye**	**7.82**	**242**	⇑Pn	**Pn**	**11 00 02.4**	**-0.2**
	comp=Z,47nm,0.8s						
PDGK				⇑Sn	**Sn**	**11 01 31.2**	**0.0**
	comp=Z,225nm,1.1s						
PDGK				⇓Lg	Lg	11 02 14.4	
	comp=Z,424nm,0.8s						
PDGK	**Podgornoye**	**7.82**	**242**	P	**Pn**	**11 00 02.3**	**-0.2**
PDGK						11 01 31.2	
PDGK				pmax	pmax		
	comp=Z,47nm,0.8s						
PDGK				smax	smax		
	comp=N,225nm,1.1s						
PDGK				pmax	pmax		
	comp=N,424nm,0.8s						
PDGK	**Podgornoye**	**7.82**	**242**	Pg	Pb	11 00 33.4	+9.1
PDGK				Sg	Sg	11 02 12.3	-7.3
MNBS	**Baschi**	**8.10**	**249**	Pg	**Pn**	**11 00 06.7**	**+0.3**
	comp=N,24nm,0.7s						
MNBS				Lg	Lg	11 01 33.6	
	comp=N,98nm,0.5s						
UZB	**Uzynbulak**	**8.21**	**242**	Pg	**Pn**	**11 00 07.9**	**0.0**
	comp=N,28nm,0.8s						
UZB				Lg	Lg	11 01 36.7	
	comp=N,135nm,0.8s						
NVS	**Novosibirsk**	**8.22**	**336**	Pg	Pb	11 00 37.9	+7.0
NVS				Sg	Sb	11 02 20.8	+12
NVSII	**Novosibirsk**	**8.22**	**336**	Pg	Pb	11 00 40.1	+9.2
NVSII				Sg	**Sg**	**11 02 28.0**	**-4.1**
ARXS	**Arharly**	**8.41**	**251**	Pg	**Pn**	**11 00 10.7**	**+0.2**
	comp=N,14nm,0.6s						
ARXS				Lg	Lg	11 01 41.4	
	comp=N,119nm,0.7s						
KURS	**Kuram**	**8.54**	**246**	P	**Pn**	**11 00 12.7**	**+0.3**
	comp=N,24nm,0.8s						
SATY	**Saty**	**8.63**	**243**	Pg	Pn	11 00 11.6	-2.0
	comp=N,58nm,0.8s						
SATY				Lg	Lg	11 01 42.0	
PRZ	**Przheval'sk**	**8.97**	**240**	*e*Pn	**Pn**	**11 00 19.6**	**+1.3**
PRZ				*e*Sn	**Sn**	**11 02 01.0**	**+1.6**
PRZ	**Przheval'sk**	**8.97**	**240**	*e*P	**Pn**	**11 00 19.6**	**+1.3**
PRZ				*e*		11 02 01.0	
CHKK	**Chushkaly**	**9.11**	**251**	Pg	**Pn**	**11 00 20.3**	**+0.2**
	comp=N,17nm,0.8s						
CHKK				Lg	Lg	11 01 57.2	
	comp=N,54nm,0.6s						
KOTS	**Kotyrbulak**	**9.33**	**247**	Pg	**Pn**	**11 00 23.8**	**+0.5**
	comp=N,17nm,0.7s						
KOTS				Lg	Lg	11 02 03.2	
	comp=N,107nm,0.4s						
KTBS	**Karatobe**	**9.37**	**251**	Pg	**Pn**	**11 00 23.9**	**+0.2**
	comp=N,14nm,0.9s						
KTBS				Lg	Lg	11 02 03.1	
	comp=N,111nm,1.1s						
MDOK	**Medeo**	**9.41**	**247**	Pg	**Pn**	**11 00 24.9**	**+0.5**
	comp=N,12nm,0.8s						
KUU	**Kurty**	**9.51**	**253**	Pg	**Pn**	**11 00 26.3**	**+0.7**
	comp=N,13nm,0.5s						
KUU				Lg	Lg	11 02 09.6	
	comp=N,4.0nm,0.0s						
TNSS	**Tian-Shan**	**9.54**	**247**	P	**Pn**	**11 00 27.3**	**+1.0**
	comp=N,31nm,0.7s						
MTBS	**Maitube**	**9.82**	**248**	P	**Pn**	**11 00 30.8**	**+0.9**
	comp=N,23nm,0.8s						
KDJ	**Kajisay**	**9.90**	**242**	*e*Pn	**Pn**	**11 00 30.6**	**-0.5**
KDJ				*e*Sn	**Sn**	**11 02 22.0**	**-0.5**
KDJ	**Kajisay**	**9.90**	**242**	*e*P	**Pn**	**11 00 30.6**	**-0.5**
KDJ				*e*		11 02 22.0	
KST	**Kastek**	**10.15**	**249**	Pg	**Pn**	**11 00 34.9**	**+0.4**
	comp=N,35nm,0.8s						
KST				Lg	Lg	11 02 25.3	
	comp=N,52nm,1.0s						
TLY	**Talaya**	**10.44**	**61**	Lg	Lg	11 03 28.2	
	comp=N,0.0nm,0.3s,baz=60,slow=15,SNR=4.8						
TLY				LR	LR	11 04 31.2	
	comp=N,377nm,18.2s,baz=214,slow=37						
TKM2	**Tokmak 2**	**10.45**	**249**	⇓Pn	**Pn**	**11 00 38.7**	**+0.1**
	comp=N,30nm,0.9s						
TKM2				⇑Lg	Lg	11 03 35.8	
	comp=N,117nm,1.0s						
TKM2	**Tokmak 2**	**10.45**	**249**	*i* P	**Pn**	**11 00 38.7**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,30nm,0.9s						
BOOM	**Boomskoye usch**	**10.46**	**246**	*e*Pn	**Pn**	**11 00 41.1**	**+2.4**
BOOM				*e*Sn	**Sn**	**11 02 38.6**	**+2.6**
BOOM	**Boomskoye usch**	**10.46**	**246**	*e*P	**Pn**	**11 00 41.1**	**+2.4**
BOOM				*e*		11 02 38.6	
SGDS	**Sogindy**	**10.82**	**254**	P	**Pn**	**11 00 44.8**	**+1.2**
	comp=Z,10nm,0.8s						
IRK	**Irkutsk**	**10.99**	**58**	*e*P	Pn	11 00 43.1	-2.7
IRK				pmax	pmax		
	comp=Z,81nm,0.1s						
NRN	**Naryn**	**11.03**	**242**	*e*Pn	Pn	11 00 44.4	-2.2
NRN				*e*Sn	**Sn**	**11 02 55.4**	**+5.2**
NRN	**Naryn**	**11.03**	**242**	*e*P	Pn	11 00 44.4	-2.3
NRN				*e*		11 02 55.4	
FRU1	**Bishkek**	**11.12**	**251**	*e*Pn	**Pn**	**11 00 49.3**	**+1.6**
FRU1				*e*Sn	**Sn**	**11 02 48.9**	**-3.2**
FRU1	**Bishkek**	**11.12**	**251**	*e*P	**Pn**	**11 00 49.3**	**+1.6**
FRU1				*e*		11 02 48.9	
OTUK	**Ortayu**	**11.19**	**280**	⇑Pn	**Pn**	**11 00 47.1**	**-1.5**
	comp=Z,151nm,0.6s						
OTUK				⇑Sn	**Sn**	**11 02 48.9**	**-4.7**
	comp=Z,67nm,1.2s						
OTUK				⇑Lg	Lg	11 03 57.2	
	comp=Z,196nm,0.9s						
OTUK	**Ortayu**	**11.19**	**280**	P	Pn	11 00 46.0	-2.5
OTUK						11 02 48.8	
OTUK				pmax	pmax		
	comp=Z,151nm,0.6s						
OTUK				smax	smax		
	comp=N,67nm,1.2s						
OTUK				pmax	pmax		
	comp=N,196nm,0.9s						
GTA	**Gaotai**	**11.27**	**132**	*e*P	**Pn**	**11 00 48.8**	**-0.9**
GTA				pP		11 00 53.4	
GTA				sP		11 00 56.3	
GTA				pmax	pmax		
	comp=N,14nm,1.0s						
AAK	**Ala-Archa**	**11.29**	**250**	Pn	**Pn**	**11 00 50.7**	**+0.6**
	comp=N,1.8nm,0.3s,baz=65,slow=10,SNR=66						
AAK				Lg	Lg	11 03 56.3	
	comp=N,0.5nm,0.3s,baz=257,slow=17,SNR=2.5						
AAK				LR	LR	11 05 38.6	
	comp=N,120nm,20.9s,baz=38,slow=40						
AAK	**Ala-Archa**	**11.29**	**250**	*e*Pn	**Pn**	**11 00 50.8**	**+0.6**
AAK				*e*Sn	**Sn**	**11 02 54.4**	**-2.0**
AAK	**Ala-Archa**	**11.29**	**250**	⇑Pn	**Pn**	**11 00 50.3**	**+0.2**
	comp=N,78nm,1.0s						
AAK				⇓Lg	Lg	11 04 04.1	
	comp=N,92nm,1.1s						
AAK	**Ala-Archa**	**11.29**	**250**	*i* Pn	**Pn**	**11 00 51.1**	**+1.0**
	SNR=34						
AAK	**Ala-Archa**	**11.29**	**250**	P	**Pn**	**11 00 50.3**	**+0.2**
AAK				pmax	pmax		
	comp=Z,78nm,1.0s						
AAK				pmax	pmax		
	comp=N,92nm,1.1s						
SONA0	**Songino Array**	**11.79**	**82**	*e*Pn	**Pn**	**11 00 57.3**	**+0.5**
SONM	**Songino Array**	**11.79**	**82**	Pn	**Pn**	**11 00 57.3**	**+0.5**
	comp=N,0.7nm,0.3s,baz=285,slow=14,SNR=8.6						
SONM				Lg	Lg	11 04 14.5	
	comp=N,1.0nm,0.3s,baz=281,slow=30,SNR=9.5						
SONM				LR	LR	11 05 33.3	
	comp=N,240nm,19.5s,baz=250,slow=38						
KSH	**Kashi**	**12.30**	**235**	P	Pn	11 01 11.5	+7.6
KSH				pP		11 01 15.5	
KSH				sP		11 01 18.3	
KSH				PP	PnPn	11 01 22.8	+11
KSH				S	Sn	11 03 35.3	+14
KSH				pmax	pmax		
	comp=N,19nm,0.9s						
KSH				pmax	pmax		
	comp=N,77nm,3.9s						
KSH				LR	LR		
	comp=N,280nm,7.3s						
KSH				LR	LR		
	comp=N,230nm,6.2s						
KSH				LR	LR		
	comp=N,180nm,12.7s						
ARSB	**Arslanbob**	**12.94**	**248**	*e*Pn	**Pn**	**11 01 14.6**	**+1.9**
BVAR	**Borovoye Array**	**13.10**	**302**	Pn	**Pn**	**11 01 13.1**	**-1.5**
	comp=N,1.1nm,0.3s,baz=100,slow=14,SNR=84						
BVAR				Sn	**Sn**	**11 03 33.6**	**-6.8**
	comp=N,0.5nm,0.3s,baz=108,slow=18,SNR=4.3						
BVAR				Lg	Lg	11 04 56.6	
	comp=N,1.4nm,0.3s,baz=104,slow=19,SNR=3.8						
BRVK	**Borovoye**	**13.17**	**302**	*e*Pn	**Pn**	**11 01 13.4**	**-2.1**
BRVK				*e*Sn	**Sn**	**11 03 37.5**	**-4.5**
BRVK	**Borovoye**	**13.17**	**302**	⇓Pn	**Pn**	**11 01 13.9**	**-1.7**
	comp=N,28nm,0.9s						
BRVK				⇑Sn	**Sn**	**11 03 39.3**	**-2.7**
	comp=N,15nm,0.7s						
BRVK				⇑Lg	Lg	11 04 58.2	
	comp=N,94nm,1.5s						
BRVK	**Borovoye**	**13.17**	**302**	*d i*P	**Pn**	**11 01 14.0**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,31nm,0.9s						
KK31	**Karatay Array**	**13.68**	**258**	*e*Pn	Pn	11 01 20.5	-2.1
KK31	**Karatay Array**	**13.68**	**258**	Pn	**Pn**	**11 01 20.6**	**-2.0**
	comp=Z,29nm,0.7s,baz=56,slow=13,SNR=210						
KK31				⇓Lg	Lg	11 05 16.7	
	comp=Z,38nm,0.8s						
KK31	**Karatay Array**	**13.68**	**258**	*i* P	**Pn**	**11 01 20.6**	**-2.0**
KK31				pmax	pmax		
	comp=Z,29nm,0.7s						
KK31				pmax	pmax		
	comp=N,39nm,0.9s						
BTK	**Batken**	**15.02**	**247**	*e*Pn	**Pn**	**11 01 40.1**	**-0.8**
	comp=N,26nm,0.8s						
BTK	**Batken**	**15.02**	**247**	*e*P	**Pn**	**11 01 40.1**	**-0.8**
BTK				pmax	pmax		
	comp=Z,26nm,0.8s						
LZH	**Lanzhou**	**15.86**	**130**	*e*P	**P**	**11 01 57.5**	**+1.7**
LZH				pP	pP	11 02 00.8	+1.9
LZH				sP	sP	11 02 03.3	+2.9
LZH				PP	Pn	11 02 08.5	+16
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=Z,480nm,10.3s						
LZH				LR	LR		
	comp=Z,340nm,9.2s						
LZH				LR	LR		
	comp=Z,410nm,10.3s						
GAR	**Garm**	**15.96**	**245**	*e*Pn	**Pn**	**11 01 52.2**	**-1.1**
	comp=Z,125nm,0.9s						
GAR	**Garm**	**15.96**	**245**	*e*P	**Pn**	**11 01 52.2**	**-1.1**
GAR				pmax	pmax		
	comp=Z,125nm,0.9s						
CHGR	**Chuyangaron**	**16.88**	**246**	*e*Pn	**Pn**	**11 02 04.8**	**-0.3**
	comp=Z,56nm,0.9s						
HHC	**Hu-ho-hao-te**	**17.49**	**104**	*e*P	**Pn**	**11 02 11.9**	**-0.8**
HHC				S	**Sn**	**11 05 25.0**	**-2.4**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				LR	LR		
	comp=Z,260nm,7.2s						
HHC				LR	LR		
	comp=Z,170nm,6.0s						
LSA	**Lhasa**	**17.81**	**174**	*e*P	**Pn**	**11 02 16.0**	**-1.0**
	comp=Z,30nm,1.6s						
LSA	**Lhasa**	**17.81**	**174**	*e*P	**Pn**	**11 02 16.0**	**-1.0**
LSA				pmax	pmax		
	comp=Z,30nm,1.6s						
CHCP	**Chirah Chowk**	**18.16**	**226**	⇓P	**Pn**	**11 02 20.5**	**-0.4**
NIL	**Nilore**	**18.18**	**226**	*e*P	**Pn**	**11 02 20.4**	**-0.7**
	comp=Z,96nm,0.8s						
NIL	**Nilore**	**18.18**	**226**	*e*P	**Pn**	**11 02 20.4**	**-0.7**
NIL				pmax	pmax		
	comp=Z,96nm,0.8s						
CEP	**Cherat**	**18.72**	**229**	⇓P	**P**	**11 02 26.2**	**-1.2**
CEP				S	**Sn**	**11 05 51.0**	**-6.1**
AB31	**Akbulak array**	**19.30**	**286**	Pn	**P**	**11 02 33.5**	**0.0**
	comp=Z,8.5nm,0.6s,baz=83,slow=11,SNR=133						
AB31	**Akbulak array**	**19.30**	**286**	*i* P	**P**	**11 02 33.5**	**0.0**
AB31				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ABKAR	**Akbulak array**	**19.30**	**286**	*e*P	**P**	**11 02 33.6**	**+0.1**
	comp=Z,16nm,0.8s						
DANN	**Dangsing**	**19.50**	**194**	*e*P	**P**	**11 02 37.3**	**+1.2**
	comp=Z,54nm,0.6s						
SVE	**Sverdlovsk**	**19.61**	**309**	*e*P	**P**	**11 02 36.5**	**-0.3**
SVE				*e*S	S	11 06 08.7	-9.2
SVE				pmax	pmax		
	comp=Z,25nm,0.9s						
THW	**Thamme Wali**	**19.61**	**228**	⇓P	**P**	**11 02 36.6**	**-0.5**
GUN	**Gumba**	**19.66**	**188**	*e*P	**P**	**11 02 38.6**	**+0.7**
	comp=Z,65nm,0.8s						
GKN	**Gorkha**	**19.71**	**191**	*e*P	**P**	**11 02 39.3**	**+1.0**
	comp=Z,48nm,0.6s						
KBL	**Kabul**	**19.73**	**236**	*e*P	**P**	**11 02 37.8**	**-0.7**
	comp=Z,38nm,0.8s						
KBL	**Kabul**	**19.73**	**236**	*e*P	**P**	**11 02 37.8**	**-0.7**
KBL				pmax	pmax		
	comp=Z,38nm,0.8s						
KKN	**Kakani**	**19.84**	**190**	*e*P	**P**	**11 02 41.0**	**+1.3**
	comp=Z,68nm,0.8s						
JIRN	**Jiri**	**19.88**	**187**	*e*P	**P**	**11 02 41.6**	**+1.3**
	comp=Z,61nm,0.8s						
PKIN	**Phulchoki**	**20.04**	**189**	*e*P	**P**	**11 02 43.4**	**+1.4**
	comp=Z,26nm,0.7s						
DMN	**Daman**	**20.04**	**190**	*e*P	**P**	**11 02 42.9**	**+0.9**
	comp=Z,52nm,0.9s						
PKI	**Pulchoki**	**20.04**	**189**	*e*P	**P**	**11 02 43.5**	**+1.4**
	comp=Z,73nm,1.0s						
CD2	**Chengdu**	**20.06**	**140**	*e*P	**P**	**11 02 41.0**	**-1.0**
CD2				S	**S**	**11 06 27.3**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,360nm,9.8s						
CD2				LR	LR		
	comp=Z,410nm,13.7s						
CD2				LR	LR		
	comp=Z,360nm,13.2s						
KOLN	**Koldanda**	**20.09**	**194**	*e*P	**P**	**11 02 43.7**	**+1.2**
	comp=Z,69nm,0.9s						
XAN	**Xi'an**	**20.14**	**125**	*e*P	**P**	**11 02 42.6**	**-0.2**
	comp=Z,15nm,0.8s						
XAN	**Xi'an**	**20.14**	**125**	P	**P**	**11 02 42.8**	**0.0**
XAN				pP	Pn	11 02 47.8	+3.1
XAN				S	**S**	**11 06 23.8**	**-5.1**
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN				pmax	pmax		
	comp=Z,31nm,4.0s						
XAN				LR	LR		
	comp=Z,310nm,8.6s						
XAN				LR	LR		
	comp=Z,240nm,9.1s						
XAN				LR	LR		
	comp=Z,260nm,11.0s						
XAN	**Xi'an**	**20.14**	**125**	*e*P	**P**	**11 02 42.6**	**-0.2**
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
AKTO	**Aktyubinsk**	**20.45**	**290**	P	**P**	**11 02 44.9**	**-1.1**
	comp=Z,3.5nm,0.7s,baz=90,slow=10,SNR=15						
AKTO				Lg	Lg	11 08 54.1	
	comp=Z,5.5nm,0.8s,baz=58,slow=15,SNR=3.1						
AKTO	**Aktyubinsk**	**20.45**	**290**	⇑Pn	**P**	**11 02 47.4**	**+1.3**
	comp=Z,32nm,1.4s						
ARU	**Arti**	**20.62**	**307**	P	**P**	**11 02 46.9**	**-0.9**
	comp=Z,5.8nm,0.7s,baz=148,slow=7.2,SNR=22						
ARU				LR	LR	11 11 29.2	
	comp=Z,33nm,21.0s,baz=132,slow=39						
ARU	**Arti**	**20.62**	**307**	*e*P	**P**	**11 02 47.5**	**-0.3**
	comp=Z,25nm,0.7s						
ARU	**Arti**	**20.62**	**307**	*c i*P	**P**	**11 02 49.3**	**+1.5**
ARU						11 03 07.2	
ARU				S	**S**	**11 06 41.6**	**+3.6**
ARU				SS	**SnSn**	**11 07 02.6**	**+5.8**
ARU				pmax	pmax		
	comp=Z,21nm,0.6s						
SHL	**Shillong**	**21.97**	**173**	*e*P	**P**	**11 03 03.0**	**+0.3**
GEYT	**Alibeck**	**24.43**	**258**	P	**P**	**11 03 28.8**	**+1.4**
	comp=Z,8.4nm,0.8s,baz=65,slow=8.4,SNR=10						
GEYT				LR	LR	11 14 28.8	
	comp=Z,88nm,20.7s,baz=70,slow=40						
GYA0B	**ALIBECK ARRAY**	**24.43**	**258**	*e*P	**P**	**11 03 27.3**	**-0.1**
	comp=Z,12nm,0.9s						
KMI	**Kunming**	**24.83**	**149**	P	**P**	**11 03 32.8**	**+1.5**
KMI				pP	pP	11 03 35.3	+0.7
KMI				sP	sP	11 03 37.3	+1.3
KMI				S	**S**	**11 07 51.4**	**-2.7**

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KMI                               sS      pS      11 07 57.0  -1.5
KMI                               SS      SnSn    11 08 45.4  +4.4
KMI                                pmax   pmax
       comp=Z,19nm,0.6s
KMI                                pmax   pmax
       comp=Z,110nm,3.9s
KMI                                LR     LR
       comp=Z,200nm,15.6s
KMI                                LR     LR
       comp=Z,310nm,15.2s
KMI                                LR     LR
       comp=Z,240nm,22.4s
ZEA    Zeya              24.89  61  eP    P       11 03 31.8  +0.5
ZEA                                pmax   pmax
       comp=Z,12nm,1.0s
ZEA                                MLR    MLR
       comp=E,300nm,9.0s
ZEA                                MLR    MLR
       comp=Z,300nm,9.0s
GYA    Guiyang           25.18 140⇑iP     P       11 03 34.1  -0.2
GYA                                S      S       11 07 59.8  +0.3
GYA                                pmax   pmax
       comp=Z,30nm,0.9s
GYA                                pmax   pmax
       comp=Z,90nm,4.0s
GYA                                LR     LR
       comp=Z,240nm,8.9s
GYA                                LR     LR
       comp=Z,250nm,10.0s
GYA                                LR     LR
       comp=Z,280nm,10.5s
CN2    Changchun         25.64  85  eP    P       11 03 36.9  -1.3
CN2                                pmax   pmax
       comp=Z,10.0nm,0.5s
CN2                                LR     LR
       comp=Z,220nm,8.0s
CN2                                LR     LR
       comp=Z,130nm,8.0s
CN2                                LR     LR
       comp=Z,200nm,9.0s
WHN    Wuhan             25.81 122  P     P       11 03 40.0  +0.2
KIRV   Kirov             25.86 310  P     P       11 03 38.9  -1.1
       comp=Z,26nm,0.7s,baz=168,slow=0.8,SNR=6.5
YAK    Yakutsk           27.11  42  eP    P       11 03 51.9  +0.6
       comp=Z,27nm,0.8s
YAK    Yakutsk           27.11  42  eP    P       11 03 51.2  -0.1
YAK                                 eS    S       11 08 28.4  -0.7
YAK                                 eSS   SnSn    11 09 53.0  +17
YAK                                pmax   pmax
       comp=Z,28nm,0.9s
YAK                                pmax   pmax
       comp=N,3.0nm,1.0s
YAK                                pmax   pmax
       comp=E,6.0nm,0.9s
YAK                                pmax   pmax
       comp=Z,76nm,5.5s
YAK                                pmax   pmax
       comp=N,60nm,4.4s
YAK                                pmax   pmax
       comp=E,51nm,3.5s
YAK                                smax   smax
       comp=N,37nm,3.3s
YAK                                smax   smax
       comp=E,20nm,2.4s
YAK                                MLR    MLR
       comp=Z,171nm,17.0s
YAK                                MLR    MLR
       comp=N,42nm,17.0s
YAK                                MLR    MLR
       comp=E,119nm,16.0s
NJ2    Nanjing           27.45 113  eP    P       11 03 53.5  -1.1
NJ2                                pmax   pmax
       comp=E,20nm,0.5s
PRGR   Permogore         28.22 316  eP    P       11 04 03.4  +2.2
PRGR                               pmax   pmax
       comp=Z,7.0nm,0.5s
KLR    Kul'dur           28.24  70  P     P       11 04 01.4  -0.1
       comp=Z,2.7nm,0.7s,baz=291,slow=8.2,SNR=14
KLR                                LR     LR      11 15 47.8
       comp=Z,120nm,19.4s,baz=261,slow=38
KLR    Kul'dur           28.24  70  i P   P       11 04 01.2  -0.3
KLR                                pmax   pmax
       comp=Z,2.0nm,0.8s
USRK   Ussuriysk Ar.     29.89  80  P     P       11 04 16.5  +0.3
       comp=Z,3.4nm,0.8s,baz=306,slow=7.7,SNR=7.5
USRK                               LR     LR      11 17 02.2
       comp=Z,84nm,21.1s,baz=294,slow=38
CM31   Chiang Mai Arr    30.06 161  eP    P       11 04 16.1  -1.8
       comp=Z,15nm,1.4s
CMAR   Chiang Mai Arr    30.06 161  P     P       11 04 18.6  +0.7
       comp=Z,2.8nm,0.7s,baz=341,slow=9.4,SNR=10
CMAR                               LR     LR      11 17 41.4
       comp=Z,80nm,18.5s,baz=190,slow=39
KSRS   Korea Array       30.17  95  P     P       11 04 19.0  +0.3
       comp=Z,1.4nm,0.7s,baz=288,slow=8.7,SNR=5.7
KSRS                               LR     LR      11 18 18.6
       comp=Z,22nm,20.7s,baz=295,slow=40
TIXI   Tiksi             30.52  24  P     P       11 04 20.8  -0.6
       comp=Z,5.4nm,0.8s,baz=231,slow=5.1,SNR=10
TIXI                               LR     LR      11 16 32.0
       comp=Z,150nm,21.2s,baz=180,slow=36
TIXI   Tiksi             30.52  24  eP    P       11 04 19.8  -1.6
       comp=Z,4.7nm,0.7s
TIXI   Tiksi             30.52  24ceP     P       11 04 20.6  -0.9
TIXI                               pmax   pmax
       comp=Z,5.0nm,0.7s
LPSR   Galich'ya Gora    32.00 298  eP    P       11 04 34.1  -0.6
LPSR                               pmax   pmax
       comp=Z,20nm,0.6s
KBZ    Khabaz            32.07 281  LR    LR      11 20 50.3
       comp=Z,41nm,19.1s,baz=150,slow=42
KIV    Kislovodsk        32.12 281  eP    P       11 04 31.9  -4.1
KIV                                pmax   pmax
       comp=Z,10.0nm,0.9s
KIV                                MLR    MLR
       comp=Z,75nm,15.0s
VSR    Storozhevoye      32.15 296  eP    P       11 04 35.2  -0.9
VSR                                pmax   pmax
       comp=Z,10.0nm,0.7s
NEY    Neytrino          32.38 280  i P   P       11 04 38.0  -0.4
NEY                                pmax   pmax
       comp=Z,3.0nm,0.8s
AKH    Akhalkalaki       32.64 276  eP    P       11 04 42.1  +1.4
       comp=Z,9.0nm,1.0s
AKH    Akhalkalaki       32.64 276  eP    P       11 04 42.1  +1.4
AKH                                pmax   pmax
       comp=Z,9.0nm,1.0s
OBN    Obninsk           32.94 303⇓eP     P       11 04 41.2  -1.7
OBN                                 e*PP  pP      11 04 46.0  -0.4
OBN                                pmax   pmax
       comp=Z,12nm,0.9s
OBN                                MLR    MLR
       comp=Z,45nm,16.0s
BANOM  Banah             33.49 242  P     P       11 04 50.0  +1.9
SHME   Shamm             33.49 242  i P   P       11 04 49.1  +1.0
       SNR=14
WSAR   Wadi Sarin        34.20 236  P     P       11 04 55.1  +0.8
       comp=Z,6.3nm,1.1s,baz=84,slow=10,SNR=2.3
ASHO   Ashiyiah          34.56 241  i P   P       11 04 58.2  +0.8
       SNR=6.7
ARA0   ARCESS Array S    37.41 329  eP    P       11 05 21.6  +0.2
ARCES  ARCESS Array B    37.41 329  P     P       11 05 21.6  +0.2
       comp=Z,2.2nm,0.7s,baz=26,slow=4.3,SNR=4.7
ARCES                              LR     LR      11 21 44.3
       comp=Z,66nm,20.5s,baz=96,slow=38
FIA0   FINESS Array S    37.55 315  eP    P       11 05 22.1  -0.4
FIA0                                ePcP  PcP     11 07 38.7  -1.5
FIA0   FINESS Array S    37.55 315  eP    P       11 05 22.1  -0.4
FIA0                                e             11 07 38.7
FINES  FINESS Array B    37.55 315  P     P       11 05 22.1  -0.4
       comp=Z,5.2nm,0.8s,baz=97,slow=9.8,SNR=8.3
FINES                              PcP    PcP     11 07 38.7  -1.5
       comp=Z,2.5nm,0.8s,baz=108,slow=6.2,SNR=3.5
FINES                              LR     LR      11 21 52.0
       comp=Z,49nm,20.3s,baz=238,slow=38
MJAR   Matsushiro Arr    37.62  88  LR    LR      11 21 19.2
       comp=Z,46nm,21.5s,baz=290,slow=37
AKASG  Malin Array Be    38.33 298  P     P       11 05 28.5  -0.7
       comp=Z,3.1nm,0.5s,baz=60,slow=8.5,SNR=9.7
AKASG                              LR     LR      11 21 52.4
       comp=Z,55nm,20.6s,baz=125,slow=37
AKASG  Malin Array Be    38.33 298  P     P       11 05 28.5  -0.7
AKASG                              pmax   pmax
       comp=Z,2.0nm,0.5s
AKASG                              MLR    MLR
       comp=Z,55nm,20.6s
AKBB   Malin Array Si    38.33 298  eP    P       11 05 28.6  -0.6
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       comp=Z,4.4nm,0.7s
AKBB   Malin Array Si    38.33 298  eP    P       11 05 28.6  -0.6
AKBB                               pmax   pmax
       comp=Z,4.0nm,0.7s
ILGA   Ilgaz             39.35 282  eP    P       11 05 35.9  -2.4
       comp=Z,14nm,0.8s
BR101  Keskin Array S    40.05 280  eP    P       11 05 44.9  +0.9
BR101                               ePP   PP      11 07 16.6  +0.8
BR131  Keskin Array S    40.05 280  eP    P       11 05 45.1  +1.1
       comp=Z,12nm,0.7s
BRTR   Keskin Array B    40.05 280  P     P       11 05 44.9  +0.9
       comp=Z,9.3nm,0.6s,baz=76,slow=6.8,SNR=48
BRTR                               PP     PP      11 07 16.6  +0.8
       comp=Z,1.3nm,0.8s,baz=75,slow=6.1,SNR=3.9
BRTR                               LR     LR      11 24 22.0
       comp=Z,15nm,18.1s,baz=95,slow=39
SPA0   Spitsbergen Ar    40.48 342  eP    P       11 05 45.2  -1.8
       comp=Z,85nm,1.8s
CFR    Carcaliu          41.12 290⇑iP     P       11 05 52.3  -0.2
CFR    Carcaliu          41.12 290 ⇑P     P       11 05 52.3  -0.2
MDUB   Mudurnu           41.31 282  eP    P       11 05 52.5  -1.8
       comp=Z,65nm,1.0s
VRI    Vrincioaia        41.71 292⇓iP     P       11 05 58.4  +1.0
VRI    Vrincioaia        41.71 292 ⇓P     P       11 05 58.4  +1.0
PLOR   Plostina          41.77 292⇓iP     P       11 05 59.7  +1.8
PLOR   Plostina          41.77 292 ⇓P     P       11 05 59.7  +1.8
BUR08  Bucovina Ar. S    41.91 295  eP    P       11 05 58.7  -0.5
       comp=Z,5.2nm,0.8s
BURAR  Bucovina Array    41.92 295⇓iP     P       11 05 59.7  +0.5
BURAR  Bucovina Array    41.92 295 ⇓P     P       11 05 59.7  +0.5
RAYN   Ar Rayn           41.94 251  eP    P       11 05 56.2  -3.3
       comp=Z,11nm,0.9s
RAYN   Ar Rayn           41.94 251  i P   P       11 05 59.9  +0.3
       SNR=10
RAYN   Ar Rayn           41.94 251  eP    P       11 05 56.3  -3.3
RAYN                               pmax   pmax
       comp=Z,11nm,0.9s
ASF    Jabal al Asfar    41.99 268  P     P       11 06 00.9  +0.9
       comp=Z,3.4nm,0.6s,baz=20,slow=4.3,SNR=7.8
ISR    Istrita           42.16 291⇓iP     P       11 06 03.3  +2.2
ISR    Istrita           42.16 291 ⇓P     P       11 06 03.3  +2.2
MLR    Muntele Rosu      42.37 292  eP    P       11 06 01.2  -1.8
       comp=Z,4.1nm,1.0s
MLR    Muntele Rosu      42.37 292⇓iP     P       11 06 04.2  +1.2
MLR    Muntele Rosu      42.37 292 ⇓P     P       11 06 04.2  +1.2
DOPR   Dopca             42.51 292⇑iP     P       11 06 05.2  +1.2
BILL   Bilibino          42.57  33⇑eP     P       11 06 05.1  +1.0
BILL                                e             11 06 10.4
BILL                               pmax   pmax
       comp=Z,2.0nm,0.4s
BILL                               MLR    MLR
       comp=Z,138nm,17.0s
PEA1   Petropavlovsk-    42.76  56  eP    P       11 06 04.8  -1.1
PETK   Petropavlovsk-    42.76  56  P     P       11 06 04.8  -1.1
       comp=Z,4.2nm,0.8s,baz=336,slow=0.2,SNR=12
PETK                               LR     LR      11 24 37.0
       comp=Z,105nm,19.1s,baz=287,slow=37
TRPA   Tarpa             43.34 297⇑iP     P       11 06 11.1  +0.5
OJC    Ojcow             44.10 300  eP    P       11 06 15.8  -0.8
       comp=Z,4.9nm,0.6s
OJC    Ojcow             44.10 300  eP    P       11 06 15.9  -0.8
OJC                                pmax   pmax
       comp=Z,5.0nm,0.6s
NC405  NORSAR Array S    44.36 317  eP    P       11 06 17.6  -1.0
       comp=Z,24nm,0.7s
GZR    Gura Zlata        44.40 293⇑iP     P       11 06 19.5  +0.2
GZR    Gura Zlata        44.40 293 ⇑P     P       11 06 19.5  +0.2
NC303  NORSAR Array S    44.48 318  eP    P       11 06 18.8  -0.9
       comp=Z,94nm,1.6s
NC602  NORSAR Array S    44.57 317  eP    P       11 06 19.8  -0.5
       comp=Z,24nm,0.9s
NB2    NORSAR Subarra    44.62 317  P     P       11 06 19.7  -1.0
       comp=Z,3.3nm,0.7s,baz=68,slow=7.9
NB200  NORSAR Array S    44.62 317  eP    P       11 06 19.8  -1.0
NOA    NORSAR Array B    44.62 317  P     P       11 06 19.8  -1.0
       comp=Z,2.3nm,0.7s,baz=67,slow=7.6,SNR=21
NOA                                LR     LR      11 26 03.2
       comp=Z,46nm,18.1s,baz=70,slow=38
NOA    NORSAR Array B    44.62 317  P     P       11 06 19.8  -1.0
NOA                                pmax   pmax
       comp=Z,4.0nm,0.7s
NOA                                MLR    MLR
       comp=Z,46nm,18.1s
NC204  NORSAR Array S    44.74 318  eP    P       11 06 21.0  -0.8
       comp=Z,174nm,1.9s
NBO00  NORSAR Array S    44.82 317  eP    P       11 06 21.4  -0.9
       comp=Z,154nm,2.0s
VYHS   Vyhne             45.41 299  eP    P       11 06 30.1  +2.9
VYHS   Vyhne             45.41 299  eP    P       11 06 30.1  +2.9
CLL    Collm             47.52 304  eP    P       11 06 41.5  -2.2
       comp=Z,3.7nm,0.5s
CLL    Collm             47.52 304  eP    P       11 06 41.5  -2.2
CLL                                pmax   pmax
       comp=Z,4.0nm,0.5s
TTG    Podgorica         48.07 291  eP    P       11 06 48.2  +0.1
       comp=Z,7.6nm,0.7s
TTG    Podgorica         48.07 291  eP    P       11 06 48.2  +0.1
TTG                                pmax   pmax
       comp=Z,8.0nm,0.7s
GERES  GERESS Array B    48.27 301  P     P       11 06 50.7  +1.1
       comp=Z,0.4nm,0.5s,baz=80,slow=7.1,SNR=2.8
GERES                              PP     PP      11 08 42.8  +1.0
       comp=Z,0.2nm,0.3s,baz=60,slow=9.4,SNR=4.2
FUORN  Ofenpass-Fuorn    51.39 300  eP    P       11 07 14.3  +0.7
       comp=Z,4.2nm,0.9s
TIP    Timpagrande       51.42 289  eP    P       11 07 14.4  +0.7
       comp=Z,8.2nm,0.8s
CEL    Celeste           52.50 288  eP    P       11 07 22.2  +0.4
SENIN  Lac Senin/Sane    53.26 301  eP    P       11 07 28.0  +0.5
       comp=Z,11nm,1.6s
SUMG   Summit            54.82 343  eP    P       11 07 39.1  +0.4
       comp=Z,5.2nm,0.7s
SUMG   Summit            54.82 343  eP    P       11 07 39.1  +0.4
SUMG                               pmax   pmax
       comp=Z,5.0nm,0.7s
TOLK   Toolik Lake Re    56.39  22  eP    P       11 07 48.7  -0.9
       comp=Z,5.4nm,0.8s
COLD   Coldfoot          57.25  23  eP    P       11 07 55.1  -0.5
       comp=Z,4.9nm,0.8s
KEST   Kesra             58.21 290  P     P       11 08 03.5  +0.6
       comp=Z,2.7nm,0.8s,baz=91,slow=4.6,SNR=5.3
KEST   Kesra             58.21 290  eP    P       11 08 02.9  -0.1
       comp=Z,4.1nm,0.8s
MLY    Manley            58.70  25  eP    P       11 08 05.6  -0.3
       comp=Z,25nm,2.0s
BPAW   Bear Paw Mtn.     59.30  26  eP    P       11 08 09.0  -1.1
       comp=Z,3.7nm,0.8s
COLA   College           59.64  24  eP    P       11 08 12.4  +0.1
       comp=Z,5.5nm,0.8s
COLA   College           59.64  24  eP    P       11 08 12.4  +0.1
COLA                               pmax   pmax
       comp=Z,6.0nm,0.8s
CCB    Clear Creek Bu    59.82  25  eP    P       11 08 13.6   0.0
       comp=Z,3.6nm,1.0s
WRH    Wood River Hil    59.88  25  eP    P       11 08 13.2  -0.7
       comp=Z,4.7nm,0.7s
ILAR   Eielson Array     59.99  24  P     P       11 08 14.4  -0.3
       comp=Z,3.7nm,0.7s,baz=315,slow=5.1,SNR=71
ILAR                               PP     PP      11 10 22.1  -4.4
       comp=Z,0.6nm,0.8s,baz=316,slow=11,SNR=5.2
ILB    Eielson Array     59.99  24  eP    P       11 08 14.0  -0.8
       comp=Z,4.7nm,0.8s
SVW2   Sparrevohn        59.99  30  eP    P       11 08 14.9   0.0
       comp=Z,5.6nm,0.8s
HDA    Harding Lake      60.25  24  eP    P       11 08 13.2  -3.3
       comp=Z,16nm,1.8s
INK    Inuvik            60.28  17  P     P       11 08 16.9  +0.2
       comp=Z,9.4nm,0.8s,baz=346,slow=8.8,SNR=37
INK    Inuvik            60.28  17  eP    P       11 08 16.4  -0.2
       comp=Z,11nm,0.9s
DHY    Denali Highway    61.15  26  eP    P       11 08 22.2  -0.7
       comp=Z,8.6nm,0.7s
EPYK   Eagle Plains      61.25  19  eP    P       11 08 23.0  -0.4
       comp=Z,6.9nm,0.8s
EGAK   Eagle             61.51  22  eP    P       11 08 23.5  -1.5
       comp=Z,3.7nm,0.7s
PAX    Paxson            61.78  25  eP    P       11 08 26.3  -0.8
       comp=Z,4.9nm,0.7s
SFJD   Kangerlussuaq     61.81 343  eP    P       11 08 26.4  -0.6
       comp=Z,12nm,0.8s
SML    Sawmill           61.83  27  eP    P       11 08 26.0  -1.4
       comp=Z,17nm,0.8s
SML    Sawmill           61.83  27  eP    P       11 08 26.0  -1.4
SML                                pmax   pmax
       comp=Z,17nm,0.8s
KNK    Knik Glacier      62.09  27  eP    P       11 08 29.0  -0.1
       comp=Z,12nm,0.9s
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SCM    Sheep Creek Mo    62.12  27  eP    P       11 08 28.9  -0.4
       comp=Z,26nm,0.8s
SCM    Sheep Creek Mo    62.12  27  eP    P       11 08 28.9  -0.4
SCM                                pmax   pmax
       comp=Z,26nm,0.8s
MENT   Mentasta          62.30  24  eP    P       11 08 29.6  -0.9
       comp=Z,5.2nm,0.8s
DAWY   Dawson            62.53  22  eP    P       11 08 31.5  -0.6
       comp=Z,3.8nm,0.8s
CNPM   China Poot        62.62  30  eP    P       11 08 33.4  +0.7
       comp=Z,25nm,0.8s
KDAK   Kodiak Island     63.46  32  i P   P       11 08 37.9  -0.3
ESDC   Sonseca Array     63.86 301  P     P       11 08 41.2   0.0
       comp=Z,2.6nm,0.6s,baz=47,slow=6.6,SNR=25
ESLA   Sonseca Array     63.86 301  eP    P       11 08 41.0  -0.2
       comp=Z,5.8nm,0.8s
TGL    Tana Glacier      64.30  25  eP    P       11 08 43.5  -0.4
       comp=Z,10nm,0.8s
CTGM   Chitina Glacie    64.56  25  eP    P       11 08 46.1  +0.5
       comp=Z,18nm,0.7s
YKW3   Yellowknife Ar    68.73  11  eP    P       11 09 11.4  -0.6
       comp=Z,7.6nm,0.8s
YKA    Yellowknife Ar    68.80  11  P     P       11 09 11.9  -0.5
       comp=Z,4.7nm,0.7s,baz=339,slow=6.6,SNR=44
YKB5   Yellowknife Ar    68.80  11  eP    P       11 09 11.9  -0.5
DLBC   Dease Lake        69.69  21  P     P       11 09 18.3  +0.2
       comp=Z,2.4nm,0.8s,baz=322,slow=12,SNR=7.1
DLBC   Dease Lake        69.69  21  eP    P       11 09 17.9  -0.3
       comp=Z,2.8nm,0.9s
FFC    Flin Flon         77.78   6  eP    P       11 10 05.1  -0.4
       comp=Z,118nm,0.8s
FFC    Flin Flon         77.78   6  eP    P       11 10 05.1  -0.4
FFC                                pmax   pmax
       comp=Z,118nm,0.8s
WRAB   Tennant Creek     78.50 137  eP    P       11 10 09.5  -0.5
       comp=Z,7.6nm,0.7s
WRAB   Tennant Creek     78.50 137ceP     P       11 10 09.4  -0.5
WRAB                               pmax   pmax
       comp=Z,17nm,1.7s
WR1    Warramunga Arr    78.51 137  eP    P       11 10 09.0  -0.9
WRA    Warramunga Arr    78.51 137  P     P       11 10 09.0  -0.9
       comp=Z,6.6nm,0.7s,baz=280,slow=4.7,SNR=35
WB2    Warramunga Arr    78.51 137  eP    P       11 10 09.3  -0.6
       comp=Z,7.8nm,0.7s
WC3    Warramunga Arr    78.53 137  eP    P       11 10 09.3  -0.8
       comp=Z,8.4nm,0.8s
TOA1   Torodi Ar. Sit    78.59 277  eP    P       11 10 10.2  -0.4
TOA0   Torodi Ar. Sit    78.59 277  eP    P       11 10 09.8  -0.8
       comp=Z,28nm,2.0s
TORD   Torodi Ar. Bea    78.59 277  P     P       11 10 10.2  -0.4
       comp=Z,2.2nm,0.8s,baz=26,slow=6.4,SNR=8.8
B08A   Colville Reser    81.45  19  eP    P       11 10 25.8  +0.1
       comp=Z,5.8nm,1.1s
AS31   Alice Springs     81.54 139  eP    P       11 10 25.8  -0.5
       comp=Z,1.4nm,0.7s
ASAR   Alice Springs     81.54 139  P     P       11 10 25.8  -0.5
       comp=Z,5.2nm,0.7s,baz=333,slow=5.3,SNR=58
WALA   Waterton Lakes    81.85  15  eP    P       11 10 26.9  -1.0
       comp=Z,7.2nm,1.4s
D05A   Enumclaw          81.95  21  eP    P       11 10 26.5  -1.8
       comp=Z,9.9nm,0.9s
NEW    Newport           82.00  17  P     P       11 10 26.8  -1.8
       comp=Z,1.3nm,0.7s,baz=297,slow=13,SNR=3.9
NEW    Newport           82.00  17  eP    P       11 10 27.2  -1.4
       comp=Z,5.9nm,1.4s
C09A   Chrisman Ranch    82.21  18  eP    P       11 10 29.3  -0.3
       comp=Z,6.8nm,1.0s
ULM    Lac du Bonnet     82.59   3  P     P       11 10 29.7  -1.8
       comp=Z,3.7nm,0.8s,baz=337,slow=5.8,SNR=4.6
ULM    Lac du Bonnet     82.59   3  eP    P       11 10 30.1  -1.5
       comp=Z,6.2nm,1.0s
E08A   Dider Farm, El    83.28  19  eP    P       11 10 35.5  +0.2
       comp=Z,4.1nm,0.8s
DGMT   Dagmar            83.78   9  eP    P       11 10 36.9  -0.9
       comp=Z,9.7nm,0.8s
MSO    Missoula          83.99  16  eP    P       11 10 38.7  -0.3
       comp=Z,4.3nm,1.0s
VLDQ   Val d'Or          84.08 351  eP    P       11 10 37.8  -1.5
       comp=Z,6.9nm,0.8s
F10A   Beach Ranch, E    84.17  18  eP    P       11 10 40.0  +0.1
       comp=Z,3.7nm,0.9s
HRY    Holter Researc    84.47  14  eP    P       11 10 40.4  -1.1
PLID   Pearl Lake        85.27  17  eP    P       11 10 44.9  -0.8
       comp=Z,13nm,1.5s
BOZ    Bozeman (W)       85.59  14  eP    P       11 10 46.7  -0.4
       comp=Z,7.3nm,1.6s
BOZ    Bozeman (W)       85.59  14  eP    P       11 10 46.7  -0.4
BOZ                                pmax   pmax
       comp=Z,7.0nm,1.6s
DLMT   Dillon            85.65  15  eP    P       11 10 47.0  -0.4
       comp=Z,4.5nm,1.2s
MCMT   McKenzie Canyo    86.12  15  eP    P       11 10 49.0  -1.0
IMW    Indian Meadow     87.36  14  eP    P       11 10 55.5  -0.5
       comp=Z,2.5nm,1.0s
FXWY   Fox Creek         87.59  14  eP    P       11 10 57.1   0.0
       comp=Z,2.6nm,1.2s
DBIC   Dimbokro          87.70 277  P     P       11 10 57.5  -0.3
       comp=Z,4.1nm,0.7s,baz=54,slow=8.7,SNR=2.4
RSSD   Black Hills       88.09   9  eP    P       11 10 56.1  -3.4
       comp=Z,4.6nm,0.7s
RSSD   Black Hills       88.09   9  eP    P       11 10 56.1  -3.4
RSSD                               pmax   pmax
       comp=Z,5.0nm,0.7s
PD31   Pinedale Array    88.68  14  eP    P       11 11 01.2  -1.1
PDAR   Pinedale Array    88.68  14  P     P       11 11 01.2  -1.1
       comp=Z,0.5nm,0.6s,baz=84,slow=3.7,SNR=3.5
ECSD   EROS Data Cent    89.06   4  eP    P       11 10 59.8  -4.0
       comp=Z,3.2nm,0.8s
HWUT   Hardware Ranch    89.47  15  eP    P       11 11 06.0   0.0
       comp=Z,4.2nm,0.7s
ELK    Elko              89.59  18  P     P       11 11 06.5  -0.1
       comp=Z,1.0nm,0.8s,baz=313,slow=10,SNR=3.4
ELK    Elko              89.59  18  eP    P       11 11 06.2  -0.4
       comp=Z,5.5nm,1.7s
ELK    Elko              89.59  18  eP    P       11 11 06.2  -0.4
ELK                                pmax   pmax
       comp=Z,6.0nm,1.7s
DUG    Dugway, Tooele    90.61  16  eP    P       11 11 10.8  -0.5
       comp=Z,2.8nm,1.0s
DUG    Dugway, Tooele    90.61  16  eP    P       11 11 10.8  -0.5
DUG                                pmax   pmax
       comp=Z,3.0nm,1.0s
NV01   Mina Array Sit    91.10  21  eP    P       11 11 14.2  +0.5
NVAR   Mina Array Bea    91.10  21  P     P       11 11 14.2  +0.5
       comp=Z,1.4nm,1.1s,baz=323,slow=3.6,SNR=6.5
STKA   Stephens Creek    92.05 137  P     P       11 11 15.5  -2.0
       comp=Z,3.8nm,0.8s,baz=330,slow=20,SNR=4.4
STKA   Stephens Creek    92.05 137  eP    P       11 11 15.7  -1.8
       comp=Z,7.8nm,1.6s
STKA   Stephens Creek    92.05 137  P     P       11 11 15.5  -2.0
STKA                               pmax   pmax
       comp=Z,2.0nm,0.8s
ANMO   Albuquerque       96.82  13  P     P       11 11 40.1  +0.2
       comp=Z,0.5nm,0.7s,baz=45,slow=1.4,SNR=2.4
ANMO   Albuquerque       96.82  13  eP    P       11 11 38.2  -1.7
       comp=Z,2.6nm,1.4s
ANMO   Albuquerque       96.82  13  eP    P       11 11 38.2  -1.7
ANMO                               pmax   pmax
       comp=Z,3.0nm,1.4s
VNDA   Vanda            132.34 164  PKP   PKPdf   11 17 20.1  -1.3
       comp=Z,1.3nm,0.9s,baz=89,slow=11,SNR=5.8
VNDA   Vanda            132.34 164  ePKPdf PKPdf  11 17 20.4  -0.9
LPAZ   La Paz           143.61 321  PKhKP PKPpre  11 17 41.3
       comp=Z,0.6nm,0.6s,baz=276,slow=10,SNR=3.1
CPUP   Villa Florida    146.15 297  PKPbc PKPdf   11 17 47.7  -0.3
       comp=Z,3.0nm,0.8s,baz=209,slow=17,SNR=2.1
CPUP   Villa Florida    146.15 297  ePKPbc PKPdf  11 17 48.4  +0.4
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*IDC **19** 11:18:29.7±2.1, 13°.68N×91°.61W, h0km, mb3.3/2, mb1 3.7/5, mb1mx3.4/37, mbtmp3.3/5, ML3.4/3, Error ellipse: s-maj=27.8km s-min=16.6km az=156.0*

*GCG **19** 11:18:32.2±0.3, 13°.64N×91°.61W, h14km±3km, MD4.1*

*MEX **19** 11:18:34.1±0.6, 13°.56N×91°.76W, h20km, MD4.0*

*SNET **19** 11:18:34.9±1.4, 13°.63N×91°.32W, h16km±9km, ML3.6*

ISC 19 11:18:31.9±2.6, **13°.6N**±0°.1×**91°.61W**±0°.06, **h23**km±17km, **n21,** σ**1**s.**27**/31, **Near coast of Guatemala**

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Code   Station Name        Δ°   AZ°   Phase ID         Time       Res
                                    Op    ISC       h  m  s      ISC
STG3   Santiaguito 3,     1.11   2  eP    Pb       11 18 51.9  -0.6
FUG    Fuego 3            1.13  41  eP    Pb       11 18 52.4  -0.5
PCG    Pacaya             1.25  51  eP    Pb       11 18 54.7  -0.4
THIG                      1.45 334  eP    Pn       11 18 56.6  -0.1
THIG                                i S   Sn       11 19 12.9  -2.1
NBG    Las Nubes          1.57  51  eP    Pb       11 18 59.9  -0.6
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NBG				eS	Sb	11 19 21.5	+1.4
APG	El Apazote	1.79	38	Pg	Pb	11 19 02.3	-1.9
	17nm,0.3s,baz=220,slow=17,SNR=67						
APG				Lg	Lg	11 19 24.1	
	40nm,0.3s,baz=237,slow=23,SNR=8.7						
RTR	El Retiro	1.93	81	eP	Pn	11 19 02.9	-0.7
CEVE	Cerro Verde	1.94	83	eP	Pn	11 19 03.7	-0.1
CEVE				eS	Sn	11 19 26.6	-1.0
CEVE				IAML		11 19 39.4	
	comp=Z,890nm,0.3s						
SNET	Serv Nac Est T	2.32	87	eP	Pn	11 19 09.4	+0.7
SNET				eS	Sn	11 19 35.0	-1.5
SNET				IAML		11 19 43.2	
	comp=Z,355nm,0.2s						
MTO3	Montecristo	2.33	70	eP	Pn	11 19 09.1	+0.1
LOMA	Loma Larga	2.37	89	eP	Pn	11 19 08.8	-0.6
LOMA				eS	Sn	11 19 36.0	-1.8
LOMA				IAML		11 19 47.9	
	comp=Z,443nm,0.4s						
MRL	Marmol	2.38	51	eP	Pn	11 19 10.5	+0.7
PCIG		2.61	324	eP	Pn	11 19 11.9	-0.8
PCIG				iS	Sn	11 19 41.6	-2.0
CCIG	Comitan	2.72	349	iP	Pn	11 19 15.6	+1.2
CCIG				iS	Sn	11 19 46.9	+0.4
TGIG		3.48	335	iP	Pn	11 19 24.5	-0.3
TGIG				iS	Sn	11 20 03.6	-1.7
CMIG	Matias Romero	4.69	318	Pn	Pn	11 19 42.6	+1.2
	comp=Z,1.8nm,0.3s,baz=130,slow=13,SNR=11						
CMIG				Sn	Sn	11 20 34.8	-0.3
	comp=Z,2.3nm,0.3s,baz=92,slow=18,SNR=3.4						
CMIG	Matias Romero	4.69	318	eP	Pn	11 19 41.0	-0.3
CMIG				iS	Sn	11 20 33.6	-1.6
JTS	Las Juntas de	7.30	116	Pn	Pn	11 20 18.5	+1.3
	comp=Z,0.3nm,0.3s,baz=22,slow=19,SNR=2.5						
TXAR	Lajitas Array	19.24	326	Pn	Pn	11 22 57.9	+2.1
	comp=Z,0.1nm,0.3s,baz=154,slow=13,SNR=8.8						
NVAR	Mina Array Bea	34.22	321	P	P	11 25 18.0	+1.8
	comp=Z,0.3nm,0.6s,baz=134,slow=7.7,SNR=2.1						
YKA	Yellowknife Ar	51.50	347	P	P	11 27 34.2	-1.3
	comp=Z,0.2nm,0.6s,baz=146,slow=7.6,SNR=4.1						

THE ***19*** *11:19:01.4, 40°.13N×19°.88E, h2^{km}±11^{km}, ML2.2/3, Error ellipse: s-maj=11.6km s-min=0.3km az=65.0*

TIR 19 11:19:02.1, 40°.09N×20°.02E, h3^{km}, Md2.1/5, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPE	Tepelena	0.20	358	P	Pg	11 19 05.3	-0.8
TPE				S	Sg	11 19 08.2	-0.6
	2µm,0.4s						
TPE	Tepelena	0.20	358	iPG	Pg	11 19 05.5	-0.5
TPE				iSG	Sg	11 19 09.6	+0.8
SRN	Sarande	0.21	184	P	Pg	11 19 06.4	+0.3
SRN				S	Sg	11 19 10.4	+1.5
	538nm,0.1s						
SRN	Sarande	0.21	184	iPG	Pg	11 19 06.4	+0.3
SRN				iSG	Sg	11 19 10.5	+1.6
KEK	Kerkira	0.41	204	P	Pg	11 19 09.3	-0.7
KEK				S	Sg	11 19 15.5	+0.1
	352nm,0.2s						
VLO	Vlora	0.55	313	iPG	Pg	11 19 13.3	+0.6
VLO				iSG	Sb	11 19 23.8	+1.1
IGT	Igoumenitsa	0.61	157	P	Pg	11 19 14.5	+0.8
IGT	Igoumenitsa	0.61	157	iPG	Pg	11 19 14.3	+0.6
IGT				iSG	Sb	11 19 25.7	+1.4
PENT	Pentalofos	0.86	83	P	Pb	11 19 19.5	-0.3
PHP	Peshkopia	1.62	11	iPN	Pg	11 19 34.5	+1.3
PHP				iSN	Sg	11 19 58.9	+4.6

ATH 19 11:19:06.2, 38°.89N×21°.87E, h12^{km}±3^{km}, ML1.6/3, **Error ellipse: s-maj=3.5km s-min=1.1km az=284.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	Evrytania	0.06	305	P	Pg	11 19 08.4	-0.3
EVR				S	Sg	11 19 10.3	-0.2
EVR				AML	AML	11 19 10.5	
	comp=N,4839µm,0.2s						
EVR				AML	AML	11 19 10.5	
	comp=E,2823µm,0.1s						
ANX	Ano Chora	0.29	172	P	Pg	11 19 12.2	-0.1
ANX				S	Sg	11 19 16.9	+0.5
ANX				AML	AML	11 19 19.3	
	comp=E,172µm,0.1s						
ANX				AML	AML	11 19 19.5	
	comp=N,245µm,0.3s						
PVO	Paravola	0.38	225	P	Pg	11 19 13.6	-0.2
PVO				S	Sg	11 19 19.5	+0.7
PVO				AML	AML	11 19 21.0	
	comp=N,128µm,0.3s						
PVO				AML	AML	11 19 22.2	
	comp=E,168µm,0.4s						
SERG	Sergoula	0.49	162	P	Pg	11 19 16.1	+0.2
SERG				S	Sb	11 19 23.3	-0.8
KALE	Kalithea	0.54	156	P	Pg	11 19 16.3	-0.4
KALE				S	Sb	11 19 24.8	-0.6
TRIZ	Trizonia	0.54	163	P	Pg	11 19 16.7	-0.2
TRIZ				S	Sg	11 19 24.7	+0.7
LAKA	Lakka	0.65	172	P	Pg	11 19 18.8	-0.1
THL	Klokotos Trika	0.69	10	P	Pg	11 19 19.7	+0.1
DSF	Desfina	0.70	132	P	Pg	11 19 19.2	-0.7
DSF				S	Sb	11 19 29.8	-0.3
KLV	Kalavryta, Ach	0.87	165	P	Pg	11 19 22.7	-0.3

ISCJB ***19*** *11:40:37.3±1.0, 30°.73S±0°.02×176°.30W±0°.03, h4^{km}±6^{km}, mb5.4/170, MS5.4/612, Error ellipse: s-maj=5.0km s-min=2.7km az=33.9*

BJI ***19*** *11:40:38.9±0.0, 30°.35S×176°.14W, h6^{km}, mb5.5/39, mB5.7/35, Ms5.4/41, Ms7 5.1/42*

IDC ***19*** *11:40:39.2±0.4, 30°.39S×176°.39W, h0^{km}, mb5.2/22, mb1 5.3/22, mb1mx5.2/26, mbtmp5.1/22, MS5.1/15, Ms1 5.1/15, ms1mx5.1/17, Error ellipse: s-maj=15.9km s-min=14.3km az=172.0*

NEIC ***19*** *11:40:41.0±0.0, 30°.49S×176°.13W, h35^{km}, Moment Tensor Solution. s43 Moment tensor: Scale 10^{17}Nm; M_{rr}3.45; $M_{\theta\theta}$-3.06; $M_{\phi\phi}$-0.38; $M_{r\theta}$-0.06; $M_{\theta\phi}$-3.22; $M_{\phi r}$-2.36; Best double couple: $M_0$5.20000×10^{17} NP1: ϕ_s209.00000°, δ61.00000°, λ54.00000°. NP2: ϕ_s85.00000°, δ45.00000°, λ137.00000°. Principal axes: T 4.8400, Plg57.0000°, Azm68.0000°; N 0.5800, Plg31.0000°, Azm228.0000°; P -5.4300, Plg9.0000°, Azm323.0000°;*

NEIC ***19*** *11:40:42.0±1.0, 30°.47S×176°.29W, h22^{km}±3^{km}, mb5.5/151, MS5.4/619, MW5.7, MW5.7 Error ellipse: s-maj=10.4km s-min=8.0km az=80.0, Moment Tensor Solution. s64 Moment tensor: Scale 10^{17}Nm; M_{rr}2.78; $M_{\theta\theta}$-2.51; $M_{\phi\phi}$-0.26; $M_{r\theta}$0.28; $M_{\theta\phi}$-3.14; $M_{\phi r}$-1.88; Best double couple: $M_0$4.50000×10^{17} NP1: ϕ_s87.00000°, δ50.00000°, λ142.00000°. NP2: ϕ_s204.00000°, δ62.00000°, λ47.00000°. Principal axes: T 4.1600, Plg52.0000°, Azm62.0000°; N 0.6600, Plg37.0000°, Azm228.0000°; P -4.8300, Plg7.0000°, Azm323.0000°;*

MOS ***19*** *11:40:43.1±1.1, 30°.40S×176°.29W, h33^{km}, mb5.6/56, MS5.3/47 Error ellipse: s-maj=9.8km s-min=8.3km az=83.6*

GCMT ***19*** *11:40:46.0±0.1, 30°.43S±0°.01×176°.30W±0°.01, h45^{km}, MW5.8/138, Moment Tensor Solution. s125,c252; s138,c273; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}3.24±.06; $M_{\theta\theta}$-3.07±.05; $M_{\phi\phi}$-0.17±.05; $M_{r\theta}$0.44±.05; $M_{\theta\phi}$-3.78±.04; $M_{\phi r}$-2.12±.05; Best double couple: $M_0$5.33100×10^{17} NP1: ϕ_s204.00000°, δ61.00000°, λ45.00000°. NP2: ϕ_s88.00000°, δ52.00000°, λ142.00000°. Principal axes: T 4.9120, Plg51.0000°, Azm61.0000°; N 0.8390, Plg38.0000°, Azm230.0000°; P -5.7510, Plg6.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 11:40:42.5±0.5, **30°.56S**±0°.04×**176°.24W**±0°.04, **h26**^{km}±3^{km}, **h27**^{km}**:pP-P, n1274, σ1^{s}82**/866, **mb5.5**/167, **MS5.4**/614, **28C-24D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.95	311	P	Pn	11 41 13.0	-0.8
GLKZ				S	Sn	11 41 33.7	-3.8
RAO	Raoul Island	1.96	311	ePn	Pn	11 41 12.8	-1.2
RAO				eSn	Sn	11 41 34.2	-3.4
RAO	Raoul Island	1.96	311	eP	Pn	11 41 12.8	-1.2
RAO				e		11 41 34.2	
RIZ	Raoul Island	1.97	311	P	Pn	11 41 13.3	-0.9
RIZ				S	Sn	11 41 34.9	-3.0
MXZ	Matakaoa Point	8.32	211	ePn	Pn	11 42 38.2	-3.2
MXZ				eSn	Sn	11 44 11.9	-2.7
MXZ	Matakaoa Point	8.32	211	P	Pn	11 42 38.5	-3.0
MXZ				S	Sn	11 44 11.8	-2.7
WMGZ	Waiomatatini S	8.49	210	P	Pn	11 42 42.0	-1.7
WMGZ				S	Sn	11 44 16.0	-2.7
PKGZ	Pakihiroa	8.70	211	P	Pn	11 42 44.3	-2.4
PKGZ				S	Sn	11 44 21.4	-2.5
HAZ	Te Kaha	8.72	213	P	Pn	11 42 45.0	-1.9
HAZ				S	Sn	11 44 23.6	-0.8
PUZ	Puketiti	8.77	210	P	Pn	11 42 44.7	-2.9
PUZ				S	Sn	11 44 22.1	-3.5
RUGZ	Raukumara Rang	8.94	213	P	Pn	11 42 47.8	-2.2
GRZ	Great Barrier	8.97	229	P	Pn	11 42 53.3	+3.0
TWGZ	Tauwhareparae	8.98	211	P	Pn	11 42 47.9	-2.6
CNGZ	Carnagh Statio	9.14	209	P	Pn	11 42 50.5	-2.1
WHRZ	Whale Island	9.20	216	P	Pn	11 42 53.4	-0.1
TKGZ	Te Karaka	9.25	210	P	Pn	11 42 52.0	-2.2
TKGZ				S	Sn	11 44 34.4	-3.0
MWZ	Matawai	9.31	212	P	Pn	11 42 51.8	-3.2
OPRZ	Ohinepanea	9.40	217	P	Pn	11 42 55.2	-1.1
URZ	Urewera	9.44	214	Pn	Pn	11 42 53.6	-3.2
	8.3nm,0.3s,baz=272,slow=3.9,SNR=56						
URZ				Sn	Sn	11 44 35.6	-6.5
	218nm,0.3s,baz=230,slow=9.8,SNR=20						
URZ	Urewera	9.44	214	ePn	Pn	11 42 54.3	-2.5
URZ				eSn	Sn	11 44 38.9	-3.2
URZ	Urewera	9.44	214	P	Pn	11 42 53.9	-2.9
MARZ	Manawahe	9.45	216	P	Pn	11 42 56.7	-0.2
RAGZ	Rawiri	9.49	212	P	Pn	11 42 54.5	-3.0
WIAZ	Waiheke Island	9.51	227	P	Pn	11 43 00.4	+2.7
EDRZ	Edgecumbe	9.51	216	P	Pn	11 43 02.5	+4.8
RIGZ	Rimuhau	9.51	210	P	Pn	11 42 54.6	-3.2
RIGZ				S	Sn	11 44 41.9	-2.0
PRGZ	Paritu Road	9.64	208	P	Pn	11 42 56.2	-3.4
MKRZ	Makatiti	9.67	217	P	Pn	11 43 02.4	+2.4
MKAZ	Moumakai	9.68	225	P	Pn	11 43 02.0	+1.9
OMRZ	Omania	9.70	217	P	Pn	11 43 02.2	+1.9
KARZ	Kaharoa	9.70	218	P	Pn	11 43 01.7	+1.4
TARZ	Mount Tarawera	9.72	216	P	Pn	11 43 01.5	+0.8
OUZ	Omahuta	9.73	239	ePn	Pn	11 43 02.6	+1.9
OUZ	Omahuta	9.73	239	P	Pn	11 43 03.7	+3.0
ETAZ	East Tamaki Re	9.73	227	P	Pn	11 43 03.7	+2.9
KMRZ	Kaimai	9.73	220	P	Pn	11 43 02.5	+1.7
SNGZ	Shannon Statio	9.76	211	P	Pn	11 42 58.8	-2.3
MUGZ	Murupara	9.78	214	P	Pn	11 42 58.3	-3.1
RTZ	Ruatahuna	9.79	213	P	Pn	11 42 58.6	-3.0
RRRZ	Republican Roa	9.80	216	P	Pn	11 43 02.1	+0.4
HLRZ	Highlands Stat	9.81	217	P	Pn	11 43 04.2	+2.2
KNZ	Kokohu	9.81	209	P	Pn	11 42 58.3	-3.5
MHGZ	Mahia Peninsul	9.83	208	P	Pn	11 42 59.1	-3.1
UTU	Utuhina	9.84	217	P	Pn	11 43 10.9	+8.6
HSRZ	Hossack Road	9.92	217	P	Pn	11 43 07.0	+3.7
WTAZ	Waiatarua	9.95	228	P	Pn	11 43 06.7	+3.0
PRRZ	Plateau Road	9.98	215	P	Pn	11 43 03.3	-0.9
RAHZ	Arahi	9.98	212	P	Pn	11 43 02.0	-2.2
MTHZ	Maungataniwha	10.04	213	P	Pn	11 43 02.7	-2.4
WHHZ	Waihua	10.05	210	P	Pn	11 43 03.6	-1.5
ALRZ	Allen Road	10.06	215	P	Pn	11 43 04.4	-0.8
KUTZ	Kaahu Road	10.27	217	P	Pn	11 43 08.7	+0.5
TLZ	Tolley Road	10.30	219	P	Pn	11 43 09.4	+0.8
ARHZ	Aropaoanui	10.31	211	P	Pn	11 43 05.4	-3.2
ARHZ	Aropaoanui	10.31	211	P	Sn	11 45 00.8	-2.5
WHTZ	Whakaora	10.33	216	P	Pn	11 43 08.8	-0.2
BKZ	Black Stump Fm	10.46	213	ePn	Pn	11 43 09.2	-1.5
BKZ	Black Stump Fm	10.46	213	P	Pn	11 43 06.6	-4.1
WATZ	Wairara	10.48	217	P	Pn	11 43 08.6	-2.5
MCHZ	McNeill Hill	10.59	211	P	Pn	11 43 09.5	-3.0
MCHZ	McNeill Hill	10.59	211	P	Sn	11 45 07.9	-2.3
CKHZ	Cape Kidnapper	10.60	209	P	Pn	11 43 08.7	-3.9
RITZ	Rihia Road	10.62	216	P	Sn	11 45 09.2	-1.8
KWHZ	Kaweka Forest	10.70	212	P	Pn	11 43 11.1	-2.9
KWHZ	Kaweka Forest	10.70	212	P	Sn	11 45 09.2	-3.8
KATZ	Kakaramea	10.70	216	P	Pn	11 43 14.2	0.0
HIZ	Hauiti	10.81	220	ePn	Pn	11 43 14.9	-0.6
KRVZ	Karewarewa	10.82	216	P	Sn	11 45 16.2	+0.3
WTVZ	West Tongariro	10.86	216	P	Pn	11 43 15.4	-0.9
KRHZ	Kereru	10.90	212	P	Sn	11 45 13.4	-4.4
NGZ	Ngauruhoe	10.90	216	P	Sn	11 45 16.9	-1.1
TWVZ	Taurewa	10.90	217	P	Pn	11 43 15.9	-1.0
TUVZ	Tukino	10.94	215	P	Sn	11 45 17.3	-1.8
WHVZ	Whangaehu Hut	10.99	215	P	Pn	11 43 17.0	-1.2
DRZ	Dome Shelter	10.99	215	P	Sn	11 45 20.0	-0.6
MOVZ	Moawhango	11.00	214	P	Pn	11 43 16.0	-2.2
MOVZ	Moawhango	11.00	214	P	Sn	11 45 15.7	-4.8
PXZ	Pawanui	11.00	209	P	Sn	11 45 15.1	-5.2
PKVZ	Pokaka	11.11	216	P	Pn	11 43 20.1	+0.4
MTVZ	Mangateitei	11.12	215	P	Pn	11 43 16.7	-3.2
MTVZ	Mangateitei	11.12	215	P	Sn	11 45 21.7	-1.7
PNHZ	Pukenui	11.19	211	P	Pn	11 43 17.4	-3.4
PNHZ	Pukenui	11.19	211	P	Sn	11 45 19.6	-5.4
WPHZ	Waipukurau	11.21	210	P	Pn	11 43 17.3	-3.7
WPHZ	Waipukurau	11.21	210	P	Sn	11 45 21.4	-4.1
PRHZ	Porangahau	11.29	209	P	Sn	11 45 20.5	-7.0
VRZ	Vera Road	11.30	218	P	Pn	11 43 21.5	-0.7
DVHZ	Dannevirke	11.52	210	P	Pn	11 43 20.7	-4.5
DVHZ				S	Sn	11 45 25.7	-7.4
DVHZ	Dannevirke	11.52	210	P	Sn	11 45 27.2	-5.9
ANWZ	Angora Road	11.52	209	P	Pn	11 43 21.5	-3.8
ANWZ				S	Sn	11 45 27.1	-6.0
ANWZ	Angora Road	11.52	209	P	Sn	11 45 26.8	-6.2
WAZ	Wanganui	11.65	216	P	Pn	11 43 24.9	-2.1
DREZ	Durham Road	11.65	220	P	Pn	11 43 27.6	+0.6
LREZ	Lake Rotokare	11.73	218	P	Pn	11 43 30.4	+2.3
PKE	Pukeiti	11.77	220	P	Pn	11 43 29.7	+1.0
POWZ	Post Office Ro	11.77	211	P	Pn	11 43 26.0	-2.7
POWZ	Post Office Ro	11.77	211	P	Sn	11 45 33.1	-6.1
PREZ	Palmer Road	11.78	219	P	Pn	11 43 29.7	+0.9
BFZ	Birch Farm	11.80	209	P	Pn	11 43 23.0	-6.2
BFZ	Birch Farm	11.80	209	P	Sn	11 45 33.5	-6.5
PRWZ	Pori Road	11.82	210	P	Pn	11 43 25.9	-3.4
PRWZ	Pori Road	11.82	210	P	Sn	11 45 34.2	-6.1
KHEZ	Kahui Hut	11.82	220	P	Pn	11 43 31.2	+1.7
OHWZ	Ohakea	11.84	213	P	Pn	11 43 25.5	-4.0
NBEZ	Newall Road No	11.89	220	P	Pn	11 43 32.0	+1.7
CPWZ	Castlepoint	12.01	209	P	Pn	11 43 28.1	-3.8
TIWZ	Tintock	12.04	210	P	Pn	11 43 27.8	-4.5
OGWZ	Otaki Gorge	12.39	212	P	Pn	11 43 32.6	-4.5
TRWZ	Traveller	12.63	209	P	Pn	11 43 34.9	-5.6
NIUE	Niue	12.78	28	ePn	Pn	11 43 37.3	-5.3
NIUE	Niue	12.78	28	P	Pn	11 43 36.9	-5.6
	baz=12,SNR=10.0						
MSWZ	Moikau Station	12.84	210	P	Pn	11 43 39.1	-4.1
DUWZ	D'Urville Isla	12.97	215	P	Pn	11 43 40.4	-4.7
BHW	Baring Head	12.99	211	P	Pn	11 43 41.5	-3.8
CMWZ	Cape Campbell	13.56	212	P	Pn	11 43 51.0	-2.2
BSWZ	Blackbirch Sta	13.69	213	P	Pn	11 43 50.9	-4.1
THZ	Tophouse	14.20	215	ePn	Pn	11 43 58.0	-3.8
THZ	Tophouse	14.20	215	P	Pn	11 43 56.2	-5.7
KHZ	Kahutara	14.40	212	ePn	Pn	11 44 00.8	-3.7
KHZ	Kahutara	14.40	212	P	Pn	11 43 59.2	-5.3
GVZ	Greta Valley S	15.06	212	P	Pn	11 44 07.3	-6.2
LTZ	Lake Taylor	15.28	214	P	Pn	11 44 09.7	-6.7
AMCZ	Amberley	15.40	212	P	Pn	11 44 16.5	-1.4
INZ	Inchbonnie	15.64	216	P	Pn	11 44 17.2	-3.9
OKCZ	Okains Bay	15.65	210	P	Pn	11 44 14.8	-6.5
CRLZ	Canterbury Las	15.72	211	ePn	Pn	11 44 19.7	-2.4
	145nm,1.0s						
CRLZ	Canterbury Las	15.72	211	P	Pn	11 44 18.4	-3.7
OXZ	Oxford	15.80	213	ePn	Pn	11 44 19.4	-3.7
	233nm,0.5s						
OXZ	Oxford	15.80	213	P	Pn	11 44 17.2	-5.9
MQZ	McQueen's Vall	15.81	211	P	Pn	11 44 16.9	-6.4
AKCZ	Akaroa Harbour	15.84	210	P	Pn	11 44 17.1	-6.5
WVZ	Waitaha Valley	16.25	216	P	Pn	11 44 24.8	-4.1
RPZ	Rata Peaks	16.56	214	Pn	Pn	11 44 25.3	-7.5
	2.2nm,0.3s,baz=101,slow=2.9,SNR=11						
RPZ				Sn	Sn	11 47 18.8	-17
	32nm,0.3s,baz=176,slow=23,SNR=12						
RPZ	Rata Peaks	16.56	214	P	Pn	11 44 27.3	-5.6
MARNC	Mare, Loyalty	16.77	299	ePn	Pn	11 44 33.6	-2.0
	627nm,1.2s						
FOZ	Fox Glacier	17.05	217	ePn	Pn	11 44 35.9	-3.0
	79nm,0.7s						
FOZ	Fox Glacier	17.05	217	P	Pn	11 44 34.5	-4.4
AFI	Afiamalu	17.07	15	ePn	Pn	11 44 35.7	-3.8
	210nm,0.6s						
AFI	Afiamalu	17.07	15	eP	Pn	11 44 35.7	-3.8
AFI				pmax	pmax		
	comp=Z,210nm,0.6s						
RAR	Rarotonga	17.48	62	P	Pn	11 44 41.3	-3.1
	comp=Z,20nm,0.3s,baz=261,slow=7.9,SNR=33						
RAR				S	Sn	11 47 38.6	-20
	comp=Z,8.1nm,0.3s,baz=266,slow=19,SNR=5.9						
RAR				LR	LR	11 50 24.7	
	comp=Z,6µm,18.8s,baz=266,slow=33						
RAR	Rarotonga	17.48	62	eP	Pn	11 44 41.3	-3.1
	comp=Z,634nm,1.2s						
ONTNC	Ouen Toro	17.53	294	eP	Pn	11 44 44.8	-0.3
	comp=Z,342nm,1.2s						
DZM	Mont Dzumac	17.66	294	eP	P	11 44 47.9	+0.3
	comp=Z,487nm,1.6s						
DZM				eLQ	LQ	11 48 05.9	
	comp=Z,14µm,33.9s						
DZM				eLR	LR	11 48 54.3	
	comp=Z,31µm,26.2s						
DZM	Mont Dzumac	17.66	294	eP	Pn	11 44 46.4	-0.5
	comp=Z,183nm,1.2s						
HHSZ	Highcliff Hill	18.43	210	P	Pn	11 44 56.0	0.0
TUZ	Tuapeka	18.91	212	P	P	11 45 00.7	-0.4
MLZ	Mavora Lakes	19.20	215	eP	P	11 45 04.6	+0.2
	comp=Z,56nm,1.0s						
SYZ	Scrubby Hill	19.58	211	P	Pn	11 45 11.8	+2.0
DCZ	Deep Cove	19.76	217	eP	Pn	11 45 12.1	+0.1
	comp=Z,91nm,1.4s						
LHI	Lord Howe Isla	21.18	261	eP	P	11 45 26.7	+0.8
	comp=Z,184nm,0.9s						
LHI				LR	LR		
	comp=Z,4µm,21.0s						
LHI	Lord Howe Isla	21.18	261	P	P	11 45 26.1	+0.2
	baz=21,SNR=3.2						
TBI	Tubuai	24.89	80	eP	P	11 46 03.3	+0.1
	comp=Z,542nm,1.4s						
TBI				eS	S	11 50 23.8	-1.1
	comp=Z,1µm,28.0s						
TBI				eLQ	LQ	11 50 54.2	
	comp=Z,16µm,28.2s						
TBI				eLR	LR	11 52 12.7	
	comp=Z,19µm,26.8s,baz=246						
TBI	Tubuai	24.89	80	eT	T	12 11 21.0	
	comp=Z,94nm,0.3s						
PAE	Paea	27.43	68	eT	T	12 14 23.9	
	comp=Z,34nm,0.3s						
PPT2	Papeete2	27.47	68	eP	P	11 46 27.9	+1.2
	comp=Z,138nm,1.4s						
PPT2				eS	S	11 51 06.4	+0.4
	comp=Z,836nm,26.5s						
PPT2				eLQ	LQ	11 51 52.4	
	comp=Z,7µm,25.2s						
PPT2				eLR	LR	11 53 21.0	
	comp=Z,15µm,25.5s,baz=234						
PPT2	Papeete2	27.47	68	eT	T	12 14 27.9	
	comp=Z,24nm,0.3s						
PPT	Papeete	27.48	68	P	P	11 46 27.2	+0.4
	comp=Z,78nm,0.9s,baz=68,slow=19,SNR=3.4						
PPT				LR	LR	11 55 14.1	
	comp=Z,4µm,19.2s,baz=246,slow=32						
TVO	Taravao	27.63	69	eT	T	12 14 40.1	
	comp=Z,7.0nm,0.4s						
ARMA	Armidale	27.64	262	eP	P	11 46 28.7	+0.4
	comp=Z,22nm,0.9s						
ARMA				LR	LR		
	comp=Z,6µm,22.0s						
ARMA	Armidale	27.64	262	P	P	11 46 28.3	0.0
	baz=28,SNR=7.3						
TIAR	Tiarei	27.67	68	eP	P	11 46 29.3	+0.8
	comp=Z,36nm,0.8s						
TIAR	Tiarei	27.67	68	eT	T	12 14 42.9	
	comp=Z,5.6nm,0.3s						
MGCD	Mangrove Creek	27.79	256	P	P	11 46 29.8	+0.4
	baz=28,SNR=5.8						
EIDS	Eidsvold	29.26	272	eP	P	11 46 42.8	+0.2
	comp=Z,20nm,0.9s						
EIDS				LR	LR		
	comp=Z,8µm,22.0s						
EIDS	Eidsvold	29.26	272	P	P	11 46 42.1	-0.5
	baz=29,SNR=4.3						
MILA	Mila	29.37	248	P	P	11 46 43.7	+0.2
	baz=29,SNR=3.8						
CAN	Canberra	29.47	251	eP	P	11 46 45.2	+0.8
	comp=Z,42nm,1.1s						
CAN				LR	LR		
	comp=Z,4µm,19.0s						
CAN	Canberra	29.47	251	eP	P	11 46 45.2	+0.8
CAN				pmax	pmax		
	comp=Z,42nm,1.1s						
CAN				MLR	MLR		
	comp=Z,4µm,19.0s						
MCQ	Macquarie Isla	29.82	209	eP	P	11 46 48.9	+1.8
	comp=Z,155nm,1.1s						
MCQ	Macquarie Isla	29.82	209	eP	P	11 46 48.9	+1.8
MCQ				pmax	pmax		
	comp=Z,155nm,1.1s						
PMOR	Pomariorio Ree	30.25	66	eP	P	11 46 52.3	+0.9
	comp=Z,205nm,1.2s						
VAH	Vaihoa	30.33	66	eP	P	11 46 52.7	+0.7
	comp=Z,166nm,1.2s						
VAH	Vaihoa	30.33	66	eT	T	12 17 59.9	
	comp=Z,162nm,0.3s						
HNR	Honiara	30.57	308	S	S	11 51 50.2	-4.4
	comp=Z,57nm,0.5s,baz=312,slow=7.0,SNR=4.0						
HNR	Honiara	30.57	308	PFAKE		11 47 10.0	+16
HNR				LR	LR		
	comp=Z,2µm,21.0s						
RMQ	Roma	30.95	269	P	P	11 46 57.2	-0.3
	baz=31,SNR=6.1						
TAU	Tasmania Unive	31.46	237	eP	P	11 47 02.9	+1.1
	comp=Z,71nm,1.3s						
TAU				LR	LR		
	comp=Z,8µm,20.0s						
TAU	Tasmania Unive	31.46	237	eP	P	11 47 02.9	+1.1
TAU				pmax	pmax		
	comp=Z,71nm,1.3s						
TAU				MLR	MLR		
	comp=Z,8µm,20.0s						
TOO	Toolangi	32.30	247	eP	P	11 47 10.9	+1.6
	comp=Z,116nm,1.6s						
TOO				LR	LR		
	comp=Z,5µm,20.0s						
TOO	Toolangi	32.30	247	P	P	11 47 10.5	+1.1
	baz=32,SNR=5.4						
TOO	Toolangi	32.30	247	eP	P	11 47 10.9	+1.6
TOO				pmax	pmax		
	comp=Z,116nm,1.6s						
TOO				MLR	MLR		
	comp=Z,5µm,20.0s						
CMSA	Cobar Meteorol	32.53	258	P	P	11 47 12.1	+0.8
	baz=32,SNR=7.5						
TARA	Tarawa	33.37	340	PFAKE		11 47 30.0	+11
TARA				LR	LR		
	comp=Z,4µm,18.0s						
CTA	Charters Tower	35.33	278	P	P	11 47 35.2	-0.5
	comp=Z,12nm,0.4s,baz=102,slow=10,SNR=25						
CTAO	Charters Tower	35.33	278	eP	P	11 47 35.5	-0.3
	comp=Z,84nm,1.4s						
CTAO				LR	LR		
	comp=Z,7µm,21.0s						
CTAO	Charters Tower	35.33	278	eP	P	11 47 35.5	-0.3
CTAO				pmax	pmax		
	comp=Z,84nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,7µm,21.0s						
STKA	Stephens Creek	35.92	257	P	P	11 47 40.7	-0.1
	comp=Z,5.9nm,0.4s,baz=107,slow=11,SNR=14						
STKA				LR	LR	12 02 14.4	
	comp=Z,4µm,18.4s,baz=90,slow=36						
STKA	Stephens Creek	35.92	257	eP	P	11 47 40.9	+0.1
	comp=Z,8.2nm,0.8s						
STKA				LR	LR		
	comp=Z,1µm,19.0s						
STKA	Stephens Creek	35.92	257	P	P	11 47 41.4	+0.6
	baz=36,SNR=11						
XMAS	Kiritimati	37.04	32	PFAKE		11 48 00.0	+10
XMAS				LR	LR		
	comp=Z,3µm,20.0s						
RKT	Rikitea	37.40	89	eLR	LR	11 57 43.8	
	comp=Z,12µm,29.0s						
MTSU	Mount Surprise	37.82	280	P	P	11 47 57.0	0.0
	baz=38,SNR=14						
HTT	Hallett	37.92	254	P	P	11 47 58.1	+0.3
	baz=38,SNR=5.8						
RABL	Rabaul	39.69	305	eP	P	11 48 12.0	-0.7

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      comp=Z,45nm,0.5s
RABL                                 LR      LR
      comp=Z,3µm,21.0s
TAOE  Nuku Hiva Isla   39.98  65  eP      P        11 48 14.9  -0.4
      comp=Z,67nm,1.1s
TAOE                                 LR      LR
      comp=Z,3µm,19.0s
PMG   Port Moresby     40.05 294   PFAKE           11 48 30.0  +14
PMG                                  LR      LR
      comp=Z,6µm,21.0s
BBOO  Buckleboo        40.39 254  eP      P        11 48 17.9  -0.5
      comp=Z,181nm,1.5s
BBOO                                 LR      LR
      comp=Z,3µm,18.0s
BBOO  Buckleboo        40.39 254   P      P        11 48 18.1  -0.3
      baz=40,SNR=13
COEN  Coen             40.78 285  eP      P        11 48 21.4  -0.4
      comp=Z,36nm,1.4s
COEN                                 LR      LR
      comp=Z,6µm,20.0s
COEN  Coen             40.78 285   P      P        11 48 20.8  -1.0
      baz=41,SNR=7.3
QIS   Mount Isa        40.84 273   P      P        11 48 21.0  -1.3
      baz=41,SNR=5.5
KWAJ  Kwajalein Atol   42.09 336   PFAKE           11 48 40.0 +7.6
KWAJ                                 LR      LR
      comp=Z,4µm,21.0s
MANU  Manus Island     44.62 302  eP      P        11 48 52.5  -0.4
      comp=Z,187nm,1.5s
AS31  Alice Springs    44.62 266  eP      P        11 48 51.4  -1.6
      comp=Z,5.2nm,0.6s
ASAR  Alice Springs    44.62 266   P      P        11 48 51.0  -2.0
      comp=Z,9.6nm,0.8s,baz=104,slow=7.3,SNR=70
ASAR                                 PcP     PP    11 50 36.5  -0.8
      comp=Z,9.7nm,0.8s,baz=103,slow=5.4,SNR=6.2
ASAR                                 LR      LR    12 07 48.3
      comp=Z,4µm,18.8s,baz=112,slow=37
WC2   Warramunga Arr   45.61 271   PFAKE           11 49 10.0 +9.2
WC2                                  LR      LR
      comp=Z,5µm,21.0s
WB2   Warramunga Arr   45.61 271  eP      P        11 48 59.2  -1.6
      comp=Z,53nm,0.7s
WB2                                  LR      LR
      comp=Z,5µm,22.0s
WRAB  Tennant Creek    45.62 271  eP      P        11 48 58.9  -2.0
      comp=Z,46nm,0.7s
WRAB                                 LR      LR
      comp=Z,5µm,22.0s
WRAB  Tennant Creek    45.62 271ceP       P        11 48 59.0  -1.9
WRAB                                 pmax    pmax
      comp=Z,37nm,0.6s
WRA   Warramunga Arr   45.62 271   P      P        11 48 58.5  -2.4
      comp=Z,31nm,0.6s,baz=104,slow=7.5,SNR=132
WRA   Warramunga Arr   45.62 271   P      P        11 48 58.5  -2.4
WRA                                  pmax    pmax
      comp=Z,30nm,0.6s
WC1   Warramunga Arr   45.63 271   PFAKE           11 49 10.0 +9.0
WC1                                  LR      LR
      comp=Z,3µm,21.0s
FORT  Forrest          47.48 255  eP      P        11 49 14.2  -1.1
      comp=Z,74nm,0.8s
FORT                                ePcP     PcP   11 50 46.3 +1.0
FORT                                 LR      LR
      comp=Z,4µm,22.0s
SBA   Scott Base       48.00 185  eP      P        11 49 22.1 +3.4
      comp=Z,48nm,1.0s
SBA                                  LR      LR
      comp=Z,2µm,21.0s
SBA   Scott Base       48.00 185  eP      P        11 49 22.1 +3.4
SBA                                  pmax    pmax
      comp=Z,48nm,1.0s
SBA                                  MLR     MLR
      comp=Z,2µm,21.0s
VNDA  Vanda            48.10 186   P      P        11 49 21.8 +2.3
      comp=Z,9.3nm,0.8s,baz=5.2,slow=8.0,SNR=33
VNDA                                 LR      LR    12 06 01.9
      comp=Z,2µm,21.4s,baz=30,slow=32
VNDA  Vanda            48.10 186  eP      P        11 49 22.7 +3.2
      comp=Z,42nm,1.6s
WRKA  Warakurna        48.97 262   P      P        11 49 24.8  -2.2
      baz=49,SNR=44
GENI  Genyem           49.70 295   P      P        11 49 35.4 +2.9
KDU   Kakadu           50.44 279   P      P        11 49 37.6  -0.6
      baz=50,SNR=5.6
MTN   Manton Dam       51.51 278  eP      P        11 49 45.2  -1.1
      comp=Z,12nm,0.7s
MTN                                 ePcP     PcP   11 51 00.8 +0.5
MTN                                  LR      LR
      comp=Z,5µm,20.0s
MTN   Manton Dam       51.51 278   P      P        11 49 44.5  -1.8
      baz=51,SNR=5.3
WAKE  Wake Island      52.22 339   PFAKE           11 50 00.0 +8.8
WAKE                                 LR      LR
      comp=Z,3µm,20.0s
KNRA  Kununurra        52.23 273   P      P        11 49 50.2  -1.4
      baz=52,SNR=13
KHU   Kahuku           53.34  25   PFAKE           11 50 10.0  +10
KHU                                  LR      LR
      comp=Z,2µm,21.0s
KHLU  Kahalu`u         53.56  24   PFAKE           11 50 10.0 +8.7
KHLU                                 LR      LR
      comp=Z,2µm,21.0s
MLOA  Mauna Loa Obse   53.62  24   PFAKE           11 50 10.0 +7.8
MLOA                                 LR      LR
      comp=Z,2µm,20.0s
MLH   Mauna Loa        53.65  25  eP      P        11 50 01.9  -0.3
      comp=Z,189nm,1.6s
MLH   Mauna Loa        53.65  25  eP      P        11 50 01.9  -0.3
MLH                                  pmax    pmax
      comp=Z,189nm,1.6s
HMH   Humu‘ula Sheep   53.72  24  eP      P        11 50 02.0  -0.7
      comp=Z,324nm,1.6s
SAUI  Saumlaki         53.82 283   PFAKE           11 50 20.0  +17
SAUI                                 LR      LR
      comp=Z,4µm,20.0s
POHA  Pohakuloa        53.84  24   PFAKE           11 50 20.0  +16
POHA                                 LR      LR
      comp=Z,2µm,22.0s
HPAH  Hawaii Prepara   54.03  24  eP      P        11 50 04.4  -0.4
      comp=Z,210nm,1.4s
HPAH                                 LR      LR
      comp=Z,2µm,19.0s
CASY  Casey            55.72 208  eP      P        11 50 17.9 +1.6
      comp=Z,40nm,0.8s
FAKI  Fak Fak          55.83 289  eP      P        11 50 17.2  -0.7
      comp=Z,56nm,1.3s
FAKI                                 LR      LR
      comp=Z,1µm,20.0s
MEEK  Meekatharra      56.63 257   P      P        11 50 22.1  -1.4
      baz=57,SNR=6.0
PSAD2 Pilbara Seismi   57.34 263   PFAKE           11 50 40.0  +11
PSAD2                                LR      LR
      comp=Z,3µm,21.0s
PSAC2 Pilbara Seismi   57.41 263   PFAKE           11 50 40.0  +11
PSAC2                                LR      LR
      comp=Z,4µm,18.0s
PSAB3 Pilbara Seismi   57.44 263   PFAKE           11 50 40.0  +11
PSAB3                                LR      LR
      comp=Z,5µm,19.0s
PSAB2 Pilbara Seismi   57.45 263   PFAKE           11 50 40.0  +11
PSAB2                                LR      LR
      comp=Z,4µm,19.0s
PSAC3 Pilbara Seismi   57.45 263   PFAKE           11 50 40.0  +11
PSAC3                                LR      LR
      comp=Z,4µm,21.0s
PSA00 Pilbara Seismi   57.46 263   PFAKE           11 50 40.0  +11
PSA00                                LR      LR
      comp=Z,5µm,19.0s
PSAA2 Pilbara Seismi   57.46 263   PFAKE           11 50 40.0  +11
PSAA2                                LR      LR
      comp=Z,5µm,19.0s
PSAA1 Pilbara Seismi   57.46 263   PFAKE           11 50 40.0  +11
PSAA1                                LR      LR
      comp=Z,4µm,19.0s
PSAB1 Pilbara Seismi   57.48 263   PFAKE           11 50 40.0  +10
PSAB1                                LR      LR
      comp=Z,5µm,19.0s
PSAD3 Pilbara Seismi   57.49 263   PFAKE           11 50 40.0  +10
PSAD3                                LR      LR
      comp=Z,4µm,18.0s
PSAC1 Pilbara Seismi   57.51 263   PFAKE           11 50 40.0  +10
PSAC1                                LR      LR
      comp=Z,5µm,18.0s
PSAD1 Pilbara Seismi   57.52 263   PFAKE           11 50 40.0  +10
PSAD1                                LR      LR
      comp=Z,4µm,19.0s
GUMO  Guam             57.67 314  eP      P        11 50 30.0  -0.9
      comp=Z,162nm,1.5s
GUMO                                 LR      LR
      comp=Z,1µm,20.0s
GUMO  Guam             57.67 314  eP      P        11 50 30.0  -0.9
GUMO                                 pmax    pmax
      comp=Z,162nm,1.5s
GUMO                                 MLR     MLR
      comp=Z,1µm,20.0s
MBWA  Marble Bar       57.72 263   PFAKE           11 50 40.0 +8.7
MBWA                                 LR      LR
      comp=Z,4µm,18.0s
MORW  Morawa           57.94 253  eP      P        11 50 31.8  -1.0
      comp=Z,30nm,1.1s
MORW                                 LR      LR
      comp=Z,3µm,20.0s
MORW  Morawa           57.94 253   P      P        11 50 31.7  -1.0
      baz=58,SNR=6.9
MIDW  Midway           58.45 359   PFAKE           11 50 50.0  +14
MIDW                                 LR      LR
      comp=Z,3µm,21.0s
SOEI  Soe              58.88 277  eP      P        11 50 39.5  -0.1
      comp=Z,44nm,1.1s
SOEI                                 LR      LR
      comp=Z,5µm,22.0s
SARN  Sarigan          59.53 317   PFAKE           11 51 00.0  +16
SARN                                 LR      LR
      comp=Z,2µm,20.0s
QSPA  South Pole Qui   59.56 180   P      P        11 50 46.1 +2.5
      comp=Z,75nm,0.9s,baz=46,slow=2.0,SNR=211
QSPA  South Pole Qui   59.56 180  eP      P        11 50 46.3 +2.7
      comp=Z,94nm,0.9s
QSPA                                 LR      LR
      comp=Z,3µm,20.0s
MMRI  Maumere          61.18 277  eP      P        11 50 54.9  -0.3
      comp=Z,97nm,1.3s
MMRI                                 LR      LR
      comp=Z,2µm,21.0s
GIRL  Giralia          61.81 259  eP      P        11 50 59.1  -0.3
      comp=Z,555nm,1.6s
GIRL                                 LR      LR
      comp=Z,4µm,21.0s
GIRL  Giralia          61.81 259   P      P        11 50 58.5  -0.9
      baz=62,SNR=4.0
KAPI  Kappang          65.14 279   PFAKE           11 51 30.0 +8.5
KAPI                                 LR      LR
      comp=Z,2µm,22.0s
KCP   Kidapawan        67.43 293⇑eP       P        11 51 32.5  -3.7
JAGI  Jajag, Banyuwa   68.20 273   PFAKE           11 51 50.0 +8.9
JAGI                                 LR      LR
      comp=Z,2µm,20.0s
MAW   Mawson           72.69 200   P      P        11 52 09.6 +2.0
      comp=Z,22nm,0.8s,baz=136,slow=7.3,SNR=45
MAW                                  LR      LR    12 22 05.8
      comp=Z,1µm,21.9s,baz=118,slow=34
MAW   Mawson           72.69 200  eP      P        11 52 09.3 +1.7
      comp=Z,7.1nm,0.9s
MAW                                  LR      LR
      comp=Z,400nm,19.0s
MAW   Mawson           72.69 200   P      P        11 52 09.6 +2.0
      baz=73,SNR=23
MAW   Mawson           72.69 200  eP      P        11 52 09.3 +1.7
MAW                                  pmax    pmax
      comp=Z,7.0nm,0.9s
MAW                                  MLR     MLR
      comp=Z,400nm,19.0s
CISI  Cisompet, Garu   74.11 271   PFAKE           11 52 30.0  +13
CISI                                 LR      LR
      comp=Z,2µm,20.0s
XMIS  Christmas Isla   74.56 267   PFAKE           11 52 30.0  +10
XMIS                                 LR      LR
      comp=Z,2µm,20.0s
LEM   Lembang          74.64 271   P      P        11 52 20.8 +0.6
      comp=Z,36nm,0.7s,baz=45,slow=4.0,SNR=8.2
SBUM  Sibu             75.44 282   PFAKE           11 52 40.0  +15
SBUM                                 LR      LR
      comp=Z,700nm,22.0s
KSM   Kuching          76.55 280  eP      P        11 52 29.8  -1.1
      comp=Z,14nm,0.7s
KSM                                  LR      LR
      comp=Z,700nm,21.0s
SYO   Syowa Base       77.30 192⇑eP       P        11 52 34.0  -0.2
SYO   Syowa Base       77.30 192⇑eP       P        11 52 37.6 +3.4
SNAA  Sanae            77.95 178   P      P        11 52 39.1 +1.2
SNAA  Sanae            77.95 178  eP      P        11 52 38.8 +0.9
      comp=Z,59nm,0.9s
SNAA                                 LR      LR
      comp=Z,2µm,22.0s
SNAA  Sanae            77.95 178 i P      P        11 52 37.9   0.0
VNA3  Neumayer Olymp   78.04 176   P      P        11 52 39.0 +0.6
VNA1  Neumayer--Stat   78.71 176   P      P        11 52 43.4 +1.4
MJAR  Matsushiro Arr   79.25 324   P      P        11 52 45.6 +0.2
      comp=Z,5.1nm,0.9s,baz=164,slow=6.0,SNR=11
MAJO  Matsushiro       79.25 324  eP      P        11 52 45.0  -0.4
      comp=Z,14nm,0.8s
MAJO  Matsushiro       79.25 324 i P      P        11 52 44.7  -0.7
MAJO                                 pmax    pmax
      comp=Z,11nm,1.0s
MAT   Matsushiro       79.25 324   P      P        11 52 45.2  -0.2
MAT                                  S       S     12 02 43.2  -0.6
MJB9  Matsu-Tunnel     79.25 324  eP      P        11 52 45.0  -0.4
      comp=Z,15nm,0.8s
YOJ   Yonaguni jima    79.88 306   PFAKE           11 53 00.0  +11
YOJ                                  LR      LR
      comp=Z,700nm,21.0s
MNAI  Manna            79.89 271   PFAKE           11 53 00.0  +11
MNAI                                 LR      LR
      comp=Z,3µm,22.0s
YULB  Yu-li            80.41 304  eP      P        11 52 51.5  -0.4
      comp=Z,21nm,1.5s
JNU   Nakatsue         80.69 317   PFAKE           11 53 00.0 +6.7
JNU                                  LR      LR
      comp=Z,800nm,22.0s
PLCA  Paso Flores      81.28 132   P      P        11 52 58.7 +2.1
      comp=Z,13nm,1.1s,baz=224,slow=4.9,SNR=10
PLCA                                 LR      LR    12 20 16.3
      comp=Z,2µm,21.6s,baz=276,slow=29
PLCA  Paso Flores      81.28 132  eP      P        11 52 57.3 +0.7
      comp=Z,32nm,1.3s
PLCA  Paso Flores      81.28 132  eP      P        11 52 57.3 +0.7
PLCA                                 pmax    pmax
      comp=Z,32nm,1.3s
ERM   Erimo            81.33 331   PFAKE           11 53 10.0  +14
ERM                                  LR      LR
      comp=Z,2µm,21.0s
YUK   Yuzh-Kuril'sk    81.92 333  eP      P        11 52 59.5 +0.1
YUK                                 e              11 53 09.4
YUK                                 e              11 56 06.3
YUK                                 ePPP     PPP   11 57 55.2
YUK                                 eS       S     12 03 10.7  -0.7
YUK                                 eSS      SS    12 08 30.4  -0.7
YUK                                 eSSS     SSS   12 11 56.9
YUK                                  pmax    pmax
      comp=Z,112µm,1.3s
YUK                                  pmax    pmax
      comp=Z,104nm,1.4s
YUK                                  pmax    pmax
      comp=E,67nm,0.7s
YUK                                  pmax    pmax
      comp=N,129nm,1.1s
KIWB  Kanaga Island    82.06 359  eP      P        11 53 00.1 +0.1
ADK   Adak             82.08 360  eP      P        11 52 59.9  -0.2
      comp=N,117nm,0.8s
ADK                                  LR      LR
      comp=Z,1µm,22.0s
ADK   Adak             82.08 360  eP      P        11 52 59.9  -0.2
ADK                                  pmax    pmax
      comp=Z,117nm,0.8s
ADK                                  MLR     MLR
      comp=Z,1µm,22.0s
KUR   Kuril'sk         82.19 335d iP      P        11 53 04.0 +3.2
KUR                                 eS       S     12 03 19.9 +5.8
KUR                                  MLR     MLR
      comp=E,599nm,17.0s
KUR                                  MLR     MLR
      comp=Z,652nm,17.0s
MYKOM Kota Tinggi      82.22 277  eP      P        11 53 01.0  -0.8
      comp=Z,13nm,0.8s
MYKOM                                LR      LR
      comp=Z,1µm,20.0s
GSTR  Great Sitkin T   82.30   0  eP      P        11 53 01.2   0.0
QZH   Quanzhou         83.30 304   P      P        11 53 09.3 +2.2
QZH                                  S       S     12 03 22.3  -4.0
QZH                                  LR      LR
      comp=Z,610nm,21.9s
SMY   Shemya           83.36 354  eP      P        11 53 06.2  -0.5
      comp=Z,80nm,1.1s
SMY                                  LR      LR
      comp=Z,2µm,22.0s
SMY   Shemya           83.36 354  eP      P        11 53 06.2  -0.5
SMY                                  pmax    pmax
      comp=Z,80nm,1.1s
SMY                                  MLR     MLR
      comp=Z,2µm,22.0s
NIKH  Nikolski High    83.42   4   PFAKE           11 53 20.0  +13
NIKH                                 LR      LR
      comp=Z,1µm,22.0s
GO05  Huala            83.46 127  eP      P        11 53 08.3 +0.3
      comp=Z,31nm,1.2s
GO05                                 LR      LR
      comp=Z,2µm,20.0s
SCZ2  Santa Cruz Isl   83.51  44   P      P        11 53 08.7 +0.7
      baz=226
SBC   Santa Barbara    83.77  44   P      P        11 53 10.3 +1.0
      baz=226
CIS   Catalina Islan   83.85  45   P      P        11 53 10.4 +0.6
      baz=227
BKNI  Bangkinang       83.89 274   PFAKE           11 53 20.0  +10
BKNI                                 LR      LR
      comp=Z,2µm,21.0s
BLG   Laguna Peak, P   83.93  45   P      P        11 53 10.9 +0.7
      baz=227
SRIG  Santa Rosalia    83.94  54   PFAKE           11 53 20.0  +10
SRIG                                 LR      LR
      comp=Z,2µm,20.0s
PKM   Mcpherson Peak   84.02  44   P      P        11 53 11.6 +0.8
      baz=226
FMP   Fort Macarthur   84.14  45   P      P        11 53 11.2   0.0
      baz=227
SMMC  Simmler          84.21  43   P      P        11 53 12.2 +0.6
      baz=226
109C  Camp Elliot, M   84.32  47   P      P        11 53 12.5 +0.3
      baz=228
CPE   Camp Elliot      84.32  47   PFAKE           11 53 20.0 +7.9
CPE                                  LR      LR
      comp=Z,1µm,20.0s
PAGB  Antelope Grade   84.35  43  eP      P        11 53 13.1 +0.8
      comp=Z,92nm,1.6s
PAGB                                 LR      LR
      comp=Z,2µm,20.0s
SAO   San Andreas Ge   84.38  41   PFAKE           11 53 20.0 +7.6
SAO                                  LR      LR
      comp=Z,2µm,19.0s
BAR   Barrett          84.45  47  eP      P        11 53 13.1 +0.2
      comp=Z,43nm,1.5s
BAR                                  LR      LR
      comp=Z,1µm,20.0s
UNV   Unalaska Valle   84.47   6   PFAKE           11 53 20.0 +7.6
UNV                                  LR      LR
      comp=Z,1µm,21.0s
DECC  Green Verdugo    84.48  45   P      P        11 53 12.8  -0.1
      baz=227
OSI   Osito Audit: C   84.49  44   PFAKE           11 53 20.0 +7.0
OSI                                  LR      LR
      comp=Z,1µm,19.0s
OSI   Osito Audit: C   84.49  44   P      P        11 53 13.6 +0.6
      baz=227
SKR   Severo-Kuril’s   84.50 343  eP      P        11 53 01.4  -11
SKR                                 e              11 56 23.8
SKR                                 eS       S     12 03 26.8  -10
SKR                                 eSS      SS    12 09 08.2  -0.9
SKR                                 eSSS     SSS   12 12 30.6
SKR                                  pmax    pmax
      comp=Z,300nm,4.6s
SKR                                  pmax    pmax
      comp=Z,300nm,13.2s
SKR                                  MLR     MLR
      comp=Z,600nm,18.0s
SKR                                  MLR     MLR
      comp=Z,600nm,19.0s
PASC  Pasadena Art C   84.51  45   PFAKE           11 53 20.0 +6.9
PASC                                 LR      LR
      comp=Z,1µm,20.0s
MCCM  Marconi Confer   84.56  39   PFAKE           11 53 20.0 +6.8
MCCM                                 LR      LR
      comp=Z,2µm,20.0s
MWC   Mount Wilson     84.62  45  eP      P        11 53 13.9   0.0
      comp=Z,48nm,1.3s
MWC                                  LR      LR
      comp=Z,1µm,19.0s
MWC   Mount Wilson     84.62  45  eP      P        11 53 13.9   0.0
MWC                                  pmax    pmax
      comp=Z,48nm,1.3s
MWC                                  MLR     MLR
      comp=Z,1µm,19.0s
MURC  Murrieta         84.74  46   P      P        11 53 14.7 +0.4
      baz=228,SNR=12
MONP2 Monument Peak    84.75  47   P      P        11 53 15.3 +0.7
      baz=228,SNR=12
ARVC  Arvin            84.77  44   P      P        11 53 15.0 +0.6
      baz=227
IKP   In-Ko-Pah, Jac   84.79  47   P      P        11 53 15.3 +0.6
      baz=229,SNR=6.1
AKUT  Akutan           84.83   6   PFAKE           11 53 30.0  +16
AKUT                                 LR      LR
      comp=Z,900nm,21.0s
BFSC  Mount Baldy Ra   84.88  45   P      P        11 53 15.6 +0.5
      baz=228,SNR=15
TJN   Taejon           85.04 318ceP       P        11 53 14.8  -0.9
HOPS  Hopland Field    85.07  39   PFAKE           11 53 30.0  +14
HOPS                                 LR      LR
      comp=Z,3µm,20.0s
GDXM  Geysers          85.08  39   PFAKE           11 53 30.0  +14
GDXM                                 LR      LR
      comp=Z,3µm,19.0s
EDW2  Edwards Air Fo   85.11  45   P      P        11 53 16.7 +0.5
      baz=227,SNR=17
VES   Vestal, Richgr   85.11  43   P      P        11 53 16.5 +0.4
      baz=227,SNR=15
SWSC  Sam W. Stewart   85.18  47   P      P        11 53 17.2 +0.7
      baz=229
PFO   Pinyon Flats O   85.20  46  eP      P        11 53 16.8   0.0
      comp=Z,53nm,1.3s
PFO                                  LR      LR
      comp=Z,1µm,18.0s
PFO   Pinyon Flats O   85.20  46  eP      P        11 53 16.8   0.0
PFO                                  pmax    pmax
      comp=Z,53nm,1.3s
PFO                                  MLR     MLR
      comp=Z,1µm,18.0s
PFO   Pinyon Flats O   85.20  46   P      P        11 53 17.7 +0.9
      baz=228,SNR=15
VOG   Valley Oaks Go   85.26  43   P      P        11 53 17.3 +0.5
      baz=226
KCPM  Cahto Peak       85.29  38   PFAKE           11 53 30.0  +13
KCPM                                 LR      LR
      comp=Z,3µm,20.0s
PEL   Peldehue         85.34 126  eP      P        11 53 18.4 +0.8
      comp=Z,83nm,0.9s
PEL   Peldehue         85.34 126  eP      P        11 53 18.4 +0.8
PEL                                  pmax    pmax
      comp=Z,83nm,0.9s
BBRC  Big Bear Solar   85.35  46   P      P        11 53 18.3 +0.7
      baz=228
ISA   Isabella, Lake   85.35  44  eP      P        11 53 17.5 +0.1
      comp=Z,85nm,1.3s
ISA                                  LR      LR
      comp=Z,2µm,19.0s
ISA   Isabella, Lake   85.35  44  eP      P        11 53 17.5 +0.1
ISA                                  pmax    pmax
      comp=Z,85nm,1.3s
ISA                                  MLR     MLR
      comp=Z,2µm,19.0s
ISA   Isabella, Lake   85.35  44   P      P        11 53 18.4 +1.1
      baz=227,SNR=20
KSRS  Korea Array      85.46 319   P      P        11 53 18.1 +0.3
      comp=Z,7.1nm,0.8s,baz=142,slow=5.7,SNR=23
KSRS                                 LR      LR    12 26 06.4
      comp=Z,519nm,21.6s,baz=132,slow=32
KS15  Wonju Array Si   85.47 319  eP      P        11 53 18.2 +0.4
      comp=Z,17nm,1.0s
YSS   Yuzh-Sakhalins   85.56 333  eP      P        11 53 18.6 +0.6
      comp=Z,42nm,0.9s
YSS                                  LR      LR
      comp=Z,3µm,22.0s
YSS   Yuzh-Sakhalins   85.56 333  eP      P        11 53 19.1 +1.1
YSS                                 e*SP     pP    11 53 24.4 +0.3
YSS                                 e              11 56 37.0
YSS                                 eS       S     12 03 48.3 +0.4
YSS                                  pmax    pmax
      comp=Z,40nm,0.9s
YSS                                  MLR     MLR
      comp=Z,400nm,18.0s
YSS                                  MLR     MLR
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	comp=N,300nm,15.0s						
KMRM	**Mail Ridge**	**85.61**	**38**	PFAKE		11 53 30.0	+11
KMRM				LR	LR		
	comp=Z,3µm,20.0s						
LRMC	**Laurel Mtn Rad**	**85.70**	**44**	P	**P**	**11 53 19.7**	**+0.5**
	baz=228,SNR=10						
RRX	**Edison Barstow**	**85.71**	**45**	P	**P**	**11 53 19.5**	**+0.4**
	baz=228						
BELC	**Belle Mtn. Jos**	**85.75**	**46**	P	**P**	**11 53 20.2**	**+0.7**
	baz=229,SNR=25						
BC3	**Big Chuckawall**	**85.86**	**47**	P	**P**	**11 53 21.1**	**+1.0**
	baz=229,SNR=22						
GLA	**Glamis**	**85.86**	**48**	PFAKE		11 53 30.0	+10
GLA				LR	LR		
	comp=Z,1µm,20.0s						
GLA	**Glamis**	**85.86**	**48**	P	**P**	**11 53 21.2**	**+1.2**
	baz=229,SNR=7.6						
CMB	**Columbia Colle**	**85.87**	**41**	*e*P	**P**	**11 53 19.9**	**0.0**
	comp=Z,29nm,1.0s						
CMB				LR	LR		
	comp=Z,2µm,19.0s						
CMB	**Columbia Colle**	**85.87**	**41**	*e*P	**P**	**11 53 19.9**	**0.0**
CMB				pmax	pmax		
	comp=Z,29nm,1.0s						
CMB				MLR	MLR		
	comp=Z,2µm,19.0s						
JCC	**Jacoby Creek,**	**85.88**	**37**	PFAKE		11 53 30.0	+10
JCC				LR	LR		
	comp=Z,2µm,20.0s						
HSIG		**85.89**	**53**	*e*P	**P**	**11 53 20.2**	**+0.1**
	comp=Z,39nm,1.1s						
HSIG				LR	LR		
	comp=Z,1µm,18.0s						
IPM	**Ipoh**	**86.02**	**278**	*e*P	**P**	**11 53 20.3**	**-0.9**
	comp=Z,23nm,1.1s						
IPM				LR	LR		
	comp=Z,1µm,22.0s						
PET	**Petropavlovsk**	**86.06**	**345**	PFAKE		11 53 30.0	+10
PET				LR	LR		
	comp=Z,900nm,19.0s						
PET	**Petropavlovsk**	**86.06**	**345**	*e*P	**P**	**11 53 18.2**	**-2.1**
PET				*e*S	**S**	**12 03 48.8**	**-3.7**
PET				*e*PS	**PnS**	**12 04 46.9**	**-5.8**
PET				*e*SS	**SS**	**12 09 31.9**	**-0.1**
PET				pmax	pmax		
	comp=Z,300nm,4.9s						
PET				pmax	pmax		
	comp=Z,200nm,12.9s						
O02D	**Mt. Diablo Mer**	**86.07**	**38**	P	**P**	**11 53 21.7**	**+0.9**
	baz=224,SNR=29						
KHMM	**Horse Mountain**	**86.08**	**37**	PFAKE		11 53 30.0	+9.0
KHMM				LR	LR		
	comp=Z,2µm,20.0s						
HEC	**Hector,Ludlow**	**86.08**	**46**	P	**P**	**11 53 21.3**	**+0.2**
	baz=228,SNR=5.2						
CWC	**Cottonwood Cre**	**86.11**	**43**	P	**P**	**11 53 21.8**	**+0.6**
	baz=227						
GSC	**Goldstone, Bar**	**86.11**	**45**	*e*P	**P**	**11 53 21.2**	**0.0**
	comp=Z,78nm,1.4s						
GSC				LR	LR		
	comp=Z,1µm,19.0s						
GSC	**Goldstone, Bar**	**86.11**	**45**	*e*P	**P**	**11 53 21.2**	**0.0**
GSC				pmax	pmax		
	comp=Z,78nm,1.4s						
GSC				MLR	MLR		
	comp=Z,1µm,19.0s						
GSC	**Goldstone, Bar**	**86.11**	**45**	P	**P**	**11 53 22.0**	**+0.8**
	baz=228,SNR=22						
PAYG	**Puerto Ayora**	**86.17**	**89**	PFAKE		11 53 30.0	+8.1
PAYG				LR	LR		
	comp=Z,2µm,20.0s						
AFDM	**Forest Hills D**	**86.18**	**40**	*e*P	**P**	**11 53 21.2**	**-0.1**
	comp=Z,29nm,1.1s						
AFDM				LR	LR		
	comp=Z,2µm,20.0s						
MPMC	**Manual Prospec**	**86.20**	**44**	P	**P**	**11 53 22.7**	**+0.9**
	baz=228,SNR=30						
DAC	**Darwin (Calif)**	**86.29**	**44**	*e*P	**P**	**11 53 22.4**	**+0.2**
	comp=Z,39nm,1.5s						
DAC				LR	LR		
	comp=Z,2µm,21.0s						
DAC	**Darwin (Calif)**	**86.29**	**44**	*e*P	**P**	**11 53 22.4**	**+0.2**
DAC				pmax	pmax		
	comp=Z,39nm,1.5s						
DAC				MLR	MLR		
	comp=Z,2µm,21.0s						
ORV	**Oroville**	**86.32**	**39**	PFAKE		11 53 30.0	+8.0
ORV				LR	LR		
	comp=Z,2µm,20.0s						
MDPB	**Devils Postpil**	**86.34**	**42**	PFAKE		11 53 30.0	+7.5
MDPB				LR	LR		
	comp=Z,2µm,20.0s						
PEA0B	**Petropavlovsk-**	**86.35**	**345**	*e*P	**P**	**11 53 22.3**	**+0.4**
	comp=Z,88nm,1.5s						
PEA0B				LR	LR		
	comp=Z,1µm,22.0s						
PETK	**Petropavlovsk-**	**86.35**	**345**	P	**P**	**11 53 22.5**	**+0.7**
	comp=Z,17nm,0.7s,baz=123,slow=7.1,SNR=43						
113A	**Mohawk Valley,**	**86.36**	**48**	*e*P	**P**	**11 53 23.1**	**+0.7**
	comp=Z,43nm,1.3s						
113A				LR	LR		
	comp=Z,2µm,20.0s						
OMMB	**Old Mammoth Mi**	**86.37**	**42**	*e*P	**P**	**11 53 22.8**	**+0.1**
	comp=Z,29nm,1.4s						
OMMB				LR	LR		
	comp=Z,2µm,20.0s						
IRM	**Iron Mountain**	**86.38**	**47**	P	**P**	**11 53 23.6**	**+1.1**
	baz=229,SNR=37						
TIN	**Tinemaha, Big**	**86.44**	**43**	P	**P**	**11 53 23.6**	**+0.8**
	baz=227						
QIZ	**Qiongzhong**	**86.44**	**294**	P	**P**	**11 53 24.8**	**+1.7**
QIZ				sS	**sS**	**12 04 04.8**	**-2.9**
QIZ				pmax	pmax		
	comp=Z,280nm,9.6s						
QIZ				LR	LR		
	comp=Z,240nm,24.5s						
QIZ				LR	LR		
	comp=Z,300nm,25.5s						
QIZ				LR	LR		
	comp=Z,810nm,30.4s						
214A	**Organ Pipe Nat**	**86.47**	**50**	P	**P**	**11 53 23.8**	**+0.8**
	baz=231,SNR=9.4						
GMRC	**Granite Mounta**	**86.47**	**46**	P	**P**	**11 53 23.6**	**+0.6**
	baz=229,SNR=16						
MLAC	**Mammoth, Mammo**	**86.48**	**42**	P	**P**	**11 53 23.5**	**+0.4**
	baz=227						
WDC	**Whiskeytown Da**	**86.49**	**38**	*e*P	**P**	**11 53 23.3**	**+0.5**
	comp=Z,58nm,1.2s						
WDC				LR	LR		
	comp=Z,2µm,20.0s						
WDC	**Whiskeytown Da**	**86.49**	**38**	*e*P	**P**	**11 53 23.3**	**+0.5**
WDC				pmax	pmax		
	comp=Z,58nm,1.2s						
WDC				MLR	MLR		
	comp=Z,2µm,20.0s						
Y12C	**Blythe**	**86.51**	**47**	*e*P	**P**	**11 53 23.2**	**+0.1**
	comp=Z,56nm,1.4s						
Y12C				LR	LR		
	comp=Z,1µm,22.0s						
Y12C	**Blythe**	**86.51**	**47**	P	**P**	**11 53 24.0**	**+1.0**
	baz=230,SNR=8.1						
TEY	**Ternei**	**86.61**	**329**	*e*P	**P**	**11 53 25.3**	**+2.1**
SDPT	**Sand Point**	**86.62**	**9**	*e*P	**P**	**11 53 22.7**	**-0.3**
	comp=Z,134nm,1.2s						
SDPT				LR	LR		
	comp=Z,800nm,20.0s						
O03E	**Paynes Creek**	**86.68**	**39**	P	**P**	**11 53 23.7**	**-0.2**
	baz=225,SNR=13						
N02D	**Trinity Center**	**86.69**	**38**	P	**P**	**11 53 25.0**	**+1.1**
	baz=224,SNR=12						
RUBR	**Rubicon Trail**	**86.71**	**40**	*e*P	**P**	**11 53 24.1**	**-0.1**
	comp=Z,52nm,1.2s						
RUBR				LR	LR		
	comp=Z,2µm,20.0s						
WAKR	**Walker**	**86.73**	**41**	*e*P	**P**	**11 53 23.9**	**-0.5**
	comp=Z,84nm,1.4s						
WAKR				LR	LR		
	comp=Z,2µm,19.0s						
TUQ	**Turquoise Moun**	**86.74**	**45**	P	**P**	**11 53 25.0**	**+0.7**
	baz=229,SNR=11						
KULM	**Kulim**	**86.75**	**278**	*e*P	**P**	**11 53 23.9**	**-0.8**
	comp=Z,40nm,1.2s						
KULM				LR	LR		
	comp=Z,1µm,20.0s						
SHOC	**Shoshone, Teco**	**86.83**	**45**	P	**P**	**11 53 25.2**	**+0.5**
	baz=228,SNR=18						
FURC	**Furnace Creek,**	**86.85**	**44**	P	**P**	**11 53 25.2**	**+0.5**
	baz=228,SNR=9.7						
GRAC	**Grapevine Rang**	**86.91**	**43**	P	**P**	**11 53 26.1**	**+1.1**
	baz=228,SNR=12						
M02C	**Callahan**	**86.91**	**37**	P	**P**	**11 53 26.1**	**+1.1**
	baz=224,SNR=8.5						
PSI	**Prapat**	**86.97**	**275**	P	**P**	**11 53 24.9**	**-1.0**
	comp=Z,5.8nm,0.4s,baz=180,slow=5.3,SNR=6.9						
PSI	**Prapat**	**86.97**	**275**	*e*P	**P**	**11 53 24.6**	**-1.4**
	comp=Z,35nm,1.1s						
PSI				LR	LR		
	comp=Z,2µm,22.0s						
PSI	**Prapat**	**86.97**	**275**	*e*P	**P**	**11 53 24.6**	**-1.4**
PSI				pmax	pmax		
	comp=Z,35nm,1.1s						
PSI				MLR	MLR		
	comp=Z,2µm,22.0s						
LDFC	**Landfair**	**87.01**	**46**	PFAKE		11 53 40.0	+14
LDFC				LR	LR		
	comp=Z,1µm,20.0s						
PNTR	**Pine Nut**	**87.05**	**41**	*e*P	**P**	**11 53 25.6**	**-0.3**
	comp=Z,46nm,0.9s						
PNTR				LR	LR		
	comp=Z,2µm,19.0s						
L02E	**Cave Junction**	**87.08**	**36**	P	**P**	**11 53 27.0**	**+1.3**
	baz=223						
PDMCI	**Parker Dam,Lak**	**87.11**	**47**	P	**P**	**11 53 26.8**	**+0.9**
	baz=230,SNR=9.6						
VCNR	**Virginia City**	**87.16**	**40**	*e*P	**P**	**11 53 26.4**	**0.0**
	comp=Z,24nm,1.0s						
VCNR				LR	LR		
	comp=Z,2µm,20.0s						
BEKR	**Beckworth**	**87.16**	**40**	PFAKE		11 53 40.0	+14
BEKR				LR	LR		
	comp=Z,2µm,20.0s						
YERR	**Yerington**	**87.18**	**41**	*e*P	**P**	**11 53 26.2**	**-0.2**
	comp=Z,56nm,1.3s						
YERR				LR	LR		
	comp=Z,2µm,19.0s						
KEBM	**Edson Butte**	**87.23**	**35**	PFAKE		11 53 40.0	+14
KEBM				LR	LR		
	comp=Z,2µm,20.0s						
YBH	**Yreka Blue Hor**	**87.23**	**37**	*e*P	**P**	**11 53 26.7**	**+0.2**
	comp=Z,9.4nm,0.8s						
YBH				LR	LR		
	comp=Z,2µm,20.0s						
YBH	**Yreka Blue Hor**	**87.23**	**37**	*e*P	**P**	**11 53 26.7**	**+0.2**
YBH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YBH				MLR	MLR		
	comp=Z,2µm,20.0s						
NVAR	**Mina Array Bea**	**87.33**	**42**	P	**P**	**11 53 27.8**	**+0.6**
	comp=Z,26nm,1.0s,baz=222,slow=8.1,SNR=96						
NVAR				LR	LR	12 26 49.9	
	comp=Z,2µm,19.1s,baz=227,slow=32						
RYN	**Ryan**	**87.34**	**42**	*e*P	**P**	**11 53 27.3**	**+0.1**
	comp=Z,43nm,1.4s						
RYN				LR	LR		
	comp=Z,2µm,19.0s						
GSI	**Gunungsitoli**	**87.37**	**273**	*e*P	**P**	**11 53 27.7**	**-0.1**
	comp=Z,56nm,0.8s						
NV11	**Mina Array Sit**	**87.42**	**42**	*e*P	**P**	**11 53 27.7**	**+0.1**
	comp=Z,3.8nm,1.3s						
NV11				LR	LR		
	comp=Z,200nm,19.0s						
K02D	**Willamette Mer**	**87.44**	**36**	P	**P**	**11 53 28.3**	**+0.9**
	baz=223						
NJ2	**Nanjing**	**87.51**	**310**	*e*P	**P**	**11 53 29.5**	**+1.6**
NJ2				SKS	**SKSac**	**12 03 51.6**	**-2.4**
NJ2				S	**ScS**	**12 04 12.1**	**-2.3**
NJ2				sS	**sS**	**12 04 21.3**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,26nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.8s						
NJ2				LR	LR		
	comp=Z,690nm,22.1s						
NJ2				LR	LR		
	comp=Z,690nm,22.1s						
NJ2				LR	LR		
	comp=Z,1µm,22.6s						
SPIA	**Saint Paul Isl**	**87.54**	**3**	PFAKE		11 53 40.0	+13
SPIA				LR	LR		
	comp=Z,2µm,22.0s						
TPNV	**Topopah Spring**	**87.54**	**44**	PFAKE		11 53 40.0	+12
TPNV				LR	LR		
	comp=Z,1µm,19.0s						
TPNV	**Topopah Spring**	**87.54**	**44**	P	**P**	**11 53 29.3**	**+1.0**
	baz=228,SNR=44						
PAHR	**Pah Rah Range**	**87.59**	**40**	*e*P	**P**	**11 53 28.2**	**-0.2**
	comp=Z,34nm,1.2s						
PAHR				LR	LR		
	comp=Z,2µm,19.0s						
Y14A	**Wickenburg**	**87.60**	**48**	*e*P	**P**	**11 53 28.2**	**-0.3**
	comp=Z,37nm,1.1s						
Y14A				LR	LR		
	comp=Z,1µm,20.0s						
LCO	**Las Campanas**	**87.61**	**122**	*e*P	**P**	**11 53 30.2**	**+1.1**
	comp=Z,72nm,1.6s						
J01E	**Myrtle Point**	**87.64**	**35**	P	**P**	**11 53 29.4**	**+1.1**
	baz=223						
M04C	**Macdoel**	**87.72**	**37**	P	**P**	**11 53 29.6**	**+0.7**
	baz=225						
HUMO	**Hull Mountain**	**87.73**	**36**	*e*P	**P**	**11 53 29.3**	**+0.5**
	comp=Z,53nm,1.6s						
HUMO				LR	LR		
	comp=Z,2µm,22.0s						
W13A	**Hualapai Mount**	**87.78**	**47**	PFAKE		11 53 40.0	+10
W13A				LR	LR		
	comp=Z,900nm,19.0s						
L04D	**Klamath Falls**	**87.79**	**37**	P	**P**	**11 53 29.6**	**+0.4**
	baz=224,SNR=6.8						
CHIA	**Chirikof Islan**	**87.84**	**11**	PFAKE		11 53 40.0	+11
CHIA				LR	LR		
	comp=Z,2µm,20.0s						
KVN	**Kaiserville**	**87.87**	**41**	*e*P	**P**	**11 53 29.4**	**-0.4**
	comp=Z,37nm,1.2s						
KVN				LR	LR		
	comp=Z,2µm,20.0s						
KVN	**Kaiserville**	**87.87**	**41**	*e*P	**P**	**11 53 29.4**	**-0.4**
KVN				pmax	pmax		
	comp=Z,37nm,1.2s						
KVN				MLR	MLR		
	comp=Z,2µm,20.0s						
SHPR	**Sheep Range**	**87.91**	**45**	*e*P	**P**	**11 53 30.1**	**+0.1**
	comp=Z,46nm,1.4s						
SHPR				LR	LR		
	comp=Z,1µm,19.0s						
TUC	**Tucson**	**88.03**	**50**	*e*P	**P**	**11 53 30.8**	**+0.2**
	comp=Z,76nm,1.4s						
TUC				LR	LR		
	comp=Z,700nm,20.0s						
TUC	**Tucson**	**88.03**	**50**	*e*P	**P**	**11 53 30.8**	**+0.2**
TUC				pmax	pmax		
	comp=Z,76nm,1.4s						
TUC				MLR	MLR		
	comp=Z,700nm,20.0s						
TUC	**Tucson**	**88.03**	**50**	P	**P**	**11 53 31.9**	**+1.3**
	baz=232						
USA0B	**Ussuriysk Arra**	**88.14**	**326**	*e*P	**P**	**11 53 31.0**	**+0.4**
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**88.14**	**326**	P	**P**	**11 53 32.0**	**+1.3**
	comp=Z,7.9nm,0.7s,baz=121,slow=3.9,SNR=19						
USRK				LR	LR	12 30 06.8	
	comp=Z,593nm,19.5s,baz=131,slow=34						
USRK	**Ussuriysk Ar.**	**88.14**	**326**	P	**P**	**11 53 32.0**	**+1.3**
I03D	**Drain, OR**	**88.32**	**35**	P	**P**	**11 53 32.3**	**+0.8**
	baz=224						
ZAIG	**Zacatecas**	**88.33**	**62**	*e*P	**P**	**11 53 31.9**	**-0.5**
	comp=Z,30nm,1.4s						
ZAIG				LR	LR		
	comp=Z,2µm,19.0s						
K04D	**Chiloquin, OR**	**88.36**	**37**	P	**P**	**11 53 32.2**	**+0.2**
	baz=225						
I02D	**Swisshome**	**88.37**	**35**	P	**P**	**11 53 32.4**	**+0.6**
	baz=223						
HPIG		**88.38**	**57**	*e*P	**P**	**11 53 32.4**	**-0.1**
	comp=Z,63nm,1.5s						
HPIG				LR	LR		
	comp=Z,4µm,18.0s						
319A	**Douglas**	**88.47**	**52**	*e*P	**P**	**11 53 32.8**	**0.0**
	comp=Z,43nm,1.0s						
319A				LR	LR		
	comp=Z,2µm,19.0s						
MOD	**Modoc Plateau**	**88.62**	**38**	PFAKE		11 53 40.0	+6.8
MOD				LR	LR		
	comp=Z,3µm,20.0s						
J04D	**Umpqua Nationa**	**88.62**	**36**	P	**P**	**11 53 33.6**	**+0.4**
	baz=224,SNR=8.7						
TLIG	**Tlapa**	**88.62**	**69**	PFAKE		11 53 50.0	+16
TLIG				LR	LR		
	comp=Z,2µm,20.0s						
SII	**Sitkinak Islan**	**88.77**	**12**	PFAKE		11 53 40.0	+6.6
SII				LR	LR		
	comp=Z,2µm,20.0s						
TYV	**Tymovskoe**	**88.82**	**335**	*e*P	**P**	**11 53 34.4**	**+0.7**
TYV				*e*		12 04 21.1	
TYV				pmax	pmax		
	comp=Z,400nm,4.2s						
TYV				pmax	pmax		
	comp=Z,28nm,1.7s						
R11A	**Troy Canyon, C**	**88.86**	**43**	*e*P	**P**	**11 53 34.1**	**-0.4**
	comp=Z,4.9nm,0.9s						
R11A				LR	LR		
	comp=Z,2µm,20.0s						
R11A	**Troy Canyon, C**	**88.86**	**43**	P	**P**	**11 53 34.8**	**+0.3**
	baz=229,SNR=14						
I04A	**Tendick Farm,**	**88.86**	**36**	P	**P**	**11 53 34.5**	**+0.4**
	baz=224,SNR=8.3						
X16A	**Lo Mia Camp, P**	**88.91**	**48**	*e*P	**P**	**11 53 35.1**	**+0.3**
	comp=Z,46nm,1.2s						
X16A				LR	LR		
	comp=Z,1µm,21.0s						
COR	**Corvallis**	**88.99**	**35**	PFAKE		11 53 50.0	+15
COR				LR	LR		
	comp=Z,2µm,19.0s						
J05D	**Fort Rock, OR**	**89.10**	**37**	P	**P**	**11 53 36.1**	**+0.7**
	baz=225,SNR=12						
H04D	**Lebanon**	**89.22**	**35**	P	**P**	**11 53 36.4**	**+0.6**
	baz=224,SNR=6.0						
BMN	**Battle Mountai**	**89.30**	**41**	*e*P	**P**	**11 53 36.3**	**-0.2**
	comp=Z,51nm,1.4s						
BMN				LR	LR		
	comp=Z,2µm,19.0s						
BMN	**Battle Mountai**	**89.30**	**41**	*e*P	**P**	**11 53 36.3**	**-0.2**
BMN				pmax	pmax		
	comp=Z,51nm,1.4s						
BMN				MLR	MLR		
	comp=Z,2µm,19.0s						
LCMT	**Little Creek M**	**89.41**	**45**	*e*P	**P**	**11 53 37.1**	**+0.1**
	comp=Z,38nm,1.1s						
G03D	**McMinnville, O**	**89.46**	**34**	P	**P**	**11 53 37.9**	**+1.1**
	baz=224						
OHAK	**Old Harbor**	**89.56**	**12**	PFAKE		11 53 50.0	+13
OHAK				LR	LR		
	comp=Z,2µm,20.0s						
PINE	**Pine Mountain**	**89.61**	**37**	*e*P	**P**	**11 53 37.6**	**-0.3**
	comp=Z,74nm,1.4s						
PINE				LR	LR		
	comp=Z,1µm,20.0s						
H04A	**Detroit Lake**	**89.61**	**35**	*e*P	**P**	**11 53 37.7**	**0.0**
	comp=Z,76nm,1.4s						
H04A				LR	LR		
	comp=Z,2µm,19.0s						
MDJ	**Mudanjiang**	**89.62**	**325**	PFAKE		11 53 50.0	+12
MDJ				LR	LR		
	comp=Z,900nm,20.0s						
U15A	**North Rim**	**89.63**	**46**	PFAKE		11 53 50.0	+12
U15A				LR	LR		
	comp=Z,800nm,20.0s						
WUAZ	**Wupatki**	**89.64**	**48**	*e*P	**P**	**11 53 38.1**	**0.0**
	comp=Z,48nm,1.0s						
WUAZ				LR	LR		
	comp=Z,1µm,20.0s						
WUAZ	**Wupatki**	**89.64**	**48**	P	**P**	**11 53 39.2**	**+1.1**
	baz=231						
WHN	**Wuhan**	**89.66**	**306**	P	**P**	**11 53 40.4**	**+2.2**
WHN				SKS	**SKSac**	**12 04 05.9**	**-1.0**
WHN				S	**ScS**	**12 04 32.5**	**+0.2**
WHN				LR	LR		
	comp=Z,380nm,10.0s						
WHN				LR	LR		
	comp=Z,1µm,19.0s						
WHN				LR	LR		
	comp=Z,2µm,19.0s						
I05D	**Terrebonne, OR**	**89.79**	**36**	P	**P**	**11 53 39.0**	**+0.5**
	baz=225,SNR=18						
WVOR	**Wild Horse Val**	**89.88**	**39**	*e*P	**P**	**11 53 38.8**	**-0.3**
	comp=Z,34nm,1.4s						
WVOR				LR	LR		
	comp=Z,3µm,20.0s						
WVOR	**Wild Horse Val**	**89.88**	**39**	*e*P	**P**	**11 53 38.8**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,34nm,1.4s						
WVOR				MLR	MLR		
	comp=Z,3µm,20.0s						
X18A	**Snowflake**	**89.94**	**49**	PFAKE		11 53 50.0	+10
X18A				LR	LR		
	comp=Z,1µm,19.0s						
PSUT	**Pine Spring**	**90.01**	**44**	*e*P	**P**	**11 53 40.2**	**+0.3**
	comp=Z,45nm,1.6s						
DL2	**Dalian**	**90.11**	**316**	P	**P**	**11 53 42.5**	**+2.5**
DL2				SKS	**SKSac**	**12 04 04.3**	**-4.8**
DL2				S	**S**	**12 04 33.4**	**+1.7**
DL2				SS	**SS**	**12 10 29.8**	**-1.7**
DL2				pmax	pmax		
	comp=Z,270nm,7.0s						
DL2				LR	LR		
	comp=Z,560nm,24.7s						
DL2				LR	LR		
	comp=Z,480nm,24.2s						
DL2				LR	LR		
	comp=Z,970nm,27.6s						
121A	**Cookes Peak, D**	**90.18**	**52**	P	**P**	**11 53 42.1**	**+1.3**
	baz=233						
F04D	**Rainier, OR**	**90.22**	**34**	P	**P**	**11 53 41.6**	**+1.2**
	baz=224,SNR=6.3						
KDAK	**Kodiak Island**	**90.22**	**12**	PFAKE		11 53 50.0	+10
KDAK				LR	LR		
	comp=Z,2µm,19.0s						
W18A	**Petrified Fore**	**90.44**	**49**	PFAKE		11 53 50.0	+8.0
W18A				LR	LR		
	comp=Z,1µm,20.0s						
G05D	**Wamic, OR**	**90.44**	**35**	P	**P**	**11 53 42.2**	**+0.6**
	baz=225,SNR=8.5						
I07A	**Izee**	**90.55**	**37**	*e*P	**P**	**11 53 42.5**	**+0.3**
I07A				LR	LR		
	comp=Z,1µm,20.0s						
GO02	**Mina Guanaco**	**90.57**	**120**	*e*P	**P**	**11 53 43.3**	**+0.2**
	comp=Z,15nm,0.9s						
J08A	**Circle Bar Ran**	**90.60**	**38**	PFAKE		11 53 50.0	+7.6
J08A				LR	LR		
	comp=Z,3µm,20.0s						
ELK	**Elko**	**90.64**	**42**	PFAKE		11 53 50.0	+7.2
ELK				LR	LR		
	comp=Z,2µm,19.0s						
MTPU	**Mount Pierson**	**90.71**	**45**	*e*P	**P**	**11 53 43.6**	**+0.2**
	comp=Z,41nm,1.1s						
NLWA	**Neilton Lookou**	**90.76**	**33**	*e*P	**P**	**11 53 43.5**	**+0.6**
	comp=Z,48nm,1.1s						
NLWA				LR	LR		
	comp=Z,2µm,20.0s						
E04D	**Cinebar**	**90.77**	**34**	P	**P**	**11 53 43.8**	**+0.9**
	baz=224,SNR=14						
F05D	**White Salmon**	**90.83**	**35**	P	**P**	**11 53 43.7**	**+0.4**
	baz=225						
SNY	**Shenyang**	**90.89**	**320**	⇑P	**P**	**11 53 44.8**	**+1.2**
SNY				S	**S**	**12 04 42.8**	**+4.0**
SNY				pmax	pmax		
	comp=Z,25nm,0.8s						
SNY				pmax	pmax		
	comp=Z,240nm,3.8s						
SNY				LR	LR		
	comp=Z,450nm,20.1s						
SNY				LR	LR		
	comp=Z,230nm,19.9s						
SNY				LR	LR		
	comp=Z,990nm,21.6s						
D04E	**Lakebay**	**91.12**	**33**	P	**P**	**11 53 45.9**	**+1.4**
	baz=224,SNR=6.5						
GRNR	**Gornyy**	**91.12**	**332**	*e*P	**P**	**11 53 46.9**	**+2.4**
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
CN2	**Changchun**	**91.19**	**322**	*e*P	**P**	**11 53 46.3**	**+1.3**
CN2				*e*sP	sP	11 53 53.4	0.0
CN2				SKS	**SKSac**	**12 04 15.8**	**+0.6**
CN2				*e*S	**S**	**12 04 42.0**	**+0.5**
CN2				SS	**SS**	**12 10 50.0**	**+2.9**
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,8.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						

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CN2                                LR     LR
      comp=Z,600nm,22.0s
TIA   Tai'an            91.20 312  P      P       11 53 46.8 +1.6
TIA                                pmax   pmax
      comp=Z,50nm,0.8s
TXAR  Lajitas Array     91.20  56  P      P       11 53 46.4 +0.9
      comp=Z,14nm,1.0s,baz=211,slow=6.0,SNR=71
TXAR                               PKKP   PKKPbc  12 11 09.8 +1.5
      comp=Z,0.4nm,0.8s,baz=72,slow=4.1,SNR=4.1
TXAR                               LR     LR      12 28 59.3
      comp=Z,2µm,18.4s,baz=0.0,slow=32
D03D  Eldon             91.23  33  P      P       11 53 45.9 +0.9
      baz=224,SNR=12
LON   Longmire          91.27  34 eP      P       11 53 45.4  0.0
      comp=Z,48nm,1.5s
LON                                LR     LR
      comp=Z,1µm,20.0s
LON   Longmire          91.27  34 eP      P       11 53 45.4  0.0
LON                                pmax   pmax
      comp=Z,48nm,1.5s
LON                                MLR    MLR
      comp=Z,1µm,20.0s
MNTX  Cornudas Mount    91.34  54 eP      P       11 53 46.2 +0.2
      comp=Z,26nm,1.3s
MNTX                               LR     LR
      comp=Z,900nm,18.0s
MNTX  Cornudas Mount    91.34  54  P      P       11 53 46.4 +0.4
      baz=235
LVIG  Laguna Verde      91.49  68  PFAKE          11 54 00.0  +13
LVIG                               LR     LR
      comp=Z,1µm,19.0s
D05A  Enumclaw          91.50  34 eP      P       11 53 46.8 +0.5
      comp=Z,139nm,1.3s
D05A                               LR     LR
      comp=Z,800nm,20.0s
G08A  Pilot Rock        91.67  36 eP      P       11 53 47.3 -0.1
      comp=Z,42nm,1.0s
G08A                               LR     LR
      comp=Z,1µm,20.0s
Y22D  IRIS PASSCAL I    91.67  51  PFAKE          11 54 00.0  +12
Y22D                               LR     LR
      comp=Z,1µm,19.0s
Y22D  IRIS PASSCAL I    91.67  51  P      P       11 53 48.2 +0.5
      baz=234
DIB   Dawson Inlet,     91.68  25 eP      P       11 53 47.7 +0.7
      comp=Z,35nm,1.1s
DIB                                LR     LR
      comp=Z,1µm,19.0s
DUG   Dugway, Tooele    91.69  43  PFAKE          11 54 00.0  +12
DUG                                LR     LR
      comp=Z,2µm,20.0s
DUG   Dugway, Tooele    91.69  43  P      P       11 53 47.9 +0.3
      baz=230
MOBC  Moresby Island    91.81  25  PFAKE          11 54 00.0  +12
MOBC                               LR     LR
      comp=Z,1µm,20.0s
LNIG  Linares           91.86  62  PFAKE          11 54 00.0  +11
LNIG                               LR     LR
      comp=Z,2µm,19.0s
PGC   Sidney            91.87  32  PFAKE          11 54 00.0  +12
PGC                                LR     LR
      comp=Z,1µm,21.0s
BNM   Barren Site       91.91  51 eP      P       11 53 48.5 -0.4
KLR   Kul'dur           91.95 329c iP     P       11 53 49.6 +1.3
KLR                                pmax   pmax
      comp=Z,6.0nm,0.9s
MFID  Camas Ranch       92.06  39 eP      P       11 53 48.7 -0.5
      comp=Z,24nm,0.9s
MFID                               LR     LR
      comp=Z,1µm,22.0s
CNPM  China Poot        92.11  12  PFAKE          11 54 00.0  +11
CNPM                               LR     LR
      comp=Z,2µm,22.0s
HAWA  Hanford           92.14  35 eP      P       11 53 49.4 +0.1
      comp=Z,35nm,1.0s
HAWA                               LR     LR
      comp=Z,2µm,19.0s
HOM   Homer             92.16  12  PFAKE          11 54 00.0  +11
HOM                                LR     LR
      comp=Z,2µm,19.0s
LTY   Liberty           92.18  34  PFAKE          11 54 00.0  +10
LTY                                LR     LR
      comp=Z,1µm,20.0s
B05A  Bryant            92.22  33  P      P       11 53 50.2 +0.7
      baz=224,SNR=11
BMO   Blue Mountains    92.23  38  PFAKE          11 54 00.0  +10
BMO                                LR     LR
      comp=Z,2µm,19.0s
A04D  Lummi Island      92.26  32  P      P       11 53 50.8 +1.0
      baz=224
MPU   Maple Canyon      92.28  44 eP      P       11 53 50.0 -0.4
      comp=Z,7.4nm,0.9s
BRLK  Bradley Lake      92.39  13  PFAKE          11 54 00.0  +10
BRLK                               LR     LR
      comp=Z,2µm,22.0s
E08A  Dider Farm, El    92.44  36  PFAKE          11 54 00.0 +9.3
E08A                               LR     LR
      comp=Z,2µm,20.0s
ANMO  Albuquerque       92.49  50 eP      P       11 53 51.6 +0.1
      comp=Z,18nm,1.0s
ANMO                               LR     LR
      comp=Z,2µm,22.0s
ANMO  Albuquerque       92.49  50ceP      P       11 53 51.6 +0.1
ANMO                               pmax   pmax
      comp=Z,14nm,1.0s
ANMO  Albuquerque       92.49  50  P      P       11 53 52.0 +0.5
      baz=234
MVCO  Mesa Verde        92.50  48  PFAKE          11 54 00.0 +8.4
MVCO                               LR     LR
      comp=Z,1µm,19.0s
MVCO  Mesa Verde        92.50  48  P      P       11 53 52.4 +0.9
      baz=233
LVC   Limon Verde       92.52 118 eP      P       11 53 53.4 +1.1
      comp=Z,28nm,1.1s
LVC   Limon Verde       92.52 118 eP      P       11 53 53.4 +1.1
LVC                                pmax   pmax
      comp=Z,28nm,1.1s
BBB   Bella Bella       92.53  27  PFAKE          11 54 00.0 +9.1
BBB                                LR     LR
      comp=Z,1µm,20.0s
PV10  Paradox Valley    92.86  47  PFAKE          11 54 00.0 +6.8
PV10                               LR     LR
      comp=Z,1µm,18.0s
SVW2  Sparrevohn        92.87  10  PFAKE          11 54 00.0 +7.7
SVW2                               LR     LR
      comp=Z,700nm,20.0s
PV18  Skein Mesa, Pa    92.87  47  PFAKE          11 54 00.0 +6.8
PV18                               LR     LR
      comp=Z,900nm,20.0s
PV13  Radium Mtn., P    92.87  47  PFAKE          11 54 00.0 +6.8
PV13                               LR     LR
      comp=Z,1µm,21.0s
D08A  Wollman Farm,     92.90  35  PFAKE          11 54 00.0 +7.2
D08A                               LR     LR
      comp=Z,2µm,19.0s
PV16  Nyswonger Mesa    92.90  47  PFAKE          11 54 00.0 +6.7
PV16                               LR     LR
      comp=Z,900nm,20.0s
E09A  Wood Farm, Sta    92.92  36  PFAKE          11 54 00.0 +7.1
E09A                               LR     LR
      comp=Z,2µm,20.0s
PV23  Carpenter Ridg    92.93  46  PFAKE          11 54 00.0 +6.5
PV23                               LR     LR
      comp=Z,700nm,20.0s
HLID  Hailey            92.94  40 eP      P       11 53 53.5 +0.2
      comp=Z,18nm,0.9s
HLID                               LR     LR
      comp=Z,900nm,22.0s
HLID  Hailey            92.94  40  P      P       11 53 54.0 +0.7
      baz=230
PV02  Paradox Valley    92.95  47  PFAKE          11 54 00.0 +6.4
PV02                               LR     LR
      comp=Z,5µm,21.0s
GYA   Guiyang           92.95 299⇑iP      P       11 53 55.3 +1.6
GYA                                SKS    SKSac   12 04 25.0 -1.2
GYA                                S      S       12 04 57.6 -0.7
GYA                                SS     SS      12 11 11.0 -2.3
GYA                                pmax   pmax
      comp=Z,40nm,1.0s
GYA                                pmax   pmax
      comp=Z,140nm,6.9s
GYA                                LR     LR
      comp=Z,380nm,24.7s
GYA                                LR     LR
      comp=Z,300nm,22.3s
GYA                                LR     LR
      comp=Z,710nm,22.8s
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PV04  Paradox Valley    92.96  47  PFAKE          11 54 00.0 +6.4
PV04                               LR     LR
      comp=Z,1µm,19.0s
PB01  IPOC Station P    92.96 116 eP      P       11 53 54.6 +0.6
      comp=Z,30nm,1.1s
PV12  Saucer Basin,     92.98  47  PFAKE          11 54 00.0 +6.3
PV12                               LR     LR
      comp=Z,1µm,19.0s
SEW   Seward            92.98  13  PFAKE          11 54 00.0 +7.2
SEW                                LR     LR
      comp=Z,1µm,20.0s
PV01  Paradox Valley    93.01  47 eP      P       11 53 53.3 -0.6
      comp=Z,14nm,1.0s
PV01                               LR     LR
      comp=Z,1µm,20.0s
F10A  Beach Ranch, E    93.03  37  PFAKE          11 54 00.0 +6.5
F10A                               LR     LR
      comp=Z,1µm,20.0s
PV22  Blue Mesa, Par    93.12  46  PFAKE          11 54 10.0  +16
PV22                               LR     LR
      comp=Z,1µm,22.0s
CCIG  Comitan           93.20  73  PFAKE          11 54 10.0  +15
CCIG                               LR     LR
      comp=Z,2µm,20.0s
HWUT  Hardware Ranch    93.32  43  PFAKE          11 54 10.0  +15
HWUT                               LR     LR
      comp=Z,2µm,19.0s
PB11  IPOC Station P    93.55 115 eP      P       11 53 57.9 +1.1
      comp=Z,58nm,0.9s
PB11                               LR     LR
      comp=Z,2µm,20.0s
B08A  Colville Reser    93.60  34  PFAKE          11 54 10.0  +14
B08A                               LR     LR
      comp=Z,900nm,22.0s
C09A  Chrisman Ranch    93.73  35  PFAKE          11 54 10.0  +13
C09A                               LR     LR
      comp=Z,2µm,19.0s
833A  Chaparral WMA,    93.76  59  P      P       11 53 57.1 -0.2
      baz=237
RC01  Rabbit Creek A    93.84  13  PFAKE          11 54 10.0  +13
RC01                               LR     LR
      comp=Z,1µm,22.0s
SIT   Sitka             93.87  21  PFAKE          11 54 10.0  +13
SIT                                LR     LR
      comp=Z,600nm,19.0s
S22A  4UR Ranch, Cre    93.89  48  P      P       11 53 58.4 +0.4
      baz=234
GO01  Chusmiza          93.96 115 eP      P       11 53 59.1  0.0
      comp=Z,20nm,1.4s
GO01                               LR     LR
      comp=Z,2µm,18.0s
LLLB  Lillooet          93.99  31  PFAKE          11 54 10.0  +12
LLLB                               LR     LR
      comp=Z,1µm,20.0s
GLI   Glacier Island    94.17  14  PFAKE          11 54 10.0  +12
GLI                                LR     LR
      comp=Z,1µm,22.0s
FID   Port Fidalgo      94.18  14  PFAKE          11 54 10.0  +12
FID                                LR     LR
      comp=Z,2µm,22.0s
RAGM  Ragged Mountai    94.24  15  PFAKE          11 54 10.0  +11
RAGM                               LR     LR
      comp=Z,2µm,20.0s
HMT   Hamilton          94.29  15  PFAKE          11 54 10.0  +11
HMT                                LR     LR
      comp=Z,2µm,20.0s
WRAK  Wrangell Islan    94.31  23  PFAKE          11 54 10.0  +11
WRAK                               LR     LR
      comp=Z,900nm,20.0s
AHID  Auburn Hatcher    94.31  42  PFAKE          11 54 10.0  +10
AHID                               LR     LR
      comp=Z,2µm,20.0s
KNK   Knik Glacier      94.38  13  PFAKE          11 54 10.0  +11
KNK                                LR     LR
      comp=Z,1µm,22.0s
O20A  White River Ci    94.42  45  PFAKE          11 54 10.0  +10
O20A                               LR     LR
      comp=Z,800nm,18.0s
O20A  White River Ci    94.42  45  P      P       11 54 00.2  0.0
      baz=233
PMR   Palmer            94.42  13  PFAKE          11 54 10.0  +11
PMR                                LR     LR
      comp=Z,1µm,22.0s
MSTX  Muleshoe          94.43  53 eP      P       11 54 00.1 -0.3
      comp=Z,15nm,0.8s
MSTX                               LR     LR
      comp=Z,2µm,20.0s
MSTX  Muleshoe          94.43  53  P      P       11 54 00.2 -0.2
      baz=236
TTA   Tatalina          94.56   9 eP      P       11 53 59.8 -0.3
      comp=Z,19nm,1.2s
TTA                                LR     LR
      comp=Z,900nm,21.0s
TTA   Tatalina          94.56   9 eP      P       11 53 59.8 -0.3
TTA                                pmax   pmax
      comp=Z,19nm,1.2s
TTA                                MLR    MLR
      comp=Z,900nm,21.0s
MCMT  McKenzie Canyo    94.61  40 eP      P       11 54 01.2 +0.1
NEW   Newport           94.61  35  PFAKE          11 54 10.0 +9.3
NEW                                LR     LR
      comp=Z,2µm,20.0s
NEW   Newport           94.61  35  P      P       11 54 00.9 +0.1
      baz=228
JCT   Junction City     94.62  57 eP      P       11 54 01.1 -0.1
      comp=Z,15nm,1.0s
JCT                                LR     LR
      comp=Z,3µm,18.0s
JCT   Junction City     94.62  57 eP      P       11 54 01.1 -0.1
JCT                                pmax   pmax
      comp=Z,15nm,1.0s
JCT                                MLR    MLR
      comp=Z,3µm,18.0s
JCT   Junction City     94.62  57  P      P       11 54 00.8 -0.4
      baz=237
SDCO  Great Sand Dun    94.75  49 eP      P       11 54 01.6 -0.4
      comp=Z,12nm,1.4s
SDCO                               LR     LR
      comp=Z,800nm,20.0s
SDCO  Great Sand Dun    94.75  49  P      P       11 54 02.2 +0.2
      baz=235,SNR=8.2
SML   Sawmill           94.77  13  PFAKE          11 54 10.0 +8.9
SML                                LR     LR
      comp=Z,1µm,22.0s
TPAW  Teton Pass        94.84  42 eP      P       11 54 02.6 +0.4
      comp=Z,38nm,1.5s
TPAW                               LR     LR
      comp=Z,1µm,19.0s
CMAR  Chiang Mai Arr    94.89 288  P      P       11 54 04.1 +1.5
      comp=Z,0.7nm,0.4s,baz=152,slow=4.1,SNR=6.2
CMAR                               PKKP   PKKPdf  12 11 00.1 +1.8
      comp=Z,0.5nm,0.3s,baz=290,slow=3.7,SNR=4.6
CMAR                               LR     LR      12 40 27.1
      comp=Z,126nm,18.6s,baz=156,slow=38
CRQM  Cirque            94.92  16  PFAKE          11 54 10.0 +8.0
CRQM                               LR     LR
      comp=Z,2µm,20.0s
SNOW  Snow King Moun    94.94  42  PFAKE          11 54 10.0 +7.4
SNOW                               LR     LR
      comp=Z,1µm,20.0s
SCM   Sheep Creek Mo    94.99  13 eP      P       11 54 02.2 +0.1
      comp=Z,21nm,1.0s
SCM                                LR     LR
      comp=Z,1µm,20.0s
SCM   Sheep Creek Mo    94.99  13 eP      P       11 54 02.2 +0.1
SCM                                pmax   pmax
      comp=Z,21nm,1.0s
SCM                                MLR    MLR
      comp=Z,1µm,20.0s
TGL   Tana Glacier      95.00  16  PFAKE          11 54 10.0 +7.8
TGL                                LR     LR
      comp=Z,2µm,20.0s
PCA   Pinnacle          95.05  17  PFAKE          11 54 10.0 +7.5
PCA                                LR     LR
      comp=Z,1µm,20.0s
BCPM  Bancas Point      95.08  18  PFAKE          11 54 10.0 +7.5
BCPM                               LR     LR
      comp=Z,1µm,20.0s
DLMT  Dillon            95.09  39  PFAKE          11 54 10.0 +6.9
DLMT                               LR     LR
      comp=Z,1µm,20.0s
PPLA  Purkeypile        95.10  11  PFAKE          11 54 10.0 +7.3
PPLA                               LR     LR
      comp=Z,2µm,20.0s
IMW   Indian Meadow     95.10  41  PFAKE          11 54 10.0 +6.6
IMW                                LR     LR
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      comp=Z,1µm,20.0s
T25A  Trinidad          95.11  50  P      P       11 54 03.7 +0.2
      baz=235,SNR=5.5
LOHW  Long Hollow       95.12  42  PFAKE          11 54 10.0 +6.6
LOHW                               LR     LR
      comp=Z,2µm,21.0s
MOOW  Moose Ponds       95.12  41  PFAKE          11 54 10.0 +6.6
MOOW                               LR     LR
      comp=Z,1µm,19.0s
JIS   Juneau Island     95.16  21  PFAKE          11 54 10.0 +7.1
JIS                                LR     LR
      comp=Z,600nm,20.0s
ANM   Nome              95.19   5  PFAKE          11 54 10.0 +7.1
ANM                                LR     LR
      comp=Z,1µm,22.0s
BW06  Boulder Array     95.21  43 eP      P       11 54 03.5 -0.3
      comp=Z,6.1nm,1.0s
BW06                               LR     LR
      comp=Z,2µm,19.0s
BW06  Boulder Array     95.21  43  P      P       11 54 03.5 -0.3
      baz=233
PDAR  Pinedale Array    95.21  43  P      P       11 54 03.8 -0.1
      comp=Z,3.9nm,0.9s,baz=206,slow=3.9,SNR=24
PDAR                               PKKP   PKKPdf  12 10 59.0 -0.3
      comp=Z,0.9nm,0.7s,baz=68,slow=4.0,SNR=6.6
KMI   Kunming           95.25 296  PFAKE          11 54 20.0  +16
KMI                                LR     LR
      comp=Z,400nm,22.0s
KMI   Kunming           95.25 296  P      P       11 54 06.8 +2.3
KMI                                pP     pP      11 54 11.3 +0.5
KMI                                sP     sP      11 54 13.5 +0.6
KMI                                PP     PP      11 57 54.3 -0.8
KMI                                SKS    SKSac   12 04 40.4 +1.4
KMI                                S      S       12 05 18.9 +0.1
KMI                                SS     SS      12 11 51.3 +4.9
KMI                                pmax   pmax
      comp=Z,8.0nm,1.6s
KMI                                pmax   pmax
      comp=Z,80nm,3.3s
KMI                                LR     LR
      comp=Z,460nm,20.0s
KMI                                LR     LR
      comp=Z,540nm,18.7s
KMI                                LR     LR
      comp=Z,600nm,22.0s
BESE  Bessie Mountai    95.27  20  PFAKE          11 54 10.0 +6.5
BESE                               LR     LR
      comp=Z,500nm,19.0s
MSO   Missoula          95.30  38 eP      P       11 54 03.2 -0.8
      comp=Z,7.2nm,1.1s
MSO                                LR     LR
      comp=Z,2µm,20.0s
MSO   Missoula          95.30  38  P      P       11 54 03.5 -0.5
      baz=230
FLWY  Flagg Ranch       95.35  41  PFAKE          11 54 20.0  +16
FLWY                               LR     LR
      comp=Z,2µm,19.0s
QLMT  Earthquake Lak    95.40  40 eP      P       11 54 04.5 -0.1
XAN   Xi'an             95.43 306  P      P       11 54 09.3 +4.5
XAN                                pmax   pmax
      comp=Z,4.0nm,1.0s
XAN                                pmax   pmax
      comp=Z,120nm,6.7s
CTGM  Chitina Glacie    95.53  16  PFAKE          11 54 20.0  +15
CTGM                               LR     LR
      comp=Z,1µm,20.0s
YMR   Madison River     95.56  41 eP      P       11 54 05.2 -0.2
      comp=Z,25nm,1.0s
CAST  Castle Rocks      95.61  11  PFAKE          11 54 20.0  +15
CAST                               LR     LR
      comp=Z,1µm,20.0s
H17A  Grant Village     95.61  41 eP      P       11 54 05.8 +0.1
      comp=Z,17nm,1.3s
H17A                               LR     LR
      comp=Z,1µm,20.0s
H17A  Grant Village     95.61  41  P      P       11 54 06.7 +1.0
      baz=232
Q24A  Divide            95.67  48  P      P       11 54 06.2 +0.1
      baz=235
AMTX  Amarillo          95.69  53  PFAKE          11 54 20.0  +14
AMTX                               LR     LR
      comp=Z,1µm,19.0s
BOZ   Bozeman (W)       95.77  40 eP      P       11 54 05.9 -0.3
      comp=Z,18nm,0.9s
BOZ                                LR     LR
      comp=Z,1µm,22.0s
BOZ   Bozeman (W)       95.77  40 eP      P       11 54 05.9 -0.3
BOZ                                pmax   pmax
      comp=Z,19nm,0.9s
BOZ                                MLR    MLR
      comp=Z,1µm,22.0s
BOZ   Bozeman (W)       95.77  40  P      P       11 54 06.5 +0.3
      baz=232,SNR=38
LKWY  Lake              95.82  41  PFAKE          11 54 20.0  +13
LKWY                               LR     LR
      comp=Z,2µm,20.0s
SKAG  Skagway           95.85  20  PFAKE          11 54 20.0  +14
SKAG                               LR     LR
      comp=Z,500nm,20.0s
ABTX  Abilene, Hawle    95.89  56 eP      P       11 54 06.2 -0.8
      comp=Z,12nm,1.1s
ABTX                               LR     LR
      comp=Z,2µm,19.0s
ABTX  Abilene, Hawle    95.89  56  P      P       11 54 06.7 -0.2
      baz=238
KTH   Kantishna Hill    95.92  11  PFAKE          11 54 20.0  +14
KTH                                LR     LR
      comp=Z,2µm,20.0s
RWWY  Rawlins           95.96  45 eP      P       11 54 06.4 -1.0
      comp=Z,19nm,1.3s
RWWY                               LR     LR
      comp=Z,1µm,22.0s
DHY   Denali Highway    96.11  13  PFAKE          11 54 20.0  +13
DHY                                LR     LR
      comp=Z,900nm,20.0s
TGUH  Tegucigalpa,Un    96.14  77  PFAKE          11 54 20.0  +11
TGUH                               LR     LR
      comp=Z,2µm,20.0s
RND   Reindeer          96.14  12 eP      P       11 54 07.1 -0.3
      comp=Z,14nm,0.9s
RND   Reindeer          96.14  12 eP      P       11 54 07.1 -0.3
RND                                pmax   pmax
      comp=Z,14nm,0.9s
JTS   Las Juntas de     96.25  82  PFAKE          11 54 20.0  +11
JTS                                LR     LR
      comp=Z,2µm,20.0s
JTS   Las Juntas de     96.25  82 i P     P       11 54 08.9 -0.1
JTS                                pmax   pmax
      comp=Z,10.0nm,1.0s
N23A  Red Feather La    96.28  46  P      P       11 54 08.7 -0.1
      baz=235
HRY   Holter Researc    96.35  39 eP      P       11 54 09.1 +0.3
HYT   Haines Junctio    96.39  18  PFAKE          11 54 20.0  +11
HYT                                LR     LR
      comp=Z,800nm,20.0s
PAX   Paxson            96.39  14  PFAKE          11 54 20.0  +11
PAX                                LR     LR
      comp=Z,1µm,20.0s
435B  Jarrell           96.40  58  P      P       11 54 09.8 +0.5
      baz=238
BPAW  Bear Paw Mtn.     96.42  11  PFAKE          11 54 20.0  +11
BPAW                               LR     LR
      comp=Z,1µm,20.0s
MCK   McKinley          96.43  12  PFAKE          11 54 20.0  +11
MCK                                LR     LR
      comp=Z,2µm,22.0s
ESTN  Estel             96.43  79  PFAKE          11 54 20.0  +10
ESTN                               LR     LR
      comp=Z,900nm,22.0s
SEY   Seymchan          96.48 346 i P     P       11 54 08.9 +0.1
DLBC  Dease Lake        96.67  22  PFAKE          11 54 20.0  +10
DLBC                               LR     LR
      comp=Z,700nm,19.0s
LPAZ  La Paz            96.69 113  P      P       11 54 13.7 +1.9
      comp=Z,7.1nm,0.9s,baz=222,slow=2.2,SNR=23
LPAZ                               LR     LR      12 28 59.6
      comp=Z,607nm,21.5s,baz=228,slow=30
LPAZ  La Paz            96.69 113 eP      P       11 54 12.1 +0.3
      comp=Z,11nm,1.1s
LPAZ  La Paz            96.69 113 eP      P       11 54 12.1 +0.3
LPAZ                               pmax   pmax
      comp=Z,11nm,1.1s
MENT  Mentasta          96.73  14 eP      P       11 54 10.4 +0.4
      comp=Z,7.2nm,1.1s
MENT                               LR     LR
      comp=Z,1µm,21.0s
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BWN	**Browne**	**96.74**	**11**	PFAKE		11 54 20.0	+10
BWN				LR	LR		
	comp=Z,2µm,20.0s						
RLMT	**Red Lodge**	**96.80**	**41**	*e*P	**P**	**11 54 11.1**	**+0.1**
	comp=Z,10nm,1.2s						
RLMT				LR	LR		
	comp=Z,1µm,19.0s						
RLMT	**Red Lodge**	**96.80**	**41**	P	**P**	**11 54 11.7**	**+0.7**
	baz=233,SNR=7.0						
PHWY	**Pilot Hill**	**96.81**	**46**	PFAKE		11 54 20.0	+8.7
PHWY				LR	LR		
	comp=Z,600nm,19.0s						
ACON	**Acoyapa**	**96.89**	**80**	PFAKE		11 54 20.0	+8.2
ACON				LR	LR		
	comp=Z,500nm,18.0s						
K22A	**Casper**	**96.94**	**44**	*e*P	**P**	**11 54 12.0**	**+0.3**
	comp=Z,11nm,0.9s						
K22A				LR	LR		
	comp=Z,2µm,18.0s						
K22A	**Casper**	**96.94**	**44**	P	**P**	**11 54 11.3**	**-0.4**
	baz=235,SNR=6.0						
WHY	**Whitehorse**	**96.97**	**19**	PFAKE		11 54 20.0	+8.8
WHY				LR	LR		
	comp=Z,500nm,20.0s						
GCMT	**Greycliff**	**96.97**	**40**	*e*P	**P**	**11 54 11.9**	**+0.2**
WHTX	**Lake Whitney,**	**97.13**	**57**	PFAKE		11 54 20.0	+7.4
WHTX				LR	LR		
	comp=Z,3µm,19.0s						
WHTX	**Lake Whitney,**	**97.13**	**57**	P	**P**	**11 54 11.9**	**-0.7**
	baz=238						
ZEA	**Zeya**	**97.13**	**330**	*e*P	Pdif	11 54 18.6	+6.5
ZEA				*e*S	**SKSac**	**12 04 48.0**	**+1.0**
ZEA				*e*		12 06 53.0	
ZEA				pmax	pmax		
	comp=Z,18nm,1.4s						
ZEA				smax	smax		
	comp=E,300nm,11.0s						
ZEA				smax	smax		
	comp=N,400nm,12.0s						
WRH	**Wood River Hil**	**97.26**	**12**	*e*P	**P**	**11 54 12.1**	**-0.2**
	comp=N,18nm,1.0s						
WRH				LR	LR		
	comp=Z,1µm,22.0s						
HKT	**Hockley**	**97.27**	**60**	PFAKE		11 54 20.0	+6.8
HKT				LR	LR		
	comp=Z,2µm,20.0s						
DOT	**Dot Lake**	**97.29**	**14**	PFAKE		11 54 20.0	+7.4
DOT				LR	LR		
	comp=Z,1µm,22.0s						
KSCO	**Kaye Shedlock’**	**97.32**	**49**	PFAKE		11 54 20.0	+6.5
KSCO				LR	LR		
	comp=Z,700nm,18.0s						
KSCO	**Kaye Shedlock’**	**97.32**	**49**	P	**P**	**11 54 13.3**	**-0.2**
	baz=236						
MLY	**Manley**	**97.33**	**11**	PFAKE		11 54 20.0	+7.2
MLY				LR	LR		
	comp=Z,800nm,20.0s						
HDA	**Harding Lake**	**97.41**	**12**	PFAKE		11 54 20.0	+6.9
HDA				LR	LR		
	comp=Z,700nm,20.0s						
HDA	**Harding Lake**	**97.41**	**12**	P	Pdif	11 54 13.1	+0.1
	baz=205						
HHC	**Hu-ho-hao-te**	**97.44**	**313**	*e*P	Pdif	11 54 14.4	+0.4
HHC				SKS	**SKSac**	**12 04 50.1**	**+0.6**
HHC				S	**ScS**	**12 05 41.3**	**+4.3**
HHC				SS	**SS**	**12 12 19.8**	**+3.2**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,9.0nm,4.9s						
HHC				LR	LR		
	comp=Z,450nm,18.7s						
HHC				LR	LR		
	comp=Z,740nm,17.0s						
CD2	**Chengdu**	**97.46**	**301**	*e*P	Pdif	11 54 15.3	+1.1
CD2				sP	sP	11 54 23.9	+1.3
CD2				SKS	**SKSac**	**12 04 50.1**	**+0.2**
CD2				S	**ScS**	**12 05 39.4**	**+1.9**
CD2				SS	**SS**	**12 12 19.6**	**+2.4**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,170nm,4.3s						
CD2				LR	LR		
	comp=Z,490nm,20.6s						
CD2				LR	LR		
	comp=Z,760nm,26.5s						
CD2				LR	LR		
	comp=Z,770nm,26.5s						
CCB	**Clear Creek Bu**	**97.47**	**12**	*e*P	**P**	**11 54 12.9**	**-0.3**
	comp=Z,9.5nm,1.0s						
CCB				LR	LR		
	comp=Z,1µm,22.0s						
MYIG	**Mrida**	**97.50**	**70**	PFAKE		11 54 30.0	+15
MYIG				LR	LR		
	comp=Z,1µm,20.0s						
SCRK	**Sand Creek**	**97.59**	**14**	PFAKE		11 54 30.0	+16
SCRK				LR	LR		
	comp=Z,1µm,22.0s						
WMOK	**Wichita Mounta**	**97.62**	**54**	PFAKE		11 54 30.0	+15
WMOK				LR	LR		
	comp=Z,1µm,18.0s						
WMOK	**Wichita Mounta**	**97.62**	**54**	P	**P**	**11 54 14.5**	**-0.2**
	baz=238						
TCOL	**CIGO, UAF Yank**	**97.66**	**12**	P	**P**	**11 54 13.9**	**-0.2**
	baz=204						
COLA	**College**	**97.67**	**12**	*e*P	**P**	**11 54 13.8**	**-0.3**
	comp=Z,17nm,1.0s						
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	**College**	**97.67**	**12**	*i* P	**P**	**11 54 13.3**	**-0.8**
COLA				pmax	pmax		
	comp=Z,14nm,0.9s						
MDM	**Murphy Dome**	**97.68**	**12**	PFAKE		11 54 30.0	+16
MDM				LR	LR		
	comp=Z,200nm,22.0s						
ESPN	**Las Esperanzas**	**97.74**	**80**	PFAKE		11 54 30.0	+14
ESPN				LR	LR		
	comp=Z,700nm,18.0s						
HIA	**Hailar**	**97.74**	**324**	PFAKE		11 54 30.0	+15
HIA				LR	LR		
	comp=Z,1µm,20.0s						
ILAR	**Eielson Array**	**97.75**	**12**	P	**P**	**11 54 14.2**	**-0.3**
	comp=Z,4.8nm,0.9s,baz=219,slow=5.1,SNR=29						
ILAR				PKiKP	**PKiKP**	**11 58 48.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=241,slow=2.7,SNR=5.1						
ILAR				PKKPbc	**PKKPbc**	**12 10 51.2**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=352,slow=3.5,SNR=5.7						
ILAR				LR	LR	12 31 24.2	
	comp=Z,535nm,22.0s,baz=211,slow=31						
ILB	**Eielson Array**	**97.75**	**12**	*e*P	**P**	**11 54 14.0**	**-0.5**
	comp=Z,7.4nm,1.1s						
POKR	**Poker Plat Res**	**97.96**	**12**	P	**P**	**11 54 15.2**	**-0.3**
	baz=205						
EGMT	**Eagleton**	**98.27**	**38**	PFAKE		11 54 30.0	+13
EGMT				LR	LR		
	comp=Z,2µm,20.0s						
EGMT	**Eagleton**	**98.27**	**38**	P	Pdif	11 54 17.5	+0.1
	baz=233						
U32A	**Winter Ranch,**	**98.33**	**53**	PFAKE		11 54 30.0	+12
U32A				LR	LR		
	comp=Z,1µm,19.0s						
TEIG	**Tepich**	**98.34**	**72**	PFAKE		11 54 30.0	+12
TEIG				LR	LR		
	comp=Z,800nm,20.0s						
DAWY	**Dawson**	**98.67**	**15**	PFAKE		11 54 30.0	+11
DAWY				LR	LR		
	comp=Z,1µm,20.0s						
PRP	**Porcupine Dome**	**98.67**	**12**	*e*P	Pdif	11 54 19.0	+0.1
	comp=Z,7.7nm,0.9s						
CPUP	**Villa Florida**	**98.69**	**127**	P	Pdif	11 54 21.9	+2.0
	comp=Z,5.8nm,1.0s,baz=241,slow=3.7,SNR=6.1						
CPUP				LR	LR	12 34 01.7	
	comp=Z,1µm,18.0s,baz=242,slow=32						
OGNE	**Ogallala**	**98.76**	**48**	PFAKE		11 54 30.0	+10
OGNE				LR	LR		
	comp=Z,1µm,20.0s						
RDOG	**Red Dog Mine**	**98.81**	**5**	PFAKE		11 54 30.0	+11
RDOG				LR	LR		
	comp=Z,1µm,20.0s						
EGAK	**Eagle**	**98.89**	**14**	*e*P	Pdif	11 54 19.9	+0.2
	comp=Z,3.0nm,0.8s						
EGAK				LR	LR		
	comp=Z,1µm,19.0s						
NATX	**Nacogdoches**	**99.05**	**59**	PFAKE		11 54 30.0	+8.8
NATX				LR	LR		
	comp=Z,2µm,19.0s						
NATX	**Nacogdoches**	**99.05**	**59**	P	**Pdif**	**11 54 20.9**	**-0.3**
	baz=240						
CBKS	**Cedar Bluff**	**99.12**	**50**	PFAKE		11 54 30.0	+8.6
CBKS				LR	LR		
	comp=Z,1µm,22.0s						
BILL	**Bilibino**	**99.16**	**353**	PFAKE		11 54 30.0	+9.2
BILL				LR	LR		
	comp=Z,2µm,22.0s						
BILL	**Bilibino**	**99.16**	**353**⇓	*e*P	**Pdif**	**11 54 21.8**	**+1.0**
BILL				*SP	**sP**	**11 54 31.0**	**+1.3**
BILL				*e*		11 58 23.9	
BILL				*e*		12 05 56.0	
BILL				PS	**PS**	**12 07 16.0**	**-4.1**
BILL				SS	SS	12 12 32.0	-7.4
BILL				*e*SSS	SSS	12 16 27.5	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,901nm,19.0s						
ETX06	**Route 59 and C**	**99.26**	**59**	PFAKE		11 54 30.0	+7.9
ETX06				LR	LR		
	comp=Z,1µm,19.0s						
RSSD	**Black Hills**	**99.27**	**44**	*e*P	**Pdif**	**11 54 21.6**	**-0.6**
	comp=Z,19nm,1.2s						
RSSD				LR	LR		
	comp=Z,2µm,20.0s						
RSSD	**Black Hills**	**99.27**	**44**	*e*P	**Pdif**	**11 54 21.6**	**-0.6**
RSSD				pmax	pmax		
	comp=Z,19nm,1.2s						
RSSD				MLR	MLR		
	comp=Z,2µm,20.0s						
RSSD	**Black Hills**	**99.27**	**44**	P	**Pdif**	**11 54 22.2**	**0.0**
	baz=236						
LAO	**LASA Array**	**99.44**	**41**	PFAKE		11 54 30.0	+7.4
LAO				LR	LR		
	comp=Z,1µm,22.0s						
LAO	**LASA Array**	**99.44**	**41**	P	**Pdif**	**11 54 23.5**	**+0.9**
	baz=235						
FYU	**Fort Yukon**	**99.67**	**12**	PFAKE		11 54 30.0	+7.0
FYU				LR	LR		
	comp=Z,900nm,21.0s						
X37A	**Clayton**	**99.95**	**56**	PFAKE		11 54 40.0	+15
X37A				LR	LR		
	comp=Z,3µm,19.0s						
LZH	**Lanzhou**	**100.04**	**306**	*e*P	**Pdif**	**11 54 23.6**	**-2.1**
LZH				SKS	**SKSac**	**12 05 02.3**	**-0.6**
LZH				*e*S	**Sdif**	**12 05 51.6**	**-7.4**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.1s						
LZH				LR	LR		
	comp=Z,390nm,15.7s						
LZH				LR	LR		
	comp=Z,410nm,17.4s						
LZH				LR	LR		
	comp=Z,520nm,19.0s						
BCIP	**Isla Barro Col**	**100.08**	**85**	PFAKE		11 54 40.0	+14
BCIP				LR	LR		
	comp=Z,2µm,20.0s						
TUL1	**Leonard**	**100.32**	**54**	PFAKE		11 54 40.0	+13
TUL1				LR	LR		
	comp=Z,2µm,19.0s						
TOLK	**Toolik Lake Re**	**100.85**	**10**	PFAKE		11 54 40.0	+12
TOLK				LR	LR		
	comp=Z,700nm,20.0s						
TOLK	**Toolik Lake Re**	**100.85**	**10**	P	**Pdif**	**11 54 29.3**	**+1.0**
	baz=203						
WLAR	**White Oak Lake**	**101.14**	**58**	PFAKE		11 54 40.0	+10
WLAR				LR	LR		
	comp=Z,3µm,19.0s						
MIAR	**Mount Ida**	**101.22**	**57**	PFAKE		11 54 40.0	+9.2
MIAR				LR	LR		
	comp=Z,1µm,20.0s						
EPYK	**Eagle Plains**	**101.23**	**15**	PFAKE		11 54 40.0	+10
EPYK				LR	LR		
	comp=Z,900nm,20.0s						
KSU1	**Kansas State U**	**101.36**	**51**	PFAKE		11 54 40.0	+8.7
KSU1				LR	LR		
	comp=Z,1µm,22.0s						
W39A	**Magazine**	**101.39**	**56**	PFAKE		11 54 40.0	+8.5
W39A				LR	LR		
	comp=Z,4µm,19.0s						
BGNE	**Belgrade**	**101.50**	**49**	PFAKE		11 54 40.0	+8.1
BGNE				LR	LR		
	comp=Z,900nm,19.0s						
DGMT	**Dagmar**	**101.57**	**40**	PFAKE		11 54 40.0	+8.0
DGMT				LR	LR		
	comp=Z,1µm,22.0s						
X40A	**Basin Creek Fa**	**101.73**	**57**	PFAKE		11 54 40.0	+7.0
X40A				LR	LR		
	comp=Z,2µm,19.0s						
YAK	**Yakutsk**	**101.98**	**337**	PFAKE		11 54 40.0	+6.6
YAK				LR	LR		
	comp=Z,600nm,21.0s						
UALR	**University of**	**102.22**	**57**	PFAKE		11 54 50.0	+15
UALR				LR	LR		
	comp=Z,1µm,19.0s						
CCAR	**Cane Creek**	**102.23**	**58**	PFAKE		11 54 50.0	+15
CCAR				LR	LR		
	comp=Z,3µm,19.0s						
VBMS	**Vicksburg**	**102.35**	**60**	PFAKE		11 54 50.0	+14
VBMS				LR	LR		
	comp=Z,1µm,20.0s						
WHAR	**Wooly Hollow**	**102.50**	**56**	PFAKE		11 54 50.0	+14
WHAR				LR	LR		
	comp=Z,2µm,19.0s						
ROSC	**El Rosal**	**102.70**	**92**	PFAKE		11 54 50.0	+12
ROSC				LR	LR		
	comp=Z,1µm,22.0s						
FCAR	**Ozark Folk Cen**	**102.91**	**56**	PFAKE		11 54 50.0	+12
FCAR				LR	LR		
	comp=Z,3µm,18.0s						
INK	**Inuvik**	**103.53**	**15**	PFAKE		11 54 50.0	+10
INK				LR	LR		
	comp=Z,1µm,20.0s						
ECSD	**EROS Data Cent**	**103.64**	**47**	PFAKE		11 54 50.0	+8.7
ECSD				LR	LR		
	comp=Z,1µm,19.0s						
HBAR	**Harrisburg**	**103.81**	**57**	PFAKE		11 54 50.0	+7.8
HBAR				LR	LR		
	comp=Z,1µm,19.0s						
MDND	**Maddock**	**103.86**	**42**	PFAKE		11 54 50.0	+7.8
MDND				LR	LR		
	comp=Z,1µm,19.0s						
MET	**Memphis--Engin**	**104.13**	**58**	PFAKE		11 55 00.0	+16
MET				LR	LR		
	comp=Z,2µm,19.0s						
OXF	**Oxford**	**104.23**	**58**	PFAKE		11 55 00.0	+16
OXF				LR	LR		
	comp=Z,2µm,19.0s						
GNAR	**Gosnell**	**104.45**	**57**	PFAKE		11 55 00.0	+15
GNAR				LR	LR		
	comp=Z,2µm,19.0s						
BRAL	**Brewton**	**104.48**	**62**	PFAKE		11 55 00.0	+15
BRAL				LR	LR		
	comp=Z,900nm,18.0s						
PBMO	**Poplar Bluff**	**104.53**	**56**	PFAKE		11 55 00.0	+15
PBMO				LR	LR		
	comp=Z,3µm,19.0s						
CCM	**Cathedral Cave**	**104.54**	**54**	PFAKE		11 55 00.0	+15
CCM				LR	LR		
	comp=Z,2µm,19.0s						
PVMO	**Portageville**	**104.89**	**56**	PFAKE		11 55 00.0	+13
PVMO				LR	LR		
	comp=Z,2µm,19.0s						
PALK	**Pallekele**	**104.89**	**270**	PFAKE		11 55 00.0	+12
PALK				LR	LR		
	comp=Z,2µm,20.0s						
HALT	**Halls**	**104.92**	**57**	PFAKE		11 55 00.0	+13
HALT				LR	LR		
	comp=Z,1µm,20.0s						
YKA	**Yellowknife Ar**	**104.94**	**25**	Pdiff	**Pdif**	**11 54 47.2**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=237,slow=4.3,SNR=5.9						
YKA				PKiKP	**PKiKP**	**11 59 01.6**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=241,slow=1.7,SNR=5.5						
YKA				PKKPbc	**PKKPbc**	**12 10 30.2**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=39,slow=3.0,SNR=9.0						
YKA				PKKP	**PKKPab**	**12 10 47.8**	**+3.4**
	comp=Z,0.5nm,0.8s,baz=57,slow=2.5,SNR=6.6						
YKB5	**Yellowknife Ar**	**104.94**	**25**	*e*Pdif	**Pdif**	**11 54 47.2**	**+0.7**
PARMO	**Parma**	**104.96**	**56**	PFAKE		11 55 00.0	+13
PARMO				LR	LR		
	comp=Z,3µm,19.0s						
SCIA	**State Center**	**104.97**	**50**	PFAKE		11 55 00.0	+13
SCIA				LR	LR		
	comp=Z,800nm,21.0s						
YKW3	**Yellowknife Ar**	**104.97**	**25**	PFAKE		11 55 00.0	+13
YKW3				LR	LR		
	comp=Z,900nm,21.0s						
GLAT	**Glass**	**105.12**	**57**	PFAKE		11 59 10.0	+7.5
GLAT				LR	LR		
	comp=Z,2µm,19.0s						
451A	**Vernon**	**105.23**	**63**	PFAKE		11 59 10.0	+7.1
451A				LR	LR		
	comp=Z,600nm,20.0s						
LRAL	**Lakeview Retre**	**105.36**	**61**	PFAKE		11 59 10.0	+7.0
LRAL				LR	LR		
	comp=Z,1µm,19.0s						
PLAL	**Pickwick Lake**	**105.42**	**58**	PFAKE		11 59 10.0	+6.9
PLAL				LR	LR		
	comp=Z,3µm,19.0s						
250A	**Grady**	**105.44**	**62**	PFAKE		11 59 10.0	+6.8
250A				LR	LR		
	comp=Z,600nm,21.0s						
SLM	**Saint Louis**	**105.51**	**54**	PFAKE		11 59 10.0	+6.9
SLM				LR	LR		
	comp=Z,2µm,21.0s						
T45A	**Paducah**	**105.92**	**56**	PFAKE		11 59 20.0	+16
T45A				LR	LR		
	comp=Z,2µm,19.0s						
X48A	**Hartselle**	**105.95**	**59**	PFAKE		11 59 20.0	+16
X48A				LR	LR		
	comp=Z,800nm,20.0s						
N41A	**Harden Midland**	**106.01**	**52**	PFAKE		11 59 20.0	+16
N41A				LR	LR		
	comp=Z,1µm,19.0s						
FFC	**Flin Flon**	**106.04**	**36**	PFAKE		11 59 20.0	+16
FFC				LR	LR		
	comp=Z,1µm,20.0s						
WVT	**Waverly**	**106.11**	**57**	PFAKE		11 59 20.0	+16
WVT				LR	LR		
	comp=Z,700nm,21.0s						
Y49A	**Blount Mountai**	**106.16**	**60**	PFAKE		11 59 20.0	+15
Y49A				LR	LR		
	comp=Z,1µm,20.0s						
352A	**Blakely**	**106.24**	**63**	PFAKE		11 59 20.0	+15
352A				LR	LR		
	comp=Z,900nm,19.0s						
Z50A	**Ashland**	**106.26**	**61**	PFAKE		11 59 20.0	+15
Z50A				LR	LR		
	comp=Z,1µm,22.0s						
AGMN	**Agassiz Nation**	**106.27**	**43**	PFAKE		11 59 20.0	+16
AGMN				LR	LR		
	comp=Z,1µm,20.0s						
MTDJ	**Mount Denham**	**106.34**	**78**	PFAKE		11 59 20.0	+15
MTDJ				LR	LR		
	comp=Z,2µm,20.0s						
L40A	**Anamosa**	**106.37**	**51**	PFAKE		11 59 20.0	+15
L40A				LR	LR		
	comp=Z,1µm,22.0s						
453A	**Whigham**	**106.44**	**64**	PFAKE		11 59 20.0	+15
453A				LR	LR		
	comp=Z,600nm,21.0s						
V48A	**Smith Brothers**	**106.68**	**58**	PFAKE		11 59 20.0	+15
V48A				LR	LR		
	comp=Z,2µm,19.0s						
957A	**Wimauma**	**106.68**	**67**	PFAKE		11 59 20.0	+14
957A				LR	LR		
	comp=Z,600nm,19.0s						
SPMN	**Marine on St.**	**106.75**	**47**	PFAKE		11 59 20.0	+15
SPMN				LR	LR		
	comp=Z,1µm,22.0s						
152A	**Waverly Hall**	**106.92**	**62**	PFAKE		11 59 20.0	+14
152A				LR	LR		
	comp=Z,500nm,20.0s						
061Z	**Ochoppi**	**106.96**	**70**	PFAKE		11 59 20.0	+14
061Z				LR	LR		
	comp=Z,900nm,22.0s						
HDIL	**Hopedale**	**107.01**	**53**	PFAKE		11 59 20.0	+14
HDIL				LR	LR		
	comp=Z,600nm,18.0s						
T47A	**Sharon Grove**	**107.01**	**57**	PFAKE		11 59 20.0	+14
T47A				LR	LR		
	comp=Z,2µm,19.0s						
USIN	**University of**	**107.03**	**56**	PFAKE		11 59 20.0	+14
USIN				LR	LR		
	comp=Z,2µm,19.0s						
OLIL	**Olney**	**107.06**	**55**	PFAKE		11 59 20.0	+14
OLIL				LR	LR		
	comp=Z,2µm,20.0s						
253A	**Americus**	**107.11**	**63**	PFAKE		11 59 20.0	+14
253A				LR	LR		
	comp=Z,500nm,21.0s						
SWET	**Sewanee**	**107.11**	**59**	PFAKE		11 59 20.0	+14
SWET				LR	LR		
	comp=Z,2µm,20.0s						
ULM	**Lac du Bonnet**	**107.17**	**41**	PFAKE		11 59 20.0	+14
ULM				LR	LR		
	comp=Z,1µm,20.0s						
555A	**McAlpin**	**107.17**	**65**	PFAKE		11 59 20.0	+14
555A				LR	LR		
	comp=Z,600nm,20.0s						
656A	**Willston**	**107.18**	**66**	PFAKE		11 59 20.0	+13
656A				LR	LR		
	comp=Z,700nm,22.0s						
CLTN	**Cedars of Leba**	**107.19**	**58**	PFAKE		11 59 20.0	+14
CLTN				LR	LR		
	comp=Z,1µm,20.0s						
059A	**Moore Haven**	**107.25**	**69**	PFAKE		11 59 20.0	+13
059A				LR	LR		
	comp=Z,500nm,18.0s						
TIGA	**Tifton**	**107.25**	**63**	PFAKE		11 59 20.0	+13
TIGA				LR	LR		
	comp=Z,900nm,20.0s						
L42A	**Oliver, Polo**	**107.38**	**51**	PFAKE		11 59 20.0	+13
L42A				LR	LR		
	comp=Z,1µm,19.0s						
JFWS	**Jewell Farm**	**107.39**	**50**	PFAKE		11 59 20.0	+13
JFWS				LR	LR		
	comp=Z,900nm,19.0s						
DWPF	**Disney Wildern**	**107.51**	**67**	PFAKE		11 59 20.0	+13
DWPF				LR	LR		
	comp=Z,500nm,19.0s						
W50A	**Signal Mountai**	**107.56**	**59**	PFAKE		11 59 20.0	+13
W50A				LR	LR		
	comp=Z,2µm,21.0s						
X51A	**Calhoun**	**107.63**	**60**	PFAKE		11 59 20.0	+13
X51A				LR	LR		
	comp=Z,900nm,22.0s						
SDV	**Santo Domingo**	**107.87**	**90**	PFAKE		11 59 20.0	+11
SDV				LR	LR		
	comp=Z,1µm,20.0s						
060A	**Indiantown**	**107.91**	**69**	PFAKE		11 59 20.0	+12
060A				LR	LR		
	comp=Z,800nm,20.0s						
Y52A	**Lilburn**	**107.93**	**61**	PFAKE		11 59 20.0	+12
Y52A				LR	LR		
	comp=Z,1µm,19.0s						
WCI	**Wyandotte Cave**	**108.12**	**56**	PFAKE		11 59 20.0	+12
WCI				LR	LR		
	comp=Z,2µm,19.0s						
154A	**Montrose**	**108.12**	**62**	PFAKE		11 59 20.0	+12
154A				LR	LR		
	comp=Z,700nm,20.0s						
I41A	**Arkdale**	**108.13**	**49**	PFAKE		11 59 20.0	+12
I41A				LR	LR		
	comp=Z,1µm,22.0s						
E38A	**The Farm, Brul**	**108.14**	**46**	PFAKE		11 59 20.0	+12
E38A				LR	LR		
	comp=Z,2µm,20.0s						
456A	**Hilliard**	**108.17**	**65**	PFAKE		11 59 20.0	+12
456A				LR	LR		
	comp=Z,800nm,20.0s						
GOGA	**Godfrey**	**108.19**	**62**	PFAKE		11 59 20.0	+12
GOGA				LR	LR		
	comp=Z,1µm,21.0s						
T49A	**Edmonton**	**108.20**	**57**	PFAKE		11 59 20.0	+12
T49A				LR	LR		
	comp=Z,1µm,19.0s						
M44A	**Midewin, Midew**	**108.22**	**52**	PFAKE		11 59 20.0	+12
M44A				LR	LR		
	comp=Z,800nm,19.0s						
CPCT	**Cooper Cave**	**108.25**	**59**	PFAKE		11 59 20.0	+12
CPCT				LR	LR		
	comp=Z,2µm,20.0s						
255A	**Hazlehurst**	**108.32**	**63**	PFAKE		11 59 20.0	+11
255A				LR	LR		
	comp=Z,800nm,22.0s						
BLO	**Bloomington**	**108.35**	**55**	PFAKE		11 59 20.0	+12

BLO				LR	LR		
	comp=Z,2μm,19.0s						
G40A	Rib Lake	108.42	48	PFAKE		11 59 20.0	+12
G40A				LR	LR		
	comp=Z,900nm,19.0s						
SFIN	Lafayette	108.45	54	PFAKE		11 59 20.0	+11
SFIN				LR	LR		
	comp=Z,1μm,19.0s						
V51A	Loudon	108.52	59	PFAKE		11 59 20.0	+11
V51A				LR	LR		
	comp=Z,2μm,20.0s						
W52A	Murphy	108.54	60	PFAKE		11 59 20.0	+11
W52A				LR	LR		
	comp=Z,2μm,19.0s						
K43A	Burlington	108.58	51	PFAKE		11 59 20.0	+11
K43A				LR	LR		
	comp=Z,1μm,21.0s						
I42A	Draeger Farm,	108.68	50	PFAKE		11 59 20.0	+11
I42A				LR	LR		
	comp=Z,1μm,22.0s						
EYMN	Ely	108.74	45	PFAKE		11 59 20.0	+11
EYMN				LR	LR		
	comp=Z,1μm,20.0s						
TIXI	Tiksi	108.83	344	PFAKE		11 59 20.0	+12
TIXI				LR	LR		
	comp=Z,800nm,21.0s						
R49A	Shelbyville	108.95	56	PFAKE		11 59 20.0	+10
R49A				LR	LR		
	comp=Z,2μm,20.0s						
V52A	Sevierville	109.10	59	PFAKE		11 59 20.0	+10
V52A				LR	LR		
	comp=Z,2μm,20.0s						
GTBY	Guantanamo Bay	109.15	78	PFAKE		11 59 20.0	+10
GTBY				LR	LR		
	comp=Z,800nm,21.0s						
BG3	Lake Jocassee	109.25	60	PFAKE		11 59 20.0	+10
BG3				LR	LR		
	comp=Z,900nm,19.0s						
P48A	Milroy	109.25	55	PFAKE		11 59 20.0	+10
P48A				LR	LR		
	comp=Z,2μm,19.0s						
TZTN	Tazewell	109.42	59	PFAKE		11 59 20.0	+9.5
TZTN				LR	LR		
	comp=Z,2μm,19.0s						
HODGE	Hodges	109.44	61	PFAKE		11 59 20.0	+9.4
HODGE				LR	LR		
	comp=Z,900nm,20.0s						
COWI	Conover	109.45	47	PFAKE		11 59 20.0	+10
COWI				LR	LR		
	comp=Z,1μm,20.0s						
257A	Skidaway Islan	109.46	64	PFAKE		11 59 20.0	+9.3
257A				LR	LR		
	comp=Z,800nm,22.0s						
R50A	Paris	109.55	57	PFAKE		11 59 20.0	+9.3
R50A				LR	LR		
	comp=Z,2μm,19.0s						
V53A	Saluda	109.61	60	PFAKE		11 59 20.0	+9.0
V53A				LR	LR		
	comp=Z,2μm,20.0s						
H43A	Windswept, Lux	109.67	49	PFAKE		11 59 20.0	+9.3
H43A				LR	LR		
	comp=Z,800nm,22.0s						
L46A	Eue Claire	109.67	52	PFAKE		11 59 20.0	+9.2
L46A				LR	LR		
	comp=Z,600nm,20.0s						
S51A	Beattyville	109.83	57	PFAKE		11 59 20.0	+8.8
S51A				LR	LR		
	comp=Z,1μm,20.0s						
PAULI	Pauline	110.01	61	PFAKE		11 59 20.0	+8.3
PAULI				LR	LR		
	comp=Z,800nm,20.0s						
T52A	Hallie	110.06	58	PFAKE		11 59 20.0	+8.3
T52A				LR	LR		
	comp=Z,1μm,19.0s						
C40A	Isle Royale Na	110.17	46	PFAKE		11 59 20.0	+8.5
C40A				LR	LR		
	comp=Z,800nm,20.0s						
J45A	Montague	110.17	51	PFAKE		11 59 20.0	+8.3
J45A				LR	LR		
	comp=Z,1μm,19.0s						
D41A	Chassel	110.19	47	PFAKE		11 59 20.0	+8.4
D41A				LR	LR		
	comp=Z,2μm,20.0s						
JSC	Jenkinsville	110.22	62	PFAKE		11 59 20.0	+7.9
JSC				LR	LR		
	comp=Z,1μm,20.0s						
O49A	Covington	110.31	55	PFAKE		11 59 20.0	+7.9
O49A				LR	LR		
	comp=Z,2μm,19.0s						
KMSC	Kings Mountain	110.50	61	PFAKE		11 59 20.0	+7.4
KMSC				LR	LR		
	comp=Z,1μm,19.0s						
I45A	Fountain	110.51	50	PFAKE		11 59 20.0	+7.7
I45A				LR	LR		
	comp=Z,1μm,20.0s						
M48A	Edgerton	110.55	53	PFAKE		11 59 20.0	+7.5
M48A				LR	LR		
	comp=Z,1μm,20.0s						
Q51A	Peebles	110.56	56	PFAKE		11 59 20.0	+7.4
Q51A				LR	LR		
	comp=Z,2μm,19.0s						
NHSC	New Hope	110.57	63	PFAKE		11 59 20.0	+7.2
NHSC				LR	LR		
	comp=Z,700nm,20.0s						
U54A	Nelsons Funny	110.69	59	PFAKE		11 59 20.0	+7.0
U54A				LR	LR		
	comp=Z,2μm,19.0s						
N49A	Columbus Grove	110.70	54	PFAKE		11 59 20.0	+7.2
N49A				LR	LR		
	comp=Z,1μm,19.0s						
Y57A	Sumter	110.77	62	PFAKE		11 59 20.0	+6.9
Y57A				LR	LR		
	comp=Z,1μm,20.0s						
E43A	Lone Tree Farm	110.92	48	PFAKE		11 59 20.0	+7.0
E43A				LR	LR		
	comp=Z,1μm,20.0s						
P51A	Williamsport	110.94	56	PFAKE		11 59 30.0	+17
P51A				LR	LR		
	comp=Z,2μm,19.0s						
BIRD	Birdtown, Kers	110.97	61	PFAKE		11 59 30.0	+17
BIRD				LR	LR		
	comp=Z,1μm,20.0s						
J47A	Sunmer	111.15	52	PFAKE		11 59 30.0	+16
J47A				LR	LR		
	comp=Z,1μm,20.0s						
ACSO	Alum Creek Sta	111.28	55	PFAKE		11 59 30.0	+16
ACSO				LR	LR		
	comp=Z,2μm,19.0s						
G45A	Suttons Bay	111.28	50	PFAKE		11 59 30.0	+16
G45A				LR	LR		
	comp=Z,1μm,20.0s						
Y58A	Scranton	111.28	62	PFAKE		11 59 30.0	+16
Y58A				LR	LR		
	comp=Z,1μm,20.0s						
R53A	Hurricane	111.29	57	PFAKE		11 59 30.0	+16
R53A				LR	LR		
	comp=Z,2μm,19.0s						
V56A	Mocksville	111.39	60	PFAKE		11 59 30.0	+16
V56A				LR	LR		
	comp=Z,2μm,19.0s						
W57A	Gilead	111.52	61	PFAKE		11 59 30.0	+16
W57A				LR	LR		
	comp=Z,1μm,19.0s						
AAM	Ann Arbor	111.59	53	PFAKE		11 59 30.0	+16
AAM				LR	LR		
	comp=Z,900nm,19.0s						
I47A	Gladwin	111.66	51	PFAKE		11 59 30.0	+16
I47A				LR	LR		
	comp=Z,1μm,20.0s						
M50A	Fremont	111.68	54	PFAKE		11 59 30.0	+15
M50A				LR	LR		
	comp=Z,800nm,18.0s						
E44A	Grand Marais A	111.70	48	PFAKE		11 59 30.0	+16
E44A				LR	LR		
	comp=Z,1μm,20.0s						
X58A	Rowland	111.78	62	PFAKE		11 59 30.0	+15
X58A				LR	LR		
	comp=Z,900nm,20.0s						
J48A	Bridge Port	111.88	52	PFAKE		11 59 30.0	+15
J48A				LR	LR		
	comp=Z,700nm,20.0s						
GLMI	Grayling	111.88	50	PFAKE		11 59 30.0	+15
GLMI				LR	LR		
	comp=Z,900nm,20.0s						
N51A	Ashland	111.97	55	PFAKE		11 59 30.0	+15
N51A				LR	LR		
	comp=Z,2μm,19.0s						
SDDR	Presa de Saban	111.97	80	PFAKE		11 59 30.0	+14
SDDR				LR	LR		
	comp=Z,700nm,21.0s						
BLA	Blacksburg	111.99	59	PFAKE		11 59 30.0	+15
BLA				LR	LR		
	comp=Z,1μm,19.0s						
PTGA	Pitinga	112.05	105	PFAKE		11 59 30.0	+14
PTGA				LR	LR		
	comp=Z,800nm,22.0s						
O52A	Adamsville	112.05	56	PFAKE		11 59 30.0	+15
O52A				LR	LR		
	comp=Z,2μm,19.0s						
P53A	Whipple	112.13	56	PFAKE		11 59 30.0	+14
P53A				LR	LR		
	comp=Z,2μm,19.0s						
BDFB	Brasilia	112.25	125	PFAKE		11 59 30.0	+13
BDFB				LR	LR		
	comp=Z,2μm,20.0s						
Q54A	Coxs Mills	112.35	57	PFAKE		11 59 30.0	+14
Q54A				LR	LR		
	comp=Z,2μm,19.0s						
Y60A	Bolivia	112.43	63	PFAKE		11 59 30.0	+14
Y60A				LR	LR		
	comp=Z,1μm,20.0s						
K50A	Casco	112.48	53	PFAKE		11 59 30.0	+14
K50A				LR	LR		
	comp=Z,700nm,20.0s						
R55A	Marlinton	112.61	58	PFAKE		11 59 30.0	+13
R55A				LR	LR		
	comp=Z,800nm,20.0s						
E46A	Sault Ste Mari	112.65	49	PFAKE		11 59 30.0	+14
E46A				LR	LR		
	comp=Z,1μm,20.0s						
H48A	Harrisville	112.70	51	PFAKE		11 59 30.0	+14
H48A				LR	LR		
	comp=Z,1μm,20.0s						
I49A	Point Hope	112.76	51	PFAKE		11 59 30.0	+13
I49A				LR	LR		
	comp=Z,1μm,19.0s						
T57A	Hurt	112.77	60	PFAKE		11 59 30.0	+13
T57A				LR	LR		
	comp=Z,2μm,20.0s						
M52A	Chesterland	112.91	54	PFAKE		11 59 30.0	+13
M52A				LR	LR		
	comp=Z,2μm,18.0s						
SDD	Santo Domingo	112.91	81	PFAKE		11 59 30.0	+12
SDD				LR	LR		
	comp=Z,4μm,22.0s						
N53A	Lisbon	113.01	55	PFAKE		11 59 30.0	+13
N53A				LR	LR		
	comp=Z,3μm,20.0s						
CNNC	Cliffs of the	113.14	62	PFAKE		11 59 30.0	+12
CNNC				LR	LR		
	comp=Z,1μm,19.0s						
S57A	Dark Hollow, R	113.27	59	PFAKE		11 59 30.0	+12
S57A				LR	LR		
	comp=Z,1μm,19.0s						
MCWV	Mont Chateau	113.31	57	PFAKE		11 59 30.0	+12
MCWV				LR	LR		
	comp=Z,1μm,19.0s						
U59A	Littleton	113.63	61	PFAKE		11 59 30.0	+12
U59A				LR	LR		
	comp=Z,2μm,19.0s						
N54A	Moraine State	113.67	55	PFAKE		11 59 30.0	+12
N54A				LR	LR		
	comp=Z,2μm,19.0s						
ALLY	Alegheny Colle	113.80	55	PFAKE		11 59 30.0	+11
ALLY				LR	LR		
	comp=Z,2μm,20.0s						
V60A	Jim Taylor Roa	113.81	61	PFAKE		11 59 30.0	+11
V60A				LR	LR		
	comp=Z,2μm,19.0s						
S58A	Poland Farm, P	113.89	59	PFAKE		11 59 30.0	+11
S58A				LR	LR		
	comp=Z,1μm,20.0s						
T59A	Double "B" Far	114.03	60	PFAKE		11 59 30.0	+11
T59A				LR	LR		
	comp=Z,2μm,20.0s						
ERPA	Erie	114.07	54	PFAKE		11 59 30.0	+11
ERPA				LR	LR		
	comp=Z,1μm,19.0s						
M54A	Oil Creek Stat	114.09	55	PFAKE		11 59 30.0	+11
M54A				LR	LR		
	comp=Z,2μm,19.0s						
R58B	Mineral	114.14	59	PFAKE		11 59 30.0	+11
R58B				LR	LR		
	comp=Z,1μm,19.0s						
N55A	Marion Center	114.32	56	PFAKE		11 59 30.0	+10
N55A				LR	LR		
	comp=Z,2μm,20.0s						
N55A	Marion Center	114.32	56	P	PKiKP	11 59 20.0	+0.3
	baz=250						
V61A	Roper	114.34	62	PFAKE		11 59 30.0	+10
V61A				LR	LR		
	comp=Z,1μm,19.0s						
O56A	Blue Knob Stat	114.44	56	PFAKE		11 59 30.0	+10
O56A				LR	LR		
	comp=Z,2μm,19.0s						
WMQ	Urumqi	114.52	308	*e*PKP	PKiKP	11 59 20.3	+0.2
WMQ				LR	LR		
	comp=Z,650nm,28.8s						
WMQ				LR	LR		
	comp=Z,1μm,28.8s						
WMQ				LR	LR		
	comp=Z,970nm,29.3s						
CBN	Corbin Frederi	114.60	59	PFAKE		11 59 30.0	+10
CBN				LR	LR		
	comp=Z,1μm,18.0s						
U61A	Possum Corner	114.63	61	PFAKE		11 59 30.0	+10
U61A				LR	LR		
	comp=Z,2μm,19.0s						
T60A	Surry	114.70	60	PFAKE		11 59 30.0	+10
T60A				LR	LR		
	comp=Z,2μm,20.0s						
M55A	Ridgway	114.71	55	P	PKiKP	11 59 21.0	+0.5
	baz=250						
V62A	Hyde County Ai	114.73	62	PFAKE		11 59 30.0	+9.4
V62A				LR	LR		
	comp=Z,1μm,19.0s						
SSPA	Standing Stone	115.05	56	PFAKE		11 59 30.0	+8.9
SSPA				LR	LR		
	comp=Z,2μm,19.0s						
SSPA	Standing Stone	115.05	56	P	PKiKP	11 59 21.4	+0.3
	baz=250						
M56A	Emporium	115.13	55	P	PKiKP	11 59 22.1	+0.9
	baz=251						
N57A	Milroy	115.33	56	P	PKiKP	11 59 22.2	+0.6
	baz=251						
J54A	Appleton	115.39	53	PFAKE		11 59 30.0	+8.4
J54A				LR	LR		
	comp=Z,800nm,18.0s						
SDMD	Soldier's Deli	115.40	58	PFAKE		11 59 30.0	+8.2
SDMD				LR	LR		
	comp=Z,600nm,21.0s						
MEDO	Medina	115.48	53	PFAKE		11 59 30.0	+8.2
MEDO				LR	LR		
	comp=Z,1μm,21.0s						
SADO	Sadowa	115.53	52	PFAKE		11 59 30.0	+8.1
SADO				LR	LR		
	comp=Z,500nm,18.0s						
BUKO	Buck Lake	115.57	51	P	PKiKP	11 59 22.7	+0.7
	baz=252						
O58A	Lewisberry	115.58	57	P	PKiKP	11 59 22.8	+0.6
	baz=251						
S61A	Accomac	115.68	60	PFAKE		11 59 30.0	+7.6
S61A				LR	LR		
	comp=Z,1μm,20.0s						
MMNY	Mt. Morris Dam	115.73	54	PFAKE		11 59 30.0	+7.7
MMNY				LR	LR		
	comp=Z,1μm,20.0s						
PAGS	Pennsylvania G	115.76	57	PFAKE		11 59 30.0	+7.6
PAGS				LR	LR		
	comp=Z,2μm,20.0s						
P59A	Jarrettsville	115.77	58	P	PKiKP	11 59 23.3	+0.8
	baz=251						
MVL	Millersville	115.95	57	PFAKE		11 59 30.0	+7.2
MVL				LR	LR		
	comp=Z,2μm,19.0s						
J55A	Hilton	115.96	53	PFAKE		11 59 30.0	+7.3
J55A				LR	LR		
	comp=Z,1μm,22.0s						
SJG	San Juan	115.98	84	PFAKE		11 59 40.0	+17
SJG				LR	LR		
	comp=Z,900nm,20.0s						
DELO	Deloro Mine	116.48	52	PFAKE		11 59 40.0	+16
DELO				LR	LR		
	comp=Z,900nm,21.0s						
PSUB	Penn St. - Bra	116.58	58	PFAKE		11 59 40.0	+16
PSUB				LR	LR		
	comp=Z,1μm,20.0s						
N59A	State Game Lan	116.67	57	PFAKE		11 59 40.0	+16
N59A				LR	LR		
	comp=Z,2μm,19.0s						
LUPA	Lehigh Univers	116.85	57	PFAKE		11 59 40.0	+15
LUPA				LR	LR		
	comp=Z,200nm,20.0s						
KSPA	Keystone Colle	116.87	56	PFAKE		11 59 40.0	+15
KSPA				LR	LR		
	comp=Z,2μm,20.0s						
BINY	Binghamton	116.91	55	PFAKE		11 59 40.0	+15
BINY				LR	LR		
	comp=Z,2μm,20.0s						
BINY	Binghamton	116.91	55	P	PKiKP	11 59 25.2	+0.6
	baz=252						
RES	Resolute Bay	116.94	17	PFAKE		11 59 40.0	+16
RES				LR	LR		
	comp=Z,1μm,22.0s						
L58A	Harry Jones Me	116.96	55	P	PKiKP	11 59 25.2	+0.4
	baz=252						
PLVO	Plevna	117.01	52	PFAKE		11 59 40.0	+15
PLVO				LR	LR		
	comp=Z,700nm,19.0s						
M59A	Waymart	117.10	56	P	PKiKP	11 59 25.4	+0.3
	baz=252						
GRGR	Grenville	117.17	92	PFAKE		11 59 40.0	+14
GRGR				LR	LR		
	comp=Z,1μm,22.0s						
D53A	Lac Vacive, Po	117.18	49	PFAKE		11 59 40.0	+15
D53A				LR	LR		
	comp=Z,1μm,20.0s						
BRNJ	Basking Ridge	117.46	57	PFAKE		11 59 40.0	+14
BRNJ				LR	LR		
	comp=Z,2μm,19.0s						
ODNJ	Ogdensburg	117.56	57	PFAKE		11 59 40.0	+14
ODNJ				LR	LR		
	comp=Z,2μm,19.0s						
VLDQ	Val d'Or	117.63	48	PFAKE		11 59 40.0	+14
VLDQ				LR	LR		
	comp=Z,1μm,21.0s						
BOSA	Boshof	117.69	201	PKP	PKiKP	11 59 27.7	+0.8
	comp=Z,5.6nm,0.9s,baz=170,slow=7.9,SNR=4.8						
BOSA				PKKPbc	PKKPbc	12 09 41.9	-6.2
	comp=Z,21nm,1.0s,baz=170,slow=4.2,SNR=9.1						
PAL	Palisades	118.04	57	PFAKE		11 59 40.0	+13
PAL				LR	LR		
	comp=Z,3μm,19.0s						
SABA	Saba	118.27	85	PFAKE		11 59 40.0	+12
SABA				LR	LR		
	comp=Z,2μm,21.0s						
KSCT	Kent School, K	118.55	56	PFAKE		11 59 40.0	+12
KSCT				LR	LR		
	comp=Z,2μm,19.0s						
SKI	Saint Kitts	118.57	86	PFAKE		11 59 40.0	+11
SKI				LR	LR		
	comp=Z,1μm,22.0s						
LONY	Lake Ozonia	118.59	53	PFAKE		11 59 40.0	+12
LONY				LR	LR		
	comp=Z,600nm,20.0s						
SMRT	St. Maarten	118.59	85	PFAKE		11 59 40.0	+11
SMRT				LR	LR		
	comp=Z,500nm,20.0s						
NCB	Newcomb	118.66	54	PFAKE		11 59 40.0	+12
NCB				LR	LR		
	comp=Z,900nm,22.0s						
TRY	Troy	118.71	55	PFAKE		11 59 40.0	+12
TRY				LR	LR		
	comp=Z,2μm,20.0s						
YLE	Yale	118.83	57	PFAKE		11 59 40.0	+12
YLE				LR	LR		
	comp=Z,200nm,21.0s						
ACCN	Adirondack Com	118.89	54	PFAKE		11 59 40.0	+12
ACCN				LR	LR		
	comp=Z,1μm,21.0s						
MK31	Makanchi Array	119.04	310	*e*PKPdf	PKPdf	11 59 28.5	-0.1
MK31	Makanchi Array	119.04	310	*e*PKIKP	PKPdf	11 59 28.5	-0.1
MKAR	Makanchi Array	119.04	310	PKP	PKPdf	11 59 27.7	-0.9
	comp=Z,4.2nm,0.8s						
MKAR				PKKPbc	PKKPab	12 09 43.9	+0.5
	comp=Z,2.8nm,0.8s,baz=283,slow=3.7,SNR=13						
ZAA0	Zalesovo Array	119.16	318	*e*PKPdf	PKPdf	11 59 28.3	-0.2
ZAA0				LR	LR		
	comp=Z,500nm,21.0s						
ZALV	Zalesovo Beam	119.16	318	PKP	PKPdf	11 59 28.3	-0.2
	comp=Z,3.6nm,0.7s,baz=154,slow=1.4,SNR=12						
MAKZ	Makanchi	119.25	310	*e*PKPdf	PKPdf	11 59 28.7	-0.3
MAKZ				LR	LR		
	comp=Z,900nm,22.0s						
MAKZ	Makanchi	119.25	310	*e*PKIKP	PKPdf	11 59 28.7	-0.3
MAKZ				MLR	MLR		
	comp=Z,900nm,22.0s						
FRNY	Flat Rock	119.33	53	PFAKE		11 59 40.0	+11
FRNY				LR	LR		
	comp=Z,800nm,20.0s						
QUA2	Belchertown	119.52	56	PFAKE		11 59 40.0	+10
QUA2				LR	LR		
	comp=Z,2μm,19.0s						
ANWB	Willy Bob	119.54	86	PFAKE		11 59 40.0	+10
ANWB				LR	LR		
	comp=Z,1μm,22.0s						
VT1	Waterbury	119.78	54	PFAKE		11 59 40.0	+10
VT1				LR	LR		
	comp=Z,1μm,19.0s						
HNH	Hanover	119.94	54	PFAKE		11 59 40.0	+10
HNH				LR	LR		
	comp=Z,1μm,21.0s						
BRYW	Bryant College	120.00	56	PFAKE		11 59 40.0	+9.3
BRYW				LR	LR		
	comp=Z,3μm,19.0s						
HRV	Adam Dziewonsk	120.14	56	PFAKE		11 59 40.0	+9.1
HRV				LR	LR		
	comp=Z,2μm,19.0s						
WES	Weston	120.28	56	PFAKE		11 59 40.0	+8.8
WES				LR	LR		
	comp=Z,2μm,19.0s						
FFD	Franklin Falls	120.33	55	PFAKE		11 59 40.0	+8.8
FFD				LR	LR		
	comp=Z,2μm,19.0s						
LBNH	Lisbon	120.33	54	PFAKE		11 59 40.0	+8.8
LBNH				LR	LR		
	comp=Z,800nm,18.0s						
KDJ	Kajisay	121.41	303	PFAKE		11 59 50.0	+16
KDJ				LR	LR		
	comp=Z,400nm,21.0s						
WVL	Waterville	121.98	54	PFAKE		11 59 50.0	+16
WVL				LR	LR		
	comp=Z,1μm,20.0s						
NRN	Naryn	122.10	302	*e*PKPdf	PKPdf	11 59 34.8	-0.2
NRN				LR	LR		
	comp=Z,600nm,22.0s						
KURK	Kurchatov	122.26	313	*e*PKPdf	PKPdf	11 59 34.4	-0.2
KURK				LR	LR		
	comp=Z,701nm,21.0s						
KURK	Kurchatov	122.26	313*d*	*i*PKIKP	PKPdf	11 59 34.4	-0.2
PKME	Peaks-Kenny Pk	122.39	53	PFAKE		11 59 50.0	+15
PKME				LR	LR		
	comp=Z,900nm,19.0s						
BOOM	Boomskoye usch	122.39	303	*e*PKPdf	PKPdf	11 59 35.3	-0.1
BOOM				LR	LR		
	comp=Z,500nm,22.0s						
BOOM	Boomskoye usch	122.39	303	*e*PKIKP	PKPdf	11 59 35.3	-0.1
BOOM				MLR	MLR		
	comp=Z,500nm,22.0s						
BBSR	BB Station	122.52	69	PFAKE		11 59 50.0	+14
BBSR				LR	LR		
	comp=Z,600nm,20.0s						
AAK	Ala-Archa	123.47	303	*e*PKPdf	PKiKP	11 59 37.7	0.0
AAK				LR	LR		
	comp=Z,500nm,20.0s						
AAK	Ala-Archa	123.47	303	*e*PKIKP	PKiKP	11 59 37.7	0.0
AAK				MLR	MLR		
	comp=Z,500nm,20.0s						
TULEG	Thule	123.52	16	PFAKE		11 59 50.0	+13
TULEG				LR	LR		
	comp=Z,1μm,21.0s						
PQI	Presque Isle	123.54	52	PFAKE		11 59 50.0	+13
PQI				LR	LR		
	comp=Z,800nm,20.0s						
EMMW	East Machias	123.55	54	PFAKE		11 59 50.0	+12
EMMW				LR	LR		

	comp=Z,1µm,19.0s						
GGN	Saint George	124.06	54	PFAKE		11 59 50.0	+12
GGN				LR	LR		
	comp=Z,1µm,20.0s						
ARSB	Arslanbob	124.28	302	PFAKE		11 59 50.0	+11
ARSB				LR	LR		
	comp=Z,2µm,20.0s						
SCHQ	Schefferville	125.34	42	PKP	PKiKP	11 59 40.7	-0.1
	comp=Z,12nm,1.0s,baz=290,slow=0.8,SNR=3.9						
SCHQ	Schefferville	125.34	42	ePKPdf	PKiKP	11 59 40.8	-0.1
SCHQ				LR	LR		
	comp=Z,2µm,19.0s						
LMN	Caledonia Moun	125.60	53	ePKPdf	PKPdf	11 59 41.4	+0.2
LMN				LR	LR		
	comp=Z,1µm,20.0s						
BTK	Batken	125.62	300	PFAKE		11 59 50.0	+8.1
BTK				LR	LR		
	comp=Z,400nm,20.0s						
WIN	Windhoek	125.65	195	PFAKE		11 59 50.0	+7.2
WIN				LR	LR		
	comp=Z,2µm,19.0s						
KBL	Kabul	125.68	293	ePKPdf	PKiKP	11 59 42.8	+0.4
KBL				LR	LR		
	comp=Z,400nm,20.0s						
GAR	Garm	125.77	298	ePKPdf	PKiKP	11 59 42.2	-0.1
GAR	Garm	125.77	298	ePKIKP	PKiKP	11 59 42.2	-0.1
HAL	Halifax	126.25	55	PFAKE		11 59 50.0	+7.1
HAL				LR	LR		
	comp=Z,2µm,19.0s						
KK31	Karatay Array	126.43	303	ePKPdf	PKiKP	11 59 43.2	-0.2
KK31	Karatay Array	126.43	303	ePKIKP	PKiKP	11 59 43.2	-0.2
RCBR	Riachuelo	127.56	127	PFAKE		12 00 00.0	+13
RCBR				LR	LR		
	comp=Z,2µm,18.0s						
BRVK	Borovoye	127.64	316	ePKPdf	PKiKP	11 59 45.3	-0.1
BRVK				LR	LR		
	comp=Z,700nm,22.0s						
BRVK	Borovoye	127.64	316c	iPKIKP	PKPdf	11 59 43.6	-1.3
GBN	Guysborough	127.82	54	ePKPdf	PKiKP	11 59 45.8	-0.2
GBN				LR	LR		
	comp=Z,2µm,21.0s						
TSUM	Tsumeb	128.77	197	PFAKE		12 00 00.0	+11
TSUM				LR	LR		
	comp=Z,2µm,21.0s						
ILULI	Ilulissat	130.52	23	PFAKE		12 00 00.0	+9.3
ILULI				LR	LR		
	comp=Z,900nm,20.0s						
KBS	Kingsbay	131.41	358	PFAKE		12 00 00.0	+7.7
KBS				LR	LR		
	comp=Z,600nm,22.0s						
SFJD	Kangerlussuaq	131.50	25	PFAKE		12 00 00.0	+7.3
SFJD				LR	LR		
	comp=Z,1µm,20.0s						
SPA0	Spitsbergen Ar	131.96	357	ePKPdf	PKiKP	11 59 53.0	-0.5
SUMG	Summit	132.44	16	PFAKE		12 00 10.0	+15
SUMG				LR	LR		
	comp=Z,700nm,20.0s						
UOSS	Minazif	133.59	276	PFAKE		12 00 10.0	+12
UOSS				LR	LR		
	comp=Z,600nm,22.0s						
ARU	Arti	134.18	321	ePKPdf	PKPdf	11 59 57.6	+0.5
ARU				LR	LR		
	comp=Z,800nm,22.0s						
ARU	Arti	134.18	321	i PKIKP	PKiKP	11 59 58.1	-0.4
ARU						12 02 26.7	
IVI	Ivigtut	134.44	32	PFAKE		12 00 10.0	+11
IVI				LR	LR		
	comp=Z,1µm,20.0s						
GEYT	Alibeck	135.01	295	PKP	PKiKP	12 00 00.6	-0.3
	comp=Z,22nm,0.6s,baz=204,slow=3.3,SNR=9.5						
KMBO	Kilima Mbogo	135.19	232	PFAKE		12 00 10.0	+7.8
KMBO				LR	LR		
	comp=Z,800nm,21.0s						
NRS	Narsarsuaq	135.71	32	PFAKE		12 00 10.0	+8.6
NRS				LR	LR		
	comp=Z,1µm,20.0s						
ANGG	Ammassalik, Gr	136.79	24	PFAKE		12 00 10.0	+6.5
ANGG				LR	LR		
	comp=Z,1µm,20.0s						
H10S3	ASCENSION HYDR	136.92	153	T	T	14 35 42.6	
	baz=205,slow=74,SNR=21						
H10S2	ASCENSION HYDR	136.92	153	T	T	14 35 55.7	
	baz=205,slow=74,SNR=18						
H10S1	ASCENSION HYDR	136.93	153	T	T	14 35 44.4	
	baz=205,slow=74,SNR=25						
SCO	Scoresbysund	137.53	12	PFAKE		12 00 10.0	+5.1
SCO				LR	LR		
	comp=Z,800nm,22.0s						
ASCN	Ascension	137.96	153	PFAKE		12 00 20.0	+12
ASCN				LR	LR		
	comp=Z,31µm,18.0s						
H10N3	ASCENSION HYDR	137.99	152	T	T	14 36 26.6	
	baz=203,slow=75,SNR=18						
H10N1	ASCENSION HYDR	138.00	152	T	T	14 36 21.7	
	baz=203,slow=75,SNR=56						
H10N2	ASCENSION HYDR	138.01	152	T	T	14 36 27.8	
	baz=203,slow=75,SNR=17						
PRGR	Permogore	138.70	331	ePKIKP	PKPdf	12 00 02.5	-2.8
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARCES	ARCESS Array B	139.06	349	PKhKP	PKPpre	11 59 59.9	
	comp=Z,2.9nm,0.7s,baz=23,slow=3.1,SNR=10						
ARCES				PKP	PKPdf	12 00 06.6	+0.8
	comp=Z,5.8nm,0.6s,baz=15,slow=2.0,SNR=16						
ATD	Arta Tunnel	139.18	251	PFAKE		12 00 20.0	+10
ATD				LR	LR		
	comp=Z,800nm,22.0s						
MBAR	Mbarara	139.77	225	PFAKE		12 00 20.0	+8.5
MBAR				LR	LR		
	comp=Z,400nm,22.0s						
FURI	Furi	140.96	244	PFAKE		12 00 20.0	+6.0
FURI				LR	LR		
	comp=Z,1µm,22.0s						
RAYN	Ar Rayn	142.33	270	PFAKE		12 00 30.0	+14
RAYN				LR	LR		
	comp=Z,900nm,22.0s						
AKT	Akhty	143.16	300	ePKIKP	PKPbc	12 00 12.1	+0.9
AKT				e		12 03 25.1	
AKT				pmax	pmax		
	comp=Z,13nm,0.9s						
MOS	Moscow	145.31	326	ePKP2	PKPbc	12 00 16.4	-0.8
MOS				pmax	pmax		
	comp=Z,184nm,0.8s						
TBLG	Delisi	145.38	300	ePKPbc	PKPab	12 00 18.1	0.0
TBLG	Delisi	145.38	300	ePKIKP	PKPab	12 00 18.1	0.0
GNI	Garni	145.49	297	PFAKE		12 00 30.0	+7.6
GNI				LR	LR		
	comp=Z,300nm,19.0s						
GNI	Garni	145.49	297c	iPKP2	PKPdf	12 00 17.7	-0.7
FIA1	FINESS Array S	145.80	341	ePKPdf	PKPdf	12 00 18.2	+0.3
FINES	FINESS Array B	145.80	341	PKPbc	PKPdf	12 00 17.9	-0.1
	comp=Z,76nm,0.8s,baz=58,slow=3.1,SNR=104						
ZEI	Tsey	145.88	302	i PKIKP	PKPdf	12 00 18.2	-0.8
ZEI				pmax	pmax		
	comp=Z,95nm,1.4s						
NCK	Nalchik	146.00	304	i PKP2	PKPab	12 00 20.5	+0.2
GOF	Gofitskoye	146.11	306	⇑ePKP2	PKPab	12 00 21.2	+0.5
GOF				pmax	pmax		
	comp=Z,90nm,0.6s						
OBN	Obninsk	146.16	326	ePKPdf	PKPbc	12 00 19.4	-0.4
OBN				LR	LR		
	comp=Z,600nm,21.0s						
OBN	Obninsk	146.16	326	⇓iP	PKPab	12 00 20.8	+0.3
OBN	Obninsk	146.16	326c	ePKP2	PKPdf	12 00 18.9	+0.1
OBN				eSS	SS	12 22 34.9	-1.2
OBN				SSS	SSS	12 28 03.0	
OBN				pmax	pmax		
	comp=Z,157nm,1.4s						
OBN				pmax	pmax		
	comp=Z,22nm,0.5s						
OBN				MLR	MLR		
	comp=Z,394nm,23.0s						
LPSR	Galich'ya Gora	146.20	321	ePKP2	PKPbc	12 00 20.1	+0.1
LPSR				pmax	pmax		
	comp=Z,200nm,0.8s						
AKH	Akhalkalaki	146.34	300	ePKPdf	PKPab	12 00 21.6	-0.3
AKH	Akhalkalaki	146.34	300	⇑iP	PKPab	12 00 22.8	+0.9
AKH	Akhalkalaki	146.34	300	ePKP2	PKPab	12 00 21.6	-0.3
VORR	Voronezh	146.45	319	PKHKP	PKPpre	12 00 17.0	
VORR				pmax	pmax		
	comp=Z,300nm,1.2s						
KBZ	Khabaz	146.46	304	PKPbc	PKPab	12 00 22.1	+0.1
	comp=Z,5.9nm,0.7s,baz=81,slow=4.8,SNR=9.9						
KIV	Kislovodsk	146.57	305	PFAKE		12 00 30.0	+5.6
KIV				LR	LR		
	comp=Z,500nm,19.0s						
KIV	Kislovodsk	146.57	305	i PKP2	PKPbc	12 00 21.7	+0.1
KIV				pmax	pmax		
	comp=Z,74nm,1.1s						
KIV				MLR	MLR		
	comp=Z,770nm,24.0s						
VSR	Storozhevoye	146.67	318	ePKP2	PKPbc	12 00 21.4	0.0
VSR				pmax	pmax		
	comp=Z,110nm,1.4s						
VORD	Divnogorie	146.70	318	ePKP2	PKPbc	12 00 21.2	-0.3
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
GEVA	Gevas	146.87	294	i P	PKPdf	12 00 12.4	-8.4
GEVA				IAML_P			
	comp=Z,2µm,0.1s						
DBAD	Bademkaya	147.73	299	i P	PKPab	12 00 27.3	-0.1
BCA	Borcka	147.73	300	⇓iP	PKPbc	12 00 25.5	+0.7
MOL	Molde	147.88	357	ePKPbc	PKPbc	12 00 24.4	0.0
VSU	Vasula	147.97	337	eP	PKPbc	12 00 24.7	-0.1
VSU				IAmb	IAmb	12 00 26.4	
	comp=Z,259nm,1.0s						
VSU	Vasula	147.97	337	i PKIKP	PKPdf	12 00 22.3	+0.6
AKN	Aaknes	148.30	357	ePKPbc	PKPbc	12 00 25.6	0.0
DOMB	Dombas	148.31	355	ePKPbc	PKPbc	12 00 25.1	-0.6
SOC	Sochi	148.75	305	ePKHKP	PKPpre	12 00 09.8	
SOC				MLR	MLR		
	comp=Z,812nm,23.0s						
NB2	NORSAR Subarra	149.11	353	PKP	PKPbc	12 00 27.2	-0.6
	comp=Z,61nm,0.9s,baz=11,slow=2.8						
NB2	NORSAR Subarra	149.11	353	PKPdf	PKPbc	12 00 27.2	-0.6
	baz=11,slow=2.8						
NOA	NORSAR Array B	149.11	353	PKPbc	PKPbc	12 00 27.5	-0.2
	comp=Z,29nm,0.8s,baz=14,slow=4.3,SNR=78						
HYA	Hoyanger	149.34	358	ePKPbc	PKPbc	12 00 28.5	+0.3
NC602	NORSAR Array S	149.38	352	ePKPbc	PKPbc	12 00 28.6	+0.3
NC602	NORSAR Array S	149.38	352	ePKPbc	PKPbc	12 00 28.3	0.0
SUE	Sulen	149.49	359	ePKPbc	PKPbc	12 00 28.7	+0.1
SKAR	Skarslia	149.72	356	ePKPbc	PKPbc	12 00 29.7	+0.4
ANN	Anapa	150.04	308	i PKP2	PKiKP	12 00 31.2	-0.1
ANN				pmax	pmax		
	comp=Z,68nm,0.9s						
ASK	Askoy	150.06	359	ePKPbc	PKPbc	12 00 29.9	-0.1
IZAR	Zarasai	150.21	334	eP	PKiKP	12 00 31.3	-0.1
IZAR				IAmb	IAmb	12 00 33.3	
	comp=Z,27nm,0.8s						
OSL	Oslo	150.25	353	ePKPbc	PKiKP	12 00 31.0	-0.3
ISAL	Salakas	150.39	334	eP	PKiKP	12 00 31.7	0.0
ISAL				IAmb	IAmb	12 00 33.8	
	comp=Z,29nm,1.1s						
MICGM	Minsk	150.47	331	eP	PKPbc	12 00 31.0	-0.2
MICGM				eLR	LR	12 56 30.0	
MNK	Minsk	150.47	331	ePKIKP	PKPbc	12 00 31.0	-0.2
SACV	Santiago Islan	150.49	116	ePKPbc	PKiKP	12 00 32.9	-0.3
IIGN	Ignalina	150.52	334	eP	PKiKP	12 00 32.1	+0.1
IIGN				IAmb	IAmb	12 00 34.1	
	comp=Z,33nm,1.0s						
ODD1	Odda	150.58	357	ePKPbc	PKPbc	12 00 31.7	+0.3
NACGM	Naroch	150.63	333	e	PKiKP	12 00 32.0	-0.2
NACGM				eLR	LR	12 56 48.0	
KONO	Kongsberg	150.64	354	ePKPbc	PKiKP	12 00 31.8	-0.4
KONO				LR	LR		
	comp=Z,500nm,20.0s						
KONO	Kongsberg	150.64	354c	iPKIKP	PKiKP	12 00 32.5	+0.4
KONO				pmax	pmax		
	comp=Z,106nm,1.3s						
KONO	Kongsberg	150.64	354	ePKPbc	PKiKP	12 00 31.7	-0.4
BLS5	Blasjo	151.08	357	ePKPbc	PKPbc	12 00 32.7	+0.2
KMY	Karmoy	151.33	358	ePKPbc	PKiKP	12 00 33.6	+0.1
HOMB	Homborsund	152.10	355	ePKPbc	PKPbc	12 00 34.9	0.0
SNART	Snartemo	152.12	356	ePKPbc	PKiKP	12 00 35.1	-0.1
SIM	Simferopol'	152.22	310c	iPKIKP	PKiKP	12 00 36.9	+1.0
SIM				e		12 00 47.0	
SIM				pmax	pmax		
	comp=Z,25µm,0.8s						
SIM				pmax	pmax		
	comp=Z,30µm,1.0s						
AKASG	Malin Array Be	152.33	324	PKPbc	PKPbc	12 00 35.3	-0.3
	comp=Z,24nm,0.7s,baz=46,slow=2.8,SNR=45						
AKBB	Malin Array Si	152.33	324	ePKPdf	PKPdf	12 00 28.4	-0.4
AKBB				ePKPbc	PKiKP	12 00 35.8	-0.1
AKBB				ePKPab	PKPab	12 00 45.2	-0.5
AKBB	Malin Array Si	152.33	324	ePKIKP	PKPdf	12 00 28.4	-0.4
AKBB				e		12 00 35.8	
AKBB				e		12 00 45.2	
SUW	Suwalki	152.69	335	ePKP	PKiKP	12 00 36.9	+0.4
SUW	Suwalki	152.69	335	PFAKE		12 00 40.0	+3.5
SUW				LR	LR		
	comp=Z,800nm,22.0s						
SUW	Suwalki	152.69	335	ePKIKP	PKiKP	12 00 36.9	+0.4
ILGA	Ilgaz	153.66	302	PFAKE		12 00 40.0	+0.7
ILGA				LR	LR		
	comp=Z,600nm,22.0s						
BR131	Keskin Array S	154.01	299	ePKPdf	PKPdf	12 00 30.8	-1.1
BR131				ePKPab	PKPab	12 00 53.9	+0.5
BRTR	Keskin Array B	154.01	299	PKP	PKPdf	12 00 31.8	0.0
	comp=Z,1.8nm,0.9s,baz=112,slow=3.3,SNR=6.4						
BRTR				PKPbc	PKiKP	12 00 40.2	+0.2
	comp=Z,5.4nm,0.9s,baz=122,slow=2.9,SNR=14						
BRTR				PKPab	PKPab	12 00 54.2	+0.9
	comp=Z,6.3nm,0.8s,baz=112,slow=3.5,SNR=12						
LIC	Lamto	154.42	159	ePKP1	PKPdf	12 00 33.3	+0.3
	comp=Z,91nm,0.9s						
ANTO	Ankara	154.62	299	PFAKE		12 00 40.0	-1.1
ANTO				LR	LR		
	comp=Z,500nm,22.0s						
KIC	Kosan Boka	154.64	160	ePKP1	PKPdf	12 00 34.3	+1.0
	comp=Z,54nm,0.8s						
KIS	Kishinev	154.64	317	ePKP	PKPdf	12 00 30.0	-2.3
KIS	Kishinev	154.64	317	ePP	PP	12 04 34.0	+2.8
KIS	Kishinev	154.64	317	ePKIKP	PKPdf	12 00 30.0	-2.3
KIS				e		12 04 34.0	
KIS				ePPS	PPS	12 17 42.0	
KIS				eSS	SS	12 24 04.0	-6.9
ESK	Eskdalemuir	154.76	9	PFAKE		12 00 40.0	-0.7
ESK				LR	LR		
	comp=Z,900nm,22.0s						
CSS	Mathiatis	154.80	288	PFAKE		12 00 40.0	-1.5
CSS				LR	LR		
	comp=Z,1µm,21.0s						
TIC	Toumodi	154.82	159	ePKP1	PKPdf	12 00 33.9	+0.3
DBIC	Dimbokro	154.90	159	PKP	PKPdf	12 00 35.0	+1.3
	comp=Z,11nm,1.0s,baz=117,slow=2.6,SNR=5.4						
DBIC	Dimbokro	154.90	159	ePKPdf	PKPdf	12 00 33.4	-0.2
DBIC	Dimbokro	154.90	159	ePKIKP	PKPdf	12 00 33.4	-0.2
RGN	Rugen	155.06	347	PFAKE		12 00 40.0	+7.5
RGN				LR	LR		
	comp=Z,700nm,21.0s						
LVV	L'vov	155.44	327	ePKIKP	PKPdf	12 00 33.5	+0.2
TLCR		155.55	314	⇑iP	PKPab	12 01 00.0	+0.5
TLCR		155.55	314	⇑PKP2	PKPab	12 01 00.0	+0.5
TIRR	Tirgusor	156.14	312	PFAKE		12 00 50.0	-12
TIRR				LR	LR		
	comp=Z,2µm,22.0s						
TIRR	Tirgusor	156.14	312	⇓iP	PKPab	12 01 03.4	+1.3
TIRR	Tirgusor	156.14	312	⇓PKP2	PKPab	12 01 03.4	+1.3
KWP	Kalwaria Pacla	156.18	328	PFAKE		12 00 50.0	-12
KWP				LR	LR		
	comp=Z,5µm,20.0s						
BIZ	Bicaz	156.23	320	⇓iP	PKPdf	12 00 45.3	+11
BURAR	Bucovina Array	156.30	322	⇓iP	PKPab	12 01 03.6	+0.8
BURAR	Bucovina Array	156.30	322	⇓PKP2	PKPab	12 01 03.6	+0.8
TLB	Topalu	156.31	313	⇑iP	PKPab	12 01 03.5	+0.7
TLB	Topalu	156.31	313	⇑PKP2	PKPab	12 01 03.5	+0.7
VRI	Vrincioaia	156.47	317	⇑iP	PKPab	12 01 04.7	+1.2
VRI	Vrincioaia	156.47	317	⇑PKP2	PKPab	12 01 04.7	+1.2
PLOR	Plostina	156.52	317	⇓iP	PKPab	12 01 05.5	+1.7
PLOR	Plostina	156.52	317	⇓PKP2	PKPab	12 01 05.5	+1.7
ISP	Isparta	156.76	295	PFAKE		12 00 50.0	+14
ISP				LR	LR		
	comp=Z,800nm,22.0s						
KOLS	Kolonicke sedl	156.88	328	ePKP2	PKPab	12 01 06.4	+1.3
KOLS	Kolonicke sedl	156.88	328	ePKP	PKPab	12 01 06.4	+1.3
OZUR		156.89	318	⇑iP	PKPdf	12 00 33.9	-1.5
YLV	Yalova	156.97	303	⇑iP	PKPab	12 01 06.7	+0.8
YLV	Yalova	156.97	303	⇑PKP2	PKPab	12 01 06.7	+0.8
MLR	Muntele Rosu	157.13	317	PFAKE		12 00 50.0	+14
MLR				LR	LR		
	comp=Z,700nm,21.0s						
DOPR	Dopca	157.19	318	⇓iP	PKPab	12 01 07.8	+1.2
NIE	Niedzica	157.39	331	ePKP	PKPdf	12 00 35.9	0.0
NIE	Niedzica	157.39	331	ePKIKP	PKPdf	12 00 35.9	0.0
VOIR		157.69	318	⇓iP	PKPab	12 01 11.6	+2.7
VOIR		157.69	318	⇓PKP2	PKPab	12 01 11.6	+2.7
OSTC	Ostas	157.95	339	ePKPAB	PKPab	12 01 11.1	+1.4
OSTC				ex	x	12 17 59.9	
OSTC				AMS	AMS	13 12 00.0	
	comp=Z,900nm,23.1s						
ARR	Arges	157.97	318	⇓iP	PKPab	12 01 11.9	+1.9
CHVC	Chvalec	157.97	339	AMS	AMS	13 10 30.0	
	comp=Z,600nm,22.1s						
UPC	Upice	158.06	339	ePKIKP	PKPdf	12 00 38.8	+2.2
UPC				e		12 00 49.0	
UPC				MLR	MLR		
	comp=Z,900nm,23.7s						
UPC	Upice	158.06	339	ePKPDF	PKPdf	12 00 38.8	+2.2
UPC				ex	x	12 00 49.0	
UPC				AMS	AMS	13 03 20.0	
	comp=Z,900nm,23.7s						
DPC	Dobruska-Polom	158.10	338	ePKIKP	PKPdf	12 00 37.8	+1.1
DPC				e		12 00 49.6	
DPC				e		12 18 08.0	
DPC				MLR	MLR		
	comp=Z,800nm,23.3s						
DPC	Dobruska-Polom	158.10	338	ePKPDF	PKPdf	12 00 37.8	+1.1
DPC				ex	x	12 00 49.6	
DPC				ePKPAB	PKPab	12 01 12.0	+1.6
DPC				ex	x	12 18 08.0	
DPC				AMS	AMS	13 09 20.0	
	comp=Z,800nm,23.3s						
CLL	Collm	158.16	344	PFAKE		12 00 50.0	+13
CLL				LR	LR		
	comp=Z,600nm,21.0s						
CLL	Collm	158.16	344	⇑ePKIKP	PKPdf	12 00 40.0	+3.3
CLL				i		12 01 11.0	
CLL				e		12 04 52.0	
CLL				pmax	pmax		
	comp=Z,14nm,1.0s						
CLL	Collm	158.16	344	ePKPdf	PKPdf	12 00 40.0	+3.3
CLL				⇑iPKPab	PKPab	12 01 11.0	+0.5
	comp=Z,14nm,1.0s						
CLL				ePP	PP	12 04 52.0	+2.1
CLL				e		12 05 45.0	
CLL				ePPP	PPP	12 08 36.0	
CLL				ePPPP		12 10 36.0	
CLL				ePSKS		12 15 12.0	
CLL				ePPS	PPS	12 18 06.0	
CLL				eSS	SS	12 24 49.0	+1.7
CLL				ePSS	PSS	12 25 46.0	
CLL				eSSS	SSS	12 30 42.0	
CLL				e		12 31 36.0	
CLL				eSSSS		12 35 00.0	
MORC	Moravsky Berou	158.17	335	ePKPdf	PKPdf	12 00 37.1	+0.2
MORC				LR	LR		
	comp=Z,600nm,20.0s						
MORC	Moravsky Berou	158.17	335	⇓iP	PKPdf	12 00 35.7	-1.1
MORC	Moravsky Berou	158.17	335	⇓PKIKP	PKPdf	12 00 35.7	-1.1
MORC	Moravsky Berou	158.17	335	ePKP	PKPdf	12 00 36.3	-0.5
MORC				e		12 01 11.9	
BRG	Berggiesshubel	158.33	342	ePKP	PKPab	12 01 11.9	+0.7
	comp=Z,22nm,1.3s						
BRG				PP	PP	12 04 48.0	-2.9
BRG				SKKS		12 15 10.0	
BRG				SS	SS	12 24 27.0	-22
BRG	Berggiesshubel	158.33	342	ePKP2	PKPab	12 01 11.9	+0.7
BRG						12 04 48.0	
BRG				pmax	pmax		
	comp=Z,22nm,1.3s						
PVCC	Panska Ves	158.47	341	ePKP2	PKPab	12 01 13.5	+1.6
PVCC				MLR	MLR		
	comp=Z,900nm,22.6s						
PVCC	Panska Ves	158.47	341	ePKPAB	PKPab	12 01 13.5	+1.6
PVCC				AMS	AMS	13 09 20.0	
	comp=Z,900nm,22.6s						
PSZ	Piszkesteto	158.70	329	ePKPdf	PKPdf	12 00 37.5	-0.1
PSZ				ePKPab	PKPab	12 01 13.8	+0.7
PSZ				LR	LR		
	comp=Z,600nm,21.0s						
PSZ	Piszkesteto	158.70	329	⇓iP	PKPab	12 01 14.2	+1.1
PSZ	Piszkesteto	158.70	329	ePKIKP	PKPdf	12 00 37.5	-0.1
PSZ				e		12 01 13.8	
PSZ				MLR	MLR		
	comp=Z,600nm,21.0s						
PSZ	Piszkesteto	158.70	329	eP	PKPdf	12 00 28.1	-9.5
VYHS	Vyhne	158.71	332	ePKP2	PKPab	12 01 13.8	+0.7
VYHS	Vyhne	158.71	332	ePKP	PKPab	12 01 13.8	+0.7
JAVC	Velka Javorina	158.88	334	ePKP	PKPdf	12 00 37.9	+0.2
JAVC				e		12 01 15.1	
VRAC	Vranov	158.90	336	⇓iP	PKPab	12 01 15.3	+1.5
VRAC	Vranov	158.90	336	⇓PKP2	PKPab	12 01 15.3	+1.5
VRAC	Vranov	158.90	336	ePKP	PKPdf	12 00 37.3	-0.4
VRAC				e		12 01 15.3	
GOPC	GO Pecny, Ondr	158.96	340	ePKIKP	PKPdf	12 00 35.4	-2.4
GOPC				e		12 18 15.0	
GOPC				MLR	MLR		
	comp=Z,700nm,20.3s						
GOPC	GO Pecny, Ondr	158.96	340	ePKPDF	PKPdf	12 00 35.4	-2.4
GOPC				ex	x	12 18 15.0	
GOPC				AMS	AMS	13 24 10.0	
	comp=Z,700nm,20.3s						
PRU	Pruhonice	158.96	340	ePKIKP	PKPdf	12 00 32.0	-5.7
PRU				e		12 01 14.6	
PRU				e		12 18 13.7	
PRU				e		12 18 14.3	
PRU				MLR	MLR		
	comp=Z,900nm,20.5s						
PRU	Pruhonice	158.96	340	ePKPAB	PKPab	12 01 14.6	+0.6
PRU				ex	x	12 18 13.7	
PRU				ex	x	12 18 14.3	
PRU				AMS	AMS	13 16 10.0	
	comp=Z,900nm,20.5s						
KRUC	Moravsky	159.18	336	ePKP	PKPdf	12 00 37.3	-0.7
KRUC				e		12 01 16.2	
ALN	Alexandroupoli	159.23	306	PFAKE		12 00 50.0	+12
ALN				LR	LR		
	comp=Z,400nm,21.0s						
TREC	Trest	159.28	338	AMS	AMS	13 25 30.0	
	comp=Z,800nm,20.2s						
NKC	Novy Kostel	159.29	344	AMS	AMS	13 05 10.0	
	comp=Z,1µm,24.3s						
EZN	Ezine	159.42	303	⇓iP	PKPab	12 01 17.0	+0.6
EZN	Ezine	159.42	303	⇓PKP2	PKPab	12 01 17.1	+0.6
MODS	Modra-Piesok	159.43	334	ePKP2	PKPab	12 01 17.0	+0.8
MODS	Modra-Piesok	159.43	334	ePKP	PKPab	12 01 17.0	+0.8
UCC	Uccle	159.77	359	PFAKE		12 00 50.0	+11
UCC				LR	LR		
	comp=Z,900nm,20.0s						
KHC	Kasperske Hory	160.01	341	PFAKE		12 00 50.0	+11
KHC				LR	LR		
	comp=Z,400nm,21.0s						
KHC	Kasperske Hory	160.01	341	ePKIKP	PKPdf	12 00 39.6	+0.6
KHC				e		12 00 45.0	
KHC				e		12 18 21.2	
KHC				MLR	MLR		
	comp=Z,1µm,22.2s						
KHC	Kasperske Hory	160.01	341	ePKPDF	PKPdf	12 00 39.6	+0.6
KHC				epPKP	pPKPdf	12 00 45.0	-0.8
KHC				ePKPAB	PKPab	12 01 19.7	+1.0
KHC				ex	x	12 01 33.9	
KHC				ex	x	12 18 21.2	
KHC				AMS	AMS	13 10 40.0	
	comp=Z,1µm,22.2s						
GRA1	Grafenberg Arr	160.07	346	PFAKE		12 00 50.0	+11
GRA1				LR	LR		
	comp=Z,800nm,20.0s						
GRFO	Grafenberg	160.07	346	PFAKE		12 00 50.0	+11
GRFO				LR	LR		
	comp=Z,800nm,21.0s						
GEC2	GERESS Array S	160.23	340	ePKPdf	PKPdf	12 00 38.1	-1.3
GEC2				ePKPab	PKPab	12 01 19.7	0.0
GEC2	GERESS Array S	160.23	340	ePKIKP	PKPdf	12 00 38.1	-1.3
GEC2				e		12 01 19.7	
GERES	GERESS Array B	160.23	340	PKPab	PKPab	12 01 20.7	+1.0
	comp=Z,2.0nm,0.2s,baz=35,slow=4.9,SNR=5.3						
SOP	Sopron	160.27	334	eP	PKPdf	12 00 34.1	-5.2
VTS	Vitosha	160.32	313	ePKPdf	PKPdf	12 00 39.0	-0.7
VTS				ePKPab	PKPab	12 01 21.7	+1.2
VTS	Vitosha	160.32	313	⇓iP	PKPab	12 01 22.4	+1.9
VTS	Vitosha	160.32	313	ePKIKP	PKPdf	12 00 39.0	-0.7
CONA	Conrad Observa	160.33	335	i PKPdf	PKPdf	12 00 39.9	+0.5
	comp=Z,0.9nm,0.5s						
CONA				i PKPab	PKPab	12 01 21.6	+1.4
	comp=Z,5.8nm,0.9s						
MOA	Molln	160.94	338	i PKPdf	PKPdf	12 00 41.8	+1.7
	comp=Z,0.7nm,0.4s						
MOA				i PKPab	PKPab	12 01 24.8	+2.0
	comp=Z,9.3nm,1.4s						

ARSA	**Arzberg**	**161.02**	**335**	*i* PKPdf	**PKPdf**	**12 00 42.2**	**+2.0**
	comp=Z,1.8nm,0.6s						
BEHE	**Becsehely**	**161.17**	**331**	*e*P	**PKPdf**	**12 00 37.1**	**-3.2**
SOKA	**Soboth**	**161.68**	**335**	*i* PKPdf	**PKPdf**	**12 00 42.3**	**+1.4**
	comp=Z,5.9nm,1.0s						
SOKA				*i* PKPab	**PKPab**	**12 01 26.7**	**+0.6**
	comp=Z,11nm,1.9s						
KBA	**Koelnbreinsper**	**161.92**	**339**	*i* PKPdf	**PKPdf**	**12 00 43.4**	**+2.1**
	comp=Z,4.4nm,0.9s						
OBKA	**Obir**	**162.00**	**335**	*i* PKPdf	**PKPdf**	**12 00 42.6**	**+1.3**
	comp=Z,4.0nm,1.0s						
OBKA				*i* PKPab	**PKPab**	**12 01 28.3**	**+0.8**
	comp=Z,5.5nm,0.8s						
LIT	**Litokhoron**	**162.03**	**307**	*e*PKPdf	**PKPdf**	**12 00 40.7**	**-0.7**
LIT				*e*PKPab	**PKPab**	**12 01 28.5**	**+0.7**
LIT	**Litokhoron**	**162.03**	**307**	*e*PKIKP	**PKPdf**	**12 00 40.7**	**-0.7**
LIT				*e*		12 01 28.5	
MYKA	**Terra Mystica**	**162.22**	**337**	*i* PKPab	**PKPab**	**12 01 28.9**	**+0.5**
	comp=Z,4.6nm,0.6s						
WTTA	**Wattenberg**	**162.24**	**342**	*i* PKPdf	**PKPdf**	**12 00 43.0**	**+1.3**
	comp=Z,7.4nm,1.0s						
WTTA				*i* PKPab	**PKPab**	**12 01 29.8**	**+1.2**
	comp=Z,10nm,0.7s						
RETA	**Reutte**	**162.25**	**344**	PKPdf	**PKPdf**	**12 00 42.8**	**+1.3**
	comp=Z,1.9nm,0.4s						
RETA				*i* PKPab	**PKPab**	**12 01 29.5**	**+1.0**
	comp=Z,9.4nm,1.2s						
MOTA	**Moosalm**	**162.31**	**343**	*i* PKPdf	**PKPdf**	**12 00 42.2**	**+0.5**
	comp=Z,2.6nm,0.6s						
MOTA				*i* PKPab	**PKPab**	**12 01 30.5**	**+1.6**
	comp=Z,12nm,1.1s						
SQTA	**Sankt Quirin**	**162.39**	**343**	*i* PKPdf	**PKPdf**	**12 00 41.8**	**+0.1**
	comp=Z,6.7nm,0.8s						
LJU	**Ljubljana**	**162.41**	**335**	*i* PKPdf	**PKPdf**	**12 00 40.6**	**-1.0**
LJU				*e*		12 18 45.4	
LJU	**Ljubljana**	**162.41**	**335**	AML	AML		
	comp=E,540µm,0.2s						
LJU				AML	AML		
	comp=E,540µm,0.2s						
LJU				AML	AML		
	comp=N,372µm,0.2s						
LJU				AML	AML		
	comp=N,372µm,0.2s						
ABTA	**Abfaltersbach**	**162.47**	**340**	*i* PKPdf	**PKPdf**	**12 00 41.6**	**-0.2**
	comp=N,3.9nm,0.9s						
ABTA				*i* PKPab	**PKPab**	**12 01 30.5**	**+0.9**
	comp=N,11nm,1.3s						
TOA0	**Torodi Ar. Sit**	**162.57**	**173**	*e*PKPdf	**PKPdf**	**12 00 40.8**	**-1.9**
TOA0				*e*PKPab	**PKPab**	**12 01 32.3**	**+1.8**
TORD	**Torodi Ar. Bea**	**162.57**	**173**	PKPab	**PKPab**	**12 01 31.3**	**+0.8**
	comp=N,1.2nm,1.9s,baz=186,slow=2.9,SNR=27						
BOJS	**Bojanci**	**162.58**	**332**	*i* PKPdf	**PKPdf**	**12 00 41.0**	**-0.8**
DAVA	**Damuels**	**162.64**	**346**	*i* PKPdf	**PKPdf**	**12 00 43.2**	**+1.2**
	comp=N,6.2nm,0.9s						
DAVA				*i* PKPab	**PKPab**	**12 01 31.2**	**+0.9**
	comp=N,12nm,0.8s						
FETA	**Feichten**	**162.70**	**344**	*i* PKPdf	**PKPdf**	**12 00 42.4**	**+0.4**
	comp=N,9.5nm,0.9s						
FETA				*i* PKPab	**PKPab**	**12 01 31.8**	**+1.2**
	comp=N,5.2nm,1.1s						
CEY	**Cerknica**	**162.70**	**334**	*e*PKPdf	**PKPdf**	**12 00 41.0**	**-1.0**
TUE	**Stuetta**	**163.53**	**346**	*e*PKPdf	**PKPdf**	**12 00 42.6**	**-0.4**
TUE				*e*PKPab	**PKPab**	**12 01 34.8**	**+0.5**
PGAV	**Gavieira, Arco**	**165.06**	**37**	*e*PKPdf	**PKPdf**	**12 00 45.4**	**+1.1**
PGAV	**Gavieira, Arco**	**165.06**	**37**	*e*PKPab	**PKPab**	**12 01 40.7**	**-0.4**
PGAV	**Gavieira, Arco**	**165.06**	**37**	*e*PP	PP	12 05 27.4	-0.1
PGAV	**Gavieira, Arco**	**165.06**	**37**	*e*LR	LR	12 57 55.1	
	comp=N,848nm,22.0s						
PCAB	**Cabril**	**165.37**	**37**	*e*PKPdf	**PKPdf**	**12 00 46.9**	**+2.4**
PCAB	**Cabril**	**165.37**	**37**	*e*PKPab	**PKPab**	**12 01 42.2**	**-0.2**
POLO	**Lamas de Olo**	**165.73**	**38**	*e*PKPdf	**PKPdf**	**12 00 45.5**	**+0.6**
POLO	**Lamas de Olo**	**165.73**	**38**	*e*PKPab	**PKPab**	**12 01 44.5**	**+0.4**
POLO	**Lamas de Olo**	**165.73**	**38**	*e*PP	PP	12 05 31.5	+0.5
ORI	**Oriolo Calabro**	**165.97**	**316**	AML	AML		
	comp=E,216µm,0.2s						
ORI				AML	AML		
	comp=E,216µm,0.2s						
ORI				AML	AML		
	comp=N,148µm,0.1s						
ORI				AML	AML		
	comp=N,148µm,0.1s						
PVIS	**Viseu**	**166.13**	**40**	*e*PKPdf	**PKPdf**	**12 00 46.2**	**+1.0**
PVIS	**Viseu**	**166.13**	**40**	*e*PKPab	**PKPab**	**12 01 45.4**	**-0.5**
PCAS	**Casmilo, Conde**	**166.23**	**43**	*e*PKPdf	**PKPdf**	**12 00 46.2**	**+1.0**
PCAS	**Casmilo, Conde**	**166.23**	**43**	*e*PKPab	**PKPab**	**12 01 45.7**	**-0.6**
PCAS	**Casmilo, Conde**	**166.23**	**43**	*e*PP	PP	12 05 35.8	+2.1
MVO	**Moncorvo**	**166.28**	**37**	*e*PKPdf	**PKPdf**	**12 00 46.3**	**+1.0**
MVO	**Moncorvo**	**166.28**	**37**	*e*PKPab	**PKPab**	**12 01 46.6**	**+0.1**
MVO	**Moncorvo**	**166.28**	**37**	*e*PP	PP	12 05 33.9	+0.1
MVO	**Moncorvo**	**166.28**	**37**	*e*LR	LR	12 58 27.9	
	comp=N,826nm,20.0s						
TIP	**Timpagrande**	**166.31**	**312**	⇑*i*P	**PKPab**	**12 01 48.2**	**+1.5**
PMAFR	**Mafra**	**166.40**	**48**	*e*PKPdf	**PKPdf**	**12 00 46.5**	**+1.1**
MTE	**Manteigas**	**166.54**	**40**	*e*PKPdf	**PKPdf**	**12 00 46.2**	**+0.7**
MTE	**Manteigas**	**166.54**	**40**	*e*PKPab	**PKPab**	**12 01 47.3**	**-0.4**
MTE	**Manteigas**	**166.54**	**40**	*e*PP	PP	12 05 36.3	+1.0
MTE	**Manteigas**	**166.54**	**40**	*e*LR	LR	12 58 52.0	
	comp=N,1µm,22.0s						
MTE	**Manteigas**	**166.54**	**40**	*e*PKPdf	**PKPdf**	**12 00 45.6**	**+0.1**
MTE				*e*PKPab	**PKPab**	**12 01 47.6**	**-0.1**
PTOM	**Tomar**	**166.55**	**44**	*e*PKPdf	**PKPdf**	**12 00 46.7**	**+1.2**
LIS	**Lisbon**	**166.62**	**49**	*e*PKPdf	**PKPdf**	**12 00 45.7**	**+0.2**
LIS				AMS	AMS	13 13 52.3	
	comp=Z,835nm,23.7s						
LIS	**Lisbon**	**166.62**	**49**	*e*PKIKP	**PKPdf**	**12 00 45.7**	**+0.2**
ALMR	**Almeirim**	**166.73**	**46**	*e*PKPdf	**PKPdf**	**12 00 45.8**	**+0.1**
ALMR				AMS	AMS	13 12 38.2	
	comp=Z,919nm,19.4s						
ALMR	**Almeirim**	**166.73**	**46**	*e*PKIKP	**PKPdf**	**12 00 45.7**	**+0.1**
PCBR	**Castelo Branco**	**166.96**	**42**	*e*PKPdf	**PKPdf**	**12 00 47.4**	**+1.6**
PCBR	**Castelo Branco**	**166.96**	**42**	*e*PKPab	**PKPab**	**12 01 48.7**	**-0.8**
PMTG	**Montargil**	**167.00**	**46**	*e*PKPdf	**PKPdf**	**12 00 47.1**	**+1.3**
PMTG	**Montargil**	**167.00**	**46**	*e*PKPab	**PKPab**	**12 01 48.4**	**-1.3**
PMTG	**Montargil**	**167.00**	**46**	*e*PP	PP	12 05 39.3	+1.5
PMRV	**Marv??o**	**167.28**	**43**	*e*PKPdf	**PKPdf**	**12 00 46.8**	**+0.7**
PMRV	**Marv??o**	**167.28**	**43**	*e*PKPab	**PKPab**	**12 01 50.6**	**-0.3**
PMRV	**Marv??o**	**167.28**	**43**	*e*PP	PP	12 05 40.9	+1.8
PMRV	**Marv??o**	**167.28**	**43**	*e*LR	LR	12 59 07.7	
	comp=Z,1µm,20.0s						
PNCL	**Nicolau / Gran**	**167.36**	**50**	*e*PKPdf	**PKPdf**	**12 00 47.2**	**+1.1**
PNCL	**Nicolau / Gran**	**167.36**	**50**	*e*PKPab	**PKPab**	**12 01 51.5**	**+0.2**
PNCL	**Nicolau / Gran**	**167.36**	**50**	*e*PP	PP	12 05 41.8	+2.1
PFVI	**Vila Bisbo**	**167.65**	**55**	*e*PP	PP	12 05 42.8	+1.4
MORF	**Marmelete**	**167.69**	**54**	*e*PKPdf	**PKPdf**	**12 00 46.4**	**-0.1**
MORF				AMS	AMS	13 13 39.3	
	comp=Z,861nm,15.7s						
MORF	**Marmelete**	**167.69**	**54**	*e*PKPdf	**PKPdf**	**12 00 47.1**	**+0.6**
MORF	**Marmelete**	**167.69**	**54**	*e*PP	PP	12 05 42.9	+1.3
MORF	**Marmelete**	**167.69**	**54**	*e*PKIKP	**PKPdf**	**12 00 46.3**	**-0.1**
PBEJ	**Beja**	**167.84**	**49**	*e*PKPdf	**PKPdf**	**12 00 50.3**	**+3.8**
PCVE	**Castro Verde**	**167.94**	**51**	*e*PKPdf	**PKPdf**	**12 00 47.7**	**+1.1**
PCVE	**Castro Verde**	**167.94**	**51**	*e*PKPab	**PKPab**	**12 01 53.9**	**0.0**
PCVE	**Castro Verde**	**167.94**	**51**	*e*PP	PP	12 05 44.2	+1.4
PBDV	**Barranco-do-Ve**	**168.22**	**52**	*e*PKPdf	**PKPdf**	**12 00 49.4**	**+2.6**
PBDV	**Barranco-do-Ve**	**168.22**	**52**	*e*PP	PP	12 05 47.1	+2.8
PVAQ	**Vaqueiros**	**168.28**	**51**	*e*PKPdf	**PKPdf**	**12 00 47.5**	**+0.7**
PVAQ	**Vaqueiros**	**168.28**	**51**	*e*PKPab	**PKPab**	**12 01 53.2**	**-2.2**
PVAQ	**Vaqueiros**	**168.28**	**51**	*e*PP	PP	12 05 46.0	+1.5
PVAQ	**Vaqueiros**	**168.28**	**51**	*e*LR	LR	13 00 18.8	
	comp=Z,829nm,20.0s						
PAB	**San Pablo**	**168.84**	**34**	*e*PKPdf	**PKPdf**	**12 00 47.2**	**+0.1**
PAB				*e*PKPab	**PKPab**	**12 01 57.7**	**-0.2**
PAB	**San Pablo**	**168.84**	**34**	*e*PKIKP	**PKPdf**	**12 00 47.3**	**+0.1**
PAB				*e*		12 01 57.7	
ESDC	**Sonseca Array**	**168.93**	**33**	PKP	**PKPdf**	**12 00 48.8**	**+1.6**
	comp=Z,2.2nm,0.8s,baz=343,slow=1.8,SNR=15						
ESDC				PKPab	**PKPab**	**12 01 58.4**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=314,slow=3.9,SNR=8.7						
ESLA	**Sonseca Array**	**168.93**	**33**	*e*PKPdf	**PKPdf**	**12 00 47.3**	**+0.1**
ESLA				*e*PKPab	**PKPab**	**12 01 57.6**	**-0.6**
TAM	**Tamanrasset**	**172.11**	**192**	*e*PKPdf	**PKPdf**	**12 00 49.8**	**+0.2**
TAM				*e*PKPab	**PKPab**	**12 02 15.3**	**+2.6**
TAM	**Tamanrasset**	**172.11**	**192**	*e*PKIKP	**PKPdf**	**12 00 49.8**	**+0.2**

IDC ***19*** *11:54:33.4±2.1, 3°.11N×126°.32E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.5/23, mbtmp3.6/3, Error ellipse: s-maj=187.7km s-min=25.0km az=66.0*

ISC 19 11:54:34.9±1.3**, 3°.11N**±0°.09×**125°.7E**±0°.3**, h10^{km}, n6, σ2^{s}.36**/7**, mb3.7**/3**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.97**	**1**	*e*P	**Pn**	**11 55 24.3**	**+2.1**
DDMP				*e*S	**Sn**	**11 55 55.4**	**-2.5**
KCP	**Kidapawan**	**3.91**	**352**	⇑*i*P	Pg	11 56 04.4	+14
KCP				*i* S	**Sb**	**11 56 30.9**	**-0.7**
DCPH	**Dipolog City**	**5.90**	**337**	*e*P	**Pn**	**11 56 01.8**	**-0.7**
DCPH				*e*S		11 56 09.7	
WRA	**Warramunga Arr**	**24.44**	**160**	P	**P**	**11 59 52.3**	**-1.8**
	0.6nm,0.3s,baz=340,slow=11,SNR=22						
ASAR	**Alice Springs**	**27.80**	**164**	P	**P**	**12 00 23.0**	**-1.4**
	0.3nm,0.4s,baz=352,slow=7.5,SNR=13						
MKAR	**Makanchi Array**	**57.46**	**326**	P	**P**	**12 04 26.5**	**+2.3**
	0.6nm,0.7s,baz=120,slow=8.5,SNR=3.3						

WEL 19 11:57:40.4, 41°.8S±0°.9×**17°2E**±°**, h11^{km}**±1^{km}**, M3.6**/23**, ML3.8**/17**, MLv3.6**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=87.4, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.72**	**87**	P	Pg	11 57 54.7	+0.3
THZ				S	Sg	11 58 04.3	+0.5
INZ	**Inchbonnie**	**0.99**	**202**	P	Pn	11 58 00.0	-0.2
INZ				S	Sb	11 58 13.3	+0.7
LTZ	**Lake Taylor**	**1.00**	**166**	P	Pn	11 58 00.6	+0.1
QRZ	**Quartz Range**	**1.08**	**24**	P	Pn	11 58 01.4	-0.1
QRZ				S	Sg	11 58 15.7	+0.5
NNZ	**Nelson**	**1.23**	**62**	P	Pb	11 58 03.7	+0.1
KHZ	**Kahutara**	**1.33**	**118**	P	Pg	11 58 06.7	+0.7
KHZ				S	Sg	11 58 24.0	+0.7
GVZ	**Greta Valley S**	**1.41**	**145**	P	Pg	11 58 07.2	-0.3
BSWZ	**Blackbirch Sta**	**1.45**	**87**	P	Pg	11 58 08.4	+0.2
AMCZ	**Amberley**	**1.46**	**159**	P	Pb	11 58 08.1	+0.4
OXZ	**Oxford**	**1.52**	**177**	P	Pb	11 58 08.3	-0.3
TUWZ	**Tuamarina**	**1.55**	**76**	P	Pb	11 58 09.3	+0.2
WVZ	**Waitaha Valley**	**1.55**	**215**	P	Pn	11 58 08.5	+0.6
CMWZ	**Cape Campbell**	**1.70**	**89**	P	Pg	11 58 13.2	+0.2
DUWZ	**D’Urville Isla**	**1.80**	**57**	P	Pb	11 58 13.0	-0.4
CRLZ	**Canterbury Las**	**1.83**	**164**	P	Pn	11 58 12.4	+0.5
TCW	**Tory Channel**	**1.85**	**72**	P	Pb	11 58 14.0	-0.3
MQZ	**McQueen’s Vall**	**1.97**	**165**	P	Pn	11 58 13.8	+0.1
RPZ	**Rata Peaks**	**2.02**	**199**	P	Pn	11 58 15.1	+0.7
OKCZ	**Okains Bay**	**2.08**	**157**	P	Pn	11 58 15.9	+0.6
AKCZ	**Akaroa Harbour**	**2.18**	**161**	P	Pn	11 58 17.5	+0.8
BHW	**Baring Head**	**2.23**	**81**	P	Pn	11 58 18.7	+1.3
FOZ	**Fox Glacier**	**2.33**	**222**	P	Pn	11 58 19.0	+0.4
CAW	**Cannon Point**	**2.45**	**74**	P	Pn	11 58 21.9	+1.6
PLWZ	**Palliser**	**2.49**	**86**	P	Pn	11 58 21.5	+0.5
MSWZ	**Moikau Station**	**2.51**	**82**	P	Pn	11 58 21.7	+0.5
OGWZ	**Otaki Gorge**	**2.62**	**69**	P	Pn	11 58 24.4	+1.6
MTW	**Mount Morrison**	**2.75**	**78**	P	Pn	11 58 24.8	+0.3
NMEZ	**Namu Road**	**2.81**	**32**	P	Pn	11 58 27.5	+2.2
HOWZ	**Holdsworth Sta**	**2.84**	**72**	P	Pn	11 58 26.5	+0.8
LBZ	**Lake Benmore**	**2.88**	**206**	P	Pn	11 58 26.3	0.0
NBEZ	**Newall Road No**	**2.93**	**31**	P	Pn	11 58 28.7	+1.8
KHEZ	**Kahui Hut**	**2.97**	**33**	P	Pn	11 58 29.3	+1.8
MRZ	**Mangatainoka R**	**2.97**	**68**	P	Pn	11 58 28.5	+0.9
PREZ	**Palmer Road**	**2.99**	**35**	P	Pn	11 58 29.7	+1.9
PKE	**Pukeiti**	**3.04**	**31**	P	Pn	11 58 30.5	+2.0
WAZ	**Wanganui**	**3.09**	**49**	P	Pn	11 58 32.0	+2.9
DREZ	**Durham Road**	**3.13**	**34**	P	Pn	11 58 31.4	+1.7
TIWZ	**Tintock**	**3.14**	**72**	P	Pn	11 58 30.3	+0.4
JCZ	**Jackson Bay**	**3.24**	**225**	P	Pn	11 58 31.5	+0.2
ODZ	**Otahua Downs**	**3.37**	**196**	P	Pn	11 58 32.7	-0.3
VRZ	**Vera Road**	**3.44**	**40**	P	Pn	11 58 35.3	+1.5
PKVZ	**Pokaka**	**3.61**	**47**	P	Pn	11 58 38.1	+1.7
WKZ	**Wanaka**	**3.70**	**214**	P	Pn	11 58 37.1	-0.4
FWVZ	**Far West T-bar**	**3.75**	**48**	P	Pn	11 58 40.5	+2.0
WHVZ	**Whangaehu Hut**	**3.75**	**49**	P	Pn	11 58 41.0	+2.5
MOVZ	**Moawhango**	**3.76**	**52**	P	Pn	11 58 40.0	+1.5
TUVZ	**Tukino**	**3.80**	**49**	P	Pn	11 58 42.0	+2.9
TWVZ	**Taurewa**	**3.82**	**45**	P	Pn	11 58 40.9	+1.6
NGZ	**Ngauruhoe**	**3.83**	**48**	P	Pn	11 58 41.5	+1.9
WTVZ	**West Tongariro**	**3.87**	**47**	P	Pn	11 58 42.1	+2.2
BHHZ	**Black Hill Sta**	**3.90**	**55**	P	Pn	11 58 41.4	+1.1
KRVZ	**Karewarewa**	**3.91**	**47**	P	Pn	11 58 41.0	+0.4
HIZ	**Hauiti**	**3.98**	**35**	P	Pn	11 58 42.0	+0.7
MSZ	**Milford Sound**	**4.10**	**224**	P	Pn	11 58 43.5	+0.5
RATZ	**Rangitukua**	**4.15**	**46**	P	Pn	11 58 47.1	+3.4
TLZ	**Tolley Road**	**4.44**	**40**	P	Pn	11 58 48.8	+1.1
MLZ	**Mavora Lakes**	**4.51**	**217**	P	Pn	11 58 50.7	+2.0
WHZ	**Wether Hill Ro**	**5.00**	**214**	P	Pn	11 58 56.6	+1.2
AWAZ	**Awhitu Peninsu**	**5.18**	**25**	P	Pn	11 58 59.5	+1.7
MKAZ	**Moumakai**	**5.32**	**29**	P	Pn	11 59 00.8	+1.1
WIAZ	**Waiheke Island**	**5.59**	**27**	P	Pn	11 59 05.4	+1.9
OUZ	**Omahuta**	**6.71**	**12**	P	Pn	11 59 20.5	+1.7

GEN ***19*** *11:59:28.8, 44°.19N×10°.22E, h2^{km}±1^{km}, Ml0.4*

ROM 19 11:59:28.4±0.1**, 44°.198N**±0°.003×**10°.215E**±0°.003**, h7^{km}, Md1.0**/2**, Error ellipse: s-maj=0.2km s-min=0.2km az=312.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.03**	**187**	P	Pg	11 59 30.0	+0.2
T0912				S	Sg	11 59 31.0	+0.3
T0912				END			
T0912				END			
T0912				END			
T0912				END			
EQUI	**Equi**	**0.06**	**234**	P	Pg	11 59 30.3	+0.3
EQUI				S	Sg	11 59 31.3	+0.1
VLC	**Villacollemand**	**0.13**	**107**	P	Pg	11 59 31.6	+0.4
VLC				S	Sg	11 59 33.9	+0.8
VLC				END			
VLC				END			
VLC				END			
VLC				END			
T0911	**Castelpoggio (**	**0.13**	**230**	P	Pg	11 59 31.7	+0.5
T0911				S	Sg	11 59 33.9	+0.8
T0911				END			
T0911				END			
SARO	**Sassorosso**	**0.14**	**96**	P	Pg	11 59 31.6	+0.3
SARO				S	Sg	11 59 33.6	+0.3
ERBM	**Eremo**	**0.26**	**33**	P	Pg	11 59 34.5	+0.8
ERBM				S	Sg	11 59 38.7	+1.5
GRAM	**Graiana**	**0.31**	**340**	P	Pg	11 59 35.3	+0.7
GRAM				S	Sg	11 59 40.2	+1.5
SAMA	**S.Maria delle**	**2.98**	**143**	AML	AML		
	comp=E,500µm,0.1s						
SAMA				AML	AML		
	comp=E,500µm,0.1s						
SAMA				AML	AML		
	comp=N,452µm,0.1s						
SAMA				AML	AML		
	comp=N,452µm,0.1s						

UCR 19 12:05:15.8±2.3**, 9°.54N**×**83°.26W, h12^{km}**±41^{km}**, MW3.5, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDBA	**Buenos Aires**	**0.38**	**182**	*e*P	Pb	12 05 24.0	-0.4
EDBA				*e*S	Sg	12 05 28.5	+0.1
EDLM	**Las Mercedes**	**0.41**	**231**	*e*P	Pb	12 05 25.2	+0.1
CVTR	**Volcan Turrial**	**0.68**	**314**	*e*P	Pn	12 05 35.2	+3.6
CVTR				*e*S	Sg	12 05 38.6	+0.4

MEX 19 12:18:13.7±0.6**, 16°.45N**×**98°.15W, h12^{km}**±10^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.49**	**65**	*e*P	Pn	12 18 37.4	-3.1
VHO				*i* S	Sn	12 18 55.8	-4.2

IDC ***19*** *12:28:21.6±13.0, 28°.41S×178°.68W, h288^{km}±121^{km}, mb3.1/2, mb1 3.5/2, mb1mx3.0/17, mbtmp3.7/2, Error ellipse: s-maj=48.1km s-min=43.5km az=130.0*

ISC 19 12:28:12.3±1.2**, 28°.3S**±0°.4×**178°.5W**±0°.3**, h210^{km}, n8, σ1^{s}.26**/8**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.60**	**270**	P	**P**	**12 35 56.9**	**+0.8**
	0.5nm,0.3s,baz=91,slow=10.0,SNR=5.9						
NVAR	**Mina Array Bea**	**87.04**	**43**	P	**P**	**12 40 35.9**	**+1.6**
	0.3nm,0.6s,baz=220,slow=8.3,SNR=3.4						
FINES	**FINESS Array B**	**143.05**	**341**	PKP	**PKPdf**	**12 47 18.6**	**-1.8**
	1.0nm,0.6s,baz=46,slow=6.0,SNR=2.9						
NB2	**NORSAR Subarra**	**146.64**	**351**	PKP	**PKPab**	**12 47 29.4**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=13,slow=3.1						
NOA	**NORSAR Array B**	**146.64**	**351**	PKPbc	**PKPbc**	**12 47 27.7**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=13,slow=4.4,SNR=3.6						
AKASG	**Malin Array Be**	**149.37**	**324**	PKPbc	**PKiKP**	**12 47 36.8**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=44,slow=3.1,SNR=4.1						
BRTR	**Keskin Array B**	**151.17**	**302**	PKPbc	**PKPbc**	**12 47 40.8**	**0.0**
	comp=Z,0.7nm,0.4s,baz=142,slow=3.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**164.89**	**181**	PKPab	**PKPab**	**12 48 48.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=178,slow=4.2,SNR=3.2						

MAN 19 12:28:49.4, 7°.90N×**124°.62E, h21^{km}, mb4.6, ML3.5, MS3.4, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.44**	**93**	*e*P	Pn	12 28 59.9	-0.7
BUKP				*e*S	Sn	12 29 08.6	+0.6
CGP	**Cagayan de Oro**	**0.55**	**8**	⇑*e*P	Pn	12 29 03.4	+1.3
CGP				*e*S	Sn	12 29 12.8	+2.2
CTBH	**Cotabato--PC H**	**0.77**	**208**	⇓*i*P	Pb	12 29 03.4	-0.7
CTBH				*i* S	Sb	12 29 13.5	-0.7
KCP	**Kidapawan**	**1.01**	**152**	⇓*i*P	Pn	12 29 08.4	0.0
KCP				*i* S	Sn	12 29 27.1	+5.2
PAGZ	**Pagadian**	**1.22**	**267**	*e*P	Pn	12 29 10.3	-1.0
PAGZ				*e*S	Sn	12 29 27.4	+0.1
SKMP	**Bagumbayan, Su**	**1.38**	**183**	*e*P	Pn	12 29 12.3	-1.2
SKMP				*e*S	Sb	12 29 31.9	+0.3
IPIL	**Ipil**	**2.03**	**267**	*e*P	Pn	12 29 23.9	+1.5
IPIL				*e*S	Sb	12 29 50.4	-0.1

SOME ***19*** *12:44:24.2, 42°.33N×81°.73E, h5^{km}*

NNC ***19*** *12:44:27.3±1.7, 42°.16N×81°.71E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=12.8km s-min=7.5km az=149.0*

ISC 19 12:44:20.5±3.7**, 42°.2N**±0°.2×**82°.1E**±0°.1**, h14^{km}, n9, σ2^{s}.05**/17**, 4C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**2.28**	**302**	⇑Pn	**Pb**	**12 45 01.9**	**+0.5**
	3.4nm,0.5s						
PDGK				⇓Lg	Lg	12 45 31.9	
	61nm,0.6s						
UZB	**Uzynbulak**	**2.50**	**295**	*e*P	**Pb**	**12 45 03.8**	**-1.5**
	4.0nm,0.4s						
UZB				*e*S	**Sn**	**12 45 32.5**	**+1.2**
	11nm,0.4s						
DJR	**Jarkent**	**2.77**	**323**	⇓*i*P	**Pb**	**12 45 10.5**	**+0.6**
	8.6nm,0.4s						
DJR				⇓*i*S	**Sb**	**12 45 43.9**	**+0.1**
	11nm,0.4s						
KPKS	**Kokpek**	**2.86**	**299**	*e*P	**Pb**	**12 45 10.5**	**-0.9**
	15nm,0.2s						
KPKS				*e*S	**Sb**	**12 45 43.7**	**-2.5**
	54nm,0.3s						
SATY	**Saty**	**2.90**	**290**	*e*P	**Pb**	**12 45 11.2**	**-0.8**
	6.9nm,0.4s						
SATY				*e*S	**Sb**	**12 45 45.0**	**-2.4**
	14nm,0.6s						
KAPS	**Kapalarasan**	**3.73**	**328**	*e*P	**Pb**	**12 45 26.0**	**0.0**
	1.7nm,0.3s						
KAPS				*e*S	**Sb**	**12 46 10.5**	**-0.6**
	5.6nm,0.2s						
ARXS	**Arharly**	**3.77**	**305**	*e*P	**Pb**	**12 45 26.2**	**-0.6**
	1.1nm,0.5s						
ARXS				*e*S	**Sb**	**12 46 10.5**	**-1.8**
	5.2nm,0.4s						
MK31	**Makanchi Array**	**4.64**	**1**	⇑Pn	**Pb**	**12 45 39.8**	**-1.9**
	0.1nm,0.3s,baz=184,slow=13,SNR=7.2						
MK31				⇑Pg	**Pg**	**12 45 52.7**	**+3.3**
	0.1nm,0.3s						
MK31				⇓Sn	**Sb**	**12 46 34.4**	**-3.1**
	0.9nm,0.7s,baz=184,slow=25,SNR=5.4						
MK31				Lg	Lg	12 46 54.4	
	2.8nm,0.8s,baz=189,slow=29,SNR=6.2						
MAKZ	**Makanchi**	**4.66**	**359**	⇑Sn	**Sb**	**12 46 34.4**	**-3.5**
	2.0nm,0.7s						
MAKZ				⇓Lg	Lg	12 46 54.4	
	2.4nm,0.8s						

UCR 19 12:45:18.5±3.0**, 11°.03N**×**86°.48W, h23^{km}**±19^{km}**, MW3.7, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	**Buena Vista**	**1.08**	**102**	*e*P	Pn	12 45 36.9	-1.4
GB1A	**Borinquen Arri**	**1.08**	**101**	*e*P	Pn	12 45 37.0	-1.4
GB1A				*e*S	Sn	12 45 53.9	+1.2
MESS	**Mesas**	**1.29**	**103**	*e*P	Pn	12 45 40.2	-1.1
MESS				*e*S	Sn	12 45 57.4	-0.5
CNGN	**Cerro Negro**	**1.48**	**352**	*e*P	Pn	12 45 43.3	-0.5
ACON	**Acoyapa**	**1.58**	**54**	*e*P	Pb	12 45 46.5	-0.6
JTS	**Las Juntas de**	**1.67**	**116**	*e*P	Pn	12 45 44.8	-1.6
ARE1	**Arenal 1**	**1.82**	**108**	*e*P	Pb	12 45 50.6	-0.6
CEDE	**Laguna Cedeo**	**1.83**	**107**	*e*P	Pb	12 45 50.1	-1.2
CEDE				*e*S	Sb	12 46 21.1	+7.3
MATN	**Matagalpa**	**1.97**	**16**	*e*P	Pn	12 45 50.0	-0.5

ISCJB ***19*** *13:25:23.3±0.3, 44°.22N±0°.03×10°.21E±0°.02, h15^{km}±2^{km}, Error ellipse: s-maj=4.5km s-min=2.9km az=10.9*

ROM ***19*** *13:25:23.2±0.1, 44°.226N±0°.005×10°.231E±0°.005, h11^{km}, ML2.5/19, Error ellipse: s-maj=0.6km s-min=0.3km az=198.0*

GEN ***19*** *13:25:23.9, 44°.24N×10°.24E, h9^{km}±1^{km}, Ml2.3*

LDG ***19*** *13:25:24.0±0.0, 44°.24N×10°.24E, h5^{km}, Ml2.8/6, Error ellipse: s-maj=1.3km s-min=0.6km az=25.0*

ISC 19 13:25:23.3±0.8**, 44°.22N**±0°.02×**10°.23E**±0°.02**, h12^{km}**±4^{km}**, n41, σ1^{s}.15**/67**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0912	**Minucciano (LU**	**0.05**	**198**	P	**Pg**	**13 25 26.1**	**+0.3**
T0912				S	**Sg**	**13 25 27.8**	**+0.3**
T0912				AML	AML		
	comp=E,32200µm,0.2s						
T0912				AML	AML		
	comp=N,54250µm,0.7s						
T0912				AML	AML		
	comp=E,32250µm,0.2s						
T0912				AML	AML		
	comp=N,53450µm,0.7s						
T0912				AML	AML		
	comp=E,32200µm,0.1s						
T0912				AML	AML		
	comp=N,54250µm,0.7s						
T0912				AML	AML		
	comp=E,32250µm,0.2s						
T0912				AML	AML		
	comp=N,53450µm,0.7s						
T0912				AML	AML		
	comp=N,54250µm,0.7s						
T0912				AML	AML		
	comp=N,53450µm,0.7s						
T0912				AML	AML		
	comp=E,32200µm,0.1s						
T0912				AML	AML		
	comp=E,32250µm,0.2s						
T0912				AML	AML		
	comp=N,54250µm,0.7s						
T0912				AML	AML		
	comp=N,53450µm,0.7s						
T0912				AML	AML		
	comp=E,32200µm,0.1s						
T0912				AML	AML		
	comp=E,32250µm,0.2s						
EQUI	**Equi**	**0.08**	**228**	P	**Pg**	**13 25 26.2**	**+0.3**
EQUI				S	**Sg**	**13 25 28.1**	**+0.2**
EQUI	**Equi**	**0.08**	**228**	P	**Pg**	**13 25 26.2**	**+0.3**
EQUI				S	**Sg**	**13 25 28.0**	**+0.2**
EQUI				AML	AML		
	comp=E,7780µm,0.5s						
EQUI				AML	AML		
	comp=N,6110µm,0.4s						
EQUI				AML	AML		
	comp=E,7780µm,0.5s						
EQUI				AML	AML		
	comp=N,6110µm,0.4s						
EQUI				AML	AML		
	comp=E,7780µm,0.5s						
EQUI				AML	AML		

	comp=N,6110µm,0.4s						
EQUI				AML	AML		
	comp=E,7780µm,0.5s						
EQUI				AML	AML		
	comp=N,6110µm,0.4s						
FIVI	**Fivizzano**	0.08	286	P	Pg	13 25 26.1	+0.1
FIVI				S	Sg	13 25 27.8	-0.1
FIVI				AML	AML		
	comp=E,31700µm,0.1s						
FIVI				AML	AML		
	comp=N,25050µm,0.1s						
FIVI				AML	AML		
	comp=E,31700µm,0.1s						
FIVI				AML	AML		
	comp=N,25050µm,0.1s						
FIVI				AML	AML		
	comp=E,31700µm,0.1s						
FIVI				AML	AML		
	comp=N,25050µm,0.1s						
VLC	**Villacollemand**	0.12	118	P	Pg	13 25 26.9	+0.4
VLC				S	Sg	13 25 29.2	+0.3
VLC				AML	AML		
	comp=E,1475µm,1.0s						
VLC				AML	AML		
	comp=N,2060µm,0.4s						
VLC				AML	AML		
	comp=E,1535µm,1.0s						
VLC				AML	AML		
	comp=N,2015µm,0.3s						
VLC				AML	AML		
	comp=E,1475µm,1.0s						
VLC				AML	AML		
	comp=N,2055µm,0.4s						
VLC				AML	AML		
	comp=E,1535µm,1.0s						
VLC				AML	AML		
	comp=N,2015µm,0.3s						
VLC				AML	AML		
	comp=E,1535µm,1.0s						
VLC				AML	AML		
	comp=E,1475µm,1.0s						
VLC				AML	AML		
	comp=N,2015µm,0.3s						
VLC				AML	AML		
	comp=N,2055µm,0.4s						
VLC				AML	AML		
	comp=E,1535µm,1.0s						
VLC				AML	AML		
	comp=E,1475µm,1.0s						
VLC				AML	AML		
	comp=N,2015µm,0.3s						
VLC				AML	AML		
	comp=N,2055µm,0.4s						
SARO	**Sassorosso**	0.13	106	P	Pg	13 25 26.9	+0.3
SARO				S	Sg	13 25 29.3	+0.3
T0911	**Castelpoggio (**	0.16	227	P	Pg	13 25 27.6	+0.6
T0911				S	Sg	13 25 30.4	+0.8
T0911				AML	AML		
	comp=E,4220µm,0.6s						
T0911				AML	AML		
	comp=N,4705µm,0.1s						
T0911				AML	AML		
	comp=E,4240µm,0.6s						
T0911				AML	AML		
	comp=N,4635µm,0.1s						
T0911				AML	AML		
	comp=E,4225µm,0.5s						
T0911				AML	AML		
	comp=N,4705µm,0.1s						
T0911				AML	AML		
	comp=E,4235µm,0.5s						
T0911				AML	AML		
	comp=N,4635µm,0.1s						
T0911				AML	AML		
	comp=N,4705µm,0.1s						
T0911				AML	AML		
	comp=N,4635µm,0.1s						
T0911				AML	AML		
	comp=E,4225µm,0.5s						
T0911				AML	AML		
	comp=E,4235µm,0.5s						
T0911				AML	AML		
	comp=N,4705µm,0.1s						
T0911				AML	AML		
	comp=N,4635µm,0.1s						
T0911				AML	AML		
	comp=E,4225µm,0.5s						
T0911				AML	AML		
	comp=E,4235µm,0.5s						
FOSD	**Fosdinovo**	0.20	237	P	Pg	13 25 28.4	+0.7
FOSD				S	Sg	13 25 31.9	+1.2
FOSD				AML	AML		
	comp=E,19150µm,0.2s						
FOSD				AML	AML		
	comp=N,12965µm,0.4s						
FOSD				AML	AML		
	comp=E,19150µm,0.2s						
FOSD				AML	AML		
	comp=N,12950µm,0.4s						
FOSD				AML	AML		
	comp=E,19150µm,0.2s						
FOSD				AML	AML		
	comp=N,12950µm,0.4s						
FOSD				AML	AML		
	comp=E,19150µm,0.2s						
FOSD				AML	AML		
	comp=N,12950µm,0.4s						
CARD	**Cardoso**	0.26	137	P	Pg	13 25 29.2	+0.3
CARD				S	Sg	13 25 33.4	+1.0
CARD	**Cardoso**	0.26	137	P	Pg	13 25 29.1	+0.3
CARD				S	Sg	13 25 33.2	+0.7
CARD				AML	AML		
	comp=E,2275µm,0.1s						
CARD				AML	AML		
	comp=N,2410µm,0.2s						
CARD				AML	AML		
	comp=E,2275µm,0.1s						
CARD				AML	AML		
	comp=N,2410µm,0.2s						
CARD				AML	AML		
	comp=E,2275µm,0.1s						
CARD				AML	AML		
	comp=N,2410µm,0.2s						
CARD				AML	AML		
	comp=E,2275µm,0.1s						
CARD				AML	AML		
	comp=N,2410µm,0.2s						
GRAM	**Graiana**	0.30	336	P	Pg	13 25 29.5	0.0
GRAM				S	Sg	13 25 33.8	+0.2
GRAM	**Graiana**	0.30	336	P	Pg	13 25 29.5	0.0
GRAM				S	Sg	13 25 33.9	+0.2
GRAM				AML	AML		
	comp=E,7140µm,0.3s						
GRAM				AML	AML		
	comp=N,5415µm,0.8s						
BDI	**Bagni Di Lucca**	0.30	120	P	Pg	13 25 29.9	+0.3
BDI				S	Sb	13 25 34.7	-1.0
BDI				AML	AML		
	comp=E,1119µm,0.8s						
BDI				AML	AML		
	comp=N,917µm,0.6s						
BDI				AML	AML		
	comp=E,898µm,0.6s						
BDI				AML	AML		
	comp=N,1310µm,0.6s						
BDI				AML	AML		
	comp=E,898µm,0.6s						
BDI				AML	AML		
	comp=N,1310µm,0.6s						
BDI				AML	AML		
	comp=N,917µm,0.6s						
BDI				AML	AML		
	comp=E,1119µm,0.8s						
BDI				AML	AML		
	comp=E,898µm,0.6s						
BDI				AML	AML		
	comp=N,1310µm,0.6s						
BDI				AML	AML		
	comp=N,917µm,0.6s						
BDI				AML	AML		
	comp=E,1119µm,0.8s						
PLMA	**Palmaria, Port**	0.32	239	P	Pg	13 25 30.5	+0.6
PLMA				S	Sg	13 25 35.0	+0.8
PLMA				AML	AML		
	comp=E,1320µm,0.6s						
PLMA				AML	AML		
	comp=N,1725µm,0.6s						
PLMA				AML	AML		
	comp=N,1725µm,0.6s						
PLMA				AML	AML		
	comp=E,1320µm,0.6s						
PLMA				AML	AML		
	comp=N,1725µm,0.6s						
PLMA				AML	AML		
	comp=E,1320µm,0.6s						
MAIM	**Mastiano**	0.36	148	P	Pg	13 25 31.0	+0.5
MAIM				S	Sb	13 25 36.4	-0.7
MAIM	**Mastiano**	0.36	148	P	Pg	13 25 30.9	+0.5
MAIM				S	Sg	13 25 36.2	+0.9
MAIM				AML	AML		
	comp=E,444µm,0.3s						
MAIM				AML	AML		
	comp=N,476µm,0.6s						
MAIM				AML	AML		
	comp=E,444µm,0.3s						
MAIM				AML	AML		
	comp=N,476µm,0.6s						
MAIM				AML	AML		
	comp=N,476µm,0.6s						
MAIM				AML	AML		
	comp=E,444µm,0.3s						
MAIM				AML	AML		
	comp=N,476µm,0.6s						
MAIM				AML	AML		
	comp=E,444µm,0.3s						
POPM	**Popiglio**	0.41	114	P	Pb	13 25 31.9	-0.7
POPM				S	Sb	13 25 38.2	-0.6
POPM	**Popiglio**	0.41	114	P	Pb	13 25 31.9	-0.7
POPM				S	Sb	13 25 38.2	-0.6
POPM				AML	AML		
	comp=E,864µm,0.2s						
POPM				AML	AML		
	comp=N,1265µm,1.0s						
POPM				AML	AML		
	comp=E,864µm,0.2s						
POPM				AML	AML		
	comp=N,1265µm,1.0s						
POPM				AML	AML		
	comp=E,864µm,0.2s						
POPM				AML	AML		
	comp=N,1265µm,1.0s						
MSSA	**Maissana**	0.52	281	P	Pg	13 25 33.8	+0.2
MSSA				S	Sg	13 25 40.6	+0.1
MSSA				AML	AML		
	comp=E,224µm,1.2s						
MSSA				AML	AML		
	comp=N,284µm,0.4s						
MSSA				AML	AML		
	comp=N,284µm,0.4s						
MSSA				AML	AML		
	comp=E,224µm,1.2s						
MSSA				AML	AML		
	comp=N,284µm,0.4s						
MSSA				AML	AML		
	comp=E,224µm,1.2s						
MTCR	**Monte La Croce**	0.58	109	P	Pb	13 25 35.1	-0.4
CRMI	**Carmignano**	0.68	129	P	Pb	13 25 36.9	-0.3
CRMI				AML	AML		
	comp=E,95µm,0.3s						
CRMI				AML	AML		
	comp=N,86µm,1.1s						
CRMI				AML	AML		
	comp=E,95µm,0.3s						
CRMI				AML	AML		
	comp=N,86µm,1.1s						
CRMI				AML	AML		
	comp=E,95µm,0.3s						
CRMI				AML	AML		
	comp=N,86µm,1.1s						
BOB	**Bobbio (Coli)**	0.79	315	P	Pg	13 25 38.6	+0.1
SEI	**Scarperia**	0.83	101	P	Pg	13 25 39.6	+0.3
SEI				AML	AML		
	comp=E,258µm,0.4s						
SEI				AML	AML		
	comp=N,544µm,0.3s						
SEI				AML	AML		
	comp=E,258µm,0.4s						
SEI				AML	AML		
	comp=N,544µm,0.3s						
SEI				AML	AML		
	comp=E,258µm,0.4s						
SEI				AML	AML		
	comp=N,544µm,0.3s						
GROG	**Isola di Gorgo**	0.83	197	P	Pb	13 25 39.7	+0.1
GROG				AML	AML		
	comp=E,357µm,0.2s						
GROG				AML	AML		
	comp=N,190µm,0.2s						
GROG				AML	AML		
	comp=N,190µm,0.2s						
GROG				AML	AML		
	comp=E,357µm,0.2s						
GROG				AML	AML		
	comp=N,190µm,0.2s						
GROG				AML	AML		
	comp=E,357µm,0.2s						
CASP	**Castiglione de**	1.50	162	P	Pn	13 25 50.0	0.0
CASP				AML	AML		
	comp=E,33µm,1.3s						
CASP				AML	AML		
	comp=N,49µm,0.6s						
CASP				AML	AML		
	comp=E,33µm,1.3s						
CASP				AML	AML		
	comp=N,49µm,0.6s						
CASP				AML	AML		
	comp=E,33µm,1.3s						
CASP				AML	AML		
	comp=N,49µm,0.6s						
IMI	**Imperia**	1.71	260	P	Pn	13 25 52.5	-0.5
IMI				AML	AML		
	comp=E,43µm,1.3s						
IMI				AML	AML		
	comp=N,50µm,1.3s						
IMI				AML	AML		
	comp=E,43µm,1.3s						
IMI				AML	AML		
	comp=N,50µm,1.3s						
IMI				AML	AML		
	comp=E,43µm,1.3s						
IMI				AML	AML		
	comp=N,50µm,1.3s						
MGRO	**Montegrosso**	1.75	265	P	Pn	13 25 53.3	-0.4
MGRO				AML	AML		
	comp=E,52µm,1.0s						
MGRO				AML	AML		
	comp=N,47µm,0.4s						
MGRO				AML	AML		
	comp=E,52µm,1.0s						
MGRO				AML	AML		
	comp=N,47µm,0.4s						
MGRO				AML	AML		
	comp=E,52µm,1.0s						
MGRO				AML	AML		
	comp=N,47µm,0.4s						
NEGI	**Seborga**	1.86	259	AML	AML		
	comp=N,42µm,1.5s						
NEGI				AML	AML		
	comp=E,43µm,1.1s						
NEGI				AML	AML		
	comp=N,42µm,1.5s						
NEGI				AML	AML		
	comp=E,43µm,1.1s						
NEGI				AML	AML		
	comp=N,42µm,1.5s						
NEGI				AML	AML		
	comp=E,43µm,1.1s						
SBF	**Sospel**	2.05	261	*e*Pn	Pn	13 25 57.7	+0.1
SBF				*e*Sn	Sn	13 26 22.3	-0.8
	comp=E,18nm,0.3s						
MBDF	**Montbardon**	2.53	283	*e*Pn	Pn	13 26 04.2	-0.1
MBDF				*e*Sn	Sn	13 26 33.7	-1.4
	comp=E,12nm,0.6s						
FRF	**La Foret Royal**	2.67	257	*e*Pn	Pn	13 26 06.3	+0.1
FRF				*e*Sn	Sn	13 26 37.2	-1.3
	comp=E,9.4nm,0.2s						
FETA	**Feichten**	2.83	7	*i* Pg	Pg	13 26 20.5	+3.1
	comp=E,1.6nm,0.4s						
FETA				*i* Sn	Sn	13 26 43.9	+1.4
	comp=E,2.2nm,0.5s						
LMR	**La Mourre**	2.84	253	*e*Pn	Pn	13 26 08.1	-0.3
LMR				*e*Sn	Sn	13 26 40.6	-1.9
	comp=E,6.4nm,0.2s						
SQTA	**Sankt Quirin**	3.08	12	*e*Pn	Pb	13 26 16.6	-1.5
	comp=E,4.6nm,0.2s						
SQTA				*e*Sn	Sb	13 26 55.8	+0.1
	comp=E,5.2nm,0.3s						
ORIF	**Oris-en-Rattie**	3.19	284	*e*Pn	Pn	13 26 13.0	-0.3
ORIF	**Oris-en-Rattie**	3.19	284	*e*P	Pn	13 26 15.9	+2.6
WTTA	**Wattenberg**	3.20	17	*e*Pn	Pb	13 26 18.3	-1.9
	comp=E,1.8nm,0.2s						
WTTA				*e*Sn	Sb	13 27 00.5	+1.3
	comp=E,7.2nm,0.5s						
SMRF	**Simiane la Rot**	3.36	267	*e*Pn	Pn	13 26 15.5	-0.2
KBA	**Koelnbreinsper**	3.60	36	Pn	Pb	13 26 23.2	-3.8
	comp=E,0.5nm,0.2s						
KBA				*i* Sn	Sn	13 27 01.6	+0.1
	comp=E,1.3nm,0.5s						
VIVF	**Saint-Julien-l**	4.03	281	*e*P	Pn	13 26 28.0	+3.2
LASF	**Ste Croix**	4.59	270	*e*P	Pn	13 26 36.0	+3.5

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*ISCJB **19** 13:27:52.4±0.9, 15.°92S±0.°09×72.°0W±0.°1, h100^{km}, mb3.3/2, Error ellipse: s-maj=19.6km s-min=9.4km az=150.4*

*IDC **19** 13:27:52.8±2.1, 15.°83S×71.°89W, h76^{km}±21^{km}, mb3.3/2, mb1 3.5/7, mb1mx3.4/39, mbtmp3.7/7, MS3.4/2, Ms1 3.4/2, ms1mx2.9/21, Error ellipse: s-maj=31.3km s-min=19.8km az=53.0*

ISC 19 13:27:53.6±0.9**, 15.°9S**±0.°1×**71.°9W**±0.°1**, h100**^{km}**, n9, σ1^{s}.36**/9**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	3.64	97	P	Pn	13 28 49.4	+0.9
	0.4nm,0.3s,baz=283,slow=14,SNR=9.7						
NNA	**Nana**	6.16	308	P	Pn	13 29 21.5	-0.7
	1.7nm,0.3s,baz=124,slow=15,SNR=2.4						
LVC	**Limon Verde**	7.28	158	P	Pn	13 29 36.7	-0.9
	1.2nm,0.3s,baz=325,slow=12,SNR=7.2						
LVC				S	Sn	13 30 59.6	+0.7
	1.0nm,0.3s,baz=267,slow=20,SNR=9.0						
LVC				LR	LR	13 32 22.2	
	comp=Z,218nm,18.7s,baz=336,slow=37						
SIV	**San Ignacio**	10.41	92	P	Pn	13 30 17.6	-2.3
	0.4nm,0.3s,baz=285,slow=12,SNR=13						
ATAH	**Atahualpa**	10.76	323	LR	LR	13 34 48.8	
	comp=Z,204nm,20.5s,baz=147,slow=39						
CFA	**Coronel Fontan**	16.02	169	P	Pn	13 31 32.8	-0.4
	0.2nm,0.3s,baz=347,slow=13,SNR=2.0						
TORD	**Torodi Ar. Bea**	78.26	73	P	P	13 39 44.7	+1.7
	0.6nm,0.8s,baz=245,slow=6.6,SNR=2.9						
YKA	**Yellowknife Ar**	84.97	342	P	P	13 40 17.6	+0.3
	0.1nm,0.3s,baz=131,slow=5.5,SNR=4.7						
SONM	**Songino Array**	148.09	2	PKPbc	PKPab	13 47 31.2	+0.4
	2.0nm,0.8s,baz=332,slow=1.5,SNR=7.6						

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*ISK **19** 13:36:27.3, 35.°51N×28.°79E, h17^{km}, ML3.1/9*

*THE **19** 13:36:31.9, 35.°70N×28.°70E, h15^{km}±4^{km}, ML2.6/1, Error ellipse: s-maj=4.9km s-min=2.4km az=219.0*

*DDA **19** 13:36:32.1, 35.°84N×28.°86E, h55^{km}±5^{km}, ML3.0*

ISC 19 13:36:30.1±1.5**, 35.°64N**±0.°06×**28.°79E**±0.°03**, h28**^{km}±13^{km}**, n26, σ0^{s}.87**/38**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	0.79	317	PG	Pb	13 36 44.9	-0.4
ARG	**Arkhangelos**	0.79	317	P	Pb	13 36 44.8	-0.5
ARG				S	Sb	13 36 55.9	+0.3
	620nm,0.4s						
AKAS	**Kas**	0.88	48	PG	Pb	13 36 46.9	-0.1
AKAS				SG	Sn	13 37 00.5	+1.7
AKAS	**Kas**	0.88	48	*i* P	Pb	13 36 47.0	0.0
AKAS				*i* S	Sn	13 37 00.2	+1.4
AKAS				IAML_P			
	comp=Z,3µm,0.2s						
FETY	**Fethiye**	1.02	13	PN	Pb	13 36 49.3	+0.1
FETY	**Fethiye**	1.02	13	*i* P	Pb	13 36 49.4	+0.2
FETY				*i* S	Sb	13 37 02.2	0.0
FETY				IAML_P			
	comp=Z,2µm,0.1s						
DALY	**Dalyan (Mula)**	1.18	355	*i* P	Pn	13 36 51.0	+0.3
DALY				*i* S	Sn	13 37 05.0	-0.8
DALY				IAML_P			
	comp=Z,2µm,0.2s						
TURN	**Turunc**	1.24	353	PN	Pn	13 36 52.0	+0.4
TURN	**Turunc**	1.24	353	*i* P	Pb	13 36 52.4	-0.5
TURN				IAML_P			
	comp=Z,3µm,0.2s						
ELL	**Elmali**	1.43	39	PN	Pn	13 36 55.1	+0.8
AKUM	**Antalya-Kumluc**	1.43	61	*i* P	Pn	13 36 54.5	+0.3
AKUM				*i* S	Sn	13 37 12.2	+0.2
AKUM				IAML_P			
	comp=Z,1µm,0.2s						
DAT	**Datca**	1.46	318	PN	Pn	13 36 55.3	+0.5
DAT	**Datca**	1.46	318	*i* P	Pb	13 36 57.9	+1.1
DAT				*i* S	Sn	13 37 12.5	-0.6
DAT				IAML_P			
	comp=Z,634nm,0.2s						
YER	**Yerkesik**	1.55	345	P	Pb	13 36 57.2	-1.0
GOLH	**Golhisar**	1.71	21	*i* P	Pb	13 36 59.8	-1.1
GOLH				IAML_P			
	comp=Z,569nm,0.1s						
TAVA	**DENIZLI_Tavas**	1.82	3	*i* P	Pn	13 37 00.7	+0.9
TAVA				*i* S	Sn	13 37 21.9	-0.1
TAVA				IAML_P			
	comp=Z,257nm,0.1s						
BODT	**Bodrum**	1.85	320	PN	Pn	13 37 00.2	+0.1
BODT	**Bodrum**	1.85	320	P	Pn	13 37 00.1	0.0
BODT				S	Sn	13 37 21.9	-0.7
AYDN	**Tasoluk**	2.15	340	*i* P	Pn	13 37 04.3	+0.2
AYDN				*i* S	Sn	13 37 28.6	-1.2
AYDN				IAML_P			
	comp=Z,305nm,0.1s						
ZKR	**Zakros**	2.17	257	P	Pn	13 37 05.2	+0.8
AYDB	**Zeytinkoy-Aydi**	2.41	343	PN	Pn	13 37 08.8	+0.9
KEPZ	**Antalya-Kepez**	2.60	60	*i* P	Pn	13 37 09.2	-1.1
KEPZ				*i* S	Sn	13 37 42.4	+1.5
KEPZ				IAML_P			
	comp=Z,102nm,0.3s						
GAZI	**Gazipasa**	2.92	77	*i* P	Pn	13 37 15.0	+0.2
GAZI				*i* S	Sn	13 37 46.4	-2.5
GAZI				IAML_P			
	comp=Z,383nm,0.2s						
TEKE	**Tekeli-Mersin**	3.54	81	PN	Pn	13 37 23.6	+0.3
BERE	**Bereket-Mersin**	3.66	78	PN	Pn	13 37 25.2	+0.2
CSS	**Mathiatis**	3.77	99	PN	Pn	13 37 26.2	-0.3

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*MEX **19** 13:55:34.2±0.9, 13.°55N×91.°57W, h30^{km}±167^{km}, MD3.8*

*GCG **19** 13:55:35.8±0.7, 15.°41N×90.°93W, h66^{km}±999^{km}, MD3.8*

ISC 19 13:55:34.7±3.7**, 13.°6N**±0.°2×**91.°63W**±0.°08**, h35**^{km}**, n5, σ0^{s}.44**/8**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	1.09	3	*e*P	Pn	13 55 53.7	0.0
STG3				*e*S	Sn	13 56 08.1	+0.4
FUG	**Fuego 3**	1.13	43	*e*P	Pn	13 55 54.1	-0.1
PCG	**Pacaya**	1.26	52	*e*P	Pn	13 55 56.5	+0.4
PCG				*e*S	Sn	13 56 11.3	-0.6
THIG		1.43	335	*i* S	Sn	13 56 15.2	-0.4
PCIG		2.58	324	*i* P	Pn	13 56 13.9	-0.1
PCIG				*i* S	Sn	13 56 44.4	+0.2

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*ISK **19** 14:01:36.9, 35.°66N×28.°89E, h16^{km}, ML2.8/13*

*ISCJB **19** 14:01:39.0±0.8, 35.°68N±0.°04×28.°84E±0.°03, h31^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=4.4km az=174.7*

*DDA **19** 14:01:39.0, 35.°82N×28.°93E, h35^{km}±1^{km}, ML2.4*

*ATH **19** 14:01:40.2, 36.°07N×28.°52E, h83^{km}±3^{km}, ML2.5/1, Error ellipse: s-maj=9.3km s-min=2.2km az=340.0*

*THE **19** 14:01:40.8, 35.°74N×28.°71E, h10^{km}±1^{km}, ML2.5/2, Error ellipse: s-maj=2.4km s-min=1.3km az=308.0*

ISC 19 14:01:39.3±1.3**, 35.°74N**±0.°05×**28.°82E**±0.°03**, h29**^{km}±13^{km}**, n32, σ0^{s}.89**/48**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	0.74	311	PG	Pn	14 01 53.2	-0.6
ARG				SG	Sn	14 02 05.8	+1.7
ARG	**Arkhangelos**	0.74	311	P	Pn	14 01 53.4	-0.4
ARG				S	Sn	14 02 04.3	+0.2
	395nm,0.4s						
ARG	**Arkhangelos**	0.74	311	P	Pn	14 01 53.2	-0.6

ARG				S	**Sb**	**14 02 03.7**	**+0.3**
ARG				AML	AML	14 02 07.4	
	comp=E,932µm,0.3s						
ARG				AML	AML	14 02 07.5	
	comp=N,532µm,0.5s						
AKAS	**Kas**	**0.81**	**52**	*i* P	**Pb**	**14 01 55.5**	**+0.7**
AKAS				*i* S	**Sb**	**14 02 05.7**	**+0.1**
AKAS				IAML_P			
	comp=Z,1µm,0.3s						
FETY	**Fethiye**	**0.92**	**13**	PG	**Pb**	**14 01 56.5**	**-0.3**
FETY	**Fethiye**	**0.92**	**13**	*i* P	**Pb**	**14 01 57.0**	**+0.2**
FETY				*i* S	**Sb**	**14 02 08.4**	**-0.2**
FETY				IAML_P			
	comp=Z,590nm,0.2s						
DALY	**Dalyan (Mula)**	**1.09**	**353**	PN	**Pn**	**14 01 58.3**	**-0.3**
DALY	**Dalyan (Mula)**	**1.09**	**353**	*i* P	**Pn**	**14 01 58.3**	**-0.3**
DALY				*i* S	**Sb**	**14 02 14.2**	**+0.9**
DALY				IAML_P			
	comp=Z,217nm,0.2s						
TURN	**Turunc**	**1.15**	**351**	PN	**Pb**	**14 02 00.0**	**-0.5**
TURN	**Turunc**	**1.15**	**351**	*i* P	**Pb**	**14 02 00.4**	**-0.2**
TURN				*i* S	**Sn**	**14 02 13.8**	**-0.4**
TURN				IAML_P			
	comp=Z,123nm,0.1s						
AKUM	**Antalya-Kumluc**	**1.36**	**64**	*i* P	**Pb**	**14 02 03.3**	**-1.0**
AKUM				*i* S	**Sn**	**14 02 19.2**	**-0.4**
AKUM				IAML_P			
	comp=Z,651nm,0.2s						
KARP	**Karpathos**	**1.36**	**263**	PN	**Pn**	**14 02 03.0**	**+0.6**
KARP	**Karpathos**	**1.36**	**263**	P	**Pn**	**14 02 03.1**	**+0.6**
KARP				S	**Sn**	**14 02 20.0**	**+0.4**
	comp=Z,212nm,0.1s						
KARP	**Karpathos**	**1.36**	**263**	P	**Pn**	**14 02 03.1**	**+0.6**
KARP				S	**Sn**	**14 02 19.4**	**-0.2**
DAT	**Datca**	**1.41**	**315**	PN	**Pn**	**14 02 03.7**	**+0.5**
DAT	**Datca**	**1.41**	**315**	*i* P	**Pb**	**14 02 05.0**	**0.0**
DAT				*i* S	**Sn**	**14 02 20.8**	**-0.1**
DAT				IAML_P			
	comp=Z,349nm,0.2s						
YER	**Yerkesik**	**1.46**	**343**	PN	**Pb**	**14 02 05.2**	**-0.7**
YER	**Yerkesik**	**1.46**	**343**	P	**Pb**	**14 02 05.5**	**-0.4**
YER				S	**Sb**	**14 02 23.9**	**-0.2**
GOLH	**Golhisar**	**1.61**	**22**	*i* P	**Pb**	**14 02 07.8**	**-0.7**
GOLH				*i* S	**Sb**	**14 02 27.7**	**-0.8**
GOLH				IAML_P			
	comp=Z,569nm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.73**	**2**	*i* P	**Pn**	**14 02 08.7**	**+1.2**
TAVA				*i* S	**Sb**	**14 02 30.3**	**-1.5**
TAVA				IAML_P			
	comp=Z,292nm,0.2s						
KORT	**Korkueli**	**1.77**	**44**	PN	**Pn**	**14 02 08.2**	**+0.1**
BODT	**Bodrum**	**1.80**	**318**	PN	**Pn**	**14 02 09.0**	**+0.6**
BODT	**Bodrum**	**1.80**	**318**	P	**Pn**	**14 02 09.1**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**2.33**	**342**	PN	**Pn**	**14 02 16.9**	**+1.1**
KEPZ	**Antalya-Kepez**	**2.53**	**62**	*i* P	**Pn**	**14 02 19.9**	**+1.4**
KEPZ				*i* S	**Sn**	**14 02 49.6**	**+1.3**
KEPZ				IAML_P			
	comp=Z,120nm,0.4s						
LAST	**Lasithi**	**2.79**	**259**	P	**Pn**	**14 02 22.8**	**+0.8**
IDI	**Anoyia**	**3.24**	**263**	P	**Pn**	**14 02 28.7**	**+0.5**
IDI				S	**Sn**	**14 03 02.7**	**-3.2**
TEKE	**Tekeli-Mersin**	**3.51**	**82**	PN	**Pn**	**14 02 32.2**	**+0.3**
BERE	**Bereket-Mersin**	**3.62**	**79**	PN	**Pn**	**14 02 33.9**	**+0.3**
CSS	**Mathiatis**	**3.77**	**101**	PN	**Pn**	**14 02 35.0**	**-0.5**
IMMV	**Iera Moni Meta**	**3.95**	**267**	P	**Pn**	**14 02 40.0**	**+2.0**
IKL	**Isikli**	**3.98**	**81**	PN	**Pn**	**14 02 38.5**	**+0.2**

IDC **19** *14:05:30.8±0.4, 8°.70S×157°.59E, h0*^{km}*, mb4.8/28, mb1 4.9/31, mb1mx4.9/36, mbtmp4.8/31, ML4.3/3, MS3.8/16, Ms1 3.8/16, ms1mx3.8/18, Error ellipse: s-maj=14.2km s-min=11.2km az=77.0*

NEIC **19** *14:05:31.7±1.5, 8°.72S×157°.63E, h10*^{km}*±1*^{km}*, mb5.2/63, Error ellipse: s-maj=13.1km s-min=11.5km az=224.0*

BJI **19** *14:05:33.2±0.0, 8°.51S×157°.82E, h25*^{km}*, mb5.0/59, mB5.1/40, Ms4.8/27, Ms7 4.6/19*

ISCJB **19** *14:05:33.5±0.2, 8°.76S±0°.03×157°.56E±0°.03, h28*^{km}*, mb5.2/103, MS4.1/25, Error ellipse: s-maj=4.8km s-min=3.9km az=148.4*

GCMT **19** *14:05:33.7±0.3, 9°.05S±0°.02×157°.60E±0°.03, h19*^{km}*±1*^{km}*, MW5.0/54, Moment Tensor Solution. s26,c30; s54,c70; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-2.78±.23;* $M_{\theta\theta}$*2.61±.14;* $M_{\phi\phi}$*0.17±.14;* $M_{r\theta}$*-2.83±.33;* $M_{\theta\phi}$*0.10±.10;* $M_{\phi r}$*0.73±.39; Best double couple:* M_0*3.97300×10*^{16} *NP1:*ϕ_s*100.00000°, δ69.00000°, λ-82.00000°. NP2:* ϕ_s*258.00000°, δ23.00000°, λ-110.00000°. Principal axes: T 3.8340, Plg23.0000°, Azm183.0000°; N 0.2770, Plg7.0000°, Azm277.0000°; P -4.1110, Plg65.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS **19** *14:05:34.4±1.2, 8°.59S×157°.40E, h33*^{km}*, mb5.1/20 Error ellipse: s-maj=11.9km s-min=9.3km az=81.6*

ISC 19 14:05:32.6±1.6**, 8°.76S**±0°.05×**157°.65E**±0°.05**, h13**^{km}±10^{km}**, n282,** σ1^{s}**.41**/286**, mb5.1**/106**, MS4.1**/26**, 5C-3D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.36**	**107**	Pn	**Pn**	**14 06 10.2**	**-0.9**
	97nm,0.3s,baz=211,slow=5.4,SNR=31						
HNR				Sn	**Sb**	**14 06 44.7**	**+0.6**
	464nm,0.3s,baz=275,slow=21,SNR=13						
HNR				LR	LR	14 07 19.4	
	comp=Z,1µm,21.9s,baz=207,slow=44						
HNR	**Honiara**	**2.36**	**107**	*e*Pn	**Pn**	**14 06 09.8**	**-1.3**
HNR	**Honiara**	**2.36**	**107**	*e*P	**Pn**	**14 06 09.8**	**-1.3**
HNR	**Honiara**	**2.36**	**107**	*e*P	**Pn**	**14 06 09.0**	**-2.1**
HNR				*e*S	**Sg**	**14 06 51.0**	**+2.4**
RABL	**Rabaul**	**7.09**	**309**	*e*P	Pn	14 07 01.6	-15
PMG	**Port Moresby**	**10.38**	**266**	LR	LR	14 11 24.4	
	comp=Z,504nm,20.8s,baz=75,slow=34						
PMG	**Port Moresby**	**10.38**	**266**	*i* P	**Pn**	**14 08 02.9**	**+1.5**
COEN	**Coen**	**15.10**	**249**	*e*P	**P**	**14 09 09.0**	**-2.1**
	31nm,0.9s						
COEN	**Coen**	**15.10**	**249**	P	**P**	**14 09 08.8**	**-2.3**
	baz=15,SNR=5.5						
PATS	**Pohnpei**	**15.51**	**2**	*e*Pn	**Pn**	**14 09 10.7**	**-0.5**
	125nm,0.8s						
PATS	**Pohnpei**	**15.51**	**2**	P	**Pn**	**14 09 11.9**	**+0.7**
	baz=16,SNR=6.0						
DZM	**Mont Dzumac**	**15.71**	**148**	*e*P	**Pn**	**14 09 14.4**	**+0.6**
	221nm,1.4s						
DZM				*e*LR	LR	14 12 49.9	
	comp=Z,1µm,27.2s						
DZM	**Mont Dzumac**	**15.71**	**148**	Pn	**Pn**	**14 09 14.8**	**+0.9**
	0.3nm,0.3s,baz=10.0,slow=15,SNR=7.9						
DZM				LR	LR	14 14 29.9	
	comp=Z,812nm,18.5s,baz=342,slow=34						
DZM	**Mont Dzumac**	**15.71**	**148**	*e*Pn	**Pn**	**14 09 14.7**	**+0.9**
	48nm,1.1s						
CTA	**Charters Tower**	**15.76**	**223**	Pn	**Pn**	**14 09 14.9**	**+0.5**
	1.5nm,0.3s,baz=50,slow=14,SNR=10						
CTAO	**Charters Tower**	**15.76**	**223**	*e*Pn	**Pn**	**14 09 15.0**	**+0.5**
	34nm,0.8s						
CTAO	**Charters Tower**	**15.76**	**223**	*e*P	**Pn**	**14 09 15.0**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,34nm,0.8s						
MTSU	**Mount Surprise**	**15.96**	**233**	P	**Pn**	**14 09 17.4**	**+0.3**
	baz=16,SNR=8.3						
EIDS	**Eidsvold**	**17.67**	**200**	*e*P	**P**	**14 09 40.0**	**+0.5**
	comp=Z,109nm,1.1s						
EIDS	**Eidsvold**	**17.67**	**200**	P	**Pn**	**14 09 38.3**	**-0.3**
	baz=18,SNR=16						
GENI	**Genyem**	**18.44**	**288**	P	**Pn**	**14 09 49.0**	**+0.9**
RMQ	**Roma**	**19.55**	**204**	P	**Pn**	**14 10 01.8**	**+0.4**
	baz=20,SNR=36						
QIS	**Mount Isa**	**21.01**	**234**	P	**P**	**14 10 17.2**	**+1.1**
	baz=21,SNR=17						
ARMA	**Armidale**	**22.27**	**194**	*e*P	**P**	**14 10 30.0**	**+0.3**
	comp=Z,32nm,0.8s						
ARMA	**Armidale**	**22.27**	**194**	P	**P**	**14 10 30.0**	**+0.3**
	baz=22,SNR=15						
KDU	**Kakadu**	**25.04**	**259**	P	**P**	**14 10 56.9**	**+0.1**
	baz=25,SNR=12						
WRAB	**Tennant Creek**	**25.12**	**241**	*e*P	**P**	**14 10 56.0**	**-1.6**
	comp=Z,26nm,0.6s						
WRAB	**Tennant Creek**	**25.12**	**241**	*ce*P	**P**	**14 10 54.8**	**-2.8**
WRAB				pmax	pmax		
	comp=Z,44nm,1.0s						
WB2	**Warramunga Arr**	**25.13**	**241**	*e*P	**P**	**14 10 56.2**	**-1.4**
	comp=Z,29nm,0.7s						
WR1	**Warramunga Arr**	**25.14**	**241**	*e*P	**P**	**14 10 57.2**	**-0.5**
WR1				*e*PcP	**PcP**	**14 14 31.9**	**0.0**
WRA	**Warramunga Arr**	**25.14**	**241**	P	**P**	**14 10 57.2**	**-0.5**
	comp=Z,27nm,0.7s,baz=65,slow=8.7,SNR=138						
WRA				PcP	**PcP**	**14 14 31.9**	**0.0**
	comp=Z,5.5nm,0.9s,baz=64,slow=1.9,SNR=3.3						
CMSA	**Cobar Meteorol**	**25.25**	**205**	P	**P**	**14 10 58.5**	**0.0**
	baz=25,SNR=41						
GUMO	**Guam**	**25.57**	**330**	P	**P**	**14 10 59.0**	**-2.6**
	comp=Z,118nm,1.1s,baz=150,slow=7.1,SNR=4.4						
GUMO				LR	LR	14 20 03.1	
	comp=Z,144nm,19.6s,baz=149,slow=34						
GUMO	**Guam**	**25.57**	**330**	*e*P	**P**	**14 10 59.9**	**-1.7**
	comp=Z,139nm,1.1s						
GUMO	**Guam**	**25.57**	**330**	*e*P	**P**	**14 10 59.9**	**-1.7**
GUMO				pmax	pmax		
	comp=Z,139nm,1.1s						
FAKI	**Fak Fak**	**25.92**	**281**	*e*P	**P**	**14 11 04.3**	**-0.5**
	comp=Z,54nm,0.9s						
FAKI	**Fak Fak**	**25.92**	**281**	P	**P**	**14 11 03.0**	**-1.8**
MTN	**Manton Dam**	**26.36**	**259**	*e*P	**P**	**14 11 08.4**	**-0.3**
	comp=Z,18nm,1.0s						
MTN	**Manton Dam**	**26.36**	**259**	P	**P**	**14 11 08.9**	**+0.2**
	baz=27,SNR=5.5						
AS31	**Alice Springs**	**27.13**	**234**	*e*P	**P**	**14 11 14.6**	**-1.2**
	comp=Z,2.6nm,0.8s						
AS31				*e*PcP	**PcP**	**14 14 36.0**	**-0.5**
ASAR	**Alice Springs**	**27.13**	**234**	P	**P**	**14 11 14.6**	**-1.2**
	comp=Z,5.2nm,0.7s,baz=68,slow=8.9,SNR=52						
ASAR				PcP	**PcP**	**14 14 36.0**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=54,slow=3.4,SNR=4.4						
ASAR				LR	LR	14 21 12.4	
	comp=Z,350nm,18.5s,baz=64,slow=35						
SIJI	**Sorong**	**27.42**	**285**	P	**P**	**14 11 17.6**	**-0.8**
	comp=Z,10nm,0.8s,baz=97,slow=7.6,SNR=8.2						
STKA	**Stephens Creek**	**27.42**	**211**	P	**P**	**14 11 19.3**	**+1.2**
	comp=Z,24nm,0.7s,baz=41,slow=14,SNR=44						
STKA				LR	LR	14 21 24.9	
	comp=Z,331nm,21.7s,baz=25,slow=35						
STKA	**Stephens Creek**	**27.42**	**211**	*e*P	**P**	**14 11 19.5**	**+1.3**
	comp=Z,6.5nm,0.9s						
STKA	**Stephens Creek**	**27.42**	**211**	P	**P**	**14 11 18.8**	**+0.6**
	baz=28,SNR=32						
STKA	**Stephens Creek**	**27.42**	**211**	*e*P	**P**	**14 11 19.5**	**+1.3**
STKA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CNB	**Canberra Magne**	**27.50**	**195**	P	**P**	**14 11 19.0**	**+0.1**
	baz=28,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**28.51**	**18**	T	T	14 40 01.4	
	baz=198,slow=76,SNR=149						
H11S2	**WAKE ISLAND Hy**	**28.51**	**18**	T	T	14 40 11.2	
	baz=198,slow=76,SNR=143						
H11S1	**WAKE ISLAND Hy**	**28.53**	**18**	T	T	14 40 01.0	
	baz=198,slow=76,SNR=105						
KNRA	**Kununurra**	**29.04**	**254**	P	**P**	**14 11 32.7**	**0.0**
	baz=29,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	**29.72**	**18**	T	T	14 41 32.1	
	baz=196,slow=76,SNR=33						
H11N3	**WAKE ISLAND Hy**	**29.73**	**18**	T	T	14 41 32.5	
	baz=196,slow=76,SNR=47						
H11N2	**WAKE ISLAND Hy**	**29.74**	**18**	T	T	14 41 32.1	
	baz=196,slow=76,SNR=33						
OUZ	**Omahuta**	**30.11**	**153**	*e*P	**P**	**14 11 41.6**	**-0.4**
	comp=Z,19nm,1.0s						
WRKA	**Warakurna**	**32.31**	**236**	P	**P**	**14 12 00.4**	**-1.2**
	baz=32,SNR=9.0						
URZ	**Urewera**	**34.21**	**152**	P	**P**	**14 12 18.2**	**+0.3**
	comp=Z,11nm,1.1s,baz=350,slow=4.4,SNR=5.0						
SGSI	**Sangihe**	**34.33**	**290**	P	**P**	**14 12 19.8**	**+0.4**
BKZ	**Black Stump Fm**	**34.67**	**154**	*e*P	**P**	**14 12 22.1**	**0.0**
	comp=Z,8.8nm,0.8s						
MMRI	**Maumere**	**35.00**	**267**	P	**P**	**14 12 25.0**	**-0.2**
THZ	**Tophouse**	**35.53**	**160**	*e*P	**P**	**14 12 29.0**	**-0.4**
	comp=Z,26nm,1.1s						
EDFI	**Ende, Flores**	**35.54**	**267**	P	**P**	**14 12 29.1**	**-0.8**
DAV	**Davao City (W)**	**35.63**	**295**	LR	LR	14 24 08.2	
	comp=Z,171nm,21.3s,baz=264,slow=31						
RPZ	**Rata Peaks**	**36.73**	**164**	P	**P**	**14 12 41.7**	**+2.0**
	comp=Z,5.3nm,0.7s,baz=11,slow=10,SNR=3.2						
KAPI	**Kappang**	**37.80**	**273**	P	**P**	**14 12 49.2**	**+0.2**
	comp=Z,25nm,0.9s,baz=110,slow=6.9,SNR=8.7						
KMBL	**Kambalda**	**40.15**	**231**	P	**P**	**14 13 08.4**	**-0.1**
	baz=40,SNR=7.1						
MEEK	**Meekatharra**	**41.01**	**239**	P	**P**	**14 13 15.5**	**-0.3**
	baz=41,SNR=6.6						
JAGI	**Jajag, Banyuwa**	**42.99**	**267**	*e*P	**P**	**14 13 29.9**	**-2.2**
	comp=Z,93nm,0.8s						
NWAO	**Narrogin (SRO)**	**44.38**	**231**	P	**P**	**14 13 42.5**	**-0.5**
	comp=Z,12nm,0.9s,baz=48,slow=9.4,SNR=4.0						
KSM	**Kuching**	**48.27**	**280**	*e*P	**P**	**14 14 14.1**	**+0.2**
	comp=Z,30nm,1.1s						
MJAR	**Matsushiro Arr**	**48.63**	**339**	P	**P**	**14 14 15.1**	**-1.2**
	comp=Z,4.6nm,0.7s,baz=169,slow=8.8,SNR=15						
MJAR				LR	LR	14 33 16.5	
	comp=Z,60nm,21.7s,baz=140,slow=34						
MAJO	**Matsushiro**	**48.63**	**339**	*e*P	**P**	**14 14 15.4**	**-0.9**
	comp=Z,14nm,0.9s						
MAJO	**Matsushiro**	**48.63**	**339**	*i* P	**P**	**14 14 14.2**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAT	**Matsushiro**	**48.63**	**339**	P	**P**	**14 14 15.1**	**-1.2**
MAT				S	**S**	**14 21 17.0**	**-1.1**
JNU	**Nakatsue**	**48.83**	**330**	P	**P**	**14 14 17.9**	**0.0**
	comp=Z,36nm,0.8s,baz=149,slow=2.2,SNR=30						
JNU	**Nakatsue**	**48.83**	**330**	*e*P	**P**	**14 14 17.6**	**-0.3**
	comp=Z,45nm,0.9s						
PPT	**Papeete**	**51.98**	**105**	LR	LR	14 31 58.8	
	comp=Z,57nm,21.4s,baz=321,slow=30						
PPT2	**Papeete2**	**51.98**	**105**	*e*LR	LR	14 29 32.8	
	comp=Z,118nm,23.5s						
TBI	**Tubuai**	**52.57**	**113**	*e*LQ	LQ	14 27 43.5	
	comp=Z,872nm,29.0s						
TBI				*e*LR	LR	14 29 51.1	
	comp=Z,207nm,36.5s						
TJN	**Taejon**	**53.17**	**329**	*ce*P	**P**	**14 14 47.4**	**-3.0**
KSRS	**Korea Array**	**53.74**	**331**	P	**P**	**14 14 54.9**	**+0.3**
	comp=Z,6.7nm,0.8s,baz=150,slow=7.9,SNR=20						
KSRS				LR	LR	14 37 43.9	
	comp=Z,99nm,19.0s,baz=135,slow=36						
ASAJ	**Asahikawa**	**54.37**	**347**	P	**P**	**14 14 59.5**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=204,slow=6.7,SNR=8.9						
QIZ	**Qiongzhong**	**54.62**	**301**	P	**P**	**14 15 03.4**	**+2.0**
QIZ				S	**S**	**14 22 43.8**	**+2.5**
QIZ				pmax	pmax		
	comp=Z,130nm,3.7s						
QIZ				LR	LR		
	comp=Z,210nm,14.7s						
NJ2	**Nanjing**	**54.95**	**319**	*e*P	**P**	**14 15 06.5**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS	**Yuzh-Sakhalins**	**57.03**	**348**	*e*P	**P**	**14 15 17.6**	**-0.5**
YSS				*e*		14 15 35.8	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WHN	**Wuhan**	**57.04**	**315**	⇑P	**P**	**14 15 19.3**	**+0.8**
WHN				pmax	pmax		
	comp=Z,44nm,0.8s						
WHN				LR	LR		
	comp=Z,500nm,19.9s						
PDSI	**Padang**	**57.46**	**275**	P	**P**	**14 15 21.2**	**-0.7**
	comp=Z,19nm,0.9s,comp=Z,3µm						
USA0B	**Ussuriysk Arra**	**57.61**	**338**	*e*P	**P**	**14 15 21.7**	**-0.6**
	comp=Z,21nm,1.1s						
USRK	**Ussuriysk Ar.**	**57.61**	**338**	P	**P**	**14 15 22.9**	**+0.6**
	comp=Z,16nm,1.0s,baz=147,slow=7.3,SNR=18						
USRK				LR	LR	14 37 21.5	
	comp=Z,70nm,21.6s,baz=151,slow=33						
DL2	**Dalian**	**58.05**	**327**	P	P	14 15 38.8	+13
DL2				*e*S	S	14 23 45.1	+19
DL2				pmax	pmax		
	comp=Z,29nm,0.9s						
DL2				LR	LR		
	comp=N,150nm,21.0s						
DL2				LR	LR		
	comp=E,190nm,17.8s						
DL2				LR	LR		
	comp=Z,200nm,20.7s						
PANO	**Nakornpanom**	**58.41**	**296**	P	**P**	**14 15 30.3**	**+1.9**
	comp=Z,0.4nm,1.8s						
MNSI	**Mandailing Nat**	**58.63**	**276**	P	**P**	**14 15 28.6**	**-1.5**
	comp=Z,67nm,0.8s						
CN2	**Changchun**	**59.92**	**334**	*e*P	**P**	**14 15 38.8**	**+0.4**
CN2				*e*sP	sP	14 15 52.8	+8.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				LR	LR		
	comp=Z,180nm,15.0s						
CN2				LR	LR		
	comp=Z,120nm,15.0s						
CN2				LR	LR		
	comp=Z,180nm,16.0s						
NONG	**Nongkai**	**60.04**	**297**	P	**P**	**14 15 40.3**	**+0.6**
	comp=Z,0.7nm,1.1s						
CHAI	**Chaiyaphum**	**60.31**	**294**	P	**P**	**14 15 42.2**	**+0.6**
	comp=Z,28µm,0.8s,comp=Z,337µm						
GYA	**Guiyang**	**60.61**	**307**	⇑*i*P	**P**	**14 15 44.8**	**+1.1**
GYA				sP	sP	14 15 57.8	+8.6
GYA				S	**S**	**14 23 59.8**	**-0.2**
GYA				SS	**SS**	**14 27 57.6**	**-1.1**
GYA				pmax	pmax		
	comp=Z,20nm,1.3s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=Z,190nm,18.1s						
GYA				LR	LR		
	comp=Z,180nm,17.3s						
GYA				LR	LR		
	comp=Z,150nm,18.7s						
GSI	**Gunungsitoli**	**60.69**	**276**	*e*P	**P**	**14 15 43.4**	**-0.9**
	comp=Z,52nm,0.9s						
GSI	**Gunungsitoli**	**60.69**	**276**	P	**P**	**14 15 43.5**	**-0.8**
	comp=Z,68nm,1.0s						
KCSI	**Kotacane, Aceh**	**60.93**	**279**	P	**P**	**14 15 44.2**	**-1.8**
	comp=Z,20nm,1.1s						
PBKT	**Sadao Pong**	**61.46**	**294**	P	**P**	**14 15 50.6**	**+1.2**
	comp=Z,10nm,1.0s,comp=Z,400nm						
PHET	**Kaeng Krachan**	**61.52**	**290**	P	**P**	**14 15 51.8**	**+1.9**
	comp=Z,51µm,0.9s						
PETK	**Petropavlovsk-**	**61.62**	**0**	P	**P**	**14 15 50.0**	**+0.1**
	comp=Z,5.4nm,0.9s,baz=142,slow=7.4,SNR=9.6						
PETK				LR	LR	14 40 22.1	
	comp=Z,198nm,20.3s,baz=168,slow=34						
KLR	**Kul'dur**	**62.05**	**341**	*d i*P	**P**	**14 15 52.6**	**-0.2**
KLR				pmax	pmax		
	comp=Z,11nm,1.2s						
GRNR	**Gornyy**	**62.08**	**345**	*e*P	**P**	**14 15 54.1**	**+1.1**
GRNR				pmax	pmax		
	comp=Z,14nm,1.0s						
UTTA	**Uttaradit**	**62.23**	**295**	P	**P**	**14 15 55.7**	**+1.1**
	comp=Z,25µm,1.0s						
MLSI	**Meulaboh, Aceh**	**62.42**	**279**	P	**P**	**14 15 55.3**	**-0.7**
SRDT	**SRDT**	**62.43**	**291**	P	**P**	**14 15 58.4**	**+2.4**
	comp=Z,19nm,1.0s,comp=Z,1µm						
UTHA	**Uthaitani**	**62.51**	**293**	P	**P**	**14 15 57.8**	**+1.3**
	comp=Z,46µm,0.9s,comp=Z,360µm						
PHRA	**Phrae**	**62.78**	**296**	P	**P**	**14 15 59.4**	**+1.1**
	comp=Z,5.0nm,1.2s,comp=Z,1µm						
XAN	**Xi'an**	**62.80**	**315**	P	**P**	**14 15 58.0**	**-0.2**
XAN				pmax	pmax		
	comp=Z,22nm,1.3s						
XAN				pmax	pmax		
	comp=Z,96nm,7.2s						
KMI	**Kunming**	**63.18**	**304**	P	**P**	**14 16 02.8**	**+1.7**
KMI				pP	sP	14 16 12.1	+5.4
KMI				sP	pP	14 16 15.3	+10
KMI				S	**S**	**14 24 37.6**	**+4.8**
KMI				pmax	pmax		
	comp=Z,37nm,1.2s						
KMI				pmax	pmax		
	comp=Z,170nm,4.6s						
KMI				LR	LR		
	comp=Z,120nm,22.8s						
KMI				LR	LR		
	comp=Z,150nm,21.5s						
KMI				LR	LR		
	comp=Z,220nm,23.5s						
UMPA	**Umpang Tak**	**63.25**	**293**	P	**P**	**14 16 03.7**	**+2.2**
	comp=Z,33µm,0.9s						
LAMP	**Lampang**	**63.32**	**296**	P	**P**	**14 16 03.5**	**+1.6**
	comp=Z,63µm,0.8s						
PAYA	**Payao**	**63.41**	**297**	P	**P**	**14 16 03.4**	**+1.0**
	comp=Z,71µm,0.8s,comp=Z,585µm						
CMAR	**Chiang Mai Arr**	**63.92**	**295**	P	**P**	**14 16 06.4**	**+0.5**
	comp=Z,17nm,0.9s,baz=117,slow=5.0,SNR=58						
CMAR				LR	LR	14 45 30.0	
	comp=Z,63nm,18.1s,baz=146,slow=38						
CMMT	**Chiang Mai**	**64.03**	**296**	P	**P**	**14 16 07.5**	**+0.9**
	comp=Z,14nm,1.1s						
CHTO	**Chiang Mai**	**64.04**	**296**	*e*P	**P**	**14 16 04.6**	**-2.0**
	comp=Z,26nm,1.0s						
CHTO	**Chiang Mai**	**64.04**	**296**	*e*P	**P**	**14 16 04.6**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,26nm,1.0s						
ADK	**Adak**	**64.31**	**17**	*e*P	**P**	**14 16 07.1**	**-0.6**
	comp=Z,64nm,0.8s						
ADK	**Adak**	**64.31**	**17**	*e*P	**P**	**14 16 07.1**	**-0.6**
ADK				pmax	pmax		
	comp=Z,64nm,0.8s						
CD2	**Chengdu**	**64.96**	**310**	*e*P	**P**	**14 16 13.5**	**+1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**65.07**	**323**	*e*P	**P**	**14 16 15.6**	**+2.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				LR	LR		
	comp=Z,200nm,12.8s						
HHC				LR	LR		
	comp=Z,190nm,13.6s						
CASY	**Casey**	**65.77**	**199**	*e*P	**P**	**14 16 16.5**	**-0.5**
	comp=Z,10nm,0.9s						
ZEA	**Zeya**	**67.37**	**341**	*e*P	**P**	**14 16 27.8**	**+0.4**
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
LZH	**Lanzhou**	**67.42**	**315**	*e*P	**P**	**14 16 30.1**	**+1.8**
LZH				pP	sP	14 16 37.9	+4.0
LZH				sP	pP	14 16 41.0	+8.6
LZH				*e*S	**S**	**14 25 27.6**	**+3.4**
LZH				pmax	pmax		
	comp=Z,42nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,12.7s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
VNDA	**Vanda**	**68.77**	**179**	P	**P**	**14 16 36.1**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=336,slow=6.9,SNR=10						
MOKO	**MOKOCHONG**	**70.48**	**302**	*e*P	**P**	**14 16 46.6**	**-1.0**
KOHI	**KOHIMA**	**70.61**	**301**	*e*P	**P**	**14 16 46.5**	**-1.9**
ZIRO	**ZIRO**	**71.46**	**303**	*e*P	**P**	**14 16 53.9**	**+0.3**
SEY	**Seymchan**	**71.59**	**357**	*i* P	**P**	**14 16 53.1**	**-0.2**
GTA	**Gaotai**	**71.82**	**316**	*e*P	**P**	**14 16 56.3**	**+0.9**
GTA				pmax	pmax		
	comp=Z,15nm,1.3s						
TEZP	**TEZPUR**	**72.03**	**302**	*e*P	**P**	**14 16 56.4**	**-0.3**
SONA0	**Songino Array**	**72.24**	**327**	*e*P	**P**	**14 16 57.9**	**+0.1**
SONM	**Songino Array**	**72.24**	**327**	P	**P**	**14 16 57.9**	**+0.1**
	comp=Z,5.9nm,0.9s,baz=127,slow=5.2,SNR=30						
SHL	**Shillong**	**72.45**	**300**	*e*P	**P**	**14 16 59.4**	**-0.2**
GUWA	**GUWAHATI**	**72.82**	**301**	*e*P	**P**	**14 17 01.4**	**-0.1**
TAWA	**Tawang**	**73.14**	**302**	*e*P	**P**	**14 17 05.0**	**+1.2**
TURI	**Tura**	**73.78**	**300**	*e*P	**P**	**14 17 07.9**	**+0.8**
TURI				IAmb	IAmb	14 17 08.9	
	comp=Z,29nm,0.9s						
YAK	**Yakutsk**	**73.85**	**347**	*e*P	**P**	**14 17 06.4**	**-0.3**
YAK				*e**PP	**PcP**	**14 17 16.1**	**-6.1**
YAK				*e*S	**SKiKP**	**14 26 32.7**	**-3.1**
YAK				*e**SS	**ScS**	**14 27 17.6**	**+1.7**
YAK				pmax	pmax		
	comp=Z,27nm,1.0s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,36nm,2.8s						
YAK				pmax	pmax		
	comp=N,25nm,2.8s						
YAK				pmax	pmax		
	comp=E,34nm,2.9s						
YAK				smax	smax		
	comp=N,49nm,3.6s						
YAK				smax	smax		
	comp=E,55nm,4.1s						
ZAK	**Zakamensk**	**75.38**	**327**	*e*P	**P**	**14 17 16.1**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						

GTK	Tadong	75.80	301	eP	P	14 17 18.7	-0.3
BWNR	Bhubaneshwar	76.30	293	eP	P	14 17 19.8	-1.9
BWNR				IAmb	IAmb	14 17 20.5	
	comp=Z,20nm,1.1s						
BILL	Bilibino	76.85	3	d iP	P	14 17 23.9	0.0
BILL				e		14 17 32.2	
BILL				*PP	PcP	14 17 42.0	+7.0
BILL				S	S	14 27 22.0	+11
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL				MLR	MLR		
	comp=Z,128nm,18.0s						
BOK	Bokaro	77.14	297	eP	P	14 17 23.0	-3.5
BOK				IAmb	IAmb	14 17 31.0	
	comp=Z,11nm,0.3s						
KDAK	Kodiak Island	77.62	25	i P	P	14 17 28.6	+0.2
JIRN	Jiri	77.94	301	eP	P	14 17 31.8	+0.4
GUN	Gumba	78.28	301	eP	P	14 17 32.9	-0.3
	comp=Z,54nm,0.9s						
PKI	Pulchoki	78.58	300	eP	P	14 17 34.8	-0.1
	comp=Z,36nm,1.1s						
PKIN	Phulchoki	78.60	300	eP	P	14 17 34.6	-0.3
	comp=Z,24nm,1.0s						
SVW2	Sparrevohn	78.65	21	eP	P	14 17 34.3	+0.2
	comp=Z,42nm,1.0s						
KKN	Kakani	78.75	301	eP	P	14 17 35.8	+0.1
DMN	Daman	78.85	300	eP	P	14 17 36.5	+0.2
	comp=Z,49nm,0.8s						
GKN	Gorkha	79.36	301	eP	P	14 17 38.7	-0.2
	comp=Z,43nm,0.8s						
TTA	Tatalina	79.76	20	eP	P	14 17 39.6	-0.6
	comp=Z,31nm,1.0s						
TTA	Tatalina	79.76	20	eP	P	14 17 39.6	-0.6
TTA				pmax	pmax		
	comp=Z,31nm,1.0s						
KOLN	Koldanda	80.18	300	eP	P	14 17 43.1	-0.4
	comp=Z,53nm,0.9s						
DANN	Dangsing	80.20	301	eP	P	14 17 44.6	+1.0
QSPA	South Pole Qui	81.23	180	eP	P	14 17 48.5	+0.3
	comp=Z,13nm,1.0s						
PMR	Palmer	81.36	23	eP	P	14 17 47.0	-1.7
	comp=Z,22nm,0.9s						
PMR	Palmer	81.36	23	eP	P	14 17 47.0	-1.7
PMR				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ	Urumqi	81.91	317	eP	P	14 17 53.0	+0.9
WMQ				pP	PcP	14 18 03.0	+5.3
WMQ				PP	PP	14 21 03.8	+4.0
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,92nm,3.8s						
WMQ				LR	LR		
	comp=Z,180nm,27.5s						
WMQ				LR	LR		
	comp=Z,220nm,29.3s						
SCM	Sheep Creek Mo	82.20	23	eP	P	14 17 52.5	-0.8
	comp=Z,57nm,1.2s						
SCM	Sheep Creek Mo	82.20	23	eP	P	14 17 52.5	-0.8
SCM				pmax	pmax		
	comp=Z,57nm,1.2s						
BPAW	Bear Paw Mtn.	82.23	20	eP	P	14 17 52.8	-0.6
	comp=Z,16nm,1.1s						
HYB	Hyderabad	82.33	289	eP	P	14 17 54.4	-0.4
TIXI	Tiksi	82.48	351	i P	P	14 17 54.4	0.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MCK	McKinley	82.72	21	eP	P	14 17 54.9	-1.0
	comp=Z,99nm,1.0s						
MCK	McKinley	82.72	21	eP	P	14 17 54.9	-1.0
MCK				pmax	pmax		
	comp=Z,99nm,1.0s						
BWN	Browne	82.80	21	eP	P	14 17 56.2	-0.1
	comp=Z,69nm,1.1s						
WRH	Wood River Hil	83.46	21	eP	P	14 17 59.4	-0.2
	comp=Z,28nm,1.0s						
TCOL	CIGO, UAF Yank	83.78	20	P	P	14 18 00.5	-0.8
	baz=234						
COLA	College	83.78	20	eP	P	14 18 00.8	-0.4
	comp=Z,45nm,0.8s						
COLA	College	83.78	20	d iP	P	14 17 59.8	-1.4
COLA				pmax	pmax		
	comp=Z,48nm,0.9s						
MAW	Mawson	83.79	203	P	P	14 18 01.9	+0.6
	comp=Z,18nm,1.3s,baz=81,slow=5.7,SNR=11						
MAW				LR	LR	14 51 31.1	
	comp=Z,72nm,18.9s,baz=159,slow=33						
MAW	Mawson	83.79	203	eP	P	14 18 01.2	-0.2
	comp=Z,2.6nm,1.1s						
MAW	Mawson	83.79	203	P	P	14 18 00.4	-1.0
	baz=84,SNR=7.6						
MAW	Mawson	83.79	203	eP	P	14 18 01.2	-0.2
MAW				pmax	pmax		
	comp=Z,3.0nm,1.1s						
HDA	Harding Lake	83.83	21	P	P	14 18 00.8	-0.7
	baz=235						
ILAR	Eielson Array	84.06	21	P	P	14 18 02.3	-0.4
	comp=Z,16nm,1.0s,baz=259,slow=4.8,SNR=77						
ILAR				LR	LR	14 50 18.0	
	comp=Z,89nm,21.2s,baz=258,slow=32						
ILB	Eielson Array	84.06	21	eP	P	14 18 01.4	-1.3
	comp=Z,26nm,1.1s						
POKR	Poker Plat Res	84.07	20	P	P	14 18 01.5	-1.3
	baz=234						
DGZ	Jazzator, Alta	84.14	322	i P	P	14 18 02.2	-1.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PCA	Pinnacle	84.21	26	eP	P	14 18 02.3	-1.3
	comp=Z,25nm,1.1s						
MENT	Mentasta	84.21	23	eP	P	14 18 02.6	-1.0
	comp=Z,11nm,0.8s						
RIDG	Independent Ri	84.22	22	eP	P	14 18 03.4	-0.2
	comp=Z,41nm,1.2s						
TOLK	Toolik Lake Re	85.51	17	P	P	14 18 10.1	+0.1
	baz=232						
SMLA	Simla	86.43	302	eP	P	14 18 13.9	-1.4
MK31	Makanchi Array	86.46	318	eP	P	14 18 15.3	+0.1
	comp=Z,3.8nm,0.9s						
MK31	Makanchi Array	86.46	318	eP	P	14 18 15.3	+0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	Makanchi Array	86.46	318	P	P	14 18 15.2	+0.1
	comp=Z,3.9nm,0.7s,baz=100,slow=5.8,SNR=21						
MAKZ	Makanchi	86.67	318	eP	P	14 18 16.2	0.0
	comp=Z,6.3nm,1.0s						
MAKZ	Makanchi	86.67	318	eP	P	14 18 16.2	0.0
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZALV	Zalesovo Beam	87.11	326	P	P	14 18 17.0	-1.1
	comp=Z,1.3nm,0.4s,baz=115,slow=5.1,SNR=6.3						
ZALV	Zalesovo Beam	87.11	326	i P	P	14 18 17.0	-1.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAA1	Zalesovo Array	87.11	326	eP	P	14 18 17.0	-1.2
DHRM	DHARAMSHALA	87.39	303	eP	P	14 18 19.2	-1.0
O02D	Mt. Diablo Mer	87.70	49	P	P	14 18 22.3	+0.8
	baz=257						
M02C	Callahan	87.94	48	P	P	14 18 21.9	-0.6
	baz=256						
N02D	Trinity Center	87.95	48	P	P	14 18 23.6	+1.0
	baz=257						
EPYK	Eagle Plains	88.51	22	P	P	14 18 25.7	+1.1
	baz=244						
L04D	Klamath Falls	88.53	47	P	P	14 18 24.0	-1.4
	baz=257						
M04C	Macdoel	88.77	48	P	P	14 18 27.2	+0.7
	baz=257						
J04D	Umpqua Nationa	88.90	46	P	P	14 18 27.2	0.0
	baz=257						
KSH	Kashi	89.15	310	eP	P	14 18 29.6	+1.2
KSH				sP	sP	14 18 44.4	+10
KSH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
E04D	Cinebar	89.34	43	P	P	14 18 29.5	+0.7
	baz=257						
BLG	Laguna Peak, P	89.34	55	P	P	14 18 29.6	+0.4
	baz=259						
J05D	Fort Rock, OR	89.53	46	P	P	14 18 30.8	+0.7
	baz=258						
VES	Vestal, Richgr	89.65	54	P	P	14 18 31.1	+0.5
	baz=259						
CIS	Catalina Islan	89.74	56	P	P	14 18 31.2	0.0
	baz=259						
KURK	Kurchatov	89.84	321	i P	P	14 18 27.5	-3.6
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KURBB	Kurchatov Arra	89.88	321	P	P	14 18 29.7	-1.6
	comp=Z,0.3nm,0.6s,baz=118,slow=3.3,SNR=5.7						
ISA	Isabella, Lake	90.11	54	P	P	14 18 33.5	+0.6
	baz=259						
EDW2	Edwards Air Fo	90.35	55	P	P	14 18 34.5	+0.5
	baz=260,SNR=7.6						
BFSC	Mount Baldy Ra	90.51	56	P	P	14 18 35.5	+0.7
	baz=260						
TIN	Tinemaha, Big	90.56	53	P	P	14 18 36.2	+1.2
	baz=260						
CWC	Cottonwood Cre	90.56	53	P	P	14 18 35.6	+0.5
	baz=260						
LRMC	Laurel Mtn Rad	90.71	54	P	P	14 18 37.0	+1.2
	baz=260,SNR=10						
NVAR	Mina Array Bea	90.75	51	P	P	14 18 37.4	+1.4
	comp=Z,14nm,0.9s,baz=243,slow=6.6,SNR=71						
AAK	Ala-Archa	90.87	313	P	P	14 18 36.1	-0.3
	comp=Z,1.3nm,0.3s,baz=156,slow=5.5,SNR=3.6						
AAK	Ala-Archa	90.87	313	c eP	P	14 18 33.3	-3.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MPMC	Manual Prospec	90.97	54	P	P	14 18 37.8	+0.8
	baz=260,SNR=11						
KVN	Kaiserville	91.02	51	eP	P	14 18 38.7	+1.5
	comp=Z,18nm,1.0s						
KVN	Kaiserville	91.02	51	eP	P	14 18 38.7	+1.5
KVN				pmax	pmax		
	comp=Z,18nm,1.0s						
GRAC	Grapevine Rang	91.22	53	P	P	14 18 38.8	+0.7
	baz=260,SNR=8.6						
MONP2	Monument Peak	91.30	57	P	P	14 18 38.7	0.0
	baz=260						
GSC	Goldstone, Bar	91.38	55	P	P	14 18 39.5	+0.7
	baz=260						
PFO	Pinyon Flats O	91.39	56	P	P	14 18 39.4	+0.4
	baz=260						
FURC	Furnace Creek,	91.53	54	P	P	14 18 40.6	+1.2
	baz=260,SNR=7.7						
HEC	Hector,Ludlow	91.69	55	P	P	14 18 40.9	+0.6
	baz=261						
SWSC	Sam W. Stewart	91.82	57	P	P	14 18 41.6	+0.8
	baz=261						
BELC	Belle Mtn. Jos	91.83	56	P	P	14 18 41.2	+0.2
	baz=261						
SHOC	Shoshone, Teco	91.91	54	P	P	14 18 41.9	+0.8
	baz=261						
TPNV	Topopah Spring	92.10	53	eP	P	14 18 44.0	+1.8
	comp=Z,15nm,0.9s						
TPNV	Topopah Spring	92.10	53	eP	P	14 18 44.0	+1.8
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s						
TPNV	Topopah Spring	92.10	53	P	P	14 18 42.8	+0.6
	baz=261,SNR=19						
TUQ	Turquoise Moun	92.12	55	P	P	14 18 42.5	+0.2
	baz=261						
BC3	Big Chuckawall	92.22	56	P	P	14 18 43.3	+0.5
	baz=261						
GMRC	Granite Mounta	92.23	55	P	P	14 18 43.6	+0.8
	baz=261						
IRM	Iron Mountain	92.55	56	P	P	14 18 45.0	+0.8
	baz=261						
BMO	Blue Mountains	92.61	45	eP	P	14 18 44.5	+0.2
	comp=Z,3.3nm,0.8s						
BMO	Blue Mountains	92.61	45	eP	P	14 18 44.5	+0.2
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
R11A	Troy Canyon, C	92.84	52	P	P	14 18 46.8	+1.1
	baz=261,SNR=19						
NEW	Newport	93.30	42	P	P	14 18 47.1	-0.2
	baz=261						
HLID	Hailey	94.47	47	P	P	14 18 54.2	+1.2
	baz=262						
DUG	Dugway, Tooele	95.22	50	P	P	14 18 57.4	+0.9
	baz=263						
BVAR	Borovoye Array	95.28	323	P	P	14 18 54.9	-1.4
	comp=Z,1.5nm,0.9s,baz=103,slow=4.7,SNR=10						
BRVK	Borovoye	95.35	323	i P	P	14 18 54.7	-1.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YKA	Yellowknife Ar	96.66	28	P	P	14 19 02.0	-0.2
	comp=Z,1.3nm,0.6s,baz=264,slow=4.7,SNR=16						
YKA				LR	LR	14 58 35.2	
	comp=Z,10nm,18.9s,baz=264,slow=33						
BOZ	Bozeman (W)	96.68	45	P	P	14 19 03.8	+0.7
	baz=264						
BW06	Boulder Array	97.92	48	P	P	14 19 08.2	-0.6
	baz=266,SNR=5.0						
PDAR	Pinedale Array	97.92	48	P	P	14 19 08.0	-0.8
	comp=Z,2.7nm,0.9s,baz=228,slow=2.2,SNR=15						
RLMT	Red Lodge	98.30	46	P	Pdif	14 19 11.0	+0.6
	baz=266						
O20A	White River Ci	98.71	51	P	Pdif	14 19 12.9	+0.5
	baz=266						
LTX	Lajitas	101.77	62	ePdif	Pdif	14 19 27.6	+1.5
LTX	Lajitas	101.77	62	eP	Pdif	14 19 27.6	+1.5
TXAR	Lajitas Array	101.77	62	P	Pdif	14 19 27.5	+1.5
	comp=Z,0.3nm,0.9s,baz=249,slow=4.7,SNR=3.0						
KIV	Kislovodsk	113.95	314	i PKIKP	PKiKP	14 24 07.9	-3.9
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV				MLR	MLR		
	comp=Z,141nm,21.0s						
T49A	Edmonton	116.57	53	ePKPdf	PKiKP	14 24 18.6	+1.7
AKASG	Malin Array Be	120.49	325	PKP	PKiKP	14 24 23.6	-0.4
	comp=Z,0.3nm,0.3s,baz=66,slow=1.5,SNR=4.8						
BR101	Keskin Array S	121.52	311	ePKPdf	PKPdf	14 24 25.8	-0.7
BRTR	Keskin Array B	121.52	311	PKP	PKPdf	14 24 25.8	-0.7
	comp=Z,2.4nm,1.1s,baz=132,slow=3.5,SNR=4.1						
BRTR				PP	PP	14 25 58.7	+0.4
	comp=Z,2.7nm,1.2s,baz=57,slow=5.3,SNR=4.3						
KOLS	Kolonicke sedl	125.29	325	ePKIKP	PKiKP	14 24 35.3	+1.6
KOLS	Kolonicke sedl	125.29	325	ePKP	PKiKP	14 24 35.3	+1.6
VYHS	Vyhne	127.43	327	ePKIKP	PKiKP	14 24 43.7	+5.7
VYHS	Vyhne	127.43	327	ePKP	PKiKP	14 24 43.7	+5.7
LPAZ	La Paz	128.31	119	PKP	PKiKP	14 24 41.9	+0.5
	comp=Z,1.0nm,0.6s,baz=354,slow=4.4,SNR=4.4						
CLL	Collm	128.60	332	ePKIKP	PKPdf	14 24 31.0	-8.5
GEC2	GERESS Array S	129.91	330	ePKPdf	PKiKP	14 24 42.5	-0.5
GEC2	GERESS Array S	129.91	330	ePKIKP	PKiKP	14 24 42.6	-0.5
GERES	GERESS Array B	129.91	330	PKP	PKiKP	14 24 42.5	-0.5
	comp=Z,0.8nm,0.6s,baz=0.0,slow=0.3,SNR=7.1						
BDFB	Brasilia	144.87	134	PKP	PKPdf	14 25 10.0	-0.7
	comp=Z,8.5nm,0.8s,baz=173,slow=5.0,SNR=7.2						
BDFB	Brasilia	144.87	134	ePKIKP	PKPdf	14 25 10.0	-0.7
MVO	Moncorvo	144.99	340	ePKP	PKPdf	14 25 09.6	-0.5
POLO	Lamas de Olo	145.05	341	ePKP	PKPdf	14 25 09.7	-0.6
ESDC	Sonseca Array	145.10	335	PKPbc	PKPab	14 25 09.3	-0.5
	comp=Z,3.1nm,0.8s,baz=24,slow=3.1,SNR=19						
ESLA	Sonseca Array	145.10	335	ePKPbc	PKPab	14 25 09.4	-0.4
PVIS	Viseu	145.68	340	ePKP	PKPab	14 25 11.8	-0.1
MTE	Manteigas	145.84	340	ePKP	PKPab	14 25 13.2	+0.7
PCBR	Castelo Branco	146.32	339	ePKP	PKPab	14 25 13.8	-0.4
PMRV	Marv??o	146.65	339	ePKP	PKPab	14 25 14.6	-1.0
TORD	Torodi Ar. Bea	156.00	283	PKP	PKPdf	14 25 27.9	+0.1
	comp=Z,1.1nm,0.9s,baz=34,slow=3.6,SNR=4.2						
TORD				PKPab	PKPab	14 25 54.6	-0.5
	comp=Z,3.4nm,1.0s,baz=68,slow=4.1,SNR=5.8						
TOA1	Torodi Ar. Sit	156.01	283	ePKPdf	PKPdf	14 25 27.9	+0.1
TOA1				ePKPab	PKPab	14 25 54.6	-0.5

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*IDC **19** 14:07:52.8±0.8, 8.˚89S×157.˚56E, h0^{km}, mb4.3/9, mb1 4.5/10, mb1mx4.2/32, mbtmp4.3/10, ML4.6/1, Error ellipse: s-maj=24.7km s-min=19.5km az=159.0*

*ISCJB **19** 14:07:54.0±0.4, 8.˚93S±0.˚07×157.˚47E±0.˚05, h17^{km}, mb4.3/18, Error ellipse: s-maj=10.6km s-min=7.7km az=175.9*

*NEIC **19** 14:07:54.1±1.9, 8.˚93S×157.˚56E, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=16.5km s-min=6.9km az=155.0*

ISC 19 14:07:55.2±0.6, **8.˚92S**±0.˚10×**157.˚60E**±0.˚07, **h17**^{km}, **n28,** σ**1§11**/29, **mb4.5**/18, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.38	103	Pn	Pn	14 08 33.4	0.0
	146nm,0.3s,baz=264,slow=10,SNR=3.8						
HNR				Sn	Sb	14 09 06.7	+0.1
	152nm,0.3s,baz=65,slow=19,SNR=2.1						
HNR	Honiara	2.38	103	ePn	Pn	14 08 33.9	+0.5
CTA	Charters Tower	15.60	223	Pn	P	14 11 39.9	+1.3
	0.8nm,0.3s,baz=33,slow=12,SNR=3.7						
EIDS	Eidsvold	17.49	200	ePn	Pn	14 11 57.3	-1.1
	19nm,1.1s						
WRAB	Tennant Creek	25.00	241	eP	P	14 13 18.5	+0.1
	30nm,1.0s						
WB2	Warramunga Arr	25.00	241	eP	P	14 13 18.7	+0.3
	35nm,1.1s						
WR1	Warramunga Arr	25.01	241	eP	P	14 13 18.5	0.0
WRA	Warramunga Arr	25.01	241	P	P	14 13 18.5	0.0
	21nm,1.0s,baz=73,slow=8.9,SNR=7.2						
GUMO	Guam	25.69	330	eP	P	14 13 24.3	-0.2
	34nm,1.0s						
AS31	Alice Springs	26.99	234	eP	P	14 13 34.1	-2.3
	1.5nm,0.8s						
ASAR	Alice Springs	26.99	234	P	P	14 13 35.2	-1.3
	2.3nm,0.8s,baz=68,slow=10,SNR=2.8						
STKA	Stephens Creek	27.25	211	P	P	14 13 40.8	+2.2
	4.9nm,0.7s,baz=33,slow=16,SNR=4.5						
STKA	Stephens Creek	27.25	211	eP	P	14 13 37.3	-1.3
	1.9nm,0.9s						
TOO	Toolangi	30.55	199	eP	P	14 14 08.6	+0.7
	2.1nm,0.8s						
MQZ	McQueen's Vall	37.06	162	eP	P	14 15 04.4	0.0
	15nm,1.2s						
MORW	Morawa	43.80	237	eP	P	14 15 59.9	-0.5
	7.1nm,0.9s						
CM31	Chiang Mai Arr	63.93	296	eP	P	14 18 28.0	+0.1
	13nm,1.0s						
CMAR	Chiang Mai Arr	63.93	296	P	P	14 18 28.0	+0.1
	4.3nm,0.9s,baz=113,slow=5.0,SNR=5.8						
SONA0	Songino Array	72.34	327	eP	P	14 19 22.4	+2.1
SONM	Songino Array	72.34	327	P	P	14 19 22.4	+2.1
	0.9nm,0.7s,baz=128,slow=6.1,SNR=2.7						
MAW	Mawson	83.62	203	P	P	14 20 22.4	0.0
	5.9nm,1.1s,baz=78,slow=6.7,SNR=5.1						
MAW	Mawson	83.62	203	eP	P	14 20 23.1	+0.7
	1.0nm,1.1s						
ILAR	Eielson Array	84.23	21	P	P	14 20 24.8	-0.7
	3.6nm,1.2s,baz=253,slow=5.3,SNR=5.9						
MK32	Makanchi Array	86.55	318	eP	P	14 20 36.5	-0.9
MKAR	Makanchi Array	86.55	318	P	P	14 20 36.6	-0.9
	0.4nm,0.6s,baz=103,slow=6.2,SNR=2.4						
WRAK	Wrangell Islan	86.61	32	eP	P	14 20 35.9	-1.6
	5.3nm,0.6s						
NV01	Mina Array Sit	90.89	51	eP	P	14 20 59.1	+0.5
NVAR	Mina Array Bea	90.89	51	P	P	14 20 59.1	+0.5
	1.2nm,0.8s,baz=249,slow=6.7,SNR=3.6						

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*ISCJB **19** 14:19:41.7±0.4, 41.˚55N±0.˚02×23.˚59E±0.˚03, h5^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=2.7km az=150.1*

*ATH **19** 14:19:42.2, 41.˚49N×23.˚61E, h24^{km}±1^{km}, ML2.4/12, Error ellipse: s-maj=2.4km s-min=1.0km az=174.0*

*THE **19** 14:19:42.4, 41.˚53N×23.˚56E, h8^{km}, ML2.3/12, Error ellipse: s-maj=1.0km s-min=0.4km az=173.0*

*SOF **19** 14:19:42.9, 41.˚63N×23.˚62E, h2^{km}, MD2.5*

*BEO **19** 14:19:42.0±1.0, 41.˚65N×24.˚07E, h23^{km}±7^{km}, ML2.7/5*

ISC 19 14:19:41.1±0.9, **41.˚59N**±0.˚02×**23.˚59E**±0.˚02, **h15**^{km}±7^{km}, **n42,** σ**1§15**/71, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	Musomiste	0.10	92	i Pg	Pg	14 19 45.4	+0.9
NVR	Nevrokopi	0.32	140	P	Pb	14 19 48.1	-0.4
NVR				S	Sg	14 19 51.9	-0.4
	1µm,0.2s						
NVR	Nevrokopi	0.32	140	P	Pb	14 19 48.1	-0.4
NVR				S	Sg	14 19 52.0	-0.2
NVR				AML	AML	14 19 52.1	
	comp=E,2371µm,0.4s						
NVR				AML	AML	14 19 52.3	
	comp=N,2008µm,0.1s						
KKB	Krupnik	0.47	306	i Pg	Pb	14 19 51.3	+0.2
SRS	Serrai	0.48	180	P	Pg	14 19 50.7	+0.1
SRS				S	Sg	14 19 57.1	+0.1
	comp=N,552nm,0.1s						
SRS	Serrai	0.48	180	P	Pg	14 19 50.7	+0.1
SRS				S	Sg	14 19 57.0	+0.1
SRS				AML	AML	14 19 57.6	
	comp=N,992µm,0.1s						
SRS				AML	AML	14 19 57.7	
	comp=E,1138µm,0.1s						
KNT	Kendrikon	0.68	231	P	Pb	14 19 54.4	-0.2
KNT				S	Sg	14 20 03.1	-0.2
	comp=E,262nm,0.1s						
KNT	Kendrikon	0.68	231	P	Pb	14 19 54.5	-0.2
KNT				S	Sg	14 20 02.9	-0.3
KNT				AML	AML	14 20 03.3	
	comp=N,602µm,0.2s						
KNT				AML	AML	14 20 04.1	
	comp=E,469µm,0.1s						
SOH	Sokhos	0.79	193	P	Pg	14 19 56.2	-0.3
SOH				S	Sg	14 20 06.9	0.0
	comp=E,462nm,0.3s						
SOH	Sokhos	0.79	193	P	Pg	14 19 56.2	-0.3
SOH				S	Sg	14 20 05.3	-1.6
SOH				AML	AML	14 20 07.3	
	comp=E,1181µm,0.4s						
SOH				AML	AML	14 20 07.3	
	comp=N,654µm,0.2s						
RZN	Rozhen	0.85	83	i Pg	Pn	14 19 59.9	+1.2
KVLA	Kavala	0.89	137	P	Pb	14 19 58.4	+0.1
KVLA				S	Sg	14 20 08.9	-1.1
KAVA	Kavala	0.92	130	P	Pb	14 19 58.8	+0.1
KAVA				S	Sn	14 20 12.8	+0.5
	comp=N,298nm,0.2s						
KAVA	Kavala	0.92	130	P	Pb	14 19 58.9	+0.1
KAVA				S	Sg	14 20 10.3	-0.6
KAVA				AML	AML	14 20 13.4	
	comp=E,518µm,0.2s						
KAVA				AML	AML	14 20 14.6	
	comp=N,654µm,0.1s						
PGB	Panagyurishte	1.05	24	i Pg	Pn	14 20 02.2	+0.9
VTS	Vitosha	1.06	346	ePg	Pn	14 20 03.4	+1.9
VTS				eSg	Sn	14 20 17.9	+1.8
VTS	Vitosha	1.06	346	i Pg	Pn	14 20 03.4	+1.9
HORT	Hortiatis	1.06	201	P	Pg	14 20 01.3	-0.3
HORT				S	Sg	14 20 15.5	0.0
	comp=N,210nm,0.2s						
HORT	Hortiatis	1.06	201	P	Pg	14 20 01.3	-0.3
HORT				S	Sg	14 20 13.8	-1.7
HORT				AML	AML	14 20 15.8	
	comp=E,465µm,0.3s						
HORT				AML	AML	14 20 16.7	
	comp=N,353µm,0.2s						
THE	Thessaloniki	1.07	206	P	Pg	14 20 01.4	-0.4
THE				S	Sg	14 20 15.6	-0.1
	comp=N,128nm,0.2s						
THE	Thessaloniki	1.07	206	P	Pg	14 20 01.4	-0.4
THE				S	Sg	14 20 14.4	-1.3
THE				AML	AML	14 20 16.1	
	comp=E,245µm,0.2s						
THE				AML	AML	14 20 16.4	
	comp=N,258µm,0.3s						
PLG	Polygyros	1.22	185	P	Pn	14 20 04.1	+0.4
PLG	Polygyros	1.22	185	P	Pn	14 20 04.0	+0.4
PLG				S	Sg	14 20 20.1	-0.5
PLG				AML	AML	14 20 22.8	
	comp=N,451µm,0.3s						
PLG				AML	AML	14 20 23.4	
	comp=E,387µm,0.4s						
OUR	Ouranopolis	1.29	167	P	Pb	14 20 05.3	+0.3
OUR				S	Sn	14 20 23.1	+1.5
	comp=E,505nm,0.4s						
OUR	Ouranopolis	1.29	167	P	Pb	14 20 05.4	+0.3
OUR				S	Sb	14 20 21.0	-0.5
OUR				AML	AML	14 20 23.4	
	comp=E,830µm,0.3s						
OUR				AML	AML	14 20 23.4	
	comp=N,1205µm,0.5s						
THAS	Thassos island	1.30	139	P	Pg	14 20 05.3	-0.9
THAS				S	Sn	14 20 23.3	+1.4
	comp=N,225nm,0.4s						
THAS	Thassos island	1.30	139	P	Pg	14 20 05.4	-0.9
THAS				S	Sb	14 20 21.9	+0.1
THAS				AML	AML	14 20 24.3	
	comp=E,430µm,0.3s						
THAS				AML	AML	14 20 24.6	
	comp=N,459µm,0.4s						
RDO	Rodhopi	1.53	106	P	Pg	14 20 09.3	-1.2
RDO				S	Sg	14 20 30.3	-0.2
	comp=N,128nm,0.3s						
RDO	Rodhopi	1.53	106	P	Pg	14 20 09.4	-1.2
RDO				S	Sg	14 20 30.0	-0.5
RDO				AML	AML	14 20 33.7	
	comp=N,277µm,0.4s						
RDO				AML	AML	14 20 33.9	
	comp=E,226µm,0.3s						
BARS	Barje	1.80	313	ePn	Pg	14 20 15.5	-0.1

BARS				eSn	Sg	14 20 40.6	+1.6
SMTH	Samothraki Isl	1.85	127	P	Pb	14 20 13.8	-0.8
SMTH				S	Sb	14 20 37.7	+0.2
	comp=E,22nm,0.4s						
SMTH	Samothraki Isl	1.85	127	P	Pn	14 20 12.6	+0.4
ALN	Alexandroupoli	1.98	110	P	Pb	14 20 15.5	-1.3
ALN				S	Sb	14 20 41.8	+0.6
	comp=E,25nm,0.7s						
ALN	Alexandroupoli	1.98	110	P	Pb	14 20 15.5	-1.3
ALN				AML	AML	14 20 47.9	
	comp=E,65µm,0.7s						
ALN				AML	AML	14 20 54.7	
	comp=N,49µm,0.5s						
LIA	Limnos Island	2.08	144	P	Pn	14 20 16.4	+1.0
LIA	Limnos Island	2.08	144	P	Pn	14 20 16.3	+0.8
XOR	Xorichti	2.25	188	P	Pn	14 20 18.7	+0.9
SELS	Selova	2.45	312	ePn	Pb	14 20 24.6	-0.2
SELS				eSn	Sb	14 20 55.4	+0.6
BOVS	Bovan	2.47	326	ePn	Pb	14 20 23.4	-1.8
BOVS				eSn	Sb	14 20 55.6	+0.2
GRUS	Gruza	3.12	318	ePn	Pb	14 20 32.5	-3.8
GRUS				eSn	Sb	14 21 11.2	-2.9
KUBS	Kucevo	3.15	334	ePn	Pn	14 20 32.3	+2.2
IVAS	Ivanjica	3.22	309	ePn	Pb	14 20 34.3	-3.7

*ATH **19** 14:22:54.8,41°.53N×23°.61E,h19^{km}±2^{km},ML1.6/8,Error ellipse: s-maj=3.1km s-min=1.2km az=175.0*

SOF 19 14:22:55.6,41°.62N×23°.61E,h5^{km},Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	Musomiste	0.09	109	i Pg	Pg	14 22 58.2	+0.6
NVR	Nevrokopi	0.33	145	P	Pg	14 23 00.9	-1.1
NVR				S	Sg	14 23 04.8	-1.5
NVR				AML	AML	14 23 05.2	
	comp=E,285µm,0.2s						
NVR				AML	AML	14 23 05.2	
	comp=N,288µm,0.1s						
KKB	Krupnik	0.47	302	i Pg	Pg	14 23 04.2	-0.4
SRS	Serrai	0.50	182	P	Pg	14 23 03.6	-1.7
SRS				S	Sg	14 23 09.8	-2.0
SRS				AML	AML	14 23 10.4	
	comp=N,208µm,0.1s						
SRS				AML	AML	14 23 10.5	
	comp=E,182µm,0.1s						
KNT	Kendrikon	0.70	230	P	Pg	14 23 07.2	-1.9
KNT				S	Sg	14 23 15.9	-2.3
KNT				AML	AML	14 23 16.7	
	comp=E,74µm,0.1s						
KNT				AML	AML	14 23 21.5	
	comp=N,89µm,0.1s						
SOH	Sokhos	0.82	194	P	Pg	14 23 09.1	-2.3
SOH				AML	AML	14 23 20.2	
	comp=N,84µm,0.2s						
SOH				AML	AML	14 23 20.4	
	comp=E,87µm,0.2s						
KAVA	Kavala	0.92	132	P	Pg	14 23 11.6	-1.7
KAVA				S	Sg	14 23 23.8	-1.4
KAVA				AML	AML	14 23 27.4	
	comp=N,97µm,0.1s						
KAVA				AML	AML	14 23 27.6	
	comp=E,80µm,0.2s						
VTS	Vitosha	1.04	344	i Pg	Pb	14 23 16.4	+0.3
HORT	Hortiatis	1.09	201	P	Pg	14 23 14.2	-2.3
HORT				S	Sg	14 23 28.1	-2.6
HORT				AML	AML	14 23 28.9	
	comp=E,54µm,0.2s						
HORT				AML	AML	14 23 29.5	
	comp=N,59µm,0.2s						
PLG	Polygyros	1.25	186	P	Pg	14 23 17.5	-2.1
PLG				S	Sg	14 23 33.1	-2.7
PLG				AML	AML	14 23 35.6	
	comp=N,63µm,0.3s						
PLG				AML	AML	14 23 36.2	
	comp=E,53µm,0.4s						
OUR	Ouranopolis	1.31	168	P	Pn	14 23 18.6	-2.0
OUR				AML	AML	14 23 36.2	
	comp=E,119µm,0.3s						
OUR				AML	AML	14 23 36.3	
	comp=N,161µm,0.4s						
THAS	Thassos island	1.31	140	P	Pn	14 23 17.9	-2.7
THAS				S	Sg	14 23 35.0	-2.9
RDO	Rodhopi	1.53	107	P	Pn	14 23 23.4	-0.1
RDO				S	Sn	14 23 42.6	-1.1

*EAF **19** 14:29:33.4±1.2,25°.36S×29°.79E,h0^{km}±22^{km},MD3.5*

*ISCJB **19** 14:29:34.7±1.8,25°.20S±0°.10×29°.3E±0°.2,h10^{km},Error ellipse: s-maj=31.9km s-min=6.5km az=24.2*

*BUL **19** 14:29:34.7±1.5,25°.38S×29°.83E,h0^{km}±26^{km},MD3.6*

ISC 19 14:29:35.2±2.0,25°.26S±0°.09×29°.5E±0°.2,h10^{km},n9, σ0^s.45/18,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	2.95	10	i P	Pn	14 30 22.5	+0.4
MSNA				i S	Sn	14 30 57.1	-0.5
MSNA	Messina	2.95	10	i P	Pn	14 30 22.5	+0.4
MSNA				i S	Sn	14 30 57.1	-0.5
MSNA	Messina	2.95	10	i P	Pn	14 30 22.5	+0.4
MSNA				i S	Sn	14 30 57.1	-0.5
MATP	Matopo	4.90	349	i P	Pn	14 30 49.6	+0.5
MATP				i S	Sn	14 31 45.4	-0.5
MATP	Matopo	4.90	349	i P	Pn	14 30 49.6	+0.5
MATP				i S	Sn	14 31 45.4	-0.5
MATP	Matopo	4.90	349	i P	Pn	14 30 49.6	+0.5
MATP				i S	Sn	14 31 45.4	-0.5
BOSA	Boshof	5.03	228	i P	Pn	14 30 50.7	-0.2
BOSA				i S	Sn	14 31 49.4	+0.2
BOSA	Boshof	5.03	228	i P	Pn	14 30 50.7	-0.2
BOSA				i S	Sn	14 31 49.4	+0.2
BOSA	Boshof	5.03	228	i P	Pn	14 30 50.7	-0.2
BOSA				i S	Sn	14 31 49.4	+0.2

*BJI **19** 14:54:11.4±0.0,17°.31S×167°.90E,h8^{km},mb4.9/26, mB5.2/16,Ms4.9/9,Ms7 4.6/7*

*IDC **19** 14:54:12.2±0.6,17°.45S×167°.70E,h0^{km},mb4.3/20, mb1 4.4/22,mb1mx4.3/41,mbtmp4.4/22,ML4.4/2,MS4.2/16, Ms1 4.2/16,ms1mx4.1/20,Error ellipse: s-maj=21.3km s-min=14.7km az=91.0*

*ISCJB **19** 14:54:13.4±0.3,17°.52S±0°.03×167°.61E±0°.06,h19^{km}, mb4.5/44,MS4.3/22,Error ellipse: s-maj=8.9km s-min=4.4km az=172.5*

*NEIC **19** 14:54:16.4±1.9,17°.47S×167°.55E,h29^{km}±4^{km},mb4.7/23, Error ellipse: s-maj=19.4km s-min=10.3km az=71.0*

*GCMT **19** 14:54:18.4±0.2,17°.49S±0°.02×167°.51E±0°.01,h20^{km}, MW5.1/91,Moment Tensor Solution. s58,c75; s91,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.95±.16; M$_{\theta\theta}$0.00±.11; M$_{\phi\phi}$-3.95±.12; M$_{r\theta}$1.42±.23; M$_{\theta\phi}$0.47±.07; M$_{\phi r}$-3.63±.23; Best double couple: M$_0$5.56900×10^{16} NP1:φ$_s$163.00000°,δ67.00000°,λ82.00000°. NP2: φ$_s$3.00000°,δ24.00000°,λ108.00000°. Principal axes: T 5.6040, Plg67.0000°, Azm59.0000°; N -0.0700, Plg7.0000°, Azm166.0000°; P -5.5340, Plg22.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 14:54:15.1±0.4,17°.53S±0°.05×167°.73E±0°.08,h19^{km},n113, σ1^s.37/116,mb4.6/42,MS4.3/22,5C-1D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.94	176	ePn	Pn	14 55 13.6	-1.0
MARNC				eSn	Sn	14 55 58.6	-1.7
DZM	Mont Dzumac	4.68	195	ePn	Pn	14 55 25.5	+0.7
	46nm,0.3s						
DZM				eSn	Sn	14 56 18.4	-0.2
	48nm,0.2s						
DZM				eLR	LR	14 56 30.2	
	comp=Z,2µm,23.4s						
DZM	Mont Dzumac	4.68	195	Pn	Pn	14 55 25.0	+0.2
	8.0nm,0.3s,baz=84,slow=9.7,SNR=44						
DZM				Sn	Sn	14 56 16.4	-2.2
	17nm,0.3s,baz=126,slow=23,SNR=7.0						
DZM				LR	LR	14 56 16.9	
	comp=Z,625nm,21.3s,baz=14,slow=26						
DZM	Mont Dzumac	4.68	195	ePn	Pn	14 55 24.6	-0.2
DZM				eSn	Sn	14 56 18.8	+0.3
ONTNC	Ouen Toro	4.90	194	ePn	Pn	14 55 28.8	+1.1
ONTNC				eSn	Sn	14 56 24.1	+0.1
PINNC	Pines Island,	5.06	183	ePn	Pn	14 55 31.7	+1.7
HNR	Honiara	11.04	316	Pn	Pn	14 56 50.8	-1.3
	4.5nm,0.3s,baz=184,slow=18,SNR=4.9						
HNR				LR	LR	15 00 42.5	
	comp=Z,2µm,18.3s,baz=128,slow=36						
HNR	Honiara	11.04	316	ePn	Pn	14 56 50.0	-2.0
OUZ	Omahuta	18.38	165	eP	Pn	14 58 29.5	+0.6
	20nm,1.0s						
CTA	Charters Tower	20.48	259	P	P	14 58 52.4	+0.4
	15nm,1.0s,baz=79,slow=14,SNR=4.3						
CTA				LR	LR	15 06 15.8	
	comp=Z,1µm,19.7s,baz=90,slow=35						
CTAO	Charters Tower	20.48	259	eP	P	14 58 50.6	-1.4
	17nm,0.9s						
PMG	Port Moresby	21.55	289	LR	LR	15 06 17.5	
	comp=Z,1µm,19.0s,baz=102,slow=34						
URZ	Urewera	22.23	160	P	P	14 59 12.8	+2.2
	19nm,0.8s,baz=6.7,slow=4.8,SNR=17						
URZ	Urewera	22.23	160	eP	P	14 59 12.4	+1.8
	37nm,1.1s						
BKZ	Black Stump Fm	22.87	162	eP	P	14 59 19.0	+1.5
	28nm,0.7s						
COEN	Coen	23.89	275	eP	P	14 59 26.5	-1.3
	9.7nm,0.9s						
BFZ	Birch Farm	24.22	164	eP	P	14 59 29.7	-0.9
	21nm,0.8s						
ODZ	Otahua Downs	27.54	176	eP	P	15 00 03.1	+2.5
	5.2nm,0.9s						
STKA	Stephens Creek	27.61	234	P	P	15 00 02.0	+0.6
	6.6nm,0.9s,baz=54,slow=8.4,SNR=5.5						
STKA				LR	LR	15 10 33.9	
	comp=Z,702nm,18.4s,baz=59,slow=36						
STKA	Stephens Creek	27.61	234	eP	P	15 00 02.0	+0.6
	4.3nm,1.1s						
TOO	Toolangi	27.93	220	eP	P	15 00 02.4	-1.8
	9.2nm,1.1s						
WB2	Warramunga Arr	31.67	260	eP	P	15 00 30.9	-6.6
	6.1nm,1.1s						
WRAB	Tennant Creek	31.67	260	eP	P	15 00 30.8	-6.8
	7.1nm,0.8s						
WR1	Warramunga Arr	31.68	260	eP	P	15 00 37.4	-0.3
WR1				ePcP	PcP	15 03 29.4	0.0
WRA	Warramunga Arr	31.68	260	P	P	15 00 37.4	-0.3
	1.4nm,0.7s,baz=81,slow=8.9,SNR=5.7						
WRA				PcP	PcP	15 03 29.4	0.0
	1.7nm,0.9s,baz=79,slow=4.3,SNR=3.0						
AS31	Alice Springs	32.19	253	eP	P	15 00 40.2	-1.9
	3.0nm,0.8s						
AS31				ePcP	PcP	15 03 27.8	-3.0
ASAR	Alice Springs	32.19	253	P	P	15 00 40.7	-1.4
	4.2nm,0.7s,baz=80,slow=8.2,SNR=45						
ASAR				PcP	PcP	15 03 30.7	-0.1
	1.7nm,0.9s,baz=94,slow=2.8,SNR=4.6						
ASAR				LR	LR	15 13 10.3	
	comp=Z,1µm,20.1s,baz=94,slow=35						
BBOO	Buckleboo	32.29	236	eP	P	15 00 43.3	+0.4
	21nm,0.9s						
MTN	Manton Dam	35.58	272	eP	P	15 01 08.8	-2.8
	9.4nm,1.1s						
SIJI	Sorong	39.48	291	P	P	15 01 44.3	-0.4
	2.6nm,0.6s,baz=210,slow=20,SNR=2.4						
SARN	Sarigan	40.30	326	eP	P	15 01 49.1	-2.4
	43nm,1.2s						
TBI	Tubuai	40.42	106	eS	S	15 07 58.4	-1.7
	289nm,28.5s						
TBI				eLQ	LQ	15 11 18.3	
	971nm,26.5s						
TBI				eLR	LR	15 12 58.2	
	comp=Z,663nm,30.2s						
PPT2	Papeete2	40.64	97	eS	S	15 08 02.7	-1.0
	298nm,23.8s						
PPT2				eLR	LR	15 12 58.0	
	comp=Z,874nm,25.5s						
PPT	Papeete	40.65	97	LR	LR	15 14 45.4	
	comp=Z,558nm,19.3s,baz=220,slow=30						
VNDA	Vanda	60.09	181	P	P	15 04 21.4	+0.8
	1.4nm,0.8s,baz=39,slow=6.0,SNR=8.1						
VNDA				LR	LR	15 26 05.6	
	comp=Z,191nm,19.9s,baz=149,slow=32						
SBA	Scott Base	60.35	180	eP	P	15 04 22.9	+0.5
	12nm,1.1s						
MJAR	Matsushiro Arr	60.58	333	P	P	15 04 23.5	-1.0
	8.5nm,1.0s,baz=170,slow=7.8,SNR=14						
MJAR				LR	LR	15 30 54.5	
	comp=Z,39nm,18.9s,baz=235,slow=36						
MAJO	Matsushiro	60.58	333	eP	P	15 04 22.8	-1.7
	13nm,1.1s						
MAT	Matsushiro	60.58	333	P	P	15 04 23.5	-1.0
MAT				S	S	15 12 43.8	+4.1
MJB9	Matsu-Tunnel	60.59	333	eP	P	15 04 23.1	-1.4
	13nm,1.1s						
JNU	Nakatsue	61.45	325	P	P	15 04 30.3	-0.2
	4.8nm,1.0s,baz=77,slow=23,SNR=3.9						
ASAJ	Asahikawa	65.51	340	P	P	15 04 56.9	-0.1
	6.4nm,0.9s,baz=184,slow=15,SNR=3.8						
NJ2	Nanjing	67.99	316	eP	P	15 05 14.4	+1.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
USRK	Ussuriysk Ar.	69.57	333	P	P	15 05 22.8	+0.1
	1.8nm,0.7s,baz=168,slow=3.9,SNR=6.2						
PETK	Petropavlovsk-	70.88	354	P	P	15 05 30.1	-0.4
	2.6nm,0.8s,baz=131,slow=7.8,SNR=4.0						
CN2	Changchun	72.26	329	eP	P	15 05 42.1	+3.0
CN2				eS	S	15 15 03.9	+2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,150nm,15.0s						
CN2				LR	LR		
	comp=E,130nm,15.0s						
CN2				LR	LR		
	comp=Z,110nm,17.0s						
QSPA	South Pole Qui	72.51	180	eP	P	15 05 41.9	+1.3
	21nm,0.9s						
KLR	Kul'dur	73.73	336	P	P	15 05 47.9	+0.2
	3.7nm,0.9s,baz=97,slow=2.2,SNR=9.2						
XAN	Xi'an	75.90	313	P	P	15 05 58.9	-1.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,57nm,4.0s						
KMI	Kunming	76.15	302	P	P	15 06 02.9	+0.4
KMI				pP	sP	15 06 09.5	-0.1
KMI				sP	pwP	15 06 12.5	+0.8
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CM31	Chiang Mai Arr	76.49	294	eP	P	15 06 05.2	+0.9
	7.4nm,1.0s						
CMAR	Chiang Mai Arr	76.49	294	P	P	15 06 05.2	+0.9
	0.7nm,0.4s,baz=129,slow=4.1,SNR=6.9						
HHC	Hu-ho-hao-te	77.99	320	eP	P	15 06 14.1	+1.7
HHC				S	S	15 16 05.9	+0.6
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				LR	LR		
	comp=N,220nm,16.2s						
HHC				LR	LR		
	comp=E,160nm,12.8s						
MAW	Mawson	79.47	202	P	P	15 06 19.4	-0.6
	1.9nm,1.0s,baz=146,slow=9.6,SNR=1.9						
MAW				LR	LR	15 39 19.4	
	comp=Z,123nm,18.3s,baz=200,slow=34						
MAW	Mawson	79.47	202	eP	P	15 06 19.4	-0.6
	0.9nm,1.0s						
LZH	Lanzhou	80.52	312	eP	P	15 06 26.0	-0.4
LZH				pP	pP	15 06 31.6	+0.1
LZH				sP	pwP	15 06 34.8	-1.5
LZH				eS	S	15 16 33.5	+1.1
LZH				sS	SKSac	15 16 43.3	-0.6
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
LZH				LR	LR		
	comp=N,1µm,14.1s						
LZH				LR	LR		
	comp=E,1µm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
GTA	Gaotai	84.91	314	eP	P	15 06 51.4	+2.3
GTA				pP	sP	15 06 55.8	-0.5
GTA				sP	pwP	15 06 58.9	-0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,5.2s						
GTA				LR	LR		
	comp=N,110nm,17.5s						
GTA				LR	LR		
	comp=E,120nm,18.2s						
GTA				LR	LR		
	comp=Z,140nm,15.1s						
SONA0	Songino Array	85.00	324	eP	P	15 06 49.9	+0.5
SONM	Songino Array	85.00	324	P	P	15 06 49.9	+0.5
	3.6nm,0.9s,baz=144,slow=5.4,SNR=14						
SONM				LR	LR	15 46 28.2	
	comp=Z,66nm,18.0s,baz=97,slow=37						
SYO	Syowa Base	86.16	197	⇑eP	P	15 06 54.3	-0.4
NV01	Mina Array Sit	88.76	49	eP	P	15 07 08.1	+0.1
NVAR	Mina Array Bea	88.76	49	P	P	15 07 08.1	+0.1
	1.6nm,1.0s,baz=235,slow=7.8,SNR=5.7						
NVAR				LR	LR	15 41 09.8	
	comp=Z,152nm,18.9s,baz=228,slow=32						
ILAR	Eielson Array	89.04	18	P	P	15 07 06.4	-2.0
	0.4nm,0.7s,baz=223,slow=5.3,SNR=5.5						
ILAR				LR	LR	15 41 21.1	
	comp=Z,120nm,20.3s,baz=258,slow=32						
SNAA	Sanae	90.79	183	P	P	15 07 16.9	+0.2
SNAA	Sanae	90.79	183	eP	P	15 07 16.0	-0.8
	9.5nm,1.0s						
VNA3	Neumayer Olymp	91.44	181	P	P	15 07 20.2	+0.5
WMQ	Urumqi	94.99	314	eP	P	15 07 35.6	-1.0
WMQ				pP	pP	15 07 41.8	-0.1
WMQ				sP	sP	15 07 44.1	+0.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WMQ				LR	LR		
	comp=N,550nm,29.2s						
WMQ				LR	LR		
	comp=E,510nm,28.9s						
WMQ				LR	LR		
	comp=Z,300nm,27.5s						
LAZ	Ladron	95.82	56	epP	pP	15 07 48.8	+2.7
TXAR	Lajitas Array	97.22	62	LR	LR	15 46 01.6	
	comp=Z,136nm,18.0s,baz=0.0,slow=32						
MK32	Makanchi Array	99.52	316	eP	Pdif	15 07 57.3	+0.4
MKAR	Makanchi Array	99.52	316	P	Pdif	15 07 57.3	+0.4
	0.5nm,0.7s,baz=193,slow=5.0,SNR=3.8						
MKAR				LR	LR	15 51 20.9	
	comp=Z,45nm,21.8s,baz=82,slow=34						
YKA	Yellowknife Ar	99.82	27	LR	LR	15 45 46.8	
	comp=Z,7.4nm,20.5s,baz=208,slow=31						
ZALV	Zalesovo Beam	99.89	323	P	Pdif	15 07 58.1	-0.2
	0.7nm,0.4s,baz=92,slow=3.6,SNR=4.8						
ZALV				LR	LR	15 53 33.3	
	comp=Z,69nm,19.1s,baz=70,slow=36						
ARA0	ARCESS Array S	123.06	345	ePKPdf	PKPdf	15 13 09.1	-0.6
ARCES	ARCESS Array B	123.06	345	PKP	PKPdf	15 13 09.1	-0.6
	4.4nm,0.8s,baz=64,slow=2.8,SNR=10						
FIA0	FINESS Array S	128.47	338	ePKPdf	PKPdf	15 13 19.9	-0.3
FINES	FINESS Array B	128.47	338	PKP	PKPdf	15 13 19.9	-0.3
	2.9nm,0.8s,baz=343,slow=6.0,SNR=4.6						
NB2	NORSAR Subarra	133.43	345	PKPdf	PKiKP	15 13 30.2	-0.7
	comp=Z,0.2nm,0.6s,baz=31,slow=1.9						
NB200	NORSAR Array S	133.43	345	ePKPdf	PKiKP	15 13 30.1	-0.9
NOA	NORSAR Array B	133.43	345	PKP	PKiKP	15 13 30.1	-0.9
	comp=Z,0.7nm,0.8s,baz=29,slow=2.0,SNR=3.9						
BR101	Keskin Array S	134.63	309	ePKPdf	PKiKP	15 13 34.5	+0.3
BRTR	Keskin Array B	134.63	309	PKP	PKiKP	15 13 34.5	+0.3
	comp=Z,0.6nm,0.8s,baz=131,slow=4.0,SNR=3.0						
DPC	Dobruska-Polom	140.04	331	ePKP	PKPdf	15 13 43.0	+0.7
VYHS	Vyhne	140.08	328	ePKP	PKiKP	15 13 51.3	+6.5
CLL	Collm	140.77	335	i PKiKP	PKiKP	15 13 46.4	+0.3
	comp=Z,4.0nm,0.9s						
CLL				e		15 14 05.0	
CONA	Conrad Observa	141.94	329	i PKiKP	PKPdf	15 13 46.5	+0.6
	comp=Z,6.4nm,1.4s						
KHC	Kasperske Hory	142.16	332	ePKP	PKPdf	15 13 43.8	-2.3
GERES	GERESS Array B	142.31	332	PKhKP	PKPpre	15 13 43.9	
	comp=Z,1.0nm,0.8s,baz=112,slow=1.4,SNR=6.3						
ARSA	Arzberg	142.57	328	i PKPdf	PKPdf	15 13 47.0	+0.1
	comp=Z,3.1nm,0.9s						
MOA	Molln	142.77	330	i PKPdf	PKPdf	15 13 45.3	-1.9
	comp=Z,6.3nm,1.1s						
SOKA	Soboth	143.21	328	i PKPdf	PKPdf	15 13 46.1	-2.0
	comp=Z,4.9nm,1.4s						
KBA	Koelnbreinsper	143.76	330	i PKPdf	PKPdf	15 13 47.7	-1.5
	comp=Z,8.0nm,1.0s,SNR=5.7						
MEM	Membach	143.90	340	⇓PKP	PKPdf	15 13 48.0	-1.1
MYKA	Terra Mystica	143.93	329	i PKPdf	PKPbc	15 13 47.6	+0.4
	comp=Z,5.4nm,0.9s						
GBAS	Gorenja Brezov	144.02	328	i PKPdf	PKPbc	15 13 47.6	+0.2
JAVS	Javornik	144.24	328	i PKPdf	PKPbc	15 13 48.1	0.0
BCLA	Clavier	144.29	341	⇑PKP	PKPdf	15 13 48.5	-1.3
WATA	Walderalm	144.39	332	i PKPdf	PKPdf	15 13 50.2	-0.1
	comp=Z,5.9nm,0.8s						
ABTA	Abfaltersbach	144.39	330	i PKPdf	PKPdf	15 13 49.2	-1.0
	comp=Z,19nm,0.9s,SNR=14						
WTTA	Wattenberg	144.42	332	i PKPdf	PKPdf	15 13 49.7	-0.6
	comp=Z,22nm,1.4s,SNR=5.6						
MOTA	Moosalm	144.59	332	i PKPdf	PKPdf	15 13 50.6	0.0
	comp=Z,19nm,1.0s,SNR=7.0						
RETA	Reutte	144.64	333	i PKPdf	PKPdf	15 13 50.3	-0.3
	comp=Z,20nm,1.4s,SNR=7.2						
SQTA	Sankt Quirin	144.64	332	i PKPdf	PKPdf	15 13 50.6	-0.1
	comp=Z,21nm,1.0s,SNR=8.1						
WLF	Walferdange	144.66	339	ePKPdf	PKPdf	15 13 50.5	0.0
WLF	Walferdange	144.66	339	⇑PKP	PKPdf	15 13 50.0	-0.4
DOU	Dourbes	144.79	341	⇑PKP	PKPdf	15 13 50.4	-0.3
DOU				⇑pPKP	pPKPdf	15 13 56.1	+0.1
BFO	Black Forest	144.98	336	ePKPdf	PKPdf	15 13 50.8	-0.4
FETA	Feichten	145.01	332	i PKiKP	PKPdf	15 13 51.9	+0.6
	comp=Z,41nm,1.0s,SNR=22						
DAVA	Damuels	145.17	333	i PKiKP	PKPdf	15 13 52.5	+0.9
	comp=Z,55nm,1.2s,SNR=19						
ECH	Echery	145.52	337	ePKPdf	PKPab	15 13 53.1	+0.8
ESDC	Sonseca Array	156.78	344	PKPab	PKPab	15 14 38.8	-0.1
	comp=Z,0.3nm,0.4s,baz=29,slow=2.9,SNR=5.4						
TORD	Torodi Ar. Bea	165.84	254	PKP	PKPdf	15 14 19.3	-0.3
	comp=Z,2.2nm,0.9s,baz=354,slow=5.2,SNR=7.6						
TOA1	Torodi Ar. Sit	165.85	254	ePKPdf	PKPdf	15 14 19.3	-0.3

IGQ 19 15:03:25.0±0.3,2°S±3°×8°0W±°,h1^{km},MLv4.4,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MILO	Milagro-Astudi	0.28	64	P	Pn	15 03 34.9	-1.5
MILO				S	Sb	15 03 43.9	+5.8
COHC	Cochancay	0.56	97	P	Pg	15 03 36.4	+0.7
COHC				S	Sb	15 03 46.3	+0.2
MORR	Playas El Morr	0.58	246	P	Pb	15 03 39.0	+0.9
MORR				S	Sn	15 03 51.6	+0.9
APLA	Playas - Guaya	0.63	248	P	Pb	15 03 39.0	+0.1
APLA				S	Sn	15 03 52.0	+0.1
JSCH	Cashca Tororas	1.07	51	P	Pg	15 03 41.9	-3.7
JSCH				S	Sg	15 03 53.5	-6.0
IGUA	Igualata	1.48	52	P	Pn	15 03 49.0	-4.4
BMAS	Trigal station	1.60	56	P	Pn	15 03 49.4	-5.4
ARRY	Arrayan	1.62	57	P	Pn	15 03 50.8	-4.3
BBIL	Ulba Tungurahu	1.62	54	P	Pn	15 03 50.9	-4.2
PAT1	Patacocha	1.63	57	P	Pn	15 03 50.7	-4.7
BPAT	Tungurahua Vol	1.64	57	P	Pn	15 03 50.9	-4.6
POND	Pondoa	1.67	54	P	Pn	15 03 51.5	-4.3
BULB	Ulba Tungurahu	1.69	56	P	Pn	15 03 51.6	-4.6
RUN5	Runtun	1.69	55	P	Pn	15 03 51.9	-4.2
BRUN	Tungurahua Vol	1.70	55	P	Pn	15 03 51.5	-4.7
GONZ	Gonzanam	1.87	167	P	Pn	15 03 55.2	-3.4
PIS1	Pisayambo	1.95	47	P	Pn	15 03 56.3	-3.5
PIS1	Pisayambo	1.95	47	S	Sn	15 04 21.0	-4.2
PISA	Pisayambo	1.95	47	P	Pn	15 03 56.3	-3.4
MCRA	Macar, Loja	1.96	184	P	Pn	15 03 51.6	-7.9
ILLI	Illinizas Sur	1.99	33	P	Pn	15 03 56.0	-4.3
BMOR	Cotopaxi Volca	2.14	39	P	Pn	15 03 58.9	-3.5
BNAS	Cotopaxi Volca	2.17	38	P	Pn	15 03 59.5	-3.4
BREF	Cotopaxi Volca	2.19	38	P	Pn	15 04 00.7	-2.6
BTAM	Cotopaxi Volca	2.22	39	P	Pn	15 03 59.7	-3.9
BVC2	Cotopaxi Volca	2.22	39	P	Pn	15 04 00.0	-3.6
VC1	Cotopaxi 1	2.24	39	P	Pn	15 04 00.2	-3.7
COV1	Cotopaxi Volc	2.26	40	P	Pn	15 03 59.3	-4.9
PITA	Cotopaxi Volc	2.29	37	P	Pn	15 04 00.8	-3.6
MAG1	Magdalena	2.31	1	P	Pn	15 03 59.0	-5.4
NINA	Atacazo Ninahu	2.32	31	P	Pn	15 04 01.0	-4.0
ANTS	Antisana-Sarah	2.50	41	P	Pn	15 04 03.4	-4.0
GGPC	Guagua Pichinc	2.52	29	P	Pn	15 04 03.8	-3.9
TERV	Terraza Guagua	2.52	29	P	Pn	15 04 03.7	-4.0
GGP	Refugio Guagua	2.52	29	P	Pn	15 04 04.3	-3.4
PINO	Pino	2.53	28	P	Pn	15 04 03.8	-4.1

ZUMB	Zumba	2.54	165	P	Pn	15 04 05.0	-2.5
ANTI	Antisana	2.54	40	P	Pn	15 04 03.9	-4.1
YANA	Yana	2.58	29	P	Pn	15 04 04.3	-4.1
PULU	Pululahua	2.74	28	P	Pn	15 04 06.6	-4.0
PAC1	Pacto, Paraso	2.84	21	P	Pn	15 04 05.3	-6.4
CUIC	Cuicocha-Domo	3.05	28	P	Pn	15 04 10.6	-4.3
COTA	Cotacachi	3.09	28	P	Pn	15 04 11.2	-4.3
IMBA	Imbabura, San	3.11	31	P	Pn	15 04 11.5	-4.2
URCU	Urcuqui	3.22	29	P	Pn	15 04 13.3	-3.9
YAHU	Yahuarcocha	3.25	32	P	Pn	15 04 13.5	-4.2
LITE1	Lita	3.49	24	P	Pn	15 04 14.4	-6.3
CASC	Dorado de Casc	3.53	44	P	Pn	15 04 16.6	-4.5

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*IDC **19** 15:19:04.7±0.6, 22°.25S×68°.43W, h97km±10km, mb3.6/4, mb1 3.7/7, mb1mx3.5/21, mbtmp4.0/7, Error ellipse: s-maj=27.5km s-min=21.9km az=114.0*

*ISCJB **19** 15:19:05.2±0.4, 22°.20S±0°.04×68°.74W±0°.06, h122km±5km, Error ellipse: s-maj=8.7km s-min=6.1km az=169.9*

*GUC **19** 15:19:05.5±0.6, 22°.19S×68°.75W, h115km±4km, ML4.0*

*SJA **19** 15:19:05.5±0.9, 22°.23S×68°.72W, h109km±4km, ML3.5, MW3.8*

ISC 19 15:19:05.2±0.8**, 22°.22S**±0°.05×**68°.69W**±0°.05**, h112**km±6km**, n38, σ1ˢ45**/51**, 9C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.43	208	P	Pn	15 19 22.7	+0.4
	1µm,0.3s,baz=37,slow=5.6						
LVC				S	Sn	15 19 34.9	-0.4
	920nm,0.3s,baz=311,slow=20,SNR=115						
LVC	Limon Verde	0.43	208	eP	Pn	15 19 22.6	+0.2
LVC				IAML		15 19 22.8	
	comp=Z,3µm,0.1s						
LVC				eS	Sn	15 19 35.1	-0.1
PB09	IPOC Station P	0.66	310	eP	Pn	15 19 24.5	+0.7
PB09				eS	Sn	15 19 38.5	+0.9
PB09	IPOC Station P	0.66	310	⇑iP	Pn	15 19 24.4	+0.7
PB09				eS	Sn	15 19 38.2	+0.6
PB09				IAML		15 19 39.8	
	comp=N,5µm,0.3s						
PB06	IPOC Station P	0.94	239	eP	Pn	15 19 26.9	+0.7
PB06	IPOC Station P	0.94	239	⇑iP	Pn	15 19 27.0	+0.7
PB06				eS	Sn	15 19 43.0	+1.0
PB06				IAML		15 19 43.6	
	comp=E,11µm,0.2s						
PB03	IPOC Station P	1.00	280	eP	Pn	15 19 27.4	+0.7
PB03	IPOC Station P	1.00	280	⇑iP	Pn	15 19 27.3	+0.6
PB03				eS	Sn	15 19 44.0	+1.0
PB03				IAML		15 19 44.7	
	comp=E,8µm,0.3s						
PB07	IPOC Station P	1.21	294	eP	Pn	15 19 29.8	+0.7
PB07	IPOC Station P	1.21	294	⇑iP	Pn	15 19 29.6	+0.6
PB07				eS	Sn	15 19 47.5	+0.4
PB07				IAML		15 19 49.0	
	comp=N,4µm,0.3s						
PB15	IPOC Station P	1.22	216	eP	Pn	15 19 30.4	+1.3
PB15	IPOC Station P	1.22	216	⇑iP	Pn	15 19 30.1	+1.0
PB15				eS	Sn	15 19 49.1	+1.9
PB04	IPOC Station P	1.35	265	eP	Pn	15 19 31.5	+0.9
PB04	IPOC Station P	1.35	265	⇑iP	Pn	15 19 31.2	+0.5
PB04				eS	Sn	15 19 50.9	+1.0
PB04				IAML		15 19 55.1	
	comp=E,4µm,0.1s						
PB01	IPOC Station P	1.39	328	⇑iP	Pn	15 19 31.2	+0.3
PB01				eS	Sn	15 19 50.6	+0.1
PB01				IAML		15 19 52.1	
	comp=N,2µm,0.4s						
PB02	IPOC Station P	1.44	309	eP	Pn	15 19 32.1	+0.5
PB02	IPOC Station P	1.44	309	⇑iP	Pn	15 19 32.0	+0.5
PB02				eS	Sn	15 19 51.5	0.0
PB02				IAML		15 19 55.8	
	comp=E,5µm,0.3s						
PB05	IPOC Station P	1.53	246	eP	Pn	15 19 33.3	+0.6
PB05	IPOC Station P	1.53	246	⇑iP	Pn	15 19 33.1	+0.5
PB05				eS	Sn	15 19 54.0	+0.5
PB05				IAML		15 20 01.8	
	comp=E,1µm,0.7s						
PB08	IPOC Station P	2.12	348	eP	Pn	15 19 41.4	+1.2
PB10	IPOC Station P	2.14	233	eP	Pn	15 19 41.0	+0.8
PB10	IPOC Station P	2.14	233	eP	Pn	15 19 40.8	+0.7
PB10				IAML		15 20 18.2	
	comp=N,582nm,0.4s						
PB11	IPOC Station P	2.61	340	eP	Pn	15 19 46.3	-0.1
PB14	IPOC Station P	2.86	213	eP	Pn	15 19 51.5	+1.7
PSGCX	Pisagua	2.94	333	eP	Pn	15 19 49.8	-0.7
YJA	Yavi	2.95	90	eP	Pn	15 19 53.2	+2.3
YJA				IAML		15 19 54.4	
	comp=Z,37nm,0.4s						
HJA	Humahuaca	3.19	109	eP	Pn	15 19 57.1	+3.0
MNMCX	Minye Minye	3.19	344	eP	Pn	15 19 54.0	-0.1
AZAP	Zapla	3.88	122	eP	Pn	15 20 04.9	+1.6
AZAP				IAML		15 20 05.7	
	comp=Z,68nm,0.6s						
PB12	IPOC Station P	3.91	337	eP	Pn	15 20 04.6	+1.1
LPAZ	La Paz	5.93	5	P	Pn	15 20 32.7	+1.5
	comp=Z,0.7nm,0.3s,baz=129,slow=4.3,SNR=14						
CFA	Coronel Fontan	9.35	178	P	Pn	15 21 15.8	-1.2
	comp=Z,0.6nm,0.3s,baz=3.7,slow=14,SNR=10						
CFA				S	Sn	15 22 54.7	-5.7
	comp=Z,0.5nm,0.3s,baz=239,slow=9.5,SNR=2.2						
SIV	San Ignacio	9.50	51	P	Pn	15 21 15.5	-3.6
	comp=Z,2.7nm,0.3s,baz=223,slow=10.0,SNR=58						
SIV				S	Sn	15 22 53.7	-11
	baz=218,slow=15,SNR=2.6						
BDFB	Brasilia	20.62	75	P	P	15 23 33.7	-2.1
	comp=Z,4.2nm,0.6s,baz=249,slow=8.6,SNR=4.9						
PTGA	Pitinga	22.99	23	P	P	15 23 59.4	-1.0
	comp=Z,1.4nm,0.3s,baz=172,slow=14,SNR=6.3						
TXAR	Lajitas Array	61.34	325	P	P	15 29 10.7	+1.4
	comp=Z,0.2nm,0.6s,baz=160,slow=7.6,SNR=3.6						
TORD	Torodi Ar. Bea	77.41	70	P	P	15 30 48.5	+0.1
	comp=Z,2.1nm,0.5s,baz=248,slow=5.0,SNR=19						
MKAR	Makanchi Array	146.09	37	PKPbc	PKPab	15 38 33.5	+0.6
	comp=Z,0.5nm,0.7s,baz=314,slow=3.4,SNR=4.8						

MEX 19 15:24:22.7±0.8**, 16°.50N**×**98°.35W, h26**km±23km**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.08	349	eP	Pn	15 24 39.2	-3.0
TLIG				eS	Sn	15 24 52.3	-4.1
VHO	Vista Hermosa	1.65	70	eP	Pn	15 24 47.6	-2.5
VHO				i S	Sn	15 25 07.5	-3.0
MEIG	Mezcala	1.87	320	eP	Pn	15 24 51.0	-2.1
MEIG				i S	Sn	15 25 13.3	-2.6

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*BJI **19** 15:33:22.7±0.0, 6°.92S×129°.89E, h154km, mb4.7/45, mB4.8/29*

*ISCJB **19** 15:33:24.1±0.2, 6°.73S±0°.02×129°.75E±0°.02, h150km, mb4.8/71, Error ellipse: s-maj=3.6km s-min=2.8km az=155.8*

*NEIC **19** 15:33:26.3±2.5, 6°.73S×129°.73E, h159km±5km, mb4.7/58, Error ellipse: s-maj=8.6km s-min=7.5km az=65.0*

*IDC **19** 15:33:27.1±1.6, 6°.70S×129°.74E, h164km±15km, mb4.4/19, mb1 4.4/24, mb1mx4.3/37, mbtmp4.9/24, Error ellipse: s-maj=12.6km s-min=8.8km az=68.0*

*DJA **19** 15:33:27.4±0.2, 7°S±2°×13°0E±°, h168km±3km, M4.9/42, mB5.4/15, mb4.9/42, MLv5.2/18, Mw(mB)4.8/15*

ISC 19 15:33:25.4±0.3**, 6°.77S**±0°.04×**129°.73E**±0°.04**, h150**km**, n190, σ1ˢ78**/204**, mb4.7**/71**, 1C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.97	128	ePn	Pn	15 34 04.5	+4.3
SAUI				eSn	Sn	15 34 29.3	+2.3
SAUI	Saumlaki	1.97	128	P	Pn	15 34 03.8	+3.6
SAUI				S	Sn	15 34 32.2	+5.2
BNDI	Bandanaira	2.24	5	P	Pn	15 34 07.8	+4.3
BNDI				S	Sn	15 34 36.8	+4.0
AAI	Ambon	3.42	334	P	Pn	15 34 22.6	+4.3
MSAI	Masohi	3.50	347	P	Pn	15 34 23.0	+3.8
NLAI	Namlea	4.38	323	P	Pn	15 34 34.9	+4.2
FAKI	Fak Fak	4.58	33	ePn	Pn	15 34 33.5	+0.1
FAKI				eSn	Sn	15 35 24.6	-1.7
FAKI	Fak Fak	4.58	33	P	Pn	15 34 33.9	+0.5
KMPI	Kaimana, Papua	5.03	52	P	Pn	15 34 39.7	+0.5
SANI	Sanana	5.99	321	P	Pn	15 34 55.8	+3.7
	195nm,0.7s,1µm0.6nm						
SIJI	Sorong	6.06	15	P	Pn	15 34 53.0	-0.1
	28nm,0.3s,baz=50,slow=12,SNR=129						
SIJI				S	Sn	15 35 57.2	-4.4
	31nm,0.3s,baz=258,slow=10,SNR=21						
SWI	Sorong	6.07	15	P	Pn	15 34 53.0	-0.1
SOEI	Soe	6.16	241	ePn	Pn	15 34 57.6	+3.1
SOEI	Soe	6.16	241	P	Pn	15 34 57.1	+2.7
MTN	Manton Dam	6.19	167	ePn	Pn	15 34 56.0	+1.3
MTN				eSn	Sn	15 36 02.1	-2.5
MTN	Manton Dam	6.19	167	P	Pn	15 34 55.9	+1.3
	baz=6.2,SNR=456						
KDU	Kakadu	6.47	155	P	Pn	15 34 59.6	+1.2
	baz=6.5,SNR=980						
LBMI	Labuha	6.49	340	P	Pn	15 35 01.4	+2.7
	456nm,0.8s,4µm1.3nm						
BATI	Baumata	6.90	240	P	Pn	15 35 06.8	+2.6
	66nm,0.3s,baz=108,slow=2.6,SNR=64						
BATI				S	Sn	15 36 21.4	-0.2
	56nm,0.3s,baz=312,slow=23,SNR=9.9						
BATI	Baumata	6.90	240	ePn	Pn	15 35 06.8	+2.6
BATI				ePn	Pn	15 35 06.8	+2.6
BATI				eSn	Sn	15 36 21.4	-0.2
BATI				eSn	Sn	15 36 21.4	-0.2
BATI	Baumata	6.90	240	P	Pn	15 35 07.1	+2.9
	116nm,0.5s,1µm1.1nm						
MMRI	Maumere	7.65	256	ePn	Pn	15 35 15.0	+0.8
MMRI				eSn	Sn	15 36 37.1	-2.5
MMRI	Maumere	7.65	256	P	Pn	15 35 16.6	+2.4
TNTI	Ternate	7.86	342	ePn	Pn	15 35 19.5	+2.4
TNTI	Ternate	7.86	342	P	Pn	15 35 19.4	+2.4
SRPI	Serui, Papua	8.12	53	P	Pn	15 35 21.6	+1.1
EDFI	Ende, Flores	8.20	256	P	Pn	15 35 23.9	+2.2
BAKI	Biak	8.44	49	P	Pn	15 35 26.9	+2.1
KNRA	Kununurra	8.90	186	P	Pn	15 35 30.9	0.0
	baz=8.9,SNR=168						
LUWI	Luwuk	8.97	309	eSn	Sn	15 37 06.5	-5.1
LUWI	Luwuk	8.97	309	P	Pn	15 35 48.4	+17
BKSI	Bulukumba	9.66	278	P	Pn	15 35 44.4	+3.4
WSI	Waingapu	9.76	252	P	Pn	15 35 42.9	+0.5
BNSI	Bone	9.86	283	P	Pn	15 35 58.7	+15
KAPI	Kappang	10.07	279	P	Pn	15 35 49.8	+3.3
	0.6nm,0.3s,baz=86,slow=5.6,SNR=3.6						
KAPI	Kappang	10.07	279	ePn	Pn	15 35 45.7	-0.8
SPSI	Sidrap Palu	10.30	285	P	Pn	15 36 01.2	+12
TTSI	Tana Toraja	10.54	290	P	Pn	15 36 12.2	+20
WBSI	Waikabubak, Su	10.62	254	P	Pn	15 35 53.7	0.0
SGSI	Sangihe	11.20	338	P	Pn	15 36 03.0	+1.6
GENI	Genyem	11.21	69	P	Pn	15 36 03.4	+2.0
DDMP	Don Marcelino,	13.40	343	eP	Pn	15 36 28.3	-1.6
WRAB	Tennant Creek	13.83	161	ePn	Pn	15 36 32.9	-2.4
WR1	Warramunga Arr	13.84	162	eP	Pn	15 36 33.6	-1.8
WR1				eSn	Sn	15 39 00.9	-7.9
WRA	Warramunga Arr	13.84	162	P	Pn	15 36 33.6	-1.8
	11nm,0.3s,baz=334,slow=13,SNR=316						
WRA				S	Sn	15 39 00.9	-7.9
	28nm,0.3s,baz=336,slow=24,SNR=16						
WB2	Warramunga Arr	13.84	162	ePn	Pn	15 36 33.7	-1.8
BKB	Balikpapan	13.91	293	P	Pn	15 36 39.5	+3.1
MATI	Mati	14.06	346	eP	P	15 36 40.8	-0.5
KCP	Kidapawan	14.45	341	⇑iP	Pn	15 36 44.5	+1.3
CTBH	Cotabato--PC H	14.94	338	⇓iP	Pn	15 36 49.6	+0.4
COEN	Coen	15.03	119	ePn	Pn	15 36 49.9	-0.4
	60nm,0.8s						
COEN				eSn	Sn	15 39 31.8	-5.6
BUKP	Musuan	15.28	342	eP	Pn	15 36 54.2	+0.7
JAGI	Jajag, Banyuwa	15.53	263	eP	Pn	15 36 56.7	+0.2
	58nm,1.0s						
MTKI	Muara Teweh, K	15.88	291	P	P	15 37 03.3	+1.7
QIS	Mount Isa	16.72	146	P	P	15 37 11.6	+0.9
	baz=17,SNR=65						
GRJI	Gresik	17.12	269	P	P	15 37 16.7	+1.5
AS31	Alice Springs	17.27	167	eP	P	15 37 18.4	+1.6
	55nm,0.6s						
AS31				eS	S	15 40 27.6	-1.6
ASAR	Alice Springs	17.27	167	P	P	15 37 18.8	+1.9
	22nm,0.3s,baz=342,slow=9.0,SNR=1503						
ASAR				S	S	15 40 25.0	-4.3
	7.1nm,0.3s,baz=347,slow=24,SNR=8.3						
PMG	Port Moresby	17.46	100	P	P	15 37 20.5	+1.6
	0.4nm,0.3s,baz=287,slow=12,SNR=3.1						
PMG				S	S	15 40 27.4	-5.8
	1.6nm,0.3s,baz=187,slow=23,SNR=7.7						
PSA00	Pilbara Seismi	17.54	212	eP	P	15 37 21.5	+1.8
	40nm,0.6s						
MTSU	Mount Surprise	18.16	130	P	P	15 37 28.4	+1.8
	baz=18,SNR=59						
WRKA	Warakurna	18.21	184	P	P	15 37 28.9	+1.7
	baz=18,SNR=55						
PBKI	Pangkalan Bun	18.44	282	P	Pn	15 37 33.2	+1.6
	413nm,0.9s,4µm						
KKM	Kota Kinabalu	18.54	313	eP	P	15 37 31.8	+0.9
	42nm,0.9s						
SBUM	Sibu	19.73	297	eP	P	15 37 44.4	+0.7
	24nm,1.1s						
CTA	Charters Tower	20.79	131	P	P	15 37 56.6	+1.6
	24nm,0.7s,baz=304,slow=12,SNR=19						
CTAO	Charters Tower	20.79	131	eP	P	15 37 56.9	+1.9
	33nm,0.8s						
GIRL	Giralia	21.72	222	eP	P	15 38 06.0	+1.1
	46nm,1.0s						
CISI	Cisompet, Garu	21.75	267	eP	P	15 38 05.6	+0.2
CISI	Cisompet, Garu	21.75	267	P	P	15 38 06.6	+1.2
	178nm,0.9s						
LEM	Lembang	21.95	269	P	P	15 38 08.2	+0.7
	77nm,0.8s,baz=317,slow=22,SNR=9.9						
MEEK	Meekatharra	22.41	207	P	P	15 38 11.9	+0.2
	baz=22,SNR=11						
TGY	Tagaytay City	22.50	337	P	P	15 38 13.3	+0.5
	184nm,0.5s,baz=174,slow=6.0,SNR=6.6						
FORT	Forrest	23.93	184	eP	P	15 38 26.1	+0.4
	148nm,1.1s						
FORT	Forrest	23.93	184	P	P	15 38 26.7	+1.0
	baz=24,SNR=21						
PPBI	Pangkal Pinang	23.95	280	P	P	15 38 27.4	+1.3
KMBL	Kambalda	25.54	196	P	P	15 38 39.8	-0.5
	baz=26,SNR=13						
MORW	Morawa	25.66	209	eP	P	15 38 43.2	+1.8
	15nm,1.1s						
BBOO	Buckleboo	26.57	168	eP	P	15 38 50.1	+0.5
	27nm,0.5s						
BBOO	Buckleboo	26.57	168	P	P	15 38 50.0	+0.4
	baz=27,SNR=20						
RMQ	Roma	26.70	139	P	P	15 38 52.6	+1.8
	baz=27,SNR=5.3						
MYKOM	Kota Tinggi	27.19	287	eP	P	15 38 56.4	+1.0
	28nm,1.0s						
STKA	Stephens Creek	27.32	158	P	P	15 38 57.0	+0.8
	25nm,0.5s,baz=339,slow=8.5,SNR=77						
STKA	Stephens Creek	27.32	158	eP	P	15 38 57.1	+0.8
	5.8nm,0.6s						
STKA	Stephens Creek	27.32	158	P	P	15 38 57.1	+0.8
	baz=27,SNR=59						
HTT	Hallett	27.86	163	P	P	15 39 02.2	+1.0
	baz=28,SNR=16						
NWAO	Narrogin (SRO)	28.50	202	P	P	15 39 07.3	+0.6
	2.9nm,0.4s,baz=57,slow=7.2,SNR=10						
NWAO	Narrogin (SRO)	28.50	202	eP	P	15 39 07.2	+0.5
	20nm,1.1s						
NWAO				eP	P	15 39 07.3	+0.6
NWAO	Narrogin (SRO)	28.50	202	P	P	15 39 07.6	+0.9
	baz=28,SNR=6.1						
CMSA	Cobar Meteorol	28.81	151	P	P	15 39 10.6	+1.2
	baz=29,SNR=114						
IPM	Ipoh	30.75	291	eP	P	15 39 24.1	-2.8
	15nm,1.0s						
MNSI	Mandailing Nat	31.01	283	P	P	15 39 27.9	-1.2
	33nm,0.8s						
TPUB	Ta-pu	31.18	344	eP	P	15 39 28.7	-1.8
	12nm,1.0s						
ARMA	Armidale	31.24	142	eP	P	15 39 31.8	+0.7
	8.4nm,0.8s						
ARMA	Armidale	31.24	142	P	P	15 39 31.5	+0.3
	baz=31,SNR=12						
KULM	Kulim	31.40	292	eP	P	15 39 31.4	-1.1
	21nm,1.0s						
ARPS	Mount Arapiles	31.84	161	P	P	15 39 36.1	0.0
	baz=32,SNR=36						
PSI	Prapat	32.18	286	P	P	15 39 38.5	-1.1
	16nm,0.7s,baz=163,slow=3.5,SNR=8.2						
YNG	Young	32.37	150	P	P	15 39 42.5	+1.7
	baz=32,SNR=23						
GSI	Gunungsitoli	33.07	283	eP	P	15 39 44.8	-2.4
	29nm,0.7s						
GSI	Gunungsitoli	33.07	283	P	P	15 39 48.3	+1.1
	47nm,0.8s						
TRTT	Trang	33.28	295	P	P	15 39 52.1	+3.1
	16nm,2.2s						
CAN	Canberra	33.48	151	eP	P	15 39 52.7	+2.1
	38nm,0.7s						
CNB	Canberra Magne	33.66	150	P	P	15 39 53.8	+1.8
	baz=34,SNR=19						
TOO	Toolangi	33.84	157	eP	P	15 39 56.1	+2.4
	13nm,0.9s						
TOO	Toolangi	33.84	157	P	P	15 39 53.7	+0.1
	baz=34,SNR=7.0						
PANO	Nakornpanom	34.37	314	P	P	15 40 05.7	+7.4
MILA	Mila	34.96	152	P	P	15 40 03.6	+0.3
	baz=35,SNR=3.6						
UTHA	Uthaitani	37.31	307	P	P	15 40 23.5	+0.1
	36µm,0.7s						
SLVN	Son La	37.72	318	eP	P	15 40 26.7	-0.1
	2.2nm,0.6s						
UTTA	Uttaradit	37.73	311	P	P	15 40 27.1	+0.2
	33µm,0.8s,247µm						
DZM	Mont Dzumac	38.54	117	P	P	15 40 33.8	0.0
	10.0nm,0.7s,baz=250,slow=11,SNR=6.9						
DZM	Mont Dzumac	38.54	117	eP	P	15 40 33.8	0.0
	23nm,1.1s						
CM31	Chiang Mai Arr	39.38	310	ePcP	PcP	15 42 46.7	+0.6
CMAR	Chiang Mai Arr	39.38	310	P	P	15 40 40.7	0.0
	6.6nm,0.7s,baz=138,slow=7.4,SNR=39						
CMAR				PcP	PcP	15 42 46.7	+0.6
	1.5nm,0.7s,baz=165,slow=2.6,SNR=5.6						
CMMT	Chiang Mai	39.59	310	P	P	15 40 42.6	+0.2
	10nm,0.8s						
CHTO	Chiang Mai	39.59	310	eP	P	15 40 41.8	-0.6
	13nm,0.8s						
JNU	Nakatsue	39.69	2	eP	P	15 40 42.0	-1.1
	7.2nm,0.8s						
WHN	Wuhan	39.93	339	⇓P	P	15 40 45.6	+0.6
NJ2	Nanjing	39.98	346	eP	P	15 40 46.1	+0.7
NJ2				pmax	pmax		
	comp=Z,23nm,0.5s						
KMI	Kunming	41.17	321	P	P	15 40 56.9	+1.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ENH	Enshi	41.64	333	eP	P	15 40 57.3	-1.8
	12nm,0.8s						
MJAR	Matsushiro Arr	43.82	10	P	P	15 41 15.2	-1.4
	8.7nm,0.8s,baz=194,slow=10,SNR=20						
MAJO	Matsushiro	43.82	10	eP	P	15 41 15.3	-1.3
	11nm,0.8s						
MAT	Matsushiro	43.82	10	P	P	15 41 15.2	-1.3
MJB9	Matsu-Tunnel	43.82	10	eP	P	15 41 15.3	-1.2
	12nm,0.8s						
KSRS	Korea Array	44.03	358	P	P	15 41 18.3	+0.1
	1.4nm,0.5s,baz=175,slow=8.9,SNR=10						
CD2	Chengdu	44.97	328	eP	P	15 41 26.0	+0.2
XAN	Xi'an	45.12	335	P	P	15 41 25.6	-1.4
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
XAN				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH	Lanzhou	49.08	332	eP	P	15 41 57.3	-0.5
LZH				pP	pP	15 42 34.0	+3.5
LZH				sP	sP	15 42 52.5	+5.9
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
OUZ	Omahuta	49.20	131	eP	P	15 41 58.1	-0.4
	6.0nm,1.2s						
HHC	Hu-ho-hao-te	50.25	342	eP	P	15 42 10.3	+3.9
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				LR	LR		
	comp=N,140nm,15.3s						
HHC				LR	LR		
	comp=E,120nm,12.8s						
FOZ	Fox Glacier	50.73	143	eP	P	15 42 10.5	+0.5
	14nm,1.1s						
USA0B	Ussuriysk Arra	50.78	2	eP	P	15 42 10.1	-0.1
	6.5nm,0.6s						
USRK	Ussuriysk Ar.	50.78	2	P	P	15 42 10.0	-0.2
	5.7nm,0.5s,baz=180,slow=7.3,SNR=35						
LSA	Lhasa	51.85	316	eP	P	15 42 18.7	-0.3
	6.0nm,0.6s						
BKZ	Black Stump Fm	52.95	135	eP	P	15 42 26.1	-0.5
	4.9nm,0.8s						
GTA	Gaotai	53.64	331	eP	P	15 42 31.8	+0.1
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
JIRN	Jiri	54.23	311	eP	P	15 42 35.6	-0.9
PKI	Pulchoki	54.77	311	eP	P	15 42 38.8	-1.5
	14nm,0.4s						
PKIN	Phulchoki	54.78	311	eP	P	15 42 38.7	-1.6
	11nm,0.4s						
KKN	Kakani	54.98	311	eP	P	15 42 40.8	-0.9
	14nm,0.5s						
DMN	Daman	55.02	310	eP	P	15 42 40.8	-1.2
	12nm,0.5s						
GKN	Gorkha	55.58	311	eP	P	15 42 45.1	-0.8
	42nm,0.4s						
KOLN	Koldanda	56.25	310	eP	P	15 42 50.2	-0.5
ULN	Ulaanbaatar	57.97	342	eP	P	15 43 02.8	+0.4
	25nm,0.7s						
SONA0	Songino Array	58.14	342	eP	P	15 43 03.9	+0.4
SONM	Songino Array	58.14	342	P	P	15 43 03.9	+0.4
	6.9nm,0.6s,baz=155,slow=6.2,SNR=28						
WMQ	Urumqi	63.06	327	eP	P	15 43 37.8	+1.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.1s						
WMQ				LR	LR		
	comp=N,64nm,29.3s						
WMQ				LR	LR		
	comp=E,350nm,29.0s						
WMQ				LR	LR		
	comp=Z,160nm,28.9s						
PEA0B	Petropavlovsk-	64.20	18	eP	P	15 43 44.5	+0.5
	7.4nm,0.8s						
PETK	Petropavlovsk-	64.20	18	P	P	15 43 44.3	+0.3
	6.2nm,0.8s,baz=183,slow=4.5,SNR=20						
PETK				PcP	PcP	15 44 16.9	-0.7
	2.7nm,0.5s,baz=183,slow=1.8,SNR=8.3						
PEA1	Petropavlovsk-	64.20	18	eP	P	15 43 44.3	+0.2
PEA1				ePcP	PcP	15 44 16.9	-0.7
PET	Petropavlovsk	64.43	19	eP	P	15 43 44.8	-0.7
	3.6nm,0.7s						
NIL	Nilore	66.86	311	eP	P	15 44 01.1	-0.5
	8.6nm,0.6s						
KSH	Kashi	67.67	318	P	P	15 44 07.4	+0.7
KSH				PP	PP	15 46 41.6	+3.6
KSH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,170nm,5.0s						
MK31	Makanchi Array	67.89	327	eP	P	15 44 08.2	+0.4
	25nm,0.7s						
MKAR	Makanchi Array	67.89	327	P	P	15 44 07.9	+0.2
	47nm,0.8s,baz=123,slow=8.0,SNR=244						
MAKZ	Makanchi	68.07	327	eP	P	15 44 09.1	+0.2
	26nm,0.6s						
KDJ	Kajisay	68.23	321	eP	P	15 44 10.3	+0.1
	6.7nm,0.6s						
YAK	Yakutsk	68.60	360	eP	P	15 44 11.6	-0.2
	33nm,0.7s						
ZALV	Zalesovo Beam	71.26	334	P	P	15 44 27.4	-0.8
	17nm,0.6s,baz=126,slow=5.2,SNR=72						
GAR	Garm	71.31	315	eP	P	15 44 29.3	+0.3
	28nm,0.8s						
KURK	Kurchatov	72.18	329	eP	P	15 44 33.8	0.0
	31nm,0.9s						
VNDA	Vanda	72.70	173	P	P	15 44 36.6	+0.1
	1.2nm,0.6s,baz=311,slow=6.2,SNR=9.4						
VNDA	Vanda	72.70	173	eP	P	15 44 35.9	-0.6
	1.4nm,0.6s						
BRVK	Borovoye	77.80	328	eP	P	15 45 05.7	-0.3
	19nm,0.8s						
UOSS	Minazif	78.08	297	eP	P	15 45 07.0	-1.2
	9.0nm,0.8s						
TIXI	Tiksi	78.27	360	eP	P	15 45 07.5	-0.7
	7.2nm,0.5s						
GEYT	Alibeck	79.86	310	P	P	15 45 17.9	+0.3
	19nm,0.3s,baz=160,slow=4.7,SNR=14						
AKTO	Aktyubinsk	83.73	322	P	P	15 45 37.0	-0.6
	5.5nm,0.5s,baz=125,slow=8.1						
ARU	Arti	85.37	328	eP	P	15 45 44.8	-0.9
	14nm,0.8s						
RAYN	Ar Rayn	87.41	294	eP	P	15 45 56.2	-0.2
	21nm,0.8s						
ILAR	Eielson Array	93.26	25	P	P	15 46 20.6	-2.2
	1.4nm,0.7s,baz=244,slow=4.6,SNR=16						

BRTR	**Keskin Array B**	**98.96**	**309**	P	**P**	**15 46 48.3**	**-1.1**
	0.9nm,0.8s,baz=127,slow=3.3,SNR=4.9						
PD31	**Pinedale Array**	**116.93**	**45**	*e*PKPdf	**PKPdf**	**15 51 52.8**	**-0.1**
PDAR	**Pinedale Array**	**116.93**	**45**	PKP	**PKPdf**	**15 51 52.8**	**-0.1**
	0.6nm,0.7s,baz=234,slow=1.6,SNR=7.0						
EKA	**Eskdalemuir Ar**	**118.84**	**331**	PKP	**PKPdf**	**15 51 54.9**	**-1.0**
	0.3nm,0.5s,baz=15,slow=2.9,SNR=3.4						
MNTX	**Cornudas Mount**	**123.06**	**57**	*e*PKPdf	**PKPdf**	**15 52 05.5**	**+0.7**
LTX	**Lajitas**	**125.05**	**59**	*e*PKPdf	**PKPdf**	**15 52 08.9**	**+0.1**
TXAR	**Lajitas Array**	**125.05**	**59**	PKP	**PKPdf**	**15 52 08.9**	**+0.1**
	0.5nm,0.7s,baz=266,slow=0.7,SNR=6.8						
TORD	**Torodi Ar. Bea**	**128.50**	**281**	PKP	**PKPdf**	**15 52 15.6**	**0.0**
	1.5nm,0.7s,baz=118,slow=1.9,SNR=9.3						
TOA1	**Torodi Ar. Sit**	**128.50**	**281**	*e*PKPdf	**PKPdf**	**15 52 15.6**	**0.0**
PLCA	**Paso Flores**	**129.18**	**160**	PKP	**PKPdf**	**15 52 16.9**	**+0.6**
	0.8nm,0.7s,baz=299,slow=7.8,SNR=3.2						
PLCA	**Paso Flores**	**129.18**	**160**	*e*PKPdf	**PKPdf**	**15 52 17.4**	**+1.0**
CPUP	**Villa Florida**	**146.39**	**169**	PKPbc	**PKPdf**	**15 52 49.5**	**+1.4**
	3.2nm,0.6s,baz=227,slow=3.0,SNR=6.9						
CPUP	**Villa Florida**	**146.39**	**169**	*e*PKPbc	**PKPdf**	**15 52 50.0**	**+2.0**
GO01	**Chusmiza**	**147.79**	**145**	*e*PKPbc	**PKPbc**	**15 52 55.3**	**+1.1**
MNMC	**Minye Minye**	**147.98**	**144**	*e*PKPbc	**PKPbc**	**15 52 56.0**	**+1.6**
LPAZ	**La Paz**	**151.06**	**143**	PKPbc	**PKPbc**	**15 53 03.2**	**+0.7**
	1.7nm,0.4s,baz=36,slow=4.8,SNR=11						
LPAZ	**La Paz**	**151.06**	**143**	*e*PKPbc	**PKPbc**	**15 53 03.6**	**+1.0**

TAP 19 15:39:24.7, 23°.62N×120°.81E, h5^{km}, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHYT	**Xinyi Township**	**0.09**	**30**	P	Pg	15 39 27.3	+0.7
	baz=30						
WHYT				S	Sg	15 39 29.1	+1.1
	baz=30						
CHN5	**Tsauling**	**0.12**	**258**	*i* P	Pg	15 39 28.0	+0.7
	baz=258						
CHN5				*i* S	Sg	15 39 30.3	+1.4
	baz=258						
WJS	**Zhushan**	**0.21**	**340**	*e*S	Sg	15 39 35.0	+3.2
	baz=340						
SSLB	**Suanglung**	**0.21**	**39**	*e*P	Sg	15 39 32.4	+0.7
	10nm,0.7s						
SSLB	**Suanglung**	**0.21**	**39**	P	Pg	15 39 29.6	+0.6
	baz=52						
SSLB				S	Sg	15 39 32.8	+1.0
	baz=52						
WGK	**Gukeng**	**0.23**	**286**	*e*P	Pg	15 39 31.0	+1.7
	baz=285						
SMLT	**Sun Moon Lake**	**0.27**	**18**	*e*P	Pg	15 39 31.1	+1.1
	baz=31						
TYC	**Yuchr**	**0.28**	**9**	*e*P	Pb	15 39 31.5	-0.8
	baz=22						
TYC				*e*S	Sb	15 39 37.1	-0.3
	baz=22						
VWDT	**VWDT**	**0.33**	**67**	*e*P	Pb	15 39 32.2	-0.9
	baz=77						
VWDT				S	Sg	15 39 37.1	+1.5
	baz=77						
CHN4	**Tsaushan**	**0.33**	**216**	P	Pb	15 39 32.5	-0.6
	baz=207						
CHN4				*e*S	Sb	15 39 38.8	0.0
	baz=207						
TPUB	**Ta-pu**	**0.36**	**207**	*e*P	Pb	15 39 32.6	-1.0
	baz=198						
TPUB				*e*S	Sb	15 39 38.5	-1.0
	baz=198						
WTP	**Ta-pu**	**0.41**	**205**	*e*P	Pb	15 39 33.7	-0.8
	baz=204						
WTP				S	Sb	15 39 40.7	-0.5
	baz=204						
DPDB	**Guoxing**	**0.42**	**15**	*e*P	Pb	15 39 34.0	-0.7
	baz=26						
DPDB				*e*S	Sb	15 39 41.3	-0.2
	baz=26						
TWK	**Hsinying**	**0.46**	**220**	*e*P	Pb	15 39 35.3	0.0
	baz=217						
ELDTW	**Lidau**	**0.47**	**156**	S	Sg	15 39 40.6	+0.6
	baz=150						
EHY	**Hungye**	**0.49**	**104**	*e*P	Pb	15 39 36.1	+0.3
	baz=106						
EHY				S	Sb	15 39 42.2	-1.0
	baz=106						
CHN1	**Nanshi**	**0.51**	**211**	*e*P	Pb	15 39 35.5	-0.5
	baz=209						
CHN1				S	Sb	15 39 44.3	+0.6
	baz=209						
YULB	**Yu-li**	**0.51**	**117**	*e*P	Pg	15 39 35.0	+0.5
	baz=124						
YULB				*e*S	Sg	15 39 41.9	+0.9
	baz=124						

MAN 19 15:39:36.6, 6°.43N×125°.16E, h0^{km}, mb4.8, ML3.7, MS3.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKMP	**Bagumbayan, Su**	**0.62**	**278**	*e*P	Pg	15 39 48.8	+0.3
SKMP				*e*S	Sn	15 40 13.2	+10
DDMP	**Don Marcelino,**	**0.63**	**121**	*e*P	Pg	15 39 49.1	+0.3
DDMP				*e*S	Sn	15 40 17.8	+14
CTBH	**Cotabato--PC H**	**1.20**	**311**	⇑*i*P	Pg	15 39 59.6	-0.1

NIED ***19*** *16:39:00, 37°.50N×141°.60E, h47^{km}, Mw5.4 Best double couple: $M_0$1.41000×10^{17} NP1:ϕ_s187.00000°, δ19.00000°, λ76.00000°. NP2:ϕ_s22.00000°, δ71.00000°, λ95.00000°.*

BJI ***19*** *16:39:15.0±0.0, 37°.43N×141°.76E, h41^{km}, mb5.3/79, mB5.3/61, Ms5.0/95, Ms7 4.9/87*

MOS ***19*** *16:39:17.8±0.9, 37°.55N×141°.52E, h43^{km}, mb5.7/78, MS4.8/62, Error ellipse: s-maj=5.6km s-min=3.5km az=104.8*

NEIC ***19*** *16:39:18.6±2.1, 37°.50N×141°.63E, h40^{km}, mb5.4/152, MS4.8/266, MW5.5, Error ellipse: s-maj=13.0km s-min=8.6km az=123.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^{17}Nm; M_{rr}1.48; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-1.37; $M_{r\theta}$0.50; $M_{\theta\phi}$-0.16; $M_{\phi r}$1.16; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s179.00000°, δ25.00000°, λ73.00000°. NP2:ϕ_s17.00000°, δ66.00000°, λ98.00000°. Principal axes: T 1.9800, Plg68.0000°, Azm302.0000°; N -0.1400, Plg7.0000°, Azm194.0000°; P -1.8400, Plg20.0000°, Azm101.0000°;*

NEIC Felt [III] at Sendai and [II] at Tokyo. Also felt at Fukushima, Iwaki, Iwanuma, Koriyama, Mito, Morioka, Moka, Saitama, Shirakawa, Tsukuba and Yamagata. Recorded [3 JMA] in Fukushima and Miyagi. Broadband depth 40 km.

ISCJB ***19*** *16:39:19.0±0.2, 37°.52N±0°.02×141°.52E±0°.02, h52^{km}±1^{km}, mb5.4/211, MS4.8/320 Error ellipse: s-maj=3.0km s-min=2.0km az=138.7*

JMA ***19*** *16:39:19.0±0.1, 37°.51N×141°.57E, h45^{km}±1^{km}, M5.4*

JMA Felt III J1.

IDC ***19*** *16:39:20.7±1.3, 37°.52N×141°.50E, h56^{km}±11^{km}, mb4.8/34, mb1 4.9/42, mb1mx4.9/45, mbtmp5.1/42, MS4.7/40, Ms1 4.7/40, ms1mx4.6/47, Error ellipse: s-maj=10.8km s-min=7.4km az=127.0*

GCMT ***19*** *16:39:21.6±0.1, 37°.55N±0°.01×141°.63E±0°.01, h52^{km}, MW5.4/120, Moment Tensor Solution. s103,c187; s120,c249; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.34±.03; $M_{\theta\theta}$-0.08±.02; $M_{\phi\phi}$-1.26±.02; $M_{r\theta}$0.44±.02; $M_{\theta\phi}$-0.41±.01; $M_{\phi r}$0.92±.02; Best double couple: $M_0$1.70500×10^{17} NP1:ϕ_s23.00000°, δ63.00000°, λ95.00000°. NP2:ϕ_s192.00000°, δ27.00000°, λ81.00000°. Principal axes: T 1.6850, Plg71.0000°, Azm303.0000°; N 0.0420, Plg4.0000°, Azm200.0000°; P -1.7250, Plg18.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 16:39:19.2±0.3, 37°.56N±0°.03×141°.55E±0°.03, h44^{km}±2^{km}, h44^{km}:pP-P, n1249, σ1^{s}61/1173, mb5.4/248, MS4.8/336, 114C-68D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMST	**Minamisoumatoc**	**0.55**	**288**	⇓P	**Pn**	**16 39 30.9**	**+0.1**
JMST				S	**Sn**	**16 39 39.2**	**+0.2**
JFK	**Kawauchi**	**0.57**	**250**	⇓P	**Pn**	**16 39 30.9**	**-0.2**
JFK				S	**Sn**	**16 39 38.9**	**-0.6**
JMM	**Marumori**	**0.67**	**297**	⇓P	**Pn**	**16 39 32.9**	**+0.5**
JMM				S	**Sn**	**16 39 42.6**	**+0.8**
ONAJ	**Iwakimizuishiy**	**0.75**	**233**	⇓P	**Pn**	**16 39 33.0**	**-0.5**
ONAJ				S	**Sn**	**16 39 42.6**	**-1.2**
JIKH	**Ishinomakikobu**	**0.75**	**355**	⇓P	**Pn**	**16 39 34.0**	**+0.5**
JIKH				S	**Sn**	**16 39 44.1**	**+0.3**
JIO	**Ouri**	**0.91**	**350**	⇓P	**Pn**	**16 39 36.2**	**+0.6**
JIO				S	**Sn**	**16 39 47.7**	**+0.2**
JFFD	**Fukushimafurud**	**0.92**	**240**	⇓P	**Pn**	**16 39 35.4**	**-0.3**
JFFD				S	**Sn**	**16 39 46.9**	**-0.8**
JFT	**Otama**	**0.96**	**268**	⇓P	**Pn**	**16 39 37.2**	**+0.9**
JFT				S	**Sn**	**16 39 49.9**	**+1.0**
JOU	**Okura**	**1.07**	**319**	⇓P	**Pn**	**16 39 38.6**	**+0.9**
JOU				S	**Sn**	**16 39 53.4**	**+2.0**
JOFO	**Osakifurukawao**	**1.16**	**334**	⇓P	**Pn**	**16 39 40.1**	**+1.2**
JYAR	**Yonezawaarcadi**	**1.17**	**288**	⇓P	**Pn**	**16 39 39.7**	**+0.6**
JHO	**Hitachi**	**1.23**	**220**	⇓P	**Pn**	**16 39 38.8**	**-1.1**
JKMT	**Kesennumamotoy**	**1.25**	**357**	⇓P	**Pn**	**16 39 40.9**	**+0.7**
JYS	**Shirataka**	**1.35**	**300**	⇓P	**Pn**	**16 39 42.5**	**+0.9**
JYS				*e*S	**Sn**	**16 39 59.4**	**+1.1**
JMK	**Ichinoseki**	**1.42**	**350**	⇓P	**Pn**	**16 39 43.5**	**+1.0**
JMK				S	**Sn**	**16 40 01.6**	**+1.7**
JSB	**Shiboa**	**1.43**	**246**	⇓P	**Pn**	**16 39 43.3**	**+0.6**
JHYU	**Hitachinakayam**	**1.44**	**213**	⇓P	**Pn**	**16 39 41.6**	**-1.2**
JFY	**Yanaizu**	**1.47**	**265**	⇓P	**Pn**	**16 39 44.0**	**+0.7**
JFY				*e*S	**Sn**	**16 40 02.7**	**+1.3**
OFUJ	**Ofunato**	**1.52**	**4**	⇓P	**Pn**	**16 39 44.5**	**+0.5**
JYK	**Kaneyama**	**1.65**	**326**	⇓P	**Pn**	**16 39 46.9**	**+1.2**
JYA	**Atsumi**	**1.78**	**306**	⇓P	**Pn**	**16 39 48.7**	**+1.2**
JNS	**Sasagawa**	**1.79**	**279**	⇓P	**Pn**	**16 39 48.6**	**+1.0**
JOM	**Ohasama**	**1.92**	**354**	⇓P	**Pn**	**16 39 50.6**	**+1.2**
JYYZ	**Yamagatayuza**	**1.93**	**319**	⇓P	**Pn**	**16 39 51.5**	**+1.9**
JRG	**Rokugo**	**1.97**	**339**	⇓P	**Pn**	**16 39 51.9**	**+1.8**
JKT	**Katashina**	**2.00**	**247**	⇓P	**Pn**	**16 39 51.6**	**+1.0**
JAG	**Ashikaga**	**2.02**	**237**	⇓P	**Pn**	**16 39 50.9**	**+0.1**
JAW	**Awa shima**	**2.02**	**297**	⇓P	**Pn**	**16 39 51.8**	**+1.0**
MIYJ	**Miyakonagasawa**	**2.03**	**6**	⇓P	**Pn**	**16 39 51.3**	**+0.4**
JHK	**Hiroka**	**2.04**	**262**	⇓P	**Pn**	**16 39 51.8**	**+0.8**
JYW	**Yuwa**	**2.24**	**332**	⇓P	**Pn**	**16 39 55.8**	**+2.0**
JIZZ	**Izumozaki**	**2.26**	**270**	⇓P	**Pn**	**16 39 55.5**	**+1.5**
JTB	**Tobi-shima**	**2.26**	**317**	⇓P	**Pn**	**16 39 55.2**	**+1.1**
JKZ	**Kuzumaki**	**2.43**	**356**	⇓P	**Pn**	**16 39 57.7**	**+1.3**
JGK	**Kuni**	**2.53**	**248**	⇓P	**Pn**	**16 39 59.1**	**+1.3**
JRY	**Ryogami san**	**2.62**	**235**	⇓P	**Pn**	**16 39 59.2**	**+0.1**
JSD	**Sado**	**2.65**	**281**	⇓P	**Pn**	**16 39 59.8**	**+0.4**
JSGW	**Sagamiharawaka**	**2.71**	**225**	P	**Pn**	**16 39 59.6**	**-0.7**
JAH	**Hinai**	**2.72**	**345**	⇓P	**Pn**	**16 40 02.7**	**+2.3**
JJN	**Nakama**	**2.74**	**261**	⇓P	**Pn**	**16 40 01.9**	**+1.3**
MJAR	**Matsushiro Arr**	**2.86**	**250**	P	**Pn**	**16 40 03.1**	**+0.8**
	19nm,0.3s,baz=43,slow=11,SNR=560						
MJAR				S	**Sn**	**16 40 36.8**	**+1.3**
	27nm,0.3s,baz=82,slow=26,SNR=5.2						
MJAR				LR	LR	16 41 26.2	
	comp=Z,29μm,19.2s,baz=70,slow=45						
MAJO	**Matsushiro**	**2.86**	**250**	*e*Pn	**Pn**	**16 40 03.9**	**+1.5**
MAJO				*e*Sn	**Sn**	**16 40 36.8**	**+1.2**
MAJO	**Matsushiro**	**2.86**	**250**	*d i*P	**Pn**	**16 40 03.8**	**+1.5**
MAT	**Matsushiro**	**2.86**	**250**	P	**Pn**	**16 40 03.8**	**+1.5**
MAT				S	**Sn**	**16 40 38.4**	**+2.9**
MAT	**Matsushiro**	**2.86**	**250**	P	**Pn**	**16 40 03.8**	**+1.5**
MJB9	**Matsu-Tunnel**	**2.86**	**250**	*e*Pn	**Pn**	**16 40 03.8**	**+1.5**
JNG	**Nsakai**	**2.99**	**248**	⇓P	**Pn**	**16 40 05.5**	**+1.3**
JYN	**Shimob**	**3.17**	**231**	P	**Pn**	**16 40 07.3**	**+0.6**
JNT	**Takato**	**3.21**	**240**	⇓P	**Pn**	**16 40 08.8**	**+1.5**
JFNN	**Fujinakano**	**3.30**	**225**	P	**Pn**	**16 40 09.8**	**+1.4**
JGN	**Niukaw**	**3.65**	**250**	⇓P	**Pn**	**16 40 15.0**	**+1.8**
SHZ3	**Shizuoka 3**	**3.67**	**228**	P	**Pn**	**16 40 14.7**	**+1.2**
JHG	**Hegura jima**	**3.68**	**276**	P	**Pn**	**16 40 14.3**	**+0.7**
JNY	**Yasuok**	**3.69**	**235**	⇓P	**Pn**	**16 40 15.8**	**+1.9**
JGF	**Kuroka**	**3.90**	**241**	P	**Pn**	**16 40 18.4**	**+1.8**
JAO	**Obara**	**4.15**	**238**	⇓P	**Pn**	**16 40 22.0**	**+2.0**
INU	**Inuyama**	**4.27**	**240**	*e*Pn	**Pn**	**16 40 23.2**	**+1.6**
JYTA	**Yamagatataniai**	**4.34**	**245**	⇓P	**Pn**	**16 40 24.6**	**+1.9**
ERM	**Erimo**	**4.62**	**15**	*e*Pn	**Pn**	**16 40 26.9**	**+0.5**
ERM	**Erimo**	**4.62**	**15**	*ce*P	**Pn**	**16 40 28.4**	**+2.0**
ERM				pmax	pmax		
	comp=Z,150nm,1.3s						
JHJ2	**Mitsune**	**4.66**	**198**	*e*Pn	**Pn**	**16 40 26.5**	**-0.5**
JHJ	**Hachijo jima 2**	**4.66**	**199**	P	**Pn**	**16 40 26.9**	**-0.1**
	comp=Z,192nm,0.3s,baz=330,slow=21,SNR=40						
JHJ				S	**Sn**	**16 41 17.6**	**-2.2**
	comp=Z,454nm,0.3s,baz=60,slow=23,SNR=10						
JHJ				LR	LR	16 42 40.2	
	comp=Z,6μm,20.1s,baz=30,slow=43						
JFM	**Mihama**	**4.92**	**247**	P	**Pn**	**16 40 33.2**	**+2.6**
JIE	**Ise**	**5.04**	**233**	P	**Pn**	**16 40 33.6**	**+1.4**
JKN2	**Miekihoku**	**5.41**	**234**	P	**Pn**	**16 40 38.2**	**+0.8**
ASAJ	**Asahikawa**	**6.60**	**7**	P	**Pn**	**16 40 55.2**	**+1.6**
	comp=Z,9.9nm,0.3s,baz=224,slow=9.0,SNR=110						
ASAJ				S	**Sn**	**16 42 08.7**	**+1.1**
	comp=Z,17nm,0.3s,baz=74,slow=28,SNR=4.4						
GRPR	**Tuman**	**7.18**	**25**	*e*P	**Pn**	**16 41 02.3**	**+0.7**
GRPR				*i* S	**Sn**	**16 42 16.3**	**-5.5**
GRPR				pmax	pmax		
	comp=Z,228nm,0.3s						
GRPR				pmax	pmax		
	comp=E,130nm,0.2s						
GRPR				pmax	pmax		
	comp=N,140nm,0.3s						
LAGR	**Lagunnoye**	**7.24**	**25**	*c i*P	**Pn**	**16 41 03.5**	**+1.1**
LAGR				*i* S	**Sn**	**16 42 18.9**	**-4.3**
LAGR				pmax	pmax		
	comp=Z,335nm,0.3s						
LAGR				pmax	pmax		
	comp=N,86nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**7.25**	**25**	*c i*P	**Pn**	**16 41 02.3**	**-0.2**
YUK				*i* S	**Sn**	**16 42 18.3**	**-5.1**
YUK				pmax	pmax		
	comp=Z,180nm,0.2s						
YUK				pmax	pmax		
	comp=N,43nm,0.3s						
YUK				pmax	pmax		
	comp=E,45nm,0.3s						
TEY	**Ternei**	**8.34**	**335**	⇑*e*P	**Pn**	**16 41 21.1**	**+3.6**
TEY				*e*S	**Sn**	**16 42 53.5**	**+3.2**
TEY				pmax	pmax		
	comp=N,70nm,0.9s						
TEY				pmax	pmax		
	comp=E,50nm,0.9s						
TEY				pmax	pmax		
	comp=Z,70nm,1.0s						
TEY				pmax	pmax		
	comp=N,530nm,0.8s						
TEY				pmax	pmax		
	comp=E,330nm,0.8s						
TEY				pmax	pmax		
	comp=Z,490nm,0.9s						
TEY				MLR	MLR		
	comp=E,4μm,18.0s						
TEY				MLR	MLR		
	comp=N,4μm,16.0s						
TEY				MLR	MLR		
	comp=Z,8μm,18.0s						
KUR	**Kuril'sk**	**9.02**	**30**	*c i*P	**Pn**	**16 41 27.7**	**+1.0**
KUR				*e*S	**Sn**	**16 43 02.6**	**-4.2**
KUR				pmax	pmax		
	comp=Z,128nm,0.9s						
KUR				pmax	pmax		
	comp=N,54nm,0.3s						
KUR				pmax	pmax		
	comp=E,25nm,0.4s						
KUR				pmax	pmax		
	comp=Z,475nm,3.2s						
KUR				smax	smax		
	comp=E,358nm,0.8s						
KUR				smax	smax		
	comp=N,174nm,0.5s						
KUR				smax	smax		
	comp=Z,2μm,21.0s						
KUR				smax	smax		
	comp=N,3μm,16.0s						
KUR				smax	smax		
	comp=E,3μm,16.0s						
VLA	**Vladivostok**	**9.23**	**310**	*i* P	**Pn**	**16 41 32.2**	**+2.5**
YSS	**Yuzh-Sakhalins**	**9.43**	**5**	*e*Pn	**Pn**	**16 41 32.2**	**-0.2**
YSS	**Yuzh-Sakhalins**	**9.43**	**5**	⇑*i*P	**Pn**	**16 41 32.7**	**+0.3**
YSS				*e*S	**Sn**	**16 43 10.0**	**-7.0**
YSS				pmax	pmax		
	comp=Z,130nm,0.8s						
YSS				pmax	pmax		
	comp=N,110nm,0.7s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS				MLR	MLR		
	comp=N,2μm,17.0s						
JNU	**Nakatsue**	**9.77**	**246**	P	**Pn**	**16 41 38.5**	**+1.3**
	comp=N,2.3nm,0.3s,baz=56,slow=9.1,SNR=76						
JNU				S	Sn	16 43 35.6	+10
	comp=N,0.4nm,0.3s,baz=240,slow=11,SNR=1.2						
JNU				LR	LR	16 45 48.5	
	comp=N,9μm,20.0s,baz=59,slow=40						
JNU	**Nakatsue**	**9.77**	**246**	*e*Pn	**Pn**	**16 41 40.1**	**+2.9**
JNU				*e*Sn	Sn	16 43 35.6	+10
USA0B	**Ussuriysk Arra**	**9.81**	**316**	*e*Pn	**Pn**	**16 41 39.9**	**+2.2**
USRK	**Ussuriysk Ar.**	**9.81**	**316**	P	**Pn**	**16 41 39.6**	**+1.9**
	comp=N,3.4nm,0.3s,baz=127,slow=13,SNR=80						
USRK				S	Sn	16 43 40.0	+14
	baz=139,slow=22,SNR=3.5						
USRK				LR	LR	16 45 14.1	
	comp=N,9μm,18.9s,baz=126,slow=36						
KSRS	**Korea Array**	**10.83**	**274**	P	**Pn**	**16 41 52.8**	**+1.3**
	comp=N,2.7nm,0.3s,baz=89,slow=13,SNR=117						
KSRS				LR	LR	16 45 56.1	
	comp=N,6μm,18.9s,baz=72,slow=36						
KS15	**Wonju Array Si**	**10.86**	**274**	*e*Pn	**Pn**	**16 41 55.2**	**+3.3**
TJN	**Taejon**	**11.41**	**268**	*i* P	**Pn**	**16 42 02.1**	**+2.6**
MDJ	**Mudanjiang**	**11.44**	**312**	*e*Pn	**Pn**	**16 42 02.1**	**+2.2**
MDJ				*e*		16 42 04.9	
MDJ	**Mudanjiang**	**11.44**	**312**	P	Pn	16 42 05.8	+5.9
MDJ				S	Sn	16 44 16.0	+10
MDJ				pmax	pmax		
	comp=N,26nm,0.7s						
MDJ				LR	LR		
	comp=N,4μm,18.5s						
MDJ				LR	LR		
	comp=N,5μm,17.4s						
MDJ				LR	LR		
	comp=N,9μm,17.4s						
UGL	**Uglegorsk**	**11.52**	**2**	*e*P	**Pn**	**16 41 58.8**	**-2.1**
UGL				pmax	pmax		
	comp=Z,98nm,1.0s						
UGL				MLR	MLR		
	comp=Z,2μm,16.0s						
UGL				MLR	MLR		
	comp=E,2μm,15.0s						
TYV	**Tymovskoe**	**13.32**	**3**	*e*P	**Pn**	**16 42 26.1**	**+0.5**
TYV				*e*		16 45 03.2	
TYV				pmax	pmax		
	comp=Z,33nm,1.9s						
TYV				MLR	MLR		
	comp=Z,2μm,18.0s						
KLR	**Kul'dur**	**13.65**	**332**	P	**Pn**	**16 42 31.2**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=131,slow=13,SNR=13						
KLR				LR	LR	16 47 47.7	
	comp=Z,5μm,18.2s,baz=145,slow=37						
KLR	**Kul'dur**	**13.65**	**332**	*d i*P	**Pn**	**16 42 30.4**	**+0.3**
KLR				pmax	pmax		
	comp=Z,105nm,0.9s						
GRNR	**Gornyy**	**13.70**	**346**	*e*P	**Pn**	**16 42 30.3**	**-0.5**
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
CN2	**Changchun**	**13.71**	**302**	*e*P	**Pn**	**16 42 33.5**	**+2.6**
CN2				*e*pP	P	16 42 41.0	+2.5
CN2				*e*S	**Sn**	**16 45 04.4**	**+2.8**
CN2				SS	**S**	**16 45 19.3**	**-3.3**
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1μm,6.0s						
CN2				LR	LR		
	comp=Z,2μm,17.0s						
CN2				LR	LR		
	comp=Z,4μm,17.0s						
CN2				LR	LR		
	comp=Z,4μm,19.0s						
SNY	**Shenyang**	**14.47**	**293**	⇓P	**P**	**16 42 44.0**	**-3.0**
SNY				pmax	pmax		
	comp=Z,30nm,0.7s						
SNY				pmax	pmax		
	comp=Z,700nm,3.8s						
SNY				LR	LR		
	comp=Z,4μm,14.9s						
SNY				LR	LR		
	comp=Z,7μm,20.3s						
SNY				LR	LR		
	comp=Z,12μm,17.4s						
JOW	**Kunigami**	**15.49**	**230**	P	**Pn**	**16 42 54.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=96,slow=17,SNR=21						
JOW	**Kunigami**	**15.49**	**230**	*e*P	**P**	**16 42 59.8**	**+1.3**
	comp=Z,61nm,0.9s						
JOW	**Kunigami**	**15.49**	**230**	P	**Pn**	**16 42 54.2**	**-0.5**
JIH	**Iheya**	**15.54**	**231**	P	**P**	**16 42 57.2**	**-1.7**
NKL	**Nikolayevsk**	**15.60**	**358**	*e*P	**Pn**	**16 42 54.8**	**-1.1**
DL2	**Dalian**	**15.71**	**281**	P	**Pn**	**16 42 58.6**	**+1.2**
DL2				sP	**sP**	**16 43 15.1**	**-1.8**
DL2				S	**Sn**	**16 45 53.3**	**+2.9**
DL2				sS	**S**	**16 46 05.0**	**+1.4**
DL2				pmax	pmax		
	comp=Z,230nm,1.2s						
DL2				pmax	pmax		
	comp=Z,650nm,5.3s						
DL2				LR	LR		
	comp=Z,640nm,16.6s						
DL2				LR	LR		
	comp=Z,3μm,19.8s						
DL2				LR	LR		
	comp=Z,4μm,20.8s						
OKH	**Okha**	**16.02**	**3**	*de*P	**P**	**16 43 02.9**	**-1.2**
OKH				*e*S	**Sn**	**16 45 54.7**	**-3.0**
OKH				pmax	pmax		
	comp=Z,200nm,20.2s						
OKH				smax	smax		
	comp=E,300nm,21.3s						
OKH				MLR	MLR		
	comp=Z,2μm,21.0s						
SKR	**Severo-Kuril's**	**16.74**	**34**	*e*P	**Pn**	**16 43 09.0**	**-1.3**
SKR				*e*S	**Sn**	**16 46 14.8**	**-0.2**
SKR				pmax	pmax		
	comp=Z,200nm,3.0s						
SKR				pmax	pmax		
	comp=Z,110nm,1.0s						
SKR				MLR	MLR		
	comp=Z,2μm,19.0s						
SKR				MLR	MLR		
	comp=Z,2μm,19.0s						
SSE	**Sheshan**	**18.00**	**255**	P	**P**	**16 43 26.8**	**+0.7**
SSE				S	**Sn**	**16 46 45.3**	**-0.5**
SSE				pmax	pmax		
	comp=Z,25nm,0.8s						
SSE				pmax	pmax		
	comp=Z,340nm,10.0s						
SSE				LR	LR		
	comp=Z,1μm,21.3s						
SSE				LR	LR		
	comp=Z,1μm,17.0s						
ZEA	**Zeya**	**18.96**	**333**	*e*P	**P**	**16 43 34.5**	**-2.0**
ZEA				*e*S	**Sn**	**16 46 59.0**	**-10**
ZEA				pmax	pmax		
	comp=N,94nm,0.8s						
ZEA				pmax	pmax		
	comp=E,62nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,500nm,7.0s						
ZEA				smax	smax		
	comp=E,400nm,7.0s						
ZEA				MLR	MLR		
	comp=N,2μm,16.0s						
ZEA				MLR	MLR		
	comp=E,2μm,16.0s						
ZEA				MLR	MLR		
	comp=Z,4μm,16.0s						
PEA0B	**Petropavlovsk-**	**19.18**	**31**	*e*Pn	**Pn**	**16 43 40.3**	**+0.1**
	comp=Z,53nm,1.0s						
PETK	**Petropavlovsk-**	**19.18**	**31**	P	**Pn**	**16 43 40.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=196,slow=7.5,SNR=16						
PETK				LR	LR	16 50 47.9	
	comp=Z,1μm,21.6s,baz=220,slow=36						
PEA1	**Petropavlovsk-**	**19.18**	**31**	*e*P	**Pn**	**16 43 40.4**	**+0.1**
NJ2	**Nanjing**	**19.41**	**260**	*e*P	**P**	**16 43 40.9**	**-0.7**
NJ2				pP	**pP**	**16 43 49.6**	**-2.6**
NJ2				sP	**sP**	**16 43 53.0**	**-4.7**
NJ2				S	**S**	**16 47 16.1**	**-2.6**
NJ2				sS	**sS**	**16 47 29.8**	**-5.8**
NJ2				pmax	pmax		
	comp=Z,44nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,460nm,3.9s						
NJ2				LR	LR		

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      comp=Z,2µm,22.1s
NJ2                                 LR     LR
      comp=Z,2µm,20.1s
NJ2                                 LR     LR
      comp=Z,3µm,18.1s
PET   Petropavlovsk     19.52  32  ePn     Pn     16 43 44.5 +0.4
      comp=Z,45nm,1.0s
PET   Petropavlovsk     19.52  32  eP      Pn     16 43 44.8 +0.7
PET                                eS      S      16 47 18.5  -2.0
PET                                 pmax   pmax
      comp=Z,200nm,6.7s
PET                                 pmax   pmax
      comp=Z,53nm,1.1s
PET                                 MLR    MLR
      comp=Z,2µm,20.0s
PET                                 MLR    MLR
      comp=Z,2µm,21.0s
TIA   Tai'an            19.57 274   P      P      16 43 42.1  -1.3
TIA                                 S      S      16 47 14.5  -7.5
TIA                                 pmax   pmax
      comp=Z,13nm,0.9s
TIA                                 LR     LR
      comp=Z,2µm,16.2s
TIA                                 LR     LR
      comp=Z,2µm,15.7s
TIA                                 LR     LR
      comp=Z,3µm,18.1s
JISG  Ishigakijimahi    19.59 234   P      P      16 43 39.9  -3.7
HIA   Hailar            19.62 314  eP      P      16 43 43.5  -0.3
      comp=Z,49nm,1.1s
HIA   Hailar            19.62 314  eP      P      16 43 43.5  -0.3
HIA                                 pmax   pmax
      comp=Z,49nm,1.1s
JIJ   Ishigaki jima     19.85 233   P      P      16 43 43.6  -2.9
BJI   Beijing           19.91 285   P      P      16 43 45.3  -1.7
BJI                                 S      S      16 47 22.8  -5.9
BJI                                 pmax   pmax
      comp=Z,69nm,0.8s
BJI                                 LR     LR
      comp=Z,670nm,16.7s
BJI                                 LR     LR
      comp=Z,600nm,22.6s
BJI                                 LR     LR
      comp=Z,1µm,34.3s
BJT   Baijiatuau        19.92 285  eP      P      16 43 46.7  -0.4
      comp=Z,107nm,0.8s
BJT   Baijiatuau        19.92 285  eP      P      16 43 46.7  -0.4
BJT                                 pmax   pmax
      comp=Z,107nm,0.8s
YOJ   Yonaguni jima     20.52 236   PFAKE         16 44 10.0  +14
YOJ                                 LR     LR
      comp=Z,1µm,21.0s
TATO  Taipei            21.19 239  eP      P      16 43 58.5  -2.5
      comp=Z,88nm,0.9s
TATO                                LR     LR
      comp=Z,1µm,20.0s
YHNB  Yeheng            21.47 239  eP      P      16 44 01.4  -2.7
      comp=Z,53nm,0.8s
YHNB                                LR     LR
      comp=Z,600nm,20.0s
NACB  Ninganchiao       21.65 238  eP      P      16 44 02.2  -3.7
      comp=Z,36nm,0.9s
NACB                                LR     LR
      comp=Z,800nm,22.0s
SSLB  Suanglung         22.34 238   PFAKE         16 44 20.0 +6.6
SSLB                                LR     LR
      comp=Z,1µm,21.0s
YULB  Yu-li             22.38 237  eP      P      16 44 11.3  -2.5
      comp=Z,47nm,1.0s
YULB                                LR     LR
      comp=Z,600nm,20.0s
MA2   Magadan           22.82  12   P      P      16 44 18.6 +0.6
      comp=Z,37nm,0.8s,baz=186,slow=9.2,SNR=14
MA2                                 LR     LR     16 52 57.0
      comp=Z,863nm,21.8s,baz=200,slow=36
MA2   Magadan           22.82  12  eP      P      16 44 17.4  -0.7
      comp=Z,46nm,0.8s
MA2   Magadan           22.82  12c iP      P      16 44 19.0 +0.9
MA2                                 pmax   pmax
      comp=Z,68nm,1.3s
TPUB  Ta-pu             22.89 238   PFAKE         16 44 30.0  +11
TPUB                                LR     LR
      comp=Z,2µm,20.0s
TWG   Pinlang           22.93 236  eP      P      16 44 17.3  -2.2
      comp=Z,624nm,1.1s
TIY   Taiyuan           23.02 279  eP      P      16 44 18.1  -2.4
TIY                                 PP     PnPn   16 44 48.8 +2.3
TIY                                 S      S      16 48 24.5  -3.4
TIY                                 SS     SnSn   16 49 13.8  +11
TIY                                 pmax   pmax
      comp=Z,120nm,0.8s
TIY                                 LR     LR
      comp=Z,2µm,20.3s
TIY                                 LR     LR
      comp=Z,2µm,13.9s
TIY                                 LR     LR
      comp=Z,3µm,17.1s
QZH   Quanzhou          23.24 244   P      P      16 44 22.8 +0.2
QZH                                 S      S      16 48 29.3  -2.2
QZH                                 LR     LR
      comp=Z,1µm,19.3s
QZH                                 LR     LR
      comp=Z,1µm,21.2s
QZH                                 LR     LR
      comp=Z,2µm,20.7s
HHC   Hu-ho-hao-te      23.41 287  eP      P      16 44 23.3  -1.0
HHC                                 S      S      16 48 31.0  -3.4
HHC                                 pmax   pmax
      comp=Z,12nm,0.6s
HHC                                 LR     LR
      comp=Z,2µm,11.3s
HHC                                 LR     LR
      comp=Z,2µm,13.5s
WHN   Wuhan             23.55 261⇓iP      P      16 44 25.8 +0.3
WHN                                 S      S      16 48 35.1  -1.3
WHN                                 pmax   pmax
      comp=Z,220nm,0.7s
WHN                                 pmax   pmax
      comp=Z,750nm,7.5s
WHN                                 LR     LR
      comp=Z,2µm,12.4s
WHN                                 LR     LR
      comp=Z,4µm,13.4s
WHN                                 LR     LR
      comp=Z,6µm,18.2s
KNMB  Chin-men Tao      23.68 243   PFAKE         16 44 40.0  +13
KNMB                                LR     LR
      comp=Z,2µm,21.0s
GUMO  Guam              24.05 172   P      P      16 44 30.7 +0.4
      comp=Z,19nm,0.6s,baz=317,slow=21,SNR=1.8
CIT   Chita             24.38 315  eP      P      16 44 25.8  -7.3
CIT                                e              16 44 43.2
CIT                                e              16 45 19.4
CIT                                 pmax   pmax
      comp=Z,517nm,1.1s
BTO   Baotou            24.59 287  eP      P      16 44 35.3 +0.1
YAK   Yakutsk           25.58 347  eP      P      16 44 42.9  -0.9
      comp=Z,403nm,0.8s
YAK   Yakutsk           25.58 347  eP      P      16 44 43.0  -0.9
YAK                                e*PP    pP     16 44 56.9 +1.5
YAK                                eS      S      16 49 07.3  -1.1
YAK                                 pmax   pmax
      comp=Z,486nm,0.9s
YAK                                 pmax   pmax
      comp=N,102nm,0.9s
YAK                                 pmax   pmax
      comp=E,63nm,1.3s
YAK                                 pmax   pmax
      comp=Z,156nm,0.9s
YAK                                 pmax   pmax
      comp=N,164nm,1.4s
YAK                                 pmax   pmax
      comp=E,114nm,1.5s
YAK                                 smax   smax
      comp=N,685nm,2.0s
YAK                                 smax   smax
      comp=E,130nm,2.1s
YAK                                 MLR    MLR
      comp=Z,3µm,23.0s
YAK                                 MLR    MLR
      comp=N,3µm,25.0s
YAK                                 MLR    MLR
      comp=E,840nm,21.0s
SEY   Seymchan          26.26  11   P      P      16 44 51.2 +1.3
      comp=E,86nm,1.1s,baz=202,slow=8.0,SNR=57
SEY   Seymchan          26.26  11c iP      P      16 44 52.1 +2.2
APYP  Conner            26.51 228  eP      P      16 44 49.9  -2.7
XAN   Xi'an             26.62 272  eP      P      16 44 52.7  -0.9
      comp=E,126nm,0.7s
XAN                                 LR     LR
      comp=Z,2µm,19.0s
XAN   Xi'an             26.62 272   P      P      16 44 52.3  -1.3
XAN                                 pP     pP     16 45 05.5 +0.2
XAN                                 sP     sP     16 45 13.8 +3.2
XAN                                 PP     PnPn   16 45 37.3 +1.6
XAN                                 S      S      16 49 19.3  -6.2
XAN                                 sS     sS     16 49 43.3  -1.8
XAN                                 pmax   pmax
      comp=Z,72nm,1.0s
XAN                                 pmax   pmax
      comp=Z,470nm,4.7s
XAN                                 LR     LR
      comp=Z,930nm,17.3s
XAN                                 LR     LR
      comp=Z,1µm,15.4s
XAN                                 LR     LR
      comp=Z,2µm,19.4s
XAN   Xi'an             26.62 272  eP      P      16 44 52.7  -0.9
XAN                                 pmax   pmax
      comp=Z,126nm,0.7s
XAN                                 MLR    MLR
      comp=Z,2µm,19.0s
BOD   Bodaibo           27.14 327  eP      P      16 44 58.1 +0.1
BOD                                 pmax   pmax
      comp=Z,121nm,0.9s
ULN   Ulaanbaatar       27.15 303  eP      P      16 44 58.0  -0.4
      comp=Z,44nm,0.8s
ULN                                 LR     LR
      comp=Z,2µm,18.0s
ULN   Ulaanbaatar       27.15 303c iP      P      16 44 58.1  -0.3
ULN                                 pmax   pmax
      comp=Z,77nm,1.3s
ULN   Ulaanbaatar       27.15 303   P      P      16 44 58.6 +0.3
      SNR=32
SMY   Shemya            27.22  46   PFAKE         16 45 10.0  +11
SMY                                 LR     LR
      comp=Z,800nm,21.0s
ENH   Enshi             27.49 264  eP      P      16 45 00.6  -0.8
      comp=Z,342nm,0.8s
ENH                                 LR     LR
      comp=Z,2µm,22.0s
SONA0 Songino Array     27.59 303  eP      P      16 45 02.3 +0.1
SONM  Songino Array     27.59 303   P      P      16 45 02.3 +0.1
      comp=Z,76nm,0.9s,baz=98,slow=8.4,SNR=119
SONM                                LR     LR     16 56 16.8
      comp=Z,1µm,19.3s,baz=98,slow=37
BALP  Baler             28.00 224  eP      P      16 45 03.4  -2.6
HKPS  Hong Kong Po S    28.08 245   PFAKE         16 45 20.0  +13
HKPS                                LR     LR
      comp=Z,2µm,20.0s
GZH   Guangzhou         28.16 247   P      P      16 45 03.6  -3.8
GZH                                 S      S      16 49 40.4  -9.4
GZH                                 LR     LR
      comp=Z,2µm,15.1s
GZH                                 LR     LR
      comp=Z,2µm,15.5s
SMPP  San Manuel, Pa    28.18 226  eP      P      16 45 04.7  -3.0
H11N2 WAKE ISLAND Hy    28.33 122   T      T      17 15 21.9
      baz=315,slow=75,SNR=1612
H11N1 WAKE ISLAND Hy    28.34 122   T      T      17 15 31.4
      baz=315,slow=75,SNR=1172
H11N3 WAKE ISLAND Hy    28.35 122   T      T      17 15 32.1
      baz=315,slow=75,SNR=1279
PVCP  Virac             28.46 218  eP      P      16 45 08.5  -1.6
WAKE  Wake Island       28.48 123   PFAKE         16 45 20.0  +10
WAKE                                LR     LR
      comp=Z,2µm,22.0s
H11S1 WAKE ISLAND Hy    29.06 124   T      T      17 16 25.1
      baz=317,slow=75,SNR=1267
H11S3 WAKE ISLAND Hy    29.06 124   T      T      17 16 16.5
      baz=317,slow=75,SNR=1822
H11S2 WAKE ISLAND Hy    29.07 124   T      T      17 16 17.1
      baz=317,slow=75,SNR=980
TGY   Tagaytay City     29.70 224   P      P      16 45 21.0  -0.1
      comp=Z,119nm,0.4s,baz=192,slow=2.0,SNR=10
TGY   Tagaytay City     29.70 224   P      P      16 45 21.0  -0.1
TGY                                 pmax   pmax
      comp=Z,119nm,0.4s
IRK   Irkutsk           29.83 312  eP      P      16 45 21.3  -0.7
IRK                                 pmax   pmax
      comp=Z,61nm,1.8s
ZAK   Zakamensk         30.03 308  eP      P      16 45 23.9   0.0
ZAK                                 pmax   pmax
      comp=Z,47nm,1.2s
LZH   Lanzhou           30.09 279  eP      P      16 45 24.3  -0.3
LZH                                 pP     pP     16 45 34.4  -2.0
LZH                                 sP     sP     16 45 38.1  -3.6
LZH                                 PP     PnPn   16 46 25.9 +3.1
LZH                                eS      S      16 50 16.0  -4.3
LZH                                 pmax   pmax
      comp=Z,74nm,1.0s
LZH                                 pmax   pmax
      comp=Z,470nm,5.1s
LZH                                 LR     LR
      comp=Z,1µm,16.3s
LZH                                 LR     LR
      comp=Z,3µm,17.4s
LZH                                 LR     LR
      comp=Z,4µm,18.4s
MSLP  Maasin            31.17 213  eP      P      16 45 34.1   0.0
GYA   Guiyang           31.42 260⇑iP      P      16 45 35.5  -0.9
GYA                                 sP     pP     16 45 49.0 +0.8
GYA                                 PP     PP     16 46 44.0  -3.8
GYA                                 S      S      16 50 30.4   -11
GYA                                 pmax   pmax
      comp=Z,50nm,0.9s
GYA                                 pmax   pmax
      comp=Z,220nm,4.4s
GYA                                 LR     LR
      comp=Z,1µm,18.3s
GYA                                 LR     LR
      comp=Z,1µm,24.3s
GYA                                 LR     LR
      comp=Z,2µm,24.9s
MOY   Mondy             31.68 310  eP      P      16 45 38.2  -0.3
MOY                                 pmax   pmax
      comp=Z,62nm,1.4s
GUIM  Jordan            31.78 217  eP      P      16 45 38.1  -1.3
CD2   Chengdu           31.78 269   P      P      16 45 38.4  -1.1
CD2                                 sP     sP     16 45 56.5   0.0
CD2                                 PP     PP     16 46 50.9  -0.8
CD2                                 S      S      16 50 42.0  -4.6
CD2                                 sS     sS     16 51 04.0  -2.4
CD2                                 pmax   pmax
      comp=Z,20nm,0.5s
CD2                                 pmax   pmax
      comp=Z,200nm,5.3s
CD2                                 LR     LR
      comp=Z,3µm,16.1s
CD2                                 LR     LR
      comp=Z,3µm,17.3s
CD2                                 LR     LR
      comp=Z,3µm,16.5s
BUSP  Coron             31.83 222  eP      P      16 45 38.4  -1.5
ADK   Adak              32.47  50   PFAKE         16 46 00.0  +15
ADK                                 LR     LR
      comp=Z,1µm,21.0s
GTA   Gaotai            32.51 286  eP      P      16 45 45.4  -0.5
GTA                                 pP     pP     16 45 54.9  -2.8
GTA                                 sP     sP     16 45 58.6  -4.4
GTA                                 PcP    PcP    16 48 33.3 +1.4
GTA                                 S      S      16 51 00.3 +2.2
GTA                                 sS     sS     16 51 15.1  -2.7
GTA                                 pmax   pmax
      comp=Z,21nm,0.8s
GTA                                 pmax   pmax
      comp=Z,350nm,6.2s
GTA                                 LR     LR
      comp=Z,1µm,18.9s
GTA                                 LR     LR
      comp=Z,2µm,21.0s
GTA                                 LR     LR
      comp=Z,3µm,22.0s
QIZ   Qiongzhong        33.24 245   PFAKE         16 46 00.0 +7.7
QIZ                                 LR     LR
      comp=Z,1µm,20.0s
QIZ   Qiongzhong        33.24 245   P      P      16 45 53.0 +0.7
QIZ                                 S      S      16 51 10.1 +0.7
QIZ                                 sS     sS     16 51 25.3  -3.9
QIZ                                 pmax   pmax
      comp=Z,58nm,1.1s
QIZ                                 pmax   pmax
      comp=Z,280nm,5.5s
QIZ                                 LR     LR
      comp=Z,1µm,15.7s
QIZ                                 LR     LR
      comp=Z,960nm,23.5s
QIZ                                 LR     LR
      comp=Z,1µm,19.6s
BILL  Bilibino          33.49  17  eP      P      16 45 54.4 +0.4
      comp=Z,18nm,1.0s
BILL  Bilibino          33.49  17c iP      P      16 45 53.9   0.0
BILL                               i *PP   pP     16 46 07.5 +1.8
BILL                               e*SP    sP     16 46 14.6 +3.6
BILL                               i              16 47 10.5
BILL                               i              16 48 35.9
BILL                               eS      S      16 51 10.6  -1.8
BILL                                SS     SS     16 53 22.7   -15
BILL                                SSS    SSS    16 53 41.0
BILL                                pmax   pmax
      comp=Z,25nm,1.3s
BILL                                MLR    MLR
      comp=Z,697nm,19.0s
DAV   Davao City (W)    33.64 210   LR     LR     17 01 07.5
      comp=Z,543nm,18.4s,baz=62,slow=39
DAV   Davao City (W)    33.64 210   PFAKE         16 46 10.0  +14
DAV                                 LR     LR
      comp=Z,1µm,21.0s
KCP   Kidapawan         33.89 210⇓iP      P      16 45 59.5 +1.5
CTBH  Cotabato--PC H    34.05 212⇑iP      P      16 45 59.7 +0.5
TIXI  Tiksi             34.78 353   P      P      16 46 04.8  -0.3
      comp=Z,26nm,0.9s,baz=144,slow=9.7,SNR=33
TIXI  Tiksi             34.78 353  eP      P      16 46 04.8  -0.3
      comp=Z,24nm,0.9s
TIXI                                LR     LR
      comp=Z,1µm,20.0s
TIXI  Tiksi             34.78 353c iP      P      16 46 04.7  -0.3
TIXI                                pmax   pmax
      comp=Z,70nm,1.7s
KMI   Kunming           35.15 261  eP      P      16 46 08.5  -0.6
      comp=Z,232nm,0.9s
KMI                                 LR     LR
      comp=Z,2µm,21.0s
KMI   Kunming           35.15 261   P      P      16 46 08.4  -0.6
KMI                                 pP     pP     16 46 20.8  -0.1
KMI                                 sP     sP     16 46 26.3 +0.2
KMI                                 PP     PP     16 47 29.8 +0.5
KMI                                 S      S      16 51 35.4  -3.8
KMI                                 sS     sS     16 51 59.8 +0.8
KMI                                 SS     SnSn   16 53 52.8  -5.9
KMI                                 pmax   pmax
      comp=Z,250nm,1.0s
KMI                                 pmax   pmax
      comp=Z,450nm,5.5s
KMI                                 LR     LR
      comp=Z,1µm,19.1s
KMI                                 LR     LR
      comp=Z,1µm,24.3s
KMI                                 LR     LR
      comp=Z,2µm,24.7s
KMI   Kunming           35.15 261  eP      P      16 46 08.5  -0.6
KMI                                 pmax   pmax
      comp=Z,232nm,0.9s
KMI                                 MLR    MLR
      comp=Z,2µm,21.0s
MIDW  Midway            35.50  93   PFAKE         16 46 20.0 +8.3
MIDW                                LR     LR
      comp=Z,2µm,21.0s
SLVN  Son La            36.27 254  eP      P      16 46 18.3  -0.2
      comp=Z,42nm,0.9s
SLVN                                LR     LR
      comp=Z,1µm,20.0s
KWAJ  Kwajalein Atol    37.07 134   PFAKE         16 46 40.0  +15
KWAJ                                LR     LR
      comp=Z,2µm,21.0s
NIKH  Nikolski High     37.35  49   PFAKE         16 46 40.0  +13
NIKH                                LR     LR
      comp=Z,1µm,21.0s
GAMB  Gambell           38.21  32   PFAKE         16 46 50.0  +16
GAMB                                LR     LR
      comp=Z,300nm,21.0s
PANO  Nakornpanom       38.26 248   P      P      16 46 36.2 +0.9
      comp=Z,1.6nm,0.9s
NONG  Nongkai           38.78 251   P      P      16 46 40.2 +0.6
      comp=Z,3.3nm,1.0s,comp=Z,120nm
UNV   Unalaska Valle    38.81  48   PFAKE         16 46 50.0  +11
UNV                                 LR     LR
      comp=Z,500nm,20.0s
KKM   Kota Kinabalu     38.94 223   PFAKE         16 46 50.0 +8.9
KKM                                 LR     LR
      comp=Z,800nm,20.0s
DLV   T  Lat            39.05 238   PFAKE         16 46 50.0 +7.9
DLV                                 LR     LR
      comp=Z,900nm,21.0s
SIJI  Sorong            39.40 196   LR     LR     17 00 56.4
      comp=Z,782nm,21.4s,baz=18,slow=33
DGZ   Jazzator, Alta    40.17 305c iP      P      16 46 52.5 +1.4
DGZ                                 pmax   pmax
      comp=Z,282nm,1.0s
PAYA  Payao             40.50 255   P      P      16 46 55.0 +1.0
      comp=Z,44µm,0.9s,comp=Z,382µm
WMQ   Urumqi            40.70 296  eP      P      16 46 55.5 +0.1
      comp=Z,119nm,0.9s
WMQ                                 LR     LR
      comp=Z,2µm,20.0s
WMQ   Urumqi            40.70 296  eP      P      16 46 57.0 +1.5
WMQ                                 pP     pP     16 47 06.8  -0.7
WMQ                                 sP     sP     16 47 13.8 +1.1
WMQ                                 PcS    PcS    16 52 47.4 +0.3
WMQ                                 S      S      16 53 03.0 +0.4
WMQ                                 sS     sS     16 53 20.6  -2.1
WMQ                                 pmax   pmax
      comp=Z,58nm,1.3s
WMQ                                 pmax   pmax
      comp=Z,490nm,3.6s
WMQ                                 LR     LR
      comp=Z,970nm,21.9s
WMQ                                 LR     LR
      comp=Z,760nm,21.9s
WMQ                                 LR     LR
      comp=Z,2µm,29.7s
WMQ   Urumqi            40.70 296  eP      P      16 46 55.5 +0.1
WMQ                                 pmax   pmax
      comp=Z,119nm,0.9s
WMQ                                 MLR    MLR
      comp=Z,2µm,20.0s
PHRA  Phrae             40.73 254   P      P      16 46 56.3 +0.5
      comp=Z,6.8nm,1.2s,comp=Z,236nm
UTTA  Uttaradit         40.93 253   P      P      16 46 57.6 +0.1
      comp=Z,71µm,1.0s,comp=Z,540µm
CHAI  Chaiyaphum        40.99 249   P      P      16 46 58.1 +0.1
      comp=Z,138µm,1.1s
ZIRO  ZIRO              41.06 270  eP      P      16 46 59.0 +0.3
MOKO  MOKOCHONG         41.08 268  eP      P      16 46 59.2 +0.4
JORH  JORHAT            41.09 269  eP      P      16 47 00.0 +1.2
LAMP  Lampang           41.17 254   P      P      16 47 01.6 +2.1
      comp=Z,78µm,0.8s,comp=Z,697µm
PBKT  Sadao Pong        41.33 251   P      P      16 47 01.1 +0.3
      comp=Z,34nm,1.0s
CMMT  Chiang Mai        41.52 255   P      P      16 47 02.5 +0.1
      comp=Z,16nm,1.0s
CHTO  Chiang Mai        41.53 255  eP      P      16 47 02.1  -0.3
      comp=Z,24nm,0.9s
CHTO                                LR     LR
      comp=Z,1µm,21.0s
CHTO  Chiang Mai        41.53 255  eP      P      16 47 02.1  -0.3
CHTO                                pmax   pmax
      comp=Z,24nm,0.9s
CHTO                                MLR    MLR
      comp=Z,1µm,21.0s
CHTO  Chiang Mai        41.53 255   P      P      16 47 02.5 +0.1
      SNR=6.6
CHTO                                P      P      16 47 02.5 +0.1
      SNR=6.6
ZAA0  Zalesovo Array    41.64 312  eP      P      16 47 02.8  -0.2
      comp=Z,187nm,1.0s
ZAA0                                LR     LR
      comp=Z,2µm,18.0s
ZAA1  Zalesovo Array    41.64 312  ePcP    PcP    16 48 57.5  -1.6
ZAA1                               eScP    ScP    16 52 44.4  -1.2
ZALV  Zalesovo Beam     41.64 312   P      P      16 47 03.0 +0.1
      comp=Z,156nm,0.9s,baz=89,slow=7.1,SNR=242
ZALV                                PcP    PcP    16 48 57.5  -1.6
      comp=Z,21nm,0.8s,baz=90,slow=3.0,SNR=4.9
ZALV                                ScP    ScP    16 52 44.4  -1.2
      comp=Z,3.1nm,0.8s,baz=49,slow=4.5,SNR=3.7
ZALV                                LR     LR     17 05 04.3
      comp=Z,2µm,18.2s,baz=71,slow=37
ZALV  Zalesovo Beam     41.64 312   P      P      16 47 03.1 +0.1
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ZALV						16 48 57.5	
ZALV				pmax	pmax		
	comp=Z,156nm,0.9s						
ZALV				pmax	pmax		
	comp=Z,21nm,0.8s						
ZALV				pmax	pmax		
	comp=N,3.0nm,0.8s						
ZALV				MLR	MLR		
	comp=Z,2µm,18.2s						
KOHI	**KOHIMA**	**41.68**	**268**	*e*P	**P**	**16 47 02.2**	**-1.6**
CM31	**Chiang Mai Arr**	**41.73**	**255**	*e*P	**P**	**16 47 04.2**	**0.0**
	comp=Z,20nm,1.0s						
CM31				*e*PcP	**PcP**	**16 48 58.6**	**-1.4**
CM31				*e*ScP	**ScP**	**16 52 45.5**	**-1.1**
CM31	**Chiang Mai Arr**	**41.73**	**255**	P	**P**	**16 47 05.0**	**+0.9**
	SNR=5.6						
CMAR	**Chiang Mai Arr**	**41.73**	**255**	P	**P**	**16 47 04.0**	**-0.1**
	comp=Z,8.4nm,0.8s,baz=52,slow=6.0,SNR=44						
CMAR				PcP	**PcP**	**16 48 58.6**	**-1.4**
	comp=Z,5.0nm,0.9s,baz=46,slow=3.2,SNR=5.2						
CMAR				ScP	**ScP**	**16 52 45.5**	**-1.1**
	comp=Z,2.1nm,1.1s,baz=356,slow=2.7,SNR=4.1						
CMAR				LR	LR	17 05 25.6	
	comp=Z,929nm,20.3s,baz=58,slow=38						
ZSN	**Zaisan**	**42.09**	**302***c*	*i*P	**P**	**16 47 07.7**	**+0.9**
ZSN				*e*S	**S**	**16 53 23.7**	**+0.7**
ZSN				pmax	pmax		
	comp=Z,61nm,1.1s						
ZSN				smax	smax		
	comp=E,34nm,4.8s						
ZSN	**Zaisan**	**42.09**	**302**⇑	*i*P	**P**	**16 47 07.7**	**+0.9**
	comp=E,61nm,1.1s						
ZSN				*e*S	**S**	**16 53 23.8**	**+0.7**
	comp=E,34nm,4.8s						
LSA	**Lhasa**	**42.27**	**275**	*e*P	**P**	**16 47 09.6**	**+0.6**
	comp=E,30nm,0.8s						
LSA				LR	LR		
	comp=Z,900nm,20.0s						
LSA	**Lhasa**	**42.27**	**275**	P	**P**	**16 47 09.9**	**+0.9**
LSA	**Lhasa**	**42.27**	**275**	*e*P	**P**	**16 47 09.6**	**+0.6**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s						
LSA				MLR	MLR		
	comp=Z,900nm,20.0s						
TEZP	**TEZPUR**	**42.30**	**270**	*e*P	**P**	**16 47 08.1**	**-0.5**
SDPT	**Sand Point**	**42.36**	**46**	PFAKE		16 47 20.0	+11
SDPT				LR	LR		
	comp=Z,500nm,19.0s						
TAWA	**Tawang**	**42.60**	**271**	*e*P	**P**	**16 47 11.1**	**-0.4**
CHBT	**CHBT**	**42.79**	**245**	P	**P**	**16 47 15.3**	**+2.6**
	comp=Z,41nm,0.6s,comp=Z,482nm						
UTHA	**Uthaitani**	**43.11**	**251**	P	**P**	**16 47 16.4**	**+1.1**
	comp=Z,66µm,0.9s,comp=Z,540µm						
UMPA	**Umpang Tak**	**43.15**	**252**	P	**P**	**16 47 18.0**	**+2.4**
	comp=Z,137µm,1.0s,comp=Z,967µm						
CHGN	**Chignik**	**43.52**	**45**	PFAKE		16 47 30.0	+12
CHGN				LR	LR		
	comp=Z,600nm,21.0s						
SHL	**Shillong**	**43.52**	**269**	*e*P	**P**	**16 47 18.2**	**-0.6**
SHL				IAmb	IAmb	16 47 22.5	
	comp=Z,47nm,0.6s						
MK31	**Makanchi Array**	**43.93**	**302**	*i* P	**P**	**16 47 22.3**	**+0.6**
MK31				pmax	pmax		
	comp=Z,83nm,0.9s						
MK32	**Makanchi Array**	**43.93**	**302**	*e*PcP	**PcP**	**16 49 06.3**	**-0.7**
MKAR	**Makanchi Array**	**43.93**	**302**	P	**P**	**16 47 21.9**	**+0.2**
	comp=Z,50nm,0.8s,baz=86,slow=8.8,SNR=211						
MKAR				PcP	**PcP**	**16 49 06.3**	**-0.7**
	comp=Z,8.1nm,0.8s,baz=79,slow=1.6,SNR=2.8						
MKAR				LR	LR	17 06 57.2	
	comp=Z,955nm,18.9s,baz=81,slow=38						
SRDT	**SRDT**	**44.11**	**250**	P	**P**	**16 47 24.8**	**+1.5**
	comp=Z,25nm,1.2s						
SBUM	**Sibu**	**44.11**	**225**	PFAKE		16 47 30.0	+6.7
SBUM				LR	LR		
	comp=Z,300nm,19.0s						
MAKZ	**Makanchi**	**44.14**	**302**	*e*P	**P**	**16 47 23.6**	**+0.3**
	comp=Z,66nm,0.9s						
MAKZ				LR	LR		
	comp=Z,1µm,22.0s						
MAKZ	**Makanchi**	**44.14**	**302**	P	**P**	**16 47 23.9**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,93nm,1.0s						
PHET	**Kaeng Krachan**	**44.66**	**248**	P	**P**	**16 47 28.9**	**+1.2**
	comp=Z,167µm,0.8s						
TURI	**Tura**	**44.76**	**270**	*e*P	**P**	**16 47 29.0**	**+0.5**
CHIR	**Chirikof Islan**	**45.10**	**45**	PFAKE		16 47 40.0	+9.2
CHIR				LR	LR		
	comp=Z,300nm,21.0s						
GTK	**Tadong**	**45.32**	**273**	*e*P	**P**	**16 47 33.2**	**+0.2**
GTK				IAmb	IAmb	16 47 35.4	
	comp=Z,69nm,1.2s						
KURK	**Kurchatov**	**45.70**	**308**	*e*P	**P**	**16 47 35.7**	**+0.2**
	comp=Z,201nm,0.8s						
KURK				LR	LR		
	comp=Z,2µm,19.0s						
KURK	**Kurchatov**	**45.70**	**308**	*i* P	**P**	**16 47 35.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,253nm,0.9s						
KURK	**Kurchatov**	**45.70**	**308**	P	**P**	**16 47 35.9**	**+0.4**
	SNR=124						
KURK				P	**P**	**16 47 35.9**	**+0.4**
	SNR=124						
SII	**Sitkinak Islan**	**45.85**	**44**	PFAKE		16 47 50.0	+13
SII				LR	LR		
	comp=Z,500nm,20.0s						
KSM	**Kuching**	**45.99**	**226**	P	**P**	**16 47 40.0**	**+1.7**
TARA	**Tarawa**	**46.17**	**134**	PFAKE		16 47 50.0	+10
TARA				LR	LR		
	comp=Z,2µm,18.0s						
OHAK	**Old Harbor**	**46.30**	**43**	PFAKE		16 47 50.0	+10
OHAK				LR	LR		
	comp=Z,1µm,21.0s						
KDAK	**Kodiak Island**	**46.64**	**42**	P	**P**	**16 47 43.5**	**+0.6**
	comp=Z,20nm,0.7s,baz=268,slow=6.1,SNR=10						
KDAK	**Kodiak Island**	**46.64**	**42**	*e*P	**P**	**16 47 43.5**	**+0.6**
	comp=Z,30nm,0.9s						
KDAK				LR	LR		
	comp=Z,900nm,21.0s						
KDAK	**Kodiak Island**	**46.64**	**42**	*i* P	**P**	**16 47 43.9**	**+1.0**
PPLA	**Purkeypile**	**46.68**	**35**	*e*P	**P**	**16 47 45.1**	**+1.8**
	comp=Z,16nm,1.0s						
TDK	**Taldyqorghan**	**46.96**	**300**	*e*P	**P**	**16 47 46.1**	**+0.5**
TDK				*e*S	**S**	**16 54 31.2**	**-2.5**
TDK				MLR	MLR		
	comp=Z,2µm,26.0s						
TDK	**Taldyqorghan**	**46.96**	**300**	*e*P	**P**	**16 47 46.2**	**+0.5**
TDK				*e*S	**S**	**16 54 31.2**	**-2.5**
TDK				*e*LR	LR	17 06 36.1	
	comp=Z,2µm,26.4s						
KAPI	**Kappang**	**46.97**	**210**	LR	LR	17 07 50.5	
	comp=Z,286nm,19.1s,baz=116,slow=36						
KAPI	**Kappang**	**46.97**	**210**	*e*P	**P**	**16 47 46.0**	**+0.1**
	comp=Z,59nm,1.0s						
KAPI	**Kappang**	**46.97**	**210**	*e*P	**P**	**16 47 46.0**	**+0.1**
KAPI				pmax	pmax		
	comp=Z,59nm,1.0s						
KAPI	**Kappang**	**46.97**	**210**	P	**P**	**16 47 48.0**	**+2.1**
	SNR=8.3						
KAPI				P	**P**	**16 47 48.0**	**+2.1**
	SNR=8.3						
UZB	**Uzynbulak**	**47.00**	**297***c*	*i*P	**P**	**16 47 46.0**	**-0.1**
UZB				*e*S	**S**	**16 54 31.4**	**-3.3**
UZB				pmax	pmax		
	comp=Z,39nm,1.4s						
UZB				smax	smax		
	comp=E,45nm,5.0s						
UZB				MLR	MLR		
	comp=Z,585nm,19.0s						
UZB	**Uzynbulak**	**47.00**	**297**⇑	*i*P	**P**	**16 47 46.1**	**-0.1**
	comp=Z,39nm,1.4s						
UZB				*e*S	**S**	**16 54 31.4**	**-3.3**
	comp=Z,45nm,5.0s						
UZB				*e*LR	LR	17 07 22.2	
	comp=Z,585nm,19.1s						
PMG	**Port Moresby**	**47.01**	**172**	*e*P	**P**	**16 47 43.3**	**-2.9**
	comp=Z,28nm,1.1s						
PMG	**Port Moresby**	**47.01**	**172**	*e*P	**P**	**16 47 43.3**	**-2.9**
PMG				pmax	pmax		
	comp=Z,28nm,1.1s						
JIRN	**Jiri**	**47.08**	**275**	*e*P	**P**	**16 47 47.5**	**+0.3**
	comp=Z,493nm,1.0s						
JIRN	**Jiri**	**47.08**	**275**	*e*P	**S**	**16 54 43.3**	**+6.8**
	comp=Z,70nm,0.9s						
KPKS	**Kokpek**	**47.16**	**298***c*	*i*P	**P**	**16 47 47.3**	**0.0**
KPKS				*e*S	**S**	**16 54 34.3**	**-2.4**
KPKS				pmax	pmax		
	comp=Z,83nm,1.7s						
KPKS				MLR	MLR		
	comp=Z,2µm,20.0s						
KPKS	**Kokpek**	**47.16**	**298**⇑	*i*P	**P**	**16 47 47.4**	**0.0**
	comp=Z,83nm,1.7s						
KPKS				*e*S	**S**	**16 54 34.4**	**-2.4**
KPKS				*e*LR	LR	17 07 50.7	
	comp=Z,2µm,19.6s						
BPAW	**Bear Paw Mtn.**	**47.23**	**34**	*e*P	**P**	**16 47 48.5**	**+1.0**
	comp=Z,9.5nm,0.8s						
BPAW				LR	LR		
	comp=Z,400nm,22.0s						
MLY	**Manley**	**47.35**	**32**	*e*P	**P**	**16 47 50.3**	**+1.9**
	comp=Z,16nm,1.0s						
SATY	**Saty**	**47.46**	**297***c*	*i*P	**P**	**16 47 49.8**	**+0.1**
SATY				*e*S	**S**	**16 54 37.9**	**-3.2**
SATY				pmax	pmax		
	comp=Z,60nm,1.7s						
SATY				MLR	MLR		
	comp=Z,1µm,19.0s						
SATY	**Saty**	**47.46**	**297**⇑	*i*P	**P**	**16 47 49.8**	**+0.1**
	comp=Z,60nm,1.7s						
SATY				*e*S	**S**	**16 54 38.0**	**-3.2**
SATY				*e*LR	LR	17 07 57.1	
	comp=Z,1µm,19.2s						
PRZ	**Przheval'sk**	**47.62**	**297**	*e*P	**P**	**16 47 51.8**	**+0.8**
	comp=Z,101nm,1.0s						
PRZ				LR	LR		
	comp=Z,2µm,22.0s						
PRZ	**Przheval'sk**	**47.62**	**297**	*e*P	**P**	**16 47 51.8**	**+0.8**
PRZ				pmax	pmax		
	comp=Z,101nm,1.0s						
PRZ				MLR	MLR		
	comp=Z,2µm,22.0s						
PKI	**Pulchoki**	**47.74**	**275**	*e*P	**P**	**16 47 52.0**	**-0.3**
	comp=Z,136nm,0.9s						
PKI	**Pulchoki**	**47.74**	**275**	*e*P	**S**	**16 54 52.1**	**+6.3**
	comp=Z,51nm,1.0s						
KKN	**Kakani**	**47.74**	**275**	*e*P	**P**	**16 47 52.4**	**+0.3**
	comp=Z,342nm,0.8s						
KKN	**Kakani**	**47.74**	**275**	*e*P	**S**	**16 54 51.9**	**+6.3**
	comp=Z,126nm,1.0s						
PKIN	**Phulchoki**	**47.74**	**275**	*e*P	**P**	**16 47 51.9**	**-0.3**
	comp=Z,67nm,0.7s						
PKIN	**Phulchoki**	**47.74**	**275**	*e*P	**S**	**16 54 52.2**	**+6.4**
	comp=Z,39nm,0.9s						
SKLT	**Songkhla**	**47.85**	**241**	P	**P**	**16 47 54.7**	**+1.9**
	comp=Z,33nm,1.3s						
RC01	**Rabbit Creek A**	**47.88**	**38**	PFAKE		16 48 00.0	+7.5
RC01				LR	LR		
	comp=Z,400nm,19.0s						
TOLK	**Toolik Lake Re**	**47.96**	**27**	*e*P	**P**	**16 47 54.1**	**+1.1**
	comp=Z,44nm,1.1s						
TOLK	**Toolik Lake Re**	**47.96**	**27**	P	**P**	**16 47 53.8**	**+0.7**
	baz=266						
DMN	**Daman**	**47.96**	**275**	*e*P	**P**	**16 47 53.9**	**0.0**
	comp=Z,184nm,1.3s						
DMN	**Daman**	**47.96**	**275**	*e*P	**S**	**16 54 55.4**	**+6.6**
	comp=Z,61nm,0.9s						
TRTT	**Trang**	**48.04**	**243**	P	**P**	**16 47 56.2**	**+1.9**
	comp=Z,42nm,1.6s						
SEW	**Seward**	**48.09**	**39**	PFAKE		16 48 10.0	+16
SEW				LR	LR		
	comp=Z,800nm,20.0s						
MCK	**McKinley**	**48.14**	**34**	*e*P	**P**	**16 47 55.4**	**+0.9**
	comp=Z,14nm,0.9s						
MCK				LR	LR		
	comp=Z,500nm,20.0s						
MCK	**McKinley**	**48.14**	**34**	*e*P	**P**	**16 47 55.4**	**+0.9**
MCK				pmax	pmax		
	comp=Z,14nm,0.9s						
MCK				MLR	MLR		
	comp=Z,500nm,20.0s						
PMR	**Palmer**	**48.14**	**37**	PFAKE		16 48 10.0	+16
PMR				LR	LR		
	comp=Z,500nm,21.0s						
GKN	**Gorkha**	**48.15**	**276**	*e*P	**P**	**16 47 55.4**	**+0.1**
	comp=Z,738nm,1.0s						
GKN	**Gorkha**	**48.15**	**276**	*e*P	**S**	**16 54 57.7**	**+6.3**
CHKK	**Chushkaly**	**48.24**	**299**	*e*P	**P**	**16 47 55.0**	**-0.5**
CHKK	**Chushkaly**	**48.24**	**299**	*e*P	**P**	**16 47 55.1**	**-0.5**
MDOK	**Medeo**	**48.39**	**298**	*i* P	**P**	**16 47 57.4**	**+0.5**
MDOK				*e*S	**S**	**16 54 50.7**	**-3.6**
MDOK				pmax	pmax		
	comp=Z,779nm,1.7s						
MDOK				smax	smax		
	comp=E,319nm,11.5s						
MDOK				MLR	MLR		
	comp=Z,1µm,21.0s						
MDOK	**Medeo**	**48.39**	**298**	*i* P	**P**	**16 47 57.4**	**+0.5**
	comp=Z,779nm,1.7s						
MDOK				*e*S	**S**	**16 54 50.7**	**-3.6**
	comp=Z,318nm,11.5s						
MDOK				*e*LR	LR	17 08 31.3	
	comp=Z,1µm,21.4s						
AAA	**Alma-Ata**	**48.47**	**298**	*e*P	**P**	**16 47 54.8**	**-2.6**
AAA				pmax	pmax		
	comp=Z,100nm,7.5s						
AAA				MLR	MLR		
	comp=Z,2µm,21.0s						
AAA	**Alma-Ata**	**48.47**	**298**	*e*P	**P**	**16 47 54.8**	**-2.6**
	comp=Z,100nm,7.5s						
AAA				*e*LR	LR	17 08 30.3	
	comp=Z,2µm,21.2s						
WRH	**Wood River Hil**	**48.49**	**33**	PFAKE		16 48 10.0	+13
WRH				LR	LR		
	comp=Z,400nm,21.0s						
TNSS	**Tian-Shan**	**48.49**	**298**	*e*P	**P**	**16 47 58.5**	**+0.5**
TNSS	**Tian-Shan**	**48.49**	**298**	*e*P	**P**	**16 47 58.5**	**+0.5**
SML	**Sawmill**	**48.51**	**37**	*e*P	**P**	**16 47 57.4**	**0.0**
	comp=Z,31nm,1.0s						
SML				LR	LR		
	comp=Z,400nm,21.0s						
SML	**Sawmill**	**48.51**	**37**	*e*P	**P**	**16 47 57.4**	**0.0**
SML				pmax	pmax		
	comp=Z,31nm,1.0s						
SML				MLR	MLR		
	comp=Z,400nm,21.0s						
TCOL	**CIGO, UAF Yank**	**48.57**	**32**	P	**P**	**16 47 59.1**	**+1.3**
	baz=271						
COLA	**College**	**48.58**	**32**⇑	*i*P	**P**	**16 47 59.5**	**+1.7**
COLA				pmax	pmax		
	comp=Z,20nm,1.3s						
KDJ	**Kajisay**	**48.59**	**297**	PFAKE		16 48 10.0	+11
KDJ				LR	LR		
	comp=Z,2µm,22.0s						
KUU	**Kurty**	**48.68**	**299***c*	*i*P	**P**	**16 47 58.7**	**-0.2**
KUU				*e*S	**S**	**16 54 54.8**	**-3.3**
KUU				pmax	pmax		
	comp=Z,100nm,1.4s						
KUU				MLR	MLR		
	comp=Z,1µm,20.0s						
KUU	**Kurty**	**48.68**	**299**⇑	*i*P	**P**	**16 47 58.7**	**-0.2**
	comp=Z,100nm,1.4s						
KUU				*e*S	**S**	**16 54 54.9**	**-3.3**
KUU				*e*LR	LR	17 08 46.3	
	comp=Z,1µm,20.0s						
DANN	**Dangsing**	**48.69**	**277**	*e*P	**P**	**16 48 00.1**	**+0.5**
	comp=Z,1µm,0.8s						
DANN	**Dangsing**	**48.69**	**277**	*e*P	**S**	**16 55 07.1**	**+7.9**
POKR	**Poker Plat Res**	**48.75**	**32**	P	**P**	**16 48 00.3**	**+1.1**
	baz=272						
DHY	**Denali Highway**	**48.87**	**35**	*e*P	**P**	**16 48 00.1**	**-0.2**
	comp=Z,19nm,1.2s						
DHY				LR	LR		
	comp=Z,400nm,20.0s						
PKDT	**Phuket**	**48.96**	**244**	P	**P**	**16 48 03.2**	**+1.8**
	comp=Z,71nm,0.8s						
SCM	**Sheep Creek Mo**	**48.98**	**37**	PFAKE		16 48 10.0	+8.9
SCM				LR	LR		
	comp=Z,600nm,22.0s						
HDA	**Harding Lake**	**48.98**	**33**	PFAKE		16 48 10.0	+9.0
HDA				LR	LR		
	comp=Z,300nm,21.0s						
ILAR	**Eielson Array**	**48.99**	**33**	P	**P**	**16 48 01.8**	**+0.7**
	comp=Z,8.2nm,0.8s,baz=268,slow=5.7,SNR=65						
ILAR				LR	LR	17 09 48.6	
	comp=Z,281nm,20.9s,baz=282,slow=37						
ILB	**Eielson Array**	**48.99**	**33**	*e*P	**P**	**16 48 01.1**	**0.0**
	comp=Z,18nm,0.8s						
KOLN	**Koldanda**	**49.08**	**276**	*e*P	**P**	**16 48 02.7**	**+0.3**
	comp=Z,431nm,1.0s						
BOK	**Bokaro**	**49.15**	**270**	*e*P	**P**	**16 48 03.0**	**+0.3**
BOK				IAmb	IAmb	16 48 03.9	
	comp=Z,65nm,1.0s						
KULM	**Kulim**	**49.17**	**239**	*e*P	**P**	**16 48 02.1**	**-0.9**
	comp=Z,36nm,1.1s						
KULM				LR	LR		
	comp=Z,800nm,20.0s						
KULM	**Kulim**	**49.17**	**239**	P	**P**	**16 48 06.0**	**+3.0**
GLI	**Glacier Island**	**49.18**	**38**	PFAKE		16 48 10.0	+7.5
GLI				LR	LR		
	comp=Z,400nm,21.0s						
ULHL	**Ulahol**	**49.22**	**297**	P	**P**	**16 48 03.8**	**+0.4**
	SNR=16						
BOOM	**Boomskoye usch**	**49.36**	**297**	*e*P	**P**	**16 48 04.9**	**+0.5**
	comp=Z,55nm,0.8s						
BOOM				LR	LR		
	comp=Z,3µm,20.0s						
BOOM	**Boomskoye usch**	**49.36**	**297**	*e*P	**P**	**16 48 04.9**	**+0.5**
BOOM				pmax	pmax		
	comp=Z,55nm,0.8s						
BOOM				MLR	MLR		
	comp=Z,3µm,20.0s						
TKM2	**Tokmak 2**	**49.48**	**298**	P	**P**	**16 48 06.2**	**+0.9**
	SNR=200						
FID	**Port Fidalgo**	**49.49**	**38**	PFAKE		16 48 20.0	+15
FID				LR	LR		
	comp=Z,500nm,20.0s						
IPM	**Ipoh**	**49.51**	**238**	*e*P	**P**	**16 48 04.8**	**-0.8**
	comp=Z,34nm,0.8s						
IPM				LR	LR		
	comp=Z,900nm,21.0s						
IPM	**Ipoh**	**49.51**	**238**	P	**P**	**16 48 07.0**	**+1.4**
DGPR	**DIGLIPUR**	**49.52**	**254**	*e*P	**P**	**16 48 05.3**	**-0.3**
PRP	**Porcupine Dome**	**49.53**	**32**	*e*P	**P**	**16 48 06.6**	**+1.3**
	comp=Z,16nm,1.0s						
BRZS	**Berezniki**	**49.57**	**308***c*	*i*P	**P**	**16 48 05.4**	**-0.2**
BRZS				pmax	pmax		
	comp=Z,56nm,0.8s						
BRZS	**Berezniki**	**49.57**	**308**⇑	*i*P	**P**	**16 48 05.4**	**-0.2**
	comp=Z,56nm,0.8s						
NRN	**Naryn**	**49.65**	**296**	PFAKE		16 48 20.0	+13
NRN				LR	LR		
	comp=Z,2µm,22.0s						
MYKOM	**Kota Tinggi**	**49.66**	**233**	*e*P	**P**	**16 48 06.0**	**-0.7**
	comp=Z,26nm,1.1s						
MYKOM				LR	LR		
	comp=Z,700nm,20.0s						
PAX	**Paxson**	**49.74**	**35**	*e*P	**P**	**16 48 07.7**	**+0.8**
	comp=Z,7.7nm,1.0s						
PAX				LR	LR		
	comp=Z,400nm,22.0s						
PAX	**Paxson**	**49.74**	**35**	*e*P	**P**	**16 48 07.7**	**+0.8**
PAX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PAX				MLR	MLR		
	comp=Z,400nm,22.0s						
HNR	**Honiara**	**49.82**	**156**	LR	LR	17 07 57.9	
	comp=Z,792nm,20.2s,baz=323,slow=34						
HNR	**Honiara**	**49.82**	**156**	PFAKE		16 48 20.0	+12
HNR				LR	LR		
	comp=Z,1µm,22.0s						
EYAK	**Cordova Ski Ar**	**49.87**	**38**	PFAKE		16 48 20.0	+12
EYAK				LR	LR		
	comp=Z,2µm,21.0s						
BTLS	**Baital**	**49.93**	**301***c*	*i*P	**P**	**16 48 08.2**	**-0.3**
BTLS				*e*S	**S**	**16 55 12.7**	**-2.9**
BTLS				pmax	pmax		
	comp=Z,35nm,0.9s						
BTLS				MLR	MLR		
	comp=Z,389nm,17.0s						
BTLS	**Baital**	**49.93**	**301**⇑	*i*P	**P**	**16 48 08.2**	**-0.3**
	comp=Z,35nm,0.9s						
BTLS				*e*S	**S**	**16 55 12.8**	**-2.9**
BTLS				*e*LR	LR	17 10 16.4	
	comp=Z,389nm,16.8s						
RIDG	**Independent Ri**	**49.95**	**34**	PFAKE		16 48 20.0	+12
RIDG				LR	LR		
	comp=Z,600nm,20.0s						
KZA	**Kyzart**	**49.98**	**297**	P	**P**	**16 48 10.9**	**+1.5**
	SNR=82						
SGDS	**Sogindy**	**49.99**	**299**⇑	*i*P	**P**	**16 48 09.1**	**+0.1**
	comp=Z,40nm,1.1s						
SGDS				*e*S	**S**	**16 55 15.7**	**-0.9**
KBK	**Karagaybulak**	**50.01**	**298**	P	**P**	**16 48 10.1**	**+0.8**
	SNR=115						
CHMS	**Chumysh**	**50.05**	**298**	P	**P**	**16 48 09.8**	**+0.4**
	SNR=21						
USP	**Ospenovka**	**50.14**	**299**	P	**P**	**16 48 10.5**	**+0.4**
	SNR=62						
FRU1	**Bishkek**	**50.19**	**298**	PFAKE		16 48 20.0	+9.5
FRU1				LR	LR		
	comp=Z,2µm,19.0s						
OTUK	**Ortayu**	**50.21**	**306**	P	**P**	**16 48 10.8**	**+0.3**
OTUK				pmax	pmax		
	comp=Z,156nm,1.1s						
KSH	**Kashi**	**50.29**	**294**	P	**P**	**16 48 15.8**	**+4.4**
KSH				pP	sP	16 48 28.0	-0.9
KSH				sP	pP	16 48 34.0	+10
KSH				PcP	**PcP**	**16 49 34.9**	**+5.1**
KSH				PP	**PP**	**16 50 13.5**	**+6.6**
KSH				S	**S**	**16 55 25.5**	**+4.5**
KSH				ScS	**ScS**	**16 58 01.0**	**+2.1**
KSH				SS	**SS**	**16 58 57.3**	**+2.7**
KSH				pmax	pmax		
	comp=Z,40nm,1.0s						
KSH				pmax	pmax		
	comp=Z,310nm,6.9s						
KSH				LR	LR		
	comp=Z,2µm,15.6s						
KSH				LR	LR		
	comp=Z,2µm,16.5s						
KSH				LR	LR		
	comp=Z,3µm,16.5s						
DOT	**Dot Lake**	**50.31**	**34**	PFAKE		16 48 20.0	+8.9
DOT				LR	LR		
	comp=Z,500nm,20.0s						
SCRK	**Sand Creek**	**50.31**	**34**	PFAKE		16 48 20.0	+8.8
SCRK				LR	LR		
	comp=Z,400nm,20.0s						
AAK	**Ala-Archa**	**50.34**	**298**	*e*P	**P**	**16 48 12.2**	**+0.5**
	comp=Z,42nm,0.8s						
AAK				LR	LR		
	comp=Z,3µm,20.0s						
AAK	**Ala-Archa**	**50.34**	**298**	*i* P	**P**	**16 48 12.1**	**+0.3**
	SNR=38						
AAK	**Ala-Archa**	**50.34**	**298**	*i* P	**P**	**16 48 11.0**	**-0.8**
AAK				pmax	pmax		
	comp=Z,43nm,0.8s						
AAK	**Ala-Archa**	**50.34**	**298**	P	**P**	**16 48 12.3**	**+0.5**
	SNR=20						
AAK				P	**P**	**16 48 12.3**	**+0.5**
	SNR=20						
AAK	**Ala-Archa**	**50.34**	**298**	P	**P**	**16 48 12.2**	**+0.5**
	SNR=37						
BRVK	**Borovoye**	**50.35**	**312**	*e*P	**P**	**16 48 11.8**	**+0.2**
	comp=Z,102nm,0.9s						
BRVK				LR	LR		
	comp=Z,2µm,18.0s						
BRVK	**Borovoye**	**50.35**	**312***c*	*i*P	**P**	**16 48 11.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,115nm,1.0s						
BRVK	**Borovoye**	**50.35**	**312**	P	**P**	**16 48 12.0**	**+0.4**
	SNR=50						
BRVK				P	**P**	**16 48 12.0**	**+0.4**
	SNR=50						
BATI	**Baumata**	**50.38**	**203**	LR	LR	17 07 51.5	
	comp=Z,324nm,20.9s,baz=14,slow=34						
RAGM	**Ragged Mountai**	**50.42**	**38**	PFAKE		16 48 20.0	+8.0
RAGM				LR	LR		
	comp=Z,700nm,22.0s						
UCH	**Uchtor**	**50.45**	**298**	P	**P**	**16 48 13.8**	**+0.8**
	SNR=45						
MENT	**Mentasta**	**50.54**	**35**	PFAKE		16 48 20.0	+7.1
MENT				LR	LR		
	comp=Z,500nm,20.0s						
HMT	**Hamilton**	**50.63**	**38**	PFAKE		16 48 30.0	+16
HMT				LR	LR		
	comp=Z,500nm,22.0s						
EKS2	**Erkin-Say**	**50.83**	**298**	P	**P**	**16 48 15.8**	**+0.3**
	SNR=57						
BWNR	**Bhubaneshwar**	**51.01**	**267**	*e*P	**P**	**16 48 14.5**	**-2.3**
BWNR				IAmb	IAmb	16 48 15.7	
	comp=Z,23nm,0.8s						
MTN	**Manton Dam**	**51.08**	**193**	*e*P	**P**	**16 48 17.0**	**-0.3**
	comp=Z,40nm,1.0s						
CRQM	**Cirque**	**51.12**	**38**	PFAKE		16 48 30.0	+13
CRQM				LR	LR		
	comp=Z,700nm,22.0s						
COEN	**Coen**	**51.26**	**178**	*e*P	**P**	**16 48 18.8**	**+0.1**
	comp=Z,27nm,1.1s						

TGL	Tana Glacier	51.27	38	PFAKE		16 48 30.0	+12
TGL				LR	LR		
	comp=Z,300nm,22.0s						
EGAK	Eagle	51.44	32	eP	P	16 48 20.3	+0.8
	comp=Z,12nm,0.9s						
EGAK				LR	LR		
	comp=Z,300nm,21.0s						
CTGM	Chitina Glacie	51.95	37	PFAKE		16 48 40.0	+16
CTGM				LR	LR		
	comp=Z,300nm,20.0s						
PSI	Prapat	52.16	239	eP	P	16 48 24.9	-0.7
	comp=Z,40nm,0.9s						
PSI				LR	LR		
	comp=Z,600nm,18.0s						
PSI	Prapat	52.16	239	eP	P	16 48 24.9	-0.7
PSI				pmax	pmax		
	comp=Z,40nm,0.9s						
PSI				MLR	MLR		
	comp=Z,600nm,18.0s						
DDI	Dehra Dun	52.29	282	eP	P	16 48 27.4	+0.9
DAWY	Dawson	52.30	33	eP	P	16 48 27.1	+1.1
	comp=Z,5.6nm,1.0s						
DAWY				LR	LR		
	comp=Z,500nm,22.0s						
SMLA	Simla	52.63	283	eP	P	16 48 28.6	-0.2
PCA	Pinnacle	52.64	38	PFAKE		16 48 40.0	+11
PCA				LR	LR		
	comp=Z,300nm,20.0s						
CMBY	CAMPBELL BAY	52.75	247	eP	P	16 48 30.5	+0.6
DHRM	DHARAMSHALA	52.82	285	eP	P	16 48 30.1	-0.5
KK31	Karatay Array	52.96	300	i P	P	16 48 31.0	-0.1
KK31				pmax	pmax		
	comp=Z,86nm,1.1s						
BCPM	Bancas Point	52.98	38	PFAKE		16 48 40.0	+9.0
BCPM				LR	LR		
	comp=Z,500nm,22.0s						
EPYK	Eagle Plains	53.02	30	P	P	16 48 32.8	+1.5
	baz=280						
JBG	Jabagly	53.16	299	ceP	P	16 48 33.3	+0.5
JBG				pmax	pmax		
	comp=Z,46nm,1.1s						
BTK	Batken	53.81	296	PFAKE		16 48 50.0	+12
BTK				LR	LR		
	comp=Z,3µm,22.0s						
HYT	Haines Junctio	53.81	37	eP	P	16 48 39.5	+2.3
	comp=Z,50nm,1.2s						
HYT				LR	LR		
	comp=Z,500nm,22.0s						
INK	Inuvik	53.87	27	P	P	16 48 38.3	+0.9
	comp=Z,31nm,1.0s,baz=276,slow=7.7,SNR=49						
NIL	Nilore	54.55	288	eP	P	16 48 43.6	+0.6
	comp=Z,125nm,0.9s						
NIL	Nilore	54.55	288	eP	P	16 48 43.6	+0.6
NIL				pmax	pmax		
	comp=Z,125nm,0.9s						
GAR	Garm	54.57	295	PFAKE		16 49 00.0	+17
GAR				LR	LR		
	comp=Z,4µm,18.0s						
SVE	Sverdlovsk	54.83	318	d iP	P	16 48 45.3	+0.8
SVE				pmax	pmax		
	comp=Z,291nm,1.0s						
WHY	Whitehorse	55.10	37	PFAKE		16 49 00.0	+13
WHY				LR	LR		
	comp=Z,300nm,21.0s						
SKAG	Skagway	55.22	38	PFAKE		16 49 00.0	+13
SKAG				LR	LR		
	comp=Z,400nm,22.0s						
CHGR	Chuyangaron	55.54	295	PFAKE		16 49 00.0	+10
CHGR				LR	LR		
	comp=Z,8µm,21.0s						
BESE	Bessie Mountai	55.70	39	PFAKE		16 49 00.0	+9.1
BESE				LR	LR		
	comp=Z,300nm,20.0s						
NGP	Nagpur	55.92	272	eP	P	16 48 52.5	-0.5
ARU	Arti	56.04	318	eP	P	16 48 53.1	-0.1
	comp=Z,321nm,1.1s						
ARU				LR	LR		
	comp=Z,2µm,18.0s						
ARU	Arti	56.04	318	c iP	P	16 48 53.5	+0.2
ARU				*PP	pP	16 49 06.5	+0.8
ARU						16 49 53.0	
ARU						16 50 56.0	
ARU				S	S	16 56 38.2	-0.2
ARU				*SS	sS	16 57 02.6	+3.4
ARU						16 58 34.1	
ARU				SS	SS	17 00 18.3	-6.0
ARU				pmax	pmax		
	comp=Z,316nm,1.1s						
ARU				MLR	MLR		
	comp=Z,2µm,18.0s						
BHPL	Bhopal	56.14	275	eP	P	16 48 53.9	-0.6
BHPL				IAmb	IAmb	16 48 55.8	
	comp=Z,53nm,0.9s						
KHU	Kahuku	57.20	90	eP	P	16 49 01.5	-0.9
	comp=Z,64nm,1.2s						
KHU	Kahuku	57.20	90	eP	P	16 49 01.5	-0.9
KHU				pmax	pmax		
	comp=Z,64nm,1.2s						
KBL	Kabul	57.33	291	eP	P	16 49 02.7	-0.3
	comp=Z,109nm,0.9s						
KBL				LR	LR		
	comp=Z,1µm,21.0s						
KBL	Kabul	57.33	291	eP	P	16 49 02.7	-0.3
KBL				pmax	pmax		
	comp=Z,109nm,0.9s						
KBL				MLR	MLR		
	comp=Z,1µm,21.0s						
WRAB	Tennant Creek	57.58	188	ceP	P	16 49 03.3	-1.2
WRAB				pmax	pmax		
	comp=Z,22nm,1.7s						
WB2	Warramunga Arr	57.59	188	eP	P	16 49 03.8	-0.8
	comp=Z,29nm,1.0s						
WR1	Warramunga Arr	57.59	188	eP	P	16 49 03.7	-0.9
WRA	Warramunga Arr	57.59	188	P	P	16 49 03.7	-0.9
	comp=Z,7.9nm,0.6s,baz=359,slow=8.5,SNR=30						
WC3	Warramunga Arr	57.61	188	eP	P	16 49 04.3	-0.4
	comp=Z,25nm,0.9s						
AB31	Akbulak array	57.68	310	i P	P	16 49 05.0	0.0
AB31				pmax	pmax		
	comp=Z,53nm,0.7s						
DLBC	Dease Lake	58.15	38	P	P	16 49 08.3	0.0
	comp=Z,9.8nm,1.0s,baz=309,slow=7.0,SNR=11						
HYB	Hyderabad	58.33	268	i P	P	16 49 09.0	-1.0
	comp=Z,130nm,1.0s						
HYB				epP	pP	16 49 23.0	+0.4
HYB				e		16 49 36.5	
HYB	Hyderabad	58.33	268	eP	P	16 49 09.4	-0.6
AKTO	Aktyubinsk	58.41	312	P	P	16 49 09.9	-0.2
AKTO				pmax	pmax		
	comp=Z,97nm,0.9s						
MDRS	Chennai	59.45	263	ex	P	16 49 15.2	-2.5
SPITS	Spitsbergen Ar	60.03	349	P	P	16 49 21.6	+0.7
	comp=Z,18nm,0.9s,baz=101,slow=16,SNR=5.4						
KBS	Kingsbay	60.16	350	ceP	P	16 49 19.9	-1.8
KBS				pmax	pmax		
	comp=Z,362nm,1.3s						
PRGR	Permogore	60.38	327	eP	P	16 49 23.1	-0.4
PRGR				e*PP	sP	16 49 39.6	-1.6
PRGR				eS	S	16 57 40.3	+5.5
PRGR				pmax	pmax		
	comp=Z,175nm,0.9s						
HSPB	Hornsund (broa	60.96	348	eP	P	16 49 28.7	+1.5
HSPB	Hornsund (broa	60.96	348	eP	P	16 49 28.7	+1.5
AS31	Alice Springs	61.32	188	eP	P	16 49 30.2	-0.1
	comp=Z,3.9nm,0.7s						
ASAR	Alice Springs	61.32	188	P	P	16 49 29.8	-0.5
	comp=Z,10nm,0.9s,baz=8.6,slow=5.6,SNR=55						
ASAR				LR	LR	17 15 33.0	
	comp=Z,309nm,20.9s,baz=357,slow=35						
ASAR				PKP2bc		17 18 53.4	
	comp=Z,1.6nm,0.9s,baz=166,slow=1.1,SNR=8.5						
POO	Poona	61.45	272	eP	P	16 49 31.0	-0.4
BBB	Bella Bella	61.61	44	P	P	16 49 31.6	-0.3
	comp=Z,6.1nm,1.1s,baz=266,slow=8.6,SNR=3.7						
LVZ	Lovozero	61.68	336	eP	P	16 49 32.0	-0.2
	comp=Z,69nm,1.0s						
LVZ				LR	LR		
	comp=Z,2µm,19.0s						
LVZ	Lovozero	61.68	336	d iP	P	16 49 32.6	+0.4
LVZ				pmax	pmax		
	comp=Z,50nm,0.8s						
RES	Resolute Bay	62.07	15	PFAKE		16 49 50.0	+15
RES				LR	LR		
	comp=Z,300nm,21.0s						
BOM	Bombay	62.08	273	eP	P	16 49 35.5	-0.1
PSAD1	Pilbara Seismi	62.16	203	eP	P	16 49 34.8	-1.2
	comp=Z,36nm,0.9s						
PSAC1	Pilbara Seismi	62.24	203	eP	P	16 49 36.2	-0.3
	comp=Z,20nm,0.9s						
PSAC2	Pilbara Seismi	62.24	203	eP	P	16 49 35.9	-0.6
	comp=Z,27nm,0.9s						
PSAB2	Pilbara Seismi	62.24	203	eP	P	16 49 35.9	-0.6
	comp=Z,15nm,0.8s						
APA	Apatity	62.25	336	⇓iP	P	16 49 35.8	-0.2
APA				i		16 49 58.0	
APA				eS	S	16 57 54.0	-4.4
APA				pmax	pmax		
	comp=Z,30nm,0.9s						
APA				MLR	MLR		
	comp=Z,600nm,16.0s						
PSAA2	Pilbara Seismi	62.26	203	eP	P	16 49 36.3	-0.2
	comp=Z,39nm,1.1s						
PSA00	Pilbara Seismi	62.27	203	eP	P	16 49 36.5	-0.1
	comp=Z,28nm,1.0s						
PALK	Pallekele	62.59	257	eP	P	16 49 36.9	-2.2
	comp=Z,37nm,1.0s						
PALK	Pallekele	62.59	257	eP	P	16 49 36.9	-2.2
PALK				pmax	pmax		
	comp=Z,37nm,1.0s						
GOA	Goa	63.16	269	eP	P	16 49 42.6	-0.2
EIDS	Eidsvold	63.23	170	eP	P	16 49 44.4	+1.4
	comp=Z,15nm,1.0s						
YKW3	Yellowknife Ar	63.26	30	eP	P	16 49 43.2	+0.3
	comp=Z,10nm,0.9s						
YKA	Yellowknife Ar	63.30	30	P	P	16 49 43.9	+0.9
	comp=Z,7.0nm,0.8s,baz=296,slow=6.6,SNR=35						
YKA				LR	LR	17 17 06.8	
	comp=Z,24nm,21.9s,baz=292,slow=36						
YKA				PKPPKP		17 18 40.9	
	comp=Z,0.2nm,0.6s,baz=103,slow=1.5,SNR=4.1						
HAMF	Hammerfest	63.36	341	eP	P	16 49 43.3	-0.1
ARCES	ARCESS Array B	63.54	339	P	P	16 49 45.1	+0.5
	comp=Z,51nm,0.9s,baz=58,slow=7.3,SNR=58						
ARCES				LR	LR	17 21 22.3	
	comp=Z,655nm,18.4s,baz=44,slow=40						
ARE0	ARCESS Array S	63.54	339	eP	P	16 49 45.3	+0.7
GEYT	Alibeck	63.68	299	P	P	16 49 46.4	+0.3
	comp=Z,56nm,1.0s,baz=45,slow=2.7,SNR=61						
GEYT				LR	LR	17 21 24.6	
	comp=Z,481nm,18.2s,baz=85,slow=40						
GYA0B	ALIBECK ARRAY	63.68	299	PFAKE		16 50 00.0	+14
GYA0B				LR	LR		
	comp=Z,800nm,18.0s						
DZM	Mont Dzumac	63.78	154	eS	S	16 58 23.8	+5.2
	comp=Z,382nm,27.4s						
DZM	Mont Dzumac	63.78	154	eLR	LR	17 08 48.7	
	comp=Z,2µm,33.4s						
DZM	Mont Dzumac	63.78	154	PFAKE		16 50 00.0	+13
DZM				LR	LR		
	comp=Z,1µm,20.0s						
KTK1	Kautokeino	64.50	339	eP	P	16 49 51.4	+0.5
TULEG	Thule	64.57	8	eP	P	16 49 51.6	+0.4
	comp=Z,63nm,1.0s						
TRO	Tromso	65.25	341	eP	P	16 49 56.1	+0.4
DAG	Danmarks Havn	65.26	355	⇑iP	P	16 49 55.8	+0.1
DAG				pmax	pmax		
	comp=Z,43nm,0.9s						
DAG	Danmarks Havn	65.26	355	⇑iP	P	16 49 55.8	+0.1
	comp=Z,51nm,0.9s						
D03D	Eldon	66.67	47	P	P	16 50 06.1	+0.9
	baz=300,SNR=7.8						
B05A	Bryant	66.87	46	P	P	16 50 07.6	+1.1
	baz=301						
MOS	Moscow	66.89	323	eP	P	16 50 06.3	-0.2
MOS				e*PP	pP	16 50 17.8	-1.4
MOS				e*SP	sP	16 50 25.6	+1.3
MOS				e		16 50 33.2	
MOS				e		16 52 32.3	
MOS				eS	S	16 58 54.5	-1.4
MOS				e		16 59 58.8	
MOS				pmax	pmax		
	comp=Z,196nm,1.3s						
MOS				pmax	pmax		
	comp=Z,300nm,1.6s						
STEI	Steigen	67.41	341	eP	P	16 50 10.1	+0.6
KULLO	Kullorsuaq	67.45	5	i P	P	16 50 10.0	+0.3
KULLO				pmax	pmax		
	comp=Z,78nm,1.4s						
KULLO	Kullorsuaq	67.45	5	i P	P	16 50 10.0	+0.3
	comp=Z,78nm,1.4s						
E04D	Cinebar	67.47	48	P	P	16 50 12.5	+2.1
	baz=301						
LOF	Lofoten	67.70	341	eP	P	16 50 12.0	+0.6
OBN	Obninsk	67.74	323	PFAKE		16 50 20.0	+8.2
OBN				LR	LR		
	comp=Z,700nm,19.0s						
OBN	Obninsk	67.74	323	c iP	P	16 50 11.7	-0.1
OBN				i *PP	pP	16 50 25.9	+1.3
OBN				i *SP	sP	16 50 31.3	+1.7
OBN				e		16 50 38.6	
OBN				e		16 52 44.4	
OBN				PPP	PPP	16 54 23.0	
OBN				eS	S	16 59 07.3	+1.2
OBN				e		16 59 57.5	
OBN				eSSS	SSS	17 06 31.1	
OBN				pmax	pmax		
	comp=Z,155nm,1.3s						
OBN				MLR	MLR		
	comp=Z,637nm,17.0s						
LPSR	Galich'ya Gora	67.97	320	eP	P	16 50 13.1	-0.2
LPSR				pmax	pmax		
	comp=Z,180nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,110nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,3µm,18.0s						
MAK	Makhachkala	68.22	308	eP	P	16 50 14.5	-0.6
MAK				eS	S	16 59 11.0	-1.2
MAK				eSS	SS	17 03 33.0	-2.0
MAK				pmax	pmax		
	comp=Z,166nm,1.2s						
MAK				MLR	MLR		
	comp=Z,659nm,15.0s						
ARMA	Armidale	68.28	171	eP	P	16 50 13.4	-2.1
	comp=Z,15nm,1.1s						
FINES	FINESS Array B	68.40	332	P	P	16 50 16.1	+0.2
	comp=Z,97nm,0.8s,baz=58,slow=7.2,SNR=130						
FINES				LR	LR	17 22 32.9	
	comp=Z,1µm,18.0s,baz=54,slow=38						
I03D	Drain, OR	68.49	51	P	P	16 50 18.4	+1.6
	baz=302						
VSR	Storozhevoye	68.61	319	eP	P	16 50 17.3	-0.1
VSR				pmax	pmax		
	comp=Z,90nm,0.8s						
VSR				pmax	pmax		
	comp=Z,210nm,1.2s						
VSR				MLR	MLR		
	comp=Z,2µm,16.0s						
VORD	Divnogorie	68.68	318	eP	P	16 50 17.5	-0.3
VORD				pmax	pmax		
	comp=Z,80nm,1.0s						
K02D	Willamette Mer	68.83	52	P	P	16 50 19.9	+0.9
	baz=302						
AKT	Akhty	68.85	306	eP	P	16 50 19.3	0.0
AKT				e		16 50 43.2	
AKT				pmax	pmax		
	comp=Z,87nm,0.9s						
GNBR	Gunib	68.86	308	⇑iP	P	16 50 19.9	+0.7
GNBR				pmax	pmax		
	comp=Z,82nm,1.0s						
G05D	Wamic, OR	68.91	49	P	P	16 50 20.5	+1.0
	baz=302						
MOR8	Moi Rana	68.91	340	eP	P	16 50 18.1	-0.9
I04A	Tendick Farm,	69.02	50	P	P	16 50 21.2	+1.0
	baz=302,SNR=5.5						
KONS	Konsvik	69.02	340	eP	P	16 50 21.8	+2.1
STKA	Stephens Creek	69.08	180	P	P	16 50 20.5	+0.1
	comp=Z,5.4nm,0.7s,baz=332,slow=8.8,SNR=8.6						
STKA				LR	LR	17 19 23.7	
	comp=Z,339nm,21.6s,baz=11,slow=35						
FORT	Forrest	69.14	192	eP	P	16 50 21.2	+0.4
	comp=Z,84nm,0.8s						
GROC	Groznyy	69.16	309	eP	P	16 50 20.9	0.0
GROC				e*PP	pP	16 50 34.2	+0.4
GROC				e		16 50 44.7	
GROC				e		16 52 54.6	
GROC				eS	S	16 59 24.9	+1.6
GROC				e		17 00 15.7	
GROC				pmax	pmax		
	comp=Z,59nm,1.0s						
I05D	Terrebonne, OR	69.38	50	P	P	16 50 23.1	+0.7
	baz=303						
J04D	Umpqua Nationa	69.50	51	P	P	16 50 24.3	+0.9
	baz=302						
NEW	Newport	69.68	44	P	P	16 50 24.9	+0.7
	baz=304,SNR=8.1						
GOF	Gofitskoye	69.82	312	⇓iP	P	16 50 25.7	+0.7
GOF				pmax	pmax		
	comp=Z,251nm,1.5s						
PINE	Pine Mountain	69.92	50	eP	P	16 50 28.0	+2.1
	comp=Z,38nm,1.0s						
L04D	Klamath Falls	69.93	52	P	P	16 50 27.3	+1.4
	baz=303						
YBH	Yreka Blue Hor	69.94	52	P	P	16 50 27.3	+1.3
	comp=Z,6.0nm,1.0s,baz=85,slow=0.8,SNR=5.6						
J05D	Fort Rock, OR	70.02	50	P	P	16 50 26.9	+0.4
	baz=303,SNR=7.5						
M02C	Callahan	70.03	53	P	P	16 50 27.5	+1.0
	baz=303						
VSU	Vasula	70.06	330	eP	P	16 50 26.9	+0.8
VSU				IAmb	IAmb	16 50 28.0	
	comp=Z,302nm,1.1s						
VSU	Vasula	70.06	330	c iP	P	16 50 27.5	+1.3
VSU				pmax	pmax		
	comp=Z,279nm,1.1s						
SUMG	Summit	70.16	0	PFAKE		16 50 40.0	+13
SUMG				LR	LR		
	comp=Z,600nm,21.0s						
SUMG	Summit	70.16	0	i P	P	16 50 28.9	+1.8
SUMG				pmax	pmax		
	comp=Z,190nm,1.1s						
SUMG	Summit	70.16	0	i P	P	16 50 28.9	+1.8
	comp=Z,189nm,1.1s						
NCK	Nalchik	70.35	310	i P	P	16 50 28.8	+0.5
NCK				pmax	pmax		
	comp=Z,45nm,1.3s						
N02D	Trinity Center	70.35	53	P	P	16 50 29.2	+0.8
	baz=303						
MORW	Morawa	70.46	204	eP	P	16 50 29.5	+0.6
	comp=Z,38nm,1.0s						
M04C	Macdoel	70.46	52	P	P	16 50 30.8	+1.6
	baz=303						
ZEI	Tsey	70.55	309	eP	P	16 50 28.2	-1.6
ZEI				pmax	pmax		
	comp=Z,87nm,1.5s						
KBZ	Khabaz	70.64	311	P	P	16 50 30.6	+0.5
	comp=Z,47nm,0.9s,baz=48,slow=3.4,SNR=49						
KBZ				LR	LR	17 26 21.4	
	comp=Z,993nm,18.0s,baz=52,slow=40						
KIV	Kislovodsk	70.64	311	eP	P	16 50 31.0	+0.8
	comp=Z,174nm,1.1s						
KIV				LR	LR		
	comp=Z,600nm,19.0s						
KIV	Kislovodsk	70.64	311	⇓iP	P	16 50 32.0	+1.8
KIV	Kislovodsk	70.64	311	i P	P	16 50 30.8	+0.6
	SNR=28						
KIV	Kislovodsk	70.64	311	eP	P	16 50 31.7	+1.5
KIV				e		16 50 50.6	
KIV				eS	S	16 59 41.3	+0.3
KIV				eSS	SS	17 04 13.9	+1.4
KIV				pmax	pmax		
	comp=Z,467nm,1.1s						
KIV				pmax	pmax		
	comp=Z,212nm,4.4s						
KIV				MLR	MLR		
	comp=Z,2µm,18.0s						
KIV	Kislovodsk	70.64	311	P	P	16 50 31.5	+1.2
	SNR=22						
KIV				P	P	16 50 31.5	+1.2
	SNR=22						
O02D	Mt. Diablo Mer	70.73	54	P	P	16 50 32.0	+1.2
	baz=303						
NSS	Namsos	70.83	339	eP	P	16 50 30.6	-0.2
NEY	Neytrino	71.02	310	i P	P	16 50 34.3	+1.7
NEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BIDO	Bidbid	71.07	285	P	P	16 50 34.8	+1.8
	SNR=11						
BIDO				P	P	16 50 34.8	+1.8
	SNR=11						
BANOM	Banah	71.14	288	i P	P	16 50 34.7	+1.2
	SNR=22						
BANOM	Banah	71.14	288	P	P	16 50 34.1	+0.7
	SNR=6.1						
SHME	Shamm	71.19	289	i P	P	16 50 33.9	+0.2
	SNR=65						
O03E	Paynes Creek	71.30	53	P	P	16 50 35.3	+1.1
	baz=304						
GNI	Garni	71.48	307	PFAKE		16 50 50.0	+15
GNI				LR	LR		
	comp=Z,800nm,19.0s						
GNI	Garni	71.48	307	P	P	16 50 36.6	+1.2
GNI	Garni	71.48	307	ceP	P	16 50 38.1	+2.7
GNI				pmax	pmax		
	comp=Z,404nm,1.3s						
MDH	Madha	71.48	288	i P	P	16 50 35.4	-0.1
	SNR=6.3						
BMO	Blue Mountains	71.50	47	PFAKE		16 50 50.0	+15
BMO				LR	LR		
	comp=Z,100nm,22.0s						
MSFE	Esma-Masafi	71.56	288	i P	P	16 50 36.4	+0.4
	SNR=20						
AKH	Akhalkalaki	71.57	308	⇑iP	P	16 50 37.0	+1.1
SCO	Scoresbysund	71.60	354	PFAKE		16 50 50.0	+15
SCO				LR	LR		
	comp=Z,300nm,22.0s						
SCO	Scoresbysund	71.60	354	i P	P	16 50 36.5	+1.1
SCO				pmax	pmax		
	comp=Z,32nm,1.0s						
SCO	Scoresbysund	71.60	354	i P	P	16 50 36.5	+1.1
	comp=Z,32nm,1.0s						
UOSS	Minazif	71.75	288	eP	P	16 50 37.3	+0.2
	comp=Z,87nm,0.9s						
UOSS				LR	LR		
	comp=Z,300nm,20.0s						
UOSS	Minazif	71.75	288	i P	P	16 50 37.1	0.0
	SNR=21						
UOSS	Minazif	71.75	288	P	P	16 50 37.5	+0.4
	SNR=8.1						
UOSS				P	P	16 50 37.5	+0.4
	SNR=8.1						
HATD	Hatta, Dubai	71.87	288	i P	P	16 50 38.2	+0.3
	SNR=31						
HATD	Hatta, Dubai	71.87	288	P	P	16 50 38.5	+0.6
	SNR=11						
HATD				P	P	16 50 38.5	+0.6
	SNR=11						
IZAR	Zarasai	72.02	327	eP	P	16 50 38.7	+0.5
IZAR				IAmb	IAmb	16 50 41.0	
	comp=Z,33nm,1.1s						
MICGM	Minsk	72.12	326	eP	P	16 50 39.0	+0.2
MICGM				eLR	LR	17 24 10.0	
MNK	Minsk	72.12	326	eP	P	16 50 39.0	+0.2
NAZ	Nazwa, Dubai	72.14	288	i P	P	16 50 40.2	+0.8
	SNR=7.6						
NAZ	Nazwa, Dubai	72.14	288	P	P	16 50 40.3	+0.9
	SNR=5.9						
NAZ				P	P	16 50 40.3	+0.9
	SNR=5.9						
ISAL	Salakas	72.19	327	eP	P	16 50 39.6	+0.4
ISAL				IAmb	IAmb	16 50 42.3	
	comp=Z,82nm,1.1s						
BSY	Bisya	72.21	285	P	P	16 50 40.7	+0.9
	SNR=5.1						
MSO	Missoula	72.27	44	PFAKE		16 50 50.0	+10
MSO				LR	LR		
	comp=Z,200nm,21.0s						
MSO	Missoula	72.27	44	P	P	16 50 41.4	+1.4
	baz=306						
IIGN	Ignalina	72.30	327	eP	P	16 50 40.3	+0.5
IIGN				IAmb	IAmb	16 50 42.8	
	comp=Z,46nm,1.0s						
TBLU	Trondheim	72.30	339	eP	P	16 50 39.3	-0.4
FAQ	Al Faqa, Dubai	72.32	288	i P	P	16 50 40.3	-0.2
	SNR=13						
NACGM	Naroch	72.35	327	e	P	16 50 41.0	+0.9
NACGM				eLQ	LQ	17 18 04.0	
NACGM				eLR	LR	17 24 16.0	
ALNE	Al Ain	72.58	287	i P	P	16 50 41.9	-0.2
	SNR=25						
ASUD	Al Ashush, Dub	72.59	288	i P	P	16 50 42.4	+0.3
	SNR=19						
ASUD	Al Ashush, Dub	72.59	288	P	P	16 50 42.5	+0.5
	SNR=7.7						
MHTO	MHTO	72.59	283	P	P	16 50 42.5	+0.3
	SNR=9.7						
MHTO				P	P	16 50 42.5	+0.3
	SNR=9.7						
SOC	Sochi	72.63	312	eP	P	16 50 40.7	-1.3

SOC				*e**SP	sP	16 51 00.9	+1.0
SOC				*e*PPP	PPP	16 55 07.1	
SOC				*e*S	S	17 00 03.2	-0.4
SOC				*e**SS	sS	17 00 28.4	+3.3
SOC				pmax	pmax		
	comp=Z,67nm,0.9s						
SOC				MLR	MLR		
	comp=Z,930nm,21.0s						
ILULI	Ilulissat	73.13	5	PFAKE		16 51 00.0	+15
ILULI				LR	LR		
	comp=Z,400nm,20.0s						
FFC	Flin Flon	73.21	33	*i* P	P	16 50 46.7	+1.5
ANN	Anapa	73.24	314	*e*P	P	16 50 45.4	-0.2
ANN				*e**PP	PcP	16 51 00.4	-1.5
ANN				*e*S	SKiKP	17 00 16.0	+2.7
ANN				pmax	pmax		
	comp=Z,134nm,1.4s						
ANN				MLR	MLR		
	comp=Z,597nm,15.0s						
DOMB	Dombas	73.59	339	*e*P	P	16 50 48.1	+0.7
MOL	Molde	73.60	340	*e*P	P	16 50 48.0	+0.6
NB2	NORSAR Subarra	73.74	337	P	P	16 50 48.6	+0.2
	comp=Z,112nm,1.1s,baz=39,slow=6.2						
NB2	NORSAR Subarra	73.74	337	P	P	16 50 48.6	+0.2
	baz=39,slow=6.2						
NOA	NORSAR Array B	73.74	337	P	P	16 50 48.6	+0.2
	comp=Z,51nm,0.9s,baz=39,slow=5.8,SNR=108						
NOA				LR	LR	17 26 47.2	
	comp=Z,1µm,19.3s,baz=45,slow=39						
EGMT	Eagleton	73.81	41	PFAKE		16 51 00.0	+11
EGMT				LR	LR		
	comp=Z,300nm,20.0s						
EGMT	Eagleton	73.81	41	P	P	16 50 49.3	+0.3
	baz=308,SNR=16						
NC602	NORSAR Array S	73.88	337	*e*P	P	16 50 49.1	0.0
HLID	Hailey	73.94	47	P	P	16 50 51.1	+1.1
	baz=307,SNR=13						
AKASG	Malin Array Be	73.95	322	P	P	16 50 49.6	-0.1
	comp=Z,24nm,0.6s,baz=45,slow=6.3,SNR=83						
AKASG				LR	LR	17 26 43.6	
	comp=Z,870nm,18.6s,baz=65,slow=38						
AKBB	Malin Array Si	73.95	322	PFAKE		16 51 00.0	+10
AKBB				LR	LR		
	comp=Z,1µm,18.0s						
AKN	Aaknes	74.07	340	*e*P	P	16 50 50.6	+0.4
BOZ	Bozeman (W)	74.29	44	P	P	16 50 52.6	+0.6
	baz=308,SNR=31						
RYN	Ryan	74.33	53	PFAKE		16 51 00.0	+7.6
RYN				LR	LR		
	comp=Z,300nm,20.0s						
SUW	Suwalki	74.50	327	*e*P	P	16 50 53.5	+0.7
SUW	Suwalki	74.50	327	PFAKE		16 51 00.0	+7.2
SUW				LR	LR		
	comp=Z,1µm,18.0s						
SUW	Suwalki	74.50	327	*e*P	P	16 50 53.5	+0.7
NVAR	Mina Array Bea	74.59	53	P	P	16 50 55.0	+1.0
	comp=Z,8.9nm,1.1s,baz=290,slow=5.2,SNR=17						
NVAR				LR	LR	17 17 31.7	
	comp=Z,180nm,21.5s,baz=279,slow=31						
OSL	Oslo	74.76	337	*e*P	P	16 50 55.1	+0.9
SKAR	Skarslia	74.91	338	*e*P	P	16 50 56.3	+1.2
SIM	Simferopol'	75.03	315	*ce*P	P	16 50 57.0	+1.0
SIM				S	S	17 00 32.0	+1.4
SIM				pmax	pmax		
	comp=Z,56nm,1.0s						
SIM				MLR	MLR		
	comp=Z,400nm,16.5s						
HYA	Hoyanger	75.12	339	*e*P	P	16 50 57.3	+1.1
ELK	Elko	75.13	50	LR	LR	17 18 11.3	
	comp=Z,240nm,20.2s,baz=320,slow=31						
KONO	Kongsberg	75.34	337	PFAKE		16 51 10.0	+12
KONO				LR	LR		
	comp=Z,1µm,18.0s						
KONO	Kongsberg	75.34	337	*ce*P	P	16 50 58.2	+0.7
KONO				pmax	pmax		
	comp=Z,67nm,1.7s						
KONO	Kongsberg	75.34	337	*e*P	P	16 50 57.9	+0.4
SFJD	Kangerlussuaq	75.36	5	*e*P	P	16 50 58.2	+0.7
	comp=Z,18nm,0.8s						
SFJD	Kangerlussuaq	75.36	5	*e*P	P	16 50 58.2	+0.7
SFJD				pmax	pmax		
	comp=Z,18nm,0.8s						
SFJD	Kangerlussuaq	75.36	5	*i* P	P	16 50 57.5	0.0
	comp=Z,19nm,0.9s						
VES	Vestal, Richgr	75.60	56	P	P	16 51 00.8	+1.4
	baz=306						
H17A	Grant Village	75.62	45	P	P	16 51 02.6	+2.8
	baz=309						
IMW	Indian Meadow	75.73	45	PFAKE		16 51 10.0	+10
IMW				LR	LR		
	comp=Z,200nm,20.0s						
RLMT	Red Lodge	75.89	44	P	P	16 51 01.8	+0.6
	baz=309,SNR=9.7						
CWC	Cottonwood Cre	75.90	55	P	P	16 51 02.0	+0.5
	baz=306						
ASK	Askoy	75.96	339	*e*P	P	16 51 01.9	+0.9
BER	Bergen	76.00	339	*e*P	P	16 51 01.8	+0.5
ODD1	Odda	76.02	338	*e*P	P	16 51 02.4	+0.9
GRAC	Grapevine Rang	76.03	54	P	P	16 51 03.3	+1.2
	baz=307						
ISA	Isabella, Lake	76.10	56	P	P	16 51 02.9	+0.4
	baz=306						
SNOW	Snow King Moun	76.10	46	PFAKE		16 51 10.0	+7.4
SNOW				LR	LR		
	comp=Z,300nm,19.0s						
R11A	Troy Canyon, C	76.36	52	P	P	16 51 04.9	+0.9
	baz=307,SNR=20						
DGMT	Dagmar	76.36	39	P	P	16 51 04.0	+0.4
	baz=312,SNR=5.6						
BLS5	Blasjo	76.47	338	*e*P	P	16 51 05.7	+1.7
LAO	LASA Array	76.51	41	P	P	16 51 04.8	+0.2
	baz=311,SNR=11						
MPMC	Manual Prospec	76.51	55	P	P	16 51 05.8	+0.8
	baz=307,SNR=7.1						
KIS	Kishinev	76.56	320⇑	*i*P	P	16 51 05.0	+0.2
	comp=Z,180nm,1.5s						
KIS	Kishinev	76.56	320	*e*PcP	PcP	16 51 16.0	-0.2
KIS				*e*S	S	17 00 46.0	-1.5
KIS	Kishinev	76.56	320	*e*P	P	16 51 05.0	+0.2
KIS				*e*		16 51 16.0	
KIS				*e*S	S	17 00 46.0	-1.5
KIS				*e*PS	PnS	17 01 45.0	+15
KIS				pmax	pmax		
	comp=Z,180nm,1.5s						
KIS				MLR	MLR		
	comp=Z,2µm,18.0s						
KIS				MLR	MLR		
	comp=N,1µm,17.0s						
MILM	Milestii Mici	76.62	319⇑	*i*P	P	16 51 05.4	+0.3
FURC	Furnace Creek,	76.67	54	P	P	16 51 06.2	+0.7
	baz=307,SNR=6.8						
LRMC	Laurel Mtn Rad	76.73	55	P	P	16 51 06.9	+0.8
	baz=307						
TPNV	Topopah Spring	76.78	54	P	P	16 51 07.6	+1.2
	baz=307,SNR=9.9						
HOMB	Homborsund	76.78	337	*e*P	P	16 51 06.6	+0.8
EDW2	Edwards Air Fo	76.88	56	P	P	16 51 07.7	+0.8
	baz=307						
DUG	Dugway, Tooele	76.93	49	P	P	16 51 08.2	+1.0
	baz=308,SNR=11						
BZK	Bozkurt	76.96	313⇑	*i*P	P	16 51 08.3	+1.2
LVV	L'vov	77.02	324	*e*P	P	16 51 08.2	+0.9
BSD	Bornholm Skovb	77.03	332	*i* P	P	16 51 07.3	+0.1
BSD				pmax	pmax		
	comp=Z,81nm,1.1s						
BSD	Bornholm Skovb	77.03	332	*i* P	P	16 51 07.3	+0.1
	comp=Z,81nm,1.1s						
BEL	Belsk	77.07	327	*e*P	P	16 51 08.4	+0.9
BEL	Belsk	77.07	327	*e*P	P	16 51 08.4	+0.9
SNART	Snartemo	77.13	337	*e*P	P	16 51 08.4	+0.6
BORG	Borgarnes	77.14	353	*i* P	P	16 51 11.1	+3.4
PASC	Pasadena Art C	77.18	57	PFAKE		16 51 20.0	+12
PASC				LR	LR		
	comp=Z,700nm,19.0s						
BW06	Boulder Array	77.22	46	P	P	16 51 09.3	+0.4
	baz=310,SNR=12						
PDAR	Pinedale Array	77.22	46	P	P	16 51 09.6	+0.7
	comp=Z,4.6nm,0.8s,baz=299,slow=1.5,SNR=33						
MWC	Mount Wilson	77.23	57	PFAKE		16 51 20.0	+11
MWC				LR	LR		
	comp=Z,700nm,21.0s						
SHOC	Shoshone, Teco	77.39	54	P	P	16 51 10.6	+0.9
	baz=307						
GSC	Goldstone, Bar	77.41	55	P	P	16 51 10.8	+1.0
	baz=307						
COP	Copenhagen	77.50	333	*e*P	P	16 51 09.8	0.0
COP				pmax	pmax		
	comp=Z,43nm,0.9s						
COP				MLR	MLR		
	comp=Z,720nm,16.0s						
COP	Copenhagen	77.50	333	*i* P	P	16 51 09.8	0.0
	comp=Z,43nm,0.9s						
	comp=Z,720nm,16.0s						
PRAR	RASCA	77.64	321⇑	*i*P	P	16 51 11.9	+1.1
ILGA	Ilgaz	77.70	313	PFAKE		16 51 20.0	+8.5
ILGA				LR	LR		
	comp=Z,400nm,21.0s						
TLCR		77.76	318⇑	*i*P	P	16 51 11.7	+0.2
KWP	Kalwaria Pacla	77.77	324	*e*P	P	16 51 12.4	+0.9
KWP	Kalwaria Pacla	77.77	324	PFAKE		16 51 20.0	+8.5
KWP				LR	LR		
	comp=Z,6µm,21.0s						
KWP	Kalwaria Pacla	77.77	324	*e*P	P	16 51 12.4	+0.9
TUQ	Turquoise Moun	77.90	55	P	P	16 51 13.5	+0.8
	baz=308,SNR=7.6						
BURAR	Bucovina Array	77.97	322⇑	*i*P	P	16 51 14.2	+1.4
HEC	Hector,Ludlow	78.00	55	P	P	16 51 14.3	+1.1
	baz=307						
MUD	Monsted U'grnd	78.02	335	*i* P	P	16 51 13.5	+0.8
MUD				pmax	pmax		
	comp=Z,45nm,1.0s						
MUD	Monsted U'grnd	78.02	335	*i* P	P	16 51 13.5	+0.8
	comp=Z,45nm,1.0s						
RGN	Rugen	78.06	332	PFAKE		16 51 20.0	+7.0
RGN				LR	LR		
	comp=Z,1µm,19.0s						
CFR	Carcaliu	78.12	318⇑	*i*P	P	16 51 13.8	+0.3
PETR	Petresti	78.23	319⇓	*i*P	P	16 51 15.1	+1.0
ODBI	Odobesti	78.30	319⇑	*i*P	P	16 51 16.4	+1.9
VRI	Vrincioaia	78.40	320⇑	*i*P	P	16 51 16.5	+1.4
PLOR	Plostina	78.45	320⇑	*i*P	P	16 51 16.8	+1.4
TIRR	Tirgusor	78.46	318	PFAKE		16 51 30.0	+15
TIRR				LR	LR		
	comp=Z,4µm,18.0s						
TIRR	Tirgusor	78.46	318⇑	*i*P	P	16 51 15.9	+0.5
KOLS	Kolonicke sedl	78.46	324	*e*P	P	16 51 16.5	+1.2
KOLS				pmax	pmax		
	comp=Z,28nm,1.2s						
KOLS	Kolonicke sedl	78.46	324	*e*P	P	16 51 16.5	+1.2
GMRC	Granite Mounta	78.47	55	P	P	16 51 16.2	+0.3
	baz=308						
HARR	Harsova	78.56	318⇑	*i*P	P	16 51 16.5	+0.6
TLB	Topalu	78.57	318⇑	*i*P	P	16 51 16.2	+0.2
BR131	Keskin Array S	78.58	312	P	P	16 51 16.8	+0.4
	SNR=20						
BRTR	Keskin Array B	78.58	312	P	P	16 51 16.6	+0.2
	comp=Z,15nm,1.0s,baz=86,slow=4.0,SNR=47						
BRTR				PP	PP	16 54 17.1	+3.1
	comp=Z,2.0nm,0.7s,baz=67,slow=6.9,SNR=3.8						
BRTR				LR	LR	17 30 41.9	
	comp=Z,304nm,18.5s,baz=54,slow=39						
BRTR	Keskin Array B	78.58	312	P	P	16 51 16.6	+0.2
BRTR						16 54 17.1	
BRTR				pmax	pmax		
	comp=Z,14nm,1.0s						
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR				MLR	MLR		
	comp=Z,304nm,18.5s						
BISRR	Bisoca	78.62	319⇑	*i*P	P	16 51 18.3	+1.9
PFO	Pinyon Flats O	78.66	56	LR	LR	17 19 08.1	
	comp=Z,567nm,21.9s,baz=320,slow=30						
PFO	Pinyon Flats O	78.66	56	PFAKE		16 51 30.0	+13
PFO				LR	LR		
	comp=Z,700nm,21.0s						
PFO	Pinyon Flats O	78.66	56	*i* P	P	16 51 19.8	+2.9
PFO	Pinyon Flats O	78.66	56	P	P	16 51 17.4	+0.5
	baz=308						
OJC	Ojcow	78.66	326	*e*P	P	16 51 17.1	+0.7
OJC	Ojcow	78.66	326	*e*P	P	16 51 17.1	+0.7
UZH	Uzhgorod	78.67	324⇓	*i*P	P	16 51 17.6	+1.2
UZH				*e*		16 51 24.9	
UZH				*e*		16 51 30.0	
UZH				*e*S	S	17 01 09.2	-0.9
UZH				MLR	MLR		
	comp=Z,300nm,17.0s						
OZUR		78.72	320⇑	*i*P	P	16 51 18.2	+1.3
BELC	Belle Mtn. Jos	78.73	56	P	P	16 51 17.6	+0.3
	baz=308						
ARCR	ARCALIA	78.76	322⇑	*i*P	P	16 51 18.5	+1.5
BMR	Baia Mare	78.77	323⇓	*i*P	P	16 51 18.2	+1.2
TRPA	Tarpa	78.90	323⇑	*i*P	P	16 51 18.8	+1.1
TRPA	Tarpa	78.90	323⇑	*i*P	P	16 51 18.1	+0.4
ANTO	Ankara	78.99	312	*e*P	P	16 51 19.3	+0.8
	comp=Z,48nm,1.1s						
ANTO	Ankara	78.99	312⇑	*i*P	P	16 51 19.4	+0.8
ANTO	Ankara	78.99	312	*e*P	P	16 51 19.3	+0.8
ANTO				pmax	pmax		
	comp=Z,48nm,1.1s						
ANTO	Ankara	78.99	312	P	P	16 51 19.1	+0.5
	SNR=9.2						
ANTO				P	P	16 51 19.1	+0.5
	SNR=9.2						
ISR	Istrita	79.00	319⇑	*i*P	P	16 51 20.2	+1.8
K22A	Casper	79.00	44	P	P	16 51 19.0	+0.4
	baz=311						
ULM	Lac du Bonnet	79.01	33	P	P	16 51 18.1	-0.1
	comp=Z,22nm,1.1s,baz=324,slow=6.5,SNR=9.0						
ULM				LR	LR	17 27 16.3	
	comp=Z,197nm,21.9s,baz=304,slow=36						
DOPR	Dopca	79.01	320⇑	*i*P	P	16 51 20.4	+2.0
ICOR	Ion Corvin	79.01	318⇓	*i*P	P	16 51 20.0	+1.6
NIE	Niedzica	79.02	325	*e*P	P	16 51 19.4	+0.9
NIE	Niedzica	79.02	325	*e*P	P	16 51 19.4	+0.9
MLR	Muntele Rosu	79.05	320	PFAKE		16 51 30.0	+11
MLR				LR	LR		
	comp=Z,2µm,20.0s						
MLR	Muntele Rosu	79.05	320⇑	*i*P	P	16 51 19.3	+0.5
PSN	Preselentsi	79.10	317	*i* P	P	16 51 20.0	+1.1
MONP2	Monument Peak	79.12	57	P	P	16 51 20.6	+1.1
	baz=308						
IRM	Iron Mountain	79.19	55	P	P	16 51 20.1	+0.5
	baz=308						
KIBS	BOLU	79.19	313	*i* P	P	16 51 20.8	+1.1
KIBS				IAML_P			
	comp=Z,39nm,0.5s						
BC3	Big Chuckawall	79.30	56	P	P	16 51 21.5	+1.2
	baz=308						
SECR		79.30	319⇓	*i*P	P	16 51 21.1	+1.1
RSSD	Black Hills	79.37	42	P	P	16 51 21.2	+0.5
	baz=313						
CJR	Cluj-Napoca	79.39	322⇑	*i*P	P	16 51 22.1	+1.6
IKP	In-Ko-Pah, Jac	79.48	57	P	P	16 51 22.2	+0.9
	baz=308						
SWSC	Sam W. Stewart	79.50	57	P	P	16 51 22.2	+0.9
	baz=308						
MDUB	Mudurnu	79.54	313	PFAKE		16 51 30.0	+8.5
MDUB				LR	LR		
	comp=Z,2µm,19.0s						
VOIR		79.55	320⇑	*i*P	P	16 51 22.7	+1.2
LANS	Liptovska Anna	79.59	326	*e*P	P	16 51 23.2	+1.6
LANS				pmax	pmax		
	comp=Z,23nm,1.1s						
LANS	Liptovska Anna	79.59	326	*e*P	P	16 51 23.2	+1.6
OKC	Ostrava-Krasne	79.67	327	*e*P	P	16 51 22.9	+1.0
OKC				*e*		16 51 40.3	
OKC				MLR	MLR		
	comp=Z,1µm,15.9s						
OKC	Ostrava-Krasne	79.67	327	*e*P	P	16 51 22.9	+1.0
OKC				*e*sP	sP	16 51 40.3	+0.4
OKC				AMS	AMS	17 29 40.0	
	comp=Z,1µm,15.9s						
O20A	White River Ci	79.67	47	P	P	16 51 22.8	+0.3
	baz=311						
KSP	Ksiaz	79.71	328	*e*P	P	16 51 22.9	+0.8
KSP	Ksiaz	79.71	328	*e*P	P	16 51 22.9	+0.8
LTVH	Ltavrtes, Hu	79.73	323	*e*P	P	16 51 39.1	+17
PDMCI	Parker Dam,Lak	79.75	55	P	P	16 51 23.7	+1.1
	baz=309						
DRGR		79.77	322⇑	*i*P	P	16 51 23.4	+0.8
ARR	Arges	79.81	320⇓	*i*P	P	16 51 24.2	+1.3
PRD	Provadia	79.85	317	*i* P	P	16 51 24.4	+1.4
Y12C	Blythe	79.85	55	P	P	16 51 23.8	+0.6
	baz=308						
OSTC	Ostas	79.96	328	*e*P	P	16 51 24.7	+1.2
OSTC				AMS	AMS	17 30 00.0	
	comp=Z,1µm,16.8s						
MORC	Moravsky Berou	79.98	327	PFAKE		16 51 40.0	+16
MORC				LR	LR		
	comp=Z,1µm,18.0s						
MORC	Moravsky Berou	79.98	327⇓	*i*P	P	16 51 24.4	+0.7
MORC	Moravsky Berou	79.98	327	*e*P	P	16 51 24.3	+0.6
CHVC	Chvalec	80.00	328	*e*P	P	16 51 24.6	+0.8
CHVC				AMS	AMS	17 29 30.0	
	comp=Z,1µm,17.4s						
DPC	Dobruska-Polom	80.07	328	*e*P	P	16 51 25.1	+0.9
DPC				*e*		16 51 32.7	
DPC				*e*S	S	17 01 21.3	-3.8
DPC				MLR	MLR		
	comp=Z,1µm,16.7s						
DPC	Dobruska-Polom	80.07	328	*e*P	P	16 51 25.1	+0.9
DPC				*e*PCP	PcP	16 51 32.7	+1.3
DPC				*e*S	S	17 01 21.3	-3.8
DPC				AMS	AMS	17 30 00.0	
	comp=Z,1µm,16.7s						
RAZG	Razgrad	80.07	318⇑	*i*P	P	16 51 25.4	+1.1
GLA	Glamis	80.08	56	P	P	16 51 25.1	+0.6
	baz=308						
UPC	Upice	80.08	328	*e*P	P	16 51 24.8	+0.6
UPC				MLR	MLR		
	comp=Z,1µm,16.5s						
UPC	Upice	80.08	328	*e*P	P	16 51 24.8	+0.6
UPC				AMS	AMS	17 29 40.0	
	comp=Z,1µm,16.5s						
LOT	Lotru	80.19	321⇑	*i*P	P	16 51 25.5	+0.5
KDHN	Kadinhani	80.26	311	*i* P	P	16 51 26.4	+0.9
KDHN				IAML_P			
	comp=Z,242nm,1.1s						
PSZ	Piszkesteto	80.29	324	PFAKE		16 51 40.0	+15
PSZ				LR	LR		
	comp=Z,600nm,18.0s						
PSZ	Piszkesteto	80.29	324⇑	*i*P	P	16 51 25.1	-0.4
PV10	Paradox Valley	80.35	49	PFAKE		16 51 40.0	+14
PV10				LR	LR		
	comp=Z,700nm,19.0s						
VYHS	Vyhne	80.35	325	*e*P	P	16 51 26.5	+0.8
VYHS				pmax	pmax		
	comp=Z,64nm,2.0s						
VYHS	Vyhne	80.35	325	*e*P	P	16 51 26.5	+0.8
PV04	Paradox Valley	80.42	49	PFAKE		16 51 40.0	+14
PV04				LR	LR		
	comp=Z,800nm,22.0s						
AGMN	Agassiz Nation	80.44	35	PFAKE		16 51 40.0	+14
AGMN				LR	LR		
	comp=Z,500nm,22.0s						
AGMN	Agassiz Nation	80.44	35	P	P	16 51 26.0	-0.1
	baz=317,SNR=7.6						
N23A	Red Feather La	80.49	45	P	P	16 51 27.6	+0.7
	baz=312,SNR=16						
PHWY	Pilot Hill	80.49	45	PFAKE		16 51 40.0	+13
PHWY				LR	LR		
	comp=Z,200nm,18.0s						
KONT	Konya--Tatoy	80.49	311	*i* P	P	16 51 27.9	+1.3
KONT				IAML_P			
	comp=Z,94nm,0.1s						
RAYN	Ar Rayn	80.56	292	*e*P	P	16 51 27.2	0.0
	comp=Z,36nm,0.9s						
RAYN				LR	LR		
	comp=Z,1µm,20.0s						
RAYN	Ar Rayn	80.56	292	*i* P	P	16 51 27.1	-0.2
	SNR=20						
RAYN	Ar Rayn	80.56	292	*e*P	P	16 51 27.2	0.0
RAYN				pmax	pmax		
	comp=Z,36nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,1µm,20.0s						
KMER	Konya-Meram	80.60	311	*i* P	P	16 51 28.1	+0.8
KMER				IAML_P			
	comp=Z,0.4nm,0.1s						
JAVC	Velka Javorina	80.61	326	*e*P	P	16 51 28.8	+1.7
SIRR	Siria	80.65	322⇑	*i*P	P	16 51 28.0	+0.7
BRG	Berggiesshubel	80.66	329	*e*P	P	16 51 27.7	+0.5
	comp=Z,40nm,1.0s						
BRG				*e*sP	sP	16 51 46.0	+0.8
	comp=Z,14nm,1.0s						
BRG				S	S	17 01 27.0	-4.1
BRG				SS	SS	17 06 41.0	-2.3
	comp=N,933nm,15.7s						
	comp=E,505nm,19.4s						
	comp=Z,1µm,21.3s						
BRG	Berggiesshubel	80.66	329	*e*P	P	16 51 27.7	+0.5
BRG				*e**SP	sP	16 51 46.0	+0.8
BRG				S	S	17 01 27.0	-4.1
BRG				SS	SS	17 06 41.0	-2.3
BRG				pmax	pmax		
	comp=Z,40nm,1.0s						
BRG				pmax	pmax		
	comp=N,14nm,1.0s						
BRG				MLR	MLR		
	comp=N,933nm,15.7s						
BRG				MLR	MLR		
	comp=E,505nm,19.4s						
BRG				MLR	MLR		
	comp=Z,1µm,21.3s						
PVCC	Panska Ves	80.67	329	*e*P	P	16 51 28.6	+1.3
PVCC				MLR	MLR		
	comp=Z,1µm,16.1s						
PVCC	Panska Ves	80.67	329	*e*P	P	16 51 28.6	+1.3
PVCC				AMS	AMS	17 30 10.0	
	comp=Z,1µm,16.1s						
CLL	Collm	80.69	330	PFAKE		16 51 40.0	+13
CLL				LR	LR		
	comp=Z,900nm,18.0s						
CLL	Collm	80.69	330⇑	*i*P	P	16 51 27.5	+0.1
CLL				*i* *PP	pP	16 51 42.5	+2.0
CLL				*e*S	S	17 01 27.0	-4.5
CLL				pmax	pmax		
	comp=Z,66nm,1.0s						
CLL				MLR	MLR		
	comp=Z,900nm,18.2s						
CLL	Collm	80.69	330⇑	*i*P	P	16 51 27.5	+0.1
	comp=Z,66nm,1.0s						
CLL				*i* sP	pP	16 51 42.5	+2.0
CLL				*i*		16 51 48.2	
CLL				*e*sPP		16 54 54.0	
CLL				*e*S	S	17 01 39.0	+7.5
CLL				*e*PPS	PPS	17 02 40.0	
CLL				*e*SS	SS	17 06 54.0	+10
CLL				*e*(SSS)		17 10 42.0	
CLL				Lm	MLR	17 30 00.0	
	comp=N,700nm,20.7s						
CLL				Lm	MLR	17 30 00.0	
	comp=E,400nm,19.9s						
CLL				Lm	MLR	17 30 00.0	
	comp=Z,900nm,18.2s						
GZR	Gura Zlata	80.72	321⇑	*i*P	P	16 51 28.1	+0.3
VRAC	Vranov	80.74	327⇑	*i*P	P	16 51 28.4	+0.7
VRAC	Vranov	80.74	327	*e*P	P	16 51 28.6	+0.9
WUAZ	Wupatki	80.75	52	P	P	16 51 29.1	+0.8
	baz=310,SNR=9.5						
PV01	Paradox Valley	80.78	49	PFAKE		16 51 40.0	+12
PV01				LR	LR		
	comp=Z,400nm,19.0s						
BOLV	Bolvadin	80.83	312	*i* P	P	16 51 29.1	+0.5
BOLV				IAML_P			
	comp=Z,688nm,0.8s						
PHSR	Pinarhisar	80.84	316⇑	*i*P	P	16 51 29.7	+1.3
ELND	Elena	80.85	318⇑	*i*P	P	16 51 29.5	+1.1
ULDT	Uludag	80.94	314	*i* P	P	16 51 30.3	+1.1
ULDT				IAML_P			
	comp=Z,22nm,0.4s						
113A	Mohawk Valley,	80.95	56	PFAKE		16 51 40.0	+11
113A				LR	LR		
	comp=Z,500nm,20.0s						
KRUC	Moravsky	81.01	327	*e*P	P	16 51 29.7	+0.6
BUD	Budapest	81.01	325⇑	*i*P	P	16 51 30.1	+0.9
AMBH	Ambrzfalva	81.04	323⇑	*i*P	P	16 51 31.1	+1.7
GOPC	GO Pecny, Ondr	81.05	328	*e*P	P	16 51 30.0	+0.6
GOPC				*e*S	S	17 01 33.8	-1.5
GOPC				MLR	MLR		
	comp=Z,1µm,18.7s						
GOPC	GO Pecny, Ondr	81.05	328	*e*P	P	16 51 30.0	+0.6
GOPC				*e*S	S	17 01 33.8	-1.5
GOPC				AMS	AMS	17 30 20.0	
	comp=Z,1µm,18.7s						
PRU	Pruhonice	81.09	329	*e*P	P	16 51 30.5	+0.9
PRU				MLR	MLR		
	comp=Z,1µm,16.5s						
PRU	Pruhonice	81.09	329	*e*P	P	16 51 30.5	+0.9
PRU				AMS	AMS	17 30 20.0	
	comp=Z,1µm,16.5s						
EDRB	Edirne	81.12	317	P	P	16 51 31.1	+1.2
BZS	Buzias	81.14	322⇑	*i*P	P	16 51 30.1	+0.2
MODS	Modra-Piesok	81.14	326	*e*P	P	16 51 30.1	+0.2
MODS				pmax	pmax		

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      comp=Z,46nm,1.1s
MODS  Modra-Piesok       81.14 326  eP       P        16 51 30.1 +0.2
PLVB  Pleven             81.19 319⇑ iP       P        16 51 31.3 +1.1
TREC  Trest              81.22 328  eP       P        16 51 31.3 +1.0
TREC                                 MLR     MLR
      comp=Z,1µm,17.1s
TREC  Trest              81.22 328  eP       P        16 51 31.3 +1.0
TREC                                 AMS     AMS      17 30 40.0
      comp=Z,1µm,17.1s
HERR  Herculane          81.27 321⇓ iP       P        16 51 31.1 +0.5
KAC   Achnashellach      81.27 343  eP       P        16 51 31.1 +0.7
ASF   Jabal al Asfar     81.30 304   P       P        16 51 31.3 +0.2
      comp=Z,37nm,1.0s
ZST   Bratislava         81.35 326  eP       P        16 51 32.1 +1.1
ZST   Bratislava         81.35 326  eP       P        16 51 32.1 +1.1
BAGO  Egridir - ISPA     81.40 312  i P      P        16 51 32.4 +0.9
BAGO                                 IAML_P
      comp=Z,1µm,1.0s
MVCO  Mesa Verde         81.43  49   P       P        16 51 32.9 +0.9
      baz=311,SNR=9.6
GDZ   Gediz              81.44 313  i P      P        16 51 32.3 +0.5
GDZ                                  IAML_P
      comp=Z,66nm,0.1s
CSKK  Cskako             81.45 325  eP       P        16 51 44.0  +13
KSDI  Kefar Szold        81.47 305   P       P        16 51 33.2 +1.3
      comp=Z,77nm,0.8s
KPL   Plockton           81.50 343  eP       P        16 51 32.6 +1.1
KPL                                  IAmb    IAmb     16 51 34.3
      comp=Z,75nm,1.0s
KPL                                  IAMs_20 IAMs_20  17 24 44.1
      comp=Z,456nm,28.7s
KEPZ  Antalya-Kepez      81.63 310  i P      P        16 51 32.0 -0.7
KEPZ                                 IAML_P
      comp=Z,251nm,0.6s
ISP   Isparta            81.67 312   PFAKE            16 51 40.0 +7.0
ISP                                  LR      LR
      comp=Z,300nm,19.0s
HIZ   Hauiti             81.69 154   PFAKE            16 51 40.0 +7.4
HIZ                                  LR      LR
      comp=Z,800nm,19.0s
MDVR  Moldovita          81.69 321⇑ iP       P        16 51 33.2 +0.3
NKC   Novy Kostel        81.75 330  eP       P        16 51 33.8 +0.7
NKC                                  MLR     MLR
      comp=Z,1µm,17.2s
NKC   Novy Kostel        81.75 330  eP       P        16 51 33.8 +0.7
NKC                                  AMS     AMS      17 31 20.0
      comp=Z,1µm,17.2s
CSS   Mathiatis          81.82 308   PFAKE            16 51 50.0  +16
CSS                                  LR      LR
      comp=Z,400nm,22.0s
CSS   Mathiatis          81.82 308   P       P        16 51 33.5 -0.2
      comp=Z,12nm,0.9s
KHAL  Karahalli          81.91 313  i P      P        16 51 35.8 +1.5
KHAL                                 IAML_P
      comp=Z,38nm,0.4s
USAK  Uak-Merkez         81.96 313  i P      P        16 51 35.2 +0.8
USAK                                 IAML_P
      comp=Z,265nm,0.5s
SOP   Sopron             81.98 326⇑ iP       P        16 51 35.0 +0.7
BALB  Balikesir          81.99 314   PFAKE            16 51 50.0  +16
BALB                                 LR      LR
      comp=Z,1µm,19.0s
ESY   Stoneypath         82.01 341  eP       P        16 51 34.7 +0.4
S22A  4UR Ranch, Cre     82.08  48   P       P        16 51 36.4 +1.0
      baz=312,SNR=19
CONA  Conrad Observa     82.10 327  i PcP    P        16 51 36.1 +1.1
      comp=Z,40nm,1.1s,SNR=30
MMLI  Mount Malkishu     82.10 305   P       P        16 51 36.6 +1.3
      comp=Z,53nm,1.6s
MORH  Mrgy, Hungar       82.12 324  i P      P        16 51 34.8 -0.3
MORH  Mrgy, Hungar       82.12 324⇑ iP       P        16 51 35.0  0.0
KHC   Kasperske Hory     82.15 328   PFAKE            16 51 50.0  +15
KHC                                  LR      LR
      comp=Z,400nm,18.0s
ALN   Alexandroupoli     82.15 316   PFAKE            16 51 50.0  +15
ALN                                  LR      LR
      comp=Z,400nm,19.0s
ALN   Alexandroupoli     82.15 316   P       P        16 51 36.0 +0.7
EAB   Aberfoyle          82.22 342  eP       P        16 51 35.9 +0.6
EBL   Broad Law          82.25 341  eP       P        16 51 36.9 +1.3
RDO   Rodhopi            82.26 317  eP       P        16 51 36.0 +0.1
RDO   Rodhopi            82.26 317   P       P        16 51 36.0 +0.1
URZ   Urewera            82.26 152   PFAKE            16 51 50.0  +14
URZ                                  LR      LR
      comp=Z,900nm,22.0s
KORT  Korkueli           82.32 311  i P      P        16 51 36.5 +0.1
KORT                                 IAML_P
      comp=Z,1µm,0.8s
GEC2  GERESS Array S     82.32 328   PFAKE            16 51 50.0  +14
GEC2                                 LR      LR
      comp=Z,1µm,18.0s
GERES GERESS Array B     82.32 328   P       P        16 51 36.3 +0.1
      comp=Z,16nm,0.9s,baz=35,slow=4.9,SNR=68
GERES                                PP      PP       16 54 43.6 -1.0
      comp=Z,2.2nm,0.8s,baz=55,slow=8.5,SNR=3.8
GERES                                LR      LR       17 31 33.4
      comp=Z,900nm,18.1s,baz=38,slow=38
RZN   Rozhen             82.33 318  i P      P        16 51 37.4 +0.9
FRGS  Fruska Gora        82.35 323  i P      P        16 51 36.5 +0.2
MANT  Manisa             82.38 313   PFAKE            16 51 50.0  +13
MANT                                 LR      LR
      comp=Z,1µm,19.0s
MANT  Manisa             82.38 313  i P      P        16 51 38.3 +1.5
MANT                                 IAML_P
      comp=Z,86nm,0.2s
WALJ  Wala               82.41 304   P       P        16 51 37.4 +0.6
      comp=Z,34nm,0.8s
VTS   Vitosha            82.46 319   PFAKE            16 51 50.0  +13
VTS                                  LR      LR
      comp=Z,1µm,19.0s
VTS   Vitosha            82.46 319⇑ iP       P        16 51 38.1 +1.0
VTS   Vitosha            82.46 319  i P      P        16 51 38.0 +1.0
PGBU  Glenifferbraes     82.59 341  eP       P        16 51 37.9 +0.6
PGBU                                 IAmb    IAmb     16 51 39.9
      comp=Z,65nm,1.0s
PGBU                                 IAMs_20 IAMs_20  17 31 32.4
      comp=Z,507nm,20.0s
GOLH  Golhisar           82.63 312  i P      P        16 51 38.0  0.0
GOLH                                 IAML_P
      comp=Z,1µm,0.8s
EYMN  Ely                82.64  33   P       P        16 51 37.4 -0.4
      baz=320,SNR=8.4
GRA1  Grafenberg Arr     82.67 330   PFAKE            16 51 50.0  +12
GRA1                                 LR      LR
      comp=Z,700nm,18.0s
ESK   Eskdalemuir        82.70 341  eP       P        16 51 38.8 +0.9
      comp=Z,18nm,0.9s
ESK                                  LR      LR
      comp=Z,700nm,20.0s
ESK   Eskdalemuir        82.70 341  eP       P        16 51 38.1 +0.2
ESK                                  IAmb    IAmb     16 51 39.7
      comp=Z,19nm,0.9s
ESK                                  IAMs_20 IAMs_20  17 31 15.6
      comp=Z,705nm,21.8s
ESK   Eskdalemuir        82.70 341  i P      P        16 51 39.6 +1.7
ARSA  Arzberg            82.77 326  i PcP    P        16 51 39.3 +0.8
      comp=Z,35nm,1.9s,SNR=12
BEHE  Becsehely          82.80 325⇑ iP       P        16 51 38.1 -0.5
BKZ   Black Stump Fm     82.84 153   PFAKE            16 51 50.0  +11
BKZ                                  LR      LR
      comp=Z,800nm,20.0s
MOA   Molln              82.85 327  i PcP    P        16 51 39.6 +0.7
      comp=Z,26nm,1.1s,SNR=18
SDCO  Great Sand Dun     82.86  47   P       P        16 51 39.6 +0.1
      baz=312,SNR=16
TAVA  DENIZLI_Tavas      82.86 312  i P      P        16 51 40.5 +1.3
TAVA                                 IAML_P
      comp=Z,0.1nm,0.1s
BHH   Howats Hill        82.90 340  eP       P        16 51 39.6 +0.7
MMB   Musomiste          82.92 318  i P      P        16 51 40.0 +0.6
NVR   Nevrokopi          83.02 318   P       P        16 51 40.3 +0.4
JDRJ  Daraweish          83.03 303   P       P        16 51 40.8 +0.5
      comp=Z,211nm,1.1s
DIVS  Divibare           83.03 322  i P      P        16 51 40.0  0.0
KKB   Krupnik            83.07 319  i P      P        16 51 40.8 +0.7
TUC   Tucson             83.19  54   P       P        16 51 41.8 +0.8
      baz=310
KESW  Keswick, Cumbr     83.32 340  eP       P        16 51 42.0 +0.9
KESW                                 IAmb    IAmb     16 51 43.6
      comp=Z,32nm,1.0s
SRS   Serrai             83.33 318   P       P        16 51 40.3 -1.2
AYDN  Tasoluk            83.33 313  i P      P        16 51 43.5 +1.9
AYDN                                 IAML_P
      comp=Z,30nm,0.4s
PERS  Pernice            83.41 326  i P      P        16 51 42.1 +0.2
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SOKA  Soboth             83.42 326  i P      P        16 51 42.1 +0.2
      comp=Z,56nm,1.0s,SNR=49
ECSD  EROS Data Cent     83.44  38   P       P        16 51 42.1 +0.1
      baz=317,SNR=14
TURN  Turunc             83.44 312  i P      P        16 51 45.6 +3.6
TURN                                 IAML_P
      comp=Z,1µm,0.9s
YER   Yerkesik           83.45 312  eP       P        16 51 42.7 +0.5
YER   Yerkesik           83.45 312   P       P        16 51 42.7 +0.5
YER   Yerkesik           83.45 312  eP       P        16 51 42.7 +0.5
BBLS  Lazi&#263;i        83.49 322  i P      P        16 51 42.9 +0.6
GAL1  Galloway           83.50 341  eP       P        16 51 42.2 +0.3
GAL1                                 IAmb    IAmb     16 51 43.7
      comp=Z,28nm,0.9s
GAL1                                 IAMs_20 IAMs_20  17 32 20.3
      comp=Z,532nm,17.3s
HAPS  Han Pijesak,Bl     83.55 322  i P      P        16 51 42.5 -0.2
URLA  Izmir              83.59 314  i P      P        16 51 43.8 +0.9
URLA                                 IAML_P
      comp=Z,2µm,1.0s
E38A  The Farm, Brul     83.64  34   P       P        16 51 42.7 -0.3
      baz=320,SNR=10
CLGH  Cloghs, Cushen     83.65 342  eP       P        16 51 43.1 +0.3
CLGH                                 IAmb    IAmb     16 51 44.8
      comp=Z,29nm,1.0s
C40A  Isle Royale Na     83.66  32   P       P        16 51 43.0 +0.1
      baz=322
KNT   Kendrikon          83.67 318   P       P        16 51 43.3 +0.1
RUDO  Rudo               83.69 322  eP       P        16 51 43.5 +0.2
VAY   Valandovo          83.73 318  i P      P        16 51 44.0 +0.5
VAY   Valandovo          83.73 318  i P      P        16 51 44.0 +0.5
KZIT  Kziot              83.75 304   P       P        16 51 44.2 +0.4
      comp=Z,222nm,1.0s
OBKA  Obir               83.76 326  i PcP    P        16 51 43.8 +0.1
      comp=Z,20nm,1.3s,SNR=9.0
KBA   Koelnbreinsper     83.85 327  i PcP    P        16 51 44.5 +0.3
      comp=Z,26nm,0.9s,SNR=20
SKO   Skopje             83.85 320  i P      P        16 51 45.1 +1.0
SKO   Skopje             83.85 320  i P      P        16 51 45.1 +1.0
BEBN  Eben Emael         83.85 334  ⇓P       P        16 51 45.2 +1.3
CRES  Cresnjev           83.88 325  i P      P        16 51 43.8 -0.4
WACR  West Acre          83.88 337  eP       P        16 51 45.2 +1.2
WACR                                 IAmb    IAmb     16 51 46.0
      comp=Z,58nm,0.9s
HRFI  Mount Harif        83.89 303   P       P        16 51 45.0 +0.5
      comp=Z,168nm,1.0s
MEM   Membach            83.89 333  ⇑P       P        16 51 43.8 -0.3
      comp=Z,26nm,1.0s
PLE   Pljevlja           83.89 322⇑ iP       P        16 51 44.5 +0.1
BLY   Banja Luka         83.90 324   PFAKE            16 52 00.0  +16
BLY                                  LR      LR
      comp=Z,900nm,18.0s
BLY   Banja Luka         83.90 324⇑ iP       P        16 51 45.2 +0.9
BLY   Banja Luka         83.90 324  i P      P        16 51 44.0 -0.3
T25A  Trinidad           83.90  47   P       P        16 51 45.4 +0.6
      baz=313,SNR=13
PLG   Polygyros          83.93 317   P       P        16 51 43.3 -1.3
IVA   Berane             83.98 321⇑ iP       P        16 51 45.1 +0.2
LBWR  Ladybower, Pea     83.99 339  eP       P        16 51 44.9 +0.4
LBWR                                 IAmb    IAmb     16 51 46.9
      comp=Z,110nm,0.9s
LBWR                                 IAMs_20 IAMs_20  17 27 44.9
      comp=Z,956nm,24.9s
MYKA  Terra Mystica      84.07 327  i P      P        16 51 44.9 -0.3
      comp=Z,17nm,0.9s,SNR=9.2
BFZ   Birch Farm         84.10 154   PFAKE            16 52 00.0  +15
BFZ                                  LR      LR
      comp=Z,600nm,19.0s
LJU   Ljubljana          84.13 326  eP       P        16 51 45.1 -0.4
LJU                                 ePP      PP       16 55 00.6 +1.3
LJU   Ljubljana          84.13 326  i P      P        16 51 44.9 -0.6
SPMN  Marine on St.      84.14  35   P       P        16 51 45.3 -0.2
      baz=320
DAT   Datca              84.14 312  i P      P        16 51 46.5 +0.7
DAT                                  IAML_P
      comp=Z,318nm,0.9s
PVY   Plav               84.15 321⇑ iP       P        16 51 45.4 -0.4
ANMO  Albuquerque        84.17  50   P       P        16 51 47.0 +1.0
      comp=Z,13nm,1.1s,baz=302,slow=6.1,SNR=24
ANMO  Albuquerque        84.17  50ceP        P        16 51 48.2 +2.1
ANMO                                 pmax    pmax
      comp=Z,23nm,1.3s
ANMO  Albuquerque        84.17  50   P       P        16 51 47.1 +1.0
      baz=312
KOME  Kolasin            84.18 321⇑ iP       P        16 51 46.1 +0.2
STU   Stuttgart          84.20 331   PFAKE            16 52 00.0  +14
STU                                  LR      LR
      comp=Z,700nm,18.0s
BOJS  Bojanci            84.22 325  eP       P        16 51 45.8 -0.1
UPM   Unac-Piva          84.23 322⇑ iP       P        16 51 45.8 -0.4
UPM   Unac-Piva          84.23 322  eP       P        16 51 45.8 -0.4
PMOR  Pomariorio Ree     84.29 114  eT       T        18 23 47.4
      comp=Z,32nm,0.2s
BCLA  Clavier            84.30 334  ⇑P       P        16 51 46.2  0.0
      comp=Z,22nm,1.4s
BCLA                                ⇓sP      pP       16 52 01.1 +1.8
UCC   Uccle              84.31 334   PFAKE            16 52 00.0  +14
UCC                                  LR      LR
      comp=Z,900nm,19.0s
UCC   Uccle              84.31 334  ⇑P       P        16 51 47.0 +0.8
BGNE  Belgrade           84.36  41   P       P        16 51 46.6 -0.1
      baz=316
GMM   Mts of Mourne      84.38 342  eP       P        16 51 46.8 +0.3
CEY   Cerknica           84.41 326  eP       P        16 51 46.5 -0.4
CEY                                 e                 16 52 01.1
CEY   Cerknica           84.41 326  i P      P        16 51 46.5 -0.4
WTTA  Wattenberg         84.42 328  i PcP    P        16 51 47.4 +0.2
      comp=Z,17nm,0.9s,SNR=7.9
CWF   Charnwood Fore     84.45 338  eP       P        16 51 47.2 +0.3
CWF                                  IAmb    IAmb     16 51 48.9
      comp=Z,112nm,1.9s
CWF                                  IAMs_20 IAMs_20  17 31 48.0
      comp=Z,1µm,22.1s
ABTA  Abfaltersbach      84.46 328  i P      P        16 51 46.9 -0.3
      comp=Z,22nm,1.1s,SNR=11
NKY   Niksic             84.47 321⇑ iP       P        16 51 47.0 -0.4
NKME  Niksic             84.52 321⇑ iP       P        16 51 47.2 -0.4
PHP   Peshkopia          84.57 320   P       P        16 51 47.9 +0.1
MOTA  Moosalm            84.58 329  i PcP    P        16 51 48.1 +0.2
      comp=Z,22nm,0.9s,SNR=11
SNF   Seneffe            84.58 334  ⇑P       P        16 51 47.5 -0.1
      comp=Z,45nm,1.2s
SNF                                 ⇑pP      pP       16 52 01.2 +0.4
RETA  Reutte             84.61 329  i PcP    P        16 51 48.4 +0.4
      comp=Z,54nm,1.0s,SNR=32
WLF   Walferdange        84.62 333   PFAKE            16 52 00.0  +12
WLF                                  LR      LR
      comp=Z,3µm,20.0s
WLF   Walferdange        84.62 333  ⇑P       P        16 51 49.3 +1.4
      comp=Z,34nm,1.8s
PDG   Podgorica          84.62 321⇑ iP       P        16 51 48.3 +0.3
PDG   Podgorica          84.62 321  i P      P        16 51 48.1 +0.1
TTG   Podgorica          84.62 321⇑ iP       P        16 51 48.0 +0.1
TTG   Podgorica          84.62 321   PFAKE            16 52 00.0  +12
TTG                                  LR      LR
      comp=Z,900nm,18.0s
BRY   Bratogost          84.63 322⇑ iP       P        16 51 47.6 -0.7
BRY   Bratogost          84.63 322  eP       P        16 51 47.5 -0.7
SQTA  Sankt Quirin       84.64 329  i PcP    P        16 51 48.5 +0.3
      comp=Z,18nm,1.1s,SNR=9.6
LIT   Litokhoron         84.64 318   P       P        16 51 47.6 -0.6
RIY   Rijeka             84.70 326  eP       P        16 51 46.0 -2.3
CEME  Cevo               84.70 321⇑ iP       P        16 51 48.2 -0.3
TRI   Trieste            84.73 326   PFAKE            16 52 00.0  +12
TRI                                  LR      LR
      comp=Z,1µm,18.0s
PPT   Papeete            84.77 117   LR      LR       17 24 55.1
      comp=Z,454nm,20.3s,baz=317,slow=32
XOR   Xorichti           84.79 317   P       P        16 51 48.1 -0.8
PPT2  Papeete2           84.79 117  eS       S        17 02 16.8 +2.7
      comp=Z,196nm,25.0s
PPT2  Papeete2           84.79 117  eLR      LR       17 18 23.8
      comp=Z,2µm,27.8s,baz=317
OHR   Ohrid              84.80 319  i P      P        16 51 49.0 -0.1
OHR   Ohrid              84.80 319  i P      P        16 51 48.9 -0.1
SCHQ  Schefferville      84.80  16   P       P        16 51 49.5 +0.8
      comp=Z,16nm,1.0s,baz=354,slow=6.0,SNR=6.3
SCHQ                                 LR      LR       17 31 57.1
      comp=Z,341nm,21.0s,baz=316,slow=37
DOU   Dourbes            84.82 334  ⇓P       P        16 51 49.2 +0.3
      comp=Z,12nm,1.1s
DOU                                 ⇑pP      pP       16 52 00.2 -1.8
DOU                                 ⇑sP      sP       16 52 04.4 -2.5
WLF1  Llynfaes           84.83 340  eP       P        16 51 49.3 +0.5
WLF1                                 IAmb    IAmb     16 51 51.1
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      comp=Z,300nm,1.9s
WLF1                                 IAMs_20 IAMs_20  17 32 26.9
      comp=Z,2µm,20.7s
G39A  Holcombe           84.83  34   P       P        16 51 48.4 -0.6
      baz=321
DRME  Dracevica, Mon     84.84 321⇑ iP       P        16 51 49.3 +0.2
DRME  Dracevica, Mon     84.84 321  i P      P        16 51 49.3 +0.2
FOEL  Foel Wylfa         84.86 339  eP       P        16 51 49.7 +0.7
FOEL                                 IAmb    IAmb     16 51 51.6
      comp=Z,83nm,1.0s
FOEL                                 IAMs_20 IAMs_20  17 34 18.9
      comp=Z,765nm,18.3s
TREB  Trebinje           84.86 322  eP       P        16 51 48.7 -0.5
BFO   Black Forest       84.90 331  eP       P        16 51 49.5 +0.2
      comp=Z,69nm,1.0s
BFO                                  LR      LR
      comp=Z,700nm,20.0s
BFO   Black Forest       84.90 331  i P      P        16 51 49.7 +0.4
BUM   Brajici-Budva      84.90 321⇑ iP       P        16 51 48.6 -0.9
YLL   Llanberis          84.90 340  eP       P        16 51 49.3 +0.2
121A  Cookes Peak, D     84.95  53   P       P        16 51 50.1  0.0
      baz=312,SNR=6.5
ULC   Ulcinj             84.97 321⇑ iP       P        16 51 49.5 -0.3
HCY   Herceg Novi        84.99 321⇑ iP       P        16 51 50.0 +0.1
HCY   Herceg Novi        84.99 321  eP       P        16 51 45.8 -4.1
FETA  Feichten           84.99 329  i PcP    P        16 51 50.2 +0.2
      comp=Z,31nm,0.9s,SNR=20
LLW   Llanuwychllyn      85.02 340  eP       P        16 51 50.0 +0.3
STON  Ston               85.06 322  i P      P        16 51 49.2 -1.0
HLM1  Long Mynd          85.10 339  eP       P        16 51 50.3 +0.1
HLM1                                 IAmb    IAmb     16 51 52.5
      comp=Z,27nm,1.2s
HLM1                                 IAMs_20 IAMs_20  17 28 55.0
      comp=Z,1µm,34.0s
TIR   Tirane             85.11 320   PFAKE            16 52 00.0  +10
TIR                                  LR      LR
      comp=Z,2µm,19.0s
DAVA  Damuels            85.13 329  i PcP    P        16 51 50.8 +0.1
      comp=Z,60nm,0.9s,SNR=28
OXZ   Oxford             85.14 158   PFAKE            16 52 00.0  +10
OXZ                                  LR      LR
      comp=Z,1µm,18.0s
NEST  Nestorio           85.18 319   P       P        16 51 49.4 -1.6
G40A  Rib Lake           85.28  34   P       P        16 51 51.4 +0.1
      baz=321,SNR=9.9
THL   Klokotos Trika     85.28 318   P       P        16 51 49.4 -1.9
ATAL  Atalanti           85.36 316  eP       P        16 51 50.5 -1.3
ATAL  Atalanti           85.36 316   P       P        16 51 50.5 -1.3
CBKS  Cedar Bluff        85.38  43   P       P        16 51 52.0 +0.1
      baz=316
LKR   Lokris             85.40 316   P       P        16 51 51.0 -1.0
ECH   Echery             85.44 331   PFAKE            16 52 00.0 +8.0
ECH                                  LR      LR
      comp=Z,600nm,20.0s
AGG   Agios Georgios     85.50 317   PFAKE            16 52 00.0 +7.5
AGG                                  LR      LR
      comp=Z,900nm,19.0s
FUORN Ofenpass-Fuorn     85.50 329   PFAKE            16 52 00.0 +7.3
FUORN                                LR      LR
      comp=Z,1µm,19.0s
STRD  Stroud             85.55 338  eP       P        16 51 53.0 +0.5
STRD                                 IAmb    IAmb     16 51 54.7
      comp=Z,164nm,1.1s
STRD                                 IAMs_20 IAMs_20  17 32 19.1
      comp=Z,1µm,21.3s
MCH1  Michaelchurch      85.59 339  eP       P        16 51 52.9 +0.3
MCH1                                 IAmb    IAmb     16 51 54.4
      comp=Z,48nm,1.0s
MCH1                                 IAMs_20 IAMs_20  17 28 29.0
      comp=Z,1000nm,30.4s
SWN1  Swindon            85.67 338  eP       P        16 51 54.1 +1.1
SWN1                                 IAmb    IAmb     16 51 55.5
      comp=Z,149nm,1.1s
SWN1                                 IAMs_20 IAMs_20  17 31 49.3
      comp=Z,2µm,23.7s
MONM  Monmouth           85.68 339  eP       P        16 51 53.7 +0.6
MONM                                 IAmb    IAmb     16 51 55.4
      comp=Z,72nm,1.0s
MONM                                 IAMs_20 IAMs_20  17 29 40.7
      comp=Z,1µm,25.0s
E43A  Lone Tree Farm     85.77  31   P       P        16 51 53.6 -0.1
      baz=323
TUE   Stuetta            86.00 329   PFAKE            16 52 10.0  +15
TUE                                  LR      LR
      comp=Z,1µm,19.0s
ANX   Ano Chora          86.03 317   P       P        16 51 55.7 +0.5
MEH   Mehetia            86.05 116  eT       T        18 25 59.2
      comp=Z,42nm,0.2s
RSBS  Rosebush, Pemb     86.12 340  eP       P        16 51 56.0 +0.7
RSBS                                 IAmb    IAmb     16 51 57.4
      comp=Z,24nm,1.1s
RSBS                                 IAMs_20 IAMs_20  17 33 25.3
      comp=Z,377nm,25.4s
TAOE  Nuku Hiva Isla     86.19 104  eS       S        17 02 31.8 +3.6
      comp=Z,221nm,30.1s
TAOE  Nuku Hiva Isla     86.19 104  eLR      LR       17 19 01.5
      comp=Z,2µm,24.8s,baz=311
IWEX  Carrickbyrne,      86.28 341  eP       P        16 51 56.8 +0.8
IWEX                                 IAmb    IAmb     16 51 59.1
      comp=Z,34nm,1.1s
IWEX                                 IAMs_20 IAMs_20  17 33 50.1
      comp=Z,752nm,24.6s
KEK   Kerkira            86.35 319  eP       P        16 51 56.5 -0.1
KEK   Kerkira            86.35 319   P       P        16 51 56.5 -0.1
I41A  Arkdale            86.37  34   P       P        16 51 56.5 -0.2
      baz=322
MATQ  Matagami           86.41  24   P       P        16 51 56.5 -0.3
      baz=330
SCIA  State Center       86.47  38   PFAKE            16 52 10.0  +13
SCIA                                 LR      LR
      comp=Z,400nm,22.0s
SCIA  State Center       86.47  38   P       P        16 51 57.7 +0.5
      baz=319
D46A  Sault St. Mari     86.54  29   P       P        16 51 57.7 +0.2
      baz=325
D47A  Chapleau           86.77  29   P       P        16 51 58.3 -0.3
      baz=326
KSU1  Kansas State U     86.84  41   P       P        16 51 58.9 -0.2
      baz=318
E46A  Sault Ste Mari     86.87  30   P       P        16 51 59.0  0.0
      baz=325
SENIN Lac Senin/Sane     86.91 330   PFAKE            16 52 10.0  +10
SENIN                                LR      LR
      comp=Z,700nm,18.0s
I42A  Draeger Farm,      86.93  34   P       P        16 51 59.4  0.0
      baz=322,SNR=5.4
H43A  Windswept, Lux     86.97  33   P       P        16 51 59.1 -0.4
      baz=323
MNTX  Cornudas Mount     87.02  52   P       P        16 52 00.5 +0.3
      baz=313,SNR=8.0
ITM   Ithomi             87.05 316   PFAKE            16 52 10.0  +10
ITM                                  LR      LR
      comp=Z,400nm,19.0s
MSTX  Muleshoe           87.05  49   P       P        16 52 01.1 +0.7
      baz=314
AMTX  Amarillo           87.06  47   P       P        16 52 01.3 +1.0
      baz=315
JFWS  Jewell Farm        87.09  35   PFAKE            16 52 10.0  +10
JFWS                                 LR      LR
      comp=Z,400nm,21.0s
JFWS  Jewell Farm        87.09  35   P       P        16 52 00.7 +0.5
      baz=321
E47A  Iron Bridge        87.20  29   P       P        16 52 00.3 -0.4
      baz=326,SNR=5.1
LSQQ  Lebel-sur-Quev     87.24  24   P       P        16 52 00.9 +0.1
      baz=330
D49A  Beulah Townshi     87.24  28   P       P        16 52 00.1 -0.8
      baz=327
L40A  Anamosa            87.30  36   P       P        16 52 01.3 +0.1
      baz=321,SNR=8.4
CHGQ  Chibougamau        87.31  22   P       P        16 52 00.4 -0.7
      baz=332,SNR=7.0
CLF   Chambon-Foret      87.39 334   PFAKE            16 52 10.0 +8.5
CLF                                  LR      LR
      comp=Z,800nm,20.0s
VLC   Villacollemand     87.42 327   PFAKE            16 52 10.0 +8.2
VLC                                  LR      LR
      comp=Z,700nm,20.0s
AQU   L'Aquila           87.50 324   PFAKE            16 52 10.0 +7.7
AQU                                  LR      LR
      comp=Z,800nm,20.0s
AQU   L'Aquila           87.50 324  i P      P        16 52 03.2 +0.9
E48A  Lockeyer           87.60  29   P       P        16 52 02.7 +0.1
      baz=327
JSA   Saint Aubin        87.83 337  eP       P        16 52 04.4 +0.8
JSA                                  IAmb    IAmb     16 52 05.6
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	comp=Z,63nm,0.9s						
JSA				IAMs_20	IAMs_20	17 35 58.7	
	comp=Z,1µm,18.4s						
VLDQ	**Val d'Or**	**87.90**	**25**	PFAKE		16 52 10.0	+6.0
VLDQ				LR	LR		
	comp=Z,400nm,20.0s						
H46A	**Fife Lake**	**88.00**	**31**	P	**P**	**16 52 04.5**	**0.0**
	baz=325						
G47A	**Hillman**	**88.03**	**30**	P	**P**	**16 52 05.4**	**+0.8**
	baz=326						
N40A	**Mertquake, Sal**	**88.04**	**37**	P	**P**	**16 52 04.7**	**-0.1**
	baz=320						
L42A	**Oliver, Polo**	**88.07**	**36**	P	**P**	**16 52 04.5**	**-0.4**
	baz=322						
K43A	**Burlington**	**88.13**	**34**	P	**P**	**16 52 05.8**	**+0.6**
	baz=323						
M41A	**Milan**	**88.15**	**36**	P	**P**	**16 52 05.7**	**+0.4**
	baz=321						
E50A	**Wahnapitae**	**88.19**	**28**	P	**P**	**16 52 05.2**	**-0.2**
	baz=328						
BNI	**Bardonecchia**	**88.24**	**330**	PFAKE		16 52 20.0	+14
BNI				LR	LR		
	comp=Z,900nm,20.0s						
F49A	**Sandfield**	**88.25**	**29**	P	**P**	**16 52 04.2**	**-1.5**
	baz=327						
TIP	**Timpagrande**	**88.31**	**320**	PFAKE		16 52 20.0	+14
TIP				LR	LR		
	comp=Z,1µm,20.0s						
TIP	**Timpagrande**	**88.31**	**320⇑**	*i*P	**P**	**16 52 06.8**	**+0.6**
N41A	**Harden Midland**	**88.52**	**37**	PFAKE		16 52 20.0	+13
N41A				LR	LR		
	comp=Z,400nm,20.0s						
N41A	**Harden Midland**	**88.52**	**37**	P	**P**	**16 52 06.9**	**-0.2**
	baz=321						
E51A	**G1948 Merrick**	**88.55**	**27**	P	**P**	**16 52 06.7**	**-0.4**
	baz=328						
D52A	**ZEK Kipawa Sen**	**88.55**	**26**	P	**P**	**16 52 07.4**	**+0.2**
	baz=329						
TBI	**Tubuai**	**88.70**	**121**	*e*S	**S**	**17 02 54.9**	**+3.3**
	comp=Z,360nm,34.2s						
TBI	**Tubuai**	**88.70**	**121**	*e*LR	LR	17 20 10.0	
	comp=Z,1µm,31.2s,baz=311						
TBI	**Tubuai**	**88.70**	**121**	*e*T	T	18 29 18.3	
	comp=Z,111nm,0.3s						
D53A	**Lac Vacive, Po**	**88.71**	**26**	P	**P**	**16 52 07.4**	**-0.4**
	baz=330,SNR=7.1						
I47A	**Gladwin**	**88.71**	**31**	P	**P**	**16 52 08.6**	**+0.6**
	baz=325						
LPIG	**La Paz**	**88.83**	**60**	LR	LR	17 27 39.3	
	comp=Z,128nm,18.5s,baz=294,slow=33						
WMOK	**Wichita Mounta**	**88.83**	**46**	P	**P**	**16 52 08.9**	**+0.2**
	baz=316,SNR=11						
SSB	**Saint Sauveur**	**88.88**	**331**	PFAKE		16 52 20.0	+11
SSB				LR	LR		
	comp=Z,800nm,21.0s						
I48A	**Sherman Twp**	**88.90**	**31**	P	**P**	**16 52 09.7**	**+0.9**
	baz=326						
D54A	**Lac Fusel, La**	**89.00**	**25**	P	**P**	**16 52 09.3**	**+0.1**
	baz=331						
E52A	**Mattawa**	**89.06**	**27**	P	**P**	**16 52 09.5**	**0.0**
	baz=329						
F52A	**Sundridge**	**89.24**	**27**	P	**P**	**16 52 10.8**	**+0.5**
	baz=329						
KLBO	**Killbear Provi**	**89.28**	**28**	P	**P**	**16 52 10.6**	**+0.1**
	baz=328						
M44A	**Midewin, Midew**	**89.30**	**35**	P	**P**	**16 52 11.1**	**+0.3**
	baz=323						
E53A	**Dumoine, Ponti**	**89.33**	**26**	P	**P**	**16 52 11.1**	**+0.3**
	baz=330						
HDIL	**Hopedale**	**89.38**	**36**	P	**P**	**16 52 11.6**	**+0.5**
	baz=322						
E54A	**Lac Daplat, Po**	**89.45**	**26**	P	**P**	**16 52 11.5**	**+0.2**
	baz=330						
CEL	**Celeste**	**89.45**	**320**	PFAKE		16 52 20.0	+8.4
CEL				LR	LR		
	comp=Z,1µm,19.0s						
ALGO	**Algonquin Park**	**89.56**	**26**	P	**P**	**16 52 11.5**	**-0.3**
	baz=330						
J48A	**Bridge Port**	**89.60**	**31**	P	**P**	**16 52 13.7**	**+1.6**
	baz=326						
TUL1	**Leonard**	**89.64**	**43**	P	**P**	**16 52 13.0**	**+0.5**
	baz=318						
TXAR	**Lajitas Array**	**89.72**	**52**	P	**P**	**16 52 13.8**	**+0.7**
	comp=Z,7.6nm,0.9s,baz=303,slow=3.1,SNR=42						
TXAR				LR	LR	17 26 36.8	
	comp=Z,224nm,21.7s,baz=0.0,slow=32						
J49A	**Marlette**	**89.82**	**31**	P	**P**	**16 52 13.7**	**+0.6**
	baz=326						
ABTX	**Abilene, Hawle**	**89.86**	**48**	P	**P**	**16 52 13.8**	**+0.2**
	baz=316,SNR=6.3						
BASO	**Ashfield**	**89.86**	**30**	P	**P**	**16 52 13.6**	**+0.3**
	baz=327						
K48A	**Perry**	**89.87**	**32**	P	**P**	**16 52 13.7**	**+0.3**
	baz=325						
P43A	**Skaggs, Pawnee**	**89.99**	**37**	P	**P**	**16 52 14.2**	**+0.2**
	baz=322						
H52A	**Wyevale**	**90.01**	**28**	P	**P**	**16 52 14.6**	**+0.6**
	baz=328						
HPIG		**90.07**	**55**	PFAKE		16 52 30.0	+15
HPIG				LR	LR		
	comp=Z,600nm,21.0s						
PEMO	**Pembroke**	**90.08**	**26**	P	**P**	**16 52 14.0**	**-0.3**
	baz=330						
O44A	**Mansfield**	**90.09**	**36**	P	**P**	**16 52 14.8**	**+0.3**
	baz=322						
L47A	**Sherwood**	**90.09**	**33**	P	**P**	**16 52 14.6**	**+0.2**
	baz=325						
SADO	**Sadowa**	**90.18**	**28**	LR	LR	17 34 46.6	
	comp=Z,184nm,20.6s,baz=339,slow=37						
I51A	**Listowel**	**90.29**	**29**	P	**P**	**16 52 16.0**	**+0.7**
	baz=328						
CCM	**Cathedral Cave**	**90.39**	**39**	P	**P**	**16 52 16.0**	**+0.1**
	baz=321						
M47A	**Cromwell**	**90.41**	**34**	P	**P**	**16 52 16.2**	**+0.3**
	baz=324						
BANO	**Bancroft**	**90.41**	**27**	P	**P**	**16 52 16.3**	**+0.4**
	baz=330						
L48A	**N Adams**	**90.45**	**32**	P	**P**	**16 52 16.5**	**+0.4**
	baz=325						
SFIN	**Lafayette**	**90.54**	**35**	P	**P**	**16 52 16.9**	**+0.3**
	baz=323						
L49A	**Milan**	**90.59**	**32**	P	**P**	**16 52 17.5**	**+0.7**
	baz=326						
G55A	**Calabogie**	**90.63**	**26**	P	**P**	**16 52 16.5**	**-0.4**
	baz=330						
PLVO	**Plevna**	**90.69**	**26**	P	**P**	**16 52 16.9**	**-0.2**
	baz=330						
N47A	**Urbana**	**90.77**	**34**	P	**P**	**16 52 17.6**	**0.0**
	baz=324,SNR=5.8						
U40A	**Yellville**	**90.87**	**41**	P	**P**	**16 52 18.1**	**-0.1**
	baz=320,SNR=18						
ORIO	**Orleans, Innes**	**90.87**	**25**	P	**P**	**16 52 18.5**	**+0.6**
	baz=331						
DELO	**Deloro Mine**	**90.95**	**27**	PFAKE		16 52 30.0	+12
DELO				LR	LR		
	comp=Z,200nm,21.0s						
DELO	**Deloro Mine**	**90.95**	**27**	P	**P**	**16 52 18.4**	**+0.1**
	baz=330,SNR=5.7						
M49A	**Liberty Center**	**91.03**	**32**	P	**P**	**16 52 19.5**	**+0.7**
	baz=326						
N48A	**Decatur**	**91.08**	**33**	P	**P**	**16 52 19.2**	**+0.1**
	baz=325,SNR=5.3						
H55A	**Tweed**	**91.08**	**27**	P	**P**	**16 52 19.7**	**+0.8**
	baz=330						
P46A	**Rosedale**	**91.10**	**36**	P	**P**	**16 52 19.6**	**+0.4**
	baz=323						
DRCO	**St. Marys Ceme**	**91.11**	**28**	P	**P**	**16 52 20.0**	**+0.9**
	baz=329						
I55A	**Frankford**	**91.19**	**27**	P	**P**	**16 52 19.9**	**+0.5**
	baz=330						
W39A	**Magazine**	**91.26**	**42**	P	**P**	**16 52 20.4**	**+0.4**
	baz=319						
CLTB	**Caltabellotta**	**91.32**	**321**	PFAKE		16 52 30.0	+10
CLTB				LR	LR		
	comp=Z,1µm,20.0s						
N49A	**Columbus Grove**	**91.39**	**33**	P	**P**	**16 52 21.2**	**+0.7**
	baz=325						
O48A	**Farmland**	**91.51**	**34**	P	**P**	**16 52 21.2**	**+0.2**
	baz=325						
WHTX	**Lake Whitney,**	**91.59**	**47**	P	**P**	**16 52 22.1**	**+0.5**
	baz=317,SNR=6.3						
S44A	**Carbondale**	**91.65**	**38**	P	**P**	**16 52 22.0**	**+0.2**
	baz=322						
BLO	**Bloomington**	**91.77**	**35**	PFAKE		16 52 30.0	+7.7
BLO				LR	LR		
	comp=Z,400nm,19.0s						
MEDO	**Medina**	**91.81**	**28**	PFAKE		16 52 30.0	+7.6
MEDO				LR	LR		
	comp=Z,300nm,20.0s						
MIAR	**Mount Ida**	**91.86**	**43**	P	**P**	**16 52 23.2**	**+0.4**
	baz=319,SNR=9.3						
O49A	**Covington**	**91.93**	**33**	P	**P**	**16 52 23.0**	**0.0**
	baz=325						
BATG	**Bathurst New B**	**92.00**	**18**	*e*P	**P**	**16 52 22.4**	**-0.8**
	comp=Z,16nm,1.1s						
WDD	**Wied Dalam**	**92.01**	**320**	PFAKE		16 52 30.0	+6.6
WDD				LR	LR		
	comp=Z,700nm,21.0s						
W41B	**Gary Mavity, V**	**92.09**	**41**	P	**P**	**16 52 23.7**	**-0.1**
	baz=320						
L53A	**Girard**	**92.15**	**30**	P	**P**	**16 52 24.3**	**+0.3**
	baz=328						
PARMO	**Parma**	**92.22**	**39**	PFAKE		16 52 40.0	+16
PARMO				LR	LR		
	comp=Z,200nm,22.0s						
O50A	**Cable**	**92.27**	**33**	P	**P**	**16 52 24.7**	**+0.1**
	baz=326						
P49A	**Miami Univ. Ec**	**92.30**	**34**	P	**P**	**16 52 25.0**	**+0.3**
	baz=325						
X40A	**Basin Creek Fa**	**92.30**	**42**	P	**P**	**16 52 25.5**	**+0.7**
	baz=320						
PVMO	**Portageville**	**92.44**	**39**	PFAKE		16 52 40.0	+15
PVMO				LR	LR		
	comp=Z,300nm,20.0s						
ALLY	**Alegheny Colle**	**92.46**	**30**	PFAKE		16 52 40.0	+15
ALLY				LR	LR		
	comp=Z,200nm,19.0s						
ACSO	**Alum Creek Sta**	**92.48**	**33**	PFAKE		16 52 40.0	+14
ACSO				LR	LR		
	comp=Z,200nm,19.0s						
ACSO	**Alum Creek Sta**	**92.48**	**33**	P	**P**	**16 52 25.6**	**+0.1**
	baz=326						
T45A	**Paducah**	**92.48**	**38**	PFAKE		16 52 40.0	+14
T45A				LR	LR		
	comp=Z,300nm,22.0s						
GNAR	**Gosnell**	**92.63**	**40**	PFAKE		16 52 40.0	+14
GNAR				LR	LR		
	comp=Z,300nm,20.0s						
P50A	**Jamestown**	**92.64**	**33**	P	**P**	**16 52 27.2**	**+0.9**
	baz=326						
WCI	**Wyandotte Cave**	**92.64**	**36**	PFAKE		16 52 40.0	+14
WCI				LR	LR		
	comp=Z,301nm,20.0s						
L55A	**Hinsdale**	**92.66**	**29**	P	**P**	**16 52 26.5**	**+0.1**
	baz=329						
O51A	**Pataskala**	**92.71**	**32**	P	**P**	**16 52 27.4**	**+0.8**
	baz=326						
GLAT	**Glass**	**92.76**	**39**	PFAKE		16 52 40.0	+13
GLAT				LR	LR		
	comp=Z,300nm,20.0s						
M54A	**Oil Creek Stat**	**92.77**	**30**	P	**P**	**16 52 27.7**	**+0.8**
	baz=328						
T46A	**Princeton**	**92.83**	**37**	P	**P**	**16 52 28.1**	**+0.9**
	baz=323						
N53A	**Lisbon**	**92.89**	**31**	P	**P**	**16 52 27.9**	**+0.4**
	baz=328						
PKME	**Peaks-Kenny Pk**	**92.99**	**21**	P	**P**	**16 52 28.2**	**+0.5**
	baz=336						
O52A	**Adamsville**	**93.06**	**32**	P	**P**	**16 52 28.9**	**+0.7**
	baz=327						
N54A	**Moraine State**	**93.10**	**30**	P	**P**	**16 52 28.7**	**+0.3**
	baz=328						
R49A	**Shelbyville**	**93.10**	**35**	PFAKE		16 52 40.0	+12
R49A				LR	LR		
	comp=Z,400nm,22.0s						
LBNH	**Lisbon**	**93.12**	**23**	PFAKE		16 52 40.0	+12
LBNH				LR	LR		
	comp=Z,400nm,20.0s						
M55A	**Ridgway**	**93.15**	**29**	P	**P**	**16 52 29.4**	**+0.7**
	baz=329						
Q50A	**Georgetown**	**93.19**	**34**	P	**P**	**16 52 29.4**	**+0.6**
	baz=325						
O53A	**New Philadelph**	**93.20**	**31**	P	**P**	**16 52 29.5**	**+0.7**
	baz=327						
T47A	**Sharon Grove**	**93.25**	**37**	PFAKE		16 52 40.0	+11
T47A				LR	LR		
	comp=Z,300nm,22.0s						
T47A	**Sharon Grove**	**93.25**	**37**	P	**P**	**16 52 30.0**	**+0.9**
	baz=323						
Q51A	**Peebles**	**93.32**	**33**	PFAKE		16 52 40.0	+11
Q51A				LR	LR		
	comp=Z,300nm,22.0s						
Q51A	**Peebles**	**93.32**	**33**	P	**P**	**16 52 30.2**	**+0.8**
	baz=326						
P52A	**Corning**	**93.33**	**32**	P	**P**	**16 52 29.8**	**+0.3**
	baz=327						
M56A	**Emporium**	**93.36**	**29**	P	**P**	**16 52 30.0**	**+0.4**
	baz=329						
S49A	**Springfield**	**93.46**	**35**	P	**P**	**16 52 30.6**	**+0.5**
	baz=324						
HNH	**Hanover**	**93.49**	**24**	PFAKE		16 52 40.0	+10
HNH				LR	LR		
	comp=Z,400nm,21.0s						
R50A	**Paris**	**93.49**	**34**	PFAKE		16 52 40.0	+10
R50A				LR	LR		
	comp=Z,300nm,20.0s						
R50A	**Paris**	**93.49**	**34**	P	**P**	**16 52 30.4**	**+0.1**
	baz=325						
WVL	**Waterville**	**93.52**	**22**	PFAKE		16 52 40.0	+10
WVL				LR	LR		
	comp=Z,400nm,21.0s						
BINY	**Binghamton**	**93.56**	**27**	PFAKE		16 52 40.0	+10
BINY				LR	LR		
	comp=Z,300nm,20.0s						
BINY	**Binghamton**	**93.56**	**27**	P	**P**	**16 52 30.9**	**+0.4**
	baz=331						
WVT	**Waverly**	**93.59**	**38**	PFAKE		16 52 40.0	+9.3
WVT				LR	LR		
	comp=Z,300nm,22.0s						
WVT	**Waverly**	**93.59**	**38**	P	**P**	**16 52 31.2**	**+0.5**
	baz=323						
U47A	**Clarksville**	**93.60**	**37**	P	**P**	**16 52 31.3**	**+0.5**
	baz=323						
O54A	**Avella**	**93.61**	**31**	P	**P**	**16 52 30.9**	**+0.2**
	baz=328						
N55A	**Marion Center**	**93.65**	**30**	P	**P**	**16 52 31.7**	**+0.7**
	baz=329						
V46A	**Holladay**	**93.71**	**38**	P	**P**	**16 52 32.3**	**+1.1**
	baz=323						
P53A	**Whipple**	**93.77**	**32**	P	**P**	**16 52 32.5**	**+1.0**
	baz=327						
Q52A	**Bidwell**	**93.84**	**33**	P	**P**	**16 52 32.4**	**+0.6**
	baz=327						
FFD	**Franklin Falls**	**93.90**	**24**	PFAKE		16 52 40.0	+8.0
FFD				LR	LR		
	comp=Z,700nm,21.0s						
T49A	**Edmonton**	**93.90**	**36**	PFAKE		16 52 40.0	+7.9
T49A				LR	LR		
	comp=Z,300nm,21.0s						
T49A	**Edmonton**	**93.90**	**36**	P	**P**	**16 52 32.4**	**+0.2**
	baz=324						
U48A	**Cassie Pea, Po**	**93.91**	**37**	P	**P**	**16 52 32.7**	**+0.5**
	baz=324						
V47A	**Nunnelly**	**93.98**	**38**	P	**P**	**16 52 33.2**	**+0.7**
	baz=323						
O55A	**Ligonier**	**94.02**	**30**	P	**P**	**16 52 33.0**	**+0.4**
	baz=329						
KSPA	**Keystone Colle**	**94.20**	**27**	PFAKE		16 52 40.0	+6.6
KSPA				LR	LR		
	comp=Z,400nm,21.0s						
SSPA	**Standing Stone**	**94.20**	**29**	P	**P**	**16 52 34.0**	**+0.5**
	baz=330						
N57A	**Milroy**	**94.23**	**29**	P	**P**	**16 52 34.2**	**+0.6**
	baz=330						
Q53A	**Leroy**	**94.24**	**32**	P	**P**	**16 52 34.1**	**+0.4**
	baz=327						
O56A	**Blue Knob Stat**	**94.26**	**30**	P	**P**	**16 52 34.4**	**+0.7**
	baz=329						
U49A	**Red Boiling Sp**	**94.26**	**36**	P	**P**	**16 52 34.4**	**+0.6**
	baz=324						
T50A	**Nancy**	**94.29**	**36**	P	**P**	**16 52 34.7**	**+0.8**
	baz=325						
CLTN	**Cedars of Leba**	**94.34**	**37**	PFAKE		16 52 50.0	+16
CLTN				LR	LR		
	comp=Z,100nm,21.0s						
S51A	**Beattyville**	**94.35**	**34**	PFAKE		16 52 50.0	+16
S51A				LR	LR		
	comp=Z,300nm,19.0s						
V48A	**Smith Brothers**	**94.39**	**38**	PFAKE		16 52 50.0	+16
V48A				LR	LR		
	comp=Z,300nm,21.0s						
V48A	**Smith Brothers**	**94.39**	**38**	P	**P**	**16 52 35.1**	**+0.7**
	baz=324						
P55A	**Reedsville**	**94.40**	**31**	P	**P**	**16 52 35.1**	**+0.7**
	baz=328						
W47A	**Westpoint**	**94.40**	**38**	P	**P**	**16 52 35.3**	**+0.8**
	baz=323						
Q54A	**Coxs Mills**	**94.43**	**32**	P	**P**	**16 52 35.0**	**+0.5**
	baz=328						
KEST	**Kesra**	**94.67**	**323**	P	**P**	**16 52 36.0**	**+0.2**
	comp=Z,11nm,1.0s,baz=356,slow=3.2,SNR=7.9						
KEST				LR	LR	17 40 27.2	
	comp=Z,574nm,19.1s,baz=354,slow=39						
KEST	**Kesra**	**94.67**	**323**	PFAKE		16 52 50.0	+14
KEST				LR	LR		
	comp=Z,900nm,19.0s						
U50A	**Jamestown**	**94.78**	**36**	P	**P**	**16 52 37.2**	**+1.0**
	baz=325						
HRV	**Adam Dziewonsk**	**94.80**	**24**	PFAKE		16 52 50.0	+14
HRV				LR	LR		
	comp=Z,400nm,20.0s						
P56A	**Dayton Farm, R**	**94.80**	**30**	P	**P**	**16 52 36.9**	**+0.7**
	baz=329						
W48A	**Pulaski**	**94.81**	**38**	P	**P**	**16 52 37.0**	**+0.6**
	baz=323						
Q56A	**Snyder Ridge,**	**95.06**	**31**	P	**P**	**16 52 38.2**	**+0.8**
	baz=329						
T52A	**Hallie**	**95.06**	**34**	PFAKE		16 52 50.0	+13
T52A				LR	LR		
	comp=Z,400nm,22.0s						
HAL	**Halifax**	**95.08**	**18**	PFAKE		16 52 50.0	+13
HAL				LR	LR		
	comp=Z,500nm,21.0s						
W49A	**Belvidere**	**95.16**	**38**	P	**P**	**16 52 38.6**	**+0.7**
	baz=324						
U51A	**La Follette**	**95.19**	**35**	P	**P**	**16 52 38.3**	**+0.2**
	baz=325						
SWET	**Sewanee**	**95.24**	**37**	PFAKE		16 52 50.0	+12
SWET				LR	LR		
	comp=Z,200nm,20.0s						
R55A	**Marlinton**	**95.32**	**32**	PFAKE		16 52 50.0	+11
R55A				LR	LR		
	comp=Z,300nm,19.0s						
R55A	**Marlinton**	**95.32**	**32**	P	**P**	**16 52 39.4**	**+0.7**
	baz=328						
PAL	**Palisades**	**95.35**	**26**	PFAKE		16 52 50.0	+11
PAL				LR	LR		
	comp=Z,300nm,20.0s						
Q57A	**Strasburg**	**95.38**	**30**	P	**P**	**16 52 39.1**	**+0.2**
	baz=329						
YLE	**Yale**	**95.41**	**25**	PFAKE		16 52 50.0	+11
YLE				LR	LR		
	comp=Z,300nm,18.0s						
R56A	**Bull Pasture M**	**95.51**	**31**	P	**P**	**16 52 39.7**	**+0.1**
	baz=328						
V51A	**Loudon**	**95.51**	**36**	PFAKE		16 52 50.0	+10
V51A				LR	LR		
	comp=Z,200nm,20.0s						
W50A	**Signal Mountai**	**95.55**	**37**	PFAKE		16 52 50.0	+10
W50A				LR	LR		
	comp=Z,300nm,20.0s						
CPCT	**Cooper Cave**	**95.72**	**36**	PFAKE		16 52 50.0	+9.5
CPCT				LR	LR		
	comp=Z,300nm,20.0s						
V52A	**Sevierville**	**95.83**	**35**	PFAKE		16 52 50.0	+9.0
V52A				LR	LR		
	comp=Z,300nm,21.0s						
TKL	**Tuckaleechee C**	**95.90**	**36**	LR	LR	17 38 23.7	
	comp=Z,152nm,20.1s,baz=330,slow=37						
T55A	**Pulaski**	**96.02**	**33**	P	**P**	**16 52 42.3**	**+0.4**
	baz=328						
U54A	**Nelsons Funny**	**96.07**	**34**	PFAKE		16 52 50.0	+7.8
U54A				LR	LR		
	comp=Z,400nm,22.0s						
BLA	**Blacksburg**	**96.10**	**32**	PFAKE		16 52 50.0	+7.8
BLA				LR	LR		
	comp=Z,300nm,20.0s						
Y49A	**Blount Mountai**	**96.10**	**38**	PFAKE		16 52 50.0	+7.7
Y49A				LR	LR		
	comp=Z,300nm,19.0s						
X51A	**Calhoun**	**96.28**	**37**	PFAKE		16 52 50.0	+6.9
X51A				LR	LR		
	comp=Z,300nm,20.0s						
W52A	**Murphy**	**96.29**	**36**	PFAKE		16 52 50.0	+6.9
W52A				LR	LR		
	comp=Z,200nm,21.0s						
V53A	**Saluda**	**96.33**	**35**	PFAKE		16 52 50.0	+6.7
V53A				LR	LR		
	comp=Z,300nm,22.0s						
T56A	**Rocky Mt**	**96.42**	**32**	P	**P**	**16 52 43.9**	**+0.2**
	baz=328						
LRAL	**Lakeview Retre**	**96.47**	**39**	PFAKE		16 53 00.0	+16
LRAL				LR	LR		
	comp=Z,300nm,20.0s						
T57A	**Hurt**	**96.77**	**32**	P	**P**	**16 52 45.6**	**+0.3**
	baz=328						
Z50A	**Ashland**	**96.83**	**38**	PFAKE		16 53 00.0	+14
Z50A				LR	LR		
	comp=Z,300nm,21.0s						
BG3	**Lake Jocassee**	**96.83**	**35**	PFAKE		16 53 00.0	+14
BG3				LR	LR		
	comp=Z,200nm,22.0s						
ESDC	**Sonseca Array**	**96.87**	**334**	P	**P**	**16 52 45.5**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=19,slow=4.1,SNR=10						
ESDC				PP	**PP**	**16 56 40.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=35,slow=7.4,SNR=4.2						
ESDC				LR	LR	17 41 04.5	
	comp=Z,856nm,20.6s,baz=20,slow=38						
ESLA	**Sonseca Array**	**96.87**	**334**	PFAKE		16 53 00.0	+14
ESLA				LR	LR		
	comp=Z,1µm,21.0s						
X53A	**Estanollee**	**97.07**	**36**	P	Pdif	16 52 47.7	+1.0
	baz=326						
PAB	**San Pablo**	**97.11**	**334**	PFAKE		16 53 00.0	+13
PAB				LR	LR		
	comp=Z,1µm,20.0s						
U57A	**Blanch**	**97.22**	**32**	P	Pdif	16 52 48.0	+0.7
	baz=328						
Y52A	**Lilburn**	**97.23**	**37**	PFAKE		16 53 00.0	+13
Y52A				LR	LR		
	comp=Z,300nm,21.0s						
V56A	**Mocksville**	**97.25**	**33**	PFAKE		16 53 00.0	+13
V56A				LR	LR		
	comp=Z,300nm,19.0s						
V56A	**Mocksville**	**97.25**	**33**	P	Pdif	16 52 47.7	+0.2
	baz=328						
MTE	**Manteigas**	**97.40**	**337**	PFAKE		16 53 00.0	+12
MTE				LR	LR		
	comp=Z,700nm,18.0s						
KMSC	**Kings Mountain**	**97.44**	**34**	PFAKE		16 53 00.0	+12
KMSC				LR	LR		
	comp=Z,300nm,20.0s						
PAULI	**Pauline**	**97.49**	**35**	PFAKE		16 53 00.0	+11
PAULI				LR	LR		
	comp=Z,400nm,21.0s						
T59A	**Double "B" Far**	**97.49**	**31**	P	Pdif	16 52 49.0	+0.5
	baz=330						
250A	**Grady**	**97.68**	**39**	PFAKE		16 53 00.0	+11
250A				LR	LR		
	comp=Z,300nm,22.0s						
HODGE	**Hodges**	**97.78**	**35**	PFAKE		16 53 00.0	+10
HODGE				LR	LR		
	comp=Z,400nm,22.0s						
COI	**Coimbra**	**97.85**	**337**	PFAKE		16 53 00.0	+10
COI				LR	LR		
	comp=Z,600nm,18.0s						
Y54A	**Tignall**	**97.88**	**36**	P	Pdif	16 52 51.1	+0.8
	baz=326						
GOGA	**Godfrey**	**97.89**	**37**	PFAKE		16 53 00.0	+10
GOGA				LR	LR		
	comp=Z,200nm,20.0s						
152A	**Waverly Hall**	**97.89**	**38**	PFAKE		16 53 00.0	+10
152A				LR	LR		
	comp=Z,300nm,21.0s						
W57A	**Gilead**	**98.02**	**33**	PFAKE		16 53 00.0	+9.1
W57A				LR	LR		
	comp=Z,300nm,20.0s						
JSC	**Jenkinsville**	**98.19**	**35**	PFAKE		16 53 00.0	+8.3
JSC				LR	LR		
	comp=Z,300nm,21.0s						
Y55A	**Saluda**	**98.20**	**35**	P	Pdif	16 52 52.4	+0.6
	baz=327						
BIRD	**Birdtown, Kers**	**98.24**	**34**	PFAKE		16 53 00.0	+8.1
BIRD				LR	LR		
	comp=Z,400nm,22.0s						
V59A	**Middlesex**	**98.25**	**32**	P	**P**	**16 52 51.9**	**+0.1**
	baz=329						
V60A	**Jim Taylor Roa**	**98.65**	**31**	PFAKE		16 53 00.0	+6.3
V60A				LR	LR		
	comp=Z,300nm,20.0s						
253A	**Americus**	**98.67**	**38**	PFAKE		16 53 10.0	+16

253A				LR	LR		
	comp=Z,300nm,21.0s						
154A	Montrose	98.72	37	PFAKE		16 53 10.0	+16
154A				LR	LR		
	comp=Z,200nm,20.0s						
Y57A	Sumter	98.80	34	PFAKE		16 53 10.0	+16
Y57A				LR	LR		
	comp=Z,400nm,21.0s						
RKT	Rikitea	98.85	112	eLR	LR	17 25 00.2	
	comp=Z,2µm,27.5s						
Y58A	Scranton	99.22	34	PFAKE		16 53 10.0	+14
Y58A				LR	LR		
	comp=Z,400nm,22.0s						
NHSC	New Hope	99.66	35	PFAKE		16 53 10.0	+12
NHSC				LR	LR		
	comp=Z,400nm,20.0s						
PVAQ	Vaqueiros	100.18	336	PFAKE		16 53 10.0	+9.5
PVAQ				LR	LR		
	comp=Z,900nm,19.0s						
PFVI	Vila Bisbo	100.79	336	PFAKE		16 53 10.0	+6.8
PFVI				LR	LR		
	comp=Z,500nm,21.0s						
RTC	Rabat Centre	102.98	333	PFAKE		16 53 20.0	+7.0
RTC				LR	LR		
	comp=Z,2µm,19.0s						
DWPF	Disney Wildern	103.24	38	PFAKE		16 53 30.0	+16
DWPF				LR	LR		
	comp=Z,400nm,22.0s						
ACON	Acoyapa	114.08	51	PFAKE		16 58 10.0	+16
ACON				LR	LR		
	comp=Z,500nm,20.0s						
ESPN	Las Esperanzas	114.45	50	PFAKE		16 58 10.0	+15
ESPN				LR	LR		
	comp=Z,300nm,18.0s						
VNDA	Vanda	115.49	175	PKP	PKPdf	16 57 54.5	-0.4
	comp=Z,1.1nm,0.9s,baz=298,slow=6.2,SNR=6.2						
TOA1	Torodi Ar. Sit	117.03	315	ePKPdf	PKPdf	16 57 58.6	-1.2
TORD	Torodi Ar. Bea	117.04	315	PKP	PKPdf	16 57 58.6	-1.2
	comp=Z,3.4nm,0.9s,baz=341,slow=5.6,SNR=11						
TORD				PP	PP	16 59 06.3	-2.5
	comp=Z,17nm,1.1s,baz=14,slow=6.4,SNR=13						
MAW	Mawson	120.06	206	PKP	PKPdf	16 58 02.9	-1.0
	comp=Z,3.0nm,0.9s,baz=279,slow=3.9,SNR=5.3						
SABA	Saba	120.36	28	PFAKE		16 58 20.0	+14
SABA				LR	LR		
	comp=Z,400nm,19.0s						
SKI	Saint Kitts	120.81	27	PFAKE		16 58 20.0	+13
SKI				LR	LR		
	comp=Z,300nm,19.0s						
LBTB	Lobatse	124.80	263	ePKPdf	PKiKP	16 58 14.7	-0.1
LBTB	Lobatse	124.80	263	ePKIKP	PKiKP	16 58 14.7	-0.1
DBIC	Dimbokro	125.98	317	PKP	PKPdf	16 58 16.9	-0.1
	comp=Z,9.7nm,1.0s,baz=69,slow=2.6,SNR=4.6						
BOSA	Boshof	126.78	260	PKP	PKPdf	16 58 17.5	-0.7
	comp=Z,3.5nm,0.9s,baz=313,slow=5.2,SNR=3.7						
QSPA	South Pole Qui	127.30	180	ePKPdf	PKPdf	16 58 17.6	-0.3
SYO	Syowa Base	128.72	207	⇓ePdiff	Pdif	16 55 12.0	+5.6
SNAA	Sanae	141.28	197	PKPdf	PKPdf	16 58 38.4	-5.5
SNAA	Sanae	141.28	197	ePKPpre	PKPdf	16 58 38.1	-5.8
SNAA	Sanae	141.28	197	ePKHKP	PKPdf	16 58 38.1	-5.8
VNA3	Neumayer Olymp	143.10	195	PKPdf	PKPbc	16 58 43.8	-0.3
VNA1	Neumayer--Stat	143.25	196	PKPdf	PKPbc	16 58 43.8	-0.6
LPAZ	La Paz	146.33	59	PKPbc	PKPbc	16 58 56.2	-0.1
	comp=Z,16nm,1.0s,baz=357,slow=2.8,SNR=31						
LPAZ	La Paz	146.33	59	ePKPbc	PKPbc	16 58 56.8	+0.5
LPAZ	La Paz	146.33	59	ePKP2	PKPbc	16 58 56.8	+0.5
MNMC	Minye Minye	147.22	65	ePKPab	PKPab	16 58 59.8	-0.4
LVC	Limon Verde	149.89	69	PKPbc	PKPbc	16 59 05.8	+0.5
	comp=Z,15nm,1.0s,baz=249,slow=2.8,SNR=7.6						
SIV	San Ignacio	150.66	49	PKP	PKPdf	16 59 01.1	-0.3
	comp=Z,3.1nm,1.0s,baz=315,slow=4.6,SNR=6.8						
SIV				PKPbc	PKPbc	16 59 06.6	-0.3
	comp=Z,28nm,1.0s,baz=300,slow=0.9,SNR=42						
CFA	Coronel Fontan	154.83	85	PKP	PKPdf	16 59 06.5	-0.6
	comp=Z,1.2nm,0.4s,baz=270,slow=4.1,SNR=2.8						
CFA				PKPbc	PKPbc	16 59 15.4	-0.4
	comp=Z,3.0nm,0.7s,baz=252,slow=3.6,SNR=5.2						
CFA				PKPab	PKPab	16 59 31.0	-0.2
	comp=Z,2.4nm,0.4s,baz=315,slow=5.2,SNR=3.0						
PLCA	Paso Flores	154.98	107	PKPab	PKPab	16 59 31.7	+0.1
	comp=Z,6.4nm,1.1s,baz=295,slow=11,SNR=3.8						
BDFB	Brasilia	156.58	24	PKPab	PKPab	16 59 39.7	+0.8
	comp=Z,5.3nm,0.7s,baz=81,slow=3.4,SNR=4.9						
CPUP	Villa Florida	160.50	60	PKP	PKPdf	16 59 14.1	-0.1
	comp=Z,0.7nm,0.5s,baz=326,slow=15,SNR=2.3						
CPUP				PKPab	PKPab	16 59 55.8	+0.2
	comp=Z,0.8nm,0.2s,baz=63,slow=2.3,SNR=2.4						

ISCJB ***19*** *16:41:28.6±0.8, 47°.64N±0°.08×92°.7W±0°.1, h0km, Error ellipse: s-maj=12.6km s-min=7.7km az=37.7*
NEIC ***19*** *16:41:29.4±0.8, 47°.64N×92°.66W, h0km, MN2.3, Error ellipse: s-maj=13.0km s-min=9.1km az=16.0, Suspected Mining explosion.*
NEIC 16 km [10 miles] NW of Virginia.
IDC ***19*** *16:41:31.0±4.0, 47°.60N×92°.60W, h0km, mb1 2.8/1, mb1mx2.7/41, mbtmp2.8/1, ML1.1/1, Error ellipse: s-maj=77.7km s-min=27.3km az=52.0*
ISC 19 16:41:29.7±1.1**, 47°.63N**±0°.07×**92°.61W**±0°.06**, h0km, n8, σ0ˢ.54**/7**, Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYMN	Ely	0.81	67	ePg	Pg	16 41 45.0	-0.3
E38A	The Farm, Brul	1.25	145	ePn	Pb	16 41 53.9	-0.2
AGMN	Agassiz Nation	2.29	288	ePg	Pb	16 42 11.2	-0.6
C40A	Isle Royale Na	2.35	82	ePn	Pn	16 42 09.9	+0.4
SPMN	Marine on St.	2.41	183	ePn	Pn	16 42 10.7	+0.4
ULM	Lac du Bonnet	3.39	322	Pn	Pn	16 42 24.4	+0.6
	0.3nm,0.3s,baz=126,slow=12,SNR=2.1						
ULM				Sn	Sn	16 43 05.0	+0.3
	0.3nm,0.3s,baz=306,slow=8.7,SNR=1.6						
ULM				Lg	Lg	16 43 16.5	
	0.9nm,0.3s,baz=65,slow=17,SNR=4.8						
I10CA	LAC DU BONNET	3.42	320	i		17 02 10.0	
	baz=138,slow=318,SNR=3.2						
I56US	NEWPORT INFRAS	16.43	281	i		18 24 50.0	
	baz=84,slow=311,SNR=2.9						

ATH 19 16:51:12.1, 38°.23N×22°.11E, h11km±1km, ML0.7/4**, Error ellipse: s-maj=2.0km s-min=0.9km az=239.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG3	Aigion	0.03	343	P	Pg	16 51 14.2	+0.1
AIG3				S	Sg	16 51 16.0	+0.4
AIG1	Aigion	0.03	135	P	Pg	16 51 14.2	0.0
AIG2	Aigio	0.04	289	P	Pg	16 51 14.1	-0.1
AIG2				S	Sg	16 51 15.4	-0.2
TRAZ	Trapeza	0.10	129	P	Pg	16 51 14.8	-0.1
TRAZ				S	Sg	16 51 16.9	-0.1
TRAZ				AML	AML	16 51 17.5	
	comp=E,125µm,0.2s						
TRAZ				AML	AML	16 51 17.6	
	comp=N,208µm,0.1s						
LAKA	Lakka	0.11	275	P	Pg	16 51 15.1	+0.1
LAKA				S	Sg	16 51 16.8	-0.3
LAKA				AML	AML	16 51 17.2	
	comp=E,60µm,0.2s						
LAKA				AML	AML	16 51 17.3	
	comp=N,50µm,0.2s						
TRIZ	Trizonia	0.14	346	P	Pg	16 51 15.5	0.0
TRIZ				S	Sg	16 51 17.5	-0.2
KALE	Kalithea	0.16	7	P	Pg	16 51 16.0	+0.1
KALE				S	Sg	16 51 18.8	+0.4
KALE				AML	AML	16 51 19.3	
	comp=E,64µm,0.2s						
KALE				AML	AML	16 51 19.4	
	comp=N,96µm,0.2s						
SERG	Sergoula	0.19	346	P	Pg	16 51 16.3	+0.1
SERG				S	Sg	16 51 19.1	0.0
SERG				AML	AML	16 51 19.7	
	comp=E,56µm,0.3s						
SERG				AML	AML	16 51 20.7	
	comp=N,72µm,0.2s						
KLV	Kalavryta, Ach	0.19	171	P	Pg	16 51 16.2	0.0
KLV				S	Sg	16 51 19.3	+0.2
DSF	Desfina	0.37	61	P	Pg	16 51 19.5	0.0
DSF				S	Sg	16 51 24.4	-0.1
ANX	Ano Chora	0.39	337	P	Pg	16 51 19.9	0.0

IDC 19 16:54:38.7±3.9**, 6°.55S×146°.42E, h152km**±62km**, mb3.1**/3**, mb1 3.3**/5**, mb1mx3.0**/26**, mbtmp3.6**/5**, Error ellipse: s-maj=80.0km s-min=36.2km az=109.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.93	165	P	Pn	16 55 26.1	+0.7
	6.4nm,0.3s,baz=350,slow=8.3,SNR=23						
PMG				S	Sn	16 56 01.6	+0.1
	6.2nm,0.3s,baz=355,slow=4.5,SNR=5.2						
WRA	Warramunga Arr	17.74	220	P	Pn	16 58 36.5	0.0
	0.1nm,0.3s,baz=44,slow=11,SNR=2.4						
ASAR	Alice Springs	20.84	214	P	P	16 59 08.4	-0.2
	0.3nm,0.6s,baz=54,slow=7.9,SNR=7.6						
CMAR	Chiang Mai Arr	53.00	299	P	P	17 03 39.5	-0.7
	0.8nm,0.6s,baz=121,slow=6.3,SNR=5.6						
MKAR	Makanchi Array	77.55	321	P	P	17 06 18.2	+0.4
	1.1nm,0.8s,baz=121,slow=5.4,SNR=5.1						

MEX 19 17:04:41.9±0.5**, 16°.18N×97°.59W, h10km**±8km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	Vista Hermosa	1.21	42	eP	Pb	17 05 01.3	-3.7
VHO				eS	Sb	17 05 16.5	-4.3
HUIG	Huatulco	1.48	106	i P	Pn	17 05 04.3	-4.4
HUIG				i S	Sn	17 05 22.6	-5.5

IDC 19 17:07:17.9±3.0**, 1°.49N×128°.54E, h0km, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.2**/33**, mbtmp3.3**/3**, Error ellipse: s-maj=231.8km s-min=30.0km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.05	165	P	P	17 12 13.3	-1.1
	0.9nm,0.7s,baz=344,slow=12,SNR=1.7						
ASAR	Alice Springs	25.54	169	P	P	17 12 49.5	+0.9
	1.3nm,1.1s,baz=356,slow=16,SNR=2.7						
MKAR	Makanchi Array	60.41	325	P	P	17 17 29.1	-0.1
	0.2nm,0.5s,baz=135,slow=7.3,SNR=2.5						

IDC ***19*** *17:23:40.5±0.8, 12°.69N×143°.99E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.7/29, mbtmp3.9/6, Error ellipse: s-maj=51.1km s-min=21.0km az=103.0*
ISCJB ***19*** *17:23:43.3±0.5, 12°.50N±0°.07×143°.8E±0°.1, h27km, mb4.3/13, Error ellipse: s-maj=17.1km s-min=8.9km az=19.4*
NEIC ***19*** *17:23:44.9±2.8, 12°.48N×143°.96E, h23km±6km, mb4.6/8, Error ellipse: s-maj=18.6km s-min=12.9km az=145.0*
ISC 19 17:23:45.0±0.7**, 12°.54N**±0°.10×**143°.9E**±0°.1**, h27km, n28, σ1ˢ.25**/24**, mb4.5**/13**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.38	41	ePn	Pn	17 24 09.5	+1.0
SARN	Sarigan	4.50	23	ePn	Pn	17 24 53.2	+1.7
PATS	Pohnpei	15.26	110	eP	Pn	17 27 17.5	-1.2
	60nm,1.1s						
H11S3	WAKE ISLAND Hy	22.70	72	T	T	17 52 30.4	
	baz=258,slow=75,SNR=5.5						
H11S1	WAKE ISLAND Hy	22.71	72	T	T	17 52 28.5	
	baz=258,slow=75,SNR=4.6						
H11S2	WAKE ISLAND Hy	22.71	72	T	T	17 52 29.2	
	baz=258,slow=75,SNR=8.0						
H11N1	WAKE ISLAND Hy	23.16	69	T	T	17 53 03.2	
	baz=255,slow=75,SNR=8.2						
H11N2	WAKE ISLAND Hy	23.17	69	T	T	17 53 05.3	
	baz=255,slow=75,SNR=8.2						
H11N3	WAKE ISLAND Hy	23.18	69	T	T	17 53 04.0	
	baz=255,slow=75,SNR=8.8						
COEN	Coen	26.34	182	eP	P	17 29 20.3	+1.4
	26nm,1.4s						
WB2	Warramunga Arr	33.63	196	eP	P	17 30 23.9	+0.4
	5.3nm,0.9s						
WR1	Warramunga Arr	33.63	196	eP	P	17 30 23.4	-0.1
WRA	Warramunga Arr	33.63	196	P	P	17 30 23.4	-0.1
	4.0nm,0.6s,baz=14,slow=7.7,SNR=8.1						
AS31	Alice Springs	37.30	195	eP	P	17 30 55.3	+0.3
	3.0nm,1.4s						
ASAR	Alice Springs	37.30	195	P	P	17 30 55.5	+0.5
	0.6nm,0.5s,baz=17,slow=9.8,SNR=18						
ASAR				PcP	PcP	17 33 15.8	+1.6
	0.7nm,0.7s,baz=32,slow=2.3,SNR=8.4						
HIZ	Hauiti	58.44	152	eP	P	17 33 37.6	-0.9
	52nm,1.3s						
MK32	Makanchi Array	61.62	317	eP	P	17 34 00.0	-0.3
MKAR	Makanchi Array	61.62	317	P	P	17 34 00.0	-0.3
	0.3nm,0.6s,baz=88,slow=7.4,SNR=2.2						
ILAR	Eielson Array	69.90	25	P	P	17 34 51.3	-2.0
	0.3nm,0.5s,baz=248,slow=5.4,SNR=3.3						
YKA	Yellowknife Ar	84.20	27	P	P	17 36 12.8	-1.0
	0.3nm,0.5s,baz=286,slow=4.9,SNR=3.1						
YKB5	Yellowknife Ar	84.20	27	eP	P	17 36 12.8	-1.0
BMO	Blue Mountains	87.37	45	eP	P	17 36 31.0	+1.0
	2.4nm,0.9s						
MFID	Camas Ranch	88.78	46	eP	P	17 36 38.9	+2.2
	7.1nm,1.2s						
ELK	Elko	89.95	48	eP	P	17 36 44.0	+1.6
	1.6nm,0.8s						
FIA0	FINESS Array S	91.72	335	eP	P	17 36 48.9	-1.0
FINES	FINESS Array B	91.72	335	P	P	17 36 48.9	-1.0
	1.7nm,0.8s,baz=79,slow=4.1,SNR=5.4						
LPAZ	La Paz	148.74	101	PKPbc	PKPbc	17 43 31.9	+0.3
	1.8nm,0.8s,baz=275,slow=3.7,SNR=6.5						
LPAZ	La Paz	148.74	101	ePKPdf	PKPdf	17 43 26.4	-1.4
LPAZ				epPKPdf	PKPbc	17 43 33.5	+1.8

IDC ***19*** *17:30:36.7±0.7, 12°.53N×143°.85E, h0km, mb3.9/13, mb1 4.2/13, mb1mx3.9/37, mbtmp3.9/13, MS3.4/3, Ms1 3.5/3, ms1mx3.1/24, Error ellipse: s-maj=21.1km s-min=15.4km az=112.0*
NEIC ***19*** *17:30:38.4±1.4, 12°.45N×143°.83E, h9km±5km, mb4.8/17, Error ellipse: s-maj=19.6km s-min=14.6km az=94.0*
ISCJB ***19*** *17:30:39.5±0.4, 12°.48N±0°.06×143°.76E±0°.07, h27km, mb4.3/28, MS3.4/3, Error ellipse: s-maj=11.1km s-min=7.4km az=32.9*
ISC 19 17:30:40.5±0.6**, 12°.46N**±0°.09×**143°.91E**±0°.10**, h27km, n49, σ1ˢ.03**/46**, mb4.6**/28**, MS3.5**/3**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.46	40	Pn	Pn	17 31 04.5	-0.6
	208nm,0.3s,baz=226,slow=2.6,SNR=154						
GUMO				Sn	Sn	17 31 23.6	+0.3
	199nm,0.3s,baz=344,slow=23,SNR=6.7						
GUMO	Guam	1.46	40	ePn	Pn	17 31 04.1	-0.9
SARN	Sarigan	4.58	23	ePn	Pn	17 31 49.2	+1.0
PATS	Pohnpei	15.26	110	ePn	Pn	17 34 12.5	-1.7
	78nm,1.3s						
H11S3	WAKE ISLAND Hy	22.74	72	T	T	17 59 26.4	
	baz=258,slow=75,SNR=4.8						
H11S1	WAKE ISLAND Hy	22.76	72	T	T	17 59 26.5	
	baz=258,slow=75,SNR=4.4						
H11S2	WAKE ISLAND Hy	22.76	72	T	T	17 59 28.0	
	baz=258,slow=75,SNR=9.4						
H11N1	WAKE ISLAND Hy	23.21	69	T	T	17 59 56.3	
	baz=255,slow=75,SNR=32						
H11N2	WAKE ISLAND Hy	23.22	69	T	T	17 59 59.1	
	baz=255,slow=75,SNR=7.7						
H11N3	WAKE ISLAND Hy	23.23	69	T	T	18 00 03.1	
	baz=255,slow=75,SNR=31						
JNU	Nakatsue	23.77	332	P	P	17 35 50.5	-0.5
	6.9nm,1.0s,baz=234,slow=3.3,SNR=4.1						
JNU	Nakatsue	23.77	332	eP	P	17 35 50.1	-0.8
	11nm,1.0s						
MJAR	Matsushiro Arr	24.52	349	P	P	17 35 58.8	+1.1
	1.9nm,0.9s,baz=171,slow=12,SNR=4.7						
MJAR				LR	LR	17 44 15.1	
	comp=Z,56nm,20.3s,baz=225,slow=34						
MAJO	Matsushiro	24.52	349	eP	P	17 35 58.9	+1.1
KSRS	Korea Array	28.71	333	P	P	17 36 34.6	-0.8
	0.8nm,0.7s,baz=133,slow=8.1,SNR=3.0						
WB2	Warramunga Arr	33.55	196	eP	P	17 37 18.6	+0.3
	13nm,0.8s						
WR1	Warramunga Arr	33.55	196	eP	P	17 37 18.7	+0.4
WRA	Warramunga Arr	33.55	196	P	P	17 37 18.7	+0.4
	4.3nm,0.8s,baz=16,slow=8.1,SNR=13						
ASAR	Alice Springs	37.22	195	P	P	17 37 50.8	+0.9
	2.8nm,1.0s,baz=17,slow=7.8,SNR=8.9						
ASAR				PcP	PcP	17 40 09.8	+0.4
	1.2nm,0.9s,baz=0.0,slow=3.8,SNR=5.1						
PETK	Petropavlovsk-	42.02	12	LR	LR	17 55 49.5	
	comp=Z,77nm,19.1s,baz=195,slow=36						
CMAR	Chiang Mai Arr	43.66	284	P	P	17 38 43.5	+0.2
	1.2nm,0.8s,baz=88,slow=6.5,SNR=6.0						
SONA0	Songino Array	47.12	326	eP	P	17 39 10.4	-0.1
SONA0				ePcP	PcP	17 40 42.1	+0.1
SONM	Songino Array	47.12	326	P	P	17 39 10.4	-0.1
	0.3nm,0.4s,baz=135,slow=7.1,SNR=2.8						
SONM				PcP	PcP	17 40 42.1	+0.1
	0.3nm,0.5s,baz=134,slow=4.2,SNR=2.3						
BKZ	Black Stump Fm	59.67	151	eP	P	17 40 42.7	+0.1
	15nm,1.5s						
MK32	Makanchi Array	61.66	317	eP	P	17 40 54.7	-1.4
MKAR	Makanchi Array	61.66	317	P	P	17 40 54.7	-1.4
	0.6nm,0.8s,baz=102,slow=7.6,SNR=3.5						
MAKZ	Makanchi	61.87	317	eP	P	17 40 58.4	+0.8
	3.0nm,1.3s						
ILAR	Eielson Array	69.98	25	P	P	17 41 50.0	+0.7
	0.4nm,0.7s,baz=261,slow=5.4,SNR=4.2						
ILAR				LR	LR	18 11 32.0	
	comp=Z,29nm,19.6s,baz=262,slow=35						
YKA	Yellowknife Ar	84.28	27	P	P	17 43 09.3	-0.4
	0.5nm,0.4s,baz=285,slow=5.0,SNR=4.9						
YKB5	Yellowknife Ar	84.28	27	eP	P	17 43 09.3	-0.4
PINE	Pine Mountain	85.16	46	eP	P	17 43 16.1	+1.3
	12nm,1.3s						
NEW	Newport	86.69	41	eP	P	17 43 23.1	+1.0
	6.0nm,0.9s						
BMO	Blue Mountains	87.44	45	eP	P	17 43 26.8	+0.9
	6.2nm,0.9s						
KVN	Kaiserville	88.35	50	eP	P	17 43 32.0	+1.6
	4.0nm,0.9s						
NVAR	Mina Array Bea	88.35	51	P	P	17 43 31.5	+1.0
	2.5nm,0.7s,baz=268,slow=6.1,SNR=10						
NV01	Mina Array Sit	88.35	51	eP	P	17 43 31.5	+1.0
NV11	Mina Array Sit	88.46	51	eP	P	17 43 32.0	+1.1
	0.4nm,1.1s						
MFID	Camas Ranch	88.85	46	eP	P	17 43 34.0	+1.4
	7.6nm,1.0s						
HLID	Hailey	89.80	45	eP	P	17 43 38.4	+1.3
	3.4nm,0.9s						
ELK	Elko	90.02	48	eP	P	17 43 39.5	+1.2
	3.4nm,0.8s						
TPNV	Topopah Spring	90.31	52	eP	P	17 43 41.2	+1.6
	3.9nm,0.8s						
PSUT	Pine Spring	91.68	50	eP	P	17 43 47.2	+1.2
	2.6nm,0.8s						
FIA0	FINESS Array S	91.78	335	eP	P	17 43 44.0	-1.7
FINES	FINESS Array B	91.78	335	P	P	17 43 44.0	-1.7
	3.1nm,1.1s,baz=76,slow=5.9,SNR=5.0						
YHH	Holmes Hill	91.85	43	eP	P	17 43 48.6	+1.8
	2.8nm,0.9s						
PD31	Pinedale Array	93.42	45	eP	P	17 43 54.6	+0.6
PDAR	Pinedale Array	93.42	45	P	P	17 43 54.6	+0.6
	0.2nm,0.4s,baz=132,slow=1.3,SNR=2.5						
LAO	LASA Array	94.18	40	eP	P	17 43 58.3	+1.0
	12nm,1.1s						
LPAZ	La Paz	148.75	101	PKPbc	PKPbc	17 50 27.5	+0.3
	1.6nm,0.9s,baz=320,slow=4.0,SNR=5.5						

IDC 19 17:50:36.9±2.0**, 0°.02N×123°.49E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/22**, mbtmp3.4**/3**, Error ellipse: s-maj=301.0km s-min=28.2km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.50	152	P	P	17 55 39.0	+0.6
	1.7nm,0.8s,baz=330,slow=11,SNR=3.5						
ASAR	Alice Springs	25.62	157	P	P	17 56 07.9	-0.4
	0.3nm,0.5s,baz=338,slow=9.2,SNR=12						
MKAR	Makanchi Array	58.86	328	P	P	18 00 37.6	0.0
	0.2nm,0.6s,baz=121,slow=6.9,SNR=2.5						

MEX 19 17:56:38.4±0.5**, 16°.74N×99°.72W, h13km**±2km**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	Acapulco	0.21	310	i P	Pg	17 56 42.3	-0.8
ACP2				eS	Sg	17 56 46.0	-0.2
CAIG	El Cayaco	0.61	300	eP	Pg	17 56 48.7	-1.6
CAIG				eS	Sg	17 56 56.6	-1.8
MEIG	Mezcala	1.18	5	eP	Pn	17 56 56.9	-3.9
MEIG				eS	Sb	17 57 11.5	-4.5
TLIG	Tlapa	1.37	53	eP	Pn	17 57 00.1	-3.3
TLIG				eS	Sn	17 57 15.8	-5.7
ARIG	Puente Sto Nin	1.65	339	eP	Pn	17 57 04.2	-2.9
ARIG				eS	Sn	17 57 22.8	-5.3
PLIG	Platanillo	1.66	7	eP	Pn	17 57 03.8	-3.4
PLIG				eS	Sn	17 57 23.7	-4.8

ISCJB ***19*** *17:56:38.8±0.9, 29°.88S±0°.03×71°.89W±0°.09, h43km±12km, Error ellipse: s-maj=13.4km s-min=5.0km az=174.3*
GUC ***19*** *17:56:41.2±0.6, 29°.96S×71°.51W, h49km±3km, ML4.1*
NEIC ***19*** *17:56:41.0±0.0, 29°.96S×71°.51W, h49km, ML4.2(GUC), After GUC.*
NEIC Felt [III] at Coquimbo and La Serena and [II] at Andacollo.
SJA ***19*** *17:56:48.5±1.6, 30°.03S×71°.12W, h70km±17km, ML3.7, MW4.2*
ISC 19 17:56:39.7±1.4**, 29°.95S**±0°.04×**71°.66W**±0°.07**, h32km**±11km**, n36, σ2ˢ.16**/44**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	0.36	83	⇑iP	Pn	17 56 50.3	+1.5
LSCH				eS	Sn	17 56 56.6	+1.9
LSCH				IAML		17 56 57.0	
	comp=N,36µm,0.3s						
GO04	Tololo Observa	0.78	107	ePg	Pn	17 56 56.0	+1.3
GO04				eSn	Sn	17 57 07.1	+1.6
GO04	Tololo Observa	0.78	107	i P	Pn	17 56 56.4	+1.6
GO04				eS	Sn	17 57 07.0	+1.6
LCO	Las Campanas	1.25	42	ePn	Pb	17 57 03.4	+0.4
LCO				eSn	Sb	17 57 20.7	+1.8
LCO	Las Campanas	1.25	42	i P	Pb	17 57 03.5	+0.5
LCO				eS	Sb	17 57 20.1	+1.2
LCO				IAML		17 57 22.4	
	comp=N,7µm,0.4s						
CO02	Combarbal	1.37	156	i P	Pb	17 57 05.1	+0.2
CO02				eS	Sb	17 57 23.1	+1.0
AROD	Rodeo	1.91	97	eP	Pb	17 57 14.8	+0.7
AROD				eS	Sn	17 57 33.6	+0.2
GO03	Copiap	2.66	28	ePn	Pn	17 57 22.4	+1.9
GO03	Copiap	2.66	28	IAML		17 58 12.6	
	comp=N,813nm,0.1s						
RTLS	Leoncito	2.74	133	eP	Pb	17 57 27.3	-1.0
RTLS				eS	Sn	17 57 57.6	+3.7
RTLS				IAML		17 58 15.7	
	comp=Z,267nm,0.4s						
AMOG	MOGNA	2.90	111	eP	Pb	17 57 29.1	-1.8
RTLL	Cerro Villicun	3.07	117	eP	Pb	17 57 30.5	-3.2
VCA	Vinchina	3.25	69	eP	Pb	17 57 34.8	-2.0
VCA				IAML		17 57 44.4	
	comp=Z,376nm,0.3s						
RTCV	Cerro Valdivia	3.29	126	eP	Pb	17 57 33.7	-3.7
PEL	Peldehue	3.29	166	ePn	Pn	17 57 31.8	+2.7
PEL	Peldehue	3.29	166	i P	Pn	17 57 31.9	+2.8
PEL				eS	Sn	17 58 10.1	+2.9
PEL				IAML		17 58 25.2	
	comp=E,403nm,0.5s						
CFA	Coronel Fontan	3.37	120	eP	Pb	17 57 34.8	-4.0
ACAN	Cantantal	4.48	122	eP	Pn	17 57 49.4	+3.9
GO05	Huala	5.05	183	ePn	Pn	17 57 53.4	+0.1
GO02	Mina Guanaco	5.11	22	ePn	Pn	17 57 55.1	+0.7
CYA	Choya	5.33	75	eP	Pn	17 58 00.3	+3.1
MRA	San Martin	5.65	117	eP	Pn	17 58 04.6	+3.0
TCA	Tanti	6.24	105	eP	Pn	17 58 12.1	+2.4
PB10	IPOC Station P	6.49	9	ePn	Pn	17 58 13.3	+0.3
PB04	IPOC Station P	7.71	10	ePn	Pn	17 58 28.6	-1.3
LVC	Limon Verde	7.72	19	ePn	Pn	17 58 29.9	-0.4
PB01	IPOC Station P	9.09	13	ePn	Pn	17 58 48.5	-0.3
PB11	IPOC Station P	10.31	11	ePn	Pn	17 59 05.3	-0.3
GO01	Chusmiza	10.48	13	ePn	Pn	17 59 07.8	-0.5
PLCA	Paso Flores	10.79	176	ePn	Pn	17 59 12.5	+0.4
MNMC	Minye Minye	10.94	10	ePn	Pn	17 59 17.3	+3.0
CPUP	Villa Florida	13.15	78	ePn	Pn	17 59 42.2	-2.1
LPAZ	La Paz	13.98	14	ePn	P	17 59 59.7	-4.3
SNAA	Sanae	55.22	159	eP	P	18 06 10.6	+1.3
060A	Indiantown	57.28	351	eP	P	18 06 25.0	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**60.27**	**180**	*e*P	**P**	**18 06 45.3**	**+0.4**

NEIC 19 18:17:36.8±0.0, 63°.06N×149°.73W, h80km, ML2.9(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.09**	**153**	*e*Pn	Pn	18 17 48.3	+0.1
HUR				*e*Sn	Sn	18 17 57.5	+0.8
RND	**Reindeer**	**0.53**	**48**	*e*Pn	Pn	18 17 51.1	+0.3
RND				*e*Sn	Sn	18 18 01.9	+0.7
KTH	**Kantishna Hill**	**0.73**	**313**	*e*Pn	Pn	18 17 52.5	-0.3
MCK	**McKinley**	**0.76**	**27**	*e*Pn	Pn	18 17 53.7	+0.6
MCK				*e*Sn	Sn	18 18 06.2	+0.9
DHY	**Denali Highway**	**1.07**	**88**	*e*Pn	Pn	18 17 56.5	-0.3
BWN	**Browne**	**1.12**	**6**	*e*Pn	Pn	18 17 58.1	+0.8
BWN				*e*Pn	Pn	18 17 58.1	+0.8
BWN				*e*Sn	Sn	18 18 12.7	0.0
CAST	**Castle Rocks**	**1.13**	**290**	*e*Pn	Pn	18 17 57.4	+0.1
CAST				*e*Sn	Sn	18 18 12.6	-0.2
PPLA	**Purkeypile**	**1.14**	**263**	*e*Pn	Pn	18 17 58.1	+0.5
PPLA				*e*Sn	Sn	18 18 14.4	+1.2
BPAW	**Bear Paw Mtn.**	**1.19**	**332**	*e*Pn	Pn	18 17 58.5	+0.5
BPAW				*e*Sn	Sn	18 18 15.2	+1.1
SML	**Sawmill**	**1.41**	**152**	*e*Pn	Pn	18 18 00.1	-0.9
PMR	**Palmer**	**1.50**	**169**	*e*Pn	Pn	18 18 01.7	-0.2
PMR				*e*Sn	Sn	18 18 21.7	+0.7
WRH	**Wood River Hil**	**1.59**	**26**	*e*Pn	Pn	18 18 03.3	+0.1
WRH				*e*Sn	Sn	18 18 22.9	-0.4
SCM	**Sheep Creek Mo**	**1.66**	**137**	*e*Pn	Pn	18 18 03.4	-0.8
SUA	**Susitna One**	**1.67**	**197**	*e*Pn	Pn	18 18 04.4	0.0
KNK	**Knik Glacier**	**1.76**	**160**	*e*Pn	Pn	18 18 05.1	-0.3
KNK				*e*Sn	Sn	18 18 27.7	+0.6
CCB	**Clear Creek Bu**	**1.81**	**27**	*e*Pn	Pn	18 18 06.1	+0.1
PS10	**TAPS Pump St10**	**1.83**	**77**	*e*Pn	Pn	18 18 07.4	+1.1
HDA	**Harding Lake**	**1.83**	**41**	*e*Pn	Pn	18 18 06.3	-0.1
PAX	**Paxson**	**1.94**	**91**	*e*Pn	Pn	18 18 08.2	+0.3
PAX				*e*Sn	Sn	18 18 33.5	+1.8
PS08	**TAPS Pump Stn8**	**1.97**	**40**	*e*Pn	Pn	18 18 08.3	+0.1
RC01	**Rabbit Creek A**	**1.98**	**180**	*e*Pn	Pn	18 18 08.8	+0.5
COLA	**College**	**2.00**	**24**	*e*Pn	Pn	18 18 08.6	+0.1
MDM	**Murphy Dome**	**2.02**	**18**	*e*Pn	Pn	18 18 09.1	+0.2
MDM				*e*Sn	Sn	18 18 32.6	-0.7
MLY	**Manley**	**2.03**	**348**	*e*Pn	Pn	18 18 09.6	+0.6
ILB	**Eielson Array**	**2.13**	**35**	*e*Pn	Pn	18 18 10.1	-0.2
SPU	**Mount Spurr**	**2.18**	**211**	*e*Pn	Pn	18 18 10.6	-0.4
SPWE	**Spurr West**	**2.23**	**218**	*e*Pn	Pn	18 18 12.1	+0.3
RIDG	**Independent Ri**	**2.30**	**71**	*e*Pn	Pn	18 18 13.2	+0.6
JPK	**Jack Peak**	**2.49**	**142**	*e*Pn	Pn	18 18 13.8	-1.4
GLI	**Glacier Island**	**2.52**	**149**	*e*Pn	Pn	18 18 14.0	-1.5
DOT	**Dot Lake**	**2.62**	**74**	*e*Pn	Pn	18 18 16.5	-0.5
SCRK	**Sand Creek**	**2.73**	**68**	*e*Pn	Pn	18 18 17.9	-0.6
MENT	**Mentasta**	**2.74**	**90**	*e*Pn	Pn	18 18 18.6	0.0
FID	**Port Fidalgo**	**2.78**	**145**	*e*Pn	Pn	18 18 18.0	-1.1
FID				*e*Pn	Pn	18 18 18.1	-1.0
TTA	**Tatalina**	**2.87**	**270**	*e*Pn	Pn	18 18 20.3	-0.1
RDJH	**Redoubt Jeurge**	**2.88**	**212**	*e*Pn	Pn	18 18 21.2	+0.7
TT01	**Tatalina**	**2.88**	**270**	*e*Pn	Pn	18 18 20.1	-0.2
SEW	**Seward**	**2.97**	**177**	*e*Pn	Pn	18 18 21.3	-0.3
RSO	**Redoubt South**	**2.98**	**210**	*e*Pn	Pn	18 18 22.6	+0.7
PRP	**Porcupine Dome**	**3.07**	**35**	*e*Pn	Pn	18 18 23.3	+0.2
EYAK	**Cordova Ski Ar**	**3.15**	**141**	*e*Pn	Pn	18 18 23.4	-0.6
SGAM	**Sherman Glacie**	**3.35**	**138**	*e*Pn	Pn	18 18 26.2	-0.5
BRLK	**Bradley Lake**	**3.35**	**190**	*e*Pn	Pn	18 18 26.5	-0.3
BRSE	**Bradley Lake S**	**3.37**	**189**	*e*Pn	Pn	18 18 26.3	-0.7
SVW2	**Sparrevohn**	**3.38**	**237**	*e*Pn	Pn	18 18 26.8	-0.5
IM3	**Indian Mountai**	**3.41**	**331**	*e*Pn	Pn	18 18 28.1	+0.5
HOM	**Homer**	**3.54**	**196**	*e*Pn	Pn	18 18 28.1	-1.1
RAGM	**Ragged Mountai**	**3.60**	**136**	*e*Pn	Pn	18 18 29.1	-1.1
BCA3	**Beaver Creek A**	**3.62**	**86**	*e*Pn	Pn	18 18 29.6	-0.8
CNPM	**China Poot**	**3.62**	**192**	*e*Pn	Pn	18 18 30.0	-0.5
CNPM				*e*Sn	Sn	18 19 11.2	-0.9
HMT	**Hamilton**	**3.77**	**134**	*e*Pn	Pn	18 18 31.7	-0.9
CRQM	**Cirque**	**3.88**	**124**	*e*Pn	Pn	18 18 33.0	-1.1
TGL	**Tana Glacier**	**4.00**	**122**	*e*Pn	Pn	18 18 34.6	-1.0
FYU	**Fort Yukon**	**4.01**	**27**	*e*Pn	Pn	18 18 35.8	+0.1
EGAK	**Eagle**	**4.16**	**62**	*e*Pn	Pn	18 18 37.3	-0.4
COLD	**Coldfoot**	**4.19**	**357**	*e*Pn	Pn	18 18 38.3	+0.1
DAWY	**Dawson**	**4.73**	**73**	*e*Pn	Pn	18 18 45.0	-0.6
BM3	**Burnt Mountain**	**4.88**	**24**	*e*Pn	Pn	18 18 47.9	+0.4
PCA	**Pinnacle**	**5.41**	**119**	*e*Pn	Pn	18 18 54.2	-0.7
KDAK	**Kodiak Island**	**5.48**	**196**	*e*Pn	Pn	18 18 53.9	-1.9
KABU	**Katmai Buttres**	**5.53**	**212**	*e*Pn	Pn	18 18 56.4	0.0
BCPM	**Bancas Point**	**5.75**	**118**	*e*Pn	Pn	18 18 57.4	-2.0
HYT	**Haines Junctio**	**6.19**	**106**	*e*Pn	Pn	18 19 04.4	-1.1
CHIA	**Chirikof Islan**	**7.83**	**205**	*e*Pn	Pn	18 19 26.3	-1.5
CHGN	**Chignik**	**8.07**	**217**	*e*Pn	Pn	18 19 29.1	-1.9
INK	**Inuvik**	**8.49**	**45**	*e*Pn	Pn	18 19 33.1	-3.5
BESE	**Bessie Mountai**	**8.53**	**115**	*e*Pn	Pn	18 19 35.8	-1.6
SDPT	**Sand Point**	**9.48**	**220**	*e*Pn	Pn	18 19 45.8	-4.5
AKUT	**Akutan**	**12.21**	**230**	*e*Pn	Pn	18 20 24.4	-3.0

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*IDC **19** 18:18:27.8±2.6, 24°.98S×179°.67E, h474km±27km, mb3.5/10, mb1 3.7/12, mb1mx3.5/27, mbtmp4.3/12, Error ellipse: s-maj=21.2km s-min=14.3km az=86.0*

*ISCJB **19** 18:18:29.6±0.6, 25°.10S±0°.08×179°.6E±0°.2, h507km, mb3.8/10, Error ellipse: s-maj=21.8km s-min=10.1km az=7.9*

ISC 19 18:18:30.5±0.6, 25°.15S±0°.09×179°.6E±0°.2, h507km, n19, σ1s.21/19, mb3.9/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera** 1.1nm,0.3s,baz=14,slow=5.1,SNR=12	**13.25**	**189**	P	**P**	**18 21 20.7**	**-1.3**
URZ	1.0nm,0.3s,baz=257,slow=20,SNR=7.1			S	**S**	**18 23 41.4**	**-2.0**
RPZ	**Rata Peaks** 1.6nm,0.3s,baz=11,slow=3.2,SNR=10	**19.81**	**199**	P	**P**	**18 22 26.3**	**-0.5**
ASAR	**Alice Springs** 2.9nm,1.1s,baz=89,slow=7.3,SNR=35	**41.52**	**262**	P	**P**	**18 25 33.8**	**+0.5**
ASAR	0.6nm,1.1s,baz=114,slow=4.9,SNR=3.3			ScP	**ScP**	**18 30 23.3**	**+2.6**
WRA	**Warramunga Arr** 2.1nm,0.3s,baz=101,slow=8.5,SNR=24	**42.01**	**268**	P	**P**	**18 25 37.0**	**-0.2**
QSPA	**South Pole Qui** 4.7nm,0.6s,baz=349,slow=0.6,SNR=59	**64.94**	**180**	P	**P**	**18 28 21.2**	**+1.7**
MJAR	**Matsushiro Arr** 3.6nm,0.7s,baz=166,slow=5.8,SNR=9.6	**72.74**	**326**	P	**P**	**18 29 06.2**	**-0.6**
MAW	**Mawson** 2.8nm,0.5s,baz=143,slow=7.0,SNR=17	**76.47**	**201**	P	**P**	**18 29 28.7**	**+1.4**
PETK	**Petropavlovsk-** 3.1nm,0.6s,baz=113,slow=6.6,SNR=13	**80.23**	**347**	P	**P**	**18 29 47.3**	**-0.2**
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=216,slow=7.3,SNR=3.6	**85.87**	**44**	P	**P**	**18 30 16.5**	**0.0**
SEY	**Seymchan** 0.9nm,0.7s,baz=158,slow=8.9,SNR=5.3	**90.41**	**348**	P	**P**	**18 30 36.4**	**-0.4**
TXAR	**Lajitas Array** 0.2nm,0.7s,baz=201,slow=4.8,SNR=3.1	**91.36**	**58**	P	**P**	**18 30 43.0**	**+0.8**
ILAR	**Eielson Array** 0.4nm,0.6s,baz=231,slow=5.7,SNR=4.2	**93.31**	**14**	P	**P**	**18 30 48.2**	**-1.9**
ARCES	**ARCESS Array B** 1.1nm,0.7s,baz=90,slow=0.5,SNR=4.5	**133.03**	**348**	PKP	**PKPdf**	**18 36 47.1**	**-0.1**
FINES	**FINESS Array B** 1.6nm,0.9s,baz=46,slow=4.0,SNR=3.1	**139.51**	**341**	PKP	**PKPdf**	**18 36 59.2**	**-0.2**
NB2	**NORSAR Subarra** comp=Z,1.0nm,0.5s,baz=16,slow=3.2	**143.25**	**351**	PKP	PKPab	18 37 03.1	-0.9
NOA	**NORSAR Array B** comp=Z,2.1nm,0.8s,baz=15,slow=4.8,SNR=8.3	**143.25**	**351**	PKhKP	PKPpre	18 37 03.1	
AKASG	**Malin Array Be** comp=Z,1.4nm,0.4s,baz=44,slow=4.6,SNR=7.8	**145.82**	**326**	PKPbc	**PKPdf**	**18 37 11.1**	**+0.3**
BRTR	**Keskin Array B** comp=Z,0.3nm,0.3s,baz=101,slow=3.8,SNR=3.1	**148.05**	**305**	PKPbc	**PKPbc**	**18 37 18.9**	**-0.1**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.8s,baz=162,slow=3.2,SNR=3.3	**167.91**	**190**	PKPab	**PKPab**	**18 38 50.1**	**+0.6**

GCG 19 18:23:34.2±0.5, 13°.84N×92°.26W, h26km±454km, MD3.8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.09**	**38**	*e*P	Pb	18 23 54.4	-0.2
FUG	**Fuego 3**	**1.50**	**66**	*e*P	Pn	18 23 59.7	0.0
FUG				*e*S	Sb	18 24 20.0	-0.2
PCG	**Pacaya**	**1.69**	**71**	*e*P	Pn	18 24 03.2	+0.8

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*SOME **19** 18:42:05.5, 43°.12N×84°.10E, h5km*

*NNC **19** 18:42:12.5±1.8, 43°.42N×83°.80E, h1km±8km, mb3.5, mpv3.2, Error ellipse: s-maj=14.0km s-min=7.7km az=132.0*

ISC 19 18:42:09.8±2.1, 43°.31N±0°.08×83°.86E±0°.07, h10km, n29, σ2s.55/43, 6C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen** 11nm,0.4s	**2.56**	**274**	Pg	**Pb**	**18 42 56.0**	**0.0**
KTMS	37nm,0.4s			Lg	Lg	18 43 32.7	
KTMS	**Ketmen** 11nm,0.4s	**2.56**	**274**	*e*P	**Pb**	**18 42 56.0**	**0.0**
KTMS	37nm,0.4s			*e*S	**Sg**	**18 43 32.8**	**+0.6**
DJR	**Jarkent** 3.4nm,0.3s	**3.12**	**291**	Pg	**Pb**	**18 43 06.6**	**+1.1**
DJR	14nm,0.5s			Lg	Lg	18 43 51.2	
DJR	**Jarkent** 3.4nm,0.3s	**3.12**	**291**	*e*P	**Pb**	**18 43 06.6**	**+1.1**
DJR	14nm,0.5s			*e*S	**Sg**	**18 43 51.2**	**+1.2**
PDGK	**Podgornoye** 1.3nm,0.3s	**3.19**	**272**	Pg	**Pg**	**18 43 08.0**	**-2.9**
PDGK	14nm,0.5s			Lg	Lg	18 43 53.6	
PDGK	**Podgornoye** 3.3nm,0.4s	**3.19**	**272**	⇑Pn	**Pb**	**18 43 04.9**	**-1.8**
PDGK	48nm,0.7s			⇓Lg	Lg	18 43 51.7	
UZB	**Uzynbulak** 4.5nm,0.5s	**3.54**	**269**	Pg	**Pg**	**18 43 15.7**	**-2.0**
UZB	17nm,0.5s			Lg	Lg	18 44 06.5	
UZB	**Uzynbulak** 4.5nm,0.5s	**3.54**	**269**	*e*P	**Pg**	**18 43 15.7**	**-2.0**
UZB	17nm,0.5s			*e*S	**Sg**	**18 44 06.5**	**+3.0**
MK31	**Makanchi Array** 0.6nm,0.3s,baz=159,slow=14,SNR=33	**3.66**	**343**	⇓Pn	**Pb**	**18 43 10.3**	**-4.3**
MK31	2.2nm,0.5s,baz=152,slow=15,SNR=9.3			⇓Pg	**Pg**	**18 43 18.4**	**-1.5**
MK31	6.1nm,0.6s,baz=151,slow=17,SNR=4.8			⇑Sn	**Sn**	**18 43 51.2**	**+1.4**
MK31	16nm,0.5s,baz=159,slow=27,SNR=7.1			⇑Lg	Lg	18 44 04.2	
MAKZ	**Makanchi** 1.7nm,0.6s	**3.75**	**340**	⇑Pn	**Pb**	**18 43 11.4**	**-4.6**
MAKZ	3.9nm,0.6s			⇓Pg	**Pg**	**18 43 19.2**	**-2.3**
MAKZ	5.0nm,0.6s			⇓Sn	**Sn**	**18 43 53.0**	**+1.2**
MAKZ	21nm,0.8s			⇓Lg	Lg	18 44 07.7	
KPKS	**Kokpek** 6.4nm,0.3s	**3.78**	**274**	*e*P	**Pg**	**18 43 20.2**	**-2.0**
KPKS	50nm,0.4s			*e*S	**Sg**	**18 44 14.7**	**+3.6**
KAPS	**Kapalarasan** 3.2nm,0.4s	**3.79**	**303**	Pg	**Pg**	**18 43 20.3**	**-2.2**
KAPS	12nm,0.6s			Lg	Lg	18 44 14.8	
KAPS	**Kapalarasan** 3.2nm,0.4s	**3.79**	**303**	*e*P	**Pg**	**18 43 20.2**	**-2.2**
KAPS	12nm,0.6s			*e*S	**Sg**	**18 44 14.8**	**+3.3**
SATY	**Saty** 3.9nm,0.4s	**4.00**	**268**	*e*P	**Pg**	**18 43 22.7**	**-3.7**
SATY	31nm,0.4s			*e*S	**Sg**	**18 44 18.6**	**+0.4**
MNBS	**Baschi** 1.3nm,0.2s	**4.03**	**283**	Pg	**Pb**	**18 43 22.4**	**+1.4**
MNBS	19nm,0.4s			Lg	Lg	18 44 18.5	
MNBS	**Baschi** 1.3nm,0.2s	**4.03**	**283**	*e*P	**Pb**	**18 43 22.4**	**+1.4**
MNBS	19nm,0.4s			*e*S	**Sg**	**18 44 18.5**	**-0.9**
ZSN	**Zaisan** 1.1nm,0.4s	**4.20**	**9**	Pg	**Pb**	**18 43 25.7**	**+1.8**
ZSN	19nm,0.7s			Lg	Lg	18 44 23.8	
ZSN	**Zaisan** 1.1nm,0.4s	**4.20**	**9**	*e*P	**Pb**	**18 43 25.7**	**+1.8**
ZSN	19nm,0.7s			*e*S	**Sg**	**18 44 23.8**	**-1.0**
ARXS	**Arharly** 3.1nm,0.4s	**4.46**	**284**	Pg	**Pg**	**18 43 32.2**	**-3.1**
ARXS	22nm,0.6s			Lg	Lg	18 44 35.2	
ARXS	**Arharly** 3.1nm,0.4s	**4.46**	**284**	*e*P	**Pg**	**18 43 32.2**	**-3.1**
ARXS	22nm,0.6s			*e*S	**Sg**	**18 44 35.2**	**+2.0**
KOTS	**Kotyrbulak** 3.3nm,0.3s	**4.93**	**271**	Pg	**Pg**	**18 43 39.8**	**-4.5**
KOTS	39nm,0.6s			Lg	Lg	18 44 48.1	
KOTS	**Kotyrbulak** 3.3nm,0.3s	**4.93**	**271**	*e*P	**Pg**	**18 43 39.8**	**-4.5**
KOTS	39nm,0.6s			*e*S	**Sg**	**18 44 48.1**	**+0.1**
MDOK	**Medeo** 2.3nm,0.6s	**4.98**	**271**	*e*P	**Pg**	**18 43 43.1**	**-2.1**
MDOK	10nm,0.8s			*e*S	**Sg**	**18 44 53.3**	**+3.6**
CHKK	**Chushkaly** 1.5nm,0.4s	**5.02**	**279**	Pg	**Pg**	**18 43 42.8**	**-3.2**
CHKK	8.2nm,0.5s			Lg	Lg	18 44 53.3	
CHKK	**Chushkaly** 1.5nm,0.4s	**5.02**	**279**	*e*P	**Pg**	**18 43 42.8**	**-3.2**
CHKK	8.2nm,0.5s			*e*S	**Sg**	**18 44 53.3**	**+2.2**
KTBS	**Karatobe** 2.1nm,0.8s	**5.24**	**277**	Pg	Pg	18 43 45.3	-4.8
KTBS	13nm,0.4s			Lg	Lg	18 44 57.6	
KTBS	**Karatobe** 2.1nm,0.8s	**5.24**	**277**	*e*P	Pg	18 43 45.4	-4.8
KTBS	13nm,0.4s			*e*S	**Sg**	**18 44 57.6**	**-0.4**
TKM2	**Tokmak 2** 5.3nm,0.7s	**6.06**	**269**	⇑Lg	Lg	18 45 24.3	
KURBB	**Kurchatov Arra** 0.6nm,0.5s	**8.17**	**335**	⇓Pn	**Pn**	**18 44 11.2**	**+2.8**
KURBB	14nm,0.7s			⇑Lg	Lg	18 46 28.0	

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*ISCJB **19** 18:54:51.7±0.4, 23°.94N±0°.02×122°.62E±0°.02, h25km±3km, Error ellipse: s-maj=3.5km s-min=2.2km az=164.0*

*JMA **19** 18:54:51.8±0.2, 24°.02N×122°.58E, h30km±5km, M2.5*

*TAP **19** 18:54:51.4, 23°.93N×122°.69E, h31km±1km, ML3.1, D*

ISC 19 18:54:51.4±1.3, 23°.95N±0°.03×122°.61E±0°.02, h21km±4km, n80, σ0s.71/134, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.58**	**31**	P	**Pb**	**18 55 02.6**	**-0.4**
JYNG				S	**Sb**	**18 55 09.9**	**-1.0**
YOJ	**Yonaguni jima** baz=28	**0.62**	**36**	*e*P	**Pb**	**18 55 03.2**	**-0.5**
YOJ	baz=28			*e*S	**Sb**	**18 55 11.4**	**-0.7**
YOJ	**Yonaguni jima**	**0.62**	**36**	P	**Pb**	**18 55 03.3**	**-0.5**
YOJ				*e*S	**Sb**	**18 55 11.1**	**-1.0**
EOS1	**EOS1** baz=320	**0.74**	**324**	*e*P	**Pn**	**18 55 06.3**	**-0.3**
EOS1	baz=320			*e*S	**Sn**	**18 55 17.3**	**+0.1**
NANB	**Nanao** baz=299	**0.92**	**301**	P	**Pb**	**18 55 08.7**	**+0.1**
NANB	baz=299			*e*S	**Sn**	**18 55 22.4**	**+0.8**
HWA	**Hwalien** baz=272	**0.92**	**272**	*e*P	**Pb**	**18 55 08.9**	**+0.2**
HWA	baz=272			*e*S	**Sn**	**18 55 22.2**	**+0.5**
ENA	**Nanau** baz=299	**0.93**	**301**	P	**Pb**	**18 55 08.8**	**0.0**
ENA	baz=299			*e*S	**Sn**	**18 55 22.6**	**+0.8**
ENLB	**Shoufeng** baz=268	**0.93**	**267**	*e*S	**Sn**	**18 55 25.0**	**+3.1**
TWD	**Chiawan** baz=278	**0.94**	**278**	P	**Pb**	**18 55 08.6**	**-0.4**
TWD	baz=278			*e*S	**Sb**	**18 55 21.1**	**+0.2**
NACB	**Ninganchiao** baz=283	**0.95**	**284**	*e*P	**Pb**	**18 55 08.9**	**-0.3**
NACB	baz=283			*e*S	**Sb**	**18 55 21.7**	**+0.3**
TWC	**Suao** baz=311	**0.95**	**313**	*e*P	**Pb**	**18 55 09.3**	**+0.1**
TWC	baz=311			*e*S	**Sn**	**18 55 22.0**	**-0.6**
ETLH	**Xiulin Townshi** baz=283	**1.06**	**284**	P	**Pn**	**18 55 10.6**	**-0.5**
ETLH	baz=283			*e*S	**Sn**	**18 55 25.5**	**+0.1**
ESL	**Shilin** baz=263	**1.09**	**263**	*e*P	**Pn**	**18 55 10.4**	**-1.0**
ESL	baz=263			*e*S	**Sb**	**18 55 24.9**	**-0.3**
IRIF	**Iriomote-Funau**	**1.09**	**69**	P	**Pn**	**18 55 10.7**	**-0.8**
IRIF				S	**Sb**	**18 55 25.3**	**-0.1**
HATJ	**Hateruma jima**	**1.10**	**84**	P	**Pb**	**18 55 12.3**	**+0.6**
HATJ				*e*S	**Sn**	**18 55 27.1**	**+1.0**
EGFH	**Guangfu** baz=257	**1.12**	**256**	P	**Pb**	**18 55 12.5**	**+0.4**
EGFH	baz=257			*e*S	**Sn**	**18 55 26.6**	**0.0**
NTC	**Toucheng** baz=319	**1.15**	**322**	P	**Pb**	**18 55 12.6**	**+0.1**
TWE	**Neicheng** baz=310	**1.15**	**312**	P	**Pn**	**18 55 12.3**	**0.0**
ENTT	**Nioudou** baz=304	**1.17**	**306**	P	**Pb**	**18 55 12.8**	**-0.2**
HGSD	**Ruisui** baz=249	**1.18**	**247**	*e*P	**Pn**	**18 55 12.4**	**-0.3**
HGSD	baz=249			*e*S	**Sb**	**18 55 27.4**	**-0.6**
NDT	**Datong Townshi** baz=301	**1.19**	**303**	*e*P	**Pb**	**18 55 13.5**	**+0.2**
NNSB	**Datong** baz=292	**1.22**	**293**	*e*P	**Pn**	**18 55 12.6**	**-0.7**
NNSB	baz=292			*e*S	**Sn**	**18 55 29.1**	**-0.1**
NNS	**Nan Shan** baz=292	**1.23**	**294**	P	**Pn**	**18 55 13.4**	**-0.1**
NNS	baz=292			S	**Sb**	**18 55 29.9**	**+0.4**
WHF	**Hehuan Shan** baz=279	**1.25**	**279**	P	**Pn**	**18 55 13.7**	**-0.3**
WHF	baz=279			*e*S	**Sn**	**18 55 30.0**	**-0.4**
EHY	**Hungye** baz=250	**1.26**	**250**	P	**Pn**	**18 55 13.7**	**-0.1**
EHY	baz=250			S	**Sn**	**18 55 30.1**	**0.0**
JKRS	**Kuro-shima**	**1.31**	**77**	P	**Pb**	**18 55 15.4**	**+0.1**
JKRS				S	**Sb**	**18 55 32.6**	**+1.0**
CHGB	**Renai** baz=275	**1.32**	**275**	*i* P	**Pn**	**18 55 14.8**	**0.0**
CHGB	baz=275			*e*S	**Sn**	**18 55 31.9**	**0.0**
YULB	**Yu-li** baz=247	**1.33**	**245**	P	**Pn**	**18 55 14.8**	**0.0**
YULB	baz=247			*e*S	**Sn**	**18 55 31.6**	**-0.2**
YHNB	**Yeheng** baz=301	**1.33**	**303**	P	**Pn**	**18 55 15.1**	**+0.2**
YHNB	baz=301			*e*S	**Sn**	**18 55 31.9**	**-0.2**
TWF1	**Yuli** baz=245	**1.34**	**244**	P	**Pn**	**18 55 15.2**	**+0.2**
TWF1	baz=245			*e*S	**Sn**	**18 55 32.3**	**+0.1**
NSK	**Sanguang** baz=301	**1.35**	**302**	P	**Pn**	**18 55 15.2**	**+0.1**
VWDT	**VWDT** baz=262	**1.36**	**262**	P	**Pb**	**18 55 15.7**	**-0.4**
VWDT	baz=262			*e*S	**Sn**	**18 55 32.8**	**+0.3**
TDCB	**Techi** baz=282	**1.36**	**283**	P	**Pn**	**18 55 15.7**	**+0.4**
TDCB	baz=282			*e*S	**Sn**	**18 55 32.5**	**-0.4**
TWA	**Mucha** baz=316	**1.39**	**318**	*e*P	**Pn**	**18 55 15.8**	**+0.3**
CHKT	**Chengkung** baz=235	**1.42**	**234**	*e*P	**Pn**	**18 55 16.3**	**+0.3**
CHKT	baz=235			*e*S	**Sn**	**18 55 33.6**	**-0.5**
TATO	**Taipei** baz=313	**1.44**	**315**	*e*P	**Pn**	**18 55 16.8**	**+0.5**
TATO	baz=313			*e*S	**Sb**	**18 55 37.2**	**+1.6**
JIJ	**Ishigaki jima**	**1.46**	**73**	P	**Pn**	**18 55 16.3**	**-0.2**
JIJ				S	**Sn**	**18 55 34.9**	**-0.1**
YM01	**YM01** baz=319	**1.52**	**322**	*e*P	**Pn**	**18 55 17.5**	**0.0**
YM01	baz=319			*e*S	**Sn**	**18 55 36.8**	**+0.2**
SSLB	**Suanglung** baz=264	**1.53**	**264**	*e*P	**Pn**	**18 55 18.1**	**+0.6**
SSLB	baz=264			*e*S	**Sn**	**18 55 36.4**	**-0.3**
WLTB	**Daxi** baz=304	**1.53**	**306**	*e*P	**Pn**	**18 55 17.3**	**-0.2**
YM10	**YM10** baz=319	**1.53**	**322**	*e*P	**Pn**	**18 55 17.3**	**-0.4**
YM10	baz=319			*e*S	**Sb**	**18 55 37.6**	**-0.6**
YM05	**YM05** baz=320	**1.54**	**322**	*e*P	**Pn**	**18 55 18.4**	**+0.7**
DPDB	**Guoxing** baz=273	**1.54**	**273**	*e*P	**Pn**	**18 55 18.5**	**+0.8**
DPDB	baz=273			*e*S	**Sb**	**18 55 37.8**	**-0.7**
YM04	**YM04** baz=319	**1.55**	**321**	*e*P	**Pn**	**18 55 17.7**	**0.0**
SMLT	**Sun Moon Lake** baz=268	**1.57**	**268**	*e*P	**Pn**	**18 55 18.7**	**+0.6**
SMLT	baz=268			*e*S	**Sn**	**18 55 37.8**	**-0.1**
TYC	**Yuchr** baz=269	**1.61**	**269**	*e*P	**Pn**	**18 55 19.2**	**+0.7**
TYC	baz=269			*e*S	**Sn**	**18 55 39.1**	**+0.4**
TWY	**Chenhua** baz=323	**1.61**	**325**	*e*P	**Pn**	**18 55 19.3**	**+0.7**
LIOB	**Emei** baz=294	**1.61**	**296**	*e*P	**Pb**	**18 55 20.0**	**-0.5**
NSTT	**Nanjuang** baz=294	**1.62**	**295**	*e*P	**Pb**	**18 55 19.9**	**-0.7**
WHYT	**Xinyi Township** baz=261	**1.63**	**261**	*e*P	**Pb**	**18 55 21.1**	**+0.3**
ELDTW	**Lidau** baz=243	**1.65**	**243**	*e*P	**Pn**	**18 55 18.9**	**-0.4**
ELDTW	baz=243			*e*S	**Sn**	**18 55 39.7**	**-0.1**
JISG	**Ishigakijimahi**	**1.68**	**67**	P	**Pn**	**18 55 19.3**	**-0.2**
JISG				S	**Sn**	**18 55 40.2**	**-0.1**
WNT	**Mingjian** baz=268	**1.77**	**268**	*e*P	**Pb**	**18 55 22.9**	**-0.2**
WNT	baz=268			*e*S	**Sb**	**18 55 45.3**	**+0.5**
TCU	**Taichung** baz=276	**1.78**	**277**	*e*P	**Pb**	**18 55 23.0**	**-0.4**
TCU	baz=276			*e*S	**Sb**	**18 55 46.5**	**+1.3**
TWGBT	**Beinan** baz=233	**1.80**	**232**	*e*P	**Pn**	**18 55 21.6**	**+0.4**
TWGBT	baz=233			*e*S	**Sn**	**18 55 43.5**	**-0.1**
TWG	**Pinlang** baz=233	**1.81**	**232**	*e*P	**Pn**	**18 55 21.7**	**+0.3**
TWG	baz=233			*e*S	**Sn**	**18 55 43.3**	**-0.3**
WDLH	**Douliu** baz=262	**1.92**	**263**	*e*P	**Pb**	**18 55 25.1**	**-0.5**
WDLH	baz=262			*e*S	**Sb**	**18 55 50.1**	**+1.0**
TPUB	**Ta-pu** baz=251	**1.93**	**251**	*e*P	**Pb**	**18 55 24.9**	**-1.0**
TPUB	baz=251			*e*S	**Sb**	**18 55 49.6**	**+0.1**
WTP	**Ta-pu** baz=250	**1.96**	**249**	*e*P	**Pb**	**18 55 25.5**	**-1.0**
WTP	baz=250			*e*S	**Sb**	**18 55 51.0**	**+0.5**
JTJ	**Tarama**	**2.03**	**70**	P	**Pn**	**18 55 24.8**	**+0.4**
CHN1	**Nanshi**	**2.06**	**249**	*e*P	**Pb**	**18 55 26.7**	**-1.4**

	baz=249						
CHN1				*e*S	Sb	18 55 53.9	+0.7
	baz=249						
TWK	Hsinying	2.06	251	*e*P	Pb	18 55 27.2	-1.0
	baz=251						
TWK				*e*S	Sb	18 55 53.9	+0.5
	baz=251						
LAY	Lan-yu	2.14	207	*e*P	Pn	18 55 25.8	-0.2
	baz=208						
LAY				*e*S	Sn	18 55 50.3	-1.6
	baz=208						
TAW	Tawu	2.24	225	*e*S	Sn	18 55 53.5	-0.7
	baz=226						
EAST	Anshuo	2.25	226	*e*P	Pn	18 55 27.4	0.0
	baz=227						
EAST				*e*S	Sn	18 55 54.9	+0.3
	baz=227						
MASBT	Mashibuluo	2.26	234	*e*P	Pn	18 55 28.3	+0.8
	baz=235						
CHN8	Yiju	2.28	255	*e*S	Sb	18 55 58.4	-1.3
	baz=255						
SCZT	Fangliau	2.42	230	*e*P	Pb	18 55 32.5	-1.7
	baz=230						
JIRB	Irabujima	2.49	69	P	Pn	18 55 32.1	+1.3
TSEB	Hengchuen, Pin	2.58	218	*e*S	Sn	18 56 04.3	+1.6
	baz=219						
TWKBT	Hengchun	2.60	220	*e*S	Sn	18 56 04.1	+1.0
	baz=221						
TWK1	Hengchun	2.60	220	*e*S	Sn	18 56 04.0	+0.8
	baz=220						
WDGT	Dungji	2.79	256	*e*P	Pn	18 55 36.2	+1.3
	baz=256						
WDGT				*e*S	Sn	18 56 07.5	-0.4
	baz=256						
PHUB	P'eng-hu	2.82	262	*e*P	Pn	18 55 36.4	+1.1
	baz=261						
PHUB				*e*S	Sn	18 56 09.4	+0.8
	baz=261						
PNG	Penghu	2.83	263	*e*P	Pn	18 55 36.4	+1.1
	baz=262						
PNG				*e*S	Sn	18 56 09.5	+0.7
	baz=262						
PTTC	Pingtan	3.01	301	*e*S	Sn	18 56 11.8	-1.5
	baz=300						
PTMZ	Houxiangcun	3.36	290	*e*P	Pn	18 55 42.6	-0.1
	baz=288						
PTMZ				*e*S	Sn	18 56 20.7	-1.3
	baz=288						
KNMB	Chin-men Tao	3.89	278	*e*P	Pn	18 55 50.6	+0.6
	baz=277						
KNMB				*e*S	Sn	18 56 33.9	-1.1
	baz=277						
AXDP	Jialang	4.33	284	*e*P	Pn	18 55 56.3	+0.2
	baz=282						
ZPLA	Ao Xicun	4.45	271	*e*P	Pn	18 55 57.9	+0.2
	baz=269						

ISCJB ***19*** *19:10:25.6±0.2, 63°.48N±0°.02×149°.63W±0°.05, h119^{km}±2^{km}, mb3.8/10, Error ellipse: s-maj=3.4km s-min=2.9km az=11.0*

IDC ***19*** *19:10:26.1±1.8, 63°.60N×150°.05W, h97^{km}±18^{km}, mb3.5/9, mb1 3.7/12, mb1mx3.4/40, mbtmp3.9/12, MS3.0/2, Ms1 3.0/2, ms1mx2.5/34, Error ellipse: s-maj=21.9km s-min=19.3km az=142.0*

AEIC ***19*** *19:10:27.4, 63°.48N×149°.58W, h107^{km}, ML3.9*

NEIC ***19*** *19:10:27.4±0.0, 63°.48N×149°.58W, h107^{km}, ML3.9(AEIC), After AEIC.*

ISC 19 19:10:27.0±0.6**, 63°.48N**±0°.04×**149°.69W**±0°.04**, h111**^{km}±6^{km}**, n115,** σ1^{s}**21**/138**, mb3.9**/11**, 1D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RND	Reindeer	0.38	100	*e*Pn	Pn	19 10 43.3	-0.1
RND				*e*Sn	Sn	19 10 54.8	-0.9
MCK	McKinley	0.42	52	*e*Pn	Pn	19 10 43.6	+0.1
MCK				*e*Sn	Sn	19 10 54.9	-1.0
HUR	Hurricane	0.50	177	*e*Pn	Pn	19 10 43.9	-0.1
KTH	Kantishna Hill	0.56	278	*e*Pn	Pn	19 10 45.1	+0.7
KTH				*e*Sn	Sn	19 10 58.0	+0.4
BWN	Browne	0.70	8	*e*Pn	Pn	19 10 45.9	+0.4
BWN				*e*Pn	Pn	19 10 45.9	+0.5
BWN				*e*Sn	Sn	19 10 59.2	-0.2
BWN				*e*Sn	Sn	19 10 59.8	+0.4
BPAW	Bear Paw Mtn.	0.85	318	*e*Pn	Pn	19 10 47.2	+0.3
BPAW				*e*Sn	Sn	19 11 01.2	-0.6
CAST	Castle Rocks	1.08	268	*e*Pn	Pn	19 10 49.5	+0.4
CAST				*e*Sn	Sn	19 11 05.6	-0.2
DHY	Denali Highway	1.12	110	*e*Pn	Pn	19 10 49.4	-0.3
DHY				*e*Sn	Sn	19 11 06.2	-0.6
WRH	Wood River Hil	1.22	34	*e*Pn	Pn	19 10 50.4	-0.2
PPLA	Purkeypile	1.28	244	*e*Pn	Pn	19 10 52.2	+0.8
CCB	Clear Creek Bu	1.44	34	*e*Pn	Pn	19 10 52.7	-0.3
CCB				*e*Sn	Sn	19 11 11.4	-1.5
HDA	Harding Lake	1.53	51	*e*Pn	Pn	19 10 53.6	-0.6
HDA	Harding Lake	1.53	51	P	Pn	19 10 53.8	-0.4
	baz=232						
HDA				S	Sn	19 11 14.2	-0.6
	baz=232						
TCOL	CIGO, UAF Yank	1.61	29	P	Pn	19 10 55.0	-0.2
	baz=209						
TCOL				S	Sn	19 11 16.6	0.0
	baz=209						
COLA	College	1.62	29	*e*Pn	Pn	19 10 55.0	-0.1
MDM	Murphy Dome	1.62	23	*e*Pn	Pn	19 10 55.2	0.0
MDM				*e*Sn	Sn	19 11 15.3	-1.5
MLY	Manley	1.63	344	*e*Pn	Pn	19 10 55.5	+0.1
MLY				*e*Sn	Sn	19 11 16.0	-1.0
PS08	TAPS Pump Stn8	1.66	48	*e*Pn	Pn	19 10 55.1	-0.5
GHO	Glory Hole Cre	1.75	168	*e*Pn	Pn	19 10 57.1	+0.2
PS10	TAPS Pump St10	1.76	90	*e*Pn	Pn	19 10 57.7	+0.7
ILAR	Eielson Array	1.79	42	P	Pn	19 10 56.5	-0.8
	152nm,0.3s,baz=224,slow=12,SNR=6803						
ILAR				S	Sn	19 11 18.4	-2.1
	29nm,0.3s,baz=225,slow=25,SNR=6.7						
ILB	Eielson Array	1.79	42	*e*Pn	Pn	19 10 56.8	-0.5
PMR	Palmer	1.91	172	*e*Pn	Pn	19 10 58.9	+0.1
POKR	Poker Plat Res	1.92	30	P	Pn	19 10 58.7	-0.2
	baz=211						
POKR				S	Sn	19 11 22.3	-1.0
	baz=211						
PS07	TAPS Pump Stn7	1.94	18	*e*Pn	Pn	19 10 59.4	+0.2
PAX	Paxson	1.98	103	*e*Pn	Pn	19 10 60.0	+0.2
PAX				*e*Sn	Sn	19 11 25.1	+0.4
SCM	Sheep Creek Mo	1.98	146	*e*Pn	Pn	19 10 59.6	-0.2
KNK	Knik Glacier	2.15	164	*e*Pn	Pn	19 11 02.0	+0.1
RIDG	Independent Ri	2.18	81	*e*Pn	Pn	19 11 01.8	-0.5
RIDG				*e*Sn	Sn	19 11 28.3	-1.0
PS06	TAPS Pump Stn6	2.39	360	*e*Pn	Pn	19 11 05.2	+0.3
PS11	TAPS Pump St11	2.39	124	*e*Pn	Pn	19 11 05.3	+0.3
RC01	Rabbit Creek A	2.40	181	*e*Pn	Pn	19 11 05.3	+0.2
DOT	Dot Lake	2.52	84	*e*Pn	Pn	19 11 06.1	-0.6
DOT				*e*Sn	Sn	19 11 35.4	-1.8
SPU	Mount Spurr	2.56	207	*e*Pn	Pn	19 11 07.8	+0.6
SCRK	Sand Creek	2.58	76	*e*Pn	Pn	19 11 06.9	-0.7
SPWE	Spurr West	2.58	212	*e*Pn	Pn	19 11 08.6	+1.0
PRP	Porcupine Dome	2.73	39	*e*Pn	Pn	19 11 09.0	-0.4
MENT	Mentasta	2.76	99	*e*Pn	Pn	19 11 09.5	-0.2
JPK	Jack Peak	2.83	148	*e*Pn	Pn	19 11 09.8	-0.9
VMT	TAPS Tl Valdez	2.86	146	*e*Pn	Pn	19 11 10.3	-0.8
GLI	Glacier Island	2.88	154	*e*Pn	Pn	19 11 10.3	-1.0
TTA	Tatalina	2.92	262	*e*Pn	Pn	19 11 11.9	0.0
TT01	Tatalina	2.93	262	*e*Pn	Pn	19 11 12.2	+0.3
IM3	Indian Mountai	3.06	327	*e*Pn	Pn	19 11 13.8	+0.1
FID	Port Fidalgo	3.12	150	*e*Pn	Pn	19 11 14.0	-0.6
FID				*e*Pn	Pn	19 11 14.0	-0.6
RSO	Redoubt South	3.35	207	*e*Pn	Pn	19 11 18.7	+0.8
SEW	Seward	3.39	178	*e*Pn	Pn	19 11 17.6	-0.4
EYAK	Cordova Ski Ar	3.48	146	*e*Pn	Pn	19 11 18.6	-0.6
BCA3	Beaver Creek A	3.59	93	*e*Pn	Pn	19 11 20.0	-0.9
FYU	Fort Yukon	3.63	29	*e*Pn	Pn	19 11 21.2	-0.1
SVW2	Sparrevohn	3.65	232	*e*Pn	Pn	19 11 21.5	0.0
SGAM	Sherman Glacie	3.66	143	*e*Pn	Pn	19 11 20.6	-1.2
BRLK	Bradley Lake	3.77	189	*e*Pn	Pn	19 11 23.5	+0.3
COLD	Coldfoot	3.77	357	*e*Pn	Pn	19 11 23.5	+0.4
BRSE	Bradley Lake S	3.78	188	*e*Pn	Pn	19 11 23.4	+0.1
RAGM	Ragged Mountai	3.90	140	*e*Pn	Pn	19 11 24.2	-0.8
HOM	Homer	3.94	195	*e*Pn	Pn	19 11 26.0	+0.4
HOM				*e*Sn	Sn	19 12 11.2	+0.4
EGAK	Eagle	3.96	67	*e*Pn	Pn	19 11 24.7	-1.0
CNPM	China Poot	4.04	191	*e*Pn	Pn	19 11 26.8	0.0
HMT	Hamilton	4.06	138	*e*Pn	Pn	19 11 26.5	-0.7
CRQM	Cirque	4.11	129	*e*Pn	Pn	19 11 27.0	-1.0
TGL	Tana Glacier	4.22	127	*e*Pn	Pn	19 11 28.1	-1.2
BM3	Burnt Mountain	4.49	26	*e*Pn	Pn	19 11 32.6	-0.2
DAWY	Dawson	4.61	78	*e*Pn	Pn	19 11 33.4	-1.0
SNH	Sunshine Point	4.63	132	*e*Pn	Pn	19 11 34.6	-0.2
TOLK	Toolik Lake Re	5.19	0	*e*Pn	Pn	19 11 42.5	+0.2
TOLK	Toolik Lake Re	5.19	0	P	Pn	19 11 43.1	+0.8
	baz=180						
TOLK				S	Sn	19 12 41.5	+0.7
	baz=180						
CHX	Chaix Hills	5.32	126	*e*Pn	Pn	19 11 44.0	-0.1
PCA	Pinnacle	5.61	123	*e*Pn	Pn	19 11 47.6	-0.5
KDAK	Kodiak Island	5.89	195	P	Pn	19 11 49.8	-1.9
	4.7nm,0.3s,baz=47,slow=6.5,SNR=80						
KDAK				S	Sn	19 12 52.1	-5.7
	8.3nm,0.3s,baz=95,slow=22,SNR=14						
KDAK	Kodiak Island	5.89	195	*e*Pn	Pn	19 11 51.8	0.0
BCPM	Bancas Point	5.94	122	*e*Pn	Pn	19 11 52.2	-0.2
PNL	Peninsula	6.22	123	*e*Pn	Pn	19 11 55.6	-0.6
EPYK	Eagle Plains	6.23	56	*e*Pn	Pn	19 11 55.7	-0.6
EPYK	Eagle Plains	6.23	56	P	Pn	19 11 56.1	-0.1
	baz=248						
EPYK				S	Sn	19 13 05.8	-0.2
	baz=248						
HYT	Haines Junctio	6.30	109	*e*Pn	Pn	19 11 57.0	-0.3
OHAK	Old Harbor	6.52	198	*e*Pn	Pn	19 11 59.5	-0.8
OHAK				*e*Sn	Sn	19 13 08.4	-4.7
RDOG	Red Dog Mine	7.11	316	*e*Pn	Pn	19 12 06.6	-1.6
SII	Sitkinak Islan	7.29	200	*e*Pn	Pn	19 12 10.1	-0.7
SII				*e*Sn	Sn	19 13 28.6	-3.4
WHY	Whitehorse	7.50	105	*e*Pn	Pn	19 12 13.7	+0.1
SKAG	Skagway	7.96	114	*e*Pn	Pn	19 12 20.3	+0.6
INK	Inuvik	8.18	47	P	Pn	19 12 22.2	-0.4
	2.5nm,0.3s,baz=235,slow=17,SNR=68						
INK				S	Sn	19 13 49.3	-3.9
	baz=165,slow=19,SNR=2.4						
INK				LR	LR	19 15 21.8	
	comp=Z,52nm,21.6s,baz=182,slow=36						
INK	Inuvik	8.18	47	*e*Pn	Pn	19 12 22.4	-0.2
CHIA	Chirikof Islan	8.22	204	*e*Pn	Pn	19 12 20.9	-2.4
CHGN	Chignik	8.42	215	*e*Pn	Pn	19 12 24.7	-1.3
BESE	Bessie Mountai	8.70	118	*e*Pn	Pn	19 12 28.3	-1.6
JIS	Juneau Island	9.09	118	*e*Pn	Pn	19 12 33.5	-1.5
JIS				*e*Sn	Sn	19 14 19.7	+4.3
SIT	Sitka	9.59	126	*e*Pn	Pn	19 12 40.1	-1.7
GAMB	Gambell	9.79	282	*e*Pn	Pn	19 12 44.7	+0.3
SDPT	Sand Point	9.82	219	*e*Pn	Pn	19 12 44.3	-0.6
DLBC	Dease Lake	10.78	109	P	Pn	19 13 03.2	+5.2
	0.1nm,0.3s,baz=334,slow=10,SNR=5.0						
MOBC	Moresby Island	13.87	130	*e*Pn	Pn	19 13 40.3	+1.7
YKA	Yellowknife Ar	15.85	78	P	P	19 14 05.7	+0.8
	0.3nm,0.3s,baz=291,slow=12,SNR=7.2						
YKB5	Yellowknife Ar	15.85	78	*e*P	P	19 14 05.7	+0.8
RES	Resolute Bay	21.53	36	P	P	19 15 07.0	+0.4
	8.1nm,0.9s,baz=248,slow=13,SNR=8.1						
RES	Resolute Bay	21.53	36	*e*P	P	19 15 07.6	+1.0
SEY	Seymchan	25.36	295	P	P	19 15 42.7	-0.5
	1.1nm,0.5s,baz=147,slow=5.5,SNR=4.3						
SFJD	Kangerlussuaq	37.45	40	LR	LR	19 33 24.3	
	comp=Z,40nm,19.8s,baz=233,slow=37						
LTX	Lajitas	44.95	117	*e*P	P	19 18 33.4	+2.7
TXAR	Lajitas Array	44.95	117	P	P	19 18 33.4	+2.7
	0.4nm,0.6s,baz=335,slow=5.5,SNR=4.2						
ARA0	ARCESS Array S	47.23	2	*e*P	P	19 18 47.5	-0.5
ARCES	ARCESS Array B	47.23	2	P	P	19 18 47.5	-0.5
	3.0nm,1.0s,baz=352,slow=7.4,SNR=6.0						
SONA0	Songino Array	54.02	306	*e*P	P	19 19 40.0	+0.7
SONM	Songino Array	54.02	306	P	P	19 19 40.0	+0.7
	0.9nm,0.7s,baz=26,slow=6.2,SNR=4.9						
FIA0	FINESS Array S	55.35	2	*e*P	P	19 19 47.0	-1.5
FINES	FINESS Array B	55.35	2	P	P	19 19 47.0	-1.5
	2.0nm,0.8s,baz=12,slow=10,SNR=4.8						
ZAA1	Zalesovo Array	55.48	324	*e*P	P	19 19 48.3	-1.3
ZALV	Zalesovo Beam	55.48	324	P	P	19 19 48.3	-1.3
	0.4nm,0.3s,baz=18,slow=7.2,SNR=3.4						
MK32	Makanchi Array	62.66	322	*e*P	P	19 20 38.3	-0.9
MKAR	Makanchi Array	62.66	322	P	P	19 20 38.3	-0.9
	0.6nm,0.4s,baz=42,slow=7.1,SNR=11						
GTA	Gaotai	63.69	306	*e*P	P	19 20 46.6	+0.3
GTA				pP	pP	19 20 52.8	-21
GTA				sP	PcP	19 20 56.5	-25
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	66.16	1	P	P	19 21 01.0	-0.9
	comp=Z,0.2nm,0.4s,baz=357,slow=6.5,SNR=2.9						
ESDC	Sonseca Array	73.63	27	pP	pP	19 22 14.1	-1.9
	comp=Z,0.2nm,0.4s,baz=339,slow=4.8,SNR=3.1						
DAV	Davao City (W)	81.36	268	⇓*i*P	P	19 22 31.9	+0.7
BOSA	Boshof	144.97	8	PKP	PKPdf	19 29 50.7	+0.2
	comp=Z,0.8nm,0.4s,baz=0.8,slow=6.7,SNR=5.8						

MOS ***19*** *19:11:18.3±1.0, 52°.04N×178°.32E, h135^{km}, mb4.3/41, Error ellipse: s-maj=8.0km s-min=6.4km az=5.2*

AEIC ***19*** *19:11:19.5±0.0, 51°.68N×178°.14E, h25^{km}*

ISCJB ***19*** *19:11:19.4±0.2, 52°.02N±0°.04×178°.28E±0°.03, h150^{km}, mb4.3/167, Error ellipse: s-maj=5.8km s-min=2.3km az=179.7*

NEIC ***19*** *19:11:19.1±2.0, 51°.97N×178°.23E, h134^{km}±6^{km}, mb4.5/175, Error ellipse: s-maj=14.2km s-min=8.1km az=178.0*

IDC ***19*** *19:11:20.1±2.2, 52°.07N×178°.26E, h136^{km}±19^{km}, mb3.8/22, mb1 4.0/24, mb1mx3.8/47, mbtmp4.2/24, Error ellipse: s-maj=17.2km s-min=8.8km az=170.0*

KRSC ***19*** *19:11:23.0±2.2, 52°.61N×177°.76E, h117^{km}±26^{km}, ML4.7*

ISC 19 19:11:20.8±0.4**, 52°.06N**±0°.07×**178°.08E**±0°.04**, h150**^{km}**, n425,** σ1^{s}**82**/443**, mb4.3**/167**, 1D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	Shemya	2.53	287	*e*Pn	Pn	19 12 00.1	-2.1
SMY				*e*Sn	Sn	19 12 31.8	-2.3
SMY	Shemya	2.53	287	*e*P	Pn	19 12 00.1	-2.1
SMY				*e*S	Sn	19 12 29.4	-4.7
SMY	Shemya	2.53	287	*e*P	Pn	19 12 00.1	-2.1
SMY				*e*		19 12 31.8	
KIWB	Kanaga Island	2.96	92	*e*Pn	Pn	19 12 04.0	-3.6
KIWB				*e*Sn	Sn	19 12 39.6	-4.1
ADK	Adak	3.24	91	*e*Pn	Pn	19 12 07.4	-3.8
ADK				*e*Sn	Sn	19 12 45.2	-4.9
ADK	Adak	3.24	91	*e*P	Pn	19 12 07.4	-3.8
ADK				*e*		19 12 45.3	
GSTR	Great Sitkin T	3.62	87	*e*Pn	Pn	19 12 13.0	-3.1
BKI	Bering	7.86	298	*e*P	Pn	19 13 10.1	-2.0
BKI				*e*S	Sn	19 14 32.0	-7.5
BKI	Bering	7.86	298	P	Pn	19 13 10.1	-2.0
BKI				S	Sn	19 14 32.0	-7.5
NIKH	Nikolski High	8.02	78	*e*Pn	Pn	19 13 12.6	-1.8
SPIA	Saint Paul Isl	8.49	48	*e*Pn	Pn	19 13 20.6	+0.1
SPIA				*e*Sn	Sn	19 14 56.6	+1.9
MSW	Makushin Switc	9.32	73	*e*Pn	Pn	19 13 31.0	-0.6
UNV	Unalaska Valle	9.47	73	*e*Pn	Pn	19 13 32.6	-1.0
AKUT	Akutan	9.93	72	*e*Pn	Pn	19 13 39.0	-0.7
MKZ	Mys Kozlova	10.10	291	*e*P	Pn	19 13 41.1	-0.8
MKZ				*e*S	Sn	19 15 24.4	-9.2
MKZ	Mys Kozlova	10.10	291	P	Pn	19 13 41.1	-0.8
SPN	Mys Shipunski	11.04	283	*e*P	Pn	19 13 53.9	-0.4
SPN				*e*S	Sn	19 15 47.6	-8.6
SPN	Mys Shipunski	11.04	283	P	Pn	19 13 53.9	-0.4
FALS	False Pass	11.37	68	*e*Pn	Pn	19 13 56.5	-2.2
SDLR	Sedlovina	11.72	284	*e*P	Pn	19 14 04.5	+1.2
SDLR				*e*S	Sn	19 16 06.5	-6.3
SDLR	Sedlovina	11.72	284	P	Pn	19 14 04.5	+1.2
SDLR				S	Sn	19 16 06.5	-6.3
UGLR	Uglovaya	11.76	283	*e*P	Pn	19 14 05.1	+1.3
UGLR	Uglovaya	11.76	283	P	Pn	19 14 05.1	+1.3
SMAR	Somma	11.77	283	*e*P	Pn	19 14 05.1	+1.0
SMAR	Somma	11.77	283	P	Pn	19 14 05.1	+1.0
KRER	Koryakskii	11.80	284	*e*P	Pn	19 14 05.2	+0.7
KRER				*e*S	Sn	19 16 08.5	-6.3
KRER	Koryakskii	11.80	284	P	Pn	19 14 05.2	+0.7
KRER				S	Sn	19 16 08.5	-6.3
DALK	Dalny	11.81	282	*e*P	Pn	19 14 06.5	+2.2
DALK				S	Sn	19 16 08.8	-5.9
DALK	Dalny	11.81	282	P	Pn	19 14 06.5	+2.2
DALK				S	Sn	19 16 08.8	-5.9
KRX	Arik	11.86	284	*e*P	Pn	19 14 06.6	+1.4
KRX	Arik	11.86	284	P	Pn	19 14 06.6	+1.4
KOK	Koryaka	11.87	284	*e*P	Pn	19 14 06.7	+1.5
KOK	Koryaka	11.87	284	P	Pn	19 14 06.7	+1.5
PET	Petropavlovsk	11.87	282	*e*P	Pn	19 14 05.3	+0.2
PET				*e*S	Sn	19 16 10.4	-5.8
PET				pmax	pmax		
	comp=Z,11nm,0.9s						
RUS	Russkaya	12.00	279	*e*P	Pn	19 14 08.6	+1.7
RUS				*e*S	Sn	19 16 11.6	-7.7
RUS	Russkaya	12.00	279	P	Pn	19 14 08.6	+1.7
RUS				S	Sn	19 16 11.6	-7.7
MTVR	Mutnovka	12.20	280	*e*P	Pn	19 14 10.8	+1.2
MTVR				*e*S	Sn	19 16 17.6	-6.7
MTVR	Mutnovka	12.20	280	P	Pn	19 14 10.8	+1.2
MTVR				S	Sn	19 16 17.6	-6.7
KRMR	Karymshinskiy	12.20	281	*e*P	Pn	19 14 11.2	+1.8
KRMR				*e*S	Sn	19 16 18.6	-5.5
KRMR	Karymshinskiy	12.20	281	P	Pn	19 14 11.2	+1.8
KRMR				S	Sn	19 16 18.6	-5.5
GNL	Ganaly	12.27	286	*e*P	Pn	19 14 12.3	+1.8
GNL	Ganaly	12.27	286	P	Pn	19 14 12.3	+1.8
KDTR	Khodutka, Kamc	12.35	277	*e*P	Pn	19 14 12.5	+1.1
KDTR				*e*S	Sn	19 16 18.6	-9.1
KDTR	Khodutka, Kamc	12.35	277	P	Pn	19 14 12.5	+1.1
ASAK	Asacha	12.38	279	*e*P	Pn	19 14 14.2	+2.3
ASAK	Asacha	12.38	279	P	Pn	19 14 14.2	+2.3
PEA0B	Petropavlovsk-	12.44	283	*e*Pn	Pn	19 14 14.1	+1.5
PEA0B				*e*Sn	Sn	19 16 28.0	-2.0
PETK	Petropavlovsk-	12.44	283	P	Pn	19 14 13.6	+1.0
	comp=Z,0.8nm,0.3s,baz=86,slow=19,SNR=43						
PETK				S	Sn	19 16 22.7	-7.2
	comp=Z,0.9nm,0.3s,baz=109,slow=17,SNR=7.5						
PEA1	Petropavlovsk-	12.44	283	*e*Pn	Pn	19 14 13.6	+1.0
PEA1				*e*Sn	Sn	19 16 22.7	-7.2
SDPT	Sand Point	13.11	67	*e*Pn	Pn	19 14 17.6	-3.5
CHGN	Chignik	14.37	64	*e*Pn	Pn	19 14 32.8	-4.3
CHIA	Chirikof Islan	15.91	66	*e*Pn	Pn	19 14 53.3	-2.9
	comp=Z,62nm,1.0s						
SII	Sitkinak Islan	16.74	63	*e*P	P	19 15 03.8	-2.1
	comp=Z,48nm,0.9s						
SVW2	Sparrevohn	16.98	48	*e*P	Pn	19 15 08.8	-0.4
	comp=Z,10nm,0.7s						
BILL	Bilibino	17.02	345	*e*P	Pn	19 15 10.8	+1.3
	comp=Z,8.8nm,0.9s						
BILL	Bilibino	17.02	345	*de*P	Pn	19 15 11.4	+1.9
BILL				S	S	19 18 07.0	-11
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OHAK	Old Harbor	17.28	61	*e*P	P	19 15 10.0	-1.8
	comp=Z,20nm,0.9s						
TTA	Tatalina	17.52	42	*e*P	Pn	19 15 13.8	-1.9
	comp=Z,11nm,0.8s						
TTA	Tatalina	17.52	42	*e*P	Pn	19 15 13.8	-1.9
TTA				pmax	pmax		
	comp=Z,11nm,0.8s						
KDAK	Kodiak Island	17.71	60	P	P	19 15 14.2	-2.4
	comp=Z,1.0nm,0.3s,baz=285,slow=7.7,SNR=6.8						
KDAK	Kodiak Island	17.71	60	*e*P	P	19 15 14.0	-2.6
	comp=Z,80nm,1.5s						
RSO	Redoubt South	18.11	51	*e*P	Pn	19 15 22.1	-0.7
HOM	Homer	18.48	54	*e*P	P	19 15 23.0	-2.0
	comp=Z,304nm,1.1s						
RDOG	Red Dog Mine	18.49	23	*e*P	Pn	19 15 26.2	-0.8
	comp=Z,30nm,0.6s						
SPU	Mount Spurr	18.64	49	*e*P	Pn	19 15 27.0	-1.7
CNPM	China Poot	18.66	54	*e*P	Pn	19 15 26.9	-2.2
	comp=Z,32nm,0.7s						
BRLK	Bradley Lake	18.88	54	*e*P	P	19 15 27.9	-1.4
	comp=Z,52nm,0.9s						
PPLA	Purkeypile	19.11	44	*e*P	Pn	19 15 33.7	-0.7
	comp=Z,56nm,0.8s						
SEW	Seward	19.65	53	*e*P	P	19 15 36.9	-0.6
	comp=Z,38nm,0.8s						
RC01	Rabbit Creek A	19.70	50	*e*P	P	19 15 37.5	-0.7
	comp=Z,30nm,0.8s						
KTH	Kantishna Hill	19.89	43	*e*P	P	19 15 38.6	-1.6
	comp=Z,48nm,0.8s						
BPAW	Bear Paw Mtn.	20.06	41	*e*P	Pn	19 15 42.8	-2.6
	comp=Z,27nm,0.9s						
PMR	Palmer	20.10	49	*e*P	P	19 15 42.2	-0.1
	comp=Z,10nm,0.7s						
PMR	Palmer	20.10	49	*e*P	P	19 15 42.3	-0.1
PMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KNK	Knik Glacier	20.38	50	*e*P	P	19 15 45.3	-0.1
	comp=Z,35nm,0.7s						
MLY	Manley	20.53	39	*e*P	P	19 15 46.9	-0.2
	comp=Z,28nm,1.1s						
BWN	Browne	20.71	42	*e*P	Pn	19 15 50.1	-3.0
	comp=Z,43nm,1.0s						
RND	Reindeer	20.71	44	*e*P	P	19 15 49.3	+0.2
	comp=Z,12nm,0.6s						
RND	Reindeer	20.71	44	*e*P	P	19 15 49.3	+0.2
RND				pmax	pmax		
	comp=Z,12nm,0.6s						
MCK	McKinley	20.78	43	*e*P	P	19 15 50.0	+0.3
	comp=Z,24nm,1.0s						
MCK	McKinley	20.78	43	*e*P	P	19 15 50.1	+0.3
MCK				pmax	pmax		
	comp=Z,25nm,1.0s						
GLI	Glacier Island	20.93	51	*e*P	P	19 15 50.0	-1.2
	comp=Z,28nm,0.8s						
SCM	Sheep Creek Mo	20.99	49	*e*P	P	19 15 50.4	-1.6
	comp=Z,33nm,0.9s						
SCM	Sheep Creek Mo	20.99	49	*e*P	P	19 15 50.4	-1.6
SCM				pmax	pmax		
	comp=Z,33nm,0.9s						
FID	Port Fidalgo	21.20	52	*e*P	P	19 15 53.7	-0.6
	comp=Z,21nm,0.7s						
DHY	Denali Highway	21.26	45	*e*P	P	19 15 54.5	-0.5
	comp=Z,50nm,0.8s						
WRH	Wood River Hil	21.38	41	*e*P	P	19 15 55.2	-0.9
	comp=Z,10nm,0.8s						
MDM	Murphy Dome	21.49	40	*e*P	P	19 15 56.3	-1.0
	comp=Z,17nm,1.0s						
EYAK	Cordova Ski Ar	21.53	53	*e*P	P	19 15 57.6	-0.1
	comp=Z,21nm,1.0s						
CCB	Clear Creek Bu	21.55	41	*e*P	P	19 15 57.5	-0.4
	comp=Z,13nm,1.0s						
TCOL	CIGO, UAF Yank	21.60	40	P	P	19 15 58.8	+0.3
	baz=250						
COLA	College	21.61	40	*e*P	P	19 15 58.6	+0.1
	comp=Z,22nm,0.8s						
COLA	College	21.61	40	*e*P	P	19 15 58.6	+0.1
COLA				pmax	pmax		
	comp=Z,22nm,0.8s						
HDA	Harding Lake	21.82	42	P	P	19 16 00.7	-0.1
	baz=252						
POKR	Poker Plat Res	21.86	40	P	P	19 16 01.4	+0.2
	baz=250						
ILAR	Eielson Array	21.96	41	P	P	19 16 00.1	-2.2
	comp=Z,4.0nm,0.6s,baz=259,slow=8.7,SNR=5.0						
ILAR				ScP	ScP	19 23 17.6	+0.3
	comp=Z,0.8nm,0.7s,baz=275,slow=3.4,SNR=7.9						
ILB	Eielson Array	21.96	41	*e*P	P	19 16 00.8	-1.4
	comp=Z,19nm,1.3s						
ILB				*e*ScP	ScP	19 23 17.6	+0.3
RAGM	Ragged Mountai	22.05	53	*e*P	P	19 16 02.3	-0.8
	comp=Z,54nm,0.8s						
PAX	Paxson	22.08	46	*e*P	P	19 16 03.4	-0.1
	comp=Z,34nm,0.8s						
PAX	Paxson	22.08	46	*e*P	P	19 16 03.4	-0.1
PAX				pmax	pmax		
	comp=Z,34nm,0.8s						
HMT	Hamilton	22.25	53	*e*P	P	19 16 04.7	-0.4
	comp=Z,48nm,0.9s						
RIDG	Independent Ri	22.53	44	*e*P	P	19 16 06.5	-1.3
	comp=Z,17nm,0.5s						
TOLK	Toolik Lake Re	22.62	31	*e*P	P	19 16 08.6	-0.1
	comp=Z,21nm,0.9s						
TOLK	Toolik Lake Re	22.62	31	P	P	19 16 09.6	+1.0
	baz=239						
PRP	Porcupine Dome	22.75	40	*e*P	P	19 16 09.9	0.0
	comp=Z,6.9nm,0.8s						
CRQM	Cirque	22.83	52	*e*P	P	19 16 10.7	-0.1
	comp=Z,46nm,1.0s						
DOT	Dot Lake	22.85	45	*e*P	P	19 16 09.9	-0.8
	comp=Z,24nm,0.7s						
MENT	Mentasta	22.86	47	*e*P	P	19 16 10.3	-0.6
	comp=Z,21nm,0.7s						
SCRK	Sand Creek	22.96	44	*e*P	P	19 16 10.8	-1.0
	comp=Z,17nm,0.8s						
TGL	Tana Glacier	22.98	52	*e*P	P	19 16 12.2	0.0
	comp=Z,28nm,0.7s						
FYU	Fort Yukon	23.22	37	*e*P	P	19 16 14.0	0.0
	comp=Z,20nm,0.8s						
MIDW	Midway	24.06	170	*e*P	P	19 16 19.2	-2.9
	comp=Z,67nm,1.3s						
PCA	Pinnacle	24.23	54	*e*P	P	19 16 22.0	-1.4

	comp=Z,27nm,0.8s						
EGAK	**Eagle**	24.33	43	*e*P	P	19 16 24.0	-0.2
	comp=Z,72nm,0.8s						
BCPM	**Bancas Point**	24.54	55	*e*P	P	19 16 26.6	+0.4
	comp=Z,32nm,0.6s						
ASAJ	**Asahikawa**	24.80	265	P	P	19 16 30.3	+1.7
	comp=Z,3.2nm,0.7s,baz=49,slow=3.1,SNR=4.2						
DAWY	**Dawson**	24.96	45	*e*P	P	19 16 30.1	+0.2
	comp=Z,40nm,0.8s						
HYT	**Haines Junctio**	25.60	53	*e*P	P	19 16 37.5	+1.7
	comp=Z,20nm,0.9s						
ERM	**Erimo**	25.61	261	*e*P	P	19 16 38.6	+2.7
	comp=Z,28nm,1.3s						
ERM	**Erimo**	25.61	261	*e*P	P	19 16 38.6	+2.7
ERM				pmax	pmax		
	comp=Z,28nm,1.3s						
EPYK	**Eagle Plains**	26.45	40	*e*P	P	19 16 43.4	0.0
	comp=Z,19nm,0.7s						
EPYK	**Eagle Plains**	26.45	40	P	P	19 16 43.5	+0.1
	baz=259						
JIS	**Juneau Island**	27.36	58	*e*P	P	19 16 51.3	-0.2
	comp=Z,7.4nm,0.9s						
INK	**Inuvik**	28.03	36	P	P	19 16 57.8	+0.5
	comp=Z,6.7nm,0.6s,baz=276,slow=8.9,SNR=13						
KLR	**Kul'dur**	29.13	283	P	P	19 17 08.6	+1.2
	comp=Z,1.0nm,0.7s,baz=98,slow=9.6,SNR=4.8						
USRK	**Ussuriysk Ar.**	31.30	274	P	P	19 17 27.2	+0.8
	comp=Z,1.2nm,0.6s,baz=63,slow=13,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	33.43	199	T	T	19 53 09.8	
	baz=11,slow=76,SNR=37						
H11N3	**WAKE ISLAND Hy**	33.44	199	T	T	19 53 11.1	
	baz=11,slow=76,SNR=40						
H11N1	**WAKE ISLAND Hy**	33.45	199	T	T	19 53 11.5	
	baz=11,slow=76,SNR=41						
H11S1	**WAKE ISLAND Hy**	34.66	199	T	T	19 54 44.0	
	baz=11,slow=76,SNR=9.1						
H11S2	**WAKE ISLAND Hy**	34.68	199	T	T	19 54 44.1	
	baz=11,slow=76,SNR=2.8						
H11S3	**WAKE ISLAND Hy**	34.68	199	T	T	19 54 43.2	
	baz=11,slow=76,SNR=7.0						
YKW3	**Yellowknife Ar**	36.14	46	*e*P	P	19 18 08.2	+0.2
	comp=Z,15nm,0.9s						
YKA	**Yellowknife Ar**	36.17	47	P	P	19 18 08.8	+0.6
	comp=Z,9.0nm,0.6s,baz=283,slow=8.3,SNR=41						
JOHN	**Johnston Islan**	36.59	160	*e*P	P	19 18 13.5	+1.2
	comp=Z,153nm,1.0s						
NLWA	**Neilton Lookou**	36.95	74	*e*P	P	19 18 14.7	-0.4
	comp=Z,7.6nm,1.0s						
D03D	**Eldon**	37.34	73	P	P	19 18 18.7	+0.3
	baz=299						
B05A	**Bryant**	37.57	71	P	P	19 18 19.8	-0.5
	baz=299						
KSRS	**Korea Array**	37.71	267	P	P	19 18 24.0	+2.5
	comp=Z,1.2nm,0.8s,baz=51,slow=9.6,SNR=3.8						
E04D	**Cinebar**	38.14	74	P	P	19 18 25.4	+0.3
	baz=301						
LTY	**Liberty**	38.90	72	*e*P	P	19 18 30.2	-1.3
	comp=Z,3.0nm,0.8s						
H04D	**Lebanon**	39.10	77	P	P	19 18 33.5	+0.3
	baz=303						
B08A	**Colville Reser**	39.13	70	*e*P	P	19 18 32.8	-0.6
	comp=Z,3.9nm,0.7s						
I04A	**Tendick Farm,**	39.70	78	P	P	19 18 38.1	-0.1
	baz=304						
L02E	**Cave Junction**	39.90	81	P	P	19 18 40.1	+0.3
	baz=305						
RES	**Resolute Bay**	39.92	24	P	P	19 18 40.8	+1.2
	comp=Z,7.4nm,0.8s,baz=270,slow=8.1,SNR=7.5						
RES	**Resolute Bay**	39.92	24	*e*P	P	19 18 41.0	+1.5
RES	**Resolute Bay**	39.92	24	*e*P	P	19 18 41.0	+1.5
HAWA	**Hanford**	40.02	73	*e*P	P	19 18 40.4	-0.3
	comp=Z,8.7nm,0.8s						
HUMO	**Hull Mountain**	40.04	80	*e*P	P	19 18 41.8	+0.8
	comp=Z,11nm,1.4s						
KRMB	**Red Mountain**	40.08	82	*e*P	P	19 18 42.2	+0.8
	comp=Z,19nm,1.3s						
NEW	**Newport**	40.45	69	P	P	19 18 43.3	-1.0
	comp=Z,6.1nm,0.6s,baz=315,slow=6.0,SNR=12						
NEW	**Newport**	40.45	69	P	P	19 18 43.4	-1.0
	baz=300,SNR=8.3						
KHMM	**Horse Mountain**	40.57	82	*e*P	P	19 18 46.1	+0.6
	comp=Z,20nm,1.2s						
PINE	**Pine Mountain**	40.59	77	*e*P	P	19 18 46.4	+0.7
	comp=Z,3.5nm,0.8s						
L04D	**Klamath Falls**	40.66	80	P	P	19 18 46.5	+0.3
	baz=305						
YBH	**Yreka Blue Hor**	40.69	80	P	P	19 18 46.8	+0.4
	comp=Z,3.0nm,0.5s,baz=345,slow=8.3,SNR=12						
YBH	**Yreka Blue Hor**	40.69	80	*e*P	P	19 18 46.8	+0.4
	comp=Z,5.8nm,1.0s						
J05D	**Fort Rock, OR**	40.70	78	P	P	19 18 46.8	+0.3
	baz=304						
M02C	**Callahan**	40.80	81	P	P	19 18 47.7	+0.4
	baz=306						
KMRM	**Mail Ridge**	40.97	83	*e*P	P	19 18 49.3	+0.6
	comp=Z,42nm,1.4s						
N02D	**Trinity Center**	41.14	81	P	P	19 18 50.7	+0.6
	baz=306						
M04C	**Macdoel**	41.19	80	P	P	19 18 51.0	+0.5
	baz=306						
I07A	**Izee**	41.29	75	*e*P	P	19 18 50.6	-0.7
	comp=Z,4.9nm,0.8s						
KCPM	**Cahto Peak**	41.37	84	*e*P	P	19 18 51.8	-0.2
	comp=Z,44nm,1.4s						
WDC	**Whiskeytown Da**	41.47	82	*e*P	P	19 18 52.9	+0.2
	comp=Z,11nm,1.3s						
WDC	**Whiskeytown Da**	41.47	82	*e*P	P	19 18 52.9	+0.2
WDC				pmax	pmax		
	comp=Z,11nm,1.3s						
O02D	**Mt. Diablo Mer**	41.56	82	P	P	19 18 54.5	+1.0
	baz=307						
WALA	**Waterton Lakes**	41.87	66	*e*P	P	19 18 54.7	-1.3
	comp=Z,9.2nm,0.8s						
MOD	**Modoc Plateau**	42.05	79	*e*P	P	19 18 57.0	-0.5
	comp=Z,6.1nm,0.6s						
O03E	**Paynes Creek**	42.09	82	P	P	19 18 57.8	-0.1
	baz=307						
HOPS	**Hopland Field**	42.11	84	*e*P	P	19 18 56.5	-1.3
	comp=Z,67nm,1.5s						
BMO	**Blue Mountains**	42.16	73	*e*P	P	19 18 57.5	-0.9
	comp=Z,4.3nm,0.8s						
BMO	**Blue Mountains**	42.16	73	*e*P	P	19 18 57.5	-0.9
BMO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
J08A	**Circle Bar Ran**	42.31	76	*e*P	P	19 18 59.2	-0.4
	comp=Z,5.7nm,1.1s						
ORV	**Oroville**	42.73	82	*e*P	P	19 19 02.6	-0.2
	comp=Z,4.8nm,0.6s						
WVOR	**Wild Horse Val**	42.75	77	*e*P	P	19 19 01.8	-1.4
	comp=Z,4.0nm,0.8s						
WVOR	**Wild Horse Val**	42.75	77	*e*P	P	19 19 01.8	-1.4
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PLID	**Pearl Lake**	42.80	72	*e*P	P	19 19 01.7	-2.0
	comp=Z,2.8nm,1.1s						
MSO	**Missoula**	43.04	69	*e*P	P	19 19 03.7	-1.8
	comp=Z,5.8nm,1.0s						
MSO	**Missoula**	43.04	69	P	P	19 19 04.3	-1.1
	baz=303						
BEKR	**Beckworth**	43.23	81	*e*P	P	19 19 06.5	-0.7
	comp=Z,3.2nm,0.7s						
AFDM	**Forest Hills D**	43.42	83	*e*P	P	19 19 07.7	-0.8
	comp=Z,3.2nm,0.9s						
MFID	**Camas Ranch**	43.86	74	*e*P	P	19 19 10.6	-1.5
	comp=Z,3.9nm,1.0s						
PAHR	**Pah Rah Range**	43.93	81	*e*P	P	19 19 11.7	-0.9
	comp=Z,3.9nm,0.7s						
VCNR	**Virginia City**	44.02	81	*e*P	P	19 19 13.8	+0.4
	comp=Z,15nm,1.3s						
PNTR	**Pine Nut**	44.17	81	*e*P	P	19 19 14.8	+0.1
	comp=Z,11nm,0.6s						
HRY	**Holter Researc**	44.31	68	*e*P	P	19 19 13.9	-1.7
CMB	**Columbia Colle**	44.35	83	*e*P	P	19 19 15.9	0.0
	comp=Z,7.8nm,1.3s						
CMB	**Columbia Colle**	44.35	83	*e*P	P	19 19 15.9	0.0
CMB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
LRM	**Limekiln Ridge**	44.46	69	*e*P	P	19 19 13.9	-3.0
YERR	**Yerington**	44.46	81	*e*P	P	19 19 16.5	-0.4
	comp=Z,4.7nm,0.8s						
SONM	**Songino Array**	44.60	294	P	P	19 19 19.9	+2.0
	comp=Z,0.3nm,0.5s,baz=60,slow=7.2,SNR=3.4						
HLID	**Hailey**	44.61	73	*e*P	P	19 19 17.1	-1.0
	comp=Z,3.9nm,1.1s						
HLID	**Hailey**	44.61	73	P	P	19 19 17.3	-0.8
	baz=306,SNR=5.2						
WAKR	**Walker**	44.64	82	*e*P	P	19 19 18.4	0.0
	comp=Z,4.8nm,0.7s						
EGMT	**Eagleton**	44.76	65	P	P	19 19 17.9	-1.2
	baz=303						
MCMT	**McKenzie Canyo**	44.79	71	*e*P	P	19 19 17.5	-2.1
BMN	**Battle Mountai**	44.80	78	*e*P	P	19 19 19.2	-0.3
	comp=Z,4.4nm,0.6s						
BOZ	**Bozeman (W)**	45.06	69	*e*P	P	19 19 19.1	-2.4
	comp=Z,4.4nm,0.7s						
BOZ	**Bozeman (W)**	45.06	69	*e*P	P	19 19 19.1	-2.4
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BOZ	**Bozeman (W)**	45.06	69	P	P	19 19 20.2	-1.4
	baz=305						
KVN	**Kaiserville**	45.11	80	*e*P	P	19 19 22.1	0.0
	comp=Z,2.7nm,0.6s						
KVN	**Kaiserville**	45.11	80	*e*P	P	19 19 22.1	0.0
KVN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
RYN	**Ryan**	45.12	81	*e*P	P	19 19 22.2	0.0
	comp=Z,5.1nm,0.7s						
NV01	**Mina Array Sit**	45.38	81	*e*ScP	ScP	19 24 40.6	+1.3
NVAR	**Mina Array Bea**	45.38	81	P	P	19 19 24.3	0.0
	comp=Z,3.9nm,0.6s,baz=300,slow=7.3,SNR=40						
NVAR				ScP	ScP	19 24 40.6	+1.3
	comp=Z,0.3nm,0.6s,baz=276,slow=2.6,SNR=3.6						
MDPB	**Devils Postpil**	45.41	83	*e*P	P	19 19 24.0	-0.5
	comp=Z,7.7nm,0.7s						
NV11	**Mina Array Sit**	45.47	81	*e*P	P	19 19 24.6	-0.2
	comp=Z,0.3nm,0.7s						
OMMB	**Old Mammoth Mi**	45.47	83	*e*P	P	19 19 25.1	0.0
	comp=Z,2.9nm,0.8s						
QLMT	**Earthquake Lak**	45.62	70	*e*P	P	19 19 24.0	-2.0
HHC	**Hu-ho-hao-te**	45.64	283	*e*P	P	19 19 27.3	+1.2
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,14nm,6.3s						
YHB	**Horse Butte**	45.80	70	*e*P	P	19 19 25.7	-1.8
	comp=Z,8.7nm,0.8s						
ELK	**Elko**	45.80	77	*e*P	P	19 19 26.6	-1.0
	comp=Z,3.3nm,0.8s						
ELK	**Elko**	45.80	77	*e*P	P	19 19 26.6	-1.0
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PAGB	**Antelope Grade**	45.91	86	*e*P	P	19 19 28.4	+0.1
	comp=Z,12nm,0.6s						
YHH	**Holmes Hill**	45.98	70	*e*P	P	19 19 27.8	-1.2
	comp=Z,3.6nm,0.7s						
YFT	**Old Faithful**	46.18	70	*e*P	P	19 19 29.7	-0.8
	comp=Z,6.4nm,0.7s						
FLWY	**Flagg Ranch**	46.48	70	*e*P	P	19 19 32.8	0.0
	comp=Z,4.9nm,0.6s						
FXWY	**Fox Creek**	46.55	71	*e*P	P	19 19 32.3	-1.1
	comp=Z,2.1nm,1.1s						
VES	**Vestal, Richgr**	46.56	85	P	P	19 19 32.7	-0.5
	baz=311						
HVU	**Hansel Valley**	46.64	74	*e*P	P	19 19 32.5	-1.5
	comp=Z,3.2nm,0.7s						
HVU	**Hansel Valley**	46.64	74	*e*P	P	19 19 32.5	-1.5
HVU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TPAW	**Teton Pass**	46.68	71	*e*P	P	19 19 34.3	-0.2
	comp=Z,2.2nm,0.9s						
RLMT	**Red Lodge**	46.69	68	*e*P	P	19 19 33.8	-0.6
	comp=Z,3.6nm,0.8s						
RLMT	**Red Lodge**	46.69	68	P	P	19 19 33.8	-0.6
	baz=306						
CWC	**Cottonwood Cre**	46.78	83	P	P	19 19 35.3	+0.1
	baz=310						
NJ2	**Nanjing**	46.87	269	*e*P	P	19 19 37.8	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BGU	**Big Grassy Mou**	47.01	75	*e*P	P	19 19 35.8	-1.1
	comp=Z,1.9nm,0.9s						
ISA	**Isabella, Lake**	47.05	84	*e*P	P	19 19 35.1	-2.1
	comp=Z,5.6nm,1.1s						
ISA	**Isabella, Lake**	47.05	84	*e*P	P	19 19 35.1	-2.1
ISA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ISA	**Isabella, Lake**	47.05	84	P	P	19 19 36.5	-0.7
	baz=311						
R11A	**Troy Canyon, C**	47.08	80	*e*P	P	19 19 36.8	-0.8
	comp=Z,3.7nm,0.9s						
R11A	**Troy Canyon, C**	47.08	80	P	P	19 19 37.1	-0.4
	baz=309,SNR=11						
SPUT	**South Promonto**	47.12	74	*e*P	P	19 19 36.5	-1.2
	comp=Z,4.4nm,1.1s						
DAC	**Darwin (Calif)**	47.19	83	*e*P	P	19 19 38.1	-0.3
DAC	**Darwin (Calif)**	47.19	83	*e*P	P	19 19 38.1	-0.3
MPMC	**Manual Prospec**	47.40	83	P	P	19 19 40.0	0.0
	baz=311						
HWUT	**Hardware Ranch**	47.46	73	*e*P	P	19 19 38.9	-1.5
	comp=Z,3.3nm,0.9s						
LAO	**LASA Array**	47.50	65	*e*P	P	19 19 39.3	-1.1
	comp=Z,5.2nm,0.6s						
LAO	**LASA Array**	47.50	65	P	P	19 19 40.1	-0.4
	baz=306						
FURC	**Furnace Creek,**	47.51	82	P	P	19 19 40.9	+0.3
	baz=311						
TPNV	**Topopah Spring**	47.58	81	*e*P	P	19 19 40.9	-0.4
	comp=Z,8.2nm,0.8s						
TPNV	**Topopah Spring**	47.58	81	P	P	19 19 41.2	-0.1
	baz=310,SNR=12						
DUG	**Dugway, Tooele**	47.59	76	*e*P	P	19 19 40.3	-1.1
	comp=Z,4.7nm,0.8s						
DUG	**Dugway, Tooele**	47.59	76	*e*P	P	19 19 40.3	-1.1
DUG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DUG	**Dugway, Tooele**	47.59	76	P	P	19 19 40.9	-0.5
	baz=309,SNR=6.4						
LRMC	**Laurel Mtn Rad**	47.66	84	P	P	19 19 41.6	-0.4
	baz=311						
EDW2	**Edwards Air Fo**	47.86	85	P	P	19 19 43.4	0.0
	baz=312						
CTU	**Camp Tracy**	47.92	75	*e*P	P	19 19 42.1	-1.8
	comp=Z,3.7nm,0.7s						
BW06	**Boulder Array**	47.93	71	*e*P	P	19 19 42.3	-1.8
	comp=Z,4.1nm,0.6s						
BW06	**Boulder Array**	47.93	71	P	P	19 19 42.9	-1.2
	baz=308						
PDAR	**Pinedale Array**	47.93	71	P	P	19 19 43.0	-1.1
	comp=Z,2.9nm,0.6s,baz=307,slow=4.1,SNR=12						
PSUT	**Pine Spring**	48.01	78	*e*P	P	19 19 43.4	-1.4
	comp=Z,3.3nm,0.8s						
JLU	**Jordanelle**	48.15	74	*e*P	P	19 19 44.6	-1.2
	comp=Z,4.2nm,1.1s						
NLU	**North Lily Min**	48.19	76	*e*P	P	19 19 45.1	-0.9
	comp=Z,2.0nm,0.8s						
MWC	**Mount Wilson**	48.26	86	*e*P	P	19 19 45.9	-0.7
	comp=Z,19nm,1.3s						
MWC	**Mount Wilson**	48.26	86	*e*P	P	19 19 45.9	-0.7
MWC				pmax	pmax		
	comp=Z,19nm,1.3s						
GSC	**Goldstone, Bar**	48.31	84	*e*P	P	19 19 46.6	-0.3
	comp=Z,11nm,0.8s						
GSC	**Goldstone, Bar**	48.31	84	*e*P	P	19 19 46.6	-0.3
GSC				pmax	pmax		
	comp=Z,11nm,0.8s						
GSC	**Goldstone, Bar**	48.31	84	P	P	19 19 46.8	-0.1
	baz=311,SNR=9.0						
BFSC	**Mount Baldy Ra**	48.49	85	P	P	19 19 47.5	-0.8
	baz=312						
HEC	**Hector,Ludlow**	48.91	84	P	P	19 19 51.1	-0.4
	baz=312						
CCUT	**Cedar City**	48.94	79	*e*P	P	19 19 50.0	-1.8
	comp=Z,2.2nm,0.7s						
TMUT	**Trail Mountain**	49.12	76	*e*P	P	19 19 52.5	-0.7
	comp=Z,4.9nm,0.7s						
P17A	**Butcher Ranch,**	49.29	75	*e*P	P	19 19 53.8	-0.6
	comp=Z,3.7nm,0.5s						
MTPU	**Mount Pierson**	49.34	78	*e*P	P	19 19 55.0	0.0
	comp=Z,7.8nm,1.3s						
GMRC	**Granite Mounta**	49.36	83	P	P	19 19 54.7	-0.2
	baz=312,SNR=7.5						
LCMT	**Little Creek M**	49.36	79	*e*P	P	19 19 55.0	+0.1
	comp=Z,4.9nm,1.0s						
SPITS	**Spitsbergen Ar**	49.54	355	P	P	19 19 55.8	+0.3
	comp=Z,3.7nm,0.7s,baz=34,slow=6.9,SNR=5.9						
KNB	**Kanab**	49.62	79	*e*P	P	19 19 56.5	-0.4
	comp=Z,8.9nm,1.4s						
KNB	**Kanab**	49.62	79	*e*P	P	19 19 56.5	-0.4
KNB				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SRU	**San Rafael Swe**	49.65	75	*e*P	P	19 19 57.0	-0.2
	comp=Z,4.7nm,0.6s						
SRU	**San Rafael Swe**	49.65	75	*e*P	P	19 19 57.0	-0.2
SRU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PFO	**Pinyon Flats O**	49.65	85	P	P	19 19 56.6	-0.5
	baz=312						
BELC	**Belle Mtn. Jos**	49.67	84	P	P	19 19 56.7	-0.6
	baz=312,SNR=5.3						
K22A	**Casper**	49.77	69	P	P	19 19 56.9	-1.1
	baz=308						
IRM	**Iron Mountain**	50.09	83	P	P	19 20 00.0	-0.4
	baz=312						
W13A	**Hualapai Mount**	50.23	82	*e*P	P	19 20 00.7	-0.9
	comp=Z,2.2nm,0.8s						
BC3	**Big Chuckawall**	50.24	84	P	P	19 20 01.3	-0.2
	baz=313						
U15A	**North Rim**	50.32	79	*e*P	P	19 20 02.1	-0.2
	comp=Z,4.6nm,0.8s						
O20A	**White River Ci**	50.35	73	*e*P	P	19 20 01.3	-1.1
	comp=Z,6.6nm,1.0s						
O20A	**White River Ci**	50.35	73	P	P	19 20 01.3	-1.1
	baz=310						
IKP	**In-Ko-Pah, Jac**	50.52	86	P	P	19 20 03.5	-0.2
	baz=313						
PDMCI	**Parker Dam,Lak**	50.61	83	P	P	19 20 04.4	+0.3
	baz=312						
WHN	**Wuhan**	50.69	271	*e*P	P	19 20 05.9	+1.1
Y12C	**Blythe**	50.75	83	*e*P	P	19 20 04.2	-1.1
	comp=Z,9.9nm,1.1s						
Y12C	**Blythe**	50.75	83	P	P	19 20 05.0	-0.3
	baz=313						
PV09	**Paradox Valley**	50.87	75	*e*P	P	19 20 05.4	-1.1
PV21	**Cone Mtn., Par**	50.93	75	*e*P	P	19 20 06.0	-0.8
	comp=Z,2.6nm,0.8s						
PV23	**Carpenter Ridg**	50.98	75	*e*P	P	19 20 05.9	-1.4
	comp=Z,4.1nm,0.7s						
PV10	**Paradox Valley**	51.01	75	*e*P	P	19 20 05.7	-1.7
	comp=Z,5.5nm,0.7s						
PV14	**Lion Creek, Pa**	51.02	75	*e*P	P	19 20 05.8	-1.7
	comp=Z,3.3nm,0.7s						
GLA	**Glamis**	51.03	84	*e*P	P	19 20 06.7	-0.7
	comp=Z,8.7nm,0.8s						
GLA	**Glamis**	51.03	84	*e*P	P	19 20 06.7	-0.7
GLA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GLA	**Glamis**	51.03	84	P	P	19 20 07.3	-0.2
	baz=313						
PV22	**Blue Mesa, Par**	51.05	75	*e*P	P	19 20 06.2	-1.5
	comp=Z,3.8nm,0.8s						
PV20	**West Nyswonger**	51.07	75	*e*P	P	19 20 06.6	-1.3
	comp=Z,4.2nm,0.6s						
PV04	**Paradox Valley**	51.08	75	*e*P	P	19 20 06.6	-1.2
	comp=Z,4.9nm,0.7s						
PV19	**Morning Glory**	51.08	75	*e*P	P	19 20 06.1	-1.8
	comp=Z,3.6nm,0.6s						
PV17	**East Wray Mesa**	51.12	75	*e*P	P	19 20 06.9	-1.3
	comp=Z,9.2nm,0.6s						
PV16	**Nyswonger Mesa**	51.12	75	*e*P	P	19 20 07.1	-1.2
	comp=Z,4.1nm,0.6s						
PV11	**David Mesa, Pa**	51.16	75	*e*P	P	19 20 07.4	-1.1
	comp=Z,8.9nm,0.6s						
PV05	**Paradox Valley**	51.17	75	*e*P	P	19 20 07.8	-0.8
	comp=Z,5.2nm,0.9s						
PV18	**Skein Mesa, Pa**	51.17	75	*e*P	P	19 20 06.8	-1.8
	comp=Z,12nm,1.3s						
PV12	**Saucer Basin,**	51.19	75	*e*P	P	19 20 07.0	-1.7
	comp=Z,4.6nm,0.8s						
PV03	**Paradox Valley**	51.20	75	*e*P	P	19 20 07.4	-1.4
	comp=Z,4.9nm,0.6s						
PV07	**Paradox Valley**	51.20	75	*e*P	P	19 20 07.0	-1.8
	comp=Z,2.9nm,0.7s						
PV13	**Radium Mtn., P**	51.28	75	*e*P	P	19 20 08.8	-0.7
	comp=Z,14nm,0.6s						
PV02	**Paradox Valley**	51.30	75	*e*P	P	19 20 08.7	-0.9
	comp=Z,6.6nm,0.7s						
PV01	**Paradox Valley**	51.45	75	*e*P	P	19 20 09.6	-1.1
	comp=Z,2.4nm,0.7s						
WUAZ	**Wupatki**	51.48	79	*e*P	P	19 20 11.1	+0.2
	comp=Z,3.0nm,0.6s						
WUAZ	**Wupatki**	51.48	79	P	P	19 20 10.7	-0.2
	baz=312						
AGMN	**Agassiz Nation**	52.12	58	*e*P	P	19 20 14.0	-1.3
	comp=Z,5.9nm,0.9s						
ZAA1	**Zalesovo Array**	52.13	312	*e*PcP	PcP	19 21 26.8	+1.9
ZALV	**Zalesovo Beam**	52.14	312	P	P	19 20 16.3	+1.0
	comp=Z,0.4nm,0.4s,baz=54,slow=7.3,SNR=2.5						
ZALV				PcP	PcP	19 21 26.8	+1.8
	comp=Z,0.8nm,0.6s,baz=66,slow=1.7,SNR=3.2						
W18A	**Petrified Fore**	52.74	79	P	P	19 20 20.2	0.0
	baz=312						
214A	**Organ Pipe Nat**	53.02	84	P	P	19 20 21.8	-0.4
	baz=314						
LZH	**Lanzhou**	53.33	284	*e*P	P	19 20 28.0	+3.5
LZH				pP	pP	19 20 58.9	+0.3
LZH				sP	sP	19 21 11.8	-3.1
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
SDCO	**Great Sand Dun**	53.52	73	*e*P	P	19 20 25.7	-0.3
	comp=Z,4.6nm,1.3s						
SDCO	**Great Sand Dun**	53.52	73	P	P	19 20 25.5	-0.6
	baz=312						
TUC	**Tucson**	54.02	82	P	P	19 20 29.3	-0.2
	baz=314						
T25A	**Trinidad**	54.57	73	P	P	19 20 33.3	-0.3
	baz=312						
EYMN	**Ely**	54.60	56	P	P	19 20 32.6	-0.7
	baz=311						
BNM	**Barren Site**	55.28	77	*e*P	P	19 20 38.8	+0.1
E38A	**The Farm, Brul**	55.45	57	P	P	19 20 38.9	-0.6
	baz=311						
CBKS	**Cedar Bluff**	56.17	69	P	P	19 20 43.6	-1.2
	baz=313						
G39A	**Holcombe**	56.53	58	P	P	19 20 46.8	-0.3
	baz=312						
ARA0	**ARCESS Array S**	57.06	349	*e*P	P	19 20 51.5	+0.9
ARCES	**ARCESS Array B**	57.06	349	P	P	19 20 51.5	+0.9
	comp=Z,1.4nm,0.8s,baz=32,slow=8.6,SNR=2.9						
WMQ	**Urumqi**	57.33	301	*e*P	P	19 20 56.3	+3.4
WMQ				pP	pP	19 21 27.4	+0.6
WMQ				sP	sP	19 21 41.6	-1.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,96nm,4.5s						
WMQ				LR	LR		
	comp=N,86nm,28.9s						
WMQ				LR	LR		
	comp=E,180nm,28.9s						
WMQ				LR	LR		
	comp=Z,69nm,29.2s						
MSTX	**Muleshoe**	57.71	75	*e*P	P	19 20 54.9	-0.9
	comp=Z,3.8nm,0.8s						
MSTX	**Muleshoe**	57.71	75	P	P	19 20 55.2	-0.6
	baz=314						
MNTX	**Cornudas Mount**	57.73	79	*e*P	P	19 20 55.6	-0.2
	comp=Z,3.4nm,0.8s						
MNTX	**Cornudas Mount**	57.73	79	P	P	19 20 55.7	-0.2
	baz=315						
E43A	**Lone Tree Farm**	57.93	54	P	P	19 20 56.5	-0.4
	baz=313						
MKAR	**Makanchi Array**	58.08	306	P	P	19 20 59.1	+1.1
	comp=Z,0.7nm,0.5s,baz=48,slow=8.6,SNR=2.9						
JFWS	**Jewell Farm**	58.63	59	P	P	19 21 01.2	-0.7
	baz=314						
H43A	**Windswept, Lux**	58.85	57	P	P	19 21 02.6	-0.7
	baz=314						
D46A	**Sault St. Mari**	59.04	52	P	P	19 21 04.2	-0.4
	baz=314						
BRVK	**Borovoye**	59.12	318	*e*P	P	19 21 06.2	+1.2
	comp=Z,2.9nm,0.4s						
BRVK	**Borovoye**	59.12	318	*e*P	P	19 21 06.2	+1.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
E46A	**Sault Ste Mari**	59.27	53	*e*P	P	19 21 05.9	-0.3
	comp=Z,14nm,0.6s						
E46A	**Sault Ste Mari**	59.27	53	P	P	19 21 06.1	-0.1
	baz=315						
D47A	**Chapleau**	59.38	52	P	P	19 21 06.5	-0.4
	baz=315						
WMOK	**Wichita Mounta**	59.54	72	*e*P	P	19 21 07.8	-0.4
	comp=Z,2.2nm,0.7s						
WMOK	**Wichita Mounta**	59.54	72	*e*P	P	19 21 07.8	-0.4
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WMOK	**Wichita Mounta**	59.54	72	P	P	19 21 07.8	-0.4
	baz=315						
E47A	**Iron Bridge**	59.72	52	P	P	19 21 08.5	-0.7
	baz=315						
N41A	**Harden Midland**	59.84	62	P	P	19 21 09.6	-0.6
	baz=314						
TX31	**Lajitas Ar. Si**	60.45	79	*e*P	P	19 21 14.3	-0.3
	comp=Z,3.8nm,0.8s						

TXAR	**Lajitas Array**	**60.45**	**79**	P	**P**	**19 21 14.6**	**0.0**
	comp=Z,3.4nm,0.8s,baz=300,slow=4.8,SNR=22						
ABTX	**Abilene, Hawle**	**60.52**	**74**	*e*P	**P**	**19 21 14.4**	**-0.6**
	comp=Z,6.9nm,0.8s						
ABTX	**Abilene, Hawle**	**60.52**	**74**	P	**P**	**19 21 14.8**	**-0.1**
	baz=315						
ARU	**Arti**	**60.98**	**326**	*e*P	**P**	**19 21 19.4**	**+1.8**
	comp=Z,3.8nm,0.6s						
ARU	**Arti**	**60.98**	**326**	*e*P	**P**	**19 21 19.4**	**+1.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CHGQ	**Chibougamau**	**61.32**	**45**	P	**P**	**19 21 19.0**	**-1.1**
	baz=318						
TOBO	**Tobermory, Bru**	**61.45**	**52**	P	**P**	**19 21 19.4**	**-1.6**
	baz=316						
U40A	**Yellville**	**61.81**	**66**	P	**P**	**19 21 22.5**	**-1.1**
	baz=316						
K48A	**Perry**	**61.90**	**56**	P	**P**	**19 21 22.8**	**-1.3**
	baz=316						
JCT	**Junction City**	**61.96**	**76**	*e*P	**P**	**19 21 23.4**	**-1.3**
	comp=Z,5.5nm,0.8s						
JCT	**Junction City**	**61.96**	**76**	*e*P	**P**	**19 21 23.4**	**-1.3**
JCT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
J49A	**Marlette**	**62.00**	**55**	P	**P**	**19 21 22.8**	**-1.9**
	baz=316						
SFIN	**Lafayette**	**62.09**	**59**	P	**P**	**19 21 24.4**	**-1.0**
	baz=316						
F52A	**Sundridge**	**62.10**	**51**	P	**P**	**19 21 24.5**	**-0.8**
	baz=317						
W39A	**Magazine**	**62.10**	**68**	P	**P**	**19 21 24.6**	**-0.9**
	baz=316						
WHTX	**Lake Whitney,**	**62.27**	**73**	P	**P**	**19 21 26.1**	**-0.5**
	baz=316						
BUKO	**Buck Lake**	**62.32**	**51**	P	**P**	**19 21 26.0**	**-0.8**
	baz=317						
BWLO	**Walkerton**	**62.45**	**53**	P	**P**	**19 21 26.4**	**-1.2**
	baz=317						
N47A	**Urbana**	**62.48**	**58**	P	**P**	**19 21 27.4**	**-0.6**
	baz=316						
FCAR	**Ozark Folk Cen**	**62.55**	**66**	*e*P	**P**	**19 21 26.7**	**-1.8**
	comp=Z,7.8nm,0.6s						
E54A	**Lac Daplat, Po**	**62.64**	**49**	P	**P**	**19 21 27.4**	**-1.5**
	baz=318						
MIAR	**Mount Ida**	**62.69**	**68**	P	**P**	**19 21 28.3**	**-1.2**
	baz=316						
G53A	**Haliburton**	**62.93**	**51**	P	**P**	**19 21 30.1**	**-0.8**
	baz=318						
W41B	**Gary Mavity, V**	**63.00**	**67**	P	**P**	**19 21 30.2**	**-1.2**
	baz=316						
BANO	**Bancroft**	**63.34**	**50**	P	**P**	**19 21 32.7**	**-0.9**
	baz=318						
G55A	**Calabogie**	**63.73**	**49**	P	**P**	**19 21 35.0**	**-1.2**
	baz=318						
T47A	**Sharon Grove**	**64.55**	**62**	P	**P**	**19 21 40.6**	**-1.0**
	baz=317						
FINES	**FINESS Array B**	**64.66**	**346**	P	**P**	**19 21 42.4**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=32,slow=6.4,SNR=3.7						
L54A	**Sinclairville**	**64.73**	**53**	P	**P**	**19 21 41.4**	**-1.3**
	baz=318						
K54A	**Basiliko Farm,**	**64.76**	**53**	P	**P**	**19 21 42.0**	**-0.9**
	baz=318						
V46A	**Holladay**	**64.86**	**64**	P	**P**	**19 21 42.4**	**-1.2**
	baz=317						
OXF	**Oxford**	**65.08**	**65**	P	**P**	**19 21 44.0**	**-1.1**
	baz=317						
V47A	**Nunnelly**	**65.17**	**63**	P	**P**	**19 21 44.4**	**-1.2**
	baz=317						
U48A	**Cassie Pea, Po**	**65.20**	**62**	P	**P**	**19 21 45.1**	**-0.7**
	baz=317						
N54A	**Moraine State**	**65.35**	**55**	P	**P**	**19 21 45.0**	**-1.7**
	baz=318						
M55A	**Ridgway**	**65.58**	**53**	P	**P**	**19 21 47.5**	**-0.7**
	baz=319						
M56A	**Emporium**	**65.86**	**53**	P	**P**	**19 21 49.4**	**-0.6**
	baz=319						
W48A	**Pulaski**	**66.00**	**63**	P	**P**	**19 21 49.7**	**-1.2**
	baz=318						
V49A	**McMinnville**	**66.10**	**62**	P	**P**	**19 21 51.2**	**-0.3**
	baz=318						
BINY	**Binghamton**	**66.39**	**51**	P	**P**	**19 21 52.8**	**-0.6**
	baz=320						
KK31	**Karatay Array**	**66.48**	**310**	*e*P	**P**	**19 21 55.7**	**+1.8**
	comp=Z,1.6nm,0.8s						
KK31	**Karatay Array**	**66.48**	**310**	*e*P	**P**	**19 21 55.7**	**+1.8**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**66.48**	**310**	*e*P	**P**	**19 21 55.3**	**+1.4**
	comp=Z,1.6nm,0.8s						
KKAR	**Karatay Array**	**66.48**	**310**	*e*P	**P**	**19 21 55.3**	**+1.4**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSH	**Kashi**	**66.52**	**304**	*e*P	P	19 22 00.3	+5.9
KSH				*e*PcP	pP	19 22 26.8	-2.2
KSH				pP	pwP	19 22 30.6	-3.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s						
L58A	**Harry Jones Me**	**66.57**	**51**	P	**P**	**19 21 53.8**	**-0.7**
	baz=320						
M58A	**Price’s Panora**	**66.79**	**52**	P	**P**	**19 21 55.4**	**-0.5**
	baz=320						
R54A	**Victor**	**66.92**	**57**	P	**P**	**19 21 56.1**	**-0.6**
	baz=319						
N58A	**Sunbury**	**67.07**	**53**	P	**P**	**19 21 57.2**	**-0.5**
	baz=320						
O57A	**Amberson**	**67.09**	**54**	P	**P**	**19 21 57.1**	**-0.7**
	baz=320						
N59A	**State Game Lan**	**67.47**	**52**	P	**P**	**19 21 59.8**	**-0.4**
	baz=320						
O59A	**Robesonia**	**67.73**	**53**	P	**P**	**19 22 01.1**	**-0.7**
	baz=320						
Z50A	**Ashland**	**67.96**	**64**	P	**P**	**19 22 01.9**	**-1.5**
	baz=318						
Q58A	**Fox Den Farm,**	**68.03**	**55**	P	**P**	**19 22 03.3**	**-0.5**
	baz=320						
V54A	**Nebo**	**68.22**	**60**	P	**P**	**19 22 04.4**	**-0.6**
	baz=319						
R58A	**Rapidan**	**68.36**	**55**	P	**P**	**19 22 04.9**	**-0.9**
	baz=320						
Y53A	**Monroe**	**68.79**	**62**	P	**P**	**19 22 07.8**	**-0.7**
	baz=319						
S58A	**Poland Farm, P**	**68.86**	**56**	P	**P**	**19 22 07.8**	**-1.1**
	baz=320						
KMSC	**Kings Mountain**	**69.03**	**60**	P	**P**	**19 22 09.3**	**-0.7**
	baz=320						
U57A	**Blanch**	**69.10**	**57**	P	**P**	**19 22 09.7**	**-0.7**
	baz=320						
Z53A	**Monticello**	**69.23**	**62**	P	**P**	**19 22 09.8**	**-1.4**
	baz=319						
Y54A	**Tignall**	**69.27**	**61**	P	**P**	**19 22 10.4**	**-1.0**
	baz=319						
X55A	**Gracelyn & Ava**	**69.38**	**60**	P	**P**	**19 22 11.5**	**-0.6**
	baz=320						
NHSC	**New Hope**	**71.20**	**60**	P	**P**	**19 22 22.4**	**-0.8**
	baz=320						
AKASG	**Malin Array Be**	**74.27**	**340**	P	**P**	**19 22 41.2**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=22,slow=6.4,SNR=7.3						
VYHS	**Vyhne**	**78.27**	**346**	*e*P	**P**	**19 23 05.8**	**+2.2**
VYHS	**Vyhne**	**78.27**	**346**	*e*P	**P**	**19 23 05.8**	**+2.2**
WRA	**Warramunga Arr**	**81.21**	**221**	P	**P**	**19 23 20.1**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=38,slow=4.7,SNR=6.0						
AS31	**Alice Springs**	**84.72**	**220**	*e*P	**P**	**19 23 38.8**	**+1.1**
	comp=Z,1.3nm,1.1s						
ASAR	**Alice Springs**	**84.72**	**220**	P	**P**	**19 23 38.8**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=17,slow=4.4,SNR=8.3						
TOA1	**Torodi Ar. Sit**	**114.98**	**356**	*e*PKiKP	**PKPdf**	**19 29 43.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**114.98**	**356**	PKP	**PKPdf**	**19 29 43.6**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=349,slow=1.6,SNR=6.6						
MAW	**Mawson**	**145.83**	**218**	PKPbc	**PKiKP**	**19 30 42.6**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=108,slow=1.7,SNR=6.1						
BOSA	**Boshof**	**149.06**	**309**	PKPbc	**PKiKP**	**19 30 52.6**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=13,slow=3.4,SNR=5.4						

MAN 19 19:23:28.8, 17.°91N×120.°74E, h22^{km}, mb4.0, ML2.8, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.26**	**185**	*e*P	Pn	19 23 36.6	-0.7
ABRA				*e*S	Sn	19 23 43.7	+1.1
APYP	**Conner**	**0.48**	**95**	*e*P	Pb	19 23 38.6	0.0
APYP				*e*S	Sn	19 23 47.2	-0.9
CVP	**Callao Caves**	**1.05**	**101**	⇓*i*P	Pn	19 23 47.1	-1.1
CVP				*i* S	Sn	19 24 02.0	-0.3

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*ISCJB **19** 19:29:27.6±0.5, 8.°00S±0.°06×74.°49W±0.°04, h151^{km}, mb3.7/7, Error ellipse: s-maj=8.6km s-min=6.1km az=178.8*

*IDC **19** 19:29:30.1±1.9, 8.°06S×74.°50W, h165^{km}±23^{km}, mb3.3/6, mb1 3.7/11, mb1mx3.5/40, mbtmp4.0/11, Error ellipse: s-maj=31.1km s-min=14.1km az=25.0*

ISC 19 19:29:28.6±0.6**, 8.°01S**±0.°07×**74.°43W**±0.°06**, h151^{km}, n14, σ2^{s}48**/18**, mb3.8**/8**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**4.02**	**282**	P	**Pn**	**19 30 29.3**	**-0.3**
	18nm,0.3s,baz=127,slow=10,SNR=65						
ATAH				S	**Sn**	**19 31 14.7**	**-2.2**
	26nm,0.3s,baz=53,slow=20,SNR=8.2						
NNA	**Nana**	**4.61**	**211**	P	**Pn**	**19 30 37.8**	**+0.9**
	13nm,0.3s,baz=30,slow=6.2,SNR=15						
NNA				S	**Sn**	**19 31 27.6**	**-2.7**
	34nm,0.3s,baz=323,slow=20,SNR=11						
LPAZ	**La Paz**	**10.28**	**144**	P	**Pn**	**19 31 55.0**	**+2.2**
	0.5nm,0.3s,baz=350,slow=11,SNR=8.7						
SIV	**San Ignacio**	**15.28**	**123**	P	**P**	**19 32 59.1**	**+1.1**
	1.1nm,0.3s,baz=303,slow=11,SNR=19						
SIV				S	**Sn**	**19 35 41.5**	**-5.1**
	0.4nm,0.3s,baz=266,slow=19,SNR=3.2						
PTGA	**Pitinga**	**16.13**	**64**	P	**P**	**19 33 09.6**	**+2.3**
	4.8nm,0.3s,baz=254,slow=16,SNR=21						
PTGA				S	**S**	**19 36 01.1**	**-5.3**
	0.4nm,0.3s,baz=319,slow=19,SNR=2.8						
MDP	**Montagnes des**	**25.34**	**60**	P	**P**	**19 34 42.3**	**+0.6**
	1.2nm,0.3s,baz=230,slow=12,SNR=2.6						
BDFB	**Brasilia**	**26.92**	**109**	pP	pP	19 35 31.6	+3.8
	4.7nm,0.6s,baz=270,slow=9.1,SNR=2.5						
TXAR	**Lajitas Array**	**46.60**	**324**	P	**P**	**19 37 42.2**	**+0.5**
	0.6nm,0.7s,baz=149,slow=9.3,SNR=6.8						
PDAR	**Pinedale Array**	**59.81**	**331**	P	**P**	**19 39 18.2**	**0.0**
	0.3nm,0.3s,baz=140,slow=7.2,SNR=3.7						
NVAR	**Mina Array Bea**	**61.64**	**322**	P	**P**	**19 39 31.3**	**+0.6**
	0.4nm,0.7s,baz=134,slow=7.7,SNR=3.1						
DBIC	**Dimbokro**	**70.89**	**80**	P	**P**	**19 40 30.4**	**+0.5**
	6.3nm,0.3s,baz=247,slow=4.9,SNR=21						
TORD	**Torodi Ar. Bea**	**78.46**	**75**	P	**P**	**19 41 13.2**	**-0.2**
	1.1nm,0.3s,baz=247,slow=5.4,SNR=20						
TORD				pP	**pP**	**19 41 52.8**	**+1.9**
	0.3nm,0.6s,baz=234,slow=4.2,SNR=0.9						
ESDC	**Sonseca Array**	**80.36**	**48**	P	**P**	**19 41 23.7**	**+0.4**
	0.2nm,0.5s,baz=262,slow=6.0,SNR=4.5						
ASAR	**Alice Springs**	**138.07**	**221**	PKP	**PKPdf**	**19 48 33.5**	**-3.0**
	0.4nm,0.7s,baz=129,slow=2.6,SNR=3.8						

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*IDC **19** 19:39:07.9±0.9, 48.°83S×164.°73E, h0^{km}, mb4.1/4, mb1 4.3/6, mb1mx4.0/18, mbtmp4.1/6, ML3.5/2, MS3.5/5, Ms1 3.5/5, ms1mx3.3/18, Error ellipse: s-maj=31.5km s-min=26.0km az=70.0*

*ISCJB **19** 19:39:10.3±0.5, 48.°98S±0.°06×164.°99E±0.°08, h35^{km}, mb4.5/14, MS3.4/4, Error ellipse: s-maj=10.9km s-min=4.5km az=139.8*

*NEIC **19** 19:39:12.5±3.0, 48.°88S×164.°88E, h33^{km}±5^{km}, mb4.5/14, Error ellipse: s-maj=17.8km s-min=9.3km az=136.0*

ISC 19 19:39:12.9±0.6**, 48.°96S**±0.°08×**165.°00E**±0.°09**, h35^{km}, n71, σ1^{s}52**/64**, mb4.3**/14**, MS3.4**/4**, 3C-1D, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**3.66**	**34**	*e*Pn	**Pn**	**19 40 07.6**	**+0.6**
WHZ				*e*Sn	**Sn**	**19 40 49.9**	**+1.0**
DCZ	**Deep Cove**	**3.79**	**24**	*e*Pn	**Pn**	**19 40 08.9**	**+0.2**
DCZ				*e*Sn	**Sn**	**19 40 52.3**	**+0.3**
MLZ	**Mavora Lakes**	**4.17**	**32**	*e*Pn	**Pn**	**19 40 14.8**	**+0.7**
MLZ				*e*Sn	**Sn**	**19 41 03.0**	**+1.4**
WKZ	**Wanaka**	**4.96**	**35**	*e*Pn	**Pn**	**19 40 26.6**	**+1.7**
WKZ				*e*Sn	**Sn**	**19 41 24.1**	**+3.1**
ODZ	**Otahua Downs**	**5.50**	**47**	*e*Pn	**Pn**	**19 40 33.2**	**+1.0**
ODZ				*e*Sn	**Sn**	**19 41 27.8**	**-6.4**
LBZ	**Lake Benmore**	**5.80**	**40**	*e*Pn	**Pn**	**19 40 35.7**	**-0.6**
FOZ	**Fox Glacier**	**6.37**	**33**	*e*Pn	**Pn**	**19 40 43.3**	**-0.9**
RPZ	**Rata Peaks**	**6.71**	**41**	Pn	**Pn**	**19 40 47.9**	**-1.0**
	1.9nm,0.3s,baz=238,slow=4.9,SNR=7.4						
RPZ				Sn	**Sn**	**19 42 03.6**	**-0.5**
	4.6nm,0.3s,baz=186,slow=19,SNR=6.5						
RPZ	**Rata Peaks**	**6.71**	**41**	*e*Pn	**Pn**	**19 40 47.1**	**-1.7**
OXZ	**Oxford**	**7.45**	**44**	*e*Pn	**Pn**	**19 40 58.8**	**-0.2**
MQZ	**McQueen’s Vall**	**7.46**	**48**	*e*Pn	**Pn**	**19 40 59.3**	**+0.3**
LTZ	**Lake Taylor**	**7.99**	**42**	*e*Pn	**Pn**	**19 41 06.0**	**-0.4**
KHZ	**Kahutara**	**8.86**	**46**	*e*Pn	**Pn**	**19 41 17.6**	**-0.7**
THZ	**Tophouse**	**9.09**	**41**	*e*Pn	**Pn**	**19 41 23.1**	**+1.6**
THZ				*e*Sn	**Sn**	**19 43 01.1**	**-1.6**
SNZO	**South Karori**	**10.26**	**45**	*e*Pn	**Pn**	**19 41 36.2**	**-1.3**
BFZ	**Birch Farm**	**11.49**	**48**	*e*Pn	**Pn**	**19 41 53.6**	**-0.7**
BKZ	**Black Stump Fm**	**12.79**	**44**	*e*Pn	**Pn**	**19 42 12.4**	**+0.2**
TAU	**Tasmania Unive**	**13.70**	**290**	*e*Pn	Pn	19 42 18.1	-6.4
URZ	**Urewera**	**13.81**	**44**	Pn	**Pn**	**19 42 27.4**	**+1.4**
	0.1nm,0.3s,baz=214,slow=7.3,SNR=2.8						
URZ				LR	LR	19 48 51.0	
	comp=Z,163nm,19.1s,baz=211,slow=42						
URZ	**Urewera**	**13.81**	**44**	*e*Pn	**Pn**	**19 42 27.6**	**+1.5**
OUZ	**Omahuta**	**15.12**	**28**	*e*P	**Pn**	**19 42 46.2**	**+2.5**
	22nm,1.7s						
CAN	**Canberra**	**18.02**	**313**	*e*P	**Pn**	**19 43 18.2**	**-2.2**
	38nm,1.4s						
TOO	**Toolangi**	**18.15**	**302**	*e*P	**Pn**	**19 43 20.1**	**-1.9**
	161nm,1.9s						
STKA	**Stephens Creek**	**24.52**	**305**	P	**P**	**19 44 29.6**	**+0.7**
	3.6nm,0.9s,baz=135,slow=14,SNR=3.4						
STKA				LR	LR	19 53 07.8	
	comp=Z,114nm,18.1s,baz=203,slow=35						
STKA	**Stephens Creek**	**24.52**	**305**	*e*P	**P**	**19 44 30.3**	**+1.4**
	6.9nm,1.8s						
EIDS	**Eidsvold**	**25.94**	**330**	*e*P	**P**	**19 44 43.2**	**+1.4**
	11nm,1.3s						
DZM	**Mont Dzumac**	**26.85**	**3**	LR	LR	19 53 56.0	
	comp=Z,86nm,20.3s,baz=219,slow=33						
VNDA	**Vanda**	**28.70**	**181**	LR	LR	19 53 33.4	
	comp=Z,146nm,21.4s,baz=128,slow=30						
CASY	**Casey**	**32.57**	**218**	*e*P	**P**	**19 45 39.5**	**-0.8**
	13nm,1.2s						
AS31	**Alice Springs**	**35.15**	**305**	*e*P	**P**	**19 46 02.1**	**-1.1**
	2.5nm,1.2s						
ASAR	**Alice Springs**	**35.15**	**305**	P	**P**	**19 46 01.6**	**-1.6**
	1.6nm,0.8s,baz=136,slow=7.6,SNR=20						
ASAR				LR	LR	20 00 44.8	
	comp=Z,60nm,18.0s,baz=190,slow=37						
WB2	**Warramunga Arr**	**37.96**	**309**	*e*P	**P**	**19 46 25.4**	**-1.7**
	5.8nm,0.8s						
WRA	**Warramunga Arr**	**37.97**	**309**	P	**P**	**19 46 25.4**	**-1.8**
	4.6nm,0.8s,baz=138,slow=8.9,SNR=5.2						
H01W1	**Cape Leeuwin H**	**39.62**	**271**	T	T	20 28 16.9	
	baz=127,slow=75,SNR=46						
H01W2	**Cape Leeuwin H**	**39.63**	**271**	T	T	20 28 14.1	
	baz=127,slow=75,SNR=45						
H01W3	**Cape Leeuwin H**	**39.63**	**271**	T	T	20 28 19.3	
	baz=127,slow=75,SNR=50						
QSPA	**South Pole Qui**	**41.16**	**180**	P	**P**	**19 46 55.4**	**+1.8**
	2.4nm,1.0s,baz=31,slow=3.6,SNR=4.5						
QSPA				PcP	**PcP**	**19 48 52.9**	**+0.8**
	2.8nm,0.8s,baz=357,slow=2.1,SNR=7.0						
QSPA	**South Pole Qui**	**41.16**	**180**	*e*P	**P**	**19 46 55.1**	**+1.5**
	9.4nm,1.5s						
MORW	**Morawa**	**42.07**	**280**	*e*P	**P**	**19 47 00.2**	**-1.0**
	86nm,1.9s						
MAW	**Mawson**	**50.09**	**209**	*e*P	**P**	**19 48 04.0**	**+0.3**
	0.9nm,1.1s						
KNTN	**Kanton**	**50.14**	**31**	*e*P	**P**	**19 48 04.5**	**-0.2**
	156nm,1.3s						
SYO	**Syowa Base**	**55.67**	**201**	⇑*e*P	**P**	**19 48 43.6**	**-1.3**
SYO	**Syowa Base**	**55.67**	**201**	⇑*e*pP	pP	19 48 55.0	+0.6
H08S2	**Diego Garcia H**	**85.94**	**263**	T	T	21 25 56.5	
	baz=139,slow=76,SNR=162						
H08S1	**Diego Carcia H**	**85.95**	**263**	T	T	21 25 57.4	
	baz=139,slow=76,SNR=158						
H08S3	**Diego Garcia H**	**85.96**	**263**	T	T	21 25 56.8	
	baz=139,slow=76,SNR=202						
H08N1	**Diego Carcia H**	**87.88**	**263**	T	T	21 28 27.8	
	baz=144,slow=79						
H08N3	**Diego Garcia H**	**87.89**	**263**	T	T	21 28 30.0	
	baz=144,slow=79						
H08N2	**Diego Garcia H**	**87.90**	**263**	T	T	21 28 35.7	
	baz=144,slow=79						
CM31	**Chiang Mai Arr**	**89.01**	**300**	*e*P	**P**	**19 52 04.0**	**0.0**
	16nm,1.7s						
CMAR	**Chiang Mai Arr**	**89.01**	**300**	P	**P**	**19 52 04.7**	**+0.6**
	0.7nm,0.9s,baz=172,slow=1.7,SNR=7.5						
KS15	**Wonju Array Si**	**92.12**	**331**	*e*P	**P**	**19 52 21.9**	**+3.9**
	11nm,0.8s						
LZH	**Lanzhou**	**100.57**	**314**	*e*P	**Pdif**	**19 52 58.3**	**+1.6**
LZH				pP	sPdif	19 53 11.8	+1.1
LZH				sP	sP	19 53 17.1	+6.3
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
HHC	**Hu-ho-hao-te**	**101.08**	**322**	*e*P	**Pdif**	**19 53 00.3**	**+1.6**
PETK	**Petropavlovsk-**	**101.88**	**356**	P	**Pdif**	**19 53 00.8**	**-1.0**
	comp=Z,3.4nm,1.0s,baz=134,slow=8.3,SNR=4.2						
PEA1	**Petropavlovsk-**	**101.88**	**356**	*e*Pdif	**Pdif**	**19 53 00.8**	**-1.0**
MK32	**Makanchi Array**	**119.27**	**309**	*e*PKPdf	**PKPdf**	**19 57 56.6**	**-0.9**
MKAR	**Makanchi Array**	**119.27**	**309**	PKP	**PKPdf**	**19 57 56.6**	**-0.9**
	comp=Z,0.9nm,0.9s,baz=219,slow=3.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	**141.72**	**207**	PKhKP	PKPpre	19 58 33.7	
	comp=Z,0.5nm,0.6s,baz=162,slow=2.7,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**141.72**	**207**	*e*PKPpre	PKPpre	19 58 33.7	
BR101	**Keskin Array S**	**144.55**	**274**	*e*PKPdf	**PKPab**	**19 58 43.6**	**-0.1**
BR131	**Keskin Array S**	**144.55**	**274**	*e*PKPdf	**PKPab**	**19 58 43.6**	**-0.1**
BRTR	**Keskin Array B**	**144.55**	**274**	PKP	**PKPab**	**19 58 43.6**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=143,slow=4.6,SNR=19						
ARA0	**ARCESS Array S**	**151.67**	**331**	*e*PKPbc	**PKPbc**	**19 59 02.0**	**0.0**
ARCES	**ARCESS Array B**	**151.67**	**331**	PKPbc	**PKPbc**	**19 59 02.0**	**0.0**
	comp=Z,4.1nm,0.8s,baz=76,slow=3.8,SNR=8.6						
AKASG	**Malin Array Be**	**151.74**	**291**	PKPbc	**PKPbc**	**19 59 02.4**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=78,slow=2.3,SNR=14						
AKBB	**Malin Array Si**	**151.74**	**291**	*e*PKPbc	**PKPbc**	**19 59 01.9**	**-0.8**
VRI	**Vrincioaia**	**151.85**	**280**	⇓*i*P	**PKPbc**	**19 59 02.1**	**-1.1**
MLR	**Muntele Rosu**	**152.22**	**279**	⇑*i*P	**PKPbc**	**19 59 03.8**	**-0.4**
FIA0	**FINESS Array S**	**153.93**	**314**	*e*PKPbc	**PKPbc**	**19 59 07.2**	**0.0**
FINES	**FINESS Array B**	**153.93**	**314**	PKPbc	**PKPbc**	**19 59 07.2**	**0.0**
	comp=Z,4.1nm,1.0s,baz=59,slow=4.0,SNR=4.4						

IDC 19 20:01:05.2±2.0**, 1.°25S**×**126.°87E, h0^{km}, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.4**/22**, mbtmp3.5**/3**, ML3.6**/1**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.8**/20**, Error ellipse: s-maj=178.2km s-min=24.9km az=66.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.96**	**159**	P	P	20 05 39.0	-0.2
	0.2nm,0.3s,baz=337,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**23.30**	**164**	P	P	20 06 15.2	+0.2
	0.7nm,0.7s,baz=346,slow=11,SNR=9.8						
NWAO	**Narrogin (SRO)**	**32.78**	**195**	LR	LR	20 24 02.5	
	comp=Z,85nm,18.6s,baz=281,slow=42						
MKAR	**Makanchi Array**	**61.74**	**327**	P	P	20 11 25.5	-0.1
	0.3nm,0.3s,baz=117,slow=7.7,SNR=9.5						

SNET 19 20:39:40.6±0.7**, 12.°64N**×**87.°83W, h71^{km}**±9^{km}**, ML3.9, 3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.63**	**360**	*e*P	Pn	20 39 55.2	+0.2
CNCH				*e*S	Sn	20 40 06.8	+1.3
CNCH				IAML		20 40 10.3	
	comp=Z,6μm,0.2s						
LCND	**La Caada**	**0.66**	**355**	⇓*e*P	Pn	20 39 55.7	+0.5
LCND				*e*S	Sn	20 40 06.9	+0.9
LCND				IAML		20 40 09.8	
	comp=Z,3μm,0.4s						
VSM	**San Miguel**	**0.89**	**331**	*e*P	Pn	20 39 58.7	+0.6
LCY	**Lacayo**	**0.90**	**330**	⇓*i*P	Pn	20 39 58.4	+0.4
PACA	**Pacayal**	**0.95**	**330**	*e*P	Pn	20 39 59.1	+0.4
TECA	**Tecapa**	**1.07**	**322**	*e*P	Pn	20 40 00.8	+0.6
ESTN	**Estel**	**1.50**	**72**	⇓*i*P	Pn	20 40 05.7	+0.1
ESTN				*e*S	Sn	20 40 25.3	+0.7

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*IDC **19** 21:05:46.5±2.5, 26.°51N×57.°48E, h0^{km}, mb3.6/9, mb1 3.7/9, mb1mx3.4/45, mbtmp3.6/9, Error ellipse: s-maj=55.4km s-min=23.7km az=155.0*

*DSN **19** 21:05:46.1±0.3, 26.°41N×58.°20E, h38^{km}, ML3.8/6, Error ellipse: s-maj=6.6km s-min=3.4km az=32.0*

*ISCJB **19** 21:05:46.4±0.4, 26.°63N±0.°02×57.°73E±0.°04, h10^{km}, mb3.6/14, Error ellipse: s-maj=5.8km s-min=3.5km az=177.4*

*TEH **19** 21:05:46.3, 26.°71N×57.°79E, h10^{km}, ML3.6*

*THR **19** 21:05:47.5, 26.°74N×57.°78E, h18^{km}, ML3.4*

*OMAN **19** 21:05:49.2±2.8, 26.°52N×57.°86E, h12^{km}, Error ellipse: s-maj=21.3km s-min=11.9km az=22.0*

ISC 19 21:05:46.6±0.6**, 26.°53N**±0.°03×**57.°79E**±0.°03**, h10^{km}, n56, σ1^{s}61**/62**, mb3.7**/14**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**0.89**	**181**	*e*Pg	**Pn**	**21 06 07.4**	**+2.3**
NIAN	**Nian**	**1.33**	**321**	*e*Pg	**Pn**	**21 06 10.8**	**-0.6**
NIAN				IAMB	IAmb	21 06 40.7	
	comp=Z,0.0nm,0.9s						
KHNJ	**Kahnooj**	**1.42**	**357**	*e*Pg	**Pn**	**21 06 09.6**	**-2.9**
SHME	**Shamm**	**1.55**	**253**	*e*P	**Pg**	**21 06 16.0**	**-0.4**
	SNR=47						
SHME				S	**Sg**	**21 06 39.0**	**+2.4**
BNDS	**Bandar-Abbas**	**1.69**	**301**	AML	AML	21 06 43.1	
	comp=Z,456nm,0.6s						
GENO	**Geno**	**1.69**	**301**	*e*Pn	**Pb**	**21 06 16.9**	**-0.9**
GENO				IAMB	IAmb	21 06 18.8	
	comp=Z,0.0nm,0.4s						
GENO				*e*Sg	**Sb**	**21 06 39.8**	**+0.6**
MDH	**Madha**	**1.82**	**228**	*e*P	**Pn**	**21 06 17.3**	**-0.7**
	SNR=24						
MDH	**Madha**	**1.82**	**228**	P	**Pn**	**21 06 18.0**	**+0.1**
	SNR=23						
MDH				S	**Sb**	**21 06 42.3**	**-0.5**
MSFE	**Esma-Masafi**	**1.87**	**232**	*e*P	**Pn**	**21 06 18.3**	**-0.5**
	SNR=8.5						
UOSS	**Minazif**	**2.13**	**223**	*e*P	**Pn**	**21 06 22.0**	**-0.3**
	SNR=9.2						
UOSS	**Minazif**	**2.13**	**223**	P	**Pn**	**21 06 21.7**	**-0.5**
UMQ	**Umm Al-Quwin**	**2.16**	**243**	P	**Pg**	**21 06 27.4**	**-0.7**
HATD	**Hatta, Dubai**	**2.26**	**222**	P	**Pn**	**21 06 24.1**	**0.0**
HATD	**Hatta, Dubai**	**2.26**	**222**	P	**Pn**	**21 06 25.1**	**+1.0**
NAZ	**Nazwa, Dubai**	**2.46**	**232**	*e*Pg	**Pb**	**21 06 30.8**	**-0.1**
	SNR=11						
NAZ	**Nazwa, Dubai**	**2.46**	**232**	P	**Pb**	**21 06 30.8**	**-0.1**
CHBR	**Chabahar**	**2.59**	**110**	*e*Pn	**Pb**	**21 06 31.8**	**-1.4**
CHBR	**Chabahar**	**2.59**	**110**	P	**Pb**	**21 06 31.8**	**-1.4**
FAQ	**Al Faqa, Dubai**	**2.66**	**229**	P	**Pb**	**21 06 34.0**	**-0.4**
ASUD	**Al Ashush, Dub**	**2.92**	**230**	*e*Pg	**Pb**	**21 06 36.4**	**-2.4**
	SNR=21						
ASUD	**Al Ashush, Dub**	**2.92**	**230**	P	**Pb**	**21 06 37.0**	**-1.8**
	SNR=21						
HOQ	**Hoqain**	**2.96**	**189**	P	**Pn**	**21 06 34.3**	**+0.5**
HOQ				S	**Sn**	**21 07 10.5**	**+1.1**
BIDO	**Bidbid**	**3.01**	**174**	P	**Pn**	**21 06 35.2**	**+0.8**
BIDO				S	**Sb**	**21 07 13.5**	**-3.6**
ALNE	**Al Ain**	**3.08**	**217**	*e*Pg	**Pn**	**21 06 37.6**	**+2.3**
	SNR=9.5						
NGRK	**Negar Kerman**	**3.24**	**343**	*e*Pn	**Pn**	**21 06 38.0**	**+0.1**
NGRK				IAMB	IAmb	21 07 32.2	
	comp=Z,0.0nm,0.7s						
CHMN	**Cheshme madani**	**3.33**	**356**	*e*Pn	**Pn**	**21 06 41.4**	**+2.3**
CHMN				IAMB	IAmb	21 07 42.1	
	comp=Z,0.0nm,0.9s						
WSAR	**Wadi Sarin**	**3.36**	**167**	P	**Pn**	**21 06 40.8**	**+1.6**
ARQ	**Araqi**	**3.38**	**200**	P	**Pb**	**21 06 43.1**	**-3.6**
ARQ				S	**Sb**	**21 07 25.6**	**-2.2**
KRBR	**Kerman**	**3.56**	**345**	AML	AML	21 07 44.0	
	comp=Z,78nm,0.5s						
TVBK	**TV Kerman**	**3.56**	**345**	*e*Pn	**Pn**	**21 06 43.6**	**+1.3**
KHGB	**Koh Gabri**	**4.00**	**344**	*e*Pn	**Pn**	**21 06 49.5**	**+1.2**
KHGB				IAMB	IAmb	21 08 00.2	
	comp=Z,0.0nm,0.7s						
ZHSF	**Zahedan**	**4.05**	**40**	*e*Pn	**Pn**	**21 06 48.9**	**0.0**
ZHSF	**Zahedan**	**4.05**	**40**	Pn	**Pn**	**21 06 48.9**	**0.0**
ZHSF				Sg	**Sb**	**21 07 48.5**	**+1.3**
ISRV	**Sarvestan**	**5.02**	**306**	*e*Pn	**Pn**	**21 07 01.7**	**-0.6**
BSRN	**Basiran**	**5.54**	**12**	*e*Pn	**Pn**	**21 07 08.6**	**-0.7**
BSRN	**Basiran**	**5.54**	**12**	Pn	**Pn**	**21 07 08.6**	**-0.7**
BSRN				S	**Sn**	**21 08 08.0**	**-5.2**
YZKH	**Yazd**	**6.47**	**335**	*e*Pn	**Pn**	**21 07 21.9**	**-0.2**
YZKH	**Yazd**	**6.47**	**335**	Pn	**Pn**	**21 07 21.9**	**-0.2**
IRAM	**Ramesheh**	**7.07**	**319**	*e*Pn	**Pn**	**21 07 28.9**	**-1.5**
TABS	**Tabas**	**7.12**	**355**	*e*Pn	**Pn**	**21 07 30.5**	**-0.5**
TABS	**Tabas**	**7.12**	**355**	Pn	**Pn**	**21 07 30.5**	**-0.5**
ZNGN	**Zangian**	**8.22**	**314**	*e*Pn	**Pn**	**21 07 46.0**	**-0.3**
AKTO	**Aktyubinsk**	**23.87**	**0**	P	**P**	**21 11 00.8**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=193,slow=9.0,SNR=3.6						
BRTR	**Keskin Array B**	**24.04**	**309**	P	**P**	**21 11 02.9**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=135,slow=10,SNR=9.8						

BVAR	Borovoye Array	28.09	16	P	P	21 11 40.2	+1.9
	comp=Z,0.6nm,0.7s,baz=197,slow=9.0,SNR=3.8						
KURBB	Kurchatov Arra	28.82	28	P	P	21 11 47.5	+2.7
	comp=Z,0.1nm,0.3s,baz=227,slow=8.6,SNR=3.0						
AKASG	Malin Array Be	32.52	326	P	P	21 12 17.7	+0.2
	comp=Z,0.5nm,0.5s,baz=133,slow=8.4,SNR=3.8						
ZALV	Zalesovo Beam	33.90	29	P	P	21 12 33.4	+3.9
	comp=Z,0.4nm,0.4s,baz=223,slow=9.7,SNR=2.5						
MOA	Molln	40.01	314	*i* P	P	21 13 21.4	-0.3
	comp=Z,0.8nm,0.5s						
GERES	GERESS Array B	40.66	315	P	P	21 13 26.4	-0.7
	comp=Z,0.5nm,0.7s,baz=124,slow=7.0,SNR=5.5						
WTTA	Wattenberg	41.59	312	*i* P	P	21 13 33.9	-0.9
	comp=Z,1.7nm,0.5s						
SQTA	Sankt Quirin	41.86	312	*i* P	P	21 13 36.2	-0.8
	comp=Z,1.9nm,0.4s						
FETA	Feichten	42.14	312	*i* P	P	21 13 38.5	-0.8
	comp=Z,1.0nm,0.4s						
DAVA	Damuels	42.76	312	*i* P	P	21 13 43.3	-1.1
	comp=Z,4.4nm,0.5s						
TORD	Torodi Ar. Bea	54.04	267	P	P	21 15 10.8	-0.8
	comp=Z,0.6nm,0.7s,baz=65,slow=7.5,SNR=7.9						
ILAR	Eielson Array	86.99	10	P	P	21 18 33.5	+1.6
	comp=Z,0.2nm,0.6s,baz=331,slow=5.4,SNR=2.6						

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*IDC **19** 21:11:36.0±3.9, 37˚.62N×70˚.04E, h0km, mb3.5/4, mb1 3.7/11, mb1mx3.4/52, mbtmp3.6/11, ML3.3/7, Error ellipse: s-maj=60.4km s-min=16.8km az=161.0*

*NNC **19** 21:11:39.9±2.4, 37˚.97N×69˚.64E, h10km±9km, mb4.0, mpv3.6, Error ellipse: s-maj=17.6km s-min=15.4km az=55.0*

*ISCJB **19** 21:11:40.7±1.3, 38˚.3N±0˚.1×69˚.52E±0˚.07, h12km, mb3.8/1, Error ellipse: s-maj=15.4km s-min=8.4km az=174.8*

ISC 19 21:11:41.8±1.5, 38˚.2N±0˚.1×69˚.40E±0˚.07, h12km, n27, σ2s.06/31, 5C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.01	7	Pg	Pg	21 12 56.1	-2.5
	2.8nm,0.4s						
IUG				Lg	Lg	21 13 56.1	
	187nm,0.5s						
BRLS	Borolday	4.87	4	Pg	Pb	21 13 07.3	+0.3
	0.8nm,0.3s						
BRLS				Lg	Lg	21 14 15.4	
	20nm,0.5s						
KK31	Karatay Array	5.01	9	Pn	Pn	21 12 58.5	+1.8
	1.0nm,0.5s,baz=193,slow=14,SNR=11						
KK31				⇑Pg	Pg	21 13 15.1	-2.5
	2.4nm,0.4s,baz=158,slow=15,SNR=5.0						
KK31				⇑Sn	Sn	21 13 57.6	+3.1
	6.3nm,0.5s,baz=190,slow=23,SNR=3.8						
KK31				⇓Lg	Lg	21 14 22.7	
	25nm,0.7s,baz=184,slow=28,SNR=8.9						
MRKS	Merke	5.43	31	Pg	Pb	21 13 18.1	+1.5
	15nm,0.3s						
MRKS				Lg	Lg	21 14 33.6	
	29nm,0.5s						
UCH	Uchtor	5.64	42	P	Pn	21 13 04.8	-1.0
	SNR=12						
AAK	Ala-Archa	5.92	39	Pn	Pn	21 13 09.5	+0.1
	4.3nm,0.3s,baz=214,slow=12,SNR=17						
AAK				Lg	Lg	21 14 46.4	
	0.8nm,0.3s,baz=347,slow=19,SNR=4.2						
AAK	Ala-Archa	5.92	39	⇓Pn	Pn	21 13 09.0	-0.4
	5.7nm,0.5s						
AAK				⇓Pg	Pb	21 13 28.3	+3.3
	11nm,0.8s						
AAK				⇑Lg	Lg	21 14 48.3	
	12nm,0.6s						
AAK	Ala-Archa	5.92	39	P	Pn	21 13 09.4	-0.1
	SNR=9.5						
KZA	Kyzart	5.95	47	P	Pn	21 13 09.5	-0.5
	SNR=6.0						
KBK	Karagaybulak	6.17	42	P	Pn	21 13 12.8	0.0
	SNR=6.2						
CHMS	Chumysh	6.32	38	P	Pn	21 13 15.0	+0.2
	SNR=12						
USP	Ospenovka	6.40	36	P	Pn	21 13 15.1	-0.9
	SNR=6.1						
TKM2	Tokmak 2	6.70	43	⇑Pn	Pn	21 13 18.8	-1.3
	3.2nm,0.5s						
TKM2				⇑Pg	Pb	21 13 42.0	+3.8
	4.9nm,0.8s						
TKM2				⇓Lg	Lg	21 15 13.9	
	7.1nm,0.7s						
TKM2	Tokmak 2	6.70	43	P	Pn	21 13 19.4	-0.7
	SNR=9.2						
KST	Kastek	6.98	44	Pg	Pb	21 13 45.1	+2.2
	2.6nm,0.5s						
GEYT	Alibeck	8.91	272	Pn	Pn	21 13 51.4	+1.1
	0.3nm,0.3s,baz=111,slow=7.9,SNR=5.5						
GEYT				Sn	Sn	21 15 30.0	-0.5
	0.2nm,0.3s,baz=83,slow=25,SNR=2.5						
MKAR	Makanchi Array	12.83	44	Pn	Pn	21 14 41.0	-2.9
	0.1nm,0.3s,baz=226,slow=10.0,SNR=9.7						
AB31	Akbulak array	13.02	331	Pn	Pn	21 14 45.5	-0.9
	0.2nm,0.3s,baz=155,slow=12,SNR=17						
AB31				⇓Sn	Sn	21 17 13.8	+2.7
	0.7nm,0.5s,baz=151,slow=23,SNR=3.5						
KURBB	Kurchatov Arra	14.05	25	Pn	Pn	21 14 56.4	-4.1
	0.0nm,0.3s,baz=215,slow=12,SNR=3.5						
KURBB				Lg	Lg	21 19 05.2	
	0.0nm,0.3s,baz=202,slow=27,SNR=4.0						
AKTO	Aktyubinsk	14.71	330	Pn	Pn	21 15 11.4	+1.9
	0.1nm,0.3s,baz=139,slow=9.9,SNR=3.9						
AKTO	Aktyubinsk	14.71	330	⇓Pn	P	21 15 13.9	-1.8
	5.1nm,0.7s						
BVAR	Borovoye Array	14.88	2	Pn	Pn	21 15 10.8	-1.1
	0.2nm,0.3s,baz=185,slow=14,SNR=4.6						
ZALV	Zalesovo Beam	19.00	29	P	P	21 15 59.8	-3.4
	0.3nm,0.3s,baz=221,slow=12,SNR=8.3						
ARU	Arti	19.65	342	P	Pn	21 16 12.2	+0.6
	0.6nm,0.6s,baz=162,slow=9.6,SNR=4.1						
KBZ	Khabaz	20.73	294	P	Pn	21 16 26.0	+1.6
	2.0nm,0.7s,baz=114,slow=12,SNR=3.5						
KVAR	Kislovodsk Arr	20.91	295	P	Pn	21 16 29.2	+2.6
	1.6nm,0.5s,baz=72,slow=20,SNR=4.0						
ARCES	ARCESS Array B	39.12	337	P	P	21 19 09.9	+1.2
	2.1nm,1.0s,baz=112,slow=9.8,SNR=3.8						

MEX 19 21:15:19.2±0.5, 16˚.00N×96˚.97W, h24km±8km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.86	105	*e*P	Pb	21 15 33.2	-2.3
HUIG				*e*S	Sb	21 15 43.0	-3.7
VHO	Vista Hermosa	1.09	12	*e*P	Pn	21 15 36.4	-2.8
VHO				*e*S	Sb	21 15 49.6	-3.9
CMIG	Matias Romero	2.28	61	*i* P	Pn	21 15 53.0	-2.4
CMIG				*e*S	Sn	21 16 19.2	-3.5

MAN 19 21:17:17.3, 7˚.96N×126˚.76E, h36km, mb4.7, ML3.6, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.12	206	*e*P	Pn	21 17 36.2	-0.3
MATI				*e*S	Sn	21 17 50.9	+0.3
BUTP	Butuan	1.51	312	*e*P	Pn	21 17 41.8	-0.1
BUTP				*e*S	Sn	21 18 01.6	+1.4
BUKP	Musuan	1.68	268	*e*P	Pn	21 17 45.0	+0.8
BUKP				*e*S	Sn	21 18 04.9	+0.3
CGP	Cagayan de Oro	2.10	284	⇓*e*P	Pn	21 17 51.0	+1.1
CGP				*e*S	Sn	21 18 15.7	+0.8
DDMP	Don Marcelino,	2.11	210	*e*P	Pn	21 17 51.7	+1.6
DDMP				*e*S	Sn	21 18 19.4	+4.3

NNC 19 21:22:05.9±1.4, 38˚.13N×69˚.29E, h7km±5km, mb3.6, mpv3.2, 4C-7D, Error ellipse: s-maj=10.9km s-min=9.8km az=172.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.05	10	⇓Pn	Pn	21 23 22.7	+0.6
	0.2nm,0.2s,baz=198,slow=17,SNR=3.6						
KK31				⇓Pg	Pb	21 23 38.4	+3.7
	0.8nm,0.4s,baz=195,slow=22,SNR=3.5						
KK31				⇓Sn	Sn	21 24 21.4	+0.6
	1.4nm,0.5s,baz=183,slow=32,SNR=3.5						
KK31				⇓Lg	Lg	21 24 46.6	
	9.7nm,0.8s,baz=192,slow=31,SNR=5.9						
AAK	Ala-Archa	6.00	40	⇓Pn	Pn	21 23 34.2	-1.1
	2.3nm,0.4s						
AAK				⇑Pg	Pb	21 23 55.2	+4.2
	4.3nm,0.8s						
AAK				⇓Lg	Lg	21 25 15.9	
	5.7nm,1.1s						
TKM2	Tokmak 2	6.78	43	⇑Pn	Pn	21 23 45.9	-0.1
	2.1nm,0.7s						
TKM2				⇓Pg	Pb	21 24 09.8	+5.6
TKM2				⇑Sn	Sn	21 25 05.6	+2.1
	1.2nm,0.6s						
TKM2				⇑Lg	Lg	21 25 41.2	
	2.7nm,0.7s						
AB31	Akbulak array	13.00	332	P	Pn	21 25 11.2	+0.2
	0.5nm,0.6s,baz=142,slow=13,SNR=8.9						

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*THR **19** 21:24:42.7, 31˚.38N×56˚.42E, h14km, ML3.6*

*TEH **19** 21:24:42.2, 31˚.34N×56˚.37E, h10km, ML3.6*

*ISCJB **19** 21:24:43.4±0.5, 31˚.36N±0˚.04×56˚.39E±0˚.05, h10km, Error ellipse: s-maj=6.1km s-min=5.7km az=31.8*

ISC 19 21:24:42.9±0.9, 31˚.35N±0˚.04×56˚.38E±0˚.04, h10km, n31, σ1s.67/33, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.73	289	*e*Pg	Pg	21 24 55.4	-1.7
IBAF				IAMB	IAmb	21 25 07.1	
	comp=Z,25µm,0.1s						
KHGB	Koh Gabri	0.97	175	*e*Pg	Pg	21 25 00.2	-1.5
TVBK	TV Kerman	1.40	166	IAMB	IAmb	21 25 33.0	
	comp=Z,0.0nm,0.3s						
TVBK				*e*Pn	Pb	21 25 08.5	-0.8
IMEH	Mehriz	1.51	272	*e*Pn	Pb	21 25 10.0	-1.2
IMEH				IAMB	IAmb	21 25 34.6	
	comp=Z,8µm,0.3s						
NGRK	Negar Kerman	1.73	170	*e*Pn	Pb	21 25 14.5	-0.5
NGRK				IAMB	IAmb	21 25 16.7	
	comp=Z,0.0nm,0.3s						
CHMN	Cheshme madani	1.79	146	*e*Pn	Pb	21 25 15.6	-0.4
CHMN				IAMB	IAmb	21 25 43.9	
	comp=Z,0.0nm,0.2s						
YZKH	Yazd	1.84	305	AML	AML	21 25 44.8	
	comp=N,481nm,0.5s						
YZKH				Pn	Pb	21 25 16.1	-0.6
TKDS	Koohdasht(Taba	2.35	15	*e*Pn	Pn	21 25 22.3	+0.6
TKDS				IAMB	IAmb	21 26 04.5	
	comp=Z,0.0nm,0.7s						
ISAD	Sadrabad	2.36	285	*e*Pn	Pb	21 25 23.3	-2.5
ISAD				IAMB	IAmb	21 25 59.4	
	comp=Z,3µm,0.4s						
TABS	Tabas	2.38	15	*e*Pn	Pn	21 25 23.1	+1.0
TABS	Tabas	2.38	15	Pn	Pn	21 25 23.1	+1.0
TABS				Sg	Sb	21 25 56.0	+0.6
BSRN	Basiran	2.42	75	*e*Pn	Pn	21 25 23.4	+0.6
BSRN	Basiran	2.42	75	Pn	Pn	21 25 23.4	+0.6
BSRN				Sg	Sb	21 25 57.5	+0.7
IKOO	Kooshah	2.48	64	*e*Pn	Pn	21 25 24.6	+1.0
ANAR	Anarak	2.90	310	*e*Pn	Pn	21 25 30.7	+1.4
ANAR				IAMB	IAmb	21 26 14.7	
	comp=Z,0.0nm,0.6s						
NASN	Na'in	3.36	296	*e*Pn	Pn	21 25 37.3	+1.5
NASN	Na'in	3.36	296	Pn	Pn	21 25 37.3	+1.5
ISRV	Sarvestan	3.43	236	*e*Pn	Pn	21 25 39.0	+2.2
IRAM	Ramesheh	3.44	279	*e*Pn	Pn	21 25 38.1	+1.3
IZEF	Zefreh	3.76	295	*e*Pn	Pn	21 25 43.1	+1.8
IKLH	Kolahrood	4.51	297	*e*Pn	Pn	21 25 54.2	+2.6
ISFB	Sefidab	4.59	312	*e*Pn	Pn	21 25 53.8	+1.3
IANJ	Anjilo	4.59	334	*e*Pn	Pn	21 25 54.6	+1.9
IPIR	Pirpir	4.84	287	*e*Pn	Pn	21 25 59.6	+3.4
SBZV	Sabzevar	5.13	11	*e*Pn	Pn	21 26 01.6	+1.5
ISHM	Shahmirzad	5.14	331	*e*Pn	Pn	21 26 02.2	+2.0
IFIR	Firoozkooh	5.24	326	*e*Pn	Pn	21 26 02.6	+1.0
IPAY	Payeh	5.54	22	IAMB	IAmb	21 26 08.7	
	comp=Z,407nm,0.4s						
IPAY				*e*Pn	Pn	21 26 07.9	+2.3
IDMV	Damavand	5.56	320	*e*Pn	Pn	21 26 08.1	+2.0
IAKL	Akhelmad	5.60	20	*e*Pn	Pn	21 26 08.5	+1.9
ISFR	Sfrayin	5.85	13	*e*Pn	Pn	21 26 11.8	+1.8

KRSC 19 21:36:13.2±1.9, 55˚.51N×165˚.86E, h22km±13km, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.31	168	*e*P	Pb	21 36 21.2	+1.0
BKI				*e*S	Sn	21 36 26.7	-1.6
KBTR	Krutoberegovo	1.85	293	*e*P	Pn	21 36 44.8	+1.2
KBTR				*e*S	Sn	21 37 05.9	-0.5
TUMD	Tumrok D	3.13	267	*e*P	Pn	21 37 04.4	+3.1
TUMD				*e*S	Sb	21 37 42.5	-3.5
KZV	Kizimen	3.21	265	*e*P	Pb	21 37 06.6	-3.0
TUMR	Tumrok	3.27	268	*e*P	Pb	21 37 08.2	-2.4
SPN	Mys Shipunski	4.19	237	*e*P	Pn	21 37 18.3	+2.6
SPN				*e*S	Sn	21 38 06.1	+2.2
SDLR	Sedlovina	4.65	244	*e*P	Pn	21 37 26.5	+4.3
SDLR				*e*S	Sn	21 38 20.3	+4.8
SMAR	Somma	4.70	244	*e*P	Pn	21 37 27.4	+4.4
SMAR				*e*S	Sn	21 38 21.5	+4.6
KRER	Koryakskii	4.71	245	*e*P	Pn	21 37 28.1	+5.1
KRER				*e*S	Sn	21 38 23.6	+6.6
UGLR	Uglovaya	4.72	244	*e*P	Pn	21 37 27.8	+4.7
UGLR				*e*S	Sn	21 38 22.5	+5.4
KRX	Arik	4.73	246	*e*P	Pn	21 37 27.9	+4.6
KRX				*e*S	Sn	21 38 22.3	+4.8
AVH	Avacha	4.73	245	*e*P	Pn	21 37 28.2	+4.9
AVH				*e*S	Sn	21 38 23.5	+6.1
KOK	Koryaka	4.77	245	*e*P	Pn	21 37 28.6	+4.8
GNL	Ganaly	4.95	252	*e*P	Pn	21 37 30.8	+4.5
RUS	Russkaya	5.32	238	*e*P	Pn	21 37 34.6	+3.4

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*ISCJB **19** 21:56:04.9±0.2, 14˚.78S±0˚.03×167˚.22E±0˚.04, h57km, mb5.0/78, Error ellipse: s-maj=5.5km s-min=4.3km az=4.9*

*NEIC **19** 21:56:08.4±1.6, 14˚.79S×167˚.25E, h74km±5km, mb4.7/75, Error ellipse: s-maj=12.0km s-min=8.7km az=50.0*

*IDC **19** 21:56:09.8±2.7, 14˚.81S×167˚.21E, h85km±23km, mb3.9/16, mb1 4.1/17, mb1mx3.9/33, mbtmp4.3/17, MS2.8/2, Ms1 2.8/2, ms1mx2.6/33, Error ellipse: s-maj=22.2km s-min=14.3km az=91.0*

ISC 19 21:56:06.6±0.3, 14˚.78S±0˚.05×167˚.26E±0˚.06, h57km, n123, σ1s.21/130, mb5.0/78, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	6.70	174	*e*Pn	Pn	21 57 43.2	+0.8
MARNC				*e*Sn	Sn	21 58 57.1	-0.3
DZM	Mont Dzumac	7.29	186	P	Pn	21 57 53.0	+2.5
	35nm,0.3s,baz=325,slow=8.6,SNR=264						
DZM				S	Sn	21 59 08.5	-3.5
	1.0nm,0.3s,baz=101,slow=18,SNR=2.3						
DZM				LR	LR	22 00 26.4	
	comp=Z,127nm,21.5s,baz=83,slow=35						
PINNC	Pines Island,	7.79	179	*e*Pn	Pn	21 58 00.0	+2.7
HNR	Honiara	8.91	306	LR	LR	22 01 32.3	
	comp=Z,37nm,21.3s,baz=138,slow=36						
HNR	Honiara	8.91	306	*e*Pn	Pn	21 58 12.8	+0.1
LHI	Lord Howe Isla	18.27	203	*e*P	Pn	22 00 16.8	+0.8
	139nm,1.3s						
EIDS	Eidsvold	18.46	233	*e*P	Pn	22 00 18.6	+0.1
	18nm,1.4s						
RAO	Raoul Island	19.88	139	*e*P	P	22 00 34.1	+1.0
	312nm,1.0s						
AFI	Afiamalu	20.33	90	*e*P	P	22 00 40.0	+1.7
	171nm,1.4s						
PMG	Port Moresby	20.36	283	*e*P	P	22 00 39.5	+1.0
	19nm,0.8s						
CTAO	Charters Tower	20.71	252	*e*P	P	22 00 43.1	+0.7
	22nm,1.4s						
OUZ	Omahuta	21.14	165	*e*P	P	22 00 48.3	+1.6
	46nm,1.8s						
ARMA	Armidale	21.18	220	*e*P	P	22 00 47.9	+0.5
	53nm,1.7s						
NIUE	Niue	22.24	104	*e*P	P	22 00 58.9	+0.2
	1µm,1.9s						
PATS	Pohnpei	23.24	337	*e*P	P	22 01 09.5	+0.4
	71nm,1.2s						
COEN	Coen	23.34	269	*e*P	P	22 01 09.9	-0.2
	32nm,1.5s						
URZ	Urewera	24.96	161	P	P	22 01 25.8	+1.2
	1.5nm,0.3s,baz=55,slow=6.8,SNR=3.2						
URZ	Urewera	24.96	161	*e*P	P	22 01 25.8	+1.2
	6.3nm,0.9s						
BKZ	Black Stump Fm	25.61	163	*e*P	P	22 01 31.5	+0.8
	5.1nm,0.5s						
BFZ	Birch Farm	26.97	165	*e*P	P	22 01 43.0	+0.2
	13nm,1.2s						
SNZO	South Karori	27.21	168	*e*P	P	22 01 45.0	+0.1
	29nm,1.2s						
THZ	Tophouse	27.33	171	*e*P	P	22 01 46.2	+0.1
	18nm,1.2s						
LTZ	Lake Taylor	28.23	172	*e*P	P	22 01 53.9	-0.3
	22nm,1.5s						
FOZ	Fox Glacier	28.74	176	*e*P	P	22 01 58.1	-0.4
	40nm,1.3s						
OXZ	Oxford	28.74	173	*e*P	P	22 01 59.1	+0.5
	58nm,1.9s						
STKA	Stephens Creek	28.95	230	P	P	22 02 01.4	+0.8
	2.4nm,0.6s,baz=59,slow=8.7,SNR=5.0						
STKA	Stephens Creek	28.95	230	*e*P	P	22 02 01.4	+0.8
	14nm,1.9s						
RPZ	Rata Peaks	29.02	174	*e*P	P	22 02 01.9	+0.8
	23nm,1.3s						
WB2	Warramunga Arr	31.79	256	*e*P	P	22 02 25.6	-0.3
	28nm,1.7s						
WRAB	Tennant Creek	31.79	256	*e*P	P	22 02 26.0	+0.2
	15nm,0.8s						
WR1	Warramunga Arr	31.80	256	*e*P	P	22 02 24.5	-1.5
WRA	Warramunga Arr	31.80	256	P	P	22 02 24.5	-1.5
	0.4nm,0.3s,baz=78,slow=9.0,SNR=4.7						
AS31	Alice Springs	32.64	249	*e*P	P	22 02 32.8	-0.6
	3.1nm,1.3s						
AS31				*e*PcP	PcP	22 05 18.1	-0.4
AS31				*e*ScP	ScP	22 08 52.8	-5.0
ASAR	Alice Springs	32.64	249	P	P	22 02 32.8	-0.6
	1.1nm,0.5s,baz=77,slow=9.1,SNR=15						
ASAR				PcP	PcP	22 05 18.1	-0.4
	0.4nm,0.7s,baz=98,slow=2.7,SNR=4.3						
ASAR				ScP	ScP	22 08 52.8	-5.0
	0.9nm,1.0s,baz=78,slow=4.8,SNR=3.6						
SARN	Sarigan	37.79	325	*e*P	P	22 03 19.3	+1.7
	28nm,1.3s						
XMAS	Kiritimati	38.74	67	*e*P	P	22 03 26.0	+0.4
	148nm,1.1s						
JOHN	Johnston Islan	38.81	37	*e*P	P	22 03 26.1	+0.1
	197nm,1.0s						
PPTF	Pamatai, Papee	41.50	100	*e*P	P	22 03 47.4	-1.2
	763nm,2.0s						
MIDW	Midway	45.26	19	*e*P	P	22 04 18.0	-0.5
	72nm,1.1s						
PSA00	Pilbara Seismi	45.41	254	*e*P	P	22 04 19.7	-0.2
	84nm,1.7s						
NWAO	Narrogin (SRO)	48.71	239	*e*P	P	22 04 45.6	+0.1
	114nm,1.8s						
HON	Honolulu	49.50	44	*e*P	P	22 04 51.3	-0.3
	418nm,1.6s						
KIP	Kipapa	49.56	44	*e*P	P	22 04 52.2	+0.2
	109nm,1.4s						
MWH	Moku‘aweowe	49.96	48	*e*P	P	22 04 55.1	-0.6
	318nm,1.8s						
HLP	Hilina Pali	50.05	49	*e*P	P	22 04 54.0	-1.9
	145nm,0.9s						
SDHHI	Sand Hill	50.12	48	*e*P	P	22 04 56.4	-0.1
	372nm,1.9s						
KKO	Keanakako`i	50.14	48	*e*P	P	22 04 56.4	-0.3
	75nm,1.0s						
SBLHI	Steaming Bluff	50.16	48	*e*P	P	22 04 56.2	-0.6
	96nm,1.2s						
JHJ2	Mitsune	54.36	332	*e*P	P	22 05 28.2	+0.6
	722nm,1.2s						
KKM	Kota Kinabalu	54.66	289	*e*P	P	22 05 29.0	-1.3
	107nm,1.3s						
JOW	Kunigami	56.08	317	*e*P	P	22 05 37.7	-2.4
	16nm,1.2s						
MJAR	Matsushiro Arr	57.95	333	P	P	22 05 51.7	-1.5
	2.0nm,0.7s,baz=172,slow=9.1,SNR=7.4						
MAJO	Matsushiro	57.95	333	*e*P	P	22 05 51.7	-1.5
MAJO				*e*		22 05 53.2	
MJB9	Matsu-Tunnel	57.95	333	*e*P	P	22 05 53.4	+0.2
	34nm,1.8s						
YOJ	Yonaguni jima	58.19	312	*e*P	P	22 05 54.5	-0.5
	56nm,1.0s						
YULB	Yu-li	58.82	309	*e*P	P	22 05 59.0	-0.5
	37nm,1.7s						
JNU	Nakatsue	58.96	324	*e*P	P	22 06 02.9	+2.6
	6.1nm,0.7s						
NACB	Ninganchiao	59.05	310	*e*P	P	22 06 01.6	+0.6
	16nm,0.8s						
KNMB	Chin-men Tao	61.61	309	*e*P	P	22 06 17.6	-0.9
	47nm,0.8s						
VNDA	Vanda	62.81	181	P	P	22 06 25.8	0.0
	1.1nm,0.4s,baz=2.0,slow=8.3,SNR=15						
VNDA	Vanda	62.81	181	*e*P	P	22 06 25.6	-0.2
VNDA				*e*		22 06 25.8	
CASY	Casey	63.47	202	*e*P	P	22 06 29.8	-0.5
	11nm,0.5s						
KSRS	Korea Array	63.77	326	P	P	22 06 33.2	+0.5
	1.0nm,0.6s,baz=132,slow=8.4,SNR=4.2						
KS15	Wonju Array Si	63.79	326	*e*P	P	22 06 33.2	+0.4
	64nm,1.8s						
USRK	Ussuriysk Ar.	66.93	333	P	P	22 06 54.5	+1.5
	2.0nm,0.8s,baz=157,slow=7.8,SNR=4.1						
PEA0B	Petropavlovsk-	68.11	354	*e*P	P	22 07 01.3	+1.1
	14nm,1.3s						
PETK	Petropavlovsk-	68.11	354	P	P	22 07 01.0	+0.7
	3.3nm,0.6s,baz=135,slow=7.4,SNR=12						
PEA1	Petropavlovsk-	68.12	354	*e*P	P	22 07 01.0	+0.7
CMAR	Chiang Mai Arr	74.96	294	P	P	22 07 43.6	+1.4
	1.4nm,0.3s,baz=136,slow=5.3,SNR=6.5						
CHIA	Chirikof Islan	76.97	20	*e*P	P	22 07 52.8	0.0
	114nm,1.2s						
SII	Sitkinak Islan	78.02	21	*e*P	P	22 07 57.8	-0.9
	58nm,1.2s						
ANM	Nome	81.82	12	*e*P	P	22 08 18.4	-0.6
	33nm,1.2s						
MAW	Mawson	81.83	202	P	P	22 08 19.9	+0.7
	1.0nm,0.5s,baz=126,slow=5.4,SNR=5.5						
MAW	Mawson	81.83	202	*e*P	P	22 08 19.9	+0.7
	3.5nm,1.8s						
SONA0	Songino Array	82.53	324	*e*P	P	22 08 23.9	+0.6
SONM	Songino Array	82.53	324	P	P	22 08 23.9	+0.6
	1.1nm,0.5s,baz=141,slow=5.6,SNR=5.0						
GLI	Glacier Island	83.71	21	*e*P	P	22 08 29.2	+0.3
	14nm,1.2s						
FID	Port Fidalgo	83.83	21	*e*P	P	22 08 29.7	+0.1
	18nm,1.2s						
SML	Sawmill	83.97	20	*e*P	P	22 08 30.4	+0.1
	18nm,1.2s						
KCPM	Cahto Peak	84.02	46	*e*P	P	22 08 31.4	+0.2
	87nm,1.5s						
HOPS	Hopland Field	84.09	47	*e*P	P	22 08 30.4	-1.0
	88nm,1.5s						
KMRM	Mail Ridge	84.15	46	*e*P	P	22 08 31.6	-0.2
	148nm,1.9s						
JCC	Jacoby Creek,	84.18	45	*e*P	P	22 08 31.8	0.0
	141nm,1.5s						
RAGM	Ragged Mountai	84.20	22	*e*P	P	22 08 32.3	+0.8
	34nm,1.6s						
SCM	Sheep Creek Mo	84.32	20	*e*P	P	22 08 32.3	+0.2
	17nm,1.3s						
HMT	Hamilton	84.32	22	*e*P	P	22 08 32.5	+0.4
	75nm,1.9s						
SAO	San Andreas Ge	84.38	50	*e*P	P	22 08 32.6	-0.3
	62nm,1.9s						
KHMM	Horse Mountain	84.41	45	*e*P	P	22 08 33.8	+0.6
	64nm,1.6s						
KRMB	Red Mountain	84.56	45	*e*P	P	22 08 34.0	+0.1
GLB	Gilahina Butte	85.24	21	*e*P	P	22 08 37.4	+0.7
	14nm,1.6s						
RIDG	Independent Ri	86.48	19	*e*P	P	22 08 42.2	-0.7
	8.8nm,1.1s						
OMMB	Old Mammoth Mi	86.51	50	*e*P	P	22 08 44.1	+0.1
	9.3nm,1.6s						
WAKR	Walker	86.52	49	*e*P	P	22 08 43.5	-0.3
	17nm,1.9s						
ILAR	Eielson Array	86.58	18	P	P	22 08 42.0	-1.3
	2.0nm,0.8s,baz=233,slow=5.8,SNR=19						
ILB	Eielson Array	86.58	18	*e*P	P	22 08 43.1	-0.1
	1.9nm,0.6s						
NV01	Mina Array Sit	87.31	49	*e*P	P	22 08 46.9	-0.8
NVAR	Mina Array Bea	87.31	49	P	P	22 08 46.9	-0.8
	0.6nm,0.8s,baz=227,slow=6.0,SNR=3.6						
U15A	North Rim	91.18	53	*e*P	P	22 09 06.1	+0.1
	12nm,1.3s						
MK32	Makanchi Array	97.23	316	*e*P	P	22 09 33.1	-0.1
MKAR	Makanchi Array	97.23	316	P	P	22 09 33.1	-0.1
	1.5nm,0.7s,baz=91,slow=6.6,SNR=11						
ZALV	Zalesovo Beam	97.42	324	P	P	22 09 33.0	-0.8
	1.7nm,0.7s,baz=101,slow=4.5,SNR=7.7						
ARA0	ARCESS Array S	120.30	345	*e*PKPdf	PKPdf	22 14 49.6	-1.2

ARCES	ARCESS Array B	120.30	345	PKP	PKPdf	22 14 49.6	-1.2
	2.5nm,0.5s,baz=85,slow=2.1,SNR=24						
FIA0	FINESS Array S	125.77	338	ePKPdf	PKPdf	22 15 00.4	-1.0
FINES	FINESS Array B	125.77	338	PKP	PKPdf	22 15 00.4	-1.0
	3.4nm,0.8s,baz=29,slow=2.1,SNR=8.9						
NB2	NORSAR Subarra	130.67	345	PKPdf	PKPdf	22 15 10.7	-0.2
	comp=Z,0.4nm,0.5s,baz=31,slow=1.9						
NB200	NORSAR Array S	130.67	345	ePKPdf	PKPdf	22 15 10.5	-0.3
NOA	NORSAR Array B	130.67	345	PKP	PKPdf	22 15 10.5	-0.3
	comp=Z,0.7nm,0.6s,baz=32,slow=2.0,SNR=4.5						
BR101	Keskin Array S	132.53	311	ePKPdf	PKPdf	22 15 15.6	+0.4
BRTR	Keskin Array B	132.53	311	PKP	PKPdf	22 15 15.6	+0.4
	comp=Z,0.5nm,0.7s,baz=112,slow=1.9,SNR=3.6						
GERES	GERESS Array B	139.68	333	PKhKP	PKPpre	22 15 23.1	
	comp=Z,0.3nm,0.5s,baz=11,slow=2.0,SNR=3.7						
GERES				PKP	PKPdf	22 15 28.9	+0.8
	comp=Z,0.4nm,0.6s,baz=67,slow=3.5,SNR=4.8						
ABTA	Abfaltersbach	141.78	332	i PKPdf	PKPdf	22 15 32.0	+0.1
	comp=Z,1.3nm,0.5s						
MOTA	Moosalm	141.96	334	i PKPdf	PKPdf	22 15 29.1	-3.3
	comp=Z,1.1nm,0.4s						
RETA	Reutte	141.99	334	i PKPdf	PKPdf	22 15 29.8	-2.6
	comp=Z,0.4nm,0.3s						
FETA	Feichten	142.37	333	i PKPdf	PKPdf	22 15 30.0	-3.1
	comp=Z,2.7nm,0.6s						
DAVA	Damuels	142.52	335	i PKPdf	PKPdf	22 15 30.4	-3.0
	comp=Z,1.9nm,0.5s						
TIP	Timpagrande	144.48	319	ePKPdf	PKPab	22 15 35.8	+0.5
BNI	Bardonecchia	145.64	335	ePKPdf	PKPdf	22 15 38.9	0.0
KEST	Kesra	151.24	321	PKPbc	PKPbc	22 15 54.1	-0.1
	comp=Z,2.8nm,0.4s,baz=36,slow=1.8,SNR=10						
KEST	Kesra	151.24	321	ePKPbc	PKiKP	22 15 54.9	+0.3
ESDC	Sonseca Array	154.03	344	PKPab	PKPab	22 16 14.6	+0.9
	comp=Z,0.6nm,0.6s,baz=15,slow=3.4,SNR=6.4						
TORD	Torodi Ar. Bea	165.89	265	PKP	PKPdf	22 16 05.5	-0.5
	comp=Z,0.5nm,0.7s,baz=72,slow=1.3,SNR=4.3						
TORD				PKPab	PKPab	22 17 05.3	-0.8
	comp=Z,0.6nm,0.9s,baz=85,slow=1.6,SNR=2.7						
TOA1	Torodi Ar. Sit	165.89	265	ePKPdf	PKPdf	22 16 05.5	-0.5
TOA1				ePKPab	PKPab	22 17 05.3	-0.8

ISCJB ***19*** *22:15:33.7±0.4, 3°.20N±0°.05×95°.20E±0°.05, h10^{km}, Error ellipse: s-maj=9.0km s-min=5.9km az=40.1*

IDC ***19*** *22:15:34.5±2.5, 3°.21N×95°.20E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.4/50, mbtmp3.6/5, ML3.8/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/37, Error ellipse: s-maj=60.5km s-min=23.8km az=48.0*

NEIC ***19*** *22:15:38.3±1.3, 3°.21N×95°.25E, h31^{km}±5^{km}, mb4.6/36, Error ellipse: s-maj=17.1km s-min=11.2km az=219.0*

DJA ***19*** *22:15:46.3±0.5, 5°N±4°×9°7E±°, h11^{km}±4^{km}, M4.2/9, MLv4.2/9*

ISC 19 22:15:35.2±0.5**, 3°.21N**±0°.07×**95°.19E**±0°.07**, h10**^{km}**, n53, σ1^{s}.11**/51**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	1.39	125	P	Sg	22 16 24.5	+4.6
MLSI	Meulaboh, Aceh	1.61	49	S	Pn	22 16 03.9	+0.2
KCSI	Kotacane, Aceh	2.60	83	P	Pn	22 16 15.3	-2.1
KCSI				S	Sn	22 16 36.1	-13
GSI	Gunungsitoli	3.04	128	P	Pg	22 16 40.9	+7.3
PSI	Prapat	3.75	96	Pn	Pn	22 16 33.6	+0.2
	5.3nm,0.3s,baz=316,slow=13,SNR=13						
PSI				Sn	Sn	22 17 18.9	+1.2
	14nm,0.3s,baz=239,slow=19,SNR=4.4						
PSI				LR	LR	22 18 01.3	
	comp=Z,302nm,20.0s,baz=218,slow=39						
PSI	Prapat	3.75	96	ePn	Pn	22 16 33.8	+0.5
MNSI	Mandailing Nat	5.00	119	P	Pb	22 16 59.8	-3.1
PDSI	Padang	6.67	128	P	Pb	22 17 25.1	-6.4
MYKOM	Kota Tinggi	8.77	99	ePn	Pn	22 17 41.9	-0.2
CM31	Chiang Mai Arr	15.60	13	ePn	Pn	22 19 15.6	+0.2
	30nm,1.9s						
CMAR	Chiang Mai Arr	15.60	13	Pn	Pn	22 19 14.8	-0.5
	0.2nm,0.3s,baz=200,slow=11,SNR=3.8						
SIMRM	Sittwe	16.97	353	ePn	Pn	22 19 33.6	+0.7
	186nm,1.6s						
SBUM	Sibu	17.03	92	eP	P	22 19 34.8	-0.7
	12nm,1.9s						
XMIS	Christmas Isla	17.13	143	eP	P	22 19 37.4	+0.8
	201nm,1.4s						
HKPS	Hong Kong Po S	26.41	43	eP	P	22 21 12.3	0.0
	488nm,2.0s						
LSA	Lhasa	26.63	352	eP	P	22 21 14.6	-0.1
LSA				epP	P	22 21 14.9	+0.2
TGY	Tagaytay City	27.62	65	LR	LR	22 32 00.2	
	comp=Z,45nm,18.2s,baz=212,slow=36						
KNMB	Chin-men Tao	30.78	45	eP	P	22 21 52.4	+1.2
	43nm,0.8s						
TPUB	Ta-pu	31.70	49	eP	P	22 22 00.2	+0.8
	25nm,1.2s						
YULB	Yu-li	32.26	49	eP	P	22 22 03.8	-0.5
	45nm,2.0s						
NACB	Ninganchiao	32.92	48	eP	P	22 22 09.3	-0.7
	12nm,0.8s						
YHNB	Yeheng	33.05	47	eP	P	22 22 11.9	+0.6
	32nm,1.5s						
YOJ	Yonaguni jima	34.15	49	eP	P	22 22 22.5	+1.8
	95nm,1.4s						
MORW	Morawa	37.82	149	eP	P	22 22 51.2	-0.9
	37nm,1.4s						
MSEY	Mahe Island	40.44	259	eP	P	22 23 15.4	+1.0
	77nm,1.3s						
NWAO	Narrogin (SRO)	41.56	152	eP	P	22 23 23.8	+0.6
	62nm,1.4s						
GAR	Garm	42.21	331	eP	P	22 23 28.5	-0.1
	9.1nm,0.9s						
ARSB	Arslanbob	42.88	335	eP	P	22 23 35.0	+0.9
	7.8nm,1.4s						
WRA	Warramunga Arr	44.80	123	P	P	22 23 50.4	+0.7
	0.7nm,0.4s,baz=294,slow=10,SNR=7.3						
WR1	Warramunga Arr	44.80	123	eP	P	22 23 50.4	+0.7
MK31	Makanchi Array	44.84	347	eP	P	22 23 50.0	+0.3
	5.7nm,1.4s						
MK32	Makanchi Array	44.84	347	eP	P	22 23 49.6	0.0
MKAR	Makanchi Array	44.84	347	P	P	22 23 49.6	0.0
	0.4nm,0.6s,baz=166,slow=7.9,SNR=3.6						
MKAR				LR	LR	22 47 28.1	
	comp=Z,41nm,18.0s,baz=12,slow=43						
SONA0	Songino Array	45.50	11	eP	P	22 23 56.4	+1.4
SONM	Songino Array	45.50	11	P	P	22 23 56.4	+1.4
	0.4nm,0.5s,baz=187,slow=8.8,SNR=3.3						
FORT	Forrest	46.10	140	eP	P	22 24 00.0	+0.3
	133nm,1.5s						
GNI	Garni	58.46	316	eP	P	22 25 31.8	0.0
	23nm,1.4s						
PATS	Pohnpei	62.95	84	eP	P	22 26 02.0	-0.6
	174nm,1.6s						
ARMA	Armidale	63.33	126	eP	P	22 26 04.5	-0.5
	50nm,1.8s						
TAU	Tasmania Unive	65.63	140	eP	P	22 26 19.9	+0.2
	156nm,1.6s						
ONTNC	Ouen Toro	73.98	114	eP	P	22 27 10.6	-0.9
	83nm,1.3s						
PINNC	Pines Island,	74.94	114	eP	P	22 27 16.3	-0.8
	263nm,1.4s						
PSZ	Piszkesteto	77.78	318	eP	P	22 27 32.4	-0.5
	3.7nm,0.8s						
HFS	Hagfors	82.99	330	LR	LR	23 08 53.5	
	comp=Z,26nm,18.2s,baz=280,slow=38						
SNZO	South Karori	84.24	132	eP	P	22 28 06.3	-1.0
	22nm,1.0s						
NBO00	NORSAR Array S	84.50	331	eP	P	22 28 08.6	+0.4
	139nm,1.9s						
SPA0	Spitsbergen Ar	84.59	348	eP	P	22 28 08.9	+0.4
	148nm,1.9s						
KEST	Kesra	84.77	305	eP	P	22 28 10.5	+0.3
	16nm,1.8s						
BFZ	Birch Farm	85.30	131	eP	P	22 28 12.6	-0.1
	32nm,1.5s						
SSB	Saint Sauveur	88.20	315	eP	P	22 28 26.2	-0.6
	15nm,1.9s						
NIKH	Nikolski High	91.06	37	eP	P	22 28 40.0	0.0
	78nm,1.1s						
AFI	Afiamalu	93.70	104	eP	P	22 28 52.2	-0.9
	88nm,1.0s						
JOHN	Johnston Islan	94.14	73	eP	P	22 28 53.8	-1.1
	153nm,0.9s						

DJA 19 22:19:36.6±1.3**, 2°S**±2°×**12°8E**±°**, h21**^{km}±12^{km}**, M3.9**/10**, mb4.3**/2**, mB5.0**/1**, MLv3.6**/10**, Mw(mB)4.3**/1**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.36	153	P	Pb	22 20 01.0	-0.4
MSAI				S	Sb	22 20 18.7	+0.3
AAI	Ambon	1.56	185	P	Pb	22 20 04.0	-0.8
AAI				S	Sb	22 20 23.6	-0.5
NLAI	Namlea	1.65	228	P	Pn	22 20 05.2	+0.9
NLAI				S	Sb	22 20 28.5	+1.8
LBMI	Labuha	1.69	331	P	Pn	22 20 05.7	+0.9
LBMI				S	Sb	22 20 28.2	+0.5
SANI	Sanana	2.33	272	P	Pn	22 20 11.0	-2.7
SANI				S	Sn	22 20 36.2	-5.6
TNTI	Ternate	3.03	342	P	Pn	22 20 23.6	+0.3
FAKI	Fak Fak	4.00	102	P	Pn	22 20 35.6	-1.2
LUWI	Luwuk	5.65	281	P	Pn	22 20 58.3	-1.1

ISCJB ***19*** *22:26:10.3±0.7, 12°.9N±0°.1×143°.3E±0°.2, h10^{km}, Error ellipse: s-maj=23.2km s-min=12.7km az=28.8*

IDC ***19*** *22:26:10.4±2.0, 12°.93N×142°.98E, h0^{km}, mb3.9/3, mb1 4.3/3, mb1mx3.5/40, mbtmp3.9/3, Error ellipse: s-maj=181.3km s-min=29.8km az=111.0*

NEIC ***19*** *22:26:12.6±1.3, 13°.02N×143°.28E, h10^{km}±2^{km}, mb4.9/16, Error ellipse: s-maj=24.2km s-min=14.4km az=148.0*

ISC 19 22:26:12.4±1.1**, 12°.9N**±0°.1×**143°.3E**±0°.2**, h10**^{km}**, n28, σ1^{s}.07**/22**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.64	66	ePn	Pn	22 26 39.5	-1.8
H11S3	WAKE ISLAND Hy	23.15	73	T	T	22 55 02.1	
	baz=258,slow=75,SNR=8.5						
H11S1	WAKE ISLAND Hy	23.16	73	T	T	22 54 56.6	
	baz=258,slow=75,SNR=7.7						
H11S2	WAKE ISLAND Hy	23.16	73	T	T	22 54 56.0	
	baz=258,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	23.58	70	T	T	22 55 30.9	
	baz=255,slow=75,SNR=15						
H11N2	WAKE ISLAND Hy	23.59	70	T	T	22 55 31.6	
	baz=255,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	23.60	70	T	T	22 55 31.8	
	baz=255,slow=75,SNR=14						
WR1	Warramunga Arr	33.85	195	eP	P	22 32 53.9	-1.4
WRA	Warramunga Arr	33.85	195	P	P	22 32 53.9	-1.4
	1.2nm,0.5s,baz=17,slow=9.1,SNR=7.2						
JOHN	Johnston Islan	45.65	79	eP	P	22 34 34.2	+0.6
	139nm,1.0s						
NIKH	Nikolski High	55.04	33	eP	P	22 35 44.0	-0.2
	83nm,1.1s						
OUZ	Omahuta	55.83	150	eP	P	22 35 50.9	+0.8
	66nm,2.0s						
NIUE	Niue	55.98	124	eP	P	22 35 52.4	+0.9
	1μm,1.8s						
OPA	Opana	56.41	72	eP	P	22 35 55.0	+0.4
	94nm,1.0s						
HON	Honolulu	56.43	73	eP	P	22 35 56.0	+1.3
	135nm,1.0s						
KHLU	Kahalu`u	58.48	75	eP	P	22 36 10.7	+1.4
	126nm,1.3s						
SBLHI	Steaming Bluff	59.08	75	eP	P	22 36 14.0	+0.5
	67nm,1.1s						
KKO	Keanakako`i	59.08	75	eP	P	22 36 13.0	-0.6
	199nm,1.4s						
BYL	Byron's Ledge	59.09	75	eP	P	22 36 13.2	-0.4
	136nm,1.2s						
BRLK	Bradley Lake	66.78	30	eP	P	22 37 03.6	-0.5
	44nm,1.4s						
MDM	Murphy Dome	69.28	25	eP	P	22 37 20.9	+1.3
	22nm,0.7s						
ILAR	Eielson Array	69.80	25	P	P	22 37 23.3	+0.5
	0.2nm,0.6s,baz=246,slow=7.8,SNR=2.8						
DIB	Dawson Inlet,	76.29	38	eP	P	22 38 01.1	-0.3
	20nm,1.7s						
MOBC	Moresby Island	76.60	38	eP	P	22 38 03.6	+0.3
	28nm,1.4s						
D05A	Enumclaw	83.78	43	eP	P	22 38 41.6	-0.4
	10nm,0.9s						
PNTR	Pine Nut	87.35	51	eP	P	22 38 58.5	-1.9
	6.2nm,1.0s						
NV01	Mina Array Sit	88.50	51	eP	P	22 39 06.8	+1.0
NVAR	Mina Array Bea	88.50	51	P	P	22 39 06.8	+1.0
	1.1nm,0.7s,baz=270,slow=5.2,SNR=7.4						

ISCJB ***19*** *22:26:59.8±0.6, 17°.9S±0°.1×178°.5W±0°.1, h650^{km}, mb3.7/11, Error ellipse: s-maj=20.6km s-min=11.7km az=137.8*

IDC ***19*** *22:27:00.7±3.5, 17°.74S×178°.46W, h641^{km}±45^{km}, mb3.3/11, mb1 3.5/12, mb1mx3.3/32, mbtmp4.3/12, Error ellipse: s-maj=23.0km s-min=19.3km az=149.0*

ISC 19 22:27:01.1±0.7**, 17°.8S**±0°.1×**178°.5W**±0°.1**, h650**^{km}**, n18, σ1^{s}.02**/19**, mb3.8**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.80	251	P	P	22 30 05.3	-0.4
	0.3nm,0.3s,baz=96,slow=19,SNR=3.4						
URZ	Urewera	20.76	190	P	P	22 30 56.9	-2.4
	2.5nm,0.3s,baz=354,slow=14,SNR=3.3						
RPZ	Rata Peaks	27.32	197	P	P	22 31 56.3	-0.7
	2.6nm,0.4s,baz=341,slow=5.8,SNR=4.5						
STKA	Stephens Creek	38.63	241	P	P	22 33 33.2	+1.5
	0.9nm,0.3s,baz=92,slow=11,SNR=8.3						
WRA	Warramunga Arr	44.58	259	P	P	22 34 18.6	+0.2
	1.6nm,0.3s,baz=98,slow=8.5,SNR=18						
ASAR	Alice Springs	44.76	254	P	P	22 34 20.4	+0.6
	4.3nm,0.4s,baz=88,slow=7.7,SNR=60						
ASAR				S	S	22 40 11.8	-0.1
	0.4nm,0.7s,baz=86,slow=15,SNR=5.5						
VNDA	Vanda	60.56	185	P	P	22 36 11.4	+1.0
	0.4nm,0.4s,baz=359,slow=6.7,SNR=3.7						
PETK	Petropavlovsk-	73.55	345	P	P	22 37 29.9	+0.2
	1.2nm,0.7s,baz=99,slow=5.4,SNR=4.6						
YBH	Yreka Blue Hor	78.48	39	P	P	22 37 58.0	+0.9
	1.9nm,0.5s,baz=226,slow=9.8,SNR=6.0						
NVAR	Mina Array Bea	79.39	44	P	P	22 38 02.6	+0.4
	1.6nm,0.7s,baz=224,slow=8.8,SNR=11						
ILAR	Eielson Array	85.78	13	P	P	22 38 31.8	-1.4
	0.7nm,0.4s,baz=219,slow=5.1,SNR=11						
TXAR	Lajitas Array	85.99	58	P	P	22 38 36.4	+1.3
	2.4nm,0.8s,baz=224,slow=5.2,SNR=8.6						
PDAR	Pinedale Array	87.31	43	P	P	22 38 41.1	-0.1
	1.2nm,0.6s,baz=228,slow=3.1,SNR=10						
MKAR	Makanchi Array	109.00	314	PKiKP	PKiKP	22 44 18.0	-0.6
	0.3nm,0.5s,baz=117,slow=1.8,SNR=2.9						
BVAR	Borovoye Array	116.71	321	PKP	PKPdf	22 44 32.5	-0.6
	0.3nm,0.4s,baz=91,slow=2.9,SNR=3.1						
ARCES	ARCESS Array B	126.18	350	PKP	PKPdf	22 44 50.2	-0.6
	2.8nm,1.0s,baz=38,slow=2.0,SNR=3.6						
BRTR	Keskin Array B	144.65	315	PKP	PKPab	22 45 26.6	-0.8
	0.7nm,0.6s,baz=98,slow=5.1,SNR=4.6						
GERES	GERESS Array B	147.48	345	PKPbc	PKPbc	22 45 34.2	+0.2
	1.0nm,0.4s,baz=20,slow=3.3,SNR=11						

NEIC ***19*** *22:33:23.7±0.0, 15°.42N×92°.12W, h214^{km}, mb4.1/17, MD3.9(MEX), After MEX.*

ISCJB ***19*** *22:33:24.6±0.3, 15°.83N±0°.04×91°.91W±0°.04, h173^{km}, mb4.8/3, Error ellipse: s-maj=6.4km s-min=5.0km az=36.3*

MEX ***19*** *22:33:24.2±0.8, 15°.48N×92°.06W, h206^{km}±7^{km}, MD3.8*

GCG ***19*** *22:33:29.4±0.5, 15°.70N×91°.75W, h131^{km}±57^{km}, MD4.2*

ISC 19 22:33:24.6±0.7**, 15°.67N**±0°.06×**91°.96W**±0°.05**, h173**^{km}**, n44, σ1^{s}.69**/52**, mb4.3**/3**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	0.63	344	ePn	Pn	22 33 52.9	+3.5
CCIG				ePn	Pn	22 33 53.0	+3.5
CCIG				eS	Sn	22 34 09.4	+0.8
CCIG	Comitan	0.63	344	i P	Pn	22 33 53.0	+3.5
CCIG				eS	Sn	22 34 13.7	+5.0
THIG		0.81	201	ePn	Pn	22 33 51.1	+0.7
THIG				eS	Sn	22 34 12.3	+2.2
THIG		0.81	201	i P	Pn	22 33 51.1	+0.7
THIG				eS	Sn	22 34 12.3	+2.2
STG3	Santiaguito 3,	1.03	158	eP	Pn	22 33 53.2	+1.1
PCIG		1.21	272	ePn	Pn	22 33 54.5	+1.2
PCIG				eS	Sn	22 34 17.4	+2.0
PCIG		1.21	272	eP	Pn	22 33 54.5	+1.2
PCIG				eS	Sn	22 34 17.4	+2.0
ERG	Entre ros, C	1.28	163	eP	Pn	22 33 55.3	+1.3
TGIG		1.57	315	ePn	Pn	22 33 58.6	+1.9
TGIG		1.57	315	eP	Pn	22 33 58.6	+1.9
FUG	Fuego 3	1.63	138	eP	Pn	22 33 58.5	+1.0
PCG	Pacaya	1.82	134	eP	Pn	22 34 01.0	+1.4
NBG	Las Nubes	1.89	124	eP	Pn	22 34 02.0	+1.6
MRL	Marmol	2.27	105	eP	Pn	22 34 05.5	+1.0
CMIG	Matias Romero	3.14	297	ePn	Pn	22 34 15.9	+1.2
CMIG				eS	Sn	22 34 53.7	0.0
CMIG	Matias Romero	3.14	297	i P	Pn	22 34 15.2	+0.6
CMIG				eS	Sn	22 34 53.7	0.0
TGUH	Tegucigalpa,Un	4.81	109	ePn	Pn	22 34 36.6	+0.7
TEIG	Tepich	5.73	37	ePn	Pn	22 34 48.7	+0.7
LVIG	Laguna Verde	5.86	314	ePn	Pn	22 34 50.8	+1.1
FSCY	Frank Sound, G	10.90	69	ePn	Pn	22 35 55.6	-0.4
CBCY	The Bluff, Cay	12.31	69	ePn	Pn	22 36 14.3	0.0
BCIP	Isla Barro Col	13.49	117	eP	Pn	22 36 30.1	+0.9
061Z	Ochoppi	14.47	44	ePn	Pn	22 36 39.7	-1.8
060A	Indiantown	15.63	42	eP	P	22 36 56.1	-0.1
	434nm,1.5s						
PAYG	Puerto Ayora	16.32	174	eP	P	22 37 04.2	+0.2
	75nm,1.4s						
WHTX	Lake Whitney,	17.00	344	eP	P	22 37 11.3	0.0
	7.2nm,0.8s						
ABTX	Abilene, Hawle	18.26	339	eP	P	22 37 24.7	-0.4
X37A	Clayton	19.09	351	eP	P	22 37 33.8	-0.2
	22nm,1.7s						
X48A	Hartselle	19.22	12	eP	P	22 37 36.0	+0.6
	3.0nm,0.6s						
Y52A	Lilburn	19.47	20	eP	P	22 37 37.2	-0.9
	38nm,1.9s						
WHAR	Wooly Hollow	19.54	359	eP	P	22 37 38.5	-0.4
	23nm,1.9s						
PLAL	Pickwick Lake	19.55	10	eP	P	22 37 38.5	-0.4
	16nm,1.6s						
WMOK	Wichita Mounta	19.95	343	eP	P	22 37 43.2	-0.2
	3.4nm,1.3s						
MNTX	Cornudas Mount	20.11	325	eP	P	22 37 45.7	+0.6
	1.7nm,0.7s						
SWET	Sewanee	20.20	14	eP	P	22 37 46.9	+0.8
	5.5nm,0.7s						
WVT	Waverly	20.71	9	eP	P	22 37 51.2	-0.1
	3.6nm,1.0s						
BANI	BANI	20.83	79	eP	P	22 37 50.0	-3.0
CLTN	Cedars of Leba	20.95	13	eP	P	22 37 53.8	-0.2
	3.0nm,0.8s						
SDD	Santo Domingo	21.26	79	eP	P	22 37 56.8	-0.6
	492nm,0.9s						
LPM	Los Pinos Moun	22.78	327	eP	P	22 38 11.2	-1.3
LENM	Lemitar	22.85	326	eP	P	22 38 11.6	-1.6
WCI	Wyandotte Cave	23.02	11	eP	P	22 38 14.2	-0.2
	6.9nm,0.6s						
LAZ	Ladron	23.12	327	eP	P	22 38 12.2	-3.5
PV17	East Wray Mesa	27.05	330	eP	P	22 38 47.2	-3.9
	8.2nm,1.4s						

DDA 19 23:13:40.7, 39°.22N×27°.96E, h7^{km}±4^{km}**, ML2.1, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEP	BALIKESIR_Sava	0.24	310	i P	Pg	23 13 45.6	+0.1
STEP				i S	Sg	23 13 50.4	+1.6
STEP				IAML_P			
	comp=Z,1μm,0.2s						
AKHS	Akhisar	0.36	198	i P	Pg	23 13 48.2	+0.5
AKHS				i S	Sb	23 13 54.9	-0.4
DURS	Dursunbey	0.55	46	i P	Pb	23 13 52.7	-0.1
DURS				i S	Sb	23 14 00.0	-0.9
DURS				IAML_P			
	comp=Z,183nm,0.1s						
BALY	Balya	0.58	333	i P	Pb	23 13 53.7	+0.4
BALY				i S	Sb	23 14 01.3	-0.4
BALY				IAML_P			
	comp=Z,341nm,0.1s						
DEMI	Demirci	0.62	107	i P	Pg	23 13 52.2	-0.4
DEMI				i S	Sg	23 14 01.3	+0.6
DEMI				IAML_P			
	comp=Z,238nm,0.1s						
MANT	Manisa	0.87	147	i P	Pb	23 13 58.1	-0.1
MANT				i S	Sg	23 14 08.5	-0.2
MANT				IAML_P			
	comp=Z,290nm,0.1s						
ULDT	Uludag	1.29	44	i P	Pg	23 14 06.9	+1.3
ULDT				IAML_P			
	comp=Z,162nm,0.2s						

ATH 19 23:14:03.5, 39°.01N×26°.27E, h20^{km}±2^{km}**, ML1.9**/2**, Error ellipse: s-maj=2.7km s-min=1.1km az=262.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	Paraskevi	0.24	360	P	Pg	23 14 09.6	+0.4
PRK				S	Sg	23 14 13.3	+0.2
PRK				AML	AML	23 14 14.3	
	comp=E,510μm,0.4s						
PRK				AML	AML	23 14 14.7	
	comp=N,469μm,0.2s						
SIGR	SIGRI	0.38	302	P	Pg	23 14 11.4	-0.1
SIGR				S	Sg	23 14 16.6	-0.5
AYVA	Ayvalik	0.44	47	i P	Pg	23 14 12.3	-0.3
AYVA				i S	Sg	23 14 18.6	-0.2
CHOS	Chios island	0.64	195	P	Pb	23 14 15.3	-0.7
CHOS				S	Sg	23 14 25.8	+0.9
CHOS				AML	AML	23 14 26.6	
	comp=E,460μm,0.4s						
CHOS				AML	AML	23 14 27.5	
	comp=N,238μm,0.2s						
URLA	Izmir	0.69	159	i P	Pg	23 14 17.1	-0.1
URLA				i S	Sg	23 14 27.0	+0.6
PSRA	Psara	0.72	230	P	Pg	23 14 17.8	+0.1
PSRA				S	Sn	23 14 28.4	-0.6
BAYC	CANAKKALE_Bayr	0.76	16	i P	Pn	23 14 19.5	+0.3
BOZC	Bozcaada	0.85	349	i P	Pg	23 14 20.0	-0.1
DGB	zmir	1.07	153	i P	Pg	23 14 24.7	+0.5
LIA	Limnos Island	1.23	317	P	Pb	23 14 26.6	+0.6
SMG	Samos	1.37	161	P	Pg	23 14 29.3	-0.7
SMG				S	Sg	23 14 48.1	+0.3
SMTH	Samothraki Isl	1.57	339	P	Pb	23 14 32.1	+0.2
ALN	Alexandroupoli	1.90	355	P	Pb	23 14 37.6	+0.2

DDA ***19*** *23:17:30.9, 38°.52N×40°.84E, h7^{km}±3^{km}, ML3.9*

ISK ***19*** *23:17:30.4, 38°.49N×40°.79E, h5^{km}, ML3.9/14*

ISC 19 23:17:30.9±1.3**, 38°.49N**±0°.02×**40°.82E**±0°.02**, h2**^{km}±11^{km}**, n50, σ1^{s}.39**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HANI	Diyarbakir_Han	0.34	257	i P	Pb	23 17 38.8	-1.0
HANI				IAML_P			
	comp=Z,25μm,0.1s						
SVAN	Silvan-Diyarba	0.45	139	PG	Pg	23 17 40.4	+0.7
SVAN				SG	Sb	23 17 47.6	-1.4
SVAN	Silvan-Diyarba	0.45	139	i P	Pb	23 17 41.1	-0.7
SVAN				i S	Sb	23 17 47.6	-1.4
SVAN				IAML_P			
	comp=Z,80μm,0.3s						
BNGB	Bingl	0.51	348	PG	Pg	23 17 41.0	+0.3
BNGB				SG	Sb	23 17 49.4	-1.3
BNGL	BINGOL	0.53	29	i P	Pg	23 17 41.3	+0.3
MUSM	Mu-Merkez	0.59	67	i P	Pg	23 17 42.5	+0.2
MUSM				i S	Sb	23 17 51.2	-1.9
MUSM				IAML_P			
	comp=Z,54μm,0.3s						
BTMN	Batman	0.70	149	i P	Pb	23 17 45.8	-0.1
BTMN				i S	Sn	23 17 57.5	-2.0
BTMN				IAML_P			
	comp=Z,13μm,0.3s						
DYBB	Diyarbakir	0.76	225	PG	Pg	23 17 45.9	+0.4
DIYA	Diyarbakir	0.79	224	i P	Pb	23 17 47.3	-0.2
VRTB	Varto-Mus	0.83	37	PG	Pb	23 17 47.9	-0.4
VRTB	Varto-Mus	0.83	37	i P	Pn	23 17 48.6	-1.3
VRTB				IAML_P			
	comp=Z,36μm,0.4s						
KARO	Karliova-Bingo	0.83	12	PG	Pg	23 17 46.8	-0.2
YEDI	Yedisu-Bingol	0.97	347	PG	Pg	23 17 48.9	-0.6
SRTM	Siirt_Merkez	1.00	120	i P	Pb	23 17 50.9	-0.3
SRTM				i S	Sn	23 18 05.9	-1.2
SRTM				IAML_P			
	comp=Z,25μm,0.2s						
BLIS	Bitlis-Merkez	1.02	94	i P	Pg	23 17 50.5	0.0
BLIS				IAML_P			
	comp=Z,11μm,0.2s						
MAZI	Mazidag	1.07	196	PG	Pb	23 17 51.7	-0.6
ECAT	Cat-ERZURUM	1.12	6	i P	Pb	23 17 52.3	-0.9
TNCL	Tunceli-Merkez	1.17	302	i P	Pn	23 17 53.6	-0.9
TNCL				i S	Sn	23 18 11.5	+0.3
TNCL				IAML_P			

	comp=Z,2µm,0.2s						
MARD	Mardin	1.18	182	*i*P	Pn	23 17 54.3	-0.3
MARD				*i*S	Sn	23 18 10.9	-0.4
SVRC	Sivrice-ELAZID	1.19	265	PN	Pn	23 17 54.2	-0.7
ERZN	Erzincan	1.39	322	PN	Pg	23 17 57.6	+0.1
ELZG	Elazig	1.44	271	*i*P	Pg	23 17 58.4	-0.2
ELZG				IAML_P			
	comp=Z,8µm,0.4s						
MLAZ	Malazgirt-MUS	1.50	64	PN	Pg	23 18 00.1	+0.4
KOPT	Kop Dagi	1.54	351	*i*P	Pg	23 18 00.3	-0.2
SIRN	Sırnak	1.61	128	*i*P	Pb	23 18 00.4	-1.0
SIRN				*i*S	Sg	23 18 23.3	+0.8
SIRN				IAML_P			
	comp=Z,10µm,0.3s						
KOPR	Koprukoy-ERZUR	1.70	28	PN	Pb	23 18 02.5	-0.6
GEVA	Gevas	1.77	95	*i*P	Pg	23 18 05.0	+0.1
GEVA				IAML_P			
	comp=Z,8µm,0.5s						
TUTA	Tutak	1.80	59	*i*P	Pg	23 18 04.6	-0.8
TUTA				IAML_P			
	comp=Z,9µm,0.3s						
URFA	Urfa	1.90	237	PN	Pb	23 18 05.3	-1.1
BAYT	Aydıntepe-Bayb	1.97	345	PN	Pb	23 18 05.9	-1.8
AGRB	Hanur-Agry	2.01	57	PN	Pb	23 18 07.3	-1.1
VANB	Van	2.02	86	PN	Pb	23 18 07.5	-1.0
TVAN	Van	2.03	88	*i*P	Pg	23 18 09.9	0.0
SENK	Senkaya-Erzuru	2.38	29	PN	Pb	23 18 12.6	-2.1
CLDR	Caldiran	2.51	74	PN	Pn	23 18 14.1	+1.1
CUKT	Cukurca	2.53	119	PN	Pb	23 18 14.7	-2.6
DARE	Darende-Malaty	2.62	273	PN	Pn	23 18 15.0	+0.6
KTUT	Trabzon	2.62	342	PN	Pn	23 18 15.3	+1.0
KARS	Kars	2.76	39	PN	Pn	23 18 17.5	+1.1
BGD	Bogdanovka	3.50	37	P	Pn	23 18 28.6	+1.9
AKH	Akhalkalaki	3.56	34	P	Pn	23 18 30.1	+2.6
TKB	Tkibuli	4.20	23	P	Pn	23 18 38.3	+2.2
BTNK	Botanikuri	4.41	43	P	Pn	23 18 43.1	+4.1
TBLG	Delisi	4.41	42	P	Pn	23 18 42.8	+3.7
ONI	Oni	4.56	25	P	Pb	23 18 45.8	-6.0
GUDG	Gudauri	4.85	34	P	Pn	23 18 47.7	+2.6
LGD	Lagodekhi	5.33	50	P	Pg	23 19 10.9	-2.2
KOLS	Kolonicke sedl	16.94	314	*e*P	P	23 21 31.1	-0.1
LANS	Liptovska Anna	18.66	312	*e*P	Pn	23 21 52.8	+2.4
VYHS	Vyhne	18.76	309	*e*P	Pn	23 21 54.9	+3.3

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*NNC **19** 23:25:06.8±0.3, 43°.20N×78°.66E, h4km±2km, mb3.4, mpv3.6, Error ellipse: s-maj=3.1km s-min=1.6km az=174.0*
*ISCJB **19** 23:25:07.3±0.4, 43°.21N±0°.02×78°.65E±0°.02, h7km±3km, Error ellipse: s-maj=3.9km s-min=2.7km az=150.8*
*SOME **19** 23:25:07.4, 43°.18N×78°.63E, h15km*
*KRNET **19** 23:25:07.1±0.1, 43°.22N×78°.66E, h21km, mb3.3*
ISC 19 23:25:07.5±0.8, 43°.21N±0°.02×78°.63E±0°.02, h13km±6km, n59, σ0^{s}.55/108, 26C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.22	228	P	Pg	23 25 12.5	0.0
	198nm,0.1s						
SATY				S	Sg	23 25 16.0	+0.1
	1µm,0.1s						
SATY	Saty	0.22	228	⇑*e*P	Pg	23 25 12.4	0.0
	198nm,0.1s						
SATY				*e*S	Sg	23 25 15.9	+0.1
	1µm,0.1s						
KPKS	Kokpek	0.26	8	⇓*e*P	Pg	23 25 12.9	-0.2
	baz=3.0						
KPKS				⇓*e*S	Sg	23 25 16.7	-0.2
	baz=3.0						
KPKS	Kokpek	0.26	8	⇓*e*P	Pg	23 25 12.9	-0.2
	459nm,0.1s						
KPKS				*e*S	Sg	23 25 16.7	-0.2
	220nm,0.1s						
UZB	Uzynbulak	0.29	102	P	Pg	23 25 13.5	-0.1
	158nm,0.1s						
UZB				S	Sg	23 25 17.6	-0.1
	198nm,0.1s						
UZB	Uzynbulak	0.29	102	⇑*e*P	Pg	23 25 13.5	-0.1
	baz=4.0						
UZB				⇑*e*S	Sg	23 25 17.7	-0.1
	baz=4.0						
UZB	Uzynbulak	0.29	102	⇑*e*P	Pg	23 25 13.5	-0.1
	158nm,0.1s						
UZB				*e*S	Sg	23 25 17.6	-0.1
	198nm,0.1s						
KURS	Kuram	0.44	310	P	Pg	23 25 16.0	-0.3
	17nm,0.1s						
KURS				S	Sg	23 25 22.1	-0.1
	79nm,0.2s						
KURS	Kuram	0.44	310	⇑*e*P	Pg	23 25 16.0	-0.3
	baz=7.0						
KURS				⇑*e*S	Sg	23 25 22.1	-0.1
	baz=7.0						
KURS	Kuram	0.44	310	⇑*e*P	Pg	23 25 16.0	-0.3
	17nm,0.1s						
KURS				*e*S	Sg	23 25 22.1	-0.1
	79nm,0.2s						
PDGK	Podgornoye	0.64	79	P	Pg	23 25 19.4	-0.6
	8.8nm,0.1s						
PDGK				S	Sg	23 25 28.0	-0.4
	70nm,0.2s						
PDGK	Podgornoye	0.64	79	⇑P	Pg	23 25 19.4	-0.6
	7.8nm,0.2s						
PDGK				⇑S	Sg	23 25 27.8	-0.7
	56nm,0.3s						
PDGK	Podgornoye	0.64	79	⇑*i*P	Pg	23 25 19.3	-0.6
	baz=79						
PDGK				⇑*i*S	Sg	23 25 27.5	-0.9
	baz=79						
PRZ	Przheval'sk	0.74	193	⇑*i*P	Pb	23 25 22.6	+0.2
	baz=94						
PRZ				⇑*i*S	Sb	23 25 32.5	0.0
	baz=94						
MNBS	Baschi	0.89	349	P	Pg	23 25 24.2	-0.4
	20nm,0.1s						
MNBS				S	Sg	23 25 36.2	-0.1
	157nm,0.2s						
MNBS	Baschi	0.89	349	*e*P	Pg	23 25 24.2	-0.4
	20nm,0.1s						
MNBS				*e*S	Sg	23 25 36.2	-0.1
	157nm,0.2s						
KOTS	Kotyrbulak	1.11	272	P	Pb	23 25 28.3	-0.3
	9.5nm,0.1s						
KOTS				S	Sb	23 25 43.4	+0.2
	69nm,0.2s						
KOTS	Kotyrbulak	1.11	272	⇓*e*P	Pb	23 25 28.3	-0.3
	baz=71						
KOTS				⇓*e*S	Sb	23 25 43.3	+0.2
	baz=71						
KOTS	Kotyrbulak	1.11	272	⇓*e*P	Pb	23 25 28.3	-0.3
	9.5nm,0.1s						
KOTS				*e*S	Sb	23 25 43.4	+0.2
	69nm,0.2s						
MDOK	Medeo	1.16	268	Pg	Pb	23 25 28.9	-0.6
	9.5nm,0.1s						
MDOK				Lg	Lg	23 25 44.4	
	18nm,0.2s						
MDOK	Medeo	1.16	268	*e*P	Pb	23 25 28.9	-0.6
	baz=68						
MDOK				*e*S	Sb	23 25 44.4	-0.1
	baz=68						
MDOK	Medeo	1.16	268	*e*P	Pb	23 25 28.9	-0.6
	9.5nm,0.1s						
MDOK				*e*S	Sb	23 25 44.4	-0.1
	18nm,0.2s						
ARXS	Arharly	1.16	330	P	Pn	23 25 29.0	-0.5
	2.9nm,0.1s						
ARXS				S	Sb	23 25 44.3	-0.2
	29nm,0.2s						
ARXS	Arharly	1.16	330	*e*P	Pn	23 25 29.0	-0.5
	2.9nm,0.1s						
ARXS				*e*S	Sb	23 25 44.3	-0.2
	29nm,0.2s						
TNSS	Tian-Shan	1.25	263	P	Pn	23 25 30.7	-0.3
	2.7nm,0.1s						
TNSS				S	Sn	23 25 47.6	-0.2
	22nm,0.2s						
TNSS	Tian-Shan	1.25	263	*e*P	Pn	23 25 30.7	-0.3
	baz=62						
TNSS				*e*S	Sn	23 25 47.6	-0.2
	baz=62						
TNSS	Tian-Shan	1.25	263	*e*P	Pn	23 25 30.7	-0.3
	2.7nm,0.1s						
TNSS				*e*S	Sn	23 25 47.6	-0.2
	22nm,0.2s						
KTMS	Ketmen	1.28	79	P	Pn	23 25 30.6	-0.6
	11nm,0.1s						
KTMS				S	Sb	23 25 47.3	-0.5
	42nm,0.2s						
KTMS	Ketmen	1.28	79	*e*P	Pn	23 25 30.6	-0.6
	baz=78						
KTMS				*e*S	Sb	23 25 47.4	-0.5
	baz=78						
KTMS	Ketmen	1.28	79	*e*P	Pn	23 25 30.6	-0.6
	11nm,0.1s						
KTMS				*e*S	Sb	23 25 47.4	-0.5
	42nm,0.2s						
CHKK	Chushkaly	1.36	299	P	Pn	23 25 32.3	+0.2
	10nm,0.1s						
CHKK				S	Sn	23 25 50.1	0.0
	37nm,0.2s						
CHKK	Chushkaly	1.36	299	*e*P	Pn	23 25 32.3	+0.2
	baz=99						
CHKK				*e*S	Sn	23 25 50.0	0.0
	baz=99						
CHKK	Chushkaly	1.36	299	*e*P	Pn	23 25 32.3	+0.2
	10nm,0.1s						
CHKK				*e*S	Sn	23 25 50.1	0.0
	37nm,0.2s						
DJR	Jarkent	1.40	36	P	Pb	23 25 33.2	-0.4
	21nm,0.1s						
DJR				S	Sb	23 25 51.8	+0.5
	45nm,0.2s						
DJR	Jarkent	1.40	36	*e*P	Pb	23 25 33.2	-0.4
	21nm,0.1s						
DJR				*e*S	Sb	23 25 51.9	+0.5
	45nm,0.2s						
IZV	Izvestkoviy	1.49	264	P	Pb	23 25 35.1	0.0
	7.7nm,0.2s						
IZV				S	Sg	23 25 55.0	-0.4
	38nm,0.2s						
IZV	Izvestkoviy	1.49	264	*e*P	Pb	23 25 35.1	0.0
	baz=64						
IZV				*e*S	Sg	23 25 55.1	-0.4
	baz=64						
IZV	Izvestkoviy	1.49	264	*e*P	Pb	23 25 35.1	0.0
	7.7nm,0.2s						
IZV				*e*S	Sg	23 25 55.0	-0.4
	38nm,0.2s						
KTBS	Karatobe	1.51	290	P	Pb	23 25 35.0	-0.3
	14nm,0.2s						
KTBS				S	Sb	23 25 54.8	+0.4
	76nm,0.2s						
KTBS	Karatobe	1.51	290	*e*P	Pb	23 25 35.0	-0.3
	14nm,0.2s						
KTBS				*e*S	Sb	23 25 54.8	+0.4
	76nm,0.2s						
KDJ	Kajisay	1.52	225	⇑*i*P	Pn	23 25 34.3	-0.2
	baz=25						
KDJ				⇑*i*S	Sb	23 25 54.9	+0.1
	baz=25						
MTBS	Maitube	1.61	268	P	Pb	23 25 37.3	+0.1
	10nm,0.1s						
MTBS				S	Sg	23 25 59.0	-0.5
	22nm,0.2s						
MTBS	Maitube	1.61	268	*e*P	Pb	23 25 37.3	+0.1
	baz=68						
MTBS				*e*S	Sg	23 25 58.9	-0.5
	baz=68						
MTBS	Maitube	1.61	268	*e*P	Pb	23 25 37.3	+0.1
	10nm,0.1s						
MTBS				*e*S	Sg	23 25 59.0	-0.5
	22nm,0.2s						
KUU	Kurty	1.80	293	P	Pb	23 25 39.7	-0.7
	6.4nm,0.1s						
KUU				S	Sb	23 26 03.1	+0.2
	28nm,0.2s						
KUU	Kurty	1.80	293	*e*P	Pb	23 25 39.7	-0.7
	baz=93						
KUU				*e*S	Sb	23 26 03.1	+0.2
	baz=93						
KUU	Kurty	1.80	293	*e*P	Pb	23 25 39.7	-0.7
	6.4nm,0.1s						
KUU				*e*S	Sb	23 26 03.1	+0.2
	28nm,0.2s						
KST	Kastek	1.96	266	Pg	Pb	23 25 43.3	+0.2
	6.2nm,0.2s						
KST				Lg	Lg	23 26 09.3	
	12nm,0.3s						
KST	Kastek	1.96	266	*e*P	Pb	23 25 43.3	+0.2
	6.2nm,0.2s						
KST				*e*S	Sg	23 26 09.3	-1.3
	12nm,0.3s						
BOOM	Boomskoye usch	2.11	251	⇑*i*P	Pn	23 25 43.7	+1.1
	baz=51						
BOOM				⇑*i*S	Sn	23 26 09.8	+1.1
	baz=51						
KAPS	Kapalarasan	2.14	14	Pg	Pb	23 25 46.1	-0.1
	2.5nm,0.1s						
KAPS				Lg	Lg	23 26 14.1	
	14nm,0.2s						
KAPS	Kapalarasan	2.14	14	*e*P	Pb	23 25 46.1	-0.1
	2.5nm,0.1s						
KAPS				*e*S	Sb	23 26 14.1	+1.5
	14nm,0.2s						
TKM2	Tokmak 2	2.24	264	⇑Pg	Pb	23 25 47.6	-0.3
	2.3nm,0.3s						
TKM2				⇓Lg	Lg	23 26 19.0	
	9.8nm,0.2s						
NRN	Naryn	2.64	229	⇑*e*P	Pn	23 25 50.6	+0.6
	baz=29						
NRN				⇑*e*S	Sn	23 26 22.6	+0.6
	baz=29						
AAK	Ala-Archa	3.09	261	⇓Lg	Lg	23 26 44.5	
	4.1nm,0.3s						
ARLS	Aral	3.46	249	⇑*i*P	Pn	23 26 01.9	+0.8
	baz=49						
ARLS				⇑*i*S	Sn	23 26 41.5	-0.5
	baz=49						
MK31	Makanchi Array	4.42	35	⇑Pn	Pn	23 26 16.9	+2.6
	0.3nm,0.2s,baz=205,slow=15,SNR=5.3						
MK31				⇑Sn	Sn	23 27 07.7	+2.0
	0.1nm,0.3s						
MK31				Lg	Lg	23 27 25.1	
	0.3nm,0.2s,baz=214,slow=29,SNR=4.7						
OTUK	Ortayu	6.69	321	⇑Lg	Lg	23 28 38.5	
	1.4nm,0.7s						
KURBB	Kurchatov Arra	7.42	359	⇑Lg	Lg	23 29 01.9	
	3.2nm,0.6s						

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*IDC **19** 23:26:41.6±1.4, 31°.35N×56°.11E, h0km, mb3.2/4, mb1 3.4/7, mb1mx3.2/41, mbtmp3.4/7, ML3.5/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/27, Error ellipse: s-maj=28.0km s-min=20.8km az=125.0*
*TEH **19** 23:26:41.8, 31°.32N×56°.38E, h10km, ML3.5*
*ISCJB **19** 23:26:42.6±0.3, 31°.32N±0°.03×56°.41E±0°.04, h10km, mb3.1/3, Error ellipse: s-maj=5.0km s-min=3.6km az=159.5*
*THR **19** 23:26:42.1, 31°.33N×56°.39E, h15km, ML3.6*
ISC 19 23:26:42.3±0.7, 31°.35N±0°.04×56°.38E±0°.03, h10km, n41, σ1^{s}.87/45, mb3.2/3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.74	289	*e*Pg	Pg	23 26 55.1	-1.5
IBAF				IAMB	IAmb	23 27 05.7	
	comp=Z,21µm,0.2s						
KHGB	Koh Gabri	0.97	175	*e*Pg	Pg	23 26 59.9	-1.2
KHGB				*e*Sg	Sb	23 27 13.9	-0.5
KHGB				IAMB	IAmb	23 27 15.8	
	comp=Z,0.0nm,0.3s						
TVBK	TV Kerman	1.40	166	IAMB	IAmb	23 27 12.2	
	comp=Z,0.0nm,0.3s						
TVBK				*e*Pn	Pg	23 27 08.3	-0.9
IMEH	Mehriz	1.52	272	IAMB	IAmb	23 27 14.9	
	comp=Z,8µm,0.2s						
IMEH				*e*Pn	Pn	23 27 09.6	-0.2
NGRK	Negar Kerman	1.72	170	*e*Pn	Pg	23 27 14.2	-1.2
NGRK				IAMB	IAmb	23 27 17.8	
	comp=Z,0.0nm,0.6s						
CHMN	Cheshme madani	1.79	146	*e*Pn	Pg	23 27 15.3	-1.3
CHMN				*e*Sg	Sg	23 27 40.6	+0.8
CHMN				IAMB	IAmb	23 27 47.0	
	comp=Z,0.0nm,0.5s						
YZKH	Yazd	1.84	305	AML	AML	23 27 44.6	
	comp=N,486nm,0.4s						
YZKH				Pn	Pb	23 27 15.6	-0.7
YZKH				AML	AML	23 27 45.1	
	comp=E,494nm,0.4s						
TKDS	Koohdasht(Taba	2.34	15	*e*Pn	Pn	23 27 22.2	+1.1
TKDS				IAMB	IAmb	23 28 02.1	
	comp=Z,0.0nm,0.4s						
ISAD	Sadrabad	2.37	284	*e*Pn	Pb	23 27 23.3	-2.0
TABS	Tabas	2.38	15	*e*Pn	Pn	23 27 22.8	+1.3
TABS	Tabas	2.38	15	Pn	Pn	23 27 22.8	+1.3
TABS				Sg	Sg	23 27 57.2	-1.6
BSRN	Basiran	2.42	75	*e*Pn	Pn	23 27 23.4	+1.3
BSRN	Basiran	2.42	75	Pn	Pn	23 27 23.4	+1.3
BSRN				Sg	Sg	23 27 57.9	-2.2
IKOO	Kooshah	2.47	64	*e*Pn	Pn	23 27 24.0	+1.0
IKOO				IAMB	IAmb	23 28 07.3	
	comp=Z,4µm,0.4s						
ANAR	Anarak	2.90	310	*e*Pn	Pn	23 27 30.8	+2.0
ANAR				IAMB	IAmb	23 28 14.5	
	comp=Z,0.0nm,0.5s						
NASN	Na'in	3.36	296	*e*Pn	Pn	23 27 36.7	+1.5
NASN	Na'in	3.36	296	Pn	Pn	23 27 36.7	+1.5
ISRV	Sarvestan	3.44	236	*e*Pn	Pn	23 27 38.2	+1.9
IRAM	Ramesheh	3.45	279	*e*Pn	Pn	23 27 37.7	+1.4
IZEF	Zefreh	3.77	295	*e*Pn	Pn	23 27 42.9	+2.1
IZEF				IAMB	IAmb	23 28 46.6	
	comp=Z,612nm,0.6s						
IKLH	Kolahrood	4.52	297	*e*Pn	Pn	23 27 54.3	+3.2
IKLH				IAMB	IAmb	23 29 06.8	
	comp=Z,353nm,0.5s						
ISFB	Sefidab	4.60	312	*e*Pn	Pn	23 27 54.6	+2.6
IANJ	Anjilo	4.60	334	*e*Pn	Pn	23 27 53.5	+1.3
ROKH	ROKH	4.66	284	*e*Pn	Pn	23 27 55.9	+2.9
IPIR	Pirpir	4.85	287	*e*Pn	Pn	23 27 58.8	+3.1
JHBN	Jahan bin	4.95	282	*e*Pn	Pn	23 27 59.6	+2.6
SBZV	Sabzevar	5.13	11	*e*Pn	Pn	23 28 01.4	+1.9
ISHM	Shahmirzad	5.14	331	*e*Pn	Pn	23 28 01.5	+1.8
IPAY	Payeh	5.53	22	*e*Pn	Pn	23 28 07.2	+2.2
IGLO	Ghaloghah	5.56	338	*e*Pn	Pn	23 28 08.3	+2.9
IDMV	Damavand	5.57	320	*e*Pn	Pn	23 28 07.6	+2.1
IAKL	Akhelmad	5.60	20	*e*Pn	Pn	23 28 08.6	+2.6
JRKH	Jarkhoshk	5.62	35	*e*Pn	Pn	23 28 08.7	+2.6
ISFR	Sfrayin	5.85	13	*e*Pn	Pn	23 28 11.7	+2.4
GEYT	Alibeck	6.72	12	Pn	Pn	23 28 22.8	+1.7
	comp=Z,0.4nm,0.3s,baz=188,slow=9.7,SNR=7.4						
GEYT				Lg	Lg	23 30 16.0	
	comp=Z,0.2nm,0.3s,baz=198,slow=27,SNR=2.4						
GEYT				LR	LR	23 31 37.1	
	comp=Z,48nm,19.7s,baz=180,slow=44						
WSAR	Wadi Sarin	8.32	166	Pn	Pn	23 28 44.2	+1.1
	comp=Z,0.5nm,0.3s,baz=350,slow=11,SNR=6.8						
AKTO	Aktyubinsk	19.11	3	P	Pn	23 31 06.6	+0.5
	comp=Z,0.6nm,0.3s,baz=206,slow=8.5,SNR=4.1						
BRTR	Keskin Array B	20.27	301	P	P	23 31 17.9	-0.3
	comp=Z,0.4nm,0.7s,baz=114,slow=12,SNR=3.9						
MKAR	Makanchi Array	25.19	45	P	P	23 32 09.5	+1.5
	comp=Z,0.4nm,0.7s,baz=234,slow=9.6,SNR=2.9						
KURBB	Kurchatov Arra	25.33	34	P	P	23 32 11.2	+2.1
	comp=Z,0.3nm,0.8s,baz=234,slow=10,SNR=4.2						
TORD	Torodi Ar. Bea	53.22	263	P	P	23 36 00.2	-1.0
	comp=Z,0.4nm,0.7s,baz=71,slow=8.4,SNR=4.1						

IDC 19 23:43:20.1±6.3, 6°.14S×121°.38W, h0km, mb3.7/4, mb1 4.2/4, mb1mx3.9/16, mbtmp3.7/4, Error ellipse: s-maj=152.8km s-min=119.9km az=123.0, South Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	39.17	25	P	P	23 50 49.9	-0.1
	0.5nm,0.8s,baz=193,slow=10,SNR=4.3						
NVAR	Mina Array Bea	44.44	3	P	P	23 51 34.1	+1.0
	1.2nm,0.7s,baz=189,slow=11,SNR=10						
PDAR	Pinedale Array	49.85	11	P	P	23 52 14.9	-0.5
	0.3nm,0.4s,baz=191,slow=9.1,SNR=3.7						
YKA	Yellowknife Ar	68.64	3	P	P	23 54 23.7	-1.1
	1.3nm,0.9s,baz=187,slow=6.5,SNR=5.3						
H11S2	WAKE ISLAND Hy	74.96	291	T	T	01 17 13.3	
	baz=101,slow=75,SNR=8.2						
H11S1	WAKE ISLAND Hy	74.97	291	T	T	01 17 14.0	
	baz=101,slow=75,SNR=8.0						
H11S3	WAKE ISLAND Hy	74.98	291	T	T	01 17 14.7	
	baz=101,slow=75,SNR=9.2						
H11N3	WAKE ISLAND Hy	75.03	292	T	T	01 17 14.5	
	baz=102						
H11N2	WAKE ISLAND Hy	75.04	292	T	T	01 17 17.4	
	baz=102						
H11N1	WAKE ISLAND Hy	75.04	292	T	T	01 17 16.3	
	baz=102						
BRTR	Keskin Array B	139.71	30	PKP	PKiKP	00 02 52.4	-0.7
	0.6nm,0.7s,baz=346,slow=3.6,SNR=4.9						

MAN 19 23:48:02.0, 13°.46N×121°.50E, h31km, mb4.1, ML2.9, MS2.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOAC	Boac	0.34	89	*e*P	Pn	23 48 11.6	+0.8
BOAC				*e*S	Sn	23 48 18.6	+2.0
PGP	Puerto Galera	0.53	275	⇑*e*P	Pb	23 48 09.3	-3.8
PGP				*e*S	Sb	23 48 09.4	-11
SJMP	San Jose	1.06	201	*e*P	Pn	23 48 20.2	-0.5
SJMP				*e*S	Sn	23 48 34.7	+0.4
OTRP	Odiongan	1.20	155	*e*P	Pn	23 48 20.3	-2.4
OTRP				*e*S	Sn	23 48 36.8	-1.1
LUBP	Lubang	1.25	283	*e*P	Pn	23 48 23.4	0.0
LUBP				*e*S	Sn	23 48 39.2	+0.1

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*SNET **20** 00:02:53.7±1.1, 12°.69N×88°.66W, h36km±151km, ML4.4*
*GCG **20** 00:02:54.9±0.3, 12°.77N×88°.74W, h120km±57km, MD4.2*
ISC 20 00:02:51.1±2.5, 12°.7N±0°.1×88°.62W±0°.05, h10km±11km, n22, σ0^{s}.92/32, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCY	Lacayo	0.79	23	*e*P	Pn	00 03 09.0	+0.6
VSM	San Miguel	0.81	25	*e*P	Pn	00 03 09.5	+0.7
TECA	Tecapa	0.81	8	*e*P	Pn	00 03 09.0	+0.3
LCND	La Caada	0.94	49	*e*P	Pn	00 03 10.3	-0.1
LCND				*e*S	Sn	00 03 24.2	+0.3
LCND				IAML		00 03 28.6	
	comp=Z,9µm,0.3s						
SNVI	San Vicente	0.94	347	*e*P	Pn	00 03 10.7	+0.2
CNCH	Conchagua	0.96	53	*e*P	Pn	00 03 10.6	-0.2
CNCH				*e*S	Sn	00 03 25.9	+1.2
PAVA	Las Pavas	1.06	343	*e*P	Pg	00 03 12.5	+1.0
PAVA				*e*S	Sn	00 03 27.1	-0.1
PAVA				IAML		00 03 28.2	
	comp=Z,10µm,0.2s						
LOMA	Loma Larga	1.09	330	*e*P	Pg	00 03 12.2	0.0
LOMA				*e*S	Sn	00 03 26.7	-1.1
LFU	La Fuente	1.16	335	*e*P	Pg	00 03 13.8	+0.5
SNET	Serv Nac Est T	1.16	329	*e*P	Pg	00 03 13.3	0.0
SNET				*e*S	Sg	00 03 28.4	0.0
CUSC	Alcaldia de Cu	1.17	332	*e*P	Pg	00 03 14.0	+0.3
CUSC				*e*S	Sg	00 03 29.0	0.0
VICT	Victoria	1.26	359	*e*P	Pg	00 03 15.7	+0.3
VICT				*e*S	Sg	00 03 32.8	+1.0
CEDA	San Andres	1.34	326	*e*P	Pb	00 03 15.7	-0.6
CEDA				*e*S	Sb	00 03 33.2	-0.4
CEDA				IAML		00 03 37.1	
	comp=Z,6µm,0.3s						
CEVE	Cerro Verde	1.50	319	*e*P	Pb	00 03 18.5	-0.6
CEVE				*e*S	Sb	00 03 37.9	-0.4
CEVE				IAML		00 03 40.0	
	comp=Z,8µm,0.4s						
SBLS	San Blas	1.50	320	*e*P	Pb	00 03 18.9	-0.3
SNJE	San Jose	1.51	321	*e*P	Pb	00 03 18.9	-0.6
RTR	El Retiro	1.56	320	*e*P	Pb	00 03 19.8	-0.4
NBG	Las Nubes	2.52	318	*e*P	Pb	00 03 34.6	-2.1
PCG	Pacaya	2.57	311	*e*P	Pb	00 03 35.2	-2.3
MRL	Marmol	2.59	337	*e*P	Pg	00 03 40.2	-0.6
FUG	Fuego 3	2.78	309	*e*P	Pn	00 03 37.5	+1.6
FUG				*e*S	Sn	00 04 10.8	+1.2
STG3	Santiaguito 3,	3.50	305	*e*P	Pn	00 03 47.3	+1.5

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*ISCJB **20** 00:17:24.0±0.8, 21°.1S±0°.2×179°.4W±0°.2, h650km, mb3.5/7, Error ellipse: s-maj=28.8km s-min=17.5km az=153.6*
*IDC **20** 00:17:26.5±6.8, 21°.01S×179°.44W, h663km±89km, mb3.1/7, mb1 3.4/8, mb1mx3.0/36, mbtmp4.1/8, Error ellipse: s-maj=35.8km s-min=28.9km az=61.0*
ISC 20 00:17:24.9±0.8, 21°.2S±0°.2×179°.4W±0°.2, h650km, n10, σ1^{s}.50/10, mb3.5/7, Fiji Islands region

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

DZM	**Mont Dzumac**	13.21	264	P	**P**	**00 20 14.5**	**-0.3**
	0.3nm,0.3s,baz=98,slow=23,SNR=3.9						
URZ	**Urewera**	17.28	189	P	**P**	**00 20 49.1**	**-2.6**
	0.3nm,0.3s,baz=74,slow=9.5,SNR=3.6						
ASAR	**Alice Springs**	43.10	258	P	**P**	**00 24 32.4**	**+1.6**
	7.1nm,0.6s,baz=98,slow=7.7,SNR=56						
WRA	**Warramunga Arr**	43.22	263	P	**P**	**00 24 32.1**	**+0.3**
	3.3nm,0.3s,baz=98,slow=7.5,SNR=14						
VNDA	**Vanda**	57.11	185	P	**P**	**00 26 13.0**	**+1.7**
	0.6nm,0.7s,baz=3.2,slow=7.8,SNR=5.2						
KSRS	**Korea Array**	76.56	319	P	**P**	**00 28 10.2**	**-0.3**
	0.8nm,0.6s,baz=110,slow=6.6,SNR=2.9						
NVAR	**Mina Array Bea**	82.42	44	P	**P**	**00 28 41.6**	**+0.2**
	0.3nm,0.5s,baz=224,slow=7.6,SNR=4.1						
TXAR	**Lajitas Array**	88.52	58	P	**P**	**00 29 11.4**	**+0.8**
	0.8nm,0.8s,baz=224,slow=3.5,SNR=6.2						
ILAR	**Eielson Array**	89.28	13	P	**P**	**00 29 12.7**	**-0.5**
	0.3nm,0.4s,baz=176,slow=6.3,SNR=2.7						
AKASG	**Malin Array Be**	142.97	330	PKP	**PKPdf**	**00 35 44.7**	**-1.5**
	0.4nm,0.4s,baz=40,slow=4.8,SNR=5.2						

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*NIED **20** 00:22:00, 37°.70N×142°.90E, h17^{km}, Mw3.7 Best double couple: M₀4.01000×10^{14} NP1:φ$_s$343.00000°, δ28.00000°, λ-115.00000°. NP2:φ$_s$191.00000°, δ65.00000°, λ-77.00000°.*

*JMA **20** 00:22:47.9±0.2, 37°.72N×142°.86E, h19^{km}±4^{km}, M4.1*

*ISCJB **20** 00:22:48.2±1.3, 37°.69N±0°.04×142°.83E±0°.07, h16^{km}±8^{km}, mb3.7/5, MS3.5/1, Error ellipse: s-maj=8.7km s-min=6.5km az=4.6*

*IDC **20** 00:22:59.0±4.2, 37°.42N×142°.29E, h80^{km}±34^{km}, mb3.6/5, mb1 3.5/7, mb1mx3.3/38, mbtmp3.8/7, MS2.8/4, Ms1 2.8/4, ms1mx2.6/31, Error ellipse: s-maj=40.9km s-min=24.8km az=90.0*

ISC 20 00:22:49.7±2.7**, 37°.72N**±0°.05×**142°.67E**±0°.07**, h8**^{km}±15^{km}**, n32, σ1^{s}.54**/35**, mb3.8**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	1.12	302	P	**Pb**	**00 23 10.4**	**-0.9**
JIKH				S	**Sg**	**00 23 27.2**	**+1.5**
JIO	**Ouri**	1.27	306	P	**Pn**	**00 23 12.9**	**-1.0**
JIO				S	**Sn**	**00 23 30.4**	**-0.8**
JMST	**Minamisoumatoc**	1.41	271	P	**Pn**	**00 23 14.7**	**-1.0**
JMST				S	**Sb**	**00 23 33.8**	**-0.6**
JKMT	**Kesennumamotoy**	1.44	320	P	**Pn**	**00 23 14.5**	**-1.7**
JKMT				*e*S	**Sn**	**00 23 34.5**	**-0.8**
JFK	**Kawauchi**	1.47	257	P	**Pn**	**00 23 15.9**	**-0.6**
JFK				*e*S	**Sg**	**00 23 36.4**	**-0.4**
JMM	**Marumori**	1.49	276	P	**Pn**	**00 23 15.8**	**-1.0**
JMM				*e*S	**Sb**	**00 23 36.4**	**-0.4**
JMK	**Ichinoseki**	1.68	318	P	**Pn**	**00 23 18.5**	**-0.9**
JMK				*e*S	**Sb**	**00 23 41.2**	**-1.0**
JOU	**Okura**	1.71	293	P	**Pn**	**00 23 19.8**	**-0.1**
JOU				*e*S	**Sg**	**00 23 43.7**	**-0.9**
JFT	**Otama**	1.86	265	P	**Pn**	**00 23 22.4**	**+0.5**
JFT				*e*S	**Sb**	**00 23 47.1**	**-0.3**
JOM	**Ohasama**	2.06	329	P	**Pn**	**00 23 23.7**	**-1.0**
JOM				*e*S	**Sn**	**00 23 50.2**	**-0.3**
JYK	**Kaneyama**	2.18	304	P	**Pn**	**00 23 26.2**	**-0.1**
JAW	**Awa shima**	2.80	286	P	**Pn**	**00 23 35.9**	**+1.1**
JANG	**Nango**	2.80	342	P	**Pn**	**00 23 34.5**	**-0.4**
JANG				S	**Sn**	**00 24 08.3**	**-0.6**
JAG	**Ashikaga**	2.87	244	P	**Pn**	**00 23 36.0**	**+0.1**
BSO1	**Boso 1**	3.35	205	P	**Pn**	**00 23 40.9**	**-1.0**
MJAR	**Matsushiro Arr**	3.75	253	P	**Pn**	**00 23 50.3**	**+2.4**
	0.5nm,0.3s,baz=88,slow=14,SNR=13						
MJAR				LR	LR	00 24 58.0	
	comp=Z,22nm,18.6s,baz=55,slow=36						
MAT	**Matsushiro**	3.75	253	P	**Pn**	**00 23 50.4**	**+2.5**
MAT				S	**Sn**	**00 24 32.2**	**-0.1**
ASAJ	**Asahikawa**	6.39	360	LR	LR	00 27 46.2	
	comp=Z,95nm,18.2s,baz=164,slow=43						
USRK	**Ussuriysk Ar.**	10.35	312	P	**Pn**	**00 25 22.1**	**+3.7**
	0.1nm,0.3s,baz=115,slow=13,SNR=3.2						
JNU	**Nakatsue**	10.65	248	LR	LR	00 30 01.1	
	comp=Z,44nm,20.7s,baz=24,slow=41						
SEY	**Seymchan**	25.94	10	P	**P**	**00 28 27.0**	**+4.8**
	1.1nm,0.5s,baz=198,slow=11,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	27.67	124	T	T	00 57 24.8	
	baz=316,slow=75,SNR=170						
H11N1	**WAKE ISLAND Hy**	27.68	124	T	T	00 57 25.2	
	baz=316,slow=75,SNR=78						
H11N3	**WAKE ISLAND Hy**	27.68	124	T	T	00 57 34.4	
	baz=316,slow=75,SNR=125						
SONM	**Songino Array**	28.25	303	P	**P**	**00 28 43.5**	**+0.2**
	0.9nm,0.6s,baz=114,slow=7.8,SNR=5.2						
H11S1	**WAKE ISLAND Hy**	28.42	126	T	T	00 58 17.7	
	baz=318,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	28.42	126	T	T	00 58 19.3	
	baz=318,slow=76,SNR=30						
H11S2	**WAKE ISLAND Hy**	28.43	126	T	T	00 58 28.1	
	baz=318,slow=76,SNR=37						
ZALV	**Zalesovo Beam**	42.20	312	P	**P**	**00 30 42.5**	**-0.4**
	0.9nm,0.3s,baz=71,slow=6.2,SNR=6.9						
MKAR	**Makanchi Array**	44.61	302	P	**P**	**00 31 03.2**	**+0.8**
	1.0nm,0.7s,baz=84,slow=9.3,SNR=6.0						
ASAR	**Alice Springs**	61.61	189	P	**P**	**00 33 05.3**	**-2.5**
	0.5nm,0.7s,baz=12,slow=8.3,SNR=4.3						
JMIC	**Jan Mayen**	69.65	350	LR	LR	01 05 24.1	
	comp=Z,25nm,18.1s,baz=44,slow=36						

ZUR 20 00:29:10.6, 47°.42N×9°.32E, h4^{km}, MLh1.4/10**, 5C-1D, Error ellipse: s-maj=1.5km s-min=0.7km az=25.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGT00	**Sennhlsen**	0.01	293	⇑Pg	Pg	00 29 11.6	+0.1
SGT00				Sg	Sg	00 29 12.3	+0.2
SGT01	**Gaiserwald**	0.01	353	⇑Pg	Pg	00 29 11.7	+0.2
SGT01				Sg	Sg	00 29 12.6	+0.4
SGT04	**Schlatt-Haslen**	0.07	165	⇓Pg	Pg	00 29 12.8	+0.6
SGT04				Sg	Sg	00 29 14.7	+1.3
SGT05	**Eggersriet**	0.09	77	⇑Pg	Pg	00 29 13.0	+0.5
SGT05				Sg	Sg	00 29 15.1	+1.1
SGT03	**Degersheim**	0.10	236	⇑Pg	Pg	00 29 13.1	+0.4
SGT03				Sg	Sg	00 29 15.1	+1.0
SGT02	**Zihlschlacht**	0.10	332	⇑Pg	Pg	00 29 13.2	+0.5
SGT02				Sg	Sg	00 29 15.3	+1.0
LIENZ	**Kamor/St.Gall**	0.17	137	Sg	Sg	00 29 18.0	+1.7
WEIN	**Weingarten**	0.25	296	Sg	Sg	00 29 20.2	+1.5
WILA	**Wila**	0.28	269	Pg	Pg	00 29 16.7	+0.6
WILA				Sg	Sg	00 29 21.1	+1.4

ROM 20 00:30:33.9±0.1**, 42°.788N**±0°.003×**12°.985E**±0°.006**, h11**^{km}**, ML1.4**/6**, Error ellipse: s-maj=0.5km s-min=0.3km az=107.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	0.10	65	P	Pg	00 30 37.2	+0.5
NRCA				S	Sg	00 30 39.3	+0.5
NRCA				AML	AML		
	comp=E,305µm,0.1s						
NRCA				AML	AML		
	comp=N,409µm,0.2s						
NRCA				AML	AML		
	comp=E,305µm,0.1s						
NRCA				AML	AML		
	comp=N,409µm,0.2s						
NRCA				AML	AML		
	comp=N,409µm,0.2s						
NRCA				AML	AML		
	comp=E,305µm,0.1s						
FEMA	**Monte Fema**	0.18	15	P	Pg	00 30 38.4	+0.5
FEMA				S	Sg	00 30 41.8	+1.1
LNSS	**Leonessa**	0.19	168	P	Pg	00 30 38.6	+0.6
LNSS				S	Sg	00 30 41.9	+1.1
LNSS				AML	AML		
	comp=E,200µm,0.2s						
LNSS				AML	AML		
	comp=N,170µm,0.1s						
LNSS				AML	AML		
	comp=E,201µm,0.2s						
LNSS				AML	AML		
	comp=N,170µm,0.1s						
LNSS				AML	AML		
	comp=N,170µm,0.1s						
LNSS				AML	AML		
	comp=E,201µm,0.2s						
CESI	**CESI - Serrava**	0.22	345	P	Pb	00 30 39.3	-0.7
CESI				S	Sg	00 30 42.9	+1.1
CESI				AML	AML		
	comp=E,20µm,0.2s						
CESI				AML	AML		
	comp=N,21µm,1.2s						
CESI				AML	AML		
	comp=E,20µm,0.2s						
CESI				AML	AML		
	comp=N,21µm,1.2s						
CESI				AML	AML		
	comp=E,20µm,0.2s						
CESI				AML	AML		
	comp=N,21µm,1.2s						
FDMO	**Fiordimonte**	0.26	17	P	Pg	00 30 39.8	+0.6
FDMO				S	Sb	00 30 44.0	-1.2
FDMO				AML	AML		
	comp=E,120µm,0.2s						
FDMO				AML	AML		
	comp=N,101µm,0.2s						
SMA1	**SAN MARTINO**	0.30	121	P	Pb	00 30 40.8	-0.6
MOMA	**Monte Martano**	0.31	273	P	Pg	00 30 40.7	+0.6
MOMA				S	Sb	00 30 45.6	-0.9
MOMA				AML	AML		
	comp=E,34µm,0.9s						
MOMA				AML	AML		
	comp=N,26µm,0.2s						
MOMA				AML	AML		
	comp=E,34µm,0.9s						
MOMA				AML	AML		
	comp=N,26µm,0.2s						
MOMA				AML	AML		
	comp=E,34µm,0.9s						
MOMA				AML	AML		
	comp=N,26µm,0.2s						
CSP1	**Cessapalombo**	0.34	28	P	Pg	00 30 41.2	+0.4
ASSB	**Assisi San Ben**	0.35	317	P	Pg	00 30 41.1	+0.3
ASSB				S	Sg	00 30 46.5	+1.0
ASSB				AML	AML		
	comp=E,169µm,0.5s						
ASSB				AML	AML		
	comp=N,216µm,1.4s						
ASSB				AML	AML		
	comp=E,169µm,0.5s						
ASSB				AML	AML		
	comp=N,216µm,1.4s						
ASSB				AML	AML		
	comp=N,216µm,1.4s						
ASSB				AML	AML		
	comp=E,169µm,0.5s						
ATCC	**AVT- Casa Cast**	0.47	328	P	Pg	00 30 43.3	+0.2
ATCC				S	Sb	00 30 50.8	-0.4
ATCC				AML	AML		
	comp=E,134µm,0.4s						
ATCC				AML	AML		
	comp=N,127µm,0.3s						
ATCC				AML	AML		
	comp=E,134µm,0.4s						
ATCC				AML	AML		
	comp=N,127µm,0.3s						
ATCC				AML	AML		
	comp=N,127µm,0.3s						
ATCC				AML	AML		
	comp=E,134µm,0.4s						
PE3	**Peglio**	0.97	339	P	Pg	00 30 52.6	0.0

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*ISCJB **20** 00:31:08.6±0.3, 54°.25N±0°.08×166°.09W±0°.08, h122^{km}±3^{km}, mb3.8/8, Error ellipse: s-maj=13.9km s-min=4.5km az=153.0*

*NEIC **20** 00:31:09.1±0.0, 54°.14N×166°.05W, h113^{km}, mb4.0/9, MD4.0, ML3.6(AEIC), After AEIC.*

*IDC **20** 00:31:10.7±3.8, 54°.56N×166°.10W, h116^{km}±31^{km}, mb3.5/8, mb1 3.6/10, mb1mx3.3/55, mbtmp3.8/10, Error ellipse: s-maj=40.0km s-min=18.7km az=177.0*

ISC 20 00:31:09.4±0.7**, 54°.19N**±0°.10×**166°.03W**±0°.06**, h116**^{km}±6^{km}**, n56, σ1^{s}.58**/65**, mb3.6**/8**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKRB	**Akutan Reef Bi**	0.07	201	*e*Pn	**Pn**	**00 31 25.3**	**0.0**
AKRB				*e*Sn	**Sn**	**00 31 37.4**	**+0.1**
AKUT	**Akutan**	0.16	110	*e*Pn	**Pn**	**00 31 25.3**	**-0.1**
AKUT				*e*Sn	**Sn**	**00 31 37.5**	**0.0**
UNV	**Unalaska Valle**	0.45	219	*e*Pn	**Pn**	**00 31 26.2**	**-0.3**
UNV				*e*Sn	**Sn**	**00 31 39.2**	**-0.2**
MSW	**Makushin Switc**	0.52	238	*e*Pn	**Pn**	**00 31 26.7**	**-0.4**
MSW				*e*Sn	**Sn**	**00 31 40.3**	**-0.1**
MCIR	**Makushin Cirqu**	0.56	245	*e*Pn	**Pn**	**00 31 27.3**	**-0.1**
MREP	**Makushin Rep't**	0.57	228	*e*Pn	**Pn**	**00 31 27.1**	**-0.3**
MREP				*e*Sn	**Sn**	**00 31 41.3**	**+0.2**
WESP	**Westdahl Peak**	0.82	68	*e*Pn	**Pn**	**00 31 30.1**	**+0.6**
WESP				*e*Sn	**Sn**	**00 31 45.6**	**+0.9**
WEBT	**Westdahl Beart**	0.85	61	*e*Pn	**Pn**	**00 31 30.2**	**+0.6**
SSBA	**Shishaldin**	1.25	62	*e*Pn	**Pn**	**00 31 34.0**	**+0.2**
SSBA				*e*Sn	**Sn**	**00 31 53.3**	**+1.0**
OKER	**Okmok East Rim**	1.41	239	*e*Pn	**Pn**	**00 31 35.4**	**-0.2**
OKTU	**Okmok Mt. Tuli**	1.44	237	*e*Pn	**Pn**	**00 31 35.8**	**-0.2**
OKAK	**Okmok**	1.51	247	*e*Pn	**Pn**	**00 31 37.4**	**+0.7**
FALS	**False Pass**	1.66	65	*e*Pn	**Pn**	**00 31 39.3**	**+0.9**
FALS				*e*Sn	**Sn**	**00 32 03.4**	**+2.9**
NIKH	**Nikolski High**	2.08	235	*e*Pn	**Pn**	**00 31 44.0**	**+0.4**
NIKH				*e*Sn	**Sn**	**00 32 10.7**	**+0.9**
DOL	**Dolgoi Island**	2.60	67	*e*Pn	**Pn**	**00 31 51.0**	**+0.7**
SDPT	**Sand Point**	3.42	68	*e*Pn	**Pn**	**00 32 02.0**	**+1.0**
SPIA	**Saint Paul Isl**	3.83	323	*e*Pn	**Pn**	**00 32 07.5**	**+1.1**
CHGN	**Chignik**	4.84	61	*e*Pn	**Pn**	**00 32 20.6**	**+0.6**
CHIA	**Chirikof Islan**	6.23	70	*e*Pn	**Pn**	**00 32 38.5**	**-0.3**
ADK	**Adak**	6.83	255	*e*Pn	**Pn**	**00 32 49.6**	**+2.7**
SII	**Sitkinak Islan**	7.15	66	*e*Pn	**Pn**	**00 32 50.3**	**-0.9**
OHAK	**Old Harbor**	7.81	62	*e*Pn	**Pn**	**00 32 58.2**	**-1.8**
KDAK	**Kodiak Island**	8.35	59	P	**Pn**	**00 33 05.6**	**-1.8**
	2.4nm,0.3s,baz=206,slow=5.3,SNR=49						
KDAK				S	**Sn**	**00 34 34.4**	**-5.5**
	0.7nm,0.3s,baz=287,slow=19,SNR=4.9						
SVW2	**Sparrevohn**	8.90	35	*e*Pn	**Pn**	**00 33 13.6**	**-1.1**
RSO	**Redoubt South**	9.53	43	*e*Pn	**Pn**	**00 33 26.2**	**+2.7**
HOM	**Homer**	9.57	49	*e*Pn	**Pn**	**00 33 27.0**	**+3.1**
CNPM	**China Poot**	9.70	51	*e*Pn	**Pn**	**00 33 25.6**	**0.0**
BRLK	**Bradley Lake**	9.96	50	*e*Pn	**Pn**	**00 33 29.0**	**-0.2**
GAMB	**Gambell**	10.04	345	*e*Pn	**Pn**	**00 33 28.2**	**-2.0**
TTA	**Tatalina**	10.19	27	*e*Pn	**Pn**	**00 33 31.8**	**-0.5**
SEW	**Seward**	10.76	50	*e*Pn	**Pn**	**00 33 38.5**	**-1.5**
PPLA	**Purkeypile**	11.31	34	*e*Pn	**Pn**	**00 33 46.9**	**-0.5**
FID	**Port Fidalgo**	12.37	50	*e*Pn	**Pn**	**00 33 58.6**	**-2.7**
SCM	**Sheep Creek Mo**	12.49	45	*e*Pn	**Pn**	**00 34 01.4**	**-1.4**
BPAW	**Bear Paw Mtn.**	12.54	32	*e*Pn	**Pn**	**00 34 04.0**	**+0.6**
BPAW				*e*Sn	**Sn**	**00 36 26.9**	**+5.6**
DHY	**Denali Highway**	13.12	40	*e*Pn	**Pn**	**00 34 11.4**	**+0.2**
ILAR	**Eielson Array**	14.31	35	P	**Pn**	**00 34 24.4**	**-1.9**
	0.1nm,0.3s,baz=225,slow=11,SNR=10.0						
ILB	**Eielson Array**	14.31	35	*e*Pn	**Pn**	**00 34 27.9**	**+1.6**
BCPM	**Bancas Point**	15.40	57	*e*Pn	**Pn**	**00 34 40.9**	**+0.8**
	18nm,1.0s						
FYU	**Fort Yukon**	15.99	31	*e*P	**Pn**	**00 34 47.8**	**+0.5**
	4.4nm,0.5s						
HYT	**Haines Junctio**	16.60	55	*e*P	**P**	**00 34 56.3**	**+0.8**
	6.7nm,0.7s						
SKAG	**Skagway**	17.50	60	*e*Pn	**Pn**	**00 35 07.4**	**+1.6**
	12nm,0.8s						
WHY	**Whitehorse**	17.85	56	*e*P	**Pn**	**00 35 10.8**	**+0.7**
	6.9nm,0.8s						
DLBC	**Dease Lake**	20.25	63	P	Pn	00 35 41.0	+2.7
	6.7nm,0.7s,baz=278,slow=10,SNR=15						
DLBC	**Dease Lake**	20.25	63	*e*P	Pn	00 35 37.2	-1.1
	6.9nm,0.7s						
INK	**Inuvik**	20.71	34	P	**P**	**00 35 38.5**	**-1.5**
	6.4nm,0.5s,baz=244,slow=12,SNR=11						
INK	**Inuvik**	20.71	34	*e*P	**P**	**00 35 38.4**	**-1.5**
	6.9nm,0.6s						
PETK	**Petropavlovsk-**	21.38	282	P	**P**	**00 35 48.1**	**+0.7**
	0.7nm,0.4s,baz=79,slow=12,SNR=6.7						
YKA	**Yellowknife Ar**	27.53	52	P	**P**	**00 36 45.1**	**+0.5**
	0.6nm,0.4s,baz=275,slow=8.4,SNR=7.6						
SUMG	**Summit**	48.43	19	*e*P	**P**	**00 39 39.5**	**-0.1**
	7.8nm,1.1s						
TXAR	**Lajitas Array**	50.77	93	P	**P**	**00 39 59.0**	**+1.5**
	0.5nm,0.7s,baz=301,slow=5.8,SNR=5.0						
SONM	**Songino Array**	52.08	301	P	**P**	**00 40 06.5**	**-0.6**
	0.3nm,0.4s,baz=46,slow=6.2,SNR=2.5						
HFS	**Hagfors**	66.03	0	P	**P**	**00 41 41.6**	**-1.3**
	2.4nm,0.7s,baz=33,slow=3.4,SNR=11						
EKA	**Eskdalemuir Ar**	69.93	10	P	**P**	**00 42 06.8**	**-0.5**
	0.6nm,0.6s,baz=1.1,slow=4.4,SNR=4.6						
AKASG	**Malin Array Be**	74.70	350	P	**P**	**00 42 34.1**	**-1.7**
	0.6nm,0.5s,baz=7.3,slow=5.4,SNR=4.4						
LBTB	**Lobatse**	149.60	339	PKPbc	**PKPbc**	**00 50 44.9**	**-0.1**
	1.9nm,0.6s,baz=0.0,slow=4.0,SNR=5.3						

ISC 20 00:50:48.6±0.9**, 50°.32N**±0°.05×**18°.81E**±0°.02**, h0**^{km}**, n16, σ0^{s}.60**/30**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHZP	**Chorzow**	0.12	102	*e*Pg	**Pg**	**00 50 50.9**	**-0.1**
CHZP				*e*Sg	**Sg**	**00 50 52.9**	**+0.3**
OKC	**Ostrava-Krasne**	0.64	222	*e*PG	**Pg**	**00 51 01.1**	**+0.2**
OKC				*e*SG	**Sg**	**00 51 09.2**	**+0.1**
	comp=Z,7.1nm,0.6s						
OJC	**Ojcow**	0.65	98	*e*Pg	**Pg**	**00 51 00.4**	**-0.6**
OJC				*e*Sg	**Sg**	**00 51 09.5**	**+0.2**
MORC	**Moravsky Berou**	0.98	237	*e*PG	**Pg**	**00 51 07.6**	**+0.3**
MORC				*e*SG	**Sg**	**00 51 20.4**	**+0.4**
LANS	**Liptovska Anna**	1.24	160	*e*PG	**Pg**	**00 51 12.5**	**+0.1**
LANS				*e*SG	**Sb**	**00 51 29.9**	**+0.3**
LANS				*e*LG	Lg	00 51 32.4	
NIE	**Niedzica**	1.32	132	*e*Pg	**Pg**	**00 51 14.4**	**+0.4**
NIE				*e*Sg	**Sn**	**00 51 33.5**	**+0.9**
DPC	**Dobruska-Polom**	1.59	272	*e*PG	**Pn**	**00 51 17.5**	**-0.6**
DPC				*e*SG	**Sb**	**00 51 39.6**	**0.0**
	comp=Z,3.3nm,0.5s						
OSTC	**Ostas**	1.67	279	*e*PG	**Pn**	**00 51 18.7**	**-0.5**
OSTC				*e*SG	**Sg**	**00 51 42.8**	**+0.4**
KSP	**Ksiaz**	1.69	289	*e*Pg	**Pb**	**00 51 20.2**	**-0.3**
KSP				*e*Sg	**Sg**	**00 51 43.5**	**+0.7**
VRAC	**Vranov**	1.75	236	*e*PN	**Pn**	**00 51 20.3**	**0.0**
VRAC				SG	**Sg**	**00 51 45.0**	**+0.1**
CHVC	**Chvalec**	1.78	280	*e*PG	**Pn**	**00 51 20.6**	**-0.1**
CHVC				*e*SG	**Sg**	**00 51 46.1**	**+0.3**
	comp=Z,3.9nm,0.6s						
UPC	**Upice**	1.80	277	*e*PG	**Pn**	**00 51 21.6**	**+0.7**
UPC				*e*SG	**Sg**	**00 51 46.8**	**+0.5**
	comp=Z,2.5nm,0.5s						
VYHS	**Vyhne**	1.82	179	*e*PN	**Pn**	**00 51 20.8**	**-0.5**
VYHS				*e*SN	**Sn**	**00 51 44.5**	**-0.6**
KRUC	**Moravsky**	2.01	232	*e*PN	**Pn**	**00 51 23.9**	**+0.1**
KRUC				*e*SG	**Sb**	**00 51 52.3**	**+0.8**
TREC	**Trest**	2.38	246	*e*SG	**Sg**	**00 52 03.9**	**-1.2**
KHC	**Kasperske Hory**	3.59	253	*e*SG	**Sg**	**00 52 42.2**	**-1.8**
	comp=Z,2.4nm,0.8s						

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*SJA **20** 01:16:26.6±0.5, 27°.61S×72°.24W, h48^{km}±10^{km}, ML3.9, MW4.0*

*GUC **20** 01:16:35.1±0.5, 27°.91S×71°.53W, h15^{km}±9^{km}, ML3.5*

ISC 20 01:16:32.3±3.1**, 27°.8S**±0°.1×**71°.7W**±0°.1**, h28**^{km}**, n16, σ2^{s}.36**/20**, 1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	**Copiap**	1.31	83	*e*P	**Pn**	**01 16 54.4**	**-0.4**
GO03				*e*S	**Sn**	**01 17 08.4**	**-2.9**
GO03	**Copiap**	1.31	83	⇓*e*P	**Pn**	**01 16 54.4**	**-0.4**
GO03				*e*S	**Sn**	**01 17 09.4**	**-1.9**
GO03				IAML		01 17 11.2	
	comp=N,2µm,0.2s						
LCO	**Las Campanas**	1.53	145	⇑*i*P	**Pn**	**01 16 57.3**	**-0.7**
LCO				*e*S	**Sn**	**01 17 13.5**	**-3.7**
LCO				IAML		01 17 14.8	
	comp=E,2µm,0.3s						
CRCH	**Chaqaral**	1.70	35	IAML		01 17 22.6	
	comp=N,902nm,0.2s						
LSCH	**La Serena**	2.18	170	*e*S	**Sn**	**01 17 29.3**	**-3.6**
LSCH				IAML		01 17 38.0	
	comp=E,399nm,0.1s						
GO04	**Tololo Observa**	2.54	162	*e*P	**Pn**	**01 17 12.2**	**+0.3**
AROD	**Rodeo**	3.10	142	*e*P	**Pn**	**01 17 22.0**	**+2.4**
AROD				*e*S	**Sn**	**01 17 57.4**	**+1.6**
VCA	**Vinchina**	3.23	108	*e*P	**Pn**	**01 17 24.6**	**+3.2**
VCA				*e*S	**Sb**	**01 18 07.6**	**-0.5**
VCA				IAML		01 18 10.6	
	comp=Z,262nm,0.4s						
ACCO	**Cerro Coronel**	3.64	141	*e*P	**Pn**	**01 17 29.7**	**+2.5**
AMOG	**MOGNA**	4.23	139	*e*P	**Pn**	**01 17 37.4**	**+2.4**
RTLS	**Leoncito**	4.54	153	*e*P	**Pn**	**01 17 41.6**	**+2.2**
RTLS				IAML		01 18 55.2	
	comp=Z,101nm,0.6s						
RTCV	**Cerro Valdivia**	4.93	147	*e*P	**Pn**	**01 17 46.3**	**+1.8**
CYA	**Choya**	5.25	99	*e*P	**Pn**	**01 17 50.6**	**+1.6**
CYA				IAML		01 19 12.7	
	comp=Z,34nm,0.5s						
AHML	**Horco Molle**	5.74	82	*e*P	**Pn**	**01 17 58.4**	**+2.6**
AHML				IAML		01 19 29.1	
	comp=Z,21nm,0.5s						
ACAN	**Cantantal**	5.96	140	*e*P	**Pn**	**01 18 00.1**	**+1.3**
TCA	**Tanti**	7.14	122	*e*P	**Pn**	**01 18 17.5**	**+2.5**

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*ISCJB **20** 01:34:17.9±0.6, 13°.36S±0°.07×114°.80E±0°.08, h10^{km}, mb4.1/7, Error ellipse: s-maj=12.7km s-min=7.5km az=142.6*

*IDC **20** 01:34:19.0±1.1, 13°.30S×114°.73E, h0^{km}, mb4.0/7, mb1 4.3/11, mb1mx3.9/41, mbtmp4.2/11, ML3.7/3, Error ellipse: s-maj=32.2km s-min=19.0km az=55.0*

*NEIC **20** 01:34:20.0±2.8, 13°.37S×114°.77E, h12^{km}±5^{km}, mb4.3/6, Error ellipse: s-maj=19.1km s-min=5.3km az=94.0*

ISC 20 01:34:19.8±0.8**, 13°.40S**±0°.08×**114°.86E**±0°.09**, h10**^{km}**, n23, σ1^{s}.91**/25**, mb4.1**/7**, Northwest of Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	9.19	71	Pn	**Pn**	**01 36 32.5**	**0.0**
	18nm,0.3s,baz=300,slow=4.8,SNR=4.7						
BATI				Sn	**Sn**	**01 38 14.2**	**-1.8**
	9.8nm,0.3s,baz=258,slow=20,SNR=3.6						
GIRL	**Giralia**	9.21	184	*e*Pn	**Pn**	**01 36 31.0**	**-1.8**
PSA00	**Pilbara Seismi**	9.42	150	*e*Pn	**Pn**	**01 36 36.6**	**+1.0**
KAPI	**Kappang**	9.63	31	Pn	**Pn**	**01 36 38.4**	**-0.1**
	1.6nm,0.3s,baz=225,slow=11,SNR=3.9						
KAPI				Sn	Sn	01 38 10.3	-17
	2.0nm,0.3s,baz=72,slow=19,SNR=6.8						
MORW	**Morawa**	15.63	176	*e*Pn	**Pn**	**01 37 56.4**	**-3.9**
	80nm,1.8s						
MTN	**Manton Dam**	15.86	90	*e*Pn	**Pn**	**01 38 04.3**	**+1.0**
	31nm,1.4s						
NWAO	**Narrogin (SRO)**	19.56	174	P	**Pn**	**01 38 49.2**	**+0.1**
	2.1nm,0.3s,baz=3.7,slow=9.8,SNR=14						
NWAO				S	S	01 42 16.4	-12
	0.9nm,0.3s,baz=90,slow=20,SNR=3.2						
NWAO	**Narrogin (SRO)**	19.56	174	*e*P	**Pn**	**01 38 49.2**	**+0.1**
NWAO				*e*P	**Pn**	**01 38 49.3**	**+0.1**
WRA	**Warramunga Arr**	19.75	112	P	**Pn**	**01 38 52.2**	**+0.6**
	0.4nm,0.3s,baz=289,slow=13,SNR=8.3						
WRA				S	**S**	**01 42 28.2**	**-4.7**
	0.3nm,0.3s,baz=280,slow=24,SNR=3.9						
WR1	**Warramunga Arr**	19.75	112	*e*P	**Pn**	**01 38 52.2**	**+0.6**
WB2	**Warramunga Arr**	19.76	112	*e*P	**Pn**	**01 38 56.8**	**+5.1**
	35nm,1.8s						
ASAR	**Alice Springs**	20.72	122	P	Pn	01 39 04.2	+1.2
	9.1nm,0.6s,baz=301,slow=10,SNR=120						
ASAR				S	**S**	**01 42 52.3**	**+0.2**
	1.5nm,0.7s,baz=293,slow=24,SNR=3.4						
AS31	**Alice Springs**	20.72	122	*e*P	Pn	01 39 04.3	+1.4
	3.9nm,0.5s						
CMAR	**Chiang Mai Arr**	35.33	333	P	**P**	**01 41 16.2**	**+0.7**
	1.0nm,0.3s,baz=155,slow=7.0,SNR=4.9						
KS15	**Wonju Array Si**	52.03	13	*e*P	**P**	**01 43 30.6**	**+1.0**
	73nm,1.9s						
KSRS	**Korea Array**	52.05	13	P	**P**	**01 43 30.6**	**+0.9**
	1.8nm,0.7s,baz=195,slow=7.5,SNR=5.4						
MAJO	**Matsushiro**	54.34	23	*e*P	**P**	**01 43 47.5**	**+0.9**
MJAR	**Matsushiro Arr**	54.34	23	P	**P**	**01 43 47.5**	**+0.9**
	0.9nm,0.4s,baz=205,slow=7.9,SNR=4.7						
SONA0	**Songino Array**	61.42	354	*e*P	**P**	**01 44 35.0**	**-1.4**
SONM	**Songino Array**	61.42	354	P	**P**	**01 44 35.0**	**-1.4**
	0.5nm,0.4s,baz=166,slow=8.9,SNR=2.9						
MK32	**Makanchi Array**	66.66	336	*e*P	**P**	**01 45 10.2**	**-0.5**
MKAR	**Makanchi Array**	66.66	336	P	**P**	**01 45 10.2**	**-0.5**
	0.5nm,0.5s,baz=137,slow=6.6,SNR=5.5						
KURBB	**Kurchatov Arra**	71.22	337	P	**P**	**01 45 39.0**	**+0.1**
	0.2nm,0.4s,baz=151,slow=5.3,SNR=3.6						

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*IDC **20** 01:49:00.6±1.9, 21°.09S×178°.42W, h474^{km}±21^{km}, mb3.6/15, mb1 3.8/18, mb1mx3.6/26, mbtmp4.5/18, Error ellipse: s-maj=17.4km s-min=13.0km az=156.0*

*ISCJB **20** 01:49:02.2±0.3, 21°.04S±0°.06×178°.53W±0°.08, h500^{km},* *mb4.2/35, Error ellipse: s-maj=10.3km s-min=7.0km az=30.5*

NEIC ***20*** *01:49:04.2±0.8, 21°.08S×178°.58W, h516km±9km, mb4.4/30, Error ellipse: s-maj=30.0km s-min=21.0km az=151.0*

ISC 20 01:49:03.0±0.4**, 21°.1S**±0°.1×**178°.44W**±0°.10**, h500**km**, n147, σ0s.94**/157**, mb4.1**/35**, 44C-6D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.10	263	P	P	01 52 03.9	+0.1
	1.0nm,0.3s,baz=76,slow=17,SNR=11						
DZM	Mont Dzumac	14.10	263	*e*P	P	01 52 03.6	-0.3
OUZ	Omahuta	15.71	205	*e*P	P	01 52 21.2	+0.8
	11nm,0.7s						
MXZ	Matakaoa Point	16.64	189	*e*P	P	01 52 30.6	+0.5
	46nm,1.6s						
RAR	Rarotonga	17.41	94	P	P	01 52 37.3	-0.7
	2.4nm,0.3s,baz=249,slow=8.6,SNR=3.1						
URZ	Urewera	17.52	192	P	P	01 52 36.7	-2.1
	1.2nm,0.3s,baz=339,slow=2.8,SNR=11						
URZ	Urewera	17.52	192	*e*P	P	01 52 38.3	-0.4
	7.1nm,0.7s						
BKZ	Black Stump Fm	18.52	192	*e*P	P	01 52 48.5	+0.5
	24nm,1.6s						
THZ	Tophouse	21.86	198	*e*P	P	01 53 18.2	-0.1
	23nm,1.3s						
OXZ	Oxford	23.54	198	*e*P	P	01 53 34.5	+1.1
	46nm,1.3s						
RPZ	Rata Peaks	24.19	199	P	P	01 53 41.3	+2.3
	15nm,0.7s,baz=51,slow=14,SNR=7.5						
PMG	Port Moresby	35.09	284	P	P	01 55 13.3	-0.5
	19nm,0.9s,baz=127,slow=7.0,SNR=4.1						
STKA	Stephens Creek	37.16	245	P	P	01 55 30.8	0.0
	2.0nm,0.9s,baz=103,slow=7.0,SNR=3.5						
STKA				PcP	PcP	01 57 38.5	+0.6
	1.1nm,0.4s,baz=315,slow=4.3,SNR=3.7						
ASAR	Alice Springs	43.98	257	P	P	01 56 24.9	-0.7
	3.0nm,0.8s,baz=96,slow=7.8,SNR=27						
ASAR				PcP	PcP	01 58 00.8	+0.2
	5.0nm,0.6s,baz=100,slow=4.2,SNR=26						
ASAR				ScP	ScP	02 01 08.3	+3.8
	0.7nm,0.7s,baz=94,slow=4.4,SNR=6.4						
WB2	Warramunga Arr	44.10	263	*e*P	P	01 56 24.9	-1.6
	34nm,1.9s						
WRA	Warramunga Arr	44.12	263	P	P	01 56 25.4	-1.2
	1.9nm,0.3s,baz=92,slow=7.8,SNR=12						
VNDA	Vanda	57.27	185	P	P	01 58 01.7	-0.1
	0.4nm,0.5s,baz=333,slow=6.8,SNR=4.4						
MJAR	Matsushiro Arr	70.45	324	P	P	01 59 25.6	-1.0
	3.8nm,0.8s,baz=159,slow=6.8,SNR=7.9						
ASAJ	Asahikawa	74.06	332	P	P	01 59 48.3	+1.0
	6.3nm,0.5s,baz=242,slow=8.1,SNR=5.0						
PETK	Petropavlovsk-	76.75	345	P	P	02 00 01.3	-0.8
	3.4nm,0.7s,baz=133,slow=8.3,SNR=9.3						
KSRS	Korea Array	77.07	319	P	P	02 00 05.0	+0.8
	2.0nm,0.8s,baz=118,slow=5.6,SNR=5.3						
USRK	Ussuriysk Ar.	79.23	326	P	P	02 00 16.5	+0.8
	2.6nm,0.6s,baz=100,slow=4.4,SNR=7.2						
NVAR	Mina Array Bea	81.74	43	P	P	02 00 29.4	+0.2
	1.6nm,0.7s,baz=224,slow=9.2,SNR=14						
KVN	Kaiserville	82.23	43	*e*P	P	02 00 31.5	-0.1
	2.6nm,0.8s						
TPNV	Topopah Spring	82.26	46	*e*P	P	02 00 32.2	+0.4
	3.1nm,0.9s						
MOD	Modoc Plateau	82.54	40	*e*P	P	02 00 33.2	+0.1
	3.9nm,0.6s						
IPM	Ipoh	82.80	278	*e*P	P	02 00 35.2	+0.3
	17nm,0.8s						
PINE	Pine Mountain	83.31	38	*e*P	P	02 00 37.7	+0.7
	9.5nm,0.9s						
U15A	North Rim	84.67	48	*e*P	P	02 00 44.0	0.0
	2.6nm,0.7s						
GLI	Glacier Island	85.53	15	*e*P	P	02 00 46.6	-0.6
	15nm,0.8s						
TTA	Tatalina	85.61	10	*e*P	P	02 00 47.7	0.0
	5.2nm,1.0s						
BMO	Blue Mountains	86.04	39	*e*P	P	02 00 50.3	+0.1
	2.3nm,0.8s						
SCM	Sheep Creek Mo	86.32	14	*e*P	P	02 00 50.8	-0.2
	15nm,0.7s						
SNAA	Sanae	87.42	179	P	P	02 00 55.1	-1.2
VNA3	Neumayer Olymp	87.57	176	P	P	02 00 56.1	-0.8
MCK	McKinley	87.65	13	*e*P	P	02 00 56.6	-0.6
	8.9nm,0.8s						
TX31	Lajitas Ar. Si	87.72	57	*e*P	P	02 00 59.3	+0.8
	3.3nm,1.1s						
TXAR	Lajitas Array	87.72	57	P	P	02 00 59.2	+0.7
	2.0nm,1.1s,baz=211,slow=7.1,SNR=10						
HDA	Harding Lake	88.66	13	*e*P	P	02 01 00.8	-1.2
	9.9nm,0.6s						
COLA	College	88.88	13	*e*P	P	02 01 01.6	-1.3
	14nm,0.8s						
ILAR	Eielson Array	88.99	13	P	P	02 01 02.1	-1.3
	4.4nm,0.8s,baz=221,slow=5.6,SNR=39						
KMI	Kunming	89.26	297	P	P	02 01 04.5	-1.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
IMW	Indian Meadow	89.37	42	*e*P	P	02 01 06.2	+0.1
	comp=Z,2.5nm,0.8s						
PDAR	Pinedale Array	89.68	43	P	P	02 01 07.1	-0.4
	comp=Z,1.4nm,0.7s,baz=224,slow=3.1,SNR=13						
CMAR	Chiang Mai Arr	89.93	290	P	P	02 01 10.4	+1.5
	comp=Z,1.7nm,0.4s,baz=124,slow=3.6,SNR=8.9						
ZALV	Zalesovo Beam	110.70	321	PKiKP	PKiKP	02 06 36.5	-1.6
	comp=Z,1.8nm,0.5s,baz=296,slow=0.3,SNR=6.4						
MKAR	Makanchi Array	111.31	313	PKiKP	PKiKP	02 06 38.2	-1.4
	comp=Z,0.8nm,0.4s,baz=103,slow=0.9,SNR=10.0						
KK31	Karatay Array	119.30	308	*e*PKPdf	PKPdf	02 06 54.3	-0.8
KKAR	Karatay Array	119.30	308	*e*PKPdf	PKPdf	02 06 53.9	-1.1
ARU	Arti	125.46	325	*e*PKPdf	PKPdf	02 07 05.8	-0.7
ABKAR	Akbulak array	126.24	316	*e*PKPdf	PKPdf	02 07 07.5	-0.6
GEYT	Alibeck	128.76	302	PKP	PKPdf	02 07 12.8	-0.6
	comp=Z,4.5nm,0.5s,baz=127,slow=3.8,SNR=5.0						
ARCES	ARCESS Array B	129.44	349	PKP	PKPdf	02 07 12.8	-0.8
	comp=Z,3.3nm,0.6s,baz=48,slow=1.8,SNR=22						
FINES	FINESS Array B	136.23	343	PKP	PKPdf	02 07 25.5	-1.1
	comp=Z,4.8nm,0.9s,baz=64,slow=3.2,SNR=6.3						
NB2	NORSAR Subarra	139.53	353	PKP	PKPdf	02 07 25.1	-7.7
	comp=Z,0.8nm,0.6s,baz=12,slow=3.3						
NOA	NORSAR Array B	139.53	353	PKhKP	PKPpre	02 07 25.4	
	comp=Z,1.2nm,0.6s,baz=8.2,slow=2.3,SNR=7.6						
NOA				PKP	PKPdf	02 07 34.3	+1.5
	comp=Z,1.0nm,0.5s,baz=15,slow=3.8,SNR=6.2						
SUW	Suwalki	143.25	339	*e*PKP	PKPab	02 07 37.2	-0.1
AKASG	Malin Array Be	143.34	330	PKhKP	PKPpre	02 07 36.8	
	comp=Z,12nm,0.5s,baz=46,slow=4.4,SNR=76						
GKP	Gorka Klasztor	145.71	343	*e*PKP	PKPdf	02 07 44.8	+1.1
BR131	Keskin Array S	146.94	311	*e*PKPbc	PKPdf	02 07 48.2	+1.7
BRTR	Keskin Array B	146.94	311	PKPbc	PKPdf	02 07 48.9	+2.3
	comp=Z,5.2nm,0.7s,baz=134,slow=4.6,SNR=31						
KWP	Kalwaria Pacla	146.95	335	*e*PKP	PKPbc	02 07 48.6	-0.2
BURAR	Bucovina Array	147.38	330	⇓*i*P	PKPbc	02 07 50.5	+0.3
BIZ	Bicaz	147.43	328	⇑*i*P	PKPbc	02 07 50.8	+0.6
ANTO	Ankara	147.46	312	*e*PKPbc	PKPbc	02 07 50.5	-0.2
ANTO	Ankara	147.46	312	⇑*i*P	PKPbc	02 07 50.8	+0.2
CFR	Carcaliu	147.53	324	⇑*i*P	PKPbc	02 07 50.3	-0.2
OJC	Ojcow	147.57	338	*e*PKP	PKPbc	02 07 49.9	-0.5
KOLS	Kolonicke sedl	147.68	334	*e*PKP	PKPbc	02 07 51.1	+0.3
TIRR	Tirgusor	147.82	323	*e*PKPbc	PKPdf	02 07 50.0	+2.4
TIRR	Tirgusor	147.82	323	⇓*i*P	PKPbc	02 07 50.7	-0.6
VRI	Vrincioaia	147.84	326	⇑*i*P	PKPbc	02 07 51.1	-0.2
PLOR	Plostina	147.89	326	⇑*i*P	PKPbc	02 07 51.1	-0.4
HARR	Harsova	147.95	323	⇑*i*P	PKPbc	02 07 51.8	+0.2
TLB	Topalu	147.96	323	⇓*i*P	PKPbc	02 07 51.5	-0.1
MFTR	Murfatlar	147.99	322	⇑*i*P	PKPbc	02 07 52.1	+0.4
NIE	Niedzica	148.06	337	*e*PKP	PKPbc	02 07 52.2	+0.4
MANR	Mangalia	148.11	321	⇑*i*P	PKPbc	02 07 52.5	+0.5
KSP	Ksiaz	148.14	342	*e*PKP	PKPbc	02 07 52.0	+0.1
OZUR		148.17	327	⇑*i*P	PKPbc	02 07 52.5	+0.3
TRPA	Tarpa	148.19	333	⇑*i*P	PKPbc	02 07 52.0	-0.1
OSTC	Ostas	148.42	342	⇑*e*PKP	PKPbc	02 07 52.8	+0.2
OSTC				*e*PKPAB	PKPab	02 07 57.1	-0.7
CHVC	Chvalec	148.44	342	⇑*e*PKP	PKPbc	02 07 52.7	0.0
DOPR	Dopca	148.46	327	⇑*i*P	PKPbc	02 07 53.4	+0.5
MLR	Muntele Rosu	148.50	326	*e*PKPbc	PKPbc	02 07 52.4	-0.8
MLR	Muntele Rosu	148.50	326	⇑*i*P	PKPbc	02 07 52.8	-0.4
UPC	Upice	148.52	342	⇑*e*PKP	PKPbc	02 07 52.8	-0.1
UPC				*e*PKPAB	PKPab	02 07 58.3	+0.1
CLL	Collm	148.55	346	⇓*i*PKPbc	PKPbc	02 07 52.4	-0.5
	comp=Z,18nm,0.8s						
CLL				⇑*i*PKPab	PKPab	02 07 57.5	-0.8
	comp=Z,9.0nm,0.8s						
CLL				*i*		02 08 11.8	
CLL				*e*pPKPab	pPKPab	02 09 53.0	+1.5
DPC	Dobruska-Polom	148.57	342	⇑*e*PKP	PKPbc	02 07 52.5	-0.6
DPC				*e*PKPAB	PKPab	02 08 00.9	+2.4
LANS	Liptovska Anna	148.58	337	*e*PKP	PKPbc	02 07 53.9	+0.8
MORC	Moravsky Berou	148.70	340	*e*PKPbc	PKPbc	02 07 52.9	-0.5
MORC	Moravsky Berou	148.70	340	⇑*i*P	PKPbc	02 07 53.6	+0.2
MORC	Moravsky Berou	148.70	340	*e*PKP	PKPbc	02 07 53.1	-0.3
BRG	Berggiesshubel	148.74	345	*e*PKP	PKPdf	02 07 48.4	-0.5
	comp=Z,6.6nm,1.7s						
BRG				*i*		02 07 53.1	
	comp=Z,7.4nm,0.7s						
BRG				*e*		02 07 58.8	
	comp=Z,3.4nm,0.7s						
SECR		148.74	325	⇑*i*P	PKPbc	02 07 53.1	-0.5
CSS	Mathiatis	148.89	303	*e*PKPbc	PKPdf	02 07 52.9	+3.2
PVCC	Panska Ves	148.90	344	⇑*e*PKP	PKPbc	02 07 54.0	+0.2
PVCC				*e*PKPAB	PKPab	02 08 00.2	+0.5
WTSB	Winterswijk	148.93	354	*e*PKP	PKPdf	02 07 52.5	+3.4
	comp=Z,23nm,0.6s						
VOIR		149.00	327	⇑*i*P	PKPbc	02 07 54.1	-0.2
LEF	Lefka	149.19	304	⇑*i*P	PKPbc	02 07 54.9	-0.1
ARR	Arges	149.26	327	⇑*i*P	PKPbc	02 07 55.6	+0.7
VYHS	Vyhne	149.36	337	*e*PKP	PKPbc	02 07 54.8	-0.2
VYHS				*e*		02 08 02.0	
PRU	Pruhonice	149.40	343	⇑*e*PKP	PKPbc	02 07 54.6	-0.4
PRU				*e*PKPAB	PKPab	02 08 01.7	-0.1
GOPC	GO Pecny, Ondr	149.40	343	⇑*e*PKP	PKPbc	02 07 54.3	-0.8
GOPC				*e*PKPAB	PKPab	02 08 01.4	-0.4
VRAC	Vranov	149.41	341	⇑*i*P	PKPbc	02 07 55.6	+0.5
VRAC	Vranov	149.41	341	*e*PKP	PKPbc	02 07 54.6	-0.5
RAZG	Razgrad	149.46	323	⇑*i*P	PKPbc	02 07 55.1	-0.3
JAVC	Velka Javorina	149.46	339	*e*PKP	PKPbc	02 07 56.1	+0.8
LOT	Lotru	149.63	328	⇑*i*P	PKPbc	02 07 55.2	-0.7
NKC	Novy Kostel	149.68	346	⇑*e*PKP	PKPbc	02 07 55.8	+0.1
KRUC	Moravsky	149.69	341	*e*PKP	PKPbc	02 07 55.2	-0.6
TREC	Trest	149.76	342	⇑*e*PKP	PKPbc	02 07 55.2	-0.7
MODS	Modra-Piesok	150.01	339	*e*PKP	PKPbc	02 07 56.0	-0.6
MODS				*e*		02 08 04.8	
SIRR	Siria	150.01	332	⇑*i*P	PKPbc	02 07 56.7	+0.1
GZR	Gura Zlata	150.15	329	⇑*i*P	PKPbc	02 07 56.0	-1.0
ELND	Elena	150.22	322	⇑*i*P	PKPbc	02 07 57.3	+0.1
MEM	Membach	150.35	354	⇑PKPbc	PKPbc	02 07 56.3	-0.9
KHC	Kasperske Hory	150.44	344	*e*PKPbc	PKPbc	02 07 56.9	-0.7
KHC	Kasperske Hory	150.44	344	⇑*e*PKP	PKPbc	02 07 57.4	-0.2
KHC				*e*PKPAB	PKPab	02 08 06.0	-0.2
BZS	Buzias	150.53	331	⇑*i*P	PKPbc	02 07 57.7	-0.1
SNF	Seneffe	150.58	356	⇑PKPbc	PKPbc	02 07 57.6	-0.1
SNF				⇑PKPab	PKPab	02 08 06.7	0.0
BCLA	Clavier	150.60	355	⇑PKPab	PKPab	02 08 05.7	-1.1
PLVB	Pleven	150.62	324	⇓*i*P	PKPbc	02 07 57.7	-0.4
GEC2	GERESS Array S	150.67	344	*e*PKPbc	PKPbc	02 07 57.5	-0.6
GERES	GERESS Array B	150.67	344	PKPbc	PKPbc	02 07 57.7	-0.4
	comp=Z,5.6nm,0.8s,baz=33,slow=2.5,SNR=48						
HERR	Herculane	150.70	329	⇑*i*P	PKPbc	02 07 58.0	-0.2
CONA	Conrad Observa	150.86	340	*i* PKiKP	PKPbc	02 07 58.6	-0.1
	comp=Z,6.9nm,0.6s,SNR=7.7						
DOU	Dourbes	150.97	356	⇓PKPbc	PKPbc	02 07 58.2	-0.5
MDVR	Moldovita	151.11	329	⇑*i*P	PKPbc	02 07 59.0	-0.3
WLF	Walferdange	151.27	354	*e*PKPbc	PKPbc	02 07 59.3	-0.1
WLF	Walferdange	151.27	354	⇑PKPbc	PKPbc	02 07 59.6	+0.2
MOA	Molln	151.42	342	*i* PKiKP	PKPbc	02 07 59.0	-0.8
	comp=Z,3.0nm,0.5s						
EZN	Ezine	151.80	317	⇑*i*P	PKPbc	02 08 00.3	-0.6
VTS	Vitosha	151.89	325	⇑*i*P	PKPbc	02 08 00.6	-0.6
SOKA	Soboth	152.23	340	*i* PKPbc	PKPbc	02 08 00.7	-1.0
	comp=Z,4.6nm,0.9s						
BFO	Black Forest	152.30	350	*e*PKPbc	PKPbc	02 08 01.1	-0.6
KBA	Koelnbreinsper	152.38	342	*i* PKiKP	PKPbc	02 08 01.6	-0.6
	comp=Z,3.8nm,0.8s						
OBKA	Obir	152.53	340	*i* PKPbc	PKPbc	02 08 00.4	-2.0
	comp=Z,4.2nm,0.8s						
RETA	Reutte	152.65	346	*i* PKiKP	PKPbc	02 08 01.9	-0.7
	comp=Z,2.0nm,0.6s						
WTTA	Wattenberg	152.66	345	*i* PKiKP	PKPbc	02 08 02.2	-0.6
	comp=Z,8.5nm,0.6s,SNR=6.7						
MYKA	Terra Mystica	152.70	342	*i* PKPbc	PKPbc	02 08 01.3	-1.4
	comp=Z,3.1nm,0.5s						
MOTA	Moosalm	152.70	346	*i* PKiKP	PKPbc	02 08 02.6	-0.3
	comp=Z,5.8nm,1.0s,SNR=5.0						
SQTA	Sankt Quirin	152.80	346	*i* PKiKP	PKPbc	02 08 02.5	-0.5
	comp=Z,4.4nm,0.6s						
ABTA	Abfaltersbach	152.91	343	*i* PKPbc	PKPbc	02 08 02.1	-1.1
	comp=Z,6.1nm,0.6s,SNR=5.4						
FETA	Feichten	153.09	346	*i* PKiKP	PKPbc	02 08 03.3	-0.4
	comp=Z,3.3nm,0.7s						
TUE	Stuetta	153.91	348	*e*PKPbc	PKPbc	02 08 04.8	-0.7
ESDC	Sonseca Array	160.90	13	PKPab	PKPab	02 08 51.3	-0.1
	comp=Z,0.1nm,0.3s,baz=341,slow=3.6,SNR=5.8						

ISCJB ***20*** *01:59:50.5±0.4, 1°.96N±0°.08×30°.62W±0°.06, h10km, mb4.5/68, MS3.9/23, Error ellipse: s-maj=12.3km s-min=6.8km az=155.5*

IDC ***20*** *01:59:50.6±0.6, 2°.00N×30°.68W, h0km, mb4.1/21, mb1 4.3/22, mb1mx4.2/37, mbtmp4.1/22, ML4.1/1, MS3.9/23, Ms1 3.9/23, ms1mx3.8/29, Error ellipse: s-maj=21.5km s-min=12.9km az=143.0*

NEIC ***20*** *01:59:52.5±0.9, 2°.07N×30°.72W, h10km±2km, mb4.7/47, Error ellipse: s-maj=23.1km s-min=16.1km az=140.0*

ISC 20 01:59:52.2±0.5**, 2°.0N**±0°.1×**30°.65W**±0°.10**, h10**km**, n101, σ0s.75**/85**, mb4.6**/68**, MS3.9**/23**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	9.35	214	Pn	Pn	02 02 06.2	-0.9
	1.7nm,0.3s,baz=324,slow=0.3,SNR=3.4						
H10N3	ASCENSION HYDR	18.82	121	T	T	02 23 32.4	
	baz=300,slow=75,SNR=306						
H10N2	ASCENSION HYDR	18.83	121	T	T	02 23 38.7	
	baz=300,slow=75,SNR=296						
H10N1	ASCENSION HYDR	18.84	121	T	T	02 23 39.8	
	baz=300,slow=75,SNR=428						
H10S3	ASCENSION HYDR	19.27	124	T	T	02 24 09.8	
	baz=303,slow=74,SNR=90						
H10S1	ASCENSION HYDR	19.28	124	T	T	02 24 07.5	
	baz=303,slow=74,SNR=41						
H10S2	ASCENSION HYDR	19.29	124	T	T	02 24 19.1	
	baz=303,slow=74,SNR=80						
MDP	Montagnes des	22.17	279	P	P	02 04 49.6	+1.0
	3.2nm,0.9s,baz=73,slow=13,SNR=4.2						
MDP				LR	LR	02 12 13.6	
	comp=Z,291nm,20.1s,baz=106,slow=34						
BDFB	Brasilia	24.51	224	P	P	02 05 13.1	+0.9
	5.5nm,0.8s,baz=63,slow=7.5,SNR=5.0						
BDFB				LR	LR	02 13 48.4	
	comp=Z,415nm,19.6s,baz=98,slow=34						
DBIC	Dimbokro	26.13	79	LR	LR	02 13 38.3	
	comp=Z,344nm,19.9s,baz=237,slow=32						
PTGA	Pitinga	29.43	265	LR	LR	02 15 57.1	
	comp=Z,149nm,21.0s,baz=86,slow=33						
TOA1	Torodi Ar. Sit	33.88	69	*e*P	P	02 06 34.9	-0.6
TORD	Torodi Ar. Bea	33.88	69	P	P	02 06 34.9	-0.6
	2.0nm,0.7s,baz=254,slow=8.7,SNR=12						
TORD				LR	LR	02 18 22.5	
	comp=Z,462nm,20.5s,baz=295,slow=33						
CPUP	Villa Florida	38.15	221	P	P	02 07 12.6	+0.7
	3.1nm,0.8s,baz=51,slow=6.3,SNR=7.0						
CPUP				LR	LR	02 22 40.8	
	comp=Z,378nm,18.5s,baz=88,slow=36						
CPUP	Villa Florida	38.15	221	*e*P	P	02 07 12.6	+0.7
	31nm,1.4s						
MDT	Midelt	39.24	36	P	P	02 07 22.4	+1.3
	2.0nm,0.8s,baz=234,slow=8.2,SNR=3.6						
TAM	Tamanrasset	40.74	57	*e*P	P	02 07 33.8	0.0
	13nm,1.5s						
LPAZ	La Paz	41.22	242	P	P	02 07 38.1	-0.3
	1.2nm,0.7s,baz=67,slow=3.8,SNR=5.2						
LPAZ				LR	LR	02 24 37.7	
	comp=Z,559nm,18.3s,baz=64,slow=36						
LPAZ	La Paz	41.22	242	*e*P	P	02 07 38.1	-0.3
	13nm,1.5s						
ROSC	El Rosal	43.68	275	P	P	02 07 58.4	+0.2
	5.8nm,0.3s,baz=93,slow=17,SNR=7.9						
ROSC				LR	LR	02 26 17.6	
	comp=Z,312nm,18.7s,baz=76,slow=36						
ROSC	El Rosal	43.68	275	*e*P	P	02 08 00.6	+2.4
	57nm,1.6s						
ESDC	Sonseca Array	44.70	30	P	P	02 08 05.4	-0.2
	2.0nm,0.9s,baz=224,slow=9.4,SNR=7.5						
ESDC				LR	LR	02 23 33.4	
	comp=Z,62nm,21.1s,baz=150,slow=32						
KEST	Kesra	50.00	43	LR	LR	02 29 13.5	
	comp=Z,237nm,21.1s,baz=215,slow=35						
TSUM	Tsumeb	51.83	116	LR	LR	02 26 14.8	
	comp=Z,128nm,21.4s,baz=307,slow=30						
BNI	Bardonecchia	54.03	32	*e*P	P	02 09 17.5	+0.5
	10nm,1.2s						
PLCA	Paso Flores	55.91	216	LR	LR	02 31 35.6	
	comp=Z,420nm,18.9s,baz=153,slow=34						
DAVA	Damuels	57.17	32	*i* P	P	02 09 39.9	+0.3
	6.3nm,1.2s						
FETA	Feichten	57.46	32	*i* P	P	02 09 41.7	+0.1
	5.2nm,0.8s						
RETA	Reutte	57.77	32	*i* P	P	02 09 43.6	-0.1
	7.8nm,1.5s						
SQTA	Sankt Quirin	57.84	32	*i* P	P	02 09 44.3	+0.1
	11nm,1.5s						
MOTA	Moosalm	57.86	32	*i* P	P	02 09 45.2	+0.8
	2.9nm,0.9s						
ABTA	Abfaltersbach	58.26	34	*i* P	P	02 09 48.0	+0.8
	7.4nm,1.2s						
MYKA	Terra Mystica	58.82	34	*i* pP	P	02 09 52.9	+1.9
	3.6nm,1.1s						
SUR	Sutherland	59.42	130	LR	LR	02 30 37.4	
	comp=Z,107nm,18.2s,baz=294,slow=31						
SOKA	Soboth	59.64	35	*i* P	P	02 09 57.4	+0.7
	7.5nm,1.3s						
GEC2	GERESS Array S	60.16	32	*e*P	P	02 10 00.3	+0.1
	6.8nm,1.5s						
GERES	GERESS Array B	60.16	32	P	P	02 10 01.7	+1.4
	0.5nm,0.8s,baz=244,slow=4.3,SNR=4.5						
SCHQ	Schefferville	60.37	337	LR	LR	02 32 28.2	
	comp=Z,34nm,20.6s,baz=3.5,slow=32						
LBTB	Lobatse	60.69	120	LR	LR	02 32 07.8	
	comp=Z,77nm,19.6s,baz=262,slow=32						
BOSA	Boshof	61.55	124	P	P	02 10 09.4	-0.8
	4.0nm,1.0s,baz=311,slow=11,SNR=3.2						
BOSA				LR	LR	02 33 13.4	
	comp=Z,67nm,18.1s,baz=244,slow=32						
PSZ	Piszkesteto	63.10	36	*e*P	P	02 10 20.3	+0.2
	9.8nm,1.0s						
MLR	Muntele Rosu	65.72	40	*e*P	P	02 10 37.6	+0.2
	16nm,1.2s						
NB2	NORSAR Subarra	66.92	21	P	P	02 10 44.4	-0.3
	comp=Z,16nm,1.7s,baz=226,slow=6.5						
NB200	NORSAR Array S	66.92	21	*e*P	P	02 10 44.8	+0.1
NOA	NORSAR Array B	66.92	21	P	P	02 10 44.8	+0.1
	comp=Z,2.6nm,1.1s,baz=226,slow=6.0,SNR=3.0						
NOA				LR	LR	02 35 30.3	
	comp=Z,34nm,20.5s,baz=240,slow=32						
ANTO	Ankara	68.55	48	*e*P	P	02 10 56.1	+0.6
	comp=Z,11nm,1.1s						
BR101	Keskin Array S	69.14	48	*e*P	P	02 10 59.6	+0.4
BR131	Keskin Array S	69.14	48	*e*P	P	02 10 59.8	+0.6
	comp=Z,6.8nm,1.1s						
BRTR	Keskin Array B	69.14	48	P	P	02 10 59.6	+0.4
	comp=Z,2.1nm,1.0s,baz=232,slow=6.1,SNR=9.7						
BRTR				LR	LR	02 41 29.3	
	comp=Z,49nm,20.6s,baz=266,slow=36						
AKASG	Malin Array Be	69.80	36	P	P	02 11 02.6	-0.2
	comp=Z,0.4nm,0.4s,baz=247,slow=7.1,SNR=8.3						
AKBB	Malin Array Si	69.80	36	*e*P	P	02 11 02.9	0.0
	comp=Z,13nm,1.4s						
JCT	Junction City	71.08	301	*e*P	P	02 11 11.1	-0.1
	comp=Z,14nm,1.5s						
BGNE	Belgrade	71.93	313	*e*P	P	02 11 14.8	-1.3
	comp=Z,26nm,1.1s						
FIA0	FINESS Array S	72.94	25	*e*P	P	02 11 21.1	-0.5
FINES	FINESS Array B	72.94	25	P	P	02 11 21.1	-0.5
	comp=Z,5.4nm,1.0s,baz=204,slow=13,SNR=4.6						
FINES				LR	LR	02 39 20.2	
	comp=Z,69nm,21.5s,baz=256,slow=32						
AMTX	Amarillo	73.36	306	*e*P	P	02 11 24.0	-0.7
	comp=Z,21nm,1.7s						
MSTX	Muleshoe	74.10	305	*e*P	P	02 11 28.8	-0.4
	comp=Z,37nm,2.0s						
LTX	Lajitas	74.25	300	*e*P	P	02 11 29.7	-0.4
TXAR	Lajitas Array	74.25	300	P	P	02 11 29.7	-0.4
	comp=Z,0.6nm,0.8s,baz=115,slow=6.8,SNR=7.8						
TXAR				LR	LR	02 41 59.0	
	comp=Z,23nm,21.7s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	74.25	300	*e*P	P	02 11 29.8	-0.3
	comp=Z,3.0nm,1.1s						
SNAA	Sanae	75.68	171	P	P	02 11 37.9	+0.4
	comp=Z,0.9nm,0.8s,baz=307,slow=6.5,SNR=5.1						
SNAA	Sanae	75.68	171	*e*P	P	02 11 37.9	+0.4
	comp=Z,9.9nm,1.5s						
MNTX	Cornudas Mount	75.99	302	*e*P	P	02 11 39.4	-0.6
	comp=Z,11nm,1.8s						
KBZ	Khabaz	76.78	46	P	P	02 11 45.4	+1.2
	comp=Z,3.6nm,0.9s,baz=223,slow=5.8,SNR=3.6						
KBZ				LR	LR	02 48 20.8	
	comp=Z,26nm,19.0s,baz=214,slow=38						
SDCO	Great Sand Dun	76.83	308	*e*P	P	02 11 45.5	+0.5
	comp=Z,7.5nm,1.7s						
ARCES	ARCESS Array B	76.84	17	LR	LR	02 42 02.9	
	comp=Z,35nm,19.4s,baz=282,slow=33						
PD31	Pinedale Array	80.53	313	*e*P	P	02 12 03.5	-1.7
PDAR	Pinedale Array	80.53	313	P	P	02 12 03.5	-1.7
	comp=Z,0.6nm,0.6s,baz=96,slow=7.4,SNR=3.7						
SRU	San Rafael Swe	80.91	309	*e*P	P	02 12 07.0	-0.2
	comp=Z,8.2nm,1.4s						
P17A	Butcher Ranch,	81.10	309	*e*P	P	02 12 08.6	+0.3
	comp=Z,17nm,1.9s						
X16A	Lo Mia Camp, P	81.29	304	*e*P	P	02 12 08.9	-0.6
	comp=Z,3.7nm,1.3s						
WUAZ	Wupatki	81.31	305	*e*P	P	02 12 09.1	-0.3
	comp=Z,24nm,1.9s						
AHID	Auburn Hatcher	81.66	313	*e*P	P	02 12 10.9	-0.3
	comp=Z,5.6nm,1.1s						
HWUT	Hardware Ranch	81.90	312	*e*P	P	02 12 11.3	-1.1
	comp=Z,7.7nm,1.3s						
MTPU	Mount Pierson	82.12	308	*e*P	P	02 12 14.1	+0.1
	comp=Z,22nm,1.8s						
SZCU	Shurtz Canyon	82.81	307	*e*P	P	02 12 17.2	-0.2
	comp=Z,22nm,1.7s						
BGU	Big Grassy Mou	82.96	311	*e*P	P	02 12 17.9	0.0
	comp=Z,6.2nm,1.4s						
CCUT	Cedar City	83.03	307	*e*P	P	02 12 17.8	-0.7
	comp=Z,10nm,1.6s						
GLA	Glamis	84.05	303	*e*P	P	02 12 23.6	0.0
	comp=Z,7.1nm,0.8s						
WALA	Waterton Lakes	84.10	319	*e*P	P	02 12 23.1	-0.6
	comp=Z,16nm,1.4s						
ELK	Elko	84.62	311	*e*P	P	02 12 25.9	-0.7
	comp=Z,6.7nm,1.5s						
R11A	Troy Canyon, C	84.81	308	*e*P	P	02 12 27.4	-0.1
	comp=Z,4.6nm,1.4s						
YKA	Yellowknife Ar	85.47	332	P	P	02 12 28.5	-1.5
	comp=Z,1.4nm,0.8s,baz=94,slow=5.4,SNR=11						
YKB5	Yellowknife Ar	85.47	332	*e*P	P	02 12 28.6	-1.5
YKW3	Yellowknife Ar	85.48	332	*e*P	P	02 12 28.9	-1.1
	comp=Z,10nm,1.3s						
BMN	Battle Mountai	86.12	310	*e*P	P	02 12 33.7	-0.3
	comp=Z,8.7nm,1.4s						
BMO	Blue Mountains	86.25	315	*e*P	P	02 12 34.0	-0.5
	comp=Z,23nm,1.7s						
KVN	Kaiserville	86.79	309	*e*P	P	02 12 36.6	-0.8
	comp=Z,3.8nm,1.2s						
NV01	Mina Array Sit	86.95	308	*e*P	P	02 12 38.0	-0.2
NVAR	Mina Array Bea	86.95	308	P	P	02 12 38.0	-0.2
	comp=Z,0.8nm,0.7s,baz=95,slow=5.5,SNR=6.8						
J08A	Circle Bar Ran	87.08	313	*e*P	P	02 12 38.5	-0.1
	comp=Z,10nm,1.4s						
RYN	Ryan	87.12	308	*e*P	P	02 12 38.7	-0.3
	comp=Z,9.7nm,1.3s						
WVOR	Wild Horse Val	87.20	312	*e*P	P	02 12 39.0	-0.2
	comp=Z,25nm,1.6s						
GEYT	Alibeck	87.83	52	LR	LR	02 57 02.8	
	comp=Z,38nm,18.5s,baz=315,slow=39						
ARU	Arti	87.94	34	*e*P	P	02 12 42.6	+0.3
	comp=Z,20nm,1.5s						
PNTR	Pine Nut	87.96	309	*e*P	P	02 12 42.7	-0.3
	comp=Z,26nm,1.6s						
ABKAR	Akbulak array	88.92	41	*e*P	P	02 12 47.7	+0.7
	comp=Z,11nm,1.6s						
DLBC	Dease Lake	93.25	329	*e*P	P	02 13 07.3	+0.2
	comp=Z,20nm,1.9s						
EPYK	Eagle Plains	94.61	337	*e*P	P	02 13 12.5	-0.7
	comp=Z,19nm,1.5s						
DAWY	Dawson	96.35	335	*e*P	P	02 13 20.3	-0.9
	comp=Z,6.3nm,1.4s						
ILAR	Eielson Array	99.13	337	P	Pdif	02 13 32.5	-1.1
	comp=Z,0.4nm,0.9s,baz=39,slow=4.6,SNR=3.7						

SJA ***20*** *02:06:02.6±0.4, 24°.16S×67°.13W, h205km±4km, ML2.7, MW3.2*

ISCJB ***20*** *02:06:04.3±1.0, 24°.15S±0°.04×67°.23W±0°.04, h180km±12km, Error ellipse: s-maj=7.9km s-min=4.5km az=29.0*

GUC ***20*** *02:06:06.0±0.6, 24°.09S×67°.64W, h207km±13km, ML3.8*

ISC 20 02:06:02.4±2.2**, 24°.16S**±0°.05×**67°.18W**±0°.04,

h206^{km}±20^{km},n21,σ1^{s}.21/36,11C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.63**	**110**	*e*P	**Pn**	**02 06 38.3**	**+0.3**
SLA				IAML		02 06 39.9	
	comp=Z,70nm,0.6s						
SLA				*e*S	**S**	**02 07 04.8**	**-0.5**
HJA	**Humahuaca**	**1.88**	**60**	*e*P	**Pn**	**02 06 41.3**	**+0.6**
HJA				IAML		02 06 42.6	
	comp=Z,38nm,0.5s						
AZAP	**Zapla**	**1.93**	**92**	*e*P	**Pn**	**02 06 41.3**	**+0.3**
AZAP				IAML		02 06 42.4	
	comp=Z,111nm,0.3s						
AZAP				*e*S	**S**	**02 07 10.0**	**-0.5**
LVC	**Limon Verde**	**2.21**	**314**	*e*P	**Pn**	**02 06 45.1**	**+1.0**
LVC				IAML		02 06 47.7	
	comp=Z,93nm,0.1s						
FSA	**Cafayete**	**2.23**	**151**	*e*P	**Pn**	**02 06 44.2**	**+0.3**
FSA				IAML		02 06 49.3	
	comp=Z,8.5nm,0.4s						
PB15	**IPOC Station P**	**2.30**	**294**⇑	*i*P	**Pn**	**02 06 45.7**	**+1.0**
PB15				*e*S	**S**	**02 07 15.8**	**-1.4**
GO02	**Mina Guanaco**	**2.41**	**245**⇑	*i*P	**Pn**	**02 06 47.2**	**+1.2**
GO02				*i* S	**S**	**02 07 19.4**	**-0.1**
GO02				IAML		02 07 20.4	
	comp=N,670nm,0.2s						
YJA	**Yavi**	**2.50**	**38**	*e*P	**Pn**	**02 06 48.4**	**+1.1**
YJA				IAML		02 06 49.7	
	comp=Z,4.4nm,0.3s						
YJA				*e*S	**S**	**02 07 21.7**	**+0.1**
PB06	**IPOC Station P**	**2.63**	**303**	*e*P	**Pn**	**02 06 49.3**	**+0.9**
PB06				*e*S	**S**	**02 07 24.0**	**+0.4**
PB06	**IPOC Station P**	**2.63**	**303**⇑	*i*P	**Pn**	**02 06 49.8**	**+1.5**
PB06				*i* S	**S**	**02 07 22.7**	**-0.9**
PB06				IAML		02 07 25.2	
	comp=N,170nm,0.1s						
PB09	**IPOC Station P**	**3.02**	**321**⇑	*i*P	**Pn**	**02 06 54.8**	**+1.9**
PB09				*i* S	**S**	**02 07 31.5**	**-0.2**
PB09				IAML		02 07 33.2	
	comp=E,132nm,0.4s						
PB05	**IPOC Station P**	**3.06**	**295**⇑	*i*P	**Pn**	**02 06 54.3**	**+1.1**
PB05				*i* S	**S**	**02 07 30.2**	**-2.2**
PB05				IAML		02 07 35.6	
	comp=N,75nm,0.3s						
AHML	**Horco Molle**	**3.10**	**148**	*e*P	**Pn**	**02 06 54.0**	**+0.5**
AHML				IAML		02 06 55.9	
	comp=Z,8.4nm,0.8s						
AHML				*e*S	**S**	**02 07 32.4**	**-0.9**
PB10	**IPOC Station P**	**3.15**	**281**	*e*P	**Pn**	**02 06 55.5**	**+1.3**
PB10	**IPOC Station P**	**3.15**	**281**⇑	*i*P	**Pn**	**02 06 55.6**	**+1.4**
PB10				*i* S	**S**	**02 07 32.2**	**-2.0**
PB03	**IPOC Station P**	**3.17**	**311**⇑	*i*P	**Pn**	**02 06 55.7**	**+1.2**
PB03				*i* S	**S**	**02 07 33.0**	**-1.8**
PB03				IAML		02 07 36.0	
	comp=E,193nm,0.2s						
PB04	**IPOC Station P**	**3.28**	**303**⇑	*i*P	**Pn**	**02 06 57.0**	**+1.2**
PB04				IAML		02 07 39.5	
	comp=N,143nm,0.4s						
PB07	**IPOC Station P**	**3.48**	**314**⇑	*i*P	**Pn**	**02 06 59.4**	**+1.2**
PB07				*i* S	**S**	**02 07 39.4**	**-2.0**
PB01	**IPOC Station P**	**3.76**	**325**⇑	*i*P	**Pn**	**02 07 02.6**	**+0.9**
PB01				*i* S	**S**	**02 07 46.1**	**-1.6**
PB02	**IPOC Station P**	**3.78**	**318**⇑	*i*P	**Pn**	**02 07 02.7**	**+0.9**
PB02				*e*S	**S**	**02 07 46.7**	**-1.2**
PB02				IAML		02 07 51.4	
	comp=E,202nm,0.3s						
PB11	**IPOC Station P**	**4.94**	**332**	*e*P	**Pn**	**02 07 16.4**	**0.0**

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*MOS **20** 02:12:55.5±1.3,51°.64N×142°.96E,h12^{km},mb4.3/11,Error ellipse: s-maj=12.9km s-min=6.9km az=85.3*

MOS Felt (III) at Nysh.

*SKHL **20** 02:12:55.5±0.1,51°.56N×142°.63E,h12^{km}±4^{km},mb5.0/8,Ms3.9/2,msh4.9/1*

SKHL Felt (III) at Nysh.

*IDC **20** 02:12:55.5±0.8,51°.57N×142°.90E,h0^{km},mb3.9/14,mb1 4.0/17,mb1mx3.9/38,mbtmp3.8/17,ML2.7/3,MS2.8/9,Ms1 2.8/9,ms1mx2.7/37,Error ellipse: s-maj=23.4km s-min=14.2km az=162.0*

*ISCJB **20** 02:12:58.3±0.8,51°.57N±0°.05×143°.14E±0°.06,h33^{km}±8^{km},mb4.0/26,MS2.9/3,Error ellipse: s-maj=8.1km s-min=5.7km az=158.0*

*NEIC **20** 02:13:00.9±1.6,51°.59N×142°.97E,h40^{km}±6^{km},mb4.3/9,Error ellipse: s-maj=14.6km s-min=4.9km az=154.0*

ISC 20 02:12:57.3±1.1,51°.54N±0°.02×142°.81E±0°.04,h14^{km}±7^{km},n79,σ1^{s}.59/91,mb4.0/26,MS2.6/3,1D,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.69**	**188**	*e*PN	**Pg**	**02 13 09.2**	**-1.5**
TYV				*e*S	**Sb**	**02 13 18.8**	**-1.6**
TYV				pmax	pmax		
	comp=Z,2µm,0.3s						
TYV				pmax	pmax		
	comp=Z,2µm,0.2s						
TYV				smax	smax		
	comp=E,4µm,0.3s						
TYV				smax	smax		
	comp=N,5µm,0.3s						
TYV	**Tymovskoe**	**0.69**	**188**	*e*Pg	**Pg**	**02 13 09.1**	**-1.6**
TYV				AMB	AMB	02 13 09.5	
	comp=N,2µm,0.2s						
TYV				pP	**Pn**	**02 13 12.0**	**-0.5**
TYV				*e*Sg	**Sb**	**02 13 18.7**	**-1.6**
TYV				A	A	02 13 19.6	
	comp=N,10µm,0.3s						
TYV				A	A	02 13 19.6	
	comp=N,6µm,0.3s						
OKH	**Okha**	**2.01**	**2**	*e*P	**Pb**	**02 13 31.9**	**-1.7**
OKH				AMB	AMB	02 13 33.3	
	comp=N,320nm,0.2s						
OKH				*e*Pg	**Pg**	**02 13 37.8**	**+2.0**
OKH				AMB	AMB	02 13 41.0	
	comp=N,460nm,0.4s						
OKH				*e*S	**Sb**	**02 13 58.0**	**-0.4**
OKH				*e*Sg	**Sg**	**02 14 07.5**	**+5.6**
OKH				A	A	02 14 09.2	
	comp=N,1µm,0.6s						
OKH				A	A	02 14 09.2	
	comp=N,2µm,0.6s						
NKL	**Nikolayevsk**	**2.07**	**322**	*e*PN	**Pg**	**02 13 34.0**	**-3.0**
NKL				*e*S	**Sg**	**02 14 03.0**	**-0.8**
NKL				pmax	pmax		
	comp=N,53nm,0.5s						
NKL				pmax	pmax		
	comp=E,280nm,0.5s						
NKL				pmax	pmax		
	comp=Z,95nm,0.5s						
NKL				pmax	pmax		
	comp=E,2µm,0.5s						
NKL	**Nikolayevsk**	**2.07**	**322**	*e*P	**Pn**	**02 13 29.4**	**-2.1**
NKL				*e*Pg	**Pg**	**02 13 35.0**	**-2.0**
NKL				AMB	AMB	02 13 37.4	
	comp=E,1µm,0.5s						
NKL				sP	Pb	02 13 39.3	+4.7
NKL				*e*Sg	**Sg**	**02 14 03.4**	**-0.4**
NKL				A	A	02 14 10.2	
	comp=E,4µm,0.5s						
NKL				A	A	02 14 10.2	
	comp=E,6µm,0.5s						
NKL				AMS	AMS	02 14 32.0	
	comp=E,7µm,7.0s						
NKL				AMS	AMS	02 14 32.0	
	comp=E,7µm,7.0s						
UGL	**Uglegorsk**	**2.51**	**191**	PN	**Pb**	**02 13 41.4**	**-0.7**
UGL				*e*S	**Sg**	**02 14 16.2**	**-1.8**
UGL				pmax	pmax		
	comp=Z,244nm,0.7s						
UGL				smax	smax		
	comp=E,2µm,2.0s						
UGL				smax	smax		
	comp=E,576nm,0.9s						
UGL	**Uglegorsk**	**2.51**	**191**	*e*P	**Pn**	**02 13 37.6**	**0.0**
UGL				*e*Pb	**Pb**	**02 13 40.9**	**-1.2**
UGL				*e*Pg	**Pg**	**02 13 45.9**	**+0.5**
UGL				AMB	AMB	02 13 49.3	
	comp=E,240nm,0.7s						
UGL				*e*Sg	**Sg**	**02 14 20.9**	**+2.9**
UGL				A	A	02 14 22.0	
	comp=E,2µm,2.0s						
UGL				A	A	02 14 25.1	
	comp=E,470nm,0.8s						
UGL				A	A	02 14 25.1	
	comp=E,600nm,0.8s						
UGL				AMS	AMS	02 16 00.9	
	comp=E,2µm,20.0s						
UGL				AMS	AMS	02 16 00.9	
	comp=E,2µm,20.0s						
GRNR	**Gornyy**	**4.09**	**262**	*e*PN	Pb	02 14 02.9	-6.1
GRNR				pmax	pmax		
	comp=Z,21nm,0.8s						
GRNR	**Gornyy**	**4.09**	**262**	*e*P	**Pn**	**02 13 57.8**	**-1.5**
GRNR				AMB	AMB	02 14 03.6	
	comp=Z,21nm,0.8s						
GRNR				*e*Pg	**Pg**	**02 14 14.5**	**-1.1**
GRNR				AMB	AMB	02 14 16.8	
	comp=Z,38nm,0.4s						
GRNR				*e*Sg	**Sg**	**02 15 07.0**	**-1.6**
YSS	**Yuzh-Sakhalins**	**4.59**	**180**	*e*Pn	**Pn**	**02 14 07.1**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.59**	**180**	*e*PN	**Pn**	**02 14 06.5**	**+0.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				MLR	MLR		
	comp=N,300nm,12.0s						
YSS				MLR	MLR		
	comp=Z,400nm,12.0s						
YSS	**Yuzh-Sakhalins**	**4.59**	**180**	*e*P	**Pn**	**02 14 07.3**	**+1.1**
YSS				AMB	AMB	02 14 09.6	
	comp=Z,30nm,0.5s						
EKMR	**Ekimchan**	**6.24**	**288**	*e*P	**Pn**	**02 14 29.5**	**+0.7**
EKMR				*e*Pg	**Pg**	**02 14 56.0**	**-0.6**
EKMR				AMB	AMB	02 14 58.5	
	comp=Z,6.0nm,0.6s						
EKMR				*e*Sg	Sg	02 16 21.6	+4.4
EKMR				A	A	02 16 30.9	
	comp=Z,16nm,0.9s						
EKMR				A	A	02 16 30.9	
	comp=Z,80nm,0.9s						
EKMR				A	A	02 16 30.9	
	comp=Z,28nm,0.9s						
ASAJ	**Asahikawa**	**7.43**	**181**	LR	LR	02 18 06.0	
	comp=Z,68nm,18.9s,baz=21,slow=42						
KLR	**Kul'dur**	**7.44**	**256**	Pn	**Pn**	**02 14 46.7**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=86,slow=12,SNR=4.3						
KLR				Lg	Lg	02 16 54.6	
	comp=Z,1.4nm,0.3s,baz=333,slow=23,SNR=10.0						
KLR				LR	LR	02 18 13.8	
	comp=Z,34nm,18.8s,baz=78,slow=42						
KLR	**Kul'dur**	**7.44**	**256**	*i* PN	**Pn**	**02 14 46.6**	**+1.4**
TEY	**Ternei**	**7.71**	**215**	*e*P	**Pn**	**02 14 50.9**	**+1.9**
TEY				AMB	AMB	02 14 52.1	
	comp=Z,2.0nm,0.4s						
BMKR	**Bomnak**	**8.97**	**296**	*e*Sg	**Sg**	**02 17 47.6**	**+2.7**
BMKR				A	A	02 17 55.9	
	comp=Z,11nm,0.4s						
MA2	**Magadan**	**9.22**	**26**	LR	LR	02 18 20.5	
	comp=Z,59nm,19.9s,baz=286,slow=35						
PEA1	**Petropavlovsk-**	**9.26**	**74**	*e*Pn	**Pn**	**02 15 09.3**	**-0.9**
PEA1				*e*Sn	**Sn**	**02 16 49.5**	**-4.5**
PETK	**Petropavlovsk-**	**9.26**	**74**	Pn	**Pn**	**02 15 09.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=172,slow=26,SNR=5.6						
PETK				Sn	**Sn**	**02 16 49.5**	**-4.5**
	comp=Z,0.3nm,0.3s,baz=197,slow=29,SNR=3.2						
PETK				LR	LR	02 19 16.9	
	comp=Z,32nm,19.1s,baz=174,slow=42						
ERM	**Erimo**	**9.54**	**178**	*i* PN	Pn	02 15 17.6	+3.6
KROS	**Kirovskiy**	**9.98**	**293**	*e*P	Pn	02 15 23.0	+3.0
KROS				AMB	AMB	02 15 24.8	
	comp=Z,3.0nm,0.4s						
KROS				*e*Sg		02 18 16.4	
KROS				A	A	02 18 22.1	
	comp=Z,5.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**10.32**	**229**	Pn	**Pn**	**02 15 26.2**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=34,slow=15,SNR=4.8						
MJA0	**Matsu Arr-Jizo**	**15.35**	**194**	*e*P	**P**	**02 16 39.2**	**+1.2**
MAJO	**Matsushiro**	**15.35**	**194**	*e*P	**P**	**02 16 39.2**	**+1.2**
MAJO	**Matsushiro**	**15.35**	**194**	*i* P	**P**	**02 16 37.2**	**-0.8**
MJAR	**Matsushiro Arr**	**15.35**	**194**	Pn	**P**	**02 16 39.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=4.7,slow=11,SNR=9.6						
MJAR				LR	LR	02 21 52.1	
	comp=Z,13nm,20.0s,baz=50,slow=35						
KSRS	**Korea Array**	**17.59**	**223**	P	**P**	**02 17 05.4**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=3.5						
KSRS				LR	LR	02 24 02.1	
	comp=Z,46nm,19.5s,baz=36,slow=38						
KS15	**Wonju Array Si**	**17.61**	**223**	*e*P	**P**	**02 17 05.5**	**+2.4**
	comp=Z,66nm,1.8s						
BILL	**Bilibino**	**20.09**	**26**	*i* P	Pn	02 17 30.3	-1.5
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
JNU	**Nakatsue**	**20.36**	**210**	LR	LR	02 24 57.4	
	comp=Z,27nm,19.1s,baz=11,slow=35						
TIXI	**Tiksi**	**21.12**	**348**	P	**P**	**02 17 41.8**	**+0.7**
	comp=Z,4.5nm,0.7s,baz=156,slow=9.9,SNR=5.5						
TIXI	**Tiksi**	**21.12**	**348**	*e*P	**P**	**02 17 41.4**	**+0.3**
	comp=Z,30nm,2.0s						
TIXI	**Tiksi**	**21.12**	**348**	*i* P	**P**	**02 17 40.6**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONA0	**Songino Array**	**23.68**	**275**	*e*P	**P**	**02 18 09.9**	**+1.5**
SONM	**Songino Array**	**23.68**	**275**	P	**P**	**02 18 09.9**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=69,slow=7.9,SNR=3.8						
ZALV	**Zalesovo Beam**	**34.34**	**297**	PcP	**PcP**	**02 22 19.5**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=96,slow=1.4,SNR=4.2						
KDAK	**Kodiak Island**	**36.59**	**54**	P	**P**	**02 20 02.5**	**+0.2**
	comp=Z,10nm,1.0s,baz=280,slow=11,SNR=4.0						
ILAR	**Eielson Array**	**37.26**	**42**	P	**P**	**02 20 08.6**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=290,slow=8.1,SNR=15						
ILB	**Eielson Array**	**37.26**	**42**	*e*P	**P**	**02 20 09.6**	**+1.5**
	comp=Z,2.3nm,0.8s						
FYU	**Fort Yukon**	**37.52**	**39**	*e*P	**P**	**02 20 10.4**	**+0.3**
	comp=Z,5.8nm,0.7s						
DOT	**Dot Lake**	**38.76**	**43**	*e*P	**P**	**02 20 19.7**	**-1.0**
MK32	**Makanchi Array**	**38.86**	**288**	*e*P	**P**	**02 20 22.8**	**+1.0**
MKAR	**Makanchi Array**	**38.86**	**288**	P	**P**	**02 20 22.8**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=57,slow=7.9,SNR=5.3						
MKAR	**Makanchi Array**	**38.86**	**288**	*e*P	**P**	**02 20 23.4**	**+1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**39.12**	**295**	*e*P	**P**	**02 20 24.7**	**+0.9**
	comp=Z,2.2nm,0.9s						
KURK	**Kurchatov**	**39.12**	**295**	*e*P	**P**	**02 20 24.7**	**+0.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EGAK	**Eagle**	**39.62**	**41**	*e*P	**P**	**02 20 27.6**	**-0.2**
	comp=Z,3.0nm,0.8s						
INK	**Inuvik**	**41.35**	**34**	LR	LR	02 42 13.6	
	comp=Z,41nm,18.2s,baz=58,slow=43						
BRVK	**Borovoye**	**42.61**	**302**	*i* P	**P**	**02 20 52.8**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	**Ala-Archa**	**45.78**	**287**	*i* P	**P**	**02 21 19.1**	**+0.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ARU	**Arti**	**46.83**	**311**	*d* *i*P	**P**	**02 21 25.3**	**-0.8**
ARU						02 23 13.2	
ARU				S	**S**	**02 28 16.3**	**+0.6**
ARU				SS	**SS**	**02 31 39.4**	**-2.2**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PRGR	**Permogore**	**49.54**	**321**	*e*P	**P**	**02 21 42.9**	**-4.0**
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ABKAR	**Akbulak array**	**50.14**	**302**	*e*P	**P**	**02 21 53.0**	**+1.3**
	comp=Z,8.1nm,1.8s						
YKA	**Yellowknife Ar**	**51.06**	**36**	P	**P**	**02 21 57.0**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=307,slow=7.5,SNR=4.1						
YKA				LR	LR	02 47 13.9	
	comp=Z,5.6nm,18.1s,baz=103,slow=40						
YKB5	**Yellowknife Ar**	**51.06**	**36**	*e*P	**P**	**02 21 57.0**	**-1.4**
FIA0	**FINESS Array S**	**56.63**	**329**	*e*P	**P**	**02 22 39.8**	**+0.6**
FIA0	**FINESS Array S**	**56.63**	**329**	*e*P	**P**	**02 22 39.8**	**+0.6**
FINES	**FINESS Array B**	**56.63**	**329**	P	**P**	**02 22 39.8**	**+0.6**
	comp=Z,4.5nm,0.6s,baz=55,slow=7.6,SNR=13						
OBN	**Obninsk**	**57.39**	**319**	*e*P	**P**	**02 22 45.0**	**+0.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NB200	**NORSAR Array S**	**61.28**	**335**	*e*P	**P**	**02 23 11.2**	**-0.3**
NOA	**NORSAR Array B**	**61.28**	**335**	P	**P**	**02 23 11.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=33,slow=6.3,SNR=2.6						
AKASG	**Malin Array Be**	**63.65**	**319**	P	**P**	**02 23 27.4**	**0.0**
	comp=Z,2.1nm,0.7s,baz=35,slow=6.9,SNR=4.7						
AKBB	**Malin Array Si**	**63.65**	**319**	*e*P	**P**	**02 23 27.4**	**0.0**
	comp=Z,2.8nm,0.7s						
AKBB	**Malin Array Si**	**63.65**	**319**	*e*P	**P**	**02 23 27.4**	**0.0**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NV01	**Mina Array Sit**	**65.94**	**58**	*e*P	**P**	**02 23 43.2**	**+0.3**
NVAR	**Mina Array Bea**	**65.94**	**58**	P	**P**	**02 23 43.2**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=335,slow=4.0,SNR=3.7						
CLL	**Collm**	**69.08**	**329**	*i* P	**P**	**02 24 02.7**	**+0.5**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	**Collm**	**69.08**	**329**	*i* P	**P**	**02 24 02.7**	**+0.5**
	comp=Z,4.0nm,1.0s						
BR101	**Keskin Array S**	**70.18**	**309**	*e*P	**P**	**02 24 10.4**	**+1.0**
BRTR	**Keskin Array B**	**70.18**	**309**	P	**P**	**02 24 10.4**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=48,slow=5.5,SNR=4.1						
BRTR	**Keskin Array B**	**70.18**	**309**	*e*P	**P**	**02 24 11.2**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**70.96**	**327**	P	**P**	**02 24 14.1**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=16,slow=5.4,SNR=3.9						
AS31	**Alice Springs**	**75.29**	**188**	*e*P	**P**	**02 24 39.9**	**+0.3**
	comp=Z,2.5nm,1.3s						
ASAR	**Alice Springs**	**75.29**	**188**	P	**P**	**02 24 39.9**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=2.4,slow=5.9,SNR=8.3						
LTX	**Lajitas**	**80.62**	**54**	*e*P	**P**	**02 25 10.3**	**+0.8**
LTX	**Lajitas**	**80.62**	**54**	*e*P	**P**	**02 25 10.3**	**+0.8**
TXAR	**Lajitas Array**	**80.62**	**54**	P	**P**	**02 25 10.3**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=274,slow=7.3,SNR=6.7						

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*ISCJB **20** 02:27:17.8±0.5,11°.03S±0°.06×165°.74E±0°.06,h35^{km},mb4.3/10,MS3.4/3,Error ellipse: s-maj=9.2km s-min=8.7km az=144.3*

*NEIC **20** 02:27:19.5±1.3,10°.91S×165°.72E,h35^{km}±3^{km},mb4.2/7,Error ellipse: s-maj=29.9km s-min=14.7km az=110.0*

*IDC **20** 02:27:21.8±3.6,10°.98S×165°.73E,h61^{km}±34^{km},mb3.7/4,mb1 4.2/6,mb1mx3.7/35,mbtmp4.3/6,ML4.7/2,MS3.5/5,Ms1 3.5/5,ms1mx3.2/24,Error ellipse: s-maj=28.4km s-min=20.5km az=46.0*

ISC 20 02:27:19.7±0.9,10°.94S±0°.09×165°.9E±0°.1,h35^{km},n25,σ1^{s}.14/17,mb4.2/10,MS3.5/3,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.00**	**284**	P	**Pn**	**02 28 48.3**	**+2.3**
	47nm,0.3s,baz=162,slow=8.4,SNR=4.5						
HNR				S	**Sn**	**02 29 52.5**	**-1.1**
	4.2nm,0.3s,baz=190,slow=23,SNR=2.1						
HNR				LR	LR	02 31 09.7	
	comp=Z,797nm,19.1s,baz=150,slow=39						
DZM	**Mont Dzumac**	**11.08**	**177**	P	**Pn**	**02 29 57.2**	**+1.3**
	2.3nm,0.3s,baz=322,slow=8.9,SNR=36						
DZM				S	**Sn**	**02 31 57.9**	**-0.8**
	0.3nm,0.3s,baz=170,slow=16,SNR=2.7						
DZM				LR	LR	02 33 59.3	
	comp=Z,118nm,19.4s,baz=358,slow=36						
CTA	**Charters Tower**	**20.94**	**242**	P	Pn	02 32 01.8	-0.6
	2.2nm,0.6s,baz=51,slow=13,SNR=3.3						
URZ	**Urewera**	**29.01**	**162**	LR	LR	02 42 36.9	
	comp=Z,141nm,18.0s,baz=20,slow=32						
H11S2	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	03 03 27.1	
	baz=181,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**29.26**	**2**	T	T	03 03 27.3	
	baz=181,slow=76,SNR=31						
H11S1	**WAKE ISLAND Hy**	**29.27**	**2**	T	T	03 03 28.4	
	baz=181,slow=76,SNR=57						
H11N1	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	03 04 58.6	
	baz=182,slow=76,SNR=44						
H11N3	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	03 04 59.1	
	baz=182,slow=76,SNR=34						
H11N2	**WAKE ISLAND Hy**	**30.50**	**2**	T	T	03 05 00.1	
	baz=182,slow=76,SNR=73						
STKA	**Stephens Creek**	**30.59**	**223**	LR	LR	02 44 23.3	
	comp=Z,115nm,18.7s,baz=26,slow=34						
WR1	**Warramunga Arr**	**31.62**	**250**	*e*P	**P**	**02 33 38.5**	**-1.1**
WRA	**Warramunga Arr**	**31.62**	**250**	P	**P**	**02 33 38.5**	**-1.1**
	1.1nm,0.7s,baz=72,slow=8.1,SNR=3.2						
GUMO	**Guam**	**32.05**	**319**	LR	LR	02 47 14.5	
	comp=Z,28nm,18.4s,baz=96,slow=37						
AS31	**Alice Springs**	**32.93**	**243**	*e*P	**P**	**02 33 49.5**	**-1.6**
	1.4nm,0.9s						
ASAR	**Alice Springs**	**32.93**	**243**	P	**P**	**02 33 49.5**	**-1.6**
	2.5nm,0.9s,baz=63,slow=11,SNR=9.7						
HDA	**Harding Lake**	**83.11**	**19**	*e*P	**P**	**02 39 41.0**	**-0.6**
	6.3nm,0.8s						
ILAR	**Eielson Array**	**83.38**	**18**	P	**P**	**02 39 42.1**	**-0.8**
	1.3nm,0.8s,baz=229,slow=6.4,SNR=15						
ILB	**Eielson Array**	**83.38**	**18**	*e*P	**P**	**02 39 42.1**	**-0.8**
	9.5nm,1.8s						
EGAK	**Eagle**	**85.24**	**20**	*e*P	**P**	**02 39 52.3**	**0.0**
	4.8nm,0.9s						
NV01	**Mina Array Sit**	**85.88**	**50**	*e*P	**P**	**02 39 56.0**	**-0.4**
NVAR	**Mina Array Bea**	**85.88**	**50**	P	**P**	**02 39 56.0**	**-0.4**
	0.7nm,0.7s,baz=242,slow=7.1,SNR=5.9						
NV11	**Mina Array Sit**	**85.99**	**50**	*e*P	**P**	**02 39 57.2**	**+0.4**
	0.8nm,1.6s						
U15A	**North Rim**	**89.96**	**53**	*e*P	**P**	**02 40 16.3**	**+0.2**
	3.4nm,1.1s						
MTPU	**Mount Pierson**	**90.42**	**51**	*e*P	**P**	**02 40 18.7**	**+0.4**
	8.7nm,1.7s						

WEL 20 02:32:21.2±1.5,36°S±13°×17°8E±1°4,h225^{km}±9^{km},M3.2/25,ML3.5/7,MLv3.2/25,Error ellipse: s-maj=0.0km s-min=0.0km az=48.7,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.65**	**168**	P	Pn	02 32 58.3	-0.1
MXZ				S	S	02 33 27.3	-0.1
HAZ	**Te Kaha**	**1.81**	**183**	P	Pn	02 33 00.2	+0.4
HAZ				S	S	02 33 30.6	+0.6
WMGZ	**Waiomatatini S**	**1.92**	**167**	P	Pn	02 33 01.0	+0.3
WMGZ				S	S	02 33 31.6	-0.1
KUZ	**Kuaotunu**	**1.92**	**245**	P	Pn	02 33 01.2	+0.4
PKGZ	**Pakihiroa**	**1.95**	**176**	P	Pn	02 33 01.4	+0.3
PKGZ				S	S	02 33 32.6	+0.2
GRZ	**Great Barrier**	**1.99**	**260**	P	Pn	02 33 01.2	-0.3
RUGZ	**Raukumara Rang**	**2.02**	**185**	P	Pn	02 33 01.7	-0.2
PUZ	**Puketiti**	**2.15**	**172**	P	Pn	02 33 02.9	-0.1
PUZ				S	S	02 33 36.2	+0.5
TWGZ	**Tauwhareparae**	**2.23**	**178**	P	Pn	02 33 04.8	+0.9
TWGZ				S	S	02 33 38.7	+1.4
WIAZ	**Waiheke Island**	**2.38**	**248**	P	Pn	02 33 05.9	+0.6
URZ	**Urewera**	**2.39**	**195**	P	Pn	02 33 05.9	+0.4
MWZ	**Matawai**	**2.40**	**187**	P	Pn	02 33 05.8	+0.2
TKGZ	**Te Karaka**	**2.49**	**181**	P	Pn	02 33 06.8	+0.3
RAGZ	**Rawiri**	**2.58**	**188**	P	Pn	02 33 08.3	+0.8
MUGZ	**Murupara**	**2.68**	**199**	P	Pn	02 33 09.1	+0.5
RIGZ	**Rimuhau**	**2.76**	**182**	P	Pn	02 33 09.5	+0.1
RTZ	**Ruatahuna**	**2.76**	**195**	P	Pn	02 33 09.4	-0.1
SNGZ	**Shannon Statio**	**2.87**	**189**	P	Pn	02 33 10.8	+0.1
WCZ	**Waipu Caves**	**2.88**	**269**	P	Pn	02 33 10.3	-0.4
MTHZ	**Maungataniwha**	**3.02**	**196**	P	Pn	02 33 12.4	0.0
RAHZ	**Arahi**	**3.04**	**192**	P	Pn	02 33 12.6	0.0
KNZ	**Kokohu**	**3.08**	**183**	P	Pn	02 33 12.6	-0.3
MHGZ	**Mahia Peninsul**	**3.20**	**180**	P	Pn	02 33 14.4	0.0
ARHZ	**Aropaoanui**	**3.39**	**192**	P	Pn	02 33 16.3	-0.2
BKZ	**Black Stump Fm**	**3.40**	**199**	P	Pn	02 33 16.4	-0.4
MCHZ	**McNeill Hill**	**3.62**	**195**	P	Pn	02 33 19.5	+0.2
KWHZ	**Kaweka Forest**	**3.66**	**198**	P	Pn	02 33 19.3	-0.6
CKHZ	**Cape Kidnapper**	**3.76**	**190**	P	Pn	02 33 20.5	-0.5
KAHZ	**Kahuranaki**	**3.93**	**191**	P	Pn	02 33 22.6	-0.4

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*ISCJB **20** 02:38:23.4±0.3,0°.15N±0°.03×127°.40E±0°.05,h131^{km},mb4.3/17,Error ellipse: s-maj=6.4km s-min=4.0km az=179.3*

*NEIC **20** 02:38:26.4±1.3,0°.03N×127°.45E,h158^{km}±10^{km},mb4.3/8,Error ellipse: s-maj=17.7km s-min=11.3km az=106.0*

*IDC **20** 02:38:26.6±2.1,0°.04N×127°.33E,h156^{km}±23^{km},mb3.8/9,mb1 3.8/11,mb1mx3.6/33,mbtmp4.2/11,MS3.0/2,Ms1 3.0/2,ms1mx2.7/29,Error ellipse: s-maj=19.5km s-min=13.3km az=91.0*

*DJA **20** 02:38:26.4±0.3,0°N±2°×12°7E±°,h136^{km}±3^{km},M4.6/12,mB4.8/4,mb4.6/10,MLv4.7/12,Mw(mB)4.0/4*

ISC 20 02:38:24.8±0.5,0°.08N±0°.05×127°.34E±0°.07,h131^{km},n46,σ1^{s}.63/51,mb4.5/17,1D,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.69**	**2**	P	**Pn**	**02 38 47.5**	**+2.3**
TNTI				S	**Sn**	**02 39 04.9**	**+4.2**
LBMI	**Labuha**	**0.73**	**167**	P	**Pn**	**02 38 48.3**	**+2.8**
LBMI				S	**Sn**	**02 39 04.9**	**+3.7**
SANI	**Sanana**	**2.50**	**213**	P	**Pn**	**02 39 06.2**	**+1.1**

SANI				S	Sn	02 39 35.0	-1.1
NLAI	Namlea	3.30	184	P	Pn	02 39 17.3	+1.9
NLAI				S	Sn	02 39 54.9	+0.4
MSAI	Masohi	3.75	155	P	Pn	02 39 23.7	+2.4
MSAI				S	Sn	02 40 06.9	+1.8
AAI	Ambon	3.83	167	P	Pn	02 39 24.4	+2.0
SGSI	Sangihe	4.02	333	P	Pn	02 39 26.0	+1.2
SIJI	Sorong	4.04	103	P	Pn	02 39 27.5	+2.4
	2.3nm,0.3s,baz=275,slow=11,SNR=3.4						
LUWI	Luwuk	4.70	256	P	Pn	02 39 35.1	+1.2
FAKI	Fak Fak	5.74	121	*e*Pn	Pn	02 39 49.1	+1.2
FAKI	Fak Fak	5.74	121	P	Pn	02 39 48.3	+0.4
	48nm,1.0s						
KDI	Kendari	6.19	230	P	Pn	02 39 55.4	+1.5
	49nm,0.7s						
DAV	Davao City (W)	7.17	346	LR	LR	02 42 52.1	
	comp=Z,51nm,19.5s,baz=308,slow=37						
KCP	Kidapawan	7.24	342	⇓*i*P	Pn	02 40 08.9	+0.8
KCP				*e*S	Sn	02 41 28.6	-0.4
TTSI	Tana Toraja	8.13	248	P	Pn	02 40 21.9	+1.9
	102nm,0.7s,1µm						
BNSI	Bone	8.48	238	P	Pn	02 40 26.9	+2.1
	31nm,0.9s						
SPSI	Sidrap Palu	8.56	242	P	Pn	02 40 28.3	+2.5
	56nm,0.8s,1µm						
BKSI	Bulukumba	8.98	233	P	Pn	02 40 31.2	-0.3
KAPI	Kappang	9.11	236	P	Pn	02 40 34.6	+1.4
	2.3nm,0.3s,baz=59,slow=13,SNR=7.7						
KAPI				S	Sn	02 42 15.8	+1.7
	3.1nm,0.3s,baz=288,slow=20,SNR=5.9						
KAPI	Kappang	9.11	236	*e*Pn	Pn	02 40 36.4	+3.2
MTN	Manton Dam	13.38	164	*e*Pn	Pn	02 41 27.8	-1.8
SRBI	Singaraja	14.55	236	P	Pn	02 41 44.6	0.0
WR1	Warramunga Arr	21.04	161	*e*P	P	02 42 58.0	-0.4
WRA	Warramunga Arr	21.04	161	P	P	02 42 58.0	-0.4
	2.6nm,0.4s,baz=336,slow=12,SNR=25						
MDSI	Maura Dua	23.57	259	P	P	02 43 25.3	+1.5
TPUB	Ta-pu	23.99	345	*e*P	P	02 43 27.2	-0.2
	27nm,0.9s						
ASAR	Alice Springs	24.45	165	P	P	02 43 30.9	-0.7
	0.9nm,0.4s,baz=353,slow=16,SNR=18						
YHNB	Yeheng	25.12	347	*e*P	P	02 43 37.1	-0.6
	81nm,1.6s						
NWAO	Narrogin (SRO)	34.18	195	P	P	02 44 56.6	-1.0
	10nm,1.0s,baz=22,slow=11,SNR=5.4						
KS15	Wonju Array Si	37.19	1	*e*P	P	02 45 23.1	-0.2
	62nm,1.8s						
KSRS	Korea Array	37.20	1	P	P	02 45 23.1	-0.3
	1.7nm,0.5s,baz=178,slow=10,SNR=6.5						
XAN	Xi'an	37.95	335	*e*P	P	02 45 29.5	-0.3
	10nm,0.7s						
USRK	Ussuriysk Ar.	44.13	5	P	P	02 46 19.3	-0.9
	3.3nm,0.6s,baz=187,slow=7.0,SNR=8.6						
LSA	Lhasa	45.34	314	*e*P	P	02 46 32.1	+1.5
	9.2nm,0.6s						
SONA0	Songino Array	50.94	342	*e*P	P	02 47 12.5	-0.3
SONM	Songino Array	50.94	342	P	P	02 47 12.5	-0.3
	2.2nm,0.6s,baz=154,slow=7.3,SNR=11						
PETK	Petropavlovsk-	58.59	21	P	P	02 48 07.4	-0.3
	2.6nm,0.6s,baz=188,slow=4.1,SNR=6.0						
PEA1	Petropavlovsk-	58.59	21	*e*P	P	02 48 07.4	-0.3
MK31	Makanchi Array	60.90	326	*e*P	P	02 48 23.4	-0.3
	2.6nm,0.9s						
MK32	Makanchi Array	60.90	326	*e*P	P	02 48 23.2	-0.5
MKAR	Makanchi Array	60.90	326	P	P	02 48 23.2	-0.5
	2.5nm,0.3s,baz=114,slow=8.0,SNR=41						
ZALV	Zalesovo Beam	64.11	334	P	P	02 48 43.3	-1.5
	0.7nm,0.4s,baz=119,slow=4.1,SNR=3.9						
ZAA1	Zalesovo Array	64.11	334	*e*P	P	02 48 43.3	-1.6
KURK	Kurchatov	65.14	328	*e*P	P	02 48 50.5	-1.1
	5.9nm,1.0s						
TIXI	Tiksi	71.47	1	*e*P	P	02 49 28.9	-1.6
	5.2nm,0.6s						
AKTO	Aktyubinsk	76.89	322	LR	LR	03 28 37.9	
	comp=Z,21nm,18.2s,baz=57,slow=39						

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*ISCJB **20** 02:43:26.9±0.9,26°.67N±0°.04×57°.9E±0°.1,h10^{km},Error ellipse: s-maj=13.4km s-min=5.9km az=167.9*

*TEH **20** 02:43:28.9,26°.79N×57°.78E,h8^{km},ML3.3*

*OMAN **20** 02:43:29.2±21.0,26°.67N×57°.98E,h25^{km},ml3.0/8,Error ellipse: s-maj=236.5km s-min=31.0km az=47.0*

ISC 20 02:43:25.1±1.2,**26°.70N**±0°.04×**57°.99E**±0°.09,**h10**^{km}**,n24,** σ**1^{s}.92**/24,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK1	Jask	1.07	191	*e*Pg	Pn	02 43 51.6	+5.4
KHNJ	Kahnooj	1.27	349	*e*Pg	Pg	02 43 51.5	+2.0
NIAN	Nian	1.34	310	*e*Pg	Pg	02 43 52.6	+1.8
NIAN				IAMB	IAmb	02 44 14.8	
	comp=N,0.0nm,0.3s						
GENO	Geno	1.76	294	*e*Pg	Pg	02 43 58.6	-0.3
GENO				IAMB	IAmb	02 44 26.5	
	comp=Z,0.0nm,0.3s						
SHME	Shamm	1.78	249	*e*Pn	Pb	02 43 57.3	-0.5
MDH	Madha	2.06	228	P	Pn	02 43 59.5	-0.3
	SNR=12						
MDH	Madha	2.06	228	*e*Pn	Pn	02 43 59.5	-0.3
MSFE	Esma-Masafi	2.12	231	*e*Pn	Pn	02 44 00.4	-0.2
UOSS	Minazif	2.37	223	P	Pb	02 44 06.2	-1.7
	SNR=8.5						
UOSS	Minazif	2.37	223	*e*Pn	Pn	02 44 03.3	-0.8
HATD	Hatta, Dubai	2.51	222	P	Pb	02 44 08.4	-1.8
HATD	Hatta, Dubai	2.51	222	*e*Pn	Pn	02 44 06.7	+0.8
ASHO	Ashiyiah	2.66	221	P	Pb	02 44 10.9	-1.9
	SNR=7.6						
ASHO	Ashiyiah	2.66	221	*e*Pn	Pn	02 44 08.8	+0.8
NAZ	Nazwa, Dubai	2.70	231	P	Pb	02 44 13.0	-0.5
NAZ	Nazwa, Dubai	2.70	231	*e*Pn	Pn	02 44 08.6	0.0
FAQ	Al Faqa, Dubai	2.91	229	P	Pb	02 44 14.4	-2.6
FAQ	Al Faqa, Dubai	2.91	229	*e*Pn	Pb	02 44 13.9	-3.1
NGRK	Negar Kerman	3.14	340	*e*Pn	Pb	02 44 20.3	-0.9
NGRK				IAMB	IAmb	02 45 11.4	
	comp=Z,0.0nm,0.3s						
HOQ	Hoqain	3.16	191	P	Pn	02 44 18.0	+3.0
CHMN	Cheshme madani	3.17	353	*e*Pn	Pg	02 44 23.4	-2.6
WSAR	Wadi Sarin	3.49	170	P	Pn	02 44 22.5	+3.0
WSAR				S	Sn	02 45 02.8	+1.8
KHGB	Koh Gabri	3.90	340	*e*Pn	Pb	02 44 32.7	-1.4
IRAM	Ramesheh	7.06	317	*e*Pn	Pn	02 45 12.0	+3.2

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*NIED **20** 03:07:00,38°.80N×141°.90E,h50^{km},Mw3.5 Best double couple: M$_0$2.14000×10^{14} NP1:φ$_s$197.00000°,δ29.00000°, λ70.00000°. NP2:φ$_s$39.00000°,δ63.00000°,λ100.00000°.*

*IDC **20** 03:07:03.7±2.5,39°.28N×141°.77E,h0^{km},mb3.6/3, mb1 3.6/4,mb1mx3.4/29,mbtmp3.5/4,ML2.2/1,Error ellipse: s-maj=56.9km s-min=30.6km az=146.0*

*JMA **20** 03:07:07.2,38°.78N×141°.93E,h52^{km}±1^{km},M3.6*

JMA Felt I J1.

ISC 20 03:07:06.1±2.0,**38°.80N**±0°.05×**142°.1E**±0°.1,**h32**^{km}±12^{km}**, n21,**σ**1^{s}.86**/24,**mb3.5**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.43	311	P	Pn	03 07 17.2	+1.1
OFUJ				S	Sn	03 07 24.1	+1.1
JKMT	Kesennumamotoy	0.48	272	P	Pn	03 07 17.0	+0.2
JKMT				S	Sn	03 07 23.9	-0.2
JIO	Ouri	0.67	240	P	Pb	03 07 19.2	-0.3
JIO				S	Sn	03 07 27.4	-1.5
JMK	Ichinoseki	0.70	283	P	Pb	03 07 19.6	-0.2
JMK				S	Sn	03 07 28.3	-1.1
JOM	Ohasama	0.92	318	P	Pb	03 07 23.1	-0.4
JOM				S	Sb	03 07 34.8	-0.6
JOU	Okura	1.20	249	P	Pn	03 07 26.0	-0.7
JOU				S	Sn	03 07 39.7	-2.2
JRG	Rokugo	1.28	298	P	Pn	03 07 27.4	-0.4
JYK	Kaneyama	1.36	276	P	Pn	03 07 28.2	-0.6
JMM	Marumori	1.38	228	P	Pn	03 07 28.4	-0.8
JMM				S	Sn	03 07 44.5	-1.8
MJAR	Matsushiro Arr	3.81	235	Pn	Pn	03 08 05.3	+2.7
	0.2nm,0.3s,baz=42,slow=10,SNR=9.0						
MJAR				Sn	Sb	03 08 58.4	-0.1
	0.1nm,0.3s,baz=341,slow=26,SNR=3.8						
MAT	Matsushiro	3.82	235	P	Pn	03 08 05.3	+2.6
MAT				S	Sn	03 08 51.4	+4.9
KSRS	Korea Array	11.24	268	Pn	Pn	03 09 47.3	+2.8
	baz=74,slow=14,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.65	124	T	T	03 43 25.3	
	baz=317,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	28.66	125	T	T	03 43 28.0	
	baz=317,slow=75,SNR=38						
H11N3	WAKE ISLAND Hy	28.66	124	T	T	03 43 27.8	
	baz=317,slow=75,SNR=51						
H11S1	WAKE ISLAND Hy	29.42	126	T	T	03 44 24.7	
	baz=319,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.42	126	T	T	03 44 24.3	
	baz=319,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	29.44	126	T	T	03 44 25.9	
	baz=319,slow=76,SNR=19						
ZALV	Zalesovo Beam	41.14	311	P	P	03 14 45.6	-1.5
	0.5nm,0.3s,baz=81,slow=9.1,SNR=2.7						
MKAR	Makanchi Array	43.66	301	P	P	03 15 05.6	-2.1
	0.4nm,0.5s,baz=69,slow=7.9,SNR=3.6						
ILAR	Eielson Array	47.72	33	P	P	03 15 39.7	+0.2
	0.3nm,0.6s,baz=262,slow=6.4,SNR=8.4						

IDC 20 03:13:10.7±17.0,**21°.65N**×**143°.11E,h312**^{km}±184^{km}**, mb3.2**/7,**mb1 3.4**/7,**mb1mx2.9**/40,**mbtmp3.8**/7,**Error ellipse: s-maj=32.3km s-min=29.7km az=54.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.22	192	P	P	03 20 33.9	-0.2
	0.5nm,0.3s,baz=5.4,slow=7.9,SNR=5.0						
KURBB	Kurchatov Arra	57.52	317	P	P	03 22 27.9	-0.1
	0.5nm,0.4s,baz=96,slow=7.6,SNR=6.9						
ILAR	Eielson Array	62.11	27	P	P	03 22 58.6	-0.3
	0.2nm,0.4s,baz=263,slow=4.5,SNR=2.9						
BVAR	Borovoye Array	62.67	320	P	P	03 23 03.1	+0.4
	0.8nm,0.3s,baz=95,slow=8.1,SNR=5.9						
YKA	Yellowknife Ar	76.53	28	P	P	03 24 26.8	+0.1
	0.3nm,0.6s,baz=291,slow=6.3,SNR=3.1						
ARCES	ARCESS Array B	78.95	341	P	P	03 24 40.3	+0.5
	1.9nm,0.8s,baz=71,slow=7.9,SNR=6.1						
FINES	FINESS Array B	83.20	334	P	P	03 25 01.5	-0.7
	1.3nm,0.8s,baz=71,slow=6.5,SNR=8.1						

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*ISK **20** 03:22:39.8,37°.47N×35°.34E,h14^{km},ML2.1/5*

*ISCJB **20** 03:22:40.8±0.8,37°.37N±0°.06×35°.41E±0°.07,h12^{km},Error ellipse: s-maj=10.3km s-min=5.6km az=145.0*

*DDA **20** 03:22:40.3,37°.35N×35°.46E,h7^{km}±2^{km},ML2.5*

ISC 20 03:22:41.0±1.1,**37°.38N**±0°.07×**35°.39E**±0°.05,**h12**^{km}**,n8,** σ**0^{s}.50**/12,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKO	Adana	0.09	26	*i* P	Pg	03 22 43.8	0.0
AKO				*i* S	Sg	03 22 45.6	-0.3
AKO				IAML_P			
	comp=Z,8µm,0.1s						
KARA	Karaisali	0.29	247	PG	Pg	03 22 46.6	-0.4
KARA				SG	Sg	03 22 51.6	+0.6
CEYT	Ceyhan	0.46	142	PG	Pb	03 22 51.3	+0.3
GULE	Gulek	0.50	260	*i* P	Pb	03 22 51.9	+0.1
GULE				*i* S	Sb	03 23 00.1	+0.9
GULE				IAML_P			
	comp=Z,546nm,0.1s						
MERS	Mersin	0.86	234	PG	Pg	03 22 57.3	-0.3
MERS				SG	Sb	03 23 09.8	+0.4
KIZK	Mersin	1.34	229	PN	Pn	03 23 05.1	-0.4
KEBE	Keben-Mersin	1.64	236	PN	Pn	03 23 09.1	-0.5
TEKE	Tekeli-Mersin	2.21	237	PN	Pn	03 23 17.2	-0.2

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*ISCJB **20** 03:30:53.0±0.1,47°.479N±0°.008×9°.32E±0°.01,h0^{km},Error ellipse: s-maj=1.1km s-min=1.0km az=15.9*

*ZUR **20** 03:30:54.9,47°.42N×9°.32E,h4^{km},MLh3.5/64,Error ellipse: s-maj=0.9km s-min=0.4km az=43.0*

*PRU **20** 03:30:55.9±0.0,47°.48N×9°.25E,h0^{km}*

*BGR **20** 03:30:55.5±0.1,47°.46N×9°.32E,h4^{km},ML3.6/39,Error ellipse: s-maj=2.2km s-min=1.1km az=8.0*

*LDG **20** 03:30:55.7±0.1,47°.43N×9°.32E,h5^{km},Md3.5/2,Ml3.5/50, Error ellipse: s-maj=1.4km s-min=1.0km az=87.0*

*NEIC **20** 03:30:55.0±0.0,47°.42N×9°.32E,h4^{km},ML3.6(ZUR),After ZUR.*

NEIC Felt at Sankt Gallen.

*BNS **20** 03:30:57.0±0.3,47°.45N×9°.27E,h5^{km},ML3.2*

*STR **20** 03:30:58.1±0.4,48°N±2°×°±°,h0^{km},MLv3.5/6*

ISC 20 03:30:53.1±0.6,**47°.43N**±0°.01×**9°.28E**±0°.01,**h0**^{km}**,n265,** σ**1^{s}.61**/503,**49C-29D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGT00	Sennhlsen	0.02	96	⇑Pg	Pg	03 30 55.9	+2.3
SGT00				Sg	Sg	03 30 56.7	+2.9
SGT01	Gaiserwald	0.03	80	⇑Pg	Pg	03 30 56.0	+2.3
SGT01				Sg	Sg	03 30 56.9	+2.9
STGK	St. Gallen Klo	0.07	92	⇑Pg	Pg	03 30 56.3	+1.9
STGK				Sg	Sg	03 30 57.5	+2.2
SGT03	Degersheim	0.08	221	⇑Pg	Pg	03 30 57.3	+2.7
SGT03				Sg	Sg	03 30 59.5	+3.8
SGT02	Zihlschlacht	0.09	347	⇓Pg	Pg	03 30 57.5	+2.6
SGT02				Sg	Sg	03 30 59.6	+3.6
SGT04	Schlatt-Haslen	0.09	148	⇓Pg	Pg	03 30 57.1	+2.3
SGT04				Sg	Sg	03 30 59.1	+3.1
SGT05	Eggersriet	0.12	83	⇑Pg	Pg	03 30 57.3	+1.9
SGT05				Sg	Sg	03 30 59.4	+2.4
LIENZ	Kamor/St.Gall	0.20	132	⇓Pg	Pg	03 30 58.9	+2.1
LIENZ	Kamor/St.Gall	0.20	132	⇓Pg	Pg	03 30 58.9	+2.1
LIENZ				Sg	Sg	03 31 02.3	+2.9
WEIN	Weingarten	0.22	298	⇑Pg	Pg	03 31 00.3	+3.0
WEIN				Sg	Sg	03 31 04.5	+4.2
WILA	Wila	0.25	267	⇑Pg	Pb	03 31 00.9	+0.3
WILA				Sg	Sb	03 31 05.5	0.0
WILA	Wila	0.25	267	⇑*e*Pg	Pb	03 31 00.9	+0.3
WILA				P*	Pn	03 31 01.9	-2.3
WILA				Sg	Sb	03 31 05.5	0.0
SBUH	Buchs, Hochsch	0.29	152	⇓Pg	Pb	03 31 00.8	-0.3
SBUA2	Buchs, Altendo	0.30	154	⇓Pg	Pb	03 31 00.9	-0.4
SBUB	Buchserberg Ma	0.30	159	⇓Pg	Pb	03 31 01.0	-0.4
SISB	Singen-Schiene	0.34	321	⇓*e*Pg	Pb	03 31 02.4	+0.4
SISB				Sg	Sb	03 31 08.1	+0.2
STEIN	Stein am Rhein	0.37	312	⇓Pg	Pb	03 31 03.2	+0.6
STEIN				Sg	Sb	03 31 09.3	+0.4
PLONS	Plons/SG	0.38	169	⇓Pg	Pb	03 31 02.6	-0.2
PLONS	Plons/SG	0.38	169	*e*Pg	Pb	03 31 02.7	-0.2
PLONS				*e*Sg	Sb	03 31 08.7	-0.6
STIEG	Stiegenhof Hun	0.43	280	⇑Pg	Pb	03 31 04.3	+0.7
STIEG				Sg	Sb	03 31 10.9	+0.3
DAVA	Damuels	0.43	109	*e*Pg	Pb	03 31 03.3	-0.5
	42nm,0.2s,SNR=381						
DAVA				*e*Sg	Sb	03 31 09.4	-1.5
	2µm,0.2s						
DAVA	Damuels	0.43	109	⇑Pg	Pb	03 31 03.3	-0.5
DAVA				Sg	Sb	03 31 09.8	-1.1
DAVA	Damuels	0.43	109	⇑*e*Pg	Pb	03 31 03.2	-0.5
DAVA				Sg	Sb	03 31 09.8	-1.1
DAVA				S*	Sg	03 31 12.9	+5.9
TRULL	Truellikon	0.46	299	⇑Pg	Pb	03 31 04.9	+0.7
TRULL				Sg	Sb	03 31 11.9	+0.3
ZUR	Degenried	0.48	263	⇑Pg	Pb	03 31 05.2	+0.8
ZUR				Sg	Sb	03 31 12.5	+0.5
FLACH	Flaach	0.50	287	⇑Pg	Pb	03 31 05.7	+0.9
FLACH				Sg	Sb	03 31 13.3	+0.6
SZUZ	Zrich, Zeugha	0.51	265	⇑Pg	Pb	03 31 05.9	+0.9
SCHS	Schaffhausen,	0.52	304	⇓Pg	Pb	03 31 05.9	+0.7
SLTM2	Linthal, Matt	0.54	201	⇑Pg	Pb	03 31 05.9	+0.5
EWZT2	Wettswil, ZR	0.54	261	⇑Pg	Pb	03 31 06.4	+0.9
SCUG	Chur Gewerbesc	0.59	163	⇓Pg	Pb	03 31 06.5	+0.1
LLS	Linth-Limmern	0.61	198	⇓Pg	Pb	03 31 06.8	0.0
LLS				Sg	Sb	03 31 15.4	-0.6
PANIX	Pigniu (Panix)	0.61	191	⇓Pg	Pb	03 31 06.8	+0.1
PANIX				Sg	Sb	03 31 15.4	-0.5
UBR	Ueberruh	0.62	65	⇑Pg	Pb	03 31 07.1	+0.3
UBR	Ueberruh	0.62	65	⇑*i*Pg	Pb	03 31 07.1	+0.3
UBR				PmP	Pn	03 31 10.2	+1.0
UBR				Sg	Sb	03 31 16.1	0.0
SLE	Schleitheim	0.63	303	⇑Pg	Pb	03 31 07.8	+0.7
SLE				Sg	Sb	03 31 16.6	+0.2
SLE	Schleitheim	0.63	303	Pg	Pb	03 31 07.8	+0.7
SLE				PmP		03 31 09.9	
SLE				Sg	Sb	03 31 16.7	+0.3
MUO	Muotathal	0.63	224	⇑Pg	Pb	03 31 07.8	+0.6
GUT	Gutenstein	0.65	350	⇓Pg	Pb	03 31 07.8	+0.4
GUT	Gutenstein	0.65	350	⇓Pg	Pb	03 31 07.8	+0.4
GUT				⇑PmP		03 31 10.0	
GUT				Sg	Sb	03 31 17.1	0.0
GUT				SmS		03 31 20.7	
OBER	Oberstdorf	0.69	91	⇑Pg	Pb	03 31 08.2	+0.1
OBER				PmP		03 31 11.2	
OBER				*e*Sg	Sb	03 31 17.7	-0.5
OBER				SmS		03 31 22.9	
ACHB	Acheberg	0.71	283	⇑Pg	Pb	03 31 09.4	+0.9
METMA	Mettma DE	0.75	293	⇑Pg	Pb	03 31 09.9	+0.8
METMA	Mettma DE	0.75	293	⇑Pg	Pb	03 31 09.8	+0.8
METMA				PmP		03 31 11.7	
METMA				Sg	Sb	03 31 21.0	+1.1
METMA				SmS		03 31 23.0	
SVAM	Vaz, Muldain	0.75	167	⇓Pg	Pb	03 31 09.5	+0.4
SLUW	Luzern Werkhof	0.76	240	⇑Pg	Pn	03 31 10.4	-0.6
SLUB	Luzern Bramber	0.76	241	⇑Pg	Pn	03 31 10.3	-0.8
DAVOX	Davos/Dischmat	0.77	147	⇓Pg	Pb	03 31 09.5	0.0
SULZ	Cheisacher	0.80	278	⇑Pg	Pn	03 31 11.0	-0.6
SULZ	Cheisacher	0.80	278	⇑Pg	Pn	03 31 11.1	-0.6
SULZ				*e*Sg	Sb	03 31 22.1	+0.9
BNALP	Bannalp	0.81	227	⇑Pg	Pn	03 31 11.1	-0.8
TUE	Stuetta	0.96	177	*e*Pg	Pb	03 31 12.8	+0.1
TUE				*e*Sg	Sb	03 31 26.3	+0.4
TUE				*e*Sn	Sn	03 31 30.9	+2.5
RETA	Reutte	1.01	86	*e*Pg	Pb	03 31 13.7	+0.1
	34nm,0.2s,SNR=1024						
RETA				*e*Sg	Sn	03 31 28.6	-1.0
	348nm,0.3s						
RETA	Reutte	1.01	86	⇑Pg	Pb	03 31 13.7	+0.1
RETA				PmP	Pn	03 31 15.4	+0.8
RETA				SmS	Sn	03 31 30.7	+1.1
BUCH	Bad Urach	1.02	3	⇓*i*Pg	Pn	03 31 14.7	-0.2
BUCH				PmP		03 31 15.4	
FUORN	Ofenpass-Fuorn	1.05	140	*e*Pg	Pb	03 31 14.6	+0.3
FUORN				*e*Sg	Sn	03 31 29.9	-1.0
KIZ	Kirchzarten	1.06	301	Pg	Pn	03 31 15.7	+0.5
KIZ				Sg	Sn	03 31 30.0	-0.8
KIZ	Kirchzarten	1.06	301	⇓Pn	Pn	03 31 15.7	+0.5
KIZ				Sg	Sn	03 31 30.3	-0.4
FETA	Feichten	1.07	112	Pg	Pb	03 31 15.0	+0.4
	15nm,0.4s,SNR=131						
FETA				Sg	Sn	03 31 30.4	-0.8
	327nm,0.4s						
BALST	Balsthal	1.08	266	⇑Pn	Pn	03 31 16.2	+0.6
BALST				Sn	Sn	03 31 31.4	+0.1
ENDD	Endenburg	1.08	286	⇑Pn	Pn	03 31 16.1	+0.5
ENDD				SmS		03 31 32.0	
TUBL	Tuebingen-Lenn	1.10	353	Pn	Pn	03 31 15.9	0.0
TUBL				PmP		03 31 16.6	
TUBL				Sn	Sb	03 31 30.6	+0.5
TUBL				SmS		03 31 31.9	
BFO	Black Forest	1.11	325	*e*Pg	Pn	03 31 16.4	+0.4
BFO				*e*Sn	Sn	03 31 31.5	-0.4
BFO	Black Forest	1.11	325	⇓Pn	Pn	03 31 16.2	+0.3
BFO				PmP		03 31 17.1	
BFO				*e*Sg	Sn	03 31 31.1	-0.9
FBB	Freiburg im Br	1.12	301	Pg	Pn	03 31 17.4	+1.3
FBB				Sg	Sn	03 31 32.8	+0.6
MOTA	Moosalm	1.24	93	*e*Pg	Pn	03 31 17.8	-0.1
	200nm,0.2s,SNR=821						
MOTA				Sg	Sn	03 31 35.5	0.0
	404nm,0.3s						
LBG	Lerchenberg	1.28	346	⇓*i*Pn	Pn	03 31 18.5	+0.2
LBG				Pg	Pb	03 31 19.7	+1.5
LBG				Sg	Sn	03 31 37.3	+1.1
OPP	Oppenau	1.30	326	Sg	Sn	03 31 37.0	+0.4
OPP	Oppenau	1.30	326	⇓Pn	Pn	03 31 18.9	+0.3
OPP				⇓Pg	Pb	03 31 20.1	+1.7
OPP				Sn	Sb	03 31 35.2	-0.4
OPP				Sg	Sn	03 31 37.3	+0.7
HDH	Heidenheim-Cha	1.32	28	⇓Pn	Pg	03 31 18.2	-0.1
HDH				Pg	Pn	03 31 20.1	+1.3
HDH				Sn	Sn	03 31 36.8	-0.3
HDH				Sg	Sb	03 31 37.9	+1.7
SQTA	Sankt Quirin	1.33	98	Pg	Pn	03 31 19.4	+0.4
	19nm,0.1s,SNR=484						
SQTA				Sg	Sn	03 31 37.7	+0.1
	264nm,0.2s						
STU	Stuttgart	1.35	358	*e*Pn	Pb	03 31 19.3	0.0
STU	Stuttgart	1.35	358	Pn	Pb	03 31 19.2	0.0
STU				Pg	Pb	03 31 20.5	+1.3
STU				Sg	Sn	03 31 39.1	+1.3
BOURR	Bourrignon	1.39	269	⇑Pn	Pb	03 31 20.7	+0.7
BOURR				Pg	Pn	03 31 22.4	+2.5
BOURR				Sg	Sn	03 31 41.1	+2.1
MOF	Molkenrain	1.51	287	Pg	Pb	03 31 23.6	+1.5
FUR	Furstenfeldbru	1.54	61	*e*Pn	Pg	03 31 22.8	+0.2
FUR				*e*Pg	Pb	03 31 24.0	+1.5
FUR				*e*Sg	Sn	03 31 44.6	+2.1
WATA	Walderalm	1.56	92	*e*Pn	Pg	03 31 23.2	+0.1
	48nm,0.1s,SNR=138						
WATA				*e*Sg	Sb	03 31 45.3	+1.9
	82nm,0.1s						
NORI	Noerdlinger Ri	1.58	34	*e*Pn	Pn	03 31 21.8	-0.6
NORI				*e*Pg	Pg	03 31 24.6	+1.2
NORI				*e*Sg	Sg	03 31 45.6	+1.7
WTTA	Wattenberg	1.61	95	Pg	Pg	03 31 24.4	+0.4
	26nm,0.1s,SNR=132						
WTTA				Sg	Sg	03 31 47.4	+2.4
	224nm,0.3s						
WTTA	Wattenberg	1.61	95	*e*Pg	Pg	03 31 25.3	+1.3
WTTA				*e*Sg	Sg	03 31 47.1	+2.2
WLS	Welschbruch	1.63	308	Pg	Pg	03 31 26.6	+2.3
WLS				Sg	Sg	03 31 47.7	+2.3
ECH	Echery	1.63	300	*e*Pn	Pb	03 31 23.7	-0.4
ECH				*e*Sn	Sn	03 31 42.9	-2.0
ECH	Echery	1.63	300	Pn	Pb	03 31 23.6	-0.4
ECH				Sn	Sn	03 31 43.0	-1.8
ECH				Sg	Sg	03 31 47.4	+1.8
BRET	Bretten	1.64	346	⇑Pn	Pb	03 31 23.7	-0.4
BRET				Pg	Pg	03 31 26.0	+1.6
BRET				Sn	Sn	03 31 43.2	-1.7
BRET				Sg	Sg	03 31 48.2	+2.5
LOMF	Lomont	1.67	268	Pn	Pb	03 31 24.4	-0.3
CDF	Champ du Feu	1.67	307	*e*Pn	Pn	03 31 24.2	+0.5
	SNR=1.0						
CDF				*e*Sg	Sg	03 31 48.7	+2.0
	254nm,0.2s						
HINF	Hinteralfeld	1.69	284	*e*Pn	Pb	03 31 24.6	-0.4
	SNR=1.0						
HINF	Hinteralfeld	1.69	284	*e*Pg	Pg	03 31 27.4	+2.0
HINF				*e*Sg	Sg	03 31 49.0	+1.8
	269nm,0.3s						
SENIN	Lac Senin/Sane	1.72	233	*e*Pn	Pb	03 31 25.6	-0.1
SUBF	Surbourg	1.77	328	Pn	Pb	03 31 26.4	0.0
SUBF				Pg	Pg	03 31 29.4	+2.4
SUBF				Sg	Sg	03 31 52.5	+2.5
CHMF	Charmoille	1.79	265	Pn	Pg	03 31 29.3	+1.8
CHMF				Sg	Sg	03 31 52.9	+2.2
LANF	Langenberg	1.84	328	Pn	Pg	03 31 30.5	+2.1
LANF				Sg	Sg	03 31 54.4	+2.2
LANF	Langenberg	1.84	328	Pg	Pg	03 31 30.5	+2.1
SIND	Sindeldorf	1.94	6	⇓Pn	Pn	03 31 26.6	-0.7
SIND				Pg	Pg	03 31 31.6	+1.3
PEB	Petersbachel	1.94	328	⇑Pn	Pn	03 31 28.2	+0.8
PEB				Pg	Pg	03 31 32.4	+2.0
PEB				Sg	Sg	03 31 57.9	+2.3
KTD	Kalmit	2.06	338	Pn	Pb	03 31 31.7	+0.3
KTD				Pg	Pg	03 31 34.6	+2.1
KTD				Sg	Sg	03 32 00.7	+1.6
KTD	Kalmit	2.06	338	Pn	Pn	03 31 29.5	+0.6
HAU	Haudompre	2.06	287	*e*Pn	Pn	03 31 29.6	+0.6
	SNR=1.0						
HAU	Haudompre	2.06	287	*e*Pg	Pg	03 31 34.5	+1.9
HAU				*e*Sg	Sg	03 32 01.0	+1.7
	358nm,0.4s,SNR=1.0						
SWS	Schriesheim-Wi	2.10	350	⇓Pn	Pn	03 31 29.6	+0.1
SWS				Pg	Pg	03 31 34.9	+1.6
SWS				Sg	Sg	03 32 02.6	+2.2
GRC1	Grafenberg Arr	2.17	43	Pn	Pn	03 31 29.6	-0.9
GRC1				Sn	Sn	03 31 56.3	-1.9
GRC1				Sg	Sg	03 32 02.9	0.0
TOD	Tromm	2.20	352	⇓Pn	Pn	03 31 31.0	0.0
WBA	Furth	2.25	352	Pn	Pn	03 31 31.9	+0.2
WBA				Pg	Pg	03 31 38.1	+1.8
ABTA	Abfaltersbach	2.31	106	*e*Pn	Pb	03 31 35.6	-0.1
	2.7nm,0.4s,SNR=171						
ABTA				*e*Pg	Pg	03 31 38.1	+0.6
	77nm,0.3s						
ABTA				*i* Sg	Sg	03 32 08.3	+0.9
	117nm,0.5s						
CABF	La Chapelle	2.33	251	*e*Pn	Pn	03 31 33.9	+1.1
	SNR=1.0						
CABF	La Chapelle	2.33	251	*e*Pg	Pg	03 31 39.3	+1.6

CABF				eSg	Sg	03 32 10.3	+2.4
	102nm,0.4s,SNR=1.0						
IMS	Imsbach	2.35	338	Pn	Pn	03 31 33.6	+0.6
IMS				Pg	Pg	03 31 40.0	+1.8
RJOB	Jochberg	2.40	81	ePn	Pb	03 31 35.7	-1.6
RJOB				ePg	Pg	03 31 39.2	+0.1
RJOB				eSg	Sg	03 32 12.0	+1.7
GRB2	Grafenberg Arr	2.44	40	⇓Pn	Pn	03 31 33.3	-1.0
WBB	Darmstadt	2.45	351	Pn	Pn	03 31 34.6	+0.2
WBB				Pg	Pg	03 31 42.8	+2.6
LPL	La Plagne	2.60	224	ePn	Pn	03 31 37.7	+1.1
	SNR=1.0						
LPL	La Plagne	2.60	224	ePg	Pg	03 31 44.2	+1.3
	SNR=1.0						
LPL				eSg	Sg	03 32 17.9	+1.4
	58nm,0.4s,SNR=1.0						
LPG	La Plagne	2.60	223	ePn	Pn	03 31 37.8	+1.1
	SNR=1.0						
LPG	La Plagne	2.60	223	ePg	Pg	03 31 44.0	+1.0
LPG				eSg	Sg	03 32 18.6	+1.9
	65nm,0.5s,SNR=1.0						
GRFO	Grafenberg	2.61	29	ePn	Pn	03 31 37.2	+0.7
GRFO	Grafenberg	2.61	29	ePg	Pg	03 31 42.8	-0.3
GRFO				eSn	Sn	03 32 07.1	-1.8
GRFO				eSg	Sg	03 32 17.7	+0.8
GRA1	Grafenberg Arr	2.61	29	ePn	Pn	03 31 34.7	-1.9
GRF	Grafenberg Arr	2.61	29	⇑Pn	Pn	03 31 35.0	-1.5
GRF				Pg	Pg	03 31 44.1	+1.0
GRF				eSn	Sn	03 32 06.8	-2.1
GRF				eSg	Sg	03 32 17.0	+0.1
PAGF	Fort de Pagny	2.64	297	ePn	Pn	03 31 38.1	+1.1
PAGF	Fort de Pagny	2.64	297	ePg	Pg	03 31 45.2	+1.5
PAGF				eSg	Sg	03 32 18.1	+0.2
	72nm,0.2s,baz=107						
ABH	Alteburg	2.71	336	Pn	Pn	03 31 39.0	+1.0
ABH				Sg	Sg	03 32 21.8	+1.6
ABH	Alteburg	2.71	336	Pn	Pn	03 31 39.0	+1.0
ABH				Pg	Pg	03 31 46.8	+1.7
ABH				Sg	Sg	03 32 23.0	+2.8
RUP	Ruppelstein	2.71	328	Pn	Pn	03 31 40.1	+2.1
RUP				Pg	Pg	03 31 46.9	+1.9
RUP				Sg	Sg	03 32 23.0	+2.8
WBG	Bieber	2.75	1	Pn	Pn	03 31 38.1	-0.3
KBA	Koelnbreinsper	2.79	96	Pn	Pb	03 31 42.1	-1.9
	2.8nm,0.2s,SNR=6.4						
KBA				ePg	Pg	03 31 46.1	-0.6
	38nm,0.2s						
KBA				eSg	Sg	03 32 22.0	-0.8
	64nm,0.5s						
RIVT	Riveris	2.83	325	Pn	Pn	03 31 41.4	+1.8
RIVT				Pg	Pg	03 31 48.7	+1.4
RIVT				Sg	Sg	03 32 24.2	+0.2
TNS	Taunus Mts	2.85	349	Pn	Pn	03 31 40.2	+0.3
TNS				eSg	Sg	03 32 26.7	+2.0
WET	Wettzell	2.96	53	ePn	Pn	03 31 41.2	-0.1
WET				ePg	Pg	03 31 49.9	+0.1
WET				eSn	Sn	03 32 15.5	-2.0
WET				eSg	Sg	03 32 26.8	-1.3
SFTF	Sexfontaines	2.96	287	ePn	Pn	03 31 42.4	+1.0
	baz=110						
SFTF	Sexfontaines	2.96	287	ePg	Pg	03 31 51.2	+1.4
	baz=109						
SFTF				eSn	Sn	03 32 16.6	-1.0
SFTF				eSg	Sg	03 32 29.0	+0.8
	127nm,0.5s,baz=106						
BNI	Bardonecchia	2.98	218	ePn	Pb	03 31 44.6	-2.6
BNI				ePg	Pg	03 31 51.4	+1.1
MEZF	Maizieres J’vi	3.04	292	ePn	Pn	03 31 43.2	+0.8
	baz=105,SNR=1.0						
MEZF	Maizieres J’vi	3.04	292	ePg	Pg	03 31 52.4	+1.1
	baz=108,SNR=1.0						
MEZF				eSg	Sg	03 32 32.1	+1.5
	121nm,0.5s,SNR=1.0						
GWBC	Aumenau	3.04	348	Pn	Pn	03 31 43.4	+0.9
ROTZ	Rotzenmuhle	3.04	39	ePn	Pn	03 31 41.1	-1.5
ROTZ				eSn	Sn	03 32 15.9	-3.8
ROTZ				eSg	Sg	03 32 30.1	-0.8
FACH	Fachingen	3.05	344	Pn	Pn	03 31 43.4	+0.8
WLF	Walferdange	3.05	318	ePn	Pn	03 31 44.5	+1.8
WLF	Walferdange	3.05	318	⇑Pn	Pn	03 31 44.5	+1.8
WLF				⇑Sn	Sn	03 32 20.4	+0.5
	comp=E,90nm,0.0s						
WLF	Walferdange	3.05	318	ePn	Pn	03 31 45.2	+2.5
WLF				ePg	Pg	03 31 53.0	+1.4
WLF				eSg	Sg	03 32 32.0	+0.8
BGG	Burgeitz	3.06	336	ePn	Pn	03 31 44.3	+1.6
MYKA	Terra Mystica	3.09	103	ePn	Pb	03 31 46.6	-2.4
	comp=E,4.2nm,0.2s,SNR=5.4						
MYKA				Sg	Sg	03 32 31.4	-1.0
	comp=E,23nm,0.4s						
HROE	Hohe Rhon--Fla	3.17	10	ePn	Pn	03 31 42.9	-1.4
HROE				ePg	Pg	03 31 53.8	+0.1
HROE				eSg	Sg	03 32 35.5	+0.7
KOE	Koeppel	3.17	342	ePn	Pn	03 31 46.0	+1.7
MANZ	Manzenberg	3.17	35	eSn	Sn	03 32 20.2	-2.8
MANZ				eSg	Sg	03 32 35.3	+0.2
MBDF	Montbardon	3.21	214	ePn	Pn	03 31 46.4	+1.4
	SNR=1.0						
MBDF	Montbardon	3.21	214	ePg	Pg	03 31 56.0	+1.3
MBDF				eSg	Sg	03 32 36.3	0.0
	comp=E,67nm,0.5s						
LAGB	Langenfeld Gru	3.27	335	Pn	Pn	03 31 46.9	+1.3
GEC2	GERESS Array S	3.29	63	ePn	Pn	03 31 46.0	+0.1
GEC2				ePg	Pg	03 31 55.3	-0.7
GEC2	GERESS Array S	3.29	63	ePn	Pn	03 31 46.2	+0.3
GEC2				ePg	Pg	03 31 55.4	-0.7
GEC2				eSg	Sg	03 32 36.5	-2.2
HILG	Hillesheim	3.34	330	ePn	Pn	03 31 48.2	+1.6
KHC	Kasperske Hory	3.34	58	ePn	Pn	03 31 46.6	0.0
KHC				ePg	Pg	03 31 57.1	0.0
KHC	Kasperske Hory	3.34	58	ePN	Pn	03 31 46.8	+0.2
KHC				ePG	Pg	03 31 56.1	-1.0
KHC				eSN	Sn	03 32 26.0	-1.0
KHC				eSG	Sg	03 32 41.2	+0.8
	comp=E,116nm,0.5s						
MOA	Molln	3.40	81	i Pn	Pn	03 31 48.5	+1.1
	comp=E,1.1nm,0.1s,SNR=11						
MOA				i Pg	Pg	03 31 56.8	-1.4
	comp=E,18nm,0.2s						
MOA				i Sn	Sn	03 32 27.8	-0.7
	comp=E,16nm,0.3s						
MOA				Sg	Sg	03 32 41.3	-1.0
	comp=E,9.9nm,0.1s						
MOA	Molln	3.40	81	ePn	Pn	03 31 48.5	+1.1
MOA				ePg	Pg	03 31 56.9	-1.4
MOA				eSg	Sg	03 32 42.0	-0.3
SURF	Saint Ours	3.41	211	Pn	Pb	03 31 51.5	-3.0
UBBA	Unterbreizbach	3.43	8	ePn	Pn	03 31 46.7	-1.0
UBBA				ePg	Pg	03 32 00.1	+1.3
UBBA				eSg	Sg	03 32 43.3	0.0
BLI	Bleialf	3.43	326	Pn	Pn	03 31 49.4	+1.6
AHRW	Bad Neuenahr-A	3.44	336	⇑Pn	Pn	03 31 49.3	+1.4
BIW	Bindweide	3.44	345	Pn	Pn	03 31 48.8	+0.8
ORIF	Oris-en-Rattie	3.44	224	ePn	Pn	03 31 49.0	+0.9
	SNR=1.0						
ORIF	Oris-en-Rattie	3.44	224	ePg	Pg	03 32 00.2	+1.1
ORIF				eSg	Sg	03 32 44.6	+0.9
	comp=E,65nm,0.6s,SNR=1.0						
NKC	Novy Kostel	3.50	36	ePG	Pg	03 31 58.6	-1.6
NKC				eSN	Sn	03 32 27.8	-3.2
TRI	Trieste	3.54	117	ePn	Pn	03 31 49.4	+0.1
STB	Steinbach	3.55	334	ePn	Pn	03 31 51.0	+1.5
STB				eSn	Sn	03 32 32.0	-0.2
	comp=E,54nm,0.7s						
SAOF	Saorge	3.65	200	Pn	Pn	03 31 54.5	+3.7
LOR	Lormes	3.69	270	ePn	Pn	03 31 52.4	+1.0
	baz=90,SNR=1.0						
LOR	Lormes	3.69	270	ePg	Pg	03 32 04.7	+0.9
	baz=87						
LOR				eSg	Sg	03 32 51.6	+0.1
	comp=E,50nm,0.3s,baz=88,SNR=1.0						
OBKA	Obir	3.73	102	i Pn	Pn	03 31 54.7	+2.7
	comp=E,2.9nm,0.2s,SNR=8.0						
OBKA				ePg	Pg	03 32 03.5	-1.0
	comp=E,27nm,0.6s						
OBKA				Sg	Sg	03 32 57.0	+4.3
	comp=E,39nm,0.6s						
OBKA	Obir	3.73	102	ePn	Pn	03 31 54.4	+2.5
OBKA				ePg	Pg	03 32 03.3	-1.2
KLL	Kalltalsperre	3.77	330	ePn	Pn	03 31 54.0	+1.5
HOBG	Hohbusch	3.78	341	ePn	Pn	03 31 53.9	+1.3
SBF	Sospel	3.79	201	ePn	Pn	03 31 53.4	+0.6
	SNR=1.0						
SBF				eSn	Sn	03 32 35.7	-2.4
	comp=E,68nm,0.6s,SNR=1.0						
SMF	Signal de Mont	3.80	260	ePn	Pn	03 31 53.5	+0.6
	SNR=1.0						
SMF	Signal de Mont	3.80	260	ePg	Pg	03 32 06.4	+0.5
SMF				eSg	Sg	03 32 55.3	+0.2
	comp=E,62nm,0.4s,SNR=1.0						
ESCA	l'Escarene	3.83	201	Pn	Pb	03 31 58.0	-3.6
MEM	Membach	3.84	327	⇑Pn	Pn	03 31 55.0	+1.5
MEM				⇑Sn	Sn	03 32 37.0	-2.4
	comp=E,34nm,0.0s						
SSB	Saint Sauveur	3.92	239	ePn	Pn	03 31 54.9	+0.4
SSF	Saint Saulge	3.95	267	ePn	Pn	03 31 56.2	+1.3
	SNR=1.0						
SSF	Saint Saulge	3.95	267	ePg	Pg	03 32 09.1	+0.3
SSF				eSg	Sg	03 32 58.2	-1.7
	comp=E,28nm,0.4s,SNR=1.0						
BCLA	Clavier	3.98	320	⇑Pn	Pn	03 31 57.1	+1.8
BCLA				⇑Sn	Sn	03 32 40.8	-1.9
	comp=E,29nm,0.0s						
GIVF	Givet	3.98	314	ePn	Pn	03 31 56.2	+0.8
	SNR=1.0						
GIVF				eSn	Sn	03 32 40.5	-2.2
GIVF				eSg	Sg	03 33 01.2	+0.3
	comp=E,41nm,0.4s,SNR=1.0						
HGN	Heimansgroeve	4.00	328	ePn	Pn	03 31 57.5	+1.9
	comp=E,37nm,0.4s						
HGN				ePn	Pn	03 31 57.5	+1.9
	comp=E,37nm,0.4s						
HGN				eSg	Sn	03 32 41.8	-1.3
HGN				eSg	Sn	03 32 41.8	-1.3
SOKA	Soboth	4.00	99	i Pn	Pn	03 31 57.4	+1.6
	comp=E,8.1nm,0.2s,SNR=38						
SOKA				Pg	Pg	03 32 09.6	-0.3
	comp=E,14nm,0.6s						
SOKA				i Sg	Sg	03 33 07.3	+5.6
	comp=E,13nm,0.5s						
POSS	Possen	4.05	14	ePn	Pn	03 31 54.4	-1.9
POSS				eSg	Sg	03 33 02.9	-0.1
DOU	Dourbes	4.09	313	Pn	Pn	03 31 59.1	+2.2
DOU				Sg	Sg	03 33 02.5	-1.9
DOU	Dourbes	4.09	313	⇑Pn	Pn	03 31 58.7	+1.8
DOU				⇑Sn	Sn	03 32 42.2	-3.2
	comp=E,29nm,0.0s						
AVF	Avril sur Loir	4.09	263	ePn	Pn	03 31 57.9	+1.0
	SNR=1.0						
AVF	Avril sur Loir	4.09	263	ePg	Pg	03 32 12.3	+0.7
AVF				eSg	Sg	03 33 05.2	+0.6
	comp=E,16nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	4.10	233	ePn	Pn	03 31 58.3	+1.2
	SNR=1.0						
VIVF	Saint-Julien-l	4.10	233	ePg	Pg	03 32 13.0	+1.2
VIVF				eSg	Sg	03 33 06.0	+1.1
	comp=E,7.2nm,0.2s,SNR=1.0						
BEBN	Eben Emael	4.12	326	⇑Pn	Pn	03 31 59.1	+1.9
GTTG	Gvttingen	4.15	6	eSg	Sg	03 33 05.8	-0.5
BUG	Bochum--Univer	4.23	343	ePn	Pn	03 32 00.4	+1.6
ARSA	Arzberg	4.25	90	ePn	Pn	03 32 00.3	+1.2
	comp=E,5.4nm,0.6s,SNR=4.6						
ARSA				ePg	Pg	03 32 13.1	-1.5
	comp=E,6.7nm,0.3s						
ARSA				Sg	Sg	03 33 12.8	+3.1
	comp=E,9.1nm,0.4s						
ARSA	Arzberg	4.25	90	ePn	Pn	03 32 00.3	+1.2
ARSA				ePg	Pg	03 32 12.3	-2.2
BAIF	Baives	4.26	310	ePn	Pn	03 32 00.2	+0.9
	SNR=1.0						
BAIF				eSn	Sn	03 32 47.2	-2.5
BAIF				eSg	Sg	03 33 09.3	-0.8
	comp=E,27nm,0.5s						
FRF	La Foret Royal	4.29	207	ePn	Pn	03 32 00.6	+1.0
	SNR=1.0						
FRF				eSn	Sn	03 32 48.3	-1.9
	comp=E,17nm,0.5s,SNR=1.0						
CHRS	Christianenhau	4.30	13	ePn	Pn	03 31 58.3	-1.6
CHRS				eSg	Sg	03 33 10.3	-1.1
SMRF	Simiane la Rot	4.32	218	ePn	Pn	03 32 00.7	+0.7
	SNR=1.0						
SMRF	Simiane la Rot	4.32	218	ePg	Pg	03 32 16.2	+0.4
SMRF				eSg	Sg	03 33 11.9	+0.2
	comp=E,12nm,0.6s,SNR=1.0						
PRU	Pruhonice	4.33	52	ePN	Pn	03 31 59.2	-0.9
PRU				ePG	Pg	03 32 13.9	-2.1
PRU				eSG	Sg	03 33 12.9	+0.8
	comp=E,67nm,0.8s						
WIMM	Wimmelburg	4.35	19	ePn	Pn	03 31 58.5	-1.9
WIMM				ePg	Pg	03 32 17.4	+1.0
WIMM				eSg	Sg	03 33 12.7	0.0
GOPC	GO Pecny, Ondr	4.42	54	ePN	Pn	03 32 00.6	-0.8
GOPC				eSG	Sg	03 33 15.6	+0.6
	comp=E,52nm,0.6s						
CLZ	Clausthal	4.48	9	ePn	Pn	03 32 01.6	-0.6
CLZ				ePg	Pg	03 32 19.2	+0.3
CLZ				eSg	Sg	03 33 16.6	-0.3
CONA	Conrad Observa	4.48	81	i Pn	Pn	03 32 03.3	+1.0
	comp=E,5.3nm,0.2s,SNR=25						
BGF	Bois d'Agland	4.49	261	ePn	Pn	03 32 03.0	+0.7
	SNR=1.0						
BGF	Bois d'Agland	4.49	261	ePg	Pg	03 32 18.9	-0.1
BGF				eSn	Sn	03 32 52.7	-2.5
	SNR=1.0						
BGF				eSg	Sg	03 33 16.8	-0.4
	comp=E,60nm,0.4s,SNR=1.0						
SNF	Seneffe	4.51	315	⇑Pn	Pn	03 32 05.2	+2.6
HYF	Humbligny	4.51	270	ePn	Pn	03 32 03.0	+0.3
HYF	Humbligny	4.51	270	ePg	Pg	03 32 20.0	+0.4
HYF				eSg	Sg	03 33 19.3	+1.2
LMR	La Mourre	4.53	206	ePn	Pn	03 32 03.8	+0.8
	SNR=1.0						
LMR				eSn	Sn	03 32 54.2	-2.1
	comp=E,7.2nm,0.4s,SNR=1.0						
TREC	Trest	4.54	63	ePN	Pn	03 32 03.6	+0.5
TREC				ePG	Pg	03 32 18.2	-1.9
TREC				eSG	Sg	03 33 20.0	+1.0
	comp=E,64nm,0.6s						
CLL	Collm	4.58	31	ePn	Pn	03 32 01.0	-2.6
CLL				e		03 32 16.0	
CLL				ePg	Pg	03 32 23.0	+2.1
CLL				e		03 32 27.0	
CLL				i		03 32 30.2	
CLL				eSn	Sn	03 32 46.0	-12
CLL				e		03 33 08.0	
CLL				eSg	Sg	03 33 19.0	-1.3
	comp=Z,59nm,0.9s						
CLL	Collm	4.58	31	eSg	Sg	03 33 18.9	-1.3
BRG	Berggiesshubel	4.61	40	PN	Pn	03 32 03.2	-0.8
BRG				PG	Pg	03 32 22.0	+0.6
BRG				SN	Sn	03 32 55.6	-2.7
BRG				SG	Sg	03 33 21.4	+0.1
	comp=Z,50nm,0.7s						
BRG	Berggiesshubel	4.61	40	eSg	Sg	03 33 20.4	-0.8
PVCC	Panska Ves	4.67	46	eSG	Sg	03 33 22.8	-0.2
	comp=Z,99nm,0.6s						
CLF	Chambon-Foret	4.77	280	ePn	Pn	03 32 07.4	+1.1
ASSE	Asse, Remlinge	4.79	10	ePg	Pg	03 32 25.7	+0.7
ASSE				eSg	Sg	03 33 25.4	-1.6
WTSB	Winterswijk	4.82	341	ePn	Pn	03 32 07.4	+0.5
	comp=Z,7.4nm,0.2s						
WTSB				ePn	Pn	03 32 07.4	+0.5
	comp=Z,7.4nm,0.2s						
NVLJ	Novalja	4.84	124	ePn	Pn	03 32 08.8	+1.7
NVLJ				Sn	Sn	03 33 02.8	-1.0
TCF	Toulx Ste Croi	4.98	259	ePn	Pn	03 32 09.1	0.0
	SNR=1.0						
TCF	Toulx Ste Croi	4.98	259	ePg	Pg	03 32 28.1	-0.4
TCF				eSn	Sn	03 33 05.2	-2.2
TCF				eSg	Sg	03 33 32.9	-0.1
	comp=Z,21nm,0.6s,SNR=1.0						
KRUC	Moravsky	5.03	68	ePN	Pn	03 32 09.9	+0.1
KRUC				ePG	Pg	03 32 27.3	-2.2
KRUC				eSG	Sg	03 33 35.8	+1.2
LASF	Ste Croix	5.06	231	ePn	Pn	03 32 11.3	+1.1
LASF	Ste Croix	5.06	231	ePg	Pg	03 32 29.2	-0.9
LASF				eSg	Sg	03 33 34.8	-0.8
	comp=Z,18nm,0.5s,SNR=1.0						
NRDL	Niedersach Rie	5.10	6	ePg	Pg	03 32 32.9	+2.0
VRAC	Vranov	5.23	66	ePN	Pn	03 32 12.6	+0.1
DUGI	Dugi Otok	5.31	128	i Pn	Pn	03 32 15.5	+1.9
DUGI				Sn	Sn	03 33 14.7	-0.8
ZST	Bratislava	5.33	79	ePN	Pn	03 32 13.3	-0.6
ZST				ePG	Pg	03 32 34.6	-0.6
ZST				eSG	Sg	03 33 43.9	-0.3
UDBI	Udbina	5.37	120	ePn	Pn	03 32 16.9	+2.4
UDBI				Sn	Sn	03 33 16.0	-1.1
UPC	Upice	5.40	53	ePN	Pn	03 32 14.2	-0.7
UPC				ePG	Pg	03 32 32.7	-3.9
UPC				eSG	Sg	03 33 46.8	+0.3
	comp=Z,49nm,0.6s						
CHVC	Chvalec	5.47	52	ePN	Pn	03 32 14.9	-0.9
CHVC				eSG	Sg	03 33 49.2	+0.5
	comp=Z,111nm,0.9s						
DPC	Dobruska-Polom	5.49	55	eSG	Sg	03 33 49.3	-0.1
	comp=Z,65nm,0.7s						
OSTC	Ostas	5.54	53	ePN	Pn	03 32 16.2	-0.6
OSTC				eSG	Sg	03 33 50.7	-0.2
	comp=Z,37nm,0.7s						
CAF	Calviac	5.60	246	ePn	Pn	03 32 17.7	+0.1
	SNR=1.0						
CAF	Calviac	5.60	246	ePg	Pg	03 32 39.2	-1.2
CAF				eSn	Sn	03 33 18.8	-3.9
	comp=Z,3.9nm,0.4s,SNR=1.0						
CAF				eSg	Sg	03 33 52.4	-0.5
	comp=Z,12nm,0.6s						
MORI	Morici	5.74	126	ePn	Pn	03 32 21.2	+1.6
MORI				Sn	Sn	03 33 25.5	-0.7
RJF	Les Rejaudoux	5.78	251	ePn	Pn	03 32 20.6	+0.6
	SNR=1.0						
RJF	Les Rejaudoux	5.78	251	ePg	Pg	03 32 43.3	-0.4
RJF				eSg	Sg	03 33 57.8	-0.7
	comp=Z,11nm,0.4s						
ZIRJ	Zirje	5.85	128	ePn	Pn	03 32 22.3	+1.3
MORC	Moravsky Berou	5.97	64	ePn	Pn	03 32 22.7	0.0
MORC	Moravsky Berou	5.97	64	ePN	Pn	03 32 22.6	-0.1
BLY	Banja Luka	6.12	113	ePn	Pn	03 32 23.6	-1.1
OKC	Ostrava-Krasne	6.36	64	eSG	Sg	03 34 16.6	-0.5
	comp=Z,53nm,0.9s						
LDF	La Druitiere	6.41	284	ePn	Pn	03 32 29.3	+0.5
	SNR=1.0						
LDF	La Druitiere	6.41	284	ePg	Pg	03 32 54.7	-1.3
LDF				eSn	Sn	03 33 38.8	-3.9
	comp=Z,9.1nm,0.6s,SNR=1.0						
LDF				eSg	Sg	03 34 17.3	-1.7
	comp=Z,15nm,0.4s						
LFF	La Frestale	6.43	250	ePn	Pn	03 32 30.0	+1.0
LFF				eSg	Sg	03 34 17.8	-1.7
	comp=Z,15nm,0.5s						
MTLF	Montolieu	6.43	233	ePn	Pn	03 32 28.6	-0.5
	SNR=1.0						
MTLF	Montolieu	6.43	233	ePg	Pg	03 32 55.5	-0.8
MTLF				eSn	Sn	03 33 40.4	-2.8
	comp=Z,1.8nm,0.4s,SNR=1.0						
MTLF				eSg	Sg	03 34 17.8	-1.9
	comp=Z,1.9nm,0.3s						
MFF	Saint Martin d	6.50	266	ePn	Pn	03 32 29.9	0.0
	SNR=1.0						
MFF	Saint Martin d	6.50	266	ePg	Pg	03 32 56.0	-1.5
MFF				eSn	Sn	03 33 40.4	-4.3
	comp=Z,3.8nm,0.4s,SNR=1.0						
MFF				eSg	Sg	03 34 20.8	-0.9
	comp=Z,5.6nm,0.4s						
VYHS	Vyhne	6.51	77	ePN	Pn	03 32 29.6	-0.5
VYHS				eSN	Sn	03 33 39.2	-5.8
VYHS				eSG	Sg	03 34 22.4	+0.3
FLN	La Foliniere	6.67	285	ePn	Pn	03 32 32.9	+0.6
	baz=108,SNR=1.0						
FLN				eSn	Sn	03 33 44.2	-4.8
FLN				eSg	Sg	03 34 25.6	-1.7
	comp=Z,16nm,0.4s						
GRR	Gorron	6.88	282	ePn	Pn	03 32 36.3	+1.1
	SNR=1.0						
GRR				eSn	Sn	03 33 49.4	-4.8
	comp=Z,6.5nm,0.4s,SNR=1.0						
GRR				eSg	Sg	03 34 31.5	-2.5
	comp=Z,8.7nm,0.4s						
LANS	Liptovska Anna	7.02	72	ePN	Pn	03 32 37.6	+0.5
LANS	Liptovska Anna	7.02	72	eSG	Sg	03 34 40.2	+1.9
LANS				eLG	Lg	03 34 50.7	
OJC	Ojcow	7.49	64	ePn	Pn	03 32 42.0	-1.5
EPF	Esparros	7.69	238	ePn	Pn	03 32 46.9	+0.6
EPF	Esparros	7.69	238	ePg	Pg	03 33 18.2	-2.1
EPF				eSg	Sg	03 34 58.1	-1.8
	comp=Z,5.5nm,0.7s						
SGMF	Saint Gilles	8.01	280	ePn	Pn	03 32 50.8	+0.2
	SNR=1.0						
SGMF				eSn	Sn	03 34 16.2	-5.6
SGMF				eSg	Sg	03 35 06.0	-4.1
	comp=Z,15nm,0.6s						
ETSF	Etsaut	8.29	241	ePn	Pn	03 32 54.8	+0.1
ETSF				eSg	Sg	03 35 16.4	-2.9
	comp=Z,2.3nm,0.5s						
QUIF	Quistinic	8.41	278	ePn	Pn	03 32 56.7	+0.5
	SNR=1.0						
QUIF				eSn	Sn	03 34 27.6	-4.2
QUIF				eSg	Sg	03 35 20.5	-2.6
	comp=Z,15nm,0.8s						
ROSF	Rostrenen	8.49	281	ePn	Pn	03 32 57.5	+0.3
ROSF				eSn	Sn	03 34 28.0	-5.7
ROSF				eSg	Sg	03 35 21.1	-4.4
	comp=Z,12nm,0.6s						
SJPF	Ste Jean	8.57	244	eP	Pn	03 33 04.1	+5.7

ISCJB **20** *03:35:33.7±0.3, 24.°26N±0.°02×122.°23E±0.°02, h55^{km}±5^{km},*
Error ellipse: s-maj=3.3km s-min=2.4km az=155.2
JMA **20** *03:35:33.7±0.1, 24.°23N×122.°22E, h56^{km}±2^{km}, M1.9*
TAP **20** *03:35:34.1, 24.°26N×122.°20E, h49^{km}, ML2.6, C*
ISC 20 03:35:34.2±1.2**, 24.°26N**±0.°03×**122.°22E**±0.°02**, h52**^{km}±9^{km}**,**
n63, σ0ˢ.53/122**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.30	343	eP	Pn	03 35 43.4	-0.1
	baz=348						
EOS1				eS	Sn	03 35 51.0	+0.9
	baz=348						
NANB	Nanao	0.46	291	P	Pn	03 35 45.3	+0.1
	baz=292						
NANB				eS	Sn	03 35 53.4	+0.2
	baz=292						
ENA	Nanau	0.47	291	P	Pn	03 35 45.4	+0.1
	baz=292						
ENA				eS	Sn	03 35 53.4	+0.1
	baz=292						
TWC	Suao	0.49	315	eP	Pn	03 35 45.5	0.0
	baz=318						
TWC				eS	Sn	03 35 53.4	-0.2
	baz=318						
NACB	Ninganchiao	0.58	262	i P	Pn	03 35 46.3	-0.3
	baz=261						
NACB				eS	Sn	03 35 55.5	0.0
	baz=261						
TWD	Chiawan	0.60	253	eP	Pn	03 35 46.7	-0.1
	baz=251						
TWD				eS	Sn	03 35 55.7	-0.2
	baz=251						
HWA	Hwalien	0.63	244	eP	Pn	03 35 46.7	-0.5
	baz=241						
HWA				eS	Sn	03 35 55.7	-0.9
	baz=241						
ILA	Ilan	0.66	319	eP	Pn	03 35 47.7	+0.1
	baz=321						
ILA				eS	Sn	03 35 57.7	+0.4
	baz=321						
ETLH	Xiulin Townshi	0.68	266	eP	Pn	03 35 47.7	-0.2
	baz=265						
ETLH				eS	Sn	03 35 57.6	-0.2
	baz=265						
TWE	Neicheng	0.68	312	eP	Pn	03 35 47.8	-0.1
	baz=314						
TWE				eS	Sn	03 35 57.2	-0.6
	baz=314						
JYNG	Yonagunijimaku	0.69	74	P	Pn	03 35 47.9	0.0
JYNG				S	Sn	03 35 57.7	-0.1
NTC	Toucheng	0.69	329	eP	Pn	03 35 47.7	-0.3
	baz=330						
NTC				eS	Sn	03 35 57.5	-0.4
	baz=330						
ENTT	Nioudou	0.71	302	P	Pn	03 35 48.1	-0.1
	baz=303						
ENTT				eS	Sn	03 35 58.0	-0.4
	baz=303						
SLBB	Yuanshan	0.73	313	eP	Pn	03 35 48.5	+0.1
	baz=314						
SLBB				eS	Sn	03 35 59.2	+0.3
	baz=314						
NDT	Datong Townshi	0.73	298	eP	Pn	03 35 48.5	0.0
	baz=298						
NDT				eS	Sn	03 35 59.0	+0.1
	baz=298						
YOJ	Yonaguni jima	0.74	74	eP	Pn	03 35 49.5	+0.9

	baz=74						
YOJ				*e*S	Sn	03 35 59.8	+0.6
	baz=74						
YOJ	**Yonaguni jima**	0.74	74	P	Pn	03 35 48.6	0.0
YOJ				*e*S	Sn	03 35 59.0	-0.1
NNSB	**Datong**	0.79	282	*e*P	Pn	03 35 49.3	+0.1
	baz=282						
NNSB				*e*S	Sn	03 36 00.0	-0.2
	baz=282						
NNS	**Nan Shan**	0.80	283	*e*P	Pn	03 35 49.3	-0.2
	baz=283						
NNS				*e*S	Sn	03 36 00.1	-0.5
	baz=283						
ESL	**Shilin**	0.85	239	*e*P	Pn	03 35 49.7	-0.3
	baz=237						
ESL				*e*S	Sn	03 36 01.7	+0.1
	baz=237						
YHNB	**Yeheng**	0.87	298	*i* P	Pn	03 35 50.4	-0.1
	baz=298						
YHNB				*e*S	Sn	03 36 02.0	-0.3
	baz=298						
WHF	**Hehuan Shan**	0.88	263	P	Pn	03 35 50.8	-0.1
	baz=262						
WHF				*e*S	Sn	03 36 03.2	+0.2
	baz=262						
NSK	**Sanguang**	0.89	298	P	Pn	03 35 50.7	+0.1
	baz=298						
NSK				*e*S	Sn	03 36 02.5	-0.2
	baz=298						
TWA	**Mucha**	0.92	321	*e*P	Pn	03 35 51.2	+0.2
	baz=322						
TWA				*e*S	Sn	03 36 03.5	+0.1
	baz=322						
EGFH	**Guangfu**	0.94	231	*e*P	Pn	03 35 51.5	+0.3
	baz=230						
EGFH				*e*S	Sn	03 36 03.9	+0.2
	baz=230						
TWT	**Tachien**	0.96	270	*e*P	Pn	03 35 51.8	+0.2
	baz=269						
TWT				*e*S	Sn	03 36 04.5	+0.2
	baz=269						
TDCB	**Techi**	0.97	270	*e*P	Pn	03 35 52.2	+0.4
	baz=269						
TDCB				*e*S	Sn	03 36 04.7	0.0
	baz=269						
CHGB	**Renai**	0.98	258	*e*P	Pn	03 35 52.0	0.0
	baz=258						
CHGB				*e*S	Sn	03 36 04.5	-0.5
	baz=258						
HGSD	**Ruisui**	1.06	224	P	Pn	03 35 52.9	+0.1
	baz=222						
HGSD				*e*S	Sn	03 36 06.8	+0.3
	baz=222						
WLTB	**Daxi**	1.06	304	*e*P	Pn	03 35 53.0	+0.2
	baz=304						
WLTB				*e*S	Sn	03 36 07.0	+0.4
	baz=304						
YM01	**YM01**	1.06	326	*e*P	Pn	03 35 52.9	0.0
	baz=327						
YM01				*e*S	Sn	03 36 07.1	+0.4
	baz=327						
YM10	**YM10**	1.08	326	*e*P	Pn	03 35 53.5	+0.4
	baz=327						
YM10				*e*S	Sn	03 36 06.3	-0.7
	baz=327						
YM05	**YM05**	1.08	326	*e*P	Pn	03 35 53.0	-0.2
	baz=327						
YM05				*e*S	Sn	03 36 05.9	-1.2
	baz=327						
YM04	**YM04**	1.09	325	*e*P	Pn	03 35 52.6	-0.6
	baz=326						
YM04				*e*S	Sn	03 36 05.8	-1.5
	baz=326						
YM08	**YM08**	1.09	328	*e*P	Pn	03 35 53.5	+0.3
	baz=329						
YM08				*e*S	Sn	03 36 07.8	+0.6
	baz=329						
VWDT	**VWDT**	1.11	243	P	Pn	03 35 53.5	+0.1
	baz=242						
VWDT				*e*S	Sn	03 36 08.1	+0.3
	baz=242						
EHY	**Hungye**	1.12	228	*e*P	Pn	03 35 53.0	-0.5
	baz=226						
EHY				*e*S	Sn	03 36 08.2	+0.3
	baz=226						
TWY	**Chenhua**	1.16	331	*e*P	Pn	03 35 54.4	+0.3
	baz=332						
TWY				*e*S	Sn	03 36 09.7	+0.7
	baz=332						
LIOB	**Emei**	1.17	289	*e*P	Pn	03 35 54.5	+0.3
	baz=289						
LIOB				*e*S	Sn	03 36 09.2	+0.1
	baz=289						
NSTT	**Nanjuang**	1.17	289	*e*P	Pn	03 35 54.4	+0.1
	baz=288						
NSTT				*e*S	Sn	03 36 09.4	+0.1
	baz=288						
DPDB	**Guoxing**	1.21	259	*e*P	Pn	03 35 55.0	+0.1
	baz=259						
DPDB				*e*S	Sn	03 36 10.2	0.0
	baz=259						
YULB	**Yu-li**	1.21	225	*e*P	Pn	03 35 54.5	-0.3
	baz=223						
YULB				*e*S	Sn	03 36 10.1	-0.2
	baz=223						
TWF1	**Yuli**	1.24	223	P	Pn	03 35 55.1	-0.1
	baz=222						
TWF1				*e*S	Sn	03 36 11.4	+0.5
	baz=222						
SBCB	**Hsinchu**	1.25	295	*e*P	Pn	03 35 55.5	+0.2
	baz=295						
SBCB				*e*S	Sn	03 36 11.1	+0.1
	baz=295						
SSLB	**Suanglung**	1.25	248	*e*P	Pn	03 35 55.7	+0.3
	baz=247						
SSLB				*e*S	Sn	03 36 11.0	-0.3
	baz=247						
TYC	**Yuchr**	1.30	254	*e*P	Pn	03 35 56.4	+0.4
	baz=253						
TYC				*e*S	Sn	03 36 12.6	+0.3
	baz=253						
WHYT	**Xinyi Township**	1.37	246	*e*P	Pn	03 35 58.6	+1.6
	baz=245						
WHYT				*e*S	Sn	03 36 16.1	+1.9
	baz=245						
IRIF	**Iriomote-Funau**	1.38	87	S	Sn	03 36 14.1	-0.1
CHKT	**Chengkung**	1.40	214	*e*P	Pn	03 35 55.9	-1.5
	baz=213						
CHKT				*e*S	Sn	03 36 13.9	-0.8
	baz=213						
WJS	**Zhushan**	1.44	253	*e*P	Pn	03 35 58.0	+0.1
	baz=252						
WJS				*e*S	Sn	03 36 15.7	0.0
	baz=252						
HATJ	**Hateruma jima**	1.46	98	S	Sn	03 36 16.5	+0.3
CHN5	**Tsauling**	1.56	245	*e*P	Pn	03 35 59.1	-0.5
	baz=244						
CHN5				*e*S	Sn	03 36 19.5	+0.6
	baz=244						
JKRS	**Kuro-shima**	1.63	90	P	Pn	03 36 00.6	+0.1
JKRS				S	Sn	03 36 20.9	+0.5
RLNB	**Erlin**	1.74	258	*e*P	Pn	03 36 01.9	-0.1
	baz=257						
RLNB				*e*S	Sn	03 36 23.0	-0.1
	baz=257						
TPUB	**Ta-pu**	1.75	237	*e*P	Pn	03 36 03.4	+1.2
	baz=236						
TPUB				*e*S	Sn	03 36 23.6	+0.3
	baz=236						
CHN4	**Tsaushan**	1.75	239	*e*P	Pn	03 36 02.0	-0.1
	baz=238						
CHN4				*e*S	Sn	03 36 24.0	+0.7
	baz=238						
JIJ	**Ishigaki jima**	1.75	86	S	Sn	03 36 22.3	-1.1
TWGBT	**Beinan**	1.78	216	P	Pn	03 36 03.0	+0.4
	baz=215						
TWGBT				*e*S	Sn	03 36 23.9	-0.2
	baz=215						
TWG	**Pinlang**	1.78	217	P	Pn	03 36 03.0	+0.4
	baz=215						
TWG				*e*S	Sn	03 36 23.0	-1.1
	baz=215						
SLGT	**Liugui**	1.92	229	*e*P	Pn	03 36 06.0	+1.5
	baz=228						
SLGT				*e*S	Sn	03 36 28.1	+0.6
	baz=228						
JISG	**Ishigakijimahi**	1.93	80	P	Pn	03 36 04.4	-0.2
JISG				S	Sn	03 36 27.3	-0.4
JTJ	**Tarama**	2.29	80	S	Sn	03 36 36.1	-0.4
PHUB	**P'eng-hu**	2.54	253	*e*P	Pn	03 36 12.2	-0.7
	baz=252						
PHUB				*e*S	Sn	03 36 41.4	-1.3
	baz=252						

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*ISCJB **20** 03:39:37.8±0.5, 10°.75S±0°.06×165°.43E±0°.06, h31^{km}, mb4.3/15, MS3.7/6, Error ellipse: s-maj=9.8km s-min=7.1km az=144.7*

*NEIC **20** 03:39:40.2±1.6, 10°.65S×165°.42E, h36^{km}±4^{km}, mb4.2/9, Error ellipse: s-maj=25.0km s-min=7.9km az=82.0*

*IDC **20** 03:39:41.7±3.8, 10°.77S×165°.43E, h53^{km}±34^{km}, mb3.8/10, mb1 4.1/12, mb1mx3.9/28, mbtmp4.2/12, ML4.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/21, Error ellipse: s-maj=25.8km s-min=19.1km az=55.0*

ISC 20 03:39:39.4±0.7, **10°.67S**±0°.08×**165°.49E**±0°.09, **h31**^{km}**, n36, σ0^{s}.96**/29, **mb4.2**/15, **MS3.7**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	5.60	282	P	Pn	03 41 01.0	+0.5
	45nm,0.3s,baz=144,slow=9.0,SNR=4.9						
HNR				S	Sn	03 42 04.4	+0.6
	27nm,0.3s,baz=232,slow=19,SNR=2.7						
HNR				LR	LR	03 43 06.6	
	comp=Z,1µm,19.1s,baz=87,slow=37						
DZM	**Mont Dzumac**	11.37	176	P	Pn	03 42 21.3	+1.5
	3.0nm,0.3s,baz=316,slow=13,SNR=52						
DZM				S	Sn	03 44 25.7	-0.2
	0.5nm,0.3s,baz=346,slow=19,SNR=3.1						
DZM				LR	LR	03 45 05.2	
	comp=Z,45nm,20.4s,baz=34,slow=29						
DZM	**Mont Dzumac**	11.37	176	*e*Pn	Pn	03 42 20.7	+0.9
DZM				*e*Sn	Sn	03 44 25.7	-0.2
EIDS	**Eidsvold**	20.00	221	*e*P	Pn	03 44 10.4	-1.0
	16nm,1.0s						
CTA	**Charters Tower**	20.75	241	P	P	03 44 18.1	+0.3
	1.3nm,0.3s,baz=56,slow=11,SNR=3.5						
OUZ	**Omahuta**	25.53	164	*e*P	P	03 45 06.2	+1.0
	22nm,1.2s						
H11S2	**WAKE ISLAND Hy**	29.00	2	T	T	04 15 47.8	
	baz=181,slow=76,SNR=125						
H11S3	**WAKE ISLAND Hy**	29.01	2	T	T	04 15 48.0	
	baz=181,slow=76,SNR=60						
H11S1	**WAKE ISLAND Hy**	29.02	2	T	T	04 15 42.3	
	baz=181,slow=76,SNR=106						
URZ	**Urewera**	29.38	161	P	P	03 45 39.8	0.0
	8.2nm,0.8s,baz=16,slow=5.3,SNR=9.2						
URZ	**Urewera**	29.38	161	*e*P	P	03 45 40.4	+0.6
	8.7nm,0.9s						
BKZ	**Black Stump Fm**	30.02	163	*e*P	P	03 45 47.0	+1.4
	43nm,1.6s						
H11N1	**WAKE ISLAND Hy**	30.23	3	T	T	04 17 34.1	
	baz=182,slow=76,SNR=153						
H11N3	**WAKE ISLAND Hy**	30.23	3	T	T	04 17 09.2	
	baz=182,slow=76,SNR=142						
H11N2	**WAKE ISLAND Hy**	30.24	3	T	T	04 17 19.9	
	baz=182,slow=76,SNR=159						
STKA	**Stephens Creek**	30.54	223	LR	LR	03 57 22.0	
	comp=Z,173nm,18.1s,baz=27,slow=35						
WR1	**Warramunga Arr**	31.38	249	*e*P	P	03 45 57.3	-0.4
WRA	**Warramunga Arr**	31.38	249	P	P	03 45 57.3	-0.4
	2.4nm,0.9s,baz=82,slow=8.7,SNR=5.3						
AS31	**Alice Springs**	32.73	243	*e*P	P	03 46 07.2	-2.4
	1.8nm,1.1s						
ASAR	**Alice Springs**	32.74	243	P	P	03 46 07.2	-2.4
	1.2nm,0.8s,baz=63,slow=10,SNR=12						
ASAR				LR	LR	03 58 55.5	
	comp=Z,137nm,18.5s,baz=82,slow=35						
KSRS	**Korea Array**	59.43	326	LR	LR	04 14 23.9	
	comp=Z,22nm,18.6s,baz=164,slow=35						
VNDA	**Vanda**	66.86	181	P	P	03 50 26.7	-1.2
	1.3nm,1.0s,baz=319,slow=5.9,SNR=5.0						
CM31	**Chiang Mai Arr**	71.73	294	*e*P	P	03 50 59.9	+0.8
	14nm,0.4s						
CMAR	**Chiang Mai Arr**	71.73	294	P	P	03 50 59.9	+0.8
	1.2nm,0.3s,baz=116,slow=4.1,SNR=4.7						
SONA0	**Songino Array**	78.22	324	*e*P	P	03 51 36.4	+0.3
SONM	**Songino Array**	78.22	324	P	P	03 51 36.4	+0.3
	0.7nm,0.6s,baz=135,slow=9.6,SNR=3.6						
QSPA	**South Pole Qui**	79.33	180	*e*P	P	03 51 42.2	+0.2
	9.9nm,1.1s						
ILAR	**Eielson Array**	83.24	19	P	P	03 52 02.4	-0.1
	0.6nm,0.8s,baz=235,slow=5.3,SNR=5.3						
ILB	**Eielson Array**	83.24	19	*e*P	P	03 52 02.4	-0.1
	6.3nm,1.5s						
EGAK	**Eagle**	85.12	20	*e*P	P	03 52 11.5	-0.4
	4.7nm,1.1s						
TIXI	**Tiksi**	85.68	349	LR	LR	04 25 42.8	
	comp=Z,28nm,21.4s,baz=288,slow=32						
NV01	**Mina Array Sit**	85.98	50	*e*P	P	03 52 16.7	-0.5
NVAR	**Mina Array Bea**	85.98	50	P	P	03 52 16.7	-0.5
	1.7nm,1.1s,baz=232,slow=7.3,SNR=6.0						
NVAR				LR	LR	04 25 22.7	
	comp=Z,45nm,18.3s,baz=250,slow=32						
MK32	**Makanchi Array**	93.08	317	*e*P	P	03 52 50.2	0.0
MKAR	**Makanchi Array**	93.08	317	P	P	03 52 50.2	0.0
	0.4nm,0.6s,baz=94,slow=10,SNR=3.7						
TXAR	**Lajitas Array**	95.87	61	LR	LR	04 29 23.3	
	comp=Z,28nm,19.6s,baz=0.0,slow=31						

MEX 20 03:45:03.6±0.6, **14°.40N**×**92°.50W, h44**^{km}±44^{km}**, MD3.5, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.47	332	*e*P	Pn	03 45 26.8	-0.9
PCIG				*e*S	Sn	03 45 43.1	-2.7
CCIG	**Comitan**	1.91	11	*i* P	Pn	03 45 32.5	-1.3
CCIG				*i* S	Sn	03 45 55.2	-1.5
CMIG	**Matias Romero**	3.53	320	*i* S	Sn	03 46 34.5	-1.9

MEX 20 04:14:24.0±0.5, **15°.44N**×**94°.79W, h18**^{km}±26^{km}**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	1.32	285	*e*P	Pn	04 14 44.4	-3.2
HUIG				*i* S	Sn	04 14 59.5	-5.3
PCIG		1.53	80	*e*P	Pn	04 14 47.2	-3.3
PCIG				*i* S	Sn	04 15 04.8	-5.3
CMIG	**Matias Romero**	1.65	357	*e*P	Pn	04 14 49.6	-2.6
CMIG				*i* S	Sn	04 15 07.9	-5.1

IDC 20 04:18:49.7±1.9, **6°.95S**×**128°.19E, h0**^{km}**, mb3.7**/1, **mb1 4.1**/4, **mb1mx3.6**/37, **mbtmp3.9**/4, **ML4.3**/3, **Error ellipse: s-maj=59.8km s-min=29.7km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	6.78	27	Pn	Pn	04 20 32.3	+1.8
	1.3nm,0.3s,baz=166,slow=12,SNR=12						
SIJI				Sn	Sn	04 21 35.7	-13
	6.2nm,0.3s,baz=223,slow=22,SNR=12						
WRA	**Warramunga Arr**	14.23	156	Pn	Pn	04 22 11.4	-1.3
	2.7nm,0.3s,baz=338,slow=12,SNR=54						
WRA				Sn	Sn	04 24 37.6	-14
	0.4nm,0.3s,baz=322,slow=24,SNR=3.7						
ASAR	**Alice Springs**	17.51	162	P	P	04 22 56.5	-0.2
	1.3nm,0.3s,baz=346,slow=11,SNR=64						
ASAR				S	Sn	04 26 04.2	-6.9
	0.2nm,0.3s,baz=353,slow=23,SNR=3.4						
MKAR	**Makanchi Array**	67.21	328	P	P	04 29 45.2	-0.6
	0.3nm,0.4s,baz=114,slow=7.6,SNR=3.1						

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*BJI **20** 04:18:56.4±0.0, 3°.70S×151°.40E, h3^{km}, mb4.8/21, mB4.9/15, Ms4.7/1, Ms7 4.5/2*

*NEIC **20** 04:18:58.8±0.9, 3°.77S×151°.36E, h8^{km}±4^{km}, mb4.6/18, Error ellipse: s-maj=15.6km s-min=8.2km az=215.0*

*ISCJB **20** 04:18:59.3±0.3, 3°.80S±0°.06×151°.32E±0°.06, h21^{km}, mb4.5/30, MS3.5/6, Error ellipse: s-maj=9.1km s-min=8.1km az=6.6*

*IDC **20** 04:19:03.7±4.7, 3°.83S×151°.36E, h46^{km}±45^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.8/37, mbtmp4.1/11, ML2.2/1, MS3.2/8, Ms1 3.2/8, ms1mx3.1/21, Error ellipse: s-maj=27.8km s-min=21.7km az=63.0*

ISC 20 04:19:00.8±0.5, **3°.76S**±0°.07×**151°.41E**±0°.09, **h21**^{km}**, n52, σ1^{s}.06**/46, **mb4.6**/30, **MS3.3**/6, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	0.87	120	*e*Pg	Pb	04 19 16.3	-1.0
MANU	**Manus Island**	4.38	293	*e*Pn	Pn	04 20 05.4	-0.7
PMG	**Port Moresby**	7.02	217	P	Pn	04 20 43.8	+1.3
	2.6nm,0.3s,baz=269,slow=6.1,SNR=3.1						
PMG				LR	LR	04 23 39.5	
	comp=Z,95nm,18.3s,baz=158,slow=40						
PMG	**Port Moresby**	7.02	217	*e*Pn	Pn	04 20 43.3	+0.8
HNR	**Honiara**	10.19	124	LR	LR	04 25 53.5	
	comp=Z,343nm,19.1s,baz=327,slow=40						
CTA	**Charters Tower**	16.99	197	P	P	04 23 00.6	+1.4
	0.2nm,0.3s,baz=26,slow=12,SNR=7.0						
CTAO	**Charters Tower**	16.99	197	*e*Pn	Pn	04 22 56.8	-0.6
	38nm,1.4s						
GUMO	**Guam**	18.41	339	LR	LR	04 30 11.3	
	comp=Z,19nm,19.5s,baz=146,slow=36						
WB2	**Warramunga Arr**	23.14	225	*e*P	P	04 24 04.1	-1.9
	27nm,1.4s						
WR1	**Warramunga Arr**	23.15	225	*e*P	P	04 24 04.3	-1.7
WRA	**Warramunga Arr**	23.15	225	P	P	04 24 04.4	-1.7
	6.0nm,0.9s,baz=54,slow=11,SNR=9.2						
DZM	**Mont Dzumac**	23.33	143	P	P	04 24 08.2	+0.3
	14nm,1.1s,baz=350,slow=12,SNR=4.0						
DZM	**Mont Dzumac**	23.33	143	*e*P	P	04 24 08.2	+0.3
	76nm,1.7s						
AS31	**Alice Springs**	26.03	219	*e*P	P	04 24 31.6	-1.2
	4.1nm,1.4s						
ASAR	**Alice Springs**	26.03	219	P	P	04 24 31.6	-1.3
	4.6nm,0.9s,baz=55,slow=8.0,SNR=16						
DAV	**Davao City (W)**	27.93	293	LR	LR	04 36 34.8	
	comp=Z,41nm,18.3s,baz=24,slow=38						
BATI	**Baumata**	28.26	255	LR	LR	04 37 50.4	
	comp=Z,184nm,18.6s,baz=165,slow=40						
NJ2	**Nanjing**	47.16	321	*e*P	P	04 27 32.8	+0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	**Kunming**	55.25	304	P	P	04 28 34.0	+0.8
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CM31	**Chiang Mai Arr**	56.18	295	*e*P	P	04 28 40.0	+0.4
CMAR	**Chiang Mai Arr**	56.18	295	P	P	04 28 40.0	+0.4
	1.7nm,0.4s,baz=108,slow=5.5,SNR=9.4						
CMAR				LR	LR	04 53 17.1	
	comp=Z,16nm,18.7s,baz=175,slow=37						
PETK	**Petropavlovsk-**	56.90	5	LR	LR	04 51 30.1	
	comp=Z,20nm,18.6s,baz=133,slow=34						
HHC	**Hu-ho-hao-te**	57.40	325	P	P	04 28 52.8	+4.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,13nm,5.4s						
LZH	**Lanzhou**	59.52	316	*e*P	P	04 29 03.6	+0.6
LZH				pP	pP	04 29 07.3	-1.7
LZH				sP	sP	04 29 09.3	-1.9
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
SONA0	**Songino Array**	64.71	328	*e*P	P	04 29 37.5	-0.1
SONM	**Songino Array**	64.71	328	P	P	04 29 37.5	-0.1
	1.4nm,0.9s,baz=145,slow=5.4,SNR=5.5						
YAK	**Yakutsk**	67.69	349	*e*P	P	04 29 58.0	+1.8
	16nm,0.5s						
VNDA	**Vanda**	73.92	178	P	P	04 30 33.5	-0.4
	0.6nm,0.7s,baz=339,slow=9.5,SNR=3.6						
WMQ	**Urumqi**	74.04	318	*e*P	P	04 30 32.9	-2.4
WMQ				pP	pP	04 30 39.3	-2.1
WMQ				sP	sP	04 30 42.9	-0.7
WMQ				pmax	pmax		
	comp=Z,84nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,61nm,3.7s						
WMQ				LR	LR		
	comp=Z,250nm,23.3s						
MK32	**Makanchi Array**	78.63	319	*e*P	P	04 31 01.2	-0.1
MKAR	**Makanchi Array**	78.63	319	P	P	04 31 01.2	-0.1
	0.9nm,0.7s,baz=93,slow=8.9,SNR=6.9						
ZAA0	**Zalesovo Array**	79.52	327	*e*P	P	04 31 06.3	+0.3
	9.2nm,1.6s						
ZALV	**Zalesovo Beam**	79.52	327	P	P	04 31 05.4	-0.6
	0.4nm,0.4s,baz=126,slow=7.4,SNR=3.0						
ZALV				LR	LR	05 05 14.1	
	comp=Z,15nm,21.9s,baz=70,slow=35						
ZAA1	**Zalesovo Array**	79.52	327	*e*P	P	04 31 05.4	-0.6
RND	**Reindeer**	80.32	23	*e*P	P	04 31 09.9	-0.3
	4.0nm,0.7s						
MCK	**McKinley**	80.44	23	*e*P	P	04 31 10.9	+0.1
	9.3nm,1.0s						
WRH	**Wood River Hil**	81.13	22	*e*P	P	04 31 14.8	+0.4
	5.5nm,0.8s						
KSH	**Kashi**	81.20	311	*e*P	P	04 31 18.8	+3.3
CCB	**Clear Creek Bu**	81.32	22	*e*P	P	04 31 14.8	-0.6
	9.3nm,1.4s						
ILAR	**Eielson Array**	81.72	22	P	P	04 31 16.6	-0.9
	1.3nm,0.8s,baz=253,slow=5.3,SNR=14						
ILB	**Eielson Array**	81.72	22	*e*P	P	04 31 16.6	-0.9
	1.9nm,0.8s						
KURK	**Kurchatov**	82.09	322	*e*P	P	04 31 19.9	+0.1
	12nm,1.9s						
BTK	**Batken**	85.21	311	*e*P	P	04 31 36.5	+0.4
	13nm,1.2s						
KK31	**Karatay Array**	85.91	314	*e*P	P	04 31 39.6	+0.2
	7.0nm,1.1s						
KKAR	**Karatay Array**	85.91	314	*e*P	P	04 31 39.8	+0.3
	7.0nm,1.1s						
EPYK	**Eagle Plains**	86.24	23	*e*P	P	04 31 41.1	+0.5
	13nm,1.5s						
DLBC	**Dease Lake**	87.21	31	*e*P	P	04 31 46.6	+1.1
	8.8nm,1.3s						
INK	**Inuvik**	87.98	21	*e*P	P	04 31 49.1	+0.1
	4.1nm,1.1s						
YKA	**Yellowknife Ar**	95.16	28	P	P	04 32 23.1	+0.7
	0.6nm,0.8s,baz=278,slow=3.9,SNR=6.1						
YKB5	**Yellowknife Ar**	95.16	28	*e*P	P	04 32 23.1	+0.7
TORD	**Torodi Ar. Bea**	148.66	289	PKPbc	PKPbc	04 38 46.6	-0.9
	4.1nm,1.0s,baz=97,slow=0.9,SNR=10						
TOA1	**Torodi Ar. Sit**	148.66	289	*e*PKPbc	PKPbc	04 38 46.6	-0.9

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*LSZ **20** 04:25:43.0±0.3, 16°.47S×23°.36E, h10^{km}, MD2.7, ML5.0*

*EAF **20** 04:25:44.8±1.3, 14°.06S×24°.11E, h0^{km}±999^{km}, MD4.0*

*BUL **20** 04:25:46.5±1.6, 14°.01S×24°.16E, h0^{km}±999^{km}, MD4.5*

ISC 20 04:25:49.6±2.1, **14°.3S**±0°.1×**24°.38E**±0°.06, **h10**^{km}**, n14, σ1^{s}.75**/22, **Zambia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MONG	**Mongu**	1.49	237	*e*P	Pg	04 26 16.9	-1.4
MONG				*i*		04 26 17.5	
	baz=273,slow=1.2						
MONG				*i* S	Sg	04 26 40.8	+3.2
ITZ	**Itezhi-Tezhi**	2.12	132	*i* P	Pn	04 26 26.6	+1.3
ITZ				*i*		04 26 27.0	
	baz=254,slow=18						
ITZ				*i* S	Sb	04 26 58.4	+3.6
ITZ				IAML		04 27 01.3	
	comp=N,16µm,0.1s						
LSZ	**Lusaka**	3.80	105	*i* P	Pn	04 26 48.7	+0.2
LSZ	**Lusaka**	3.80	105	*i* P	Pn	04 26 48.7	+0.2
LSZ	**Lusaka**	3.80	105	*i* P	Pn	04 26 48.7	+0.2
BLWY	**Bulawayo**	7.05	146	*i* P	Pn	04 27 32.4	-0.7
BLWY				*i* S	Sn	04 28 51.9	-1.6
BLWY	**Bulawayo**	7.05	146	*i* P	Pn	04 27 32.4	-0.7
BLWY				*i* S	Sn	04 28 51.9	-1.6
BLWY	**Bulawayo**	7.05	146	*i* P	Pn	04 27 32.4	-0.7
BLWY				*i* S	Sn	04 28 51.9	-1.6
MATP	**Matopo**	7.23	148	*i* P	Pn	04 27 36.6	+1.0
MATP				*i* S	Sn	04 28 56.5	-1.4
MATP	**Matopo**	7.23	148	*i* P	Pn	04 27 36.6	+1.0
MATP				*i* S	Sn	04 28 56.5	-1.4
MATP	**Matopo**	7.23	148	*i* P	Pn	04 27 36.6	+1.0
MATP				*i* S	Sn	04 28 56.5	-1.4
MSNA	**Messina**	9.61	147	*i* P	Pn	04 28 06.1	-2.0
MSNA	**Messina**	9.61	147	*i* P	Pn	04 28 06.1	-2.0
MSNA	**Messina**	9.61	147	*i* P	Pn	04 28 06.1	-2.0

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*IDC **20** 05:03:20.9±4.7, 24°.93S×179°.83E, h468^{km}±51^{km}, mb3.3/10, mb1 3.5/11, mb1mx3.3/35, mbtmp4.1/11, Error ellipse: s-maj=29.7km s-min=17.3km az=65.0*

*ISCJB **20** 05:03:22.7±0.8, 25°.05S±0°.08×179°.8E±0°.2, h501^{km}, mb3.6/9, Error ellipse: s-maj=21.2km s-min=10.9km az=2.3*

ISC 20 05:03:23.4±0.8, **25°.08S**±0°.10×**179°.8E**±0°.2, **h501**^{km}**, n15, σ1^{s}.39**/16, **mb3.7**/9, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.34	189	P	P	05 06 15.2	-0.7
	1.0nm,0.3s,baz=74,slow=3.7,SNR=14						
URZ				S	S	05 08 35.9	-2.3
	0.9nm,0.3s,baz=250,slow=21,SNR=9.6						
RPZ	Rata Peaks	19.93	199	P	P	05 07 20.8	-0.3
	8.9nm,0.7s,baz=24,slow=7.4,SNR=4.4						
CTA	Charters Tower	31.32	272	P	P	05 09 03.0	+0.7
	3.2nm,0.4s,baz=80,slow=15,SNR=3.2						
ASAR	Alice Springs	41.68	262	P	P	05 10 28.2	+0.4
	0.2nm,0.3s,baz=94,slow=7.6,SNR=6.7						
WRA	Warramunga Arr	42.16	267	P	P	05 10 30.9	-0.8
	1.2nm,0.4s,baz=92,slow=7.8,SNR=11						
VNDA	Vanda	53.20	185	P	P	05 11 55.6	+2.0
	0.8nm,0.5s,baz=0.2,slow=8.2,SNR=7.7						
MJAR	Matsushiro Arr	72.77	326	P	P	05 14 00.1	-0.3
	1.6nm,0.6s,baz=169,slow=6.2,SNR=5.4						
MAW	Mawson	76.59	201	P	P	05 14 22.9	+1.5
	2.9nm,0.6s,baz=131,slow=9.3,SNR=5.6						
PETK	Petropavlovsk-	80.20	347	P	P	05 14 41.2	+0.4
	1.8nm,0.6s,baz=126,slow=5.9,SNR=5.8						
TXAR	Lajitas Array	91.20	58	P	P	05 15 35.6	+0.7
	0.2nm,0.9s,baz=224,slow=2.5,SNR=3.5						
ILAR	Eielson Array	93.21	14	P	P	05 15 42.1	-1.1
	0.3nm,0.6s,baz=213,slow=6.5,SNR=3.9						
NB2	NORSAR Subarra	143.21	351	PKP	PKPdf	05 21 57.3	-2.3
	comp=Z,0.6nm,0.5s,baz=18,slow=3.2						
NOA	NORSAR Array B	143.21	351	PKP	PKPdf	05 21 57.6	-2.0
	comp=Z,0.5nm,0.8s,baz=15,slow=4.1,SNR=6.3						
AKASG	Malin Array Be	145.85	326	PKPbc	PKPbc	05 22 05.6	-0.4
	comp=Z,0.7nm,0.4s,baz=42,slow=4.3,SNR=5.3						
TORD	Torodi Ar. Bea	168.00	189	PKPab	PKPab	05 23 44.4	+0.9
	comp=Z,0.6nm,0.8s,baz=146,slow=4.1,SNR=4.7						

DJA ***20*** *05:06:59.5±0.7, 3°N±6°×12°8E±°, h138^{km}±10^{km}, M4.7/11, mb4.7/6, mB5.3/5, MLv4.8/11, Mw(mB)4.7/5, Mwp7.0/1*

ISCJB ***20*** *05:07:06.3±0.4, 2°.30N±0°.04×127°.22E±0°.06, h100^{km}, mb4.5/25, Error ellipse: s-maj=9.1km s-min=4.7km az=155.9*

NEIC ***20*** *05:07:08.5±1.8, 2°.22N×127°.31E, h97^{km}±6^{km}, mb4.7/20, Error ellipse: s-maj=16.1km s-min=10.9km az=64.0*

IDC ***20*** *05:07:08.6±8.1, 2°.12N×127°.14E, h102^{km}±75^{km}, mb4.0/9, mb1 4.2/9, mb1mx3.7/35, mbtmp4.3/9, MS3.8/1, Ms1 3.8/1, ms1mx2.6/19, Error ellipse: s-maj=45.8km s-min=14.7km az=65.0*

ISC 20 05:07:08.0±0.5**, 2°.33N**±0°.05×**127°.26E**±0°.08**, h100^{km}, n47, σ1^{s}.43**/49**, mb4.7**/25**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.55	176	ePn	Pn	05 07 33.8	-1.1
TNTI				eSn	Sn	05 07 56.7	+1.3
TNTI	Ternate	1.55	176	P	Pn	05 07 33.5	-1.5
SGSI	Sangihe	2.19	308	P	Pn	05 07 40.5	-2.6
SGSI				S	Sn	05 08 06.7	-3.3
LBMI	Labuha	2.96	175	P	Pn	05 07 52.0	-1.3
SANI	Sanana	4.54	196	P	Pn	05 08 11.6	-2.9
KCP	Kidapawan	5.12	335	⇑eP	Pn	05 08 22.1	-0.4
KCP				i S	Sn	05 09 20.0	-0.6
NLAI	Namlea	5.54	182	P	Pn	05 08 27.2	-0.9
LUWI	Luwuk	5.60	233	ePn	Pn	05 08 30.2	+1.2
LUWI				eSn	Sn	05 09 32.1	0.0
LUWI	Luwuk	5.60	233	P	Pn	05 08 30.2	+1.2
BNDI	Bandanaira	7.30	159	P	Pn	05 08 46.8	-5.3
SBUM	Sibu	15.03	271	eP	P	05 10 39.0	+0.8
	5.7nm,0.8s						
MTN	Manton Dam	15.56	166	ePn	Pn	05 10 39.6	-2.3
	16nm,0.6s						
WR1	Warramunga Arr	23.20	163	eP	P	05 12 04.8	-1.5
WRA	Warramunga Arr	23.20	163	P	P	05 12 04.8	-1.5
	39nm,0.5s,baz=340,slow=12,SNR=173						
WB2	Warramunga Arr	23.20	163	eP	P	05 12 05.1	-1.3
	36nm,0.6s						
AS31	Alice Springs	26.64	166	eP	P	05 12 36.6	-0.9
	3.3nm,0.3s						
ASAR	Alice Springs	26.64	166	P	P	05 12 36.5	-1.1
	3.2nm,0.5s,baz=352,slow=7.6,SNR=43						
CMAR	Chiang Mai Arr	32.05	302	P	P	05 13 24.6	-0.9
	1.4nm,0.3s,baz=123,slow=6.9,SNR=5.4						
FORT	Forrest	32.94	179	eP	P	05 13 32.1	-0.9
	39nm,0.8s						
MORW	Morawa	33.02	198	eP	P	05 13 33.2	-0.6
	14nm,1.1s						
MJAR	Matsushiro Arr	35.51	15	LR	LR	05 29 31.5	
	comp=Z,132nm,18.9s,baz=205,slow=38						
BBOO	Buckleboo	35.93	167	eP	P	05 13 58.0	-0.9
	59nm,1.5s						
NWAO	Narrogin (SRO)	36.33	194	eP	P	05 14 02.1	-0.2
	36nm,1.4s						
STKA	Stephens Creek	36.64	159	P	P	05 14 04.3	-0.7
	9.0nm,0.5s,baz=346,slow=7.9,SNR=22						
STKA	Stephens Creek	36.64	159	eP	P	05 14 04.3	-0.7
	2.6nm,0.8s						
ARMA	Armidale	40.02	146	eP	P	05 14 34.4	+1.0
	12nm,1.1s						
CAN	Canberra	42.63	153	eP	P	05 14 55.8	+1.1
	30nm,1.5s						
TOO	Toolangi	43.15	159	eP	P	05 14 59.8	+0.9
	16nm,1.4s						
SONA0	Songino Array	48.78	341	eP	P	05 15 46.0	+3.0
SONM	Songino Array	48.78	341	P	P	05 15 46.0	+3.0
	0.7nm,0.5s,baz=161,slow=9.4,SNR=4.2						
MK31	Makanchi Array	59.00	325	eP	P	05 16 59.1	+1.8
	1.8nm,0.8s						
MK32	Makanchi Array	59.00	325	eP	P	05 16 58.9	+1.6
MKAR	Makanchi Array	59.00	325	P	P	05 16 58.9	+1.6
	2.0nm,0.7s,baz=120,slow=8.6,SNR=19						
LBZ	Lake Benmore	60.24	146	eP	P	05 17 05.8	0.0
	31nm,1.5s						
THZ	Tophouse	60.28	142	eP	P	05 17 05.7	-0.5
	10nm,1.2s						
RPZ	Rata Peaks	60.32	145	eP	P	05 17 08.1	+1.7
	17nm,1.2s						
KHZ	Kahutara	61.04	142	eP	P	05 17 10.7	-0.6
	18nm,1.2s						
CASY	Casey	69.50	187	eP	P	05 18 06.2	+0.8
	21nm,1.5s						
ABKAR	Akbulak array	73.56	321	eP	P	05 18 30.8	+0.6
	1.6nm,1.2s						
VNDA	Vanda	81.98	173	P	P	05 19 16.1	-0.3
	1.1nm,0.8s,baz=313,slow=6.3,SNR=5.2						
VNDA	Vanda	81.98	173	eP	P	05 19 15.5	-0.9
MAW	Mawson	82.64	200	P	P	05 19 18.6	-1.3
	1.9nm,0.6s,baz=40,slow=5.4,SNR=4.6						
ILAR	Eielson Array	86.13	25	P	P	05 19 37.8	+0.1
	0.3nm,0.6s,baz=246,slow=3.8,SNR=3.7						
LTX	Lajitas	122.02	53	ePKPdf	PKiKP	05 25 52.4	+0.5
TXAR	Lajitas Array	122.02	53	PKP	PKiKP	05 25 52.4	+0.5
	0.3nm,0.7s,baz=346,slow=1.5,SNR=4.8						
LCO	Las Campanas	148.43	149	ePKPbc	PKiKP	05 26 45.1	-0.5
GO02	Mina Guanaco	152.09	146	ePKPbc	PKiKP	05 26 54.7	+1.4

IDC ***20*** *05:08:52.9±0.5, 1°.52S×136°.83E, h0^{km}, mb4.4/16, mb1 4.6/22, mb1mx4.5/32, mbtmp4.5/22, ML4.7/5, MS3.9/11, Ms1 3.9/11, ms1mx3.7/21, Error ellipse: s-maj=18.2km s-min=11.9km az=70.0*

ISCJB ***20*** *05:08:54.9±0.2, 1°.57S±0°.03×136°.77E±0°.03, h23^{km}, mb4.8/77, MS4.2/19, Error ellipse: s-maj=4.1km s-min=3.7km az=175.6*

BJI ***20*** *05:08:55.2±0.0, 1°.84S×136°.41E, h27^{km}, mb4.8/45, mB5.0/28, Ms4.5/22, Ms7 4.2/19*

GCMT ***20*** *05:08:56.0±0.2, 1°.51S±0°.01×136°.79E±0°.01, h16^{km}±1^{km}, MW5.0/100, Moment Tensor Solution. s33,c37; s100,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.46±.11; M$_{\theta\theta}$-0.33±.09; M$_{\phi\phi}$-0.12±.10; M$_{r\theta}$-0.58±.28; M$_{\theta\phi}$3.01±.08; M$_{\phi r}$1.74±.34; Best double couple: M$_0$3.48600×10^{16} NP1:φ$_s$178.00000°, δ90.00000°, λ-150.00000°. NP2:φ$_s$88.00000°, δ60.00000°, λ0.00000°. Principal axes: T 3.1040, Plg21.0000°, Azm308.0000°; N 0.7650, Plg60.0000°, Azm178.0000°; P -3.8690, Plg21.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***20*** *05:08:56.1±0.4, 2°S±5°×13°7E±°, h10^{km}, M4.9/16, mB5.2/11, mb5.0/16, MLv5.2/8, Mw(mB)4.6/11*

NEIC ***20*** *05:08:58.0±2.2, 1°.57S×136°.66E, h32^{km}±4^{km}, mb4.9/55, Error ellipse: s-maj=12.2km s-min=10.5km az=182.0*

NEIC Felt [III] at Biak and Serui.

ISC 20 05:08:56.6±0.3**, 1°.65S**±0°.04×**136°.73E**±0°.05**, h23^{km}, n177, σ1^{s}.52**/171**, mb4.9**/77**, MS4.2**/19**, 1C, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	0.54	246	P	Pb	05 09 07.0	-0.4
SRPI				S	Sb	05 09 15.7	+0.9
SRPI	Serui, Papua	0.54	246	P	Pb	05 09 06.5	-0.9
BAKI	Biak	0.77	306	P	Pb	05 09 09.7	-1.7
BAKI	Biak	0.77	306	P	Pb	05 09 09.3	-2.1
GENI	Genyem	3.56	105	P	Pn	05 09 50.2	-0.3
GENI	Genyem	3.56	105	P	Pn	05 09 50.4	-0.1
KMPI	Kaimana, Papua	3.62	236	P	Pn	05 09 53.6	+2.2
FAKI	Fak Fak	4.65	254	ePn	Pn	05 10 06.0	+0.4
FAKI	Fak Fak	4.65	254	P	Pn	05 10 06.0	+0.4
SIJI	Sorong	5.52	278	Pn	Pn	05 10 18.9	+1.4
	7.4nm,0.3s,baz=92,slow=16,SNR=6.6						
SIJI				Pg	Pb	05 10 34.7	+2.4
	15nm,0.3s,baz=71,slow=15,SNR=11						
SIJI				Lg	Lg	05 11 44.4	
	4.1nm,0.3s,baz=5.9,slow=21,SNR=7.2						
SIJI				LR	LR	05 12 32.2	
	comp=Z,2μm,18.4s,baz=26,slow=39						
SWI	Sorong	5.53	278	P	Pn	05 10 20.5	+3.0
	189nm,0.6s,2μm2.4nm						
BNDI	Bandanaira	7.39	247	P	Pn	05 10 45.2	+2.0
	373nm,0.8s,4.2nm						
MSAI	Masohi	7.97	258	P	Pn	05 10 53.3	+2.1
	45nm,0.5s,1μm						
AAI	Ambon	8.76	256	P	Pn	05 11 02.7	+0.7
	123nm,1.2s,3μm						
NLAI	Namlea	9.75	260	P	Pn	05 11 17.4	+1.8
	83nm,1.1s,2μm						
MANU	Manus Island	10.64	92	ePn	Pn	05 11 28.6	+0.8
KDU	Kakadu	11.75	201	P	Pn	05 11 41.4	-1.6
	baz=12,SNR=16						
MTN	Manton Dam	12.43	206	ePn	Pn	05 11 51.2	-1.1
MTN	Manton Dam	12.43	206	P	Pn	05 11 50.2	-2.1
	baz=12,SNR=26						
PMG	Port Moresby	12.92	127	Pn	Pn	05 11 59.2	+0.2
	1.0nm,0.3s,baz=305,slow=16,SNR=2.6						
PMG				LR	LR	05 18 30.6	
	comp=Z,2μm,21.7s,baz=290,slow=45						
PMG	Port Moresby	12.92	127	ePn	Pn	05 12 01.6	+2.6
COEN	Coen	13.79	153	ePn	Pn	05 12 08.8	-2.1
COEN	Coen	13.79	153	P	Pn	05 12 08.0	-2.8
	baz=14,SNR=8.1						
LUWI	Luwuk	13.97	272	ePn	Pn	05 12 14.2	+0.9
DAV	Davao City (W)	14.10	308	LR	LR	05 17 34.8	
	comp=Z,290nm,19.2s,baz=150,slow=37						
DAV	Davao City (W)	14.10	308	eP	P	05 12 20.3	-2.3
SOEI	Soe	14.78	237	ePn	P	05 12 27.6	-2.7
SOEI	Soe	14.78	237	P	Pn	05 12 25.4	+0.9
	248nm,1.1s,2μm						
BATI	Baumata	15.52	236	Pn	P	05 12 36.7	-1.8
	13nm,0.3s,baz=69,slow=4.3,SNR=8.2						
BATI	Baumata	15.52	236	eP	P	05 12 36.7	-1.8
BATI				eP	P	05 12 36.7	-1.8
BATI	Baumata	15.52	236	P	Pn	05 12 35.6	+1.4
	123nm,1.0s,1μm						
RABL	Rabaul	15.62	100	eP	P	05 12 40.2	+0.7
	79nm,0.5s						
KNRA	Kununurra	16.00	209	P	Pn	05 12 38.0	-2.4
	baz=16,SNR=23						
EDFI	Ende, Flores	16.55	244	P	Pn	05 12 48.3	+0.8
BNSI	Bone	16.82	260	P	P	05 12 54.5	+1.6
TTSI	Tana Toraja	16.95	265	P	P	05 12 54.2	-0.1
BKSI	Bulukumba	16.97	257	P	P	05 12 54.0	-0.5
SPSI	Sidrap Palu	17.10	262	P	P	05 12 57.3	+1.4
GUMO	Guam	17.15	28	Pn	Pn	05 12 53.7	-1.3
	3.1nm,0.3s,baz=115,slow=17,SNR=2.3						
GUMO				LR	LR	05 20 20.8	
	comp=Z,82nm,18.4s,baz=210,slow=40						
KAPI	Kappang	17.27	258	P	P	05 12 58.8	+0.9
	1.7nm,0.3s,baz=191,slow=16,SNR=2.7						
KAPI				LR	LR	05 20 20.4	
	comp=Z,285nm,21.7s,baz=299,slow=40						
KAPI	Kappang	17.27	258	eP	P	05 12 57.3	-0.5
	19nm,0.9s						
WRAB	Tennant Creek	18.32	187	eP	P	05 13 09.2	-0.2
	43nm,0.8s						
WB2	Warramunga Arr	18.33	187	eP	P	05 13 09.4	-0.1
	30nm,0.8s						
WB2				eSn	Sn	05 16 33.3	-0.5
WR1	Warramunga Arr	18.33	187	eP	P	05 13 08.5	-1.0
WRA	Warramunga Arr	18.33	187	P	P	05 13 08.5	-1.0
	3.2nm,0.3s,baz=8.2,slow=12,SNR=12						
WRA				S	Sn	05 16 20.4	-13
	0.8nm,0.3s,baz=7.7,slow=26,SNR=5.3						
WBSI	Waikabubak, Su	18.98	245	P	Pn	05 13 18.2	+0.7
QIS	Mount Isa	19.00	172	P	P	05 13 16.7	-0.2
	baz=19,SNR=4.3						
PLAI	Plampang	20.17	249	P	P	05 13 24.7	-5.0
CTA	Charters Tower	20.56	154	P	Pn	05 13 35.3	-0.9
	6.1nm,0.7s,baz=323,slow=8.8,SNR=2.8						
CTAO	Charters Tower	20.56	154	eP	Pn	05 13 35.7	-0.5
KKM	Kota Kinabalu	21.86	291	eP	P	05 13 47.5	-0.6
	79nm,1.1s						
AS31	Alice Springs	22.06	187	eP	P	05 13 49.5	-0.5
	26nm,1.0s						
ASAR	Alice Springs	22.06	187	P	P	05 13 50.3	+0.3
	32nm,0.9s,baz=15,slow=11,SNR=60						
ASAR				S	S	05 17 49.1	-3.3
	4.6nm,0.9s,baz=7.0,slow=24,SNR=4.7						
TGY	Tagaytay City	22.13	315	P	P	05 13 51.7	+0.8
	112nm,0.3s,baz=305,slow=2.7,SNR=5.8						
TGY				LR	LR	05 21 19.0	
	comp=Z,195nm,21.8s,baz=146,slow=34						
WRKA	Warakurna	24.64	199	P	P	05 14 15.3	-0.3
	baz=24,SNR=7.8						
PSA00	Pilbara Seismi	25.75	218	eP	P	05 14 26.8	+1.2
	74nm,0.8s						
EIDS	Eidsvold	27.35	151	eP	P	05 14 42.3	+2.2
	25nm,0.9s						
EIDS	Eidsvold	27.35	151	P	P	05 14 42.7	+2.6
	baz=27,SNR=4.8						
LEM	Lembang	29.48	259	LR	LR	05 28 45.1	
	comp=Z,344nm,20.7s,baz=72,slow=40						
SSLB	Suanglung	29.57	330	eP	P	05 14 59.5	-0.5
	12nm,0.9s						
NACB	Ninganchiao	29.58	331	eP	P	05 14 57.8	-2.2
FORT	Forrest	30.12	195	eP	P	05 15 04.5	-0.2
	66nm,1.0s						
STKA	Stephens Creek	30.42	172	P	P	05 15 07.9	+0.5
	21nm,0.7s,baz=350,slow=10,SNR=14						
STKA	Stephens Creek	30.42	172	eP	P	05 15 07.7	+0.3
	7.5nm,0.8s						
STKA	Stephens Creek	30.42	172	P	P	05 15 07.8	+0.5
	baz=30,SNR=13						
CMSA	Cobar Meteorol	30.91	165	P	P	05 15 13.5	+1.8
	baz=31,SNR=5.1						
BBOO	Buckleboo	31.01	181	eP	P	05 15 12.9	+0.4
	54nm,1.3s						
ARMA	Armidale	31.91	155	eP	P	05 15 22.4	+1.7
	23nm,1.0s						
ARMA	Armidale	31.91	155	P	P	05 15 22.5	+1.8
	baz=32,SNR=3.9						
MDSI	Maura Dua	32.62	264	P	P	05 15 28.2	+1.2
LHSI	Lahat	33.24	266	P	P	05 15 33.1	+0.7
QIZ	Qiongzhong	33.47	309	P	P	05 15 33.8	-0.5
QIZ				S	S	05 20 53.6	-1.4
QIZ				pmax	pmax		
	comp=Z,82nm,2.2s						
QIZ				LR	LR		
	comp=N,240nm,20.6s						
QIZ				LR	LR		
	comp=E,270nm,17.7s						
MORW	Morawa	33.65	214	eP	P	05 15 36.8	+1.0
	19nm,0.9s						
MORW	Morawa	33.65	214	P	P	05 15 36.1	+0.3
	baz=34,SNR=4.5						
JNU	Nakatsue	35.02	351	P	P	05 15 46.2	-1.4
	6.2nm,0.8s,baz=140,slow=5.7,SNR=6.4						
JNU	Nakatsue	35.02	351	eP	P	05 15 47.1	-0.6
	26nm,1.2s						
ARPS	Mount Arapiles	35.27	173	P	P	05 15 51.4	+1.8
	baz=35,SNR=5.8						
DZM	Mont Dzumac	35.32	127	eP	P	05 15 55.7	+5.3
	58nm,1.2s						
DZM				eLR	LR	05 25 19.0	
	comp=Z,567nm,26.9s						
H11S3	WAKE ISLAND Hy	35.62	54	T	T	05 53 29.9	
	baz=239,slow=74						
H11S2	WAKE ISLAND Hy	35.63	54	T	T	05 53 32.0	
	baz=239,slow=74						
H11S1	WAKE ISLAND Hy	35.64	54	T	T	05 53 27.8	
	baz=239						
NWAO	Narrogin (SRO)	36.11	208	eP	P	05 15 57.8	+0.8
	49nm,1.0s						
NWAO	Narrogin (SRO)	36.11	208	P	P	05 15 57.8	+0.8
	baz=36,SNR=4.4						
IPM	Ipoh	36.19	280	eP	P	05 15 57.4	-0.6
	28nm,1.1s						
TOO	Toolangi	36.65	168	eP	P	05 16 04.6	+3.0
	29nm,1.0s						
KULM	Kulim	36.69	281	eP	P	05 16 01.1	-1.2
	20nm,0.8s						
PANO	Nakornpanom	36.77	302	P	P	05 16 08.8	+6.0
	0.3nm,1.0s						
SKLT	Songkhla	37.08	284	P	P	05 16 13.3	+7.8
	13nm,0.8s,398nm						
NJ2	Nanjing	37.55	335	eP	P	05 16 10.4	+1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PSI	Prapat	38.05	277	P	P	05 16 14.0	+0.1
	22nm,1.0s,baz=0.0,slow=0.0,SNR=7.2						
PSI	Prapat	38.05	277	eP	P	05 16 12.2	-1.7
	31nm,1.1s						
TRTT	Trang	38.12	285	P	P	05 16 21.3	+7.0
	34nm,1.3s						
NONG	Nongkai	38.43	302	P	P	05 16 18.0	+1.2
	0.3nm,0.8s						
WHN	Wuhan	38.47	328	P	P	05 16 21.1	+4.2
WHN				S	S	05 22 15.1	+4.0
WHN				LR	LR		
	comp=N,440nm,9.6s						
WHN				LR	LR		
	comp=E,1μm,19.7s						
WHN				LR	LR		
	comp=Z,640nm,19.3s						
GSI	Gunungsitoli	39.26	274	eP	P	05 16 20.5	-3.4
	27nm,0.9s						
GYA	Guiyang	40.28	316	⇑iP	P	05 16 38.1	+5.7
GYA				pP	sP	05 16 45.8	+3.6
GYA				PP	PcP	05 18 26.0	-10
GYA				S	S	05 22 49.1	+10
GYA				sS	sS	05 23 08.6	+18
GYA				SS	SnSn	05 25 59.8	+17
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,90nm,6.1s						
GYA				LR	LR		
	comp=N,220nm,15.9s						
GYA				LR	LR		
	comp=E,210nm,16.0s						
GYA				LR	LR		
	comp=Z,240nm,16.5s						
ENH	Enshi	41.02	323	eP	P	05 16 37.3	-1.0
ENH				epP	P	05 16 38.0	-0.3
PAYA	Payao	41.78	302	P	P	05 16 45.2	+0.5
	comp=Z,78μm,0.5s						
CM31	Chiang Mai Arr	42.20	300	eP	P	05 16 47.9	-0.2
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	42.20	300	P	P	05 16 48.1	+0.1
	comp=Z,1.2nm,0.4s,baz=120,slow=6.7,SNR=11						
KMI	Kunming	42.33	311	P	P	05 16 49.8	+0.4
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMMT	Chiang Mai	42.34	300	P	P	05 16 56.9	+7.6
	comp=Z,3.2nm,1.0s						
XAN	Xi'an	44.09	326	eP	P	05 17 01.6	-1.6
	comp=Z,23nm,1.2s						
XAN	Xi'an	44.09	326	P	P	05 17 01.8	-1.4
XAN				pP	sP	05 17 16.1	+3.0
XAN				S	S	05 23 23.5	-11
XAN				sS	sS	05 23 49.8	+3.7
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,140nm,3.9s						
XAN				LR	LR		
	comp=Z,230nm,14.4s						
XAN				LR	LR		
	comp=Z,150nm,17.0s						
XAN				LR	LR		
	comp=Z,260nm,23.0s						
CD2	Chengdu	45.08	319	eP	P	05 17 10.0	-1.2
CD2				S	S	05 23 49.5	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				LR	LR		
	comp=Z,310nm,13.7s						
CD2				LR	LR		
	comp=Z,280nm,14.2s						
CD2				LR	LR		
	comp=Z,250nm,9.8s						
ASAJ	Asahikawa	45.86	6	P	P	05 17 17.4	+0.3
	comp=Z,2.5nm,0.3s,baz=231,slow=14,SNR=2.7						
CN2	Changchun	46.36	349	eP	P	05 17 23.8	+2.8
CN2				eS	S	05 24 10.3	+3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
MDJ	Mudanjiang	46.50	353	P	P	05 17 27.3	+5.2
MDJ				pmax	pmax		
	comp=Z,13nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,83nm,2.2s						
LZH	Lanzhou	48.46	324	eP	P	05 17 37.5	-0.2
LZH				pP	pP	05 17 44.1	-0.7
LZH				sP	sP	05 17 46.9	-0.7
LZH				eS	S	05 24 39.0	+1.4
LZH				sS	sS	05 24 55.6	+6.4
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=Z,1μm,17.9s						
LZH				LR	LR		
	comp=Z,1μm,14.9s						
LZH				LR	LR		
	comp=Z,1μm,17.9s						
SHL	Shillong	51.11	305	eP	P	05 17 56.0	-2.1
RPZ	Rata Peaks	51.81	149	P	P	05 18 04.1	+1.2
	comp=Z,20nm,1.1s,baz=326,slow=5.2,SNR=4.9						
URZ	Urewera	51.90	140	eP	P	05 18 04.5	+0.9
	comp=Z,14nm,1.1s						
BKZ	Black Stump Fm	52.03	141	eP	P	05 18 07.2	+2.6
	comp=Z,15nm,1.1s						
GTA	Gaotai	53.05	324	eP	P	05 18 12.5	+0.2
GTA				pP	pP	05 18 17.0	-2.4
GTA				sP	sP	05 18 20.4	-1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,74nm,5.5s						
GTA				LR	LR		
	comp=Z,90nm,15.1s						
GTA				LR	LR		
	comp=Z,140nm,19.6s						
GTA				LR	LR		
	comp=Z,140nm,15.8s						
SONA0	Songino Array	55.93	336	eP	P	05 18 31.6	-1.4
SONM	Songino Array	55.93	336	P	P	05 18 31.6	-1.4
	comp=Z,0.6nm,0.5s,baz=141,slow=9.3,SNR=2.5						
SONM				LR	LR	05 41 14.2	
	comp=Z,198nm,21.8s,baz=113,slow=35						
JIRN	Jiri	56.61	305	eP	P	05 18 39.3	+0.7
GUN	Gumba	56.96	305	eP	P	05 18 41.2	+0.2
PKI	Pulchoki	57.22	304	eP	P	05 18 42.6	-0.2
	comp=Z,13nm,0.8s						
PETK	Petropavlovsk-	57.32	15	P	P	05 18 41.0	-1.7
	comp=Z,0.7nm,0.6s,baz=188,slow=9.7,SNR=2.6						
PEA1	Petropavlovsk-	57.32	15	eP	P	05 18 41.0	-1.7
KKN	Kakani	57.41	305	eP	P	05 18 44.2	+0.2
	comp=Z,36nm,0.9s						
DMN	Daman	57.48	304	eP	P	05 18 44.8	+0.2
	comp=Z,33nm,0.9s						
GKN	Gorkha	58.02	305	eP	P	05 18 48.4	+0.2
KOLN	Koldanda	58.79	304	eP	P	05 18 53.3	-0.4
	comp=Z,120nm,1.3s						
WMQ	Urumqi	62.96	322	eP	P	05 19 23.3	+1.7
WMQ				LR	LR		

	comp=Z,460nm,29.1s						
WMQ				LR	LR		
	comp=Z,660nm,27.7s						
WMQ				LR	LR		
	comp=Z,120nm,24.3s						
MK31	**Makanchi Array**	**67.75**	**323**	*e*P	**P**	**05 19 51.7**	**-0.8**
	comp=Z,4.6nm,0.8s						
MKAR	**Makanchi Array**	**67.75**	**323**	P	**P**	**05 19 52.0**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=108,slow=7.8,SNR=15						
MKAR				LR	LR	05 50 40.6	
	comp=Z,74nm,20.1s,baz=104,slow=37						
MAKZ	**Makanchi**	**67.94**	**323**	*e*P	**P**	**05 19 52.5**	**-1.3**
	comp=Z,9.9nm,0.8s						
PRZ	**Przheval'sk**	**68.35**	**317**	*e*P	**P**	**05 19 57.5**	**+1.0**
	comp=Z,16nm,0.9s						
KSH	**Kashi**	**68.92**	**314**	P	**P**	**05 20 01.1**	**+1.0**
KSH				S	**S**	**05 29 01.4**	**-2.1**
KSH				pmax	pmax		
	comp=Z,59nm,2.3s						
KSH				pmax	pmax		
	comp=Z,150nm,5.3s						
KDJ	**Kajisay**	**69.04**	**317**	*e*P	**P**	**05 20 00.4**	**-0.5**
	comp=Z,8.0nm,1.0s						
ZALV	**Zalesovo Beam**	**70.03**	**330**	P	**P**	**05 20 06.2**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=88,slow=4.9,SNR=6.1						
ZALV				LR	LR	05 49 43.7	
	comp=Z,75nm,21.6s,baz=70,slow=35						
ARSB	**Arslanbob**	**71.69**	**315**	*e*P	**P**	**05 20 16.9**	**-0.1**
	comp=Z,15nm,1.2s						
KURK	**Kurchatov**	**71.72**	**325**	*e*P	**P**	**05 20 15.8**	**-1.1**
	comp=Z,11nm,0.9s						
GAR	**Garm**	**72.92**	**312**	*e*P	**P**	**05 20 24.3**	**-0.1**
	comp=Z,25nm,1.3s						
PPT2	**Papeete2**	**73.96**	**108**	*e*LR	LR	05 43 29.4	
	comp=Z,318nm,26.5s						
KK31	**Karatay Array**	**73.99**	**316**	*e*P	**P**	**05 20 29.8**	**-0.8**
	comp=Z,3.3nm,1.0s						
TBI	**Tubuai**	**74.49**	**114**	*e*LR	LR	05 43 40.9	
	comp=Z,275nm,33.0s						
VNDA	**Vanda**	**77.01**	**175**	P	**P**	**05 20 47.8**	**+0.6**
	comp=Z,4.8nm,0.8s,baz=313,slow=6.1,SNR=23						
VNDA	**Vanda**	**77.01**	**175**	*e*P	**P**	**05 20 48.0**	**+0.8**
	comp=Z,7.4nm,0.8s						
BRVK	**Borovoye**	**77.39**	**325**	*e*P	**P**	**05 20 48.8**	**-0.9**
	comp=Z,10nm,0.8s						
SBA	**Scott Base**	**77.81**	**174**	*e*P	**P**	**05 20 53.8**	**+2.2**
	comp=Z,8.8nm,1.3s						
TTA	**Tatalina**	**81.29**	**25**	*e*P	**P**	**05 21 12.2**	**+1.3**
	comp=Z,8.5nm,1.2s						
GEYT	**Alibeck**	**82.03**	**308**	P	**P**	**05 21 15.0**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=29,slow=3.4,SNR=6.3						
GEYT				LR	LR	05 59 36.6	
	comp=Z,88nm,21.9s,baz=60,slow=37						
GYA0B	**ALIBECK ARRAY**	**82.03**	**308**	*e*P	**P**	**05 21 15.8**	**+0.4**
	comp=Z,7.7nm,0.9s						
MAW	**Mawson**	**82.37**	**202**	P	**P**	**05 21 17.3**	**+0.9**
	comp=Z,1.0nm,0.2s,baz=77,slow=7.7,SNR=5.1						
MAW	**Mawson**	**82.37**	**202**	*e*P	**P**	**05 21 17.2**	**+0.9**
	comp=Z,4.2nm,1.4s						
ABKAR	**Akbulak array**	**82.64**	**320**	*e*P	**P**	**05 21 20.3**	**+2.1**
	comp=Z,3.4nm,0.8s						
TAOE	**Nuku Hiva Isla**	**82.95**	**99**	*e*LR	LR	05 47 20.9	
	comp=Z,145nm,22.9s						
RND	**Reindeer**	**84.53**	**26**	*e*P	**P**	**05 21 26.3**	**-1.4**
	comp=Z,7.9nm,0.9s						
ARU	**Arti**	**84.83**	**327**	*e*P	**P**	**05 21 27.6**	**-1.6**
	comp=Z,9.4nm,0.9s						
COLD	**Coldfoot**	**85.01**	**22**	*e*P	**P**	**05 21 30.4**	**+0.5**
	comp=Z,5.5nm,1.2s						
WRH	**Wood River Hil**	**85.12**	**25**	*e*P	**P**	**05 21 28.5**	**-2.1**
	comp=Z,8.8nm,1.0s						
CCB	**Clear Creek Bu**	**85.28**	**25**	*e*P	**P**	**05 21 30.2**	**-1.2**
	comp=Z,6.6nm,0.9s						
HDA	**Harding Lake**	**85.59**	**25**	*e*P	**P**	**05 21 33.5**	**+0.6**
	comp=Z,4.3nm,0.8s						
ILAR	**Eielson Array**	**85.69**	**25**	P	**P**	**05 21 31.4**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=263,slow=3.7,SNR=18						
ILB	**Eielson Array**	**85.69**	**25**	*e*P	**P**	**05 21 32.4**	**-1.1**
	comp=Z,10nm,1.5s						
MENT	**Mentasta**	**86.70**	**27**	*e*P	**P**	**05 21 39.6**	**+1.1**
	comp=Z,4.4nm,0.9s						
FYU	**Fort Yukon**	**86.75**	**23**	*e*P	**P**	**05 21 39.0**	**+0.5**
	comp=Z,38nm,1.2s						
EGAK	**Eagle**	**88.11**	**25**	*e*P	**P**	**05 21 44.6**	**-0.5**
	comp=Z,10.0nm,1.2s						
QSPA	**South Pole Qui**	**88.29**	**180**	*e*P	**P**	**05 21 46.6**	**+0.4**
	comp=Z,19nm,0.9s						
DAWY	**Dawson**	**88.78**	**26**	*e*P	**P**	**05 21 48.9**	**+0.4**
	comp=Z,12nm,1.0s						
HYT	**Haines Junctio**	**89.35**	**29**	*e*P	**P**	**05 21 51.5**	**+0.2**
	comp=Z,8.0nm,1.2s						
ARCES	**ARCESS Array B**	**98.86**	**341**	P	**P**	**05 22 33.2**	**-1.3**
	comp=Z,2.4nm,0.9s,baz=74,slow=6.7,SNR=3.9						
VYHS	**Vyhne**	**109.41**	**321**	*e*pPDIF	pPdif	05 23 31.8	+2.3
CLL	**Collm**	**111.75**	**326**	*e*(PKiKP)	**PKiKP**	**05 27 33.0**	**+3.4**
CLL				*e*pPP	PP	05 28 21.0	+9.3
CLL				LmV		06 18 00.0	
	comp=Z,200nm,19.9s						
E43A	**Lone Tree Farm**	**121.38**	**34**	*e*PKPdf	**PKiKP**	**05 27 48.6**	**+0.2**
PB01	**IPOC Station P**	**145.84**	**133**	*e*PKPdf	**PKiKP**	**05 28 38.1**	**-0.5**
PB11	**IPOC Station P**	**146.49**	**131**	*e*PKPdf	**PKPdf**	**05 28 31.7**	**-4.1**
MNMC	**Minye Minye**	**146.90**	**130**	*e*PKPbc	**PKPab**	**05 28 39.1**	**-0.8**
ROSC	**El Rosal**	**148.84**	**83**	PKPbc	**PKPbc**	**05 28 44.6**	**+0.5**
	comp=Z,2.9nm,0.3s,baz=156,slow=19,SNR=3.9						
ROSC	**El Rosal**	**148.84**	**83**	*e*PKPdf	**PKPdf**	**05 28 41.7**	**+1.5**
CPUP	**Villa Florida**	**149.05**	**155**	PKPbc	**PKPbc**	**05 28 43.4**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=226,slow=2.4,SNR=3.9						
CPUP	**Villa Florida**	**149.05**	**155**	*e*PKPbc	**PKPbc**	**05 28 42.8**	**-0.9**
LPAZ	**La Paz**	**149.66**	**127**	PKPbc	**PKPbc**	**05 28 46.2**	**-0.1**
	comp=Z,3.2nm,1.0s,baz=246,slow=6.1,SNR=4.8						
LPAZ	**La Paz**	**149.66**	**127**	*e*PKPbc	**PKPbc**	**05 28 45.2**	**-1.0**

MAN 20 05:30:37.9,7°.32N×123°.74E,h34km,mb3.7,ML2.4,MS1.9, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.51**	**101**	⇓*i*P	Pn	05 30 49.8	+1.0
CTBH				*i* S	Sn	05 30 58.1	+1.7

UCR 20 05:40:06.3±1.4,8°.08N×82°.93W,h11km±15km,MW3.5,1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDSV	**San Vito**	**0.73**	**357**	*e*P	Pg	05 40 20.4	-0.2
EDSV				*e*S	Sg	05 40 30.2	0.0
BRU2	**Volcan**	**0.75**	**19**	⇓*i*P	Pg	05 40 20.2	-0.6
BRU2				*e*S	Sg	05 40 28.4	-2.2
EDPN	**Palmar Norte**	**1.02**	**329**	*e*P	Pg	05 40 24.6	-1.3
EDPN				*e*S	Sg	05 40 38.6	-0.6
EDLM	**Las Mercedes**	**1.35**	**331**	*e*P	Pn	05 40 30.2	-1.0
CVTR	**Volcan Turrial**	**2.09**	**337**	*e*S	Sn	05 41 06.7	-1.3
ARE1	**Arenal 1**	**2.95**	**323**	*i* P	Pn	05 40 56.0	+2.8
JTS	**Las Juntas de**	**2.96**	**318**	*e*P	Pb	05 40 56.6	-2.6

MAN 20 05:52:18.5,7°.06N×127°.17E,h1km,mb4.7,ML3.6,MS3.5, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**1.65**	**271**	*e*P	Pg	05 52 51.1	+0.9
DMPH				*e*S	Sg	05 53 13.3	+1.8
KCP	**Kidapawan**	**2.06**	**269**	⇓*i*P	Pb	05 52 56.2	-0.7
KCP				*i* S	Sn	05 53 15.0	-5.9

LJU 20 05:53:42.5,46°.13N×14°.79E,h4km,ML0.3,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDS	**Vrh nad Dolski**	**0.07**	**243**	*i* Pg	Pg	05 53 44.0	0.0
VNDS				*i* Sg	Sg	05 53 45.3	+0.2
	comp=Z,21nm,0.1s						
PDKS	**Podkum**	**0.16**	**116**	*i* Pg	Pg	05 53 45.8	+0.1
PDKS				*i* Sg	Sg	05 53 48.3	+0.5
	comp=Z,4.0nm,0.1s						
LJU	**Ljubljana**	**0.20**	**244**	*i* Pg	Pg	05 53 46.8	+0.3
MOZS	**Mozjanca**	**0.29**	**304**	*i* Pg	Pg	05 53 48.2	+0.1
MOZS				*i* Sg	Sg	05 53 52.5	+0.6
	comp=Z,1.0nm,0.1s						
CRNS	**Crni Vrh**	**0.37**	**262**	*i* Pg	Pg	05 53 49.9	+0.3

ZUR 20 05:55:41.8,47°.42N×9°.32E,h5km±1km,MLh0.8/4,1D, Error ellipse: s-maj=2.2km s-min=1.0km az=134.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGT00	**Sennhlsen**	**0.01**	**289**	⇓Pg	Pg	05 55 42.8	+0.1
SGT00				Sg	Sg	05 55 43.6	+0.2
SGT01	**Gaiserwald**	**0.01**	**349**	Pg	Pg	05 55 43.0	+0.2
SGT01				Sg	Sg	05 55 43.9	+0.4
SGT04	**Schlatt-Haslen**	**0.07**	**166**	Pg	Pg	05 55 44.0	+0.6

*NIED **20** 06:06:00,36°.30N×141°.90E,h20km,Mw5.2 Best double couple: $M_0$7.78000×10^{16} NP1:ϕ_s200.00000°,δ23.00000°, λ91.00000°. NP2:ϕ_s19.00000°,δ67.00000°,λ89.00000°.*

*IDC **20** 06:06:19.7±0.3,36°.18N×141°.80E,h0km,mb5.2/33, mb1 5.3/39,mb1mx5.3/44,mbtmp5.2/39,ML4.6/6,MS4.7/31, Ms1 4.7/31,ms1mx4.7/33,Error ellipse: s-maj=12.5km s-min=9.0km az=94.0*

*MOS **20** 06:06:21.9±0.9,36°.22N×141°.79E,h25km,mb5.8/91, MS5.1/52,Error ellipse: s-maj=6.4km s-min=3.8km az=113.5*

*JMA **20** 06:06:21.1±0.2,36°.23N×141°.93E,h33km,M5.4*

JMA Felt III J1.

*BJI **20** 06:06:22.5±0.0,36°.25N×141°.39E,h22km,mb5.6/80, mB5.3/57,Ms5.3/93,Ms7 5.3/83*

*NEIC **20** 06:06:22.1±1.7,36°.25N×141°.70E,h14km,mb5.5/397, MS4.9/311,MW5.2,Error ellipse: s-maj=8.6km s-min=5.9km az=181.0,Moment Tensor Solution. s29 Moment tensor: Scale 10^{16}Nm; M_{rr}5.71; $M_{\theta\theta}$-2.13; $M_{\phi\phi}$-3.58; $M_{r\theta}$2.90; $M_{\theta\phi}$-3.25; $M_{\phi r}$5.53; Best double couple: $M_0$8.60000×10^{16} NP1:ϕ_s228.00000°,δ23.00000°, λ106.00000°. NP2:ϕ_s31.00000°,δ68.00000°,λ83.00000°. Principal axes: T 8.4500, Plg66.0000°, Azm289.0000°; N 0.3500, Plg6.0000°, Azm33.0000°; P -8.8000, Plg23.0000°, Azm126.0000°;*

NEIC Felt [II] at Tokyo. Felt widely in east-central Honshu. Recorded [3 JMA] in Ibaraki.

*ISCJB **20** 06:06:23.0±0.6,36°.16N±0°.02×141°.76E±0°.02,h32km±3km, mb5.6/242,MS4.9/374 Error ellipse: s-maj=2.9km s-min=2.2km az=144.6*

*GCMT **20** 06:06:26.1±0.2,36°.19N±0°.01×141°.81E±0°.01,h21km, MW5.2/106,Moment Tensor Solution. s77,c117; s106,c183; Duration: 1s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.60±.02; $M_{\theta\theta}$-0.07±.01; $M_{\phi\phi}$-0.53±.01; $M_{r\theta}$0.23±.02; $M_{\theta\phi}$-0.20±.01; $M_{\phi r}$0.55±.03; Best double couple: $M_0$0.85000×10^{17} NP1:ϕ_s22.00000°,δ67.00000°, λ91.00000°. NP2:ϕ_s198.00000°,δ23.00000°,λ87.00000°. Principal axes: T 0.8470, Plg68.0000°, Azm295.0000°; N 0.0060, Plg1.0000°, Azm202.0000°; P -0.8530, Plg22.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 06:06:22.7±0.4,36°.21N±0°.03×141°.76E±0°.03,h20km±1km, h20km:pP-P,n1478,σ1s.31/1329,mb5.6/288,MS4.9/394, 161C-39D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.89**	**236**	P	**Pb**	**06 06 39.5**	**0.0**
CHOJ				S	**Sn**	**06 06 52.8**	**+0.4**
JHYU	**Hitachinakayam**	**0.96**	**278**	P	**Pb**	**06 06 40.4**	**-0.2**
JHYU				S	**Sn**	**06 06 54.7**	**+0.6**
JIHU	**Itakohorinouch**	**1.03**	**257**	P	**Pn**	**06 06 42.3**	**+0.3**
JHO	**Hitachi**	**1.04**	**293**	⇓P	**Pb**	**06 06 41.3**	**-0.8**
JFK	**Kawauchi**	**1.36**	**329**	P	**Pn**	**06 06 46.2**	**-0.3**
JFK				S	**Sn**	**06 07 04.0**	**0.0**
JKUC	**kamogawauchiur**	**1.65**	**231**	P	**Pn**	**06 06 51.1**	**+0.6**
JSB	**Shiboa**	**1.67**	**298**	P	**Pn**	**06 06 51.3**	**+0.5**
BSO1	**Boso 1**	**1.68**	**203**	P	**Pn**	**06 06 50.2**	**-0.2**
BSO4	**Boso 4**	**1.68**	**224**	P	**Pn**	**06 06 51.7**	**+0.8**
JFT	**Otama**	**1.74**	**319**	⇓P	**Pn**	**06 06 52.3**	**+0.6**
BSO3	**Boso 3**	**1.74**	**216**	P	**Pn**	**06 06 51.5**	**0.0**
JMM	**Marumori**	**1.83**	**335**	⇑P	**Pn**	**06 06 52.5**	**-0.4**
JAG	**Ashikaga**	**1.88**	**277**	⇑P	**Pn**	**06 06 53.5**	**-0.2**
JAG				*e*S	**Sn**	**06 07 17.9**	**+1.1**
JFY	**Yanaizu**	**2.04**	**306**	P	**Pn**	**06 06 56.9**	**+1.0**
JKT	**Katashina**	**2.10**	**286**	⇑P	**Pn**	**06 06 57.4**	**+0.6**
JSGW	**Sagamiharawaka**	**2.16**	**254**	P	**Pn**	**06 06 58.2**	**+0.6**
JRY	**Ryogami san**	**2.33**	**266**	⇑P	**Pn**	**06 06 59.7**	**-0.1**
JOD2	**Odawara 2**	**2.37**	**247**	⇑P	**Pn**	**06 07 00.9**	**+0.4**
JIM2	**Oshima 3**	**2.42**	**233**	P	**Pn**	**06 07 00.2**	**-0.9**
JHK	**Hiroka**	**2.44**	**296**	⇑P	**Pn**	**06 07 02.6**	**+1.2**
AJI	**Ajiro2**	**2.47**	**243**	P	**Pn**	**06 07 01.9**	**+0.1**
JNS	**Sasagawa**	**2.53**	**310**	P	**Pn**	**06 07 04.4**	**+1.8**
JGK	**Kuni**	**2.55**	**279**	P	**Pn**	**06 07 03.9**	**+1.0**
JHTM	**Izuhatsuma**	**2.57**	**242**	P	**Pn**	**06 07 03.6**	**+0.4**
JFNN	**Fujinakano**	**2.70**	**249**	P	**Pn**	**06 07 06.0**	**+1.0**
JMK	**Ichinoseki**	**2.77**	**351**	⇑P	**Pn**	**06 07 05.7**	**-0.2**
JIZZ	**Izumozaki**	**2.78**	**299**	⇑P	**Pn**	**06 07 08.4**	**+2.3**
JSKK	**Shikinejimakit**	**2.80**	**229**	P	**Pn**	**06 07 06.3**	**-0.1**
OFUJ	**Ofunato**	**2.87**	**359**	⇑P	**Pn**	**06 07 06.4**	**-0.8**
MJAR	**Matsushiro Arr**	**2.89**	**278**	Pn	**Pn**	**06 07 08.9**	**+1.4**
	105nm,0.3s,baz=114,slow=7.6,SNR=3324						
MJAR				Sn	**Sb**	**06 07 47.0**	**-1.5**
	42nm,0.3s,baz=100,slow=14,SNR=6.5						
MJAR				LR	LR	06 08 22.6	
	comp=Z,15μm,19.4s,baz=125,slow=42						
MAJO	**Matsushiro**	**2.89**	**278**	*e*Pn	**Pn**	**06 07 09.4**	**+1.8**
MAJO				*e*Sg	**Sb**	**06 07 47.0**	**-1.5**
MAJO	**Matsushiro**	**2.89**	**278**	*c* *i*P	**Pn**	**06 07 09.0**	**+1.4**
MAT	**Matsushiro**	**2.89**	**278**	P	**Pn**	**06 07 08.9**	**+1.3**
MAT				S	**Sb**	**06 07 46.9**	**-1.6**
MJB9	**Matsu-Tunnel**	**2.89**	**278**	*e*Pn	**Pn**	**06 07 09.4**	**+1.8**
JKO	**Kozu shima**	**2.95**	**228**	P	**Pn**	**06 07 08.2**	**-0.2**
JNT	**Takato**	**2.96**	**265**	⇑P	**Pn**	**06 07 10.4**	**+1.8**
JNG	**Nsakai**	**2.97**	**275**	⇑P	**Pn**	**06 07 10.0**	**+1.3**
JAW	**Awa shima**	**3.01**	**319**	⇑P	**Pn**	**06 07 10.2**	**+1.0**
JJN	**Nakama**	**3.03**	**288**	⇑P	**Pn**	**06 07 11.5**	**+2.0**
SHZ3	**Shizuoka 3**	**3.11**	**250**	P	**Pn**	**06 07 12.1**	**+1.4**
JNY	**Yasuok**	**3.29**	**256**	P	**Pn**	**06 07 15.0**	**+1.9**
JSD	**Sado**	**3.34**	**304**	P	**Pn**	**06 07 14.6**	**+0.8**
JHJ2	**Mitsune**	**3.48**	**208**	*e*Pn	**Pn**	**06 07 16.5**	**+0.8**
JHJ2				*e*Sn	**Sn**	**06 07 55.8**	**-0.6**
JHJ	**Hachijo jima 2**	**3.49**	**208**	Pn	**Pn**	**06 07 15.3**	**-0.5**
	594nm,0.3s,baz=289,slow=21,SNR=94						
JHJ				Sn	**Sn**	**06 07 54.6**	**-1.9**
	1μm,0.3s,baz=194,slow=22,SNR=14						
JHJ				LR	LR	06 08 57.7	
	comp=Z,5μm,18.6s,baz=348,slow=46						
JYZW	**Yoshizawa**	**3.50**	**251**	P	**Pn**	**06 07 17.5**	**+1.5**
JGN	**Niukaw**	**3.60**	**272**	⇑P	**Pn**	**06 07 19.3**	**+1.9**
JGF	**Kuroka**	**3.63**	**262**	P	**Pn**	**06 07 20.2**	**+2.4**
JAO	**Obara**	**3.78**	**257**	P	**Pn**	**06 07 21.8**	**+1.9**
INU	**Inuyama**	**3.95**	**259**	*e*Pn	**Pn**	**06 07 24.0**	**+1.8**
JJH	**Hakui**	**4.07**	**282**	⇑P	**Pn**	**06 07 26.1**	**+2.3**
JAA	**Atsumi**	**4.09**	**249**	P	**Pn**	**06 07 26.1**	**+2.1**
JYTA	**Yamagatataniai**	**4.13**	**263**	P	**Pn**	**06 07 26.9**	**+2.3**
JHG	**Hegura jima**	**4.21**	**294**	P	**Pn**	**06 07 27.1**	**+1.4**
JIE	**Ise**	**4.52**	**248**	P	**Pn**	**06 07 31.5**	**+1.6**
JFM	**Mihama**	**4.74**	**263**	P	**Pn**	**06 07 35.2**	**+2.1**
JKN2	**Miekihoku**	**4.91**	**248**	P	**Pn**	**06 07 36.5**	**+1.2**
ERM	**Erimo**	**5.90**	**10**	*e*Pn	**Pn**	**06 07 47.0**	**-1.9**
ERM	**Erimo**	**5.90**	**10**	*c* *i*P	**Pn**	**06 07 46.9**	**-1.9**
ERM				pmax	pmax		
	comp=Z,284nm,1.0s						
ASAJ	**Asahikawa**	**7.92**	**4**	Pn	**Pn**	**06 08 15.8**	**-0.9**
	comp=Z,13nm,0.3s,baz=222,slow=13,SNR=60						
ASAJ				Sn	**Sn**	**06 09 39.9**	**-5.8**
	comp=Z,4.0nm,0.3s,baz=248,slow=29,SNR=4.1						
ASAJ				Lg	Lg	06 10 20.4	
	comp=Z,4.4nm,0.3s,baz=17,slow=30,SNR=6.9						
GRPR	**Tuman**	**8.36**	**20**	P	**Pn**	**06 08 19.3**	**-3.3**
GRPR				pmax	pmax		
	comp=E,55nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,171nm,0.5s						
GRPR				pmax	pmax		
	comp=N,176nm,0.4s						
JKD	**Kudamatsu**	**8.38**	**258**	P	**Pn**	**06 08 25.5**	**+2.5**
LAGR	**Lagunnoye**	**8.42**	**20**	*d* *i*P	**Pn**	**06 08 20.4**	**-3.1**
LAGR				pmax	pmax		
	comp=N,117nm,0.4s						
LAGR				pmax	pmax		
	comp=E,128nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,261nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**8.42**	**21**	*e*P	**Pn**	**06 08 19.8**	**-3.7**
YUK				pmax	pmax		
	comp=Z,181nm,0.3s						
YUK				pmax	pmax		
	comp=N,70nm,0.2s						
YUK				pmax	pmax		
	comp=E,47nm,0.2s						
YUK				MLR	MLR		
	comp=Z,4μm,16.0s						
YUK				MLR	MLR		
	comp=E,3μm,15.0s						
YUK				MLR	MLR		
	comp=N,3μm,14.0s						
CBIJ	**Chichi jima**	**9.09**	**178**	P	**Pn**	**06 08 29.4**	**-3.4**
JNU	**Nakatsue**	**9.48**	**254**	Pn	**Pn**	**06 08 39.8**	**+1.6**
	comp=N,4.2nm,0.3s,baz=70,slow=8.4,SNR=51						
JNU	**Nakatsue**	**9.48**	**254**	*e*Pn	**Pn**	**06 08 40.0**	**+1.9**
JNU	**Nakatsue**	**9.48**	**254**	P	**Pn**	**06 08 40.3**	**+2.2**
TEY	**Ternei**	**9.65**	**338**	⇓*i*P	**Pn**	**06 08 41.0**	**+0.7**
TEY				*e*S	**Sn**	**06 10 34.8**	**+6.8**
TEY				pmax	pmax		
	comp=N,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
TEY				pmax	pmax		
	comp=N,90nm,0.8s						
TEY				pmax	pmax		
	comp=Z,110nm,0.7s						
TEY				MLR	MLR		
	comp=E,2μm,18.0s						
TEY				MLR	MLR		
	comp=N,4μm,14.0s						
TEY				MLR	MLR		
	comp=Z,6μm,13.0s						
JTA	**Tamana**	**9.81**	**254**	P	**Pn**	**06 08 44.9**	**+2.3**
KUR	**Kuril'sk**	**10.13**	**25**	*e*P	**Pn**	**06 08 48.3**	**+1.4**
KUR				pmax	pmax		
	comp=Z,100nm,0.4s						
KUR				pmax	pmax		
	comp=N,38nm,0.3s						
KUR				pmax	pmax		
	comp=E,60nm,0.3s						
KUR				pmax	pmax		
	comp=Z,658nm,3.6s						
KUR				MLR	MLR		
	comp=Z,2μm,12.0s						
KUR				MLR	MLR		
	comp=N,2μm,13.0s						
KUR				MLR	MLR		
	comp=E,2μm,12.0s						
JUR	**Ureshino**	**10.22**	**256**	P	**Pn**	**06 08 50.9**	**+2.7**
VLA	**Vladivostok**	**10.27**	**315**	*c* *i*P	**Pn**	**06 08 51.3**	**+2.4**
MSHR	**Mys Shultsa**	**10.38**	**311**	*c* *i*P	**Pn**	**06 08 52.5**	**+2.2**
YSS	**Yuzh-Sakhalins**	**10.76**	**4**	*e*Pn	**Pn**	**06 08 54.4**	**-1.2**
YSS	**Yuzh-Sakhalins**	**10.76**	**4**	⇑*e*P	**Pn**	**06 08 53.9**	**-1.6**
YSS				*e*S	**Sn**	**06 10 48.8**	**-6.5**
YSS				pmax	pmax		
	comp=Z,260nm,0.8s						
YSS				MLR	MLR		
	comp=N,3μm,15.0s						
YSS				MLR	MLR		
	comp=E,5μm,15.0s						
YSS				MLR	MLR		
	comp=Z,4μm,15.0s						
USA0B	**Ussuriysk Arra**	**10.93**	**320**	*e*Pn	**Pn**	**06 08 59.2**	**+1.4**
USRK	**Ussuriysk Ar.**	**10.93**	**320**	Pn	**Pn**	**06 08 59.7**	**+1.9**
	comp=Z,5.5nm,0.3s,baz=138,slow=13,SNR=58						
USRK				LR	LR	06 13 03.5	
	comp=Z,9μm,18.4s,baz=124,slow=37						
KSRS	**Korea Array**	**11.16**	**280**	Pn	**Pn**	**06 09 05.5**	**+4.5**
	comp=Z,3.3nm,0.3s,baz=93,slow=13,SNR=177						
KSRS				LR	LR	06 13 26.3	
	comp=Z,5μm,18.3s,baz=70,slow=38						
KSRS				PcP	**PcP**	**06 14 57.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=19,slow=0.2,SNR=6.1						
KS15	**Wonju Array Si**	**11.19**	**280**	*e*Pn	**Pn**	**06 09 05.4**	**+3.9**
KS15				*e*PcP	**PcP**	**06 14 57.9**	**+1.0**
TJN	**Taejon**	**11.62**	**275**	*c* *i*P	**Pn**	**06 09 10.6**	**+3.2**
MDJ	**Mudanjiang**	**12.50**	**316**	*e*Pn	**Pn**	**06 09 19.7**	**+0.4**
MDJ	**Mudanjiang**	**12.50**	**316**	P	**Pn**	**06 09 20.5**	**+1.1**
MDJ				PP	**P**	**06 09 31.3**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,25nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,240nm,7.1s						
MDJ				LR	LR		
	comp=Z,7μm,18.8s						
MDJ				LR	LR		
	comp=Z,7μm,17.1s						
MDJ				LR	LR		
	comp=Z,13μm,18.0s						
JTAJ	**Takarajima**	**12.70**	**240**	P	**Pn**	**06 09 23.6**	**+1.5**
UGL	**Uglegorsk**	**12.86**	**1**	P	P	06 09 29.7	-5.2
UGL				pmax	pmax		
	comp=Z,49nm,0.8s						
CN2	**Changchun**	**14.61**	**306**	*e*P	**Pn**	**06 09 47.4**	**-0.8**
CN2				*e*S	**Sn**	**06 12 32.6**	**+3.2**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				pmax	pmax		
	comp=Z,300nm,3.1s						
CN2				LR	LR		
	comp=Z,6μm,16.0s						
CN2				LR	LR		
	comp=Z,7μm,16.0s						
CN2				LR	LR		
	comp=Z,7μm,16.0s						
TYV	**Tymovskoe**	**14.66**	**2**	*e*P	**Pn**	**06 09 47.9**	**-0.9**
TYV				*e*		06 12 28.3	
TYV				pmax	pmax		
	comp=Z,29nm,1.2s						
TYV				MLR	MLR		
	comp=E,5μm,15.0s						
TYV				MLR	MLR		
	comp=Z,7μm,15.0s						
JOW	**Kunigami**	**14.81**	**235**	Pn	**Pn**	**06 09 49.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=98,slow=18,SNR=10						
JOW	**Kunigami**	**14.81**	**235**	*e*Pn	**Pn**	**06 09 53.1**	**+2.2**
JOW	**Kunigami**	**14.81**	**235**	P	**Pn**	**06 09 49.3**	**-1.7**
JIH	**Iheya**	**14.88**	**236**	P	**Pn**	**06 09 49.8**	**-2.1**
KLR	**Kul'dur**	**14.93**	**334**	Pn	**Pn**	**06 09 50.7**	**-1.8**
	comp=Z,1.7nm,0.3s,baz=136,slow=11,SNR=30						
KLR				LR	LR	06 15 40.9	
	comp=Z,4μm,18.7s,baz=144,slow=38						
KLR	**Kul'dur**	**14.93**	**334**	*c* *i*P	**Pn**	**06 09 52.0**	**-0.5**
KLR				pmax	pmax		
	comp=Z,14nm,0.6s						
GRNR	**Gornyy**	**15.05**	**347**	*e*P	**Pn**	**06 09 52.5**	**-1.6**
GRNR				pmax	pmax		
	comp=Z,34nm,0.9s						
SNY	**Shenyang**	**15.20**	**297**	⇑P	**Pn**	**06 09 55.8**	**-0.3**
SNY				pP	**P**	**06 10 03.3**	**+2.3**
SNY				sP	**sP**	**06 10 07.8**	**-0.7**
SNY				S	**Sn**	**06 12 37.3**	**-6.5**
SNY				pmax	pmax		
	comp=Z,92nm,1.0s						
SNY				pmax	pmax		
	comp=Z,730nm,3.4s						
SNY				LR	LR		
	comp=Z,4μm,13.8s						
SNY				LR	LR		
	comp=Z,8μm,15.7s						
SNY				LR	LR		
	comp=Z,12μm,16.2s						
JAGN	**Aguni-jima**	**15.66**	**236**	P	**P**	**06 10 04.8**	**-1.4**
JKE	**Kume jima 2**	**16.14**	**237**	P	**P**	**06 10 10.8**	**-0.7**
DL2	**Dalian**	**16.19**	**286**	⇑*i*P	**Pn**	**06 10 09.4**	**+0.4**
DL2				sP	**pwP**	**06 10 21.1**	**+1.5**
DL2				S	**Sn**	**06 13 10.3**	**+2.3**
DL2				pmax	pmax		
	comp=Z,190nm,0.6s						
DL2				pmax	pmax		
	comp=Z,830nm,3.7s						
DL2				LR	LR		
	comp=Z,4μm,11.8s						
DL2				LR	LR		
	comp=Z,10μm,13.8s						
DL2				LR	LR		
	comp=Z,11μm,15.1s						
NKL	**Nikolayevsk**	**16.96**	**358**	*e*P	**Pn**	**06 10 15.0**	**-3.5**

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NKL                                    pmax    pmax
       comp=Z,86nm,1.0s
OKH    Okha              17.36   2deP  P       06 10 28.0 +3.2
OKH                                    pmax    pmax
       comp=Z,200nm,16.8s
OKH                                    MLR     MLR
       comp=Z,5µm,16.0s
SKR    Severo-Kuril's    17.78  31 eP  Pn      06 10 28.6 -0.2
SKR                               eS   S       06 13 50.0 -3.0
SKR                                    pmax    pmax
       comp=Z,102nm,1.0s
SKR                                    pmax    pmax
       comp=Z,400nm,3.6s
SKR                                    MLR     MLR
       comp=Z,1µm,17.0s
SKR                                    MLR     MLR
       comp=Z,1µm,18.0s
JOGS   Gusukube          18.11 235     P       P       06 10 33.4 +0.1
JMJ2   Miyako jima3      18.18 236     P       Pn      06 10 33.9 +0.1
JIRB   Irabujima         18.22 236     P       Pn      06 10 33.4 -1.0
JTJ    Tarama            18.66 237     P       P       06 10 37.6 -1.8
JISG   Ishigakijimahi    18.96 237     P       P       06 10 40.4 -2.3
JIJ    Ishigaki jima     19.23 237     P       P       06 10 42.8 -2.8
JKRS   Kuro-shima        19.40 237     P       P       06 10 45.1 -2.4
NJ2    Nanjing           19.40 264 eP          P       06 10 45.9 -1.6
NJ2                                    pP      pP      06 10 52.3 -0.3
NJ2                                    sP      pwP     06 10 56.6 +1.6
NJ2                                    pmax    pmax
       comp=Z,46nm,0.9s
NJ2                                    pmax    pmax
       comp=Z,370nm,3.5s
NJ2                                    LR      LR
       comp=Z,6µm,14.2s
NJ2                                    LR      LR
       comp=Z,3µm,14.2s
NJ2                                    LR      LR
       comp=Z,4µm,21.2s
IRIF   Iriomote-Funau    19.52 238     P       P       06 10 45.0 -3.8
HATJ   Hateruma jima     19.66 237     P       P       06 10 48.4 -1.9
TIA    Tai'an            19.87 277     P       P       06 10 51.3 -1.3
TIA                                    pmax    pmax
       comp=Z,64nm,0.8s
TIA                                    LR      LR
       comp=Z,3µm,15.2s
TIA                                    LR      LR
       comp=Z,1µm,20.1s
TIA                                    LR      LR
       comp=Z,2µm,17.5s
YOJ    Yonaguni jima     19.94 239 eP          P       06 10 49.6 -3.8
       comp=Z,269nm,1.1s
YOJ    Yonaguni jima     19.94 239 eP          P       06 10 49.6 -3.8
YOJ                                    pmax    pmax
       comp=Z,269nm,1.1s
YOJ    Yonaguni jima     19.94 239     P       P       06 10 49.9 -3.5
JYNG   Yonagunijimaku    19.99 239     P       P       06 10 49.8 -4.1
ZEA    Zeya              20.24 335 eP          P       06 10 53.8 -2.7
ZEA                                e                   06 11 30.0
ZEA                                eS          Sn      06 14 47.0 +1.3
ZEA                                e                   06 15 05.5
ZEA                                e                   06 15 12.0
ZEA                                    pmax    pmax
       comp=N,170nm,1.0s
ZEA                                    pmax    pmax
       comp=E,71nm,1.0s
ZEA                                    pmax    pmax
       comp=Z,240nm,1.0s
ZEA                                    pmax    pmax
       comp=Z,500nm,5.0s
ZEA                                    pmax    pmax
       comp=Z,600nm,7.0s
ZEA                                    pmax    pmax
       comp=N,500nm,6.0s
ZEA                                    smax    smax
       comp=N,500nm,5.0s
ZEA                                    MLR     MLR
       comp=Z,6µm,14.0s
ZEA                                    MLR     MLR
       comp=N,5µm,15.0s
ZEA                                    MLR     MLR
       comp=E,3µm,15.0s
PEA0B  Petropavlovsk-    20.27  29 eP          P       06 10 57.1 +0.3
       comp=E,138nm,1.3s
PEA0B                                  LR      LR
       comp=Z,1µm,20.0s
PETK   Petropavlovsk-    20.27  29     P       P       06 10 57.3 +0.6
       comp=Z,32nm,0.9s,baz=204,slow=8.5,SNR=58
PETK                                   LR      LR      06 18 49.8
       comp=Z,1µm,21.0s,baz=215,slow=37
BJI    Beijing           20.47 289     P       P       06 10 56.8 -2.2
BJI                                    LR      LR
       comp=Z,1µm,13.5s
BJI                                    LR      LR
       comp=Z,1µm,12.8s
BJT    Baijiatuau        20.47 288 eP          P       06 10 56.7 -2.4
       comp=Z,107nm,1.1s
BJT    Baijiatuau        20.47 288 eP          P       06 10 56.7 -2.4
BJT                                    pmax    pmax
       comp=Z,107nm,1.1s
PET    Petropavlovsk     20.58  30 eP          P       06 11 00.4 +0.3
       comp=Z,123nm,1.2s
PET                                    LR      LR
       comp=Z,1µm,19.0s
PET    Petropavlovsk     20.58  30d iP         P       06 11 00.7 +0.6
PET                                i S         S       06 14 42.5 -6.7
PET                                    pmax    pmax
       comp=Z,101nm,1.1s
PET                                    pmax    pmax
       comp=Z,300nm,15.0s
PET                                    pmax    pmax
       comp=Z,600nm,11.4s
PET                                    MLR     MLR
       comp=Z,1µm,17.0s
PET                                    MLR     MLR
       comp=Z,1µm,14.0s
HIA    Hailar            20.69 316 eP          P       06 10 58.8 -2.6
       comp=Z,66nm,0.8s
HIA    Hailar            20.69 316 eP          P       06 10 58.8 -2.6
HIA                                    pmax    pmax
       comp=Z,66nm,0.8s
TATO   Taipei            20.69 243 eP          P       06 11 00.1 -1.5
       comp=Z,83nm,1.1s
TATO                                   LR      LR
       comp=Z,2µm,18.0s
YHNB   Yeheng            20.96 242     PFAKE           06 11 20.0  +13
YHNB                                   LR      LR
       comp=Z,1µm,19.0s
NACB   Ninganchiao       21.11 241     PFAKE           06 11 20.0  +14
NACB                                   LR      LR
       comp=Z,2µm,21.0s
SSLB   Suanglung         21.81 241     PFAKE           06 11 30.0  +16
SSLB                                   LR      LR
       comp=Z,1µm,20.0s
YULB   Yu-li             21.82 240 eP          P       06 11 09.4 -4.3
       comp=Z,59nm,0.7s
YULB                                   LR      LR
       comp=Z,2µm,21.0s
TPUB   Ta-pu             22.35 241 eP          P       06 11 15.8 -3.6
       comp=Z,103nm,0.8s
TPUB                                   LR      LR
       comp=Z,2µm,21.0s
TWG    Pinlang           22.35 239 eP          P       06 11 15.4 -4.1
       comp=Z,336nm,0.5s
TWG                                    LR      LR
       comp=Z,4µm,22.0s
GUMO   Guam              22.70 172     P       P       06 11 23.2 +0.1
       comp=Z,93nm,1.0s,baz=124,slow=6.5,SNR=7.2
GUMO                                   LR      LR      06 20 51.1
       comp=Z,362nm,21.1s,baz=12,slow=38
GUMO   Guam              22.70 172 eP          P       06 11 22.9 -0.1
       comp=Z,309nm,1.0s
GUMO   Guam              22.70 172 eP          P       06 11 23.0 -0.1
GUMO                                   pmax    pmax
       comp=Z,309nm,1.0s
QZH    Quanzhou          22.84 247⇑iP          P       06 11 21.6 -2.9
QZH                                    S       S       06 15 27.9 -5.0
QZH                                    pmax    pmax
       comp=Z,75nm,0.9s
QZH                                    LR      LR
       comp=Z,1µm,17.7s
QZH                                    LR      LR
       comp=Z,3µm,17.1s
QZH                                    LR      LR
       comp=Z,4µm,17.5s
KNMB   Chin-men Tao      23.26 246 eP          P       06 11 25.3 -3.7
       comp=Z,79nm,0.9s
KNMB                                   LR      LR
       comp=Z,4µm,18.0s
TIY    Taiyuan           23.45 282 eP          P       06 11 30.0 -0.8
TIY                                    S       S       06 15 40.9 -2.3
TIY                                    sS      sS      06 15 51.3 -1.1
TIY                                    pmax    pmax
       comp=Z,56nm,0.5s
TIY                                    pmax    pmax
       comp=Z,410nm,5.3s
TIY                                    LR      LR
       comp=Z,4µm,13.9s
TIY                                    LR      LR
       comp=Z,9µm,14.4s
TIY                                    LR      LR
       comp=Z,10µm,14.3s
WHN    Wuhan             23.54 264⇓iP          P       06 11 29.8 -1.8
WHN                                    pP      pP      06 11 36.1 -0.9
WHN                                    S       S       06 15 41.5 -3.1
WHN                                    pmax    pmax
       comp=Z,650nm,1.7s
WHN                                    pmax    pmax
       comp=Z,1µm,6.4s
WHN                                    LR      LR
       comp=Z,5µm,13.0s
WHN                                    LR      LR
       comp=Z,12µm,15.4s
WHN                                    LR      LR
       comp=Z,14µm,14.9s
HHC    Hu-ho-hao-te      24.01 290     P       P       06 11 36.8 +0.6
HHC                                    S       S       06 15 52.3  0.0
HHC                                    sS      pS      06 15 58.8 +0.5
HHC                                    pmax    pmax
       comp=Z,25nm,0.8s
HHC                                    LR      LR
       comp=Z,3µm,13.6s
HHC                                    LR      LR
       comp=Z,5µm,14.5s
MA2    Magadan           24.10  11     P       P       06 11 37.3 +0.6
       comp=Z,49nm,0.7s,baz=195,slow=11,SNR=27
MA2                                    LR      LR      06 22 10.5
       comp=Z,845nm,19.4s,baz=200,slow=39
MA2    Magadan           24.10  11 eP          P       06 11 36.5 -0.2
       comp=Z,64nm,0.8s
MA2    Magadan           24.10  11ceP          P       06 11 36.7  0.0
MA2                                    pmax    pmax
       comp=Z,251nm,2.5s
BTO    Baotou            25.18 290 eP          P       06 11 44.8 -2.1
BTO                                    S       S       06 16 12.4 +1.3
CIT    Chita             25.47 317 eP          P       06 11 47.5 -1.8
CIT                                e                   06 11 57.6
CIT                                e                   06 12 25.1
CIT                                    pmax    pmax
       comp=Z,216nm,1.4s
XAN    Xi'an             26.88 275     PFAKE           06 12 10.0 +7.8
XAN                                    LR      LR
       comp=Z,2µm,18.0s
XAN    Xi'an             26.88 275     P       P       06 12 01.8 -0.4
XAN                                    PP      PnPn    06 12 47.3 +3.0
XAN                                    S       S       06 16 29.3 -8.7
XAN                                    SS      SnSn    06 17 42.8 -0.3
XAN                                    ScS     ScS     06 22 47.9 -6.3
XAN                                    pmax    pmax
       comp=Z,160nm,0.6s
XAN                                    pmax    pmax
       comp=Z,670nm,3.8s
XAN                                    LR      LR
       comp=Z,2µm,13.9s
XAN                                    LR      LR
       comp=Z,2µm,13.9s
XAN                                    LR      LR
       comp=Z,3µm,15.1s
YAK    Yakutsk           26.93 347 eP          P       06 12 02.3  0.0
       comp=Z,470nm,0.9s
YAK                                    LR      LR
       comp=Z,2µm,22.0s
YAK    Yakutsk           26.93 347c iP         P       06 12 02.5 +0.2
YAK                                e                   06 12 44.6
YAK                                ePPP        PPP     06 12 57.0
YAK                                e                   06 15 23.6
YAK                                eS          S       06 16 37.3 -0.8
YAK                                    pmax    pmax
       comp=Z,331nm,0.9s
YAK                                    pmax    pmax
       comp=N,255nm,1.0s
YAK                                    pmax    pmax
       comp=E,93nm,1.0s
YAK                                    pmax    pmax
       comp=Z,98nm,1.5s
YAK                                    pmax    pmax
       comp=N,124nm,1.9s
YAK                                    pmax    pmax
       comp=E,170nm,1.8s
YAK                                    smax    smax
       comp=N,122nm,1.6s
YAK                                    smax    smax
       comp=E,87nm,1.9s
H11N2  WAKE ISLAND Hy    27.49 120     T       T       06 41 03.8
       baz=312,slow=75
H11N1  WAKE ISLAND Hy    27.50 120     T       T       06 41 21.6
       baz=312,slow=75
H11N3  WAKE ISLAND Hy    27.51 120     T       T       06 41 26.7
       baz=312,slow=75
SEY    Seymchan          27.55  11     P       P       06 12 09.1 +1.3
       comp=E,28nm,1.1s,baz=190,slow=6.1,SNR=29
WAKE   Wake Island       27.62 121     PFAKE           06 12 20.0  +11
WAKE                                   LR      LR
       comp=Z,2µm,21.0s
HKPS   Hong Kong Po S    27.70 248     PFAKE           06 12 20.0  +10
HKPS                                   LR      LR
       comp=Z,3µm,19.0s
GZH    Guangzhou         27.83 250     P       P       06 12 05.8 -5.0
GZH                                    S       S       06 16 45.1 -7.8
GZH                                    LR      LR
       comp=Z,2µm,13.7s
GZH                                    LR      LR
       comp=Z,2µm,14.6s
ULN    Ulaanbaatar       28.05 305 eP          P       06 12 12.6 -0.1
       comp=Z,88nm,0.9s
ULN                                    LR      LR
       comp=Z,2µm,18.0s
ULN    Ulaanbaatar       28.05 305c iP         P       06 12 12.5 -0.3
ULN                                    pmax    pmax
       comp=Z,144nm,1.3s
SMY    Shemya            28.06  44     PFAKE           06 12 20.0 +7.5
SMY                                    LR      LR
       comp=Z,700nm,20.0s
H11S1  WAKE ISLAND Hy    28.18 122     T       T       06 41 44.8
       baz=312,slow=75
H11S3  WAKE ISLAND Hy    28.18 122     T       T       06 41 49.6
       baz=312,slow=75
H11S2  WAKE ISLAND Hy    28.20 122     T       T       06 42 25.2
       baz=312,slow=75
BOD    Bodaibo           28.38 328 eP          P       06 12 15.3  0.0
BOD                                    pmax    pmax
       comp=Z,168nm,1.2s
SONA0  Songino Array     28.48 305 ePcP        PcP     06 15 28.5 +0.5
SONM   Songino Array     28.48 305     P       P       06 12 16.8 +0.2
       comp=Z,135nm,0.8s,baz=104,slow=8.4,SNR=185
SONM                                   PcP     PcP     06 15 28.5 +0.5
       comp=Z,3.2nm,0.6s,baz=120,slow=1.4,SNR=5.0
SONM                                   LR      LR      06 24 11.4
       comp=Z,3µm,18.3s,baz=94,slow=38
TGY    Tagaytay City     28.86 226     P       P       06 12 20.4 +0.4
       comp=Z,151nm,0.3s,baz=90,slow=13,SNR=5.3
TGY                                    LR      LR      06 22 24.7
       comp=Z,464nm,18.2s,baz=24,slow=33
LZH    Lanzhou           30.49 281 eP          P       06 12 34.6 +0.1
LZH                                    pP      pP      06 12 40.1  0.0
LZH                                    sP      pwP     06 12 43.1 +0.7
LZH                                eS          S       06 17 35.8 +0.8
LZH                                    pmax    pmax
       comp=Z,89nm,1.2s
LZH                                    pmax    pmax
       comp=Z,500nm,4.6s
LZH                                    LR      LR
       comp=Z,3µm,14.6s
LZH                                    LR      LR
       comp=Z,5µm,16.8s
LZH                                    LR      LR
       comp=Z,7µm,17.9s
IRK    Irkutsk           30.86 313 eP          P       06 12 38.1 +0.7
IRK                                    pmax    pmax
       comp=Z,144nm,2.2s
ZAK    Zakamensk         31.00 309 eP          P       06 12 39.0 +0.2
ZAK                                    pmax    pmax
       comp=Z,117nm,1.2s
GYA    Guiyang           31.37 262⇑iP          P       06 12 41.3 -1.0
GYA                                    pP      pP      06 12 48.5 +0.6
GYA                                    PP      PnPn    06 13 42.0 -3.0
GYA                                    S       S       06 17 39.1  -10
GYA                                    pmax    pmax
       comp=Z,140nm,1.1s
GYA                                    pmax    pmax
       comp=Z,150nm,3.3s
GYA                                    LR      LR
       comp=Z,2µm,16.8s
GYA                                    LR      LR
       comp=Z,2µm,16.2s
GYA                                    LR      LR
       comp=Z,3µm,16.2s
CD2    Chengdu           31.97 272 ⇑P          P       06 12 46.6 -0.8
CD2                                    pP      sP      06 12 54.3 -1.0
CD2                                    sP      pwP     06 12 58.5 +3.2
CD2                                    S       S       06 17 54.6 -3.3
CD2                                    pmax    pmax
       comp=Z,160nm,0.6s
CD2                                    pmax    pmax
       comp=Z,430nm,5.1s
CD2                                    LR      LR
       comp=Z,5µm,15.2s
CD2                                    LR      LR
       comp=Z,3µm,16.7s
CD2                                    LR      LR
       comp=Z,4µm,19.6s
DAV    Davao City (W)    32.56 211     PFAKE           06 13 10.0  +17
DAV                                    LR      LR
       comp=Z,700nm,22.0s
QIZ    Qiongzhong        32.86 247     P       P       06 12 55.4 +0.1
QIZ                                    S       S       06 18 12.3 +0.5
QIZ                                    sS      sS      06 18 23.9 +2.9
QIZ                                    pmax    pmax
       comp=Z,250nm,14.5s
QIZ                                    LR      LR
       comp=Z,2µm,13.7s
QIZ                                    LR      LR
       comp=Z,1µm,15.7s
QIZ                                    LR      LR
       comp=Z,2µm,17.2s
GTA    Gaotai            33.08 288     P       P       06 12 57.4 +0.2
GTA                                    pP      pwP     06 13 04.8 -0.3
GTA                                    sP      sP      06 13 07.9 +2.8
GTA                                    PcP     PcP     06 15 41.8 +1.5
GTA                                    S       S       06 18 15.4 +0.1
GTA                                    sS      sS      06 18 26.4 +1.7
GTA                                    pmax    pmax
       comp=Z,89nm,0.8s
GTA                                    pmax    pmax
       comp=Z,480nm,7.2s
GTA                                    LR      LR
       comp=Z,1µm,17.2s
GTA                                    LR      LR
       comp=Z,3µm,17.2s
GTA                                    LR      LR
       comp=Z,4µm,17.5s
BILL   Bilibino          34.74  16 eP          P       06 13 10.9 -0.1
       comp=Z,63nm,1.4s
BILL                                   LR      LR
       comp=Z,2µm,20.0s
BILL   Bilibino          34.74  16c iP         P       06 13 11.2 +0.1
BILL                                   pmax    pmax
       comp=Z,37nm,1.0s
BILL                                   MLR     MLR
       comp=Z,1µm,16.0s
KMI    Kunming           35.13 263     P       P       06 13 14.3 -0.9
KMI                                    pP      pP      06 13 21.3 +0.5
KMI                                    sP      pwP     06 13 23.8 +0.7
KMI                                    PP      PP      06 14 35.1 +0.2
KMI                                    S       S       06 18 43.3 -4.0
KMI                                    sS      sS      06 18 55.0 -1.7
KMI                                    pmax    pmax
       comp=Z,110nm,1.2s
KMI                                    pmax    pmax
       comp=Z,410nm,3.1s
KMI                                    LR      LR
       comp=Z,2µm,17.1s
KMI                                    LR      LR
       comp=Z,3µm,17.5s
KMI                                    LR      LR
       comp=Z,3µm,16.4s
MIDW   Midway            35.28  91     PFAKE           06 13 30.0  +14
MIDW                                   LR      LR
       comp=Z,1µm,19.0s
SGSI   Sangihe           35.66 209     P       P       06 13 20.9 +1.4
       comp=Z,149nm,0.6s
TIXI   Tiksi             36.14 353 eP          P       06 13 22.8 -0.2
       comp=Z,41nm,0.9s
TIXI                                   LR      LR
       comp=Z,3µm,18.0s
TIXI   Tiksi             36.14 353c iP         P       06 13 23.0  0.0
TIXI                                   pmax    pmax
       comp=Z,52nm,1.0s
TNTI   Ternate           37.71 204 eP          P       06 13 36.2 -0.7
       comp=Z,99nm,0.9s
TNTI                                   LR      LR
       comp=Z,500nm,20.0s
TNTI   Ternate           37.71 204     P       P       06 13 38.3 +1.3
       comp=Z,116nm,1.6s
PANO   Nakornpanom       37.94 250     P       P       06 13 40.0 +1.0
       comp=Z,0.9nm,1.1s
KKM    Kota Kinabalu     38.08 224     PFAKE           06 13 50.0  +10
KKM                                    LR      LR
       comp=Z,900nm,19.0s
NIKH   Nikolski High     38.11  48     PFAKE           06 13 50.0  +10
NIKH                                   LR      LR
       comp=Z,900nm,21.0s
SIJI   Sorong            38.16 197     P       P       06 13 40.8  0.0
       comp=Z,62nm,0.7s,baz=7.2,slow=8.6,SNR=7.8
MANU   Manus Island      38.41 171 eP          P       06 13 43.4 +0.4
       comp=Z,24nm,0.9s
NONG   Nongkai           38.52 252     P       P       06 13 44.2 +0.4
       comp=Z,3.2nm,0.7s,comp=Z,34nm
GENI   Genyem            38.63 183     P       P       06 13 45.3 +0.6
GAMB   Gambell           39.28  31     PFAKE           06 14 00.0  +10
GAMB                                   LR      LR
       comp=Z,600nm,20.0s
UNV    Unalaska Valle    39.59  47     PFAKE           06 14 00.0 +7.6
UNV                                    LR      LR
       comp=Z,700nm,20.0s
LKP    Lekhapani         39.72 270 eP          P       06 13 54.4 +0.6
FAKI   Fak Fak           39.93 195 eP          P       06 13 56.1 +0.5
       comp=Z,56nm,0.7s
FAKI                                   LR      LR
       comp=Z,900nm,21.0s
FAKI   Fak Fak           39.93 195     P       P       06 13 58.1 +2.5
       comp=Z,81nm,0.7s,comp=Z,788nm
PAYA   Payao             40.34 257     P       P       06 13 59.7 +0.6
       comp=Z,64µm,1.0s,comp=Z,540µm
DIBR   DIBRUGARH         40.42 271 eP          P       06 13 59.9 +0.2
CHAI   Chaiyaphum        40.69 251     P       P       06 14 01.9 -0.1
       comp=Z,127µm,0.6s
UTTA   Uttaradit         40.71 254     P       P       06 14 02.4 +0.3
       comp=Z,182µm,0.9s
SANI   Sanana            40.81 205     P       P       06 14 01.9 -1.0
       comp=Z,540nm,0.8s,comp=Z,4µm
LAMP   Lampang           40.99 256     P       P       06 14 05.4 +1.0
       comp=Z,203µm,0.7s
LUWI   Luwuk             41.06 210     P       P       06 14 04.0 -1.0
       comp=Z,293nm,0.6s,comp=Z,3µm
PBKT   Sadao Pong        41.07 252     P       P       06 14 05.3 +0.2
       comp=Z,59nm,1.1s,comp=Z,904nm
DGZ    Jazzator, Alta    41.11 307c iP         P       06 14 06.4 +1.2
DGZ                                    pmax    pmax
       comp=Z,186nm,0.7s
MOKO   MOKOCHONG         41.23 270 eP          P       06 14 06.5  0.0
ZIRO   ZIRO              41.26 272 eP          P       06 14 05.6 -1.2
JORH   JORHAT            41.26 271 eP          P       06 14 07.0 +0.5
CMMT   Chiang Mai        41.37 257     P       P       06 14 07.6  0.0
       comp=Z,45nm,1.2s,comp=Z,539nm
CHTO   Chiang Mai        41.37 257 eP          P       06 14 07.2 -0.4
       comp=Z,63nm,0.9s
CHTO                                   LR      LR
       comp=Z,800nm,20.0s
CHTO   Chiang Mai        41.37 257 eP          P       06 14 07.2 -0.4
CHTO                                   pmax    pmax
       comp=Z,63nm,0.9s
CHTO                                   MLR     MLR
       comp=Z,800nm,20.0s
CHTO   Chiang Mai        41.37 257     P       P       06 14 07.8 +0.2
       SNR=11
WMQ    Urumqi            41.47 298 eP          P       06 14 10.0 +1.8
WMQ                                    sP      pwP     06 14 21.3 +4.9
WMQ                                    S       S       06 20 27.8 +5.3
WMQ                                    pmax    pmax
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	comp=Z,230nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,810nm,3.7s						
WMQ				LR	LR		
	comp=Z,740nm,19.7s						
WMQ				LR	LR		
	comp=Z,1µm,15.3s						
WMQ				LR	LR		
	comp=Z,2µm,18.7s						
NLAI	Namlea	41.57	202	P	P	06 14 11.5	+2.4
	comp=Z,92nm,0.7s						
CM31	Chiang Mai Arr	41.57	256	eP	P	06 14 09.1	-0.1
	comp=Z,51nm,1.1s						
CM31				ePcP	PcP	06 16 07.8	+1.4
CM31	Chiang Mai Arr	41.57	256	P	P	06 14 10.2	+0.9
	SNR=13						
CMAR	Chiang Mai Arr	41.57	256	P	P	06 14 09.6	+0.4
	comp=Z,23nm,0.8s,baz=48,slow=5.8,SNR=88						
CMAR				PcP	PcP	06 16 07.8	+1.4
	comp=Z,10.0nm,1.0s,baz=13,slow=2.9,SNR=6.4						
CMAR				LR	LR	06 33 00.4	
	comp=Z,704nm,18.9s,baz=54,slow=38						
KOHI	KOHIMA	41.82	269	eP	P	06 14 09.6	-1.8
KOHI				IAmb	IAmb	06 14 14.1	
	comp=Z,62nm,0.3s						
ANM	Nome	42.15	31	PFAKE		06 14 30.0	+17
ANM				LR	LR		
	comp=Z,700nm,19.0s						
IMP	Imphal	42.35	268	eP	P	06 14 13.8	-1.8
CHBT	CHBT	42.40	247	P	P	06 14 18.4	+2.4
	comp=Z,76nm,0.5s						
TEZP	TEZPUR	42.49	271	eP	P	06 14 15.9	-0.7
TEZP				IAmb	IAmb	06 14 19.0	
	comp=Z,44nm,0.7s						
LSA	Lhasa	42.57	276	eP	P	06 14 19.4	+1.6
	comp=Z,148nm,1.0s						
LSA				LR	LR		
	comp=Z,800nm,19.0s						
LSA	Lhasa	42.57	276	P	P	06 14 19.1	+1.3
LSA				pmax	pmax		
	comp=Z,290nm,0.9s						
LSA				LR	LR		
	comp=Z,4µm,13.7s						
LSA				LR	LR		
	comp=Z,7µm,14.1s						
LSA				LR	LR		
	comp=Z,12µm,13.8s						
LSA	Lhasa	42.57	276	P	P	06 14 18.9	+1.0
LSA	Lhasa	42.57	276	eP	P	06 14 19.4	+1.6
LSA				pmax	pmax		
	comp=Z,148nm,1.0s						
LSA				MLR	MLR		
	comp=Z,800nm,19.0s						
ZAA0	Zalesovo Array	42.68	313	PFAKE		06 14 30.0	+12
ZAA0				LR	LR		
	comp=Z,3µm,19.0s						
ZAA1	Zalesovo Array	42.68	313	ePcP	PcP	06 16 09.7	+0.3
ZALV	Zalesovo Beam	42.68	313	P	P	06 14 18.1	+0.2
	comp=Z,102nm,0.7s,baz=90,slow=6.4,SNR=288						
ZALV				PcP	PcP	06 16 09.7	+0.3
	comp=Z,29nm,0.6s,baz=99,slow=3.3,SNR=5.4						
ZALV				LR	LR	06 32 52.2	
	comp=Z,2µm,18.6s,baz=72,slow=37						
TAWA	Tawang	42.83	273	eP	P	06 14 20.5	+0.7
UTHA	Uthaitani	42.85	253	P	P	06 14 20.4	+0.8
	comp=Z,79µm,1.4s,comp=Z,742µm						
SGKI	Sangatta, Kali	42.91	217	P	P	06 14 17.3	-2.8
UMPA	Umpang Tak	42.92	254	P	P	06 14 22.0	+1.8
	comp=Z,145µm,1.0s						
ZSN	Zaisan	42.97	303	ceP	P	06 14 21.6	+1.3
ZSN				eS	S	06 20 47.5	+3.1
ZSN				pmax	pmax		
	comp=Z,80nm,1.1s						
ZSN				smax	smax		
	comp=E,21nm,4.4s						
ZSN				MLR	MLR		
	comp=Z,215nm,14.0s						
ZSN	Zaisan	42.97	303	⇑eP	P	06 14 21.6	+1.3
	comp=Z,80nm,1.1s						
ZSN				eS	S	06 20 47.5	+3.1
	comp=Z,21nm,4.4s						
ZSN				eLR	LR	06 32 42.6	
	comp=Z,215nm,13.6s						
SDPT	Sand Point	43.18	45	PFAKE		06 14 30.0	+8.2
SDPT				LR	LR		
	comp=Z,500nm,20.0s						
SBUM	Sibu	43.29	226	PFAKE		06 14 40.0	+17
SBUM				LR	LR		
	comp=Z,300nm,19.0s						
SBUM	Sibu	43.29	226	P	P	06 14 24.0	+0.9
SILR	SILCHAR	43.30	269	eP	P	06 14 23.6	+0.5
GUWA	GUWAHATI	43.57	271	eP	P	06 14 24.7	-0.6
GUWA				IAmb	IAmb	06 14 29.2	
	comp=Z,35nm,0.7s						
SHL	Shillong	43.69	270	eP	P	06 14 25.4	-1.1
SHL				IAmb	IAmb	06 14 29.4	
	comp=Z,29nm,0.6s						
SHL				ex	x	06 20 22.5	
SRDT	SRDT	43.83	251	P	P	06 14 28.5	+1.0
	comp=Z,44nm,1.5s,comp=Z,2µm						
BKB	Balikpapan	43.88	217	P	P	06 14 29.0	+1.1
	comp=Z,406nm,1.0s,comp=Z,4µm						
TTSI	Tana Toraja	44.10	212	P	P	06 14 29.7	0.0
	comp=Z,48nm,0.9s,comp=Z,5µm						
RDOG	Red Dog Mine	44.11	26	eP	P	06 14 29.7	+0.5
	comp=Z,22nm,0.9s						
RDOG				LR	LR		
	comp=Z,900nm,19.0s						
SAIH	SAIHA	44.23	266	eP	P	06 14 29.8	-1.1
SAIH				IAmb	IAmb	06 14 31.1	
	comp=Z,426nm,0.2s						
PHET	Kaeng Krachan	44.33	249	P	P	06 14 32.9	+1.4
	comp=Z,196µm,0.9s						
CHGN	Chignik	44.36	44	PFAKE		06 14 40.0	+8.7
CHGN				LR	LR		
	comp=Z,400nm,20.0s						
MTKI	Muara Teweh, K	44.62	220	P	P	06 14 36.0	+2.1
MK31	Makanchi Array	44.80	303	eP	P	06 14 35.4	+0.4
	comp=Z,183nm,1.1s						
MK31	Makanchi Array	44.80	303	i P	P	06 14 35.6	+0.6
MK31				pmax	pmax		
	comp=Z,120nm,0.8s						
MK32	Makanchi Array	44.80	303	ePcP	PcP	06 16 17.4	+0.6
MKAR	Makanchi Array	44.80	303	P	P	06 14 35.5	+0.4
	comp=Z,67nm,0.6s,baz=88,slow=9.8,SNR=340						
MKAR				PcP	PcP	06 16 17.4	+0.6
	comp=Z,12nm,0.7s,baz=94,slow=6.1,SNR=2.6						
MKAR				LR	LR	06 34 08.7	
	comp=Z,2µm,18.2s,baz=82,slow=37						
TURI	Tura	44.95	271	eP	P	06 14 35.3	-1.1
SPSI	Sidrap Palu	44.95	212	P	P	06 14 36.1	-0.3
	comp=Z,46nm,1.0s,comp=Z,732nm						
MAKZ	Makanchi	45.01	303	eP	P	06 14 37.4	+0.7
	comp=Z,180nm,1.0s						
MAKZ				LR	LR		
	comp=Z,2µm,20.0s						
MAKZ	Makanchi	45.01	303	eP	P	06 14 37.4	+0.7
MAKZ				pmax	pmax		
	comp=Z,180nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,2µm,20.0s						
KSM	Kuching	45.20	227	eP	P	06 14 38.5	+0.1
	comp=Z,72nm,0.8s						
KSM	Kuching	45.20	227	P	P	06 14 40.0	+1.6
GTK	Tadong	45.58	274	eP	P	06 14 41.8	+0.2
GTK				IAmb	IAmb	06 14 42.7	
PMG	Port Moresby	45.66	173	P	P	06 14 41.1	-0.8
	comp=Z,16nm,0.8s,baz=18,slow=16,SNR=2.2						
PMG	Port Moresby	45.66	173	⇓eP	P	06 14 42.6	+0.6
SEM	Semipalatinsk	45.67	308	eLR	LR	06 34 05.3	
	comp=Z,2µm,16.5s						
KAPI	Kappang	45.90	211	eP	P	06 14 45.3	+1.3
	comp=Z,255nm,1.0s						
KAPI	Kappang	45.90	211	eP	P	06 14 45.3	+1.3
KAPI				pmax	pmax		
	comp=Z,255nm,1.0s						
KAPI	Kappang	45.90	211	P	P	06 14 44.6	+0.6
	SNR=21						
KAPI				P	P	06 14 44.6	+0.6
	SNR=21						
CHIR	Chirikof Islan	45.93	44	PFAKE		06 15 00.0	+16
CHIR				LR	LR		
	comp=Z,800nm,20.0s						
SVW2	Sparrevohn	46.01	37	eP	P	06 14 45.9	+1.5
	comp=Z,26nm,1.1s						
KURK	Kurchatov	46.66	309	eP	P	06 14 50.1	+0.5
	comp=Z,201nm,0.8s						
KURK				LR	LR		
	comp=Z,2µm,18.0s						
KURK	Kurchatov	46.66	309	c iP	P	06 14 49.1	-0.5
KURK				pmax	pmax		
	comp=Z,279nm,1.0s						
KURK	Kurchatov	46.66	309	P	P	06 14 49.6	0.0
	SNR=117						
SII	Sitkinak Islan	46.71	43	PFAKE		06 15 00.0	+10
SII				LR	LR		
	comp=Z,700nm,20.0s						
OHAK	Old Harbor	47.17	42	PFAKE		06 15 10.0	+17
OHAK				LR	LR		
	comp=Z,800nm,21.0s						
SKLT	Songkhla	47.37	243	P	P	06 14 56.2	+0.6
	comp=Z,61nm,1.0s,comp=Z,543nm						
RSO	Redoubt South	47.38	38	eP	P	06 14 56.3	+1.0
JIRN	Jiri	47.38	276	eP	P	06 14 56.7	+0.7
	comp=Z,1µm,1.1s						
PDGK	Podgornoye	47.41	299	P	P	06 14 56.1	+0.3
PDGK				pmax	pmax		
	comp=Z,439nm,1.1s						
GUN	Gumba	47.52	277	eP	P	06 14 57.5	+0.4
	comp=Z,499nm,0.9s						
KDAK	Kodiak Island	47.52	41	eP	P	06 14 56.4	+0.2
	comp=Z,41nm,0.9s						
KDAK				LR	LR		
	comp=Z,800nm,20.0s						
KDAK	Kodiak Island	47.52	41	i P	P	06 14 56.4	+0.2
TRTT	Trang	47.59	244	P	P	06 14 57.9	+0.6
	comp=Z,87nm,1.0s						
PPLA	Purkeypile	47.68	34	eP	P	06 14 59.9	+2.3
	comp=Z,70nm,1.5s						
PPLA				LR	LR		
	comp=Z,500nm,19.0s						
SPU	Mount Spurr	47.72	37	eP	P	06 14 59.0	+1.2
UZB	Uzynbulak	47.79	299	ceP	P	06 14 59.0	+0.3
UZB				eS	S	06 21 56.9	+2.5
UZB				pmax	pmax		
	comp=Z,52nm,0.9s						
UZB				MLR	MLR		
	comp=Z,849nm,14.0s						
UZB	Uzynbulak	47.79	299	⇑eP	P	06 14 59.0	+0.3
	comp=Z,52nm,0.9s						
UZB				eS	S	06 21 56.9	+2.5
UZB				eLR	LR	06 36 16.3	
	comp=Z,849nm,14.4s						
TDK	Taldyqorghan	47.80	301	eP	P	06 14 59.2	+0.6
TDK				pmax	pmax		
	comp=Z,73nm,0.5s						
TDK				MLR	MLR		
	comp=Z,4µm,17.0s						
TDK	Taldyqorghan	47.80	301	eP	P	06 14 59.2	+0.6
	comp=Z,73nm,0.5s						
TDK				eLR	LR	06 35 19.7	
	comp=Z,4µm,17.1s						
HOM	Homer	47.95	39	PFAKE		06 15 10.0	+11
HOM				LR	LR		
	comp=Z,400nm,20.0s						
KPKS	Kokpek	47.95	299	c iP	P	06 15 00.2	+0.3
KPKS				eS	S	06 21 58.5	+1.9
KPKS				pmax	pmax		
	comp=Z,128nm,1.9s						
KPKS				MLR	MLR		
	comp=Z,2µm,16.0s						
KPKS	Kokpek	47.95	299	⇑iP	P	06 15 00.3	+0.3
	comp=Z,128nm,1.9s						
KPKS				eS	S	06 21 58.6	+1.9
KPKS				eLR	LR	06 35 45.2	
	comp=Z,2µm,16.5s						
PKI	Pulchoki	48.04	276	eP	P	06 15 01.3	+0.2
	comp=Z,219nm,0.9s						
PKIN	Phulchoki	48.05	276	eP	P	06 15 01.2	+0.1
	comp=Z,201nm,0.9s						
KKN	Kakani	48.06	277	eP	P	06 15 01.5	+0.4
	comp=Z,413nm,0.9s						
MMRI	Maumere	48.24	206	eP	P	06 15 02.9	+0.7
	comp=Z,110nm,0.7s						
MMRI	Maumere	48.24	206	P	P	06 15 03.5	+1.2
	comp=Z,147nm,0.9s						
SATY	Saty	48.25	299	ceP	P	06 15 02.5	+0.3
SATY				eS	S	06 22 05.5	+4.7
SATY				pmax	pmax		
	comp=Z,119nm,2.0s						
SATY				MLR	MLR		
	comp=Z,1µm,15.0s						
SATY	Saty	48.25	299	⇑eP	P	06 15 02.6	+0.3
	comp=Z,119nm,2.0s						
SATY				eS	S	06 22 05.5	+4.7
SATY				eLR	LR	06 36 34.7	
	comp=Z,1µm,14.6s						
BPAW	Bear Paw Mtn.	48.26	33	eP	P	06 15 03.2	+1.3
	comp=Z,40nm,1.6s						
BPAW				LR	LR		
	comp=Z,600nm,18.0s						
DMN	Daman	48.27	277	eP	P	06 15 03.2	+0.4
	comp=Z,207nm,0.9s						
KTH	Kantishna Hill	48.27	34	PFAKE		06 15 10.0	+7.9
KTH				LR	LR		
	comp=Z,500nm,20.0s						
JRMM	Jerantut	48.38	238	P	P	06 15 04.0	+0.6
PRZ	Przheval'sk	48.40	298	PFAKE		06 15 20.0	+17
PRZ				LR	LR		
	comp=Z,4µm,18.0s						
MLY	Manley	48.40	32	PFAKE		06 15 20.0	+17
MLY				LR	LR		
	comp=Z,600nm,19.0s						
GKN	Gorkha	48.48	277	eP	P	06 15 04.9	+0.6
	comp=Z,795nm,0.9s						
HNR	Honiara	48.52	156	PFAKE		06 15 20.0	+16
HNR				LR	LR		
	comp=Z,800nm,21.0s						
PKDT	Phuket	48.54	245	P	P	06 15 05.7	+1.1
	comp=Z,228nm,0.8s						
EDFI	Ende, Flores	48.55	207	P	P	06 15 04.2	-0.5
	comp=Z,96nm,0.8s,comp=Z,1µm						
SOEI	Soe	48.60	203	P	P	06 15 06.3	+1.2
	comp=Z,313nm,0.9s,comp=Z,3µm						
KULM	Kulim	48.65	241	PFAKE		06 15 20.0	+14
KULM				LR	LR		
	comp=Z,900nm,20.0s						
KULM	Kulim	48.65	241	P	P	06 15 07.0	+1.5
COLD	Coldfoot	48.74	29	epP	pP	06 15 10.2	-1.0
RC01	Rabbit Creek A	48.85	37	PFAKE		06 15 20.0	+14
RC01				LR	LR		
	comp=Z,500nm,21.0s						
BWN	Browne	48.93	33	PFAKE		06 15 20.0	+13
BWN				LR	LR		
	comp=Z,800nm,20.0s						
IPM	Ipoh	48.96	240	PFAKE		06 15 20.0	+12
IPM				LR	LR		
	comp=Z,1µm,18.0s						
IPM	Ipoh	48.96	240	P	P	06 15 08.0	+0.1
MYKOM	Kota Tinggi	49.01	234	eP	P	06 15 08.6	+0.4
	comp=Z,81nm,1.2s						
MYKOM	Kota Tinggi	49.01	234	P	P	06 15 09.0	+0.8
SEW	Seward	49.03	38	PFAKE		06 15 20.0	+12
SEW				LR	LR		
	comp=Z,600nm,18.0s						
DANN	Dangsing	49.04	278	eP	P	06 15 09.6	+0.9
	comp=Z,1µm,0.9s						
CHKK	Chushkaly	49.05	300	⇑eP	P	06 15 08.6	+0.3
CHKK	Chushkaly	49.05	300	⇑eP	P	06 15 08.6	+0.3
TOLK	Toolik Lake Re	49.08	27	PFAKE		06 15 20.0	+12
TOLK				LR	LR		
	comp=Z,700nm,19.0s						
TOLK	Toolik Lake Re	49.08	27	P	P	06 15 09.0	+0.8
	baz=266,SNR=19						
PMR	Palmer	49.12	36	eP	P	06 15 08.7	+0.2
	comp=Z,32nm,1.1s						
PMR				LR	LR		
	comp=Z,300nm,20.0s						
PMR	Palmer	49.12	36	eP	P	06 15 08.7	+0.2
PMR				pmax	pmax		
	comp=Z,33nm,1.1s						
PMR				MLR	MLR		
	comp=Z,300nm,20.0s						
MCK	McKinley	49.16	33	PFAKE		06 15 20.0	+11
MCK				LR	LR		
	comp=Z,700nm,19.0s						
MDOK	Medeo	49.18	299	i P	P	06 15 10.3	+0.8
MDOK				eS	S	06 22 23.1	+9.0
MDOK				pmax	pmax		
	comp=Z,1µm,1.3s						
MDOK				MLR	MLR		
	comp=Z,3µm,18.0s						
MDOK	Medeo	49.18	299	i P	P	06 15 10.3	+0.8
	comp=Z,1µm,1.3s						
MDOK				eS	S	06 22 23.1	+9.0
MDOK				eLR	LR	06 36 17.7	
	comp=Z,3µm,18.0s						
RND	Reindeer	49.20	34	PFAKE		06 15 20.0	+11
RND				LR	LR		
	comp=Z,700nm,20.0s						
BATI	Baumata	49.22	204	P	P	06 15 11.2	+1.4
	comp=Z,159nm,0.7s,comp=Z,1µm						
TPRI	Tanjung Pinang	49.22	233	P	P	06 15 11.1	+1.3
	comp=Z,182nm,0.9s,comp=Z,9µm						
AAA	Alma-Ata	49.27	299	eP	P	06 15 11.6	+1.6
AAA				eS	S	06 22 16.0	+0.9
AAA				pmax	pmax		
	comp=Z,300nm,2.6s						
AAA				smax	smax		
	comp=N,1µm,20.6s						
AAA				MLR	MLR		
	comp=Z,3µm,18.0s						
DGPR	DIGLIPUR	49.33	255	eP	P	06 15 09.5	-1.2
BOK	Bokaro	49.34	272	eP	P	06 15 11.3	+0.5
KDJ	Kajisay	49.36	298	PFAKE		06 15 20.0	+9.1
KDJ				LR	LR		
	comp=Z,4µm,18.0s						
KOLN	Koldanda	49.41	278	eP	P	06 15 11.9	+0.4
	comp=Z,499nm,1.1s						
SML	Sawmill	49.49	36	PFAKE		06 15 20.0	+8.6
SML				LR	LR		
	comp=Z,400nm,20.0s						
KUU	Kurty	49.49	300	eP	P	06 15 11.5	-0.2
KUU				pmax	pmax		
	comp=E,110nm,1.4s						
KUU				MLR	MLR		
	comp=E,2µm,15.0s						
KUU	Kurty	49.49	300	eP	P	06 15 11.6	-0.2
	comp=E,110nm,1.4s						
KUU				eLR	LR	06 36 37.5	
	comp=E,2µm,14.7s						
WRH	Wood River Hil	49.53	32	PFAKE		06 15 20.0	+8.4
WRH				LR	LR		
	comp=Z,600nm,18.0s						
TCOL	CIGO, UAF Yank	49.62	32	P	P	06 15 13.2	+0.9
	baz=270						
COLA	College	49.63	32	eP	P	06 15 13.4	+1.1
	comp=Z,18nm,0.8s						
COLA				LR	LR		
	comp=Z,600nm,19.0s						
COLA	College	49.63	32	c iP	P	06 15 13.2	+0.9
COLA				pmax	pmax		
	comp=Z,17nm,0.8s						
CCB	Clear Creek Bu	49.65	32	PFAKE		06 15 20.0	+7.5
CCB				LR	LR		
	comp=Z,500nm,18.0s						
PYUN	Piuthan	49.76	278	eP	P	06 15 14.8	+0.6
	comp=Z,798nm,1.0s						
POKR	Poker Plat Res	49.80	32	P	P	06 15 14.6	+0.9
	baz=271,SNR=14						
DHY	Denali Highway	49.88	34	PFAKE		06 15 30.0	+16
DHY				LR	LR		
	comp=Z,700nm,20.0s						
COEN	Coen	49.91	178	eP	P	06 15 15.6	+0.6
	comp=Z,68nm,1.0s						
COEN				LR	LR		
	comp=Z,300nm,20.0s						
SCM	Sheep Creek Mo	49.97	36	PFAKE		06 15 30.0	+15
SCM				LR	LR		
	comp=Z,400nm,20.0s						
ULHL	Ulahol	50.00	298	P	P	06 15 16.8	+1.0
	SNR=18						
HDA	Harding Lake	50.02	32	PFAKE		06 15 30.0	+15
HDA				LR	LR		
	comp=Z,600nm,18.0s						
HDA	Harding Lake	50.02	32	P	P	06 15 15.5	+0.2
	baz=272						
ILAR	Eielson Array	50.04	32	P	P	06 15 15.9	+0.4
	comp=Z,16nm,0.7s,baz=266,slow=6.3,SNR=191						
ILAR				LR	LR	06 38 36.9	
	comp=Z,373nm,18.8s,baz=282,slow=39						
BOOM	Boomskoye usch	50.15	298	PFAKE		06 15 30.0	+13
BOOM				LR	LR		
	comp=Z,3µm,19.0s						
TPI	Tanjungpandan	50.15	227	P	P	06 15 17.5	+0.6
	comp=Z,226nm,1.0s,comp=Z,2µm						
PLAI	Plampang	50.16	212	P	P	06 15 17.0	0.0
	comp=Z,190nm,0.8s,comp=Z,2µm						
WBSI	Waikabubak, Su	50.24	209	P	P	06 15 18.3	+0.7
	comp=Z,115nm,0.8s						
TKM2	Tokmak 2	50.27	299	i P	P	06 15 19.2	+1.3
TKM2				pmax	pmax		
	comp=Z,87nm,0.6s						
TKM2	Tokmak 2	50.27	299	P	P	06 15 18.9	+1.1
	SNR=184						
NRN	Naryn	50.40	297	PFAKE		06 15 30.0	+11
NRN				LR	LR		
	comp=Z,1µm,20.0s						
FID	Port Fidalgo	50.45	37	PFAKE		06 15 30.0	+11
FID				LR	LR		
	comp=Z,500nm,19.0s						
BRZS	Berezniki	50.54	309	c iP	P	06 15 19.5	0.0
BRZS				eS	S	06 22 30.3	-2.2
BRZS				pmax	pmax		
	comp=Z,112nm,1.1s						
BRZS				MLR	MLR		
	comp=Z,688nm,16.0s						
BRZS	Berezniki	50.54	309	⇑iP	P	06 15 19.6	0.0
	comp=Z,112nm,1.1s						
BRZS				eS	S	06 22 30.4	-2.2
BRZS				eLR	LR	06 36 54.5	
	comp=Z,688nm,15.6s						
PPBI	Pangkal Pinang	50.59	229	P	P	06 15 21.0	+0.8
PRP	Porcupine Dome	50.59	31	PFAKE		06 15 30.0	+10
PRP				LR	LR		
	comp=Z,600nm,20.0s						
SRBI	Singaraja	50.64	215	P	P	06 15 22.5	+1.9
	comp=Z,95nm,0.8s						
FYU	Fort Yukon	50.68	30	PFAKE		06 15 30.0	+10
FYU				LR	LR		
	comp=Z,600nm,19.0s						
PAX	Paxson	50.75	34	PFAKE		06 15 30.0	+9.0
PAX				LR	LR		
	comp=Z,500nm,19.0s						
KZA	Kyzart	50.76	298	P	P	06 15 23.5	+1.7
	SNR=44						
BTLS	Baital	50.79	302	c iP	P	06 15 21.7	+0.3
BTLS				eS	S	06 22 39.9	+3.8
BTLS				pmax	pmax		
	comp=Z,41nm,0.6s						
BTLS				MLR	MLR		
	comp=Z,774nm,17.0s						
BTLS	Baital	50.79	302	⇑iP	P	06 15 21.7	+0.3
	comp=Z,41nm,0.6s						
BTLS				eS	S	06 22 39.9	+3.8
BTLS				eLR	LR	06 37 20.0	
	comp=Z,774nm,17.3s						
KBK	Karagaybulak	50.80	299	P	P	06 15 22.9	+1.1
	SNR=67						
SGDS	Sogindy	50.81	300	⇑iP	P	06 15 22.2	+0.5
	comp=Z,61nm,1.2s						
SGDS				eS	S	06 22 41.0	+4.4
SGDS				eLR	LR	06 37 27.9	
	comp=Z,1µm,16.8s						
CHMS	Chumysh	50.85	299	P	P	06 15 22.8	+0.9
	SNR=19						
USP	Ospenovka	50.95	300	P	P	06 15 23.3	+0.6
	SNR=46						
GRJI	Gresik	50.95	219	P	P	06 15 23.8	+0.9
	comp=Z,271nm,0.7s,comp=Z,2µm						
RIDG	Independent Ri	50.98	33	PFAKE		06 15 30.0	+7.3
RIDG				LR	LR		
	comp=Z,700nm,18.0s						
FRU1	Bishkek	50.99	299	PFAKE		06 15 30.0	+6.9
FRU1				LR	LR		
	comp=Z,5µm,19.0s						
KSH	Kashi	51.00	295	P	P	06 15 27.8	+4.5
KSH				sP	pwP	06 15 36.8	+5.2
KSH				PP	PP	06 17 25.3	+5.6
KSH				S	S	06 22 44.1	+4.6
KSH				sS	sS	06 22 53.0	+3.9
KSH				ScS	ScS	06 25 12.8	-0.2
KSH				SS	SS	06 26 16.5	+2.3
KSH				pmax	pmax		
	comp=Z,100nm,1.5s						
KSH				pmax	pmax		
	comp=Z,300nm,3.1s						
KSH				LR	LR		
	comp=Z,1µm,14.1s						

KSH				LR	LR		
	comp=Z,3µm,14.2s						
KSH				LR	LR		
	comp=Z,3µm,15.6s						
BWNR	**Bhubaneshwar**	**51.11**	**268**	*e*P	**P**	**06 15 24.9**	**+0.7**
BWNR				IAmb	IAmb	06 15 26.6	
	comp=Z,509nm,2.2s						
AAK	**Ala-Archa**	**51.13**	**299**	*e*P	**P**	**06 15 24.8**	**+0.5**
	comp=Z,68nm,0.8s						
AAK				LR	LR		
	comp=Z,5µm,19.0s						
AAK	**Ala-Archa**	**51.13**	**299**	*i* P	**P**	**06 15 24.8**	**+0.5**
	SNR=42						
AAK	**Ala-Archa**	**51.13**	**299**	*i* P	**P**	**06 15 24.7**	**+0.4**
AAK				pmax	pmax		
	comp=Z,67nm,0.8s						
AAK	**Ala-Archa**	**51.13**	**299**	P	**P**	**06 15 25.2**	**+0.9**
	SNR=33						
AAK				P	**P**	**06 15 25.2**	**+0.9**
	SNR=33						
AAK	**Ala-Archa**	**51.13**	**299**	P	**P**	**06 15 25.2**	**+0.9**
	SNR=28						
OTUK	**Ortayu**	**51.14**	**307**	P	**P**	**06 15 24.2**	**+0.1**
OTUK				pmax	pmax		
	comp=Z,91nm,0.7s						
UCH	**Uchtor**	**51.24**	**299**	P	**P**	**06 15 26.8**	**+1.4**
	SNR=24						
DOT	**Dot Lake**	**51.33**	**33**	PFAKE		06 15 40.0	+15
DOT				LR	LR		
	comp=Z,800nm,18.0s						
SCRK	**Sand Creek**	**51.34**	**33**	PFAKE		06 15 40.0	+15
SCRK				LR	LR		
	comp=Z,500nm,21.0s						
RAGM	**Ragged Mountai**	**51.38**	**38**	PFAKE		06 15 40.0	+14
RAGM				LR	LR		
	comp=Z,800nm,18.0s						
BRVK	**Borovoye**	**51.39**	**313**	*e*P	**P**	**06 15 26.1**	**+0.3**
	comp=Z,98nm,0.9s						
BRVK				LR	LR		
	comp=Z,3µm,19.0s						
BRVK	**Borovoye**	**51.39**	**313**	P	**P**	**06 15 25.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,85nm,0.8s						
BRVK	**Borovoye**	**51.39**	**313**	P	**P**	**06 15 26.5**	**+0.7**
	SNR=44						
BRVK				P	**P**	**06 15 26.5**	**+0.7**
	SNR=44						
MENT	**Mentasta**	**51.55**	**34**	PFAKE		06 15 40.0	+13
MENT				LR	LR		
	comp=Z,700nm,18.0s						
HMT	**Hamilton**	**51.59**	**38**	PFAKE		06 15 40.0	+13
HMT				LR	LR		
	comp=Z,600nm,20.0s						
PSI	**Prapat**	**51.62**	**240**	*e*P	**P**	**06 15 27.6**	**-0.6**
	comp=Z,67nm,0.9s						
PSI				LR	LR		
	comp=Z,700nm,19.0s						
PSI	**Prapat**	**51.62**	**240**	*e*P	**P**	**06 15 27.6**	**-0.6**
PSI				pmax	pmax		
	comp=Z,67nm,0.9s						
PSI				MLR	MLR		
	comp=Z,700nm,19.0s						
EKS2	**Erkin-Say**	**51.63**	**299**	P	**P**	**06 15 28.8**	**+0.9**
	SNR=37						
NGJI	**Ngawi**	**51.86**	**220**	P	**P**	**06 15 32.1**	**+2.4**
	comp=Z,108nm,0.9s						
BKNI	**Bangkinang**	**51.96**	**236**	PFAKE		06 15 40.0	+9.5
BKNI				LR	LR		
	comp=Z,500nm,18.0s						
BKNI	**Bangkinang**	**51.96**	**236**	P	**P**	**06 15 31.3**	**+0.8**
	comp=Z,668nm,0.9s,comp=Z,5µm						
CRQM	**Cirque**	**52.08**	**37**	PFAKE		06 15 40.0	+8.9
CRQM				LR	LR		
	comp=Z,700nm,22.0s						
SMRI	**Semarang**	**52.12**	**221**	P	**P**	**06 15 33.1**	**+1.4**
	comp=Z,172nm,0.9s						
CMBY	**CAMPBELL BAY**	**52.40**	**248**	*e*P	**P**	**06 15 32.2**	**-1.6**
MLSI	**Meulaboh, Aceh**	**52.40**	**244**	P	**P**	**06 15 33.1**	**-0.7**
	comp=Z,146nm,1.2s						
EGAK	**Eagle**	**52.49**	**32**	PFAKE		06 15 50.0	+16
EGAK				LR	LR		
	comp=Z,500nm,20.0s						
TPTI		**52.53**	**242**	P	**P**	**06 15 32.9**	**-1.9**
	comp=Z,27nm,1.3s						
WOJI	**Wonogiri, Jawa**	**52.53**	**220**	P	**P**	**06 15 34.3**	**-0.4**
DDI	**Dehra Dun**	**52.76**	**283**	*e*P	**P**	**06 15 36.3**	**-0.1**
DDI				IAmb	IAmb	06 15 38.5	
	comp=Z,420nm,1.7s						
CTGM	**Chitina Glacie**	**52.93**	**37**	PFAKE		06 15 50.0	+13
CTGM				LR	LR		
	comp=Z,400nm,21.0s						
SMLA	**Simla**	**53.12**	**284**	*e*P	**P**	**06 15 39.0**	**0.0**
PDSI	**Padang**	**53.26**	**235**	P	**P**	**06 15 39.4**	**-0.8**
	comp=Z,30nm,0.8s,comp=Z,984nm						
DAWY	**Dawson**	**53.34**	**33**	PFAKE		06 15 50.0	+10
DAWY				LR	LR		
	comp=Z,600nm,21.0s						
DHRM	**DHARAMSHALA**	**53.35**	**286**	*e*P	**P**	**06 15 40.9**	**-0.1**
KLSI		**53.44**	**228**	P	**P**	**06 15 41.7**	**+0.3**
	comp=Z,175nm,1.5s,comp=Z,3µm						
KRJI	**Kerinci**	**53.48**	**234**	P	**P**	**06 15 42.0**	**+0.1**
KLI	**Kotabumi**	**53.50**	**228**	P	**P**	**06 15 40.8**	**-1.1**
LHSI	**Lahat**	**53.50**	**230**	P	**P**	**06 15 41.4**	**-0.5**
MDSI	**Maura Dua**	**53.61**	**229**	P	**P**	**06 15 41.0**	**-1.7**
GSI	**Gunungsitoli**	**53.63**	**240**	*e*P	**P**	**06 15 42.4**	**-0.5**
	comp=Z,300nm,0.9s						
GSI	**Gunungsitoli**	**53.63**	**240**	P	**P**	**06 15 42.6**	**-0.3**
BLSI	**Bandar Lampung**	**53.67**	**227**	P	**P**	**06 15 42.3**	**-0.8**
KK31	**Karatay Array**	**53.78**	**301**	*i* P	**P**	**06 15 44.2**	**+0.4**
KK31				pmax	pmax		
	comp=Z,154nm,1.1s						
KKAR	**Karatay Array**	**53.78**	**301**	*e*P	**P**	**06 15 44.0**	**+0.3**
	comp=Z,125nm,1.0s						
KKAR	**Karatay Array**	**53.78**	**301**	*e*P	**P**	**06 15 44.1**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,125nm,1.0s						
BCPM	**Bancas Point**	**53.94**	**38**	PFAKE		06 16 00.0	+15
BCPM				LR	LR		
	comp=Z,500nm,21.0s						
CISI	**Cisompet, Garu**	**53.96**	**223**	P	**P**	**06 15 43.6**	**-1.7**
JBG	**Jabagly**	**53.98**	**300**	*ce*P	**P**	**06 15 47.5**	**+2.2**
JBG				pmax	pmax		
	comp=Z,57nm,0.9s						
JBG				MLR	MLR		
	comp=Z,665nm,15.0s						
EPYK	**Eagle Plains**	**54.10**	**29**	PFAKE		06 16 00.0	+14
EPYK				LR	LR		
	comp=Z,500nm,18.0s						
EPYK	**Eagle Plains**	**54.10**	**29**	P	**P**	**06 15 47.3**	**+1.6**
	baz=279,SNR=92						
LWLI	**Liwa**	**54.10**	**229**	P	**P**	**06 15 45.3**	**-1.1**
NDI	**New Delhi**	**54.11**	**282**	*e*P	**P**	**06 15 46.0**	**-0.3**
PBSI	**Pulau Batu**	**54.11**	**238**	P	**P**	**06 15 45.9**	**-0.5**
KASI	**Kota Agung**	**54.24**	**228**	P	**P**	**06 15 45.2**	**-2.1**
KASI				pP	**pwP**	**06 15 55.5**	**-0.3**
IUG	**Iuzhnay**	**54.43**	**300**	*c i*P	**P**	**06 15 49.4**	**+0.8**
IUG	**Iuzhnay**	**54.43**	**300**	⇑*i*P	**P**	**06 15 49.4**	**+0.8**
IUG				*e*LR	LR	06 39 37.3	
BTK	**Batken**	**54.57**	**297**	PFAKE		06 16 00.0	+10
BTK				LR	LR		
	comp=Z,5µm,18.0s						
HYT	**Haines Junctio**	**54.79**	**36**	PFAKE		06 16 00.0	+9.1
HYT				LR	LR		
	comp=Z,500nm,18.0s						
INK	**Inuvik**	**54.99**	**27**	*e*P	**P**	**06 15 52.9**	**+0.9**
	comp=Z,30nm,0.8s						
INK				LR	LR		
	comp=Z,800nm,21.0s						
INK	**Inuvik**	**54.99**	**27**	*e*P	**P**	**06 15 52.9**	**+0.9**
INK				pmax	pmax		
	comp=Z,30nm,0.8s						
INK				MLR	MLR		
	comp=Z,800nm,21.0s						
GAR	**Garm**	**55.31**	**296**	PFAKE		06 16 10.0	+15
GAR				LR	LR		
	comp=Z,5µm,19.0s						
SVE	**Sverdlovsk**	**55.95**	**319**	*d i*P	**P**	**06 16 00.1**	**+0.9**
SVE				pmax	pmax		
	comp=Z,183nm,1.1s						
SVE				MLR	MLR		
	comp=Z,3µm,16.0s						
WHY	**Whitehorse**	**56.08**	**36**	PFAKE		06 16 10.0	+10
WHY				LR	LR		
	comp=Z,400nm,21.0s						
NGP	**Nagpur**	**56.15**	**273**	*e*P	**P**	**06 16 00.3**	**-0.8**
CTA	**Charters Tower**	**56.15**	**175**	P	**P**	**06 16 00.5**	**-0.5**
	comp=Z,6.0nm,0.7s,baz=341,slow=8.9,SNR=7.8						
CTAO	**Charters Tower**	**56.15**	**175**	*e*P	**P**	**06 16 00.4**	**-0.5**
	comp=Z,92nm,2.0s						
CTAO	**Charters Tower**	**56.15**	**175**	*e*P	**P**	**06 16 00.4**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,92nm,2.0s						
WRAB	**Tennant Creek**	**56.28**	**188**	*e*P	**P**	**06 16 01.4**	**-0.4**
	comp=Z,88nm,0.8s						
WRAB	**Tennant Creek**	**56.28**	**188**	*c i*P	**P**	**06 16 00.7**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,55nm,1.0s						
WRA	**Warramunga Arr**	**56.29**	**188**	P	**P**	**06 16 01.3**	**-0.6**
	comp=Z,29nm,0.8s,baz=359,slow=8.3,SNR=71						
BHPL	**Bhopal**	**56.43**	**276**	*e*P	**P**	**06 16 02.4**	**-0.8**
BHPL				IAmb	IAmb	06 16 03.1	
	comp=Z,26nm,1.0s						
BESE	**Bessie Mountai**	**56.65**	**39**	PFAKE		06 16 20.0	+16
BESE				LR	LR		
	comp=Z,400nm,20.0s						
JIS	**Juneau Island**	**56.97**	**39**	PFAKE		06 16 20.0	+14
JIS				LR	LR		
	comp=Z,400nm,20.0s						
ARU	**Arti**	**57.16**	**319**	*e*P	**P**	**06 16 07.7**	**-0.1**
	comp=Z,204nm,1.1s						
ARU				LR	LR		
	comp=Z,2µm,19.0s						
ARU	**Arti**	**57.16**	**319**	*c i*P	**P**	**06 16 08.1**	**+0.3**
ARU				pmax	pmax		
	comp=Z,247nm,1.3s						
KBL	**Kabul**	**57.98**	**292**	*e*P	**P**	**06 16 13.9**	**-0.3**
	comp=Z,100nm,1.3s						
KBL				LR	LR		
	comp=Z,1µm,18.0s						
KBL	**Kabul**	**57.98**	**292**	*e*P	**P**	**06 16 13.9**	**-0.3**
KBL				pmax	pmax		
	comp=Z,100nm,1.3s						
KBL				MLR	MLR		
	comp=Z,1µm,18.0s						
HYB	**Hyderabad**	**58.47**	**269**	*i* P	**P**	**06 16 17.5**	**0.0**
HYB				*e*pP	**sP**	**06 16 24.0**	**-1.6**
HYB				*e*PcP	**PcP**	**06 17 08.5**	**+0.4**
HYB	**Hyderabad**	**58.47**	**269**	*e*P	**P**	**06 16 17.6**	**0.0**
WRAK	**Wrangell Islan**	**58.59**	**40**	*e*P	**P**	**06 16 19.0**	**+1.2**
	comp=Z,13nm,1.0s						
AB31	**Akbulak array**	**58.69**	**311**	*i* P	**P**	**06 16 18.4**	**-0.2**
AB31				pmax	pmax		
	comp=Z,55nm,0.7s						
ABKAR	**Akbulak array**	**58.69**	**311**	*e*P	**P**	**06 16 18.3**	**-0.3**
	comp=Z,67nm,0.7s						
DLBC	**Dease Lake**	**59.10**	**38**	*e*P	**P**	**06 16 23.4**	**+1.9**
	comp=Z,45nm,1.4s						
MDRS	**Chennai**	**59.47**	**264**	*e*P	**P**	**06 16 25.5**	**+1.0**
MDRS				IAmb	IAmb	06 16 27.2	
	comp=Z,109nm,1.1s						
DIB	**Dawson Inlet,**	**59.62**	**44**	*e*P	**P**	**06 16 25.5**	**+0.6**
	comp=Z,29nm,1.2s						
MOBC	**Moresby Island**	**59.92**	**44**	PFAKE		06 16 40.0	+13
MOBC				LR	LR		
	comp=Z,400nm,22.0s						
AS31	**Alice Springs**	**60.01**	**188**	*e*P	**P**	**06 16 27.1**	**-0.9**
	comp=Z,10.0nm,0.6s						
ASAR	**Alice Springs**	**60.01**	**188**	P	**P**	**06 16 27.4**	**-0.5**
	comp=Z,12nm,0.7s,baz=13,slow=8.0,SNR=115						
ASAR				LR	LR	06 41 17.8	
	comp=Z,307nm,21.3s,baz=3.5,slow=35						
PSA00	**Pilbara Seismi**	**61.09**	**203**	*e*P	**P**	**06 16 34.5**	**-0.8**
	comp=Z,145nm,1.8s						
SPA0	**Spitsbergen Ar**	**61.38**	**349**	*e*P	**P**	**06 16 36.7**	**0.0**
	comp=Z,50nm,1.0s						
KBS	**Kingsbay**	**61.52**	**350**	*e*P	**P**	**06 16 39.0**	**+1.4**
	comp=Z,90nm,0.9s						
KBS	**Kingsbay**	**61.52**	**350**	*c i*P	**P**	**06 16 38.8**	**+1.2**
KBS				pmax	pmax		
	comp=Z,405nm,0.9s						
KBS	**Kingsbay**	**61.52**	**350**	*e*P	**P**	**06 16 38.6**	**+1.0**
PRGR	**Permogore**	**61.61**	**327**	*e*P	**P**	**06 16 36.5**	**-1.9**
PRGR				pmax	pmax		
	comp=Z,144nm,1.3s						
POO	**Poona**	**61.69**	**273**	*e*P	**P**	**06 16 39.1**	**-0.6**
EIDS	**Eidsvold**	**61.88**	**170**	*e*P	**P**	**06 16 40.7**	**+0.1**
	comp=Z,36nm,1.1s						
HSPB	**Hornsund (broa**	**62.31**	**348**	*e*P	**P**	**06 16 44.0**	**+1.1**
PALK	**Pallekele**	**62.47**	**258**	*e*P	**P**	**06 16 45.0**	**0.0**
	comp=Z,51nm,1.1s						
PALK	**Pallekele**	**62.47**	**258**	*e*P	**P**	**06 16 45.0**	**0.0**
PALK				pmax	pmax		
	comp=Z,51nm,1.1s						
DZM	**Mont Dzumac**	**62.49**	**154**	*e*S	**S**	**06 25 13.6**	**+2.4**
	comp=Z,327nm,24.4s						
DZM	**Mont Dzumac**	**62.49**	**154**	*e*LR	LR	06 35 19.1	
	comp=Z,1µm,21.0s						
DZM	**Mont Dzumac**	**62.49**	**154**	P	**P**	**06 16 45.3**	**+0.4**
	comp=Z,14nm,1.0s,baz=27,slow=18,SNR=3.0						
DZM	**Mont Dzumac**	**62.49**	**154**	*e*P	**P**	**06 16 48.0**	**+3.2**
	comp=Z,74nm,1.1s						
LVZ	**Lovozero**	**62.98**	**336**	*e*P	**P**	**06 16 48.3**	**+0.8**
	comp=Z,144nm,1.4s						
LVZ				LR	LR		
	comp=Z,2µm,20.0s						
LVZ	**Lovozero**	**62.98**	**336**	⇓*e*P	**P**	**06 16 48.2**	**+0.7**
LVZ				pmax	pmax		
	comp=Z,84nm,1.3s						
GOA	**Goa**	**63.32**	**270**	*e*P	**P**	**06 16 50.7**	**+0.2**
APA	**Apatity**	**63.55**	**336**	⇑*i*P	**P**	**06 16 50.7**	**-0.6**
APA				*i*		06 17 03.5	
APA				*i*		06 19 07.0	
APA				pmax	pmax		
	comp=Z,21nm,0.9s						
APA				MLR	MLR		
	comp=Z,800nm,16.0s						
YKW3	**Yellowknife Ar**	**64.34**	**30**	*e*P	**P**	**06 16 56.6**	**+0.1**
	comp=Z,30nm,1.2s						
YKW3				LR	LR		
	comp=Z,400nm,22.0s						
YKA	**Yellowknife Ar**	**64.38**	**30**	P	**P**	**06 16 57.2**	**+0.4**
	comp=Z,11nm,0.9s,baz=298,slow=6.6,SNR=60						
YKA				LR	LR	06 45 17.7	
	comp=Z,20nm,21.7s,baz=302,slow=36						
GEYT	**Alibeck**	**64.48**	**299**	P	**P**	**06 16 58.6**	**+0.7**
	comp=Z,61nm,0.4s,baz=23,slow=4.7,SNR=3.6						
GEYT				LR	LR	06 48 11.6	
	comp=Z,1µm,18.0s,baz=65,slow=39						
GYA0B	**ALIBECK ARRAY**	**64.48**	**299**	*e*P	**P**	**06 16 58.3**	**+0.4**
	comp=Z,32nm,0.8s						
GYA0B				LR	LR		
	comp=Z,1µm,18.0s						
HAMF	**Hammerfest**	**64.69**	**341**	*e*P	**P**	**06 16 58.4**	**-0.3**
ARCES	**ARCESS Array B**	**64.87**	**340**	P	**P**	**06 17 00.6**	**+0.7**
	comp=Z,47nm,0.8s,baz=56,slow=8.9,SNR=66						
ARCES				LR	LR	06 48 33.9	
	comp=Z,951nm,21.8s,baz=28,slow=39						
ARE0	**ARCESS Array S**	**64.87**	**340**	PFAKE		06 17 10.0	+10
ARE0				LR	LR		
	comp=Z,100nm,22.0s						
ARE0	**ARCESS Array S**	**64.87**	**340**	*e*P	**P**	**06 17 00.7**	**+0.8**
KTK1	**Kautokeino**	**65.83**	**340**	*e*P	**P**	**06 17 06.8**	**+0.7**
TULEG	**Thule**	**65.88**	**8**	PFAKE		06 17 20.0	+14
TULEG				LR	LR		
	comp=Z,800nm,18.0s						
TRO	**Tromso**	**66.58**	**341**	*e*P	**P**	**06 17 11.1**	**+0.1**
DAG	**Danmarks Havn**	**66.62**	**355**	⇑*i*P	**P**	**06 17 11.5**	**+0.4**
DAG				pmax	pmax		
	comp=Z,34nm,0.9s						
DAG	**Danmarks Havn**	**66.62**	**355**	⇑*i*P	**P**	**06 17 11.5**	**+0.4**
	comp=Z,40nm,0.9s						
LLLB	**Lillooet**	**66.65**	**44**	PFAKE		06 17 20.0	+8.2
LLLB				LR	LR		
	comp=Z,300nm,19.0s						
ARMA	**Armidale**	**66.92**	**171**	*e*P	**P**	**06 17 13.9**	**+0.2**
	comp=Z,43nm,1.0s						
NLWA	**Neilton Lookou**	**67.06**	**47**	*e*P	**P**	**06 17 16.3**	**+1.8**
	comp=Z,131nm,1.1s						
D03D	**Eldon**	**67.46**	**47**	P	**P**	**06 17 19.0**	**+2.1**
	baz=299,SNR=8.2						
B05A	**Bryant**	**67.68**	**46**	P	**P**	**06 17 19.6**	**+1.4**
	baz=300,SNR=5.1						
STKA	**Stephens Creek**	**67.73**	**180**	P	**P**	**06 17 18.5**	**-0.1**
	comp=Z,17nm,0.7s,baz=344,slow=7.2,SNR=19						
STKA				LR	LR	06 45 48.8	
	comp=Z,279nm,21.5s,baz=11,slow=35						
STKA	**Stephens Creek**	**67.73**	**180**	*e*P	**P**	**06 17 18.2**	**-0.3**
	comp=Z,3.8nm,0.8s						
D04E	**Lakebay**	**67.82**	**47**	P	**P**	**06 17 21.3**	**+2.1**
	baz=300						
FORT	**Forrest**	**67.87**	**193**	*e*P	**P**	**06 17 19.6**	**+0.1**
	comp=Z,75nm,0.8s						
MOS	**Moscow**	**68.08**	**324**	*e*P	**P**	**06 17 18.9**	**-1.7**
MOS				*e*		06 17 33.8	
MOS				*e*		06 19 49.5	
MOS				*e*S	**S**	**06 26 17.7**	**-1.3**
MOS				pmax	pmax		
	comp=Z,202nm,1.2s						
MOS				pmax	pmax		
	comp=Z,300nm,1.5s						
MOS				MLR	MLR		
	comp=Z,2µm,15.0s						
E04D	**Cinebar**	**68.25**	**48**	P	**P**	**06 17 23.2**	**+1.3**
	baz=300,SNR=9.1						
G03D	**McMinnville, O**	**68.50**	**49**	P	**P**	**06 17 23.9**	**+0.4**
	baz=300						
LON	**Longmire**	**68.60**	**47**	*e*P	**P**	**06 17 25.1**	**+0.9**
	comp=Z,24nm,1.1s						
LON	**Longmire**	**68.60**	**47**	*e*P	**P**	**06 17 25.1**	**+0.9**
LON				pmax	pmax		
	comp=Z,25nm,1.1s						
I02D	**Swisshome**	**68.69**	**50**	P	**P**	**06 17 26.0**	**+1.3**
	baz=300						
STEI	**Steigen**	**68.74**	**341**	*e*P	**P**	**06 17 24.9**	**+0.4**
KULLO	**Kullorsuaq**	**68.77**	**5**	⇑*i*P	**P**	**06 17 25.0**	**+0.3**
KULLO				pmax	pmax		
	comp=Z,130nm,1.3s						
KULLO				MLR	MLR		
	comp=Z,820nm,18.0s						
KULLO	**Kullorsuaq**	**68.77**	**5**	⇑*i*P	**P**	**06 17 25.0**	**+0.3**
	comp=Z,126nm,1.3s						
	comp=Z,810nm,18.0s						
OBN	**Obninsk**	**68.92**	**324**	*e*P	**P**	**06 17 26.0**	**+0.1**
	comp=Z,96nm,0.8s						
OBN				LR	LR		
	comp=Z,800nm,18.0s						
OBN	**Obninsk**	**68.92**	**324**	⇓*i*P	**P**	**06 17 26.0**	**+0.1**
OBN	**Obninsk**	**68.92**	**324**	*c i*P	**P**	**06 17 26.0**	**+0.1**
OBN				*e*		06 17 48.3	
OBN				*i*		06 19 57.8	
OBN				*e*PPP	PPP	06 21 37.8	
OBN				*e*S	**S**	**06 26 31.1**	**+2.1**
OBN				*e*SS	**SS**	**06 30 57.8**	**+4.1**
OBN				pmax	pmax		
	comp=Z,243nm,1.6s						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
LOF	**Lofoten**	**69.03**	**342**	*e*P	**P**	**06 17 27.4**	**+1.0**
LPSR	**Galich'ya Gora**	**69.11**	**320**	*e*P	**P**	**06 17 27.2**	**0.0**
LPSR				pmax	pmax		
	comp=Z,130nm,0.8s						
LPSR				pmax	pmax		
	comp=Z,150nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,4µm,18.0s						
H04D	**Lebanon**	**69.17**	**50**	P	**P**	**06 17 28.6**	**+1.0**
	baz=301						
MAK	**Makhachkala**	**69.19**	**308**	*e*P	**P**	**06 17 25.7**	**-2.1**
MAK				*e*S	**S**	**06 26 28.7**	**-3.9**
MAK				pmax	pmax		
	comp=Z,202nm,1.5s						
MAK				MLR	MLR		
	comp=Z,2µm,16.0s						
I03D	**Drain, OR**	**69.21**	**51**	P	**P**	**06 17 28.9**	**+1.0**
	baz=301						
B08A	**Colville Reser**	**69.22**	**45**	*e*P	**P**	**06 17 28.6**	**+0.7**
	comp=Z,51nm,1.1s						
F05D	**White Salmon**	**69.25**	**48**	P	**P**	**06 17 29.3**	**+1.1**
	baz=301						
MORW	**Morawa**	**69.30**	**204**	*e*P	**P**	**06 17 27.8**	**-0.7**
	comp=Z,24nm,0.8s						
K02D	**Willamette Mer**	**69.52**	**52**	P	**P**	**06 17 31.4**	**+1.4**
	baz=301						
G05D	**Wamic, OR**	**69.67**	**48**	P	**P**	**06 17 32.3**	**+1.5**
	baz=301						
FINES	**FINESS Array B**	**69.67**	**332**	P	**P**	**06 17 30.9**	**+0.4**
	comp=Z,67nm,0.8s,baz=58,slow=7.2,SNR=101						
FINES				PP	**PP**	**06 20 04.3**	**+0.3**
	comp=Z,6.5nm,1.0s,baz=41,slow=9.4,SNR=2.6						
FINES				LR	LR	06 50 25.9	
	comp=Z,980nm,18.6s,baz=33,slow=38						
VSR	**Storozhevoye**	**69.74**	**319**	*e*P	**P**	**06 17 31.0**	**0.0**
VSR				pmax	pmax		
	comp=Z,120nm,0.8s						
VSR				pmax	pmax		
	comp=Z,120nm,0.7s						
VSR				MLR	MLR		
	comp=Z,3µm,15.0s						
I04A	**Tendick Farm,**	**69.75**	**50**	P	**P**	**06 17 32.6**	**+1.3**
	baz=301						
AKT	**Akhty**	**69.80**	**307**	*e*P	**P**	**06 17 32.0**	**+0.2**
AKT				*e*		06 17 53.7	
AKT				*e*		06 20 06.1	
AKT				pmax	pmax		
	comp=Z,67nm,1.1s						
VORD	**Divnogorie**	**69.81**	**319**	*e*P	**P**	**06 17 31.4**	**0.0**
VORD				pmax	pmax		
	comp=Z,60nm,0.7s						
L02E	**Cave Junction**	**69.83**	**52**	P	**P**	**06 17 32.7**	**+0.9**
	baz=301						
C09A	**Chrisman Ranch**	**70.12**	**45**	PFAKE		06 17 50.0	+17
C09A				LR	LR		
	comp=Z,300nm,19.0s						
I05D	**Terrebonne, OR**	**70.12**	**49**	P	**P**	**06 17 34.7**	**+1.1**
	baz=302,SNR=5.0						
J04D	**Umpqua Nationa**	**70.22**	**51**	P	**P**	**06 17 35.7**	**+1.3**
	baz=301						
MOR8	**Moi Rana**	**70.23**	**340**	*e*P	**P**	**06 17 33.2**	**-0.6**
KONS	**Konsvik**	**70.35**	**341**	*e*P	**P**	**06 17 34.8**	**+0.2**
NEW	**Newport**	**70.52**	**44**	PFAKE		06 17 50.0	+14
NEW				LR	LR		
	comp=Z,300nm,21.0s						
NEW	**Newport**	**70.52**	**44**	P	**P**	**06 17 36.9**	**+0.9**
	baz=303,SNR=42						
L04D	**Klamath Falls**	**70.63**	**52**	P	**P**	**06 17 37.6**	**+0.7**
	baz=302,SNR=5.2						
PINE	**Pine Mountain**	**70.66**	**50**	*e*P	**P**	**06 17 38.4**	**+1.3**
	comp=Z,108nm,1.1s						
M02C	**Callahan**	**70.71**	**53**	P	**P**	**06 17 37.7**	**+0.4**
	baz=302						
J05D	**Fort Rock, OR**	**70.74**	**50**	P	**P**	**06 17 39.2**	**+1.6**
	baz=302,SNR=9.0						
K04D	**Chiloquin, OR**	**70.76**	**51**	P	**P**	**06 17 38.9**	**+1.2**
	baz=302						
GOF	**Gofitskoye**	**70.85**	**312**	⇑*i*P	**P**	**06 17 38.4**	**+0.4**
GOF				pmax	pmax		
	comp=Z,135nm,1.0s						
N02D	**Trinity Center**	**71.02**	**53**	P	**P**	**06 17 40.7**	**+1.5**
	baz=302						
M04C	**Macdoel**	**71.15**	**52**	P	**P**	**06 17 41.1**	**+1.0**
	baz=302						
VSU	**Vasula**	**71.31**	**330**	*e*P	**P**	**06 17 40.5**	**+0.1**
VSU				IAmb	IAmb	06 17 41.6	
	comp=Z,295nm,0.9s						
VSU	**Vasula**	**71.31**	**330**	*c i*P	**P**	**06 17 40.6**	**+0.1**
VSU				pmax	pmax		
	comp=Z,300nm,0.8s						
NCK	**Nalchik**	**71.35**	**311**	⇓*e*P	**P**	**06 17 41.6**	**+0.5**
NCK				pmax	pmax		
	comp=Z,69nm,1.1s						
O02D	**Mt. Diablo Mer**	**71.39**	**54**	P	**P**	**06 17 42.3**	**+0.9**
	baz=302						
SUMG	**Summit**	**71.51**	**0**	PFAKE		06 17 50.0	+8.0
SUMG				LR	LR		
	comp=Z,800nm,18.0s						
SUMG	**Summit**	**71.51**	**0**	⇑*i*P	**P**	**06 17 43.4**	**+1.4**
SUMG				pmax	pmax		
	comp=Z,120nm,0.8s						
SUMG	**Summit**	**71.51**	**0**	⇑*i*P	**P**	**06 17 43.4**	**+1.4**
	comp=Z,121nm,0.8s						
ZEI	**Tsey**	**71.54**	**310**	*e*P	**P**	**06 17 40.5**	**-2.0**
ZEI				pmax	pmax		
	comp=Z,34nm,1.0s						
BIDO	**Bidbid**	**71.60**	**286**	P	**P**	**06 17 44.2**	**+1.4**
	SNR=6.7						
BIDO				P	**P**	**06 17 44.2**	**+1.4**
	SNR=6.7						
KBZ	**Khabaz**	**71.65**	**311**	P	**P**	**06 17 43.5**	**+0.7**
	comp=Z,51nm,1.0s,baz=46,slow=2.9,SNR=43						
KBZ				LR	LR	06 51 16.8	
	comp=Z,826nm,21.3s,baz=52,slow=38						
KIV	**Kislovodsk**	**71.66**	**311**	*e*P	**P**	**06 17 43.6**	**+0.6**
	comp=Z,113nm,0.9s						
KIV				LR	LR		
	comp=Z,800nm,20.0s						
KIV	**Kislovodsk**	**71.66**	**311**	⇓*i*P	**P**	**06 17 43.6**	**+0.6**
KIV	**Kislovodsk**	**71.66**	**311**	*i* P	**P**	**06 17 43.6**	**+0.6**
	SNR=16						
KIV	**Kislovodsk**	**71.66**	**311**	*e*P	**P**	**06 17 43.5**	**+0.6**

KIV				pmax	pmax		
	comp=Z,330nm,1.1s						
KIV	Kislovodsk	71.66	311	P	P	06 17 44.0	+1.0
	SNR=18						
KIV				P	P	06 17 44.0	+1.0
	SNR=18						
BANOM	Banah	71.74	289	i P	P	06 17 44.6	+0.8
	SNR=5.5						
SHME	Shamm	71.80	289	i P	P	06 17 44.1	+0.1
	SNR=24						
O03E	Paynes Creek	71.97	53	P	P	06 17 45.1	+0.2
	baz=302,SNR=7.0						
NEY	Neytrino	72.02	311	⇓eP	P	06 17 46.2	+0.9
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MDH	Madha	72.07	288	P	P	06 17 44.8	-0.9
MSFE	Esma-Masafi	72.14	289	i P	P	06 17 46.7	+0.5
	SNR=16						
NSS	Namsos	72.15	340	eP	P	06 17 45.5	+0.1
UOSS	Minazif	72.33	288	eP	P	06 17 47.5	+0.2
	comp=Z,76nm,0.8s						
UOSS	Minazif	72.33	288	i P	P	06 17 47.1	-0.2
	SNR=17						
UOSS	Minazif	72.33	288	P	P	06 17 47.2	-0.1
	SNR=5.2						
UOSS				P	P	06 17 47.2	-0.1
	SNR=5.2						
GNI	Garni	72.42	307	eP	P	06 17 48.9	+1.2
	comp=Z,80nm,1.0s						
GNI				LR	LR		
	comp=Z,600nm,18.0s						
GNI	Garni	72.42	307	i P	P	06 17 48.9	+1.2
	SNR=6.4						
GNI	Garni	72.42	307	c iP	P	06 17 49.0	+1.2
GNI				pmax	pmax		
	comp=Z,299nm,1.9s						
GNI	Garni	72.42	307	P	P	06 17 48.9	+1.2
	SNR=9.3						
HATD	Hatta, Dubai	72.45	288	i P	P	06 17 48.4	+0.4
	SNR=26						
HATD	Hatta, Dubai	72.45	288	P	P	06 17 49.0	+1.1
	SNR=8.8						
HATD				P	P	06 17 49.0	+1.1
	SNR=8.8						
NWAO	Narrogin (SRO)	72.51	201	eP	P	06 17 47.7	-0.2
	comp=Z,36nm,0.9s						
NWAO	Narrogin (SRO)	72.51	201	eP	P	06 17 47.7	-0.2
NWAO				pmax	pmax		
	comp=Z,36nm,0.9s						
AKH	Akhalkalaki	72.54	309	PFAKE		06 18 00.0	+12
AKH				LR	LR		
	comp=Z,1µm,18.0s						
AKH	Akhalkalaki	72.54	309	⇑iP	P	06 17 49.3	+0.8
ASHO	Ashiyiah	72.58	288	i P	P	06 17 48.9	+0.1
	SNR=24						
ASHO	Ashiyiah	72.58	288	P	P	06 17 49.0	+0.2
	SNR=10.0						
ASHO				P	P	06 17 49.0	+0.2
	SNR=10.0						
NAZ	Nazwa, Dubai	72.72	289	i P	P	06 17 49.6	0.0
	SNR=7.1						
NAZ	Nazwa, Dubai	72.72	289	P	P	06 17 50.1	+0.5
	SNR=5.8						
NAZ				P	P	06 17 50.1	+0.5
	SNR=5.8						
BSY	Bisya	72.73	286	P	P	06 17 49.3	-0.4
	SNR=9.0						
FAQ	Al Faqa, Dubai	72.91	288	i P	P	06 17 50.6	0.0
	SNR=15						
FAQ	Al Faqa, Dubai	72.91	288	P	P	06 17 50.4	-0.3
	SNR=6.5						
PLID	Pearl Lake	72.92	46	PFAKE		06 18 00.0	+9.3
PLID				LR	LR		
	comp=Z,500nm,18.0s						
SCO	Scoresbysund	72.96	354	PFAKE		06 18 00.0	+10
SCO				LR	LR		
	comp=Z,300nm,19.0s						
SCO	Scoresbysund	72.96	354	i P	P	06 17 51.5	+1.3
SCO				pmax	pmax		
	comp=Z,50nm,1.1s						
SCO	Scoresbysund	72.96	354	i P	P	06 17 51.5	+1.3
	comp=Z,50nm,1.1s						
MHTO	MHTO	73.08	284	P	P	06 17 53.0	+1.3
	SNR=10.0						
MHTO				P	P	06 17 53.0	+1.3
	SNR=10.0						
MSO	Missoula	73.11	44	PFAKE		06 18 00.0	+8.3
MSO				LR	LR		
	comp=Z,200nm,19.0s						
MSO	Missoula	73.11	44	P	P	06 17 52.0	+0.3
	baz=305,SNR=9.6						
ALNE	Al Ain	73.15	288	i P	P	06 17 52.5	+0.4
	SNR=16						
ASUD	Al Ashush, Dub	73.17	288	i P	P	06 17 52.6	+0.4
	SNR=25						
ASUD	Al Ashush, Dub	73.17	288	P	P	06 17 52.9	+0.7
	SNR=9.4						
ASUD				P	P	06 17 52.9	+0.7
	SNR=9.4						
AFDM	Forest Hills D	73.23	54	PFAKE		06 18 00.0	+7.6
AFDM				LR	LR		
	comp=Z,400nm,18.0s						
IZAR	Zarasai	73.25	328	eP	P	06 17 53.0	+0.8
IZAR				IAmb	IAmb	06 17 54.5	
	comp=Z,34nm,0.7s						
MICGM	Minsk	73.33	326	⇑eP	P	06 17 53.0	+0.3
MICGM				PM		06 17 54.0	
	comp=Z,0.4nm,1.0s						
MICGM				ePcP	PcP	06 18 08.0	-0.9
MICGM				ePP	PP	06 20 36.0	+0.4
MICGM				ePPP	PPP	06 22 13.0	
MICGM				eS	S	06 27 15.0	-5.2
MICGM				eLR	LR	06 51 45.0	
MICGM				LRM	MLR	06 53 22.0	
	comp=Z,2.6nm,16.0s						
MNK	Minsk	73.33	326	eP	P	06 17 53.0	+0.3
MNK				e		06 18 08.0	
MNK				e		06 20 36.0	
MNK				eS	S	06 27 15.0	-5.2
MNK				pmax	pmax		
	comp=Z,370nm,1.0s						
MNK				MLR	MLR		
	comp=Z,3µm,16.0s						
ISAL	Salakas	73.42	328	eP	P	06 17 54.2	+1.0
ISAL				IAmb	IAmb	06 17 54.8	
	comp=Z,56nm,0.5s						
IIGN	Ignalina	73.52	327	eP	P	06 17 54.6	+0.8
IIGN				IAmb	IAmb	06 17 55.3	
	comp=Z,36nm,0.6s						
NACGM	Naroch	73.57	327	eP	P	06 17 54.0	0.0
NACGM				PM		06 17 55.0	
	comp=Z,0.2nm,1.0s						
NACGM				eLQ	LQ	06 50 37.0	
NACGM				eLR	LR	06 51 42.0	
NACGM				LRM	MLR	06 54 18.0	
	comp=Z,2.7nm,14.0s						
TBLU	Trondheim	73.62	339	eP	P	06 17 53.9	-0.3
SLIT	Slitere, Latvi	73.64	331	eP	P	06 17 54.2	-0.2
SLIT				IAmb	IAmb	06 17 55.0	
	comp=Z,350nm,0.7s						
SOC	Sochi	73.66	312	c iP	P	06 17 54.2	-0.6
SOC				e*PP	pP	06 17 58.8	-1.9
SOC				e		06 20 37.2	
SOC				ePPP	PPP	06 22 19.4	
SOC				eS	S	06 27 24.8	+0.6
SOC				eSSS	SSS	06 35 20.8	
SOC				pmax	pmax		
	comp=Z,63nm,1.0s						
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
PNTR	Pine Nut	74.05	53	PFAKE		06 18 10.0	+13
PNTR				LR	LR		
	comp=Z,400nm,18.0s						
CMB	Columbia Colle	74.12	54	eP	P	06 17 57.8	+0.1
	comp=Z,30nm,1.1s						
CMB				LR	LR		
	comp=Z,400nm,18.0s						
CMB	Columbia Colle	74.12	54	eP	P	06 17 57.8	+0.1
CMB				pmax	pmax		
	comp=Z,30nm,1.1s						
CMB				MLR	MLR		
	comp=Z,400nm,18.0s						
FFC	Flin Flon	74.24	33	eP	P	06 17 58.4	+0.4
	comp=Z,324nm,0.9s						
FFC	Flin Flon	74.24	33	eP	P	06 17 58.4	+0.4
FFC				pmax	pmax		
	comp=Z,324nm,0.9s						
ANN	Anapa	74.31	314	eP	P	06 17 56.2	-2.3
ANN				e*PP	pP	06 18 02.7	-1.7
ANN				e		06 18 11.0	
ANN				e		06 20 41.7	
ANN				ePPP	PPP	06 22 27.4	
ANN				eS	S	06 27 28.3	-3.1
ANN				pmax	pmax		
	comp=Z,152nm,1.3s						
ANN				MLR	MLR		
	comp=E,1µm,18.0s						
ANN				MLR	MLR		
	comp=N,1µm,18.0s						
ANN				MLR	MLR		
	comp=Z,2µm,18.0s						
ILULI	Ilulissat	74.46	5	PFAKE		06 18 10.0	+11
ILULI				LR	LR		
	comp=Z,500nm,18.0s						
ILULI	Ilulissat	74.46	5	i P	P	06 17 59.9	+0.9
ILULI				pmax	pmax		
	comp=Z,69nm,1.0s						
ILULI	Ilulissat	74.46	5	i P	P	06 17 59.9	+0.9
	comp=Z,69nm,1.0s						
FCC	Fort Churchill	74.61	27	PFAKE		06 18 10.0	+10
FCC				LR	LR		
	comp=Z,500nm,20.0s						
EGMT	Eagleton	74.70	41	P	P	06 18 01.4	+0.5
	baz=308,SNR=15						
HLID	Hailey	74.73	47	P	P	06 18 02.3	+1.1
	baz=306,SNR=35						
DOMB	Dombas	74.91	339	eP	P	06 18 02.6	+0.7
MOL	Molde	74.92	340	eP	P	06 18 03.0	+1.2
RYN	Ryan	75.00	53	PFAKE		06 18 20.0	+17
RYN				LR	LR		
	comp=Z,400nm,20.0s						
NB2	NORSAR Subarra	75.05	337	P	P	06 18 02.9	+0.2
	comp=Z,68nm,0.8s,baz=40,slow=6.2						
NB2	NORSAR Subarra	75.05	337	P	P	06 18 02.9	+0.2
	baz=40,slow=6.2						
NOA	NORSAR Array B	75.05	337	P	P	06 18 02.7	+0.1
	comp=Z,53nm,0.9s,baz=39,slow=5.8,SNR=157						
NOA				LR	LR	06 54 31.7	
	comp=Z,1µm,18.5s,baz=35,slow=38						
AKASG	Malin Array Be	75.12	323	P	P	06 18 03.3	+0.2
	comp=Z,58nm,0.6s,baz=46,slow=6.1,SNR=203						
AKASG				LR	LR	06 54 05.2	
	comp=Z,2µm,18.5s,baz=25,slow=38						
AKBB	Malin Array Si	75.12	323	PFAKE		06 18 10.0	+6.9
AKBB				LR	LR		
	comp=Z,2µm,18.0s						
BOZ	Bozeman (W)	75.14	44	PFAKE		06 18 20.0	+16
BOZ				LR	LR		
	comp=Z,200nm,18.0s						
BOZ	Bozeman (W)	75.14	44	P	P	06 18 04.5	+1.0
	baz=307,SNR=50						
NC602	NORSAR Array S	75.19	337	eP	P	06 18 03.3	-0.1
MDPB	Devils Postpil	75.20	54	PFAKE		06 18 20.0	+16
MDPB				LR	LR		
	comp=Z,400nm,18.0s						
NVAR	Mina Array Bea	75.26	53	P	P	06 18 05.5	+1.0
	comp=Z,8.3nm,0.8s,baz=282,slow=6.0,SNR=36						
NVAR				LR	LR	06 47 44.4	
	comp=Z,237nm,18.6s,baz=288,slow=33						
NAO01	NORSAR Array S	75.31	337	eP	P	06 18 03.8	-0.3
	comp=Z,126nm,1.1s						
MLAC	Mammoth, Mammo	75.36	54	P	P	06 18 06.1	+1.0
	baz=305						
AKN	Aaknes	75.39	340	eP	P	06 18 05.8	+1.2
MZR	Muzera	75.47	288	P	P	06 18 06.0	+0.3
	SNR=7.4						
SUW	Suwalki	75.73	328	PFAKE		06 18 20.0	+13
SUW				LR	LR		
	comp=Z,2µm,18.0s						
OSL	Oslo	76.06	337	eP	P	06 18 09.0	+0.7
TIN	Tinemaha, Big	76.08	54	P	P	06 18 10.4	+1.3
	baz=305						
SIM	Simferopol'	76.11	316	ceP	P	06 18 09.3	+0.3
SIM				S	S	06 28 06.9	+15
SIM				pmax	pmax		
	comp=Z,81nm,0.8s						
SIM				MLR	MLR		
	comp=Z,490nm,15.0s						
VES	Vestal, Richgr	76.21	56	P	P	06 18 10.8	+1.1
	baz=305						
SKAR	Skarslia	76.22	338	eP	P	06 18 10.7	+1.3
PKM	Mcpherson Peak	76.26	57	P	P	06 18 12.0	+1.7
	baz=305						
HYA	Hoyanger	76.44	340	eP	P	06 18 11.8	+1.4
LKWY	Lake	76.45	44	eP	P	06 18 13.8	+2.5
	comp=Z,32nm,1.0s						
H17A	Grant Village	76.46	45	PFAKE		06 18 20.0	+8.7
H17A				LR	LR		
	comp=Z,600nm,20.0s						
H17A	Grant Village	76.46	45	P	P	06 18 14.0	+2.7
	baz=308,SNR=31						
CWC	Cottonwood Cre	76.53	55	P	P	06 18 12.5	+0.8
	baz=305						
SEVA	Sevastopol	76.61	316	⇑iP	P	06 18 12.0	+0.2
KONO	Kongsberg	76.64	337	eP	P	06 18 11.9	+0.2
	comp=Z,56nm,1.3s						
KONO				LR	LR		
	comp=Z,2µm,18.0s						
KONO	Kongsberg	76.64	337	eP	P	06 18 11.9	+0.2
KONO				pmax	pmax		
	comp=Z,56nm,1.3s						
KONO				MLR	MLR		
	comp=Z,2µm,18.0s						
KONO	Kongsberg	76.64	337	eP	P	06 18 12.3	+0.6
SFJD	Kangerlussuaq	76.68	5	eP	P	06 18 12.1	+0.4
	comp=Z,58nm,1.1s						
SFJD				LR	LR		
	comp=Z,400nm,18.0s						
SFJD	Kangerlussuaq	76.68	5	⇑iP	P	06 18 12.5	+0.8
SFJD				pmax	pmax		
	comp=Z,37nm,0.9s						
SFJD	Kangerlussuaq	76.68	5	⇑iP	P	06 18 12.5	+0.8
	comp=Z,37nm,0.9s						
GRAC	Grapevine Rang	76.68	54	P	P	06 18 13.5	+1.1
	baz=306						
ISA	Isabella, Lake	76.72	56	P	P	06 18 13.4	+0.8
	baz=305						
RLMT	Red Lodge	76.75	43	PFAKE		06 18 20.0	+7.2
RLMT				LR	LR		
	comp=Z,300nm,19.0s						
RLMT	Red Lodge	76.75	43	P	P	06 18 14.0	+1.2
	baz=308,SNR=22						
ARVC	Arvin	76.79	56	P	P	06 18 13.8	+0.8
	baz=305						
SCZ2	Santa Cruz Isl	76.89	58	P	P	06 18 14.5	+0.9
	baz=305						
SUE	Sulen	76.93	340	eP	P	06 18 14.1	+0.8
R11A	Troy Canyon, C	77.05	52	P	P	06 18 15.7	+1.0
	baz=306,SNR=27						
MPMC	Manual Prospec	77.14	55	P	P	06 18 15.5	+0.3
	baz=306,SNR=9.3						
OSI	Osito Audit: C	77.15	57	PFAKE		06 18 30.0	+15
OSI				LR	LR		
	comp=Z,600nm,19.0s						
ASK	Askoy	77.28	340	eP	P	06 18 16.3	+1.1
DGMT	Dagmar	77.31	39	P	P	06 18 16.0	+0.3
	baz=311,SNR=7.6						
FURC	Furnace Creek,	77.32	54	P	P	06 18 16.9	+1.0
	baz=306						
BER	Bergen	77.32	339	eP	P	06 18 16.5	+1.0
ODD1	Odda	77.34	339	eP	P	06 18 16.6	+1.0
LRMC	Laurel Mtn Rad	77.35	55	P	P	06 18 16.7	+0.4
	baz=306						
LAO	LASA Array	77.41	41	P	P	06 18 17.3	+0.9
	baz=310,SNR=13						
TPNV	Topopah Spring	77.44	53	PFAKE		06 18 30.0	+13
TPNV				LR	LR		
	comp=Z,300nm,18.0s						
TPNV	Topopah Spring	77.44	53	P	P	06 18 17.7	+0.9
	baz=306,SNR=36						
DIKM	Dikmen	77.45	313	⇓iP	P	06 18 17.6	+1.0
EDW2	Edwards Air Fo	77.49	56	P	P	06 18 18.0	+1.0
	baz=306						
DUG	Dugway, Tooele	77.68	49	P	P	06 18 19.3	+1.2
	baz=307,SNR=24						
KIS	Kishinev	77.70	320	⇓iP	P	06 18 17.0	-0.9
	comp=Z,190nm,1.6s						
KIS	Kishinev	77.70	320	ePcP	PcP	06 18 28.0	+0.1
KIS	Kishinev	77.70	320	ePP	PP	06 21 20.0	+7.4
KIS				eS	S	06 28 07.0	-1.8
KIS				eL	L	06 46 50.0	
KIS				LRM	MLR	06 55 28.0	
	comp=Z,4µm,16.0s						
KIS	Kishinev	77.70	320	⇓iP	P	06 18 17.0	-0.9
KIS				e		06 18 28.0	
KIS				e		06 21 20.0	
KIS				eS	S	06 28 07.0	-1.8
KIS				e		06 28 26.0	
KIS				e		06 28 52.0	
KIS				pmax	pmax		
	comp=Z,190nm,1.6s						
KIS				MLR	MLR		
	comp=Z,4µm,16.0s						
KIS				MLR	MLR		
	comp=N,2µm,15.0s						
MILM	Milestii Mici	77.76	320	⇓iP	P	06 18 18.3	+0.1
BLS5	Blasjo	77.79	338	eP	P	06 18 19.3	+1.2
MWC	Mount Wilson	77.83	57	PFAKE		06 18 30.0	+11
MWC				LR	LR		
	comp=Z,800nm,18.0s						
BZK	Bozkurt	78.01	313	⇑iP	P	06 18 20.6	+1.0
CTU	Camp Tracy	78.03	48	eP	P	06 18 20.8	+0.8
	comp=Z,27nm,1.0s						
GSC	Goldstone, Bar	78.04	55	P	P	06 18 20.7	+0.6
	baz=306						
BW06	Boulder Array	78.04	45	P	P	06 18 20.5	+0.4
	baz=309,SNR=20						
PDAR	Pinedale Array	78.04	45	P	P	06 18 20.6	+0.5
	comp=Z,5.6nm,0.6s,baz=270,slow=2.2,SNR=75						
CIS	Catalina Islan	78.06	57	P	P	06 18 20.6	+0.5
	baz=306						
BFSC	Mount Baldy Ra	78.09	56	P	P	06 18 20.7	+0.3
	baz=306						
HOMB	Homborsund	78.09	337	eP	P	06 18 20.3	+0.5
LVV	L'vov	78.21	324	eP	P	06 18 20.8	+0.2
LVV				e		06 21 17.9	
LVV				eS	S	06 28 11.5	-2.7
LVV				ePS	PnS	06 28 55.4	-0.5
LVV				eSS	SS	06 33 11.6	-3.7
LVV				MLR	MLR		
	comp=N,900nm,17.0s						
LVV				MLR	MLR		
	comp=E,1µm,17.0s						
LVV				MLR	MLR		
	comp=Z,2µm,17.0s						
BEL	Belsk	78.29	327	eP	P	06 18 22.0	+1.0
BEL	Belsk	78.29	327	eP	P	06 18 22.0	+1.0
BSD	Bornholm Skovb	78.30	332	⇑iP	P	06 18 21.1	+0.1
BSD				pmax	pmax		
	comp=Z,46nm,0.8s						
BSD				MLR	MLR		
	comp=Z,1µm,16.0s						
BSD	Bornholm Skovb	78.30	332	⇑iP	P	06 18 21.1	+0.1
	comp=Z,46nm,0.8s						
	comp=Z,1µm,16.0s						
SNART	Snartemo	78.44	337	eP	P	06 18 22.6	+0.9
BORG	Borgarnes	78.50	353	eP	P	06 18 25.3	+3.4
	comp=Z,112nm,0.8s						
BORG	Borgarnes	78.50	353	i P	P	06 18 25.1	+3.2
TUQ	Turquoise Moun	78.54	54	P	P	06 18 23.3	+0.4
	baz=306						
BBRC	Big Bear Solar	78.57	56	P	P	06 18 23.6	+0.3
	baz=306						
HEC	Hector,Ludlow	78.63	55	P	P	06 18 24.0	+0.7
	baz=306						
ILGA	Ilgaz	78.74	313	PFAKE		06 18 40.0	+16
ILGA				LR	LR		
	comp=Z,400nm,18.0s						
GKP	Gorka Klasztor	78.76	330	eP	P	06 18 24.1	+0.5
GKP				LMZ	LR	06 56 44.1	
	comp=Z,2µm,17.8s						
GKP	Gorka Klasztor	78.76	330	eP	P	06 18 24.1	+0.5
GKP				MLR	MLR		
	comp=Z,2µm,17.8s						
MURC	Murrieta	78.77	57	P	P	06 18 24.9	+0.8
	baz=306						
COP	Copenhagen	78.79	333	⇑iP	P	06 18 24.4	+0.7
COP				pmax	pmax		
	comp=Z,63nm,0.7s						
COP				MLR	MLR		
	comp=Z,780nm,17.0s						
COP	Copenhagen	78.79	333	⇑iP	P	06 18 24.4	+0.7
	comp=Z,63nm,0.7s						
	comp=Z,780nm,17.0s						
PRAR	RASCA	78.80	321	⇓iP	P	06 18 24.3	+0.4
BIR	Birlad	78.80	320	⇓iP	P	06 18 24.6	+0.6
TLCR		78.88	318	⇑iP	P	06 18 24.7	+0.3
KWP	Kalwaria Pacla	78.96	325	eP	P	06 18 25.0	+0.2
KWP	Kalwaria Pacla	78.96	325	PFAKE		06 18 40.0	+15
KWP				LR	LR		
	comp=Z,5µm,18.0s						
KWP	Kalwaria Pacla	78.96	325	eP	P	06 18 25.0	+0.2
GMRC	Granite Mounta	79.10	55	P	P	06 18 26.5	+0.5
	baz=307						
BURAR	Bucovina Array	79.13	322	⇑iP	P	06 18 26.5	+0.6
BIZ	Bicaz	79.14	321	⇓iP	P	06 18 26.9	+1.1
CFR	Carcaliu	79.25	319	⇑iP	P	06 18 26.6	+0.2
CPE	Camp Elliot	79.25	57	PFAKE		06 18 40.0	+13
CPE				LR	LR		
	comp=Z,500nm,18.0s						
PFO	Pinyon Flats O	79.26	56	eP	P	06 18 27.8	+0.9
	comp=Z,29nm,1.3s						
PFO				LR	LR		
	comp=Z,700nm,20.0s						
PFO	Pinyon Flats O	79.26	56	eP	P	06 18 27.8	+0.9
PFO				pmax	pmax		
	comp=Z,29nm,1.3s						
PFO				MLR	MLR		
	comp=Z,700nm,20.0s						
PFO	Pinyon Flats O	79.26	56	P	P	06 18 27.2	+0.3
	baz=306						
MUD	Monsted U'grnd	79.32	335	⇑iP	P	06 18 27.2	+0.6
MUD				pmax	pmax		
	comp=Z,45nm,1.0s						
MUD	Monsted U'grnd	79.32	335	⇑iP	P	06 18 27.2	+0.6
	comp=Z,45nm,1.0s						
RGN	Rugen	79.33	332	PFAKE		06 18 40.0	+13
RGN				LR	LR		
	comp=Z,1µm,18.0s						
BELC	Belle Mtn. Jos	79.34	56	P	P	06 18 27.7	+0.4
	baz=307						
ODBI	Odobesti	79.43	320	⇓iP	P	06 18 28.9	+1.5
VRI	Vrincioaia	79.54	320	⇓iP	P	06 18 28.6	+0.6
TIRR	Tirgusor	79.57	318	PFAKE		06 18 40.0	+12
TIRR				LR	LR		
	comp=Z,5µm,19.0s						
TIRR	Tirgusor	79.57	318	⇑iP	P	06 18 28.8	+0.6
PLOR	Plostina	79.59	320	⇑iP	P	06 18 28.7	+0.4
BR131	Keskin Array S	79.61	312	P	P	06 18 29.2	+0.5
	SNR=31						
BRTR	Keskin Array B	79.61	312	P	P	06 18 29.1	+0.5
	comp=Z,45nm,1.0s,baz=99,slow=3.9,SNR=109						
BRTR				PP	PP	06 21 29.6	+0.6
	comp=Z,2.7nm,0.9s,baz=69,slow=7.9,SNR=3.7						
BRTR				LR	LR	06 58 21.5	
	comp=Z,459nm,18.2s,baz=43,slow=39						
KOLS	Kolonicke sedl	79.65	324	eP	P	06 18 29.4	+0.8
KOLS				pmax	pmax		
	comp=Z,25nm,1.0s						
KOLS	Kolonicke sedl	79.65	324	eP	P	06 18 29.4	+0.8
BAR	Barrett	79.67	57	eP	P	06 18 30.0	+1.0
	comp=Z,26nm,1.1s						
HARR	Harsova	79.68	318	⇓iP	P	06 18 29.3	+0.5
TLB	Topalu	79.69	318	⇓iP	P	06 18 29.1	+0.3
MONP2	Monument Peak	79.71	57	P	P	06 18 29.9	+0.5
	baz=307						
MFTR	Murfatlar	79.75	318	⇑iP	P	06 18 30.1	+0.9
IRM	Iron Mountain	79.82	55	P	P	06 18 30.2	+0.4
	baz=307						
K22A	Casper	79.84	44	P	P	06 18 30.3	+0.3
	baz=310,SNR=10						
UZH	Uzhgorod	79.86	324	⇑iP	P	06 18 29.0	-0.7
UZH				i		06 18 36.3	
UZH				i		06 21 28.5	
UZH				eS	S	06 28 27.3	-4.4
UZH				MLR	MLR		
	comp=Z,160nm,16.0s						
OZUR		79.87	321	⇑iP	P	06 18 30.7	+0.8
OJC	Ojcow	79.88	326	eP	P	06 18 30.6	+0.8
OJC				LMZ	LR	06 57 31.8	
	comp=Z,2µm,16.2s						
OJC	Ojcow	79.88	326	eP	P	06 18 30.6	+0.8
OJC				MLR	MLR		
	comp=Z,2µm,16.2s						
BC3	Big Chuckawall	79.91	56	P	P	06 18 31.1	+0.6
	baz=307						
ARCR	ARCALIA	79.92	322	⇑iP	P	06 18 31.3	+1.2

MDND	**Maddock**	**80.00**	**37**	P	**P**	**06 18 31.0**	**+0.5**
	baz=314						
ANTO	**Ankara**	**80.03**	**312**	*e*P	**P**	**06 18 31.6**	**+0.7**
	comp=Z,116nm,1.3s						
ANTO	**Ankara**	**80.03**	**312**	⇑*i*P	**P**	**06 18 31.8**	**+0.9**
ANTO	**Ankara**	**80.03**	**312**	*e*P	**P**	**06 18 31.6**	**+0.7**
ANTO				pmax	pmax		
	comp=Z,116nm,1.3s						
ANTO	**Ankara**	**80.03**	**312**	P	**P**	**06 18 31.7**	**+0.8**
	SNR=10						
ANTO				P	**P**	**06 18 31.7**	**+0.8**
	SNR=10						
ULM	**Lac du Bonnet**	**80.03**	**33**	P	**P**	**06 18 30.5**	**-0.1**
	comp=Z,12nm,0.8s,baz=308,slow=6.0,SNR=12						
ULM				LR	LR	06 53 40.5	
	comp=Z,129nm,21.8s,baz=344,slow=36						
IKP	**In-Ko-Pah, Jac**	**80.07**	**57**	P	**P**	**06 18 31.3**	**0.0**
	baz=307						
TRPA	**Tarpa**	**80.09**	**324**	⇑*i*P	**P**	**06 18 31.8**	**+0.9**
TRPA	**Tarpa**	**80.09**	**324**	⇑*i*P	**P**	**06 18 31.0**	**+0.1**
SWSC	**Sam W. Stewart**	**80.10**	**56**	P	**P**	**06 18 31.5**	**+0.2**
	baz=307						
ICOR	**Ion Corvin**	**80.13**	**318**	⇓*i*P	**P**	**06 18 32.5**	**+1.3**
ISR	**Istrita**	**80.13**	**319**	⇑*i*P	**P**	**06 18 32.4**	**+1.1**
DOPR	**Dopca**	**80.16**	**321**	⇓*i*P	**P**	**06 18 33.0**	**+1.6**
MLR	**Muntele Rosu**	**80.20**	**320**	PFAKE		06 18 40.0	+8.2
MLR				LR	LR		
	comp=Z,3µm,19.0s						
MLR	**Muntele Rosu**	**80.20**	**320**	⇓*i*P	**P**	**06 18 32.0**	**+0.2**
PSN	**Preselentsi**	**80.21**	**318**	*i* P	**P**	**06 18 32.5**	**+0.8**
NIE	**Niedzica**	**80.23**	**326**	*e*P	**P**	**06 18 32.8**	**+1.1**
NIE				LMZ	LR	06 57 46.7	
	comp=Z,1µm,17.0s						
NIE	**Niedzica**	**80.23**	**326**	*e*P	**P**	**06 18 32.8**	**+1.1**
NIE				MLR	MLR		
	comp=Z,1µm,17.0s						
RSSD	**Black Hills**	**80.25**	**42**	*e*P	**P**	**06 18 32.6**	**+0.4**
	comp=Z,28nm,1.3s						
RSSD	**Black Hills**	**80.25**	**42**	*e*P	**P**	**06 18 32.6**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,28nm,1.3s						
RSSD	**Black Hills**	**80.25**	**42**	P	**P**	**06 18 32.1**	**-0.1**
	baz=312						
PDMCI	**Parker Dam,Lak**	**80.39**	**55**	P	**P**	**06 18 33.5**	**+0.6**
	baz=308						
HIZ	**Hauiti**	**80.40**	**154**	PFAKE		06 18 40.0	+7.5
HIZ				LR	LR		
	comp=Z,600nm,20.0s						
SECR		**80.44**	**320**	⇓*i*P	**P**	**06 18 34.2**	**+1.3**
O20A	**White River Ci**	**80.47**	**47**	P	**P**	**06 18 33.9**	**+0.5**
	baz=310,SNR=17						
Y12C	**Blythe**	**80.47**	**55**	PFAKE		06 18 50.0	+17
Y12C				LR	LR		
	comp=Z,500nm,18.0s						
Y12C	**Blythe**	**80.47**	**55**	P	**P**	**06 18 33.9**	**+0.6**
	baz=307						
MDUB	**Mudurnu**	**80.59**	**314**	PFAKE		06 18 50.0	+16
MDUB				LR	LR		
	comp=Z,2µm,19.0s						
GLA	**Glamis**	**80.69**	**56**	P	**P**	**06 18 34.9**	**+0.4**
	baz=307,SNR=6.3						
VOIR		**80.69**	**320**	⇑*i*P	**P**	**06 18 34.8**	**+0.4**
LANS	**Liptovska Anna**	**80.80**	**326**	*e*P	**P**	**06 18 36.4**	**+1.6**
LANS				pmax	pmax		
	comp=Z,23nm,0.7s						
LANS	**Liptovska Anna**	**80.80**	**326**	*e*P	**P**	**06 18 36.4**	**+1.6**
LANS				*e*PP	**PP**	**06 21 39.9**	**+1.5**
OKC	**Ostrava-Krasne**	**80.89**	**327**	*e*P	**P**	**06 18 36.1**	**+0.9**
OKC				MLR	MLR		
	comp=Z,1µm,17.8s						
OKC	**Ostrava-Krasne**	**80.89**	**327**	*e*P	**P**	**06 18 36.1**	**+0.9**
OKC				AMS	AMS	06 57 30.0	
	comp=Z,1µm,17.8s						
LTVH	**Ltavrtes, Hu**	**80.92**	**323**	*i* P	**P**	**06 18 37.0**	**+1.6**
DRGR		**80.94**	**323**	⇓*i*P	**P**	**06 18 36.1**	**+0.5**
KSP	**Ksiaz**	**80.95**	**328**	*e*P	**P**	**06 18 36.3**	**+0.8**
KSP				LMZ	LR	06 58 09.4	
	comp=Z,1µm,18.1s						
KSP	**Ksiaz**	**80.95**	**328**	*e*P	**P**	**06 18 36.3**	**+0.8**
KSP				MLR	MLR		
	comp=Z,1µm,18.0s						
ARR	**Arges**	**80.96**	**321**	⇑*i*P	**P**	**06 18 37.1**	**+1.3**
PV09	**Paradox Valley**	**80.97**	**49**	*e*P	**P**	**06 18 37.6**	**+1.4**
URZ	**Urewera**	**80.99**	**153**	P	**P**	**06 18 36.7**	**+1.1**
	comp=Z,2.9nm,0.8s,baz=305,slow=2.6,SNR=4.4						
OSTC	**Ostas**	**81.20**	**328**	AMS	AMS	07 02 40.0	
	comp=Z,1µm,14.7s						
MORC	**Moravsky Berou**	**81.20**	**327**	PFAKE		06 18 50.0	+13
MORC				LR	LR		
	comp=Z,1µm,18.0s						
MORC	**Moravsky Berou**	**81.20**	**327**	⇑*i*P	**P**	**06 18 37.6**	**+0.6**
MORC	**Moravsky Berou**	**81.20**	**327**	*e*P	**P**	**06 18 37.4**	**+0.4**
RAYN	**Ar Rayn**	**81.23**	**293**	*e*P	**P**	**06 18 37.7**	**+0.2**
	comp=Z,56nm,1.0s						
RAYN				LR	LR		
	comp=Z,1µm,20.0s						
RAYN	**Ar Rayn**	**81.23**	**293**	*i* P	**P**	**06 18 37.7**	**+0.2**
	SNR=35						
RAYN	**Ar Rayn**	**81.23**	**293**	*e*P	**P**	**06 18 37.7**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,56nm,1.0s						
RAYN				MLR	MLR		
	comp=Z,1µm,20.0s						
CHVC	**Chvalec**	**81.24**	**328**	*e*P	**P**	**06 18 37.9**	**+0.8**
CHVC				AMS	AMS	07 01 50.0	
	comp=Z,1µm,15.0s						
DPC	**Dobruska-Polom**	**81.31**	**328**	*e*P	**P**	**06 18 38.5**	**+1.0**
DPC				MLR	MLR		
	comp=Z,1µm,17.2s						
DPC	**Dobruska-Polom**	**81.31**	**328**	*e*P	**P**	**06 18 38.5**	**+1.0**
DPC				AMS	AMS	06 57 50.0	
	comp=Z,1µm,17.2s						
N23A	**Red Feather La**	**81.31**	**45**	P	**P**	**06 18 38.7**	**+0.7**
	baz=311,SNR=20						
UPC	**Upice**	**81.32**	**328**	*e*P	**P**	**06 18 38.4**	**+0.9**
UPC				MLR	MLR		
	comp=Z,1µm,16.1s						
UPC	**Upice**	**81.32**	**328**	*e*P	**P**	**06 18 38.4**	**+0.9**
UPC				AMS	AMS	07 02 00.0	
	comp=Z,1µm,16.1s						
LOT	**Lotru**	**81.34**	**321**	⇓*i*P	**P**	**06 18 38.5**	**+0.6**
PV13	**Radium Mtn., P**	**81.38**	**49**	PFAKE		06 18 50.0	+12
PV13				LR	LR		
	comp=Z,400nm,21.0s						
BIGH	**Upper Bighouse**	**81.39**	**343**	*e*P	**P**	**06 18 38.6**	**+1.0**
BIGH				IAmb	IAmb	06 18 40.9	
	comp=Z,32nm,0.7s						
WUAZ	**Wupatki**	**81.44**	**52**	*e*P	**P**	**06 18 38.8**	**+0.1**
	comp=Z,32nm,1.0s						
WUAZ	**Wupatki**	**81.44**	**52**	P	**P**	**06 18 39.8**	**+1.1**
	baz=309,SNR=11						
AGMN	**Agassiz Nation**	**81.45**	**35**	P	**P**	**06 18 37.7**	**-0.5**
	baz=316,SNR=9.1						
PSZ	**Piszkesteto**	**81.49**	**325**	PFAKE		06 18 50.0	+11
PSZ				LR	LR		
	comp=Z,2µm,18.0s						
PSZ	**Piszkesteto**	**81.49**	**325**	⇑*i*P	**P**	**06 18 39.2**	**+0.6**
PSZ	**Piszkesteto**	**81.49**	**325**	⇑*i*P	**P**	**06 18 39.0**	**+0.5**
PV01	**Paradox Valley**	**81.54**	**49**	PFAKE		06 18 50.0	+11
PV01				LR	LR		
	comp=Z,300nm,18.0s						
BKZ	**Black Stump Fm**	**81.56**	**153**	PFAKE		06 18 50.0	+11
BKZ				LR	LR		
	comp=Z,600nm,20.0s						
VYHS	**Vyhne**	**81.56**	**326**	*e*P	**P**	**06 18 39.8**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,27nm,1.3s						
VYHS	**Vyhne**	**81.56**	**326**	*e*P	**P**	**06 18 39.8**	**+0.9**
YLV	**Yalova**	**81.59**	**315**	⇓*i*P	**P**	**06 18 39.4**	**+0.2**
JAVC	**Velka Javorina**	**81.82**	**326**	*e*P	**P**	**06 18 41.7**	**+1.4**
SIRR	**Siria**	**81.82**	**323**	⇑*i*P	**P**	**06 18 40.9**	**+0.6**
GZR	**Gura Zlata**	**81.88**	**321**	⇑*i*P	**P**	**06 18 41.2**	**+0.5**
BRG	**Berggiesshubel**	**81.90**	**330**	⇑*i*P	**P**	**06 18 40.9**	**+0.3**
	comp=Z,33nm,0.8s						
BRG				*i*		06 18 52.4	
	comp=Z,20nm,0.8s						
BRG				*e*PP	**PP**	**06 21 45.5**	**-1.8**
	comp=Z,10nm,1.1s						
BRG				S	**S**	**06 28 52.0**	**-1.0**
	comp=N,1µm,14.6s						
	comp=E,742nm,15.8s						
	comp=Z,1µm,15.4s						
BRG	**Berggiesshubel**	**81.90**	**330**	⇑*i*P	**P**	**06 18 40.9**	**+0.3**
BRG				*i*		06 18 52.4	
BRG				*e*		06 21 45.5	
BRG				S	**S**	**06 28 52.0**	**-1.0**
BRG				pmax	pmax		
	comp=Z,33nm,0.8s						
BRG				pmax	pmax		
	comp=Z,20nm,0.8s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,1µm,14.6s						
BRG				MLR	MLR		
	comp=E,742nm,15.8s						
BRG				MLR	MLR		
	comp=Z,1µm,15.4s						
PVCC	**Panska Ves**	**81.91**	**329**	*e*P	**P**	**06 18 41.1**	**+0.5**
PVCC				MLR	MLR		
	comp=Z,2µm,15.4s						
PVCC	**Panska Ves**	**81.91**	**329**	*e*P	**P**	**06 18 41.1**	**+0.5**
PVCC				AMS	AMS	06 59 50.0	
	comp=Z,2µm,15.4s						
PHSR	**Pinarhisar**	**81.93**	**316**	⇓*i*P	**P**	**06 18 41.5**	**+0.6**
CLL	**Collm**	**81.95**	**330**	PFAKE		06 18 50.0	+9.2
CLL				LR	LR		
	comp=Z,900nm,19.0s						
CLL	**Collm**	**81.95**	**330**	⇑*i*P	**P**	**06 18 40.9**	**+0.1**
CLL				*e*		06 18 45.0	
CLL				*e*S	**S**	**06 28 53.0**	**-0.5**
CLL				pmax	pmax		
	comp=Z,56nm,0.8s						
CLL	**Collm**	**81.95**	**330**	⇑*i*P	**P**	**06 18 40.9**	**+0.1**
	comp=Z,56nm,0.8s						
CLL				*e*pP	**pP**	**06 18 45.0**	**-1.8**
CLL				*e*		06 18 56.0	
CLL				*e*PP	**PP**	**06 21 48.0**	**+0.3**
CLL				*e*PPPP		06 24 54.0	
CLL				*e*S	**S**	**06 28 53.0**	**-0.5**
CLL				*e*SS	**SS**	**06 34 14.0**	**+3.0**
CLL				*e*		06 34 54.0	
CLL				*e*(SSS)		06 37 24.0	
CLL				Lmax		07 00 00.0	
ELND	**Elena**	**81.97**	**318**	⇑*i*P	**P**	**06 18 41.6**	**+0.5**
VRAC	**Vranov**	**81.97**	**327**	⇓*i*P	**P**	**06 18 41.5**	**+0.5**
VRAC	**Vranov**	**81.97**	**327**	*e*P	**P**	**06 18 41.4**	**+0.5**
MVCO	**Mesa Verde**	**82.18**	**49**	P	**P**	**06 18 43.5**	**+0.9**
	baz=310,SNR=13						
SRE	**Strehaia**	**82.18**	**321**	⇑*i*P	**P**	**06 18 43.3**	**+1.2**
BUD	**Budapest**	**82.21**	**325**	⇑*i*P	**P**	**06 18 43.0**	**+0.8**
AMBH	**Ambrzfalva**	**82.22**	**323**	⇑*e*P	**P**	**06 18 43.0**	**+0.8**
KRUC	**Moravsky**	**82.23**	**327**	*e*P	**P**	**06 18 43.0**	**+0.6**
GOPC	**GO Pecny, Ondr**	**82.28**	**329**	*e*P	**P**	**06 18 43.2**	**+0.6**
GOPC				MLR	MLR		
	comp=Z,1µm,14.9s						
GOPC	**GO Pecny, Ondr**	**82.28**	**329**	*e*P	**P**	**06 18 43.2**	**+0.6**
GOPC				AMS	AMS	06 59 40.0	
	comp=Z,1µm,14.9s						
PLVB	**Pleven**	**82.32**	**319**	⇓*i*P	**P**	**06 18 43.6**	**+0.7**
PRU	**Pruhonice**	**82.33**	**329**	*e*P	**P**	**06 18 43.5**	**+0.7**
PRU				MLR	MLR		
	comp=Z,1µm,14.8s						
PRU	**Pruhonice**	**82.33**	**329**	*e*P	**P**	**06 18 43.5**	**+0.7**
PRU				AMS	AMS	06 59 50.0	
	comp=Z,1µm,14.8s						
MODS	**Modra-Piesok**	**82.36**	**326**	*e*P	**P**	**06 18 43.0**	**0.0**
MODS				pmax	pmax		
	comp=Z,33nm,1.0s						
MODS	**Modra-Piesok**	**82.36**	**326**	*e*P	**P**	**06 18 43.0**	**0.0**
MODS				*e*PP	**PP**	**06 21 52.4**	**+1.2**
HERR	**Herculane**	**82.42**	**321**	⇓*i*P	**P**	**06 18 43.9**	**+0.5**
DRUM	**Mains of Drumt**	**82.43**	**341**	⇑*e*P	**P**	**06 18 43.5**	**+0.4**
DRUM				IAmb	IAmb	06 18 45.1	
	comp=Z,20nm,0.7s						
DRUM				IAMs_20	IAMs_20	06 59 10.1	
	comp=Z,690nm,13.7s						
TREC	**Trest**	**82.45**	**328**	*e*P	**P**	**06 18 44.1**	**+0.6**
TREC				*e*		06 18 55.8	
TREC				MLR	MLR		
	comp=Z,1µm,15.0s						
TREC	**Trest**	**82.45**	**328**	*e*P	**P**	**06 18 44.1**	**+0.6**
TREC				*e*x	x	06 18 55.8	
TREC				AMS	AMS	06 59 50.0	
	comp=Z,1µm,15.0s						
ZST	**Bratislava**	**82.57**	**326**	*e*P	**P**	**06 18 44.4**	**+0.3**
ZST	**Bratislava**	**82.57**	**326**	*e*P	**P**	**06 18 44.4**	**+0.3**
KAC	**Achnashellach**	**82.61**	**343**	⇑*e*P	**P**	**06 18 44.7**	**+0.5**
CSKK	**Cskako**	**82.65**	**325**	⇓*e*P	**P**	**06 18 45.1**	**+0.5**
THZ	**Tophouse**	**82.67**	**157**	*e*P	**P**	**06 18 44.6**	**+0.1**
	comp=Z,49nm,1.2s						
ISP	**Isparta**	**82.70**	**312**	PFAKE		06 19 00.0	+15
ISP				LR	LR		
	comp=Z,400nm,19.0s						
ISP	**Isparta**	**82.70**	**312**	⇑*i*P	**P**	**06 18 44.9**	**-0.2**
SUSD	**Miller**	**82.70**	**39**	P	**P**	**06 18 45.1**	**+0.2**
	baz=315						
214A	**Organ Pipe Nat**	**82.71**	**56**	P	**P**	**06 18 45.9**	**+0.7**
	baz=308						
W18A	**Petrified Fore**	**82.73**	**52**	P	**P**	**06 18 45.2**	**-0.3**
	baz=310						
DIM	**Dimitrovgrad**	**82.75**	**318**	*i* P	**P**	**06 18 45.9**	**+0.8**
CSS	**Mathiatis**	**82.79**	**308**	PFAKE		06 19 00.0	+14
CSS				LR	LR		
	comp=Z,800nm,20.0s						
CSS	**Mathiatis**	**82.79**	**308**	P	**P**	**06 18 45.3**	**-0.3**
	comp=Z,10nm,1.3s						
KPL	**Plockton**	**82.84**	**343**	*e*P	**P**	**06 18 46.4**	**+1.1**
KPL				IAmb	IAmb	06 18 47.3	
	comp=Z,81nm,0.8s						
S22A	**4UR Ranch, Cre**	**82.84**	**48**	P	**P**	**06 18 47.4**	**+1.2**
	baz=311,SNR=24						
MDVR	**Moldovita**	**82.85**	**322**	⇓*i*P	**P**	**06 18 45.8**	**+0.1**
EDU	**Dundee**	**82.89**	**341**	*e*P	**P**	**06 18 46.3**	**+0.7**
NKC	**Novy Kostel**	**83.01**	**330**	*e*P	**P**	**06 18 46.8**	**+0.4**
NKC				MLR	MLR		
	comp=Z,1µm,15.7s						
NKC	**Novy Kostel**	**83.01**	**330**	*e*P	**P**	**06 18 46.8**	**+0.4**
NKC				AMS	AMS	06 59 20.0	
	comp=Z,1µm,15.7s						
Q24A	**Divide**	**83.04**	**46**	P	**P**	**06 18 47.5**	**+0.3**
	baz=312						
BALB	**Balikesir**	**83.06**	**315**	PFAKE		06 19 00.0	+13
BALB				LR	LR		
	comp=Z,1µm,19.0s						
KDZ	**Kurdzhali**	**83.08**	**317**	*i* P	**P**	**06 18 47.2**	**+0.3**
PGB	**Panagyurishte**	**83.14**	**319**	*i* P	**P**	**06 18 47.7**	**+0.4**
PLD	**Plovdiv**	**83.16**	**318**	*i* P	**P**	**06 18 47.7**	**+0.4**
TIH	**Tihany**	**83.16**	**325**	*e*P	**P**	**06 18 45.1**	**-2.1**
SOP	**Sopron**	**83.19**	**326**	⇑*i*P	**P**	**06 18 48.1**	**+0.7**
ALN	**Alexandroupoli**	**83.25**	**317**	PFAKE		06 19 00.0	+12
ALN				LR	LR		
	comp=Z,500nm,18.0s						
ALN	**Alexandroupoli**	**83.25**	**317**	P	**P**	**06 18 48.2**	**+0.4**
MORH	**Mrgy, Hungar**	**83.31**	**324**	*i* P	**P**	**06 18 47.9**	**-0.1**
MORH	**Mrgy, Hungar**	**83.31**	**324**	⇑*i*P	**P**	**06 18 48.1**	**+0.1**
CONA	**Conrad Observa**	**83.32**	**327**	*i* PcP	**P**	**06 18 49.2**	**+1.1**
	comp=Z,37nm,1.1s,SNR=26						
ESY	**Stoneypath**	**83.34**	**341**	*e*P	**P**	**06 18 48.5**	**+0.5**
KULA	**Kula-Manisa**	**83.35**	**313**	P	**P**	**06 18 48.8**	**+0.3**
RDO	**Rodhopi**	**83.36**	**317**	P	**P**	**06 18 49.1**	**+0.8**
KHC	**Kasperske Hory**	**83.39**	**329**	PFAKE		06 19 00.0	+12
KHC				LR	LR		
	comp=Z,600nm,18.0s						
KHC	**Kasperske Hory**	**83.39**	**329**	*e*P	**P**	**06 18 48.9**	**+0.5**
KHC				*e*		06 19 04.0	
KHC				MLR	MLR		
	comp=Z,2µm,16.4s						
KHC	**Kasperske Hory**	**83.39**	**329**	*e*P	**P**	**06 18 48.9**	**+0.5**
KHC				*e*x	x	06 19 04.0	
KHC				AMS	AMS	07 00 30.0	
	comp=Z,2µm,16.4s						
MANT	**Manisa**	**83.43**	**313**	PFAKE		06 19 00.0	+11
MANT				LR	LR		
	comp=Z,2µm,19.0s						
RZN	**Rozhen**	**83.44**	**318**	*i* P	**P**	**06 18 50.0**	**+1.0**
OGNE	**Ogallala**	**83.48**	**43**	P	**P**	**06 18 49.2**	**+0.1**
	baz=313						
FRGS	**Fruska Gora**	**83.52**	**323**	*i* P	**P**	**06 18 49.5**	**+0.4**
EAB	**Aberfoyle**	**83.55**	**342**	⇑*e*P	**P**	**06 18 49.8**	**+0.8**
GEC2	**GERESS Array S**	**83.56**	**328**	PFAKE		06 19 00.0	+11
GEC2				LR	LR		
	comp=Z,1µm,20.0s						
GERES	**GERESS Array B**	**83.56**	**328**	P	**P**	**06 18 49.5**	**+0.2**
	comp=Z,15nm,0.7s,baz=34,slow=5.2,SNR=132						
GERES				PP	**PP**	**06 21 57.6**	**-3.4**
	comp=Z,1.6nm,0.8s,baz=32,slow=9.3,SNR=2.8						
GERES				LR	LR	07 00 47.7	
	comp=Z,992nm,18.9s,baz=22,slow=39						
EBL	**Broad Law**	**83.58**	**341**	⇑*e*P	**P**	**06 18 49.8**	**+0.6**
VTS	**Vitosha**	**83.59**	**319**	PFAKE		06 19 00.0	+10
VTS				LR	LR		
	comp=Z,1µm,19.0s						
VTS	**Vitosha**	**83.59**	**319**	⇑*i*P	**P**	**06 18 50.5**	**+0.8**
VTS	**Vitosha**	**83.59**	**319**	*i* P	**P**	**06 18 50.0**	**+0.3**
PMOR	**Pomariorio Ree**	**83.59**	**114**	*e*T	T	07 50 39.0	
	comp=Z,7.6nm,0.2s						
EAU	**Auchinoon**	**83.62**	**341**	*e*P	**P**	**06 18 50.3**	**+0.9**
SDCO	**Great Sand Dun**	**83.64**	**47**	PFAKE		06 19 00.0	+10
SDCO				LR	LR		
	comp=Z,300nm,19.0s						
SDCO	**Great Sand Dun**	**83.64**	**47**	P	**P**	**06 18 51.2**	**+1.0**
	baz=312,SNR=19						
EYMN	**Ely**	**83.68**	**33**	P	**P**	**06 18 49.8**	**-0.1**
	baz=320,SNR=12						
WTSB	**Winterswijk**	**83.77**	**334**	*e*P	**P**	**06 18 49.3**	**-0.9**
	comp=Z,28nm,0.9s						
EZN	**Ezine**	**83.82**	**316**	P	**P**	**06 18 51.1**	**+0.4**
EZN	**Ezine**	**83.82**	**316**	⇑*i*P	**P**	**06 18 51.1**	**+0.4**
OXZ	**Oxford**	**83.83**	**158**	PFAKE		06 19 00.0	+10
OXZ				LR	LR		
	comp=Z,400nm,20.0s						
SMTH	**Samothraki Isl**	**83.83**	**317**	P	**P**	**06 18 50.5**	**-0.3**
TUC	**Tucson**	**83.83**	**54**	*e*P	**P**	**06 18 51.9**	**+0.8**
	comp=Z,21nm,1.2s						
TUC				LR	LR		
	comp=Z,600nm,18.0s						
TUC	**Tucson**	**83.83**	**54**	P	**P**	**06 18 51.8**	**+0.8**
	baz=309						
PGBU	**Glenifferbraes**	**83.92**	**342**	⇑*e*P	**P**	**06 18 51.9**	**+1.0**
PGBU				IAmb	IAmb	06 18 54.1	
	comp=Z,74nm,0.9s						
GRA1	**Grafenberg Arr**	**83.92**	**330**	*e*P	**P**	**06 18 51.8**	**+0.7**
	comp=Z,67nm,0.9s						
GRA1				LR	LR		
	comp=Z,800nm,18.0s						
GRF	**Grafenberg Arr**	**83.92**	**330**	*e*P	**P**	**06 18 51.8**	**+0.7**
GRF				pmax	pmax		
	comp=Z,67nm,0.9s						
GRF				MLR	MLR		
	comp=Z,800nm,18.0s						
GRFO	**Grafenberg**	**83.92**	**330**	*e*P	**P**	**06 18 51.5**	**+0.4**
	comp=Z,79nm,1.0s						
GRFO	**Grafenberg**	**83.92**	**330**	*e*P	**P**	**06 18 51.5**	**+0.4**
GRFO				pmax	pmax		
	comp=Z,79nm,1.0s						
ARSA	**Arzberg**	**83.98**	**326**	*i* PcP	**P**	**06 18 52.2**	**+0.7**
	comp=Z,16nm,0.8s,SNR=10.0						
BEHE	**Becsehely**	**84.00**	**325**	*e*P	**P**	**06 18 51.8**	**+0.3**
BEHE	**Becsehely**	**84.00**	**325**	⇑*e*P	**P**	**06 18 51.1**	**-0.4**
PPT	**Papeete**	**84.01**	**117**	LR	LR	06 50 26.1	
	comp=Z,518nm,19.8s,baz=306,slow=32						
KAVA	**Kavala**	**84.03**	**317**	P	**P**	**06 18 52.4**	**+0.6**
PPT2	**Papeete2**	**84.03**	**117**	*e*LR	LR	06 45 09.6	
	comp=Z,853nm,21.5s,baz=307						
ESK	**Eskdalemuir**	**84.03**	**341**	*e*P	**P**	**06 18 52.0**	**+0.5**
	comp=Z,15nm,0.7s						
ESK				LR	LR		
	comp=Z,800nm,20.0s						
ESK	**Eskdalemuir**	**84.03**	**341**	⇑*e*P	**P**	**06 18 52.0**	**+0.5**
ESK				IAmb	IAmb	06 18 52.5	
	comp=Z,16nm,0.7s						
ESK				IAMs_20	IAMs_20	06 59 48.2	
	comp=Z,775nm,18.8s						
ESK	**Eskdalemuir**	**84.03**	**341**	*e*P	**P**	**06 18 52.0**	**+0.5**
ESK				pmax	pmax		
	comp=Z,15nm,0.7s						
ESK				MLR	MLR		
	comp=Z,800nm,20.0s						
MMB	**Musomiste**	**84.04**	**318**	*i* P	**P**	**06 18 52.4**	**+0.5**
MOA	**Molln**	**84.08**	**328**	*i* PcP	**P**	**06 18 52.5**	**+0.5**
	comp=Z,27nm,1.2s,SNR=17						
NVR	**Nevrokopi**	**84.14**	**318**	P	**P**	**06 18 52.9**	**+0.5**
THAS	**Thassos island**	**84.18**	**317**	P	**P**	**06 18 52.6**	**+0.1**
KKB	**Krupnik**	**84.19**	**319**	*i* P	**P**	**06 18 53.4**	**+0.8**
DIVS	**Divibare**	**84.20**	**322**	*i* P	**P**	**06 18 52.9**	**+0.2**
BHH	**Howats Hill**	**84.23**	**341**	⇑*e*P	**P**	**06 18 53.3**	**+0.8**
PRK	**Paraskevi**	**84.24**	**315**	P	**P**	**06 18 54.2**	**+1.3**
FETY	**Fethiye**	**84.34**	**312**	P	**P**	**06 18 53.3**	**-0.2**
KSL	**Kastellorizon**	**84.36**	**311**	P	**P**	**06 18 53.2**	**-0.3**
ECSD	**EROS Data Cent**	**84.39**	**38**	P	**P**	**06 18 53.4**	**-0.2**
	baz=316,SNR=17						
SRS	**Serrai**	**84.44**	**318**	P	**P**	**06 18 53.8**	**-0.1**
KSCO	**Kaye Shedlock’**	**84.47**	**45**	P	**P**	**06 18 54.4**	**+0.2**
	baz=313						
YER	**Yerkesik**	**84.49**	**313**	P	**P**	**06 18 55.2**	**+0.9**
BBO1	**Bothel**	**84.55**	**340**	⇑*e*P	**P**	**06 18 55.2**	**+1.0**
PERS	**Pernice**	**84.63**	**326**	*i* P	**P**	**06 18 54.9**	**+0.1**
PERS				*i*		06 19 09.9	
SOKA	**Soboth**	**84.64**	**326**	*i* PcP	**P**	**06 18 55.2**	**+0.3**
	comp=Z,30nm,0.8s,SNR=40						
KESW	**Keswick, Cumbr**	**84.65**	**340**	⇑*e*P	**P**	**06 18 55.4**	**+0.7**
KESW				IAmb	IAmb	06 18 56.5	
	comp=Z,152nm,1.5s						
BBLS	**Lazići**	**84.66**	**322**	*i* P	**P**	**06 18 55.7**	**+0.7**
E38A	**The Farm, Brul**	**84.67**	**34**	P	**P**	**06 18 54.7**	**-0.2**
	baz=320,SNR=13						
T25A	**Trinidad**	**84.69**	**47**	P	**P**	**06 18 56.4**	**+0.9**
	baz=312,SNR=15						
C40A	**Isle Royale Na**	**84.71**	**32**	P	**P**	**06 18 54.9**	**-0.2**
	baz=321						
HAPS	**Han Pijesak,Bl**	**84.72**	**323**	*e*P	**P**	**06 18 55.2**	**-0.2**
HRFI	**Mount Harif**	**84.78**	**303**	P	**P**	**06 18 56.0**	**+0.2**
	comp=Z,119nm,1.2s						
OUR	**Ouranopolis**	**84.78**	**317**	P	**P**	**06 18 55.9**	**+0.3**
KNT	**Kendrikon**	**84.79**	**318**	P	**P**	**06 18 55.9**	**+0.3**
HPK	**Haverah Park**	**84.79**	**339**	⇑*e*P	**P**	**06 18 56.1**	**+0.8**
HPK				IAmb	IAmb	06 18 57.1	
	comp=Z,46nm,0.9s						
HPK				IAMs_20	IAMs_20	07 01 11.9	
	comp=Z,1µm,19.9s						
GAL1	**Galloway**	**84.83**	**341**	*e*P	**P**	**06 18 56.1**	**+0.6**
GAL1				IAmb	IAmb	06 18 56.6	
	comp=Z,29nm,0.7s						
GAL1				IAMs_20	IAMs_20	07 00 33.9	
	comp=Z,718nm,19.5s						
VAY	**Valandovo**	**84.85**	**319**	*i* P	**P**	**06 18 56.4**	**+0.5**
RUDO	**Rudo**	**84.86**	**322**	*e*P	**P**	**06 18 55.8**	**-0.1**
ANMO	**Albuquerque**	**84.90**	**50**	*e*P	**P**	**06 18 57.5**	**+0.9**
	comp=Z,22nm,1.0s						
ANMO	**Albuquerque**	**84.90**	**50**	*e*P	**P**	**06 18 57.5**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,22nm,1.0s						
ANMO	**Albuquerque**	**84.90**	**50**	P	**P**	**06 18 57.2**	**+0.7**
	baz=311						
OBKA	**Obir**	**84.98**	**326**	*i* P	**P**	**06 18 56.6**	**-0.1**
	comp=Z,9.8nm,0.8s,SNR=6.2						
CLGH	**Cloghs, Cushen**	**84.99**	**342**	*e*P	**P**	**06 18 57.0**	**+0.7**
CLGH				IAmb	IAmb	06 18 58.1	
	comp=Z,93nm,0.8s						
SKO	**Skopje**	**84.99**	**320**	*i* P	**P**	**06 18 57.9**	**+1.3**
PLG	**Polygyros**	**85.04**	**318**	P	**P**	**06 18 56.9**	**-0.1**
PLE	**Pljevlja**	**85.06**	**322**	⇑*i*P	**P**	**06 18 58.0**	**+0.9**
EIL	**Elat**	**85.06**	**303**	P	**P**	**06 18 57.7**	**+0.5**
	comp=Z,53nm,1.4s						
HGN	**Heimansgroeve**	**85.07**	**334**	*e*P	**P**	**06 18 56.5**	**-0.3**
	comp=Z,50nm,1.0s						
HGN	**Heimansgroeve**	**85.07**	**334**	*e*S	S	06 29 09.7	-15
KBA	**Koelnbreinsper**	**85.07**	**327**	*i* PcP	**P**	**06 18 57.2**	**0.0**
	comp=Z,16nm,0.8s,SNR=13						
CRES	**Cresnjev**	**85.09**	**326**	*i* P	**P**	**06 18 56.7**	**-0.4**
BLY	**Banja Luka**	**85.09**	**324**	PFAKE		06 19 10.0	+13
BLY				LR	LR		
	comp=Z,1µm,18.0s						
BLY	**Banja Luka**	**85.09**	**324**	*i* P	**P**	**06 18 57.2**	**+0.1**
THE	**Thessaloniki**	**85.12**	**318**	P	**P**	**06 18 56.7**	**-0.6**
IVA	**Berane**	**85.14**	**321**	⇑*i*P	**P**	**06 18 58.4**	**+0.9**
SPMN	**Marine on St.**	**85.14**	**35**	P	**P**	**06 18 56.8**	**-0.5**
	baz=319,SNR=7.3						
MEM	**Membach**	**85.17**	**334**	⇑P	**P**	**06 18 57.5**	**+0.1**
	comp=Z,30nm,1.1s						
WACR	**West Acre**	**85.19**	**337**	⇑*e*P	**P**	**06 18 57.4**	**+0.1**
WACR				IAmb	IAmb	06 18 59.0	
	comp=Z,107nm,0.9s						
WACR				IAMs_20	IAMs_20	07 00 49.3	
	comp=Z,1µm,19.6s						
BGNE	**Belgrade**	**85.26**	**41**	P	**P**	**06 18 57.7**	**-0.4**
	baz=316						
MYKA	**Terra Mystica**	**85.29**	**327**	*i* P	**P**	**06 18 57.8**	**-0.4**
	comp=Z,13nm,0.6s,SNR=8.7						
PVY	**Plav**	**85.30**	**321**	⇑*i*P	**P**	**06 18 58.2**	**-0.2**
LBWR	**Ladybower, Pea**	**85.31**	**339**	*e*P	**P**	**06 18 58.5**	**+0.5**
LBWR				IAmb	IAmb	06 19 00.1	
	comp=Z,126nm,0.8s						

LBWR				IAMs_20	IAMs_20	07 00 30.8	
	comp=Z,649nm,17.0s						
IOMK	**Kirk Michael**	**85.33**	**341**	⇑*e*P	**P**	**06 18 58.2**	**+0.1**
IOMK				IAmb	IAmb	06 18 59.1	
	comp=Z,146nm,0.9s						
IOMK				IAMs_20	IAMs_20	07 00 37.9	
	comp=Z,1µm,18.4s						
IDGL	**Inch Island, C**	**85.33**	**343**	*e*P	**P**	**06 18 58.7**	**+0.6**
KOME	**Kolasin**	**85.34**	**321**	⇑*i*P	**P**	**06 18 58.9**	**+0.4**
LJU	**Ljubljana**	**85.34**	**326**	*i* P	**P**	**06 18 58.0**	**-0.3**
VISS	**Visnje**	**85.39**	**326**	*i* P	**P**	**06 18 58.1**	**-0.5**
VISS				*i*		06 19 13.1	
UPM	**Unac-Piva**	**85.39**	**322**	⇑*i*P	**P**	**06 18 58.5**	**-0.4**
UPM	**Unac-Piva**	**85.39**	**322**	*e*P	**P**	**06 18 58.8**	**-0.1**
319A	**Douglas**	**85.41**	**54**	PFAKE		06 19 10.0	+11
319A				LR	LR		
	comp=Z,600nm,21.0s						
BOJS	**Bojanci**	**85.43**	**325**	*i* P	**P**	**06 18 58.6**	**-0.2**
BOJS				*i*		06 19 12.7	
WIM	**Isle of Man**	**85.46**	**341**	⇑*e*P	**P**	**06 18 59.6**	**+0.8**
STU	**Stuttgart**	**85.46**	**331**	PFAKE		06 19 10.0	+11
STU				LR	LR		
	comp=Z,500nm,18.0s						
BCLA	**Clavier**	**85.58**	**334**	⇑P	**P**	**06 18 59.3**	**-0.1**
	comp=Z,31nm,1.3s						
UCC	**Uccle**	**85.60**	**334**	PFAKE		06 19 10.0	+11
UCC				LR	LR		
	comp=Z,1µm,18.0s						
UCC	**Uccle**	**85.60**	**334**	⇑P	**P**	**06 18 59.3**	**-0.2**
CEY	**Cerknica**	**85.62**	**326**	*i* P	**P**	**06 18 59.3**	**-0.5**
D41A	**Chassel**	**85.63**	**32**	P	**P**	**06 18 59.9**	**+0.2**
	baz=322						
NKY	**Niksic**	**85.63**	**322**	⇑*i*P	**P**	**06 18 59.8**	**-0.2**
121A	**Cookes Peak, D**	**85.64**	**53**	P	**P**	**06 19 01.2**	**+0.9**
	baz=311,SNR=6.1						
WTTA	**Wattenberg**	**85.66**	**329**	*i* PcP	**P**	**06 19 00.3**	**+0.2**
	comp=Z,7.7nm,0.8s						
JAVS	**Javornik**	**85.67**	**326**	*i* P	**P**	**06 18 59.2**	**-0.9**
JAVS				*i*		06 19 13.8	
NKME	**Niksic**	**85.69**	**322**	⇑*i*P	**P**	**06 18 59.9**	**-0.3**
ABTA	**Abfaltersbach**	**85.69**	**328**	*i* P	**P**	**06 18 59.5**	**-0.7**
	comp=Z,14nm,1.0s,SNR=7.5						
TAOE	**Nuku Hiva Isla**	**85.70**	**104**	*e*S	**S**	**06 29 36.2**	**+3.8**
	comp=Z,167nm,25.7s						
GMM	**Mts of Mourne**	**85.71**	**342**	*e*P	**P**	**06 19 00.7**	**+0.7**
PHP	**Peshkopia**	**85.71**	**320**	P	**P**	**06 19 00.2**	**-0.1**
LIT	**Litokhoron**	**85.75**	**318**	PFAKE		06 19 10.0	+9.5
LIT				LR	LR		
	comp=Z,2µm,18.0s						
LIT	**Litokhoron**	**85.75**	**318**	P	**P**	**06 19 00.0**	**-0.5**
CWF	**Charnwood Fore**	**85.76**	**339**	*e*P	**P**	**06 19 00.4**	**+0.1**
CWF				IAmb	IAmb	06 19 01.5	
	comp=Z,54nm,0.9s						
PDG	**Podgorica**	**85.78**	**321**	⇑*i*P	**P**	**06 19 00.8**	**+0.2**
PDG	**Podgorica**	**85.78**	**321**	*i* P	**P**	**06 19 00.7**	**+0.2**
TTG	**Podgorica**	**85.78**	**321**	⇑*i*P	**P**	**06 19 00.9**	**+0.4**
TTG	**Podgorica**	**85.78**	**321**	PFAKE		06 19 10.0	+9.5
TTG				LR	LR		
	comp=Z,2µm,18.0s						
HSIG		**85.79**	**57**	PFAKE		06 19 10.0	+9.1
HSIG				LR	LR		
	comp=Z,500nm,18.0s						
BRY	**Bratogost**	**85.80**	**322**	⇑*i*P	**P**	**06 19 00.0**	**-0.8**
BRY	**Bratogost**	**85.80**	**322**	*i* P	**P**	**06 19 00.3**	**-0.5**
MOTA	**Moosalm**	**85.82**	**329**	*i* PcP	**P**	**06 19 01.2**	**+0.3**
	comp=Z,14nm,0.9s,SNR=10						
G39A	**Holcombe**	**85.84**	**34**	P	**P**	**06 19 00.3**	**-0.5**
	baz=320,SNR=7.1						
RETA	**Reutte**	**85.85**	**329**	*i* PcP	**P**	**06 19 01.3**	**+0.4**
	comp=Z,40nm,1.0s,SNR=18						
CEME	**Cevo**	**85.87**	**322**	⇑*i*P	**P**	**06 19 00.9**	**-0.2**
SNF	**Seneffe**	**85.87**	**334**	⇑P	**P**	**06 19 00.9**	**+0.1**
	comp=Z,44nm,0.7s						
SQTA	**Sankt Quirin**	**85.88**	**329**	*i* PcP	**P**	**06 19 01.3**	**+0.2**
	comp=Z,7.7nm,0.8s,SNR=5.1						
XOR	**Xorichti**	**85.89**	**317**	P	**P**	**06 19 00.1**	**-1.1**
WLF	**Walferdange**	**85.90**	**333**	PFAKE		06 19 10.0	+9.0
WLF				LR	LR		
	comp=Z,5µm,18.0s						
WLF	**Walferdange**	**85.90**	**333**	⇓P	**P**	**06 19 01.4**	**+0.4**
	comp=Z,33nm,1.5s						
RIY	**Rijeka**	**85.91**	**326**	*e*P	**P**	**06 19 00.4**	**-0.7**
OHR	**Ohrid**	**85.94**	**319**	*i* P	**P**	**06 19 01.5**	**+0.1**
TRI	**Trieste**	**85.94**	**326**	PFAKE		06 19 10.0	+8.7
TRI				LR	LR		
	comp=Z,700nm,18.0s						
DRME	**Dracevica, Mon**	**85.99**	**321**	⇑*i*P	**P**	**06 19 01.6**	**0.0**
DRME	**Dracevica, Mon**	**85.99**	**321**	*i* P	**P**	**06 19 01.8**	**+0.2**
TREB	**Trebinje**	**86.03**	**322**	*e*P	**P**	**06 19 00.6**	**-1.2**
WME	**Myndd Eilian**	**86.03**	**340**	⇑*e*P	**P**	**06 19 01.9**	**+0.3**
SCHQ	**Schefferville**	**86.05**	**16**	P	**P**	**06 19 01.3**	**-0.3**
	comp=Z,16nm,0.8s,baz=13,slow=7.7,SNR=6.2						
SCHQ				LR	LR	06 58 02.2	
	comp=Z,501nm,22.0s,baz=335,slow=36						
BUM	**Brajici-Budva**	**86.06**	**321**	⇑*i*P	**P**	**06 19 02.0**	**0.0**
DOU	**Dourbes**	**86.10**	**334**	⇑P	**P**	**06 19 01.9**	**-0.1**
	comp=Z,14nm,1.5s						
ULC	**Ulcinj**	**86.13**	**321**	⇑*i*P	**P**	**06 19 02.1**	**-0.2**
MRKA	**Markates**	**86.13**	**316**	P	**P**	**06 19 01.9**	**-0.5**
HCY	**Herceg Novi**	**86.15**	**322**	⇑*i*P	**P**	**06 19 01.8**	**-0.6**
HCY	**Herceg Novi**	**86.15**	**322**	*e*P	**P**	**06 19 01.8**	**-0.6**
WLF1	**Llynfaes**	**86.15**	**340**	*e*P	**P**	**06 19 02.4**	**+0.3**
WLF1				IAmb	IAmb	06 19 03.6	
	comp=Z,151nm,1.0s						
WLF1				IAMs_20	IAMs_20	07 01 01.0	
	comp=Z,2µm,20.2s						
BFO	**Black Forest**	**86.16**	**331**	*e*P	**P**	**06 19 02.5**	**+0.1**
	comp=Z,52nm,0.9s						
BFO				LR	LR		
	comp=Z,700nm,19.0s						
BFO	**Black Forest**	**86.16**	**331**	*e*P	**P**	**06 19 02.5**	**+0.1**
BFO				pmax	pmax		
	comp=Z,52nm,0.9s						
BFO				MLR	MLR		
	comp=Z,700nm,19.0s						
FOEL	**Foel Wylfa**	**86.18**	**340**	⇑*e*P	**P**	**06 19 03.1**	**+0.8**
FOEL				IAmb	IAmb	06 19 04.0	
	comp=Z,104nm,0.8s						
FOEL				IAMs_20	IAMs_20	07 02 20.8	
	comp=Z,762nm,16.8s						
STON	**Ston**	**86.23**	**322**	*i* P	**P**	**06 19 01.7**	**-1.0**
CBKS	**Cedar Bluff**	**86.23**	**43**	PFAKE		06 19 10.0	+7.1
CBKS				LR	LR		
	comp=Z,200nm,18.0s						
CBKS	**Cedar Bluff**	**86.23**	**43**	P	**P**	**06 19 02.4**	**-0.5**
	baz=315						
FETA	**Feichten**	**86.23**	**329**	*i* PcP	**P**	**06 19 03.2**	**+0.2**
	comp=Z,26nm,1.3s,SNR=12						
YRC	**Rhoscolyn**	**86.24**	**341**	⇑*e*P	**P**	**06 19 02.9**	**+0.4**
TIR	**Tirane**	**86.25**	**320**	PFAKE		06 19 10.0	+7.1
TIR				LR	LR		
	comp=Z,3µm,18.0s						
TIR	**Tirane**	**86.25**	**320**	⇑*i*P	**P**	**06 19 03.3**	**+0.4**
G40A	**Rib Lake**	**86.30**	**34**	P	**P**	**06 19 03.1**	**0.0**
	baz=320,SNR=10						
LLW	**Llanuwychllyn**	**86.34**	**340**	*e*P	**P**	**06 19 03.6**	**+0.5**
DAVA	**Damuels**	**86.38**	**329**	*i* PcP	**P**	**06 19 03.7**	**+0.1**
	comp=Z,37nm,0.9s,SNR=15						
ELSH	**Elham, Standar**	**86.39**	**336**	*e*P	**P**	**06 19 03.5**	**+0.2**
ELSH				IAmb	IAmb	06 19 04.5	
	comp=Z,159nm,0.8s						
ELSH				IAMs_20	IAMs_20	07 01 17.8	
	comp=Z,1µm,18.9s						
HLM1	**Long Mynd**	**86.42**	**339**	*e*P	**P**	**06 19 03.9**	**+0.4**
HLM1				IAmb	IAmb	06 19 04.3	
	comp=Z,22nm,0.8s						
HLM1				IAMs_20	IAMs_20	07 02 45.5	
	comp=Z,1µm,16.7s						
ATAL	**Atalanti**	**86.45**	**317**	P	**P**	**06 19 02.6**	**-1.4**
KPRO	**Kipourio**	**86.47**	**318**	P	**P**	**06 19 03.1**	**-1.0**
LKR	**Lokris**	**86.50**	**317**	P	**P**	**06 19 02.6**	**-1.6**
AGG	**Agios Georgios**	**86.60**	**317**	PFAKE		06 19 20.0	+15
AGG				LR	LR		
	comp=Z,1µm,19.0s						
ECH	**Echery**	**86.71**	**332**	PFAKE		06 19 20.0	+15
ECH				LR	LR		
	comp=Z,500nm,19.0s						
FUORN	**Ofenpass-Fuorn**	**86.75**	**329**	PFAKE		06 19 20.0	+14
FUORN				LR	LR		
	comp=Z,1µm,19.0s						
E43A	**Lone Tree Farm**	**86.83**	**31**	P	**P**	**06 19 05.7**	**0.0**
	baz=323						
F42A	**Maple Grove Fa**	**86.83**	**32**	P	**P**	**06 19 05.8**	**+0.1**
	baz=322						
STRD	**Stroud**	**86.86**	**339**	⇑*e*P	**P**	**06 19 06.2**	**+0.6**
STRD				IAmb	IAmb	06 19 07.0	
	comp=Z,188nm,0.8s						
STRD				IAMs_20	IAMs_20	06 59 02.1	
	comp=Z,840nm,23.6s						
HMNX	**Herstmonceux**	**86.89**	**337**	*e*P	**P**	**06 19 06.8**	**+1.0**
HMNX				IAMs_20	IAMs_20	07 02 11.3	
	comp=Z,1µm,17.8s						
MCH1	**Michaelchurch**	**86.91**	**339**	⇑*e*P	**P**	**06 19 06.4**	**+0.4**
MCH1				IAmb	IAmb	06 19 07.2	
	comp=Z,76nm,0.7s						
MCH1				IAMs_20	IAMs_20	07 06 04.2	
	comp=Z,885nm,16.5s						
DSF	**Desfina**	**86.93**	**317**	P	**P**	**06 19 04.0**	**-2.4**
JAN	**Janina**	**86.95**	**318**	P	**P**	**06 19 06.6**	**+0.2**
SWN1	**Swindon**	**86.98**	**338**	⇑*e*P	**P**	**06 19 06.9**	**+0.6**
SWN1				IAmb	IAmb	06 19 07.8	
	comp=Z,139nm,0.8s						
SWN1				IAMs_20	IAMs_20	06 59 44.0	
	comp=Z,999nm,19.0s						
WOL	**Wolverton**	**86.99**	**338**	*e*P	**P**	**06 19 06.3**	**0.0**
WOL				IAmb	IAmb	06 19 07.4	
	comp=Z,75nm,0.8s						
WOL				IAMs_20	IAMs_20	07 02 12.7	
	comp=Z,1µm,21.5s						
MONM	**Monmouth**	**87.00**	**339**	⇑*e*P	**P**	**06 19 06.9**	**+0.6**
MONM				IAmb	IAmb	06 19 07.7	
	comp=Z,86nm,0.7s						
MONM				IAMs_20	IAMs_20	07 05 57.4	
	comp=Z,652nm,17.1s						
E44A	**Grand Marais A**	**87.08**	**31**	P	**P**	**06 19 07.2**	**+0.3**
	baz=323						
ANX	**Ano Chora**	**87.13**	**317**	P	**P**	**06 19 08.0**	**+0.6**
TUE	**Stuetta**	**87.25**	**329**	PFAKE		06 19 20.0	+12
TUE				LR	LR		
	comp=Z,2µm,18.0s						
IGT	**Igoumenitsa**	**87.32**	**319**	P	**P**	**06 19 07.6**	**-0.6**
GUR	**Goura**	**87.37**	**316**	P	**P**	**06 19 06.6**	**-2.0**
I41A	**Arkdale**	**87.38**	**34**	P	**P**	**06 19 08.5**	**+0.1**
	baz=321						
KLV	**Kalavryta, Ach**	**87.40**	**317**	P	**P**	**06 19 07.8**	**-0.9**
SCIA	**State Center**	**87.42**	**38**	P	**P**	**06 19 09.1**	**+0.5**
	baz=319,SNR=8.0						
RSBS	**Rosebush, Pemb**	**87.44**	**340**	⇑*e*P	**P**	**06 19 08.6**	**+0.1**
RSBS				IAmb	IAmb	06 19 09.8	
	comp=Z,16nm,0.9s						
RSBS				IAMs_20	IAMs_20	07 01 50.0	
	comp=Z,420nm,18.5s						
KEK	**Kerkira**	**87.48**	**319**	P	**P**	**06 19 08.4**	**-0.5**
MATQ	**Matagami**	**87.57**	**24**	P	**P**	**06 19 09.1**	**-0.1**
	baz=329						
D46A	**Sault St. Mari**	**87.63**	**29**	P	**P**	**06 19 08.8**	**-0.7**
	baz=325,SNR=6.6						
MNTX	**Cornudas Mount**	**87.72**	**52**	PFAKE		06 19 20.0	+10
MNTX				LR	LR		
	comp=Z,300nm,18.0s						
MNTX	**Cornudas Mount**	**87.72**	**52**	P	**P**	**06 19 10.5**	**+0.2**
	baz=312,SNR=5.5						
KSU1	**Kansas State U**	**87.74**	**42**	P	**P**	**06 19 09.9**	**-0.3**
	baz=317,SNR=9.2						
MSTX	**Muleshoe**	**87.81**	**49**	PFAKE		06 19 20.0	+9.2
MSTX				LR	LR		
	comp=Z,400nm,19.0s						
MSTX	**Muleshoe**	**87.81**	**49**	P	**P**	**06 19 10.7**	**-0.1**
	baz=313						
AMTX	**Amarillo**	**87.84**	**47**	P	**P**	**06 19 11.3**	**+0.4**
	baz=314						
TBI	**Tubuai**	**87.86**	**121**	*e*S	**S**	**06 29 54.7**	**+2.0**
	comp=Z,181nm,31.0s						
TBI	**Tubuai**	**87.86**	**121**	*e*LR	LR	06 46 47.5	
	comp=Z,851nm,23.2s,baz=306						
TBI	**Tubuai**	**87.86**	**121**	*e*T	T	07 55 56.6	
	comp=Z,15nm,0.3s						
D47A	**Chapleau**	**87.86**	**29**	P	**P**	**06 19 10.3**	**-0.3**
	baz=325,SNR=9.3						
I42A	**Draeger Farm,**	**87.95**	**34**	P	**P**	**06 19 11.2**	**+0.1**
	baz=321,SNR=9.9						
E46A	**Sault Ste Mari**	**87.95**	**30**	P	**P**	**06 19 10.7**	**-0.4**
	baz=324,SNR=5.8						
H43A	**Windswept, Lux**	**88.00**	**33**	P	**P**	**06 19 11.6**	**+0.3**
	baz=322						
F45A	**CMU Biological**	**88.00**	**31**	P	**P**	**06 19 11.5**	**+0.2**
	baz=324						
JFWS	**Jewell Farm**	**88.09**	**35**	P	**P**	**06 19 11.2**	**-0.6**
	baz=320,SNR=6.6						
ITM	**Ithomi**	**88.14**	**316**	PFAKE		06 19 20.0	+7.9
ITM				LR	LR		
	comp=Z,500nm,18.0s						
ITM	**Ithomi**	**88.14**	**316**	P	**P**	**06 19 11.1**	**-1.0**
SENIN	**Lac Senin/Sane**	**88.17**	**330**	PFAKE		06 19 20.0	+7.6
SENIN				LR	LR		
	comp=Z,700nm,21.0s						
L40A	**Anamosa**	**88.28**	**37**	PFAKE		06 19 20.0	+7.3
L40A				LR	LR		
	comp=Z,300nm,20.0s						
L40A	**Anamosa**	**88.28**	**37**	P	**P**	**06 19 12.4**	**-0.3**
	baz=320,SNR=9.0						
D49A	**Beulah Townshi**	**88.35**	**28**	P	**P**	**06 19 12.9**	**-0.1**
	baz=327						
MATE	**Matera**	**88.39**	**321**	⇑*i*P	**P**	**06 19 12.8**	**-0.4**
LSQQ	**Lebel-sur-Quev**	**88.39**	**24**	P	**P**	**06 19 13.1**	**+0.1**
	baz=330						
G45A	**Suttons Bay**	**88.46**	**31**	P	**P**	**06 19 14.1**	**+0.6**
	baz=324,SNR=7.3						
CHGQ	**Chibougamau**	**88.48**	**22**	P	**P**	**06 19 13.3**	**-0.2**
	baz=332,SNR=11						
G46A	**Petoskey**	**88.57**	**31**	P	**P**	**06 19 14.2**	**+0.2**
	baz=324						
H45A	**Beulah**	**88.63**	**32**	P	**P**	**06 19 14.9**	**+0.6**
	baz=323,SNR=12						
VLC	**Villacollemand**	**88.65**	**327**	PFAKE		06 19 30.0	+16
VLC				LR	LR		
	comp=Z,1µm,18.0s						
CLF	**Chambon-Foret**	**88.68**	**334**	PFAKE		06 19 30.0	+16
CLF				LR	LR		
	comp=Z,1µm,19.0s						
AQU	**L'Aquila**	**88.70**	**324**	PFAKE		06 19 30.0	+15
AQU				LR	LR		
	comp=Z,2µm,18.0s						
AQU	**L'Aquila**	**88.70**	**324**	*i* P	**P**	**06 19 15.2**	**+0.5**
E48A	**Lockeyer**	**88.70**	**29**	P	**P**	**06 19 14.4**	**-0.3**
	baz=326						
N40A	**Mertquake, Sal**	**89.00**	**37**	P	**P**	**06 19 16.6**	**+0.5**
	baz=320						
I45A	**Fountain**	**89.02**	**32**	P	**P**	**06 19 16.7**	**+0.5**
	baz=323						
VLDQ	**Val d'Or**	**89.05**	**25**	PFAKE		06 19 30.0	+14
VLDQ				LR	LR		
	comp=Z,600nm,19.0s						
H46A	**Fife Lake**	**89.06**	**32**	P	**P**	**06 19 16.7**	**+0.4**
	baz=324,SNR=9.0						
F48A	**Evansville**	**89.06**	**29**	P	**P**	**06 19 16.4**	**+0.1**
	baz=326						
L42A	**Oliver, Polo**	**89.06**	**36**	P	**P**	**06 19 16.2**	**-0.2**
	baz=321,SNR=6.5						
GLMI	**Grayling**	**89.07**	**31**	P	**P**	**06 19 16.8**	**+0.4**
	baz=324,SNR=8.5						
G47A	**Hillman**	**89.10**	**30**	P	**P**	**06 19 16.2**	**-0.3**
	baz=325						
M41A	**Milan**	**89.13**	**37**	P	**P**	**06 19 16.8**	**0.0**
	baz=320,SNR=8.3						
K43A	**Burlington**	**89.14**	**34**	P	**P**	**06 19 15.6**	**-1.1**
	baz=322						
D51A	**Lot 18 Range I**	**89.24**	**27**	P	**P**	**06 19 16.9**	**-0.2**
	baz=328						
E50A	**Wahnapitae**	**89.30**	**28**	P	**P**	**06 19 17.1**	**-0.2**
	baz=327						
F49A	**Sandfield**	**89.34**	**29**	P	**P**	**06 19 17.9**	**+0.3**
	baz=326						
H47A	**Mio**	**89.43**	**31**	P	**P**	**06 19 18.5**	**+0.4**
	baz=325,SNR=7.1						
J45A	**Montague**	**89.43**	**33**	P	**P**	**06 19 18.2**	**+0.1**
	baz=323						
I46A	**Reed City**	**89.44**	**32**	P	**P**	**06 19 18.6**	**+0.5**
	baz=324						
TIP	**Timpagrande**	**89.46**	**320**	PFAKE		06 19 30.0	+12
TIP				LR	LR		
	comp=Z,2µm,21.0s						
TIP	**Timpagrande**	**89.46**	**320**	⇑*i*P	**P**	**06 19 18.1**	**-0.3**
BNI	**Bardonecchia**	**89.49**	**330**	PFAKE		06 19 30.0	+11
BNI				LR	LR		
	comp=Z,700nm,22.0s						
N41A	**Harden Midland**	**89.49**	**37**	PFAKE		06 19 30.0	+12
N41A				LR	LR		
	comp=Z,300nm,20.0s						
N41A	**Harden Midland**	**89.49**	**37**	P	**P**	**06 19 18.5**	**+0.1**
	baz=320						
WMOK	**Wichita Mounta**	**89.65**	**46**	P	**P**	**06 19 19.4**	**0.0**
	baz=315,SNR=8.7						
E51A	**G1948 Merrick**	**89.67**	**27**	P	**P**	**06 19 18.9**	**-0.3**
	baz=328						
H48A	**Harrisville**	**89.71**	**30**	P	**P**	**06 19 19.3**	**-0.1**
	baz=325						
L44A	**Lake County Fo**	**89.75**	**35**	P	**P**	**06 19 19.6**	**+0.1**
	baz=322						
I47A	**Gladwin**	**89.77**	**31**	P	**P**	**06 19 20.2**	**+0.5**
	baz=324						
J46A	**Howard City**	**89.83**	**32**	P	**P**	**06 19 20.1**	**+0.1**
	baz=324						
D53A	**Lac Vacive, Po**	**89.85**	**26**	*e*P	**P**	**06 19 19.6**	**-0.4**
	comp=Z,15nm,0.8s						
D53A				LR	LR		
	comp=Z,600nm,19.0s						
D53A	**Lac Vacive, Po**	**89.85**	**26**	P	**P**	**06 19 19.9**	**-0.1**
	baz=329,SNR=5.5						
I48A	**Sherman Twp**	**89.97**	**31**	P	**P**	**06 19 21.1**	**+0.5**
	baz=325						
TOBO	**Tobermory, Bru**	**89.99**	**29**	P	**P**	**06 19 20.8**	**+0.1**
	baz=326						
F51A	**Arnstein**	**90.02**	**28**	P	**P**	**06 19 20.8**	**0.0**
	baz=328						
D54A	**Lac Fusel, La**	**90.15**	**25**	P	**P**	**06 19 21.2**	**-0.1**
	baz=330						
SSB	**Saint Sauveur**	**90.15**	**331**	PFAKE		06 19 30.0	+8.5
SSB				LR	LR		
	comp=Z,1µm,18.0s						
E52A	**Mattawa**	**90.19**	**27**	P	**P**	**06 19 21.2**	**-0.3**
	baz=328						
J47A	**Sunmer**	**90.27**	**32**	P	**P**	**06 19 21.8**	**-0.3**
	baz=324						
K46A	**Dorr**	**90.30**	**33**	P	**P**	**06 19 22.1**	**0.0**
	baz=324						
M44A	**Midewin, Midew**	**90.31**	**35**	P	**P**	**06 19 22.0**	**-0.2**
	baz=322						
ATD	**Arta Tunnel**	**90.35**	**284**	PFAKE		06 19 30.0	+7.1
ATD				LR	LR		
	comp=Z,400nm,22.0s						
F52A	**Sundridge**	**90.36**	**27**	P	**P**	**06 19 22.4**	**0.0**
	baz=328						
HDIL	**Hopedale**	**90.36**	**36**	P	**P**	**06 19 22.3**	**-0.2**
	baz=321,SNR=5.5						
KLBO	**Killbear Provi**	**90.39**	**28**	P	**P**	**06 19 22.6**	**+0.1**
	baz=327						
TXAR	**Lajitas Array**	**90.40**	**53**	P	**P**	**06 19 23.5**	**+0.5**
	comp=Z,5.7nm,0.7s,baz=297,slow=3.6,SNR=86						
TXAR				PKKPbc	**PKKPbc**	**06 36 51.3**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=128,slow=5.8,SNR=4.6						
TXAR				LR	LR	07 00 09.1	
	comp=Z,317nm,18.1s,baz=0.0,slow=36						
E53A	**Dumoine, Ponti**	**90.46**	**26**	P	**P**	**06 19 22.7**	**-0.1**
	baz=329						
TUL1	**Leonard**	**90.50**	**43**	P	**P**	**06 19 23.5**	**+0.2**
	baz=317,SNR=6.2						
I49A	**Point Hope**	**90.54**	**30**	P	**P**	**06 19 23.6**	**+0.3**
	baz=326						
E54A	**Lac Daplat, Po**	**90.58**	**26**	P	**P**	**06 19 23.1**	**-0.3**
	baz=330						
CEL	**Celeste**	**90.59**	**320**	PFAKE		06 19 40.0	+16
CEL				LR	LR		
	comp=Z,1µm,18.0s						
L46A	**Eue Claire**	**90.61**	**34**	P	**P**	**06 19 23.8**	**+0.2**
	baz=323						
BUKO	**Buck Lake**	**90.63**	**28**	P	**P**	**06 19 23.7**	**0.0**
	baz=328						
ABTX	**Abilene, Hawle**	**90.63**	**48**	P	**P**	**06 19 24.0**	**0.0**
	baz=315,SNR=5.6						
BMRO	**Meriville Lake**	**90.64**	**29**	P	**P**	**06 19 23.6**	**-0.1**
	baz=327						
K47A	**Vermontville**	**90.65**	**33**	P	**P**	**06 19 23.6**	**-0.2**
	baz=324						
J48A	**Bridge Port**	**90.66**	**31**	P	**P**	**06 19 24.6**	**+0.8**
	baz=325						
ALGO	**Algonquin Park**	**90.69**	**27**	P	**P**	**06 19 23.7**	**-0.2**
	baz=329						
HPIG		**90.69**	**56**	PFAKE		06 19 40.0	+15
HPIG				LR	LR		
	comp=Z,600nm,20.0s						
J49A	**Marlette**	**90.88**	**31**	P	**P**	**06 19 25.0**	**+0.2**
	baz=325						
K48A	**Perry**	**90.92**	**32**	P	**P**	**06 19 25.2**	**+0.2**
	baz=325						
O44A	**Mansfield**	**91.08**	**36**	P	**P**	**06 19 25.8**	**0.0**
	baz=322						
H52A	**Wyevale**	**91.12**	**28**	P	**P**	**06 19 26.0**	**+0.1**
	baz=328						
CLWO	**Collingwood**	**91.12**	**29**	P	**P**	**06 19 26.3**	**+0.3**
	baz=327						
L47A	**Sherwood**	**91.12**	**33**	P	**P**	**06 19 26.1**	**+0.1**
	baz=324						
G53A	**Haliburton**	**91.19**	**27**	P	**P**	**06 19 26.3**	**+0.1**
	baz=328						
LATQ	**La Tuque**	**91.21**	**23**	P	**P**	**06 19 26.1**	**-0.2**
	baz=333						
PEMO	**Pembroke**	**91.21**	**26**	P	**P**	**06 19 26.1**	**-0.2**
	baz=330						
K49A	**Clarkson**	**91.22**	**32**	P	**P**	**06 19 26.7**	**+0.2**
	baz=325						
CCM	**Cathedral Cave**	**91.32**	**39**	*e*P	**P**	**06 19 26.7**	**-0.3**
	comp=Z,22nm,0.9s						
CCM	**Cathedral Cave**	**91.32**	**39**	*e*P	**P**	**06 19 26.7**	**-0.3**
CCM				pmax	pmax		
	comp=Z,22nm,0.9s						
CCM	**Cathedral Cave**	**91.32**	**39**	P	**P**	**06 19 27.1**	**+0.1**
	baz=320						
SLM	**Saint Louis**	**91.39**	**38**	PFAKE		06 19 40.0	+13
SLM				LR	LR		
	comp=Z,400nm,21.0s						
M47A	**Cromwell**	**91.43**	**34**	P	**P**	**06 19 27.6**	**+0.2**
	baz=324						
L48A	**N Adams**	**91.49**	**33**	P	**P**	**06 19 27.9**	**+0.2**
	baz=324						
I52A	**Shelburne**	**91.49**	**29**	P	**P**	**06 19 28.0**	**+0.3**
	baz=327						
BANO	**Bancroft**	**91.53**	**27**	P	**P**	**06 19 27.8**	**0.0**
	baz=329						
SFIN	**Lafayette**	**91.54**	**35**	P	**P**	**06 19 28.0**	**0.0**
	baz=323						
K50A	**Casco**	**91.58**	**31**	P	**P**	**06 19 28.0**	**-0.1**
	baz=326						
G55A	**Calabogie**	**91.77**	**26**	P	**P**	**06 19 28.7**	**-0.2**
	baz=330						
U40A	**Yellville**	**91.77**	**41**	P	**P**	**06 19 29.1**	**-0.1**
	baz=319,SNR=40						
N47A	**Urbana**	**91.79**	**34**	P	**P**	**06 19 28.9**	**-0.2**
	baz=324						
PLVO	**Plevna**	**91.82**	**26**	P	**P**	**06 19 29.0**	**-0.2**
	baz=330						
PKRO	**Pickering**	**92.00**	**28**	P	**P**	**06 19 30.3**	**+0.3**
	baz=328						
ORIO	**Orleans, Innes**	**92.02**	**25**	P	**P**	**06 19 29.5**	**-0.5**
	baz=331						
JCT	**Junction City**	**92.04**	**49**	P	**P**	**06 19 30.5**	**0.0**
	baz=315						
M49A	**Liberty Center**	**92.07**	**33**	P	**P**	**06 19 30.4**	**0.0**
	baz=325						
DELO	**Deloro Mine**	**92.08**	**27**	PFAKE		06 19 40.0	+10
DELO				LR	LR		
	comp=Z,500nm,21.0s						
P46A	**Rosedale**	**92.09**	**36**	P	**P**	**06 19 30.7**	**+0.2**
	baz=323						
L50A	**Kingsville**	**92.10**	**32**	P	**P**	**06 19 30.3**	**-0.2**
	baz=326						
N48A	**Decatur**	**92.10**	**34**	P	**P**	**06 19 30.4**	**-0.1**
	baz=324						
W39A	**Magazine**	**92.13**	**43**	P	**P**	**06 19 30.3**	**-0.5**
	baz=318,SNR=6.1						
H55A	**Tweed**	**92.21**	**27**	P	**P**	**06 19 30.9**	**-0.1**
	baz=330						
WHTX	**Lake Whitney,**	**92.38**	**47**	PFAKE		06 19 40.0	+8.0
WHTX				LR	LR		
	comp=Z,500nm,18.0s						
WHTX	**Lake Whitney,**	**92.38**	**47**	P	**P**	**06 19 32.3**	**+0.3**
	baz=316,SNR=6.7						
PLIO	**Pelee Island,**	**92.42**	**32**	P	**P**	**06 19 31.9**	**-0.1**
	baz=326						
N49A	**Columbus Grove**	**92.43**	**33**	P	**P**	**06 19 32.0**	**-0.1**
	baz=325						
CLTB	**Caltabellotta**	**92.48**	**322**	PFAKE		06 19 40.0	+7.5
CLTB				LR	LR		
	comp=Z,2µm,20.0s						
O48A	**Farmland**	**92.53**	**34**	P	**P**	**06 19 32.3**	**-0.2**
	baz=324						
S44A	**Carbondale**	**92.61**	**38**	P	**P**	**06 19 32.8**	**-0.2**
	baz=321						
MIAR	**Mount Ida**	**92.73**	**43**	*e*P	**P**	**06 19 33.8**	**+0.2**
	comp=Z,25nm,1.0s						

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MIAR  Mount Ida         92.73  43 eP     P        06 19 33.8 +0.2
MIAR                                pmax   pmax
      comp=Z,25nm,1.0s
MIAR  Mount Ida         92.73  43  P     P        06 19 33.5 -0.1
      baz=318,SNR=17
BLO   Bloomington       92.77  36  PFAKE          06 19 50.0  +16
BLO                                LR    LR
      comp=Z,300nm,18.0s
MEDO  Medina            92.92  28  PFAKE          06 19 50.0  +16
MEDO                               LR    LR
      comp=Z,300nm,21.0s
O49A  Covington         92.95  34  PFAKE          06 19 50.0  +15
O49A                               LR    LR
      comp=Z,300nm,18.0s
O49A  Covington         92.95  34  P     P        06 19 34.6 +0.1
      baz=324
W41B  Gary Mavity, V    92.98  42  P     P        06 19 34.7 -0.1
      baz=319,SNR=7.2
N50A  Nevada            93.00  32  P     P        06 19 34.8 +0.1
      baz=325
P48A  Milroy            93.05  35  P     P        06 19 34.6 -0.4
      baz=324
J55A  Hilton            93.08  28  PFAKE          06 19 50.0  +15
J55A                               LR    LR
      comp=Z,400nm,19.0s
WDD   Wied Dalam        93.14 320  PFAKE          06 19 50.0  +15
WDD                                LR    LR
      comp=Z,900nm,19.0s
X40A  Basin Creek Fa    93.18  42  P     P        06 19 36.1 +0.4
      baz=319
ERPA  Erie              93.20  30  PFAKE          06 19 50.0  +14
ERPA                               LR    LR
      comp=Z,500nm,19.0s
FRNY  Flat Rock         93.21  24  PFAKE          06 19 50.0  +14
FRNY                               LR    LR
      comp=Z,500nm,18.0s
N51A  Ashland           93.22  32  PFAKE          06 19 50.0  +14
N51A                               LR    LR
      comp=Z,300nm,20.0s
L53A  Girard            93.23  30  P     P        06 19 35.9 +0.1
      baz=327
K54A  Basiliko Farm,    93.30  29  P     P        06 19 36.5 +0.4
      baz=328
O50A  Cable             93.31  33  P     P        06 19 36.3 +0.1
      baz=325,SNR=5.5
P49A  Miami Univ. Ec    93.31  34  P     P        06 19 36.2  0.0
      baz=324
Q48A  North Vernon      93.33  35  P     P        06 19 36.3 +0.1
      baz=324
L54A  Sinclairville     93.37  29  P     P        06 19 36.4 -0.1
      baz=328
T45A  Paducah           93.44  38  PFAKE          06 19 50.0  +13
T45A                               LR    LR
      comp=Z,400nm,20.0s
M53A  WI Miller and     93.50  31  P     P        06 19 37.1 +0.1
      baz=327
ACSO  Alum Creek Sta    93.52  33  PFAKE          06 19 50.0  +13
ACSO                               LR    LR
      comp=Z,500nm,22.0s
ACSO  Alum Creek Sta    93.52  33  P     P        06 19 37.0 -0.1
      baz=325
WCI   Wyandotte Cave    93.63  36 eP     P        06 19 37.0 -0.6
      comp=Z,14nm,0.8s
WCI                                LR    LR
      comp=Z,400nm,19.0s
WCI   Wyandotte Cave    93.63  36 eP     P        06 19 37.0 -0.6
WCI                                pmax  pmax
      comp=Z,14nm,0.8s
WCI                                MLR   MLR
      comp=Z,400nm,19.0s
WCI   Wyandotte Cave    93.63  36  P     P        06 19 37.7 +0.1
      baz=323
Q49A  Aurora            93.66  35  P     P        06 19 37.9 +0.1
      baz=324
P50A  Jamestown         93.67  34  P     P        06 19 38.0 +0.2
      baz=325
GLAT  Glass             93.69  39  PFAKE          06 19 50.0  +12
GLAT                               LR    LR
      comp=Z,300nm,22.0s
T46A  Princeton         93.79  38  P     P        06 19 38.5 +0.1
      baz=322,SNR=6.8
M54A  Oil Creek Stat    93.85  30  PFAKE          06 19 50.0  +11
M54A                               LR    LR
      comp=Z,400nm,20.0s
M54A  Oil Creek Stat    93.85  30  P     P        06 19 38.6  0.0
      baz=328
VT1   Waterbury         93.94  24  PFAKE          06 19 50.0  +11
VT1                                LR    LR
      comp=Z,500nm,18.0s
N53A  Lisbon            93.96  31  PFAKE          06 19 50.0  +11
N53A                               LR    LR
      comp=Z,400nm,20.0s
N53A  Lisbon            93.96  31  P     P        06 19 39.2 +0.1
      baz=327
P51A  Williamsport      94.10  33  P     P        06 19 39.4 -0.4
      baz=325
O52A  Adamsville        94.11  32  PFAKE          06 19 50.0  +10
O52A                               LR    LR
      comp=Z,400nm,18.0s
O52A  Adamsville        94.11  32  P     P        06 19 39.8 -0.1
      baz=326
N54A  Moraine State     94.18  30  P     P        06 19 39.9 -0.2
      baz=328
PKME  Peaks-Kenny Pk    94.18  21  PFAKE          06 19 50.0  +10
PKME                               LR    LR
      comp=Z,500nm,22.0s
Q50A  Georgetown        94.21  34  P     P        06 19 40.0 -0.3
      baz=325
T47A  Sharon Grove      94.22  37  P     P        06 19 40.4  0.0
      baz=322,SNR=6.3
M55A  Ridgway           94.24  29  P     P        06 19 40.3 -0.2
      baz=328
O53A  New Philadelph    94.26  32  P     P        06 19 40.3 -0.3
      baz=327
Q51A  Peebles           94.34  34  P     P        06 19 40.9 -0.1
      baz=325,SNR=5.5
P52A  Corning           94.38  32  P     P        06 19 40.6 -0.5
      baz=326
M56A  Emporium          94.46  29  P     P        06 19 41.5  0.0
      baz=329
S49A  Springfield       94.46  36  P     P        06 19 41.4 -0.1
      baz=324,SNR=6.3
T48A  Bowling Green     94.47  37  P     P        06 19 41.2 -0.3
      baz=323
R50A  Paris             94.50  35  P     P        06 19 41.6  0.0
      baz=324
WVT   Waverly           94.54  38 eP     P        06 19 41.4 -0.5
      comp=Z,7.4nm,0.9s
WVT                                LR    LR
      comp=Z,400nm,19.0s
WVT   Waverly           94.54  38 eP     P        06 19 41.4 -0.5
WVT                                pmax  pmax
      comp=Z,7.0nm,0.9s
WVT                                MLR   MLR
      comp=Z,400nm,19.0s
WVT   Waverly           94.54  38  P     P        06 19 41.6 -0.2
      baz=322
U47A  Clarksville       94.56  38  P     P        06 19 41.9 -0.1
      baz=322
V46A  Holladay          94.65  39  P     P        06 19 42.4  0.0
      baz=322
O54A  Avella            94.67  31  P     P        06 19 42.3 -0.1
      baz=327
BINY  Binghamton        94.68  27  PFAKE          06 19 50.0 +7.6
BINY                               LR    LR
      comp=Z,500nm,20.0s
N55A  Marion Center     94.74  30  PFAKE          06 19 50.0 +7.3
N55A                               LR    LR
      comp=Z,500nm,20.0s
N55A  Marion Center     94.74  30  P     P        06 19 42.6 -0.1
      baz=328
P53A  Whipple           94.82  32  P     P        06 19 43.2 +0.1
      baz=326
L58A  Harry Jones Me    94.86  27  P     P        06 19 43.1 -0.2
      baz=330
Q52A  Bidwell           94.88  33  P     P        06 19 43.2 -0.1
      baz=326
U48A  Cassie Pea, Po    94.88  37  P     P        06 19 43.4  0.0
      baz=323
T49A  Edmonton          94.89  36  PFAKE          06 20 00.0  +17
T49A                               LR    LR
      comp=Z,300nm,19.0s
T49A  Edmonton          94.89  36  P     P        06 19 43.3 -0.2
      baz=324,SNR=5.1
N56A  West Decatur      94.90  29  P     P        06 19 43.3 -0.1
      baz=329
V47A  Nunnelly          94.93  38  P     P        06 19 43.8 +0.1
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      baz=322
S50A  Richmond          94.96  35  P     P        06 19 43.8  0.0
      baz=324,SNR=8.0
OXF   Oxford            94.99  40  P     P        06 19 43.8 -0.1
      baz=321
FFD   Franklin Falls    95.06  24  PFAKE          06 20 00.0  +16
FFD                                LR    LR
      comp=Z,400nm,18.0s
O55A  Ligonier          95.09  30  P     P        06 19 44.4  0.0
      baz=328
P54A  Burton            95.11  31  P     P        06 19 44.5  0.0
      baz=327
FURI  Furi              95.20 285  PFAKE          06 20 00.0  +14
FURI                               LR    LR
      comp=Z,600nm,21.0s
EMMW  East Machias      95.22  20  PFAKE          06 20 00.0  +15
EMMW                               LR    LR
      comp=Z,600nm,19.0s
M58A  Price's Panora    95.22  28  P     P        06 19 44.8 -0.1
      baz=330
R52A  Catlettsburg      95.22  34  P     P        06 19 44.5 -0.5
      baz=326
U49A  Red Boiling Sp    95.24  37  P     P        06 19 45.0  0.0
      baz=323,SNR=5.7
Q53A  Leroy             95.28  33  P     P        06 19 45.4 +0.1
      baz=326
T50A  Nancy             95.28  36  P     P        06 19 45.2 -0.1
      baz=324,SNR=7.7
SSPA  Standing Stone    95.30  29  PFAKE          06 20 00.0  +15
SSPA                               LR    LR
      comp=Z,300nm,20.0s
CLTN  Cedars of Leba    95.31  37  PFAKE          06 20 00.0  +15
CLTN                               LR    LR
      comp=Z,200nm,20.0s
KSPA  Keystone Colle    95.31  27  PFAKE          06 20 00.0  +15
KSPA                               LR    LR
      comp=Z,600nm,19.0s
N57A  Milroy            95.33  29  P     P        06 19 45.3 -0.1
      baz=329
MCWV  Mont Chateau      95.33  31  P     P        06 19 45.5 +0.1
      baz=328
O56A  Blue Knob Stat    95.34  30  P     P        06 19 45.4 -0.2
      baz=328
W47A  Westpoint         95.35  39  P     P        06 19 45.1 -0.5
      baz=322
V48A  Smith Brothers    95.35  38  PFAKE          06 20 00.0  +14
V48A                               LR    LR
      comp=Z,300nm,20.0s
V48A  Smith Brothers    95.35  38  P     P        06 19 45.0 -0.6
      baz=323
S51A  Beattyville       95.36  35  P     P        06 19 45.1 -0.5
      baz=325
M59A  Waymart           95.45  27  P     P        06 19 45.5 -0.4
      baz=331
P55A  Reedsville        95.47  31  P     P        06 19 46.3 +0.2
      baz=328
Q54A  Coxs Mills        95.48  32  P     P        06 19 46.3 +0.2
      baz=327,SNR=5.8
T51A  Gray              95.75  35  P     P        06 19 47.1 -0.3
      baz=325
W48A  Pulaski           95.77  38  P     P        06 19 47.1 -0.4
      baz=323
U50A  Jamestown         95.77  36  P     P        06 19 47.3 -0.3
      baz=324
V49A  McMinnville       95.78  37  P     P        06 19 47.0 -0.5
      baz=323
X47A  Russelville       95.79  39  P     P        06 19 47.0 -0.6
      baz=322
Q55A  Buckhannon        95.79  32  P     P        06 19 47.1 -0.5
      baz=327
KEST  Kesra             95.85 323  P     P        06 19 47.6 -0.3
      comp=Z,4.7nm,0.9s,baz=119,slow=5.9,SNR=4.6
KEST                               LR    LR       07 08 19.5
      comp=Z,888nm,18.4s,baz=360,slow=39
KEST  Kesra             95.85 323  PFAKE          06 20 00.0  +12
KEST                               LR    LR
      comp=Z,1µm,19.0s
N59A  State Game Lan    95.87  28  PFAKE          06 20 00.0  +12
N59A                               LR    LR
      comp=Z,600nm,20.0s
N59A  State Game Lan    95.87  28  P     P        06 19 47.7 -0.2
      baz=330
P56A  Dayton Farm, R    95.88  30  P     P        06 19 48.0 +0.1
      baz=328
HRV   Adam Dziewonsk    95.96  24  PFAKE          06 20 00.0  +12
HRV                                LR    LR
      comp=Z,500nm,18.0s
T52A  Hallie            96.08  34 eP     P        06 19 49.0 +0.1
      comp=Z,9.9nm,0.8s
T52A  Hallie            96.08  34  P     P        06 19 48.6 -0.3
      baz=325
R54A  Victor            96.08  33  P     P        06 19 48.5 -0.4
      baz=327
PAGS  Pennsylvania G    96.10  29  PFAKE          06 20 00.0  +11
PAGS                               LR    LR
      comp=Z,400nm,19.0s
W49A  Belvidere         96.12  38  P     P        06 19 48.8 -0.3
      baz=323
WES   Weston            96.14  24  PFAKE          06 20 00.0  +11
WES                                LR    LR
      comp=Z,600nm,18.0s
ODNJ  Ogdensburg        96.16  27  PFAKE          06 20 00.0  +11
ODNJ                               LR    LR
      comp=Z,500nm,18.0s
SWET  Sewanee           96.20  38  PFAKE          06 20 00.0  +10
SWET                               LR    LR
      comp=Z,400nm,20.0s
X48A  Hartselle         96.25  39  PFAKE          06 20 00.0  +10
X48A                               LR    LR
      comp=Z,300nm,20.0s
X48A  Hartselle         96.25  39  P     P        06 19 49.8 +0.1
      baz=322
S54A  Dingess, Beckl    96.26  33  P     P        06 19 49.6 -0.2
      baz=326
TZTN  Tazewell          96.28  35  P     P        06 19 49.8  0.0
      baz=325
LUPA  Lehigh Univers    96.30  28  PFAKE          06 20 00.0  +10
LUPA                               LR    LR
      comp=Z,100nm,20.0s
HAL   Halifax           96.31  18  PFAKE          06 20 00.0  +10
HAL                                LR    LR
      comp=Z,500nm,20.0s
R55A  Marlinton         96.37  32  PFAKE          06 20 00.0  +10
R55A                               LR    LR
      comp=Z,400nm,18.0s
R55A  Marlinton         96.37  32  P     P        06 19 50.2 -0.1
      baz=327
T53A  Wise              96.38  34  P     P        06 19 50.2 -0.1
      baz=326
MVL   Millersville      96.44  28  PFAKE          06 20 00.0  +10
MVL                                LR    LR
      comp=Z,600nm,20.0s
PAL   Palisades         96.48  26  PFAKE          06 20 00.0 +9.4
PAL                                LR    LR
      comp=Z,300nm,19.0s
U52A  Thorn Hill        96.48  35  P     P        06 19 50.6 -0.1
      baz=325
BRYW  Bryant College    96.49  24  PFAKE          06 20 00.0 +9.3
BRYW                               LR    LR
      comp=Z,500nm,18.0s
P58A  Pank, Wackersv    96.51  29  P     P        06 19 50.7 -0.1
      baz=329
W50A  Signal Mountai    96.52  37  P     P        06 19 50.8 -0.2
      baz=324
BRNJ  Basking Ridge     96.52  27  PFAKE          06 20 00.0 +9.2
BRNJ                               LR    LR
      comp=Z,500nm,18.0s
S55A  Lewisburg         96.63  32  P     P        06 19 51.0 -0.4
      baz=327
CPCT  Cooper Cave       96.70  36  PFAKE          06 20 00.0 +8.2
CPCT                               LR    LR
      comp=Z,300nm,18.0s
P59A  Jarrettsville     96.75  29  P     P        06 19 51.6 -0.3
      baz=330
Q58A  Fox Den Farm,     96.83  30  P     P        06 19 52.1 -0.1
      baz=329
PSUB  Penn St. - Bra    96.85  28  PFAKE          06 20 00.0 +7.7
PSUB                               LR    LR
      comp=Z,500nm,19.0s
U53A  Fall Branch       96.87  35  P     P        06 19 52.8 +0.2
      baz=326
Y49A  Blount Mountai    97.04  39  P     Pdif     06 19 53.5 +0.1
      baz=323
T55A  Pulaski           97.06  33  P     P        06 19 53.3 -0.1
      baz=327
U54A  Nelsons Funny     97.09  34  PFAKE          06 20 10.0  +16
U54A                               LR    LR
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      comp=Z,300nm,18.0s
U54A  Nelsons Funny     97.09  34  P     Pdif     06 19 53.8 +0.1
      baz=326
S56A  Natural Bridge    97.12  32  P     Pdif     06 19 53.9 +0.2
      baz=328
BLA   Blacksburg        97.14  33  PFAKE          06 20 10.0  +16
BLA                                LR    LR
      comp=Z,400nm,19.0s
BLA   Blacksburg        97.14  33  P     P        06 19 53.8  0.0
      baz=327
X51A  Calhoun           97.25  37  PFAKE          06 20 10.0  +16
X51A                               LR    LR
      comp=Z,300nm,21.0s
W52A  Murphy            97.28  36  PFAKE          06 20 10.0  +16
W52A                               LR    LR
      comp=Z,300nm,20.0s
S57A  Dark Hollow, R    97.31  31  PFAKE          06 20 10.0  +15
S57A                               LR    LR
      comp=Z,300nm,20.0s
P61A  Hammonton         97.32  28  P     Pdif     06 19 54.6 +0.2
      baz=331
V53A  Saluda            97.33  35  PFAKE          06 20 10.0  +15
V53A                               LR    LR
      comp=Z,300nm,20.0s
V53A  Saluda            97.33  35  P     Pdif     06 19 54.9 +0.2
      baz=325
U55A  TA2, Sparta       97.45  34  P     Pdif     06 19 55.5 +0.2
      baz=326
W53A  Cullowhee         97.58  36  P     P        06 19 55.8 -0.1
      baz=325
R58B  Mineral           97.58  31  PFAKE          06 20 10.0  +14
R58B                               LR    LR
      comp=Z,300nm,20.0s
V54A  Nebo              97.64  35  P     P        06 19 56.0  0.0
      baz=326
Y51A  Rockmart          97.68  38  P     P        06 19 55.9 -0.4
      baz=324
X52A  Dahlonega         97.69  37  P     P        06 19 55.9 -0.4
      baz=324
Z50A  Ashland           97.77  39  P     P        06 19 56.4 -0.2
      baz=323
T57A  Hurt              97.82  32  PFAKE          06 20 10.0  +13
T57A                               LR    LR
      comp=Z,400nm,18.0s
T57A  Hurt              97.82  32  P     P        06 19 56.4 -0.4
      baz=328
BG3   Lake Jocassee     97.83  36  PFAKE          06 20 10.0  +13
BG3                                LR    LR
      comp=Z,200nm,19.0s
149A  Jones             97.84  40  P     Pdif     06 19 57.2 +0.2
      baz=322
V55A  Taylorsville      97.92  34  P     P        06 19 57.1 -0.2
      baz=326
S59A  Mechanicsville    97.99  30  P     P        06 19 58.7 +1.2
      baz=329
X53A  Estanollee        98.05  36  P     P        06 19 57.7 -0.2
      baz=325
Z51A  Franklin          98.10  38  P     P        06 19 58.0 -0.1
      baz=324
W54A  Cherokee Point    98.10  35  P     P        06 19 57.9 -0.2
      baz=326
ESDC  Sonseca Array     98.15 334  P     P        06 19 57.7 -0.6
      comp=Z,1.8nm,0.8s,baz=19,slow=4.0,SNR=13
ESDC                               LR    LR       07 08 57.9
      comp=Z,607nm,21.1s,baz=15,slow=38
ESLA  Sonseca Array     98.15 334  PFAKE          06 20 10.0  +12
ESLA                               LR    LR
      comp=Z,800nm,21.0s
T58A  Grand View Acr    98.17  32  P     P        06 19 57.6 -0.7
      baz=328
Y52A  Lilburn           98.20  37  PFAKE          06 20 10.0  +11
Y52A                               LR    LR
      comp=Z,300nm,21.0s
Y52A  Lilburn           98.20  37  P     P        06 19 58.3 -0.3
      baz=324
150A  Eclectic          98.23  39  P     P        06 19 57.9 -0.8
      baz=323
V56A  Mocksville        98.27  34  PFAKE          06 20 10.0  +11
V56A                               LR    LR
      comp=Z,400nm,18.0s
V56A  Mocksville        98.27  34  P     P        06 19 58.5 -0.3
      baz=327
PAB   San Pablo         98.40 334  PFAKE          06 20 10.0  +11
PAB                                LR    LR
      comp=Z,800nm,20.0s
KMSC  Kings Mountain    98.45  34  PFAKE          06 20 10.0  +10
KMSC                               LR    LR
      comp=Z,500nm,18.0s
X54A  Belton            98.46  36  P     P        06 19 59.5 -0.2
      baz=326
V57A  Coltrane Farms    98.53  33  P     Pdif     06 20 00.3 +0.3
      baz=327
T59A  Double "B" Far    98.56  31  P     P        06 20 00.2 +0.1
      baz=329
250A  Grady             98.61  40  PFAKE          06 20 10.0  +10
250A                               LR    LR
      comp=Z,300nm,19.0s
250A  Grady             98.61  40  P     P        06 20 00.0 -0.3
      baz=323
U58A  Oxford            98.63  32  P     P        06 19 59.8 -0.6
      baz=328
MTE   Manteigas         98.71 337  PFAKE          06 20 10.0 +9.2
MTE                                LR    LR
      comp=Z,800nm,18.0s
T60A  Surry             98.75  30  PFAKE          06 20 10.0 +9.1
T60A                               LR    LR
      comp=Z,400nm,22.0s
HODGE Hodges            98.77  36  PFAKE          06 20 10.0 +8.9
HODGE                              LR    LR
      comp=Z,300nm,20.0s
152A  Waverly Hall      98.84  38  PFAKE          06 20 10.0 +8.6
152A                               LR    LR
      comp=Z,300nm,20.0s
GOGA  Godfrey           98.86  37  PFAKE          06 20 10.0 +8.5
GOGA                               LR    LR
      comp=Z,300nm,20.0s
Y54A  Tignall           98.87  36  P     P        06 20 01.7 +0.1
      baz=325
U59A  Littleton         98.99  31  PFAKE          06 20 10.0 +8.0
U59A                               LR    LR
      comp=Z,300nm,20.0s
W57A  Gilead            99.05  34  PFAKE          06 20 10.0 +7.7
W57A                               LR    LR
      comp=Z,300nm,21.0s
COI   Coimbra           99.16 337  PFAKE          06 20 10.0 +7.3
COI                                LR    LR
      comp=Z,600nm,21.0s
JSC   Jenkinsville      99.19  35  PFAKE          06 20 10.0 +7.0
JSC                                LR    LR
      comp=Z,400nm,18.0s
Y55A  Saluda            99.20  36  P     Pdif     06 20 04.0 +1.0
      baz=326
BIRD  Birdtown, Kers    99.26  34  PFAKE          06 20 10.0 +6.8
BIRD                               LR    LR
      comp=Z,500nm,18.0s
154A  Montrose          99.69  37  PFAKE          06 20 20.0  +15
154A                               LR    LR
      comp=Z,300nm,20.0s
Y57A  Sumter            99.81  34  PFAKE          06 20 20.0  +14
Y57A                               LR    LR
      comp=Z,400nm,19.0s
X58A  Rowland           99.84  33  PFAKE          06 20 20.0  +14
X58A                               LR    LR
      comp=Z,400nm,21.0s
Z56A  Williston         99.94  36  PFAKE          06 20 20.0  +14
Z56A                               LR    LR
      comp=Z,300nm,18.0s
254A  Abbeville        100.14  38  P     Pdif     06 20 07.0 -0.2
      baz=325
Y58A  Scranton         100.24  34  PFAKE          06 20 20.0  +12
Y58A                               LR    LR
      comp=Z,300nm,18.0s
NHSC  New Hope         100.67  35  PFAKE          06 20 20.0  +10
NHSC                               LR    LR
      comp=Z,500nm,18.0s
Y60A  Bolivia          100.80  33  PFAKE          06 20 20.0  +10
Y60A                               LR    LR
      comp=Z,400nm,19.0s
PVAQ  Vaqueiros        101.48 336  PFAKE          06 20 20.0 +6.9
PVAQ                               LR    LR
      comp=Z,1µm,18.0s
SFS   San Fernando     101.81 334  PFAKE          06 20 30.0  +15
SFS                                LR    LR
      comp=Z,600nm,18.0s
PFVI  Vila Bisbo       102.09 336  PFAKE          06 20 30.0  +14
PFVI                               LR    LR
      comp=Z,700nm,19.0s
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KMBO	Kilima Mbogo	102.36	278	PFAKE		06 20 30.0	+12
KMBO				LR	LR		
	comp=Z,300nm,20.0s						
RTC	Rabat Centre	104.27	333	PFAKE		06 20 40.0	+14
RTC				LR	LR		
	comp=Z,2µm,20.0s						
MBAR	Mbarara	107.23	282	PFAKE		06 25 00.0	+12
MBAR				LR	LR		
	comp=Z,800nm,19.0s						
VNDA	Vanda	114.13	175	PKiKP	PKPdf	06 24 58.9	-0.3
	comp=Z,0.6nm,0.7s,baz=333,slow=5.8,SNR=6.5						
ACON	Acoyapa	114.78	52	PFAKE		06 25 10.0	+7.6
ACON				LR	LR		
	comp=Z,500nm,21.0s						
ESPN	Las Esperanzas	115.16	51	PFAKE		06 25 20.0	+17
ESPN				LR	LR		
	comp=Z,300nm,22.0s						
LSZ	Lusaka	117.79	271	PKP	PKPdf	06 25 08.1	-0.1
	comp=Z,5.6nm,0.6s,baz=23,slow=3.4,SNR=14						
LSZ	Lusaka	117.79	271	*e*PKPdf	PKiKP	06 25 08.5	+0.3
TOC1	Torodi Ar. Sit	118.09	315	PFAKE		06 25 20.0	+11
TOC1				LR	LR		
	comp=Z,600nm,18.0s						
TOB2	Torodi Ar. Sit	118.10	315	PFAKE		06 25 20.0	+11
TOB2				LR	LR		
	comp=Z,900nm,20.0s						
TOC3	Torodi Ar. Sit	118.11	315	PFAKE		06 25 20.0	+11
TOC3				LR	LR		
	comp=Z,400nm,20.0s						
TOC7	Torodi Ar. Sit	118.11	315	PFAKE		06 25 20.0	+11
TOC7				LR	LR		
	comp=Z,500nm,18.0s						
TORD	Torodi Ar. Bea	118.11	315	PKP	PKPdf	06 25 08.0	-0.8
	comp=Z,1.4nm,0.6s,baz=11,slow=1.9,SNR=6.6						
TOA3	Torodi Ar. Sit	118.12	315	PFAKE		06 25 20.0	+11
TOA3				LR	LR		
	comp=Z,400nm,20.0s						
MAW	Mawson	118.92	205	PKP	PKiKP	06 25 08.8	+0.2
	comp=Z,2.1nm,0.5s,baz=302,slow=3.4,SNR=5.8						
MAW	Mawson	118.92	205	*e*PKPdf	PKiKP	06 25 09.5	+0.9
SMRT	St. Maarten	121.14	28	PFAKE		06 25 30.0	+15
SMRT				LR	LR		
	comp=Z,500nm,18.0s						
ZARC	Zaragoza, Cauc	124.57	46	*e*P	PKiKP	06 25 21.8	+0.2
LBTB	Lobatse	124.81	263	*e*PKPdf	PKPdf	06 25 21.5	+0.1
LBTB	Lobatse	124.81	263	*e*PKIKP	PKPdf	06 25 21.5	+0.1
OCAC	Ocana	124.84	44	*e*P	PKPdf	06 25 22.1	+0.2
PTBC	PUERTO BERRIO,	125.57	46	*e*P	PKPdf	06 25 22.4	-0.8
QSPA	South Pole Qui	125.95	180	*e*PKPdf	PKPdf	06 25 22.0	-0.3
GUY2C	Guyana, Caldas	126.08	48	*e*P	PKPdf	06 25 24.5	-0.3
NORC	Norcasia	126.11	47	*e*P	PKPdf	06 25 23.8	-0.5
SOCV	Socops	126.16	41	*e*P	PKPdf	06 25 23.8	-0.5
YOTC	Yotoco, Valle	126.46	50	*e*P	PKPdf	06 25 25.1	+0.1
SPBC	San Pablo de B	126.51	46	*e*P	PKPdf	06 25 24.7	-0.4
BOSA	Boshof	126.70	259	PKP	PKPdf	06 25 25.2	+0.2
	comp=Z,10nm,0.8s,baz=16,slow=3.3,SNR=13						
BOSA	Boshof	126.70	259	*e*PKPdf	PKPdf	06 25 24.6	-0.4
BOSA	Boshof	126.70	259	*e*PKIKP	PKPdf	06 25 24.6	-0.4
RUSC	La Rusia	126.89	45	*e*P	PKPdf	06 25 25.8	-0.4
ROSC	El Rosal	127.01	47	PKP	PKPdf	06 25 26.7	+0.3
	comp=Z,6.0nm,0.5s,baz=285,slow=23,SNR=5.3						
ROSC	El Rosal	127.01	47	*e*PKPdf	PKiKP	06 25 27.3	+0.4
ROSC				LR	LR		
	comp=Z,200nm,18.0s						
DBIC	Dimbokro	127.08	317	PKP	PKiKP	06 25 26.6	+0.1
	comp=Z,4.4nm,0.6s,baz=16,slow=2.3,SNR=7.0						
ORTC	Ortega, Tolima	127.19	49	*e*P	PKPdf	06 25 25.5	-0.8
PRAC	Prado	127.56	49	*e*P	PKPdf	06 25 26.7	-0.3
SYO	Syowa Base	127.60	206	⇑*i*X	PKPdf	06 25 24.0	-1.2
SYO	Syowa Base	127.60	206	⇑*e*pPKPdf	pPKPdf	06 25 32.0	+0.6
VILC	Villavicencio,	127.97	47	*e*P	PKPdf	06 25 27.1	-0.8
PTGA	Pitinga	139.35	35	*e*PKPdf	PKPdf	06 25 48.8	-0.3
SNAA	Sanae	140.04	197	P	PKPdf	06 25 41.2	-7.4
SNAA	Sanae	140.04	197	PKhKP	PKPpre	06 25 38.8	
	comp=Z,3.3nm,0.8s,baz=200,slow=3.3,SNR=14						
SNAA				PKP	PKiKP	06 25 50.1	-1.0
	comp=Z,9.2nm,0.8s,baz=145,slow=0.3,SNR=17						
SNAA	Sanae	140.04	197	*e*PKPpre	PKPpre	06 25 38.8	
SNAA				*e*PKPdf	PKPdf	06 25 48.5	-0.2
VNA3	Neumayer Olymp	141.84	194	P	PKPdf	06 25 45.6	-6.2
VNA1	Neumayer--Stat	142.00	196	P	PKPdf	06 25 47.4	-4.7
LPAZ	La Paz	146.85	61	PKPbc	PKPbc	06 26 04.4	-0.3
	comp=Z,20nm,0.6s,baz=326,slow=2.2,SNR=98						
LPAZ	La Paz	146.85	61	*e*PKPdf	PKPdf	06 26 03.7	+0.8
LPAZ	La Paz	146.85	61	*e*PKP2	PKPdf	06 26 03.7	+0.8
PMSA	Palmer Station	147.50	160	PKPbc	PKPbc	06 26 03.2	-1.1
	comp=Z,11nm,0.9s,baz=223,slow=5.3,SNR=3.0						
MNMC	Minye Minye	147.62	67	*e*PKPbc	PKPbc	06 26 06.6	+0.2
PB11	IPOC Station P	147.96	68	*e*PKPdf	PKPdf	06 26 03.6	-0.5
PB11				*e*PKPbc	PKPbc	06 26 07.3	+0.1
GO01	Chusmiza	148.25	67	*e*PKPdf	PKPdf	06 26 05.4	+0.4
GO01				*e*PKPbc	PKPbc	06 26 08.8	+0.5
PB01	IPOC Station P	148.85	70	*e*PKPdf	PKPdf	06 26 06.1	+0.7
LVC	Limon Verde	150.18	71	*e*PKPbc	PKiKP	06 26 13.5	-0.3
LVC	Limon Verde	150.18	71	*e*PKIKP	PKiKP	06 26 13.5	-0.3
GO02	Mina Guanaco	150.99	77	*e*PKPbc	PKPbc	06 26 14.8	+0.1
GO03	Copiap	151.61	82	*e*PKPbc	PKPbc	06 26 15.8	0.0
LCO	Las Campanas	151.82	85	*e*PKPbc	PKPbc	06 26 16.4	-0.1
LCO	Las Campanas	151.82	85	*e*PKIKP	PKPbc	06 26 16.4	-0.1
BDFB	Brasilia	157.74	26	PKPab	PKPab	06 26 50.5	-0.2
	comp=Z,5.0nm,0.7s,baz=251,slow=8.2,SNR=8.0						

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*ISCJB **20** 06:10:53.0±0.4, 17°.20S±0°.03×168°.23E±0°.09, h33^{km}, mb4.6/30, MS3.1/2, Error ellipse: s-maj=11.9km s-min=4.9km az=2.3*

*NEIC **20** 06:10:56.7±2.9, 17°.14S×168°.35E, h56^{km}±5^{km}, mb4.5/20, Error ellipse: s-maj=18.1km s-min=9.7km az=80.0*

*IDC **20** 06:10:58.8±4.1, 17°.24S×168°.41E, h75^{km}±36^{km}, mb4.0/12, mb1 4.1/13, mb1mx3.8/38, mbtmp4.3/13, ML5.0/1, MS3.2/3, Ms1 3.2/3, ms1mx3.1/21, Error ellipse: s-maj=26.9km s-min=18.3km az=77.0*

ISC 20 06:10:54.4±0.6**, 17°.15S**±0°.06×**168°.4E**±0°.1**, h35^{km}, n51, σ1^s.66**/53**, mb4.5**/30**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.32	185	*e*Pn	Pn	06 11 58.5	+0.8
MARNC				*e*Sn	Sn	06 12 43.7	-3.2
DZM	Mont Dzumac	5.23	200	P	Pn	06 12 12.6	+2.3
	59nm,0.3s,baz=62,slow=8.9,SNR=437						
DZM				S	Sn	06 13 06.2	-3.2
	49nm,0.3s,baz=145,slow=23,SNR=29						
DZM	Mont Dzumac	5.23	200	*e*Pn	Pn	06 12 12.5	+2.2
DZM				*e*Sn	Sn	06 13 06.0	-3.5
ONTNC	Ouen Toro	5.45	199	*e*Pn	Pn	06 12 15.9	+2.7
ONTNC				*e*Sn	Sn	06 13 12.9	-1.8
PINNC	Pines Island,	5.51	189	*e*Pn	Pn	06 12 17.5	+3.5
PINNC				*e*Sn	Sn	06 13 15.2	-0.9
HNR	Honiara	11.25	312	LR	LR	06 17 47.9	
	comp=Z,72nm,19.1s,baz=82,slow=36						
OUZ	Omahuta	18.58	167	*e*P	Pn	06 15 11.3	+2.4
	12nm,0.9s						
CTA	Charters Tower	21.19	259	P	P	06 15 37.8	+0.7
	6.6nm,0.8s,baz=89,slow=12,SNR=11						
CTAO	Charters Tower	21.19	259	*e*P	P	06 15 37.5	+0.4
	8.0nm,0.8s						
MXZ	Matakaoa Point	22.12	159	*e*P	P	06 15 49.7	+2.8
	26nm,1.4s						
URZ	Urewera	22.37	162	P	P	06 15 51.1	+1.5
	5.8nm,0.6s,baz=12,slow=2.9,SNR=15						
URZ				LR	LR	06 21 59.9	
	comp=Z,53nm,20.5s,baz=339,slow=30						
URZ	Urewera	22.37	162	*e*P	P	06 15 51.6	+2.0
	6.9nm,0.6s						
BKZ	Black Stump Fm	23.04	164	*e*P	P	06 15 57.9	+1.2
	16nm,0.6s						
BFZ	Birch Farm	24.41	165	*e*P	P	06 16 10.3	+0.7
	13nm,0.8s						
KHZ	Kahutara	25.56	171	*e*P	P	06 16 20.2	+0.2
	29nm,1.2s						
LTZ	Lake Taylor	25.76	173	*e*P	P	06 16 22.3	+0.4
	23nm,1.3s						
RPZ	Rata Peaks	26.57	176	LR	LR	06 24 44.2	
	comp=Z,99nm,20.3s,baz=10,slow=31						
STKA	Stephens Creek	28.36	234	P	P	06 16 46.1	+0.8
	3.1nm,0.7s,baz=70,slow=8.7,SNR=3.2						
STKA	Stephens Creek	28.36	234	*e*P	P	06 16 45.7	+0.3
	2.0nm,1.1s						
AS31	Alice Springs	32.92	253	*e*P	P	06 17 24.1	-1.7
	4.1nm,0.8s						
ASAR	Alice Springs	32.92	253	P	P	06 17 26.0	+0.2
	2.8nm,0.5s,baz=83,slow=9.0,SNR=4.6						
KSM	Kuching	60.16	282	*e*P	P	06 20 58.6	-0.6
	19nm,0.7s						
VNDA	Vanda	60.48	182	P	P	06 20 59.3	-1.0
	0.4nm,0.7s,baz=333,slow=7.3,SNR=2.9						
VNDA	Vanda	60.48	182	*e*P	P	06 20 59.8	-0.6
	2.7nm,1.3s						
SBA	Scott Base	60.73	180	*e*P	P	06 21 02.6	+0.5
	3.0nm,0.8s						
NJ2	Nanjing	68.17	316	*e*P	P	06 21 52.8	+1.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PEA0B	Petropavlovsk-	70.58	353	*e*P	P	06 22 07.1	+1.3
	comp=Z,33nm,1.5s						
PETK	Petropavlovsk-	70.58	353	P	P	06 22 06.7	+1.0
	comp=Z,5.6nm,0.7s,baz=137,slow=8.0,SNR=11						
PEA1	Petropavlovsk-	70.58	353	*e*P	P	06 22 06.7	+0.9
QSPA	South Pole Qui	72.89	180	*e*P	P	06 22 19.3	-0.6
	comp=Z,4.3nm,0.9s						
KMI	Kunming	76.50	302	P	P	06 22 42.1	+0.6
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
CMAR	Chiang Mai Arr	76.93	294	P	P	06 22 44.2	+0.4
	comp=Z,0.9nm,0.3s,baz=113,slow=4.4,SNR=4.3						
HHC	Hu-ho-hao-te	78.13	320	P	P	06 22 49.1	-1.1
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,71nm,8.9s						
MAW	Mawson	80.06	202	P	P	06 22 59.8	-0.4
	comp=Z,1.1nm,0.5s,baz=37,slow=5.1,SNR=2.8						
LZH	Lanzhou	80.75	312	*e*P	P	06 23 05.8	+1.2
LZH				pP	sP	06 23 23.3	+3.9
LZH				sP	pP	06 23 30.1	+15
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
SEY	Seymchan	80.81	353	P	P	06 23 04.3	+0.3
	comp=Z,3.9nm,0.8s,baz=149,slow=7.1,SNR=8.3						
RC01	Rabbit Creek A	84.84	19	*e*P	P	06 23 21.1	-4.0
	comp=Z,5.4nm,0.9s						
SONA0	Songino Array	85.08	323	*e*P	P	06 23 26.6	-0.1
SONM	Songino Array	85.08	323	P	P	06 23 26.6	-0.1
	comp=Z,3.0nm,0.8s,baz=143,slow=4.7,SNR=9.2						
RND	Reindeer	86.89	18	*e*P	P	06 23 34.6	-0.7
	comp=Z,12nm,1.4s						
COR	Corvallis	87.27	42	*e*P	P	06 23 36.0	-1.4
	comp=Z,26nm,1.1s						
ILAR	Eielson Array	88.49	18	P	P	06 23 41.9	-0.9
	comp=Z,0.7nm,0.6s,baz=229,slow=5.4,SNR=8.7						
ILB	Eielson Array	88.49	18	*e*P	P	06 23 41.1	-1.6
	comp=Z,1.2nm,0.8s						
SNAA	Sanae	91.20	183	P	P	06 23 54.2	-1.4
SNAA	Sanae	91.20	183	P	P	06 23 54.1	-1.6
	comp=Z,2.0nm,1.0s,baz=207,slow=7.3,SNR=11						
SNAA	Sanae	91.20	183	*e*P	P	06 23 54.5	-1.2
	comp=Z,1.9nm,0.9s						
VNA3	Neumayer Olymp	91.82	181	P	P	06 23 56.9	-1.6
VNA1	Neumayer--Stat	92.40	181	P	P	06 23 59.7	-1.4
VNA1	Neumayer--Stat	92.40	181	PKiKP	PKiKP	06 29 02.3	+12
WMQ	Urumqi	95.19	314	*e*P	P	06 24 13.8	-0.7
WMQ				pP	sP	06 24 29.0	-0.5
WMQ				pmax	pmax		
	comp=Z,58nm,0.7s						
FUORN	Ofenpass-Fuorn	145.48	333	*e*PKPdf	PKPab	06 30 29.6	0.0

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*JMA **20** 06:16:14.3±0.2, 36°.25N×141°.87E, h36^{km}, M4.1*

*ISCJB **20** 06:16:15.4±0.9, 36°.22N±0°.04×141°.82E±0°.08, h40^{km}±9^{km}, mb3.7/8, Error ellipse: s-maj=10.3km s-min=6.8km az=175.9*

*IDC **20** 06:16:17.4±4.3, 36°.16N×141°.76E, h40^{km}±35^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.6/39, mbtmp3.8/11, ML3.1/3, Error ellipse: s-maj=37.5km s-min=16.8km az=74.0*

ISC 20 06:16:15.5±3.0**, 36°.22N**±0°.04×**141°.80E**±0°.08**, h23^{km}**±21^{km}**, n32, σ0^s.88**/34**, mb3.9**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.92	236	P	Pn	06 16 32.0	-0.9
CHOJ				S	Sn	06 16 45.5	+0.1
JHYU	Hitachinakayam	0.99	277	P	Pn	06 16 32.9	-1.0
JHYU				S	Sn	06 16 46.6	-0.5
JIHU	Itakohorinouch	1.06	257	P	Pn	06 16 34.6	-0.3
JIHU				S	Sn	06 16 49.2	+0.3
JHO	Hitachi	1.07	292	P	Pn	06 16 33.7	-1.3
ONAJ	Iwakimizuishiy	1.19	318	P	Pn	06 16 35.8	-1.0
JSMT	Sammumatsuo	1.24	243	P	Pn	06 16 37.6	+0.3
JYT	Yasato	1.30	271	P	Pn	06 16 37.3	-0.8
JYT				*e*S	Sn	06 16 54.1	-0.6
JFK	Kawauchi	1.36	327	P	Pn	06 16 38.2	-0.9
BSO1	Boso 1	1.70	203	P	Pn	06 16 43.5	+0.3
BSO1				*e*S	Sn	06 17 05.4	+1.5
JFT	Otama	1.75	318	P	Pn	06 16 44.5	+0.1
BSO3	Boso 3	1.76	217	P	Pn	06 16 44.2	-0.1
JMM	Marumori	1.83	334	P	Pn	06 16 45.2	-0.3
JAG	Ashikaga	1.91	277	P	Pn	06 16 45.9	-0.6
MJAR	Matsushiro Arr	2.91	277	Pn	Pn	06 17 00.6	+0.2
	4.2nm,0.3s,baz=122,slow=7.7,SNR=109						
MJAR				Sn	Sn	06 17 34.5	-0.2
	1.7nm,0.3s,baz=120,slow=14,SNR=4.9						
MAT	Matsushiro	2.92	277	P	Pn	06 17 01.4	+1.0
MAT				S	Sn	06 17 34.8	+0.1
JHJ	Hachijo jima 2	3.51	209	Pn	Pn	06 17 07.9	-0.7
	22nm,0.3s,baz=300,slow=21,SNR=16						
JHJ				Sn	Sn	06 17 46.9	-2.4
	42nm,0.3s,baz=255,slow=23,SNR=6.2						
USRK	Ussuriysk Ar.	10.94	320	Pn	Pn	06 18 52.1	+1.7
	0.2nm,0.3s,baz=133,slow=13,SNR=3.2						
H11N2	WAKE ISLAND Hy	27.47	120	T	T	06 51 05.1	
	baz=313						
H11N1	WAKE ISLAND Hy	27.48	120	T	T	06 51 17.9	
	baz=313						
H11N3	WAKE ISLAND Hy	27.49	120	T	T	06 51 17.4	
	baz=313						
H11S1	WAKE ISLAND Hy	28.16	122	T	T	06 52 21.9	
	baz=314,slow=75,SNR=9.0						
H11S3	WAKE ISLAND Hy	28.16	122	T	T	06 52 11.9	
	baz=314,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	28.18	122	T	T	06 52 23.8	
	baz=314,slow=75,SNR=7.0						
SONM	Songino Array	28.50	305	P	P	06 22 09.3	+0.3
	1.8nm,0.6s,baz=109,slow=9.4,SNR=6.0						
ZALV	Zalesovo Beam	42.69	313	P	P	06 24 09.5	-0.8
	1.0nm,0.4s,baz=85,slow=6.5,SNR=2.9						
MKAR	Makanchi Array	44.82	303	P	P	06 24 27.5	0.0
	0.8nm,0.6s,baz=88,slow=8.8,SNR=5.7						
WRA	Warramunga Arr	56.30	188	P	P	06 25 53.1	-1.2
	1.7nm,0.9s,baz=1.9,slow=6.8,SNR=2.5						
ASAR	Alice Springs	60.03	188	P	P	06 26 20.6	+0.2
	0.4nm,0.9s,baz=21,slow=11,SNR=2.5						
NOA	NORSAR Array B	75.06	338	P	P	06 27 55.3	+0.3
	0.4nm,0.7s,baz=51,slow=5.7,SNR=2.4						
AKASG	Malin Array Be	75.13	323	P	P	06 27 55.0	-0.5
	0.5nm,0.4s,baz=46,slow=6.7,SNR=4.3						
PDAR	Pinedale Array	78.02	46	P	P	06 28 12.2	-0.1
	0.2nm,0.3s,baz=251,slow=2.8,SNR=3.8						
VOIR		80.71	320	S	S	06 38 33.9	+0.9

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*NNC **20** 06:22:58.9±2.3, 36°.84N×71°.04E, h140^{km}±53^{km}, mb2.9, mpv3.6, Error ellipse: s-maj=21.6km s-min=17.2km az=169.0*

ISC 20 06:22:52.3±3.4**, 36°.4N**±0°.2×**71°.4E**±0°.1**, h100^{km}, n5, σ2^s.93**/9**, 5C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	4.78	48	Pn	Pn	06 24 02.9	+0.9
KSH				Sn	Sn	06 24 51.8	-4.5
KSH				smax	smax		
	comp=N,300nm,0.5s						
KSH				smax	smax		
	comp=E,160nm,0.2s						
AAK	Ala-Archa	6.67	20	⇑P	Pn	06 24 30.6	+2.9
	comp=E,3.0nm,0.5s						
AAK				⇑S	Sn	06 25 42.5	+0.3
	comp=E,4.4nm,0.4s						
KK31	Karatay Array	6.71	355	P	Pn	06 24 29.3	+1.1
	comp=E,1.5nm,0.2s,baz=178,slow=12,SNR=91						
KK31				S	Sn	06 25 40.0	-3.1
	comp=E,3.8nm,0.4s,baz=188,slow=25,SNR=7.8						
TKM2	Tokmak 2	7.27	25	⇑P	Pn	06 24 38.6	+2.7
	comp=E,1.5nm,0.5s						
TKM2				⇑S	Sn	06 25 58.2	+1.3
	comp=E,2.8nm,0.9s						
AB31	Akbulak array	15.30	331	⇑P	Pn	06 26 21.1	-1.5
	comp=E,0.5nm,0.4s,baz=74,slow=8.7,SNR=14						

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*KRNET **20** 06:40:20.3±0.1, 41°.54N×70°.65E, h35^{km}, mb2.4*

*NNC **20** 06:40:22.1±3.6, 41°.18N×71°.05E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=29.3km s-min=11.6km az=10.0*

ISC 20 06:40:24.2±1.3**, 41°.34N**±0°.04×**71°.03E**±0°.04**, h13^{km}**±11^{km}**, n11, σ1^s.18**/20**, 13C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.84	57	⇑*i*P	Pg	06 40 39.6	-0.8
	baz=76						
ARK				⇑*i*S	Sn	06 40 53.3	-0.8
	baz=76						
IUG	Iuzhnay	1.10	317	P	Pn	06 40 45.4	-0.1
	1.0nm,0.2s						
IUG				S	Sn	06 41 01.4	+0.8
	13nm,0.5s						
BTK	Batken	1.29	187	⇑*i*P	Pn	06 40 47.0	-1.1
	baz=75						
BTK				⇑*i*S	Sg	06 41 07.3	+1.4
	baz=75						
ARSB	Arslanbob	1.47	90	⇓*i*P	Pn	06 40 50.8	+0.2
	baz=96						
ARSB				⇓*i*S	Sg	06 41 12.8	+1.2
	baz=96						
KK31	Karatay Array	1.80	348	⇑P	Pg	06 40 57.1	-1.8
	1.7nm,0.3s,baz=152,slow=14,SNR=51						
KK31				S	Sg	06 41 24.3	+2.1
	7.9nm,0.6s,baz=153,slow=26,SNR=17						
MRKS	Merke	2.15	49	Pg	Pb	06 41 03.4	+0.2
	3.0nm,0.4s						
MRKS				Lg	Lg	06 41 32.8	
	3.5nm,0.4s						
EKS2	Erkin-Say	2.44	56	⇑*i*P	Pn	06 41 02.5	-1.4
	baz=63						
EKS2				⇑*i*S	Sn	06 41 33.7	+0.1
	baz=63						
UCH	Uchtor	2.75	70	⇑*i*P	Pn	06 41 07.5	-1.0
	baz=75						
UCH				⇑*i*S	Sn	06 41 43.0	+1.1
	baz=75						
AAK	Ala-Archa	2.89	62	⇑*i*P	Pn	06 41 09.0	-1.1
	baz=68						
AAK				⇑*i*S	Sn	06 41 45.0	+0.1
	baz=68						
KZA	Kyzart	3.24	76	⇑*i*P	Pn	06 41 14.8	-0.5
	baz=80						
KZA				⇑*i*S	Sn	06 41 55.1	+1.1
	baz=80						
SGDS	Sogindy	3.40	50	Pg	Pb	06 41 25.4	+1.0
	1.1nm,0.3s						
SGDS				Lg	Lg	06 42 10.3	
	1.6nm,0.4s						

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*GEN **20** 07:00:03.4, 44°.18N×10°.19E, h4^{km}, Ml0.5*

ROM 20 07:00:03.0±0.1**, 44°.183N**±0°.004×**10°.187E**±0°.006**, h6^{km}, ML1.0**/4**, Error ellipse: s-maj=0.5km s-min=0.4km az=35.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0912	Minucciano (LU	0.02	132	P	Pg	07 00 04.5	+0.2
T0912				S	Sg	07 00 05.2	0.0
T0912				AML	AML		
	comp=E,1390µm,0.3s						
T0912				AML	AML		
	comp=N,2110µm,0.8s						
T0912				AML	AML		
	comp=N,2110µm,0.8s						
T0912				AML	AML		
	comp=E,1390µm,0.3s						
T0912				AML	AML		
	comp=N,2110µm,0.8s						
T0912				AML	AML		
	comp=E,1390µm,0.3s						
EQUI	Equi	0.03	235	P	Pg	07 00 04.5	+0.2
EQUI				S	Sg	07 00 05.1	-0.1
EQUI	Equi	0.03	235	P	Pg	07 00 04.5	+0.2
EQUI				S	Sg	07 00 05.3	+0.1
EQUI				AML	AML		
	comp=E,404µm,0.1s						
EQUI				AML	AML		
	comp=N,438µm,0.3s						
EQUI				AML	AML		
	comp=N,438µm,0.3s						
EQUI				AML	AML		
	comp=E,404µm,0.1s						
EQUI				AML	AML		
	comp=N,438µm,0.3s						
EQUI				AML	AML		
	comp=E,404µm,0.1s						
FIVI	Fivizzano	0.07	323	P	Pg	07 00 05.2	+0.4
FIVI				S	Sg	07 00 06.6	+0.6
T0911	Castelpoggio (	0.11	229	P	Pg	07 00 05.8	+0.4
T0911				S	Sg	07 00 07.8	+0.8
T0911				AML	AML		
	comp=E,437µm,1.4s						
T0911				AML	AML		
	comp=N,240µm,1.6s						
T0911				AML	AML		
	comp=N,240µm,1.6s						
T0911				AML	AML		
	comp=E,437µm,1.4s						
T0911				AML	AML		
	comp=N,240µm,1.6s						
T0911				AML	AML		
	comp=E,437µm,1.4s						
VLC	Villacollemand	0.15	99	P	Pg	07 00 06.7	+0.7
VLC				S	Sg	07 00 09.2	+1.1
VLC				AML	AML		
	comp=E,38µm,0.4s						
VLC				AML	AML		
	comp=N,89µm,0.1s						
VLC				AML	AML		
	comp=E,38µm,0.4s						
VLC				AML	AML		
	comp=N,89µm,0.1s						
VLC				AML	AML		
	comp=E,38µm,0.4s						
VLC				AML	AML		
	comp=N,89µm,0.1s						
SARO	Sassorosso	0.15	90	P	Pg	07 00 06.9	+0.7
SARO				S	Sg	07 00 09.4	+1.0
CARD	Cardoso	0.26	126	P	Pb	07 00 09.7	-0.5
CARD				S	Sg	07 00 12.8	+1.1
GRAM	Graiana	0.32	344	P	Pg	07 00 10.0	+0.7
GRAM				S	Sb	07 00 15.3	-1.3
MAIM	Mastiano	0.35	141	P	Pg	07 00 10.0	+0.3
MAIM				S	Sg	07 00 15.2	+0.8
POPM	Popiglio	0.43	108	P	Pg	07 00 11.6	+0.2
POPM				S	Sg	07 00 18.4	+1.3
POPM	Popiglio	0.43	108	P	Pg	07 00 12.0	+0.6
POPM				AML	AML		
	comp=E,19µm,0.4s						
POPM				AML	AML		
	comp=N,29µm,0.3s						
POPM				AML	AML		
	comp=N,29µm,0.3s						
POPM				AML	AML		
	comp=E,19µm,0.4s						
POPM				AML	AML		
	comp=N,29µm,0.3s						
POPM				AML	AML		
	comp=E,19µm,0.4s						
ZCCA	Zocca	0.59	73	AML	AML		
	comp=E,47µm,1.1s						
ZCCA				AML	AML		
	comp=E,47µm,1.1s						
ZCCA				AML	AML		
	comp=N,55µm,0.1s						
ZCCA				AML	AML		
	comp=N,55µm,0.1s						
ZCCA				AML	AML		
	comp=N,55µm,0.1s						
ZCCA				AML	AML		
	comp=E,47µm,1.1s						

MEX 20 07:00:14.3±0.8**, 15°.65N**×**96°.51W, h17^{km}**±153^{km}**, MD4.0, Near coast of Oaxaca**

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

HUIG	**Huatulco**	**0.40**	**73**	*e*P	Pg	07 00 21.2	-1.3
HUIG				*e*S	Sg	07 00 27.1	-1.1
VHO	**Vista Hermosa**	**1.43**	**351**	*i* P	Pn	07 00 36.1	-3.6
VHO				*e*S	Sn	07 00 52.9	-5.3
CMIG	**Matias Romero**	**2.12**	**47**	*e*P	Pn	07 00 45.3	-3.6

ZUR 20 07:01:30.1, 47°.42N×9°.32E, h4^{km}, MLh0.7/4, 3C-1D, Error ellipse: s-maj=1.5km s-min=0.8km az=77.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGT01	**Gaiserwald**	**0.01**	**334**	Pg	Pg	07 01 31.2	+0.2
SGT01				Sg	Sg	07 01 32.1	+0.4
SGT00	**Sennhlsen**	**0.01**	**273**	⇑Pg	Pg	07 01 31.1	+0.1
SGT00				Sg	Sg	07 01 31.8	+0.2
SGT04	**Schlatt-Haslen**	**0.08**	**167**	⇓Pg	Pg	07 01 32.4	+0.6
SGT04				Sg	Sg	07 01 34.3	+1.4
SGT05	**Eggersriet**	**0.09**	**78**	⇑Pg	Pg	07 01 32.6	+0.5
SGT03	**Degersheim**	**0.10**	**236**	⇑Pg	Pg	07 01 32.7	+0.4
SGT03				Sg	Sg	07 01 34.7	+1.0
SGT02	**Zihlschlacht**	**0.10**	**330**	Pg	Pg	07 01 32.7	+0.5

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*ISCJB **20** 07:03:24.5±0.6, 43°.97N±0°.08×84°.54E±0°.05, h10^{km}, Error ellipse: s-maj=11.0km s-min=4.7km az=179.0*
*BJI **20** 07:03:31.5±0.0, 44°.16N×84°.69E, h11^{km}, ML3.4/4, Ms3.3/1, Ms7 3.1/1*
*NNC **20** 07:03:32.3±1.5, 44°.18N×84°.50E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=12.5km s-min=5.9km az=127.0*
ISC 20 07:03:30.8±1.0, **44°.12N**±0°.07×**84°.71E**±0°.04, **h10^{km}, n23, σ2^s.50**/22, **6C-9D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.17**	**97**	Pg	**Pb**	**07 04 10.3**	**0.0**
WMQ				Sg	**Sb**	**07 04 40.3**	**+3.0**
MK31	**Makanchi Array**	**3.17**	**328**	⇓Pn	**Pn**	**07 04 21.2**	**+0.3**
	0.4nm,0.2s,baz=144,slow=9.9,SNR=326						
MK31				Pg	**Pb**	**07 04 28.9**	**+1.6**
	13nm,0.5s,baz=149,slow=16,SNR=87						
MK31				⇓Lg	Lg	07 05 09.6	
	38nm,0.3s,baz=142,slow=29,SNR=14						
KTMS	**Ketmen**	**3.23**	**260**	Pg	**Pb**	**07 04 26.9**	**-1.4**
	13nm,0.3s						
KTMS				Lg	Lg	07 05 06.4	
	67nm,0.3s						
MAKZ	**Makanchi**	**3.31**	**325**	⇓Pn	**Pn**	**07 04 23.0**	**+0.3**
	1.5nm,0.4s						
MAKZ				⇑Pg	**Pb**	**07 04 31.0**	**+1.4**
	17nm,0.5s						
MAKZ				⇑Lg	Lg	07 05 13.3	
	72nm,0.7s						
DJR	**Jarkent**	**3.54**	**275**	Pg	**Pb**	**07 04 34.1**	**+0.4**
	20nm,0.6s						
DJR				Lg	Lg	07 05 18.6	
	70nm,0.5s						
PDGK	**Podgornoye**	**3.87**	**260**	Pg	**Pb**	**07 04 40.2**	**+1.0**
	3.8nm,0.3s						
PDGK				Lg	Lg	07 05 28.6	
	23nm,0.4s						
PDGK	**Podgornoye**	**3.87**	**260**	⇓Pn	**Pn**	**07 04 31.5**	**+1.0**
	1.1nm,0.3s						
PDGK				⇑Pg	**Pb**	**07 04 41.3**	**+2.1**
	5.1nm,0.4s						
PDGK				⇓Lg	Lg	07 05 34.2	
	40nm,0.6s						
MNBS	**Baschi**	**4.55**	**272**	Pg	**Pb**	**07 04 52.2**	**+1.4**
	8.1nm,0.3s						
MNBS				Lg	Lg	07 05 50.1	
	54nm,0.3s						
TDK	**Taldyqorghan**	**4.59**	**283**	Pg	**Pb**	**07 04 55.0**	**+3.5**
	84nm,0.4s						
TDK				Lg	Lg	07 05 54.8	
	168nm,0.6s						
SATY	**Saty**	**4.70**	**259**	Pg	**Pb**	**07 04 55.8**	**+2.4**
	10nm,0.1s						
SATY				Lg	Lg	07 05 56.0	
	48nm,0.4s						
KURS	**Kuram**	**4.78**	**265**	Pg	**Pb**	**07 04 57.8**	**+3.2**
	6.9nm,0.7s						
KURS				Lg	Lg	07 05 59.4	
	18nm,0.8s						
ARXS	**Arharly**	**4.96**	**274**	Pg	**Pb**	**07 04 59.8**	**+2.1**
	4.0nm,0.2s						
ARXS				Lg	Lg	07 06 03.1	
	60nm,0.5s						
KOTS	**Kotyrbulak**	**5.58**	**264**	Pg	**Pb**	**07 05 11.1**	**+2.6**
	4.8nm,0.4s						
KOTS				Lg	Lg	07 06 22.2	
	43nm,0.3s						
MDOK	**Medeo**	**5.64**	**263**	Pg	**Pb**	**07 05 13.5**	**+4.1**
	4.2nm,0.5s						
MDOK				Lg	Lg	07 06 26.2	
	15nm,0.7s						
TNSS	**Tian-Shan**	**5.74**	**262**	Pg	**Pg**	**07 05 17.1**	**-3.7**
	5.0nm,0.3s						
TNSS				Lg	Lg	07 06 32.5	
	14nm,0.4s						
KTBS	**Karatobe**	**5.82**	**269**	Pg	**Pb**	**07 05 15.3**	**+3.0**
	3.3nm,0.6s						
KTBS				Lg	Lg	07 06 29.5	
	38nm,0.3s						
KUU	**Kurty**	**6.04**	**271**	Pg	**Pg**	**07 05 22.6**	**-3.9**
	3.1nm,0.4s						
KUU				Lg	Lg	07 06 42.1	
	19nm,0.7s						
TKM2	**Tokmak 2**	**6.74**	**263**	⇓Lg	Lg	07 07 06.6	
	6.9nm,0.6s						
KURBB	**Kurchatov Arra**	**7.74**	**329**	⇓Pn	**Pn**	**07 05 22.7**	**-0.8**
	1.7nm,0.3s						
KURBB				⇑Lg	Lg	07 07 33.7	
	64nm,0.7s						
KURK	**Kurchatov**	**7.79**	**330**	⇓Lg	Lg	07 07 33.7	
OTUK	**Ortayu**	**9.52**	**300**	⇑Lg	Lg	07 08 29.0	
	9.0nm,0.7s						
ZAA0	**Zalesovo Array**	**9.84**	**0**	⇑Lg	Lg	07 08 38.5	
	0.9nm,0.8s						
KK31	**Karatay Array**	**10.35**	**269**	⇓Lg	Lg	07 09 03.1	
	0.3nm,0.4s,baz=226,slow=46,SNR=2.6						

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*ISCJB **20** 07:07:23.1±0.4, 60°.86N±0°.03×147°.49W±0°.04, h27^{km}±3^{km}, mb3.8/1, Error ellipse: s-maj=4.5km s-min=3.1km az=11.7*
*IDC **20** 07:07:23.5±1.2, 61°.02N×148°.02W, h0^{km}, mb3.6/1, mb1 3.6/5, mb1mx3.3/37, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=24.9km s-min=9.6km az=116.0*
*NEIC **20** 07:07:24.4±0.0, 60°.89N×147°.48W, h15^{km}, ML3.4(AEIC), After AEIC.*
ISC 20 07:07:22.4±1.2, **60°.85N**±0°.03×**147°.49W**±0°.02, **h15^{km}**±9^{km}, **n62, σ1^s.21**/79, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLI	**Glacier Island**	**0.19**	**81**	*e*Pg	**Pb**	**07 07 29.1**	**+1.3**
GLI				*e*Sg	**Sb**	**07 07 33.5**	**+2.2**
JPK	**Jack Peak**	**0.48**	**64**	*e*Pg	**Pb**	**07 07 32.7**	**0.0**
JPK				*e*Sg	**Sb**	**07 07 39.9**	**+0.3**
FID	**Port Fidalgo**	**0.50**	**101**	*e*Pg	**Pb**	**07 07 32.6**	**-0.5**
FID				*e*Pg	**Pg**	**07 07 32.7**	**+0.3**
FID				*e*Sg	**Sb**	**07 07 40.0**	**-0.2**
VMT	**TAPS Tl Valdez**	**0.59**	**66**	*e*Sg	**Sb**	**07 07 42.5**	**-0.2**
KNK	**Knik Glacier**	**0.73**	**321**	*e*Pg	**Pb**	**07 07 37.3**	**+0.3**
KNK				*e*Sg	**Sb**	**07 07 47.3**	**+0.4**
EYAK	**Cordova Ski Ar**	**0.91**	**109**	*e*Pg	**Pn**	**07 07 40.3**	**-0.4**
EYAK				*e*Sn	**Sn**	**07 07 54.4**	**+0.9**
SCM	**Sheep Creek Mo**	**0.99**	**4**	*e*Pg	**Pb**	**07 07 40.8**	**-0.5**
SML	**Sawmill**	**1.04**	**337**	*e*Pg	**Pb**	**07 07 42.0**	**-0.3**
SML				*e*Sg	**Sg**	**07 07 56.3**	**0.0**
PMR	**Palmer**	**1.09**	**314**	*e*Pn	**Pb**	**07 07 42.5**	**-0.5**
PMR				*e*Sg	**Sb**	**07 07 57.5**	**+0.5**
RC01	**Rabbit Creek A**	**1.12**	**283**	*e*Pn	**Pb**	**07 07 43.5**	**-0.1**
RC01				*e*Sg	**Sb**	**07 07 58.7**	**+0.7**
GHO	**Glory Hole Cre**	**1.16**	**324**	*e*Pn	**Pb**	**07 07 43.9**	**-0.3**
SGAM	**Sherman Glacie**	**1.18**	**106**	*e*Pn	**Pg**	**07 07 44.6**	**-0.5**
SEW	**Seward**	**1.23**	**233**	*e*Pn	**Pn**	**07 07 45.2**	**+0.1**
PS12	**TAPS Pump St12**	**1.30**	**60**	*e*Pn	**Pn**	**07 07 45.6**	**-0.5**
RAGM	**Ragged Mountai**	**1.46**	**107**	*e*Pn	**Pb**	**07 07 49.3**	**-0.1**
RAGM				*e*Sg	**Sg**	**07 08 10.6**	**+1.1**
PS11	**TAPS Pump St11**	**1.57**	**37**	*e*Pn	**Pb**	**07 07 50.4**	**-0.7**
HMT	**Hamilton**	**1.67**	**107**	*e*Pn	**Pn**	**07 07 50.8**	**-0.5**
BRSE	**Bradley Lake S**	**1.97**	**237**	*e*Pn	**Pn**	**07 07 55.9**	**+0.6**
BRLK	**Bradley Lake**	**2.01**	**239**	*e*Pn	**Pn**	**07 07 56.6**	**+0.6**
CRQM	**Cirque**	**2.13**	**91**	*e*Pn	**Pn**	**07 07 57.9**	**+0.2**
CRQM				*e*Pn	**Pb**	**07 07 58.0**	**-2.9**
DHY	**Denali Highway**	**2.23**	**1**	*e*Pn	**Pn**	**07 07 59.8**	**+0.7**
SPU	**Mount Spurr**	**2.25**	**280**	*e*Pn	**Pn**	**07 07 59.2**	**0.0**
SKT	**Skwentna**	**2.25**	**302**	*e*Pn	**Pn**	**07 07 59.5**	**+0.3**
TGL	**Tana Glacier**	**2.29**	**90**	*e*Pn	**Pn**	**07 07 59.9**	**+0.2**
TGL				*e*Sn	**Sb**	**07 08 30.8**	**-0.7**
CNPM	**China Poot**	**2.30**	**236**	*e*Pn	**Pn**	**07 08 00.1**	**+0.3**
PAX	**Paxson**	**2.33**	**23**	*e*Pn	**Pn**	**07 08 01.3**	**+0.9**
HUR	**Hurricane**	**2.36**	**335**	*e*Pn	**Pn**	**07 08 02.2**	**+1.4**
HOM	**Homer**	**2.39**	**242**	*e*Pn	**Pn**	**07 08 02.2**	**+1.1**
HOM				*e*Sn	**Sn**	**07 08 31.1**	**+1.0**
SNH	**Sunshine Point**	**2.40**	**104**	*e*Pn	**Pn**	**07 08 01.2**	**0.0**
SPWE	**Spurr West**	**2.50**	**282**	*e*Pn	**Pn**	**07 08 03.0**	**+0.3**
RSO	**Redoubt South**	**2.62**	**264**	*e*Pn	**Pn**	**07 08 04.5**	**0.0**
RDJH	**Redoubt Jeurge**	**2.63**	**267**	*e*Pn	**Pn**	**07 08 04.5**	**+0.1**
RND	**Reindeer**	**2.64**	**347**	*e*Pn	**Pn**	**07 08 05.7**	**+1.0**
MCK	**McKinley**	**2.97**	**347**	*e*Pn	**Pn**	**07 08 10.7**	**+1.6**
CTGM	**Chitina Glacie**	**3.01**	**85**	*e*Pn	**Pn**	**07 08 10.5**	**+0.8**
PPLA	**Purkeypile**	**3.03**	**315**	*e*Pn	**Pn**	**07 08 09.6**	**-0.3**
RIDG	**Independent Ri**	**3.15**	**22**	*e*Pn	**Pn**	**07 08 13.1**	**+1.5**
CAST	**Castle Rocks**	**3.36**	**322**	*e*Pn	**Pn**	**07 08 15.0**	**+0.5**
BCA3	**Beaver Creek A**	**3.49**	**48**	*e*Pn	**Pn**	**07 08 17.4**	**+1.2**
BPAW	**Bear Paw Mtn.**	**3.64**	**335**	*e*Pn	**Pn**	**07 08 19.1**	**+0.8**
WRH	**Wood River Hil**	**3.65**	**356**	*e*Pn	**Pn**	**07 08 18.6**	**+0.3**
PCA	**Pinnacle**	**3.66**	**99**	*e*Pn	**Pn**	**07 08 18.7**	**+0.1**
ILAR	**Eielson Array**	**3.94**	**4**	Pn	**Pn**	**07 08 22.7**	**+0.3**
	11nm,0.3s,baz=184,slow=12,SNR=63						
ILAR				Pg	**Pb**	**07 08 27.0**	**-4.6**
	11nm,0.3s,baz=188,slow=14,SNR=70						
ILAR				Sn	**Sn**	**07 09 06.7**	**-1.7**
	2.2nm,0.3s,baz=189,slow=23,SNR=3.3						
ILAR				Lg	Lg	07 09 19.8	
	6.3nm,0.3s,baz=179,slow=26,SNR=6.2						
SVW2	**Sparrevohn**	**3.95**	**277**	*e*Pn	**Pn**	**07 08 21.1**	**-1.4**
KDAK	**Kodiak Island**	**4.04**	**223**	Pn	**Pn**	**07 08 23.7**	**0.0**
	3.8nm,0.3s,baz=33,slow=13,SNR=82						
KDAK				Sn	**Sn**	**07 09 06.9**	**-3.7**
	5.5nm,0.3s,baz=307,slow=23,SNR=19						
KDAK				Lg	Lg	07 09 29.6	
	1.7nm,0.3s,baz=4.4,slow=16,SNR=1.5						
KDAK	**Kodiak Island**	**4.04**	**223**	*e*Pn	**Pn**	**07 08 23.3**	**-0.4**
COLA	**College**	**4.04**	**358**	*e*Pn	**Pn**	**07 08 24.5**	**+0.8**
PNL	**Peninsula**	**4.20**	**103**	*e*Pn	**Pn**	**07 08 26.2**	**+0.3**
TT01	**Tatalina**	**4.54**	**301**	*e*Pn	**Pn**	**07 08 29.7**	**-0.8**
TTA	**Tatalina**	**4.54**	**301**	*e*Pn	**Pn**	**07 08 29.6**	**-1.1**
EGAK	**Eagle**	**4.89**	**34**	*e*Pn	**Pn**	**07 08 36.4**	**+0.9**
DAWY	**Dawson**	**4.95**	**46**	*e*Pn	**Pn**	**07 08 37.6**	**+1.4**
FYU	**Fort Yukon**	**5.82**	**9**	*e*Pn	**Pn**	**07 08 52.3**	**+4.1**
IM3	**Indian Mountai**	**5.87**	**334**	*e*Pn	**Pn**	**07 08 49.5**	**+0.7**
WHY	**Whitehorse**	**6.18**	**86**	*e*Pn	**Pn**	**07 08 54.0**	**+0.7**
BM3	**Burnt Mountain**	**6.71**	**10**	*e*Pn	**Pn**	**07 09 00.1**	**-0.4**
JIS	**Juneau Island**	**7.14**	**105**	*e*Pn	**Pn**	**07 09 06.5**	**+0.2**
INK	**Inuvik**	**9.57**	**33**	Pn	**Pn**	**07 09 42.0**	**+2.6**
	0.2nm,0.3s,baz=233,slow=16,SNR=3.1						
INK				Sn	**Sn**	**07 11 28.2**	**+1.7**
	0.1nm,0.3s,baz=25,slow=14,SNR=2.3						
INK				Lg	Lg	07 12 22.2	
	0.1nm,0.3s,baz=123,slow=31,SNR=1.9						
YKA	**Yellowknife Ar**	**15.60**	**70**	Pn	**P**	**07 11 05.3**	**-0.4**
	0.1nm,0.3s,baz=279,slow=10,SNR=4.5						
YKB5	**Yellowknife Ar**	**15.60**	**70**	*e*P	**P**	**07 11 05.3**	**-0.4**
SONA0	**Songino Array**	**56.44**	**309**	*e*P	**P**	**07 17 03.3**	**0.0**
SONM	**Songino Array**	**56.44**	**309**	P	**P**	**07 17 03.3**	**0.0**
	0.4nm,0.4s,baz=32,slow=8.5,SNR=2.5						

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*NIED **20** 07:21:00, 36°.20N×141°.80E, h23^{km}, Mw3.6 Best double couple: M$_0$3.29000×10^{14} NP1:φ$_s$134.00000°, δ26.00000°, λ4.00000°. NP2:φ$_s$41.00000°, δ88.00000°, λ116.00000°.*
*IDC **20** 07:21:27.0±1.1, 35°.30N×142°.03E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.5/36, mbtmp3.6/8, ML2.9/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/28, Error ellipse: s-maj=37.1km s-min=19.6km az=55.0*
*ISCJB **20** 07:21:33.4±1.0, 36°.16N±0°.07×141°.99E±0°.07, h23^{km}, mb3.6/6, Error ellipse: s-maj=11.8km s-min=7.1km az=148.6*
*JMA **20** 07:21:36.4±0.3, 36°.21N×141°.80E, h53^{km}, M3.5*
ISC 20 07:21:34.2±1.4, **36°.14N**±0°.09×**141°.99E**±0°.09, **h23^{km}, n29, σ0^s.84**/25, **mb3.6**/6, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.02**	**245**	P	**Pn**	**07 21 53.1**	**+0.1**
CHOJ				*e*S	**Sb**	**07 22 05.6**	**-0.5**
JHYU	**Hitachinakayam**	**1.16**	**280**	P	**Pn**	**07 21 54.1**	**-0.8**
JIHU	**Itakohorinouch**	**1.20**	**262**	P	**Pb**	**07 21 56.2**	**0.0**
JHO	**Hitachi**	**1.24**	**292**	P	**Pn**	**07 21 54.8**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.36**	**315**	P	**Pn**	**07 21 56.8**	**-0.9**
JFK	**Kawauchi**	**1.52**	**324**	P	**Pn**	**07 21 59.6**	**-0.3**
JFT	**Otama**	**1.91**	**316**	P	**Pn**	**07 22 05.9**	**+0.6**
JMM	**Marumori**	**1.97**	**331**	P	**Pn**	**07 22 06.3**	**+0.2**
JAG	**Ashikaga**	**2.07**	**279**	P	**Pn**	**07 22 07.4**	**-0.1**
JFY	**Yanaizu**	**2.23**	**305**	P	**Pn**	**07 22 10.3**	**+0.6**
JKT	**Katashina**	**2.30**	**287**	P	**Pn**	**07 22 11.3**	**+0.6**
JKT				S	**Sn**	**07 22 37.6**	**-0.8**
JRY	**Ryogami san**	**2.51**	**268**	P	**Pn**	**07 22 13.5**	**-0.1**
JRY				*e*S	**Sn**	**07 22 41.7**	**-1.7**
JOD2	**Odawara 2**	**2.52**	**250**	P	**Pn**	**07 22 14.2**	**+0.5**
MJAR	**Matsushiro Arr**	**3.08**	**279**	Pn	**Pn**	**07 22 22.1**	**+0.7**
	1.1nm,0.3s,baz=118,slow=7.5,SNR=51						
MJAR				Sn	**Sn**	**07 22 59.1**	**+1.6**
	0.9nm,0.3s,baz=99,slow=13,SNR=7.2						
MAT	**Matsushiro**	**3.08**	**279**	P	**Pn**	**07 22 22.7**	**+1.2**
MAT				S	**Sn**	**07 22 57.7**	**+0.1**
KSRS	**Korea Array**	**11.36**	**281**	LR	LR	07 28 55.6	
	comp=Z,31nm,18.7s,baz=305,slow=39						
H11N2	**WAKE ISLAND Hy**	**27.30**	**120**	T	T	07 56 10.4	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**27.30**	**120**	T	T	07 56 09.0	
	baz=312,slow=74						
H11N3	**WAKE ISLAND Hy**	**27.31**	**120**	T	T	07 56 06.6	
	baz=312,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.99**	**122**	T	T	07 56 52.9	
	baz=314,slow=75,SNR=18						
H11S3	**WAKE ISLAND Hy**	**27.99**	**122**	T	T	07 56 53.5	
	baz=314,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**28.00**	**122**	T	T	07 56 53.6	
	baz=314,slow=75,SNR=8.1						
SONM	**Songino Array**	**28.67**	**305**	P	**P**	**07 27 29.8**	**+0.4**
	0.4nm,0.4s,baz=104,slow=10,SNR=2.5						
ZALV	**Zalesovo Beam**	**42.86**	**313**	P	**P**	**07 29 31.4**	**+1.1**
	0.5nm,0.4s,baz=79,slow=7.5,SNR=2.1						
MKAR	**Makanchi Array**	**44.99**	**303**	P	**P**	**07 29 47.5**	**-0.1**
	0.4nm,0.6s,baz=83,slow=11,SNR=4.0						
KURBB	**Kurchatov Arra**	**46.92**	**309**	P	**P**	**07 30 03.4**	**+0.7**
	0.7nm,0.4s,baz=85,slow=8.0,SNR=8.9						
WRA	**Warramunga Arr**	**56.25**	**189**	P	P	07 31 03.1	-10
	1.1nm,1.0s,baz=358,slow=7.6,SNR=2.3						
ASAR	**Alice Springs**	**59.98**	**189**	P	P	07 31 29.5	-9.2
	0.7nm,1.1s,baz=8.8,slow=6.7,SNR=3.1						
TXAR	**Lajitas Array**	**90.29**	**53**	P	**P**	**07 34 32.6**	**-0.9**
	0.0nm,0.3s,baz=290,slow=2.6,SNR=2.2						

MEX 20 07:39:48.7±0.4, **14°.63N×92°.18W, h96^{km}**±3^{km}, **MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.29**	**343**	*e*P	Pn	07 40 01.4	-1.3
THIG				*i* S	Sn	07 40 11.7	-1.5
PCIG		**1.47**	**317**	*i* P	Pn	07 40 12.8	-1.5
PCIG				*e*S	Sn	07 40 32.1	-1.6
CCIG	**Comitan**	**1.64**	**1**	*e*P	Pn	07 40 15.8	-0.9
CCIG				*i* S	Sn	07 40 36.5	-1.5
TGIG		**2.32**	**337**	*i* P	Pn	07 40 24.1	-1.3
TGIG				*i* S	Sn	07 40 52.2	-1.3

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*TAP **20** 07:45:01.8, 24°.08N×122°.46E, h24^{km}, ML3.0, D*
*ISCJB **20** 07:45:02.4±0.3, 24°.06N±0°.02×122°.43E±0°.02, h26^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.2km az=156.5*
*JMA **20** 07:45:02.0±0.2, 24°.08N×122°.41E, h23^{km}±5^{km}, M2.4*
ISC 20 07:45:02.2±1.2, **24°.08N**±0°.02×**122°.42E**±0°.02, **h22^{km}**±5^{km}, **n76, σ0^s.73**/144, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.54**	**330**	P	**Pb**	**07 45 13.3**	**+0.2**
	baz=326						
EOS1				S	**Sn**	**07 45 21.9**	**-1.2**
	baz=326						
JYNG	**Yonagunijimaku**	**0.60**	**52**	P	**Pb**	**07 45 13.9**	**-0.3**
JYNG				*e*S	**Sb**	**07 45 21.7**	**-0.7**
YOJ	**Yonaguni jima**	**0.66**	**54**	P	**Pb**	**07 45 14.6**	**-0.5**
	baz=52						
YOJ				*e*S	**Sb**	**07 45 23.3**	**-0.6**
	baz=52						
YOJ	**Yonaguni jima**	**0.66**	**54**	P	**Pb**	**07 45 14.8**	**-0.3**
YOJ				*e*S	**Sb**	**07 45 23.6**	**-0.3**
NANB	**Nanao**	**0.71**	**300**	*e*P	**Pn**	**07 45 16.6**	**-0.4**
	baz=297						
NANB				*e*S	**Sb**	**07 45 24.3**	**-0.9**
	baz=297						
ENA	**Nanau**	**0.71**	**299**	*e*P	**Pn**	**07 45 17.0**	**-0.1**
	baz=297						
ENA				*e*S	**Sb**	**07 45 25.3**	**-0.1**
	baz=297						
TWC	**Suao**	**0.74**	**315**	*e*P	**Pb**	**07 45 16.6**	**+0.1**
	baz=313						
TWC				*e*S	**Sb**	**07 45 25.1**	**-1.1**
	baz=313						
HWA	**Hwalien**	**0.75**	**263**	*e*P	**Pn**	**07 45 17.2**	**-0.3**
	baz=262						
HWA				*e*S	**Sn**	**07 45 28.5**	**+0.2**
	baz=262						
NACB	**Ninganchiao**	**0.76**	**277**	*e*P	**Pb**	**07 45 16.6**	**-0.2**
	baz=276						
NACB				*e*S	**Sn**	**07 45 28.5**	**0.0**
	baz=276						
ENLB	**Shoufeng**	**0.77**	**257**	*e*P	**Pn**	**07 45 17.5**	**-0.3**
	baz=257						
ENLB				*e*S	**Sn**	**07 45 29.3**	**+0.5**
	baz=257						
ETLH	**Xiulin Townshi**	**0.87**	**279**	*e*P	**Pb**	**07 45 18.2**	**-0.5**
	baz=277						
ETLH				*e*S	**Sn**	**07 45 31.2**	**-0.1**
	baz=277						
ILA	**Ilan**	**0.92**	**318**	*e*P	**Pb**	**07 45 19.3**	**-0.2**
	baz=316						
ILA				*e*S	**Sn**	**07 45 32.4**	**-0.1**
	baz=316						
TWE	**Neicheng**	**0.94**	**313**	*e*P	**Pb**	**07 45 19.7**	**-0.1**
	baz=311						
TWE				*e*S	**Sb**	**07 45 32.3**	**+0.4**
	baz=311						
ESL	**Shilin**	**0.94**	**254**	*e*S	**Sb**	**07 45 32.5**	**+0.6**
	baz=253						
NTC	**Toucheng**	**0.94**	**325**	*e*P	**Pn**	**07 45 20.0**	**-0.2**
	baz=323						
NTC				*e*S	**Sn**	**07 45 33.2**	**+0.2**
	baz=323						
ENTT	**Nioudou**	**0.96**	**306**	*e*P	**Pb**	**07 45 20.0**	**-0.2**
	baz=304						
ENTT				*e*S	**Sb**	**07 45 32.6**	**+0.1**
	baz=304						
NDT	**Datong Townshi**	**0.98**	**302**	*e*P	**Pn**	**07 45 20.7**	**0.0**
	baz=300						
NDT				*e*S	**Sb**	**07 45 32.7**	**-0.3**
	baz=300						
EGFH	**Guangfu**	**1.00**	**246**	*e*P	**Pn**	**07 45 21.1**	**+0.1**
	baz=246						
NNSB	**Datong**	**1.01**	**290**	*i* P	**Pb**	**07 45 21.1**	**0.0**
	baz=289						
NNSB				*e*S	**Sn**	**07 45 34.6**	**-0.3**
	baz=289						
NNS	**Nan Shan**	**1.02**	**291**	*e*P	**Pn**	**07 45 21.2**	**-0.2**
	baz=289						
NNS				*e*S	**Sn**	**07 45 35.4**	**+0.2**
	baz=289						
WHF	**Hehuan Shan**	**1.06**	**274**	P	**Pn**	**07 45 21.5**	**-0.7**
	baz=273						
WHF				*e*S	**Sn**	**07 45 36.5**	**0.0**
	baz=273						
HGSD	**Ruisui**	**1.08**	**238**	*e*P	**Pb**	**07 45 22.5**	**+0.2**
	baz=238						
HGSD				S	**Sn**	**07 45 37.3**	**+0.8**
	baz=238						
YHNB	**Yeheng**	**1.12**	**302**	P	**Pb**	**07 45 23.3**	**+0.3**
	baz=300						
YHNB				*e*S	**Sn**	**07 45 37.7**	**+0.1**
	baz=300						
NSK	**Sanguang**	**1.14**	**302**	P	**Pb**	**07 45 23.5**	**+0.2**
	baz=300						
NSK				S	**Sn**	**07 45 38.3**	**+0.3**
	baz=300						
CHGB	**Renai**	**1.14**	**269**	*i* P	**Pn**	**07 45 22.5**	**-0.6**
	baz=268						
CHGB				*e*S	**Sn**	**07 45 38.3**	**0.0**
	baz=268						
NWF	**Wu-fen Shan**	**1.15**	**330**	*e*P	**Pb**	**07 45 23.6**	**+0.1**
	baz=327						
NWF				*e*S	**Sn**	**07 45 39.0**	**+0.7**
	baz=327						
WFSB	**Wu-fen Shan**	**1.15**	**330**	*e*P	**Pn**	**07 45 23.0**	**-0.1**
	baz=327						
WFSB				*e*S	**Sn**	**07 45 38.4**	**+0.2**
	baz=327						
TWT	**Tachien**	**1.15**	**279**	*e*P	**Pn**	**07 45 23.3**	**0.0**
	baz=277						
TWT				*e*S	**Sn**	**07 45 39.1**	**+0.7**
	baz=277						
EHY	**Hungye**	**1.16**	**241**	*e*P	**Pn**	**07 45 21.4**	**-1.7**
	baz=240						
EHY				*e*S	**Sb**	**07 45 36.6**	**-1.6**
	baz=240						
TDCB	**Techi**	**1.17**	**279**	P	**Pb**	**07 45 23.8**	**-0.1**
	baz=278						
TDCB				*e*S	**Sn**	**07 45 39.3**	**+0.5**
	baz=278						
TWA	**Mucha**	**1.18**	**320**	*e*P	**Pn**	**07 45 23.2**	**-0.3**
	baz=318						
TWA				*e*S	**Sb**	**07 45 39.3**	**+0.5**
	baz=318						
NHDH	**Xindian Distri**	**1.20**	**317**	*e*P	**Pn**	**07 45 23.1**	**-0.6**
	baz=315						
NHDH				*e*S	**Sb**	**07 45 39.7**	**+0.3**
	baz=315						
VWDT	**VWDT**	**1.22**	**255**	*e*S	**Sn**	**07 45 39.5**	**-0.2**
	baz=254						
IRIF	**Iriomote-Funau**	**1.22**	**78**	P	**Pb**	**07 45 24.2**	**-0.4**
IRIF				S	**Sb**	**07 45 39.8**	**-0.1**
TATO	**Taipei**	**1.23**	**317**	*e*P	**Pb**	**07 45 25.6**	**+0.7**
	baz=315						
TATO				*e*S	**Sn**	**07 45 40.2**	**0.0**
	baz=315						
YULB	**Yu-li**	**1.24**	**237**	*e*P	**Pn**	**07 45 22.8**	**-1.5**
	baz=237						
YULB				*e*S	**Sn**	**07 45 37.8**	**-2.5**
	baz=237						
TWF1	**Yuli**	**1.26**	**235**	*e*P	**Pn**	**07 45 23.2**	**-1.4**
	baz=235						
TWF1				*e*S	**Sn**	**07 45 39.1**	**-1.7**
	baz=235						
HATJ	**Hateruma jima**	**1.26**	**91**	S	**Sb**	**07 45 42.4**	**+1.2**
WLTB	**Daxi**	**1.32**	**306**	*e*S	**Sb**	**07 45 42.9**	**+0.2**
	baz=304						
YM01	**YM01**	**1.32**	**324**	*e*P	**Pb**	**07 45 26.4**	**+0.1**
	baz=322						
YM01				*e*S	**Sn**	**07 45 42.2**	**-0.1**
	baz=322						
YM10	**YM10**	**1.33**	**324**	*e*P	**Pn**	**07 45 25.5**	**-0.1**
	baz=322						
YM10				*e*S	**Sn**	**07 45 42.5**	**-0.1**
	baz=322						
YM05	**YM05**	**1.33**	**324**	*e*P	**Pb**	**07 45 27.3**	**+0.7**
	baz=322						
YM05				*e*S	**Sn**	**07 45 42.9**	**+0.1**
	baz=322						
YM04	**YM04**	**1.34**	**323**	*e*P	**Pn**	**07 45 25.9**	**+0.2**
	baz=321						
YM04				*e*S	**Sn**	**07 45 42.7**	**-0.2**
	baz=321						
YM03	**YM03**	**1.36**	**324**	*e*P	**Pn**	**07 45 25.7**	**-0.3**
	baz=322						
YM03				*e*S	**Sb**	**07 45 43.7**	**-0.3**
	baz=322						
DPDB	**Guoxing**	**1.37**	**268**	*e*P	**Pn**	**07 45 26.3**	**+0.2**
	baz=267						
DPDB				*e*S	**Sb**	**07 45 45.2**	**+0.9**
	baz=267						
SSLB	**Suanglung**	**1.37**	**258**	*e*P	**Pn**	**07 45 25.8**	**-0.4**
	baz=257						
SSLB				*e*S	**Sb**	**07 45 44.6**	**+0.2**
	baz=257						
ANP	**Anpu**	**1.38**	**324**	*e*P	**Pn**	**07 45 25.9**	**-0.4**
	baz=322						
ANP				*e*S	**Sb**	**07 45 44.1**	**-0.4**
	baz=322						

LIOB	**Emei**	**1.40**	**294**	*e*P	**Pb**	**07 45 27.7**	**0.0**
	baz=293						
LIOB				*e*S	**Sb**	**07 45 45.1**	**-0.1**
	baz=293						
NSTT	**Nanjuang**	**1.41**	**293**	*e*P	**Pb**	**07 45 27.4**	**-0.4**
	baz=292						
NSTT				*e*S	**Sn**	**07 45 44.9**	**+0.4**
	baz=292						
TYC	**Yuchr**	**1.44**	**263**	P	**Pn**	**07 45 27.1**	**+0.1**
	baz=263						
TYC				*e*S	**Sb**	**07 45 46.8**	**+0.5**
	baz=263						
JKRS	**Kuro-shima**	**1.46**	**83**	P	**Pb**	**07 45 28.6**	**-0.1**
JKRS				S	**Sb**	**07 45 48.1**	**+1.3**
YUS	**Yu-Shan**	**1.47**	**247**	*e*P	**Pn**	**07 45 27.6**	**-0.2**
	baz=246						
YUS				*e*S	**Sn**	**07 45 45.5**	**-1.2**
	baz=246						
WHYT	**Xinyi Township**	**1.49**	**255**	*e*P	**Pb**	**07 45 28.6**	**-0.6**
	baz=255						
WHYT				*e*S	**Sb**	**07 45 50.3**	**+2.6**
	baz=255						
TWQ1	**Liyutan**	**1.53**	**280**	*e*P	**Pn**	**07 45 28.6**	**+0.3**
	baz=279						
TWQ1				*e*S	**Sb**	**07 45 48.5**	**-0.4**
	baz=279						
NSY	**Sanyi**	**1.55**	**283**	*e*P	**Pn**	**07 45 28.6**	**-0.1**
	baz=282						
NSY				*e*S	**Sn**	**07 45 48.2**	**+0.1**
	baz=282						
ELDTW	**Lidau**	**1.56**	**236**	*e*P	**Pn**	**07 45 27.2**	**-1.6**
	baz=235						
ELDTW				*e*S	**Sn**	**07 45 45.5**	**-3.0**
	baz=235						
WJS	**Zhushan**	**1.57**	**261**	*e*P	**Pn**	**07 45 29.0**	**+0.2**
	baz=260						
WJS				*e*S	**Sb**	**07 45 49.8**	**-0.2**
	baz=260						
ALS	**Alishan**	**1.58**	**249**	*e*P	**Pn**	**07 45 29.4**	**+0.1**
	baz=249						
ALS				*e*S	**Sn**	**07 45 49.9**	**+0.5**
	baz=249						
JIJ	**Ishigaki jima**	**1.60**	**79**	P	**Pn**	**07 45 29.6**	**+0.4**
JIJ				*e*S	**Sn**	**07 45 49.4**	**+0.2**
WNT	**Mingjian**	**1.60**	**263**	*e*P	**Pn**	**07 45 29.4**	**+0.2**
	baz=262						
WNT				*e*S	**Sn**	**07 45 50.0**	**+0.7**
	baz=262						
PTSB	**Yuanli**	**1.61**	**284**	*e*P	**Pn**	**07 45 29.9**	**+0.5**
	baz=282						
PTSB				*e*S	**Sn**	**07 45 50.0**	**+0.5**
	baz=282						
WDJ	**Dajia District**	**1.65**	**280**	*e*P	**Pn**	**07 45 30.6**	**+0.7**
	baz=278						
WDJ				*e*S	**Sn**	**07 45 51.0**	**+0.5**
	baz=278						
TWGBT	**Beinan**	**1.76**	**225**	*e*P	**Pn**	**07 45 31.7**	**+0.2**
	baz=225						
TWGBT				*e*S	**Sn**	**07 45 53.0**	**-0.2**
	baz=225						
TWG	**Pinlang**	**1.76**	**225**	*e*P	**Pn**	**07 45 31.9**	**+0.4**
	baz=225						
TWG				*e*S	**Sn**	**07 45 51.6**	**-1.6**
	baz=225						
JISG	**Ishigakijimahi**	**1.80**	**73**	P	**Pn**	**07 45 32.3**	**+0.4**
JISG				S	**Sn**	**07 45 53.8**	**-0.3**
TPUB	**Ta-pu**	**1.82**	**245**	*e*S	**Sn**	**07 45 55.7**	**+1.0**
	baz=245						
CHN4	**Tsaushan**	**1.83**	**247**	*e*P	**Pn**	**07 45 32.7**	**+0.4**
	baz=246						
CHN4				*e*S	**Sn**	**07 45 55.9**	**+1.0**
	baz=246						
TWK	**Hsinying**	**1.95**	**246**	*e*S	**Sn**	**07 45 58.6**	**+0.7**
	baz=245						
SLGT	**Liugui**	**1.96**	**237**	*e*P	**Pn**	**07 45 35.0**	**+0.9**
	baz=236						
SLGT				*e*S	**Sn**	**07 45 58.7**	**+0.6**
	baz=236						
SNST	**Tainan City**	**1.96**	**245**	*e*P	**Pn**	**07 45 34.7**	**+0.5**
	baz=244						
SNST				*e*S	**Sn**	**07 45 59.1**	**+0.9**
	baz=244						
WSF	**Szhu**	**2.06**	**258**	*e*S	**Sn**	**07 46 01.1**	**+0.5**
	baz=257						
MASBT	**Mashibuluo**	**2.20**	**229**	*e*P	**Pn**	**07 45 37.5**	**0.0**
	baz=228						
MASBT				*e*S	**Sn**	**07 46 04.6**	**+0.6**
	baz=228						
EAST	**Anshuo**	**2.22**	**221**	*e*P	**Pn**	**07 45 38.7**	**+0.9**
	baz=221						
EAST				*e*S	**Sn**	**07 46 05.5**	**+0.8**
	baz=221						
SCZT	**Fangliau**	**2.37**	**225**	*e*P	**Pn**	**07 45 40.6**	**+0.7**
	baz=224						
SCZT				*e*S	**Sn**	**07 46 08.4**	**+0.1**
	baz=224						
PHUB	**P'eng-hu**	**2.67**	**258**	*e*P	**Pn**	**07 45 45.1**	**+1.1**
	baz=257						
PHUB				*e*S	**Sn**	**07 46 16.2**	**+0.5**
	baz=257						
PTMZ	**Houxiangcun**	**3.16**	**288**	*e*P	**Pn**	**07 45 50.5**	**-0.1**
	baz=287						
PTMZ				*e*S	**Sn**	**07 46 26.1**	**-1.6**
	baz=287						

TAP 20 07:45:04.1, 24°.52N×121°.84E, h15^{km}, ML2.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.09**	**7**	*e*P	Pg	07 45 08.2	+0.8
	baz=12						
TWC				*e*S	Sg	07 45 10.3	+1.0
	baz=12						
NANB	**Nanao**	**0.12**	**222**	P	Pb	07 45 08.0	-0.1
	baz=221						
NANB				*e*S	Sb	07 45 11.0	+0.3
	baz=221						
ENA	**Nanau**	**0.12**	**225**	P	Pb	07 45 08.1	-0.1
	baz=221						
ENA				*e*S	Sb	07 45 11.1	+0.2
	baz=221						
NWF	**Wu-fen Shan**	**0.55**	**355**	*e*P	Pb	07 45 15.5	-0.1
	baz=354						
NWF				*e*S	Sb	07 45 24.1	+0.8
	baz=354						
WFSB	**Wu-fen Shan**	**0.55**	**355**	*e*P	Pb	07 45 15.4	-0.1
	baz=354						
WFSB				*e*S	Sb	07 45 23.9	+0.7
	baz=354						
YM05	**YM05**	**0.69**	**339**	*e*P	Pg	07 45 17.6	0.0
	baz=339						
YM05				*e*S	Sb	07 45 28.5	+1.2
	baz=339						
ANP	**Anpu**	**0.73**	**337**	*e*P	Pb	07 45 18.6	+0.1
	baz=337						
ANP				*e*S	Sn	07 45 29.7	-1.2
	baz=337						
ESL	**Shilin**	**0.79**	**208**	*e*P	Pg	07 45 19.2	-0.3
	baz=207						
ESL				*e*S	Sn	07 45 31.3	-1.0
	baz=207						
ESL	**Shilin**	**0.79**	**208**	*e*P	Pg	07 45 18.9	-0.6
	baz=253						
SBCB	**Hsinchu**	**0.82**	**290**	*e*P	Pb	07 45 20.5	+0.4
	baz=289						
SBCB				*e*S	Sn	07 45 33.4	+0.3
	baz=289						
EGFH	**Guangfu**	**0.92**	**204**	*e*P	Pb	07 45 21.8	0.0
	baz=203						
EGFH				*e*S	Sb	07 45 33.7	-0.2
	baz=203						
EGFH	**Guangfu**	**0.92**	**204**	*e*S	Sb	07 45 33.7	-0.2
	baz=246						
VWDT	**VWDT**	**0.99**	**220**	*e*P	Pb	07 45 23.0	+0.1
	baz=219						
VWDT				*e*S	Sn	07 45 37.6	+0.5
	baz=219						
VWDT	**VWDT**	**0.99**	**220**	*e*P	Pb	07 45 23.0	+0.1
	baz=254						
HGSD	**Ruisui**	**1.09**	**200**	*e*S	Sg	07 45 39.1	-0.2
	baz=200						
TPUB	**Ta-pu**	**1.64**	**223**	*e*P	Pn	07 45 32.9	+0.5
	baz=222						
TPUB				*e*S	Sb	07 45 54.3	-0.2
	baz=222						
TPUB	**Ta-pu**	**1.64**	**223**	*e*P	Pn	07 45 32.8	+0.4
	baz=245						
WTP	**Ta-pu**	**1.69**	**222**	*e*P	Pn	07 45 33.2	+0.1
	baz=243						
WTP				*e*S	Sb	07 45 56.0	0.0
	baz=243						
WTP	**Ta-pu**	**1.69**	**222**	*e*P	Pn	07 45 33.5	+0.4
	baz=221						
WTP				*e*S	Sb	07 45 55.6	-0.4
	baz=221						
TWK	**Hsinying**	**1.75**	**225**	*e*P	Pn	07 45 34.5	+0.5
	baz=224						
TWK				*e*S	Sn	07 45 56.7	+0.6
	baz=224						
TWK	**Hsinying**	**1.75**	**225**	*e*P	Pn	07 45 34.6	+0.6
	baz=245						
SLGT	**Liugui**	**1.87**	**216**	*e*P	Pn	07 45 36.2	+0.6
	baz=215						
SLGT				*e*S	Sn	07 45 59.4	+0.5
	baz=215						
MASBT	**Mashibuluo**	**2.19**	**210**	*e*P	Pn	07 45 40.2	+0.1
	baz=210						
MASBT				*e*S	Sn	07 46 06.6	-0.4
	baz=210						
PHUB	**P'eng-hu**	**2.30**	**245**	*e*P	Pn	07 45 42.3	+0.9
	baz=244						
PHUB				*e*S	Sn	07 46 11.1	+1.6
	baz=244						
EAST	**Anshuo**	**2.31**	**203**	*e*P	Pn	07 45 41.4	-0.2
	baz=202						
EAST				*e*S	Sn	07 46 10.0	+0.1
	baz=202						
SCZT	**Fangliau**	**2.41**	**208**	*e*P	Pn	07 45 44.1	+1.1
	baz=207						
SCZT				*e*S	Sn	07 46 11.1	-1.2
	baz=207						
VCHM	**Qimei**	**2.56**	**240**	*e*P	Pn	07 45 45.0	-0.1
	baz=239						
VCHM				*e*S	Sn	07 46 16.1	+0.2
	baz=239						

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*ISCJB **20** 07:46:13.5±0.4, 31°.90N±0°.04×130°.95E±0°.07, h107^{km}±3^{km}, mb3.5/7, Error ellipse: s-maj=10.2km s-min=6.3km az=9.7*

*IDC **20** 07:46:14.8±1.3, 31°.91N×130°.85E, h104^{km}±8^{km}, mb3.4/7, mb1 3.5/9, mb1mx3.3/31, mbtmp3.6/9, Error ellipse: s-maj=26.1km s-min=16.3km az=91.0*

*JMA **20** 07:46:15.5, 31°.87N×130°.91E, h93^{km}±1^{km}, M3.2*

ISC 20 07:46:14.3±0.8**, 31°.87N**±0°.04×**130°.90E**±0°.07**, h104**^{km}±6^{km}**, n17, σ1^{s}.27**/26**, mb3.4**/7**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTZ	**Takazaki**	**0.16**	**77**	P	**Pn**	**07 46 28.6**	**-0.3**
JTZ				S	**Sn**	**07 46 38.5**	**-1.3**
JZO	**Okuchi**	**0.38**	**317**	P	**Pn**	**07 46 29.8**	**0.0**
JZO				S	**Sn**	**07 46 40.6**	**-0.8**
JIU3	**Izumi3**	**0.69**	**354**	P	**Pn**	**07 46 32.5**	**+0.5**
JIU3				S	**Sn**	**07 46 44.4**	**-0.9**
JSJ	**Shimokoshiki**	**1.03**	**260**	P	**Pn**	**07 46 35.7**	**+0.4**
JSJ				*e*S	**Sn**	**07 46 51.1**	**-0.1**
JTN	**Tanegashima 3**	**1.21**	**177**	P	**Pn**	**07 46 38.0**	**+0.6**
JTN				S	**Sn**	**07 46 55.2**	**+0.4**
JNU	**Nakatsue**	**1.25**	**359**	P	**Pn**	**07 46 38.6**	**+0.7**
	36nm,0.3s,baz=178,slow=5.8,SNR=129						
JNU				S	**Sn**	**07 46 55.2**	**-0.5**
	52nm,0.3s,baz=327,slow=23,SNR=23						
JMTN	**Minamitane**	**1.46**	**180**	P	**Pn**	**07 46 41.3**	**+0.9**
JMTN				S	**Sn**	**07 47 01.0**	**+0.9**
JOW	**Kunigami**	**5.51**	**205**	P	**Pn**	**07 47 34.7**	**+0.6**
	0.2nm,0.3s,baz=136,slow=13,SNR=9.3						
JOW				S	**Sn**	**07 48 31.4**	**-4.8**
	0.6nm,0.3s,baz=64,slow=29,SNR=8.3						
KSRS	**Korea Array**	**6.09**	**337**	P	**Pn**	**07 47 42.4**	**+0.6**
	0.3nm,0.3s,baz=163,slow=13,SNR=6.0						
MJAR	**Matsushiro Arr**	**7.64**	**50**	P	**Pn**	**07 48 03.6**	**+0.7**
	0.2nm,0.3s,baz=244,slow=14,SNR=7.1						
MJAR				S	**Sn**	**07 49 26.4**	**-1.5**
	0.1nm,0.3s,baz=220,slow=24,SNR=5.9						
SONM	**Songino Array**	**24.51**	**318**	P	**P**	**07 51 24.5**	**+0.4**
	1.4nm,0.7s,baz=133,slow=9.4,SNR=6.9						
ASAR	**Alice Springs**	**55.29**	**177**	P	**P**	**07 55 37.4**	**+0.3**
	0.1nm,0.4s,baz=357,slow=5.5,SNR=4.7						
ARCES	**ARCESS Array B**	**65.65**	**338**	P	**P**	**07 56 47.0**	**+0.1**
	4.7nm,1.0s,baz=54,slow=9.1,SNR=2.6						
FINES	**FINESS Array B**	**69.14**	**330**	P	**P**	**07 57 09.3**	**+0.3**
	2.4nm,0.9s,baz=67,slow=4.9,SNR=9.9						
YKA	**Yellowknife Ar**	**72.45**	**26**	P	**P**	**07 57 29.7**	**+0.6**
	0.1nm,0.4s,baz=306,slow=6.1,SNR=2.4						
NOA	**NORSAR Array B**	**75.29**	**334**	P	**P**	**07 57 44.9**	**-0.9**
	0.2nm,0.6s,baz=52,slow=5.4,SNR=2.8						
NVAR	**Mina Array Bea**	**84.95**	**47**	P	**P**	**07 58 39.0**	**+0.7**
	0.3nm,0.5s,baz=297,slow=6.0,SNR=2.5						

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*ISN **20** 08:03:49.0±0.3, 39°.69N×43°.28E, h3^{km}, ML3.3*

DDA 20 08:03:50.8, 36°.65N×43°.29E, h4^{km}±2^{km}, ML3.3, Iraq

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSL	**Mosul**	**0.29**	**211**	*e*Pg	Pg	08 03 56.0	-0.4
	baz=25						
MSL				*e*Sg	Sg	08 04 00.9	+0.7
MSL				*e*Sg	Sg	08 04 01.0	+0.9
HAKT	**HAKKARI**	**0.97**	**20**	*i* P	Pb	08 04 09.8	-0.4
HAKT				*i* S	Sg	08 04 20.5	-1.5
SIRN	**Sırnak**	**1.10**	**321**	*i* P	Pn	08 04 13.8	+0.7
SIRN				*i* S	Sn	08 04 28.3	-0.5
YOVA	**Hakkari_Yksek**	**1.23**	**40**	*i* P	Pg	08 04 14.6	+0.1
BASK	**Baskale_VAN**	**1.51**	**22**	*i* P	Pg	08 04 19.8	0.0
BASK				IAML_P			
	comp=Z,2μm,0.2s						
GEVA	**Gevas**	**1.67**	**354**	*i* P	Pg	08 04 23.0	+0.2
SRTM	**Siirt_Merkez**	**1.73**	**321**	*i* P	Pg	08 04 24.4	+0.4
SRTM				*i* S	Sg	08 04 45.9	-0.5
TVAN	**Van**	**1.88**	**3**	*i* P	Pg	08 04 26.5	-0.3
TVAN				IAML_P			
	comp=Z,2μm,0.3s						
MARD	**Mardin**	**2.12**	**289**	*i* P	Pb	08 04 29.3	-0.6
MUSM	**Mu-Merkez**	**2.51**	**326**	*i* P	Pb	08 04 35.7	-0.8
MUSM				IAML_P			
	comp=Z,448nm,0.2s						

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*DDA **20** 08:52:22.9, 39°.65N×29°.41E, h7^{km}±2^{km}, ML2.5*

*ISK **20** 08:52:22.7, 39°.61N×29°.44E, h19^{km}, ML2.1/5, Suspected Mining explosion.*

*ISCJB **20** 08:52:23.6±0.6, 39°.64N±0°.02×29°.41E±0°.06, h0^{km}, Error ellipse: s-maj=6.5km s-min=3.3km az=166.6*

ISC 20 08:52:22.5±0.9**, 39°.71N**±0°.05×**29°.45E**±0°.05**, h0**^{km}**, n10, σ0^{s}.45**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVSB	**Tavsanli**	**0.26**	**179**	PG	**Pg**	**08 52 27.4**	**-0.2**
TVSB				SG	**Sg**	**08 52 30.9**	**-0.1**
ULDT	**Uludag**	**0.49**	**330**	*i* P	**Pb**	**08 52 34.1**	**-0.1**
ULDT				*i* S	**Sb**	**08 52 42.7**	**+0.7**
ULDT				IAML_P			
	comp=Z,830nm,0.1s						
GDZ	**Gediz**	**0.62**	**178**	*i* P	**Pg**	**08 52 34.3**	**-0.1**
GDZ				*i* S	**Sg**	**08 52 42.9**	**+0.4**
GDZ				IAML_P			
	comp=Z,1μm,0.1s						
DURS	**Dursunbey**	**0.76**	**262**	*i* P	**Pg**	**08 52 37.6**	**+0.5**
DURS				*i* S	**Sg**	**08 52 47.2**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.79**	**326**	PG	**Pn**	**08 52 40.3**	**-0.6**
MDNY				SG	**Sn**	**08 52 52.6**	**-0.7**
BORA	**Eskisehir**	**0.79**	**78**	*i* P	**Pb**	**08 52 39.6**	**+0.4**
BORA				IAML_P			
	comp=Z,1μm,0.1s						
YLV	**Yalova**	**0.85**	**356**	PG	**Pn**	**08 52 41.5**	**-0.4**
YLV				SG	**Sn**	**08 52 55.3**	**+0.2**
DEMI	**Demirci**	**0.88**	**221**	*i* P	**Pg**	**08 52 39.9**	**+0.5**
DEMI				IAML_P			
	comp=Z,656nm,0.1s						
ARMT	**Armutlu**	**0.96**	**332**	PG	**Pn**	**08 52 42.9**	**-0.4**
KCTX	**Karacabey (Bur**	**1.01**	**304**	PG	**Pb**	**08 52 42.7**	**-0.1**

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*ISCJB **20** 09:14:12.5±0.3, 22°.01N±0°.02×94°.34E±0°.02, h88^{km}±3^{km}, mb4.3/81, Error ellipse: s-maj=4.1km s-min=3.0km az=43.7*

*BJI **20** 09:14:13.1±0.0, 21°.83N×94°.33E, h103^{km}, mb4.6/44, mB4.7/24*

*IDC **20** 09:14:14.8±0.4, 22°.05N×94°.47E, h95^{km}±2^{km}, mb3.9/33, mb1 4.0/37, mb1mx3.9/56, mbtmp4.3/37, MS3.5/19, Ms1 3.5/19, ms1mx3.4/32, Error ellipse: s-maj=10.9km s-min=7.1km az=45.0*

*NEIC **20** 09:14:15.1±1.7, 22°.04N×94°.43E, h100^{km}±4^{km}, mb4.4/48, Error ellipse: s-maj=12.7km s-min=8.4km az=47.0*

*NDI **20** 09:14:15.7±3.6, 22°.15N×94°.24E, h23^{km}±47^{km}, ML4.4, mb4.4(NEIC)*

*GCMT **20** 09:14:16.1±0.4, 21°.89N±0°.03×94°.30E±0°.03, h100^{km}±5^{km}, MW4.8/69, Moment Tensor Solution. s26,c28; s69,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.38±.12; $M_{\theta\theta}$-0.78±.14; $M_{\phi\phi}$-0.59±.14; $M_{r\theta}$-0.37±.09; $M_{\theta\phi}$1.40±.11; $M_{\phi r}$-1.14±.07; Best double couple: $M_0$2.19900×10^{16} NP1:ϕ_s164.00000°, δ63.00000°, λ130.00000°. NP2: ϕ_s283.00000°, δ47.00000°, λ39.00000°. Principal axes: T 2.2230, Plg54.0000°, Azm124.0000°; N -0.0490, Plg35.0000°, Azm323.0000°; P -2.1750, Plg9.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 09:14:14.5±0.3**, 22°.03N**±0°.04×**94°.31E**±0°.03**, h95**^{km}±2^{km}**, h95**^{km}**:pP-P, n185, σ1^{s}.90**/276**, mb4.5**/87**, 5C-5D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**1.31**	**291**	*e*P	**Pn**	**09 14 37.8**	**-0.5**
SAIH				*e*S	**Sn**	**09 14 55.7**	**-0.5**
SAIH				IAML		09 15 07.8	
	comp=N,7μm,0.3s						
SAIH				IAML		09 15 07.9	
	comp=E,12μm,0.3s						
BRDH	**Bariadhala**	**2.55**	**285**	P	**Pn**	**09 14 54.5**	**+0.4**
	comp=E,49nm,0.3s,baz=123,slow=7.0,SNR=26						
BRDH				S	**Sn**	**09 15 23.8**	**-0.8**
	comp=E,416nm,0.3s,baz=274,slow=21,SNR=15						
IMP	**Imphal**	**2.81**	**353**	*e*P	**Pn**	**09 15 00.3**	**+2.7**
IMP				*e*S	**Sn**	**09 15 28.5**	**-2.3**
IMP				IAML		09 15 39.9	
	comp=N,3μm,0.2s						
IMP				IAML		09 15 40.9	
	comp=E,954nm,0.3s						
BELO	**BELONIA**	**2.91**	**295**	*e*P	**Pn**	**09 14 59.6**	**+0.8**
BELO				*e*S	**Sn**	**09 15 32.1**	**-1.0**
KOHI	**KOHIMA**	**3.67**	**357**	*e*P	**Pn**	**09 15 11.0**	**+1.7**
KOHI				*e*S	**Sn**	**09 15 49.5**	**-2.3**
KOHI				IAML		09 16 06.5	
	comp=E,829nm,0.5s						
KOHI				IAML		09 16 06.9	
	comp=N,1μm,0.1s						
SHL	**Shillong**	**4.16**	**328**	*e*P	**Pn**	**09 15 15.8**	**-0.2**
SHL				*e*S	**Sn**	**09 16 02.6**	**-1.0**
SHL				IAML		09 16 05.2	
	comp=E,1μm,0.0s						
SHL				IAML		09 16 05.8	
	comp=N,1μm,0.1s						
MOKO	**MOKOCHONG**	**4.27**	**2**	*e*P	**Pn**	**09 15 19.9**	**+2.4**
JORH	**JORHAT**	**4.69**	**359**	*e*P	**Pn**	**09 15 25.1**	**+2.1**
JORH				*e*S	**Sn**	**09 16 14.1**	**-2.1**
TEZP	**TEZPUR**	**4.77**	**343**	*e*P	**Pn**	**09 15 23.4**	**-0.6**
TEZP				*e*S	**Sn**	**09 16 13.1**	**-4.9**
TEZP				IAML		09 16 20.3	
	comp=E,1μm,0.1s						
TEZP				IAML		09 16 20.7	
	comp=N,982nm,0.1s						
GUWA	**GUWAHATI**	**4.78**	**330**	*e*P	**Pn**	**09 15 23.3**	**-1.0**
GUWA				*e*S	**Sn**	**09 16 14.6**	**-3.8**
TURI	**Tura**	**5.05**	**315**	*e*P	**Pn**	**09 15 27.4**	**-0.5**
TURI				*e*S	**Sn**	**09 16 21.0**	**-4.0**
TURI				IAML		09 16 23.2	
	comp=N,1μm,0.1s						
TURI				IAML		09 16 23.4	
	comp=E,1μm,0.1s						
CHTO	**Chiang Mai**	**5.40**	**126**	*e*Pn	**Pn**	**09 15 31.4**	**-1.2**
CHTO				*e*Sn	**Sn**	**09 16 32.0**	**-1.5**
DIBR	**DIBRUGARH**	**5.44**	**6**	*e*P	**Pn**	**09 15 33.6**	**+0.5**
DIBR				*e*S	**Sn**	**09 16 29.6**	**-4.8**
LKP	**Lekhapani**	**5.46**	**15**	*e*P	**Pn**	**09 15 32.4**	**-1.0**
LKP				*e*S	**Sn**	**09 16 32.1**	**-2.8**
ZIRO	**ZIRO**	**5.49**	**356**	*e*P	**Pn**	**09 15 34.0**	**0.0**
ZIRO				*e*S	**Sn**	**09 16 31.1**	**-4.7**
CM31	**Chiang Mai Arr**	**5.62**	**128**	*e*Pn	**Pn**	**09 15 34.9**	**-0.7**
CM31				*e*Sn	**Sn**	**09 16 39.5**	**+0.6**
CM31				*e*		09 18 23.0	
CMAR	**Chiang Mai Arr**	**5.62**	**128**	P	**Pn**	**09 15 34.6**	**-1.0**
	comp=E,9.7nm,0.3s,baz=307,slow=14,SNR=444						
CMAR				S	**Sn**	**09 16 38.6**	**-0.2**
	comp=E,4.3nm,0.3s,baz=295,slow=17,SNR=5.4						
CMAR				LR	LR	09 18 23.0	
	comp=E,224nm,20.1s,baz=278,slow=45						
TAWA	**Tawang**	**5.96**	**339**	*e*P	**Pn**	**09 15 41.6**	**+0.9**
TAWA				*e*S	**Sn**	**09 16 41.6**	**-6.1**
GTK	**Tadong**	**7.39**	**317**	*e*P	**Pn**	**09 16 01.0**	**+1.1**
LSA	**Lhasa**	**8.15**	**340**	*e*Pn	**Pn**	**09 16 11.0**	**+0.6**
LSA				*e*		09 16 11.5	
LSA				*e*Sn	**Sn**	**09 17 41.2**	**+0.1**
JIRN	**Jiri**	**9.26**	**309**	*e*Pn	**Pn**	**09 16 23.9**	**-1.6**
JIRN				*e*Sn	**Sn**	**09 18 02.8**	**-5.3**
	comp=E,648nm,0.4s						
GUN	**Gumba**	**9.63**	**309**	*e*Pn	**Pn**	**09 16 28.8**	**-1.7**
GUN				*e*Sn	**Sn**	**09 18 11.9**	**-5.1**
	comp=E,342nm,0.5s						
PKI	**Pulchoki**	**9.79**	**306**	*e*Pn	**Pn**	**09 16 30.9**	**-1.7**
PKI				*e*Sn	**Sn**	**09 18 15.2**	**-5.6**
PKIN	**Phulchoki**	**9.80**	**306**	*e*Pn	**Pn**	**09 16 30.8**	**-1.9**
KKN	**Kakani**	**10.00**	**307**	*e*Pn	**Pn**	**09 16 34.5**	**-0.9**
KKN				*e*Sn	**Sn**	**09 18 20.4**	**-5.5**
	comp=E,151nm,0.4s						
DMN	**Daman**	**10.03**	**305**	*e*Pn	**Pn**	**09 16 34.8**	**-1.1**
GKN	**Gorkha**	**10.59**	**306**	*e*Pn	**Pn**	**09 16 41.6**	**-1.9**
GKN				*e*Sn	**Sn**	**09 18 33.4**	**-6.9**
KOLN	**Koldanda**	**11.27**	**303**	*e*Pn	**Pn**	**09 16 49.8**	**-2.9**
KOLN				*e*Sn	**Sn**	**09 18 48.4**	**-8.5**
	comp=E,249nm,0.4s						
DANN	**Dangsing**	**11.43**	**305**	*e*Pn	**Pn**	**09 16 52.8**	**-2.2**
DANN				*e*Sn	**Sn**	**09 18 53.5**	**-7.4**
	comp=E,112nm,0.4s						
GYA	**Guiyang**	**12.10**	**66**	⇑*i*P	**Pn**	**09 17 08.0**	**+4.2**
GYA				sP	P	09 17 36.6	+24
GYA				S	**Sn**	**09 19 17.6**	**+0.8**
GYA				ScS	**ScS**	**09 29 40.4**	**-0.8**
GYA				pmax	pmax		
	comp=E,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=E,80nm,4.7s						
GYA				LR	LR		
	comp=E,370nm,8.4s						
GYA				LR	LR		
	comp=E,240nm,8.1s						
GYA				LR	LR		
	comp=E,370nm,8.6s						
CD2	**Chengdu**	**12.23**	**42**	*e*P	**Pn**	**09 17 06.0**	**+0.6**
CD2				S	**Sn**	**09 19 21.4**	**+1.5**
CD2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CD2				LR	LR		
	comp=E,450nm,11.8s						
CD2				LR	LR		
	comp=E,430nm,7.3s						
JBP	**Jabalpur**	**13.28**	**278**	⇑*i*P	**Pn**	**09 17 22.1**	**+2.8**
JBP				*e*x	x	09 18 28.4	
NGP	**Nagpur**	**14.22**	**269**	*e*P	**Pn**	**09 17 32.7**	**+1.0**
NGP				*e*x	x	09 20 00.2	
HYB	**Hyderabad**	**15.53**	**256**	*i* P	**P**	**09 17 52.0**	**+1.4**
HYB				*e*		09 20 25.0	
HYB				*e*S	**Sn**	**09 20 39.5**	**-0.4**
ENH	**Enshi**	**15.89**	**56**	*e*Pn	**Pn**	**09 17 51.4**	**-1.3**
	comp=E,53nm,1.0s						
LZH	**Lanzhou**	**16.28**	**29**	*e*P	**P**	**09 18 01.5**	**+2.5**
LZH				pP	pP	09 18 15.4	-1.4
LZH				sP	sP	09 18 26.3	-2.6
LZH				pmax	pmax		
	comp=E,27nm,1.1s						
XAN	**Xi'an**	**17.57**	**44**	*e*P	**P**	**09 18 11.6**	**-1.4**
	comp=E,14nm,1.0s						
XAN	**Xi'an**	**17.57**	**44**	P	**P**	**09 18 11.6**	**-1.4**
XAN				S	**Sn**	**09 21 25.4**	**-3.5**
XAN				pmax	pmax		
	comp=E,12nm,1.1s						
XAN				pmax	pmax		
	comp=E,78nm,4.1s						

XAN				LR	LR		
	comp=E,210nm,10.3s						
XAN				LR	LR		
	comp=E,170nm,9.6s						
XAN				LR	LR		
	comp=E,230nm,14.2s						
KULM	Kulim	17.74	159	eP	P	09 18 12.7	-2.3
	comp=E,21nm,1.1s						
MLSI	Meulaboh, Aceh	17.78	173	P	P	09 18 15.1	-0.3
	comp=E,95nm,1.2s						
IPM	Ipoh	18.62	159	eP	P	09 18 24.1	-0.7
	comp=E,22nm,0.9s						
IPM	Ipoh	18.62	159	P	P	09 18 24.0	-0.7
KCSI	Kotacane, Aceh	18.71	169	P	P	09 18 25.9	+0.3
	comp=E,58nm,1.1s						
TSI	Tuntungan	18.88	167	P	Pn	09 18 28.7	-0.4
PSI	Prapat	19.64	166	P	Pn	09 18 37.2	-1.0
	comp=E,1.7nm,0.3s,baz=338,slow=9.5,SNR=12						
PSI				S	S	09 22 14.4	+1.8
	comp=E,0.2nm,0.3s,baz=29,slow=11,SNR=1.5						
PSI	Prapat	19.64	166	eP	Pn	09 18 37.2	-1.0
	comp=E,75nm,1.1s						
PSI				eS	S	09 22 14.4	+1.8
PALK	Pallekele	19.69	224	P	Pn	09 18 38.2	-0.5
	comp=E,1.3nm,0.3s,baz=114,slow=3.6,SNR=5.0						
PALK				LR	LR	09 25 31.7	
	comp=E,237nm,21.5s,baz=116,slow=34						
PALK	Pallekele	19.69	224	eP	P	09 18 37.1	+0.7
	comp=E,44nm,1.1s						
JRMM	Jerantut	19.70	155	P	P	09 18 37.0	+0.5
WHN	Wuhan	19.84	61	⇑P	Pn	09 18 41.4	+1.0
WHN				pP	pP	09 18 57.3	+1.2
WHN				S	S	09 22 15.8	-0.5
WHN				pmax	pmax		
	comp=E,44nm,0.8s						
WHN				pmax	pmax		
	comp=E,430nm,6.2s						
WHN				LR	LR		
	comp=E,390nm,4.5s						
WHN				LR	LR		
	comp=E,410nm,6.9s						
WHN				LR	LR		
	comp=E,530nm,11.1s						
GSI	Gunungsitoli	20.85	171	eP	P	09 18 48.3	-0.6
	comp=E,61nm,1.1s						
GSI	Gunungsitoli	20.85	171	P	P	09 18 48.6	-0.3
	comp=E,52nm,1.0s						
MNSI	Mandailing Nat	21.73	166	P	P	09 18 59.1	+0.9
	comp=E,20nm,0.5s						
NIL	Nilore	21.88	306	eP	P	09 19 00.2	+0.5
	comp=E,15nm,0.8s						
MYKOM	Kota Tinggi	22.16	154	eP	P	09 19 02.0	-0.9
	comp=E,29nm,1.0s						
MYKOM	Kota Tinggi	22.16	154	P	P	09 19 05.0	+2.2
PBSI	Pulau Batu	22.29	169	P	P	09 19 04.3	+0.1
	comp=E,73nm,0.9s						
WMQ	Urumqi	22.41	347	eP	P	09 19 07.5	+2.2
WMQ				sP	sP	09 19 41.6	+5.6
WMQ				LR	LR		
	comp=E,110nm,11.7s						
WMQ				LR	LR		
	comp=E,170nm,10.1s						
WMQ				LR	LR		
	comp=E,37nm,7.5s						
BTO	Baotou	22.80	32	eP	P	09 19 09.8	+0.4
KSH	Kashi	23.41	322	P	P	09 19 16.5	+1.2
KSH				pP	pP	09 19 38.1	+2.8
KSH				sP	sP	09 19 49.9	+2.8
KSH				PP	PnPn	09 19 53.4	+6.3
KSH				pmax	pmax		
	comp=E,13nm,0.7s						
KSH				pmax	pmax		
	comp=E,120nm,5.2s						
SISI	Saibi	23.68	168	P	P	09 19 16.7	-1.0
	comp=E,58nm,1.4s						
HHC	Hu-ho-hao-te	23.77	34	P	P	09 19 19.6	+1.2
HHC				S	S	09 23 24.0	-2.9
HHC				pmax	pmax		
	comp=E,12nm,0.8s						
HHC				LR	LR		
	comp=E,220nm,11.1s						
HHC				LR	LR		
	comp=E,220nm,12.8s						
HHC				LR	LR		
	comp=E,13nm,15.3s						
NJ2	Nanjing	23.98	60	eP	P	09 19 20.3	0.0
NJ2				pmax	pmax		
	comp=E,12nm,0.5s						
TIA	Tai'an	24.35	50	P	P	09 19 23.4	-0.2
TIA				pmax	pmax		
	comp=E,10.0nm,1.1s						
KDJ	Kajisay	24.65	328	eP	P	09 19 29.3	+2.8
	comp=E,10nm,1.0s						
YULB	Yu-li	24.92	82	eP	P	09 19 30.5	+1.6
	comp=E,8.3nm,0.9s						
KBL	Kabul	25.42	305	eP	P	09 19 35.7	+2.0
	comp=E,20nm,1.1s						
BOOM	Boomskoye usch	25.54	327	eP	P	09 19 34.8	+0.3
	comp=E,3.9nm,0.9s						
AAK	Ala-Archa	26.38	326	P	P	09 19 42.8	+0.7
	comp=E,1.2nm,0.2s,baz=149,slow=12,SNR=2.1						
AAK				pP	pP	09 20 05.4	+1.8
	comp=E,16nm,0.9s,baz=115,slow=5.0,SNR=5.6						
AAK				LR	LR	09 33 00.3	
	comp=E,96nm,20.4s,baz=112,slow=42						
AAK	Ala-Archa	26.38	326	eP	P	09 19 43.2	+1.1
	comp=E,5.0nm,0.9s						
MK31	Makanchi Array	26.55	341	eP	P	09 19 44.3	+0.8
	comp=E,4.1nm,0.9s						
MK32	Makanchi Array	26.55	341	ePcP	PcP	09 23 06.4	+0.7
MK32				eScP	ScP	09 26 37.9	+0.8
MKAR	Makanchi Array	26.55	341	P	P	09 19 43.8	+0.3
	comp=E,1.8nm,0.5s,baz=156,slow=9.5,SNR=18						
MKAR				pP	pP	09 20 04.4	-0.3
	comp=E,22nm,0.8s,baz=145,slow=10,SNR=19						
MKAR				PcP	PcP	09 23 06.4	+0.7
	comp=E,0.5nm,0.4s,baz=132,slow=3.5,SNR=4.8						
MKAR				ScP	ScP	09 26 37.9	+0.8
	comp=E,4.1nm,0.9s,baz=144,slow=1.9,SNR=17						
GAR	Garm	26.58	315	eP	P	09 19 45.8	+1.8
	comp=E,24nm,1.0s						
MAKZ	Makanchi	26.66	341	eP	P	09 19 47.2	+2.8
	comp=E,6.6nm,1.1s						
BTK	Batken	26.85	317	eP	P	09 19 48.4	+2.1
	comp=E,5.8nm,0.6s						
CHGR	Chuyangaron	27.18	313	eP	P	09 19 51.0	+1.7
	comp=E,22nm,1.3s						
SONA0	Songino Array	27.51	18	eP	P	09 19 52.8	+0.6
SONA0				ePcP	PcP	09 23 08.1	+0.1
SONA0				eScP	ScP	09 26 39.2	-1.0
SONM	Songino Array	27.51	18	P	P	09 19 52.8	+0.6
	comp=E,0.5nm,0.4s,baz=219,slow=8.9,SNR=2.6						
SONM				PcP	PcP	09 23 08.1	+0.1
	comp=E,0.8nm,0.3s,baz=198,slow=2.6,SNR=2.9						
SONM				ScP	ScP	09 26 39.2	-1.0
	comp=E,1.1nm,0.8s,baz=192,slow=1.4,SNR=5.9						
SONM				LR	LR	09 33 28.6	
	comp=E,93nm,18.7s,baz=240,slow=42						
TPI	Tanjungpandan	27.88	150	P	P	09 19 50.7	-4.9
MDSI	Maura Dua	28.07	159	P	P	09 19 56.8	-0.5
	comp=E,20nm,1.0s						
KURBB	Kurchatov Arra	31.10	340	P	P	09 20 24.6	+0.9
	comp=E,1.8nm,0.7s,baz=152,slow=8.5,SNR=14						
KURBB				pP	pP	09 20 47.3	+2.1
	comp=E,11nm,0.8s,baz=152,slow=8.1,SNR=22						
KURBB				PcP	PcP	09 23 17.1	+0.2
	comp=E,1.3nm,0.7s,baz=160,slow=2.9,SNR=5.5						
KURK	Kurchatov	31.15	341	eP	P	09 20 25.6	+1.4
	comp=E,3.2nm,0.8s						
ZAA0	Zalesovo Array	32.67	350	eP	P	09 20 38.9	+1.5
	comp=E,5.3nm,0.4s						
ZAA0				epP	pP	09 20 58.7	-0.4
ZALV	Zalesovo Beam	32.67	350	P	P	09 20 38.2	+0.8
	comp=E,5.5nm,0.4s,baz=176,slow=8.1,SNR=17						
ZALV				pP	pP	09 20 59.9	+0.7
	comp=E,14nm,0.9s,baz=184,slow=8.6,SNR=6.8						
ZALV				PcP	PcP	09 23 20.9	-0.3
	comp=E,1.0nm,0.3s,baz=190,slow=4.6,SNR=3.4						
ZALV				ScP	ScP	09 26 56.1	-0.5
	comp=E,0.8nm,0.3s,baz=159,slow=4.5,SNR=2.6						
ZALV				LR	LR	09 35 43.7	
	comp=E,58nm,18.1s,baz=60,slow=39						
ZAA1	Zalesovo Array	32.67	350	ePcP	PcP	09 23 20.9	-0.3
ZAA1				eScP	ScP	09 26 56.1	-0.5
KSRS	Korea Array	32.78	54	LR	LR	09 36 10.7	
	comp=E,71nm,18.5s,baz=261,slow=40						
CN2	Changchun	33.67	42	eP	P	09 20 46.9	+0.6
CN2				pmax	pmax		
	comp=E,10.0nm,0.6s						
JNU	Nakatsue	34.09	63	P	P	09 20 49.2	-0.9
	comp=E,2.6nm,0.8s,baz=234,slow=19,SNR=2.3						
JNU				pP	pP	09 21 11.3	-0.5
	comp=E,3.0nm,0.8s,baz=268,slow=15,SNR=2.1						
JNU	Nakatsue	34.09	63	eP	P	09 20 48.7	-1.4
	comp=E,8.2nm,1.2s						
GEYT	Alibeck	34.87	305	P	P	09 20 58.1	+1.3
	comp=E,1.1nm,0.4s,baz=97,slow=7.8,SNR=3.9						
GEYT				ScP	ScP	09 27 05.5	+0.7
	comp=E,5.3nm,0.6s,baz=207,slow=3.0,SNR=9.5						
GEYT				LR	LR	09 38 57.7	
	comp=E,49nm,18.2s,baz=155,slow=42						
BRVK	Borovoye	36.01	335	eP	P	09 21 06.5	+0.2
	comp=E,2.3nm,0.8s						
BRVK				epP	pP	09 21 27.4	-0.7
LUWI	Luwuk	36.02	126	eP	P	09 21 07.4	+0.6
	comp=E,44nm,0.9s						
MDJ	Mudanjiang	36.68	44	P	P	09 21 23.5	+11
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,96nm,2.5s						
USRK	Ussuriysk Ar.	38.06	45	P	P	09 21 22.4	-1.4
	comp=Z,2.5nm,0.8s,baz=213,slow=6.6,SNR=6.1						
USRK				pP	pP	09 21 44.3	-1.4
	comp=Z,12nm,1.3s,baz=183,slow=9.5,SNR=3.7						
USRK				LR	LR	09 39 33.0	
	comp=Z,80nm,19.4s,baz=197,slow=40						
ABKAR	Akbulak array	38.41	323	eP	P	09 21 27.8	+1.1
	comp=Z,8.0nm,1.2s						
AKTO	Aktyubinsk	40.09	324	P	P	09 21 41.4	+0.7
	comp=Z,1.6nm,0.3s,baz=134,slow=9.2,SNR=7.6						
AKTO				ScP	ScP	09 27 24.7	+0.5
	comp=Z,1.0nm,0.6s,baz=99,slow=4.2,SNR=6.7						
AKTO				LR	LR	09 41 40.5	
	comp=Z,97nm,18.9s,baz=129,slow=41						
MAJO	Matsushiro	40.58	59	eP	P	09 21 44.0	-0.9
MAJO				eScP	ScP	09 27 24.5	-1.8
MAT	Matsushiro	40.58	59	P	P	09 21 43.0	-1.9
MAT				eS	S	09 27 35.8	-12
MJAR	Matsushiro Arr	40.58	59	P	P	09 21 44.0	-0.9
	comp=Z,2.4nm,0.8s,baz=268,slow=11,SNR=9.2						
MJAR				pP	pP	09 22 06.6	-0.4
	comp=Z,8.4nm,1.1s,baz=268,slow=10,SNR=7.0						
MJAR				ScP	ScP	09 27 24.5	-1.8
	comp=Z,1.7nm,0.9s,baz=236,slow=5.8,SNR=5.3						
MJAR				LR	LR	09 40 43.8	
	comp=Z,71nm,18.6s,baz=260,slow=39						
ARU	Arti	43.24	332	LR	LR	09 42 33.7	
	comp=Z,66nm,19.0s,baz=134,slow=39						
ARU	Arti	43.24	332	eP	P	09 22 06.8	+0.6
	comp=Z,3.8nm,0.5s						
ARU				epP	pP	09 22 27.5	-1.1
RAYN	Ar Rayn	44.85	282	eP	P	09 22 21.1	+1.4
	comp=Z,6.4nm,0.8s						
ASAJ	Asahikawa	45.30	49	pP	pP	09 22 44.0	-1.4
	comp=Z,6.9nm,1.0s,baz=261,slow=23,SNR=2.9						
AKH	Akhalkalaki	46.63	307	⇓iP	P	09 22 36.3	+2.7
KBZ	Khabaz	47.43	310	LR	LR	09 46 01.3	
	comp=Z,52nm,21.6s,baz=122,slow=40						
PSA00	Pilbara Seismi	49.99	148	eP	P	09 22 58.7	-0.6
	comp=Z,47nm,1.1s						
GENI	Genyem	51.04	113	P	P	09 23 07.6	+0.2
ASF	Jabal al Asfar	51.58	294	P	P	09 23 12.7	+1.3
	comp=Z,2.6nm,0.7s,baz=98,slow=17						
ASF				pP	pP	09 23 34.7	+0.2
	comp=Z,4.4nm,0.8s,baz=103,slow=5.4,SNR=3.9						
EIL	Elat	53.47	291	P	P	09 23 27.1	+1.8
	comp=Z,6.2nm,0.9s,baz=62,slow=17,SNR=3.1						
EIL				pP	pP	09 23 51.0	+2.4
	comp=Z,4.2nm,0.9s,baz=117,slow=6.8,SNR=1.9						
ILGA	Ilgaz	53.95	305	eP	P	09 23 27.1	-1.7
	comp=Z,18nm,1.4s						
ILGA				epP	pP	09 23 51.9	-0.3
BR101	Keskin Array S	53.99	304	eP	P	09 23 29.9	+0.8
BR101				eScP	ScP	09 28 23.0	+0.3
BRTR	Keskin Array B	53.99	304	P	P	09 23 29.9	+0.8
	comp=Z,0.8nm,0.8s,baz=92,slow=8.7,SNR=4.4						
BRTR				pP	pP	09 23 51.4	-1.0
	comp=Z,1.6nm,0.8s,baz=111,slow=6.8,SNR=4.4						
BRTR				ScP	ScP	09 28 23.0	+0.3
	comp=Z,1.7nm,1.0s,baz=116,slow=3.4,SNR=5.8						
BRTR				LR	LR	09 52 10.1	
	comp=Z,22nm,18.1s,baz=94,slow=42						
PETK	Petropavlovsk-	56.76	40	LR	LR	09 49 14.5	
	comp=Z,33nm,19.7s,baz=247,slow=37						
WRA	Warramunga Arr	57.19	134	P	P	09 23 51.4	-0.6
	comp=Z,8.4nm,0.8s,baz=316,slow=5.8,SNR=24						
WRA				PcP	PcP	09 24 45.4	-0.2
	comp=Z,2.0nm,0.7s,baz=310,slow=5.1,SNR=2.8						
WRA				ScP	ScP	09 28 35.0	-1.8
	comp=Z,1.8nm,1.0s,baz=295,slow=4.3,SNR=2.9						
WR1	Warramunga Arr	57.19	134	ePcP	PcP	09 24 45.4	-0.2
WR1				eScP	ScP	09 28 35.0	-1.8
WRAB	Tennant Creek	57.19	134	eP	P	09 23 50.2	-1.7
	comp=Z,18nm,1.1s						
WB2	Warramunga Arr	57.19	134	eP	P	09 23 51.9	-0.1
	comp=Z,12nm,0.9s						
AKASG	Malin Array Be	57.56	317	P	P	09 23 54.1	-0.1
	comp=Z,1.4nm,0.4s,baz=80,slow=6.5,SNR=6.4						
AKASG				pP	pP	09 24 18.7	+1.0
	comp=Z,4.8nm,0.7s,baz=76,slow=6.7,SNR=4.9						
AKBB	Malin Array Si	57.56	317	eP	P	09 23 54.8	+0.6
	comp=Z,3.6nm,0.6s						
AKBB				epP	pP	09 24 16.3	-1.4
VRI	Vrincioaia	59.07	311	⇓iP	P	09 24 05.9	+1.1
PLOR	Plostina	59.12	311	⇑iP	P	09 24 05.9	+0.7
BIZ	Bicaz	59.49	312	⇓iP	P	09 24 09.4	+1.7
AS31	Alice Springs	59.56	137	eP	P	09 24 08.5	+0.1
	comp=Z,1.8nm,0.9s						
AS31				eScP	ScP	09 28 45.2	-2.0
ASAR	Alice Springs	59.56	137	P	P	09 24 08.4	0.0
	comp=Z,6.0nm,0.8s,baz=317,slow=6.8,SNR=37						
ASAR				ScP	ScP	09 28 45.2	-2.0
	comp=Z,0.6nm,0.9s,baz=321,slow=5.5,SNR=3.3						
MLR	Muntele Rosu	59.62	311	P	P	09 24 10.1	+1.3
	comp=Z,9.8nm,1.1s,baz=127,slow=5.6,SNR=6.8						
MLR				pP	pP	09 24 32.5	+0.1
	comp=Z,16nm,0.7s,baz=134,slow=0.7,SNR=10						
MLR	Muntele Rosu	59.62	311	eP	P	09 24 10.5	+1.8
	comp=Z,14nm,1.2s						
COEN	Coen	59.79	122	eP	P	09 24 09.9	-0.3
	comp=Z,16nm,1.4s						
BURAR	Bucovina Array	60.09	313	⇑iP	P	09 24 13.2	+1.3
BUR08	Bucovina Ar. S	60.10	313	eP	P	09 24 13.0	+1.0
	comp=Z,7.1nm,1.4s						
VOIR		60.25	311	⇓iP	P	09 24 12.0	-1.0
FIA0	FINESS Array S	60.50	329	eP	P	09 24 14.8	+0.5
FINES	FINESS Array B	60.50	329	P	P	09 24 14.8	+0.5
	comp=Z,2.5nm,0.8s,baz=191,slow=5.8,SNR=8.0						
FINES				pP	pP	09 24 38.3	+0.3
	comp=Z,4.2nm,0.7s,baz=92,slow=9.5,SNR=5.5						
FINES				LR	LR	09 54 34.9	
	comp=Z,63nm,20.1s,baz=78,slow=40						
IDI	Anoyia	61.23	299	P	P	09 24 21.1	+1.3
	comp=Z,6.5nm,0.7s,baz=290,slow=3.7,SNR=3.1						
ARA0	ARCESS Array S	62.15	338	eP	P	09 24 26.5	+1.1
ARCES	ARCESS Array B	62.15	338	P	P	09 24 26.5	+1.1
	comp=Z,2.7nm,0.8s,baz=94,slow=7.3,SNR=8.5						
ARCES				pP	pP	09 24 49.0	-0.1
	comp=Z,2.0nm,0.5s,baz=99,slow=8.6,SNR=2.8						
MDVR	Moldovita	62.65	310	⇓iP	P	09 24 26.2	-2.9
VYHS	Vyhne	64.32	314	eP	P	09 24 42.5	+2.4
VYHS				epP	pP	09 25 05.8	+1.8
MORC	Moravsky Berou	65.06	316	eP	P	09 24 46.8	+1.9
MORC				epP	pP	09 25 10.3	+1.4
VRAC	Vranov	65.72	315	P	P	09 24 50.8	+1.7
	comp=Z,1.3nm,0.5s,baz=102,slow=7.3,SNR=4.1						
VRAC				pP	pP	09 25 15.5	+2.4
	comp=Z,7.9nm,0.9s,baz=80,slow=6.3,SNR=4.8						
VRAC	Vranov	65.72	315	eP	P	09 24 49.3	+0.2
VRAC				epP	pP	09 25 15.0	+1.9
CTAO	Charters Tower	65.78	126	eP	P	09 24 49.8	-0.1
	comp=Z,3.7nm,0.8s						
KRUC	Moravsky	65.88	315	eP	P	09 24 51.1	+1.0
KRUC				epP	pP	09 25 15.9	+1.8
CONA	Conrad Observa	66.36	314	i P	P	09 24 55.1	+1.8
	comp=Z,5.2nm,1.3s						
CONA				i pP	pP	09 25 16.4	-1.0
	comp=Z,8.6nm,1.2s						
HFS	Hagfors	66.51	327	P	P	09 24 54.0	+0.1
	comp=Z,2.4nm,0.7s,baz=108,slow=4.8,SNR=9.5						
ARSA	Arzberg	66.67	313	i pP	pP	09 25 20.2	+0.8
	comp=Z,2.7nm,0.6s						
SOKA	Soboth	67.09	313	i PcP	PcP	09 25 23.9	-1.6
	comp=Z,4.7nm,1.0s						
BRG	Berggiesshubel	67.24	317	eP	P	09 25 02.1	+3.4
	comp=Z,5.1nm,1.3s						
BRG				e		09 25 21.2	
	comp=Z,8.6nm,1.2s						
MOA	Molln	67.44	314	i pP	pP	09 25 22.1	-2.0
	comp=Z,4.7nm,0.7s						
OBKA	Obir	67.44	313	i P	P	09 25 02.3	+2.1
	comp=Z,3.9nm,1.0s						
OBKA				i PcP	PcP	09 25 26.3	-0.8
	comp=Z,5.0nm,0.8s						
BBOO	Buckleboo	67.56	143	eP	P	09 25 01.1	+0.2
	comp=Z,130nm,1.5s						
NB2	NORSAR Subarra	67.66	329	P	P	09 25 01.1	-0.1
	comp=Z,1.1nm,0.7s,baz=84,slow=6.5						
NB200	NORSAR Array S	67.66	329	eP	P	09 25 00.6	-0.7
NOA	NORSAR Array B	67.66	329	P	P	09 25 00.6	-0.7
	comp=Z,1.3nm,0.8s,baz=83,slow=6.2,SNR=4.3						
NOA				pP	pP	09 25 22.6	-2.7
	comp=Z,1.3nm,0.7s,baz=85,slow=6.4,SNR=3.0						
NOA				LR	LR	09 55 53.5	
	comp=Z,30nm,18.1s,baz=100,slow=37						
GEC2	GERESS Array S	67.67	315	eP	P	09 25 02.5	+0.9
	comp=Z,3.4nm,0.9s						
GERES	GERESS Array B	67.67	315	P	P	09 25 02.7	+1.1
	comp=Z,1.7nm,0.8s,baz=76,slow=6.1,SNR=6.9						
GERES				pP	PcP	09 25 27.1	-0.8
	comp=Z,4.1nm,0.6s,baz=71,slow=5.8,SNR=9.4						
GERES				LR	LR	10 01 37.6	
	comp=Z,31nm,18.2s,baz=74,slow=42						
CLL	Collm	67.77	318	epP	pP	09 25 25.0	-1.1
CLL				Lm	MLR	13 11 00.0	
	comp=N,200nm,19.9s						
CLL				Lm	MLR	13 11 00.0	
	comp=E,100nm,21.4s						
CLL				Lm	MLR	13 11 00.0	
	comp=Z,200nm,19.1s						
KBA	Koelnbreinsper	68.17	313	i pP	pP	09 25 27.2	-1.9
	comp=Z,4.2nm,0.8s						
WTTA	Wattenberg	69.29	314	i pP	pP	09 25 37.0	+1.0
	comp=Z,7.9nm,1.3s						
SQTA	Sankt Quirin	69.58	314	i pP	pP	09 25 38.7	+0.9
	comp=Z,5.7nm,0.6s						
MOTA	Moosalm	69.63	314	i P	P	09 25 15.4	+1.5
	comp=Z,3.3nm,0.9s						
MOTA				i pP	pP	09 25 39.2	+1.1
	comp=Z,6.4nm,0.7s						
RETA	Reutte	69.83	314	i P	P	09 25 15.9	+0.8
	comp=Z,6.0nm,1.2s						
RETA				i PcP	PcP	09 25 35.7	-1.3
	comp=Z,6.5nm,0.6s						
FETA	Feichten	69.94	314	i P	P	09 25 18.1	+2.3
	comp=Z,3.9nm,1.2s						
FETA				i PcP	PcP	09 25 37.9	+0.3
	comp=Z,7.9nm,1.3s						
STKA	Stephens Creek	70.16	138	P	P	09 25 16.9	-0.1
	comp=Z,8.2nm,0.9s,baz=278,slow=19,SNR=6.2						
STKA	Stephens Creek	70.16	138	eP	P	09 25 16.4	-0.7
	comp=Z,5.2nm,1.2s						
FUORN	Ofenpass-Fuorn	70.33	313	eP	P	09 25 15.9	-2.4
	comp=Z,2.2nm,0.8s						
DAVOX	Davos/Dischmat	70.56	314	P	P	09 25 20.2	+0.5
	comp=Z,1.0nm,0.3s,baz=112,slow=20,SNR=1.8						
DAVOX				pP	pP	09 25 45.1	+1.3
	comp=Z,4.8nm,0.7s,baz=62,slow=5.6,SNR=3.7						
SENIN	Lac Senin/Sane	72.39	313	eP	P	09 25 29.9	-0.8
	comp=Z,1.9nm,0.6s						
KEST	Kesra	73.55	302	P	P	09 25 38.5	+0.9
	comp=Z,1.5nm,0.6s,baz=21,slow=13,SNR=3.5						
KEST				pP	pP	09 26 01.5	-0.5
	comp=Z,8.7nm,1.0s,baz=329,slow=3.7,SNR=4.8						
KEST	Kesra	73.55	302	eP	P	09 25 37.4	-0.2
	comp=Z,6.3nm,1.1s						
KEST				epP	pP	09 26 01.1	-0.9
EKA	Eskdalemuir Ar	76.28	324	P	P	09 25 53.3	+0.5
	comp=Z,0.4nm,0.5s,baz=80,slow=5.1,SNR=5.1						
EKA				pP	pP	09 26 18.9	+1.6
	comp=Z,1.0nm,0.6s,baz=71,slow=6.0,SNR=2.8						
CAST	Castle Rocks	80.45	25	eP	P	09 26 15.2	-0.4
	comp=Z,3.6nm,0.9s						
BPAW	Bear Paw Mtn.	80.51	24	eP	P	09 26 15.8	-0.1
	comp=Z,3.8nm,0.9s						
ILAR	Eielson Array	81.64	22	P	P	09 26 20.6	-1.4
	comp=Z,0.8nm,0.8s,baz=303,slow=5.4,SNR=10						
ILAR				pP	pP	09 26 46.7	-0.1
	comp=Z,0.6nm,0.4s,baz=280,slow=5.0,SNR=4.6						
ILB	Eielson Array	81.64	22	eP	P	09 26 20.4	-1.4
	comp=Z,2.6nm,1.2s						
ESDC	Sonseca Array	82.29	310	P	P	09 26 27.0	+1.1
	comp=Z,0.1nm,0.3s,baz=75,slow=5.4,SNR=3.7						
ESDC				pP	pP	09 26 49.2	-1.6
	comp=Z,0.3nm,0.4s,baz=68,slow=4.2,SNR=2.9						
BOSA	Boshof	83.46	236	P	P	09 26 33.2	+1.1
	comp=Z,6.1nm,1.0s,baz=159,slow=9.1,SNR=3.9						
BOSA				pP	pP	09 26 55.7	-1.3
	comp=Z,3.6nm,0.7s,baz=0.9,slow=4.0,SNR=3.0						
BOSA				LR	LR	10 04 50.5	
	comp=Z,42nm,18.1s,baz=35,slow=36						
TORD	Torodi Ar. Bea	87.53	283	P	P	09 26 54.1	+1.6
	comp=Z,0.8nm,1.0s,baz=81,slow=6.2,SNR=4.0						
TORD				pP	pP	09 27 19.5	+1.9
	comp=Z,2.5nm,0.9s,baz=30,slow=4.5,SNR=5.8						
TORD				LR	LR	10 10 30.7	
	comp=Z,32nm,18.2s,baz=275,slow=38						
YKA	Yellowknife Ar	92.68	13	P	P	09 27 14.3	-1.2
	comp=Z,0.8nm,0.9s,baz=330,slow=4.8,SNR=6.6						
YKA				sP	sP	09 27 50.2	-0.9
	comp=Z,0.7nm,0.9s,baz=331,slow=4.6,SNR=3.3						
YKB5	Yellowknife Ar	92.68	13	esP	sP	09 27 50.2	-0.9
LTX	Lajitas	126.07	19	ePKPdf	PKPdf	09 33 06.4	-0.1
LTX				epPKPdf	pPKPdf	09 33 31.2	-1.7
TXAR	Lajitas Array	126.07	19	PKP	PKPdf	09 33 06.4	-0.1
	comp=Z,0.5nm,0.6s,baz=40,slow=1.3,SNR=9.1						
TXAR				pPKP	pPKPdf	09 33 31.2	-1.7
	comp=Z,0.6nm,0.9s,baz=162,slow=0.9,SNR=2.8						
ROSC	El Rosal	151.06	336	PKPbc	PKiKP	09 33 59.2	+0.7
	comp=Z,12nm,0.6s,baz=18,slow=6.4,SNR=8.9						
ROSC				pPKPbc	pPKPbc	09 34 23.6	-0.7
	comp=Z,20nm,0.8s,baz=18,slow=20,SNR=4.5						
ROSC	El Rosal	151.06	336	ePKPdf	PKPdf	09 33 48.4	-3.7
ROSC				ePKPbc	PKPbc	09 33 54.7	-3.3
ROSC				ePKPab	PKiKP	09 33 59.8	+1.3
CPUP	Villa Florida	153.80	255	PKPbc	PKPbc	09 34 03.2	0.0
	comp=Z,1.0nm,0.5s,baz=6.9,slow=3.1,SNR=3.8						

SOME ***20*** *09:15:23.5, 40.°65N×72.°32E, h0^{km}*

KRNET ***20*** *09:15:29.2±0.1, 40.°81N×72.°20E, h17^{km}, mb3.0*

NNC ***20*** *09:15:29.8±1.9, 40.°78N×72.°47E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=15.3km s-min=11.0km az=167.0*

ISCJB ***20*** *09:15:30.4±0.6, 40.°82N±0.°05×72.°16E±0.°05, h10^{km}, Error ellipse: s-maj=7.5km s-min=4.2km az=146.8*

ISC 20 09:15:28.3±1.1**, 40.°75N**±0.°05×**72.°30E**±0.°04**, h10^{km}, n31, σ2.^{s}13**/51**, 28C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.78	42	⇑iP	Pb	09 15 44.1	+0.1
	baz=49						
ARSB				⇑iS	Sb	09 15 55.3	+0.7
	baz=49						
ARK	Arkit	1.08	347	⇑iP	Pg	09 15 47.7	-1.3
	baz=50						
ARK				⇑iS	Sg	09 16 01.7	-1.4
	baz=50						
BTK	Batken	1.32	239	⇓iP	Pn	09 15 53.3	+0.4
	baz=35						
BTK				⇓iS	Sb	09 16 11.3	+1.1
	baz=35						
ARLS	Aral	1.89	53	⇑iP	Pg	09 16 04.6	+0.1
	baz=56						
ARLS				⇑iS	Sg	09 16 30.3	+1.2
	baz=56						
MRKS	Merke	2.11	19	Pg	Pb	09 16 07.0	+0.2
	22nm,0.4s						
MRKS				Lg	Lg	09 16 37.3	
	61nm,0.4s						
MRKS	Merke	2.11	19	⇓iP	Pb	09 16 07.0	+0.2
	22nm,0.3s						
MRKS				⇓iS	Sg	09 16 37.3	+1.1
	61nm,0.5s						
EKS2	Erkin-Say	2.21	30	⇑eP	Pb	09 16 07.3	-1.1
	baz=32						
EKS2				⇑iS	Sb	09 16 36.4	+0.5
	baz=32						
AAK	Ala-Archa	2.51	40	⇑Pn	Pn	09 16 11.1	+1.9
	7.7nm,0.7s						

AAK				⇑Lg	Lg	09 16 48.0	
	52nm,0.5s						
AAK	Ala-Archa	2.51	40	⇑iP	Pb	09 16 12.1	-1.4
	baz=42						
AAK				⇑iS	Sb	09 16 44.0	-0.4
	baz=42						
KZA	Kyzart	2.59	58	⇑eP	Pb	09 16 13.3	-1.7
	baz=60						
KZA				⇑iS	Sb	09 16 47.1	0.0
	baz=60						
FRU1	Bishkek	2.70	40	⇓iP	Pb	09 16 15.0	-1.7
	baz=41						
FRU1				⇓iS	Sb	09 16 49.3	-0.7
	baz=41						
KK31	Karatay Array	2.70	331	⇑Pn	Pb	09 16 14.9	-1.9
	1.9nm,0.3s,baz=140,slow=16,SNR=12						
KK31				Lg	Lg	09 16 54.6	
	15nm,0.5s,baz=137,slow=28,SNR=16						
KBK	Karagaybulak	2.75	45	⇑eP	Pn	09 16 15.4	+2.7
	baz=47						
KBK				⇑iS	Sb	09 16 50.1	-1.5
	baz=47						
NRN	Naryn	2.88	75	⇑eP	Pb	09 16 18.3	-1.7
	baz=77						
NRN				⇑iS	Sb	09 16 54.3	-1.1
	baz=77						
CHMS	Chumysh	2.90	38	⇑iP	Pn	09 16 17.4	+2.8
	baz=40						
CHMS				⇑iS	Sb	09 16 53.1	-2.6
	baz=40						
USP	Ospenovka	3.01	32	⇑eP	Pn	09 16 18.6	+2.6
	baz=34						
USP				⇑iS	Sn	09 16 55.1	+3.0
	baz=34						
SGDS	Sogindy	3.21	32	Pg	Pb	09 16 25.6	+0.1
	4.5nm,0.4s						
SGDS				Lg	Lg	09 17 09.1	
	11nm,0.5s						
TKM2	Tokmak 2	3.29	48	⇑Pn	Pn	09 16 22.9	+2.9
	2.8nm,0.5s						
TKM2				⇑Lg	Lg	09 17 10.8	
	12nm,0.5s						
ULHL	Ulahol	3.32	62	⇑eP	Pn	09 16 24.2	+3.7
	baz=63						
ULHL				⇑iS	Sb	09 17 04.7	-3.2
	baz=63						
KST	Kastek	3.57	49	Pg	Pb	09 16 32.3	+0.7
	6.5nm,0.6s						
KST				Lg	Lg	09 17 20.3	
	15nm,0.5s						
KST	Kastek	3.57	49	eP	Pb	09 16 32.3	+0.7
	2.7nm,0.2s						
KST				⇓iS	Sg	09 17 20.3	-2.6
	12nm,0.5s						
IZV	Izvestkoviy	3.95	53	Pg	Pb	09 16 38.7	+0.6
	2.4nm,0.3s						
IZV				Lg	Lg	09 17 30.9	
	10.0nm,0.7s						
IZV	Izvestkoviy	3.95	53	eP	Pb	09 16 38.0	-0.1
	2.4nm,0.3s						
IZV				eS	Sg	09 17 30.9	-4.3
	10.0nm,0.7s						
KUU	Kurty	4.34	42	Pg	Pb	09 16 46.7	+2.0
	1.7nm,0.4s						
KUU				Lg	Lg	09 17 43.9	
	10nm,0.5s						
KUU	Kurty	4.34	42	eP	Pb	09 16 45.7	+1.0
	0.7nm,0.5s						
KUU				⇑iS	Sg	09 17 43.9	-3.8
	14nm,0.5s						
KTBS	Karatobe	4.40	46	Pg	Pb	09 16 46.7	+1.0
	1.2nm,0.5s						
KTBS				Lg	Lg	09 17 46.6	
	28nm,0.5s						
KTBS	Karatobe	4.40	46	eP	Pb	09 16 46.7	+1.0
	1.2nm,0.3s						
KTBS				eS	Sg	09 17 45.9	-3.7
	28nm,0.5s						
CHKK	Chushkaly	4.66	47	Pg	Pb	09 16 51.8	+1.6
	1.1nm,0.4s						
CHKK				Lg	Lg	09 17 54.9	
	6.6nm,0.3s						
CHKK	Chushkaly	4.66	47	eP	Pb	09 16 52.0	+1.9
	0.9nm,0.2s						
CHKK				⇓iS	Sg	09 17 54.9	-3.1
	6.6nm,0.3s						
ARXS	Arharly	5.36	48	Pg	Pb	09 17 03.6	+1.6
	1.6nm,0.4s						
ARXS				Lg	Lg	09 18 15.4	
	8.2nm,0.5s						
ARXS	Arharly	5.36	48	eP	Pb	09 17 03.6	+1.6
	1.6nm,0.4s						
ARXS				eS	Sg	09 18 14.5	-5.8
	8.2nm,0.5s						

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*ISCJB **20** 09:16:34.7±0.3, 19°.99S±0°.02×68°.98W±0°.06, h135^{km}±4^{km}, mb4.0/4, Error ellipse: s-maj=9.9km s-min=3.9km az=179.3*

*GUC **20** 09:16:35.9±0.7, 19°.97S×69°.00W, h120^{km}±3^{km}, ML4.0*

*SJA **20** 09:16:35.0±0.7, 19°.99S×68°.93W, h129^{km}±4^{km}, ML3.0, MW3.3*

*NEIC **20** 09:16:36.0±0.0, 19°.97S×68°.96W, h118^{km}, mb4.1/3, ML4.1(GUC), After GUC.*

*IDC **20** 09:16:36.2±1.0, 20°.00S×68°.65W, h127^{km}±9^{km}, mb3.8/6, mb1 3.8/10, mb1mx3.5/36, mbtmp4.2/10, Error ellipse: s-maj=24.8km s-min=8.5km az=100.0*

ISC 20 09:16:35.1±0.7, 19°.99S±0°.03×68°.96W±0°.07, h129^{km}±6^{km}, n59, σ1^{s}.03/83, mb4.0/4, 9C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.24	231	eP	Pn	09 16 54.0	+0.6
PB08				eS	Sn	09 17 07.9	+0.6
PB08	IPOC Station P	0.24	231	⇑iP	Pn	09 16 53.8	+0.3
PB08				i S	Sn	09 17 07.1	-0.2
PB08				IAML		09 17 07.6	
	comp=N,18μm,0.3s						
GO01	Chusmiza	0.39	325	ePn	Pn	09 16 54.2	+0.1
GO01				eSn	Sn	09 17 07.9	-0.6
GO01	Chusmiza	0.39	325	⇓iP	Pn	09 16 54.0	-0.2
GO01				i S	Sn	09 17 07.9	-0.6
GO01				IAML		09 17 09.4	
	comp=N,28μm,0.1s						
PB11	IPOC Station P	0.70	289	ePn	Pn	09 16 55.7	+0.1
PB11				eSn	Sn	09 17 10.4	-0.6
PB11	IPOC Station P	0.70	289	eP	Pn	09 16 56.0	+0.4
PB11				eS	Sn	09 17 11.8	+0.7
PB11	IPOC Station P	0.70	289	⇑iP	Pn	09 16 55.7	+0.1
PB11				i S	Sn	09 17 10.4	-0.6
PB11				IAML		09 17 11.2	
	comp=N,11μm,0.2s						
MNMC	Minye Minye	1.05	325	ePn	Pn	09 16 59.4	+0.7
MNMC				eSn	Sn	09 17 16.6	0.0
MNMC	Minye Minye	1.05	325	⇑iP	Pn	09 16 59.3	+0.5
MNMC				i S	Sn	09 17 15.9	-0.7
MNMC				IAML		09 17 17.8	
	comp=N,13μm,0.2s						
MNMCX	Minye Minye	1.05	325	eP	Pn	09 16 59.6	+0.8
MNMCX				eS	Sn	09 17 17.9	+1.2
PB01	IPOC Station P	1.16	205	ePn	Pn	09 17 00.5	+0.9
PB01				eSn	Sn	09 17 19.2	+0.9
PB01	IPOC Station P	1.16	205	⇑iP	Pn	09 17 00.3	+0.7
PB01				i S	Sn	09 17 18.8	+0.6
PB01				IAML		09 17 21.6	
	comp=N,4μm,0.2s						
PSGC	Pisagua	1.17	289	eP	Pn	09 16 59.7	0.0
PSGC				i S	Sn	09 17 17.8	-0.6
PSGC				IAML		09 17 19.6	
	comp=N,3μm,0.4s						
PB02	IPOC Station P	1.59	214	eP	Pn	09 17 05.1	+0.8
PB02	IPOC Station P	1.59	214	⇑iP	Pn	09 17 05.1	+0.8
PB02				i S	Sn	09 17 27.0	+0.5
PB02				IAML		09 17 32.4	
	comp=E,3μm,0.4s						
PB16	IPOC Station P	1.73	342	eP	Pn	09 17 07.5	+1.0
PB16				eS	Sn	09 17 31.0	+0.8
PB16	IPOC Station P	1.73	342	⇓iP	Pn	09 17 07.6	+1.2
PB16				i S	Sn	09 17 30.6	+0.4
PB16				IAML		09 17 32.9	
	comp=N,459nm,0.4s						
PB09	IPOC Station P	1.81	188	eP	Pn	09 17 08.2	+1.2
PB09	IPOC Station P	1.81	188	⇑iP	Pn	09 17 08.2	+1.2
PB09				i S	Sn	09 17 32.5	+1.1
PB09				IAML		09 17 35.7	
	comp=E,910nm,0.2s						
PB12	IPOC Station P	1.89	316	eP	Pn	09 17 07.7	-0.1
PB12	IPOC Station P	1.89	316	⇑iP	Pn	09 17 07.5	-0.3
PB12				i S	Sn	09 17 31.5	-1.3
PB12				IAML		09 17 39.7	
	comp=E,806nm,0.2s						
PB07	IPOC Station P	1.93	207	eP	Pn	09 17 09.8	+1.4
PB07	IPOC Station P	1.93	207	⇑iP	Pn	09 17 09.0	+0.5
PB07				i S	Sn	09 17 34.0	+0.1
PB07				IAML		09 17 38.4	
	comp=E,976nm,0.2s						
PB03	IPOC Station P	2.18	200	eP	Pn	09 17 12.3	+0.9
PB03	IPOC Station P	2.18	200	⇑iP	Pn	09 17 11.8	+0.4
PB03				i S	Sn	09 17 38.6	-0.6
PB03				IAML		09 17 41.6	
	comp=E,756nm,0.3s						
PB04	IPOC Station P	2.58	205	ePn	Pn	09 17 17.6	+1.0
PB04				eSn	Sn	09 17 44.8	-3.5
PB04	IPOC Station P	2.58	205	eP	Pn	09 17 17.3	+0.8
PB04	IPOC Station P	2.58	205	⇓iP	Pn	09 17 17.5	+1.0
PB04				i S	Sn	09 17 47.0	-1.4
PB04				IAML		09 17 58.7	
	comp=N,528nm,0.1s						
LVC	Limon Verde	2.60	179	P	Pn	09 17 18.6	+1.6
	comp=N,21nm,0.3s,baz=5.2,slow=9.1,SNR=160						
LVC				S	Sn	09 17 50.3	+1.1
	comp=N,59nm,0.3s,baz=266,slow=21,SNR=16						
LVC	Limon Verde	2.60	179	ePn	Pn	09 17 17.3	+0.3
LVC				eSn	Sn	09 17 47.8	-1.4
LVC	Limon Verde	2.60	179	eP	Pn	09 17 18.1	+1.2
LVC				IAML		09 17 55.4	
	comp=Z,108nm,0.5s						
PB05	IPOC Station P	3.08	202	eP	Pn	09 17 23.4	+0.6
PB15	IPOC Station P	3.24	188	eP	Pn	09 17 26.1	+1.1
LPAZ	La Paz	3.77	12	P	Pn	09 17 32.9	+0.5
	comp=Z,7.9nm,0.3s,baz=196,slow=6.4,SNR=82						
LPAZ				S	Sn	09 18 18.1	+1.5
	comp=Z,0.6nm,0.3s,baz=39,slow=22,SNR=1.3						
LPAZ	La Paz	3.77	12	ePn	Pn	09 17 33.0	+0.7
LPAZ				e		09 17 34.0	
PB10	IPOC Station P	3.81	203	ePn	Pn	09 17 31.9	-0.4
PB10	IPOC Station P	3.81	203	eP	Pn	09 17 31.9	-0.4
YJA	Yavi	3.88	125	eP	Pn	09 17 35.1	+1.4
YJA				IAML		09 17 40.6	
	comp=Z,4.9nm,0.6s						
HJA	Humahuaca	4.60	135	eP	Pn	09 17 44.0	+0.8
HJA				IAML		09 18 38.7	
	comp=Z,19nm,0.5s						
GO02	Mina Guanaco	5.18	186	ePn	Pn	09 17 50.7	-0.1
GO03	Copiap	7.66	189	ePn	Pn	09 18 23.7	-0.3
SIV	San Ignacio	8.49	63	P	Pn	09 18 32.3	-3.0
	comp=Z,5.5nm,0.3s,baz=268,slow=9.6,SNR=130						
LCO	Las Campanas	9.12	190	ePn	Pn	09 18 44.3	+0.4
CPUP	Villa Florida	12.41	123	P	Pn	09 19 25.6	-1.8
	comp=Z,0.1nm,0.3s,baz=318,slow=15,SNR=3.1						
CPUP	Villa Florida	12.41	123	ePn	Pn	09 19 27.3	-0.1
BDFB	Brasilia	20.40	81	P	P	09 21 01.0	-1.1
	comp=Z,5.4nm,0.4s,baz=260,slow=13,SNR=6.9						
PLCA	Paso Flores	20.72	183	P	Pn	09 21 07.7	-1.3
	comp=Z,4.3nm,1.0s,baz=45,slow=9.7,SNR=4.6						
PLCA	Paso Flores	20.72	183	eP	P	09 21 06.0	+0.7
	comp=Z,24nm,1.4s						
PTGA	Pitinga	21.07	26	P	P	09 21 07.2	-1.9
	comp=Z,4.2nm,0.3s,baz=312,slow=23,SNR=16						
PTGA	Pitinga	21.07	26	eP	P	09 21 07.3	-1.9
	comp=Z,4.8nm,0.8s						
DBIC	Dimbokro	68.36	74	P	P	09 27 23.2	+0.2
	comp=Z,7.2nm,0.6s,baz=210,slow=6.1,SNR=8.2						
DBIC	Dimbokro	68.36	74	eP	P	09 27 23.3	+0.2
	comp=Z,8.4nm,0.8s						
TOA1	Torodi Ar. Sit	76.89	71	eP	P	09 28 13.3	-0.3
TORD	Torodi Ar. Bea	76.89	71	P	P	09 28 13.3	-0.3
	comp=Z,0.6nm,0.3s,baz=243,slow=5.4,SNR=13						
YKA	Yellowknife Ar	89.76	341	P	P	09 29 19.7	+1.4
	comp=Z,0.3nm,0.5s,baz=129,slow=4.8,SNR=4.0						
YKB5	Yellowknife Ar	89.76	341	eP	P	09 29 19.7	+1.4
ASAR	Alice Springs	131.22	208	PKP	PKiKP	09 35 33.8	+0.2
	comp=Z,0.2nm,0.5s,baz=136,slow=1.8,SNR=4.0						
WR1	Warramunga Arr	134.22	211	ePKPdf	PKiKP	09 35 40.7	+1.0
WRA	Warramunga Arr	134.22	211	PKP	PKiKP	09 35 40.7	+1.0
	comp=Z,0.3nm,0.3s,baz=156,slow=1.9,SNR=5.4						

MEX 20 09:22:26.4±0.4, 13°.95N×92°.55W, h49^{km}±26^{km}, MD3.8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.99	16	i P	Pn	09 22 41.9	-2.0
THIG				i S	Sn	09 22 55.0	-1.9
PCIG		1.86	340	eP	Pn	09 22 54.5	-1.4
PCIG				i S	Sn	09 23 15.9	-2.2
CCIG	Comitan	2.35	10	i P	Pn	09 23 00.7	-2.0
CCIG				i S	Sn	09 23 28.2	-2.3
TGIG		2.86	349	eP	Pn	09 23 08.4	-1.3
TGIG				i S	Sn	09 23 41.3	-1.7
CMIG	Matias Romero	3.85	324	eP	Pn	09 23 22.9	-0.2
CMIG				i S	Sn	09 24 05.1	-2.1

IDC 20 09:47:09.7±3.0, 22°.51S×179°.64W, h0^{km}, mb3.6/3, mb1 4.0/3, mb1mx3.6/20, mbtmp3.6/3, Error ellipse: s-maj=289.5km s-min=35.8km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.60	259	P	P	09 55 07.5	-0.4
	0.3nm,0.3s,baz=95,slow=7.4,SNR=7.3						
WRA	Warramunga Arr	42.85	265	P	P	09 55 10.0	+0.1
	1.0nm,0.5s,baz=101,slow=8.6,SNR=9.0						
TXAR	Lajitas Array	89.42	58	P	P	10 00 08.8	0.0
	0.1nm,0.6s,baz=220,slow=4.1,SNR=3.8						

IDC 20 10:13:22.3±15.0, 27°.20N×140°.11E, h550^{km}±195^{km}, mb2.9/6, mb1 3.1/6, mb1mx2.7/35, mbtmp3.8/6, Error ellipse: s-maj=63.2km s-min=24.6km az=67.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	47.20	187	P	P	10 21 05.9	+0.1
	0.4nm,0.2s,baz=2.9,slow=7.1,SNR=1.6						
MKAR	Makanchi Array	48.99	310	P	P	10 21 18.7	-0.2
	0.3nm,0.4s,baz=106,slow=9.6,SNR=5.1						
ASAR	Alice Springs	50.92	187	P	P	10 21 33.0	-0.3
	0.3nm,0.7s,baz=5.5,slow=7.2,SNR=4.8						
ARCES	ARCESS Array B	72.83	340	P	P	10 23 55.5	+0.5
	2.0nm,0.9s,baz=67,slow=9.9,SNR=1.6						
YKA	Yellowknife Ar	72.92	28	P	P	10 23 55.5	-0.1
	0.3nm,0.8s,baz=297,slow=5.8,SNR=2.0						
FINES	FINESS Array B	77.03	333	P	P	10 24 18.4	-0.1
	1.2nm,0.4s,baz=66,slow=4.6,SNR=15						

UCR 20 10:25:54.3±2.5, 7°.66N×81°.97W, h3^{km}±24^{km}, MW3.8, Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	1.34	328	eP	Pg	10 26 19.6	-0.3
AZU	Azuero	1.68	85	eP	Pn	10 26 23.4	-1.3
AZU				eS	Sb	10 26 47.6	+0.1
ZANG	Zanguenga, Cho	2.44	58	eP	Pn	10 26 35.9	+0.7
BCIP	Isla Barro Col	2.58	54	eP	Pn	10 26 38.3	+1.2
LCR2	La Lucha 2	2.89	316	eP	Pn	10 26 41.4	0.0
ARE1	Arenal 1	3.89	316	eP	Pn	10 26 47.2	-7.8

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*NIED **20** 10:28:00, 35°.70N×141°.00E, h11^{km}, Mw3.5 Best double couple: $M_0$1.91000×10^{14} NP1:ϕ_s348.00000°, δ42.00000°, λ-107.00000°. NP2:ϕ_s190.00000°, δ50.00000°, λ-75.00000°.*

*ISCJB **20** 10:28:34.4±1.0, 35°.77N±0°.04×141°.04E±0°.08, h24^{km}±5^{km}, mb3.6/2, Error ellipse: s-maj=10.5km s-min=6.0km az=163.6*

*IDC **20** 10:28:35.5±1.5, 35°.54N×140°.61E, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.4/30, mbtmp3.4/4, ML2.7/2, Error ellipse: s-maj=30.7km s-min=22.9km az=86.0*

*JMA **20** 10:28:35.1±0.2, 35°.75N×140°.98E, h13^{km}±1^{km}, M3.9 JMA Felt II J1.*

ISC 20 10:28:34.4±1.4, 35°.75N±0°.03×141°.03E±0°.07, h16^{km}±6^{km}, n21, σ1^{s}.30/23, 4C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.15	250	⇓P	Pg	10 28 38.1	-0.3
CHOJ				S	Sg	10 28 40.1	-1.0
JIHU	Itakohorinouch	0.46	298	⇑P	Pg	10 28 44.2	+0.6
JIHU				S	Sg	10 28 51.0	+1.1
JSMT	Sammumatsuo	0.49	257	⇑P	Pg	10 28 44.3	+0.2
JSMT				S	Sg	10 28 51.5	+0.9
JHYU	Hitachinakayam	0.69	329	P	Pg	10 28 48.4	+0.5
JHYU				S	Sg	10 28 57.4	+0.4
JCN	Nagara	0.75	244	⇑P	Pg	10 28 49.7	+0.6
JCN				S	Sb	10 29 00.3	+1.2
JYT	Yasato	0.83	305	⇑P	Pb	10 28 49.7	-0.6
JYT				S	Sb	10 29 00.0	-1.2
JHO	Hitachi	0.93	337	P	Pb	10 28 52.0	-0.2
BSO4	Boso 4	0.95	217	P	Pg	10 28 53.2	+0.5
BSO3	Boso 3	1.04	204	P	Pb	10 28 54.1	+0.3
BSO1	Boso 1	1.10	182	P	Pb	10 28 54.6	0.0
MJAR	Matsushiro Arr	2.42	290	Pn	Pn	10 29 12.9	-0.3
	0.8nm,0.3s,baz=91,slow=8.5,SNR=44						
MJAR				Sn	Sn	10 29 40.2	-2.2
	0.9nm,0.3s,baz=60,slow=33,SNR=3.6						
MAT	Matsushiro	2.42	290	P	Pn	10 29 13.3	+0.1
MAT				S	Sn	10 29 43.2	+0.8
JHJ	Hachijo jima 2	2.82	202	Pn	Pn	10 29 19.6	+0.9
	11nm,0.3s,baz=53,slow=18,SNR=1.4						
JHJ				Sn	Sn	10 29 48.2	-4.2
	7.9nm,0.3s,baz=53,slow=20,SNR=1.2						
H11N2	WAKE ISLAND Hy	27.79	118	T	T	11 03 27.5	
	baz=311,slow=75,SNR=72						
H11N1	WAKE ISLAND Hy	27.80	118	T	T	11 03 26.5	
	baz=311,slow=75,SNR=54						
H11N3	WAKE ISLAND Hy	27.81	118	T	T	11 03 27.3	
	baz=311,slow=75,SNR=70						
H11S1	WAKE ISLAND Hy	28.45	120	T	T	11 04 12.4	
	baz=312,slow=75,SNR=65						
H11S3	WAKE ISLAND Hy	28.45	120	T	T	11 04 12.7	
	baz=312,slow=75,SNR=69						
H11S2	WAKE ISLAND Hy	28.47	120	T	T	11 04 14.5	
	baz=312,slow=75,SNR=53						
ILAR	Eielson Array	50.74	32	P	P	10 37 39.6	+6.5
	0.3nm,0.6s,baz=263,slow=6.7,SNR=5.3						
WRA	Warramunga Arr	55.75	188	P	P	10 38 11.2	+0.8
	1.2nm,1.0s,baz=8.5,slow=8.0,SNR=1.6						

UCR 20 10:32:02.8±4.4, 7°.43N×81°.94W, h0^{km}±19^{km}, MW4.0, Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	1.54	331	eP	Pn	10 32 29.9	-1.9
BRU2				eS	Sn	10 32 56.8	+4.2
AZU	Azuero	1.69	78	eP	Pn	10 32 33.8	+0.1
AZU				eS	Sg	10 32 58.1	+0.8
ZANG	Zanguenga, Cho	2.56	53	eP	Pn	10 32 46.7	+1.2
ZANG				eS	Sn	10 33 19.3	+1.9
BCIP	Isla Barro Col	2.71	50	eP	Pb	10 32 50.0	-2.2
UPA	Univ. de Panam	2.84	57	eP	Pn	10 32 51.3	+1.9
LCR2	La Lucha 2	3.07	319	eP	Pn	10 32 51.9	-0.9
JTS	Las Juntas de	4.11	314	eP	Pn	10 33 05.7	-1.3

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*NEIC **20** 10:39:41.9±2.5, 8°.72S×67°.49E, h10^{km}±2^{km}, mb4.4/9, Error ellipse: s-maj=14.1km s-min=13.2km az=182.0*

*IDC **20** 10:39:41.2±0.7, 8°.60S×67°.31E, h0^{km}, mb4.1/11, mb1 4.2/11, mb1mx3.9/37, mbtmp4.1/11, MS3.6/19, Ms1 3.6/19, ms1mx3.4/36, Error ellipse: s-maj=22.9km s-min=19.4km az=170.0*

ISC 20 10:39:42.0±0.6, 8°.6S±0°.1×67°.61E±0°.06, h10^{km}, n60, σ2^{s}.21/47, mb4.2/19, MS3.6/19, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N3	Diego Garcia H	4.03	57	Pn	Pn	10 40 38.3	-5.2
H08N3				Sn	Sn	10 41 25.6	-5.1
H08N3				T	T	10 45 14.5	
	baz=230,slow=75,SNR=637						
H08N2	Diego Garcia H	4.05	56	Pn	Pn	10 40 38.5	-5.2
H08N2				Sn	Sn	10 41 26.1	-5.1
H08N2				T	T	10 45 14.8	
	baz=230,slow=75,SNR=856						
H08N1	Diego Carcia H	4.05	57	Pn	Pn	10 40 38.6	-5.2
H08N1				Sn	Sn	10 41 26.2	-5.1
H08N1				T	T	10 45 17.0	
	baz=230,slow=75,SNR=941						
H08S1	Diego Carcia H	4.91	79	Pn	Pn	10 40 54.5	-1.2
H08S1				Sn	Sn	10 41 48.8	-3.6
H08S1				T	T	10 46 26.8	
	baz=222						
H08S3	Diego Garcia H	4.92	79	Pn	Pn	10 40 54.7	-1.2
H08S3				Sn	Sn	10 41 49.1	-3.6
H08S3				T	T	10 46 09.9	
	baz=222,slow=74						
H08S2	Diego Garcia H	4.93	79	Pn	Pn	10 40 54.7	-1.2
H08S2				Sn	Sn	10 41 49.3	-3.6
H08S2				T	T	10 46 18.0	
	baz=222,slow=74						
DGAR	Diego Garcia	4.94	77	ePn	Pn	10 40 57.4	+1.1
MSEY	Mahe Island	12.66	287	ePn	Pn	10 42 39.7	-2.7
PALK	Pallekele	20.46	40	LR	LR	10 50 19.5	
	comp=Z,213nm,19.4s,baz=42,slow=31						
OPO	Ambohidratompo	22.16	241	LR	LR	10 50 36.2	
	comp=Z,94nm,20.3s,baz=150,slow=30						
ABPO	Ambohimpanom	22.31	240	eP	P	10 44 39.0	-1.2
	61nm,1.4s						
LSZ	Lusaka	39.09	256	P	P	10 47 09.1	-0.8
	8.8nm,0.9s,baz=92,slow=8.9,SNR=5.7						
LSZ	Lusaka	39.09	256	eP	P	10 47 06.4	-3.5
	17nm,1.1s						
CM31	Chiang Mai Arr	40.97	49	eP	P	10 47 25.8	+0.4
	7.8nm,1.0s						
CMAR	Chiang Mai Arr	40.97	49	P	P	10 47 28.7	+3.3
	1.5nm,0.4s,baz=244,slow=9.3,SNR=10						
BOSA	Boshof	44.50	238	P	P	10 47 51.6	-2.5
	2.0nm,0.5s,baz=65,slow=8.7,SNR=6.1						
BOSA				LR	LR	11 03 43.3	
	comp=Z,86nm,19.5s,baz=46,slow=33						
GEYT	Alibeck	47.12	350	LR	LR	11 07 46.9	
	comp=Z,37nm,18.2s,baz=110,slow=36						
GAR	Garm	47.42	3	eP	P	10 48 18.1	+1.2
	30nm,1.4s						
H01W3	Cape Leeuwin H	49.92	129	T	T	11 42 07.7	
	baz=290,slow=75						
H01W2	Cape Leeuwin H	49.92	129	T	T	11 42 14.7	
	baz=290,slow=75						
H01W1	Cape Leeuwin H	49.93	129	T	T	11 42 19.5	
	baz=290,slow=75						
MMAI	Mount Meron Ar	51.50	325	LR	LR	11 07 27.2	
	comp=Z,36nm,19.5s,baz=160,slow=32						
KAPI	Kappang	51.87	90	LR	LR	11 11 40.5	
	comp=Z,59nm,18.9s,baz=293,slow=37						
MAKZ	Makanchi	56.63	12	eP	P	10 49 25.7	+0.5
	4.0nm,1.1s						
MK31	Makanchi Array	56.68	12	eP	P	10 49 26.1	+0.5
	1.6nm,0.8s						
MK32	Makanchi Array	56.68	12	eP	P	10 49 26.4	+0.8
MKAR	Makanchi Array	56.68	12	P	P	10 49 26.4	+0.8
	1.1nm,0.6s,baz=196,slow=8.2,SNR=10						
MKAR				LR	LR	11 12 35.8	
	comp=Z,55nm,18.8s,baz=186,slow=35						
BR101	Keskin Array S	57.45	329	eP	P	10 49 32.4	+1.0
BRTR	Keskin Array B	57.45	329	P	P	10 49 32.4	+1.0
	1.2nm,1.0s,baz=108,slow=4.7,SNR=3.0						
BRTR				LR	LR	11 13 27.7	
	comp=Z,40nm,18.1s,baz=98,slow=35						
TGY	Tagaytay City	57.51	67	LR	LR	11 12 23.7	
	comp=Z,61nm,18.4s,baz=315,slow=34						
ABKAR	Akbulak array	58.00	354	eP	P	10 49 35.8	+0.9
	5.2nm,1.0s						
MAW	Mawson	59.02	182	LR	LR	11 10 19.6	
	comp=Z,99nm,18.3s,baz=304,slow=31						
DAV	Davao City (W)	59.84	77	LR	LR	11 14 31.5	
	comp=Z,33nm,18.2s,baz=262,slow=35						
SIJI	Sorong	63.83	87	LR	LR	11 15 19.9	
	comp=Z,28nm,18.8s,baz=221,slow=33						
ZALV	Zalesovo Beam	63.98	11	P	P	10 50 14.6	-0.8
	2.2nm,0.8s,baz=219,slow=8.8,SNR=4.7						
ZALV				LR	LR	11 16 10.0	
	comp=Z,40nm,20.6s,baz=250,slow=34						

ZAA1	Zalesovo Array	63.99	11	*e*P	P	10 50 14.6	-0.8
ASAR	Alice Springs	64.92	112	P	P	10 50 24.5	+2.2
	1.1nm,0.8s,baz=271,slow=5.6,SNR=11						
ASAR				LR	LR	11 14 15.1	
	comp=Z,47nm,21.9s,baz=274,slow=32						
AS31	Alice Springs	64.93	112	*e*P	P	10 50 22.6	+0.3
	2.2nm,1.4s						
WR1	Warramunga Arr	65.30	108	*e*P	P	10 50 27.9	+3.1
WRA	Warramunga Arr	65.30	108	P	P	10 50 27.9	+3.1
	0.8nm,0.8s,baz=276,slow=7.5,SNR=3.9						
SONA0	Songino Array	65.82	28	*e*P	P	10 50 29.7	+2.0
SONM	Songino Array	65.82	28	P	P	10 50 29.7	+2.0
	3.9nm,0.8s,baz=225,slow=6.5,SNR=16						
SONM				LR	LR	11 18 44.1	
	comp=Z,72nm,20.8s,baz=241,slow=36						
AKASG	Malin Array Be	67.77	335	P	P	10 50 38.8	-1.1
	0.6nm,0.5s,baz=141,slow=6.1,SNR=2.8						
AKBB	Malin Array Si	67.77	335	*e*P	P	10 50 39.2	-0.7
	3.3nm,1.0s						
TORD	Torodi Ar. Bea	68.93	288	LR	LR	11 18 58.2	
	comp=Z,47nm,19.2s,baz=305,slow=34						
KEST	Kesra	70.31	313	LR	LR	11 20 51.9	
	comp=Z,40nm,18.4s,baz=300,slow=35						
DBIC	Dimbokro	73.81	280	LR	LR	11 21 45.1	
	comp=Z,29nm,21.1s,baz=104,slow=34						
FINES	FINESS Array B	76.97	341	LR	LR	11 26 15.6	
	comp=Z,36nm,18.7s,baz=147,slow=36						
MAJO	Matsushiro	79.83	51	*e*P	P	10 51 52.9	+1.8
MJAR	Matsushiro Arr	79.83	51	P	P	10 51 52.9	+1.8
	1.5nm,0.9s,baz=258,slow=7.9,SNR=4.6						
FYU	Fort Yukon	117.93	14	*e*PKPdf	PKPdf	10 58 28.4	-0.1
ILAR	Eielson Array	118.91	16	PKP	PKiKP	10 58 31.4	+0.9
	0.1nm,0.5s,baz=274,slow=2.6,SNR=2.6						
ILB	Eielson Array	118.91	16	*e*PKPdf	PKPdf	10 58 30.7	+0.2
DOT	Dot Lake	120.56	16	*e*PKPdf	PKPdf	10 58 33.0	-0.8
PD31	Pinedale Array	145.87	356	*e*PKPdf	PKPdf	10 59 22.9	+1.1
PDAR	Pinedale Array	145.87	356	PKPbc	PKPdf	10 59 22.9	+1.1
	0.1nm,0.4s,baz=354,slow=8.2,SNR=3.8						
NV01	Mina Array Sit	149.82	9	*e*PKPbc	PKiKP	10 59 34.5	+0.4
NVAR	Mina Array Bea	149.82	9	PKPbc	PKiKP	10 59 34.5	+0.4
	1.4nm,1.0s,baz=299,slow=2.7,SNR=4.9						
LTX	Lajitas	157.80	339	*e*PKPab	PKPab	11 00 12.8	+0.6
TXAR	Lajitas Array	157.80	339	PKPab	PKPab	11 00 12.8	+0.6
	0.2nm,0.7s,baz=46,slow=5.2,SNR=2.8						

MEX 20 10:42:07.7±1.0,16°.99N×95°.16W,h115km±8km,MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.28	68	*i* P	Pn	10 42 22.6	-1.3
CMIG				*e*S	Sn	10 42 34.2	-2.0
VHO	Vista Hermosa	1.51	273	*e*P	Pn	10 42 34.6	-0.5
VHO				*i* S	Sn	10 42 54.7	-1.3
HUIG	Huatulco	1.52	217	*i* P	Pn	10 42 32.9	-2.1
HUIG				*i* S	Sn	10 42 54.4	-1.4
PCIG		2.25	124	*e*P	Pn	10 42 43.1	-1.0
PCIG				*i* S	Sn	10 43 10.6	-1.4

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*ISCJB **20** 11:07:28.3±0.3,8°.03S±0°.04×107°.91E±0°.03,h70km, mb4.2/32,Error ellipse: s-maj=5.7km s-min=3.3km az=25.2*

*NEIC **20** 11:07:28.6±2.3,8°.10S×107°.85E,h62km±5km,mb4.5/24, Error ellipse: s-maj=8.3km s-min=5.8km az=73.0*

NEIC Felt [III] at Ciamis, Pangandaran and Tasikmalaya; [II] at Cianjur. Also felt in southern Garut.

*DJA **20** 11:07:29.9±0.3,8°S±4°×10°8E±°,h50km±6km,M4.9/21, mB5.7/3,mb4.8/10,MLv4.8/21,Mw(mB)5.2/3*

*IDC **20** 11:07:32.8±0.8,7°.68S×108°.08E,h91km±6km,mb3.9/16, mb1 4.1/17,mb1mx3.9/33,mbtmp4.3/17,MS3.3/4, Ms1 3.4/4,ms1mx2.9/23,Error ellipse: s-maj=23.3km s-min=10.6km az=54.0*

ISC 20 11:07:29.6±0.3,8°.03S±0°.05×107°.91E±0°.03,h70km,n251, σ1°.21/257,mb4.5/32,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.48	349	*e*Pn	Pn	11 07 40.8	-1.6
CISI				*e*Sn	Sn	11 07 49.8	-1.9
CISI	Cisompet, Garu	0.48	349	P	Pn	11 07 41.0	-1.4
CISI				S	Sn	11 07 49.2	-2.5
CMJI	Cimerak	0.59	65	P	Pn	11 07 42.4	-0.9
CMJI				S	Sn	11 07 51.1	-2.3
LEM	Lembang	1.23	346	P	Pn	11 07 52.0	+0.7
	565nm,0.3s,baz=342,slow=6.3,SNR=244						
LEM				S	Sn	11 08 11.4	+4.0
	604nm,0.3s,baz=112,slow=19,SNR=7.1						
LEM	Lembang	1.23	346	P	Pn	11 07 51.7	+0.4
SKJI	Sukabumi	1.69	307	P	Pn	11 07 57.4	+0.3
SKJI				S	Sn	11 08 18.0	+0.2
TNG	Tangerang	2.23	326	P	Pn	11 08 17.7	+13
YOGI	Yogyakarta	2.37	85	P	Pn	11 08 05.9	-0.4
YOGI				S	Sn	11 08 31.9	-2.6
UGM	Wanagama	2.59	88	*e*Pn	Pn	11 08 09.1	-0.2
SBJI	Serang	2.59	317	P	Pn	11 08 09.4	+0.1
CGJI	Cibinong	2.61	303	P	Pn	11 08 09.1	-0.4
SMRI	Semarang	2.69	69	*e*Pn	Pn	11 08 12.2	+1.5
SMRI				*e*Sn	Sn	11 08 42.8	+0.5
SMRI	Semarang	2.69	69	P	Pn	11 08 12.2	+1.5
WOJI	Wonogiri, Jawa	2.99	86	P	Pn	11 08 14.5	-0.2
XMIS	Christmas Isla	3.30	222	*e*Pn	Pn	11 08 16.8	-2.1
XMIS				*e*Sn	Sn	11 08 51.1	-5.9
NGJI	Ngawi	3.58	80	P	Pn	11 08 25.4	+2.6
BLSI	Bandar Lampung	3.74	315	P	Pn	11 08 26.5	+1.5
PWJI	Pagerwojo	3.86	90	P	Pn	11 08 28.3	+1.8
KASI	Kota Agung	4.21	306	P	Pn	11 08 32.4	+1.1
KLI	Kotabumi	4.37	316	P	Pn	11 08 41.1	+7.5
KLSI		4.58	316	P	Pn	11 08 39.6	+3.1
GRJI	Gresik	4.67	77	P	Pn	11 08 38.4	+0.8
LWLI	Liwa	4.86	308	P	Pn	11 08 43.1	+2.8
MDSI	Maura Dua	5.12	313	P	Pn	11 08 45.3	+1.6
	61nm,0.8s,0.2nm						
TPI	Tanjungpandan	5.25	357	P	Pn	11 08 46.0	+0.4
GMJI	Gumukmas	5.49	93	P	Pn	11 08 51.8	+3.0
	95nm,1.0s,0.6nm						
LHSI	Lahat	6.04	314	P	Pn	11 08 57.9	+1.5
PPBI	Pangkal Pinang	6.09	343	P	Pn	11 08 58.9	+1.8
	66nm,0.8s,17µm0.8nm						
MNAI	Manna	6.13	306	*e*Pn	Pn	11 08 57.3	-0.3
JAGI	Jajag, Banyuwa	6.20	94	*e*Pn	Pn	11 08 58.2	-0.3
JAGI	Jajag, Banyuwa	6.20	94	P	Pn	11 09 00.4	+1.9
	110nm,0.7s,0.7nm						
PBKI	Pangkalan Bun	6.48	35	P	Pn	11 09 03.2	+0.7
	198nm,0.9s,2µm0.6nm						
DSRI	Dabo	8.21	336	P	Pn	11 09 28.0	+2.0
	121nm,0.9s						
RGRI	Rengat	9.44	324	P	Pn	11 09 55.9	+13
KSM	Kuching	9.74	14	*e*Pn	Pn	11 09 47.9	+0.9
MYKOM	Kota Tinggi	10.56	337	*e*Pn	Pn	11 09 58.6	+0.3
GSI	Gunungsitoli	13.86	312	P	Pn	11 10 38.9	-4.1
KULM	Kulim	15.09	331	*e*P	P	11 11 01.9	-0.6
	10nm,1.5s						
BATI	Baumata	15.71	99	P	Pn	11 11 07.5	+0.7
	3.3nm,0.3s,baz=319,slow=9.3,SNR=3.3						
BATI				S	Sn	11 13 53.8	-6.4
	2.8nm,0.3s,baz=336,slow=20,SNR=2.3						
BATI	Baumata	15.71	99	*e*Pn	Pn	11 11 07.5	+0.7
BATI				*e*P	Pn	11 11 07.5	+0.7
BATI	Baumata	15.71	99	P	Pn	11 11 05.0	-1.8
GIRL	Giralia	15.75	158	*e*Pn	Pn	11 11 05.6	-1.7
	284nm,1.5s						
SOEI	Soe	16.25	97	P	Pn	11 11 11.2	-2.6
PSA00	Pilbara Seismi	17.71	141	*e*P	P	11 11 31.2	-0.4
	19nm,1.1s						
MTN	Manton Dam	23.33	104	*e*P	P	11 12 32.2	+0.2
	19nm,1.0s						
CMAR	Chiang Mai Arr	27.77	341	P	P	11 13 11.0	-1.0
	0.7nm,0.3s,baz=174,slow=9.7,SNR=3.8						
CMAR				PcP	PcP	11 16 27.8	+0.6
	0.5nm,0.3s,baz=187,slow=1.8,SNR=4.8						
CMAR				LR	LR	11 25 52.0	
	comp=Z,67nm,18.1s,baz=194,slow=40						
WR1	Warramunga Arr	28.20	118	*e*P	P	11 13 17.1	+1.2
WRA	Warramunga Arr	28.20	118	P	P	11 13 17.2	+1.2
	3.8nm,1.1s,baz=289,slow=13,SNR=9.6						
WRA				pP	sP	11 13 38.5	-1.4
	2.4nm,0.7s,baz=286,slow=12,SNR=3.1						
WB2	Warramunga Arr	28.21	118	*e*P	P	11 13 16.1	+0.1
	16nm,1.5s						
ASAR	Alice Springs	29.36	125	P	P	11 13 27.7	+1.5
	1.5nm,1.0s,baz=301,slow=8.4,SNR=8.3						
ASAR				pP	pwP	11 13 47.5	+1.3
	1.8nm,0.8s,baz=312,slow=8.8,SNR=6.5						
ASAR				PcP	PcP	11 16 32.4	+1.1
	1.0nm,0.7s,baz=314,slow=2.1,SNR=6.5						
ASAR				ScP	ScP	11 20 07.8	+0.8
	0.4nm,0.7s,baz=268,slow=3.2,SNR=4.2						
AS31	Alice Springs	29.36	125	*e*P	P	11 13 26.1	-0.2
	1.8nm,1.3s						
H08S2	Diego Garcia H	35.08	268	T	T	11 51 28.2	
	baz=92,slow=75,SNR=54						
H08S3	Diego Garcia H	35.09	268	T	T	11 51 19.6	
	baz=92,slow=75,SNR=25						
H08S1	Diego Carcia H	35.10	268	T	T	11 51 31.8	
	baz=92,slow=75,SNR=12						
STKA	Stephens Creek	39.28	132	P	P	11 14 54.0	+2.2
	4.0nm,0.5s,baz=308,slow=7.6,SNR=12						
STKA				LR	LR	11 32 37.9	
	comp=Z,41nm,18.1s,baz=215,slow=38						
STKA	Stephens Creek	39.28	132	*e*P	P	11 14 54.0	+2.2
	1.8nm,0.8s						
KSRS	Korea Array	48.97	21	LR	LR	11 38 37.2	
	comp=Z,18nm,18.1s,baz=189,slow=38						
NIL	Nilore	52.92	324	*e*P	P	11 16 37.6	-1.3
	6.1nm,0.7s						
SONA0	Songino Array	55.64	359	*e*P	P	11 16 56.9	-1.6
SONM	Songino Array	55.64	359	P	P	11 16 56.9	-1.6
	1.0nm,0.5s,baz=173,slow=8.7,SNR=5.0						
SONM				PcP	PcP	11 17 57.3	+0.1
	2.0nm,0.5s,baz=189,slow=2.0,SNR=6.5						
SONM				LR	LR	11 41 31.1	
	comp=Z,48nm,20.5s,baz=112,slow=37						
KDJ	Kajisay	57.29	333	*e*P	P	11 17 10.1	-0.3
	7.7nm,1.3s						
GAR	Garm	58.37	326	*e*P	P	11 17 17.4	-0.5
	14nm,1.2s						
MK31	Makanchi Array	59.16	340	*e*P	P	11 17 21.2	-1.9
	1.7nm,0.6s						
MK32	Makanchi Array	59.16	340	*e*P	P	11 17 21.0	-2.1
MKAR	Makanchi Array	59.16	340	P	P	11 17 21.0	-2.1
	3.2nm,0.6s,baz=149,slow=7.5,SNR=37						
UOSS	Minazif	60.07	305	*e*P	P	11 17 29.7	-0.1
	15nm,1.2s						
KURK	Kurchatov	63.77	340	*e*P	P	11 17 53.1	-1.0
	3.2nm,0.8s						
ZALV	Zalesovo Beam	64.75	345	P	P	11 18 00.7	+0.2
	1.0nm,0.3s,baz=158,slow=5.0,SNR=2.4						
ZALV				pP	sP	11 18 24.3	-2.4
	1.3nm,0.3s,baz=152,slow=6.5,SNR=2.6						
ZAA1	Zalesovo Array	64.76	345	*e*P	P	11 18 00.7	+0.2
GEYT	Alibeck	65.13	318	P	P	11 18 03.3	0.0
	6.3nm,0.8s,baz=151,slow=6.4,SNR=9.2						
GYA0B	ALIBECK ARRAY	65.13	318	*e*P	P	11 18 03.2	-0.1
	7.1nm,0.7s						
MAW	Mawson	66.65	197	P	P	11 18 15.1	+2.6
	1.4nm,0.6s,baz=47,slow=4.5,SNR=4.0						
MAW	Mawson	66.65	197	*e*P	P	11 18 15.3	+2.8
	0.5nm,0.8s						
BKZ	Black Stump Fm	68.38	129	*e*P	P	11 18 25.0	+0.9
	8.3nm,1.1s						
RAYN	Ar Rayn	68.53	299	*e*P	P	11 18 25.0	-0.2
	8.3nm,1.4s						
URZ	Urewera	68.75	128	*e*P	P	11 18 27.1	+0.8
	6.6nm,1.1s						
ABKAR	Akbulak array	70.76	329	*e*P	P	11 18 38.1	-0.2
	11nm,0.7s						
PETK	Petropavlovsk-	74.06	29	P	P	11 18 56.1	-1.8
	0.7nm,0.7s,baz=297,slow=1.0,SNR=3.5						
PEA1	Petropavlovsk-	74.06	29	*e*P	P	11 18 56.1	-1.8
VNDA	Vanda	74.79	169	P	P	11 19 04.3	+2.5
	1.4nm,0.6s,baz=306,slow=6.9,SNR=11						
VNDA	Vanda	74.79	169	*e*P	P	11 19 03.6	+1.8
	2.3nm,0.9s						
SBA	Scott Base	75.86	169	*e*P	P	11 19 10.0	+2.0
KBZ	Khabaz	78.02	318	P	P	11 19 19.8	-0.8
	0.9nm,0.4s,baz=153,slow=6.8,SNR=2.9						
BOSA	Boshof	79.78	242	P	P	11 19 33.5	+2.7
	5.0nm,1.1s,baz=91,slow=4.2,SNR=5.3						
BOSA	Boshof	79.78	242	*e*P	P	11 19 31.8	+1.0
	15nm,1.4s						
QSPA	South Pole Qui	81.96	180	*e*P	P	11 19 43.3	+1.6
	6.0nm,1.4s						
BR101	Keskin Array S	83.18	312	*e*P	P	11 19 48.2	-0.3
BRTR	Keskin Array B	83.18	312	P	P	11 19 48.2	-0.3
	1.3nm,0.7s,baz=133,slow=5.2,SNR=7.0						
SNAA	Sanae	88.81	197	*e*P	P	11 20 18.4	+2.8
	2.3nm,0.8s						
FIA0	FINESS Array S	93.10	332	*e*P	P	11 20 33.8	-1.7
FINES	FINESS Array B	93.10	332	P	P	11 20 33.8	-1.7
	2.4nm,0.8s,baz=95,slow=6.5,SNR=3.7						
ARA0	ARCESS Array S	94.81	340	*e*P	P	11 20 42.7	-0.6
ARCES	ARCESS Array B	94.81	340	P	P	11 20 42.7	-0.6
	1.7nm,0.9s,baz=99,slow=5.6,SNR=2.9						
TORD	Torodi Ar. Bea	107.50	281	PKiKP	PKiKP	11 25 50.1	+0.7
	0.3nm,0.5s,baz=113,slow=1.2,SNR=4.5						
YKA	Yellowknife Ar	117.51	21	PKP	PKPdf	11 26 07.0	-0.1
	0.4nm,0.5s,baz=0.2,slow=2.0,SNR=16						
YKB5	Yellowknife Ar	117.51	21	*e*PKPdf	PKPdf	11 26 07.0	-0.1
PD31	Pinedale Array	132.28	37	*e*PKPdf	PKPdf	11 26 33.5	-2.8
PDAR	Pinedale Array	132.28	37	PKP	PKPdf	11 26 33.5	-2.8
	0.2nm,0.3s,baz=352,slow=9.0,SNR=4.1						
LTX	Lajitas	143.55	50	*e*PKPdf	PKPbc	11 26 55.3	+0.6
TXAR	Lajitas Array	143.55	50	PKP	PKPbc	11 26 55.3	+0.6
	0.5nm,0.5s,baz=246,slow=1.5,SNR=12						
WMOK	Wichita Mounta	143.85	39	P	PKPbc	11 26 55.6	+0.3
	baz=311,SNR=5.8						
ABTX	Abilene, Hawle	144.63	42	P	PKPdf	11 26 59.3	+0.4
	baz=308						
TUL1	Leonard	144.81	34	P	PKPbc	11 26 58.6	+0.4
	baz=316						
P43A	Skaggs, Pawnee	144.87	24	P	PKPab	11 26 58.4	+0.2
	baz=329						
K54A	Basiliko Farm,	145.07	9	P	PKPbc	11 26 59.0	+0.1
	baz=349						
SFIN	Lafayette	145.12	20	P	PKPab	11 26 59.4	+0.3
	baz=334						
N47A	Urbana	145.12	18	P	PKPbc	11 26 58.6	-0.4
	baz=336						
N48A	Decatur	145.34	17	P	PKPbc	11 26 59.3	-0.4
	baz=337						
CCM	Cathedral Cave	145.46	27	P	PKPdf	11 27 00.4	+0.3
	baz=325						
N49A	Columbus Grove	145.53	16	P	PKPdf	11 27 00.2	+0.1
	baz=339						
L55A	Hinsdale	145.53	8	P	PKPdf	11 27 00.4	+0.2
	baz=349						
M52A	Chesterland	145.63	12	P	PKPdf	11 27 00.5	+0.1
	baz=344						
P46A	Rosedale	145.76	21	P	PKPbc	11 27 01.2	+0.2
	baz=333						
JCT	Junction City	145.79	46	P	PKPab	11 27 03.5	+1.5
	baz=305						
BINY	Binghamton	145.80	5	P	PKPbc	11 27 01.2	0.0
	baz=353						
O48A	Farmland	145.86	18	P	PKPdf	11 27 01.2	+0.5
	baz=337						
N50A	Nevada	145.94	15	P	PKPbc	11 27 02.1	+0.4
	baz=340						
L58A	Harry Jones Me	145.97	5	P	PKPab	11 27 02.2	0.0
	baz=354						
M54A	Oil Creek Stat	145.99	10	P	PKPbc	11 27 01.9	+0.1
	baz=347						
U40A	Yellville	146.04	31	P	PKPbc	11 27 02.0	-0.1
	baz=321						
O49A	Covington	146.16	17	P	PKPab	11 27 03.2	+0.2
	baz=338						
M55A	Ridgway	146.18	9	P	PKPdf	11 27 02.0	+0.7
	baz=348						
M56A	Emporium	146.25	8	P	PKPbc	11 27 02.7	+0.1
	baz=349						
N52A	McGinn’s Farm,	146.26	13	P	PKPbc	11 27 02.4	-0.1
	baz=343						
O50A	Cable	146.40	16	P	PKPbc	11 27 02.7	-0.3
	baz=339						
W39A	Magazine	146.44	33	P	PKPbc	11 27 03.4	+0.1
	baz=319						
N53A	Lisbon	146.45	12	P	PKPdf	11 27 00.7	-1.0
	baz=344						
N54A	Moraine State	146.47	11	P	PKPbc	11 27 03.0	-0.2
	baz=346						
ACSO	Alum Creek Sta	146.49	15	P	PKPbc	11 27 03.1	-0.2
	baz=340						
M59A	Waymart	146.50	5	P	PKPbc	11 27 03.2	-0.1
	baz=354						
P48A	Milroy	146.50	19	P	PKPbc	11 27 03.4	+0.1
	baz=336						
BDFB	Brasilia	146.50	225	PKPbc	PKiKP	11 27 06.5	-0.5
	1.4nm,0.3s,baz=96,slow=4.9,SNR=5.2						
M58A	Price’s Panora	146.57	6	P	PKPbc	11 27 04.2	+0.7
	baz=352						
S44A	Carbondale	146.63	25	P	PKPbc	11 27 04.2	+0.5
	baz=328						
P49A	Miami Univ. Ec	146.65	18	P	PKPdf	11 27 02.9	+0.8
	baz=337						
O51A	Pataskala	146.67	15	P	PKPbc	11 27 03.6	-0.2
	baz=341						
N56A	West Decatur	146.79	9	P	PKPbc	11 27 04.5	+0.4
	baz=349						
N55A	Marion Center	146.82	10	P	PKPbc	11 27 04.2	-0.1
	baz=348						
P50A	Jamestown	146.85	17	P	PKPbc	11 27 04.1	-0.2
	baz=339						
Q48A	North Vernon	146.88	20	P	PKPbc	11 27 05.2	+0.8
	baz=335						
O52A	Adamsville	146.89	14	P	PKPbc	11 27 04.4	0.0
	baz=342						
O53A	New Philadelph	146.90	13	P	PKPbc	11 27 04.7	+0.2
	baz=343						
MIAR	Mount Ida	147.04	34	P	PKPbc	11 27 05.4	+0.4
	baz=318,SNR=12						
N57A	Milroy	147.05	8	P	PKPbc	11 27 05.5	+0.6
	baz=350						
Q49A	Aurora	147.08	19	P	PKPbc	11 27 04.7	-0.3
	baz=336						
N59A	State Game Lan	147.09	5	P	PKPbc	11 27 05.7	+0.7
	baz=353						
SSPA	Standing Stone	147.13	8	P	PKPbc	11 27 05.3	+0.2
	baz=350						
P51A	Williamsport	147.18	16	P	PKPbc	11 27 05.0	-0.2
	baz=340						
P52A	Corning	147.27	14	P	PKPbc	11 27 05.1	-0.4
	baz=342						
O56A	Blue Knob Stat	147.38	9	P	PKPbc	11 27 06.5	+0.6
	baz=348						
Q51A	Peebles	147.52	16	P	PKPbc	11 27 05.8	-0.4
	baz=339						
O59A	Robesonia	147.65	6	P	PKPbc	11 27 06.8	+0.2
	baz=352						
P54A	Burton	147.68	12	P	PKPbc	11 27 06.8	+0.2
	baz=344						
T46A	Princeton	147.75	24	P	PKPbc	11 27 07.3	+0.5
	baz=330						
Q52A	Bidwell	147.87	15	P	PKPbc	11 27 07.1	0.0
	baz=341						
R50A	Paris	147.92	18	P	PKPbc	11 27 08.1	+0.8
	baz=337						
O61A	Allentown	148.00	4	P	PKiKP	11 27 09.8	+0.5
	baz=356						
P56A	Dayton Farm, R	148.09	10	P	PKPbc	11 27 07.7	0.0
	baz=347						
Q53A	Leroy	148.16	14	P	PKPbc	11 27 08.1	+0.1
	baz=342						
Q54A	Coxs Mills	148.20	13	P	PKPbc	11 27 08.1	+0.1
	baz=344						
P57A	Homestead Farm	148.24	9	P	PKPbc	11 27 08.7	+0.6
	baz=349						
T48A	Bowling Green	148.27	22	P	PKPbc	11 27 08.5	+0.2
	baz=332						
P58A	Pank, Wackersv	148.33	8	P	PKPbc	11 27 08.3	0.0
	baz=350						
Q55A	Buckhannon	148.35	12	P	PKPbc	11 27 08.8	+0.3
	baz=345						
Z41A	Richland Creek	148.42	34	P	PKPbc	11 27 09.5	+0.8
	baz=318						
S50A	Richmond	148.45	19	P	PKPbc	11 27 08.3	-0.5
	baz=336						
U47A	Clarksville	148.51	24	P	PKPbc	11 27 09.4	+0.5
	baz=330						
R53A	Hurricane	148.55	15	P	PKPbc	11 27 09.4	+0.4
	baz=341						
WVT	Waverly	148.56	25	P	PKPbc	11 27 09.7	+0.7
	baz=329						
Q57A	Strasburg	148.61	9	P	PKPbc	11 27 09.0	-0.2
	baz=348						
V46A	Holladay	148.72	26	P	PKPbc	11 27 09.9	+0.4
	baz=328						
S51A	Beattyville	148.74	18	P	PKPbc	11 27 08.8	-0.7
	baz=338						
U48A	Cassie Pea, Po	148.75	23	P	PKPbc	11 27 10.1	+0.6
	baz=332						
S52A	Salyersville	148.85	17	P	PKPbc	11 27 09.9	+0.1
	baz=339						
T50A	Nancy	148.91	20	P	PKPbc	11 27 09.8	-0.1
	baz=335						
R54A	Victor	148.93	14	P	PKPbc	11 27 09.3	-0.7
	baz=343						
V47A	Nunnelly	148.95	25	P	PKPbc	11 27 10.8	+0.8
	baz=330						
U49A	Red Boiling Sp	149.03	22	P	PKPbc	11 27 10.2	-0.1
	baz=333						
R56A	Bull Pasture M	149.05	11	P	PKPbc	11 27 10.3	0.0
	baz=346						
S53A	Williamson	149.12	16	P	PKPbc	11 27 10.5	0.0
	baz=340						
W46A	Michie	149.17	27	P	PKPbc	11 27 10.5	-0.1
	baz=327						
OXF	Oxford	149.21	29	P	PKPbc	11 27 10.8	+0.1
	baz=325						
S54A	Dingess, Beckl	149.21	14	P	PKPbc	11 27 11.3	+0.6
	baz=342						
T51A	Gray	149.25	19	P	PKPbc	11 27 10.8	0.0
	baz=337						
V48A	Smith Brothers	149.31	24	P	PKPbc	11 27 10.7	-0.3
	baz=331						
R57A	Stanardsville	149.32	10	P	PKPbc	11 27 11.2	+0.3
	baz=348						
U50A	Jamestown	149.45	21	P	PKPbc	11 27 11.8	+0.5
	baz=335						
X46A	Booneville	149.56	28	P	PKPbc	11 27 11.5	-0.1
	baz=326						
V49A	McMinnville	149.64	23	P	PKPbc	11 27 11.9	+0.1
	baz=332						
TZTN	Tazewell	149.76	19	P	PKPbc	11 27 11.9	-0.2
	baz=337						
W48A	Pulaski	149.78	25	P	PKPbc	11 27 12.0	-0.1
	baz=330						
T54A	Tazewell	149.85	15	P	PKPbc	11 27 12.2	-0.1
	baz=341						
X47A	Russelville	149.91	27	P	PKPbc	11 27 12.1	-0.4
	baz=328,SNR=5.3						
U52A	Thorn Hill	149.96	18	P	PKPbc	11 27 12.6	+0.1
	baz=337						
T55A	Pulaski	149.99	14	P	PKPbc	11 27 12.8	+0.1
	baz=343						
V50A	Pikevile	150.03	22	P	PKPbc	11 27 12.9	+0.2
	baz=334						
S58A	Poland Farm, P	150.06	10	P	PKPbc	11 27 13.0	+0.3
	baz=348						
W49A	Belvidere	150.07	24	P	PKPbc	11 27 12.5	-0.3
	baz=331,SNR=6.4						
V51A	Loudon	150.17	20	P	PKPbc	11 27 13.1	+0.1
	baz=335						
T56A	Rocky Mt	150.25	13	P	PKPbc	11 27 13.2	0.0
	baz=344						
X48A	Hartselle	150.32	26	P	PKPbc	11 27 12.9	-0.6
	baz=329,SNR=5.2						
V52A	Sevierville	150.39	19	P	PKPbc	11 27 14.2	+0.6
	baz=337,SNR=16						
T57A	Hurt	150.44	12	P	PKPbc	11 27 13.8	+0.2
	baz=346						
U55A	TA2, Sparta	150.51	15	P	PKPbc	11 27 13.8	-0.1
	baz=342						
X49A	Woodville	150.57	24	P	PKPbc	11 27 14.5	+0.5
	baz=330						
W51A	Cleveland	150.61	21	P	PKPbc	11 27 14.4	+0.3
	baz=334						
Y48A	Jasper	150.73	26	P	PKPbc	11 27 14.6	+0.2
	baz=328						
T59A	Double "B" Far	150.77	9	P	PKPbc	11 27 14.8	+0.4
	baz=349						
V53A	Saluda	150.80	18	P	PKiKP	11 27 15.2	0.0
	baz=338,SNR=6.8						
X50B	Fort Payne	150.89	23	P	PKPbc	11 27 14.6	-0.2
	baz=332						
W52A	Murphy	150.96	20	P	PKiKP	11 27 15.6	0.0
	baz=335						
U57A	Blanch	150.97	12	P	PKPbc	11 27 14.9	0.0
	baz=345						
V55A	Taylorsville	151.08	15	P	PKPbc	11 27 15.4	+0.1
	baz=341						
X51A	Calhoun	151.10	22	P	PKPbc	11 27 15.6	+0.3
	baz=333						
Y49A	Blount Mountai	151.10	25	P	PKPbc	11 27 15.5	+0.2
	baz=330,SNR=5.3						
W53A	Cullowhee	151.15	19	P	PKPbc	11 27 15.9	+0.4
	baz=337,SNR=6.8						
U58A	Oxford	151.16	11	P	PKPbc	11 27 15.8	+0.5
	baz=347						

V56A	**Mocksville** baz=343	151.31	14	P	PKPbc	11 27 15.7	0.0
U60A	**Pendleton** baz=350	151.32	9	P	PKiKP	11 27 16.3	+0.1
V57A	**Coltrane Farms** baz=344	151.40	13	P	PKPbc	11 27 16.0	0.0
X52A	**Dahlonega** baz=335	151.42	21	P	PKPbc	11 27 16.4	+0.4
W54A	**Cherokee Point** baz=339	151.53	18	P	PKPbc	11 27 16.6	+0.4
LRAL	**Lakeview Retre** baz=328	151.55	27	P	PKPbc	11 27 16.7	+0.4
Y51A	**Rockmart** baz=332	151.61	23	P	PKPbc	11 27 16.3	-0.2
Z49A	**Columbiana** baz=329	151.62	26	P	PKPbc	11 27 16.8	+0.2
X53A	**Estanollee** baz=336	151.71	20	P	PKiKP	11 27 17.5	+0.4
KMSC	**Kings Mountain** baz=341	151.72	16	P	PKPbc	11 27 17.1	+0.4
Z50A	**Ashland** baz=330	151.83	25	P	PKPbc	11 27 17.3	+0.2
V59A	**Middlesex** baz=347	151.83	11	P	PKPbc	11 27 17.0	+0.1
W56A	**Indian Trail** baz=342	151.92	15	P	PKPbc	11 27 16.8	-0.4
X54A	**Belton** baz=338,SNR=5.2	151.97	18	P	PKiKP	11 27 17.9	+0.3
149A	**Jones** baz=328	152.01	27	P	PKiKP	11 27 18.3	+0.5
Y52A	**Lilburn** baz=334	152.02	22	P	PKiKP	11 27 18.6	+0.9
W57A	**Gilead** baz=343	152.05	14	P	PKPbc	11 27 17.7	+0.3
Y53A	**Monroe** baz=335	152.20	21	P	PKiKP	11 27 18.7	+0.6
X55A	**Gracelyn & Ava** baz=340	152.26	17	P	PKiKP	11 27 18.5	+0.2
150A	**Eclectic** baz=329	152.34	26	P	PKiKP	11 27 18.6	+0.1
W58A	**Raeford** baz=345	152.35	13	P	PKiKP	11 27 18.5	+0.1
249A	**Camden** baz=327	152.38	28	P	PKiKP	11 27 19.1	+0.5
CNNC	**Cliffs of the** baz=348	152.41	10	P	PKiKP	11 27 19.5	+1.0
X56A	**White Oak** baz=341	152.41	16	P	PKPbc	11 27 18.5	+0.3
Z52A	**Williamson** baz=333	152.49	23	P	PKiKP	11 27 19.3	+0.6
Y54A	**Tignall** baz=337	152.50	19	P	PKiKP	11 27 19.2	+0.4
Y55A	**Saluda** baz=339	152.69	18	P	PKPbc	11 27 18.9	-0.1
151A	**Opelika** baz=331	152.71	25	P	PKPbc	11 27 19.2	+0.1
Z53A	**Monticello** baz=335	152.72	21	P	PKPbc	11 27 19.0	0.0
152A	**Waverly Hall** baz=332	152.83	24	P	PKiKP	11 27 20.0	+0.5
Z54A	**Sparta** baz=336	153.02	20	P	PKiKP	11 27 20.0	+0.2
251A	**Midway** baz=330	153.05	26	P	PKiKP	11 27 20.9	+1.0
BRAL	**Brewton** baz=326	153.08	29	P	PKiKP	11 27 21.1	+1.1
Z55A	**Blythe** baz=338	153.27	19	P	PKiKP	11 27 21.1	+0.8

IDC 20 11:24:35.1±2.7, 31°.10S×59°.28E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.7/34, mbtmp3.9/4, Error ellipse: s-maj=85.7km s-min=41.7km az=50.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H** baz=259,slow=75,SNR=3.9	45.68	110	T	T	12 21 53.8	
H01W3	**Cape Leeuwin H** baz=259,slow=75,SNR=3.5	45.69	110	T	T	12 21 52.8	
H01W1	**Cape Leeuwin H** baz=259,slow=75,SNR=3.7	45.70	110	T	T	12 21 46.8	
CMAR	**Chiang Mai Arr** 1.4nm,0.6s,baz=230,slow=7.1,SNR=7.7	62.29	43	P	P	11 34 58.9	-0.4
ASAR	**Alice Springs** 0.5nm,0.6s,baz=237,slow=6.0,SNR=8.1	65.56	104	P	P	11 35 21.2	+0.2
WRA	**Warramunga Arr** 2.3nm,1.0s,baz=234,slow=7.1,SNR=3.0	67.52	100	P	P	11 35 33.9	+0.3
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=219,slow=11,SNR=2.0	80.27	16	P	P	11 36 47.2	-0.3
YKA	**Yellowknife Ar** 0.9nm,0.7s,baz=355,slow=2.4,SNR=9.2	148.35	355	PKPbc	PKPbc	11 44 22.2	-0.5

MEX 20 11:52:22.8±0.7, 15°.95N×97°.11W, h54^{km}±5^{km}, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	0.98	101	*i* P	Pn	11 52 39.4	-1.0
HUIG				*i* S	Sn	11 52 51.0	-2.4
VHO	**Vista Hermosa**	1.17	18	*i* P	Pn	11 52 42.4	-0.8
VHO				*e*S	Sn	11 52 56.2	-2.0
CMIG	**Matias Romero**	2.42	62	*i* P	Pn	11 52 59.3	-0.7
CMIG				*i* S	Sn	11 53 27.3	-1.1

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*IDC **20** 12:01:15.7±0.4, 2°.31S×138°.49E, h0^{km}, mb4.9/25, mb1 5.0/29, mb1mx5.0/34, mbtmp5.0/29, ML4.9/4, MS4.4/27, Ms1 4.4/27, ms1mx4.3/31, Error ellipse: s-maj=17.3km s-min=9.6km az=76.0*

*NEIC **20** 12:01:17.0±1.1, 2°.25S×138°.47E, h8^{km}±3^{km}, mb5.2/104, Error ellipse: s-maj=9.8km s-min=7.6km az=178.0*

NEIC Felt [IV] at Sarmi.

*ISCJB **20** 12:01:19.0±0.1, 2°.27S±0°.02×138°.51E±0°.02, h32^{km}, mb5.2/155, MS4.5/48, Error ellipse: s-maj=3.2km s-min=2.7km az=146.7*

*DJA **20** 12:01:19.4±0.4, 2°S±2°×13°8E±°, h12^{km}±3^{km}, M5.2/49, mB5.5/24, mb5.3/49, MLv5.7/7, Mw(mB)5.0/24, Mwp7.0/1*

*MOS **20** 12:01:19.0±0.9, 2°.26S×138°.50E, h32^{km}, mb5.2/41, Error ellipse: s-maj=9.6km s-min=5.3km az=105.9*

*BJI **20** 12:01:19.5±0.0, 2°.02S×138°.71E, h32^{km}, mb5.0/68, mB5.1/49, Ms4.7/54, Ms7 4.5/52*

*GCMT **20** 12:01:22.0±0.2, 2°.06S±0°.01×138°.62E±0°.01, h25^{km}, MW5.2/99, Moment Tensor Solution. s49,c69; s99,c167; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.73±.16; $M_{\theta\theta}$-3.92±.11; $M_{\phi\phi}$3.19±.13; $M_{r\theta}$-4.82±.24; $M_{\theta\phi}$3.52±.08; $M_{\phi r}$-0.59±.28; Best double couple: $M_0$6.87700×10^{16} NP1:ϕ_s252.00000°, δ88.00000°, λ44.00000°. NP2: ϕ_s160.00000°, δ46.00000°, λ177.00000°. Principal axes: T 6.1210, Plg31.0000°, Azm125.0000°; N 1.5160, Plg46.0000°, Azm254.0000°; P -7.6330, Plg28.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 12:01:20.8±0.2, 2°.28S±0°.03×138°.46E±0°.03, h32^{km}, h32^{km}:pP-P, n385, σ1^{s}.64/402, mb5.1/154, MS4.5/49, 10C-11D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	1.74	100	P	Pn	12 01 47.5	-1.3
SRPI	**Serui, Papua**	2.25	280	P	Pn	12 01 56.4	+0.5
SRPI				S	Sb	12 02 26.0	-2.3
BAKI	**Biak**	2.59	295	P	Pn	12 01 59.5	-1.0
FAKI	**Fak Fak**	6.23	264	*e*Pn	Pn	12 02 51.6	+1.0
FAKI				*e*Sn	Sn	12 03 59.3	-1.5
FAKI	**Fak Fak** 246nm,0.4s,5μm3.1nm	6.23	264	P	Pn	12 02 51.9	+1.3
FAKI	246nm,0.4s,5μm3.1nm			S	Sn	12 03 59.7	-1.1
MMPI	**Merauke** 1μm,0.6s,16μm11nm	6.43	163	P	Pn	12 02 56.1	+2.7
MMPI	1μm,0.6s,16μm11nm			S	Sn	12 04 10.8	+5.0
SIJI	**Sorong** 19nm,0.3s,baz=279,slow=23,SNR=24	7.32	281	Pn	Pn	12 03 08.1	+2.5
SIJI	6.4nm,0.3s,baz=288,slow=20,SNR=3.2			Sn	Sn	12 04 27.5	-0.2
SIJI	comp=Z,9μm,19.8s,baz=90,slow=42			LR	LR	12 06 25.7	
SWI	**Sorong**	7.33	281	P	Pn	12 03 08.0	+2.3
SWI				S	Sn	12 04 30.5	+2.6
MANU	**Manus Island**	8.91	89	*e*Pn	Pn	12 03 27.0	-0.3
MANU				*e*Sn	Sn	12 05 04.5	-2.2
SAUI	**Saumlaki**	9.10	231	*e*Pn	Pn	12 03 30.2	+0.2
MSAI	**Masohi** 64nm,0.6s,654nm	9.57	263	P	Pn	12 03 37.7	+1.2
AAI	**Ambon** 148nm,0.6s,2μm	10.34	262	P	Pn	12 03 47.0	0.0
PALU	**Palau** baz=10,SNR=11	10.36	337	P	Pn	12 03 47.9	+0.7
PMG	**Port Moresby** 2.8nm,0.3s,baz=310,slow=9.6,SNR=19	11.18	130	Pn	Pn	12 03 60.0	+1.5
PMG	comp=Z,6μm,19.2s,baz=302,slow=46			LR	LR	12 09 51.1	
PMG	**Port Moresby**	11.18	130	*e*Pn	Pn	12 03 57.7	-0.8
PMG	**Port Moresby**	11.18	130	*e*P	Pn	12 03 57.7	-0.8
NLAI	**Namlea** 146nm,0.9s,2μm	11.38	265	P	Pn	12 04 03.4	+2.1
TNTI	**Ternate**	11.49	285	*e*Pn	Pn	12 04 02.7	-0.1
KDU	**Kakadu** baz=12,SNR=65	11.91	210	P	Pn	12 04 07.0	-1.5
SANI	**Sanana**	12.46	271	P	Pn	12 04 14.9	-1.2
COEN	**Coen**	12.50	158	*e*Pn	Pn	12 04 15.2	-1.4
COEN				*e*Sn	Sn	12 06 33.4	-1.4
COEN	**Coen** baz=12,SNR=45	12.50	158	P	Pn	12 04 15.4	-1.2
MTN	**Manton Dam**	12.75	214	*e*Pn	Pn	12 04 18.9	-1.1
MTN				*e*Sn	Sn	12 06 37.2	-3.8
MTN	**Manton Dam** baz=13,SNR=54	12.75	214	P	Pn	12 04 18.8	-1.1
RABL	**Rabaul**	13.82	98	*e*Pn	Pn	12 04 34.0	-0.6
LUWI	**Luwuk** 111nm,0.8s	15.73	274	*e*P	Pn	12 05 00.7	+0.6
LUWI	**Luwuk** 164nm,0.9s,3μm	15.73	274	P	Pn	12 05 00.7	+0.6
DAV	**Davao City (W)** comp=Z,730nm,18.1s,baz=119,slow=42	15.86	306	LR	LR	12 12 27.3	
SOEI	**Soe** 365nm,0.9s	15.94	242	*e*Pn	Pn	12 05 02.8	-0.1
SOEI	**Soe** 301nm,1.0s,4μm	15.94	242	P	Pn	12 05 03.4	+0.5
BBSI	**Bau Bau**	16.16	258	P	P	12 05 16.5	+7.8
KCP	**Kidapawan**	16.22	305⇓	*i*P	P	12 05 10.4	+1.1
KNRA	**Kununurra** baz=16,SNR=104	16.38	215	P	Pn	12 05 06.6	-1.9
BATI	**Baumata** 6.7nm,0.3s,baz=19,slow=5.2,SNR=5.2	16.67	241	Pn	Pn	12 05 12.2	0.0
BATI	2.5nm,0.3s,baz=0.0,slow=20,SNR=1.7			Sn	Sn	12 08 09.7	-6.8
BATI	**Baumata**	16.67	241	P	Pn	12 05 10.3	-1.9
MTSU	**Mount Surprise** baz=17,SNR=45	16.77	160	P	Pn	12 05 12.6	-0.8
GUMO	**Guam** 2.4nm,0.3s,baz=200,slow=5.9,SNR=17	17.00	22	P	Pn	12 05 16.7	+0.4
GUMO	comp=Z,539nm,18.5s,baz=206,slow=38			LR	LR	12 12 05.3	
GUMO	**Guam** 330nm,1.0s	17.00	22	*e*P	Pn	12 05 15.1	-1.3
MMRI	**Maumere** 72nm,1.0s	17.33	248	*e*P	Pn	12 05 20.7	+0.2
MMRI	**Maumere**	17.33	248	P	P	12 05 31.2	+10
EDFI	**Ende, Flores** 34nm,0.9s,2μm	17.87	248	P	P	12 05 30.0	+2.3
WRAB	**Tennant Creek** 84nm,0.8s	17.99	193	*e*P	Pn	12 05 28.2	-0.4
WRAB	**Tennant Creek**	17.99	193⇓	*e*P	P	12 05 29.0	+0.1
WRAB	comp=Z,39nm,0.8s			pmax	pmax		
WB2	**Warramunga Arr** comp=Z,94nm,0.6s	18.00	193	*e*P	Pn	12 05 28.7	0.0
WRA	**Warramunga Arr** comp=Z,4.9nm,0.3s,baz=8.5,slow=12,SNR=102	18.01	193	P	Pn	12 05 26.9	-1.8
WRA	comp=Z,5.2nm,0.3s,baz=12,slow=25,SNR=5.9			S	Sn	12 08 36.9	-12
QIS	**Mount Isa** baz=18,SNR=14	18.20	177	P	Pn	12 05 28.3	-2.8
BNSI	**Bone**	18.44	263	P	Pn	12 05 36.9	+2.8
BKSI	**Bulukumba**	18.54	260	P	P	12 05 34.8	-0.1
TTSI	**Tana Toraja**	18.63	267	P	Pn	12 05 48.1	+12
SPSI	**Sidrap Palu** comp=Z,37nm,0.7s,comp=Z,836nm	18.73	264	P	Pn	12 05 41.0	+3.3
KAPI	**Kappang** comp=Z,1.2nm,0.3s,baz=91,slow=11,SNR=3.5	18.86	261	P	Pn	12 05 41.9	+2.7
KAPI	comp=Z,639nm,21.4s,baz=299,slow=40			LR	LR	12 13 56.2	
KAPI	**Kappang** comp=Z,32nm,1.0s	18.86	261	*e*P	Pn	12 05 39.9	+0.7
KAPI	**Kappang**	18.86	261	*e*P	Pn	12 05 39.9	+0.7
KAPI	comp=Z,32nm,1.0s			pmax	pmax		
CTA	**Charters Tower** comp=Z,2.3nm,0.3s,baz=339,slow=12,SNR=51	19.27	157	P	P	12 05 43.4	+0.5
CTA	comp=Z,0.3nm,0.3s,baz=96,slow=19,SNR=2.1			S	S	12 09 24.8	+5.4
CTA	comp=Z,6μm,18.6s,baz=340,slow=39			LR	LR	12 13 49.8	
CTAO	**Charters Tower** comp=Z,84nm,0.8s	19.27	157	*e*P	P	12 05 42.8	-0.1
CTAO	**Charters Tower**	19.27	157	*e*P	P	12 05 42.8	-0.1
CTAO	comp=Z,84nm,0.8s			pmax	pmax		
ANA2	**Anatahan** comp=Z,126nm,0.8s	19.85	21	*e*P	P	12 05 48.4	-0.9
SARN	**Sarigan** comp=Z,236nm,1.6s	20.20	21	*e*P	P	12 05 51.3	-1.8
WBSI	**Waikabubak, Su** comp=Z,84nm,0.9s	20.31	248	P	Pn	12 05 58.8	+2.3
RCP	**Roxas**	20.81	312⇑	*e*P	Pn	12 06 01.7	-0.6
BKB	**Balikpapan**	21.57	272	P	P	12 06 10.1	+2.1
AS31	**Alice Springs** comp=Z,35nm,0.7s	21.71	191	*e*P	P	12 06 09.2	-0.1
ASAR	**Alice Springs** comp=Z,36nm,0.7s,baz=22,slow=10,SNR=228	21.71	191	P	P	12 06 09.2	-0.2
ASAR	comp=Z,41nm,0.8s,baz=12,slow=22,SNR=12			S	S	12 10 04.3	-3.8
ASAR	comp=Z,3μm,18.5s,baz=14,slow=39			LR	LR	12 15 28.8	
PATS	**Pohnpei** comp=Z,165nm,1.1s	21.79	65	*e*P	P	12 06 09.1	-1.2
PATS	**Pohnpei** baz=22,SNR=3.2	21.79	65	P	P	12 06 10.4	+0.1
HNR	**Honiara** comp=Z,189nm,0.8s,baz=213,slow=1.1,SNR=8.4	22.51	109	P	P	12 06 16.8	-1.2
HNR	comp=Z,263nm,21.3s,baz=283,slow=36			LR	LR	12 14 44.6	
HNR	**Honiara** comp=Z,180nm,0.8s	22.51	109	*e*P	P	12 06 16.6	-1.5
HNR	**Honiara**	22.51	109	*e*P	P	12 06 18.0	-0.1
TGY	**Tagaytay City** comp=Z,242nm,0.4s,baz=189,slow=1.8,SNR=11	23.80	314	P	P	12 06 31.3	+0.2
TGY	comp=Z,728nm,19.6s,baz=140,slow=37			LR	LR	12 15 59.5	
WRKA	**Warakurna** baz=25,SNR=60	24.65	203	P	P	12 06 38.2	-0.6
KMMI	**Kalianget**	24.86	258	P	P	12 06 40.0	-0.7
EIDS	**Eidsvold** comp=Z,440nm,1.2s	25.98	153	*e*P	P	12 06 51.0	+0.3
EIDS	**Eidsvold** baz=26,SNR=57	25.98	153	P	P	12 06 52.0	+1.3
RMQ	**Roma** baz=26,SNR=72	26.02	159	P	P	12 06 52.7	+1.6
GRJI	**Gresik** comp=Z,115nm,0.7s,comp=Z,955nm	26.29	259	P	P	12 06 57.9	+4.2
PSA00	**Pilbara Seismi** comp=Z,48nm,1.0s	26.38	222	*e*P	P	12 06 54.4	-0.1
SBUM	**Sibu** comp=Z,8.0nm,1.1s	26.65	280	*e*P	P	12 06 57.4	+0.4
KSM	**Kuching** comp=Z,11nm,0.8s	28.39	277	*e*P	P	12 07 12.7	+0.1
STKA	**Stephens Creek** comp=Z,35nm,0.9s,baz=359,slow=8.4,SNR=33	29.58	175	P	P	12 07 23.0	+0.1
STKA	comp=Z,3μm,18.2s,baz=346,slow=39			LR	LR	12 20 29.9	
STKA	**Stephens Creek** comp=Z,8.6nm,0.9s	29.58	175	*e*P	P	12 07 22.5	-0.5
STKA	**Stephens Creek** baz=30,SNR=24	29.58	175	P	P	12 07 23.7	+0.7
STKA	**Stephens Creek**	29.58	175	*e*P	P	12 07 22.5	-0.5
STKA	comp=Z,9.0nm,0.9s			pmax	pmax		
CMSA	**Cobar Meteorol** baz=30,SNR=32	29.89	168	P	P	12 07 27.1	+1.4
FORT	**Forrest** baz=30,SNR=7.1	30.00	198	P	P	12 07 29.1	+2.4
BBOO	**Buckleboo** comp=Z,87nm,1.0s	30.45	184	*e*P	P	12 07 31.2	+0.6
BBOO	**Buckleboo** baz=31,SNR=12	30.45	184	P	P	12 07 31.7	+1.1
JOW	**Kunigami** comp=Z,0.7nm,0.5s,baz=105,slow=14,SNR=3.7	30.57	342	P	P	12 07 31.1	-0.6
ARMA	**Armidale** comp=Z,143nm,1.2s	30.64	157	*e*P	P	12 07 32.9	+0.4
ARMA	**Armidale** baz=31,SNR=18	30.64	157	P	P	12 07 33.5	+1.1
MEEK	**Meekatharra** baz=31,SNR=9.1	30.80	216	P	P	12 07 34.1	+0.3
HTT	**Hallett** baz=31,SNR=13	30.99	179	P	P	12 07 35.7	+0.3
NACB	**Ninganchiao** comp=Z,32nm,0.9s	30.99	329	*e*P	P	12 07 34.6	-0.8
SSLB	**Suanglung** comp=Z,15nm,1.1s	31.01	328	*e*P	P	12 07 35.1	-0.6
GIRL	**Giralia** baz=31,SNR=3.8	31.02	227	P	P	12 07 38.0	+2.3
PPBI	**Pangkal Pinang** comp=Z,36nm,0.8s,comp=Z,8μm	32.30	270	P	P	12 07 48.9	+1.8
KMBL	**Kambalda** baz=33,SNR=5.3	32.89	207	P	P	12 07 53.2	+1.1
MGCD	**Mangrove Creek** baz=33,SNR=6.8	32.97	160	P	P	12 07 53.5	+0.7
YNG	**Young** baz=33,SNR=12	33.17	165	P	P	12 07 56.4	+1.9
RIV	**Riverview** baz=34,SNR=8.0	33.55	161	P	P	12 07 59.6	+1.8
DZM	**Mont Dzumac** comp=Z,312nm,27.2s	33.56	128	*e*S	S	12 13 14.9	-3.9
DZM	comp=Z,1μm,22.6s			*e*LR	LR	12 16 54.2	
MORW	**Morawa** comp=Z,48nm,1.3s	34.13	217	*e*P	P	12 08 02.9	0.0
MORW	**Morawa** baz=34,SNR=12	34.13	217	P	P	12 08 03.1	+0.2
MDSI	**Maura Dua** comp=Z,34nm,1.0s	34.28	265	P	P	12 08 05.5	+1.0
CAN	**Canberra** comp=Z,105nm,1.1s	34.30	165	*e*P	P	12 08 04.9	+0.5
CAN	**Canberra**	34.30	165	*e*P	P	12 08 04.9	+0.5
CAN	comp=Z,105nm,1.1s			pmax	pmax		
CNB	**Canberra Magne** baz=34,SNR=19	34.39	164	P	P	12 08 05.2	0.0
ARPS	**Mount Arapiles** baz=35,SNR=13	34.46	175	P	P	12 08 06.6	+0.9
H11S3	**WAKE ISLAND Hy** baz=236,slow=75,SNR=67	34.62	52	T	T	12 44 05.2	
H11S2	**WAKE ISLAND Hy** baz=236,slow=75,SNR=59	34.63	52	T	T	12 43 57.7	
H11S1	**WAKE ISLAND Hy** baz=236,slow=75,SNR=56	34.63	52	T	T	12 44 07.3	
MYKOM	**Kota Tinggi** comp=Z,16nm,0.9s	34.83	276	*e*P	P	12 08 09.2	0.0
BLDU	**Ballidu** baz=35,SNR=10	34.90	214	P	P	12 08 09.8	+0.2
LHSI	**Lahat** comp=Z,80nm,1.0s,comp=Z,2μm	34.91	267	P	P	12 08 11.8	+1.9
QIZ	**Qiongzhong**	35.21	308	P	P	12 08 13.6	+1.2
QIZ				S	S	12 13 46.8	+2.7
QIZ	comp=Z,120nm,3.9s			pmax	pmax		
QIZ	comp=Z,690nm,27.5s			LR	LR		
QIZ	comp=Z,470nm,32.4s			LR	LR		
QIZ	comp=Z,470nm,22.1s			LR	LR		
JHJ	**Hachijo jima 2** comp=Z,346nm,20.3s,baz=190,slow=31	35.23	2	LR	LR	12 19 23.4	
H11N1	**WAKE ISLAND Hy** baz=228,slow=76,SNR=7.6	35.46	51	T	T	12 45 10.3	
H11N2	**WAKE ISLAND Hy** baz=228,slow=76,SNR=10	35.47	51	T	T	12 45 31.2	
H11N3	**WAKE ISLAND Hy** baz=228,slow=76,SNR=5.7	35.48	51	T	T	12 45 18.1	
TOO	**Toolangi** comp=Z,130nm,1.3s	35.71	170	*e*P	P	12 08 16.8	+0.3
TOO	**Toolangi** baz=36,SNR=11	35.71	170	P	P	12 08 17.0	+0.5
TOO	**Toolangi**	35.71	170	*e*P	P	12 08 16.8	+0.3
TOO	comp=Z,130nm,1.3s			pmax	pmax		
JNU	**Nakatsue** comp=Z,31nm,1.0s,baz=132,slow=5.4,SNR=11	35.94	349	P	P	12 08 17.3	-1.1
JNU	comp=Z,598nm,19.9s,baz=163,slow=34			LR	LR	12 21 20.4	
JNU	**Nakatsue** comp=Z,37nm,1.0s	35.94	349	*e*P	P	12 08 17.6	-0.9
MILA	**Mila** baz=36,SNR=6.5	35.98	165	P	P	12 08 19.9	+1.0
MUN	**Mundaring** baz=36,SNR=3.3	36.21	213	P	P	12 08 21.4	+0.6
NWAO	**Narrogin (SRO)** comp=Z,29nm,1.0s	36.41	211	*e*P	P	12 08 22.5	0.0
NWAO	**Narrogin (SRO)** baz=36,SNR=5.3	36.41	211	P	P	12 08 23.0	+0.5
NWAO	**Narrogin (SRO)**	36.41	211	*e*P	P	12 08 22.5	0.0
NWAO	comp=Z,29nm,1.0s			pmax	pmax		
BKNI	**Bangkinang** comp=Z,75nm,0.9s	37.50	273	*e*P	P	12 08 32.2	+0.2
BKNI	**Bangkinang** comp=Z,90nm,0.9s	37.50	273	P	P	12 08 33.8	+1.8
IPM	**Ipoh** comp=Z,24nm,0.7s	38.00	280	*e*P	P	12 08 36.2	-0.1
PDSI	**Padang** comp=Z,77nm,0.7s	38.00	271	P	P	12 08 36.1	-0.3
KULM	**Kulim** comp=Z,41nm,1.1s	38.51	281	*e*P	P	12 08 40.5	-0.1
PANO	**Nakornpanom** comp=Z,0.7nm,0.9s	38.57	301	P	P	12 08 41.5	+0.5
MAJO	**Matsushiro** comp=Z,9.4nm,0.6s	38.63	360	*e*P	P	12 08 40.1	-1.1
MAJO	**Matsushiro**	38.63	360⇑	*e*P	P	12 08 39.3	-1.9
MAJO	comp=Z,8.0nm,0.6s			pmax	pmax		
MAT	**Matsushiro**	38.63	360	P	P	12 08 37.9	-3.3
MAT				S	S	12 14 33.2	-2.5
MJAR	**Matsushiro Arr** comp=Z,7.2nm,0.6s,baz=179,slow=9.5,SNR=30	38.63	360	P	P	12 08 38.7	-2.6
MJAR	comp=Z,2.5nm,0.8s,baz=176,slow=3.3,SNR=5.5			PcP	PcP	12 10 53.2	0.0
MJAR	comp=Z,1.0nm,1.1s,baz=181,slow=4.1,SNR=4.1			ScP	ScP	12 14 40.7	+1.6
MJAR	comp=Z,236nm,20.6s,baz=170,slow=33			LR	LR	12 22 16.6	
NJ2	**Nanjing**	38.88	333	*e*P	P	12 08 43.0	-0.4
NJ2				pP	pP	12 08 52.9	0.0
NJ2				sP	sP	12 08 56.6	-0.2
NJ2				S	S	12 14 44.0	+4.4
NJ2				sS	sS	12 14 58.3	+3.1
NJ2	comp=Z,18nm,0.6s			pmax	pmax		
NJ2	comp=Z,200nm,5.2s			pmax	pmax		
NJ2	comp=Z,570nm,18.0s			LR	LR		
NJ2	comp=Z,470nm,15.6s			LR	LR		
NJ2	comp=Z,690nm,18.8s			LR	LR		
SKLT	**Songkhla** comp=Z,19nm,0.9s	38.91	284	P	P	12 08 46.6	+2.7
MNSI	**Mandailing Nat** comp=Z,42nm,0.6s,comp=Z,3μm	38.99	274	P	P	12 08 45.1	+0.5
SISI	**Saibi** comp=Z,91nm,0.9s	39.36	271	P	P	12 08 48.1	+0.4
TJN	**Taejon**	39.83	346⇑	*e*P	P	12 08 50.1	-1.1
PSI	**Prapat** baz=75,slow=9.9	39.84	277	P	P	12 08 51.4	-0.5
PSI	**Prapat** comp=Z,39nm,0.9s	39.84	277	*e*P	P	12 08 51.0	-0.9
PSI	**Prapat**	39.84	277	*e*P	P	12 08 51.0	-0.9
PSI	comp=Z,39nm,0.9s			pmax	pmax		
WHN	**Wuhan**	39.93	327	⇑P	P	12 08 53.1	+1.0
WHN				S	S	12 15 01.0	+5.7
WHN	comp=Z,290nm,11.2s			LR	LR		
WHN	comp=Z,750nm,15.1s			LR	LR		
WHN	comp=Z,1μm,21.2s			LR	LR		
TRTT	**Trang** comp=Z,47nm,0.7s	39.95	285	P	P	12 08 53.8	+1.2
NONG	**Nongkai** comp=Z,0.7nm,0.9s	40.23	302	P	P	12 08 54.7	-0.1

CHAI	**Chaiyaphum**	**40.32**	**298**	P	**P**	**12 08 55.9**	**+0.2**
	comp=Z,57µm,0.8s,comp=Z,405µm						
KS15	**Wonju Array Si**	**40.73**	**347**	*e*P	**P**	**12 08 58.4**	**-0.2**
	comp=Z,28nm,1.4s						
KSRS	**Korea Array**	**40.73**	**347**	P	**P**	**12 08 58.0**	**-0.7**
	comp=Z,5.6nm,0.7s,baz=158,slow=8.9,SNR=26						
KSRS				PcP	**PcP**	**12 11 00.6**	**+0.8**
	comp=Z,2.9nm,0.8s,baz=175,slow=3.4,SNR=6.3						
KSRS				LR	LR	12 26 46.3	
	comp=Z,325nm,18.7s,baz=169,slow=38						
MOO	**Moorlands**	**40.74**	**170**	P	**P**	**12 09 00.6**	**+1.9**
	baz=41,SNR=3.9						
GSI	**Gunungsitoli**	**41.03**	**275**	*e*P	**P**	**12 09 01.1**	**-0.4**
	comp=Z,54nm,0.7s						
GSI	**Gunungsitoli**	**41.03**	**275**	P	**P**	**12 09 01.4**	**-0.2**
	comp=Z,94nm,0.8s						
KCSI	**Kotacane, Aceh**	**41.07**	**278**	P	**P**	**12 09 01.7**	**-0.2**
TAU	**Tasmania Unive**	**41.22**	**170**	*e*P	**P**	**12 09 03.0**	**+0.4**
	comp=Z,289nm,1.8s						
TAU	**Tasmania Unive**	**41.22**	**170**	*e*P	**P**	**12 09 03.0**	**+0.4**
TAU				pmax	pmax		
	comp=Z,289nm,1.8s						
PHET	**Kaeng Krachan**	**41.39**	**292**	P	**P**	**12 09 06.1**	**+1.6**
	comp=Z,58µm,0.8s,comp=Z,629µm						
PBKT	**Sadao Pong**	**41.48**	**298**	P	**P**	**12 09 08.6**	**+3.4**
	comp=Z,6.1nm,0.9s,comp=Z,474nm						
GYA	**Guiyang**	**41.94**	**315**	⇑*i*P	**P**	**12 09 09.9**	**+0.9**
GYA				pP	pP	12 09 20.3	+1.8
GYA				PP	**PnPn**	**12 10 54.3**	**+2.6**
GYA				S	**S**	**12 15 23.3**	**-2.4**
GYA				sS	sS	12 15 39.8	-1.7
GYA				SS	**SS**	**12 18 25.5**	**-7.8**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,150nm,7.1s						
GYA				LR	LR		
	comp=Z,350nm,22.4s						
GYA				LR	LR		
	comp=Z,240nm,23.3s						
GYA				LR	LR		
	comp=Z,420nm,23.3s						
UTTA	**Uttaradit**	**42.32**	**300**	P	**P**	**12 09 13.2**	**+1.2**
	comp=Z,22µm,0.8s						
SRDT	**SRDT**	**42.33**	**294**	P	**P**	**12 09 15.0**	**+2.9**
	comp=Z,14nm,1.1s						
UTHA	**Uthaitani**	**42.46**	**296**	P	**P**	**12 09 14.6**	**+1.4**
	comp=Z,39µm,0.9s						
MLSI	**Meulaboh, Aceh**	**42.52**	**279**	P	**P**	**12 09 14.8**	**+1.0**
	comp=Z,60nm,0.9s						
ENH	**Enshi**	**42.57**	**322**	*e*P	**P**	**12 09 13.3**	**-0.6**
	comp=Z,17nm,0.9s						
PHRA	**Phrae**	**42.91**	**300**	P	**P**	**12 09 17.8**	**+1.0**
	comp=Z,3.5nm,1.0s,comp=Z,698nm						
TIA	**Tai'an**	**43.16**	**335**	P	**P**	**12 09 17.8**	**-0.8**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
UMPA	**Umpang Tak**	**43.22**	**297**	P	**P**	**12 09 22.0**	**+2.6**
	comp=Z,35µm,0.8s						
PAYA	**Payao**	**43.58**	**301**	P	**P**	**12 09 22.8**	**+0.5**
	comp=Z,64µm,0.9s						
CM31	**Chiang Mai Arr**	**44.01**	**300**	*e*P	**P**	**12 09 25.6**	**-0.1**
	comp=Z,22nm,1.1s						
CMAR	**Chiang Mai Arr**	**44.01**	**300**	P	**P**	**12 09 26.6**	**+0.9**
	comp=Z,6.1nm,0.8s,baz=117,slow=6.5,SNR=27						
CMAR				PcP	**PcP**	**12 11 12.6**	**+1.5**
	comp=Z,6.5nm,0.9s,baz=142,slow=1.9,SNR=7.1						
CMAR				LR	LR	12 26 58.3	
	comp=Z,195nm,21.1s,baz=128,slow=35						
KMI	**Kunming**	**44.05**	**310**	P	**P**	**12 09 26.6**	**+0.4**
KMI				pP	pP	12 09 37.0	+1.2
KMI				sP	sP	12 09 41.4	+1.7
KMI				S	**S**	**12 15 59.0**	**+2.0**
KMI				sS	sS	12 16 18.5	+5.8
KMI				SS	**SS**	**12 19 06.6**	**-8.4**
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				pmax	pmax		
	comp=Z,44nm,3.1s						
KMI				LR	LR		
	comp=Z,210nm,18.5s						
KMI				LR	LR		
	comp=Z,450nm,20.7s						
KMI				LR	LR		
	comp=Z,730nm,20.9s						
CMMT	**Chiang Mai**	**44.15**	**300**	P	**P**	**12 09 27.4**	**+0.6**
	comp=Z,6.1nm,1.4s						
CHTO	**Chiang Mai**	**44.15**	**300**	*e*P	**P**	**12 09 26.5**	**-0.3**
	comp=Z,14nm,1.1s						
CHTO	**Chiang Mai**	**44.15**	**300**	*e*P	**P**	**12 09 26.5**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,14nm,1.1s						
ERM	**Erimo**	**44.30**	**5**	⇓*e*P	**P**	**12 09 26.5**	**-1.1**
ERM				pmax	pmax		
	comp=Z,33nm,1.7s						
XAN	**Xi'an**	**45.58**	**325**	*e*P	**P**	**12 09 37.5**	**-0.6**
	comp=Z,25nm,0.8s						
XAN	**Xi'an**	**45.58**	**325**	P	**P**	**12 09 37.8**	**-0.3**
XAN				S	**S**	**12 16 17.5**	**-1.1**
XAN				sS	pS	12 16 30.8	+1.0
XAN				pmax	pmax		
	comp=Z,28nm,0.7s						
XAN				pmax	pmax		
	comp=Z,160nm,5.6s						
XAN				LR	LR		
	comp=Z,310nm,16.6s						
XAN				LR	LR		
	comp=Z,240nm,17.7s						
XAN				LR	LR		
	comp=Z,380nm,22.8s						
XAN	**Xi'an**	**45.58**	**325**	*e*P	**P**	**12 09 37.5**	**-0.6**
XAN				pmax	pmax		
	comp=Z,25nm,0.8s						
SNY	**Shenyang**	**45.94**	**345**	⇑P	P	12 09 48.6	+8.0
SNY				S	**S**	**12 16 23.6**	**+0.4**
SNY				pmax	pmax		
	comp=Z,160nm,4.2s						
SNY				LR	LR		
	comp=N,350nm,19.0s						
SNY				LR	LR		
	comp=E,230nm,15.1s						
SNY				LR	LR		
	comp=Z,560nm,20.0s						
OUZ	**Omahuta**	**46.23**	**139**	*e*P	**P**	**12 09 42.8**	**-0.3**
	comp=Z,75nm,1.7s						
ASAJ	**Asahikawa**	**46.34**	**4**	P	**P**	**12 09 43.0**	**-0.8**
	comp=Z,14nm,0.8s,baz=213,slow=7.6,SNR=20						
USA0B	**Ussuriysk Arra**	**46.64**	**354**	*e*P	**P**	**12 09 45.8**	**-0.3**
	comp=Z,96nm,2.0s						
USRK	**Ussuriysk Ar.**	**46.64**	**354**	P	**P**	**12 09 46.0**	**-0.1**
	comp=Z,6.7nm,0.7s,baz=181,slow=6.9,SNR=17						
USRK				LR	LR	12 26 02.1	
	comp=Z,466nm,20.6s,baz=156,slow=32						
CD2	**Chengdu**	**46.70**	**318**	*e*P	**P**	**12 09 46.5**	**-0.4**
CD2				S	**S**	**12 16 35.1**	**+0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,480nm,17.7s						
CD2				LR	LR		
	comp=Z,480nm,18.1s						
CN2	**Changchun**	**47.34**	**347**	*e*P	**P**	**12 09 50.8**	**-0.8**
CN2				*e*S	**S**	**12 16 46.4**	**+3.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,40nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
MDJ	**Mudanjiang**	**47.36**	**351**	P	**P**	**12 09 52.0**	**+0.2**
MDJ				pP	pP	12 10 01.4	0.0
MDJ				sP	sP	12 10 06.8	+1.6
MDJ				PP	**PP**	**12 11 46.4**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,22nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,97nm,3.8s						
MDJ				LR	LR		
	comp=Z,380nm,17.8s						
YSS	**Yuzh-Sakhalins**	**49.18**	**4**	*e*P	**P**	**12 10 04.8**	**-0.9**
	comp=Z,23nm,0.5s						
YSS	**Yuzh-Sakhalins**	**49.18**	**4**	*e*P	**P**	**12 10 04.8**	**-0.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**49.44**	**333**	P	**P**	**12 10 08.4**	**+0.4**
HHC				S	**S**	**12 17 12.4**	**-0.9**
HHC				sS	sS	12 17 31.1	+1.8
HHC				SS	**SS**	**12 20 41.6**	**-4.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				LR	LR		
	comp=Z,540nm,17.9s						
HHC				LR	LR		
	comp=Z,490nm,17.9s						
FOZ	**Fox Glacier**	**49.63**	**150**	*e*P	**P**	**12 10 09.5**	**+0.3**
	comp=Z,63nm,1.4s						
DCZ	**Deep Cove**	**49.84**	**154**	*e*P	**P**	**12 10 11.6**	**+0.7**
	comp=Z,63nm,1.1s						
LZH	**Lanzhou**	**49.99**	**323**	*e*P	**P**	**12 10 13.5**	**+1.1**
LZH				pP	sP	12 10 25.3	-0.6
LZH				sP	pP	12 10 28.5	+6.4
LZH				*e*S	**S**	**12 17 25.6**	**+4.3**
LZH				sS	sS	12 17 38.3	+1.0
LZH				pmax	pmax		
	comp=Z,71nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,5.7s						
LZH				LR	LR		
	comp=Z,1µm,17.1s						
LZH				LR	LR		
	comp=Z,1µm,17.1s						
LZH				LR	LR		
	comp=Z,2µm,17.6s						
MLZ	**Mavora Lakes**	**50.20**	**153**	*e*P	**P**	**12 10 13.7**	**+0.1**
	comp=Z,113nm,1.2s						
LTZ	**Lake Taylor**	**50.36**	**148**	*e*P	**P**	**12 10 14.7**	**-0.2**
	comp=Z,68nm,1.2s						
RPZ	**Rata Peaks**	**50.38**	**150**	P	**P**	**12 10 15.0**	**0.0**
	comp=Z,103nm,0.9s,baz=336,slow=6.3,SNR=5.8						
RPZ	**Rata Peaks**	**50.38**	**150**	*e*P	**P**	**12 10 14.8**	**-0.2**
	comp=Z,112nm,0.9s						
BKZ	**Black Stump Fm**	**50.45**	**142**	*e*P	**P**	**12 10 14.8**	**-0.9**
	comp=Z,16nm,0.8s						
MQZ	**McQueen's Vall**	**51.20**	**148**	*e*P	**P**	**12 10 20.6**	**-0.5**
	comp=Z,80nm,1.2s						
KLR	**Kul'dur**	**51.64**	**354**	P	**P**	**12 10 23.9**	**-0.5**
	comp=Z,6.9nm,0.6s,baz=157,slow=6.1,SNR=22						
KLR	**Kul'dur**	**51.64**	**354**	*d i*P	**P**	**12 10 23.8**	**-0.5**
KLR				pmax	pmax		
	comp=Z,26nm,1.5s						
GTA	**Gaotai**	**54.58**	**324**	*e*P	**P**	**12 10 46.9**	**+0.5**
GTA				pP	pP	12 10 56.0	-0.1
GTA				sP	sP	12 11 00.3	+0.3
GTA				pmax	pmax		
	comp=Z,17nm,1.0s						
GTA				pmax	pmax		
	comp=Z,50nm,7.2s						
GTA				LR	LR		
	comp=Z,190nm,18.9s						
GTA				LR	LR		
	comp=Z,190nm,21.6s						
GTA				LR	LR		
	comp=Z,310nm,21.6s						
LSA	**Lhasa**	**55.25**	**309**	*e*P	**P**	**12 10 51.5**	**-0.3**
	comp=Z,8.4nm,0.7s						
LSA	**Lhasa**	**55.25**	**309**	*e*P	**P**	**12 10 51.5**	**-0.3**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZEA	**Zeya**	**56.60**	**352**	*e*P	**P**	**12 11 00.5**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
ULN	**Ulaanbaatar**	**56.98**	**335**	*e*P	**P**	**12 11 03.6**	**+0.2**
	comp=Z,13nm,1.1s						
ULN	**Ulaanbaatar**	**56.98**	**335**	*d i*P	**P**	**12 11 03.6**	**+0.2**
ULN				pmax	pmax		
	comp=Z,18nm,1.7s						
SONA0	**Songino Array**	**57.23**	**335**	*e*P	**P**	**12 11 04.8**	**-0.4**
SONM	**Songino Array**	**57.23**	**335**	P	**P**	**12 11 04.8**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=148,slow=8.3,SNR=12						
SONM				LR	LR	12 36 36.0	
	comp=Z,553nm,18.7s,baz=134,slow=37						
PEA0B	**Petropavlovsk-**	**57.51**	**14**	*e*P	**P**	**12 11 06.8**	**0.0**
	comp=Z,22nm,1.2s						
PETK	**Petropavlovsk-**	**57.51**	**14**	P	**P**	**12 11 06.4**	**-0.5**
	comp=Z,2.9nm,0.7s,baz=161,slow=5.7,SNR=8.2						
PETK				LR	LR	12 39 10.4	
	comp=Z,104nm,18.0s,baz=195,slow=40						
PET	**Petropavlovsk**	**57.66**	**14**	*e*P	**P**	**12 11 11.5**	**+3.6**
PET				*e*S	**S**	**12 19 06.1**	**+2.0**
JIRN	**Jiri**	**58.39**	**305**	*e*P	**P**	**12 11 14.2**	**+0.2**
	comp=Z,46nm,0.7s						
GUN	**Gumba**	**58.74**	**305**	*e*P	**P**	**12 11 16.3**	**-0.1**
PKI	**Pulchoki**	**59.00**	**304**	*e*P	**P**	**12 11 18.7**	**+0.5**
	comp=Z,23nm,0.8s						
PKIN	**Phulchoki**	**59.02**	**304**	*e*P	**P**	**12 11 18.4**	**+0.2**
	comp=Z,15nm,0.7s						
KKN	**Kakani**	**59.19**	**304**	*e*P	**P**	**12 11 19.9**	**+0.5**
	comp=Z,59nm,0.9s						
DMN	**Daman**	**59.27**	**304**	*e*P	**P**	**12 11 20.7**	**+0.7**
	comp=Z,36nm,0.7s						
GKN	**Gorkha**	**59.80**	**304**	*e*P	**P**	**12 11 24.2**	**+0.7**
	comp=Z,60nm,0.8s						
ZAK	**Zakamensk**	**60.50**	**335**	*e*P	**P**	**12 11 27.0**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,197nm,1.2s						
KOLN	**Koldanda**	**60.57**	**304**	*e*P	**P**	**12 11 29.6**	**+0.7**
	comp=Z,37nm,0.8s						
DANN	**Dangsing**	**60.64**	**304**	*e*P	**P**	**12 11 30.0**	**+0.5**
	comp=Z,52nm,0.7s						
PYUN	**Piuthan**	**61.19**	**304**	*e*P	**P**	**12 11 33.7**	**+0.6**
	comp=Z,113nm,0.8s						
IRK	**Irkutsk**	**61.51**	**337**	*e*P	**P**	**12 11 34.7**	**+0.2**
IRK				pmax	pmax		
	comp=Z,48nm,2.0s						
HYB	**Hyderabad**	**62.19**	**291**	*i* P	**P**	**12 11 40.0**	**+0.3**
YAK	**Yakutsk**	**64.49**	**355**	*e*P	**P**	**12 11 53.8**	**-0.3**
	comp=Z,33nm,0.8s						
YAK	**Yakutsk**	**64.49**	**355**	*e*P	**P**	**12 11 53.5**	**-0.6**
YAK				*i* *PP	**pP**	**12 12 05.8**	**+1.8**
YAK				*e*		12 12 25.0	
YAK				*e*		12 14 15.9	
YAK				*e*PPP	PPP	12 15 46.5	
YAK				*e*S	**S**	**12 20 29.4**	**-1.4**
YAK				*e**SS	**sS**	**12 20 53.1**	**+5.9**
YAK				*e*		12 21 45.6	
YAK				*e*SS	**SS**	**12 24 39.2**	**-2.4**
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,64nm,3.7s						
YAK				pmax	pmax		
	comp=N,32nm,2.3s						
YAK				pmax	pmax		
	comp=E,36nm,3.2s						
YAK				smax	smax		
	comp=N,22nm,2.3s						
YAK				smax	smax		
	comp=E,31nm,2.7s						
WMQ	**Urumqi**	**64.52**	**322**	*e*P	**P**	**12 11 56.3**	**+1.5**
WMQ				pP	sP	12 12 07.0	-1.5
WMQ				sP	pP	12 12 11.6	+6.9
WMQ				pmax	pmax		
	comp=E,31nm,0.7s						
WMQ				pmax	pmax		
	comp=E,32nm,3.6s						
WMQ				LR	LR		
	comp=E,180nm,18.5s						
WMQ				LR	LR		
	comp=E,320nm,26.1s						
WMQ				LR	LR		
	comp=E,220nm,26.1s						
SEY	**Seymchan**	**65.89**	**7**	P	**P**	**12 12 03.3**	**+0.1**
	comp=E,3.5nm,0.7s,baz=211,slow=2.8,SNR=9.5						
CASY	**Casey**	**66.83**	**192**	*e*P	**P**	**12 12 09.6**	**+0.4**
	comp=E,52nm,0.8s						
DGZ	**Jazzator, Alta**	**67.79**	**327**	*c i*P	**P**	**12 12 16.3**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**69.30**	**322**	*e*P	**P**	**12 12 24.9**	**-0.1**
	comp=Z,15nm,0.9s						
MK31	**Makanchi Array**	**69.30**	**322**	*i* P	**P**	**12 12 25.3**	**+0.2**
MK31				pmax	pmax		
	comp=Z,23nm,1.0s						
MKAR	**Makanchi Array**	**69.30**	**322**	P	**P**	**12 12 25.4**	**+0.3**
	comp=Z,16nm,0.9s,baz=115,slow=8.1,SNR=43						
MKAR				LR	LR	12 44 25.1	
	comp=Z,96nm,21.1s,baz=104,slow=37						
MAKZ	**Makanchi**	**69.50**	**322**	*e*P	**P**	**12 12 26.3**	**0.0**
	comp=Z,24nm,0.8s						
MAKZ	**Makanchi**	**69.50**	**322**	*e*P	**P**	**12 12 26.3**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,24nm,0.8s						
PRZ	**Przheval'sk**	**69.98**	**317**	*e*P	**P**	**12 12 30.3**	**+0.7**
	comp=Z,32nm,1.2s						
PRZ	**Przheval'sk**	**69.98**	**317**	*e*P	**P**	**12 12 30.3**	**+0.7**
PRZ				pmax	pmax		
	comp=Z,32nm,1.2s						
KSH	**Kashi**	**70.61**	**313**	P	**P**	**12 12 35.8**	**+2.4**
KSH				pP	sP	12 12 47.3	+0.1
KSH				sP	PcP	12 12 50.8	-3.6
KSH				PcP	pP	12 12 57.3	+14
KSH				PP	**PP**	**12 15 14.3**	**+4.2**
KSH				S	**S**	**12 21 46.0**	**+0.6**
KSH				SKS	**SKSac**	**12 22 30.5**	**-2.9**
KSH				ScS	**SKKSac**	**12 22 33.3**	**-0.2**
KSH				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH				pmax	pmax		
	comp=Z,87nm,4.1s						
KSH				LR	LR		
	comp=Z,330nm,13.8s						
KSH				LR	LR		
	comp=Z,200nm,12.9s						
KSH				LR	LR		
	comp=Z,82nm,9.8s						
KDJ	**Kajisay**	**70.69**	**316**	*e*P	**P**	**12 12 34.0**	**+0.1**
	comp=Z,15nm,1.0s						
KDJ	**Kajisay**	**70.69**	**316**	*e*P	**P**	**12 12 34.0**	**+0.1**
KDJ				pmax	pmax		
	comp=Z,15nm,1.0s						
NIL	**Nilore**	**70.87**	**307**	*e*P	**P**	**12 12 35.0**	**0.0**
	comp=Z,17nm,0.7s						
NIL	**Nilore**	**70.87**	**307**	*e*P	**P**	**12 12 35.0**	**0.0**
NIL				pmax	pmax		
	comp=Z,17nm,0.7s						
NRN	**Naryn**	**71.26**	**315**	*e*P	**P**	**12 12 37.7**	**+0.1**
	comp=Z,8.8nm,1.1s						
NRN	**Naryn**	**71.26**	**315**	*e*P	**P**	**12 12 37.7**	**+0.1**
NRN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZAA0	**Zalesovo Array**	**71.44**	**330**	*e*P	**P**	**12 12 37.2**	**-0.7**
	comp=Z,7.9nm,0.7s						
ZALV	**Zalesovo Beam**	**71.44**	**330**	P	**P**	**12 12 37.1**	**-0.9**
	comp=Z,9.1nm,0.7s,baz=111,slow=6.3,SNR=19						
ZALV				LR	LR	12 44 14.1	
	comp=Z,175nm,20.5s,baz=70,slow=36						
TKM2	**Tokmak 2**	**72.06**	**317**	*i* P	**P**	**12 12 42.1**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,11nm,1.0s						
PPT	**Papeete**	**72.12**	**108**	LR	LR	12 41 10.0	
	comp=Z,153nm,21.5s,baz=269,slow=33						
PPT2	**Papeete2**	**72.13**	**108**	*e*S	**S**	**12 22 03.9**	**+0.3**
	comp=Z,89nm,27.0s						
PPT2	**Papeete2**	**72.13**	**108**	*e*LR	LR	12 34 55.5	
	comp=Z,569nm,25.0s						
TBI	**Tubuai**	**72.66**	**114**	*e*LR	LR	12 35 03.5	
	comp=Z,388nm,30.5s						
AAK	**Ala-Archa**	**72.73**	**316**	P	**P**	**12 12 46.7**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=173,slow=5.2,SNR=7.5						
AAK	**Ala-Archa**	**72.73**	**316**	*e*P	**P**	**12 12 46.4**	**+0.2**
	comp=Z,16nm,1.3s						
AAK	**Ala-Archa**	**72.73**	**316**	⇑*e*P	**P**	**12 12 47.0**	**+0.9**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BILL	**Bilibino**	**72.80**	**11**	*e*P	**P**	**12 12 46.1**	**+0.2**
	comp=Z,54nm,1.9s						
BILL	**Bilibino**	**72.80**	**11**	⇓*e*P	**P**	**12 12 46.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	**73.22**	**325**	*e*P	**P**	**12 12 48.5**	**-0.2**
	comp=Z,24nm,1.1s						
KURK	**Kurchatov**	**73.22**	**325**	*de*P	**P**	**12 12 48.4**	**-0.2**
KURK				pmax	pmax		
	comp=Z,19nm,1.3s						
KURBB	**Kurchatov Arra**	**73.24**	**325**	P	**P**	**12 12 48.7**	**0.0**
	comp=Z,14nm,1.0s,baz=115,slow=5.0,SNR=20						
ARSB	**Arslanbob**	**73.36**	**314**	*e*P	**P**	**12 12 50.2**	**+0.3**
	comp=Z,81nm,1.8s						
TIXI	**Tiksi**	**74.07**	**357**	P	**P**	**12 12 53.4**	**+0.2**
	comp=Z,6.5nm,0.6s,baz=182,slow=2.1,SNR=19						
TIXI	**Tiksi**	**74.07**	**357**	*e*P	**P**	**12 12 52.8**	**-0.4**
	comp=Z,7.4nm,0.6s						
TIXI	**Tiksi**	**74.07**	**357**	*de*P	**P**	**12 12 53.7**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,17nm,1.7s						
KBL	**Kabul**	**74.47**	**307**	*e*P	**P**	**12 12 56.5**	**-0.1**
	comp=Z,30nm,1.7s						
KBL	**Kabul**	**74.47**	**307**	*e*P	**P**	**12 12 56.6**	**-0.1**
KBL				pmax	pmax		
	comp=Z,30nm,1.7s						
GAR	**Garm**	**74.63**	**311**	*e*P	**P**	**12 12 57.2**	**-0.2**
	comp=Z,31nm,0.9s						
GAR	**Garm**	**74.63**	**311**	*e*P	**P**	**12 12 57.2**	**-0.2**
GAR				pmax	pmax		
	comp=Z,31nm,0.9s						
KK31	**Karatay Array**	**75.65**	**316**	*e*P	**P**	**12 13 03.2**	**+0.2**
	comp=Z,13nm,1.2s						
KK31	**Karatay Array**	**75.65**	**316**	*e*P	**P**	**12 13 03.2**	**+0.2**
KK31				pmax	pmax		
	comp=Z,13nm,1.2s						
SDPT	**Sand Point**	**75.90**	**31**	*e*P	**P**	**12 13 03.8**	**-0.3**
	comp=Z,40nm,0.7s						
VNDA	**Vanda**	**76.22**	**175**	P	**P**	**12 13 05.8**	**+0.2**
	comp=Z,17nm,0.8s,baz=320,slow=6.1,SNR=82						
VNDA				LR	LR	12 46 48.6	
	comp=Z,1µm,19.3s,baz=353,slow=36						
VNDA	**Vanda**	**76.22**	**175**	*e*P	**P**	**12 13 05.5**	**-0.1**
	comp=Z,20nm,0.8s						
VNDA	**Vanda**	**76.22**	**175**	*e*P	**P**	**12 13 05.5**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,20nm,0.8s						
SBA	**Scott Base**	**76.99**	**174**	*e*P	**P**	**12 13 10.5**	**+0.6**
	comp=Z,18nm,0.9s						
SBA	**Scott Base**	**76.99**	**174**	*e*P	**P**	**12 13 10.5**	**+0.6**
SBA				pmax	pmax		
	comp=Z,18nm,0.9s						
BVAR	**Borovoye Array**	**78.82**	**325**	P	**P**	**12 13 20.8**	**+0.3**
	comp=Z,12nm,0.6s,baz=111,slow=7.5,SNR=47						
BRVK	**Borovoye**	**78.89**	**325**	*e*P	**P**	**12 13 20.9**	**0.0**
	comp=Z,18nm,0.8s						
BRVK	**Borovoye**	**78.89**	**325**	*c i*P	**P**	**12 13 21.5**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,14nm,0.7s						
SVW2	**Sparrevohn**	**80.61**	**27**	*e*P	**P**	**12 13 29.9**	**-0.2**
	comp=Z,19nm,1.1s						
KDAK	**Kodiak Island**	**80.87**	**30**	*e*P	**P**	**12 13 31.9**	**+0.4**
	comp=Z,90nm,1.6s						
KDAK	**Kodiak Island**	**80.87**	**30**	*i* P	**P**	**12 13 32.1**	**+0.6**
TTA	**Tatalina**	**81.13**	**25**	*e*P	**P**	**12 13 33.3**	**+0.4**
	comp=Z,17nm,1.3s						
TTA	**Tatalina**	**81.13**	**25**	*e*P	**P**	**12 13 33.3**	**+0.4**
TTA				pmax	pmax		
	comp=Z,17nm,1.3s						
CNPM	**China Poot**	**82.09**	**29**	*e*P	**P**	**12 13 38.1**	**+0.1**
	comp=Z,104nm,1.6s						
MAW	**Mawson**	**82.42**	**202**	P	**P**	**12 13 40.1**	**+0.6**
	comp=Z,6.9nm,0.8s,baz=68,slow=4.9,SNR=13						
MAW				LR	LR	12 48 26.5	
	comp=Z,508nm,19.5s,baz=62,slow=34						
MAW	**Mawson**	**82.42**	**202**	*e*P	**P**	**12 13 39.9**	**+0.4**
	comp=Z,2.3nm,0.9s						
MAW	**Mawson**	**82.42**	**202**	P	**P**	**12 13 40.5**	**+1.0**
	baz=82,SNR=6.3						
MAW	**Mawson**	**82.42**	**202**	*e*P	**P**	**12 13 39.9**	**+0.4**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PPLA	**Purkeypile**	**82.75**	**26**	*e*P	**P**	**12 13 41.7**	**+0.2**
	comp=Z,51nm,1.7s						
RC01	**Rabbit Creek A**	**83.28**	**28**	*e*P	**P**	**12 13 43.9**	**-0.2**
	comp=Z,101nm,1.9s						
BPAW	**Bear Paw Mtn.**	**83.66**	**25**	*e*P	**P**	**12 13 46.1**	**+0.1**
	comp=Z,49nm,2.0s						
PMR	**Palmer**	**83.71**	**27**	*e*P	**P**	**12 13 46.0**	**-0.3**
	comp=Z,26nm,1.4s						
PMR	**Palmer**	**83.71**	**27**	*e*P	**P**	**12 13 46.0**	**-0.3**
PMR				pmax	pmax		
	comp=Z,26nm,1.4s						
GEYT	**Alibeck**	**83.78**	**308**	P	**P**	**12 13 48.5**	**+1.2**
	comp=Z,6.9nm,0.8s,baz=119,slow=1.9,SNR=12						
GEYT				LR	LR	12 53 50.2	
	comp=Z,115nm,20.5s,baz=25,slow=38						
GYA0B	**ALIBECK ARRAY**	**83.78**	**308**	*e*P	**P**	**12 13 47.4**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,12nm,0.9s						
KNK	Knik Glacier	83.97	28	*e*P	P	12 13 47.6	0.0
	comp=Z,33nm,1.2s						
AB31	Akbulak array	84.23	320	*i* P	P	12 13 49.3	+0.1
AB31				pmax	pmax		
	comp=Z,23nm,1.5s						
ABKAR	Akbulak array	84.23	320	*e*P	P	12 13 49.6	+0.3
	comp=Z,21nm,1.4s						
RND	Reindeer	84.35	26	*e*P	P	12 13 49.1	-0.5
	comp=Z,66nm,1.6s						
RND	Reindeer	84.35	26	*e*P	P	12 13 49.1	-0.5
RND				pmax	pmax		
	comp=Z,66nm,1.6s						
SCM	Sheep Creek Mo	84.60	27	*e*P	P	12 13 50.3	-0.6
	comp=Z,100nm,1.6s						
SCM	Sheep Creek Mo	84.60	27	*e*P	P	12 13 50.3	-0.6
SCM				pmax	pmax		
	comp=Z,100nm,1.6s						
DHY	Denali Highway	84.90	26	*e*P	P	12 13 52.7	+0.2
	comp=Z,18nm,1.0s						
COLD	Coldfoot	84.95	22	*e*P	P	12 13 53.3	+0.8
	comp=Z,2.7nm,0.8s						
WRH	Wood River Hil	84.97	25	*e*P	P	12 13 51.9	-0.8
	comp=Z,31nm,1.5s						
TCOL	CIGO, UAF Yank	85.18	24	P	P	12 13 52.7	-1.0
	baz=254						
COLA	College	85.18	24	*e*P	P	12 13 52.9	-0.8
	comp=Z,6.2nm,0.6s						
COLA	College	85.18	24	*de*P	P	12 13 53.2	-0.5
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SVE	Sverdlovsk	85.25	327	*e*P	P	12 13 55.9	+1.7
SVE				pmax	pmax		
	comp=Z,17nm,1.1s						
POKR	Poker Plat Res	85.42	24	P	P	12 13 54.5	-0.4
	baz=255						
ILAR	Eielson Array	85.55	24	P	P	12 13 54.0	-1.5
	comp=Z,4.0nm,0.6s,baz=261,slow=4.5,SNR=50						
ILAR				LR	LR	12 54 12.5	
	comp=Z,106nm,18.4s,baz=258,slow=37						
ILB	Eielson Array	85.55	24	*e*P	P	12 13 53.9	-1.7
	comp=Z,7.8nm,0.9s						
TOLK	Toolik Lake Re	85.61	20	*e*P	P	12 13 56.5	+0.6
	comp=Z,41nm,1.4s						
TOLK	Toolik Lake Re	85.61	20	P	P	12 13 56.9	+1.1
	baz=252						
ARU	Arti	86.30	327	*e*P	P	12 13 59.8	+0.3
	comp=Z,10nm,0.9s						
ARU	Arti	86.30	327	*d i*P	P	12 14 00.1	+0.7
ARU						12 17 15.9	
ARU				S	S	12 24 23.4	-9.2
ARU				SS	SS	12 30 06.2	-6.2
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CRQM	Cirque	86.32	29	*e*P	P	12 13 59.7	0.0
	comp=Z,12nm,0.7s						
FYU	Fort Yukon	86.66	23	*e*P	P	12 14 01.5	+0.6
	comp=Z,91nm,1.4s						
QSPA	South Pole Qui	87.66	180	P	P	12 14 05.7	-0.3
	comp=Z,46nm,1.0s,baz=322,slow=1.7,SNR=79						
QSPA				PP	PP	12 17 30.9	-0.3
	comp=Z,10nm,0.9s,baz=353,slow=3.0,SNR=7.1						
QSPA	South Pole Qui	87.66	180	*e*P	P	12 14 05.8	-0.3
	comp=Z,38nm,0.8s						
DAWY	Dawson	88.60	26	*e*P	P	12 14 11.2	+0.8
	comp=Z,26nm,1.0s						
HYT	Haines Junctio	89.06	29	*e*P	P	12 14 13.1	+0.3
	comp=Z,17nm,1.1s						
EPYK	Eagle Plains	89.99	24	P	P	12 14 17.3	+0.4
	baz=264						
SKAG	Skagway	90.02	31	*e*P	P	12 14 18.1	+1.1
	comp=Z,46nm,1.7s						
SYO	Syowa Base	91.06	201	⇑*e*P	P	12 14 20.4	-1.3
SYO	Syowa Base	91.06	201	⇓*e*pP	pP	12 14 32.0	-0.2
INK	Inuvik	91.37	22	*e*P	P	12 14 22.8	-0.4
	comp=Z,9.3nm,1.3s						
INK	Inuvik	91.37	22	*e*P	P	12 14 22.8	-0.4
INK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GNI	Garni	94.30	310	LR	LR	13 01 22.8	
	comp=Z,38nm,20.9s,baz=96,slow=38						
KBZ	Khabaz	95.59	314	LR	LR	13 03 04.0	
	comp=Z,47nm,19.9s,baz=86,slow=39						
KIV	Kislovodsk	95.73	314	*e*P	P	12 14 42.1	-1.9
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
D03D	Eldon	97.39	43	P	Pdif	12 14 53.0	+1.7
	baz=275						
O02D	Mt. Diablo Mer	98.16	50	P	Pdif	12 14 56.9	+1.8
	baz=274						
OBN	Obninsk	98.67	325	*e*P	P	12 14 56.6	-0.1
OBN				*e*		12 18 57.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANN	Anapa	99.43	315	*e*P	Pdif	12 14 55.2	-5.2
ANN				*e**PP	pP	12 15 07.9	-2.9
ANN				*e*S	SKSac	12 25 30.5	-6.2
ANN				*e*SS	SS	12 33 16.3	-4.6
ANN				pmax	pmax		
	comp=Z,36nm,1.1s						
YKA	Yellowknife Ar	99.80	27	P	Pdif	12 15 01.6	-0.1
	comp=Z,0.6nm,0.7s,baz=286,slow=4.9,SNR=6.8						
YKA				LR	LR	12 55 02.0	
	comp=Z,11nm,21.9s,baz=292,slow=32						
ARA0	ARCESS Array S	100.03	341	*e*Pdif	Pdif	12 15 02.1	-0.5
ARCES	ARCESS Array B	100.03	341	P	Pdif	12 15 02.1	-0.5
	comp=Z,3.9nm,0.9s,baz=67,slow=6.9,SNR=3.5						
NVAR	Mina Array Bea	101.79	51	P	Pdif	12 15 11.7	+0.3
	comp=Z,1.1nm,0.7s,baz=259,slow=6.4,SNR=4.1						
SNAA	Sanae	102.07	192	Pdiff	Pdif	12 15 12.1	+0.4
SNAA	Sanae	102.07	192	P	Pdif	12 15 12.1	+0.4
	comp=Z,2.1nm,1.1s,baz=123,slow=7.1,SNR=4.4						
VNA3	Neumayer Olymp	103.71	190	Pdiff	Pdif	12 15 19.0	0.0
OKC	Ostrava-Krasne	110.90	323	AMS	AMS	13 09 00.0	
	comp=Z,300nm,23.7s						
VYHS	Vyhne	110.98	322	*i* P	Pdif	12 15 58.1	+6.3
VYHS	Vyhne	110.98	322	*e*PDIF	Pdif	12 15 58.1	+6.3
OSTC	Ostas	111.75	324	AMS	AMS	13 11 30.0	
	comp=Z,200nm,16.5s						
DPC	Dobruska-Polom	111.77	324	AMS	AMS	13 11 50.0	
	comp=Z,300nm,18.8s						
CHVC	Chvalec	111.83	325	AMS	AMS	13 11 30.0	
	comp=Z,300nm,20.4s						
UPC	Upice	111.89	324	AMS	AMS	13 11 50.0	
	comp=Z,300nm,17.5s						
PVCC	Panska Ves	112.71	325	AMS	AMS	13 11 20.0	
	comp=Z,200nm,19.5s						
GOPC	GO Pecny, Ondr	112.85	324	AMS	AMS	13 12 30.0	
	comp=Z,300nm,21.3s						
PRU	Pruhonice	112.96	324	AMS	AMS	13 12 20.0	
	comp=Z,200nm,20.1s						
KHC	Kasperske Hory	113.90	324	AMS	AMS	13 13 10.0	
	comp=Z,200nm,20.9s						
GERES	GERESS Array B	113.95	324	PKP	PKiKP	12 19 56.2	-0.7
	comp=Z,0.6nm,0.5s,baz=108,slow=4.3,SNR=3.9						
TXAR	Lajitas Array	115.29	59	PKP	PKPdf	12 19 59.4	-0.6
	comp=Z,0.2nm,0.4s,baz=241,slow=2.3,SNR=2.9						
JCT	Junction City	118.28	56	*e*PKPdf	PKPdf	12 20 04.9	-0.8
JCT	Junction City	118.28	56	*e*PKIKP	PKPdf	12 20 04.9	-0.8
MIAR	Mount Ida	121.99	50	*e*PKPdf	PKPdf	12 20 12.3	-0.2
MIAR	Mount Ida	121.99	50	*e*PKIKP	PKPdf	12 20 12.4	-0.2
PLCA	Paso Flores	129.67	151	PKP	PKiKP	12 20 27.9	0.0
	comp=Z,4.4nm,1.0s,baz=276,slow=3.4,SNR=5.3						
PLCA	Paso Flores	129.67	151	*e*PKPdf	PKPdf	12 20 27.4	+0.2
PLCA	Paso Flores	129.67	151	*e*PKIKP	PKPdf	12 20 27.4	+0.2
TOA0	Torodi Ar. Sit	135.89	287	*e*PKPdf	PKPdf	12 20 39.8	+0.3
TORD	Torodi Ar. Bea	135.89	287	PKP	PKPdf	12 20 39.0	-0.6
	comp=Z,4.1nm,0.8s,baz=114,slow=3.7,SNR=17						
DBIC	Dimbokro	143.18	278	PKP	PKPdf	12 20 51.4	-1.4
	comp=Z,3.4nm,0.6s,baz=25,slow=3.6,SNR=3.4						
LVC	Limon Verde	143.60	134	*e*PKPdf	PKPbc	12 20 52.0	+0.9
LVC	Limon Verde	143.60	134	*e*PKIKP	PKPbc	12 20 52.0	+0.8
PB11	IPOC Station P	144.76	130	*e*PKPdf	PKPbc	12 20 54.6	0.0
MNMC	Minye Minye	145.17	129	*e*PKPbc	PKPdf	12 20 56.6	+0.1
GO01	Chusmiza	145.17	130	*e*PKPbc	PKPdf	12 20 56.9	+0.1
ROSC	El Rosal	147.19	85	PKPbc	PKPbc	12 21 01.8	-0.7
	comp=Z,22nm,0.8s,baz=69,slow=3.1,SNR=10.0						
ROSC	El Rosal	147.19	85	*e*PKPbc	PKPbc	12 21 02.3	-0.2
CPUP	Villa Florida	147.72	153	PKPbc	PKPbc	12 21 02.3	-0.8
	comp=Z,22nm,1.0s,baz=226,slow=2.6,SNR=22						
CPUP	Villa Florida	147.72	153	*e*PKPbc	PKPbc	12 21 03.1	+0.1
LPAZ	La Paz	147.90	126	PKPbc	PKPdf	12 21 02.2	+0.7
	comp=Z,17nm,1.0s,baz=291,slow=1.9,SNR=29						
LPAZ	La Paz	147.90	126	*e*PKPdf	PKPdf	12 21 01.2	-0.4
LPAZ	La Paz	147.90	126	*e*PKIKP	PKPdf	12 21 01.2	-0.4
SDV	Santo Domingo	150.33	76	*e*PKPdf	PKPdf	12 21 04.1	-0.9
CRPR	Cabo Rojo, PR	150.45	56	*e*PKPbc	PKPbc	12 21 08.8	-1.4
EMPR	Esperanza - Ma	150.70	55	*e*PKPbc	PKPbc	12 21 10.6	-0.1
OBIP	Obispado Ponce	150.85	56	*e*PKPdf	PKPdf	12 21 05.2	-0.3
OBIP				*e*PKPbc	PKPbc	12 21 10.9	-0.2
SJG	San Juan	151.19	55	*e*PKPbc	PKPbc	12 21 11.5	-0.4
SJG	San Juan	151.19	55	*e*PKIKP	PKPbc	12 21 11.5	-0.4

AZER **20** *12:13:41.8±1.0, 37°.47N×48°.55E, h10*^{km}*±9*^{km}*, ml3.1/4,*
Error ellipse: s-maj=23.4km s-min=6.0km az=99.0
TEH **20** *12:13:41.9, 37°.61N×48°.81E, h5*^{km}*, ML3.0*
THR **20** *12:13:43.8, 37°.53N×48°.74E, h18*^{km}*, ML3.0*
ISC 20 12:13:45.3±1.2**, 37°.53N**±0°.04×**48°.67E**±0°.07**, h29**^{km}±20^{km},
n21, σ1ˢ.01/23**, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	Sarab	0.84	291	*e*Pg	Pb	12 14 01.8	+0.3
ZNJK	Zanjan	0.86	179	Pg	Pn	12 14 00.2	-1.4
ASTR	Astara	1.03	6	P	Pn	12 14 02.4	-1.4
ASTR				S	Sb	12 14 17.8	+0.1
LRK	Lerik	1.14	347	P	Pn	12 14 05.2	-0.3
LRK				S	Sb	12 14 20.6	-0.3
LKRN	Lenkeran, Azer	1.18	4	P	Pn	12 14 05.8	0.0
LKRN				S	Sb	12 14 23.0	+1.1
GRMI	Germi	1.41	335	*e*Pg	Pb	12 14 10.6	-0.5
GRMI	Germi	1.41	335	AML	AML	12 14 31.6	
	comp=E,195nm,0.4s						
GRMI	Germi	1.41	335	Pg	Pb	12 14 10.6	-0.5
GRMI				S	Sb	12 14 29.1	+0.4
IBST	Bostanabad	1.42	277	*e*Pn	Pb	12 14 11.2	0.0
IBST				IAMB	IAmb	12 14 35.0	
	comp=Z,2µm,0.2s						
IHRS	Heris	1.50	302	*e*Pg	Pb	12 14 13.9	+1.2
IHRS				IAMB	IAmb	12 14 18.2	
	comp=Z,2µm,0.2s						
IGZV	Ghazvin	1.69	132	*e*Pn	Pn	12 14 12.6	-0.4
IGZV				IAMB	IAmb	12 14 37.5	
	comp=Z,2µm,0.3s						
GLBA	Clilabad	1.72	353	P	Pn	12 14 13.7	+0.4
GLBA				S	Sb	12 14 36.1	-1.3
QALM	Alamut, Qazvin	1.93	124	*e*Pn	Pn	12 14 17.5	+1.1
QALM				IAMB	IAmb	12 14 43.5	
	comp=Z,0.0nm,0.5s						
QABG	Abgarm-Qazvin	1.96	158	*e*Pn	Pb	12 14 19.4	-1.1
HSRG	Sareghieh	2.31	188	*e*Pn	Pb	12 14 25.3	-1.1
IRAZ	Razeghan	2.35	154	*e*Pn	Pn	12 14 24.2	+2.0
IRAZ				IAMB	IAmb	12 14 59.6	
	comp=Z,563nm,0.3s						
THKV	Tehran--Karaj	2.40	132	Sg	Sb	12 14 57.9	+0.8
ISHB	Shabestar	2.52	288	IAMB	IAmb	12 14 38.7	
	comp=Z,296nm,0.2s						
CHTH	Charan	2.56	129	*e*Pn	Pn	12 14 25.8	+0.8
CHTH	Charan	2.56	129	Pn	Pn	12 14 25.8	+0.8
IMRD	Marand	2.62	298	IAMB	IAmb	12 14 35.2	
	comp=Z,476nm,0.3s						

SOME **20** *12:18:36.7, 43°.35N×74°.55E, h5*^{km}
KRNET **20** *12:18:37.7±0.1, 43°.33N×74°.57E, h15*^{km}*, mb2.2*
NNC **20** *12:18:38.8±1.8, 43°.39N×74°.64E, h0*^{km}*, mb2.8, mpv2.8,*
Error ellipse: s-maj=14.9km s-min=4.8km az=38.0
ISC 20 12:18:37.3±1.0**, 43°.35N**±0°.02×**74°.58E**±0°.03**, h3**^{km}±10^{km},
n18, σ0ˢ.47/36**, 14C, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USP	Ospenovka	0.10	215	⇑*i*P	Pg	12 18 39.2	-0.1
	baz=19						
USP				⇑*i*S	Sg	12 18 41.3	+0.7
	baz=19						
SGDS	Sogindy	0.11	21	P	Pg	12 18 39.2	-0.4
	43nm,0.2s						
SGDS				S	Sg	12 18 40.9	-0.1
	171nm,0.3s						
CHMS	Chumysh	0.37	160	⇑*i*P	Pg	12 18 44.2	-0.3
	baz=57						
CHMS				⇑*i*S	Sg	12 18 49.6	+0.3
	baz=57						
AAK	Ala-Archa	0.71	185	⇑*i*P	Pg	12 18 50.9	-0.1
	baz=84						
AAK				⇑*i*S	Sg	12 19 01.3	+1.1
	baz=84						
EKS2	Erkin-Say	0.90	221	⇑*i*P	Pg	12 18 54.0	-0.6
	baz=21						
EKS2				⇑*i*S	Sg	12 19 06.7	+0.4
	baz=21						
KST	Kastek	1.06	106	*e*P	Pg	12 18 57.3	-0.3
	baz=5.0						
KST				*e*S	Sg	12 19 11.7	+0.4
	baz=5.0						
KST	Kastek	1.06	106	*e*P	Pg	12 18 57.3	-0.3
	1.8nm,0.3s						
KST				*e*S	Sg	12 19 11.7	+0.4
	3.4nm,0.4s						
UCH	Uchtor	1.12	182	⇑*i*P	Pg	12 18 58.1	-0.7
	baz=82						
UCH				⇑*i*S	Sg	12 19 14.0	+0.7
	baz=82						
KZA	Kyzart	1.36	158	⇑*i*P	Pn	12 19 02.4	-1.2
	baz=58						
KZA				⇑*i*S	Sb	12 19 21.8	+0.1
	baz=58						
KTBS	Karatobe	1.57	76	P	Pn	12 19 06.5	+0.4
	2.6nm,0.2s						
KTBS				S	Sn	12 19 27.1	+0.1
	21nm,0.5s						
KTBS	Karatobe	1.57	76	*e*P	Pn	12 19 06.3	+0.1
	baz=73						
KTBS				*e*S	Sn	12 19 27.2	+0.1
	baz=73						
KTBS	Karatobe	1.57	76	*e*P	Pn	12 19 06.3	+0.1
	2.6nm,0.2s						
KTBS				*e*S	Sn	12 19 27.2	+0.1
	21nm,0.5s						
BTLS	Baital	1.73	347	P	Pb	12 19 09.9	+0.1
	2.1nm,0.1s						
BTLS				S	Sg	12 19 33.0	0.0
	3.8nm,0.5s						
BTLS	Baital	1.73	347	*e*P	Pb	12 19 09.9	+0.1
	baz=48						
BTLS				*e*S	Sg	12 19 33.4	+0.3
	baz=48						
BTLS	Baital	1.73	347	*e*P	Pb	12 19 09.9	+0.1
	2.1nm,0.1s						
BTLS				*e*S	Sg	12 19 33.4	+0.3
	3.8nm,0.5s						
CHKK	Chushkaly	1.82	73	P	Pb	12 19 10.9	-0.4
	1.8nm,0.3s						
CHKK				S	Sb	12 19 35.1	+0.5
	8.4nm,0.2s						
CHKK	Chushkaly	1.82	73	*e*P	Pb	12 19 10.9	-0.4
	baz=73						
CHKK				⇑*i*S	Sb	12 19 35.1	+0.5
	baz=73						
CHKK	Chushkaly	1.82	73	*e*P	Pb	12 19 10.9	-0.4
	1.8nm,0.3s						
CHKK				⇑*i*S	Sb	12 19 35.1	+0.5
	8.9nm,0.3s						

NNC **20** *12:22:22.6±1.1, 39°.85N×76°.04E, h0*^{km}*, mb3.5, mpv3.2,*
Error ellipse: s-maj=7.8km s-min=7.3km az=129.0
KRNET **20** *12:22:23.0±0.1, 39°.86N×76°.26E, mb2.8*
ISC 20 12:22:19.7±3.1**, 39°.8N**±0°.1×**75°.99E**±0°.06**, h4**^{km}±17^{km}**, n20,**
σ1ˢ.13/32**, 21C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.67	0	⇓*e*P	Pg	12 22 52.7	+1.1
	baz=52						
NRN				⇓*i*S	Sg	12 23 14.5	+1.3
	baz=52						
KZA	Kyzart	2.38	347	⇑*e*P	Pg	12 23 05.3	+0.1
	baz=41						
KZA				⇑*i*S	Sg	12 23 36.1	+0.1
	baz=41						
ARLS	Aral	2.44	329	⇑*i*P	Pg	12 23 07.1	+0.6
	baz=25						
ARLS				⇑*i*S	Sg	12 23 39.5	+1.4
	baz=25						
ULHL	Ulahol	2.48	4	⇑*e*P	Pb	12 23 05.5	+0.6
	baz=60						
ULHL				⇑*i*S	Sb	12 23 36.5	+0.6
	baz=60						
KDJ	Kajisay	2.53	21	⇑*e*P	Pb	12 23 05.5	-0.2
	baz=17						
KDJ				⇑*i*S	Sb	12 23 36.5	-0.7
	baz=17						
UCH	Uchtor	2.70	336	⇑*i*P	Pg	12 23 10.3	-1.1
	baz=31						
UCH				⇑*i*S	Sg	12 23 45.0	-1.4
	baz=31						
BOOM	Boomskoye usch	2.72	359	⇑*i*P	Pb	12 23 09.3	+0.3
	baz=55						
BOOM				⇑*i*S	Sb	12 23 43.0	+0.3
	baz=55						
ARSB	Arslanbob	2.77	305	⇑*e*P	Pg	12 23 12.6	-0.1
	baz=1.0						
ARSB				⇑*i*S	Sg	12 23 48.8	+0.2
	baz=1.0						
KBK	Karagaybulak	2.99	345	⇑*e*P	Pb	12 23 14.0	+0.4
	baz=41						
KBK				⇑*i*S	Sb	12 23 50.7	+0.2
	baz=41						
AAK	Ala-Archa	3.08	339	⇑Pg	Pg	12 23 18.0	-0.7
	4.1nm,0.5s						
AAK				⇑Lg	Lg	12 23 59.4	
	9.1nm,0.6s						
AAK	Ala-Archa	3.08	339	⇓*i*P	Pb	12 23 15.2	+0.1
	baz=35						
AAK				⇓*i*S	Sb	12 23 53.3	+0.2
	baz=35						
TKM2	Tokmak 2	3.17	355	⇓Pg	Pb	12 23 18.4	+1.9
	2.3nm,0.4s						
TKM2				⇑Lg	Lg	12 24 00.9	
	5.6nm,0.5s						
TKM2	Tokmak 2	3.17	355	⇑*e*P	Pb	12 23 15.4	-1.1
	baz=51						
TKM2				⇑*i*S	Sb	12 23 53.7	-1.8
	baz=51						
KST	Kastek	3.27	360	Pg	Pb	12 23 20.2	+1.8
	6.0nm,0.4s						
KST				Lg	Lg	12 24 03.8	
	12nm,0.6s						
IZV	Izvestkoviy	3.30	8	Pg	Pb	12 23 20.9	+2.1
	3.1nm,0.3s						
IZV				Lg	Lg	12 24 04.9	
	7.5nm,0.5s						
EKS2	Erkin-Say	3.34	331	⇓*e*P	Pb	12 23 19.3	-0.1
	baz=27						
EKS2				⇓*i*S	Sb	12 24 00.2	-0.2
	baz=27						
MDOK	Medeo	3.49	13	Pg	Pg	12 23 25.2	-1.3
	4.3nm,0.5s						
MDOK				Lg	Lg	12 24 11.5	
	4.8nm,0.6s						
MRKS	Merke	3.63	326	Pg	Pg	12 23 28.2	-1.0
	2.7nm,0.4s						
MRKS				Lg	Lg	12 24 16.4	
	6.2nm,0.5s						
SGDS	Sogindy	3.82	345	Pg	Pg	12 23 31.0	-1.8
	1.6nm,0.3s						
SGDS				Lg	Lg	12 24 20.9	
	4.1nm,0.7s						
KUU	Kurty	4.13	4	Pg	Pg	12 23 37.0	-1.8
	2.2nm,0.4s						
KUU				Lg	Lg	12 24 30.5	
	13nm,0.7s						

ISK **20** *12:29:33.3, 40°.92N×30°.41E, h1*^{km}*, ML2.1/13*
ISCJB **20** *12:29:34.3±0.6, 40°.91N±0°.03×30°.43E±0°.04, h7*^{km}*±6*^{km}*,*
Error ellipse: s-maj=6.5km s-min=4.8km az=41.0
DDA **20** *12:29:34.4, 40°.88N×30°.43E, h7*^{km}*±2*^{km}*, ML2.5*
ISC 20 12:29:34.5±1.1**, 40°.91N**±0°.04×**30°.41E**±0°.03**, h14**^{km}±9^{km},
n20, σ0ˢ.38/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUV	Serdivan-Sakar	0.18	202	PG	Pg	12 29 38.1	-0.6
SPNC	Sapanca-Adapaz	0.23	200	PG	Pg	12 29 39.4	-0.2
SPNC				SG	Sg	12 29 43.8	+0.7
KAND	Kocaeli-Kandir	0.25	318	*i* P	Pg	12 29 40.5	+0.6
KAND				*i* S	Sb	12 29 45.1	+0.1
KAND				IAML_P			
	comp=Z,698nm,0.2s						
SAHE	Sakarya_HENDEK	0.34	99	*i* P	Pg	12 29 41.1	-0.3
GEYV	SAKARYA_Geyve	0.43	192	*i* P	Pg	12 29 42.9	-0.2
GEYV				*i* S	Sg	12 29 48.7	-0.3
GEYV				IAML_P			
	comp=Z,1µm,0.1s						
GULT	Gulveren	0.48	171	PG	Pg	12 29 43.9	-0.1
BTAS	Taskesti	0.56	127	*i* P	Pg	12 29 45.5	0.0
BTAS				IAML_P			
	comp=Z,2µm,0.1s						
HRT	Hereke	0.57	262	PG	Pg	12 29 45.4	-0.4
HRT				SG	Sb	12 29 54.3	-0.1
SILT	Sile	0.63	293	PG	Pg	12 29 46.3	-0.6
MDUB	Mudurnu	0.74	126	PG	Pg	12 29 49.1	+0.2
YIGI	Dzce	0.79	86	*i* P	Pg	12 29 49.5	-0.3
YIGI				IAML_P			
	comp=Z,622nm,0.1s						
YLV	Yalova	0.86	247	PG	Pg	12 29 51.2	0.0
SRCK	Saricakaya, Es	0.88	169	PG	Pb	12 29 51.2	-0.4
SRCK	Saricakaya, Es	0.88	169	*i* P	Pg	12 29 51.9	+0.3
SRCK				IAML_P			
	comp=Z,1µm,0.2s						
BORA	Eskisehir	1.03	178	*i* P	Pn	12 29 54.8	+0.3
BORA				IAML_P			
	comp=Z,1µm,0.3s						
KAVV	Kandilli-Istan	1.04	279	PG	Pb	12 29 53.8	-0.4
ISK	Istanbul-Kandi	1.04	279	PG	Pb	12 29 53.9	-0.3
ARMT	Armutlu	1.23	254	PN	Pb	12 29 57.6	+0.1
ULDT	Uludag	1.24	232	*i* P	Pg	12 29 58.6	+0.3
ULDT				IAML_P			
	comp=Z,317nm,0.1s						
TVSB	Tavsanli	1.63	207	PN	Pb	12 30 04.3	-0.1

GRAL **20** *12:30:00.5±0.2, 33°.79N×35°.77E, h3*^{km}*±4*^{km}*, MD2.8*
NSSC **20** *12:30:00.9±0.3, 33°.79N×35°.85E, h10*^{km}*±5*^{km}*, ML1.4*
ISC 20 12:29:58.9±1.0**, 33°.80N**±0°.04×**35°.75E**±0°.05**, h17**^{km}±8^{km},
n8, σ0ˢ.40/14**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.13	321	*e*P	Pg	12 30 03.2	+0.2
BHL				*e*S	Sg	12 30 05.2	-0.3
DQRL	Deir Qamar	0.18	237	*e*P	Pg	12 30 03.8	+0.3
DQRL				*e*S	Sg	12 30 06.4	-0.3
BEYL	Beirut	0.23	288	*e*P	Pb	12 30 04.8	+0.2
RCY	Rachaya	0.31	167	*e*P	Pg	12 30 05.8	+0.1
RCY				*e*S	Sg	12 30 09.8	-0.5
BRBR	Barbar	0.42	157	*e*P	Pb	12 30 08.7	+0.5
BRBR				*e*S	Sb	12 30 14.5	+0.2
BRBR				AML	AML	12 30 18.1	
	comp=N,32nm,0.6s						
BRBR				AML	AML	12 30 19.1	
	comp=E,51nm,0.4s						
HWQ	Hawqa	0.50	19	*e*P	Pb	12 30 09.7	+0.3
QASN	Qassioun	0.51	122	*e*P	Pb	12 30 10.1	+0.5
QASN				*e*S	Sg	12 30 15.9	-0.3
QASN				AML	AML	12 30 21.6	
	comp=N,35nm,0.5s						
QASN				AML	AML	12 30 22.1	
	comp=E,105nm,0.4s						
TOTH	TOTAH	0.72	128	*e*P	Pn	12 30 13.9	-0.5
TOTH				AML	AML	12 30 17.1	
	comp=N,7.9nm,0.3s						
TOTH				*e*S	Sb	12 30 22.4	-0.2
TOTH				AML	AML	12 30 35.0	
	comp=E,5.8nm,5.0s						

IDC 20 12:32:49.9±57.0**, 1°.00N**×**30°.54W, h0**^{km}**, mb3.9**/2**,**
mb1 4.1/2**, mb1mx3.5**/27**, mbtmp3.9**/2**, MS3.5**/5**, Ms1 3.5**/5**,**
ms1mx3.2/23**, Error ellipse: s-maj=2047.0km**
s-min=45.6km az=6.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	18.24	119	T	T	12 55 45.3	
	baz=298,slow=74,SNR=166						
H10N2	ASCENSION HYDR	18.25	119	T	T	12 55 46.8	
	baz=298,slow=74,SNR=256						
H10N1	ASCENSION HYDR	18.26	119	T	T	12 55 45.7	
	baz=298,slow=74,SNR=340						
BDFB	Brasilia	23.91	226	LR	LR	12 45 29.7	
	comp=Z,87nm,18.7s,baz=204,slow=32						

DBIC	Dimbokro	26.23	77	LR	LR	12 46 46.6	
	comp=Z,60nm,18.8s,baz=217,slow=32						
TORD	Torodi Ar. Bea	34.13	68	P	P	12 39 36.8	-0.1
	1.9nm,0.9s,baz=247,slow=10,SNR=6.1						
TORD				LR	LR	12 51 55.6	
	comp=Z,61nm,18.2s,baz=320,slow=34						
ROSC	El Rosal	43.88	276	LR	LR	12 57 32.1	
	comp=Z,92nm,18.4s,baz=65,slow=34						
NOA	NORSAR Array B	67.78	20	LR	LR	13 07 58.1	
	comp=Z,56nm,21.2s,baz=55,slow=31						
YKA	Yellowknife Ar	86.37	332	P	P	12 45 33.8	0.0
	0.6nm,0.8s,baz=93,slow=5.6,SNR=5.7						
ILAR	Eielson Array	100.06	337	P	Pdif	12 46 36.8	-0.3
	0.3nm,0.8s,baz=59,slow=3.5,SNR=2.8						

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*IDC **20** 12:46:36.8±6.4, 36°.12N×142°.20E, h0^{km}, mb3.8/3, mb1 3.7/4, mb1mx3.3/41, mbtmp3.6/4, ML2.5/1, Error ellipse: s-maj=135.0km s-min=54.2km az=167.0*

*JMA **20** 12:46:39.7±0.2, 36°.26N×142°.14E, h62^{km}, M3.0*

ISC 20 12:46:40.8±1.7**, 36°.26N**±0°.06×**142°.1E**±0°.1**, h23^{km}, n25, σ1^s.25**/21**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.16	242	P	Pn	12 47 00.6	-1.0
JHYU	Hitachinakayam	1.24	274	P	Pn	12 47 01.3	-1.3
JHO	Hitachi	1.29	286	P	Pn	12 47 02.0	-1.5
JIHU	Itakohorinouch	1.32	258	P	Pn	12 47 03.0	-0.8
ONAJ	Iwakimizuishiy	1.35	309	P	Pn	12 47 02.7	-1.6
JFK	Kawauchi	1.48	318	P	Pn	12 47 04.8	-1.3
BSO1	Boso 1	1.85	210	P	Pn	12 47 09.7	-1.0
JFT	Otama	1.90	312	P	Pn	12 47 11.4	-0.4
JMM	Marumori	1.92	327	P	Pn	12 47 10.8	-1.2
BSO3	Boso 3	1.96	222	P	Pn	12 47 11.5	-0.8
JAG	Ashikaga	2.15	275	P	Pn	12 47 14.3	-1.0
JFY	Yanaizu	2.25	301	P	Pn	12 47 16.7	+0.1
JRY	Ryogami san	2.61	266	P	Pn	12 47 20.6	-1.0
JOD2	Odawara 2	2.66	249	P	Pn	12 47 21.6	-0.6
MJAR	Matsushiro Arr	3.16	276	Pn	Pn	12 47 29.0	-0.1
	0.5nm,0.3s,baz=119,slow=8.3,SNR=56						
MJAR				Sn	Sn	12 48 08.6	+2.4
	0.2nm,0.3s,baz=96,slow=15,SNR=4.7						
MAT	Matsushiro	3.17	276	P	Pn	12 47 29.4	+0.2
MAT				eS	Sn	12 48 03.9	-2.4
H11N2	WAKE ISLAND Hy	27.27	120	T	T	13 21 16.0	
	baz=300,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	27.28	121	T	T	13 21 13.7	
	baz=300,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	27.29	120	T	T	13 21 18.6	
	baz=300,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	27.97	123	T	T	13 22 09.5	
	baz=302,slow=75,SNR=6.8						
H11S3	WAKE ISLAND Hy	27.97	123	T	T	13 21 50.7	
	baz=302,slow=75,SNR=8.1						
H11S2	WAKE ISLAND Hy	27.98	123	T	T	13 22 04.7	
	baz=302,slow=75,SNR=10.0						
SONM	Songino Array	28.69	305	P	P	12 52 36.5	+0.5
	0.2nm,0.3s,baz=109,slow=13,SNR=3.5						
MKAR	Makanchi Array	45.01	303	P	P	12 54 54.8	+0.4
	0.5nm,0.7s,baz=89,slow=13,SNR=4.2						
KURBB	Kurchatov Arra	46.92	309	P	P	12 55 10.4	+1.0
	0.4nm,0.6s,baz=92,slow=9.4,SNR=2.5						

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*NIED **20** 12:51:00, 36°.20N×141°.80E, h17^{km}, Mw3.9 Best double couple: $M_0$7.96000×10^{14} NP1:φ$_s$195.00000°, δ26.00000°, λ81.00000°. NP2:φ$_s$24.00000°, δ64.00000°, λ94.00000°.*

*IDC **20** 12:51:56.1±0.7, 36°.22N×141°.81E, h0^{km}, mb3.7/13, mb1 3.9/16, mb1mx3.7/43, mbtmp3.8/16, ML3.6/3, MS2.8/5, Ms1 2.8/5, ms1mx2.6/29, Error ellipse: s-maj=17.8km s-min=17.1km az=103.0*

*ISCJB **20** 12:51:57.5±0.5, 36°.23N±0°.04×141°.90E±0°.05, h23^{km}, mb3.7/13, Error ellipse: s-maj=6.4km s-min=5.5km az=41.8*

*JMA **20** 12:51:58.7±0.2, 36°.23N×141°.82E, h56^{km}, M3.6*

ISC 20 12:51:59.2±0.7**, 36°.20N**±0°.05×**141°.88E**±0°.07**, h23^{km}, n40, σ1^s.41**/39**, mb3.8**/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.97	239	P	Pb	12 52 15.9	-1.4
CHOJ				S	Sb	12 52 29.3	-0.3
JHYU	Hitachinakayam	1.05	278	P	Pn	12 52 16.8	-1.7
JIHU	Itakohorinouch	1.12	258	P	Pn	12 52 18.5	-1.0
JHO	Hitachi	1.13	291	P	Pn	12 52 17.4	-2.2
ONAJ	Iwakimizuishiy	1.25	316	P	Pn	12 52 19.3	-2.0
JFK	Kawauchi	1.42	325	P	Pn	12 52 21.9	-1.6
BSO1	Boso 1	1.71	206	P	Pn	12 52 26.9	-0.2
BSO3	Boso 3	1.79	219	P	Pn	12 52 28.0	-0.4
JFT	Otama	1.81	317	P	Pn	12 52 28.5	-0.4
JFT				S	Sn	12 52 49.7	-1.4
JMM	Marumori	1.87	333	P	Pn	12 52 28.7	-1.1
JAG	Ashikaga	1.97	277	P	Pn	12 52 30.0	-1.2
JKT	Katashina	2.19	286	P	Pn	12 52 33.7	-0.6
JRY	Ryogami san	2.42	266	P	Pn	12 52 36.2	-1.2
MJAR	Matsushiro Arr	2.98	278	Pn	Pn	12 52 44.6	-0.5
	2.6nm,0.3s,baz=121,slow=7.6,SNR=172						
MJAR				Sn	Sn	12 53 20.9	+0.7
	1.2nm,0.3s,baz=98,slow=18,SNR=7.1						
MJAR				LR	LR	12 53 58.4	
	comp=Z,201nm,18.1s,baz=80,slow=42						
MAT	Matsushiro	2.98	278	P	Pn	12 52 45.4	+0.3
MAT				S	Sn	12 53 20.5	+0.3
JHJ	Hachijo jima 2	3.53	210	Pn	Pn	12 52 52.4	-0.2
	18nm,0.3s,baz=328,slow=18,SNR=11						
JHJ				Sn	Sn	12 53 29.9	-3.7
	48nm,0.3s,baz=258,slow=22,SNR=10						
JHJ				LR	LR	12 53 58.8	
	comp=Z,29nm,20.5s,baz=292,slow=35						
ASAJ	Asahikawa	7.92	4	Pn	Pn	12 53 52.5	-0.4
	1.1nm,0.3s,baz=225,slow=11,SNR=11						
ASAJ				Sn	Sn	12 55 18.0	-3.8
	0.3nm,0.3s,baz=107,slow=19,SNR=3.4						
JNU	Nakatsue	9.57	254	LR	LR	12 58 02.4	
	comp=Z,66nm,18.1s,baz=52,slow=38						
USRK	Ussuriysk Ar.	10.99	320	Pn	Pn	12 54 36.6	+1.6
	0.1nm,0.3s,baz=140,slow=14,SNR=3.1						
USRK				LR	LR	12 58 31.2	
	comp=Z,89nm,21.9s,baz=118,slow=36						
KSRS	Korea Array	11.26	281	Pn	Pn	12 54 41.2	+2.6
	0.1nm,0.3s,baz=96,slow=12,SNR=4.8						
KSRS				LR	LR	12 58 43.0	
	comp=Z,76nm,20.4s,baz=100,slow=36						
H11N2	WAKE ISLAND Hy	27.40	120	T	T	13 26 27.1	
	baz=312,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	27.41	120	T	T	13 26 26.0	
	baz=312,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	27.42	120	T	T	13 26 24.3	
	baz=312,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	28.10	122	T	T	13 27 16.1	
	baz=314,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	28.10	122	T	T	13 27 24.0	
	baz=314,slow=75,SNR=16						
H11S2	WAKE ISLAND Hy	28.11	122	T	T	13 27 11.2	
	baz=314,slow=75,SNR=11						
SONM	Songino Array	28.57	305	P	P	12 57 52.9	-0.5
	1.8nm,0.6s,baz=99,slow=8.8,SNR=8.6						
ZALV	Zalesovo Beam	42.75	313	P	P	12 59 54.4	-0.1
	1.4nm,0.6s,baz=96,slow=9.1,SNR=5.6						
MKAR	Makanchi Array	44.88	303	P	P	13 00 11.4	-0.3
	1.0nm,0.6s,baz=84,slow=9.2,SNR=8.2						
KURBB	Kurchatov Arra	46.81	309	P	P	13 00 26.6	-0.3
	2.6nm,0.6s,baz=84,slow=7.9,SNR=24						
ILAR	Eielson Array	49.99	32	P	P	13 00 51.9	+0.7
	0.4nm,0.7s,baz=276,slow=6.8,SNR=4.5						
BVAR	Borovoye Array	51.41	313	P	P	13 01 02.0	-0.1
	1.1nm,1.0s,baz=51,slow=11,SNR=4.3						
INK	Inuvik	54.95	27	P	P	13 01 28.6	+0.8
	0.9nm,0.7s,baz=260,slow=6.1,SNR=2.6						
WRA	Warramunga Arr	56.30	189	P	P	13 01 37.8	-0.3
	0.4nm,0.5s,baz=1.8,slow=7.8,SNR=3.2						
ASAR	Alice Springs	60.02	188	P	P	13 02 04.9	+0.8
	0.3nm,0.7s,baz=220,slow=39,SNR=3.2						
FINES	FINESS Array B	69.72	333	P	P	13 03 06.0	-0.8
	0.6nm,0.5s,baz=72,slow=8.9,SNR=3.9						
PDAR	Pinedale Array	77.98	46	P	P	13 03 56.3	+0.5
	0.1nm,0.4s,baz=290,slow=3.5,SNR=2.6						
BRTR	Keskin Array B	79.68	312	P	P	13 04 06.7	+1.6
	0.3nm,0.4s,baz=23,slow=7.8,SNR=3.1						
TXAR	Lajitas Array	90.33	53	P	P	13 05 00.4	+1.7
	0.2nm,0.8s,baz=256,slow=2.7,SNR=2.7						
LPAZ	La Paz	146.77	61	PKPbc	PKPbc	13 11 40.7	+0.1
	0.5nm,0.5s,baz=343,slow=11,SNR=1.9						

MAN 20 12:55:07.3, 7°.28N×124°.86E, h11^{km}, mb4.2, ML3.0, MS2.7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.35	139	⇑eP	Pb	12 55 15.7	0.0
KCP				i S	Sb	12 55 39.0	+18
CTBH	Cotabato--PC H	0.61	265	⇓iP	Pg	12 55 19.4	+0.3
BUKP	Musuan	0.63	19	eP	Pb	12 55 20.1	-0.3
BUKP				eS	Sb	12 55 30.0	+0.7
SKMP	Bagumbayan, Su	0.81	202	eP	Pg	12 55 23.1	+0.1
SKMP				eS	Sb	12 55 34.7	+0.3
DDMP	Don Marcelino,	1.44	144	eP	Pg	12 55 35.2	+0.2
DDMP				eS	Sg	12 55 58.6	+4.8
DDMP	Don Marcelino,	1.44	144	eP	Pg	12 55 35.2	+0.2
DDMP				eS	Sg	12 55 58.6	+4.8
PAGZ	Pagadian	1.57	291	eP	Pn	12 55 35.2	+0.2
PAGZ				eS	Sb	12 55 56.2	0.0
PAGZ	Pagadian	1.57	291	eP	Pn	12 55 35.2	+0.2
PAGZ				eS	Sb	12 55 56.2	0.0

MAN 20 12:55:07.0, 7°.39N×124°.85E, h1^{km}, mb3.8, ML2.6, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	1.07	352	⇑eP	Pn	12 55 29.1	-0.1
CGP				eS	Sn	12 55 44.2	-0.5

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*MAN **20** 13:27:56.8, 9°.92N×125°.90E, h41^{km}, mb4.6, ML3.5, MS3.4*

*IDC **20** 13:27:56.5±2.9, 8°.97N×126°.39E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.6/24, mbtmp3.8/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/32, Error ellipse: s-maj=240.5km s-min=26.2km az=65.0*

ISC 20 13:27:50.3±3.1**, 9°.91N**±0°.05×**126°.16E**±0°.08**, h10^{km}**±22^{km}**, n24, σ2^s.03**/27**, mb3.8**/4**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	1.07	210	eP	Pn	13 28 13.8	+2.3
BUTP				eS	Sn	13 28 28.1	+1.6
PLP	Palo	1.71	317	⇑eP	Pb	13 28 21.3	-0.6
PLP				i S	Sb	13 28 42.3	-1.2
CGP	Cagayan de Oro	2.04	225	⇓eP	Pb	13 28 26.6	-1.0
CGP				eS	Sn	13 28 49.8	-0.7
LLP	Lapu-Lapu	2.20	281	eP	Pb	13 28 28.9	-1.4
LLP				eS	Sn	13 28 53.9	-0.5
BUKP	Musuan	2.29	208	eP	Pb	13 28 31.6	-0.2
BUKP				eS	Sb	13 28 59.9	-0.3
DMPH	Davao City--Mi	2.88	193	eP	Pb	13 28 41.0	-0.9
DMPH				eS	Sg	13 29 42.3	+19
MATI	Mati	2.94	178	eP	Pb	13 28 40.5	-2.4
MATI				eS	Sb	13 29 20.9	+1.9
KCP	Kidapawan	3.07	200	⇑iP	Pb	13 28 44.6	-0.5
KCP				i S	Sn	13 29 12.9	-2.9
DCPH	Dipolog City	3.07	245	⇑eP	Pn	13 28 41.5	+2.5
DCPH				eS	Sn	13 29 15.1	-0.7
CTBH	Cotabato--PC H	3.27	216	⇓iP	Pn	13 28 44.6	+2.9
PAGZ	Pagadian	3.42	234	eP	Pn	13 28 45.1	+1.3
PAGZ				eS	Sn	13 29 26.0	+1.4
SKMP	Bagumbayan, Su	3.73	206	eP	Pn	13 28 50.5	+2.5
SKMP				eS	Sn	13 29 31.1	-0.9
DDMP	Don Marcelino,	3.80	187	eP	Pn	13 28 53.0	+3.9
DDMP				eS	Sb	13 29 39.5	-4.3
MJAR	Matsushiro Arr	28.68	21	LR	LR	13 45 09.1	
	comp=Z,18nm,20.7s,baz=90,slow=35						
WRA	Warramunga Arr	30.73	165	P	P	13 34 04.7	-1.2
	1.0nm,0.6s,baz=348,slow=12,SNR=6.1						
ASAR	Alice Springs	34.22	167	P	P	13 34 35.8	-0.6
	0.5nm,0.3s,baz=352,slow=6.8,SNR=22						
H11S3	WAKE ISLAND Hy	40.13	73	T	T	14 18 43.1	
	baz=100,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	40.14	73	T	T	14 18 36.2	
	baz=100,slow=75,SNR=21						
H11S2	WAKE ISLAND Hy	40.14	73	T	T	14 18 34.7	
	baz=100,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	40.47	71	T	T	14 18 48.2	
	baz=264,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	40.48	71	T	T	14 18 47.5	
	baz=264,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	40.49	71	T	T	14 18 55.2	
	baz=264,slow=74,SNR=10						
STKA	Stephens Creek	44.09	161	P	P	13 35 59.2	+0.3
	1.9nm,0.7s,baz=337,slow=7.7,SNR=3.4						
MKAR	Makanchi Array	52.25	323	P	P	13 37 16.1	+14
	0.5nm,0.5s,baz=122,slow=8.7,SNR=4.9						

TRN 20 13:30:13.9, 15°.37N×60°.98W, h120^{km}, MD3.9, 1C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLPL	La Plaine	0.26	263	⇓eP	Pn	13 30 31.6	+0.9
DLPL				eS	Sn	13 30 44.6	+1.3
DSTT	Stowe	0.33	249	eP	Pn	13 30 33.4	+2.4
DBCT	Belle View Cho	0.36	255	eP	Pn	13 30 33.3	+2.2
DWS	Wesley	0.37	303	⇓eP	Pn	13 30 32.1	+1.0
DWS				eS	Sn	13 30 45.3	+1.1
DPMT	Pointe Michel	0.39	255	eP	Pn	13 30 33.6	+2.3
MDN	Morne-Daniel	0.40	263	eP	Pn	13 30 33.6	+2.3
MDVC	Dominica, Viel	0.47	301	eP	Pn	13 30 32.6	+0.9
MDVC				eS	Sn	13 30 46.7	+1.6
MDPO	Dominica; Chan	0.50	295	eP	Pn	13 30 33.2	+1.4
MDPO				eS	Sn	13 30 47.0	+1.7
BAMF	Morne Balai	0.57	196	eP	Pn	13 30 33.4	+1.0
CXM	Morne La Croix	0.58	198	eP	Pn	13 30 33.6	+1.0
PCM	Pelee Case Pet	0.59	202	eP	Pn	13 30 33.4	+0.9
GBMF	Grand Be	0.59	197	eP	Pn	13 30 33.5	+0.9
ILAM	Ilet Lapin Mar	0.60	170	eP	Pn	13 30 33.5	+0.9
PML	Morne Lenard	0.61	198	eP	Pn	13 30 33.7	+1.0
MAGL	Barre de l'ile	0.65	334	eP	Pn	13 30 34.1	+1.2
FDF	Fort de France	0.65	194	eP	Pn	13 30 34.0	+1.0
FDF				eS	Sn	13 30 48.5	+1.2
LPMF	Morne Lapointe	0.79	179	eP	Pn	13 30 34.4	+0.4
ZAM	Aeronautique	0.79	183	eP	Pn	13 30 34.5	+0.5
TDBA	Terre de Bas,	0.79	307	eP	Pn	13 30 35.2	+1.2
TRMF	Trois Ilets	0.83	185	eP	Pn	13 30 35.3	+0.9
BIM	Bigot	0.85	186	eP	Pn	13 30 35.8	+1.2
CBE	Ff, Capester	0.92	319	eP	Pn	13 30 36.3	+1.0
MPOM	Morne Pois Mar	0.92	172	eP	Pn	13 30 36.0	+0.7
ABD	La Joyeuse, An	1.20	336	eP	Pn	13 30 39.2	+1.1
SLBI	Saint Lucia, B	1.33	180	⇑iP	Pn	13 30 39.8	+0.3
SLB	Belfond	1.53	182	eP	Pn	13 30 43.8	+2.0
SLB				eS	Sn	13 31 03.5	+0.5
MCLT	Moule a Chique	1.65	179	eP	Pn	13 30 44.5	+1.4
MCLT				i S	Sn	13 31 07.0	+1.6
MLYT	Lee's Yard	1.78	319	eP	Pn	13 30 46.2	+1.5
MLYT				eS	Sn	13 31 09.4	+1.2
BPA	Boggy Peak	1.87	333	eP	Pn	13 30 46.8	+1.0
BPA				eS	Sn	13 31 10.6	+0.5
SFAN	Fancy Village	1.98	185	eP	Pn	13 30 47.2	+0.1
SSV	Crater Summit	2.04	186	eP	Pn	13 30 49.2	+1.3
SVV	Soufriere Volc	2.05	186	eP	Pn	13 30 49.5	+1.5
SVV				eS	Sn	13 31 15.5	+1.4
SVCV	St. Vincent, C	2.09	184	eP	Pn	13 30 49.2	+0.7
SVCV				eS	Sn	13 31 15.7	+0.7
SVB	Belmont	2.10	187	eP	Pn	13 30 49.1	+0.4
SVB				eS	Sn	13 31 16.9	+1.7
FCV	Fort Charlotte	2.21	187	eP	Pn	13 30 51.1	+1.1
FCV				eS	Sn	13 31 18.4	+0.7
NEV	Hard Times	2.33	319	eP	Pn	13 30 53.5	+1.9
NEV				eS	Sn	13 31 20.6	+0.2
NVBH	Bath Hotel, Ne	2.34	318	eP	Pn	13 30 54.1	+2.4
NVBH				eS	Sn	13 31 21.0	+0.3
NVRH	Round Hill, Ne	2.38	320	eP	Pn	13 30 54.2	+2.0
NVRH				eS	Sn	13 31 23.2	+1.6
SKTB	Turtle Beach	2.41	320	eP	Pn	13 30 53.9	+1.3
ANWB	Willy Bob	2.42	342	eP	Pn	13 30 52.5	-0.1
ANWB				eS	Sn	13 31 21.7	-0.6
BCHC	Barbados, Cave	2.58	149	eP	Pn	13 30 56.6	+1.9
SKI	Saint Kitts	2.58	320	eP	Pn	13 30 55.5	+0.7
SKI				eS	Sn	13 31 27.1	+0.9
BBGH	Gun Hill	2.61	148	eP	Pn	13 30 56.9	+1.7
BBGH				eS	Sn	13 31 27.9	+1.1
SKDB	Saint Kitts 2	2.67	319	eP	Pn	13 30 58.2	+2.2
SKDB				eS	Sn	13 31 29.5	+1.3
BBSP	Saint Philip	2.69	146	eP	Pn	13 30 58.7	+2.5
SEUS	St. Eustatius	2.85	318	eP	Pn	13 31 00.1	+1.8
SEUS				eS	Sn	13 31 32.9	+0.5
GRSS	Sisters	3.11	191	eP	Pn	13 31 02.8	+1.1
GRSS				eS	Sn	13 31 39.8	+1.3
SABA	Saba	3.12	316	eP	Pn	13 31 02.3	+0.5
SABA				eS	Sn	13 31 40.3	+1.6
GRHS	Sauteurs	3.19	192	eP	Pn	13 31 03.8	+1.1
GRHS				eS	Sn	13 31 41.0	+0.7
GRGR	Grenville	3.28	192	eP	Pn	13 31 04.4	+0.4
GRGR				eS	Sn	13 31 42.6	0.0
SMRT	St. Maarten	3.34	323	eP	Pn	13 31 05.8	+1.1
SMRT	St. Maarten	3.34	323	e	Pn	13 31 40.6	+36
TOSP	Speyside	4.07	174	eP	Pn	13 31 15.7	+1.3

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*ISK **20** 13:30:26.2, 39°.77N×30°.27E, h7^{km}, ML1.8/6*

*DDA **20** 13:30:27.1, 39°.85N×30°.31E, h7^{km}±2^{km}, ML2.5*

ISC 20 13:30:26.6±1.2**, 39°.79N**±0°.05×**30°.28E**±0°.04**, h9^{km}**±9^{km}**, n11, σ0^s.55**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORA	Eskisehir	0.16	57	i P	Pg	13 30 30.4	+0.2
BORA				i S	Sg	13 30 32.8	+0.1
BORA				IAML_P			
	comp=Z,24µm,0.1s						
SRCK	Saricakaya, Es	0.37	47	PG	Pg	13 30 34.1	+0.2
SRCK				SG	Sb	13 30 40.2	-1.0
SRCK	Saricakaya, Es	0.37	47	i P	Pg	13 30 34.1	+0.2
SRCK				i S	Sg	13 30 38.2	-0.6
SRCK				IAML_P			
	comp=Z,3µm,0.1s						
GULT	Gulveren	0.67	16	PG	Pb	13 30 40.0	-0.5
TVSB	Tavsanli	0.72	242	PG	Pg	13 30 40.1	-0.4
AUMIH	MIHALICIK	0.93	85	i P	Pn	13 30 46.8	+0.8
GDZ	Gediz	0.94	222	i P	Pn	13 30 46.6	+0.6
GDZ				IAML_P			
	comp=Z,590nm,0.2s						
ULDT	Uludag	0.94	292	i P	Pg	13 30 45.2	+0.3
ULDT				i S	Sn	13 31 00.3	+0.3
ULDT				IAML_P			
	comp=Z,686nm,0.2s						
SVRH	Sivrihisar-ESK	1.02	109	PG	Pg	13 30 46.2	-0.1
ARMT	Armutlu	1.33	306	PN	Pn	13 30 51.8	+0.4
KIZT	Kizilcal	1.54	126	PN	Pn	13 30 54.9	+0.5

WEL 20 13:38:45.1, 38°S±11°×**18°0W**±°**, h33^{km}, M3.2**/25**, ML3.5**/20**, MLv3.2**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=0.8, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.64	283	P	Pn	13 39 11.4	-0.2
PUZ	Puketiti	1.72	274	P	Pn	13 39 13.2	+0.4
PUZ				S	Sn	13 39 33.5	0.0
CNGZ	Carnagh Statio	1.77	261	P	Pn	13 39 14.4	+1.0
MXZ	Matakaoa Point	1.80	291	P	Pn	13 39 13.6	-0.3
MXZ				S	Sn	13 39 34.5	-1.0
PKGZ	Pakihiroa	1.88	279	P	Pn	13 39 15.3	+0.3
PKGZ				S	Sn	13 39 37.8	+0.1
TWGZ	Tauwhareparae	1.93	270	P	Pn	13 39 16.8	+1.2
TWGZ				S	Sn	13 39 40.3	+1.5
TKGZ	Te Karaka	2.04	263	P	Pn	13 39 17.9	+0.8
TKGZ				S	Sn	13 39 42.4	+1.0
PRGZ	Paritu Road	2.11	250	P	Pn	13 39 19.9	+1.7
HAZ	Te Kaha	2.14	282	P	Pn	13 39 18.9	+0.4
MHGZ	Mahia Peninsul	2.18	244	P	Pn	13 39 20.6	+1.4
RUGZ	Raukumara Rang	2.18	276	P	Pn	13 39 19.4	+0.1
MWZ	Matawai	2.28	266	P	Pn	13 39 21.3	+0.8
KNZ	Kokohu	2.30	249	P	Pn	13 39 22.3	+1.6
RAGZ	Rawiri	2.38	262	P	Pn	13 39 22.7	+0.7
URZ	Urewera	2.61	268	P	Pn	13 39 26.6	+1.6
WHHZ	Waihua	2.64	250	P	Pn	13 39 27.2	+1.7
RAHZ	Arahi	2.71	254	P	Pn	13 39 28.1	+1.7
RTZ	Ruatahuna	2.74	261	P	Pn	13 39 27.8	+1.0
MUGZ	Murupara	2.89	264	P	Pn	13 39 30.1	+1.3
MARZ	Manawahe	2.97	273	P	Pn	13 39 31.0	+1.1
RRRZ	Republican Roa	3.08	267	P	Pn	13 39 32.6	+1.1
TARZ	Mount Tarawera	3.09	268	P	Pn	13 39 33.0	+1.3
BKZ	Black Stump Fm	3.22	252	P	Pn	13 39 34.8	+1.3
KRHZ	Kereru	3.47	244	P	Pn	13 39 38.3	+1.4
BHHZ	Black Hill Sta	3.64	248	P	Pn	13 39 40.3	+1.1
PNHZ	Pukenui	3.70	241	P	Pn	13 39 41.5	+1.5
MOVZ	Moawhango	3.84	251	P	Pn	13 39 43.3	+1.4
TUVZ	Tukino	3.88	253	P	Pn	13 39 44.1	+1.6
NGZ	Ngauruhoe	3.90	254	P	Pn	13 39 43.8	+1.0
DVHZ	Dannevirke	3.91	237	P	Pn	13 39 43.8	+1.0
WHVZ	Whangaehu Hut	3.93	253	P	Pn	13 39 43.4	0.0
BFZ	Birch Farm	4.07	231	P	Pn	13 39 45.0	0.0
PRWZ	Pori Road	4.17	235	P	Pn	13 39 47.4	+1.0
HIZ	Hauiti	4.39	264	P	Pn	13 39 50.7	+1.3

MAN 20 13:49:56.9, 7°.39N×124°.76E, h55^{km}, mb4.1, ML2.8, MS2.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.49	139	⇓iP	Pn	13 50 09.7	+1.2
KCP				i S	Sn	13 50 35.7	+19
CTBH	Cotabato--PC H	0.54	252	⇑iP	Pn	13 50 10.2	+1.3
CTBH				i S	Sn	13 50 18.3	+0.7

WEL 20 13:52:07.6±1.5**, 32°S**±17°×**18°0W**±2°8**, h404^{km}**±30^{km}**, M3.8**/6**, mB4.1**/4**, MLv4.0**/6**, Mw(mB)3.2**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=104.4, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.80	196	P	P	13 53 38.2	+0.5
WMGZ	Waiomatatini S	6.02	194	P	P	13 53 41.1	+1.0
HAZ	Te Kaha	6.12	199	P	P	13 53 40.7	-0.4
HAZ				S	S	13 54 57.7	-0.3
PKGZ	Pakihiroa	6.16	196	P	P	13 53 42.0	+0.3
PKGZ				S	S	13 55 00.6	+1.5
PUZ	Puketiti	6.30	195	P	P	13 53 42.4	-0.8
WCZ	Waipu Caves	6.31	230	P	P	13 53 43.9	+0.6
RUGZ	Raukumara Rang	6.34	199	P	P	13 53 43.0	-0.7
MWZ	Matawai	6.73	199	P	P	13 53 49.0	+0.3
MWZ				S	S	13 55 10.3	-0.1
URZ	Urewera	6.78	202	P	P	13 53 47.9	-1.4
URZ				S	S	13 55 11.1	-0.2
MUGZ	Murupara	7.09	203	P	P	13 53 52.2	-0.5
ARHZ	Aropaoanui	7.74	199	P	P	13 53 59.9	0.0
OTVZ	Oturere	8.09	206	P	P	13 54 04.2	+0.3
BHHZ	Black Hill Sta	8.24	203	P	P	13 54 05.6	+0.2
KAHZ	Kahuranaki	8.27	198	P	P	13 54 06.3	+0.5
KRHZ	Kereru	8.28	201	P	P	13 54 04.7	-1.1
PXZ	Pawanui	8.49	198	P	P	13 54 07.8	-0.4
OGWZ	Otaki Gorge	9.73	204	P	P	13 54 21.8	-0.1

UCR 20 13:54:26.0±1.6**, 9°.42N×84°.36W, h22^{km}**±8^{km}**, MD3.7, 7C-4D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	La Lucha 2	0.48	47	eP	Pb	13 54 36.6	+0.7
LCR2				eS	Sb	13 54 43.9	+1.3
SJS	Escuela Geolog	0.60	30	eP	Pn	13 54 39.5	+0.2
HDC	Heredia	0.63	23	⇑iP	Pb	13 54 39.0	+0.5
HDC				eS	Sb	13 54 47.7	+0.8
HDC	Heredia	0.63	23	eP	Pb	13 54 38.8	+0.3
SRA1	San Ramn	0.67	350	eP	Pb	13 54 39.1	-0.1
CVTR	Volcan Turrial	0.84	45	⇓iP	Pb	13 54 42.1	-0.1
CVTR				eS	Sb	13 54 53.5	+0.2
CVTR	Volcan Turrial	0.84	45	eP	Pb	13 54 42.1	-0.1
CVTR	Volcan Turrial	0.84	45	⇓iP	Pb	13 54 42.2	0.0
CVTR				eS	Sb	13 54 53.5	+0.2
JTS	Las Juntas de	1.05	326	eP	Pn	13 54 44.4	-1.0
ARE1	Arenal 1	1.09	341	eS	Sb	13 54 58.8	-1.4
ARE1	Arenal 1	1.09	341	eP	Pn	13 54 46.1	+0.1
ARE1	Arenal 1	1.09	341	⇑iP	Pn	13 54 46.2	+0.1
ARE1				i P	Pb	13 54 46.5	+0.2
DRK0	Durika	1.11	98	⇓iP	Pn	13 54 46.4	0.0
DRK0				eS	Sb	13 55 00.9	+0.2
DRK0	Durika	1.11	98	eP	Pn	13 54 46.4	0.0
DRK0	Durika	1.11	98	⇓iP	Pn	13 54 46.4	0.0
DRK0				eS	Sb	13 55 00.8	0.0
CEDE	Laguna Cedeo	1.11	342	⇑iP	Pb	13 54 46.8	+0.1

CEDE	Laguna Cedeo	1.11	342	eP	Pb	13 54 46.6	-0.1
CEDE	Laguna Cedeo	1.11	342	⇑iP	Pb	13 54 46.5	-0.1
CEDE				eS	Sn	13 55 01.0	-0.1
PLVR	Palo Verde	1.34	313	eP	Pn	13 54 49.1	-0.5
MESS	Mesas	1.55	328	eP	Pn	13 54 52.3	-0.1
BUEV	Buena Vista	1.72	323	eP	Pn	13 54 55.2	+0.6
BUEV	Buena Vista	1.72	323	eP	Pb	13 54 56.0	-0.9
BUEV	Buena Vista	1.72	323	eP	Pn	13 54 54.4	-0.3
BUEV				eS	Sn	13 55 15.0	-1.0
GB1A	Borinquen Arri	1.73	324	eP	Pn	13 54 54.9	0.0
GB1A				eS	Sn	13 55 15.5	-0.8
GB1A	Borinquen Arri	1.73	324	eP	Pb	13 54 56.1	-1.0
BRU2	Volcan	1.76	110	eP	Pn	13 54 54.5	-0.8
BRU2	Volcan	1.76	110	eP	Pn	13 54 56.2	+0.9
BRU2	Volcan	1.76	110	eP	Pn	13 54 54.8	-0.6
ACON	Acoyapa	2.66	343	⇑iP	Pn	13 55 07.2	-0.3
ACON	Acoyapa	2.66	343	eP	Pn	13 55 07.2	-0.4
ACON	Acoyapa	2.66	343	⇑iP	Pn	13 55 07.2	-0.4
ESPN	Las Esperanzas	2.76	1	⇑iP	Pn	13 55 08.6	-0.4

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*ISCJB **20** 14:07:28.7±1.0,37°.04N±0°.08×39°.24E±0°.04,h9^{km},Error ellipse: s-maj=12.2km s-min=4.6km az=4.2*

*DDA **20** 14:07:28.6,37°.01N×39°.16E,h6^{km}±1^{km},ML2.8*

*ISK **20** 14:07:28.1,37°.06N×39°.24E,h5^{km},ML2.5/7*

ISC 20 14:07:28.3±1.4,37°.01N±0°.09×39°.24E±0°.04,h9^{km},n12,σ0^{s}.61/15,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANL	SANLIURFA_Merk	0.26	309	i P	Pg	14 07 33.1	-0.5
SANL				i S	Sg	14 07 37.4	+0.2
SANL				IAML_P			
	comp=Z,8µm,0.2s						
URFA	Urfa	0.55	322	PG	Pg	14 07 38.3	-0.7
URFA				SG	Sg	14 07 45.9	-0.3
MAZI	Mazidag	1.06	64	PG	Pg	14 07 48.4	-0.3
MAZI				SG	Sb	14 08 03.5	+0.5
DIYA	Diyarbakir	1.15	37	i P	Pn	14 07 51.9	+1.2
DYBB	Diyarbakir	1.18	37	PN	Pb	14 07 50.4	-0.6
MARD	Mardin	1.27	75	i P	Pn	14 07 52.0	-0.2
SVRC	Sivrice-ELAZID	1.37	2	PN	Pn	14 07 53.8	0.0
GZT	Gaziantep	1.39	285	i P	Pb	14 07 54.5	+0.1
GZT				IAML_P			
	comp=Z,526nm,0.2s						
ELZG	Elazig	1.50	352	i P	Pb	14 07 56.6	+0.1
ELZG				IAML_P			
	comp=Z,785nm,0.2s						
GAZ	Gaziantep	1.63	276	PN	Pb	14 07 58.2	-0.4
SVAN	Silvan-Diyarba	1.93	53	PN	Pn	14 08 02.0	+0.7
KMRS	Kahramanmaras	1.94	286	PN	Pn	14 08 02.2	+0.8

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*IDC **20** 14:07:55.6±0.9,35°.92N×68°.78E,h0^{km},mb3.8/11,mb1 3.9/17,mb1mx3.7/50,mbtmp3.8/17,ML3.9/5,MS2.9/2,Ms1 2.9/2,ms1mx2.3/36,Error ellipse: s-maj=19.3km s-min=16.3km az=131.0*

*ISCJB **20** 14:07:59.4±0.3,36°.19N±0°.03×68°.56E±0°.04,h35^{km},mb3.8/14,MS2.9/1,Error ellipse: s-maj=5.0km s-min=4.5km az=149.6*

*NEIC **20** 14:08:00.1±3.0,36°.09N×68°.53E,h25^{km}±6^{km},mb4.0/6,Error ellipse: s-maj=11.5km s-min=7.8km az=92.0*

*NNC **20** 14:08:01.9±8.7,36°.04N×68°.75E,h108^{km}±171^{km},mb3.6,mpv4.0,Error ellipse: s-maj=71.1km s-min=58.1km az=158.0*

ISC 20 14:08:01.3±0.6,36°.14N±0°.06×68°.56E±0°.05,h35^{km},n58,σ2^{s}.00/64,mb3.7/14,7C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.64	166	ePn	Pn	14 08 27.8	-0.1
CHGR	Chuyangaron	2.56	11	ePn	Pn	14 08 52.4	+12
GAR	Garm	3.18	26	ePn	Pn	14 08 50.3	+1.3
CEP	Cherat	3.59	129	P	Pn	14 08 57.0	+2.4
CEP				S	Sn	14 09 42.0	+6.1
THW	Thamme Wali	4.25	141	P	Pn	14 09 05.1	+1.5
BTK	Batken	4.30	24	ePn	Pn	14 09 06.6	+2.3
NIL	Nilore	4.59	121	ePn	Pn	14 09 10.4	+2.2
CHCP	Chirah Chowk	4.59	121	P	Pn	14 09 10.2	+1.9
ARSB	Arslanbob	6.23	32	ePn	Pn	14 09 31.4	+0.6
KK31	Karatay Array	7.12	12	ePn	Pn	14 09 44.2	+1.2
KK31	Karatay Array	7.12	12	⇑P	Pn	14 09 44.3	+1.3
	0.6nm,0.2s,baz=192,slow=14,SNR=26						
KK31				⇓S	Sn	14 11 02.6	0.0
	10nm,0.5s,baz=187,slow=24						
KKAR	Karatay Array	7.12	12	ePn	Pn	14 09 44.2	+1.2
NRN	Naryn	7.86	45	ePn	Pn	14 09 52.7	-0.7
AAK	Ala-Archa	7.96	33	Pn	Pn	14 09 55.4	+0.9
	4.2nm,0.3s,baz=198,slow=10,SNR=18						
AAK				Sn	Sn	14 11 25.5	+2.1
	0.8nm,0.3s,baz=110,slow=23,SNR=6.3						
AAK	Ala-Archa	7.96	33	ePn	Pn	14 09 54.7	+0.2
AAK	Ala-Archa	7.96	33	⇑P	Pn	14 09 55.2	+0.6
	12nm,0.7s						
AAK				⇑S	Sn	14 11 26.0	+2.7
	17nm,0.9s						
GEYT	Alibeck	8.54	285	Pn	Pn	14 10 02.2	-0.2
	1.5nm,0.3s,baz=122,slow=8.1,SNR=16						
GEYT				Sn	Sn	14 11 36.4	-1.2
	1.3nm,0.3s,baz=92,slow=13,SNR=5.3						
GEYT				LR	LR	14 14 20.2	
	comp=Z,67nm,19.8s,baz=210,slow=44						
GYA0B	ALIBECK ARRAY	8.54	285	ePn	Pn	14 10 02.2	-0.3
GYA0B				eSn	Sn	14 11 40.5	+3.0
TKM2	Tokmak 2	8.69	37	⇑P	Pn	14 10 04.3	-0.4
	3.7nm,0.4s						
TKM2				⇑S	Sn	14 11 42.7	+1.2
	8.1nm,0.7s						
KDJ	Kajisay	8.98	46	ePn	Pn	14 10 08.7	0.0
AB31	Akbulak array	14.55	337	⇑P	Pn	14 11 22.3	-2.2
	2.8nm,0.5s,baz=152,slow=12,SNR=63						
ABKAR	Akbulak array	14.55	337	ePn	Pn	14 11 22.9	-1.6
MK31	Makanchi Array	14.79	40	ePn	Pn	14 11 24.3	-3.5
MK32	Makanchi Array	14.79	40	ePn	Pn	14 11 25.9	-1.9
MKAR	Makanchi Array	14.79	40	Pn	Pn	14 11 25.9	-1.9
	0.3nm,0.3s,baz=230,slow=13,SNR=18						
GKN	Gorkha	15.85	116	eP	Pn	14 11 42.3	+0.4
KURBB	Kurchatov Arra	16.17	23	Pn	Pn	14 11 41.8	-4.0
	baz=218,slow=12,SNR=1.6						
AKTO	Aktyubinsk	16.20	335	Pn	Pn	14 11 45.0	-1.0
	0.4nm,0.3s,baz=140,slow=12,SNR=6.0						
AKTO	Aktyubinsk	16.20	335	⇑P	Pn	14 11 46.2	+0.1
	5.1nm,1.1s						
DMN	Daman	16.41	117	eP	Pn	14 11 48.0	-1.2
	12nm,0.6s						
KKN	Kakani	16.44	116	eP	Pn	14 11 47.5	-2.0
	21nm,0.5s						
PKIN	Phulchoki	16.64	116	eP	Pn	14 11 49.6	-2.5
	18nm,0.6s						
PKI	Pulchoki	16.65	116	eP	Pn	14 11 49.6	-2.8
	22nm,0.6s						
BVAR	Borovoye Array	16.94	4	Pn	Pn	14 11 53.4	-2.0
	0.4nm,0.3s,baz=170,slow=13,SNR=7.9						
BRVK	Borovoye	16.96	4	ePn	Pn	14 11 53.5	-2.3
	2.8nm,0.9s						
JIRN	Jiri	17.18	115	eP	Pn	14 11 54.1	-4.8
	36nm,0.5s						
ZAA0	Zalesovo Array	21.11	27	eP	P	14 12 42.1	-0.6
	5.5nm,0.6s						
ZALV	Zalesovo Beam	21.11	27	P	P	14 12 41.9	-0.7
	6.9nm,0.6s,baz=217,slow=10,SNR=22						
ZAA1	Zalesovo Array	21.11	27	eP	P	14 12 41.9	-0.8
ARU	Arti	21.40	345	P	P	14 12 45.9	+0.2
	1.3nm,0.7s,baz=178,slow=12,SNR=5.5						
ULN	Ulaanbaatar	30.61	55	eP	P	14 14 09.1	-3.0
	3.0nm,0.6s						
FIA0	FINESS Array S	36.70	327	eP	P	14 15 07.7	+3.1
FINES	FINESS Array B	36.70	327	P	P	14 15 07.7	+3.1
	2.2nm,0.9s,baz=93,slow=12,SNR=3.0						
ARA0	ARCESS Array S	40.74	338	eP	P	14 15 40.9	+2.4
ARCES	ARCESS Array B	40.74	338	P	P	14 15 40.9	+2.4
	0.9nm,0.7s,baz=128,slow=10,SNR=3.3						
NB200	NORSAR Array S	43.49	323	eP	P	14 16 02.2	+1.3
NOA	NORSAR Array B	43.49	323	P	P	14 16 02.2	+1.3
	0.3nm,0.6s,baz=98,slow=7.8,SNR=2.5						
NOA				LR	LR	14 37 29.3	
	comp=Z,16nm,20.4s,baz=40,slow=40						
TIXI	Tiksi	46.85	22	P	P	14 16 27.0	-0.4
	2.1nm,0.4s,baz=274,slow=9.1,SNR=5.5						
TOA1	Torodi Ar. Sit	63.73	267	eP	P	14 18 30.1	+0.3
TORD	Torodi Ar. Bea	63.73	267	P	P	14 18 30.1	+0.3
	0.6nm,0.8s,baz=53,slow=5.6,SNR=3.3						
INK	Inuvik	74.57	8	P	P	14 19 36.8	+0.7
	0.4nm,0.5s,baz=346,slow=4.2,SNR=2.7						
INK	Inuvik	74.57	8	eP	P	14 19 36.8	+0.7
	1.0nm,1.0s						
YKA	Yellowknife Ar	81.68	1	P	P	14 20 17.0	+1.4
	0.3nm,0.6s,baz=352,slow=5.3,SNR=4.4						
YKB5	Yellowknife Ar	81.68	1	eP	P	14 20 17.1	+1.5
WRA	Warramunga Arr	83.49	120	P	P	14 20 24.5	-1.2
	0.3nm,0.6s,baz=298,slow=4.9,SNR=2.9						
WR1	Warramunga Arr	83.49	120	eP	P	14 20 24.5	-1.2
AS31	Alice Springs	85.69	123	eP	P	14 20 35.2	-1.5
	0.7nm,0.8s						
ASAR	Alice Springs	85.69	123	P	P	14 20 35.2	-1.5
	0.1nm,0.3s,baz=313,slow=4.6,SNR=3.6						

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*ISCJB **20** 14:09:43.8±1.6,14°.7N±0°.1×92°.4W±0°.1,h88^{km}±12^{km},Error ellipse: s-maj=22.6km s-min=7.7km az=43.5*

*MEX **20** 14:09:44.0±0.8,14°.61N×92°.31W,h93^{km}±7^{km},MD3.7*

*GCG **20** 14:09:44.7±0.3,14°.90N×92°.29W,h79^{km}±8^{km},MD3.9*

ISC 20 14:09:45.0±2.4,14°.7N±0°.1×92°.4W±0°.1,h82^{km}±14^{km},n8,σ0^{s}.54/13,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.24	27	eP	Pn	14 09 56.5	-0.7
THIG				eS	Sn	14 10 07.1	+0.9
STG3	Santiaguito 3,	0.78	88	eP	Pn	14 10 01.2	-0.6
ERG	Entre ros, C	0.82	108	eP	Pn	14 10 01.8	-0.3
PCIG		1.29	321	i P	Pn	14 10 07.5	-0.2
PCIG				eS	Sn	14 10 25.5	+0.6
FUG	Fuego 3	1.51	99	eP	Pn	14 10 10.4	-0.2
FUG				eS	Sn	14 10 30.3	+0.3
CCIG	Comitan	1.60	8	eP	Pn	14 10 11.8	-0.1
CCIG				i S	Sn	14 10 32.1	-0.1
PCG	Pacaya	1.74	100	eP	Pn	14 10 13.7	0.0
TGIG		2.20	341	i P	Pn	14 10 19.1	-0.5
TGIG				i S	Sn	14 10 46.5	+0.4

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*DRS **20** 14:13:06.6±0.0,42°.07N×45°.46E,h12^{km},ML2.3/2*

*NORS **20** 14:13:09.7±0.0,42°.19N×45°.88E,h47^{km},MPVA3.4*

*TIF **20** 14:13:09.4,42°.14N×45°.82E,h22^{km}±2^{km}*

*ISCJB **20** 14:13:10.9±0.4,42°.12N±0°.03×45°.83E±0°.03,h20^{km}±7^{km},Error ellipse: s-maj=4.8km s-min=3.5km az=147.1*

ISC 20 14:13:10.8±1.0,42°.11N±0°.03×45°.85E±0°.03,h27^{km}±12^{km},n18,σ1^{s}.12/35,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LGD	Lagodekhi	0.40	133	P	Pb	14 13 19.1	-0.4
LGD				S	Sb	14 13 25.5	0.0
BTLR	Botlikh	0.62	26	i Pg	Pb	14 13 22.2	-1.0
	41nm,0.5s						
BTLR				eSg	Sb	14 13 30.7	-0.8
	165nm,0.4s						
DDFL	Dedoflistskaro	0.69	163	P	Pn	14 13 22.5	-2.4
XNZR	Khunzakh	0.77	55	ePg	Pb	14 13 25.5	-0.2
XNZR				eSg	Sn	14 13 36.2	-0.7
DVE	Vedeno	0.87	14	ePg	Pn	14 13 26.7	-0.7
DVE				eSg	Sn	14 13 38.1	-1.1
GNBR	Gunib	0.87	71	ePg	Pb	14 13 27.2	-0.2
GNBR				eSg	Sb	14 13 39.3	+0.6
BTNK	Botanikuri	0.89	242	P	Pn	14 13 26.6	-0.9
BTNK				S	Sn	14 13 39.9	+0.3
TBLG	Delisi	0.91	246	P	Pn	14 13 27.3	-0.6
TBLG				S	Sn	14 13 40.3	+0.2
KMKR	Kumukh	0.93	88	ePg	Pb	14 13 30.0	+1.6
	23nm,0.0s						
KMKR				eSg	Sb	14 13 44.0	+3.5
	65nm,0.2s						
GUDG	Gudauri	1.08	290	P	Pn	14 13 29.5	-0.8
GUDG				S	Sn	14 13 43.3	-1.2
GROC	Groznyy	1.09	358	ePg	Pn	14 13 29.9	-0.5
GROC				eSg	Sb	14 13 45.0	+0.1
DBC	Dubki	1.16	38	ePg	Pb	14 13 32.0	-0.3
	10.0nm,0.2s						
DBC				eSg	Sb	14 13 47.9	+0.9
	24nm,0.5s						
KMGR	Komgaron	1.19	323	ePg	Pn	14 13 31.6	-0.2
KMGR				eSg	Sb	14 13 48.2	+0.4
KZRT	Kazreti	1.30	237	P	Pn	14 13 33.1	-0.1
KZRT				S	Sn	14 13 50.8	+1.0
LACR	Lac	1.35	303	ePg	Pn	14 13 34.1	+0.1
LACR				eSg	Sn	14 13 51.9	+0.7
ONI	Oni	1.84	286	P	Pn	14 13 42.4	+1.7
ONI				S	Sb	14 14 06.0	-0.4
TKB	Tkibuli	2.13	277	P	Pn	14 13 46.4	+1.7
TKB				S	Sb	14 14 13.9	-0.9
PYA1	Pyatigorsk	2.81	315	ePn	Pn	14 13 55.1	+1.1
PYA1				eSn	Sn	14 14 26.8	-0.1

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*ISK **20** 14:30:39.6,39°.90N×40°.02E,h5^{km},ML2.3/3*

*DDA **20** 14:30:40.2,39°.97N×39°.98E,h7^{km}±4^{km},ML2.8*

ISC 20 14:30:39.9±1.2,39°.95N±0°.06×40°.03E±0°.04,h9^{km}±14^{km},n8,σ0^{s}.36/13,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EUZM	Uzumlu	0.35	227	i P	Pg	14 30 47.2	+0.3
EUZM				IAML_P			
	comp=Z,19µm,0.2s						
KOPT	Kop Dagi	0.36	78	i P	Pb	14 30 49.1	+0.3
KOPT				i S	Sb	14 30 54.5	-0.2
KOPT				IAML_P			
	comp=Z,4µm,0.1s						
ERZN	Erzincan	0.43	214	PG	Pg	14 30 47.9	-0.5
ERZN				SG	Sg	14 30 53.8	-0.2
BAYT	Aydıntepe-Bayb	0.46	11	PG	Pb	14 30 49.9	-0.4
BAYT				SG	Sb	14 30 57.4	+0.2
KELT	Kelkit	0.63	289	i P	Pb	14 30 53.1	-0.1
KELT				i S	Sg	14 31 00.8	+0.4
KELT				IAML_P			
	comp=Z,2µm,0.1s						
YEDI	Yedisu-Bingol	0.64	142	PG	Pg	14 30 52.0	-0.4
YEDI				SG	Sg	14 31 01.1	+0.3
TNCL	Tunceli-Merkez	0.91	205	i P	Pn	14 30 59.3	+0.3
TNCL				IAML_P			
	comp=Z,204nm,0.1s						
KEMA	Kemaliye	1.37	241	i P	Pn	14 31 05.2	0.0
KEMA				IAML_P			
	comp=Z,595nm,0.1s						

WEL 20 14:45:03.7,39°S±9°×18°0E±°,h33^{km},M3.4/37,ML3.7/29,MLv3.4/37,Error ellipse: s-maj=0.0km s-min=0.0km az=47.9,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	Carnagh Statio	1.15	296	P	Pn	14 45 23.8	+0.3
CNGZ	Carnagh Statio	1.15	296	P	Pn	14 45 23.6	+0.1
MHGZ	Mahia Peninsul	1.27	262	P	Pn	14 45 25.9	+0.7
MHGZ				S	Sn	14 45 41.8	+0.6
PRGZ	Paritu Road	1.28	272	P	Pn	14 45 25.6	+0.2
PRGZ	Paritu Road	1.28	272	P	Pn	14 45 25.3	-0.1
PRGZ				S	Sn	14 45 41.5	0.0
PUZ	Puketiti	1.35	312	P	Pn	14 45 25.3	-1.0
PUZ				S	Sn	14 45 42.1	-1.0
PUZ	Puketiti	1.35	312	P	Pn	14 45 25.2	-1.1
PUZ				S	Sn	14 45 41.3	-1.8
RIGZ	Rimuhau	1.41	281	P	Pn	14 45 27.5	+0.5
RIGZ				S	Sn	14 45 45.1	+0.6
RIGZ	Rimuhau	1.41	281	P	Pn	14 45 27.4	+0.3
TKGZ	Te Karaka	1.42	292	P	Pn	14 45 27.2	0.0
TKGZ	Te Karaka	1.42	292	P	Pn	14 45 26.9	-0.3
KNZ	Kokohu	1.45	268	P	Pn	14 45 28.2	+0.7
KNZ				S	Sn	14 45 45.4	0.0
KNZ	Kokohu	1.45	268	P	Pn	14 45 28.0	+0.5
TWGZ	Tauwhareparae	1.46	303	P	Pn	14 45 27.4	-0.4
TWGZ	Tauwhareparae	1.46	303	P	Pn	14 45 27.4	-0.4
TWGZ				S	Sn	14 45 46.5	+0.7
WMGZ	Waiomatatini S	1.46	323	P	Pn	14 45 26.8	-0.9
WMGZ	Waiomatatini S	1.46	323	P	Pn	14 45 26.7	-1.1
PKGZ	Pakihiroa	1.58	313	P	Pn	14 45 28.8	-0.7
PKGZ	Pakihiroa	1.58	313	P	Pn	14 45 28.7	-0.8
MWZ	Matawai	1.70	292	P	Pn	14 45 30.9	-0.2
SNGZ	Shannon Statio	1.72	276	P	Pn	14 45 32.2	+0.9
SNGZ	Shannon Statio	1.72	276	P	Pn	14 45 32.3	+0.9
RAGZ	Rawiri	1.72	286	P	Pn	14 45 32.1	+0.7
RAGZ				S	Sn	14 45 52.6	+0.3
RAGZ	Rawiri	1.72	286	P	Pn	14 45 31.8	+0.3
RUGZ	Raukumara Rang	1.77	305	P	Pn	14 45 31.7	-0.5
RUGZ	Raukumara Rang	1.77	305	P	Pn	14 45 31.9	-0.4
WHHZ	Waihua	1.79	266	P	Pn	14 45 33.7	+1.4
WHHZ	Waihua	1.79	266	P	Pn	14 45 33.4	+1.1
HAZ	Te Kaha	1.84	311	P	Pn	14 45 32.4	-0.6
HAZ				S	Sn	14 45 54.8	-0.4
RAHZ	Arahi	1.91	271	P	Pn	14 45 35.0	+1.1
ARHZ	Aropaoanui	1.99	261	P	Pn	14 45 36.2	+1.2
CKHZ	Cape Kidnapper	2.02	250	P	Pn	14 45 36.3	+0.9
CKHZ	Cape Kidnapper	2.02	250	P	Pn	14 45 36.2	+0.8
RTZ	Ruatahuna	2.02	280	P	Pn	14 45 36.2	+0.6
RTZ				S	Sn	14 45 59.7	-0.1
URZ	Urewera	2.03	290	P	Pn	14 45 36.3	+0.7
URZ				S	Sn	14 46 01.2	+1.5
KAHZ	Kahuranaki	2.21	248	P	Pn	14 45 38.6	+0.5
MUGZ	Murupara	2.21	282	P	Pn	14 45 39.0	+0.8
WHRZ	Whale Island	2.30	299	P	Pn	14 45 40.7	+1.3
EDRZ	Edgecumbe	2.36	291	P	Pb	14 45 45.2	-0.4
BKZ	Black Stump Fm	2.37	265	P	Pn	14 45 41.1	+0.8
BKZ				S	Sn	14 46 08.6	+0.3
MRHZ	Matea Rd	2.43	273	P	Pn	14 45 42.9	+1.8
MRHZ	Matea Rd	2.43	273	S	Sn	14 46 11.2	+1.4
RRRZ	Republican Roa	2.45	284	P	Pn	14 45 42.0	+0.6
KWHZ	Kaweka Forest	2.45	259	P	Pn	14 45 43.7	+2.3
KWHZ				S	Sn	14 46 11.6	+1.2
KWHZ	Kaweka Forest	2.45	259	S	Sn	14 46 11.9	+1.6
MARZ	Manawahe	2.45	293	P	Pn	14 45 41.7	+0.3
TARZ	Mount Tarawera	2.48	287	P	Pn	14 45 43.1	+1.2
PRRZ	Plateau Road	2.50	280	P	Pn	14 45 43.3	+1.2
ALRZ	Allen Road	2.52	279	P	Pn	14 45 43.6	+1.2
KRHZ	Kereru	2.54	254	P	Pn	14 45 43.7	+1.2
MKRZ	Makatiti	2.54	289	P	Pn	14 45 44.2	+1.5
PRHZ	Porangahau	2.57	239	P	Pn	14 45 42.9	-0.2
OPRZ	Ohinepanea	2.60	295	P	Pn	14 45 43.0	-0.4
HRRZ	Handcock Road	2.61	282	P	Pb	14 45 48.5	-1.3
HRRZ	Handcock Road	2.61	282	P	Pn	14 45 44.4	+0.8
WPHZ	Waipukurau	2.62	245	P	Pn	14 45 44.1	+0.4
OMRZ	Omania	2.63	289	P	Pn	14 45 44.5	+0.6
BHHZ	Black Hill Sta	2.74	258	P	Pn	14 45 46.0	+0.6
PNHZ	Pukenui	2.74	249	P	Pn	14 45 45.9	+0.5
KARZ	Kaharoa	2.75	290	P	Pn	14 45 48.5	+2.9
ANWZ	Angora Road	2.77	237	P	Pn	14 45 45.6	-0.3
RITZ	Rihia Road	2.86	269	P	Pn	14 45 48.7	+1.7
RITZ	Rihia Road	2.86	269	P	Pn	14 45 48.0	+1.0
RATZ	Rangitukua	2.93	271	P	Pb	14 45 52.1	-3.2
RATZ	Rangitukua	2.93	271	P	Pn	14 45 49.2	+1.1
KUTZ	Kaahu Road	2.94	279	P	Pn	14 45 49.2	+1.1
MOVZ	Moawhango	2.96	261	P	Pn	14 45 50.1	+1.6
MOVZ				S	Sn	14 46 23.7	+0.8
KATZ	Kakaramea	2.99	269	P	Pn	14 45 49.6	+0.7
TUVZ	Tukino	3.02	263	P	Pn	14 45 51.0	+1.5
BFZ	Birch Farm	3.04	235	P	Pn	14 45 48.1	-1.4
NGZ	Ngauruhoe	3.06	265	P	Pn	14 45 50.7	+0.7
WTVZ	West Tongariro	3.07	266	P	Pn	14 45 51.2	+1.2
WHVZ	Whangaehu Hut	3.08	263	P	Pn	14 45 51.7	+1.4
FWVZ	Far West T-bar	3.10	264	P	Pn	14 45 52.3	+1.8
FWVZ	Far West T-bar	3.10	264	P	Pn	14 45 51.6	+1.1
POWZ	Post Office Ro	3.22	243	P	Pn	14 45 52.4	+0.4
PKVZ	Pokaka	3.27	263	P	Pn	14 45 53.9	+1.3
MRZ	Mangatainoka R	3.47	240	P	Pn	14 45 54.5	-0.9
TMWZ	Te Maipa	3.50	232	P	Pn	14 45 54.8	-1.1
TMWZ				S	Sn	14 46 35.7	-0.5
WAZ	Wanganui	3.60	256	P	Pn	14 45 59.7	+2.4
WAZ	Wanganui	3.60	256	P	Pn	14 45 58.9	+1.6
HOWZ	Holdsworth Sta	3.63	237	P	Pn	14 45 56.6	-1.0
HOWZ				S	Sn	14 46 37.8	-1.5
HIZ	Hauiti	3.68	276	P	Pn	14 46 00.4	+2.1
HIZ	Hauiti	3.68	276	P	Pn	14 45 59.6	+1.2
VRZ	Vera Road	3.71	266	P	Pn	14 46 02.8	+4.0
VRZ	Vera Road	3.71	266	P	Pn	14 45 59.7	+0.9
KUZ	Kuaotunu	3.75	305	P	Pn	14 45 58.4	-0.9
MTW	Mount Morrison	3.77	234	P	Pn	14 45 57.9	-1.6
OGWZ	Otaki Gorge	3.82	240	P	Pn	14 45 59.9	-0.3
MKAZ	Moumakai	3.93	297	P	Pn	14 46 02.4	+0.7
PAWZ	Paruwai Farm	3.95	231	P	Pn	14 46 01.0	-1.0
CAW	Cannon Point	4.03	237	P	Pn	14 46 02.1	-1.0
CAW				S	Sn	14 46 47.4	-1.6
MSWZ	Moikau Station	4.08	232	P	Pn	14 46 01.2	-2.5
ETAZ	East Tamaki Re	4.16	298	P	Pn	14 46 05.8	+0.9
PLWZ	Palliser	4.16	230	P	Pn	14 46 02.7	-2.3
GRZ	Great Barrier	4.23	309	P	Pn	14 46 06.5	+0.6
MBAZ	Motutapu North	4.28	300	P	Pn	14 46 07.4	+0.9
KHEZ	Kahui Hut	4.30	264	P	Pn	14 46 07.9	+1.0
AWAZ	Awhitu Peninsu	4.31	295	P	Pn	14 46 06.8	-0.1
PKE	Pukeiti	4.32	266	P	Pn	14 46 09.1	+2.1
NBEZ	Newall Road No	4.41	265	P	Pn	14 46 08.9	+0.6
TCW	Tory Channel	4.60	239	P	Pn	14 46 09.2	-1.7
TCW				S	Sn	14 47 01.3	-1.9
DUWZ	D'Urville Isla	4.68	245	P	Pn	14 46 12.7	+0.7
DUWZ	D'Urville Isla	4.68	245	P	Pn	14 46 11.8	-0.2
TUWZ	Tuamarina	4.92	239	P	Pn	14 46 13.5	-1.8
BSWZ	Blackbirch Sta	5.11	236	P	Pn	14 46 15.5	-2.4
WCZ	Waipu Caves	5.12	305	P	Pn	14 46 19.7	+1.6
NNZ	Nelson	5.21	243	P	Pn	14 46 19.1	-0.3
NNZ	Nelson	5.21	243	P	Pn	14 46 18.1	-1.2
QRZ	Quartz Range	5.69	249	P	Pn	14 46 24.5	-1.3
KHZ	Kahutara	5.70	231	P	Pn	14 46 25.3	-0.6
THZ	Tophouse	5.77	239	P	Pn	14 46 26.1	-0.9
LTZ	Lake Taylor	6.68	233	P	Pn	14 46 37.9	-1.6
OKCZ	Okains Bay	6.79	224	P	Pn	14 46 40.5	-0.5

IDC 20 14:51:29.1±3.6,1°.09N×125°.80E,h0^{km},mb3.6/3,mb1 3.8/3,mb1mx3.4/25,mbtmp3.6/3,Error ellipse: s-maj=462.8km s-min=24.7km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.52	159	P	P	14 56 30.1	-0.6
	0.8nm,0.3s,baz=334,slow=12,SNR=14						
ASAR	Alice Springs	25.84	163	P	P	14 57 02.9	+0.4
	0.5nm,0.4s,baz=345,slow=10,SNR=12						
MKAR	Makanchi Array	59.21	327	P	P	15 01 32.0	-0.1
	0.3nm,0.4s,baz=120,slow=7.8,SNR=7.8						

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*ISK **20** 14:54:13.9,38°.81N×27°.92E,h7^{km},ML2.0/5*

*ISCJB **20** 14:54:14.2±0.5,38°.82N±0°.04×27°.90E±0°.04,h4^{km}±8^{km},Error ellipse: s-maj=6.7km s-min=5.3km az=21.1*

*DDA **20** 14:54:14.0,38°.82N×27°.91E,h7^{km}±2^{km},ML2.7*

ISC 20 14:54:14.1±1.0,38°.82N±0°.03×27°.91E±0°.03,h8^{km}±8^{km},n15,σ0^{s}.34/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	Akhisar	0.10	308	i P	Pg	14 54 16.3	-0.1
AKHS				IAML_P			
	comp=Z,37µm,0.1s						
GOMA	Golmarmara-Man	0.11	178	PG	Pg	14 54 16.8	+0.1
GOMA				SG	Sg	14 54 18.6	+0.2
STEP	BALIKESIR_Sava	0.58	345	i P	Pg	14 54 25.1	-0.2
STEP				IAML_P			
	comp=Z,642nm,0.1s						
MANT	Manisa	0.60	123	i P	Pg	14 54 26.0	+0.2
MANT				i S	Sb	14 54 35.2	-0.6
MANT				IAML_P			
	comp=Z,1µm,0.2s						
KULA	Kula-Manisa	0.66	117	PG	Pg	14 54 27.1	+0.2
DEMI	Demirci	0.67	70	i P	Pg	14 54 27.3	+0.3
DEMI				IAML_P			
	comp=Z,2µm,0.1s						
ZEDA	zmir-Bergama	0.67	283	i P	Pg	14 54 27.2	+0.2
BLCB	Balcova	0.81	238	PG	Pg	14 54 29.9	+0.2
BLCB				SG	Sb	14 54 41.5	0.0
AYDB	Zeytinkoy-Aydi	0.87	181	PG	Pg	14 54 30.8	-0.1
USAK	Uak-Merkez	0.87	97	i P	Pg	14 54 31.2	+0.3
USAK				IAML_P			
	comp=Z,2µm,0.2s						
DURS	Dursunbey	0.89	29	i P	Pn	14 54 33.0	-0.2
DURS				IAML_P			
	comp=Z,2µm,0.3s						
BALY	Balya	0.95	346	i P	Pb	14 54 32.7	-0.1
BALY				i S	Sb	14 54 46.5	+0.9
BALY				IAML_P			
	comp=Z,643nm,0.2s						
URLA	Izmir	1.13	246	PN	Pb	14 54 35.9	0.0
TVSB	Tavsanli	1.36	62	PN	Pb	14 54 39.9	0.0
KCTX	Karacabey (Bur	1.48	13	PN	Pb	14 54 41.7	-0.3

ISCJB ***20*** *15:29:43.0±1.6, 33°.80N±0°.05×35°.8E±0°.1, h16km±22km, Error ellipse: s-maj=17.6km s-min=8.0km az=170.9*
GRAL ***20*** *15:29:43.4±0.3, 33°.80N×35°.77E, h15km±4km, MD2.6*
NSSC ***20*** *15:29:44.2±0.7, 33°.77N×35°.84E, h4km±14km, ML1.2*
ISC 20 15:29:43.4±1.5**, 33°.81N**±0°.04×**35°.80E**±0°.07**, h11**km±18km**, n7, σ0.s22**/11**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.15	309	eP	Pg	15 29 47.0	0.0
BHL				eS	Sg	15 29 49.7	+0.1
DQRL	Deir Qamar	0.21	242	eP	Pg	15 29 47.7	-0.3
RCY	Rachaya	0.31	174	eP	Pg	15 29 49.5	-0.3
RCY				eS	Sg	15 29 54.1	+0.2
BRBR	Barbar	0.41	162	eP	Pg	15 29 51.7	+0.1
BRBR				eS	Sg	15 29 57.1	-0.1
BRBR				AML	AML	15 30 01.3	
	comp=E,35nm,0.4s						
BRBR				AML	AML	15 30 02.7	
	comp=N,17nm,0.3s						
QASN	Qassioun	0.48	124	eP	Pg	15 29 52.8	0.0
QASN				AML	AML	15 30 01.3	
	comp=N,25nm,0.3s						
QASN				AML	AML	15 30 07.6	
	comp=E,42nm,0.3s						
HWQ	Hawqa	0.48	15	eP	Pg	15 29 52.7	-0.3
TOTH	TOTAH	0.69	130	eP	Pb	15 29 57.6	+0.2
TOTH				eS	Sg	15 30 05.7	-0.1
TOTH				AML	AML	15 30 16.7	
	comp=N,5.8nm,0.4s						

NNC 20 15:42:32.6±5.1**, 36°.54N×70°.02E, h0km, mb3.7, mpv3.3, 3C-1D, Error ellipse: s-maj=49.1km s-min=29.0km az=157.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.57	3	⇓P	Pn	15 44 12.5	+2.0
	0.7nm,0.3s,baz=183,slow=12,SNR=8.9						
KK31				⇑S	Sn	15 45 27.7	+1.6
	0.9nm,0.3s,baz=184,slow=27,SNR=5.1						
AAK	Ala-Archa	7.00	28	⇑P	Pn	15 44 16.2	-0.4
	1.2nm,0.5s						
AAK				⇑S	Sn	15 45 37.8	+0.8
	4.5nm,0.8s						
AB31	Akbulak array	14.68	333	P	Pn	15 46 00.0	-1.5
	0.9nm,0.5s,baz=152,slow=12,SNR=22						

ISCJB ***20*** *15:47:53.5±0.3, 51°.58N±0°.02×16°.10E±0°.02, h0km, Error ellipse: s-maj=2.6km s-min=2.1km az=25.1*
LDG ***20*** *15:47:55.8±0.4, 51°.50N×16°.06E, h1km, Ml3.4/2, Error ellipse: s-maj=9.6km s-min=2.9km az=19.0, Suspected Mining induced.*
IDC ***20*** *15:47:55.3±0.7, 51°.46N×16°.28E, h0km, mb1 3.3/5, mb1mx3.1/47, mbtmp3.2/5, ML2.7/5, Error ellipse: s-maj=10.6km s-min=6.2km az=109.0*
BGR ***20*** *15:47:57.2±0.4, 51°.50N×16°.09E, h1km, ML3.1/14, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*
UPP ***20*** *15:47:58.0±3.1, 51°.60N×15°.05E, h0km, ML2.0, Suspected explosion*
VIE ***20*** *15:47:58.9±0.6, 51°.33N×16°.07E, h0km, mb2.6/8, ml2.8/10, Error ellipse: s-maj=5.8km s-min=4.3km az=78.0, Suspected Mining induced.*
ISC 20 15:47:53.6±0.7**, 51°.64N**±0°.03×**16°.13E**±0°.02**, h0km, n64, σ1.s71**/127**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.80	173	i Pg	Pg	15 48 09.9	+1.0
KSP				eSg	Sg	15 48 19.2	-0.1
KSP	Ksiaz	0.80	173	ePg	Pg	15 48 09.9	+1.0
KSP				eSg	Sg	15 48 18.6	-0.7
CHVC	Chvalec	1.05	183	ePG	Pg	15 48 14.4	+0.7
CHVC				eSG	Sg	15 48 27.4	+0.1
	comp=Z,94nm,0.5s						
OSTC	Ostas	1.08	177	ePG	Pg	15 48 15.2	+0.9
OSTC				eSG	Sg	15 48 28.6	+0.2
	comp=Z,83nm,0.3s						
UPC	Upice	1.14	184	ePG	Pg	15 48 15.9	+0.6
UPC				eSG	Sg	15 48 29.4	-0.6
	comp=Z,139nm,0.4s						
DPC	Dobruska-Polom	1.29	175	ePg	Pg	15 48 18.7	+0.3
DPC				eSg	Sg	15 48 34.0	-1.1
DPC	Dobruska-Polom	1.29	175	ePG	Pg	15 48 18.8	+0.4
DPC				eSG	Sg	15 48 34.2	-0.9
	comp=Z,65nm,0.6s						
PVCC	Panska Ves	1.49	222	ePG	Pn	15 48 22.5	+1.0
PVCC				eSG	Sg	15 48 41.7	+0.4
	comp=Z,170nm,0.5s						
BRG	Berggiesshubel	1.57	242	PN	Pn	15 48 22.9	+0.1
BRG				PG	Pg	15 48 24.8	+1.0
BRG				SG	Sg	15 48 45.2	+1.1
	148nm,0.4s						
BRG	Berggiesshubel	1.57	242	ePn	Pb	15 48 24.3	+0.7
BRG				eSg	Sg	15 48 45.2	+1.1
FBE	Freiberg	1.89	249	ePg	Pg	15 48 30.7	+1.0
FBE				eSg	Sg	15 48 54.9	+0.8
GOPC	GO Pecny, Ondr	1.93	207	ePN	Pn	15 48 28.7	+1.1
GOPC				ePG	Pb	15 48 30.1	+0.5
GOPC				eSG	Sb	15 48 54.6	+0.5
	comp=Z,51nm,0.6s						
PRU	Pruhonice	1.94	212	ePN	Pn	15 48 28.6	+0.9
PRU				ePG	Pb	15 48 29.9	+0.2
PRU				eSG	Sb	15 48 54.6	+0.2
	comp=Z,41nm,0.4s						
CLL	Collm	1.99	262	ePn	Pn	15 48 29.0	+0.6
CLL				ePg	Pb	15 48 32.0	+1.4
CLL				i Sg	Sg	15 48 58.6	+1.3
	comp=Z,43nm,0.4s						
CLL	Collm	1.99	262	ePn	Pn	15 48 29.5	+1.1
CLL				ePg	Pg	15 48 32.5	+0.9
CLL				eSg	Sg	15 48 58.8	+1.4
RAC	Raciborz	2.03	139	ePg	Pg	15 48 33.6	+1.1
RAC				eSg	Sg	15 48 59.2	+0.4
MORC	Moravsky Berou	2.07	154	ePN	Pn	15 48 29.9	+0.3
MORC	Moravsky Berou	2.07	154	ePn	Pn	15 48 30.2	+0.7
MORC				eSg	Sb	15 48 59.4	+1.1
OKC	Ostrava-Krasne	2.21	144	ePn	Pn	15 48 32.5	+1.0
OKC				eSg	Sg	15 49 05.4	+0.8
OKC	Ostrava-Krasne	2.21	144	ePG	Pg	15 48 36.3	+0.4
OKC				eSG	Sg	15 49 05.1	+0.6
	comp=Z,49nm,0.5s						
VRAC	Vranov	2.35	173	Pg	Pn	15 48 34.8	+1.4
	comp=Z,1.6nm,0.3s,baz=347,slow=16,SNR=31						
VRAC				Lg	Lg	15 49 03.0	
	comp=Z,4.4nm,0.3s,baz=272,slow=18,SNR=13						
VRAC	Vranov	2.35	173	ePN	Pn	15 48 34.4	+1.0
VRAC				eSG	Sb	15 49 06.7	+0.3
TREC	Trest	2.38	190	ePN	Pn	15 48 34.9	+1.0
TREC				ePG	Pb	15 48 38.2	+0.9
TREC				eSG	Sb	15 49 08.8	+1.5
	comp=Z,51nm,0.9s						
KRUC	Moravsky	2.58	176	ePN	Pn	15 48 37.7	+1.1
KRUC				eSG	Sb	15 49 14.0	+0.9
TANN	Tannenbergstha	2.62	244	ePn	Pn	15 48 38.6	+1.3
TANN				ePg	Pg	15 48 44.7	+0.9
TANN				eSg	Sg	15 49 17.7	0.0
OJC	Ojcow	2.72	120	ePg	Pg	15 48 46.9	+1.3
OJC				eSn	Sn	15 49 10.9	-1.1
OJC				eSg	Sg	15 49 22.2	+1.4
OJC	Ojcow	2.72	120	ePn	Pn	15 48 39.9	+1.4
OJC				ePg	Pg	15 48 47.3	+1.7
OJC				eSg	Sg	15 49 22.3	+1.4
NKC	Novy Kostel	2.72	240	ePN	Pn	15 48 40.3	+1.7
NKC				ePG	Pg	15 48 45.6	-0.1
NKC				eSG	Sg	15 49 22.0	+1.0
	comp=Z,115nm,0.4s						
JAVC	Velka Javorina	2.95	160	ePN	Pn	15 48 42.8	+1.1
KHC	Kasperske Hory	3.00	214	ePN	Pn	15 48 43.5	+1.2
KHC				ePG	Pb	15 48 48.9	+1.1
KHC				eSG	Sg	15 49 28.4	-1.4
	comp=Z,13nm,0.3s						
MANZ	Manzenberg	3.04	239	ePn	Pn	15 48 44.3	+1.4
MANZ				eSg	Sg	15 49 31.6	+0.4
ROTZ	Rotzenmuhle	3.12	235	ePn	Pn	15 48 45.2	+1.2
ROTZ				eSg	Sg	15 49 33.1	-0.7
GEC2	GERESS Array S	3.20	210	ePn	Pn	15 48 46.9	+1.7
GEC2				ePg	Pg	15 48 54.6	-0.3
GEC2				eSg	Sb	15 49 33.4	+2.5
GERES	GERESS Array B	3.20	210	Pn	Pn	15 48 46.0	+0.8
	comp=Z,1.8nm,0.3s,baz=34,slow=13,SNR=37						
GERES				Pg	Pb	15 48 52.6	+1.3
	comp=Z,3.0nm,0.3s,baz=32,slow=15,SNR=30						
GERES				Lg	Lg	15 49 32.6	
	comp=Z,4.0nm,0.3s,baz=31,slow=30,SNR=7.4						
WET	Wettzell	3.25	221	ePn	Pn	15 48 47.1	+1.3
LANS	Liptovska Anna	3.28	138	ePG	Pg	15 48 57.1	+0.7
LANS				eSG	Sg	15 49 40.0	+1.1
LANS				eLG	Lg	15 49 52.9	
MODS	Modra-Piesok	3.35	167	ePN	Pn	15 48 49.3	+2.1
MODS				ePG	Pg	15 48 58.4	+0.6
MODS				eSG	Sg	15 49 39.3	-1.8
MODS				eLG	Lg	15 49 47.5	
BSD	Bornholm Skovb	3.56	349	i P	Pn	15 48 51.9	+1.9
BSD				i S	Sn	15 49 31.9	-0.8
CLZ	Clausthal	3.59	276	ePn	Pn	15 48 53.2	+2.8
CLZ				eSg	Sg	15 49 51.1	+2.4
VYHS	Vyhne	3.60	150	ePN	Pn	15 48 51.3	+0.7
VYHS				ePG	Pg	15 49 04.0	+1.5
VYHS				eSG	Sg	15 49 47.4	-1.7
GRF	Grafenberg Arr	3.68	240	ePn	Pn	15 48 53.6	+1.8
GRF				eSg	Sg	15 49 51.9	+0.1
CONA	Conrad Observa	3.72	183	i Pn	Pn	15 48 54.1	+1.8
	comp=Z,1.5nm,0.2s						
CONA				Sg	Sg	15 49 52.1	-0.9
	comp=Z,9.9nm,0.3s						
MOA	Molln	3.98	198	i Pn	Pn	15 48 57.0	+1.1
	comp=Z,2.9nm,0.2s						
MOA				eSg	Sg	15 49 59.9	-1.5
	comp=Z,9.5nm,0.3s						
LUNU	Lund	4.31	339	P	Pn	15 49 01.9	+1.6
LUNU				S	Sn	15 49 51.4	+0.2
ARSA	Arzberg	4.41	185	i Pn	Pn	15 49 03.5	+1.7
	comp=Z,1.6nm,0.3s						
ARSA				Sg	Sg	15 50 14.5	-0.6
	comp=Z,11nm,0.5s						
KOLS	Kolonicke sedl	4.78	122	ePN	Pn	15 49 08.5	+1.7
KOLS				ePG	Pg	15 49 27.7	+2.6
BJUU	Bjuv	4.81	339	P	Pn	15 49 08.5	+1.3
BJUU				S	Sn	15 50 01.6	-2.0
KBA	Koelnbreinsper	4.91	203	i Pn	Pn	15 49 10.3	+1.5
	comp=Z,3.7nm,0.3s						
KBA				Sg	Sg	15 50 32.9	+1.6
	comp=Z,13nm,0.7s						
DEL	Delary	5.02	345	P	Pn	15 49 11.9	+1.8
WATA	Walderalm	5.23	216	ePn	Pn	15 49 14.4	+1.3
	comp=Z,3.0nm,0.4s						
WTTA	Wattenberg	5.27	216	i Pn	Pn	15 49 16.1	+2.5
	comp=Z,0.5nm,0.1s						
WTTA				eSn	Sn	15 50 15.5	+0.3
	comp=Z,1.2nm,0.2s						
MOTA	Moosalm	5.40	219	ePn	Pn	15 49 16.0	+0.5
	comp=Z,2.3nm,0.4s						
SQTA	Sankt Quirin	5.46	218	i Pn	Pn	15 49 18.6	+2.3
	comp=Z,1.6nm,0.2s						
FABU	Falkenberg	5.73	341	P	Pn	15 49 21.4	+1.6
GNOU	Gnosjoe	5.83	347	P	Pn	15 49 23.8	+2.6
DAVOX	Davos/Dischmat	6.36	223	Pn	Pn	15 49 29.8	+1.2
	comp=Z,0.2nm,0.3s,baz=359,slow=15,SNR=3.2						
DAVOX				Lg	Lg	15 51 14.8	
	comp=Z,0.3nm,0.3s,baz=179,slow=9.4,SNR=2.4						
CDF	Champ du Feu	6.56	244	ePn	Pn	15 49 29.8	-1.5
CDF				eSg	Sg	15 51 17.8	-6.2
	comp=Z,17nm,1.0s						
HINF	Hinteralfeld	7.13	241	eP	Pn	15 49 42.6	+3.5
HINF				eSg	Sg	15 51 35.5	-6.8
	comp=Z,4.9nm,0.5s						
PAGF	Fort de Pagny	7.37	249	eP	Pn	15 49 45.9	+3.5
	baz=69						
AKASG	Malin Array Be	8.28	91	Pn	Pn	15 49 50.5	-4.3
	comp=Z,0.3nm,0.3s,baz=280,slow=12,SNR=3.7						
AKASG				Sn	Sn	15 51 23.7	-5.3
	comp=Z,0.7nm,0.3s,baz=272,slow=22,SNR=3.0						
HFS	Hagfors	8.62	352	Pn	Pn	15 50 00.6	+1.1
	comp=Z,0.1nm,0.3s,baz=172,slow=15,SNR=4.5						
HFS				Sn	Sn	15 51 35.8	-1.6
	comp=Z,0.1nm,0.3s,baz=193,slow=10,SNR=2.1						
FINES	FINESS Array B	11.24	25	Pn	Pn	15 50 35.7	+0.4
	comp=Z,0.1nm,0.3s,baz=212,slow=15,SNR=4.4						
FINES				Sn	Sn	15 52 35.7	-5.8
	comp=Z,0.2nm,0.3s,baz=211,slow=21,SNR=4.1						
EKA	Eskdalemuir Ar	12.06	295	Pn	Pn	15 50 44.6	-2.0
	baz=103,slow=14,SNR=2.6						
ARCES	ARCESS Array B	18.49	10	P	P	15 52 08.7	-2.2
	comp=Z,0.1nm,0.3s,baz=199,slow=10,SNR=1.4						

IDC 20 16:08:54.0±2.3**, 16°.94S×168°.86E, h0km, mb3.9**/2**, mb1 4.1**/3**, mb1mx3.6**/27**, mbtmp3.9**/3**, ML3.5**/1**, Error ellipse: s-maj=67.7km s-min=40.3km az=132.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.59	204	Pn	Pn	16 10 18.2	-0.3
	1.4nm,0.3s,baz=40,slow=17,SNR=18						
WRA	Warramunga Arr	32.85	259	P	P	16 15 29.3	-0.4
	1.4nm,1.0s,baz=86,slow=7.6,SNR=3.1						
ASAR	Alice Springs	33.40	253	P	P	16 15 34.9	+0.3
	1.5nm,0.6s,baz=79,slow=9.2,SNR=40						
ARCES	ARCESS Array B	122.76	346	PKP	PKPdf	16 27 51.0	-0.3
	2.1nm,0.8s,baz=89,slow=4.0,SNR=3.4						
GERES	GERESS Array B	142.29	333	PKP	PKPdf	16 28 28.4	-0.2
	0.5nm,0.5s,baz=49,slow=3.3,SNR=5.2						

ISCJB ***20*** *16:44:19.7±0.6, 69°.11N±0°.05×144°.5W±0°.1, h10km, Error ellipse: s-maj=6.7km s-min=5.4km az=171.5*
NEIC ***20*** *16:44:21.9±0.0, 69°.18N×144°.52W, h21km, ML3.1(AEIC), After AEIC.*
PGC ***20*** *16:44:21.6±5.8, 69°.27N×144°.90W, h10km, ML3.3/1, 171km Ese of Prudhoe Bay, Ak Northern Alaska*
ISC 20 16:44:19.4±1.4**, 69°.20N**±0°.08×**144°.63W**±0°.06**, h10km, n37, σ1.s88**/44**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PS01	TAPS Pump Stn	1.75	309	ePn	Pn	16 44 51.4	+1.7
BM3	Burnt Mountain	1.79	180	ePn	Pn	16 44 51.3	+0.9
BM3				eSn	Sn	16 45 14.4	+1.3
TOLK	Toolik Lake Re	1.88	255	ePn	Pn	16 44 53.2	+1.7
PS04	TAPS Pump Stn4	1.89	248	ePn	Pn	16 44 53.4	+1.6
FYU	Fort Yukon	2.66	185	ePn	Pn	16 45 03.5	+1.3
COLD	Coldfoot	2.87	229	ePn	Pn	16 45 06.5	+1.3
COLD	Coldfoot	2.87	229	Pn	Pn	16 45 06.4	+1.3
PRP	Porcupine Dome	3.72	186	ePn	Pn	16 45 17.7	+0.7
PS06	TAPS Pump Stn6	3.89	213	ePn	Pn	16 45 20.4	+1.3
EPYK	Eagle Plains	4.13	130	ePn	Pn	16 45 23.8	+1.2
INK	Inuvik	4.14	97	ePn	Pn	16 45 24.7	+2.2
INK	Inuvik	4.14	97	Pn	Pn	16 45 25.1	+2.6
INK				Sn	Sn	16 46 11.8	+0.9
ILB	Eielson Array	4.54	192	ePn	Pn	16 45 28.2	+0.2
EGAK	Eagle	4.65	161	ePn	Pn	16 45 31.7	+2.2
CCB	Clear Creek Bu	4.74	197	ePn	Pn	16 45 31.5	+0.6
IM3	Indian Mountai	4.75	232	ePn	Pn	16 45 31.5	+0.5
PS08	TAPS Pump Stn8	4.76	191	ePn	Pn	16 45 31.9	+0.8
HDA	Harding Lake	4.90	192	ePn	Pn	16 45 33.5	+0.5
WRH	Wood River Hil	4.95	198	ePn	Pn	16 45 33.9	+0.3
RIDG	Independent Ri	5.49	181	ePn	Pn	16 45 42.8	+1.6
DAWY	Dawson	5.56	156	ePn	Pn	16 45 42.5	+0.4
DAWY	Dawson	5.56	156	Pn	Pn	16 45 44.4	+2.2
DAWY				Sn	Sn	16 46 45.0	-1.1
DOT	Dot Lake	5.58	177	ePn	Pn	16 45 44.5	+2.0
DOT	Dot Lake	5.58	177	Pn	Pn	16 45 44.3	+1.9
DOT				Sn	Sn	16 46 47.0	+0.4
BPAW	Bear Paw Mtn.	5.71	209	ePn	Pn	16 45 44.7	+0.5
MCK	McKinley	5.76	199	ePn	Pn	16 45 45.9	+1.1
RND	Reindeer	6.07	198	ePn	Pn	16 45 50.1	+1.0
PAX	Paxson	6.27	184	Pn	Pn	16 45 54.0	+2.0
PAX				Sn	Sn	16 47 02.6	-0.9
BCA3	Beaver Creek A	6.27	168	ePn	Pn	16 45 53.6	+1.8
MENT	Mentasta	6.30	176	ePn	Pn	16 45 53.6	+1.3
YUK2	White River	7.61	166	Pn	Pn	16 46 12.2	+2.0
YUK4	Talbot Arm	8.27	160	Pn	Pn	16 46 20.5	+1.1
YUK5	Granite Creek	8.58	157	Pn	Pn	16 46 26.3	+2.7
YUK6	Outpost Mounta	8.70	159	Pn	Pn	16 46 27.5	+2.2
HYT	Haines Junctio	8.93	157	Pn	Pn	16 46 30.6	+2.2
DHRN	Dharma Camp	9.59	91	Pn	Pn	16 46 38.3	+1.0
DHRN				Sn	Sn	16 48 22.1	-2.8
KUKN	Kugluktuk,NWT	10.86	83	Pn	Pn	16 46 56.6	+2.0
KUKN				Sn	Sn	16 48 49.6	-6.5

BJI ***20*** *16:48:34.4±0.0, 3°.72S×135°.71E, h31km, mb5.0/62, mB5.1/44, Ms4.6/42, Ms7 4.3/41*
MOS ***20*** *16:48:36.9±0.9, 3°.49S×135°.39E, h33km, mb5.3/29, Error ellipse: s-maj=15.3km s-min=7.2km az=112.8*
ISCJB ***20*** *16:48:38.1±0.5, 3°.55S±0°.03×135°.51E±0°.03, h46km±4km, mb5.0/92, MS4.3/34, Error ellipse: s-maj=5.1km s-min=4.3km az=173.1*
IDC ***20*** *16:48:39.8±0.5, 3°.48S×135°.49E, h48km±4km, mb4.4/18, mb1 4.5/21, mb1mx4.4/27, mbtmp4.6/21, MS4.2/22, Ms1 4.2/22, ms1mx4.1/31, Error ellipse: s-maj=16.7km s-min=9.9km az=77.0*
DJA ***20*** *16:48:40.7±0.2, 3°S±2°×13°5E±°, h36km±3km, M5.2/35, mB5.5/26, mb5.3/35, MLv5.8/12, Mw(mB)5.0/26*
NEIC ***20*** *16:48:40.1±1.9, 3°.51S×135°.42E, h46km±5km, mb5.0/42, Error ellipse: s-maj=12.3km s-min=9.8km az=53.0*
NEIC Felt [IV] at Nabire and [III] at Wasior.
GCMT ***20*** *16:48:42.1±0.2, 3°.42S±0°.01×135°.43E±0°.01, h43km, MW5.2/90, Moment Tensor Solution. s88,c136; s90,c143; Duration: 0 Moment tensor: Scale 10*

ISC 20 16:48:39.3±0.4**, 3°.57S**±0°.04×**135°.38E**±0°.04**, h40km**±2km**, h41km:pP-P, n277, σ1.s85**/306**, mb5.0**/92**, MS4.2**/37**, 11C-6D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.68	267	P	Pn	16 49 09.9	+3.8
SRPI	Serui, Papua	1.89	27	P	Pn	16 49 07.4	-1.7
SRPI				S	Sn	16 49 30.3	-1.4
BAKI	Biak	2.47	17	P	Pn	16 49 16.1	-0.9
FAKI	Fak Fak	3.20	282	ePn	Pn	16 49 29.4	+2.4
FAKI	Fak Fak	3.20	282	P	Pn	16 49 28.2	+1.2
FAKI				S	Sn	16 50 03.8	-0.1
GENI	Genyem	4.87	79	P	Pn	16 49 52.4	+2.3
SIJI	Sorong	4.91	303	P	Pn	16 49 50.8	+0.2
	131nm,0.3s,baz=45,slow=4.4,SNR=273						
SIJI				S	Sn	16 50 43.3	-3.0
	817nm,0.3s,baz=138,slow=23,SNR=19						
SIJI				LR	LR	16 52 21.9	
	comp=Z,7μm,18.5s,baz=125,slow=45						
SWI	Sorong	4.92	303	P	Pn	16 49 51.1	+0.4
BNDI	Bandanaira	5.55	260	P	Pn	16 50 03.6	+4.2
SAUI	Saumlaki	5.98	223	P	Pn	16 50 09.4	+4.1
MSAI	Masohi	6.45	272	P	Pn	16 50 13.9	+2.2
MMPI	Merauke	6.96	135	P	Pn	16 50 21.5	+2.8
AAI	Ambon	7.18	269	P	Pn	16 50 25.3	+3.6
	311nm,0.6s,5μm						
NLAI	Namlea	8.28	272	P	Pn	16 50 41.9	+5.1
	181nm,0.5s,3μm						
LBMI	Labuha	8.40	290	P	Pn	16 50 40.8	+2.3
	485nm,1.1s,4μm						
SANI	Sanana	9.51	279	P	Pn	16 50 54.5	+0.8
KDU	Kakadu	9.51	197	P	Pn	16 50 53.9	+0.2
	baz=9.5,SNR=305						
MTN	Manton Dam	10.13	204	ePn	Pn	16 51 04.1	+1.9
MTN	Manton Dam	10.13	204	P	Pn	16 51 02.9	+0.6
	baz=10,SNR=1000						
PALU	Palau	10.88	355	P	Pn	16 51 16.9	+4.4
	baz=11,SNR=6.0						
SOEI	Soe	12.63	240	P	Pn	16 51 38.6	+2.0
	1μm,1.0s,8μm						
KDI	Kendari	12.74	268	P	Pn	16 51 41.4	+3.4
	93nm,1.2s,3μm						
LUWI	Luwuk	12.85	281	ePn	Pn	16 51 40.9	+1.5
LUWI				eSn	Sn	16 53 55.8	-5.4
LUWI	Luwuk	12.85	281	P	Pn	16 51 41.9	+2.4
	149nm,0.8s,2μm						
COEN	Coen	12.87	144	ePn	Pn	16 51 38.0	-1.8
COEN	Coen	12.87	144	P	Pn	16 51 38.0	-1.8
	baz=13,SNR=289						
PMG	Port Moresby	13.05	117	P	Pn	16 51 42.4	+0.1
	6.5nm,0.3s,baz=327,slow=5.1,SNR=25						
PMG				S	Sn	16 53 56.3	-10
	0.7nm,0.3s,baz=139,slow=15,SNR=1.9						
PMG				LR	LR	16 58 55.0	
	comp=Z,2μm,18.8s,baz=298,slow=47						
PMG	Port Moresby	13.05	117	ePn	Pn	16 51 44.1	+1.9
PMG	Port Moresby	13.05	117	eP	Pn	16 51 44.1	+1.9
BATI	Baumata	13.37	240	P	Pn	16 51 48.2	+1.6
	11nm,0.3s,baz=105,slow=1.9,SNR=17						
BATI				S	Sn	16 54 10.6	-3.4
	7.3nm,0.3s,baz=104,slow=19,SNR=5.2						
BATI	Baumata	13.37	240	ePn	Pn	16 51 48.2	+1.6
BATI				ePn	Pn	16 51 48.2	+1.6
BATI	Baumata	13.37	240	P	Pn	16 51 47.9	+1.3
KNRA	Kununurra	13.68	208	P	Pn	16 51 49.8	-1.0
	baz=14,SNR=100						
MMRI	Maumere	14.01	248	P	P	16 51 59.8	-2.6
DAV	Davao City (W)	14.40	317	LR	LR	16 58 00.3	
	comp=Z,734nm,18.2s,baz=144,slow=39						
EDFI	Ende, Flores	14.55	249	P	P	16 52 06.2	-2.4
	67nm,1.2s,994nm						
BNSI	Bone	15.26	266	P	P	16 52 16.7	+0.3
	58nm,1.0s,922nm						
BKSI	Bulukumba	15.31	263	P	Pn	16 52 13.2	+0.5
TTSI	Tana Toraja	15.55	271	P	P	16 52 29.6	+10
SPSI	Sidrap Palu	15.59	268	P	P	16 52 19.7	-0.3
KAPI	Kappang	15.65	264	P	P	16 52 19.9	-0.8
	0.3nm,0.3s,baz=79,slow=16,SNR=3.0						
WSI	Waingapu	16.16	247	P	P	16 52 40.1	+14
WC2	Warramunga Arr	16.29	183	P	Pn	16 52 21.7	-3.5
	baz=16						
WRAB	Tennant Creek	16.30	183	ePn	Pn	16 52 22.3	-3.0
	80nm,0.7s						
WRAB	Tennant Creek	16.30	183	ceP	Pn	16 52 21.8	-3.5
WRAB				pmax	pmax		
	comp=Z,54nm,1.0s						
WB2	Warramunga Arr	16.31	183	ePn	Pn	16 52 22.3	-3.2
	comp=Z,83nm,0.6s						
WR1	Warramunga Arr	16.31	184	eP	Pn	16 52 21.9	-3.6
WRA	Warramunga Arr	16.31	184	P	Pn	16 52 21.9	-3.6
	comp=Z,6.3nm,0.3s,baz=360,slow=13,SNR=133						
WRA				S	Sn	16 55 12.6	-13
	comp=Z,1.9nm,0.3s,baz=16,slow=24,SNR=6.3						
MTSU	Mount Surprise	16.91	150	P	Pn	16 52 31.0	-2.2
	baz=17,SNR=26						
QIS	Mount Isa	17.38	167	P	Pn	16 52 37.2	-1.7
	baz=17,SNR=28						
SMKI	Samarinda	18.43	279	P	Pn	16 52 59.2	+7.4
GUMO	Guam	19.47	29	LR	LR	17 01 28.7	
	comp=Z,395nm,18.3s,baz=207,slow=40						
CTA	Charters Tower	19.55	148	P	Pn	16 53 04.8	-0.4
	comp=Z,4.8nm,0.3s,baz=325,slow=12,SNR=81						
CTA				LR	LR	17 01 32.5	
	comp=Z,3μm,18.5s,baz=322,slow=40						
CTAO	Charters Tower	19.55	148	ePn	Pn	16 53 06.1	+0.9
	comp=Z,50nm,1.0s						
CTAO	Charters Tower	19.55	148	eP	Pn	16 53 06.1	+0.9
CTAO				pmax	pmax		
	comp=Z,50nm,1.0s						
RCP	Roxas	19.59	320	⇑eP	Pn	16 53 06.4	+0.6
AS31	Alice Springs	20.03	184	eP	Pn	16 53 10.3	-0.6
	comp=Z,40nm,0.6s						
ASAR	Alice Springs	20.03	184	P	Pn	16 53 10.3	-0.6
	comp=Z,45nm,0.4s,baz=6.2,slow=10,SNR=158						
ASAR				S	S	16 56 43.4	-8.8
	comp=Z,13nm,0.9s,baz=7.4,slow=29,SNR=2.8						
ASAR				LR	LR	17 01 29.3	
	comp=Z,4μm,19.1s,baz=9.0,slow=38						
KMMI	Kalianget	21.60	260	P	P	16 53 33.1	+7.2
	comp=Z,116nm,1.0s,comp=Z,920nm						
WRKA	Warakurna	22.41	197	P	P	16 53 35.0	+0.5
	baz=22,SNR=73						
GRJI	Gresik	23.05	261	P	P	16 53 47.3	+6.0
	comp=Z,67nm,1.1s,comp=Z,647nm						
PSA00	Pilbara Seismi	23.41	219	eP	P	16 53 46.1	+1.3
	comp=Z,34nm,0.9s						
PBKI	Pangkalan Bun	23.69	271	P	P	16 53 51.1	+3.5
	comp=Z,324nm,1.2s,comp=Z,4μm						
NGJI	Ngawi	24.11	260	P	P	16 54 03.3	+12
SMRI	Semarang	25.07	261	P	P	16 54 05.0	+4.7
	comp=Z,136nm,1.5s						
HNR	Honiara	25.08	105	LR	LR	17 05 28.5	

	comp=Z,309nm,18.4s,baz=248,slow=40						
KSM	Kuching	25.56	281	eP	P	16 54 06.4	+1.7
	comp=Z,47nm,1.0s						
FORT	Forrest	27.94	194	P	P	16 54 26.8	+0.9
	baz=28,SNR=12						
MEEK	Meekatharra	28.00	213	P	P	16 54 28.0	+1.4
	baz=28,SNR=4.6						
STKA	Stephens Creek	28.76	169	P	P	16 54 32.4	-0.9
	comp=Z,6.7nm,0.5s,baz=346,slow=9.0,SNR=16						
STKA				LR	LR	17 07 01.7	
	comp=Z,2µm,20.2s,baz=347,slow=38						
STKA	Stephens Creek	28.76	169	eP	P	16 54 33.2	0.0
	comp=Z,1.6nm,0.8s						
STKA	Stephens Creek	28.76	169	P	P	16 54 35.1	+1.9
	baz=29,SNR=6.5						
STKA	Stephens Creek	28.76	169	eP	P	16 54 33.2	0.0
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMSA	Cobar Meteorol	29.47	162	P	P	16 54 40.7	+1.2
	baz=30,SNR=6.5						
HTT	Hallett	29.89	174	P	P	16 54 44.7	+1.4
	baz=30,SNR=4.3						
KMBL	Kambalda	30.44	203	P	P	16 54 49.2	+1.1
	baz=30,SNR=6.6						
MDSI	Maura Dua	31.14	267	P	P	16 54 56.8	+2.3
	comp=Z,18nm,1.3s						
MYKOM	Kota Tinggi	31.96	279	eP	P	16 55 02.4	+0.6
	comp=Z,25nm,0.9s						
ARPS	Mount Arapiles	33.57	171	P	P	16 55 16.6	+1.1
	baz=34,SNR=12						
QIZ	Qiongzhong	33.70	313	P	P	16 55 16.8	-0.1
QIZ				pmax	pmax		
	comp=Z,71nm,2.8s						
QIZ				LR	LR		
	comp=Z,430nm,40.2s						
QIZ				LR	LR		
	comp=Z,340nm,18.6s						
QIZ				LR	LR		
	comp=Z,390nm,27.5s						
NWAO	Narrogin (SRO)	33.79	208	P	P	16 55 17.9	+0.4
	comp=Z,6.3nm,0.7s,baz=342,slow=3.2,SNR=3.0						
NWAO				PcP	PcP	16 57 56.9	+0.8
	comp=Z,5.0nm,0.4s,baz=40,slow=1.3,SNR=5.0						
PDSI	Padang	34.99	273	P	P	16 55 36.2	+8.0
IPM	Ipoh	35.25	283	eP	P	16 55 30.9	+0.5
	comp=Z,22nm,1.1s						
DZM	Mont Dzumac	35.30	124	eLR	LR	17 05 07.2	
	comp=Z,906nm,23.4s						
DZM	Mont Dzumac	35.30	124	P	P	16 55 30.6	-0.2
	comp=Z,6.3nm,0.9s,baz=72,slow=20,SNR=3.1						
DZM	Mont Dzumac	35.30	124	eP	P	16 55 30.6	-0.2
	comp=Z,9.9nm,1.0s						
MNSI	Mandailing Nat	36.05	276	P	P	16 55 41.7	+4.5
	comp=Z,27nm,0.8s						
PANO	Nakornpanom	36.70	305	P	P	16 55 44.1	+1.4
	comp=Z,0.6nm,1.0s						
JNU	Nakatsue	36.74	354	eP	P	16 55 41.7	-1.1
	comp=Z,71nm,1.1s						
TRTT	Trang	37.37	288	P	P	16 55 51.2	+2.7
	comp=Z,31nm,1.1s						
GSI	Gunungsitoli	38.10	277	P	P	16 55 56.4	+1.7
	comp=Z,42nm,1.0s						
KCSI	Kotacane, Aceh	38.24	280	P	P	16 56 11.7	+16
CHAI	Chaiyaphum	38.28	301	P	P	16 55 58.8	+2.7
	comp=Z,30µm,0.6s,comp=Z,315µm						
NONG	Nongkai	38.37	305	P	P	16 55 58.4	+1.6
	comp=Z,0.3nm,1.0s						
NJ2	Nanjing	38.75	337	eP	P	16 56 01.3	+1.5
NJ2				pP	pP	16 56 09.4	-1.7
NJ2				sP	sP	16 56 13.0	-2.9
NJ2				S	S	17 01 55.9	+1.5
NJ2				sS	sS	17 02 13.0	-0.2
NJ2				pmax	pmax		
	comp=Z,21nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,120nm,3.5s						
NJ2				LR	LR		
	comp=Z,320nm,18.5s						
NJ2				LR	LR		
	comp=Z,280nm,16.3s						
NJ2				LR	LR		
	comp=Z,560nm,20.3s						
WHN	Wuhan	39.43	331	P	P	16 56 08.0	+2.5
WHN				sP	sP	16 56 22.0	+0.4
WHN				S	S	17 02 02.9	-1.7
WHN				LR	LR		
	comp=Z,630nm,18.7s						
MLSI	Meulaboh, Aceh	39.72	281	P	P	16 56 08.8	+0.6
	comp=Z,89nm,0.9s						
MJAR	Matsushiro Arr	39.99	4	P	P	16 56 07.0	-3.2
	comp=Z,2.7nm,0.5s,baz=191,slow=7.9,SNR=19						
MJAR				pP	pP	16 56 20.9	-0.5
	comp=Z,2.4nm,0.6s,baz=194,slow=9.7,SNR=6.2						
MJAR				PcP	PcP	16 58 14.3	-0.6
	comp=Z,1.8nm,0.7s,baz=169,slow=3.7,SNR=3.2						
MJAR				LR	LR	17 09 48.9	
	comp=Z,654nm,19.9s,baz=180,slow=32						
MAJO	Matsushiro	39.99	4	eP	P	16 56 07.2	-2.9
	comp=Z,8.3nm,0.8s						
MAJO				ePcP	PcP	16 58 14.3	-0.6
MAJO	Matsushiro	39.99	4d	iP	P	16 56 08.8	-1.3
MAJO				pmax	pmax		
	comp=Z,19nm,1.4s						
MJB9	Matsu-Tunnel	39.99	4	eP	P	16 56 07.4	-2.7
	comp=Z,12nm,1.0s						
UTTA	Uttaradit	40.35	303	P	P	16 56 17.0	+3.6
	comp=Z,9µm,0.9s						
TJN	Taejon	40.44	350⇓	eP	P	16 56 13.8	0.0
GYA	Guiyang	40.78	319⇓	iP	P	16 56 18.3	+1.4
GYA				PP	PnPn	16 57 54.6	-1.2
GYA				S	S	17 02 29.5	+4.3
GYA				sS	sS	17 02 48.9	+4.8
GYA				SS	SS	17 05 25.6	-1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,80nm,5.3s						
GYA				LR	LR		
	comp=Z,330nm,24.3s						
GYA				LR	LR		
	comp=Z,280nm,22.7s						
GYA				LR	LR		
	comp=Z,470nm,23.9s						
PHRA	Phrae	40.98	304	P	P	16 56 20.3	+1.7
	comp=Z,2.4nm,1.3s						
KSRS	Korea Array	41.40	351	P	P	16 56 20.2	-1.5
	comp=Z,6.5nm,1.0s,baz=170,slow=9.3,SNR=21						
KSRS				pP	pP	16 56 34.5	+1.5
	comp=Z,11nm,1.1s,baz=174,slow=8.4,SNR=9.4						
KSRS				PcP	PcP	16 58 18.6	-0.6
	comp=Z,2.4nm,0.8s,baz=186,slow=2.6,SNR=5.0						
KSRS				LR	LR	17 11 17.7	
	comp=Z,187nm,22.0s,baz=158,slow=33						
PAYA	Payao	41.70	304	P	P	16 56 26.1	+1.6
	comp=Z,18µm,0.8s,comp=Z,517µm						
CM31	Chiang Mai Arr	42.04	303	eP	P	16 56 27.0	-0.3
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	42.04	303	P	P	16 56 27.4	+0.1
	comp=Z,12nm,1.1s,baz=125,slow=6.5,SNR=30						
CMAR				PcP	PcP	16 58 22.3	+0.4
	comp=Z,1.7nm,0.5s,baz=152,slow=2.0,SNR=5.4						
CMMT	Chiang Mai	42.20	303	P	P	16 56 29.5	+0.9
	comp=Z,5.5nm,0.7s						
CHTO	Chiang Mai	42.20	303	eP	P	16 56 29.2	+0.6
	comp=Z,5.3nm,0.6s						
CHTO	Chiang Mai	42.20	303	eP	P	16 56 29.2	+0.6
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KMI	Kunming	42.63	314	P	P	16 56 33.8	+1.5
KMI				pP	pP	16 56 42.8	-0.9
KMI				sP	sP	16 56 46.6	-1.9
KMI				S	S	17 02 53.8	+0.9
KMI				sS	sS	17 03 09.8	-2.1
KMI				pmax	pmax		
	comp=Z,19nm,1.3s						
KMI				pmax	pmax		
	comp=Z,78nm,3.1s						
KMI				LR	LR		
	comp=Z,130nm,18.5s						
KMI				LR	LR		
	comp=Z,220nm,15.2s						
KMI				LR	LR		
	comp=Z,260nm,24.5s						
TIA	Tai'an	43.10	338	P	P	16 56 35.9	+0.3
TIA				S	S	17 02 57.3	-1.8
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA				LR	LR		
	comp=Z,340nm,20.0s						
TIA				LR	LR		
	comp=Z,450nm,19.9s						
XAN	Xi'an	44.97	328	P	P	16 56 51.3	+0.6
XAN				pP	pP	16 56 58.8	-3.3
XAN				sP	sP	16 57 02.0	-4.9
XAN				PP	PP	16 58 34.8	-1.6
XAN				S	S	17 03 22.6	-3.8
XAN				ScS	ScS	17 06 45.6	+0.7
XAN				pmax	pmax		
	comp=Z,20nm,1.5s						
XAN				pmax	pmax		
	comp=Z,76nm,4.2s						
XAN				LR	LR		
	comp=Z,150nm,15.4s						
XAN				LR	LR		
	comp=Z,150nm,20.6s						
XAN				LR	LR		
	comp=Z,330nm,22.0s						
CD2	Chengdu	45.66	321	eP	P	16 56 56.5	+0.2
TIY	Taiyuan	46.27	335	eP	P	16 57 01.4	+0.4
TIY				S	S	17 03 44.3	-0.9
TIY				LR	LR		
	comp=Z,240nm,19.1s						
SNY	Shenyang	46.44	348 ⇑	P	P	16 57 15.8	+14
SNY				S	S	17 03 45.8	-1.5
SNY				pmax	pmax		
	comp=Z,140nm,4.4s						
SNY				LR	LR		
	comp=N,160nm,12.0s						
SNY				LR	LR		
	comp=E,210nm,32.1s						
SNY				LR	LR		
	comp=Z,420nm,20.0s						
BJT	Baijiatuau	46.83	340	eP	P	16 57 05.8	+0.6
	comp=Z,34nm,1.1s						
BJT	Baijiatuau	46.83	340	eP	P	16 57 05.8	+0.6
BJT				pmax	pmax		
	comp=Z,34nm,1.1s						
USRK	Ussuriysk Ar.	47.65	357	P	P	16 57 10.9	-0.6
	comp=Z,2.1nm,0.5s,baz=182,slow=7.7,SNR=15						
USRK				pP	pP	16 57 23.2	+0.2
	comp=Z,7.0nm,0.8s,baz=154,slow=8.8,SNR=8.9						
USRK				LR	LR	17 15 19.6	
	comp=Z,399nm,18.9s,baz=170,slow=34						
CN2	Changchun	47.99	350	eP	P	16 57 16.6	+2.4
CN2				eS	S	17 04 12.0	+2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.4s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
MDJ	Mudanjiang	48.25	354	eP	P	16 57 15.2	-1.0
	comp=Z,16nm,0.9s						
MDJ	Mudanjiang	48.25	354	P	P	16 57 29.4	+13
MDJ				pmax	pmax		
	comp=Z,47nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,270nm,2.4s						
MDJ	Mudanjiang	48.25	354	P	P	16 57 16.8	+0.7
MDJ				pmax	pmax		
	comp=Z,22nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,170nm,3.7s						
LZH	Lanzhou	49.25	326	eP	P	16 57 26.5	+2.3
LZH				pP	pP	16 57 35.3	-0.5
LZH				sP	sP	16 57 39.0	-1.5
LZH				eS	S	17 04 27.0	-0.7
LZH				pmax	pmax		
	comp=Z,50nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.1s						
LZH				LR	LR		
	comp=Z,1µm,11.7s						
LZH				LR	LR		
	comp=Z,1µm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,18.7s						
HHC	Hu-ho-hao-te	49.28	336	P	P	16 57 26.3	+2.0
HHC				S	S	17 04 30.0	+2.2
HHC				SS	SS	17 07 58.4	-1.5
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,26nm,5.4s						
HHC				LR	LR		
	comp=Z,320nm,17.9s						
HHC				LR	LR		
	comp=Z,270nm,17.0s						
YSS	Yuzh-Sakhalins	50.73	7	eP	P	16 57 34.9	-0.1
YSS				e		16 57 48.7	
YSS				eS	S	17 04 45.9	-1.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SHL	Shillong	51.14	307	eP	P	16 57 37.0	-1.8
KLR	Kul'dur	52.68	357c	iP	P	16 57 49.4	-0.1
KLR				pmax	pmax		
	comp=Z,16nm,1.4s						
GTA	Gaotai	53.85	326	eP	P	16 57 59.8	+1.3
GTA				pP	pP	16 58 07.3	-2.9
GTA				sP	sP	16 58 10.3	-4.7
GTA				S	S	17 05 27.4	-3.6
GTA				pmax	pmax		
	comp=Z,27nm,1.2s						
GTA				pmax	pmax		
	comp=Z,160nm,6.2s						
GTA				LR	LR		
	comp=Z,130nm,15.5s						
GTA				LR	LR		
	comp=Z,150nm,19.2s						
GTA				LR	LR		
	comp=Z,210nm,20.6s						
TYV	Tymovskoe	54.58	6	eP	P	16 58 04.1	+0.7
TYV				e		16 58 17.6	
TYV				eS	S	17 05 43.8	+3.8
TYV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,2.2s						
TYV				smax	smax		
	comp=E,4.0nm,1.3s						
PALK	Pallekele	55.62	281	LR	LR	17 22 09.3	
	comp=E,106nm,22.0s,baz=125,slow=36						
JIRN	Jiri	56.63	306	eP	P	16 58 18.4	-0.7
	comp=E,147nm,1.2s						
ULN	Ulaanbaatar	56.92	338c	iP	P	16 58 21.4	+0.9
ULN				pmax	pmax		
	comp=Z,28nm,1.7s						
SONA0	Songino Array	57.14	337	eP	P	16 58 21.8	-0.2
SONM	Songino Array	57.14	337	P	P	16 58 21.8	-0.2
	comp=Z,1.3nm,0.4s,baz=153,slow=8.0,SNR=21						
SONM				pP	pP	16 58 35.2	+1.4
	comp=Z,5.8nm,0.9s,baz=151,slow=6.7,SNR=9.6						
SONM				LR	LR	17 23 05.3	
	comp=Z,228nm,19.5s,baz=143,slow=36						
PKI	Pulchoki	57.22	306	eP	P	16 58 22.6	-0.6
	comp=Z,99nm,1.3s						
PKIN	Phulchoki	57.24	306	eP	P	16 58 22.5	-0.8
	comp=Z,46nm,1.1s						
KKN	Kakani	57.42	306	eP	P	16 58 24.1	-0.4
	comp=Z,123nm,1.1s						
DMN	Daman	57.48	306	eP	P	16 58 25.1	+0.1
	comp=Z,120nm,1.1s						
GKN	Gorkha	58.02	306	eP	P	16 58 28.8	+0.1
	comp=Z,218nm,1.2s						
KOLN	Koldanda	58.77	305	eP	P	16 58 34.1	+0.2
	comp=Z,247nm,1.2s						
DANN	Dangsing	58.87	306	eP	P	16 58 34.7	0.0
	comp=Z,119nm,1.0s						
PETK	Petropavlovsk-	59.51	15	P	P	16 58 38.9	+0.5
	comp=Z,3.6nm,0.7s,baz=180,slow=7.3,SNR=13						
PETK				LR	LR	17 21 29.1	
	comp=Z,122nm,21.5s,baz=196,slow=33						
PEA1	Petropavlovsk-	59.52	15	eP	P	16 58 38.9	+0.5
PET	Petropavlovsk	59.70	16	eP	P	16 58 38.5	-1.0
PET				i S	S	17 06 45.6	-1.7
PET				eSS	SS	17 10 48.5	+4.8
PET				pmax	pmax		
	comp=Z,11nm,1.1s						
PET				pmax	pmax		
	comp=Z,100nm,13.4s						
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
ZAK	Zakamensk	60.41	337	eP	P	16 58 45.2	+0.5
ZAK				pmax	pmax		
	comp=Z,28nm,1.5s						
IRK	Irkutsk	61.53	339	eP	P	16 58 53.2	+1.1
IRK				pmax	pmax		
	comp=Z,82nm,2.2s						
MOY	Mondy	62.32	337	eP	P	16 58 59.0	+1.5
MOY				pmax	pmax		
	comp=Z,77nm,2.1s						
BOD	Bodaibo	63.57	347	eP	P	16 59 05.1	-0.4
BOD				pmax	pmax		
	comp=Z,65nm,1.7s						
WMQ	Urumqi	63.66	323	eP	P	16 59 08.2	+1.6
	comp=Z,26nm,0.9s						
WMQ	Urumqi	63.66	323	P	P	16 59 08.5	+1.9
WMQ				pP	sP	16 59 21.3	-1.9
WMQ				sP	pP	16 59 24.1	+5.6
WMQ				S	S	17 07 38.4	+0.3
WMQ				sS	sS	17 07 57.1	-0.7
WMQ				pmax	pmax		
	comp=Z,28nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.7s						
WMQ				LR	LR		
	comp=Z,220nm,27.3s						
WMQ				LR	LR		
	comp=Z,410nm,29.2s						
WMQ				LR	LR		
	comp=Z,160nm,22.3s						
WMQ	Urumqi	63.66	323	eP	P	16 59 08.2	+1.6
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
YAK	Yakutsk	65.56	357	eP	P	16 59 17.2	-1.3
YAK				e*PP	pP	16 59 31.0	+0.5
YAK				e		16 59 45.8	
YAK				e		17 01 40.9	
YAK				eS	S	17 08 00.3	-0.3
YAK				e*SS	sS	17 08 17.7	-2.6
YAK				e		17 09 10.0	
YAK				eSS	SS	17 12 13.9	-1.3
YAK				pmax	pmax		
	comp=Z,17nm,1.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.6s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,36nm,2.5s						
YAK				pmax	pmax		
	comp=E,17nm,2.5s						
YAK				pmax	pmax		
	comp=N,21nm,2.0s						
YAK				smax	smax		
	comp=N,65nm,3.0s						
YAK				smax	smax		
	comp=E,28nm,2.3s						
SEY	Seymchan	67.56	8	P	P	16 59 31.1	-0.2
	comp=E,1.2nm,0.4s,baz=232,slow=5.6,SNR=7.1						
SEY				pP	pP	16 59 44.5	+1.2
	comp=E,26nm,1.3s,baz=210,slow=5.0,SNR=8.4						
SEY	Seymchan	67.56	8d	eP	P	16 59 32.3	+1.1
MK31	Makanchi Array	68.48	324	eP	P	16 59 37.3	-0.1
MK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR	Makanchi Array	68.48	324	P	P	16 59 37.4	0.0
	comp=Z,4.1nm,0.4s,baz=107,slow=8.7,SNR=70						
MKAR	Makanchi Array	68.48	324	i P	P	16 59 37.4	0.0
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MAKZ	Makanchi	68.67	324	eP	P	16 59 38.4	-0.2
	comp=Z,23nm,0.8s						
MAKZ	Makanchi	68.67	324	eP	P	16 59 38.4	-0.2
MAKZ				pmax	pmax		
	comp=Z,23nm,0.8s						
NIL	Nilore	69.20	308	eP	P	16 59 42.4	+0.2
	comp=Z,30nm,0.9s						
NIL	Nilore	69.20	308	eP	P	16 59 42.4	+0.2
NIL				pmax	pmax		
	comp=Z,30nm,0.9s						
KSH	Kashi	69.29	315	P	P	16 59 45.3	+2.6
KSH				sP	sP	16 59 58.6	-0.8
KSH				PcP	PcP	17 00 08.4	+2.2
KSH				S	S	17 08 48.3	+1.7
KSH				ScS	ScS	17 09 40.8	-0.1
KSH				pmax	pmax		
	comp=Z,35nm,1.3s						
KSH				pmax	pmax		
	comp=Z,160nm,3.8s						
KSH				LR	LR		
	comp=Z,97nm,5.2s						
KSH				LR	LR		
	comp=Z,77nm,6.0s						
KDJ	Kajisay	69.52	318	eP	P	16 59 45.7	+1.5
	comp=Z,14nm,0.8s						
KDJ	Kajisay	69.52	318	eP	P	16 59 45.7	+1.5
KDJ				pmax	pmax		
	comp=Z,14nm,0.8s						
ZALV	Zalesovo Beam	71.04	331	P	P	16 59 52.2	-0.7
	comp=Z,5.6nm,0.7s,baz=126,slow=6.3,SNR=27						
ZALV				pP	pP	17 00 05.7	+0.7
	comp=Z,10nm,0.9s,baz=111,slow=5.4,SNR=8.9						
ZALV				LR	LR	17 31 44.0	
	comp=Z,47nm,20.3s,baz=70,slow=36						
AAK	Ala-Archa	71.54	317	LR	LR	17 32 41.8	
	comp=Z,106nm,21.9s,baz=76,slow=37						
AAK	Ala-Archa	71.54	317	eP	P	16 59 57.9	+1.4
	comp=Z,11nm,1.1s						
AAK	Ala-Archa	71.54	317⇑	eP	P	16 59 57.6	+1.1
AAK				pmax	pmax		
	comp=Z,21nm,1.4s						
ARSB	Arslanbob	72.09	315	eP	P	17 00 00.9	+1.1
	comp=Z,23nm,1.0s						
KURK	Kurchatov	72.54	326	eP	P	17 00 02.5	+0.5
	comp=Z,17nm,1.0s						
KURK	Kurchatov	72.54	326c	iP	P	17 00 02.1	+0.1
KURK				pmax	pmax		
	comp=Z,65nm,2.5s						
KBL	Kabul	72.80	308	eP	P	17 00 04.7	+0.5
	comp=Z,21nm,1.0s						
KBL	Kabul	72.80	308	eP	P	17 00 04.7	+0.5
KBL				pmax	pmax		
	comp=Z,21nm,1.0s						
GAR	Garm	73.20	312	eP	P	17 00 07.0	+0.7
	comp=Z,51nm,1.0s						
GAR	Garm	73.20	312	eP	P	17 00 07.1	+0.7
GAR				pmax	pmax		
	comp=Z,51nm,1.0s						
KK31	Karatay Array	74.44	317	i P	P	17 00 13.5	+0.1
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BILL	Bilibino	74.64	12⇓	eP	P	17 00 13.3	-0.7
BILL				pmax	pmax		
	comp=Z,8.0nm,1.8s						
PPT	Papeete	74.67	107	LR	LR	17 31 15.2	
	comp=Z,94nm,20.0s,baz=271,slow=34						
PPT2	Papeete2	74.67	107	eLR	LR	17 23 23.9	
	comp=Z,235nm,23.5s						
TBI	Tubuai	74.97	113	eLR	LR	17 23 28.0	
	comp=Z,254nm,31.5s						
OTUK	Ortayu	75.14	322	P	P	17 00 16.9	-0.5
OTUK				pmax	pmax		
	comp=Z,24nm,1.2s						
TIXI	Tiksi	75.20	358	P	P	17 00 17.0	-0.2
	comp=Z,2.1nm,0.6s,baz=208,slow=4.0,SNR=4.2						
TIXI	Tiksi	75.20	358⇑	eP	P	17 00 18.9	+1.7
VNDA	Vanda	75.24	174	P	P	17 00 18.8	+1.3
	comp=Z,1.6nm,0.5s,baz=322,slow=7.1,SNR=13						
VNDA				LR	LR	17 33 31.6	
	comp=Z,772nm,18.1s,baz=355,slow=36						
BRVK	Borovoye	78.21	326	eP	P	17 00 34.2	-0.3
	comp=Z,26nm,1.0s						
BRVK	Borovoye	78.21	326c	iP	P	17 00 34.6	0.0
MAW	Mawson	80.09	202	P	P	17 00 44.6	0.0
	comp=Z,3.9nm,0.5s,baz=89,slow=6.0,SNR=6.8						
MAW				LR	LR	17 33 43.7	
	comp=Z,274nm,19.3s,baz=66,slow=34						
MAW	Mawson	80.09	202	eP	P	17 00 45.4	+0.8
	comp=Z,2.3nm,1.0s						
MAW	Mawson	80.09	202	P	P	17 00 45.5	+0.8
	baz=80,SNR=8.5						
MAW	Mawson	80.09	202	eP	P	17 00 45.4	+0.8

MAW				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GEYT	**Alibeck**	**82.18**	**309**	P	**P**	**17 00 55.7**	**-0.7**
	comp=Z,37nm,1.2s,baz=115,slow=2.1,SNR=42						
GEYT				LR	LR	17 39 31.5	
	comp=Z,70nm,21.9s,baz=20,slow=37						
AB31	**Akbulak array**	**83.24**	**320**	*i* P	**P**	**17 01 01.0**	**-0.6**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KDAK	**Kodiak Island**	**83.53**	**31**	*i* P	**P**	**17 01 03.4**	**+0.6**
TAOE	**Nuku Hiva Isla**	**84.00**	**98**	*e*LR	LR	17 27 23.4	
	comp=Z,223nm,33.1s						
SVE	**Sverdlovsk**	**84.68**	**328**⇑	*e*P	**P**	**17 01 09.4**	**+0.7**
SVE				pmax	pmax		
	comp=Z,49nm,1.7s						
AKTO	**Aktyubinsk**	**84.72**	**321**	LR	LR	17 40 49.5	
	comp=Z,51nm,21.2s,baz=99,slow=37						
ARU	**Arti**	**85.70**	**327**	LR	LR	17 43 50.0	
	comp=Z,45nm,18.6s,baz=91,slow=39						
ARU	**Arti**	**85.70**	**327**	*e*P	**P**	**17 01 13.5**	**-0.4**
	comp=Z,11nm,1.0s						
ARU	**Arti**	**85.70**	**327***c*	*i*P	**P**	**17 01 14.1**	**+0.3**
ARU				S	**S**	**17 11 36.4**	**-6.9**
ARU				pmax	pmax		
	comp=Z,17nm,1.1s						
QSPA	**South Pole Qui**	**86.38**	**180**	*e*P	**P**	**17 01 17.4**	**+0.2**
	comp=Z,10nm,0.7s						
SML	**Sawmill**	**86.68**	**28**	*e*P	**P**	**17 01 18.4**	**-0.2**
	comp=Z,11nm,1.0s						
RND	**Reindeer**	**86.83**	**26**	*e*P	**P**	**17 01 17.8**	**-1.6**
	comp=Z,16nm,0.8s						
RND	**Reindeer**	**86.83**	**26**	*e*P	**P**	**17 01 17.8**	**-1.6**
RND				pmax	pmax		
	comp=Z,16nm,0.8s						
SCM	**Sheep Creek Mo**	**87.14**	**28**	*e*P	**P**	**17 01 21.0**	**0.0**
	comp=Z,11nm,1.0s						
SCM	**Sheep Creek Mo**	**87.14**	**28**	*e*P	**P**	**17 01 21.0**	**0.0**
SCM				pmax	pmax		
	comp=Z,11nm,1.0s						
WRH	**Wood River Hil**	**87.42**	**25**	*e*P	**P**	**17 01 19.6**	**-2.5**
	comp=Z,11nm,1.1s						
COLA	**College**	**87.61**	**25***d*	*e*P	**P**	**17 01 22.7**	**-0.3**
COLA				pmax	pmax		
	comp=Z,16nm,1.7s						
HDA	**Harding Lake**	**87.89**	**25**	P	**P**	**17 01 24.4**	**+0.1**
	baz=257						
TOLK	**Toolik Lake Re**	**87.89**	**21**	P	**P**	**17 01 24.4**	**+0.1**
	baz=255						
ILAR	**Eielson Array**	**87.99**	**25**	P	**P**	**17 01 22.5**	**-2.3**
	comp=Z,3.1nm,0.5s,baz=261,slow=4.3,SNR=23						
ILAR				pP	**pP**	**17 01 37.8**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=263,slow=4.3,SNR=6.9						
RAYN	**Ar Rayn**	**91.30**	**293**	*e*P	**P**	**17 01 41.5**	**+0.2**
	comp=Z,14nm,1.1s						
RAYN	**Ar Rayn**	**91.30**	**293**	*e*P	**P**	**17 01 41.5**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,15nm,1.1s						
PRGR	**Permogore**	**93.00**	**331**	*e*P	**P**	**17 01 46.0**	**-2.2**
PRGR				pmax	pmax		
	comp=Z,24nm,1.6s						
KIV	**Kislovodsk**	**94.40**	**314**	*e*P	**P**	**17 01 54.6**	**-0.6**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN	**Obninsk**	**97.96**	**325**	*e*P	**P**	**17 02 09.1**	**-1.8**
OBN				*e*		17 06 09.5	
OBN				*e*PPP	PPP	17 08 15.8	
OBN				pmax	pmax		
	comp=Z,17nm,1.3s						
OBN				MLR	MLR		
	comp=Z,109nm,22.0s						
ARA0	**ARCESS Array S**	**100.21**	**340**	*e*Pdif	**Pdif**	**17 02 19.7**	**-1.1**
ARCES	**ARCESS Array B**	**100.21**	**340**	P	**Pdif**	**17 02 19.7**	**-1.1**
	comp=Z,2.3nm,0.4s,baz=84,slow=5.7,SNR=32						
FIA0	**FINESS Array S**	**102.28**	**332**	*e*Pdif	**Pdif**	**17 02 28.7**	**-1.4**
FIA0	**FINESS Array S**	**102.28**	**332**	*e*P	**Pdif**	**17 02 28.7**	**-1.4**
FINES	**FINESS Array B**	**102.28**	**332**	P	**Pdif**	**17 02 28.7**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=57,slow=7.0,SNR=5.1						
FINES	**FINESS Array B**	**102.28**	**332**	*i* P	**Pdif**	**17 02 32.7**	**+2.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**102.97**	**321**	P	**Pdif**	**17 02 31.2**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=64,slow=4.2,SNR=4.1						
CLL	**Collm**	**112.56**	**325**	*e*PS	PS	17 17 32.0	-0.8
CLL				*e*(SS)		17 23 06.0	
CLL				*e*(SSS)		17 28 24.0	
CLL				LmV		17 59 00.0	
	comp=Z,200nm,19.9s						
CLL				LmV		19 05 00.0	
	comp=Z,100nm,20.0s						
MNTX	**Cornudas Mount**	**116.60**	**56**	P	**PKiKP**	**17 07 20.5**	**+0.8**
	baz=283						
LTX	**Lajitas**	**118.58**	**59**	*e*PKPdf	**PKPdf**	**17 07 21.7**	**-1.9**
LTX	**Lajitas**	**118.58**	**59**	*e*PKIKP	**PKPdf**	**17 07 21.7**	**-1.9**
TXAR	**Lajitas Array**	**118.58**	**59**	PKP	**PKPdf**	**17 07 21.7**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=178,slow=3.7,SNR=6.6						
ECSD	**EROS Data Cent**	**119.21**	**41**	P	**PKPdf**	**17 07 24.4**	**0.0**
	baz=296						
EYMN	**Ely**	**120.29**	**35**	P	**PKPdf**	**17 07 26.2**	**-0.1**
	baz=303						
WMOK	**Wichita Mounta**	**121.08**	**51**	P	**PKPdf**	**17 07 28.0**	**-0.2**
	baz=289						
JCT	**Junction City**	**121.54**	**56**	P	**PKiKP**	**17 07 29.8**	**+0.4**
	baz=286						
C40A	**Isle Royale Na**	**121.62**	**34**	P	**PKPdf**	**17 07 28.2**	**-0.6**
	baz=305						
U40A	**Yellville**	**124.97**	**47**	P	**PKPdf**	**17 07 34.3**	**-1.3**
	baz=295						
MIAR	**Mount Ida**	**125.16**	**50**	P	**PKPdf**	**17 07 34.1**	**-1.9**
	baz=293						
E46A	**Sault Ste Mari**	**125.20**	**33**	P	**PKPdf**	**17 07 35.1**	**-0.6**
	baz=309						
CCM	**Cathedral Cave**	**125.38**	**45**	P	**PKPdf**	**17 07 35.7**	**-0.6**
	baz=297						
D47A	**Chapleau**	**125.40**	**31**	P	**PKPdf**	**17 07 36.1**	**0.0**
	baz=310						
SFIN	**Lafayette**	**127.03**	**40**	P	**PKPdf**	**17 07 39.7**	**+0.3**
	baz=302						
E50A	**Wahnapitae**	**127.04**	**31**	P	**PKiKP**	**17 07 40.1**	**+0.3**
	baz=313						
CHGQ	**Chibougamau**	**127.40**	**24**	P	**PKPdf**	**17 07 40.1**	**+0.2**
	baz=322						
D52A	**ZEK Kipawa Sen**	**127.81**	**29**	P	**PKPdf**	**17 07 40.9**	**+0.2**
	baz=315						
D53A	**Lac Vacive, Po**	**128.07**	**28**	P	**PKiKP**	**17 07 41.6**	**-0.2**
	baz=316						
O48A	**Farmland**	**128.34**	**39**	P	**PKiKP**	**17 07 42.6**	**0.0**
	baz=304						
BUKO	**Buck Lake**	**128.39**	**31**	P	**PKPdf**	**17 07 41.8**	**-0.1**
	baz=314						
D54A	**Lac Fusel, La**	**128.51**	**28**	P	**PKPdf**	**17 07 41.4**	**-0.7**
	baz=318						
N49A	**Columbus Grove**	**128.56**	**38**	P	**PKiKP**	**17 07 43.6**	**+0.6**
	baz=306						
WCI	**Wyandotte Cave**	**128.70**	**42**	P	**PKPdf**	**17 07 41.2**	**-1.5**
	baz=302						
L50A	**Kingsville**	**128.72**	**36**	P	**PKPdf**	**17 07 42.0**	**-0.6**
	baz=308						
O49A	**Covington**	**128.89**	**39**	P	**PKiKP**	**17 07 43.6**	**-0.1**
	baz=305						
TORD	**Torodi Ar. Bea**	**133.28**	**285**	PKP	**PKPdf**	**17 07 50.0**	**-2.0**
	comp=Z,2.2nm,0.6s,baz=40,slow=2.6,SNR=11						
TOA1	**Torodi Ar. Sit**	**133.28**	**285**	*e*PKPdf	**PKPdf**	**17 07 50.0**	**-2.0**
PB11	**IPOC Station P**	**146.19**	**134**	*e*PKPbc	**PKPab**	**17 08 17.8**	**+0.6**
MNMC	**Minye Minye**	**146.64**	**133**	*e*PKPbc	**PKPab**	**17 08 19.4**	**+0.4**
MALC	**Bahia Malaga**	**147.35**	**88**	*e*P	**PKiKP**	**17 08 26.2**	**+4.1**
BBAC	**Balboa, Cauca**	**147.37**	**92**	*e*P	**PKPdf**	**17 08 18.2**	**+0.5**
CPUP	**Villa Florida**	**147.83**	**158**	PKPbc	**PKPbc**	**17 08 19.9**	**-0.8**
	comp=Z,12nm,0.5s,baz=206,slow=1.9,SNR=33						
FLOC	**Florencia**	**148.93**	**93**	*e*P	**PKPbc**	**17 08 24.2**	**+0.1**
SJCC	**San Jacinto, C**	**149.02**	**77**	*e*P	**PKPbc**	**17 08 24.2**	**-0.1**
RREF	**El Recreo**	**149.33**	**86**	*e*P	**PKPbc**	**17 08 26.2**	**+0.4**
ORTC	**Ortega, Tolima**	**149.43**	**88**	*e*P	**PKPbc**	**17 08 24.2**	**-1.1**
LPAZ	**La Paz**	**149.51**	**131**	PKPbc	**PKPdf**	**17 08 23.8**	**+2.2**
	comp=Z,4.6nm,1.1s,baz=311,slow=5.4,SNR=6.4						
PTLC	**Puerto Leguiza**	**149.65**	**96**	*e*P	**PKPbc**	**17 08 25.5**	**-0.3**
NORC	**Norcasia**	**149.78**	**85**	*e*P	**PKiKP**	**17 08 28.1**	**+1.0**
PRAC	**Prado**	**149.79**	**89**	*e*P	**PKPbc**	**17 08 26.2**	**0.0**
PTBC	**PUERTO BERRIO,**	**150.13**	**83**	*e*P	**PKPbc**	**17 08 25.5**	**-1.5**
SMLC	**San Martn de**	**150.27**	**79**	*e*P	**PKPbc**	**17 08 26.8**	**-0.4**
ROSC	**El Rosal**	**150.35**	**87**	PKPbc	**PKPdf**	**17 08 25.3**	**+2.6**
	comp=Z,27nm,0.4s,baz=318,slow=9.1,SNR=8.5						
CTAB	**Cerro Tablazo,**	**150.46**	**86**	*e*P	**PKPbc**	**17 08 28.1**	**-0.1**
CBOG1	**Bogota, SGC**	**150.59**	**87**	*e*P	**PKPdf**	**17 08 22.8**	**-0.2**
CODC	**Agustn Codazz**	**150.70**	**76**	*e*P	**PKPbc**	**17 08 27.5**	**-0.7**
MACC	**Macarena, Meta**	**150.77**	**92**	*e*P	**PKPbc**	**17 08 28.1**	**-0.3**
CHIC	**Chingaza**	**150.94**	**87**	*e*P	**PKPbc**	**17 08 27.5**	**-1.9**
GIRC	**Giron, Santand**	**151.34**	**82**	*e*P	**PKPbc**	**17 08 28.1**	**-1.8**
RUSC	**La Rusia**	**151.54**	**84**	*e*P	**PKPbc**	**17 08 29.5**	**-1.4**

JMA 20 17:04:48.2±0.2,30°.42N×143°.10E,h47^{km},M3.9,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.41**	**194**	P	Pn	17 05 40.6	+1.7
JHJ2	**Mitsune**	**3.88**	**315**	*e*S	Sn	17 06 31.6	+2.1
BSO1	**Boso 1**	**4.59**	**338**	P	Pn	17 05 56.6	+2.1
BSO1				*e*S	Sn	17 06 47.5	+1.3
BSO3	**Boso 3**	**4.88**	**334**	P	Pn	17 06 01.6	+2.7
JOD2	**Odawara 2**	**5.89**	**326**	P	Pn	17 06 15.3	+2.4
JOD2				*e*S	Sn	17 07 21.8	+2.6
JYT	**Yasato**	**6.28**	**338**	P	Pn	17 06 21.3	+3.1
JHU	**Hanno**	**6.29**	**330**	P	Pn	17 06 20.6	+2.2
JHU				*e*S	Sn	17 07 29.0	0.0
JHO	**Hitachi**	**6.53**	**342**	P	Pn	17 06 23.7	+2.1
JRY	**Ryogami san**	**6.60**	**329**	P	Pn	17 06 26.0	+3.4
JAG	**Ashikaga**	**6.72**	**334**	P	Pn	17 06 27.1	+2.8

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*IDC **20** 17:05:40.5±1.8,41°.50S×174°.21E,h0^{km},mb3.6/2, mb1 3.6/4,mb1mx3.6/24,mbtmp3.4/4,ML2.6/2,Error ellipse: s-maj=43.4km s-min=31.0km az=141.0*

*ISCJB **20** 17:05:43.3±0.3,41°.74S±0°.03×174°.51E±0°.04,h28^{km}, mb3.5/2,Error ellipse: s-maj=5.2km s-min=2.5km az=135.9*

*WEL **20** 17:05:43.1,41°.5S±0°.6×174°.4E±0°.8,h16^{km}±2^{km},M3.4/25, ML3.7/19,MLv3.4/25,Error ellipse: s-maj=0.0km s-min=0.0km az=123.4*

ISC 20 17:05:43.1±0.8,41°.58S±0°.03×174°.41E±0°.03,h28^{km},n88,
σ1^{s}38/92,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.22**	**221**	P	**Pb**	**17 05 49.4**	**-0.1**
TUWZ	**Tuamarina**	**0.38**	**293**	P	**Pb**	**17 05 51.1**	**-0.4**
TUWZ				S	**Sb**	**17 05 56.6**	**-0.7**
TCW	**Tory Channel**	**0.38**	**345**	P	**Pb**	**17 05 51.0**	**-0.6**
TCW				S	**Sb**	**17 05 56.3**	**-1.1**
BHW	**Baring Head**	**0.39**	**64**	P	**Pb**	**17 05 51.4**	**-0.3**
BHW				S	**Sb**	**17 05 57.2**	**-0.2**
BSWZ	**Blackbirch Sta**	**0.42**	**251**	P	**Pb**	**17 05 52.3**	**+0.1**
BSWZ				S	**Sn**	**17 05 59.2**	**-1.0**
PLWZ	**Palliser**	**0.64**	**89**	P	**Pb**	**17 05 56.2**	**+0.4**
MSWZ	**Moikau Station**	**0.65**	**76**	P	**Pb**	**17 05 56.3**	**+0.3**
CAW	**Cannon Point**	**0.69**	**47**	P	**Pb**	**17 05 56.4**	**-0.1**
PAWZ	**Paruwai Farm**	**0.79**	**76**	P	**Pn**	**17 05 58.8**	**+0.4**
NNZ	**Nelson**	**0.85**	**295**	P	**Pn**	**17 05 59.5**	**+0.2**
DUWZ	**D’Urville Isla**	**0.86**	**335**	P	**Pn**	**17 05 59.6**	**+0.2**
MTW	**Mount Morrison**	**0.93**	**63**	P	**Pn**	**17 06 01.1**	**+0.8**
OGWZ	**Otaki Gorge**	**0.95**	**37**	P	**Pn**	**17 06 01.0**	**+0.3**
TRWZ	**Traveller**	**0.98**	**80**	P	**Pn**	**17 06 01.7**	**+0.7**
KHZ	**Kahutara**	**1.06**	**217**	P	**Pb**	**17 06 03.3**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.08**	**51**	P	**Pn**	**17 06 03.4**	**+1.0**
THZ	**Tophouse**	**1.14**	**260**	P	**Pb**	**17 06 04.6**	**+0.3**
TMWZ	**Te Maipa**	**1.21**	**68**	P	**Pn**	**17 06 04.8**	**+0.6**
MRZ	**Mangatainoka R**	**1.27**	**44**	P	**Pn**	**17 06 06.3**	**+1.2**
TIWZ	**Tintock**	**1.38**	**55**	P	**Pn**	**17 06 07.2**	**+0.7**
CPWZ	**Castlepoint**	**1.51**	**64**	P	**Pn**	**17 06 10.2**	**+1.9**
OHWZ	**Ohakea**	**1.54**	**27**	P	**Pb**	**17 06 11.6**	**+0.7**
PRWZ	**Pori Road**	**1.56**	**50**	P	**Pn**	**17 06 10.0**	**+1.0**
POWZ	**Post Office Ro**	**1.57**	**41**	P	**Pn**	**17 06 10.3**	**+1.1**
QRZ	**Quartz Range**	**1.60**	**297**	P	**Pb**	**17 06 12.0**	**-0.1**
BFZ	**Birch Farm**	**1.65**	**58**	P	**Pn**	**17 06 10.5**	**+0.3**
GVZ	**Greta Valley S**	**1.72**	**216**	P	**Pn**	**17 06 12.1**	**+0.9**
DVHZ	**Dannevirke**	**1.85**	**47**	P	**Pn**	**17 06 13.4**	**+0.4**
WAZ	**Wanganui**	**1.88**	**14**	P	**Pb**	**17 06 17.8**	**+1.1**
ANWZ	**Angora Road**	**1.92**	**55**	P	**Pn**	**17 06 13.9**	**-0.1**
LTZ	**Lake Taylor**	**1.99**	**232**	P	**Pn**	**17 06 16.2**	**+1.2**
AMCZ	**Amberley**	**2.06**	**219**	P	**Pn**	**17 06 16.1**	**+0.3**
LREZ	**Lake Rotokare**	**2.12**	**360**	P	**Pb**	**17 06 19.4**	**-1.4**
PNHZ	**Pukenui**	**2.15**	**40**	P	**Pn**	**17 06 17.9**	**+0.8**
WPHZ	**Waipukurau**	**2.16**	**46**	P	**Pn**	**17 06 17.7**	**+0.4**
NMEZ	**Namu Road**	**2.20**	**349**	P	**Pb**	**17 06 22.6**	**+0.3**
PREZ	**Palmer Road**	**2.24**	**355**	P	**Pb**	**17 06 22.9**	**0.0**
KHEZ	**Kahui Hut**	**2.30**	**352**	P	**Pb**	**17 06 24.3**	**+0.3**
MTVZ	**Mangateitei**	**2.34**	**21**	P	**Pb**	**17 06 25.3**	**+0.7**
NBEZ	**Newall Road No**	**2.35**	**350**	P	**Pb**	**17 06 24.0**	**-0.7**
OKCZ	**Okains Bay**	**2.36**	**204**	P	**Pn**	**17 06 19.9**	**-0.1**
CRLZ	**Canterbury Las**	**2.39**	**213**	P	**Pn**	**17 06 19.7**	**-0.7**
DREZ	**Durham Road**	**2.39**	**356**	P	**Pb**	**17 06 24.5**	**-1.0**
PKVZ	**Pokaka**	**2.40**	**18**	P	**Pb**	**17 06 24.4**	**-1.2**
MOVZ	**Moawhango**	**2.40**	**26**	P	**Pb**	**17 06 25.8**	**+0.1**
PKE	**Pukeiti**	**2.41**	**352**	P	**Pb**	**17 06 25.1**	**-0.6**
PXZ	**Pawanui**	**2.42**	**51**	P	**Pn**	**17 06 20.2**	**-0.6**
BHHZ	**Black Hill Sta**	**2.44**	**32**	P	**Pn**	**17 06 23.8**	**+2.6**
KRHZ	**Kereru**	**2.44**	**38**	P	**Pn**	**17 06 21.5**	**+0.3**
WHVZ	**Whangaehu Hut**	**2.46**	**22**	P	**Pb**	**17 06 24.9**	**-2.0**
VRZ	**Vera Road**	**2.47**	**6**	P	**Pb**	**17 06 25.4**	**-1.3**
OXZ	**Oxford**	**2.47**	**224**	P	**Pn**	**17 06 21.6**	**0.0**
FWVZ	**Far West T-bar**	**2.48**	**21**	P	**Pb**	**17 06 26.7**	**-0.5**
INZ	**Inchbonnie**	**2.48**	**242**	P	**Pn**	**17 06 23.1**	**+1.4**
MQZ	**McQueen’s Vall**	**2.49**	**211**	P	**Pn**	**17 06 21.0**	**-0.7**
TUVZ	**Tukino**	**2.50**	**23**	P	**Pb**	**17 06 26.1**	**-1.3**
AKCZ	**Akaroa Harbour**	**2.54**	**205**	P	**Pn**	**17 06 22.4**	**-0.1**
NGZ	**Ngauruhoe**	**2.57**	**21**	P	**Pb**	**17 06 28.8**	**+0.2**
KAHZ	**Kahuranaki**	**2.59**	**47**	P	**Pn**	**17 06 23.5**	**+0.3**
WTVZ	**West Tongariro**	**2.62**	**21**	P	**Pb**	**17 06 29.1**	**-0.4**
TWVZ	**Taurewa**	**2.63**	**18**	P	**Pb**	**17 06 30.9**	**+1.3**
KRVZ	**Karewarewa**	**2.66**	**21**	P	**Pb**	**17 06 31.0**	**+0.9**
KATZ	**Kakaramea**	**2.78**	**21**	P	**Pb**	**17 06 33.4**	**+1.2**
RITZ	**Rihia Road**	**2.83**	**24**	P	**Pb**	**17 06 34.7**	**+1.8**
BKZ	**Black Stump Fm**	**2.89**	**34**	P	**Pn**	**17 06 28.1**	**+0.7**
RATZ	**Rangitukua**	**2.90**	**22**	P	**Pb**	**17 06 36.2**	**+2.0**
HIZ	**Hauiti**	**3.08**	**7**	P	**Pb**	**17 06 34.1**	**-3.2**
WVZ	**Waitaha Valley**	**3.10**	**240**	P	**Pn**	**17 06 33.3**	**+3.1**
RPZ	**Rata Peaks**	**3.27**	**228**	Pn	**Pn**	**17 06 32.1**	**-0.4**
	1.4nm,0.3s,baz=127,slow=2.2,SNR=4.4						
RPZ				Sn	**Sn**	**17 07 08.7**	**-1.7**
	1.8nm,0.3s,baz=149,slow=22,SNR=6.7						
RPZ	**Rata Peaks**	**3.27**	**228**	P	**Pn**	**17 06 34.8**	**+2.3**
MTHZ	**Maungataniwha**	**3.30**	**35**	P	**Pb**	**17 06 40.7**	**-0.3**
TLZ	**Tolley Road**	**3.36**	**15**	P	**Pb**	**17 06 38.4**	**-3.6**
FOZ	**Fox Glacier**	**3.91**	**239**	P	**Pn**	**17 06 45.1**	**+3.8**
URZ	**Urewera**	**3.91**	**33**	Pn	**Pn**	**17 06 42.2**	**+0.8**
	0.2nm,0.3s,baz=217,slow=16,SNR=3.8						
URZ				Sn	**Sn**	**17 07 25.8**	**-0.5**
	1.8nm,0.3s,baz=39,slow=9.1,SNR=5.2						
URZ	**Urewera**	**3.91**	**33**	P	**Pb**	**17 06 49.0**	**-2.4**
MWZ	**Matawai**	**4.03**	**38**	P	**Pn**	**17 06 43.9**	**+0.9**
LBZ	**Lake Benmore**	**4.18**	**226**	P	**Pn**	**17 06 46.8**	**+1.8**
TWGZ	**Tauwhareparae**	**4.37**	**40**	P	Pb	17 06 54.6	-4.6
ODZ	**Otahua Downs**	**4.42**	**217**	P	**Pn**	**17 06 48.0**	**-0.3**
AWAZ	**Awhitu Peninsu**	**4.51**	**2**	P	**Pn**	**17 06 54.1**	**+4.5**
ETAZ	**East Tamaki Re**	**4.64**	**5**	P	**Pn**	**17 06 55.8**	**+4.5**
JCZ	**Jackson Bay**	**4.83**	**237**	P	Pn	17 06 59.6	+5.6
HHSZ	**Highcliff Hill**	**5.11**	**211**	P	**Pn**	**17 06 58.3**	**+0.5**
TUZ	**Tuapeka**	**5.57**	**217**	P	**Pn**	**17 07 05.8**	**+1.7**
CTZ	**Chatham Island**	**6.96**	**111**	P	**Pn**	**17 07 24.0**	**+0.9**
ASAR	**Alice Springs**	**38.10**	**285**	P	**P**	**17 12 59.7**	**+0.1**
	0.2nm,0.5s,baz=125,slow=6.9,SNR=12						
WRA	**Warramunga Arr**	**40.16**	**290**	P	**P**	**17 13 17.0**	**+0.1**
	1.2nm,0.5s,baz=126,slow=8.3,SNR=9.5						
TORD	**Torodi Ar. Bea**	**150.97**	**195**	PKPbc	**PKiKP**	**17 25 35.5**	**+1.3**
	0.1nm,0.4s,baz=139,slow=3.9,SNR=2.7						

WEL 20 17:15:32.0±1.3,35°S±13°×17°9E±1°2,h168^{km}±28^{km},
M4.0/40,ML4.6/12,MLv4.0/40,Error ellipse:
s-maj=0.0km s-min=0.0km az=40.7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.80**	**197**	P	Pn	17 16 18.2	+0.6
MXZ				S	Sn	17 16 52.5	-0.6
WMGZ	**Waiomatatini S**	**3.02**	**194**	P	Pn	17 16 21.4	+1.1
HAZ	**Te Kaha**	**3.13**	**203**	P	Pn	17 16 21.9	+0.3
PKGZ	**Pakihiroa**	**3.17**	**198**	P	Pn	17 16 22.7	+0.5
PUZ	**Puketiti**	**3.30**	**195**	P	Pn	17 16 24.0	+0.2
PUZ				S	Sn	17 17 03.8	-0.4
RUGZ	**Raukumara Rang**	**3.35**	**203**	P	Pn	17 16 24.6	0.0
GRZ	**Great Barrier**	**3.44**	**245**	P	Pn	17 16 24.3	-1.2
KUZ	**Kuaotunu**	**3.47**	**237**	P	Pn	17 16 25.4	-0.6
WHRZ	**Whale Island**	**3.52**	**212**	P	Pn	17 16 28.1	+1.5
WHRZ				S	Sn	17 17 11.4	+2.1
CNGZ	**Carnagh Statio**	**3.71**	**194**	P	Pn	17 16 29.4	+0.5
OPRZ	**Ohinepanea**	**3.71**	**216**	P	Pn	17 16 29.8	+0.9
MWZ	**Matawai**	**3.74**	**202**	P	Pn	17 16 29.5	+0.1
TKGZ	**Te Karaka**	**3.75**	**198**	P	Pn	17 16 29.4	0.0
TKGZ				S	Sn	17 17 14.5	+0.2
MARZ	**Manawahe**	**3.77**	**214**	P	Pn	17 16 30.3	+0.6
URZ	**Urewera**	**3.81**	**207**	P	Pn	17 16 30.1	-0.2
URZ				S	Sn	17 17 15.4	-0.4
WIAZ	**Waiheke Island**	**3.91**	**240**	P	Pn	17 16 31.0	-0.5
RAGZ	**Rawiri**	**3.92**	**203**	P	Pn	17 16 31.7	0.0
KARZ	**Kaharoa**	**4.00**	**218**	P	Pn	17 16 33.3	+0.6
RIGZ	**Rimuhau**	**4.02**	**198**	P	Pn	17 16 32.4	-0.5
KMRZ	**Kaimai**	**4.03**	**222**	P	Pn	17 16 34.3	+1.2
MKAZ	**Moumakai**	**4.04**	**236**	P	Pn	17 16 33.3	+0.1
TARZ	**Mount Tarawera**	**4.05**	**213**	P	Pn	17 16 34.6	+1.3
MBAZ	**Motutapu North**	**4.06**	**241**	P	Pn	17 16 33.2	-0.3
ETAZ	**East Tamaki Re**	**4.13**	**239**	P	Pn	17 16 34.2	-0.1
RRRZ	**Republican Roa**	**4.13**	**212**	P	Pn	17 16 34.2	-0.1
MUGZ	**Murupara**	**4.14**	**209**	P	Pn	17 16 34.0	-0.5
RTZ	**Ruatahuna**	**4.18**	**206**	P	Pn	17 16 34.0	-1.0
PRGZ	**Paritu Road**	**4.20**	**196**	P	Pn	17 16 34.3	-0.9
TOZ	**Tahuroa Road**	**4.20**	**226**	P	Pn	17 16 36.2	+1.0
WCZ	**Waipu Caves**	**4.20**	**254**	P	Pn	17 16 33.7	-1.7
EPAZ	**Eden Park BICE**	**4.22**	**241**	P	Pn	17 16 35.9	+0.3
PRRZ	**Plateau Road**	**4.31**	**212**	P	Pn	17 16 36.5	-0.3
KNZ	**Kokohu**	**4.34**	**197**	P	Pn	17 16 35.8	-1.2
ALRZ	**Allen Road**	**4.39**	**212**	P	Pn	17 16 37.2	-0.5
RAHZ	**Arahi**	**4.41**	**203**	P	Pn	17 16 37.3	-0.7
MHGZ	**Mahia Peninsul**	**4.41**	**195**	P	Pn	17 16 37.5	-0.5
WHHZ	**Waihua**	**4.51**	**201**	P	Pn	17 16 38.5	-0.8
KUTZ	**Kaahu Road**	**4.57**	**217**	P	Pn	17 16 40.8	+0.7
TLZ	**Tolley Road**	**4.60**	**220**	P	Pn	17 16 41.7	+1.2
WHTZ	**Whakaora**	**4.65**	**215**	P	Pn	17 16 41.9	+0.8
BKZ	**Black Stump Fm**	**4.84**	**207**	P	Pn	17 16 42.4	-1.3
RITZ	**Rihia Road**	**4.94**	**213**	P	Pn	17 16 44.6	-0.4
MCHZ	**McNeill Hill**	**5.02**	**204**	P	Pn	17 16 44.5	-1.4
HIZ	**Hauiti**	**5.10**	**223**	P	Pn	17 16 48.9	+1.9
KAHZ	**Kahuranaki**	**5.28**	**201**	P	Pn	17 16 47.5	-1.9
KRHZ	**Kereru**	**5.31**	**206**	P	Pn	17 16 47.2	-2.5
WHVZ	**Whangaehu Hut**	**5.31**	**213**	P	Pn	17 16 48.6	-1.4
PKVZ	**Pokaka**	**5.43**	**215**	P	Pn	17 16 52.0	+0.6
MTVZ	**Mangateitei**	**5.45**	**213**	P	Pn	17 16 49.6	-2.0
PXZ	**Pawanui**	**5.50**	**200**	P	Pn	17 16 49.3	-2.9
VRZ	**Vera Road**	**5.59**	**219**	P	Pn	17 16 53.4	-0.1
PNHZ	**Pukenui**	**5.61**	**205**	P	Pn	17 16 50.2	-3.5
DVHZ	**Dannevirke**	**5.96**	**204**	P	Pn	17 16 55.2	-3.1
WAZ	**Wanganui**	**5.97**	**214**	P	Pn	17 16 54.7	-3.7
ANWZ	**Angora Road**	**6.01**	**201**	P	Pn	17 16 55.4	-3.5
PKE	**Pukeiti**	**6.06**	**223**	P	Pn	17 17 00.5	+0.8
PRWZ	**Pori Road**	**6.26**	**204**	P	Pn	17 17 00.2	-1.9
BFZ	**Birch Farm**	**6.28**	**202**	P	Pn	17 16 59.5	-3.0
MRZ	**Mangatainoka R**	**6.49**	**206**	P	Pn	17 17 00.7	-4.5
HOWZ	**Holdsworth Sta**	**6.72**	**206**	P	Pn	17 17 03.8	-4.5
OGWZ	**Otaki Gorge**	**6.78**	**208**	P	Pn	17 17 05.0	-4.0
MTW	**Mount Morrison**	**6.96**	**205**	P	Pn	17 17 06.9	-4.5
TRWZ	**Traveller**	**7.11**	**203**	P	Pn	17 17 08.6	-4.8
CTZ	**Chatham Island**	**9.38**	**162**	P	Pn	17 17 45.9	+2.4
INZ	**Inchbonnie**	**9.96**	**216**	P	Pn	17 17 45.8	-5.2
AKCZ	**Akaroa Harbour**	**10.26**	**207**	P	Pn	17 17 49.5	-5.5

IDC 20 17:16:51.2±5.5,10°.22N×92°.95E,h0^{km},mb3.6/2,
mb1 3.8/3,mb1mx3.2/43,mbtmp3.5/3,ML3.7/1,Error
ellipse: s-maj=121.0km s-min=44.4km az=92.0,
Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.04**	**35**	Pn	Pn	17 19 16.3	-0.5
	0.2nm,0.3s,baz=226,slow=15,SNR=5.8						
WRA	**Warramunga Arr**	**50.58**	**126**	P	P	17 25 51.9	-0.3
	0.9nm,0.7s,baz=301,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**52.32**	**131**	P	P	17 26 05.3	+0.2
	0.5nm,0.8s,baz=304,slow=7.2,SNR=6.0						

MEX 20 17:17:09.1±0.6,15°.17N×92°.59W,h104^{km}±7^{km},MD3.6,
Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.41**	**129**	*i* P	Pn	17 17 23.5	-1.2
THIG				*i* S	Sn	17 17 35.1	-1.4
PCIG		**0.81**	**312**	*e*P	Pn	17 17 26.5	-1.4
PCIG				*e*S	Sn	17 17 40.5	-1.6
CCIG	**Comitan**	**1.19**	**21**	*i* P	Pn	17 17 31.5	-0.7
CCIG				*i* S	Sn	17 17 47.9	-1.7

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*IDC **20** 17:20:52.2±1.6,43°.13N×126°.48W,h0^{km},mb3.6/4, mb1 3.8/12,mb1mx3.6/46,mbtmp3.6/12,ML3.4/8,MS3.8/16, Ms1 3.8/16,ms1mx3.7/31,Error ellipse: s-maj=27.0km s-min=10.6km az=48.0*

*ISCJB **20** 17:20:54.1±0.9,43°.31N±0°.02×126°.43W±0°.04,h4^{km}±6^{km}, mb4.1/22,MS3.9/11,Error ellipse: s-maj=5.2km s-min=3.0km az=161.4*

*GCMT **20** 17:20:55.7±0.3,43°.13N±0°.02×126°.81W±0°.02,h16^{km}±1^{km}, MW4.8/88,Moment Tensor Solution. s11,c12; s88,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.25±.11; M$_{\theta\theta}$-1.45±.09; M$_{\phi\phi}$1.70±.08; M$_{r\theta}$-0.52±.28; M$_{\theta\phi}$-1.01±.08; M$_{\phi r}$-0.24±.22; Best double couple: M$_0$1.96700×10^{16} NP1:φ$_s$27.00000°,δ79.00000°,λ-15.00000°. NP2: φ$_s$120.00000°,δ75.00000°,λ-168.00000°. Principal axes: T 1.9990, Plg2.0000°, Azm74.0000°; N -0.0670, Plg71.0000°, Azm171.0000°; P -1.9350, Plg19.0000°, Azm343.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ANF **20** 17:20:56.1±1.0,43°.17N×126°.44W,h14^{km}±14^{km},ML3.8/20 Error ellipse: s-maj=14.8km s-min=4.4km az=81.0*

*NEIC **20** 17:20:57.7±2.5,43°.29N×126°.43W,h16^{km}±6^{km},mb4.2/40, MW4.6,ML4.0(SEA),Error ellipse: s-maj=12.9km s-min=7.9km az=69.0,Moment Tensor Solution. s15 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.59; M$_{\theta\theta}$0.65; M$_{\phi\phi}$-2.24; M$_{r\theta}$3.54; M$_{\theta\phi}$-7.67; M$_{\phi r}$-2.80; Best double couple: M$_0$9.10000×10^{15} NP1:φ$_s$179.00000°,δ69.00000°, λ21.00000°. NP2:φ$_s$81.00000°,δ70.00000°,λ158.00000°. Principal axes: T 9.5600, Plg30.0000°, Azm39.0000°; N -0.9600, Plg60.0000°, Azm221.0000°; P -8.6100, Plg1.0000°, Azm130.0000°;*

ISC 20 17:20:55.3±3.8,43°.19N±0°.04×126°.41W±0°.06,h9^{km}±25^{km},
n233,σ2^{s}10/224,mb4.3/22,MS3.8/11,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**1.56**	**101**	*e*Pn	**Pn**	**17 21 22.0**	**-1.2**
J01E	**Myrtle Point**	**1.81**	**90**	P	**Pn**	**17 21 25.7**	**-1.0**
	baz=275,SNR=306						
J01E				S	**Sb**	**17 21 51.1**	**-0.4**
	baz=275						
K02D	**Willamette Mer**	**2.08**	**103**	P	**Pn**	**17 21 29.2**	**-1.1**
	baz=287,SNR=349						
K02D				S	**Sn**	**17 21 56.8**	**+0.4**
	baz=287						
I02D	**Swisshome**	**2.08**	**63**	P	**Pn**	**17 21 29.6**	**-0.6**
	baz=247,SNR=22						
I02D				S	**Sn**	**17 21 57.4**	**+1.1**
	baz=247						
I03D	**Drain, OR**	**2.29**	**76**	P	**Pn**	**17 21 32.6**	**-0.5**
	baz=261,SNR=120						
I03D				S	**Sn**	**17 22 02.7**	**+1.2**
	baz=261						
L02E	**Cave Junction**	**2.31**	**115**	P	**Pn**	**17 21 33.0**	**-0.5**
	baz=300,SNR=8.3						
L02E				S	**Sn**	**17 22 02.6**	**+0.5**
	baz=300						
KRMB	**Red Mountain**	**2.49**	**131**	*e*Pn	**Pn**	**17 21 34.5**	**-1.7**
HUMO	**Hull Mountain**	**2.60**	**102**	*e*Pn	**Pn**	**17 21 37.1**	**-0.5**
COR	**Corvallis**	**2.65**	**57**	*e*Pn	**Pn**	**17 21 38.2**	**+0.1**
JCC	**Jacoby Creek,**	**2.96**	**142**	*e*Pn	**Pn**	**17 21 41.2**	**-1.2**
I04A	**Tendick Farm,**	**2.97**	**77**	P	**Pn**	**17 21 43.0**	**+0.3**
	baz=262,SNR=92						
H04D	**Lebanon**	**2.97**	**62**	P	**Pn**	**17 21 43.3**	**+0.7**
	baz=246,SNR=42						
G03D	**McMinnville, O**	**3.04**	**47**	P	**Pn**	**17 21 43.5**	**0.0**
	baz=231,SNR=16						
G03D				S	**Sn**	**17 22 22.2**	**+2.2**
	baz=231						

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KHMM Horse Mountain      3.05 138 ePn   Pn   17 21 42.9 -0.9
YBH  Yreka Blue Hor      3.10 117  Pn   Pn   17 21 44.7 +0.3
     3.4nm,0.3s,baz=303,slow=14,SNR=34
YBH                                Sn   Sn   17 22 21.3 -0.3
     5.4nm,0.3s,baz=130,slow=16,SNR=13
YBH  Yreka Blue Hor      3.10 117 ePn   Pn   17 21 45.1 +0.6
J04D Umpqua Nationa      3.15  88  P    Pn   17 21 46.5 +1.3
     baz=272,SNR=83
M02C Callahan            3.19 123  P    Pn   17 21 45.6  0.0
     baz=307,SNR=13
M02C                               S    Sn   17 22 24.4 +0.5
     baz=307
H04A Detroit Lake        3.40  62 ePn   Pn   17 21 49.1 +0.6
K04D Chiloquin, OR       3.47  98  P    Pn   17 21 49.7 +0.1
     baz=283,SNR=8.3
N02D Trinity Center      3.54 127  S    Sn   17 22 32.5 +0.1
     baz=311
KMRM Mail Ridge          3.59 145 ePn   Pn   17 21 51.6 +0.5
M04C Macdoel             3.66 111  P    Pn   17 21 52.7 +0.5
     baz=296,SNR=11
M04C                               S    Sn   17 22 37.8 +2.2
     baz=296
F04D Rainier, OR         3.78  39  P    Pn   17 21 53.8 +0.2
     baz=222
F04D                               S    Sn   17 22 40.5 +2.3
     baz=222
J05D Fort Rock, OR       3.78  87  P    Pn   17 21 54.4 +0.5
     baz=272,SNR=29
I05D Terrebonne, OR      3.85  71  P    Pn   17 21 55.4 +0.6
     baz=256,SNR=40
WDC  Whiskeytown Da      3.89 131 ePn   Pn   17 21 57.7 +2.5
PINE Pine Mountain       4.03  79 ePn   Pn   17 21 57.9 +0.6
KCPM Cahto Peak          4.09 148 ePn   Pn   17 22 02.0 +3.9
E04D Cinebar             4.34  38  P    Pn   17 22 01.4  0.0
     baz=221,SNR=12
F05D White Salmon        4.45  51  P    Pn   17 22 04.0 +1.1
     baz=236,SNR=35
NLWA Neilton Lookou      4.57  22 ePn   Pn   17 22 04.1 -0.5
MOD  Modoc Plateau       4.69 104 ePn   Pn   17 22 09.9 +3.5
D04E Lakebay             4.75  32  P    Pn   17 22 07.8 +0.8
     baz=215
LON  Longmire            4.83  41 ePn   Pn   17 22 09.5 +1.3
HOPS Hopland Field       4.89 148 ePn   Pn   17 22 13.2 +4.3
D03D Eldon               4.94  27  P    Pn   17 22 10.5 +0.9
     baz=210
D03D                               S    Sn   17 23 06.6 -0.2
     baz=210
D05A Enumclaw            5.08  36 ePn   Pn   17 22 09.6 -1.9
D05A                              eSn   Sn   17 23 12.3 +2.1
I07A Izee                5.09  78 ePn   Pn   17 22 10.9 -0.9
ORV  Oroville            5.18 133 ePn   Pn   17 22 16.5 +3.6
ORV                               eSn   Sn   17 23 15.6 +2.8
BEKR Beckworth           5.62 124 ePn   Pn   17 22 23.1 +3.9
MCCM Marconi Confer      5.71 151 ePn   Pn   17 22 23.8 +3.6
LTY  Liberty             5.75  43 ePn   Pn   17 22 22.1 +1.4
G08A Pilot Rock          5.75  66 ePn   Pn   17 22 20.9  0.0
WVOR Wild Horse Val      5.77  95 ePn   Pn   17 22 21.2 +0.1
J08A Circle Bar Ran      5.80  86 ePn   Pn   17 22 21.7 +0.2
PGC  Sidney              5.84  20 ePn   Pn   17 22 21.0 -1.0
PGC                               eSn   Sn   17 23 27.2 -1.8
HAWA Hanford             5.85  54 ePn   Pn   17 22 23.1 +0.9
AFDM Forest Hills D      5.90 134 ePn   Pn   17 22 27.8 +4.9
B05A Bryant              5.91  29  S    Sn   17 23 32.1 +1.5
     baz=213
E08A Dider Farm, El      6.18  55 ePn   Pn   17 22 27.1 +0.4
PAHR Pah Rah Range       6.32 121 ePn   Pn   17 22 29.6 +0.9
VCNR Virginia City       6.41 125 ePn   Pn   17 22 33.5 +3.5
D08A Wollman Farm,       6.56  51 ePn   Pn   17 22 32.5 +0.6
PNTR Pine Nut            6.57 126 ePn   Pn   17 22 33.7 +1.4
E09A Wood Farm, Sta      6.75  58 ePn   Pn   17 22 33.9 -0.6
BMO  Blue Mountains      6.77  73 ePn   Pn   17 22 35.4 +0.5
YERR Yerington           6.85 125 ePn   Pn   17 22 38.6 +2.5
YERR                              eSg   Sb   17 24 11.4 -5.1
CMB  Columbia Colle      6.89 136 ePn   Pn   17 22 40.9 +4.4
WAKR Walker              7.06 129 ePn   Pn   17 22 42.1 +3.2
F10A Beach Ranch, E      7.12  64 ePn   Pn   17 22 39.7  0.0
B08A Colville Reser      7.16  41 ePn   Pn   17 22 40.3 +0.2
C09A Chrisman Ranch      7.34  48 ePn   Pn   17 22 43.2 +0.5
RYN  Ryan                7.51 125 ePn   Pn   17 22 49.2 +4.1
KVN  Kaiserville         7.51 121 ePn   Pn   17 22 49.8 +4.7
MFID Camas Ranch         7.72  85 ePn   Pn   17 22 49.9 +1.9
PLID Pearl Lake          7.73  72 ePn   Pn   17 22 49.7 +1.5
NVAR Mina Array Bea      7.77 125  Pn   Pn   17 22 47.5 -1.2
     0.1nm,0.3s,baz=304,slow=13,SNR=2.4
NVAR                               LR   LR   17 25 46.6
     comp=Z,387nm,19.3s,baz=300,slow=37
NV11 Mina Array Sit      7.86 124 ePn   Pn   17 22 53.6 +3.8
MDPB Devils Postpil      7.88 132 ePn   Pn   17 22 51.9 +1.7
LLLB Lillooet            8.04  21 ePn   Pn   17 22 51.8 -0.5
NEW  Newport             8.24  49  Pn   Pn   17 22 55.5 +0.4
     0.4nm,0.3s,baz=238,slow=14,SNR=6.8
NEW                                LR   LR   17 26 14.6
     comp=Z,1µm,21.1s,baz=237,slow=39
NEW  Newport             8.24  49 ePn   Pn   17 22 54.0 -1.0
NEW  Newport             8.24  49  P    Pn   17 22 55.1 +0.1
     baz=236
ELK  Elko                8.67 103  Pn   Pn   17 23 02.6 +1.4
     0.2nm,0.3s,baz=291,slow=16,SNR=12
ELK  Elko                8.67 103 ePn   Pn   17 23 05.5 +4.4
HLID Hailey              8.75  83 ePn   Pn   17 23 04.5 +2.4
BBB  Bella Bella         9.08 353  Pn   Pn   17 23 06.5 +0.2
     0.3nm,0.3s,baz=178,slow=15,SNR=4.2
BBB                                LR   LR   17 25 57.8
     comp=Z,651nm,21.0s,baz=182,slow=34
BBB  Bella Bella         9.08 353 ePn   Pn   17 23 06.4 +0.1
R11A Troy Canyon, C      9.53 117 ePn   Pn   17 23 14.8 +2.0
MSO  Missoula            9.55  63 ePn   Pn   17 23 13.5 +0.5
ISA  Isabella, Lake      9.70 138 ePn   Pn   17 23 18.6 +3.6
MCMT McKenzie Canyo      9.91  76 ePn   Pn   17 23 20.5 +2.5
TPNV Topopah Spring      9.97 125 ePn   Pn   17 23 23.8 +5.0
DLMT Dillon             10.15  73 ePn   Pn   17 23 23.4 +2.2
HVU  Hansel Valley      10.17  93 ePn   Pn   17 23 24.8 +3.3
BGU  Big Grassy Mou     10.21  98 ePn   Pn   17 23 24.4 +2.3
LRM  Limekiln Ridge     10.32  70 ePn   Pn   17 23 25.0 +1.4
WALA Waterton Lakes     10.47  52 ePn   Pn   17 23 26.9 +1.3
SPUT South Promonto     10.52  96 ePn   Pn   17 23 29.3 +2.9
EDW2 Edwards Air Fo     10.56 139  P    Pn   17 23 29.1 +2.3
     baz=325
PSUT Pine Spring        10.58 112 ePn   Pn   17 23 31.5 +4.2
DUG  Dugway, Tooele     10.60 102 ePn   Pn   17 23 30.0 +2.6
DUG  Dugway, Tooele     10.60 102  P    Pn   17 23 29.0 +1.5
     baz=291
DIB  Dawson Inlet,      10.80 340 ePn   Pn   17 23 30.3 +0.3
GSC  Goldstone, Bar     10.83 133 ePn   Pn   17 23 37.7 +7.1
BOZ  Bozeman (W)        10.85  72 ePn   Pn   17 23 32.3 +1.5
BOZ  Bozeman (W)        10.85  72  P    Pn   17 23 32.0 +1.1
     baz=263
HRY  Holter Researc     10.92  66 ePn   Pn   17 23 32.3 +0.6
SHPR Sheep Range        10.92 124 ePn   Pn   17 23 34.6 +2.8
QLMT Earthquake Lak     10.92  76 ePn   Pn   17 23 34.3 +2.5
YHB  Horse Butte        11.08  77 ePn   Pn   17 23 35.8 +1.7
HWUT Hardware Ranch     11.10  93 ePn   Pn   17 23 35.1 +0.9
CTU  Camp Tracy         11.20  98 ePn   Pn   17 23 38.7 +3.0
FXWY Fox Creek          11.20  82 ePn   Pn   17 23 37.1 +1.4
NLU  North Lily Min     11.21 102 ePn   Pn   17 23 38.4 +2.5
IMW  Indian Meadow      11.26  81 ePn   Pn   17 23 39.6 +3.0
TPAW Teton Pass         11.27  83 ePn   Pn   17 23 40.6 +4.0
YFT  Old Faithful       11.33  78 ePn   Pn   17 23 42.9 +5.4
YHH  Holmes Hill        11.33  77 ePn   Pn   17 23 40.0 +2.4
YPP  Pitchstone Pla     11.35  79 ePn   Pn   17 23 40.0 +2.2
MOOW Moose Ponds        11.40  82 ePn   Pn   17 23 41.2 +2.7
SNOW Snow King Moun     11.41  83 ePn   Pn   17 23 40.7 +2.0
FLWY Flagg Ranch        11.43  80 ePn   Pn   17 23 41.0 +2.2
CCUT Cedar City         11.43 115 ePn   Pn   17 23 42.8 +3.9
YNR  Norris Junctio     11.45  77 ePn   Pn   17 23 41.7 +2.6
JLU  Jordanelle         11.45  98 ePn   Pn   17 23 42.0 +2.8
LOHW Long Hollow        11.51  82 ePn   Pn   17 23 41.9 +1.9
TCRU Three Creeks R     11.51 109 ePn   Pn   17 23 42.2 +2.2
H17A Grant Village      11.51  79 ePn   Pn   17 23 43.4 +3.4
SZCU Shurtz Canyon      11.59 114 ePn   Pn   17 23 43.7 +2.6
LCMT Little Creek M     11.81 117 ePn   Pn   17 23 48.0 +4.0
LDFC Landfair           11.93 129 ePn   Pn   17 23 49.3 +3.7
TMUT Trail Mountain     12.09 104 ePn   Pn   17 23 50.6 +2.7
KNB  Kanab              12.09 116 ePn   Pn   17 23 51.7 +3.9
PKCU Pink Cliffs        12.19 113 ePn   Pn   17 23 52.8 +3.5
GCMT Greycliff          12.24  72 ePn   Pn   17 23 50.1 +0.2
P17A Butcher Ranch,     12.35 102 ePn   Pn   17 23 53.4 +2.0
BW06 Boulder Array      12.36  86 ePn   Pn   17 23 53.3 +1.8
BW06 Boulder Array      12.36  86  P    Pn   17 23 53.0 +1.5
     baz=278
PDAR Pinedale Array     12.36  86  Pn   Pn   17 23 52.9 +1.4
     0.1nm,0.3s,baz=278,slow=12,SNR=15
RLMT Red Lodge          12.47  75 ePn   Pn   17 23 54.1 +1.1
EGMT Eagleton           12.62  62 ePn   Pn   17 23 55.6 +0.6
W13A Hualapai Mount     12.63 126 ePn   Pn   17 23 59.2 +3.9
SRU  San Rafael Swe     12.65 103 ePn   Pn   17 23 58.7 +3.2
U15A North Rim          12.78 117 ePn   Pn   17 24 00.1 +2.8
Y12C Blythe             13.23 131 ePn   P    17 24 08.4 -4.9
GLA  Glamis             13.61 134 ePn   Pn   17 24 08.9 +0.5
WUAZ Wupatki            13.92 118 ePn   Pn   17 24 15.5 +2.7
O20A White River Ci     13.92  96 ePn   Pn   17 24 14.5 +1.6
Y14A Wickenburg         13.96 127 ePn   Pn   17 24 15.9 +2.7
PV21 Cone Mtn., Par     13.97 103 ePn   Pn   17 24 14.5 +0.9
PV23 Carpenter Ridg     13.99 104 ePn   Pn   17 24 16.3 +2.4
PV14 Lion Creek, Pa     14.02 104 ePn   Pn   17 24 16.1 +1.8
PV20 West Nyswonger     14.07 104 eP    P    17 24 19.3 -3.5
PV19 Morning Glory      14.08 104 ePn   P    17 24 19.9 -3.0
PV04 Paradox Valley     14.10 104 ePn   Pn   17 24 17.8 +2.6
PV17 East Wray Mesa     14.11 104 ePn   P    17 24 19.7 -3.5
PV22 Blue Mesa, Par     14.12 103 ePn   Pn   17 24 17.3 +1.7
PV16 Nyswonger Mesa     14.12 104 ePn   Pn   17 24 19.3 +3.6
PV18 Skein Mesa, Pa     14.16 104 ePn   Pn   17 24 19.6 +3.5
PV03 Paradox Valley     14.20 104 ePn   Pn   17 24 20.4 +3.8
PV12 Saucer Basin,      14.20 104 ePn   Pn   17 24 19.7 +2.9
PV07 Paradox Valley     14.26 103 ePn   Pn   17 24 18.8 +1.3
RWWY Rawlins            14.26  89 ePn   Pn   17 24 18.4 +0.9
113A Mohawk Valley,     14.39 132 ePn   P    17 24 22.8 -3.4
PV01 Paradox Valley     14.45 104 ePn   Pn   17 24 22.9 +2.8
X16A Lo Mia Camp, P     14.57 122 ePn   P    17 24 25.3 -3.1
MVCO Mesa Verde         14.92 108 ePn   Pn   17 24 27.9 +1.4
SMCO Snowmass           15.17  99 ePn   Pn   17 24 31.9 +1.9
     8.9nm,1.6s
W18A Petrified Fore     15.22 116 ePn   P    17 24 33.1 -2.5
     18nm,1.1s
W18A Petrified Fore     15.22 116  P    Pn   17 24 32.4 +1.8
     baz=307
DLBC Dease Lake         15.44 353  Pn   Pn   17 24 33.9 +0.8
     0.1nm,0.3s,baz=162,slow=20,SNR=2.0
DLBC                               LR   LR   17 29 48.4
     comp=Z,267nm,20.5s,baz=154,slow=35
DLBC Dease Lake         15.44 353 ePn   Pn   17 24 34.6 +1.5
     4.1nm,0.8s
X18A Snowflake          15.44 119 ePn   P    17 24 36.8 -1.3
     18nm,1.4s
PHWY Pilot Hill         15.63  90 ePn   Pn   17 24 35.3 -0.6
     6.1nm,1.4s
BESE Bessie Mountai     16.29 344 ePn   Pn   17 24 45.2 +1.1
     9.7nm,1.0s
DGMT Dagmar             16.34  63 ePn   Pn   17 24 46.2 +1.4
     42nm,1.3s
DGMT Dagmar             16.34  63  P    P    17 24 47.0 -0.7
     baz=260
TUC  Tucson             16.42 126 ePn   P    17 24 48.8  0.0
     19nm,1.6s
TUC  Tucson             16.42 126  P    Pn   17 24 46.8 +0.8
     baz=316
SDCO Great Sand Dun     16.80 102 ePn   Pn   17 24 52.0 +1.0
     33nm,1.6s
SDCO Great Sand Dun     16.80 102  P    Pn   17 24 51.3 +0.3
     baz=296
LAZ  Ladron             17.37 114 ePn   P    17 25 01.2 +1.8
ANMO Albuquerque        17.52 111  P    Pn   17 24 58.8 -1.1
     0.1nm,0.3s,baz=305,slow=9.8,SNR=13
ANMO                               LR   LR   17 32 43.3
     comp=Z,327nm,18.1s,baz=300,slow=40
ANMO Albuquerque        17.52 111 eP    P    17 25 02.0 +1.0
     6.6nm,1.0s
ANMO Albuquerque        17.52 111  P    Pn   17 24 59.6 -0.2
     baz=304
BNM  Barren Site        17.86 114 eP    P    17 25 06.5 +1.7
319A Douglas            17.98 125 eP    P    17 25 08.2 +2.1
     14nm,1.3s
KSCO Kaye Shedlock'     18.39  95 eP    Pn   17 25 11.8 +1.3
     44nm,1.6s
HYT  Haines Junctio     18.89 343 eP    P    17 25 14.8 -1.1
     4.3nm,1.1s
MDND Maddock            19.31  67 eP    Pn   17 25 22.1 +0.6
     18nm,0.9s
FFC  Flin Flon          19.65  46 eP    P    17 25 23.9 -0.3
     162nm,1.0s
MNTX Cornudas Mount     20.20 118 eP    Pn   17 25 33.4 +1.2
     8.2nm,1.5s
YKA  Yellowknife Ar     20.55  16  P    P    17 25 33.9 +0.1
     1.6nm,0.9s,baz=204,slow=11,SNR=9.2
YKB5 Yellowknife Ar     20.55  16 eP    P    17 25 33.9 +0.1
MSTX Muleshoe           20.59 109 eP    Pn   17 25 36.1 -0.7
     24nm,1.6s
AMTX Amarillo           20.87 105 eP    Pn   17 25 41.0 +0.9
     15nm,1.0s
ECSD EROS Data Cent     21.59  78 eP    P    17 25 45.9 +0.6
     5.7nm,0.9s
ECSD EROS Data Cent     21.59  78  P    P    17 25 42.5 -2.7
     baz=279
AGMN Agassiz Nation     21.84  66 eP    P    17 25 48.0 +0.1
     18nm,1.1s
ULM  Lac du Bonnet      21.98  61  P    P    17 25 50.0 +0.6
     9.8nm,0.9s,baz=271,slow=11,SNR=5.7
ULM                                LR   LR   17 35 02.2
     comp=Z,513nm,18.1s,baz=278,slow=38
ULM  Lac du Bonnet      21.98  61 eP    P    17 25 49.6 +0.2
     9.5nm,0.8s
MENT Mentasta           22.21 339 eP    P    17 25 47.6 -4.1
     9.5nm,1.4s
SML  Sawmill            22.73 333 eP    P    17 25 57.1 -0.1
     8.1nm,1.0s
TX31 Lajitas Ar. Si     22.87 120 eP    P    17 26 01.8 +2.7
     3.8nm,0.9s
TXAR Lajitas Array      22.87 120  P    P    17 26 02.0 +2.9
     0.7nm,0.7s,baz=298,slow=8.1,SNR=8.7
WMOK Wichita Mounta     23.00 102 eP    P    17 26 02.0 +1.7
     11nm,0.8s
WMOK Wichita Mounta     23.00 102  P    P    17 25 59.1 -1.3
     baz=300
HPIG                    23.38 127 eP    P    17 26 07.8 +3.3
     14nm,1.4s
ABTX Abilene, Hawle     23.51 108 eP    P    17 26 09.2 +3.6
     5.2nm,0.9s
SPMN Marine on St.      24.08  73 eP    P    17 26 12.4 +1.5
     6.6nm,0.7s
SCIA State Center       24.40  82 eP    P    17 26 15.5 +1.6
ILAR Eielson Array      24.52 339  P    P    17 26 12.6 -2.2
     1.1nm,0.9s,baz=144,slow=7.8,SNR=8.5
EYMN Ely                24.77  67 eP    P    17 26 16.5 -0.6
     13nm,1.1s
EYMN Ely                24.77  67  P    P    17 26 16.2 -1.0
     baz=272
PPLA Purkeypile         24.79 332 eP    P    17 26 17.5 +0.2
     16nm,1.3s
BWN  Browne             24.79 336 eP    P    17 26 16.7 -0.5
     25nm,1.3s
WHTX Lake Whitney,      25.40 106 eP    P    17 26 25.6 +2.7
     7.6nm,0.9s
INK  Inuvik             25.46 354  LR   LR   17 36 13.4
     comp=Z,533nm,18.7s,baz=200,slow=36
INK  Inuvik             25.46 354 eP    P    17 26 22.8 -0.4
     11nm,1.6s
HHAR Hobbs              25.79  94 eP    P    17 26 27.9 +1.4
     11nm,1.3s
L40A Anamosa            25.81  80 eP    P    17 26 27.3 +0.7
     11nm,0.8s
MIAR Mount Ida          26.84  98 eP    P    17 26 37.0 +1.0
     3.3nm,0.9s
MIAR Mount Ida          26.84  98  P    P    17 26 35.1 -1.0
     baz=299
SCHQ Schefferville      39.60  52  LR   LR   17 45 11.3
     comp=Z,328nm,18.0s,baz=291,slow=37
SEY  Seymchan           48.89 323  LR   LR   17 47 32.8
     comp=Z,95nm,21.2s,baz=328,slow=33
PETK Petropavlovsk-     49.34 310  LR   LR   17 46 56.8
     comp=Z,32nm,21.5s,baz=89,slow=32
MA2  Magadan            50.69 319  LR   LR   17 49 50.7
     comp=Z,83nm,18.8s,baz=90,slow=34
H11N3 WAKE ISLAND Hy    59.90 269  T    T    18 35 39.3
     baz=51,slow=75
H11N2 WAKE ISLAND Hy    59.90 269  T    T    18 35 45.8
     baz=51,slow=75
H11N1 WAKE ISLAND Hy    59.92 269  T    T    18 35 52.8
     baz=51,slow=75
H11S1 WAKE ISLAND Hy    60.82 268  T    T    18 36 44.1
     baz=50,slow=75,SNR=439
H11S2 WAKE ISLAND Hy    60.83 268  T    T    18 36 42.3
     baz=50,slow=75,SNR=267
H11S3 WAKE ISLAND Hy    60.84 268  T    T    18 36 52.0
     baz=50,slow=75,SNR=310
SONM Songino Array      78.11 327  LR   LR   18 05 32.6
     comp=Z,50nm,21.1s,baz=57,slow=34
ZALV Zalesovo Beam      79.61 342  LR   LR   18 11 42.4
     comp=Z,24nm,18.3s,baz=70,slow=38
HHC  Hu-ho-hao-te       81.37 319  P    P    17 33 11.9 -0.5
HHC                                pmax pmax
     comp=Z,6.0nm,0.7s
HHC                                pmax pmax
     comp=Z,13nm,4.3s
BVAR Borovoye Array     83.08 350  P    P    17 33 18.6 -2.3
     comp=Z,0.2nm,0.3s,baz=10,slow=3.2,SNR=3.6
MKAR Makanchi Array     86.86 341  LR   LR   18 14 02.8
     comp=Z,29nm,20.6s,baz=16,slow=37
WMQ  Urumqi             88.16 336 eP    P    17 33 48.6 +2.1
BDFB Brasilia           92.35 109  LR   LR   18 19 59.7
     comp=Z,186nm,19.8s,baz=173,slow=38
GEYT Alibeck            99.16 356  LR   LR   18 24 21.2
     comp=Z,26nm,18.4s,baz=75,slow=38
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*DSN **20** 17:25:19.2±1.8, 26°.88N×59°.73E, h10^{km}, ML3.7/7, Error ellipse: s-maj=43.5km s-min=14.3km az=144.0*
*ISCJB **20** 17:25:20.7±0.4, 26°.57N±0°.03×59°.69E±0°.04, h10^{km}, mb3.6/10, Error ellipse: s-maj=5.4km s-min=4.4km az=174.7*
*IDC **20** 17:25:20.7±1.2, 26°.56N×59°.60E, h0^{km}, mb3.7/10, mb1 3.8/11, mb1mx3.6/47, mbtmp3.7/11, ML3.6/1, Error ellipse: s-maj=25.8km s-min=18.5km az=143.0*
*THR **20** 17:25:20.9, 26°.64N×59°.65E, h18^{km}, ML3.7*
*TEH **20** 17:25:21.8, 26°.59N×59°.71E, h19^{km}, ML3.6*
ISC 20 17:25:22.1±0.7, **26°.57N**±0°.05×**59°.68E**±0°.05, **h10^{km}, n48,** σ1^{s}.**26**/51, **mb3.8**/10, **Southern Iran**

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Code Station Name         Δ°  AZ°   Phase ID     Time      Res
                                    Op   ISC     h  m  s   ISC
CHBR Chabahar            1.21 143  AML  AML  17 26 17.6
     1µm,0.8s
CHBR                               Pg   Pn   17 25 44.7 -0.4
CHBR                               Sg   Sb   17 26 01.8 +1.1
KHNJ Kahnooj             2.23 308 ePn   Pn   17 25 58.5 -0.6
NIAN Nian                2.72 292 ePn   Pn   17 26 07.3 +1.4
NIAN                               IAMB IAmb 17 27 17.7
     comp=Z,0.0nm,0.7s
SZD1 Zahaedan-tmp        3.09  20 ePn   Pn   17 26 12.4 +1.4
ZHSF Zahedan             3.18  17 ePn   Pn   17 26 11.5 -0.9
ZHSF Zahedan             3.18  17  Pn   Pn   17 26 11.5 -0.9
SHME Shamm               3.22 261 i P   Pn   17 26 12.7 -0.1
     SNR=7.9
SHME Shamm               3.22 261 ePn   Pn   17 26 13.5 +0.8
GENO Geno                3.24 286 ePn   Pn   17 26 14.6 +1.5
GENO                               IAMB IAmb 17 27 20.9
     comp=Z,0.0nm,0.8s
BNDS Bandar-Abbas        3.24 286 ePn   Pn   17 26 12.5 -0.6
BNDS Bandar-Abbas        3.24 286  Pn   Pn   17 26 12.4 -0.6
MDH  Madha               3.30 248 i P   Pn   17 26 13.0 -0.8
     SNR=12
MDH  Madha               3.30 248 ePn   Pn   17 26 13.2 -0.6
BIDO Bidbid              3.35 205 ePn   Pn   17 26 13.4 -1.1
MSFE Esma-Masafi         3.39 250 i P   Pn   17 26 14.4 -0.8
     SNR=7.1
MSFE Esma-Masafi         3.39 250 ePn   Pn   17 26 14.3 -0.8
WSAR Wadi Sarin          3.45 196  Pn   Pn   17 26 15.7 -0.2
     comp=Z,5.8nm,0.3s,baz=45,slow=6.5,SNR=68
WSAR                               Sn   Sn   17 26 55.9 -1.0
     comp=Z,12nm,0.3s,baz=312,slow=4.4,SNR=14
UOSS Minazif             3.53 243 i P   Pn   17 26 15.8 -1.2
     SNR=22
UOSS Minazif             3.53 243 ePn   Pn   17 26 15.5 -1.5
HATD Hatta, Dubai        3.64 242 i P   Pn   17 26 17.3 -1.3
     SNR=9.0
HATD Hatta, Dubai        3.64 242 ePn   Pn   17 26 17.7 -0.8
HOQ  Hoqain              3.67 216 ePn   Pn   17 26 17.7 -1.2
CHMN Cheshme madani      3.78 331 ePn   Pn   17 26 21.3 +0.5
CHMN                               IAMB IAmb 17 27 31.7
     comp=Z,0.0nm,1.0s
NAZ  Nazwa, Dubai        3.95 247 i P   Pn   17 26 23.3 +0.5
     SNR=8.4
NAZ  Nazwa, Dubai        3.95 247 ePn   Pn   17 26 24.9 +2.1
FAQ  Al Faqa, Dubai      4.11 245 i P   Pn   17 26 25.0  0.0
     SNR=7.8
FAQ                                S    Sn   17 27 15.6 +2.4
FAQ  Al Faqa, Dubai      4.11 245 ePn   Pn   17 26 26.9 +1.9
ALNE Al Ain              4.35 236 ePn   Pn   17 26 29.5 +1.2
ASUD Al Ashush, Dub      4.38 245 i P   Pn   17 26 28.7 +0.1
     SNR=24
ASUD Al Ashush, Dub      4.38 245 ePn   Pn   17 26 31.0 +2.3
BSRN Basiran             5.40 355 ePn   Pn   17 26 41.9 -0.9
BSRN Basiran             5.40 355  Pn   Pn   17 26 41.9 -0.9
IBAF Bafgh               6.16 325 ePn   Pn   17 26 54.3 +1.0
ISRV Sarvestan           6.45 297 ePn   Pn   17 26 58.5 +1.1
IKAZ Kazeroun            7.62 297 ePn   Pn   17 27 12.6 -0.9
IRAM Ramesheh            8.24 311 ePn   Pn   17 27 22.1 +0.2
RAYN Ar Rayn            13.20 260 i P   Pn   17 28 26.3 -3.4
     SNR=5.6
ASF  Jabal al Asfar     20.61 291  P    P    17 30 02.1 +0.5
     comp=Z,2.6nm,0.5s,baz=47,slow=9.5,SNR=6.4
MMAI Mount Meron Ar     22.00 293  P    P    17 30 17.4 +0.9
     comp=Z,0.7nm,0.5s,baz=90,slow=13,SNR=3.6
EIL  Elat               22.02 284  P    P    17 30 18.9 +2.2
     comp=Z,5.2nm,0.8s,baz=87,slow=8.4,SNR=4.9
BRTR Keskin Array B     25.34 308  P    P    17 30 49.9 +0.6
     comp=Z,2.7nm,0.8s,baz=122,slow=8.9,SNR=16
MKAR Makanchi Array     26.96  36  P    P    17 31 04.1 +0.3
     comp=Z,0.3nm,0.6s,baz=223,slow=8.9,SNR=4.3
ZALV Zalesovo Beam      33.06  27  P    P    17 31 58.7 +1.1
     comp=Z,0.5nm,0.3s,baz=218,slow=11,SNR=3.3
FINES FINESS Array B    41.53 336  P    P    17 33 07.5 -1.8
     comp=Z,2.7nm,0.9s,baz=125,slow=9.7,SNR=7.0
GERES GERESS Array B    41.83 315  P    P    17 33 10.7 -1.4
     comp=Z,0.5nm,0.7s,baz=108,slow=6.3,SNR=5.0
SONM Songino Array      42.06  47  P    P    17 33 15.3 +1.2
     comp=Z,0.5nm,0.6s,baz=260,slow=8.6,SNR=3.7
ARCES ARCESS Array B    47.38 344  P    P    17 33 56.2 +0.1
     comp=Z,0.9nm,0.5s,baz=138,slow=9.3,SNR=6.9
TORD Torodi Ar. Bea     55.73 268  P    P    17 34 58.5 -0.9
     comp=Z,0.5nm,0.6s,baz=64,slow=8.2,SNR=3.2
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*ISCJB **20** 17:50:37.4±0.5, 0°.10N±0°.04×98°.46E±0°.05, h48^{km}, mb4.3/19, MS3.3/1, Error ellipse: s-maj=8.7km s-min=4.8km az=147.4*
*IDC **20** 17:50:40.1±4.5, 0°.16N×98°.72E, h50^{km}±35^{km}, mb3.6/8, mb1 3.7/10, mb1mx3.5/36, mbtmp3.8/10, ML3.9/2, MS2.9/3, Ms1 3.0/3, ms1mx2.7/27, Error ellipse: s-maj=57.2km s-min=18.2km az=62.0*
*NEIC **20** 17:50:40.4±1.6, 0°.17N×98°.50E, h58^{km}±7^{km}, mb4.6/13, Error ellipse: s-maj=16.8km s-min=8.1km az=219.0*
NEIC Felt [III] at Airbangis.
*DJA **20** 17:50:41.2±0.3, 0°N±2°×9°9E±°, h30^{km}, M4.2/13, mb4.4/1, MLv4.2/13*
ISC 20 17:50:40.2±0.7, **0°.20N**±0°.05×**98°.58E**±0°.05, **h48^{km}, n48,** σ1^{s}.**51**/51, **mb4.2**/19, **Northern Sumatera**

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Code Station Name         Δ°  AZ°   Phase ID     Time      Res
                                    Op   ISC     h  m  s   ISC
MNSI Mandailing Nat      1.17  59  P    Pn   17 51 00.5 +0.4
MNSI                               S    Sn   17 51 15.7 +0.8
SBSI Sibolga             1.38  13  P    Pn   17 51 04.3 +1.2
SBSI                               S    Sn   17 51 22.6 +2.4
GSI  Gunungsitoli        1.49 318 ePn   Pn   17 51 04.6 +0.1
GSI  Gunungsitoli        1.49 318  P    Pn   17 51 04.7 +0.1
GSI                                S    Sn   17 51 29.0 +6.2
SISI Saibi               1.60 161  P    Pn   17 51 07.7 +1.6
PPI  Padang Panjang      1.93 110  P    Pn   17 51 10.2 -0.4
PDSI Padang              2.18 120  P    Pn   17 51 15.4 +1.3
BKNI Bangkinang          2.46  87 ePn   Pn   17 51 19.8 +1.8
BKNI Bangkinang          2.46  87  P    Pn   17 51 21.3 +3.4
PSI  Prapat              2.61   8  P    Pn   17 51 18.9 -1.2
     7.3nm,0.3s,baz=166,slow=7.2,SNR=9.3
PSI  Prapat              2.61   8 ePn   Pn   17 51 19.2 -0.9
SDSI Sungai Dareh        3.06 111  P    Pn   17 51 28.0 +1.8
TSI  Tuntungan           3.28 360  P    Pn   17 51 28.2 -1.0
KCSI Kotacane, Aceh      3.40 346  P    Pn   17 51 29.9 -0.9
KRJI Kerinci             3.67 128  P    Pn   17 51 35.7 +1.1
IPM  Ipoh                4.91  30 ePn   Pn   17 51 53.3 +1.8
LHMI Lhok Sumawe         5.26 342 ePn   Pn   17 51 56.6 +0.3
KULM Kulim               5.46  22 ePn   Pn   17 52 00.0 +0.8
MYKOM Kota Tinggi        5.50  73 ePn   Pn   17 52 00.8 +1.1
MNAI Manna               6.29 136 ePn   Pn   17 52 12.1 +1.5
MNAI                              eSn   Sn   17 53 20.5 -0.8
LEM  Lembang            11.40 128  LR   LR   17 57 21.9
     comp=Z,42nm,20.7s,baz=290,slow=36
SBUM Sibu               13.82  81 eP    P    17 54 01.4 +0.7
CMAR Chiang Mai Arr     18.15   1  P    P    17 54 48.7 -0.1
     0.3nm,0.3s,baz=190,slow=11,SNR=3.0
CMAR                               LR   LR   18 01 28.7
     comp=Z,21nm,18.1s,baz=190,slow=36
KKM  Kota Kinabalu      18.54  71 eP    P    17 54 53.3 +0.1
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	78nm,1.3s						
ENH	**Enshi**	**31.66**	**18**	eP	**P**	**17 56 58.5**	**-0.6**
	14nm,1.5s						
WRA	**Warramunga Arr**	**40.34**	**122**	P	**P**	**17 58 11.6**	**-2.0**
	0.6nm,0.5s,baz=294,slow=10,SNR=6.1						
WR1	**Warramunga Arr**	**40.34**	**122**	eP	**P**	**17 58 11.6**	**-2.0**
WB2	**Warramunga Arr**	**40.35**	**122**	eP	**P**	**17 58 10.8**	**-2.8**
	24nm,1.8s						
AS31	**Alice Springs**	**41.70**	**127**	eP	**P**	**17 58 23.4**	**-1.2**
	4.9nm,1.6s						
ASAR	**Alice Springs**	**41.70**	**127**	P	**P**	**17 58 23.5**	**-1.2**
	0.8nm,0.7s,baz=297,slow=7.7,SNR=15						
JNU	**Nakatsue**	**44.67**	**40**	eP	**P**	**17 58 47.6**	**-0.9**
	11nm,1.2s						
KS15	**Wonju Array Si**	**45.88**	**33**	eP	**P**	**17 58 57.6**	**-0.4**
	45nm,1.6s						
KSRS	**Korea Array**	**45.91**	**33**	P	**P**	**17 58 57.8**	**-0.5**
	1.9nm,0.6s,baz=223,slow=8.5,SNR=10						
KSRS				LR	LR	18 20 34.1	
	comp=Z,33nm,18.2s,baz=268,slow=39						
SONA0	**Songino Array**	**47.93**	**7**	eP	**P**	**17 59 13.3**	**-0.7**
SONM	**Songino Array**	**47.93**	**7**	P	**P**	**17 59 13.3**	**-0.7**
	1.4nm,0.6s,baz=184,slow=8.3,SNR=9.6						
MK31	**Makanchi Array**	**48.55**	**345**	eP	**P**	**17 59 19.1**	**+0.4**
	2.6nm,1.4s						
MK32	**Makanchi Array**	**48.55**	**345**	eP	**P**	**17 59 19.1**	**+0.5**
MKAR	**Makanchi Array**	**48.55**	**345**	P	**P**	**17 59 19.1**	**+0.5**
	0.9nm,0.7s,baz=160,slow=10,SNR=7.0						
JHJ2	**Mitsune**	**50.73**	**46**	eP	**P**	**17 59 35.7**	**+0.2**
	240nm,1.2s						
MJB9	**Matsu-Tunnel**	**51.52**	**41**	eP	**P**	**17 59 41.4**	**+0.1**
	18nm,1.9s						
MAJO	**Matsushiro**	**51.52**	**41**	eP	**P**	**17 59 39.8**	**-1.5**
MAJO				e		17 59 41.6	
MJAR	**Matsushiro Arr**	**51.52**	**41**	P	**P**	**17 59 39.8**	**-1.5**
	0.7nm,0.7s,baz=232,slow=6.8,SNR=4.0						
GYA0B	**ALIBECK ARRAY**	**52.86**	**320**	eP	**P**	**17 59 51.4**	**+0.1**
	18nm,1.9s						
USRK	**Ussuriysk Ar.**	**52.93**	**30**	P	**P**	**17 59 51.6**	**0.0**
	1.8nm,0.7s,baz=226,slow=7.2,SNR=5.0						
KURK	**Kurchatov**	**53.12**	**344**	eP	**P**	**17 59 53.3**	**+0.4**
	1.9nm,0.9s						
ZAA0	**Zalesovo Array**	**54.77**	**350**	eP	**P**	**18 00 04.8**	**-0.1**
	1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**54.77**	**350**	P	**P**	**18 00 04.6**	**-0.3**
	1.1nm,0.5s,baz=161,slow=7.2,SNR=2.7						
ZAA1	**Zalesovo Array**	**54.77**	**350**	eP	**P**	**18 00 04.6**	**-0.3**

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*ISCJB **20** 18:15:26.0±0.2, 62°.58N±0°.02×151°.13W±0°.04, h100^{km}±2^{km}, mb4.1/42, Error ellipse: s-maj=3.0km s-min=2.6km az=16.0*

*MOS **20** 18:15:26.1±1.1, 62°.61N×151°.15W, h98^{km}, mb4.4/19, Error ellipse: s-maj=13.6km s-min=7.4km az=98.8*

*IDC **20** 18:15:26.6±1.8, 62°.65N×151°.25W, h86^{km}±17^{km}, mb3.6/19, mb1 3.7/25, mb1mx3.6/48, mbtmp3.9/25, MS2.8/4, Ms1 2.8/4, ms1mx2.5/37, Error ellipse: s-maj=16.2km s-min=11.5km az=27.0*

*AEIC **20** 18:15:27.5, 62°.59N×151°.13W, h85^{km}, ML4.1, MB4.3(NEIC)*

*NEIC **20** 18:15:27.5±0.0, 62°.59N×151°.13W, h85^{km}, mb4.3/16, ML4.1(AEIC), After AEIC.*

NEIC Felt [II] at Talkeetna.

*ANF **20** 18:15:30.7±3.7, 62°.71N×150°.72W, h80^{km}, ML4.2/2, Error ellipse: s-maj=38.8km s-min=35.9km az=132.0*

ISC 20 18:15:27.3±0.6**, 62°.59N**±0°.03×**151°.14W**±0°.04**, h94**^{km}±5^{km}**, n200,** σ1^s**14**/224**, mb4.3**/42**, 7C-6D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	**0.57**	**303**	ePn	**Pn**	**18 15 43.0**	**-0.2**
PPLA				eSn	**Sn**	**18 15 54.1**	**-1.0**
SKT	**Skwentna**	**0.64**	**197**	ePn	**Pn**	**18 15 43.1**	**-0.5**
SKT				eSn	**Sn**	**18 15 54.9**	**-1.0**
HUR	**Hurricane**	**0.79**	**60**	ePn	**Pn**	**18 15 45.1**	**+0.1**
HUR				eSn	**Sn**	**18 15 58.4**	**0.0**
CAST	**Castle Rocks**	**0.94**	**333**	ePn	**Pn**	**18 15 46.3**	**-0.3**
CAST				eSn	**Sn**	**18 15 59.8**	**-1.2**
KTH	**Kantishna Hill**	**0.97**	**6**	ePn	**Pn**	**18 15 47.2**	**+0.2**
KTH				eSn	**Sn**	**18 16 01.1**	**-0.6**
SUA	**Susitna One**	**1.15**	**171**	ePn	**Pn**	**18 15 49.2**	**+0.1**
SUA				eSn	**Sn**	**18 16 03.9**	**-1.5**
RND	**Reindeer**	**1.32**	**51**	ePn	**Pn**	**18 15 51.4**	**+0.2**
RND				eSn	**Sn**	**18 16 09.1**	**0.0**
PMR	**Palmer**	**1.38**	**136**	ePn	**Pn**	**18 15 51.2**	**-0.4**
PMR	**Palmer**	**1.38**	**136**	eP	**Pn**	**18 15 51.3**	**-0.4**
SPU	**Mount Spurr**	**1.48**	**197**	ePn	**Pn**	**18 15 52.5**	**-0.5**
SPWE	**Spurr West**	**1.48**	**208**	ePn	**Pn**	**18 15 53.0**	**-0.1**
BPAW	**Bear Paw Mtn.**	**1.52**	**2**	ePn	**Pn**	**18 15 53.3**	**-0.2**
BPAW				eSn	**Sn**	**18 16 12.3**	**-0.9**
MCK	**McKinley**	**1.52**	**40**	ePn	**Pn**	**18 15 53.9**	**+0.4**
SML	**Sawmill**	**1.53**	**120**	ePn	**Pn**	**18 15 53.7**	**0.0**
SML	**Sawmill**	**1.53**	**120**	eP	**Pn**	**18 15 53.7**	**0.0**
RC01	**Rabbit Creek A**	**1.65**	**156**	ePn	**Pn**	**18 15 54.4**	**-0.7**
RC01				eSn	**Sn**	**18 16 16.3**	**+0.2**
KNK	**Knik Glacier**	**1.73**	**132**	ePn	**Pn**	**18 15 55.9**	**-0.2**
BWN	**Browne**	**1.76**	**25**	ePn	**Pn**	**18 15 57.0**	**+0.5**
BWN				ePn	Pn	18 15 57.1	+0.7
DHY	**Denali Highway**	**1.79**	**73**	ePn	**Pn**	**18 15 57.0**	**-0.1**
DHY				eSn	**Sn**	**18 16 19.9**	**+0.2**
SCM	**Sheep Creek Mo**	**1.94**	**111**	ePn	**Pn**	**18 15 58.5**	**-0.4**
SCM	**Sheep Creek Mo**	**1.94**	**111**	eP	**Pn**	**18 15 58.5**	**-0.4**
RDJH	**Redoubt Jeurge**	**2.16**	**202**	ePn	**Pn**	**18 16 02.0**	**+0.2**
TTA	**Tatalina**	**2.27**	**281**	ePn	**Pn**	**18 16 02.8**	**-0.4**
TTA	**Tatalina**	**2.27**	**281**	eP	**Pn**	**18 16 02.8**	**-0.4**
TT01	**Tatalina**	**2.27**	**280**	ePn	**Pn**	**18 16 02.7**	**-0.4**
RSO	**Redoubt South**	**2.27**	**201**	ePn	**Pn**	**18 16 03.6**	**+0.2**
WRH	**Wood River Hil**	**2.33**	**35**	ePn	**Pn**	**18 16 03.9**	**0.0**
MLY	**Manley**	**2.46**	**4**	ePn	**Pn**	**18 16 05.7**	**+0.1**
CCB	**Clear Creek Bu**	**2.54**	**34**	ePn	**Pn**	**18 16 06.8**	**0.0**
GLI	**Glacier Island**	**2.58**	**130**	ePn	**Pn**	**18 16 06.5**	**-0.8**
SVW2	**Sparrevohn**	**2.59**	**237**	ePn	**Pn**	**18 16 07.1**	**-0.3**
PS10	**TAPS Pump St10**	**2.59**	**69**	ePn	**Pn**	**18 16 07.8**	**+0.4**
HDA	**Harding Lake**	**2.62**	**44**	ePn	**Pn**	**18 16 08.0**	**+0.2**
SEW	**Seward**	**2.62**	**161**	ePn	**Pn**	**18 16 06.8**	**-1.1**
PAX	**Paxson**	**2.63**	**79**	ePn	**Pn**	**18 16 08.8**	**+0.8**
PAX	**Paxson**	**2.63**	**79**	eP	**Pn**	**18 16 08.9**	**+0.8**
JPK	**Jack Peak**	**2.65**	**124**	ePn	**Pn**	**18 16 07.4**	**-0.9**
PS11	**TAPS Pump St11**	**2.69**	**98**	ePn	**Pn**	**18 16 09.5**	**+0.7**
MDM	**Murphy Dome**	**2.71**	**27**	ePn	**Pn**	**18 16 09.2**	**+0.2**
TCOL	**CIGO, UAF Yank**	**2.71**	**31**	P	**Pn**	**18 16 09.4**	**+0.4**
	baz=214						
TCOL				S	**Sn**	**18 16 39.7**	**-1.3**
	baz=214						
COLA	**College**	**2.72**	**31**	ePn	**Pn**	**18 16 09.4**	**+0.4**
COLA	**College**	**2.72**	**31**	diP	**Pn**	**18 16 09.3**	**+0.3**
VMT	**TAPS Tl Valdez**	**2.72**	**122**	ePn	**Pn**	**18 16 08.2**	**-0.9**
IVE	**Iliamna Volcan**	**2.74**	**200**	ePn	**Pn**	**18 16 10.0**	**+0.5**
PS08	**TAPS Pump Stn8**	**2.75**	**43**	ePn	**Pn**	**18 16 09.8**	**+0.3**
ILS	**Iliamna Low So**	**2.80**	**200**	ePn	**Pn**	**18 16 11.1**	**+0.7**
BRLK	**Bradley Lake**	**2.84**	**177**	ePn	**Pn**	**18 16 10.8**	**+0.1**
BRSE	**Bradley Lake S**	**2.87**	**176**	ePn	**Pn**	**18 16 11.4**	**+0.3**
FID	**Port Fidalgo**	**2.89**	**128**	ePn	**Pn**	**18 16 10.4**	**-1.0**
FID				ePn	Pn	18 16 10.4	-1.0
ILAR	**Eielson Array**	**2.89**	**39**	P	**Pn**	**18 16 11.4**	**0.0**
	42nm,0.3s,baz=222,slow=14,SNR=932						
ILAR				S	**Sn**	**18 16 40.0**	**-5.4**
	21nm,0.3s,baz=357,slow=28,SNR=13						
ILB	**Eielson Array**	**2.89**	**39**	ePn	**Pn**	**18 16 11.6**	**+0.2**
HOM	**Homer**	**2.95**	**185**	ePn	**Pn**	**18 16 13.2**	**+0.9**
PS07	**TAPS Pump Stn7**	**3.01**	**24**	ePn	**Pn**	**18 16 13.8**	**+0.8**
POKR	**Poker Plat Res**	**3.02**	**31**	P	**Pn**	**18 16 13.4**	**+0.3**
	baz=214						
POKR				S	**Sn**	**18 16 46.7**	**-1.8**
	baz=214						
PS12	**TAPS Pump St12**	**3.04**	**109**	ePn	**Pn**	**18 16 12.6**	**-0.8**
CNPM	**China Poot**	**3.08**	**181**	ePn	**Pn**	**18 16 14.6**	**+0.6**
RIDG	**Independent Ri**	**3.08**	**65**	ePn	**Pn**	**18 16 15.0**	**+1.0**
EYAK	**Cordova Ski Ar**	**3.29**	**126**	ePn	**Pn**	**18 16 16.0**	**-0.8**
PS06	**TAPS Pump Stn6**	**3.33**	**10**	ePn	**Pn**	**18 16 17.9**	**+0.5**
DOT	**Dot Lake**	**3.38**	**69**	ePn	**Pn**	**18 16 18.4**	**+0.3**
AUE	**Augustine Isla**	**3.42**	**200**	ePn	**Pn**	**18 16 18.8**	**+0.3**
AUW	**Augustine West**	**3.43**	**200**	ePn	**Pn**	**18 16 19.4**	**+0.8**
MENT	**Mentasta**	**3.43**	**81**	ePn	**Pn**	**18 16 19.0**	**+0.4**
SCRK	**Sand Creek**	**3.52**	**64**	ePn	**Pn**	**18 16 20.5**	**+0.6**
SGAM	**Sherman Glacie**	**3.53**	**124**	ePn	**Pn**	**18 16 18.8**	**-1.2**
IM3	**Indian Mountai**	**3.59**	**343**	ePn	**Pn**	**18 16 21.2**	**+0.4**
RAGM	**Ragged Mountai**	**3.81**	**123**	ePn	**Pn**	**18 16 22.9**	**-0.9**
PRP	**Porcupine Dome**	**3.83**	**38**	ePn	**Pn**	**18 16 23.9**	**-0.3**
HMT	**Hamilton**	**4.00**	**121**	ePn	**Pn**	**18 16 25.5**	**-0.9**
CRQM	**Cirque**	**4.23**	**112**	ePn	**Pn**	**18 16 29.1**	**-0.6**
CRQM				ePn	Pn	18 16 29.2	-0.5
PS05	**TAPS Pump Stn5**	**4.24**	**3**	ePn	**Pn**	**18 16 30.6**	**+1.0**
BCA3	**Beaver Creek A**	**4.32**	**80**	ePn	**Pn**	**18 16 30.4**	**-0.3**
TGL	**Tana Glacier**	**4.37**	**111**	ePn	**Pn**	**18 16 30.4**	**-1.0**
KAHC	**Katmai Hardscr**	**4.39**	**207**	ePn	**Pn**	**18 16 32.0**	**+0.2**
COLD	**Coldfoot**	**4.67**	**4**	ePn	**Pn**	**18 16 36.4**	**+1.0**
FYU	**Fort Yukon**	**4.73**	**30**	ePn	**Pn**	**18 16 36.8**	**+0.6**
KABU	**Katmai Buttres**	**4.80**	**207**	ePn	**Pn**	**18 16 37.7**	**+0.4**
KDAK	**Kodiak Island**	**4.88**	**189**	P	**Pn**	**18 16 36.6**	**-1.6**
	2.2nm,0.3s,baz=52,slow=9.0,SNR=42						
KDAK				S	**Sn**	**18 17 28.6**	**-4.8**
	9.8nm,0.3s,baz=215,slow=20,SNR=14						
KDAK				LR	LR	18 18 48.5	
	comp=Z,82nm,20.0s,baz=320,slow=41						
CTGM	**Chitina Glacie**	**4.93**	**105**	ePn	**Pn**	**18 16 38.6**	**-0.5**
EGAK	**Eagle**	**4.95**	**59**	ePn	**Pn**	**18 16 39.6**	**+0.4**
CHX	**Chaix Hills**	**5.45**	**113**	ePn	**Pn**	**18 16 46.1**	**0.0**
DAWY	**Dawson**	**5.49**	**69**	ePn	**Pn**	**18 16 46.8**	**+0.1**
OHAK	**Old Harbor**	**5.49**	**192**	ePn	**Pn**	**18 16 45.8**	**-0.8**
BM3	**Burnt Mountain**	**5.58**	**27**	ePn	**Pn**	**18 16 48.4**	**+0.6**
PCA	**Pinnacle**	**5.80**	**111**	ePn	**Pn**	**18 16 50.2**	**-0.7**
TOLK	**Toolik Lake Re**	**6.11**	**5**	ePn	**Pn**	**18 16 57.1**	**+2.2**
TOLK	**Toolik Lake Re**	**6.11**	**5**	P	**Pn**	**18 16 56.7**	**+1.7**
	baz=187						
TOLK				S	**Sn**	**18 18 05.0**	**+1.6**
	baz=187						
BCPM	**Bancas Point**	**6.14**	**110**	ePn	**Pn**	**18 16 54.8**	**-0.7**
SII	**Sitkinak Islan**	**6.25**	**196**	ePn	**Pn**	**18 16 56.0**	**-0.8**
PNL	**Peninsula**	**6.39**	**112**	ePn	**Pn**	**18 16 57.7**	**-1.2**
ANM	**Nome**	**6.65**	**294**	ePn	**Pn**	**18 17 02.4**	**+0.1**
ANM	**Nome**	**6.65**	**294**	eP	**Pn**	**18 17 02.4**	**+0.1**
HYT	**Haines Junctio**	**6.72**	**99**	ePn	**Pn**	**18 17 03.0**	**-0.3**
CHIA	**Chirikof Islan**	**7.15**	**201**	ePn	**Pn**	**18 17 07.4**	**-1.7**
EPYK	**Eagle Plains**	**7.28**	**52**	ePn	**Pn**	**18 17 11.3**	**+0.3**
EPYK	**Eagle Plains**	**7.28**	**52**	P	**Pn**	**18 17 11.2**	**+0.3**
	baz=245						
EPYK				S	**Sn**	**18 18 30.4**	**-1.5**
	baz=245						
CHGN	**Chignik**	**7.31**	**214**	ePn	**Pn**	**18 17 10.0**	**-1.3**
RDOG	**Red Dog Mine**	**7.36**	**323**	ePn	**Pn**	**18 17 11.8**	**-0.2**
WHY	**Whitehorse**	**7.98**	**97**	ePn	**Pn**	**18 17 19.5**	**-1.0**
SKAG	**Skagway**	**8.29**	**105**	ePn	**Pn**	**18 17 23.8**	**-0.7**
SDPT	**Sand Point**	**8.71**	**218**	ePn	**Pn**	**18 17 30.5**	**+0.2**
BESE	**Bessie Mountai**	**8.96**	**109**	ePn	**Pn**	**18 17 32.3**	**-1.5**
INK	**Inuvik**	**9.28**	**44**	P	**Pn**	**18 17 38.7**	**+0.8**
	0.6nm,0.3s,baz=246,slow=17,SNR=12						
INK				S	**Sn**	**18 19 17.0**	**-3.3**
	0.6nm,0.3s,baz=159,slow=30,SNR=3.8						
INK				LR	LR	18 21 05.4	
	comp=Z,51nm,20.7s,baz=100,slow=36						
INK	**Inuvik**	**9.28**	**44**	ePn	**Pn**	**18 17 37.5**	**-0.4**
INK				eSn	**Sn**	**18 19 17.4**	**-2.8**
INK	**Inuvik**	**9.28**	**44**	eP	**Pn**	**18 17 37.5**	**-0.4**
INK				e		18 19 17.4	
JIS	**Juneau Island**	**9.33**	**110**	ePn	**Pn**	**18 17 36.0**	**-2.7**
GAMB	**Gambell**	**9.36**	**286**	ePn	**Pn**	**18 17 39.1**	**0.0**
SIT	**Sitka**	**9.69**	**118**	ePn	**Pn**	**18 17 42.3**	**-1.3**
SIT	**Sitka**	**9.69**	**118**	eP	**Pn**	**18 17 42.3**	**-1.3**
FALS	**False Pass**	**10.03**	**225**	ePn	**Pn**	**18 17 46.5**	**-1.7**
SPIA	**Saint Paul Isl**	**11.00**	**249**	ePn	**Pn**	**18 18 00.3**	**-1.2**
DLBC	**Dease Lake**	**11.18**	**102**	P	**Pn**	**18 18 02.5**	**-1.5**
	0.3nm,0.3s,baz=287,slow=12,SNR=5.8						
DLBC				LR	LR	18 22 13.0	
	comp=Z,86nm,19.9s,baz=203,slow=36						
DLBC	**Dease Lake**	**11.18**	**102**	ePn	**Pn**	**18 18 02.8**	**-1.1**
WRAK	**Wrangell Islan**	**11.35**	**115**	ePn	**Pn**	**18 18 06.1**	**0.0**
AKUT	**Akutan**	**11.41**	**229**	ePn	**Pn**	**18 18 06.4**	**-0.6**
CRAG	**Craig**	**11.67**	**120**	ePn	**Pn**	**18 18 09.7**	**-0.8**
DIB	**Dawson Inlet,**	**13.62**	**125**	ePn	**Pn**	**18 18 36.0**	**-0.2**
MOBC	**Moresby Island**	**13.85**	**124**	ePn	**Pn**	**18 18 40.0**	**+0.5**
BBB	**Bella Bella**	**16.10**	**120**	P	**P**	**18 19 09.3**	**-0.1**
	0.2nm,0.3s,baz=243,slow=9.7,SNR=3.7						
BBB	**Bella Bella**	**16.10**	**120**	eP	**P**	**18 19 09.9**	**+0.5**
	7.4nm,0.9s						
YKW3	**Yellowknife Ar**	**16.68**	**74**	eP	**P**	**18 19 17.6**	**+1.8**
	2.5nm,0.6s						
YKA	**Yellowknife Ar**	**16.71**	**74**	P	**Pn**	**18 19 14.4**	**-0.8**
	0.1nm,0.3s,baz=285,slow=11,SNR=6.9						
YKB5	**Yellowknife Ar**	**16.71**	**74**	eP	**Pn**	**18 19 14.4**	**-0.8**
GSTR	**Great Sitkin T**	**16.95**	**243**	eP	**P**	**18 19 18.7**	**-0.1**
ADK	**Adak**	**17.36**	**244**	eP	**Pn**	**18 19 23.8**	**+0.4**
	35nm,1.0s						
ADK	**Adak**	**17.36**	**244**	eP	**Pn**	**18 19 23.8**	**+0.4**
ADK				pmax	pmax		
	comp=Z,35nm,1.0s						
KIWB	**Kanaga Island**	**17.58**	**244**	eP	**Pn**	**18 19 27.4**	**+1.4**
BILL	**Bilibino**	**18.28**	**306**	eP	**P**	**18 19 33.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s						
RES	**Resolute Bay**	**22.64**	**35**	eP	**P**	**18 20 23.0**	**+3.0**
	comp=Z,18nm,1.1s						
RES	**Resolute Bay**	**22.64**	**35**	eP	**P**	**18 20 23.0**	**+3.0**
RES				pmax	pmax		
	comp=Z,18nm,1.1s						
SEY	**Seymchan**	**25.15**	**296**	P	**P**	**18 20 42.6**	**-0.7**
	comp=Z,2.7nm,0.6s,baz=60,slow=8.8,SNR=8.1						
SEY	**Seymchan**	**25.15**	**296**	⇓eP	**P**	**18 20 45.2**	**+1.9**
FCC	**Fort Churchill**	**27.41**	**72**	eP	**P**	**18 21 03.4**	**-0.2**
	comp=Z,16nm,1.0s						
FCC	**Fort Churchill**	**27.41**	**72**	eP	**P**	**18 21 03.4**	**-0.2**
FCC				pmax	pmax		
	comp=Z,16nm,1.0s						
MA2	**Magadan**	**27.43**	**290**	⇓eP	**P**	**18 21 06.6**	**+2.8**
MA2				pmax	pmax		
	comp=Z,16nm,1.1s						
PEA1	**Petropavlovsk-**	**28.09**	**274**	eP	**P**	**18 21 08.8**	**-0.9**
PETK	**Petropavlovsk-**	**28.09**	**274**	P	**P**	**18 21 08.8**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=70,slow=13,SNR=4.1						
PD31	**Pinedale Array**	**31.28**	**110**	eP	**P**	**18 21 38.3**	**0.0**
PDAR	**Pinedale Array**	**31.28**	**110**	P	**P**	**18 21 38.3**	**0.0**
	comp=Z,0.1nm,0.4s,baz=338,slow=6.8,SNR=2.1						
NV01	**Mina Array Sit**	**31.34**	**125**	eP	**P**	**18 21 39.4**	**+0.5**
NV01				ePcP	**PcP**	**18 24 31.3**	**+0.9**
NVAR	**Mina Array Bea**	**31.34**	**125**	P	**P**	**18 21 39.4**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=342,slow=8.5,SNR=2.6						
NVAR				PcP	**PcP**	**18 24 31.3**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=300,slow=2.2,SNR=5.4						
YAK	**Yakutsk**	**34.64**	**305**	⇑eP	**P**	**18 22 07.9**	**+0.9**
YAK				pmax	pmax		
	comp=Z,16nm,0.5s						
KLR	**Kul'dur**	**42.52**	**289**	P	**P**	**18 23 12.4**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=61,slow=7.1,SNR=5.3						
KLR	**Kul'dur**	**42.52**	**289**	⇓eP	**P**	**18 23 12.6**	**-0.4**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
LTX	**Lajitas**	**45.15**	**115**	eP	**P**	**18 23 36.3**	**+1.9**
LTX				ePcP	**PcP**	**18 25 13.8**	**+0.6**
LTX	**Lajitas**	**45.15**	**115**	eP	**P**	**18 23 36.3**	**+1.9**
LTX				e		18 25 13.8	
TXAR	**Lajitas Array**	**45.15**	**115**	P	**P**	**18 23 36.3**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=332,slow=6.0,SNR=11						
TXAR				PcP	**PcP**	**18 25 13.8**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=118,slow=1.7,SNR=4.7						
WVT	**Waverly**	**46.47**	**94**	eP	**P**	**18 23 46.0**	**+1.4**
	comp=Z,8.3nm,0.6s						
WVT	**Waverly**	**46.47**	**94**	eP	**P**	**18 23 46.0**	**+1.4**
WVT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARA0	**ARCESS Array S**	**48.14**	**2**	eP	**P**	**18 23 56.4**	**-0.7**
ARA0				ePcP	**PcP**	**18 25 22.5**	**-0.5**
ARCES	**ARCESS Array B**	**48.14**	**2**	P	**P**	**18 23 56.4**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=10,slow=7.6,SNR=5.4						
ARCES				PcP	**PcP**	**18 25 22.5**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=349,slow=3.9,SNR=7.2						
KSRS	**Korea Array**	**53.50**	**282**	P	**P**	**18 24 38.6**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=30,slow=7.9,SNR=7.1						
KSRS				LR	LR	18 50 08.0	
	comp=Z,6.2nm,18.2s,baz=300,slow=39						
ULN	**Ulaanbaatar**	**53.73**	**305**	eP	**P**	**18 24 40.2**	**+0.7**
	comp=Z,2.6nm,0.7s						
ULN	**Ulaanbaatar**	**53.73**	**305**	ceP	**P**	**18 24 40.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONA0	**Songino Array**	**54.00**	**306**	eP	**P**	**18 24 42.6**	**+1.2**
SONM	**Songino Array**	**54.00**	**306**	P	**P**	**18 24 42.6**	**+1.2**
	comp=Z,2.4nm,0.7s,baz=26,slow=6.8,SNR=17						
TJN	**Taejon**	**54.64**	**282**	⇓eP	**P**	**18 24 45.5**	**-0.5**
ZAA1	**Zalesovo Array**	**55.81**	**324**	eP	**P**	**18 24 53.9**	**-0.3**
ZALV	**Zalesovo Beam**	**55.81**	**324**	P	**P**	**18 24 53.9**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=28,slow=6.4,SNR=9.8						
FIA0	**FINESS Array S**	**56.27**	**2**	eP	**P**	**18 24 55.4**	**-1.9**
FIA0	**FINESS Array S**	**56.27**	**2**	eP	**P**	**18 24 55.4**	**-1.9**
FINES	**FINESS Array B**	**56.27**	**2**	P	**P**	**18 24 55.4**	**-1.9**
	comp=Z,1.9nm,0.7s,baz=22,slow=6.8,SNR=6.0						
FINES	**FINESS Array B**	**56.27**	**2**	ceP	**P**	**18 24 56.4**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**57.79**	**297**	P	**P**	**18 25 08.3**	**-0.2**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,14nm,6.4s						
ARU	**Arti**	**59.09**	**341**	eP	**P**	**18 25 16.4**	**-0.7**
	comp=Z,6.6nm,0.8s						
ARU	**Arti**	**59.09**	**341**	diP	**P**	**18 25 16.6**	**-0.5**
ARU						18 26 03.5	
ARU				S	**S**	**18 33 16.0**	**-0.4**
ARU				SS	**SS**	**18 37 08.0**	**-2.7**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ESK	**Eskdalemuir**	**59.79**	**21**	eP	**P**	**18 25 21.8**	**-0.2**
	comp=Z,6.8nm,1.3s						
ESK	**Eskdalemuir**	**59.79**	**21**	eP	**P**	**18 25 21.8**	**-0.2**
ESK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRVK	**Borovoye**	**60.18**	**333**	eP	**P**	**18 25 24.6**	**-0.1**
	comp=Z,2.6nm,1.0s						
BRVK	**Borovoye**	**60.18**	**333**	⇑eP	**P**	**18 25 24.3**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**60.38**	**326**	eP	**P**	**18 25 25.4**	**-0.6**
	comp=Z,2.7nm,0.9s						
KURK	**Kurchatov**	**60.38**	**326**	ceP	**P**	**18 25 25.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**60.49**	**326**	P	**P**	**18 25 26.3**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=32,slow=6.8,SNR=14						
NJ2	**Nanjing**	**62.09**	**286**	eP	**P**	**18 25 36.4**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
OBN	**Obninsk**	**62.48**	**355**	eP	**P**	**18 25 39.4**	**-0.7**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**62.96**	**322**	eP	**P**	**18 25 42.6**	**-0.9**
	comp=Z,1.4nm,0.9s						
MK31	**Makanchi Array**	**62.96**	**322**	eP	**P**	**18 25 42.6**	**-0.9**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**62.96**	**322**	P	**P**	**18 25 42.7**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=39,slow=6.9,SNR=36						
GTA	**Gaotai**	**63.67**	**305**	eP	**P**	**18 25 49.0**	**+0.6**
GTA				pP	pP	18 25 56.1	-16
GTA				sP	sP	18 25 59.4	-24
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ	**Urumqi**	**64.00**	**316**	eP	**P**	**18 25 54.9**	**+4.4**
WMQ				LR	LR		
	comp=N,37nm,29.1s						
WMQ				LR	LR		
	comp=E,78nm,27.7s						
WMQ				LR	LR		
	comp=Z,130nm,26.9s						
LZH	**Lanzhou**	**64.99**	**300**	eP	P	18 26 02.6	+5.4
LZH				pP	pP	18 26 20.8	-0.5
LZH				sP	PcP	18 26 28.0	-1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
WHN	**Wuhan**	**65.36**	**289**	eP	P	18 26 06.5	+7.1
ABKAR	**Akbulak array**	**65.80**	**338**	eP	**P**	**18 26 01.3**	**-0.6**
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**67.05**	**360**	P	**P**	**18 26 09.2**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=2.7,slow=6.2,SNR=12						
AKBB	**Malin Array Si**	**67.05**	**360**	eP	**P**	**18 26 09.6**	**-0.3**
	comp=Z,5.0nm,1.0s						
AKBB	**Malin Array Si**	**67.05**	**360**	eP	**P**	**18 26 09.6**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GERES	**GERESS Array B**	**68.26**	**11**	P	**P**	**18 26 17.6**	**0.0**
	comp=Z,0.3nm,0.4s,baz=12,slow=6.8,SNR=3.9						
AAK	**Ala-Archa**	**68.93**	**326**	⇑eP	**P**	**18 26 22.3**	**+0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	**Karatay Array**	**69.49**	**329**	eP	**P**	**18 26 24.8**	**-0.5**
	comp=Z,2.8nm,1.0s						
KK31	**Karatay Array**	**69.49**	**329**	eP	**P**	**18 26 24.8**	**-0.5**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KKAR	**Karatay Array**	**69.49**	**329**	eP	**P**	**18 26 24.7**	**-0.6**
	comp=Z,2.8nm,1.0s						
KKAR	**Karatay Array**	**69.49**	**329**	eP	**P**	**18 26 24.7**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH	**Kashi**	**71.45**	**323**	P	**P**	**18 26 40.8**	**+3.4**
KIV	**Kislovodsk**	**73.22**	**350**	eP	**P**	**18 26 47.4**	**-0.4**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KBZ	**Khabaz**	**73.43**	**349**	P	**P**	**18 26 49.4**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=1.1,slow=3.5,SNR=4.7						
NEY	**Neytrino**	**73.92**	**350**	⇑eP	**P**	**18 26 51.8**	**-0.2**
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ESDC	**Sonseca Array**	**74.72**	**26**	P	**P**	**18 26 56.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=356,slow=6.4,SNR=3.6						
BRTR	**Keskin Array B**	**77.96**	**356**	P	**P**	**18 27 14.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=0.2,slow=3.7,SNR=5.2						
CMAR	**Chiang Mai Arr**	**82.57**	**296**	P	**P**	**18 27 37.9**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=4.2,slow=5.6,SNR=2.9						
BOSA	**Boshof**	**145.94**	**6**	PKPbc	**PKPdf**	**18 34 54.4**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=24,slow=3.4,SNR=9.0						

IDC 20 18:29:16.4±2.5**, 2°.04N**×**128°.75E, h0**^{km}**, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.2**/25**, mbtmp3.4**/4**, Error ellipse: s-maj=209.0km s-min=21.7km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.53**	**166**	P	P	18 34 19.3	+1.2
	0.6nm,0.6s,baz=350,slow=14,SNR=4.2						
ASAR	**Alice Springs**	**26.04**	**169**	P	P	18 34 50.6	-0.9
	0.1nm,0.3s,baz=347,slow=13,SNR=12						
MKAR	**Makanchi Array**	**60.08**	**325**	P	P	18 39 25.2	-0.3
	0.2nm,0.4s,baz=112,slow=7.2,SNR=5.4						
KURBB	**Kurchatov Arra**	**64.24**	**327**	P	P	18 39 53.5	+0.3
	0.4nm,0.6s,baz=130,slow=6.9,SNR=6.2						

IDC 20 18:32:23.1±2.6**, 7°.25S**×**127°.99E, h0**^{km}**, mb3.3**/1**, mb1 3.9**/3**, mb1mx3.3**/26**, mbtmp3.7**/3**, ML3.7**/2**, Error ellipse: s-maj=312.5km s-min=32.4km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.04**	**155**	Pn	Pn	18 35 42.2	-1.4
	0.4nm,0.3s,baz=330,slow=13,SNR=11						
WRA				Sn	Sn	18 38 01.8	-19
	0.2nm,0.3s,baz=334,slow=22,SNR=3.1						
ASAR	**Alice Springs**	**17.29**	**161**	P	P	18 36 27.1	-0.5
	0.3nm,0.3s,baz=342,slow=9.6,SNR=39						
ASAR				S	Sn	18 39 19.6	-20
	0.0nm,0.3s,baz=345,slow=25,SNR=2.4						
MKAR	**Makanchi Array**	**67.35**	**328**	P	P	18 43 20.1	0.0
	0.2nm,0.5s,baz=115,slow=8.2,SNR=4.1						

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*ISCJB **20** 18:45:52.9±0.6, 36°.41N±0°.05×70°.03E±0°.08, h213^{km}, mb3.3/3, Error ellipse: s-maj=9.7km s-min=5.9km az=162.5*

*IDC **20** 18:45:52.9±3.1, 36°.30N×70°.04E, h213^{km}±36^{km}, mb3.0/4, mb1 3.2/10, mb1mx2.9/39, mbtmp3.7/10, Error ellipse: s-maj=27.5km s-min=23.8km az=141.0*

*NNC **20** 18:45:58.3±15.0, 36°.90N×69°.62E, h164^{km}±263^{km}, mb2.9, mpv3.8, Error ellipse: s-maj=142.2km s-min=86.7km az=7.0*

ISC 20 18:45:53.6±0.8**, 36°.46N**±0°.07×**70°.07E**±0°.08**, h213**^{km}**, n31,** σ**1^{s}36**/35**, mb3.3**/3**, 3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.65**	**3**	⇑P	**Pn**	**18 47 30.5**	**+1.2**
	0.6nm,0.3s,baz=186,slow=13,SNR=27						
KK31				⇓S	**S**	**18 48 41.4**	**-3.9**
	2.7nm,0.5s,baz=195,slow=22,SNR=7.6						
UCH	**Uchtor**	**6.71**	**30**	P	**Pn**	**18 47 32.0**	**+1.4**
	SNR=15						
EKS2	**Erkin-Say**	**6.83**	**24**	P	**Pn**	**18 47 33.3**	**+1.6**
	SNR=29						
KZA	**Kyzart**	**6.90**	**34**	P	**Pn**	**18 47 34.3**	**+1.3**

	SNR=5.4						
AAK	**Ala-Archa**	**7.06**	**28**	P	**Pn**	**18 47 35.9**	**+1.2**
	4.4nm,0.3s,baz=193,slow=5.4,SNR=31						
AAK				S	**S**	**18 48 54.1**	**-1.1**
	1.0nm,0.3s,baz=156,slow=20,SNR=4.7						
AAK	**Ala-Archa**	**7.06**	**28**	⇑P	**Pn**	**18 47 35.9**	**+1.2**
	8.8nm,0.3s						
AAK				⇑S	**S**	**18 48 54.6**	**-0.6**
	5.9nm,0.6s						
AAK	**Ala-Archa**	**7.06**	**28**	P	**Pn**	**18 47 36.6**	**+1.9**
	SNR=14						
KBK	**Karagaybulak**	**7.25**	**30**	P	**Pn**	**18 47 39.3**	**+2.1**
	SNR=5.8						
CHMS	**Chumysh**	**7.46**	**27**	P	**Pn**	**18 47 41.2**	**+1.3**
	SNR=7.2						
ULHL	**Ulahol**	**7.50**	**38**	P	**Pn**	**18 47 42.2**	**+1.6**
	SNR=5.9						
USP	**Ospenovka**	**7.61**	**25**	P	**Pn**	**18 47 43.0**	**+1.3**
	SNR=16						
TKM2	**Tokmak 2**	**7.74**	**32**	⇓P	**Pn**	**18 47 44.1**	**+0.6**
	3.3nm,0.4s						
TKM2				⇓S	**S**	**18 49 08.5**	**-2.7**
	2.4nm,0.7s						
TKM2	**Tokmak 2**	**7.74**	**32**	P	**Pn**	**18 47 44.8**	**+1.2**
	SNR=14						
GEYT	**Alibeck**	**9.65**	**282**	P	**Pn**	**18 48 07.6**	**-0.5**
	0.3nm,0.3s,baz=95,slow=16,SNR=3.4						
MKAR	**Makanchi Array**	**13.78**	**38**	P	**Pn**	**18 49 00.4**	**+0.2**
	0.2nm,0.3s,baz=222,slow=15,SNR=19						
DANN	**Dangsing**	**14.10**	**121**	*e*P	**Pn**	**18 49 05.3**	**+0.7**
	16nm,0.4s						
KOLN	**Koldanda**	**14.36**	**123**	*e*P	**P**	**18 49 08.5**	**-0.3**
	8.5nm,0.5s						
AB31	**Akbulak array**	**14.77**	**333**	P	**P**	**18 49 14.5**	**+1.5**
	0.3nm,0.5s,baz=163,slow=10,SNR=6.7						
GKN	**Gorkha**	**14.92**	**120**	*e*P	**P**	**18 49 15.0**	**0.0**
	17nm,0.4s						
KURBB	**Kurchatov Arra**	**15.42**	**21**	P	**P**	**18 49 19.9**	**-0.1**
	0.1nm,0.3s,baz=212,slow=10,SNR=5.9						
DMN	**Daman**	**15.49**	**120**	*e*P	**Pn**	**18 49 21.8**	**+0.3**
	4.6nm,0.3s						
KKN	**Kakani**	**15.50**	**120**	*e*P	**Pn**	**18 49 22.4**	**+0.8**
	28nm,0.5s						
PKIN	**Phulchoki**	**15.71**	**120**	*e*P	**Pn**	**18 49 24.3**	**+0.1**
	14nm,0.3s						
PKI	**Pulchoki**	**15.73**	**120**	*e*P	**Pn**	**18 49 24.5**	**+0.1**
	28nm,0.5s						
AKTO	**Aktyubinsk**	**16.45**	**332**	P	**Pn**	**18 49 32.7**	**+0.1**
	0.2nm,0.3s,baz=158,slow=8.0,SNR=6.1						
AKTO	**Aktyubinsk**	**16.45**	**332**	⇓P	**Pn**	**18 49 32.4**	**-0.2**
	3.0nm,1.1s						
BVAR	**Borovoye Array**	**16.57**	**1**	P	**Pn**	**18 49 34.4**	**+0.5**
	0.4nm,0.3s,baz=171,slow=10,SNR=18						
ZALV	**Zalesovo Beam**	**20.27**	**26**	P	**P**	**18 50 13.5**	**+0.7**
	1.5nm,0.6s,baz=214,slow=12,SNR=7.6						
SONM	**Songino Array**	**28.98**	**55**	P	**P**	**18 51 34.2**	**+0.8**
	0.3nm,0.5s,baz=251,slow=9.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	**31.10**	**117**	P	**P**	**18 51 51.5**	**-0.7**
	0.3nm,0.3s,baz=297,slow=8.0,SNR=4.1						
ASAR	**Alice Springs**	**84.85**	**124**	P	**P**	**18 58 02.6**	**-1.8**
	0.4nm,0.6s,baz=321,slow=5.3,SNR=6.5						

MAN 20 18:55:39.7, 13°.99N×123°.97E, h33^{km}, mb4.3, ML3.1, MS2.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	**Guinayangan**	**1.48**	**267**	⇓*i*P	Pn	18 56 04.7	+0.6

ISCJB ***20*** *19:03:21.1±0.3, 43°.69N±0°.03×105°.26W±0°.04, h0^{km}, mb4.5/2, Error ellipse: s-maj=4.4km s-min=3.8km az=21.3*

ANF ***20*** *19:03:22.0±0.9, 43°.67N×105°.32W, ML3.5/8, Error ellipse: s-maj=13.1km s-min=8.0km az=133.0*

IDC ***20*** *19:03:21.1±1.6, 43°.81N×105°.53W, h0^{km}, mb4.4/2, mb1 4.1/5, mb1mx3.6/32, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=49.7km s-min=8.7km az=148.0*

NEIC ***20*** *19:03:22.6±0.2, 43°.71N×105°.27W, h0^{km}, ML3.3, Error ellipse: s-maj=3.3km s-min=2.9km az=123.0, Suspected Mining explosion.*

NEIC 68 km [42 miles] SSE of Gillette.

ISC 20 19:03:22.3±0.7, **43°.71N**±0°.04×**105°.34W**±0°.04, **h0^{km}, n64,** σ**1^{s}13**/67, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.03**	**66**	*e*Pg	**Pg**	**19 03 41.7**	**-0.3**
RSSD	**Black Hills**	**1.03**	**66**	P	**Pg**	**19 03 41.8**	**-0.3**
	baz=245						
K22A	**Casper**	**1.37**	**220**	*e*Pn	**Pg**	**19 03 47.1**	**-1.4**
K22A	**Casper**	**1.37**	**220**	P	**Pg**	**19 03 47.0**	**-1.5**
	baz=40						
K22A				S	**Sg**	**19 04 07.3**	**+1.1**
	baz=40						
PHWY	**Pilot Hill**	**2.41**	**182**	*e*Pn	**Pn**	**19 04 03.2**	**-0.1**
RWWY	**Rawlins**	**2.44**	**215**	*e*Pn	**Pn**	**19 04 04.6**	**+0.9**
N23A	**Red Feather La**	**2.85**	**189**	P	**Pn**	**19 04 08.9**	**-0.4**
	baz=9.8						
N23A				S	**Sn**	**19 04 46.4**	**+2.0**
	baz=9.8						
LAO	**LASA Array**	**3.04**	**348**	*e*Pn	**Pn**	**19 04 12.7**	**+0.8**
LAO	**LASA Array**	**3.04**	**348**	P	**Pn**	**19 04 12.3**	**+0.5**
	baz=167						
LAO				Sb	**Sb**	**19 04 57.6**	**+2.5**
	baz=167						
RLMT	**Red Lodge**	**3.15**	**298**	*e*Pn	**Pn**	**19 04 14.2**	**+0.9**
RLMT	**Red Lodge**	**3.15**	**298**	P	**Pn**	**19 04 14.3**	**+0.9**
	baz=115						
PD31	**Pinedale Array**	**3.22**	**254**	*e*Pn	**Pn**	**19 04 15.2**	**+0.8**
PDAR	**Pinedale Array**	**3.22**	**254**	Pn	**Pn**	**19 04 15.2**	**+0.8**
	4.9nm,0.3s,baz=75,slow=17,SNR=36						
PDAR				Lg	Lg	19 04 58.5	
	8.0nm,0.3s,baz=71,slow=35,SNR=4.4						
BW06	**Boulder Array**	**3.22**	**254**	*e*Pn	**Pn**	**19 04 14.8**	**+0.4**
BW06	**Boulder Array**	**3.22**	**254**	P	**Pn**	**19 04 14.9**	**+0.5**
	baz=72						
OGNE	**Ogallala**	**3.69**	**137**	*e*Pn	**Pn**	**19 04 20.4**	**-0.4**
OGNE	**Ogallala**	**3.69**	**137**	P	**Pn**	**19 04 20.3**	**-0.4**
	baz=320						
OGNE				Sb	**Sb**	**19 05 15.9**	**+2.0**
	baz=320						
GCMT	**Greycliff**	**3.72**	**306**	*e*Pn	**Pn**	**19 04 21.9**	**+0.8**
LKWY	**Lake**	**3.74**	**285**	*e*Pn	**Pn**	**19 04 23.2**	**+1.7**
LOHW	**Long Hollow**	**3.82**	**270**	*e*Pn	**Pn**	**19 04 23.8**	**+1.2**
H17A	**Grant Village**	**3.84**	**282**	*e*Pn	**Pn**	**19 04 24.6**	**+1.7**
H17A	**Grant Village**	**3.84**	**282**	Pb	**Pb**	**19 04 31.2**	**+0.2**
	baz=98						
FLWY	**Flagg Ranch**	**3.89**	**277**	*e*Pn	**Pn**	**19 04 25.0**	**+1.4**
MOOW	**Moose Ponds**	**3.92**	**272**	*e*Pn	**Pn**	**19 04 24.9**	**+0.9**
SNOW	**Snow King Moun**	**3.94**	**268**	*e*Pn	**Pn**	**19 04 25.4**	**+1.1**
YPP	**Pitchstone Pla**	**3.98**	**280**	*e*Pn	**Pn**	**19 04 26.0**	**+1.1**
TPAW	**Teton Pass**	**4.08**	**269**	*e*Pn	**Pn**	**19 04 27.1**	**+0.8**
YHH	**Holmes Hill**	**4.10**	**287**	*e*Pn	**Pn**	**19 04 27.1**	**+0.6**
O20A	**White River Ci**	**4.17**	**212**	*e*Pn	**Pn**	**19 04 28.4**	**+1.0**
QLMT	**Earthquake Lak**	**4.51**	**286**	*e*Pn	**Pn**	**19 04 33.4**	**+1.3**
DGMT	**Dagmar**	**4.83**	**9**	*e*Pn	**Pn**	**19 04 38.0**	**+1.7**
BOZ	**Bozeman (W)**	**4.87**	**295**	*e*Pn	**Pn**	**19 04 38.0**	**+1.0**
HWUT	**Hardware Ranch**	**5.05**	**248**	*e*Pn	**Pn**	**19 04 40.4**	**+1.0**
EGMT	**Eagleton**	**5.30**	**326**	*e*Pn	**Pn**	**19 04 43.8**	**+0.9**
HRY	**Holter Researc**	**5.48**	**305**	*e*Pn	**Pn**	**19 04 46.7**	**+1.4**
CTU	**Camp Tracy**	**5.63**	**240**	*e*Pn	**Pn**	**19 04 47.5**	**0.0**
SPUT	**South Promonto**	**5.77**	**248**	*e*Pn	**Pn**	**19 04 49.8**	**+0.4**
PV22	**Blue Mesa, Par**	**5.79**	**208**	*e*Pn	**Pn**	**19 04 50.6**	**+1.0**
HVU	**Hansel Valley**	**5.80**	**253**	*e*Pn	**Pn**	**19 04 50.3**	**+0.5**
PV07	**Paradox Valley**	**5.83**	**206**	*e*Pn	**Pn**	**19 04 50.9**	**+0.7**
PV21	**Cone Mtn., Par**	**5.83**	**209**	*e*Pn	**Pn**	**19 04 51.3**	**+1.1**
P17A	**Butcher Ranch,**	**5.85**	**226**	*e*Pn	**Pn**	**19 04 51.2**	**+0.7**
PV23	**Carpenter Ridg**	**5.94**	**209**	*e*Pn	**Pn**	**19 04 52.5**	**+0.8**
SDCO	**Great Sand Dun**	**5.96**	**181**	*e*Pn	**Pn**	**19 04 52.4**	**+0.3**
MPU	**Maple Canyon**	**5.97**	**234**	*e*Pn	**Pn**	**19 04 53.8**	**+1.7**
SRU	**San Rafael Swe**	**6.02**	**222**	*e*Pn	**Pn**	**19 04 53.4**	**+0.6**
PV17	**East Wray Mesa**	**6.07**	**208**	*e*Pn	**Pn**	**19 04 54.4**	**+0.9**
PV01	**Paradox Valley**	**6.08**	**205**	*e*Pn	**Pn**	**19 04 54.7**	**+1.0**
TMUT	**Trail Mountain**	**6.23**	**227**	*e*Pn	**Pn**	**19 04 56.6**	**+0.8**
ECSD	**EROS Data Cent**	**6.33**	**87**	*e*Pn	**Pn**	**19 04 56.3**	**-0.5**
CBKS	**Cedar Bluff**	**6.46**	**137**	*e*Pn	**Pn**	**19 04 58.9**	**+0.2**
DUG	**Dugway, Tooele**	**6.58**	**240**	*e*Pn	**Pn**	**19 05 00.3**	**-0.2**
HLID	**Hailey**	**6.58**	**272**	*e*Pn	**Pn**	**19 05 01.1**	**+0.5**
MVCO	**Mesa Verde**	**6.92**	**201**	*e*Pn	**Pn**	**19 05 06.7**	**+1.5**
AGMN	**Agassiz Nation**	**8.04**	**52**	*e*Pn	**Pn**	**19 05 20.1**	**-0.2**
PKCU	**Pink Cliffs**	**8.20**	**223**	*e*Pn	**Pn**	**19 05 23.6**	**+0.8**
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	**19 05 32.5**	**-3.7**
	2.2nm,0.3s,baz=242,slow=11,SNR=8.1						
ULM				Lg	Lg	19 08 06.8	
	baz=123,slow=23,SNR=1.6						
I56US	**NEWPORT INFRAS**	**9.38**	**303**	*i*		20 03 00.0	
	baz=117,slow=298,SNR=2.2						
WUAZ	**Wupatki**	**9.41**	**212**	*e*Pn	**Pn**	**19 05 39.9**	**+0.6**
NV01	**Mina Array Sit**	**11.11**	**246**	*e*Pn	**Pn**	**19 06 02.4**	**-0.2**
NVAR	**Mina Array Bea**	**11.11**	**246**	Pn	**Pn**	**19 06 02.4**	**-0.2**
	baz=62,slow=13,SNR=1.9						
FFC	**Flin Flon**	**11.24**	**10**	*e*Pn	**Pn**	**19 06 02.7**	**-1.5**
ARCES	**ARCESS Array B**	**61.46**	**18**	P	**P**	**19 13 38.6**	**-1.5**
	3.9nm,1.0s,baz=333,slow=7.5,SNR=5.2						
FINES	**FINESS Array B**	**68.08**	**23**	P	**P**	**19 14 22.4**	**-0.9**
	4.4nm,1.1s,baz=329,slow=10.0,SNR=3.6						

IDC ***20*** *19:04:38.5±1.4, 41°.57S×174°.35E, h0^{km}, mb4.1/2, mb1 4.3/3, mb1mx3.8/19, mbtmp4.1/3, ML3.5/2, Error ellipse: s-maj=40.2km s-min=15.0km az=133.0*

ISCJB ***20*** *19:04:42.2±0.3, 41°.76S±0°.02×174°.46E±0°.03, h25^{km}±3^{km}, mb4.1/5, Error ellipse: s-maj=5.1km s-min=2.5km az=44.7*

WEL ***20*** *19:04:42.4, 42°S±2°×17°4E±°, h21^{km}±3^{km}, M4.1/34, ML4.4/26, MLv4.1/34, Error ellipse: s-maj=0.0km s-min=0.0km az=138.7*

NEIC ***20*** *19:04:42.6±0.0, 41°.57S×174°.39E, h18^{km}, mb4.2/3, ML4.2(WEL), After WEL.*

ISC 20 19:04:42.4±0.9, **41°.61S**±0°.03×**174°.44E**±0°.03, **h24^{km}**±6^{km}, **n155,** σ**1^{s}48**/162, **mb4.2**/5, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.22**	**229**	P	**Pb**	**19 04 48.1**	**-0.1**
CMWZ				S	**Sb**	**19 04 52.6**	**+0.4**
SNZO	**South Karori**	**0.36**	**35**	*e*Pg	**Pb**	**19 04 50.5**	**+0.2**
SNZO				*e*Sg	**Sb**	**19 04 55.9**	**+0.4**
BHW	**Baring Head**	**0.38**	**59**	P	**Pn**	**19 04 51.3**	**-1.1**
TUWZ	**Tuamarina**	**0.41**	**295**	P	**Pb**	**19 04 50.6**	**-0.4**
TUWZ				S	**Sb**	**19 04 56.3**	**-0.6**
TCW	**Tory Channel**	**0.41**	**343**	P	**Pb**	**19 04 50.9**	**-0.2**
TCW				S	**Sb**	**19 04 56.5**	**-0.5**
BSWZ	**Blackbirch Sta**	**0.43**	**255**	P	**Pb**	**19 04 51.3**	**-0.2**
BSWZ				S	**Sb**	**19 04 57.8**	**+0.2**
PLWZ	**Palliser**	**0.62**	**87**	P	**Pn**	**19 04 55.9**	**+0.2**
MSWZ	**Moikau Station**	**0.64**	**73**	P	**Pn**	**19 04 56.1**	**+0.1**
MSWZ				S	**Sn**	**19 05 05.7**	**+0.3**
CAW	**Cannon Point**	**0.69**	**44**	P	**Pn**	**19 04 56.3**	**-0.3**
PAWZ	**Paruwai Farm**	**0.78**	**74**	P	**Pn**	**19 04 58.6**	**+0.7**
NNZ	**Nelson**	**0.88**	**296**	P	**Pn**	**19 04 59.0**	**-0.3**
DUWZ	**D'Urville Isla**	**0.89**	**334**	P	**Pn**	**19 04 59.4**	**-0.1**
MTW	**Mount Morrison**	**0.92**	**61**	P	**Pn**	**19 05 00.9**	**+1.1**
TRWZ	**Traveller**	**0.96**	**78**	P	**Pn**	**19 05 01.3**	**+0.9**
OGWZ	**Otaki Gorge**	**0.96**	**35**	P	**Pn**	**19 05 00.9**	**+0.5**
KHZ	**Kahutara**	**1.05**	**219**	*e*Pn	**Pn**	**19 05 02.5**	**+0.8**
KHZ				*e*Sn	**Sn**	**19 05 17.0**	**+1.6**
KHZ	**Kahutara**	**1.05**	**219**	P	**Pn**	**19 05 02.4**	**+0.8**
HOWZ	**Holdsworth Sta**	**1.08**	**49**	P	**Pb**	**19 05 03.3**	**+0.9**
THZ	**Tophouse**	**1.16**	**262**	*e*Pn	**Pb**	**19 05 03.5**	**-0.3**
THZ	**Tophouse**	**1.16**	**262**	P	**Pb**	**19 05 03.8**	**0.0**
TMWZ	**Te Maipa**	**1.20**	**66**	P	**Pb**	**19 05 04.6**	**+0.1**
MRZ	**Mangatainoka R**	**1.28**	**43**	P	**Pb**	**19 05 06.2**	**+0.4**
TIWZ	**Tintock**	**1.37**	**53**	P	**Pb**	**19 05 07.3**	**-0.1**
CPWZ	**Castlepoint**	**1.50**	**63**	P	**Pb**	**19 05 09.4**	**-0.2**
OHWZ	**Ohakea**	**1.55**	**26**	P	**Pb**	**19 05 11.7**	**+1.3**
PRWZ	**Pori Road**	**1.56**	**48**	P	**Pb**	**19 05 09.8**	**-0.9**
POWZ	**Post Office Ro**	**1.58**	**40**	P	**Pb**	**19 05 10.4**	**-0.5**
QRZ	**Quartz Range**	**1.64**	**298**	P	**Pb**	**19 05 11.6**	**-0.3**
BFZ	**Birch Farm**	**1.65**	**57**	*e*Pn	**Pn**	**19 05 10.8**	**+0.9**
BFZ	**Birch Farm**	**1.65**	**57**	P	**Pn**	**19 05 10.2**	**+0.4**
GVZ	**Greta Valley S**	**1.71**	**217**	P	**Pn**	**19 05 11.1**	**+0.4**
DVHZ	**Dannevirke**	**1.85**	**46**	P	**Pn**	**19 05 13.2**	**+0.6**
WAZ	**Wanganui**	**1.90**	**13**	P	**Pb**	**19 05 17.0**	**+0.6**
ANWZ	**Angora Road**	**1.92**	**54**	P	**Pn**	**19 05 14.0**	**+0.4**
LTZ	**Lake Taylor**	**1.99**	**233**	*e*Pn	**Pn**	**19 05 15.3**	**+0.6**
LTZ	**Lake Taylor**	**1.99**	**233**	P	**Pn**	**19 05 15.2**	**+0.6**
AMCZ	**Amberley**	**2.05**	**219**	P	**Pn**	**19 05 15.4**	**+0.1**
LREZ	**Lake Rotokare**	**2.14**	**359**	P	**Pb**	**19 05 21.1**	**+0.6**
PNHZ	**Pukenui**	**2.16**	**39**	P	**Pn**	**19 05 17.8**	**+0.9**
NMEZ	**Namu Road**	**2.23**	**349**	P	**Pb**	**19 05 22.8**	**+0.8**
PREZ	**Palmer Road**	**2.27**	**355**	P	**Pb**	**19 05 23.1**	**+0.4**
KHEZ	**Kahui Hut**	**2.33**	**352**	P	**Pb**	**19 05 23.5**	**-0.3**
OKCZ	**Okains Bay**	**2.35**	**205**	P	**Pn**	**19 05 19.0**	**-0.5**
MTVZ	**Mangateitei**	**2.35**	**20**	P	**Pb**	**19 05 23.0**	**-1.2**
NBEZ	**Newall Road No**	**2.38**	**349**	P	**Pb**	**19 05 23.4**	**-1.1**
CRLZ	**Canterbury Las**	**2.38**	**214**	*e*Pn	**Pn**	**19 05 19.1**	**-0.8**
CRLZ	**Canterbury Las**	**2.38**	**214**	P	**Pn**	**19 05 19.1**	**-0.8**
MOVZ	**Moawhango**	**2.42**	**25**	P	**Pb**	**19 05 23.1**	**-2.1**
PKVZ	**Pokaka**	**2.42**	**17**	P	**Pb**	**19 05 25.2**	**0.0**
DREZ	**Durham Road**	**2.42**	**356**	P	**Pb**	**19 05 24.3**	**-1.0**
PXZ	**Pawanui**	**2.42**	**50**	P	**Pn**	**19 05 20.3**	**-0.1**
PKE	**Pukeiti**	**2.43**	**352**	P	**Pb**	**19 05 24.3**	**-1.2**
BHHZ	**Black Hill Sta**	**2.45**	**31**	P	**Pn**	**19 05 22.7**	**+1.8**
KRHZ	**Kereru**	**2.45**	**38**	P	**Pn**	**19 05 21.6**	**+0.7**
OXZ	**Oxford**	**2.47**	**225**	*e*Pn	**Pn**	**19 05 20.5**	**-0.6**
OXZ	**Oxford**	**2.47**	**225**	P	**Pn**	**19 05 20.5**	**-0.6**
MQZ	**McQueen's Vall**	**2.48**	**211**	*e*Pn	**Pn**	**19 05 20.0**	**-1.2**
MQZ	**McQueen's Vall**	**2.48**	**211**	P	**Pn**	**19 05 20.0**	**-1.2**
DRZ	**Dome Shelter**	**2.48**	**21**	P	**Pb**	**19 05 28.2**	**+1.8**
WHVZ	**Whangaehu Hut**	**2.48**	**21**	P	**Pb**	**19 05 24.4**	**-2.1**
INZ	**Inchbonnie**	**2.49**	**242**	P	**Pn**	**19 05 22.1**	**+0.8**
VRZ	**Vera Road**	**2.49**	**6**	P	**Pb**	**19 05 25.1**	**-1.3**
FWVZ	**Far West T-bar**	**2.50**	**20**	P	**Pb**	**19 05 24.9**	**-1.8**
TUVZ	**Tukino**	**2.51**	**22**	P	**Pb**	**19 05 25.5**	**-1.5**
MHEZ	**Mangahewa**	**2.53**	**358**	P	**Pb**	**19 05 25.8**	**-1.3**
AKCZ	**Akaroa Harbour**	**2.53**	**206**	P	**Pn**	**19 05 21.2**	**-0.8**
NGZ	**Ngauruhoe**	**2.58**	**21**	P	**Pb**	**19 05 26.0**	**-2.1**
WTVZ	**West Tongariro**	**2.64**	**20**	P	**Pb**	**19 05 27.8**	**-1.2**
TWVZ	**Taurewa**	**2.65**	**17**	P	**Pb**	**19 05 28.4**	**-0.8**
KWHZ	**Kaweka Forest**	**2.65**	**35**	P	**Pn**	**19 05 25.7**	**+1.9**
KWHZ				P	**Pb**	**19 05 31.4**	**+2.1**
KRVZ	**Karewarewa**	**2.67**	**21**	P	**Pb**	**19 05 28.3**	**-1.3**
MCHZ	**McNeill Hill**	**2.76**	**39**	P	**Pn**	**19 05 26.0**	**+0.8**
KATZ	**Kakaramea**	**2.80**	**21**	P	**Pb**	**19 05 33.3**	**+1.5**
RITZ	**Rihia Road**	**2.84**	**23**	P	**Pb**	**19 05 33.2**	**+0.8**
BKZ	**Black Stump Fm**	**2.90**	**33**	*e*Pn	**Pn**	**19 05 27.3**	**+0.2**
BKZ	**Black Stump Fm**	**2.90**	**33**	P	**Pb**	**19 05 33.5**	**0.0**
RATZ	**Rangitukua**	**2.92**	**21**	P	**Pb**	**19 05 35.1**	**+1.3**
WATZ	**Wairara**	**3.06**	**19**	P	**Pb**	**19 05 37.0**	**+0.8**
HIZ	**Hauiti**	**3.11**	**6**	*e*Pn	**Pn**	**19 05 31.0**	**+1.2**
HIZ	**Hauiti**	**3.11**	**6**	P	**Pb**	**19 05 33.4**	**-3.5**
WVZ	**Waitaha Valley**	**3.11**	**241**	P	**Pn**	**19 05 30.4**	**+0.5**
WHTZ	**Whakaora**	**3.16**	**22**	P	**Pb**	**19 05 39.6**	**+1.8**
RPZ	**Rata Peaks**	**3.27**	**229**	Pn	**Pn**	**19 05 31.2**	**-0.9**
	20nm,0.3s,baz=81,slow=2.2,SNR=76						
RPZ				Pg	**Pb**	**19 05 40.7**	**+1.0**
	47nm,0.3s,baz=334,slow=2.0,SNR=24						
RPZ				Sn	**Sn**	**19 06 08.2**	**-2.0**
	7.4nm,0.3s,baz=323,slow=23,SNR=8.1						
RPZ				Lg	Lg	19 06 21.0	
	3.8nm,0.3s,baz=204,slow=22,SNR=1.4						
RPZ	**Rata Peaks**	**3.27**	**229**	*e*Pn	**Pn**	**19 05 31.6**	**-0.5**
RPZ	**Rata Peaks**	**3.27**	**229**	P	**Pn**	**19 05 31.8**	**-0.3**
MTHZ	**Maungataniwha**	**3.31**	**35**	P	**Pn**	**19 05 33.5**	**+0.8**
WHHZ	**Waihua**	**3.31**	**41**	P	**Pb**	**19 05 39.9**	**-0.5**
RAHZ	**Arahi**	**3.37**	**38**	P	**Pb**	**19 05 39.3**	**-2.1**
ALRZ	**Allen Road**	**3.37**	**26**	P	**Pb**	**19 05 39.5**	**-2.0**
TLZ	**Tolley Road**	**3.38**	**15**	P	**Pb**	**19 05 38.3**	**-3.4**
PRRZ	**Plateau Road**	**3.45**	**26**	P	**Pb**	**19 05 40.7**	**-2.0**
GRRZ	**Galatos Road**	**3.50**	**22**	P	**Pb**	**19 05 42.1**	**-1.5**
RTZ	**Ruatahuna**	**3.57**	**34**	P	**Pn**	**19 05 38.8**	**+2.5**
MUGZ	**Murupara**	**3.60**	**31**	P	**Pn**	**19 05 39.2**	**+2.5**
MHGZ	**Mahia Peninsul**	**3.61**	**48**	P	**Pn**	**19 05 36.3**	**-0.5**
RRRZ	**Republican Roa**	**3.63**	**27**	P	**Pb**	**19 05 43.6**	**-2.3**
TARZ	**Mount Tarawera**	**3.72**	**26**	P	**Pb**	**19 05 45.2**	**-2.3**
PRGZ	**Paritu Road**	**3.76**	**46**	P	**Pn**	**19 05 37.9**	**-1.0**
RAGZ	**Rawiri**	**3.86**	**37**	P	**Pn**	**19 05 40.4**	**+0.1**
RIGZ	**Rimuhau**	**3.86**	**42**	P	**Pn**	**19 05 40.5**	**+0.2**
FOZ	**Fox Glacier**	**3.92**	**239**	*e*Pn	**Pn**	**19 05 41.5**	**+0.5**
FOZ	**Fox Glacier**	**3.92**	**239**	P	**Pn**	**19 05 41.6**	**+0.6**
URZ	**Urewera**	**3.92**	**32**	Pn	**Pn**	**19 05 40.2**	**-0.9**
	0.7nm,0.3s,baz=253,slow=5.6,SNR=11						
URZ				Sn	**Sn**	**19 06 27.0**	**+0.7**
	6.6nm,0.3s,baz=352,slow=19,SNR=3.5						
URZ				Lg	Lg	19 06 44.3	
	baz=281,slow=23,SNR=0.7						
URZ	**Urewera**	**3.92**	**32**	*e*Pn	**Pn**	**19 05 42.2**	**+1.2**
URZ	**Urewera**	**3.92**	**32**	P	**Pn**	**19 05 42.3**	**+1.2**
KMRZ	**Kaimai**	**3.93**	**18**	P	**Pb**	**19 05 48.8**	**-2.2**
TOZ	**Tahuroa Road**	**3.96**	**12**	P	**Pb**	**19 05 47.2**	**-4.2**
MARZ	**Manawahe**	**4.01**	**26**	P	**Pb**	**19 05 48.4**	**-3.9**
OPRZ	**Ohinepanea**	**4.10**	**24**	P	**Pb**	**19 05 49.2**	**-4.6**
LBZ	**Lake Benmore**	**4.18**	**227**	*e*Pn	**Pn**	**19 05 44.8**	**+0.2**
LBZ	**Lake Benmore**	**4.18**	**227**	P	**Pn**	**19 05 44.7**	**+0.2**
TWGZ	**Tauwhareparae**	**4.38**	**40**	P	**Pn**	**19 05 47.4**	**0.0**
ODZ	**Otahua Downs**	**4.41**	**218**	*e*Pn	**Pn**	**19 05 47.1**	**-0.7**
ODZ	**Otahua Downs**	**4.41**	**218**	P	**Pn**	**19 05 46.8**	**-1.0**
RUGZ	**Raukumara Rang**	**4.41**	**36**	P	**Pn**	**19 05 47.9**	**0.0**
KBAZ	**Karaka Road Bo**	**4.52**	**5**	P	Pb	19 05 54.8	-6.2
MKAZ	**Moumakai**	**4.53**	**7**	P	**Pn**	**19 05 53.2**	**+3.8**
AWAZ	**Awhitu Peninsu**	**4.54**	**2**	P	**Pn**	**19 05 53.1**	**+3.6**
PUZ	**Puketiti**	**4.59**	**41**	P	**Pn**	**19 05 50.5**	**+0.2**
HAZ	**Te Kaha**	**4.63**	**35**	P	**Pn**	**19 05 51.4**	**+0.6**
ETAZ	**East Tamaki Re**	**4.66**	**5**	P	Pn	19 05 56.3	+5.0
WTAZ	**Waiatarua**	**4.67**	**1**	P	**Pn**	**19 05 55.4**	**+4.1**
RVAZ	**Riverhead Bore**	**4.83**	**1**	P	**Pn**	**19 05 56.6**	**+3.0**
JCZ	**Jackson Bay**	**4.83**	**237**	P	**Pn**	**19 05 54.7**	**+1.1**
WIAZ	**Waiheke Island**	**4.84**	**7**	P	**Pn**	**19 05 56.8**	**+3.1**
MBAZ	**Motutapu North**	**4.84**	**4**	P	Pn	19 05 58.5	+4.8
KUZ	**Kuaotunu**	**4.96**	**12**	P	Pb	19 06 03.5	-4.9
ABAZ	**Army Bay**	**5.01**	**4**	P	**Pn**	**19 05 59.4**	**+3.4**
MXZ	**Matakaoa Point**	**5.02**	**38**	*e*Pn	**Pn**	**19 05 56.7**	**+0.4**
MXZ	**Matakaoa Point**	**5.02**	**38**	P	**Pn**	**19 06 00.2**	**+4.0**
HHSZ	**Highcliff Hill**	**5.10**	**212**	P	**Pn**	**19 05 56.6**	**-0.7**
WKZ	**Wanaka**	**5.10**	**229**	*e*Pn	**Pn**	**19 05 56.8**	**-0.5**
WKZ	**Wanaka**	**5.10**	**229**	P	**Pn**	**19 05 57.1**	**-0.2**
TUZ	**Tuapeka**	**5.57**	**217**	P	**Pn**	**19 06 03.3**	**-0.3**
WCZ	**Waipu Caves**	**5.66**	**359**	P	Pn	19 06 09.9	+5.0
MSZ	**Milford Sound**	**5.66**	**235**	P	**Pn**	**19 06 08.2**	**+3.2**
SYZ	**Scrubby Hill**	**6.23**	**216**	P	**Pn**	**19 06 12.3**	**-0.4**
WHZ	**Wether Hill Ro**	**6.36**	**225**	P	**Pn**	**19 06 14.2**	**-0.3**
OUZ	**Omahuta**	**6.41**	**354**	*e*Pn	**Pn**	**19 06 16.6**	**+1.3**
OUZ				*e*Sn	**Sn**	**19 07 28.8**	**+1.1**
OUZ	**Omahuta**	**6.41**	**354**	P	**Pn**	**19 06 18.7**	**+3.4**
DCZ	**Deep Cove**	**6.55**	**231**	*e*Pn	**Pn**	**19 06 18.1**	**+1.0**
CTZ	**Chatham Island**	**6.93**	**111**	P	**Pn**	**19 06 22.4**	**+0.1**
APZ	**The Paps**	**6.98**	**219**	P	**Pn**	**19 06 22.6**	**-0.5**
AS31	**Alice Springs**	**38.12**	**285**	*e*P	**P**	**19 11 59.8**	**+0.1**
	1.4nm,1.1s						
ASAR	**Alice Springs**	**38.12**	**285**	P	**P**	**19 11 58.6**	**-1.1**
	0.5nm,0.4s,baz=123,slow=6.6,SNR=14						
WB2	**Warramunga Arr**	**40.17**	**290**	*e*P	**P**	**19 12 16.7**	**0.0**
	5.7nm,0.5s						
WR1	**Warramunga Arr**	**40.18**	**290**	*e*P	**P**	**19 12 16.2**	**-0.7**
WRA	**Warramunga Arr**	**40.18**	**290**	P	**P**	**19 12 16.2**	**-0.7**
	2.8nm,0.3s,baz=142,slow=7.4,SNR=26						
QSPA	**South Pole Qui**	**48.52**	**180**	*e*P	**P**	**19 13 24.9**	**+1.7**
	2.2nm,0.9s						
ARA0	**ARCESS Array S**	**147.69**	**340**	*e*PKPbc	**PKPbc**	**19 24 23.4**	**-0.3**
ARCES	**ARCESS Array B**	**147.69**	**340**	PKPbc	**PKPbc**	**19 24 23.4**	**-0.3**
	3.5nm,1.0s,baz=64,slow=5.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**150.95**	**195**	PKPbc	**PKPbc**	**19 24 33.6**	**+0.2**
	0.9nm,0.6s,baz=148,slow=2.0,SNR=13						
TOA1	**Torodi Ar. Sit**	**150.96**	**195**	*e*PKPbc	**PKPbc**	**19 24 33.6**	**+0.2**
FIA0	**FINESS Array S**	**152.49**	**327**	*e*PKPbc	**PKPbc**	**19 24 34.2**	**-1.3**
FINES	**FINESS Array B**	**152.49**	**327**	PKPbc	**PKPbc**	**19 24 34.2**	**-1.3**
	1.1nm,0.9s,baz=48,slow=2.1,SNR=3.9						

BJI ***20*** *19:17:07.7±0.0, 41°.46S×174°.60E, h5^{km}, mb5.5/43, mB5.8/50, Ms5.5/53, Ms7 5.3/48*

NEIC ***20*** *19:17:09.0±0.0, 41°.91S×174°.50E, h15^{km}, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.87; M$_{\theta\theta}$-0.16; M$_{\phi\phi}$-3.71; M$_{r\theta}$0.07; M$_{\theta\phi}$-1.68; M$_{\phi r}$7.82; Best double couple: M$_0$8.80000×10^{17} NP1:φ$_s$3.00000°, δ77.00000°, λ80.00000°. NP2:φ$_s$220.00000°, δ16.00000°, λ126.00000°. Principal axes: T 8.8500, Plg57.0000°, Azm260.0000°; N 0.0100, Plg9.0000°, Azm5.0000°; P -8.8500, Plg31.0000°, Azm101.0000°;*

MOS ***20*** *19:17:09.2±1.1, 41°.61S×174°.20E, h10^{km}, mb5.8/26, MS5.5/51 Error ellipse: s-maj=12.2km s-min=9.4km az=124.0*

ISCJB ***20*** *19:17:10.8±0.3, 41°.68S±0°.02×174°.38E±0°.02, h27^{km}±2^{km}, mb5.6/97, MS5.6/641, Error ellipse: s-maj=3.9km s-min=2.2km az=136.2*

WEL ***20*** *19:17:10.8, 42°S±2°×17°4E±°, h21^{km}±5^{km}, M5.8/20, ML6.1/20, MLv5.8/20, Error ellipse: s-maj=0.0km s-min=0.0km az=122.1*

IDC ***20*** *19:17:10.3±1.9, 41°.56S×174°.30E, h19^{km}±11^{km}, mb5.2/23, mb1 5.2/25, mb1mx5.1/34, mbtmp5.3/25, ML4.7/2, MS5.3/21, Ms1 5.3/21, ms1mx5.2/26, Error ellipse: s-maj=11.6km s-min=10.7km az=153.0*

NEIC ***20*** *19:17:10.1±1.6, 41°.64S×174°.39E, h14^{km}, mb5.8/75, ME5.8, MS5.6/638, MW5.8, MW5.9, ML5.8(WEL), Error ellipse: s-maj=10.9km s-min=5.8km az=323.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.66; M$_{\theta\theta}$0.53; M$_{\phi\phi}$-5.18; M$_{r\theta}$0.81; M$_{\theta\phi}$-2.18; M$_{\phi r}$2.49; Best double couple: M$_0$6.00000×10^{17} NP1:φ$_s$199.00000°, δ32.00000°, λ91.00000°. NP2:φ$_s$18.00000°, δ58.00000°, λ90.00000°. Principal axes: T 5.2700, Plg77.0000°, Azm287.0000°; N 1.2600, Plg0.0000°, Azm19.0000°; P -6.5300, Plg13.0000°, Azm109.0000°; Apparent Stress 0.25 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] at Wellington. Also felt at Hawera, Lower Hutt, Porirua and Upper Hutt.

GCMT ***20*** *19:17:15.1±0.1, 41°.71S±0°.01×174°.20E±0°.01, h13^{km}, MW5.7/137, Moment Tensor Solution. s116, c221; s137, c367; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.48±.04; M$_{\theta\theta}$1.30±.03; M$_{\phi\phi}$-3.78±.03; M$_{r\theta}$-1.66±.10; M$_{\theta\phi}$-1.52±.03; M$_{\phi r}$1.09±.08; Best double couple: M$_0$4.15800×10^{17} NP1:φ$_s$343.00000°, δ61.00000°, λ45.00000°. NP2:φ$_s$228.00000°, δ52.00000°, λ142.00000°. Principal axes: T 4.0550, Plg51.0000°, Azm201.0000°; N 0.2050, Plg39.0000°, Azm9.0000°; P -4.2600, Plg6.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 20 19:17:10.7±0.4, **41°.62S**±0°.02×**174°.41E**±0°.02, **h16^{km}**±2^{km}, **h17^{km}:pP-P, n1562,** σ**1^{s}59**/1135, **mb5.8**/96, **MS5.6**/641, **66C-25D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.19**	**229**	P	**Pb**	**19 17 17.0**	**+1.1**
CMWZ				S	**Sb**	**19 17 21.3**	**+2.0**
SNZO	**South Karori**	**0.38**	**36**	*e*Pg	**Pg**	**19 17 18.2**	**-0.3**
TUWZ	**Tuamarina**	**0.40**	**298**	P	**Pb**	**19 17 19.0**	**-0.3**
BHW	**Baring Head**	**0.41**	**59**	P	**Pb**	**19 17 19.3**	**-0.2**
BSWZ	**Blackbirch Sta**	**0.41**	**257**	P	**Pb**	**19 17 19.3**	**-0.2**
BSWZ				S	**Sb**	**19 17 26.8**	**+1.3**
TCW	**Tory Channel**	**0.42**	**346**	P	**Pg**	**19 17 18.9**	**-0.3**
PLWZ	**Palliser**	**0.64**	**86**	P	**Pb**	**19 17 23.9**	**+0.5**
MSWZ	**Moikau Station**	**0.66**	**72**	P	**Pb**	**19 17 24.1**	**+0.3**
CAW	**Cannon Point**	**0.71**	**44**	P	**Pg**	**19 17 24.4**	**-0.2**
PAWZ	**Paruwai Farm**	**0.80**	**73**	P	**Pg**	**19 17 26.6**	**+0.3**
PAWZ				S	**Sn**	**19 17 40.0**	**+1.1**
NNZ	**Nelson**	**0.87**	**297**	P	**Pb**	**19 17 27.0**	**-0.4**
DUWZ	**D'Urville Isla**	**0.90**	**336**	P	**Pb**	**19 17 27.3**	**-0.5**
DUWZ				S	**Sg**	**19 17 39.7**	**-0.1**
MTW	**Mount Morrison**	**0.94**	**61**	P	**Pn**	**19 17 29.0**	**-0.3**
TRWZ	**Traveller**	**0.99**	**77**	P	**Pb**	**19 17 29.4**	**0.0**
OGWZ	**Otaki Gorge**	**0.99**	**36**	P	**Pb**	**19 17 28.9**	**-0.4**
KHZ	**Kahutara**	**1.02**	**219**	*e*Pn	**Pn**	**19 17 30.4**	**+0.1**
HOWZ	**Holdsworth Sta**	**1.10**	**49**	P	**Pn**	**19 17 31.3**	**-0.1**
THZ	**Tophouse**	**1.14**	**262**	*e*Pn	**Pb**	**19 17 31.8**	**-0.1**
TMWZ	**Te Maipa**	**1.23**	**66**	P	**Pn**	**19 17 32.6**	**-0.5**
MRZ	**Mangatainoka R**	**1.30**	**43**	P	**Pn**	**19 17 34.3**	**+0.1**
TIWZ	**Tintock**	**1.40**	**53**	P	**Pn**	**19 17 35.3**	**-0.2**
CPWZ	**Castlepoint**	**1.53**	**63**	P	**Pn**	**19 17 37.4**	**+0.2**
OHWZ	**Ohakea**	**1.57**	**26**	P	**Pb**	**19 17 39.8**	**+0.5**
PRWZ	**Pori Road**	**1.59**	**48**	P	**Pn**	**19 17 37.9**	**-0.2**
POWZ	**Post Office Ro**	**1.60**	**40**	P	**Pn**	**19 17 38.7**	**+0.5**
BFZ	**Birch Farm**	**1.68**	**57**	*e*Pn	**Pn**	**19 17 38.4**	**-0.9**
BFZ	**Birch Farm**	**1.68**	**57**	P	**Pn**	**19 17 38.4**	**-0.9**
GVZ	**Greta Valley S**	**1.69**	**217**	P	**Pn**	**19 17 39.4**	**-0.1**
DVHZ	**Dannevirke**	**1.88**	**46**	P	**Pn**	**19 17 41.3**	**-0.8**
WAZ	**Wanganui**	**1.92**	**13**	P	**Pb**	**19 17 44.9**	**-0.3**
ANWZ	**Angora Road**	**1.95**	**54**	P	**Pn**	**19 17 42.1**	**-0.9**
LTZ	**Lake Taylor**	**1.97**	**233**	*e*Pn	**Pn**	**19 17 43.1**	**-0.3**
LTZ	**Lake Taylor**	**1.97**	**233**	P	**Pn**	**19 17 43.4**	**+0.1**
LREZ	**Lake Rotokare**	**2.16**	**360**	P	**Pb**	**19 17 49.1**	**-0.2**
PNHZ	**Pukenui**	**2.18**	**39**	P	**Pn**	**19 17 45.9**	**-0.4**
NMEZ	**Namu Road**	**2.24**	**349**	P	**Pb**	**19 17 49.5**	**-1.2**
PREZ	**Palmer Road**	**2.28**	**355**	P	**Pb**	**19 17 50.7**	**-0.8**
KHEZ	**Kahui Hut**	**2.34**	**353**	P	**Pb**	**19 17 50.8**	**-1.7**
CRLZ	**Canterbury Las**	**2.36**	**213**	*e*Pn	**Pn**	**19 17 47.5**	**-1.1**

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MTVZ  Mangateitei         2.38  20  P      Pb     19 17 51.1 -2.0
NBEZ  Newall Road No      2.39 350  P      Pb     19 17 51.4 -1.8
DREZ  Durham Road         2.43 356  P      Pb     19 17 53.3 -0.8
PKVZ  Pokaka              2.44  17  P      Pn     19 17 51.5 +1.7
MOVZ  Moawhango           2.44  25  P      Pn     19 17 50.7 +0.9
OXZ   Oxford              2.44 225 ePn     Pn     19 17 48.5 -1.4
PKE   Pukeiti             2.44 352  P      Pb     19 17 52.4 -1.9
PXZ   Pawanui             2.45  50  P      Pn     19 17 48.4 -1.5
MQZ   McQueen's Vall      2.45 211 ePn     Pn     19 17 48.3 -1.6
INZ   Inchbonnie          2.46 242  P      Pn     19 17 50.7 +0.6
BHHZ  Black Hill Sta      2.47  31  P      Pn     19 17 50.6 +0.3
KRHZ  Kereru              2.48  38  P      Pn     19 17 49.7 -0.7
DRZ   Dome Shelter        2.50  21  P      Pb     19 17 53.6 -1.8
VRZ   Vera Road           2.51   6  P      Pb     19 17 52.8 -2.4
FWVZ  Far West T-bar      2.52  21  P      Pn     19 17 52.4 +1.4
TUVZ  Tukino              2.54  22  P      Pn     19 17 52.5 +1.3
MHEZ  Mangahewa           2.54 359  P      Pb     19 17 55.3 -0.5
NGZ   Ngauruhoe           2.61  21  P      Pn     19 17 53.6 +1.4
WTVZ  West Tongariro      2.66  20  P      Pn     19 17 54.5 +1.6
TWVZ  Taurewa             2.67  18  P      Pn     19 17 55.2 +2.2
KWHZ  Kaweka Forest       2.68  36  P      Pn     19 17 53.5 +0.4
KRVZ  Karewarewa          2.69  21  P      Pn     19 17 55.0 +1.7
MCHZ  McNeill Hill        2.79  39  P      Pn     19 17 54.1 -0.5
KATZ  Kakaramea           2.82  21  P      Pb     19 17 59.1 -1.6
RITZ  Rihia Road          2.86  23  P      Pn     19 17 57.6 +2.0
BKZ   Black Stump Fm      2.92  34 ePn     Pn     19 17 55.4 -1.1
BKZ   Black Stump Fm      2.92  34  P      Pn     19 17 55.6 -0.9
RATZ  Rangitukua          2.94  21  P      Pn     19 17 59.2 +2.4
HATZ  Hinemaiaia          3.02  26  P      Pb     19 18 02.4 -1.5
WATZ  Wairara             3.08  20  P      Pn     19 18 00.6 +2.0
HIZ   Hauiti              3.12   6 ePn     Pn     19 18 00.6 +1.4
HIZ   Hauiti              3.12   6  P      Pn     19 18 01.3 +2.1
MRHZ  Matea Rd            3.18  30  P      Pn     19 17 60.0  0.0
WHTZ  Whakaora            3.18  22  P      Pb     19 18 05.4 -1.4
RPZ   Rata Peaks          3.24 229  Pn     Pn     19 17 60.0 -0.8
      372nm,0.3s,baz=46,slow=0.2,SNR=448
RPZ                                 Pg     Pb     19 18 08.9 +1.1
      390nm,0.3s,baz=300,slow=3.9,SNR=39
RPZ                                 Sn     Sn     19 18 37.5 -1.5
      652nm,0.3s,baz=119,slow=23,SNR=13
RPZ                                 Lg     Lg     19 18 52.9
      523nm,0.3s,baz=112,slow=19,SNR=2.7
KUTZ  Kaahu Road          3.31  20  P      Pb     19 18 06.4 -2.5
MTHZ  Maungataniwha       3.33  35  P      Pn     19 18 01.1 -1.0
WHHZ  Waihua              3.33  41  P      Pn     19 18 01.6 -0.5
WPRZ  Whakapapatarin      3.38  24  P      Pb     19 18 06.4 -3.7
RAHZ  Arahi               3.39  38  P      Pn     19 18 01.8 -1.0
ALRZ  Allen Road          3.40  27  P      Pn     19 18 03.4 +0.4
TLZ   Tolley Road         3.40  15  P      Pn     19 18 04.8 +1.7
PRRZ  Plateau Road        3.47  27  P      Pn     19 18 04.8 +0.9
GRRZ  Galatos Road        3.52  22  P      Pn     19 18 06.2 +1.5
HRRZ  Handcock Road       3.53  25  P      Pn     19 18 06.0 +1.1
RTZ   Ruatahuna           3.59  34  P      Pn     19 18 05.3 -0.4
HSRZ  Hossack Road        3.59  24  P      Pn     19 18 07.9 +2.3
KNZ   Kokohu              3.60  45  P      Pn     19 18 03.5 -2.2
MUGZ  Murupara            3.62  31  P      Pn     19 18 06.1  0.0
MHGZ  Mahia Peninsul      3.63  48  P      Pn     19 18 04.7 -1.5
RRRZ  Republican Roa      3.66  27  P      Pn     19 18 06.7 +0.2
HLRZ  Highlands Stat      3.68  25  P      Pn     19 18 09.7 +2.8
UTU   Utuhina             3.70  22  P      Pn     19 18 10.2 +3.0
TARZ  Mount Tarawera      3.75  26  P      Pn     19 18 08.0 +0.2
NGRZ  Ngongotaha          3.77  22  P      Pn     19 18 10.9 +2.7
PRGZ  Paritu Road         3.79  46  P      Pn     19 18 06.5 -1.8
MKRZ  Makatiti            3.82  25  P      Pn     19 18 11.0 +2.2
OMRZ  Omania              3.82  24  P      Pn     19 18 11.2 +2.4
KARZ  Kaharoa             3.86  22  P      Pn     19 18 13.2 +3.9
RAGZ  Rawiri              3.88  37  P      Pn     19 18 07.7 -2.0
RIGZ  Rimuhau             3.88  43  P      Pn     19 18 07.6 -2.0
FOZ   Fox Glacier         3.89 239 ePn     Pn     19 18 09.5 -0.2
EDRZ  Edgecumbe           3.94  28  P      Pn     19 18 13.4 +2.9
URZ   Urewera             3.95  33  Pn     Pn     19 18 09.9 -0.6
      14nm,0.3s,baz=226,slow=7.0,SNR=86
URZ                                 Pg     Pb     19 18 19.5 -0.3
      220nm,0.3s,baz=245,slow=12,SNR=32
URZ                                 Sn     Sn     19 18 56.5 +0.1
      258nm,0.3s,baz=220,slow=22,SNR=4.4
URZ                                 Lg     Lg     19 19 14.6
      294nm,0.3s,baz=39,slow=18,SNR=3.2
URZ   Urewera             3.95  33 ePn     Pn     19 18 09.3 -1.2
URZ   Urewera             3.95  33  P      Pn     19 18 08.8 -1.7
KMRZ  Kaimai              3.95  18  P      Pn     19 18 13.0 +2.4
TOZ   Tahuroa Road        3.98  13  P      Pn     19 18 12.5 +1.7
MARZ  Manawahe            4.03  26  P      Pn     19 18 12.0 +0.3
MWZ   Matawai             4.06  37  P      Pn     19 18 09.6 -2.5
OPRZ  Ohinepanea          4.12  24  P      Pn     19 18 13.3 +0.5
TKGZ  Te Karaka           4.13  41  P      Pn     19 18 12.0 -1.0
TGRZ  Tauranga            4.14  21  P      Pn     19 18 17.4 +4.2
LBZ   Lake Benmore        4.15 227 ePn     Pn     19 18 13.1 -0.3
WHRZ  Whale Island        4.25  29  P      Pn     19 18 17.1 +2.4
CNGZ  Carnagh Statio      4.28  44  P      Pn     19 18 13.1 -2.0
ODZ   Otahua Downs        4.39 217 ePn     Pn     19 18 15.6 -0.9
TWGZ  Tauwhareparae       4.40  40  P      Pn     19 18 15.2 -1.6
RUGZ  Raukumara Rang      4.43  36  P      Pn     19 18 15.7 -1.6
KBAZ  Karaka Road Bo      4.54   5  P      Pn     19 18 21.8 +3.2
MKAZ  Moumakai            4.55   8  P      Pn     19 18 20.0 +1.3
AWAZ  Awhitu Peninsu      4.55   2  P      Pn     19 18 20.9 +2.0
PUZ   Puketiti            4.62  41  P      Pn     19 18 16.8 -2.9
HAZ   Te Kaha             4.66  35  P      Pn     19 18 18.5 -1.7
ETAZ  East Tamaki Re      4.68   5  P      Pn     19 18 22.9 +2.4
PKGZ  Pakihiroa           4.68  38  P      Pn     19 18 18.8 -1.9
WTAZ  Waiatarua           4.68   2  P      Pn     19 18 23.5 +2.9
EPAZ  Eden Park BICE      4.75   3  P      Pn     19 18 23.8 +2.4
HBAZ  Herne Bay Bore      4.77   3  P      Pn     19 18 24.7 +2.9
RVAZ  Riverhead Bore      4.85   2  P      Pn     19 18 25.4 +2.6
WIAZ  Waiheke Island      4.85   7  P      Pn     19 18 24.7 +1.7
MBAZ  Motutapu North      4.86   5  P      Pn     19 18 25.5 +2.5
WMGZ  Waiomatatini S      4.89  40  P      Pn     19 18 21.0 -2.5
KUZ   Kuaotunu            4.97  12  P      Pn     19 18 25.7 +1.1
ABAZ  Army Bay            5.02   4  P      Pn     19 18 27.8 +2.5
MXZ   Matakaoa Point      5.05  38 ePn     Pn     19 18 23.8 -1.9
MXZ   Matakaoa Point      5.05  38  P      Pn     19 18 23.9 -1.7
WKZ   Wanaka              5.08 229 ePn     Pn     19 18 25.4 -0.6
GRZ   Great Barrier       5.42   9  P      Pn     19 18 33.0 +2.2
WCZ   Waipu Caves         5.67 359  P      Pn     19 18 36.7 +2.5
MLZ   Mavora Lakes        5.91 229 ePn     Pn     19 18 35.9 -1.6
WHZ   Wether Hill Ro      6.33 225 ePn     Pn     19 18 42.6 -0.7
OUZ   Omahuta             6.42 354 ePn     Pn     19 18 46.2 +1.7
OUZ   Omahuta             6.42 354  P      Pn     19 18 46.6 +2.1
DCZ   Deep Cove           6.52 231 ePn     Pn     19 18 45.2 -0.7
I36NZ CHATHAM INFRAS      7.08 112 i              19 58 30.0
      baz=285,slow=310,SNR=1.0
NFK   Norfolk Island     13.61 335  P      Pn     19 20 27.1 +4.2
      baz=14,SNR=5.3
LHI   Lord Howe Isla     15.90 304 ePn     Pn     19 20 54.7 +1.0
      320nm,1.3s
MCQ   Macquarie Isla     16.46 213 eP      Pn     19 20 59.6 -1.1
      2µm,1.9s
MCQ   Macquarie Isla     16.46 213 eP      Pn     19 20 59.6 -1.1
MCQ                                 pmax   pmax
      comp=Z,2µm,1.9s
PINNC Pines Island,      19.83 341 eP      P      19 21 39.8 -0.8
      comp=Z,519nm,1.5s
RIV   Riverview          19.93 285  P      Pn     19 21 47.9 +4.6
      baz=21,SNR=7.9
MILA  Mila               20.03 275  P      Pn     19 21 46.2 +1.6
      baz=21,SNR=15
TAU   Tasmania Unive     20.06 257 eP      Pn     19 21 44.3 -0.6
      comp=Z,560nm,1.8s
TAU                                 LR     LR
      comp=Z,26µm,18.0s
TAU   Tasmania Unive     20.06 257 eP      Pn     19 21 44.3 -0.6
TAU                                 pmax   pmax
      comp=Z,561nm,1.8s
TAU                                 MLR    MLR
      comp=Z,26µm,18.0s
MOO   Moorlands          20.21 259  P      Pn     19 21 46.4 -0.2
      baz=21,SNR=6.9
MGCD  Mangrove Creek     20.28 287  P      Pn     19 21 49.9 +2.4
      baz=21,SNR=7.6
CNB   Canberra Magne     20.56 280  P      Pn     19 21 51.0 +0.2
      baz=21,SNR=8.0
DZM   Mont Dzumac        20.61 339 eP      Pn     19 21 52.3 +0.8
      comp=Z,383nm,1.4s
DZM                                eS      S      19 25 37.5 -1.7
      comp=Z,2µm,25.0s
DZM                                eLR     LR     19 26 45.1
      comp=Z,12µm,21.1s
DZM   Mont Dzumac        20.61 339  P      P      19 21 47.5 -1.8
      comp=Z,23nm,1.0s,baz=136,slow=11,SNR=1.8
DZM                                 LR     LR     19 29 43.4
      comp=Z,17µm,18.3s,baz=180,slow=37
DZM   Mont Dzumac        20.61 339 eP      Pn     19 21 51.0 -0.5
      comp=Z,331nm,1.5s
DZM                                 LR     LR
      comp=Z,17µm,18.0s
MARNC Mare, Loyalty      20.79 343 eP      Pn     19 21 53.0 -0.5
      comp=Z,250nm,1.1s
MARNC                               LR     LR
      comp=Z,13µm,19.0s
CAN   Canberra           20.82 279 eP      Pn     19 21 53.8 -0.1
      comp=Z,123nm,1.0s
CAN                                 LR     LR
      comp=Z,17µm,18.0s
CAN   Canberra           20.82 279 eP      Pn     19 21 53.8 -0.1
CAN                                 pmax   pmax
      comp=Z,123nm,1.0s
CAN                                 MLR    MLR
      comp=Z,17µm,18.0s
ARMA  Armidale           21.48 294 eP      P      19 22 00.2 +1.6
      comp=Z,288nm,1.7s
ARMA                                LR     LR
      comp=Z,18µm,19.0s
ARMA  Armidale           21.48 294  P      P      19 22 01.9 +3.2
      baz=22,SNR=9.3
TOO   Toolangi           22.60 271 eP      P      19 22 11.8 +1.3
      comp=Z,155nm,1.2s
TOO                                 LR     LR
      comp=Z,13µm,18.0s
TOO   Toolangi           22.60 271  P      P      19 22 12.0 +1.6
      baz=23,SNR=6.7
TOO   Toolangi           22.60 271 eP      P      19 22 11.8 +1.3
TOO                                 pmax   pmax
      comp=Z,155nm,1.2s
TOO                                 MLR    MLR
      comp=Z,13µm,18.0s
CMSA  Cobar Meteorol     25.06 284  P      P      19 22 34.4 +0.3
      baz=26,SNR=17
EIDS  Eidsvold           25.20 303 eP      P      19 22 35.9 +0.4
      comp=Z,81nm,1.1s
EIDS                                LR     LR
      comp=Z,21µm,19.0s
EIDS  Eidsvold           25.20 303  P      P      19 22 36.1 +0.6
      baz=26,SNR=8.0
ARPS  Mount Arapiles     25.61 270  P      P      19 22 40.3 +1.2
      baz=26,SNR=5.1
RMQ   Roma               25.94 298  P      P      19 22 43.2 +1.0
      baz=27,SNR=8.7
STKA  Stephens Creek     27.89 280  P      P      19 22 58.1 -1.6
      comp=Z,26nm,1.0s,baz=122,slow=9.5,SNR=14
STKA                                LR     LR     19 33 36.2
      comp=Z,11µm,18.2s,baz=134,slow=36
STKA  Stephens Creek     27.89 280 eP      P      19 23 00.2 +0.5
      comp=Z,15nm,1.3s
STKA                                LR     LR
      comp=Z,2µm,19.0s
STKA  Stephens Creek     27.89 280  P      P      19 23 00.5 +0.8
      baz=29,SNR=11
STKA  Stephens Creek     27.89 280 eP      P      19 23 00.8 +1.1
HTT   Hallett            29.15 275  P      P      19 23 11.5 +0.5
      baz=30,SNR=6.3
BBOO  Buckleboo          31.57 274 eP      P      19 23 31.9 -0.5
      comp=Z,45nm,0.8s
BBOO                                LR     LR
      comp=Z,16µm,19.0s
BBOO  Buckleboo          31.57 274  P      P      19 23 31.6 -0.7
      baz=32,SNR=14
CTAO  Charters Tower     32.09 303 eP      P      19 23 37.6 +0.7
      comp=Z,106nm,1.0s
CTAO                                LR     LR
      comp=Z,16µm,18.0s
CTAO  Charters Tower     32.09 303 eP      P      19 23 37.6 +0.7
CTAO                                pmax   pmax
      comp=Z,106nm,1.0s
CTAO                                MLR    MLR
      comp=Z,16µm,18.0s
HNR   Honiara            34.51 334  LR     LR     19 37 23.8
      comp=Z,3µm,19.3s,baz=162,slow=35
HNR   Honiara            34.51 334  PFAKE         19 24 10.0  +12
HNR                                 LR     LR
      comp=Z,3µm,22.0s
MTSU  Mount Surprise     34.76 303  P      P      19 24 00.6 +0.3
      baz=36,SNR=21
TBI   Tubuai             35.18  70 eS      S      19 29 39.7 +3.3
      comp=Z,2µm,27.5s
TBI                                eLQ     LQ     19 31 56.5
      comp=Z,5µm,24.0s
TBI                                eLR     LR     19 32 48.9
      comp=Z,6µm,34.5s
TBI   Tubuai             35.18  70 eT      T      20 01 08.8
      comp=Z,100nm,0.3s
VNDA  Vanda              36.38 185  P      P      19 24 13.8 +0.3
      comp=Z,8.0nm,1.0s,baz=7.7,slow=9.7,SNR=22
VNDA  Vanda              36.38 185 eP      P      19 24 15.1 +1.5
VNDA  Vanda              36.38 185 eP      P      19 24 15.1 +1.5
SBA   Scott Base         36.48 183 eP      P      19 24 16.9 +2.5
      comp=Z,288nm,1.6s
SBA                                 LR     LR
      comp=Z,9µm,20.0s
SBA   Scott Base         36.48 183 eP      P      19 24 16.9 +2.5
SBA                                 pmax   pmax
      comp=Z,288nm,1.6s
SBA                                 MLR    MLR
      comp=Z,9µm,20.0s
AS31  Alice Springs      38.11 285 eP      P      19 24 27.8 -1.1
      comp=Z,32nm,1.1s
ASAR  Alice Springs      38.11 285  P      P      19 24 26.8 -2.1
      comp=Z,29nm,0.7s,baz=125,slow=6.8,SNR=263
ASAR                                PcP    PcP    19 26 41.5 -2.2
      comp=Z,7.9nm,0.8s,baz=115,slow=4.4,SNR=3.9
ASAR                                S      S      19 30 19.8 -1.5
      comp=Z,2.2nm,0.9s,baz=136,slow=16,SNR=4.7
ASAR                                ScP    ScP    19 30 28.8 -1.8
      comp=Z,4.8nm,1.0s,baz=111,slow=5.1,SNR=4.2
ASAR                                LR     LR     19 40 21.0
      comp=Z,11µm,18.5s,baz=136,slow=37
FORT  Forrest            38.52 271 eP      P      19 24 31.9 -0.4
      comp=Z,239nm,1.1s
FORT                                LR     LR
      comp=Z,12µm,18.0s
COEN  Coen               38.65 306 eP      P      19 24 33.0 -0.4
      comp=Z,116nm,1.1s
COEN                                LR     LR
      comp=Z,13µm,19.0s
PAE   Paea               38.94  63 eT      T      20 05 49.9
      comp=Z,14nm,0.4s
PPT2  Papeete2           38.99  63 eS      S      19 30 36.4 +1.7
      comp=Z,2µm,27.2s
PPT2                               eLQ     LQ     19 33 37.0
      comp=Z,7µm,24.5s
PPT2                               eLR     LR     19 35 11.4
      comp=Z,8µm,31.0s,baz=212
PPT2  Papeete2           38.99  63 eT      T      20 05 54.6
      comp=Z,16nm,0.4s
PPT   Papeete            39.01  63  LR     LR     19 38 46.2
      comp=Z,3µm,20.6s,baz=232,slow=33
TVO   Taravao            39.08  64 eT      T      20 06 00.4
      comp=Z,6.3nm,0.3s
PMG   Port Moresby       40.08 315  P      P      19 24 44.8 -0.5
      comp=Z,203nm,1.0s,baz=123,slow=6.0,SNR=31
PMG                                 LR     LR     19 42 17.9
      comp=Z,6µm,18.1s,baz=154,slow=38
PMG   Port Moresby       40.08 315 eP      P      19 24 45.9 +0.6
      comp=Z,395nm,1.2s
PMG                                 LR     LR
      comp=Z,7µm,18.0s
PMG   Port Moresby       40.08 315ceP      P      19 24 46.2 +0.9
PMG                                 pmax   pmax
      comp=Z,2µm,1.7s
WC3   Warramunga Arr     40.13 290  PFAKE         19 25 00.0  +14
WC3                                 LR     LR
      comp=Z,14µm,19.0s
WB2   Warramunga Arr     40.16 290 eP      P      19 24 45.0 -1.0
      comp=Z,193nm,1.1s
WB2                                 LR     LR
      comp=Z,13µm,20.0s
WC2   Warramunga Arr     40.16 290  PFAKE         19 25 00.0  +14
WC2                                 LR     LR
      comp=Z,14µm,18.0s
WRAB  Tennant Creek      40.17 290  PFAKE         19 25 00.0  +14
WRAB                                LR     LR
      comp=Z,12µm,19.0s
WRAB  Tennant Creek      40.17 290d iP     P      19 24 44.9 -1.2
WRAB                                pmax   pmax
      comp=Z,144nm,1.2s
WRA   Warramunga Arr     40.17 290  P      P      19 24 44.7 -1.4
      comp=Z,96nm,0.6s,baz=130,slow=7.8,SNR=341
WRA                                 S      S      19 30 50.4 -1.8
      comp=Z,3.7nm,1.1s,baz=132,slow=14,SNR=5.0
WC1   Warramunga Arr     40.18 290  PFAKE         19 25 00.0  +14
WC1                                 LR     LR
      comp=Z,10µm,18.0s
KNTN  Kanton             40.63  22  PFAKE         19 25 00.0  +10
KNTN                                LR     LR
      comp=Z,6µm,20.0s
RABL  Rabaul             42.25 326 eP      P      19 25 03.2 -0.1
      comp=Z,774nm,1.0s
CASY  Casey              42.38 213 eP      P      19 25 04.6 +0.9
      comp=Z,208nm,1.5s
CASY                                LR     LR
      comp=Z,16µm,18.0s
TARA  Tarawa             42.80 358  PFAKE         19 25 20.0  +12
TARA                                LR     LR
      comp=Z,4µm,22.0s
NWAO  Narrogin (SRO)     45.59 262  LR     LR     19 41 54.5
      comp=Z,6µm,19.7s,baz=93,slow=33
NWAO  Narrogin (SRO)     45.59 262 eP      P      19 25 28.8 -1.1
      comp=Z,32nm,0.9s
NWAO                                LR     LR
      comp=Z,6µm,19.0s
NWAO  Narrogin (SRO)     45.59 262 eP      P      19 25 28.8 -1.1
NWAO                                pmax   pmax
      comp=Z,32nm,0.9s
NWAO                                MLR    MLR
      comp=Z,6µm,19.0s
RKT   Rikitea            45.87  82 eS      S      19 32 18.8 +3.0
      comp=Z,2µm,28.8s
RKT                                eLQ     LQ     19 36 23.2
      comp=Z,6µm,27.5s
RKT                                eLR     LR     19 38 23.9
      comp=Z,5µm,30.8s
MANU  Manus Island       46.30 321 eP      P      19 25 36.2 +0.5
      comp=Z,265nm,1.3s
MANU                                LR     LR
      comp=Z,3µm,19.0s
MTN   Manton Dam         47.27 294 eP      P      19 25 42.5 -0.7
      comp=Z,380nm,1.1s
MTN                                 LR     LR
      comp=Z,12µm,19.0s
MORW  Morawa             48.39 266 eP      P      19 25 50.6 -1.3
      comp=Z,78nm,0.9s
MORW                                LR     LR
      comp=Z,9µm,18.0s
QSPA  South Pole Qui     48.51 180 eP      P      19 25 53.8 +1.3
      comp=Z,528nm,1.9s
QSPA                                LR     LR
      comp=Z,5µm,21.0s
GENI  Genyem             49.54 312  P      P      19 26 01.5 +0.8
PSAD2 Pilbara Seismi     49.61 276  PFAKE         19 26 10.0 +8.7
PSAD2                               LR     LR
      comp=Z,20µm,18.0s
PSAC2 Pilbara Seismi     49.69 276  PFAKE         19 26 10.0 +8.2
PSAC2                               LR     LR
      comp=Z,20µm,19.0s
PSAB3 Pilbara Seismi     49.70 276  PFAKE         19 26 10.0 +8.0
PSAB3                               LR     LR
      comp=Z,20µm,18.0s
PSAC3 Pilbara Seismi     49.70 276  PFAKE         19 26 10.0 +8.0
PSAC3                               LR     LR
      comp=Z,18µm,18.0s
PSAA3 Pilbara Seismi     49.71 276  PFAKE         19 26 10.0 +8.0
PSAA3                               LR     LR
      comp=Z,20µm,18.0s
PSAB2 Pilbara Seismi     49.72 276  PFAKE         19 26 10.0 +7.9
PSAB2                               LR     LR
      comp=Z,20µm,18.0s
PSA00 Pilbara Seismi     49.72 276 eP      P      19 26 00.6 -1.5
      comp=Z,143nm,1.3s
PSA00                               LR     LR
      comp=Z,20µm,18.0s
PSAA1 Pilbara Seismi     49.73 276  PFAKE         19 26 10.0 +7.9
PSAA1                               LR     LR
      comp=Z,20µm,18.0s
PSAA2 Pilbara Seismi     49.73 276  PFAKE         19 26 10.0 +7.9
PSAA2                               LR     LR
      comp=Z,20µm,18.0s
PSAD3 Pilbara Seismi     49.73 276  PFAKE         19 26 10.0 +7.8
PSAD3                               LR     LR
      comp=Z,19µm,18.0s
PSAB1 Pilbara Seismi     49.74 276  PFAKE         19 26 10.0 +7.7
PSAB1                               LR     LR
      comp=Z,20µm,18.0s
PSAC1 Pilbara Seismi     49.77 276  PFAKE         19 26 10.0 +7.5
PSAC1                               LR     LR
      comp=Z,19µm,18.0s
PSAD1 Pilbara Seismi     49.80 276  PFAKE         19 26 10.0 +7.3
PSAD1                               LR     LR
      comp=Z,19µm,19.0s
MBWA  Marble Bar         50.05 277  PFAKE         19 26 20.0  +15
MBWA                                LR     LR
      comp=Z,16µm,19.0s
PATS  Pohnpei            50.43 339 eP      P      19 26 06.4 -1.0
      comp=Z,175nm,1.2s
PATS                                LR     LR
      comp=Z,3µm,22.0s
KWAJ  Kwajalein Atol     50.56 351  PFAKE         19 26 20.0  +12
KWAJ                                LR     LR
      comp=Z,4µm,20.0s
SAUI  Saumlaki           50.70 299 eP      P      19 26 09.2 -0.4
      comp=Z,568nm,1.1s
SAUI  Saumlaki           50.70 299  P      P      19 26 11.9 +2.4
TAOE  Nuku Hiva Isla     51.61  64 eS      S      19 33 39.5 +2.6
      comp=Z,2µm,26.8s
TAOE                               eLQ     LQ     19 38 55.7
      comp=Z,5µm,25.4s
TAOE                               eLR     LR     19 41 06.5
      comp=Z,5µm,28.3s
SRPI  Serui, Papua       52.37 309  P      P      19 26 22.8 +0.8
BAKI  Biak               52.99 309  P      P      19 26 27.1 +0.5
GIRL  Giralia            53.29 271 eP      P      19 26 28.7 -0.1
      comp=Z,399nm,1.3s
GIRL                                LR     LR
      comp=Z,8µm,18.0s
FAKI  Fak Fak            53.95 304 eP      P      19 26 31.9 -1.7
      comp=Z,60nm,0.9s
FAKI                                LR     LR
      comp=Z,11µm,20.0s
FAKI  Fak Fak            53.95 304  P      P      19 26 33.1 -0.6
SOEI  Soe                54.19 291 eP      P      19 26 36.3 +0.7
      comp=Z,602nm,1.4s
SOEI                                LR     LR
      comp=Z,13µm,18.0s
SOEI  Soe                54.19 291  P      P      19 26 37.1 +1.5
      comp=Z,286nm,1.3s,comp=Z,3µm
BATI  Baumata            54.30 290  P      P      19 26 35.7 -0.6
      comp=Z,200nm,1.1s,baz=192,slow=1.0,SNR=20
BATI                                LR     LR     19 49 51.0
      comp=Z,8µm,19.4s,baz=116,slow=36
BATI  Baumata            54.30 290  P      P      19 26 36.1 -0.2
      comp=Z,78nm,1.2s,comp=Z,793nm
SIJI  Sorong             56.15 305  P      P      19 26 47.8 -1.9
      comp=Z,104nm,1.1s,baz=88,slow=4.9,SNR=23
MMRI  Maumere            56.40 290 eP      P      19 26 50.9 -0.5
      comp=Z,165nm,0.9s
MMRI  Maumere            56.40 290  P      P      19 26 47.6 -3.8
      comp=Z,209nm,1.3s,comp=Z,2µm
EDFI  Ende, Flores       56.70 290  P      P      19 26 52.6 -1.1
WSI   Waingapu           57.06 288  P      P      19 26 56.4 +0.3
      comp=Z,466nm,1.1s,comp=Z,6µm
SANI  Sanana             58.62 299  P      P      19 27 07.7 +0.7
      comp=Z,84nm,1.0s,comp=Z,1µm
PLAI  Plampang           59.44 287  P      P      19 27 13.8 +1.1
KDI   Kendari            59.47 294  P      P      19 27 14.5 +1.6
      comp=Z,85nm,1.2s,comp=Z,2µm
MAW   Mawson             59.62 204  P      P      19 27 11.5 -1.7
      comp=Z,24nm,1.1s,baz=116,slow=9.0,SNR=24
MAW                                 LR     LR     19 52 41.6
      comp=Z,18µm,18.0s,baz=107,slow=36
MAW   Mawson             59.62 204 eP      P      19 27 12.7 -0.5
      comp=Z,20nm,1.4s
MAW                                 LR     LR
      comp=Z,4µm,19.0s
MAW   Mawson             59.62 204 eP      P      19 27 12.7 -0.5
MAW                                 pmax   pmax
      comp=Z,21nm,1.4s
MAW                                 MLR    MLR
      comp=Z,4µm,19.0s
TNTI  Ternate            59.87 302 eP      P      19 27 14.9 -0.7
      comp=Z,133nm,1.3s
TNTI  Ternate            59.87 302  P      P      19 27 15.3 -0.3
JOHN  Johnston Islan     59.93  18  PFAKE         19 27 30.0  +14
JOHN                                LR     LR
      comp=Z,3µm,19.0s
BKSI  Bulukumba          60.21 291  P      P      19 27 17.5 -0.5
KAPI  Kappang            60.69 291  P      P      19 27 19.9 -1.4
      comp=Z,56nm,0.9s,baz=167,slow=4.1,SNR=21
KAPI  Kappang            60.69 291 eP      P      19 27 21.6 +0.3
      comp=Z,136nm,1.2s
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KAPI   Kappang          60.69 291  eP       P        19 27 21.6 +0.3
KAPI                               pmax     pmax
       comp=Z,136nm,1.2s
BNSI   Bone             60.88 292  P        P        19 27 22.4 -0.2
WAKE   Wake Island      61.02 352  eP       P        19 27 22.7 -0.6
       comp=Z,373nm,1.3s
WAKE                               LR       LR
       comp=Z,4µm,20.0s
GUMO   Guam             61.33 327  P        P        19 27 23.9 -1.5
       comp=Z,108nm,1.1s,baz=152,slow=5.9,SNR=9.4
GUMO   Guam             61.33 327  eP       P        19 27 25.8 +0.3
       comp=Z,200nm,1.2s
GUMO                               LR       LR
       comp=Z,2µm,18.0s
GUMO   Guam             61.33 327  eP       P        19 27 25.8 +0.3
GUMO                               pmax     pmax
       comp=Z,200nm,1.2s
GUMO                               MLR      MLR
       comp=Z,2µm,18.0s
SPSI   Sidrap Palu      61.42 292  P        P        19 27 25.3 -1.0
LUWI   Luwuk            61.50 297  eP       P        19 27 26.5 -0.2
       comp=Z,601nm,1.3s
LUWI                               LR       LR
       comp=Z,3µm,19.0s
LUWI   Luwuk            61.50 297  P        P        19 27 27.3 +0.5
JAGI   Jajag, Banyuwa   62.30 284  PFAKE             19 27 40.0 +7.8
JAGI                               LR       LR
       comp=Z,5µm,18.0s
GMJI   Gumukmas         62.95 284  P        P        19 27 36.2 -0.3
ANA2   Anatahan         63.49 329  eP       P        19 27 39.2 -0.7
       comp=Z,84nm,0.6s
SARN   Sarigan          63.79 329  eP       P        19 27 41.0 -0.9
       comp=Z,53nm,1.3s
PWJI   Pagerwojo        64.32 283  P        P        19 27 45.2 -0.4
PMSA   Palmer Station   64.55 156  eP       P        19 27 47.8 +1.5
       comp=Z,283nm,1.9s
PMSA   Palmer Station   64.55 156  eP       P        19 27 46.0 -0.3
SYO    Syowa Base       64.73 196⇓ eP       P        19 27 45.9 -1.6
SYO    Syowa Base       64.73 196⇓ epP      P        19 27 48.6 +1.1
UGM    Wanagama         65.33 282  PFAKE             19 28 00.0 +7.8
UGM                                LR       LR
       comp=Z,5µm,18.0s
DAV    Davao City (W)   65.86 305  P        P        19 27 55.4 -0.1
       comp=Z,203nm,0.4s,baz=99,slow=1.9,SNR=12
DAV    Davao City (W)   65.86 305  eP       P        19 27 55.2 -0.3
       comp=Z,703nm,1.3s
DAV                                LR       LR
       comp=Z,3µm,21.0s
DAV    Davao City (W)   65.86 305⇑ iP       P        19 27 55.3 -0.3
SMRI   Semarang         65.97 282  eP       P        19 27 55.8 -0.5
       comp=Z,396nm,1.9s
KCP    Kidapawan        66.11 305⇓ eP       P        19 27 56.3 -0.9
CTBH   Cotabato--PC H   66.80 304⇓ iP       P        19 28 00.6 -0.9
KHLU   Kahalu`u         66.83  31  eP       P        19 28 00.7 -1.0
       comp=Z,138nm,1.1s
KHLU                               LR       LR
       comp=Z,2µm,19.0s
HMH    Humu‘ula Sheep   67.00  31  eP       P        19 28 05.0 +2.1
       comp=Z,128nm,0.9s
SNAA   Sanae            67.00 181  P        P        19 28 03.1 +0.9
SNAA   Sanae            67.00 181  eP       P        19 28 02.9 +0.8
       comp=Z,114nm,1.2s
SNAA                               LR       LR
       comp=Z,6µm,20.0s
SNAA   Sanae            67.00 181c iP       P        19 28 03.1 +0.9
POHA   Pohakuloa        67.12  31  PFAKE             19 28 20.0  +16
POHA                               LR       LR
       comp=Z,2µm,20.0s
XMIS   Christmas Isla   67.25 276  PFAKE             19 28 20.0  +16
XMIS                               LR       LR
       comp=Z,6µm,19.0s
HPAH   Hawaii Prepara   67.30  31  PFAKE             19 28 20.0  +15
HPAH                               LR       LR
       comp=Z,2µm,19.0s
VNA3   Neumayer Olymp   67.41 179  P        P        19 28 05.6 +0.9
CISI   Cisompet, Garu   67.56 280  eP       P        19 28 05.5 -1.0
       comp=Z,87nm,0.9s
CISI                               LR       LR
       comp=Z,4µm,22.0s
KEKH   Kekaha           67.68  26  PFAKE             19 28 20.0  +13
KEKH                               LR       LR
       comp=Z,2µm,21.0s
HLK    Haleakala        67.76  30  PFAKE             19 28 20.0  +12
HLK                                LR       LR
       comp=Z,3µm,20.0s
KHLH   Kahului Airpor   67.82  29  PFAKE             19 28 20.0  +12
KHLH                               LR       LR
       comp=Z,3µm,19.0s
VNA1   Neumayer--Stat   68.02 179  P        P        19 28 09.7 +1.2
LEM    Lembang          68.19 281  P        P        19 28 09.8 -0.9
       comp=Z,69nm,0.9s,baz=61,slow=10,SNR=8.1
LEM                                LR       LR       19 57 12.3
       comp=Z,5µm,21.9s,baz=126,slow=35
MIDW   Midway           69.90   8  PFAKE             19 28 30.0 +9.4
MIDW                               LR       LR
       comp=Z,4µm,20.0s
GO10   Punta Arenas     70.08 144  eP       P        19 28 21.9 +0.3
       comp=Z,620nm,1.8s
KKM    Kota Kinabalu    71.11 297  PFAKE             19 28 40.0  +12
KKM                                LR       LR
       comp=Z,2µm,20.0s
SBUM   Sibu             71.25 291  eP       P        19 28 29.0 -0.3
       comp=Z,50nm,1.1s
SBUM                               LR       LR
       comp=Z,1µm,18.0s
KSM    Kuching          71.91 289  PFAKE             19 28 40.0 +6.8
KSM                                LR       LR
       comp=Z,3µm,19.0s
MNAI   Manna            73.27 279  PFAKE             19 28 50.0 +8.6
MNAI                               LR       LR
       comp=Z,4µm,19.0s
EFI    East Falkland    76.50 149⇓ eP       P        19 29 02.6 +3.1
MYKOM  Kota Tinggi      76.77 284  eP       P        19 29 01.0 -0.5
       comp=Z,105nm,1.1s
MYKOM                              LR       LR
       comp=Z,3µm,19.0s
BKNI   Bangkinang       77.83 281  eP       P        19 29 05.8 -1.7
       comp=Z,221nm,1.0s
BKNI                               LR       LR
       comp=Z,4µm,20.0s
PLCA   Paso Flores      79.11 135  P        P        19 29 15.5 +1.2
       comp=Z,16nm,1.0s,baz=249,slow=6.2,SNR=11
PLCA                               LR       LR       19 57 45.1
       comp=Z,948nm,18.2s,baz=244,slow=31
PLCA   Paso Flores      79.11 135  eP       P        19 29 14.7 +0.3
       comp=Z,134nm,1.5s
PLCA   Paso Flores      79.11 135  eP       P        19 29 13.7 -0.6
IPM    Ipoh             80.65 284  eP       P        19 29 21.8 -1.2
       comp=Z,68nm,1.0s
IPM                                LR       LR
       comp=Z,3µm,20.0s
HOPE   Hope Point       80.86 162  eP       P        19 29 24.1 +0.6
       comp=Z,137nm,1.2s
HOPE                               LR       LR
       comp=Z,5µm,20.0s
TWG    Pinlang          80.92 311  eP       P        19 29 22.2 -1.8
       comp=Z,84nm,0.9s
TWG                                LR       LR
       comp=Z,3µm,19.0s
GSI    Gunungsitoli     81.04 280  eP       P        19 29 24.5 -0.5
       comp=Z,394nm,1.2s
GSI                                LR       LR
       comp=Z,5µm,19.0s
PSI    Prapat           81.05 282  P        P        19 29 22.6 -2.6
       comp=Z,67nm,1.0s,baz=182,slow=8.5,SNR=9.4
PSI    Prapat           81.05 282  eP       P        19 29 23.1 -2.1
       comp=Z,105nm,1.1s
PSI                                LR       LR
       comp=Z,5µm,19.0s
PSI    Prapat           81.05 282  eP       P        19 29 23.1 -2.1
PSI                                pmax     pmax
       comp=Z,105nm,1.1s
PSI                                MLR      MLR
       comp=Z,5µm,19.0s
YOJ    Yonaguni jima    81.15 314  PFAKE             19 29 40.0  +15
YOJ                                LR       LR
       comp=Z,2µm,20.0s
YULB   Yu-li            81.24 312  eP       P        19 29 24.9 -0.9
       comp=Z,24nm,1.2s
KULM   Kulim            81.48 285  PFAKE             19 29 40.0  +13
KULM                               LR       LR
       comp=Z,4µm,19.0s
TPUB   Ta-pu            81.54 311  PFAKE             19 29 40.0  +13
TPUB                               LR       LR
       comp=Z,600nm,19.0s
NACB   Ninganchiao      81.69 313  PFAKE             19 29 40.0  +12
NACB                               LR       LR
       comp=Z,1µm,19.0s
SSLB   Suanglung        81.75 312  eP       P        19 29 27.8 -0.7
       comp=Z,36nm,1.0s
TATO   Taipei           82.39 313  PFAKE             19 29 40.0 +8.2
TATO                               LR       LR
       comp=Z,1µm,19.0s
GO05   Huala            82.48 131  eP       P        19 29 32.3 -0.1
       comp=Z,193nm,1.7s
GO05                               LR       LR
       comp=Z,2µm,18.0s
SKLT   Songkhla         82.78 286  P        P        19 29 35.7 +1.6
TRTT   Trang            83.91 286  P        P        19 29 39.5 -0.4
INU    Inuyama          83.92 330  eP       P        19 29 38.8 -0.7
       comp=Z,68nm,1.3s
INU                                LR       LR
       comp=Z,1µm,21.0s
QZH    Quanzhou         83.98 311⇑ iP       P        19 29 41.3 +1.3
QZH                                S        S        19 40 03.6 +0.3
QZH                                pmax     pmax
       comp=Z,46nm,0.9s
QZH                                pmax     pmax
       comp=Z,460nm,9.7s
QZH                                LR       LR
       comp=Z,560nm,20.9s
QZH                                LR       LR
       comp=Z,570nm,17.9s
QZH                                LR       LR
       comp=Z,690nm,19.3s
LHMI   Lhok Sumawe      84.13 282  PFAKE             19 29 50.0 +8.9
LHMI                               LR       LR
       comp=Z,3µm,18.0s
JNU    Nakatsue         84.47 325  P        P        19 29 40.1 -2.2
       comp=Z,41nm,0.9s,baz=90,slow=2.7,SNR=18
JNU    Nakatsue         84.47 325  eP       P        19 29 41.1 -1.3
       comp=Z,100nm,1.3s
JNU                                LR       LR
       comp=Z,1µm,20.0s
PEL    Peldehue         84.54 130  PFAKE             19 29 50.0 +6.9
PEL                                LR       LR
       comp=Z,1µm,18.0s
MJAR   Matsushiro Arr   84.55 331  P        P        19 29 41.3 -1.3
       comp=Z,12nm,1.1s,baz=170,slow=6.4,SNR=27
MAJO   Matsushiro       84.55 331  eP       P        19 29 42.2 -0.5
       comp=Z,45nm,1.3s
MAJO                               LR       LR
       comp=Z,900nm,19.0s
MAJO   Matsushiro       84.55 331c iP       P        19 29 43.1 +0.4
MAJO                               pmax     pmax
       comp=Z,42nm,1.3s
MAT    Matsushiro       84.55 331  P        P        19 29 43.1 +0.4
MAT                                S        S        19 40 02.4 -6.2
MJB9   Matsu-Tunnel     84.56 331  PFAKE             19 29 50.0 +7.3
MJB9                               LR       LR
       comp=Z,1µm,19.0s
QIZ    Qiongzhong       84.83 301  P        P        19 29 45.3 +0.9
QIZ                                S        S        19 40 15.9 +3.8
QIZ                                sS       ScS      19 40 22.9 -0.1
QIZ                                pmax     pmax
       comp=Z,600nm,8.6s
QIZ                                LR       LR
       comp=Z,980nm,24.5s
QIZ                                LR       LR
       comp=Z,980nm,27.0s
QIZ                                LR       LR
       comp=Z,880nm,27.0s
PKDT   Phuket           84.92 285  P        P        19 29 47.0 +1.9
TRQA   Tornquist        85.49 139  eP       P        19 29 47.3 -0.4
GZH    Guangzhou        85.64 306  P        P        19 29 50.5 +2.1
GZH                                pmax     pmax
       comp=Z,410nm,4.9s
GZH                                LR       LR
       comp=Z,510nm,16.6s
GZH                                LR       LR
       comp=Z,810nm,16.5s
PANO   Nakornpanom      86.92 296  P        P        19 29 55.8 +0.9
CFA    Coronel Fontan   87.07 131  LR       LR       20 03 00.5
       comp=Z,593nm,18.0s,baz=254,slow=32
PHET   Kaeng Krachan    87.42 290  P        P        19 29 59.0 +1.7
SSE    Sheshan          87.42 317  PFAKE             19 30 10.0  +13
SSE                                LR       LR
       comp=Z,2µm,19.0s
LCO    Las Campanas     87.54 127  eP       P        19 29 58.0 -0.3
       comp=Z,118nm,1.6s
LCO                                LR       LR
       comp=Z,2µm,18.0s
LCO    Las Campanas     87.54 127  eP       P        19 29 58.0 -0.3
LCO                                pmax     pmax
       comp=Z,118nm,1.6s
LCO                                MLR      MLR
       comp=Z,2µm,18.0s
LCO    Las Campanas     87.54 127  eP       P        19 29 57.8 -0.4
CHAI   Chaiyaphum       87.84 293  P        P        19 30 01.1 +1.8
ERM    Erimo            87.91 337  PFAKE             19 30 10.0  +11
ERM                                LR       LR
       comp=Z,3µm,20.0s
ERM    Erimo            87.91 337c iP       P        19 30 01.3 +2.3
ERM                                pmax     pmax
       comp=Z,40nm,1.5s
NONG   Nongkai          88.56 296  P        P        19 30 02.6 -0.1
SRDT   SRDT             88.76 290  P        P        19 30 05.9 +2.2
TJN    Taejon           88.76 324c eP       P        19 30 04.5 +1.3
GO03   Copiap           88.86 127  eP       P        19 30 04.4 +0.1
       comp=Z,152nm,1.6s
GO03                               LR       LR
       comp=Z,2µm,19.0s
YUK    Yuzh-Kuril'sk    89.04 340c iP       P        19 30 05.6 +1.3
YUK                                i                 19 33 32.5
YUK                                i S      SKSac    19 40 35.5 +2.7
YUK                                i SS     SS       19 46 45.6 -0.5
YUK                                i SSS    SSS      19 50 22.3
YUK                                pmax     pmax
       comp=E,68nm,1.3s
YUK                                pmax     pmax
       comp=Z,70nm,1.3s
YUK                                pmax     pmax
       comp=N,82nm,0.7s
YUK                                pmax     pmax
       comp=Z,95nm,2.6s
YUK                                MLR      MLR
       comp=Z,2µm,19.0s
YUK                                MLR      MLR
       comp=E,518nm,21.0s
YUK                                MLR      MLR
       comp=N,1µm,17.0s
UTHA   Uthaitani        89.36 291  P        P        19 30 07.3 +0.8
NJ2    Nanjing          89.39 316⇑ iP       P        19 30 07.5 +1.3
NJ2                                pP       pP       19 30 11.0 -0.7
NJ2                                sP       sP       19 30 13.3 -0.3
NJ2                                S        S        19 40 58.3 +2.8
NJ2                                sS       sS       19 41 06.3 +1.8
NJ2                                pmax     pmax
       comp=N,37nm,1.3s
NJ2                                pmax     pmax
       comp=N,410nm,8.0s
NJ2                                LR       LR
       comp=N,800nm,18.9s
NJ2                                LR       LR
       comp=N,1µm,21.2s
NJ2                                LR       LR
       comp=N,1µm,18.0s
KSRS   Korea Array      89.42 325  P        P        19 30 06.8 +0.6
       comp=N,52nm,1.0s,baz=145,slow=5.3,SNR=69
KSRS                               LR       LR       20 07 07.2
       comp=N,802nm,21.4s,baz=150,slow=34
KS15   Wonju Array Si   89.43 325  eP       P        19 30 06.5 +0.2
       comp=N,104nm,1.3s
KUR    Kuril'sk         89.67 342c iP       P        19 30 07.1 -0.1
KUR                                i S      S        19 41 05.9 +8.4
KUR                                pmax     pmax
       comp=Z,383nm,4.8s
KUR                                MLR      MLR
       comp=Z,983nm,19.0s
KUR                                MLR      MLR
       comp=E,526nm,17.0s
KUR                                MLR      MLR
       comp=N,1µm,18.0s
ASAJ   Asahikawa        90.01 338  P        P        19 30 09.2 +0.3
       comp=N,12nm,1.1s,baz=239,slow=11,SNR=6.5
UMPA   Umpang Tak       90.22 292  P        P        19 30 12.2 +1.7
WHN    Wuhan            90.67 312⇓ iP       P        19 30 13.8 +1.5
WHN                                PP       PP       19 33 50.3 +2.2
WHN                                SKS      SKSac    19 40 39.8 -3.2
WHN                                S        S        19 41 07.5  0.0
WHN                                SS       SS       19 47 06.3 -3.8
WHN                                pmax     pmax
       comp=N,130nm,1.2s
WHN                                pmax     pmax
       comp=N,600nm,3.7s
WHN                                LR       LR
       comp=N,2µm,20.4s
WHN                                LR       LR
       comp=N,1µm,21.3s
WHN                                LR       LR
       comp=N,2µm,21.3s
LAMP   Lampang          91.27 294  P        P        19 30 18.3 +2.9
CM31   Chiang Mai Arr   91.70 293  eP       P        19 30 17.2 -0.1
       comp=N,63nm,0.9s
CMAR   Chiang Mai Arr   91.70 293  P        P        19 30 17.3 -0.1
       comp=N,40nm,1.0s,baz=150,slow=3.5,SNR=89
CMAR                               PP       PP       19 33 51.0 -5.3
       comp=N,6.5nm,1.0s,baz=147,slow=6.1,SNR=4.1
CMAR                               LR       LR       20 16 58.7
       comp=N,1µm,18.4s,baz=150,slow=39
CMAR   Chiang Mai Arr   91.70 293c eP       P        19 30 17.6 +0.2
CMAR                               pmax     pmax
       comp=Z,39nm,0.9s
CMMT   Chiang Mai       91.94 293  P        P        19 30 19.2 +0.7
CHTO   Chiang Mai       91.94 293  eP       P        19 30 18.3 -0.2
       comp=Z,55nm,1.1s
CHTO                               LR       LR
       comp=Z,2µm,19.0s
CHTO   Chiang Mai       91.94 293  eP       P        19 30 18.3 -0.2
CHTO                               pmax     pmax
       comp=Z,55nm,1.1s
CHTO                               MLR      MLR
       comp=Z,2µm,19.0s
OGAUY  Aigu             91.98 141  eP       P        19 30 18.3 -0.3
GYA    Guiyang          92.22 304⇑ iP       P        19 30 20.8 +1.1
GYA                                PP       PP       19 33 59.1 -1.4
GYA                                SKS      SKSac    19 40 49.9 -2.4
GYA                                S        S        19 41 21.3 -0.7
GYA                                SS       SS       19 47 36.6 +3.8
GYA                                pmax     pmax
       comp=Z,30nm,1.0s
GYA                                pmax     pmax
       comp=Z,230nm,8.4s
GYA                                LR       LR
       comp=Z,680nm,28.6s
GYA                                LR       LR
       comp=Z,670nm,25.2s
GYA                                LR       LR
       comp=Z,1µm,28.3s
YSS    Yuzh-Sakhalins   92.57 339  PFAKE             19 30 30.0 +9.4
YSS                                LR       LR
       comp=Z,3µm,20.0s
YSS    Yuzh-Sakhalins   92.57 339  eP       P        19 30 17.5 -3.1
YSS                                e                 19 34 09.5
YSS                                e                 19 40 46.2
YSS                                e                 19 41 28.7
YSS                                eSP      SP       19 42 37.1 +1.8
YSS                                eSS      SS       19 47 39.6 +2.6
YSS                                pmax     pmax
       comp=Z,200nm,9.0s
PB04   IPOC Station P   92.76 123  PFAKE             19 30 30.0 +7.4
PB04                               LR       LR
       comp=Z,1µm,21.0s
ENH    Enshi            93.27 308  PFAKE             19 30 40.0  +16
ENH                                LR       LR
       comp=Z,900nm,19.0s
SKR    Severo-Kuril’s   93.31 348  eP       P        19 30 17.1 -6.8
SKR                                eS       SKSac    19 40 54.7 -2.1
SKR                                pmax     pmax
       comp=Z,200nm,5.9s
LVC    Limon Verde      93.33 124  LR       LR       20 03 04.3
       comp=Z,407nm,20.4s,baz=243,slow=30
LVC    Limon Verde      93.33 124  eP       P        19 30 24.8 -0.7
DL2    Dalian           93.44 322  P        P        19 30 25.6 +0.7
DL2                                PP       PP       19 34 10.8 +1.0
DL2                                S        S        19 41 34.1 +2.1
DL2                                pmax     pmax
       comp=Z,20nm,1.2s
DL2                                pmax     pmax
       comp=Z,270nm,7.0s
DL2                                LR       LR
       comp=Z,770nm,17.9s
DL2                                LR       LR
       comp=Z,410nm,19.2s
DL2                                LR       LR
       comp=Z,880nm,16.6s
ADK    Adak             93.45   6  PFAKE             19 30 40.0  +15
ADK                                LR       LR
       comp=Z,2µm,22.0s
TIA    Tai'an           93.53 317  P        P        19 30 25.4  0.0
TIA                                SKS      SKSac    19 40 58.8 -0.1
TIA                                S        ScS      19 41 38.0 +3.5
TIA                                pmax     pmax
       comp=Z,9.0nm,0.8s
TIA                                pmax     pmax
       comp=Z,270nm,3.8s
TIA                                LR       LR
       comp=Z,910nm,18.0s
TIA                                LR       LR
       comp=Z,390nm,20.4s
TIA                                LR       LR
       comp=Z,1µm,18.7s
USA0B  Ussuriysk Arra   93.53 331  PFAKE             19 30 40.0  +15
USA0B                              LR       LR
       comp=Z,800nm,22.0s
USRK   Ussuriysk Ar.    93.53 331  LR       LR       20 11 23.0
       comp=Z,480nm,18.9s,baz=142,slow=35
KMI    Kunming          93.76 300  PFAKE             19 30 40.0  +13
KMI                                LR       LR
       comp=Z,1µm,20.0s
KMI    Kunming          93.76 300  P        P        19 30 29.3 +2.3
KMI                                pP       pP       19 30 32.4 -0.1
KMI                                sP       sP       19 30 34.0 -0.4
KMI                                PP       PP       19 34 13.8 +1.0
KMI                                SKS      SKSac    19 41 02.5 +1.3
KMI                                S        S        19 41 34.1 -1.8
KMI                                sS       pS       19 41 42.1 -0.9
KMI                                SS       SS       19 47 52.1 -3.1
KMI                                pmax     pmax
       comp=Z,13nm,0.5s
KMI                                pmax     pmax
       comp=Z,430nm,11.5s
KMI                                LR       LR
       comp=Z,490nm,21.3s
KMI                                LR       LR
       comp=Z,760nm,21.3s
KMI                                LR       LR
       comp=Z,1µm,20.8s
SMY    Shemya           93.97 360  PFAKE             19 30 40.0  +13
SMY                                LR       LR
       comp=Z,3µm,22.0s
PB01   IPOC Station P   94.13 123  PFAKE             19 30 40.0  +11
PB01                               LR       LR
       comp=Z,2µm,18.0s
PLTB   Pedras Altas     94.62 141  eP       P        19 30 30.2 -0.7
MDJ    Mudanjiang       94.78 330  PFAKE             19 30 40.0 +9.1
MDJ                                LR       LR
       comp=Z,800nm,22.0s
MDJ    Mudanjiang       94.78 330  P        P        19 30 34.6 +3.7
MDJ                                pP       sP       19 30 38.3  0.0
MDJ                                sP       pP       19 30 39.3 +2.9
MDJ                                PP       PP       19 34 24.1 +4.0
MDJ                                pmax     pmax
       comp=Z,18nm,1.8s
MDJ                                pmax     pmax
       comp=Z,420nm,5.7s
MDJ                                LR       LR
       comp=Z,530nm,24.0s
MDJ                                LR       LR
       comp=Z,600nm,18.9s
MDJ                                LR       LR
       comp=Z,1µm,24.6s
SNY    Shenyang         94.92 324 ⇑P        P        19 30 32.1 +0.5
SNY                                PP       PP       19 34 23.3 +2.1
SNY                                SKS      SKSac    19 41 06.5 +0.4
SNY                                S        S        19 41 43.6 -1.1
SNY                                pmax     pmax
       comp=Z,250nm,14.5s
SNY                                LR       LR
       comp=Z,620nm,19.7s
SNY                                LR       LR
       comp=Z,640nm,18.0s
SNY                                LR       LR
       comp=Z,1µm,17.4s
PB11   IPOC Station P   94.96 122  PFAKE             19 30 40.0 +7.3
PB11                               LR       LR
       comp=Z,1µm,21.0s
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PET    Petropavlovsk     95.25 351  PFAKE                19 30 40.0 +7.2
PET                                 LR       LR
       comp=Z,2µm,22.0s
PET    Petropavlovsk     95.25 351  eP       P           19 30 30.5  -2.3
PET                                 e                    19 34 26.7
PET                                 eS       S           19 41 42.0  -5.0
PET                                 pmax     pmax
       comp=Z,200nm,12.1s
PET                                 pmax     pmax
       comp=Z,200nm,12.4s
PET                                 pmax     pmax
       comp=Z,100nm,14.1s
PET                                 MLR      MLR
       comp=Z,2µm,22.0s
NIKH   Nikolski High     95.32  10  PFAKE                19 30 40.0 +6.9
NIKH                                LR       LR
       comp=Z,3µm,22.0s
GO01   Chusmiza          95.32 122  PFAKE                19 30 50.0  +15
GO01                                LR       LR
       comp=Z,2µm,21.0s
PEA0B  Petropavlovsk-    95.45 350  PFAKE                19 30 40.0 +6.2
PEA0B                               LR       LR
       comp=Z,2µm,20.0s
PETK   Petropavlovsk-    95.45 350  P        P           19 30 33.1  -0.6
       comp=Z,4.3nm,1.0s,baz=111,slow=7.6,SNR=6.7
PETK                                LR       LR          20 08 24.0
       comp=Z,2µm,20.6s,baz=157,slow=32
MNMC   Minye Minye       95.46 121  PFAKE                19 30 50.0  +15
MNMC                                LR       LR
       comp=Z,2µm,20.0s
NNA    Nana              95.70 111  LR       LR          20 06 21.0
       comp=Z,2µm,18.2s,baz=230,slow=31
NNA    Nana              95.70 111  PFAKE                19 30 50.0  +14
NNA                                 LR       LR
       comp=Z,2µm,20.0s
CN2    Changchun         95.74 327  eP       P           19 30 36.1 +0.8
CN2                                 PP       PP          19 34 27.8 +0.2
CN2                                 eS       S           19 41 55.3 +3.5
CN2                                 pmax     pmax
       comp=Z,10.0nm,1.0s
CN2                                 pmax     pmax
       comp=Z,70nm,4.0s
CN2                                 LR       LR
       comp=Z,800nm,18.0s
CN2                                 LR       LR
       comp=Z,600nm,18.0s
CN2                                 LR       LR
       comp=Z,1µm,22.0s
CPSB   Cacapava Do Su    95.83 140  eP       P           19 30 35.7  -0.6
XAN    Xi'an             96.34 311  PFAKE                19 30 50.0  +12
XAN                                 LR       LR
       comp=Z,900nm,19.0s
XAN    Xi'an             96.34 311  P        P           19 30 38.3  -0.1
XAN                                 pP       sP          19 30 44.8  -1.0
XAN                                 sP       pP          19 30 47.5 +3.7
XAN                                 PP       PP          19 34 29.5  -3.0
XAN                                 SKS      SKSac       19 41 11.5  -2.6
XAN                                 S        S           19 41 50.6  -7.0
XAN                                 sS       sS          19 42 08.4 +1.7
XAN                                 SS       SS          19 48 31.6 +0.3
XAN                                 pmax     pmax
       comp=Z,19nm,1.0s
XAN                                 pmax     pmax
       comp=Z,260nm,8.0s
XAN                                 LR       LR
       comp=Z,590nm,18.4s
XAN                                 LR       LR
       comp=Z,580nm,19.5s
XAN                                 LR       LR
       comp=Z,870nm,19.5s
SRIG   Santa Rosalia     96.37  59  PFAKE                19 30 50.0  +11
SRIG                                LR       LR
       comp=Z,2µm,19.0s
UNV    Unalaska Valle    96.50  11  PFAKE                19 30 50.0  +12
UNV                                 LR       LR
       comp=Z,2µm,20.0s
AKUT   Akutan            96.89  12  PFAKE                19 30 50.0  +10
AKUT                                LR       LR
       comp=Z,2µm,20.0s
BJT    Baijiatuau        96.94 319  PFAKE                19 30 50.0 +9.2
BJT                                 LR       LR
       comp=Z,1µm,20.0s
PKM    Mcpherson Peak    97.12  49  P        Pdif        19 30 45.9 +3.8
       baz=223
CD2    Chengdu           97.16 305  P        Pdif        19 30 42.6 +0.3
CD2                                 sP       sP          19 30 49.8 +0.2
CD2                                 PP       PP          19 34 38.8  -0.1
CD2                                 S        S           19 42 08.3 +3.5
CD2                                 pmax     pmax
       comp=Z,10.0nm,0.5s
CD2                                 pmax     pmax
       comp=Z,390nm,8.4s
CD2                                 LR       LR
       comp=Z,1µm,15.9s
CD2                                 LR       LR
       comp=Z,1µm,15.7s
CD2                                 LR       LR
       comp=Z,1µm,18.2s
CPUP   Villa Florida     97.17 135  P        P           19 30 41.8  -0.7
       comp=Z,3.1nm,0.9s,baz=235,slow=8.9,SNR=5.4
CPUP                                LR       LR          20 09 22.9
       comp=Z,984nm,18.3s,baz=212,slow=32
CPUP   Villa Florida     97.17 135  eP       P           19 30 42.0  -0.4
CPE    Camp Elliot       97.25  52  PFAKE                19 30 50.0 +7.4
CPE                                 LR       LR
       comp=Z,2µm,18.0s
BAR    Barrett           97.36  53  eP       Pdif        19 30 44.0 +0.8
       comp=Z,28nm,1.6s
BAR                                 LR       LR
       comp=Z,2µm,21.0s
PAGB   Antelope Grade    97.48  48  PFAKE                19 30 50.0 +6.4
PAGB                                LR       LR
       comp=Z,2µm,20.0s
PASC   Pasadena Art C    97.53  51  PFAKE                19 30 50.0 +6.2
PASC                                LR       LR
       comp=Z,2µm,18.0s
OSI    Osito Audit: C    97.54  50  PFAKE                19 30 50.0 +6.1
OSI                                 LR       LR
       comp=Z,2µm,22.0s
PALK   Pallekele         97.54 273  PFAKE                19 31 00.0  +16
PALK                                LR       LR
       comp=Z,3µm,19.0s
SAO    San Andreas Ge    97.57  47  PFAKE                19 30 50.0 +6.1
SAO                                 LR       LR
       comp=Z,3µm,18.0s
MWC    Mount Wilson      97.64  51  PFAKE                19 31 00.0  +15
MWC                                 LR       LR
       comp=Z,2µm,22.0s
MONP2  Monument Peak     97.66  53  P        Pdif        19 30 48.1 +3.5
       baz=225
IKP    In-Ko-Pah, Jac    97.68  53  P        Pdif        19 30 46.7 +2.1
       baz=225
MCCM   Marconi Confer    97.81  45  PFAKE                19 31 00.0  +15
MCCM                                LR       LR
       comp=Z,2µm,22.0s
BFSC   Mount Baldy Ra    97.89  51  P        Pdif        19 30 49.2 +3.6
       baz=224
KLR    Kul'dur           97.95 333  P        P           19 30 44.2  -0.9
       comp=Z,0.4nm,0.4s,baz=159,slow=8.6,SNR=3.2
KLR    Kul'dur           97.95 333⇓eP       Pdif        19 30 46.3 +1.1
KLR                                 pmax     pmax
       comp=Z,12nm,2.3s
ATAH   Atahualpa         97.95 107  LR       LR          20 07 55.7
       comp=Z,958nm,18.7s,baz=236,slow=31
FALS   False Pass        97.96  13  PFAKE                19 31 00.0  +15
FALS                                LR       LR
       comp=Z,3µm,22.0s
PFO    Pinyon Flats O    98.15  52  PFAKE                19 31 00.0  +13
PFO                                 LR       LR
       comp=Z,2µm,18.0s
PFO    Pinyon Flats O    98.15  52  P        Pdif        19 30 49.7 +3.0
       baz=225
EDW2   Edwards Air Fo    98.15  50  P        Pdif        19 30 49.4 +2.8
       baz=224
HOPS   Hopland Field     98.34  44  PFAKE                19 31 00.0  +13
HOPS                                LR       LR
       comp=Z,3µm,21.0s
GDXM   Geysers           98.35  45  PFAKE                19 31 00.0  +13
GDXM                                LR       LR
       comp=Z,3µm,21.0s
HSIG                     98.36  59  PFAKE                19 31 00.0  +12
HSIG                                LR       LR
       comp=Z,2µm,18.0s
ISA    Isabella, Lake    98.43  49  eP       Pdif        19 30 49.2 +1.3
       comp=Z,19nm,1.4s
ISA                                 LR       LR
       comp=Z,3µm,21.0s
ISA    Isabella, Lake    98.43  49  eP       Pdif        19 30 49.2 +1.3
ISA                                 pmax     pmax
       comp=Z,19nm,1.4s
ISA                                 MLR      MLR
       comp=Z,3µm,21.0s
ISA    Isabella, Lake    98.43  49  P        Pdif        19 30 52.2 +4.3
       baz=224
LPAZ   La Paz            98.49 121  P        P           19 30 48.9  -0.4
       comp=Z,1.1nm,0.8s,baz=213,slow=5.1,SNR=3.3
LPAZ                                LR       LR          20 07 13.9
       comp=Z,392nm,19.3s,baz=220,slow=30
LPAZ   La Paz            98.49 121  eP       P           19 30 49.3   0.0
       comp=Z,31nm,1.9s
LPAZ   La Paz            98.49 121  eP       P           19 30 49.3   0.0
LPAZ                                pmax     pmax
       comp=Z,31nm,1.9s
LPAZ   La Paz            98.49 121  eP       P           19 30 48.1  -1.2
BELC   Belle Mtn. Jos    98.69  52  P        Pdif        19 30 53.7 +4.5
       baz=225
GLA    Glamis            98.73  53  PFAKE                19 31 00.0  +11
GLA                                 LR       LR
       comp=Z,2µm,20.0s
LRMC   Laurel Mtn Rad    98.75  50  P        Pdif        19 30 53.4 +4.0
       baz=224
BC3    Big Chuckawall    98.77  53  P        Pdif        19 30 53.4 +4.0
       baz=225
KMRM   Mail Ridge        98.92  43  PFAKE                19 31 00.0  +10
KMRM                                LR       LR
       comp=Z,2µm,20.0s
SDPT   Sand Point        98.94  14  PFAKE                19 31 00.0  +11
SDPT                                LR       LR
       comp=Z,1µm,20.0s
CMB    Columbia Colle    99.07  47  PFAKE                19 31 00.0 +9.4
CMB                                 LR       LR
       comp=Z,2µm,18.0s
HEC    Hector,Ludlow     99.08  51  P        Pdif        19 30 52.5 +1.8
       baz=225
ITAB   Concordia         99.09 139  eP       Pdif        19 30 50.5  -0.6
GSC    Goldstone, Bar    99.14  51  eP       Pdif        19 30 51.9 +0.9
       comp=Z,8.4nm,1.3s
GSC                                 LR       LR
       comp=Z,2µm,21.0s
GSC    Goldstone, Bar    99.14  51  eP       Pdif        19 30 51.9 +0.9
GSC                                 pmax     pmax
       comp=Z,8.0nm,1.3s
GSC                                 MLR      MLR
       comp=Z,2µm,21.0s
GSC    Goldstone, Bar    99.14  51  P        Pdif        19 30 52.0 +1.0
       baz=225
214A   Organ Pipe Nat    99.20  55  P        Pdif        19 30 53.2 +1.9
       baz=226
JCC    Jacoby Creek,     99.20  43  PFAKE                19 31 00.0 +9.0
JCC                                 LR       LR
       comp=Z,2µm,18.0s
CWC    Cottonwood Cre    99.21  49  P        Pdif        19 30 54.7 +3.3
       baz=224
SPIA   Saint Paul Isl    99.28   8  PFAKE                19 31 00.0 +9.1
SPIA                                LR       LR
       comp=Z,3µm,22.0s
MPMC   Manual Prospec    99.28  50  P        Pdif        19 30 54.4 +2.7
       baz=225
IRM    Iron Mountain     99.31  52  P        Pdif        19 30 55.4 +3.7
       baz=226
KHMM   Horse Mountain    99.39  43  PFAKE                19 31 00.0 +7.9
KHMM                                LR       LR
       comp=Z,2µm,20.0s
Y12C   Blythe            99.39  53  PFAKE                19 31 00.0 +7.9
Y12C                                LR       LR
       comp=Z,2µm,20.0s
Y12C   Blythe            99.39  53  P        Pdif        19 30 56.4 +4.3
       baz=226
AFDM   Forest Hills D    99.42  46  PFAKE                19 31 00.0 +7.9
AFDM                                LR       LR
       comp=Z,2µm,19.0s
GMRC   Granite Mounta    99.44  52  P        Pdif        19 30 54.7 +2.3
       baz=225
MDPB   Devils Postpil    99.50  48  PFAKE                19 31 00.0 +7.2
MDPB                                LR       LR
       comp=Z,2µm,19.0s
OMMB   Old Mammoth Mi    99.53  48  PFAKE                19 31 00.0 +7.0
OMMB                                LR       LR
       comp=Z,2µm,19.0s
ORV    Oroville          99.58  45  PFAKE                19 31 00.0 +7.2
ORV                                 LR       LR
       comp=Z,2µm,21.0s
WDC    Whiskeytown Da    99.79  44  PFAKE                19 31 00.0 +6.4
WDC                                 LR       LR
       comp=Z,2µm,19.0s
HHC    Hu-ho-hao-te      99.88 317  P        Pdif        19 30 56.1 +1.9
HHC                                 S        S           19 42 28.4 +0.9
HHC                                 SS       SS          19 49 22.9 +1.9
HHC                                 pmax     pmax
       comp=Z,8.0nm,0.8s
HHC                                 pmax     pmax
       comp=Z,18nm,5.7s
HHC                                 LR       LR
       comp=Z,1µm,17.9s
HHC                                 LR       LR
       comp=Z,1µm,17.9s
WAKR   Walker            99.93  47  PFAKE                19 31 10.0  +15
WAKR                                LR       LR
       comp=Z,2µm,20.0s
RUBR   Rubicon Trail     99.93  46  PFAKE                19 31 10.0  +15
RUBR                                LR       LR
       comp=Z,2µm,19.0s
O03E   Paynes Creek      99.96  44  P        Pdif        19 30 56.6 +2.1
       baz=223
LDFC   Landfair          99.97  52  PFAKE                19 31 10.0  +15
LDFC                                LR       LR
       comp=Z,2µm,18.0s
CHGN   Chignik          100.23  15  PFAKE                19 31 10.0  +15
CHGN                                LR       LR
       comp=Z,2µm,20.0s
PNTR   Pine Nut         100.26  46  PFAKE                19 31 10.0  +14
PNTR                                LR       LR
       comp=Z,2µm,18.0s
CHIR   Chirikof Islan   100.35  17  PFAKE                19 31 10.0  +14
CHIR                                LR       LR
       comp=Z,2µm,20.0s
VCNR   Virginia City    100.38  46  PFAKE                19 31 10.0  +13
VCNR                                LR       LR
       comp=Z,3µm,19.0s
YERR   Yerington        100.38  47  PFAKE                19 31 10.0  +13
YERR                                LR       LR
       comp=Z,2µm,19.0s
BEKR   Beckworth        100.41  45  PFAKE                19 31 10.0  +13
BEKR                                LR       LR
       comp=Z,2µm,22.0s
HPIG                    100.43  63  PFAKE                19 31 10.0  +13
HPIG                                LR       LR
       comp=Z,2µm,20.0s
Y14A   Wickenburg       100.44  54  PFAKE                19 31 10.0  +13
Y14A                                LR       LR
       comp=Z,2µm,20.0s
NVAR   Mina Array Bea   100.50  47  P        Pdif        19 30 56.5  -0.6
       comp=Z,0.1nm,0.3s,baz=215,slow=4.2,SNR=2.1
NVAR                                PP       PP          19 35 03.4  -1.1
       comp=Z,0.2nm,0.3s,baz=39,slow=29,SNR=4.1
NVAR                                PKiKP    PKiKP       19 35 25.7 +2.0
       comp=Z,1.9nm,1.0s,baz=218,slow=4.2,SNR=5.9
NVAR                                PKKPbc   PKKPbc      19 47 10.3  -2.0
       comp=Z,0.5nm,0.7s,baz=90,slow=1.8,SNR=2.6
RYN    Ryan             100.52  47  PFAKE                19 31 10.0  +13
RYN                                 LR       LR
       comp=Z,1µm,19.0s
YBH    Yreka Blue Hor   100.54  43  PFAKE                19 31 10.0  +13
YBH                                 LR       LR
       comp=Z,1µm,21.0s
KEBM   Edson Butte      100.58  41  PFAKE                19 31 10.0  +13
KEBM                                LR       LR
       comp=Z,2µm,19.0s
NV11   Mina Array Sit   100.58  48  PFAKE                19 31 10.0  +13
NV11                                LR       LR
       comp=Z,100nm,19.0s
TPNV   Topopah Spring   100.61  50  PFAKE                19 31 10.0  +12
TPNV                                LR       LR
       comp=Z,2µm,21.0s
TPNV   Topopah Spring   100.61  50  P        Pdif        19 30 59.8 +2.1
       baz=225
TUC    Tucson           100.70  56  PFAKE                19 31 10.0  +12
TUC                                 LR       LR
       comp=Z,2µm,18.0s
TUC    Tucson           100.70  56  P        Pdif        19 31 01.9 +3.9
       baz=227
W13A   Hualapai Mount   100.71  52  PFAKE                19 31 10.0  +12
W13A                                LR       LR
       comp=Z,2µm,18.0s
LZH    Lanzhou          100.72 309  eP       Pdif        19 30 59.4 +1.3
LZH                                 pP       sPdif       19 31 05.0  -0.5
LZH                                 sP       sP          19 31 07.9 +2.3
LZH                                 PP       PP          19 35 05.0  -1.1
LZH                                 SKS      SKSac       19 41 35.0  -1.4
LZH                                 eS       Sdif        19 42 32.6  -2.2
LZH                                 SS       SS          19 49 32.1  -0.9
LZH                                 pmax     pmax
       comp=Z,26nm,1.0s
LZH                                 pmax     pmax
       comp=Z,180nm,4.6s
LZH                                 LR       LR
       comp=Z,1µm,17.6s
LZH                                 LR       LR
       comp=Z,270nm,14.4s
LZH                                 LR       LR
       comp=Z,1µm,17.1s
PAHR   Pah Rah Range    100.82  46  PFAKE                19 31 10.0  +12
PAHR                                LR       LR
       comp=Z,2µm,18.0s
SHPR   Sheep Range      100.93  51  PFAKE                19 31 10.0  +11
SHPR                                LR       LR
       comp=Z,1µm,18.0s
319A   Douglas          101.02  58  PFAKE                19 31 10.0  +10
319A                                LR       LR
       comp=Z,2µm,20.0s
KVN    Kaiserville      101.05  47  PFAKE                19 31 10.0  +10
KVN                                 LR       LR
       comp=Z,2µm,18.0s
HUMO   Hull Mountain    101.06  42  PFAKE                19 31 10.0  +11
HUMO                                LR       LR
       comp=Z,1µm,19.0s
SHL    Shillong         101.30 294  eP       Pdif        19 31 01.5 +0.5
SII    Sitkinak Islan   101.35  17  PFAKE                19 31 10.0  +10
SII                                 LR       LR
       comp=Z,2µm,20.0s
I03D   Drain, OR        101.67  41  P        Pdif        19 31 04.6 +2.7
       baz=223
X16A   Lo Mia Camp, P   101.71  54  PFAKE                19 31 10.0 +7.4
X16A                                LR       LR
       comp=Z,2µm,21.0s
MOD    Modoc Plateau    101.91  44  PFAKE                19 31 10.0 +6.8
MOD                                 LR       LR
       comp=Z,2µm,20.0s
R11A   Troy Canyon, C   101.96  49  PFAKE                19 31 20.0  +16
R11A                                LR       LR
       comp=Z,2µm,21.0s
R11A   Troy Canyon, C   101.96  49  P        Pdif        19 31 05.8 +2.1
       baz=226
OHAK   Old Harbor       102.15  17  PFAKE                19 31 20.0  +16
OHAK                                LR       LR
       comp=Z,2µm,20.0s
COR    Corvallis        102.34  40  PFAKE                19 31 20.0  +15
COR                                 LR       LR
       comp=Z,3µm,21.0s
ABPO   Ambohimpanom     102.38 231  PFAKE                19 31 20.0  +14
ABPO                                LR       LR
       comp=Z,5µm,19.0s
J05D   Fort Rock, OR    102.42  42  P        Pdif        19 31 07.4 +1.9
       baz=224
SUR    Sutherland       102.45 203  PFAKE                19 31 20.0  +14
SUR                                 LR       LR
       comp=Z,5µm,19.0s
HIA    Hailar           102.47 327  PFAKE                19 31 20.0  +15
HIA                                 LR       LR
       comp=Z,1µm,20.0s
WUAZ   Wupatki          102.49  54  PFAKE                19 31 20.0  +14
WUAZ                                LR       LR
       comp=Z,2µm,21.0s
BMN    Battle Mountai   102.50  47  PFAKE                19 31 20.0  +14
BMN                                 LR       LR
       comp=Z,2µm,18.0s
U15A   North Rim        102.56  52  PFAKE                19 31 20.0  +14
U15A                                LR       LR
       comp=Z,1µm,18.0s
H04D   Lebanon          102.57  41  P        Pdif        19 31 07.7 +1.8
       baz=223
X18A   Snowflake        102.70  55  PFAKE                19 31 20.0  +13
X18A                                LR       LR
       comp=Z,2µm,19.0s
MA2    Magadan          102.71 348  PFAKE                19 31 20.0  +14
MA2                                 LR       LR
       comp=Z,2µm,20.0s
KDAK   Kodiak Island    102.82  17  PFAKE                19 31 20.0  +13
KDAK                                LR       LR
       comp=Z,2µm,20.0s
PINE   Pine Mountain    102.94  42  PFAKE                19 31 20.0  +12
PINE                                LR       LR
       comp=Z,2µm,20.0s
H04A   Detroit Lake     102.96  41  PFAKE                19 31 20.0  +12
H04A                                LR       LR
       comp=Z,2µm,22.0s
WVOR   Wild Horse Val   103.15  44  PFAKE                19 31 20.0  +11
WVOR                                LR       LR
       comp=Z,2µm,19.0s
W18A   Petrified Fore   103.22  55  PFAKE                19 31 20.0  +11
W18A                                LR       LR
       comp=Z,1µm,21.0s
TXAR   Lajitas Array    103.33  63  Pdiff    Pdif        19 31 10.7 +0.9
       comp=Z,0.3nm,0.8s,baz=202,slow=4.7,SNR=3.9
TXAR                                PKKPbc   PKKPbc      19 47 01.6  -1.9
       comp=Z,1.4nm,0.7s,baz=73,slow=4.1,SNR=12
LNIG   Linares          103.36  69  PFAKE                19 31 20.0  +10
LNIG                                LR       LR
       comp=Z,1µm,18.0s
MNTX   Cornudas Mount   103.73  60  PFAKE                19 31 20.0 +8.6
MNTX                                LR       LR
       comp=Z,2µm,18.0s
ELK    Elko             103.81  47  PFAKE                19 31 20.0 +8.2
ELK                                 LR       LR
       comp=Z,2µm,19.0s
I07A   Izee             103.87  43  PFAKE                19 31 20.0 +8.1
I07A                                LR       LR
       comp=Z,1µm,20.0s
J08A   Circle Bar Ran   103.89  44  PFAKE                19 31 20.0 +8.0
J08A                                LR       LR
       comp=Z,2µm,18.0s
NLWA   Neilton Lookou   104.13  38  PFAKE                19 31 20.0 +7.2
NLWA                                LR       LR
       comp=Z,2µm,20.0s
Y22D   IRIS PASSCAL I   104.29  57  PFAKE                19 31 30.0  +16
Y22D                                LR       LR
       comp=Z,2µm,18.0s
SPB    Sao Paulo        104.42 141  PFAKE                19 31 30.0  +15
SPB                                 LR       LR
       comp=Z,2µm,18.0s
LSA    Lhasa            104.45 297  PFAKE                19 31 30.0  +15
LSA                                 LR       LR
       comp=Z,800nm,19.0s
BOSA   Boshof           104.52 208  PKiKP    PKiKP       19 35 32.1 +0.7
       comp=Z,5.9nm,1.1s,baz=227,slow=7.3,SNR=3.7
LON    Longmire         104.64  40  PFAKE                19 31 30.0  +15
LON                                 LR       LR
       comp=Z,2µm,21.0s
JTS    Las Juntas de    104.69  89  PFAKE                19 31 30.0  +14
JTS                                 LR       LR
       comp=Z,1µm,18.0s
CNPM   China Poot       104.70  17  PFAKE                19 31 30.0  +15
CNPM                                LR       LR
       comp=Z,2µm,20.0s
HOM    Homer            104.73  17  PFAKE                19 31 30.0  +15
HOM                                 LR       LR
       comp=Z,2µm,20.0s
DUG    Dugway, Tooele   104.79  49  PFAKE                19 31 30.0  +14
DUG                                 LR       LR
       comp=Z,2µm,18.0s
D05A   Enumclaw         104.87  39  PFAKE                19 31 30.0  +14
D05A                                LR       LR
       comp=Z,1µm,21.0s
DIB    Dawson Inlet,    104.94  30  PFAKE                19 31 30.0  +14
DIB                                 LR       LR
       comp=Z,1µm,19.0s
BRLK   Bradley Lake     105.00  17  PFAKE                19 35 40.0 +9.1
BRLK                                LR       LR
       comp=Z,2µm,20.0s
G08A   Pilot Rock       105.00  42  PFAKE                19 35 40.0 +8.5
G08A                                LR       LR
       comp=Z,1µm,18.0s
HDC    Heredia          105.14  90  PFAKE                19 35 40.0 +7.3
HDC                                 LR       LR
       comp=Z,1µm,22.0s
ANMO   Albuquerque      105.14  57  PFAKE                19 35 40.0 +7.8
ANMO                                LR       LR
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      comp=Z,3µm,18.0s
ANMO  Albuquerque      105.14  57⇑iP      Pdif     19 31 19.7 +1.8
SVW2  Sparrevohn       105.25  15  PFAKE           19 35 40.0 +8.7
SVW2                               LR     LR
      comp=Z,1µm,20.0s
GTA   Gaotai           105.31 309 eP      PKiKP    19 35 34.0 +1.7
GTA                                pP     PP       19 35 38.4 -2.1
GTA                                sP              19 35 41.3
GTA                                pmax   pmax
      comp=Z,5.0nm,1.2s
GTA                                pmax   pmax
      comp=Z,70nm,5.5s
GTA                                LR     LR
      comp=N,300nm,18.9s
GTA                                LR     LR
      comp=E,440nm,22.0s
GTA                                LR     LR
      comp=Z,220nm,22.0s
MFID  Camas Ranch      105.32  45  PFAKE           19 35 40.0 +7.8
MFID                               LR     LR
      comp=Z,1µm,21.0s
MVCO  Mesa Verde       105.35  54  PFAKE           19 35 40.0 +7.4
MVCO                               LR     LR
      comp=Z,2µm,21.0s
TGUH  Tegucigalpa,Un   105.36  85  PFAKE           19 35 40.0 +6.9
TGUH                               LR     LR
      comp=Z,600nm,19.0s
ESTN  Estel            105.43  86  PFAKE           19 35 40.0 +6.8
ESTN                               LR     LR
      comp=Z,800nm,20.0s
HAWA  Hanford          105.49  41  PFAKE           19 35 40.0 +7.8
HAWA                               LR     LR
      comp=Z,2µm,21.0s
BMO   Blue Mountains   105.53  43  PFAKE           19 35 40.0 +7.5
BMO                                LR     LR
      comp=Z,2µm,20.0s
LTY   Liberty          105.54  40  PFAKE           19 35 40.0 +7.6
LTY                                LR     LR
      comp=Z,3µm,21.0s
SEW   Seward           105.63  18  PFAKE           19 35 40.0 +8.0
SEW                                LR     LR
      comp=Z,1µm,20.0s
GAMB  Gambell          105.63   6  PFAKE           19 35 40.0 +8.1
GAMB                               LR     LR
      comp=Z,1µm,20.0s
PV13  Radium Mtn., P   105.78  53  PFAKE           19 35 40.0 +6.6
PV13                               LR     LR
      comp=Z,2µm,21.0s
PV19  Morning Glory    105.78  53  PFAKE           19 35 40.0 +6.7
PV19                               LR     LR
      comp=Z,2µm,21.0s
PV18  Skein Mesa, Pa   105.78  53  PFAKE           19 35 40.0 +6.7
PV18                               LR     LR
      comp=Z,2µm,22.0s
PV10  Paradox Valley   105.79  53  PFAKE           19 35 40.0 +6.6
PV10                               LR     LR
      comp=Z,2µm,20.0s
E08A  Dider Farm, El   105.79  41  PFAKE           19 35 40.0 +7.2
E08A                               LR     LR
      comp=Z,2µm,22.0s
PV14  Lion Creek, Pa   105.79  53  PFAKE           19 35 40.0 +6.6
PV14                               LR     LR
      comp=Z,2µm,20.0s
PV20  West Nyswonger   105.81  53  PFAKE           19 35 40.0 +6.6
PV20                               LR     LR
      comp=Z,400nm,22.0s
PV03  Paradox Valley   105.82  53  PFAKE           19 35 40.0 +6.6
PV03                               LR     LR
      comp=Z,2µm,22.0s
PV04  Paradox Valley   105.88  53  PFAKE           19 35 40.0 +6.5
PV04                               LR     LR
      comp=Z,2µm,21.0s
PV12  Saucer Basin,    105.89  53  PFAKE           19 35 50.0  +16
PV12                               LR     LR
      comp=Z,2µm,19.0s
HLID  Hailey           106.17  46  P      PKiKP    19 35 33.5 -0.3
      baz=228
ITRB  Iturama          106.25 136 eP      Pdif     19 31 21.9 -1.1
D08A  Wollman Farm,    106.25  41  PFAKE           19 35 50.0  +16
D08A                               LR     LR
      comp=Z,2µm,22.0s
E09A  Wood Farm, Sta   106.26  42  PFAKE           19 35 50.0  +16
E09A                               LR     LR
      comp=Z,1µm,21.0s
F10A  Beach Ranch, E   106.35  42  PFAKE           19 35 50.0  +16
F10A                               LR     LR
      comp=Z,1µm,18.0s
ESPN  Las Esperanzas   106.41  88  PFAKE           19 35 50.0  +15
ESPN                               LR     LR
      comp=Z,500nm,18.0s
HWUT  Hardware Ranch   106.44  49  PFAKE           19 35 50.0  +16
HWUT                               LR     LR
      comp=Z,2µm,19.0s
RC01  Rabbit Creek A   106.44  17  PFAKE           19 35 50.0  +16
RC01                               LR     LR
      comp=Z,2µm,20.0s
JCT   Junction City    106.64  64  PFAKE           19 35 50.0  +15
JCT                                LR     LR
      comp=Z,1µm,20.0s
TTA   Tatalina         106.86  14  PFAKE           19 35 50.0  +16
TTA                                LR     LR
      comp=Z,2µm,20.0s
GLI   Glacier Island   106.86  19  PFAKE           19 35 50.0  +16
GLI                                LR     LR
      comp=Z,2µm,20.0s
MSTX  Muleshoe         106.87  59  PFAKE           19 35 50.0  +15
MSTX                               LR     LR
      comp=Z,1µm,21.0s
FID   Port Fidalgo     106.90  19  PFAKE           19 35 50.0  +16
FID                                LR     LR
      comp=Z,2µm,20.0s
B08A  Colville Reser   106.96  40  PFAKE           19 35 50.0  +15
B08A                               LR     LR
      comp=Z,2µm,21.0s
SIT   Sitka            107.00  26  PFAKE           19 35 50.0  +15
SIT                                LR     LR
      comp=Z,3µm,21.0s
PMR   Palmer           107.02  17  PFAKE           19 35 50.0  +15
PMR                                LR     LR
      comp=Z,1µm,20.0s
RAGM  Ragged Mountai   107.03  20  PFAKE           19 35 50.0  +15
RAGM                               LR     LR
      comp=Z,3µm,20.0s
ANM   Nome             107.04   9  PFAKE           19 35 50.0  +15
ANM                                LR     LR
      comp=Z,2µm,21.0s
C09A  Chrisman Ranch   107.08  41  PFAKE           19 35 50.0  +15
C09A                               LR     LR
      comp=Z,3µm,21.0s
HMT   Hamilton         107.10  20  PFAKE           19 35 50.0  +15
HMT                                LR     LR
      comp=Z,2µm,20.0s
ULN   Ulaanbaatar      107.15 319  PFAKE           19 35 50.0  +15
ULN                                LR     LR
      comp=Z,600nm,19.0s
ULN   Ulaanbaatar      107.15 319⇓iP      Pdif     19 31 27.8 +1.4
SML   Sawmill          107.39  18  PFAKE           19 35 50.0  +15
SML                                LR     LR
      comp=Z,1µm,18.0s
O20A  White River Ci   107.39  52  PFAKE           19 35 50.0  +14
O20A                               LR     LR
      comp=Z,1µm,18.0s
SONM  Songino Array    107.45 319  Pdiff  Pdif     19 31 28.0 +0.3
      comp=Z,0.8nm,0.9s,baz=131,slow=4.0,SNR=4.3
SONM                               PKiKP  PKiKP    19 35 34.9 -1.1
      comp=Z,0.4nm,0.6s,baz=191,slow=3.8,SNR=2.9
SONM                               PKKPbc PKKPbc   19 46 49.3 -2.2
      comp=Z,0.5nm,0.7s,baz=282,slow=2.9,SNR=2.2
AHID  Auburn Hatcher   107.46  48  PFAKE           19 35 50.0  +14
AHID                               LR     LR
      comp=Z,2µm,19.0s
WRAK  Wrangell Islan   107.51  28  PFAKE           19 35 50.0  +14
WRAK                               LR     LR
      comp=Z,2µm,20.0s
SDCO  Great Sand Dun   107.52  55  PFAKE           19 35 50.0  +13
SDCO                               LR     LR
      comp=Z,1µm,21.0s
SDCO  Great Sand Dun   107.52  55  P      PKiKP    19 35 38.2 +1.6
      baz=231
PPLA  Purkeypile       107.55  15  PFAKE           19 35 50.0  +14
PPLA                               LR     LR
      comp=Z,1µm,19.0s
CRQM  Cirque           107.75  20  PFAKE           19 35 50.0  +14
CRQM                               LR     LR
      comp=Z,2µm,20.0s
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BCIP  Isla Barro Col   107.80  94  PFAKE           19 35 50.0  +12
BCIP                               LR     LR
      comp=Z,1µm,18.0s
TGL   Tana Glacier     107.83  20  PFAKE           19 35 50.0  +14
TGL                                LR     LR
      comp=Z,2µm,19.0s
MYIG  Mrida            107.86  78  PFAKE           19 35 50.0  +13
MYIG                               LR     LR
      comp=Z,500nm,21.0s
MSEY  Mahe Island      107.94 246  PFAKE           19 35 50.0  +12
MSEY                               LR     LR
      comp=Z,2µm,18.0s
NEW   Newport          107.97  41  PFAKE           19 35 50.0  +13
NEW                                LR     LR
      comp=Z,3µm,22.0s
PCA   Pinnacle         107.97  22  PFAKE           19 35 50.0  +13
PCA                                LR     LR
      comp=Z,2µm,20.0s
TPAW  Teton Pass       108.01  48  PFAKE           19 35 50.0  +13
TPAW                               LR     LR
      comp=Z,2µm,21.0s
BCPM  Bancas Point     108.03  22  PFAKE           19 35 50.0  +13
BCPM                               LR     LR
      comp=Z,2µm,19.0s
CAST  Castle Rocks     108.04  15  PFAKE           19 35 50.0  +14
CAST                               LR     LR
      comp=Z,1µm,19.0s
ABTX  Abilene, Hawle   108.08  62  PFAKE           19 35 50.0  +12
ABTX                               LR     LR
      comp=Z,2µm,21.0s
SNOW  Snow King Moun   108.11  48  PFAKE           19 35 50.0  +12
SNOW                               LR     LR
      comp=Z,2µm,18.0s
AMTX  Amarillo         108.14  59  PFAKE           19 35 50.0  +12
AMTX                               LR     LR
      comp=Z,2µm,19.0s
JIS   Juneau Island    108.28  26  PFAKE           19 35 50.0  +13
JIS                                LR     LR
      comp=Z,3µm,21.0s
IMW   Indian Meadow    108.28  47  PFAKE           19 35 50.0  +12
IMW                                LR     LR
      comp=Z,2µm,18.0s
LOHW  Long Hollow      108.29  48  PFAKE           19 35 50.0  +12
LOHW                               LR     LR
      comp=Z,2µm,20.0s
MOOW  Moose Ponds      108.30  47  PFAKE           19 35 50.0  +12
MOOW                               LR     LR
      comp=Z,2µm,18.0s
BW06  Boulder Array    108.33  49  PFAKE           19 35 50.0  +12
BW06                               LR     LR
      comp=Z,2µm,21.0s
PDAR  Pinedale Array   108.33  49  PKiKP  PKiKP    19 35 38.0  0.0
      comp=Z,0.2nm,0.3s,baz=225,slow=2.4,SNR=2.5
PDAR                               PP     PP       19 36 04.2 +1.5
      comp=Z,0.5nm,0.7s,baz=249,slow=4.1,SNR=4.0
PDAR                               PKKPbc PKKPbc   19 46 46.5 -2.2
      comp=Z,0.6nm,0.6s,baz=83,slow=3.1,SNR=3.1
PDAR                               PKKPab PKKPab   19 46 57.6 -1.9
      comp=Z,1.5nm,0.8s,baz=60,slow=13,SNR=3.3
DLMT  Dillon           108.34  45  PFAKE           19 35 50.0  +12
DLMT                               LR     LR
      comp=Z,2µm,19.0s
BESE  Bessie Mountai   108.36  25  PFAKE           19 35 50.0  +13
BESE                               LR     LR
      comp=Z,2µm,21.0s
KTH   Kantishna Hill   108.39  16  PFAKE           19 35 50.0  +13
KTH                                LR     LR
      comp=Z,2µm,20.0s
CTGM  Chitina Glacie   108.40  21  PFAKE           19 35 50.0  +13
CTGM                               LR     LR
      comp=Z,2µm,20.0s
TEIG  Tepich           108.49  79  PFAKE           19 35 50.0  +11
TEIG                               LR     LR
      comp=Z,600nm,18.0s
FLWY  Flagg Ranch      108.54  47  PFAKE           19 35 50.0  +12
FLWY                               LR     LR
      comp=Z,2µm,18.0s
MSO   Missoula         108.60  43  PFAKE           19 35 50.0  +12
MSO                                LR     LR
      comp=Z,2µm,19.0s
MSO   Missoula         108.60  43  P      PKiKP    19 35 39.8 +1.6
      baz=229
RND   Reindeer         108.69  17  PFAKE           19 35 50.0  +12
RND                                LR     LR
      comp=Z,2µm,20.0s
DHY   Denali Highway   108.72  17  PFAKE           19 35 50.0  +12
DHY                                LR     LR
      comp=Z,900nm,20.0s
H17A  Grant Village    108.81  47  PFAKE           19 35 50.0  +11
H17A                               LR     LR
      comp=Z,2µm,18.0s
BPAW  Bear Paw Mtn.    108.87  15  PFAKE           19 35 50.0  +12
BPAW                               LR     LR
      comp=Z,1µm,20.0s
SKAG  Skagway          108.91  25  PFAKE           19 35 50.0  +12
SKAG                               LR     LR
      comp=Z,2µm,19.0s
MCK   McKinley         108.96  16  PFAKE           19 35 50.0  +12
MCK                                LR     LR
      comp=Z,2µm,20.0s
RWWY  Rawlins          108.99  51  PFAKE           19 35 50.0  +11
RWWY                               LR     LR
      comp=Z,2µm,22.0s
BOZ   Bozeman (W)      109.01  46  PFAKE           19 35 50.0  +11
BOZ                                LR     LR
      comp=Z,1µm,21.0s
BOZ   Bozeman (W)      109.01  46  P      PKiKP    19 35 42.1 +3.1
      baz=230
LKWY  Lake             109.01  47  PFAKE           19 35 50.0  +11
LKWY                               LR     LR
      comp=Z,3µm,18.0s
HKT   Hockley          109.02  67  PFAKE           19 35 50.0  +11
HKT                                LR     LR
      comp=Z,1µm,18.0s
ROSC  El Rosal         109.06 101  PFAKE           19 35 50.0  +10
ROSC                               LR     LR
      comp=Z,800nm,18.0s
PAX   Paxson           109.07  18  PFAKE           19 35 50.0  +12
PAX                                LR     LR
      comp=Z,1µm,21.0s
WHTX  Lake Whitney,    109.16  64  PFAKE           19 35 50.0  +10
WHTX                               LR     LR
      comp=Z,2µm,20.0s
BWN   Browne           109.24  16  PFAKE           19 35 50.0  +11
BWN                                LR     LR
      comp=Z,3µm,20.0s
YAK   Yakutsk          109.42 339  PFAKE           19 35 50.0  +11
YAK                                LR     LR
      comp=Z,800nm,20.0s
MENT  Mentasta         109.45  19  PFAKE           19 35 50.0  +11
MENT                               LR     LR
      comp=Z,2µm,20.0s
MLY   Manley           109.75  15  PFAKE           19 35 50.0  +10
MLY                                LR     LR
      comp=Z,1µm,21.0s
PHWY  Pilot Hill       109.77  52  PFAKE           19 35 50.0 +9.2
PHWY                               LR     LR
      comp=Z,800nm,22.0s
WRH   Wood River Hil   109.79  16  PFAKE           19 35 50.0  +10
WRH                                LR     LR
      comp=Z,2µm,20.0s
RIDG  Independent Ri   109.87  18  PFAKE           19 35 50.0  +10
RIDG                               LR     LR
      comp=Z,1µm,22.0s
WMOK  Wichita Mounta   109.94  61  PFAKE           19 35 50.0 +9.0
WMOK                               LR     LR
      comp=Z,2µm,18.0s
WMOK  Wichita Mounta   109.94  61  P      PKiKP    19 35 41.2 +0.3
      baz=233
DOT   Dot Lake         109.98  18  PFAKE           19 35 50.0  +10
DOT                                LR     LR
      comp=Z,2µm,20.0s
HDA   Harding Lake     109.98  17  PFAKE           19 35 50.0  +10
HDA                                LR     LR
      comp=Z,900nm,22.0s
K22A  Casper           109.99  50  PFAKE           19 35 50.0 +9.0
K22A                               LR     LR
      comp=Z,2µm,21.0s
RLMT  Red Lodge        109.99  47  PFAKE           19 35 50.0 +9.0
RLMT                               LR     LR
      comp=Z,1µm,21.0s
RLMT  Red Lodge        109.99  47  P      PKiKP    19 35 43.7 +2.7
      baz=231
CCB   Clear Creek Bu   110.00  16  PFAKE           19 35 50.0  +10
CCB                                LR     LR
      comp=Z,2µm,20.0s
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KSCO  Kaye Shedlock’   110.08  55  PFAKE           19 35 50.0 +8.8
KSCO                               LR     LR
      comp=Z,1µm,19.0s
COLA  College          110.19  16  PFAKE           19 35 50.0  +10
COLA                               LR     LR
      comp=Z,2µm,20.0s
COLA  College          110.19  16⇑iPKIKP  PKiKP    19 35 42.0 +1.6
SCRK  Sand Creek       110.28  18  PFAKE           19 35 50.0 +9.2
SCRK                               LR     LR
      comp=Z,900nm,20.0s
ILAR  Eielson Array    110.31  17  PKiKP  PKiKP    19 35 40.2 -0.5
      comp=Z,3.8nm,0.8s,baz=270,slow=2.5,SNR=15
ILAR                               PKKPbc PKKPbc   19 46 41.1 -1.5
      comp=Z,1.2nm,0.9s,baz=2.5,slow=3.0,SNR=8.6
ILAR                               PKKPab PKKPab   19 46 48.5 -0.7
      comp=Z,1.3nm,1.0s,baz=1.7,slow=3.0,SNR=3.8
MATP  Matopo           110.66 214  PKKPbc PKKPbc   19 46 40.8 +0.4
      comp=Z,0.9nm,0.4s,baz=327,slow=8.3,SNR=3.8
ZAK   Zakamensk        110.67 320 eP      Pdif     19 31 37.3 -4.6
ZAK                                pmax   pmax
      comp=Z,20nm,1.4s
RDOG  Red Dog Mine     110.68   9  PFAKE           19 35 50.0 +8.7
RDOG                               LR     LR
      comp=Z,2µm,22.0s
BDFB  Brasilia         110.85 136  PFAKE           19 35 50.0 +6.6
BDFB                               LR     LR
      comp=Z,2µm,18.0s
NATX  Nacogdoches      110.92  66  PFAKE           19 35 50.0 +7.2
NATX                               LR     LR
      comp=Z,1µm,20.0s
ETX06 Route 59 and C   111.12  66  PFAKE           19 35 50.0 +6.8
ETX06                              LR     LR
      comp=Z,800nm,20.0s
PRP   Porcupine Dome   111.25  17  PFAKE           19 35 50.0 +7.4
PRP                                LR     LR
      comp=Z,1µm,22.0s
DAWY  Dawson           111.47  20  PFAKE           19 35 50.0 +7.0
DAWY                               LR     LR
      comp=Z,1µm,20.0s
EGMT  Eagleton         111.55  44  PFAKE           19 36 00.0  +16
EGMT                               LR     LR
      comp=Z,2µm,18.0s
OGNE  Ogallala         111.61  54  PFAKE           19 36 00.0  +16
OGNE                               LR     LR
      comp=Z,2µm,18.0s
EGAK  Eagle            111.62  19  PFAKE           19 35 50.0 +6.9
EGAK                               LR     LR
      comp=Z,2µm,21.0s
CBKS  Cedar Bluff      111.76  57  PFAKE           19 36 00.0  +16
CBKS                               LR     LR
      comp=Z,2µm,18.0s
COLD  Coldfoot         111.81  14  PFAKE           19 35 50.0 +6.6
COLD                               LR     LR
      comp=Z,1µm,19.0s
FYU   Fort Yukon       112.21  16  PFAKE           19 36 00.0  +16
FYU                                LR     LR
      comp=Z,2µm,20.0s
RSSD  Black Hills      112.32  50  PFAKE           19 36 00.0  +15
RSSD                               LR     LR
      comp=Z,2µm,22.0s
RSSD  Black Hills      112.32  50  P      PKiKP    19 35 46.9 +1.5
      baz=233
TUL1  Leonard          112.60  62  PFAKE           19 36 00.0  +14
TUL1                               LR     LR
      comp=Z,2µm,18.0s
LAO   LASA Array       112.63  47  PFAKE           19 36 00.0  +14
LAO                                LR     LR
      comp=Z,1µm,21.0s
LAO   LASA Array       112.63  47  P      PKiKP    19 35 47.7 +2.0
      baz=233
WIN   Windhoek         112.76 203  PFAKE           19 36 00.0  +13
WIN                                LR     LR
      comp=Z,5µm,20.0s
WLAR  White Oak Lake   113.10  65  PFAKE           19 36 00.0  +13
WLAR                               LR     LR
      comp=Z,1µm,20.0s
TOLK  Toolik Lake Re   113.17  14  PFAKE           19 36 00.0  +14
TOLK                               LR     LR
      comp=Z,2µm,20.0s
TOLK  Toolik Lake Re   113.17  14  P      PKiKP    19 35 48.5 +2.4
      baz=209
MIAR  Mount Ida        113.28  64  PFAKE           19 36 00.0  +13
MIAR                               LR     LR
      comp=Z,1µm,18.0s
W39A  Magazine         113.52  63  PFAKE           19 36 00.0  +12
W39A                               LR     LR
      comp=Z,2µm,18.0s
X40A  Basin Creek Fa   113.75  64  PFAKE           19 36 00.0  +12
X40A                               LR     LR
      comp=Z,1µm,20.0s
KSU1  Kansas State U   113.91  58  PFAKE           19 36 00.0  +12
KSU1                               LR     LR
      comp=Z,2µm,19.0s
EPYK  Eagle Plains     114.00  19  PFAKE           19 36 00.0  +12
EPYK                               LR     LR
      comp=Z,1µm,21.0s
VBMS  Vicksburg        114.03  68  PFAKE           19 36 00.0  +11
VBMS                               LR     LR
      comp=Z,800nm,18.0s
HHAR  Hobbs            114.04  62  PFAKE           19 36 00.0  +11
HHAR                               LR     LR
      comp=Z,2µm,21.0s
CCAR  Cane Creek       114.15  65  PFAKE           19 36 00.0  +11
CCAR                               LR     LR
      comp=Z,1µm,20.0s
UALR  University of    114.25  64  PFAKE           19 36 00.0  +11
UALR                               LR     LR
      comp=Z,1µm,20.0s
BGNE  Belgrade         114.26  56  PFAKE           19 36 00.0  +11
BGNE                               LR     LR
      comp=Z,1µm,18.0s
SDV   Santo Domingo    114.47 100  PFAKE           19 36 00.0  +10
SDV                                LR     LR
      comp=Z,1µm,18.0s
W41B  Gary Mavity, V   114.54  64  P      PKiKP    19 35 50.3 +0.7
      baz=235
WHAR  Wooly Hollow     114.58  64  PFAKE           19 36 00.0  +10
WHAR                               LR     LR
      comp=Z,2µm,19.0s
DGMT  Dagmar           114.79  46  PFAKE           19 36 00.0  +10
DGMT                               LR     LR
      comp=Z,1µm,18.0s
U40A  Yellville        114.80  63  P      PKiKP    19 35 50.5 +0.3
      baz=236
FCAR  Ozark Folk Cen   115.03  63  PFAKE           19 36 00.0 +9.4
FCAR                               LR     LR
      comp=Z,2µm,22.0s
WMQ   Urumqi           115.18 307  PKP    PKiKP    19 35 51.6 +0.9
WMQ                                PP     PP       19 36 49.8 -1.8
WMQ                                PKS    PKSdf    19 39 25.1 -2.2
WMQ                                SKKS            19 43 48.0
WMQ                                AMB    AMB
      comp=Z,110nm,8.5s
WMQ                                LR     LR
      comp=Z,250nm,19.7s
WMQ                                LR     LR
      comp=Z,320nm,21.1s
WMQ                                LR     LR
      comp=Z,510nm,21.1s
MTDJ  Mount Denham     115.25  88  PFAKE           19 36 00.0 +8.4
MTDJ                               LR     LR
      comp=Z,900nm,18.0s
LSZ   Lusaka           115.35 216  PKKPbc PKKPbc   19 46 25.2 +0.5
      comp=Z,1.7nm,0.4s,baz=23,slow=1.6,SNR=7.1
LSZ   Lusaka           115.35 216 ePKPdf  PKiKP    19 35 52.0 -0.1
LSZ                                LR     LR
      comp=Z,4µm,18.0s
LSZ   Lusaka           115.35 216 ePKIKP  PKiKP    19 35 52.0 -0.1
LSZ                                MLR    MLR
      comp=Z,4µm,18.0s
PTGA  Pitinga          115.36 116  PFAKE           19 36 00.0 +8.1
PTGA                               LR     LR
      comp=Z,2µm,19.0s
TSUM  Tsumeb           115.79 204  PFAKE           19 36 00.0 +7.2
TSUM                               LR     LR
      comp=Z,3µm,20.0s
147A  Livingston       115.86  68  PFAKE           19 36 00.0 +7.8
147A                               LR     LR
      comp=Z,2728µm,21.0s
MET   Memphis--Engin   116.08  65  PFAKE           19 36 00.0 +7.4
MET                                LR     LR
      comp=Z,1µm,21.0s
OXF   Oxford           116.10  66  PFAKE           19 36 00.0 +7.4
OXF                                LR     LR
      comp=Z,700nm,20.0s
INK   Inuvik           116.29  19  PKP    PKPdf    19 35 50.3 -1.6
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	comp=Z,7.8nm,0.8s,baz=217,slow=3.5,SNR=12						
INK	**Inuvik**	**116.29**	**19**	*e*PKPdf	**PKiKP**	**19 35 52.0**	**+0.1**
INK				LR	LR		
	comp=Z,2µm,21.0s						
INK	**Inuvik**	**116.29**	**19**	*e*PKIKP	**PKiKP**	**19 35 52.0**	**+0.1**
INK				MLR	MLR		
	comp=Z,2µm,21.0s						
GNAR	**Gosnell**	**116.49**	**64**	PFAKE		19 36 00.0	+6.6
GNAR				LR	LR		
	comp=Z,1µm,20.0s						
ECSD	**EROS Data Cent**	**116.50**	**54**	*e*PKPdf	**PKPdf**	**19 35 53.1**	**-0.1**
ECSD				LR	LR		
	comp=Z,2µm,20.0s						
ECSD	**EROS Data Cent**	**116.50**	**54**	P	**PKPdf**	**19 35 53.0**	**-0.2**
	baz=237						
PBMO	**Poplar Bluff**	**116.66**	**63**	PFAKE		19 36 10.0	+16
PBMO				LR	LR		
	comp=Z,2µm,21.0s						
CCM	**Cathedral Cave**	**116.81**	**62**	PFAKE		19 36 10.0	+16
CCM				LR	LR		
	comp=Z,2µm,19.0s						
CCM	**Cathedral Cave**	**116.81**	**62**	P	**PKiKP**	**19 35 54.3**	**+0.4**
	baz=237						
250A	**Grady**	**116.87**	**70**	PFAKE		19 36 10.0	+16
250A				LR	LR		
	comp=Z,400nm,20.0s						
HALT	**Halls**	**116.92**	**65**	PFAKE		19 36 10.0	+16
HALT				LR	LR		
	comp=Z,1µm,19.0s						
LRAL	**Lakeview Retre**	**116.94**	**69**	PFAKE		19 36 10.0	+16
LRAL				LR	LR		
	comp=Z,800nm,21.0s						
PVMO	**Portageville**	**116.95**	**64**	PFAKE		19 36 10.0	+16
PVMO				LR	LR		
	comp=Z,1µm,22.0s						
MDND	**Maddock**	**116.98**	**49**	PFAKE		19 36 10.0	+16
MDND				LR	LR		
	comp=Z,2µm,18.0s						
PARMO	**Parma**	**117.05**	**64**	PFAKE		19 36 10.0	+16
PARMO				LR	LR		
	comp=Z,2µm,22.0s						
GLAT	**Glass**	**117.15**	**65**	PFAKE		19 36 10.0	+15
GLAT				LR	LR		
	comp=Z,1µm,18.0s						
PLAL	**Pickwick Lake**	**117.27**	**66**	*e*PKPdf	**PKiKP**	**19 35 55.5**	**+0.6**
PLAL				LR	LR		
	comp=Z,1µm,21.0s						
061Z	**Ochoppi**	**117.28**	**79**	PFAKE		19 36 10.0	+15
061Z				LR	LR		
	comp=Z,600nm,18.0s						
TIXI	**Tiksi**	**117.47**	**345**	PFAKE		19 36 10.0	+16
TIXI				LR	LR		
	comp=Z,800nm,20.0s						
352A	**Blakely**	**117.54**	**71**	PFAKE		19 36 10.0	+14
352A				LR	LR		
	comp=Z,700nm,20.0s						
SCIA	**State Center**	**117.61**	**57**	PFAKE		19 36 10.0	+15
SCIA				LR	LR		
	comp=Z,2µm,19.0s						
SCIA	**State Center**	**117.61**	**57**	P	**PKiKP**	**19 35 56.1**	**+0.7**
	baz=238						
V46A	**Holladay**	**117.69**	**66**	P	**PKiKP**	**19 35 56.5**	**+0.8**
	baz=237						
X48A	**Hartselle**	**117.69**	**67**	PFAKE		19 36 10.0	+14
X48A				LR	LR		
	comp=Z,600nm,19.0s						
X48A	**Hartselle**	**117.69**	**67**	P	**PKiKP**	**19 35 56.5**	**+0.8**
	baz=237						
W47A	**Westpoint**	**117.75**	**66**	P	**PKiKP**	**19 35 57.2**	**+1.3**
	baz=237						
SLM	**Saint Louis**	**117.79**	**62**	PFAKE		19 36 10.0	+14
SLM				LR	LR		
	comp=Z,2µm,19.0s						
Y49A	**Blount Mountai**	**117.81**	**68**	PFAKE		19 36 10.0	+14
Y49A				LR	LR		
	comp=Z,1µm,21.0s						
Z50A	**Ashland**	**117.82**	**69**	PFAKE		19 36 10.0	+14
Z50A				LR	LR		
	comp=Z,600nm,20.0s						
Z50A	**Ashland**	**117.82**	**69**	P	**PKPdf**	**19 35 56.0**	**-0.1**
	baz=237						
T45A	**Paducah**	**117.99**	**64**	PFAKE		19 36 10.0	+14
T45A				LR	LR		
	comp=Z,1µm,21.0s						
WVT	**Waverly**	**118.06**	**65**	*e*PKPdf	**PKPdf**	**19 35 56.2**	**-0.2**
WVT				LR	LR		
	comp=Z,1µm,20.0s						
WVT	**Waverly**	**118.06**	**65**	*e*PKIKP	**PKPdf**	**19 35 56.2**	**-0.2**
WVT				MLR	MLR		
	comp=Z,1µm,20.0s						
WVT	**Waverly**	**118.06**	**65**	P	**PKPdf**	**19 35 56.3**	**-0.1**
	baz=237						
656A	**Willston**	**118.08**	**75**	PFAKE		19 36 10.0	+13
656A				LR	LR		
	comp=Z,400nm,20.0s						
656A	**Willston**	**118.08**	**75**	P	**PKiKP**	**19 35 58.5**	**+1.9**
	baz=236						
V47A	**Nunnelly**	**118.11**	**66**	P	**PKiKP**	**19 35 57.5**	**+1.0**
	baz=237						
W48A	**Pulaski**	**118.14**	**67**	P	**PKiKP**	**19 35 58.1**	**+1.5**
	baz=237						
DWPF	**Disney Wildern**	**118.17**	**76**	PFAKE		19 36 10.0	+13
DWPF				LR	LR		
	comp=Z,500nm,18.0s						
YKA	**Yellowknife Ar**	**118.21**	**30**	PKP	**PKPdf**	**19 35 54.5**	**-1.3**
	comp=Z,26nm,0.8s,baz=229,slow=1.7,SNR=69						
YKA				PKKPbc	**PKKPab**	**19 46 12.9**	**-1.9**
	comp=Z,4.2nm,0.8s,baz=50,slow=4.3,SNR=16						
X49A	**Woodville**	**118.22**	**68**	P	**PKiKP**	**19 35 57.5**	**+0.7**
	baz=237						
YKW3	**Yellowknife Ar**	**118.24**	**30**	*e*PKPdf	**PKPdf**	**19 35 55.3**	**-0.5**
YKW3				LR	LR		
	comp=Z,2µm,20.0s						
152A	**Waverly Hall**	**118.34**	**70**	PFAKE		19 36 10.0	+13
152A				LR	LR		
	comp=Z,600nm,20.0s						
152A	**Waverly Hall**	**118.34**	**70**	P	**PKiKP**	**19 35 58.7**	**+1.6**
	baz=237						
N41A	**Harden Midland**	**118.49**	**60**	PFAKE		19 36 10.0	+13
N41A				LR	LR		
	comp=Z,1µm,18.0s						
T46A	**Princeton**	**118.51**	**64**	P	**PKiKP**	**19 35 59.0**	**+1.8**
	baz=238						
V48A	**Smith Brothers**	**118.54**	**66**	PFAKE		19 36 10.0	+13
V48A				LR	LR		
	comp=Z,1µm,20.0s						
V48A	**Smith Brothers**	**118.54**	**66**	P	**PKiKP**	**19 35 59.1**	**+1.7**
	baz=237						
W49A	**Belvidere**	**118.59**	**67**	P	**PKiKP**	**19 35 58.6**	**+1.1**
	baz=237						
U47A	**Clarksville**	**118.60**	**65**	P	**PKiKP**	**19 35 59.2**	**+1.8**
	baz=238						
X50B	**Fort Payne**	**118.66**	**68**	P	**PKiKP**	**19 35 58.8**	**+1.1**
	baz=237						
Y51A	**Rockmart**	**118.77**	**69**	P	**PKiKP**	**19 35 58.8**	**+0.9**
	baz=237						
Z52A	**Williamson**	**118.84**	**70**	P	**PKiKP**	**19 35 59.8**	**+1.8**
	baz=237						
SWET	**Sewanee**	**118.87**	**67**	PFAKE		19 36 10.0	+12
SWET				LR	LR		
	comp=Z,1µm,20.0s						
L40A	**Anamosa**	**118.96**	**58**	PFAKE		19 36 10.0	+12
L40A				LR	LR		
	comp=Z,2µm,19.0s						
T47A	**Sharon Grove**	**119.01**	**65**	PFAKE		19 36 10.0	+12
T47A				LR	LR		
	comp=Z,1µm,21.0s						
T47A	**Sharon Grove**	**119.01**	**65**	P	**PKiKP**	**19 35 59.4**	**+1.2**
	baz=238						
CLTN	**Cedars of Leba**	**119.06**	**66**	PFAKE		19 36 10.0	+12
CLTN				LR	LR		
	comp=Z,600nm,21.0s						
NIL	**Nilore**	**119.08**	**291**	PFAKE		19 36 10.0	+11
NIL				LR	LR		
	comp=Z,500nm,20.0s						
USIN	**University of**	**119.15**	**64**	PFAKE		19 36 10.0	+12
USIN				LR	LR		
	comp=Z,1µm,22.0s						
V49A	**McMinnville**	**119.19**	**67**	P	**PKiKP**	**19 35 58.6**	**0.0**
	baz=238						
456A	**Hilliard**	**119.20**	**74**	PFAKE		19 36 10.0	+11
456A				LR	LR		
	comp=Z,600nm,18.0s						
OLIL	**Olney**	**119.26**	**63**	PFAKE		19 36 10.0	+11
OLIL				LR	LR		
	comp=Z,2µm,18.0s						
X51A	**Calhoun**	**119.27**	**68**	PFAKE		19 36 10.0	+11
X51A				LR	LR		
	comp=Z,500nm,20.0s						
X51A	**Calhoun**	**119.27**	**68**	P	**PKPdf**	**19 35 58.8**	**0.0**
	baz=238						
W50A	**Signal Mountai**	**119.29**	**68**	PFAKE		19 36 10.0	+11
W50A				LR	LR		
	comp=Z,1µm,21.0s						
W50A	**Signal Mountai**	**119.29**	**68**	P	**PKiKP**	**19 36 00.2**	**+1.2**
	baz=238						
AGMN	**Agassiz Nation**	**119.35**	**50**	*e*PKPdf	**PKiKP**	**19 35 58.8**	**+0.3**
AGMN				LR	LR		
	comp=Z,1µm,22.0s						
AGMN	**Agassiz Nation**	**119.35**	**50**	P	**PKiKP**	**19 35 60.0**	**+1.4**
	baz=239						
FFC	**Flin Flon**	**119.38**	**41**	*e*PKPdf	**PKiKP**	**19 35 58.9**	**+0.5**
FFC				LR	LR		
	comp=Z,1µm,21.0s						
FFC	**Flin Flon**	**119.38**	**41**	*i* PKIKP	**PKiKP**	**19 35 59.4**	**+1.0**
HDIL	**Hopedale**	**119.42**	**60**	PFAKE		19 36 10.0	+11
HDIL				LR	LR		
	comp=Z,2µm,18.0s						
Y52A	**Lilburn**	**119.45**	**69**	PFAKE		19 36 10.0	+11
Y52A				LR	LR		
	comp=Z,900nm,20.0s						
Y52A	**Lilburn**	**119.45**	**69**	P	**PKiKP**	**19 36 02.9**	**+3.7**
	baz=237						
154A	**Montrose**	**119.45**	**71**	PFAKE		19 36 10.0	+11
154A				LR	LR		
	comp=Z,500nm,20.0s						
Z53A	**Monticello**	**119.48**	**70**	P	**PKiKP**	**19 36 01.6**	**+2.3**
	baz=237						
255A	**Hazlehurst**	**119.53**	**72**	PFAKE		19 36 10.0	+11
255A				LR	LR		
	comp=Z,400nm,20.0s						
SPMN	**Marine on St.**	**119.60**	**54**	PFAKE		19 36 10.0	+11
SPMN				LR	LR		
	comp=Z,1µm,20.0s						
SPMN	**Marine on St.**	**119.60**	**54**	P	**PKiKP**	**19 36 01.4**	**+2.3**
	baz=239						
GOGA	**Godfrey**	**119.63**	**70**	PFAKE		19 36 10.0	+10
GOGA				LR	LR		
	comp=Z,500nm,19.0s						
GOGA	**Godfrey**	**119.63**	**70**	P	**PKiKP**	**19 36 01.5**	**+2.0**
	baz=237						
U49A	**Red Boiling Sp**	**119.67**	**66**	P	**PKiKP**	**19 36 01.2**	**+1.7**
	baz=238						
V50A	**Pikevile**	**119.69**	**67**	P	**PKiKP**	**19 36 00.3**	**+0.7**
	baz=238						
Y53A	**Monroe**	**119.78**	**70**	P	**PKiKP**	**19 36 01.8**	**+2.0**
	baz=238						
155A	**Kite**	**119.91**	**71**	P	**PKiKP**	**19 36 01.9**	**+1.7**
	baz=237						
L42A	**Oliver, Polo**	**119.92**	**59**	PFAKE		19 36 10.0	+10
L42A				LR	LR		
	comp=Z,2µm,19.0s						
X52A	**Dahlonega**	**119.96**	**69**	P	**PKiKP**	**19 36 02.0**	**+1.8**
	baz=238						
CPCT	**Cooper Cave**	**119.97**	**68**	PFAKE		19 36 10.0	+10
CPCT				LR	LR		
	comp=Z,900nm,21.0s						
MK31	**Makanchi Array**	**119.99**	**308**	*e*PKPdf	**PKPdf**	**19 35 58.3**	**-1.5**
MK31	**Makanchi Array**	**119.99**	**308**	*e*PKIKP	**PKPdf**	**19 35 58.3**	**-1.5**
MKAR	**Makanchi Array**	**119.99**	**308**	PKP	**PKPdf**	**19 35 56.7**	**-3.1**
	comp=Z,4.4nm,0.6s,baz=168,slow=1.3,SNR=27						
MKAR				PKKPbc	**PKKPab**	**19 46 08.1**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=316,slow=3.4,SNR=8.7						
JFWS	**Jewell Farm**	**120.02**	**58**	*e*PKPdf	**PKPdf**	**19 35 59.5**	**-0.5**
JFWS				LR	LR		
	comp=Z,2µm,19.0s						
JFWS	**Jewell Farm**	**120.02**	**58**	*e*PKIKP	**PKPdf**	**19 35 59.5**	**-0.5**
JFWS				MLR	MLR		
	comp=Z,2µm,19.0s						
JFWS	**Jewell Farm**	**120.02**	**58**	P	**PKiKP**	**19 36 01.2**	**+1.2**
	baz=240						
T49A	**Edmonton**	**120.14**	**66**	PFAKE		19 36 10.0	+10
T49A				LR	LR		
	comp=Z,1µm,19.0s						
T49A	**Edmonton**	**120.14**	**66**	P	**PKiKP**	**19 36 01.8**	**+1.3**
	baz=238						
MAKZ	**Makanchi**	**120.18**	**307**	*e*PKPdf	**PKPdf**	**19 35 59.6**	**-0.6**
MAKZ				LR	LR		
	comp=Z,500nm,20.0s						
MAKZ	**Makanchi**	**120.18**	**307**	*e*PKIKP	**PKPdf**	**19 35 59.6**	**-0.6**
MAKZ				MLR	MLR		
	comp=Z,500nm,20.0s						
W52A	**Murphy**	**120.20**	**68**	PFAKE		19 36 10.0	+9.3
W52A				LR	LR		
	comp=Z,900nm,21.0s						
W52A	**Murphy**	**120.20**	**68**	P	**PKiKP**	**19 36 03.4**	**+2.7**
	baz=238						
WCI	**Wyandotte Cave**	**120.21**	**64**	*e*PKPdf	**PKPdf**	**19 36 00.5**	**0.0**
WCI				LR	LR		
	comp=Z,1µm,21.0s						
WCI	**Wyandotte Cave**	**120.21**	**64**	P	**PKiKP**	**19 36 01.2**	**+0.6**
	baz=239						
PRZ	**Przheval'sk**	**120.22**	**302**	*e*PKPdf	**PKiKP**	**19 36 01.3**	**+0.6**
PRZ				LR	LR		
	comp=Z,600nm,20.0s						
U50A	**Jamestown**	**120.26**	**67**	P	**PKiKP**	**19 36 02.4**	**+1.6**
	baz=238						
V51A	**Loudon**	**120.28**	**67**	PFAKE		19 36 10.0	+9.2
V51A				LR	LR		
	comp=Z,1µm,21.0s						
KSH	**Kashi**	**120.29**	**298**	*e*PKP	**PKiKP**	**19 36 02.4**	**+1.5**
KSH				PP	**PP**	**19 37 34.1**	**+6.7**
KSH				PKS	**PKSdf**	**19 39 38.3**	**+0.8**
KSH				SKS	**SKSdf**	**19 43 13.6**	**+1.6**
KSH				SKKS	**SKKSac**	**19 44 27.3**	**+1.4**
KSH				AMB	AMB		
	comp=Z,210nm,5.7s						
KSH				LR	LR		
	comp=Z,300nm,14.4s						
KSH				LR	LR		
	comp=Z,220nm,11.6s						
KSH				LR	LR		
	comp=Z,460nm,18.0s						
P46A	**Rosedale**	**120.31**	**62**	P	**PKiKP**	**19 36 03.1**	**+2.4**
	baz=239						
X53A	**Estanollee**	**120.33**	**69**	P	**PKiKP**	**19 36 03.2**	**+2.3**
	baz=238						
ULM	**Lac du Bonnet**	**120.33**	**48**	PKP	**PKPdf**	**19 35 58.7**	**-1.6**
	comp=Z,13nm,0.8s,baz=260,slow=2.9,SNR=14						
ULM				PKKPab	**PKKPab**	**19 46 05.3**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=285,slow=5.7,SNR=3.6						
ULM	**Lac du Bonnet**	**120.33**	**48**	*e*PKPdf	**PKPdf**	**19 36 00.2**	**-0.1**
ULM	**Lac du Bonnet**	**120.33**	**48**	*e*PKIKP	**PKPdf**	**19 36 00.2**	**-0.1**
Y54A	**Tignall**	**120.42**	**70**	P	**PKiKP**	**19 36 01.5**	**+0.4**
	baz=238						
BLO	**Bloomington**	**120.54**	**63**	PFAKE		19 36 10.0	+8.8
BLO				LR	LR		
	comp=Z,2µm,19.0s						
T50A	**Nancy**	**120.58**	**66**	P	**PKiKP**	**19 36 02.4**	**+1.1**
	baz=239						
257A	**Skidaway Islan**	**120.59**	**73**	PFAKE		19 36 10.0	+8.5
257A				LR	LR		
	comp=Z,500nm,18.0s						
G39A	**Holcombe**	**120.63**	**55**	P	**PKiKP**	**19 36 02.8**	**+1.6**
	baz=240						
M44A	**Midewin, Midew**	**120.66**	**60**	PFAKE		19 36 10.0	+8.7
M44A				LR	LR		
	comp=Z,2µm,18.0s						
S49A	**Springfield**	**120.66**	**65**	P	**PKiKP**	**19 36 03.0**	**+1.5**
	baz=239						
SFIN	**Lafayette**	**120.77**	**62**	PFAKE		19 36 10.0	+8.4
SFIN				LR	LR		
	comp=Z,2µm,19.0s						
W53A	**Cullowhee**	**120.77**	**69**	P	**PKiKP**	**19 36 03.7**	**+1.8**
	baz=238						
U51A	**La Follette**	**120.81**	**67**	P	**PKiKP**	**19 36 03.8**	**+2.0**
	baz=239						
V52A	**Sevierville**	**120.82**	**68**	PFAKE		19 36 10.0	+8.2
V52A				LR	LR		
	comp=Z,1µm,22.0s						
V52A	**Sevierville**	**120.82**	**68**	P	**PKiKP**	**19 36 04.4**	**+2.5**
	baz=238						
KDJ	**Kajisay**	**120.82**	**301**	PFAKE		19 36 10.0	+8.1
KDJ				LR	LR		
	comp=Z,800nm,20.0s						
I41A	**Arkdale**	**120.83**	**57**	PFAKE		19 36 10.0	+8.4
I41A				LR	LR		
	comp=Z,2µm,19.0s						
BG3	**Lake Jocassee**	**120.84**	**69**	PFAKE		19 36 10.0	+8.1
BG3				LR	LR		
	comp=Z,500nm,19.0s						
HODGE	**Hodges**	**120.92**	**70**	PFAKE		19 36 10.0	+7.9
HODGE				LR	LR		
	comp=Z,900nm,19.0s						
Q48A	**North Vernon**	**120.95**	**64**	P	**PKiKP**	**19 36 03.7**	**+1.7**
	baz=239						
R49A	**Shelbyville**	**121.00**	**65**	PFAKE		19 36 10.0	+7.9
R49A				LR	LR		
	comp=Z,1µm,22.0s						
R49A	**Shelbyville**	**121.00**	**65**	P	**PKiKP**	**19 36 06.1**	**+4.0**
	baz=239						
X54A	**Belton**	**121.00**	**70**	P	**PKiKP**	**19 36 04.1**	**+1.9**
	baz=238						
E38A	**The Farm, Brul**	**121.04**	**53**	PFAKE		19 36 10.0	+8.1
E38A				LR	LR		
	comp=Z,2µm,19.0s						
Y55A	**Saluda**	**121.04**	**70**	P	**PKiKP**	**19 36 03.8**	**+1.5**
	baz=238						
Z56A	**Williston**	**121.07**	**71**	PFAKE		19 36 10.0	+7.6
Z56A				LR	LR		
	comp=Z,600nm,21.0s						
K43A	**Burlington**	**121.13**	**59**	PFAKE		19 36 10.0	+7.8
K43A				LR	LR		
	comp=Z,1µm,20.0s						
T51A	**Gray**	**121.16**	**66**	P	**PKiKP**	**19 36 05.8**	**+3.3**
	baz=239						
S50A	**Richmond**	**121.21**	**66**	P	**PKiKP**	**19 36 04.4**	**+1.8**
	baz=239						
G40A	**Rib Lake**	**121.22**	**55**	PFAKE		19 36 10.0	+7.7
G40A				LR	LR		
	comp=Z,1µm,20.0s						
G40A	**Rib Lake**	**121.22**	**55**	P	**PKiKP**	**19 36 03.9**	**+1.6**
	baz=241						
TZTN	**Tazewell**	**121.22**	**67**	PFAKE		19 36 10.0	+7.4
TZTN				LR	LR		
	comp=Z,1µm,19.0s						
TZTN	**Tazewell**	**121.22**	**67**	P	**PKiKP**	**19 36 06.1**	**+3.5**
	baz=239						
NRN	**Naryn**	**121.24**	**300**	*e*PKPdf	**PKPdf**	**19 36 02.0**	**-0.8**
NRN				LR	LR		
	comp=Z,1µm,21.0s						
NRN	**Naryn**	**121.24**	**300**	*e*PKIKP	**PKPdf**	**19 36 02.0**	**-0.8**
NRN				MLR	MLR		
	comp=Z,1µm,21.0s						
U52A	**Thorn Hill**	**121.26**	**67**	P	**PKiKP**	**19 36 04.9**	**+2.1**
	baz=239						
V53A	**Saluda**	**121.28**	**68**	PFAKE		19 36 10.0	+7.2
V53A				LR	LR		
	comp=Z,900nm,21.0s						
V53A	**Saluda**	**121.28**	**68**	P	**PKiKP**	**19 36 04.3**	**+1.5**
	baz=239						
I42A	**Draeger Farm,**	**121.34**	**57**	PFAKE		19 36 10.0	+7.4
I42A				LR	LR		
	comp=Z,2µm,18.0s						
I42A	**Draeger Farm,**	**121.34**	**57**	P	**PKiKP**	**19 36 04.5**	**+1.9**
	baz=241						
W54A	**Cherokee Point**	**121.41**	**69**	P	**PKiKP**	**19 36 05.7**	**+2.7**
	baz=239						
P48A	**Milroy**	**121.42**	**63**	PFAKE		19 36 10.0	+7.1
P48A				LR	LR		
	comp=Z,2µm,19.0s						
P48A	**Milroy**	**121.42**	**63**	P	**PKiKP**	**19 36 03.7**	**+0.8**
	baz=240						
X55A	**Gracelyn & Ava**	**121.48**	**70**	P	**PKiKP**	**19 36 04.7**	**+1.5**
	baz=238						
PAULI	**Pauline**	**121.54**	**70**	PFAKE		19 36 10.0	+6.7
PAULI				LR	LR		
	comp=Z,600nm,19.0s						
R50A	**Paris**	**121.57**	**65**	PFAKE		19 36 10.0	+6.8
R50A				LR	LR		
	comp=Z,900nm,20.0s						
R50A	**Paris**	**121.57**	**65**	P	**PKiKP**	**19 36 04.9**	**+1.7**
	baz=240						
JSC	**Jenkinsville**	**121.65**	**70**	PFAKE		19 36 10.0	+6.5
JSC				LR	LR		
	comp=Z,900nm,19.0s						
EYMN	**Ely**	**121.72**	**52**	*e*PKPdf	**PKPdf**	**19 36 02.8**	**-0.3**
EYMN				LR	LR		
	comp=Z,2µm,20.0s						
EYMN	**Ely**	**121.72**	**52**	P	**PKiKP**	**19 36 04.3**	**+1.1**
	baz=242						
S51A	**Beattyville**	**121.74**	**66**	PFAKE		19 36 10.0	+6.4
S51A				LR	LR		
	comp=Z,1µm,21.0s						
S51A	**Beattyville**	**121.74**	**66**	P	**PKiKP**	**19 36 05.2**	**+1.6**
	baz=240						
U53A	**Fall Branch**	**121.80**	**68**	P	**PKiKP**	**19 36 05.9**	**+2.1**
	baz=239						
NHSC	**New Hope**	**121.80**	**72**	PFAKE		19 36 20.0	+16
NHSC				LR	LR		
	comp=Z,600nm,18.0s						
T52A	**Hallie**	**121.89**	**67**	PFAKE		19 36 20.0	+16
T52A				LR	LR		
	comp=Z,1µm,20.0s						
T52A	**Hallie**	**121.89**	**67**	P	**PKiKP**	**19 36 06.2**	**+2.3**
	baz=239						
P49A	**Miami Univ. Ec**	**121.93**	**63**	P	**PKPdf**	**19 36 03.1**	**-0.6**
	baz=240						
V54A	**Nebo**	**121.94**	**69**	P	**PKiKP**	**19 36 05.0**	**+0.9**
	baz=239						
O48A	**Farmland**	**122.00**	**63**	P	**PKiKP**	**19 36 05.3**	**+1.3**
	baz=240						
GRTK	**Grand Turk**	**122.03**	**89**	PFAKE		19 36 20.0	+15
GRTK				LR	LR		
	comp=Z,900nm,18.0s						
KMSC	**Kings Mountain**	**122.04**	**70**	PFAKE		19 36 20.0	+16
KMSC				LR	LR		
	comp=Z,800nm,19.0s						
KMSC	**Kings Mountain**	**122.04**	**70**	P	**PKiKP**	**19 36 06.5**	**+2.3**
	baz=239						
ZAA0	**Zalesovo Array**	**122.04**	**316**	*e*PKPdf	**PKPdf**	**19 36 02.2**	**-1.3**
ZAA0				LR	LR		
	comp=Z,500nm,20.0s						
ZALV	**Zalesovo Beam**	**122.04**	**316**	PKP	**PKPdf**	**19 36 00.1**	**-3.3**
	comp=Z,2.3nm,0.5s,baz=174,slow=1.9,SNR=11						
ZALV				PKKPbc	**PKKPbc**	**19 46 01.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=298,slow=6.4,SNR=4.4						
Q50A	**Georgetown**	**122.08**	**65**	P	**PKiKP**	**19 36 05.7**	**+1.5**
	baz=240						
L46A	**Eue Claire**	**122.11**	**60**	PFAKE		19 36 20.0	+16
L46A				LR	LR		
	comp=Z,2µm,18.0s						
S52A	**Salyersville**	**122.12**	**66**	P	**PKiKP**	**19 36 05.9**	**+1.6**
	baz=240						
Y57A	**Sumter**	**122.12**	**71**	PFAKE		19 36 20.0	+16
Y57A				LR	LR		
	comp=Z,900nm,18.0s						
T53A	**Wise**	**122.14**	**67**	P	**PKiKP**	**19 36 06.3**	**+1.9**
	baz=240						
M47A	**Cromwell**	**122.23**	**61**	P	**PKiKP**	**19 36 05.2**	**+0.8**
	baz=241						
COWI	**Conover**	**122.27**	**55**	*e*PKPdf	**PKPdf**	**19 36 04.3**	**+0.1**
COWI				LR	LR		
	comp=Z,1µm,21.0s						
H43A	**Windswept, Lux**	**122.34**	**57**	PFAKE		19 36 20.0	+15
H43A				LR	LR		
	comp=Z,1µm,18.0s						
N48A	**Decatur**	**122.38**	**62**	P	**PKiKP**	**19 36 06.3**	**+1.5**
	baz=241						
BIRD	**Birdtown, Kers**	**122.40**	**70**	PFAKE		19 36 20.0	+15
BIRD				LR	LR		
	comp=Z,800nm,19.0s						
U54A	**Nelsons Funny**	**122.40**	**68**	PFAKE		19 36 20.0	+15
U54A				LR	LR		
	comp=Z,1µm,19.0s						
U54A	**Nelsons Funny**	**122.40**	**68**	P	**PKiKP**	**19 36 07.0**	**+2.0**
	baz=240						
KMBO	**Kilima Mbogo**	**122.46**	**234**	*e*PKPdf	**PKiKP**	**19 36 06.1**	**0.0**
KMBO				LR	LR		
	comp=Z,3µm,18.0s						
V55A	**Taylorsville**	**122.48**	**69**	P	**PKiKP**	**19 36 07.7**	**+2.6**
	baz=239						
O49A	**Covington**	**122.51**	**63**	PFAKE		19 36 20.0	+15
O49A				LR	LR		
	comp=Z,2µm,20.0s						
O49A	**Covington**	**122.51**	**63**	P	**PKiKP**	**19 36 06.9**	**+1.9**
	baz=241						
KBL	**Kabul**	**122.51**	**289**	*e*PKPdf	**PKPdf**	**19 36 04.9**	**-0.4**
KBL				LR	LR		
	comp=Z,800nm,20.0s						
KBL	**Kabul**	**122.51**	**289**	*e*PKIKP	**PKPdf**	**19 36 04.9**	**-0.4**
KBL				MLR	MLR		
	comp=Z,800nm,20.0s						
W56A	**Indian Trail**	**122.56**	**70**	P	**PKiKP**	**19 36 06.9**	**+1.7**
	baz=239						
Y58A	**Scranton**	**122.58**	**72**	PFAKE		19 36 20.0	+15
Y58A				LR	LR		
	comp=Z,800nm,20.0s						
Y58A	**Scranton**	**122.58**	**72**	P	**PKiKP**	**19 36 07.9**	**+2.6**

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      baz=239
Q51A  Peebles          122.61  65  PFAKE              19 36 20.0  +15
Q51A                               LR        LR
      comp=Z,900nm,19.0s
Q51A  Peebles          122.61  65  P         PKiKP    19 36 06.7 +1.4
      baz=240
F42A  Maple Grove Fa   122.73  56  P         PKiKP    19 36 06.6 +1.3
      baz=242
J45A  Montague         122.73  59  PFAKE              19 36 20.0  +15
J45A                               LR        LR
      comp=Z,2µm,18.0s
S53A  Williamson       122.77  67  P         PKiKP    19 36 08.3 +2.6
      baz=240
L47A  Sherwood         122.80  61  P         PKiKP    19 36 09.1 +3.6
      baz=241
FRU1  Bishkek          122.80 300 ePKPdf     PKiKP    19 36 05.5 -0.1
FRU1                               LR        LR
      comp=Z,1µm,22.0s
FRU1  Bishkek          122.80 300 ePKIKP     PKiKP    19 36 05.5 -0.1
FRU1                               MLR       MLR
      comp=Z,1µm,22.0s
AAK   Ala-Archa        122.81 300 ePKPdf     PKiKP    19 36 05.8  0.0
AAK                                LR        LR
      comp=Z,900nm,22.0s
AAK   Ala-Archa        122.81 300d iPKIKP    PKiKP    19 36 06.8 +1.0
T54A  Tazewell         122.84  67  P         PKiKP    19 36 08.1 +2.2
      baz=240
M48A  Edgerton         122.88  61  PFAKE              19 36 20.0  +14
M48A                               LR        LR
      comp=Z,2µm,20.0s
U55A  TA2, Sparta      122.93  68  P         PKiKP    19 36 07.6 +1.6
      baz=240
N49A  Columbus Grove   122.97  62  PFAKE              19 36 20.0  +14
N49A                               LR        LR
      comp=Z,2µm,18.0s
V56A  Mocksville       122.97  69  PFAKE              19 36 20.0  +14
V56A                               LR        LR
      comp=Z,900nm,21.0s
O50A  Cable            122.97  63  P         PKiKP    19 36 06.8 +0.9
      baz=241
W57A  Gilead           122.99  70  PFAKE              19 36 20.0  +14
W57A                               LR        LR
      comp=Z,700nm,20.0s
W57A  Gilead           122.99  70  P         PKiKP    19 36 07.6 +1.5
      baz=239
P51A  Williamsport     123.02  64  PFAKE              19 36 20.0  +14
P51A                               LR        LR
      comp=Z,900nm,19.0s
D41A  Chassel          123.07  54  PFAKE              19 36 20.0  +14
D41A                               LR        LR
      comp=Z,2µm,18.0s
D41A  Chassel          123.07  54  P         PKiKP    19 36 06.3 +0.4
      baz=242
C40A  Isle Royale Na   123.11  53  PFAKE              19 36 20.0  +14
C40A                               LR        LR
      comp=Z,1µm,19.0s
C40A  Isle Royale Na   123.11  53  P         PKiKP    19 36 06.2 +0.3
      baz=243
I45A  Fountain         123.11  58  PFAKE              19 36 20.0  +14
I45A                               LR        LR
      comp=Z,2µm,19.0s
X58A  Rowland          123.15  71  PFAKE              19 36 20.0  +14
X58A                               LR        LR
      comp=Z,800nm,18.0s
ARSB  Arslanbob        123.17 298 ePKPdf     PKPdf    19 36 05.9 -0.4
R53A  Hurricane        123.21  66  PFAKE              19 36 20.0  +14
R53A                               LR        LR
      comp=Z,1µm,18.0s
Q52A  Bidwell          123.31  65  P         PKiKP    19 36 06.9 +0.3
      baz=241
U56A  King             123.32  69  P         PKiKP    19 36 08.0 +1.2
      baz=240
M49A  Liberty Center   123.37  62  P         PKiKP    19 36 08.9 +2.2
      baz=242
S54A  Dingess, Beckl   123.39  67  P         PKiKP    19 36 08.2 +1.3
      baz=240
T55A  Pulaski          123.42  68  P         PKiKP    19 36 08.2 +1.2
      baz=240
ACSO  Alum Creek Sta   123.44  64 ePKPdf     PKPdf    19 36 06.7 +0.1
ACSO                               LR        LR
      comp=Z,2µm,21.0s
ACSO  Alum Creek Sta   123.44  64  P         PKiKP    19 36 07.9 +1.0
      baz=241
W58A  Raeford          123.46  71  P         PKiKP    19 36 08.8 +1.8
      baz=239
V57A  Coltrane Farms   123.51  70  P         PKiKP    19 36 08.6 +1.4
      baz=240
N50A  Nevada           123.58  63  P         PKiKP    19 36 09.5 +2.4
      baz=241
J47A  Sunmer           123.65  60  PFAKE              19 36 20.0  +13
J47A                               LR        LR
      comp=Z,2µm,18.0s
O51A  Pataskala        123.65  64  P         PKiKP    19 36 08.5 +1.2
      baz=241
Y60A  Bolivia          123.67  72  PFAKE              19 36 20.0  +13
Y60A                               LR        LR
      comp=Z,900nm,20.0s
SJG   San Juan         123.71  95  PFAKE              19 36 20.0  +12
SJG                                LR        LR
      comp=Z,700nm,19.0s
E43A  Lone Tree Farm   123.71  55  PFAKE              19 36 20.0  +13
E43A                               LR        LR
      comp=Z,2µm,21.0s
E43A  Lone Tree Farm   123.71  55  P         PKiKP    19 36 08.3 +1.1
      baz=243
BLA   Blacksburg       123.72  68  PFAKE              19 36 20.0  +12
BLA                                LR        LR
      comp=Z,1µm,18.0s
BLA   Blacksburg       123.72  68  P         PKiKP    19 36 08.4 +0.8
      baz=240
P52A  Corning          123.72  65  P         PKiKP    19 36 08.0 +0.6
      baz=241
Q53A  Leroy            123.76  66  P         PKiKP    19 36 08.9 +1.3
      baz=241
GAR   Garm             123.85 294 ePKPdf     PKPdf    19 36 07.3 -0.3
GAR                                LR        LR
      comp=Z,2µm,20.0s
K48A  Perry            123.90  60  P         PKiKP    19 36 08.6 +0.9
      baz=242
T56A  Rocky Mt         123.90  68  P         PKiKP    19 36 08.9 +1.0
      baz=240
V58A  Windy Hill, Pi   123.93  70  P         PKPdf    19 36 06.3 -1.3
      baz=240
G45A  Suttons Bay      123.94  57  PFAKE              19 36 20.0  +12
G45A                               LR        LR
      comp=Z,2µm,18.0s
M50A  Fremont          123.95  62  PFAKE              19 36 20.0  +12
M50A                               LR        LR
      comp=Z,2µm,20.0s
AAM   Ann Arbor        123.97  61  PFAKE              19 36 20.0  +12
AAM                                LR        LR
      comp=Z,2µm,20.0s
KURK  Kurchatov        123.98 310 ePKPdf     PKPdf    19 36 06.2 -1.1
KURK                               LR        LR
      comp=Z,800nm,20.0s
KURK  Kurchatov        123.98 310 ePKIKP     PKPdf    19 36 06.2 -1.1
KURK                               MLR       MLR
      comp=Z,800nm,20.0s
KURBB Kurchatov Arra   123.99 310  PKP       PKPdf    19 36 04.4 -2.8
      comp=Z,8.2nm,0.6s,baz=123,slow=1.8,SNR=45
KURBB                              PKKPbc    PKKPbc   19 45 53.3 +0.2
      comp=Z,0.7nm,0.8s,baz=294,slow=4.8,SNR=3.3
H46A  Fife Lake        124.00  58  P         PKiKP    19 36 08.0 +0.2
      baz=243
BTK   Batken           124.01 296 ePKPdf     PKPdf    19 36 06.9 -0.9
BTK                                LR        LR
      comp=Z,900nm,20.0s
BTK   Batken           124.01 296 ePKIKP     PKPdf    19 36 06.9 -0.9
BTK                                MLR       MLR
      comp=Z,900nm,20.0s
U57A  Blanch           124.09  69  P         PKiKP    19 36 09.9 +1.6
      baz=240
O52A  Adamsville       124.15  64  PFAKE              19 36 20.0  +12
O52A                               LR        LR
      comp=Z,1µm,22.0s
O52A  Adamsville       124.15  64  P         PKiKP    19 36 08.5 +0.2
      baz=242
P53A  Whipple          124.16  65  PFAKE              19 36 20.0  +12
P53A                               LR        LR
      comp=Z,1µm,19.0s
P53A  Whipple          124.16  65  P         PKiKP    19 36 10.0 +1.7
      baz=241
N51A  Ashland          124.17  63  PFAKE              19 36 20.0  +12
N51A                               LR        LR
      comp=Z,2µm,18.0s
N51A  Ashland          124.17  63  P         PKiKP    19 36 08.7 +0.4
      baz=242
I47A  Gladwin          124.21  59  PFAKE              19 36 20.0  +12
I47A                               LR        LR
      comp=Z,1µm,18.0s
Q54A  Coxs Mills       124.29  66  PFAKE              19 36 20.0  +11
Q54A                               LR        LR
      comp=Z,1µm,18.0s
Q54A  Coxs Mills       124.29  66  P         PKiKP    19 36 10.1 +1.5
      baz=241
J48A  Bridge Port      124.34  60  PFAKE              19 36 20.0  +11
J48A                               LR        LR
      comp=Z,2µm,18.0s
J48A  Bridge Port      124.34  60  P         PKPdf    19 36 07.6 -0.7
      baz=243
T57A  Hurt             124.43  69  PFAKE              19 36 20.0  +11
T57A                               LR        LR
      comp=Z,1µm,21.0s
T57A  Hurt             124.43  69  P         PKiKP    19 36 10.3 +1.4
      baz=241
R55A  Marlinton        124.45  67  PFAKE              19 36 20.0  +11
R55A                               LR        LR
      comp=Z,1µm,18.0s
R55A  Marlinton        124.45  67  P         PKiKP    19 36 09.4 +0.4
      baz=241
CHGR  Chuyangaron      124.47 294  PFAKE              19 36 20.0  +11
CHGR                               LR        LR
      comp=Z,2µm,20.0s
E44A  Grand Marais A   124.49  56  PFAKE              19 36 20.0  +11
E44A                               LR        LR
      comp=Z,2µm,19.0s
M51A  Elyria           124.49  63  P         PKiKP    19 36 09.9 +1.0
      baz=242
GLMI  Grayling         124.50  58  PFAKE              19 36 20.0  +11
GLMI                               LR        LR
      comp=Z,2µm,19.0s
V59A  Middlesex        124.53  70  P         PKiKP    19 36 10.1 +1.0
      baz=240
W60A  Pink Hill        124.55  71  P         PKiKP    19 36 10.0 +0.8
      baz=240
G46A  Petoskey         124.57  57  P         PKiKP    19 36 09.5 +0.6
      baz=243
N52A  McGinn’s Farm,   124.58  63  P         PKiKP    19 36 10.1 +1.0
      baz=242
U58A  Oxford           124.62  70  P         PKiKP    19 36 09.9 +0.6
      baz=240
O53A  New Philadelph   124.64  64  P         PKiKP    19 36 09.6 +0.4
      baz=242
J49A  Marlette         124.79  60  P         PKPdf    19 36 08.4 -0.7
      baz=243
Q55A  Buckhannon       124.81  66  P         PKiKP    19 36 09.5 -0.1
      baz=242
P54A  Burton           124.83  65  P         PKPdf    19 36 08.8 -0.5
      baz=242
K50A  Casco            124.86  61  PFAKE              19 36 20.0  +10
K50A                               LR        LR
      comp=Z,2µm,20.0s
T58A  Grand View Acr   124.90  69  P         PKiKP    19 36 10.1 +0.2
      baz=241
R56A  Bull Pasture M   125.00  67  P         PKiKP    19 36 11.2 +1.1
      baz=241
S57A  Dark Hollow, R   125.00  68  PFAKE              19 36 20.0  +10
S57A                               LR        LR
      comp=Z,900nm,19.0s
S57A  Dark Hollow, R   125.00  68  P         PKiKP    19 36 10.8 +0.8
      baz=241
FCC   Fort Churchill   125.10  40 ePKPdf     PKiKP    19 36 09.8 +0.3
FCC                                LR        LR
      comp=Z,3µm,21.0s
FCC   Fort Churchill   125.10  40 ePKIKP     PKiKP    19 36 09.8 +0.3
FCC                                MLR       MLR
      comp=Z,3µm,21.0s
U59A  Littleton        125.14  70  PFAKE              19 36 20.0  +10
U59A                               LR        LR
      comp=Z,900nm,18.0s
M52A  Chesterland      125.14  63  PFAKE              19 36 20.0  +10
M52A                               LR        LR
      comp=Z,2µm,18.0s
M52A  Chesterland      125.14  63  P         PKiKP    19 36 10.6 +0.4
      baz=243
N53A  Lisbon           125.15  64  PFAKE              19 36 20.0  +10
N53A                               LR        LR
      comp=Z,2µm,22.0s
N53A  Lisbon           125.15  64  P         PKiKP    19 36 10.8 +0.5
      baz=242
O54A  Avella           125.17  65  P         PKiKP    19 36 12.3 +2.0
      baz=242
V60A  Jim Taylor Roa   125.22  71  PFAKE              19 36 20.0  +10
V60A                               LR        LR
      comp=Z,800nm,18.0s
P55A  Reedsville       125.23  66  P         PKiKP    19 36 11.3 +0.8
      baz=242
I49A  Point Hope       125.26  60  PFAKE              19 36 20.0  +10
I49A                               LR        LR
      comp=Z,1µm,18.0s
RCBR  Riachuelo        125.26 142  PFAKE              19 36 20.0 +8.6
RCBR                               LR        LR
      comp=Z,25µm,19.0s
RCBR  Riachuelo        125.26 142 eP         PKPdf    19 36 09.6 -1.4
H48A  Harrisville      125.27  59  PFAKE              19 36 20.0  +10
H48A                               LR        LR
      comp=Z,2µm,18.0s
MCWV  Mont Chateau     125.29  66  PFAKE              19 36 20.0 +9.5
MCWV                               LR        LR
      comp=Z,700nm,18.0s
E46A  Sault Ste Mari   125.38  56 ePKPdf     PKPdf    19 36 10.1  0.0
E46A                               LR        LR
      comp=Z,1µm,19.0s
E46A  Sault Ste Mari   125.38  56  P         PKiKP    19 36 10.5  0.0
      baz=244
Q56A  Snyder Ridge,    125.45  67  P         PKiKP    19 36 11.9 +1.0
      baz=242
M53A  WI Miller and    125.55  63  P         PKiKP    19 36 12.3 +1.3
      baz=243
R57A  Stanardsville    125.56  68  P         PKiKP    19 36 12.8 +1.7
      baz=242
S58A  Poland Farm, P   125.56  69  PFAKE              19 36 20.0 +8.9
S58A                               LR        LR
      comp=Z,600nm,19.0s
S58A  Poland Farm, P   125.56  69  P         PKiKP    19 36 11.0 -0.2
      baz=241
SABA  Saba             125.57  98  PFAKE              19 36 20.0 +8.3
SABA                               LR        LR
      comp=Z,800nm,22.0s
K51A  Iona Station     125.57  61  P         PKiKP    19 36 12.0 +1.0
      baz=243
T59A  Double "B" Far   125.60  69  PFAKE              19 36 20.0 +8.8
T59A                               LR        LR
      comp=Z,1µm,21.0s
T59A  Double "B" Far   125.60  69  P         PKiKP    19 36 12.7 +1.5
      baz=241
KK31  Karatay Array    125.62 299 ePKPdf     PKPdf    19 36 10.2 -0.6
KK31  Karatay Array    125.62 299 ePKIKP     PKPdf    19 36 10.2 -0.6
U60A  Pendleton        125.64  70  P         PKiKP    19 36 12.6 +1.3
      baz=241
V61A  Roper            125.72  71  PFAKE              19 36 20.0 +8.5
V61A                               LR        LR
      comp=Z,800nm,19.0s
SKI   Saint Kitts      125.76  99  PFAKE              19 36 20.0 +7.9
SKI                                LR        LR
      comp=Z,600nm,19.0s
D46A  Sault St. Mari   125.77  56  P         PKiKP    19 36 12.0 +0.7
      baz=245
N54A  Moraine State    125.79  64 ePKPdf     PKPdf    19 36 10.9 -0.2
N54A                               LR        LR
      comp=Z,2µm,22.0s
N54A  Moraine State    125.79  64  P         PKiKP    19 36 11.8 +0.3
      baz=243
R58B  Mineral          125.85  68  PFAKE              19 36 20.0 +8.3
R58B                               LR        LR
      comp=Z,900nm,19.0s
R58B  Mineral          125.85  68  P         PKPdf    19 36 10.4 -0.9
      baz=242
P56A  Dayton Farm, R   125.91  66  P         PKiKP    19 36 12.0 +0.2
      baz=242
O55A  Ligonier         125.91  65  P         PKiKP    19 36 12.6 +0.8
      baz=243
R58A  Rapidan          125.92  68  P         PKiKP    19 36 13.3 +1.5
      baz=242
SMRT  St. Maarten      125.96  98  PFAKE              19 36 20.0 +7.5
SMRT                               LR        LR
      comp=Z,800nm,19.0s
Q57A  Strasburg        125.98  67  P         PKiKP    19 36 14.0 +2.1
      baz=242
BASO  Ashfield         126.04  60  P         PKiKP    19 36 13.6 +1.7
      baz=244
L53A  Girard           126.06  63  P         PKiKP    19 36 13.1 +1.1
      baz=243
E47A  Iron Bridge      126.06  57  P         PKiKP    19 36 11.8 -0.1
      baz=245
U61A  Possum Corner    126.08  71  PFAKE              19 36 20.0 +7.8
U61A                               LR        LR
      comp=Z,1µm,19.0s
U61A  Possum Corner    126.08  71  P         PKiKP    19 36 16.3 +4.1
      baz=241
M54A  Oil Creek Stat   126.26  64  PFAKE              19 36 20.0 +7.6
M54A                               LR        LR
      comp=Z,2µm,19.0s
M54A  Oil Creek Stat   126.26  64  P         PKiKP    19 36 12.7 +0.2
      baz=243
T60A  Surry            126.26  70  PFAKE              19 36 20.0 +7.5
T60A                               LR        LR
      comp=Z,900nm,21.0s
T60A  Surry            126.26  70  P         PKiKP    19 36 12.5 -0.1
      baz=242
ERPA  Erie             126.31  63  PFAKE              19 36 20.0 +7.5
ERPA                               LR        LR
      comp=Z,2µm,18.0s
ERPA  Erie             126.31  63  P         PKiKP    19 36 14.3 +1.8
      baz=244
CBN   Corbin Frederi   126.31  68  PFAKE              19 36 20.0 +7.4
CBN                                LR        LR
      comp=Z,900nm,19.0s
N55A  Marion Center    126.39  65  PFAKE              19 36 20.0 +7.3
N55A                               LR        LR
      comp=Z,1µm,22.0s
N55A  Marion Center    126.39  65  P         PKiKP    19 36 12.9 +0.2
      baz=243
D47A  Chapleau         126.42  56  P         PKPdf    19 36 11.7 -0.4
      baz=245
O56A  Blue Knob Stat   126.44  65 ePKPdf     PKPdf    19 36 12.0 -0.4
O56A                               LR        LR
      comp=Z,1µm,19.0s
O56A  Blue Knob Stat   126.44  65  P         PKiKP    19 36 13.8 +0.9
      baz=243
Q58A  Fox Den Farm,    126.44  67  P         PKiKP    19 36 13.8 +0.9
      baz=242
P57A  Homestead Farm   126.46  67  P         PKPdf    19 36 11.4 -1.1
      baz=243
J52A  Paris            126.48  61  P         PKiKP    19 36 14.4 +1.6
      baz=244
R59A  King George, V   126.49  68  P         PKiKP    19 36 13.8 +0.9
      baz=242
F49A  Sandfield        126.55  58  P         PKiKP    19 36 14.6 +1.7
      baz=245
MBAR  Mbarara          126.66 228  PFAKE              19 36 30.0  +16
MBAR                               LR        LR
      comp=Z,4µm,20.0s
MBAR  Mbarara          126.66 228⇓iPKIKP     PKiKP    19 36 14.7 +0.4
E48A  Lockeyer         126.77  57  P         PKiKP    19 36 13.7 +0.4
      baz=246
L54A  Sinclairville    126.81  63  P         PKiKP    19 36 14.5 +1.0
      baz=244
UOSS  Minazif          126.81 272  PFAKE              19 36 30.0  +16
UOSS                               LR        LR
      comp=Z,800nm,18.0s
TYNO  Tyneside         126.82  62  P         PKiKP    19 36 15.3 +1.8
      baz=244
M55A  Ridgway          126.84  64  P         PKiKP    19 36 14.5 +0.9
      baz=244
ACTO  Acton            126.91  61  P         PKPdf    19 36 13.4 +0.2
      baz=244
N56A  West Decatur     126.92  65  P         PKiKP    19 36 14.7 +0.9
      baz=244
P58A  Pank, Wackersv   126.96  67  P         PKiKP    19 36 14.4 +0.5
      baz=243
I52A  Shelburne        127.03  61  P         PKiKP    19 36 13.8 -0.1
      baz=245
O57A  Amberson         127.05  66  P         PKPdf    19 36 10.4 -3.2
      baz=243
SSPA  Standing Stone   127.07  65 ePKPdf     PKPdf    19 36 13.5  0.0
SSPA                               LR        LR
      comp=Z,1µm,18.0s
SSPA  Standing Stone   127.07  65  P         PKPdf    19 36 13.3 -0.3
      baz=243
CLWO  Collingwood      127.11  60  P         PKPdf    19 36 12.4 -1.1
      baz=245
SDMD  Soldier’s Deli   127.24  67  PFAKE              19 36 30.0  +16
SDMD                               LR        LR
      comp=Z,500nm,21.0s
M56A  Emporium         127.24  64  P         PKiKP    19 36 14.2 -0.2
      baz=244
N57A  Milroy           127.35  65  P         PKPdf    19 36 13.8 -0.3
      baz=244
L55A  Hinsdale         127.38  63  P         PKiKP    19 36 14.4 -0.3
      baz=244
K54A  Basiliko Farm,   127.39  63  P         PKiKP    19 36 14.4 -0.2
      baz=244
O58A  Lewisberry       127.50  66  P         PKiKP    19 36 16.3 +1.4
      baz=243
D49A  Beulah Townshi   127.60  56  P         PKiKP    19 36 16.0 +1.1
      baz=246
E50A  Wahnapitae       127.65  58  P         PKiKP    19 36 16.1 +1.1
      baz=246
PAGS  Pennsylvania G   127.69  66  PFAKE              19 36 30.0  +15
PAGS                               LR        LR
      comp=Z,900nm,18.0s
J54A  Appleton         127.71  62  PFAKE              19 36 30.0  +15
J54A                               LR        LR
      comp=Z,3µm,20.0s
PKRO  Pickering        127.71  61  P         PKiKP    19 36 16.4 +1.2
      baz=245
MEDO  Medina           127.78  62  PFAKE              19 36 30.0  +15
MEDO                               LR        LR
      comp=Z,2µm,19.0s
MEDO  Medina           127.78  62  P         PKPdf    19 36 14.8  0.0
      baz=245
N58A  Sunbury          127.96  66  P         PKPdf    19 36 14.7 -0.5
      baz=244
MMNY  Mt. Morris Dam   127.97  63  PFAKE              19 36 30.0  +14
MMNY                               LR        LR
      comp=Z,2µm,18.0s
O59A  Robesonia        128.09  66  P         PKiKP    19 36 16.1  0.0
      baz=244
BUKO  Buck Lake        128.11  59  P         PKiKP    19 36 16.8 +0.8
      baz=246
WLVO  Wesleyville      128.14  61  P         PKiKP    19 36 15.9 -0.2
      baz=246
ATD   Arta Tunnel      128.24 249  PFAKE              19 36 30.0  +13
ATD                                LR        LR
      comp=Z,1µm,20.0s
J55A  Hilton           128.25  62  PFAKE              19 36 30.0  +14
J55A                               LR        LR
      comp=Z,2µm,20.0s
F52A  Sundridge        128.30  59  P         PKiKP    19 36 18.8 +2.5
      baz=246
M58A  Price’s Panora   128.36  65  P         PKiKP    19 36 17.6 +0.9
      baz=244
PSUB  Penn St. - Bra   128.43  67  PFAKE              19 36 30.0  +13
PSUB                               LR        LR
      comp=Z,1µm,19.0s
G53A  Haliburton       128.48  60  P         PKPdf    19 36 15.8 -0.3
      baz=246
E51A  G1948 Merrick    128.48  58  P         PKPdf    19 36 15.4 -0.7
      baz=247
N59A  State Game Lan   128.64  66  PFAKE              19 36 30.0  +13
N59A                               LR        LR
      comp=Z,1µm,19.0s
N59A  State Game Lan   128.64  66  P         PKiKP    19 36 17.2 -0.1
      baz=244
I55A  Frankford        128.73  61  P         PKiKP    19 36 19.6 +2.4
      baz=246
BANO  Bancroft         128.89  60  P         PKiKP    19 36 17.5 -0.1
      baz=246
DELO  Deloro Mine      128.89  61  PFAKE              19 36 30.0  +12
DELO                               LR        LR
      comp=Z,2µm,19.0s
DELO  Deloro Mine      128.89  61  P         PKiKP    19 36 17.7 +0.1
      baz=246
KSPA  Keystone Colle   128.91  65  PFAKE              19 36 30.0  +12
KSPA                               LR        LR
      comp=Z,1µm,21.0s
E52A  Mattawa          128.92  59  P         PKiKP    19 36 17.9 +0.4
      baz=247
BINY  Binghamton       129.03  64  PFAKE              19 36 30.0  +12
BINY                               LR        LR
      comp=Z,2µm,21.0s
BINY  Binghamton       129.03  64  P         PKiKP    19 36 19.4 +1.5
      baz=245
L58A  Harry Jones Me   129.06  65  P         PKiKP    19 36 19.9 +1.8
      baz=245
PECO  Prince Edward    129.07  62  PFAKE              19 36 30.0  +12
PECO                               LR        LR
      comp=Z,2µm,19.0s
N60A  Cedar Hill Far   129.08  66  P         PKPdf    19 36 17.4 +0.1
      baz=245
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M59A	Waymart	129.13	65	P	PKiKP	19 36 18.5	+0.3
	baz=245						
ALGO	Algonquin Park	129.18	59	P	PKiKP	19 36 19.0	+0.9
	baz=247						
H55A	Tweed	129.19	61	P	PKiKP	19 36 20.3	+2.1
	baz=246						
FURI	Furi	129.21	243	PFAKE		19 36 30.0	+10
FURI				LR	LR		
	comp=Z,2µm,20.0s						
D52A	ZEK Kipawa Sen	129.34	58	P	PKiKP	19 36 20.4	+2.0
	baz=248						
PLVO	Plevna	129.45	61	PFAKE		19 36 30.0	+11
PLVO				LR	LR		
	comp=Z,1µm,19.0s						
PLVO	Plevna	129.45	61	P	PKiKP	19 36 20.2	+1.6
	baz=247						
ODNJ	Ogdensburg	129.51	66	PFAKE		19 36 30.0	+11
ODNJ				LR	LR		
	comp=Z,1µm,18.0s						
BVAR	Borovoye Array	129.57	311	PKP	PKPdf	19 36 16.6	-1.3
	comp=Z,4.8nm,0.6s,baz=72,slow=1.6,SNR=26						
BVAR				PP	PP	19 38 24.5	-4.5
	comp=Z,5.6nm,1.1s,baz=106,slow=5.3,SNR=3.6						
E53A	Dumoine, Ponti	129.59	59	P	PKiKP	19 36 19.2	+0.3
	baz=248						
PEMO	Pembroke	129.59	60	P	PKiKP	19 36 19.5	+0.6
	baz=247						
BRVK	Borovoye	129.64	311	ePKPdf	PKiKP	19 36 18.5	-0.3
BRVK				LR	LR		
	comp=Z,1µm,18.0s						
BRVK	Borovoye	129.64	311	c iPKIKP	PKPdf	19 36 18.1	+0.1
H56A	Elgin	129.81	61	P	PKPdf	19 36 18.1	-0.5
	baz=247						
RES	Resolute Bay	129.81	20	PFAKE		19 36 30.0	+11
RES				LR	LR		
	comp=Z,900nm,20.0s						
D53A	Lac Vacive, Po	129.83	58	ePKPdf	PKiKP	19 36 19.1	-0.2
D53A				LR	LR		
	comp=Z,2µm,18.0s						
D53A	Lac Vacive, Po	129.83	58	P	PKiKP	19 36 20.4	+1.0
	baz=248						
E54A	Lac Daplat, Po	129.91	59	P	PKiKP	19 36 20.9	+1.4
	baz=248						
PAL	Palisades	129.95	67	PFAKE		19 36 30.0	+10
PAL				LR	LR		
	comp=Z,1µm,18.0s						
ASCN	Ascension	130.04	169	PFAKE		19 36 30.0	+9.1
ASCN				LR	LR		
	comp=Z,83µm,22.0s						
VLDQ	Val d'Or	130.36	57	PFAKE		19 36 30.0	+10
VLDQ				LR	LR		
	comp=Z,2µm,18.0s						
D54A	Lac Fusel, La	130.52	58	P	PKiKP	19 36 20.7	0.0
	baz=249						
KSCT	Kent School, K	130.54	66	PFAKE		19 36 30.0	+9.1
KSCT				LR	LR		
	comp=Z,1µm,22.0s						
MATQ	Matagami	130.81	55	P	PKiKP	19 36 22.4	+1.2
	baz=250						
TRY	Troy	130.82	65	PFAKE		19 36 30.0	+8.5
TRY				LR	LR		
	comp=Z,2µm,21.0s						
NCB	Newcomb	130.92	63	PFAKE		19 36 30.0	+8.3
NCB				LR	LR		
	comp=Z,2µm,18.0s						
LONY	Lake Ozonia	130.93	62	PFAKE		19 36 30.0	+8.3
LONY				LR	LR		
	comp=Z,2µm,19.0s						
LONY	Lake Ozonia	130.93	62	P	PKiKP	19 36 23.0	+1.3
	baz=248						
LSQQ	Lebel-sur-Quev	130.98	56	P	PKiKP	19 36 22.5	+0.9
	baz=250						
QUA2	Belchertown	131.53	66	PFAKE		19 36 30.0	+7.1
QUA2				LR	LR		
	comp=Z,1µm,22.0s						
FRNY	Flat Rock	131.67	62	PFAKE		19 36 30.0	+6.9
FRNY				LR	LR		
	comp=Z,2µm,19.0s						
GEYT	Alibeck	131.89	288	PKP	PKPdf	19 36 22.1	-0.8
	comp=Z,2.5nm,0.8s,baz=210,slow=5.1,SNR=7.1						
GEYT				SKPab	SKPbc	19 39 44.2	-3.8
	comp=Z,14nm,1.2s,baz=140,slow=1.2,SNR=10						
GYA0B	ALIBECK ARRAY	131.89	288	ePKPdf	PKPdf	19 36 22.7	-0.2
GYA0B				LR	LR		
	comp=Z,1µm,20.0s						
BRYW	Bryant College	131.95	66	PFAKE		19 36 30.0	+6.2
BRYW				LR	LR		
	comp=Z,1µm,18.0s						
VT1	Waterbury	132.04	63	PFAKE		19 36 30.0	+6.1
VT1				LR	LR		
	comp=Z,2µm,20.0s						
HNH	Hanover	132.12	64	PFAKE		19 36 30.0	+5.9
HNH				LR	LR		
	comp=Z,2µm,20.0s						
HRV	Adam Dziewonsk	132.16	66	PFAKE		19 36 30.0	+5.8
HRV				LR	LR		
	comp=Z,1µm,22.0s						
WES	Weston	132.28	66	PFAKE		19 36 30.0	+5.6
WES				LR	LR		
	comp=Z,1µm,19.0s						
BCX	Boston College	132.36	66	PFAKE		19 36 40.0	+15
BCX				LR	LR		
	comp=Z,1µm,20.0s						
FFD	Franklin Falls	132.46	64	PFAKE		19 36 40.0	+15
FFD				LR	LR		
	comp=Z,2µm,22.0s						
LBNH	Lisbon	132.56	63	PFAKE		19 36 40.0	+15
LBNH				LR	LR		
	comp=Z,2µm,20.0s						
BBSR	BB Station	132.72	81	PFAKE		19 36 40.0	+14
BBSR				LR	LR		
	comp=Z,400nm,20.0s						
CHGQ	Chibougamau	132.86	55	P	PKiKP	19 36 25.3	-0.1
	baz=252						
RAYN	Ar Rayn	134.01	263	ePKPdf	PKPdf	19 36 27.5	+0.2
RAYN				LR	LR		
	comp=Z,1µm,20.0s						
RAYN	Ar Rayn	134.01	263	ePKIKP	PKPdf	19 36 27.5	+0.2
RAYN				MLR	MLR		
	comp=Z,1µm,20.0s						
WVL	Waterville	134.20	64	PFAKE		19 36 40.0	+12
WVL				LR	LR		
	comp=Z,2µm,20.0s						
PKME	Peaks-Kenny Pk	134.68	63	PFAKE		19 36 40.0	+11
PKME				LR	LR		
	comp=Z,2µm,18.0s						
PKME	Peaks-Kenny Pk	134.68	63	P	PKiKP	19 36 31.3	+2.1
	baz=251						
ABKAR	Akbulak array	134.69	303	ePKPdf	PKPdf	19 36 27.6	-0.1
EMMW	East Machias	135.73	64	PFAKE		19 36 40.0	+8.7
EMMW				LR	LR		
	comp=Z,2µm,19.0s						
PQI	Presque Isle	135.96	61	PFAKE		19 36 40.0	+8.2
PQI				LR	LR		
	comp=Z,2µm,19.0s						
SVE	Sverdlovsk	135.96	314	i PKIKP	PKiKP	19 36 30.8	-0.6
SVE				pmax	pmax		
	comp=Z,26nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,21.0s						
AKTO	Aktyubinsk	136.21	304	SKPbc	SKPbc	19 39 57.9	-3.9
	comp=Z,3.0nm,0.9s,baz=119,slow=5.5,SNR=6.6						
TULEG	Thule	136.25	18	PFAKE		19 36 40.0	+8.5
TULEG				LR	LR		
	comp=Z,1µm,20.0s						
ARU	Arti	137.04	313	SKPbc	SKPbc	19 40 00.9	-3.0
	comp=Z,1.7nm,0.7s,baz=178,slow=2.3,SNR=5.2						
ARU	Arti	137.04	313	ePKPdf	PKPdf	19 36 31.6	-0.2
ARU				LR	LR		
	comp=Z,1µm,19.0s						
ARU	Arti	137.04	313	i PKIKP	PKiKP	19 36 32.8	-0.8
ARU						19 39 14.9	
BATG	Bathurst New B	137.41	61	PFAKE		19 36 40.0	+5.3
BATG				LR	LR		
	comp=Z,2µm,20.0s						
HAL	Halifax	138.33	66	PFAKE		19 36 50.0	+13
HAL				LR	LR		
	comp=Z,2µm,22.0s						
GBN	Guysborough	139.96	65	PFAKE		19 36 50.0	+10
GBN				LR	LR		
	comp=Z,2µm,21.0s						
AKT	Akhty	140.64	288	ePKIKP	PKPdf	19 36 38.5	-0.6
AKT				e		19 39 40.2	
AKT				e		19 43 47.6	
AKT				pmax	pmax		
	comp=Z,21nm,1.1s						
MAK	Makhachkala	141.24	290	i P	Pdif	19 33 53.9	-4.0
MAK				i		19 36 40.0	
MAK				e		19 39 38.3	
MAK				ePPP	PPP	19 42 45.8	
MAK				e		19 43 49.7	
MAK				eSS	SS	19 58 07.8	-3.6
MAK				eSSS	SSS	20 03 25.2	
MAK				pmax	pmax		
	comp=Z,164nm,2.5s						
KBS	Kingsbay	141.95	355	PFAKE		19 36 50.0	+6.9
KBS				LR	LR		
	comp=Z,1µm,19.0s						
GNI	Garni	142.36	285	PFAKE		19 36 50.0	+4.7
GNI				LR	LR		
	comp=Z,800nm,19.0s						
GNI	Garni	142.36	285	⇓ePKIKP	PKiKP	19 36 44.0	-1.3
GROC	Groznyy	142.51	290	ePKIKP	PKPdf	19 36 40.5	-1.7
GROC				e		19 39 49.1	
GROC				e		19 43 50.3	
GROC				pmax	pmax		
	comp=Z,33nm,0.8s						
TBLG	Delisi	142.85	287	ePKPdf	PKPdf	19 36 40.2	-2.7
TBLG	Delisi	142.85	287	ePKIKP	PKPdf	19 36 40.2	-2.7
AKH	Akhalkalaki	143.65	286	ePKPdf	PKPbc	19 36 42.7	+0.6
AKH				LR	LR		
	comp=Z,1µm,18.0s						
AKH	Akhalkalaki	143.65	286	⇑iP	PKPbc	19 36 42.2	+0.2
AKH	Akhalkalaki	143.65	286	ePKIKP	PKPbc	19 36 42.7	+0.7
AKH				MLR	MLR		
	comp=Z,1µm,18.0s						
PRGR	Permogore	143.67	321	ePKHKP	PKPpre	19 36 39.5	
PRGR				pmax	pmax		
	comp=Z,46nm,1.1s						
ILULI	Ilulissat	143.67	25	ePKPdf	PKPdf	19 36 42.8	-0.6
ILULI				LR	LR		
	comp=Z,1µm,18.0s						
ILULI	Ilulissat	143.67	25	ePKIKP	PKPdf	19 36 42.8	-0.6
ILULI				MLR	MLR		
	comp=Z,1µm,18.0s						
ZEI	Tsey	143.74	289	i PKIKP	PKPbc	19 36 42.4	+0.1
ZEI				pmax	pmax		
	comp=Z,42nm,1.4s						
NCK	Nalchik	144.14	290	⇓iPKIKP	PKPdf	19 36 44.2	-0.9
DAG	Danmarks Havn	144.30	5	i PKIKP	PKPab	19 36 41.9	-0.5
DAG	Danmarks Havn	144.30	5	i P	PKPab	19 36 41.9	-0.5
KBZ	Khabaz	144.69	290	PKP	PKPab	19 36 42.7	-2.0
	comp=Z,22nm,0.7s,baz=84,slow=3.5,SNR=26						
NEY	Neytrino	144.70	289	c ePKIKP	PKPdf	19 36 46.2	-0.1
LIC	Lamto	144.75	181	ePKP1	PKPbc	19 36 46.2	+0.2
	comp=Z,350nm,1.1s						
SFJD	Kangerlussuaq	144.76	29	ePKPdf	PKPbc	19 36 44.5	+0.1
SFJD				LR	LR		
	comp=Z,2µm,20.0s						
SFJD	Kangerlussuaq	144.76	29	i PKIKP	PKPdf	19 36 45.0	-0.4
SFJD	Kangerlussuaq	144.76	29	i P	PKPdf	19 36 45.0	-0.4
KIC	Kosan Boka	144.88	181	ePKP1	PKPbc	19 36 46.7	+0.3
	comp=Z,565nm,1.3s						
GOF	Gofitskoye	144.88	292	⇑ePKIKP	PKPab	19 36 45.3	-0.2
GOF				pmax	pmax		
	comp=Z,239nm,1.0s						
KIV	Kislovodsk	144.89	290	ePKPdf	PKPab	19 36 45.6	-0.1
KIV				LR	LR		
	comp=Z,700nm,19.0s						
KIV	Kislovodsk	144.89	290	⇑iP	PKPbc	19 36 45.7	0.0
KIV	Kislovodsk	144.89	290	i PKIKP	PKPab	19 36 45.2	-0.5
KIV				e		19 40 00.4	
KIV				eSS	SS	19 58 47.7	-6.1
KIV				pmax	pmax		
	comp=Z,76nm,1.1s						
BATM	Batumi	145.00	286	⇑iP	PKPbc	19 36 45.0	-1.0
BCA	Borcka	145.00	286	⇑iP	PKPbc	19 36 45.2	-0.9
SUMG	Summit	145.15	17	ePKPbc	PKPbc	19 36 45.7	-0.4
SUMG				LR	LR		
	comp=Z,2µm,22.0s						
SUMG	Summit	145.15	17	ePKIKP	PKPbc	19 36 45.7	-0.4
SUMG				MLR	MLR		
	comp=Z,2µm,22.0s						
SUMG	Summit	145.15	17	i P	PKPdf	19 36 47.3	+0.8
TIC	Toumodi	145.17	181	ePKP1	PKPab	19 36 47.5	+0.1
DBIC	Dimbokro	145.19	181	PKPbc	PKPbc	19 36 47.4	0.0
	comp=Z,87nm,0.7s,baz=158,slow=4.3,SNR=48						
DBIC	Dimbokro	145.19	181	ePKPbc	PKPbc	19 36 46.8	-0.6
LVZ	Lovozero	146.00	334	ePKPdf	PKPbc	19 36 48.1	-0.3
LVZ				LR	LR		
	comp=Z,1µm,21.0s						
LVZ	Lovozero	146.00	334	c iPKP2	PKPdf	19 36 47.7	+0.1
KTUT	Trabzon	146.22	284	⇑iP	PKPbc	19 36 50.0	+0.2
APA	Apatity	146.58	334	⇑iPKIKP	PKPdf	19 36 48.0	-0.5
APA				i		19 36 56.5	
APA				pmax	pmax		
	comp=Z,14nm,0.7s						
APA				MLR	MLR		
	comp=Z,400nm,16.0s						
SOC	Sochi	146.90	289	c iPKIKP	PKPdf	19 36 49.7	-0.1
SOC				i		19 36 55.2	
SOC				e		19 40 16.5	
SOC				ePPP	PPP	19 43 35.8	
ARCES	ARCESS Array B	147.70	340	PKPbc	PKPdf	19 36 50.2	-0.2
	comp=Z,27nm,0.7s,baz=52,slow=2.4,SNR=57						
ARE0	ARCESS Array S	147.70	340	ePKPdf	PKPdf	19 36 50.9	+0.6
ARE0				LR	LR		
	comp=Z,100nm,22.0s						
IVI	Ivigtut	147.81	38	ePKPdf	PKPdf	19 36 51.0	+0.3
IVI				LR	LR		
	comp=Z,1µm,18.0s						
VORD	Divnogorie	148.05	303	ePKP2	PKPbc	19 36 54.3	-0.3
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
VORR	Voronezh	148.11	304	ePKHKP	PKPpre	19 36 50.0	
VORR				pmax	pmax		
	comp=Z,350nm,1.2s						
VSR	Storozhevoye	148.13	303	ePKP2	PKPbc	19 36 54.5	-0.3
VSR				pmax	pmax		
	comp=Z,60nm,1.2s						
LPSR	Galich'ya Gora	148.26	306	ePKP2	PKPbc	19 36 55.2	+0.1
LPSR				pmax	pmax		
	comp=Z,140nm,1.1s						
KTK1	Kautokeino	148.64	340	ePKPdf	PKPdf	19 36 51.9	0.0
MOS	Moscow	148.73	312	ePKHKP	PKPpre	19 36 50.8	
MOS				pmax	pmax		
	comp=Z,194nm,1.8s						
ANN	Anapa	148.75	291	i PKP2	PKPbc	19 36 56.9	+0.3
ANN				e		19 40 26.6	
ANN				eSSS	SSS	20 05 14.7	
ANN				pmax	pmax		
	comp=Z,146nm,1.2s						
CSS	Mathiatis	148.93	271	ePKPdf	PKPdf	19 36 54.1	+0.6
CSS				LR	LR		
	comp=Z,1µm,20.0s						
NRS	Narsarsuaq	149.08	37	PFAKE		19 37 00.0	-1.3
NRS				LR	LR		
	comp=Z,2µm,19.0s						
NRS	Narsarsuaq	149.08	37	i PKP2	PKiKP	19 36 57.8	-0.4
NRS				MLR	MLR		
	comp=Z,1µm,14.0s						
NRS	Narsarsuaq	149.08	37	i P	PKiKP	19 36 57.8	-0.4
	comp=Z,1µm,14.0s						
TRO	Tromso	149.16	344	ePKPbc	PKPbc	19 36 57.3	+0.4
SACV	Santiago Islan	149.20	144	ePKPab	PKPab	19 37 02.5	-0.6
OBN	Obninsk	149.42	311	ePKPdf	PKPdf	19 36 54.1	+0.5
OBN				LR	LR		
	comp=Z,1µm,20.0s						
OBN	Obninsk	149.42	311	⇑iP	PKPdf	19 36 55.0	+1.5
OBN	Obninsk	149.42	311	c iPKIKP	PKPdf	19 36 54.0	+0.5
OBN				e		19 40 31.8	
OBN				ePPP	PPP	19 43 52.2	
OBN				e		19 44 03.2	
OBN				eSS	SS	19 59 36.3	-7.6
OBN				pmax	pmax		
	comp=Z,301nm,1.8s						
SCO	Scoresbysund	149.88	11	ePKPdf	PKPdf	19 36 53.8	0.0
SCO				LR	LR		
	comp=Z,1µm,19.0s						
SCO	Scoresbysund	149.88	11	ePKIKP	PKPdf	19 36 53.8	0.0
SCO				MLR	MLR		
	comp=Z,1µm,19.0s						
ANGG	Ammassalik, Gr	149.98	26	PFAKE		19 37 10.0	+5.2
ANGG				LR	LR		
	comp=Z,1µm,20.0s						
BR131	Keskin Array S	150.36	280	ePKPdf	PKPdf	19 36 55.9	+0.2
BRTR	Keskin Array B	150.36	280	PKPbc	PKPbc	19 36 58.9	-2.2
	comp=Z,19nm,0.8s,baz=134,slow=4.7,SNR=29						
TOC4	Torodi Ar. Sit	150.90	195	PFAKE		19 37 10.0	0.0
TOC4				LR	LR		
	comp=Z,3µm,19.0s						
TOC3	Torodi Ar. Sit	150.91	195	PFAKE		19 37 10.0	0.0
TOC3				LR	LR		
	comp=Z,3µm,19.0s						
TOC5	Torodi Ar. Sit	150.91	195	PFAKE		19 37 10.0	0.0
TOC5				LR	LR		
	comp=Z,3µm,19.0s						
TOB3	Torodi Ar. Sit	150.92	195	PFAKE		19 37 10.0	0.0
TOB3				LR	LR		
	comp=Z,3µm,19.0s						
TOB4	Torodi Ar. Sit	150.92	195	PFAKE		19 37 10.0	-0.1
TOB4				LR	LR		
	comp=Z,3µm,19.0s						
TOA3	Torodi Ar. Sit	150.93	195	PFAKE		19 37 10.0	-0.1
TOA3				LR	LR		
	comp=Z,3µm,19.0s						
TOA2	Torodi Ar. Sit	150.93	195	PFAKE		19 37 10.0	-0.1
TOA2				LR	LR		
	comp=Z,3µm,19.0s						
TOA0	Torodi Ar. Sit	150.93	195	ePKPdf	PKPdf	19 36 56.8	-0.4
TOA0				LR	LR		
	comp=Z,3µm,19.0s						
TORD	Torodi Ar. Bea	150.93	195	PKP	PKPdf	19 36 56.5	-0.7
	comp=Z,9.4nm,1.0s,baz=188,slow=2.2,SNR=30						
TORD				PKPbc	pPKPdf	19 37 02.5	-0.3
	comp=Z,92nm,0.9s,baz=163,slow=1.8,SNR=84						
TOB2	Torodi Ar. Sit	150.93	195	PFAKE		19 37 10.0	-0.1
TOB2				LR	LR		
	comp=Z,3µm,19.0s						
TOC2	Torodi Ar. Sit	150.93	195	PFAKE		19 37 10.0	-0.1
TOC2				LR	LR		
	comp=Z,3µm,18.0s						
TOA1	Torodi Ar. Sit	150.94	195	PFAKE		19 37 10.0	-0.1
TOA1				LR	LR		
	comp=Z,3µm,19.0s						
TOB5	Torodi Ar. Sit	150.94	195	PFAKE		19 37 10.0	-0.1
TOB5				LR	LR		
	comp=Z,3µm,19.0s						
TOC7	Torodi Ar. Sit	150.95	195	PFAKE		19 37 10.0	-0.2
TOC7				LR	LR		
	comp=Z,3µm,19.0s						
TOC1	Torodi Ar. Sit	150.95	195	PFAKE		19 37 10.0	-0.2
TOC1				LR	LR		
	comp=Z,3µm,19.0s						
ANTO	Ankara	151.02	279	ePKPdf	PKPdf	19 36 56.8	+0.1
ANTO				LR	LR		
	comp=Z,800nm,18.0s						
ANTO	Ankara	151.02	279	⇑iP	PKPbc	19 37 02.5	0.0
ANTO	Ankara	151.02	279	ePKIKP	PKPdf	19 36 56.8	+0.1
ANTO				MLR	MLR		
	comp=Z,800nm,18.0s						
SIM	Simferopol'	151.10	290	d iPKIKP	PKPdf	19 36 58.1	+1.6
SIM						19 40 48.1	
SIM				pmax	pmax		
	comp=Z,128nm,1.8s						
SIM				MLR	MLR		
	comp=Z,370nm,17.0s						
STEI	Steigen	151.34	344	ePKPdf	PKPdf	19 36 56.2	0.0
STEI				ePKPbc	PKiKP	19 37 02.6	0.0
PUL	Pulkovo	151.40	322	eP	PKPdf	19 36 53.0	-3.5
PUL	Pulkovo	151.40	322	⇑iPKIKP	PKiKP	19 37 04.3	+1.3
LOF	Lofoten	151.51	345	ePKPdf	PKPdf	19 36 56.4	0.0
ISP	Isparta	152.09	274	PFAKE		19 37 10.0	+4.6
ISP				LR	LR		
	comp=Z,900nm,19.0s						
MDUB	Mudurnu	152.36	280	ePKPdf	PKPdf	19 36 58.5	-0.2
MDUB				LR	LR		
	comp=Z,2µm,19.0s						
FIA1	FINESS Array S	152.49	327	ePKPdf	PKPdf	19 36 59.2	+1.2
FINES	FINESS Array B	152.49	327	PKPbc	PKPbc	19 37 03.2	-1.7
	comp=Z,30nm,0.7s,baz=66,slow=2.9,SNR=58						
MOR8	Moi Rana	152.97	342	ePKPdf	PKPdf	19 36 58.0	-0.7
MOR8				ePKPab	PKPab	19 37 16.9	-0.4
VSU	Vasula	153.63	321	eP	PKPbc	19 37 06.2	-1.4
VSU				IAmb	IAmb	19 37 21.9	
	comp=Z,227nm,0.9s						
VSU	Vasula	153.63	321	⇓ePKIKP	PKPdf	19 37 02.4	+2.6
YLV	Yalova	153.73	279	⇑iP	PKPab	19 37 20.7	-0.8
YLV	Yalova	153.73	279	⇑PKP2	PKPab	19 37 20.7	-0.8
KARP	Karpathos	153.79	267	ePKPab	PKPab	19 37 22.4	+0.6
KARP				LR	LR		
	comp=Z,2µm,20.0s						
AKASG	Malin Array Be	154.44	303	PKP	PKPdf	19 36 59.4	-1.8
	comp=Z,1.0nm,0.6s,baz=59,slow=1.7,SNR=9.3						
AKASG				PKPbc	sPKPdf	19 37 07.8	-0.9
	comp=Z,7.3nm,0.7s,baz=63,slow=2.5,SNR=20						
AKASG				PKPab	PKPab	19 37 22.0	-2.1
	comp=Z,16nm,0.9s,baz=67,slow=4.0,SNR=8.4						
AKBB	Malin Array Si	154.44	303	ePKPdf	PKPdf	19 37 02.1	+0.9
AKBB				ePKPbc	PKiKP	19 37 10.2	+0.6
AKBB				ePKPab	PKPab	19 37 24.2	+0.2
AKBB				LR	LR		
	comp=Z,1µm,22.0s						
AKBB	Malin Array Si	154.44	303	ePKIKP	PKPdf	19 37 02.1	+0.9
AKBB				e		19 37 10.2	
AKBB				e		19 37 24.2	
AKBB				MLR	MLR		
	comp=Z,1µm,22.0s						
MICGM	Minsk	154.46	312	ePKP2	PKPdf	19 37 05.0	+3.9
MICGM				ePKP1	PKPab	19 37 25.0	+1.0
MICGM				ePP	PP	19 41 05.0	+5.2
MICGM				eLR	LR	20 46 10.0	
MNK	Minsk	154.46	312	ePKIKP	PKPdf	19 37 05.0	+3.9
MNK				e		19 41 05.0	
BALB	Balikesir	154.61	277	ePKPdf	PKPdf	19 37 01.1	-0.7
BALB				ePKPbc	PKiKP	19 37 12.4	+2.1
BALB				ePKPab	PKPab	19 37 25.3	+0.2
BALB				LR	LR		
	comp=Z,2µm,20.0s						
CTYL	Yalikoy Yolu	154.73	281	⇑iP	PKPab	19 37 26.5	+0.9
NSS	Namsos	154.92	342	epPKPdf	pPKPdf	19 37 04.9	-2.2
KIS	Kishinev	154.93	294	ePKP	PKPdf	19 37 03.0	+1.0
KIS	Kishinev	154.93	294	ePP	PP	19 41 02.0	-0.8
KIS				LRM	MLR	20 50 00.0	
	comp=Z,600nm,20.0s						
KIS	Kishinev	154.93	294	ePKIKP	PKPdf	19 37 03.0	+1.0
KIS				e		19 37 25.0	
KIS				e		19 41 02.0	
KIS				MLR	MLR		
	comp=Z,600nm,20.0s						
IZAR	Zarasai	154.95	315	eP	PKPbc	19 37 07.1	-3.3
IZAR				IAmb	IAmb	19 37 27.8	
	comp=Z,32nm,1.2s						
ISAL	Salakas	155.07	315	eP	PKPdf	19 37 02.2	+0.3
ISAL				IAmb	IAmb	19 37 28.3	
	comp=Z,26nm,1.4s						
TIRR	Tirgusor	155.09	288	PFAKE		19 37 10.0	+7.7
TIRR				LR	LR		
	comp=Z,2µm,20.0s						
IIGN	Ignalina	155.10	314	eP	PKPdf	19 37 02.9	+0.9
IIGN				IAmb	IAmb	19 37 13.4	
	comp=Z,10nm,0.9s						
BORG	Borgarnes	155.13	16	PFAKE		19 37 10.0	+8.3
BORG				LR	LR		
	comp=Z,1µm,22.0s						
PHSR	Pinarhisar	155.33	281	⇑iP	PKPab	19 37 27.8	-0.4
HARR	Harsova	155.45	289	⇓iP	PKPdf	19 37 07.9	+5.1
HARR	Harsova	155.45	289	⇓PKIKP	PKPdf	19 37 07.9	+5.1
JMB	Yambol	156.16	283	P	PKPab	19 37 32.4	+0.7
ALN	Alexandroupoli	156.27	279	PFAKE		19 37 10.0	+6.0
ALN				LR	LR		
	comp=Z,700nm,20.0s						
VRI	Vrincioaia	156.36	291	⇑iP	PKPab	19 37 21.6	-11
PLOR	Plostina	156.42	291	⇑iP	PKPab	19 37 33.8	+1.0
PLOR	Plostina	156.42	291	⇑PKP2	PKPab	19 37 33.8	+1.0
BIZ	Bicaz	156.79	294	⇑iP	PKPdf	19 37 06.3	+1.8
DIM	Dimitrovgrad	156.87	282	P	PKPab	19 37 35.4	+0.7
KDZ	Kurdzhali	156.88	280	P	PKPab	19 37 34.9	0.0
MLR	Muntele Rosu	156.90	290	ePKPdf	PKPdf	19 37 03.2	-1.7
MLR				ePKPab	PKPab	19 37 34.6	-0.4
MLR				LR	LR		
	comp=Z,2µm,21.0s						
MLR	Muntele Rosu	156.90	290	⇑iP	PKPdf	19 37 05.7	+0.8
MLR	Muntele Rosu	156.90	290	⇑PKIKP	PKPdf	19 37 05.7	+0.8
SUW	Suwalki	157.23	313	ePKPdf	PKPdf	19 37 04.6	-0.2
SUW				ePKPab	PKPab	19 37 35.8	0.0
SUW				LR	LR		
	comp=Z,1µm,22.0s						
SUW	Suwalki	157.23	313	ePKIKP	PKPdf	19 37 04.6	-0.2
SUW				MLR	MLR		
	comp=Z,1µm,22.0s						
DOPR	Dopca	157.30	292	⇓iP	PKPdf	19 37 06.5	+1.3
BURAR	Bucovina Array	157.36	296	⇑iP	PKPdf	19 37 06.9	+1.5
BURAR	Bucovina Array	157.36	296	⇑PKIKP	PKPdf	19 37 06.9	+1.5

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BUR08 Bucovina Ar. S  157.37 296  ePKPab    PKPab    19 37 36.8  -0.1
RZN   Rozhen          157.41 280   P        PKPab    19 37 37.5  +0.2
PLD   Plovdiv         157.48 281   P        PKPab    19 37 37.5  +0.1
VOIR                  157.53 290⇓iP         PKPdf    19 37 05.9  +0.3
VOIR                  157.53 290 ⇓PKIKP     PKPdf    19 37 06.0  +0.3
PLVB  Pleven          157.71 285⇑iP         PKPab    19 37 37.1  -1.2
DOMB  Dombas          157.74 342  ePKPab    PKPab    19 37 37.7  -0.2
ARR   Arges           157.82 290⇓iP         PKPdf    19 37 07.2  +1.2
LVV   L'vov           157.87 302  i PKIKP   PKPdf    19 37 05.6  -0.2
LVV                               e                  19 41 16.7
LVV                               e                  19 44 05.8
LVV                                MLR      MLR
      comp=E,200nm,22.0s
LVV                                MLR      MLR
      comp=N,400nm,23.0s
LVV                                MLR      MLR
      comp=Z,400nm,23.0s
PGB   Panagyurishte   157.94 282   P        PKPab    19 37 39.5   0.0
NB2   NORSAR Subarra158.03 338     PKPdf    PKPdf    19 37 05.2  -0.5
      comp=Z,108nm,2.5s,baz=28,slow=1.2
NB2   NORSAR Subarra158.03 338     PKPdf    PKPdf    19 37 05.2  -0.5
      baz=28,slow=1.2
NOA   NORSAR Array B 158.03 338    PKP      PKPdf    19 37 04.3  -1.4
      comp=Z,9.7nm,1.3s,baz=44,slow=1.3,SNR=3.0
NOA                                PKPab    PKPab    19 37 37.6  -1.6
      comp=Z,4.0nm,0.9s,baz=39,slow=4.6,SNR=5.4
MMB   Musomiste       158.12 280   P        PKPab    19 37 40.4  +0.2
NBO00 NORSAR Array S 158.16 338   ePKPdf    PKPdf    19 37 05.8   0.0
NBO00                             ePKPab    PKPab    19 37 40.3  +0.6
ITM   Ithomi          158.32 267   PFAKE             19 37 20.0  +13
ITM                                LR       LR
      comp=Z,1µm,21.0s
MPEP  Malo Peshtene   158.35 284   P        PKPab    19 37 41.7  +0.6
LOT   Lotru           158.43 290⇑iP         PKPdf    19 37 12.6  +5.8
AGG   Agios Georgios  158.59 272   PFAKE             19 37 20.0  +13
AGG                                LR       LR
      comp=Z,1µm,19.0s
VTS   Vitosha         158.63 282  ePKPdf    PKPdf    19 37 05.5  -1.7
VTS                               ePKPab    PKPab    19 37 42.2  -0.4
VTS                                LR       LR
      comp=Z,1µm,19.0s
VTS   Vitosha         158.63 282⇑iP         PKPab    19 37 41.0  -1.6
VTS   Vitosha         158.63 282  ePKIKP    PKPdf    19 37 05.5  -1.7
VTS                               e                  19 37 42.2
VTS                                MLR      MLR
      comp=Z,1µm,19.0s
VTS   Vitosha         158.63 282   P        PKPab    19 37 42.6   0.0
KKB   Krupnik         158.64 280   P        PKPab    19 37 42.3  -0.2
LIT   Litokhoron      158.74 275   PFAKE             19 37 20.0  +13
LIT                                LR       LR
      comp=Z,1µm,20.0s
KWP   Kalwaria Pacla  158.74 302   PFAKE             19 37 20.0  +13
KWP                                LR       LR
      comp=Z,9µm,20.0s
DEV   Deva            159.03 291⇑iP         PKPab    19 37 45.7  +1.7
DEV   Deva            159.03 291 ⇑PKP2      PKPab    19 37 45.7  +1.7
TAM   Tamanrasset     159.04 210  ePKPdf    PKPdf    19 37 07.2  -1.0
TAM                                LR       LR
      comp=Z,2µm,21.0s
TAM   Tamanrasset     159.04 210  ePKIKP    PKPdf    19 37 07.2  -1.0
TAM                                MLR      MLR
      comp=Z,2µm,21.0s
TRPA  Tarpa           159.10 298  eP        PKPdf    19 37 04.1  -3.2
TRPA                              ePP       PP       19 41 24.0  -1.7
SKAR  Skarslia        159.10 341  epPKPdf   pPKPdf   19 37 10.0  -2.6
GZR   Gura Zlata      159.13 290⇑iP         PKPdf    19 37 07.3  -0.2
GZR   Gura Zlata      159.13 290 ⇑PKIKP     PKPdf    19 37 07.3  -0.2
KOLS  Kolonicke sedl  159.15 300  ePKIKP    PKPdf    19 37 08.0  +0.6
KOLS  Kolonicke sedl  159.15 300  ePKP      PKPdf    19 37 08.0  +0.6
KOLS                              e                  19 37 46.3
UZH   Uzhgorod        159.19 299⇓iPKP2      PKPab    19 37 42.7  -1.9
LTVH  Ltavrtes, Hu    159.62 296⇑eP         PKPdf    19 37 08.1  +0.2
LTVH                              ePP       PP       19 41 24.0  -4.6
KONO  Kongsberg       159.63 338   PFAKE             19 37 20.0  +12
KONO                               LR       LR
      comp=Z,900nm,19.0s
MDVR  Moldovita       159.88 288⇑iP         PKPdf    19 37 09.2  +0.8
BZS   Buzias          159.94 291⇑iP         PKPdf    19 37 09.2  +0.8
BZS   Buzias          159.94 291 ⇑PKIKP     PKPdf    19 37 09.2  +0.8
OJC   Ojcow           160.43 305  ePKPdf    PKPdf    19 37 08.7  -0.1
OJC                               ePKPab    PKPab    19 37 50.3  +0.3
OJC   Ojcow           160.43 305  ePKIKP    PKPdf    19 37 08.7  -0.1
OJC                               e                  19 37 50.3
AMBH  Ambrzfalva      160.52 293  eP        PKPdf    19 37 10.1  +1.1
BLS5  Blasjo          160.66 341  ePKPdf    PKPdf    19 37 08.5  -0.2
PSZ   Piszkesteto     160.89 298⇑eP         PKPdf    19 37 08.1  -1.3
PSZ                               ePP       PP       19 41 35.1  -0.5
DIVS  Divibare        161.10 286  i P       PKPdf    19 37 09.7  -0.1
FRGS  Fruska Gora     161.23 289  i P       PKPdf    19 37 09.5  -0.3
VYHS  Vyhne           161.47 300  ePKIKP    PKPdf    19 37 09.5  -0.5
VYHS  Vyhne           161.47 300  ePKP      PKPdf    19 37 09.5  -0.5
VYHS                              e                  19 37 55.7
BBLS  Lazi&#263;i     161.52 285  i P       PKPdf    19 37 10.4  +0.2
PDG   Podgorica       161.53 281⇑iP         PKPab    19 37 53.8  -1.2
PDG   Podgorica       161.53 281  eP        PKPdf    19 37 09.6  -0.6
TTG   Podgorica       161.53 281  ePKPdf    PKPdf    19 37 09.3  -0.9
TTG                               ePKPab    PKPab    19 37 53.4  -1.6
TTG   Podgorica       161.53 281  ePKIKP    PKPdf    19 37 09.3  -0.9
TTG                               e                  19 37 53.4
BUD   Budapest        161.54 297  eP        PKPdf    19 37 10.1  +0.1
OKC   Ostrava-Krasne  161.56 305  ePKP2     PKPab    19 37 56.4  +1.5
OKC                                MLR      MLR
      comp=Z,900nm,21.1s
OKC   Ostrava-Krasne  161.56 305  ePKPAB    PKPab    19 37 56.4  +1.5
OKC                                AMS      AMS      20 56 30.0
      comp=Z,900nm,21.1s
DRME  Dracevica, Mon  161.56 280  eP        PKPdf    19 37 08.8  -1.4
MORC  Moravsky Berou  161.95 305  ePKPdf    PKPdf    19 37 09.7  -0.7
MORC                              ePKPab    PKPab    19 37 56.7   0.0
MORC  Moravsky Berou  161.95 305⇑iP         PKPdf    19 37 10.8  +0.3
MORC  Moravsky Berou  161.95 305 ⇑PKIKP     PKPdf    19 37 10.8  +0.3
MORC  Moravsky Berou  161.95 305  ePKP      PKPdf    19 37 10.1  -0.4
MORC                              e                  19 37 57.6
MORH  Mrgy, Hungar    161.97 293  i P       PKPdf    19 37 10.2  -0.3
MORH  Mrgy, Hungar    161.97 293  eP        PKPdf    19 37 09.1  -1.4
MORH                              ePP       PP       19 41 38.1  -3.2
CSKK  Cskako          162.07 297  eP        PKPdf    19 37 11.0  +0.4
JAVC  Velka Javorina  162.13 302  ePKP      PKPdf    19 37 11.4  +0.7
JAVC                              e                  19 37 59.2
TIH   Tihany          162.40 295  eP        PKPdf    19 37 11.1  +0.2
TIH                               ePP       PP       19 41 38.1  -5.5
OSTC  Ostas           162.48 308  ePKPAB    PKPab    19 38 00.0  +1.1
OSTC                               AMS      AMS      20 50 30.0
      comp=Z,1µm,23.5s
DPC   Dobruska-Polom  162.50 307  ePKP2     PKPab    19 37 59.4  +0.3
DPC                                MLR      MLR
      comp=Z,900nm,21.6s
DPC   Dobruska-Polom  162.50 307  ePKPAB    PKPab    19 37 59.4  +0.3
DPC                               ex        x        19 38 07.8
DPC                                AMS      AMS      20 55 10.0
      comp=Z,900nm,21.6s
MODS  Modra-Piesok    162.51 300  ePKIKP    PKPdf    19 37 11.2  +0.2
MODS                              e                  19 37 59.6
MODS  Modra-Piesok    162.51 300  ePKP      PKPdf    19 37 11.2  +0.2
MODS                              e                  19 37 59.6
CHVC  Chvalec         162.57 308  ePKPAB    PKPab    19 38 00.6  +1.3
CHVC                               AMS      AMS      20 50 40.0
      comp=Z,1µm,21.9s
UPC   Upice           162.62 308  ePKP2     PKPab    19 37 59.8  +0.3
UPC                                MLR      MLR
      comp=Z,1µm,23.7s
UPC   Upice           162.62 308  ePKPAB    PKPab    19 37 59.8  +0.3
UPC                                AMS      AMS      20 50 50.0
      comp=Z,1µm,23.7s
VRAC  Vranov          162.69 304⇑iP         PKPdf    19 37 10.2  -1.0
VRAC  Vranov          162.69 304 ⇑PKIKP     PKPdf    19 37 10.2  -1.0
VRAC  Vranov          162.69 304  ePKP      PKPdf    19 37 10.7  -0.5
VRAC                              e                  19 38 01.1
STON  Ston            162.72 282  i P       PKPdf    19 37 10.8  -0.5
TIP   Timpagrande     162.81 269  ePKPdf    PKPdf    19 37 11.4  -0.3
TIP                               ePKPab    PKPab    19 38 01.4  +0.6
TIP   Timpagrande     162.81 269⇑iP         PKPdf    19 37 09.3  -2.4
KRUC  Moravsky        162.88 303  ePKP      PKPdf    19 37 10.4  -0.9
KRUC                              e                  19 38 01.8
BLY   Banja Luka      163.11 288  ePKPdf    PKPdf    19 37 11.0  -0.7
BLY                               ePKPab    PKPab    19 38 02.4  +0.6
BLY   Banja Luka      163.11 288  i P       PKPdf    19 37 11.6  -0.1
SOP   Sopron          163.14 299  eP        PKPdf    19 37 10.1  -1.5
SOP                               ePP       PP       19 41 39.0  -8.4
BEHE  Becsehely       163.22 294  eP        PKPdf    19 37 11.8  +0.1
BEHE  Becsehely       163.22 294⇑eP         PKPdf    19 37 11.0  -0.7
BEHE                              ePP       PP       19 41 47.0  -0.9
TREC  Trest           163.38 305   AMS      AMS      20 58 40.0
      comp=Z,1µm,20.0s
PVCC  Panska Ves      163.46 309  ePKP2     PKPab    19 38 04.7  +1.5
PVCC                               MLR      MLR
      comp=Z,900nm,19.9s
PVCC  Panska Ves      163.46 309  ePKPAB    PKPab    19 38 04.7  +1.5
PVCC                               AMS      AMS      21 03 30.0
      comp=Z,900nm,19.9s
CONA  Conrad Observa  163.54 300  i PKPdf   PKPdf    19 37 11.3  -0.8
      comp=Z,9.9nm,1.3s
CONA                              i PKPab   PKPab    19 38 05.2  +1.4
      comp=Z,7.9nm,1.5s
GOPC  GO Pecny, Ondr  163.58 307  ePKP2     PKPab    19 38 03.1  -0.7
GOPC                               MLR      MLR
      comp=Z,1µm,21.2s
GOPC  GO Pecny, Ondr  163.58 307  ePKPAB    PKPab    19 38 03.1  -0.7
GOPC                              ex        x        19 38 12.9
GOPC                               AMS      AMS      20 57 40.0
      comp=Z,1µm,21.2s
PRU   Pruhonice       163.69 308  ePKP2     PKPab    19 38 05.6  +1.4
PRU                                MLR      MLR
      comp=Z,1µm,21.4s
PRU   Pruhonice       163.69 308  ePKPAB    PKPab    19 38 05.6  +1.4
PRU                                AMS      AMS      20 56 20.0
      comp=Z,1µm,21.4s
ARSA  Arzberg         163.92 298  i PKPdf   PKPdf    19 37 11.8  -0.6
      comp=Z,16nm,1.4s,SNR=8.9
ARSA                              ePKPab    PKPab    19 38 06.1  +0.7
      comp=Z,20nm,1.4s
CLL   Collm           163.98 314  ePKPdf    PKPdf    19 37 11.2  -1.0
CLL                               ePKPab    PKPab    19 38 05.8  +0.4
CLL   Collm           163.98 314⇑iPKIKP     PKPdf    19 37 11.6  -0.7
CLL                               i                  19 37 17.4
CLL                                pmax     pmax
      comp=Z,34nm,1.6s
CLL   Collm           163.98 314⇑iPKPdf     PKPdf    19 37 11.6  -0.7
      comp=Z,34nm,1.6s
CLL                               i pPKPdf  pPKPdf   19 37 17.4  -0.5
      comp=Z,29nm,1.6s
CLL                             ⇓iPKPab     PKPab    19 38 05.8  +0.4
      comp=Z,16nm,1.1s
CLL                               i pPKPab  sPKPab   19 38 12.1  -0.7
CLL                               ePP       PP       19 41 56.0  +4.5
CLL                               e                  19 42 10.0
CLL                               ePPP      PPP      19 45 37.0
CLL                               e                  19 47 10.0
CLL                               eSKKSac   SKKSac   19 48 24.0  -14
CLL                               ePPPrev            19 49 25.0
CLL                               ePSKS              19 52 18.0
CLL                               e                  19 53 00.0
CLL                               ePPS      PPS      19 55 30.0
CLL                               eSS       SS       20 02 18.0  -2.1
CLL                               ePSS      PSS      20 03 12.0
CLL                               ePSPS              20 03 54.0
CLL                               eSSS      SSS      20 08 54.0
CLL                               eSSSS              20 13 18.0
CLL                               e                  20 18 30.0
CLL                                LmV               21 01 00.0
      comp=Z,1µm,20.1s
CLL                                Lmax              21 03 00.0
CLL                                LmH               21 07 00.0
      comp=N,700nm,21.5s
CLL                                LmH               21 07 00.0
      comp=E,800nm,18.4s
KAC   Achnashellach   164.10 359  eP        PKPdf    19 37 11.8  -0.4
CRES  Cresnjev        164.22 293  i P       PKPdf    19 37 12.6  -0.1
KPL   Plockton        164.26   0  eP        PKPdf    19 37 12.4  +0.1
KPL                                IAMs_20  IAMs_20  20 50 25.8
      comp=Z,1µm,20.1s
PERS  Pernice         164.32 296  i PKPdf   PKPdf    19 37 12.4  -0.5
PERS                              i PKPab   PKPab    19 38 07.8  +0.6
PERS                              ePP       PP       19 41 54.6  +0.8
PERS                              eSKSac             19 44 08.6
SOKA  Soboth          164.37 296  i PKPdf   PKPdf    19 37 12.4  -0.5
      comp=Z,19nm,1.3s,SNR=12
SOKA                              i PKPab   PKPab    19 38 08.3  +0.8
      comp=Z,20nm,1.3s,SNR=7.7
BOJS  Bojanci         164.41 291  i PKPdf   PKPdf    19 37 13.2  +0.3
BOJS                              i pPKPdf  sPKPdf   19 37 19.4  -1.0
BOJS                              i PKPab   PKPab    19 38 06.5  -1.0
BOJS                              i PP      PP       19 41 54.6  +0.3
BOJS                              e                  19 44 12.5
BOJS                              e                  19 44 36.0
MOA   Molln           164.59 301  i PKPdf   PKPdf    19 37 12.3  -0.7
      comp=Z,5.7nm,1.5s
MOA                               i PKPab   PKPab    19 38 09.6  +1.3
      comp=Z,31nm,1.7s,SNR=9.4
KHC   Kasperske Hory  164.60 306  ePKPdf    PKPdf    19 37 11.9  -1.0
KHC                               ePKPab    PKPab    19 38 07.9  -0.5
KHC   Kasperske Hory  164.60 306  ePKP2     PKPab    19 38 09.0  +0.7
KHC                                MLR      MLR
      comp=Z,1µm,20.3s
KHC   Kasperske Hory  164.60 306  ePKPAB    PKPab    19 38 09.0  +0.7
KHC                               ex        x        19 38 14.2
KHC                                AMS      AMS      21 03 40.0
      comp=Z,1µm,20.3s
GEC2  GERESS Array S 164.63 305   ePKPdf    PKPdf    19 37 11.8  -1.3
GEC2                              ePKPab    PKPab    19 38 09.5  +0.9
GEC2  GERESS Array S 164.63 305   ePKIKP    PKPdf    19 37 11.8  -1.3
GERES GERESS Array B 164.63 305    PKP      PKPdf    19 37 11.8  -1.3
      comp=Z,2.7nm,0.9s,baz=270,slow=1.0,SNR=16
GERES                              PKPab    PKPab    19 38 07.9  -0.6
      comp=Z,12nm,1.0s,baz=64,slow=4.5,SNR=22
VISS  Visnje          164.65 293  ePKPdf    PKPdf    19 37 13.3  +0.2
VISS                              ePKPab    PKPab    19 38 08.6   0.0
VISS                              ePP       PP       19 41 56.3  +0.8
OBKA  Obir            164.73 295  ePKPdf    PKPdf    19 37 12.7  -0.6
      comp=Z,9.1nm,1.3s
OBKA                              i PKPab   PKPab    19 38 09.9  +0.8
      comp=Z,21nm,1.2s,SNR=5.2
NKC   Novy Kostel     164.81 311  ePKP2     PKPab    19 38 10.8  +1.6
NKC                                MLR      MLR
      comp=Z,1µm,18.2s
NKC   Novy Kostel     164.81 311  ePKPAB    PKPab    19 38 10.8  +1.6
NKC                                AMS      AMS      21 00 10.0
      comp=Z,1µm,18.2s
LJU   Ljubljana       164.83 294  i P       PKPdf    19 37 13.4  +0.2
CEY   Cerknica        164.95 293  i P       PKPdf    19 37 13.0  -0.4
RIY   Rijeka          164.97 291  i P       PKPdf    19 37 13.1  -0.2
JAVS  Javornik        165.17 293  i PKPdf   PKPdf    19 37 13.5  -0.2
JAVS                              i PKPab   PKPab    19 38 10.4  -0.7
JAVS                              i PP      PP       19 41 58.6  +0.2
MYKA  Terra Mystica   165.32 296  ePKPdf    PKPdf    19 37 13.2  -0.5
      comp=Z,9.0nm,1.2s
MYKA                              ePKPab    PKPab    19 38 12.0  +0.4
      comp=Z,8.0nm,1.4s
EAB   Aberfoyle       165.40 357  eP        PKPdf    19 37 12.4  -0.9
KBA   Koelnbreinsper  165.41 298  ePKPdf    PKPdf    19 37 12.9  -1.1
      comp=Z,20nm,1.4s,SNR=12
KBA                               ePKPab    PKPab    19 38 12.2  +0.1
      comp=Z,11nm,1.4s
ESY   Stoneypath      165.56 353  eP        PKPdf    19 37 12.6  -0.9
EDI   Edinburgh       165.60 355  eP        PKPdf    19 37 12.4  -1.1
EDI                                IAMs_20  IAMs_20  20 52 24.1
      comp=Z,1µm,20.4s
EBL   Broad Law       165.74 354  eP        PKPdf    19 37 13.5  -0.1
GRA1  Grafenberg Arr  165.76 310  ePKPdf    PKPdf    19 37 14.2  +0.3
GRA1                              ePKPab    PKPab    19 38 13.9  +0.6
AQU   L'Aquila        165.85 279  ePKPdf    PKPdf    19 37 14.1  -0.2
AQU                               ePKPab    PKPab    19 38 13.5  -0.6
AQU   L'Aquila        165.85 279  ePKIKP    PKPdf    19 37 14.1  -0.2
AQU                               e                  19 38 13.5
AQU   L'Aquila        165.85 279  eP        PKPdf    19 37 14.7  +0.4
ABTA  Abfaltersbach   166.04 298  i PKPdf   PKPdf    19 37 13.6  -0.7
      comp=Z,9.1nm,1.1s,SNR=8.6
ABTA                              i PKPab   PKPab    19 38 14.7  -0.1
      comp=Z,16nm,1.2s,SNR=6.1
WTTA  Wattenberg      166.47 300  i PKPdf   PKPdf    19 37 14.7  -0.1
      comp=Z,18nm,1.2s
WTTA                              ePKPab    PKPab    19 38 17.4  +0.6
      comp=Z,55nm,2.1s,SNR=7.3
WATA  Walderalm       166.49 301  ePKPdf    PKPdf    19 37 15.4  +0.7
      comp=Z,4.1nm,0.6s
WATA                              ePKPab    PKPab    19 38 16.9  +0.1
      comp=Z,22nm,1.3s
SQTA  Sankt Quirin    166.76 301  i PKPdf   PKPdf    19 37 14.8  -0.1
      comp=Z,26nm,1.3s,SNR=12
SQTA                              i PKPab   PKPab    19 38 18.5  +0.5
      comp=Z,20nm,0.9s,SNR=6.1
MOTA  Moosalm         166.79 301  i PKPdf   PKPdf    19 37 14.4  -0.6
      comp=Z,18nm,1.1s,SNR=13
MOTA                              ePKPab    PKPab    19 38 18.4  +0.2
      comp=Z,11nm,1.0s
KEST  Kesra           166.94 248   PKP      PKPdf    19 37 15.8  +0.5
      comp=Z,15nm,1.1s,baz=209,slow=1.6,SNR=8.9
KEST                               PKPab    PKPab    19 38 18.3  -0.8
      comp=Z,33nm,1.1s,baz=11,slow=1.3,SNR=12
KEST  Kesra           166.94 248  ePKPdf    PKPdf    19 37 15.5  +0.1
KEST                              ePKPab    PKPab    19 38 20.5  +1.4
RETA  Reutte          166.95 302  i PKPdf   PKPdf    19 37 14.3  -0.7
      comp=Z,16nm,1.2s,SNR=10.0
RETA                              i PKPab   PKPab    19 38 19.1  +0.3
      comp=Z,11nm,1.4s
FETA  Feichten        167.13 300  i PKPdf   PKPdf    19 37 15.4  +0.1
      comp=Z,24nm,1.1s,SNR=13
FETA                              ePKPab    PKPab    19 38 20.6  +0.9
      comp=Z,18nm,1.2s
PMOZ  Porto Moniz, M  167.26 130  ePKPdf    PKPdf    19 37 17.8  +2.1
PMOZ  Porto Moniz, M  167.26 130  ePKPab    PKPab    19 38 23.8  +3.3
PMOZ  Porto Moniz, M  167.26 130  ePP       PP       19 42 13.1  +4.4
PMOZ  Porto Moniz, M  167.26 130  eLR       LR       20 41 47.3
      comp=Z,2µm,20.0s
STU   Stuttgart       167.37 309  ePKPab    PKPab    19 38 20.7  +0.2
GMM   Mts of Mourne   167.37   1  eP        PKPdf    19 37 14.5  -0.4
FUORN Ofenpass-Fuorn  167.56 299  ePKPdf    PKPdf    19 37 15.1  -0.7
FUORN                             ePKPab    PKPab    19 38 22.1  +0.3
DAVA  Damuels         167.59 302  i PKPdf   PKPdf    19 37 15.4  -0.2
      comp=Z,19nm,1.3s,SNR=7.8
DAVA                              ePKPab    PKPab    19 38 22.7  +1.0
      comp=Z,16nm,1.2s
PMPS  Porto Santo     167.92 132  ePKPdf    PKPdf    19 37 19.3  +3.3
LBWR  Ladybower, Pea  167.93 349  eP        PKPdf    19 37 14.0  -1.4
LBWR                               IAMs_20  IAMs_20  21 04 58.0
      comp=Z,2µm,18.9s
PMPST Porto Santo, M  167.94 132  ePKPdf    PKPdf    19 37 19.9  +3.8
PMPST Porto Santo, M  167.94 132  ePKPab    PKPab    19 38 27.5  +4.1
PMPST Porto Santo, M  167.94 132  ePP       PP       19 42 14.9  +2.9
BFO   Black Forest    168.09 309  ePKPdf    PKPdf    19 37 14.7  -1.0
BFO                               ePKPab    PKPab    19 38 23.9  +0.2
BFO   Black Forest    168.09 309  ePKIKP    PKPdf    19 37 14.7  -1.0
BFO                               e                  19 38 23.9
WPS   Cemaes, Angles  168.19 357  eP        PKPdf    19 37 15.5   0.0
WPS                                IAMs_20  IAMs_20  20 59 42.6
      comp=Z,1µm,20.1s
TUE   Stuetta         168.21 299  ePKPdf    PKPdf    19 37 15.2  -0.9
BCLA  Clavier         168.40 323  ⇓PKP      PKPdf    19 37 16.5  +0.7
WLF   Walferdange     168.51 318  ⇑PKP      PKPdf    19 37 16.9  +1.0
UCC   Uccle           168.53 327  ⇑PKP      PKPdf    19 37 16.4  +0.5
SNF   Seneffe         168.78 326  ⇓PKP      PKPdf    19 37 16.8  +0.8
ECH   Echery          168.82 310  ePKPdf    PKPdf    19 37 14.9  -1.3
ECH                               ePKPab    PKPab    19 38 27.6  +0.6
ECH   Echery          168.82 310  ePKIKP    PKPdf    19 37 14.9  -1.3
ECH                               e                  19 38 27.6
HLM1  Long Mynd       168.94 351  eP        PKPdf    19 37 15.0  -1.1
HLM1                               IAMs_20  IAMs_20  21 00 48.7
      comp=Z,2µm,40.3s
DOU   Dourbes         168.95 324  ⇑PKP      PKPdf    19 37 16.8  +0.6
SENIN Lac Senin/Sane  169.57 301  ePKPdf    PKPdf    19 37 16.7  -0.3
SENIN                             ePKPab    PKPab    19 38 31.0  +0.3
MONM  Monmouth        169.60 350  eP        PKPdf    19 37 15.1  -1.4
MONM                               IAMs_20  IAMs_20  21 04 45.0
      comp=Z,2µm,19.1s
RSBS  Rosebush, Pemb 169.65 357   eP        PKPdf    19 37 15.8  -0.8
RSBS                               IAMs_20  IAMs_20  21 04 27.1
      comp=Z,908nm,18.4s
BNI   Bardonecchia    170.43 295  ePKPdf    PKPdf    19 37 16.9  -0.5
BNI                               ePKPab    PKPab    19 38 34.3   0.0
BNI   Bardonecchia    170.43 295  ePKIKP    PKPdf    19 37 16.9  -0.5
BNI                               e                  19 38 34.3
PFVI  Vila Bisbo      174.87 150  ePKPdf    PKPdf    19 37 21.4  +2.0
PFVI  Vila Bisbo      174.87 150  ePKPab    PKPab    19 38 58.1  +4.2
PFVI  Vila Bisbo      174.87 150  ePP       PP       19 42 46.2  +0.2
MORF  Marmelete       175.08 150  ePKPdf    PKPdf    19 37 20.2  +0.6
MORF                               AMS      AMS      20 54 29.6
      comp=Z,2µm,25.8s
MORF  Marmelete       175.08 150  ePKPdf    PKPdf    19 37 21.1  +1.6
MORF  Marmelete       175.08 150  ePKPab    PKPab    19 38 58.9  +4.0
MORF  Marmelete       175.08 150  ePP       PP       19 42 48.2  +1.1
MORF  Marmelete       175.08 150  ePKIKP    PKPdf    19 37 20.1  +0.6
PTEO  Sao Teotonio    175.27 148  ePKPdf    PKPdf    19 37 21.8  +2.4
PTEO  Sao Teotonio    175.27 148  ePKPab    PKPab    19 39 00.0  +4.3
PTEO  Sao Teotonio    175.27 148  ePP       PP       19 42 49.2  +1.3
PBDV  Barranco-do-Ve  175.27 157  ePKPdf    PKPdf    19 37 21.8  +2.3
PBDV  Barranco-do-Ve  175.27 157  ePKPab    PKPab    19 38 58.8  +3.1
PBDV  Barranco-do-Ve  175.27 157  ePP       PP       19 42 48.7  +0.9
PVAQ  Vaqueiros       175.48 158  ePKPdf    PKPdf    19 37 21.4  +1.9
PVAQ  Vaqueiros       175.48 158  ePKPab    PKPab    19 39 00.1  +3.5
PVAQ  Vaqueiros       175.48 158  ePP       PP       19 42 49.2  +0.5
PVAQ  Vaqueiros       175.48 158  eLR       LR       20 42 39.0
      comp=Z,2µm,22.0s
PVAQ  Vaqueiros       175.48 158  ePKPdf    PKPdf    19 37 20.3  +0.7
PCVE  Castro Verde    175.59 154  ePKPdf    PKPdf    19 37 21.1  +1.5
PCVE  Castro Verde    175.59 154  ePKPab    PKPab    19 39 01.3  +4.2
PCVE  Castro Verde    175.59 154  ePP       PP       19 42 50.0  +0.6
PNCL  Nicolau / Gran  175.83 146  ePKPdf    PKPdf    19 37 21.3  +1.7
PNCL  Nicolau / Gran  175.83 146  ePKPab    PKPab    19 39 02.4  +4.2
PBEJ  Beja            176.01 153  ePKPdf    PKPdf    19 37 22.4  +2.8
PBEJ  Beja            176.01 153  ePKPab    PKPab    19 39 03.6  +4.7
PBEJ  Beja            176.01 153  ePP       PP       19 42 53.5  +2.1
LIS   Lisbon          176.02 136  ePKPdf    PKPdf    19 37 20.5  +0.9
LIS                                AMS      AMS      20 57 06.7
      comp=Z,4µm,17.4s
LIS   Lisbon          176.02 136  ePKIKP    PKPdf    19 37 20.5  +0.9
PMAFR Mafra           176.12 132  ePKPdf    PKPdf    19 37 20.9  +1.2
PMAFR Mafra           176.12 132  ePKPab    PKPab    19 39 02.5  +3.0
PMAFR Mafra           176.12 132  ePP       PP       19 42 53.1  +0.6
ALMR  Almeirim        176.65 136  ePKPdf    PKPdf    19 37 20.7  +1.0
ALMR                               AMS      AMS      20 55 16.2
      comp=Z,3µm,18.4s
ALMR  Almeirim        176.65 136  ePKPdf    PKPdf    19 37 22.7  +3.0
ALMR  Almeirim        176.65 136  ePP       PP       19 42 56.4  +1.6
ALMR  Almeirim        176.65 136  ePKIKP    PKPdf    19 37 20.7  +1.0
PMTG  Montargil       176.75 141  ePKPdf    PKPdf    19 37 20.7  +0.9
PMTG  Montargil       176.75 141  ePKPab    PKPab    19 39 06.1  +3.8
PMTG  Montargil       176.75 141  ePP       PP       19 42 55.9  +0.7
PTOM  Tomar           177.07 132  ePKPdf    PKPdf    19 37 21.8  +2.0
PCAS  Casmilo, Conde  177.29 124  ePKPdf    PKPdf    19 37 21.6  +1.8
PCAS  Casmilo, Conde  177.29 124  ePP       PP       19 42 59.0  +0.8
PMRV  Marv??o         177.42 147  ePKPdf    PKPdf    19 37 20.9  +1.0
PMRV  Marv??o         177.42 147  ePP       PP       19 42 58.5  +0.3
PMRV  Marv??o         177.42 147  eLR       LR       20 42 00.8
      comp=Z,1µm,20.0s
COI   Coimbra         177.44 123  ePKPdf    PKPdf    19 37 21.8  +2.0
COI   Coimbra         177.44 123  ePP       PP       19 43 01.2  +2.3
COI   Coimbra         177.44 123  ePKPdf    PKPdf    19 37 20.7  +0.9
COI                               ePKPab    PKPab    19 39 07.2  +1.8
COI   Coimbra         177.44 123  ePKIKP    PKPdf    19 37 20.7  +0.9
ESDC  Sonseca Array   177.69 213   PKP      PKPdf    19 37 19.8  -0.2
      comp=Z,32nm,1.1s,baz=353,slow=1.4,SNR=78
ESDC                               PKPab    PKPab    19 39 05.6  -0.9
      comp=Z,13nm,1.1s,baz=113,slow=3.6,SNR=16
ESLA  Sonseca Array   177.69 213  ePKPdf    PKPdf    19 37 21.3  +1.3
ESLA                              ePKPab    PKPab    19 39 08.7  +2.2
PCBR  Castelo Branco  177.72 141  ePKPdf    PKPdf    19 37 21.7  +1.8
PCBR  Castelo Branco  177.72 141  ePP       PP       19 43 01.1  +1.4
PAB   San Pablo       177.72 205  ePKPdf    PKPdf    19 37 20.7  +0.7
PAB   San Pablo       177.72 205  ePKIKP    PKPdf    19 37 20.7  +0.7
PGAV  Gavieira, Arco  177.97  79  ePKPdf    PKPdf    19 37 20.7  +0.7
PGAV  Gavieira, Arco  177.97  79  ePP       PP       19 43 03.5  +1.5
PGAV  Gavieira, Arco  177.97  79  eLR       LR       20 42 03.8
      comp=Z,3µm,22.0s
PVIS  Viseu           178.04 117  ePKPdf    PKPdf    19 37 21.5  +1.5
MTE   Manteigas       178.08 129  ePKPdf    PKPdf    19 37 19.6  -0.4
MTE   Manteigas       178.08 129  ePP       PP       19 43 03.4  +1.5
MTE   Manteigas       178.08 129  eLR       LR       20 44 45.5
      comp=Z,2µm,20.0s
MTE   Manteigas       178.08 129  ePKPdf    PKPdf    19 37 20.7  +0.7
PCAB  Cabril          178.17  86  ePKPdf    PKPdf    19 37 21.5  +1.6
PCAB  Cabril          178.17  86  ePP       PP       19 43 04.8  +1.9
POLO  Lamas de Olo    178.33  98  ePKPdf    PKPdf    19 37 20.7  +0.7
POLO  Lamas de Olo    178.33  98  ePP       PP       19 43 04.8  +1.1
PVRL  Vila Real       178.37 101  ePKPdf    PKPdf    19 37 21.6  +1.6
PVRL  Vila Real       178.37 101  ePP       PP       19 43 06.7  +2.9
MVO   Moncorvo        178.83 112  ePKPdf    PKPdf    19 37 21.3  +1.2
MVO   Moncorvo        178.83 112  ePP       PP       19 43 07.3  +1.5
MVO   Moncorvo        178.83 112  eLR       LR       20 43 30.0
      comp=Z,2µm,20.0s
PBRG  Braganca        179.12  78  ePKPdf    PKPdf    19 37 21.4  +1.4
PBRG  Braganca        179.12  78  ePP       PP       19 43 07.4  +0.1
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NIED ***20*** *19:19:00, 24°30N×121°50E, h5*^{km}*, Mw3.9   Best double couple: M*$_0$*9.15000×10*^{14}*   NP1:φ*$_s$*356.00000°, δ36.00000°, λ-39.00000°.   NP2:φ*$_s$*119.00000°, δ68.00000°, λ-119.00000°.*

*JMA **20** 19:19:45.4±0.1,24°.26N×121°.47E,h3^{km},M3.9*
*TAP **20** 19:19:45.2,24°.28N×121°.49E,h5^{km},ML4.3,C*
*IDC **20** 19:19:45.6±2.2,24°.44N×121°.64E,h0^{km},mb3.9/10, mb1 4.1/10,mb1mx3.8/41,mbtmp4.0/10,ML2.2/1,Error ellipse: s-maj=50.8km s-min=25.0km az=160.0*
*ISCJB **20** 19:19:45.8±0.2,24°.291N±0°.008×121°.51E±0°.01, h5^{km}±1^{km},mb3.9/15,Error ellipse: s-maj=1.8km s-min=1.3km az=27.9*
*NEIC **20** 19:19:46.1±0.7,24°.28N×121°.46E,h8^{km}±5^{km},mb4.2/5, ML4.1(TAP),Error ellipse: s-maj=2.8km s-min=1.6km az=89.0*
NEIC Recorded [3 TAP] in Hualien, Nantou and Yilan; [2 TAP] in Taichung; [1 TAP] in Hsinchu and Taoyuan.
*BJI **20** 19:19:50.9±0.0,24°.64N×121°.01E,h9^{km},mb4.0/7, mB4.3/2,ML4.1/1,Ms4.1/4,Ms7 3.9/4*
ISC 20 19:19:46.1±0.8,**24°.28N**±0°.01×**121°.49E**±0°.01,**h7**^{km}±5^{km}, **n159,**σ**0**^{s}**.85**/235,**mb4.1**/15,**55C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.07	183	⇑P	Pg	19 19 47.9	-0.1
	baz=187						
ETLH				S	Sg	19 19 49.2	-0.1
	baz=187						
NACB	Ninganchiao	0.14	137	*e*Pg	Pg	19 19 49.4	+0.3
NACB				*e*Sg	Sg	19 19 51.5	+0.3
NACB	Ninganchiao	0.14	137	⇑P	Pg	19 19 49.1	0.0
	baz=139						
NACB				S	Sg	19 19 51.4	+0.3
	baz=139						
NNSB	Datong	0.17	327	⇓P	Pg	19 19 49.4	-0.3
	baz=325						
NNSB				S	Sg	19 19 51.8	-0.3
	baz=325						
NNS	Nan Shan	0.19	327	⇓P	Pg	19 19 49.6	-0.3
	baz=326						
NNS				*i* S	Sg	19 19 52.2	-0.4
	baz=326						
TWD	Chiawan	0.22	153	⇑*i*P	Pg	19 19 50.6	0.0
	baz=153						
TWD				S	Sg	19 19 54.0	+0.5
	baz=153						
WHF	Hehuan Shan	0.24	236	⇑*i*P	Pg	19 19 50.9	-0.2
	baz=235						
WHF				*i* S	Sg	19 19 54.3	0.0
	baz=235						
ENA	Nanau	0.28	58	⇑*i*P	Pg	19 19 51.0	-0.6
	baz=59						
ENA				*e*S	Sg	19 19 54.5	-0.7
	baz=59						
NANB	Nanao	0.28	59	⇑*i*P	Pg	19 19 51.0	-0.7
	baz=59						
NANB				*e*S	Sg	19 19 54.3	-1.1
	baz=59						
TDCB	Techi	0.30	265	⇑P	Pg	19 19 52.1	0.0
	baz=255						
TDCB				S	Sg	19 19 55.9	-0.2
	baz=255						
HWA	Hwalien	0.32	160	P	Pg	19 19 52.9	+0.5
	baz=160						
HWA				S	Sg	19 19 57.5	+0.9
	baz=160						
NDT	Datong Townshi	0.32	4	⇑*i*P	Pg	19 19 52.2	-0.2
	baz=4.0						
NDT				S	Sg	19 19 56.2	-0.5
	baz=4.0						
CHGB	Renai	0.36	232	⇑P	Pg	19 19 53.0	-0.2
	baz=232						
CHGB				S	Sg	19 19 57.9	-0.1
	baz=232						
ENTT	Nioudou	0.36	11	⇑*i*P	Pg	19 19 53.0	-0.3
	baz=12						
ENTT				S	Sg	19 19 57.8	-0.3
	baz=12						
YHNB	Yeheng	0.40	345	*e*Pg	Pg	19 19 53.9	0.0
YHNB				*e*Sg	Sg	19 19 59.0	-0.2
YHNB	Yeheng	0.40	345	⇑P	Pg	19 19 54.0	0.0
	baz=344						
YHNB				S	Sg	19 19 59.0	-0.2
	baz=344						
NSK	Sanguang	0.41	344	⇑*i*P	Pg	19 19 54.1	0.0
	baz=329						
NSK				S	Sg	19 19 59.5	0.0
	baz=329						
TWC	Suao	0.47	45	⇑*i*P	Pg	19 19 54.5	-0.6
	baz=47						
TWC				*e*S	Sg	19 20 00.0	-1.2
	baz=47						
ESL	Shilin	0.47	186	⇑*i*P	Pg	19 19 54.9	-0.3
	baz=174						
TWE	Neicheng	0.47	21	⇑*i*P	Pg	19 19 55.0	-0.2
	baz=22						
TWE				S	Sg	19 20 01.0	-0.3
	baz=22						
ILA	Ilan	0.54	26	P	Pg	19 19 56.3	-0.2
	baz=27						
ILA				S	Sg	19 20 04.3	+0.7
	baz=27						
LIOB	Emei	0.56	310	⇑*i*P	Pb	19 19 57.6	-0.7
	baz=308						
LIOB				S	Sb	19 20 05.0	-1.6
	baz=308						
NSTT	Nanjuang	0.56	308	⇑*i*P	Pb	19 19 57.5	-0.8
	baz=307						
NSTT				S	Sg	19 20 04.5	+0.1
	baz=307						
DPDB	Guoxing	0.57	244	⇑*i*P	Pb	19 19 57.5	-1.0
	baz=244						
DPDB				*i* S	Sg	19 20 04.6	+0.1
	baz=244						
WLTB	Daxi	0.61	340	⇑*e*P	Pb	19 19 58.7	-0.4
	baz=339						
WLTB				*e*S	Sb	19 20 07.0	-0.9
	baz=339						
EGFH	Guangfu	0.61	185	⇑*i*P	Pg	19 19 57.6	-0.3
	baz=186						
EGFH				*e*S	Sg	19 20 06.1	+0.2
	baz=186						
VWDT	VWDT	0.61	211	⇑P	Pg	19 19 57.6	-0.3
	baz=216						
VWDT				S	Sb	19 20 06.5	-1.5
	baz=216						
EOS1	EOS1	0.64	65	⇑P	Pg	19 19 58.5	0.0
	baz=54						
EOS1				*e*S	Sg	19 20 07.6	+0.7
	baz=54						
NTC	Toucheng	0.65	29	*e*P	Pg	19 19 58.5	-0.2
	baz=29						
NTC				*e*S	Sg	19 20 06.8	-0.3
	baz=29						
TWQ1	Liyutan	0.65	276	⇑*i*P	Pb	19 19 59.7	-0.2
	baz=275						
NSY	Sanyi	0.68	282	⇑*i*P	Pb	19 20 00.4	+0.2
	baz=280						
NSY				S	Sb	19 20 09.6	-0.3
	baz=280						
NHDH	Xindian Distri	0.68	3	P	Pb	19 19 59.3	-1.0
	baz=3.0						
NHDH				S	Sg	19 20 08.2	+0.1
	baz=3.0						
NMLH	Miaoli	0.68	292	P	Pb	19 20 00.7	+0.3
	baz=290						
SBCB	Hsinchu	0.68	318	P	Pb	19 20 00.5	+0.1
	baz=317						
SBCB				*e*S	Sb	19 20 10.4	+0.3
	baz=317						
TYC	Yuchr	0.69	237	⇑*i*P	Pb	19 19 59.2	-1.2
	baz=236						
TYC				*e*S	Sg	19 20 07.5	-0.8
	baz=236						
SSLB	Suanglung	0.69	225	*e*Pg	Pg	19 19 58.8	-0.7
SSLB				*e*Sg	Sg	19 20 07.2	-1.2
SSLB	Suanglung	0.69	225	⇑P	Pg	19 19 58.9	-0.5
	baz=234						
SSLB				S	Sg	19 20 08.7	+0.2
	baz=234						
TATO	Taipei	0.69	0	*e*Pg	Pb	19 19 59.5	-1.0
TATO				*e*Sg	Sg	19 20 08.6	+0.1
HSN	Hsinchu	0.70	318	*e*P	Pn	19 20 01.1	-1.3
	baz=309						
TWA	Mucha	0.70	7	⇑*i*P	Pb	19 19 59.8	-1.0
	baz=8.0						
TWA				*e*S	Sg	19 20 08.1	-0.7
	baz=8.0						
PTSB	Yuanli	0.73	283	⇑*i*P	Pn	19 20 01.6	-1.3
	baz=282						
PTSB				*i* S	Sb	19 20 11.6	+0.1
	baz=282						
NCUH	Zhongli	0.74	338	P	Pb	19 20 01.3	0.0
	baz=338						
NCU	National Centr	0.74	338	*e*P	Pb	19 20 01.5	+0.1
	baz=347						
NCU				*e*S	Sb	19 20 12.5	+0.9
	baz=347						
TCU	Taichung	0.75	260	⇑P	Pb	19 20 01.7	+0.2
	baz=259						
TCU				*e*S	Sn	19 20 12.9	-1.9
	baz=259						
TAP	Taipei	0.76	1	P	Pb	19 20 01.1	-0.5
	baz=1.0						
TAP				*e*S	Sg	19 20 10.7	+0.2
	baz=1.0						
WDJ	Dajia District	0.78	275	⇑*e*P	Pn	19 20 02.7	-0.8
	baz=274						
EHY	Hungye	0.79	191	P	Pg	19 20 00.4	-0.8
	baz=173						
HGSD	Ruisui	0.79	184	⇑P	Pg	19 20 01.2	0.0
	baz=193						
HGSD				*e*S	Sb	19 20 13.8	+0.8
	baz=193						
WHYT	Xinyi Township	0.82	225	*e*P	Pg	19 20 01.4	-0.5
	baz=226						
WJS	Zhushan	0.83	237	*e*P	Pb	19 20 02.7	-0.2
	baz=236						
WJS				*e*S	Sb	19 20 14.8	+0.5
	baz=236						
NWF	Wu-fen Shan	0.83	19	⇑*i*P	Pg	19 20 01.9	-0.2
	baz=7.0						
WFSB	Wu-fen Shan	0.83	19	⇑P	Pg	19 20 01.9	-0.2
	baz=19						
WFSB				*e*S	Sb	19 20 13.6	-0.7
	baz=19						
WNT	Mingjian	0.84	242	⇑P	Pn	19 20 03.1	-1.2
	baz=233						
WNT				*e*S	Sb	19 20 14.8	+0.4
	baz=233						
YM01	YM01	0.86	5	P	Pb	19 20 03.1	-0.5
	baz=6.0						
WCHH	Zhanghua	0.87	257	*e*P	Pn	19 20 04.1	-0.7
	baz=256						
YM04	YM04	0.87	3	⇑P	Pb	19 20 03.1	-0.5
	baz=3.0						
YM04				*e*S	Sb	19 20 15.8	+0.3
	baz=3.0						
YM10	YM10	0.87	4	⇑*i*P	Pb	19 20 03.3	-0.4
	baz=4.0						
YM10				S	Sg	19 20 14.3	+0.1
	baz=4.0						
YM05	YM05	0.88	5	⇑*i*P	Pb	19 20 03.5	-0.4
	baz=6.0						
YM03	YM03	0.90	3	⇑*i*P	Pb	19 20 03.6	-0.5
	baz=3.0						
YM03				*e*S	Sb	19 20 17.0	+0.7
	baz=3.0						
YULB	Yu-li	0.90	191	*e*Pg	Pg	19 20 02.3	-1.1
YULB				*e*Sg	Sb	19 20 15.4	-1.0
YULB	Yu-li	0.90	191	*e*P	Pg	19 20 02.3	-1.1
	baz=185						
YULB				*e*S	Sg	19 20 14.9	-0.2
	baz=185						
ANP	Anpu	0.90	2	⇑*i*P	Pb	19 20 03.8	-0.4
	baz=16						
ANP				*e*S	Sb	19 20 16.9	+0.4
	baz=16						
YM08	YM08	0.91	6	⇑P	Pb	19 20 03.5	-0.7
	baz=6.0						
YM08				*e*S	Sb	19 20 16.7	+0.1
	baz=6.0						
YUS	Yu-Shan	0.93	212	⇑*e*P	Pg	19 20 03.0	-1.0
	baz=212						
TWF1	Yuli	0.94	191	*e*P	Pg	19 20 03.1	-1.0
	baz=191						
TWF1				*e*S	Sb	19 20 16.6	-0.9
	baz=191						
ALS	Alishan	0.99	219	⇑*i*P	Pg	19 20 04.8	-0.3
	baz=209						
TWY	Chenhua	1.00	6	*e*P	Pb	19 20 05.3	-0.4
	baz=6.0						
TWY				*e*S	Sb	19 20 19.1	0.0
	baz=6.0						
CHN5	Tsauling	1.00	228	⇑*i*P	Pn	19 20 05.9	-0.9
	baz=228						
CHN5				*e*S	Sn	19 20 21.4	+0.1
	baz=228						
WGK	Gukeng	1.03	235	⇑*i*P	Pn	19 20 06.8	-0.2
	baz=235						
WDLH	Douliu	1.05	236	P	Pn	19 20 07.1	-0.1
	baz=236						
RLNB	Erlin	1.10	250	⇑P	Pn	19 20 07.9	-0.1
	baz=249						
RLNB				*e*S	Sn	19 20 24.1	+0.7
	baz=249						
ELDTW	Lidau	1.17	202	*e*P	Pg	19 20 07.4	-1.1
	baz=192						
CHKT	Chengkung	1.18	185	*e*P	Pg	19 20 06.9	-1.9
	baz=185						
CHY	Chiayi	1.25	232	⇑P	Pn	19 20 10.2	+0.2
	baz=232						
CHY				*e*S	Sn	19 20 28.3	+1.3
	baz=232						
WMLT	Mailiao	1.25	248	*e*P	Pn	19 20 10.2	+0.2
	baz=259						
WMLT				*e*S	Sn	19 20 28.5	+1.4
	baz=259						
TPUB	Ta-pu	1.25	219	*e*Pn	Pn	19 20 09.9	-0.2
TPUB	Ta-pu	1.25	219	⇑P	Pn	19 20 09.9	-0.2
	baz=220						
TPUB				*e*S	Sn	19 20 28.2	+0.9
	baz=220						
STYT	Tauyuan	1.30	211	⇑*i*P	Pn	19 20 10.1	-0.6
	baz=212						
STYT				S	Sn	19 20 29.2	+0.8
	baz=212						
WTP	Ta-pu	1.30	218	⇑*i*P	Pb	19 20 10.9	-0.1
	baz=212						
WSF	Szhu	1.32	241	⇑*i*P	Pg	19 20 11.1	-0.4
	baz=241						
WSF				S	Sn	19 20 29.8	+0.9
	baz=241						
JYNG	Yonagunijimaku	1.34	82	P	Pn	19 20 10.8	-0.5
JYNG				*e*S	Sn	19 20 30.9	+1.5
WLGB	Puzi	1.35	234	P	Pg	19 20 11.8	-0.2
	baz=234						
SNST	Tainan City	1.39	221	P	Pg	19 20 12.9	+0.1
	baz=221						
YOJ	Yonaguni jima	1.40	82	*e*Pn	Pn	19 20 12.1	0.0
YOJ	Yonaguni jima	1.40	82	P	Pn	19 20 11.3	-0.8
	baz=72						
YOJ	Yonaguni jima	1.40	82	P	Pn	19 20 11.7	-0.4
YOJ				S	Sb	19 20 30.4	-0.4
SGST	Jiashian	1.45	215	⇑*i*P	Pg	19 20 13.8	-0.2
	baz=216						
CHN8	Yiju	1.49	232	⇑*i*P	Pg	19 20 14.0	-0.8
	baz=233						
CHN8				*e*S	Sg	19 20 35.8	+1.6
	baz=233						
SLGT	Liugui	1.50	211	*e*P	Pg	19 20 14.0	-0.8
	baz=212						
TWG	Pinlang	1.50	195	*e*Pn	Pb	19 20 13.6	-0.8
TWG	Pinlang	1.50	195	*e*P	Pn	19 20 12.2	-1.3
	baz=178						
TWGBT	Beinan	1.50	194	*e*P	Pn	19 20 11.9	-1.6
	baz=178						
TTN	Taitung	1.55	192	*e*P	Pb	19 20 14.9	-0.3
	baz=170						
CHN3	Shinhua	1.58	221	⇑P	Pg	19 20 16.1	-0.3
	baz=222						
SCLT	Jiali	1.62	227	⇑*i*P	Pb	19 20 15.9	-0.4
	baz=229						
SCLT				*e*S	Sg	19 20 39.5	+1.5
	baz=229						
TAI1	Yung-k'ang	1.69	223	P	Pg	19 20 17.7	-0.8
	baz=224						
SSD	Sandimen	1.72	207	P	Pg	19 20 18.0	-1.0
	baz=209						
SSD				*e*S	Sg	19 20 42.0	+0.7
	baz=209						
ECL	Taimali	1.75	196	*e*P	Pb	19 20 17.4	-1.1
	baz=179						
SGLT	Jiouru	1.80	211	*e*P	Pg	19 20 20.2	-0.4
	baz=212						
MASBT	Mashibuluo	1.84	205	⇑P	Pb	19 20 19.6	-0.4
	baz=208						
MASBT				*e*S	Sg	19 20 44.2	-0.9
	baz=208						
SNJT	Kaohsiung City	1.85	215	*e*P	Pg	19 20 20.4	-1.2
	baz=217						
PNG	Penghu	1.91	249	*e*P	Pn	19 20 18.6	-0.5
	baz=248						
PHUB	P'eng-hu	1.91	247	*e*P	Pn	19 20 18.0	-1.1
	baz=248						
PHUB				*e*S	Sb	19 20 45.2	-0.2
	baz=248						
WDGT	Dungji	1.96	239	*e*P	Pn	19 20 20.1	+0.3
	baz=240						
WDGT				*e*S	Sb	19 20 47.0	+0.3
	baz=240						
PTTC	Pingtan	1.98	308	*e*P	Pn	19 20 19.1	-0.9
	baz=309						
EAST	Anshuo	1.98	197	*e*P	Pb	19 20 21.8	-0.7
	baz=177						
TAW	Tawu	1.99	196	*e*P	Pb	19 20 21.6	-1.0
	baz=181						
IRIF	Iriomote-Funau	2.05	88	P	Pn	19 20 21.0	0.0
IRIF				S	Sn	19 20 47.3	+0.5
SCZT	Fangliau	2.06	203	*e*P	Pb	19 20 23.6	-0.3
	baz=206						
SCZT				*e*S	Sg	19 20 50.5	-1.8
	baz=206						
VCHM	Qimei	2.17	241	*e*P	Pn	19 20 23.4	+0.8
	baz=242						
VCHM				*e*S	Sb	19 20 53.0	+0.3
	baz=242						
WLCH	Liuqiu	2.17	208	*e*P	Pb	19 20 25.7	-0.1
	baz=229						
TWP	Hsiaoliuchiu	2.19	208	*e*P	Pg	19 20 27.4	-0.7
	baz=229						
LAY	Lan-yu	2.23	178	*e*P	Pn	19 20 22.6	-1.0
	baz=162						
PTMZ	Houxiangcun	2.28	290	*e*P	Pn	19 20 23.1	-1.1
	baz=292						
JKRS	Kuro-shima	2.30	91	P	Pn	19 20 24.9	+0.4
JKRS				*e*S	Sn	19 20 53.8	+0.7
MATB	Ma-tsu	2.33	323	*e*P	Pn	19 20 24.2	-0.7
	baz=324						
HEN	Hengchun	2.37	197	*e*P	Pb	19 20 27.6	-1.4
	baz=177						
TWK1	Hengchun	2.41	195	*e*P	Pb	19 20 28.9	-1.0
	baz=176						
TWKBT	Hengchun	2.41	195	*e*P	Pn	19 20 27.2	+1.2
	baz=176						
JIJ	Ishigaki jima	2.42	88	P	Pn	19 20 25.9	-0.3
JIJ				*e*S	Sn	19 20 56.0	-0.2
TSEB	Hengchuen, Pin	2.43	193	*e*P	Pb	19 20 28.6	-1.6
	baz=176						
JISG	Ishigakijimahi	2.59	83	P	Pn	19 20 28.0	-0.5
JISG				*e*S	Sn	19 20 59.3	-1.0
QZH	Quanzhou	2.72	285	Pn	Pn	19 20 29.8	-0.4
QZH				Sn	Sn	19 21 00.1	-3.2
LYJJ	Jianjiangzhen	2.75	326	*e*P	Pn	19 20 30.0	-0.7
	baz=326						
KNMB	Chin-men Tao	2.83	274	*e*Pn	Pn	19 20 31.2	-0.6
KNMB	Chin-men Tao	2.83	274	*e*P	Pn	19 20 30.8	-1.0
	baz=276						
MHZQ	Yeshan	2.87	310	*e*P	Pn	19 20 32.4	0.0
	baz=311						
XPSS	Dashiqiu	2.89	336	*e*P	Pn	19 20 31.5	-1.1
	baz=338						
JTJ	Tarama	2.95	82	*e*S	Sn	19 21 09.8	+0.6
AXDP	Jialang	3.26	282	*e*P	Pn	19 20 37.0	-0.7
	baz=284						
JIRB	Irabujima	3.40	80	P	Pn	19 20 41.3	+1.7
ZPLA	Ao Xicun	3.43	265	*e*P	Pn	19 20 39.4	-0.7
	baz=267						
JIKM	Ikemajima	3.48	79	P	Pn	19 20 40.2	-0.6
ZZJH	Jiuhuzhen	3.52	274	*e*P	Pn	19 20 40.5	-0.8
	baz=276						
JMJ2	Miyako jima3	3.53	82	P	Pn	19 20 42.9	+1.5
JMJ2				*e*S	Sn	19 21 26.5	+3.1
JOGS	Gusukube	3.60	82	P	Pn	19 20 44.3	+1.9
JOW	Kunigami	6.64	66	Pn	Pn	19 21 23.9	-0.2
	0.1nm,0.3s,baz=218,slow=19,SNR=4.8						
JOW	Kunigami	6.64	66	*e*Pn	Pn	19 21 25.1	+1.0
HKPS	Hong Kong Po S	7.04	255	*e*Pn	Pn	19 21 29.2	-0.5
NJ2	Nanjing	8.08	344	*e*P	Pn	19 21 53.3	+9.3
NJ2				smax	smax		
	comp=N,73nm,0.8s						
NJ2				smax	smax		
	comp=E,49nm,0.7s						
WHN	Wuhan	8.89	316	P	Pn	19 21 53.8	-1.3
WHN				S	Sn	19 23 37.3	+1.7
WHN				LR	LR		
	comp=E,430nm,8.4s						
WHN				LR	LR		
	comp=E,540nm,4.7s						
WHN				LR	LR		
	comp=E,500nm,11.5s						
JNU	Nakatsue	12.06	41	*e*Pn	Pn	19 22 39.5	+1.0
KSRS	Korea Array	14.24	21	Pn	Pn	19 23 10.6	+2.4
	comp=E,0.1nm,0.3s,baz=204,slow=12,SNR=2.1						
CMAR	Chiang Mai Arr	21.77	259	P	P	19 24 41.9	+3.3
	comp=E,1.7nm,1.0s,baz=66,slow=8.2,SNR=8.5						
SBUM	Sibu	23.48	204	*e*P	P	19 24 56.2	-0.3
	comp=E,2.8nm,1.1s						
KSM	Kuching	25.12	207	*e*P	P	19 25 11.8	-0.1
	comp=E,10nm,1.4s						
ERM	Erimo	25.22	40	*e*P	P	19 25 11.4	-1.1
	comp=E,10.0nm,1.1s						
KLR	Kul'dur	26.18	15	P	P	19 25 21.0	-0.2
	comp=E,0.5nm,0.7s,baz=252,slow=3.2,SNR=2.5						
ULN	Ulaanbaatar	26.18	338	*e*P	P	19 25 21.7	+0.3
	comp=E,3.8nm,0.6s						
SONA0	Songino Array	26.39	337	*e*P	P	19 25 23.6	+0.3
SONM	Songino Array	26.39	337	P	P	19 25 23.6	+0.3
	comp=E,3.8nm,0.7s,baz=155,slow=9.7,SNR=25						
KULM	Kulim	27.53	230	*e*P	P	19 25 32.9	-0.8
	comp=E,2.4nm,0.9s						
MKAR	Makanchi Array	38.46	316	P	P	19 27 09.4	+0.7
	comp=E,4.8nm,0.8s,baz=108,slow=10.0,SNR=38						
ZALV	Zalesovo Beam	40.31	327	P	P	19 27 23.3	-0.7
	comp=E,3.4nm,0.8s,baz=118,slow=8.5,SNR=14						
GEYT	Alibeck	54.99	300	P	P	19 29 19.2	+0.9
	comp=E,2.5nm,0.9s,baz=73,slow=4.8,SNR=4.7						
FINES	FINESS Array B	71.50	330	P	P	19 31 07.2	-0.1
	comp=E,4.2nm,0.9s,baz=88,slow=4.3,SNR=8.5						
BRTR	Keskin Array B	73.34	306	P	P	19 31 19.6	+0.6
	comp=E,0.6nm,0.7s,baz=94,slow=5.6,SNR=5.3						
YKA	Yellowknife Ar	82.77	23	P	P	19 32 08.6	-2.1
	comp=E,0.6nm,0.8s,baz=314,slow=4.1,SNR=3.7						
GERES	GERESS Array B	82.94	321	P	P	19 32 11.8	-0.2
	comp=E,0.2nm,0.4s,baz=83,slow=10,SNR=2.5						

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*NEIC **20** 19:20:16.2±0.0,41°.57S×174°.36E,h14^{km},ML4.3(WEL), After WEL.*
WEL 20 19:20:16.2,41°.6S±0°.7×**174°.4E**±0°.6,**h12**^{km}±2^{km},**M4.3**/12, **ML4.6**/10,**MLv4.3**/12,**Error ellipse: s-maj=0.0km s-min=0.0km az=156.1,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.21	213	P	Pb	19 20 21.4	-0.6
CMWZ				S	Sg	19 20 25.5	+1.6
TUWZ	Tuamarina	0.35	294	P	Pb	19 20 24.0	-0.3
TUWZ				S	Sb	19 20 29.4	-0.4
SNZO	South Karori	0.36	44	*e*Pg	Pb	19 20 24.2	-0.3
SNZO				*e*Sg	Sb	19 20 30.7	+0.6
TCW	Tory Channel	0.37	349	P	Pb	19 20 24.3	-0.3
TCW				S	Sb	19 20 30.0	-0.3
BSWZ	Blackbirch Sta	0.40	249	P	Pg	19 20 24.5	+0.4
BSWZ				S	Sb	19 20 30.4	-0.8
BHW	Baring Head	0.41	67	P	Pb	19 20 24.9	-0.4
BHW				S	Sb	19 20 31.3	-0.2
PLWZ	Palliser	0.66	90	P	Pb	19 20 29.7	0.0
MSWZ	Moikau Station	0.68	77	P	Pb	19 20 30.0	0.0
MTW	Mount Morrison	0.95	65	P	Pb	19 20 34.8	+0.3
MTW				S	Sn	19 20 48.9	+0.2
OGWZ	Otaki Gorge	0.96	39	P	Pn	19 20 35.2	-0.3
TRWZ	Traveller	1.00	81	P	Pg	19 20 35.8	+0.3
KHZ	Kahutara	1.05	216	*e*Pn	Pb	19 20 36.0	-0.2
KHZ				*e*Sg	Sg	19 20 50.1	+0.1
HOWZ	Holdsworth Sta	1.09	52	P	Pn	19 20 37.7	+0.4
THZ	Tophouse	1.11	260	*e*Pn	Pb	19 20 36.8	-0.6
THZ	Tophouse	1.11	260	P	Pb	19 20 37.1	-0.3
QRZ	Quartz Range	1.58	298	P	Pb	19 20 44.9	-0.3
BFZ	Birch Farm	1.67	59	*e*Pn	Pn	19 20 45.8	+0.6
GVZ	Greta Valley S	1.71	215	P	Pn	19 20 44.5	-1.3
LTZ	Lake Taylor	1.98	231	*e*Pn	Pn	19 20 49.5	0.0
LTZ	Lake Taylor	1.98	231	P	Pn	19 20 49.0	-0.5

MQZ	McQueen’s Vall	2.48	210	*e*Pn	Pn	19 20 56.4	0.0
WKZ	Wanaka	5.09	228	*e*Pn	Pn	19 21 31.5	-0.7

IDC ***20*** *19:22:04.8±1.7, 41°.40S×174°.38E, h0^{km}, mb4.0/2, mb1 4.3/4, mb1mx3.9/35, mbtmp4.1/4, ML3.7/1, Error ellipse: s-maj=43.9km s-min=25.6km az=137.0*

ISCJB ***20*** *19:22:07.9±0.3, 41°.61S±0°.03×174°.36E±0°.04, h25^{km}±3^{km}, mb3.9/2, Error ellipse: s-maj=6.3km s-min=3.5km az=144.2*

WEL ***20*** *19:22:07.8, 41°.6S±0°.6×174°.4E±0°.7, h13^{km}±2^{km}, M4.1/22, ML4.4/18, MLv4.1/22, Error ellipse: s-maj=0.0km s-min=0.0km az=125.3*

NEIC ***20*** *19:22:07.9±0.0, 41°.56S×174°.38E, h10^{km}, ML4.1(WEL), After WEL.*

ISC 20 19:22:07.8±0.9**, 41°.58S**±0°.03×**174°.39E**±0°.03**, h21**^{km}±1^{km}**, n53, σ1^s.14**/61**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.21	218	P	Pb	19 22 13.0	-0.7
CMWZ				S	Sb	19 22 17.4	-0.5
SNZO	South Karori	0.36	41	*e*Pg	Pb	19 22 15.7	+0.3
SNZO				*e*Sg	Sb	19 22 21.6	+1.1
TUWZ	Tuamarina	0.37	294	P	Pb	19 22 15.7	+0.2
TUWZ				S	Sb	19 22 21.0	+0.2
TCW	Tory Channel	0.38	347	P	Pb	19 22 16.0	+0.3
TCW				S	Sb	19 22 20.9	-0.2
BHW	Baring Head	0.40	65	P	Pb	19 22 16.5	+0.4
BHW				S	Sb	19 22 22.7	+1.0
BSWZ	Blackbirch Sta	0.41	251	P	Pb	19 22 16.6	+0.4
PLWZ	Palliser	0.65	89	P	Pb	19 22 21.1	+0.6
MSWZ	Moikau Station	0.67	76	P	Pn	19 22 21.6	-0.5
CAW	Cannon Point	0.70	47	P	Pn	19 22 21.8	-0.6
PAWZ	Paruwai Farm	0.81	76	P	Pn	19 22 24.0	0.0
NNZ	Nelson	0.84	295	P	Pn	19 22 24.0	-0.4
DUWZ	D’Urville Isla	0.85	336	P	Pn	19 22 24.5	-0.1
MTW	Mount Morrison	0.94	64	P	Pn	19 22 26.3	+0.5
OGWZ	Otaki Gorge	0.96	38	P	Pn	19 22 26.2	+0.1
TRWZ	Traveller	0.99	80	P	Pn	19 22 26.8	+0.3
KHZ	Kahutara	1.05	217	*e*Pg	Pb	19 22 27.8	+0.6
KHZ				*e*Sg	Sn	19 22 42.5	+1.3
KHZ	Kahutara	1.05	217	P	Pb	19 22 27.9	+0.7
HOWZ	Holdsworth Sta	1.09	52	P	Pb	19 22 29.1	+1.1
THZ	Tophouse	1.13	260	*e*Pn	Pb	19 22 29.1	+0.5
THZ	Tophouse	1.13	260	P	Pb	19 22 29.0	+0.4
TMWZ	Te Maipa	1.23	68	P	Pn	19 22 30.0	+0.2
MRZ	Mangatainoka R	1.29	45	P	Pb	19 22 31.6	+0.3
TIWZ	Tintock	1.39	55	P	Pn	19 22 32.4	+0.5
OHWZ	Ohakea	1.54	27	P	Pb	19 22 37.2	+1.6
PRWZ	Pori Road	1.58	50	P	Pn	19 22 35.3	+0.7
QRZ	Quartz Range	1.59	298	P	Pb	19 22 36.8	+0.3
BFZ	Birch Farm	1.67	58	*e*Pn	Pn	19 22 36.1	+0.3
BFZ	Birch Farm	1.67	58	P	Pb	19 22 37.8	0.0
GVZ	Greta Valley S	1.71	216	P	Pn	19 22 36.6	+0.2
LTZ	Lake Taylor	1.98	232	*e*Pn	Pn	19 22 40.9	+0.8
LTZ	Lake Taylor	1.98	232	P	Pn	19 22 40.7	+0.6
OKCZ	Okains Bay	2.35	204	P	Pn	19 22 44.4	-0.9
CRLZ	Canterbury Las	2.38	213	*e*Pn	Pn	19 22 45.9	+0.3
PKE	Pukeiti	2.41	353	P	Pb	19 22 52.7	+2.4
MOVZ	Moawhango	2.41	26	P	Pb	19 22 50.9	+0.5
BHHZ	Black Hill Sta	2.45	32	P	Pb	19 22 51.9	+0.8
OXZ	Oxford	2.46	224	*e*Pn	Pn	19 22 46.5	-0.3
MQZ	McQueen’s Vall	2.48	210	*e*Pn	Pn	19 22 45.8	-1.2
MQZ	McQueen’s Vall	2.48	210	P	Pn	19 22 45.3	-1.6
WTVZ	West Tongariro	2.63	21	P	Pb	19 22 55.5	+1.3
KRVZ	Karewarewa	2.66	21	P	Pb	19 22 55.9	+1.1
BKZ	Black Stump Fm	2.90	34	*e*Pg	Pb	19 23 00.7	+1.9
HIZ	Hauiti	3.09	7	*e*Pg	Pb	19 23 02.7	+0.8
RPZ	Rata Peaks	3.25	228	Pn	Pn	19 22 57.5	-0.1
	8.3nm,0.3s,baz=34,slow=5.0,SNR=2.6						
RPZ				Sn	Sn	19 23 33.9	-1.9
	7.8nm,0.3s,baz=330,slow=20,SNR=8.1						
TARZ	Mount Tarawera	3.72	27	P	Pb	19 23 09.3	-3.4
FOZ	Fox Glacier	3.90	238	*e*Pn	Pn	19 23 06.8	+0.4
URZ	Urewera	3.92	33	Pn	Pn	19 23 05.2	-1.6
	baz=135,slow=10.0,SNR=1.1						
URZ				Sn	Sn	19 23 51.1	-1.1
	1.2nm,0.3s,baz=259,slow=16,SNR=1.6						
URZ	Urewera	3.92	33	*e*Pn	Pn	19 23 06.4	-0.4
MARZ	Manawahe	4.00	27	P	Pb	19 23 12.9	-4.7
ODZ	Otahua Downs	4.41	217	*e*Pn	Pn	19 23 13.2	-0.3
ASAR	Alice Springs	38.09	285	P	P	19 29 25.4	+0.3
	1.5nm,0.9s,baz=129,slow=7.3,SNR=2.9						
WRA	Warramunga Arr	40.14	290	P	P	19 29 41.6	-0.8
	2.4nm,0.7s,baz=119,slow=8.3,SNR=4.5						
TORD	Torodi Ar. Bea	150.96	195	PKPbc	PKiKP	19 41 59.6	-0.3
	0.4nm,0.5s,baz=169,slow=3.4,SNR=4.1						

WEL 20 19:22:37.9, 42°S±2°×**17°4E**±°**, h10**^{km}±5^{km}**, M3.9**/9**, ML4.2**/8**, MLv3.9**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=122.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.18	215	P	Pb	19 22 42.7	-0.7
CMWZ				S	Sg	19 22 46.2	+1.6
TUWZ	Tuamarina	0.35	298	P	Pg	19 22 45.3	+0.4
TUWZ				S	Sb	19 22 51.7	-0.1
BSWZ	Blackbirch Sta	0.38	252	P	Pg	19 22 45.3	-0.1
BSWZ				S	Sb	19 22 52.3	-0.3
TCW	Tory Channel	0.39	351	S	Sb	19 22 52.9	0.0
PLWZ	Palliser	0.68	88	P	Pn	19 22 52.6	-0.9
MSWZ	Moikau Station	0.69	75	P	Pb	19 22 52.5	+0.4
MSWZ				S	Sn	19 23 04.9	+0.3
NNZ	Nelson	0.83	297	P	Pb	19 22 54.5	+0.2
NNZ				S	Sn	19 23 07.8	+0.1
PAWZ	Paruwai Farm	0.83	75	P	Pb	19 22 54.5	0.0
PAWZ				S	Sn	19 23 07.8	-0.2
MTW	Mount Morrison	0.97	63	P	Pn	19 22 57.2	-0.3
MTW				S	Sn	19 23 11.8	+0.5
OGWZ	Otaki Gorge	0.99	38	P	Pn	19 22 57.6	-0.2
OGWZ				S	Sn	19 23 13.1	+1.3
KHZ	Kahutara	1.02	216	P	Pg	19 22 57.3	-0.2
KHZ				S	Sb	19 23 11.6	+0.6
THZ	Tophouse	1.10	261	S	Sn	19 23 16.8	+2.2
HOWZ	Holdsworth Sta	1.12	52	S	Sn	19 23 15.3	+0.3
MRZ	Mangatainoka R	1.31	45	S	Sg	19 23 21.4	+1.2

IDC 20 19:23:12.8±60.0**, 16°.73S**×**178°.39E, h0**^{km}**, mb4.4**/3**, mb1 4.6**/3**, mb1mx3.8**/40**, mbtmp4.4**/3**, Error ellipse: s-maj=1076.0km s-min=158.6km az=76.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.56	239	P	P	19 30 19.8	-0.7
	1.6nm,0.5s,baz=108,slow=6.4,SNR=3.5						
WRA	Warramunga Arr	41.85	259	P	P	19 31 05.3	+0.4
	1.7nm,0.4s,baz=88,slow=8.4,SNR=9.7						
ASAR	Alice Springs	42.18	253	P	P	19 31 07.4	-0.2
	8.0nm,0.6s,baz=87,slow=8.8,SNR=39						

IDC ***20*** *19:25:09.0±1.4, 41°.62S×174°.44E, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.6/34, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=44.7km s-min=14.9km az=133.0*

ISCJB ***20*** *19:25:12.6±0.4, 41°.77S±0°.03×174°.39E±0°.04, h16^{km}±4^{km}, mb3.5/2, Error ellipse: s-maj=6.4km s-min=3.7km az=142.5*

WEL ***20*** *19:25:12.5, 42°S±2°×17°4E±°, h16^{km}±3^{km}, M3.7/23, ML4.0/18, MLv3.7/23, Error ellipse: s-maj=0.0km s-min=0.0km az=143.6*

ISC 20 19:25:11.6±1.0**, 41°.65S**±0°.03×**174°.39E**±0°.03**, h18**^{km}±5^{km}**, n59, σ1^s.08**/66**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	231	P	Pb	19 25 17.1	+1.2
CMWZ				S	Sg	19 25 20.8	+1.7
BSWZ	Blackbirch Sta	0.39	259	P	Pb	19 25 20.4	+0.4
TUWZ	Tuamarina	0.40	303	P	Pb	19 25 20.5	+0.4
TUWZ				S	Sb	19 25 25.9	0.0
BHW	Baring Head	0.43	57	P	Pb	19 25 22.1	+1.3
TCW	Tory Channel	0.44	349	P	Pb	19 25 21.5	+0.7
TCW				S	Sb	19 25 27.1	0.0
PLWZ	Palliser	0.66	84	P	Pn	19 25 26.7	+0.7
MSWZ	Moikau Station	0.69	71	P	Pn	19 25 26.9	+0.4
CAW	Cannon Point	0.74	44	P	Pn	19 25 27.5	+0.3
PAWZ	Paruwai Farm	0.82	72	P	Pn	19 25 29.9	+1.5
NNZ	Nelson	0.87	299	P	Pn	19 25 28.8	-0.2
DUWZ	D’Urville Isla	0.91	337	P	Pn	19 25 29.8	+0.2
MTW	Mount Morrison	0.97	60	P	Pn	19 25 31.6	+1.3
KHZ	Kahutara	1.00	219	P	Pb	19 25 30.2	-0.1
TRWZ	Traveller	1.01	76	P	Pn	19 25 32.0	+1.1
OGWZ	Otaki Gorge	1.02	36	P	Pn	19 25 32.2	+1.3
THZ	Tophouse	1.12	263	P	Pn	19 25 33.4	+1.0
HOWZ	Holdsworth Sta	1.13	49	P	Pn	19 25 34.1	+1.5
TMWZ	Te Maipa	1.25	65	P	Pg	19 25 35.4	-0.4
MRZ	Mangatainoka R	1.33	43	P	Pg	19 25 37.1	-0.2
TIWZ	Tintock	1.43	53	P	Pb	19 25 38.1	+0.4
OHWZ	Ohakea	1.60	26	P	Pg	19 25 42.7	+0.4
PRWZ	Pori Road	1.62	48	P	Pb	19 25 40.6	-0.3
QRZ	Quartz Range	1.62	300	P	Pg	19 25 41.8	-1.0
POWZ	Post Office Ro	1.63	40	P	Pb	19 25 41.7	+0.5
GVZ	Greta Valley S	1.66	217	P	Pn	19 25 40.8	+1.0
DVHZ	Dannevirke	1.90	46	P	Pn	19 25 44.2	+1.0
LTZ	Lake Taylor	1.94	233	P	Pn	19 25 44.9	+1.2
WAZ	Wanganui	1.94	14	P	Pg	19 25 48.6	-0.3
LREZ	Lake Rotokare	2.18	0	P	Pg	19 25 52.7	-0.7
PNHZ	Pukenui	2.21	39	P	Pn	19 25 48.8	+1.4
WPHZ	Waipukurau	2.22	45	P	Pb	19 25 49.8	-1.4
NMEZ	Namu Road	2.26	350	P	Pg	19 25 54.1	-0.9
OKCZ	Okains Bay	2.30	205	P	Pn	19 25 48.6	0.0
PREZ	Palmer Road	2.31	356	P	Pb	19 25 53.9	+1.2
KHEZ	Kahui Hut	2.37	353	P	Pb	19 25 54.9	+1.2
NBEZ	Newall Road No	2.41	350	P	Pg	19 25 55.8	-2.0
MQZ	McQueen’s Vall	2.42	211	P	Pn	19 25 49.6	-0.7
INZ	Inchbonnie	2.44	243	P	Pn	19 25 52.0	+1.4
DREZ	Durham Road	2.46	357	P	Pg	19 25 56.9	-1.8
MOVZ	Moawhango	2.47	25	P	Pb	19 25 54.5	-1.0
PKE	Pukeiti	2.47	353	P	Pb	19 25 56.6	+1.1
AKCZ	Akaroa Harbour	2.48	206	P	Pn	19 25 51.0	-0.1
WHVZ	Whangaehu Hut	2.53	22	P	Pg	19 25 58.8	-1.4
VRZ	Vera Road	2.53	7	P	Pb	19 25 57.8	+1.3
FWVZ	Far West T-bar	2.55	21	P	Pb	19 25 56.7	-0.2
TUVZ	Tukino	2.56	23	P	Pb	19 25 56.9	-0.2
NGZ	Ngauruhoe	2.63	21	P	Pg	19 26 00.7	-1.4
WTVZ	West Tongariro	2.69	20	P	Pb	19 26 00.8	+1.5
KRVZ	Karewarewa	2.72	21	P	Pb	19 26 00.6	+0.7
WVZ	Waitaha Valley	3.06	241	P	Pn	19 26 01.2	+2.1
RPZ	Rata Peaks	3.21	229	Pn	Pn	19 26 01.1	-0.1
	4.5nm,0.3s,baz=347,slow=4.2,SNR=4.1						
RPZ				Pg	Pb	19 26 08.7	+0.6
	7.4nm,0.3s,baz=336,slow=4.1,SNR=5.7						
RPZ				Sn	Sn	19 26 39.0	0.0
	3.6nm,0.3s,baz=234,slow=8.7,SNR=6.0						
RPZ				Lg	Lg	19 26 52.8	
	3.3nm,0.3s,baz=256,slow=4.2,SNR=2.6						
RPZ	Rata Peaks	3.21	229	P	Pn	19 26 01.6	+0.4
URZ	Urewera	3.98	33	Pn	Pn	19 26 11.6	0.0
	baz=162,slow=20,SNR=2.2						
URZ				Pg	Pb	19 26 21.6	+0.5
	1.8nm,0.3s,baz=250,slow=9.1,SNR=5.1						
URZ				Sn	Sn	19 26 57.1	-0.7
	3.4nm,0.3s,baz=165,slow=20,SNR=3.4						
URZ				Lg	Lg	19 27 19.5	
	1.1nm,0.3s,baz=81,slow=19,SNR=1.9						
ETAZ	East Tamaki Re	4.70	5	P	Pn	19 26 25.3	+3.7
ASAR	Alice Springs	38.10	285	P	P	19 32 30.4	+0.9
	0.3nm,0.6s,baz=120,slow=6.6,SNR=4.7						
WRA	Warramunga Arr	40.16	290	P	P	19 32 46.7	0.0
	1.1nm,0.5s,baz=134,slow=7.2,SNR=5.3						
ARCES	ARCESS Array B	147.71	340	PKPbc	PKPbc	19 44 53.6	-0.3
	3.1nm,1.0s,baz=19,slow=3.1,SNR=4.1						
TORD	Torodi Ar. Bea	150.90	195	PKPbc	PKPbc	19 45 04.1	+0.6
	1.3nm,1.2s,baz=166,slow=3.6,SNR=5.9						
FINES	FINESS Array B	152.50	327	PKPbc	PKPbc	19 45 05.1	-0.6
	1.2nm,0.8s,baz=325,slow=7.1,SNR=3.6						

MAN 20 19:25:46.6, 18°.84N×**120°.81E, h2**^{km}**, mb4.3, ML3.1, MS2.9, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	Callao Caves	1.49	140⇑	*i*P	Pn	19 26 13.5	-0.9
CVP				*i* S	Sg	19 26 35.0	+0.6

MEX 20 19:30:02.7±0.5**, 16°.24N**×**97°.52W, h13**^{km}±8^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.12	42	*i* P	Pb	19 30 21.1	-3.0
VHO				*e*S	Sb	19 30 34.4	-4.3
HUIG	Huatulco	1.43	109	*i* P	Pn	19 30 25.1	-3.2
HUIG				*i* S	Sn	19 30 42.1	-5.0

IDC ***20*** *19:30:28.8±1.1, 41°.37S×174°.24E, h0^{km}, mb4.0/2, mb1 4.1/4, mb1mx3.7/32, mbtmp3.8/4, ML3.5/2, MS4.5/1, Ms1 4.5/1, ms1mx3.8/20, Error ellipse: s-maj=34.6km s-min=23.8km az=134.0*

ISCJB ***20*** *19:30:31.4±0.3, 41°.78S±0°.02×174°.42E±0°.03, h24^{km}±3^{km}, mb4.2/8, MS4.4/1, Error ellipse: s-maj=5.2km s-min=2.4km az=43.7*

WEL ***20*** *19:30:32.1, 41°.6S±0°.9×174°.4E±0°.9, h18^{km}±2^{km}, M4.4/26, ML4.7/20, MLv4.4/26, Error ellipse: s-maj=0.0km s-min=0.0km az=135.8*

NEIC ***20*** *19:30:32.1±0.0, 41°.61S×174°.36E, h19^{km}, mb4.5/6, ML4.4(WEL), After WEL.*

ISC 20 19:30:30.7±1.0**, 41°.60S**±0°.03×**174°.36E**±0°.02**, h12**^{km}±7^{km}**, n150, σ1^s.49**/157**, mb4.4**/8**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.19	214	P	Pb	19 30 36.7	+0.6
CMWZ				S	Sb	19 30 41.2	+3.4
TUWZ	Tuamarina	0.35	298	P	Pn	19 30 40.0	-1.6
TUWZ				S	Sb	19 30 45.6	+1.3
BSWZ	Blackbirch Sta	0.38	251	P	Pb	19 30 40.1	+0.8
BSWZ				S	Sb	19 30 46.2	+1.1
SNZO	South Karori	0.39	43	*e*Pg	Pb	19 30 40.7	+1.3
SNZO				*e*Sg	Sn	19 30 47.5	+3.9
TCW	Tory Channel	0.39	351	P	Pn	19 30 40.9	-1.2
TCW				S	Sb	19 30 46.8	+1.4
BHW	Baring Head	0.43	64	P	Pb	19 30 41.4	+1.2
BHW				S	Sb	19 30 48.1	+1.5
PLWZ	Palliser	0.68	88	P	Pn	19 30 46.0	-0.1
MSWZ	Moikau Station	0.70	75	P	Pn	19 30 46.3	-0.1
CAW	Cannon Point	0.72	48	P	Pn	19 30 46.7	0.0
NNZ	Nelson	0.82	297	P	Pn	19 30 48.3	+0.2
PAWZ	Paruwai Farm	0.83	75	P	Pn	19 30 48.7	+0.4
DUWZ	D’Urville Isla	0.86	337	P	Pn	19 30 49.3	+0.8
MTW	Mount Morrison	0.97	64	P	Pn	19 30 51.1	+1.0
OGWZ	Otaki Gorge	0.99	39	P	Pn	19 30 51.4	+1.0
KHZ	Kahutara	1.02	216	*e*Pn	Pn	19 30 51.2	+0.4
KHZ				*e*Sn	Sg	19 31 04.3	+0.6
KHZ	Kahutara	1.02	216	P	Pn	19 30 51.3	+0.6
TRWZ	Traveller	1.02	79	P	Pn	19 30 51.3	+0.5
THZ	Tophouse	1.10	261	*e*Pn	Pg	19 30 52.8	+0.9
THZ	Tophouse	1.10	261	P	Pg	19 30 52.9	+1.0
HOWZ	Holdsworth Sta	1.12	52	P	Pg	19 30 53.4	+1.2
TMWZ	Te Maipa	1.25	68	P	Pb	19 30 54.6	+0.3
MRZ	Mangatainoka R	1.31	45	P	Pg	19 30 56.4	+0.4
TIWZ	Tintock	1.42	55	P	Pb	19 30 57.4	+0.3
CPWZ	Castlepoint	1.55	64	P	Pb	19 30 59.5	+0.2
OHWZ	Ohakea	1.57	28	P	Pg	19 31 02.2	+1.3
QRZ	Quartz Range	1.58	299	P	Pg	19 31 01.3	+0.3
PRWZ	Pori Road	1.60	50	P	Pb	19 30 60.0	-0.3
POWZ	Post Office Ro	1.61	42	P	Pb	19 31 00.7	+0.4
GVZ	Greta Valley S	1.69	215	P	Pn	19 31 00.1	+0.1
BFZ	Birch Farm	1.69	58	*e*Pn	Pn	19 31 00.2	+0.2
BFZ	Birch Farm	1.69	58	P	Pn	19 31 00.3	+0.2
DVHZ	Dannevirke	1.89	47	P	Pn	19 31 03.3	+0.6
WAZ	Wanganui	1.90	15	P	Pg	19 31 07.7	+0.5
LTZ	Lake Taylor	1.95	232	*e*Pn	Pn	19 31 04.2	+0.6
LTZ	Lake Taylor	1.95	232	P	Pn	19 31 04.3	+0.6
ANWZ	Angora Road	1.96	55	P	Pn	19 31 04.4	+0.6
AMCZ	Amberley	2.02	218	P	Pn	19 31 04.4	-0.2
LREZ	Lake Rotokare	2.13	1	P	Pb	19 31 09.4	+0.2
PNHZ	Pukenui	2.19	40	P	Pn	19 31 07.9	+1.0
NMEZ	Namu Road	2.21	350	P	Pg	19 31 12.7	-0.4
PREZ	Palmer Road	2.26	356	P	Pg	19 31 13.2	-0.8
KHEZ	Kahui Hut	2.31	353	P	Pg	19 31 14.1	-1.0
OKCZ	Okains Bay	2.33	204	P	Pn	19 31 08.0	-0.9
CRLZ	Canterbury Las	2.35	212	*e*Pn	Pn	19 31 08.0	-1.1
CRLZ	Canterbury Las	2.35	212	P	Pn	19 31 08.1	-1.1
NBEZ	Newall Road No	2.35	351	P	Pb	19 31 14.0	+0.9
MTVZ	Mangateitei	2.37	21	P	Pb	19 31 13.8	+0.5
DREZ	Durham Road	2.41	357	P	Pg	19 31 15.7	-1.1
PKE	Pukeiti	2.42	353	P	Pb	19 31 15.1	+1.0
PKVZ	Pokaka	2.42	19	P	Pb	19 31 14.4	+0.2
MOVZ	Moawhango	2.43	26	P	Pb	19 31 13.3	-1.1
OXZ	Oxford	2.44	224	*e*Pn	Pn	19 31 09.3	-0.9
OXZ	Oxford	2.44	224	P	Pn	19 31 09.5	-0.8
INZ	Inchbonnie	2.44	241	P	Pn	19 31 11.3	+0.9
MQZ	McQueen’s Vall	2.45	210	*e*Pn	Pn	19 31 08.9	-1.5
MQZ	McQueen’s Vall	2.45	210	P	Pn	19 31 09.0	-1.5
PXZ	Pawanui	2.46	51	P	Pn	19 31 10.9	+0.3
BHHZ	Black Hill Sta	2.47	32	P	Pn	19 31 13.0	+2.1
KRHZ	Kereru	2.48	39	P	Pn	19 31 11.7	+0.8
VRZ	Vera Road	2.49	7	P	Pb	19 31 15.4	+0.1
DRZ	Dome Shelter	2.49	22	P	Pg	19 31 18.5	0.0
WHVZ	Whangaehu Hut	2.50	23	P	Pb	19 31 14.7	-0.9
FWVZ	Far West T-bar	2.51	22	P	Pb	19 31 14.8	-1.0
AKCZ	Akaroa Harbour	2.51	205	P	Pn	19 31 10.2	-1.1
MHEZ	Mangahewa	2.52	359	P	Pb	19 31 16.3	+0.5
TUVZ	Tukino	2.53	24	P	Pb	19 31 14.7	-1.4
NGZ	Ngauruhoe	2.60	22	P	Pb	19 31 16.1	-1.2
WTVZ	West Tongariro	2.65	21	P	Pb	19 31 17.1	-1.0
TWVZ	Taurewa	2.65	19	P	Pb	19 31 17.1	-1.2
KWHZ	Kaweka Forest	2.68	37	P	Pn	19 31 15.1	+1.4
KRVZ	Karewarewa	2.69	22	P	Pb	19 31 17.4	-1.4
MCHZ	McNeill Hill	2.79	40	P	Pn	19 31 16.4	+1.2
KATZ	Kakaramea	2.81	22	P	Pg	19 31 23.6	-1.0
RITZ	Rihia Road	2.86	24	P	Pb	19 31 23.3	+1.7
BKZ	Black Stump Fm	2.92	35	*e*Pn	Pn	19 31 17.5	+0.5
BKZ	Black Stump Fm	2.92	35	P	Pn	19 31 17.9	+0.8
RATZ	Rangitukua	2.93	22	P	Pg	19 31 26.0	-1.0
WVZ	Waitaha Valley	3.06	240	P	Pn	19 31 19.5	+0.6
WATZ	Wairara	3.07	21	P	Pg	19 31 27.9	-1.7
HIZ	Hauiti	3.10	7	*e*Pn	Pn	19 31 21.5	+2.0
HIZ	Hauiti	3.10	7	P	Pb	19 31 24.1	-1.7
MRHZ	Matea Rd	3.18	30	P	Pn	19 31 22.5	+1.9
RPZ	Rata Peaks	3.23	228	Pn	Pn	19 31 20.1	-1.1
	16nm,0.3s,baz=81,slow=2.4,SNR=40						
RPZ				Sn	Sn	19 31 56.5	-3.0
	13nm,0.3s,baz=200,slow=3.1,SNR=4.6						
RPZ				Lg	Lg	19 32 07.5	
	12nm,0.3s,baz=215,slow=16,SNR=4.6						
RPZ	Rata Peaks	3.23	228	*e*Pn	Pn	19 31 20.8	-0.4
RPZ	Rata Peaks	3.23	228	P	Pn	19 31 20.8	-0.4
MTHZ	Maungataniwha	3.34	36	P	Pn	19 31 23.9	+1.2
TLZ	Tolley Road	3.39	16	P	Pb	19 31 28.2	-2.4
RAHZ	Arahi	3.40	39	P	Pn	19 31 24.5	+1.0
RTZ	Ruatahuna	3.59	35	P	Pn	19 31 27.6	+1.4
MUGZ	Murupara	3.62	32	P	Pn	19 31 28.1	+1.5
MHGZ	Mahia Peninsul	3.65	49	P	Pn	19 31 27.2	+0.2
TARZ	Mount Tarawera	3.74	27	P	Pn	19 31 29.7	+1.4
PRGZ	Paritu Road	3.80	46	P	Pn	19 31 28.1	-0.9
FOZ	Fox Glacier	3.87	238	*e*Pn	Pn	19 31 29.9	-0.1
FOZ	Fox Glacier	3.87	238	P	Pn	19 31 30.5	+0.5
RAGZ	Rawiri	3.89	38	P	Pn	19 31 29.7	-0.6
RIGZ	Rimuhau	3.89	43	P	Pn	19 31 29.4	-0.9
URZ	Urewera	3.95	33	Pn	Pn	19 31 29.5	-1.6
	1.0nm,0.3s,baz=242,slow=5.2,SNR=14						
URZ				Sn	Sn	19 32 15.3	-2.0
	14nm,0.3s,baz=180,slow=15,SNR=3.6						
URZ	Urewera	3.95	33	*e*Pn	Pn	19 31 31.4	+0.3
URZ	Urewera	3.95	33	P	Pn	19 31 30.9	-0.1
TOZ	Tahuroa Road	3.96	13	P	Pb	19 31 36.1	-4.3
LBZ	Lake Benmore	4.14	226	*e*Pn	Pn	19 31 33.1	-0.6
LBZ	Lake Benmore	4.14	226	P	Pn	19 31 33.3	-0.4
ODZ	Otahua Downs	4.38	217	*e*Pn	Pn	19 31 35.8	-1.2
ODZ	Otahua Downs	4.38	217	P	Pn	19 31 35.6	-1.5
TWGZ	Tauwhareparae	4.41	40	P	Pn	19 31 37.1	-0.4
RUGZ	Raukumara Rang	4.44	36	P	Pn	19 31 37.1	-0.8
KBAZ	Karaka Road Bo	4.51	5	P	Pn	19 31 42.9	+4.0
MKAZ	Moumakai	4.53	8	P	Pn	19 31 42.4	+3.4
AWAZ	Awhitu Peninsu	4.53	3	P	Pn	19 31 43.5	+4.4
PUZ	Puketiti	4.63	42	P	Pn	19 31 40.4	0.0
ETAZ	East Tamaki Re	4.66	6	P	Pn	19 31 44.7	+3.9
WTAZ	Waiatarua	4.66	2	P	Pn	19 31 45.8	+5.0
PKGZ	Pakihiroa	4.68	39	P	Pn	19 31 41.0	-0.2
JCZ	Jackson Bay	4.79	237	P	Pn	19 31 42.3	-0.3
RVAZ	Riverhead Bore	4.82	2	P	Pn	19 31 47.3	+4.2
WIAZ	Waiheke Island	4.83	7	P	Pn	19 31 46.9	+3.7
MBAZ	Motutapu North	4.84	5	P	Pn	19 31 48.3	+5.0
KUZ	Kuaotunu	4.96	13	P	Pn	19 31 48.1	+3.1
ABAZ	Army Bay	5.00	4	P	Pn	19 31 49.4	+3.9
MXZ	Matakaoa Point	5.05	38	*e*Pn	Pn	19 31 45.9	-0.3
MXZ	Matakaoa Point	5.05	38	P	Pn	19 31 45.5	-0.7
WKZ	Wanaka	5.06	229	*e*Pn	Pn	19 31 45.2	-1.2
WKZ	Wanaka	5.06	229	P	Pn	19 31 45.2	-1.2
HHSZ	Highcliff Hill	5.08	211	P	Pn	19 31 45.1	-1.5
EAZ	Earnscleugh	5.17	224	P	Pn	19 31 47.7	-0.1
TUZ	Tuapeka	5.54	217	P	Pn	19 31 51.7	-1.1
WCZ	Waipu Caves	5.65	360	P	Pn	19 31 59.3	+4.9
MLZ	Mavora Lakes	5.90	228	*e*Pn	Pn	19 31 57.1	-0.8
MLZ	Mavora Lakes	5.90	228	P	Pn	19 31 57.5	-0.4
SYZ	Scrubby Hill	6.21	215	P	Pn	19 32 01.1	-0.9
WHZ	Wether Hill Ro	6.32	225	*e*Pn	Pn	19 32 02.6	-1.1
WHZ	Wether Hill Ro	6.32	225	P	Pn	19 32 02.0	-1.6
OUZ	Omahuta	6.39	354	*e*Pn	Pn	19 32 04.1	-0.6
OUZ	Omahuta	6.39	354	P	Pn	19 32 08.7	+4.0
DCZ	Deep Cove	6.51	231	*e*Pn	Pn	19 32 05.3	-0.9
APZ	The Paps	6.95	219	P	Pn	19 32 10.8	-1.5
CTZ	Chatham Island	6.99	111	P	Pn	19 32 11.5	-1.3
VNDA	Vanda	36.41	185	LR	LR	19 50 44.2	
	comp=Z,606nm,18.4s,baz=337,slow=33						
AS31	Alice Springs	38.06	285	*e*P	P	19 37 49.5	+0.3
	1.3nm,1.0s						
ASAR	Alice Springs	38.06	285	P	P	19 37 48.2	-1.0
	0.4nm,0.4s,baz=124,slow=6.9,SNR=33						
WB2	Warramunga Arr	40.11	290	*e*P	P	19 38 06.5	+0.1
	6.6nm,0.8s						
WRA	Warramunga Arr	40.12	290	P	P	19 38 05.6	-0.8
	1.4nm,0.3s,baz=133,slow=7.3,SNR=13						
MTN	Manton Dam	47.22	294	*e*P	P	19 39 04.0	+0.5
	11nm,1.1s						
QSPA	South Pole Qui	48.53	180	*e*P	P	19 39 15.1	+1.7
	4.6nm,0.9s						
SOEI	Soe	54.15	291	*e*P	P	19 39 56.8	+0.8
	11nm,1.1s						
SNAA	Sanae	67.02	181	*e*P	P	19 41 24.2	+1.1
	2.7nm,1.0s						
ARCES	ARCESS Array B	147.66	340	PKPbc	PKPdf	19 50 11.9	+0.9
	2.0nm,0.9s,baz=29,slow=2.8,SNR=5.5						
TORD	Torodi Ar. Bea	150.94	195	PKPbc	PKPbc	19 50 23.7	+0.1
	0.6nm,0.4s,baz=162,slow=3.5,SNR=11						
TORD				PKPab	pPKPab	19 50 33.2	-1.9
	2.0nm,0.6s,baz=150,slow=2.2,SNR=16						
FINES	FINESS Array B	152.45	327	PKPbc	PKPbc	19 50 23.6	-2.0
	2.0nm,0.9s,baz=64,slow=3.2,SNR=4.2						
FINES				PKPab	PKPab	19 50 34.3	-1.6
	1.8nm,0.7s,baz=77,slow=4.1,SNR=6.7						

WEL 20 19:35:26.6, 41°.6S±0°.9×**174°.4E**±0°.7**, h14**^{km}±2^{km}**, M3.4**/29**, ML3.6**/19**, MLv3.4**/29**, Error ellipse: s-maj=0.0km s-min=0.0km az=150.5, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	216	P	Pg	19 35 31.5	+0.3
CMWZ				S	Sb	19 35 35.7	-0.1
TUWZ	Tuamarina	0.36	296	P	Pb	19 35 34.4	-0.3
TUWZ				S	Sb	19 35 39.9	-0.2
TCW	Tory Channel	0.38	349	P	Pb	19 35 35.1	0.0
TCW				S	Sb	19 35 40.5	-0.3
BSWZ	Blackbirch Sta	0.39	251	P	Pg	19 35 34.8	+0.3
BSWZ				S	Sg	19 35 40.4	+0.5
BHW	Baring Head	0.41	65	P	Pb	19 35 35.6	-0.1
PLWZ	Palliser	0.66	89	P	Pb	19 35 40.2	+0.3
MSWZ	Moikau Station	0.68	76	P	Pb	19 35 40.6	+0.4
CAW	Cannon Point	0.71	48	P	Pb	19 35 40.9	+0.2
PAWZ	Paruwai Farm	0.82	76	P	Pb	19 35 43.0	+0.4
NNZ	Nelson	0.83	296	P	Pb	19 35 42.8	0.0
DUWZ	D’Urville Isla	0.85	336	P	Pb	19 35 43.4	+0.2
MTW	Mount Morrison	0.95	64	P	Pg	19 35 45.2	+0.2
OGWZ	Otaki Gorge	0.98	38	P	Pn	19 35 45.7	-0.1
TRWZ	Traveller	1.01	80	P	Pb	19 35 45.7	-0.1
KHZ	Kahutara	1.04	216	P	Pb	19 35 46.2	-0.1
HOWZ	Holdsworth Sta	1.10	52	P	Pn	19 35 47.7	+0.1
THZ	Tophouse	1.11	260	P	Pn	19 35 47.7	0.0
TMWZ	Te Maipa	1.24	68	P	Pn	19 35 48.9	-0.5
MRZ	Mangatainoka R	1.30	45	P	Pn	19 35 50.5	+0.2
TIWZ	Tintock	1.40	55	P	Pn	19 35 51.5	-0.2
OHWZ	Ohakea	1.55	28	P	Pg	19 35 56.0	-0.4

QRZ	Quartz Range	1.58	298	P	Pb	19 35 55.4	-0.2
PRWZ	Pori Road	1.59	50	P	Pn	19 35 54.0	-0.2
BFZ	Birch Farm	1.68	58	P	Pn	19 35 55.7	+0.2
GVZ	Greta Valley S	1.70	215	P	Pn	19 35 54.7	-1.1
DVHZ	Dannevirke	1.87	47	P	Pn	19 35 57.5	-0.7
LTZ	Lake Taylor	1.97	232	P	Pn	19 35 59.0	-0.5
AMCZ	Amberley	2.04	218	P	Pn	19 35 59.2	-1.3
PNHZ	Pukenui	2.17	40	P	Pn	19 36 01.9	-0.4
PREZ	Palmer Road	2.25	356	P	Pb	19 36 07.3	+0.4
KHEZ	Kahui Hut	2.30	353	P	Pb	19 36 08.9	+1.0
OKCZ	Okains Bay	2.35	204	P	Pn	19 36 02.8	-1.9
PKE	Pukeiti	2.41	353	P	Pb	19 36 09.3	-0.3
MOVZ	Moawhango	2.42	26	P	Pb	19 36 10.9	+1.0
OXZ	Oxford	2.45	224	P	Pn	19 36 04.1	-2.0
INZ	Inchbonnie	2.46	241	P	Pn	19 36 06.4	+0.2
KRHZ	Kereru	2.46	39	P	Pn	19 36 05.8	-0.5
AKCZ	Akaroa Harbour	2.53	205	P	Pn	19 36 05.0	-2.2
JCZ	Jackson Bay	4.80	237	P	Pn	19 36 41.9	+3.4

IDC ***20*** *19:43:32.9±1.7, 41°.68S×173°.92E, h0^{km}, mb3.8/2, mb1 3.8/4, mb1mx3.7/30, mbtmp3.6/4, ML3.1/2, Error ellipse: s-maj=46.6km s-min=16.1km az=133.0*

ISCJB ***20*** *19:43:38.1±0.3, 41°.77S±0°.03×174°.37E±0°.04, h18^{km}, mb3.5/2, Error ellipse: s-maj=5.1km s-min=3.1km az=137.2*

WEL ***20*** *19:43:38.4, 42°S±4°×17°4E±°, h12^{km}, M3.8/16, ML4.1/13, MLv3.8/16, Error ellipse: s-maj=0.0km s-min=0.0km az=0.2*

ISC 20 19:43:36.5±0.8**, 41°.66S**±0°.03×**174°.22E**±0°.03**, h18^{km}, n58,** σ**2s.23**/61**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.27	257	P	Pb	19 43 47.2	+4.6
BSWZ				S	Sb	19 43 53.2	+6.4
TUWZ	Tuamarina	0.31	317	P	Pn	19 43 46.8	+0.7
TUWZ				S	Sn	19 43 52.5	+0.3
TCW	Tory Channel	0.45	5	P	Pn	19 43 47.4	-0.6
TCW				S	Sb	19 43 53.0	+0.8
BHW	Baring Head	0.55	63	P	Pg	19 43 48.3	+0.9
NNZ	Nelson	0.77	304	P	Pn	19 43 55.2	+2.8
PLWZ	Palliser	0.78	84	P	Pb	19 43 52.7	+1.1
DUWZ	D’Urville Isla	0.88	345	P	Pn	19 43 56.4	+2.4
KHZ	Kahutara	0.91	214	P	Pn	19 43 58.6	+4.2
PAWZ	Paruwai Farm	0.95	74	P	Pg	19 43 56.1	+1.2
THZ	Tophouse	0.99	263	P	Pn	19 44 00.1	+4.5
MTW	Mount Morrison	1.08	63	P	Pb	19 43 58.0	+1.3
TMWZ	Te Maipa	1.37	67	P	Pb	19 44 02.5	+0.8
POWZ	Post Office Ro	1.72	43	P	Pb	19 44 08.2	+0.6
BFZ	Birch Farm	1.81	58	P	Pn	19 44 07.0	+0.2
LTZ	Lake Taylor	1.83	232	P	Pn	19 44 06.7	-0.5
AMCZ	Amberley	1.91	217	P	Pb	19 44 11.8	+1.0
WAZ	Wanganui	1.99	17	P	Pb	19 44 12.4	+0.3
DVHZ	Dannevirke	2.00	48	P	Pn	19 44 10.3	+0.9
ANWZ	Angora Road	2.08	56	P	Pb	19 44 13.0	-0.7
OKCZ	Okains Bay	2.24	202	P	Pb	19 44 15.1	-1.3
PNHZ	Pukenui	2.30	41	P	Pn	19 44 14.6	+1.0
WPHZ	Waipukurau	2.32	47	P	Pb	19 44 17.8	+0.1
MQZ	McQueen’s Vall	2.35	209	P	Pn	19 44 16.3	+2.1
AKCZ	Akaroa Harbour	2.42	203	P	Pn	19 44 14.2	-0.9
PKVZ	Pokaka	2.52	20	P	Pg	19 44 23.5	-1.2
VRZ	Vera Road	2.56	9	P	Pb	19 44 22.1	+0.2
BHHZ	Black Hill Sta	2.58	34	P	Pn	19 44 20.0	+2.6
WHVZ	Whangaehu Hut	2.59	24	P	Pb	19 44 20.8	-1.7
KRHZ	Kereru	2.59	40	P	Pn	19 44 18.6	+1.0
FWVZ	Far West T-bar	2.60	23	P	Pb	19 44 21.1	-1.7
TUVZ	Tukino	2.62	25	P	Pb	19 44 22.7	-0.4
NGZ	Ngauruhoe	2.69	23	P	Pb	19 44 22.2	-2.0
KAHZ	Kahuranaki	2.75	48	P	Pn	19 44 20.8	+1.1
TWVZ	Taurewa	2.75	20	P	Pb	19 44 24.9	-0.2
WTVZ	West Tongariro	2.75	23	P	Pb	19 44 24.6	-0.5
KRVZ	Karewarewa	2.78	23	P	Pb	19 44 23.7	-2.0
RITZ	Rihia Road	2.96	26	P	Pb	19 44 27.2	-1.4
BKZ	Black Stump Fm	3.03	36	P	Pb	19 44 28.1	-1.9
RPZ	Rata Peaks	3.11	228	Pn	Pn	19 44 20.7	-3.9
	3.0nm,0.3s,baz=48,slow=5.2,SNR=6.4						
RPZ				Pg	Pb	19 44 27.0	-4.2
	3.4nm,0.3s,baz=303,slow=1.1,SNR=8.0						
RPZ				Sn	Sn	19 45 03.1	+1.7
	8.6nm,0.3s,baz=359,slow=20,SNR=7.7						
RPZ				Lg	Lg	19 45 17.3	
	3.3nm,0.3s,baz=108,slow=19,SNR=2.6						
RPZ	Rata Peaks	3.11	228	P	Pn	19 44 23.6	-1.1
HIZ	Hauiti	3.18	9	P	Pb	19 44 30.9	-1.5
TARZ	Mount Tarawera	3.84	28	P	Pn	19 44 36.9	+2.2
LBZ	Lake Benmore	4.02	226	P	Pn	19 44 37.5	+0.2
URZ	Urewera	4.05	34	Pn	Pn	19 44 39.8	+2.1
	1.1nm,0.3s,baz=278,slow=3.8,SNR=8.1						
URZ				Pg	Pb	19 44 49.2	+1.9
	4.0nm,0.3s,baz=256,slow=6.3,SNR=10.0						
URZ				Sn	Sn	19 45 23.0	-1.7
	4.6nm,0.3s,baz=184,slow=17,SNR=4.1						
URZ				Lg	Lg	19 45 46.3	
	0.8nm,0.3s,baz=90,slow=20,SNR=2.6						
URZ	Urewera	4.05	34	P	Pn	19 44 42.9	+5.2
MWZ	Matawai	4.18	39	P	Pn	19 44 40.2	+0.9
TGRZ	Tauranga	4.23	23	P	Pn	19 44 43.4	+3.4
ODZ	Otahua Downs	4.27	216	P	Pn	19 44 40.3	-0.3
MKAZ	Moumakai	4.60	9	P	Pn	19 44 49.7	+4.5
JCZ	Jackson Bay	4.67	237	P	Pn	19 44 51.2	+5.0
WIAZ	Waiheke Island	4.91	9	P	Pn	19 44 55.3	+5.9
HHSZ	Highcliff Hill	4.97	211	P	Pn	19 44 53.1	+2.8
TUZ	Tuapeka	5.43	216	P	Pn	19 45 00.3	+3.8
SYZ	Scrubby Hill	6.10	215	P	Pn	19 45 09.8	+4.2
CTZ	Chatham Island	7.06	110	P	Pn	19 45 19.2	+0.3
ASAR	Alice Springs	37.98	285	P	P	19 50 50.7	-2.7
	0.4nm,0.9s,baz=122,slow=6.6,SNR=8.0						
WRA	Warramunga Arr	40.05	290	P	P	19 51 07.9	-2.8
	1.1nm,0.6s,baz=129,slow=9.0,SNR=3.2						
TORD	Torodi Ar. Bea	150.86	195	PKPbc	PKPbc	20 03 26.7	-1.6
	0.9nm,1.1s,baz=153,slow=4.1,SNR=2.7						

IDC ***20*** *19:45:02.5±1.5, 41°.56S×174°.43E, h0^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.7/29, mbtmp3.8/4, ML3.4/1, Error ellipse: s-maj=44.2km s-min=18.0km az=135.0*

ISCJB ***20*** *19:45:06.9±0.4, 41°.66S±0°.04×174°.30E±0°.04, h26^{km}±4^{km}, mb3.6/2, Error ellipse: s-maj=7.3km s-min=4.0km az=153.9*

WEL ***20*** *19:45:06.5, 41°.6S±0°.8×174°.4E±0°.9, h13^{km}±2^{km}, M3.9/21, ML4.2/17, MLv3.9/21, Error ellipse: s-maj=0.0km s-min=0.0km az=129.4*

ISC 20 19:45:06.7±1.0**, 41°.64S**±0°.04×**174°.34E**±0°.03**, h23^{km}**±7^{km}**, n34,** σ**0s.82**/39**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	221	P	Pb	19 45 11.1	-0.3
BSWZ	Blackbirch Sta	0.35	258	P	Pb	19 45 14.5	+0.1
BSWZ				S	Sb	19 45 20.5	+0.9
TUWZ	Tuamarina	0.36	306	P	Pb	19 45 14.5	0.0
TUWZ				S	Sb	19 45 20.2	+0.3
TCW	Tory Channel	0.44	354	P	Pb	19 45 15.6	-0.2
TCW				S	Sb	19 45 21.3	-0.6
BHW	Baring Head	0.47	60	P	Pb	19 45 15.8	-0.4
PLWZ	Palliser	0.69	84	P	Pb	19 45 20.6	+0.4
MSWZ	Moikau Station	0.72	72	P	Pb	19 45 20.9	+0.2
MSWZ				S	Sn	19 45 33.0	+1.1
CAW	Cannon Point	0.77	46	P	Pn	19 45 21.3	-0.8
NNZ	Nelson	0.83	300	P	Pn	19 45 22.8	-0.2
PAWZ	Paruwai Farm	0.86	73	P	Pn	19 45 23.7	+0.2
DUWZ	D’Urville Isla	0.90	340	P	Pn	19 45 24.3	+0.3
KHZ	Kahutara	0.97	217	P	Pn	19 45 25.7	+0.8
MTW	Mount Morrison	1.00	61	P	Pn	19 45 25.7	+0.3
OGWZ	Otaki Gorge	1.04	38	P	Pn	19 45 26.0	+0.1
TRWZ	Traveller	1.05	77	P	Pn	19 45 26.0	+0.1
THZ	Tophouse	1.08	263	P	Pn	19 45 27.3	+0.9
HOWZ	Holdsworth Sta	1.16	50	P	Pn	19 45 28.4	+0.8
TMWZ	Te Maipa	1.29	66	P	Pn	19 45 29.8	+0.4
MRZ	Mangatainoka R	1.36	44	P	Pn	19 45 31.1	+0.9
TIWZ	Tintock	1.46	54	P	Pn	19 45 32.1	+0.5
QRZ	Quartz Range	1.59	300	P	Pb	19 45 35.9	+0.6
OHWZ	Ohakea	1.62	28	P	Pb	19 45 36.7	+0.9
GVZ	Greta Valley S	1.64	216	P	Pn	19 45 34.7	+0.6
PRWZ	Pori Road	1.65	49	P	Pn	19 45 35.1	+0.9
LTZ	Lake Taylor	1.91	233	P	Pn	19 45 38.8	+0.9
INZ	Inchbonnie	2.40	242	P	Pn	19 45 46.0	+1.4
MOVZ	Moawhango	2.48	26	P	Pn	19 45 48.0	+2.2
RPZ	Rata Peaks	3.18	228	Pn	Pn	19 45 54.4	-1.0
	3.9nm,0.3s,baz=285,slow=3.9,SNR=1.4						
RPZ				Sn	Sn	19 46 31.6	-1.0
	6.8nm,0.3s,baz=349,slow=10,SNR=4.1						
RPZ				Lg	Lg	19 46 46.2	
	5.1nm,0.3s,baz=306,slow=19,SNR=2.4						
URZ	Urewera	4.00	33	Pn	Pn	19 46 01.8	-4.7
	baz=45,slow=21,SNR=6.1						
URZ				Sn	Sn	19 46 50.9	-1.7
	4.1nm,0.3s,baz=319,slow=20,SNR=2.7						
ASAR	Alice Springs	38.06	285	P	P	19 52 23.1	-0.4
	0.3nm,0.4s,baz=121,slow=6.9,SNR=8.0						
WRA	Warramunga Arr	40.13	290	P	P	19 52 40.7	-0.1
	2.1nm,0.8s,baz=130,slow=7.8,SNR=6.0						
ARCES	ARCESS Array B	147.70	340	PKPbc	PKPbc	20 04 47.8	-0.4
	3.6nm,0.9s,baz=36,slow=4.7,SNR=3.6						
TORD	Torodi Ar. Bea	150.89	195	PKPbc	PKPbc	20 04 58.0	+0.3
	0.6nm,0.6s,baz=155,slow=3.4,SNR=5.4						
FINES	FINESS Array B	152.48	327	PKPbc	PKPbc	20 04 58.8	-1.2
	0.8nm,0.6s,baz=15,slow=5.9,SNR=3.3						

IDC ***20*** *19:52:24.1±1.7, 41°.39S×174°.27E, h0^{km}, mb3.6/2, mb1 3.6/4, mb1mx3.5/24, mbtmp3.4/4, ML2.8/2, Error ellipse: s-maj=43.4km s-min=25.5km az=138.0*

ISCJB ***20*** *19:52:27.0±0.3, 41°.70S±0°.03×174°.33E±0°.04, h28^{km}, mb3.4/2, Error ellipse: s-maj=5.3km s-min=2.9km az=139.9*

WEL ***20*** *19:52:26.6, 42°S±1°×174°.4E±0°.9, h16^{km}±3^{km}, M3.4/30, ML3.6/22, MLv3.4/30, Error ellipse: s-maj=0.0km s-min=0.0km az=148.9*

ISC 20 19:52:27.1±0.8**, 41°.66S**±0°.03×**174°.35E**±0°.03**, h28^{km}, n55,** σ**1s.01**/61**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	227	P	Pb	19 52 31.2	-1.2
CMWZ				S	Sb	19 52 34.9	-1.2
BSWZ	Blackbirch Sta	0.36	260	P	Pb	19 52 34.6	-0.6
BSWZ				S	Sb	19 52 40.5	-0.2
TUWZ	Tuamarina	0.38	307	P	Pb	19 52 34.5	-1.0
TUWZ				S	Sb	19 52 40.2	-1.0
TCW	Tory Channel	0.45	353	P	Pb	19 52 35.7	-0.8
TCW				S	Sb	19 52 41.8	-1.3
BHW	Baring Head	0.47	58	P	Pb	19 52 36.0	-0.9
PLWZ	Palliser	0.69	83	P	Pb	19 52 40.8	+0.3
MSWZ	Moikau Station	0.72	71	P	Pb	19 52 41.0	-0.1
CAW	Cannon Point	0.77	45	P	Pb	19 52 41.5	-0.4
NNZ	Nelson	0.85	301	P	Pn	19 52 42.9	-0.2
PAWZ	Paruwai Farm	0.86	72	P	Pn	19 52 43.7	+0.4
DUWZ	D’Urville Isla	0.91	339	P	Pb	19 52 44.4	+0.1
KHZ	Kahutara	0.97	218	P	Pb	19 52 46.0	+0.8
MTW	Mount Morrison	1.00	61	P	Pn	19 52 45.9	+0.6
OGWZ	Otaki Gorge	1.04	37	P	Pb	19 52 46.7	+0.2
THZ	Tophouse	1.08	264	P	Pb	19 52 47.6	+0.3
HOWZ	Holdsworth Sta	1.16	50	P	Pn	19 52 48.3	+0.8
TMWZ	Te Maipa	1.29	65	P	Pn	19 52 49.5	+0.3
MRZ	Mangatainoka R	1.36	44	P	Pn	19 52 51.1	+0.9
TIWZ	Tintock	1.46	53	P	Pb	19 52 54.6	+1.0
QRZ	Quartz Range	1.60	301	P	Pb	19 52 56.1	+0.2
OHWZ	Ohakea	1.62	27	P	Pb	19 52 56.7	+0.3
GVZ	Greta Valley S	1.63	216	P	Pn	19 52 55.0	+1.0
PRWZ	Pori Road	1.65	49	P	Pn	19 52 54.7	+0.6
BFZ	Birch Farm	1.73	56	P	Pn	19 52 56.0	+0.6
LTZ	Lake Taylor	1.91	233	P	Pn	19 52 59.0	+1.3
DVHZ	Dannevirke	1.93	46	P	Pn	19 52 58.2	+0.1
ANWZ	Angora Road	2.00	54	P	Pn	19 52 59.4	+0.3
WPHZ	Waipukurau	2.25	46	P	Pn	19 53 03.1	+0.7
OKCZ	Okains Bay	2.27	204	P	Pn	19 53 02.6	-0.2
KHEZ	Kahui Hut	2.37	354	P	Pb	19 53 09.4	+0.3
MQZ	McQueen’s Vall	2.40	211	P	Pn	19 53 03.8	-0.6
INZ	Inchbonnie	2.41	243	P	Pn	19 53 05.8	+1.3
NBEZ	Newall Road No	2.41	351	P	Pb	19 53 08.6	-1.2
AKCZ	Akaroa Harbour	2.45	205	P	Pn	19 53 04.9	-0.3
PKE	Pukeiti	2.47	354	P	Pb	19 53 09.6	-1.2
MOVZ	Moawhango	2.49	26	P	Pn	19 53 07.4	+1.6
BHHZ	Black Hill Sta	2.53	32	P	Pn	19 53 07.4	+1.1
VRZ	Vera Road	2.55	7	P	Pb	19 53 11.4	-0.7
WHVZ	Whangaehu Hut	2.55	22	P	Pb	19 53 11.1	-1.2
FWVZ	Far West T-bar	2.57	21	P	Pn	19 53 09.2	+2.2
TUVZ	Tukino	2.59	23	P	Pn	19 53 09.6	+2.4
NGZ	Ngauruhoe	2.66	22	P	Pb	19 53 14.0	0.0
WTVZ	West Tongariro	2.71	21	P	Pb	19 53 15.0	+0.1
WVZ	Waitaha Valley	3.03	241	P	Pn	19 53 14.6	+1.5
HIZ	Hauiti	3.16	7	P	Pn	19 53 18.2	+3.2
RPZ	Rata Peaks	3.18	229	Pn	Pn	19 53 15.4	+0.2
	2.7nm,0.3s,baz=68,slow=4.1,SNR=8.8						
RPZ				Sn	Sn	19 53 51.4	-0.9
	3.9nm,0.3s,baz=305,slow=21,SNR=8.9						
RPZ	Rata Peaks	3.18	229	P	Pn	19 53 15.4	+0.2
FOZ	Fox Glacier	3.83	239	P	Pn	19 53 25.1	+0.9
URZ	Urewera	4.00	33	Pn	Pn	19 53 24.7	-1.8
	0.2nm,0.3s,baz=255,slow=7.6,SNR=1.9						
URZ				Sn	Sn	19 54 11.4	-1.1
	1.6nm,0.3s,baz=108,slow=20,SNR=2.8						
LBZ	Lake Benmore	4.09	227	P	Pn	19 53 28.9	+1.1
ODZ	Otahua Downs	4.33	217	P	Pn	19 53 31.1	+0.1
JCZ	Jackson Bay	4.75	238	P	Pn	19 53 37.4	+0.6
ASAR	Alice Springs	38.07	285	P	P	19 59 43.7	+0.3
	0.2nm,0.4s,baz=122,slow=6.6,SNR=9.0						
WRA	Warramunga Arr	40.14	290	P	P	20 00 00.6	0.0
	1.0nm,0.8s,baz=116,slow=8.6,SNR=2.3						
TORD	Torodi Ar. Bea	150.88	195	PKPbc	PKiKP	20 12 19.1	+1.1
	0.9nm,1.1s,baz=164,slow=4.2,SNR=3.0						

ISCJB ***20*** *19:55:55.0±0.6, 6°.52N±0°.02×73°.35W±0°.04, h141^{km}±5^{km}, mb3.2/2, Error ellipse: s-maj=6.1km s-min=3.9km az=6.2*

RSNC ***20*** *19:55:56.6±1.0, 6°.51N×73°.36W, h134^{km}±4^{km}, ML3.2, Mw3.5*

IDC ***20*** *19:55:57.2±6.6, 6°.52N×73°.66W, h162^{km}±120^{km}, mb2.9/2, mb1 3.4/2, mb1mx2.9/44, mbtmp3.4/2, Error ellipse: s-maj=160.7km s-min=57.7km az=11.0*

ISC 20 19:55:54.6±1.0**, 6°.52N**±0°.03×**73°.32W**±0°.04**, h146^{km}**±6^{km}**, n27,** σ**1s.50**/52**, 4C-7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.15	61	⇑*i*P	Pn	19 56 14.8	+0.2
BARC				*e*S	Sn	19 56 29.0	-0.7
BARC				*i*		19 56 30.3	
	comp=Z,286nm,0.2s						
GIRC	Giron, Santand	0.57	12	⇓*i*P	Pn	19 56 16.6	+0.5
GIRC				*e*S	Sn	19 56 32.0	-0.4
GIRC				*i*		19 56 34.1	
	comp=Z,752nm,0.3s						
RUSC	La Rusia	0.66	160	⇓*i*P	Pn	19 56 17.3	+0.2
RUSC				*e*S	Sn	19 56 33.4	-0.7
RUSC				*i*		19 56 35.0	
	comp=Z,236nm,0.3s						
BRRC	Barranca, Sant	0.70	326	⇑*i*P	Pn	19 56 17.4	+0.7
BRRC				*e*S	Sn	19 56 33.1	-0.4
BRRC				*i*		19 56 41.8	
	comp=Z,182nm,0.2s						
PTBC	PUERTO BERRIO,	1.13	271	⇑*i*P	Pn	19 56 19.6	-0.6
PTBC				*e*S	Sn	19 56 37.7	-2.0
PTBC				*i*		19 56 41.8	
	comp=Z,179nm,0.2s						
SPBC	San Pablo de B	1.14	221	⇓*i*P	Pn	19 56 20.6	+0.2
SPBC				*e*S	Sn	19 56 39.9	-0.1
SPBC				*i*		19 56 46.1	
	comp=Z,157nm,0.4s						
YOPC	Yopal, Colombi	1.46	142	⇓*i*P	Pn	19 56 24.4	+0.8
YOPC				*e*S	Sn	19 56 46.3	+0.6
YOPC				*i*		19 56 47.5	
	comp=Z,397nm,0.2s						
TAMC	Tame, Arauca	1.52	93	⇓*i*P	Pn	19 56 25.3	+1.2
TAMC				*e*S	Sn	19 56 46.7	+0.1
TAMC				*i*		19 56 48.4	
	comp=Z,96nm,0.2s						
OCAC	Ocana	1.71	360	⇓*e*P	Pn	19 56 27.3	+0.9
OCAC				*e*S	Sn	19 56 51.3	+0.6
OCAC				*i*		19 56 55.7	
	comp=Z,443nm,0.3s						
ZARC	Zaragoza, Cauc	1.81	302	⇓*e*P	Pn	19 56 27.7	+0.4
ZARC				*e*S	Sn	19 56 52.1	-0.3
ZARC				*i*		19 56 58.6	
	comp=Z,329nm,0.5s						
NORC	Norcasia	1.81	239	*e*P	Pn	19 56 27.6	+0.2
NORC				*e*S	Sn	19 56 51.5	-1.0
NORC				*i*		19 56 58.5	
	comp=Z,122nm,0.2s						
CHIC	Chingaza	1.92	192	*e*P	Pn	19 56 29.7	+0.6
CHIC				*e*S	Sn	19 56 55.1	-0.2
CHIC				*i*		19 57 01.6	
	comp=Z,60nm,0.3s						
ROSC	El Rosal	1.94	211	P	Pn	19 56 31.4	+2.1
	comp=Z,14nm,0.3s,baz=15,slow=23,SNR=9.5						
ROSC				S	Sn	19 56 57.3	+1.5
	comp=Z,17nm,0.3s,baz=239,slow=22,SNR=6.9						
ROSC	El Rosal	1.94	211	⇑*i*P	Pn	19 56 31.7	+2.4
ROSC				*e*S	Sn	19 56 58.7	+2.9
HELC	Santa Helena	2.22	262	*e*P	Pn	19 56 33.5	+1.0
HELC				*e*S	Sn	19 57 01.0	-0.6
HELC				*i*		19 57 08.3	
	comp=Z,112nm,0.4s						
SMLC	San Martn de	2.39	342	*e*P	Pn	19 56 34.5	+0.2
SMLC				*e*S	Sn	19 57 05.5	+0.8
SMLC				*i*		19 57 13.0	
	comp=Z,172nm,0.3s						
VILC	Villavicencio,	2.42	189	*e*P	Pn	19 56 35.0	+0.2
VILC				*e*S	Sn	19 57 05.7	+0.1
VILC				*i*		19 57 11.5	
	comp=Z,81nm,0.5s						
RREF	El Recreo	2.58	232	*e*P	Pn	19 56 38.6	+1.4
RREF				*e*S	Sn	19 57 13.8	+3.9
RREF				*i*		19 57 18.8	
	comp=Z,109nm,0.3s						
PRAC	Prado	3.19	209	*e*P	Pn	19 56 44.7	+0.3
PRAC				*e*S	Sn	19 57 24.2	+1.3
PRAC				*i*		19 57 30.3	
	comp=Z,103nm,0.3s						
ORTC	Ortega, Tolima	3.23	217	*e*P	Pn	19 56 46.0	+1.2
ORTC				*e*S	Sn	19 57 23.7	+0.1
ORTC				*i*		19 57 30.9	
	comp=Z,54nm,0.4s						
CODC	Agustn Codazz	3.40	358	*e*P	Pn	19 56 48.3	+1.3
CODC				*e*S	Sn	19 57 28.8	+1.3
CODC				*i*		19 57 38.3	
	comp=Z,34nm,0.3s						
ARGC	Ariguani, Magd	3.44	345	*e*P	Pn	19 56 50.8	+3.2
ARGC				*e*S	Sn	19 57 31.0	+2.4
ARGC				*i*		19 57 37.0	
	comp=Z,36nm,0.3s						
SJCC	San Jacinto, C	3.83	331	*e*P	Pn	19 56 52.2	-0.4
SJCC				*e*S	Sn	19 57 34.9	-2.8
SJCC				*i*		19 57 39.0	
	comp=Z,30nm,0.6s						
MACC	Macarena, Meta	4.38	187	*e*P	Pn	19 56 58.4	-1.4
MACC				*e*S	Sn	19 57 46.7	-3.8
MACC				*i*		19 57 53.8	
	comp=Z,16nm,0.6s						
SMRC	Santa Marta, M	4.70	349	*e*P	Pn	19 57 04.9	+0.8
SMRC				*e*S	Sn	19 57 55.4	-2.7
SMRC				*i*		19 57 57.9	
	comp=Z,13nm,0.2s						
TXAR	Lajitas Array	36.52	312	P	P	20 02 45.9	-0.5
	comp=Z,0.2nm,0.7s,baz=119,slow=10,SNR=3.3						
YKA	Yellowknife Ar	63.48	340	P	P	20 06 08.3	-0.6
	comp=Z,0.4nm,0.5s,baz=134,slow=6.3,SNR=6.0						

WEL 20 20:00:02.0, 42°S±1°×**17°4E**±°**, h12^{km}**±3^{km}**, M3.4**/23**, ML3.7**/19**, MLv3.4**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=126.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.19	224	P	Pg	20 00 06.5	+0.3
TUWZ	Tuamarina	0.38	299	P	Pg	20 00 10.1	+0.4
TUWZ				S	Sb	20 00 16.2	-0.4
BSWZ	Blackbirch Sta	0.40	255	P	Pg	20 00 10.2	+0.2
BSWZ				S	Sb	20 00 17.0	-0.1
TCW	Tory Channel	0.41	348	P	Pb	20 00 10.9	-0.3
BHW	Baring Head	0.41	61	P	Pb	20 00 11.1	-0.1
PLWZ	Palliser	0.65	86	P	Pb	20 00 15.7	+0.4
MSWZ	Moikau Station	0.68	73	P	Pb	20 00 16.0	+0.3
MSWZ				S	Sn	20 00 28.0	+0.2
CAW	Cannon Point	0.72	45	P	Pb	20 00 16.5	+0.1
PAWZ	Paruwai Farm	0.81	74	P	Pb	20 00 18.4	+0.3
NNZ	Nelson	0.86	297	P	Pg	20 00 18.6	+0.1
DUWZ	D’Urville Isla	0.89	336	P	Pn	20 00 20.0	-0.2
MTW	Mount Morrison	0.95	62	P	Pn	20 00 21.0	-0.2
OGWZ	Otaki Gorge	0.99	37	P	Pg	20 00 21.2	+0.1
TRWZ	Traveller	1.00	78	P	Pg	20 00 21.4	+0.2
KHZ	Kahutara	1.02	218	P	Pg	20 00 21.7	0.0
HOWZ	Holdsworth Sta	1.11	50	P	Pg	20 00 23.6	+0.2
THZ	Tophouse	1.12	262	P	Pb	20 00 23.2	-0.1
TMWZ	Te Maipa	1.24	66	P	Pn	20 00 24.6	-0.5
MRZ	Mangatainoka R	1.31	44	P	Pb	20 00 26.4	-0.1
TIWZ	Tintock	1.41	54	P	Pn	20 00 27.1	-0.3
CPWZ	Castlepoint	1.54	63	P	Pn	20 00 29.3	+0.1
OHWZ	Ohakea	1.57	27	P	Pg	20 00 31.8	-0.4
PRWZ	Pori Road	1.60	49	P	Pn	20 00 29.9	-0.1
POWZ	Post Office Ro	1.60	41	P	Pb	20 00 31.2	-0.4
QRZ	Quartz Range	1.61	299	P	Pb	20 00 32.1	+0.4
BFZ	Birch Farm	1.68	57	P	Pn	20 00 30.3	-0.9
GVZ	Greta Valley S	1.69	216	P	Pn	20 00 30.2	-1.1
DVHZ	Dannevirke	1.88	46	P	Pn	20 00 33.4	-0.6
WAZ	Wanganui	1.91	14	P	Pg	20 00 37.8	-0.8
ANWZ	Angora Road	1.95	55	P	Pn	20 00 34.0	-0.9
LTZ	Lake Taylor	1.96	233	P	Pn	20 00 34.6	-0.5
AMCZ	Amberley	2.02	219	P	Pn	20 00 34.7	-1.2
PNHZ	Pukenui	2.19	40	P	Pn	20 00 38.0	-0.2
WPHZ	Waipukurau	2.19	46	P	Pn	20 00 38.5	+0.2
NMEZ	Namu Road	2.23	350	P	Pb	20 00 43.3	+1.1
PREZ	Palmer Road	2.28	355	P	Pb	20 00 43.9	+0.9
OKCZ	Okains Bay	2.33	205	P	Pn	20 00 38.3	-1.8
KHEZ	Kahui Hut	2.33	353	P	Pb	20 00 42.8	-1.3
CRLZ	Canterbury Las	2.35	213	P	Pn	20 00 38.6	-1.9
MTVZ	Mangateitei	2.37	21	P	Pb	20 00 43.7	-1.0
NBEZ	Newall Road No	2.38	350	P	Pb	20 00 45.2	+0.5
PKVZ	Pokaka	2.43	18	P	Pb	20 00 44.3	-1.4
MOVZ	Moawhango	2.44	26	P	Pb	20 00 45.2	-0.6
PKE	Pukeiti	2.44	353	P	Pb	20 00 45.5	-0.3
OXZ	Oxford	2.44	225	P	Pn	20 00 38.9	-2.8
MQZ	McQueen’s Vall	2.45	211	P	Pn	20 00 39.5	-2.3
PXZ	Pawanui	2.45	51	P	Pn	20 00 39.9	-1.9
INZ	Inchbonnie	2.46	242	P	Pn	20 00 41.7	-0.2
BHHZ	Black Hill Sta	2.48	32	P	Pn	20 00 43.7	+1.5
KRHZ	Kereru	2.48	38	P	Pn	20 00 41.7	-0.5
VRZ	Vera Road	2.50	7	P	Pb	20 00 46.0	-0.9
AKCZ	Akaroa Harbour	2.51	205	P	Pn	20 00 40.4	-2.2
FWVZ	Far West T-bar	2.52	21	P	Pb	20 00 46.8	-0.4
TUVZ	Tukino	2.53	23	P	Pb	20 00 45.9	-1.6
NGZ	Ngauruhoe	2.60	21	P	Pb	20 00 50.1	+1.4
KAHZ	Kahuranaki	2.62	47	P	Pn	20 00 43.4	-0.7
WTVZ	West Tongariro	2.66	21	P	Pb	20 00 49.8	+0.2
TWVZ	Taurewa	2.66	18	P	Pb	20 00 50.7	+1.1
KRVZ	Karewarewa	2.69	21	P	Pb	20 00 49.8	-0.3
KATZ	Kakaramea	2.82	21	P	Pb	20 00 53.7	+1.4
RITZ	Rihia Road	2.86	24	P	Pb	20 00 54.4	+1.4
BKZ	Black Stump Fm	2.92	34	P	Pn	20 00 50.0	+1.7
RATZ	Rangitukua	2.94	22	P	Pg	20 00 56.4	-1.9
WVZ	Waitaha Valley	3.08	240	P	Pn	20 00 51.2	+0.8
HIZ	Hauiti	3.12	7	P	Pb	20 00 56.9	-0.4
RPZ	Rata Peaks	3.23	228	P	Pn	20 00 51.7	-0.9
TLZ	Tolley Road	3.40	15	P	Pb	20 01 03.4	+1.3
FOZ	Fox Glacier	3.88	239	P	Pn	20 01 02.6	+1.2
MWZ	Matawai	4.07	37	P	Pn	20 01 04.7	+0.7
LBZ	Lake Benmore	4.15	227	P	Pn	20 01 05.5	+0.4
ODZ	Otahua Downs	4.38	217	P	Pn	20 01 06.6	-1.7
MKAZ	Moumakai	4.54	8	P	Pb	20 01 18.3	-3.3
AWAZ	Awhitu Peninsu	4.55	3	P	Pb	20 01 18.4	-3.4
JCZ	Jackson Bay	4.80	237	P	Pn	20 01 17.9	+3.7
WIAZ	Waiheke Island	4.85	7	P	Pb	20 01 21.2	-5.7
HHSZ	Highcliff Hill	5.08	211	P	Pn	20 01 16.2	-1.6
TUZ	Tuapeka	5.54	217	P	Pn	20 01 24.4	+0.2
SYZ	Scrubby Hill	6.21	216	P	Pn	20 01 33.0	-0.4

IDC ***20*** *20:06:52.9±1.0, 9°.69S×151°.14E, h0^{km}, mb4.0/14, mb1 4.1/17, mb1mx4.0/27, mbtmp4.0/17, ML3.9/2, MS4.1/7, Ms1 4.2/7, ms1mx3.7/34, Error ellipse: s-maj=25.9km s-min=17.2km az=121.0*

ISCJB ***20*** *20:06:53.6±0.4, 9°.67S±0°.04×151°.05E±0°.06, h13^{km}, mb4.2/23, MS4.1/6, Error ellipse: s-maj=8.7km s-min=5.4km az=19.3*

NEIC ***20*** *20:06:57.0±1.1, 9°.69S×151°.05E, h24^{km}±5^{km}, mb4.4/17, Error ellipse: s-maj=10.9km s-min=6.6km az=56.0*

ISC 20 20:06:55.3±0.5**, 9°.72S**±0°.06×**151°.08E**±0°.06**, h13^{km}, n50,** σ**1s.00**/50**, mb4.2**/23**, MS4.0**/6**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.88	274	Pn	Pn	20 07 54.0	-0.7
	4.8nm,0.3s,baz=156,slow=5.8,SNR=15						
PMG				Pg	Pb	20 08 06.2	+2.6
	10nm,0.3s,baz=93,slow=11,SNR=15						
PMG				Sn	Sg	20 08 58.8	-1.2
	3.0nm,0.3s,baz=117,slow=14,SNR=2.8						
PMG	Port Moresby	3.88	274	ePn	Pn	20 07 54.6	0.0
RABL	Rabaul	5.59	11	ePn	Pn	20 08 17.9	-0.3
RABL				eSn	Sn	20 09 21.4	-1.0
MANU	Manus Island	8.47	334	ePn	Pn	20 08 57.9	+0.2
COEN	Coen	8.81	241	ePn	Pn	20 09 01.9	-0.5
CTA	Charters Tower	11.32	204	Pn	Pn	20 09 37.7	+0.9
	0.6nm,0.3s,baz=33,slow=15,SNR=5.9						
CTA				Sn	Sn	20 11 39.5	-3.7
	0.2nm,0.3s,baz=99,slow=19,SNR=1.9						
CTAO	Charters Tower	11.32	204	ePn	Pn	20 09 37.6	+0.9
EIDS	Eidsvold	15.57	180	ePn	Pn	20 10 35.6	+1.1
	8.4nm,0.8s						
WB2	Warramunga Arr	19.09	236	ePn	Pn	20 11 19.1	+0.5
	6.3nm,0.9s						
WR1	Warramunga Arr	19.09	236	eP	Pn	20 11 19.7	+1.0
WRA	Warramunga Arr	19.09	236	P	Pn	20 11 19.7	+1.0
	0.4nm,0.3s,baz=64,slow=10,SNR=18						
DZM	Mont Dzumac	19.19	132	LR	LR	20 17 01.5	
	comp=Z,900nm,18.7s,baz=304,slow=32						
ONTNC	Ouen Toro	19.34	132	eP	P	20 11 20.9	+0.4
	46nm,1.2s						
MTN	Manton Dam	19.81	259	eP	P	20 11 25.7	0.0
	8.6nm,0.8s						
FAKI	Fak Fak	19.89	289	eP	P	20 11 26.6	-0.1
	27nm,1.0s						
ARMA	Armidale	20.61	179	eP	P	20 11 34.7	+0.3
	23nm,1.3s						
AS31	Alice Springs	21.48	228	eP	P	20 11 44.2	+0.4
	1.2nm,0.6s						
ASAR	Alice Springs	21.49	228	P	P	20 11 44.8	+0.9
	2.0nm,0.7s,baz=63,slow=9.3,SNR=19						
ASAR				LR	LR	20 19 10.0	
	comp=Z,449nm,18.1s,baz=57,slow=34						
SIJI	Sorong	21.58	293	P	P	20 11 44.0	-0.9
	9.7nm,0.7s,baz=112,slow=6.1,SNR=9.4						
STKA	Stephens Creek	23.74	200	P	P	20 12 06.0	-1.3
	3.8nm,0.7s,baz=23,slow=11,SNR=6.5						
STKA	Stephens Creek	23.74	200	eP	P	20 12 07.0	-0.4
	3.6nm,1.0s						
GUMO	Guam	23.96	345	LR	LR	20 19 28.6	
	comp=Z,240nm,21.4s,baz=180,slow=32						
TARA	Tarawa	24.37	64	eP	P	20 12 12.5	-0.9
	71nm,0.9s						
SOEI	Soe	26.43	268	eP	P	20 12 31.2	-0.9
	32nm,1.3s						
ANA2	Anatahan	26.43	348	eP	P	20 12 32.3	+0.3
	38nm,0.8s						
UGM	Wanagama	40.10	269	eP	P	20 14 31.0	-0.1
	245nm,1.5s						
MJAR	Matsushiro Arr	47.58	346	P	P	20 15 30.3	-0.5
	0.8nm,0.7s,baz=167,slow=5.3,SNR=5.4						
MJAR				LR	LR	20 34 01.2	
	comp=Z,245nm,18.7s,baz=170,slow=34						
MAJO	Matsushiro	47.58	346	eP	P	20 15 31.2	+0.4
	8.7nm,1.5s						
KSRS	Korea Array	51.70	336	P	P	20 16 02.6	+0.5
	0.7nm,0.6s,baz=139,slow=6.9,SNR=3.6						
KSRS				LR	LR	20 35 14.3	
	comp=Z,101nm,20.8s,baz=280,slow=33						
CMAR	Chiang Mai Arr	58.56	299	P	P	20 16 52.5	+0.3
	0.9nm,0.9s,baz=113,slow=6.0,SNR=5.5						
PETK	Petropavlovsk-	62.83	4	P	P	20 17 20.6	0.0
	1.8nm,0.9s,baz=189,slow=6.6,SNR=4.2						
VNDA	Vanda	68.02	177	LR	LR	20 44 38.5	
	comp=Z,355nm,18.4s,baz=260,slow=33						
VNDA	Vanda	68.02	177	eP	P	20 17 55.0	+1.2
ULN	Ulaanbaatar	69.31	330	eP	P	20 18 02.8	+0.2
	4.1nm,1.2s						
SONA0	Songino Array	69.61	330	eP	P	20 18 04.9	+0.5
SONM	Songino Array	69.61	330	P	P	20 18 04.9	+0.5
	0.9nm,0.6s,baz=116,slow=3.4,SNR=7.0						
LSA	Lhasa	69.69	307	eP	P	20 18 05.0	-0.7
	3.8nm,1.2s						
MK32	Makanchi Array	82.92	320	eP	P	20 19 20.0	+0.1
MKAR	Makanchi Array	82.92	320	P	P	20 19 20.0	+0.1
	0.8nm,0.7s,baz=104,slow=6.7,SNR=9.1						
MAKZ	Makanchi	83.13	320	eP	P	20 19 20.6	-0.3
	3.3nm,1.0s						
ZALV	Zalesovo Beam	84.30	327	P	P	20 19 26.0	-0.8
	1.2nm,0.5s,baz=136,slow=5.2,SNR=7.0						
ZAA1	Zalesovo Array	84.30	327	eP	P	20 19 26.0	-0.8
KURBB	Kurchatov Arra	86.61	323	P	P	20 19 36.5	-1.9
	0.2nm,0.5s,baz=101,slow=5.4,SNR=3.0						
ILAR	Eielson Array	87.33	22	P	P	20 19 41.4	-0.2
	1.1nm,0.8s,baz=254,slow=4.9,SNR=10						
BVAR	Borovoye Array	92.14	323	P	P	20 20 02.6	-1.8
	0.2nm,0.4s,baz=108,slow=5.2,SNR=2.9						
DLBC	Dease Lake	92.45	31	LR	LR	20 55 05.6	
	comp=Z,117nm,19.6s,baz=320,slow=31						
NV01	Mina Array Sit	96.44	52	eP	P	20 20 25.5	+0.7
NVAR	Mina Array Bea	96.44	52	P	P	20 20 25.5	+0.7
	0.9nm,0.8s,baz=257,slow=6.1,SNR=4.2						
TORD	Torodi Ar. Bea	149.81	279	PKPbc	PKPbc	20 26 45.7	-0.4
	1.0nm,0.6s,baz=61,slow=3.3,SNR=10						
TOA1	Torodi Ar. Sit	149.81	279	ePKPbc	PKPbc	20 26 45.7	-0.5

WEL 20 20:08:11.4, 38°.5S±0°.9×176°.8E±0°.9, h61km±1km, M3.8/76, ML4.0/56, MLv3.8/76, Error ellipse: s-maj=0.0km s-min=0.0km az=146.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUGZ	Murupara	0.05	287	P	Pn	20 08 20.4	0.0
MUGZ				S	Sn	20 08 27.0	0.0
RTZ	Ruatahuna	0.17	137	P	Pn	20 08 20.8	-0.1
RTZ				S	Sn	20 08 28.3	+0.5
RRRZ	Republican Roa	0.29	301	P	Pn	20 08 21.8	+0.2
URZ	Urewera	0.32	43	P	Pn	20 08 21.6	-0.1
URZ				S	Sn	20 08 28.9	-0.3
PRRZ	Plateau Road	0.35	269	P	Pn	20 08 22.1	+0.2
MTHZ	Maungataniwha	0.36	179	P	Pn	20 08 22.3	+0.1
MTHZ				S	Sn	20 08 31.1	+1.1
TARZ	Mount Tarawera	0.36	315	P	Pn	20 08 22.7	+0.5
ALRZ	Allen Road	0.39	260	P	Pn	20 08 22.6	+0.3
EDRZ	Edgecumbe	0.39	349	P	Pn	20 08 24.3	+1.8
HRRZ	Handcock Road	0.44	283	P	Pn	20 08 23.1	+0.2
HLRZ	Highlands Stat	0.45	302	P	Pn	20 08 23.4	+0.5
MKRZ	Makatiti	0.46	321	P	Pn	20 08 24.0	+1.0
RAGZ	Rawiri	0.46	91	P	Pn	20 08 23.1	+0.1
RAGZ				S	Sn	20 08 32.2	+0.6
RAHZ	Arahi	0.47	155	P	Pn	20 08 23.6	+0.5
MRHZ	Matea Rd	0.47	224	P	Pn	20 08 23.3	+0.1
SNGZ	Shannon Statio	0.49	126	P	Pn	20 08 23.9	+0.6
HSRZ	Hossack Road	0.50	291	P	Pn	20 08 23.9	+0.5
MARZ	Manawahe	0.52	346	P	Pn	20 08 23.8	+0.1
WPRZ	Whakapapatarin	0.53	267	P	Pn	20 08 23.9	+0.2
OMRZ	Omania	0.53	317	P	Pn	20 08 24.0	+0.2
MWZ	Matawai	0.57	74	P	Pn	20 08 24.2	0.0
GRRZ	Galatos Road	0.59	284	P	Pn	20 08 25.0	+0.6
UTU	Utuhina	0.59	302	P	Pn	20 08 25.1	+0.7
LIRZ	Lichensteins R	0.60	324	P	Pn	20 08 24.8	+0.3
NGRZ	Ngongotaha	0.64	307	P	Pn	20 08 25.8	+0.7
WHRZ	Whale Island	0.65	10	P	Pn	20 08 25.3	+0.3
KARZ	Kaharoa	0.66	315	P	Pn	20 08 25.4	+0.1
WHHZ	Waihua	0.66	152	P	Pn	20 08 26.2	+0.9
OPRZ	Ohinepanea	0.68	341	P	Pn	20 08 25.3	-0.2
HATZ	Hinemaiaia	0.70	235	P	Pn	20 08 25.7	0.0
WHTZ	Whakaora	0.71	256	P	Pn	20 08 26.0	+0.2
BKZ	Black Stump Fm	0.72	202	P	Pn	20 08 26.2	+0.2
RIGZ	Rimuhau	0.76	107	P	Pn	20 08 27.1	+0.7
ARHZ	Aropaoanui	0.78	171	P	Pn	20 08 27.8	+1.1
KUTZ	Kaahu Road	0.79	270	P	Pn	20 08 27.3	+0.5
TKGZ	Te Karaka	0.80	87	P	Pn	20 08 28.0	+1.1
KNZ	Kokohu	0.84	129	P	Pn	20 08 27.6	+0.2
RUGZ	Raukumara Rang	0.85	52	P	Pn	20 08 27.3	-0.3
TGRZ	Tauranga	0.89	329	P	Pn	20 08 27.9	0.0
WATZ	Wairara	0.89	256	P	Pn	20 08 28.2	+0.1
RITZ	Rihia Road	0.90	237	P	Pn	20 08 28.8	+0.5
RATZ	Rangitukua	0.91	245	P	Pn	20 08 28.9	+0.5
PRGZ	Paritu Road	0.93	118	P	Pn	20 08 28.8	+0.3
KMRZ	Kaimai	0.95	312	P	Pn	20 08 29.0	+0.1
TWGZ	Tauwhareparae	0.95	71	P	Pn	20 08 30.0	+1.1
MCHZ	McNeill Hill	0.96	186	P	Pn	20 08 30.3	+1.4
KWHZ	Kaweka Forest	0.98	199	P	Pn	20 08 30.3	+1.0
KATZ	Kakaramea	1.01	241	P	Pn	20 08 30.5	+0.8
TLZ	Tolley Road	1.03	279	P	Pn	20 08 30.2	+0.3
HAZ	Te Kaha	1.05	46	P	Pn	20 08 29.6	-0.4
MHGZ	Mahia Peninsul	1.07	129	P	Pn	20 08 30.6	+0.3
CNGZ	Carnagh Statio	1.08	90	P	Pn	20 08 31.7	+1.3
KRVZ	Karewarewa	1.11	237	P	Pn	20 08 31.4	+0.4
PKGZ	Pakihiroa	1.15	59	P	Pn	20 08 32.2	+0.7
WTVZ	West Tongariro	1.15	237	P	Pn	20 08 32.3	+0.7
BHHZ	Black Hill Sta	1.16	211	P	Pn	20 08 32.0	+0.3
CKHZ	Cape Kidnapper	1.18	171	P	Pn	20 08 32.0	+0.2
NGZ	Ngauruhoe	1.18	234	P	Pn	20 08 32.3	+0.4
PUZ	Puketiti	1.20	70	P	Pn	20 08 32.4	+0.3
TUVZ	Tukino	1.20	230	P	Pn	20 08 32.6	+0.4
KRHZ	Kereru	1.21	197	P	Pn	20 08 32.5	+0.4
TWVZ	Taurewa	1.23	242	P	Pn	20 08 33.2	+0.6
MOVZ	Moawhango	1.24	222	P	Pn	20 08 32.8	+0.1
WHVZ	Whangaehu Hut	1.25	231	P	Pn	20 08 33.3	+0.3
FWVZ	Far West T-bar	1.26	232	P	Pn	20 08 33.6	+0.5
DRZ	Dome Shelter	1.26	231	P	Pn	20 08 34.0	+0.8
TOZ	Tahuroa Road	1.30	305	P	Pn	20 08 33.7	+0.4
KAHZ	Kahuranaki	1.30	179	P	Pn	20 08 34.0	+0.5
MTVZ	Mangateitei	1.39	230	P	Pn	20 08 35.0	+0.4
PKVZ	Pokaka	1.41	235	P	Pn	20 08 35.8	+0.9
WMGZ	Waiomatatini S	1.42	62	P	Pn	20 08 35.7	+0.8
MXZ	Matakaoa Point	1.49	52	P	Pn	20 08 37.1	+1.3
PNHZ	Pukenui	1.50	199	P	Pn	20 08 35.6	-0.5
PXZ	Pawanui	1.54	179	P	Pn	20 08 36.3	-0.2
HIZ	Hauiti	1.55	269	P	Pn	20 08 37.5	+0.8
WPHZ	Waipukurau	1.60	191	P	Pn	20 08 37.8	+0.3
PRHZ	Porangahau	1.78	185	P	Pn	20 08 39.1	-0.8
DVHZ	Dannevirke	1.88	196	P	Pn	20 08 41.3	+0.2
WAZ	Wanganui	1.91	228	P	Pn	20 08 43.0	+1.4
MKAZ	Moumakai	1.92	316	P	Pn	20 08 42.3	+0.6
KUZ	Kuaotunu	1.96	333	P	Pn	20 08 42.3	+0.1
ANWZ	Angora Road	1.98	188	P	Pn	20 08 44.4	+1.8
OHWZ	Ohakea	2.08	214	P	Pn	20 08 44.4	+0.6
KBAZ	Karaka Road Bo	2.08	312	P	Pn	20 08 45.1	+1.2
LREZ	Lake Rotokare	2.13	242	P	Pn	20 08 46.2	+1.7
ETAZ	East Tamaki Re	2.15	315	P	Pn	20 08 46.0	+1.1
WIAZ	Waiheke Island	2.17	321	P	Pn	20 08 45.9	+0.8
BFZ	Birch Farm	2.23	192	P	Pn	20 08 46.0	0.0
AWAZ	Awhitu Peninsu	2.25	309	P	Pn	20 08 47.0	+0.8
PREZ	Palmer Road	2.25	247	P	Pn	20 08 48.9	+2.6
MBAZ	Motutapu North	2.31	318	P	Pn	20 08 48.1	+1.1
EPAZ	Eden Park BICE	2.31	314	P	Pn	20 08 48.5	+1.4
PKE	Pukeiti	2.33	252	P	Pn	20 08 49.4	+2.0
HBAZ	Herne Bay Bore	2.34	314	P	Pn	20 08 48.5	+1.1
KHEZ	Kahui Hut	2.34	249	P	Pn	20 08 49.7	+2.1
WTAZ	Waiatarua	2.37	310	P	Pn	20 08 49.1	+1.1
TIWZ	Tintock	2.40	197	P	Pn	20 08 48.1	-0.1
ABAZ	Army Bay	2.47	319	P	Pn	20 08 50.5	+1.4
RVAZ	Riverhead Bore	2.48	313	P	Pn	20 08 50.2	+0.9
GRZ	Great Barrier	2.49	333	P	Pn	20 08 49.8	+0.3
WCZ	Waipu Caves	3.23	321	P	Pn	20 09 00.8	+1.2
OUZ	Omahuta	4.17	321	P	Pn	20 09 14.1	+1.6

ISCJB ***20*** *20:13:17.1±0.3, 48°.77N±0°.01×18°.25E±0°.02, h3km±3km, Error ellipse: s-maj=2.6km s-min=2.0km az=30.1*

PRU ***20*** *20:13:18.8±0.0, 48°.73N×18°.25E, h0km, Slovakia*

VIE ***20*** *20:13:18.6±0.6, 48°.72N×18°.25E, h5km±4km, mb2.3/8, ml2.5/10, Error ellipse: s-maj=4.6km s-min=4.2km az=84.0*

IPEC ***20*** *20:13:18.6±0.1, 48°.74N×18°.31E, h9km, ML2.4/5, Error ellipse: s-maj=0.7km s-min=0.5km az=13.0*

ISC 20 20:13:18.5±0.9, 48°.73N±0°.02×18°.26E±0°.02, h11km±7km, n64, σ1ˢ26/112, 7C-1D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOLL	Kolacno	0.18	148	ePG	Pg	20 13 22.5	+0.1
KOLL				eSG	Sg	20 13 24.9	-0.2
JAVC	Velka Javorina	0.41	288	ePG	Pb	20 13 27.4	-0.5
JAVC				eSG	Sg	20 13 32.5	+0.4
JAVC	Velka Javorina	0.41	288	ePg	Pb	20 13 27.4	-0.5
	baz=106						
JAVC				eSg	Sg	20 13 32.5	+0.4
	274nm,0.2s,baz=106						
VYHS	Vyhne	0.45	122	ePG	Pg	20 13 27.2	-0.1
VYHS				eSG	Sg	20 13 33.2	-0.1
MODS	Modra-Piesok	0.74	242	ePG	Pg	20 13 32.2	-0.7
MODS				eSG	Sb	20 13 44.2	+0.5
MODS				eLG	Lg	20 13 46.9	
LANS	Liptovska Anna	0.90	62	ePG	Pg	20 13 34.9	-0.9
LANS				eSG	Sg	20 13 46.9	-0.7
LANS				eLG	Lg	20 13 51.4	
ZST	Bratislava	0.94	236	ePG	Pg	20 13 35.9	-0.7
ZST				eSG	Sb	20 13 50.1	+0.8
OKC	Ostrava-Krasne	1.11	356	ePG	Pb	20 13 39.7	-0.1
OKC				eSG	Sb	20 13 55.0	+0.8
	comp=Z,64nm,0.7s						
MORC	Moravsky Berou	1.15	336	⇑iP	Pb	20 13 40.4	0.0
MORC	Moravsky Berou	1.15	336	S	Sn	20 13 56.3	-0.1
MORC	Moravsky Berou	1.15	336	ePG	Pb	20 13 40.4	0.0
MORC				eSG	Sg	20 13 55.1	-0.4
MORC	Moravsky Berou	1.15	336	ePg	Pg	20 13 40.3	-0.3
	baz=154						
MORC				eSg	Sg	20 13 55.1	-0.4
	55nm,0.3s,baz=154						
VRAC	Vranov	1.24	298	⇑iP	Pb	20 13 41.6	-0.4
VRAC	Vranov	1.24	298	S	Sb	20 13 58.3	+0.3
VRAC	Vranov	1.24	298	ePG	Pb	20 13 41.7	-0.3
VRAC				eSG	Sn	20 13 58.6	-0.1
VRAC	Vranov	1.24	298	ePg	Pb	20 13 41.7	-0.3
	baz=116						
VRAC				eSg	Sn	20 13 58.5	-0.1
	61nm,0.2s,baz=116						
KRUC	Moravsky	1.27	286	ePG	Pn	20 13 42.1	-0.3
KRUC				eSG	Sg	20 13 59.2	-0.4
KRUC	Moravsky	1.27	286	ePg	Pn	20 13 42.0	-0.3
	baz=104						
KRUC				eSg	Sg	20 13 59.2	-0.4
	34nm,0.5s,baz=104						
BUD	Budapest	1.35	157	Pn	Pn	20 13 43.0	-0.3
BUD				eSn	Sg	20 14 03.1	+1.2
PSZ	Piszkesteto	1.36	126	⇑iP	Pn	20 13 43.5	0.0
PSZ	Piszkesteto	1.36	126	S	Sb	20 14 01.8	+0.3
PSZ	Piszkesteto	1.36	126	ePn	Pb	20 13 44.0	0.0
PSZ				eSg	Sn	20 14 02.0	+0.4
CSKK	Cskako	1.37	180	ePg	Pb	20 13 44.1	-0.1
CSKK				eSg	Sg	20 14 03.1	+0.5
CSKK				Sn	Sn	20 14 04.0	+2.3
NIE	Niedzica	1.51	62	ePb	Pb	20 13 46.5	-0.1
NIE				ePg	Pg	20 13 47.3	-0.1
NIE				eSg	Sg	20 14 08.5	+1.6
SOP	Sopron	1.55	228	ePn	Pn	20 13 46.0	0.0
SOP				Sn	Sn	20 14 06.1	0.0
CHZP	Chorzow	1.63	17	ePg	Pb	20 13 48.5	-0.2
CHZP				eSg	Sg	20 14 11.3	+0.3
CONA	Conrad Observa	1.79	244	ePn	Pn	20 13 50.0	+0.5
	7.9nm,0.3s,SNR=21						
CONA				eSn	Sb	20 14 13.7	-0.2
	22nm,0.4s						
OJC	Ojcow	1.80	33	ePb	Pn	20 13 49.5	+0.1
OJC				ePg	Pb	20 13 50.8	-0.7
OJC				eSg	Sb	20 14 15.0	+1.0
TIH	Tihany	1.85	188	ePn	Pn	20 13 51.1	+0.9
TIH				Sn	Sb	20 14 15.0	-0.4
DPC	Dobruska-Polom	2.06	323	ePN	Pn	20 13 54.1	+1.0
DPC				ePG	Pb	20 13 55.9	0.0
DPC				eSG	Sg	20 14 23.5	-1.0
	comp=Z,25nm,0.8s						
OSTC	Ostas	2.26	325	ePN	Pn	20 13 57.1	+1.2
OSTC				ePG	Pg	20 14 00.5	-1.3
OSTC				eSG	Sg	20 14 30.1	-1.0
	comp=Z,20nm,0.5s						
UPC	Upice	2.30	321	ePG	Pg	20 14 01.4	-1.2
UPC				eSG	Sg	20 14 31.4	-1.1
	comp=Z,32nm,0.8s						
CHVC	Chvalec	2.35	323	ePN	Pn	20 13 58.5	+1.4
CHVC				ePG	Pb	20 14 01.0	+0.1
CHVC				eSG	Sg	20 14 32.4	-1.5
	comp=Z,30nm,0.7s						
ARSA	Arzberg	2.36	232	ePn	Pn	20 13 57.8	+0.5
	1.7nm,0.2s,SNR=12						
KSP	Ksiaz	2.47	330	ePg	Pb	20 14 03.6	+0.7
KSP				eSg	Sg	20 14 37.9	+0.1
BEHE	Becsehely	2.48	205	ePn	Pb	20 14 02.1	-1.0
MORH	Mrgy, Hungar	2.53	174	ePn	Pn	20 13 59.1	-0.5
MORH				Sn	Sn	20 14 28.1	-2.3
MORH				eSg	Sg	20 14 38.1	-1.7
GOPC	GO Pecny, Ondr	2.56	299	eSG	Sg	20 14 40.1	-0.7
	comp=Z,12nm,0.3s						
KOLS	Kolonicke sedl	2.66	84	ePN	Pn	20 14 02.6	+1.3
KOLS				eSN	Sn	20 14 34.8	+1.2
KOLS				eLG	Lg	20 14 51.9	
PRU	Pruhonice	2.74	299	eSG	Sg	20 14 44.6	-1.8
	comp=Z,13nm,0.5s						
LTVH	Ltavrtes, Hu	2.79	118	ePn	Pn	20 14 03.1	0.0
LTVH				Sn	Sn	20 14 31.0	-5.7
MOA	Molln	2.81	253	Pn	Pn	20 14 04.5	+1.0
	1.4nm,0.1s,SNR=15						
MOA				eSn	Sn	20 14 37.6	+0.3
	3.4nm,0.2s						
TRPA	Tarpa	2.91	100	⇑iP	Pn	20 14 04.3	-0.5
TRPA	Tarpa	2.91	100	ePn	Pn	20 14 04.0	-0.7
TRPA				Sn	Sn	20 14 39.1	-0.7
SOKA	Soboth	3.00	228	ePn	Pn	20 14 06.5	+0.5
	0.6nm,0.2s,SNR=5.5						
PVCC	Panska Ves	3.00	308	ePN	Pn	20 14 08.4	+2.4
PVCC				eSG	Sg	20 14 53.6	-1.2
	comp=Z,18nm,0.4s						
KHC	Kasperske Hory	3.11	279	ePN	Pn	20 14 08.4	+0.8
KHC				ePG	Pg	20 14 17.0	-1.1
KHC				eSN	Sn	20 14 45.0	+0.2
KHC				eSG	Sg	20 14 56.0	-2.5
	comp=Z,7.1nm,0.5s						
PTJ	Puntijarka	3.23	210	ePn		20 14 09.5	
OBKA	Obir	3.35	230	ePn	Pn	20 14 11.8	+0.8
	2.1nm,0.2s,SNR=4.5						
DRGR		3.57	121	⇑iP	Pn	20 14 13.5	-0.5
OZLJ	Ozalj	3.65	212	ePn	Pn	20 14 15.2	+0.2
KBA	Koelnbreinsper	3.70	245	i Pn	Pn	20 14 17.5	+1.7
	2.5nm,0.3s,SNR=6.7						
KBA				eSn	Sn	20 15 00.5	+1.1
	1.5nm,0.3s						
BZS	Buzias	3.87	142	⇓iP	Pn	20 14 18.1	+0.2
NKC	Novy Kostel	4.08	294	eSG	Sg	20 15 26.6	-2.8
	comp=Z,12nm,0.5s						
CLL	Collm	4.26	309	ePn	Pn	20 14 24.0	+0.7
CLL				ePg	Pg	20 14 43.0	+2.9
CLL				e		20 15 13.0	
CLL				eSg	Sg	20 15 31.0	-4.2
	comp=Z,10.0nm,0.7s						
GZR	Gura Zlata	4.55	136	⇑iP	Pn	20 14 27.3	0.0
WTTA	Wattenberg	4.68	254	i Pn	Pn	20 14 31.6	+2.3
	comp=Z,0.5nm,0.1s						
WTTA				i Sn	Sn	20 15 23.8	+0.1
	comp=Z,0.9nm,0.2s						
BURAR	Bucovina Array	4.79	101	⇑iP	Pn	20 14 31.2	+0.5
MOTA	Moosalm	5.00	257	i Pn	Pn	20 14 35.7	+2.1
	comp=Z,0.2nm,0.1s						
MORI	Morici	5.18	201	ePn	Pn	20 14 38.0	+2.1
MORI				Sn	Sn	20 15 36.3	+0.7
DUGI	Dugi Otok	5.23	206	ePn	Pn	20 14 38.6	+1.9
ZIRJ	Zirje	5.39	201	ePn	Pn	20 14 40.9	+2.0
MAKA	Makarska	5.51	189	ePn	Pn	20 14 42.9	+2.3
HVAR	Hvar	5.70	193	ePn	Pn	20 14 45.5	+2.5

ISCJB ***20*** *20:24:25.5±0.7, 4°.34S±0°.07×138°.51E±0°.09, h150km, mb3.9/6, Error ellipse: s-maj=13.6km s-min=8.6km az=151.7*

IDC ***20*** *20:24:28.3±2.8, 4°.49S×138°.54E, h166km±27km, mb3.6/6, mb1 3.8/10, mb1mx3.4/24, mbtmp4.3/10, Error ellipse: s-maj=22.3km s-min=12.0km az=85.0*

ISC 20 20:24:26.9±0.8, 4°.42S±0°.09×138°.5E±0°.1, h150km, n10, σ1ˢ62/12, mb3.7/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	8.02	296	P	Pn	20 26 21.5	+0.9
	1.7nm,0.3s,baz=107,slow=19,SNR=8.8						
SIJI				S	Sn	20 27 47.4	-2.6
	0.4nm,0.3s,baz=127,slow=20,SNR=2.9						
WRA	Warramunga Arr	15.94	194	P	Pn	20 28 03.6	+0.6
	3.7nm,0.3s,baz=16,slow=12,SNR=57						
CTA	Charters Tower	17.32	155	P	P	20 28 19.5	+0.7
	0.2nm,0.3s,baz=327,slow=17,SNR=4.0						
ASAR	Alice Springs	19.63	193	P	P	20 28 45.6	+1.6
	3.3nm,0.3s,baz=15,slow=10,SNR=219						
ASAR				S	S	20 32 15.4	-2.1
	0.1nm,0.3s,baz=18,slow=25,SNR=7.3						
HNR	Honiara	21.89	104	P	P	20 29 05.5	-2.7
	24nm,0.4s,baz=267,slow=17,SNR=2.0						
JNU	Nakatsue	38.03	350	P	P	20 31 31.4	+0.8
	2.5nm,0.7s,baz=163,slow=19,SNR=2.9						
CMAR	Chiang Mai Arr	45.10	301	P	P	20 32 28.5	0.0
	0.8nm,0.7s,baz=114,slow=7.2,SNR=7.0						
MKAR	Makanchi Array	71.00	323	P	P	20 35 28.6	+0.3
	0.9nm,0.8s,baz=122,slow=7.8,SNR=7.6						
ZALV	Zalesovo Beam	73.29	330	P	P	20 35 41.9	+0.1
	0.6nm,0.4s,baz=129,slow=5.9,SNR=2.6						
ILAR	Eielson Array	87.48	24	P	P	20 36 57.4	+0.2
	0.4nm,0.6s,baz=284,slow=4.7,SNR=5.6						

IGQ 20 20:25:10.9±0.5, 1°S±3°×8°1W±°, h10km, MLv3.8, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	Salinas	1.16	205	P	Pb	20 25 32.5	-0.6
SALI				S	Sn	20 25 48.7	-0.4
MAG1	Magdalena	1.28	35	P	Pn	20 25 34.5	-0.3
MILO	Milagro-Astudi	1.48	140	P	Pn	20 25 35.0	-2.6
MORR	Playas El Morr	1.51	174	P	Pg	20 25 39.7	-0.2
JSCH	Cashca Tororas	1.63	111	P	Pn	20 25 38.6	-1.4
ILLI	Illinizas Sur	1.82	77	P	Pn	20 25 41.2	-1.6
COHC	Cochancay	1.82	137	P	Pn	20 25 40.7	-1.7
IGUA	Igualata	1.90	101	P	Pn	20 25 43.9	0.0
NINA	Atacazo Ninahu	2.02	69	P	Pn	20 25 44.5	-1.0
BBIL	Ulba Tungurahu	2.04	99	P	Pn	20 25 44.8	-0.9
BMAS	Trigal station	2.06	100	P	Pn	20 25 46.0	+0.1
POND	Pondoa	2.07	98	P	Pn	20 25 45.6	-0.4
BNAS	Cotopaxi Volca	2.07	77	P	Pn	20 25 46.1	-0.1
ARRY	Arrayan	2.08	100	P	Pn	20 25 45.8	-0.4
PAT1	Patacocha	2.10	100	P	Pn	20 25 47.1	+0.6
BPAT	Tungurahua Vol	2.10	100	P	Pn	20 25 46.7	+0.1
BPAT				S	Sn	20 26 13.8	+0.7
BREF	Cotopaxi Volca	2.11	78	P	Pn	20 25 46.7	-0.1
BULB	Ulba Tungurahu	2.12	98	P	Pn	20 25 46.0	-0.7
PIS1	Pisayambo	2.12	88	P	Pn	20 25 47.3	+0.5
PISA	Pisayambo	2.12	88	P	Pn	20 25 46.6	-0.3
PINO	Pino	2.12	63	P	Pn	20 25 45.8	-1.2
GGPC	Guagua Pichinc	2.13	64	P	Pn	20 25 47.0	0.0
BVC2	Cotopaxi Volca	2.14	77	P	Pn	20 25 46.7	-0.6
PITA	Cotopaxi Volc	2.15	75	P	Pn	20 25 46.0	-1.2
BTAM	Cotopaxi Volca	2.15	78	P	Pn	20 25 46.6	-0.7
VC1	Cotopaxi 1	2.15	77	P	Pn	20 25 46.7	-0.6
YANA	Yana	2.18	63	P	Pn	20 25 46.2	-1.4
PAC1	Pacto, Paraso	2.20	51	P	Pn	20 25 45.4	-2.2
COV1	Cotopaxi Volc	2.21	78	P	Pn	20 25 46.3	-1.9
ANTG	Antisana-Guama	2.33	75	P	Pn	20 25 49.5	-0.3
ANTM	Antisana-La Mi	2.35	76	P	Pn	20 25 49.3	-0.8
ANTS	Antisana-Sarah	2.41	75	P	Pn	20 25 50.6	-0.4
ANTI	Antisana	2.44	74	P	Pn	20 25 50.0	-1.3
CUIC	Cuicocha-Domo	2.57	56	P	Pn	20 25 53.1	+0.2
IMBA	Imbabura, San	2.69	59	P	Pn	20 25 55.7	+1.0
ARDO	Archidona, Ten	2.71	87	P	Pb	20 25 57.1	-2.4
URCU	Urcuqui	2.73	55	P	Pn	20 25 55.6	+0.4
ZUMB	Zumba	3.95	160	P	Pn	20 26 15.0	+3.2

WEL 20 20:37:44.0, 41°.6S±0°.8×174°.4E±0°.7, h15km±2km, M3.1/13, ML3.7/17, MLv3.1/13, Error ellipse: s-maj=0.0km s-min=0.0km az=149.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.23	219	P	Pb	20 37 49.5	-0.4
CMWZ				S	Sb	20 37 54.0	+0.2
TCW	Tory Channel	0.38	345	P	Pb	20 37 52.4	0.0
TCW				S	Sb	20 37 58.1	+0.1
TUWZ	Tuamarina	0.38	292	P	Pb	20 37 52.1	-0.3
TUWZ				S	Sb	20 37 58.0	-0.1
BHW	Baring Head	0.39	65	P	Pb	20 37 52.6	0.0
BSWZ	Blackbirch Sta	0.42	250	P	Pg	20 37 52.6	+0.2
BSWZ				S	Sb	20 37 58.9	-0.5
PLWZ	Palliser	0.64	90	P	Pb	20 37 57.2	+0.3
MSWZ	Moikau Station	0.65	76	P	Pb	20 37 57.4	+0.3
CAW	Cannon Point	0.68	47	P	Pb	20 37 57.9	+0.3
PAWZ	Paruwai Farm	0.79	76	P	Pb	20 37 59.8	+0.3
NNZ	Nelson	0.85	294	P	Pg	20 38 00.5	+0.1
DUWZ	D'Urville Isla	0.85	335	P	Pg	20 38 00.9	+0.4
MTW	Mount Morrison	0.92	64	P	Pn	20 38 02.4	-0.1

OGWZ	Otaki Gorge	0.95	38	P	Pg	20 38 02.4	0.0
TRWZ	Traveller	0.98	80	P	Pg	20 38 02.9	0.0
KHZ	Kahutara	1.06	217	P	Pb	20 38 03.9	-0.1
HOWZ	Holdsworth Sta	1.08	52	P	Pg	20 38 05.0	+0.2
THZ	Tophouse	1.14	260	P	Pn	20 38 05.5	0.0
TMWZ	Te Maipa	1.21	68	P	Pn	20 38 06.2	-0.2
MRZ	Mangatainoka R	1.27	45	P	Pb	20 38 07.9	+0.3
TIWZ	Tintock	1.37	55	P	Pn	20 38 08.7	0.0
OHWZ	Ohakea	1.53	27	P	Pg	20 38 13.0	-0.4
PRWZ	Pori Road	1.56	50	P	Pn	20 38 11.4	+0.1
PRWZ	Pori Road	1.56	50	P	Pb	20 38 12.1	-0.5
QRZ	Quartz Range	1.60	297	P	Pb	20 38 13.3	0.0
BFZ	Birch Farm	1.65	58	P	Pn	20 38 11.8	-0.7
BFZ	Birch Farm	1.65	58	P	Pb	20 38 14.2	0.0
GVZ	Greta Valley S	1.73	216	P	Pn	20 38 12.8	-0.7
DVHZ	Dannevirke	1.84	47	P	Pn	20 38 14.7	-0.4
DVHZ	Dannevirke	1.84	47	P	Pn	20 38 15.3	+0.1
WAZ	Wanganui	1.87	14	P	Pg	20 38 19.2	-0.7
WAZ	Wanganui	1.87	14	P	Pg	20 38 19.5	-0.4
LTZ	Lake Taylor	1.99	232	P	Pn	20 38 17.0	-0.3
AMCZ	Amberley	2.06	218	P	Pn	20 38 16.9	-1.3
PNHZ	Pukenui	2.15	40	P	Pn	20 38 19.4	+0.1
KHEZ	Kahui Hut	2.29	352	P	Pb	20 38 25.7	+0.6
MTVZ	Mangateitei	2.33	21	P	Pb	20 38 26.2	+0.4
OKCZ	Okains Bay	2.37	204	P	Pn	20 38 20.5	-1.8
PKVZ	Pokaka	2.39	18	P	Pb	20 38 27.6	+0.8
CRLZ	Canterbury Las	2.40	213	P	Pn	20 38 21.0	-1.7
MOVZ	Moawhango	2.40	26	P	Pb	20 38 27.2	+0.3
PKE	Pukeiti	2.40	352	P	Pb	20 38 26.0	-0.9
KRHZ	Kereru	2.44	38	P	Pn	20 38 23.2	-0.2
WHVZ	Whangaehu Hut	2.46	22	P	Pb	20 38 26.6	-1.4
VRZ	Vera Road	2.46	6	P	Pb	20 38 27.4	-0.6
FWVZ	Far West T-bar	2.48	21	P	Pb	20 38 29.2	+0.8
OXZ	Oxford	2.48	224	P	Pn	20 38 22.1	-1.7
INZ	Inchbonnie	2.48	241	P	Pn	20 38 23.9	0.0
TUVZ	Tukino	2.49	23	P	Pb	20 38 27.3	-1.3
MQZ	McQueen’s Vall	2.49	211	P	Pn	20 38 21.7	-2.3
AKCZ	Akaroa Harbour	2.55	205	P	Pn	20 38 22.7	-2.1
NGZ	Ngauruhoe	2.56	21	P	Pb	20 38 28.0	-1.8
WTVZ	West Tongariro	2.62	21	P	Pb	20 38 30.6	-0.1
KRVZ	Karewarewa	2.65	21	P	Pb	20 38 32.6	+1.4
RITZ	Rihia Road	2.82	24	P	Pb	20 38 34.4	+0.3
BKZ	Black Stump Fm	2.88	34	P	Pb	20 38 36.2	+0.9
RATZ	Rangitukua	2.90	22	P	Pb	20 38 35.7	+0.2
HIZ	Hauiti	3.08	7	P	Pn	20 38 33.8	+1.8
RPZ	Rata Peaks	3.27	228	P	Pn	20 38 33.1	-1.7
LBZ	Lake Benmore	4.18	226	P	Pn	20 38 45.8	-1.5
ODZ	Otahua Downs	4.42	217	P	Pn	20 38 47.9	-2.7
HHSZ	Highcliff Hill	5.12	211	P	Pn	20 38 58.2	-1.9

WEL 20 20:38:05.8, 41°.6S±0°.8×**174°.4E**±0°.9**, h12**^{km}±2^{km}**, M3.5**/12**, ML3.8**/12**, MLv3.5**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=132.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.22	213	P	Pb	20 38 12.4	+0.7
TUWZ	Tuamarina	0.35	293	P	Pb	20 38 13.5	-0.4
TUWZ				S	Sb	20 38 18.8	-0.6
TCW	Tory Channel	0.36	348	P	Pb	20 38 13.8	-0.3
TCW				S	Sb	20 38 19.6	-0.2
BSWZ	Blackbirch Sta	0.40	248	P	Pb	20 38 14.4	-0.4
BSWZ				S	Sb	20 38 20.5	-0.4
BHW	Baring Head	0.41	67	P	Pb	20 38 14.6	-0.2
BHW				S	Sb	20 38 20.5	-0.4
PLWZ	Palliser	0.66	90	P	Pb	20 38 19.4	+0.2
MSWZ	Moikau Station	0.67	77	P	Pb	20 38 19.6	+0.1
CAW	Cannon Point	0.69	49	P	Pb	20 38 19.7	0.0
PAWZ	Paruwai Farm	0.81	77	P	Pn	20 38 22.5	-0.5
NNZ	Nelson	0.83	295	P	Pb	20 38 22.0	0.0
DUWZ	D’Urville Isla	0.84	336	P	Pb	20 38 22.1	-0.1
MTW	Mount Morrison	0.94	65	P	Pb	20 38 24.3	+0.3
OGWZ	Otaki Gorge	0.96	39	P	Pn	20 38 24.8	-0.2
KHZ	Kahutara	1.05	216	P	Pb	20 38 25.5	-0.3
HOWZ	Holdsworth Sta	1.09	53	P	Pb	20 38 26.5	0.0
THZ	Tophouse	1.12	259	P	Pb	20 38 26.8	-0.3
QRZ	Quartz Range	1.58	297	P	Pb	20 38 34.5	-0.3
GVZ	Greta Valley S	1.72	215	P	Pn	20 38 34.3	-1.2
LTZ	Lake Taylor	1.98	231	P	Pn	20 38 38.6	-0.5

ISCJB ***20*** *20:40:26.9±0.5, 53°.14N±0°.07×176°.41W±0°.10, h231^{km}, mb3.6/15, Error ellipse: s-maj=10.3km s-min=7.0km az=146.0*

IDC ***20*** *20:40:29.6±5.0, 52°.98N×176°.22W, h266^{km}±46^{km}, mb3.2/12, mb1 3.3/15, mb1mx3.1/50, mbtmp3.8/15, Error ellipse: s-maj=29.6km s-min=13.0km az=10.0*

NEIC ***20*** *20:40:29.0±0.0, 52°.52N×176°.04W, h234^{km}, mb4.2/14, After AEIC.*

ISC 20 20:40:27.0±0.6**, 53°.0N**±0°.1×**176°.20W**±0°.08**, h231**^{km}**, n41,** σ**1^{s}.59**/42**, mb3.5**/15**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.89	174	*e*Pn	Pn	20 41 01.9	+2.5
ADK	Adak	1.14	195	*e*Pn	Pn	20 41 02.6	+1.8
ADK				*e*S	S	20 41 29.5	+2.3
KIWB	Kanaga Island	1.27	208	*e*Pn	Pn	20 41 03.7	+1.9
CHGN	Chignik	10.83	65	*e*Pn	Pn	20 42 57.4	+1.4
CHIR	Chirikof Islan	12.32	68	*e*Pn	P	20 43 16.9	-1.0
SII	Sitkinak Islan	13.19	65	*e*Pn	P	20 43 27.6	-0.1
OHAK	Old Harbor	13.76	63	*e*Pn	P	20 43 33.4	-0.6
SVW2	Sparrevohn	13.81	46	*e*Pn	P	20 43 36.9	+2.5
KDAK	Kodiak Island	14.22	61	P	Pn	20 43 37.8	-0.4
	1.4nm,0.3s,baz=300,slow=4.6,SNR=41						
KDAK				S	S	20 46 06.2	-9.2
	0.2nm,0.3s,baz=221,slow=23,SNR=7.8						
KDAK	Kodiak Island	14.22	61	*e*Pn	P	20 43 39.0	-0.1
CNPM	China Poot	15.28	55	*e*P	Pn	20 43 53.2	+2.2
	32nm,1.2s						
SPU	Mount Spurr	15.40	48	*e*P	Pn	20 43 56.0	+3.5
SEW	Seward	16.30	53	*e*P	Pn	20 44 04.4	+1.3
	9.2nm,1.0s						
KTH	Kantishna Hill	16.86	41	*e*P	Pn	20 44 10.9	+1.0
	15nm,0.8s						
GHO	Glory Hole Cre	17.02	48	*e*P	Pn	20 44 15.5	+3.9
	5.2nm,1.0s						
BPAW	Bear Paw Mtn.	17.10	40	*e*P	Pn	20 44 12.9	+0.4
	5.0nm,0.8s						
SML	Sawmill	17.30	48	*e*P	Pn	20 44 15.5	+0.6
	5.0nm,1.0s						
RND	Reindeer	17.64	43	*e*P	P	20 44 17.9	+1.3
	3.2nm,0.6s						
BWN	Browne	17.72	40	*e*P	Pn	20 44 20.0	+0.2
	17nm,1.1s						
ILAR	Eielson Array	18.99	40	P	P	20 44 30.4	-0.7
	0.1nm,0.3s,baz=240,slow=9.7,SNR=7.6						
SEY	Seymchan	19.21	314	P	P	20 44 33.4	0.0
	0.2nm,0.3s,baz=174,slow=19,SNR=3.4						
GLB	Gilahina Butte	19.29	51	*e*P	Pn	20 44 36.5	-1.8
	8.4nm,0.6s						
DOT	Dot Lake	19.74	45	*e*P	P	20 44 41.2	+2.1
	15nm,1.0s						
EGAK	Eagle	21.29	43	*e*P	P	20 44 56.4	+1.1
	3.3nm,0.6s						
HYT	Haines Junctio	22.25	54	*e*P	P	20 45 05.0	+0.3
	1.2nm,1.0s						
INK	Inuvik	25.23	36	P	P	20 45 31.0	-0.3
	1.3nm,0.4s,baz=258,slow=7.7,SNR=4.7						
INK	Inuvik	25.23	36	*e*P	P	20 45 32.5	+1.2
	3.3nm,1.0s						
YAK	Yakutsk	29.60	309	*e*P	P	20 46 12.0	+1.8
	5.8nm,0.4s						
TIXI	Tiksi	30.06	329	P	P	20 46 15.1	+0.9
	2.2nm,0.6s,baz=117,slow=15,SNR=3.0						
YKA	Yellowknife Ar	32.97	49	P	P	20 46 40.0	+0.4
	0.6nm,0.5s,baz=276,slow=9.6,SNR=7.7						
NVAR	Mina Array Bea	41.81	86	P	P	20 47 54.1	0.0
	0.4nm,0.5s,baz=301,slow=9.6,SNR=4.7						
PDAR	Pinedale Array	44.33	75	P	P	20 48 14.3	0.0
	0.3nm,0.4s,baz=336,slow=2.0,SNR=4.2						
SONM	Songino Array	47.36	297	P	P	20 48 37.7	+0.1
	0.3nm,0.5s,baz=42,slow=7.8,SNR=3.8						
ARCES	ARCESS Array B	56.77	351	P	P	20 49 45.5	-0.8
	2.1nm,0.9s,baz=23,slow=7.1,SNR=3.1						
TXAR	Lajitas Array	56.86	84	P	P	20 49 46.6	-1.0
	0.3nm,0.4s,baz=307,slow=6.0,SNR=10						
SCHQ	Schefferville	57.75	40	P	P	20 49 52.9	-0.5
	3.0nm,0.5s,baz=252,slow=16,SNR=3.6						
MKAR	Makanchi Array	60.28	309	P	P	20 50 09.5	-1.4
	0.2nm,0.3s,baz=41,slow=4.8,SNR=5.3						
FINES	FINESS Array B	64.56	348	P	P	20 50 37.7	-1.1
	0.9nm,0.7s,baz=17,slow=11,SNR=2.8						
ASAR	Alice Springs	87.75	225	P	P	20 52 47.7	-1.8
	0.2nm,0.6s,baz=15,slow=5.4,SNR=2.7						
MAW	Mawson	148.73	219	PKPbc	PKPbc	20 59 43.4	-1.9
	0.9nm,0.6s,baz=135,slow=5.7,SNR=3.5						
BOSA	Boshof	150.96	319	PKPbc	PKPbc	20 59 49.5	-2.5
	0.6nm,0.4s,baz=53,slow=5.1,SNR=2.6						

DJA ***20*** *20:41:37.0±2.1, 8°N±18°×12°7E±°, h10^{km}, M4.9/5, mB5.2/1, mb4.7/5, MLv5.0/4, Mw(mB)4.5/1*

MAN ***20*** *20:41:39.3, 7°.22N×127°.14E, h1^{km}, mb5.1, ML4.1, MS4.2*

IDC ***20*** *20:41:43.9±0.6, 7°.31N×127°.13E, h48^{km}±4^{km}, mb4.0/27, mb1 4.1/29, mb1mx4.0/44, mbtmp4.2/29, MS3.7/5, Ms1 3.7/5, ms1mx3.3/31, Error ellipse: s-maj=11.7km s-min=7.3km az=152.0*

ISCJB ***20*** *20:41:44.2±0.6, 7°.28N±0°.03×126°.98E±0°.05, h71^{km}±5^{km}, mb4.4/65, Error ellipse: s-maj=8.6km s-min=4.2km az=170.8*

NEIC ***20*** *20:41:46.1±1.1, 7°.28N×126°.94E, h73^{km}±7^{km}, mb4.6/47, Error ellipse: s-maj=12.1km s-min=9.5km az=219.0*

ISC 20 20:41:44.6±0.5**, 7°.29N**±0°.04×**127°.10E**±0°.05**, h58**^{km}±4^{km}**, n108,** σ**1^{s}.46**/127**, mb4.5**/64**, 6C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.15	321	⇑ *i*P	Pn	20 42 02.5	-2.1
BIPH				*i* S	Sn	20 42 18.4	-1.0
DAV	Davao City (W)	1.52	262	P	Pn	20 42 08.4	-1.1
	369nm,0.3s,baz=38,slow=2.1,SNR=74						
DAV				S	Sn	20 42 29.5	+1.2
	200nm,0.3s,baz=66,slow=20,SNR=7.4						
DAV	Davao City (W)	1.52	262	*e*Pn	Pn	20 42 08.8	-0.7
DAV				*e*Sn	Sn	20 42 27.1	-1.2
DMPH	Davao City--Mi	1.59	263	⇓ *i*P	Pn	20 42 10.9	+0.5
DMPH				*i* S	Sn	20 42 34.8	+4.9
KCP	Kidapawan	2.01	262	⇑ *i*P	Pn	20 42 16.1	-0.1
KCP				*i* S	Sn	20 42 50.6	+10
CGP	Cagayan de Oro	2.65	296	⇓ *e*P	Pn	20 42 25.1	+0.2
CGP				*e*S	Sn	20 43 01.7	+5.9
SGSI	Sangihe	3.90	204	P	Pn	20 42 44.2	+2.2
DCPH	Dipolog City	3.92	289	⇑ *e*P	Pn	20 42 36.0	-6.4
LLP	Lapu-Lapu	4.32	314	*e*P	Pn	20 42 47.2	-0.5
LLP				*e*S	Sn	20 43 42.0	+5.1
SNPH	Sibulan	4.33	298	⇑ *e*P	Pn	20 42 49.1	+1.1
SNPH				*e*S	Sn	20 43 43.1	+5.8
PLP	Palo	4.38	332	⇑ *e*P	Pn	20 42 47.0	-1.6
PLP				*i* S	Sn	20 43 51.7	+13
RCP	Roxas	6.04	315	⇑ *e*P	Pn	20 43 12.5	+1.2
TNTI	Ternate	6.47	178	*e*Pn	Pn	20 43 17.8	+0.5
TNTI				*e*Sn	Sn	20 44 31.7	+1.8
TGY	Tagaytay City	9.08	319	LR	LR	20 48 17.6	
	comp=Z,373nm,19.2s,baz=151,slow=43						
SIJI	Sorong	9.11	153	P	Pn	20 43 51.5	-1.9
	1.7nm,0.3s,baz=345,slow=19,SNR=14						
SIJI				S	Sn	20 45 24.8	-10
	1.5nm,0.3s,baz=343,slow=19,SNR=6.3						
LUWI	Luwuk	9.33	208	*e*Pn	Pn	20 43 57.0	+0.6
LUWI				*e*Sn	Sn	20 45 40.7	+0.8
SANI	Sanana	9.34	187	P	Pn	20 43 52.4	-4.2
KKM	Kota Kinabalu	10.88	264	*e*Pn	Pn	20 44 15.8	-1.9
FAKI	Fak Fak	11.37	153	*e*Pn	Pn	20 44 24.2	-0.1
SBUM	Sibu	15.58	253	*e*P	P	20 45 24.4	+0.5
	17nm,0.7s						
KSM	Kuching	17.70	252	*e*P	Pn	20 45 46.5	-0.6
	13nm,1.1s						
BATI	Baumata	17.71	191	LR	LR	20 53 45.1	
	comp=Z,201nm,18.3s,baz=172,slow=41						
GUMO	Guam	18.56	69	LR	LR	20 52 21.9	
	comp=Z,98nm,21.6s,baz=217,slow=34						
JOW	Kunigami	19.47	3	P	P	20 46 07.2	+0.5
	0.1nm,0.3s,baz=177,slow=12,SNR=11						
JOW	Kunigami	19.47	3	*e*P	Pn	20 46 09.5	+1.0
	22nm,0.9s						
MTN	Manton Dam	20.39	169	*e*P	P	20 46 17.4	+0.6
	15nm,1.0s						
JNU	Nakatsue	25.95	7	P	P	20 47 12.0	+0.4
	20nm,0.8s,baz=187,slow=2.8,SNR=16						
JNU	Nakatsue	25.95	7	*e*P	P	20 47 12.1	+0.4
	21nm,0.8s						
COEN	Coen	26.46	143	*e*P	P	20 47 16.6	+0.2
	9.7nm,0.9s						
WR1	Warramunga Arr	27.98	165	*e*P	P	20 47 30.5	+0.5
WRA	Warramunga Arr	27.98	165	P	P	20 47 30.5	+0.5
	1.1nm,0.5s,baz=344,slow=12,SNR=8.1						
WB2	Warramunga Arr	27.98	165	*e*P	P	20 47 31.3	+1.3
	17nm,1.5s						
INU	Inuyama	29.38	17	*e*P	P	20 47 43.4	+1.1
PSA00	Pilbara Seismi	29.55	194	*e*P	P	20 47 43.6	-0.3
	30nm,1.4s						
CMAR	Chiang Mai Arr	29.56	295	P	P	20 47 43.4	-0.7
	0.5nm,0.5s,baz=113,slow=7.0,SNR=3.7						
CMAR				PcP	PcP	20 50 49.6	+1.5
	1.0nm,0.8s,baz=111,slow=0.6,SNR=7.6						
GSI	Gunungsitoli	30.02	260	*e*P	P	20 47 46.9	-1.3
	11nm,0.7s						
KS15	Wonju Array Si	30.03	1	*e*P	P	20 47 48.5	+0.6
	36nm,1.6s						
KSRS	Korea Array	30.04	1	P	P	20 47 48.5	+0.4
	3.5nm,0.8s,baz=178,slow=9.9,SNR=15						
KSRS				pP	pP	20 48 00.8	+0.4
	2.5nm,0.8s,baz=175,slow=10,SNR=5.6						
KSRS				LR	LR	21 03 15.9	
	comp=Z,55nm,18.0s,baz=320,slow=43						
MJAR	Matsushiro Arr	30.84	18	P	P	20 47 55.6	+0.4
	2.3nm,0.7s,baz=195,slow=9.8,SNR=13						
MJAR				pP	pP	20 48 06.9	-0.4
	3.7nm,1.0s,baz=192,slow=9.8,SNR=5.7						
MJAR				PcP	PcP	20 50 51.9	+0.7
	0.4nm,0.7s,baz=167,slow=2.6,SNR=4.2						
MAJO	Matsushiro	30.84	18	*e*P	P	20 47 55.5	+0.3
	5.8nm,0.8s						
AS31	Alice Springs	31.47	168	*e*P	P	20 48 01.7	+0.8
	1.0nm,0.6s						
ASAR	Alice Springs	31.47	168	P	P	20 48 02.0	+1.1
	0.5nm,0.3s,baz=341,slow=7.2,SNR=12						
ASAR				PcP	PcP	20 50 53.7	+0.6
	1.6nm,0.6s,baz=351,slow=2.3,SNR=14						
ASAR				ScP	ScP	20 54 33.0	+1.5
	0.5nm,0.6s,baz=352,slow=3.1,SNR=7.0						
CTAO	Charters Tower	33.09	146	*e*P	P	20 48 16.8	+1.6
	13nm,1.4s						
USA0B	Ussuriysk Arra	37.02	6	*e*P	P	20 48 49.2	+0.6
	60nm,1.5s						
USRK	Ussuriysk Ar.	37.02	6	P	P	20 48 50.1	+1.5
	13nm,0.9s,baz=188,slow=7.7,SNR=17						
USRK				pP	pP	20 49 01.3	0.0
	12nm,0.9s,baz=196,slow=9.1,SNR=8.2						
ERM	Erimo	37.40	20	*e*P	P	20 48 53.4	+1.5
	31nm,1.4s						
MORW	Morawa	37.68	196	*e*P	P	20 48 54.5	+0.1
	47nm,1.6s						
FORT	Forrest	37.86	179	*e*P	P	20 48 55.7	-0.1
	50nm,1.3s						
ASAJ	Asahikawa	39.11	18	P	P	20 49 08.1	+1.8
	11nm,0.8s,baz=211,slow=5.2,SNR=16						
BBOO	Buckleboo	40.77	168	*e*P	P	20 49 21.2	+1.0
	74nm,1.5s						
NWAO	Narrogin (SRO)	41.08	193	*e*P	P	20 49 23.2	+0.5
	28nm,1.1s						
STKA	Stephens Creek	41.33	161	P	P	20 49 25.4	+0.7
	3.1nm,0.7s,baz=328,slow=10,SNR=4.2						
STKA	Stephens Creek	41.33	161	*e*P	P	20 49 25.9	+1.2
	3.0nm,1.0s						
YSS	Yuzh-Sakhalins	41.74	16	*e*P	P	20 49 29.0	+1.1
	19nm,1.3s						
ULN	Ulaanbaatar	43.89	341	*e*P	P	20 49 44.5	-1.1
	5.6nm,1.5s						
SONA0	Songino Array	44.08	340	*e*P	P	20 49 47.3	+0.2
SONM	Songino Array	44.08	340	P	P	20 49 47.3	+0.2
	0.6nm,0.8s,baz=144,slow=6.2,SNR=4.6						
SONM				pP	pP	20 50 01.9	+1.2
	0.3nm,0.4s,baz=18,slow=42,SNR=3.0						
SONM				PcP	PcP	20 51 29.2	-2.3
	0.4nm,0.6s,baz=153,slow=4.2,SNR=3.7						
ARMA	Armidale	44.27	149	*e*P	P	20 49 49.9	+1.1
	25nm,1.5s						
PEA0B	Petropavlovsk-	52.03	23	*e*P	P	20 50 50.8	+2.7
	8.1nm,0.8s						
PETK	Petropavlovsk-	52.03	23	P	P	20 50 49.8	+1.6
	5.0nm,0.6s,baz=192,slow=4.5,SNR=24						
YAK	Yakutsk	54.67	1	*e*P	P	20 51 07.3	0.0
	17nm,0.9s						
MK31	Makanchi Array	54.89	324	*e*P	P	20 51 08.8	-0.6
	1.9nm,0.8s						
MK32	Makanchi Array	54.89	324	*e*P	P	20 51 08.6	-0.7
MKAR	Makanchi Array	54.89	324	P	P	20 51 08.6	-0.7
	1.9nm,0.7s,baz=114,slow=6.7,SNR=17						
MKAR				pP	pP	20 51 21.1	-2.0
	1.8nm,0.6s,baz=125,slow=7.9,SNR=8.5						
MKAR				PcP	PcP	20 52 10.4	-0.4
	1.3nm,0.6s,baz=126,slow=4.6,SNR=4.1						
MAKZ	Makanchi	55.08	324	*e*P	P	20 51 09.9	-0.8
	2.6nm,0.8s						
MA2	Magadan	55.19	14	P	P	20 51 10.1	-1.1
	6.1nm,0.8s,baz=183,slow=19,SNR=2.8						
MA2				pP	pP	20 51 25.1	+0.5
	8.2nm,0.7s,baz=180,slow=9.1,SNR=4.0						
NIL	Nilore	56.10	306	*e*P	P	20 51 17.0	-1.2
	6.8nm,0.8s						
NRN	Naryn	56.53	315	*e*P	P	20 51 20.3	-1.3
	1.8nm,0.7s						
ZALV	Zalesovo Beam	57.62	332	P	P	20 51 27.5	-1.1
	0.7nm,0.6s,baz=137,slow=8.2,SNR=3.0						
ZAA1	Zalesovo Array	57.63	332	*e*P	P	20 51 27.5	-1.1
SEY	Seymchan	58.51	13	P	P	20 51 36.5	+1.9
	2.0nm,0.8s,baz=208,slow=8.8,SNR=6.7						
KURK	Kurchatov	58.98	326	*e*P	P	20 51 37.2	-0.9
	6.1nm,1.1s						
KK31	Karatay Array	60.93	316	*e*P	P	20 51 50.5	-1.2
	4.1nm,0.8s						
TIXI	Tiksi	64.31	1	P	P	20 52 12.8	-0.8
	5.2nm,0.7s,baz=228,slow=4.5,SNR=5.0						
TIXI	Tiksi	64.31	1	*e*P	P	20 52 13.8	+0.2
	6.8nm,0.8s						
ODZ	Otahua Downs	65.11	147	*e*P	P	20 52 18.6	-0.7
	27nm,1.4s						
NIUE	Niue	67.33	114	*e*P	P	20 52 32.9	-1.1
	665nm,1.6s						
GEYT	Alibeck	68.99	308	P	P	20 52 43.5	-0.7
	2.5nm,0.9s,baz=120,slow=20,SNR=4.8						
ABKAR	Akbulak array	69.66	320	*e*P	P	20 52 47.0	-1.1
	1.7nm,0.9s						
ARU	Arti	72.16	327	*e*P	P	20 53 02.4	-0.6
	2.9nm,0.7s						
CAST	Castle Rocks	79.42	27	*e*P	P	20 53 44.8	+0.5
	3.7nm,0.9s						
RAYN	Ar Rayn	79.45	293	*e*P	P	20 53 44.5	-0.9
	10nm,1.2s						
AKH	Akhalkalaki	80.44	311	*e*P	P	20 53 49.9	-0.6
	4.4nm,0.6s						
KBZ	Khabaz	80.82	313	P	P	20 53 51.5	-0.8
	1.5nm,0.6s,baz=96,slow=8.0,SNR=3.6						
KIV	Kislovodsk	80.97	313	*e*P	P	20 53 51.6	-1.6
	3.7nm,1.0s						
CCB	Clear Creek Bu	81.36	26	*e*P	P	20 53 55.3	+0.6
	3.9nm,1.2s						
ILAR	Eielson Array	81.76	26	P	P	20 53 57.8	+0.9
	0.6nm,0.6s,baz=246,slow=5.8,SNR=9.4						
ILAR				pP	pP	20 54 09.8	-0.6
	1.7nm,0.8s,baz=240,slow=6.0,SNR=9.5						
ILAR				LR	LR	21 34 49.7	
	comp=Z,274nm,19.5s,baz=47,slow=39						
GLB	Gilahina Butte	83.22	29	*e*P	P	20 54 05.1	+0.5
	5.0nm,1.0s						
EGAK	Eagle	84.21	25	*e*P	P	20 54 09.7	+0.2
	4.7nm,0.8s						
INK	Inuvik	86.74	22	P	P	20 54 23.1	+1.1
	1.0nm,0.7s,baz=321,slow=8.3,SNR=3.3						
VNDA	Vanda	86.88	173	*e*P	P	20 54 21.8	-0.6
	5.6nm,1.6s						
ARA0	ARCESS Array S	87.26	340	*e*P	P	20 54 24.1	-0.4
ARCES	ARCESS Array B	87.26	340	P	P	20 54 24.1	-0.4
	2.1nm,0.9s,baz=69,slow=4.9,SNR=3.6						
BR101	Keskin Array S	88.05	310	*e*P	P	20 54 28.0	-1.1
BRTR	Keskin Array B	88.05	310	P	P	20 54 28.0	-1.1
	0.5nm,0.8s,baz=78,slow=6.7,SNR=3.8						
FIA0	FINESS Array S	88.89	332	*e*P	P	20 54 31.9	-0.5
FINES	FINESS Array B	88.89	332	P	P	20 54 31.9	-0.5
	2.5nm,0.9s,baz=45,slow=2.2,SNR=4.1						
AKASG	Malin Array Be	89.38	321	P	P	20 54 33.8	-1.1
	1.2nm,0.6s,baz=65,slow=5.2,SNR=4.8						
AKBB	Malin Array Si	89.38	321	*e*P	P	20 54 33.7	-1.2
	3.4nm,0.7s						
NOA	NORSAR Array B	95.78	334	P	P	20 55 04.3	-0.1
	0.4nm,0.8s,baz=68,slow=6.9,SNR=2.6						
YKA	Yellowknife Ar	96.13	24	P	P	20 55 06.7	+0.9
	0.7nm,0.8s,baz=298,slow=4.3,SNR=4.7						
YKA				pP	pP	20 55 19.9	-0.3
	0.8nm,0.8s,baz=302,slow=4.3,SNR=4.2						
YKB5	Yellowknife Ar	96.13	24	*e*P	P	20 55 06.7	+0.9
GEC2	GERESS Array S	99.53	322	*e*P	Pdif	20 55 20.4	-1.2
	3.8nm,1.5s						
GERES	GERESS Array B	99.53	322	P	Pdif	20 55 21.0	-0.6
	0.4nm,0.8s,baz=50,slow=6.5,SNR=3.9						
LTX	Lajitas	119.11	51	*e*PKPdf	PKiKP	21 00 29.4	+1.5
TXAR	Lajitas Array	119.11	51	PKP	PKiKP	21 00 29.4	+1.5
	0.2nm,0.7s,baz=299,slow=2.6,SNR=3.5						
TORD	Torodi Ar. Bea	122.09	290	PKP	PKPdf	21 00 33.5	-0.2
	1.6nm,0.7s,baz=51,slow=1.7,SNR=8.7						
TOA1	Torodi Ar. Sit	122.10	290	*e*PKPdf	PKPdf	21 00 33.5	-0.2

IDC ***20*** *20:42:20.4±1.4, 11°.54S×117°.76E, h0^{km}, mb3.9/2, mb1 3.8/6, mb1mx3.5/37, mbtmp3.7/6, ML3.3/4, Error ellipse: s-maj=37.0km s-min=25.5km az=68.0*

ISCJB ***20*** *20:42:24.6±0.8, 11°.39S±0°.06×118°.06E±0°.06, h36^{km}, mb3.9/2, Error ellipse: s-maj=9.0km s-min=7.3km az=41.8*

DJA ***20*** *20:42:28.5±0.9, 11°S±7°×11°8E±°, h10^{km}, M3.9/3, mb4.2/1, MLv3.8/3*

ISC 20 20:42:25.3±1.0**, 11°.39S**±0°.08×**117°.98E**±0°.05**, h36**^{km}**, n14,** σ**2^{s}.33**/18**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.22	39	P	Pn	20 43 00.5	+0.8
WBSI				S	Sn	20 43 24.8	-1.1
PLAI	Plampang	2.55	355	P	Pn	20 43 05.5	+1.3
PLAI				S	Sn	20 43 33.1	-0.9
IGBI	Denpasar	3.78	312	P	Pn	20 43 22.1	+1.0
DNP	Denpasar	3.83	314	P	Sn	20 44 04.7	-1.0
SRBI	Singaraja	4.27	320	P	Pn	20 43 30.7	+2.9
EDFI	Ende, Flores	4.50	55	P	Pn	20 43 30.9	-0.2
JAGI	Jajag, Banyuwa	4.76	307	P	Sn	20 44 22.5	-6.0
BATI	Baumata	5.71	79	Pn	Pn	20 43 48.9	+1.3
	3.3nm,0.3s,baz=258,slow=1.7,SNR=14						
BATI				Sn	Sn	20 44 50.8	-1.2
	2.2nm,0.3s,baz=319,slow=19,SNR=5.2						
BKSI	Bulukumba	6.39	20	P	Pn	20 43 59.7	+2.7
KAPI	Kappang	6.57	16	Pn	Pn	20 44 02.3	+2.8
	0.8nm,0.3s,baz=193,slow=6.4,SNR=16						
KAPI				Sn	Sn	20 45 09.6	-3.5
	2.8nm,0.3s,baz=197,slow=14,SNR=7.4						
WRA	Warramunga Arr	17.89	120	P	Pn	20 46 31.8	+0.3
	0.1nm,0.3s,baz=293,slow=14,SNR=2.8						
ASAR	Alice Springs	19.46	131	P	Pn	20 46 50.9	+0.3
	0.0nm,0.3s,baz=308,slow=12,SNR=3.3						
MKAR	Makanchi Array	66.13	334	P	P	20 53 09.5	+0.5
	0.5nm,0.4s,baz=142,slow=7.0,SNR=4.3						
VNDA	Vanda	69.80	171	P	P	20 53 31.5	-0.1
	0.9nm,0.7s,baz=307,slow=10,SNR=3.0						

MEX 20 20:48:51.8±0.5**, 18°.70N**×**103°.42W, h50**^{km}±7^{km}**, MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.42	171	*e*P	Pn	20 49 01.1	-1.0
MMIG				*i* S	Sn	20 49 07.3	-2.2
EZ5V		0.79	347	*e*P	Pn	20 49 05.2	-1.9
EZ5V				*e*S	Sn	20 49 16.5	-1.6
CJM	Chamela	1.73	298	*e*P	Pn	20 49 17.9	-1.6
CJM				*i* S	Sn	20 49 38.3	-2.1
ARIG	Puente Sto Nin	2.94	98	*i* P	Pn	20 49 35.0	-1.1
ARIG				*i* S	Sn	20 50 08.4	-1.9

MEX 20 20:51:31.0±0.5**, 18°.70N**×**103°.53W, h32**^{km}±24^{km}**, MD3.6, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.44	157	*i* P	Pb	20 51 38.7	-2.0
MMIG				*e*S	Sb	20 51 45.6	-1.7
EZ5V		0.78	355	*e*P	Pn	20 51 43.9	-2.1
EZ5V				*e*S	Sn	20 51 53.6	-3.2
CJM	Chamela	1.64	299	*e*P	Pn	20 51 55.8	-1.8
CJM				*i* S	Sn	20 52 14.8	-2.9

IDC ***20*** *20:51:29.2±1.0, 9°.90S×151°.39E, h0^{km}, mb3.9/10, mb1 4.1/13, mb1mx3.9/29, mbtmp3.9/13, ML3.2/2, MS3.3/2, Ms1 3.3/2, ms1mx3.0/22, Error ellipse: s-maj=29.5km s-min=18.2km az=120.0*

ISCJB ***20*** *20:51:31.9±0.7, 10°.03S±0°.09×151°.45E±0°.08, h33^{km}, mb3.9/10, MS3.1/1, Error ellipse: s-maj=13.5km s-min=10.8km az=158.6*

ISC 20 20:51:34.0±0.8**, 10°.0S**±0°.1×**151°.5E**±0°.1**, h35**^{km}**, n15, σ1^{s}07**/15**, mb3.9**/10**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.28	277	Pn	Pn	20 52 36.7	0.0
	1.3nm,0.3s,baz=108,slow=20,SNR=3.5						
PMG				Sn	Sn	20 53 26.7	+1.3
	baz=106,slow=18,SNR=1.9						
PMG				LR	LR	20 54 06.0	
	comp=Z,408nm,21.0s,baz=44,slow=37						
CTA	Charters Tower	11.22	206	Pn	Pn	20 54 11.7	-0.4
	0.1nm,0.3s,baz=41,slow=11,SNR=3.5						
WRA	Warramunga Arr	19.25	237	P	P	20 55 55.3	-0.4
	0.1nm,0.3s,baz=61,slow=8.7,SNR=5.4						
ASAR	Alice Springs	21.58	229	P	P	20 56 20.0	-0.9
	4.3nm,1.1s,baz=59,slow=10,SNR=14						
STKA	Stephens Creek	23.61	201	P	P	20 56 43.0	+1.1
	9.6nm,1.0s,baz=19,slow=12,SNR=6.0						
GUMO	Guam	24.33	344	LR	LR	21 04 06.6	
	comp=Z,66nm,20.0s,baz=178,slow=31						
KSRS	Korea Array	52.10	336	P	P	21 00 39.2	-1.5
	1.1nm,0.8s,baz=139,slow=8.2,SNR=4.1						
CMAR	Chiang Mai Arr	59.02	299	P	P	21 01 31.7	+0.8
	0.7nm,0.9s,baz=99,slow=4.7,SNR=3.8						
PETK	Petropavlovsk-	63.08	4	P	P	21 01 59.0	+1.3
	1.6nm,1.0s,baz=150,slow=9.9,SNR=2.9						
SONM	Songino Array	70.04	330	P	P	21 02 41.7	-0.8
	1.2nm,0.9s,baz=111,slow=32,SNR=7.2						
MKAR	Makanchi Array	83.37	320	P	P	21 03 57.3	-0.4
	1.1nm,1.0s,baz=134,slow=6.2,SNR=3.4						
ZALV	Zalesovo Beam	84.73	327	P	P	21 04 02.9	-1.5
	0.3nm,0.3s,baz=96,slow=9.0,SNR=2.9						
ILAR	Eielson Array	87.44	22	P	P	21 04 17.4	-0.1
	0.5nm,0.8s,baz=260,slow=4.8,SNR=5.4						
NVAR	Mina Array Bea	96.31	52	P	P	21 05 01.1	+1.5
	0.4nm,0.8s,baz=249,slow=7.5,SNR=1.9						
TORD	Torodi Ar. Bea	150.22	279	PKPbc	PKiKP	21 11 22.8	-0.5
	0.8nm,0.7s,baz=116,slow=3.4,SNR=2.7						

MEX 20 20:53:56.0±0.3**, 18°.73N**×**103°.46W, h38**^{km}±12^{km}**, MD3.6, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.45	167	*e*P	Pn	20 54 04.3	-1.5
MMIG				*e*S	Sn	20 54 11.1	-1.8
EZ5V		0.76	349	*e*P	Pn	20 54 08.8	-1.6
EZ5V				*e*S	Sn	20 54 18.4	-2.5
CJM	Chamela	1.69	297	*e*P	Pn	20 54 21.4	-1.5
CJM				*i* S	Sn	20 54 41.2	-2.1

ISCJB ***20*** *20:55:01.6±1.0, 9°.9S±0°.1×151°.48E±0°.09, h33^{km}, mb3.8/6, Error ellipse: s-maj=19.5km s-min=13.4km az=178.0*

IDC ***20*** *20:55:11.5±5.4, 9°.92S×151°.12E, h99^{km}±43^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.5/25, mbtmp3.9/8, Error ellipse: s-maj=41.1km s-min=22.6km az=93.0*

ISC 20 20:55:04.0±0.9**, 9°.9S**±0°.2×**151°.5E**±0°.1**, h35**^{km}**, n9, σ1^{s}76**/11**, mb3.9**/6**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.32	277	P	Pn	20 56 09.7	+2.5
	6.4nm,0.3s,baz=86,slow=7.2,SNR=8.3						
PMG				S	Sn	20 56 56.3	-0.2
	1.4nm,0.3s,baz=97,slow=17,SNR=2.1						
WRA	Warramunga Arr	19.32	237	P	P	20 59 24.8	-1.6
	0.2nm,0.3s,baz=59,slow=11,SNR=8.5						
ASAR	Alice Springs	21.65	229	P	P	20 59 50.8	-0.9
	2.0nm,0.8s,baz=58,slow=9.0,SNR=14						
STKA	Stephens Creek	23.69	201	P	P	21 00 12.8	+0.2
	11nm,1.0s,baz=28,slow=9.4,SNR=6.0						
SONM	Songino Array	70.02	329	P	P	21 06 11.3	-1.1
	1.2nm,1.0s,baz=136,slow=6.0,SNR=5.5						
MKAR	Makanchi Array	83.36	320	P	P	21 07 25.0	-2.6
	0.2nm,0.4s,baz=122,slow=5.2,SNR=3.1						
ILAR	Eielson Array	87.37	22	P	P	21 07 46.9	-0.3
	0.6nm,0.7s,baz=242,slow=4.9,SNR=5.5						
NVAR	Mina Array Bea	96.24	52	P	P	21 08 31.9	+2.6
	0.2nm,0.4s,baz=246,slow=6.5,SNR=3.9						
TORD	Torodi Ar. Bea	150.26	279	PKP	PKPdf	21 14 47.9	+0.5
	0.6nm,0.7s,baz=95,slow=3.4,SNR=2.7						
TORD				PKPbc	PKPbc	21 14 52.2	-0.4
	1.1nm,0.8s,baz=90,slow=4.4,SNR=4.1						

ISCJB ***20*** *21:04:02.5±0.3, 16°.12N±0°.03×95°.00W±0°.03, h10^{km}, mb5.5/1, Error ellipse: s-maj=4.8km s-min=4.5km az=5.1*

MEX ***20*** *21:04:04.6±0.6, 16°.09N×94°.98W, h8^{km}±7^{km}, MD4.1*

NEIC ***20*** *21:04:04.5±0.0, 16°.09N×94°.98W, h7^{km}, mb4.3/35, MD4.1(MEX), After MEX.*

ISC 20 21:04:03.9±0.5**, 16°.11N**±0°.05×**95°.02W**±0°.04**, h10**^{km}**, n54, σ1^{s}78**/60**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.99	7	*e*Pg	Pg	21 04 20.9	-2.0
CMIG				*e*Sg	Sg	21 04 33.5	-2.3
CMIG	Matias Romero	0.99	7	*i* P	Pg	21 04 21.0	-2.0
CMIG				*i* S	Sg	21 04 33.8	-2.0
HUIG	Huatulco	1.10	253	*e*Pg	Pb	21 04 22.5	-2.6
HUIG				*e*Sg	Sb	21 04 37.5	-2.0
HUIG	Huatulco	1.10	253	*i* P	Pb	21 04 22.5	-2.6
HUIG				*e*S	Sb	21 04 37.5	-2.0
PCIG		1.77	103	*e*Pn	Pn	21 04 31.9	-2.7
PCIG				*e*Sn	Sn	21 04 53.0	-4.3
PCIG		1.77	103	*e*P	Pn	21 04 31.9	-2.7
PCIG				*e*S	Sn	21 04 53.0	-4.3
VHO	Vista Hermosa	1.91	301	*e*Pn	Pn	21 04 35.4	-1.3
VHO				*e*Sn	Sn	21 04 58.1	-2.8
VHO	Vista Hermosa	1.91	301	*e*P	Pn	21 04 35.4	-1.3
VHO				*e*S	Sn	21 04 58.1	-2.8
TGIG		1.94	70	*e*Pn	Pn	21 04 33.9	-3.1
TGIG		1.94	70	*e*P	Pn	21 04 33.9	-3.1
CCIG	Comitan	2.77	86	*e*Pn	Pn	21 04 46.0	-2.6
TLIG	Tlapa	3.70	294	*e*Pn	Pn	21 05 00.3	-0.9
LVIG	Laguna Verde	3.84	340	*e*P	Pn	21 04 58.5	-4.5
MYIG	Mrida	6.95	45	*e*Pn	Pn	21 05 45.6	-0.3
TEIG	Tepich	7.61	56	*e*Pn	Pn	21 05 49.9	-4.9
LNIG	Linares	9.69	335	*e*Pn	Pn	21 06 22.1	-1.4
JTS	Las Juntas de	11.37	119	*e*Pn	Pn	21 06 47.4	+0.8
KVTX	Kingsville	11.69	347	*e*Pn	Pn	21 06 51.2	+0.3
HKT	Hockley	13.80	357	*e*Pn	Pn	21 07 20.5	+0.9
061Z	Ochoppi	16.35	51	*e*Pn	Pn	21 07 55.1	+1.4
	99nm,0.8s						
ABTX	Abilene, Hawle	16.97	347	*e*Pn	Pn	21 08 01.3	-0.2
	12nm,0.7s						
PAYG	Puerto Ayora	17.31	164	*e*Pn	Pn	21 08 05.2	-0.7
	60nm,1.2s						
250A	Grady	17.69	25	*e*Pn	Pn	21 08 11.0	+0.5
	29nm,1.5s						
WMOK	Wichita Mounta	18.86	350	*e*P	Pn	21 08 25.9	+1.2
	6.4nm,1.2s						
GRTK	Grand Turk	23.23	73	*e*P	P	21 09 11.4	0.0
	116nm,1.0s						
I42A	Draeger Farm,	28.18	9	*e*P	P	21 09 57.3	+0.8
	15nm,1.3s						
MTP	Monte Pirata	28.22	82	*e*P	P	21 09 57.2	+0.1
	75nm,1.7s						
HWUT	Hardware Ranch	29.15	334	*e*P	P	21 10 07.4	+2.0
	3.7nm,1.1s						
MEDO	Medina	30.45	24	*e*P	P	21 10 17.7	+1.0
	12nm,0.8s						
J55A	Hilton	30.79	25	*e*P	P	21 10 20.7	+1.0
	11nm,0.6s						
PAL	Palisades	30.81	32	*e*P	P	21 10 21.3	+1.4
	75nm,1.8s						
SKI	Saint Kitts	30.92	83	*e*P	P	21 10 21.8	+0.6
	113nm,1.1s						
SAO	San Andreas Ge	31.18	316	*e*P	P	21 10 24.1	+0.8
	9.3nm,0.9s						
BEKR	Beckworth	32.37	322	*e*P	P	21 10 34.6	+0.7
	10nm,1.9s						
WDC	Whiskeytown Da	34.12	321	*e*P	P	21 10 50.5	+1.6
	25nm,1.9s						
LBNH	Lisbon	34.19	30	*e*P	P	21 10 50.1	+0.7
	21nm,1.3s						
COR	Corvallis	37.09	326	*e*P	P	21 11 15.8	+1.5
	52nm,1.3s						
GLI	Glacier Island	58.03	333	*e*P	P	21 13 57.9	+1.0
	6.6nm,0.8s						
KHLH	Kahului Airpor	58.14	285	*e*P	P	21 13 58.7	+0.5
	323nm,1.6s						
TRQA	Tornquist	62.17	151	*e*P	P	21 14 25.7	+0.2
	0.2nm,0.9s						
SACV	Santiago Islan	68.47	80	*e*P	P	21 15 07.0	+0.1
	226nm,1.9s						
SPIA	Saint Paul Isl	68.61	326	*e*P	P	21 15 07.4	+0.4
	145nm,1.2s						
JOHN	Johnston Islan	71.05	282	*e*P	P	21 15 24.0	+1.3
	143nm,1.1s						
PMOZ	Porto Moniz, M	71.37	60	*e*P	P	21 15 25.3	+0.7
MACI	Morro de la Ar	72.62	65	*e*P	P	21 15 32.2	0.0
	108nm,1.2s						
PFVI	Vila Bisbo	77.48	55	*e*P	P	21 16 00.6	+0.7
	45nm,1.1s						
NAO01	NORSAR Array S	83.61	28	*e*P	P	21 16 34.1	+1.8
	81nm,1.7s						
NC303	NORSAR Array S	83.68	28	*e*P	P	21 16 35.4	+2.7
	118nm,1.9s						
NC602	NORSAR Array S	83.94	28	*e*P	P	21 16 34.1	+0.1
	76nm,1.7s						
PMSA	Palmer Station	84.02	167	*e*P	P	21 16 35.6	+1.5
	31nm,1.4s						
WLF	Walferdange	84.92	40	*e*P	P	21 16 40.5	+1.3
	96nm,1.6s						
BFO	Black Forest	86.72	41	*e*P	P	21 16 49.6	+1.3
	4.9nm,1.2s						
FUORN	Ofenpass-Fuorn	88.56	42	*e*P	P	21 16 58.0	+0.6
	17nm,2.0s						
VLC	Villacollemand	89.56	44	*e*P	P	21 17 02.8	+0.9
	5.2nm,1.0s						

IDC 20 21:04:51.7±9.0**, 21°.09N**×**95°.25W, h0**^{km}**, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.5**/23**, mbtmp3.2**/4**, ML3.2**/1**, Error ellipse: s-maj=183.7km s-min=85.6km az=10.0, Gulf of Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	11.20	319	Pn	Pn	21 07 37.3	+4.1
	0.0nm,0.3s,baz=143,slow=14,SNR=5.9						
NVAR	Mina Array Bea	26.33	316	P	P	21 10 28.4	-1.2
	0.3nm,0.4s,baz=142,slow=8.9,SNR=3.6						
YKA	Yellowknife Ar	43.45	347	P	P	21 12 54.9	-1.4
	0.6nm,0.8s,baz=154,slow=7.7,SNR=3.6						
ILAR	Eielson Array	55.14	336	P	P	21 14 27.4	+1.8
	0.2nm,0.7s,baz=113,slow=7.8,SNR=1.4						

MEX 20 21:10:18.3±0.6**, 17°.01N**×**100°.16W, h26**^{km}±8^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.11	289	*i* P	Pb	21 10 21.8	-1.5
CAIG				*i* S	Sb	21 10 25.3	-1.2
MEIG	Mezcala	1.04	29	*i* P	Pn	21 10 34.9	-2.5
MEIG				*e*S	Sn	21 10 47.5	-3.6
ARIG	Puente Sto Nin	1.27	352	*e*P	Pn	21 10 38.2	-2.2
ARIG				*e*S	Sn	21 10 52.7	-4.1
PLIG	Platanillo	1.51	24	*i* P	Pn	21 10 41.4	-2.4
PLIG				*e*S	Sn	21 10 58.6	-4.0

IDC ***20*** *21:28:20.8±2.9, 41°.41S×174°.20E, h10^{km}±17^{km}, mb4.1/5, mb1 4.2/7, mb1mx4.0/22, mbtmp4.1/7, ML3.9/2, MS3.8/5, Ms1 3.8/5, ms1mx3.5/17, Error ellipse: s-maj=23.7km s-min=14.6km az=121.0*

BJI ***20*** *21:28:20.4±0.0, 41°.79S×174°.30E, h15^{km}, mb5.1/3, mB5.1/1, Ms5.0/1*

ISCJB ***20*** *21:28:21.4±0.4, 41°.81S±0°.02×174°.44E±0°.03, h26^{km}±3^{km}, mb5.0/24, Error ellipse: s-maj=5.4km s-min=2.4km az=42.7*

WEL ***20*** *21:28:21.1, 41°.6S±1°.0×174°.4E±0°.8, h16^{km}±2^{km}, M4.6/29, ML4.8/22, MLv4.6/29, Error ellipse: s-maj=0.0km s-min=0.0km az=147.3*

NEIC ***20*** *21:28:21.0±0.0, 41°.62S×174°.35E, h13^{km}, mb4.6/28, MW4.5, ML4.5(WEL), Moment Tensor Solution. s39 Moment tensor: Scale 10^{15}Nm; M_{rr}4.45; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-3.81; $M_{r\theta}$0.03; $M_{\theta\phi}$-3.62; $M_{\phi r}$2.71; Best double couple: $M_0$6.20000×10^{15} NP1:ϕ_s14.00000°, δ60.00000°, λ67.00000°. NP2:ϕ_s235.00000°, δ37.00000°, λ124.00000°. Principal axes: T 5.4700, Plg66.0000°, Azm240.0000°; N 1.1900, Plg20.0000°, Azm27.0000°; P -6.6600, Plg12.0000°, Azm121.0000°; After WEL.*

ISC 20 21:28:20.8±1.0**, 41°.64S**±0°.03×**174°.39E**±0°.02**, h16**^{km}±6^{km}**, n215, σ1^{s}65**/212**, mb5.2**/24**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	231	P	Pb	21 28 25.8	+0.1
CMWZ				S	Sg	21 28 29.2	+1.0
BSWZ	Blackbirch Sta	0.39	259	P	Pb	21 28 29.1	-0.3
TUWZ	Tuamarina	0.40	302	P	Pb	21 28 29.0	-0.5
TUWZ				S	Sb	21 28 34.9	-0.4
SNZO	South Karori	0.41	35	*e*Pg	Pb	21 28 30.1	+0.4
BHW	Baring Head	0.43	57	P	Pb	21 28 30.8	+0.8
TCW	Tory Channel	0.44	349	P	Pb	21 28 30.1	-0.1
PLWZ	Palliser	0.65	84	P	Pn	21 28 35.4	0.0
MSWZ	Moikau Station	0.68	71	P	Pn	21 28 35.7	-0.1
CAW	Cannon Point	0.74	44	P	Pn	21 28 36.2	-0.3
PAWZ	Paruwai Farm	0.82	72	P	Pn	21 28 38.2	+0.4
NNZ	Nelson	0.87	299	P	Pb	21 28 37.4	-0.1
DUWZ	D'Urville Isla	0.91	337	P	Pn	21 28 38.9	-0.1
MTW	Mount Morrison	0.96	60	P	Pn	21 28 40.7	+1.0
KHZ	Kahutara	1.00	219	*e*Pn	Pn	21 28 41.0	+0.8
KHZ	Kahutara	1.00	219	P	Pn	21 28 41.0	+0.8
TRWZ	Traveller	1.00	76	P	Pn	21 28 41.0	+0.8
OGWZ	Otaki Gorge	1.01	36	P	Pn	21 28 40.7	+0.3
THZ	Tophouse	1.12	263	*e*Pn	Pn	21 28 42.1	+0.2
THZ	Tophouse	1.12	263	P	Pn	21 28 42.5	+0.6
HOWZ	Holdsworth Sta	1.13	49	P	Pn	21 28 43.2	+1.3
TMWZ	Te Maipa	1.25	65	P	Pg	21 28 44.4	-0.5
MRZ	Mangatainoka R	1.33	43	P	Pg	21 28 46.1	-0.3
TIWZ	Tintock	1.42	53	P	Pg	21 28 47.6	-0.6
CPWZ	Castlepoint	1.55	62	P	Pg	21 28 51.0	+0.4
OHWZ	Ohakea	1.60	26	P	Pg	21 28 51.4	-0.1
PRWZ	Pori Road	1.61	48	P	Pb	21 28 50.0	-0.2
QRZ	Quartz Range	1.62	300	P	Pg	21 28 51.0	-1.1
POWZ	Post Office Ro	1.63	40	P	Pb	21 28 50.8	+0.4
GVZ	Greta Valley S	1.66	217	P	Pn	21 28 49.9	+0.6
BFZ	Birch Farm	1.70	56	*e*Pn	Pn	21 28 49.7	-0.1
BFZ	Birch Farm	1.70	56	P	Pn	21 28 50.2	+0.5
DVHZ	Dannevirke	1.90	46	P	Pn	21 28 53.2	+0.6
WAZ	Wanganui	1.94	14	P	Pg	21 28 57.5	-0.5
LTZ	Lake Taylor	1.94	233	*e*Pn	Pn	21 28 53.9	+0.6
LTZ	Lake Taylor	1.94	233	P	Pn	21 28 54.0	+0.8
ANWZ	Angora Road	1.97	54	P	Pn	21 28 54.3	+0.8
AMCZ	Amberley	2.00	219	P	Pn	21 28 54.3	+0.3
LREZ	Lake Rotokare	2.18	0	P	Pg	21 29 01.3	-1.3
PRHZ	Porangahau	2.19	52	P	Pn	21 28 56.3	-0.2
PNHZ	Pukenui	2.21	39	P	Pn	21 28 57.8	+1.0
WPHZ	Waipukurau	2.21	45	P	Pn	21 28 58.6	+1.7
NMEZ	Namu Road	2.26	350	P	Pg	21 29 03.0	-1.2
OKCZ	Okains Bay	2.30	205	P	Pn	21 28 57.8	-0.3
PREZ	Palmer Road	2.31	355	P	Pb	21 29 02.6	+0.5
CRLZ	Canterbury Las	2.33	213	*e*Pn	Pn	21 28 57.7	-0.8
CRLZ	Canterbury Las	2.33	213	P	Pn	21 28 57.7	-0.8
KHEZ	Kahui Hut	2.36	353	P	Pg	21 29 04.3	-1.9
MTVZ	Mangateitei	2.40	20	P	Pb	21 29 04.6	+0.9
NBEZ	Newall Road No	2.41	350	P	Pb	21 29 03.3	-0.4
OXZ	Oxford	2.42	225	*e*Pn	Pn	21 28 59.2	-0.6
OXZ	Oxford	2.42	225	P	Pn	21 28 59.5	-0.3
MQZ	McQueen's Vall	2.43	211	*e*Pn	Pn	21 28 58.4	-1.4
MQZ	McQueen's Vall	2.43	211	P	Pn	21 28 58.9	-0.9
INZ	Inchbonnie	2.44	243	P	Pn	21 29 01.1	+1.0
DREZ	Durham Road	2.46	357	P	Pb	21 29 04.9	+0.3
PKVZ	Pokaka	2.46	18	P	Pb	21 29 05.6	+0.9
MOVZ	Moawhango	2.46	25	P	Pb	21 29 03.6	-1.1
PKE	Pukeiti	2.46	353	P	Pb	21 29 05.4	+0.6
PXZ	Pawanui	2.47	50	P	Pn	21 29 00.4	0.0
AKCZ	Akaroa Harbour	2.48	206	P	Pn	21 29 00.2	-0.4
BHHZ	Black Hill Sta	2.50	31	P	Pb	21 29 04.7	-0.7
KRHZ	Kereru	2.50	38	P	Pn	21 29 01.6	+0.8
DRZ	Dome Shelter	2.53	21	P	Pg	21 29 07.4	-1.9
WHVZ	Whangaehu Hut	2.53	22	P	Pb	21 29 06.7	+0.8
VRZ	Vera Road	2.53	6	P	Pb	21 29 05.4	-0.4
FWVZ	Far West T-bar	2.54	21	P	Pb	21 29 07.3	+1.0
TUVZ	Tukino	2.56	23	P	Pb	21 29 06.2	-0.3
MHEZ	Mangahewa	2.56	359	P	Pg	21 29 10.5	+0.5
NGZ	Ngauruhoe	2.63	21	P	Pb	21 29 07.2	-0.5
KAHZ	Kahuranaki	2.64	46	P	Pn	21 29 03.1	+0.3
WTVZ	West Tongariro	2.69	20	P	Pb	21 29 09.5	+0.9
TWVZ	Taurewa	2.69	18	P	Pb	21 29 09.2	+0.5
KWHZ	Kaweka Forest	2.70	36	P	Pb	21 29 10.3	+1.5
KRVZ	Karewarewa	2.72	21	P	Pb	21 29 08.5	-0.6
MCHZ	McNeill Hill	2.81	39	P	Pn	21 29 07.5	+2.4
KATZ	Kakaramea	2.84	21	P	Pg	21 29 13.0	-2.4
CKHZ	Cape Kidnapper	2.85	47	P	Pb	21 29 11.1	-0.1
RITZ	Rihia Road	2.89	23	P	Pb	21 29 13.4	+1.4
BKZ	Black Stump Fm	2.95	34	*e*Pn	Pn	21 29 07.5	+0.5
BKZ	Black Stump Fm	2.95	34	P	Pn	21 29 09.1	+2.0
RATZ	Rangitukua	2.97	21	P	Pb	21 29 14.5	+1.2
HATZ	Hinemaiaia	3.04	26	P	Pb	21 29 16.1	+1.5
WVZ	Waitaha Valley	3.06	241	P	Pn	21 29 09.5	+0.9
ARHZ	Aropaoanui	3.10	41	P	Pn	21 29 11.0	+2.0
WATZ	Wairara	3.11	20	P	Pb	21 29 15.6	-0.1
HIZ	Hauiti	3.15	7	*e*Pn	Pn	21 29 09.6	-0.1
HIZ	Hauiti	3.15	7	P	Pb	21 29 13.9	-2.5
MRHZ	Matea Rd	3.21	30	P	Pn	21 29 10.9	+0.3
RPZ	Rata Peaks	3.22	229	Pn	Pn	21 29 10.3	-0.4
	20nm,0.3s,baz=72,slow=3.5,SNR=31						
RPZ				Pg	Pb	21 29 19.2	+1.6
	80nm,0.3s,baz=19,slow=1.8,SNR=51						
RPZ				Sn	Sn	21 29 48.6	0.0
	23nm,0.3s,baz=143,slow=20,SNR=7.4						
RPZ				Lg	Lg	21 30 05.7	
	15nm,0.3s,baz=102,slow=19,SNR=2.5						
RPZ				LR	LR	21 30 57.6	
	comp=Z,2μm,18.6s,baz=46,slow=48						
RPZ	Rata Peaks	3.22	229	P	Pn	21 29 10.7	0.0
MTHZ	Maungataniwha	3.36	35	P	Pn	21 29 16.0	+3.4
WHHZ	Waihua	3.36	41	P	Pb	21 29 16.6	-3.3
RAHZ	Arahi	3.41	38	P	Pn	21 29 16.3	+2.9
ALRZ	Allen Road	3.42	27	P	Pb	21 29 21.0	-0.1
TLZ	Tolley Road	3.42	15	P	Pb	21 29 19.2	-1.9
PRRZ	Plateau Road	3.50	27	P	Pb	21 29 19.3	-3.0
GRRZ	Galatos Road	3.54	22	P	Pb	21 29 21.0	-2.2
SNGZ	Shannon Statio	3.64	39	P	Pn	21 29 17.4	+0.9
MUGZ	Murupara	3.65	31	P	Pn	21 29 19.3	+2.7
MHGZ	Mahia Peninsul	3.66	48	P	Pn	21 29 16.0	-0.7
RRRZ	Republican Roa	3.68	27	P	Pn	21 29 20.4	+3.4
TARZ	Mount Tarawera	3.77	26	P	Pn	21 29 20.2	+1.9
PRGZ	Paritu Road	3.81	46	P	Pn	21 29 21.2	+2.4
OMRZ	Omania	3.85	24	P	Pn	21 29 23.6	+4.3
FOZ	Fox Glacier	3.87	239	*e*Pn	Pn	21 29 19.7	0.0
FOZ	Fox Glacier	3.87	239	P	Pn	21 29 20.6	+1.0
RAGZ	Rawiri	3.91	37	P	Pn	21 29 21.8	+1.6
RIGZ	Rimuhau	3.91	42	P	Pn	21 29 21.4	+1.2
URZ	Urewera	3.97	33	Pn	Pn	21 29 20.9	-0.1
	5.3nm,0.3s,baz=193,slow=5.5,SNR=14						
URZ				Pg	Pb	21 29 31.4	+1.0
	21nm,0.3s,baz=227,slow=12,SNR=25						
URZ				Sn	Sn	21 30 07.3	0.0
	16nm,0.3s,baz=244,slow=21,SNR=3.2						
URZ				Lg	Lg	21 30 29.5	
	6.8nm,0.3s,baz=299,slow=19,SNR=2.7						
URZ	Urewera	3.97	33	*e*Pn	Pn	21 29 22.5	+1.5
URZ	Urewera	3.97	33	P	Pn	21 29 22.7	+1.7
TOZ	Tahuroa Road	4.00	13	P	Pb	21 29 26.4	-4.5
MARZ	Manawahe	4.05	26	P	Pn	21 29 26.6	+4.4
MWZ	Matawai	4.09	37	P	Pn	21 29 22.8	+0.1
LBZ	Lake Benmore	4.13	227	P	Pn	21 29 24.2	+1.0
TKGZ	Te Karaka	4.16	41	P	Pn	21 29 25.5	+1.9
WHRZ	Whale Island	4.27	29	P	Pn	21 29 29.7	+4.5
ODZ	Otahua Downs	4.36	218	*e*Pn	Pn	21 29 26.1	-0.3
ODZ	Otahua Downs	4.36	218	P	Pn	21 29 26.2	-0.2
TWGZ	Tauwhareparae	4.43	40	P	Pn	21 29 29.0	+1.6
RUGZ	Raukumara Rang	4.46	36	P	Pn	21 29 29.2	+1.4
KBAZ	Karaka Road Bo	4.56	5	P	Pn	21 29 32.0	+2.9
MKAZ	Moumakai	4.57	8	P	Pn	21 29 32.5	+3.2
AWAZ	Awhitu Peninsu	4.58	3	P	Pn	21 29 33.2	+3.9
PUZ	Puketiti	4.64	41	P	Pn	21 29 33.3	+3.0
HAZ	Te Kaha	4.68	35	P	Pn	21 29 31.7	+1.0
ETAZ	East Tamaki Re	4.70	5	P	Pn	21 29 35.8	+4.7
PKGZ	Pakihiroa	4.70	38	P	Pn	21 29 33.0	+1.8
WTAZ	Waiatarua	4.71	2	P	Pn	21 29 36.5	+5.4
JCZ	Jackson Bay	4.78	238	P	Pn	21 29 33.2	+0.9
RVAZ	Riverhead Bore	4.87	2	P	Pb	21 29 40.6	-5.1
WIAZ	Waiheke Island	4.88	7	P	Pn	21 29 37.3	+3.8
MBAZ	Motutapu North	4.88	5	P	Pn	21 29 38.1	+4.6
WMGZ	Waiomatatini S	4.92	40	P	Pn	21 29 34.8	+0.8
KUZ	Kuaotunu	5.00	12	P	Pn	21 29 40.1	+4.9
ABAZ	Army Bay	5.05	4	P	Pn	21 29 40.3	+4.5
HHSZ	Highcliff Hill	5.05	212	P	Pn	21 29 35.4	-0.5
WKZ	Wanaka	5.05	229	*e*Pn	Pn	21 29 38.5	+2.6
WKZ	Wanaka	5.05	229	P	Pn	21 29 36.2	+0.2
MXZ	Matakaoa Point	5.07	38	*e*Pn	Pn	21 29 36.7	+0.5
MXZ	Matakaoa Point	5.07	38	P	Pn	21 29 38.6	+2.4
GRZ	Great Barrier	5.45	9	P	Pn	21 29 47.5	+6.2
TUZ	Tuapeka	5.52	217	P	Pn	21 29 43.1	+0.9
MSZ	Milford Sound	5.62	235	P	Pn	21 29 50.2	+6.6
WCZ	Waipu Caves	5.70	360	P	Pn	21 29 49.1	+4.4
MLZ	Mavora Lakes	5.89	229	*e*Pn	Pn	21 29 49.0	+1.6
SYZ	Scrubby Hill	6.18	216	P	Pn	21 29 52.4	+1.1
WHZ	Wether Hill Ro	6.31	226	*e*Pn	Pn	21 29 52.7	-0.4
OUZ	Omahuta	6.44	354	*e*Pn	Pn	21 29 56.0	+1.0
OUZ	Omahuta	6.44	354	P	Pn	21 30 01.4	+6.4
DCZ	Deep Cove	6.50	232	*e*Pn	Pn	21 29 55.9	+0.1
APZ	The Paps	6.93	219	P	Pn	21 30 03.5	+1.8
CTZ	Chatham Island	6.95	111	P	Pn	21 30 02.9	+1.0
LHI	Lord Howe Isla	15.90	305	*e*Pn	Pn	21 32 04.5	+0.6
	474nm,1.8s						
MCQ	Macquarie Isla	16.44	213	*e*Pn	Pn	21 32 10.6	+0.1
	294nm,1.4s						
PINNC	Pines Island,	19.85	341	*e*P	P	21 32 50.4	-0.6
	157nm,1.3s						
DZM	Mont Dzumac	20.63	339	LR	LR	21 40 10.6	
	comp=Z,151nm,18.2s,baz=67,slow=35						
DZM	Mont Dzumac	20.63	339	*e*P	P	21 33 00.3	+0.7
	28nm,1.2s						
STKA	Stephens Creek	27.88	280	LR	LR	21 43 55.8	
	comp=Z,123nm,19.1s,baz=198,slow=34						
VNDA	Vanda	36.36	185	P	P	21 35 26.3	+2.7
	1.4nm,1.0s,baz=5.6,slow=10,SNR=2.7						
VNDA	Vanda	36.36	185	*e*P	P	21 35 21.5	-2.1
VNDA				*e*pP	P	21 35 21.6	-2.0
SBA	Scott Base	36.46	183	*e*P	P	21 35 22.5	-1.9
	7.4nm,1.1s						
ASAR	Alice Springs	38.10	285	P	P	21 35 38.5	-0.5
	1.0nm,0.4s,baz=125,slow=6.8,SNR=27						
ASAR				LR	LR	21 51 13.6	
	comp=Z,92nm,18.1s,baz=208,slow=36						
FORT	Forrest	38.51	271	*e*P	P	21 35 42.7	+0.3
	70nm,1.3s						
PPTF	Pamatai, Papee	39.02	63	*e*P	P	21 35 46.6	-0.2
	383nm,1.6s						
PPT	Papeete	39.03	63	*e*P	P	21 35 46.8	0.0
WB2	Warramunga Arr	40.16	290	*e*P	P	21 35 55.8	-0.4
	6.7nm,0.8s						
WRAB	Tennant Creek	40.16	290	*e*P	P	21 35 55.1	-1.1
	14nm,0.9s						
WR1	Warramunga Arr	40.16	290	*e*P	P	21 35 55.6	-0.7
WRA	Warramunga Arr	40.17	290	P	P	21 35 55.6	-0.7
	3.2nm,0.6s,baz=134,slow=7.2,SNR=20						
CASY	Casey	42.35	213	*e*P	P	21 36 13.1	-0.6
	22nm,1.8s						
NWAO	Narrogin (SRO)	45.57	262	*e*P	P	21 36 39.8	-0.2
	50nm,1.4s						
MTN	Manton Dam	47.27	295	*e*P	P	21 36 53.9	+0.5
	21nm,1.3s						
MORW	Morawa	48.38	266	*e*P	P	21 37 01.4	-0.6
	54nm,1.6s						
QSPA	South Pole Qui	48.49	180	P	P	21 37 05.7	+3.2
	6.3nm,0.9s,baz=3.2,slow=3.3,SNR=14						
QSPA	South Pole Qui	48.49	180	*e*P	P	21 37 03.0	+0.5
	8.9nm,1.0s						
XMAS	Kiritimati	50.44	38	*e*P	P	21 37 17.5	-0.2
	94nm,0.9s						
JAGI	Jajag, Banyuwa	62.30	284	*e*P	P	21 38 41.9	-0.5
	104nm,1.4s						
RPN	Rapa Nui	62.69	103	*e*P	P	21 38 44.0	-0.9
	608nm,1.8s						
SARN	Sarigan	63.80	329	*e*P	P	21 38 51.3	-0.9
	17nm,0.9s						
PMSA	Palmer Station	64.53	156	*e*P	P	21 38 55.9	-0.5

	48nm,1.6s						
HLP	Hilina Pali	66.81	31	eP	P	21 39 10.6	-1.1
	289nm,1.2s						
NPOC	North of Pu‘u	66.97	31	eP	P	21 39 12.6	-0.2
	455nm,0.5s						
SNAA	Sanae	66.98	181	P	PcP	21 39 40.0	-0.6
SNAA	Sanae	66.98	181	eP	P	21 39 13.0	+0.8
	4.5nm,0.6s						
POHA	Pohakuloa	67.14	31	eP	P	21 39 12.8	-1.2
	213nm,1.4s						
VNA3	Neumayer Olymp	67.39	179	P	PcP	21 39 35.6	-6.6
HON	Honolulu	67.67	28	eP	P	21 39 16.4	-0.6
	119nm,0.8s						
OPA	Opana	68.00	28	eP	P	21 39 18.9	-0.3
VNA1	Neumayer--Stat	68.00	179	P	P	21 39 28.1	+10
GSI	Gunungsitoli	81.03	280	eP	P	21 40 35.2	0.0
	56nm,1.9s						
NJ2	Nanjing	89.40	316	eP	P	21 41 19.0	+2.5
CM31	Chiang Mai Arr	91.69	293	eP	P	21 41 27.9	+0.4
	22nm,1.8s						
CMAR	Chiang Mai Arr	91.69	293	P	P	21 41 28.0	+0.4
	0.6nm,0.7s,baz=116,slow=1.9,SNR=5.6						
CMAR				LR	LR	22 26 48.5	
	comp=Z,59nm,18.1s,baz=12,slow=38						
KMI	Kunming	93.76	300	P	P	21 41 41.3	+4.1
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
CD2	Chengdu	97.17	305	eP	Pdif	21 41 53.0	+0.5
HHC	Hu-ho-hao-te	99.89	317	P	Pdif	21 42 06.4	+2.0
HHC				pmax	pmax		
	comp=Z,15nm,4.5s						
LZH	Lanzhou	100.72	309	eP	Pdif	21 42 12.8	+4.5
LZH				pP	sP	21 42 16.8	+1.0
LZH				sP	sPdif	21 42 19.5	+3.8
CAST	Castle Rocks	108.07	15	ePdif	Pdif	21 42 39.3	-0.8
WMQ	Urumqi	115.18	307	ePKP	PKPdf	21 47 00.9	0.0
WMQ				LR	LR		
	comp=E,280nm,27.7s						
YKA	Yellowknife Ar	118.23	30	PKP	PKiKP	21 47 06.5	+0.4
	0.5nm,0.6s,baz=243,slow=1.6,SNR=5.0						
YKB5	Yellowknife Ar	118.23	30	ePKPdf	PKiKP	21 47 06.5	+0.4
MK32	Makanchi Array	119.99	308	ePKPdf	PKPdf	21 47 08.7	-1.4
MKAR	Makanchi Array	119.99	308	PKP	PKPdf	21 47 08.7	-1.4
	0.2nm,0.5s,baz=146,slow=0.5,SNR=3.3						
KSH	Kashi	120.29	298	ePKP	PKiKP	21 47 14.6	+3.5
KSH				PKS	PKSdf	21 50 48.6	+0.9
DBIC	Dimbokro	145.17	181	PKPbc	PKPdf	21 47 58.5	+0.6
	4.7nm,0.7s,baz=180,slow=4.0,SNR=4.8						
DBIC	Dimbokro	145.17	181	ePKPbc	PKPbc	21 47 54.6	-2.9
ARA0	ARCESS Array S	147.71	340	ePKPbc	PKPbc	21 48 02.5	-0.9
ARCES	ARCESS Array B	147.71	340	PKPbc	PKPbc	21 48 02.5	-0.9
	3.2nm,0.8s,baz=348,slow=1.7,SNR=8.0						
BR101	Keskin Array S	150.35	280	ePKPbc	PKiKP	21 48 12.2	+0.2
BRTR	Keskin Array B	150.35	280	PKPbc	PKiKP	21 48 12.2	+0.2
	0.5nm,0.6s,baz=122,slow=4.0,SNR=4.3						
TORD	Torodi Ar. Bea	150.91	195	PKPbc	PKiKP	21 48 13.9	+0.3
	3.0nm,0.9s,baz=157,slow=2.9,SNR=15						
TOA1	Torodi Ar. Sit	150.91	195	ePKPbc	PKiKP	21 48 13.9	+0.3
FIA0	FINESS Array S	152.50	327	ePKPbc	PKPbc	21 48 14.5	-0.7
FINES	FINESS Array B	152.50	327	PKPbc	PKPbc	21 48 14.5	-0.7
	2.2nm,0.7s,baz=122,slow=2.9,SNR=9.6						

ISCJB ***20*** *21:29:16.1±0.7, 37°.04N±0°.04×36°.47E±0°.04, h5^{km}±6^{km}, Error ellipse: s-maj=6.2km s-min=5.0km az=11.1*
DDA ***20*** *21:29:16.5, 37°.08N×36°.49E, h7^{km}±4^{km}, ML2.6*
ISK ***20*** *21:29:16.0, 37°.12N×36°.46E, h13^{km}, ML1.9/5*
ISC 20 21:29:16.2±1.0, **37°.07N**±0°.04×**36°.48E**±0°.03, **h14**^{km}±8^{km}, **n13**, σ**0^{s}.46**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMA	Osmaniye	0.19	52	i P	Pg	21 29 20.7	0.0
KAMA				i S	Sg	21 29 23.6	-0.1
KAMA				IAML_P			
	comp=Z,4µm,0.1s						
HCB	Kahramanmara	0.44	51	i P	Pg	21 29 25.4	+0.4
HCB				IAML_P			
	comp=Z,940nm,0.1s						
ANDN	Andirin	0.52	348	i P	Pb	21 29 27.5	+0.1
ANDN				i S	Sb	21 29 34.4	-0.5
ANDN				IAML_P			
	comp=Z,580nm,0.1s						
KMRS	Kahramanmaras	0.55	37	PG	Pg	21 29 26.9	-0.2
KMRS				SG	Sg	21 29 34.4	-0.1
KUZU	Kuzuini	0.56	121	i P	Pg	21 29 27.5	+0.3
KUZU				i S	Sg	21 29 33.8	-0.9
CEYT	Ceyhan	0.59	265	PG	Pg	21 29 27.8	0.0
GAZ	Gaziantep	0.59	80	PG	Pg	21 29 28.0	+0.1
GAZ				SG	Sb	21 29 37.3	+0.5
YURE	YUREGIR	0.72	251	PG	Pb	21 29 30.6	0.0
GZT	Gaziantep	0.91	71	i P	Pn	21 29 35.0	+0.1
GZT				i S	Sn	21 29 47.2	-0.7
SAIM	ADANA	0.96	341	i P	Pn	21 29 36.3	+0.8
SAIM				i S	Sn	21 29 48.6	-0.4
SAIM				IAML_P			
	comp=Z,785nm,0.2s						
MERS	Mersin	1.58	263	PN	Pn	21 29 44.3	+0.3
DARE	Darende-Malaty	1.70	28	PN	Pn	21 29 45.6	0.0
URFA	Urfa	1.91	78	PN	Pn	21 29 49.1	+0.7

ISCJB ***20*** *22:13:18.3±0.2, 36°.59N±0°.02×71°.35E±0°.02, h227^{km}±2^{km}, mb4.5/143, Error ellipse: s-maj=3.1km s-min=2.5km az=140.8*
MOS ***20*** *22:13:18.6±1.0, 36°.61N×71°.40E, h231^{km}, mb4.5/28, Error ellipse: s-maj=5.5km s-min=3.8km az=106.1*
BJI ***20*** *22:13:18.3±0.0, 36°.69N×71°.28E, h221^{km}, mb4.6/35, mB4.6/22*
NEIC ***20*** *22:13:19.9±2.2, 36°.59N×71°.32E, h232^{km}±6^{km}, mb4.5/90, Error ellipse: s-maj=9.5km s-min=8.2km az=85.0*
NNC ***20*** *22:13:19.2±3.3, 36°.77N×71°.05E, h198^{km}±49^{km}, mb4.3, mpv5.7, Error ellipse: s-maj=35.2km s-min=15.4km az=164.0*
IDC ***20*** *22:13:20.4±0.4, 36°.62N×71°.39E, h234^{km}±3^{km}, mb4.0/33, mb1 4.2/40, mb1mx4.1/47, mbtmp4.7/40, Error ellipse: s-maj=9.0km s-min=6.5km az=7.0*
ISC 20 22:13:19.2±0.3, **36°.60N**±0°.03×**71°.36E**±0°.03, **h227**^{km}±2^{km}, **h227**^{km}**:pP-P**, **n410**, σ**1^{s}.60**/478, **mb4.5**/144, **40C-24D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.53	341	ePn	Pn	22 14 05.3	+0.1
GAR	Garm	2.53	341	ePN	Pn	22 14 05.4	+0.1
CHGR	Chuyangaron	2.70	320	eP	Pn	22 14 21.7	+15
KBL	Kabul	2.79	223	ePn	Pn	22 14 08.1	-0.2
KBL				eS	S	22 14 45.0	-1.6
KBL	Kabul	2.79	223	ePN	Pn	22 14 08.1	-0.2
KBL				eS	S	22 14 45.0	-1.6
CEP	Cherat	2.81	171	P	Pn	22 14 08.8	+0.4
CEP				S	S	22 14 46.0	-0.8
CHCP	Chirah Chowk	3.32	152	P	Pn	22 14 15.0	+0.9
NIL	Nilore	3.33	152	ePn	Pn	22 14 15.1	+1.0
NIL	Nilore	3.33	152	ePN	Pn	22 14 15.1	+1.0
BTK	Batken	3.48	353	ePn	Pn	22 14 17.0	+1.2
BTK	Batken	3.48	353	ePN	Pn	22 14 17.0	+1.2
THW	Thamme Wali	3.81	175	P	Pn	22 14 19.9	0.0
KSH	Kashi	4.66	50	P	Pn	22 14 25.6	-4.5
KSH				sP		22 15 07.9	
KSH				S	S	22 15 15.1	-11
SARP	Sargodha	4.79	167	P	Pn	22 14 31.3	-0.5
ARSB	Arslanbob	4.88	14	ePn	Pn	22 14 32.8	-0.1
TAS	Tashkent	4.99	342	PN	Pn	22 14 33.7	-0.4
DHRM	DHARAMSHALA	5.96	135	eP	Pn	22 14 46.6	0.0
DHRM				eS	S	22 15 53.0	-3.0
NRN	Naryn	6.03	35	ePn	Pn	22 14 46.1	-1.3
NRN	Naryn	6.03	35	ePN	Pn	22 14 46.2	-1.3
UCH	Uchtor	6.12	22	P	Pn	22 14 49.0	+0.2
	SNR=761						
KZA	Kyzart	6.24	28	P	Pn	22 14 49.8	-0.5
	SNR=447						
EKS2	Erkin-Say	6.33	16	P	Pn	22 14 51.3	+0.2
	SNR=545						
AAK	Ala-Archa	6.49	21	P	Pn	22 14 53.7	+0.5
	117nm,0.3s,baz=221,slow=8.9,SNR=298						
AAK				S	S	22 16 05.7	-2.4
	67nm,0.3s,baz=311,slow=19,SNR=47						
AAK	Ala-Archa	6.49	21	⇑P	Pn	22 14 53.6	+0.4
	126nm,0.4s						
AAK				⇑S	S	22 16 05.3	-2.9
	2µm,0.8s						
AAK	Ala-Archa	6.49	21	d iPN	Pn	22 14 53.4	+0.2
AAK				pmax	pmax		
	comp=Z,116nm,0.5s						
AAK	Ala-Archa	6.49	21	P	Pn	22 14 53.8	+0.5
	SNR=234						
KK31	Karatay Array	6.53	355	ePn	Pn	22 14 53.2	-0.3
KK31	Karatay Array	6.53	355	⇓P	Pn	22 14 53.1	-0.3
	comp=Z,263nm,0.6s,baz=175,slow=13,SNR=1916						
KK31				⇓S	S	22 16 04.0	-4.7
	comp=Z,756nm,0.3s,baz=177,slow=23						
KK31	Karatay Array	6.53	355	ePN	Pn	22 14 53.2	-0.3
KKAR	Karatay Array	6.53	355	ePn	Pn	22 14 53.2	-0.3
KKAR	Karatay Array	6.53	355	ePN	Pn	22 14 53.2	-0.3
KBK	Karagaybulak	6.65	23	P	Pn	22 14 55.9	+0.6
	SNR=103						
BHK	Bhakra	6.66	139	eP	Pn	22 14 53.6	-1.8
BHK				eS	S	22 16 05.8	-6.2
FRU1	Bishkek	6.69	21	ePn	Pn	22 14 56.4	+0.7
FRU1	Bishkek	6.69	21	ePN	Pn	22 14 56.4	+0.7
ULHL	Ulahol	6.78	32	P	Pn	22 14 56.7	-0.3
	SNR=57						
BOOM	Boomskoye usch	6.86	30	ePn	Pn	22 14 58.1	+0.2
BOOM	Boomskoye usch	6.86	30	ePN	Pn	22 14 58.1	+0.2
CHMS	Chumysh	6.90	21	P	Pn	22 14 58.2	-0.1
	SNR=139						
USP	Ospenovka	7.08	19	P	Pn	22 14 59.9	-0.7
	SNR=213						
TKM2	Tokmak 2	7.10	26	⇑P	Pn	22 15 01.3	+0.2
	comp=Z,250nm,0.6s						
TKM2				⇓S	S	22 16 19.4	-3.0
	comp=Z,1µm,1.1s						
TKM2	Tokmak 2	7.10	26	i PN	Pn	22 15 01.2	+0.2
TKM2				pmax	pmax		
	comp=Z,250nm,0.5s						
TKM2	Tokmak 2	7.10	26	P	Pn	22 15 01.3	+0.2
	SNR=335						
KDJ	Kajisay	7.12	37	ePn	Pn	22 15 01.0	-0.4
KDJ	Kajisay	7.12	37	ePN	Pn	22 15 01.0	-0.4
SMLA	Simla	7.29	137	eP	Pn	22 15 03.1	-0.2
SMLA				eS	S	22 16 21.3	-5.2
AAA	Alma-Ata	7.86	31	ePN	Pn	22 15 11.5	+0.9
AAA				pmax	pmax		
	comp=Z,412nm,0.5s						
KNDC	Almaty	7.88	31	⇑P	Pn	22 15 11.7	+0.8
	comp=Z,450nm,0.5s						
PRZ	Przheval'sk	8.00	41	ePn	Pn	22 15 13.1	+0.5
PRZ	Przheval'sk	8.00	41	ePN	Pn	22 15 13.1	+0.5
DDI	Dehra Dun	8.39	136	eP	Pn	22 15 17.7	+0.1
DDI				eS	S	22 16 46.6	-6.0
DDI				IAML		22 16 52.5	
	comp=N,793nm,0.4s						
DDI				IAML		22 16 52.7	
	comp=E,625nm,0.8s						
JOSI	Joshimath	9.11	129	eP	Pn	22 15 26.6	-0.4
JOSI				eS	S	22 17 01.6	-8.2
JOSI				IAML		22 17 07.1	
	comp=E,676nm,0.9s						
JOSI				IAML		22 17 09.6	
	comp=N,963nm,0.7s						
PDGK	Podgornoye	9.16	40	⇓P	Pn	22 15 26.0	-1.5
	comp=N,48nm,0.7s						
PDGK	Podgornoye	9.16	40	i P	Pn	22 15 25.9	-1.5
PDGK				pmax	pmax		
	comp=Z,48nm,0.7s						
NDI	New Delhi	9.31	146	eP	Pn	22 15 29.5	+0.2
NDI				eS	S	22 17 06.0	-8.1
GEYT	Alibeck	10.64	281	P	Pn	22 15 43.9	-2.3
	comp=Z,3.3nm,0.3s,baz=111,slow=11,SNR=40						
GEYT				S	S	22 17 38.3	-7.1
	comp=Z,3.9nm,0.3s,baz=358,slow=25,SNR=4.9						
GYA0B	ALIBECK ARRAY	10.64	281	ePn	Pn	22 15 44.3	-1.9
GYA0B	ALIBECK ARRAY	10.64	281	⇑P	Pn	22 15 42.4	-3.9
GYA0B				⇑S	S	22 17 36.6	-8.8
OTUK	Ortayu	11.66	3	⇑P	Pn	22 15 57.9	-1.1
	comp=Z,65nm,0.8s						
OTUK	Ortayu	11.66	3	i P	Pn	22 15 57.9	-1.1
OTUK				pmax	pmax		
	comp=Z,65nm,0.7s						
MAKZ	Makanchi	12.90	35	ePn	Pn	22 16 13.8	-0.7
MAKZ	Makanchi	12.90	35	eP	Pn	22 16 13.8	-0.7
MK31	Makanchi Array	13.04	35	ePn	Pn	22 16 15.6	-0.6
MK31	Makanchi Array	13.04	35	P	Pn	22 16 15.4	-0.8
	comp=Z,11nm,0.3s,baz=208,slow=11,SNR=659						
MK31	Makanchi Array	13.04	35	eP	Pn	22 16 15.6	-0.6
MKAR	Makanchi Array	13.04	35	P	Pn	22 16 15.3	-0.9
	comp=Z,7.7nm,0.3s,baz=214,slow=12,SNR=260						
DANN	Dangsing	13.30	125	eP	Pn	22 16 20.0	+0.1
	comp=Z,191nm,0.4s						
BHJ	Bhuj	13.38	187	eP	Pn	22 16 20.7	0.0
GKN	Gorkha	14.11	124	eP	Pn	22 16 29.8	0.0
	comp=Z,126nm,0.2s						
BHPL	Bhopal	14.31	157	eP	Pn	22 16 31.3	-0.8
WMQ	Urumqi	14.40	55	ePn	Pn	22 16 32.3	-0.7
WMQ	Urumqi	14.40	55	eP	P	22 16 33.4	-0.3
WMQ				sP	Pn	22 17 31.8	+59
WMQ				S	S	22 19 10.4	-1.8
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,40nm,3.7s						
WMQ				LR	LR		
	comp=Z,110nm,5.3s						
WMQ	Urumqi	14.40	55	eP	Pn	22 16 32.3	-0.7
KKN	Kakani	14.68	123	eP	Pn	22 16 36.4	-0.4
	comp=Z,267nm,0.6s						
DMN	Daman	14.69	124	eP	Pn	22 16 36.5	-0.3
	comp=Z,91nm,0.3s						
PKIN	Phulchoki	14.90	123	eP	Pn	22 16 39.1	-0.4
	comp=Z,200nm,0.5s						
PKI	Pulchoki	14.91	123	eP	Pn	22 16 39.1	-0.6
	comp=Z,258nm,0.6s						
KURBB	Kurchatov Arra	14.93	18	P	Pn	22 16 38.2	-1.1
	comp=Z,1.3nm,0.3s,baz=205,slow=11,SNR=68						
KURBB				S	S	22 19 18.2	-6.1
	baz=202,slow=21,SNR=5.1						
KURBB	Kurchatov Arra	14.93	18	⇑P	Pn	22 16 37.7	-1.6
	comp=Z,20nm,0.7s						
KURK	Kurchatov	15.04	18	eP	Pn	22 16 39.6	-1.0
	comp=Z,18nm,0.8s						
KURK	Kurchatov	15.04	18	deP	Pn	22 16 39.5	-1.1
KURK				pmax	pmax		
	comp=Z,17nm,0.7s						
AB31	Akbulak array	15.14	330	⇓P	P	22 16 41.1	-0.7
	comp=Z,18nm,0.4s						
AB31	Akbulak array	15.14	330	i P	P	22 16 41.1	-0.7
AB31				pmax	pmax		
	comp=Z,18nm,0.4s						
ABKAR	Akbulak array	15.14	330	eP	P	22 16 40.8	-1.0
	comp=Z,56nm,0.7s						
JIRN	Jiri	15.39	121	eP	Pn	22 16 45.6	+0.2
	comp=Z,375nm,0.5s						
BVAR	Borovoye Array	16.44	358	P	Pn	22 16 57.0	-0.3
	comp=Z,4.1nm,0.3s,baz=158,slow=9.7,SNR=51						
BVAR				S	S	22 19 54.2	-2.2
	comp=Z,1.5nm,0.3s,baz=178,slow=20,SNR=6.3						
BRVK	Borovoye	16.47	358	ePn	Pn	22 16 58.3	+0.6
	comp=Z,19nm,0.6s						
BRVK	Borovoye	16.47	358	⇓P	Pn	22 16 57.9	+0.2
	comp=Z,13nm,0.5s						
BRVK	Borovoye	16.47	358	deP	Pn	22 16 57.9	+0.2
SHME	Shamm	16.71	235	P	P	22 16 59.1	-0.2
NGP	Nagpur	16.79	154	eP	Pn	22 17 01.1	-0.7
NGP				ex	x	22 20 01.4	
AKTO	Aktyubinsk	16.84	329	P	Pn	22 17 01.6	-0.4
	comp=Z,17nm,0.3s,baz=139,slow=9.1,SNR=200						
AKTO				S	S	22 20 03.5	-0.9
	comp=Z,0.9nm,0.3s,baz=282,slow=18,SNR=6.5						
MDH	Madha	17.12	233	P	P	22 17 02.3	-1.5
MSFE	Esma-Masafi	17.17	234	P	P	22 17 04.8	+0.5
WSAR	Wadi Sarin	17.27	223	P	P	22 17 06.2	+0.8
	comp=Z,0.7nm,0.3s,baz=56,slow=10,SNR=8.7						
GTK	Tadong	17.29	117	eP	Pn	22 17 07.9	+0.2
UOSS	Minazif	17.43	232	eP	P	22 17 06.7	-0.5
	comp=Z,25nm,0.8s						
UOSS	Minazif	17.43	232	P	P	22 17 07.2	+0.1
HATD	Hatta, Dubai	17.56	232	P	P	22 17 07.6	-1.0
NAZ	Nazwa, Dubai	17.75	234	P	P	22 17 10.5	-0.1
BOK	Bokaro	17.87	132	eP	P	22 17 12.8	+0.8
LSA	Lhasa	17.93	107	eP	Pn	22 17 15.5	0.0
	comp=Z,38nm,0.7s						
LSA	Lhasa	17.93	107	P	Pn	22 17 16.4	+0.9
LSA	Lhasa	17.93	107	eP	Pn	22 17 15.5	0.0
LSA				pmax	pmax		
	comp=Z,38nm,0.7s						
FAQ	Al Faqa, Dubai	17.96	233	P	P	22 17 12.6	-0.4
POO	Poona	18.14	172	eP	P	22 17 15.5	+0.6
ASUD	Al Ashush, Dub	18.22	234	i P	P	22 17 16.0	+0.3
	SNR=8.2						
ALNE	Al Ain	18.35	231	i P	P	22 17 17.1	-0.1
	SNR=11						
AJN	Ajban	18.48	234	P	P	22 17 18.4	-0.2
AKT	Akhty	18.97	292	⇓iP	P	22 17 24.6	+0.8
AKT				eS	S	22 20 51.9	+4.9
AKT				pmax	pmax		
	comp=Z,32nm,0.6s						
AKT				smax	smax		
	comp=N,13nm,0.7s						
AKT				smax	smax		
	comp=E,18nm,0.8s						
MAK	Makhachkala	19.37	296	eP	P	22 17 27.5	-0.4
MAK				eS	S	22 20 54.9	+0.3
MAK				pmax	pmax		
	comp=Z,50nm,1.3s						
TAWA	Tawang	19.53	112	eP	P	22 17 30.3	+0.1
TURI	Tura	19.59	119	eP	P	22 17 30.8	+0.3
ZALV	Zalesovo Beam	19.70	24	P	P	22 17 31.6	+0.3
	comp=Z,6.9nm,0.3s,baz=220,slow=11,SNR=56						
ZALV				sP	sP	22 18 40.0	+1.0
	comp=Z,0.2nm,0.3s,baz=225,slow=9.1,SNR=2.0						
ZAA1	Zalesovo Array	19.70	24	esP	sP	22 18 40.0	+0.9
HYB	Hyderabad	20.14	160	i P	P	22 17 37.0	+0.6
	comp=Z,100nm,1.0s						
HYB	Hyderabad	20.14	160	eP	P	22 17 38.2	+1.8
BWNR	Bhubaneshwar	20.58	138	eP	P	22 17 42.3	+1.3
GROC	Groznyy	20.65	296	eP	P	22 17 41.9	+0.3
GROC				eS	S	22 21 22.1	+3.4
GROC				e		22 21 38.9	
GROC				pmax	pmax		
	comp=Z,69nm,0.8s						
SHL	Shillong	20.69	116	eP	P	22 17 42.5	+0.1
SHL				ex	x	22 21 20.0	
TEZP	TEZPUR	20.75	113	eP	P	22 17 43.1	+0.2
ZIRO	ZIRO	21.06	109	eP	P	22 17 46.8	+0.5
GNI	Garni	21.14	288	P	P	22 17 48.9	+2.0
	comp=Z,42nm,1.2s,baz=178,slow=4.8,SNR=12						
GNI	Garni	21.14	288	eP	P	22 17 48.6	+1.7
	comp=Z,41nm,0.9s						
GNI	Garni	21.14	288	i P	P	22 17 48.9	+2.0
	SNR=8.5						
GNI	Garni	21.14	288	ceP	P	22 17 48.8	+1.9
GNI				pmax	pmax		
	comp=Z,178nm,1.3s						
TBLG	Delisi	21.23	292	eP	P	22 17 49.5	+1.9
	comp=Z,50nm,1.0s						
TBLG	Delisi	21.23	292	eP	P	22 17 49.5	+1.9
TBLG				pmax	pmax		
	comp=Z,50nm,1.0s						
SVE	Sverdlovsk	21.48	344	⇑eP	P	22 17 50.9	+1.0
SVE				eS	S	22 21 46.7	+14
SVE				pmax	pmax		
	comp=Z,32nm,1.1s						
ARU	Arti	21.63	340	P	P	22 17 52.2	+0.8
	comp=Z,4.8nm,0.4s,baz=156,slow=7.7,SNR=38						
ARU				sP	sP	22 19 00.0	+1.1
	comp=Z,12nm,0.9s,baz=143,slow=7.8,SNR=3.0						
ARU	Arti	21.63	340	eP	P	22 17 51.9	+0.6
	comp=Z,28nm,0.9s						
ARU	Arti	21.63	340	c iP	P	22 17 52.0	+0.6
ARU				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEI	Tsey	21.96	295	eP	P	22 17 55.2	+0.3
ZEI				pmax	pmax		
	comp=Z,19nm,0.5s						
AKH	Akhalkalaki	22.14	291	⇑iP	P	22 17 58.5	+1.9
MOKO	MOKOCHONG	22.20	111	eP	P	22 17 58.9	+1.6
NCK	Nalchik	22.28	297	⇑eP	P	22 17 58.3	+0.7
NCK				pmax	pmax		
	comp=Z,45nm,0.9s						
GTA	Gaotai	22.56	74	eP	P	22 17 55.8	-4.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBZ	Khabaz	22.81	297	P	P	22 18 03.2	+0.8
	comp=Z,12nm,0.8s,baz=126,slow=7.9,SNR=22						
NEY	Neytrino	22.88	296	⇓eP	P	22 18 05.4	+2.2
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOF	Gofitskoye	22.94	300	⇑iP	P	22 18 05.6	+2.0
GOF				pmax	pmax		
	comp=Z,183nm,0.9s						
KIV	Kislovodsk	23.00	298	eP	P	22 18 05.1	+0.9
	comp=Z,28nm,0.8s						
KIV	Kislovodsk	23.00	298	i P	P	22 18 04.9	+0.7
	SNR=6.7						
KIV	Kislovodsk	23.00	298	eP	P	22 18 04.9	+0.7
KIV				eS	S	22 21 59.5	+2.1
KIV				pmax	pmax		
	comp=Z,60nm,1.0s						
KIV				MLR	MLR		
	comp=Z,64nm,14.0s						
RAYN	Ar Rayn	25.81	247	eP	P	22 18 29.1	-0.7
	comp=Z,8.4nm,0.8s						
RAYN	Ar Rayn	25.81	247	i P	P	22 18 29.5	-0.3
	SNR=7.4						
RAYN	Ar Rayn	25.81	247	eP	P	22 18 29.1	-0.7
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	Lanzhou	26.10	81	eP	P	22 18 35.4	+2.9
LZH				pP	pP	22 19 16.5	-2.1
LZH				sP	sP	22 19 42.4	-3.3
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
KIRV	Kirov	26.28	334	P	P	22 18 34.8	+1.3
	comp=Z,45nm,0.6s,baz=133,slow=3.7,SNR=23						
ZAK	Zakamensk	26.70	49	eP	P	22 18 38.2	+0.6
ZAK				pmax	pmax		
	comp=Z,18nm,1.3s						
ANN	Anapa	26.84	298	eP	P	22 18 37.7	-1.0
ANN				e*PP	pP	22 19 21.8	-2.0
ANN				eS	S	22 22 57.8	-0.1
ANN				pmax	pmax		
	comp=Z,50nm,1.0s						
VORD	Divnogorie	26.99	312	eP	P	22 18 39.2	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VSR	Storozhevoye	27.15	313	eP	P	22 18 40.5	-0.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CD2	Chengdu	27.45	92	eP	P	22 18 44.5	+0.2
LPSR	Galich'ya Gora	27.78	315	eP	P	22 18 46.7	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
SONA0	Songino Array	28.04	55	eP	P	22 18 50.7	+1.2
SONA0				epP	pP	22 19 38.1	+2.2
SONM	Songino Array	28.04	55	P	P	22 18 50.7	+1.2
	comp=Z,1.0nm,0.7s,baz=258,slow=9.0,SNR=6.4						
SONM				pP	pP	22 19 38.1	+2.2
	comp=Z,5.0nm,0.9s,baz=251,slow=10,SNR=8.1						
ULN	Ulaanbaatar	28.48	55	⇑eP	P	22 18 55.0	+1.6
ULN				pmax	pmax		
	comp=Z,6.0nm,2.6s						
ASF	Jabal al Asfar	28.69	271	P	P	22 18 56.6	+1.2
	comp=Z,2.6nm,0.8s,baz=27,slow=3.7,SNR=5.5						
KMI	Kunming	29.14	104	P	P	22 19 00.8	+1.2
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MMAI	Mount Meron Ar	29.63	274	P	P	22 19 05.5	+1.8
	comp=Z,2.0nm,0.6s,baz=55,slow=10,SNR=5.6						
BR101	Keskin Array S	29.68	288	epP	pP	22 19 50.9	+1.2
BR131	Keskin Array S	29.68	288	eP	P	22 19 04.9	+0.7
	comp=Z,15nm,1.3s						
BRTR	Keskin Array B	29.68	288	P	P	22 19 04.8	+0.7
	comp=Z,3.5nm,0.7s,baz=100,slow=8.8,SNR=25						
BRTR				pP	pP	22 19 50.9	+1.2
	comp=Z,1.0nm,0.6s,baz=112,slow=9.5,SNR=2.2						
MOS	Moscow	29.77	321	eP	P	22 19 04.2	-0.2
MOS				e		22 19 49.3	
MOS				pmax	pmax		
	comp=Z,32nm,0.9s						
MOS				pmax	pmax		
	comp=Z,40nm,0.9s						
PRGR	Permogore	29.80	335	⇑iP	P	22 19 05.3	+0.6
PRGR				e		22 19 56.4	
PRGR				pmax	pmax		
	comp=Z,29nm,0.6s						
CHTO	Chiang Mai	30.01	119	eP	P	22 19 06.9	-0.1
	comp=Z,9.1nm,1.1s						
CHTO	Chiang Mai	30.01	119	eP	P	22 19 06.9	-0.1
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						

CMMT	Chiang Mai	30.02	119	P	P	22 19 09.2	+2.1
	comp=Z,5.0nm,0.7s						
OBN	Obninsk	30.05	319	P	P	22 19 07.8	+0.8
	comp=Z,14nm,0.6s,baz=290,slow=21,SNR=14						
OBN				pP	pP	22 19 53.0	+0.1
	comp=Z,3.0nm,0.6s,baz=337,slow=17,SNR=1.4						
OBN	Obninsk	30.05	319	eP	P	22 19 07.6	+0.7
	comp=Z,50nm,0.6s						
OBN				epP	pP	22 19 53.0	+0.1
OBN	Obninsk	30.05	319	⇑iP	P	22 19 07.9	+1.0
OBN	Obninsk	30.05	319	c iP	P	22 19 07.7	+0.8
OBN				e*PP	pP	22 19 52.4	-0.6
OBN				e*SP	sP	22 20 19.0	-0.5
OBN				e		22 22 03.5	
OBN				pmax	pmax		
	comp=Z,32nm,0.5s						
CMAR	Chiang Mai Arr	30.25	119	P	P	22 19 10.0	+0.9
	comp=Z,9.1nm,0.9s,baz=302,slow=8.4,SNR=36						
CMAR				pP	pP	22 19 57.4	+1.6
	comp=Z,9.2nm,1.0s,baz=303,slow=9.1,SNR=5.9						
ANTO	Ankara	30.31	288	eP	P	22 19 10.3	+0.7
	comp=Z,5.5nm,0.7s						
ANTO	Ankara	30.31	288	eP	P	22 19 10.3	+0.7
ANTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PALK	Pallekele	30.41	161	eP	P	22 19 11.4	+0.8
	comp=Z,27nm,0.8s						
PALK	Pallekele	30.41	161	eP	P	22 19 11.4	+0.8
PALK				pmax	pmax		
	comp=Z,27nm,0.8s						
XAN	Xi'an	30.63	84	P	P	22 19 14.0	+1.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,5.7s						
CSS	Mathiatis	30.77	278	eP	P	22 19 13.5	-0.1
	comp=Z,9.5nm,1.0s						
EIL	Elat	31.13	268	P	P	22 19 18.0	+1.2
	comp=Z,12nm,0.9s,baz=82,slow=6.7,SNR=7.5						
HHC	Hu-ho-hao-te	31.45	70	P	P	22 19 22.3	+2.7
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GYA	Guiyang	31.59	99	eP	P	22 19 21.8	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
UMPA	Umpang Tak	31.74	123	P	P	22 19 25.4	+3.2
	comp=Z,51µm,0.8s,comp=Z,405µm						
UTTA	Uttaradit	31.86	118	P	P	22 19 24.4	+1.2
	comp=Z,63µm,0.7s,comp=Z,472µm						
ENH	Enshi	32.28	90	eP	P	22 19 28.2	+1.3
	comp=Z,13nm,0.9s						
PBKT	Sadao Pong	32.94	119	P	P	22 19 34.3	+1.7
	comp=Z,17nm,0.9s						
MILM	Milestii Mici	33.01	302	⇑iP	P	22 19 33.8	+0.9
AKASG	Malin Array Be	33.11	309	P	P	22 19 33.9	+0.2
	comp=Z,1.4nm,0.4s,baz=86,slow=7.3,SNR=28						
AKASG				pP	pP	22 20 20.6	+0.9
	comp=Z,3.1nm,0.6s,baz=84,slow=7.8,SNR=2.9						
AKASG				PP	sP	22 20 45.9	-0.1
	comp=Z,2.1nm,0.5s,baz=80,slow=7.5,SNR=1.7						
AKBB	Malin Array Si	33.11	309	eP	P	22 19 33.5	-0.2
	comp=Z,6.3nm,0.8s						
AKBB	Malin Array Si	33.11	309	eP	P	22 19 33.5	-0.2
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SRDT	SRDT	33.24	125	P	P	22 19 37.2	+2.0
	comp=Z,21nm,0.9s,comp=Z,2µm						
CFR	Carcaliu	33.45	298	⇑iP	P	22 19 37.7	+1.0
NONG	Nongkai	33.52	115	P	P	22 19 38.3	+0.7
	comp=Z,0.8nm,0.8s,comp=Z,124nm						
BALB	Balikesir	34.10	289	eP	P	22 19 41.9	-0.5
	comp=Z,39nm,1.0s						
CHAI	Chaiyaphum	34.11	119	P	P	22 19 44.3	+1.6
	comp=Z,40µm,0.8s,comp=Z,337µm						
VRI	Vrincioaia	34.43	300	⇑iP	P	22 19 47.2	+2.0
PLOR	Plostina	34.48	300	⇓iP	P	22 19 47.7	+2.0
PRAR	RASCA	34.78	302	⇑iP	P	22 19 49.6	+1.4
BIZ	Bicaz	34.86	302	⇑iP	P	22 19 50.1	+1.2
MLR	Muntele Rosu	34.99	299	P	P	22 19 52.3	+2.2
	comp=Z,26nm,0.8s,baz=83,slow=2.6,SNR=64						
MLR	Muntele Rosu	34.99	299	⇑iP	P	22 19 51.6	+1.5
PANO	Nakornpanom	35.17	114	P	P	22 19 52.7	+0.9
	comp=Z,0.6nm,1.2s,comp=Z,232nm						
ELND	Elena	35.19	295	⇑iP	P	22 19 52.3	+0.6
ALN	Alexandroupoli	35.30	291	eP	P	22 19 53.3	+0.6
	comp=Z,4.7nm,1.1s						
ALN	Alexandroupoli	35.30	291	eP	P	22 19 53.3	+0.6
ALN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DOPR	Dopca	35.36	300	⇑iP	P	22 19 55.5	+2.3
BURAR	Bucovina Array	35.48	303	⇑iP	P	22 19 55.5	+1.3
KARP	Karpathos	35.51	282	eP	P	22 19 54.3	-0.2
	comp=Z,124nm,1.0s						
VOIR		35.62	299	⇑iP	P	22 19 57.2	+1.8
ATD	Arta Tunnel	35.82	233	eP	P	22 19 57.8	+0.5
	comp=Z,48nm,1.6s						
ARR	Arges	35.91	299	⇑iP	P	22 19 58.9	+1.0
KAAM	Kaadhehdhoo	35.96	177	eP	P	22 19 56.5	-2.0
	comp=Z,290nm,1.4s						
ARCR	ARCALIA	36.06	302	⇑iP	P	22 20 01.2	+2.2
WHN	Wuhan	36.09	87	⇓iP	P	22 20 01.5	+2.0
WHN				pmax	pmax		
	comp=Z,24nm,0.5s						
LVV	L'vov	36.34	307	eP	P	22 20 02.5	+1.2
LVV				e*PP	pP	22 20 48.5	+0.5
LVV				e		22 21 29.2	
LVV				eS	S	22 25 23.9	-1.1
LVV				pmax	pmax		
	comp=Z,60nm,1.3s						
CJR	Cluj-Napoca	36.59	301	⇑iP	P	22 20 05.0	+1.5
VTS	Vitosha	37.16	294	⇓iP	P	22 20 09.2	+0.7
GZR	Gura Zlata	37.22	299	⇑iP	P	22 20 10.1	+1.2
TRPA	Tarpa	37.28	304	⇑iP	P	22 20 10.9	+1.6
TRPA	Tarpa	37.28	304	⇓eP	P	22 20 11.0	+1.7
IDI	Anoyia	37.36	282	P	P	22 20 10.7	+0.5
	comp=Z,10nm,0.7s,baz=12,slow=7.6,SNR=13						
UZH	Uzhgorod	37.44	304	eP	P	22 20 10.7	+0.1
KOLS	Kolonicke sedl	37.46	305	eP	P	22 20 12.4	+1.6
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KOLS	Kolonicke sedl	37.46	305	eP	P	22 20 12.4	+1.6
KOLS				ePP	PnPn	22 21 44.7	-0.3
LVZ	Lovozero	37.47	338	⇓eP	P	22 20 11.7	+1.0
LVZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FIA0	FINESS Array S	37.56	326	eP	P	22 20 12.2	+0.7
FIA0				epP	pP	22 20 59.4	+0.8
FIA0	FINESS Array S	37.56	326	eP	P	22 20 12.2	+0.7
FIA0				e*PP	pP	22 20 59.4	+0.8
FIA1	FINESS Array S	37.56	326	eP	P	22 20 12.2	+0.8
	comp=Z,42nm,1.4s						
FINES	FINESS Array B	37.56	326	P	P	22 20 12.2	+0.7
	comp=Z,16nm,0.7s,baz=113,slow=9.1,SNR=110						
FINES				pP	pP	22 20 59.4	+0.8
	comp=Z,6.2nm,0.8s,baz=99,slow=8.9,SNR=4.1						
BZS	Buzias	38.02	300	⇓iP	P	22 20 16.7	+1.2
MDVR	Moldovita	38.02	298	⇑iP	P	22 20 15.7	+0.1
LIT	Litokhoron	38.10	291	eP	P	22 20 16.2	-0.1
	comp=Z,9.1nm,0.9s						
LIT	Litokhoron	38.10	291	eP	P	22 20 16.2	-0.1
LIT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NIE	Niedzica	38.75	306	eP	P	22 20 23.2	+1.6
NIE	Niedzica	38.75	306	eP	P	22 20 23.2	+1.6
LHMI	Lhok Sumawe	39.05	137	eP	P	22 20 23.9	-0.5
	comp=Z,70nm,1.1s						
PSZ	Piszkesteto	39.06	303	eP	P	22 20 24.1	-0.1
OJC	Ojcow	39.08	307	eP	P	22 20 25.3	+1.0
NJ2	Nanjing	39.17	82	eP	P	22 20 25.8	+0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
LANS	Liptovska Anna	39.30	305	eP	P	22 20 28.5	+2.3
LANS	Liptovska Anna	39.30	305	eP	P	22 20 28.5	+2.3
VYHS	Vyhne	39.74	304	eP	P	22 20 30.7	+0.9
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.5s						
VYHS	Vyhne	39.74	304	eP	P	22 20 30.7	+0.9
VYHS				ePP	PP	22 22 08.0	+2.0
MORH	Mrgy, Hungar	40.03	301	⇓eP	P	22 20 33.0	+0.9
PDG	Podgorica	40.09	295	⇑iP	P	22 20 32.8	+0.1
TTG	Podgorica	40.09	295	eP	P	22 20 33.1	+0.4
	comp=Z,21nm,1.7s						
TTG	Podgorica	40.09	295	eP	P	22 20 33.1	+0.4
TTG				pmax	pmax		
	comp=Z,21nm,1.7s						
JAVC	Velka Javorina	40.49	305	eP	P	22 20 37.7	+1.7
MORC	Moravsky Berou	40.54	306	⇑iP	P	22 20 38.3	+2.0
MORC	Moravsky Berou	40.54	306	eP	P	22 20 37.2	+0.9
GKP	Gorka Klasztor	40.72	312	eP	P	22 20 38.6	+0.9
GKP	Gorka Klasztor	40.72	312	eP	P	22 20 38.6	+0.9
MODS	Modra-Piesok	40.78	304	eP	P	22 20 38.9	+0.6
MODS	Modra-Piesok	40.78	304	eP	P	22 20 38.9	+0.6
ZST	Bratislava	40.91	304	eP	P	22 20 39.4	+0.1
ZST	Bratislava	40.91	304	eP	P	22 20 39.4	+0.1
KULM	Kulim	41.12	132	eP	P	22 20 41.8	+0.4
	comp=Z,45nm,1.8s						
ARA0	ARCESS Array S	41.16	337	epP	pP	22 21 30.6	+1.1
ARA0				esP	sP	22 21 56.6	+0.9
ARCES	ARCESS Array B	41.16	337	P	P	22 20 42.1	+1.0
	comp=Z,11nm,0.5s,baz=114,slow=8.7,SNR=114						
ARCES				pP	pP	22 21 30.6	+1.1
	comp=Z,5.8nm,0.7s,baz=116,slow=10,SNR=4.5						
ARCES				sP	sP	22 21 56.6	+0.9
	comp=Z,13nm,0.8s,baz=113,slow=6.9,SNR=5.4						
ARE0	ARCESS Array S	41.16	337	eP	P	22 20 41.6	+0.6
	comp=Z,2.9nm,1.6s						
ARE0	ARCESS Array S	41.16	337	eP	P	22 20 42.0	+1.0
VRAC	Vranov	41.18	306	P	P	22 20 42.9	+1.4
	comp=Z,13nm,0.9s,baz=92,slow=8.0,SNR=25						
VRAC				pP	pP	22 21 31.1	+2.0
	comp=Z,8.3nm,1.1s,baz=94,slow=10,SNR=4.7						
VRAC	Vranov	41.18	306	⇑iP	P	22 20 42.8	+1.4
VRAC	Vranov	41.18	306	eP	P	22 20 42.6	+1.1
BEHE	Becsehely	41.29	301	eP	P	22 20 43.0	+0.6
DPC	Dobruska-Polom	41.30	307	eP	P	22 20 44.2	+1.7
DPC	Dobruska-Polom	41.30	307	eP	P	22 20 44.2	+1.7
KSP	Ksiaz	41.30	308	eP	P	22 20 44.1	+1.7
KSP	Ksiaz	41.30	308	eP	P	22 20 44.1	+1.7
SOP	Sopron	41.32	303	⇓eP	P	22 20 43.0	+0.4
KRUC	Moravsky	41.32	305	eP	P	22 20 43.5	+0.9
OSTC	Ostas	41.36	308	eP	P	22 20 44.6	+1.6
CHVC	Chvalec	41.46	308	eP	P	22 20 44.9	+1.1
UPC	Upice	41.49	308	eP	P	22 20 45.6	+1.6
UPC	Upice	41.49	308	eP	P	22 20 45.6	+1.6
KTK1	Kautokeino	41.64	336	eP	P	22 20 45.5	+0.5
CONA	Conrad Observa	41.77	304	i P	P	22 20 47.9	+1.6
	comp=Z,21nm,0.9s,SNR=18						
CONA				epP	pP	22 21 36.5	+2.4
	comp=Z,13nm,1.6s						
CONA				ePP	PP	22 22 22.4	-5.3
	comp=Z,7.4nm,1.3s						
KNMB	Chin-men Tao	41.90	93	eP	P	22 20 46.0	-1.5
	comp=Z,31nm,0.7s						
TREC	Trest	41.90	306	eP	P	22 20 49.1	+1.7
TREC	Trest	41.90	306	eP	P	22 20 49.1	+1.7
IPM	Ipoh	41.99	132	eP	P	22 20 48.7	+0.2
	comp=Z,14nm,0.9s						
ARSA	Arzberg	42.06	303	i P	P	22 20 50.0	+1.3
	comp=Z,7.9nm,1.3s,SNR=5.3						
ARSA				ePP	PP	22 22 24.6	-6.3
	comp=Z,2.7nm,1.0s						
BSD	Bornholm Skovb	42.15	314	i P	P	22 20 48.6	-0.6
BSD				pmax	pmax		
	comp=Z,22nm,1.0s						
BSD	Bornholm Skovb	42.15	314	i P	P	22 20 48.6	-0.6
	comp=Z,22nm,1.0s						
HAMF	Hammerfest	42.24	338	eP	P	22 20 51.0	+1.2
SOKA	Soboth	42.46	302	i P	P	22 20 53.5	+1.5
	comp=Z,17nm,0.8s,SNR=21						
SOKA				i pP	pP	22 21 42.5	+2.5
	comp=Z,5.4nm,0.9s						
PRU	Pruhonice	42.47	307	eP	P	22 20 53.7	+1.9
PRU	Pruhonice	42.47	307	eP	P	22 20 53.7	+1.9
GSI	Gunungsitoli	42.68	139	eP	P	22 20 55.1	+1.1
	comp=Z,71nm,0.8s						
OBKA	Obir	42.82	302	i P	P	22 20 56.4	+1.6
	comp=Z,12nm,1.4s,SNR=6.2						
MOA	Molln	42.84	304	i P	P	22 20 56.0	+1.1
	comp=Z,16nm,0.9s,SNR=12						
MOA				epP	pP	22 21 44.7	+1.6
	comp=Z,3.5nm,0.9s						
GERES	GERESS Array B	43.11	305	P	P	22 20 57.9	+0.7
	comp=Z,1.8nm,0.8s,baz=79,slow=7.2,SNR=19						
KHC	Kasperske Hory	43.16	306	eP	P	22 20 58.7	+1.2
KHC				e		22 21 48.0	
KHC				e		22 22 42.0	
KHC	Kasperske Hory	43.16	306	eP	P	22 20 58.7	+1.2
KHC				epP	pP	22 21 48.0	+2.3
KHC				ePP	PP	22 22 42.0	-0.5
HFS	Hagfors	43.17	322	P	P	22 20 57.6	+0.3
	comp=Z,21nm,0.6s,baz=96,slow=11,SNR=90						
HFS				pP	pP	22 21 46.5	+0.9
	comp=Z,5.5nm,0.5s,baz=108,slow=9.5,SNR=3.5						
TRO	Tromso	43.29	336	eP	P	22 20 58.8	+0.7
CLL	Collm	43.35	309	i P	P	22 20 59.4	+0.5
CLL				e*PP	pP	22 21 47.0	-0.1
CLL				pmax	pmax		
	comp=Z,11nm,1.0s						
CLL	Collm	43.35	309	i P	P	22 20 59.4	+0.5
	comp=Z,11nm,1.0s						
CLL				epP	pP	22 21 47.0	-0.1
CLL				ePP	PP	22 22 47.0	+2.5
CLL				e		22 22 59.0	
KBA	Koelnbreinsper	43.56	303	eP	P	22 21 01.9	+1.0
	comp=Z,4.3nm,0.7s						
YAK	Yakutsk	43.71	35	eP	P	22 21 00.6	-1.0
YAK				e*PP	pP	22 21 48.5	-2.3
YAK				e		22 22 47.9	
YAK				ePPP	PPP	22 23 42.8	
YAK				eS	S	22 27 12.7	-1.3
YAK				e*SS	sS	22 28 34.9	-5.6
YAK				e		22 30 33.2	
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,11nm,1.4s						
YAK				smax	smax		
	comp=N,16nm,1.5s						
YAK				smax	smax		
	comp=E,24nm,1.4s						
MOR8	Moi Rana	43.87	331	eP	P	22 21 02.8	0.0
STEI	Steigen	44.01	333	eP	P	22 21 04.5	+0.6
ABTA	Abfaltersbach	44.17	302	i P	P	22 21 05.7	+0.1
	comp=E,4.7nm,0.9s						
NC405	NORSAR Array S	44.24	323	eP	P	22 21 05.5	-0.4
	comp=E,36nm,0.8s						
SSLB	Suanglung	44.28	92	eP	P	22 21 07.8	+1.1
	comp=E,39nm,1.8s						
NC602	NORSAR Array S	44.29	323	eP	P	22 21 05.6	-0.6
NB201	NORSAR Array S	44.44	323	eP	P	22 21 07.4	0.0
	comp=E,140nm,1.8s						
KONS	Konsvik	44.46	331	eP	P	22 21 08.0	+0.5
NB2	NORSAR Subarra	44.48	323	P	P	22 21 07.6	-0.2
	comp=Z,14nm,0.6s,baz=97,slow=7.9						
NB200	NORSAR Array S	44.48	323	epP	pP	22 21 56.7	+0.4
NB200				esP	sP	22 22 22.5	+0.4
NOA	NORSAR Array B	44.48	323	P	P	22 21 07.5	-0.2
	comp=Z,14nm,0.8s,baz=96,slow=7.7,SNR=57						
NOA				pP	pP	22 21 56.7	+0.4
	comp=Z,4.5nm,0.8s,baz=96,slow=8.1,SNR=5.1						
NOA				sP	sP	22 22 22.5	+0.4
	comp=Z,9.0nm,0.9s,baz=96,slow=8.0,SNR=4.5						
KS15	Wonju Array Si	44.54	71	eP	P	22 21 09.0	+0.4
	comp=Z,44nm,1.8s						
NSS	Namsos	44.57	328	eP	P	22 21 08.5	+0.2
KSRS	Korea Array	44.57	71	P	P	22 21 09.9	+1.1
	comp=Z,2.0nm,0.5s,baz=274,slow=6.9,SNR=13						
KSRS				pP	pP	22 21 59.2	+0.9
	comp=Z,1.6nm,0.9s,baz=275,slow=8.4,SNR=3.1						
GRA1	Grafenberg Arr	44.63	307	eP	P	22 21 09.8	+0.6
	comp=Z,41nm,1.6s						
GRFO	Grafenberg	44.63	307	eP	P	22 21 08.9	-0.2
	comp=Z,12nm,0.6s						
GRFO	Grafenberg	44.63	307	eP	P	22 21 08.9	-0.2
GRFO				pmax	pmax		
	comp=Z,12nm,0.6s						
OSL	Oslo	44.64	321	eP	P	22 21 08.8	-0.1
LOF	Lofoten	44.68	333	eP	P	22 21 09.6	+0.4
WTTA	Wattenberg	44.69	303	i P	P	22 21 10.1	+0.3
	comp=Z,16nm,1.1s,SNR=9.4						
NC204	NORSAR Array S	44.71	323	eP	P	22 21 10.0	+0.4
	comp=Z,77nm,1.3s						
WATA	Walderalm	44.71	303	i P	P	22 21 09.9	0.0
	comp=Z,5.6nm,0.9s,SNR=9.7						
YULB	Yu-li	44.74	93	eP	P	22 21 11.1	+0.7
	comp=Z,6.8nm,0.9s						
TWG	Pinlang	44.84	94	eP	P	22 21 12.2	+1.1
	comp=Z,158nm,1.4s						
VAE	Valguarnera	44.86	289	P	P	22 21 12.8	+1.6
	comp=Z,4.5nm,0.7s,baz=253,slow=4.6,SNR=3.8						
SQTA	Sankt Quirin	44.98	303	i P	P	22 21 12.1	+0.1
	comp=Z,5.8nm,0.7s,SNR=5.6						
SQTA				epP	pP	22 22 02.3	+1.7
	comp=Z,2.0nm,0.6s						
MOTA	Moosalm	45.03	303	i P	P	22 21 12.3	-0.2
	comp=Z,7.2nm,0.7s,SNR=11						
MOTA				epP	pP	22 22 02.7	+1.7
	comp=Z,4.7nm,0.9s						
KONO	Kongsberg	45.19	321	eP	P	22 21 12.9	-0.4
	comp=Z,11nm,0.8s						
KONO	Kongsberg	45.19	321	c eP	P	22 21 14.1	+0.8
KONO				pmax	pmax		
	comp=Z,14nm,1.7s						
KONO	Kongsberg	45.19	321	eP	P	22 21 13.7	+0.4
RETA	Reutte	45.24	304	eP	P	22 21 14.3	+0.3
	comp=Z,5.9nm,0.9s						
RETA				epP	pP	22 22 04.6	+2.0
	comp=Z,3.2nm,0.9s						
FETA	Feichten	45.34	303	i P	P	22 21 15.0	+0.1
	comp=Z,9.3nm,0.9s,SNR=7.3						
BKNI	Bangkinang	45.37	136	eP	P	22 21 15.2	0.0
	comp=Z,56nm,0.5s						
TIXI	Tiksi	45.57	22	eP	P	22 21 17.2	+1.1
	comp=Z,7.1nm,0.8s						
TIXI	Tiksi	45.57	22	eP	P	22 21 17.2	+1.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FUORN	Ofenpass-Fuorn	45.72	303	eP	P	22 21 17.1	-0.9
	comp=Z,6.9nm,0.9s						
HOMB	Homborsund	45.73	319	eP	P	22 21 17.8	+0.2
DAVA	Damuels	45.86	304	i P	P	22 21 19.4	+0.5
	comp=Z,37nm,0.9s,SNR=20						
DAVA				epP	pP	22 22 09.8	+2.2
	comp=Z,7.7nm,0.8s						
SKAR	Skarslia	45.87	322	eP	P	22 21 18.8	0.0
DAVOX	Davos/Dischmat	45.95	303	P	P	22 21 19.7	0.0
	comp=Z,10nm,0.8s,baz=110,slow=8.3,SNR=16						
DAVOX				pP	pP	22 22 09.3	+0.8
	comp=Z,3.4nm,0.7s,baz=126,slow=10,SNR=2.7						
SNART	Snartemo	46.42	319	eP	P	22 21 22.4	-0.5
BFO	Black Forest	46.71	305	eP	P	22 21 25.9	+0.5
	comp=Z,5.5nm,1.0s						
BFO	Black Forest	46.71	305	i P	P	22 21 26.3	+0.9
BLS5	Blasjo	46.79	321	eP	P	22 21 25.8	0.0
HYA	Hoyanger	46.92	323	eP	P	22 21 27.3	+0.5
HSPB	Hornsund (broa	47.11	345	eP	P	22 21 28.9	+0.8
BER	Bergen	47.34	322	eP	P	22 21 30.1	+0.2
ASK	Askoy	47.41	322	eP	P	22 21 30.3	-0.2
KMY	Karmoy	47.41	320	eP	P	22 21 30.8	+0.3
SPA0	Spitsbergen Ar	47.46	347	eP	P	22 21 30.2	-0.5
SUE	Sulen	47.61	323	eP	P	22 21 31.7	-0.4
SENIN	Lac Senin/Sane	47.78	303	epP	pP	22 22 25.4	+2.2
MEM	Membach	47.83	309	⇓P	P	22 21 34.9	+1.0
	comp=Z,6.4nm,1.1s						
WLF	Walferdange	47.89	307	⇓P	P	22 21 35.5	+1.1
	comp=Z,9.9nm,0.9s						
BNI	Bardonecchia	48.50	301	eP	P	22 21 38.9	-0.4
	comp=Z,19nm,1.4s						
BNI	Bardonecchia	48.50	301	eP	P	22 21 38.9	-0.4
BNI				pmax	pmax		
	comp=Z,19nm,1.4s						
KBS	Kingsbay	48.58	347	eP	P	22 21 39.6	+0.4
DOU	Dourbes	48.81	308	⇓P	P	22 21 42.8	+1.4
	comp=Z,6.2nm,1.4s						
KMBO	Kilima Mbogo	49.12	228	eP	P	22 21 45.8	+1.4
	comp=Z,4.0nm,0.8s						
KMBO	Kilima Mbogo	49.12	228	eP	P	22 21 45.8	+1.4
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KEST	Kesra	49.28	289	P	P	22 21 46.4	+1.1
	comp=Z,12nm,0.7s,baz=29,slow=1.4,SNR=14						
KSM	Kuching	50.15	125	eP	P	22 21 53.2	+1.3
	comp=Z,8.8nm,0.8s						
EKA	Eskdalemuir Ar	52.42	316	P	P	22 22 08.0	-0.2
	comp=Z,6.7nm,1.0s,baz=90,slow=8.1,SNR=11						
EKA				pP	pP	22 22 59.4	+0.9
	comp=Z,2.9nm,0.8s,baz=80,slow=8.0,SNR=5.5						
ESK	Eskdalemuir	52.45	316	i P	P	22 22 09.8	+1.4
YSS	Yuzh-Sakhalins	52.53	55	⇓eP	P	22 22 10.6	+1.5
YSS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAJO	Matsushiro	52.64	69	eP	P	22 22 10.8	+0.6
MAJO				epP	pP	22 23 03.5	+2.3
MAJO	Matsushiro	52.64	69	⇑eP	P	22 22 10.7	+0.5
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	Matsushiro Arr	52.64	69	P	P	22 22 10.8	+0.6
	comp=Z,1.6nm,0.8s,baz=289,slow=10,SNR=7.4						
MJAR				pP	pP	22 23 03.5	+2.3
	comp=Z,2.8nm,0.9s,baz=285,slow=10,SNR=5.7						
MBAR	Mbarara	52.80	235	eP	P	22 22 12.3	+0.5
	comp=Z,9.9nm,0.7s						
MBAR	Mbarara	52.80	235	eP	P	22 22 12.3	+0.5
MBAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DAG	Danmarks Havn	54.71	344	i P	pP	22 23 17.2	+1.3
	comp=Z,13nm,0.9s						
ESDC	Sonseca Array	57.67	298	P	P	22 22 45.8	-0.3
	comp=Z,5.1nm,0.7s,baz=60,slow=7.4,SNR=55						
ESDC				pP	pP	22 23 37.5	+0.2
	comp=Z,1.9nm,0.8s,baz=63,slow=7.4,SNR=4.8						
TAM	Tamanrasset	57.82	276	eP	P	22 22 47.4	0.0
	comp=Z,2.9nm,0.6s						
TAM	Tamanrasset	57.82	276	eP	P	22 22 47.4	0.0
TAM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PAB	San Pablo	57.99	298	eP	P	22 22 48.6	+0.3
	comp=Z,11nm,1.3s						
PAB	San Pablo	57.99	298	eP	P	22 22 48.6	+0.3
PAB				pmax	pmax		
	comp=Z,11nm,1.3s						
BILL	Bilibino	58.39	26	⇓eP	P	22 22 53.2	+2.7
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LUWI	Luwuk	60.58	116	epP	pP	22 23 57.6	-1.2
SUMG	Summit	61.06	341	eP	P	22 23 10.4	+1.4
	comp=Z,13nm,0.8s						
SUMG	Summit	61.06	341	i P	P	22 23 10.6	+1.5
SUMG				pmax	pmax		
	comp=Z,36nm,0.9s						
SUMG	Summit	61.06	341	i P	P	22 23 10.6	+1.5
	comp=Z,36nm,0.9s						
TOA1	Torodi Ar. Sit	66.01	269	eP	P	22 23 38.8	-3.0
TOA0	Torodi Ar. Sit	66.01	269	eP	P	22 23 40.0	-1.8
	comp=Z,14nm,0.6s						
TORD	Torodi Ar. Bea	66.01	269	P	P	22 23 38.8	-3.0
	comp=Z,13nm,0.7s,baz=47,slow=6.3,SNR=102						
TORD				pP	pP	22 24 38.4	+3.8
	comp=Z,2.2nm,0.8s,baz=49,slow=6.1,SNR=2.8						
TOLK	Toolik Lake Re	70.75	15	epP	pP	22 25 06.8	+2.3
COLD	Coldfoot	71.79	16	epP	pP	22 25 13.6	+3.0
INK	Inuvik	73.76	9	eP	P	22 24 29.3	+1.3
INK				epP	pP	22 25 24.2	+2.1
INK	Inuvik	73.76	9	eP	P	22 24 29.3	+1.3
INK				e*PP	pP	22 25 24.2	+2.1
TTA	Tatalina	73.83	21	epP	pP	22 25 25.6	+2.5
ILAR	Eielson Array	74.60	16	P	P	22 24 32.6	-0.4
	comp=Z,0.8nm,0.9s,baz=317,slow=4.6,SNR=8.0						
ILAR				pP	pP	22 25 29.5	+2.0
	comp=Z,1.4nm,0.9s,baz=323,slow=6.3,SNR=4.6						
ILB	Eielson Array	74.60	16	eP	P	22 24 32.6	-0.4
	comp=Z,4.7nm,1.3s						
DBIC	Dimbokro	75.00	267	P	P	22 24 35.5	-0.6
	comp=Z,5.4nm,0.5s,baz=25,slow=7.5,SNR=15						
DBIC	Dimbokro	75.00	267	eP	P	22 24 35.5	-0.6
	comp=Z,46nm,1.5s						
KIC	Kosan Boka	75.08	267	eP	P	22 24 35.3	-1.3
	comp=Z,23nm,0.6s						
TIC	Toumodi	75.14	267	eP	P	22 24 35.7	-1.2
LIC	Lamto	75.39	267	eP	P	22 24 37.0	-1.3
	comp=Z,80nm,1.5s						
DHY	Denali Highway	75.95	17	epP	pP	22 25 38.3	+2.8
DAWY	Dawson	76.75	13	epP	pP	22 25 42.2	+2.0
BOSA	Boshof	78.01	220	P	P	22 24 52.1	-0.6
	comp=Z,6.7nm,1.2s,baz=40,slow=4.9,SNR=4.6						
HYT	Haines Junctio	80.08	14	epP	pP	22 26 02.0	+3.3
YKA	Yellowknife Ar	81.13	3	P	P	22 25 09.0	+0.1
	comp=Z,2.0nm,0.5s,baz=352,slow=5.4,SNR=15						
YKA				pP	pP	22 26 05.2	+0.8
	comp=Z,2.5nm,0.6s,baz=350,slow=5.5,SNR=6.7						

YKA				sP	sP	22 26 27.6	-1.2
	comp=Z,2.9nm,0.8s,baz=351,slow=5.4,SNR=3.1						
YKB5	Yellowknife Ar	81.13	3	eP	P	22 25 09.0	+0.1
WRA	Warramunga Arr	81.80	122	P	P	22 25 12.1	-0.9
	comp=Z,8.1nm,0.8s,baz=312,slow=5.4,SNR=18						
WRAB	Tennant Creek	81.80	122⇑	eP	P	22 25 12.3	-0.8
WRAB				pmax	pmax		
	comp=Z,15nm,0.9s						
WB2	Warramunga Arr	81.81	122	eP	P	22 25 12.5	-0.6
	comp=Z,11nm,0.9s						
AS31	Alice Springs	84.07	125	eP	P	22 25 24.1	-0.6
	comp=Z,1.9nm,0.7s						
ASAR	Alice Springs	84.07	125	P	P	22 25 23.8	-0.9
	comp=Z,6.6nm,0.7s,baz=311,slow=5.0,SNR=63						
ASAR				pP	pP	22 26 21.1	+0.4
	comp=Z,1.3nm,0.6s,baz=311,slow=5.1,SNR=4.0						
NCB	Newcomb	93.93	336	eP	P	22 26 09.1	-2.1
	comp=Z,24nm,1.6s						
C40A	Isle Royale Na	94.08	347	eP	P	22 26 11.3	-0.3
	comp=Z,10nm,1.1s						
PECO	Prince Edward	94.85	338	eP	P	22 26 15.2	0.0
	comp=Z,10nm,0.7s						

MEX 20 22:15:08.6±0.5, 14°09N×91°94W, h72^{km}±14^{km}, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.87	339	i P	Pn	22 15 23.6	-2.1
THIG				i S	Sn	22 15 37.0	-1.3
PCIG		2.02	323	i P	Pn	22 15 39.6	-1.1
PCIG				i S	Sn	22 16 02.9	-2.1
CCIG	Comitan	2.19	355	i P	Pn	22 15 42.0	-1.0
CCIG				i S	Sn	22 16 08.0	-1.2
TGIG		2.91	337	eP	Pn	22 15 51.4	-1.3
TGIG				i S	Sn	22 16 25.1	-1.4

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*SJA **20** 22:29:35.3±0.6, 28°27S×69°80W, h124^{km}±6^{km}, ML2.8, MW2.9*
*ISCJB **20** 22:29:36.9±0.7, 28°34S±0°06×69°78W±0°07, h111^{km}, Error ellipse: s-maj=8.5km s-min=7.8km az=42.1*
*GUC **20** 22:29:36.4±0.7, 28°35S×69°75W, h125^{km}±9^{km}, ML3.1*
ISC 20 22:29:37.1±1.3, 28°35S±0°05×69°81W±0°06, h111^{km}, n9, σ1^{s}31/14, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	0.84	333	eP	Pn	22 29 56.7	-0.2
GO03				eS	Sn	22 30 11.8	0.0
GO03	Copiap	0.84	333	eP	Pn	22 29 56.8	-0.1
GO03				i S	Sn	22 30 11.7	-0.2
GO03				IAML		22 30 12.2	
	comp=E,1μm,0.1s						
LCO	Las Campanas	1.03	230	eP	Pn	22 29 59.5	+0.5
LCO				i S	Sn	22 30 16.9	+1.5
LCO				IAML		22 30 20.1	
	comp=E,261nm,0.3s						
VCA	Vinchina	1.46	106	eP	Pn	22 30 04.0	+0.3
VCA				eS	Sn	22 30 24.8	+1.0
VCA				IAML		22 30 27.2	
	comp=Z,84nm,0.2s						
CO02	Combarbal	3.03	200	eP	Pn	22 30 24.1	+0.4
CO02				i S	Sn	22 31 00.0	+0.5
CFA	Coronel Fontan	3.52	158	eP	Pn	22 30 30.5	+0.4
CYA	Choya	3.53	92	eP	Pn	22 30 29.6	-0.6
CYA				IAML		22 30 30.5	
	comp=Z,17nm,0.2s						
PEL	Peldehue	4.84	189⇓	iP	Pn	22 30 47.6	-0.2
FCH	Farellones	4.98	185⇑	iP	Pn	22 30 46.2	-3.8

MEX 20 22:40:35.2±0.6, 15°73N×97°20W, h4^{km}±8^{km}, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.05	88	eP	Pg	22 40 52.4	-2.9
HUIG				i S	Sg	22 41 06.7	-2.3
VHO	Vista Hermosa	1.41	18	i P	Pn	22 40 58.7	-3.2
VHO				eS	Sg	22 41 15.5	-5.1

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*IDC **20** 22:55:13.5±0.6, 41°45S×174°44E, h0^{km}, mb4.3/7, mb1 4.4/9, mb1mx4.1/32, mbtmp4.3/9, ML4.0/2, MS3.6/10, Ms1 3.7/10, ms1mx3.5/23, Error ellipse: s-maj=22.3km s-min=16.8km az=120.0*
*ISCJB **20** 22:55:15.1±0.2, 41°74S±0°02×174°45E±0°03, h10^{km}, mb4.8/21, MS3.6/12, Error ellipse: s-maj=3.8km s-min=2.0km az=42.2*
*BJI **20** 22:55:15.1±0.0, 41°59S×174°42E, h18^{km}, mb5.2/8, mB5.5/3, Ms5.0/1*
*WEL **20** 22:55:16.9, 41°6S±0°6×174°4E±0°7, h20^{km}±2^{km}, M5.0/31, ML5.2/19, MLv5.0/31, Error ellipse: s-maj=0.0km s-min=0.0km az=123.3*
*NEIC **20** 22:55:16.0±0.0, 41°56S×174°39E, h18^{km}, mb4.8/15, MW4.6, ML4.9(WEL) Best double couple: NP1: ϕ_s35.00000°, δ60.00000°, λ109.00000°. NP2: ϕ_s180.00000°, δ35.00000°, λ61.00000°. Principal axes: T 1.0400, Plg69.0000°, Azm344.0000°; N 0.1300, Plg16.0000°, Azm205.0000°; P -1.1700, Plg13.0000°, Azm111.0000°; After WEL.*
ISC 20 22:55:15.5±0.4, 41°61S±0°03×174°42E±0°02, h10^{km}, n220, σ1^{s}64/221, mb4.9/20, MS3.6/13, 2D, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.21	229	P	Pg	22 55 22.6	+2.7
SNZO	South Karori	0.37	35	ePg	Pb	22 55 24.8	+0.7
BHW	Baring Head	0.39	59	P	Pb	22 55 25.5	+1.0
TUWZ	Tuamarina	0.41	297	P	Pb	22 55 24.8	+0.1
TUWZ				S	Sb	22 55 30.2	-0.7
TCW	Tory Channel	0.42	344	P	Pb	22 55 25.2	+0.3
BSWZ	Blackbirch Sta	0.42	256	P	Pb	22 55 25.6	+0.5
BSWZ				S	Sb	22 55 32.3	+0.7
MSWZ	Moikau Station	0.65	73	P	Pb	22 55 30.5	+1.5
CAW	Cannon Point	0.70	44	P	Pb	22 55 30.9	+1.1
PAWZ	Paruwai Farm	0.79	73	P	Pb	22 55 32.9	+1.7
NNZ	Nelson	0.88	296	P	Pg	22 55 33.1	+0.7
DUWZ	D'Urville Isla	0.89	335	P	Pb	22 55 33.6	+0.5
DUWZ				S	Sb	22 55 45.1	+0.1
MTW	Mount Morrison	0.93	61	P	Pb	22 55 35.3	+1.6
OGWZ	Otaki Gorge	0.97	36	P	Pg	22 55 35.2	+1.0
TRWZ	Traveller	0.97	78	P	Pg	22 55 35.8	+1.6
KHZ	Kahutara	1.04	219	ePn	Pg	22 55 37.0	+1.5
KHZ	Kahutara	1.04	219	P	Pg	22 55 37.0	+1.5
HOWZ	Holdsworth Sta	1.09	49	P	Pg	22 55 37.6	+1.2
THZ	Tophouse	1.15	262	ePn	Pb	22 55 38.0	+0.6
THZ	Tophouse	1.15	262	P	Pb	22 55 38.0	+0.6
TMWZ	Te Maipa	1.21	66	P	Pn	22 55 39.0	+0.5
MRZ	Mangatainoka R	1.29	43	P	Pn	22 55 40.6	+1.0
TIWZ	Tintock	1.38	53	P	Pn	22 55 41.5	+0.7
CPWZ	Castlepoint	1.51	63	P	Pn	22 55 43.5	+0.9
OHWZ	Ohakea	1.56	26	P	Pg	22 55 46.0	+0.7
PRWZ	Pori Road	1.57	48	P	Pn	22 55 44.2	+0.7
POWZ	Post Office Ro	1.59	40	P	Pn	22 55 44.9	+1.2
QRZ	Quartz Range	1.63	298	P	Pb	22 55 45.8	+0.1
BFZ	Birch Farm	1.66	57	P	Pn	22 55 44.6	0.0
GVZ	Greta Valley S	1.70	217	P	Pn	22 55 45.7	+0.4
DVHZ	Dannevirke	1.86	46	P	Pn	22 55 47.6	+0.1
WAZ	Wanganui	1.90	13	P	Pb	22 55 51.2	+0.9
ANWZ	Angora Road	1.93	54	P	Pn	22 55 48.3	-0.1
LTZ	Lake Taylor	1.98	233	ePn	Pn	22 55 49.8	+0.6
LTZ	Lake Taylor	1.98	233	P	Pn	22 55 49.7	+0.6
AMCZ	Amberley	2.04	219	P	Pn	22 55 50.1	+0.2
PRHZ	Porangahau	2.15	52	P	Pn	22 55 51.3	0.0
LREZ	Lake Rotokare	2.15	360	P	Pb	22 55 55.7	+1.2
PNHZ	Pukenui	2.17	39	P	Pn	22 55 52.1	+0.5
WPHZ	Waipukurau	2.17	45	P	Pn	22 55 52.1	+0.4
NMEZ	Namu Road	2.23	349	P	Pb	22 55 55.3	-0.6
PREZ	Palmer Road	2.28	355	P	Pn	22 55 54.6	+1.5
KHEZ	Kahui Hut	2.34	352	P	Pb	22 55 56.7	-1.0
OKCZ	Okains Bay	2.34	205	P	Pn	22 55 53.5	-0.5
MTVZ	Mangateitei	2.36	20	P	Pb	22 55 58.1	0.0
CRLZ	Canterbury Las	2.37	214	ePn	Pn	22 55 53.5	-0.9
CRLZ	Canterbury Las	2.37	214	P	Pn	22 55 53.8	-0.6
NBEZ	Newall Road No	2.38	350	P	Pb	22 55 57.1	-1.3
MOVZ	Moawhango	2.42	25	P	Pn	22 55 56.8	+1.5
PKVZ	Pokaka	2.42	17	P	Pb	22 55 58.5	-0.7
DREZ	Durham Road	2.43	356	P	Pb	22 55 58.7	-0.5
PXZ	Pawanui	2.43	50	P	Pn	22 55 54.7	-0.6
PKE	Pukeiti	2.44	352	P	Pb	22 55 58.1	-1.4
BHHZ	Black Hill Sta	2.46	31	P	Pn	22 55 57.0	+1.3
OXZ	Oxford	2.46	225	ePn	Pn	22 55 54.9	-0.8
OXZ	Oxford	2.46	225	P	Pn	22 55 55.1	-0.6
KRHZ	Kereru	2.46	38	P	Pn	22 55 55.9	+0.2
MQZ	McQueen's Vall	2.47	211	ePn	Pn	22 55 54.5	-1.2
MQZ	McQueen's Vall	2.47	211	P	Pn	22 55 54.6	-1.2
INZ	Inchbonnie	2.48	242	P	Pn	22 55 56.5	+0.6
DRZ	Dome Shelter	2.49	21	P	Pb	22 55 59.8	-0.7
WHVZ	Whangaehu Hut	2.49	21	P	Pn	22 55 58.5	+2.3
VRZ	Vera Road	2.50	6	P	Pb	22 55 59.3	-1.1
FWVZ	Far West T-bar	2.51	20	P	Pn	22 55 59.2	+2.7
AKCZ	Akaroa Harbour	2.52	206	P	Pn	22 55 55.8	-0.7
TUVZ	Tukino	2.52	22	P	Pn	22 55 59.6	+2.9
MHEZ	Mangahewa	2.53	358	P	Pb	22 56 01.5	+0.5
NGZ	Ngauruhoe	2.59	21	P	Pn	22 56 00.1	+2.5
KAHZ	Kahuranaki	2.60	47	P	Pn	22 55 57.3	-0.4
WTVZ	West Tongariro	2.65	20	P	Pn	22 56 01.0	+2.6
TWVZ	Taurewa	2.65	17	P	Pn	22 56 01.2	+2.8
KWHZ	Kaweka Forest	2.66	36	P	Pn	22 55 59.5	+1.0
KRVZ	Karewarewa	2.68	21	P	Pn	22 56 01.5	+2.7
MCHZ	McNeill Hill	2.77	39	P	Pn	22 56 00.2	+0.2
KATZ	Kakaramea	2.81	21	P	Pb	22 56 05.0	-0.8
CKHZ	Cape Kidnapper	2.81	47	P	Pn	22 56 00.8	+0.4
RITZ	Rihia Road	2.85	23	P	Pb	22 56 05.6	-0.8
BKZ	Black Stump Fm	2.91	34	ePn	Pn	22 56 02.2	+0.3
BKZ	Black Stump Fm	2.91	34	P	Pn	22 56 02.1	+0.3
RATZ	Rangitukua	2.93	21	P	Pb	22 56 07.7	-0.1
HATZ	Hinemaiaia	3.00	26	P	Pb	22 56 10.7	+1.7
ARHZ	Aropaoanui	3.06	41	P	Pn	22 56 03.9	0.0
WATZ	Wairara	3.07	20	P	Pb	22 56 10.1	-0.1
WVZ	Waitaha Valley	3.10	241	P	Pn	22 56 05.3	+0.9
HIZ	Hauiti	3.11	6	ePg	Pn	22 56 07.8	+3.2
HIZ	Hauiti	3.11	6	P	Pn	22 56 07.6	+3.0
MRHZ	Matea Rd	3.17	29	P	Pn	22 56 05.9	+0.5
RPZ	Rata Peaks	3.25	229	Pn	Pn	22 56 06.0	-0.6
	50nm,0.3s,baz=84,slow=1.8,SNR=125						
RPZ				Pg	Pb	22 56 14.2	+0.9
	225nm,0.3s,baz=345,slow=5.1,SNR=62						
RPZ				Sn	Sn	22 56 43.5	-1.9
	76nm,0.3s,baz=162,slow=20,SNR=7.8						
RPZ				Lg	Lg	22 57 02.8	
	100nm,0.3s,baz=105,slow=18,SNR=7.1						
RPZ	Rata Peaks	3.25	229	P	Pn	22 56 06.3	-0.2
KUTZ	Kaahu Road	3.30	19	P	Pb	22 56 15.1	+1.0
WHHZ	Waihua	3.32	41	P	Pn	22 56 11.0	+3.5
RAHZ	Arahi	3.38	38	P	Pn	22 56 08.3	0.0
ALRZ	Allen Road	3.38	26	P	Pn	22 56 11.8	+3.4
TLZ	Tolley Road	3.39	15	P	Pn	22 56 11.8	+3.4
PRRZ	Plateau Road	3.46	27	P	Pn	22 56 12.4	+3.1
PRRZ				P	Pb	22 56 15.6	-1.2
GRRZ	Galatos Road	3.51	22	P	Pb	22 56 16.9	-0.7
RTZ	Ruatahuna	3.58	34	P	Pn	22 56 14.3	+3.2
HSRZ	Hossack Road	3.58	24	P	Pb	22 56 19.2	+0.3
KNZ	Kokohu	3.59	45	P	Pn	22 56 11.1	0.0
MUGZ	Murupara	3.61	31	P	Pn	22 56 14.2	+2.7
MHGZ	Mahia Peninsul	3.62	48	P	Pn	22 56 11.7	+0.1
RRRZ	Republican Roa	3.64	27	P	Pb	22 56 17.6	-2.3
TARZ	Mount Tarawera	3.73	26	P	Pn	22 56 15.0	+1.8
PRGZ	Paritu Road	3.77	46	P	Pn	22 56 12.7	-1.0
OMRZ	Omania	3.81	24	P	Pb	22 56 21.0	-1.8
RAGZ	Rawiri	3.87	37	P	Pn	22 56 14.0	-1.1
RIGZ	Rimuhau	3.87	42	P	Pn	22 56 13.8	-1.2
FOZ	Fox Glacier	3.91	239	ePn	Pn	22 56 16.3	+0.7
FOZ	Fox Glacier	3.91	239	P	Pn	22 56 16.5	+1.0
URZ	Urewera	3.93	33	Pn	Pn	22 56 15.2	-0.7
	3.7nm,0.3s,baz=258,slow=2.1,SNR=18						
URZ				Pg	Pb	22 56 21.9	-3.0
	19nm,0.3s,baz=208,slow=10.0,SNR=36						
URZ				Lg	Lg	22 57 19.1	
	30nm,0.3s,baz=53,slow=19,SNR=2.2						
URZ	Urewera	3.93	33	ePn	Pn	22 56 15.8	-0.1
URZ	Urewera	3.93	33	P	Pn	22 56 16.4	+0.5
KMRZ	Kaimai	3.94	18	P	Pb	22 56 24.0	-1.0
TOZ	Tahuroa Road	3.96	12	P	Pn	22 56 19.7	+3.4
MARZ	Manawahe	4.01	26	P	Pb	22 56 22.7	-3.7
TKGZ	Te Karaka	4.12	41	P	Pn	22 56 23.1	+4.7
TGRZ	Tauranga	4.13	21	P	Pb	22 56 26.7	-1.5
LBZ	Lake Benmore	4.17	227	ePn	Pn	22 56 19.6	+0.5
LBZ	Lake Benmore	4.17	227	P	Pn	22 56 19.1	-0.1
CNGZ	Carnagh Statio	4.26	44	P	Pn	22 56 21.4	+0.9
TWGZ	Tauwhareparae	4.39	40	P	Pn	22 56 21.5	-0.7
ODZ	Otahua Downs	4.40	218	ePn	Pn	22 56 21.4	-0.9
ODZ	Otahua Downs	4.40	218	P	Pn	22 56 21.3	-1.0
RUGZ	Raukumara Rang	4.42	36	P	Pn	22 56 21.9	-0.8
KBAZ	Karaka Road Bo	4.53	5	P	Pn	22 56 28.6	+4.6
MKAZ	Moumakai	4.54	7	P	Pn	22 56 26.7	+2.5
AWAZ	Awhitu Peninsu	4.54	2	P	Pn	22 56 28.1	+3.8
HAZ	Te Kaha	4.64	35	P	Pn	22 56 25.2	-0.4
ETAZ	East Tamaki Re	4.67	5	P	Pn	22 56 29.3	+3.3
WTAZ	Waiatarua	4.67	1	P	Pn	22 56 31.2	+5.1
EPAZ	Eden Park BICE	4.74	3	P	Pb	22 56 35.1	-3.5
JCZ	Jackson Bay	4.82	237	P	Pn	22 56 27.6	-0.6
RVAZ	Riverhead Bore	4.84	1	P	Pn	22 56 31.7	+3.4
WIAZ	Waiheke Island	4.84	7	P	Pn	22 56 31.9	+3.5
MBAZ	Motutapu North	4.85	5	P	Pn	22 56 32.0	+3.6
KUZ	Kuaotunu	4.96	12	P	Pn	22 56 33.8	+3.8
ABAZ	Army Bay	5.01	4	P	Pn	22 56 34.5	+3.7
MXZ	Matakaoa Point	5.03	38	ePn	Pn	22 56 35.0	+4.0
MXZ	Matakaoa Point	5.03	38	P	Pn	22 56 31.8	+0.8
HHSZ	Highcliff Hill	5.09	212	P	Pn	22 56 31.1	-0.7
WKZ	Wanaka	5.09	229	ePn	Pn	22 56 35.1	+3.3
WKZ	Wanaka	5.09	229	P	Pn	22 56 31.6	-0.3
EAZ	Earnscleugh	5.19	224	P	Pn	22 56 34.1	+0.9
TUZ	Tuapeka	5.56	217	P	Pn	22 56 37.7	-0.4
MSZ	Milford Sound	5.65	235	P	Pn	22 56 41.5	+2.0
MLZ	Mavora Lakes	5.93	229	ePn	Pn	22 56 44.2	+0.9
MLZ	Mavora Lakes	5.93	229	P	Pn	22 56 43.9	+0.6
WHZ	Wether Hill Ro	6.35	225	ePn	Pn	22 56 48.7	-0.4
WHZ	Wether Hill Ro	6.35	225	P	Pn	22 56 49.1	0.0
OUZ	Omahuta	6.42	354	ePn	Pn	22 56 51.2	+1.2
DCZ	Deep Cove	6.54	231	ePn	Pn	22 56 53.5	+1.9
DZM	Mont Dzumac	20.61	339	eLR	LR	23 05 24.4	
	comp=Z,127nm,21.6s						
DZM	Mont Dzumac	20.61	339	LR	LR	23 07 55.3	
	comp=Z,212nm,18.2s,baz=306,slow=37						
STKA	Stephens Creek	27.90	280	P	P	23 01 06.6	+1.0
	3.2nm,0.8s,baz=122,slow=14,SNR=4.4						
STKA				LR	LR	23 11 32.8	
	comp=Z,150nm,18.4s,baz=185,slow=35						
STKA	Stephens Creek	27.90	280	eP	P	23 01 06.6	+1.0
	12nm,1.9s						
CTA	Charters Tower	32.09	303	P	P	23 01 42.8	0.0
	1.3nm,0.4s,baz=122,slow=9.7,SNR=5.2						
HNR	Honiara	34.50	334	LR	LR	23 15 25.1	
	comp=Z,43nm,19.3s,baz=134,slow=35						
TBI	Tubuai	35.17	70	eT	T	23 39 56.8	
	23nm,0.4s						
VNDA	Vanda	36.40	185	P	P	23 02 21.3	+1.8
	1.9nm,0.9s,baz=325,slow=7.3,SNR=3.9						
VNDA				LR	LR	23 16 08.5	
	comp=Z,131nm,18.3s,baz=4.0,slow=34						
SBA	Scott Base	36.49	183	eP	P	23 02 21.8	+1.5
	16nm,1.3s						
AS31	Alice Springs	38.12	285	eP	P	23 02 33.7	-1.1
	2.2nm,0.4s						
AS31				ePcP	PcP	23 04 47.5	-2.2
ASAR	Alice Springs	38.12	285	P	P	23 02 33.5	-1.3
	4.6nm,0.7s,baz=122,slow=6.2,SNR=69						
ASAR				PcP	PcP	23 04 47.5	-2.2
	0.6nm,0.6s,baz=128,slow=3.5,SNR=4.0						
ASAR				LR	LR	23 18 05.9	
	comp=Z,145nm,18.6s,baz=126,slow=36						
PPT2	Papeete2	38.98	63	eLR	LR	23 13 47.0	
	comp=Z,121nm,25.5s						
WB2	Warramunga Arr	40.17	290	eP	P	23 02 50.9	-1.0
	24nm,0.6s						
WR1	Warramunga Arr	40.18	290	eP	P	23 02 51.0	-1.0
WRA	Warramunga Arr	40.18	290	P	P	23 02 51.0	-1.0
	23nm,0.6s,baz=131,slow=7.8,SNR=83						
MTN	Manton Dam	47.28	294	eP	P	23 03 48.4	-0.8
	36nm,1.2s						
QSPA	South Pole Qui	48.52	180	eP	P	23 03 59.6	+1.3
	16nm,0.9s						
TAOE	Nuku Hiva Isla	51.59	64	eLR	LR	23 19 23.7	
	comp=Z,116nm,23.3s						
MAW	Mawson	59.63	204	P	P	23 05 19.5	+0.3
	2.0nm,0.7s,baz=115,slow=7.4,SNR=5.0						
MAW				LR	LR	23 30 10.4	
	comp=Z,237nm,18.9s,baz=103,slow=35						
MAW	Mawson	59.63	204	eP	P	23 05 19.5	+0.3
	3.2nm,1.9s						
GUMO	Guam	61.33	327	LR	LR	23 33 02.3	
	comp=Z,22nm,18.1s,baz=261,slow=37						
SYO	Syowa Base	64.75	196⇓	eP	P	23 05 51.9	-1.5
SYO	Syowa Base	64.75	196⇓	epP	P	23 05 55.4	+2.0
SNAA	Sanae	67.01	181	P	P	23 06 09.1	+1.1
SNAA	Sanae	67.01	181	eP	P	23 06 08.5	+0.4
	10nm,1.1s						
VNA3	Neumayer Olymp	67.42	179	P	P	23 06 11.7	+1.1
VNA1	Neumayer--Stat	68.03	179	P	P	23 06 15.9	+1.5
KSM	Kuching	71.92	289	eP	P	23 06 38.3	-0.9
	7.7nm,0.9s						
GSI	Gunungsitoli	81.05	280	eP	P	23 07 28.2	-2.7
	20nm,0.9s						
NJ2	Nanjing	89.39	316	eP	P	23 08 12.8	+0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	89.42	325	P	P	23 08 12.4	+0.2
	1.6nm,0.8s,baz=143,slow=6.3,SNR=4.7						
KSRS				LR	LR	23 43 29.2	
	comp=Z,14nm,21.4s,baz=195,slow=32						
KS15	Wonju Array Si	89.42	325	eP	P	23 08 12.3	+0.2
	33nm,1.5s						
CM31	Chiang Mai Arr	91.70	293	eP	P	23 08 22.8	-0.5
	14nm,1.4s						
CMAR	Chiang Mai Arr	91.70	293	P	P	23 08 22.8	-0.5
	0.9nm,0.4s,baz=149,slow=3.4,SNR=8.6						
CMAR				LR	LR	23 53 40.0	
	comp=Z,20nm,18.2s,baz=225,slow=38						
KMI	Kunming	93.77	300	P	P	23 08 33.3	+0.4
KMI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PETK	Petropavlovsk-	95.44	350	LR	LR	23 46 36.9	
	comp=Z,31nm,20.3s,baz=131,slow=32						
CD2	Chengdu	97.17	305	eP	P	23 08 48.0	-0.1
CMB	Columbia Colle	99.06	47	eP	Pdif	23 08 55.4	-1.0
	6.3nm,0.6s						
WMQ	Urumqi	115.18	307	ePKP	PKPdf	23 13 55.1	-1.5
WMQ				LR	LR		
	comp=E,290nm,29.3s						
YKA	Yellowknife Ar	118.19	30	PKP	PKPdf	23 14 00.9	-0.7
	1.6nm,0.7s,baz=245,slow=1.5,SNR=10						
YKB5	Yellowknife Ar	118.19	30	ePKPdf	PKPdf	23 14 00.9	-0.8
MK32	Makanchi Array	119.99	308	ePKPdf	PKPdf	23 14 03.5	-2.2
MKAR	Makanchi Array	119.99	308	PKP	PKPdf	23 14 03.5	-2.2
	0.6nm,0.7s,baz=132,slow=2.1,SNR=3.5						
ZALV	Zalesovo Beam	122.05	316	PKP	PKPdf	23 14 06.9	-2.4
	0.4nm,0.4s,baz=126,slow=2.5,SNR=2.7						
ZAA1	Zalesovo Array	122.05	316	ePKPdf	PKPdf	23 14 06.9	-2.5
KURBB	Kurchatov Arra	123.99	310	PKP	PKPdf	23 14 11.6	-1.6
	0.9nm,0.2s,baz=124,slow=1.8,SNR=6.6						
BVAR	Borovoye Array	129.58	311	PKP	PKPdf	23 14 22.7	-1.2
	0.6nm,0.5s,baz=124,slow=0.5,SNR=6.6						
KBZ	Khabaz	144.70	290	PKP	PKPab	23 14 49.4	-1.3
	3.1nm,0.8s,baz=93,slow=4.9,SNR=6.0						
LIC	Lamto	144.76	181	eP	PKPdf	23 14 54.3	+1.3
	40nm,0.6s						
KIC	Kosan Boka	144.89	181	eP	PKPab	23 14 52.8	+0.5
	19nm,0.6s						
ASF	Jabal al Asfar	145.05	268	PKPbc	PKPbc	23 14 51.9	-0.6
	3.5nm,0.9s,baz=135,slow=1.4,SNR=5.4						
TIC	Toumodi	145.18	181	eP	PKPbc	23 14 53.7	+0.4
DBIC	Dimbokro	145.20	181	PKPbc	PKPbc	23 14 53.7	+0.4
	9.5nm,0.6s,baz=141,slow=4.3,SNR=16						
EIL	Elat	145.27	263	PKPbc	PKPbc	23 14 53.9	+0.8
	2.1nm,0.7s,baz=17,slow=9.4,SNR=3.6						
MMAI	Mount Meron Ar	146.56	269	PKPbc	PKPdf	23 14 57.2	+1.6
	1.4nm,0.5s,baz=113,slow=3.3,SNR=4.8						
ARA0	ARCESS Array S	147.69	340	ePKPbc	PKPdf	23 14 57.9	+1.6
ARCES	ARCESS Array B	147.69	340	PKPbc	PKPdf	23 14 57.9	+1.6
	3.2nm,0.6s,baz=48,slow=1.9,SNR=19						
BR101	Keskin Array S	150.37	280	ePKPbc	PKPdf	23 15 05.5	+3.9
BR131	Keskin Array S	150.37	280	ePKPbc	PKPdf	23 15 03.6	+1.9
BRTR	Keskin Array B	150.37	280	PKPbc	PKPdf	23 15 05.5	+3.9
	0.8nm,0.6s,baz=126,slow=4.2,SNR=6.5						
TOA0	Torodi Ar. Sit	150.94	195	ePKPbc	PKPbc	23 15 07.6	-1.2
TORD	Torodi Ar. Bea	150.94	195	PKP	PKPdf	23 15 03.4	+0.3
	1.5nm,1.0s,baz=348,slow=3.6,SNR=5.6						
TORD				PKPbc	PKPbc	23 15 08.5	-0.3
	8.9nm,0.8s,baz=153,slow=1.8,SNR=56						
TOA1	Torodi Ar. Sit	150.95	195	ePKPdf	PKPdf	23 15 03.4	+0.3
FIA0	FINESS Array S	152.49	327	ePKPbc	PKPbc	23 15 09.5	-1.4
FINES	FINESS Array B	152.49	327	PKPbc	PKPbc	23 15 09.5	-1.4
	2.4nm,0.6s,baz=40,slow=2.5,SNR=19						
HFS	Hagfors	157.98	334	PKPab	PKPab	23 15 42.4	-2.4
	2.0nm,0.9s,baz=29,slow=3.3,SNR=5.4						
GEC2	GERESS Array S	164.64	305	ePKPab	PKPab	23 16 14.0	-0.5
GERES	GERESS Array B	164.64	305	PKPab	PKPab	23 16 14.0	-0.5
	0.2nm,0.3s,baz=64,slow=4.5,SNR=4.3						
ESDC	Sonseca Array	177.71	213	PKP	PKPdf	23 15 26.5	+0.6
	1.2nm,0.9s,baz=92,slow=0.9,SNR=8.3						
ESDC				PKPab	PKPab	23 17 12.2	-0.3
	0.6nm,0.7s,baz=111,slow=3.3,SNR=6.1						
PAB	San Pablo	177.74	205	ePKPdf	PKPdf	23 15 25.3	-0.7

ISC 20 22:57:42.5±2.2, 51°37N±0°10×16°06E±0°07, h0^{km}, n11, σ0^{s}71/18, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.55	164	ePg	Pg	22 57 52.0	-1.0
KSP				eSg	Sg	22 58 00.2	+0.2
CHVC	Chvalec	0.78	180	ePG	Pg	22 57 56.8	-0.6
CHVC				eSG	Sg	22 58 08.6	+1.0
OSTC	Ostas	0.82	173	ePG	Pg	22 57 57.5	-0.7
OSTC				eSG	Sg	22 58 09.6	+0.8
	comp=Z,3.6nm,0.3s						
UPC	Upice	0.86	182	ePG	Pg	22 57 58.1	-0.9
UPC				eSG	Sg	22 58 10.4	+0.2
	comp=Z,7.2nm,0.4s						
DPC	Dobruska-Polom	1.03	171	ePG	Pg	22 58 01.9	-0.4
DPC				eSG	Sg	22 58 15.6	0.0
	comp=Z,3.1nm,0.5s						
PVCC	Panska Ves	1.27	229	ePG	Pg	22 58 06.1	-0.6
PVCC				eSG	Sb	22 58 23.9	-0.1
	comp=Z,12nm,0.4s						
GOPC	GO Pecny, Ondr	1.67	210	eSG	Sg	22 58 36.2	+0.2
PRU	Pruhonice	1.69	216	eSG	Sg	22 58 37.8	+1.2
	comp=Z,1.8nm,0.3s						
CLL	Collm	1.92	269	ePg	Pn	22 58 17.0	+0.6
CLL				eSg	Sb	22 58 43.0	+0.2
NKC	Novy Kostel	2.56	245	eSG	Sg	22 59 04.0	-0.6
	comp=Z,3.8nm,0.4s						
KHC	Kasperske Hory	2.75	216	eSG	Sg	22 59 10.2	-0.5

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*IDC **20** 23:03:13.6±18.0, 26°55N×126°23E, h186^{km}±132^{km}, mb3.2/3, mb1 3.1/5, mb1mx2.8/63, mbtmp3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.2/18, Error ellipse: s-maj=212.9km s-min=94.8km az=178.0*
*ISCJB **20** 23:03:25.3±0.6, 27°78N±0°09×126°39E±0°08, h237^{km}±10^{km}, mb3.3/3, Error ellipse: s-maj=17.4km s-min=6.2km az=140.8*
*JMA **20** 23:03:28.5±0.2, 28°00N×126°47E, h207^{km}, M3.5*
ISC 20 23:03:26.0±1.2, 27°8N±0°1×126°38E±0°09, h232^{km}±13^{km}, n23, σ1^{s}69/33, mb3.3/3, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGN	Aguni-jima	1.46	148	P	Pn	23 04 03.6	+1.2
JAGN				S	S	23 04 31.3	+0.6
JKE	Kume jima 2	1.55	166	P	Pn	23 04 04.3	+1.2
JKE				eS	S	23 04 32.9	+0.9
JIH	Iheya	1.62	119	P	Pn	23 04 04.8	+1.2
JIH				eS	S	23 04 32.3	-0.7
JOW	Kunigami	1.96	120	P	Pn	23 04 07.6	+0.9
JOW				S	S	23 04 37.0	-1.4
JNTH	Nagotoyohara	1.96	132	P	Pn	23 04 08.1	+1.4
JNTH				S	S	23 04 38.0	-0.5
JOKE	Okinoerabujima	2.00	103	P	Pn	23 04 07.6	+0.6
JOKE				eS	S	23 04 36.9	-2.2
JYRO	Yoronjima	2.01	113	P	Pn	23 04 07.8	+0.7
JYRO				eS	S	23 04 37.5	-1.7
JJT3	Tamagusuku3	2.10	143	P	Pn	23 04 10.2	+2.2
JJT3				S	S	23 04 41.3	+0.5
JTK	Tokunoshima	2.28	91	P	Pn	23 04 09.9	+0.2
JTK				S	S	23 04 41.6	-2.3
JAMN	Amaminishikomi	2.50	80	P	Pn	23 04 12.0	0.0
JAMN				eS	S	23 04 45.9	-2.1
JAM	Amami Oshima	2.91	78	P	Pn	23 04 16.6	+0.3
JAM				S	S	23 04 53.9	-1.9
JTJ	Tarama	3.52	206	eS	S	23 05 06.6	-2.0

JISG	Ishigakijimahi	3.73	210	*e*S	S	23 05 10.6	-2.5
JIJ	Ishigaki jima	4.00	211	P	Pn	23 04 28.3	-0.8
JIJ				S	S	23 05 15.1	-3.8
JMZ	Minamidaito 2	4.77	114	P	Pn	23 04 40.1	+1.7
JMZ				S	S	23 05 32.9	-2.8
JTN	Tanegashima 3	4.90	54	P	Pn	23 04 40.0	0.0
JTZ	Takazaki	5.75	44	P	Pn	23 04 51.4	+0.8
JNU	Nakatsue	6.54	35	P	Pn	23 05 02.9	+2.2
	0.8nm,0.3s,baz=212,slow=8.7,SNR=9.7						
MJAR	Matsushiro Arr	13.24	46	P	Pn	23 06 27.2	+1.7
	0.0nm,0.3s,baz=232,slow=9.5,SNR=3.2						
TGY	Tagaytay City	14.57	201	LR	LR	23 11 28.9	
	comp=Z,49nm,20.4s,baz=36,slow=37						
SONM	Songino Array	25.32	327	P	P	23 08 32.2	+0.7
	0.5nm,0.6s,baz=141,slow=9.9,SNR=4.5						
MKAR	Makanchi Array	39.24	311	P	P	23 10 29.7	-2.3
	0.3nm,0.3s,baz=98,slow=8.9,SNR=6.7						
KURBB	Kurchatov Arra	42.56	316	P	P	23 10 57.5	-1.3
	0.3nm,0.2s,baz=104,slow=9.0,SNR=4.3						

NNC 20 23:13:02.9±6.7, 36°.17N×69°.30E, h0^{km}, mb3.6, mpv3.4, 3C-2D, Error ellipse: s-maj=69.4km s-min=46.0km az=145.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.99	7	⇑P	Pn	23 14 48.2	+1.8
	0.7nm,0.3s,baz=190,slow=13,SNR=22						
KK31				⇑S	Sn	23 16 08.4	+1.7
	1.1nm,0.3s,baz=192,slow=22,SNR=8.0						
AAK	Ala-Archa	7.61	30	⇑P	Pn	23 14 54.3	-0.8
	1.7nm,0.5s						
AAK				⇓S	Sn	23 16 22.6	+0.5
	2.4nm,0.6s						
AB31	Akbulak array	14.76	335	⇓P	Pn	23 16 30.6	-2.1
	0.3nm,0.4s,baz=166,slow=15,SNR=11						

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*HEL **20** 23:19:06.8, 67°.79N×20°.52E, h0^{km}, ML1.8, Explosion*

UPP 20 23:19:06.3±0.0, 67°.82N×20°.20E, h0^{km}, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.23	271	P	Pg	23 19 10.9	+0.2
RATU				S	Sg	23 19 14.2	+0.5
RATU	Laukkuluspa	0.23	271	*i* P	Pg	23 19 10.9	+0.2
RATU				*i* S	Sg	23 19 14.2	+0.5
KOVU	Salmi	0.40	358	P	Pg	23 19 14.1	+0.1
KOVU				S	Sg	23 19 19.4	+0.2
KOVU	Salmi	0.40	358	P	Sg	23 19 19.4	+0.2
KOVU	Salmi	0.40	358	*i* P	Pg	23 19 14.1	+0.1
KOVU				*i* S	Sg	23 19 19.4	+0.2
NIKU	Nikkaluokta	0.45	277	P	Pg	23 19 14.9	+0.1
NIKU	Nikkaluokta	0.45	277	*i* P	Pg	23 19 14.9	+0.1
LANU	Lannavaara	0.71	70	P	Pg	23 19 19.7	-0.2
LANU	Lannavaara	0.71	70	*i* P	Pg	23 19 19.7	-0.2
DUNU	Dundret	0.72	168	P	Pg	23 19 19.8	-0.2
DUNU	Dundret	0.72	168	*i* P	Pg	23 19 19.8	-0.2
MASU	Masugnsbyn	0.78	117	P	Pg	23 19 21.1	-0.1
MASU	Masugnsbyn	0.78	117	*i* P	Pg	23 19 21.1	-0.1
SALU	Saltoluokta	0.79	236	P	Pg	23 19 21.2	-0.1
SALU	Saltoluokta	0.79	236	*i* P	Pg	23 19 21.2	-0.1
KIF	Kilpisjarvi	1.21	10	*e*PB	Pg	23 19 29.6	+0.1
	baz=190						
KIF				MSG		23 19 44.9	
	comp=Z,12nm,0.2s						
KIF				*e*SB	Sb	23 19 45.7	-0.4
KIF	Kilpisjarvi	1.21	10	*e*P	Pg	23 19 29.6	+0.2
PAJU	Pajala	1.38	124	P	Pg	23 19 31.6	-1.1
PAJU				S	Sg	23 19 49.9	-0.7
PAJU	Pajala	1.38	124	*e*P	Pg	23 19 31.6	-1.1
PAJU				*e*S	Sg	23 19 49.9	-0.7
HEF	Hetta	1.42	64	*e*P	Pn	23 19 32.2	-1.1
	baz=241						
HEF				MSG		23 19 47.0	
	comp=Z,4.8nm,0.2s						
HEF	Hetta	1.42	64	*e*P	Pn	23 19 32.5	-0.8
ERTU	Ertsjaerv	1.49	148	*e*P	Pn	23 19 33.4	-0.9
	baz=328						
ERTU				*e*SN	Sb	23 19 54.2	0.0
KALU	Kalix	2.33	146	*e*PB	Pn	23 19 46.9	+1.1
	baz=325						
SGF	Sodankyl	2.45	96	*e*PB	Pn	23 19 48.6	+1.2
	baz=284						
RNF	Rovaniemi	2.57	116	*e*PB	Pn	23 19 50.7	+1.6
ARE0	ARCESS Array S	2.59	46	*e*P	Pn	23 19 50.6	+1.2
	baz=228						
ARE0				*e*S	Sn	23 20 19.3	-2.3
UMAU	Umeaa	3.96	177	*e*PB	Pb	23 20 15.7	-1.2
	baz=350						

UPP 20 23:19:11.8±0.0, 67°.82N×20°.19E, h0^{km}, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.23	271	P	Pg	23 19 16.3	+0.2
RATU				S	Sg	23 19 19.5	+0.5
LANU	Lannavaara	0.72	71	P	Pg	23 19 25.4	-0.2
DUNU	Dundret	0.72	168	P	Pg	23 19 25.1	-0.4
SALU	Saltoluokta	0.78	236	P	Pg	23 19 26.6	-0.1
MASU	Masugnsbyn	0.79	117	P	Pg	23 19 26.6	-0.2
PAJU	Pajala	1.39	124	P	Pg	23 19 37.0	-1.4

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*ISCJB **20** 23:26:45.6±0.5, 36°.47N±0°.04×71°.21E±0°.06, h188^{km}, mb3.5/6, Error ellipse: s-maj=6.6km s-min=5.8km az=139.1*

*IDC **20** 23:26:45.0±3.2, 36°.27N×71°.34E, h195^{km}±29^{km}, mb3.2/7, mb1 3.2/13, mb1mx3.0/49, mbtmp3.7/13, Error ellipse: s-maj=27.1km s-min=18.7km az=168.0*

*NNC **20** 23:26:46.8±7.9, 36°.92N×70°.82E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=69.9km s-min=48.5km az=153.0*

ISC 20 23:26:45.6±0.7, 36°.44N±0°.07×71°.25E±0°.07, h188^{km}, n31, σ1s49/36, mb3.4/6, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	Uchtor	6.31	23	P	Pn	23 28 18.8	+1.7
	SNR=43						
AAK	Ala-Archa	6.68	21	P	Pn	23 28 23.6	+2.0
	5.0nm,0.3s,baz=190,slow=6.0,SNR=20						
AAK				S	Sn	23 29 36.6	-1.1
	1.5nm,0.3s,baz=311,slow=23,SNR=26						
AAK	Ala-Archa	6.68	21	⇑P	Pn	23 28 23.2	+1.6
	8.6nm,0.5s						
AAK				⇑S	Sn	23 29 35.8	-1.8
	36nm,0.7s						
AAK	Ala-Archa	6.68	21	P	Pn	23 28 23.6	+2.0
	SNR=14						
KK31	Karatay Array	6.68	355	P	Pn	23 28 22.9	+1.4
	4.8nm,0.5s,baz=174,slow=12,SNR=96						
KK31				⇑S	Sn	23 29 33.4	-4.0
	26nm,0.6s,baz=181,slow=22,SNR=22						
KBK	Karagaybulak	6.84	24	P	Pn	23 28 25.8	+2.1
	SNR=11						
ULHL	Ulahol	6.97	32	P	Pn	23 28 26.8	+1.3
	SNR=9.0						
CHMS	Chumysh	7.09	21	P	Pn	23 28 28.8	+2.0
	SNR=7.5						
USP	Ospenovka	7.27	19	P	Pn	23 28 31.4	+2.2
	SNR=7.8						
TKM2	Tokmak 2	7.29	26	⇓P	Pn	23 28 31.0	+1.3
	13nm,0.5s						
TKM2				⇓S	Sn	23 29 50.4	-1.7
	21nm,1.1s						
TKM2	Tokmak 2	7.29	26	P	Pn	23 28 31.3	+1.6
	SNR=8.6						
GEYT	Alibeck	10.58	282	P	Pn	23 29 13.3	+0.8
	0.3nm,0.3s,baz=82,slow=10,SNR=3.9						
GEYT				S	Sn	23 31 09.4	-0.9
	0.4nm,0.3s,baz=296,slow=30,SNR=4.2						
MKAR	Makanchi Array	13.23	35	P	Pn	23 29 45.8	-0.4
	0.5nm,0.3s,baz=218,slow=14,SNR=14						
GKN	Gorkha	14.10	123	*e*P	P	23 29 59.6	+0.2
	22nm,0.3s						
DMN	Daman	14.67	123	*e*P	P	23 30 06.0	+0.1
	8.5nm,0.4s						
KKN	Kakani	14.67	122	*e*P	P	23 30 06.2	+0.3
	21nm,0.5s						
PKIN	Phulchoki	14.89	122	*e*P	P	23 30 08.8	+0.5
	16nm,0.5s						
PKI	Pulchoki	14.90	122	*e*P	P	23 30 08.6	+0.1
	18nm,0.6s						
KURBB	Kurchatov Arra	15.12	18	P	Pn	23 30 08.8	-0.8
	0.1nm,0.3s,baz=204,slow=11,SNR=4.0						
AB31	Akbulak array	15.24	331	P	P	23 30 13.1	+1.5
	2.2nm,0.7s,baz=145,slow=11,SNR=25						
JIRN	Jiri	15.38	120	*e*P	Pn	23 30 13.2	-0.2
	28nm,0.5s						
BVAR	Borovoye Array	16.60	358	P	Pn	23 30 28.0	+0.6
	0.3nm,0.3s,baz=160,slow=12,SNR=7.0						
AKTO	Aktyubinsk	16.94	330	P	Pn	23 30 31.6	+0.2
	0.8nm,0.3s,baz=144,slow=8.4,SNR=14						
AKTO	Aktyubinsk	16.94	330	⇓P	Pn	23 30 31.4	-0.1
	1.0nm,0.4s						
ZALV	Zalesovo Beam	19.89	24	P	P	23 31 03.6	+1.3
	0.6nm,0.3s,baz=205,slow=10,SNR=3.9						
BRTR	Keskin Array B	29.64	288	P	P	23 32 34.9	+1.4
	0.3nm,0.8s,baz=88,slow=5.7,SNR=3.5						
FINES	FINESS Array B	37.65	326	P	P	23 33 41.9	-0.2
	2.3nm,0.9s,baz=99,slow=12,SNR=5.6						
ARCES	ARCESS Array B	41.28	338	P	P	23 34 12.1	+0.1
	4.3nm,1.2s,baz=110,slow=10,SNR=5.2						
NOA	NORSAR Array B	44.55	323	P	P	23 34 37.3	-1.1
	1.0nm,0.8s,baz=100,slow=7.7,SNR=3.4						
TORD	Torodi Ar. Bea	65.92	269	P	P	23 37 10.1	-1.5
	0.4nm,0.5s,baz=44,slow=5.3,SNR=7.8						
ASAR	Alice Springs	84.05	125	P	P	23 38 53.4	-1.8
	0.3nm,0.6s,baz=337,slow=4.7,SNR=5.0						

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*ISCJB **20** 23:28:13.1±0.5, 34°.09N±0°.02×6°.75W±0°.03, h23^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=3.2km az=156.9*

*CNRM **20** 23:28:13.1, 33°.85N×6°.67W, h0^{km}, ml2.3*

*INMG **20** 23:28:13.8±1.1, 33°.84N×6°.90W, h31^{km}, ML1.9, Error ellipse: s-maj=9.4km s-min=3.1km az=58.0*

*MDD **20** 23:28:14.5±0.6, 33°.97N×6°.68W, h0^{km}, mb3.4/9, Error ellipse: s-maj=5.0km s-min=3.7km az=22.0, PRXIMO SIN SOLUCIN*

ISC 20 23:28:13.4±0.9, 34°.00N±0°.03×6°.70W±0°.03, h17^{km}±6^{km}, n38, σ1s37/68, Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTC	Rabat Centre	0.13	266	P	Pg	23 28 16.7	-0.6
RTC				S	Sg	23 28 20.7	+0.7
ZHG	ZHG	0.55	175	P	Pg	23 28 23.6	-0.8
ZHG				S	Sg	23 28 29.9	-1.9
RSA	Sarsar	1.14	39	P	Pg	23 28 36.6	+1.0
RSA				S	Sg	23 28 53.4	+2.9
SICH	Sidi Chahed	1.15	84	P	Pn	23 28 34.6	-0.2
SICH				S	Sg	23 28 50.8	0.0
LCRM	LCR	1.56	101	P	Pb	23 28 41.2	-0.8
LCRM				S	Sb	23 29 01.1	-0.5
CHEFC	Chefchaouen	1.58	45	P	Pg	23 28 45.2	+1.4
CHEFC				S	Sg	23 29 07.3	+3.0
CZD	Col de Zad	1.69	124	P	Pb	23 28 43.5	-0.6
CZD				S	Sb	23 29 05.7	+0.5
SRHM	Skhour des Reh	1.82	214	P	Pg	23 28 49.1	+0.7
SRHM				S	Sb	23 29 11.6	+2.8
MD31	MD31	1.98	124	P	Pn	23 28 46.8	+0.7
MD31				S	Sb	23 29 13.3	0.0
MDT	Midelt	2.11	123	P	Pn	23 28 48.8	+0.8
MDT				S	Sb	23 29 17.9	+0.7
ECEU	Ceuta	2.19	29	S	Sn	23 29 14.3	-1.3
	SNR=7.9						
AKLM	AKL	2.41	77	P	Pb	23 28 55.1	-1.2
AKLM				S	Sn	23 29 20.6	-0.5
EMIJ	Mijas	3.01	31	P	Pn	23 29 00.2	-0.1
	8.2nm,2.1s,SNR=7.9						
EMIJ				S	Sn	23 29 35.0	-0.9
	9.9nm,7.4s,SNR=7.9						
OUZM	OUZ	3.08	181	P	Pn	23 29 02.4	+1.0
OUZM				S	Sn	23 29 39.5	+1.6
PBDV	Barranco-do-Ve	3.39	343	*e*Pn	Pn	23 29 05.4	-0.1
PBDV				*e*Sn	Sn	23 29 44.1	-1.2
PBDV				A	A	23 29 47.2	
	3.5nm,0.8s						
PBDV	Barranco-do-Ve	3.39	343	P	Pn	23 29 05.4	-0.1
PBDV				S	Sn	23 29 44.1	-1.2
	3.5nm,0.8s						
JBK	JBK	3.44	83	P	Pn	23 29 05.4	-1.0
JBK				S	Sn	23 29 46.7	-0.1
PVAQ	Vaqueiros	3.50	347	*e*Pn	Pn	23 29 08.1	+1.1
PVAQ				*e*Sn	Sn	23 29 46.5	-1.4
PVAQ				A	A	23 29 52.5	
	1.8nm,0.1s						
PVAQ	Vaqueiros	3.50	347	P	Pn	23 29 08.1	+1.1
PVAQ				S	Sn	23 29 46.5	-1.4
	1.8nm,0.1s						
EGRO	El Granado	3.59	350	P	Pn	23 29 08.4	+0.2
	8.8nm,1.4s,SNR=7.9						
EGRO				S	Sn	23 29 49.4	-0.7
	1.0nm,0.1s,SNR=7.9						
TTIG	Tnine Tigouga,	3.74	204	P	Pn	23 29 11.6	+1.2
TTIG				S	Sn	23 29 56.0	+1.8
EMIN	Mina Concepcio	3.76	0	P	Pn	23 29 11.2	+0.6
	4.5nm,1.2s,SNR=7.9						
EMIN				S	Sn	23 29 53.4	-1.0
	0.4nm,0.1s,SNR=7.9						
PCVE	Castro Verde	3.79	344	*e*Pn	Pn	23 29 13.1	+2.2
PCVE				*e*Sn	Sn	23 29 54.2	-0.8
PCVE				A	A	23 29 58.8	
	2.6nm,0.5s						
PCVE	Castro Verde	3.79	344	S	Sn	23 29 54.2	-0.8
	2.6nm,0.5s						
ECAB	El Cabril	4.20	14	P	Pn	23 29 16.7	0.0
	1.6nm,0.7s,SNR=9.8						
ECAB				S	Sn	23 30 03.5	-1.8
	0.2nm,0.1s,SNR=7.9						
PNCL	Nicolau / Gran	4.36	341	*e*Pn	Pn	23 29 18.7	-0.2
PNCL				*e*Sn	Sn	23 30 07.6	-1.7
PNCL				A	A	23 30 10.3	
	1.9nm,0.6s						
PNCL	Nicolau / Gran	4.36	341	P	Pn	23 29 18.7	-0.2
PNCL				S	Sn	23 30 07.6	-1.7
	1.9nm,0.6s						
EADA	Adamuz	4.50	22	P	Pn	23 29 21.1	+0.3
	1.6nm,1.2s,SNR=7.9						
EADA				S	Sn	23 30 10.9	-1.8
	0.5nm,0.1s,SNR=7.9						
EQES	Quesada	4.80	37	P	Pn	23 29 25.8	+0.8
	1.9nm,1.4s,SNR=7.9						
EQES				S	Sn	23 30 18.1	-2.3
	0.1nm,0.1s,SNR=7.9						
PMTG	Montargil	5.21	347	*e*Sn	Sn	23 30 28.6	-1.5
PMTG	Montargil	5.21	347	S	Sn	23 30 28.6	-1.5
SESP	Santiago Espad	5.31	38	P	Pn	23 29 32.5	+0.4
	3.1nm,0.8s,SNR=7.9						
PMRV	Marv??o	5.45	354	*e*Pn	Pn	23 29 34.0	+0.2
PMRV				*e*Sn	Sn	23 30 34.2	-1.8
PMRV				A	A	23 30 35.3	
	0.9nm,0.6s						
PMRV	Marv??o	5.45	354	P	Pn	23 29 34.0	+0.2
PMRV				S	Sn	23 30 34.2	-1.8
	0.9nm,0.6s						
PAB	San Pablo	5.85	18	S	Sn	23 30 42.4	-3.6
	3.1nm,7.3s,SNR=7.9						
EPLA	Plasencia	6.08	5	P	Pn	23 29 42.7	+0.3
	0.5nm,0.2s,SNR=5.7						
EPLA				S	Sn	23 30 48.4	-3.1
	2.6nm,6.3s,SNR=7.9						
ETOB	Tobarra	6.23	40	P	Pn	23 29 45.0	+0.5
	6.1nm,2.1s,SNR=7.9						
MVO	Moncorvo	7.16	358	P	Pn	23 29 57.1	-0.2
	2.5nm,1.1s,SNR=7.9						

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*NIED **20** 23:33:00, 38°.40N×142°.10E, h50^{km}, Mw3.7 Best double couple: $M_0$3.95000×10^{14} NP1:ϕ_s124.00000°, δ33.00000°, λ158.00000°. NP2:ϕ_s233.00000°, δ78.00000°, λ59.00000°.*

*ISCJB **20** 23:33:13.3±0.9, 38°.38N±0°.03×142°.14E±0°.08, h46^{km}±8^{km}, mb3.6/4, Error ellipse: s-maj=10.7km s-min=4.9km az=15.8*

*IDC **20** 23:33:13.3±2.4, 38°.28N×142°.53E, h41^{km}±23^{km}, mb3.4/4, mb1 3.6/8, mb1mx3.3/39, mbtmp3.7/8, ML3.0/4, Error ellipse: s-maj=25.9km s-min=11.6km az=105.0*

*JMA **20** 23:33:14.6±0.1, 38°.42N×142°.05E, h45^{km}±1^{km}, M3.8*

JMA Felt I J1.

ISC 20 23:33:13.5±2.4, 38°.38N±0°.04×142°.14E±0°.10, h30^{km}±14^{km}, n28, σ1s61/39, mb3.6/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.53	263	P	Pn	23 33 25.1	+0.1
JIKH				S	Sb	23 33 32.3	+0.4
JIO	Ouri	0.63	277	P	Pn	23 33 26.3	0.0
JIO				S	Sb	23 33 34.2	-0.3
JKMT	Kesennumamotoy	0.68	310	P	Pn	23 33 26.9	-0.1
JKMT				S	Sb	23 33 35.3	-0.7
OFUJ	Ofunato	0.79	333	P	Pn	23 33 28.5	-0.1
OFUJ				S	Sb	23 33 38.6	-0.6
JMK	Ichinoseki	0.92	309	P	Pn	23 33 30.2	-0.2
JMK				*e*S	Sb	23 33 41.4	-1.4
JOU	Okura	1.16	270	P	Pn	23 33 33.7	0.0
JOU				S	Sn	23 33 48.3	-0.2
JMM	Marumori	1.18	245	P	Pn	23 33 33.7	-0.2
JMM				S	Sn	23 33 47.6	-1.3
JOM	Ohasama	1.28	329	P	Pn	23 33 35.5	+0.2
JOM				*e*S	Sn	23 33 50.9	-0.6
JFK	Kawauchi	1.42	225	P	Pn	23 33 37.4	+0.1
JFK				S	Sn	23 33 54.4	-0.6
JYK	Kaneyama	1.50	292	P	Pn	23 33 38.5	+0.2
JYK				S	Sn	23 33 56.6	-0.2
JRG	Rokugo	1.56	311	P	Pn	23 33 39.2	+0.1
JRG				*e*S	Sn	23 33 58.4	+0.1
JYS	Shirataka	1.64	265	P	Pn	23 33 40.6	+0.3
JYS				*e*S	Sn	23 33 59.9	-0.4
JFT	Otama	1.66	240	P	Pn	23 33 41.3	+0.7
JFT				*e*S	Sn	23 34 00.4	-0.5
MJAR	Matsushiro Arr	3.62	241	P	Pn	23 34 09.4	+1.8
	0.2nm,0.3s,baz=54,slow=9.8,SNR=15						
MJAR				S	Sn	23 34 55.5	+6.2
	0.4nm,0.3s,baz=320,slow=18,SNR=5.6						
MAT	Matsushiro	3.62	241	P	Pn	23 34 09.6	+2.0
MAT				*e*S	Sn	23 34 51.2	+1.9
JHJ	Hachijo jima 2	5.58	201	P	Pn	23 34 35.6	+1.1
	3.9nm,0.3s,baz=328,slow=23,SNR=3.6						
JHJ				S	Sn	23 35 34.5	-3.1
	8.7nm,0.3s,baz=83,slow=23,SNR=4.3						
ASAJ	Asahikawa	5.75	3	P	Pn	23 34 37.1	+0.4
	0.8nm,0.3s,baz=190,slow=11,SNR=5.8						
ASAJ				S	Sn	23 35 43.7	+2.1
	0.6nm,0.3s,baz=65,slow=28,SNR=3.6						
USRK	Ussuriysk Ar.	9.60	311	P	Pn	23 35 33.5	+4.0
	0.3nm,0.3s,baz=124,slow=13,SNR=7.1						
H11N2	WAKE ISLAND Hy	28.38	124	T	T	00 09 21.5	
	baz=316,slow=75,SNR=146						
H11N1	WAKE ISLAND Hy	28.39	124	T	T	00 09 22.3	
	baz=316,slow=75,SNR=195						
H11N3	WAKE ISLAND Hy	28.40	124	T	T	00 09 22.9	
	baz=316,slow=75,SNR=180						
H11S1	WAKE ISLAND Hy	29.14	126	T	T	00 10 20.2	
	baz=318,slow=76,SNR=42						
H11S3	WAKE ISLAND Hy	29.14	126	T	T	00 10 18.3	
	baz=318,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	29.16	126	T	T	00 10 19.0	
	baz=318,slow=76,SNR=41						
ZALV	Zalesovo Beam	41.45	311	P	P	23 40 56.3	-0.9
	0.5nm,0.4s,baz=99,slow=9.3,SNR=3.1						
MKAR	Makanchi Array	43.91	301	P	P	23 41 17.4	+0.1
	0.5nm,0.8s,baz=74,slow=9.3,SNR=3.8						
WRA	Warramunga Arr	58.47	189	P	P	23 43 05.6	-1.1
	0.9nm,0.5s,baz=1.7,slow=8.3,SNR=3.2						
ASAR	Alice Springs	62.20	189	P	P	23 43 31.2	-0.9
	0.4nm,0.6s,baz=3.2,slow=5.0,SNR=4.4						

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*ISCJB **20** 23:48:34.2±1.0, 30°.2N±0°.1×140°.3E±0°.3, h139^{km}, mb3.3/5, Error ellipse: s-maj=39.1km s-min=19.2km az=171.2*

*IDC **20** 23:48:34.1±3.2, 30°.15N×140°.33E, h126^{km}±27^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.2/30, mbtmp3.7/7, Error ellipse: s-maj=43.1km s-min=25.2km az=84.0*

ISC 20 23:48:35.6±1.1, 30°.2N±0°.1×140°.4E±0°.3, h139^{km}, n7, σ1s58/7, mb3.4/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.93	351	P	Pn	23 49 19.8	-1.8
	3.5nm,0.3s,baz=102,slow=20,SNR=5.3						
JHJ				S	Sn	23 49 50.4	-6.7
	15nm,0.3s,baz=72,slow=20,SNR=5.3						
KLR	Kul'dur	20.08	343	P	P	23 53 00.2	+2.3
	0.5nm,0.3s,baz=173,slow=4.7,SNR=3.7						
ASAR	Alice Springs	53.94	187	P	P	23 57 44.3	-0.6
	0.2nm,0.5s,baz=359,slow=6.2,SNR=5.7						
FINES	FINESS Array B	74.44	333	P	P	23 59 57.5	-0.6
	1.3nm,0.8s,baz=59,slow=5.4,SNR=9.9						
NVAR	Mina Array Bea	79.85	51	P	P	00 00 29.6	+0.5
	0.6nm,0.9s,baz=304,slow=6.4,SNR=2.5						
BRTR	Keskin Array B	82.71	312	P	P	00 00 44.9	+0.9
	0.3nm,0.6s,baz=76,slow=5.2,SNR=5.1						
TXAR	Lajitas Array	94.99	52	P	P	00 01 43.0	+0.1
	0.1nm,0.5s,baz=301,slow=2.7,SNR=4.0						

TAP 21 00:03:11.9, 24°.39N×121°.47E, h16^{km}±2^{km}, ML2.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNSB	Datong	0.09	297	*e*P	Pg	00 03 16.6	+1.2
	baz=297						
NNSB				*e*S	Sg	00 03 18.0	+0.4
	baz=297						
NNS	Nan Shan	0.11	301	*e*P	Pb	00 03 16.6	+0.9
	baz=301						
NNS				*e*S	Sb	00 03 18.5	+0.3
	baz=301						
ETLH	Xiulin Townshi	0.18	177	P	Pb	00 03 17.5	+0.5
	baz=177						
ETLH				*e*S	Sg	00 03 19.5	+0.1
	baz=177						
YHNB	Yeheng	0.30	343	*e*P	Pb	00 03 20.3	+1.3
	baz=342						
WHF	Hehuan Shan	0.31	218	P	Pb	00 03 19.0	-0.3
	baz=217						
WHF				*e*S	Sb	00 03 24.1	-0.1
	baz=217						
NSK	Sanguang	0.31	340	*e*P	Pb	00 03 20.2	+1.1
	baz=341						
CHGB	Renai	0.42	220	*e*P	Pg	00 03 20.9	+0.3
	baz=220						

TAP 21 00:03:13.7, 24°.52N×121°.82E, h23^{km}, ML2.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao	0.09	17	P	Pb	00 03 18.4	+0.4
	baz=22						
TWC				*e*S	Sb	00 03 21.5	+0.5
	baz=22						
NANB	Nanao	0.11	215	*e*P	Pb	00 03 18.7	+0.5
	baz=80						
NANB				*e*S	Sb	00 03 21.9	+0.8
	baz=80						
NANB	Nanao	0.11	215	*e*P	Pb	00 03 18.7	+0.5
	baz=214						
NANB				*e*S	Sb	00 03 22.1	+0.9
	baz=214						
ENA	Nanau	0.12	218	P	Pb	00 03 18.5	+0.3
	baz=80						
ENA				*e*S	Sb	00 03 22.0	+0.7
	baz=80						
ENA	Nanau	0.12	218	P	Pb	00 03 18.7	+0.5
	baz=214						
ENA				*e*S	Sb	00 03 22.0	+0.8
	baz=214						
TWE	Neicheng	0.24	325	*e*P	Pb	00 03 20.4	+0.7
	baz=327						
TWE				*e*S	Sb	00 03 23.7	-0.1
	baz=327						
ILA	Ilan	0.25	345	*e*S	Sn	00 03 26.0	-1.3
	baz=346						
ENTT	Nioudou	0.26	297	*e*P	Pb	00 03 20.9	+0.9
	baz=297						
ENTT				*e*S	Sb	00 03 25.0	+0.8
	baz=297						
EOS1	EOS1	0.28	84	*e*P	Pb	00 03 20.6	+0.3
	baz=84						
EOS1				*e*S	Sb	00 03 25.9	+1.2
	baz=84						
SLBB	Yuanshan	0.29	324	*e*P	Pb	00 03 21.4	+0.9
	baz=324						
SLBB				*e*S	Sb	00 03 26.6	+1.6
	baz=324						
NDT	Datong Townshi	0.29	286	*e*P	Pb	00 03 21.5	+1.0
	baz=286						

NDT				*e*S	Sb	00 03 25.8	+0.8
	baz=286						
NTC	**Toucheng**	**0.33**	**2**	*e*P	Pb	00 03 21.4	+0.3
	baz=1.0						
NTC				*e*S	Sb	00 03 26.6	+0.5
	baz=1.0						
NACB	**Ninganchiao**	**0.40**	**211**	*e*S	Sb	00 03 28.9	+1.0
	baz=210						
NNSB	**Datong**	**0.41**	**257**	*e*S	Sb	00 03 29.2	+0.9
	baz=257						
NNS	**Nan Shan**	**0.41**	**259**	*e*S	Sb	00 03 29.8	+1.2
	baz=258						
YHNB	**Yeheng**	**0.43**	**290**	*e*P	Pb	00 03 23.7	+0.9
	baz=290						
YHNB				*e*S	Sb	00 03 29.6	+0.7
	baz=290						
YHNB	**Yeheng**	**0.43**	**290**	*e*S	Pb	00 03 23.8	+1.0
	baz=342						
ETLH	**Xiulin Townshi**	**0.44**	**225**	*e*S	Sb	00 03 29.9	+0.8
	baz=224						
NSK	**Sanguang**	**0.45**	**290**	*e*P	Pb	00 03 23.7	+0.6
	baz=290						
NSK				*e*S	Sb	00 03 30.1	+0.7
	baz=290						
NSK	**Sanguang**	**0.45**	**290**	*e*S	Pb	00 03 23.7	+0.6
	baz=341						
TWD	**Chiawan**	**0.48**	**205**	*e*P	Pn	00 03 25.1	-0.2
	baz=204						
TWD				*e*S	Sn	00 03 32.5	-0.5
	baz=204						
NHDH	**Xindian Distri**	**0.52**	**329**	*e*S	Sn	00 03 32.5	-1.3
	baz=328						
WFSB	**Wu-fen Shan**	**0.55**	**356**	*e*P	Pb	00 03 25.4	+0.7
	baz=356						
WFSB				*e*S	Sb	00 03 32.9	+0.6
	baz=356						
WHF	**Hehuan Shan**	**0.63**	**234**	*e*S	Sb	00 03 36.0	+1.1
	baz=233						
YM01	**YM01**	**0.66**	**340**	*e*P	Pn	00 03 27.9	+0.1
	baz=339						
YM01				*e*S	Sn	00 03 37.6	0.0
	baz=339						
YM10	**YM10**	**0.68**	**340**	*e*P	Pn	00 03 28.1	+0.1
	baz=339						
YM10				*e*S	Sb	00 03 36.8	+0.9
	baz=339						
YM04	**YM04**	**0.68**	**338**	*e*P	Pb	00 03 27.3	+0.3
	baz=337						
YM04				*e*S	Sn	00 03 37.5	-0.4
	baz=337						
YM05	**YM05**	**0.68**	**340**	*e*P	Pn	00 03 27.7	-0.3
	baz=340						
YM05				*e*S	Sn	00 03 37.5	-0.6
	baz=340						
TWS1	**Kuangyinshan**	**0.68**	**328**	*e*P	Pn	00 03 28.0	-0.1
	baz=328						
TWS1				*e*S	Sn	00 03 37.3	-0.7
	baz=328						
CHGB	**Renai**	**0.75**	**232**	*e*P	Pb	00 03 27.3	-0.9
	baz=232						
CHGB	**Renai**	**0.75**	**232**	*e*S	Pb	00 03 26.9	-1.3
	baz=220						
ESL	**Shilin**	**0.79**	**207**	*e*S	Sn	00 03 40.7	+0.2
	baz=206						
VWDT	**VWDT**	**0.98**	**219**	*e*S	Sn	00 03 46.9	+1.6
	baz=219						
YULB	**Yu-li**	**1.22**	**203**	*e*S	Sn	00 03 51.2	0.0
	baz=203						

*NIED **21** 00:11:00,45°.20N×150°.90E,h104^{km},Mw4.0 Best double couple: $M_0$1.09000×10^{15} NP1:ϕ_s116.00000°, δ37.00000°,λ-18.00000°. NP2:ϕ_s220.00000°,δ79.00000°, λ-126.00000°.*

*ISCJB **21** 00:11:51.9±0.3,45°.91N±0°.04×151°.18E±0°.05,h100^{km}, mb4.2/36,Error ellipse: s-maj=7.1km s-min=3.0km az=141.0*

*MOS **21** 00:11:53.8±1.3,46°.04N×151°.05E,h118^{km},mb4.3/14, Error ellipse: s-maj=9.6km s-min=6.7km az=62.7*

*SKHL **21** 00:11:53.6±0.7,45°.81N×151°.29E,h118^{km}±10^{km},mb5.2/1*

*NEIC **21** 00:11:55.5±1.1,46°.07N×150°.99E,h115^{km}±7^{km},mb4.4/12, Error ellipse: s-maj=20.0km s-min=13.1km az=156.0*

*IDC **21** 00:11:57.3±2.5,46°.37N×150°.87E,h115^{km}±20^{km}, mb3.8/16,mb1 3.8/21,mb1mx3.6/54,mbtmp4.1/21,MS2.5/1, Ms1 2.5/1,ms1mx2.1/30,Error ellipse: s-maj=29.6km s-min=13.2km az=154.0*

*JMA **21** 00:11:58.6±0.6,45°.21N×150°.91E,h119^{km},M4.2*

ISC 21 00:11:52.4±0.5,**45°.79N**±0°.06×**151°.15E**±0°.06,**h100**^{km}, **n142,σ2^{s}.29**/165,**mb4.2**/39,**5C-4D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.38**	**258***d*	*i*PN	**Pn**	**00 12 33.6**	**+3.8**
KUR				*i* S	**Sn**	**00 13 03.1**	**+4.6**
KUR				pmax	pmax		
	comp=N,767nm,0.2s						
KUR				pmax	pmax		
	comp=E,226nm,0.2s						
KUR				pmax	pmax		
	comp=Z,2μm,0.2s						
KUR				smax	smax		
	comp=E,757nm,0.3s						
KUR				smax	smax		
	comp=N,542nm,0.4s						
KUR	**Kuril'sk**	**2.38**	**258**	*i* P	**Pn**	**00 12 33.0**	**+3.2**
KUR				AMB	AMB	00 12 34.4	
	comp=N,230nm,0.2s						
KUR				AMB	AMB	00 12 34.4	
	comp=N,330nm,0.2s						
KUR				AMB	AMB	00 12 34.4	
	comp=N,220nm,0.2s						
KUR				*i* S	**Sn**	**00 13 03.0**	**+4.6**
KUR				A	A	00 13 04.7	
	comp=N,540nm,0.4s						
KUR				A	A	00 13 04.7	
	comp=N,620nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.15**	**247***c*	*i*PN	**Pn**	**00 12 56.7**	**+3.3**
YUK				*i* S	**Sn**	**00 13 44.1**	**+3.2**
YUK				pmax	pmax		
	comp=N,202nm,0.2s						
YUK				pmax	pmax		
	comp=E,301nm,0.2s						
YUK				pmax	pmax		
	comp=Z,453nm,0.2s						
YUK				smax	smax		
	comp=N,433nm,0.2s						
YUK				smax	smax		
	comp=E,276nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.15**	**247**	*i* P	**Pn**	**00 12 56.8**	**+3.3**
YUK				AMB	AMB	00 12 59.0	
	comp=E,200nm,0.5s						
YUK				AMB	AMB	00 12 59.0	
	comp=E,300nm,0.5s						
YUK				AMB	AMB	00 12 59.0	
	comp=E,250nm,0.5s						
YUK				*i* S	**Sn**	**00 13 44.0**	**+3.2**
YUK				A	A	00 13 46.0	
	comp=E,330nm,0.5s						
YUK				A	A	00 13 46.0	
	comp=E,280nm,0.5s						
LAGR	**Lagunnoye**	**4.19**	**247**	*e*PN	**Pn**	**00 12 57.6**	**+3.6**
LAGR				*e*S	**Sn**	**00 13 45.7**	**+3.9**
LAGR				pmax	pmax		
	comp=Z,320nm,0.3s						
LAGR				pmax	pmax		
	comp=N,106nm,0.1s						
LAGR				pmax	pmax		
	comp=E,142nm,0.2s						
LAGR				smax	smax		
	comp=E,959nm,0.3s						
LAGR				smax	smax		
	comp=N,815nm,0.4s						
LAGR	**Lagunnoye**	**4.19**	**247**	*e*P	**Pn**	**00 12 57.0**	**+3.0**
LAGR				AMB	AMB	00 13 01.0	
	comp=N,110nm,0.5s						
LAGR				AMB	AMB	00 13 01.0	
	comp=N,140nm,0.5s						
LAGR				AMB	AMB	00 13 01.0	
	comp=N,300nm,0.5s						
LAGR				*e*S	**Sn**	**00 13 45.0**	**+3.2**
LAGR				A	A	00 13 51.0	
	comp=N,420nm,0.4s						
LAGR				A	A	00 13 51.0	
	comp=N,240nm,0.4s						
GRPR	**Tuman**	**4.22**	**247**	*e*PN	**Pn**	**00 12 57.1**	**+2.5**
GRPR				*e*S	**Sn**	**00 13 44.8**	**+2.1**
GRPR				pmax	pmax		
	comp=E,95nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,417nm,0.3s						
GRPR				pmax	pmax		
	comp=N,112nm,0.2s						
GRPR				smax	smax		
	comp=N,489nm,0.3s						
GRPR				smax	smax		
	comp=E,430nm,0.3s						
GRPR	**Tuman**	**4.22**	**247**	*e*P	**Pn**	**00 12 57.0**	**+2.5**
GRPR				AMB	AMB	00 12 58.0	
	comp=E,110nm,0.5s						
GRPR				AMB	AMB	00 12 58.0	
	comp=E,100nm,0.5s						
GRPR				AMB	AMB	00 12 58.0	
	comp=E,290nm,0.5s						
GRPR				*e*S	**Sn**	**00 13 44.0**	**+1.3**
GRPR				A	A	00 13 48.0	
	comp=E,280nm,0.4s						
GRPR				A	A	00 13 48.0	
	comp=E,230nm,0.4s						
NEM2	**Nemuro 2**	**4.56**	**240**	P	**Pn**	**00 13 00.6**	**+1.5**
NEM2				*e*S	**Sn**	**00 13 48.9**	**-2.0**
JRA	**Rausu**	**4.67**	**249**	P	**Pn**	**00 13 03.8**	**+3.3**
JNK	**Nakash**	**5.09**	**247**	P	**Pn**	**00 13 09.1**	**+2.9**
JAK	**Akkeshi**	**5.40**	**241**	P	**Pn**	**00 13 11.8**	**+1.3**
JAK				*e*S	**Sn**	**00 14 09.1**	**-2.2**
JTKR	**Abashiri--Toko**	**5.46**	**253**	P	**Pn**	**00 13 14.5**	**+3.3**
JMP	**Maruseppu**	**5.81**	**255**	P	**Pn**	**00 13 19.3**	**+3.2**
JAR	**Ashorobuto**	**5.83**	**247**	P	**Pn**	**00 13 19.6**	**+3.3**
SKR	**Severo-Kuril's**	**5.91**	**32**	*e*PN	**Pn**	**00 13 17.1**	**-0.2**
SKR				*e*S	**Sn**	**00 14 18.7**	**-4.9**
SKR				pmax	pmax		
	comp=Z,100nm,0.9s						
SKR				pmax	pmax		
	comp=Z,62nm,0.6s						
SKR				smax	smax		
	comp=E,69nm,0.2s						
SKR				smax	smax		
	comp=N,61nm,0.4s						
SKR				MLR	MLR		
	comp=Z,100nm,8.0s						
SKR	**Severo-Kuril's**	**5.91**	**32**	*e*P	**Pn**	**00 13 17.3**	**0.0**
SKR				AMB	AMB	00 13 19.0	
	comp=Z,100nm,0.9s						
SKR				AMB	AMB	00 13 19.0	
	comp=Z,60nm,0.6s						
SKR				*e*S	**Sn**	**00 14 20.2**	**-3.4**
SKR				A	A	00 14 25.0	
	comp=Z,60nm,0.4s						
SKR				A	A	00 14 25.0	
	comp=Z,70nm,0.4s						
YSS	**Yuzh-Sakhalins**	**5.93**	**284**	*e*Pn	**Pn**	**00 13 19.0**	**+1.4**
YSS	**Yuzh-Sakhalins**	**5.93**	**284**⇑	*e*PN	**Pn**	**00 13 21.4**	**+3.9**
YSS				*e*S	**Sn**	**00 14 28.7**	**+4.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				smax	smax		
	comp=E,10.0nm,1.0s						
YSS				smax	smax		
	comp=E,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**5.93**	**284**	*e*P	**Pn**	**00 13 21.5**	**+3.9**
YSS				AMB	AMB	00 13 22.0	
	comp=E,20nm,0.5s						
YSS				*e*S	**Sn**	**00 14 26.9**	**+2.9**
YSS				A	A	00 14 32.0	
	comp=E,10.0nm,0.8s						
YSS				A	A	00 14 32.0	
	comp=E,20nm,0.8s						
JOB	**Onbets**	**5.99**	**244**	P	**Pn**	**00 13 20.7**	**+2.3**
JOB				*e*S	**Sn**	**00 14 24.5**	**-1.0**
JKK2	**Kamakawa 2**	**6.28**	**255**	P	**Pn**	**00 13 25.9**	**+3.6**
JKA	**Kamikawa-asahi**	**6.29**	**258**	*e*P	**Pn**	**00 13 25.8**	**+3.2**
ASAJ	**Asahikawa**	**6.30**	**258**	P	**Pn**	**00 13 25.8**	**+3.2**
	comp=E,1.9nm,0.3s,baz=86,slow=16,SNR=30						
ASAJ	**Asahikawa**	**6.30**	**258**	P	**Pn**	**00 13 26.7**	**+4.1**
JCH	**Churui**	**6.44**	**243**	P	**Pn**	**00 13 26.3**	**+1.8**
JCH				*e*S	**Sn**	**00 14 34.9**	**-1.6**
ERM	**Erimo**	**6.90**	**240**	*e*Pn	**Pn**	**00 13 34.2**	**+3.5**
ERM	**Erimo**	**6.90**	**240**	*e*PN	**Pn**	**00 13 34.2**	**+3.5**
JEM	**Erimo**	**6.90**	**240**	P	**Pn**	**00 13 33.2**	**+2.5**
UGL	**Uglegorsk**	**6.98**	**301**	*e*P	**Pn**	**00 13 34.4**	**+2.5**
UGL				AMB	AMB	00 13 36.8	
	comp=E,20nm,0.8s						
UGL				*e*S	**Sn**	**00 14 50.4**	**+0.7**
UGL				A	A	00 14 54.3	
	comp=E,5μm,0.5s						
UGL				A	A	00 14 54.3	
	comp=E,80nm,0.5s						
JBT2	**Biratori 2**	**6.99**	**248**	P	**Pn**	**00 13 34.5**	**+2.5**
JBT2				*e*S	**Sn**	**00 14 50.0**	**+0.1**
JNBK	**Urakawa-nobuka**	**7.00**	**243**	P	**Pn**	**00 13 33.2**	**+1.1**
JNBK				*e*S	**Sn**	**00 14 47.0**	**-3.1**
TYV	**Tymovskoe**	**7.60**	**315**	*e*P	**Pn**	**00 13 42.2**	**+1.9**
TYV				AMB	AMB	00 13 44.5	
	comp=E,10.0nm,0.7s						
JNB	**Noboribetsu**	**8.00**	**249**	P	**Pn**	**00 13 47.9**	**+2.2**
JNB				*e*S	**Sn**	**00 15 13.4**	**-1.0**
JKB	**Kayabe**	**8.29**	**246**	P	**Pn**	**00 13 50.3**	**+0.6**
JKB				*e*S	**Sn**	**00 15 16.7**	**-4.8**
PEA0B	**Petropavlovsk-**	**8.47**	**28**	*e*Pn	**Pn**	**00 13 51.6**	**-0.5**
PETK	**Petropavlovsk-**	**8.47**	**28**	P	**Pn**	**00 13 52.0**	**-0.1**
	comp=E,0.3nm,0.3s,baz=70,slow=2.8,SNR=7.7						
PETK	**Petropavlovsk-**	**8.47**	**28**	PN	**Pn**	**00 13 52.0**	**-0.1**
PEA1	**Petropavlovsk-**	**8.48**	**28**	*e*Pn	**Pn**	**00 13 52.0**	**-0.2**
JYM2	**Yakumo 2**	**8.60**	**249**	P	**Pn**	**00 13 55.5**	**+1.6**
PET	**Petropavlovsk**	**8.73**	**31**	*e*Pn	**Pn**	**00 13 56.1**	**+0.5**
PET	**Petropavlovsk**	**8.73**	**31**	*e*PN	**Pn**	**00 13 56.1**	**+0.5**
PET	**Petropavlovsk**	**8.73**	**31**	*e*P	**Pn**	**00 13 56.1**	**+0.5**
JSR	**Shiriuchi**	**8.87**	**245**	P	**Pn**	**00 13 59.0**	**+1.4**
JANG	**Nango**	**8.89**	**236**	P	**Pn**	**00 13 57.0**	**-0.8**
JTM	**Tenmabayashi**	**8.89**	**239**	P	**Pn**	**00 13 57.4**	**-0.5**
JTM				*e*S	**Sn**	**00 15 29.7**	**-6.5**
OFUJ	**Ofunato**	**9.70**	**230**	P	**Pn**	**00 14 08.2**	**-0.6**
JRG	**Rokugo**	**10.04**	**234**	P	**Pn**	**00 14 13.9**	**+0.3**
MJA0	**Matsu Arr-Jizo**	**13.40**	**231**	*e*P	**Pn**	**00 14 59.0**	**+0.6**
MAJO	**Matsushiro**	**13.42**	**231**	*e*Pn	**Pn**	**00 14 59.1**	**+0.4**
MAJO	**Matsushiro**	**13.42**	**231**⇓	*e*P	**P**	**00 15 02.8**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**13.42**	**231**	P	**Pn**	**00 14 59.1**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=26,slow=13,SNR=7.6						
KLR	**Kul'dur**	**13.55**	**292**	P	**Pn**	**00 15 00.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=103,slow=19,SNR=2.8						
KLR	**Kul'dur**	**13.55**	**292**⇓	*e*PN	**Pn**	**00 15 01.6**	**+1.3**
KLR	**Kul'dur**	**13.55**	**292**	*e*P	**Pn**	**00 15 01.6**	**+1.3**
USRK	**Ussuriysk Ar.**	**13.66**	**270**	P	**Pn**	**00 15 03.6**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=51,slow=14,SNR=4.1						
EKMR	**Ekimchan**	**13.88**	**308**	*e*P	**Pn**	**00 15 03.5**	**-1.0**
BMKR	**Bomnak**	**16.77**	**310**	*e*P	**P**	**00 15 41.0**	**-0.4**
BMKR				AMB	AMB	00 15 44.0	
	comp=Z,4.0nm,0.8s						
SEY	**Seymchan**	**17.19**	**2**	P	**Pn**	**00 15 43.9**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=149,slow=11,SNR=5.8						
ZEA	**Zeya**	**17.31**	**306**	*e*P	**P**	**00 15 46.0**	**-1.3**
KROS	**Kirovskiy**	**17.68**	**308**	*e*P	**Pn**	**00 15 52.0**	**0.0**
KROS				AMB	AMB	00 15 55.4	
	comp=Z,60nm,0.8s						
KSRS	**Korea Array**	**19.21**	**253**	P	**Pn**	**00 16 13.8**	**+3.5**
	comp=Z,0.3nm,0.3s,baz=55,slow=9.3,SNR=5.9						
KSRS				LR	LR	00 22 31.9	
	comp=Z,14nm,19.0s,baz=230,slow=33						
YAK	**Yakutsk**	**20.44**	**330**	*e*P	**P**	**00 16 20.0**	**-1.3**
	comp=Z,15nm,0.5s						
YAK	**Yakutsk**	**20.44**	**330**	*e*P	**P**	**00 16 22.0**	**+0.7**
YAK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YAK	**Yakutsk**	**20.44**	**330**	*e*P	**P**	**00 16 22.0**	**+0.7**
BILL	**Bilibino**	**23.64**	**14**⇑	*e*P	**P**	**00 16 56.3**	**+2.2**
BILL				*e**PP	**sP**	**00 17 21.1**	**-5.7**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BILL	**Bilibino**	**23.64**	**14**	*e*P	**P**	**00 16 56.3**	**+2.2**
TIXI	**Tiksi**	**28.02**	**345**	P	**P**	**00 17 30.7**	**-2.8**
	comp=Z,3.7nm,0.6s,baz=160,slow=7.4,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	**29.06**	**148**	T	T	00 49 29.6	
	baz=337,slow=76,SNR=616						
H11N1	**WAKE ISLAND Hy**	**29.07**	**148**	T	T	00 49 30.6	
	baz=337,slow=76,SNR=486						
H11N3	**WAKE ISLAND Hy**	**29.07**	**148**	T	T	00 49 31.0	
	baz=337,slow=76,SNR=505						
H11S1	**WAKE ISLAND Hy**	**30.11**	**150**	T	T	00 50 45.9	
	baz=350,slow=76,SNR=581						
H11S3	**WAKE ISLAND Hy**	**30.12**	**150**	T	T	00 50 01.2	
	SNR=422						
H11S2	**WAKE ISLAND Hy**	**30.13**	**150**	T	T	00 50 48.8	
	baz=340,slow=76,SNR=376						
SONA0	**Songino Array**	**30.38**	**290**	*e*P	**P**	**00 17 54.1**	**-0.6**
SONM	**Songino Array**	**30.38**	**290**	P	**P**	**00 17 54.2**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=72,slow=4.7,SNR=2.2						
SDPT	**Sand Point**	**31.58**	**55**	*e*P	**P**	**00 18 05.9**	**+0.8**
	comp=Z,39nm,1.0s						
WHN	**Wuhan**	**32.37**	**255**	P	**P**	**00 18 10.9**	**-1.3**
COLA	**College**	**37.73**	**38**⇑	*e*P	**P**	**00 18 58.8**	**+1.0**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAA1	**Zalesovo Array**	**42.07**	**306**	*e*PcP	**PcP**	**00 21 27.5**	**+0.7**
ZALV	**Zalesovo Beam**	**42.07**	**306**	PcP	**PcP**	**00 21 27.5**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=82,slow=1.8,SNR=4.1						
INK	**Inuvik**	**43.19**	**32**	P	**P**	**00 19 43.6**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=279,slow=4.8,SNR=3.8						
MK32	**Makanchi Array**	**46.17**	**297**	*e*P	**P**	**00 20 06.3**	**-0.4**
MKAR	**Makanchi Array**	**46.17**	**297**	P	**P**	**00 20 06.3**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=69,slow=8.2,SNR=16						
KURK	**Kurchatov**	**46.76**	**304**⇓	*e*P	**P**	**00 20 10.0**	**-1.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.8s						
KURK	**Kurchatov**	**46.76**	**304**	*e*P	**P**	**00 20 10.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**50.82**	**255**	P	**P**	**00 20 45.8**	**+3.1**
	comp=Z,1.0nm,0.3s,baz=39,slow=7.3,SNR=4.0						
RES	**Resolute Bay**	**52.17**	**18**	P	**P**	**00 20 52.2**	**+0.2**
	comp=Z,6.1nm,0.8s,baz=321,slow=8.4,SNR=5.2						
YKA	**Yellowknife Ar**	**52.50**	**36**	P	**P**	**00 20 55.6**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=299,slow=7.0,SNR=2.8						
YKB5	**Yellowknife Ar**	**52.50**	**36**	*e*P	**P**	**00 20 55.6**	**+1.0**
ARU	**Arti**	**54.80**	**317***c*	*i*P	**P**	**00 21 09.8**	**-1.6**
ARU				S	**S**	**00 28 41.4**	**-2.9**
ARU				SS	**SS**	**00 32 18.4**	**-10**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARU	**Arti**	**54.80**	**317**	*e*P	**P**	**00 21 10.4**	**-1.0**
ARA0	**ARCESS Array S**	**58.30**	**340**	*e*P	**P**	**00 21 34.5**	**-1.7**
ARCES	**ARCESS Array B**	**58.30**	**340**	P	**P**	**00 21 34.5**	**-1.7**
	comp=Z,2.7nm,0.8s,baz=36,slow=6.3,SNR=5.3						
FIA0	**FINESS Array S**	**64.32**	**334**	*e*P	**P**	**00 22 15.2**	**-1.5**
FIA0	**FINESS Array S**	**64.32**	**334**	*e*P	**P**	**00 22 15.2**	**-1.5**
FINES	**FINESS Array B**	**64.32**	**334**	P	**P**	**00 22 15.2**	**-1.5**
	comp=Z,1.9nm,0.7s,baz=45,slow=8.4,SNR=11						
FINES	**FINESS Array B**	**64.32**	**334**	*i* P	**P**	**00 22 15.1**	**-1.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GEYT	**Alibeck**	**65.92**	**300**	P	**P**	**00 22 28.6**	**+1.1**
	comp=Z,3.7nm,0.6s,baz=45,slow=2.3,SNR=9.3						
NB2	**NORSAR Subarra**	**68.68**	**340**	P	**P**	**00 22 43.7**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=30,slow=6.5						
NB200	**NORSAR Array S**	**68.68**	**340**	*e*P	**P**	**00 22 43.8**	**-0.8**
NOA	**NORSAR Array B**	**68.68**	**340**	P	**P**	**00 22 43.8**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=29,slow=6.6,SNR=18						
KIV	**Kislovodsk**	**70.48**	**313**	*e*P	**P**	**00 22 54.3**	**-1.7**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV	**Kislovodsk**	**70.48**	**313**	*e*P	**P**	**00 22 53.4**	**-2.6**
KBZ	**Khabaz**	**70.53**	**313**	P	**P**	**00 22 57.0**	**+0.8**
	comp=Z,3.8nm,0.9s,baz=116,slow=3.2,SNR=6.6						
KBZ	**Khabaz**	**70.53**	**313**	P	**P**	**00 22 57.0**	**+0.8**
AKASG	**Malin Array Be**	**71.57**	**325**	P	**P**	**00 23 01.2**	**-1.1**
	comp=Z,1.6nm,0.4s,baz=35,slow=6.4,SNR=8.8						
MORC	**Moravsky Berou**	**76.64**	**331**	*e*P	**P**	**00 23 32.6**	**+0.7**
CLL	**Collm**	**76.76**	**335**	*i* P	**P**	**00 23 31.7**	**-0.7**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**76.76**	**335**	*i* P	**P**	**00 23 31.7**	**-0.7**
	comp=Z,5.0nm,0.9s						
CLL				*e*PP	**PP**	**00 26 26.0**	**+0.5**
VRAC	**Vranov**	**77.36**	**331**	*e*P	**P**	**00 23 37.0**	**+1.1**
JAVC	**Velka Javorina**	**77.38**	**331**	*e*P	**P**	**00 23 37.8**	**+1.7**
KRUC	**Moravsky**	**77.64**	**331**	*e*P	**P**	**00 23 38.2**	**+0.8**
BR101	**Keskin Array S**	**78.14**	**316**	*e*P	**P**	**00 23 41.4**	**+0.8**
BRTR	**Keskin Array B**	**78.14**	**316**	P	**P**	**00 23 41.4**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=76,slow=4.6,SNR=8.1						
KHC	**Kasperske Hory**	**78.49**	**333**	*e*P	**P**	**00 23 42.4**	**+0.2**
	comp=Z,1.5nm,0.8s						
KHC	**Kasperske Hory**	**78.49**	**333**	*e*P	**P**	**00 23 42.4**	**+0.2**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	**Kasperske Hory**	**78.49**	**333**	*e*P	**P**	**00 23 43.0**	**+0.8**
I49A	**Point Hope**	**78.65**	**37**	*e*P	**P**	**00 23 43.9**	**+0.8**
	comp=Z,45nm,0.8s						
GEC2	**GERESS Array S**	**78.70**	**333**	*e*P	**P**	**00 23 43.7**	**+0.2**
	comp=Z,12nm,1.9s						
GEC2	**GERESS Array S**	**78.70**	**333**	*e*P	**P**	**00 23 43.7**	**+0.2**
GEC2				pmax	pmax		
	comp=Z,12nm,1.9s						
GERES	**GERESS Array B**	**78.70**	**333**	P	**P**	**00 23 44.0**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=30,slow=6.2,SNR=7.9						
CONA	**Conrad Observa**	**78.79**	**331**	*i* P	**P**	**00 23 44.8**	**+0.8**
	comp=Z,2.6nm,0.8s						
LTX	**Lajitas**	**79.15**	**59**	*e*P	**P**	**00 23 47.8**	**+1.6**
LTX				*e*pP	**pP**	**00 24 15.8**	**+4.1**
LTX	**Lajitas**	**79.15**	**59**	*e*P	**P**	**00 23 47.8**	**+1.6**
LTX				*e**PP	**pP**	**00 24 15.8**	**+4.1**
TX31	**Lajitas Ar. Si**	**79.15**	**59**	*e*P	**P**	**00 23 47.5**	**+1.3**
	comp=Z,12nm,1.9s						
TXAR	**Lajitas Array**	**79.15**	**59**	P	**P**	**00 23 47.8**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=301,slow=4.7,SNR=12						
TXAR				pP	**pP**	**00 24 15.8**	**+4.1**
	comp=Z,0.3nm,0.6s,baz=304,slow=4.5,SNR=4.5						
ARSA	**Arzberg**	**79.50**	**331**	*i* P	**P**	**00 23 48.4**	**+0.7**
	comp=Z,1.1nm,0.8s						
SOKA	**Soboth**	**80.16**	**331**	*i* P	**P**	**00 23 51.7**	**+0.4**
	comp=Z,2.7nm,0.9s						
KBA	**Koelnbreinsper**	**80.37**	**332**	*e*P	**P**	**00 23 53.6**	**+1.0**
	comp=Z,1.0nm,0.5s						
WATA	**Walderalm**	**80.71**	**333**	*e*PcP	**P**	**00 23 55.4**	**+1.0**
	comp=Z,2.0nm,0.5s						
ALN	**Alexandroupoli**	**80.74**	**321**	*e*P	**P**	**00 23 54.1**	**-0.3**
	comp=Z,5.8nm,1.3s						
ALN	**Alexandroupoli**	**80.74**	**321**	*e*P	**P**	**00 23 54.1**	**-0.3**
ALN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WTTA	**Wattenberg**	**80.75**	**333**	*e*P	**P**	**00 23 55.5**	**+0.8**
	comp=Z,1.7nm,0.4s						
BFO	**Black Forest**	**80.79**	**336**	*e*P	**P**	**00 23 54.4**	**-0.2**
	comp=Z,6.0nm,1.4s						
BFO	**Black Forest**	**80.79**	**336**	*e*P	**P**	**00 23 54.4**	**-0.2**
BFO				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MOTA	**Moosalm**	**80.85**	**334**	*e*PcP	**P**	**00 23 56.4**	**+1.3**
	comp=Z,2.0nm,0.7s						
SQTA	**Sankt Quirin**	**80.92**	**334**	*i* PcP	**P**	**00 23 56.4**	**+0.9**
	comp=Z,1.4nm,0.6s						
MEDO	**Medina**	**81.07**	**34**	*e*P	**P**	**00 23 56.5**	**+0.4**
	comp=Z,13nm,0.8s						
ECH	**Echery**	**81.22**	**337**	*e*P	**P**	**00 23 56.4**	**-0.5**
	comp=Z,6.5nm,1.4s						
ECH	**Echery**	**81.22**	**337**	*e*P	**P**	**00 23 56.4**	**-0.5**
ECH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TUE	**Stuetta**	**82.17**	**334**	*e*P	**P**	**00 24 02.0**	**-0.1**
	comp=Z,2.8nm,0.9s						

*IDC **21** 00:17:07.2±2.0,8°.34S×117°.23E,h0^{km},mb3.9/5, mb1 4.0/6,mb1mx3.7/35,mbtmp3.9/6,ML3.5/1,MS3.3/1, Ms1 3.5/1,ms1mx2.5/36,Error ellipse: s-maj=50.8km s-min=22.6km az=70.0*

*ISCJB **21** 00:17:09.8±1.2,8°.35S±0°.09×117°.2E±0°.2,h33^{km},mb3.9/4, MS3.2/1,Error ellipse: s-maj=22.8km s-min=12.4km az=12.1*

ISC 21 00:17:12.2±1.6,**8°.4S**±0°.1×**117°.3E**±0°.2,**h35**^{km},**n7,σ0^{s}.48**/7, **mb3.9**/4,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**4.14**	**37**	Pn	**Pn**	**00 18 12.5**	**-0.5**
	3.1nm,0.3s,baz=195,slow=1.8,SNR=5.8						
KAPI				Sn	**Sn**	**00 19 00.7**	**+0.4**
	20nm,0.3s,baz=44,slow=22,SNR=20						
WRA	**Warramunga Arr**	**20.15**	**127**	P	**P**	**00 21 44.0**	**+0.4**
	3.3nm,0.4s,baz=294,slow=12,SNR=17						
ASAR	**Alice Springs**	**22.05**	**136**	P	**P**	**00 22 03.8**	**-0.2**
	2.0nm,0.7s,baz=314,slow=8.8,SNR=19						
CMAR	**Chiang Mai Arr**	**32.20**	**326**	LR	LR	00 37 33.3	
	comp=Z,50nm,18.4s,baz=184,slow=38						
KSRS	**Korea Array**	**46.65**	**12**	P	**P**	**00 25 37.5**	**+0.2**
	1.1nm,0.8s,baz=187,slow=8.8,SNR=4.2						
USRK	**Ussuriysk Ar.**	**53.98**	**13**	P	**P**	**00 26 32.3**	**-0.3**

	1.8nm,0.7s,baz=186,slow=1.9,SNR=4.5						
SONM	Songino Array	56.77	351	P	P	00 26 53.1	+0.2
	0.8nm,0.7s,baz=168,slow=9.1,SNR=4.3						

IDC ***21*** *00:21:21.8±1.0, 41°.54S×174°.38E, h0^{km}, mb4.0/3, mb1 4.1/5, mb1mx3.8/27, mbtmp3.9/5, ML3.5/2, Error ellipse: s-maj=30.7km s-min=19.0km az=128.0*
WEL ***21*** *00:21:24.1, 42°S±4°×17°4E±°, h5^{km}, M4.0/7, ML4.6/14, MLv4.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISCJB ***21*** *00:21:25.9±2.0, 41°.73S±0°.04×174°.43E±0°.04, h15^{km}±17^{km}, mb4.0/3, Error ellipse: s-maj=7.0km s-min=4.1km az=159.8*
ISC 21 00:21:24.8±0.9**, 41°.66S**±0°.03×**174°.38E**±0°.03**, h17**^{km}±6^{km}**, n94, σ1s.45**/99**, mb4.1**/3**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.15	234	P	Pg	00 21 29.1	+0.1
CMWZ				S	Sg	00 21 32.5	+0.9
BSWZ	Blackbirch Sta	0.38	262	P	Pg	00 21 32.3	-0.3
TUWZ	Tuamarina	0.40	305	P	Pg	00 21 32.2	-0.8
TUWZ				S	Sg	00 21 38.2	-0.3
SNZO	South Karori	0.43	35	eP	Pg	00 21 33.3	-0.2
BHW	Baring Head	0.45	56	P	Pg	00 21 33.9	+0.1
TCW	Tory Channel	0.46	350	P	Pg	00 21 33.2	-0.8
TCW				S	Sg	00 21 39.3	-0.9
PLWZ	Palliser	0.66	82	P	Pg	00 21 38.5	+0.6
MSWZ	Moikau Station	0.70	70	P	Pg	00 21 38.7	+0.3
CAW	Cannon Point	0.76	43	P	Pb	00 21 39.3	-0.2
PAWZ	Paruwai Farm	0.83	71	P	Pg	00 21 41.3	+0.3
NNZ	Nelson	0.87	300	P	Pb	00 21 40.6	-0.9
DUWZ	D'Urville Isla	0.93	338	P	Pb	00 21 41.6	-0.8
KHZ	Kahutara	0.98	219	ePn	Pg	00 21 44.1	+0.3
KHZ	Kahutara	0.98	219	P	Pg	00 21 44.3	+0.4
KHZ	Kahutara	0.98	219	P	Sn	00 21 58.8	+1.5
MTW	Mount Morrison	0.98	60	P	Pn	00 21 43.6	-0.2
TRWZ	Traveller	1.02	75	P	Pn	00 21 44.2	-0.1
OGWZ	Otaki Gorge	1.03	36	P	Pn	00 21 44.3	-0.3
THZ	Tophouse	1.11	264	ePn	Pg	00 21 46.2	-0.1
THZ	Tophouse	1.11	264	P	Pg	00 21 46.0	-0.3
THZ	Tophouse	1.11	264	P	Sn	00 22 01.0	+0.4
HOWZ	Holdsworth Sta	1.15	49	P	Pb	00 21 46.4	+0.2
TMWZ	Te Maipa	1.27	65	P	Pn	00 21 47.6	-0.2
MRZ	Mangatainoka R	1.35	43	P	Pb	00 21 49.2	-0.4
TIWZ	Tintock	1.44	53	P	Pn	00 21 50.0	-0.2
CPWZ	Castlepoint	1.56	62	P	Pn	00 21 52.2	+0.3
OHWZ	Ohakea	1.62	26	P	Pb	00 21 54.7	+0.5
QRZ	Quartz Range	1.62	300	P	Pn	00 21 50.8	-1.9
PRWZ	Pori Road	1.63	48	P	Pn	00 21 52.9	+0.1
POWZ	Post Office Ro	1.65	40	P	Pn	00 21 53.4	+0.4
BFZ	Birch Farm	1.71	56	eP	Pn	00 21 53.1	-0.9
BFZ	Birch Farm	1.71	56	P	Pn	00 21 53.4	-0.5
DVHZ	Dannevirke	1.92	45	P	Pn	00 21 56.3	-0.4
WAZ	Wanganui	1.96	14	P	Pb	00 22 00.4	+0.4
ANWZ	Angora Road	1.99	54	P	Pn	00 21 57.5	-0.2
LREZ	Lake Rotokare	2.20	0	P	Pg	00 22 05.7	-1.3
PNHZ	Pukenui	2.23	39	P	Pn	00 22 00.9	-0.2
WPHZ	Waipukurau	2.23	45	P	Pn	00 22 00.9	-0.1
NMEZ	Namu Road	2.28	350	P	Pb	00 22 06.2	+0.7
PREZ	Palmer Road	2.32	356	P	Pb	00 22 06.6	+0.3
KHEZ	Kahui Hut	2.38	353	P	Pb	00 22 06.3	-0.9
MTVZ	Mangateitei	2.42	20	P	Pb	00 22 07.9	0.0
NBEZ	Newall Road No	2.42	351	P	Pb	00 22 06.9	-1.1
DREZ	Durham Road	2.47	357	P	Pb	00 22 08.1	-0.7
PKVZ	Pokaka	2.48	18	P	Pb	00 22 06.9	-2.1
PKE	Pukeiti	2.48	353	P	Pb	00 22 07.2	-1.8
MOVZ	Moawhango	2.48	25	P	Pn	00 22 05.7	+1.1
PXZ	Pawanui	2.49	50	P	Pn	00 22 03.4	-1.1
BHHZ	Black Hill Sta	2.52	31	P	Pn	00 22 05.9	+0.8
KRHZ	Kereru	2.52	38	P	Pn	00 22 04.6	-0.4
DRZ	Dome Shelter	2.55	21	P	Pb	00 22 11.2	+1.0
WHVZ	Whangaehu Hut	2.55	22	P	Pn	00 22 07.3	+1.7
VRZ	Vera Road	2.55	7	P	Pb	00 22 08.3	-1.8
FWVZ	Far West T-bar	2.56	21	P	Pb	00 22 11.0	+0.5
TUVZ	Tukino	2.58	23	P	Pn	00 22 07.6	+1.6
NGZ	Ngauruhoe	2.65	21	P	Pn	00 22 08.8	+1.8
KAHZ	Kahuranaki	2.66	46	P	Pn	00 22 06.0	-1.0
WTVZ	West Tongariro	2.71	20	P	Pn	00 22 09.8	+2.1
TWVZ	Taurewa	2.71	18	P	Pb	00 22 13.6	+0.7
KRVZ	Karewarewa	2.74	21	P	Pn	00 22 10.5	+2.4
MCHZ	McNeill Hill	2.83	39	P	Pn	00 22 08.9	-0.4
KATZ	Kakaramea	2.87	21	P	Pb	00 22 14.6	-1.0
RITZ	Rihia Road	2.91	23	P	Pb	00 22 16.6	+0.3
BKZ	Black Stump Fm	2.97	34	P	Pn	00 22 11.2	0.0
ARHZ	Aropaoanui	3.12	41	P	Pn	00 22 13.7	+0.5
HIZ	Hauiti	3.17	7	P	Pn	00 22 16.6	+2.7
RPZ	Rata Peaks	3.20	229	Pn	Pn	00 22 13.6	-0.7
	13nm,0.3s,baz=71,slow=3.2,SNR=20						
RPZ				Pg	Pb	00 22 22.6	+1.4
	70nm,0.3s,baz=338,slow=5.4,SNR=60						
RPZ	Rata Peaks	3.20	229	ePn	Pn	00 22 13.8	-0.5
RPZ	Rata Peaks	3.20	229	P	Pn	00 22 13.9	-0.4
TLZ	Tolley Road	3.44	15	P	Pb	00 22 22.5	-2.9
MUGZ	Murupara	3.67	31	P	Pn	00 22 22.2	+1.3
TARZ	Mount Tarawera	3.79	26	P	Pn	00 22 22.9	+0.3
RAGZ	Rawiri	3.93	37	P	Pn	00 22 22.9	-1.5
RIGZ	Rimuhau	3.93	42	P	Pn	00 22 23.5	-0.9
URZ	Urewera	3.99	33	Pn	Pn	00 22 22.9	-2.4
	1.3nm,0.3s,baz=217,slow=9.4,SNR=9.0						
URZ				Pg	Pb	00 22 34.3	-0.4
	3.5nm,0.3s,baz=240,slow=6.7,SNR=16						
URZ	Urewera	3.99	33	P	Pn	00 22 27.2	+1.9
KMRZ	Kaimai	4.00	18	P	Pb	00 22 33.2	-1.6
TOZ	Tahuroa Road	4.02	13	P	Pn	00 22 30.1	+4.5
MWZ	Matawai	4.11	37	P	Pn	00 22 25.0	-1.9
KBAZ	Karaka Road Bo	4.58	5	P	Pg	00 22 55.0	+2.5
MKAZ	Moumakai	4.59	8	P	Pn	00 22 36.5	+3.1
AWAZ	Awhitu Peninsu	4.59	3	P	Pn	00 22 36.7	+3.1
HAZ	Te Kaha	4.70	35	P	Pn	00 22 35.9	+0.9
ETAZ	East Tamaki Re	4.72	5	P	Pn	00 22 39.0	+3.7
MBAZ	Motutapu North	4.90	5	P	Pn	00 22 41.6	+3.9
WMGZ	Waiomatatini S	4.94	40	P	Pn	00 22 36.6	-1.6
OUZ	Omahuta	6.46	354	P	Pn	00 23 03.5	+4.4
ASAR	Alice Springs	38.10	285	P	P	00 28 42.7	-0.2
	0.6nm,0.4s,baz=124,slow=6.9,SNR=15						
WRA	Warramunga Arr	40.16	290	P	P	00 28 59.4	-0.7
	2.7nm,0.7s,baz=137,slow=7.0,SNR=9.6						
QSPA	South Pole Qui	48.47	180	P	P	00 30 07.7	+1.4
	2.2nm,1.0s,baz=24,slow=3.3,SNR=4.4						
ARCES	ARCESS Array B	147.73	340	PKPbc	PKPbc	00 41 05.9	-1.5
	1.8nm,0.7s,baz=0.0,slow=1.8,SNR=6.0						
BRTR	Keskin Array B	150.34	279	PKPbc	PKPbc	00 41 13.3	-1.8
	0.3nm,0.9s,baz=98,slow=2.9,SNR=2.4						
TORD	Torodi Ar. Bea	150.89	195	PKPbc	PKPbc	00 41 16.6	-0.3
	1.3nm,0.9s,baz=194,slow=2.1,SNR=17						
FINES	FINESS Array B	152.51	327	PKPbc	PKPbc	00 41 18.3	-0.9
	6.5nm,1.2s,baz=108,slow=6.2,SNR=5.2						

ISCJB ***21*** *00:21:31.1±0.3, 42°.13S±0°.04×173°.89E±0°.06, h17^{km}, mb4.2/4, Error ellipse: s-maj=8.5km s-min=2.8km az=38.5*
WEL ***21*** *00:21:32.2, 42°S±3°×17°4E±°, h34^{km}±29^{km}, M4.6/21, mB5.2/2, ML5.1/5, MLv4.6/21, Mw(mB)4.6/2, Error ellipse: s-maj=0.0km s-min=0.0km az=86.3*
NEIC ***21*** *00:21:32.2±0.0, 42°.14S×173°.98E, h34^{km}, ML4.6(WEL), After WEL.*
IDC ***21*** *00:21:36.7±1.3, 41°.33S×174°.46E, h0^{km}, mb4.2/4, mb1 4.4/4, mb1mx4.0/25, mbtmp4.2/4, MS3.9/1, Ms1 3.9/1, ms1mx3.1/21, Error ellipse: s-maj=36.4km s-min=29.3km az=81.0*
ISC 21 00:21:30.6±0.7**, 42°.16S**±0°.03×**174°.08E**±0°.04**, h17**^{km}**, n75, σ2s.14**/71**, mb4.2**/4**, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.42	13	S	Sb	00 21 47.6	+1.9
BSWZ	Blackbirch Sta	0.47	341	P	Pn	00 21 46.7	+4.1
TUWZ	Tuamarina	0.74	352	P	Pn	00 21 46.5	+0.2
TUWZ				S	Sg	00 21 52.8	-1.9
BHW	Baring Head	0.95	38	P	Pb	00 21 48.4	-0.3
TCW	Tory Channel	0.96	9	P	Pb	00 21 48.2	-0.6
TCW				S	Sb	00 21 54.4	-6.8
PLWZ	Palliser	1.05	56	P	Pg	00 21 52.4	+1.4
NNZ	Nelson	1.08	331	P	Pg	00 21 53.3	+1.8
MSWZ	Moikau Station	1.15	50	P	Pn	00 21 52.3	+0.4
PAWZ	Paruwai Farm	1.27	53	P	Pg	00 21 55.7	+0.5
CAW	Cannon Point	1.28	35	P	Pn	00 21 53.8	0.0
DUWZ	D'Urville Isla	1.36	355	P	Pb	00 21 56.2	+0.5
TRWZ	Traveller	1.42	58	P	Pg	00 22 00.1	+2.1
MTW	Mount Morrison	1.46	47	P	Pb	00 21 58.6	+1.2
LTZ	Lake Taylor	1.48	244	ePn	Pb	00 21 57.1	-0.6
OGWZ	Otaki Gorge	1.57	32	P	Pb	00 21 59.0	-0.2
HOWZ	Holdsworth Sta	1.66	41	P	Pb	00 22 01.5	+0.8
TMWZ	Te Maipa	1.71	53	P	Pg	00 22 05.3	+1.8
OKCZ	Okains Bay	1.73	205	P	Pn	00 22 00.8	+0.8
QRZ	Quartz Range	1.77	318	P	Pg	00 22 08.6	+3.9
CRLZ	Canterbury Las	1.78	217	ePn	Pn	00 22 01.1	+0.6
CRLZ	Canterbury Las	1.78	217	P	Pb	00 22 03.1	+0.4
MQZ	McQueen's Vall	1.87	214	ePn	Pn	00 22 01.9	+0.1
MQZ	McQueen's Vall	1.87	214	P	Pn	00 22 02.0	+0.2
MRZ	Mangatainoka R	1.87	37	P	Pb	00 22 04.1	-0.2
OXZ	Oxford	1.91	232	ePn	Pn	00 22 02.3	0.0
OXZ	Oxford	1.91	232	P	Pn	00 22 02.5	+0.2
AKCZ	Akaroa Harbour	1.92	206	P	Pn	00 22 03.3	+0.8
TIWZ	Tintock	1.94	45	P	Pb	00 22 07.1	+1.6
INZ	Inchbonnie	2.03	253	P	Pn	00 22 04.2	+0.2
OHWZ	Ohakea	2.16	26	P	Pb	00 22 08.5	-0.8
WVZ	Waitaha Valley	2.63	249	P	Pn	00 22 12.5	+0.2
RPZ	Rata Peaks	2.71	234	Pg	Pg	00 22 39.5	+17
	140nm,0.3s,baz=302,slow=3.4,SNR=22						
RPZ				LR	LR	00 24 15.1	
	comp=Z,2μm,18.5s,baz=36,slow=46						
FOZ	Fox Glacier	3.42	245	ePn	Pn	00 22 23.2	0.0
FOZ	Fox Glacier	3.42	245	P	Pn	00 22 23.9	+0.8
LBZ	Lake Benmore	3.61	231	ePn	Pn	00 22 26.0	+0.2
LBZ	Lake Benmore	3.61	231	P	Pn	00 22 26.8	+1.0
ODZ	Otahua Downs	3.81	220	ePn	Pn	00 22 28.6	+0.1
ODZ	Otahua Downs	3.81	220	P	Pn	00 22 29.1	+0.5
WHHZ	Waihua	3.90	39	P	Pn	00 22 34.3	+4.5
ALRZ	Allen Road	3.99	26	P	Pn	00 22 33.8	+2.9
PRRZ	Plateau Road	4.06	27	P	Pn	00 22 34.9	+2.9
GRRZ	Galatos Road	4.11	23	P	Pn	00 22 33.5	+0.9
RRRZ	Republican Roa	4.25	27	P	Pn	00 22 37.8	+3.3
HLRZ	Highlands Stat	4.27	25	P	Pb	00 22 41.7	-3.6
JCZ	Jackson Bay	4.32	242	P	Pn	00 22 36.9	+1.3
OMRZ	Omania	4.41	24	P	Pn	00 22 41.2	+4.4
KARZ	Kaharoa	4.45	23	P	Pn	00 22 39.9	+2.5
RAGZ	Rawiri	4.46	36	P	Pn	00 22 38.8	+1.3
HHSZ	Highcliff Hill	4.49	213	P	Pn	00 22 38.7	+0.9
WKZ	Wanaka	4.55	232	ePn	Pn	00 22 38.2	-0.4
WKZ	Wanaka	4.55	232	P	Pn	00 22 39.8	+1.1
TUZ	Tuapeka	4.97	219	P	Pn	00 22 46.2	+1.8
TWGZ	Tauwhareparae	4.97	38	P	Pn	00 22 47.5	+2.9
RUGZ	Raukumara Rang	5.01	35	P	Pn	00 22 48.4	+3.2
PUZ	Puketiti	5.19	39	P	Pn	00 22 50.0	+2.5
MLZ	Mavora Lakes	5.38	231	ePn	Pn	00 22 50.1	0.0
MXZ	Matakaoa Point	5.62	37	ePn	Pn	00 22 53.8	+0.4
WHZ	Wether Hill Ro	5.79	228	ePn	Pn	00 22 55.5	-0.2
DCZ	Deep Cove	6.00	234	ePn	Pn	00 22 58.4	-0.2
WCZ	Waipu Caves	6.21	2	P	Pn	00 23 02.4	+0.8
OUZ	Omahuta	6.94	357	ePn	Pn	00 23 10.6	-0.9
PINNC	Pines Island,	20.27	342	eP	P	00 26 05.1	-0.2
ASAR	Alice Springs	38.02	286	P	P	00 28 56.9	+8.8
	0.8nm,0.4s,baz=121,slow=6.8,SNR=6.0						
FORT	Forrest	38.30	272	eP	P	00 28 49.9	-0.3
WR1	Warramunga Arr	40.13	291	epP	pP	00 29 14.2	+3.3
WRA	Warramunga Arr	40.13	291	P	P	00 29 14.2	+8.6
	2.7nm,0.5s,baz=133,slow=7.1,SNR=4.2						
QSPA	South Pole Qui	47.97	180	P	P	00 30 23.7	+16
	4.1nm,0.9s,baz=352,slow=3.3,SNR=5.6						
HATHI	Halema'uma'u T	67.50	31	eP	P	00 32 24.3	-1.6
SBLHI	Steaming Bluff	67.51	31	eP	P	00 32 23.6	-2.3
KHLH	Kahului Airpor	68.41	30	eP	P	00 32 31.0	-0.4
KSRS	Korea Array	89.72	325	P	P	00 34 35.1	+7.7
	1.3nm,0.8s,baz=132,slow=5.4,SNR=3.6						
ARCES	ARCESS Array B	148.12	340	PKPbc	PKPab	00 41 20.5	+3.4
	2.7nm,0.9s,baz=39,slow=2.4,SNR=2.7						
TORD	Torodi Ar. Bea	150.35	195	PKPbc	PKPab	00 41 31.8	+4.2
	0.7nm,0.4s,baz=153,slow=3.6,SNR=5.7						
FIA0	FINESS Array S	152.80	326	ePKPab	PKPab	00 41 32.0	-4.6
FINES	FINESS Array B	152.80	326	PKPbc	PKPab	00 41 32.0	-4.6
	0.8nm,0.6s,baz=122,slow=2.5,SNR=1.4						

IDC ***21*** *00:28:36.5±2.0, 41°.61S×174°.48E, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.6/21, mbtmp3.5/4, ML3.1/2, Error ellipse: s-maj=46.8km s-min=25.2km az=131.0*
ISCJB ***21*** *00:28:39.5±0.4, 41°.76S±0°.03×174°.39E±0°.03, h18^{km}±4^{km}, mb3.5/2, Error ellipse: s-maj=5.4km s-min=3.1km az=139.0*
WEL ***21*** *00:28:39.6, 42°S±1°×174°.4E±0°.9, h14^{km}±3^{km}, M3.7/27, ML4.0/21, MLv3.7/27, Error ellipse: s-maj=0.0km s-min=0.0km az=157.8*
ISC 21 00:28:38.7±1.2**, 41°.69S**±0°.03×**174°.35E**±0°.03**, h15**^{km}±9^{km}**, n89, σ1s.42**/94**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	241	P	Pb	00 28 43.8	+1.0
CMWZ				S	Sb	00 28 47.6	+2.3
BSWZ	Blackbirch Sta	0.36	266	P	Pb	00 28 47.3	+0.5
BSWZ				S	Sn	00 28 53.7	-2.5
TUWZ	Tuamarina	0.40	311	P	Pb	00 28 47.2	-0.4
TUWZ				S	Sb	00 28 53.1	-0.4
BHW	Baring Head	0.48	54	P	Pb	00 28 49.1	+0.2
TCW	Tory Channel	0.48	353	P	Pg	00 28 48.3	-0.1
TCW				S	Sg	00 28 54.7	-0.2
PLWZ	Palliser	0.69	80	P	Pn	00 28 53.7	-0.3
MSWZ	Moikau Station	0.73	68	P	Pn	00 28 54.1	-0.5
CAW	Cannon Point	0.80	43	P	Pb	00 28 54.4	+0.1
PAWZ	Paruwai Farm	0.87	69	P	Pn	00 28 56.6	+0.1
NNZ	Nelson	0.87	303	P	Pn	00 28 55.6	-0.8
KHZ	Kahutara	0.94	220	P	Pn	00 28 59.2	+1.8
DUWZ	D'Urville Isla	0.95	340	P	Pg	00 28 56.7	-0.3
MTW	Mount Morrison	1.02	59	P	Pg	00 28 59.1	+0.7
TRWZ	Traveller	1.05	74	P	Pg	00 28 59.5	+0.6
OGWZ	Otaki Gorge	1.07	36	P	Pb	00 28 59.0	0.0
THZ	Tophouse	1.08	266	P	Pg	00 29 00.5	+0.8
HOWZ	Holdsworth Sta	1.18	48	P	Pg	00 29 01.5	0.0
TMWZ	Te Maipa	1.30	64	P	Pb	00 29 02.9	0.0
MRZ	Mangatainoka R	1.39	42	P	Pb	00 29 04.5	+0.2
TIWZ	Tintock	1.48	52	P	Pb	00 29 05.5	-0.5
CPWZ	Castlepoint	1.60	61	P	Pn	00 29 07.3	+0.8
GVZ	Greta Valley S	1.60	217	P	Pb	00 29 08.2	+0.1
QRZ	Quartz Range	1.62	302	P	Pg	00 29 08.9	-1.0
OHWZ	Ohakea	1.66	27	P	Pb	00 29 09.5	+0.6
PRWZ	Pori Road	1.67	48	P	Pn	00 29 08.1	+0.6
POWZ	Post Office Ro	1.69	40	P	Pb	00 29 08.6	-0.9
BFZ	Birch Farm	1.75	55	P	Pn	00 29 08.5	-0.1
LTZ	Lake Taylor	1.89	234	P	Pb	00 29 12.3	-0.7
AMCZ	Amberley	1.94	220	P	Pn	00 29 12.2	+0.9
DVHZ	Dannevirke	1.96	45	P	Pn	00 29 09.1	-2.3
WAZ	Wanganui	2.00	14	P	Pb	00 29 15.1	+0.3
ANWZ	Angora Road	2.02	53	P	Pn	00 29 12.0	-0.3
LREZ	Lake Rotokare	2.23	1	P	Pg	00 29 20.1	-1.4
OKCZ	Okains Bay	2.24	205	P	Pn	00 29 15.7	+0.4
PNHZ	Pukenui	2.27	39	P	Pn	00 29 15.9	+0.2
WPHZ	Waipukurau	2.27	45	P	Pn	00 29 16.6	+0.8
NMEZ	Namu Road	2.31	351	P	Pb	00 29 20.2	+0.2
PREZ	Palmer Road	2.35	356	P	Pb	00 29 21.2	+0.3
OXZ	Oxford	2.36	226	P	Pn	00 29 17.8	+0.7
MQZ	McQueen's Vall	2.37	211	P	Pn	00 29 16.9	-0.2
INZ	Inchbonnie	2.39	243	P	Pb	00 29 19.4	-2.1
KHEZ	Kahui Hut	2.41	354	P	Pb	00 29 21.2	-0.7
AKCZ	Akaroa Harbour	2.42	205	P	Pn	00 29 18.1	+0.3
NBEZ	Newall Road No	2.45	351	P	Pb	00 29 22.3	-0.2
DREZ	Durham Road	2.50	357	P	Pb	00 29 22.6	-0.8
PKE	Pukeiti	2.51	354	P	Pb	00 29 23.0	-0.6
PKVZ	Pokaka	2.52	18	P	Pb	00 29 22.7	-1.0
MOVZ	Moawhango	2.52	26	P	Pn	00 29 21.0	+1.7
PXZ	Pawanui	2.53	50	P	Pn	00 29 18.0	-1.2
BHHZ	Black Hill Sta	2.56	31	P	Pn	00 29 20.9	+1.1
KRHZ	Kereru	2.56	38	P	Pn	00 29 19.7	0.0
VRZ	Vera Road	2.58	7	P	Pb	00 29 23.4	-1.4
DRZ	Dome Shelter	2.59	21	P	Pb	00 29 25.1	+0.1
WHVZ	Whangaehu Hut	2.59	22	P	Pn	00 29 22.2	+1.9
FWVZ	Far West T-bar	2.60	21	P	Pb	00 29 23.1	-2.1
NGZ	Ngauruhoe	2.69	21	P	Pb	00 29 24.6	-2.1
KAHZ	Kahuranaki	2.70	46	P	Pn	00 29 21.0	-0.6
WTVZ	West Tongariro	2.74	21	P	Pb	00 29 26.9	-0.6
TWVZ	Taurewa	2.75	18	P	Pb	00 29 25.6	-2.1
KRVZ	Karewarewa	2.78	21	P	Pb	00 29 28.7	+0.6
KATZ	Kakaramea	2.90	21	P	Pb	00 29 29.8	-0.5
RITZ	Rihia Road	2.95	24	P	Pb	00 29 30.3	-0.7
BKZ	Black Stump Fm	3.01	34	P	Pn	00 29 26.4	+0.5
WVZ	Waitaha Valley	3.01	242	P	Pn	00 29 27.5	+1.5
RATZ	Rangitukua	3.02	22	P	Pb	00 29 32.4	0.0
RPZ	Rata Peaks	3.16	229	Pn	Pn	00 29 28.1	+0.1
	4.7nm,0.3s,baz=124,slow=2.8,SNR=9.7						
RPZ				Pg	Pg	00 29 37.4	-1.9
	26nm,0.3s,baz=339,slow=3.9,SNR=23						
RPZ	Rata Peaks	3.16	229	P	Pn	00 29 28.9	+0.9
WATZ	Wairara	3.16	20	P	Pb	00 29 35.4	+0.7
HIZ	Hauiti	3.20	7	P	Pb	00 29 31.7	-3.5
MRHZ	Matea Rd	3.26	30	P	Pn	00 29 30.0	+0.5
MTHZ	Maungataniwha	3.42	35	P	Pn	00 29 35.2	+3.6
TLZ	Tolley Road	3.48	16	P	Pn	00 29 35.9	+3.5
FOZ	Fox Glacier	3.82	240	P	Pn	00 29 38.5	+1.5
URZ	Urewera	4.03	33	Pn	Pn	00 29 38.7	-1.2
	0.6nm,0.3s,baz=354,slow=18,SNR=2.7						
LBZ	Lake Benmore	4.07	227	P	Pn	00 29 42.1	+1.7
MWZ	Matawai	4.15	37	P	Pn	00 29 40.9	-0.7
ODZ	Otahua Downs	4.30	218	P	Pn	00 29 43.6	0.0
MKAZ	Moumakai	4.62	8	P	Pn	00 29 50.9	+2.8
AWAZ	Awhitu Peninsu	4.63	3	P	Pn	00 29 51.5	+3.4
JCZ	Jackson Bay	4.73	238	P	Pn	00 29 51.2	+1.5
ETAZ	East Tamaki Re	4.75	6	P	Pn	00 29 53.6	+3.8
WIAZ	Waiheke Island	4.93	7	P	Pn	00 29 54.8	+2.5
MBAZ	Motutapu North	4.94	5	P	Pn	00 29 55.9	+3.6
HHSZ	Highcliff Hill	4.99	212	P	Pn	00 29 53.0	-0.2
OUZ	Omahuta	6.49	355	P	Pn	00 30 16.2	+2.5
CTZ	Chatham Island	6.96	110	P	Pn	00 30 20.1	-0.1
ASAR	Alice Springs	38.09	285	P	P	00 35 57.7	+0.7
	0.4nm,0.8s,baz=130,slow=7.0,SNR=3.3						
WRA	Warramunga Arr	40.15	290	P	P	00 36 14.6	+0.3
	1.5nm,0.9s,baz=119,slow=8.0,SNR=2.7						
TORD	Torodi Ar. Bea	150.85	195	PKPbc	PKPbc	00 48 31.0	0.0
	0.5nm,0.7s,baz=171,slow=3.4,SNR=4.2						

IDC ***21*** *00:41:56.4±1.4, 41°.55S×174°.23E, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.6/32, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=40.7km s-min=19.7km az=134.0*
WEL ***21*** *00:41:58.3, 42°S±1°×174°.3E±1°.0, h14^{km}±2^{km}, M3.8/28, ML4.0/19, MLv3.8/28, Error ellipse: s-maj=0.0km s-min=0.0km az=138.8*
ISC 21 00:41:57.7±1.5**, 41°.62S**±0°.03×**174°.33E**±0°.03**, h11**^{km}±12^{km}**, n96, σ1s.26**/100**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	213	P	Pb	00 42 02.8	+0.1
CMWZ				S	Sb	00 42 06.4	+2.6
TUWZ	Tuamarina	0.35	303	P	Pb	00 42 05.8	-0.1
TUWZ				S	Sb	00 42 11.1	-0.4
BSWZ	Blackbirch Sta	0.35	254	P	Pb	00 42 06.1	+0.1
BSWZ				S	Sb	00 42 12.1	+0.4
TCW	Tory Channel	0.41	354	P	Pb	00 42 06.8	-0.2
BHW	Baring Head	0.46	63	P	Pb	00 42 07.9	+0.1
BHW				S	Sb	00 42 15.2	+0.5
PLWZ	Palliser	0.70	86	P	Pb	00 42 12.6	+0.7
MSWZ	Moikau Station	0.72	74	P	Pb	00 42 12.9	+0.6
CAW	Cannon Point	0.76	48	P	Pb	00 42 13.1	+0.2
NNZ	Nelson	0.82	299	P	Pb	00 42 14.3	+0.3
PAWZ	Paruwai Farm	0.86	74	P	Pn	00 42 15.4	-0.4
KHZ	Kahutara	0.99	216	P	Pn	00 42 18.2	+0.6
MTW	Mount Morrison	0.99	63	P	Pn	00 42 17.8	+0.1
OGWZ	Otaki Gorge	1.02	39	P	Pg	00 42 17.7	+0.3
TRWZ	Traveller	1.04	78	P	Pg	00 42 18.3	+0.5
THZ	Tophouse	1.08	262	P	Pn	00 42 19.0	+0.2
HOWZ	Holdsworth Sta	1.15	52	P	Pg	00 42 20.1	+0.3
TMWZ	Te Maipa	1.28	67	P	Pn	00 42 21.6	-0.1
MRZ	Mangatainoka R	1.34	45	P	Pb	00 42 23.1	+0.1
TIWZ	Tintock	1.45	55	P	Pn	00 42 24.0	+0.1
QRZ	Quartz Range	1.57	300	P	Pb	00 42 27.5	+0.6
OHWZ	Ohakea	1.60	28	P	Pg	00 42 28.3	-0.1
PRWZ	Pori Road	1.63	50	P	Pn	00 42 26.9	+0.4
POWZ	Post Office Ro	1.64	42	P	Pb	00 42 27.6	-0.4
GVZ	Greta Valley S	1.66	215	P	Pn	00 42 27.0	+0.2
BFZ	Birch Farm	1.72	58	P	Pn	00 42 27.5	-0.3
DVHZ	Dannevirke	1.92	47	P	Pn	00 42 30.0	-0.4
LTZ	Lake Taylor	1.92	232	P	Pn	00 42 31.2	+0.7
WAZ	Wanganui	1.93	15	P	Pg	00 42 34.5	-0.2
AMCZ	Amberley	1.99	218	P	Pn	00 42 31.4	0.0
ANWZ	Angora Road	1.99	55	P	Pn	00 42 31.2	-0.2
LREZ	Lake Rotokare	2.16	2	P	Pg	00 42 39.7	+0.6
PNHZ	Pukenui	2.22	40	P	Pn	00 42 34.7	+0.2
NMEZ	Namu Road	2.23	351	P	Pb	00 42 38.3	+0.2
WPHZ	Waipukurau	2.23	47	P	Pn	00 42 35.1	+0.4
PREZ	Palmer Road	2.28	357	P	Pb	00 42 39.7	+0.8
OKCZ	Okains Bay	2.30	204	P	Pn	00 42 34.9	-0.8
CRLZ	Canterbury Las	2.33	212	P	Pn	00 42 35.3	-0.6
KHEZ	Kahui Hut	2.33	354	P	Pb	00 42 40.3	+0.4
NBEZ	Newall Road No	2.37	351	P	Pb	00 42 41.2	+0.7
MTVZ	Mangateitei	2.40	22	P	Pb	00 42 40.0	-0.9
OXZ	Oxford	2.41	224	P	Pn	00 42 36.1	-1.0
INZ	Inchbonnie	2.41	242	P	Pn	00 42 38.1	+0.9
MQZ	McQueen's Vall	2.42	210	P	Pn	00 42 36.0	-1.3
DREZ	Durham Road	2.43	358	P	Pb	00 42 41.2	-0.2
PKE	Pukeiti	2.44	354	P	Pb	00 42 41.4	-0.2
PKVZ	Pokaka	2.45	19	P	Pb	00 42 41.3	-0.6
MOVZ	Moawhango	2.46	27	P	Pb	00 42 40.0	-2.0
AKCZ	Akaroa Harbour	2.48	204	P	Pn	00 42 37.4	-0.8
PXZ	Pawanui	2.49	51	P	Pn	00 42 37.8	-0.5
BHHZ	Black Hill Sta	2.50	32	P	Pn	00 42 40.5	+2.0
KRHZ	Kereru	2.51	39	P	Pn	00 42 38.6	+0.1
VRZ	Vera Road	2.51	8	P	Pb	00 42 42.3	-0.5
DRZ	Dome Shelter	2.52	22	P	Pg	00 42 45.5	-0.6
WHVZ	Whangaehu Hut	2.52	23	P	Pb	00 42 42.3	-0.9
FWVZ	Far West T-bar	2.54	22	P	Pb	00 42 44.3	+0.8
TUVZ	Tukino	2.56	24	P	Pb	00 42 42.9	-0.8
NGZ	Ngauruhoe	2.63	22	P	Pb	00 42 44.3	-0.7
KAHZ	Kahuranaki	2.66	48	P	Pn	00 42 40.3	-0.3
WTVZ	West Tongariro	2.68	21	P	Pb	00 42 45.0	-0.8
TWVZ	Taurewa	2.68	19	P	Pb	00 42 46.7	+0.8
KWHZ	Kaweka Forest	2.71	37	P	Pg	00 42 49.9	+0.2
KRVZ	Karewarewa	2.71	22	P	Pb	00 42 47.0	+0.6
MCHZ	McNeill Hill	2.82	40	P	Pn	00 42 44.8	+2.0
KATZ	Kakaramea	2.84	22	P	Pb	00 42 50.4	+1.9
RITZ	Rihia Road	2.89	24	P	Pb	00 42 50.8	+1.5
BKZ	Black Stump Fm	2.96	35	P	Pb	00 42 49.6	-0.9
RATZ	Rangitukua	2.96	22	P	Pg	00 42 52.9	-1.6
WVZ	Waitaha Valley	3.03	240	P	Pn	00 42 46.4	+0.7
WATZ	Wairara	3.10	21	P	Pg	00 42 55.4	-1.8
HIZ	Hauiti	3.13	8	P	Pb	00 42 51.0	-2.3
RPZ	Rata Peaks	3.20	228	Pn	Pn	00 42 47.5	-0.5
	7.1nm,0.3s,baz=85,slow=3.5,SNR=13						
RPZ				Pg	Pb	00 42 54.9	+0.4
	12nm,0.3s,baz=1.3,slow=1.9,SNR=21						
RPZ	Rata Peaks	3.20	228	P	Pn	00 42 48.0	0.0
MRHZ	Matea Rd	3.21	31	P	Pb	00 42 56.8	+2.0
MTHZ	Maungataniwha	3.37	36	P	Pb	00 42 54.6	-2.8
TLZ	Tolley Road	3.41	16	P	Pb	00 42 56.3	-2.0
FOZ	Fox Glacier	3.84	239	P	Pn	00 42 57.6	+0.8
RAGZ	Rawiri	3.92	38	P	Pn	00 43 01.5	+3.6
URZ	Urewera	3.98	33	Pn	Pn	00 42 59.2	+0.5
	0.9nm,0.3s,baz=233,slow=3.4,SNR=5.3						
URZ				Pg	Pb	00 43 10.1	+2.2
	5.6nm,0.3s,baz=230,slow=10,SNR=14						
MWZ	Matawai	4.10	38	P	Pn	00 43 04.2	+3.8
LBZ	Lake Benmore	4.11	226	P	Pn	00 43 01.2	+0.7
ODZ	Otahua Downs	4.35	217	P	Pn	00 43 03.0	-0.8
MKAZ	Moumakai	4.55	8	P	Pn	00 43 11.2	+4.6
AWAZ	Awhitu Peninsu	4.55	3	P	Pn	00 43 11.5	+4.9
ETAZ	East Tamaki Re	4.68	6	P	Pb	00 43 15.9	-3.9
JCZ	Jackson Bay	4.76	237	P	Pn	00 43 10.5	+1.0
WMGZ	Waiomatatini S	4.93	41	P	Pn	00 43 14.3	+2.5
WKZ	Wanaka	5.03	229	P	Pn	00 43 14.5	+1.3
HHSZ	Highcliff Hill	5.05	211	P	Pn	00 43 13.3	-0.1
TUZ	Tuapeka	5.51	217	P	Pn	00 43 20.0	+0.4
SYZ	Scrubby Hill	6.17	215	P	Pn	00 43 29.6	+0.7
OUZ	Omahuta	6.42	355	P	Pn	00 43 38.9	+6.8
CTZ	Chatham Island	7.00	111	P	Pn	00 43 39.7	-0.5
ASAR	Alice Springs	38.05	285	P	P	00 49 16.6	+0.2
	0.4nm,0.4s,baz=121,slow=6.7,SNR=11						
WRA	Warramunga Arr	40.11	290	P	P	00 49 32.7	-0.9
	1.3nm,0.6s,baz=125,slow=8.0,SNR=7.4						
ARCES	ARCESS Array B	147.67	340	PKPbc	PKPdf	01 01 38.8	+0.4
	4.9nm,1.1s,baz=72,slow=2.9,SNR=3.7						
TORD	Torodi Ar. Bea	150.92	195	PKPbc	PKiKP	01 01 51.3	-0.2
	0.3nm,0.5s,baz=168,slow=1.3,SNR=15						

IDC ***21*** *00:43:44.5±1.6, 41°.49S×174°.49E, h0^{km}, mb3.7/2, mb1 3.9/3, mb1mx3.6/31, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=42.7km s-min=23.1km az=132.0*
ISCJB ***21*** *00:43:48.3±0.4, 41°.68S±0°.03×174°.36E±0°.04, h10^{km}, mb3.6/2, Error ellipse: s-maj=4.9km s-min=3.3km az=148.3*

*WEL **21** 00:43:48.0, 42°S±1°×174°.4E±0°.8, h11^{km}±2^{km}, M3.6/21, ML4.0/17, MLv3.6/21, Error ellipse: s-maj=0.0km s-min=0.0km az=153.7*

ISC 21 00:43:47.6±0.8, 41°.64S±0°.03×174°.37E±0°.03, h10^{km}, n41, σ1^{s}18/45, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.15	227	P	Pg	00 43 52.7	+1.6
CMWZ				S	Sg	00 43 55.4	+2.0
BSWZ	Blackbirch Sta	0.37	259	P	Pg	00 43 56.0	+0.9
TUWZ	Tuamarina	0.38	304	P	Pg	00 43 56.0	+0.8
TUWZ				S	Sb	00 44 01.7	-0.8
TCW	Tory Channel	0.44	351	P	Pb	00 43 56.9	-0.5
TCW				S	Sb	00 44 03.4	-0.7
BHW	Baring Head	0.45	58	P	Pb	00 43 57.7	+0.1
PLWZ	Palliser	0.67	84	P	Pb	00 44 02.3	+0.9
MSWZ	Moikau Station	0.70	71	P	Pb	00 44 02.5	+0.6
CAW	Cannon Point	0.75	45	P	Pb	00 44 03.0	+0.2
PAWZ	Paruwai Farm	0.84	72	P	Pb	00 44 04.6	+0.3
NNZ	Nelson	0.85	300	P	Pg	00 44 04.4	+0.2
DUWZ	D’Urville Isla	0.91	338	P	Pb	00 44 05.9	+0.4
MTW	Mount Morrison	0.98	61	P	Pn	00 44 07.5	0.0
KHZ	Kahutara	0.99	218	P	Pn	00 44 08.0	+0.5
TRWZ	Traveller	1.02	77	P	Pb	00 44 08.1	+0.7
OGWZ	Otaki Gorge	1.03	37	P	Pb	00 44 07.8	+0.3
THZ	Tophouse	1.10	263	P	Pn	00 44 09.9	+0.7
HOWZ	Holdsworth Sta	1.14	50	P	Pn	00 44 10.0	+0.3
TMWZ	Te Maipa	1.27	65	P	Pn	00 44 11.8	+0.3
MRZ	Mangatainoka R	1.34	43	P	Pb	00 44 13.1	+0.2
TIWZ	Tintock	1.44	53	P	Pb	00 44 14.7	+0.2
OHWZ	Ohakea	1.61	27	P	Pg	00 44 18.6	+0.2
QRZ	Quartz Range	1.61	300	P	Pb	00 44 17.9	+0.5
PRWZ	Pori Road	1.63	49	P	Pn	00 44 16.9	+0.5
GVZ	Greta Valley S	1.65	216	P	Pn	00 44 16.9	+0.2
BFZ	Birch Farm	1.71	57	P	Pn	00 44 18.3	+0.7
DVHZ	Dannevirke	1.92	46	P	Pb	00 44 23.2	+0.5
LTZ	Lake Taylor	1.93	233	P	Pn	00 44 20.7	+0.2
WAZ	Wanganui	1.94	14	P	Pg	00 44 24.5	-0.5
OKCZ	Okains Bay	2.29	204	P	Pn	00 44 24.2	-1.3
INZ	Inchbonnie	2.42	243	P	Pn	00 44 28.0	+0.7
AKCZ	Akaroa Harbour	2.47	205	P	Pn	00 44 27.0	-1.0
BHHZ	Black Hill Sta	2.51	32	P	Pb	00 44 33.7	+0.9
WHVZ	Whangaehu Hut	2.54	22	P	Pb	00 44 33.1	-0.3
TUVZ	Tukino	2.57	23	P	Pb	00 44 32.9	-1.0
RPZ	Rata Peaks	3.20	229	Pn	Pn	00 44 36.9	-1.1
	3.4nm,0.3s,baz=94,slow=6.8,SNR=2.8						
RPZ				Pg	Pb	00 44 46.0	+1.4
	54nm,0.3s,baz=284,slow=2.9,SNR=16						
URZ	Urewera	3.98	33	Pg	Pn	00 44 53.1	+4.4
	1.2nm,0.3s,baz=223,slow=5.8,SNR=2.5						
ETAZ	East Tamaki Re	4.70	6	P	Pn	00 45 01.7	+3.0
ASAR	Alice Springs	38.09	285	P	P	00 51 05.3	-1.4
	0.4nm,0.4s,baz=123,slow=7.0,SNR=7.8						
WRA	Warramunga Arr	40.15	290	P	P	00 51 22.8	-1.1
	1.1nm,0.6s,baz=124,slow=8.2,SNR=4.7						
TORD	Torodi Ar. Bea	150.90	195	PKPbc	PKPbc	01 03 40.1	-0.8
	0.6nm,0.6s,baz=160,slow=2.7,SNR=9.4						
FINES	FINESS Array B	152.49	327	PKPbc	PKPbc	01 03 40.9	-2.1
	1.6nm,0.9s,baz=35,slow=5.1,SNR=4.2						

WEL 21 00:48:57.5, 41°.6S±0°.7×174°.4E±0°.6, h13^{km}±2^{km}, M3.2/21, ML3.5/17, MLv3.2/21, Error ellipse: s-maj=0.0km s-min=0.0km az=139.8, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	217	P	Pb	00 49 02.6	-0.4
CMWZ				S	Sb	00 49 06.2	-0.4
TUWZ	Tuamarina	0.36	297	P	Pb	00 49 05.3	-0.4
TUWZ				S	Sb	00 49 10.9	-0.4
TCW	Tory Channel	0.39	350	P	Pb	00 49 06.0	-0.2
TCW				S	Sb	00 49 11.7	-0.4
BSWZ	Blackbirch Sta	0.39	252	P	Pg	00 49 05.7	+0.4
BSWZ				S	Sb	00 49 11.9	-0.3
BHW	Baring Head	0.42	64	P	Pb	00 49 06.5	-0.2
PLWZ	Palliser	0.66	88	P	Pb	00 49 11.4	+0.4
MSWZ	Moikau Station	0.68	75	P	Pb	00 49 11.6	+0.3
CAW	Cannon Point	0.71	47	P	Pb	00 49 12.2	+0.3
PAWZ	Paruwai Farm	0.82	75	P	Pb	00 49 14.0	+0.4
NNZ	Nelson	0.83	296	P	Pb	00 49 13.8	-0.1
DUWZ	D’Urville Isla	0.86	337	P	Pb	00 49 14.8	+0.5
MTW	Mount Morrison	0.96	63	P	Pn	00 49 16.5	-0.2
OGWZ	Otaki Gorge	0.98	38	P	Pg	00 49 16.5	0.0
TRWZ	Traveller	1.01	79	P	Pb	00 49 16.8	-0.1
KHZ	Kahutara	1.03	217	P	Pb	00 49 17.0	-0.2
HOWZ	Holdsworth Sta	1.11	52	P	Pn	00 49 18.8	0.0
THZ	Tophouse	1.11	261	P	Pb	00 49 18.5	-0.1
TMWZ	Te Maipa	1.24	67	P	Pn	00 49 20.0	-0.6
MRZ	Mangatainoka R	1.30	45	P	Pb	00 49 21.7	-0.1
OHWZ	Ohakea	1.56	28	P	Pb	00 49 26.7	+0.5
QRZ	Quartz Range	1.59	298	P	Pb	00 49 26.7	0.0
PRWZ	Pori Road	1.59	50	P	Pn	00 49 25.3	-0.1
POWZ	Post Office Ro	1.60	42	P	Pn	00 49 26.0	+0.5
GVZ	Greta Valley S	1.69	215	P	Pn	00 49 25.9	-0.9
WAZ	Wanganui	1.90	15	P	Pg	00 49 33.2	-0.7
LTZ	Lake Taylor	1.96	232	P	Pn	00 49 29.9	-0.6
AMCZ	Amberley	2.03	218	P	Pn	00 49 30.1	-1.3
PNHZ	Pukenui	2.18	40	P	Pn	00 49 33.2	-0.3
KHEZ	Kahui Hut	2.31	353	P	Pb	00 49 39.4	+0.3
OKCZ	Okains Bay	2.34	204	P	Pn	00 49 33.7	-1.9
NBEZ	Newall Road No	2.35	350	P	Pb	00 49 40.0	+0.3
DREZ	Durham Road	2.41	357	P	Pn	00 49 37.7	+1.2
PKE	Pukeiti	2.42	353	P	Pb	00 49 39.6	-1.3
PKVZ	Pokaka	2.42	18	P	Pb	00 49 41.1	+0.2
OXZ	Oxford	2.44	224	P	Pn	00 49 35.2	-1.9
INZ	Inchbonnie	2.45	242	P	Pn	00 49 36.7	-0.5
MQZ	McQueen’s Vall	2.46	210	P	Pn	00 49 34.7	-2.7
BHHZ	Black Hill Sta	2.47	32	P	Pn	00 49 38.8	+1.3
KRHZ	Kereru	2.47	39	P	Pn	00 49 36.9	-0.6
VRZ	Vera Road	2.48	7	P	Pb	00 49 41.1	-0.9
WHVZ	Whangaehu Hut	2.49	22	P	Pb	00 49 40.6	-1.6
TUVZ	Tukino	2.52	23	P	Pb	00 49 42.7	0.0
NGZ	Ngauruhoe	2.59	22	P	Pb	00 49 45.0	+1.1
WTVZ	West Tongariro	2.65	21	P	Pb	00 49 45.3	+0.5
HIZ	Hauiti	3.10	7	P	Pb	00 49 50.2	-2.3
RPZ	Rata Peaks	3.24	228	P	Pn	00 49 46.3	-1.7
ODZ	Otahua Downs	4.39	217	P	Pn	00 50 01.3	-2.6

WEL 21 00:49:09.1, 41°S±320°×17°4E±7°4, h16^{km}±161^{km}, M3.5/7, ML3.8/7, MLv3.5/7, Error ellipse: s-maj=0.5km s-min=0.1km az=0.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPHZ	Waipukurau	2.26	53	P	Pn	00 49 46.7	+0.9
MTVZ	Mangateitei	2.32	28	P	Pn	00 49 45.7	-0.9
PXZ	Pawanui	2.54	57	P	Pn	00 49 49.5	-0.1
TWVZ	Taurewa	2.59	24	P	Pn	00 49 51.3	+0.9
KAHZ	Kahuranaki	2.69	53	P	Pn	00 49 53.3	+1.6
KATZ	Kakaramea	2.76	27	P	Pn	00 49 53.4	+0.6
RITZ	Rihia Road	2.82	29	P	Pn	00 49 54.9	+1.4
MCHZ	McNeill Hill	2.82	46	P	Pn	00 49 56.2	+2.7
RATZ	Rangitukua	2.89	27	P	Pn	00 49 56.6	+2.2
BKZ	Black Stump Fm	2.93	40	P	Pn	00 49 51.9	-3.1

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*ISCJB **21** 00:59:14.9±0.5, 19°.96N±0°.09×94°.96E±0°.07, h97^{km}, mb3.8/7, Error ellipse: s-maj=15.0km s-min=4.9km az=36.0*

*IDC **21** 00:59:15.2±2.7, 19°.89N×94°.97E, h82^{km}±25^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.3/44, mbtmp3.9/8, MS3.1/3, Ms1 3.2/3, ms1mx2.8/37, Error ellipse: s-maj=26.4km s-min=17.2km az=55.0*

ISC 21 00:59:16.3±0.8, 19°.9N±0°.1×94°.90E±0°.09, h97^{km}, n22, σ1^{s}89/24, mb3.9/7, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMMT	Chiang Mai	3.99	106	P	Pn	01 00 13.9	-1.4
CMAR	Chiang Mai Arr	4.10	110	P	Pn	01 00 15.7	-1.1
	3.3nm,0.3s,baz=284,slow=14,SNR=55						
CMAR				S	Sn	01 01 00.6	-3.1
	5.4nm,0.3s,baz=304,slow=18,SNR=10						
CMAR				LR	LR	01 01 51.3	
	comp=Z,46nm,19.9s,baz=280,slow=39						
PAYA	Payao	4.72	96	P	Pn	01 00 24.6	-0.6
UTTA	Uttaradit	5.79	111	P	Pn	01 00 39.3	-0.3
SHL	Shillong	6.25	334	*e*PN	Pn	01 00 46.0	-0.2
SHL				*e*SN	Sn	01 01 57.5	+1.2
PBKT	Sadao Pong	6.67	119	P	Pn	01 00 51.8	+0.1
	6.8nm,0.7s,0.1nm						
NONG	Nongkai	8.03	102	P	Pn	01 01 11.2	+1.1
	0.2nm,1.1s,0.0nm						
JIRN	Jiri	11.07	316	*e*P	Pn	01 01 53.2	+1.3
	13nm,0.3s						
JIRN				*e*S	Sn	01 03 47.4	-6.5
PKI	Pulchoki	11.54	313	*e*P	Pn	01 01 57.1	-1.0
	5.6nm,0.4s						
PKIN	Phulchoki	11.55	313	*e*P	Pn	01 01 57.1	-1.1
	6.4nm,0.3s						
DMN	Daman	11.77	312	*e*P	Pn	01 02 00.8	-0.4
	3.3nm,0.3s						
GKN	Gorkha	12.34	313	*e*P	Pn	01 02 07.3	-1.4
	14nm,0.2s						
MKAR	Makanchi Array	28.71	342	P	P	01 05 05.6	+1.4
	0.5nm,0.5s,baz=152,slow=8.8,SNR=7.2						
MKAR				ScP	ScP	01 11 47.5	+2.5
	0.8nm,0.7s,baz=153,slow=4.1,SNR=7.5						
SONM	Songino Array	29.35	16	P	P	01 05 10.9	+0.9
	0.6nm,0.4s,baz=201,slow=8.4,SNR=4.3						
KSRS	Korea Array	33.59	52	LR	LR	01 19 31.4	
	comp=Z,24nm,19.6s,baz=204,slow=36						
ZALV	Zalesovo Beam	34.82	350	P	P	01 05 57.8	+0.1
	0.6nm,0.4s,baz=153,slow=9.7,SNR=3.4						
ASAR	Alice Springs	57.66	137	P	P	01 08 56.5	-0.3
	0.8nm,0.7s,baz=321,slow=7.0,SNR=6.8						
STKA	Stephens Creek	68.23	138	LR	LR	01 43 57.2	
	comp=Z,103nm,18.8s,baz=207,slow=39						
MATP	Matopo	76.37	242	P	P	01 10 56.5	+1.1
	1.4nm,0.6s,baz=95,slow=4.3,SNR=5.2						
BOSA	Boshof	82.74	236	P	P	01 11 30.6	+0.8
	4.1nm,1.0s,baz=111,slow=5.2,SNR=4.0						
TORD	Torodi Ar. Bea	88.54	283	P	P	01 11 59.5	+0.7
	0.5nm,0.8s,baz=84,slow=4.5,SNR=6.2						
TXAR	Lajitas Array	127.85	21	PKP	PKPdf	01 18 11.8	+0.5
	0.1nm,0.6s,baz=343,slow=0.9,SNR=3.6						

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*ISCJB **21** 01:14:13.2±2.4, 41°.8S±0°.3×174°.6E±0°.4, h10^{km}, mb3.6/2, Error ellipse: s-maj=62.3km s-min=9.9km az=41.3*

*IDC **21** 01:14:14.1±1.6, 41°.64S×174°.57E, h0^{km}, mb3.7/2, mb1 3.8/4, mb1mx3.6/22, mbtmp3.6/4, ML3.0/2, Error ellipse: s-maj=44.2km s-min=24.2km az=134.0*

ISC 21 01:14:16.3±1.5, 41°.7S±0°.2×174°.5E±0°.3, h10^{km}, n6, σ1^{s}22/8, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	3.24	229	Pn	Pn	01 15 06.5	-0.7
	5.2nm,0.3s,baz=93,slow=2.3,SNR=18						
RPZ				Pg	Pb	01 15 15.6	+1.6
	8.3nm,0.3s,baz=317,slow=3.3,SNR=15						
RPZ				Sn	Sn	01 15 44.2	-1.8
	3.8nm,0.3s,baz=319,slow=18,SNR=6.9						
URZ	Urewera	3.96	32	Pn	Pn	01 15 16.5	-0.6
	0.3nm,0.3s,baz=184,slow=15,SNR=1.8						
ASAR	Alice Springs	38.15	285	P	P	01 21 35.9	+0.1
	0.3nm,0.4s,baz=125,slow=6.9,SNR=11						
WRA	Warramunga Arr	40.21	290	P	P	01 21 53.0	0.0
	1.8nm,0.9s,baz=124,slow=9.0,SNR=3.7						
ARCES	ARCESS Array B	147.74	340	PKPbc	PKPdf	01 33 57.9	+0.8
	1.5nm,0.8s,baz=33,slow=3.5,SNR=3.6						
TORD	Torodi Ar. Bea	150.91	195	PKPbc	PKPbc	01 34 09.1	-0.5
	0.5nm,0.7s,baz=148,slow=3.1,SNR=7.3						

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*IDC **21** 01:15:21.1±0.8, 41°.46S×174°.42E, h0^{km}, mb4.2/3, mb1 4.3/5, mb1mx3.9/22, mbtmp4.1/5, ML3.6/2, MS3.7/1, Ms1 3.7/1, ms1mx2.9/17, Error ellipse: s-maj=27.9km s-min=21.8km az=123.0*

*ISCJB **21** 01:15:23.4±0.3, 41°.74S±0°.03×174°.40E±0°.03, h10^{km}, mb4.1/4, MS3.7/1, Error ellipse: s-maj=4.5km s-min=2.7km az=141.9*

*WEL **21** 01:15:24.6, 41°.6S±0°.6×174°.4E±0°.8, h17^{km}±2^{km}, M4.3/23, ML4.6/19, MLv4.3/23, Error ellipse: s-maj=0.0km s-min=0.0km az=119.8*

*NEIC **21** 01:15:24.9±0.0, 41°.60S×174°.37E, h13^{km}, mb3.8/2, ML4.4(WEL), After WEL.*

ISC 21 01:15:23.5±0.6, 41°.62S±0°.03×174°.37E±0°.03, h10^{km}, n86, σ1^{s}36/89, mb4.0/4, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.18	222	P	Pg	01 15 29.9	+2.5
CMWZ				S	Sg	01 15 33.3	+3.3
TUWZ	Tuamarina	0.37	300	P	Pb	01 15 32.6	+0.4
TUWZ				S	Sb	01 15 38.0	0.0
BSWZ	Blackbirch Sta	0.39	255	P	Pb	01 15 32.9	+0.5
BSWZ				S	Sb	01 15 39.0	+0.5
TCW	Tory Channel	0.41	350	P	Pb	01 15 33.3	+0.4
BHW	Baring Head	0.43	61	P	Pb	01 15 33.9	+0.8
PLWZ	Palliser	0.66	86	P	Pb	01 15 38.6	+1.4
MSWZ	Moikau Station	0.69	73	P	Pb	01 15 38.8	+1.2
CAW	Cannon Point	0.73	46	P	Pb	01 15 39.1	+0.8
PAWZ	Paruwai Farm	0.83	74	P	Pb	01 15 41.2	+1.2
NNZ	Nelson	0.85	298	P	Pg	01 15 40.7	+0.9
DUWZ	D’Urville Isla	0.88	337	P	Pb	01 15 41.9	+1.0
MTW	Mount Morrison	0.97	62	P	Pb	01 15 43.4	+1.0
OGWZ	Otaki Gorge	1.00	37	P	Pb	01 15 43.9	+1.0
KHZ	Kahutara	1.01	218	P	Pg	01 15 44.3	+1.3
TRWZ	Traveller	1.01	78	P	Pg	01 15 43.9	+0.9
THZ	Tophouse	1.11	262	P	Pb	01 15 45.6	+0.7
HOWZ	Holdsworth Sta	1.12	51	P	Pb	01 15 45.8	+0.8
TMWZ	Te Maipa	1.25	66	P	Pn	01 15 47.3	+0.2
MRZ	Mangatainoka R	1.32	44	P	Pn	01 15 48.8	+0.7
TIWZ	Tintock	1.42	54	P	Pn	01 15 49.8	+0.4
OHWZ	Ohakea	1.58	27	P	Pg	01 15 54.5	+0.7
QRZ	Quartz Range	1.60	299	P	Pb	01 15 53.7	+0.6
PRWZ	Pori Road	1.61	49	P	Pn	01 15 52.4	+0.4
POWZ	Post Office Ro	1.62	41	P	Pn	01 15 53.0	+0.9
GVZ	Greta Valley S	1.68	216	P	Pn	01 15 53.0	0.0
BFZ	Birch Farm	1.70	57	P	Pn	01 15 52.9	-0.3
DVHZ	Dannevirke	1.89	47	P	Pn	01 15 55.8	-0.1
WAZ	Wanganui	1.92	14	P	Pg	01 16 01.4	+1.2
LTZ	Lake Taylor	1.95	233	P	Pn	01 15 57.1	+0.4
AMCZ	Amberley	2.01	219	P	Pn	01 15 57.2	-0.4
PRHZ	Porangahau	2.18	53	P	Pn	01 16 00.5	+0.7
PNHZ	Pukenui	2.20	40	P	Pn	01 16 00.1	0.0
OKCZ	Okains Bay	2.32	204	P	Pn	01 16 00.6	-1.1
KHEZ	Kahui Hut	2.33	353	P	Pb	01 16 07.2	+1.4
CRLZ	Canterbury Las	2.34	213	P	Pn	01 16 01.2	-0.9
DREZ	Durham Road	2.43	357	P	Pg	01 16 10.3	+0.2
OXZ	Oxford	2.43	225	P	Pb	01 16 09.3	+2.0
PKE	Pukeiti	2.44	353	P	Pg	01 16 11.0	+0.7
INZ	Inchbonnie	2.44	242	P	Pb	01 16 08.6	+1.1
MQZ	McQueen’s Vall	2.44	211	P	Pn	01 16 02.2	-1.2
MOVZ	Moawhango	2.44	26	P	Pg	01 16 11.4	+1.1
BHHZ	Black Hill Sta	2.48	32	P	Pg	01 16 12.5	+1.3
AKCZ	Akaroa Harbour	2.50	205	P	Pn	01 16 03.5	-0.7
WHVZ	Whangaehu Hut	2.51	22	P	Pg	01 16 12.2	+0.5
KAHZ	Kahuranaki	2.63	47	P	Pb	01 16 12.5	+1.7
KRVZ	Karewarewa	2.70	21	P	Pg	01 16 15.2	-0.1
WVZ	Waitaha Valley	3.06	240	P	Pb	01 16 18.1	0.0
RPZ	Rata Peaks	3.22	228	Pn	Pn	01 16 13.6	-0.6
	9.5nm,0.3s,baz=70,slow=2.4,SNR=4.7						
RPZ				Pg	Pb	01 16 21.8	+1.0
	53nm,0.3s,baz=346,slow=3.3,SNR=6.8						
RPZ				Sn	Sn	01 16 49.8	-2.8
	29nm,0.3s,baz=346,slow=23,SNR=10						
FOZ	Fox Glacier	3.87	239	*e*Pn	Pn	01 16 24.3	+1.2
URZ	Urewera	3.96	33	Pn	Pn	01 16 21.8	-2.5
	3.4nm,0.3s,baz=79,slow=5.2,SNR=2.2						
URZ	Urewera	3.96	33	*e*Pn	Pn	01 16 26.2	+2.0
LBZ	Lake Benmore	4.13	227	*e*Pn	Pn	01 16 26.9	+0.2
LBZ	Lake Benmore	4.13	227	P	Pn	01 16 28.2	+1.5
ODZ	Otahua Downs	4.37	217	*e*Pn	Pn	01 16 29.0	-1.0
ODZ	Otahua Downs	4.37	217	P	Pn	01 16 29.7	-0.3
AWAZ	Awhitu Peninsu	4.55	3	P	Pn	01 16 37.1	+4.6
ETAZ	East Tamaki Re	4.68	5	P	Pb	01 16 41.2	-4.4
JCZ	Jackson Bay	4.79	237	P	Pn	01 16 40.5	+4.7
WKZ	Wanaka	5.06	229	*e*Pn	Pn	01 16 40.3	+0.8
MXZ	Matakaoa Point	5.06	38	*e*Pn	Pn	01 16 39.5	+0.1
HHSZ	Highcliff Hill	5.07	211	P	Pn	01 16 38.8	-0.8
TUZ	Tuapeka	5.53	217	P	Pn	01 16 45.6	-0.3
MSZ	Milford Sound	5.62	235	P	Pn	01 16 53.2	+6.2
MLZ	Mavora Lakes	5.89	228	*e*Pn	Pn	01 16 52.0	+1.1
SYZ	Scrubby Hill	6.20	216	P	Pn	01 16 55.3	+0.3
OUZ	Omahuta	6.42	354	*e*Pn	Pn	01 17 00.1	+2.0
APZ	The Paps	6.94	219	P	Pn	01 17 06.1	+0.8
CTZ	Chatham Island	6.97	111	P	Pn	01 17 04.9	-0.8
AS31	Alice Springs	38.08	285	*e*P	P	01 22 42.2	-0.3
	2.0nm,1.1s						
ASAR	Alice Springs	38.08	285	P	P	01 22 42.2	-0.3
	0.8nm,0.4s,baz=122,slow=6.7,SNR=27						
ASAR				LR	LR	01 38 55.0	
	comp=Z,98nm,18.2s,baz=256,slow=37						
WR1	Warramunga Arr	40.14	290	*e*P	P	01 22 59.0	-0.8
WRA	Warramunga Arr	40.14	290	P	P	01 22 59.0	-0.8
	1.9nm,0.4s,baz=121,slow=8.1,SNR=13						
QSPA	South Pole Qui	48.51	180	P	P	01 24 07.3	+0.9
	4.4nm,1.0s,baz=8.1,slow=3.5,SNR=8.3						
QSPA	South Pole Qui	48.51	180	*e*P	P	01 24 08.3	+1.9
	24nm,1.8s						
YKA	Yellowknife Ar	118.22	30	PKP	PKPdf	01 34 08.6	-1.1
	0.5nm,0.6s,baz=251,slow=1.8,SNR=5.7						
YKB5	Yellowknife Ar	118.22	30	*e*PKPdf	PKPdf	01 34 08.7	-1.1
KURBB	Kurchatov Arra	123.96	310	PKP	PKPdf	01 34 19.0	-2.2
	0.3nm,0.6s,baz=118,slow=1.9,SNR=6.8						
DBIC	Dimbokro	145.19	181	PKPbc	PKPbc	01 35 01.6	+0.3
	5.2nm,0.9s,baz=131,slow=2.9,SNR=5.1						
ARA0	ARCESS Array S	147.68	340	*e*PKPdf	PKPdf	01 35 05.2	+0.9
ARCES	ARCESS Array B	147.68	340	PKPbc	PKPdf	01 35 05.2	+0.9
	1.7nm,0.7s,baz=56,slow=3.1,SNR=8.8						
BR101	Keskin Array S	150.33	280	*e*PKPbc	PKPbc	01 35 13.8	-1.2
BRTR	Keskin Array B	150.33	280	PKPbc	PKPbc	01 35 13.8	-1.2
	0.5nm,0.8s,baz=118,slow=7.1,SNR=4.3						
TORD	Torodi Ar. Bea	150.93	195	PKPbc	PKPbc	01 35 15.8	-1.0
	1.3nm,0.5s,baz=154,slow=2.6,SNR=24						
TOA1	Torodi Ar. Sit	150.93	195	*e*PKPbc	PKPbc	01 35 15.8	-1.0
FIA0	FINESS Array S	152.47	327	*e*PKPbc	PKPbc	01 35 16.8	-2.1
FINES	FINESS Array B	152.47	327	PKPbc	PKPbc	01 35 16.8	-2.1
	1.6nm,0.6s,baz=72,slow=6.2,SNR=7.8						

WEL 21 01:28:28.2, 41°.6S±0°.9×174°.4E±0°.9, h14^{km}±2^{km}, M3.2/22, ML3.4/18, MLv3.2/22, Error ellipse: s-maj=0.0km s-min=0.0km az=133.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	220	P	Pg	01 28 32.5	+0.3
CMWZ				S	Sb	01 28 36.1	-0.2
TUWZ	Tuamarina	0.36	302	P	Pb	01 28 36.1	-0.4
BSWZ	Blackbirch Sta	0.37	255	P	Pb	01 28 36.2	-0.4
BSWZ				S	Sb	01 28 42.3	+0.1
TCW	Tory Channel	0.42	352	P	Pb	01 28 37.3	-0.1
TCW				S	Sb	01 28 43.4	-0.1
BHW	Baring Head	0.44	61	P	Pb	01 28 37.8	-0.1
PLWZ	Palliser	0.68	86	P	Pb	01 28 42.5	+0.6
MSWZ	Moikau Station	0.70	73	P	Pb	01 28 42.7	+0.4
CAW	Cannon Point	0.74	46	P	Pb	01 28 43.3	+0.3
NNZ	Nelson	0.84	299	P	Pg	01 28 44.4	0.0
PAWZ	Paruwai Farm	0.84	74	P	Pb	01 28 45.1	+0.4
DUWZ	D’Urville Isla	0.88	338	P	Pg	01 28 45.3	-0.1
MTW	Mount Morrison	0.98	62	P	Pn	01 28 47.6	0.0
KHZ	Kahutara	1.00	217	P	Pn	01 28 48.1	+0.3
OGWZ	Otaki Gorge	1.01	38	P	Pb	01 28 47.5	0.0
TRWZ	Traveller	1.03	78	P	Pg	01 28 48.0	-0.1
THZ	Tophouse	1.09	262	P	Pn	01 28 49.2	-0.1
HOWZ	Holdsworth Sta	1.14	51	P	Pn	01 28 49.9	+0.1
TMWZ	Te Maipa	1.27	66	P	Pn	01 28 51.5	0.0
MRZ	Mangatainoka R	1.33	44	P	Pb	01 28 53.2	+0.1
QRZ	Quartz Range	1.59	299	P	Pb	01 28 57.7	+0.3
OHWZ	Ohakea	1.59	28	P	Pg	01 28 58.2	-0.6
PRWZ	Pori Road	1.62	49	P	Pn	01 28 56.9	+0.5
POWZ	Post Office Ro	1.63	42	P	Pb	01 28 57.3	-0.7
GVZ	Greta Valley S	1.66	216	P	Pn	01 28 56.8	-0.2
BFZ	Birch Farm	1.71	57	P	Pb	01 28 58.9	-0.6
DVHZ	Dannevirke	1.91	47	P	Pn	01 29 00.3	-0.1
WAZ	Wanganui	1.93	15	P	Pg	01 29 04.3	-0.9
LTZ	Lake Taylor	1.93	232	P	Pn	01 29 00.9	+0.2
AMCZ	Amberley	2.00	218	P	Pn	01 29 01.6	0.0
PNHZ	Pukenui	2.21	40	P	Pn	01 29 04.5	0.0
PREZ	Palmer Road	2.28	356	P	Pg	01 29 11.1	-0.9
OKCZ	Okains Bay	2.31	204	P	Pn	01 29 04.5	-1.3
KHEZ	Kahui Hut	2.34	354	P	Pb	01 29 11.3	+1.1
MTVZ	Mangateitei	2.39	21	P	Pb	01 29 12.0	+0.9
OXZ	Oxford	2.42	224	P	Pn	01 29 06.5	-0.8
INZ	Inchbonnie	2.43	242	P	Pn	01 29 08.0	+0.5
DREZ	Durham Road	2.43	357	P	Pg	01 29 13.8	-1.1
MOVZ	Moawhango	2.46	26	P	Pb	01 29 12.0	-0.2
AKCZ	Akaroa Harbour	2.49	205	P	Pn	01 29 07.0	-1.4
BHHZ	Black Hill Sta	2.50	32	P	Pn	01 29 10.6	+2.0
KRHZ	Kereru	2.50	38	P	Pn	01 29 08.4	-0.1
VRZ	Vera Road	2.52	7	P	Pb	01 29 12.4	-0.8
WHVZ	Whangaehu Hut	2.52	22	P	Pb	01 29 13.7	+0.3
NGZ	Ngauruhoe	2.62	22	P	Pb	01 29 15.8	+0.7
KAHZ	Kahuranaki	2.65	47	P	Pn	01 29 10.2	-0.4
TWVZ	Taurewa	2.68	18	P	Pb	01 29 15.2	-0.9
KRVZ	Karewarewa	2.71	22	P	Pb	01 29 17.3	+0.7
KATZ	Kakaramea	2.84	22	P	Pb	01 29 19.9	+1.1
RITZ	Rihia Road	2.88	24	P	Pb	01 29 20.3	+0.9
WVZ	Waitaha Valley	3.05	240	P	Pn	01 29 16.5	+0.5
HIZ	Hauiti	3.13	7	P	Pb	01 29 24.7	+1.0
RPZ	Rata Peaks	3.21	228	P	Pn	01 29 19.8	+1.5
FOZ	Fox Glacier	3.86	239	P	Pn	01 29 27.5	+0.4
ODZ	Otahua Downs	4.36	217	P	Pn	01 29 32.2	-1.9
MKAZ	Moumakai	4.56	8	P	Pn	01 29 41.1	+4.3
AWAZ	Awhitu Peninsu	4.56	3	P	Pb	01 29 45.2	-2.8

IDC 21 01:29:00.9±2.3, 41°.39S×174°.52E, h0^{km}, mb3.5/2, mb1 3.8/2, mb1mx3.5/19, mbtmp3.5/2, Error ellipse: s-maj=47.1km s-min=45.2km az=73.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	3.46	227	Pg	Pb	01 30 03.9	+0.9
	3.4nm,0.3s,baz=359,slow=3.4,SNR=3.6						
ASAR	Alice Springs	38.13	285	P	P	01 36 21.9	+0.1
	0.5nm,0.8s,baz=124,slow=6.7,SNR=4.5						
WRA	Warramunga Arr	40.17	290	P	P	01 36 38.6	-0.3
	0.5nm,0.4s,baz=138,slow=8.9,SNR=3.0						
TORD	Torodi Ar. Bea	151.18	195	PKPbc	PKPbc	01 48 56.2	-0.2
	1.0nm,1.1s,baz=144,slow=2.9,SNR=3.3						

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*MOS **21** 01:32:23.1±1.2, 43°.58N×13°.66E, h10^{km}, mb5.4/50, MS4.9/28, Error ellipse: s-maj=3.5km s-min=2.7km az=82.6*

*ISCJB **21** 01:32:23.8±0.2, 43°.529N±0°.008×13°.751E±0°.008, h13^{km}±1^{km}, mb5.0/126, MS4.9/59, Error ellipse: s-maj=1.3km s-min=0.9km az=13.1*

*IDC **21** 01:32:23.5±0.4, 43°.56N×13°.71E, h0^{km}, mb4.6/33, mb1 4.7/49, mb1mx4.6/55, mbtmp4.6/49, ML4.2/15, MS4.7/46, Ms1 4.7/46, ms1mx4.6/56, Error ellipse: s-maj=9.0km s-min=8.7km az=175.0*

*BJI **21** 01:32:23.2±0.0, 43°.73N×13°.64E, h10^{km}, mb5.0/60, mB5.3/38, Ms5.3/48, Ms7 5.0/44*

*ROM **21** 01:32:24.2±0.1, 43°.509N±0°.006×13°.72E±0°.01, h8^{km}, ML4.9/182, Mw4.9, Error ellipse: s-maj=1.0km s-min=0.2km az=238.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.88; M$_{θθ}$-1.55; M$_{φφ}$-0.33; M$_{rθ}$0.25; M$_{θφ}$1.73; M$_{φr}$-0.87; Fault plane solution: M$_{0}$2.54787×10^{16} NP1:φ$_{s}$282.00000°, δ41.00000°, λ55.00000°. NP2:φ$_{s}$145.00000°, δ57.00000°, λ117.00000°.*

*LDG **21** 01:32:24.5±0.1, 43°.61N×13°.86E, h8^{km}, Md4.8/2, Ml4.5/54 Error ellipse: s-maj=2.5km s-min=1.5km az=12.0*

*MED_RC **21** 01:32:24.0±0.2, 43°.45N×13°.82E, h14^{km}±1^{km}, MW5.2/15, Moment Tensor Solution.Mantle waves: s15,c30; Duration: 1^{s}3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.12±.43; M$_{θθ}$-3.20±.28; M$_{φφ}$-1.93±.24; M$_{rθ}$-0.40±.39; M$_{θφ}$4.85±.15; M$_{φr}$2.35±.44; Best double couple: M$_{0}$6.86000×10^{16} NP1:φ$_{s}$331.00000°, δ57.00000°, λ116.00000°. NP2:φ$_{s}$109.00000°, δ41.00000°, λ56.00000°. Principal axes: T 5.9900, Plg67.0000°, Azm293.0000°; N 1.7300, Plg22.0000°, Azm136.0000°; P -7.7300, Plg8.0000°, Azm43.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **21** 01:32:24.0±0.0, 43°.50N×13°.67E, h8^{km}, mb5.4/278, ML4.9(ROM), After ROM.*

NEIC Felt at Ancona, Ascoli Piceno, Castelbellino, Civitanova Marche, Fiano Romano, Macerata, Osimo, Perugia, Porto San Giorgio, Recanati and Silvi.

*CRAAG **21** 01:32:24.0, 43°.53N×13°.74E, Mw5.0*

*PDG **21** 01:32:24.0±0.8, 43°.54N×13°.74E, h11^{km}±1^{km}, MD5.2/9, ML5.2/11, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*

PRU **21** *01:32:25.4±0.0, 43°.60N×13°.66E, h0^{km}, M5.4*
BEO **21** *01:32:25.6±0.4, 43°.50N×13°.69E, h10^{km}, ML5.2/8*
GCMT **21** *01:32:27.0±0.2, 43°.48N±0°.01×13°.68E±0°.02, h12^{km}, MW5.1/107, Moment Tensor Solution. s51,c72; s107,c191; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.45±.13; $M_{\theta\theta}$-3.18±.12; $M_{\phi\phi}$-1.26±.11; $M_{r\theta}$-0.97±.35; $M_{\theta\phi}$4.25±.10; $M_{\phi r}$1.27±.36; Best double couple: $M_0$5.75700×10^{16} NP1:ϕ_s316.00000°,δ53.00000°, λ100.00000°. NP2:ϕ_s119.00000°,δ38.00000°,λ76.00000°. Principal axes: T 4.7210, Plg79.0000°, Azm266.0000°; N 2.0820, Plg8.0000°, Azm130.0000°; P -6.7920, Plg8.0000°, Azm39.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
STR **21** *01:32:30.5±1.3, 44°N±4°×1°4E±°, h22^{km}±13^{km}, mB5.5/13, mb4.7/13, MLv4.9/6, Mw(mB)4.9/13*
BGS **21** *01:32:43.5±2.3, 44°.58N×12°.27E, h8^{km}, mb5.3, MS5.0*
TIR **21** *01:33:00.9, 43°.52N×13°.71E, h7^{km}, Md5.1/9*
ISC 21 01:32:25.1±0.6, **43°.50N**±0°.02×**13°.69E**±0°.01, **h11**^{km}±3^{km}, **n1537**, σ**1.s63**/1672, **mb5.2**/138, **MS4.9**/60, **61C-48D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOI	**Ancona**	**0.08**	**307**	*e*P	**Pg**	**01 32 26.6**	**-1.0**
AOI				S	**Sg**	**01 32 28.5**	**-1.0**
PCRO	**Pietralacroce**	**0.16**	**313**	P	**Pg**	**01 32 28.2**	**-0.4**
PCRO				S	**Sg**	**01 32 31.4**	**+0.3**
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
PCRO				AML	AML		
CIMA	**Civitanova Mar**	**0.20**	**185**	*e*P	**Pg**	**01 32 29.7**	**+0.5**
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CIMA				AML	AML		
CADA	**Capodarco di F**	**0.31**	**171**	*e*P	**Pb**	**01 32 31.5**	**-1.1**
CADA				S	**Sb**	**01 32 37.3**	**-0.4**
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CADA				AML	AML		
CING	**Cingoli**	**0.38**	**251**	*e*P	**Pg**	**01 32 32.5**	**-0.2**
CING	comp=E,68550μm,1.1s			AML	AML		
CING	comp=N,83000μm,0.6s			AML	AML		
CING	comp=N,83000μm,0.6s			AML	AML		
CING	comp=E,68550μm,1.1s			AML	AML		
CING	comp=N,83000μm,0.6s			AML	AML		
CING	comp=E,68550μm,1.1s			AML	AML		
SENI	**Senigallia**	**0.39**	**302**	*e*P	**Pb**	**01 32 33.0**	**-1.0**
SENI				S	**Sb**	**01 32 38.9**	**-1.1**
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
SENI				AML	AML		
MNTP	**Montappone**	**0.40**	**204**	P	**Pb**	**01 32 33.2**	**-0.9**
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
MNTP				AML	AML		
EL6	**Elcito**	**0.46**	**249**	*e*P	**Pg**	**01 32 34.0**	**-0.2**
EL6				S	**Sb**	**01 32 42.7**	**+0.5**
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
EL6				AML	AML		
SSM1	**San Severino M**	**0.46**	**234**	P	**Pg**	**01 32 33.9**	**-0.2**
MDAR	**Monte D'Aria**	**0.51**	**233**	P	**Pg**	**01 32 34.8**	**-0.1**
MDAR	comp=E,61900μm,0.7s			AML	AML		
MDAR	comp=N,66900μm,0.6s			AML	AML		
MDAR	comp=E,61900μm,0.7s			AML	AML		
MDAR	comp=N,66900μm,0.6s			AML	AML		
MDAR	comp=N,66900μm,0.6s			AML	AML		
MDAR	comp=E,61900μm,0.7s			AML	AML		
MDAR	comp=N,66900μm,0.6s			AML	AML		
MDAR	comp=E,61900μm,0.7s			AML	AML		
COR1	**Corinaldo**	**0.52**	**285**	P	**Pb**	**01 32 35.5**	**-0.7**
COR1				AML	AML		
COR1				AML	AML		
COR1	comp=E,57950μm,1.6s			AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1	comp=E,60250μm,1.1s			AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1	comp=E,58050μm,1.6s			AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1	comp=E,58050μm,1.6s			AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1				AML	AML		
COR1	comp=E,58050μm,1.6s			AML	AML		
GAG1	**Gagliole**	**0.53**	**240**	P	**Pg**	**01 32 34.9**	**-0.5**
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
GAG1				AML	AML		
CSP1	**Cessapalombo**	**0.54**	**221**	*e*P	**Pg**	**01 32 35.4**	**-0.2**
CSP1	comp=E,82650μm,1.6s			AML	AML		
CSP1				AML	AML		
CSP1	comp=E,83200μm,1.6s			AML	AML		
CSP1				AML	AML		
CSP1				AML	AML		
CSP1	comp=E,83200μm,1.6s			AML	AML		
CSP1				AML	AML		
CSP1	comp=E,83200μm,1.6s			AML	AML		
ARVD	**Arcevia**	**0.55**	**270**	*e*P	**Pg**	**01 32 35.2**	**-0.5**
ARVD				S	**Sb**	**01 32 44.7**	**+0.2**
CRM1	**Catelraimondo**	**0.55**	**238**	P	**Pg**	**01 32 35.4**	**-0.3**
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
CRM1				AML	AML		
MTL1	**Matelica**	**0.55**	**244**	P	**Pg**	**01 32 35.5**	**-0.3**
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
MTL1				AML	AML		
SNTG	**Esanatoglia**	**0.60**	**246**	*e*P	**Pg**	**01 32 36.2**	**-0.5**
SNTG	comp=E,4445μm,0.9s			AML	AML		
SNTG	comp=N,5405μm,1.1s			AML	AML		
SNTG	comp=E,35150μm,0.9s			AML	AML		
SNTG	comp=N,43750μm,1.1s			AML	AML		
SNTG	comp=E,4450μm,0.9s			AML	AML		
SNTG	comp=N,5405μm,1.1s			AML	AML		
SNTG	comp=E,35150μm,0.9s			AML	AML		
SNTG	comp=N,43750μm,1.1s			AML	AML		
SNTG	comp=E,4450μm,0.9s			AML	AML		
SNTG	comp=N,5405μm,1.1s			AML	AML		
SNTG	comp=N,43750μm,1.1s			AML	AML		
SNTG	comp=E,35150μm,0.9s			AML	AML		
SNTG	comp=E,35150μm,0.9s			AML	AML		
SNTG	comp=N,5405μm,1.1s			AML	AML		
SNTG	comp=N,43750μm,1.1s			AML	AML		
SNTG	comp=E,4450μm,0.9s			AML	AML		
FDMO	**Fiordimonte**	**0.64**	**224**	P	**Pg**	**01 32 37.0**	**-0.5**
FDMO	comp=E,66100μm,1.1s			AML	AML		
FDMO	comp=N,57700μm,1.4s			AML	AML		
FDMO	comp=E,66100μm,1.1s			AML	AML		
FDMO	comp=N,57700μm,1.4s			AML	AML		
FDMO	comp=N,57700μm,1.4s			AML	AML		
FDMO	comp=E,66100μm,1.1s			AML	AML		
FDMO	comp=N,57700μm,1.4s			AML	AML		
FDMO	comp=E,66100μm,1.1s			AML	AML		
SEF1	**Sefro**	**0.65**	**237**	P	**Pg**	**01 32 37.6**	**-0.1**
SSFR	**Montelago di S**	**0.67**	**265**	P	**Pg**	**01 32 37.5**	**-0.5**
SSFR	comp=E,63300μm,0.2s			AML	AML		
SSFR	comp=N,54050μm,0.3s			AML	AML		
SSFR	comp=E,66800μm,0.2s			AML	AML		
SSFR	comp=N,52300μm,0.2s			AML	AML		
SSFR	comp=E,63350μm,0.2s			AML	AML		
SSFR	comp=N,54050μm,0.3s			AML	AML		
SSFR	comp=E,66750μm,0.2s			AML	AML		
SSFR	comp=N,52250μm,0.2s			AML	AML		
SSFR	comp=N,54050μm,0.3s			AML	AML		
SSFR	comp=E,66750μm,0.2s			AML	AML		
SSFR	comp=E,63350μm,0.2s			AML	AML		
SSFR	comp=N,52250μm,0.2s			AML	AML		
SSFR	comp=N,54050μm,0.3s			AML	AML		
SSFR	comp=E,66750μm,0.2s			AML	AML		
SSFR	comp=E,63350μm,0.2s			AML	AML		
SSFR	comp=N,52250μm,0.2s			AML	AML		
MPAG	**Monte Paganucc**	**0.69**	**281**	P	**Pg**	**01 32 37.7**	**-0.7**
MPAG	comp=E,35200μm,0.7s			AML	AML		
MPAG	comp=N,29000μm,0.6s			AML	AML		
MPAG	comp=E,35650μm,0.7s			AML	AML		
MPAG	comp=N,30150μm,0.5s			AML	AML		
MPAG	comp=E,35150μm,0.7s			AML	AML		
MPAG	comp=N,29050μm,0.6s			AML	AML		
MPAG	comp=E,35750μm,0.7s			AML	AML		
MPAG	comp=N,30150μm,0.5s			AML	AML		
MPAG	comp=N,29050μm,0.6s			AML	AML		
MPAG	comp=N,30150μm,0.5s			AML	AML		
MPAG	comp=E,35750μm,0.7s			AML	AML		
MPAG	comp=E,35150μm,0.7s			AML	AML		
MPAG	comp=N,29050μm,0.6s			AML	AML		
MPAG	comp=N,30150μm,0.5s			AML	AML		
MPAG	comp=E,35750μm,0.7s			AML	AML		
MPAG	comp=E,35150μm,0.7s			AML	AML		
FSSB	**Fossombrone**	**0.69**	**286**	P	**Pg**	**01 32 37.8**	**-0.6**
FSSB	comp=E,87650μm,0.3s			AML	AML		
FSSB				AML	AML		
FSSB	comp=E,87650μm,0.3s			AML	AML		
FSSB				AML	AML		
FSSB	comp=E,87650μm,0.3s			AML	AML		
FSSB				AML	AML		
FSSB	comp=E,87650μm,0.3s			AML	AML		
FSSB				AML	AML		
FRON	**Frontone**	**0.70**	**272**	P	**Pg**	**01 32 38.1**	**-0.6**
FRON	comp=E,41450μm,0.5s			AML	AML		
FRON	comp=N,56450μm,0.6s			AML	AML		
FRON	comp=E,41500μm,0.5s			AML	AML		
FRON	comp=N,56500μm,0.6s			AML	AML		
FRON	comp=N,56500μm,0.6s			AML	AML		
FRON	comp=E,41500μm,0.5s			AML	AML		
FRON	comp=N,56500μm,0.6s			AML	AML		
FRON	comp=E,41500μm,0.5s			AML	AML		
FOSV	**Fossato di Vic**	**0.71**	**253**	*e*P	**Pg**	**01 32 38.1**	**-0.7**
FOSV	comp=E,41550μm,1.4s			AML	AML		
FOSV	comp=N,44700μm,0.5s			AML	AML		
FOSV	comp=E,41500μm,1.4s			AML	AML		
FOSV	comp=N,44800μm,0.5s			AML	AML		
FOSV	comp=E,41500μm,1.4s			AML	AML		
FOSV	comp=N,44800μm,0.5s			AML	AML		
FOSV	comp=E,41500μm,1.4s			AML	AML		
FOSV	comp=N,44800μm,0.5s			AML	AML		
TRTR	**Tortoreto Alta**	**0.71**	**167**	P	**Pn**	**01 32 39.8**	**-1.2**
PESA	**Pesaro**	**0.76**	**306**	P	**Pb**	**01 32 39.5**	**-0.7**
PESA	comp=E,81050μm,1.0s			AML	AML		
PESA	comp=N,82100μm,0.3s			AML	AML		
PESA	comp=E,81050μm,1.0s			AML	AML		
PESA	comp=N,82100μm,0.3s			AML	AML		
PESA	comp=E,81050μm,1.0s			AML	AML		
PESA	comp=N,82100μm,0.3s			AML	AML		
PESA	comp=E,81050μm,1.0s			AML	AML		
PESA	comp=N,82100μm,0.3s			AML	AML		
CESI	**CESI - Serrava**	**0.76**	**230**	*e*P	**Pg**	**01 32 39.2**	**-0.5**
CESI	comp=E,23400μm,0.4s			AML	AML		
CESI	comp=N,42450μm,0.4s			AML	AML		
CESI	comp=E,23400μm,0.4s			AML	AML		
CESI	comp=N,42450μm,0.4s			AML	AML		
CESI	comp=E,23400μm,0.4s			AML	AML		
CESI	comp=N,42450μm,0.4s			AML	AML		
CESI	comp=E,23400μm,0.4s			AML	AML		
CESI	comp=N,42450μm,0.4s			AML	AML		
NRCA	**Norcia**	**0.79**	**213**	P	**Pg**	**01 32 39.5**	**-0.8**
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
NRCA				AML	AML		
ATFO	**Monte Foce - G**	**0.83**	**261**	*e*P	**Pg**	**01 32 40.4**	**-0.6**
ATFO	comp=E,58800μm,0.9s			AML	AML		
ATFO	comp=N,51850μm,0.4s			AML	AML		
ATFO	comp=E,58800μm,0.9s			AML	AML		
ATFO	comp=N,51850μm,0.4s			AML	AML		
ATFO	comp=E,58800μm,0.9s			AML	AML		
ATFO	comp=N,51850μm,0.4s			AML	AML		
ATFO	comp=E,58800μm,0.9s			AML	AML		
ATFO	comp=N,51850μm,0.4s			AML	AML		
ATCC	**AVT- Casa Cast**	**0.83**	**248**	*e*P	**Pg**	**01 32 40.6**	**-0.4**
ATCC	comp=E,92450μm,0.9s			AML	AML		
ATCC	comp=N,82550μm,1.2s			AML	AML		
ATCC	comp=E,92500μm,0.9s			AML	AML		
ATCC	comp=N,82500μm,1.2s			AML	AML		
ATCC	comp=N,82500μm,1.2s			AML	AML		
ATCC	comp=E,92500μm,0.9s			AML	AML		
ATCC	comp=N,82500μm,1.2s			AML	AML		
ATCC	comp=E,92500μm,0.9s			AML	AML		
PIEI	**Pieia**	**0.84**	**273**	P	**Pg**	**01 32 40.6**	**-0.7**
PIEI	comp=E,23300μm,1.5s			AML	AML		
PIEI	comp=N,21200μm,1.6s			AML	AML		
PIEI	comp=E,23300μm,1.5s			AML	AML		
PIEI	comp=N,21200μm,1.6s			AML	AML		
PIEI	comp=N,21200μm,1.6s			AML	AML		
PIEI	comp=E,23300μm,1.5s			AML	AML		
PIEI	comp=N,21200μm,1.6s			AML	AML		
PIEI	comp=E,23300μm,1.5s			AML	AML		
TERO	**Teramo**	**0.88**	**184**	P	**Pg**	**01 32 41.1**	**-0.9**
TERO				AML	AML		
TERO				AML	AML		
TERO	comp=E,53850μm,0.4s			AML	AML		
TERO	comp=N,44900μm,0.6s			AML	AML		
TERO	comp=E,53850μm,0.4s			AML	AML		
TERO				AML	AML		
TERO	comp=N,44900μm,0.6s			AML	AML		
TERO				AML	AML		
TERO	comp=E,53850μm,0.4s			AML	AML		
TERO				AML	AML		
TERO	comp=N,44900μm,0.6s			AML	AML		
TERO				AML	AML		
ASSB	**Assisi San Ben**	**0.88**	**239**	*e*P	**Pg**	**01 32 41.4**	**-0.7**

```
MURB  Monte Urbino      0.88 255  eP     Pg     01 32 41.5 -0.6
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
MURB                              AML    AML
PE3   Peglio            0.89 283  P      Pg     01 32 41.8 -0.4
PE3                               AML    AML
PE3                               AML    AML
PE3                               AML    AML
PE3                               AML    AML
PE3                               AML    AML
PE3                               AML    AML
PE3                               AML    AML
PE3                               AML    AML
SMA1  SAN MARTINO       0.91 197  P      Pg     01 32 41.5 -1.1
SMA1                              AML    AML
SMA1                              AML    AML
SMA1                              AML    AML
SMA1                              AML    AML
SMA1                              AML    AML
SMA1                              AML    AML
ATPI  Pietralunga -     0.94 267  P      Pg     01 32 42.5 -0.7
ATPI                              AML    AML
      comp=E,48550µm,0.6s
ATPI                              AML    AML
      comp=N,34650µm,0.6s
ATPI                              AML    AML
      comp=E,48650µm,0.6s
ATPI                              AML    AML
      comp=N,34600µm,0.6s
ATPI                              AML    AML
      comp=E,48650µm,0.6s
ATPI                              AML    AML
      comp=N,34600µm,0.6s
ATPI                              AML    AML
      comp=E,48650µm,0.6s
ATPI                              AML    AML
      comp=N,34600µm,0.6s
ATVO  AVT- Monte Val    0.94 263  eP     Pg     01 32 42.4 -0.8
ATVO                              AML    AML
      comp=E,39150µm,1.2s
ATVO                              AML    AML
      comp=N,26050µm,1.3s
ATVO                              AML    AML
      comp=N,26050µm,1.3s
ATVO                              AML    AML
      comp=E,39150µm,1.2s
ATVO                              AML    AML
      comp=N,26050µm,1.3s
ATVO                              AML    AML
      comp=E,39150µm,1.2s
RSM   Repubblica di     1.00 296  AML    AML
      comp=N,79550µm,1.3s
RSM                               AML    AML
      comp=E,53000µm,1.6s
RSM                               AML    AML
      comp=N,79550µm,1.3s
RSM                               AML    AML
      comp=E,53000µm,1.6s
RSM                               AML    AML
      comp=N,79550µm,1.3s
RSM                               AML    AML
      comp=E,53000µm,1.6s
LNSS  Leonessa          1.02 208  P      Pg     01 32 43.5 -1.1
LNSS                              AML    AML
LNSS                              AML    AML
LNSS                              AML    AML
LNSS                              AML    AML
LNSS                              AML    AML
LNSS                              AML    AML
ATTE  AVT- Monte Tez    1.02 253  AML    AML
      comp=E,51550µm,1.6s
ATTE                              AML    AML
      comp=E,51550µm,1.6s
ATTE                              AML    AML
      comp=N,47150µm,1.5s
ATTE                              AML    AML
      comp=N,47150µm,1.5s
ATTE                              AML    AML
      comp=E,51550µm,1.6s
ATTE                              AML    AML
      comp=N,47150µm,1.5s
CPGN  Carpegna, Ital    1.04 287  AML    AML
      comp=N,39300µm,1.6s
CPGN                              AML    AML
      comp=E,42450µm,1.4s
CPGN                              AML    AML
      comp=E,41500µm,0.8s
CPGN                              AML    AML
      comp=N,47150µm,1.6s
CPGN                              AML    AML
      comp=N,47150µm,1.6s
CPGN                              AML    AML
      comp=E,42450µm,1.4s
CPGN                              AML    AML
      comp=E,41500µm,0.8s
CPGN                              AML    AML
      comp=N,39300µm,1.6s
CPGN                              AML    AML
      comp=N,47150µm,1.6s
CPGN                              AML    AML
      comp=E,42450µm,1.4s
CPGN                              AML    AML
      comp=E,41500µm,0.8s
CPGN                              AML    AML
      comp=N,39300µm,1.6s
ATMI  Monte Miggiano    1.05 261  AML    AML
      comp=E,54500µm,0.6s
ATMI                              AML    AML
      comp=E,54500µm,0.6s
ATMI                              AML    AML
      comp=N,64700µm,0.8s
ATMI                              AML    AML
      comp=N,64700µm,0.8s
ATMI                              AML    AML
      comp=N,64700µm,0.8s
ATMI                              AML    AML
      comp=E,54500µm,0.6s
BADI  Badiali           1.05 271  P      Pg     01 32 44.5 -0.9
BADI                              AML    AML
      comp=E,39900µm,1.3s
BADI                              AML    AML
      comp=N,57350µm,0.5s
BADI                              AML    AML
      comp=N,57350µm,0.5s
BADI                              AML    AML
      comp=E,39900µm,1.3s
BADI                              AML    AML
      comp=N,57350µm,0.5s
BADI                              AML    AML
      comp=E,39900µm,1.3s
CDCA  Citt' di Caste    1.06 268  AML    AML
      comp=N,37150µm,1.6s
CDCA                              AML    AML
      comp=E,57750µm,0.8s
CDCA                              AML    AML
CDCA                              AML    AML
      comp=E,47700µm,0.9s
CDCA                              AML    AML
      comp=N,37150µm,1.6s
CDCA                              AML    AML
CDCA                              AML    AML
      comp=E,57750µm,0.8s
CDCA                              AML    AML
      comp=E,47700µm,0.9s
CDCA                              AML    AML
CDCA                              AML    AML
      comp=E,57750µm,0.8s
CDCA                              AML    AML
      comp=N,37150µm,1.6s
CDCA                              AML    AML
      comp=E,47700µm,0.9s
PARC  Parchiule         1.07 278  P      Pg     01 32 44.9 -0.7
PARC                              AML    AML
      comp=E,36250µm,0.7s
PARC                              AML    AML
      comp=N,34550µm,0.5s
PARC                              AML    AML
      comp=N,34550µm,0.5s
PARC                              AML    AML
      comp=E,36250µm,0.7s
PARC                              AML    AML
      comp=N,34550µm,0.5s
PARC                              AML    AML
      comp=E,36250µm,0.7s
MOMA  Monte Martano     1.08 230  P      Pg     01 32 44.7 -1.0
MOMA                              AML    AML
      comp=E,55200µm,0.8s
MOMA                              AML    AML
      comp=N,91500µm,1.1s
MOMA                              AML    AML
      comp=E,55450µm,0.8s
MOMA                              AML    AML
      comp=N,94350µm,1.1s
MOMA                              AML    AML
      comp=E,55200µm,0.8s
MOMA                              AML    AML
      comp=N,91500µm,1.1s
MOMA                              AML    AML
      comp=N,94350µm,1.1s
MOMA                              AML    AML
      comp=E,55450µm,0.8s
MOMA                              AML    AML
      comp=E,55450µm,0.8s
MOMA                              AML    AML
      comp=N,94350µm,1.1s
MOMA                              AML    AML
      comp=N,91500µm,1.1s
MOMA                              AML    AML
      comp=E,55200µm,0.8s
BLLA  Bellaria          1.09 306  P      Pn     01 32 47.0 +0.8
BLLA                              AML    AML
      comp=E,78800µm,1.4s
BLLA                              AML    AML
      comp=N,74800µm,1.6s
BLLA                              AML    AML
      comp=E,78800µm,1.4s
BLLA                              AML    AML
      comp=N,74800µm,1.6s
BLLA                              AML    AML
      comp=E,78800µm,1.4s
BLLA                              AML    AML
      comp=N,74800µm,1.6s
DUGI  Dugi Otok         1.10  63  i Pg   Pn     01 32 45.6 -0.9
DUGI                                Sg   Sb     01 32 59.8 -0.8
VCEL  Villa Celiera     1.11 174  P      Pn     01 32 46.5 -0.2
VCEL                              AML    AML
VCEL                              AML    AML
VCEL                              AML    AML
VCEL                              AML    AML
VCEL                              AML    AML
VCEL                              AML    AML
SSP9  Sansepolcro       1.14 274  AML    AML
      comp=E,30550µm,0.7s
SSP9                              AML    AML
      comp=E,30550µm,0.7s
SSP9                              AML    AML
      comp=N,29600µm,1.3s
SSP9                              AML    AML
      comp=N,29600µm,1.3s
SSP9                              AML    AML
      comp=E,30550µm,0.7s
SSP9                              AML    AML
      comp=N,29600µm,1.3s
ARRO  Arrone            1.14 217  P      Pg     01 32 46.1 -0.9
ARRO                              AML    AML
      comp=E,41050µm,1.1s
ARRO                              AML    AML
      comp=N,55500µm,1.0s
ARRO                              AML    AML
      comp=E,41050µm,1.1s
ARRO                              AML    AML
      comp=N,55500µm,1.0s
ARRO                              AML    AML
      comp=E,41050µm,1.1s
ARRO                              AML    AML
      comp=N,55500µm,1.0s
AQU   L'Aquila          1.17 191  ePn    Pg     01 32 46.8 -0.7
AQU   L'Aquila          1.17 191  eP     Pg     01 32 46.8 -0.7
AQU   L'Aquila          1.17 191  i Pn   Pg     01 32 45.5 -2.0
AQU   L'Aquila          1.17 191  P      Pg     01 32 45.7 -1.8
AQU                               AML    AML
      comp=E,82850µm,1.6s
AQU                               AML    AML
      comp=N,86600µm,0.8s
AQU                               AML    AML
      comp=E,79450µm,1.6s
AQU                               AML    AML
      comp=N,84800µm,0.8s
AQU                               AML    AML
      comp=N,84800µm,0.8s
AQU                               AML    AML
      comp=N,86600µm,0.8s
AQU                               AML    AML
      comp=E,79450µm,1.6s
AQU                               AML    AML
      comp=E,82850µm,1.6s
AQU                               AML    AML
      comp=N,84800µm,0.8s
AQU                               AML    AML
      comp=N,86600µm,0.8s
AQU                               AML    AML
      comp=E,79450µm,1.6s
AQU                               AML    AML
      comp=E,82850µm,1.6s
T0104 Madonna delle     1.17 193  P      Pg     01 32 46.1 -1.4
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
T0104                             AML    AML
CESX  Cesi              1.21 223  P      Pb     01 32 46.8 -1.1
CESX                              AML    AML
      comp=E,90250µm,0.5s
CESX                              AML    AML
      comp=N,83800µm,0.8s
CESX                              AML    AML
      comp=N,83800µm,0.8s
CESX                              AML    AML
      comp=E,90250µm,0.5s
CESX                              AML    AML
      comp=N,83800µm,0.8s
CESX                              AML    AML
      comp=E,90250µm,0.5s
FAGN  Fagnano           1.24 184  P      Pg     01 32 48.9 +0.1
FAGN                              AML    AML
FAGN                              AML    AML
FAGN                              AML    AML
FAGN                              AML    AML
FAGN                              AML    AML
FAGN                              AML    AML
CAFI  Castiglion Fio    1.27 263  P      Pg     01 32 50.0 +0.5
CAFI                              AML    AML
      comp=E,25050µm,1.4s
CAFI                              AML    AML
      comp=N,29900µm,1.3s
CAFI                              AML    AML
      comp=E,26100µm,1.4s
CAFI                              AML    AML
      comp=N,31100µm,1.3s
CAFI                              AML    AML
      comp=E,25050µm,1.4s
CAFI                              AML    AML
      comp=N,31100µm,1.3s
CAFI                              AML    AML
      comp=N,29900µm,1.3s
CAFI                              AML    AML
      comp=E,26100µm,1.4s
CAFI                              AML    AML
      comp=E,26100µm,1.4s
CAFI                              AML    AML
      comp=N,31100µm,1.3s
CAFI                              AML    AML
      comp=N,29900µm,1.3s
CAFI                              AML    AML
      comp=E,25050µm,1.4s
MGAB  Montegabbione     1.30 244  P      Pg     01 32 50.1 +0.2
MGAB                              AML    AML
      comp=E,63350µm,1.1s
MGAB                              AML    AML
      comp=N,56800µm,0.5s
MGAB                              AML    AML
      comp=E,66550µm,1.1s
MGAB                              AML    AML
      comp=N,57550µm,0.6s
MGAB                              AML    AML
      comp=N,57550µm,0.6s
MGAB                              AML    AML
      comp=N,56800µm,0.5s
MGAB                              AML    AML
      comp=E,63350µm,1.1s
MGAB                              AML    AML
      comp=E,66550µm,1.1s
MGAB                              AML    AML
      comp=N,57550µm,0.6s
MGAB                              AML    AML
      comp=N,56800µm,0.5s
MGAB                              AML    AML
      comp=E,63350µm,1.1s
MGAB                              AML    AML
      comp=E,66550µm,1.1s
CAFR  Castel Frentan    1.36 159  eP     Pg     01 32 50.5 -0.7
CAFR                              AML    AML
CAFR                              AML    AML
CAFR                              AML    AML
CAFR                              AML    AML
CAFR                              AML    AML
CAFR                              AML    AML
NVLJ  Novalja           1.36  38  i Pg   Pb     01 32 49.6 -1.0
NVLJ                                Sg   Sg     01 33 07.9 -1.0
SFI   Santa Sofia       1.40 287  P      Pg     01 32 51.9  0.0
SFI                               AML    AML
      comp=E,12950µm,1.2s
SFI                               AML    AML
      comp=N,16200µm,1.5s
SFI                               AML    AML
      comp=E,15550µm,1.2s
SFI                               AML    AML
      comp=N,17350µm,1.5s
SFI                               AML    AML
      comp=E,15550µm,1.2s
SFI                               AML    AML
      comp=N,16200µm,1.5s
SFI                               AML    AML
      comp=E,12950µm,1.2s
SFI                               AML    AML
      comp=N,17350µm,1.5s
SFI                               AML    AML
      comp=E,15550µm,1.2s
SFI                               AML    AML
      comp=N,16200µm,1.5s
SFI                               AML    AML
      comp=E,12950µm,1.2s
SFI                               AML    AML
      comp=N,17350µm,1.5s
ASQU  Asqua             1.41 283  P      Pg     01 32 51.8 -0.4
ASQU                              AML    AML
      comp=E,18950µm,1.2s
ASQU                              AML    AML
      comp=N,19300µm,1.2s
ASQU                              AML    AML
      comp=N,19300µm,1.2s
ASQU                              AML    AML
      comp=E,18950µm,1.2s
ASQU                              AML    AML
      comp=N,19300µm,1.2s
ASQU                              AML    AML
      comp=E,18950µm,1.2s
ZIRJ  Zirje             1.43  83  i Pn   Pb     01 32 50.5 -1.2
ZIRJ                                Sg   Sg     01 33 10.6 -0.3
SACS  San Casciano d    1.46 244  P      Pg     01 32 52.5 -0.5
PTQR  Pietraquaria      1.49 188  P      Pg     01 32 53.3 -0.4
PTQR                              AML    AML
      comp=E,32600µm,1.6s
PTQR                              AML    AML
      comp=N,21800µm,0.9s
PTQR                              AML    AML
      comp=E,32600µm,1.6s
PTQR                              AML    AML
      comp=N,21800µm,0.9s
PTQR                              AML    AML
      comp=E,32600µm,1.6s
PTQR                              AML    AML
      comp=N,21800µm,0.9s
INTR  Introdacqua       1.50 174  eP     Pn     01 32 51.7 -0.2
INTR                              AML    AML
INTR                              AML    AML
INTR                              AML    AML
INTR                              AML    AML
INTR                              AML    AML
INTR                              AML    AML
LPEL  Lama dei Pelig    1.50 166  eP     Pn     01 32 51.9  0.0
LPEL                              AML    AML
      comp=E,71450µm,1.4s
LPEL                              AML    AML
      comp=N,52000µm,1.6s
LPEL                              AML    AML
      comp=N,52000µm,1.6s
LPEL                              AML    AML
      comp=E,71450µm,1.4s
LPEL                              AML    AML
      comp=N,52000µm,1.6s
LPEL                              AML    AML
      comp=E,71450µm,1.4s
MORI  Morici            1.51  75  i Pn   Pb     01 32 51.8 -1.2
MORI                                Sg   Sg     01 33 13.1 -0.4
VVLD  Villa Vallelon    1.63 182  AML    AML
      comp=E,37050µm,0.7s
VVLD                              AML    AML
      comp=E,37050µm,0.7s
VVLD                              AML    AML
      comp=N,35300µm,1.5s
VVLD                              AML    AML
      comp=E,37050µm,0.7s
VVLD                              AML    AML
      comp=N,35300µm,1.5s
VVLD                              AML    AML
      comp=N,35300µm,1.5s
MTCE  Montecelio        1.63 206  P      Pn     01 32 54.0 +0.2
MTCE                              AML    AML
      comp=E,34450µm,1.6s
MTCE                              AML    AML
      comp=N,18950µm,0.6s
MTCE                              AML    AML
      comp=E,34450µm,1.6s
MTCE                              AML    AML
      comp=N,18950µm,0.6s
MTCE                              AML    AML
      comp=E,34450µm,1.6s
MTCE                              AML    AML
      comp=N,18950µm,0.6s
CERT  Cerreto           1.64 199  P      Pb     01 32 54.7 -0.6
CERT                              AML    AML
      comp=E,56200µm,0.6s
CERT                              AML    AML
      comp=N,41750µm,0.8s
CERT                              AML    AML
      comp=N,41750µm,0.8s
CERT                              AML    AML
      comp=E,56200µm,0.6s
CERT                              AML    AML
      comp=N,41750µm,0.8s
CERT                              AML    AML
      comp=E,56200µm,0.6s
MCIV  Monte Civitell    1.64 245  eP     Pn     01 32 54.4 +0.5
MCIV                              AML    AML
      comp=E,9770µm,1.5s
MCIV                              AML    AML
      comp=N,10475µm,1.4s
MCIV                              AML    AML
      comp=N,10475µm,1.4s
MCIV                              AML    AML
      comp=E,9770µm,1.5s
MCIV                              AML    AML
      comp=N,10475µm,1.4s
MCIV                              AML    AML
      comp=E,9770µm,1.5s
BRIS  BRISIGHELLA       1.71 293  P      Pn     01 32 54.6 -0.1
BRIS                              AML    AML
      comp=E,16050µm,0.8s
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BRIS				AML	AML			comp=N,14250µm,0.6s
BRIS				AML	AML			comp=N,14250µm,0.6s
BRIS				AML	AML			comp=E,16050µm,0.8s
BRIS				AML	AML			comp=N,14250µm,0.6s
BRIS				AML	AML			comp=E,16050µm,0.8s
CSNT	**Castellina Chi**	**1.75**	**270**	eP	**Pb**	**01 32 56.6**	**-0.5**	
CSNT				AML	AML			comp=E,10010µm,1.6s
CSNT				AML	AML			comp=N,9450µm,1.4s
CSNT				AML	AML			comp=N,9450µm,1.4s
CSNT				AML	AML			comp=E,10010µm,1.6s
CSNT				AML	AML			comp=N,9450µm,1.4s
CSNT				AML	AML			comp=E,10010µm,1.6s
SEI	**Scarperia**	**1.78**	**289**	P	**Pg**	**01 32 58.2**	**-1.0**	
SEI				AML	AML			comp=E,15700µm,0.6s
SEI				AML	AML			comp=N,23900µm,0.5s
SEI				AML	AML			comp=N,23900µm,0.5s
SEI				AML	AML			comp=E,15700µm,0.6s
SEI				AML	AML			comp=N,23900µm,0.5s
SEI				AML	AML			comp=E,15700µm,0.6s
POFI	**Posta Fibreno**	**1.78**	**180**	P	**Pb**	**01 32 56.6**	**-1.2**	
POFI				AML	AML			comp=E,23400µm,1.6s
POFI				AML	AML			comp=N,33600µm,1.5s
POFI				AML	AML			comp=E,25900µm,1.6s
POFI				AML	AML			comp=N,35750µm,1.5s
POFI				AML	AML			comp=E,23400µm,1.6s
POFI				AML	AML			comp=N,35750µm,1.5s
POFI				AML	AML			comp=N,33600µm,1.5s
POFI				AML	AML			comp=E,25900µm,1.6s
POFI				AML	AML			comp=E,25900µm,1.6s
POFI				AML	AML			comp=N,33600µm,1.5s
POFI				AML	AML			comp=N,35750µm,1.5s
POFI				AML	AML			comp=E,23400µm,1.6s
UDBI	**Udbina**	**1.81**	**55**	ePn	**Pn**	**01 32 57.0**	**-1.3**	
UDBI				Sn	Sb	01 33 20.4	-0.7	
RNI2	**Rionero Sannit**	**1.83**	**169**	P	**Pn**	**01 32 56.9**	**+0.4**	
RNI2				AML	AML			comp=E,60800µm,1.6s
RNI2				AML	AML			comp=N,59150µm,1.5s
RNI2				AML	AML			comp=E,62100µm,1.6s
RNI2				AML	AML			comp=N,60850µm,1.6s
RNI2				AML	AML			comp=E,62100µm,1.6s
RNI2				AML	AML			comp=N,60850µm,1.6s
RNI2				AML	AML			comp=N,59150µm,1.5s
RNI2				AML	AML			comp=E,60800µm,1.6s
RNI2				AML	AML			comp=E,60800µm,1.6s
RNI2				AML	AML			comp=N,60850µm,1.6s
RNI2				AML	AML			comp=N,59150µm,1.5s
RNI2				AML	AML			comp=E,62100µm,1.6s
RMP	**Rome, Mte Porz**	**1.84**	**204**	P	**Pn**	**01 32 57.3**	**+0.7**	
RMP				AML	AML			comp=E,26150µm,0.9s
RMP				AML	AML			comp=N,32150µm,0.8s
RMP				AML	AML			comp=E,26150µm,0.9s
RMP				AML	AML			comp=N,32150µm,0.8s
RMP				AML	AML			comp=E,26150µm,0.9s
RMP				AML	AML			comp=N,32150µm,0.8s
FROS	**Frosini**	**1.87**	**262**	P	**Pn**	**01 32 57.9**	**+0.9**	
FROS				AML	AML			comp=E,13150µm,1.4s
FROS				AML	AML			comp=N,12250µm,1.0s
FROS				AML	AML			comp=N,12250µm,1.0s
FROS				AML	AML			comp=E,13150µm,1.4s
FROS				AML	AML			comp=N,12250µm,1.0s
FROS				AML	AML			comp=E,13150µm,1.4s
RDP	**Rocca di Papa**	**1.88**	**203**	AML	AML			comp=E,44350µm,0.5s
RDP				AML	AML			comp=E,44350µm,0.5s
RDP				AML	AML			comp=N,52250µm,0.5s
RDP				AML	AML			comp=N,52250µm,0.5s
RDP				AML	AML			comp=N,52250µm,0.5s
RDP				AML	AML			comp=E,44350µm,0.5s
MIDA	**Miranda**	**1.90**	**167**	eP	**Pn**	**01 32 57.3**	**-0.2**	
MIDA				AML	AML			comp=E,32950µm,1.5s
MIDA				AML	AML			comp=N,35800µm,1.2s
MIDA				AML	AML			comp=E,34000µm,1.5s
MIDA				AML	AML			comp=N,36150µm,1.2s
MIDA				AML	AML			comp=N,35800µm,1.2s
MIDA				AML	AML			comp=E,34000µm,1.5s
MIDA				AML	AML			comp=E,32950µm,1.5s
MIDA				AML	AML			comp=N,36150µm,1.2s
MIDA				AML	AML			comp=N,35800µm,1.2s
MIDA				AML	AML			comp=E,34000µm,1.5s
MIDA				AML	AML			comp=E,32950µm,1.5s
MIDA				AML	AML			comp=N,36150µm,1.2s
RIY	**Rijeka**	**1.91**	**17**	ePn	**Pn**	**01 32 57.6**	**0.0**	
RIY				eSg	Sg	01 33 26.2	-0.3	
RIY	**Rijeka**	**1.91**	**17**	iPn	**Pb**	**01 32 58.0**	**-1.9**	
RIY				Sn	Sb	01 33 24.0	+0.2	
RIY	**Rijeka**	**1.91**	**17**	i Pn	**Pn**	**01 32 57.5**	**0.0**	
CERA	**Filignano**	**1.92**	**173**	eP	**Pn**	**01 32 57.7**	**0.0**	
CERA				AML	AML			comp=E,41700µm,1.4s
CERA				AML	AML			comp=N,40850µm,1.1s
CERA				AML	AML			comp=E,43050µm,0.6s
CERA				AML	AML			comp=N,42300µm,1.1s
CERA				AML	AML			comp=N,40850µm,1.1s
CERA				AML	AML			comp=E,43050µm,0.6s
CERA				AML	AML			comp=E,41700µm,1.4s
CERA				AML	AML			comp=N,42300µm,1.1s
CERA				AML	AML			comp=N,42300µm,1.1s
CERA				AML	AML			comp=E,43050µm,0.6s
CERA				AML	AML			comp=E,41700µm,1.4s
CERA				AML	AML			comp=N,40850µm,1.1s
FIU	**Minerbio Fiu**	**1.95**	**306**	AML	AML			comp=E,37500µm,1.1s
FIU				AML	AML			comp=E,37500µm,1.1s
FIU				AML	AML			comp=N,32650µm,1.3s
FIU				AML	AML			comp=N,32650µm,1.3s
FIU				AML	AML			comp=E,37500µm,1.1s
FIU				AML	AML			comp=N,32650µm,1.3s
LAV9	**Lanuvio**	**1.96**	**202**	AML	AML			comp=N,59500µm,0.6s
LAV9				AML	AML			comp=E,35200µm,1.1s
LAV9				AML	AML			comp=N,58150µm,0.6s
LAV9				AML	AML			comp=E,37150µm,1.1s
LAV9				AML	AML			comp=N,59500µm,0.6s
LAV9				AML	AML			comp=N,58150µm,0.6s
LAV9				AML	AML			comp=E,35200µm,1.1s
LAV9				AML	AML			comp=E,37150µm,1.1s
LAV9				AML	AML			comp=N,59500µm,0.6s
LAV9				AML	AML			comp=N,58150µm,0.6s
LAV9				AML	AML			comp=E,35200µm,1.1s
LAV9				AML	AML			comp=E,37150µm,1.1s
GIUL	**Giuliano Di Ro**	**1.97**	**190**	AML	AML			comp=E,16500µm,1.6s
GIUL				AML	AML			comp=E,16500µm,1.6s
GIUL				AML	AML			comp=N,19000µm,1.4s
GIUL				AML	AML			comp=N,19000µm,1.4s
GIUL				AML	AML			comp=N,19000µm,1.4s
GIUL				AML	AML			comp=E,16500µm,1.6s
FNVD	**Fontana Vidola**	**1.98**	**291**	P	**Pb**	**01 33 01.3**	**+0.3**	
FNVD				AML	AML			comp=E,9990µm,1.5s
FNVD				AML	AML			comp=N,11605µm,1.2s
FNVD				AML	AML			comp=E,9990µm,1.5s
FNVD				AML	AML			comp=N,11605µm,1.2s
FNVD				AML	AML			comp=E,9990µm,1.5s
FNVD				AML	AML			comp=N,11605µm,1.2s
CRMI	**Carmignano**	**2.00**	**279**	P	**Pb**	**01 33 00.3**	**-1.1**	
CRMI				AML	AML			comp=E,9035µm,1.5s
CRMI				AML	AML			comp=N,4785µm,1.6s
CRMI				AML	AML			comp=E,3770µm,1.5s
CRMI				AML	AML			comp=N,2035µm,1.6s
CRMI				AML	AML			comp=E,9035µm,1.5s
CRMI				AML	AML			comp=E,3770µm,1.5s
CRMI				AML	AML			comp=N,2035µm,1.6s
CRMI				AML	AML			comp=N,4785µm,1.6s
CRMI				AML	AML			comp=E,9035µm,1.5s
CRMI				AML	AML			comp=E,3770µm,1.5s
CRMI				AML	AML			comp=N,2035µm,1.6s
CRMI				AML	AML			comp=N,4785µm,1.6s
MTCR	**Monte La Croce**	**2.02**	**286**	AML	AML			comp=E,7295µm,1.6s
MTCR				AML	AML			comp=N,8360µm,1.4s
MTCR				AML	AML			comp=E,7295µm,1.6s
MTCR				AML	AML			comp=N,8360µm,1.4s
MTCR				AML	AML			comp=E,7295µm,1.6s
MTCR				AML	AML			comp=N,8360µm,1.4s
HVAR	**Hvar**	**2.04**	**98**	i Pn	**Pn**	**01 32 58.8**	**-0.4**	
CIGN	**Sant'Elia a Pi**	**2.05**	**154**	AML	AML			comp=N,46850µm,1.6s
CIGN				AML	AML			comp=E,46300µm,0.9s
CIGN				AML	AML			comp=N,46850µm,1.6s
CIGN				AML	AML			comp=E,46300µm,0.9s
CIGN				AML	AML			comp=N,46850µm,1.6s
CIGN				AML	AML			comp=E,46300µm,0.9s
SKDS	**Skadanscina**	**2.06**	**6**	i Pn	**Pn**	**01 32 59.2**	**-0.4**	
SKDS				eSn	**Sn**	**01 33 25.4**	**+0.1**	comp=Z,13µm,1.5s
BSSO	**Busso**	**2.06**	**161**	AML	AML			comp=E,56100µm,1.0s
BSSO				AML	AML			comp=E,56100µm,1.0s
BSSO				AML	AML			comp=N,57150µm,1.4s
BSSO				AML	AML			comp=E,24550µm,1.0s
BSSO				AML	AML			comp=N,22800µm,1.5s
BSSO				AML	AML			comp=N,22800µm,1.5s
BSSO				AML	AML			comp=E,56100µm,1.0s
BSSO				AML	AML			comp=E,24550µm,1.0s
BSSO				AML	AML			comp=N,57150µm,1.4s
BSSO				AML	AML			comp=N,22800µm,1.5s
BSSO				AML	AML			comp=E,24550µm,1.0s
BSSO				AML	AML			comp=N,57150µm,1.4s
TRIF	**Trifonti**	**2.07**	**260**	P	**Pn**	**01 33 00.6**	**+0.7**	
TRIF				AML	AML			comp=E,8735µm,1.4s
TRIF				AML	AML			comp=N,5400µm,1.0s
TRIF				AML	AML			comp=E,8735µm,1.4s
TRIF				AML	AML			comp=N,5400µm,1.0s
TRIF				AML	AML			comp=E,8735µm,1.4s
TRIF				AML	AML			comp=N,5400µm,1.0s
LATB	**Latina**	**2.08**	**195**	AML	AML			comp=N,8635µm,1.0s
LATB				AML	AML			comp=E,5815µm,1.6s
LATB				AML	AML			comp=N,8635µm,1.0s
LATB				AML	AML			comp=E,5815µm,1.6s
LATB				AML	AML			comp=N,8635µm,1.0s
LATB				AML	AML			comp=E,5815µm,1.6s
MELA	**Melanico ??? S**	**2.08**	**149**	P	**Pn**	**01 32 59.3**	**-0.6**	
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
KNDS	**Knezji Dol**	**2.09**	**13**	i Pn	**Pn**	**01 32 60.0**	**-0.1**	
KNDS				eSn	**Sb**	**01 33 27.8**	**-1.2**	comp=Z,35µm,1.8s
VAGA	**Valle Agricola**	**2.12**	**169**	eP	**Pn**	**01 33 00.6**	**0.0**	
ZCCA	**Zocca**	**2.14**	**294**	AML	AML			comp=N,9360µm,1.6s
ZCCA				AML	AML			comp=E,8045µm,1.1s
ZCCA				AML	AML			comp=N,8750µm,1.6s
ZCCA				AML	AML			comp=E,7700µm,1.5s
ZCCA				AML	AML			comp=N,9360µm,1.6s
ZCCA				AML	AML			comp=E,7700µm,1.5s
ZCCA				AML	AML			comp=E,8045µm,1.1s
ZCCA				AML	AML			comp=N,9360µm,1.6s
ZCCA				AML	AML			comp=N,8750µm,1.6s
ZCCA				AML	AML			comp=E,7700µm,1.5s
ZCCA				AML	AML			comp=E,8045µm,1.1s
ZCCA				AML	AML			comp=N,8750µm,1.6s
MAON	**Monte Argentar**	**2.16**	**241**	P	**Pn**	**01 33 01.3**	**+0.3**	
MAON				AML	AML			comp=E,3170µm,1.6s
MAON				AML	AML			comp=N,3010µm,1.6s
MAON				AML	AML			comp=E,3170µm,1.6s
MAON				AML	AML			comp=N,3010µm,1.6s
MAON				AML	AML			comp=E,3170µm,1.6s
MAON				AML	AML			comp=N,3010µm,1.6s
GATE	**Gambatesa**	**2.18**	**155**	AML	AML			comp=E,29400µm,1.6s
GATE				AML	AML			comp=E,53300µm,0.8s
GATE				AML	AML			comp=N,51800µm,1.6s
GATE				AML	AML			comp=E,29400µm,1.6s
GATE				AML	AML			comp=N,53250µm,1.6s
GATE				AML	AML			comp=E,53300µm,0.8s
GATE				AML	AML			comp=E,29400µm,1.6s
GATE				AML	AML			comp=N,51800µm,1.6s
GATE				AML	AML			comp=N,53250µm,1.6s
GATE				AML	AML			comp=E,53300µm,0.8s
GATE				AML	AML			comp=N,51800µm,1.6s
GATE				AML	AML			comp=N,53250µm,1.6s
CASP	**Castiglione de**	**2.19**	**252**	P	**Pn**	**01 33 01.7**	**+0.3**	
CASP				AML	AML			comp=E,3010µm,1.6s
CASP				AML	AML			comp=N,2245µm,1.2s
CASP				AML	AML			comp=E,3010µm,1.6s
CASP				AML	AML			comp=N,2245µm,1.2s
CASP				AML	AML			comp=E,3010µm,1.6s
CASP				AML	AML			comp=N,2245µm,1.2s
POPM	**Popiglio**	**2.19**	**285**	P	**Pn**	**01 33 02.5**	**+1.0**	
POPM				AML	AML			comp=E,4020µm,1.1s
POPM				AML	AML			comp=N,5470µm,1.6s
POPM				AML	AML			comp=E,4020µm,1.1s
POPM				AML	AML			comp=N,5470µm,1.6s
POPM				AML	AML			comp=E,4020µm,1.1s
POPM				AML	AML			comp=N,5470µm,1.6s
TRI	**Trieste**	**2.21**	**1**	ePn	**Pn**	**01 33 00.9**	**-0.7**	
TRI	**Trieste**	**2.21**	**1**	eP	**Pn**	**01 33 00.9**	**-0.7**	
TRI	**Trieste**	**2.21**	**1**	eP	**Pn**	**01 33 01.1**	**-0.5**	
TRI				AML	AML			comp=E,9270µm,0.7s
TRI				AML	AML			comp=N,6810µm,1.2s
TRI				AML	AML			comp=E,9270µm,0.7s
TRI				AML	AML			comp=N,6810µm,1.2s
TRI				AML	AML			comp=E,9270µm,0.7s
TRI				AML	AML			comp=N,6810µm,1.2s
SACR	**S. Croce Del S**	**2.23**	**160**	P	**Pn**	**01 33 01.7**	**-0.4**	
SACR				AML	AML			comp=E,33350µm,1.1s
SACR				AML	AML			comp=N,29000µm,1.6s
SACR				AML	AML			comp=E,33850µm,1.1s
SACR				AML	AML			comp=N,29550µm,1.6s
SACR				AML	AML			comp=N,29550µm,1.6s
SACR				AML	AML			comp=N,29000µm,1.6s
SACR				AML	AML			comp=E,33350µm,1.1s
SACR				AML	AML			comp=E,33850µm,1.1s
SACR				AML	AML			comp=N,29550µm,1.6s
SACR				AML	AML			comp=N,29000µm,1.6s
SACR				AML	AML			comp=E,33850µm,1.1s
SACR				AML	AML			comp=E,33350µm,1.1s
RAVA	**Ravarino**	**2.24**	**305**	AML	AML			comp=E,26500µm,1.6s
RAVA				AML	AML			comp=N,27350µm,0.9s
RAVA				AML	AML			comp=E,26500µm,1.6s
RAVA				AML	AML			comp=N,27350µm,0.9s
RAVA				AML	AML			comp=E,26500µm,1.6s
RAVA				AML	AML			comp=N,27350µm,0.9s
SERM	**Sermide**	**2.29**	**312**	AML	AML			comp=N,13570µm,1.3s
SERM				AML	AML			

	comp=E,10095µm,1.4s						
SERM				AML	AML		
	comp=N,9085µm,1.0s						
SERM				AML	AML		
	comp=E,18000µm,1.0s						
SERM				AML	AML		
	comp=N,13570µm,1.3s						
SERM				AML	AML		
	comp=E,18000µm,1.0s						
SERM				AML	AML		
	comp=E,10095µm,1.4s						
SERM				AML	AML		
	comp=N,13570µm,1.3s						
SERM				AML	AML		
	comp=N,9085µm,1.0s						
SERM				AML	AML		
	comp=E,18000µm,1.0s						
SERM				AML	AML		
	comp=E,10095µm,1.4s						
SERM				AML	AML		
	comp=N,9085µm,1.0s						
BOJS	**Bojanci**	**2.29**	**29**	*e*Pn	**Pn**	**01 33 03.8**	**+1.0**
BOJS				*e*Sn	**Sn**	**01 33 32.0**	**+1.0**
BOJS	**Bojanci**	**2.29**	**29**	P	**Pn**	**01 33 03.5**	**+0.7**
BOJS				AML	AML		
	comp=E,15700µm,1.2s						
BOJS				AML	AML		
	comp=N,10865µm,1.5s						
BOJS				AML	AML		
	comp=N,10865µm,1.5s						
BOJS				AML	AML		
	comp=E,15700µm,1.2s						
BOJS				AML	AML		
	comp=N,10865µm,1.5s						
BOJS				AML	AML		
	comp=E,15700µm,1.2s						
CEY	**Cerknica**	**2.30**	**13**	*e*Pn	**Pn**	**01 33 03.3**	**+0.4**
CEY				*e*Sn	**Sn**	**01 33 31.5**	**+0.3**
CEY	**Cerknica**	**2.30**	**13**	*i* Pn	**Pn**	**01 33 02.5**	**-0.4**
SGRT	**San Giovanni R**	**2.31**	**138**	*i* PN	**Pn**	**01 33 01.0**	**-2.1**
SGRT				*i* SN	Sg	01 33 49.1	+10
SGRT	**San Giovanni R**	**2.31**	**138**	P	**Pn**	**01 33 02.4**	**-0.7**
SGRT				AML	AML		
	comp=E,44900µm,1.3s						
SGRT				AML	AML		
	comp=N,35100µm,1.4s						
SGRT				AML	AML		
	comp=N,35100µm,1.4s						
SGRT				AML	AML		
	comp=E,44900µm,1.3s						
SGRT				AML	AML		
	comp=N,35100µm,1.4s						
SGRT				AML	AML		
	comp=E,44900µm,1.3s						
BDI	**Bagni Di Lucca**	**2.31**	**285**	P	**Pn**	**01 33 03.9**	**+0.7**
BDI				AML	AML		
	comp=E,3900µm,1.5s						
BDI				AML	AML		
	comp=N,4095µm,1.3s						
BDI				AML	AML		
	comp=E,4220µm,0.9s						
BDI				AML	AML		
	comp=N,5165µm,1.5s						
BDI				AML	AML		
	comp=E,3900µm,1.5s						
BDI				AML	AML		
	comp=N,5165µm,1.5s						
BDI				AML	AML		
	comp=N,4095µm,1.3s						
BDI				AML	AML		
	comp=E,4220µm,0.9s						
BDI				AML	AML		
	comp=E,3900µm,1.5s						
BDI				AML	AML		
	comp=N,5165µm,1.5s						
BDI				AML	AML		
	comp=N,4095µm,1.3s						
BDI				AML	AML		
	comp=E,4220µm,0.9s						
PIGN	**Pignataro Magg**	**2.33**	**171**	P	**Pn**	**01 33 03.2**	**-0.1**
PIGN				AML	AML		
	comp=E,14000µm,1.2s						
PIGN				AML	AML		
	comp=N,19700µm,1.6s						
PIGN				AML	AML		
	comp=E,14150µm,1.2s						
PIGN				AML	AML		
	comp=N,19850µm,1.6s						
PIGN				AML	AML		
	comp=N,19850µm,1.6s						
PIGN				AML	AML		
	comp=N,19700µm,1.6s						
PIGN				AML	AML		
	comp=E,14000µm,1.2s						
PIGN				AML	AML		
	comp=E,14150µm,1.2s						
PIGN				AML	AML		
	comp=N,19850µm,1.6s						
PIGN				AML	AML		
	comp=N,19700µm,1.6s						
PIGN				AML	AML		
	comp=E,14000µm,1.2s						
PIGN				AML	AML		
	comp=E,14150µm,1.2s						
MAIM	**Mastiano**	**2.36**	**281**	AML	AML		
	comp=N,2940µm,1.2s						
MAIM				AML	AML		
	comp=E,4430µm,1.3s						
MAIM				AML	AML		
	comp=N,2940µm,1.2s						
MAIM				AML	AML		
	comp=N,2940µm,1.2s						
MAIM				AML	AML		
	comp=E,4430µm,1.3s						
MAIM				AML	AML		
	comp=E,4430µm,1.3s						
MODR	**Mondragone**	**2.36**	**177**	AML	AML		
	comp=E,17050µm,1.6s						
MODR				AML	AML		
	comp=E,17050µm,1.6s						
MODR				AML	AML		
	comp=N,17200µm,1.4s						
MODR				AML	AML		
	comp=E,17050µm,1.6s						
MODR				AML	AML		
	comp=N,17200µm,1.4s						
MODR				AML	AML		
	comp=N,17200µm,1.4s						
TEOL	**Teolo**	**2.36**	**323**	P	**Pn**	**01 33 03.6**	**-0.1**
TEOL				AML	AML		
	comp=E,46150µm,0.7s						
TEOL				AML	AML		
	comp=N,44650µm,1.1s						
TEOL				AML	AML		
	comp=E,46150µm,0.7s						
TEOL				AML	AML		
	comp=N,44650µm,1.1s						
TEOL				AML	AML		
	comp=E,46150µm,0.7s						
TEOL				AML	AML		
	comp=N,44650µm,1.1s						
CAVE	**Cavezzo**	**2.37**	**306**	AML	AML		
	comp=E,17500µm,1.2s						
CAVE				AML	AML		
	comp=E,17500µm,1.2s						
CAVE				AML	AML		
	comp=N,13300µm,0.7s						
CAVE				AML	AML		
	comp=N,13300µm,0.7s						
CAVE				AML	AML		
	comp=E,17500µm,1.2s						
CAVE				AML	AML		
	comp=N,13300µm,0.7s						
MOCO	**Biccari - m.te**	**2.39**	**152**	AML	AML		
	comp=N,32100µm,1.4s						
MOCO				AML	AML		
	comp=E,42650µm,1.4s						
MOCO				AML	AML		
	comp=N,30300µm,1.4s						
MOCO				AML	AML		
	comp=E,43300µm,0.9s						
MOCO				AML	AML		
	comp=N,32100µm,1.4s						
MOCO				AML	AML		
	comp=E,42650µm,1.4s						
MOCO				AML	AML		
	comp=E,43300µm,0.9s						
MOCO				AML	AML		
	comp=N,30300µm,1.4s						
MOCO				AML	AML		
	comp=E,42650µm,1.4s						
MOCO				AML	AML		
	comp=E,43300µm,0.9s						
MOCO				AML	AML		
	comp=N,32100µm,1.4s						
MOCO				AML	AML		
	comp=N,30300µm,1.4s						
PSB1	**Pescosannita**	**2.42**	**160**	*e*P	**Pn**	**01 33 04.5**	**-0.2**
PSB1				AML	AML		
	comp=E,30600µm,0.9s						
PSB1				AML	AML		
	comp=N,35600µm,1.2s						
PSB1				AML	AML		
	comp=E,31400µm,0.9s						
PSB1				AML	AML		
	comp=N,36450µm,1.2s						
PSB1				AML	AML		
	comp=E,31400µm,0.9s						
PSB1				AML	AML		
	comp=N,35600µm,1.2s						
PSB1				AML	AML		
	comp=N,36450µm,1.2s						
PSB1				AML	AML		
	comp=E,30600µm,0.9s						
PSB1				AML	AML		
	comp=E,31400µm,0.9s						
PSB1				AML	AML		
	comp=N,35600µm,1.2s						
PSB1				AML	AML		
	comp=N,36450µm,1.2s						
PSB1				AML	AML		
	comp=E,30600µm,0.9s						
MSAG	**Monte S. Angel**	**2.42**	**137**	*e*P	**Pn**	**01 33 03.8**	**-0.9**
MSAG				AML	AML		
	comp=E,47250µm,0.7s						
MSAG				AML	AML		
	comp=N,60750µm,0.7s						
MSAG				AML	AML		
	comp=E,48800µm,0.7s						
MSAG				AML	AML		
	comp=N,62650µm,0.5s						
MSAG				AML	AML		
	comp=E,48800µm,0.7s						
MSAG				AML	AML		
	comp=E,47250µm,0.7s						
MSAG				AML	AML		
	comp=N,60750µm,0.7s						
MSAG				AML	AML		
	comp=N,62650µm,0.5s						
MSAG				AML	AML		
	comp=E,48800µm,0.7s						
MSAG				AML	AML		
	comp=E,47250µm,0.7s						
MSAG				AML	AML		
	comp=N,60750µm,0.7s						
MSAG				AML	AML		
	comp=N,62650µm,0.5s						
MAKA	**Makarska**	**2.44**	**94**	*i* Pn	**Pn**	**01 33 05.1**	**+0.4**
MAKA				Sn	**Sb**	**01 33 36.3**	**-2.6**
OZLJ	**Ozalj**	**2.47**	**30**	*i* Pn	**Pn**	**01 33 06.2**	**+1.0**
SABO	**M.te Sabotino**	**2.48**	**359**	P	**Pn**	**01 33 05.2**	**-0.3**
VLC	**Villacollemand**	**2.48**	**287**	*e*Pn	**Pn**	**01 33 05.9**	**+0.5**
VLC	**Villacollemand**	**2.48**	**287**	AML	AML		
	comp=E,4120µm,1.6s						
VLC				AML	AML		
	comp=E,4120µm,1.6s						
VLC				AML	AML		
	comp=N,4595µm,1.4s						
VLC				AML	AML		
	comp=E,4160µm,1.6s						
VLC				AML	AML		
	comp=N,4460µm,1.3s						
VLC				AML	AML		
	comp=E,4160µm,1.6s						
VLC				AML	AML		
	comp=N,4595µm,1.4s						
VLC				AML	AML		
	comp=N,4460µm,1.3s						
VLC				AML	AML		
	comp=E,4120µm,1.6s						
VLC				AML	AML		
	comp=N,4595µm,1.4s						
VLC				AML	AML		
	comp=N,4460µm,1.3s						
VLC				AML	AML		
	comp=E,4160µm,1.6s						
NOVE	**Novellara**	**2.50**	**302**	AML	AML		
	comp=E,14900µm,1.1s						
NOVE				AML	AML		
	comp=E,14900µm,1.1s						
NOVE				AML	AML		
	comp=N,17750µm,1.6s						
NOVE				AML	AML		
	comp=E,14900µm,1.1s						
NOVE				AML	AML		
	comp=N,17750µm,1.6s						
NOVE				AML	AML		
	comp=N,17750µm,1.6s						
OPPE	**Oppeano**	**2.56**	**316**	AML	AML		
	comp=N,20850µm,1.4s						
OPPE				AML	AML		
	comp=E,23200µm,1.5s						
OPPE				AML	AML		
	comp=N,20850µm,1.4s						
OPPE				AML	AML		
	comp=N,20850µm,1.4s						
OPPE				AML	AML		
	comp=E,23200µm,1.5s						
OPPE				AML	AML		
	comp=E,23200µm,1.5s						
CRND	**Cornuda**	**2.60**	**334**	AML	AML		
	comp=N,10550µm,1.2s						
CRND				AML	AML		
	comp=E,9230µm,0.8s						
CRND				AML	AML		
	comp=N,10550µm,1.2s						
CRND				AML	AML		
	comp=E,9230µm,0.8s						
CRND				AML	AML		
	comp=N,10550µm,1.2s						
CRND				AML	AML		
	comp=E,9230µm,0.8s						
T0912	**Minucciano (LU**	**2.61**	**286**	AML	AML		
	comp=E,5370µm,1.4s						
T0912				AML	AML		
	comp=E,5255µm,1.3s						
T0912				AML	AML		
	comp=N,4175µm,1.4s						
T0912				AML	AML		
	comp=E,5370µm,1.4s						
T0912				AML	AML		
	comp=N,4335µm,1.3s						
T0912				AML	AML		
	comp=N,4175µm,1.4s						
T0912				AML	AML		
	comp=N,4335µm,1.3s						
T0912				AML	AML		
	comp=E,5255µm,1.3s						
T0912				AML	AML		
	comp=N,4175µm,1.4s						
T0912				AML	AML		
	comp=N,4335µm,1.3s						
T0912				AML	AML		
	comp=E,5255µm,1.3s						
T0912				AML	AML		
	comp=E,5370µm,1.4s						
LJU	**Ljubljana**	**2.61**	**13**	*e*Pn	**Pn**	**01 33 07.9**	**+0.7**
LJU				*e*Sn	**Sn**	**01 33 40.2**	**+1.3**
LJU	**Ljubljana**	**2.61**	**13**	*i* Pn	**Pn**	**01 33 07.5**	**+0.3**
LJU	**Ljubljana**	**2.61**	**13**	P	**Pn**	**01 33 07.6**	**+0.3**
LJU				AML	AML		
	comp=E,26650µm,0.9s						
LJU				AML	AML		
	comp=N,27300µm,1.0s						
LJU				AML	AML		
	comp=N,27300µm,1.0s						
LJU				AML	AML		
	comp=E,26650µm,0.9s						
LJU				AML	AML		
	comp=N,27300µm,1.0s						
LJU				AML	AML		
	comp=E,26650µm,0.9s						
CRES	**Cresnjev**	**2.64**	**28**	*i* Pn	**Pn**	**01 33 07.7**	**0.0**
CELB	**S.Piero in Cam**	**2.66**	**255**	AML	AML		
	comp=E,1190µm,1.6s						
CELB				AML	AML		
	comp=E,1190µm,1.6s						
CELB				AML	AML		
	comp=N,1165µm,1.2s						
CELB				AML	AML		
	comp=N,1165µm,1.2s						
CELB				AML	AML		
	comp=N,1165µm,1.2s						
CELB				AML	AML		
	comp=E,1190µm,1.6s						
POLC	**Polcenigo**	**2.67**	**342**	P	**Pn**	**01 33 08.1**	**+0.2**
POLC				AML	AML		
	comp=E,13850µm,1.6s						
POLC				AML	AML		
	comp=N,15250µm,0.5s						
POLC				AML	AML		
	comp=N,15250µm,0.5s						
POLC				AML	AML		
	comp=E,13850µm,1.6s						
POLC				AML	AML		
	comp=N,15250µm,0.5s						
POLC				AML	AML		
	comp=E,13850µm,1.6s						
T0911	**Castelpoggio (**	**2.69**	**284**	AML	AML		
	comp=E,2690µm,1.6s						
T0911				AML	AML		
	comp=E,2690µm,1.6s						
T0911				AML	AML		
	comp=N,2315µm,1.6s						
T0911				AML	AML		
	comp=E,2905µm,1.6s						
T0911				AML	AML		
	comp=N,2390µm,1.6s						
T0911				AML	AML		
	comp=E,2690µm,1.6s						
T0911				AML	AML		
	comp=E,2905µm,1.6s						
T0911				AML	AML		
	comp=N,2315µm,1.6s						
T0911				AML	AML		
	comp=N,2390µm,1.6s						
T0911				AML	AML		
	comp=E,2905µm,1.6s						
T0911				AML	AML		
	comp=N,2315µm,1.6s						
T0911				AML	AML		
	comp=N,2390µm,1.6s						
CGRP	**Cima Grappa**	**2.73**	**331**	P	**Pn**	**01 33 08.8**	**-0.3**
CGRP				AML	AML		
	comp=E,14600µm,1.3s						
CGRP				AML	AML		
	comp=N,12100µm,0.9s						
CGRP				AML	AML		
	comp=N,12100µm,0.9s						
CGRP				AML	AML		
	comp=E,14600µm,1.3s						
CGRP				AML	AML		
	comp=N,12100µm,0.9s						
CGRP				AML	AML		
	comp=E,14600µm,1.3s						
GROG	**Isola di Gorgo**	**2.77**	**270**	AML	AML		
	comp=E,1860µm,1.4s						
GROG				AML	AML		
	comp=E,1860µm,1.4s						
GROG				AML	AML		
	comp=N,2075µm,0.6s						
GROG				AML	AML		
	comp=N,2075µm,0.6s						
GROG				AML	AML		
	comp=E,1860µm,1.4s						
GROG				AML	AML		
	comp=N,2075µm,0.6s						
GRAM	**Graiana**	**2.80**	**292**	AML	AML		
	comp=N,5290µm,1.6s						
GRAM				AML	AML		
	comp=E,4905µm,1.3s						
GRAM				AML	AML		
	comp=N,5290µm,1.6s						
GRAM				AML	AML		
	comp=E,4905µm,1.3s						
GRAM				AML	AML		
	comp=N,5290µm,1.6s						
GRAM				AML	AML		
	comp=E,4905µm,1.3s						
GEPF	**Gemona**	**2.80**	**352**	P	**Pn**	**01 33 09.4**	**-0.3**
GEPF				AML	AML		
	comp=E,6255µm,0.8s						
GEPF				AML	AML		
	comp=N,7290µm,0.7s						
GEPF				AML	AML		
	comp=E,6255µm,0.8s						
GEPF				AML	AML		
	comp=N,7290µm,0.7s						
GEPF				AML	AML		
	comp=E,6255µm,0.8s						
GEPF				AML	AML		
	comp=N,7290µm,0.7s						
BLY	**Banja Luka**	**2.81**	**62**	*e*Pn	**Pn**	**01 33 10.3**	**+0.5**
BLY	**Banja Luka**	**2.81**	**62**	*e*Pn	**Pn**	**01 33 11.3**	**+1.4**
BLY				*e*Sg	**Sg**	**01 33 55.8**	**+0.6**
BLY	**Banja Luka**	**2.81**	**62**	⇓*i*P	**Pn**	**01 33 10.6**	**+0.7**
BLY	**Banja Luka**	**2.81**	**62**	S	**Sn**	**01 33 43.3**	**-0.4**
BLY	**Banja Luka**	**2.81**	**62**	*i* Pn	**Pn**	**01 33 10.7**	**+0.8**
BLY	**Banja Luka**	**2.81**	**62**	P	**Pn**	**01 33 10.9**	**+1.0**
BLY				AML	AML		
	comp=E,25400µm,1.0s						
BLY				AML	AML		
	comp=N,26200µm,1.1s						
BLY				AML	AML		
	comp=E,25450µm,1.0s						
BLY				AML	AML		
	comp=N,25050µm,1.1s						
BLY				AML	AML		
	comp=E,25400µm,1.0s						
BLY				AML	AML		
	comp=N,26200µm,1.1s						
BLY				AML	AML		
	comp=N,25050µm,1.1s						
BLY				AML	AML		
	comp=E,25450µm,1.0s						
BLY				AML	AML		
	comp=E,25400µm,1.0s						
BLY				AML	AML		
	comp=N,26200µm,1.1s						
BLY				AML	AML		
	comp=N,25050µm,1.1s						
BLY				AML	AML		
	comp=E,25450µm,1.0s						
SNAL	**S. Angelo Dei**	**2.81**	**156**	P	**Pn**	**01 33 09.5**	**-0.4**
SNAL				AML	AML		
	comp=E,37100µm,1.2s						
SNAL				AML	AML		
	comp=N,43900µm,1.3s						
SNAL				AML	AML		
	comp=N,43900µm,1.3s						
SNAL				AML	AML		
	comp=E,37100µm,1.2s						
SNAL				AML	AML		
	comp=N,43900µm,1.3s						
SNAL				AML	AML		
	comp=E,37100µm,1.2s						
PLMA	**Palmaria, Port**	**2.84**	**282**	AML	AML		
	comp=N,1660µm,1.6s						
PLMA				AML	AML		
	comp=E,1455µm,1.3s						
PLMA				AML	AML		
	comp=E,1455µm,1.3s						
PLMA				AML	AML		
	comp=N,1660µm,1.6s						
PLMA				AML	AML		
	comp=E,1455µm,1.3s						
PLMA				AML	AML		
	comp=N,1660µm,1.6s						
MOZS	**Mozjanca**	**2.84**	**11**	*i* Pn	**Pn**	**01 33 10.7**	**+0.3**
MOZS				*e*Sg	**Sg**	**01 33 59.0**	**+2.6**
	comp=Z,30µm,2.2s						
STAL	**STALIGIAL**	**2.85**	**346**	P	**Pn**	**01 33 10.2**	**-0.2**
STAL				AML	AML		
	comp=E,6310µm,0.7s						
STAL				AML	AML		
	comp=N,7025µm,1.6s						
STAL				AML	AML		
	comp=E,7870µm,1.1s						
STAL				AML	AML		
	comp=N,6760µm,0.9s						
STAL				AML	AML		
	comp=N,7025µm,1.6s						
STAL				AML	AML		
	comp=N,6760µm,0.9s						

STAL				AML	AML		
	comp=E,7870μm,1.1s						
STAL				AML	AML		
	comp=E,6310μm,0.7s						
STAL				AML	AML		
	comp=N,7025μm,1.6s						
STAL				AML	AML		
	comp=N,6760μm,0.9s						
STAL				AML	AML		
	comp=E,7870μm,1.1s						
STAL				AML	AML		
	comp=E,6310μm,0.7s						
ROVR	**Rover Verones**	**2.85**	**320**	P	**Pn**	**01 33 10.4**	**-0.1**
ROVR				AML	AML		
	comp=E,10115μm,1.1s						
ROVR				AML	AML		
	comp=N,11230μm,1.2s						
ROVR				AML	AML		
	comp=E,3935μm,1.1s						
ROVR				AML	AML		
	comp=N,4440μm,1.2s						
ROVR				AML	AML		
	comp=E,10115μm,1.1s						
ROVR				AML	AML		
	comp=N,11230μm,1.2s						
ROVR				AML	AML		
	comp=N,4440μm,1.2s						
ROVR				AML	AML		
	comp=E,3935μm,1.1s						
ROVR				AML	AML		
	comp=E,10115μm,1.1s						
ROVR				AML	AML		
	comp=N,11230μm,1.2s						
ROVR				AML	AML		
	comp=N,4440μm,1.2s						
ROVR				AML	AML		
	comp=E,3935μm,1.1s						
GOLS	**Golise**	**2.86**	**28**	*i* Pn	**Pn**	**01 33 10.6**	**-0.1**
GOLS				*e*Sg	**Sg**	**01 33 57.9**	**+0.9**
	comp=Z,14μm,1.4s						
PTJ	**Puntijarka**	**2.90**	**33**	ePn	**Pn**	**01 33 11.6**	**+0.3**
PTCC	**Patocco-Chiusa**	**2.92**	**355**	P	**Pn**	**01 33 11.0**	**-0.4**
PTCC				AML	AML		
	comp=E,5155μm,0.9s						
PTCC				AML	AML		
	comp=N,4610μm,1.1s						
PTCC				AML	AML		
	comp=E,5155μm,0.9s						
PTCC				AML	AML		
	comp=N,4610μm,1.1s						
PTCC				AML	AML		
	comp=E,5155μm,0.9s						
PTCC				AML	AML		
	comp=N,4610μm,1.1s						
CTI	**Castel Tesino**	**2.93**	**331**	P	**Pn**	**01 33 11.6**	**-0.1**
CTI				AML	AML		
	comp=E,7435μm,1.1s						
CTI				AML	AML		
	comp=N,8895μm,1.6s						
CTI				AML	AML		
	comp=N,8895μm,1.6s						
CTI				AML	AML		
	comp=E,7435μm,1.1s						
CTI				AML	AML		
	comp=N,8895μm,1.6s						
CTI				AML	AML		
	comp=E,7435μm,1.1s						
STON	**Ston**	**3.00**	**101**	*e*Pn	**Pn**	**01 33 12.5**	**0.0**
STON				*e*Sg	**Sg**	**01 34 00.0**	**-1.3**
STON	**Ston**	**3.00**	**101**	*i* Pn	**Pn**	**01 33 12.5**	**0.0**
STON				Sn	**Sn**	**01 33 49.4**	**+1.0**
STON	**Ston**	**3.00**	**101**	*i* Pn	**Pn**	**01 33 11.9**	**-0.6**
ACOM	**Acomizza, Ital**	**3.05**	**358**	P	**Pn**	**01 33 13.4**	**0.0**
ACOM				AML	AML		
	comp=E,10855μm,0.8s						
ACOM				AML	AML		
	comp=N,10600μm,0.6s						
ACOM				AML	AML		
	comp=E,10855μm,0.8s						
ACOM				AML	AML		
	comp=N,10600μm,0.6s						
ACOM				AML	AML		
	comp=E,10855μm,0.8s						
ACOM				AML	AML		
	comp=N,10600μm,0.6s						
MRLC	**Muro Lucano**	**3.05**	**153**	P	**Pn**	**01 33 12.5**	**-0.8**
MRLC				AML	AML		
	comp=E,12095μm,0.7s						
MRLC				AML	AML		
	comp=N,10470μm,1.6s						
MRLC				AML	AML		
	comp=E,12615μm,0.8s						
MRLC				AML	AML		
	comp=N,12015μm,1.3s						
MRLC				AML	AML		
	comp=E,12615μm,0.8s						
MRLC				AML	AML		
	comp=N,10470μm,1.6s						
MRLC				AML	AML		
	comp=N,12015μm,1.3s						
MRLC				AML	AML		
	comp=E,12095μm,0.7s						
MRLC				AML	AML		
	comp=E,12615μm,0.8s						
MRLC				AML	AML		
	comp=N,10470μm,1.6s						
MRLC				AML	AML		
	comp=N,12015μm,1.3s						
MRLC				AML	AML		
	comp=E,12095μm,0.7s						
PALZ	**Palazzo San Ge**	**3.06**	**146**	P	**Pn**	**01 33 12.4**	**-0.9**
PALZ				AML	AML		
	comp=E,68300μm,1.2s						
PALZ				AML	AML		
	comp=N,46250μm,1.6s						
PALZ				AML	AML		
	comp=N,46250μm,1.6s						
PALZ				AML	AML		
	comp=E,68300μm,1.2s						
PALZ				AML	AML		
	comp=N,46250μm,1.6s						
PALZ				AML	AML		
	comp=E,68300μm,1.2s						
OBKA	**Obir**	**3.07**	**11**	*e*Pn	**Pn**	**01 33 13.7**	**+0.1**
	comp=E,77nm,0.2s,SNR=164						
OBKA				Sg	**Sg**	**01 34 08.5**	**+4.8**
	comp=E,5μm,0.7s						
MSSA	**Maissana**	**3.12**	**287**	P	**Pn**	**01 33 15.4**	**+1.1**
MSSA				AML	AML		
	comp=E,1740μm,1.4s						
MSSA				AML	AML		
	comp=N,2365μm,1.6s						
MSSA				AML	AML		
	comp=N,2365μm,1.6s						
MSSA				AML	AML		
	comp=E,1740μm,1.4s						
MSSA				AML	AML		
	comp=N,2365μm,1.6s						
MSSA				AML	AML		
	comp=E,1740μm,1.4s						
VOBA	**Vobarno**	**3.13**	**314**	P	**Pn**	**01 33 16.2**	**+1.9**
VOBA				AML	AML		
	comp=E,3330μm,0.7s						
VOBA				AML	AML		
	comp=N,4510μm,1.6s						
VOBA				AML	AML		
	comp=E,3330μm,0.7s						
VOBA				AML	AML		
	comp=N,4510μm,1.6s						
VOBA				AML	AML		
	comp=E,3330μm,0.7s						
VOBA				AML	AML		
	comp=N,4510μm,1.6s						
MYKA	**Terra Mystica**	**3.13**	**359**	*i* Pn	**Pn**	**01 33 14.8**	**+0.4**
	comp=N,434nm,0.5s,SNR=426						
MYKA				*e*Sn	**Sn**	**01 33 51.7**	**-0.1**
	comp=N,396nm,0.4s						
MYKA				Sg	**Sg**	**01 34 11.2**	**+5.7**
	comp=N,1μm,0.5s						
MAGA	**Magasa**	**3.15**	**317**	P	**Pn**	**01 33 14.6**	**-0.2**
MAGA				AML	AML		
	comp=E,17750μm,0.7s						
MAGA				AML	AML		
	comp=N,10650μm,0.4s						
MAGA				AML	AML		
	comp=N,10650μm,0.4s						
MAGA				AML	AML		
	comp=E,17750μm,0.7s						
MAGA				AML	AML		
	comp=N,10650μm,0.4s						
MAGA				AML	AML		
	comp=E,17750μm,0.7s						
FVI	**Forni Avoltri**	**3.16**	**349**	P	**Pn**	**01 33 14.9**	**+0.1**
FVI				AML	AML		
	comp=E,4010μm,1.6s						
FVI				AML	AML		
	comp=N,4480μm,0.7s						
FVI				AML	AML		
	comp=E,4010μm,1.6s						
FVI				AML	AML		
	comp=N,4480μm,0.7s						
FVI				AML	AML		
	comp=E,4010μm,1.6s						
FVI				AML	AML		
	comp=N,4480μm,0.7s						
ACER	**Acerenza**	**3.19**	**148**	P	**Pn**	**01 33 14.1**	**-1.0**
ACER				AML	AML		
	comp=E,35550μm,0.6s						
ACER				AML	AML		
	comp=N,26900μm,1.2s						
ACER				AML	AML		
	comp=E,36950μm,0.6s						
ACER				AML	AML		
	comp=N,28150μm,1.2s						
ACER				AML	AML		
	comp=N,28150μm,1.2s						
ACER				AML	AML		
	comp=N,26900μm,1.2s						
ACER				AML	AML		
	comp=E,35550μm,0.6s						
ACER				AML	AML		
	comp=E,36950μm,0.6s						
ACER				AML	AML		
	comp=N,28150μm,1.2s						
ACER				AML	AML		
	comp=N,26900μm,1.2s						
ACER				AML	AML		
	comp=E,35550μm,0.6s						
ACER				AML	AML		
	comp=E,36950μm,0.6s						
CDRU	**Civita di Ruta**	**3.24**	**158**	P	**Pn**	**01 33 15.3**	**-0.6**
CDRU				AML	AML		
	comp=E,10845μm,1.6s						
CDRU				AML	AML		
	comp=N,4930μm,1.6s						
CDRU				AML	AML		
	comp=N,4930μm,1.6s						
CDRU				AML	AML		
	comp=E,10845μm,1.6s						
CDRU				AML	AML		
	comp=N,4930μm,1.6s						
CDRU				AML	AML		
	comp=E,10845μm,1.6s						
KALN	**Kalnik**	**3.28**	**36**	*e*Pn	**Pn**	**01 33 15.9**	**-0.6**
BOB	**Bobbio (Coli)**	**3.31**	**294**	P	**Pn**	**01 33 19.4**	**+2.6**
BOB				AML	AML		
	comp=E,5045μm,1.1s						
BOB				AML	AML		
	comp=N,3665μm,1.4s						
BOB				AML	AML		
	comp=E,5555μm,1.2s						
BOB				AML	AML		
	comp=N,3770μm,0.9s						
BOB				AML	AML		
	comp=E,5045μm,1.1s						
BOB				AML	AML		
	comp=N,3665μm,1.4s						
BOB				AML	AML		
	comp=N,3770μm,0.9s						
BOB				AML	AML		
	comp=E,5555μm,1.2s						
BOB				AML	AML		
	comp=E,5045μm,1.1s						
BOB				AML	AML		
	comp=N,3665μm,1.4s						
BOB				AML	AML		
	comp=N,3770μm,0.9s						
BOB				AML	AML		
	comp=E,5555μm,1.2s						
SOKA	**Soboth**	**3.32**	**16**	*i* Pn	**Pn**	**01 33 17.2**	**+0.2**
	comp=E,31nm,0.5s,SNR=168						
SOKA				Sg	**Sg**	**01 34 13.5**	**+1.9**
	comp=E,727nm,0.5s						
CTL8	**Castelleone**	**3.33**	**304**	P	**Pn**	**01 33 19.7**	**+2.6**
CTL8				AML	AML		
	comp=E,15250μm,1.3s						
CTL8				AML	AML		
	comp=N,11190μm,1.4s						
CTL8				AML	AML		
	comp=E,3090μm,1.1s						
CTL8				AML	AML		
	comp=N,2445μm,1.1s						
CTL8				AML	AML		
	comp=N,2445μm,1.1s						
CTL8				AML	AML		
	comp=E,15250μm,1.3s						
CTL8				AML	AML		
	comp=E,3090μm,1.1s						
CTL8				AML	AML		
	comp=N,11190μm,1.4s						
CTL8				AML	AML		
	comp=N,2445μm,1.1s						
CTL8				AML	AML		
	comp=E,15250μm,1.3s						
CTL8				AML	AML		
	comp=E,3090μm,1.1s						
CTL8				AML	AML		
	comp=N,11190μm,1.4s						
ABTA	**Abfaltersbach**	**3.35**	**346**	*i* Pn	**Pn**	**01 33 18.0**	**+0.5**
	comp=N,762nm,0.6s,SNR=949						
GORR	**Gorreto**	**3.36**	**291**	P	**Pn**	**01 33 20.6**	**+3.1**
GORR				AML	AML		
	comp=E,2690μm,1.5s						
GORR				AML	AML		
	comp=N,3040μm,1.0s						
GORR				AML	AML		
	comp=E,2690μm,1.5s						
GORR				AML	AML		
	comp=N,3040μm,1.0s						
GORR				AML	AML		
	comp=E,2690μm,1.5s						
GORR				AML	AML		
	comp=N,3040μm,1.0s						
BAI	**Bari**	**3.36**	**134⇑**	*i* Pn	**Pn**	**01 33 16.5**	**-1.0**
DBRK	**Dubrovnik**	**3.37**	**103**	*e*Pn	**Pn**	**01 33 18.0**	**+0.4**
DBRK				Sn	**Sn**	**01 33 57.5**	**0.0**
AMUR	**Altamura**	**3.38**	**139**	P	**Pn**	**01 33 16.5**	**-1.2**
AMUR				AML	AML		
	comp=E,12450μm,0.8s						
AMUR				AML	AML		
	comp=N,9835μm,1.3s						
AMUR				AML	AML		
	comp=N,9835μm,1.3s						
AMUR				AML	AML		
	comp=E,12450μm,0.8s						
AMUR				AML	AML		
	comp=N,9835μm,1.3s						
AMUR				AML	AML		
	comp=E,12450μm,0.8s						
KOSI	**Kohlern**	**3.39**	**332**	P	**Pn**	**01 33 18.5**	**+0.5**
KOSI				AML	AML		
	comp=E,13300μm,1.1s						
KOSI				AML	AML		
	comp=N,11340μm,1.6s						
KOSI				AML	AML		
	comp=E,13300μm,1.1s						
KOSI				AML	AML		
	comp=N,11340μm,1.6s						
KOSI				AML	AML		
	comp=E,13300μm,1.1s						
KOSI				AML	AML		
	comp=N,11340μm,1.6s						
CMPR	**Campora**	**3.40**	**159**	P	**Pn**	**01 33 17.5**	**-0.6**
CMPR				AML	AML		
	comp=E,8835μm,1.2s						
CMPR				AML	AML		
	comp=N,6430μm,1.2s						
CMPR				AML	AML		
	comp=E,8835μm,1.2s						
CMPR				AML	AML		
	comp=N,6430μm,1.2s						
CMPR				AML	AML		
	comp=E,8835μm,1.2s						
CMPR				AML	AML		
	comp=N,6430μm,1.2s						
DOB	**Doboj**	**3.41**	**67**	*e*Pn	**Pn**	**01 33 18.0**	**-0.1**
MABI	**Malga Bissina**	**3.41**	**320**	P	**Pn**	**01 33 18.8**	**+0.4**
MABI				AML	AML		
	comp=E,2560μm,1.3s						
MABI				AML	AML		
	comp=N,2410μm,1.6s						
MABI				AML	AML		
	comp=N,2410μm,1.6s						
MABI				AML	AML		
	comp=E,2560μm,1.3s						
MABI				AML	AML		
	comp=N,2410μm,1.6s						
MABI				AML	AML		
	comp=E,2560μm,1.3s						
SLCN	**Sala Consilina**	**3.43**	**154**	P	**Pn**	**01 33 17.8**	**-0.7**
SLCN				AML	AML		
	comp=E,16750μm,1.6s						
SLCN				AML	AML		
	comp=N,11490μm,1.6s						
SLCN				AML	AML		
	comp=E,17400μm,1.6s						
SLCN				AML	AML		
	comp=N,12350μm,1.6s						
SLCN				AML	AML		
	comp=N,11490μm,1.6s						
SLCN				AML	AML		
	comp=N,12350μm,1.6s						
SLCN				AML	AML		
	comp=E,17400μm,1.6s						
SLCN				AML	AML		
	comp=E,16750μm,1.6s						
SLCN				AML	AML		
	comp=N,11490μm,1.6s						
SLCN				AML	AML		
	comp=N,12350μm,1.6s						
SLCN				AML	AML		
	comp=E,17400μm,1.6s						
SLCN				AML	AML		
	comp=E,16750μm,1.6s						
BOSI	**Bolzano**	**3.44**	**331**	P	**Pn**	**01 33 18.4**	**-0.1**
BOSI				AML	AML		
	comp=E,30700μm,1.5s						
BOSI				AML	AML		
	comp=N,32200μm,1.5s						
BOSI				AML	AML		
	comp=N,32200μm,1.5s						
BOSI				AML	AML		
	comp=E,30700μm,1.5s						
BOSI				AML	AML		
	comp=N,32200μm,1.5s						
BOSI				AML	AML		
	comp=E,30700μm,1.5s						
APPI	**Appiano**	**3.45**	**330**	P	**Pn**	**01 33 19.3**	**+0.5**
APPI				AML	AML		
	comp=E,5845μm,1.6s						
APPI				AML	AML		
	comp=N,5550μm,1.3s						
APPI				AML	AML		
	comp=E,5845μm,1.6s						
APPI				AML	AML		
	comp=N,5550μm,1.3s						
APPI				AML	AML		
	comp=E,5845μm,1.6s						
APPI				AML	AML		
	comp=N,5550μm,1.3s						
KOGS	**Kog**	**3.46**	**31**	P	**Pn**	**01 33 18.1**	**-0.7**
KOGS				AML	AML		
	comp=E,25400μm,1.5s						
KOGS				AML	AML		
	comp=N,21650μm,1.3s						
KOGS				AML	AML		
	comp=N,21650μm,1.3s						
KOGS				AML	AML		
	comp=E,25400μm,1.5s						
KOGS				AML	AML		
	comp=N,21650μm,1.3s						
KOGS				AML	AML		
	comp=E,25400μm,1.5s						
BRES	**Bressanone**	**3.49**	**337**	P	**Pn**	**01 33 20.1**	**+0.7**
BRES				AML	AML		
	comp=E,7430μm,1.5s						
BRES				AML	AML		
	comp=N,7485μm,1.5s						
BRES				AML	AML		
	comp=E,7430μm,1.5s						
BRES				AML	AML		
	comp=N,7485μm,1.5s						
BRES				AML	AML		
	comp=E,7430μm,1.5s						
BRES				AML	AML		
	comp=N,7485μm,1.5s						
TREB	**Trebinje**	**3.50**	**101**	*e*Pn	**Pn**	**01 33 19.5**	**+0.1**
TREB				*e*Sn	**Sn**	**01 34 00.7**	**-0.1**
TREB	**Trebinje**	**3.50**	**101**	*e*Pn	**Pn**	**01 33 19.1**	**-0.3**
SMPL	**Sampolo**	**3.53**	**248**	P	**Pn**	**01 33 21.9**	**+2.0**
SMPL	**Sampolo**	**3.53**	**248**	P	**Pn**	**01 33 23.6**	**+3.7**
SMPL				AML	AML		
	comp=E,21350μm,1.6s						
SMPL				AML	AML		
	comp=N,18440μm,1.1s						
SMPL				AML	AML		
	comp=N,18440μm,1.1s						
SMPL				AML	AML		
	comp=E,21350μm,1.6s						
SMPL				AML	AML		
	comp=N,18440μm,1.1s						
SMPL				AML	AML		
	comp=E,21350μm,1.6s						
MCEL	**Monticello**	**3.54**	**153**	P	**Pn**	**01 33 19.1**	**-0.9**
MCEL				AML	AML		
	comp=E,9150μm,1.0s						
MCEL				AML	AML		
	comp=N,9735μm,0.9s						
MCEL				AML	AML		
	comp=E,9300μm,1.0s						
MCEL				AML	AML		
	comp=N,10015μm,0.9s						
MCEL				AML	AML		
	comp=N,9735μm,0.9s						
MCEL				AML	AML		
	comp=E,9300μm,1.0s						
MCEL				AML	AML		
	comp=E,9150μm,1.0s						
MCEL				AML	AML		
	comp=N,10015μm,0.9s						
MCEL				AML	AML		
	comp=N,9735μm,0.9s						
MCEL				AML	AML		
	comp=E,9300μm,1.0s						
MCEL				AML	AML		
	comp=E,9150μm,1.0s						
MCEL				AML	AML		
	comp=N,10015μm,0.9s						
MIGL	**Miglionico**	**3.54**	**144**	P	**Pn**	**01 33 19.1**	**-0.9**
MIGL				AML	AML		
	comp=E,45200μm,1.4s						
MIGL				AML	AML		
	comp=N,56800μm,0.9s						
MIGL				AML	AML		
	comp=E,45200μm,1.4s						
MIGL				AML	AML		
	comp=N,56800μm,0.9s						
MIGL				AML	AML		
	comp=E,45200μm,1.4s						
MIGL				AML	AML		
	comp=N,56800μm,0.9s						
PGF	**Pioggiola**	**3.57**	**256**	*e*P	**Pn**	**01 33 22.0**	**+1.5**
PGF	**Pioggiola**	**3.57**	**256**	P	**Pn**	**01 33 21.7**	**+1.3**
MTSN	**Montesano sull**	**3.58**	**154**	P	**Pn**	**01 33 19.9**	**-0.7**
MTSN				AML	AML		
	comp=E,9035μm,1.1s						
MTSN				AML	AML		
	comp=N,6160μm,0.9s						
MTSN				AML	AML		
	comp=E,9035μm,1.1s						
MTSN				AML	AML		
	comp=N,6160μm,0.9s						
MTSN				AML	AML		
	comp=E,9035μm,1.1s						
MTSN				AML	AML		
	comp=N,6160μm,0.9s						
KBA	**Koelnbreinsper**	**3.59**	**356**	*i* Pn	**Pn**	**01 33 21.3**	**+0.5**
	comp=N,194nm,0.5s,SNR=474						
KBA				Pg	**Pg**	**01 33 36.8**	**+3.1**
	comp=N,1μm,0.8s						
KBA				*e*Sn	**Sn**	**01 34 06.7**	**+3.5**
	comp=N,672nm,0.7s						
KBA	**Koelnbreinsper**	**3.59**	**356**	P	**Pn**	**01 33 21.2**	**+0.5**

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BRY   Bratogost          3.59  98⇓iPn    Pn     01 33 20.7  -0.1
BRY                                eSn     Sn     01 34 03.2  -0.1
BRY   Bratogost          3.59  98 ePn    Pn     01 33 21.2  +0.4
MATE  Matera             3.63 141⇑iP     Pn     01 33 20.2  -0.9
MATE  Matera             3.63 141  S     Sn     01 34 03.1  -0.8
MATE  Matera             3.63 141  P     Pn     01 33 20.2  -0.9
MATE                               AML     AML
      comp=E,10825µm,1.1s
MATE                               AML     AML
      comp=N,14100µm,0.7s
MATE                               AML     AML
      comp=E,10825µm,1.1s
MATE                               AML     AML
      comp=N,14100µm,0.7s
MATE                               AML     AML
      comp=E,10825µm,1.1s
MATE                               AML     AML
      comp=N,14100µm,0.7s
RISI  Rein               3.63 342  P     Pn     01 33 22.4  +1.0
RISI                               AML     AML
      comp=E,7320µm,1.3s
RISI                               AML     AML
      comp=N,7375µm,1.3s
RISI                               AML     AML
      comp=N,7375µm,1.3s
RISI                               AML     AML
      comp=E,7320µm,1.3s
RISI                               AML     AML
      comp=N,7375µm,1.3s
RISI                               AML     AML
      comp=E,7320µm,1.3s
ABSI  Aberstuecki        3.64 333  P     Pn     01 33 22.1  +0.6
ABSI                               S     Sn     01 34 05.0  +0.5
ABSI                               AML     AML
      comp=E,8840µm,1.0s
ABSI                               AML     AML
      comp=N,10570µm,0.8s
ABSI                               AML     AML
      comp=E,8840µm,1.0s
ABSI                               AML     AML
      comp=N,10570µm,0.8s
ABSI                               AML     AML
      comp=E,8840µm,1.0s
ABSI                               AML     AML
      comp=N,10570µm,0.8s
MDI   Monti di Nese      3.64 310  P     Pn     01 33 21.5  +0.1
MDI                                AML     AML
      comp=E,2385µm,0.9s
MDI                                AML     AML
      comp=N,2595µm,1.1s
MDI                                AML     AML
      comp=E,2425µm,0.9s
MDI                                AML     AML
      comp=N,2675µm,1.1s
MDI                                AML     AML
      comp=N,2675µm,1.1s
MDI                                AML     AML
      comp=E,2425µm,0.9s
MDI                                AML     AML
      comp=E,2385µm,0.9s
MDI                                AML     AML
      comp=N,2595µm,1.1s
MDI                                AML     AML
      comp=N,2595µm,1.1s
MDI                                AML     AML
      comp=E,2425µm,0.9s
MDI                                AML     AML
      comp=E,2385µm,0.9s
MDI                                AML     AML
      comp=N,2675µm,1.1s
HCY   Herceg Novi        3.68 105⇑iPn    Pn     01 33 21.6  -0.3
HCY                                eSn     Sn     01 34 05.8  +0.6
HCY   Herceg Novi        3.68 105 ePn    Pn     01 33 21.5  -0.3
BEHE  Becsehely          3.69  35 ePn    Pn     01 33 21.6  -0.4
NOCI  Noci               3.69 136 i PN   Pn     01 33 20.1  -1.9
NOCI                              i SN   Sg     01 34 25.3  +1.7
NOCI  Noci               3.69 136  P     Pn     01 33 20.8  -1.3
NOCI                               AML     AML
      comp=E,8730µm,0.9s
NOCI                               AML     AML
      comp=N,9180µm,0.7s
NOCI                               AML     AML
      comp=N,9180µm,0.7s
NOCI                               AML     AML
      comp=E,8730µm,0.9s
NOCI                               AML     AML
      comp=N,9180µm,0.7s
NOCI                               AML     AML
      comp=E,8730µm,0.9s
SIRI  Monte Sirino -     3.69 153  P     Pn     01 33 22.4  +0.2
SIRI                               AML     AML
      comp=E,8390µm,1.6s
SIRI                               AML     AML
      comp=N,6925µm,1.4s
SIRI                               AML     AML
      comp=E,8530µm,1.6s
SIRI                               AML     AML
      comp=N,7115µm,1.4s
SIRI                               AML     AML
      comp=E,8390µm,1.6s
SIRI                               AML     AML
      comp=E,8530µm,1.6s
SIRI                               AML     AML
      comp=N,6925µm,1.4s
SIRI                               AML     AML
      comp=N,7115µm,1.4s
SIRI                               AML     AML
      comp=E,8390µm,1.6s
SIRI                               AML     AML
      comp=E,8530µm,1.6s
SIRI                               AML     AML
      comp=N,7115µm,1.4s
SIRI                               AML     AML
      comp=N,6925µm,1.4s
ROSI  Rosskopf           3.79 336  P     Pn     01 33 24.5  +0.9
ROSI                               AML     AML
      comp=E,9770µm,1.6s
ROSI                               AML     AML
      comp=N,8240µm,1.5s
ROSI                               AML     AML
      comp=N,8240µm,1.5s
ROSI                               AML     AML
      comp=E,9770µm,1.6s
ROSI                               AML     AML
      comp=N,8240µm,1.5s
ROSI                               AML     AML
      comp=E,9770µm,1.6s
BRMO  Bormio             3.79 323  P     Pn     01 33 24.9  +1.4
BRMO                               AML     AML
      comp=E,2190µm,1.5s
BRMO                               AML     AML
      comp=N,2840µm,1.3s
BRMO                               AML     AML
      comp=N,2840µm,1.3s
BRMO                               AML     AML
      comp=E,2190µm,1.5s
BRMO                               AML     AML
      comp=N,2840µm,1.3s
BRMO                               AML     AML
      comp=E,2190µm,1.5s
UPM   Unac-Piva          3.81  93⇑iPn    Pn     01 33 23.6  -0.3
UPM                                eSn     Sn     01 34 09.0  +0.2
UPM   Unac-Piva          3.81  93 ePn    Pn     01 33 25.0  +1.1
FASA  Fasano             3.82 133⇑iPn    Pn     01 33 22.9  -0.9
FASA                               Sn     Sn     01 34 09.6  +0.9
MOSI  Grossmontoni       3.83 326  P     Pn     01 33 25.2  +1.1
MOSI                               AML     AML
      comp=E,13950µm,1.2s
MOSI                               AML     AML
      comp=N,15450µm,1.4s
MOSI                               AML     AML
      comp=N,15450µm,1.4s
MOSI                               AML     AML
      comp=E,13950µm,1.2s
MOSI                               AML     AML
      comp=N,15450µm,1.4s
MOSI                               AML     AML
      comp=E,13950µm,1.2s
MASS  Massafra           3.85 137⇑iPn    Pn     01 33 23.3  -0.9
MASS                               Sn     Sn     01 34 10.3  +0.9
HAPS  Han Pijesak,Bl     3.85  79 ePn    Pn     01 33 24.5  +0.1
HAPS                               eSg     Sg     01 34 27.4  -1.3
HAPS  Han Pijesak,Bl     3.85  79 ePn    Pn     01 33 23.6  -0.8
PCP   Piancastagn        3.85 287  P     Pn     01 33 25.8  +1.4
PCP                                AML     AML
      comp=E,1175µm,1.6s
PCP                                AML     AML
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      comp=N,1195µm,1.6s
PCP                                AML     AML
      comp=E,1175µm,1.6s
PCP                                AML     AML
      comp=N,1195µm,1.6s
PCP                                AML     AML
      comp=E,1175µm,1.6s
PCP                                AML     AML
      comp=N,1195µm,1.6s
BERNI Berninapass        3.91 319  P     Pn     01 33 27.1  +1.8
BERNI                              AML     AML
      comp=E,2205µm,1.2s
BERNI                              AML     AML
      comp=N,2975µm,1.6s
BERNI                              AML     AML
      comp=N,2975µm,1.6s
BERNI                              AML     AML
      comp=E,2205µm,1.2s
BERNI                              AML     AML
      comp=N,2975µm,1.6s
BERNI                              AML     AML
      comp=E,2205µm,1.2s
NKME  Niksic             3.92  99⇓iPn    Pn     01 33 25.4  +0.2
NKME                               eSn     Sn     01 34 11.1  -0.1
NKY   Niksic             3.94  98⇑iPn    Pn     01 33 25.7  +0.2
NKY                                eSn     Sn     01 34 11.6  -0.2
FINB  Finale Ligure      3.94 282  P     Pn     01 33 26.6  +1.2
FINB                               AML     AML
      comp=E,410µm,0.6s
FINB                               AML     AML
      comp=N,494µm,0.3s
FINB                               AML     AML
      comp=E,410µm,0.6s
FINB                               AML     AML
      comp=N,494µm,0.3s
FINB                               AML     AML
      comp=E,410µm,0.6s
FINB                               AML     AML
      comp=N,494µm,0.3s
CEME  Cevo               3.95 102⇑iPn    Pn     01 33 25.6   0.0
CEME                               eSn     Sn     01 34 12.6  +0.6
QLNO  Quiliano           3.95 284  P     Pn     01 33 26.3  +0.7
QLNO                               AML     AML
      comp=E,843µm,1.5s
QLNO                               AML     AML
      comp=N,968µm,1.6s
QLNO                               AML     AML
      comp=E,843µm,1.5s
QLNO                               AML     AML
      comp=N,968µm,1.6s
QLNO                               AML     AML
      comp=E,843µm,1.5s
QLNO                               AML     AML
      comp=N,968µm,1.6s
FUORN Ofenpass-Fuorn     3.95 323 ePn    Pn     01 33 26.8  +0.9
FUORN Ofenpass-Fuorn     3.95 323  P     Pn     01 33 27.2  +1.3
FUORN                              AML     AML
      comp=E,3395µm,1.1s
FUORN                              AML     AML
      comp=N,4385µm,1.5s
FUORN                              AML     AML
      comp=N,4385µm,1.5s
FUORN                              AML     AML
      comp=E,3395µm,1.1s
FUORN                              AML     AML
      comp=N,4385µm,1.5s
FUORN                              AML     AML
      comp=E,3395µm,1.1s
ARSA  Arzberg            3.97  18 ePn    Pn     01 33 25.6  -0.2
ARSA  Arzberg            3.97  18 i Pn   Pn     01 33 25.6  -0.2
      comp=E,41nm,0.3s,SNR=176
ARSA                               Pg     Pg     01 33 43.7  +2.7
      comp=E,307nm,0.5s
ARSA  Arzberg            3.97  18  P     Pn     01 33 25.4  -0.4
ARSA                               AML     AML
      comp=E,2795µm,1.5s
ARSA                               AML     AML
      comp=N,2675µm,1.5s
ARSA                               AML     AML
      comp=N,2675µm,1.5s
ARSA                               AML     AML
      comp=E,2795µm,1.5s
ARSA                               AML     AML
      comp=N,2675µm,1.5s
ARSA                               AML     AML
      comp=E,2795µm,1.5s
TAR1  Taranto            4.00 137⇑iPn    Pn     01 33 25.4  -0.8
TAR1                               Sn     Sn     01 34 13.0  -0.1
CGL1  Ceglie Messapi     4.00 134⇑iPn    Pn     01 33 25.0  -1.3
BUM   Brajici-Budva      4.00 106⇓iPn    Pn     01 33 26.2  -0.2
BUM                                eSn     Sn     01 34 13.7  +0.3
ORI   Oriolo Calabro     4.00 148  P     Pn     01 33 26.8  +0.5
ORI                                AML     AML
      comp=E,10810µm,1.0s
ORI                                AML     AML
      comp=N,11100µm,0.8s
ORI                                AML     AML
      comp=N,11100µm,0.8s
ORI                                AML     AML
      comp=E,10810µm,1.0s
ORI                                AML     AML
      comp=N,11100µm,0.8s
ORI                                AML     AML
      comp=E,10810µm,1.0s
WTTA  Wattenberg         4.03 340 i Pn   Pn     01 33 27.9  +1.0
      comp=E,143nm,0.2s,SNR=470
WTTA                               Sn     Sn     01 34 17.4  +3.2
      comp=E,1µm,0.9s
WTTA  Wattenberg         4.03 340  P     Pn     01 33 28.0  +1.1
WTTA                               AML     AML
      comp=E,7150µm,1.3s
WTTA                               AML     AML
      comp=N,5695µm,1.6s
WTTA                               AML     AML
      comp=E,7150µm,1.3s
WTTA                               AML     AML
      comp=N,5695µm,1.6s
WTTA                               AML     AML
      comp=E,7150µm,1.3s
WTTA                               AML     AML
      comp=N,5695µm,1.6s
ROTM  Rocchetta Tana     4.07 291  P     Pn     01 33 29.4  +2.2
ROTM                               AML     AML
      comp=E,7235µm,1.6s
ROTM                               AML     AML
      comp=N,6590µm,1.4s
ROTM                               AML     AML
      comp=E,7235µm,1.6s
ROTM                               AML     AML
      comp=N,6590µm,1.4s
ROTM                               AML     AML
      comp=E,7235µm,1.6s
ROTM                               AML     AML
      comp=N,6590µm,1.4s
FETA  Feichten           4.09 330 ePn    Pn     01 33 28.5  +0.7
      comp=N,445nm,0.8s,SNR=833
FETA                               Sn     Sn     01 34 18.0  +2.3
      comp=N,133nm,0.4s
MUGIO Muggio             4.10 308  P     Pn     01 33 27.1  -0.7
SQTA  Sankt Quirin       4.11 336 i Pn   Pn     01 33 29.3  +1.4
      comp=N,254nm,0.3s,SNR=588
SQTA                               eSn     Sn     01 34 18.3  +2.3
      comp=N,272nm,0.3s
WATA  Walderalm          4.11 340 i Pn   Pn     01 33 29.3  +1.4
      comp=N,332nm,0.4s,SNR=1160
RORO  Rocca Rossa        4.12 280  P     Pn     01 33 29.5  +1.6
RUDO  Rudo               4.13  86 ePn    Pn     01 33 27.9  -0.2
SALB  San Lorenzo Be     4.13 150  P     Pn     01 33 27.6  -0.6
SALB                               AML     AML
      comp=E,3880µm,1.4s
SALB                               AML     AML
      comp=N,3925µm,0.8s
SALB                               AML     AML
      comp=E,4035µm,1.4s
SALB                               AML     AML
      comp=N,3985µm,0.8s
SALB                               AML     AML
      comp=E,3880µm,1.4s
SALB                               AML     AML
      comp=N,3925µm,0.8s
SALB                               AML     AML
      comp=N,3985µm,0.8s
SALB                               AML     AML
      comp=E,4035µm,1.4s
SALB                               AML     AML
      comp=E,3880µm,1.4s
SALB                               AML     AML
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      comp=N,3925µm,0.8s
SALB                               AML     AML
      comp=N,3985µm,0.8s
SALB                               AML     AML
      comp=E,4035µm,1.4s
PLE   Pljevlja           4.15  90⇓iPn    Pn     01 33 29.1  +0.6
PLE                                eSn     Sn     01 34 17.0  -0.1
BBLS  Lazi&#263;i        4.16  83 ePn    Pn     01 33 29.5  +1.0
BBLS  Lazi&#263;i        4.16  83 i Pn   Pn     01 33 28.7  +0.2
PDG   Podgorica          4.22 103 ePn    Pn     01 33 29.8  +0.4
PDG   Podgorica          4.22 103⇓iP     Pn     01 33 29.4  +0.2
PDG   Podgorica          4.22 103  S     Sn     01 34 17.2  -1.3
PDG   Podgorica          4.22 103 i Pn   Pn     01 33 29.5  +0.2
PDG   Podgorica          4.22 103  P     Pn     01 33 29.6  +0.4
PDG                                AML     AML
      comp=E,7190µm,1.0s
PDG                                AML     AML
      comp=N,11025µm,0.9s
PDG                                AML     AML
      comp=E,5640µm,1.0s
PDG                                AML     AML
      comp=N,8530µm,0.9s
PDG                                AML     AML
      comp=N,8530µm,0.9s
PDG                                AML     AML
      comp=N,11025µm,0.9s
PDG                                AML     AML
      comp=E,7190µm,1.0s
PDG                                AML     AML
      comp=E,5640µm,1.0s
PDG                                AML     AML
      comp=N,8530µm,0.9s
PDG                                AML     AML
      comp=N,11025µm,0.9s
PDG                                AML     AML
      comp=E,7190µm,1.0s
PDG                                AML     AML
      comp=E,5640µm,1.0s
TTG   Podgorica          4.22 103⇑iPn    Pn     01 33 29.7  +0.4
TTG                                eSn     Sn     01 34 19.4  +0.9
TTG   Podgorica          4.22 103 ePn    Pn     01 33 29.3   0.0
TTG   Podgorica          4.22 103 eP     Pn     01 33 29.3   0.0
IMI   Imperia            4.22 278  P     Pn     01 33 30.9  +1.5
VARE  Varese             4.23 306  P     Pn     01 33 29.9  +0.4
VARE                               AML     AML
      comp=E,2630µm,1.1s
VARE                               AML     AML
      comp=N,2215µm,1.6s
VARE                               AML     AML
      comp=N,2215µm,1.6s
VARE                               AML     AML
      comp=E,2630µm,1.1s
VARE                               AML     AML
      comp=N,2215µm,1.6s
VARE                               AML     AML
      comp=E,2630µm,1.1s
DAVOX Davos/Dischmat     4.25 322  Pn    Pn     01 33 30.6  +0.8
      comp=E,83nm,0.3s,baz=167,slow=17,SNR=253
DAVOX                              Sn     Sn     01 34 23.0  +3.6
      comp=E,41nm,0.3s,baz=7.6,slow=23,SNR=3.3
DAVOX                              Lg     Lg     01 34 39.9
      comp=E,30nm,0.3s,baz=253,slow=16,SNR=3.8
DAVOX Davos/Dischmat     4.25 322  P     Pn     01 33 31.3  +1.4
DRME  Dracevica, Mon     4.25 106⇑iPn    Pn     01 33 29.7   0.0
DRME                               eSn     Sn     01 34 20.1  +0.9
DRME  Dracevica, Mon     4.25 106 i Pn   Pn     01 33 29.9  +0.2
MOTA  Moosalm            4.25 336 i Pn   Pn     01 33 31.4  +1.5
      comp=E,203nm,0.5s,SNR=795
TUE   Stuetta            4.28 315 ePn    Pn     01 33 31.4  +1.1
TUE   Stuetta            4.28 315  P     Pn     01 33 31.1  +0.7
TUE                                AML     AML
      comp=E,1240µm,1.6s
TUE                                AML     AML
      comp=N,1460µm,1.2s
TUE                                AML     AML
      comp=E,1585µm,1.6s
TUE                                AML     AML
      comp=N,1810µm,1.2s
TUE                                AML     AML
      comp=N,1460µm,1.2s
TUE                                AML     AML
      comp=N,1810µm,1.2s
TUE                                AML     AML
      comp=E,1585µm,1.6s
TUE                                AML     AML
      comp=E,1240µm,1.6s
TUE                                AML     AML
      comp=N,1460µm,1.2s
TUE                                AML     AML
      comp=N,1810µm,1.2s
TUE                                AML     AML
      comp=E,1585µm,1.6s
TUE                                AML     AML
      comp=E,1240µm,1.6s
GBOS  Grotte di Boss     4.30 282  P     Pn     01 33 31.7  +1.3
GBOS                               AML     AML
      comp=E,502µm,1.6s
GBOS                               AML     AML
      comp=N,649µm,1.6s
GBOS                               AML     AML
      comp=N,649µm,1.6s
GBOS                               AML     AML
      comp=E,502µm,1.6s
GBOS                               AML     AML
      comp=N,649µm,1.6s
GBOS                               AML     AML
      comp=E,502µm,1.6s
MGRO  Montegrosso        4.30 279  P     Pn     01 33 32.8  +2.3
MGRO                               AML     AML
      comp=E,788µm,1.4s
MGRO                               AML     AML
      comp=N,851µm,1.6s
MGRO                               AML     AML
      comp=E,788µm,1.4s
MGRO                               AML     AML
      comp=N,851µm,1.6s
MGRO                               AML     AML
      comp=E,788µm,1.4s
MGRO                               AML     AML
      comp=N,851µm,1.6s
KOME  Kolasin            4.31  97⇑iPn    Pn     01 33 31.9  +1.3
KOME                               eSn     Sn     01 34 22.1  +1.2
CET2  Cetraro            4.32 156  P     Pn     01 33 31.1  +0.4
CET2                               AML     AML
      comp=E,6115µm,1.3s
CET2                               AML     AML
      comp=N,4925µm,0.8s
CET2                               AML     AML
      comp=E,6115µm,1.3s
CET2                               AML     AML
      comp=N,4925µm,0.8s
CET2                               AML     AML
      comp=E,6115µm,1.3s
CET2                               AML     AML
      comp=N,4925µm,0.8s
TEKS  Tekeris            4.34  74 ePn    Pn     01 33 31.9  +1.0
TEKS  Tekeris            4.34  74 i Pn   Pn     01 33 30.8  -0.1
NEGI  Seborga            4.36 277  P     Pn     01 33 32.7  +1.5
MOA   Molln              4.37   5 ePn    Pn     01 33 31.9  +0.6
MOA   Molln              4.37   5 i Pn   Pn     01 33 31.9  +0.6
      comp=N,95nm,0.4s,SNR=273
MOA                                eSn     Sn     01 34 23.3  +1.0
      comp=N,198nm,0.4s
ULC   Ulcinj             4.37 109⇑iPn    Pn     01 33 31.2  -0.2
ULC                                eSn     Sn     01 34 22.6  +0.3
MONC  Moncucco Torin     4.43 293  P     Pn     01 33 34.1  +2.0
MONC                               AML     AML
      comp=E,1960µm,1.5s
MONC                               AML     AML
      comp=N,2645µm,1.3s
MONC                               AML     AML
      comp=N,2645µm,1.3s
MONC                               AML     AML
      comp=E,1960µm,1.5s
MONC                               AML     AML
      comp=N,2645µm,1.3s
MONC                               AML     AML
      comp=E,1960µm,1.5s
MORH  Mrgy, Hungar       4.45  51 ePn    Pn     01 33 31.2  -1.2
MORH  Mrgy, Hungar       4.45  51 ePn    Pn     01 33 32.0  -0.3
MORH                               Sn     Sg     01 34 46.1  -1.6
SAOF  Saorge             4.47 278  P     Pn     01 33 34.8  +2.0
SAOF  Saorge             4.47 278  P     Pn     01 33 34.5  +1.7
SAOF                               AML     AML
      comp=E,687µm,1.6s
SAOF                               AML     AML
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	comp=N,844µm,1.5s						
SAOF				AML	AML		
	comp=E,687µm,1.6s						
SAOF				AML	AML		
	comp=N,844µm,1.5s						
SAOF				AML	AML		
	comp=E,687µm,1.6s						
SAOF				AML	AML		
	comp=N,844µm,1.5s						
RETA	Reutte	4.49	334	iPn	Pn	01 33 34.3	+1.3
	comp=N,42nm,0.2s,SNR=388						
RETA				Sn	Sn	01 34 29.0	+3.8
	comp=N,222nm,0.5s						
SBF	Sospel	4.55	277	ePn	Pn	01 33 34.3	+0.4
	SNR=1.0						
SBF				eSn	Sn	01 34 24.0	-2.8
	comp=N,262nm,0.5s						
SBF	Sospel	4.55	277	ePn	Pn	01 33 34.3	+0.4
SBF				eSn	Sn	01 34 24.0	-2.8
SBF	Sospel	4.55	277	eP	Pn	01 33 34.3	+0.4
SBF				e		01 34 24.0	
MON	Monaco	4.56	275	P	Pn	01 33 35.0	+1.1
IVA	Berane	4.58	96⇑	iPn	Pn	01 33 35.1	+0.8
IVA				eSn	Sn	01 34 27.6	+0.1
SJES	Sjenica	4.58	91	ePn	Pn	01 33 35.6	+1.2
ENR	Entracque	4.59	281	P	Pn	01 33 36.6	+2.1
ENR				AML	AML		
	comp=E,548µm,1.6s						
ENR				AML	AML		
	comp=N,870µm,1.6s						
ENR				AML	AML		
	comp=E,548µm,1.6s						
ENR				AML	AML		
	comp=N,870µm,1.6s						
ENR				AML	AML		
	comp=E,548µm,1.6s						
ENR				AML	AML		
	comp=N,870µm,1.6s						
ESCA	l'Escarene	4.59	276	P	Pn	01 33 36.2	+1.7
REVF	Revere	4.60	275	P	Pn	01 33 36.0	+1.5
DIVS	Divibare	4.60	80	ePn	Pn	01 33 35.1	+0.5
DIVS	Divibare	4.60	80	iPn	Pn	01 33 34.0	-0.6
CELI	Celico	4.61	152	P	Pn	01 33 34.2	-0.5
FUSIO	Fusio	4.63	311	P	Pn	01 33 34.6	-0.5
FUSIO				AML	AML		
	comp=E,1630µm,0.8s						
FUSIO				AML	AML		
	comp=N,1730µm,1.0s						
FUSIO				AML	AML		
	comp=E,1630µm,0.8s						
FUSIO				AML	AML		
	comp=N,1730µm,1.0s						
FUSIO				AML	AML		
	comp=E,1630µm,0.8s						
FUSIO				AML	AML		
	comp=N,1730µm,1.0s						
DAVA	Damuels	4.64	326	ePn	Pn	01 33 36.7	+1.5
	comp=N,18nm,0.3s,SNR=238						
DAVA				eSn	Sn	01 34 31.4	+2.2
	comp=N,173nm,0.3s						
SOP	Sopron	4.64	25	ePn	Pn	01 33 35.0	0.0
SOP				Sn	Sg	01 34 53.1	-1.0
CAR1	CAROLEI	4.65	155	P	Pn	01 33 35.5	+0.3
CAR1				AML	AML		
	comp=E,3575µm,1.2s						
CAR1				AML	AML		
	comp=N,2695µm,1.1s						
CAR1				AML	AML		
	comp=E,3785µm,1.2s						
CAR1				AML	AML		
	comp=N,2740µm,1.0s						
CAR1				AML	AML		
	comp=E,3785µm,1.2s						
CAR1				AML	AML		
	comp=E,3575µm,1.2s						
CAR1				AML	AML		
	comp=N,2695µm,1.1s						
CAR1				AML	AML		
	comp=N,2740µm,1.0s						
CAR1				AML	AML		
	comp=E,3785µm,1.2s						
CAR1				AML	AML		
	comp=E,3575µm,1.2s						
CAR1				AML	AML		
	comp=N,2695µm,1.1s						
CAR1				AML	AML		
	comp=N,2740µm,1.0s						
PIPA	Pietrapaola	4.65	149	P	Pn	01 33 35.7	+0.5
STV	Sant Anna di V	4.66	281	P	Pn	01 33 36.7	+1.3
STV				AML	AML		
	comp=E,462µm,0.5s						
STV				AML	AML		
	comp=N,459µm,1.5s						
STV				AML	AML		
	comp=E,462µm,0.5s						
STV				AML	AML		
	comp=N,459µm,1.5s						
STV				AML	AML		
	comp=E,462µm,0.5s						
STV				AML	AML		
	comp=N,459µm,1.5s						
PLONS	Plons/SG	4.67	321	P	Pn	01 33 37.7	+2.1
PVY	Plav	4.68	99⇓	iPn	Pn	01 33 36.6	+0.8
PVY				eSn	Sn	01 34 30.2	+0.1
CONA	Conrad Observa	4.68	18	iPn	Pn	01 33 35.7	0.0
	comp=N,3.9nm,0.2s,SNR=299						
FRGS	Fruska Gora	4.69	67	ePn	Pn	01 33 35.9	+0.1
FRGS	Fruska Gora	4.69	67	iPn	Pn	01 33 35.3	-0.5
IVAS	Ivanjica	4.70	87	ePn	Pn	01 33 35.8	-0.1
DOI	San Damiano	4.76	284	P	Pn	01 33 38.6	+1.9
DOI				AML	AML		
	comp=E,916µm,1.6s						
DOI				AML	AML		
	comp=N,759µm,1.5s						
DOI				AML	AML		
	comp=N,759µm,1.5s						
DOI				AML	AML		
	comp=E,916µm,1.6s						
DOI				AML	AML		
	comp=N,759µm,1.5s						
DOI				AML	AML		
	comp=E,916µm,1.6s						
EILF	Villa Eilenroc	4.77	273	P	Pn	01 33 37.5	+0.6
PUK	Puka	4.79	106	iPN	Pn	01 33 38.2	+1.0
PUK				iSN	Sg	01 35 02.1	+3.2
PUK	Puka	4.79	106	P	Pn	01 33 37.8	+0.5
BCI	Bajram Curri	4.82	101	iPN	Pn	01 33 39.9	+2.4
BCI				iSN	Sg	01 35 03.6	+3.9
PZZ	Stroppo	4.85	284	P	Pn	01 33 39.4	+1.3
PZZ				AML	AML		
	comp=E,542µm,1.2s						
PZZ				AML	AML		
	comp=N,814µm,1.5s						
PZZ				AML	AML		
	comp=E,542µm,1.2s						
PZZ				AML	AML		
	comp=N,814µm,1.5s						
PZZ				AML	AML		
	comp=E,542µm,1.2s						
PZZ				AML	AML		
	comp=N,814µm,1.5s						
ISO	Isola	4.85	280	P	Pn	01 33 39.2	+1.2
TIP	Timpagrande	4.90	151	ePn	Pn	01 33 39.7	+1.1
TIP	Timpagrande	4.90	151⇑	iP	Pn	01 33 38.5	-0.2
TIP	Timpagrande	4.90	151	P	Pn	01 33 38.9	+0.2
TRUS	Trudelj	4.91	79	ePn	Pn	01 33 39.1	+0.3
CALF	Calern	4.92	275	P	Pn	01 33 40.2	+1.2
SCTE	Santa Cesarea	4.95	132	P	Pn	01 33 38.5	-0.8
SCTE				AML	AML		
	comp=E,6595µm,1.2s						
SCTE				AML	AML		
	comp=N,8975µm,1.3s						
SCTE				AML	AML		
	comp=N,8975µm,1.3s						
SCTE				AML	AML		
	comp=E,6595µm,1.2s						
SCTE				AML	AML		
	comp=N,8975µm,1.3s						
SCTE				AML	AML		
	comp=E,6595µm,1.2s						
BNALP	Bannalp	5.02	314	P	Pn	01 33 42.0	+1.6
CSKK	Cskako	5.03	38	ePn	Pb	01 33 48.1	-4.9
CSKK				Sn	Sb	01 34 56.0	+2.7
TIR	Tirane	5.05	113	ePn	Pn	01 33 40.3	-0.4
TIR	Tirane	5.05	113	ePn	Pn	01 33 40.6	-0.1
TIR	Tirane	5.05	113	P	Pn	01 33 40.7	0.0
TIR	Tirane	5.05	113⇑	iP	Pn	01 33 40.5	-0.1
TIR	Tirane	5.05	113	eP	Pn	01 33 40.3	-0.4
TIR	Tirane	5.05	113	iPN	Pn	01 33 40.5	-0.2
TIR				iSN	Sg	01 35 30.0	+23
TIR	Tirane	5.05	113	P	Pn	01 33 40.4	-0.4
SURF	Saint Ours	5.06	284	P	Pn	01 33 41.3	+0.3
GRUS	Gruza	5.11	83	ePn	Pn	01 33 41.7	+0.2
FRF	La Foret Royal	5.12	273	ePn	Pn	01 33 41.6	-0.1
	SNR=1.0						
FRF				eSn	Sn	01 34 38.0	-2.8
	comp=E,57nm,0.3s						
FRF	La Foret Royal	5.12	273	ePn	Pn	01 33 41.6	-0.1
FRF				eSn	Sn	01 34 38.0	-2.8
FRF	La Foret Royal	5.12	273	eP	Pn	01 33 41.6	-0.1
FRF				e		01 34 38.0	
MBDF	Montbardon	5.13	286	ePn	Pn	01 33 41.5	-0.5
	SNR=1.0						
MBDF				eSn	Sn	01 34 38.1	-3.1
	comp=E,221nm,0.7s,SNR=1.0						
MBDF	Montbardon	5.13	286	ePn	Pn	01 33 41.5	-0.5
MBDF				eSn	Sn	01 34 38.1	-3.1
MBDF	Montbardon	5.13	286	eP	Pn	01 33 41.5	-0.5
MBDF				e		01 34 38.1	
RRL	Rocca Remolon	5.16	288	P	Pn	01 33 43.5	+1.0
DIX	Grande Dixence	5.16	302	P	Pn	01 33 43.8	+1.3
LMR	La Mourre	5.24	271	ePn	Pn	01 33 43.2	0.0
	SNR=1.0						
LMR				eSn	Sn	01 34 41.0	-2.5
	comp=E,30nm,0.3s,SNR=1.0						
LMR	La Mourre	5.24	271	ePn	Pn	01 33 43.2	0.0
LMR				eSn	Sn	01 34 41.0	-2.5
LMR	La Mourre	5.24	271	eP	Pn	01 33 43.2	0.0
LMR				e		01 34 41.0	
OGAG	Argentiere	5.25	283	P	Pn	01 33 46.0	+2.5
ZST	Bratislava	5.27	26	eP	Pn	01 33 42.1	-1.5
ZST	Bratislava	5.27	26	ePN	Pn	01 33 42.1	-1.5
ZST				ePG	Pg	01 34 03.9	-2.0
ZST				eSG	Sg	01 35 10.8	-3.2
BNI	Bardonecchia	5.27	290	ePn	Pn	01 33 44.0	+0.2
BNI	Bardonecchia	5.27	290	eP	Pn	01 33 44.0	+0.2
PHP	Peshkopia	5.30	108	P	Pn	01 33 44.8	+0.6
GEC2	GERESS Array S	5.35	0	ePn	Pn	01 33 44.5	-0.4
GEC2	GERESS Array S	5.35	0	eP	Pn	01 33 44.5	-0.4
GERES	GERESS Array B	5.35	0	Pn	Pn	01 33 44.3	-0.5
	comp=E,26nm,0.3s,baz=174,slow=13,SNR=586						
GERES				Lg	Lg	01 35 14.3	
	comp=E,12nm,0.3s,baz=182,slow=21,SNR=2.9						
GERES				LR	LR	01 36 14.0	
	comp=E,7µm,18.9s,baz=182,slow=44						
LPG	La Plagne	5.35	294	ePn	Pn	01 33 44.2	-0.9
	SNR=1.0						
LPG				eSn	Sn	01 34 43.0	-3.8
	comp=E,337nm,0.6s						
LPG	La Plagne	5.35	294	ePn	Pn	01 33 44.2	-0.9
LPG				eSn	Sn	01 34 43.0	-3.8
LPG	La Plagne	5.35	294	eP	Pn	01 33 44.2	-0.9
LPG				e		01 34 43.0	
SENIN	Lac Senin/Sane	5.37	304	ePn	Pn	01 33 46.0	+0.8
LPL	La Plagne	5.37	294	ePn	Pn	01 33 44.6	-0.7
	SNR=1.0						
LPL				eSn	Sn	01 34 42.3	-4.9
	comp=E,232nm,0.4s						
LPL	La Plagne	5.37	294	ePn	Pn	01 33 44.6	-0.7
LPL				eSn	Sn	01 34 42.3	-4.9
LPL	La Plagne	5.37	294	eP	Pn	01 33 44.6	-0.7
LPL				e		01 34 42.3	
SRO	Srobarova	5.39	35	eP	Pn	01 33 45.2	-0.2
SRO	Srobarova	5.39	35	ePN	Pn	01 33 45.2	-0.2
SRO				ePG	Pg	01 34 06.7	-1.6
SRO				e		01 34 58.3	
SELS	Selova	5.42	90	ePn	Pn	01 33 46.1	+0.3
BUD	Budapest	5.47	41	ePn	Pn	01 33 50.0	+3.6
MODS	Modra-Piesok	5.48	26	eP	Pn	01 33 45.1	-1.5
MODS	Modra-Piesok	5.48	26	ePN	Pn	01 33 45.0	-1.5
MODS				e		01 33 52.2	
MODS	Modra-Piesok	5.48	26	ePG	Pg	01 34 09.2	-0.7
MODS				e		01 35 01.0	
MODS	Modra-Piesok	5.48	26	eSG	Sg	01 35 14.5	-6.3
MODS				eLG	Lg	01 35 28.1	
SVIS	Svilajnac	5.49	79	ePn	Pn	01 33 46.4	-0.3
RSL	Roselend	5.50	296	P	Pn	01 33 47.5	+0.5
KHC	Kasperske Hory	5.63	359	ePn	Pn	01 33 48.1	-0.7
KHC	Kasperske Hory	5.63	359	eP	Pn	01 33 48.2	-0.5
KHC				e		01 34 51.9	
KHC				MLR	MLR		
	comp=Z,20µm,10.0s						
KHC	Kasperske Hory	5.63	359	ePN	Pn	01 33 48.2	-0.5
KHC				eSN	Sn	01 34 51.9	-1.5
KHC				AMS	AMS	01 36 10.0	
	comp=Z,20µm,10.0s						
TPE	Tepelena	5.70	122	P	Pn	01 33 49.2	-0.4
TPE	Tepelena	5.70	122	iPN	Pn	01 33 48.7	-0.9
TPE				iSN	Sg	01 35 46.1	+18
OHR	Ohrid	5.79	112	iPn	Pn	01 33 51.4	+0.5
OHR				iSn	Sn	01 34 57.7	+0.5
ORIF	Oris-en-Rattie	5.79	287	ePn	Pn	01 33 50.2	-0.8
	SNR=1.0						
ORIF				eSn	Sn	01 34 53.6	-3.8
	comp=Z,104nm,0.5s						
ORIF	Oris-en-Rattie	5.79	287	ePn	Pn	01 33 50.2	-0.8
ORIF				eSn	Sn	01 34 53.6	-3.8
ORIF	Oris-en-Rattie	5.79	287	P	Pn	01 33 52.2	+1.3
ORIF	Oris-en-Rattie	5.79	287	eP	Pn	01 33 50.2	-0.8
ORIF				e		01 34 53.6	
BOVS	Bovan	5.82	86	ePn	Pn	01 33 51.8	+0.5
KUBS	Kucevo	5.83	78	ePn	Pn	01 33 50.8	-0.7
KRUC	Moravsky	5.87	18	ePN	Pn	01 33 51.7	-0.2
KRUC				eSN	Sg	01 35 43.7	+10
SMRF	Simiane la Rot	5.90	277	ePn	Pn	01 33 52.9	+0.5
	SNR=1.0						
SMRF				eSn	Sn	01 34 56.6	-3.4
	comp=Z,28nm,0.5s						
SMRF	Simiane la Rot	5.90	277	ePn	Pn	01 33 52.9	+0.5
SMRF				eSn	Sn	01 34 56.6	-3.4
SKO	Skopje	5.91	102	ePn	Pn	01 33 53.1	+0.6
SKO	Skopje	5.91	102	iPn	Pn	01 33 53.0	+0.6
SKO				iSn	Sn	01 35 01.6	+1.5
MDVR	Moldovita	5.91	75⇑	iP	Pn	01 33 52.3	-0.3
CLTB	Caltabellotta	5.93	184	ePn	Pn	01 33 55.9	+3.1
TREC	Trest	5.93	11	eP	Pn	01 33 52.2	-0.6
TREC				MLR	MLR		
	comp=Z,28µm,10.1s						
TREC	Trest	5.93	11	ePN	Pn	01 33 52.2	-0.6
TREC				AMS	AMS	01 36 20.0	
	comp=Z,28µm,10.1s						
KEK	Kerkira	5.94	128	P	Pn	01 33 52.3	-0.6
OG02	Monnetier-Morn	5.94	299	P	Pn	01 33 53.7	+0.8
SRN	Sarande	5.95	125	P	Pn	01 33 52.4	-0.6
SRN	Sarande	5.95	125	iPN	Pn	01 33 52.0	-1.0
SRN				iSN	Sg	01 35 51.3	+15
BARS	Barje	5.98	94	ePn	Pn	01 33 53.7	+0.2
BARS	Barje	5.98	94	ePn	Pn	01 33 54.0	+0.5
KIZ	Kirchzarten	6.01	320	P	Pn	01 33 54.1	+0.1
JAVC	Velka Javorina	6.03	26	ePN	Pn	01 33 54.6	+0.4
JAVC				eSN	Sg	01 35 47.9	+9.4
VAE	Valguarnera	6.04	175	Pn	Pn	01 33 59.2	+4.9
	comp=Z,1.4nm,0.3s,baz=27,slow=11,SNR=14						
BZS	Buzias	6.04	67⇓	iP	Pn	01 33 54.6	+0.3
BZS	Buzias	6.04	67	S	Sn	01 35 03.0	-0.5
OGSM	Saint Maurice	6.09	293	P	Pn	01 33 56.0	+1.0
BFO	Black Forest	6.11	324	ePn	Pn	01 33 55.0	-0.3
BFO	Black Forest	6.11	324	iP	Pn	01 33 55.2	0.0
VRAC	Vranov	6.15	18	Pn	Pn	01 33 55.2	-0.5
	comp=Z,6.3nm,0.3s,baz=209,slow=14,SNR=69						
VRAC				LR	LR	01 36 55.1	
	comp=Z,13µm,18.4s,baz=206,slow=45						
VRAC	Vranov	6.15	18⇓	iP	Pn	01 33 55.2	-0.5
VRAC	Vranov	6.15	18	ePN	Pn	01 33 55.2	-0.5
VYHS	Vyhne	6.15	34	eP	Pn	01 33 55.0	-0.7
VYHS	Vyhne	6.15	34	ePN	Pn	01 33 55.0	-0.7
VYHS				e		01 34 03.6	
VYHS	Vyhne	6.15	34	ePG	Pg	01 34 23.2	+0.5
VYHS				e		01 35 18.6	
VYHS	Vyhne	6.15	34	eSG	Sg	01 35 38.5	-3.7
LOMF	Lomont	6.18	311	P	Pn	01 33 56.8	+0.6
PSZ	Piszkesteto	6.19	42	ePn	Pn	01 33 55.9	-0.6
PSZ	Piszkesteto	6.19	42⇓	iP	Pn	01 33 56.8	+0.3
PSZ	Piszkesteto	6.19	42	eP	Pn	01 33 55.9	-0.6
PSZ	Piszkesteto	6.19	42	ePn	Pg	01 34 24.0	+0.4
PSZ				Sn	Sg	01 35 51.0	+7.2
ZAGS	Zajecar	6.20	84	ePn	Pn	01 33 56.8	+0.3
CHMF	Charmoille	6.21	310	P	Pn	01 33 56.5	-0.3
CABF	La Chapelle	6.22	303	ePn	Pn	01 33 55.8	-1.0
	SNR=1.0						
CABF				eSn	Sn	01 35 02.3	-5.6
	comp=Z,191nm,0.6s,SNR=1.0						
CABF	La Chapelle	6.22	303	ePn	Pn	01 33 55.8	-1.0
CABF	La Chapelle	6.22	303	eP	Pn	01 33 55.8	-1.0
NEST	Nestorio	6.29	117	P	Pn	01 33 58.2	+0.4
OPP	Oppenau	6.30	324	P	Pn	01 33 57.7	-0.1
SIRR	Siria	6.30	61⇑	iP	Pn	01 33 59.7	+1.8
OG35	Corcelles	6.32	297	P	Pn	01 33 57.9	-0.3
IGT	Igoumenitsa	6.37	126	ePn	Pn	01 33 58.2	-0.6
IGT	Igoumenitsa	6.37	126	P	Pn	01 33 58.2	-0.6
GRFO	Grafenberg	6.42	346	ePn	Pn	01 33 58.3	-1.2
GRFO	Grafenberg	6.42	346	eP	Pn	01 33 58.3	-1.2
GRA1	Grafenberg Arr	6.42	346	ePn	Pn	01 33 58.0	-1.5
GRF	Grafenberg Arr	6.42	346	eP	Pn	01 33 58.0	-1.5
HERR	Herculane	6.42	75⇓	iP	Pn	01 33 59.7	+0.2
HINF	Hinteralfeld	6.45	314	ePn	Pn	01 33 58.4	-1.5
	SNR=1.0						
HINF				eSn	Sn	01 35 07.8	-5.7
	comp=Z,656nm,0.8s,SNR=1.0						
HINF	Hinteralfeld	6.45	314	ePn	Pn	01 33 58.4	-1.5
HINF	Hinteralfeld	6.45	314	eP	Pn	01 33 58.4	-1.5
GOPC	GO Pecny, Ondr	6.46	6	eP	Pn	01 33 59.1	-1.0
GOPC				MLR	MLR		
	comp=Z,19µm,10.4s						
GOPC	GO Pecny, Ondr	6.46	6	ePN	Pn	01 33 59.1	-1.0
GOPC				AMS	AMS	01 36 40.0	
	comp=Z,19µm,10.4s						
DJES	Djerdap	6.46	77	ePn	Pn	01 34 00.3	+0.2
PENT	Pentalofos	6.47	118	P	Pn	01 34 00.6	+0.3
PRU	Pruhonice	6.52	5	eP	Pn	01 33 59.6	-1.2
PRU				MLR	MLR		
	comp=Z,16µm,12.5s						
PRU	Pruhonice	6.52	5	ePN	Pn	01 33 59.6	-1.2
PRU				AMS	AMS	01 36 40.0	
	comp=Z,16µm,12.5s						
ZAPS	Zavoj	6.52	89	ePn	Pn	01 34 01.9	+1.0
ECH	Echery	6.56	318	P	Pn	01 34 01.5	0.0
JAN	Janina	6.60	123	P	Pn	01 34 01.7	-0.3
WLS	Welschbruch	6.61	320	P	Pn	01 34 02.7	+0.6
VIVF	Saint-Julien-l	6.62	285	ePn	Pn	01 34 02.0	-0.4
	SNR=1.0						
VIVF				eSn	Sn	01 35 14.2	-3.7
	comp=Z,30nm,0.6s,SNR=1.0						
VIVF	Saint-Julien-l	6.62	285	ePn	Pn	01 34 02.0	-0.4
VIVF				eSn	Sn	01 35 14.2	-3.7
CDF	Champ du Feu	6.64	320	ePn	Pn	01 34 01.5	-1.1
	SNR=1.0						
CDF				eSn	Sn	01 35 11.8	-6.5
	comp=Z,66nm,0.5s						
CDF	Champ du Feu	6.64	320	ePn	Pn	01 34 01.5	-1.1
CDF	Champ du Feu	6.64	320	eP	Pn	01 34 01.5	-1.1
KPRO	Kipourio	6.74	119	P	Pn	01 34 04.3	+0.3
GZR	Gura Zlata	6.77	71⇑	iP	Pn	01 34 04.4	0.0
NKC	Novy Kostel	6.79	353	eP	Pn	01 34 03.5	-1.1
NKC				MLR	MLR		
	comp=Z,17µm,9.9s						
NKC	Novy Kostel	6.79	353	ePN	Pn	01 34 03.5	-1.1
NKC				AMS	AMS	01 37 00.0	
	comp=Z,17µm,9.9s						
SSB	Saint Sauveur	6.79	288	P	Pn	01 34 04.7	+0.1
MORC	Moravsky Berou	6.81	22	ePn	Pn	01 34 05.1	+0.1
MORC	Moravsky Berou	6.81	22⇑	iP	Pn	01 34 05.9	+1.0
MORC	Moravsky Berou	6.81	22	eP	Pn	01 34 05.1	+0.1
MORC	Moravsky Berou	6.81	22	ePN	Pn	01 34 05.8	+0.9
KZN	Kozani	6.82	115	P	Pn	01 34 04.3	-0.8
HAU	Haudompre	6.83	314	ePn	Pn	01 34 04.0	-1.2
	SNR=1.0						
HAU				eSn	Sn	01 35 17.0	-5.9
	comp=Z,990nm,0.7s,SNR=1.0						
HAU	Haudompre	6.83	314	ePn	Pn	01 34 04.0	-1.2
HAU	Haudompre	6.83	314	eP	Pn	01 34 04.0	-1.2
LANF	Langenberg	6.83	325	P	Pn	01 34 05.8	+0.6
LANS	Liptovska Anna	6.92	33	eP	Pn	01 34 06.3	-0.1
LANS	Liptovska Anna	6.92	33	ePN	Pn	01 34 06.3	-0.1
LANS				e		01 34 16.0	
VAY	Valandovo	6.92	105	ePn	Pn	01 34 06.4	0.0
VAY	Valandovo	6.92	105	iPn	Pn	01 34 06.0	-0.4
VAY				iSn	Sn	01 35 26.6	+1.5
SRE	Strehaia	6.95	77⇑	iP	Pn	01 34 07.7	+0.9
LTVH	Ltavrtes, Hu	6.96	53	ePn	Pg	01 34 48.1	+10
LTVH				Sn	Sg	01 36 20.1	+12
DEV	Deva	6.98	67⇑	iP	Pn	01 34 08.3	+1.1
KTD	Kalmit	6.99	328	P	Pn	01 34 07.8	+0.5
KTI	Kastanea	7.01	113	P	Pn	01 34 07.3	-0.4
OKC	Ostrava-Krasne	7.04	24	eP	Pn	01 34 07.8	-0.2
OKC				MLR	MLR		
	comp=Z,14µm,14.0s						
OKC	Ostrava-Krasne	7.04	24	ePN	Pn	01 34 07.8	-0.2
OKC				AMS	AMS	01 37 30.0	
	comp=Z,14µm,14.0s						
VTS	Vitosha	7.05	94⇑	iP	Pn	01 34 08.1	-0.1
PVCC	Panska Ves	7.06	5	AMS	AMS	01 37 00.0	
	comp=Z,13µm,11.0s						
DPC	Dobruska-Polom	7.08	14	eP	Pn	01 34 07.7	-1.0
DPC				MLR	MLR		
	comp=Z,22µm,11.2s						
DPC	Dobruska-Polom	7.08	14	ePN	Pn	01 34 07.7	-1.0
DPC				AMS	AMS	01 37 00.0	
	comp=Z,22µm,11.2s						
LASF	Ste Croix	7.14	278	ePn	Pn	01 34 09.1	-0.3
	SNR=1.0						
LASF				eSn	Sn	01 35 25.9	-4.7
	comp=Z,41nm,0.7s						
LASF	Ste Croix	7.14	278	ePn	Pn	01 34 09.1	-0.3
DRGR		7.17	60⇑	iP	Pn	01 34 10.8	+0.9
DRGR		7.17	60	P	Pn	01 34 11.7	+1.8
UPC	Upice	7.19	12	eP	Pn	01 34 09.2	-0.8
UPC				MLR	MLR		
	comp=Z,32µm,9.6s						
UPC	Upice	7.19	12	ePN	Pn	01 34 09.2	-0.8
UPC				AMS	AMS	01 37 00.0	
	comp=Z,32µm,9.6s						
KNT	Kendrikon	7.21	106	P	Pn	01 34 09.9	-0.5
FSK	Fiskardo	7.24	132	P	Pn	01 34 10.2	-0.5
OSTC	Ostas	7.27	13	AMS	AMS	01 37 10.0	
	comp=Z,25µm,10.6s						
CHVC	Chvalec	7.27	12	ePN	Pn	01 34 10.4	-0.8
RAC	Raciborz	7.27	24	eP	Pn	01 34 12.6	+1.4
RAC				MLR	MLR		
	comp=Z,16µm,15.7s						
BRG	Berggiesshubel	7.38	1	PN	Pn	01 34 11.6	-1.0
BRG				PG	Pg	01 34 45.6	-0.6
BRG				SN	Sn	01 35 31.1	-5.2
BRG				SG	Sg	01 36 19.2	-2.5
	comp=Z,873nm,1.5s						
	comp=N,11µm,12.0s						
	comp=E,24µm,14.1s						
	comp=Z,15µm,11.0s						
BRG	Berggiesshubel	7.38	1	P	Pn	01 34 11.6	-1.0
BRG						01 35 31.1	
BRG				smax	smax		
	comp=N,873nm,1.5s						
BRG				MLR	MLR		
	comp=N,11µm,12.0s						
BRG				MLR	MLR		
	comp=E,24µm,14.1s						
BRG				MLR	MLR		
	comp=Z,15µm,11.0s						
THL	Klokotos Trika	7.38	119	P	Pn	01 34 12.5	-0.1
LIT	Litokhoron	7.40	114	ePn	Pn	01 34 12.1	-0.9
LIT	Litokhoron	7.40	114	P	Pn	01 34 11.7	-1.3
LIT	Litokhoron	7.40	114	eP	Pn	01 34 12.1	-0.9
VLS	Valsamata	7.46	133	P	Pn	01 34 12.9	-0.9
LOT	Lotru	7.47	71⇑	iP	Pn	01 34 14.6	+0.6
NIE	Niedzica	7.47	35	ePn	Pn	01 34 15.1	+1.1
NIE				eSn	Sn	01 35 43.0	+4.4
NIE				eSb	Sg	01 36 14.7	-10
NIE				eSg	Sg	01 36 28.7	+4.0
NIE	Niedzica	7.47	35	eP	Pn	01 34 15.1	+1.1
NIE				e		01 35 43.1	
THE	Thessaloniki	7.47	109	P	Pn	01 34 12.8	-1.1
PAGF	Fort de Pagny	7.50	315	ePn	Pn	01 34 13.4	-0.9
	baz=138						
PAGF				eSn	Sn	01 35 33.8	-5.5
	comp=Z,39nm,0.3s,baz=136						
PAGF	Fort de Pagny	7.50	315	ePn	Pn	01 34 13.4	-0.9
KSP	Ksiaz	7.56	13	ePn	Pn	01 34 13.8	-1.2
KSP				eSn	Sn	01 35 33.1	-7.6
KSP				eSg	Sg	01 36 19.2	-8.2
KSP				eSg	Sg	01 36 24.2	-3.2
KSP	Ksiaz	7.56	13	eP	Pn	01 34 13.9	-1.2

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KSP                                e                  01 35 33.1
HORT  Hortiatis          7.58 109   P        Pn        01 34 14.5 -1.0
KFL   Anninata           7.61 133   P        Pn        01 34 14.8 -1.1
EVR   Evrytania          7.64 124   P        Pn        01 34 16.6 +0.2
SMF   Signal de Mont     7.65 298  ePn       Pn        01 34 15.3 -1.1
      SNR=1.0
SMF                                eSn       Sn        01 35 37.8 -5.2
      comp=Z,172nm,0.5s,SNR=1.0
SMF   Signal de Mont     7.65 298  ePn       Pn        01 34 15.3 -1.1
SMF   Signal de Mont     7.65 298  eP        Pn        01 34 15.3 -1.1
ABH   Alteburg           7.65 329   P        Pn        01 34 16.6 +0.2
SFTF  Sexfontaines       7.66 311  ePn       Pn        01 34 15.2 -1.2
      baz=132
SFTF                               eSn       Sn        01 35 36.7 -6.4
      comp=Z,69nm,0.4s
SFTF  Sexfontaines       7.66 311  ePn       Pn        01 34 15.2 -1.2
SOH   Sokhos             7.66 107   P        Pn        01 34 16.1 -0.5
PVO   Paravola           7.67 127   P        Pn        01 34 16.1 -0.6
LBL   Lubilhac           7.68 287   P        Pn        01 34 16.7 -0.2
CJR   Cluj-Napoca        7.71  62⇑iP        Pn        01 34 18.8 +1.6
SRS   Serrai             7.71 105  ePn       Pn        01 34 16.9 -0.4
SRS   Serrai             7.71 105   P        Pn        01 34 17.2 -0.1
TRPA  Tarpa              7.72  50  ePn       Pn        01 34 19.0 +1.7
TRPA                               eSg       Sb        01 36 13.0 +2.2
TRPA                                Sn       Sg        01 36 57.1  +24
MEZF  Maizieres J'vi     7.82 313  ePn       Pn        01 34 17.5 -1.2
      baz=129,SNR=1.0
MEZF                               eSn       Sn        01 35 39.3 -7.9
      comp=Z,56nm,0.4s,baz=135,SNR=1.0
MEZF  Maizieres J'vi     7.82 313  ePn       Pn        01 34 17.5 -1.2
CLL   Collm              7.83 357  eP        Pn        01 34 18.0 -0.8
CLL                                 pmax     pmax
      comp=Z,97nm,0.6s
CLL   Collm              7.83 357  ePn       Pn        01 34 18.0 -0.8
      comp=Z,97nm,0.6s
CLL                                e                   01 34 27.0
CLL                                e                   01 34 58.0
CLL                                eSn       Sn        01 35 29.0  -18
CLL                                eSb       Sb        01 36 04.0  -10
CLL                                e                   01 36 31.0
CLL                                eSg       Sg        01 36 39.0 +3.0
      comp=Z,3µm,2.0s
CLL                                 LmH                01 37 00.0
      comp=N,4µm,19.2s
CLL                                 LmH                01 37 00.0
      comp=E,21µm,18.2s
CLL                                 Lmax               01 38 00.0
NVR   Nevrokopi          7.83 102   P        Pn        01 34 19.1 +0.3
UZH   Uzhgorod           7.88  46  eP        Pn        01 34 22.0 +2.5
UZH                                eS        Sn        01 35 52.0 +3.4
UZH                                 MLR      MLR
      comp=N,2µm,12.0s
UZH                                 MLR      MLR
      comp=E,850nm,12.0s
UZH                                 MLR      MLR
      comp=Z,900nm,12.0s
LOR   Lormes             7.88 302  ePn       Pn        01 34 18.4 -1.1
      baz=121,SNR=1.0
LOR   Lormes             7.88 302  eP        Pn        01 34 19.1 -0.4
LOR                                eSn       Sn        01 35 42.8 -5.9
      comp=Z,206nm,0.4s,SNR=1.0
LOR   Lormes             7.88 302  ePn       Pn        01 34 19.1 -0.4
LOR   Lormes             7.88 302   P        Pn        01 34 19.2 -0.3
LOR   Lormes             7.88 302  eP        Pn        01 34 19.1 -0.4
AGG   Agios Georgios     7.89 122  ePn       Pn        01 34 19.3 -0.5
AGG   Agios Georgios     7.89 122   P        Pn        01 34 19.2 -0.5
AGG   Agios Georgios     7.89 122  eP        Pn        01 34 19.3 -0.5
PLG   Polygyros          7.91 110   P        Pn        01 34 19.1 -0.9
OJC   Ojcow              7.92  30  ePn       Pn        01 34 23.2 +3.2
OJC                                eSn       Sn        01 35 47.5 -2.0
OJC                                eSb       Sg        01 36 27.0  -12
OJC                                eSg       Sg        01 36 51.7  +13
OJC   Ojcow              7.92  30  ePn       Pn        01 34 20.5 +0.5
OJC   Ojcow              7.92  30  eP        Pn        01 34 23.2 +3.2
OJC                                e                   01 35 47.5
ANX   Ano Chora          7.92 125   P        Pn        01 34 20.1 -0.1
MAHO  Mahon              7.92 246⇓iP        Pn        01 34 20.8 +0.8
MAHO                               eS        Sn        01 35 55.8 +6.2
ZKS   Zakynthos          7.92 135   P        Pn        01 34 18.4 -1.7
AGO   Saint Agoulin      7.94 292   P        Pn        01 34 19.4 -0.9
PYM   Petit Puy Mans     7.95 290   P        Pn        01 34 19.9 -0.6
PLVB  Pleven             7.96  87⇓iP        Pn        01 34 20.9 +0.3
SJAF  Saint Jean de      7.99 266   P        Pn        01 34 22.5 +1.4
AVF   Avril sur Loir     8.01 298  ePn       Pn        01 34 20.2 -1.2
      SNR=1.0
AVF                                eSn       Sn        01 35 46.7 -5.2
      comp=Z,57nm,0.6s
AVF   Avril sur Loir     8.01 298  ePn       Pn        01 34 20.2 -1.2
AVF   Avril sur Loir     8.01 298  eP        Pn        01 34 20.2 -1.2
SSF   Saint Saulge       8.02 300  ePn       Pn        01 34 20.0 -1.4
      SNR=1.0
SSF                                eSn       Sn        01 35 45.0 -7.0
      comp=Z,108nm,0.6s,SNR=1.0
SSF   Saint Saulge       8.02 300  ePn       Pn        01 34 20.0 -1.4
SSF   Saint Saulge       8.02 300  eP        Pn        01 34 20.0 -1.4
RLS   Riolos of Patr     8.02 130   P        Pn        01 34 20.7 -0.8
BMR   Baia Mare          8.04  55⇓iP        Pn        01 34 23.8 +2.1
ARR   Arges              8.05  73⇑iP        Pn        01 34 23.5 +1.5
KOLS  Kolonicke sedl     8.05  45  eP        Pn        01 34 23.1 +1.2
KOLS                                MLR      MLR
      comp=Z,1µm,1.9s
KOLS  Kolonicke sedl     8.05  45  ePN       Pn        01 34 23.1 +1.2
KOLS  Kolonicke sedl     8.05  45  eSG       Sg        01 36 38.9 -4.5
KOLS                               eLG       Lg        01 37 41.8
WLF   Walferdange        8.06 323  ⇑Pn       Pn        01 34 23.3 +1.4
WLF                                ⇑Sn       Sn        01 35 48.4 -4.6
      comp=N,469nm,0.0s
SERG  Sergoula           8.12 126   P        Pn        01 34 22.5 -0.3
TRIZ  Trizonia           8.16 126   P        Pn        01 34 22.9 -0.4
KALE  Kalithea           8.18 126   P        Pn        01 34 23.3 -0.4
LAKA  Lakka              8.19 127   P        Pn        01 34 23.2 -0.6
HUMR  Humele             8.20  79⇓iP        Pn        01 34 24.8 +0.8
PLD   Plovdiv            8.22  96  ePn       Pn        01 34 24.5 +0.3
DRO   Drossia            8.23 130   P        Pn        01 34 23.6 -0.8
BGF   Bois d'Agland      8.27 295  ePn       Pn        01 34 23.8 -1.1
      SNR=1.0
BGF                                eSn       Sn        01 35 52.9 -5.3
      comp=N,144nm,0.5s
BGF   Bois d'Agland      8.27 295  ePn       Pn        01 34 23.8 -1.1
BGF   Bois d'Agland      8.27 295  eP        Pn        01 34 23.8 -1.1
VOIR                     8.35  73⇑iP        Pn        01 34 26.6 +0.5
MTLF  Montolieu          8.36 273  eP        Pn        01 34 29.6 +3.5
      SNR=1.0
MTLF                               eSn       Sn        01 35 55.0 -5.4
      comp=N,25nm,0.9s
MTLF  Montolieu          8.36 273  ePn       Pn        01 34 29.6 +3.5
COPA  Copaceanca         8.36  82⇓iP        Pn        01 34 25.9 -0.2
CMAH  Djebel Manchou     8.38 217   P        Pn        01 34 30.1 +3.6
KEST  Kesra              8.45 205   Pn       Pn        01 34 30.0 +2.5
      comp=N,4.9nm,0.3s,baz=294,slow=0.4,SNR=44
KEST                                LR       LR        01 38 06.7
      comp=N,12µm,18.3s,baz=348,slow=40
KEST  Kesra              8.45 205  ePn       Pn        01 34 31.3 +3.8
CAF   Calviac            8.47 284  ePn       Pn        01 34 27.3 -0.4
      SNR=1.0
CAF                                eSn       Sn        01 35 58.4 -4.9
      comp=N,8.5nm,0.4s
CAF   Calviac            8.47 284  ePn       Pn        01 34 27.3 -0.4
CAF   Calviac            8.47 284  eP        Pn        01 34 27.3 -0.4
CAEH  'Ain El Ouahch     8.51 220   P        Pn        01 34 34.9 +6.7
TCF   Toulx Ste Croi     8.61 293  ePn       Pn        01 34 28.6 -1.0
      SNR=1.0
TCF                                eSn       Sn        01 36 01.0 -5.8
      comp=N,37nm,0.5s
TCF   Toulx Ste Croi     8.61 293  ePn       Pn        01 34 28.6 -1.0
TCF   Toulx Ste Croi     8.61 293  eP        Pn        01 34 28.6 -1.0
HYF   Humbligny          8.64 300  ePn       Pn        01 34 29.5 -0.5
HYF                                eSn       Sn        01 36 01.9 -5.5
HYF   Humbligny          8.64 300  ePn       Pn        01 34 29.5 -0.5
ABSA  Djebel Ababsia     8.65 216   P        Pn        01 34 31.7 +1.4
DOPR  Dopca              8.69  69⇑iP        Pn        01 34 31.9 +1.3
KWP   Kalwaria Pacla     8.72  42  eP        Pn        01 34 33.8 +2.7
KWP                                eSn       Sn        01 36 16.9 +7.5
KWP                                eSb       Sb        01 36 45.1
KWP                                eSg       Sg        01 36 58.0 -6.8
KWP   Kalwaria Pacla     8.72  42  eP        Pn        01 34 33.8 +2.7
KWP                                e                   01 36 16.9
MEM   Membach            8.83 326  ⇑Pn       Pn        01 34 33.5 +0.9
MEM                                ⇑Sn       Sn        01 36 10.2 -1.9
      comp=E,166nm,0.0s
RJF   Les Rejaudoux      8.90 286  ePn       Pn        01 34 33.4 -0.2
      SNR=1.0
RJF                                eSn       Sn        01 36 08.9 -4.9
      comp=E,30nm,0.8s
RJF                                eSg       Sg        01 37 06.2 -4.4
      comp=E,485nm,1.9s
RJF   Les Rejaudoux      8.90 286  ePn       Pn        01 34 33.4 -0.2
RJF   Les Rejaudoux      8.90 286  eP        Pn        01 34 33.4 -0.2
SGRR  Singureni          8.90  81⇑iP        Pn        01 34 34.3 +0.7
ITM   Ithomi             8.91 132  ePn       Pn        01 34 33.1 -0.6
ELND  Elena              8.92  89⇓iP        Pn        01 34 33.6 -0.2
GIVF  Givet              8.97 320  eP        Pn        01 34 37.0 +2.5
GIVF                               eSn       Sn        01 36 07.7 -7.8
      comp=E,151nm,0.8s
GIVF  Givet              8.97 320  ePn       Pn        01 34 37.0 +2.5
HGN   Heimansgroeve      8.98 327  ePn       Pn        01 34 36.5 +1.9
      comp=E,327nm,1.3s
HGN                                eSn       Sn        01 36 13.3 -2.4
MLR   Muntele Rosu       8.98  73   Pn       Pn        01 34 36.7 +2.0
      comp=E,2.0nm,0.3s,baz=262,slow=6.1,SNR=29
MLR                                 Lg       Lg        01 37 08.6
      comp=E,0.8nm,0.3s,baz=112,slow=11,SNR=4.4
MLR   Muntele Rosu       8.98  73  ePn       Pn        01 34 35.4 +0.6
MLR   Muntele Rosu       8.98  73⇑iP        Pn        01 34 35.8 +1.0
BCLA  Clavier            8.98 323  ⇑Pn       Pn        01 34 35.9 +1.3
BCLA                               ⇑Sn       Sn        01 36 10.1 -5.7
      comp=N,253nm,0.0s
BURAR Bucovina Array     9.07  59⇑iP        Pn        01 34 37.3 +1.4
DOU   Dourbes            9.07 320  ⇑Pn       Pn        01 34 37.6 +1.7
BEBN  Eben Emael         9.11 326  ⇑Pn       Pn        01 34 38.6 +2.3
BEBN                               ⇑Sn       Sn        01 36 17.6 -1.2
CLF   Chambon-Foret      9.18 303   P        Pn        01 34 37.8 +0.5
BAIF  Baives             9.23 319  eP        Pn        01 34 40.3 +2.2
      SNR=1.0
BAIF                               eSn       Sn        01 36 14.6 -7.3
      comp=N,22nm,0.5s
BAIF  Baives             9.23 319  ePn       Pn        01 34 40.3 +2.2
BAIF  Baives             9.23 319  eP        Pn        01 34 40.3 +2.2
BIZ   Bicaz              9.41  64⇓iP        Pn        01 34 44.2 +3.7
LFF   La Frestale        9.41 283  ePn       Pn        01 34 40.5  0.0
LFF                                eSn       Sn        01 36 21.7 -4.6
      comp=N,14nm,0.5s
LFF   La Frestale        9.41 283  ePn       Pn        01 34 40.5  0.0
LFF   La Frestale        9.41 283  eP        Pn        01 34 40.5  0.0
SNF   Seneffe            9.51 321  ⇑Pn       Pn        01 34 43.7 +1.9
LVV   L'vov              9.51  45  eP        Pn        01 34 45.2 +3.4
LVV                                eS        Sn        01 36 34.5 +5.9
LVV                                 MLR      MLR
      comp=E,16µm,10.0s
LVV                                 MLR      MLR
      comp=Z,14µm,10.0s
LVV                                 MLR      MLR
      comp=N,11µm,9.0s
PLOR  Plostina           9.53  71⇑iP        Pn        01 34 43.2 +1.0
VRI   Vrincioaia         9.58  71⇓iP        Pn        01 34 44.4 +1.5
BEL   Belsk              9.61  27  eP        Pn        01 34 45.8 +2.6
BEL                                eSn       Sn        01 36 40.0 +8.9
BEL                                eSg                 01 37 10.4
BEL                                eSb                 01 37 17.2
BEL                                eSg                 01 37 53.5
BEL   Belsk              9.61  27  eP        Pn        01 34 45.8 +2.6
BEL                                e                   01 36 40.0
WTSB  Winterswijk        9.65 334  ePn       Pn        01 34 43.9 +0.1
      comp=N,364nm,1.6s
ENEZ  Enez               9.66 102  eP        Pn        01 34 43.8 -0.2
EPF   Esparros           9.75 272  eP        Pn        01 34 48.9 +3.6
EPF                                eSn       Sn        01 36 28.6 -6.2
      comp=N,5.4nm,0.6s
EPF   Esparros           9.75 272  ePn       Pn        01 34 48.9 +3.6
EPF   Esparros           9.75 272  eP        Pn        01 34 48.9 +3.6
BOZC  Bozcaada           9.94 107  eP        Pn        01 34 46.6 -1.2
GELI  Tayfur-Gelibol    10.01 104  eP        Pn        01 34 48.5 -0.3
KIRK  Kırklareli        10.03  95  i P       Pn        01 34 49.3 +0.3
KIRK                                IAML_P
      comp=Z,660nm,0.5s
GKP   Gorka Klasztor    10.05  12  eP        Pn        01 34 49.8 +0.5
GKP                                eSn       Sn        01 36 21.9  -20
GKP                                eSb                 01 36 58.0
GKP                                eSg                 01 37 53.7
GKP   Gorka Klasztor    10.05  12  eP        Pn        01 34 49.8 +0.5
EZN   Ezine             10.14 107  eP        Pn        01 34 49.4 -1.1
EZN   Ezine             10.14 107⇑iP        Pn        01 34 49.5 -1.1
MFF   Saint Martin d    10.27 292  ePn       Pn        01 34 51.2 -1.1
      SNR=1.0
MFF                                eSn       Sn        01 36 41.0 -6.4
      comp=Z,5.0nm,0.3s
MFF                                eSg                 01 37 47.6
      comp=Z,79nm,1.1s
MFF   Saint Martin d    10.27 292  ePn       Pn        01 34 51.2 -1.1
MFF   Saint Martin d    10.27 292  eP        Pn        01 34 51.2 -1.1
BAYC  CANAKKALE_Bayr10.33 107  i P       Pn        01 34 53.4 +0.3
BAYC                                IAML_P
      comp=Z,921nm,0.3s
PHSR  Pinarhisar        10.38  96⇑iP        Pn        01 34 53.6 -0.1
TLB   Topalu            10.39  79⇑iP        Pn        01 34 54.3 +0.4
SART  Tekirdag          10.41 101  i P       Pn        01 34 55.3 +1.0
SART                                IAML_P
      comp=Z,170nm,0.5s
ETSF  Etsaut            10.43 272  eP        Pn        01 35 00.2 +5.7
      SNR=1.0
ETSF                               eSn       Sn        01 36 46.4 -4.9
      comp=Z,2.7nm,0.4s
CFR   Carcaliu          10.48  76⇓iP        Pn        01 34 54.7 -0.5
AYVA  Ayvalik           10.62 109  i P       Pn        01 34 59.1 +2.0
AYVA                                IAML_P
      comp=Z,557nm,0.3s
TIRR  Tirgusor          10.66  80  ePn       Pn        01 34 56.9 -0.6
TIRR  Tirgusor          10.66  80⇓iP        Pn        01 34 58.5 +1.0
TIRR  Tirgusor          10.66  80  eP        Pn        01 34 56.9 -0.6
LDF   La Druitiere      10.86 303  ePn       Pn        01 34 59.1 -1.3
      SNR=1.0
LDF                                eSn       Sn        01 36 54.7 -7.2
      comp=Z,12nm,0.4s
LDF                                eSg                 01 38 07.1
      comp=Z,323nm,1.6s
LDF   La Druitiere      10.86 303  ePn       Pn        01 34 59.1 -1.3
LDF   La Druitiere      10.86 303  eP        Pn        01 34 59.1 -1.3
DKL   Dikili            10.88 110  eP        Pn        01 35 00.1 -0.5
SJPF  Ste Jean          10.88 273  ePn       Pn        01 34 59.7 -1.0
      SNR=1.0
SJPF  Ste Jean          10.88 273  ePn       Pn        01 34 59.7 -1.0
SJPF  Ste Jean          10.88 273  eP        Pn        01 34 59.7 -1.0
TLCR                    10.96  76⇓iP        Pn        01 35 02.2 +0.4
TLCR                    10.96  76   P        Pn        01 35 02.2 +0.4
CTYL  Yalikoy Yolu      10.97  96⇑iP        Pn        01 35 01.5 -0.4
EDC   Edincik           11.02 102  eP        Pn        01 35 02.5 -0.1
ZEDA  zmir-Bergama      11.05 110  i P       Pn        01 35 03.9 +1.0
ZEDA                                IAML_P
      comp=Z,84nm,0.3s
BALY  Balya             11.08 105  i P       Pn        01 35 04.9 +1.4
BALY                                IAML_P
      comp=Z,861nm,1.1s
APE   Apeiranthos       11.09 121⇑iP        Pn        01 35 01.5 -2.0
APE   Apeiranthos       11.09 121⇓eP        Pn        01 35 01.5 -2.0
FLN   La Foliniere      11.15 303  ePn       Pn        01 35 02.3 -2.0
      baz=122,SNR=1.0
FLN                                eSn       Sn        01 37 00.9 -8.0
      comp=Z,23nm,0.5s
FLN   La Foliniere      11.15 303  ePn       Pn        01 35 02.3 -2.0
FLN   La Foliniere      11.15 303  eP        Pn        01 35 02.3 -2.0
ELBA  Catalca           11.16  97  i P       Pn        01 35 05.5 +0.9
ELBA                                IAML_P
      comp=Z,217nm,0.1s
MILM  Milestii Mici     11.20  67⇑iP        Pn        01 35 05.8 +0.8
KIS   Kishinev          11.22  67⇓iP        Pn        01 35 06.0 +0.7
      comp=Z,250nm,2.0s
KIS                                i S       Sn        01 37 10.0 -0.7
KIS                                i Li                01 37 52.0
KIS                                i LQ      LQ        01 38 30.0
      comp=Z,10µm,12.0s
KIS                                 LRM      MLR       01 40 16.0
      comp=Z,14µm,12.0s
KIS   Kishinev          11.22  67⇓iP        Pn        01 35 06.0 +0.7
KIS                                i S       Sn        01 37 10.0 -0.7
KIS                                 pmax     pmax
      comp=Z,250nm,2.0s
KIS                                 MLR      MLR
      comp=Z,14µm,12.0s
KIS                                 MLR      MLR
      comp=N,6µm,12.0s
GRR   Gorron            11.24 301  ePn       Pn        01 35 03.6 -2.0
      SNR=1.0
GRR                                eSn       Sn        01 37 03.0 -8.2
      comp=N,12nm,0.5s
GRR   Gorron            11.24 301  ePn       Pn        01 35 03.6 -2.0
GRR   Gorron            11.24 301  eP        Pn        01 35 03.6 -2.0
STEP  BALIKESIR_Sava    11.30 107  i P       Pn        01 35 07.5 +1.0
BALB  Balikesir         11.31 105  eP        Pn        01 35 06.2 -0.3
KCTX  Karacabey (Bur    11.40 101  eP        Pn        01 35 07.3 -0.5
ELSH  Elham, Standar    11.44 316  eP        Pn        01 35 07.8 -0.5
ELSH                                IAmb     IAmb      01 35 11.4
      comp=Z,264nm,1.1s
ELSH                                IAMs_20  IAMs_20   01 40 29.6
      comp=Z,10µm,12.8s
KLYT  Kilyos            11.58  96  eP        Pn        01 35 09.5 -0.7
KLYT  Kilyos            11.58  96⇓iP        Pn        01 35 09.4 -0.7
ISK   Istanbul-Kandi    11.64  97  eP        Pn        01 35 10.5 -0.6
KAVV  Kandilli-Istan    11.64  97  eP        Pn        01 35 10.4 -0.7
BSD   Bornholm Skovb    11.65   3  eP        Pn        01 35 10.1 -1.0
BSD   Bornholm Skovb    11.65   3  i P       Pn        01 35 10.1 -1.0
BSD                                i                   01 38 49.5
DURS  Dursunbey         11.74 104  i P       Pn        01 35 13.5 +1.0
DURS                                IAML_P
      comp=Z,246nm,0.5s
BUY   Buyukada          11.75  98  eP        Pn        01 35 11.9 -0.6
BUY   Buyukada          11.75  98  i P       Pn        01 35 13.3 +0.8
BUY                                 IAML_P
      comp=Z,1µm,0.7s
IDI   Anoyia            11.92 130   Pn       Pn        01 35 15.1 +0.2
      comp=Z,1.7nm,0.3s,baz=329,slow=9.9,SNR=13
IDI                                 Sn       Sn        01 37 18.7 -9.3
      comp=Z,5.3nm,0.3s,baz=358,slow=10,SNR=6.9
IDI                                 LR       LR        01 40 37.7
      comp=Z,1µm,18.5s,baz=333,slow=41
YLV   Yalova            12.02  99  eP        Pn        01 35 15.9 -0.5
YLV   Yalova            12.02  99⇓iP        Pn        01 35 15.9 -0.5
YLV   Yalova            12.02  99   P        Pn        01 35 15.9 -0.5
SILT  Sile              12.04  96  eP        Pn        01 35 16.0 -0.5
DEMI  Demirci           12.15 106  i P       Pn        01 35 18.5 +0.4
DEMI                                IAML_P
      comp=Z,30nm,0.3s
HRT   Hereke            12.16  97  eP        Pn        01 35 17.9 -0.2
SUW   Suwalki           12.23  27  eP        Pn        01 35 21.1 +2.2
SUW                                ePcP      PcP       01 41 00.7 -0.8
SUW   Suwalki           12.23  27  eP        Pn        01 35 21.2 +2.2
SGMF  Saint Gilles      12.28 298  ePn       Pn        01 35 17.6 -2.1
      SNR=1.0
SGMF                               eSn       Sn        01 37 28.4 -8.0
      comp=Z,19nm,0.5s
SGMF  Saint Gilles      12.28 298  ePn       Pn        01 35 17.6 -2.1
SGMF  Saint Gilles      12.28 298  eP        Pn        01 35 17.6 -2.1
KULA  Kula-Manisa       12.35 109  eP        Pn        01 35 20.3 -0.6
QUIF  Quistinic         12.58 296  ePn       Pn        01 35 22.2 -1.6
      SNR=1.0
QUIF                               eSn       Sn        01 37 35.7 -8.1
      comp=Z,7.6nm,0.4s
QUIF                               eSg                 01 39 00.6
      comp=Z,394nm,1.9s
QUIF  Quistinic         12.58 296  ePn       Pn        01 35 22.2 -1.6
QUIF  Quistinic         12.58 296  eP        Pn        01 35 22.2 -1.6
WOL   Wolverton         12.76 313  eP        Pn        01 35 24.8 -1.4
WOL                                 IAmb     IAmb      01 35 28.8
      comp=Z,670nm,1.8s
WOL                                 IAMs_20  IAMs_20   01 41 39.0
      comp=Z,15µm,11.4s
ROSF  Rostrenen         12.76 298  ePn       Pn        01 35 24.7 -1.6
      SNR=1.0
ROSF                               eSn       Sn        01 37 40.5 -7.7
      comp=Z,11nm,0.5s
ROSF  Rostrenen         12.76 298  ePn       Pn        01 35 24.7 -1.6
ROSF  Rostrenen         12.76 298  eP        Pn        01 35 24.7 -1.6
AKASG Malin Array Be    12.79  50   Pn       Pn        01 35 25.9 -0.8
      comp=Z,0.6nm,0.3s,baz=242,slow=12,SNR=27
AKASG                               LR       LR        01 40 55.0
      comp=Z,3µm,18.5s,baz=235,slow=40
AKASG Malin Array Be    12.79  50  i P       Pn        01 35 27.5 +0.9
AKASG                               pmax     pmax
      comp=Z,2.0nm,0.6s
AKBB  Malin Array Si    12.79  50  ePn       Pn        01 35 26.4 -0.2
AKBB  Malin Array Si    12.79  50  eP        Pn        01 35 26.4 -0.2
GULT  Gulveren          12.89  98  eP        Pn        01 35 28.4 +0.2
UCM   Universidad Co    13.01 262  i P       Pn        01 35 24.1 -5.8
UCM                                eS        S         01 38 11.3 -8.9
SWN1  Swindon           13.17 313  eP        Pn        01 35 31.3 -0.5
SWN1                                IAmb     IAmb      01 35 34.3
      comp=Z,632nm,1.7s
SWN1                                IAMs_20  IAMs_20   01 41 58.6
      comp=Z,15µm,12.8s
MUD   Monsted U'grnd    13.29 349  i P       Pn        01 35 35.2 +1.8
MUD   Monsted U'grnd    13.29 349  i P       Pn        01 35 35.2 +1.8
BATH  Bath              13.42 312  eP        Pn        01 35 34.2 -1.0
BATH                                IAmb     IAmb      01 35 37.0
      comp=Z,434nm,1.5s
BATH                                IAMs_20  IAMs_20   01 42 08.8
      comp=Z,9µm,13.1s
CWF   Charnwood Fore    13.61 318  eP        Pn        01 35 37.1 -0.7
CWF                                 IAmb     IAmb      01 35 41.5
      comp=Z,98nm,1.2s
CWF                                 IAMs_20  IAMs_20   01 41 57.0
      comp=Z,8µm,11.8s
OLDB  Oldbury-Upon-S    13.65 312  eP        Pn        01 35 37.4 -0.9
OLDB                                IAMs_20  IAMs_20   01 42 15.6
      comp=Z,14µm,12.0s
CIFT  Cifteler, Eski    13.67 102  eP        Pn        01 35 38.7 -0.2
ESDC  Sonseca Array     13.75 260   Pn       Pn        01 35 41.6 +1.6
      comp=Z,0.2nm,0.3s,baz=65,slow=14,SNR=38
ESDC                                LR       LR        01 41 07.7
      comp=Z,2µm,18.4s,baz=80,slow=38
ESLA  Sonseca Array     13.75 260  ePn       Pn        01 35 41.1 +1.1
MONM  Monmouth          13.87 313  eP        Pn        01 35 40.1 -1.3
MONM                                IAmb     IAmb      01 35 42.9
      comp=Z,71nm,1.2s
MONM                                IAMs_20  IAMs_20   01 42 22.3
      comp=Z,16µm,12.5s
SVRH  Sivrihisar-ESK    13.97 101  eP        Pn        01 35 42.7 -0.2
ISP   Isparta           13.97 108  eP        Pn        01 35 42.6 -0.4
MCH1  Michaelchurch     14.06 313  eP        Pn        01 35 42.5 -1.5
MCH1                                IAmb     IAmb      01 35 44.0
      comp=Z,132nm,1.8s
MCH1                                IAMs_20  IAMs_20   01 42 21.0
      comp=Z,16µm,13.6s
PAB   San Pablo         14.08 260  ePn       Pn        01 35 44.5 +0.1
PAB   San Pablo         14.08 260  eP        Pn        01 35 44.5 +0.1
KURC  Kurucasile-Bar    14.12  90  eP        Pn        01 35 43.3 -1.6
BCK   Bucak             14.20 109  eP        Pn        01 35 46.2 +0.1
LBWR  Ladybower, Pea    14.21 320  eP        Pn        01 35 44.5 -1.5
LBWR                                IAmb     IAmb      01 35 48.5
      comp=Z,78nm,1.4s
LBWR                                IAMs_20  IAMs_20   01 42 16.6
      comp=Z,6µm,12.1s
NACGM Naroch            14.23  32  eP        Pn        01 35 44.0 -2.4
NACGM                              eS        Sn        01 38 22.0 -2.1
NACGM                              eSS       SbSb      01 39 06.0  -17
NACGM                              eLQ       LQ        01 40 04.0
NACGM                              eLR       LR        01 41 26.0
NACGM                               LRM      MLR       01 42 34.0
      comp=Z,22nm,10.0s
HLM1  Long Mynd         14.27 315  eP        Pn        01 35 43.0 -3.9
HLM1                                IAMs_20  IAMs_20   01 42 18.4
      comp=Z,9µm,12.6s
KORT  Korkueli          14.27 111  eP        Pn        01 35 47.3 +0.1
IIGN  Ignalina          14.36  30  eP        Pn        01 35 47.7 -0.5
IIGN                                IAmb     IAmb      01 35 50.2
      comp=Z,25nm,1.0s
MICGM Minsk             14.39  35  eP        Pn        01 35 46.0 -2.5
MICGM                              eS        Sn        01 38 24.0 -3.9
MICGM                              eLR       LR        01 40 10.0
MICGM                               LRM      MLR       01 42 00.0
      comp=Z,19nm,14.0s
MICGM                               LRM      MLR       01 42 08.0
      comp=N,11nm,10.0s
MICGM                               LRM      MLR       01 48 11.0
      comp=E,12nm,10.0s
MNK   Minsk             14.39  35  eP        Pn        01 35 46.0 -2.5
MNK                                eS        Sn        01 38 24.0 -3.9
MNK                                 MLR      MLR
      comp=Z,19µm,14.0s
MNK                                 MLR      MLR
      comp=N,11µm,10.0s
MNK                                 MLR      MLR
      comp=E,12µm,10.0s
SEVA  Sevastopol        14.42  79⇑iP        Pn        01 35 46.9 -2.1
KIZT  Kizilcal          14.45 102  eP        Pn        01 35 49.8 +0.3
ISAL  Salakas           14.50  29  eP        Pn        01 35 50.1 +0.1
ISAL                                IAmb     IAmb      01 35 51.9
      comp=Z,44nm,1.6s
HPK   Haverah Park      14.51 321  eP        Pn        01 35 48.2 -2.0
HPK                                 IAMs_20  IAMs_20   01 43 12.1
      comp=Z,4µm,10.9s
FOEL  Foel Wylfa        14.63 316  eP        Pn        01 35 50.0 -1.9
FOEL                                IAMs_20  IAMs_20   01 42 54.7
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	comp=Z,7µm,10.1s						
IZAR	Zarasai	14.68	29	eP	Pn	01 35 51.6	-0.9
SIM	Simferopol'	14.72	77	deP	Pn	01 35 51.3	-1.8
SIM				S	Sn	01 38 42.1	+6.1
SIM				pmax	pmax		
	comp=Z,72nm,1.9s						
SIM				MLR	MLR		
	comp=Z,5µm,11.0s						
ANTO	Ankara	14.72	98	ePn	Pn	01 35 53.4	+0.1
ANTO	Ankara	14.72	98	⇑iP	Pn	01 35 52.1	-1.2
ANTO	Ankara	14.72	98	eP	Pn	01 35 53.4	+0.1
BZK	Bozkurt	15.01	89	eP	Pn	01 35 54.8	-2.2
CANT	Cankiri	15.08	94	eP	Pn	01 35 58.2	+0.1
LADK	Ladik-KONYA	15.08	104	eP	Pn	01 35 57.8	-0.3
MELI	Melilla	15.23	243	i P	Pn	01 35 58.7	-1.2
MELI				eS	S	01 39 04.2	-1.2
EDMD	Edmundbyers	15.23	324	eP	Pn	01 35 58.7	-1.3
EDMD				IAmb	IAmb	01 36 00.9	
	comp=Z,151nm,1.4s						
BR131	Keskin Array S	15.38	97	ePn	Pn	01 36 01.9	-0.3
	comp=Z,39nm,1.3s						
BRTR	Keskin Array B	15.38	97	Pn	Pn	01 36 02.4	+0.2
	comp=Z,0.2nm,0.3s,baz=284,slow=10,SNR=30						
BRTR				LR	LR	01 41 47.2	
	comp=Z,2µm,18.8s,baz=290,slow=37						
EMAL	Malaga-Limoner	15.39	250	⇓iP	Pn	01 36 03.0	+0.9
EMAL				eS	S	01 39 04.0	-4.8
MVO	Moncorvo	15.50	268	eP	P	01 36 07.8	-0.2
	comp=Z,227nm,1.5s						
MVO				eS	S	01 39 05.7	-5.4
WPS	Cemaes, Angles	15.57	316	eP	Pn	01 36 03.4	-0.9
WPS				IAMs_20	IAMs_20	01 43 25.1	
	comp=Z,8µm,11.4s						
KESW	Keswick, Cumbr	15.59	321	eP	Pn	01 36 03.5	-1.0
KESW				IAMs_20	IAMs_20	01 43 53.0	
	comp=Z,5µm,9.7s						
BHH	Howats Hill	15.96	323	eP	Pn	01 36 09.2	-0.1
PVRL	Vila Real	15.97	269	eP	P	01 36 12.9	-0.3
	comp=Z,224nm,1.5s						
POLO	Lamas de Olo	16.00	270	eP	P	01 36 13.6	0.0
	comp=Z,82nm,1.5s						
IOMK	Kirk Michael	16.08	318	eP	Pn	01 36 10.5	-0.3
IOMK				IAmb	IAmb	01 36 17.8	
	comp=Z,587nm,1.3s						
IOMK				IAMs_20	IAMs_20	01 43 38.8	
	comp=Z,15µm,13.3s						
EKA	Eskdalemuir Ar	16.08	323	Pn	Pn	01 36 09.5	-1.5
	baz=138,slow=14,SNR=17						
PCAB	Cabril	16.09	271	eP	P	01 36 15.2	+0.7
	comp=Z,166nm,1.6s						
ESK	Eskdalemuir	16.09	323	ePn	Pn	01 36 10.5	-0.6
	comp=Z,56nm,1.2s						
ESK	Eskdalemuir	16.09	323	eP	Pn	01 36 10.5	-0.6
ESK				pmax	pmax		
	comp=Z,56nm,1.2s						
MTE	Manteigas	16.09	266	eP	P	01 36 15.0	+0.4
	comp=Z,244nm,1.4s						
MTE				eS	S	01 39 22.9	-0.4
PGAV	Gavieira, Arco	16.21	272	eP	P	01 36 14.9	-1.0
	comp=Z,102nm,2.0s						
PGAV				eS	S	01 39 33.9	+8.3
PCBR	Castelo Branco	16.23	264	eP	P	01 36 15.0	-1.0
	comp=Z,115nm,1.7s						
ESY	Stoneypath	16.24	326	eP	Pn	01 36 13.0	0.0
PVIS	Viseu	16.25	268	eP	P	01 36 16.5	+0.1
	comp=Z,145nm,1.4s						
IWEX	Carrickbyrne,	16.29	310	eP	Pn	01 36 12.7	-1.0
IWEX				IAmb	IAmb	01 36 21.8	
	comp=Z,225nm,2.1s						
IWEX				IAMs_20	IAMs_20	01 44 03.4	
	comp=Z,11µm,11.6s						
PMRV	Marv??o	16.31	263	eP	Pn	01 36 13.2	-0.8
	comp=Z,76nm,1.4s						
PMRV				eS	S	01 39 22.7	-4.9
EBL	Broad Law	16.32	325	eP	Pn	01 36 13.2	-0.8
KONO	Kongsberg	16.37	353	ePn	Pn	01 36 14.6	+0.1
	comp=Z,156nm,1.4s						
KONO	Kongsberg	16.37	353	ceP	Pn	01 36 14.8	+0.3
KONO				pmax	pmax		
	comp=Z,149nm,1.7s						
KONO	Kongsberg	16.37	353	eP	Pn	01 36 14.6	+0.1
DSB	Dublin	16.46	313	eP	Pn	01 36 16.2	+0.4
	comp=Z,113nm,1.2s						
EDI	Edinburgh	16.48	325	eP	Pn	01 36 15.9	-0.2
EDI				IAmb	IAmb	01 36 24.3	
	comp=Z,210nm,1.6s						
EDI				IAMs_20	IAMs_20	01 44 58.2	
	comp=Z,5µm,10.5s						
CEU	Ceuta	16.50	249	eP	Pn	01 36 15.6	-0.8
CEU				eS	Sn	01 39 13.8	-5.6
OSL	Oslo	16.56	355	eP	Pn	01 36 16.3	-0.7
BERE	Bereket-Mersin	16.58	109	eP	P	01 36 20.4	+0.3
HFS	Hagfors	16.66	0	Pn	Pn	01 36 16.7	-1.6
	comp=Z,0.2nm,0.3s,baz=181,slow=8.9,SNR=12						
HFS				LR	LR	01 42 51.3	
	comp=Z,2µm,20.5s,baz=182,slow=38						
KVT	Kavak	16.71	91	eP	Pn	01 36 18.5	-0.6
GMM	Mts of Mourne	16.74	317	eP	P	01 36 20.8	-0.8
SFS	San Fernando	16.77	252	i P	Pn	01 36 17.3	-2.5
SFS				eS	S	01 39 38.7	+1.8
COI	Coimbra	16.79	266	eP	P	01 36 23.7	+1.5
	comp=Z,272nm,1.1s						
KEBE	Keben-Mersin	16.86	108	eP	P	01 36 26.6	+3.4
DRUM	Mains of Drumt	16.89	328	eP	P	01 36 22.1	-1.2
DRUM				IAmb	IAmb	01 36 24.1	
	comp=Z,37nm,1.2s						
DRUM				IAMs_20	IAMs_20	01 44 59.6	
	comp=Z,6µm,13.2s						
PCAS	Casmilo, Conde	16.90	266	eP	P	01 36 22.8	-0.7
	comp=Z,255nm,1.6s						
PTOM	Tomar	16.98	264	eP	P	01 36 25.2	+0.8
	comp=Z,155nm,1.6s						
ODD1	Odda	16.99	348	eP	P	01 36 24.1	-0.2
VSU	Vasula	17.03	24	eP	Pn	01 36 20.9	-2.0
VSU				IAmb	IAmb	01 36 36.1	
	comp=Z,177nm,1.0s						
VSU	Vasula	17.03	24	deP	Pn	01 36 22.2	-0.8
VSU				pmax	pmax		
	comp=Z,305nm,1.7s						
PMTG	Montargil	17.05	262	eP	P	01 36 25.5	+0.4
	comp=Z,155nm,1.6s						
ANN	Anapa	17.08	77	d iP	Pn	01 36 20.2	-3.4
ANN				eS	Sn	01 39 31.4	-2.0
ANN				pmax	pmax		
	comp=Z,198nm,2.2s						
ANN				MLR	MLR		
	comp=Z,4µm,12.0s						
EVO	Evora	17.10	261	eP	Pn	01 36 24.4	+0.4
	comp=Z,94nm,1.5s						
EVO	Evora	17.10	261	⇓iP	Pn	01 36 22.3	-1.7
EVO				eS	S	01 39 39.9	-3.8
EAB	Aberfoyle	17.15	324	eP	P	01 36 25.7	-0.3
PBEJ	Beja	17.21	259	eP	P	01 36 27.9	+1.0
	comp=Z,39nm,1.8s						
MERS	Mersin	17.22	106	eP	P	01 36 28.7	+1.6
ALMR	Almeirim	17.27	263	eP	P	01 36 27.4	-0.1
ALMR				AMb	AMB	01 36 32.7	
	comp=Z,129nm,1.6s						
ALMR				eS	Sn	01 39 41.0	+3.0
ALMR	Almeirim	17.27	263	eP	P	01 36 28.1	+0.6
	comp=Z,131nm,1.3s						
ALMR	Almeirim	17.27	263	eP	P	01 36 27.4	-0.1
ALMR				eS	Sn	01 39 41.0	+3.0
CLGH	Cloghs, Cushen	17.28	319	eP	Pn	01 36 26.0	-0.1
CLGH				IAMs_20	IAMs_20	01 45 01.9	
	comp=Z,6µm,9.9s						
TOKT	Tokat	17.29	93	eP	P	01 36 26.7	-1.2
NC602	NORSAR Array S	17.31	356	eP	Pn	01 36 25.4	-1.0
PVAQ	Vaqueiros	17.38	257	eP	P	01 36 29.5	+0.8
	comp=Z,87nm,1.4s						
PVAQ				eS	S	01 39 54.0	+4.7
KARA	Karaisali	17.41	104	eP	P	01 36 30.5	+1.4
CSS	Mathiatis	17.41	113	ePn	Pn	01 36 26.4	-1.5
	comp=Z,78nm,1.2s						
CSS	Mathiatis	17.41	113	P	Pn	01 36 27.6	-0.3
	comp=Z,15nm,1.1s						
NAO01	NORSAR Array S	17.45	355	ePn	Pn	01 36 27.4	-0.8
	comp=Z,408nm,1.4s						
PCVE	Castro Verde	17.50	258	eP	P	01 36 31.4	+1.3
SKAR	Skarslia	17.51	351	eP	P	01 36 30.0	-0.2
PBDV	Barranco-do-Ve	17.60	257	eP	P	01 36 34.1	+2.8
	comp=Z,82nm,1.7s						
NB2	NORSAR Subarra	17.63	356	P	Pn	01 36 30.4	-0.1
	comp=Z,192nm,1.7s,baz=174,slow=11						
NB2	NORSAR Subarra	17.63	356	P	Pn	01 36 30.4	-0.1
	baz=174,slow=11						
NOA	NORSAR Array B	17.63	356	P	Pn	01 36 30.1	-0.3
	comp=Z,0.1nm,0.3s,baz=170,slow=12,SNR=35						
PNCL	Nicolau / Gran	17.64	260	eP	P	01 36 32.8	+1.1
	comp=Z,44nm,2.0s						
LIS	Lisbon	17.85	262	eP	P	01 36 34.1	+0.1
LIS				AMb	AMB	01 36 40.0	
	comp=Z,105nm,1.9s						
LIS	Lisbon	17.85	262	eP	P	01 36 34.0	+0.1
PMAFR	Mafra	17.85	263	eP	P	01 36 34.6	+0.6
	comp=Z,128nm,1.5s						
MDT	Midelt	17.88	239	P	P	01 36 35.0	+0.6
	comp=Z,0.1nm,0.3s,baz=58,slow=13,SNR=10.0						
MDT				LR	LR	01 44 10.2	
	comp=Z,1µm,18.1s,baz=50,slow=39						
NC204	NORSAR Array S	17.89	355	eP	Pn	01 36 32.7	-1.0
	comp=Z,765nm,1.9s						
PTEO	Sao Teotonio	18.03	258	eP	P	01 36 38.0	+2.1
	comp=Z,57nm,1.6s						
MORF	Marmelete	18.08	258	eP	P	01 36 37.5	+0.9
MORF				AMb	AMB	01 36 52.7	
	comp=Z,58nm,2.4s						
MORF				eS	Sn	01 40 00.8	+2.9
MORF	Marmelete	18.08	258	eP	P	01 36 38.9	+2.3
	comp=Z,59nm,1.8s						
MORF	Marmelete	18.08	258	eP	P	01 36 37.4	+0.9
MORF				eS	Sn	01 40 00.8	+2.9
PFVI	Vila Bisbo	18.29	257	eP	P	01 36 40.8	+2.0
	comp=Z,110nm,1.9s						
KAC	Achnashellach	18.41	326	eP	Pn	01 36 39.4	-0.5
KPL	Plockton	18.45	325	eP	Pn	01 36 41.4	+0.9
KPL				IAmb	IAmb	01 36 43.0	
	comp=Z,191nm,1.7s						
KPL				IAMs_20	IAMs_20	01 46 14.4	
	comp=Z,3µm,10.4s						
RTC	Rabat Centre	18.59	246	P	Pn	01 36 44.7	+2.3
ZHG	ZHG	18.78	244	P	Pn	01 36 48.0	+3.2
OBN	Obninsk	18.81	44	P	P	01 36 43.5	-0.8
	comp=Z,1.0nm,0.3s,baz=223,slow=3.7,SNR=19						
OBN				LR	LR	01 44 28.3	
	comp=Z,890nm,21.6s,baz=232,slow=39						
OBN	Obninsk	18.81	44	eP	P	01 36 43.0	-1.4
	comp=Z,265nm,1.4s						
OBN	Obninsk	18.81	44	⇑eP	P	01 36 41.9	-2.5
OBN				eS	Sn	01 40 08.8	-6.3
OBN				pmax	pmax		
	comp=Z,229nm,1.7s						
OBN				MLR	MLR		
	comp=Z,3µm,13.0s						
VSR	Storozhevoye	18.84	57	eP	P	01 36 43.4	-1.3
VSR				eS	Sn	01 40 08.9	-7.0
VSR				pmax	pmax		
	comp=Z,120nm,1.7s						
VSR				smax	smax		
	comp=E,80nm,6.4s						
VSR				MLR	MLR		
	comp=Z,7µm,11.0s						
SOC	Sochi	18.85	81	d iP	P	01 36 43.7	-1.2
SOC				e		01 40 13.1	
SOC				pmax	pmax		
	comp=Z,60nm,1.2s						
SOC				MLR	MLR		
	comp=Z,2µm,13.0s						
VORR	Voronezh	18.98	56	eP	P	01 36 45.0	-1.3
VORR				pmax	pmax		
	comp=Z,400nm,2.2s						
GAZ	Gaziantep	18.98	101	eP	Pn	01 36 47.4	+0.2
LPSR	Galich'ya Gora	19.09	53	eP	P	01 36 46.0	-1.4
LPSR				eS	Sn	01 40 13.6	-8.2
LPSR				pmax	pmax		
	comp=Z,60nm,1.1s						
LPSR				smax	smax		
	comp=E,280nm,2.0s						
LPSR				MLR	MLR		
	comp=Z,4µm,10.0s						
PUL	Pulkovo	19.19	26	eP	Pn	01 36 54.4	+4.9
FIA0	FINESS Array S	19.43	18	eP	P	01 36 50.4	-0.7
FIA0				ePcP	PcP	01 41 12.1	+0.2
FIA0	FINESS Array S	19.43	18	eP	P	01 36 50.4	-0.7
FINES	FINESS Array B	19.43	18	P	P	01 36 50.4	-0.7
	comp=Z,0.7nm,0.3s,baz=213,slow=9.5,SNR=22						
FINES				PcP	PcP	01 41 12.1	+0.2
	comp=Z,0.1nm,0.3s,baz=197,slow=2.0,SNR=4.4						
FINES				LR	LR	01 45 16.1	
	comp=Z,5µm,18.2s,baz=206,slow=40						
FIA1	FINESS Array S	19.43	18	eP	P	01 36 50.8	-0.3
	comp=Z,172nm,1.6s						
KTUT	Trabzon	19.44	88	eP	Pn	01 36 52.3	-0.3
BHL	Bhannes	19.59	112	eP	P	01 36 52.9	-0.4
MOS	Moscow	19.64	43	eP	P	01 36 50.4	-3.0
MOS				i S	S	01 40 31.3	-3.4
MOS				pmax	pmax		
	comp=Z,199nm,2.1s						
MOS				pmax	pmax		
	comp=Z,900nm,2.8s						
MOS				pmax	pmax		
	comp=E,1µm,3.3s						
MOS				pmax	pmax		
	comp=N,300nm,3.2s						
MOS				smax	smax		
	comp=N,1µm,4.6s						
MOS				smax	smax		
	comp=E,1µm,4.6s						
MOS				MLR	MLR		
	comp=E,6µm,11.0s						
MOS				MLR	MLR		
	comp=Z,9µm,11.0s						
MOS				MLR	MLR		
	comp=N,5µm,10.0s						
TBLU	Trondheim	19.89	355	eP	Pn	01 36 57.0	-0.8
MMAI	Mount Meron Ar	19.95	114	P	Pn	01 36 58.0	-0.9
	comp=N,2.3nm,0.3s,baz=325,slow=10,SNR=29						
SHBL	Chebaa	19.98	113	eP	P	01 36 57.6	+0.1
KSDI	Kefar Szold	20.01	114	P	Pn	01 36 58.4	-1.1
	comp=N,242nm,1.3s						
URFA	Urfa	20.02	99	eP	Pn	01 36 58.9	-0.7
SRHM	Skhour des Reh	20.21	244	P	Pn	01 37 02.0	+0.1
MMLI	Mount Malkishu	20.32	116	P	Pn	01 37 02.1	-1.1
	comp=N,132nm,1.6s						
SHMJ	Saham	20.37	114	P	Pn	01 37 04.7	+1.0
YEDI	Yedisu-Bingol	20.49	92	eP	Pn	01 37 04.8	-0.4
AMAZ	Amatzia	20.58	118	P	P	01 37 04.4	+0.5
	comp=N,230nm,2.0s						
KZIT	Kziot	20.67	121	P	P	01 37 05.4	+0.5
	comp=N,196nm,1.2s						
BNGB	Bingl	20.75	93	eP	Pn	01 37 07.2	-1.0
KARO	Karliova-Bingo	20.90	92	eP	Pn	01 37 09.3	-0.8
KIV	Kislovodsk	20.92	79	eP	P	01 37 07.3	-0.3
	comp=N,123nm,1.4s						
KIV	Kislovodsk	20.92	79	i P	Pn	01 37 08.2	-1.9
	SNR=20						
KIV	Kislovodsk	20.92	79	eP	P	01 37 07.3	-0.3
KIV				pmax	pmax		
	comp=Z,123nm,1.4s						
KVAR	Kislovodsk Arr	20.92	79	LR	LR	01 46 40.6	
	comp=Z,1µm,19.5s,baz=348,slow=41						
GOF	Gofitskoye	21.02	76	⇑eP	P	01 37 09.2	+0.6
GOF				pmax	pmax		
	comp=Z,22nm,0.6s						
NEY	Neytrino	21.06	81	deP	P	01 37 11.1	+1.8
NEY				pmax	pmax		
	comp=Z,11nm,2.0s						
KBZ	Khabaz	21.10	79	P	P	01 37 10.8	+1.3
	comp=Z,17nm,0.8s,baz=291,slow=13,SNR=33						
KBZ				LR	LR	01 46 42.3	
	comp=Z,2µm,18.8s,baz=296,slow=41						
LISJ	El Lisan	21.13	118	P	P	01 37 12.5	+2.7
	comp=Z,90nm,2.0s						
WALJ	Wala	21.14	117	P	P	01 37 12.4	+2.5
	comp=Z,87nm,0.9s						
VRTB	Varto-Mus	21.25	92	eP	P	01 37 14.1	+2.8
SVAN	Silvan-Diyarba	21.44	95	eP	P	01 37 13.9	+0.7
SENK	Senkaya-Erzuru	21.45	88	eP	P	01 37 14.9	+1.5
ASF	Jabal al Asfar	21.46	114	P	P	01 37 15.3	+1.7
	comp=Z,42nm,1.0s,baz=260,slow=4.6,SNR=15						
ASF	Jabal al Asfar	21.46	114	P	P	01 37 17.8	+4.3
	comp=Z,76nm,1.4s						
JDRJ	Daraweish	21.59	119	P	P	01 37 16.4	+1.4
	comp=Z,145nm,1.3s						
NCK	Nalchik	21.64	80	⇓eP	P	01 37 17.5	+2.2
NCK				pmax	pmax		
	comp=Z,159nm,2.6s						
HRFI	Mount Harif	21.67	121	P	P	01 37 16.5	+0.8
	comp=Z,130nm,1.9s						
TAM	Tamanrasset	21.73	201	eP	P	01 37 17.1	+0.5
	comp=Z,90nm,1.4s						
TAM	Tamanrasset	21.73	201	eP	P	01 37 17.1	+0.5
TAM				pmax	pmax		
	comp=Z,90nm,1.4s						
EIL	Elat	21.87	122	P	P	01 37 19.0	+1.1
	comp=Z,14nm,0.8s,baz=332,slow=9.6,SNR=13						
EIL	Elat	21.87	122	P	P	01 37 18.6	+0.8
	comp=Z,65nm,1.2s						
ZEI	Tsey	22.00	81	eP	P	01 37 22.6	+3.2
ZEI				pmax	pmax		
	comp=Z,135nm,1.7s						
AKH	Akhalkalaki	22.04	85	eP	P	01 37 19.8	+0.1
	comp=Z,181nm,1.6s						
AKH	Akhalkalaki	22.04	85	eP	P	01 37 19.8	+0.1
AKH				pmax	pmax		
	comp=Z,181nm,1.6s						
MLAZ	Malazgirt-MUS	22.05	91	eP	P	01 37 21.4	+1.5
TBLG	Delisi	22.85	84	eP	P	01 37 28.8	+0.5
	comp=Z,174nm,1.5s						
TBLG	Delisi	22.85	84	eP	P	01 37 28.8	+0.5
TBLG				pmax	pmax		
	comp=Z,174nm,1.5s						
CLDR	Caldiran	23.05	90	eP	P	01 37 30.9	+0.4
GROC	Groznyy	23.27	80	eP	P	01 37 31.0	-1.5
GROC				e		01 41 18.1	
GROC				eS	S	01 41 44.6	-0.1
GROC				pmax	pmax		
	comp=Z,114nm,1.4s						
GNI	Garni	23.31	88	P	P	01 37 33.9	+0.8
	comp=Z,31nm,0.9s,baz=346,slow=2.9,SNR=17						
GNI				LR	LR	01 49 09.7	
	comp=Z,1µm,18.5s,baz=292,slow=43						
GNI	Garni	23.31	88	eP	P	01 37 33.5	+0.4
	comp=Z,264nm,1.6s						
GNI	Garni	23.31	88	i P	P	01 37 33.8	+0.7
	SNR=15						
GNI	Garni	23.31	88	eP	P	01 37 33.5	+0.4
GNI				pmax	pmax		
	comp=Z,264nm,1.6s						
MAK	Makhachkala	24.55	79	d iP	P	01 37 45.1	+0.5
MAK				ePPP	PPP	01 38 24.3	
MAK				eS	S	01 42 05.7	+0.6
MAK				pmax	pmax		
	comp=Z,463nm,1.8s						
MAK				MLR	MLR		
	comp=Z,3µm,14.0s						
AKT	Akhty	25.08	83	eP	P	01 37 50.2	+0.6
AKT				e		01 38 20.6	
AKT				eS	S	01 42 14.4	+0.4
AKT				pmax	pmax		
	comp=Z,164nm,1.3s						
KTK1	Kautokeino	26.05	8	eP	P	01 37 57.0	-1.0
PRGR	Permogore	26.16	35	⇓iP	P	01 37 58.2	-0.8
PRGR				e		01 38 49.6	
PRGR				pmax	pmax		
	comp=Z,150nm,1.7s						
PMOZ	Porto Moniz, M	26.38	257	eP	P	01 38 02.7	+1.2
KIRV	Kirov	26.65	43	P	P	01 38 02.7	-0.8
	comp=Z,13nm,0.6s,baz=263,slow=8.0,SNR=19						
KIRV				LR	LR	01 49 12.7	
	comp=Z,3µm,19.6s,baz=238,slow=38						
ARA0	ARCESS Array S	26.80	9	eP	P	01 38 03.6	-1.2
ARA0				ePcP	PcP	01 41 27.0	-0.1
ARCES	ARCESS Array B	26.80	9	P	P	01 38 03.6	-1.2
	comp=Z,13nm,0.9s,baz=185,slow=6.5,SNR=28						
ARCES				PcP	PcP	01 41 27.0	-0.1
	comp=Z,2.3nm,0.7s,baz=179,slow=2.8,SNR=6.1						
ARCES				LR	LR	01 48 45.0	
	comp=Z,1µm,20.2s,baz=200,slow=37						
ARE0	ARCESS Array S	26.80	9	eP	P	01 38 04.2	-0.5
	comp=Z,2.6nm,1.4s						
ARE0	ARCESS Array S	26.80	9	eP	P	01 38 02.4	-2.4
LVZ	Lovozero	26.87	17	eP	P	01 38 04.8	-0.6
	comp=Z,233nm,1.9s						
LVZ	Lovozero	26.87	17	⇓eP	P	01 38 05.4	0.0
LVZ				pmax	pmax		
	comp=Z,105nm,1.9s						
BORG	Borgarnes	28.93	329	LR	LR	01 51 20.3	
	comp=Z,1µm,18.1s,baz=119,slow=39						
JMIC	Jan Mayen	29.67	346	LR	LR	01 50 56.1	
	comp=Z,869nm,19.0s,baz=112,slow=38						
AKTO	Aktyubinsk	30.66	61	P	P	01 38 38.8	-0.5
	comp=Z,4.6nm,0.7s,baz=267,slow=7.6,SNR=14						
AKTO				LR	LR	01 53 43.3	
	comp=Z,1µm,20.4s,baz=270,slow=42						
AKTO	Aktyubinsk	30.66	61	P	P	01 38 37.7	-1.6
ARU	Arti	31.04	49	P	P	01 38 41.7	-0.8
	comp=Z,17nm,0.5s,baz=257,slow=6.3,SNR=95						
ARU				LR	LR	01 51 31.9	
	comp=Z,2µm,18.1s,baz=256,slow=37						
ARU	Arti	31.04	49	eP	P	01 38 41.1	-1.4
	comp=Z,76nm,0.9s						
ARU	Arti	31.04	49	c iP	P	01 38 41.6	-1.0
ARU						01 41 33.9	
ARU				S	S	01 43 46.4	-0.8
ARU				SS	SnSn	01 45 28.0	+0.3
ARU				PPP	PPP	01 45 48.4	
ARU				pmax	pmax		
	comp=Z,93nm,0.9s						
ARU				MLR	MLR		
	comp=Z,3µm,15.0s						
TOA0	Torodi Ar. Sit	31.96	202	eP	P	01 38 50.4	-0.6
	comp=Z,40nm,1.2s						
TORD	Torodi Ar. Bea	31.96	202	P	P	01 38 50.5	-0.6
	comp=Z,10nm,0.7s,baz=9.0,slow=10,SNR=45						
TORD				LR	LR	01 53 15.4	
	comp=Z,4µm,18.7s,baz=350,slow=39						
AB31	Akbulak array	32.02	63	i P	P	01 38 50.1	-1.2
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	32.02	63	eP	P	01 38 50.5	-0.8
	comp=Z,33nm,1.8s						
SVE	Sverdlovsk	32.21	49	deP	P	01 38 52.8	-0.1
SVE				eS	S	01 44 04.3	-1.3
SVE				pmax	pmax		
	comp=Z,189nm,1.9s						
SVE				MLR	MLR		
	comp=Z,4µm,14.0s						
RAYN	Ar Rayn	32.88	117	eP	P	01 39 00.4	+1.3
	comp=Z,11nm,1.3s						
RAYN	Ar Rayn	32.88	117	eP	P	01 39 00.4	+1.3
RAYN				pmax	pmax		
	comp=Z,11nm,1.3s						
GEYT	Alibeck	33.82	84	P	P	01 39 07.2	-0.1
	comp=Z,9.5nm,0.8s,baz=289,slow=9.0,SNR=20						
GEYT				LR	LR	01 57 03.7	
	comp=Z,383nm,18.1s,baz=315,slow=44						
DAG	Danmarks Havn	35.99	348	eP	P	01 39 25.1	-0.4
DAG	Danmarks Havn	35.99	348	i P	P	01 39 25.1	-0.4
BRVK	Borovoye	37.93	55	eP	P	01 39 42.6	+0.4
	comp=Z,48nm,1.0s						
BRVK	Borovoye	37.93	55	eP	P	01 39 42.6	+0.4
BRVK				pmax	pmax		
	comp=Z,48nm,1.0s						
SUMG	Summit	37.95	337	eP	P	01 39 42.4	-0.2
	comp=Z,23nm,1.1s						
SUMG	Summit	37.95	337	eP	P	01 39 42.4	-0.2
SUMG				pmax	pmax		
	comp=Z,23nm,1.1s						
SUMG	Summit	37.95	337	i P	P	01 39 44.8	+2.2
BVAR	Borovoye Array	38.00	55	P	P	01 39 43.1	+0.2
	comp=Z,17nm,0.8s,baz=275,slow=7.0,SNR=97						
SHME	Shamm	38.50	103	P	P	01 39 46.8	-0.6
ASUD	Al Ashush, Dub	38.81	105	P	P	01 39 50.3	+0.4
NAZ	Nazwa, Dubai	38.82	105	i P	P	01 39 50.0	0.0
	SNR=11						
FAQ	Al Faqa, Dubai	38.92	105	P	P	01 39 49.3	-1.6
MSFE	Esma-Masafi	38.94	104	P	P	01 39 50.8	-0.3
MDH	Madha	39.08	104	P	P	01 39 51.8	-0.3
UOSS	Minazif	39.23	104	eP	P	01 39 53.0	-0.5
	comp=Z,28nm,0.9s						
UOSS	Minazif	39.23	104	P	P	01 39 52.9	-0.5
HATD	Hatta, Dubai	39.25	104	P	P	01 39 53.3	-0.3
DBIC	Dimbokro	40.15	209	P	P	01 40 00.5	-0.6
	comp=Z,12nm,1.0s,baz=10,slow=6.7,SNR=4.5						
DBIC				LR	LR	01 58 06.5	
	comp=Z,2µm,18.7s,baz=10.0,slow=38						
DBIC	Dimbokro	40.15	209	eP	P	01 40 00.5	-0.6
	comp=Z,45nm,1.4s						
TIC	Toumodi	40.23	210	eP	P	01 40 02.8	+1.0
OTUK	Ortayu	40.25	62	P	P	01 40 01.3	-0.4
OTUK				pmax	pmax		
	comp=Z,84nm,1.8s						
KIC	Kosan Boka	40.39	209	eP	P	01 40 03.0	-0.1
	comp=Z,281nm,1.9s						
LIC	Lamto	40.62	209	eP	P	01 40 04.6	-0.4
	comp=Z,103nm,1.4s						

ATD	Arta Tunnel	40.62	133	eP	P	01 40 05.6	+0.5
	comp=Z,69nm,1.2s						
KK31	Karatay Array	40.65	70	i P	P	01 40 05.1	0.0
KK31				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FURI	Furi	40.79	140	eP	P	01 40 07.4	+0.6
	comp=Z,222nm,1.9s						
SFJD	Kangerlussuaq	41.00	327	P	P	01 40 05.7	-1.9
	comp=Z,13nm,0.8s,baz=78,slow=11,SNR=10						
SFJD	Kangerlussuaq	41.00	327	eP	P	01 40 08.6	+1.0
	comp=Z,114nm,1.7s						
SFJD	Kangerlussuaq	41.00	327	eP	P	01 40 08.6	+1.0
SFJD				pmax	pmax		
	comp=Z,114nm,1.7s						
SFJD	Kangerlussuaq	41.00	327	i P	P	01 40 07.1	-0.5
ILULI	Ilulissat	41.29	331	eP	P	01 40 10.8	+0.8
	comp=Z,198nm,1.8s						
ILULI	Ilulissat	41.29	331	eP	P	01 40 10.8	+0.8
ILULI				pmax	pmax		
	comp=Z,199nm,1.8s						
WSAR	Wadi Sarin	42.02	104	P	P	01 40 16.4	-0.2
	comp=Z,6.5nm,0.9s,baz=284,slow=5.5,SNR=6.4						
KURBB	Kurchatov Arra	43.46	57	P	P	01 40 27.7	-0.2
	comp=Z,6.4nm,0.9s,baz=293,slow=8.9,SNR=38						
KURBB				PP	PP	01 42 07.3	-1.4
	comp=Z,2.4nm,0.9s,baz=291,slow=11,SNR=5.4						
KURK	Kurchatov	43.49	57	eP	P	01 40 26.9	-1.2
	comp=Z,31nm,1.1s						
KURK	Kurchatov	43.49	57c	iP	P	01 40 27.3	-0.8
KURK				pmax	pmax		
	comp=Z,52nm,1.7s						
KURK				MLR	MLR		
	comp=Z,1µm,15.0s						
AAK	Ala-Archa	43.54	69	P	P	01 40 29.1	+0.2
	comp=Z,3.1nm,0.5s,baz=271,slow=9.7,SNR=14						
AAK	Ala-Archa	43.54	69	eP	P	01 40 28.1	-0.7
	comp=Z,78nm,1.8s						
AAK	Ala-Archa	43.54	69	i P	P	01 40 29.6	+0.7
	SNR=11						
AAK	Ala-Archa	43.54	69c	iP	P	01 40 29.5	+0.6
AAK				pmax	pmax		
	comp=Z,65nm,2.5s						
KSH	Kashi	45.85	73	eP	P	01 40 47.9	+0.6
KSH				pP	sP	01 40 53.8	+1.7
KSH				sP	pP	01 40 55.5	+4.8
KSH				PcP	PcP	01 42 26.9	+2.4
KSH				PP	PP	01 42 36.3	+1.8
KSH				S	S	01 47 29.5	-1.8
KSH				ScS	ScS	01 50 42.4	-0.9
KSH				pmax	pmax		
	comp=Z,30nm,1.0s						
KSH				pmax	pmax		
	comp=Z,390nm,3.0s						
KSH				LR	LR		
	comp=Z,870nm,12.1s						
KSH				LR	LR		
	comp=Z,1µm,13.6s						
KSH				LR	LR		
	comp=Z,1µm,15.0s						
ZALV	Zalesovo Beam	46.18	51	P	P	01 40 48.9	-0.6
	comp=Z,5.4nm,0.6s,baz=285,slow=8.8,SNR=18						
ZALV				PP	PP	01 42 36.7	-0.9
	comp=Z,8.4nm,1.1s,baz=280,slow=9.8,SNR=4.0						
ZALV				LR	LR	02 02 28.1	
	comp=Z,2µm,18.0s,baz=256,slow=39						
ZALV	Zalesovo Beam	46.18	51	i P	P	01 40 49.5	0.0
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TULEG	Thule	46.45	341	eP	P	01 40 50.9	-0.4
	comp=Z,124nm,1.8s						
PDGK	Podgornoye	46.63	66	P	P	01 40 52.6	-0.8
PDGK				pmax	pmax		
	comp=Z,56nm,1.4s						
NIL	Nilore	46.70	81	eP	P	01 40 53.8	-0.1
	comp=Z,157nm,1.4s						
NIL	Nilore	46.70	81	eP	P	01 40 53.8	-0.1
NIL				pmax	pmax		
	comp=Z,157nm,1.4s						
MAKZ	Makanchi	46.89	61	eP	P	01 40 55.1	-0.1
	comp=Z,68nm,1.8s						
MAKZ	Makanchi	46.89	61	eP	P	01 40 55.1	-0.1
MAKZ				pmax	pmax		
	comp=Z,68nm,1.8s						
MK31	Makanchi Array	47.09	61	i P	P	01 40 56.2	-0.6
MK31				pmax	pmax		
	comp=Z,19nm,1.1s						
MKAR	Makanchi Array	47.09	61	P	P	01 40 56.5	-0.4
	comp=Z,5.3nm,0.7s,baz=287,slow=5.9,SNR=31						
MKAR				LR	LR	02 04 49.5	
	comp=Z,1µm,18.5s,baz=288,slow=41						
KMBO	Kilima Mbogo	49.20	148	eP	P	01 41 12.7	-0.9
	comp=Z,23nm,1.5s						
KMBO	Kilima Mbogo	49.20	148	eP	P	01 41 12.7	-0.9
KMBO				pmax	pmax		
	comp=Z,23nm,1.5s						
DHRM	DHARAMSHALA	49.61	81	eP	P	01 41 16.8	+0.1
SMLA	Simla	50.84	82	eP	P	01 41 25.0	-0.7
SMLA				IAmb	IAmb	01 41 27.9	
	comp=Z,82nm,1.2s						
SCHQ	Schefferville	51.04	313	LR	LR	02 02 25.1	
	comp=Z,427nm,18.5s,baz=74,slow=35						
SCHQ	Schefferville	51.04	313	eP	P	01 41 26.8	-0.1
	comp=Z,146nm,1.9s						
WMQ	Urumqi	51.80	62	eP	P	01 41 36.3	+3.5
WMQ				pmax	pmax		
	comp=Z,44nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,20.5s						
WMQ				LR	LR		
	comp=Z,1µm,16.5s						
WMQ				LR	LR		
	comp=Z,1µm,21.9s						
DDI	Dehra Dun	51.92	82	ex	P	01 41 28.3	-5.5
BATG	Bathurst New B	53.81	304	eP	P	01 41 46.5	-1.0
	comp=Z,91nm,1.7s						
PQI	Presque Isle	55.27	304	eP	P	01 41 57.8	-0.3
	comp=Z,66nm,1.5s						
BHPL	Bhopal	55.57	90	eP	P	01 41 59.6	-1.1
BHPL				IAmb	IAmb	01 42 02.1	
	comp=Z,72nm,1.6s						
MOY	Mondy	56.08	49	eP	P	01 42 04.8	+0.7
MOY				pmax	pmax		
	comp=Z,65nm,3.4s						
TIXI	Tiksi	56.46	20	eP	P	01 42 06.3	+0.1
	comp=Z,58nm,1.5s						
TIXI	Tiksi	56.46	20c	eP	P	01 42 05.8	-0.5
TIXI				pmax	pmax		
	comp=Z,48nm,1.6s						
PKME	Peaks-Kenny Pk	56.74	303	P	P	01 42 09.0	+0.3
	baz=60						
DANN	Dangsing	57.13	81	eP	P	01 42 12.0	-0.1
CHGQ	Chibougamau	57.37	310	P	P	01 42 13.1	0.0
	baz=60						
LATQ	La Tuque	57.75	307	P	P	01 42 16.2	+0.4
	baz=59						
GKN	Gorkha	57.97	80	eP	P	01 42 17.3	-0.5
ZAK	Zakamensk	57.98	49	eP	P	01 42 17.9	+0.4
ZAK				e		01 44 23.9	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.9s						
NGP	Nagpur	58.05	90	eP	P	01 42 16.2	-2.1
NGP				IAmb	IAmb	01 42 19.7	
	comp=Z,34nm,1.1s						
DMN	Daman	58.53	80	eP	P	01 42 21.6	-0.3
	comp=Z,178nm,1.4s						
KKN	Kakani	58.55	80	eP	P	01 42 21.4	-0.6
PKIN	Phulchoki	58.76	80	eP	P	01 42 22.8	-0.7
	comp=Z,72nm,1.2s						
PKI	Pulchoki	58.77	80	eP	P	01 42 22.8	-0.8
	comp=Z,56nm,1.0s						
LBNH	Lisbon	58.88	303	P	P	01 42 23.9	+0.2
	baz=58						
MATQ	Matagami	59.26	311	P	P	01 42 27.0	+0.7
	baz=58						
LSQQ	Lebel-sur-Quev	59.27	310	P	P	01 42 26.9	+0.6
	baz=58						
JIRN	Jiri	59.28	80	eP	P	01 42 26.9	-0.3
BOD	Bodaibo	59.35	38	eP	P	01 42 28.0	+1.2
BOD				pmax	pmax		
	comp=Z,33nm,1.8s						
LSZ	Lusaka	59.98	164	eP	P	01 42 31.1	-0.6
	comp=Z,36nm,1.8s						
LSZ	Lusaka	59.98	164	eP	P	01 42 31.1	-0.6
LSZ				pmax	pmax		
	comp=Z,36nm,1.8s						
D54A	Lac Fusel, La	60.11	308	P	P	01 42 33.4	+1.1
	baz=57						
LONY	Lake Ozonia	60.28	305	P	P	01 42 33.8	+0.4
	baz=57						
ORIO	Orleans, Innes	60.37	306	P	P	01 42 34.5	+0.5
	baz=57						
F55A	Otter Lake	60.66	307	P	P	01 42 36.3	+0.4
	baz=56						
D53A	Lac Vacive, Po	60.75	308	P	P	01 42 37.0	+0.5
	baz=56						
E54A	Lac Daplat, Po	60.81	308	P	P	01 42 36.0	-1.0
	baz=56,SNR=5.4						
SONM	Songino Array	61.07	50	P	P	01 42 39.5	+0.6
	comp=Z,10nm,1.0s,baz=295,slow=8.9,SNR=27						
SONM				LR	LR	02 10 54.3	
	comp=Z,2µm,18.6s,baz=308,slow=38						
E53A	Dumoine, Ponti	61.12	308	P	P	01 42 39.2	+0.1
	baz=56						
G55A	Calabogie	61.19	306	P	P	01 42 39.7	+0.1
	baz=56						
GTK	Tadong	61.20	79	eP	P	01 42 40.0	-0.1
GTK				IAmb	IAmb	01 42 43.4	
	comp=Z,69nm,1.2s						
PEMO	Pembroke	61.27	307	P	P	01 42 40.5	+0.4
	baz=56						
H56A	Elgin	61.29	305	P	P	01 42 39.8	-0.5
	baz=56						
BOK	Bokaro	61.38	83	eP	P	01 42 39.5	-1.7
ULN	Ulaanbaatar	61.42	50	eP	P	01 42 42.3	+1.0
	comp=Z,62nm,1.9s						
ULN	Ulaanbaatar	61.42	50⇓	eP	P	01 42 41.2	-0.1
ULN				pmax	pmax		
	comp=Z,41nm,2.5s						
PLVO	Plevna	61.52	306	P	P	01 42 41.8	-0.1
	baz=56,SNR=6.6						
E52A	Mattawa	61.74	308	P	P	01 42 43.0	-0.3
	baz=56						
GTA	Gaotai	61.85	61	eP	P	01 42 44.8	+0.5
GTA				pP	sP	01 42 49.1	-0.1
GTA				sP	pP	01 42 52.5	+4.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
H55A	Tweed	61.86	306	P	P	01 42 44.1	0.0
	baz=56						
PAL	Palisades	61.88	301	P	P	01 42 44.7	+0.5
	baz=55						
DELO	Deloro Mine	62.14	306	P	P	01 42 46.3	+0.3
	baz=55						
F52A	Sundridge	62.40	308	P	P	01 42 47.5	-0.2
	baz=55						
BUKO	Buck Lake	62.64	308	P	P	01 42 49.3	-0.1
	baz=55						
F51A	Arnstein	62.66	308	P	P	01 42 49.6	+0.1
	baz=55						
N60A	Cedar Hill Far	62.69	301	P	P	01 42 49.8	0.0
	baz=55						
D49A	Beulah Townshi	62.70	310	P	P	01 42 49.5	-0.2
	baz=55						
YAK	Yakutsk	62.96	28	eP	P	01 42 48.9	-2.3
YAK				e		01 43 28.6	
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK				pmax	pmax		
	comp=E,14nm,1.4s						
YAK				pmax	pmax		
	comp=N,14nm,1.5s						
YAK				MLR	MLR		
	comp=Z,727nm,18.0s						
YAK				MLR	MLR		
	comp=E,469nm,19.0s						
YAK				MLR	MLR		
	comp=N,750nm,21.0s						
O60A	Telford	63.20	301	P	P	01 42 51.8	-1.3
	baz=54						
TAWA	Tawang	63.36	76	eP	P	01 42 54.6	-0.2
TAWA				IAmb	IAmb	01 42 58.9	
H52A	Wyevale	63.39	307	P	P	01 42 53.8	-0.5
	baz=54						
MEDO	Medina	63.41	305	P	P	01 42 54.1	-0.4
	baz=54						
K55A	Perry	63.43	305	P	P	01 42 54.6	-0.1
	baz=54						
J54A	Appleton	63.46	305	P	P	01 42 54.8	+0.1
	baz=54						
TURI	Tura	63.51	79	eP	P	01 42 53.9	-1.5
TURI				IAmb	IAmb	01 42 56.9	
E48A	Lockeyer	63.61	310	P	P	01 42 56.1	+0.3
	baz=54						
P60A	Greenville	63.64	301	P	P	01 42 56.1	0.0
	baz=54						
TORO	Toronto--Lesli	63.67	306	P	P	01 42 56.4	+0.2
	baz=54						
O59A	Robesonia	63.69	301	P	P	01 42 56.4	0.0
	baz=54						
I53A	Kortright Cn E	63.70	306	P	P	01 42 56.1	-0.3
	baz=54						
N58A	Sunbury	63.71	302	P	P	01 42 56.7	+0.2
	baz=54						
CLWO	Collingwood	63.74	307	P	P	01 42 55.8	-0.9
	baz=54						
D47A	Chapleau	63.79	311	P	P	01 42 55.9	-1.1
	baz=54						
STCO	Saint Catharin	63.81	306	P	P	01 42 56.3	-0.8
	baz=54						
K54A	Basiliko Farm,	63.87	305	P	P	01 42 57.5	-0.1
	baz=54						
I52A	Shelburne	63.90	307	P	P	01 42 57.5	-0.2
	baz=54						
F49A	Sandfield	63.96	309	P	P	01 42 58.0	-0.1
	baz=54						
TOBO	Tobermory, Bru	63.99	308	P	P	01 42 57.4	-0.9
	baz=54						
Q61A	Milford	63.99	300	P	P	01 42 58.9	+0.5
	baz=54						
GUWA	GUWAHATI	64.08	78	eP	P	01 42 58.0	-1.2
GUWA				IAmb	IAmb	01 43 01.2	
	comp=Z,19nm,0.6s						
ACTO	Acton	64.10	306	P	P	01 42 59.0	-0.1
	baz=54						
M56A	Emporium	64.23	304	P	P	01 42 59.1	-0.9
	baz=54						
F48A	Evansville	64.25	310	P	P	01 43 00.1	+0.1
	baz=53						
P59A	Jarrettsville	64.26	301	P	P	01 43 00.8	+0.7
	baz=54						
N57A	Milroy	64.27	303	P	P	01 43 00.8	+0.5
	baz=54,SNR=9.1						
TYNO	Tyneside	64.29	306	P	P	01 43 01.0	+0.7
	baz=54						
D46A	Sault St. Mari	64.40	311	P	P	01 43 01.7	+0.8
	baz=53						
L54A	Sinclairville	64.47	305	P	P	01 43 01.9	+0.4
	baz=54						
BRCO	Bruce Peninsul	64.52	308	P	P	01 43 02.3	+0.5
	baz=53						
I51A	Listowel	64.54	307	P	P	01 43 02.5	+0.6
	baz=53						
SSPA	Standing Stone	64.55	303	eP	P	01 43 02.4	+0.4
	comp=Z,57nm,1.4s						
SSPA	Standing Stone	64.55	303	P	P	01 43 02.1	+0.1
	baz=54						
J52A	Paris	64.56	306	P	P	01 43 02.0	-0.1
	baz=53						
M55A	Ridgway	64.59	304	P	P	01 43 02.4	0.0
	baz=54						
SHL	Shillong	64.60	78	eP	P	01 43 02.1	-0.7
SHL	Shillong	64.60	78	eP	P	01 43 02.1	-0.7
SHL	Shillong	64.60	78	eP	P	01 43 01.3	-1.5
SHL				IAmb	IAmb	01 43 04.4	
	comp=Z,31nm,1.0s						
SHL	Shillong	64.60	78	eP	P	01 43 01.5	-1.3
TEZP	TEZPUR	64.61	77	eP	P	01 43 01.6	-1.0
TEZP				IAmb	IAmb	01 43 04.8	
	comp=Z,91nm,1.4s						
N56A	West Decatur	64.63	303	P	P	01 43 02.7	0.0
	baz=54						
O57A	Amberson	64.65	302	P	P	01 43 02.8	+0.1
	baz=54						
BASO	Ashfield	64.79	307	P	P	01 43 03.7	+0.2
	baz=53						
ZIRO	ZIRO	64.80	75	eP	P	01 43 03.6	-0.4
ZIRO				IAmb	IAmb	01 43 06.8	
	comp=Z,123nm,0.2s						
E46A	Sault Ste Mari	64.86	311	P	P	01 43 04.3	+0.3
	baz=53						
P58A	Pank, Wackersv	64.87	301	P	P	01 43 04.7	+0.6
	baz=53						
S61A	Accomac	64.92	299	P	P	01 43 04.9	+0.4
	baz=53						
ERPA	Erie	64.94	305	P	P	01 43 05.1	+0.5
	baz=53						
K52A	Tillsonburg	64.97	306	P	P	01 43 03.7	-1.1
	baz=53						
M54A	Oil Creek Stat	65.11	304	P	P	01 43 06.0	+0.3
	baz=53						
N55A	Marion Center	65.14	303	P	P	01 43 05.9	0.0
	baz=53,SNR=5.4						
R60A	Leonardtown, M	65.14	300	P	P	01 43 06.3	+0.4
	baz=53						
O56A	Blue Knob Stat	65.19	303	P	P	01 43 06.5	+0.3
	baz=53,SNR=5.9						
L53A	Girard	65.20	305	P	P	01 43 06.1	-0.2
	baz=53						
P57A	Homestead Farm	65.31	302	P	P	01 43 06.8	-0.2
	baz=53						
H48A	Harrisville	65.33	309	P	P	01 43 06.6	-0.4
	baz=52						
G47A	Hillman	65.34	310	P	P	01 43 07.1	0.0
	baz=52						
Q58A	Fox Den Farm,	65.43	301	P	P	01 43 07.6	-0.2
	baz=53						
K51A	Iona Station	65.48	306	P	P	01 43 07.5	-0.5
	baz=53						
R59A	King George, V	65.52	300	P	P	01 43 08.3	-0.1
	baz=53						
S60A	Water View	65.53	299	P	P	01 43 08.7	+0.3
	baz=53						
E44A	Grand Marais A	65.59	312	P	P	01 43 07.6	-1.2
	baz=52						
N54A	Moraine State	65.63	304	P	P	01 43 09.5	+0.4
	baz=53						
O55A	Ligonier	65.67	303	P	P	01 43 09.2	-0.2
	baz=53						
CBN	Corbin Frederi	65.68	300	P	P	01 43 09.0	-0.4
	baz=53						
BELO	BELONIA	65.72	80	eP	P	01 43 09.7	-0.2
M53A	WI Miller and	65.76	305	P	P	01 43 09.0	-0.9
	baz=53						
P56A	Dayton Farm, R	65.81	302	P	P	01 43 09.8	-0.5
	baz=53						
Q57A	Strasburg	65.83	301	P	P	01 43 09.2	-1.1
	baz=53						
INK	Inuvik	65.84	347	eP	P	01 43 09.5	-0.4
	comp=Z,55nm,1.6s						
INK	Inuvik	65.84	347	eP	P	01 43 09.5	-0.4
INK				pmax	pmax		
	comp=Z,55nm,1.6s						
I48A	Sherman Twp	65.85	309	P	P	01 43 09.5	-0.9
	baz=52						
S59A	Mechanicsville	65.90	300	P	P	01 43 10.8	0.0
	baz=53						
T60A	Surry	65.92	299	P	P	01 43 10.3	-0.6
	baz=53						
F45A	CMU Biological	65.95	311	P	P	01 43 09.8	-1.2
	baz=52						
GLMI	Grayling	65.98	310	P	P	01 43 09.8	-1.5
	baz=52						
MOKO	MOKOCHONG	66.01	76	eP	P	01 43 11.3	-0.5
MOKO				IAmb	IAmb	01 43 14.4	
	comp=Z,37nm,0.9s						
R58A	Rapidan	66.02	301	P	P	01 43 10.8	-0.8
	baz=53						
J49A	Marlette	66.04	308	P	P	01 43 11.0	-0.6
	baz=52						
K50A	Casco	66.10	307	P	P	01 43 10.6	-1.4
	baz=52						
M52A	Chesterland	66.10	305	P	P	01 43 11.9	-0.2
	baz=52						
R58B	Mineral	66.14	300	P	P	01 43 12.2	-0.2
	baz=53,SNR=7.3						
U61A	Possum Corner	66.22	298	P	P	01 43 12.4	-0.5
	baz=53						
N53A	Lisbon	66.24	304	P	P	01 43 11.8	-1.2
	baz=52,SNR=5.2						
Q56A	Snyder Ridge,	66.31	302	P	P	01 43 12.6	-0.8
	baz=52,SNR=5.8						
E43A	Lone Tree Farm	66.33	312	P	P	01 43 13.0	-0.5
	baz=51						
MCWV	Mont Chateau	66.34	303	P	P	01 43 13.6	0.0
	baz=52,SNR=7.5						
R57A	Stanardsville	66.35	301	P	P	01 43 13.1	-0.6
	baz=52,SNR=6.1						
LZH	Lanzhou	66.38	62	eP	P	01 43 14.8	+0.6
LZH				pP	sP	01 43 18.0	-1.0
LZH				sP	pP	01 43 19.5	+1.8
LZH				pmax	pmax		
	comp=Z,41nm,1.2s						
LZH				pmax	pmax		
	comp=Z,270nm,6.3s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
LZH				LR	LR		
	comp=Z,1µm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,17.3s						
P55A	Reedsville	66.42	303	P	P	01 43 14.5	+0.3
	baz=52,SNR=6.5						
G45A	Suttons Bay	66.43	310	P	P	01 43 14.3	+0.2
	baz=52						
J48A	Bridge Port	66.45	308	P	P	01 43 09.6	-4.7
	baz=52						
S58A	Poland Farm, P	66.47	300	P	P	01 43 14.3	-0.2
	baz=52,SNR=7.9						
H46A	Fife Lake	66.48	310	P	P	01 43 14.3	-0.2
	baz=52						
YKW3	Yellowknife Ar	66.49	337	eP	P	01 43 13.7	-0.5
	comp=Z,71nm,1.5s						
C40A	Isle Royale Na	66.50	314	P	P	01 43 13.9	-0.6
	baz=51,SNR=5.1						
YKA	Yellowknife Ar	66.54	337	P	P	01 43 15.0	+0.5
	comp=Z,4.2nm,0.6s,baz=41,slow=6.2,SNR=47						
YKA				LR	LR	02 13 04.4	
	comp=Z,83nm,18.4s,baz=40,slow=37						
YKA	Yellowknife Ar	66.54	337	P	P	01 43 15.0	+0.5
T59A	Double "B" Far	66.54	299	P	P	01 43 15.0	+0.1
	baz=52						
K49A	Clarkson	66.57	307	P	P	01 43 15.0	-0.1
	baz=52						
U60A	Pendleton	66.59	299	P	P	01 43 15.2	0.0
	baz=52						
V61A	Roper	66.63	298	P	P	01 43 15.8	+0.2
	baz=52						
L50A	Kingsville	66.65	306	P	P	01 43 15.1	-0.5
	baz=52						
M51A	Elyria	66.72	305	P	P	01 43 15.8	-0.3
	baz=52						
PLIO	Pelee Island,	66.73	306	P	P	01 43 16.1	+0.1
	baz=52						
D41A	Chassel	66.74	313	P	P	01 43 15.9	-0.1
	baz=51						
N52A	McGinn's Farm,	66.75	305	P	P	01 43 16.3	+0.1
	baz=52						
P54A	Burton	66.76	303	P	P	01 43 15.9	-0.4
	baz=52						
O53A	New Philadelph	66.81	304	P	P	01 43 16.9	+0.3
	baz=52						
R56A	Bull Pasture M	66.83	301	P	P	01 43 16.8	-0.1
	baz=52,SNR=6.8						
BILL	Bilibino	66.88	11⇓	eP	P	01 43 16.9	+0.3
BILL				e		01 43 47.6	
BILL				e		01 45 45.7	
BILL				pmax	pmax		
	comp=Z,26nm,1.2s						
BILL				MLR	MLR		
	comp=Z,736nm,20.0s						
Q55A	Buckhannon	66.89	302	P	P	01 43 17.2	0.0
	baz=52,SNR=5.4						
S57A	Dark Hollow, R	66.94	301	P	P	01 43 17.2	-0.3
	baz=52						
K48A	Perry	66.95	308	P	P	01 43 17.5	0.0
	baz=52						
AAM	Ann Arbor	66.99	307	P	P	01 43 18.1	+0.4
	baz=52						
I46A	Reed City	66.99	309	P	P	01 43 18.1	+0.3
	baz=51						
U59A	Littleton	67.07	299	P	P	01 43 18.5	+0.2
	baz=52,SNR=6.1						
J47A	Sunmer	67.08	308	P	P	01 43 18.8	+0.5
	baz=51						
N51A	Ashland	67.09	305	P	P	01 43 18.5	+0.1
	baz=52						
V60A	Jim Taylor Roa	67.09	298	P	P	01 43 19.0	+0.6

	baz=52						
L49A	Milan	67.17	307	P	P	01 43 19.3	+0.4
	baz=51						
T58A	Grand View Acr	67.18	300	P	P	01 43 19.1	0.0
	baz=52						
M50A	Fremont	67.19	306	P	P	01 43 20.1	+1.1
	baz=52						
O52A	Adamsville	67.27	304	*e*P	P	01 43 20.5	+0.9
	comp=Z,165nm,1.9s						
O52A	Adamsville	67.27	304	P	P	01 43 19.6	+0.1
	baz=52,SNR=5.6						
W61A	Ground Anchor	67.28	297	P	P	01 43 20.8	+1.1
	baz=52						
SAIH	SAIHA	67.30	80	*e*P	P	01 43 19.0	-1.2
SAIH				IAmb	IAmb	01 43 23.4	
	comp=Z,29nm,0.6s						
F42A	Maple Grove Fa	67.33	312	P	P	01 43 20.2	+0.3
	baz=50						
R55A	Marlinton	67.35	302	P	P	01 43 20.9	+0.7
	baz=52,SNR=7.5						
Q54A	Coxs Mills	67.36	303	P	P	01 43 20.7	+0.6
	baz=52						
I45A	Fountain	67.38	310	P	P	01 43 21.1	+0.9
	baz=51						
S56A	Natural Bridge	67.38	301	P	P	01 43 20.6	+0.3
	baz=52						
P53A	Whipple	67.38	303	P	P	01 43 20.4	+0.1
	baz=52,SNR=8.0						
BTO	Baotou	67.44	55	*e*P	P	01 43 18.8	-2.0
J46A	Howard City	67.48	309	P	P	01 43 20.5	-0.3
	baz=51						
TOLK	Toolik Lake Re	67.48	353	P	P	01 43 20.1	-0.4
	baz=13,SNR=15						
U58A	Oxford	67.53	299	P	P	01 43 21.3	+0.1
	baz=52,SNR=8.2						
K47A	Vermontville	67.53	308	P	P	01 43 20.8	-0.4
	baz=51						
T57A	Hurt	67.60	300	P	P	01 43 22.2	+0.5
	baz=52						
N50A	Nevada	67.64	305	P	P	01 43 22.2	+0.3
	baz=51						
L48A	N Adams	67.66	307	P	P	01 43 22.5	+0.5
	baz=51						
EYMN	Ely	67.69	315	P	P	01 43 22.4	+0.3
	baz=49,SNR=5.7						
M49A	Liberty Center	67.69	306	P	P	01 43 22.7	+0.5
	baz=51						
O51A	Pataskala	67.71	305	P	P	01 43 22.1	-0.3
	baz=51,SNR=5.7						
V59A	Middlesex	67.72	299	P	P	01 43 22.6	+0.2
	baz=52						
ZEA	Zeya	67.73	36	*e*P	P	01 43 22.6	+0.4
ZEA				pmax	pmax		
	comp=Z,48nm,1.8s						
ZEA				MLR	MLR		
	comp=Z,4µm,15.0s						
ZEA				MLR	MLR		
	comp=E,2µm,14.0s						
ZEA				MLR	MLR		
	comp=N,2µm,15.0s						
P52A	Corning	67.74	304	P	P	01 43 22.9	+0.3
	baz=51						
W60A	Pink Hill	67.82	298	P	P	01 43 23.7	+0.7
	baz=52						
Q53A	Leroy	67.86	303	P	P	01 43 23.8	+0.5
	baz=51						
S55A	Lewisburg	67.90	301	P	P	01 43 23.5	-0.2
	baz=52,SNR=6.2						
FFC	Flin Flon	67.92	326	*e*P	P	01 43 24.0	+0.6
	comp=N,64nm,1.6s						
FFC	Flin Flon	67.92	326	*e*P	P	01 43 24.0	+0.6
FFC				pmax	pmax		
	comp=Z,64nm,1.6s						
R54A	Victor	67.95	302	P	P	01 43 24.1	+0.2
	baz=51,SNR=5.7						
H43A	Windswept, Lux	67.95	311	P	P	01 43 24.5	+0.7
	baz=50						
K46A	Dorr	67.97	308	P	P	01 43 24.2	+0.3
	baz=51						
U57A	Blanch	68.00	300	P	P	01 43 24.5	+0.3
	baz=52,SNR=7.8						
T56A	Rocky Mt	68.07	301	P	P	01 43 24.9	+0.2
	baz=51,SNR=6.2						
L47A	Sherwood	68.09	307	P	P	01 43 24.8	+0.1
	baz=51						
EPYK	Eagle Plains	68.12	348	P	P	01 43 24.1	-0.4
	baz=23						
N49A	Columbus Grove	68.16	306	P	P	01 43 25.5	+0.4
	baz=51						
BLA	Blacksburg	68.20	301	P	P	01 43 26.0	+0.5
	baz=51						
HHC	Hu-ho-hao-te	68.20	54	P	P	01 43 24.9	-0.7
HHC				S	S	01 52 26.5	+0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,25nm,5.0s						
HHC				LR	LR		
	comp=Z,2µm,15.0s						
HHC				LR	LR		
	comp=Z,2µm,16.3s						
W59A	Clinton	68.22	298	P	P	01 43 25.7	+0.1
	baz=51						
Q52A	Bidwell	68.24	303	P	P	01 43 26.0	+0.3
	baz=51						
V58A	Windy Hill, Pi	68.26	299	P	P	01 43 25.9	+0.1
	baz=51						
O50A	Cable	68.31	305	P	P	01 43 26.2	0.0
	baz=51						
ULM	Lac du Bonnet	68.32	319	P	P	01 43 27.0	+1.0
	comp=Z,11nm,0.8s,baz=50,slow=5.9,SNR=11						
ULM				LR	LR	02 12 40.0	
	comp=Z,557nm,18.7s,baz=38,slow=35						
ULM	Lac du Bonnet	68.32	319	P	P	01 43 27.0	+1.0
S54A	Dingess, Beckl	68.39	302	P	P	01 43 26.8	+0.2
	baz=51						
PALK	Pallekele	68.39	101	LR	LR	02 16 43.6	
	comp=Z,111nm,18.9s,baz=297,slow=39						
P51A	Williamsport	68.40	304	P	P	01 43 27.2	+0.5
	baz=51						
R53A	Hurricane	68.45	303	P	P	01 43 27.1	+0.1
	baz=51,SNR=5.9						
E38A	The Farm, Brul	68.60	314	P	P	01 43 28.3	+0.5
	baz=49						
N48A	Decatur	68.69	306	P	P	01 43 27.6	-0.9
	baz=50						
O49A	Covington	68.71	306	P	P	01 43 27.8	-0.9
	baz=50						
U56A	King	68.71	300	P	P	01 43 28.7	0.0
	baz=51						
M47A	Cromwell	68.72	307	P	P	01 43 29.0	+0.4
	baz=50						
G40A	Rib Lake	68.76	313	P	P	01 43 29.1	+0.3
	baz=49						
P50A	Jamestown	68.76	305	P	P	01 43 28.7	-0.3
	baz=51						
Q51A	Peebles	68.86	304	P	P	01 43 29.9	+0.3
	baz=51						
R52A	Catlettsburg	68.87	303	P	P	01 43 30.2	+0.5
	baz=51						
SEY	Seymchan	68.91	19	⇓*e*P	P	01 43 30.1	+0.7
I42A	Draeger Farm,	68.96	311	P	P	01 43 29.6	-0.5
	baz=50						
S53A	Williamson	68.96	302	P	P	01 43 30.2	-0.1
	baz=51						
OPO	Ambohidratompo	68.99	146	LR	LR	02 16 50.0	
	comp=Z,93nm,18.7s,baz=162,slow=39						
T54A	Tazewell	69.01	301	P	P	01 43 30.7	0.0
	baz=51						
U55A	TA2, Sparta	69.03	301	P	P	01 43 30.3	-0.5
	baz=51,SNR=7.4						
O48A	Farmland	69.15	306	P	P	01 43 31.3	-0.1
	baz=50						
X58A	Rowland	69.17	298	P	P	01 43 31.9	+0.3
	baz=51						
W57A	Gilead	69.22	299	P	P	01 43 32.0	+0.2
	baz=51						
G39A	Holcombe	69.26	313	P	P	01 43 31.6	-0.4
	baz=49,SNR=6.4						
Q50A	Georgetown	69.35	304	P	P	01 43 31.7	-0.9
	baz=50						
P49A	Miami Univ. Ec	69.35	305	P	P	01 43 32.6	0.0
	baz=50						
K43A	Burlington	69.40	310	P	P	01 43 33.0	+0.1
	baz=49						
R51A	Hillsboro	69.46	304	P	P	01 43 34.2	+0.9
	baz=50						
U54A	Nelsons Funny	69.50	301	P	P	01 43 33.5	-0.2
	baz=50						
L44A	Lake County Fo	69.51	309	P	P	01 43 33.5	0.0
	baz=50						
CD2	Chengdu	69.52	67	⇓*i*P	P	01 43 32.3	-1.5
CD2				S	S	01 52 42.8	+1.3
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,320nm,3.9s						
CD2				LR	LR		
	comp=Z,940nm,16.3s						
CD2				LR	LR		
	comp=Z,700nm,15.3s						
CD2				LR	LR		
	comp=Z,1µm,13.9s						
S52A	Salyersville	69.55	303	P	P	01 43 33.6	-0.3
	baz=50,SNR=9.4						
V55A	Taylorsville	69.55	300	P	P	01 43 33.8	-0.1
	baz=51,SNR=5.1						
W56A	Indian Trail	69.60	299	P	P	01 43 35.1	+0.9
	baz=51						
AGMN	Agassiz Nation	69.64	318	*e*P	P	01 43 34.7	+0.5
	comp=Z,35nm,1.7s						
T53A	Wise	69.66	302	P	P	01 43 35.0	+0.4
	baz=50						
Y58A	Scranton	69.79	298	P	P	01 43 35.6	+0.2
	baz=51						
Q49A	Aurora	69.80	305	P	P	01 43 34.5	-0.8
	baz=50						
T52A	Hallie	69.85	302	P	P	01 43 36.3	+0.5
	baz=50						
R50A	Paris	69.92	304	P	P	01 43 36.5	+0.3
	baz=50						
V54A	Nebo	70.06	301	P	P	01 43 37.0	0.0
	baz=50,SNR=8.0						
KMSC	Kings Mountain	70.07	300	P	P	01 43 37.4	+0.3
	baz=50						
U53A	Fall Branch	70.08	301	P	P	01 43 37.7	+0.5
	baz=50						
M44A	Midewin, Midew	70.10	308	P	P	01 43 38.0	+0.8
	baz=49						
Z58A	St. Stephen	70.25	297	P	P	01 43 38.6	+0.4
	baz=50						
X56A	White Oak	70.30	299	P	P	01 43 38.0	-0.5
	baz=50,SNR=6.6						
JFWS	Jewell Farm	70.33	311	P	P	01 43 38.2	-0.4
	baz=48						
Q48A	North Vernon	70.35	305	P	P	01 43 38.7	0.0
	baz=50						
T51A	Gray	70.53	303	P	P	01 43 40.8	+0.9
	baz=50						
U52A	Thorn Hill	70.55	302	P	P	01 43 40.9	+0.9
	baz=50						
TZTN	Tazewell	70.56	302	P	P	01 43 40.6	+0.4
	baz=50						
L42A	Oliver, Polo	70.61	310	P	P	01 43 40.3	0.0
	baz=48						
W54A	Cherokee Point	70.65	300	P	P	01 43 40.6	-0.1
	baz=50,SNR=5.1						
V53A	Saluda	70.67	301	P	P	01 43 41.0	+0.2
	baz=50						
X55A	Gracelyn & Ava	70.69	299	P	P	01 43 41.3	+0.4
	baz=50						
POKR	Poker Plat Res	70.72	352	P	P	01 43 40.6	0.0
	baz=14						
Z57A	Bowman	70.85	298	P	P	01 43 42.9	+1.0
	baz=50						
XAN	Xi'an	70.91	61	P	P	01 43 42.3	0.0
XAN				pP	sP	01 43 46.9	-0.3
XAN				sP	pP	01 43 49.3	+3.4
XAN				PcP	PcP	01 44 02.9	+0.1
XAN				S	S	01 52 53.4	-4.3
XAN				SKS	SKSac	01 53 38.8	-6.0
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN				pmax	pmax		
	comp=Z,120nm,3.9s						
XAN				LR	LR		
	comp=Z,910nm,16.5s						
XAN				LR	LR		
	comp=Z,690nm,19.0s						
XAN				LR	LR		
	comp=Z,930nm,17.1s						
U51A	La Follette	70.96	302	P	P	01 43 42.6	+0.1
	baz=50						
ILAR	Eielson Array	71.00	351	P	P	01 43 43.2	+0.9
	comp=Z,3.7nm,0.9s,baz=9.5,slow=5.5,SNR=31						
COLA	College	71.00	352	*de*P	P	01 43 43.2	+1.0
COLA				pmax	pmax		
	comp=Z,27nm,1.5s						
V52A	Sevierville	71.04	302	P	P	01 43 43.4	+0.3
	baz=50						
T50A	Nancy	71.04	303	P	P	01 43 43.2	+0.2
	baz=49,SNR=8.5						
X54A	Belton	71.11	300	P	P	01 43 42.7	-0.7
	baz=50						
WCI	Wyandotte Cave	71.14	305	*e*P	P	01 43 44.3	+0.8
	comp=Z,9.6nm,0.8s						
WCI	Wyandotte Cave	71.14	305	*e*P	P	01 43 44.3	+0.8
WCI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WCI	Wyandotte Cave	71.14	305	P	P	01 43 43.8	+0.2
	baz=49						
Y55A	Saluda	71.18	299	P	P	01 43 44.3	+0.4
	baz=50						
W53A	Cullowhee	71.21	301	P	P	01 43 44.1	-0.1
	baz=50						
Z56A	Williston	71.26	298	P	P	01 43 44.2	-0.1
	baz=50						
TKL	Tuckaleechee C	71.27	302	LR	LR	02 14 24.5	
	comp=Z,1µm,19.1s,baz=342,slow=35						
HDA	Harding Lake	71.36	351	P	P	01 43 44.7	+0.2
	baz=15						
MA2	Magadan	71.38	21	*de*P	P	01 43 46.6	+1.9
MA2				pmax	pmax		
	comp=Z,65nm,1.6s						
BJI	Beijing	71.41	52	P	P	01 43 47.3	+2.1
BJI				S	S	01 53 06.5	+3.3
BJI				pmax	pmax		
	comp=Z,8.0nm,1.8s						
BJI				LR	LR		
	comp=Z,630nm,14.6s						
BJI				LR	LR		
	comp=Z,530nm,18.8s						
BJI				LR	LR		
	comp=Z,580nm,23.7s						
T49A	Edmonton	71.41	304	P	P	01 43 44.7	-0.6
	baz=49						
L40A	Anamosa	71.44	311	P	P	01 43 45.1	-0.2
	baz=48						
U50A	Jamestown	71.44	303	P	P	01 43 45.4	0.0
	baz=49						
M41A	Milan	71.52	310	P	P	01 43 46.2	+0.4
	baz=48						
V51A	Loudon	71.53	302	P	P	01 43 46.1	+0.1
	baz=49						
X53A	Estanollee	71.72	300	P	P	01 43 46.4	-0.8
	baz=49,SNR=5.4						
MDND	Maddock	71.75	319	P	P	01 43 46.8	-0.4
	baz=45						
Y54A	Tignall	71.75	299	P	P	01 43 47.4	+0.1
	baz=50,SNR=7.1						
156A	Sylvania	71.77	298	P	P	01 43 47.4	0.0
	baz=50						
OLIL	Olney	71.87	306	*e*P	P	01 43 48.5	+0.6
	comp=Z,43nm,1.5s						
U49A	Red Boiling Sp	71.95	303	P	P	01 43 48.2	-0.2
	baz=49,SNR=6.1						
X52A	Dahlonega	72.03	301	P	P	01 43 48.7	-0.3
	baz=49						
V50A	Pikevile	72.08	302	P	P	01 43 49.4	+0.1
	baz=49						
P43A	Skaggs, Pawnee	72.10	308	P	P	01 43 48.9	-0.4
	baz=48						
N41A	Harden Midland	72.14	309	P	P	01 43 49.7	+0.1
	baz=48						
W51A	Cleveland	72.21	302	P	P	01 43 50.6	+0.6
	baz=49						
Z54A	Sparta	72.25	299	P	P	01 43 50.4	+0.1
	baz=49						
Y53A	Monroe	72.32	300	P	P	01 43 50.6	-0.2
	baz=49						
155A	Kite	72.41	298	P	P	01 43 51.9	+0.6
	baz=49						
N40A	Mertquake, Sal	72.43	310	P	P	01 43 50.8	-0.4
	baz=47						
T47A	Sharon Grove	72.44	304	P	P	01 43 51.0	-0.4
	baz=48,SNR=8.9						
KMI	Kunming	72.51	72	P	P	01 43 51.8	-0.5
KMI				pP	pP	01 43 54.3	-1.6
KMI				pmax	pmax		
	comp=Z,24nm,1.6s						
KMI				pmax	pmax		
	comp=Z,220nm,3.5s						
KMI				LR	LR		
	comp=Z,370nm,18.0s						
KMI				LR	LR		
	comp=Z,340nm,26.5s						
KMI				LR	LR		
	comp=Z,610nm,25.2s						
V49A	McMinnville	72.51	303	P	P	01 43 51.8	-0.1
	baz=49,SNR=7.1						
W50A	Signal Mountai	72.52	302	P	P	01 43 51.7	-0.3
	baz=49,SNR=5.2						
GOGA	Godfrey	72.54	300	P	P	01 43 52.6	+0.5
	baz=49						
BOSA	Boshof	72.54	169	P	P	01 43 51.2	-0.8
	comp=Z,4.8nm,0.8s,baz=340,slow=6.0,SNR=8.2						
BOSA				LR	LR	02 18 57.5	
	comp=Z,388nm,18.6s,baz=352,slow=38						
Y52A	Lilburn	72.62	300	P	P	01 43 53.1	+0.6
	baz=49						
SCIA	State Center	72.63	312	P	P	01 43 52.4	-0.1
	baz=47						
Z53A	Monticello	72.69	299	P	P	01 43 53.0	+0.1
	baz=49,SNR=5.3						
CAST	Castle Rocks	72.83	353	*e*P	P	01 43 53.4	+0.1
	comp=Z,59nm,1.6s						
154A	Montrose	72.83	299	P	P	01 43 53.7	-0.1
	baz=49						
255A	Hazlehurst	72.87	298	P	P	01 43 53.7	-0.3
	baz=49						
T46A	Princeton	72.87	305	P	P	01 43 53.6	-0.4
	baz=48						
U47A	Clarksville	72.91	304	P	P	01 43 53.7	-0.5
	baz=48,SNR=14						
KLR	Kul'dur	72.93	37	*d i*P	P	01 43 55.0	+0.9
KLR				pmax	pmax		
	comp=Z,31nm,1.5s						
356A	Blackshear	73.04	297	P	P	01 43 55.2	+0.1
	baz=49						
V48A	Smith Brothers	73.09	303	P	P	01 43 55.1	-0.2
	baz=48,SNR=9.5						
W49A	Belvidere	73.16	302	P	P	01 43 55.6	-0.1
	baz=48						
ECSD	EROS Data Cent	73.17	315	P	P	01 43 55.7	0.0
	baz=45,SNR=17						
X50B	Fort Payne	73.22	302	P	P	01 43 55.6	-0.5
	baz=48						
Y51A	Rockmart	73.22	301	P	P	01 43 55.9	-0.2
	baz=49,SNR=7.3						
153A	Fort Valley	73.27	299	P	P	01 43 56.4	0.0
	baz=49						
Z52A	Williamson	73.28	300	P	P	01 43 55.6	-0.9
	baz=49						
T45A	Paducah	73.33	305	P	P	01 43 56.6	-0.1
	baz=48						
456A	Hilliard	73.36	297	P	P	01 43 57.5	+0.5
	baz=49						
254A	Abbeville	73.38	298	P	P	01 43 57.4	+0.3
	baz=49						
DGMT	Dagmar	73.41	322	P	P	01 43 56.6	-0.4
	baz=42						
WVT	Waverly	73.44	304	*e*P	P	01 43 57.7	+0.4
	comp=Z,107nm,2.0s						
WVT	Waverly	73.44	304	*e*P	P	01 43 57.7	+0.4
WVT				pmax	pmax		
	comp=Z,107nm,2.0s						
WVT	Waverly	73.44	304	P	P	01 43 57.0	-0.3
	baz=48						
V47A	Nunnelly	73.46	304	P	P	01 43 57.6	+0.1
	baz=48						
355A	Pearson	73.50	298	P	P	01 43 57.2	-0.5
	baz=49						
U46A	Springville	73.50	305	P	P	01 43 57.4	-0.2
	baz=48						
W48A	Pulaski	73.56	303	P	P	01 43 57.4	-0.7
	baz=48						
X49A	Woodville	73.60	302	P	P	01 43 58.0	-0.3
	baz=48,SNR=5.6						
Y50A	Piedmont	73.65	301	P	P	01 43 59.0	+0.4
	baz=48						
Z51A	Franklin	73.68	300	P	P	01 43 59.1	+0.3
	baz=48						
GRNR	Gornyy	73.74	34	*e*P	P	01 43 58.9	0.0
152A	Waverly Hall	73.82	300	P	P	01 43 59.9	+0.3
	baz=48						
V46A	Holladay	73.83	304	P	P	01 43 59.3	-0.3
	baz=48,SNR=11						
253A	Americus	73.84	299	P	P	01 43 59.9	+0.1
	baz=48						
SUSD	Miller	73.86	317	P	P	01 43 59.7	0.0
	baz=44						
CN2	Changchun	73.87	44	*e*P	P	01 44 00.0	+0.3
CN2				*e*sP	sP	01 44 08.0	+3.3
CN2				*e*S	SKiKP	01 53 26.1	-2.3
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,990nm,15.0s						
CN2				LR	LR		
	comp=Z,570nm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,16.0s						
W47A	Westpoint	73.89	303	P	P	01 43 60.0	0.0
	baz=48						
CHTO	Chiang Mai	73.92	79	*e*P	P	01 44 00.1	-0.4
	comp=Z,37nm,1.4s						
CHTO	Chiang Mai	73.92	79	*e*P	P	01 44 00.1	-0.4
CHTO				pmax	pmax		
	comp=Z,37nm,1.4s						
758A	Lake Helen	73.97	295	P	P	01 44 00.9	+0.3
	baz=49						
455A	Stateville	74.00	297	P	P	01 44 01.0	+0.3
	baz=49						
657A	Interlachen	74.01	296	P	P	01 44 01.3	+0.5
	baz=49						
X48A	Hartselle	74.08	302	P	P	01 44 00.6	-0.5
	baz=48,SNR=13						
556A	Lake Butler	74.08	296	P	P	01 44 01.0	-0.2
	baz=49						
Y49A	Blount Mountai	74.09	302	P	P	01 44 01.1	-0.1
	baz=48						
CMAR	Chiang Mai Arr	74.16	80	P	P	01 44 01.5	-0.3
	comp=Z,3.4nm,0.5s,baz=305,slow=8.8,SNR=17						
CMAR				LR	LR	02 24 04.7	
	comp=Z,171nm,18.2s,baz=329,slow=42						
CMAR	Chiang Mai Arr	74.16	80	*i* P	P	01 44 04.3	+2.5
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CCM	Cathedral Cave	74.16	308	*e*P	P	01 44 01.5	0.0
	comp=Z,78nm,2.0s						
CCM	Cathedral Cave	74.16	308	*e*P	P	01 44 01.5	0.0
CCM				pmax	pmax		
	comp=Z,78nm,2.0s						
CCM	Cathedral Cave	74.16	308	P	P	01 44 01.5	0.0
	baz=47						
Z50A	Ashland	74.19	301	P	P	01 44 02.1	+0.3
	baz=48						
SKAG	Skagway	74.27	344	*e*P	P	01 44 01.7	-0.1
	comp=Z,29nm,1.3s						
252A	Lumpkin	74.27	299	P	P	01 44 02.2	-0.1
	baz=48						
151A	Opelika	74.29	300	P	P	01 44 02.7	+0.3
	baz=48						
GYA	Guiyang	74.33	68	⇑*i*P	P	01 44 05.1	+2.2
GYA				S	S	01 53 36.3	-0.8
GYA				SKS	SKSac	01 54 08.5	-2.4
GYA				SS	SS	01 58 28.3	+5.9
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA				pmax	pmax		
	comp=Z,120nm,5.5s						
GYA				LR	LR		
	comp=Z,440nm,16.5s						
GYA				LR	LR		
	comp=Z,360nm,16.2s						
GYA				LR	LR		
	comp=Z,530nm,17.3s						
PLAL	Pickwick Lake	74.36	303	*e*P	P	01 44 03.3	+0.5
	comp=Z,76nm,1.5s						
859A	Kempfer Cattle	74.37	294	P	P	01 44 03.4	+0.6
	baz=49						
353A	Camilla	74.37	298	P	P	01 44 02.9	0.0

	baz=48						
555A	McAlpin	74.37	297	P	P	01 44 03.6	+0.7
	baz=48						
454A	Quitman	74.41	298	P	P	01 44 03.8	+0.7
	baz=48						
W46A	Michie	74.44	304	P	P	01 44 03.8	+0.6
	baz=48						
Y48A	Jasper	74.52	302	P	P	01 44 04.0	+0.3
	baz=48						
TIA	Tai'an	74.53	55	P	P	01 44 04.6	+0.9
TIA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIA				pmax	pmax		
	comp=Z,120nm,3.9s						
TIA				LR	LR		
	comp=Z,140nm,18.5s						
TIA				LR	LR		
	comp=Z,190nm,15.0s						
TIA				LR	LR		
	comp=Z,170nm,17.1s						
X47A	Russelville	74.54	303	P	P	01 44 03.1	-0.7
	baz=48,SNR=5.2						
757A	Oxford	74.56	295	P	P	01 44 05.0	+1.0
	baz=48						
656A	Willston	74.59	296	P	P	01 44 05.2	+1.1
	baz=48						
Z49A	Columbiana	74.61	301	P	P	01 44 04.3	+0.1
	baz=48,SNR=7.0						
251A	Midway	74.63	300	P	P	01 44 05.2	+0.8
	baz=48						
150A	Eclectic	74.68	300	P	P	01 44 05.1	+0.4
	baz=48						
DWPF	Disney Wildern	74.69	294	P	P	01 44 04.9	+0.1
	baz=49						
959A	Okeechobee	74.70	293	P	P	01 44 06.1	+1.3
	baz=49						
352A	Blakely	74.74	299	P	P	01 44 05.3	+0.3
	baz=48						
EYAK	Cordova Ski Ar	74.95	350	eP	P	01 44 06.8	+1.1
	comp=Z,56nm,1.4s						
X46A	Booneville	74.95	303	P	P	01 44 06.2	0.0
	baz=47						
LRAL	Lakeview Retre	75.00	301	eP	P	01 44 07.1	+0.6
	comp=Z,78nm,1.7s						
LRAL	Lakeview Retre	75.00	301	P	P	01 44 06.1	-0.4
	baz=48,SNR=7.9						
149A	Jones	75.17	301	P	P	01 44 08.1	+0.6
	baz=48						
060Z	West Palm Beac	75.22	292	P	P	01 44 09.2	+1.3
	baz=48						
250A	Grady	75.25	300	P	P	01 44 08.5	+0.5
	baz=48						
553A	Crawfordville	75.28	298	P	P	01 44 08.5	+0.4
	baz=48						
OXF	Oxford	75.48	304	P	P	01 44 09.2	-0.1
	baz=47						
148A	Greensboro	75.62	301	P	P	01 44 10.5	+0.4
	baz=47						
BGNE	Belgrade	75.62	314	P	P	01 44 09.9	-0.1
	baz=44						
LAO	LASA Array	75.66	322	P	P	01 44 09.6	-0.6
	baz=40,SNR=8.9						
350A	Dozier	75.67	300	P	P	01 44 11.0	+0.7
	baz=48						
249A	Camden	75.79	301	P	P	01 44 11.4	+0.3
	baz=47						
059Z	Ave Maria	75.86	293	P	P	01 44 12.4	+0.8
	baz=48						
EGMT	Eagleton	76.16	325	P	P	01 44 13.2	+0.2
	baz=39,SNR=13						
349A	Repton	76.26	300	P	P	01 44 14.8	+1.1
	baz=47						
U40A	Yellville	76.26	307	P	P	01 44 14.3	+0.6
	baz=46,SNR=9.1						
X43A	Marvell	76.36	305	P	P	01 44 15.0	+0.7
	baz=46						
KSU1	Kansas State U	76.44	311	P	P	01 44 14.9	+0.2
	baz=44,SNR=5.7						
RSSD	Black Hills	76.58	319	eP	P	01 44 16.6	+0.9
	comp=Z,56nm,1.8s						
RSSD	Black Hills	76.58	319	eP	P	01 44 16.6	+0.9
RSSD				pmax	pmax		
	comp=Z,56nm,1.8s						
RSSD	Black Hills	76.58	319	P	P	01 44 15.8	+0.2
	baz=41						
WHN	Wuhan	76.66	61	P	P	01 44 17.0	+1.0
W41B	Gary Mavity, V	76.72	306	P	P	01 44 16.4	+0.1
	baz=46,SNR=10						
USRK	Ussuriysk Ar.	76.80	41	P	P	01 44 16.1	-0.4
	comp=Z,4.7nm,1.0s,baz=316,slow=5.3,SNR=7.6						
USRK				LR	LR	02 22 57.3	
	comp=Z,852nm,19.2s,baz=321,slow=40						
X40A	Basin Creek Fa	77.55	306	P	P	01 44 22.1	+1.1
	baz=46						
W39A	Magazine	77.61	307	P	P	01 44 21.6	+0.3
	baz=45,SNR=7.3						
MIAR	Mount Ida	77.94	306	P	P	01 44 23.4	+0.2
	baz=45,SNR=15						
OGNE	Ogallala	77.96	316	P	P	01 44 23.9	+0.6
	baz=42						
RLMT	Red Lodge	78.22	323	P	P	01 44 24.5	-0.3
	baz=38,SNR=8.4						
TUL1	Leonard	78.26	309	P	P	01 44 25.4	+0.5
	baz=44						
CBKS	Cedar Bluff	78.34	313	P	P	01 44 25.6	+0.3
	baz=43						
Z41A	Richland Creek	78.39	305	P	P	01 44 26.2	+0.6
	baz=45						
NJ2	Nanjing	78.43	57	eP	P	01 44 26.8	+0.9
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
KDAK	Kodiak Island	78.43	353	iP	P	01 44 28.5	+3.1
MSO	Missoula	78.84	326	P	P	01 44 28.3	+0.2
	baz=36						
BOZ	Bozeman (W)	78.87	324	P	P	01 44 27.6	-0.7
	baz=37,SNR=18						
K22A	Casper	78.88	319	P	P	01 44 28.1	-0.3
	baz=40,SNR=8.8						
NEW	Newport	78.90	329	P	P	01 44 28.8	+0.5
	baz=34,SNR=8.7						
PETK	Petropavlovsk-	78.91	21	P	P	01 44 27.2	-0.9
	comp=Z,3.1nm,0.9s,baz=112,slow=1.6,SNR=7.4						
PETK				LR	LR	02 24 11.5	
	comp=Z,930nm,19.2s,baz=331,slow=39						
PET	Petropavlovsk	79.24	21	eP	P	01 44 30.4	+0.5
PET				pmax	pmax		
	comp=Z,47nm,2.2s						
YSS	Yuzh-Sakhalins	79.31	33	eP	P	01 44 30.0	-0.4
	comp=Z,116nm,1.3s						
YSS	Yuzh-Sakhalins	79.31	33	⇓eP	P	01 44 30.6	+0.2
YSS				e		01 44 44.9	
YSS				eS	S	01 54 29.2	-1.3
YSS				pmax	pmax		
	comp=Z,300nm,2.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.2s						
YSS				smax	smax		
	comp=N,200nm,5.0s						
YSS				smax	smax		
	comp=E,100nm,8.0s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
YSS				MLR	MLR		
	comp=E,900nm,16.0s						
KSCO	Kaye Shedlock’	79.71	315	P	P	01 44 33.9	+0.9
	baz=41						
C09A	Chrisman Ranch	79.72	329	eP	P	01 44 33.5	+0.9
	comp=E,115nm,1.7s						
KSRS	Korea Array	79.77	48	P	P	01 44 32.5	-0.5
	comp=E,4.2nm,1.1s,baz=325,slow=4.7,SNR=9.9						
KSRS				LR	LR	02 23 21.8	
	comp=E,837nm,18.4s,baz=320,slow=38						
N23A	Red Feather La	79.95	318	P	P	01 44 35.2	+0.8
	baz=40,SNR=17						
BW06	Boulder Array	80.20	321	P	P	01 44 35.8	+0.1
	baz=38,SNR=11						
PDAR	Pinedale Array	80.20	321	P	P	01 44 36.0	+0.4
	comp=E,2.1nm,0.6s,baz=60,slow=5.3,SNR=15						
NATX	Nacogdoches	80.55	305	P	P	01 44 38.0	+0.6
	baz=44						
C06D	Leavenworth	80.56	331	P	P	01 44 37.7	+0.4
	baz=32						
SKR	Severo-Kuril’s	80.66	23	eP	P	01 44 41.6	+4.0
SKR				pmax	pmax		
	comp=Z,100nm,6.0s						
SKR				MLR	MLR		
	comp=Z,400nm,17.0s						
B05A	Bryant	80.69	332	P	P	01 44 37.7	-0.2
	baz=31						
WMOK	Wichita Mounta	80.79	310	P	P	01 44 39.6	+0.9
	baz=43,SNR=13						
Q24A	Divide	81.03	316	P	P	01 44 40.2	-0.1
	baz=40,SNR=7.3						
QIZ	Qiongzhong	81.46	72	P	P	01 44 44.6	+2.1
QIZ				S	S	01 54 55.8	+1.8
QIZ				LR	LR		
	comp=Z,290nm,11.8s						
QIZ				LR	LR		
	comp=Z,410nm,12.7s						
QIZ				LR	LR		
	comp=Z,530nm,20.6s						
BDFB	Brasilia	81.46	239	P	P	01 44 43.1	+0.7
	comp=Z,1.7nm,0.5s,baz=28,slow=11,SNR=4.3						
BDFB				LR	LR	02 21 00.9	
	comp=Z,225nm,18.0s,baz=58,slow=36						
O20A	White River Ci	81.64	319	P	P	01 44 43.9	+0.5
	baz=38,SNR=15						
D03D	Eldon	81.66	332	P	P	01 44 44.4	+1.4
	baz=30,SNR=7.1						
HLID	Hailey	81.69	325	P	P	01 44 44.1	+0.6
	baz=35,SNR=15						
D04E	Lakebay	81.85	332	P	P	01 44 44.4	+0.4
	baz=30						
WHTX	Lake Whitney,	82.03	307	P	P	01 44 46.3	+1.0
	baz=43						
T25A	Trinidad	82.04	315	P	P	01 44 46.6	+1.0
	baz=40,SNR=17						
SDCO	Great Sand Dun	82.14	316	P	P	01 44 47.2	+1.0
	baz=40						
E04D	Cinebar	82.32	331	P	P	01 44 47.5	+0.9
	baz=30						
SMLC	San Martn de	82.39	275	eP	P	01 44 47.2	-0.3
F05D	White Salmon	82.50	330	P	P	01 44 48.1	+0.5
	baz=31						
HKT	Hockley	82.55	304	eP	P	01 44 49.3	+1.3
	comp=Z,16nm,1.4s						
HKT	Hockley	82.55	304	eP	P	01 44 49.3	+1.3
HKT				pmax	pmax		
	comp=Z,16nm,1.4s						
ABTX	Abilene, Hawle	82.83	309	P	P	01 44 50.4	+0.9
	baz=42,SNR=7.9						
F04D	Rainier, OR	82.88	331	P	P	01 44 50.3	+0.8
	baz=30						
YUK	Yuzh-Kuril'sk	82.95	33c	iP	P	01 44 50.0	+0.2
YUK				e		01 47 59.1	
YUK				eS	S	01 55 08.9	+0.4
YUK				eSS	SS	02 00 32.5	+2.2
YUK				eSSS	SSS	02 03 55.1	
YUK				pmax	pmax		
	comp=Z,148nm,3.0s						
435B	Jarrell	82.99	306	P	P	01 44 51.2	+0.9
	baz=43						
G05D	Wamic, OR	83.00	330	P	P	01 44 50.7	+0.5
	baz=31						
ERM	Erimo	83.53	35d	eP	P	01 44 54.9	+2.0
ERM				pmax	pmax		
	comp=Z,30nm,1.3s						
MSTX	Muleshoe	83.57	312	P	P	01 44 53.6	+0.2
	baz=41						
DUG	Dugway, Tooele	83.72	322	P	P	01 44 54.8	+0.7
	baz=36,SNR=14						
G03D	McMinnville, O	83.73	331	P	P	01 44 53.6	-0.2
	baz=30						
I05D	Terrebonne, OR	83.78	329	P	P	01 44 55.2	+0.9
	baz=31						
MVCO	Mesa Verde	84.06	317	P	P	01 44 56.3	+0.3
	baz=38,SNR=14						
H04D	Lebanon	84.13	330	P	P	01 44 56.1	+0.1
	baz=30						
KULM	Kulim	84.19	88	eP	P	01 44 57.7	+1.0
	comp=Z,56nm,1.7s						
PTBC	PUERTO BERRIO,	84.20	273	eP	P	01 44 57.5	+0.6
ELK	Elko	84.34	324	LR	LR	02 24 32.3	
	comp=Z,636nm,18.1s,baz=38,slow=37						
JCT	Junction City	84.50	307	P	P	01 44 59.5	+1.4
	baz=42						
J05D	Fort Rock, OR	84.64	329	P	P	01 44 59.7	+0.9
	baz=31						
I04A	Tendick Farm,	84.64	330	P	P	01 44 59.2	+0.6
	baz=30						
GSI	Gunungsitoli	84.66	93	eP	P	01 44 59.1	0.0
	comp=Z,90nm,1.5s						
ANMO	Albuquerque	84.78	314	eP	P	01 45 00.7	+1.0
	comp=Z,48nm,1.7s						
ANMO	Albuquerque	84.78	314	eP	P	01 45 00.7	+1.0
ANMO				pmax	pmax		
	comp=Z,48nm,1.7s						
ANMO	Albuquerque	84.78	314	P	P	01 45 00.4	+0.7
	baz=39						
J04D	Umpqua Nationa	85.01	329	P	P	01 45 01.2	+0.5
	baz=30						
NORC	Norcasia	85.17	273	eP	P	01 45 03.0	+1.3
HELC	Santa Helena	85.22	274	eP	P	01 45 04.5	+2.1
ROSC	El Rosal	85.26	272	P	P	01 45 02.8	+0.2
	comp=Z,8.6nm,0.6s,baz=216,slow=7.0,SNR=5.0						
ROSC				LR	LR	02 20 37.2	
	comp=Z,382nm,19.8s,baz=52,slow=34						
ROSC	El Rosal	85.26	272	eP	P	01 45 03.7	+1.1
	comp=Z,16nm,1.3s						
MAJO	Matsushiro	85.72	42	eP	P	01 45 04.7	+0.5
	comp=Z,40nm,1.7s						
MAJO	Matsushiro	85.72	42	eP	P	01 45 04.7	+0.5
MAJO				pmax	pmax		
	comp=Z,40nm,1.7s						
MAT	Matsushiro	85.72	42	P	P	01 45 03.5	-0.6
MAT				S	S	01 55 35.0	-1.6
MJAR	Matsushiro Arr	85.72	42	P	P	01 45 03.4	-0.7
	comp=Z,4.1nm,1.0s,baz=311,slow=4.5,SNR=15						
MJAR				LR	LR	02 27 20.1	
	comp=Z,1µm,18.5s,baz=340,slow=38						
833A	Chaparral WMA,	85.86	306	P	P	01 45 05.5	+0.6
	baz=42						
L04D	Klamath Falls	85.96	329	P	P	01 45 05.4	0.0
	baz=30						
RREF	El Recreo	85.96	273	eP	P	01 45 08.5	+2.1
M04C	Macdoel	86.16	328	P	P	01 45 07.1	+0.7
	baz=31						
R11A	Troy Canyon, C	86.47	322	P	P	01 45 07.8	-0.2
	baz=34,SNR=7.8						
YBH	Yreka Blue Hor	86.53	329	LR	LR	02 25 22.5	
	comp=Z,380nm,19.3s,baz=12,slow=37						
ORTC	Ortega, Tolima	86.56	272	eP	P	01 45 10.0	+1.4
PLMC	San Jos del P	86.64	274	eP	P	01 45 10.6	+1.6
MNTX	Cornudas Mount	86.72	312	P	P	01 45 09.4	+0.3
	baz=39,SNR=11						
MACC	Macarena, Meta	86.75	270	eP	P	01 45 10.3	+0.8
WUAZ	Wupatki	86.81	318	P	P	01 45 09.8	+0.1
	baz=36,SNR=5.8						
121A	Cookes Peak, D	87.36	314	P	P	01 45 12.8	+0.4
	baz=38						
O03E	Paynes Creek	87.42	328	P	P	01 45 12.7	+0.2
	baz=31						
TXAR	Lajitas Array	87.58	309	P	P	01 45 15.0	+1.6
	comp=Z,2.2nm,0.8s,baz=65,slow=4.6,SNR=24						
TXAR				LR	LR	02 24 25.4	
	comp=Z,328nm,18.0s,baz=0.0,slow=36						
NVAR	Mina Array Bea	87.58	324	P	P	01 45 14.3	+0.9
	comp=Z,0.9nm,0.7s,baz=38,slow=4.2,SNR=5.5						
NVAR				LR	LR	02 26 53.4	
	comp=Z,635nm,18.3s,baz=59,slow=37						
TUC	Tucson	89.08	316	eP	P	01 45 21.2	+0.7
	comp=Z,48nm,1.8s						
TUC	Tucson	89.08	316	eP	P	01 45 21.2	+0.7
TUC				pmax	pmax		
	comp=Z,48nm,1.8s						
TUC	Tucson	89.08	316	P	P	01 45 21.4	+0.9
	baz=37						
CWC	Cottonwood Cre	89.15	323	P	P	01 45 21.6	+0.7
	baz=33						
MPMC	Manual Prospec	89.21	322	P	P	01 45 21.8	+0.6
	baz=33						
GMRC	Granite Mounta	89.44	320	P	P	01 45 22.9	+0.7
	baz=34						
GSC	Goldstone, Bar	89.54	322	P	P	01 45 23.0	+0.4
	baz=34						
IRM	Iron Mountain	89.72	320	P	P	01 45 23.9	+0.5
	baz=34						
Y12C	Blythe	89.76	319	P	P	01 45 24.4	+0.9
	baz=35						
ISA	Isabella, Lake	89.98	323	P	P	01 45 25.7	+1.1
	baz=32						
BELC	Belle Mtn. Jos	90.25	320	P	P	01 45 26.7	+0.7
	baz=34						
BC3	Big Chuckawall	90.28	320	P	P	01 45 26.9	+0.8
	baz=34						
214A	Organ Pipe Nat	90.38	317	P	P	01 45 27.5	+1.0
	baz=36						
EDW2	Edwards Air Fo	90.42	322	P	P	01 45 26.8	+0.1
	baz=33						
GLA	Glamis	90.47	319	P	P	01 45 27.0	0.0
	baz=35						
PFO	Pinyon Flats O	90.78	320	eP	P	01 45 30.2	+1.7
	comp=Z,36nm,1.8s						
PFO	Pinyon Flats O	90.78	320	eP	P	01 45 30.2	+1.7
PFO				pmax	pmax		
	comp=Z,35nm,1.8s						
PFO	Pinyon Flats O	90.78	320	P	P	01 45 28.5	0.0
	baz=34						
BFSC	Mount Baldy Ra	90.81	322	P	P	01 45 28.1	-0.5
	baz=33						
SWSC	Sam W. Stewart	91.02	320	P	P	01 45 29.5	+0.1
	baz=34						
MURC	Murrieta	91.13	321	P	P	01 45 30.0	0.0
	baz=33						
PKM	Mcpherson Peak	91.22	323	P	P	01 45 30.6	0.0
	baz=32						
MONP2	Monument Peak	91.36	320	P	P	01 45 30.9	-0.4
	baz=34						
IKP	In-Ko-Pah, Jac	91.41	320	P	P	01 45 30.9	-0.5
	baz=34						
CPUP	Villa Florida	95.18	238	LR	LR	02 29 49.2	
	comp=Z,236nm,18.5s,baz=54,slow=36						
LPAZ	La Paz	95.27	253	LR	LR	02 28 31.6	
	comp=Z,236nm,18.6s,baz=93,slow=35						
VNA1	Neumayer--Stat	114.94	188	PKPdf	PKiKP	01 51 07.1	+2.5
SNAA	Sanae	115.47	186	PKPdf	PKiKP	01 51 08.6	+2.9
VNA3	Neumayer Olymp	115.65	188	PKPdf	PKiKP	01 51 09.7	+3.7
AS31	Alice Springs	127.56	88	ePKPdf	PKiKP	01 51 30.4	-0.4
ASAR	Alice Springs	127.56	88	PKP	PKiKP	01 51 30.4	-0.4
	comp=Z,2.1nm,0.8s,baz=328,slow=1.5,SNR=17						
QSPA	South Pole Qui	133.36	180	ePKPdf	PKPdf	01 51 40.1	+0.1
TAOE	Nuku Hiva Isla	138.62	319	eLR	LR	02 36 53.6	
	comp=Z,152nm,25.5s						
VNDA	Vanda	143.51	169	PKP	PKPdf	01 51 58.3	0.0
	comp=Z,4.0nm,1.1s,baz=281,slow=5.6,SNR=10						
VNDA	Vanda	143.51	169	ePKPdf	PKPdf	01 51 58.6	+0.4
VNDA	Vanda	143.51	169	ePKIKP	PKPdf	01 51 58.6	+0.4
SBA	Scott Base	143.88	171	ePKPdf	PKPdf	01 52 00.1	+1.2
SBA	Scott Base	143.88	171	ePKIKP	PKPdf	01 52 00.1	+1.2
RKT	Rikitea	147.14	298	eLR	LR	02 40 46.2	
	comp=Z,5µm,36.8s						
DZM	Mont Dzumac	148.91	55	eLR	LR	02 41 31.7	
	comp=Z,392nm,23.8s						
PPT2	Papeete2	150.54	326	eLR	LR	02 42 21.0	
	comp=Z,121nm,21.5s						
TBI	Tubuai	155.56	320	eLR	LR	02 44 24.0	
	comp=Z,186nm,25.2s						
RPZ	Rata Peaks	163.61	99	ePKPdf	PKPdf	01 52 29.2	+1.7

ZUR 21 01:32:45.0, 47°.42N×9°.32E, h5km, MLh1.8/10, 4C-4D, Error ellipse: s-maj=1.5km s-min=0.7km az=271.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGT00	Sennhlsen	0.01	274	⇑Pg	Pg	01 32 46.1	+0.1
SGT00				Sg	Sg	01 32 46.8	+0.2
SGT01	Gaiserwald	0.01	351	⇑Pg	Pg	01 32 46.2	+0.2
SGT01				Sg	Sg	01 32 47.1	+0.4
STGK	St. Gallen Klo	0.04	89	⇓Pg	Pg	01 32 46.5	+0.3
STGK				Sg	Sg	01 32 47.7	+0.6
SGT04	Schlatt-Haslen	0.08	165	⇓Pg	Pg	01 32 47.3	+0.6
SGT04				Sg	Sg	01 32 49.3	+1.3
SGT05	Eggersriet	0.09	79	⇑Pg	Pg	01 32 47.5	+0.4
SGT05				Sg	Sg	01 32 49.5	+1.1
SGT03	Degersheim	0.10	235	⇑Pg	Pg	01 32 47.6	+0.4
SGT03				Sg	Sg	01 32 49.6	+1.0
SGT02	Zihlschlacht	0.10	331	⇓Pg	Pg	01 32 47.6	+0.4
SGT02				Sg	Sg	01 32 49.7	+1.0
LIENZ	Kamor/St.Gall	0.17	138	Pg	Pg	01 32 49.3	+0.7
WEIN	Weingarten	0.25	295	⇓Pg	Pg	01 32 50.5	+0.6
WEIN				Sg	Sg	01 32 54.7	+1.5
WILA	Wila	0.28	268	Pg	Pg	01 32 51.2	+0.7
WILA				Sg	Sg	01 32 55.6	+1.4

PRU 21 01:33:30.9±0.0, 49°.92N×18°.53E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	252	ePG	Pg	01 33 35.7	-0.2
OKC				eSG	Sg	01 33 39.5	+0.2
	comp=Z,4.0nm,0.4s						
OSTC	Ostas	1.62	294	ePG	Pn	01 34 00.9	+0.2
CHVC	Chvalec	1.72	294	ePG	Pb	01 34 02.9	-0.6

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*IDC **21** 01:42:51.3±2.3, 41°.53S×174°.20E, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.6/14, mbtmp3.6/2, MS4.0/1, Ms1 4.0/1, ms1mx3.1/12, Error ellipse: s-maj=46.6km s-min=41.9km az=102.0*

*ISCJB **21** 01:42:53.7±0.4, 41°.69S±0°.04×174°.35E±0°.04, h26km±4km, mb3.4/2, MS4.0/1, Error ellipse: s-maj=7.9km s-min=4.0km az=148.8*

*WEL **21** 01:42:53.5, 42°S±1°×174°.4E±1°.0, h15km±2km, M3.0/21, ML3.3/17, MLv3.0/21, Error ellipse: s-maj=0.0km s-min=0.0km az=147.4*

ISC 21 01:42:53.4±1.4, 41°.65S±0°.04×174°.36E±0°.03, h18km±11km, n42, σ0.s73/45, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.15	227	P	Pb	01 42 58.5	+1.0
CMWZ				S	Sb	01 43 01.7	+1.6
BSWZ	Blackbirch Sta	0.37	259	P	Pb	01 43 01.8	+0.4
BSWZ				S	Sb	01 43 07.9	+1.0
TUWZ	Tuamarina	0.38	305	P	Pb	01 43 01.6	0.0
TUWZ				S	Sb	01 43 07.0	-0.2
BHW	Baring Head	0.45	58	P	Pb	01 43 02.9	0.0
PLWZ	Palliser	0.68	84	P	Pb	01 43 07.5	+0.8
MSWZ	Moikau Station	0.71	71	P	Pb	01 43 07.9	+0.7
CAW	Cannon Point	0.76	45	P	Pb	01 43 08.1	+0.1
PAWZ	Paruwai Farm	0.84	72	P	Pb	01 43 10.2	+0.6
NNZ	Nelson	0.85	300	P	Pb	01 43 09.8	+0.2
KHZ	Kahutara	0.98	218	P	Pn	01 43 13.2	+0.9
MTW	Mount Morrison	0.99	61	P	Pn	01 43 12.7	+0.3
TRWZ	Traveller	1.03	76	P	Pg	01 43 13.0	-0.3
OGWZ	Otaki Gorge	1.03	37	P	Pg	01 43 12.9	-0.5
THZ	Tophouse	1.09	263	P	Pg	01 43 14.7	+0.2
HOWZ	Holdsworth Sta	1.15	50	P	Pg	01 43 15.1	-0.5
TMWZ	Te Maipa	1.27	65	P	Pn	01 43 16.5	+0.1
MRZ	Mangatainoka R	1.35	43	P	Pb	01 43 17.9	-0.3
TIWZ	Tintock	1.44	53	P	Pn	01 43 18.9	+0.2
QRZ	Quartz Range	1.60	300	P	Pb	01 43 23.0	+0.5
PRWZ	Pori Road	1.64	49	P	Pn	01 43 21.6	+0.3
GVZ	Greta Valley S	1.65	216	P	Pn	01 43 22.0	+0.6
POWZ	Post Office Ro	1.65	41	P	Pn	01 43 22.1	+0.6
BFZ	Birch Farm	1.72	57	P	Pn	01 43 23.3	+0.9
LTZ	Lake Taylor	1.92	233	P	Pn	01 43 26.0	+0.8
OKCZ	Okains Bay	2.29	204	P	Pn	01 43 29.8	-0.5
MQZ	McQueen’s Vall	2.41	211	P	Pn	01 43 30.9	-1.0
INZ	Inchbonnie	2.42	243	P	Pn	01 43 33.0	+1.0
AKCZ	Akaroa Harbour	2.47	205	P	Pn	01 43 31.3	-1.4
MOVZ	Moawhango	2.48	26	P	Pb	01 43 37.5	+0.1
BHHZ	Black Hill Sta	2.52	32	P	Pb	01 43 38.8	+0.7
KRHZ	Kereru	2.52	38	P	Pn	01 43 33.2	-0.2
VRZ	Vera Road	2.54	7	P	Pb	01 43 38.2	-0.2
WHVZ	Whangaehu Hut	2.54	22	P	Pb	01 43 39.1	+0.5
NGZ	Ngauruhoe	2.65	21	P	Pb	01 43 41.1	+0.8
WTVZ	West Tongariro	2.70	21	P	Pb	01 43 42.1	+0.9
KRVZ	Karewarewa	2.73	21	P	Pb	01 43 42.5	+0.7
RPZ	Rata Peaks	3.19	229	Pg	Pb	01 43 49.2	-0.4
	1.4nm,0.3s,baz=34,slow=11,SNR=3.7						
RPZ				Sn	Sn	01 44 19.3	-1.0
	1.3nm,0.3s,baz=15,slow=20,SNR=4.6						
ODZ	Otahua Downs	4.34	217	P	Pn	01 43 57.3	-1.2
ASAR	Alice Springs	38.08	285	P	P	01 50 10.8	-0.4
	0.5nm,1.0s,baz=123,slow=6.6,SNR=4.7						
WRA	Warramunga Arr	40.14	290	P	P	01 50 27.5	-0.9
	1.4nm,1.0s,baz=128,slow=8.7,SNR=2.5						
BATI	Baumata	54.28	290	LR	LR	02 16 15.5	
	comp=Z,121nm,18.6s,baz=264,slow=37						
TORD	Torodi Ar. Bea	150.90	195	PKPbc	PKPbc	02 02 46.1	+0.9
	0.7nm,1.1s,baz=180,slow=2.5,SNR=2.6						

IDC 21 01:51:19.2±2.0, **6°.45S**×**128°.96E**, **h0**^{km}, **mb4.4**/1, **mb1 4.4**/3, **mb1mx3.7**/28, **mbtmp4.3**/3, **ML4.1**/2, **Error ellipse: s-maj=137.4km s-min=29.9km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.39**	**159**	Pn	Pn	01 54 42.6	-1.8
	0.7nm,0.3s,baz=337,slow=13,SNR=14						
WRA				Sn	Sn	01 57 11.8	-13
	1.7nm,0.3s,baz=344,slow=23,SNR=7.6						
ASAR	**Alice Springs**	**17.77**	**165**	P	P	01 55 29.1	+0.1
	0.9nm,0.3s,baz=350,slow=11,SNR=54						
ASAR				S	Sn	01 58 35.0	-12
	0.2nm,0.3s,baz=3.7,slow=30,SNR=3.8						
MKAR	**Makanchi Array**	**67.20**	**327**	P	P	02 02 15.3	0.0
	1.8nm,0.4s,baz=114,slow=8.0,SNR=28						

ROM ***21*** *02:08:05.9±0.0, 43°.360N±0°.002×12°.536E±0°.003, h10^{km}, ML1.4/17, Error ellipse: s-maj=0.2km s-min=0.0km az=222.0*

ISCJB ***21*** *02:08:06.6±0.5, 43°.35N±0°.02×12°.53E±0°.04, h11^{km}±3^{km}, Error ellipse: s-maj=4.7km s-min=3.7km az=140.7*

ISC 21 02:08:06.0±0.9, **43°.35N**±0°.03×**12°.51E**±0°.03, **h12**^{km}±6^{km}, **n23**, σ**1^{s}.09**/33, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.08**	**293**	P	**Pg**	**02 08 08.8**	**+0.1**
ATVO				S	**Sg**	**02 08 10.6**	**-0.1**
ATVO				AML	AML		
	comp=E,478μm,0.2s						
ATVO				AML	AML		
	comp=N,417μm,0.2s						
ATVO				AML	AML		
	comp=E,478μm,0.2s						
ATVO				AML	AML		
	comp=N,416μm,0.2s						
ATVO				AML	AML		
	comp=N,416μm,0.2s						
ATVO				AML	AML		
	comp=E,478μm,0.2s						
ATVO				AML	AML		
	comp=N,416μm,0.2s						
ATVO				AML	AML		
	comp=E,478μm,0.2s						
MURB	**Monte Urbino**	**0.09**	**174**	P	**Pg**	**02 08 08.9**	**+0.2**
MURB				S	**Sg**	**02 08 10.9**	**+0.2**
MURB				AML	AML		
	comp=E,646μm,0.4s						
MURB				AML	AML		
	comp=N,702μm,0.3s						
MURB				AML	AML		
	comp=E,741μm,0.2s						
MURB				AML	AML		
	comp=N,691μm,0.2s						
MURB				AML	AML		
	comp=E,741μm,0.2s						
MURB				AML	AML		
	comp=N,692μm,0.2s						
MURB				AML	AML		
	comp=E,741μm,0.2s						
MURB				AML	AML		
	comp=N,692μm,0.2s						
MURB				AML	AML		
	comp=E,741μm,0.2s						
MURB				AML	AML		
	comp=N,692μm,0.2s						
ATPI	**Pietralunga -**	**0.13**	**322**	P	**Pg**	**02 08 09.6**	**+0.3**
ATPI				S	**Sg**	**02 08 12.1**	**+0.4**
ATPI				AML	AML		
	comp=E,62μm,0.3s						
ATPI				AML	AML		
	comp=N,75μm,0.3s						
ATPI				AML	AML		
	comp=E,62μm,0.3s						
ATPI				AML	AML		
	comp=N,75μm,0.3s						
ATPI				AML	AML		
	comp=E,62μm,0.3s						
ATPI				AML	AML		
	comp=N,75μm,0.3s						
ATPI				AML	AML		
	comp=E,62μm,0.3s						
ATPI				AML	AML		
	comp=N,75μm,0.3s						
ATMI	**Monte Miggiano**	**0.18**	**265**	P	**Pg**	**02 08 10.7**	**+0.7**
ATMI				S	**Sg**	**02 08 14.0**	**+1.2**
ATMI				AML	AML		
	comp=E,63μm,0.6s						
ATMI				AML	AML		
	comp=N,63μm,0.4s						
ATMI				AML	AML		
	comp=E,104μm,0.4s						
ATMI				AML	AML		
	comp=N,88μm,0.6s						
ATMI				AML	AML		
	comp=E,104μm,0.4s						
ATMI				AML	AML		
	comp=N,88μm,0.6s						
ATMI				AML	AML		
	comp=E,104μm,0.4s						
ATMI				AML	AML		
	comp=N,88μm,0.6s						
PIEI	**Pieia**	**0.19**	**5**	P	**Pg**	**02 08 10.3**	**+0.2**
PIEI				S	**Sg**	**02 08 13.6**	**+0.5**
PIEI				AML	AML		
	comp=E,132μm,0.7s						
PIEI				AML	AML		
	comp=N,73μm,0.2s						
PIEI				AML	AML		
	comp=E,132μm,0.7s						
PIEI				AML	AML		
	comp=N,73μm,0.2s						
PIEI				AML	AML		
	comp=N,73μm,0.2s						
PIEI				AML	AML		
	comp=E,132μm,0.7s						
PIEI				AML	AML		
	comp=N,73μm,0.2s						
PIEI				AML	AML		
	comp=E,132μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.19**	**150**	P	**Pg**	**02 08 10.7**	**+0.5**
ATCC				S	**Sg**	**02 08 14.4**	**+1.3**
ATCC				AML	AML		
	comp=E,192μm,0.1s						
ATCC				AML	AML		
	comp=N,188μm,0.1s						
ATCC				AML	AML		
	comp=E,191μm,0.1s						
ATCC				AML	AML		
	comp=N,188μm,0.1s						
ATCC				AML	AML		
	comp=N,188μm,0.1s						
ATCC				AML	AML		
	comp=E,191μm,0.1s						
ATCC				AML	AML		
	comp=N,188μm,0.1s						
ATCC				AML	AML		
	comp=E,191μm,0.1s						
ATTE	**AVT- Monte Tez**	**0.19**	**217**	AML	AML		
	comp=E,73μm,1.6s						
ATTE				AML	AML		
	comp=E,41μm,1.0s						
ATTE				AML	AML		
	comp=N,45μm,0.9s						
ATTE				AML	AML		
	comp=E,73μm,1.6s						
ATTE				AML	AML		
	comp=N,52μm,0.4s						
ATTE				AML	AML		
	comp=E,73μm,1.6s						
ATTE				AML	AML		
	comp=N,52μm,0.4s						
ATTE				AML	AML		
	comp=N,52μm,0.4s						
FOSV	**Fossato di Vic**	**0.19**	**107**	P	**Pg**	**02 08 10.2**	**0.0**
FOSV				S	**Sg**	**02 08 13.4**	**+0.3**
FOSV				AML	AML		
	comp=E,40μm,0.3s						
FOSV				AML	AML		
	comp=N,42μm,1.2s						
FOSV				AML	AML		
	comp=E,77μm,0.4s						
FOSV				AML	AML		
	comp=N,64μm,0.3s						
FOSV				AML	AML		
	comp=N,64μm,0.3s						
FOSV				AML	AML		
	comp=E,77μm,0.4s						
FOSV				AML	AML		
	comp=N,64μm,0.3s						
FOSV				AML	AML		
	comp=E,77μm,0.4s						
SSFR	**Montelago di S**	**0.22**	**66**	P	**Pg**	**02 08 10.5**	**-0.1**
SSFR				S	**Sg**	**02 08 14.3**	**+0.4**
SSFR				AML	AML		
	comp=E,225μm,1.3s						
SSFR				AML	AML		
	comp=N,193μm,1.1s						
SSFR				AML	AML		
	comp=E,171μm,0.2s						
SSFR				AML	AML		
	comp=N,147μm,0.9s						
SSFR				AML	AML		
	comp=E,171μm,0.2s						
SSFR				AML	AML		
	comp=N,193μm,1.1s						
SSFR				AML	AML		
	comp=N,147μm,0.9s						
SSFR				AML	AML		
	comp=E,225μm,1.3s						
SSFR				AML	AML		
	comp=E,171μm,0.2s						
SSFR				AML	AML		
	comp=N,193μm,1.1s						
SSFR				AML	AML		
	comp=N,147μm,0.9s						
SSFR				AML	AML		
	comp=E,225μm,1.3s						
FRON	**Frontone**	**0.23**	**43**	P	**Pg**	**02 08 10.8**	**0.0**
FRON				S	**Sg**	**02 08 14.6**	**+0.3**
FRON				AML	AML		
	comp=E,62μm,0.3s						
FRON				AML	AML		
	comp=N,68μm,1.4s						
FRON				AML	AML		
	comp=N,68μm,1.4s						
FRON				AML	AML		
	comp=E,62μm,0.3s						
FRON				AML	AML		
	comp=N,68μm,1.4s						
FRON				AML	AML		
	comp=E,62μm,0.3s						
BADI	**Badiali**	**0.25**	**310**	P	**Pb**	**02 08 12.0**	**-0.5**
BADI				S	**Sb**	**02 08 16.5**	**-0.4**
BADI				AML	AML		
	comp=E,174μm,1.1s						
BADI				AML	AML		
	comp=N,100μm,0.2s						
BADI				AML	AML		
	comp=N,100μm,0.2s						
BADI				AML	AML		
	comp=E,174μm,1.1s						
BADI				AML	AML		
	comp=N,100μm,0.2s						
BADI				AML	AML		
	comp=E,174μm,1.1s						
ASSB	**Assisi San Ben**	**0.33**	**161**	P	**Pg**	**02 08 12.9**	**+0.3**
ASSB				S	**Sb**	**02 08 18.2**	**-0.7**
ASSB				AML	AML		
	comp=E,140μm,0.3s						
ASSB				AML	AML		
	comp=N,116μm,0.4s						
ASSB				AML	AML		
	comp=N,116μm,0.4s						
ASSB				AML	AML		
	comp=E,140μm,0.3s						
ASSB				AML	AML		
	comp=N,116μm,0.4s						
ASSB				AML	AML		
	comp=E,140μm,0.3s						
MPAG	**Monte Paganucc**	**0.33**	**33**	P	**Pg**	**02 08 12.8**	**+0.1**
MPAG				AML	AML		
	comp=E,109μm,0.4s						
MPAG				AML	AML		
	comp=N,75μm,0.6s						
MPAG				AML	AML		
	comp=E,108μm,0.4s						
MPAG				AML	AML		
	comp=N,74μm,0.6s						
MPAG				AML	AML		
	comp=E,109μm,0.4s						
MPAG				AML	AML		
	comp=N,75μm,0.6s						
PE3	**Peglio**	**0.35**	**358**	AML	AML		
	comp=E,154μm,0.6s						
PE3				AML	AML		
	comp=E,154μm,0.6s						
PE3				AML	AML		
	comp=N,378μm,0.4s						
PE3				AML	AML		
	comp=N,378μm,0.4s						
PE3				AML	AML		
	comp=E,154μm,0.6s						
PE3				AML	AML		
	comp=N,378μm,0.4s						
FSSB	**Fossombrone**	**0.39**	**29**	AML	AML		
	comp=E,170μm,0.3s						
FSSB				AML	AML		
	comp=E,170μm,0.3s						
FSSB				AML	AML		
	comp=N,194μm,1.4s						
FSSB				AML	AML		
	comp=N,194μm,1.4s						
FSSB				AML	AML		
	comp=E,170μm,0.3s						
FSSB				AML	AML		
	comp=N,194μm,1.4s						
FDMO	**Fiordimonte**	**0.53**	**126**	AML	AML		
	comp=N,83μm,0.2s						
FDMO				AML	AML		
	comp=E,194μm,1.0s						
FDMO				AML	AML		
	comp=N,83μm,0.2s						
FDMO				AML	AML		
	comp=E,194μm,1.0s						
FDMO				AML	AML		
	comp=E,194μm,1.0s						
FDMO				AML	AML		
	comp=N,83μm,0.2s						
MGAB	**Montegabbione**	**0.53**	**214**	AML	AML		
	comp=E,84μm,0.7s						
MGAB				AML	AML		
	comp=N,47μm,0.3s						
MGAB				AML	AML		
	comp=N,47μm,0.3s						
MGAB				AML	AML		
	comp=E,84μm,0.7s						
MGAB				AML	AML		
	comp=N,47μm,0.3s						
MGAB				AML	AML		
	comp=E,84μm,0.7s						
DUGI	**Dugi Otok**	**1.96**	**70**	*e*Pg	**Pg**	**02 08 46.8**	**+3.4**
DUGI				Sg	**Sn**	**02 09 02.3**	**-1.1**
NVLJ	**Novalja**	**2.09**	**54**	*e*Pn	Pg	02 08 50.6	+4.6
NVLJ				Sn	**Sb**	**02 09 09.7**	**0.0**
ZIRJ	**Zirje**	**2.30**	**81**	*e*Pn	**Pg**	**02 08 51.4**	**+1.4**
ZIRJ				Sn	**Sn**	**02 09 11.7**	**-0.1**
MORI	**Morici**	**2.38**	**76**	*e*Pn	**Pg**	**02 08 53.0**	**+1.5**
MORI				Sn	**Sn**	**02 09 14.3**	**+0.6**
UDBI	**Udbina**	**2.63**	**62**	*i* Pn	**Pg**	**02 08 58.0**	**+1.7**
UDBI				Sn	**Sb**	**02 09 22.6**	**-2.7**
HVAR	**Hvar**	**2.88**	**92**	*e*Pn	**Pg**	**02 08 59.8**	**-1.4**

ROM 21 02:08:25.2±0.3, **43°.51N**±0°.01×**13°.73E**±0°.02, **h8**^{km}, **ML2.0**/17, **Error ellipse: s-maj=2.2km s-min=0.8km az=56.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOI	**Ancona**	**0.10**	**291**	P	Pg	02 08 27.9	+0.2
AOI				S	Sg	02 08 29.9	+0.5
AOI				AML	AML		
	comp=E,1835μm,0.7s						
AOI				AML	AML		
	comp=N,2245μm,1.2s						
PCRO	**Pietralacroce**	**0.17**	**303**	P	Pg	02 08 29.4	+0.5
PCRO				S	Sg	02 08 32.5	+1.2
CIMA	**Civitanova Mar**	**0.21**	**193**	P	Pg	02 08 30.9	+1.4
SENI	**Senigallia**	**0.41**	**298**	P	Pb	02 08 34.3	-0.4
CING	**Cingoli**	**0.42**	**251**	P	Pg	02 08 33.6	+0.3
CING				S	Sb	02 08 40.7	-0.5
CING				AML	AML		
	comp=E,146μm,0.3s						
CING				AML	AML		
	comp=N,116μm,1.0s						
CING				AML	AML		
	comp=N,116μm,1.0s						
CING				AML	AML		
	comp=E,146μm,0.3s						
CING				AML	AML		
	comp=N,116μm,1.0s						
CING				AML	AML		
	comp=E,146μm,0.3s						
MNTP	**Montappone**	**0.42**	**207**	P	Pb	02 08 34.5	-0.3
EL6	**Elcito**	**0.50**	**249**	P	Pg	02 08 35.0	+0.2
COR1	**Corinaldo**	**0.55**	**283**	P	Pb	02 08 36.9	-0.1
CSP1	**Cessapalombo**	**0.57**	**223**	P	Pg	02 08 36.5	+0.2
ARVD	**Arcevia**	**0.58**	**269**	P	Pg	02 08 36.2	-0.2
ARVD				S	Sb	02 08 45.6	-0.2
ARVD				AML	AML		
	comp=E,59μm,0.2s						
ARVD				AML	AML		
	comp=N,43μm,0.7s						
ARVD				AML	AML		
	comp=E,59μm,0.2s						
ARVD				AML	AML		
	comp=N,43μm,0.7s						
ARVD				AML	AML		
	comp=E,59μm,0.2s						
ARVD				AML	AML		
	comp=N,43μm,0.7s						
ARVD				AML	AML		
	comp=E,59μm,0.2s						
ARVD				AML	AML		
	comp=N,43μm,0.7s						
SNTG	**Esanatoglia**	**0.63**	**246**	P	Pg	02 08 37.1	-0.3
SNTG				S	Sb	02 08 47.5	+0.1
FDMO	**Fiordimonte**	**0.67**	**225**	P	Pg	02 08 38.0	-0.1
FDMO				AML	AML		
	comp=E,194μm,1.0s						
FDMO				AML	AML		
	comp=N,83μm,0.2s						
FDMO				AML	AML		
	comp=E,194μm,1.0s						
FDMO				AML	AML		
	comp=N,83μm,0.2s						
FDMO				AML	AML		
	comp=N,83μm,0.2s						
FDMO				AML	AML		
	comp=E,194μm,1.0s						
FDMO				AML	AML		
	comp=N,83μm,0.2s						
FDMO				AML	AML		
	comp=E,194μm,1.0s						
MPAG	**Monte Paganucc**	**0.72**	**280**	P	Pb	02 08 39.7	-0.2
MPAG				AML	AML		
	comp=E,109μm,0.4s						
MPAG				AML	AML		
	comp=N,75μm,0.6s						
MPAG				AML	AML		
	comp=N,74μm,0.6s						
MPAG				AML	AML		
	comp=E,108μm,0.4s						
MPAG				AML	AML		
	comp=N,75μm,0.6s						
MPAG				AML	AML		
	comp=E,109μm,0.4s						
FOSV	**Fossato di Vic**	**0.74**	**253**	P	Pg	02 08 39.2	-0.3
FOSV				AML	AML		
	comp=E,77μm,0.4s						
FOSV				AML	AML		
	comp=N,64μm,0.3s						
CESI	**CESI - Serrava**	**0.79**	**230**	P	Pg	02 08 40.5	+0.1
CESI				AML	AML		
	comp=E,35μm,0.3s						
CESI				AML	AML		
	comp=N,53μm,0.6s						
CESI				AML	AML		
	comp=E,35μm,0.3s						
CESI				AML	AML		
	comp=N,53μm,0.6s						
CESI				AML	AML		
	comp=E,35μm,0.3s						
CESI				AML	AML		
	comp=N,53μm,0.6s						
NRCA	**Norcia**	**0.82**	**214**	P	Pg	02 08 40.7	-0.2
NRCA				AML	AML		
	comp=E,185μm,0.2s						
NRCA				AML	AML		
	comp=N,182μm,0.2s						
NRCA				AML	AML		
	comp=N,182μm,0.2s						
NRCA				AML	AML		
	comp=E,185μm,0.2s						
NRCA				AML	AML		
	comp=N,182μm,0.2s						
NRCA				AML	AML		
	comp=E,185μm,0.2s						
PIEI	**Pieia**	**0.87**	**272**	P	Pg	02 08 41.9	-0.1
PIEI				AML	AML		
	comp=E,72μm,0.3s						
PIEI				AML	AML		
	comp=N,38μm,0.8s						
PIEI				AML	AML		
	comp=N,38μm,0.8s						
PIEI				AML	AML		
	comp=E,72μm,0.3s						
PIEI				AML	AML		
	comp=N,38μm,0.8s						
PIEI				AML	AML		
	comp=E,72μm,0.3s						
ASSB	**Assisi San Ben**	**0.92**	**240**	P	Pg	02 08 42.5	-0.3
ASSB				AML	AML		
	comp=E,140μm,0.3s						
ASSB				AML	AML		
	comp=N,116μm,0.4s						
ASSB				AML	AML		
	comp=N,116μm,0.4s						
ASSB				AML	AML		
	comp=E,140μm,0.3s						
ASSB				AML	AML		
	comp=N,116μm,0.4s						
ASSB				AML	AML		
	comp=E,140μm,0.3s						
PE3	**Peglio**	**0.92**	**282**	P	Pb	02 08 43.4	+0.1
PE3				AML	AML		
	comp=E,154μm,0.6s						
PE3				AML	AML		
	comp=N,378μm,0.4s						
PE3				AML	AML		
	comp=E,154μm,0.6s						
PE3				AML	AML		
	comp=N,378μm,0.4s						
PE3				AML	AML		
	comp=E,154μm,0.6s						
PE3				AML	AML		
	comp=N,378μm,0.4s						
SMA1	**SAN MARTINO**	**0.93**	**198**	P	Pg	02 08 42.6	-0.4
SMA1				AML	AML		
	comp=E,265μm,0.4s						
SMA1				AML	AML		
	comp=N,390μm,0.5s						
SMA1				AML	AML		
	comp=N,390μm,0.5s						
SMA1				AML	AML		
	comp=E,265μm,0.4s						
SMA1				AML	AML		
	comp=N,390μm,0.5s						
SMA1				AML	AML		
	comp=E,265μm,0.4s						
LNSS	**Leonessa**	**1.04**	**209**	P	Pg	02 08 44.7	-0.5
LNSS				AML	AML		
	comp=E,134μm,1.2s						
LNSS				AML	AML		
	comp=N,150μm,0.5s						
LNSS				AML	AML		
	comp=N,150μm,0.5s						
LNSS				AML	AML		
	comp=E,134μm,1.2s						
LNSS				AML	AML		
	comp=N,150μm,0.5s						
LNSS				AML	AML		
	comp=E,134μm,1.2s						
PARC	**Parchiule**	**1.09**	**278**	AML	AML		
	comp=N,43μm,0.7s						
PARC				AML	AML		

	comp=E,38μm,1.0s						
PARC				AML	AML		
	comp=N,43μm,0.7s						
PARC				AML	AML		
	comp=E,38μm,1.0s						
PARC				AML	AML		
	comp=E,38μm,1.0s						
PARC				AML	AML		
	comp=N,43μm,0.7s						
MOMA	**Monte Martano**	**1.11**	**231**	P	Pg	02 08 46.0	-0.4
MOMA				AML	AML		
	comp=E,78μm,0.9s						
MOMA				AML	AML		
	comp=N,72μm,0.3s						
MOMA				AML	AML		
	comp=E,78μm,0.9s						
MOMA				AML	AML		
	comp=N,72μm,0.3s						
MOMA				AML	AML		
	comp=E,78μm,0.9s						
MOMA				AML	AML		
	comp=N,72μm,0.3s						
T0104	**Madonna delle**	**1.19**	**194**	AML	AML		
	comp=E,236μm,0.7s						
T0104				AML	AML		
	comp=E,236μm,0.7s						
T0104				AML	AML		
	comp=N,146μm,0.8s						
T0104				AML	AML		
	comp=N,146μm,0.8s						
T0104				AML	AML		
	comp=E,236μm,0.7s						
T0104				AML	AML		
	comp=N,146μm,0.8s						
FAGN	**Fagnano**	**1.25**	**185**	AML	AML		
	comp=N,156μm,0.4s						
FAGN				AML	AML		
	comp=E,213μm,0.6s						
FAGN				AML	AML		
	comp=E,213μm,0.6s						
FAGN				AML	AML		
	comp=N,156μm,0.4s						
FAGN				AML	AML		
	comp=E,213μm,0.6s						
FAGN				AML	AML		
	comp=N,156μm,0.4s						
CAFI	**Castiglion Fio**	**1.30**	**263**	AML	AML		
	comp=E,21μm,0.6s						
CAFI				AML	AML		
	comp=N,22μm,0.8s						
CAFI				AML	AML		
	comp=N,22μm,0.8s						
CAFI				AML	AML		
	comp=E,21μm,0.6s						
CAFI				AML	AML		
	comp=N,22μm,0.8s						
CAFI				AML	AML		
	comp=E,21μm,0.6s						
MGAB	**Montegabbione**	**1.33**	**244**	AML	AML		
	comp=E,84μm,0.7s						
MGAB				AML	AML		
	comp=N,46μm,1.4s						
MGAB				AML	AML		
	comp=N,46μm,1.4s						
MGAB				AML	AML		
	comp=E,84μm,0.7s						
MGAB				AML	AML		
	comp=N,46μm,1.4s						
MGAB				AML	AML		
	comp=E,84μm,0.7s						

RSPR ***21*** *02:11:21.5, 19°.35N×68°.24W, h29^{km}±14^{km}, MD3.2/7*
NEIC ***21*** *02:11:21.5±0.0, 19°.35N×68°.24W, h29^{km}, MD3.2(RSPR), After RSPR.*
ISCJB ***21*** *02:11:22.4±1.2, 19°.23N±0°.08×68°.03W±0°.04, h21^{km}, Error ellipse: s-maj=11.3km s-min=5.2km az=2.3*
OSPL ***21*** *02:11:22.1±1.9, 17°.81N×67°.57W, h30^{km}, ML2.8*
ISC 21 02:11:23.8±1.6, **19°.1N**±0°.1×**68°.07W**±0°.06, **h21**^{km}, **n28**, σ**1^{s}.39**/31, **8C-1D**, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.65**	**207⇑**	*e*P	**Pb**	**02 11 35.6**	**-0.9**
PCDR	**Punta Cana, DR**	**0.65**	**207**	*e*S	**Sb**	**02 11 46.3**	**+1.1**
PCDR	**Punta Cana, DR**	**0.65**	**207**	*e*Pn	**Pb**	**02 11 35.6**	**-0.9**
PCDR				*e*Sn	**Sb**	**02 11 46.3**	**+1.1**
AGPR	**Aguadilla, PR**	**1.10**	**124⇑**	*e*P	**Pn**	**02 11 42.6**	**-1.4**
AGPR	**Aguadilla, PR**	**1.10**	**124**	*e*S	**Sn**	**02 11 59.6**	**+1.0**
AGP	**Aguadilla**	**1.12**	**128**	*e*Pn	**Pn**	**02 11 42.6**	**-1.6**
AGP				*e*Sn	**Sn**	**02 11 59.6**	**+0.7**
MPR	**Mayaguez**	**1.25**	**135**	*e*Sn	**Sn**	**02 12 02.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.42**	**140⇑**	*e*P	**Pn**	**02 11 47.5**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.42**	**140**	*e*S	**Sn**	**02 12 08.4**	**+2.1**
CRPR	**Cabo Rojo, PR**	**1.42**	**140**	*e*Sn	**Sn**	**02 12 02.6**	**-3.7**
AOPR	**Arecibo Observ**	**1.46**	**121⇑**	*e*P	**Pn**	**02 11 48.1**	**-0.7**
AOPR	**Arecibo Observ**	**1.46**	**121**	*e*S	**Sn**	**02 12 08.3**	**+1.0**
AOPR	**Arecibo Observ**	**1.46**	**121**	*e*Pn	**Pn**	**02 11 48.1**	**-0.7**
AOPR				*e*Sn	**Sn**	**02 12 08.3**	**+1.0**
MLPR	**Magueyes Islan**	**1.49**	**139⇑**	*e*P	**Pn**	**02 11 48.4**	**-0.9**
MLPR	**Magueyes Islan**	**1.49**	**139**	*e*S	**Sn**	**02 12 09.6**	**+1.6**
OBIP	**Obispado Ponce**	**1.74**	**127**	*e*Sn	**Sn**	**02 12 15.5**	**+1.1**
CELP	**Cerrillos**	**1.74**	**126⇑**	*e*P	**Pn**	**02 11 52.2**	**-0.6**
CELP				*e*S	**Sn**	**02 12 16.0**	**+1.6**
CELP	**Cerrillos**	**1.74**	**126**	*e*Pn	**Pn**	**02 11 52.2**	**-0.6**
CELP				*e*Sn	**Sn**	**02 12 16.0**	**+1.6**
SDD	**Santo Domingo**	**1.86**	**250**	*e*S	**Sb**	**02 12 21.7**	**+1.8**
SDD				AMP		02 12 22.1	
SJG	**San Juan**	**2.07**	**118⇑**	*e*P	**Pn**	**02 11 56.4**	**-0.9**
SJG	**San Juan**	**2.07**	**118**	*e*S	**Sn**	**02 12 23.8**	**+1.4**
SJG	**San Juan**	**2.07**	**118**	*e*Sn	**Sn**	**02 12 24.1**	**+1.6**
BANI	**BANI**	**2.28**	**252**	*i* P	**Pb**	**02 12 03.6**	**-0.7**
BANI				IAML		02 12 22.6	
	comp=Z,18nm,0.7s						
HUMP	**Col San Antoni**	**2.31**	**114⇓**	*e*P	**Pn**	**02 11 59.8**	**-0.8**
HUMP	**Col San Antoni**	**2.31**	**114**	*e*S	**Sn**	**02 12 29.4**	**+1.0**
SC01	**Santiago de lo**	**2.53**	**278**	*i* P	Pb	02 12 10.8	+2.3
SC01				*e*S	Sb	02 12 49.5	+10
SC01				IAML		02 13 00.8	
	comp=Z,36nm,0.8s						
MTP	**Monte Pirata**	**2.59**	**112⇑**	*e*P	**Pn**	**02 12 03.4**	**-1.0**
SDDR	**Presa de Saban**	**3.05**	**268**	*e*S	Sb	02 12 56.6	+2.5
SDDR				IAML		02 13 07.0	
	comp=Z,16nm,0.4s						

ROM ***21*** *02:15:51.7±0.2, 43°.510N±0°.009×13°.72E±0°.02, h8^{km}, ML2.6/38, Error ellipse: s-maj=1.5km s-min=0.5km az=53.0*
LDG ***21*** *02:15:51.5±0.3, 43°.52N×13°.68E, h10^{km}, Ml2.5/12, Error ellipse: s-maj=6.0km s-min=3.2km az=74.0*
ISCJB ***21*** *02:15:52.5±0.3, 43°.49N±0°.02×13°.68E±0°.02, h15^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.9km az=172.9*
ISC 21 02:15:51.6±0.8, **43°.46N**±0°.02×**13°.61E**±0°.02, **h14**^{km}±5^{km}, **n95**, σ**2^{s}.28**/116, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOI	**Ancona**	**0.09**	**358**	P	**Pg**	**02 15 54.1**	**-0.7**
AOI				S	**Sg**	**02 15 56.0**	**-0.8**
AOI				AML	AML		
	comp=E,10700μm,0.8s						
AOI				AML	AML		
	comp=N,12800μm,1.0s						
AOI				AML	AML		
	comp=E,10700μm,0.8s						
AOI				AML	AML		
	comp=N,12800μm,1.0s						
AOI				AML	AML		
	comp=E,10700μm,0.8s						
AOI				AML	AML		
	comp=N,12800μm,1.0s						
PCRO	**Pietralacroce**	**0.15**	**340**	P	**Pg**	**02 15 55.7**	**+0.1**
PCRO				S	**Sg**	**02 15 58.6**	**+0.5**
CIMA	**Civitanova Mar**	**0.17**	**163**	P	**Pb**	**02 15 57.4**	**+0.9**
CIMA				AML	AML		
	comp=E,19350μm,0.2s						
CIMA				AML	AML		
	comp=N,11500μm,0.4s						
CIMA				AML	AML		
	comp=E,19400μm,0.2s						
CIMA				AML	AML		
	comp=N,11500μm,0.4s						
CIMA				AML	AML		
	comp=E,19400μm,0.2s						
CIMA				AML	AML		
	comp=N,11500μm,0.4s						
CIMA				AML	AML		
	comp=N,11500μm,0.4s						
CIMA				AML	AML		
	comp=E,19400μm,0.2s						
CIMA				AML	AML		
	comp=N,11500μm,0.4s						
CIMA				AML	AML		
	comp=E,19400μm,0.2s						
CADA	**Capodarco di F**	**0.29**	**157**	P	**Pb**	**02 15 59.2**	**+0.5**
CING	**Cingoli**	**0.31**	**254**	P	**Pb**	**02 16 00.0**	**+1.0**
CING				S	**Sb**	**02 16 06.8**	**+2.8**
CING				AML	AML		
	comp=E,428μm,0.4s						
CING				AML	AML		
	comp=N,496μm,1.4s						
CING				AML	AML		
	comp=E,428μm,0.4s						
CING				AML	AML		
	comp=N,496μm,1.4s						
CING				AML	AML		
	comp=E,428μm,0.4s						
CING				AML	AML		
	comp=N,496μm,1.4s						
MNTP	**Montappone**	**0.34**	**197**	P	**Pb**	**02 16 00.8**	**+1.3**
SENI	**Senigallia**	**0.36**	**312**	P	**Pb**	**02 16 00.6**	**+0.8**
SENI				AML	AML		
	comp=E,3160μm,0.3s						
SENI				AML	AML		
	comp=N,2900μm,0.2s						
SENI				AML	AML		
	comp=E,3160μm,0.3s						
SENI				AML	AML		
	comp=N,2900μm,0.2s						
SENI				AML	AML		
	comp=E,545μm,1.0s						
SENI				AML	AML		
	comp=N,596μm,0.2s						
SENI				AML	AML		
	comp=N,596μm,0.2s						
SENI				AML	AML		
	comp=N,2900μm,0.2s						
SENI				AML	AML		
	comp=E,545μm,1.0s						
SENI				AML	AML		
	comp=E,3160μm,0.3s						
SENI				AML	AML		
	comp=N,596μm,0.2s						
SENI				AML	AML		
	comp=N,2900μm,0.2s						
SENI				AML	AML		
	comp=E,545μm,1.0s						
SENI				AML	AML		
	comp=E,3160μm,0.3s						
EL6	**Elcito**	**0.39**	**250**	P	**Pb**	**02 16 01.5**	**+1.1**
EL6				S	**Sn**	**02 16 09.7**	**-0.5**
EL6				AML	AML		
	comp=E,650μm,0.7s						
EL6				AML	AML		
	comp=N,550μm,0.3s						
COR1	**Corinaldo**	**0.47**	**291**	P	**Pb**	**02 16 03.1**	**+1.4**
CSP1	**Cessapalombo**	**0.47**	**218**	P	**Pb**	**02 16 02.9**	**+1.1**
CSP1				AML	AML		
	comp=E,642μm,0.4s						
CSP1				AML	AML		
	comp=N,834μm,0.3s						
ARVD	**Arcevia**	**0.48**	**274**	P	**Pb**	**02 16 02.7**	**+0.8**
ARVD				S	**Sn**	**02 16 12.2**	**-0.2**
ARVD				AML	AML		
	comp=E,153μm,0.8s						
ARVD				AML	AML		
	comp=N,250μm,0.6s						
ARVD				AML	AML		
	comp=E,153μm,0.8s						
ARVD				AML	AML		
	comp=N,250μm,0.6s						
ARVD				AML	AML		
	comp=E,153μm,0.8s						
ARVD				AML	AML		
	comp=N,250μm,0.6s						
ARVD				AML	AML		
	comp=N,250μm,0.6s						
ARVD				AML	AML		
	comp=E,153μm,0.8s						
ARVD				AML	AML		
	comp=N,250μm,0.6s						
ARVD				AML	AML		
	comp=E,153μm,0.8s						
SNTG	**Esanatoglia**	**0.53**	**247**	P	**Pb**	**02 16 03.7**	**+1.0**
SNTG				AML	AML		
	comp=E,204μm,0.4s						
SNTG				AML	AML		
	comp=N,290μm,0.3s						
SNTG				AML	AML		
	comp=E,204μm,0.4s						
SNTG				AML	AML		
	comp=N,290μm,0.3s						
SNTG				AML	AML		
	comp=E,204μm,0.4s						
SNTG				AML	AML		
	comp=N,290μm,0.3s						
SNTG				AML	AML		
	comp=N,290μm,0.3s						
SNTG				AML	AML		
	comp=E,204μm,0.4s						
SNTG				AML	AML		
	comp=N,290μm,0.3s						
SNTG				AML	AML		
	comp=E,204μm,0.4s						
FDMO	**Fiordimonte**	**0.57**	**222**	P	**Pb**	**02 16 04.5**	**+1.1**
FDMO				AML	AML		
	comp=E,542μm,0.9s						
FDMO				AML	AML		
	comp=N,394μm,0.5s						
FDMO				AML	AML		
	comp=E,542μm,0.9s						
FDMO				AML	AML		
	comp=N,394μm,0.5s						
FDMO				AML	AML		
	comp=E,542μm,0.9s						
FDMO				AML	AML		
	comp=N,394μm,0.5s						
FDMO				AML	AML		
	comp=E,542μm,0.9s						
FDMO				AML	AML		
	comp=N,394μm,0.5s						
MPAG	**Monte Paganucc**	**0.64**	**285**	P	**Pb**	**02 16 05.6**	**+1.1**
MPAG				AML	AML		
	comp=E,300μm,0.5s						
MPAG				AML	AML		
	comp=N,228μm,0.4s						
MPAG				AML	AML		
	comp=E,300μm,0.5s						
MPAG				AML	AML		
	comp=N,228μm,0.4s						
MPAG				AML	AML		
	comp=E,300μm,0.5s						
MPAG				AML	AML		
	comp=N,228μm,0.4s						
MPAG				AML	AML		
	comp=N,228μm,0.4s						
MPAG				AML	AML		
	comp=E,300μm,0.5s						
MPAG				AML	AML		
	comp=N,228μm,0.4s						
MPAG				AML	AML		
	comp=E,300μm,0.5s						
FOSV	**Fossato di Vic**	**0.64**	**255**	P	**Pb**	**02 16 05.5**	**+1.0**
FOSV				AML	AML		
	comp=E,261μm,0.4s						
FOSV				AML	AML		
	comp=N,284μm,0.3s						
FOSV				AML	AML		
	comp=E,260μm,0.4s						
FOSV				AML	AML		
	comp=N,284μm,0.3s						
FOSV				AML	AML		
	comp=N,284μm,0.3s						
FOSV				AML	AML		
	comp=E,260μm,0.4s						
FOSV				AML	AML		
	comp=N,284μm,0.3s						
FOSV				AML	AML		
	comp=E,260μm,0.4s						
FRON	**Frontone**	**0.64**	**275**	P	**Pb**	**02 16 05.5**	**+0.8**
FRON				AML	AML		
	comp=E,181μm,0.3s						
FRON				AML	AML		
	comp=N,322μm,0.6s						
FRON				AML	AML		
	comp=E,182μm,0.3s						
FRON				AML	AML		
	comp=N,322μm,0.6s						
FRON				AML	AML		
	comp=N,322μm,0.6s						
FRON				AML	AML		
	comp=E,182μm,0.3s						
FRON				AML	AML		
	comp=N,322μm,0.6s						
FRON				AML	AML		
	comp=E,182μm,0.3s						
FSSB	**Fossombrone**	**0.64**	**291**	P	**Pb**	**02 16 05.4**	**+0.7**
FSSB				AML	AML		
	comp=E,606μm,0.3s						
FSSB				AML	AML		
	comp=N,705μm,0.4s						
FSSB				AML	AML		
	comp=E,606μm,0.3s						
FSSB				AML	AML		
	comp=N,705μm,0.4s						
FSSB				AML	AML		
	comp=E,606μm,0.3s						
FSSB				AML	AML		
	comp=N,705μm,0.4s						
FSSB				AML	AML		
	comp=E,606μm,0.3s						
FSSB				AML	AML		
	comp=N,705μm,0.4s						
CESI	**CESI - Serrava**	**0.69**	**228**	P	**Pn**	**02 16 06.8**	**-0.2**
CESI				AML	AML		
	comp=E,152μm,0.3s						
CESI				AML	AML		
	comp=N,268μm,0.4s						
CESI				AML	AML		
	comp=E,153μm,0.3s						
CESI				AML	AML		
	comp=N,268μm,0.4s						
CESI				AML	AML		
	comp=E,153μm,0.3s						
CESI				AML	AML		
	comp=N,268μm,0.4s						
CESI				AML	AML		
	comp=E,153μm,0.3s						
CESI				AML	AML		
	comp=N,268μm,0.4s						
TRTR	**Tortoreto Alta**	**0.69**	**161**	AML	AML		
	comp=E,1780μm,0.4s						
TRTR				AML	AML		
	comp=E,1780μm,0.4s						
TRTR				AML	AML		
	comp=N,1770μm,0.3s						
TRTR				AML	AML		
	comp=E,1780μm,0.4s						
TRTR				AML	AML		
	comp=N,1770μm,0.3s						
TRTR				AML	AML		
	comp=N,1770μm,0.3s						
TRTR				AML	AML		
	comp=N,1770μm,0.3s						
TRTR				AML	AML		
	comp=E,1780μm,0.4s						
NRCA	**Norcia**	**0.72**	**210**	P	**Pb**	**02 16 07.0**	**+1.0**
NRCA				AML	AML		
	comp=E,640μm,1.2s						
NRCA				AML	AML		
	comp=N,816μm,1.2s						
NRCA				AML	AML		
	comp=E,664μm,1.2s						
NRCA				AML	AML		
	comp=N,812μm,0.2s						
NRCA				AML	AML		
	comp=N,816μm,1.2s						
NRCA				AML	AML		
	comp=N,812μm,0.2s						
NRCA				AML	AML		
	comp=E,640μm,1.2s						
NRCA				AML	AML		
	comp=E,664μm,1.2s						
NRCA				AML	AML		
	comp=N,812μm,0.2s						
NRCA				AML	AML		
	comp=N,816μm,1.2s						
NRCA				AML	AML		
	comp=E,640μm,1.2s						
NRCA				AML	AML		
	comp=E,664μm,1.2s						
PESA	**Pesaro**	**0.73**	**311**	P	**Pn**	**02 16 07.3**	**-0.2**
ATFO	**Monte Foce - G**	**0.76**	**263**	P	**Pn**	**02 16 08.0**	**0.0**
ATFO				AML	AML		
	comp=E,270μm,1.0s						
ATFO				AML	AML		
	comp=N,270μm,0.3s						
ATFO				AML	AML		
	comp=E,270μm,1.0s						
ATFO				AML	AML		
	comp=N,270μm,0.3s						
ATFO				AML	AML		
	comp=E,270μm,1.0s						
ATFO				AML	AML		
	comp=N,270μm,0.3s						
ATFO				AML	AML		
	comp=E,270μm,1.0s						
ATFO				AML	AML		
	comp=N,270μm,0.3s						
PIEI	**Pieia**	**0.78**	**276**	P	**Pb**	**02 16 08.0**	**+1.0**
PIEI				AML	AML		
	comp=E,226μm,0.3s						
PIEI				AML	AML		
	comp=N,170μm,1.3s						
PIEI				AML	AML		
	comp=E,226μm,0.3s						
PIEI				AML	AML		
	comp=N,170μm,1.3s						
PIEI				AML	AML		
	comp=E,226μm,0.3s						
PIEI				AML	AML		
	comp=N,170μm,1.3s						
PIEI				AML	AML		
	comp=E,226μm,0.3s						
PIEI				AML	AML		
	comp=N,170μm,1.3s						
ASSB	**Assisi San Ben**	**0.81**	**239**	P	**Pb**	**02 16 08.6**	**+1.1**
ASSB				AML	AML		
	comp=E,675μm,0.4s						
ASSB				AML	AML		
	comp=N,703μm,0.4s						
ASSB				AML	AML		
	comp=E,675μm,0.4s						
ASSB				AML	AML		
	comp=N,703μm,0.4s						
ASSB				AML	AML		
	comp=N,703μm,0.4s						
ASSB				AML	AML		
	comp=E,675μm,0.4s						
ASSB				AML	AML		
	comp=N,703μm,0.4s						
ASSB				AML	AML		
	comp=E,675μm,0.4s						
MURB	**Monte Urbino**	**0.81**	**256**	P	**Pn**	**02 16 09.1**	**+0.4**
MURB				AML	AML		
	comp=E,724μm,0.4s						
MURB				AML	AML		
	comp=N,991μm,0.3s						
MURB				AML	AML		
	comp=E,764μm,0.3s						
MURB				AML	AML		
	comp=N,1120μm,0.3s						
MURB				AML	AML		
	comp=E,764μm,0.3s						
MURB				AML	AML		
	comp=N,1120μm,0.3s						
MURB				AML	AML		
	comp=E,764μm,0.3s						
MURB				AML	AML		
	comp=N,1120μm,0.3s						
MURB				AML	AML		
	comp=E,764μm,0.3s						
MURB				AML	AML		
	comp=N,1120μm,0.3s						
PE3	**Peglio**	**0.84**	**286**	AML	AML		
	comp=N,974μm,0.4s						
PE3				AML	AML		
	comp=E,775μm,0.5s						
PE3				AML	AML		

	comp=N,974µm,0.4s						
PE3				AML	AML		
	comp=E,776µm,0.5s						
PE3				AML	AML		
	comp=N,974µm,0.4s						
PE3				AML	AML		
	comp=E,776µm,0.5s						
PE3				AML	AML		
	comp=N,974µm,0.4s						
PE3				AML	AML		
	comp=E,776µm,0.5s						
TERO	**Teramo**	**0.84**	**180**	P	**Pb**	**02 16 08.9**	**+0.8**
TERO				AML	AML		
	comp=E,230µm,1.1s						
TERO				AML	AML		
	comp=N,156µm,0.5s						
TERO				AML	AML		
	comp=E,230µm,1.1s						
TERO				AML	AML		
	comp=N,156µm,0.5s						
TERO				AML	AML		
	comp=E,230µm,1.1s						
TERO				AML	AML		
	comp=N,156µm,0.5s						
TERO				AML	AML		
	comp=E,230µm,1.1s						
TERO				AML	AML		
	comp=N,156µm,0.5s						
SMA1	**SAN MARTINO**	**0.86**	**193**	P	**Pb**	**02 16 09.0**	**+0.6**
SMA1				AML	AML		
	comp=E,1054µm,0.5s						
SMA1				AML	AML		
	comp=N,1295µm,0.4s						
SMA1				AML	AML		
	comp=E,1053µm,0.5s						
SMA1				AML	AML		
	comp=N,1295µm,0.4s						
SMA1				AML	AML		
	comp=N,1295µm,0.4s						
SMA1				AML	AML		
	comp=E,1053µm,0.5s						
SMA1				AML	AML		
	comp=N,1295µm,0.4s						
SMA1				AML	AML		
	comp=E,1053µm,0.5s						
ATVO	**AVT- Monte Val**	**0.88**	**265**	P	**Pn**	**02 16 10.1**	**+0.5**
ATVO				AML	AML		
	comp=E,191µm,1.3s						
ATVO				AML	AML		
	comp=N,242µm,0.5s						
ATVO				AML	AML		
	comp=E,191µm,1.3s						
ATVO				AML	AML		
	comp=N,242µm,0.5s						
ATVO				AML	AML		
	comp=E,191µm,1.3s						
ATVO				AML	AML		
	comp=N,242µm,0.5s						
ATVO				AML	AML		
	comp=E,191µm,1.3s						
ATVO				AML	AML		
	comp=N,242µm,0.5s						
LNSS	**Leonessa**	**0.95**	**206**	P	**Pn**	**02 16 11.1**	**+0.4**
LNSS				AML	AML		
	comp=E,622µm,0.3s						
LNSS				AML	AML		
	comp=N,540µm,0.8s						
LNSS				AML	AML		
	comp=E,622µm,0.3s						
LNSS				AML	AML		
	comp=N,540µm,0.8s						
LNSS				AML	AML		
	comp=E,622µm,0.3s						
LNSS				AML	AML		
	comp=N,540µm,0.8s						
LNSS				AML	AML		
	comp=E,622µm,0.3s						
LNSS				AML	AML		
	comp=N,540µm,0.8s						
MOMA	**Monte Martano**	**1.00**	**229**	P	**Pn**	**02 16 12.1**	**+0.7**
MOMA				AML	AML		
	comp=E,240µm,1.6s						
MOMA				AML	AML		
	comp=N,442µm,0.4s						
MOMA				AML	AML		
	comp=E,241µm,1.6s						
MOMA				AML	AML		
	comp=N,442µm,0.4s						
MOMA				AML	AML		
	comp=E,241µm,1.6s						
MOMA				AML	AML		
	comp=N,442µm,0.4s						
MOMA				AML	AML		
	comp=E,241µm,1.6s						
MOMA				AML	AML		
	comp=N,442µm,0.4s						
PARC	**Parchiule**	**1.01**	**281**	AML	AML		
	comp=N,150µm,1.0s						
PARC				AML	AML		
	comp=E,150µm,0.6s						
PARC				AML	AML		
	comp=E,150µm,0.6s						
PARC				AML	AML		
	comp=N,151µm,1.0s						
PARC				AML	AML		
	comp=E,150µm,0.6s						
PARC				AML	AML		
	comp=N,151µm,1.0s						
PARC				AML	AML		
	comp=E,150µm,0.6s						
PARC				AML	AML		
	comp=N,151µm,1.0s						
ARRO	**Arrone**	**1.08**	**215**	AML	AML		
	comp=N,173µm,0.3s						
ARRO				AML	AML		
	comp=E,207µm,0.2s						
ARRO				AML	AML		
	comp=N,173µm,0.3s						
ARRO				AML	AML		
	comp=E,207µm,0.2s						
ARRO				AML	AML		
	comp=N,173µm,0.3s						
ARRO				AML	AML		
	comp=E,207µm,0.2s						
VCEL	**Villa Celiera**	**1.08**	**171**	AML	AML		
	comp=N,445µm,0.8s						
VCEL				AML	AML		
	comp=E,494µm,0.8s						
VCEL				AML	AML		
	comp=N,446µm,0.8s						
VCEL				AML	AML		
	comp=E,494µm,0.8s						
VCEL				AML	AML		
	comp=N,445µm,0.8s						
VCEL				AML	AML		
	comp=E,494µm,0.8s						
VCEL				AML	AML		
	comp=N,445µm,0.8s						
VCEL				AML	AML		
	comp=E,494µm,0.8s						
AQU	**L'Aquila**	**1.12**	**188**	*e*Pn	**Pn**	**02 16 13.5**	**+0.6**
T0104	**Madonna delle**	**1.12**	**190**	P	**Pg**	**02 16 13.6**	**+0.3**
T0104				AML	AML		
	comp=E,1074µm,0.8s						
T0104				AML	AML		
	comp=N,670µm,0.5s						
T0104				AML	AML		
	comp=N,670µm,0.5s						
T0104				AML	AML		
	comp=E,1074µm,0.8s						
T0104				AML	AML		
	comp=N,670µm,0.5s						
T0104				AML	AML		
	comp=E,1074µm,0.8s						
CESX	**Cesi**	**1.14**	**222**	P	**Pg**	**02 16 14.4**	**+0.9**
CESX				AML	AML		
	comp=E,302µm,1.3s						
CESX				AML	AML		
	comp=N,321µm,0.6s						
CESX				AML	AML		
	comp=N,321µm,0.6s						
CESX				AML	AML		
	comp=E,302µm,1.3s						
CESX				AML	AML		
	comp=N,321µm,0.6s						
CESX				AML	AML		
	comp=E,302µm,1.3s						
DUGI	**Dugi Otok**	**1.18**	**63**	*e*Pg	**Pn**	**02 16 13.3**	**-0.3**
DUGI				Sg	**Sg**	**02 16 29.5**	**-0.2**
CAFI	**Castiglion Fio**	**1.20**	**264**	AML	AML		
	comp=N,83µm,0.8s						
CAFI				AML	AML		
	comp=E,118µm,0.7s						
CAFI				AML	AML		
	comp=N,83µm,0.8s						
CAFI				AML	AML		
	comp=E,118µm,0.7s						
CAFI				AML	AML		
	comp=E,118µm,0.7s						
CAFI				AML	AML		
	comp=N,83µm,0.8s						
MGAB	**Montegabbione**	**1.22**	**244**	AML	AML		
	comp=N,235µm,0.6s						
MGAB				AML	AML		
	comp=E,239µm,0.4s						
MGAB				AML	AML		
	comp=E,239µm,0.4s						
MGAB				AML	AML		
	comp=N,235µm,0.6s						
MGAB				AML	AML		
	comp=E,239µm,0.4s						
MGAB				AML	AML		
	comp=N,235µm,0.6s						
FIAM	**Fiamignano**	**1.25**	**197**	P	**Pb**	**02 16 15.5**	**+0.5**
FIAM				AML	AML		
	comp=E,319µm,0.5s						
FIAM				AML	AML		
	comp=N,371µm,0.9s						
FIAM				AML	AML		
	comp=N,371µm,0.9s						
FIAM				AML	AML		
	comp=E,319µm,0.5s						
FIAM				AML	AML		
	comp=N,371µm,0.9s						
FIAM				AML	AML		
	comp=E,319µm,0.5s						
CAFR	**Castel Frentan**	**1.35**	**156**	AML	AML		
	comp=N,665µm,0.4s						
CAFR				AML	AML		
	comp=E,515µm,0.5s						
CAFR				AML	AML		
	comp=N,665µm,0.4s						
CAFR				AML	AML		
	comp=E,515µm,0.5s						
CAFR				AML	AML		
	comp=N,665µm,0.4s						
CAFR				AML	AML		
	comp=E,515µm,0.5s						
SACS	**San Casciano d**	**1.39**	**244**	AML	AML		
	comp=E,80µm,0.9s						
SACS				AML	AML		
	comp=E,80µm,0.9s						
SACS				AML	AML		
	comp=N,97µm,1.2s						
SACS				AML	AML		
	comp=N,97µm,1.2s						
SACS				AML	AML		
	comp=N,97µm,1.2s						
SACS				AML	AML		
	comp=E,80µm,0.9s						
NVLJ	**Novalja**	**1.43**	**39**	*e*Pg	**Pn**	**02 16 17.3**	**+0.2**
NVLJ				Sg	**Sn**	**02 16 35.4**	**-0.2**
INTR	**Introdacqua**	**1.47**	**171**	AML	AML		
	comp=E,254µm,0.6s						
INTR				AML	AML		
	comp=E,254µm,0.6s						
INTR				AML	AML		
	comp=N,468µm,0.5s						
INTR				AML	AML		
	comp=E,254µm,0.6s						
INTR				AML	AML		
	comp=N,468µm,0.5s						
INTR				AML	AML		
	comp=N,468µm,0.5s						
LPEL	**Lama dei Pelig**	**1.48**	**163**	AML	AML		
	comp=E,196µm,0.3s						
LPEL				AML	AML		
	comp=N,157µm,1.5s						
LPEL				AML	AML		
	comp=N,157µm,1.5s						
LPEL				AML	AML		
	comp=E,196µm,0.3s						
LPEL				AML	AML		
	comp=N,157µm,1.5s						
LPEL				AML	AML		
	comp=E,196µm,0.3s						
ZIRJ	**Zirje**	**1.49**	**82**	*e*Pg	**Pn**	**02 16 18.0**	**0.0**
ZIRJ				Sg	**Sn**	**02 16 36.8**	**-0.5**
MORI	**Morici**	**1.58**	**75**	*e*Pn	**Pn**	**02 16 19.2**	**0.0**
MORI				Sn	**Sb**	**02 16 39.6**	**-0.7**
UDBI	**Udbina**	**1.89**	**55**	*e*Pn	**Pb**	**02 16 25.4**	**-0.5**
UDBI				Sn	**Sb**	**02 16 48.7**	**-0.6**
RIY	**Rijeka**	**1.96**	**18**	ePn		02 16 25.2	
RIY				Sn	**Sb**	**02 16 50.4**	**-1.1**
RIY	**Rijeka**	**1.96**	**18**	*e*Pn	**Pn**	**02 16 24.7**	**+0.2**
HVAR	**Hvar**	**2.10**	**97**	*e*Pn	**Pn**	**02 16 26.1**	**-0.1**
HVAR				Sn	**Sn**	**02 16 52.5**	**+0.4**
SKDS	**Skadanscina**	**2.10**	**8**	*i* Pn	**Pn**	**02 16 26.6**	**+0.2**
SKDS				*i* Sn	**Sn**	**02 16 53.5**	**+1.2**
	comp=Z,17nm,0.3s						
CEY	**Cerknica**	**2.35**	**14**	*e*Pn	**Pn**	**02 16 30.2**	**+0.4**
MAKA	**Makarska**	**2.50**	**93**	*e*Pn	**Pn**	**02 16 32.5**	**+0.8**
OZLJ	**Ozalj**	**2.53**	**31**	*e*Pn	**Pb**	**02 16 34.6**	**-2.2**
LJU	**Ljubljana**	**2.66**	**14**	*e*Pn	**Pn**	**02 16 34.0**	**-0.1**
LJU	**Ljubljana**	**2.66**	**14**	AML	AML		
	comp=N,112µm,0.8s						
LJU				AML	AML		
	comp=E,85µm,0.6s						
LJU				AML	AML		
	comp=N,112µm,0.8s						
LJU				AML	AML		
	comp=E,85µm,0.6s						
LJU				AML	AML		
	comp=N,112µm,0.8s						
LJU				AML	AML		
	comp=E,85µm,0.6s						
CRES	**Cresnjev**	**2.71**	**29**	*e*Pn	Pn	02 16 27.2	-7.5
BLY	**Banja Luka**	**2.88**	**62**	*e*Pn	**Pb**	**02 16 42.4**	**-0.4**
STON	**Ston**	**3.05**	**100**	*e*Pn	**Pn**	**02 16 39.7**	**+0.3**
STON	**Ston**	**3.05**	**100**	*e*Pn	**Pn**	**02 16 39.6**	**+0.2**
OBKA	**Obir**	**3.12**	**12**	*e*Pn	**Pn**	**02 16 41.7**	**+1.3**
	comp=E,0.9nm,0.2s						
OBKA				Sg	**Sg**	**02 17 31.2**	**-0.6**
	comp=E,29nm,0.7s						
MYKA	**Terra Mystica**	**3.17**	**0**	*e*Pn	**Pn**	**02 16 42.9**	**+1.9**
	comp=E,1.4nm,0.3s						
MYKA				*e*Sn	**Sn**	**02 17 20.8**	**+2.2**
	comp=E,2.6nm,0.5s						
SOKA	**Soboth**	**3.37**	**17**	*e*Pn	**Pn**	**02 16 45.5**	**+1.7**
	comp=E,0.8nm,0.5s						
SOKA				Sg	**Sg**	**02 17 39.9**	**+0.1**
	comp=E,2.6nm,0.7s						
ABTA	**Abfaltersbach**	**3.37**	**347**	*e*Pn	**Pn**	**02 16 45.4**	**+1.5**
	comp=E,0.5nm,0.2s						
ABTA				*e*Sn	**Sn**	**02 17 24.1**	**+0.3**
	comp=E,2.8nm,0.4s						
DBRK	**Dubrovnik**	**3.42**	**102**	*e*Pn	**Pn**	**02 16 46.2**	**+1.7**
TREB	**Trebinje**	**3.56**	**101**	*e*Pn	**Pn**	**02 16 47.1**	**+0.8**
KBA	**Koelnbreinsper**	**3.62**	**357**	*e*Pn	**Pn**	**02 16 49.0**	**+1.6**
	comp=E,0.6nm,0.3s						
KBA				*e*Sn	**Sn**	**02 17 30.4**	**+0.5**
	comp=E,6.1nm,0.8s						
KBA				Sg	**Sg**	**02 17 51.7**	**+3.8**
	comp=E,3.8nm,0.6s						
ROSI	**Rosskopf**	**3.79**	**337**	AML	AML		
	comp=E,30µm,0.4s						
ROSI				AML	AML		
	comp=N,39µm,0.5s						
ROSI				AML	AML		
	comp=E,30µm,0.4s						
ROSI				AML	AML		
	comp=N,39µm,0.5s						
ROSI				AML	AML		
	comp=E,30µm,0.4s						
ROSI				AML	AML		
	comp=N,39µm,0.5s						
UPM	**Unac-Piva**	**3.88**	**92**	*e*Pn	**Pn**	**02 16 53.7**	**+2.8**
ARSA	**Arzberg**	**4.02**	**19**	*e*Pn	**Pn**	**02 16 53.9**	**+1.1**
	comp=N,0.4nm,0.3s						
ARSA				*e*Sn	**Sn**	**02 17 38.8**	**-0.9**
	comp=N,0.8nm,0.3s						
WTTA	**Wattenberg**	**4.04**	**341**	*e*Pn	**Pn**	**02 16 55.8**	**+2.5**
	comp=N,0.4nm,0.2s						
WTTA				*e*Sn	**Sn**	**02 17 44.5**	**+4.0**
	comp=N,1.0nm,0.3s						
FETA	**Feichten**	**4.10**	**331**	Pn	**Pn**	**02 16 58.6**	**+4.7**
	comp=N,1.0nm,0.3s						
FETA				Sn	**Sn**	**02 17 43.3**	**+1.6**
	comp=N,1.2nm,0.3s						
SQTA	**Sankt Quirin**	**4.12**	**337**	*e*Pn	**Pn**	**02 16 57.8**	**+3.6**
	comp=N,0.8nm,0.2s						
SQTA				*e*Sn	**Sn**	**02 17 46.5**	**+4.3**
	comp=N,3.6nm,0.4s						
WATA	**Walderalm**	**4.13**	**340**	*e*Pn	**Pn**	**02 16 56.9**	**+2.6**
	comp=N,0.7nm,0.2s						
RUDO	**Rudo**	**4.19**	**86**	*e*Pn	**Pn**	**02 16 56.8**	**+1.7**
MOTA	**Moosalm**	**4.26**	**336**	*e*Pn	**Pn**	**02 16 59.0**	**+2.8**
	comp=N,0.6nm,0.4s						
PDG	**Podgorica**	**4.27**	**102**	*e*Pn	**Pn**	**02 16 57.1**	**+0.9**
DRME	**Dracevica, Mon**	**4.30**	**105**	*e*Pn	**Pn**	**02 16 57.0**	**+0.5**
MOA	**Molln**	**4.41**	**6**	*e*Pn	**Pn**	**02 16 59.8**	**+1.7**
	comp=N,0.7nm,0.3s						
MOA				*e*Sn	**Sn**	**02 17 50.2**	**+1.0**
	comp=N,4.5nm,0.6s						
RETA	**Reutte**	**4.49**	**335**	*e*Pn	**Pn**	**02 17 02.2**	**+2.9**
	comp=N,0.8nm,0.4s						
SBF	**Sospel**	**4.49**	**277**	*e*Pn	**Pn**	**02 16 58.6**	**-0.7**
SBF				*e*Sn	**Sn**	**02 17 48.3**	**-3.1**
	comp=N,4.7nm,0.6s						
DAVA	**Damuels**	**4.64**	**327**	*e*Pn	**Pn**	**02 17 05.5**	**+4.2**
	comp=N,1.3nm,0.2s						
CONA	**Conrad Observa**	**4.74**	**19**	*i* Pn	**Pn**	**02 17 03.0**	**+0.3**
	comp=N,0.5nm,0.2s						
CONA				*e*Sn	**Sn**	**02 17 56.9**	**-0.5**
	comp=N,0.2nm,0.2s						
FRF	**La Foret Royal**	**5.06**	**273**	*e*P	**Pn**	**02 17 10.3**	**+3.2**
FRF				*e*Sn	**Sn**	**02 18 02.7**	**-2.6**
	comp=N,0.5nm,0.3s						
LMR	**La Mourre**	**5.17**	**271**	*e*Pn	**Pn**	**02 17 08.2**	**-0.4**
LMR				*e*Sn	**Sn**	**02 18 04.7**	**-3.3**
	comp=N,1.0nm,0.4s						
LPG	**La Plagne**	**5.31**	**295**	*e*P	**Pn**	**02 17 13.5**	**+2.8**
LPG				*e*Sn	**Sn**	**02 18 06.7**	**-5.1**
	comp=N,1.0nm,0.3s						
LPL	**La Plagne**	**5.33**	**295**	*e*P	**Pn**	**02 17 14.3**	**+3.4**
LPL				*e*Sn	**Sn**	**02 18 07.8**	**-4.3**
	comp=N,1.4nm,0.3s						
ORIF	**Oris-en-Rattie**	**5.74**	**287**	*e*P	**Pn**	**02 17 19.5**	**+3.0**
ORIF				*e*Sn	**Sn**	**02 18 17.5**	**-4.7**
	comp=N,0.5nm,0.3s						
CABF	**La Chapelle**	**6.19**	**303**	*e*Pn	**Pn**	**02 17 21.4**	**-1.2**
CABF				*e*Sn	**Sn**	**02 18 27.2**	**-5.9**
	comp=N,0.5nm,0.3s						
HINF	**Hinteralfeld**	**6.43**	**315**	*e*Pn	**Pn**	**02 17 24.6**	**-1.3**
HINF				*e*Sn	**Sn**	**02 18 32.3**	**-6.7**
	comp=N,2.1nm,0.5s						
CDF	**Champ du Feu**	**6.63**	**320**	*e*Pn	**Pn**	**02 17 27.3**	**-1.3**
CDF				*e*Sn	**Sn**	**02 18 37.1**	**-6.9**
	comp=N,0.5nm,0.3s						
HAU	**Haudompre**	**6.81**	**314**	*e*Pn	**Pn**	**02 17 28.9**	**-2.2**
HAU				*e*Sn	**Sn**	**02 18 42.2**	**-6.2**
	comp=N,2.5nm,0.3s						
LOR	**Lormes**	**7.85**	**302**	*e*Pn	**Pn**	**02 17 43.1**	**-2.2**
LOR				*e*Sn	**Sn**	**02 19 06.3**	**-7.5**
	comp=N,1.1nm,0.3s						

SVSA 21 02:19:51.5±0.9**,38°.59N**×**28°.39W,h13**^{km}±2^{km}**,MD3.7, ML3.4,3C-1D,Error ellipse: s-maj=2.4km s-min=2.2km az=14.0,Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PICO	**Pico**	**0.09**	**198**	⇑*i*P	Pg	02 19 54.0	-0.4
PICO				*e*S	Sg	02 19 56.4	-0.1
PCAN	**Candelaria**	**0.15**	**211**	⇑*i*P	Pg	02 19 54.5	-0.6
ROSA	**Rosais**	**0.17**	**42**	⇑*i*P	Pg	02 19 55.0	-0.5
ROSA				*e*S	Sg	02 19 57.9	-0.4
ROSA				A	A	02 19 59.0	
	7µm,0.4s						
HOR	**Horta**	**0.20**	**252**	*e*P	Pg	02 19 55.1	-0.8
HOR				*e*S	Sg	02 19 58.3	-0.6
PMAN	**Manadas**	**0.24**	**80**	*e*P	Pg	02 19 55.8	-0.8
PMAN				*e*S	Sg	02 19 59.2	-0.8
PMAN				A	A	02 20 06.4	
	2µm,0.2s						
CALA	**Caldeira**	**0.24**	**268**	*e*P	Pg	02 19 56.1	-0.6
CALA				*e*S	Sg	02 19 59.8	-0.5
PCED	**Cedros**	**0.25**	**279**	⇓*i*P	Pg	02 19 55.8	-0.9
PCED				*e*S	Sg	02 19 59.8	-0.5
PCED				A	A	02 20 01.4	
	4µm,0.3s						
PGRA	**Graciosa**	**0.54**	**36**	*e*P	Pg	02 20 00.1	-2.0
PGRA				A	A	02 20 16.6	
	884nm,0.3s						
ADH	**Angra Heroismo**	**0.91**	**86**	*e*P	Pg	02 20 05.4	-3.6
ADH				*e*S	Sg	02 20 16.1	-4.7
ADH				A	A	02 20 17.9	
	862nm,0.2s						
PSCM	**Serra do Cume**	**1.00**	**83**	*e*P	Pb	02 20 06.5	-4.3
PSCM				*e*S	Sb	02 20 18.2	-5.7
PSCM				A	A	02 20 19.6	
	1µm,0.1s						
PSET	**Sete Cidades**	**2.24**	**109**	*e*P	Pn	02 20 24.7	-3.6
PSET				*e*S	Sn	02 20 48.3	-7.5
PSET				A	A	02 20 52.6	
	78nm,0.1s						
PDA	**Ponta Delgada**	**2.31**	**111**	*e*P	Pn	02 20 25.2	-4.0
PDA				*e*S	Sn	02 20 49.8	-7.7
CMLA	**Cha da Macela**	**2.40**	**109**	*e*P	Pn	02 20 26.6	-4.0
CMLA				*e*S	Sn	02 20 52.0	-7.9
CMLA				A	A	02 20 56.5	
	70nm,0.3s						
PCALD	**Caldeiras da R**	**2.42**	**108**	*e*P	Pn	02 20 26.4	-4.4
PCALD				*e*S	Sn	02 20 52.6	-7.7
PCALD				A	A	02 20 55.1	
	74nm,0.3s						
BART	**Pico Bartolome**	**2.66**	**107**	*e*P	Pn	02 20 30.1	-4.1
BART				*e*S	Sn	02 20 58.9	-7.6
BART				A	A	02 21 03.6	
	22nm,0.2s						
PSMA	**Santa Maria**	**3.03**	**121**	*e*P	Pn	02 20 35.0	-4.2
PSMA				*e*S	Sn	02 21 07.3	-8.1
PSMA				A	A	02 21 10.7	
	20nm,0.1s						
PSMN	**Pico do Norte,**	**3.07**	**120**	*e*P	Pn	02 20 35.6	-4.2
PSMN				*e*S	Sn	02 21 08.2	-8.2
PSMN				A	A	02 21 12.0	
	19nm,0.1s						

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*IDC **21** 02:19:58.9±7.5, 40°.47S×175°.39E, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.6/16, mbtmp3.7/2, Error ellipse: s-maj=464.7km s-min=43.1km az=31.0*

*WEL **21** 02:20:04.9, 41°.6S±1°.0×174°.3E±0°.8, h14^{km}±2^{km}, M3.6/27, ML3.9/18, MLv3.6/27, Error ellipse: s-maj=0.0km s-min=0.0km az=149.6*

ISC 21 02:20:05.0±0.9**,41°.64S**±0°.03×**174°.37E**±0°.02**,h17**^{km}±7^{km}**, n102,**σ1^{s}.**22**/100**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.16**	**226**	P	**Pb**	**02 20 09.5**	**-0.1**
CMWZ				S	**Sg**	**02 20 12.7**	**+0.4**
BSWZ	**Blackbirch Sta**	**0.38**	**258**	P	**Pg**	**02 20 12.8**	**-0.1**
BSWZ				S	**Sb**	**02 20 18.6**	**-0.2**
TUWZ	**Tuamarina**	**0.38**	**303**	P	**Pg**	**02 20 12.5**	**-0.4**
TUWZ				S	**Sg**	**02 20 18.1**	**-0.1**
TCW	**Tory Channel**	**0.43**	**351**	P	**Pg**	**02 20 13.4**	**-0.3**
BHW	**Baring Head**	**0.44**	**59**	P	**Pb**	**02 20 14.6**	**+0.3**
PLWZ	**Palliser**	**0.67**	**85**	P	**Pn**	**02 20 19.3**	**-0.4**
MSWZ	**Moikau Station**	**0.70**	**72**	P	**Pg**	**02 20 19.5**	**+0.9**
CAW	**Cannon Point**	**0.74**	**45**	P	**Pg**	**02 20 19.8**	**+0.3**
PAWZ	**Paruwai Farm**	**0.83**	**73**	P	**Pn**	**02 20 22.0**	**+0.1**
NNZ	**Nelson**	**0.85**	**299**	P	**Pb**	**02 20 20.9**	**-0.5**
DUWZ	**D'Urville Isla**	**0.90**	**338**	P	**Pb**	**02 20 21.8**	**-0.3**
MTW	**Mount Morrison**	**0.98**	**61**	P	**Pg**	**02 20 24.4**	**+0.5**
KHZ	**Kahutara**	**1.00**	**218**	P	**Pg**	**02 20 24.9**	**+0.6**
OGWZ	**Otaki Gorge**	**1.02**	**37**	P	**Pb**	**02 20 24.4**	**+0.3**
TRWZ	**Traveller**	**1.02**	**77**	P	**Pg**	**02 20 25.0**	**+0.3**
THZ	**Tophouse**	**1.10**	**263**	P	**Pn**	**02 20 25.7**	**0.0**
HOWZ	**Holdsworth Sta**	**1.14**	**50**	P	**Pg**	**02 20 26.8**	**-0.1**
TMWZ	**Te Maipa**	**1.26**	**66**	P	**Pb**	**02 20 28.3**	**+0.1**
MRZ	**Mangatainoka R**	**1.33**	**44**	P	**Pb**	**02 20 29.8**	**+0.2**
TIWZ	**Tintock**	**1.43**	**54**	P	**Pn**	**02 20 30.3**	**+0.2**
CPWZ	**Castlepoint**	**1.56**	**63**	P	**Pb**	**02 20 33.1**	**-0.2**
OHWZ	**Ohakea**	**1.60**	**27**	P	**Pb**	**02 20 34.9**	**+0.9**
QRZ	**Quartz Range**	**1.61**	**300**	P	**Pb**	**02 20 34.1**	**0.0**

PRWZ	Pori Road	1.62	49	P	Pn	02 20 33.6	+0.9
POWZ	Post Office Ro	1.63	41	P	Pb	02 20 34.2	-0.4
GVZ	Greta Valley S	1.66	216	P	Pn	02 20 33.7	+0.4
BFZ	Birch Farm	1.71	57	P	Pn	02 20 34.8	+0.9
DVHZ	Dannevirke	1.91	46	P	Pn	02 20 37.0	+0.3
LTZ	Lake Taylor	1.94	233	P	Pn	02 20 37.8	+0.7
WAZ	Wanganui	1.94	14	P	Pb	02 20 40.6	+0.8
ANWZ	Angora Road	1.98	54	P	Pn	02 20 38.4	+0.7
AMCZ	Amberley	2.00	219	P	Pn	02 20 37.9	0.0
LREZ	Lake Rotokare	2.17	1	P	Pg	02 20 46.0	-0.7
PNHZ	Pukenui	2.21	40	P	Pn	02 20 41.4	+0.5
WPHZ	Waipukurau	2.22	46	P	Pn	02 20 41.1	+0.1
NMEZ	Namu Road	2.25	350	P	Pb	02 20 45.6	+0.4
PREZ	Palmer Road	2.30	356	P	Pb	02 20 46.3	+0.3
OKCZ	Okains Bay	2.30	204	P	Pn	02 20 41.6	-0.5
KHEZ	Kahui Hut	2.35	353	P	Pb	02 20 46.9	0.0
NBEZ	Newall Road No	2.40	351	P	Pb	02 20 49.0	+1.4
MTVZ	Mangateitei	2.40	21	P	Pb	02 20 49.4	+1.7
OXZ	Oxford	2.41	225	P	Pn	02 20 43.1	-0.5
MQZ	McQueen's Vall	2.43	211	P	Pn	02 20 42.7	-1.1
INZ	Inchbonnie	2.43	242	P	Pn	02 20 44.8	+0.9
DREZ	Durham Road	2.45	357	P	Pb	02 20 50.0	+1.5
PKE	Pukeiti	2.46	353	P	Pb	02 20 48.3	-0.3
PKVZ	Pokaka	2.46	18	P	Pb	02 20 50.2	+1.4
MOVZ	Moawhango	2.46	26	P	Pb	02 20 47.9	-0.9
PXZ	Pawanui	2.48	51	P	Pb	02 20 48.0	-1.1
AKCZ	Akaroa Harbour	2.48	205	P	Pn	02 20 44.1	-0.5
BHHZ	Black Hill Sta	2.50	32	P	Pb	02 20 47.5	-2.0
KRHZ	Kereru	2.50	38	P	Pn	02 20 45.4	+0.4
VRZ	Vera Road	2.53	7	P	Pb	02 20 49.2	-0.6
DRZ	Dome Shelter	2.53	21	P	Pg	02 20 52.9	-0.6
WHVZ	Whangaehu Hut	2.53	22	P	Pb	02 20 49.1	-0.9
NGZ	Ngauruhoe	2.63	21	P	Pb	02 20 52.2	+0.5
KAHZ	Kahuranaki	2.65	47	P	Pn	02 20 47.7	+0.8
WTVZ	West Tongariro	2.69	21	P	Pb	02 20 52.3	-0.3
TWVZ	Taurewa	2.69	18	P	Pb	02 20 54.7	+2.0
KWHZ	Kaweka Forest	2.71	36	P	Pg	02 20 56.5	-0.4
KRVZ	Karewarewa	2.72	21	P	Pb	02 20 54.2	+1.0
MCHZ	McNeill Hill	2.82	40	P	Pg	02 21 00.2	+1.2
KATZ	Kakaramea	2.84	21	P	Pb	02 20 57.4	+2.1
CKHZ	Cape Kidnapper	2.85	47	P	Pg	02 21 04.8	+5.1
RITZ	Rihia Road	2.89	24	P	Pb	02 20 57.9	+1.9
BKZ	Black Stump Fm	2.95	34	P	Pb	02 20 56.2	-1.0
WVZ	Waitaha Valley	3.05	241	P	Pn	02 20 53.1	+0.7
ARHZ	Aropaoanui	3.10	41	P	Pg	02 21 08.0	+3.5
WATZ	Wairara	3.10	20	P	Pg	02 21 02.3	-2.2
HIZ	Hauiti	3.14	7	P	Pb	02 20 58.0	-2.4
MRHZ	Matea Rd	3.21	30	P	Pg	02 21 05.8	-0.7
RPZ	Rata Peaks	3.21	229	P	Pn	02 20 54.5	-0.1
KUTZ	Kaahu Road	3.33	20	P	Pg	02 21 06.5	-2.3
MTHZ	Maungataniwha	3.36	35	P	Pb	02 21 01.7	-2.4
RAHZ	Arahi	3.42	38	P	Pb	02 21 01.8	-3.2
TLZ	Tolley Road	3.42	16	P	Pb	02 21 05.9	+0.8
ALRZ	Allen Road	3.42	27	P	Pg	02 21 11.6	+1.1
PRRZ	Plateau Road	3.50	27	P	Pg	02 21 15.1	+3.1
RRRZ	Republican Roa	3.68	27	P	Pg	02 21 17.2	+1.7
TARZ	Mount Tarawera	3.77	26	P	Pg	02 21 18.4	+1.2
NGRZ	Ngongotaha	3.80	22	P	Pg	02 21 19.0	+1.3
FOZ	Fox Glacier	3.86	239	P	Pn	02 21 04.4	+0.9
KARZ	Kaharoa	3.89	22	P	Pg	02 21 21.4	+1.9
RAGZ	Rawiri	3.91	38	P	Pg	02 21 19.8	-0.1
URZ	Urewera	3.98	33	P	Pg	02 21 20.8	-0.3
TOZ	Tahuroa Road	4.00	13	P	Pb	02 21 14.5	-0.4
LBZ	Lake Benmore	4.12	227	P	Pn	02 21 07.8	+0.7
CNGZ	Carnagh Statio	4.31	44	P	Pg	02 21 24.8	-2.7
ODZ	Otahua Downs	4.36	217	P	Pn	02 21 09.9	-0.5
MKAZ	Moumakai	4.57	8	P	Pn	02 21 18.7	+5.5
AWAZ	Awhitu Peninsu	4.57	3	P	Pb	02 21 19.4	-5.3
WIZ	White Island	4.65	29	P	Pb	02 21 22.9	-3.1
JCZ	Jackson Bay	4.77	237	P	Pn	02 21 17.3	+1.2
RVAZ	Riverhead Bore	4.86	2	P	Pn	02 21 22.3	+5.1
WIAZ	Waiheke Island	4.87	7	P	Pb	02 21 24.7	-5.1
WKZ	Wanaka	5.05	229	P	Pn	02 21 22.0	+2.2
TUZ	Tuapeka	5.51	217	P	Pn	02 21 26.9	+0.7
SYZ	Scrubby Hill	6.18	216	P	Pn	02 21 38.0	+2.7
CTZ	Chatham Island	6.96	111	P	Pn	02 21 46.4	+0.3
ASAR	Alice Springs	38.09	285	P	P	02 27 22.7	-0.2
	0.2nm,0.4s,baz=123,slow=6.7,SNR=9.6						
WRA	Warramunga Arr	40.15	290	P	P	02 27 40.0	-0.1
	0.8nm,0.3s,baz=135,slow=7.6,SNR=7.1						
TORD	Torodi Ar. Bea	150.91	195	PKPbc	PKPbc	02 39 56.8	-0.2
	0.5nm,0.5s,baz=157,slow=1.8,SNR=15						

IDC ***21*** *02:21:52.3±2.1, 0°.58N×67°.22E, h0^{km}, mb3.9/4, mb1 4.2/4, mb1mx3.5/30, mbtmp3.9/4, Error ellipse: s-maj=63.5km s-min=33.3km az=66.0*
ISCJB ***21*** *02:21:53.1±1.4, 0°.6N±0°.2×67°.5E±0°.2, h10^{km}, mb4.1/6, Error ellipse: s-maj=26.9km s-min=20.8km az=155.3*
NEIC ***21*** *02:21:53.5±0.8, 0°.58N×67°.18E, h10^{km}±3^{km}, mb4.3/3, Error ellipse: s-maj=25.1km s-min=22.7km az=204.0*
ISC 21 02:21:56.2±1.6, **0°.6N**±0°.2×**67°.6E**±0°.2, **h10**^{km}**, n15,** σ**1^{s}23**/12, **mb4.2**/6, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAAM	Kaadhehdhoo	5.40	92	ePn	Pn	02 23 15.9	-1.0
H08N2	Diego Garcia H	7.71	154	T	T	02 31 42.6	
	baz=332,slow=76,SNR=48						
H08N3	Diego Garcia H	7.72	154	T	T	02 31 44.6	
	baz=332,slow=76,SNR=63						
H08N1	Diego Carcia H	7.73	154	T	T	02 31 43.5	
	baz=332,slow=76,SNR=67						
PALK	Pallekele	14.63	63	ePn	Pn	02 25 24.6	+1.0
	19nm,0.7s						
CM31	Chiang Mai Arr	35.50	58	eP	P	02 28 54.5	+1.0
	12nm,0.4s						
CMAR	Chiang Mai Arr	35.50	58	P	P	02 28 54.5	+1.0
	0.7nm,0.3s,baz=254,slow=10,SNR=4.9						
MK32	Makanchi Array	47.73	14	eP	P	02 30 31.7	-1.6
MKAR	Makanchi Array	47.73	14	P	P	02 30 31.7	-1.6
	0.3nm,0.7s,baz=201,slow=11,SNR=3.2						
WRA	Warramunga Arr	68.43	112	P	P	02 32 58.6	-0.4
	3.3nm,0.9s,baz=285,slow=7.2,SNR=5.9						
WR1	Warramunga Arr	68.43	112	eP	P	02 32 58.6	-0.4
ASAR	Alice Springs	68.66	116	P	P	02 33 00.1	-0.2
	0.9nm,0.6s,baz=284,slow=6.0,SNR=12						
AS31	Alice Springs	68.66	116	eP	P	02 33 00.1	-0.2
	2.8nm,1.4s						
LTX	Lajitas	149.05	345	ePKPbc	PKPdf	02 41 43.0	+1.4
TXAR	Lajitas Array	149.05	345	PKPbc	PKPdf	02 41 43.0	+1.4
	0.5nm,0.9s,baz=35,slow=3.3,SNR=4.8						

SOME ***21*** *02:32:56.3, 44°.47N×81°.48E, h15^{km}*
NNC ***21*** *02:32:57.6±0.7, 44°.53N×81°.37E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=7.1km s-min=3.2km az=122.0*
ISC 21 02:32:56.3±1.0, **44°.49N**±0°.04×**81°.48E**±0°.04, **h10**^{km}**, n46,** σ**1^{s}83**/70, **12C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.22	263	P	Pg	02 33 19.5	-0.3
	38nm,0.3s						
DJR				S	Sn	02 33 36.7	+0.4
	36nm,0.3s						
DJR	Jarkent	1.22	263	⇑iP	Pg	02 33 19.5	-0.3
	38nm,0.3s						
DJR				eS	Sn	02 33 36.6	+0.4
	36nm,0.3s						
KTMS	Ketmen	1.33	218	P	Pg	02 33 21.6	-0.2
	27nm,0.3s						
KTMS				S	Sg	02 33 40.2	+1.1
	84nm,0.2s						
KTMS	Ketmen	1.33	218	eP	Pg	02 33 21.6	-0.2
	27nm,0.3s						
KTMS				eS	Sg	02 33 40.2	+1.1
	84nm,0.2s						
KAPS	Kapalarasan	1.71	298	P	Pb	02 33 27.4	-0.5
	28nm,0.5s						
KAPS				S	Sb	02 33 49.8	+0.4
	61nm,0.7s						
KAPS	Kapalarasan	1.71	298	⇓iP	Pb	02 33 27.4	-0.5
	3.6nm,0.1s						
KAPS				⇓iS	Sb	02 33 49.8	+0.4
	74nm,0.3s						
PDGK	Podgornoye	1.85	232	S	Sg	02 33 55.2	-0.7
	79nm,0.5s						
PDGK	Podgornoye	1.85	232	⇑Pn	Pg	02 33 30.7	-1.1
	9.8nm,0.3s						
PDGK				⇑Sn	Sg	02 33 55.1	-0.8
	152nm,0.7s						
UZB	Uzynbulak	2.23	234	Pg	Pg	02 33 36.9	-2.2
	20nm,0.2s						
UZB				Lg	Lg	02 34 06.2	
	84nm,0.3s						
UZB	Uzynbulak	2.23	234	eP	Pg	02 33 36.9	-2.2
	20nm,0.2s						
UZB				eS	Sg	02 34 06.2	-1.9
	84nm,0.3s						
TDK	Taldyqorghan	2.25	284	Pg	Pg	02 33 38.4	-1.1
	86nm,0.5s						
TDK	Taldyqorghan	2.25	284	eP	Pg	02 33 38.4	-1.1
	86nm,0.5s						
TDK				eS	Sg	02 34 08.9	+0.3
	191nm,0.9s						
MNBS	Baschi	2.25	260	Pg	Pb	02 33 36.9	-0.2
	40nm,0.3s						
MNBS				Lg	Lg	02 34 06.6	
	44nm,0.2s						
MNBS	Baschi	2.25	260	eP	Pb	02 33 36.9	-0.2
	40nm,0.3s						
MNBS				eS	Sg	02 34 06.6	-2.0
	44nm,0.2s						
KPKS	Kokpek	2.27	244	eP	Pb	02 33 37.3	-0.1
	71nm,0.1s						
KPKS				eS	Sg	02 34 06.6	-2.5
	179nm,0.3s						
MAKZ	Makanchi	2.34	8	⇑Pn	Pb	02 33 37.7	-0.9
	2.8nm,0.5s						
MAKZ				⇑Sn	Sb	02 34 07.0	-0.6
	17nm,0.4s						
MK31	Makanchi Array	2.37	14	Pn	Pb	02 33 37.5	-1.7
	1.1nm,0.2s,baz=195,slow=15,SNR=126						
MK31				⇑Lg	Lg	02 34 08.1	
	15nm,0.3s,baz=198,slow=29						
ARXS	Arharly	2.64	265	Pg	Pb	02 33 43.8	+0.1
	17nm,0.3s						
ARXS				Lg	Lg	02 34 18.0	
	68nm,0.3s						
ARXS	Arharly	2.64	265	eP	Pb	02 33 43.8	+0.1
	17nm,0.3s						
ARXS				eS	Sb	02 34 18.1	+1.9
	68nm,0.3s						
SATY	Saty	2.65	238	Pg	Pb	02 33 42.3	-1.7
	19nm,0.2s						
SATY				Lg	Lg	02 34 16.5	
	104nm,0.1s						
SATY	Saty	2.65	238	eP	Pb	02 33 42.2	-1.7
	4.5nm,0.2s						
SATY				eS	Sb	02 34 15.5	-1.1
	105nm,0.1s						
CHKK	Chushkaly	3.30	260	Lg	Lg	02 34 37.5	
	34nm,0.2s						
CHKK	Chushkaly	3.30	260	eP	Pb	02 33 54.0	-0.9
	6.5nm,0.3s						
CHKK				eS	Sb	02 34 35.5	+0.4
	24nm,0.4s						
KOTS	Kotyrbulak	3.40	250	Pg	Pb	02 33 57.7	+0.9
	7.4nm,0.3s						
KOTS				Lg	Lg	02 34 41.9	
	15nm,0.3s						
KOTS	Kotyrbulak	3.40	250	eP	Pb	02 33 57.7	+0.9
	7.4nm,0.3s						
KOTS				eS	Sg	02 34 41.9	-3.7
	15nm,0.3s						
MDOK	Medeo	3.47	249	Lg	Lg	02 34 40.8	
	13nm,0.7s						
MDOK	Medeo	3.47	249	⇑eP	Pb	02 33 56.9	-1.1
	16nm,0.5s						
MDOK				eS	Sb	02 34 40.2	-0.1
	13nm,0.6s						
KTBS	Karatobe	3.54	259	Pg	Pb	02 33 59.4	+0.3
	5.6nm,0.4s						
KTBS				Lg	Lg	02 34 44.6	
	28nm,0.5s						
KTBS	Karatobe	3.54	259	eP	Pb	02 33 59.5	+0.3
	5.6nm,0.4s						
KTBS				eS	Sb	02 34 44.6	+2.3
	28nm,0.5s						
TNSS	Tian-Shan	3.59	248	Pg	Pg	02 34 03.0	-2.1
	6.9nm,0.6s						
TNSS	Tian-Shan	3.59	248	⇑iP	Pg	02 34 03.0	-2.1
	11nm,0.6s						
TNSS				eS	Sg	02 34 50.8	-1.0
	9.4nm,0.4s						
KUU	Kurty	3.75	263	Pg	Pg	02 34 06.0	-2.1
	5.7nm,0.5s						
KUU				Lg	Lg	02 34 51.8	
	12nm,0.4s						
KUU	Kurty	3.75	263	eP	Pg	02 34 05.7	-2.4
	4.6nm,0.6s						
KUU				eS	Sg	02 34 55.3	-1.4
	15nm,0.6s						
ZSN	Zaisan	3.78	37	Pg	Pb	02 34 02.0	-1.2
	3.5nm,0.4s						
ZSN	Zaisan	3.78	37	eP	Pb	02 34 02.0	-1.2
	3.5nm,0.4s						
ZSN				eS	Sb	02 34 48.9	-0.2
	5.8nm,0.4s						
IZV	Izvestkoviy	3.82	249	Pg	Pg	02 34 07.5	-1.9
	7.5nm,0.6s						
IZV	Izvestkoviy	3.82	249	eP	Pg	02 34 07.5	-1.9
	7.5nm,0.6s						
IZV				eS	Sg	02 34 58.8	0.0
	13nm,0.6s						
MTBS	Maitube	3.90	251	Pg	Pg	02 34 08.6	-2.5
	7.5nm,0.3s						
MTBS				Lg	Lg	02 34 56.8	
	19nm,0.4s						
MTBS	Maitube	3.90	251	⇑iP	Pg	02 34 08.6	-2.5
	6.3nm,0.3s						
MTBS				eS	Sg	02 35 00.5	-1.1
	19nm,0.3s						
KST	Kastek	4.25	252	Lg	Lg	02 35 09.4	
	14nm,0.9s						
KST	Kastek	4.25	252	⇑iP	Pb	02 34 12.3	+1.1
	11nm,0.6s						
KST				eS	Sg	02 35 07.4	-5.4
	14nm,0.7s						
DGS	Degeres	4.31	255	Pg	Pg	02 34 15.0	-3.9
	6.7nm,0.4s						
DGS				Lg	Lg	02 35 11.7	
	11nm,0.5s						
DGS	Degeres	4.31	255	eP	Pg	02 34 15.0	-3.9
	6.7nm,0.4s						
DGS				eS	Sg	02 35 11.7	-3.2
	11nm,0.5s						
TKM2	Tokmak 2	4.55	252	⇓Pn	Pb	02 34 18.8	+2.5
	4.3nm,0.7s						
TKM2				⇓Lg	Lg	02 35 16.4	
	6.8nm,0.7s						
KURBB	Kurchatov Arra	6.45	343	⇑Pn	Pn	02 34 35.1	+3.9
	1.0nm,0.9s						
KURBB				⇓Sn	Sn	02 35 45.7	+0.8
	2.3nm,0.6s						
KURBB				⇓Lg	Lg	02 36 15.4	
	7.1nm,0.7s						
KURK	Kurchatov	6.52	344	⇑Pn	Pn	02 34 36.0	+3.7
	0.6nm,0.6s						
KURK				⇓Sn	Sn	02 35 47.3	+0.7
	1.7nm,0.8s						
KURK				⇓Lg	Lg	02 36 19.8	
	7.6nm,1.3s						

SGS 21 02:35:29, 15°.15N×43°.15E, h16^{km}, Ml3.8, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRSS	Farasan al Kab	1.86	328	P	Pn	02 35 59.0	-1.3
BESHS	BESHS	2.22	352	P	Pn	02 36 03.9	-1.3
BESHS				S	Sn	02 36 30.1	-2.2
DJNS	Zahran al Janu	2.56	8	P	Pn	02 36 09.0	-1.1
NJRNS	Najran	2.68	22	P	Pn	02 36 10.1	-1.6
KNGHS	KNGHS	3.14	6	P	Pn	02 36 17.6	-0.5
RHWAS	RHWAS	4.00	13	P	Pn	02 36 29.2	-0.5
QNF02	Al Qunfudhah	4.20	338	P	Pn	02 36 32.7	+0.3
TATS	Tathlith	4.38	4	P	Pn	02 36 34.2	-0.8
QNF01	Al Qunfudhah	4.58	337	P	Pn	02 36 39.0	+1.4
QNFDS	Al Qunfudhah	5.08	336	P	Pn	02 36 46.0	+1.5

MEX 21 02:37:13.1±0.5, **16°.50N×98°.42W, h15**^{km}±10^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.06	353	eP	Pb	02 37 29.9	-3.4
TLIG				eS	Sb	02 37 42.1	-5.0
VHO	Vista Hermosa	1.71	71	i P	Pn	02 37 39.5	-3.1
VHO				i S	Sn	02 37 59.8	-4.6

ISCJB ***21*** *02:50:35.8±0.8, 22°.59S±0°.05×68°.66W±0°.07, h119^{km}±9^{km}, Error ellipse: s-maj=10.2km s-min=7.9km az=163.8*
SJA ***21*** *02:50:35.4±0.6, 22°.57S×68°.60W, h110^{km}±3^{km}, ML2.8, MW3.3*
GUC ***21*** *02:50:36.1±0.6, 22°.59S×68°.70W, h115^{km}±4^{km}, ML3.7*
ISC 21 02:50:36.9±1.7, **22°.58S**±0°.05×**68°.66W**±0°.06, **h110**^{km}±12^{km}**, n25,** σ**0^{s}50**/38, **1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.23	263	eP	Pn	02 50 52.1	-0.8
LVC				IAML		02 51 04.3	
	comp=Z,1μm,0.1s						
LVC				eS	Sn	02 51 04.4	-0.4
PB06	IPOC Station P	0.85	261	eP	Pn	02 50 56.8	0.0
PB06				eS	Sn	02 51 12.6	+0.8
PB06	IPOC Station P	0.85	261	eP	Pn	02 50 56.2	-0.6
PB06				i S	Sn	02 51 12.1	+0.3
PB06				IAML		02 51 14.6	
	comp=N,2μm,0.4s						
PB09	IPOC Station P	0.95	325	eP	Pn	02 50 57.6	-0.2
PB09	IPOC Station P	0.95	325	eP	Pn	02 50 57.9	+0.1
PB09				i S	Sn	02 51 14.2	+0.7
PB15	IPOC Station P	0.98	230	eP	Pn	02 50 57.9	-0.3
PB15				eS	Sn	02 51 14.7	+0.7
PB15	IPOC Station P	0.98	230	eP	Pn	02 50 57.8	-0.3
PB15				i S	Sn	02 51 14.4	+0.3
PB03	IPOC Station P	1.14	297	eP	Pn	02 50 59.6	-0.2
PB03				eS	Sn	02 51 17.5	+0.5
PB03	IPOC Station P	1.14	297	eP	Pn	02 50 59.6	-0.2
PB03				i S	Sn	02 51 17.1	+0.1
PB03				IAML		02 51 17.6	
	comp=N,3μm,0.3s						
PB04	IPOC Station P	1.40	280	eP	Pn	02 51 02.6	-0.1
PB04	IPOC Station P	1.40	280	eP	Pn	02 51 02.4	-0.4
PB04				i S	Sn	02 51 23.1	+0.8
PB04				IAML		02 51 25.5	
	comp=N,1μm,0.2s						
PB07	IPOC Station P	1.42	307	eP	Pn	02 51 03.1	+0.1
PB07	IPOC Station P	1.42	307	eP	Pn	02 51 02.8	-0.2
PB07				i S	Sn	02 51 22.9	+0.2
PB07				IAML		02 51 24.4	
	comp=E,2μm,0.3s						
PB05	IPOC Station P	1.45	259	eP	Pn	02 51 02.8	-0.4
PB05	IPOC Station P	1.45	259	eP	Pn	02 51 02.7	-0.5
PB05				i S	Sn	02 51 23.0	-0.2
PB02	IPOC Station P	1.70	317	eP	Pn	02 51 06.1	-0.2
PB02	IPOC Station P	1.70	317	eP	Pn	02 51 06.3	0.0
PB02				i S	Sn	02 51 28.7	+0.1
PB02				IAML		02 51 33.7	
	comp=E,2μm,0.8s						
PB01	IPOC Station P	1.71	333	eP	Pn	02 51 06.4	0.0
PB01				i S	Sn	02 51 29.5	+0.7
PB01				IAML		02 51 31.2	
	comp=N,1μm,0.5s						
PB10	IPOC Station P	1.98	242	eP	Pn	02 51 10.1	+0.4
PB10	IPOC Station P	1.98	242	⇑iP	Pn	02 51 09.3	-0.3
PB10				IAML		02 51 44.5	
	comp=E,188nm,0.4s						
PB08	IPOC Station P	2.47	349	eP	Pn	02 51 16.2	-0.1
YJA	Yavi	2.94	83	eP	Pn	02 51 22.8	+0.3
YJA				IAML		02 51 23.9	
	comp=Z,8.7nm,0.7s						
PB11	IPOC Station P	2.96	341	eP	Pn	02 51 22.1	-0.4
PSGCX	Pisagua	3.27	335	eP	Pn	02 51 25.1	-1.5
AZAP	Zapla	3.68	117	eP	Pn	02 51 31.9	-0.4
AZAP				IAML		02 51 32.1	
	comp=Z,11nm,0.5s						

MDD 21 03:06:28.1±0.6, **37°.00N×3°.71W, h0**^{km}**, mbLg1.1**/4, **Error ellipse: s-maj=5.1km s-min=3.2km az=165.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUE	Quentar	0.30	47	Pg	Pg	03 06 33.1	-0.6
	1.3nm,0.1s,SNR=7.9						
EQUE				Lg	Lg	03 06 37.8	
	9.7nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	0.34	289	Pg	Pg	03 06 34.1	-0.4
	1.0nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	03 06 39.4	
	3.0nm,0.1s,SNR=7.9						
EBER	Berja	0.67	99	Pg	Pg	03 06 40.8	-0.1
	0.2nm,0.1s,SNR=7.9						
EBER				Lg	Lg	03 06 49.6	
	0.1nm,0.1s,SNR=7.9						
EQES	Quesada	0.95	32	Pg	Pg	03 06 45.7	-0.5
	0.6nm,0.2s,SNR=7.9						
EQES				Lg	Lg	03 06 58.7	
	4.4nm,1.3s,SNR=7.9						
EMIJ	Mijas	0.96	243	Pg	Pg	03 06 45.0	-1.4
	0.1nm,0.1s,SNR=7.9						
EMIJ				Lg	Lg	03 06 58.9	
	0.2nm,0.1s,SNR=7.9						
EADA	Adamuz	1.35	330	Pg	Pg	03 06 52.6	-1.3
	0.1nm,0.1s,SNR=4.0						
EADA				Lg	Lg	03 07 10.7	
	0.2nm,0.1s,SNR=7.9						
SESP	Santiago Espad	1.45	39	Pg	Pn	03 06 54.3	-1.4
	0.1nm,0.7s,SNR=7.9						

IDC ***21*** *03:07:23.9±0.7, 43°.56N×13°.73E, h0^{km}, mb4.0/14, mb1 4.1/26, mb1mx4.0/45, mbtmp4.0/26, ML3.5/11, MS3.3/17, Ms1 3.3/17, ms1mx3.0/53, Error ellipse: s-maj=13.2km s-min=11.3km az=46.0*
MOS ***21*** *03:07:23.6±1.1, 43°.58N×13°.73E, h11^{km}, mb4.5/17, Error ellipse: s-maj=5.6km s-min=3.7km az=87.9*
ISCJB ***21*** *03:07:23.8±0.2, 43°.511N±0°.009×13°.75E±0°.01, h11^{km}±1^{km}, mb4.3/39, MS3.6/9, Error ellipse: s-maj=1.5km s-min=1.2km az=22.0*
PDG ***21*** *03:07:24.5±0.7, 43°.51N×13°.75E, h9^{km}±1^{km}, ML4.1/11, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
NEIC ***21*** *03:07:24.0±0.0, 43°.52N×13°.71E, h10^{km}, mb4.2/23, ML4.0(ROM), After ROM.*
LDG ***21*** *03:07:24.4±0.1, 43°.57N×13°.85E, h2^{km}, Ml3.3/41, Error ellipse: s-maj=3.2km s-min=1.9km az=13.0*
ROM ***21*** *03:07:24.4±0.2, 43°.503N±0°.006×13°.72E±0°.01, h9^{km}, ML4.0/137, Error ellipse: s-maj=1.1km s-min=0.3km az=240.0*
BEO ***21*** *03:07:25.8±0.6, 43°.55N×13°.80E, h2^{km}±4^{km}, ML4.0/14*
MED_RC ***21*** *03:07:25.0±0.5, 43°.46N×13°.82E, h19^{km}±2^{km}, MW4.2/9, Moment Tensor Solution.Mantle waves: s9,c12; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.77±.42; M$_{\theta\theta}$-1.62±.27; M$_{\phi\phi}$-0.15±.26; M$_{r\theta}$-1.03±.48; M$_{\theta\phi}$1.43±.16; M$_{\phi r}$-0.09±.31; Best double couple: M$_0$2.42000×10^{15} NP1:φ$_s$281.00000°, δ59.00000°, λ64.00000°. NP2: φ$_s$144.00000°, δ39.00000°, λ126.00000°. Principal axes: T 2.1800, Plg65.0000°, Azm144.0000°; N 0.4700, Plg22.0000°, Azm295.0000°; P -2.6500, Plg11.0000°, Azm29.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
PRU ***21*** *03:07:25.7±0.0, 43°.45N×13°.84E, h13^{km}, M4.2*
STR ***21*** *03:07:38.5±0.8, 44°N±4°×1°3E±°, h20^{km}, mB5.1/6, mb3.9/11, MLv3.8/6, Mw(mB)4.5/6*
ZUR ***21*** *03:07:41.2, 44°.24N×11°.96E, h0^{km}, Ml3.2/47*
ISC 21 03:07:25.4±0.7, **43°.50N**±0°.02×**13°.67E**±0°.02, **h13**^{km}±4^{km}**, n660,** σ**1^{s}73**/737, **mb4.2**/39, **MS3.5**/9, **69C-51D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	Ancona	0.07	313	eP	Pg	03 07 26.8	-1.4
AOI				S	Sg	03 07 29.0	-1.1
AOI				AML	AML		
	comp=E,98200μm,0.5s						
AOI				AML	AML		
AOI				AML	AML		
	comp=E,98200μm,0.5s						
AOI				AML	AML		
AOI				AML	AML		
	comp=E,98200μm,0.5s						

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AOI                              AML   AML
AOI                              AML   AML
AOI                              AML   AML
      comp=E,98200µm,0.5s
AOI                              AML   AML
AOI                              AML   AML
      comp=E,98200µm,0.5s
PCRO  Pietralacroce    0.15 316  eP    Pg    03 07 28.4 -0.7
PCRO                             S     Sg    03 07 31.9 +0.3
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
PCRO                             AML   AML
CIMA  Civitanova Mar   0.20 180  P     Pg    03 07 29.7 -0.2
CIMA                             S     Sg    03 07 34.1 +1.3
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CIMA                             AML   AML
CADA  Capodarco di F   0.32 168  P     Pg    03 07 31.4 -0.5
CADA                             S     Sb    03 07 37.5 -0.4
CADA                             AML   AML
CADA                             AML   AML
      comp=N,87200µm,0.5s
CADA                             AML   AML
CADA                             AML   AML
      comp=N,87200µm,0.5s
CADA                             AML   AML
CADA                             AML   AML
      comp=N,87200µm,0.5s
CADA                             AML   AML
CADA                             AML   AML
      comp=N,87200µm,0.5s
CADA                             AML   AML
CADA                             AML   AML
      comp=N,87200µm,0.5s
CING  Cingoli          0.37 250  P     Pg    03 07 32.5 -0.3
CING                             AML   AML
      comp=E,12600µm,1.2s
CING                             AML   AML
      comp=N,8645µm,1.2s
CING                             AML   AML
      comp=N,8645µm,1.2s
CING                             AML   AML
      comp=E,12600µm,1.2s
CING                             AML   AML
      comp=N,8645µm,1.2s
CING                             AML   AML
      comp=E,12600µm,1.2s
SENI  Senigallia       0.38 303  P     Pg    03 07 33.3 +0.3
SENI                             AML   AML
      comp=E,45750µm,0.2s
SENI                             AML   AML
      comp=N,45450µm,1.3s
SENI                             AML   AML
      comp=E,16700µm,1.2s
SENI                             AML   AML
      comp=N,12910µm,0.6s
SENI                             AML   AML
      comp=E,45750µm,0.2s
SENI                             AML   AML
      comp=N,45450µm,1.3s
SENI                             AML   AML
      comp=E,17150µm,1.2s
SENI                             AML   AML
      comp=N,12800µm,0.6s
SENI                             AML   AML
      comp=E,45750µm,0.2s
SENI                             AML   AML
      comp=N,45450µm,1.3s
SENI                             AML   AML
      comp=E,16850µm,1.2s
SENI                             AML   AML
      comp=N,12950µm,0.6s
SENI                             AML   AML
      comp=N,45450µm,1.3s
SENI                             AML   AML
      comp=E,16850µm,1.2s
SENI                             AML   AML
      comp=N,12950µm,0.6s
SENI                             AML   AML
      comp=E,45750µm,0.2s
SENI                             AML   AML
      comp=N,45450µm,1.3s
SENI                             AML   AML
      comp=E,16850µm,1.2s
SENI                             AML   AML
      comp=N,12950µm,0.6s
SENI                             AML   AML
      comp=E,45750µm,0.2s
MNTP  Montappone       0.39 202  P     Pg    03 07 33.1 -0.2
MNTP                             AML   AML
      comp=E,46550µm,0.7s
MNTP                             AML   AML
      comp=N,43300µm,0.7s
MNTP                             AML   AML
      comp=E,43000µm,0.8s
MNTP                             AML   AML
      comp=N,43300µm,0.6s
MNTP                             AML   AML
      comp=E,46550µm,0.7s
MNTP                             AML   AML
      comp=N,43300µm,0.6s
MNTP                             AML   AML
      comp=N,43300µm,0.6s
MNTP                             AML   AML
      comp=E,46550µm,0.7s
MNTP                             AML   AML
      comp=N,43300µm,0.6s
MNTP                             AML   AML
      comp=E,46550µm,0.7s
EL6   Elcito           0.45 248  P     Pg    03 07 34.0 -0.3
EL6                              AML   AML
      comp=E,18800µm,1.0s
EL6                              AML   AML
      comp=N,26800µm,1.3s
EL6                              AML   AML
      comp=E,18850µm,1.0s
EL6                              AML   AML
      comp=N,26600µm,1.3s
EL6                              AML   AML
      comp=E,18800µm,1.0s
EL6                              AML   AML
      comp=N,26800µm,1.3s
EL6                              AML   AML
      comp=E,18800µm,1.0s
EL6                              AML   AML
      comp=N,26800µm,1.3s
EL6                              AML   AML
      comp=E,18800µm,1.0s
EL6                              AML   AML
      comp=N,26800µm,1.3s
SSM1  San Severino M   0.45 233  P     Pg    03 07 34.5 +0.1
COR1  Corinaldo        0.51 285  P     Pg    03 07 35.7 +0.3
COR1                             AML   AML
      comp=E,11050µm,0.4s
COR1                             AML   AML
      comp=N,12500µm,0.9s
COR1                             AML   AML
      comp=E,6275µm,0.9s
COR1                             AML   AML
      comp=N,12480µm,0.9s
COR1                             AML   AML
      comp=E,11050µm,0.4s
COR1                             AML   AML
      comp=N,12550µm,0.9s
COR1                             AML   AML
      comp=E,6315µm,0.9s
COR1                             AML   AML
      comp=N,12480µm,0.9s
COR1                             AML   AML
      comp=E,13300µm,1.5s
COR1                             AML   AML
      comp=N,14800µm,1.2s
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COR1                             AML   AML
      comp=E,7290µm,1.6s
COR1                             AML   AML
      comp=N,15400µm,1.2s
COR1                             AML   AML
      comp=N,14800µm,1.2s
COR1                             AML   AML
      comp=E,7290µm,1.6s
COR1                             AML   AML
      comp=E,13300µm,1.5s
COR1                             AML   AML
      comp=N,15400µm,1.2s
COR1                             AML   AML
      comp=N,14800µm,1.2s
COR1                             AML   AML
      comp=E,7290µm,1.6s
COR1                             AML   AML
      comp=E,13300µm,1.5s
COR1                             AML   AML
      comp=N,15400µm,1.2s
ARVD  Arcevia          0.53 270  P     Pg    03 07 35.3 -0.5
ARVD                             AML   AML
      comp=E,2875µm,0.8s
ARVD                             AML   AML
      comp=N,3005µm,0.8s
ARVD                             AML   AML
      comp=E,2875µm,0.8s
ARVD                             AML   AML
      comp=N,3010µm,0.8s
ARVD                             AML   AML
      comp=N,3010µm,0.8s
ARVD                             AML   AML
      comp=E,2875µm,0.8s
ARVD                             AML   AML
      comp=N,3010µm,0.8s
ARVD                             AML   AML
      comp=E,2875µm,0.8s
CSP1  Cessapalombo     0.53 220  eP    Pg    03 07 35.4 -0.6
SNTG  Esanatoglia      0.59 245  P     Pg    03 07 36.3 -0.6
SNTG                             AML   AML
      comp=E,623µm,1.1s
SNTG                             AML   AML
      comp=N,831µm,0.6s
SNTG                             AML   AML
      comp=E,4850µm,1.1s
SNTG                             AML   AML
      comp=N,6560µm,0.6s
SNTG                             AML   AML
      comp=E,623µm,1.1s
SNTG                             AML   AML
      comp=N,832µm,0.6s
SNTG                             AML   AML
      comp=E,4850µm,1.1s
SNTG                             AML   AML
      comp=N,6565µm,0.6s
SNTG                             AML   AML
      comp=N,832µm,0.6s
SNTG                             AML   AML
      comp=N,6565µm,0.6s
SNTG                             AML   AML
      comp=E,623µm,1.1s
SNTG                             AML   AML
      comp=E,4850µm,1.1s
SNTG                             AML   AML
      comp=N,832µm,0.6s
SNTG                             AML   AML
      comp=N,6565µm,0.6s
SNTG                             AML   AML
      comp=E,623µm,1.1s
SNTG                             AML   AML
      comp=E,4850µm,1.1s
FDMO  Fiordimonte      0.63 223  eP    Pg    03 07 36.9 -0.8
FDMO                             S     Sb    03 07 47.9 +0.9
FDMO                             AML   AML
      comp=E,9805µm,1.2s
FDMO                             AML   AML
      comp=N,5810µm,0.7s
FDMO                             AML   AML
      comp=E,9805µm,1.2s
FDMO                             AML   AML
      comp=N,5815µm,0.7s
FDMO                             AML   AML
      comp=N,5815µm,0.7s
FDMO                             AML   AML
      comp=E,9805µm,1.2s
FDMO                             AML   AML
      comp=N,5815µm,0.7s
FDMO                             AML   AML
      comp=E,9805µm,1.2s
SSFR  Montelago di S   0.65 264  P     Pg    03 07 37.5 -0.7
SSFR                             AML   AML
      comp=E,9595µm,0.2s
SSFR                             AML   AML
      comp=N,10075µm,0.3s
SSFR                             AML   AML
      comp=E,9700µm,0.2s
SSFR                             AML   AML
      comp=N,10115µm,0.3s
SSFR                             AML   AML
      comp=E,9700µm,0.2s
SSFR                             AML   AML
      comp=E,9595µm,0.2s
SSFR                             AML   AML
      comp=N,10115µm,0.3s
SSFR                             AML   AML
      comp=N,10075µm,0.3s
SSFR                             AML   AML
      comp=E,9700µm,0.2s
SSFR                             AML   AML
      comp=E,9595µm,0.2s
SSFR                             AML   AML
      comp=N,10115µm,0.3s
SSFR                             AML   AML
      comp=N,10075µm,0.3s
MPAG  Monte Paganucc   0.68 281  P     Pg    03 07 37.9 -0.7
MPAG                             AML   AML
      comp=E,3230µm,0.4s
MPAG                             AML   AML
      comp=N,3865µm,1.3s
MPAG                             AML   AML
      comp=E,3305µm,0.4s
MPAG                             AML   AML
      comp=N,3910µm,1.3s
MPAG                             AML   AML
      comp=E,3230µm,0.4s
MPAG                             AML   AML
      comp=N,3870µm,1.3s
MPAG                             AML   AML
      comp=E,3310µm,0.4s
MPAG                             AML   AML
      comp=N,3905µm,1.3s
MPAG                             AML   AML
      comp=E,3310µm,0.4s
MPAG                             AML   AML
      comp=E,3230µm,0.4s
MPAG                             AML   AML
      comp=N,3870µm,1.3s
MPAG                             AML   AML
      comp=N,3905µm,1.3s
MPAG                             AML   AML
      comp=E,3230µm,0.4s
MPAG                             AML   AML
      comp=E,3310µm,0.4s
MPAG                             AML   AML
      comp=N,3870µm,1.3s
MPAG                             AML   AML
      comp=N,3905µm,1.3s
FSSB  Fossombrone      0.68 287  P     Pg    03 07 38.2 -0.4
FSSB                             AML   AML
      comp=E,8840µm,0.4s
FSSB                             AML   AML
      comp=N,13400µm,0.4s
FSSB                             AML   AML
      comp=E,8840µm,0.4s
FSSB                             AML   AML
      comp=N,13400µm,0.4s
FSSB                             AML   AML
      comp=E,8840µm,0.4s
FSSB                             AML   AML
      comp=N,13400µm,0.4s
FSSB                             AML   AML
      comp=E,8840µm,0.4s
FSSB                             AML   AML
      comp=N,13400µm,0.4s
FRON  Frontone         0.69 272  P     Pg    03 07 38.1 -0.7
FRON                             AML   AML
      comp=E,3435µm,0.7s
FRON                             AML   AML
```

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      comp=N,4165µm,0.5s
FRON                             AML   AML
      comp=E,3440µm,0.7s
FRON                             AML   AML
      comp=N,4170µm,0.5s
FRON                             AML   AML
      comp=N,4170µm,0.5s
FRON                             AML   AML
      comp=E,3440µm,0.7s
FRON                             AML   AML
      comp=N,4170µm,0.5s
FRON                             AML   AML
      comp=E,3440µm,0.7s
FOSV  Fossato di Vic   0.70 253  P     Pg    03 07 38.2 -0.8
FOSV                             AML   AML
      comp=E,4545µm,0.8s
FOSV                             AML   AML
      comp=N,5155µm,1.0s
FOSV                             AML   AML
      comp=E,4540µm,0.8s
FOSV                             AML   AML
      comp=N,5145µm,1.0s
FOSV                             AML   AML
      comp=N,5145µm,1.0s
FOSV                             AML   AML
      comp=E,4540µm,0.8s
FOSV                             AML   AML
      comp=N,5145µm,1.0s
FOSV                             AML   AML
      comp=E,4540µm,0.8s
FEMA  Monte Fema       0.71 220  P     Pg    03 07 38.7 -0.5
TRTR  Tortoreto Alta   0.72 166  P     Pb    03 07 39.6 -0.1
TRTR                             AML   AML
      comp=E,42950µm,0.6s
TRTR                             AML   AML
      comp=N,58000µm,0.6s
TRTR                             AML   AML
      comp=E,42950µm,0.6s
TRTR                             AML   AML
      comp=N,58000µm,0.6s
TRTR                             AML   AML
      comp=E,42950µm,0.6s
TRTR                             AML   AML
      comp=N,58000µm,0.6s
PESA  Pesaro           0.75 306  P     Pg    03 07 39.6 -0.3
PESA                             AML   AML
      comp=E,5015µm,1.3s
PESA                             AML   AML
      comp=N,7850µm,0.8s
PESA                             AML   AML
      comp=E,5015µm,1.3s
PESA                             AML   AML
      comp=N,7850µm,0.8s
PESA                             AML   AML
      comp=E,5015µm,1.3s
PESA                             AML   AML
      comp=N,7850µm,0.8s
PESA                             AML   AML
      comp=E,5015µm,1.3s
PESA                             AML   AML
      comp=N,7850µm,0.8s
CESI  CESI - Serrava   0.75 229  P     Pg    03 07 39.2 -0.7
CESI                             AML   AML
      comp=E,2285µm,0.4s
CESI                             AML   AML
      comp=N,4730µm,0.6s
CESI                             AML   AML
      comp=E,2285µm,0.4s
CESI                             AML   AML
      comp=N,4730µm,0.6s
CESI                             AML   AML
      comp=N,4730µm,0.6s
CESI                             AML   AML
      comp=E,2285µm,0.4s
CESI                             AML   AML
      comp=N,4730µm,0.6s
CESI                             AML   AML
      comp=E,2285µm,0.4s
NRCA  Norcia           0.78 212  P     Pg    03 07 39.7 -0.9
NRCA                             AML   AML
      comp=E,13550µm,0.7s
NRCA                             AML   AML
      comp=N,16800µm,0.6s
NRCA                             AML   AML
      comp=E,14150µm,0.7s
NRCA                             AML   AML
      comp=N,17550µm,0.4s
NRCA                             AML   AML
      comp=E,13600µm,0.7s
NRCA                             AML   AML
      comp=N,16800µm,0.6s
NRCA                             AML   AML
      comp=E,14150µm,0.7s
NRCA                             AML   AML
      comp=N,17550µm,0.4s
NRCA                             AML   AML
      comp=N,16800µm,0.6s
NRCA                             AML   AML
      comp=E,14150µm,0.7s
NRCA                             AML   AML
      comp=E,13600µm,0.7s
NRCA                             AML   AML
      comp=N,17550µm,0.4s
NRCA                             AML   AML
      comp=N,17550µm,0.4s
NRCA                             AML   AML
      comp=E,13600µm,0.7s
NRCA                             AML   AML
      comp=E,14150µm,0.7s
NRCA                             AML   AML
      comp=N,16800µm,0.6s
ATFO  Monte Foce - G   0.81 261  P     Pg    03 07 39.9 -1.3
ATFO                             AML   AML
      comp=E,6275µm,1.3s
ATFO                             AML   AML
      comp=N,6620µm,0.6s
ATFO                             AML   AML
      comp=E,6275µm,1.3s
ATFO                             AML   AML
      comp=N,6615µm,0.6s
ATFO                             AML   AML
      comp=N,6615µm,0.6s
ATFO                             AML   AML
      comp=E,6275µm,1.3s
ATFO                             AML   AML
      comp=N,6615µm,0.6s
ATFO                             AML   AML
      comp=E,6275µm,1.3s
ATCC  AVT- Casa Cast   0.82 248  P     Pg    03 07 40.5 -0.7
ATCC                             AML   AML
      comp=E,8840µm,1.0s
ATCC                             AML   AML
      comp=N,7610µm,0.8s
ATCC                             AML   AML
      comp=E,8845µm,1.0s
ATCC                             AML   AML
      comp=N,7620µm,0.8s
ATCC                             AML   AML
      comp=N,7620µm,0.8s
ATCC                             AML   AML
      comp=E,8845µm,1.0s
ATCC                             AML   AML
      comp=N,7620µm,0.8s
ATCC                             AML   AML
      comp=E,8845µm,1.0s
PIEI  Pieia            0.83 273  P     Pg    03 07 40.4 -1.0
PIEI                             AML   AML
      comp=E,3475µm,1.0s
PIEI                             AML   AML
      comp=N,2460µm,0.4s
PIEI                             AML   AML
      comp=E,3475µm,1.0s
PIEI                             AML   AML
      comp=N,2460µm,0.4s
PIEI                             AML   AML
      comp=N,2460µm,0.4s
PIEI                             AML   AML
      comp=E,3475µm,1.0s
PIEI                             AML   AML
      comp=N,2460µm,0.4s
PIEI                             AML   AML
      comp=E,3475µm,1.0s
MURB  Monte Urbino     0.87 254  P     Pg    03 07 41.5 -0.7
MURB                             AML   AML
      comp=E,16250µm,1.6s
MURB                             AML   AML
      comp=N,16300µm,1.0s
MURB                             AML   AML
```

	comp=E,17150µm,1.6s					
MURB			AML	AML		
	comp=N,18100µm,1.0s					
MURB			AML	AML		
	comp=E,16250µm,1.6s					
MURB			AML	AML		
	comp=N,16300µm,1.0s					
MURB			AML	AML		
	comp=E,17150µm,1.6s					
MURB			AML	AML		
	comp=N,18100µm,1.0s					
MURB			AML	AML		
	comp=N,16300µm,1.0s					
MURB			AML	AML		
	comp=E,16250µm,1.6s					
MURB			AML	AML		
	comp=E,17150µm,1.6s					
MURB			AML	AML		
	comp=N,18100µm,1.0s					
MURB			AML	AML		
	comp=N,16300µm,1.0s					
MURB			AML	AML		
	comp=E,16250µm,1.6s					
MURB			AML	AML		
	comp=E,17150µm,1.6s					
MURB			AML	AML		
	comp=N,18100µm,1.0s					
ASSB	**Assisi San Ben**	**0.87 239**	P	**Pg**	**03 07 41.3**	**-1.0**
ASSB			AML	AML		
	comp=E,8790µm,0.5s					
ASSB			AML	AML		
	comp=N,10250µm,0.7s					
ASSB			AML	AML		
	comp=E,8790µm,0.5s					
ASSB			AML	AML		
	comp=N,10250µm,0.7s					
ASSB			AML	AML		
	comp=E,8790µm,0.5s					
ASSB			AML	AML		
	comp=N,10250µm,0.7s					
ASSB			AML	AML		
	comp=E,8790µm,0.5s					
ASSB			AML	AML		
	comp=N,10250µm,0.7s					
PE3	**Peglio**	**0.88 283**	P	**Pg**	**03 07 42.5**	**+0.1**
PE3			AML	AML		
	comp=E,11535µm,0.5s					
PE3			AML	AML		
	comp=N,16150µm,1.2s					
PE3			AML	AML		
	comp=E,11530µm,0.5s					
PE3			AML	AML		
	comp=N,16150µm,1.2s					
PE3			AML	AML		
	comp=E,11530µm,0.5s					
PE3			AML	AML		
	comp=N,16150µm,1.2s					
PE3			AML	AML		
	comp=E,11530µm,0.5s					
PE3			AML	AML		
	comp=N,16150µm,1.2s					
TERO	**Teramo**	**0.88 183**	P	**Pg**	**03 07 41.0**	**-1.5**
TERO			AML	AML		
	comp=E,14100µm,0.6s					
TERO			AML	AML		
	comp=N,11400µm,1.3s					
TERO			AML	AML		
	comp=E,5810µm,0.6s					
TERO			AML	AML		
	comp=N,4695µm,1.3s					
TERO			AML	AML		
	comp=E,14100µm,0.6s					
TERO			AML	AML		
	comp=E,5810µm,0.6s					
TERO			AML	AML		
	comp=N,4695µm,1.3s					
TERO			AML	AML		
	comp=N,11400µm,1.3s					
TERO			AML	AML		
	comp=E,14100µm,0.6s					
TERO			AML	AML		
	comp=E,5810µm,0.6s					
TERO			AML	AML		
	comp=N,11400µm,1.3s					
TERO			AML	AML		
	comp=N,4695µm,1.3s					
SMA1	**SAN MARTINO**	**0.91 196**	P	**Pg**	**03 07 41.4**	**-1.5**
SMA1			AML	AML		
	comp=E,28000µm,0.8s					
SMA1			AML	AML		
	comp=N,43950µm,0.6s					
SMA1			AML	AML		
	comp=E,28000µm,0.8s					
SMA1			AML	AML		
	comp=N,43950µm,0.6s					
SMA1			AML	AML		
	comp=E,28000µm,0.8s					
SMA1			AML	AML		
	comp=N,43950µm,0.6s					
ATPI	**Pietralunga -**	**0.93 267**	P	**Pg**	**03 07 42.4**	**-0.9**
ATPI			AML	AML		
	comp=E,4275µm,0.7s					
ATPI			AML	AML		
	comp=N,5870µm,0.7s					
ATPI			AML	AML		
	comp=E,4275µm,0.7s					
ATPI			AML	AML		
	comp=N,5880µm,0.7s					
ATPI			AML	AML		
	comp=E,4275µm,0.7s					
ATPI			AML	AML		
	comp=N,5880µm,0.7s					
ATPI			AML	AML		
	comp=E,4275µm,0.7s					
ATPI			AML	AML		
	comp=N,5880µm,0.7s					
ATVO	**AVT- Monte Val**	**0.93 263**	P	**Pg**	**03 07 42.5**	**-0.9**
ATVO			AML	AML		
	comp=E,4725µm,1.2s					
ATVO			AML	AML		
	comp=N,4360µm,1.3s					
ATVO			AML	AML		
	comp=E,4725µm,1.2s					
ATVO			AML	AML		
	comp=N,4365µm,1.3s					
ATVO			AML	AML		
	comp=E,4725µm,1.2s					
ATVO			AML	AML		
	comp=N,4365µm,1.3s					
ATVO			AML	AML		
	comp=E,4725µm,1.2s					
ATVO			AML	AML		
	comp=N,4365µm,1.3s					
RSM	**Repubblica di**	**0.98 296**	AML	AML		
	comp=N,6050µm,0.9s					
RSM			AML	AML		
	comp=E,4575µm,1.0s					
RSM			AML	AML		
	comp=N,6050µm,0.9s					
RSM			AML	AML		
	comp=E,4575µm,1.0s					
RSM			AML	AML		
	comp=E,4575µm,1.0s					
RSM			AML	AML		
	comp=N,6050µm,0.9s					
ATTE	**AVT- Monte Tez**	**1.01 253**	P	**Pb**	**03 07 45.1**	**+0.3**
ATTE			AML	AML		
	comp=E,4900µm,0.4s					
ATTE			AML	AML		
	comp=N,7430µm,1.6s					
ATTE			AML	AML		
	comp=E,4900µm,0.4s					
ATTE			AML	AML		
	comp=N,7425µm,1.6s					
ATTE			AML	AML		
	comp=E,4900µm,0.4s					
ATTE			AML	AML		
	comp=N,7425µm,1.6s					
ATTE			AML	AML		
	comp=E,4900µm,0.4s					
ATTE			AML	AML		
	comp=N,7425µm,1.6s					
LNSS	**Leonessa**	**1.01 207**	P	**Pb**	**03 07 43.4**	**-1.4**
LNSS			AML	AML		
	comp=E,21200µm,0.8s					
LNSS			AML	AML		
	comp=N,19750µm,0.6s					
LNSS			AML	AML		
	comp=E,21200µm,0.8s					
LNSS			AML	AML		
	comp=N,19750µm,0.6s					
LNSS			AML	AML		
	comp=E,21200µm,0.8s					
LNSS			AML	AML		
	comp=N,19750µm,0.6s					
LNSS			AML	AML		
	comp=E,21200µm,0.8s					
LNSS			AML	AML		
	comp=N,19750µm,0.6s					
CPGN	**Carpegna, Ital**	**1.03 287**	AML	AML		
	comp=E,4725µm,0.7s					
CPGN			AML	AML		
	comp=N,5275µm,1.1s					
CPGN			AML	AML		
	comp=E,4865µm,0.7s					
CPGN			AML	AML		
	comp=N,5270µm,1.1s					
CPGN			AML	AML		
	comp=N,5275µm,1.1s					
CPGN			AML	AML		
	comp=N,5270µm,1.1s					
CPGN			AML	AML		
	comp=E,4865µm,0.7s					
CPGN			AML	AML		
	comp=E,4725µm,0.7s					
CPGN			AML	AML		
	comp=N,5275µm,1.1s					
CPGN			AML	AML		
	comp=N,5270µm,1.1s					
CPGN			AML	AML		
	comp=E,4725µm,0.7s					
CPGN			AML	AML		
	comp=E,4865µm,0.7s					
ATMI	**Monte Miggiano**	**1.04 261**	P	**Pb**	**03 07 45.2**	**0.0**
ATMI			AML	AML		
	comp=E,6645µm,1.0s					
ATMI			AML	AML		
	comp=N,10850µm,0.9s					
ATMI			AML	AML		
	comp=N,10850µm,0.9s					
ATMI			AML	AML		
	comp=E,6645µm,1.0s					
ATMI			AML	AML		
	comp=N,10850µm,0.9s					
ATMI			AML	AML		
	comp=E,6645µm,1.0s					
BADI	**Badiali**	**1.04 271**	P	**Pb**	**03 07 44.5**	**-0.7**
PARC	**Parchiule**	**1.05 278**	P	**Pb**	**03 07 44.8**	**-0.6**
PARC			AML	AML		
	comp=E,3140µm,1.1s					
PARC			AML	AML		
	comp=N,3235µm,0.6s					
PARC			AML	AML		
	comp=E,3140µm,1.1s					
PARC			AML	AML		
	comp=N,3235µm,0.6s					
PARC			AML	AML		
	comp=N,3235µm,0.6s					
PARC			AML	AML		
	comp=E,3140µm,1.1s					
PARC			AML	AML		
	comp=N,3235µm,0.6s					
PARC			AML	AML		
	comp=E,3140µm,1.1s					
MOMA	**Monte Martano**	**1.07 229**	P	**Pb**	**03 07 44.7**	**-1.1**
MOMA			AML	AML		
	comp=E,6215µm,0.9s					
MOMA			AML	AML		
	comp=N,10110µm,1.3s					
MOMA			AML	AML		
	comp=E,6390µm,0.9s					
MOMA			AML	AML		
	comp=N,10500µm,1.3s					
MOMA			AML	AML		
	comp=E,6390µm,0.9s					
MOMA			AML	AML		
	comp=N,10500µm,1.3s					
MOMA			AML	AML		
	comp=N,10110µm,1.3s					
MOMA			AML	AML		
	comp=E,6215µm,0.9s					
MOMA			AML	AML		
	comp=E,6390µm,0.9s					
MOMA			AML	AML		
	comp=N,10500µm,1.3s					
MOMA			AML	AML		
	comp=N,10110µm,1.3s					
MOMA			AML	AML		
	comp=E,6215µm,0.9s					
BLLA	**Bellaria**	**1.08 307**	AML	AML		
	comp=N,5890µm,0.9s					
BLLA			AML	AML		
	comp=E,5240µm,1.4s					
BLLA			AML	AML		
	comp=N,5890µm,0.9s					
BLLA			AML	AML		
	comp=N,5890µm,0.9s					
BLLA			AML	AML		
	comp=E,5240µm,1.4s					
BLLA			AML	AML		
	comp=E,5240µm,1.4s					
VCEL	**Villa Celiera**	**1.11 174**	P	**Pb**	**03 07 46.3**	**-0.3**
VCEL			AML	AML		
	comp=E,19300µm,0.9s					
VCEL			AML	AML		
	comp=N,17200µm,0.7s					
VCEL			AML	AML		
	comp=N,17200µm,0.7s					
VCEL			AML	AML		
	comp=E,19300µm,0.9s					
VCEL			AML	AML		
	comp=N,17200µm,0.7s					
VCEL			AML	AML		
	comp=E,19300µm,0.9s					
DUGI	**Dugi Otok**	**1.12 64**	*i* Pg	**Pb**	**03 07 45.8**	**-0.8**
DUGI			Sg	**Sn**	**03 08 01.3**	**-0.6**
SSP9	**Sansepolcro**	**1.12 274**	AML	AML		
	comp=E,4250µm,1.4s					
SSP9			AML	AML		
	comp=E,4250µm,1.4s					
SSP9			AML	AML		
	comp=N,4205µm,1.2s					
SSP9			AML	AML		
	comp=N,4205µm,1.2s					
SSP9			AML	AML		
	comp=E,4250µm,1.4s					
SSP9			AML	AML		
	comp=N,4205µm,1.2s					
ARRO	**Arrone**	**1.14 216**	P	**Pb**	**03 07 45.8**	**-1.1**
ARRO			AML	AML		
	comp=E,7795µm,1.1s					
ARRO			AML	AML		
	comp=N,8815µm,1.0s					
ARRO			AML	AML		
	comp=N,8815µm,1.0s					
ARRO			AML	AML		
	comp=E,7795µm,1.1s					
ARRO			AML	AML		
	comp=N,8815µm,1.0s					
ARRO			AML	AML		
	comp=E,7795µm,1.1s					
AQU	**L'Aquila**	**1.17 190**	*e*Pn	**Pn**	**03 07 47.0**	**-0.4**
AQU	**L'Aquila**	**1.17 190**	*e*P	**Pn**	**03 07 47.0**	**-0.4**
AQU	**L'Aquila**	**1.17 190**	*i* Pn	**Pn**	**03 07 45.3**	**-2.1**
AQU	**L'Aquila**	**1.17 190**	AML	AML		
	comp=E,19050µm,1.2s					
AQU			AML	AML		
	comp=N,15200µm,1.2s					
AQU			AML	AML		
	comp=E,18050µm,1.2s					
AQU			AML	AML		
	comp=N,15250µm,1.2s					
AQU			AML	AML		
	comp=N,15250µm,1.2s					
AQU			AML	AML		
	comp=N,15200µm,1.2s					
AQU			AML	AML		
	comp=E,18050µm,1.2s					
AQU			AML	AML		
	comp=E,19050µm,1.2s					
AQU			AML	AML		
	comp=N,15250µm,1.2s					
AQU			AML	AML		
	comp=N,15200µm,1.2s					
AQU			AML	AML		
	comp=E,18050µm,1.2s					
AQU			AML	AML		
	comp=E,19050µm,1.2s					
T0104	**Madonna delle**	**1.17 192**	P	**Pn**	**03 07 45.7**	**-1.8**
T0104			AML	AML		
	comp=E,39700µm,0.7s					
T0104			AML	AML		
	comp=N,26900µm,0.7s					
T0104			AML	AML		
	comp=E,39700µm,0.7s					
T0104			AML	AML		
	comp=N,26900µm,0.7s					
T0104			AML	AML		
	comp=E,39700µm,0.7s					
T0104			AML	AML		
	comp=N,26900µm,0.7s					
CESX	**Cesi**	**1.20 222**	P	**Pn**	**03 07 46.7**	**-1.1**
CESX			AML	AML		
	comp=E,12650µm,0.8s					
CESX			AML	AML		
	comp=N,12090µm,1.1s					
CESX			AML	AML		
	comp=N,12090µm,1.1s					
CESX			AML	AML		
	comp=E,12650µm,0.8s					
CESX			AML	AML		
	comp=N,12090µm,1.1s					
CESX			AML	AML		
	comp=E,12650µm,0.8s					
FAGN	**Fagnano**	**1.24 183**	AML	AML		
	comp=E,34100µm,0.6s					
FAGN			AML	AML		
	comp=E,34100µm,0.6s					
FAGN			AML	AML		
	comp=N,23100µm,0.5s					
FAGN			AML	AML		
	comp=N,23100µm,0.5s					
FAGN			AML	AML		
	comp=E,34100µm,0.6s					
FAGN			AML	AML		
	comp=N,23100µm,0.5s					
CAFI	**Castiglion Fio**	**1.25 263**	P	**Pn**	**03 07 48.5**	**-0.1**
CAFI			AML	AML		
	comp=E,2705µm,1.2s					
CAFI			AML	AML		
	comp=N,3400µm,1.0s					
CAFI			AML	AML		
	comp=E,2770µm,1.2s					
CAFI			AML	AML		
	comp=N,3545µm,1.0s					
CAFI			AML	AML		
	comp=E,2705µm,1.2s					
CAFI			AML	AML		
	comp=E,2770µm,1.2s					
CAFI			AML	AML		
	comp=N,3545µm,1.0s					
CAFI			AML	AML		
	comp=N,3400µm,1.0s					
CAFI			AML	AML		
	comp=E,2770µm,1.2s					
CAFI			AML	AML		
	comp=E,2705µm,1.2s					
CAFI			AML	AML		
	comp=N,3545µm,1.0s					
CAFI			AML	AML		
	comp=N,3400µm,1.0s					
MGAB	**Montegabbione**	**1.28 243**	AML	AML		
	comp=N,6895µm,1.2s					
MGAB			AML	AML		
	comp=E,5700µm,1.4s					
MGAB			AML	AML		
	comp=E,7310µm,1.3s					
MGAB			AML	AML		
	comp=N,6610µm,1.2s					
MGAB			AML	AML		
	comp=E,5700µm,1.4s					
MGAB			AML	AML		
	comp=E,7310µm,1.3s					
MGAB			AML	AML		
	comp=N,6895µm,1.2s					
MGAB			AML	AML		
	comp=N,6610µm,1.2s					
MGAB			AML	AML		
	comp=E,5700µm,1.4s					
MGAB			AML	AML		
	comp=E,7310µm,1.3s					
MGAB			AML	AML		
	comp=N,6895µm,1.2s					
MGAB			AML	AML		
	comp=N,6610µm,1.2s					
CAFR	**Castel Frentan**	**1.37 158**	P	**Pn**	**03 07 50.3**	**+0.2**
CAFR			AML	AML		
	comp=E,40900µm,0.8s					
CAFR			AML	AML		
	comp=N,32600µm,0.6s					
CAFR			AML	AML		
	comp=E,40900µm,0.8s					
CAFR			AML	AML		
	comp=N,32600µm,0.6s					
CAFR			AML	AML		
	comp=E,40900µm,0.8s					
CAFR			AML	AML		
	comp=N,32600µm,0.6s					
NVLJ	**Novalja**	**1.37 39**	*e*Pg	**Pn**	**03 07 49.6**	**-0.5**
NVLJ			Sg	**Sg**	**03 08 08.4**	**-1.1**
SFI	**Santa Sofia**	**1.38 288**	P	**Pg**	**03 07 51.9**	**-0.1**
SFI			AML	AML		
	comp=E,1665µm,1.0s					
SFI			AML	AML		
	comp=N,1705µm,1.4s					
SFI			AML	AML		
	comp=E,1385µm,1.3s					
SFI			AML	AML		
	comp=N,1710µm,1.5s					
SFI			AML	AML		
	comp=E,1385µm,1.3s					
SFI			AML	AML		
	comp=N,1710µm,1.5s					
SFI			AML	AML		
	comp=E,1665µm,1.0s					
SFI			AML	AML		
	comp=N,1705µm,1.4s					
SFI			AML	AML		
	comp=E,1385µm,1.3s					
SFI			AML	AML		
	comp=N,1710µm,1.5s					
SFI			AML	AML		
	comp=E,1665µm,1.0s					
SFI			AML	AML		
	comp=N,1705µm,1.4s					
ASQU	**Asqua**	**1.40 283**	AML	AML		
	comp=N,2035µm,1.0s					
ASQU			AML	AML		
	comp=E,2745µm,1.4s					
ASQU			AML	AML		
	comp=N,2035µm,1.0s					
ASQU			AML	AML		
	comp=E,2745µm,1.4s					
ASQU			AML	AML		
	comp=N,2035µm,1.0s					
ASQU			AML	AML		
	comp=E,2745µm,1.4s					
ZIRJ	**Zirje**	**1.44 83**	*e*Pn	**Pn**	**03 07 50.0**	**-1.1**
ZIRJ			Sg	**Sb**	**03 08 09.5**	**-0.8**
SACS	**San Casciano d**	**1.45 244**	P	**Pn**	**03 07 52.0**	**+0.7**
SACS			AML	AML		
	comp=E,3350µm,1.6s					
SACS			AML	AML		
	comp=N,4920µm,0.9s					
SACS			AML	AML		
	comp=E,3265µm,1.6s					
SACS			AML	AML		
	comp=N,4960µm,0.9s					
SACS			AML	AML		
	comp=N,4920µm,0.9s					
SACS			AML	AML		
	comp=N,4960µm,0.9s					
SACS			AML	AML		
	comp=E,3350µm,1.6s					
SACS			AML	AML		
	comp=E,3265µm,1.6s					
SACS			AML	AML		
	comp=N,4960µm,0.9s					
SACS			AML	AML		
	comp=N,4920µm,0.9s					
SACS			AML	AML		
	comp=E,3350µm,1.6s					
SACS			AML	AML		
	comp=E,3265µm,1.6s					

PTQR	**Pietraquaria**	**1.49**	**188**	AML	AML		
	comp=E,4095µm,1.0s						
PTQR				AML	AML		
	comp=N,3435µm,1.4s						
PTQR				AML	AML		
	comp=N,3435µm,1.4s						
PTQR				AML	AML		
	comp=E,4095µm,1.0s						
PTQR				AML	AML		
	comp=N,3435µm,1.4s						
PTQR				AML	AML		
	comp=E,4095µm,1.0s						
INTR	**Introdacqua**	**1.50**	**173**	P	**Pn**	**03 07 51.8**	**-0.2**
INTR				AML	AML		
	comp=E,17950µm,1.1s						
INTR				AML	AML		
	comp=N,23800µm,0.8s						
INTR				AML	AML		
	comp=N,23800µm,0.8s						
INTR				AML	AML		
	comp=E,17950µm,1.1s						
INTR				AML	AML		
	comp=N,23800µm,0.8s						
INTR				AML	AML		
	comp=E,17950µm,1.1s						
LPEL	**Lama dei Pelig**	**1.50**	**165**	P	**Pn**	**03 07 51.9**	**-0.1**
LPEL				AML	AML		
	comp=E,10600µm,0.7s						
LPEL				AML	AML		
	comp=N,6780µm,0.8s						
LPEL				AML	AML		
	comp=N,6780µm,0.8s						
LPEL				AML	AML		
	comp=E,10600µm,0.7s						
LPEL				AML	AML		
	comp=N,6780µm,0.8s						
LPEL				AML	AML		
	comp=E,10600µm,0.7s						
MORI	**Morici**	**1.52**	**75**	*e*Pn	**Pn**	**03 07 51.9**	**-0.3**
MORI				Sn	**Sg**	**03 08 12.6**	**-1.8**
RUFI	**Rufina**	**1.60**	**283**	P	**Pb**	**03 07 55.4**	**+0.6**
MCIV	**Monte Civitell**	**1.63**	**244**	*e*P	**Pn**	**03 07 54.6**	**+0.8**
MCIV				AML	AML		
	comp=E,1565µm,1.5s						
MCIV				AML	AML		
	comp=N,1275µm,1.3s						
MCIV				AML	AML		
	comp=N,1275µm,1.3s						
MCIV				AML	AML		
	comp=E,1565µm,1.5s						
MCIV				AML	AML		
	comp=N,1275µm,1.3s						
MCIV				AML	AML		
	comp=E,1565µm,1.5s						
MTCE	**Montecelio**	**1.63**	**205**	P	**Pn**	**03 07 54.3**	**+0.6**
MTCE				AML	AML		
	comp=E,5200µm,0.9s						
MTCE				AML	AML		
	comp=N,3355µm,1.0s						
MTCE				AML	AML		
	comp=N,3355µm,1.0s						
MTCE				AML	AML		
	comp=E,5200µm,0.9s						
MTCE				AML	AML		
	comp=N,3355µm,1.0s						
MTCE				AML	AML		
	comp=E,5200µm,0.9s						
VVLD	**Villa Vallelon**	**1.63**	**181**	P	**Pn**	**03 07 54.4**	**+0.5**
VVLD				AML	AML		
	comp=E,4945µm,0.7s						
VVLD				AML	AML		
	comp=N,5815µm,0.8s						
VVLD				AML	AML		
	comp=E,4945µm,0.7s						
VVLD				AML	AML		
	comp=N,5815µm,0.8s						
VVLD				AML	AML		
	comp=E,4945µm,0.7s						
VVLD				AML	AML		
	comp=N,5815µm,0.8s						
CERT	**Cerreto**	**1.63**	**198**	P	**Pn**	**03 07 54.7**	**+0.9**
CERT				AML	AML		
	comp=E,9215µm,0.8s						
CERT				AML	AML		
	comp=N,4815µm,1.2s						
CERT				AML	AML		
	comp=E,9215µm,0.8s						
CERT				AML	AML		
	comp=N,4815µm,1.2s						
CERT				AML	AML		
	comp=E,9215µm,0.8s						
CERT				AML	AML		
	comp=N,4815µm,1.2s						
BRIS	**BRISIGHELLA**	**1.69**	**293**	AML	AML		
	comp=E,2450µm,1.1s						
BRIS				AML	AML		
	comp=E,2450µm,1.1s						
BRIS				AML	AML		
	comp=N,1895µm,0.9s						
BRIS				AML	AML		
	comp=N,1895µm,0.9s						
BRIS				AML	AML		
	comp=E,2450µm,1.1s						
BRIS				AML	AML		
	comp=N,1895µm,0.9s						
CSNT	**Castellina Chi**	**1.73**	**270**	P	**Pb**	**03 07 56.5**	**-0.5**
CSNT				AML	AML		
	comp=E,938µm,1.6s						
CSNT				AML	AML		
	comp=N,1230µm,1.4s						
CSNT				AML	AML		
	comp=E,938µm,1.6s						
CSNT				AML	AML		
	comp=N,1230µm,1.4s						
CSNT				AML	AML		
	comp=E,938µm,1.6s						
CSNT				AML	AML		
	comp=N,1230µm,1.4s						
SEI	**Scarperia**	**1.77**	**289**	P	**Pb**	**03 07 58.2**	**+0.6**
SEI				AML	AML		
	comp=E,1290µm,0.6s						
SEI				AML	AML		
	comp=N,2345µm,0.6s						
SEI				AML	AML		
	comp=N,2345µm,0.6s						
SEI				AML	AML		
	comp=E,1290µm,0.6s						
SEI				AML	AML		
	comp=N,2345µm,0.6s						
SEI				AML	AML		
	comp=E,1290µm,0.6s						
POFI	**Posta Fibreno**	**1.78**	**179**	AML	AML		
	comp=N,2920µm,1.0s						
POFI				AML	AML		
	comp=E,4245µm,1.2s						
POFI				AML	AML		
	comp=N,2920µm,1.0s						
POFI				AML	AML		
	comp=E,4425µm,1.2s						
POFI				AML	AML		
	comp=N,2935µm,1.1s						
POFI				AML	AML		
	comp=N,2935µm,1.1s						
POFI				AML	AML		
	comp=E,4245µm,1.2s						
POFI				AML	AML		
	comp=E,4425µm,1.2s						
POFI				AML	AML		
	comp=N,2935µm,1.1s						
POFI				AML	AML		
	comp=N,2920µm,1.0s						
POFI				AML	AML		
	comp=E,4245µm,1.2s						
POFI				AML	AML		
	comp=E,4425µm,1.2s						
UDBI	**Udbina**	**1.82**	**55**	*i* Pn	**Pb**	**03 07 57.2**	**-1.5**
UDBI				Sn	**Sb**	**03 08 20.8**	**-0.6**
RNI2	**Rionero Sannit**	**1.83**	**169**	AML	AML		
	comp=N,6795µm,0.9s						
RNI2				AML	AML		
	comp=E,5505µm,1.6s						
RNI2				AML	AML		
	comp=N,6640µm,0.9s						
RNI2				AML	AML		
	comp=E,5645µm,1.6s						
RNI2				AML	AML		
	comp=N,6795µm,0.9s						
RNI2				AML	AML		
	comp=E,5505µm,1.6s						
RNI2				AML	AML		
	comp=E,5645µm,1.6s						
RNI2				AML	AML		
	comp=N,6640µm,0.9s						
RNI2				AML	AML		
	comp=N,6795µm,0.9s						
RNI2				AML	AML		
	comp=E,5505µm,1.6s						
RNI2				AML	AML		
	comp=E,5645µm,1.6s						
RNI2				AML	AML		
	comp=N,6640µm,0.9s						
RMP	**Rome, Mte Porz**	**1.83**	**203**	AML	AML		
	comp=N,5875µm,0.9s						
RMP				AML	AML		
	comp=E,4265µm,1.0s						
RMP				AML	AML		
	comp=N,5875µm,0.9s						
RMP				AML	AML		
	comp=E,4265µm,1.0s						
RMP				AML	AML		
	comp=N,5875µm,0.9s						
RMP				AML	AML		
	comp=E,4265µm,1.0s						
FROS	**Frosini**	**1.86**	**262**	*e*P	**Pn**	**03 07 58.0**	**+1.1**
FROS				AML	AML		
	comp=E,1395µm,1.4s						
FROS				AML	AML		
	comp=N,1260µm,1.0s						
FROS				AML	AML		
	comp=E,1395µm,1.4s						
FROS				AML	AML		
	comp=N,1260µm,1.0s						
FROS				AML	AML		
	comp=N,1260µm,1.0s						
FROS				AML	AML		
	comp=E,1395µm,1.4s						
TOLF	**Tolfa**	**1.89**	**221**	P	**Pn**	**03 07 57.9**	**+0.5**
TOLF				AML	AML		
	comp=E,1485µm,0.7s						
TOLF				AML	AML		
	comp=N,1285µm,1.0s						
TOLF				AML	AML		
	comp=E,1485µm,0.7s						
TOLF				AML	AML		
	comp=N,1285µm,1.0s						
TOLF				AML	AML		
	comp=E,1485µm,0.7s						
TOLF				AML	AML		
	comp=N,1285µm,1.0s						
MIDA	**Miranda**	**1.91**	**167**	P	**Pn**	**03 07 58.0**	**+0.4**
MIDA				AML	AML		
	comp=E,4560µm,0.9s						
MIDA				AML	AML		
	comp=N,4710µm,0.6s						
MIDA				AML	AML		
	comp=E,4760µm,0.9s						
MIDA				AML	AML		
	comp=N,4630µm,0.6s						
MIDA				AML	AML		
	comp=N,4710µm,0.6s						
MIDA				AML	AML		
	comp=E,4760µm,0.9s						
MIDA				AML	AML		
	comp=E,4560µm,0.9s						
MIDA				AML	AML		
	comp=N,4630µm,0.6s						
MIDA				AML	AML		
	comp=N,4710µm,0.6s						
MIDA				AML	AML		
	comp=E,4560µm,0.9s						
MIDA				AML	AML		
	comp=E,4760µm,0.9s						
MIDA				AML	AML		
	comp=N,4630µm,0.6s						
RIY	**Rijeka**	**1.91**	**17**	*e*Pn	**Pn**	**03 07 57.9**	**+0.3**
RIY				*e*Sg	**Sb**	**03 08 24.0**	**+0.1**
RIY	**Rijeka**	**1.91**	**17**	iPn	**Pb**	**03 07 58.1**	**-2.0**
RIY				Sn	**Sb**	**03 08 24.3**	**+0.4**
RIY	**Rijeka**	**1.91**	**17**	*e*Pn	**Pn**	**03 07 58.0**	**+0.3**
CERA	**Filignano**	**1.92**	**172**	P	**Pn**	**03 07 57.5**	**-0.3**
CERA				AML	AML		
	comp=E,6400µm,0.8s						
CERA				AML	AML		
	comp=N,5650µm,0.7s						
CERA				AML	AML		
	comp=E,6595µm,0.8s						
CERA				AML	AML		
	comp=N,5860µm,0.7s						
CERA				AML	AML		
	comp=E,6595µm,0.8s						
CERA				AML	AML		
	comp=E,6400µm,0.8s						
CERA				AML	AML		
	comp=N,5860µm,0.7s						
CERA				AML	AML		
	comp=N,5650µm,0.7s						
CERA				AML	AML		
	comp=E,6595µm,0.8s						
CERA				AML	AML		
	comp=E,6400µm,0.8s						
CERA				AML	AML		
	comp=N,5860µm,0.7s						
CERA				AML	AML		
	comp=N,5650µm,0.7s						
GIUL	**Giuliano Di Ro**	**1.97**	**189**	AML	AML		
	comp=N,2125µm,0.9s						
GIUL				AML	AML		
	comp=E,3040µm,1.0s						
GIUL				AML	AML		
	comp=N,2125µm,0.9s						
GIUL				AML	AML		
	comp=E,3040µm,1.0s						
GIUL				AML	AML		
	comp=N,2125µm,0.9s						
GIUL				AML	AML		
	comp=E,3040µm,1.0s						
HVAR	**Hvar**	**2.05**	**98**	*e*Pn	**Pn**	**03 07 58.8**	**-0.8**
SKDS	**Skadanscina**	**2.06**	**7**	*i* Pn	**Pn**	**03 07 59.5**	**-0.2**
SKDS				*e*Sn	**Sb**	**03 08 26.2**	**-1.9**
	comp=Z,132nm,0.2s						
TRIF	**Trifonti**	**2.06**	**260**	*e*P	**Pn**	**03 08 00.6**	**+0.9**
TRIF				AML	AML		
	comp=E,819µm,0.8s						
TRIF				AML	AML		
	comp=N,758µm,0.8s						
TRIF				AML	AML		
	comp=E,819µm,0.8s						
TRIF				AML	AML		
	comp=N,758µm,0.8s						
TRIF				AML	AML		
	comp=E,819µm,0.8s						
TRIF				AML	AML		
	comp=N,758µm,0.8s						
BSSO	**Busso**	**2.07**	**160**	AML	AML		
	comp=E,1522µm,0.7s						
BSSO				AML	AML		
	comp=E,3595µm,0.7s						
BSSO				AML	AML		
	comp=N,4055µm,0.7s						
BSSO				AML	AML		
	comp=E,1522µm,0.7s						
BSSO				AML	AML		
	comp=N,1780µm,0.7s						
BSSO				AML	AML		
	comp=N,4055µm,0.7s						
BSSO				AML	AML		
	comp=N,1780µm,0.7s						
BSSO				AML	AML		
	comp=E,1522µm,0.7s						
BSSO				AML	AML		
	comp=E,3595µm,0.7s						
BSSO				AML	AML		
	comp=N,4055µm,0.7s						
BSSO				AML	AML		
	comp=N,1780µm,0.7s						
BSSO				AML	AML		
	comp=E,3595µm,0.7s						
KNDS	**Knezji Dol**	**2.09**	**14**	*i* Pn	**Pn**	**03 08 00.5**	**+0.3**
KNDS				*e*Sn	**Sb**	**03 08 28.0**	**-1.0**
	comp=Z,2µm,0.8s						
MELA	**Melanico ??? S**	**2.09**	**149**	P	**Pn**	**03 07 59.4**	**-0.6**
MELA				AML	AML		
	comp=E,10885µm,1.1s						
MELA				AML	AML		
	comp=N,11755µm,0.7s						
MELA				AML	AML		
	comp=E,11145µm,1.1s						
MELA				AML	AML		
	comp=N,12210µm,0.7s						
MELA				AML	AML		
	comp=E,10885µm,1.1s						
MELA				AML	AML		
	comp=N,12210µm,0.7s						
MELA				AML	AML		
	comp=N,11755µm,0.7s						
MELA				AML	AML		
	comp=E,11145µm,1.1s						
MELA				AML	AML		
	comp=E,10885µm,1.1s						
MELA				AML	AML		
	comp=N,12210µm,0.7s						
MELA				AML	AML		
	comp=N,11755µm,0.7s						
MELA				AML	AML		
	comp=E,11145µm,1.1s						
MAON	**Monte Argentar**	**2.15**	**241**	AML	AML		
	comp=N,357µm,1.0s						
MAON				AML	AML		
	comp=E,488µm,1.0s						
MAON				AML	AML		
	comp=N,357µm,1.0s						
MAON				AML	AML		
	comp=E,488µm,1.0s						
MAON				AML	AML		
	comp=N,357µm,1.0s						
MAON				AML	AML		
	comp=E,488µm,1.0s						
CASP	**Castiglione de**	**2.17**	**252**	AML	AML		
	comp=E,277µm,1.1s						
CASP				AML	AML		
	comp=E,277µm,1.1s						
CASP				AML	AML		
	comp=N,315µm,1.0s						
CASP				AML	AML		
	comp=E,277µm,1.1s						
CASP				AML	AML		
	comp=N,315µm,1.0s						
CASP				AML	AML		
	comp=N,315µm,1.0s						
POPM	**Popiglio**	**2.18**	**285**	P	**Pn**	**03 08 02.8**	**+1.5**
POPM				AML	AML		
	comp=E,498µm,1.4s						
POPM				AML	AML		
	comp=N,440µm,1.3s						
POPM				AML	AML		
	comp=E,498µm,1.4s						
POPM				AML	AML		
	comp=N,440µm,1.3s						
POPM				AML	AML		
	comp=E,498µm,1.4s						
POPM				AML	AML		
	comp=N,440µm,1.3s						
TRI	**Trieste**	**2.21**	**2**	*e*Pn	**Pn**	**03 08 01.3**	**-0.4**
TRI	**Trieste**	**2.21**	**2**	*e*P	**Pn**	**03 08 01.3**	**-0.4**
TRI	**Trieste**	**2.21**	**2**	P	**Pn**	**03 08 00.5**	**-1.2**
TRI				AML	AML		
	comp=E,1238µm,0.8s						
TRI				AML	AML		
	comp=N,952µm,1.1s						
TRI				AML	AML		
	comp=E,1238µm,0.8s						
TRI				AML	AML		
	comp=N,952µm,1.1s						
TRI				AML	AML		
	comp=E,1238µm,0.8s						
TRI				AML	AML		
	comp=N,952µm,1.1s						
SACR	**S. Croce Del S**	**2.24**	**160**	AML	AML		
	comp=N,2420µm,1.3s						
SACR				AML	AML		
	comp=E,2330µm,0.8s						
SACR				AML	AML		
	comp=N,2420µm,1.3s						
SACR				AML	AML		
	comp=E,2330µm,0.8s						
SACR				AML	AML		
	comp=N,2420µm,1.3s						
SACR				AML	AML		
	comp=E,2330µm,0.8s						
BDI	**Bagni Di Lucca**	**2.30**	**285**	AML	AML		
	comp=N,544µm,0.9s						
BDI				AML	AML		
	comp=E,631µm,1.6s						
BDI				AML	AML		
	comp=N,544µm,0.9s						
BDI				AML	AML		
	comp=E,668µm,1.4s						
BDI				AML	AML		
	comp=N,539µm,0.9s						
BDI				AML	AML		
	comp=N,539µm,0.9s						
BDI				AML	AML		
	comp=E,668µm,1.4s						
BDI				AML	AML		
	comp=E,631µm,1.6s						
BDI				AML	AML		
	comp=N,539µm,0.9s						
BDI				AML	AML		
	comp=N,544µm,0.9s						
BDI				AML	AML		
	comp=E,668µm,1.4s						
BDI				AML	AML		
	comp=E,631µm,1.6s						
BOJS	**Bojanci**	**2.30**	**29**	*e*Pn	**Pn**	**03 08 03.6**	**+0.7**
BOJS				*e*Sn	**Sn**	**03 08 30.6**	**-0.5**
BOJS	**Bojanci**	**2.30**	**29**	P	**Pn**	**03 08 03.5**	**+0.5**
BOJS				AML	AML		
	comp=E,1272µm,0.7s						
BOJS				AML	AML		
	comp=N,694µm,1.1s						
BOJS				AML	AML		
	comp=E,1272µm,0.7s						
BOJS				AML	AML		
	comp=N,694µm,1.1s						
BOJS				AML	AML		
	comp=E,1272µm,0.7s						
BOJS				AML	AML		
	comp=N,694µm,1.1s						
CEY	**Cerknica**	**2.30**	**13**	*e*Pn	**Pn**	**03 08 03.9**	**+0.9**
CEY				*e*Sn	**Sn**	**03 08 32.0**	**+0.8**
CEY	**Cerknica**	**2.30**	**13**	*i* Pn	**Pn**	**03 08 03.1**	**+0.1**
CEY				*e*Sn	**Sb**	**03 08 33.0**	**-2.0**
	comp=Z,570nm,0.6s						
CEY	**Cerknica**	**2.30**	**13**	*e*Pn	**Pn**	**03 08 02.9**	**-0.1**
PIGN	**Pignataro Magg**	**2.33**	**171**	AML	AML		
	comp=E,1440µm,1.0s						
PIGN				AML	AML		
	comp=E,1455µm,1.1s						
PIGN				AML	AML		
	comp=N,1585µm,0.9s						
PIGN				AML	AML		
	comp=N,1580µm,0.9s						
PIGN				AML	AML		
	comp=N,1580µm,0.9s						
PIGN				AML	AML		
	comp=E,1455µm,1.1s						
PIGN				AML	AML		
	comp=N,1585µm,0.9s						
PIGN				AML	AML		
	comp=E,1440µm,1.0s						
PIGN				AML	AML		
	comp=N,1585µm,0.9s						
PIGN				AML	AML		
	comp=E,1455µm,1.1s						
PIGN				AML	AML		
	comp=N,1580µm,0.9s						
PIGN				AML	AML		
	comp=E,1440µm,1.0s						
MAIM	**Mastiano**	**2.34**	**281**	AML	AML		
	comp=E,378µm,1.0s						
MAIM				AML	AML		
	comp=E,378µm,1.0s						
MAIM				AML	AML		
	comp=N,450µm,0.6s						
MAIM				AML	AML		
	comp=N,450µm,0.6s						
MAIM				AML	AML		
	comp=E,378µm,1.0s						
MAIM				AML	AML		
	comp=N,450µm,0.6s						
CARD	**Cardoso**	**2.37**	**284**	AML	AML		
	comp=N,494µm,0.9s						
CARD				AML	AML		
	comp=E,411µm,0.6s						

CARD	comp=N,494µm,0.9s			AML	AML		
CARD	comp=N,494µm,0.9s			AML	AML		
CARD	comp=E,411µm,0.6s			AML	AML		
CARD	comp=E,411µm,0.6s			AML	AML		
MOCO	**Biccari - m.te** comp=N,2270µm,1.0s	**2.40**	**152**	AML	AML		
MOCO	comp=E,3440µm,0.8s			AML	AML		
MOCO	comp=N,2085µm,1.1s			AML	AML		
MOCO	comp=E,3585µm,0.8s			AML	AML		
MOCO	comp=N,2270µm,1.0s			AML	AML		
MOCO	comp=N,2085µm,1.1s			AML	AML		
MOCO	comp=N,2270µm,1.0s			AML	AML		
MOCO	comp=E,3440µm,0.8s			AML	AML		
MOCO	comp=E,3585µm,0.8s			AML	AML		
MOCO	comp=N,2085µm,1.1s			AML	AML		
MOCO	comp=E,3440µm,0.8s			AML	AML		
MOCO	comp=E,3585µm,0.8s			AML	AML		
JAVS	**Javornik**	**2.41**	**7**	*i* Pn	**Pn**	**03 08 04.4**	**-0.1**
JAVS				*e*Sn	**Sn**	**03 08 34.7**	**+0.8**
MSAG	**Monte S. Angel**	**2.44**	**137**	P	**Pn**	**03 08 03.7**	**-1.2**
MSAG	comp=E,4405µm,0.6s			AML	AML		
MSAG	comp=N,4950µm,1.1s			AML	AML		
MSAG	comp=E,4565µm,0.6s			AML	AML		
MSAG	comp=N,5060µm,1.1s			AML	AML		
MSAG	comp=N,4950µm,1.1s			AML	AML		
MSAG	comp=E,4565µm,0.6s			AML	AML		
MSAG	comp=E,4405µm,0.6s			AML	AML		
MSAG	comp=N,5060µm,1.1s			AML	AML		
MSAG	comp=N,5060µm,1.1s			AML	AML		
MSAG	comp=E,4565µm,0.6s			AML	AML		
MSAG	comp=E,4405µm,0.6s			AML	AML		
MSAG	comp=N,4950µm,1.1s			AML	AML		
VLC	**Villacollemand**	**2.47**	**287**	*e*Pn	**Pn**	**03 08 06.0**	**+0.7**
VLC	**Villacollemand** comp=N,501µm,1.5s	**2.47**	**287**	AML	AML		
VLC	comp=E,369µm,1.3s			AML	AML		
VLC	comp=N,568µm,1.5s			AML	AML		
VLC	comp=E,300µm,1.2s			AML	AML		
VLC	comp=N,501µm,1.5s			AML	AML		
VLC	comp=E,369µm,1.3s			AML	AML		
VLC	comp=N,568µm,1.5s			AML	AML		
VLC	comp=E,300µm,1.2s			AML	AML		
VLC	comp=E,369µm,1.3s			AML	AML		
VLC	comp=N,568µm,1.5s			AML	AML		
VLC	comp=N,501µm,1.5s			AML	AML		
VLC	comp=E,300µm,1.2s			AML	AML		
OZLJ	**Ozalj**	**2.47**	**31**	*i* Pn	**Pn**	**03 08 05.9**	**+0.6**
SABO	**M.te Sabotino**	**2.48**	**359**	P	**Pn**	**03 08 05.3**	**-0.2**
SABO	comp=E,2425µm,0.6s			AML	AML		
SABO	comp=N,2230µm,0.8s			AML	AML		
SABO	comp=E,2425µm,0.6s			AML	AML		
SABO	comp=N,2230µm,0.8s			AML	AML		
SABO	comp=E,2425µm,0.6s			AML	AML		
SABO	comp=N,2230µm,0.8s			AML	AML		
LJU	**Ljubljana**	**2.61**	**13**	*e*Pn	**Pn**	**03 08 07.8**	**+0.5**
LJU	**Ljubljana**	**2.61**	**13**	P	**Pn**	**03 08 08.2**	**+0.9**
LJU	comp=E,2290µm,0.9s			AML	AML		
LJU	comp=N,3080µm,0.8s			AML	AML		
LJU	comp=N,3080µm,0.8s			AML	AML		
LJU	comp=E,2290µm,0.9s			AML	AML		
LJU	comp=E,2290µm,0.9s			AML	AML		
LJU	comp=N,3080µm,0.8s			AML	AML		
EQUI	**Equi** comp=N,253µm,0.8s	**2.63**	**286**	AML	AML		
EQUI	comp=E,192µm,1.6s			AML	AML		
EQUI	comp=N,253µm,0.8s			AML	AML		
EQUI	comp=E,192µm,1.6s			AML	AML		
EQUI	comp=N,253µm,0.8s			AML	AML		
EQUI	comp=E,192µm,1.6s			AML	AML		
CRES	**Cresnjev**	**2.65**	**28**	*e*Pn	**Pn**	**03 08 08.2**	**+0.4**
POLC	**Polcenigo**	**2.66**	**342**	P	**Pn**	**03 08 08.4**	**+0.5**
POLC	comp=E,2290µm,0.7s			AML	AML		
POLC	comp=N,2205µm,1.4s			AML	AML		
POLC	comp=N,2205µm,1.4s			AML	AML		
POLC	comp=E,2290µm,0.7s			AML	AML		
POLC	comp=N,2205µm,1.4s			AML	AML		
POLC	comp=E,2290µm,0.7s			AML	AML		
CGRP	**Cima Grappa**	**2.73**	**331**	⇑*i*Pn	**Pn**	**03 08 09.3**	**+0.3**
CGRP	**Cima Grappa**	**2.73**	**331**	P	**Pn**	**03 08 09.2**	**+0.1**
CGRP	comp=E,1685µm,1.0s			AML	AML		
CGRP	comp=N,1920µm,1.0s			AML	AML		
CGRP	comp=N,1920µm,1.0s			AML	AML		
CGRP	comp=E,1685µm,1.0s			AML	AML		
CGRP	comp=N,1920µm,1.0s			AML	AML		
CGRP	comp=E,1685µm,1.0s			AML	AML		
GROG	**Isola di Gorgo** comp=N,276µm,0.7s	**2.75**	**270**	AML	AML		
GROG	comp=E,276µm,1.0s			AML	AML		
GROG	comp=N,276µm,0.7s			AML	AML		
GROG	comp=N,276µm,0.7s			AML	AML		
GROG	comp=E,276µm,1.0s			AML	AML		
GROG	comp=E,276µm,1.0s			AML	AML		
GEPF	**Gemona**	**2.80**	**352**	P	**Pn**	**03 08 09.8**	**+0.1**
GEPF	comp=E,625µm,0.6s			AML	AML		
GEPF	comp=N,968µm,0.7s			AML	AML		
GEPF	comp=E,625µm,0.6s			AML	AML		
GEPF	comp=N,968µm,0.7s			AML	AML		
GEPF	comp=E,625µm,0.6s			AML	AML		
GEPF	comp=N,968µm,0.7s			AML	AML		
SNAL	**S. Angelo Dei** comp=E,2620µm,1.2s	**2.82**	**156**	AML	AML		
SNAL	comp=N,3105µm,1.0s			AML	AML		
SNAL	comp=N,3105µm,1.0s			AML	AML		
SNAL	comp=E,2620µm,1.2s			AML	AML		
SNAL	comp=N,3105µm,1.0s			AML	AML		
SNAL	comp=E,2620µm,1.2s			AML	AML		
BLY	**Banja Luka**	**2.82**	**63**	*e*Pn	**Pn**	**03 08 10.5**	**+0.4**
BLY	**Banja Luka**	**2.82**	**63**	*e*Pn	**Pn**	**03 08 10.8**	**+0.7**
BLY				*e*Sn	**Sn**	**03 08 43.5**	**-0.4**
BLY	**Banja Luka**	**2.82**	**63**	⇓*i*P	**Pn**	**03 08 11.1**	**+1.0**
BLY	**Banja Luka**	**2.82**	**63**	*i* Pn	**Pn**	**03 08 10.2**	**+0.1**
BLY	**Banja Luka**	**2.82**	**63**	P	**Pn**	**03 08 10.4**	**+0.3**
BLY	comp=E,2265µm,0.7s			AML	AML		
BLY	comp=N,1895µm,0.9s			AML	AML		
BLY	comp=E,2165µm,0.7s			AML	AML		
BLY	comp=N,1855µm,0.9s			AML	AML		
BLY	comp=E,2165µm,0.7s			AML	AML		
BLY	comp=E,2265µm,0.7s			AML	AML		
BLY	comp=N,1855µm,0.9s			AML	AML		
BLY	comp=N,1895µm,0.9s			AML	AML		
BLY	comp=E,2165µm,0.7s			AML	AML		
BLY	comp=E,2265µm,0.7s			AML	AML		
BLY	comp=N,1895µm,0.9s			AML	AML		
BLY	comp=N,1855µm,0.9s			AML	AML		
PLMA	**Palmaria, Port** comp=E,178µm,0.7s	**2.82**	**282**	AML	AML		
PLMA	comp=E,178µm,0.7s			AML	AML		
PLMA	comp=N,184µm,1.1s			AML	AML		
PLMA	comp=N,184µm,1.1s			AML	AML		
PLMA	comp=E,178µm,0.7s			AML	AML		
PLMA	comp=N,184µm,1.1s			AML	AML		
GORS	**Gorjuse**	**2.82**	**5**	*i* Pn	**Pn**	**03 08 10.4**	**+0.1**
GORS				*e*Sn	**Sn**	**03 08 45.5**	**+1.4**
STAL	**STALIGIAL** comp=E,1255µm,0.8s	**2.84**	**346**	AML	AML		
STAL	comp=E,947µm,0.7s			AML	AML		
STAL	comp=N,741µm,1.5s			AML	AML		
STAL	comp=E,1255µm,0.8s			AML	AML		
STAL	comp=N,800µm,0.9s			AML	AML		
STAL	comp=E,947µm,0.7s			AML	AML		
STAL	comp=E,1255µm,0.8s			AML	AML		
STAL	comp=N,800µm,0.9s			AML	AML		
STAL	comp=N,741µm,1.5s			AML	AML		
STAL	comp=E,947µm,0.7s			AML	AML		
STAL	comp=N,800µm,0.9s			AML	AML		
STAL	comp=N,741µm,1.5s			AML	AML		
PTJ	**Puntijarka**	**2.91**	**33**	iPn	**Pn**	**03 08 12.3**	**+0.9**
PTCC	**Patocco-Chiusa**	**2.91**	**356**	P	**Pn**	**03 08 11.4**	**0.0**
PTCC	comp=E,772µm,0.8s			AML	AML		
PTCC	comp=N,614µm,0.6s			AML	AML		
PTCC	comp=N,614µm,0.6s			AML	AML		
PTCC	comp=E,772µm,0.8s			AML	AML		
PTCC	comp=N,614µm,0.6s			AML	AML		
PTCC	comp=E,772µm,0.8s			AML	AML		
CTI	**Castel Tesino**	**2.92**	**331**	P	**Pn**	**03 08 12.2**	**+0.5**
CTI	comp=E,780µm,1.2s			AML	AML		
CTI	comp=N,742µm,0.7s			AML	AML		
CTI	comp=E,780µm,1.2s			AML	AML		
CTI	comp=N,742µm,0.7s			AML	AML		
CTI	comp=E,780µm,1.2s			AML	AML		
CTI	comp=N,742µm,0.7s			AML	AML		
STON	**Ston**	**3.01**	**101**	*e*Pn	**Pn**	**03 08 12.9**	**+0.2**
STON				*e*Sn	**Sn**	**03 08 49.7**	**+1.1**
STON	**Ston**	**3.01**	**101**	*e*Pn	**Pn**	**03 08 12.5**	**-0.2**
STON	**Ston**	**3.01**	**101**	*e*Pn	**Pn**	**03 08 12.1**	**-0.6**
STON	**Ston** comp=N,704µm,0.7s	**3.01**	**101**	AML	AML		
STON	comp=E,436µm,0.9s			AML	AML		
STON	comp=N,704µm,0.7s			AML	AML		
STON	comp=E,436µm,0.9s			AML	AML		
STON	comp=N,704µm,0.7s			AML	AML		
STON	comp=E,436µm,0.9s			AML	AML		
ACOM	**Acomizza, Ital** comp=E,1030µm,1.2s	**3.05**	**358**	AML	AML		
ACOM	comp=E,1030µm,1.2s			AML	AML		
ACOM	comp=N,1210µm,0.8s			AML	AML		
ACOM	comp=E,1030µm,1.2s			AML	AML		
ACOM	comp=N,1210µm,0.8s			AML	AML		
ACOM	comp=N,1210µm,0.8s			AML	AML		
OBKA	**Obir** comp=N,5.9nm,0.2s,SNR=9.9	**3.07**	**11**	*i* Pn	**Pn**	**03 08 14.5**	**+0.9**
OBKA	comp=N,121nm,0.8s			Pg	**Pg**	**03 08 23.0**	**-1.2**
OBKA	comp=N,174nm,0.6s			*e*Sn	**Sb**	**03 08 53.6**	**-3.6**
OBKA	comp=N,766nm,0.9s			Sg	**Sg**	**03 09 06.2**	**+2.2**
PALZ	**Palazzo San Ge**	**3.07**	**146**	P	**Pn**	**03 08 12.5**	**-1.0**
PALZ	comp=E,3770µm,1.2s			AML	AML		
PALZ	comp=N,3490µm,1.1s			AML	AML		
PALZ	comp=N,3490µm,1.1s			AML	AML		
PALZ	comp=E,3770µm,1.2s			AML	AML		
PALZ	comp=N,3490µm,1.1s			AML	AML		
PALZ	comp=E,3770µm,1.2s			AML	AML		
MRVN	**Minervino Murg**	**3.08**	**142**	P	**Pn**	**03 08 12.2**	**-1.5**
MRVN	comp=E,938µm,1.0s			AML	AML		
MRVN	comp=N,890µm,0.8s			AML	AML		
MRVN	comp=N,890µm,0.8s			AML	AML		
MRVN	comp=E,938µm,1.0s			AML	AML		
MRVN	comp=N,890µm,0.8s			AML	AML		
MRVN	comp=E,938µm,1.0s			AML	AML		
MYKA	**Terra Mystica** comp=E,62nm,0.6s,SNR=61	**3.13**	**360**	*i* Pn	**Pn**	**03 08 15.1**	**+0.7**
MYKA	comp=E,122nm,0.8s			Sg	**Sg**	**03 09 06.2**	**+0.3**
FVI	**Forni Avoltri** comp=N,686µm,0.8s	**3.16**	**349**	AML	AML		
FVI	comp=E,448µm,0.8s			AML	AML		
FVI	comp=N,686µm,0.8s			AML	AML		
FVI	comp=E,448µm,0.8s			AML	AML		
FVI	comp=N,686µm,0.8s			AML	AML		
FVI	comp=E,448µm,0.8s			AML	AML		
LEOD	**Capriano del C**	**3.21**	**309**	P	**Pg**	**03 08 28.1**	**+1.3**
CDRU	**Civita di Ruta** comp=N,418µm,1.5s	**3.25**	**157**	AML	AML		
CDRU	comp=E,562µm,1.6s			AML	AML		
CDRU	comp=N,418µm,1.5s			AML	AML		
CDRU	comp=E,562µm,1.6s			AML	AML		
CDRU	comp=N,418µm,1.5s			AML	AML		
CDRU	comp=E,562µm,1.6s			AML	AML		
KALN	**Kalnik**	**3.29**	**36**	*i* Pn	**Pn**	**03 08 16.5**	**-0.1**
BOB	**Bobbio (Coli)**	**3.29**	**294**	⇓*i*Pn	**Pn**	**03 08 19.2**	**+2.5**
BOB	**Bobbio (Coli)** comp=E,484µm,1.1s	**3.29**	**294**	AML	AML		
BOB	comp=N,386µm,1.6s			AML	AML		
BOB	comp=E,543µm,1.1s			AML	AML		
BOB	comp=N,384µm,1.6s			AML	AML		
BOB	comp=E,543µm,1.1s			AML	AML		
BOB	comp=N,384µm,1.6s			AML	AML		
BOB	comp=E,484µm,1.1s			AML	AML		
BOB	comp=N,386µm,1.6s			AML	AML		
BOB	comp=E,543µm,1.1s			AML	AML		
BOB	comp=N,384µm,1.6s			AML	AML		
BOB	comp=E,484µm,1.1s			AML	AML		
BOB	comp=N,386µm,1.6s			AML	AML		
SOKA	**Soboth** comp=N,4.5nm,0.3s,SNR=10.0	**3.32**	**16**	*e*Pn	**Pn**	**03 08 17.6**	**+0.6**
SOKA	comp=N,130nm,0.8s			Sg	**Sg**	**03 09 11.4**	**-0.6**
GORR	**Gorreto** comp=N,224µm,1.4s	**3.34**	**291**	AML	AML		
GORR	comp=E,249µm,0.8s			AML	AML		
GORR	comp=N,224µm,1.4s			AML	AML		
GORR	comp=E,249µm,0.8s			AML	AML		
GORR	comp=N,224µm,1.4s			AML	AML		
GORR	comp=E,249µm,0.8s			AML	AML		
ABTA	**Abfaltersbach** comp=E,58nm,0.4s,SNR=82	**3.35**	**346**	*e*Pn	**Pn**	**03 08 18.3**	**+0.9**
ABTA	comp=E,143nm,0.6s			Sn	**Sn**	**03 08 57.6**	**+0.5**
BAI	**Bari**	**3.37**	**134**	⇓*i*Pn	**Pn**	**03 08 16.6**	**-1.1**
BAI				Sn	**Sg**	**03 09 18.8**	**+5.0**
KOSI	**Kohlern**	**3.38**	**332**	⇑*i*Pn	**Pn**	**03 08 18.4**	**+0.4**
KOSI	**Kohlern**	**3.38**	**332**	P	**Pn**	**03 08 18.9**	**+0.9**
KOSI	comp=E,1265µm,1.1s			AML	AML		
KOSI	comp=N,822µm,1.2s			AML	AML		
KOSI	comp=E,1265µm,1.1s			AML	AML		
KOSI	comp=N,822µm,1.2s			AML	AML		
KOSI	comp=E,1265µm,1.1s			AML	AML		
KOSI	comp=N,822µm,1.2s			AML	AML		
DBRK	**Dubrovnik**	**3.38**	**103**	*e*Pn	**Pn**	**03 08 16.7**	**-1.1**
AMUR	**Altamura**	**3.39**	**139**	P	**Pn**	**03 08 16.5**	**-1.4**
AMUR	comp=E,938µm,1.0s			AML	AML		
AMUR	comp=N,822µm,0.6s			AML	AML		
AMUR	comp=N,822µm,0.6s			AML	AML		
AMUR	comp=E,938µm,1.0s			AML	AML		
AMUR	comp=N,822µm,0.6s			AML	AML		
AMUR	comp=E,938µm,1.0s			AML	AML		
MABI	**Malga Bissina**	**3.40**	**320**	⇑*i*Pn	**Pn**	**03 08 19.2**	**+0.9**
MABI	**Malga Bissina**	**3.40**	**320**	P	**Pn**	**03 08 19.1**	**+0.9**
MABI	comp=E,209µm,0.8s			AML	AML		
MABI	comp=N,240µm,0.6s			AML	AML		
MABI	comp=E,209µm,0.8s			AML	AML		
MABI	comp=N,240µm,0.6s			AML	AML		
MABI	comp=E,209µm,0.8s			AML	AML		
MABI	comp=N,240µm,0.6s			AML	AML		
CMPR	**Campora** comp=E,690µm,0.7s	**3.41**	**159**	AML	AML		
CMPR	comp=E,690µm,0.7s			AML	AML		
CMPR	comp=N,402µm,1.0s			AML	AML		
CMPR	comp=N,402µm,1.0s			AML	AML		
CMPR	comp=N,402µm,1.0s			AML	AML		
CMPR	comp=E,690µm,0.7s			AML	AML		
BOSI	**Bolzano** comp=N,2555µm,1.2s	**3.43**	**332**	AML	AML		
BOSI	comp=E,2515µm,0.8s			AML	AML		
BOSI	comp=N,2555µm,1.2s			AML	AML		
BOSI	comp=E,2515µm,0.8s			AML	AML		
BOSI	comp=N,2555µm,1.2s			AML	AML		
BOSI	comp=E,2515µm,0.8s			AML	AML		
SLCN	**Sala Consilina** comp=N,910µm,1.4s	**3.44**	**154**	AML	AML		
SLCN	comp=E,1086µm,0.9s			AML	AML		
SLCN	comp=N,887µm,1.4s			AML	AML		
SLCN	comp=E,1210µm,0.9s			AML	AML		
SLCN	comp=N,910µm,1.4s			AML	AML		
SLCN	comp=N,910µm,1.4s			AML	AML		
SLCN	comp=E,1210µm,0.9s			AML	AML		
SLCN				AML	AML		

	comp=E,1086µm,0.9s						
SLCN				AML	AML		
	comp=N,887µm,1.4s						
SLCN				AML	AML		
	comp=E,1086µm,0.9s						
SLCN				AML	AML		
	comp=E,1210µm,0.9s						
SLCN				AML	AML		
	comp=N,887µm,1.4s						
APPI	**Appiano**	**3.44**	**331**	P	**Pn**	**03 08 19.6**	**+0.8**
APPI				AML	AML		
	comp=E,755µm,0.8s						
APPI				AML	AML		
	comp=N,615µm,0.6s						
APPI				AML	AML		
	comp=N,615µm,0.6s						
APPI				AML	AML		
	comp=E,755µm,0.8s						
APPI				AML	AML		
	comp=N,615µm,0.6s						
APPI				AML	AML		
	comp=E,755µm,0.8s						
KOGS	**Kog**	**3.47**	**31**	AML	AML		
	comp=N,1520µm,1.2s						
KOGS				AML	AML		
	comp=E,1815µm,0.9s						
KOGS				AML	AML		
	comp=N,1520µm,1.2s						
KOGS				AML	AML		
	comp=N,1520µm,1.2s						
KOGS				AML	AML		
	comp=E,1815µm,0.9s						
KOGS				AML	AML		
	comp=E,1815µm,0.9s						
SG1	**Sgolgore (BA)**	**3.47**	**139**	⇑*i*Pn	**Pn**	**03 08 17.8**	**-1.3**
SG1				Sn	**Sg**	**03 09 23.6**	**+6.6**
TREB	**Trebinje**	**3.51**	**101**	*e*Pn	**Pn**	**03 08 19.7**	**0.0**
TREB				*e*Sn	**Sn**	**03 09 01.3**	**+0.2**
TREB	**Trebinje**	**3.51**	**101**	*i* Pn	**Pn**	**03 08 19.5**	**-0.2**
MIGL	**Miglionico**	**3.56**	**144**	AML	AML		
	comp=E,4175µm,0.8s						
MIGL				AML	AML		
	comp=E,4175µm,0.8s						
MIGL				AML	AML		
	comp=N,5705µm,1.1s						
MIGL				AML	AML		
	comp=N,5705µm,1.1s						
MIGL				AML	AML		
	comp=E,4175µm,0.8s						
MIGL				AML	AML		
	comp=N,5705µm,1.1s						
KBA	**Koelnbreinsper**	**3.58**	**356**	*e*Pn	**Pn**	**03 08 21.5**	**+0.7**
	comp=N,15nm,0.3s,SNR=33						
KBA				Pg	**Pg**	**03 08 35.6**	**+1.6**
	comp=N,55nm,0.6s						
KBA				Sn	**Sn**	**03 09 04.5**	**+1.5**
	comp=N,57nm,0.5s						
KBA	**Koelnbreinsper**	**3.58**	**356**	P	**Pn**	**03 08 21.9**	**+1.1**
BRY	**Bratogost**	**3.61**	**98**	⇓*i*Pn	**Pn**	**03 08 21.8**	**+0.7**
BRY				*e*Sn	**Sn**	**03 09 04.7**	**+1.1**
BRY	**Bratogost**	**3.61**	**98**	*i* Pn	**Pn**	**03 08 21.6**	**+0.5**
RISI	**Rein**	**3.62**	**342**	⇑*i*Pn	**Pn**	**03 08 22.9**	**+1.6**
RISI	**Rein**	**3.62**	**342**	AML	AML		
	comp=N,725µm,1.1s						
RISI				AML	AML		
	comp=E,794µm,1.3s						
RISI				AML	AML		
	comp=N,725µm,1.1s						
RISI				AML	AML		
	comp=E,794µm,1.3s						
RISI				AML	AML		
	comp=E,794µm,1.3s						
RISI				AML	AML		
	comp=N,725µm,1.1s						
MDI	**Monti di Nese**	**3.63**	**310**	⇑*i*Pn	**Pn**	**03 08 21.9**	**+0.5**
MDI	**Monti di Nese**	**3.63**	**310**	P	**Pn**	**03 08 21.8**	**+0.5**
MDI				AML	AML		
	comp=E,212µm,1.3s						
MDI				AML	AML		
	comp=N,300µm,1.0s						
MDI				AML	AML		
	comp=N,300µm,1.0s						
MDI				AML	AML		
	comp=E,212µm,1.3s						
MDI				AML	AML		
	comp=N,300µm,1.0s						
MDI				AML	AML		
	comp=E,212µm,1.3s						
ABSI	**Aberstueckl**	**3.63**	**334**	⇓*i*Pn	**Pn**	**03 08 22.4**	**+1.0**
ABSI	**Aberstueckl**	**3.63**	**334**	AML	AML		
	comp=E,1735µm,0.7s						
ABSI				AML	AML		
	comp=E,1735µm,0.7s						
ABSI				AML	AML		
	comp=N,1515µm,0.6s						
ABSI				AML	AML		
	comp=N,1515µm,0.6s						
ABSI				AML	AML		
	comp=E,1735µm,0.7s						
ABSI				AML	AML		
	comp=N,1515µm,0.6s						
MATE	**Matera**	**3.64**	**141**	⇓*i*P	**Pn**	**03 08 19.2**	**-2.1**
MATE	**Matera**	**3.64**	**141**	S	**Pb**	**03 08 32.4**	**+2.9**
BULG	**Bulgheria - Ca**	**3.65**	**159**	P	**Pn**	**03 08 21.4**	**-0.2**
BULG				AML	AML		
	comp=E,550µm,0.8s						
BULG				AML	AML		
	comp=N,848µm,0.6s						
BULG				AML	AML		
	comp=N,848µm,0.6s						
BULG				AML	AML		
	comp=E,550µm,0.8s						
BULG				AML	AML		
	comp=N,848µm,0.6s						
BULG				AML	AML		
	comp=E,550µm,0.8s						
HCY	**Herceg Novi**	**3.69**	**105**	⇓*i*Pn	**Pn**	**03 08 22.2**	**+0.1**
HCY				*e*Sn	**Sn**	**03 09 06.6**	**+1.2**
HCY	**Herceg Novi**	**3.69**	**105**	*i* Pn	**Pn**	**03 08 21.7**	**-0.4**
BEHE	**Becsehely**	**3.69**	**35**	*e*Pn	**Pb**	**03 08 26.1**	**-4.4**
BEHE	**Becsehely**	**3.69**	**35**	*e*Pn	**Pb**	**03 08 32.1**	**+1.6**
BEHE				Sn	**Sg**	**03 09 20.0**	**-4.0**
SIRI	**Monte Sirino -**	**3.70**	**153**	AML	AML		
	comp=E,634µm,1.6s						
SIRI				AML	AML		
	comp=E,634µm,1.6s						
SIRI				AML	AML		
	comp=N,542µm,1.2s						
SIRI				AML	AML		
	comp=E,638µm,1.5s						
SIRI				AML	AML		
	comp=N,568µm,1.1s						
SIRI				AML	AML		
	comp=N,542µm,1.2s						
SIRI				AML	AML		
	comp=E,638µm,1.5s						
SIRI				AML	AML		
	comp=N,568µm,1.1s						
SIRI				AML	AML		
	comp=N,568µm,1.1s						
SIRI				AML	AML		
	comp=E,634µm,1.6s						
SIRI				AML	AML		
	comp=E,638µm,1.5s						
SIRI				AML	AML		
	comp=N,542µm,1.2s						
NOCI	**Noci**	**3.70**	**136**	P	**Pn**	**03 08 20.9**	**-1.4**
NOCI				AML	AML		
	comp=E,786µm,0.8s						
NOCI				AML	AML		
	comp=N,983µm,0.7s						
NOCI				AML	AML		
	comp=N,983µm,0.7s						
NOCI				AML	AML		
	comp=E,786µm,0.8s						
NOCI				AML	AML		
	comp=N,983µm,0.7s						
NOCI				AML	AML		
	comp=E,786µm,0.8s						
ROSI	**Rosskopf**	**3.78**	**336**	⇑*i*Pn	**Pn**	**03 08 24.8**	**+1.3**
ROSI	**Rosskopf**	**3.78**	**336**	AML	AML		
	comp=N,883µm,0.7s						
ROSI				AML	AML		
	comp=E,890µm,1.0s						
ROSI				AML	AML		
	comp=E,890µm,1.0s						
ROSI				AML	AML		
	comp=N,883µm,0.7s						
ROSI				AML	AML		
	comp=E,890µm,1.0s						
ROSI				AML	AML		
	comp=N,883µm,0.7s						
BRMO	**Bormio**	**3.78**	**323**	⇓*i*Pn	**Pn**	**03 08 25.6**	**+2.1**
BRMO	**Bormio**	**3.78**	**323**	AML	AML		
	comp=E,210µm,0.9s						
BRMO				AML	AML		
	comp=E,210µm,0.9s						
BRMO				AML	AML		
	comp=N,249µm,0.7s						
BRMO				AML	AML		
	comp=N,249µm,0.7s						
BRMO				AML	AML		
	comp=E,210µm,0.9s						
BRMO				AML	AML		
	comp=N,249µm,0.7s						
MOSI	**Grossmontoni**	**3.82**	**326**	⇓*i*Pn	**Pn**	**03 08 26.2**	**+2.1**
MOSI	**Grossmontoni**	**3.82**	**326**	P	**Pn**	**03 08 26.3**	**+2.3**
MOSI				AML	AML		
	comp=E,1255µm,1.0s						
MOSI				AML	AML		
	comp=N,1780µm,0.8s						
MOSI				AML	AML		
	comp=E,1255µm,1.0s						
MOSI				AML	AML		
	comp=N,1780µm,0.8s						
MOSI				AML	AML		
	comp=E,1255µm,1.0s						
MOSI				AML	AML		
	comp=N,1780µm,0.8s						
UPM	**Unac-Piva**	**3.83**	**93**	⇓*i*Pn	**Pn**	**03 08 25.1**	**+1.0**
UPM				*e*Sn	**Sn**	**03 09 09.6**	**+0.5**
UPM	**Unac-Piva**	**3.83**	**93**	*e*Pn	**Pn**	**03 08 25.3**	**+1.2**
FASA	**Fasano**	**3.83**	**133**	⇓*i*Pn	**Pn**	**03 08 23.1**	**-0.9**
MASS	**Massafra**	**3.86**	**137**	⇑*i*Pn	**Pn**	**03 08 23.1**	**-1.3**
HAPS	**Han Pijesak,Bl**	**3.87**	**80**	*e*Pn	**Pn**	**03 08 24.6**	**0.0**
HAPS	**Han Pijesak,Bl**	**3.87**	**80**	*e*Pn	**Pn**	**03 08 24.1**	**-0.5**
BERNI	**Berninapass**	**3.90**	**320**	⇓*i*Pn	**Pn**	**03 08 26.6**	**+1.4**
NKME	**Niksic**	**3.93**	**99**	⇑*i*Pn	**Pn**	**03 08 25.6**	**+0.1**
NKME				*e*Sn	**Sn**	**03 09 12.3**	**+0.8**
FUORN	**Ofenpass-Fuorn**	**3.94**	**323**	*e*Pn	**Pn**	**03 08 27.4**	**+1.6**
FUORN	**Ofenpass-Fuorn**	**3.94**	**323**	⇓*i*Pn	**Pn**	**03 08 27.7**	**+1.9**
NKY	**Niksic**	**3.95**	**98**	⇓*i*Pn	**Pn**	**03 08 26.7**	**+0.9**
NKY				*e*Sn	**Sn**	**03 09 12.9**	**+0.9**
CEME	**Cevo**	**3.96**	**102**	⇑*i*Pn	**Pn**	**03 08 25.9**	**0.0**
CEME				*e*Sn	**Sn**	**03 09 12.4**	**+0.2**
ARSA	**Arzberg**	**3.97**	**19**	*e*Pn	**Pn**	**03 08 26.1**	**+0.2**
ARSA				*e*Sn	**Sn**	**03 09 11.1**	**-1.2**
ARSA	**Arzberg**	**3.97**	**19**	*e*Pn	**Pn**	**03 08 26.1**	**+0.2**
	comp=N,6.0nm,0.3s,SNR=11						
ARSA				*e*Sn	**Sn**	**03 09 11.6**	**-0.7**
	comp=N,9.8nm,0.3s						
TAR1	**Taranto**	**4.01**	**137**	⇑*i*Pn	**Pn**	**03 08 25.3**	**-1.2**
TAR1				Sn	**Sg**	**03 09 34.6**	**+0.4**
CGL1	**Ceglie Messapi**	**4.01**	**134**	⇑*i*Pn	**Pn**	**03 08 25.1**	**-1.4**
CGL1				Sn	**Sg**	**03 09 33.4**	**-0.9**
BUM	**Brajici-Budva**	**4.02**	**106**	⇑*i*Pn	**Pn**	**03 08 26.9**	**+0.2**
BUM				*e*Sn	**Sn**	**03 09 14.4**	**+0.8**
WTTA	**Wattenberg**	**4.03**	**340**	*e*Pn	**Pn**	**03 08 28.6**	**+1.8**
	comp=N,4.7nm,0.1s,SNR=30						
WTTA				Sn	**Sn**	**03 09 16.7**	**+2.8**
	comp=N,46nm,0.3s						
WTTA	**Wattenberg**	**4.03**	**340**	⇑*i*Pn	**Pn**	**03 08 28.7**	**+1.9**
WTTA	**Wattenberg**	**4.03**	**340**	P	**Pn**	**03 08 28.7**	**+1.9**
WTTA				AML	AML		
	comp=E,530µm,1.2s						
WTTA				AML	AML		
	comp=N,446µm,1.0s						
WTTA				AML	AML		
	comp=N,446µm,1.0s						
WTTA				AML	AML		
	comp=E,530µm,1.2s						
WTTA				AML	AML		
	comp=N,446µm,1.0s						
WTTA				AML	AML		
	comp=E,530µm,1.2s						
ROTM	**Rocchetta Tana**	**4.06**	**291**	P	**Pn**	**03 08 30.9**	**+3.8**
ROTM				AML	AML		
	comp=E,651µm,1.2s						
ROTM				AML	AML		
	comp=N,536µm,0.9s						
ROTM				AML	AML		
	comp=E,651µm,1.2s						
ROTM				AML	AML		
	comp=N,536µm,0.9s						
ROTM				AML	AML		
	comp=E,651µm,1.2s						
ROTM				AML	AML		
	comp=N,536µm,0.9s						
FETA	**Feichten**	**4.09**	**330**	*e*Pn	**Pn**	**03 08 29.1**	**+1.4**
	comp=N,40nm,0.5s,SNR=71						
MUGIO	**Muggio**	**4.09**	**308**	⇑*i*Pn	**Pn**	**03 08 27.7**	**0.0**
SQTA	**Sankt Quirin**	**4.10**	**336**	*e*Pn	**Pn**	**03 08 29.6**	**+1.8**
	comp=N,57nm,0.4s,SNR=85						
SQTA				Sn	**Sn**	**03 09 18.8**	**+3.0**
	comp=N,77nm,0.4s						
WATA	**Walderalm**	**4.11**	**340**	*e*Pn	**Pn**	**03 08 30.1**	**+2.2**
	comp=N,26nm,0.3s,SNR=40						
SALB	**San Lorenzo Be**	**4.14**	**150**	P	**Pn**	**03 08 28.1**	**-0.2**
SALB				AML	AML		
	comp=E,363µm,0.6s						
SALB				AML	AML		
	comp=N,263µm,1.0s						
SALB				AML	AML		
	comp=N,263µm,1.0s						
SALB				AML	AML		
	comp=E,363µm,0.6s						
SALB				AML	AML		
	comp=N,263µm,1.0s						
SALB				AML	AML		
	comp=E,363µm,0.6s						
RUDO	**Rudo**	**4.14**	**86**	*e*Pn	**Pn**	**03 08 28.3**	**0.0**
PLE	**Pljevlja**	**4.17**	**90**	⇑*i*Pn	**Pn**	**03 08 29.6**	**+0.8**
PLE				*e*Sn	**Sn**	**03 09 17.7**	**+0.3**
BBLS	**Lazići**	**4.17**	**83**	*e*Pn	**Pn**	**03 08 29.4**	**+0.6**
BBLS	**Lazići**	**4.17**	**83**	*i* Pn	**Pn**	**03 08 28.5**	**-0.3**
IMI	**Imperia**	**4.21**	**278**	P	**Pn**	**03 08 31.6**	**+2.3**
IMI				AML	AML		
	comp=E,58µm,1.4s						
IMI				AML	AML		
	comp=N,69µm,1.2s						
IMI				AML	AML		
	comp=N,69µm,1.2s						
IMI				AML	AML		
	comp=E,58µm,1.4s						
IMI				AML	AML		
	comp=N,69µm,1.2s						
IMI				AML	AML		
	comp=E,58µm,1.4s						
VARE	**Varese**	**4.22**	**306**	P	**Pn**	**03 08 30.8**	**+1.3**
VARE				AML	AML		
	comp=E,213µm,1.0s						
VARE				AML	AML		
	comp=N,189µm,0.7s						
VARE				AML	AML		
	comp=N,189µm,0.7s						
VARE				AML	AML		
	comp=E,213µm,1.0s						
VARE				AML	AML		
	comp=N,189µm,0.7s						
VARE				AML	AML		
	comp=E,213µm,1.0s						
VDL	**Val di Lei**	**4.22**	**316**	⇑*i*Pn	**Pn**	**03 08 31.6**	**+2.0**
PDG	**Podgorica**	**4.24**	**103**	*e*Pn	**Pn**	**03 08 29.5**	**0.0**
PDG				*e*Sn	**Sn**	**03 09 17.5**	**-1.3**
PDG	**Podgorica**	**4.24**	**103**	⇓*i*P	**Pn**	**03 08 29.6**	**0.0**
PDG	**Podgorica**	**4.24**	**103**	*i* Pn	**Pn**	**03 08 29.5**	**0.0**
PDG	**Podgorica**	**4.24**	**103**	P	**Pn**	**03 08 30.3**	**+0.7**
PDG				AML	AML		
	comp=E,400µm,1.0s						
PDG				AML	AML		
	comp=N,404µm,0.7s						
PDG				AML	AML		
	comp=E,306µm,0.9s						
PDG				AML	AML		
	comp=N,313µm,0.7s						
PDG				AML	AML		
	comp=N,404µm,0.7s						
PDG				AML	AML		
	comp=N,313µm,0.7s						
PDG				AML	AML		
	comp=E,306µm,0.9s						
PDG				AML	AML		
	comp=E,400µm,1.0s						
PDG				AML	AML		
	comp=N,404µm,0.7s						
PDG				AML	AML		
	comp=N,313µm,0.7s						
PDG				AML	AML		
	comp=E,306µm,0.9s						
PDG				AML	AML		
	comp=E,400µm,1.0s						
TTG	**Podgorica**	**4.24**	**103**	⇑*i*Pn	**Pn**	**03 08 29.6**	**0.0**
TTG				*e*Sn	**Sn**	**03 09 20.6**	**+1.8**
TTG	**Podgorica**	**4.24**	**103**	*e*Pn	**Pn**	**03 08 29.5**	**0.0**
TTG	**Podgorica**	**4.24**	**103**	*e*P	**Pn**	**03 08 29.5**	**0.0**
DAVOX	**Davos/Dischmat**	**4.24**	**322**	Pn	**Pn**	**03 08 31.0**	**+1.3**
	comp=E,9.3nm,0.3s,baz=159,slow=17,SNR=107						
DAVOX				Sn	**Sn**	**03 09 22.6**	**+3.5**
	comp=E,5.0nm,0.3s,baz=335,slow=20,SNR=3.3						
DAVOX				LR	LR	03 10 02.4	
	comp=E,62nm,18.8s,baz=137,slow=38						
DAVOX	**Davos/Dischmat**	**4.24**	**322**	⇑*i*Pn	**Pn**	**03 08 32.2**	**+2.4**
DAVOX	**Davos/Dischmat**	**4.24**	**322**	P	**Pn**	**03 08 32.7**	**+2.9**
MOTA	**Moosalm**	**4.25**	**336**	*i* Pn	**Pn**	**03 08 31.8**	**+1.9**
	comp=E,6.5nm,0.3s,SNR=68						
DRME	**Dracevica, Mon**	**4.26**	**106**	⇑*i*Pn	**Pn**	**03 08 30.0**	**0.0**
DRME				*e*Sn	**Sn**	**03 09 20.4**	**+0.9**
DRME	**Dracevica, Mon**	**4.26**	**106**	*i* Pn	**Pn**	**03 08 29.9**	**0.0**
TUE	**Stuetta**	**4.27**	**316**	*e*Pn	**Pn**	**03 08 31.6**	**+1.4**
TUE	**Stuetta**	**4.27**	**316**	⇑*i*Pn	**Pn**	**03 08 31.9**	**+1.7**
TUE	**Stuetta**	**4.27**	**316**	P	**Pn**	**03 08 31.9**	**+1.7**
TUE				AML	AML		
	comp=E,154µm,1.2s						
TUE				AML	AML		
	comp=N,138µm,0.9s						
TUE				AML	AML		
	comp=E,190µm,1.2s						
TUE				AML	AML		
	comp=N,174µm,0.9s						
TUE				AML	AML		
	comp=N,138µm,0.9s						
TUE				AML	AML		
	comp=E,154µm,1.2s						
TUE				AML	AML		
	comp=E,190µm,1.2s						
TUE				AML	AML		
	comp=N,174µm,0.9s						
TUE				AML	AML		
	comp=N,174µm,0.9s						
TUE				AML	AML		
	comp=E,154µm,1.2s						
TUE				AML	AML		
	comp=E,190µm,1.2s						
TUE				AML	AML		
	comp=N,138µm,0.9s						
MGRO	**Montegrosso**	**4.28**	**279**	P	**Pn**	**03 08 32.6**	**+2.3**
MGRO				AML	AML		
	comp=E,76µm,1.0s						
MGRO				AML	AML		
	comp=N,92µm,1.6s						
MGRO				AML	AML		
	comp=N,92µm,1.6s						
MGRO				AML	AML		
	comp=E,76µm,1.0s						
MGRO				AML	AML		
	comp=N,92µm,1.6s						
MGRO				AML	AML		
	comp=E,76µm,1.0s						
KOME	**Kolasin**	**4.32**	**97**	⇑*i*Pn	**Pn**	**03 08 31.9**	**+1.0**
KOME				*e*Sn	**Sn**	**03 09 21.6**	**+0.5**
NEGI	**Seborga**	**4.34**	**277**	P	**Pn**	**03 08 33.8**	**+2.7**
TEKS	**Tekeris**	**4.35**	**74**	*e*Pn	**Pn**	**03 08 32.0**	**+0.8**
TEKS	**Tekeris**	**4.35**	**74**	*e*Pn	**Pn**	**03 08 29.8**	**-1.4**
MOA	**Molln**	**4.37**	**5**	*e*Pn	**Pn**	**03 08 32.3**	**+0.9**
MOA				*e*Sn	**Sn**	**03 09 22.1**	**0.0**
MOA	**Molln**	**4.37**	**5**	*e*Pn	**Pn**	**03 08 32.1**	**+0.7**
	comp=E,8.6nm,0.2s,SNR=24						
MOA				*e*Sn	**Sn**	**03 09 23.7**	**+1.5**
	comp=E,95nm,0.7s						
ULC	**Ulcinj**	**4.38**	**109**	⇑*i*Pn	**Pn**	**03 08 31.2**	**-0.4**
ULC				*e*Sn	**Sn**	**03 09 23.7**	**+1.2**
MONC	**Moncucco Torin**	**4.41**	**293**	⇑*i*P*	**Pn**	**03 08 34.7**	**+2.7**
MONC	**Moncucco Torin**	**4.41**	**293**	P	**Pn**	**03 08 35.4**	**+3.4**
MONC				AML	AML		
	comp=E,198µm,1.6s						
MONC				AML	AML		
	comp=N,236µm,1.0s						
MONC				AML	AML		
	comp=E,198µm,1.6s						
MONC				AML	AML		
	comp=N,236µm,1.0s						
MONC				AML	AML		
	comp=E,198µm,1.6s						
MONC				AML	AML		
	comp=N,236µm,1.0s						
MORH	**Mrgy, Hungar**	**4.46**	**51**	*e*Pn	**Pn**	**03 08 34.1**	**+1.5**
MORH	**Mrgy, Hungar**	**4.46**	**51**	*e*Pn	**Pn**	**03 08 33.0**	**+0.5**
MORH				*e*Pg	**Pg**	**03 08 49.0**	**-1.7**
MORH				Sn	**Sn**	**03 09 24.1**	**-0.1**
MORH				*e*Sg	**Sg**	**03 09 46.0**	**-2.3**
SAOF	**Saorge**	**4.46**	**278**	P	**Pn**	**03 08 34.6**	**+2.0**
RETA	**Reutte**	**4.48**	**334**	*i* Pn	**Pn**	**03 08 34.7**	**+1.7**
	comp=N,3.1nm,0.2s,SNR=60						
RETA				Sn	**Sn**	**03 09 28.7**	**+3.8**
	comp=N,24nm,0.5s						
TIH	**Tihany**	**4.52**	**40**	*e*Pn	**Pn**	**03 08 34.0**	**+0.6**
TIH				*e*Pg	**Pg**	**03 08 54.0**	**+2.1**
TIH				Sn	**Sn**	**03 09 28.1**	**+2.2**
SBF	**Sospel**	**4.54**	**277**	*e*Pn	**Pn**	**03 08 34.6**	**+0.8**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**03 09 25.4**	**-1.0**
	comp=N,46nm,0.6s,SNR=1.0						
MON	**Monaco**	**4.54**	**275**	P	**Pn**	**03 08 36.0**	**+2.2**
ESCA	**l'Escarene**	**4.58**	**276**	P	**Pn**	**03 08 36.5**	**+2.2**
REVF	**Revere**	**4.58**	**275**	P	**Pn**	**03 08 36.4**	**+2.0**
IVA	**Berane**	**4.59**	**96**	⇑*i*Pn	**Pn**	**03 08 34.8**	**+0.2**
IVA				*e*Sn	**Sn**	**03 09 27.8**	**0.0**
SJES	**Sjenica**	**4.60**	**91**	*e*Pn	**Pn**	**03 08 34.7**	**0.0**
DIVS	**Divibare**	**4.61**	**80**	*e*Pn	**Pn**	**03 08 35.2**	**+0.4**
DIVS	**Divibare**	**4.61**	**80**	*i* Pn	**Pn**	**03 08 34.1**	**-0.7**
FUSIO	**Fusio**	**4.62**	**311**	⇑*i*Pn	**Pn**	**03 08 35.2**	**+0.2**
FUSIO	**Fusio**	**4.62**	**311**	P	**Pn**	**03 08 35.8**	**+0.8**
FUSIO				AML	AML		
	comp=E,169µm,1.6s						
FUSIO				AML	AML		
	comp=N,137µm,1.1s						
FUSIO				AML	AML		
	comp=E,169µm,1.6s						
FUSIO				AML	AML		
	comp=N,137µm,1.1s						
FUSIO				AML	AML		
	comp=E,169µm,1.6s						
FUSIO				AML	AML		
	comp=N,137µm,1.1s						
PANIX	**Pigniu (Panix)**	**4.63**	**317**	⇓*i*Pn	**Pn**	**03 08 37.9**	**+2.8**
DAVA	**Damuels**	**4.63**	**326**	*e*Pn	**Pn**	**03 08 37.1**	**+1.9**
	comp=N,9.8nm,0.2s,SNR=26						
DAVA				*e*Sn	**Sn**	**03 09 30.9**	**+2.1**
	comp=N,49nm,0.4s						
DAVA	**Damuels**	**4.63**	**326**	⇓*i*Pn	**Pn**	**03 08 37.5**	**+2.3**
SOP	**Sopron**	**4.65**	**25**	*e*Pn	**Pn**	**03 08 37.1**	**+1.9**
SOP				Sn	**Sn**	**03 09 29.1**	**+0.1**
SOP				*e*Sg	**Sg**	**03 09 57.1**	**+2.6**
PLONS	**Plons/SG**	**4.66**	**321**	⇓*i*Pn	**Pn**	**03 08 37.9**	**+2.4**
PLONS	**Plons/SG**	**4.66**	**321**	P	**Pn**	**03 08 38.7**	**+3.1**
PLONS				AML	AML		
	comp=E,131µm,1.2s						
PLONS				AML	AML		
	comp=N,156µm,1.4s						
PLONS				AML	AML		
	comp=E,131µm,1.2s						
PLONS				AML	AML		
	comp=N,156µm,1.4s						
PLONS				AML	AML		
	comp=E,131µm,1.2s						
PLONS				AML	AML		
	comp=N,156µm,1.4s						
CONA	**Conrad Observa**	**4.68**	**18**	*e*Pn	**Pn**	**03 08 36.2**	**+0.4**
	comp=N,13nm,0.4s,SNR=20						
CONA				*e*Sn	**Sn**	**03 09 30.9**	**+0.9**
	comp=N,9.2nm,0.3s						
TRAV	**Traversella**	**4.69**	**297**	⇓*i*Pn	**Pn**	**03 08 35.2**	**-0.7**
LLS	**Linth-Limmern**	**4.70**	**317**	⇓*i*Pn	**Pn**	**03 08 38.5**	**+2.4**
PVY	**Plav**	**4.70**	**99**	⇑*i*Pn	**Pn**	**03 08 36.9**	**+0.9**
PVY				*e*Sn	**Sn**	**03 09 30.8**	**+0.4**
FRGS	**Fruska Gora**	**4.70**	**67**	*e*Pn	**Pn**	**03 08 35.7**	**-0.3**
FRGS	**Fruska Gora**	**4.70**	**67**	*i* Pn	**Pn**	**03 08 35.2**	**-0.8**
IVAS	**Ivanjica**	**4.71**	**87**	*e*Pn	**Pn**	**03 08 35.8**	**-0.4**

IVAS				eSn	Sn	03 09 29.1	-1.6
EILF	Villa Eilenroc	4.76	273	P	Pn	03 08 39.2	+2.5
MMK	Mattmark	4.80	304	⇑iPn	Pn	03 08 37.2	-0.3
LIENZ	Kamor/St.Gall	4.80	324	⇑iPn	Pn	03 08 39.7	+2.2
PUK	Puka	4.81	106	P	Pn	03 08 37.9	+0.5
ISO	Isola	4.84	280	P	Pn	03 08 40.6	+2.7
CIRO	Champorcher	4.84	298	⇓iPn	Pn	03 08 37.3	-0.8
SIMPL	Simplonpass	4.86	306	⇓iPn	Pn	03 08 38.5	+0.1
RSP	Reno Superiore	4.88	292	⇓iPn	Pn	03 08 37.0	-1.5
TIP	Timpagrande	4.90	151	ePn	Pn	03 08 39.5	+0.7
TIP	Timpagrande	4.90	151	⇓iP	Pn	03 08 39.8	+1.0
CALF	Calern	4.91	275	P	Pn	03 08 41.2	+2.3
FIESA	Fiescheralp	4.92	309	⇓iPn	Pn	03 08 39.6	+0.4
TRUS	Trudelj	4.92	79	ePn	Pn	03 08 39.0	0.0
EMBD	Embd, Matterta	4.96	305	⇑iPn	Pn	03 08 39.9	+0.2
SCTE	Santa Cesarea	4.96	132	P	Pn	03 08 38.4	-1.1
MUO	Muotathal	4.96	316	⇓iPn	Pn	03 08 42.1	+2.4
BNALP	Bannalp	5.01	314	⇓iPn	Pn	03 08 42.3	+2.0
BNALP	Bannalp	5.01	314	P	Pn	03 08 43.2	+2.8
CSKK	Cskako	5.03	38	ePn	Pb	03 08 51.0	-2.2
CSKK				Sn	Sn	03 09 43.1	+4.6
SURF	Saint Ours	5.04	284	P	Pn	03 08 42.2	+1.3
TIR	Tirane	5.06	113	ePn	Pn	03 08 40.4	-0.5
TIR	Tirane	5.06	113	ePn	Pn	03 08 40.4	-0.5
TIR				eSn	Sn	03 09 37.3	-2.0
TIR	Tirane	5.06	113	P	Pn	03 08 40.5	-0.5
TIR	Tirane	5.06	113	⇑iP	Pn	03 08 40.2	-0.8
TIR	Tirane	5.06	113	eP	Pn	03 08 40.4	-0.5
TIR	Tirane	5.06	113	P	Pn	03 08 40.6	-0.4
LSD	Lago del Serru	5.07	295	⇑iPn	Pn	03 08 40.5	-0.8
HASLI	Hasliberg/Brie	5.08	312	⇓iPn	Pn	03 08 43.2	+1.9
VANNI	Vissoie, Val d	5.10	304	⇓iPn	Pn	03 08 42.5	+1.0
LAUCH	Lauchernalp	5.10	307	⇓iPn	Pn	03 08 42.2	+0.5
FRF	La Foret Royal	5.11	273	ePn	Pn	03 08 42.1	+0.5
	SNR=1.0						
FRF				eSn	Sn	03 09 38.8	-1.6
	comp=N,16nm,0.5s						
MBDF	Montbardon	5.12	286	ePn	Pn	03 08 41.8	0.0
	SNR=1.0						
MBDF				eSn	Sn	03 09 38.5	-2.3
	comp=N,12nm,0.3s						
GRUS	Gruza	5.12	83	ePn	Pn	03 08 41.4	-0.3
VSL	Villasalto	5.14	220	P	Pn	03 08 44.3	+2.3
DIX	Grande Dixence	5.15	302	⇓iPn	Pn	03 08 43.6	+1.3
LKBD2	Leukerbad 2	5.15	306	⇑iPn	Pn	03 08 43.2	+0.8
LKBD	Leukerbad	5.17	306	⇑iPn	Pn	03 08 43.4	+0.9
REMY	Saint-Rhmy-en	5.20	299	P	Pn	03 08 45.0	+1.9
LMR	La Mourre	5.22	271	ePg	Pn	03 08 43.7	+0.6
LMR	La Mourre	5.22	271	ePn	Pn	03 08 44.4	+1.3
	SNR=1.0						
LMR				eSn	Sn	03 09 41.8	-1.3
	comp=N,12nm,0.8s,SNR=1.0						
OGAG	Argentiere	5.23	283	P	Pn	03 08 46.2	+2.8
BNI	Bardonecchia	5.25	290	ePn	Pn	03 08 44.4	+0.7
BNI	Bardonecchia	5.25	290	eP	Pn	03 08 44.4	+0.7
ZST	Bratislava	5.27	26	eSG	Sg	03 10 15.5	+1.0
PHP	Peshkopia	5.32	108	P	Pn	03 08 45.1	+0.6
WIMIS	Wimmis	5.32	309	⇑iPn	Pn	03 08 46.5	+1.9
LPG	La Plagne	5.34	294	ePn	Pn	03 08 44.4	-0.6
	SNR=1.0						
LPG				eSn	Sn	03 09 43.9	-2.5
	comp=N,9.0nm,0.3s						
LPG	La Plagne	5.34	294	P	Pn	03 08 44.4	-0.6
GEC2	GERESS Array S	5.34	0	ePn	Pn	03 08 44.6	-0.3
GEC2				eSn	Sn	03 09 45.0	-1.2
GEC2	GERESS Array S	5.34	0	eP	Pn	03 08 44.6	-0.3
GEC2				e		03 09 45.1	
GERES	GERESS Array B	5.34	0	Pn	Pn	03 08 44.6	-0.3
	comp=N,6.5nm,0.3s,baz=175,slow=13,SNR=125						
GERES				Sn	Sn	03 09 45.0	-1.2
	comp=N,3.2nm,0.3s,baz=179,slow=25,SNR=7.2						
GERES				Lg	Lg	03 10 12.1	
	comp=N,0.5nm,0.3s,baz=174,slow=24,SNR=3.1						
GERES				LR	LR	03 11 29.9	
	comp=N,151nm,20.4s,baz=152,slow=46						
SENIN	Lac Senin/Sane	5.35	305	ePn	Pn	03 08 45.8	+0.7
SENIN	Lac Senin/Sane	5.35	305	⇑iPn	Pn	03 08 46.8	+1.7
LPL	La Plagne	5.36	294	ePn	Pn	03 08 45.1	-0.1
	SNR=1.0						
LPL				eSn	Sn	03 09 42.9	-3.9
	comp=N,24nm,0.3s						
LPL	La Plagne	5.36	294	P	Pn	03 08 45.9	+0.7
SRO	Srobarova	5.40	35	eP	Pn	03 08 46.6	+1.1
SRO	Srobarova	5.40	35	ePN	Pn	03 08 46.6	+1.1
GRYON	Gryon	5.41	303	⇑iPn	Pn	03 08 47.9	+2.1
FLACH	Flaach	5.42	320	⇑ePn	Pn	03 08 47.5	+1.6
SELS	Selova	5.44	90	ePn	Pn	03 08 45.7	-0.4
SELS				eSn	Sn	03 09 46.9	-1.6
SALAN	Lac Salanfe	5.45	301	⇓iPn	Pn	03 08 48.6	+2.2
MODS	Modra-Piesok	5.48	26	eP	Pn	03 08 45.6	-1.1
MODS	Modra-Piesok	5.48	26	ePN	Pn	03 08 45.6	-1.1
RSL	Roselend	5.49	296	⇓iPn	Pn	03 08 48.8	+1.9
ASEAF	Site Antares,	5.54	265	P	Pn	03 08 50.0	+2.8
AIGLE	Aigle	5.55	303	⇓iPn	Pn	03 08 49.5	+1.8
GUT	Gutenstein	5.57	327	⇓ePn	Pn	03 08 48.7	+0.8
SLE	Schleitheim	5.60	321	⇓iPn	Pn	03 08 49.1	+0.8
SULZ	Cheisacher	5.61	318	⇓iPn	Pn	03 08 49.8	+1.3
KHC	Kasperske Hory	5.63	359	ePn	Pn	03 08 48.7	-0.1
KHC	Kasperske Hory	5.63	359	eP	Pn	03 08 48.8	0.0
KHC				e		03 09 52.5	
KHC				MLR	MLR		
	comp=Z,800nm,9.5s						
KHC	Kasperske Hory	5.63	359	ePN	Pn	03 08 48.8	0.0
KHC				eSN	Sn	03 09 52.5	-0.8
KHC				AMS	AMS	03 11 10.0	
	comp=Z,800nm,9.5s						
BALST	Balsthal	5.69	314	⇑iPn	Pn	03 08 50.2	+0.6
ARTF	Artigues	5.72	274	P	Pn	03 08 53.0	+3.1
ORIF	Oris-en-Rattie	5.78	287	ePn	Pn	03 08 50.5	-0.3
	SNR=1.0						
ORIF				eSn	Sn	03 09 54.1	-2.9
	comp=Z,31nm,0.7s						
ORIF	Oris-en-Rattie	5.78	287	P	Pn	03 08 52.7	+1.9
OHR	Ohrid	5.80	112	i Pn	Pn	03 08 51.2	+0.1
BSTF	la Bastide-des	5.83	276	P	Pn	03 08 54.1	+2.6
BOVS	Bovan	5.84	86	ePn	Pn	03 08 51.9	+0.3
KUBS	Kucevo	5.85	78	ePn	Pn	03 08 51.8	+0.1
KRUC	Moravsky	5.87	18	ePN	Pn	03 08 52.0	0.0
SMRF	Simiane la Rot	5.89	277	ePn	Pn	03 08 52.3	0.0
	SNR=1.0						
SMRF				eSn	Sn	03 09 56.9	-2.7
	comp=Z,20nm,0.8s						
SKO	Skopje	5.92	102	i Pn	Pn	03 08 52.9	+0.2
OG02	Monnetier-Morn	5.92	299	P	Pn	03 08 54.1	+1.3
MDVR	Moldovita	5.93	75	⇑iP	Pn	03 08 52.9	+0.1
CLTB	Caltabellotta	5.93	184	ePn	Pn	03 08 52.0	-0.9
TREC	Trest	5.93	12	eP	Pn	03 08 52.7	-0.1
TREC				e		03 09 58.3	
TREC				MLR	MLR		
	comp=Z,1μm,10.0s						
TREC	Trest	5.93	12	ePN	Pn	03 08 52.7	-0.1
TREC				eSN	Sn	03 09 58.3	-2.3
TREC				AMS	AMS	03 11 20.0	
	comp=Z,1μm,10.0s						
RUSF	Rustrel	5.95	277	P	Pn	03 08 56.0	+2.8
KEK	Kerkira	5.95	127	P	Pn	03 08 52.1	-1.0
KEK	Kerkira	5.95	127	P	Pn	03 08 52.3	-0.9
BOURR	Bourrignon	5.97	313	⇓iPn	Pn	03 08 54.4	+0.9
BARS	Barje	6.00	94	ePn	Pn	03 08 54.0	+0.2
BARS				eSn	Sn	03 09 59.6	-2.6
KIZ	Kirchzarten	6.00	320	P	Pn	03 08 54.8	+1.0
KIZ	Kirchzarten	6.00	320	⇑iPn	Pn	03 08 54.6	+0.8
JAVC	Velka Javorina	6.03	26	ePN	Pn	03 08 55.1	+0.8
VAE	Valguarnera	6.04	174	Pn	Pn	03 08 57.6	+3.1
	comp=Z,0.2nm,0.3s,baz=23,slow=13,SNR=1.7						
BZS	Buzias	6.06	67	⇑iP	Pn	03 08 55.3	+0.7
GIMEL	St. Georges /	6.06	303	⇑iPn	Pn	03 08 55.6	+0.9
OGSM	Saint Maurice	6.08	293	P	Pn	03 08 55.5	+0.6
BFO	Black Forest	6.10	324	ePn	Pn	03 08 54.5	-0.6
BFO	Black Forest	6.10	324	i P	Pn	03 08 56.5	+1.3
BFO	Black Forest	6.10	324	⇑iPn	Pn	03 08 55.9	+0.7
BRANT	Les Verrieres	6.14	307	⇓iPn	Pn	03 08 56.3	+0.6
VRAC	Vranov	6.15	18	Pn	Pn	03 08 56.6	+0.8
	comp=Z,0.8nm,0.3s,baz=195,slow=16,SNR=6.1						
VRAC				Lg	Lg	03 10 41.4	
	comp=Z,0.5nm,0.3s,baz=315,slow=12,SNR=3.4						
VRAC				LR	LR	03 11 55.0	
	comp=Z,410nm,19.0s,baz=204,slow=45						
VRAC	Vranov	6.15	18	⇑iP	Pn	03 08 56.8	+1.0
VRAC	Vranov	6.15	18	ePN	Pn	03 08 55.6	-0.2
VYHS	Vyhne	6.15	34	eP	Pn	03 08 58.1	+2.2
VYHS	Vyhne	6.15	34	ePN	Pn	03 08 58.1	+2.2
VYHS				ePG	Pg	03 09 21.9	-1.2
CHMF	Charmoille	6.20	310	P	Pn	03 08 57.0	+0.3
CHMF				S	Sn	03 10 04.1	-3.3
PSZ	Piszkesteto	6.20	42	ePn	Pn	03 08 55.1	-1.5
PSZ	Piszkesteto	6.20	42	eP	Pn	03 08 55.1	-1.5
PSZ	Piszkesteto	6.20	42	ePn	Pn	03 08 58.1	+1.4
PSZ				Sn	Sn	03 10 09.0	+1.7
CABF	La Chapelle	6.21	303	ePn	Pn	03 08 56.3	-0.4
	SNR=1.0						
CABF				eSn	Sn	03 10 03.7	-3.8
	comp=Z,16nm,0.6s,SNR=1.0						
OPP	Oppenau	6.29	325	P	Pn	03 08 58.7	+0.9
OG35	Corcelles	6.30	297	P	Pn	03 08 59.1	+1.1
OG35				S	Sn	03 10 07.2	-2.6
OG35	Corcelles	6.30	297	⇑iPn	Pn	03 08 58.6	+0.6
NEST	Nestorio	6.30	117	P	Pn	03 08 58.4	+0.3
IGT	Igoumenitsa	6.38	126	ePn	Pn	03 08 58.4	-0.6
IGT				eSn	Sn	03 10 10.3	-1.4
IGT	Igoumenitsa	6.38	126	P	Pn	03 08 58.2	-0.8
GRFO	Grafenberg	6.42	346	ePn	Pn	03 08 57.6	-1.8
GRFO	Grafenberg	6.42	346	eP	Pn	03 08 57.7	-1.8
GRA1	Grafenberg Arr	6.42	346	ePn	Pn	03 08 58.4	-1.1
GRF	Grafenberg Arr	6.42	346	eP	Pn	03 08 58.4	-1.1
HERR	Herculane	6.44	75	⇑iP	Pn	03 09 00.1	+0.3
HINF	Hinteralfeld	6.44	314	ePn	Pn	03 08 58.9	-0.9
	SNR=1.0						
HINF				eSn	Sn	03 10 08.4	-4.7
	comp=Z,64nm,0.8s,SNR=1.0						
GOPC	GO Pecny, Ondr	6.46	6	eP	Pn	03 09 00.6	+0.5
GOPC				e		03 10 11.9	
GOPC				MLR	MLR		
	comp=Z,800nm,9.9s						
GOPC	GO Pecny, Ondr	6.46	6	ePN	Pn	03 09 00.6	+0.5
GOPC				eSN	Sn	03 10 11.9	-1.7
GOPC				AMS	AMS	03 11 40.0	
	comp=Z,800nm,9.9s						
PENT	Pentalofos	6.48	118	P	Pn	03 09 00.5	0.0
PRU	Pruhonice	6.52	5	eP	Pn	03 09 01.2	+0.3
PRU				e		03 10 13.0	
PRU				MLR	MLR		
	comp=Z,800nm,9.3s						
PRU	Pruhonice	6.52	5	ePN	Pn	03 09 01.2	+0.3
PRU				eSN	Sn	03 10 13.0	-2.0
PRU				AMS	AMS	03 11 40.0	
	comp=Z,800nm,9.3s						
ZAPS	Zavoj	6.53	89	ePn	Pn	03 09 01.3	+0.1
ECH	Echery	6.55	318	ePn	Pn	03 09 01.5	+0.2
ECH	Echery	6.55	318	P	Pn	03 09 01.8	+0.5
ECH				S	Sn	03 10 14.1	-1.8
ECH	Echery	6.55	318	eP	Pn	03 09 01.5	+0.2
WLS	Welschbruch	6.59	320	P	Pn	03 09 03.0	+1.0
VIVF	Saint-Julien-l	6.61	285	ePn	Pn	03 09 02.0	-0.2
	SNR=1.0						
VIVF				eSn	Sn	03 10 14.6	-2.8
	comp=Z,1.6nm,0.3s,SNR=1.0						
JAN	Janina	6.61	123	ePn	Pn	03 09 02.3	0.0
JAN	Janina	6.61	123	P	Pn	03 09 02.3	0.0
JAN	Janina	6.61	123	eP	Pn	03 09 02.3	0.0
CDF	Champ du Feu	6.63	320	ePn	Pn	03 09 01.9	-0.6
	SNR=1.0						
CDF				eSn	Sn	03 10 13.0	-4.9
	comp=Z,8.7nm,0.4s						
KPRO	Kipourio	6.76	119	P	Pn	03 09 03.7	-0.6
SSB	Saint Sauveur	6.78	288	ePn	Pn	03 09 05.0	+0.5
SSB	Saint Sauveur	6.78	288	P	Pn	03 09 05.0	+0.5
SSB	Saint Sauveur	6.78	288	eP	Pn	03 09 05.0	+0.5
GZR	Gura Zlata	6.79	71	⇑iP	Pn	03 09 04.9	+0.3
NKC	Novy Kostel	6.79	353	eP	Pn	03 09 04.3	-0.3
NKC				e		03 10 18.9	
NKC				MLR	MLR		
	comp=Z,700nm,9.8s						
NKC	Novy Kostel	6.79	353	ePN	Pn	03 09 04.3	-0.3
NKC				eSN	Sn	03 10 18.9	-2.8
NKC				AMS	AMS	03 12 00.0	
	comp=Z,700nm,9.8s						
MORC	Moravsky Berou	6.82	22	ePn	Pn	03 09 06.0	+1.0
MORC	Moravsky Berou	6.82	22	⇑iP	Pn	03 09 06.5	+1.4
MORC	Moravsky Berou	6.82	22	ePN	Pn	03 09 06.0	+1.0
HAU	Haudompre	6.82	314	ePn	Pn	03 09 04.5	-0.6
	SNR=1.0						
HAU				eSn	Sn	03 10 17.8	-4.7
	comp=Z,42nm,0.4s						
KZN	Kozani	6.83	115	P	Pn	03 09 04.5	-0.8
LANS	Liptovska Anna	6.93	33	eP	Pb	03 09 17.6	-7.9
LANS	Liptovska Anna	6.93	33	e	Pb	03 09 17.6	-7.9
VAY	Valandovo	6.94	105	i Pn	Pn	03 09 06.1	-0.6
LTVH	Ltavrtes, Hu	6.97	53	Sn	Sn	03 10 12.0	-14
DEV	Deva	7.00	67	⇓iP	Pn	03 09 09.2	+1.7
TSLK	Tsoukalades, L	7.04	129	P	Pn	03 09 07.4	-0.7
OKC	Ostrava-Krasne	7.04	24	AMS	AMS	03 12 30.0	
	comp=Z,500nm,13.2s						
PVCC	Panska Ves	7.06	5	AMS	AMS	03 12 00.0	
	comp=Z,500nm,11.3s						
VTS	Vitosha	7.06	94	ePn	Pn	03 09 08.8	+0.3
VTS	Vitosha	7.06	94	ePn	Pn	03 09 08.6	+0.1
VTS	Vitosha	7.06	94	⇓iP	Pn	03 09 09.2	+0.7
VTS	Vitosha	7.06	94	eP	Pn	03 09 08.8	+0.3
LKD2	Lefkada island	7.07	129	P	Pn	03 09 07.6	-0.9
DPC	Dobruska-Polom	7.09	14	eP	Pn	03 09 08.8	+0.1
DPC				MLR	MLR		
	comp=Z,900nm,10.6s						
DPC	Dobruska-Polom	7.09	14	ePN	Pn	03 09 08.8	+0.1
DPC				AMS	AMS	03 12 00.0	
	comp=Z,900nm,10.6s						
LASF	Ste Croix	7.13	278	ePn	Pn	03 09 09.2	-0.1
	SNR=1.0						
LASF				eSn	Sn	03 10 25.7	-4.4
	comp=Z,3.2nm,0.6s						
EVGI	Lefkada island	7.18	130	P	Pn	03 09 09.4	-0.7
DRGR		7.19	60	⇓iP	Pn	03 09 10.9	+0.7
DRGR		7.19	60	P	Pn	03 09 10.8	+0.6
UPC	Upice	7.19	12	eP	Pn	03 09 10.3	+0.2
UPC				MLR	MLR		
	comp=Z,1μm,9.4s						
UPC	Upice	7.19	12	ePN	Pn	03 09 10.3	+0.2
UPC				AMS	AMS	03 12 10.0	
	comp=Z,1μm,9.4s						
KNT	Kendrikon	7.22	106	P	Pn	03 09 10.0	-0.6
FSK	Fiskardo	7.25	132	P	Pn	03 09 10.4	-0.5
OSTC	Ostas	7.27	13	AMS	AMS	03 12 10.0	
	comp=Z,1μm,8.7s						
CHVC	Chvalec	7.27	12	ePN	Pn	03 09 10.6	-0.7
BRG	Berggiesshubel	7.38	1	PN	Pn	03 09 11.9	-0.7
BRG				PG	Pg	03 09 50.2	+3.7
BRG				SN	Sn	03 10 28.8	-7.4
BRG				SG	Sg	03 11 22.8	+0.8
	comp=Z,42nm,1.2s comp=N,425nm,11.1s comp=E,740nm,15.7s comp=Z,559nm,10.4s						
BRG	Berggiesshubel	7.38	1	P	Pn	03 09 11.9	-0.7
BRG						03 10 28.8	
BRG				smax	smax		
	comp=N,42nm,1.2s						
BRG				MLR	MLR		
	comp=N,425nm,11.1s						
BRG				MLR	MLR		
	comp=E,740nm,15.7s						
BRG				MLR	MLR		
	comp=Z,559nm,10.4s						
THL	Klokotos Trika	7.39	119	P	Pn	03 09 13.2	+0.3
LIT	Litokhoron	7.41	114	ePn	Pn	03 09 12.3	-0.9
LIT	Litokhoron	7.41	114	P	Pn	03 09 12.1	-1.1
LIT	Litokhoron	7.41	114	eP	Pn	03 09 12.3	-0.9
VLS	Valsamata	7.47	133	P	Pn	03 09 13.0	-1.0
PAGF	Fort de Pagny	7.49	315	ePn	Pn	03 09 13.3	-0.9
	baz=132						
PAGF				eSn	Sn	03 10 34.3	-4.6
	comp=Z,25nm,0.6s						
HORT	Hortiatis	7.59	109	P	Pn	03 09 08.2	-7.5
KFL	Anninata	7.62	133	P	Pn	03 09 15.7	-0.4
SMF	Signal de Mont	7.63	298	ePn	Pn	03 09 15.6	-0.7
	SNR=1.0						
SMF				eSn	Sn	03 10 38.6	-4.0
	comp=Z,3.8nm,0.2s						
ABH	Alteburg	7.64	329	P	Pn	03 09 18.3	+1.9
SFTF	Sexfontaines	7.64	311	ePn	Pn	03 09 16.1	-0.2
	baz=130						
SFTF				eSn	Sn	03 10 37.5	-5.2
	comp=Z,4.6nm,0.3s						
EVR	Evrytania	7.65	124	P	Pn	03 09 16.8	+0.2
SOH	Sokhos	7.67	107	P	Pn	03 09 16.5	-0.3
PVO	Paravola	7.68	127	P	Pn	03 09 15.1	-1.8
SRS	Serrai	7.73	105	ePn	Pn	03 09 16.7	-0.9
TRPA	Tarpa	7.73	50	ePn	Pn	03 09 18.1	+0.5
TRPA				ePg	Pg	03 09 56.1	+2.8
TRPA				Sn	Sn	03 10 51.0	+6.2
MEZF	Maizieres J'vi	7.81	313	ePn	Pn	03 09 18.3	-0.3
	baz=133,SNR=1.0						
MEZF				eSn	Sn	03 10 41.0	-5.8
	comp=Z,3.5nm,0.4s						
CLL	Collm	7.82	357	ePn	Pn	03 09 18.1	-0.7
CLL	Collm	7.82	357	eP	Pn	03 09 18.0	-0.7
CLL				pmax	pmax		
	comp=Z,13nm,1.1s						
CLL	Collm	7.82	357	ePn	Pn	03 09 18.0	-0.7
	comp=Z,13nm,1.1s						
CLL				eSn	Sn	03 10 44.0	-3.1
CLL				e		03 11 22.0	
CLL				eSg	Sg	03 11 40.0	+3.8
	comp=Z,59nm,1.2s						
CLL				Lmax		03 13 00.0	
NVR	Nevrokopi	7.84	102	P	Pn	03 09 19.3	+0.2
LOR	Lormes	7.87	302	ePn	Pn	03 09 19.5	+0.1
	baz=118,SNR=1.0						
LOR	Lormes	7.87	302	ePKP1	Pn	03 09 20.2	+0.8
LOR				eSn	Sn	03 10 43.4	-4.9
	comp=Z,19nm,0.5s						
LOR	Lormes	7.87	302	P	Pn	03 09 19.7	+0.2
AGG	Agios Georgios	7.91	122	ePn	Pn	03 09 19.7	-0.3
AGG	Agios Georgios	7.91	122	P	Pn	03 09 19.3	-0.7
AGG	Agios Georgios	7.91	122	eP	Pn	03 09 19.7	-0.3
AGO	Saint Agoulin	7.92	292	P	Pn	03 09 20.8	+0.6
PLG	Polygyros	7.93	110	P	Pn	03 09 19.1	-1.2
ANX	Ano Chora	7.93	125	P	Pn	03 09 20.8	+0.4
PLVB	Pleven	7.97	87	⇑iP	Pn	03 09 21.7	+0.9
SJAF	Saint Jean de	7.98	266	P	Pn	03 09 23.5	+2.6
AVF	Avril sur Loir	8.00	298	ePn	Pn	03 09 21.1	-0.1
	SNR=1.0						
AVF				eSn	Sn	03 10 46.8	-4.7
	comp=Z,1.4nm,0.3s						
SSF	Saint Saulge	8.00	300	ePn	Pn	03 09 20.5	-0.8
	SNR=1.0						
SSF				eSn	Sn	03 10 46.3	-5.3
	comp=Z,1.2nm,0.2s						
WLF	Walferdange	8.05	323	ePn	Pn	03 09 21.2	-0.7
WLF	Walferdange	8.05	323	eP	Pn	03 09 21.2	-0.7
WLF	Walferdange	8.05	323	⇓Pn	Pn	03 09 23.9	+2.0
ARR	Arges	8.06	73	⇓iP	Pn	03 09 23.0	+0.8
SERG	Sergoula	8.13	126	P	Pn	03 09 23.4	+0.4
TRIZ	Trizonia	8.17	126	P	Pn	03 09 24.1	+0.5
KALE	Kalithea	8.19	126	P	Pn	03 09 24.2	+0.2
PLD	Plovdiv	8.23	96	ePn	Pn	03 09 24.6	+0.2
BGF	Bois d'Agland	8.25	295	ePn	Pn	03 09 24.3	-0.4
	SNR=1.0						
BGF				eSn	Sn	03 10 53.5	-4.3
	comp=Z,14nm,0.4s,SNR=1.0						
MTLF	Montolieu	8.34	273	ePn	Pn	03 09 25.9	0.0
	SNR=1.0						
MTLF				eSn	Sn	03 10 56.0	-3.9
	comp=Z,0.2nm,0.3s						
VOIR		8.37	73	⇑iP	Pn	03 09 26.7	+0.4
DSF	Desfina	8.41	124	P	Pn	03 09 26.4	-0.5
KLV	Kalavryta, Ach	8.43	127	P	Pn	03 09 27.5	+0.3
KEST	Kesra	8.45	205	Pn	Pn	03 09 30.6	+3.1
	comp=Z,0.4nm,0.3s,baz=168,slow=0.4,SNR=16						
KEST				LR	LR	03 13 05.6	
	comp=Z,379nm,18.3s,baz=284,slow=40						
KEST	Kesra	8.45	205	ePn	Pn	03 09 32.1	+4.7
CAF	Calviac	8.46	284	ePn	Pn	03 09 27.5	-0.1
	SNR=1.0						
CAF				eSn	Sn	03 10 59.3	-3.6
	comp=Z,0.9nm,0.4s						
CAF	Calviac	8.46	284	P	Pn	03 09 28.6	+1.0
TCF	Toulx Ste Croi	8.60	293	ePn	Pn	03 09 29.5	0.0
	SNR=1.0						
TCF				eSn	Sn	03 11 01.8	-4.5
	comp=Z,2.8nm,0.3s,SNR=1.0						
HYF	Humbligny	8.63	300	ePn	Pn	03 09 29.4	-0.5
HYF				eSn	Sn	03 11 02.6	-4.4
DOPR	Dopca	8.70	69	⇑iP	Pn	03 09 31.8	+1.0
MEM	Membach	8.82	326	⇑Pn	Pn	03 09 34.1	+1.6
MEM				⇑Sn	Sn	03 11 06.5	-5.2
	comp=N,21nm,0.0s						
RJF	Les Rejaudoux	8.89	286	ePn	Pn	03 09 33.1	-0.3
	SNR=1.0						
RJF				eSn	Sn	03 11 08.9	-4.5
	comp=N,1.2nm,0.4s						
ITM	Ithomi	8.92	132	ePn	Pn	03 09 33.7	-0.1
BCLA	Clavier	8.97	323	⇑Pn	Pn	03 09 36.8	+2.2
BCLA				⇓Sn	Sn	03 11 13.0	-2.4
MLR	Muntele Rosu	9.00	73	Pn	Pn	03 09 36.9	+1.9
	comp=N,0.3nm,0.3s,baz=168,slow=18,SNR=9.0						
MLR				LR	LR	03 13 04.5	
	comp=N,217nm,21.5s,baz=296,slow=38						
MLR	Muntele Rosu	9.00	73	ePn	Pn	03 09 34.5	-0.5
MLR	Muntele Rosu	9.00	73	⇓iP	Pn	03 09 35.5	+0.5
DOU	Dourbes	9.06	320	⇑Pn	Pn	03 09 39.3	+3.5
BURAR	Bucovina Array	9.08	59	⇑iP	Pn	03 09 38.0	+1.8
BUR08	Bucovina Ar. S	9.08	59	ePn	Pn	03 09 35.5	-0.7
RDO	Rodhopi	9.10	101	P	Pn	03 09 36.8	+0.5
CLF	Chambon-Foret	9.17	304	ePn	Pn	03 09 36.8	-0.4
BAIF	Baives	9.22	319	ePKP1	Pn	03 09 41.0	+3.0
BAIF				eSn	Sn	03 11 14.6	-6.9
	comp=N,1.6nm,0.5s						
LFF	La Frestale	9.40	283	ePn	Pn	03 09 39.0	-1.4
LFF				eSn	Sn	03 11 20.8	-5.0
	comp=N,1.3nm,0.4s						
SNF	Seneffe	9.49	321	⇑Pn	Pn	03 09 45.0	+3.3
PLOR	Plostina	9.54	71	⇑iP	Pn	03 09 44.0	+1.6
ALN	Alexandroupoli	9.54	102	ePn	Pn	03 09 41.5	-0.8
ALN	Alexandroupoli	9.54	102	eP	Pn	03 09 41.6	-0.8
VRI	Vrincioaia	9.60	71	⇑iP	Pn	03 09 44.7	+1.6
EPF	Esparros	9.74	272	ePn	Pn	03 09 44.9	-0.3
EPF				eSn	Sn	03 11 28.7	-5.7
	comp=N,0.3nm,0.2s						
EDRB	Edirne	9.77	95	P	Pn	03 09 45.6	+0.1
EZN	Ezine	10.15	107	⇑iP	Pn	03 09 50.9	+0.1
MFF	Saint Martin d	10.26	292	ePn	Pn	03 09 50.9	-1.3
MFF				eSn	Sn	03 11 41.5	-5.4
	comp=N,0.4nm,0.3s						
PHSR	Pinarhisar	10.39	96	⇑iP	Pn	03 09 53.9	-0.1
ETSF	Etsaut	10.41	272	ePKP1	Pn	03 10 00.5	+6.1
ETSF				eSn	Sn	03 11 47.0	-3.9
	comp=N,1.0nm,0.4s						
LDF	La Druitiere	10.85	303	ePn	Pn	03 09 59.5	-0.8
LDF				eSn	Sn	03 11 55.3	-6.2
	comp=N,0.3nm,0.2s						
SJPF	Ste Jean	10.87	273	ePn	Pn	03 09 59.9	-0.6
SJPF				eSn	Sn	03 11 57.6	-4.3
	comp=N,0.1nm,0.2s						
CTYL	Yalikoy Yolu	10.98	96	⇑iP	Pn	03 10 02.7	+0.6
FLN	La Foliniere	11.14	303	ePn	Pn	03 10 03.6	-0.6
	baz=125,SNR=1.0						
GRR	Gorron	11.23	301	ePn	Pn	03 10 04.4	-1.1
GRR				eSn	Sn	03 12 04.5	-6.3
	comp=N,0.8nm,0.4s						
BALB	Balikesir	11.32	105	ePn	Pn	03 10 06.3	-0.4
KLNR	Kaliningrad	11.90	19	⇓eP	Pn	03 10 13.1	-1.5
SGMF	Saint Gilles	12.26	298	ePn	Pn	03 10 19.2	-0.4
SGMF				eSn	Sn	03 12 29.4	-6.6
	comp=N,1.1nm,0.4s						
QUIF	Quistinic	12.56	296	ePn	Pn	03 10 22.3	-1.4
QUIF				eSn	Sn	03 12 35.3	-8.1
	comp=N,0.9nm,0.3s						
ROSF	Rostrenen	12.74	298	ePn	Pn	03 10 25.9	-0.3
ROSF				eSn	Sn	03 12 41.6	-6.2
	comp=N,2.0nm,0.6s						
MDUB	Mudurnu	13.38	97	ePn	Pn	03 10 34.5	-0.6
ESDC	Sonseca Array	13.74	260	Pn	Pn	03 10 41.4	+1.5
	comp=N,0.0nm,0.3s,baz=65,slow=15,SNR=5.9						
BR101	Keskin Array S	15.40	97	eP	Pn	03 11 03.7	+1.3
BR131	Keskin Array S	15.40	97	ePn	Pn	03 11 01.8	-0.6
	comp=N,4.1nm,1.0s						
BRTR	Keskin Array B	15.40	97	Pn	Pn	03 11 03.7	+1.3
	comp=N,0.0nm,0.3s,baz=290,slow=12,SNR=12						
MVO	Moncorvo	15.48	268	eP	P	03 11 10.2	+2.3
	comp=N,22nm,1.1s						
PVRL	Vila Real	15.96	269	eP	P	03 11 15.8	+2.7
	comp=N,28nm,1.2s						
POLO	Lamas de Olo	15.99	270	eP	P	03 11 15.1	+1.6
	comp=N,9.5nm,1.4s						
EKA	Eskdalemuir Ar	16.07	323	Pn	Pn	03 11 09.5	-1.4
	baz=139,slow=14,SNR=2.8						
PCAB	Cabril	16.07	271	eP	P	03 11 16.7	+2.3
	comp=N,14nm,1.4s						
MTE	Manteigas	16.08	266	eP	P	03 11 16.7	+2.2

	comp=N,30nm,1.2s						
MTE	**Manteigas**	**16.08**	**266**	*e*P	**Pn**	**03 11 12.8**	**+1.6**
	comp=N,21nm,0.9s						
ESK	**Eskdalemuir**	**16.08**	**323**	*i* P	**Pn**	**03 11 10.4**	**-0.6**
PCBR	**Castelo Branco**	**16.21**	**264**	*e*P	**P**	**03 11 18.1**	**+2.2**
	comp=N,12nm,1.6s						
PVIS	**Viseu**	**16.24**	**268**	*e*P	**P**	**03 11 18.6**	**+2.4**
	comp=N,22nm,1.2s						
PMRV	**Marv??o**	**16.30**	**263**	*e*P	**P**	**03 11 18.1**	**+1.3**
	comp=N,12nm,1.3s						
HFS	**Hagfors**	**16.66**	**0**	Pn	**Pn**	**03 11 17.3**	**-1.0**
	comp=N,0.0nm,0.3s,baz=139,slow=9.6,SNR=2.3						
HFS				LR	LR	03 17 52.6	
	comp=N,88nm,20.5s,baz=187,slow=38						
COI	**Coimbra**	**16.77**	**266**	*e*Pn	**Pn**	**03 11 19.9**	**+0.1**
	comp=N,22nm,0.8s						
COI	**Coimbra**	**16.77**	**266**	*e*P	**Pn**	**03 11 19.9**	**+0.1**
COI				pmax	pmax		
	comp=Z,23nm,0.8s						
PCAS	**Casmilo, Conde**	**16.88**	**266**	*e*P	**P**	**03 11 26.3**	**+3.0**
	comp=Z,24nm,1.3s						
EVO	**Evora**	**17.09**	**261**	*e*P	**P**	**03 11 29.2**	**+3.6**
	comp=Z,16nm,1.5s						
NC602	**NORSAR Array S**	**17.31**	**356**	*e*P	**P**	**03 11 27.6**	**-0.2**
	comp=Z,46nm,1.3s						
NB2	**NORSAR Subarra**	**17.63**	**356**	P	**P**	**03 11 31.4**	**0.0**
	comp=Z,1.3nm,0.6s,baz=174,slow=11						
NB200	**NORSAR Array S**	**17.63**	**356**	*e*P	**Pn**	**03 11 30.4**	**-0.1**
NOA	**NORSAR Array B**	**17.63**	**356**	P	**Pn**	**03 11 30.4**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=172,slow=12,SNR=5.7						
NOA				LR	LR	03 18 17.2	
	comp=Z,40nm,19.0s,baz=200,slow=37						
MDT	**Midelt**	**17.86**	**239**	LR	LR	03 17 32.7	
	comp=Z,68nm,19.0s,baz=84,slow=34						
NC204	**NORSAR Array S**	**17.89**	**355**	*e*P	**Pn**	**03 11 33.4**	**-0.3**
	comp=Z,26nm,1.0s						
OBN	**Obninsk**	**18.82**	**44**	LR	LR	03 20 42.6	
	comp=Z,15nm,20.7s,baz=172,slow=43						
OBN	**Obninsk**	**18.82**	**44**	⇑*e*P	**P**	**03 11 42.7**	**-1.8**
OBN				pmax	pmax		
	comp=Z,17nm,1.6s						
OBN				MLR	MLR		
	comp=Z,134nm,13.0s						
VSR	**Storozhevoye**	**18.85**	**57**	*e*P	**P**	**03 11 43.5**	**-1.4**
VSR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VORD	**Divnogorie**	**18.87**	**58**	*e*P	**P**	**03 11 43.7**	**-1.3**
VORD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPSR	**Galich'ya Gora**	**19.09**	**53**	*e*P	**P**	**03 11 45.7**	**-1.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FIA0	**FINESS Array S**	**19.43**	**18**	*e*P	**P**	**03 11 49.8**	**-1.3**
FIA0	**FINESS Array S**	**19.43**	**18**	*e*P	**P**	**03 11 49.8**	**-1.3**
FINES	**FINESS Array B**	**19.43**	**18**	P	**P**	**03 11 49.8**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=242,slow=4.1,SNR=6.5						
FINES				LR	LR	03 19 56.0	
	comp=Z,112nm,20.7s,baz=212,slow=39						
MOS	**Moscow**	**19.64**	**43**	*e*P	Pn	03 12 04.2	+9.3
MMAI	**Mount Meron Ar**	**19.96**	**114**	P	**Pn**	**03 11 58.1**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=319,slow=8.8,SNR=5.7						
KIV	**Kislovodsk**	**20.93**	**79**	*e*P	**P**	**03 12 07.4**	**-0.3**
	comp=Z,9.8nm,1.0s						
KIV	**Kislovodsk**	**20.93**	**79**	*e*P	**P**	**03 12 08.3**	**+0.6**
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
KBZ	**Khabaz**	**21.12**	**79**	P	**P**	**03 12 10.2**	**+0.6**
	comp=Z,4.4nm,0.9s,baz=319,slow=7.5,SNR=8.5						
ASF	**Jabal al Asfar**	**21.48**	**114**	P	**P**	**03 12 15.0**	**+1.3**
	comp=Z,2.5nm,0.4s,baz=183,slow=3.4,SNR=5.5						
TAM	**Tamanrasset**	**21.73**	**201**	*e*P	**P**	**03 12 17.1**	**+0.6**
	comp=Z,8.6nm,1.3s						
TAM	**Tamanrasset**	**21.73**	**201**	*e*P	**P**	**03 12 17.1**	**+0.6**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AKH	**Akhalkalaki**	**22.05**	**85**	*e*P	**P**	**03 12 19.6**	**-0.3**
	comp=Z,11nm,1.3s						
AKH	**Akhalkalaki**	**22.05**	**85**	*e*P	**P**	**03 12 19.6**	**-0.3**
AKH				pmax	pmax		
	comp=Z,11nm,1.3s						
TBLG	**Delisi**	**22.87**	**84**	*e*P	**P**	**03 12 28.6**	**+0.3**
	comp=Z,7.0nm,1.0s						
TBLG	**Delisi**	**22.87**	**84**	*e*P	**P**	**03 12 28.7**	**+0.3**
TBLG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	**Garni**	**23.32**	**88**	⇓*e*P	**P**	**03 12 33.5**	**+0.2**
GNI				pmax	pmax		
	comp=Z,27nm,1.0s						
AKT	**Akhty**	**25.10**	**83**	*e*P	**P**	**03 12 51.2**	**+1.5**
AKT				*e*		03 13 23.9	
AKT				pmax	pmax		
	comp=Z,20nm,1.1s						
ARA0	**ARCESS Array S**	**26.80**	**9**	*e*P	**P**	**03 13 02.9**	**-1.8**
ARCES	**ARCESS Array B**	**26.80**	**9**	P	**P**	**03 13 02.9**	**-1.8**
	comp=Z,3.0nm,0.8s,baz=226,slow=4.9,SNR=6.6						
ARCES				LR	LR	03 24 46.4	
	comp=Z,61nm,19.6s,baz=120,slow=39						
AKTO	**Aktyubinsk**	**30.67**	**61**	P	**P**	**03 13 37.9**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=267,slow=8.9,SNR=3.8						
AKTO				LR	LR	03 26 45.0	
	comp=Z,35nm,18.3s,baz=167,slow=38						
ARU	**Arti**	**31.05**	**49**	P	**P**	**03 13 41.4**	**-1.2**
	comp=Z,5.1nm,0.6s,baz=260,slow=6.1,SNR=22						
ARU	**Arti**	**31.05**	**49**	*e*P	**P**	**03 13 41.8**	**-0.9**
	comp=Z,14nm,0.6s						
ARU	**Arti**	**31.05**	**49**	*d* *i*P	**P**	**03 13 42.5**	**-0.1**
ARU						03 14 39.1	
ARU				S	**S**	**03 18 49.7**	**+2.6**
ARU				SS	**SnSn**	**03 20 29.6**	**+1.8**
ARU				pmax	pmax		
	comp=Z,14nm,0.7s						
TOA1	**Torodi Ar. Sit**	**31.95**	**202**	*e*P	**P**	**03 13 50.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**31.96**	**202**	P	**P**	**03 13 50.2**	**-0.8**
	comp=Z,2.3nm,1.0s,baz=9.6,slow=10.0,SNR=12						
TORD				LR	LR	03 28 04.9	
	comp=Z,111nm,18.8s,baz=340,slow=39						
SVE	**Sverdlovsk**	**32.22**	**49**	⇑*e*P	**P**	**03 13 53.5**	**+0.5**
SVE				pmax	pmax		
	comp=Z,19nm,1.0s						
GEYT	**Alibeck**	**33.83**	**84**	P	**P**	**03 14 07.3**	**0.0**
	comp=Z,935nm,0.4s,baz=289,slow=9.2,SNR=5.0						
BRVK	**Borovoye**	**37.94**	**55**	*e*P	**P**	**03 14 43.0**	**+0.7**
	comp=Z,6.9nm,0.9s						
BRVK	**Borovoye**	**37.94**	**55**	⇑*e*P	**P**	**03 14 43.0**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DBIC	**Dimbokro**	**40.14**	**209**	LR	LR	03 32 44.4	
	comp=Z,50nm,18.4s,baz=28,slow=38						
KK31	**Karatay Array**	**40.66**	**70**	*e*P	**P**	**03 15 04.9**	**-0.3**
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	**40.66**	**70**	*e*P	**P**	**03 15 04.9**	**-0.3**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**40.66**	**70**	*e*P	**P**	**03 15 04.6**	**-0.6**
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**40.66**	**70**	*e*P	**P**	**03 15 04.6**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**43.50**	**57**	*de*P	**P**	**03 15 28.0**	**-0.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**43.55**	**69**	⇑*e*P	**P**	**03 15 30.8**	**+1.9**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ZAA1	**Zalesovo Array**	**46.19**	**51**	*e*P	**P**	**03 15 48.6**	**-1.0**
ZALV	**Zalesovo Beam**	**46.19**	**51**	P	**P**	**03 15 48.6**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=297,slow=9.8,SNR=4.1						
ZALV				LR	LR	03 37 27.8	
	comp=Z,52nm,18.1s,baz=245,slow=39						
NIL	**Nilore**	**46.71**	**81**	*e*P	**P**	**03 15 53.7**	**-0.3**
	comp=Z,8.2nm,1.0s						
NIL	**Nilore**	**46.71**	**81**	*e*P	**P**	**03 15 53.7**	**-0.3**
NIL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	**Makanchi Array**	**47.10**	**61**	*e*P	**P**	**03 15 56.9**	**0.0**
	comp=Z,1.6nm,0.8s						
MK31	**Makanchi Array**	**47.10**	**61**	*e*P	**P**	**03 15 56.9**	**0.0**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	**Makanchi Array**	**47.10**	**61**	*e*P	**P**	**03 15 57.0**	**+0.1**
MKAR	**Makanchi Array**	**47.10**	**61**	P	**P**	**03 15 57.0**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=282,slow=6.7,SNR=11						
MKAR				LR	LR	03 39 11.2	
	comp=Z,37nm,18.6s,baz=298,slow=40						
MKAR	**Makanchi Array**	**47.10**	**61**	P	**P**	**03 15 57.0**	**+0.1**
WMQ	**Urumqi**	**51.81**	**62**	*e*P	**P**	**03 16 36.3**	**+3.4**
WMQ				LR	LR		
	comp=N,220nm,29.2s						
WMQ				LR	LR		
	comp=E,440nm,29.0s						
WMQ				LR	LR		
	comp=Z,150nm,28.7s						
SONA0	**Songino Array**	**61.08**	**50**	*e*P	**P**	**03 17 38.9**	**0.0**
SONM	**Songino Array**	**61.08**	**50**	P	**P**	**03 17 38.9**	**0.0**
	comp=Z,1.9nm,1.0s,baz=290,slow=7.0,SNR=7.0						
ULN	**Ulaanbaatar**	**61.43**	**50**	⇑*e*P	**P**	**03 17 42.9**	**+1.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	**62.97**	**28**	*e*P	**P**	**03 17 51.2**	**0.0**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YKW3	**Yellowknife Ar**	**66.48**	**337**	*e*P	**P**	**03 18 14.2**	**+0.1**
	comp=Z,4.1nm,1.0s						
YKA	**Yellowknife Ar**	**66.53**	**337**	P	**P**	**03 18 15.3**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=44,slow=6.6,SNR=13						
YKB5	**Yellowknife Ar**	**66.53**	**337**	*e*P	**P**	**03 18 15.3**	**+0.9**
HHC	**Hu-ho-hao-te**	**68.21**	**54**	P	**P**	**03 18 24.9**	**-0.7**
HHC				S	**S**	**03 27 25.1**	**-0.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,17nm,5.5s						
HHC				LR	LR		
	comp=N,270nm,14.9s						
HHC				LR	LR		
	comp=E,200nm,15.1s						
SEY	**Seymchan**	**68.91**	**19**	⇓*e*P	**P**	**03 18 30.3**	**+0.9**
CD2	**Chengdu**	**69.53**	**67**	*e*P	**P**	**03 18 32.5**	**-1.4**
DAWY	**Dawson**	**70.68**	**348**	*e*P	**P**	**03 18 40.2**	**-0.2**
	comp=E,5.4nm,1.0s						
ILAR	**Eielson Array**	**70.99**	**351**	P	**P**	**03 18 42.8**	**+0.6**
	comp=E,1.0nm,0.9s,baz=8.3,slow=5.8,SNR=7.7						
ILB	**Eielson Array**	**70.99**	**351**	*e*P	**P**	**03 18 42.8**	**+0.6**
	comp=E,5.5nm,1.5s						
KMI	**Kunming**	**72.52**	**72**	P	**P**	**03 18 54.0**	**+1.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CM31	**Chiang Mai Arr**	**74.17**	**80**	*e*P	**P**	**03 19 02.0**	**+0.2**
	comp=Z,34nm,1.9s						
CMAR	**Chiang Mai Arr**	**74.17**	**80**	P	**P**	**03 19 02.0**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=307,slow=8.2,SNR=4.5						
PETK	**Petropavlovsk-**	**78.92**	**21**	LR	LR	03 57 24.1	
	comp=Z,38nm,18.8s,baz=146,slow=38						
YSS	**Yuzh-Sakhalins**	**79.31**	**33**	*e*P	**P**	**03 19 31.6**	**+1.2**
YSS				pmax	pmax		
	comp=Z,15nm,2.5s						
PD31	**Pinedale Array**	**80.19**	**321**	*e*P	**P**	**03 19 36.9**	**+1.3**
PDAR	**Pinedale Array**	**80.19**	**321**	P	**P**	**03 19 36.9**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=44,slow=6.6,SNR=4.3						
BMO	**Blue Mountains**	**81.79**	**327**	*e*P	**P**	**03 19 44.6**	**+0.7**
	comp=Z,4.1nm,1.0s						
BMO	**Blue Mountains**	**81.79**	**327**	*e*P	**P**	**03 19 44.6**	**+0.7**
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HWUT	**Hardware Ranch**	**82.01**	**322**	*e*P	**P**	**03 19 46.2**	**+1.0**
	comp=Z,5.4nm,1.3s						
SDCO	**Great Sand Dun**	**82.13**	**316**	*e*P	**P**	**03 19 45.4**	**-0.6**
	comp=Z,2.6nm,1.1s						
PV22	**Blue Mesa, Par**	**83.15**	**318**	*e*P	**P**	**03 19 52.5**	**+1.2**
	comp=Z,6.8nm,1.1s						
ANMO	**Albuquerque**	**84.77**	**314**	⇑*e*P	**P**	**03 20 00.3**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,7.0nm,3.7s						
LTX	**Lajitas**	**87.56**	**309**	*e*P	**P**	**03 20 15.3**	**+2.1**
LTX	**Lajitas**	**87.56**	**309**	*e*P	**P**	**03 20 15.4**	**+2.1**
TXAR	**Lajitas Array**	**87.56**	**309**	P	**P**	**03 20 15.3**	**+2.0**
	comp=Z,1.0nm,1.0s,baz=54,slow=6.4,SNR=7.3						
AS31	**Alice Springs**	**127.57**	**88**	*e*PKPdf	**PKPdf**	**03 26 30.1**	**-0.2**
ASAR	**Alice Springs**	**127.57**	**88**	PKP	**PKPdf**	**03 26 30.1**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=329,slow=1.1,SNR=4.0						

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*ROM **21** 03:34:46.3±0.4, 43°.52N±0°.01×13°.79E±0°.02, h10^{km}, ML2.7/61, Error ellipse: s-maj=2.4km s-min=0.7km az=237.0*

*LDG **21** 03:34:47.5±0.2, 43°.42N×13°.58E, h2^{km}, Ml2.7/24, Error ellipse: s-maj=4.1km s-min=3.1km az=77.0*

ISC 21 03:34:47.1±0.9**, 43°.43N**±0°.02×**13°.64E**±0°.03**, h15**^{km}±6^{km}**, n107, σ2ˢ41**/114**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.12**	**347**	P	**Pg**	**03 34 49.7**	**-1.1**
AOI				S	**Sg**	**03 34 52.4**	**-0.7**
AOI				AML	AML		
	comp=E,5460µm,0.5s						
AOI				AML	AML		
	comp=N,4910µm,1.4s						
AOI				AML	AML		
	comp=E,5460µm,0.5s						
AOI				AML	AML		
	comp=N,4910µm,1.4s						
AOI				AML	AML		
	comp=E,5460µm,0.5s						
AOI				AML	AML		
	comp=N,4910µm,1.4s						
AOI				AML	AML		
	comp=N,4910µm,1.4s						
AOI				AML	AML		
	comp=E,5460µm,0.5s						
AOI				AML	AML		
	comp=N,4910µm,1.4s						
AOI				AML	AML		
	comp=E,5460µm,0.5s						
CIMA	**Civitanova Mar**	**0.13**	**170**	P	**Pb**	**03 34 51.7**	**+0.5**
CIMA				S	**Sb**	**03 34 56.8**	**+2.9**
CIMA				AML	AML		
	comp=E,13500µm,0.7s						
CIMA				AML	AML		
	comp=N,12700µm,0.5s						
CIMA				AML	AML		
	comp=E,13450µm,0.7s						
CIMA				AML	AML		
	comp=N,12700µm,0.5s						
CIMA				AML	AML		
	comp=E,13440µm,0.7s						
CIMA				AML	AML		
	comp=N,12700µm,0.5s						
CIMA				AML	AML		
	comp=E,13440µm,0.7s						
CIMA				AML	AML		
	comp=N,12700µm,0.5s						
CIMA				AML	AML		
	comp=E,13440µm,0.7s						
CIMA				AML	AML		
	comp=N,12700µm,0.5s						
PCRO	**Pietralacroce**	**0.19**	**336**	P	**Pg**	**03 34 51.0**	**-0.6**
PCRO				S	**Sg**	**03 34 55.0**	**+0.3**
PCRO				AML	AML		
	comp=E,3605µm,0.6s						
PCRO				AML	AML		
	comp=N,3365µm,0.4s						
PCRO				AML	AML		
	comp=E,3605µm,0.6s						
PCRO				AML	AML		
	comp=N,3370µm,0.4s						
PCRO				AML	AML		
	comp=E,3605µm,0.6s						
PCRO				AML	AML		
	comp=N,3370µm,0.4s						
PCRO				AML	AML		
	comp=E,3605µm,0.6s						
PCRO				AML	AML		
	comp=N,3370µm,0.4s						
PCRO				AML	AML		
	comp=E,3605µm,0.6s						
PCRO				AML	AML		
	comp=N,3370µm,0.4s						
CADA	**Capodarco di F**	**0.26**	**159**	P	**Pb**	**03 34 53.3**	**-0.1**
CADA				AML	AML		
	comp=E,3680µm,0.8s						
CADA				AML	AML		
	comp=N,3635µm,0.6s						
CADA				AML	AML		
	comp=E,3680µm,0.8s						
CADA				AML	AML		
	comp=N,3640µm,0.6s						
CADA				AML	AML		
	comp=E,3680µm,0.8s						
CADA				AML	AML		
	comp=N,3635µm,0.6s						
CADA				AML	AML		
	comp=E,3680µm,0.8s						
CADA				AML	AML		
	comp=N,3635µm,0.6s						
CADA				AML	AML		
	comp=E,3680µm,0.8s						
CADA				AML	AML		
	comp=N,3635µm,0.6s						
MNTP	**Montappone**	**0.32**	**203**	P	**Pb**	**03 34 55.8**	**+1.3**
CING	**Cingoli**	**0.33**	**260**	P	**Pb**	**03 34 55.3**	**+0.6**
CING				S	**Sn**	**03 35 02.8**	**-1.0**
CING				AML	AML		
	comp=E,824µm,0.4s						
CING				AML	AML		
	comp=N,863µm,0.5s						
CING				AML	AML		
	comp=E,824µm,0.4s						
CING				AML	AML		
	comp=N,863µm,0.5s						
CING				AML	AML		
	comp=E,824µm,0.4s						
CING				AML	AML		
	comp=N,863µm,0.5s						
SENI	**Senigallia**	**0.40**	**313**	P	**Pg**	**03 34 56.0**	**+0.8**
SENI				AML	AML		
	comp=E,2490µm,0.3s						
SENI				AML	AML		
	comp=N,2640µm,0.3s						
SENI				AML	AML		
	comp=E,2490µm,0.3s						
SENI				AML	AML		
	comp=N,2645µm,0.3s						
SENI				AML	AML		
	comp=E,492µm,0.9s						
SENI				AML	AML		
	comp=N,534µm,0.8s						
SENI				AML	AML		
	comp=E,2485µm,0.3s						
SENI				AML	AML		
	comp=N,2640µm,0.3s						
SENI				AML	AML		
	comp=N,2640µm,0.3s						
SENI				AML	AML		
	comp=E,2485µm,0.3s						
SENI				AML	AML		
	comp=N,2640µm,0.3s						
SENI				AML	AML		
	comp=E,2485µm,0.3s						
CSP1	**Cessapalombo**	**0.47**	**223**	P	**Pb**	**03 34 57.7**	**+0.7**
COR1	**Corinaldo**	**0.50**	**293**	P	**Pb**	**03 34 58.3**	**+0.7**
COR1				AML	AML		
	comp=E,1485µm,1.1s						
COR1				AML	AML		
	comp=N,1290µm,1.1s						
COR1				AML	AML		
	comp=E,1805µm,1.6s						
COR1				AML	AML		
	comp=N,1306µm,1.4s						
COR1				AML	AML		
	comp=E,1805µm,1.6s						
COR1				AML	AML		
	comp=N,1306µm,1.4s						
COR1				AML	AML		
	comp=E,1805µm,1.6s						
COR1				AML	AML		
	comp=N,1306µm,1.4s						
ARVD	**Arcevia**	**0.51**	**277**	P	**Pg**	**03 34 58.0**	**+0.7**
ARVD				AML	AML		
	comp=E,228µm,0.6s						
ARVD				AML	AML		
	comp=N,306µm,0.7s						
ARVD				AML	AML		
	comp=E,228µm,0.6s						
ARVD				AML	AML		
	comp=N,306µm,0.7s						
ARVD				AML	AML		
	comp=E,228µm,0.6s						
ARVD				AML	AML		
	comp=N,306µm,0.7s						
ARVD				AML	AML		
	comp=N,306µm,0.7s						
ARVD				AML	AML		
	comp=E,228µm,0.6s						
ARVD				AML	AML		
	comp=N,306µm,0.7s						
ARVD				AML	AML		
	comp=E,228µm,0.6s						
SNTG	**Esanatoglia**	**0.54**	**251**	P	**Pb**	**03 34 59.0**	**+0.7**
SNTG				AML	AML		
	comp=E,264µm,0.3s						
SNTG				AML	AML		
	comp=N,439µm,0.9s						
SNTG				AML	AML		
	comp=E,264µm,0.3s						
SNTG				AML	AML		
	comp=N,439µm,0.9s						
SNTG				AML	AML		
	comp=E,264µm,0.3s						
SNTG				AML	AML		
	comp=N,439µm,0.9s						
SNTG				AML	AML		
	comp=N,439µm,0.9s						
SNTG				AML	AML		
	comp=E,264µm,0.3s						
SNTG				AML	AML		
	comp=N,439µm,0.9s						
SNTG				AML	AML		
	comp=E,264µm,0.3s						
FDMO	**Fiordimonte**	**0.57**	**226**	P	**Pb**	**03 34 59.3**	**+0.6**
FDMO				AML	AML		
	comp=E,1300µm,0.2s						
FDMO				AML	AML		
	comp=N,546µm,0.2s						
FDMO				AML	AML		
	comp=E,1300µm,0.2s						
FDMO				AML	AML		
	comp=N,546µm,0.2s						
FDMO				AML	AML		
	comp=E,1300µm,0.2s						
FDMO				AML	AML		
	comp=N,546µm,0.2s						
FDMO				AML	AML		
	comp=E,1300µm,0.2s						
FDMO				AML	AML		
	comp=N,546µm,0.2s						
FOSV	**Fossato di Vic**	**0.65**	**258**	P	**Pb**	**03 35 00.8**	**+0.6**
FOSV				AML	AML		
	comp=E,364µm,0.3s						
FOSV				AML	AML		
	comp=N,402µm,0.7s						
FOSV				AML	AML		
	comp=E,365µm,0.3s						
FOSV				AML	AML		
	comp=N,402µm,0.7s						
FOSV				AML	AML		
	comp=E,365µm,0.3s						
FOSV				AML	AML		
	comp=N,402µm,0.7s						
FOSV				AML	AML		
	comp=E,365µm,0.3s						
FOSV				AML	AML		
	comp=N,402µm,0.7s						
TRTR	**Tortoreto Alta**	**0.66**	**162**	P	**Pn**	**03 35 01.4**	**-0.4**
TRTR				AML	AML		
	comp=E,1680µm,0.4s						
TRTR				AML	AML		
	comp=N,1196µm,0.8s						
TRTR				AML	AML		
	comp=N,1196µm,0.8s						
TRTR				AML	AML		
	comp=E,1680µm,0.4s						
TRTR				AML	AML		
	comp=N,1196µm,0.8s						
TRTR				AML	AML		
	comp=E,1680µm,0.4s						
MPAG	**Monte Paganucc**	**0.67**	**287**	P	**Pg**	**03 35 00.4**	**+0.2**
MPAG				AML	AML		
	comp=E,340µm,0.4s						
MPAG				AML	AML		
	comp=N,381µm,0.5s						
MPAG				AML	AML		
	comp=E,340µm,0.4s						
MPAG				AML	AML		
	comp=N,381µm,0.5s						
MPAG				AML	AML		
	comp=N,381µm,0.5s						
MPAG				AML	AML		
	comp=E,340µm,0.4s						
MPAG				AML	AML		

	comp=N,381μm,0.5s						
MPAG				AML	AML		
	comp=E,340μm,0.4s						
FRON	**Frontone**	**0.67**	**277**	P	**Pg**	**03 35 00.8**	**+0.6**
FRON				AML	AML		
	comp=E,396μm,0.6s						
FRON				AML	AML		
	comp=N,402μm,0.3s						
FRON				AML	AML		
	comp=E,396μm,0.6s						
FRON				AML	AML		
	comp=N,402μm,0.3s						
FRON				AML	AML		
	comp=N,402μm,0.3s						
FRON				AML	AML		
	comp=E,396μm,0.6s						
FRON				AML	AML		
	comp=N,402μm,0.3s						
FRON				AML	AML		
	comp=E,396μm,0.6s						
CESI	**CESI - Serrava**	**0.69**	**232**	P	**Pb**	**03 35 01.7**	**+0.9**
CESI				AML	AML		
	comp=E,184μm,0.6s						
CESI				AML	AML		
	comp=N,308μm,0.6s						
CESI				AML	AML		
	comp=E,184μm,0.6s						
CESI				AML	AML		
	comp=N,308μm,0.6s						
CESI				AML	AML		
	comp=E,184μm,0.6s						
CESI				AML	AML		
	comp=N,308μm,0.6s						
CESI				AML	AML		
	comp=E,184μm,0.6s						
CESI				AML	AML		
	comp=N,308μm,0.6s						
NRCA	**Norcia**	**0.71**	**213**	P	**Pb**	**03 35 01.8**	**+0.6**
NRCA				AML	AML		
	comp=E,784μm,1.0s						
NRCA				AML	AML		
	comp=N,845μm,0.4s						
NRCA				AML	AML		
	comp=N,845μm,0.4s						
NRCA				AML	AML		
	comp=E,784μm,1.0s						
NRCA				AML	AML		
	comp=N,845μm,0.4s						
NRCA				AML	AML		
	comp=E,784μm,1.0s						
PESA	**Pesaro**	**0.77**	**311**	AML	AML		
	comp=N,988μm,0.2s						
PESA				AML	AML		
	comp=E,928μm,1.0s						
PESA				AML	AML		
	comp=N,988μm,0.2s						
PESA				AML	AML		
	comp=E,928μm,1.0s						
PESA				AML	AML		
	comp=N,988μm,0.2s						
PESA				AML	AML		
	comp=E,928μm,1.0s						
ATCC	**AVT- Casa Cast**	**0.77**	**251**	P	**Pn**	**03 35 03.1**	**-0.3**
ATCC				AML	AML		
	comp=E,884μm,0.6s						
ATCC				AML	AML		
	comp=N,632μm,0.5s						
ATCC				AML	AML		
	comp=E,884μm,0.6s						
ATCC				AML	AML		
	comp=N,632μm,0.5s						
ATCC				AML	AML		
	comp=E,884μm,0.6s						
ATCC				AML	AML		
	comp=N,632μm,0.5s						
ATCC				AML	AML		
	comp=E,884μm,0.6s						
ATCC				AML	AML		
	comp=N,632μm,0.5s						
ATFO	**Monte Foce - G**	**0.78**	**265**	P	**Pg**	**03 35 03.3**	**+1.0**
ATFO				AML	AML		
	comp=E,556μm,0.5s						
ATFO				AML	AML		
	comp=N,378μm,1.0s						
ATFO				AML	AML		
	comp=E,556μm,0.5s						
ATFO				AML	AML		
	comp=N,378μm,1.0s						
ATFO				AML	AML		
	comp=N,378μm,1.0s						
ATFO				AML	AML		
	comp=E,556μm,0.5s						
ATFO				AML	AML		
	comp=N,378μm,1.0s						
ATFO				AML	AML		
	comp=E,556μm,0.5s						
PIEI	**Pieia**	**0.81**	**278**	P	**Pb**	**03 35 03.2**	**+0.3**
PIEI				AML	AML		
	comp=E,288μm,1.5s						
PIEI				AML	AML		
	comp=N,152μm,0.5s						
PIEI				AML	AML		
	comp=E,288μm,1.5s						
PIEI				AML	AML		
	comp=N,152μm,0.5s						
PIEI				AML	AML		
	comp=N,152μm,0.5s						
PIEI				AML	AML		
	comp=E,288μm,1.5s						
PIEI				AML	AML		
	comp=N,152μm,0.5s						
PIEI				AML	AML		
	comp=E,288μm,1.5s						
TERO	**Teramo**	**0.81**	**182**	P	**Pb**	**03 35 02.6**	**-0.3**
TERO				AML	AML		
	comp=E,190μm,0.5s						
TERO				AML	AML		
	comp=N,156μm,1.4s						
TERO				AML	AML		
	comp=E,190μm,0.5s						
TERO				AML	AML		
	comp=N,155μm,1.4s						
TERO				AML	AML		
	comp=E,190μm,0.5s						
TERO				AML	AML		
	comp=N,155μm,1.4s						
TERO				AML	AML		
	comp=E,190μm,0.5s						
TERO				AML	AML		
	comp=N,155μm,1.4s						
ASSB	**Assisi San Ben**	**0.82**	**242**	P	**Pg**	**03 35 03.8**	**+0.8**
ASSB				AML	AML		
	comp=E,580μm,0.5s						
ASSB				AML	AML		
	comp=N,558μm,0.5s						
ASSB				AML	AML		
	comp=E,580μm,0.5s						
ASSB				AML	AML		
	comp=N,558μm,0.5s						
ASSB				AML	AML		
	comp=N,558μm,0.5s						
ASSB				AML	AML		
	comp=E,580μm,0.5s						
ASSB				AML	AML		
	comp=N,558μm,0.5s						
ASSB				AML	AML		
	comp=E,580μm,0.5s						
MURB	**Monte Urbino**	**0.83**	**258**	P	**Pn**	**03 35 04.2**	**0.0**
MURB				AML	AML		
	comp=E,938μm,0.9s						
MURB				AML	AML		
	comp=N,1074μm,0.3s						
MURB				AML	AML		
	comp=E,1085μm,0.9s						
MURB				AML	AML		
	comp=N,988μm,0.3s						
MURB				AML	AML		
	comp=E,1085μm,0.9s						
MURB				AML	AML		
	comp=N,989μm,0.3s						
MURB				AML	AML		
	comp=N,989μm,0.3s						
MURB				AML	AML		
	comp=E,1085μm,0.9s						
MURB				AML	AML		
	comp=N,989μm,0.3s						
MURB				AML	AML		
	comp=E,1085μm,0.9s						
SMA1	**SAN MARTINO**	**0.83**	**196**	P	**Pg**	**03 35 03.6**	**+0.3**
SMA1				AML	AML		
	comp=E,666μm,0.5s						
SMA1				AML	AML		
	comp=N,580μm,1.4s						
SMA1				AML	AML		
	comp=E,666μm,0.5s						
SMA1				AML	AML		
	comp=N,580μm,1.4s						
SMA1				AML	AML		
	comp=E,666μm,0.5s						
SMA1				AML	AML		
	comp=N,580μm,1.4s						
SMA1				AML	AML		
	comp=E,666μm,0.5s						
SMA1				AML	AML		
	comp=N,580μm,1.4s						
ATVO	**AVT- Monte Val**	**0.90**	**267**	P	**Pn**	**03 35 05.4**	**+0.2**
ATVO				AML	AML		
	comp=E,287μm,0.6s						
ATVO				AML	AML		
	comp=N,198μm,0.3s						
ATVO				AML	AML		
	comp=E,286μm,0.6s						
ATVO				AML	AML		
	comp=N,198μm,0.3s						
ATVO				AML	AML		
	comp=E,286μm,0.6s						
ATVO				AML	AML		
	comp=N,198μm,0.3s						
ATVO				AML	AML		
	comp=E,286μm,0.6s						
ATVO				AML	AML		
	comp=N,198μm,0.3s						
ATPI	**Pietralunga -**	**0.90**	**271**	P	**Pg**	**03 35 05.3**	**+0.7**
ATPI				AML	AML		
	comp=E,274μm,0.7s						
ATPI				AML	AML		
	comp=N,292μm,0.4s						
ATPI				AML	AML		
	comp=E,274μm,0.7s						
ATPI				AML	AML		
	comp=N,291μm,0.4s						
ATPI				AML	AML		
	comp=N,291μm,0.4s						
ATPI				AML	AML		
	comp=E,274μm,0.7s						
ATPI				AML	AML		
	comp=N,291μm,0.4s						
ATPI				AML	AML		
	comp=E,274μm,0.7s						
LNSS	**Leonessa**	**0.94**	**208**	P	**Pg**	**03 35 05.6**	**+0.3**
LNSS				AML	AML		
	comp=E,704μm,0.7s						
LNSS				AML	AML		
	comp=N,575μm,0.5s						
LNSS				AML	AML		
	comp=E,704μm,0.7s						
LNSS				AML	AML		
	comp=N,575μm,0.5s						
LNSS				AML	AML		
	comp=E,704μm,0.7s						
LNSS				AML	AML		
	comp=N,575μm,0.5s						
LNSS				AML	AML		
	comp=E,704μm,0.7s						
LNSS				AML	AML		
	comp=N,575μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.97**	**256**	P	**Pn**	**03 35 08.2**	**+2.1**
ATTE				AML	AML		
	comp=E,262μm,0.9s						
ATTE				AML	AML		
	comp=N,254μm,0.6s						
ATTE				AML	AML		
	comp=N,254μm,0.6s						
ATTE				AML	AML		
	comp=E,262μm,0.9s						
ATTE				AML	AML		
	comp=N,254μm,0.6s						
ATTE				AML	AML		
	comp=E,262μm,0.9s						
ATMI	**Monte Miggiano**	**1.00**	**265**	AML	AML		
	comp=E,324μm,0.6s						
ATMI				AML	AML		
	comp=E,324μm,0.6s						
ATMI				AML	AML		
	comp=N,520μm,0.9s						
ATMI				AML	AML		
	comp=E,324μm,0.6s						
ATMI				AML	AML		
	comp=N,520μm,0.9s						
ATMI				AML	AML		
	comp=N,520μm,0.9s						
MOMA	**Monte Martano**	**1.00**	**232**	P	**Pn**	**03 35 07.1**	**+0.4**
MOMA				AML	AML		
	comp=E,322μm,0.5s						
MOMA				AML	AML		
	comp=N,1830μm,1.6s						
MOMA				AML	AML		
	comp=E,361μm,0.8s						
MOMA				AML	AML		
	comp=N,434μm,0.2s						
MOMA				AML	AML		
	comp=E,322μm,0.5s						
MOMA				AML	AML		
	comp=N,1830μm,1.6s						
MOMA				AML	AML		
	comp=E,361μm,0.8s						
MOMA				AML	AML		
	comp=N,434μm,0.2s						
MOMA				AML	AML		
	comp=E,361μm,0.8s						
MOMA				AML	AML		
	comp=N,434μm,0.2s						
MOMA				AML	AML		
	comp=N,1830μm,1.6s						
MOMA				AML	AML		
	comp=E,322μm,0.5s						
MOMA				AML	AML		
	comp=E,361μm,0.8s						
MOMA				AML	AML		
	comp=N,434μm,0.2s						
MOMA				AML	AML		
	comp=N,1830μm,1.6s						
MOMA				AML	AML		
	comp=E,322μm,0.5s						
BADI	**Badiali**	**1.02**	**275**	P	**Pg**	**03 35 07.9**	**+1.1**
BADI				AML	AML		
	comp=E,348μm,0.6s						
BADI				AML	AML		
	comp=N,467μm,0.4s						
BADI				AML	AML		
	comp=N,467μm,0.4s						
BADI				AML	AML		
	comp=E,348μm,0.6s						
BADI				AML	AML		
	comp=N,467μm,0.4s						
BADI				AML	AML		
	comp=E,348μm,0.6s						
VCEL	**Villa Celiera**	**1.05**	**172**	AML	AML		
	comp=N,496μm,1.2s						
VCEL				AML	AML		
	comp=E,956μm,0.8s						
VCEL				AML	AML		
	comp=N,496μm,1.2s						
VCEL				AML	AML		
	comp=E,958μm,0.8s						
VCEL				AML	AML		
	comp=N,496μm,1.2s						
VCEL				AML	AML		
	comp=E,958μm,0.8s						
VCEL				AML	AML		
	comp=N,496μm,1.2s						
VCEL				AML	AML		
	comp=E,958μm,0.8s						
ARRO	**Arrone**	**1.07**	**217**	AML	AML		
	comp=E,266μm,1.2s						
ARRO				AML	AML		
	comp=E,266μm,1.2s						
ARRO				AML	AML		
	comp=N,200μm,1.5s						
ARRO				AML	AML		
	comp=E,266μm,1.2s						
ARRO				AML	AML		
	comp=N,201μm,1.5s						
ARRO				AML	AML		
	comp=N,201μm,1.5s						
ARRO				AML	AML		
	comp=N,201μm,1.5s						
ARRO				AML	AML		
	comp=E,266μm,1.2s						
AQU	**L'Aquila**	**1.09**	**189**	AML	AML		
	comp=N,280μm,1.0s						
AQU				AML	AML		
	comp=E,312μm,0.8s						
AQU				AML	AML		
	comp=N,307μm,1.1s						
AQU				AML	AML		
	comp=E,278μm,0.8s						
AQU				AML	AML		
	comp=E,278μm,0.8s						
AQU				AML	AML		
	comp=E,312μm,0.8s						
AQU				AML	AML		
	comp=N,280μm,1.0s						
AQU				AML	AML		
	comp=N,307μm,1.1s						
AQU				AML	AML		
	comp=E,278μm,0.8s						
AQU				AML	AML		
	comp=E,312μm,0.8s						
AQU				AML	AML		
	comp=N,280μm,1.0s						
AQU				AML	AML		
	comp=N,307μm,1.1s						
T0104	**Madonna delle**	**1.10**	**192**	AML	AML		
	comp=E,562μm,1.0s						
T0104				AML	AML		
	comp=E,556μm,1.0s						
T0104				AML	AML		
	comp=N,410μm,0.8s						
T0104				AML	AML		
	comp=N,416μm,0.7s						
T0104				AML	AML		
	comp=E,562μm,1.0s						
T0104				AML	AML		
	comp=N,416μm,0.7s						
T0104				AML	AML		
	comp=E,562μm,1.0s						
T0104				AML	AML		
	comp=N,416μm,0.7s						
T0104				AML	AML		
	comp=E,562μm,1.0s						
T0104				AML	AML		
	comp=N,416μm,0.7s						
CESX	**Cesi**	**1.13**	**224**	AML	AML		
	comp=N,342μm,0.3s						
CESX				AML	AML		
	comp=E,358μm,0.7s						
CESX				AML	AML		
	comp=N,342μm,0.3s						
CESX				AML	AML		
	comp=E,358μm,0.7s						
CESX				AML	AML		
	comp=N,342μm,0.3s						
CESX				AML	AML		
	comp=E,358μm,0.7s						
FAGN	**Fagnano**	**1.17**	**182**	AML	AML		
	comp=E,1041μm,0.4s						
FAGN				AML	AML		
	comp=N,703μm,0.6s						
FAGN				AML	AML		
	comp=N,703μm,0.6s						
FAGN				AML	AML		
	comp=E,1041μm,0.4s						
FAGN				AML	AML		
	comp=N,703μm,0.6s						
FAGN				AML	AML		
	comp=E,1041μm,0.4s						
DUGI	**Dugi Otok**	**1.17**	**61**	*i* Pg	**Pn**	**03 35 07.0**	**-1.8**
DUGI				Sg	**Sb**	**03 35 23.0**	**-1.0**
CAFI	**Castiglion Fio**	**1.22**	**266**	P	**Pg**	**03 35 12.3**	**+1.6**
CAFI				AML	AML		
	comp=E,134μm,0.9s						
CAFI				AML	AML		
	comp=N,207μm,0.6s						
CAFI				AML	AML		
	comp=N,207μm,0.6s						
CAFI				AML	AML		
	comp=E,134μm,0.9s						
CAFI				AML	AML		
	comp=N,207μm,0.6s						
CAFI				AML	AML		
	comp=E,134μm,0.9s						
MGAB	**Montegabbione**	**1.23**	**245**	P	**Pg**	**03 35 12.3**	**+1.5**
MGAB				AML	AML		
	comp=E,279μm,0.4s						
MGAB				AML	AML		
	comp=N,352μm,1.0s						
MGAB				AML	AML		
	comp=E,279μm,0.4s						
MGAB				AML	AML		
	comp=N,352μm,1.0s						
MGAB				AML	AML		
	comp=E,279μm,0.4s						
MGAB				AML	AML		
	comp=N,352μm,1.0s						
CAFR	**Castel Frentan**	**1.31**	**156**	AML	AML		
	comp=E,1062μm,0.7s						
CAFR				AML	AML		
	comp=E,1062μm,0.7s						
CAFR				AML	AML		
	comp=N,714μm,0.4s						
CAFR				AML	AML		
	comp=N,714μm,0.4s						
CAFR				AML	AML		
	comp=E,1062μm,0.7s						
CAFR				AML	AML		
	comp=N,714μm,0.4s						
SACS	**San Casciano d**	**1.39**	**246**	P	**Pg**	**03 35 14.7**	**+0.8**
SACS				AML	AML		
	comp=E,98μm,0.8s						
SACS				AML	AML		
	comp=N,133μm,0.6s						
SACS				AML	AML		
	comp=N,133μm,0.6s						
SACS				AML	AML		
	comp=E,98μm,0.8s						
SACS				AML	AML		
	comp=N,133μm,0.6s						
SACS				AML	AML		
	comp=E,98μm,0.8s						
INTR	**Introdacqua**	**1.44**	**172**	P	**Pb**	**03 35 13.8**	**+0.2**
INTR				AML	AML		
	comp=E,298μm,0.7s						
INTR				AML	AML		
	comp=N,391μm,0.8s						
INTR				AML	AML		
	comp=E,298μm,0.7s						
INTR				AML	AML		
	comp=N,391μm,0.8s						
INTR				AML	AML		
	comp=E,298μm,0.7s						
INTR				AML	AML		
	comp=N,391μm,0.8s						
ZIRJ	**Zirje**	**1.48**	**81**	*i* Pn	**Pn**	**03 35 12.0**	**-1.0**
ZIRJ				Sn	**Sn**	**03 35 31.0**	**-1.0**
CERT	**Cerreto**	**1.56**	**198**	P	**Pg**	**03 35 16.7**	**-0.4**
CERT				AML	AML		
	comp=E,165μm,0.6s						
CERT				AML	AML		
	comp=N,107μm,0.6s						
CERT				AML	AML		
	comp=N,107μm,0.6s						
CERT				AML	AML		
	comp=E,165μm,0.6s						
CERT				AML	AML		
	comp=N,107μm,0.6s						
CERT				AML	AML		
	comp=E,165μm,0.6s						
MORI	**Morici**	**1.56**	**73**	*e*Pn	**Pn**	**03 35 13.4**	**-0.8**
POFI	**Posta Fibreno**	**1.72**	**178**	P	**Pb**	**03 35 18.8**	**+0.4**
POFI				AML	AML		
	comp=E,106μm,0.6s						
POFI				AML	AML		
	comp=N,79μm,0.6s						
POFI				AML	AML		
	comp=E,106μm,0.6s						
POFI				AML	AML		
	comp=N,79μm,0.6s						
POFI				AML	AML		
	comp=E,106μm,0.6s						
POFI				AML	AML		
	comp=N,79μm,0.6s						
SEI	**Scarperia**	**1.77**	**291**	AML	AML		
	comp=E,122μm,0.4s						

SEI				AML	AML		
	comp=E,122µm,0.4s						
SEI				AML	AML		
	comp=N,159µm,0.4s						
SEI				AML	AML		
	comp=N,159µm,0.4s						
SEI				AML	AML		
	comp=E,122µm,0.4s						
SEI				AML	AML		
	comp=N,159µm,0.4s						
RNI2	Rionero Sannit	1.77	167	AML	AML		
	comp=N,142µm,0.6s						
RNI2				AML	AML		
	comp=E,156µm,0.6s						
RNI2				AML	AML		
	comp=N,128µm,0.7s						
RNI2				AML	AML		
	comp=E,134µm,0.6s						
RNI2				AML	AML		
	comp=N,142µm,0.6s						
RNI2				AML	AML		
	comp=N,128µm,0.7s						
RNI2				AML	AML		
	comp=E,134µm,0.6s						
RNI2				AML	AML		
	comp=E,156µm,0.6s						
RNI2				AML	AML		
	comp=N,128µm,0.7s						
RNI2				AML	AML		
	comp=N,142µm,0.6s						
RNI2				AML	AML		
	comp=E,156µm,0.6s						
RNI2				AML	AML		
	comp=E,134µm,0.6s						
MIDA	Miranda	1.85	166	AML	AML		
	comp=N,95µm,0.9s						
MIDA				AML	AML		
	comp=E,104µm,0.7s						
MIDA				AML	AML		
	comp=N,95µm,0.9s						
MIDA				AML	AML		
	comp=E,104µm,0.7s						
MIDA				AML	AML		
	comp=N,95µm,0.9s						
MIDA				AML	AML		
	comp=E,104µm,0.7s						
UDBI	Udbina	1.89	54	*e*Pn	Pn	03 35 18.5	-0.3
UDBI				Sn	Sn	03 35 42.5	+0.2
HVAR	Hvar	2.07	96	*i* Pn	Pn	03 35 19.9	-1.3
SKDS	Skadanscina	2.13	7	*e*Pn	Pn	03 35 21.4	-0.7
SKDS				*i* Sn	Sn	03 35 48.1	-0.2
	comp=Z,11nm,0.3s						
MSAG	Monte S. Angel	2.40	135	AML	AML		
	comp=E,97µm,0.7s						
MSAG				AML	AML		
	comp=E,97µm,0.7s						
MSAG				AML	AML		
	comp=N,195µm,0.6s						
MSAG				AML	AML		
	comp=N,195µm,0.6s						
MSAG				AML	AML		
	comp=E,97µm,0.7s						
MSAG				AML	AML		
	comp=N,195µm,0.6s						
OZLJ	Ozalj	2.54	30	*e*Pn	Pn	03 35 27.5	-0.2
LJU	Ljubljana	2.69	13	AML	AML		
	comp=E,77µm,1.5s						
LJU				AML	AML		
	comp=E,77µm,1.5s						
LJU				AML	AML		
	comp=N,94µm,0.6s						
LJU				AML	AML		
	comp=N,94µm,0.6s						
LJU				AML	AML		
	comp=E,77µm,1.5s						
LJU				AML	AML		
	comp=N,94µm,0.6s						
POLC	Polcenigo	2.72	343	AML	AML		
	comp=N,112µm,0.5s						
POLC				AML	AML		
	comp=E,82µm,0.7s						
POLC				AML	AML		
	comp=N,112µm,0.5s						
POLC				AML	AML		
	comp=N,112µm,0.5s						
POLC				AML	AML		
	comp=E,82µm,0.7s						
POLC				AML	AML		
	comp=E,82µm,0.7s						
GRAM	Graiana	2.79	294	AML	AML		
	comp=E,33µm,1.0s						
GRAM				AML	AML		
	comp=E,33µm,1.0s						
GRAM				AML	AML		
	comp=N,40µm,0.3s						
GRAM				AML	AML		
	comp=N,40µm,0.3s						
GRAM				AML	AML		
	comp=N,40µm,0.3s						
GRAM				AML	AML		
	comp=E,33µm,1.0s						
MCRV	Calabrutti - M	2.88	156	AML	AML		
	comp=E,35µm,0.8s						
MCRV				AML	AML		
	comp=N,53µm,0.6s						
MCRV				AML	AML		
	comp=E,35µm,0.8s						
MCRV				AML	AML		
	comp=N,53µm,0.6s						
MCRV				AML	AML		
	comp=E,35µm,0.8s						
MCRV				AML	AML		
	comp=N,53µm,0.6s						
CTI	Castel Tesino	2.97	332	AML	AML		
	comp=N,45µm,0.2s						
CTI				AML	AML		
	comp=E,51µm,1.0s						
CTI				AML	AML		
	comp=E,51µm,1.0s						
CTI				AML	AML		
	comp=N,45µm,0.2s						
CTI				AML	AML		
	comp=E,51µm,1.0s						
CTI				AML	AML		
	comp=N,45µm,0.2s						
STON	Ston	3.02	99	*e*Pn	Pn	03 35 33.8	-0.6
OBKA	Obir	3.14	12	*e*Pn	Pn	03 35 36.5	+0.4
	comp=N,0.6nm,0.2s						
MAGA	Magasa	3.18	318	AML	AML		
	comp=E,166µm,0.4s						
MAGA				AML	AML		
	comp=E,166µm,0.4s						
MAGA				AML	AML		
	comp=N,182µm,1.1s						
MAGA				AML	AML		
	comp=E,166µm,0.4s						
MAGA				AML	AML		
	comp=N,182µm,1.1s						
MAGA				AML	AML		
	comp=N,182µm,1.1s						
MYKA	Terra Mystica	3.20	0	*e*Pn	Pn	03 35 37.2	+0.5
	comp=N,2.6nm,0.4s						
MYKA				Sg	Sg	03 36 31.6	+1.8
	comp=N,1.6nm,0.3s						
BOB	Bobbio (Coli)	3.30	295	AML	AML		
	comp=N,20µm,0.9s						
BOB				AML	AML		
	comp=E,24µm,0.8s						
BOB				AML	AML		
	comp=E,24µm,0.8s						
BOB				AML	AML		
	comp=N,20µm,0.9s						
BOB				AML	AML		
	comp=E,24µm,0.8s						
BOB				AML	AML		
	comp=N,20µm,0.9s						
SOKA	Soboth	3.39	16	*e*Pn	Pn	03 35 39.9	+0.5
	comp=N,0.2nm,0.2s						
SOKA				*e*Sn	Sb	03 36 32.8	+4.9
	comp=N,1.3nm,0.4s						
ABTA	Abfaltersbach	3.41	347	*i* Pn	Pn	03 35 40.4	+0.7
	comp=N,7.3nm,0.6s,SNR=10						
KOSI	Kohlern	3.43	333	AML	AML		
	comp=N,39µm,0.9s						
KOSI				AML	AML		
	comp=E,37µm,0.7s						
KOSI				AML	AML		
	comp=N,39µm,0.9s						
KOSI				AML	AML		
	comp=E,37µm,0.7s						
KOSI				AML	AML		
	comp=N,39µm,0.9s						
KOSI				AML	AML		
	comp=E,37µm,0.7s						
MABI	Malga Bissina	3.44	321	AML	AML		
	comp=N,26µm,1.4s						
MABI				AML	AML		
	comp=E,21µm,0.7s						
MABI				AML	AML		
	comp=N,26µm,1.4s						
MABI				AML	AML		
	comp=E,21µm,0.7s						
MABI				AML	AML		
	comp=N,26µm,1.4s						
MABI				AML	AML		
	comp=E,21µm,0.7s						
KBA	Koelnbreinsper	3.65	357	*e*Pn	Pn	03 35 43.4	+0.2
	comp=E,0.6nm,0.3s						
MDI	Monti di Nese	3.65	311	AML	AML		
	comp=N,20µm,0.3s						
MDI				AML	AML		
	comp=E,21µm,0.3s						
MDI				AML	AML		
	comp=N,20µm,0.3s						
MDI				AML	AML		
	comp=E,21µm,0.3s						
MDI				AML	AML		
	comp=N,20µm,0.3s						
MDI				AML	AML		
	comp=E,21µm,0.3s						
ABSI	Aberstueckl	3.68	334	AML	AML		
	comp=N,58µm,0.9s						
ABSI				AML	AML		
	comp=E,64µm,0.6s						
ABSI				AML	AML		
	comp=N,58µm,0.9s						
ABSI				AML	AML		
	comp=E,64µm,0.6s						
ABSI				AML	AML		
	comp=N,58µm,0.9s						
ABSI				AML	AML		
	comp=E,64µm,0.6s						
ROSI	Rosskopf	3.83	337	AML	AML		
	comp=E,36µm,0.4s						
ROSI				AML	AML		
	comp=N,33µm,0.8s						
ROSI				AML	AML		
	comp=N,33µm,0.8s						
ROSI				AML	AML		
	comp=E,36µm,0.4s						
ROSI				AML	AML		
	comp=N,33µm,0.8s						
ROSI				AML	AML		
	comp=E,36µm,0.4s						
ARSA	Arzberg	4.04	19	*e*Pn	Pn	03 35 48.9	+0.6
	comp=E,0.4nm,0.4s						
WTTA	Wattenberg	4.08	340	*e*Pn	Pn	03 35 50.2	+1.1
	comp=E,1.1nm,0.2s						
WTTA				*e*Sn	Sn	03 36 38.9	+2.3
	comp=E,1.3nm,0.3s						
FETA	Feichten	4.13	331	*e*Pn	Pn	03 35 51.3	+1.5
	comp=E,0.9nm,0.3s						
SQTA	Sankt Quirin	4.16	337	*e*Pn	Pn	03 35 51.9	+1.9
	comp=E,1.3nm,0.2s,SNR=5.5						
SQTA				*e*Sn	Sn	03 36 41.1	+2.8
	comp=E,2.9nm,0.3s						
WATA	Walderalm	4.16	340	*e*Pn	Pn	03 35 51.9	+1.7
	comp=E,1.8nm,0.2s,SNR=5.0						
MOTA	Moosalm	4.30	336	*e*Pn	Pn	03 35 53.9	+1.9
	comp=E,0.6nm,0.3s						
MOA	Molln	4.44	5	*e*Pn	Pn	03 35 54.3	+0.5
	comp=E,0.5nm,0.2s						
SBF	Sospel	4.52	278	*e*P	Pn	03 35 57.4	+2.4
SBF				*e*Sn	Sn	03 36 44.1	-3.2
	comp=E,1.3nm,0.2s						
RETA	Reutte	4.53	334	*e*Pn	Pn	03 35 57.4	+2.2
	comp=E,1.7nm,0.3s,SNR=5.0						
DAVA	Damuels	4.67	327	*e*Pn	Pn	03 35 59.6	+2.4
	comp=E,0.8nm,0.2s						
DAVA				*e*Sn	Sn	03 36 52.6	+1.4
	comp=E,4.5nm,0.7s						
FRF	La Foret Royal	5.09	274	*e*P	Pn	03 36 05.7	+3.0
FRF				*e*Sn	Sn	03 36 57.3	-3.9
	comp=E,0.5nm,0.2s						
MBDF	Montbardon	5.11	287	*e*Pn	Pn	03 36 02.6	-0.6
MBDF				*e*Sn	Sn	03 36 58.5	-3.5
	comp=E,1.8nm,0.3s						
LMR	La Mourre	5.20	271	*e*P	Pn	03 36 07.0	+2.8
LMR				*e*Sn	Sn	03 36 59.7	-4.1
	comp=E,0.4nm,0.2s						
LPG	La Plagne	5.34	295	*e*Pn	Pn	03 36 06.6	+0.1
LPG				*e*Sn	Sn	03 37 05.0	-2.8
	comp=E,1.3nm,0.2s						
LPL	La Plagne	5.36	295	*e*Pn	Pn	03 36 06.6	-0.1
LPL				*e*Sn	Sn	03 37 04.4	-3.8
	comp=E,2.9nm,0.3s						
ORIF	Oris-en-Rattie	5.77	288	*e*P	Pn	03 36 15.0	+2.8
ORIF				*e*Sn	Sn	03 37 14.6	-3.6
	comp=E,0.9nm,0.3s						
SMRF	Simiane la Rot	5.87	278	*e*P	Pn	03 36 17.6	+4.1
SMRF				*e*Sn	Sn	03 37 17.4	-3.1
	comp=E,0.3nm,0.2s						
CABF	La Chapelle	6.22	303	*e*Pn	Pn	03 36 18.1	-0.3
CABF				*e*Sn	Sn	03 37 25.5	-3.7
	comp=E,1.6nm,0.4s						
VYHS	Vyhne	6.22	34	*e*PG	Pg	03 36 53.2	+7.0
HINF	Hinteralfeld	6.47	315	*e*Pn	Pn	03 36 21.2	-0.5
HINF				*e*Sn	Sn	03 37 30.8	-4.4
	comp=E,1.7nm,0.2s						
CDF	Champ du Feu	6.67	321	*e*Pn	Pn	03 36 24.3	-0.2
CDF				*e*Sn	Sn	03 37 35.2	-5.0
	comp=E,1.2nm,0.3s						
HAU	Haudompre	6.85	314	*e*Pn	Pn	03 36 26.6	-0.3
HAU				*e*Sn	Sn	03 37 39.8	-4.7
	comp=E,6.0nm,0.3s						
PAGF	Fort de Pagny	7.52	316	*e*Pn	Pn	03 36 35.1	-1.0
PAGF				*e*Sn	Sn	03 37 55.6	-5.4
	comp=E,0.9nm,0.2s						
SMF	Signal de Mont	7.64	298	*e*Pn	Pn	03 36 37.4	-0.4
SMF				*e*Sn	Sn	03 37 58.5	-5.6
	comp=E,1.3nm,0.3s						
SFTF	Sexfontaines	7.67	311	*e*Pn	Pn	03 36 38.5	+0.4
	baz=134						
SFTF				*e*Sn	Sn	03 37 59.3	-5.4
	comp=E,0.8nm,0.3s						
MEZF	Maizieres J’vi	7.84	313	*e*Pn	Pn	03 36 39.7	-0.7
	baz=134						
MEZF				*e*Sn	Sn	03 38 02.2	-6.6
	comp=E,1.2nm,0.3s						
LOR	Lormes	7.88	302	*e*Pn	Pn	03 36 40.7	-0.4
	baz=118						
LOR				*e*Sn	Sn	03 38 04.1	-5.8
	comp=E,4.7nm,0.5s						
AVF	Avril sur Loir	8.01	298	*e*Pn	Pn	03 36 42.2	-0.6
AVF				*e*Sn	Sn	03 38 06.7	-6.4
	comp=E,0.2nm,0.2s						
SSF	Saint Saulge	8.02	300	*e*Pn	Pn	03 36 42.5	-0.4
SSF				*e*Sn	Sn	03 38 07.8	-5.4
	comp=E,1.6nm,0.5s						
BGF	Bois d'Agland	8.26	296	*e*Pn	Pn	03 36 45.5	-0.8
BGF				*e*Sn	Sn	03 38 13.6	-5.6
	comp=E,1.4nm,0.2s						
TCF	Toulx Ste Croi	8.60	293	*e*Pn	Pn	03 36 50.4	-0.6
TCF	Toulx Ste Croi	8.60	293	*e*P	Pn	03 36 55.4	+4.4
TCF				*e*Sn	Sn	03 38 22.2	-5.5
	comp=E,0.4nm,0.4s						

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*NEIC **21** 03:43:00.5±0.0, 18.°13N×101.°90W, h16km, MD4.0(MEX), After MEX.*

MEX 21 03:43:00.4±0.6**, 18.°16N×101.°90W, h18**km±7km**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.69	143	*e*Pg	Pb	03 43 11.4	-2.4
ZIIG				*e*Sg	Sb	03 43 19.4	-3.7
ZIIG	Zihuatanejo	0.69	143	*e*P	Pb	03 43 11.4	-2.4
ZIIG				*e*S	Sb	03 43 20.5	-2.5
MMIG	Aquila	1.38	276	*e*Pn	Pn	03 43 20.9	-3.9
MMIG				*e*Sn	Sn	03 43 38.0	-4.6
MMIG	Aquila	1.38	276	*e*P	Pn	03 43 20.9	-3.9
MMIG				*i* S	Sn	03 43 38.0	-4.6
ARIG	Puente Sto Nin	1.48	85	*e*P	Pn	03 43 22.9	-3.4
ARIG				*i* S	Sn	03 43 40.5	-4.7
CAIG	El Cayaco	1.91	125	*e*Pn	Pn	03 43 28.9	-3.1
CAIG	El Cayaco	1.91	125	*e*P	Pn	03 43 28.9	-3.1
CAIG				*e*S	Sn	03 43 50.6	-5.2
EZ5V		2.08	310	*e*P	Pn	03 43 32.4	-2.3
EZ5V				*e*S	Sn	03 43 55.8	-4.4
MEIG	Mezcala	2.19	96	*e*Pn	Pn	03 43 32.8	-3.2
MEIG	Mezcala	2.19	96	*e*P	Pn	03 43 32.8	-3.2
MEIG				*i* S	Sn	03 43 58.8	-3.8
TLIG	Tlapa	3.23	100	*e*Pn	Pn	03 43 51.9	+1.5
CJM	Chamela	3.26	295	*e*Pn	Pn	03 43 48.8	-1.9
CJM	Chamela	3.26	295	*e*P	Pn	03 43 48.8	-1.9
CJM				*i* S	Sn	03 44 25.2	-3.8

BJI 21 03:49:47.3±0.0**, 32.°37N×104.°99E, h20**km**, ML3.5**/12**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XAN	Xi'an	3.69	62	Pn	Pn	03 50 44.3	+1.0
XAN				Pg	Pb	03 50 50.3	-1.6
XAN				Sn	Sb	03 51 31.3	-4.9
XAN				Sg	Sn	03 51 39.8	+14
XAN				smax	smax		
	comp=N,190nm,0.6s						
XAN				smax	smax		
	comp=E,200nm,0.7s						
LZH	Lanzhou	3.83	346	Pg	Pb	03 50 58.9	+4.7
LZH				Sn	Sn	03 51 33.9	+4.2
LZH				Sg	Sb	03 51 47.3	+7.1
LZH				smax	smax		
	comp=N,230nm,1.0s						
LZH				smax	smax		
	comp=E,400nm,1.1s						
GYA	Guiyang	6.07	166	*e*Pn	Pn	03 51 15.5	-0.5
GYA				Pg	Pb	03 51 36.3	+3.9
GYA				Sn	Sn	03 52 22.8	-2.2
GYA				smax	smax		
	comp=N,40nm,0.7s						
GYA				smax	smax		
	comp=E,50nm,1.0s						
GTA	Gaotai	8.18	331	*e*P	Pb	03 52 04.3	-4.1
GTA				pP	Pn	03 52 08.5	+23
GTA				sP		03 52 11.9	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WMQ	Urumqi	17.74	315	*e*P	Pn	03 53 53.4	+0.3
WMQ				smax	smax		
	comp=N,45nm,1.1s						
WMQ				smax	smax		
	comp=E,33nm,0.7s						

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*IDC **21** 04:20:33.4±1.6, 41.°47S×174.°37E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/27, mbtmp3.8/3, ML3.1/2, MS2.6/2, Ms1 2.6/2, ms1mx2.5/17, Error ellipse: s-maj=43.0km s-min=14.0km az=131.0*

*ISCJB **21** 04:20:36.7±0.4, 41.°77S±0.°03×174.°48E±0.°03, h18km±4km, mb3.7/2, Error ellipse: s-maj=5.7km s-min=2.6km az=137.3*

*WEL **21** 04:20:36.9, 41.°6S±0.°6×174.°4E±0.°6, h16km±1km, M4.0/26, ML4.2/20, MLv4.0/26, Error ellipse: s-maj=0.0km s-min=0.0km az=132.6*

*NEIC **21** 04:20:37.0±0.0, 41.°54S×174.°37E, h15km, ML4.0(WEL), After WEL.*

ISC 21 04:20:36.6±0.8**, 41.°58S**±0.°03×**174.°38E**±0.°03**, h21**km±1km**, n125, σ1.°26**/126**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.21	216	P	Pb	04 20 42.7	+0.1
CMWZ				S	Sb	04 20 47.2	+0.4
SNZO	South Karori	0.36	42	*e*Pg	Pb	04 20 43.1	-1.1
TUWZ	Tuamarina	0.36	294	P	Pb	04 20 44.5	+0.3
TUWZ				S	Sb	04 20 49.9	+0.6
TCW	Tory Channel	0.38	348	P	Pb	04 20 44.8	+0.3
TCW				S	Sb	04 20 49.9	+0.2
BSWZ	Blackbirch Sta	0.40	250	P	Pb	04 20 45.6	+0.6
BSWZ				S	Sb	04 20 51.9	+1.3
BHW	Baring Head	0.41	66	P	Pb	04 20 45.7	+0.8
BHW				S	Sb	04 20 51.8	+1.1
PLWZ	Palliser	0.66	90	P	Pb	04 20 50.5	+1.0
MSWZ	Moikau Station	0.67	76	P	Pb	04 20 50.7	+1.0
CAW	Cannon Point	0.70	48	P	Pb	04 20 50.7	+0.6
CAW				S	Sb	04 21 00.5	+1.3
PAWZ	Paruwai Farm	0.81	76	P	Pn	04 20 53.1	+0.2
NNZ	Nelson	0.83	295	P	Pb	04 20 52.9	+0.5
DUWZ	D’Urville Isla	0.85	336	P	Pb	04 20 53.3	+0.6
MTW	Mount Morrison	0.94	64	P	Pn	04 20 55.5	+0.9
OGWZ	Otaki Gorge	0.96	38	P	Pn	04 20 55.1	+0.2
TRWZ	Traveller	1.00	80	P	Pn	04 20 56.1	+0.7
KHZ	Kahutara	1.05	217	*e*Pn	Pn	04 20 57.0	+0.9
KHZ	Kahutara	1.05	217	P	Pn	04 20 57.2	+1.2
HOWZ	Holdsworth Sta	1.09	52	P	Pb	04 20 57.6	+0.9
THZ	Tophouse	1.12	260	*e*Pn	Pb	04 20 57.7	+0.3
THZ	Tophouse	1.12	260	P	Pb	04 20 58.0	+0.7
TMWZ	Te Maipa	1.23	68	P	Pn	04 20 59.2	+0.7
MRZ	Mangatainoka R	1.29	45	P	Pb	04 21 00.7	+0.6
TIWZ	Tintock	1.39	55	P	Pn	04 21 01.6	+0.9
CPWZ	Castlepoint	1.53	65	P	Pb	04 21 04.1	-0.1
OHWZ	Ohakea	1.54	28	P	Pb	04 21 05.7	+1.3
PRWZ	Pori Road	1.58	50	P	Pn	04 21 04.4	+1.1
POWZ	Post Office Ro	1.58	42	P	Pb	04 21 05.1	-0.1
QRZ	Quartz Range	1.59	298	P	Pb	04 21 05.6	+0.4
BFZ	Birch Farm	1.67	58	*e*Pn	Pn	04 21 05.0	+0.5
BFZ	Birch Farm	1.67	58	P	Pn	04 21 04.8	+0.2
GVZ	Greta Valley S	1.71	215	P	Pn	04 21 06.1	+0.9
DVHZ	Dannevirke	1.86	47	P	Pn	04 21 07.6	+0.4
WAZ	Wanganui	1.88	14	P	Pb	04 21 11.7	+1.5
ANWZ	Angora Road	1.94	56	P	Pn	04 21 08.3	0.0
LTZ	Lake Taylor	1.98	232	*e*Pn	Pn	04 21 09.5	+0.6
LTZ	Lake Taylor	1.98	232	P	Pn	04 21 10.0	+1.2
AMCZ	Amberley	2.05	218	P	Pn	04 21 10.2	+0.4
PNHZ	Pukenui	2.16	40	P	Pn	04 21 12.3	+0.9
WPHZ	Waipukurau	2.17	47	P	Pn	04 21 12.8	+1.3
NMEZ	Namu Road	2.19	350	P	Pb	04 21 16.2	+0.6
PREZ	Palmer Road	2.24	356	P	Pb	04 21 17.7	+1.3
KHEZ	Kahui Hut	2.30	353	P	Pb	04 21 17.6	+0.3
NBEZ	Newall Road No	2.34	350	P	Pb	04 21 17.1	-1.0
MTVZ	Mangateitei	2.34	21	P	Pb	04 21 18.9	+0.8
OKCZ	Okains Bay	2.36	204	P	Pn	04 21 13.8	-0.2
CRLZ	Canterbury Las	2.38	212	*e*Pn	Pn	04 21 14.1	-0.3
CRLZ	Canterbury Las	2.38	212	P	Pn	04 21 13.8	-0.6
DREZ	Durham Road	2.39	357	P	Pb	04 21 19.4	+0.5
PKE	Pukeiti	2.40	353	P	Pb	04 21 18.2	-0.9
PKVZ	Pokaka	2.40	18	P	Pb	04 21 19.6	+0.5
MOVZ	Moawhango	2.41	26	P	Pb	04 21 17.5	-1.7
BHHZ	Black Hill Sta	2.45	32	P	Pn	04 21 17.8	+2.4
KRHZ	Kereru	2.45	39	P	Pn	04 21 16.2	+0.8
OXZ	Oxford	2.46	224	*e*Pn	Pn	04 21 15.0	-0.5
OXZ	Oxford	2.46	224	P	Pn	04 21 15.3	-0.2
INZ	Inchbonnie	2.47	241	P	Pn	04 21 16.9	+1.3
VRZ	Vera Road	2.47	7	P	Pb	04 21 19.9	-0.3
DRZ	Dome Shelter	2.47	22	P	Pb	04 21 21.5	+1.0
WHVZ	Whangaehu Hut	2.47	22	P	Pb	04 21 19.2	-1.3
MQZ	McQueen’s Vall	2.48	210	*e*Pn	Pn	04 21 14.8	-0.9
MQZ	McQueen’s Vall	2.48	210	P	Pn	04 21 14.9	-0.9
FWVZ	Far West T-bar	2.49	21	P	Pb	04 21 19.8	-0.9
TUVZ	Tukino	2.50	23	P	Pb	04 21 20.3	-0.6
AKCZ	Akaroa Harbour	2.54	205	P	Pn	04 21 16.2	-0.4
NGZ	Ngauruhoe	2.57	22	P	Pb	04 21 20.6	-1.6
KAHZ	Kahuranaki	2.60	48	P	Pn	04 21 17.8	+0.4
WTVZ	West Tongariro	2.63	21	P	Pb	04 21 22.2	-0.8
TWVZ	Taurewa	2.63	18	P	Pb	04 21 22.9	-0.2
KWHZ	Kaweka Forest	2.66	37	P	Pb	04 21 25.8	+2.4
KRVZ	Karewarewa	2.66	22	P	Pb	04 21 23.6	0.0
MCHZ	McNeill Hill	2.77	40	P	Pb	04 21 26.7	+1.4
KATZ	Kakaramea	2.79	22	P	Pb	04 21 27.7	+2.0
RITZ	Rihia Road	2.83	24	P	Pb	04 21 27.9	+1.5
BKZ	Black Stump Fm	2.90	34	*e*Pn	Pn	04 21 21.9	+0.4
BKZ	Black Stump Fm	2.90	34	P	Pb	04 21 28.4	+0.7
RATZ	Rangitukua	2.91	22	P	Pb	04 21 29.6	+1.8
WATZ	Wairara	3.05	20	P	Pb	04 21 31.9	+1.7
HIZ	Hauiti	3.08	7	*e*Pn	Pb	04 21 28.4	-2.3
HIZ	Hauiti	3.08	7	P	Pb	04 21 28.6	-2.1
WVZ	Waitaha Valley	3.09	240	P	Pn	04 21 25.4	+1.3
MRHZ	Matea Rd	3.15	30	P	Pb	04 21 31.3	-0.6
RPZ	Rata Peaks	3.25	228	Pn	Pn	04 21 26.6	+0.2
	5.7nm,0.3s,baz=100,slow=3.9,SNR=13						
RPZ				Pg	Pb	04 21 33.6	0.0

	5.0nm,0.3s,baz=16,slow=2.2,SNR=14						
RPZ				Sn	Sn	04 22 03.4	-1.1
	7.1nm,0.3s,baz=16,slow=8.7,SNR=3.7						
RPZ				Lg	Lg	04 22 19.1	
	3.8nm,0.3s,baz=274,slow=12,SNR=3.0						
RPZ				LR	LR	04 22 47.1	
	comp=Z,75nm,21.1s,baz=6.0,slow=40						
RPZ	Rata Peaks	3.25	228	ePn	Pn	04 21 26.3	-0.1
RPZ	Rata Peaks	3.25	228	P	Pn	04 21 27.2	+0.8
KUTZ	Kaahu Road	3.28	20	P	Pb	04 21 36.6	+2.5
MTHZ	Maungataniwha	3.31	35	P	Pn	04 21 28.9	+1.7
TLZ	Tolley Road	3.36	16	P	Pb	04 21 34.1	-1.4
RAHZ	Arahi	3.37	39	P	Pb	04 21 33.8	-1.9
MUGZ	Murupara	3.60	31	P	Pb	04 21 37.0	-2.5
TARZ	Mount Tarawera	3.72	27	P	Pb	04 21 39.1	-2.5
RAGZ	Rawiri	3.86	38	P	Pn	04 21 36.6	+1.8
RIGZ	Rimuhau	3.87	43	P	Pn	04 21 35.8	+1.0
FOZ	Fox Glacier	3.90	238	ePn	Pn	04 21 36.3	+1.1
FOZ	Fox Glacier	3.90	238	P	Pn	04 21 37.9	+2.7
URZ	Urewera	3.92	33	Pn	Pn	04 21 34.5	-1.0
	0.6nm,0.3s,baz=220,slow=6.1,SNR=4.9						
URZ				Sn	Sn	04 22 21.6	+0.7
	1.0nm,0.3s,baz=315,slow=16,SNR=2.3						
URZ				Lg	Lg	04 22 34.7	
	5.0nm,0.3s,baz=63,slow=11,SNR=4.5						
URZ				LR	LR	04 23 18.2	
	comp=Z,89nm,19.8s,baz=226,slow=43						
URZ	Urewera	3.92	33	ePn	Pn	04 21 36.0	+0.4
URZ	Urewera	3.92	33	P	Pb	04 21 42.4	-2.6
TOZ	Tahuroa Road	3.94	13	P	Pb	04 21 41.7	-3.6
MARZ	Manawahe	4.00	27	P	Pb	04 21 43.8	-2.6
MWZ	Matawai	4.04	38	P	Pn	04 21 38.3	+1.0
LBZ	Lake Benmore	4.17	226	ePn	Pn	04 21 40.0	+1.0
LBZ	Lake Benmore	4.17	226	P	Pn	04 21 40.0	+1.0
ODZ	Otahua Downs	4.41	217	ePn	Pn	04 21 41.6	-0.6
ODZ	Otahua Downs	4.41	217	P	Pn	04 21 41.8	-0.5
RUGZ	Raukumara Rang	4.41	36	P	Pn	04 21 47.7	+5.3
MKAZ	Moumakai	4.51	8	P	Pn	04 21 48.5	+4.9
AWAZ	Awhitu Peninsu	4.51	3	P	Pn	04 21 49.0	+5.4
HAZ	Te Kaha	4.63	36	P	Pn	04 21 48.6	+3.3
ETAZ	East Tamaki Re	4.64	5	P	Pb	04 21 52.4	-4.8
WIAZ	Waiheke Island	4.81	7	P	Pn	04 21 53.5	+5.7
MBAZ	Motutapu North	4.82	5	P	Pn	04 21 53.6	+5.7
KUZ	Kuaotunu	4.94	13	P	Pb	04 21 58.0	-4.3
HHSZ	Highcliff Hill	5.10	211	P	Pn	04 21 51.8	0.0
TUZ	Tuapeka	5.56	217	P	Pn	04 21 58.8	+0.7
WCZ	Waipu Caves	5.63	360	P	Pb	04 22 07.4	-6.7
SYZ	Scrubby Hill	6.23	216	P	Pn	04 22 07.8	+0.6
OUZ	Omahuta	6.38	354	P	Pb	04 22 19.0	-7.9
CTZ	Chatham Island	6.98	111	P	Pn	04 22 17.7	+0.2
AS31	Alice Springs	38.08	285	eP	P	04 27 53.4	-0.5
ASAR	Alice Springs	38.08	285	P	P	04 27 53.4	-0.5
	0.4nm,0.5s,baz=123,slow=6.7,SNR=9.8						
WR1	Warramunga Arr	40.13	290	eP	P	04 28 11.3	+0.2
WRA	Warramunga Arr	40.13	290	P	P	04 28 11.3	+0.2
	1.6nm,0.4s,baz=127,slow=8.0,SNR=16						
TORD	Torodi Ar. Bea	150.97	195	PKPbc	PKPbc	04 40 28.7	+0.6
	0.5nm,0.8s,baz=123,slow=1.1,SNR=6.0						
TOA1	Torodi Ar. Sit	150.97	195	ePKPbc	PKPbc	04 40 28.7	+0.6
GERES	GERESS Array B	164.59	305	PKPab	PKPab	04 41 31.5	-2.0
	0.2nm,0.5s,baz=31,slow=5.9,SNR=2.7						

SJA **21** *04:26:52.7±0.7,23°.24S×66°.84W,h224^{km}±4^{km},ML3.3, MW3.1*

ISCJB **21** *04:26:53.0±0.5,23°.28S±0°.04×66°.90W±0°.04,h220^{km}±6^{km}, mb3.5/1,Error ellipse: s-maj=7.6km s-min=4.9km az=24.4*

IDC **21** *04:26:53.1±1.2,23°.26S×66°.71W,h199^{km}±18^{km},mb3.4/1, mb1 3.4/6,mb1mx3.2/26,mbtmp3.9/6,Error ellipse: s-maj=26.1km s-min=17.7km az=107.0*

GUC **21** *04:26:55.1±0.6,23°.11S×67°.45W,h258^{km}±9^{km},ML4.3*

ISC 21 04:26:52.9±0.9**,23°.31S**±0°.06×**66°.88W**±0°.04**,h220**^{km}±8^{km}**,**
n33,σ1^{s}.**28**/51**,7C-2D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.69	48	eP	Pn	04 27 30.4	-0.2
YJA				IAML		04 27 30.9	
	comp=Z,56nm,0.3s						
YJA				eS	S	04 27 59.5	-0.3
SLA	San Lorenzo	1.89	138	eP	Pn	04 27 33.1	+1.1
SLA				IAML		04 27 34.2	
	comp=Z,148nm,0.7s						
SLA				eS	S	04 28 03.0	+0.5
AZAP	Zapla	1.89	119	eP	Pn	04 27 32.1	-0.1
AZAP				IAML		04 27 32.4	
	comp=Z,183nm,0.6s						
AZAP				eS	S	04 28 02.7	0.0
LVC	Limon Verde	2.00	290	P	Pn	04 27 34.5	+1.2
	comp=Z,61nm,0.3s,baz=106,slow=5.0,SNR=365						
LVC				S	S	04 28 04.6	-0.1
	comp=Z,19nm,0.3s,baz=44,slow=23,SNR=11						
LVC	Limon Verde	2.00	290	eP	Pn	04 27 34.0	+0.7
LVC				IAML		04 27 35.6	
	comp=Z,102nm,0.3s						
LVC				eS	S	04 28 04.5	-0.1
PB15	IPOC Station P	2.39	272	eP	Pn	04 27 38.4	+1.3
PB15				eS	S	04 28 11.5	+0.1
PB15	IPOC Station P	2.39	272	⇑iP	Pn	04 27 38.6	+1.5
PB15				i S	S	04 28 12.1	+0.7
PB15				IAML		04 28 17.9	
	comp=N,1µm,0.3s						
PB06	IPOC Station P	2.55	283	eP	Pn	04 27 39.7	+0.9
PB06	IPOC Station P	2.55	283	⇓iP	Pn	04 27 40.3	+1.5
PB06				eS	S	04 28 14.6	0.0
PB06				IAML		04 28 16.3	
	comp=E,407nm,0.1s						
PB09	IPOC Station P	2.65	304	⇑iP	Pn	04 27 41.3	+1.4
PB09				eS	S	04 28 16.9	+0.3
PB03	IPOC Station P	2.94	295	eP	Pn	04 27 43.8	+0.7
PB03				eS	S	04 28 21.1	-1.0
PB03	IPOC Station P	2.94	295	⇑iP	Pn	04 27 44.0	+0.9
PB03				eS	S	04 28 20.8	-1.3
PB03				IAML		04 28 21.3	
	comp=N,543nm,0.4s						
GO02	Mina Guanaco	3.09	233	IAML		04 28 28.3	
	comp=N,465nm,0.3s						
PB05	IPOC Station P	3.10	278	eP	Pn	04 27 45.9	+1.1
PB05	IPOC Station P	3.10	278	⇑iP	Pn	04 27 45.8	+1.0
PB05				eS	S	04 28 24.0	-1.3
PB04	IPOC Station P	3.17	287	eP	Pn	04 27 46.7	+0.9
PB04	IPOC Station P	3.17	287	⇓iP	Pn	04 27 46.4	+0.7
PB04				eS	S	04 28 25.7	-1.3
PB04				IAML		04 28 28.7	
	comp=N,385nm,0.2s						
PB07	IPOC Station P	3.20	299	⇑iP	Pn	04 27 46.9	+0.8
PB07				eS	S	04 28 25.7	-1.8
PB07				IAML		04 28 27.0	
	comp=N,873nm,0.1s						
PB01	IPOC Station P	3.31	313	eP	Pn	04 27 47.9	+0.6
PB01				eS	S	04 28 28.4	-1.4
PB01				IAML		04 28 30.4	
	comp=E,382nm,0.1s						
PB10	IPOC Station P	3.38	266	eP	Pn	04 27 49.0	+1.0
PB10	IPOC Station P	3.38	266	⇑iP	Pn	04 27 49.3	+1.3
PB10				eS	S	04 28 29.9	-1.3
PB10				IAML		04 28 33.1	
	comp=N,82nm,0.2s						
PB02	IPOC Station P	3.42	305	eP	Pn	04 27 49.1	+0.4
PB02	IPOC Station P	3.42	305	⇑iP	Pn	04 27 49.1	+0.4
PB02				eS	S	04 28 29.9	-2.3
PB02				IAML		04 28 33.5	
	comp=E,518nm,0.3s						
PB14	IPOC Station P	3.48	247	eP	Pn	04 27 50.8	+1.3
PB08	IPOC Station P	3.80	326	eP	Pn	04 27 53.9	+0.5
GO03	Copiap	5.24	215	eP	Pn	04 28 11.6	+0.8
PB12	IPOC Station P	5.68	325	eP	Pn	04 28 16.6	+0.1
LPAZ	La Paz	7.08	350	P	Pn	04 28 35.9	+0.9
	comp=E,0.4nm,0.3s,baz=140,slow=5.2,SNR=19						
LPAZ				S	S	04 29 54.7	-1.6
	comp=E,0.1nm,0.3s,baz=6.7,slow=18,SNR=2.9						
CFA	Coronel Fontan	8.35	188	P	Pn	04 28 51.1	+0.5
	comp=E,0.4nm,0.3s,baz=238,slow=21,SNR=11						
CFA				S	S	04 30 20.1	-4.9
	comp=E,0.9nm,0.3s,baz=160,slow=21,SNR=11						
SIV	San Ignacio	9.10	38	P	Pn	04 28 58.3	-2.1
	comp=E,1.2nm,0.3s,baz=234,slow=12,SNR=30						
BDFB	Brasilia	19.34	70	P	P	04 31 03.1	+1.1
	comp=E,0.8nm,0.3s,baz=236,slow=12,SNR=11						
TORD	Torodi Ar. Bea	76.22	69	P	P	04 38 18.4	+1.0
	comp=E,0.5nm,0.4s,baz=241,slow=6.0,SNR=15						
MKAR	Makanchi Array	145.92	39	PKPbc	PKiKP	04 46 08.8	-0.7
	comp=E,0.3nm,0.6s,baz=309,slow=3.5,SNR=2.8						

ISCJB **21** *04:41:22.3±0.6,11°.5S±0°.1×12°.8W±0°.1,h13^{km},mb4.2/14, MS4.0/3,Error ellipse: s-maj=20.8km s-min=10.8km az=138.0*

IDC **21** *04:41:22.2±0.8,11°.54S×12°.87W,h0^{km},mb4.0/11, mb1 4.1/12,mb1mx3.9/32,mbtmp4.0/12,ML3.5/1,MS4.0/4, Ms1 3.9/4,ms1mx3.6/30,Error ellipse: s-maj=25.5km s-min=16.3km az=137.0*

NEIC **21** *04:41:24.7±1.0,11°.53S×12°.89W,h16^{km}±5^{km},mb4.5/7, Error ellipse: s-maj=22.6km s-min=17.7km az=132.0*

GCMT **21** *04:41:24.7±0.4,11°.03S±0°.03×13°.11W±0°.03,h16^{km}±1^{km}, MW5.0/60,Moment Tensor Solution. s15,c18; s60,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.85±.18; $M_{\theta\theta}$-0.03±.11; $M_{\phi\phi}$1.88±.12; $M_{r\theta}$1.98±.46; $M_{\theta\phi}$-0.30±.07; $M_{\phi r}$2.21±.42; Best double couple: $M_0$3.44600×10^{16} NP1:ϕ_s210.00000°,δ76.00000°,λ-71.00000°. NP2: ϕ_s336.00000°,δ23.00000°,λ-142.00000°. Principal axes: T 3.0360, Plg28.0000°, Azm285.0000°; N 0.8150, Plg18.0000°, Azm25.0000°; P -3.8550, Plg55.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 04:41:24.2±0.7**,11°.5S**±0°.1×**12°.9W**±0°.1**,h13**^{km}**,n28,**
σ**0**^{s}.**80**/21**,mb4.2**/14**,MS4.0**/3**,Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	3.10	326	T	T	04 45 04.5	
	baz=144,slow=74,SNR=574						
H10S3	ASCENSION HYDR	3.12	325	T	T	04 45 05.8	
	baz=144,slow=74,SNR=360						
H10S1	ASCENSION HYDR	3.12	326	T	T	04 45 10.0	
	baz=144,slow=74,SNR=68						
H10N1	ASCENSION HYDR	4.00	337	T	T	04 46 08.0	
	baz=157,slow=76,SNR=8.4						
H10N3	ASCENSION HYDR	4.01	336	T	T	04 46 11.7	
	baz=157,slow=76,SNR=5.9						
H10N2	ASCENSION HYDR	4.02	337	T	T	04 46 10.0	
	baz=157,slow=76,SNR=6.8						
DBIC	Dimbokro	19.77	24	P	P	04 45 54.5	+0.3
	0.2nm,0.3s,baz=145,slow=8.1,SNR=3.6						
DBIC				LR	LR	04 51 41.7	
	comp=Z,267nm,19.9s,baz=184,slow=31						
DBIC	Dimbokro	19.77	24	eP	P	04 45 54.5	+0.3
	35nm,1.4s						
TOA0	Torodi Ar. Sit	28.47	31	eP	P	04 47 19.5	+0.3
	14nm,1.3s						
TORD	Torodi Ar. Bea	28.47	31	P	P	04 47 17.6	-1.6
	4.4nm,0.9s,baz=229,slow=7.8,SNR=8.2						
TORD				LR	LR	04 56 55.7	
	comp=Z,313nm,19.8s,baz=280,slow=33						
TOA1	Torodi Ar. Sit	28.47	31	eP	P	04 47 17.6	-1.6
BDFB	Brasilia	34.37	259	P	P	04 48 11.3	-0.1
	7.6nm,1.0s,baz=161,slow=3.6,SNR=5.0						
BDFB				LR	LR	04 59 19.7	
	comp=Z,384nm,20.3s,baz=99,slow=31						
BOSA	Boshof	39.42	121	LR	LR	05 02 17.2	
	comp=Z,229nm,20.8s,baz=276,slow=32						
MATP	Matopo	40.65	108	P	P	04 49 05.3	+0.7
	1.5nm,0.8s,baz=110,slow=11,SNR=2.0						
CPUP	Villa Florida	44.32	244	P	P	04 49 35.0	+0.8
	4.7nm,1.1s,baz=42,slow=4.4,SNR=5.2						
CPUP	Villa Florida	44.32	244	eP	P	04 49 35.0	+0.8
	32nm,1.8s						
MDT	Midelt	44.80	10	P	P	04 49 39.2	+1.2
	0.8nm,0.9s,baz=158,slow=10,SNR=2.1						
SIV	San Ignacio	46.95	259	P	P	04 49 55.8	+0.6
	1.3nm,0.8s,baz=116,slow=8.1,SNR=6.5						
LPAZ	La Paz	53.72	258	P	P	04 50 46.1	-1.1
	1.0nm,0.9s,baz=107,slow=8.5,SNR=3.7						
SNAA	Sanae	60.41	176	P	P	04 51 32.5	-0.5
	2.1nm,1.0s,baz=11,slow=10,SNR=4.6						
SNAA	Sanae	60.41	176	eP	P	04 51 32.5	-0.5
	14nm,1.7s						
GEC2	GERESS Array S	64.54	19	eP	P	04 52 00.9	0.0
	11nm,1.8s						
GERES	GERESS Array B	64.54	19	P	P	04 52 01.1	+0.2
	0.3nm,0.6s,baz=205,slow=4.3,SNR=4.7						
AKASG	Malin Array Be	72.00	27	P	P	04 52 47.4	-0.1
	1.7nm,0.9s,baz=226,slow=7.4,SNR=4.6						
AKBB	Malin Array Si	72.00	27	eP	P	04 52 47.4	-0.1
	10.0nm,1.5s						
CCM	Cathedral Cave	88.06	309	eP	P	04 54 14.5	-0.1
	9.3nm,1.1s						
LTX	Lajitas	96.24	299	eP	P	04 54 52.3	-0.5
TXAR	Lajitas Array	96.24	299	P	P	04 54 52.3	-0.5
	0.4nm,1.0s,baz=188,slow=7.2,SNR=3.6						

IDC **21** *04:50:16.5±1.2,41°.50S×174°.30E,h0^{km},mb4.0/2, mb1 4.1/4,mb1mx3.8/25,mbtmp3.9/4,ML3.4/2,MS2.9/3, Ms1 2.9/3,ms1mx2.9/31,Error ellipse: s-maj=37.6km s-min=14.3km az=131.0*

ISCJB **21** *04:50:19.1±0.4,41°.73S±0°.02×174°.42E±0°.03,h21^{km}±4^{km}, mb3.8/2,MS2.9/1,Error ellipse: s-maj=5.2km s-min=2.5km az=136.5*

NEIC **21** *04:50:19.2±0.0,41°.55S×174°.37E,h14^{km},ML4.4(WEL), After WEL.*

WEL **21** *04:50:19.2,41°.6S±0°.4×174°.4E±0°.5,h14^{km}±1^{km},M4.4/22, ML4.7/13,MLv4.4/22,Error ellipse: s-maj=0.0km s-min=0.0km az=118.7*

ISC 21 04:50:18.6±1.5**,41°.58S**±0°.03×**174°.38E**±0°.02**,h16**^{km}±11^{km}**,**
n150,σ1^{s}.**64**/155**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.21	216	P	Pb	04 50 25.0	+0.9
CMWZ				S	Sb	04 50 29.1	+1.3
TUWZ	Tuamarina	0.36	294	P	Pb	04 50 26.7	+0.2
TUWZ				S	Sb	04 50 32.0	0.0
SNZO	South Karori	0.36	43	ePg	Pb	04 50 26.8	+0.3
TCW	Tory Channel	0.37	348	P	Pb	04 50 27.0	+0.2
TCW				S	Sb	04 50 32.2	-0.2
BSWZ	Blackbirch Sta	0.40	250	P	Pb	04 50 27.8	+0.5
BSWZ				S	Sb	04 50 34.1	+0.8
BHW	Baring Head	0.41	66	P	Pb	04 50 28.0	+0.7
BHW				S	Sb	04 50 34.3	+1.0
PLWZ	Palliser	0.66	90	P	Pb	04 50 32.9	+1.2
MSWZ	Moikau Station	0.67	77	P	Pb	04 50 32.9	+0.9
CAW	Cannon Point	0.70	48	P	Pb	04 50 33.0	+0.6
NNZ	Nelson	0.83	295	P	Pb	04 50 35.1	+0.4
NNZ				S	Sn	04 50 47.0	-0.5
DUWZ	D'Urville Isla	0.85	336	P	Pb	04 50 35.6	+0.6
MTW	Mount Morrison	0.94	64	P	Pn	04 50 37.8	+0.6
KHZ	Kahutara	1.05	216	ePn	Pb	04 50 38.9	+0.6
THZ	Tophouse	1.12	260	ePn	Pb	04 50 39.8	+0.2
THZ	Tophouse	1.12	260	P	Pb	04 50 40.3	+0.7
MRZ	Mangatainoka R	1.29	45	P	Pb	04 50 43.0	+0.6
TIWZ	Tintock	1.39	55	P	Pn	04 50 44.4	+1.1
CPWZ	Castlepoint	1.53	65	P	Pb	04 50 47.7	+1.2
OHWZ	Ohakea	1.54	28	P	Pg	04 50 48.2	-0.1
PRWZ	Pori Road	1.58	50	P	Pn	04 50 46.8	+0.9
POWZ	Post Office Ro	1.58	42	P	Pb	04 50 47.5	0.0
QRZ	Quartz Range	1.58	298	P	Pb	04 50 47.2	-0.2
BFZ	Birch Farm	1.67	58	ePn	Pn	04 50 47.6	+0.4
BFZ	Birch Farm	1.67	58	P	Pn	04 50 47.2	0.0
GVZ	Greta Valley S	1.71	215	P	Pn	04 50 48.3	+0.5
DVHZ	Dannevirke	1.86	47	P	Pn	04 50 50.2	+0.4
WAZ	Wanganui	1.88	14	P	Pg	04 50 53.9	-0.7
ANWZ	Angora Road	1.94	56	P	Pn	04 50 51.2	+0.4
LTZ	Lake Taylor	1.98	232	ePn	Pn	04 50 51.9	+0.5
LTZ	Lake Taylor	1.98	232	P	Pn	04 50 52.3	+0.8
AMCZ	Amberley	2.05	218	P	Pn	04 50 52.6	+0.2
LREZ	Lake Rotokare	2.11	0	P	Pb	04 50 57.3	+0.8
PRHZ	Porangahau	2.15	53	P	Pn	04 50 55.4	+1.6
PNHZ	Pukenui	2.16	40	P	Pn	04 50 54.6	+0.7
WPHZ	Waipukurau	2.17	47	P	Pn	04 50 55.2	+1.1
NMEZ	Namu Road	2.19	350	P	Pb	04 50 58.9	+1.0
PREZ	Palmer Road	2.24	356	P	Pb	04 50 59.6	+0.9
KHEZ	Kahui Hut	2.30	353	P	Pb	04 50 59.5	-0.2
NBEZ	Newall Road No	2.34	350	P	Pb	04 50 59.6	-0.7
MTVZ	Mangateitei	2.34	21	P	Pb	04 51 01.0	+0.5
OKCZ	Okains Bay	2.36	204	P	Pn	04 50 56.2	-0.5
CRLZ	Canterbury Las	2.38	212	ePn	Pn	04 50 56.1	-0.8
CRLZ	Canterbury Las	2.38	212	P	Pn	04 50 56.1	-0.8
DREZ	Durham Road	2.39	357	P	Pb	04 51 01.1	-0.1
PKE	Pukeiti	2.40	353	P	Pb	04 51 00.4	-1.0
PKVZ	Pokaka	2.40	18	P	Pb	04 51 00.5	-0.9
MOVZ	Moawhango	2.41	26	P	Pn	04 50 59.3	+2.0
BHHZ	Black Hill Sta	2.45	32	P	Pn	04 50 59.6	+1.7
KRHZ	Kereru	2.45	39	P	Pn	04 50 58.4	+0.5
OXZ	Oxford	2.46	224	ePn	Pn	04 50 57.3	-0.8
OXZ	Oxford	2.46	224	P	Pn	04 50 57.6	-0.5
VRZ	Vera Road	2.46	7	P	Pb	04 51 01.9	-0.6
INZ	Inchbonnie	2.47	241	P	Pn	04 50 59.2	+1.1
DRZ	Dome Shelter	2.47	22	P	Pb	04 51 03.9	+1.2
WHVZ	Whangaehu Hut	2.47	22	P	Pn	04 51 01.0	+2.6
MQZ	McQueen's Vall	2.48	210	ePn	Pn	04 50 57.2	-1.1
MQZ	McQueen's Vall	2.48	210	P	Pn	04 50 57.2	-1.1
FWVZ	Far West T-bar	2.48	22	P	Pb	04 51 01.5	-1.5
TUVZ	Tukino	2.50	23	P	Pn	04 51 01.4	+2.7
AKCZ	Akaroa Harbour	2.54	205	P	Pn	04 50 58.5	-0.6
NGZ	Ngauruhoe	2.57	22	P	Pb	04 51 02.6	-1.8
KAHZ	Kahuranaki	2.60	48	P	Pn	04 51 00.2	+0.2
WTVZ	West Tongariro	2.63	21	P	Pb	04 51 03.4	-1.9
TWVZ	Taurewa	2.63	18	P	Pb	04 51 04.6	-0.8
KWHZ	Kaweka Forest	2.65	37	P	Pb	04 51 07.3	+1.6
KRVZ	Karewarewa	2.66	22	P	Pb	04 51 04.0	-1.8
MCHZ	McNeill Hill	2.77	40	P	Pn	04 51 03.5	+1.2
KATZ	Kakaramea	2.79	22	P	Pb	04 51 09.8	+1.8
CKHZ	Cape Kidnapper	2.81	48	P	Pb	04 51 06.7	-1.6
RITZ	Rihia Road	2.83	24	P	Pb	04 51 09.5	+0.7
BKZ	Black Stump Fm	2.90	35	ePn	Pn	04 51 06.5	+2.4
BKZ	Black Stump Fm	2.90	35	P	Pn	04 51 05.0	+0.9
RATZ	Rangitukua	2.91	22	P	Pb	04 51 11.6	+1.5
HATZ	Hinemaiaia	2.98	27	P	Pb	04 51 11.3	-0.1
WATZ	Wairara	3.05	20	P	Pb	04 51 13.7	+1.2
ARHZ	Aropaoanui	3.05	42	P	Pn	04 51 08.0	+1.9
HIZ	Hauiti	3.08	7	ePn	Pn	04 51 09.9	+3.4
HIZ	Hauiti	3.08	7	P	Pb	04 51 10.6	-2.4
WVZ	Waitaha Valley	3.09	240	P	Pn	04 51 07.5	+0.9
MRHZ	Matea Rd	3.15	30	P	Pb	04 51 13.0	-1.2
RPZ	Rata Peaks	3.25	228	Pn	Pn	04 51 08.6	-0.4
	10nm,0.3s,baz=75,slow=4.4,SNR=39						
RPZ				Pg	Pb	04 51 16.4	+0.4
	28nm,0.3s,baz=326,slow=0.7,SNR=26						
RPZ				Sn	Sn	04 51 46.8	-0.5
	12nm,0.3s,baz=319,slow=19,SNR=16						
RPZ				Lg	Lg	04 52 01.4	
	12nm,0.3s,baz=356,slow=18,SNR=3.6						
RPZ				LR	LR	04 52 21.1	
	comp=Z,163nm,20.7s,baz=30,slow=38						
RPZ	Rata Peaks	3.25	228	ePn	Pn	04 51 09.0	0.0
RPZ	Rata Peaks	3.25	228	P	Pn	04 51 09.0	0.0
MTHZ	Maungataniwha	3.31	36	P	Pn	04 51 10.4	+0.7
WHHZ	Waihua	3.31	42	P	Pb	04 51 14.3	-2.7
TLZ	Tolley Road	3.36	16	P	Pb	04 51 15.6	-2.3
ALRZ	Allen Road	3.37	27	P	Pb	04 51 16.7	-1.2
RAHZ	Arahi	3.37	39	P	Pb	04 51 15.2	-2.7
PRRZ	Plateau Road	3.44	27	P	Pb	04 51 17.3	-1.8
KNZ	Kokohu	3.58	46	P	Pn	04 51 13.4	-0.1
SNGZ	Shannon Statio	3.60	40	P	Pn	04 51 17.6	+4.0
MUGZ	Murupara	3.60	31	P	Pb	04 51 20.8	-1.0
MHGZ	Mahia Peninsul	3.62	49	P	Pn	04 51 15.2	+1.2
TARZ	Mount Tarawera	3.71	27	P	Pb	04 51 21.3	-2.6
PRGZ	Paritu Road	3.77	46	P	Pn	04 51 19.8	+3.8
RAGZ	Rawiri	3.86	38	P	Pn	04 51 18.6	+1.3
RIGZ	Rimuhau	3.86	43	P	Pn	04 51 17.9	+0.6
FOZ	Fox Glacier	3.90	238	ePn	Pn	04 51 19.0	+1.3
FOZ	Fox Glacier	3.90	238	P	Pn	04 51 18.8	+1.0
EDRZ	Edgecumbe	3.91	28	P	Pb	04 51 24.6	-2.6
URZ	Urewera	3.92	33	Pn	Pn	04 51 17.6	-0.5
	1.0nm,0.3s,baz=238,slow=7.6,SNR=9.0						
URZ				Lg	Lg	04 52 22.2	
	baz=16,slow=19,SNR=1.9						
URZ				LR	LR	04 52 31.3	
	comp=Z,98nm,18.1s,baz=202,slow=35						
URZ	Urewera	3.92	33	ePn	Pn	04 51 19.8	+1.7
URZ	Urewera	3.92	33	P	Pn	04 51 19.5	+1.4
TOZ	Tahuroa Road	3.94	13	P	Pn	04 51 23.0	+4.7
MARZ	Manawahe	4.00	27	P	Pb	04 51 25.7	-2.9
MWZ	Matawai	4.04	38	P	Pn	04 51 20.1	+0.3
LBZ	Lake Benmore	4.17	226	ePn	Pn	04 51 21.6	+0.1
LBZ	Lake Benmore	4.17	226	P	Pn	04 51 22.1	+0.6
TWGZ	Tauwhareparae	4.38	40	P	Pn	04 51 27.9	+3.4
ODZ	Otahua Downs	4.41	217	ePn	Pn	04 51 24.1	-0.7
ODZ	Otahua Downs	4.41	217	P	Pn	04 51 24.1	-0.7
RUGZ	Raukumara Rang	4.41	36	P	Pn	04 51 26.2	+1.3
KBAZ	Karaka Road Bo	4.49	5	P	Pb	04 51 35.2	-1.8
MKAZ	Moumakai	4.51	8	P	Pn	04 51 29.9	+3.7
AWAZ	Awhitu Peninsu	4.51	3	P	Pn	04 51 30.2	+4.0
PUZ	Puketiti	4.60	42	P	Pn	04 51 31.1	+3.7
HAZ	Te Kaha	4.63	36	P	Pn	04 51 29.1	+1.3
ETAZ	East Tamaki Re	4.63	5	P	Pn	04 51 32.3	+4.4
JCZ	Jackson Bay	4.81	237	P	Pn	04 51 32.6	+2.2
WIAZ	Waiheke Island	4.81	7	P	Pn	04 51 34.6	+4.2
MBAZ	Motutapu North	4.82	5	P	Pb	04 51 39.3	-3.2
WMGZ	Waiomatatini S	4.87	41	P	Pn	04 51 35.0	+3.8
KUZ	Kuaotunu	4.94	13	P	Pb	04 51 39.4	-5.2
MXZ	Matakaoa Point	5.03	38	ePn	Pn	04 51 35.2	+2.0
MXZ	Matakaoa Point	5.03	38	P	Pn	04 51 37.5	+4.3
WKZ	Wanaka	5.09	229	ePn	Pn	04 51 36.1	+1.9
HHSZ	Highcliff Hill	5.11	211	P	Pn	04 51 33.9	-0.5
EAZ	Earnscleugh	5.20	224	P	Pn	04 51 36.9	+1.2
TUZ	Tuapeka	5.56	217	P	Pn	04 51 40.2	-0.5
WCZ	Waipu Caves	5.63	360	P	Pb	04 51 49.6	-6.8
MLZ	Mavora Lakes	5.92	228	ePn	Pn	04 51 46.6	+1.0
SYZ	Scrubby Hill	6.23	216	P	Pn	04 51 50.0	+0.2
OUZ	Omahuta	6.38	354	ePn	Pn	04 51 54.8	+2.9
OUZ	Omahuta	6.38	354	P	Pn	04 51 55.6	+3.8
APZ	The Paps	6.98	219	P	Pn	04 52 00.3	+0.2
CTZ	Chatham Island	6.98	111	P	Pn	04 52 00.1	0.0
DZM	Mont Dzumac	20.56	339	LR	LR	05 03 07.8	
	comp=Z,51nm,18.2s,baz=211,slow=38						
AS31	Alice Springs	38.08	285	eP	P	04 57 36.2	-0.4
ASAR	Alice Springs	38.08	285	P	P	04 57 36.2	-0.4
	0.7nm,0.6s,baz=130,slow=7.4,SNR=5.8						
WR1	Warramunga Arr	40.13	290	eP	P	04 57 53.4	-0.3
WRA	Warramunga Arr	40.13	290	P	P	04 57 53.4	-0.3
	2.7nm,0.7s,baz=122,slow=8.5,SNR=9.8						
DBIC	Dimbokro	145.24	181	PKPbc	PKPbc	05 09 55.8	+0.4
	5.0nm,1.0s,baz=180,slow=11,SNR=2.7						
ARA0	ARCESS Array S	147.65	340	ePKPdf	PKPdf	05 09 58.5	+0.3
ARCES	ARCESS Array B	147.65	340	PKPbc	PKPdf	05 09 58.5	+0.3
	1.3nm,0.8s,baz=46,slow=3.9,SNR=2.7						
BR101	Keskin Array S	150.33	280	ePKPbc	PKPbc	05 10 09.5	+0.6
BRTR	Keskin Array B	150.33	280	PKPbc	PKPbc	05 10 09.5	+0.6
	0.3nm,0.7s,baz=90,slow=3.5,SNR=3.1						
TORD	Torodi Ar. Bea	150.97	195	PKPbc	PKPbc	05 10 11.3	+0.4
	0.5nm,0.6s,baz=140,slow=1.2,SNR=7.0						
TOA1	Torodi Ar. Sit	150.97	195	ePKPbc	PKPbc	05 10 11.3	+0.4
FIA0	FINESS Array S	152.44	327	ePKPbc	PKiKP	05 10 13.9	+0.8
FINES	FINESS Array B	152.44	327	PKPbc	PKiKP	05 10 13.9	+0.8
	2.1nm,1.0s,baz=2.7,slow=2.9,SNR=3.3						

GUC 21 04:58:44.8±0.6**,35°.92S**×**70°.78W,h153**^{km}±8^{km}**,ML3.5,**
Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	1.25	236	eP	Pn	04 59 11.4	-0.7
CCHI				i S	Sn	04 59 32.4	-0.6
GO05	Huala	1.30	314	eP	Pn	04 59 12.4	-0.3
GO05				i S	Sn	04 59 33.2	-0.7
GO05				IAML		04 59 38.7	
	comp=E,524nm,0.1s						
COCH	Cobquecura	1.64	262	eP	Pn	04 59 16.1	0.0
COCH				i S	Sn	04 59 39.3	-0.8
LMEL	Las Melosas	2.12	13	eP	Pn	04 59 22.0	+0.3
LMEL				i S	Sn	04 59 53.6	+3.5
LMEL				IAML		04 59 56.0	
	comp=N,265nm,0.1s						
CLCH	Cerro Calan	2.52	5	eP	Pn	04 59 26.3	-0.1
CLCH				i S	Sn	04 59 58.0	-0.6
CLCH				IAML		04 59 59.9	
	comp=E,186nm,0.2s						
FCH	Farellones	2.61	9	eP	Pn	04 59 27.8	-0.1
FCH				i S	Sn	05 00 00.7	-0.2
FCH				IAML		05 00 04.7	
	comp=N,114nm,0.4s						

BJI **21** *05:09:28.5±0.0,41°.71S×174°.46E,h10^{km},mb6.1/15, mB6.4/55,Ms6.6/82,Ms7 6.4/74*

NEIC **21** *05:09:29.0±0.0,41°.78S×174°.28E,h13^{km},Moment Tensor Solution. s24 Moment tensor: Scale 10^{18}Nm; M_{rr}0.46; $M_{\theta\theta}$5.81; $M_{\phi\phi}$-6.27; $M_{r\theta}$-2.07; $M_{\theta\phi}$-3.02; $M_{\phi r}$1.76; Best double couple: $M_0$7.30000×10^{18} NP1:ϕ_s329.00000°, δ83.00000°,λ21.00000°. NP2:ϕ_s237.00000°,δ69.00000°, λ173.00000°. Principal axes: T 7.3800, Plg19.0000°,* *Azm195.0000°; N -0.1800, Plg67.0000°, Azm346.0000°; P -7.1900, Plg9.0000°, Azm101.0000°;*

MOS **21** *05:09:29.8±1.1, 41°.68S×174°.17E, h10^{km}, mb5.9/34, MS6.5/61 Error ellipse: s-maj=11.9km s-min=7.9km az=119.0*

WEL **21** *05:09:30.5, 41°.6S±0°.8×174°.3E±0°.8, h16^{km}±2^{km}, M6.5/24, ML6.8/18, MLv6.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=134.6*

IDC **21** *05:09:30.0±0.3, 41°.57S×174°.09E, h0^{km}, mb5.5/30, mb1 5.5/31, mb1mx5.5/33, mbtmp5.5/31, ML5.4/1, MS6.3/26, Ms1 6.3/26, ms1mx6.3/29, Error ellipse: s-maj=13.0km s-min=9.7km az=41.0*

ISCJB **21** *05:09:30.7±0.3, 41°.71S±0°.02×174°.33E±0°.02, h21^{km}±2^{km}, mb5.9/121, MS6.6/707, Error ellipse: s-maj=3.4km s-min=2.0km az=137.1*

NEIC **21** *05:09:31.4±1.7, 41°.70S×174°.34E, h17^{km}, mb6.1/90, ME6.9, MS6.7/707, MW6.4, MW6.4, MW6.5, ML6.5(WEL), Error ellipse: s-maj=13.0km s-min=7.5km az=124.0, Moment Tensor Solution. s43 Moment tensor: Scale 10^{18}Nm; M_{rr}2.01; $M_{\theta\theta}$3.97; $M_{\phi\phi}$-5.98; $M_{r\theta}$-2.04; $M_{\theta\phi}$-0.79; $M_{\phi r}$-0.32; Best double couple: $M_0$5.70000×10^{18} NP1: ϕ_s225.00000°, δ71.00000°, λ154.00000°. NP2: ϕ_s324.00000°, δ65.00000°, λ21.00000°. Principal axes: T 5.2800, Plg32.0000°, Azm183.0000°; N 0.7900, Plg58.0000°, Azm11.0000°; P -6.0700, Plg4.0000°, Azm275.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s215.00000°, δ56.00000°, λ162.00000°. NP2: ϕ_s315.00000°, δ75.00000°, λ35.00000°. Principal axes: T Plg35.0000°, Azm180.0000°; N Plg0.0000°, Azm0.0000°; P Plg12.0000°, Azm81.0000°; Apparent Stress 1.62 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC *Four people injured in Wellington and one in Kapiti. Minor damage to 35 buildings in Wellington and one wharf collapsed. Localized power outages due to downed power lines and reports of broken water mains. Felt [VI] at Upper Hutt; [IV] at Feilding, Nelson and Wellington. Also felt at Auckland, Hamilton, Hastings, Kapiti, Levin, Marton, Masterton, Napier, New Plymouth, Palmerston North, Picton, Raglan, Takaka, Te Awamutu and Upper Harbour.*

GCMT **21** *05:09:38.5±0.0, 41°.63S×174°.17E, h12^{km}, MW6.5/150, Moment Tensor Solution. s150,c369; s147,c627; Duration: 4^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}1.42±.02; $M_{\theta\theta}$4.62±.02; $M_{\phi\phi}$-6.05±.02; $M_{r\theta}$-3.65±.06; $M_{\theta\phi}$-1.95±.02; $M_{\phi r}$1.60±.06; Best double couple: $M_0$6.99900×10^{18} NP1: ϕ_s329.00000°, δ73.00000°, λ30.00000°. NP2: ϕ_s230.00000°, δ61.00000°, λ161.00000°. Principal axes: T 7.4710, Plg33.0000°, Azm193.0000°; N -0.9530, Plg56.0000°, Azm355.0000°; P -6.5280, Plg8.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **21** *05:09:54.7±0.0, 41°.42S×174°.37E, h10^{km}, Moment Tensor Solution. s128 Moment tensor: Scale 10^{18}Nm; M_{rr}1.23; $M_{\theta\theta}$4.69; $M_{\phi\phi}$-5.93; $M_{r\theta}$0.55; $M_{\theta\phi}$-1.77; $M_{\phi r}$1.01; Best double couple: $M_0$5.70000×10^{18} NP1: ϕ_s144.00000°, δ80.00000°, λ-2.00000°. NP2: ϕ_s234.00000°, δ88.00000°, λ-170.00000°. Principal axes: T 5.0200, Plg6.0000°, Azm9.0000°; N 1.3500, Plg80.0000°, Azm243.0000°; P -6.3700, Plg8.0000°, Azm100.0000°;*

ISC 21 05:09:32.2±0.3**, 41°.69S**±0°.02×**174°.36E**±0°.02**, h16**^{km}±1^{km}**, h16**^{km}**:pP-P, n2301,** σ**1**^{s}**88**/1935**, mb6.0**/122**, MS6.7**/711**, 76C-61D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.13	240	P	Pg	05 09 35.2	-0.7
BSWZ	Blackbirch Sta	0.36	265	P	Pg	05 09 38.3	-1.4
TUWZ	Tuamarina	0.40	309	P	Pg	05 09 37.9	-2.5
SNZO	South Karori	0.46	35	*e*Pg	Pg	05 09 40.0	-1.3
BHW	Baring Head	0.47	54	P	Pg	05 09 40.1	-1.6
BHW				S	Sg	05 09 47.9	-0.2
TCW	Tory Channel	0.48	353	P	Pg	05 09 39.0	-2.8
PLWZ	Palliser	0.68	80	P	Pg	05 09 44.8	-0.7
MSWZ	Moikau Station	0.72	68	P	Pg	05 09 45.1	-1.2
CAW	Cannon Point	0.79	43	P	Pb	05 09 45.3	-2.1
PAWZ	Paruwai Farm	0.86	70	P	Pb	05 09 47.5	-1.2
NNZ	Nelson	0.87	302	P	Pb	05 09 46.3	-2.6
DUWZ	D'Urville Isla	0.94	339	P	Pb	05 09 47.4	-2.8
DUWZ				S	Sb	05 10 01.2	-1.1
KHZ	Kahutara	0.95	220	*e*Pg	Pn	05 09 51.0	+0.2
KHZ	Kahutara	0.95	220	P	Pb	05 09 50.4	+0.1
MTW	Mount Morrison	1.01	59	P	Pb	05 09 49.9	-1.3
MTW				S	Sg	05 10 04.8	-0.1
TRWZ	Traveller	1.04	74	P	Pb	05 09 50.5	-1.3
OGWZ	Otaki Gorge	1.06	35	P	Pb	05 09 49.8	-2.3
OGWZ				S	Sg	05 10 06.6	0.0
THZ	Tophouse	1.09	265	*e*Pn	Pb	05 09 52.5	-0.2
THZ	Tophouse	1.09	265	P	Pb	05 09 51.1	-1.5
HOWZ	Holdsworth Sta	1.17	48	P	Pn	05 09 52.3	-1.6
TMWZ	Te Maipa	1.29	64	P	Pn	05 09 53.9	-1.6
MRZ	Mangatainoka R	1.38	42	P	Pn	05 09 55.3	-1.4
TIWZ	Tintock	1.47	52	P	Pn	05 09 56.4	-1.5
CPWZ	Castlepoint	1.59	61	P	Pn	05 09 58.6	-1.0
GVZ	Greta Valley S	1.61	217	P	Pn	05 09 59.4	-0.6
QRZ	Quartz Range	1.62	301	P	Pn	05 09 59.6	-0.5
OHWZ	Ohakea	1.65	26	P	Pn	05 10 00.7	+0.3
PRWZ	Pori Road	1.66	48	P	Pn	05 09 59.1	-1.5
POWZ	Post Office Ro	1.68	40	P	Pn	05 09 59.7	-1.1
BFZ	Birch Farm	1.74	55	*e*Pn	Pn	05 09 59.5	-2.2
BFZ	Birch Farm	1.74	55	P	Pn	05 09 59.5	-2.2
LTZ	Lake Taylor	1.90	234	*e*Pn	Pn	05 10 02.0	-1.9
LTZ	Lake Taylor	1.90	234	P	Pn	05 10 03.4	-0.6
DVHZ	Dannevirke	1.95	45	P	Pn	05 10 02.5	-2.0
AMCZ	Amberley	1.95	220	P	Pn	05 10 03.8	-0.9
WAZ	Wanganui	1.99	14	P	Pn	05 10 05.8	+0.7
ANWZ	Angora Road	2.02	53	P	Pn	05 10 03.2	-2.2
LREZ	Lake Rotokare	2.22	1	P	Pn	05 10 09.7	+1.4
PRHZ	Porangahau	2.23	51	P	Pn	05 10 06.4	-2.1
OKCZ	Okains Bay	2.25	205	P	Pn	05 10 07.2	-1.5
PNHZ	Pukenui	2.25	39	P	Pn	05 10 07.1	-1.7
WPHZ	Waipukurau	2.26	45	P	Pn	05 10 07.1	-1.8
CRLZ	Canterbury Las	2.28	214	*e*Pn	Pn	05 10 08.3	-0.8
CRLZ	Canterbury Las	2.28	214	P	Pn	05 10 08.0	-1.1
NMEZ	Namu Road	2.30	351	P	Pn	05 10 10.4	+1.1
PREZ	Palmer Road	2.35	356	P	Pn	05 10 11.1	+1.1
OXZ	Oxford	2.37	226	*e*Pn	Pn	05 10 09.8	-0.6
OXZ	Oxford	2.37	226	P	Pn	05 10 10.2	-0.2
MQZ	McQueen's Vall	2.38	211	*e*Pn	Pn	05 10 08.6	-1.9
MQZ	McQueen's Vall	2.38	211	P	Pn	05 10 08.2	-2.2
INZ	Inchbonnie	2.40	243	P	Pn	05 10 10.4	-0.3
KHEZ	Kahui Hut	2.40	354	P	Pn	05 10 11.5	+0.7
AKCZ	Akaroa Harbour	2.43	206	P	Pn	05 10 09.7	-1.5
NBEZ	Newall Road No	2.44	351	P	Pn	05 10 11.7	+0.3
MTVZ	Mangateitei	2.45	21	P	Pn	05 10 12.2	+0.7
DREZ	Durham Road	2.50	357	P	Pn	05 10 13.4	+1.3
PKE	Pukeiti	2.50	353	P	Pn	05 10 12.5	+0.2
PKVZ	Pokaka	2.51	18	P	Pn	05 10 12.6	+0.3
MOVZ	Moawhango	2.51	25	P	Pn	05 10 11.7	-0.7
PXZ	Pawanui	2.52	50	P	Pn	05 10 09.7	-2.7
BHHZ	Black Hill Sta	2.55	31	P	Pn	05 10 11.8	-1.1
KRHZ	Kereru	2.55	38	P	Pn	05 10 10.8	-2.0
DRZ	Dome Shelter	2.58	21	P	Pn	05 10 14.1	+0.6
VRZ	Vera Road	2.58	7	P	Pn	05 10 14.2	+1.0
WHVZ	Whangaehu Hut	2.58	22	P	Pn	05 10 13.3	-0.1
FWVZ	Far West T-bar	2.59	21	P	Pn	05 10 13.5	-0.1
MHEZ	Mangahewa	2.61	359	P	Pn	05 10 15.8	+2.2
TUVZ	Tukino	2.61	23	P	Pn	05 10 13.7	-0.1
NGZ	Ngauruhoe	2.68	21	P	Pn	05 10 14.9	+0.2
KAHZ	Kahuranaki	2.69	46	P	Pn	05 10 12.2	-2.6
WTVZ	West Tongariro	2.73	21	P	Pn	05 10 15.5	0.0
TWVZ	Taurewa	2.74	18	P	Pn	05 10 15.6	0.0
KWHZ	Kaweka Forest	2.75	36	P	Pn	05 10 14.6	-1.1
KRVZ	Karewarewa	2.77	21	P	Pn	05 10 16.0	+0.1
MCHZ	McNeill Hill	2.86	39	P	Pn	05 10 15.2	-1.9
CKHZ	Cape Kidnapper	2.89	46	P	Pn	05 10 15.3	-2.2
KATZ	Kakaramea	2.89	21	P	Pn	05 10 19.0	+1.3
RITZ	Rihia Road	2.94	23	P	Pn	05 10 18.0	-0.2
BKZ	Black Stump Fm	3.00	34	*e*Pn	Pn	05 10 16.7	-2.4
BKZ	Black Stump Fm	3.00	34	P	Pn	05 10 17.0	-2.0
RATZ	Rangitukua	3.02	21	P	Pn	05 10 21.6	+2.3
WVZ	Waitaha Valley	3.02	241	P	Pn	05 10 18.7	-0.5
HATZ	Hinemaiaia	3.09	26	P	Pn	05 10 20.7	+0.4
ARHZ	Aropaoanui	3.15	41	P	Pn	05 10 18.8	-2.2
WATZ	Wairara	3.15	20	P	Pn	05 10 20.9	-0.2
RPZ	Rata Peaks	3.17	229	Pn	Pn	05 10 19.9	-1.5
	432nm,0.3s,baz=63,slow=3.0,SNR=284						
RPZ				Sn	Sn	05 10 58.9	+0.1
	1µm,0.3s,baz=356,slow=13,SNR=4.0						
RPZ				Lg	Lg	05 11 14.0	
	964nm,0.3s,baz=28,slow=19,SNR=2.7						
RPZ				LR	LR	05 11 27.0	
	comp=Z,301µm,20.0s,baz=41,slow=38						
RPZ	Rata Peaks	3.17	229	*e*Pn	Pn	05 10 22.0	+0.7
RPZ	Rata Peaks	3.17	229	P	Pn	05 10 20.1	-1.3
HIZ	Hauiti	3.19	7	*e*Pn	Pn	05 10 24.5	+2.8
HIZ	Hauiti	3.19	7	P	Pn	05 10 22.4	+0.7
MRHZ	Matea Rd	3.25	30	P	Pn	05 10 21.2	-1.3
WHTZ	Whakaora	3.25	23	P	Pn	05 10 23.3	+0.7
KUTZ	Kaahu Road	3.38	20	P	Pn	05 10 25.7	+1.3
MTHZ	Maungataniwha	3.41	35	P	Pn	05 10 22.2	-2.5
WHHZ	Waihua	3.41	41	P	Pn	05 10 22.5	-2.1
WPRZ	Whakapapatarin	3.45	24	P	Pn	05 10 25.1	-0.2
RAHZ	Arahi	3.46	38	P	Pn	05 10 23.1	-2.4
ALRZ	Allen Road	3.47	27	P	Pn	05 10 24.1	-1.4
TLZ	Tolley Road	3.47	15	P	Pn	05 10 25.4	-0.1
PRRZ	Plateau Road	3.54	27	P	Pn	05 10 25.0	-1.5
GRRZ	Galatos Road	3.59	23	P	Pn	05 10 26.6	-0.6
HRRZ	Handcock Road	3.61	25	P	Pn	05 10 27.2	-0.2
RTZ	Ruatahuna	3.67	34	P	Pn	05 10 26.6	-1.7
HSRZ	Hossack Road	3.67	24	P	Pn	05 10 27.9	-0.3
KNZ	Kokohu	3.67	45	P	Pn	05 10 25.4	-2.8
SNGZ	Shannon Statio	3.69	39	P	Pn	05 10 26.4	-2.2
MUGZ	Murupara	3.70	31	P	Pn	05 10 27.4	-1.3
MHGZ	Mahia Peninsul	3.71	48	P	Pn	05 10 25.6	-3.2
RRRZ	Republican Roa	3.73	27	P	Pn	05 10 27.5	-1.6
HLRZ	Highlands Stat	3.76	25	P	Pn	05 10 30.8	+1.3
UTU	Utuhina	3.78	23	P	Pn	05 10 29.8	+0.1
TARZ	Mount Tarawera	3.82	26	P	Pn	05 10 29.0	-1.4
FOZ	Fox Glacier	3.83	240	*e*Pn	Pn	05 10 32.2	+1.8
FOZ	Fox Glacier	3.83	240	P	Pn	05 10 29.9	-0.4
NGRZ	Ngongotaha	3.85	22	P	Pn	05 10 30.4	-0.3
PRGZ	Paritu Road	3.86	45	P	Pn	05 10 27.4	-3.4
MKRZ	Makatiti	3.90	25	P	Pn	05 10 32.4	+1.0
OMRZ	Omania	3.90	24	P	Pn	05 10 30.8	-0.6
KARZ	Kaharoa	3.94	22	P	Pn	05 10 33.7	+1.8
RAGZ	Rawiri	3.96	37	P	Pn	05 10 29.1	-3.1
RIGZ	Rimuhau	3.96	42	P	Pn	05 10 28.8	-3.4
EDRZ	Edgecumbe	4.02	28	P	Pn	05 10 32.9	-0.2
URZ	Urewera	4.02	33	Pn	Pn	05 10 30.0	-3.0
	44nm,0.3s,baz=230,slow=6.6,SNR=103						
URZ				Lg	Lg	05 11 35.4	
	3µm,0.3s,baz=37,slow=16,SNR=6.1						
URZ	Urewera	4.02	33	*e*Pn	Pn	05 10 36.6	+3.6
URZ	Urewera	4.02	33	P	Pn	05 10 30.0	-3.0
KMRZ	Kaimai	4.02	18	P	Pn	05 10 34.1	+1.0
TOZ	Tahuroa Road	4.05	13	P	Pn	05 10 33.5	+0.1
LBZ	Lake Benmore	4.08	227	*e*Pn	Pn	05 10 33.3	-0.6
LBZ	Lake Benmore	4.08	227	P	Pn	05 10 32.9	-1.0
MARZ	Manawahe	4.10	27	P	Pn	05 10 32.5	-1.8
MWZ	Matawai	4.14	37	P	Pn	05 10 31.1	-3.6
OPRZ	Ohinepanea	4.19	25	P	Pn	05 10 34.2	-1.2
TKGZ	Te Karaka	4.21	41	P	Pn	05 10 32.2	-3.3
TGRZ	Tauranga	4.21	21	P	Pn	05 10 36.2	+0.5
ODZ	Otahua Downs	4.31	218	*e*Pn	Pn	05 10 37.0	0.0
ODZ	Otahua Downs	4.31	218	P	Pn	05 10 35.4	-1.7
WHRZ	Whale Island	4.32	29	P	Pn	05 10 36.5	-0.7
CNGZ	Carnagh Statio	4.35	44	P	Pn	05 10 34.6	-3.0
TWGZ	Tauwhareparae	4.47	40	P	Pn	05 10 36.0	-3.3
RUGZ	Raukumara Rang	4.51	36	P	Pn	05 10 36.6	-3.3
KBAZ	Karaka Road Bo	4.60	5	P	Pn	05 10 42.7	+1.7
MKAZ	Moumakai	4.62	8	P	Pn	05 10 41.3	+0.1
AWAZ	Awhitu Peninsu	4.62	3	P	Pn	05 10 42.2	+0.9
WIZ	White Island	4.69	29	P	Pn	05 10 43.4	+1.1
HAZ	Te Kaha	4.73	35	P	Pn	05 10 39.7	-3.1
JCZ	Jackson Bay	4.74	238	P	Pn	05 10 42.4	-0.6
ETAZ	East Tamaki Re	4.75	6	P	Pn	05 10 44.1	+1.1
WTAZ	Waiatarua	4.75	2	P	Pn	05 10 44.4	+1.4
EPAZ	Eden Park BICE	4.81	4	P	Pn	05 10 46.0	+2.1
HBAZ	Herne Bay Bore	4.84	4	P	Pn	05 10 46.6	+2.4
RVAZ	Riverhead Bore	4.91	2	P	Pn	05 10 47.0	+1.7
WIAZ	Waiheke Island	4.92	7	P	Pn	05 10 46.2	+0.8
MBAZ	Motutapu North	4.93	5	P	Pn	05 10 46.6	+1.1
WMGZ	Waiomatatini S	4.97	40	P	Pn	05 10 42.7	-3.4
HHSZ	Highcliff Hill	5.00	212	P	Pn	05 10 45.1	-1.4
WKZ	Wanaka	5.01	229	*e*Pn	Pn	05 10 46.3	-0.3
WKZ	Wanaka	5.01	229	P	Pn	05 10 45.3	-1.3
KUZ	Kuaotunu	5.05	13	P	Pn	05 10 47.1	0.0
EAZ	Earnscleugh	5.11	224	P	Pn	05 10 48.0	0.0
MXZ	Matakaoa Point	5.12	38	*e*Pn	Pn	05 10 44.7	-3.5
MXZ	Matakaoa Point	5.12	38	P	Pn	05 10 44.8	-3.4
TUZ	Tuapeka	5.47	217	P	Pn	05 10 51.8	-1.1
GRZ	Great Barrier	5.50	9	P	Pn	05 10 53.9	+0.6
MSZ	Milford Sound	5.57	235	P	Pn	05 10 53.9	-0.4
WCZ	Waipu Caves	5.74	360	P	Pn	05 10 57.5	+0.8
MLZ	Mavora Lakes	5.84	229	*e*Pn	Pn	05 10 57.0	-1.1
MLZ	Mavora Lakes	5.84	229	P	Pn	05 10 56.8	-1.2
SYZ	Scrubby Hill	6.13	216	P	Pn	05 11 01.3	-0.8
WHZ	Wether Hill Ro	6.26	226	*e*Pn	Pn	05 11 03.8	0.0
WHZ	Wether Hill Ro	6.26	226	P	Pn	05 11 02.4	-1.4
DCZ	Deep Cove	6.45	232	*e*Pn	Pn	05 11 05.3	-1.1
DCZ	Deep Cove	6.45	232	P	Pn	05 11 06.4	0.0
OUZ	Omahuta	6.48	354	*e*Pn	Pn	05 11 09.6	+2.7
OUZ	Omahuta	6.48	354	P	Pn	05 11 07.3	+0.4
APZ	The Paps	6.88	219	P	Pn	05 11 11.1	-1.3
CTZ	Chatham Island	6.96	110	P	Pn	05 11 11.5	-1.8
I36NZ	CHATHAM INFRAS	7.09	111	Pn	Pn	05 11 13.8	-1.4
	baz=291,slow=35,SNR=1.6						
I36NZ				*i*		05 47 10.0	
	baz=297,slow=309,SNR=0.9						
NFK	Norfolk Island	13.65	335	P	Pn	05 12 45.4	+0.3
	baz=14,SNR=16						
LHI	Lord Howe Isla	15.91	305	*e*Pn	Pn	05 13 15.4	+0.2
	2µm,1.8s						
LHI	Lord Howe Isla	15.91	305	P	Pn	05 13 14.0	-1.3
	baz=16,SNR=4.9						
MCQ	Macquarie Isla	16.39	213	*e*Pn	Pn	05 13 20.9	-0.3
	5µm,1.8s						
MCQ	Macquarie Isla	16.39	213	P	Pn	05 13 22.0	+0.7
	baz=16,SNR=9.0						
MCQ	Macquarie Isla	16.39	213	*e*P	Pn	05 13 20.9	-0.3
MCQ				pmax	pmax		
	comp=Z,5µm,1.8s						
PINNC	Pines Island,	19.88	341	*e*P	P	05 14 01.1	-1.6
	comp=Z,5µm,2.0s						
RIV	Riverview	19.91	286	P	P	05 14 01.8	-1.2
	baz=20,SNR=9.2						
MILA	Mila	20.00	275	P	Pn	05 14 08.9	+3.1
	baz=20,SNR=5.5						
MOO	Moorlands	20.16	259	P	P	05 14 04.5	-1.1
	baz=20,SNR=13						
MGCD	Mangrove Creek	20.26	287	P	P	05 14 05.7	-1.1
	baz=20,SNR=17						
CNB	Canberra Magne	20.53	280	P	P	05 14 10.2	+0.4
	baz=20,SNR=7.6						
DZM	Mont Dzumac	20.66	339	*e*P	Pn	05 14 14.6	+1.0
	comp=Z,2µm,1.4s						
DZM				*e*LR	LR	05 19 05.8	
	comp=Z,93µm,24.2s						
DZM	Mont Dzumac	20.66	339	P	Pn	05 14 13.0	-0.6
	comp=Z,101nm,0.9s,baz=147,slow=9.9,SNR=26						
DZM				LR	LR	05 21 56.2	
	comp=Z,163µm,18.1s,baz=178,slow=36						
DZM	Mont Dzumac	20.66	339	*e*P	Pn	05 14 13.5	-0.1
	comp=Z,939nm,1.2s						
CAN	Canberra	20.80	279	*e*P	P	05 14 11.7	-1.0
	comp=Z,549nm,1.2s						
CAN				LR	LR		
	comp=Z,104µm,18.0s						
CAN	Canberra	20.80	279	P	P	05 14 12.6	-0.1
	baz=21						
CAN	Canberra	20.80	279	*e*P	P	05 14 11.7	-1.0
CAN				pmax	pmax		
	comp=Z,549nm,1.2s						
CAN				MLR	MLR		
	comp=Z,104µm,18.0s						
MARNC	Mare, Loyalty	20.84	343	*e*P	P	05 14 12.7	-0.5
	comp=Z,3µm,1.5s						
MARNC				LR	LR		
	comp=Z,153µm,20.0s						
ARMA	Armidale	21.48	294	*e*P	P	05 14 21.0	+0.9
	comp=Z,968nm,1.5s						
ARMA				LR	LR		
	comp=Z,162µm,19.0s						
ARMA	Armidale	21.48	294	P	P	05 14 21.2	+1.1
	baz=21,SNR=12						
YNG	Young	21.70	281	P	P	05 14 23.0	+0.6
	baz=22,SNR=7.9						
TOO	Toolangi	22.56	271	*e*P	P	05 14 32.2	+0.6
	comp=Z,467nm,1.2s						
TOO				LR	LR		
	comp=Z,95µm,21.0s						
TOO	Toolangi	22.56	271	P	P	05 14 32.1	+0.6
	baz=22,SNR=24						
TOO	Toolangi	22.56	271	*e*P	P	05 14 32.2	+0.6
TOO				pmax	pmax		
	comp=Z,467nm,1.2s						
TOO				MLR	MLR		
	comp=Z,95µm,21.0s						
CMSA	Cobar Meteorol	25.04	285	P	P	05 14 55.3	-0.2
	baz=25,SNR=23						
EIDS	Eidsvold	25.21	303	*e*P	P	05 14 57.2	+0.1
	comp=Z,357nm,1.2s						
EIDS				LR	LR		
	comp=Z,240µm,18.0s						
EIDS	Eidsvold	25.21	303	P	P	05 14 57.2	+0.1
	baz=25,SNR=60						
ARPS	Mount Arapiles	25.57	270	P	P	05 15 01.5	+1.2
	baz=25,SNR=9.6						
RMQ	Roma	25.94	298	P	P	05 15 03.9	+0.2
	baz=26,SNR=12						
NIUE	Niue	26.21	35	PFAKE		05 15 20.0	+14
NIUE				LR	LR		
	comp=Z,82µm,20.0s						
NIUE	Niue	26.21	35	P	P	05 15 10.3	+4.1
	baz=26,SNR=3.3						
STKA	Stephens Creek	27.86	280	P	P	05 15 21.3	+0.3
	comp=Z,26nm,0.9s,baz=113,slow=9.6,SNR=17						
STKA				LR	LR	05 25 49.6	
	comp=Z,78µm,18.6s,baz=137,slow=35						
STKA	Stephens Creek	27.86	280	*e*P	P	05 15 21.3	+0.3
	comp=Z,39nm,1.1s						
STKA	Stephens Creek	27.86	280	P	P	05 15 21.6	+0.6
	baz=28,SNR=8.7						
QLP	Quilpie	28.95	292	P	P	05 15 30.1	-0.6
	baz=29						
HTT	Hallett	29.11	275	P	P	05 15 32.6	+0.4
	baz=29,SNR=14						
RAR	Rarotonga	29.87	55	P	P	05 15 41.3	+2.5
	comp=Z,52nm,0.8s,baz=141,slow=5.8,SNR=3.7						
RAR				LR	LR	05 26 05.1	
	comp=Z,78µm,22.0s,baz=216,slow=33						
RAR	Rarotonga	29.87	55	*e*P	P	05 15 37.2	-1.6
	comp=Z,790nm,1.4s						
RAR				LR	LR		
	comp=Z,89µm,21.0s						
RAR	Rarotonga	29.87	55	*e*P	P	05 15 37.2	-1.6
RAR				pmax	pmax		
	comp=Z,790nm,1.4s						
RAR				MLR	MLR		
	comp=Z,89µm,21.0s						
BBOO	Buckleboo	31.54	274	*e*P	P	05 15 52.6	-0.9
	comp=Z,165nm,0.9s						
BBOO				LR	LR		
	comp=Z,108µm,18.0s						
BBOO	Buckleboo	31.54	274	P	P	05 15 53.0	-0.5
	baz=31,SNR=18						
CTA	Charters Tower	32.09	304	P	P	05 15 58.0	-0.5
	comp=Z,49nm,0.9s,baz=141,slow=10,SNR=37						
CTA				LR	LR	05 27 08.9	
	comp=Z,164µm,21.6s,baz=130,slow=33						
CTA	Charters Tower	32.09	304	P	P	05 15 59.0	+0.5
	baz=32						
CTAO	Charters Tower	32.09	304	*e*P	P	05 15 58.7	+0.2
	comp=Z,253nm,1.3s						
CTAO				LR	LR		
	comp=Z,170µm,21.0s						
CTAO	Charters Tower	32.09	304	*e*P	P	05 15 58.7	+0.2
CTAO				pmax	pmax		
	comp=Z,253nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,170µm,21.0s						
FUNA	Funafuti	33.30	9	PFAKE		05 16 20.0	+11
FUNA				LR	LR		
	comp=Z,122µm,20.0s						
HNR	Honiara	34.55	334	P	P	05 16 19.8	-0.2
	comp=Z,144nm,0.8s,baz=189,slow=13,SNR=2.3						
HNR				LR	LR	05 28 55.5	
	comp=Z,44µm,20.2s,baz=165,slow=34						
HNR	Honiara	34.55	334	PFAKE		05 16 30.0	+10
HNR				LR	LR		
	comp=Z,43µm,19.0s						
HNR	Honiara	34.55	334	*e*P	P	05 16 24.0	+4.1
MTSU	Mount Surprise	34.76	303	P	P	05 16 21.5	-0.3
	baz=35,SNR=45						
TBI	Tubuai	35.24	70	*e*P	P	05 16 29.7	+3.9
	comp=Z,951nm,1.4s						
TBI				*e*S	S	05 22 03.2	+4.4
	comp=Z,21µm,28.2s						
TBI				*e*LQ	LQ	05 24 25.6	
	comp=Z,78µm,23.2s						
TBI				*e*LR	LR	05 25 49.9	
	comp=Z,89µm,30.5s						
TBI	Tubuai	35.24	70	*e*T	T	05 53 44.0	
	comp=Z,315nm,0.4s						
QIS	Mount Isa	36.10	295	P	P	05 16 32.8	-0.5
	baz=36,SNR=36						
VNDA	Vanda	36.32	185	P	P	05 16 37.0	+2.4
	comp=Z,29nm,1.0s,baz=6.0,slow=8.2,SNR=77						
VNDA	Vanda	36.32	185	*e*P	P	05 16 34.6	+0.1
	comp=Z,177nm,1.4s						
VNDA	Vanda	36.32	185	*e*P	P	05 16 34.6	+0.1
VNDA				pmax	pmax		
	comp=Z,177nm,1.4s						
SBA	Scott Base	36.41	183	*e*P	P	05 16 35.5	+0.2
	comp=Z,1µm,1.5s						
SBA				LR	LR		
	comp=Z,94µm,21.0s						
SBA	Scott Base	36.41	183	*e*P	P	05 16 35.5	+0.2
SBA				pmax	pmax		
	comp=Z,1µm,1.5s						
SBA				MLR	MLR		
	comp=Z,94µm,21.0s						
AS31	Alice Springs	38.09	285	*e*P	P	05 16 49.2	-1.1
	comp=Z,49nm,0.6s						
AS31				LR	LR		
	comp=Z,1µm,18.0s						
ASAR	Alice Springs	38.09	285	P	P	05 16 48.4	-1.9
	comp=Z,49nm,0.7s,baz=126,slow=7.3,SNR=182						
ASAR				S	S	05 22 41.5	-1.0
	comp=Z,7.6nm,0.8s,baz=135,slow=15,SNR=4.2						
ASAR				LR	LR	05 32 53.0	
	comp=Z,76µm,18.5s,baz=130,slow=37						
FORT	Forrest	38.49	271	*e*P	P	05 16 53.0	-0.5
	comp=Z,318nm,1.0s						
FORT				LR	LR		
	comp=Z,97µm,20.0s						
FORT	Forrest	38.49	271	P	P	05 16 52.9	-0.5
	baz=38,SNR=19						
COEN	Coen	38.66	306	*e*P	P	05 16 54.6	-0.4
	comp=Z,626nm,1.6s						
COEN				LR	LR		
	comp=Z,116µm,21.0s						
COEN	Coen	38.66	306	P	P	05 16 54.6	-0.4
	baz=39,SNR=42						
PAE	Paea	39.00	63	*e*P	P	05 17 01.0	+3.1
	comp=Z,90nm,1.2s						
PAE	Paea	39.00	63	*e*T	T	05 58 26.5	
	comp=Z,29nm,0.3s						
PPT2	Papeete2	39.06	63	*e*P	P	05 17 01.9	+3.5
	comp=Z,467nm,1.2s						
PPT2				*e*S	S	05 23 01.7	+4.5
	comp=Z,45µm,26.0s						
PPT2				*e*LQ	LQ	05 26 02.7	
	comp=Z,134µm,25.5s						
PPT2				*e*LR	LR	05 27 18.4	
	comp=Z,141µm,31.0s,baz=216						
PPT2	Papeete2	39.06	63	*e*T	T	05 58 30.3	
	comp=Z,48nm,0.3s						
PPTF	Pamatai, Papee	39.06	63	PFAKE		05 17 10.0	+12
PPTF				LR	LR		
	comp=Z,51µm,20.0s						
PPT	Papeete	39.07	63	P	P	05 16 59.6	+1.1
	comp=Z,50nm,0.8s,baz=61,slow=19,SNR=2.0						
PPT				LR	LR	05 31 08.3	
	comp=Z,46µm,20.6s,baz=232,slow=33						
TVO	Taravao	39.14	64	*e*P	P	05 17 02.4	+3.3
	comp=Z,93nm,1.2s						
TVO	Taravao	39.14	64	*e*T	T	05 58 37.2	
	comp=Z,19nm,0.3s						
TIAR	Tiarei	39.23	63	*e*P	P	05 17 03.3	+3.5
	comp=Z,130nm,1.1s						
TIAR	Tiarei	39.23	63	*e*T	T	05 58 44.2	
	comp=Z,13nm,0.3s						

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MEH   Mehetia            39.87  65  eP       P        05 17 08.5 +3.3
      comp=Z,152nm,1.3s
PMG   Port Moresby       40.10 316   P       P        05 17 07.1 +0.1
      comp=Z,146nm,0.9s,baz=116,slow=7.6,SNR=20
PMG                                  LR      LR       05 32 33.2
      comp=Z,44µm,19.1s,baz=152,slow=35
PMG   Port Moresby       40.10 316  eP       P        05 17 08.5 +1.4
      comp=Z,1µm,1.5s
PMG                                  LR      LR
      comp=Z,62µm,19.0s
PMG   Port Moresby       40.10 316c iP       P        05 17 07.4 +0.4
PMG                                  pmax    pmax
      comp=Z,1µm,1.2s
PMG                                  MLR     MLR
      comp=Z,287µm,16.0s
WC3   Warramunga Arr     40.12 290   PFAKE            05 17 20.0  +13
WC3                                  LR      LR
      comp=Z,105µm,19.0s
WB2   Warramunga Arr     40.15 290  eP       P        05 17 06.6 -0.8
      comp=Z,314nm,0.6s
WB2                                  LR      LR
      comp=Z,114µm,20.0s
WC2   Warramunga Arr     40.15 290   PFAKE            05 17 20.0  +13
WC2                                  LR      LR
      comp=Z,114µm,19.0s
WRAB  Tennant Creek      40.16 290  eP       P        05 17 06.6 -0.9
      comp=Z,296nm,0.6s
WRAB                                 LR      LR
      comp=Z,109µm,20.0s
WRAB  Tennant Creek      40.16 290  eP       P        05 17 06.6 -0.9
WRAB                                 pmax    pmax
      comp=Z,296nm,0.6s
WRAB                                 MLR     MLR
      comp=Z,109µm,20.0s
WRA   Warramunga Arr     40.16 290   P       P        05 17 05.6 -1.9
      comp=Z,260nm,0.8s,baz=124,slow=8.4,SNR=535
WC1   Warramunga Arr     40.17 290   PFAKE            05 17 20.0  +12
WC1                                  LR      LR
      comp=Z,80µm,19.0s
KNTN  Kanton             40.71  22   PFAKE            05 17 20.0 +8.0
KNTN                                 LR      LR
      comp=Z,51µm,20.0s
WRKA  Warakurna          41.38 279   P       P        05 17 14.8 -2.9
      baz=41,SNR=196
PMOR  Pomariorio Ree     42.03  62  eT       T        06 02 13.7
      comp=Z,16nm,0.3s
VAH   Vaihoa             42.04  63  eT       T        06 02 13.3
      comp=Z,50nm,0.3s
RABL  Rabaul             42.29 326  eP       P        05 17 24.2 -0.8
      comp=Z,5µm,1.5s
RABL                                 LR      LR
      comp=Z,68µm,20.0s
CASY  Casey              42.30 213  eP       P        05 17 26.0 +1.4
      comp=Z,426nm,1.1s
CASY                                 LR      LR
      comp=Z,131µm,18.0s
KMBL  Kambalda           42.83 266   P       P        05 17 28.3 -1.0
      baz=43,SNR=28
TARA  Tarawa             42.86 358  eP       P        05 17 28.8 -0.8
      comp=Z,1µm,1.4s
RKGY  Rocky Gully        44.96 259   P       P        05 17 46.0 -0.4
      baz=45,SNR=5.6
NWAO  Narrogin (SRO)     45.54 262   P       P        05 17 49.4 -1.6
      comp=Z,45nm,0.7s,baz=126,slow=6.8,SNR=17
NWAO                                 LR      LR       05 34 08.5
      comp=Z,36µm,20.3s,baz=116,slow=33
NWAO  Narrogin (SRO)     45.54 262  eP       P        05 17 49.6 -1.5
      comp=Z,77nm,0.9s
NWAO                                 LR      LR
      comp=Z,38µm,20.0s
NWAO  Narrogin (SRO)     45.54 262   P       P        05 17 50.0 -1.1
      baz=45,SNR=16
NWAO  Narrogin (SRO)     45.54 262  eP       P        05 17 49.6 -1.5
NWAO                                 pmax    pmax
      comp=Z,77nm,0.9s
NWAO                                 MLR     MLR
      comp=Z,38µm,20.0s
RKT   Rikitea            45.91  82  eS       S        05 24 41.3 +3.3
      comp=Z,35µm,28.8s
RKT                                 eLQ      LQ       05 28 56.5
      comp=Z,124µm,32.2s
RKT                                 eLR      LR       05 30 47.0
      comp=Z,86µm,29.2s
RKT   Rikitea            45.91  82  eT       T        06 06 31.5
      comp=Z,30nm,0.2s
MANU  Manus Island       46.33 321  eP       P        05 17 57.6 +0.2
      comp=Z,2µm,1.8s
MANU                                 LR      LR
      comp=Z,41µm,20.0s
MUN   Mundaring          46.76 262   P       P        05 17 59.3 -1.4
      baz=46,SNR=58
KNRA  Kununurra          46.94 290   P       P        05 18 01.9 -0.2
      baz=47,SNR=22
BLDU  Ballidu            47.06 264   P       P        05 18 01.8 -1.2
      baz=47,SNR=18
MTN   Manton Dam         47.26 295  eP       P        05 18 03.6 -1.1
      comp=Z,249nm,0.8s
MTN                                  LR      LR
      comp=Z,110µm,18.0s
MTN   Manton Dam         47.26 295   P       P        05 18 03.5 -1.2
      baz=47,SNR=104
MEEK  Meekatharra        47.72 270   P       P        05 18 06.2 -2.0
      baz=48,SNR=216
MORW  Morawa             48.35 266  eP       P        05 18 11.8 -1.3
      comp=Z,157nm,1.1s
MORW                                 LR      LR
      comp=Z,60µm,18.0s
MORW  Morawa             48.35 266   P       P        05 18 11.6 -1.4
      baz=48,SNR=44
PTCN  Pitcairn Islan     48.43  88  eP       P        05 18 12.6 -1.1
      comp=Z,1µm,1.6s
QSPA  South Pole Qui     48.44 180  eP       P        05 18 13.8 +0.3
      comp=Z,312nm,0.9s
QSPA                                 LR      LR
      comp=Z,71µm,22.0s
PSAD2 Pilbara Seismi     49.58 276   PFAKE            05 18 30.0 +7.4
PSAD2                                LR      LR
      comp=Z,144µm,18.0s
PSAC2 Pilbara Seismi     49.66 276   PFAKE            05 18 30.0 +6.9
PSAC2                                LR      LR
      comp=Z,142µm,18.0s
PSAB3 Pilbara Seismi     49.67 276   PFAKE            05 18 30.0 +6.7
PSAB3                                LR      LR
      comp=Z,123µm,19.0s
PSAC3 Pilbara Seismi     49.67 276   PFAKE            05 18 30.0 +6.7
PSAC3                                LR      LR
      comp=Z,133µm,18.0s
PSAA3 Pilbara Seismi     49.68 276   PFAKE            05 18 30.0 +6.7
PSAA3                                LR      LR
      comp=Z,141µm,18.0s
PSAB2 Pilbara Seismi     49.69 276   PFAKE            05 18 30.0 +6.6
PSAB2                                LR      LR
      comp=Z,123µm,19.0s
PSA00 Pilbara Seismi     49.69 276  eP       P        05 18 21.6 -1.8
      comp=Z,232nm,1.0s
PSA00                                LR      LR
      comp=Z,136µm,18.0s
PSAA1 Pilbara Seismi     49.70 276   PFAKE            05 18 30.0 +6.6
PSAA1                                LR      LR
      comp=Z,140µm,18.0s
PSAA2 Pilbara Seismi     49.70 276   PFAKE            05 18 30.0 +6.6
PSAA2                                LR      LR
      comp=Z,138µm,18.0s
PSAD3 Pilbara Seismi     49.70 276   PFAKE            05 18 30.0 +6.5
PSAD3                                LR      LR
      comp=Z,134µm,18.0s
PSAB1 Pilbara Seismi     49.71 276   PFAKE            05 18 30.0 +6.4
PSAB1                                LR      LR
      comp=Z,137µm,18.0s
PSAC1 Pilbara Seismi     49.74 276   PFAKE            05 18 30.0 +6.2
PSAC1                                LR      LR
      comp=Z,142µm,18.0s
PSAD1 Pilbara Seismi     49.77 276   PFAKE            05 18 40.0  +16
PSAD1                                LR      LR
      comp=Z,135µm,18.0s
MBWA  Marble Bar         50.02 277   PFAKE            05 18 40.0  +14
MBWA                                 LR      LR
      comp=Z,110µm,18.0s
PATS  Pohnpei            50.47 339  eP       P        05 18 29.2 -0.1
      comp=Z,652nm,1.5s
PATS                                 LR      LR
      comp=Z,29µm,21.0s
PATS  Pohnpei            50.47 339   P       P        05 18 31.1 +1.9
      baz=51,SNR=5.4
XMAS  Kiritimati         50.49  38   PFAKE            05 18 40.0  +11
XMAS                                 LR      LR
      comp=Z,38µm,21.0s
KWAJ  Kwajalein Atol     50.62 351   PFAKE            05 18 40.0  +10
KWAJ                                 LR      LR
      comp=Z,31µm,20.0s
KWAJ  Kwajalein Atol     50.62 351  i P      P        05 18 30.1 -0.2
SAUI  Saumlaki           50.70 299   P       P        05 18 31.2 +0.2
TAOE  Nuku Hiva Isla     51.67  64  eP       P        05 18 42.0 +3.5
      comp=Z,461nm,1.3s
TAOE                                eS       S        05 26 02.7 +3.4
      comp=Z,22µm,27.7s
TAOE                                eLQ      LQ       05 31 20.4
      comp=Z,104µm,25.1s
TAOE                                eLR      LR       05 33 31.0
      comp=Z,86µm,26.8s
TAOE  Nuku Hiva Isla     51.67  64   PFAKE            05 18 50.0  +12
TAOE                                 LR      LR
      comp=Z,47µm,20.0s
BAKI  Biak               53.00 309   P       P        05 18 47.9 -0.4
GIRL  Giralia            53.25 271   PFAKE            05 19 00.0  +10
GIRL                                 LR      LR
      comp=Z,65µm,18.0s
GIRL  Giralia            53.25 271   P       P        05 18 48.5 -1.5
      baz=53,SNR=32
FAKI  Fak Fak            53.95 304  eP       P        05 18 52.9 -2.3
      comp=Z,98nm,0.8s
FAKI                                 LR      LR
      comp=Z,96µm,20.0s
FAKI  Fak Fak            53.95 304   P       P        05 18 52.4 -2.8
SOEI  Soe                54.18 291  eP       P        05 18 58.0 +0.9
      comp=Z,622nm,1.0s
SOEI                                 LR      LR
      comp=Z,160µm,18.0s
SOEI  Soe                54.18 291   P       P        05 18 57.6 +0.5
SIJI  Sorong             56.16 305   P       P        05 19 09.5 -1.7
      comp=Z,111nm,1.0s,baz=113,slow=7.9,SNR=7.8
MMRI  Maumere            56.39 290  eP       P        05 19 12.1 -0.7
      comp=Z,576nm,1.0s
MAW   Mawson             59.55 204   P       P        05 19 35.1 +0.8
      comp=Z,78nm,1.2s,baz=121,slow=8.1,SNR=49
MAW                                  LR      LR       05 44 55.5
      comp=Z,128µm,18.3s,baz=106,slow=36
MAW                                  PKPPKP  P'P'df   05 49 04.0 -7.2
      comp=Z,2.4nm,0.8s,baz=348,slow=7.0,SNR=4.2
MAW                                  PKP2bc           05 49 15.4
      comp=Z,5.0nm,0.9s,baz=218,slow=4.8,SNR=6.6
MAW   Mawson             59.55 204  eP       P        05 19 33.7 -0.6
      comp=Z,38nm,1.1s
MAW                                  LR      LR
      comp=Z,27µm,19.0s
MAW   Mawson             59.55 204  eP       P        05 19 33.7 -0.6
MAW                                  pmax    pmax
      comp=Z,38nm,1.1s
MAW                                  MLR     MLR
      comp=Z,27µm,19.0s
TNTI  Ternate            59.87 302  eP       P        05 19 35.9 -1.2
      comp=Z,271nm,1.0s
JOHN  Johnston Islan     60.01  18   PFAKE            05 19 50.0  +12
JOHN                                 LR      LR
      comp=Z,38µm,20.0s
KAPI  Kappang            60.68 291  eP       P        05 19 41.6 -1.2
      comp=Z,750nm,1.7s
KAPI  Kappang            60.68 291  eP       P        05 19 41.6 -1.2
KAPI                                 pmax    pmax
      comp=Z,750nm,1.7s
WAKE  Wake Island        61.08 352  eP       P        05 19 44.9 -0.3
      comp=Z,3µm,1.9s
WAKE                                 LR      LR
      comp=Z,25µm,20.0s
GUMO  Guam               61.36 327   P       P        05 19 47.4 +0.2
      comp=Z,113nm,1.0s,baz=168,slow=6.4,SNR=8.3
GUMO                                 LR      LR       05 45 44.2
      comp=Z,10µm,18.7s,baz=154,slow=36
GUMO  Guam               61.36 327  eP       P        05 19 46.3 -1.0
GUMO                                 LR      LR
      comp=Z,20µm,19.0s
GUMO  Guam               61.36 327  eP       P        05 19 46.3 -1.0
GUMO                                 MLR     MLR
      comp=Z,20µm,19.0s
H11N1 WAKE ISLAND Hy     61.48 352   P       P        05 19 43.1 -4.5
      baz=188,slow=9.8,SNR=6.1
H11N3 WAKE ISLAND Hy     61.48 352   P       P        05 19 53.8 +6.1
      baz=188,slow=9.8,SNR=4.5
LUWI  Luwuk              61.49 297  eP       P        05 19 47.4 -0.8
      comp=Z,2µm,1.5s
LUWI                                 LR      LR
      comp=Z,30µm,20.0s
H11N2 WAKE ISLAND Hy     61.49 352   P       P        05 19 50.2 +2.5
      baz=188,slow=9.8,SNR=4.4
JAGI  Jajag, Banyuwa     62.28 284  eP       P        05 19 51.6 -2.0
      comp=Z,134nm,1.0s
JAGI                                 LR      LR
      comp=Z,43µm,20.0s
RPN   Rapa Nui           62.71 103   P       P        05 19 58.8 +2.4
      comp=Z,62nm,1.0s,baz=230,slow=5.5,SNR=1.8
RPN                                  LR      LR       05 43 20.0
      comp=Z,26µm,18.1s,baz=220,slow=32
RPN   Rapa Nui           62.71 103  eP       P        05 19 55.7 -0.6
      comp=Z,1µm,2.0s
RPN                                  LR      LR
      comp=Z,27µm,18.0s
RPN   Rapa Nui           62.71 103  eP       P        05 19 55.7 -0.6
RPN                                  pmax    pmax
      comp=Z,1µm,2.0s
RPN                                  MLR     MLR
      comp=Z,27µm,18.0s
KMMI  Kalianget          63.38 285   P       P        05 19 57.5 -3.4
ANA2  Anatahan           63.52 329  eP       P        05 19 59.8 -1.9
      comp=Z,149nm,0.8s
ANA2                                 LR      LR
      comp=Z,17µm,21.0s
SARN  Sarigan            63.82 329  eP       P        05 20 03.1 -0.6
      comp=Z,365nm,1.9s
SARN                                 LR      LR
      comp=Z,19µm,20.0s
PWJI  Pagerwojo          64.30 283   P       P        05 20 05.8 -1.1
PMSA  Palmer Station     64.50 156   P       P        05 20 10.0 +2.5
      comp=Z,71nm,1.0s,baz=231,slow=4.7,SNR=8.3
PMSA                                 LR      LR       05 44 30.8
      comp=Z,28µm,18.5s,baz=231,slow=32
PMSA  Palmer Station     64.50 156  eP       P        05 20 06.9 -0.7
      comp=Z,100nm,1.0s
PMSA                                 LR      LR
      comp=Z,43µm,18.0s
PMSA  Palmer Station     64.50 156  eP       P        05 20 06.9 -0.7
GRJI  Gresik             64.55 284   P       P        05 20 08.6  0.0
SYO   Syowa Base         64.66 196⇓iP       P        05 20 07.4 -1.1
NGJI  Ngawi              64.98 283   P       P        05 20 13.5 +2.1
DDMP  Don Marcelino,     65.03 305  eP       P        05 20 08.8 -2.9
WOJI  Wonogiri, Jawa     65.06 282   P       P        05 20 11.1 -0.9
UGM   Wanagama           65.31 282   PFAKE            05 20 20.0 +6.4
UGM                                  LR      LR
      comp=Z,42µm,18.0s
DAV   Davao City (W)     65.87 305   P       P        05 20 16.4 -0.7
      comp=Z,413nm,0.8s,baz=73,slow=2.6,SNR=11
DAV   Davao City (W)     65.87 305  eP       P        05 20 16.1 -1.0
      comp=Z,827nm,1.0s
DAV                                  LR      LR
      comp=Z,35µm,21.0s
DAV   Davao City (W)     65.87 305⇑iP       P        05 20 16.2 -1.0
SMRI  Semarang           65.94 283  eP       P        05 20 17.1 -0.6
      comp=Z,376nm,1.2s
SMRI                                 LR      LR
      comp=Z,36µm,20.0s
SMRI  Semarang           65.94 283   P       P        05 20 17.2 -0.5
SKMP  Bagumbayan, Su     66.08 304  eP       P        05 20 16.8 -1.6
KHU   Kahuku             66.70  31   PFAKE            05 20 30.0 +7.5
KHU                                  LR      LR
      comp=Z,22µm,20.0s
CTBH  Cotabato--PC H     66.81 304⇑iP       P        05 20 22.0 -1.1
BUKP  Musuan             66.82 305  eP       P        05 20 22.6 -0.6
KHLU  Kahalu`u           66.90  31   PFAKE            05 20 40.0  +16
KHLU                                 LR      LR
      comp=Z,24µm,19.0s
CMJI  Cimerak            66.92 280   P       P        05 20 21.8 -2.1
SNAA  Sanae              66.93 181   P       P        05 20 24.5 +1.3
SNAA  Sanae              66.93 181   P       P        05 20 24.6 +1.3
      comp=Z,234nm,1.2s,baz=178,slow=6.0,SNR=144
SNAA  Sanae              66.93 181  eP       P        05 20 24.8 +1.5
      comp=Z,209nm,1.1s
SNAA                                 LR      LR
      comp=Z,65µm,20.0s
SNAA  Sanae              66.93 181  eP       P        05 20 24.8 +1.5
SNAA                                 pmax    pmax
      comp=Z,209nm,1.1s
SNAA                                 MLR     MLR
      comp=Z,65µm,20.0s
MTKI  Muara Teweh, K     66.96 291   P       P        05 20 24.3 +0.1
MLOA  Mauna Loa Obse     66.97  31   PFAKE            05 20 40.0  +15
MLOA                                 LR      LR
      comp=Z,28µm,19.0s
HMH   Humu‘ula Sheep     67.07  31  eP       P        05 20 24.8 -0.2
      comp=Z,673nm,1.0s
POHA  Pohakuloa          67.19  31   PFAKE            05 20 40.0  +14
POHA                                 LR      LR
      comp=Z,25µm,20.0s
XMIS  Christmas Isla     67.22 276   PFAKE            05 20 40.0  +14
XMIS                                 LR      LR
      comp=Z,48µm,19.0s
BUTP  Butuan             67.33 306  eP       P        05 20 18.6 -7.8
VNA3  Neumayer Olymp     67.34 179   P       P        05 20 26.9 +1.1
HPAH  Hawaii Prepara     67.38  31   PFAKE            05 20 40.0  +13
HPAH                                 LR      LR
      comp=Z,21µm,19.0s
CGP   Cagayan de Oro     67.49 305  eP       P        05 20 28.8 +1.4
CISI  Cisompet, Garu     67.53 280  eP       P        05 20 26.7 -1.2
      comp=Z,2µm,1.9s
CISI                                 LR      LR
      comp=Z,26µm,18.0s
CISI  Cisompet, Garu     67.53 280   P       P        05 20 26.7 -1.2
HON   Honolulu           67.72  28   PFAKE            05 20 40.0  +11
HON                                  LR      LR
      comp=Z,23µm,19.0s
KEKH  Kekaha             67.75  26   PFAKE            05 20 40.0  +11
KEKH                                 LR      LR
      comp=Z,25µm,21.0s
KIP   Kipapa             67.81  28  eP       P        05 20 29.2  0.0
      comp=Z,853nm,1.8s
KIP                                  LR      LR
      comp=Z,23µm,19.0s
KIP   Kipapa             67.81  28  eP       P        05 20 29.2  0.0
KIP                                  pmax    pmax
      comp=Z,853nm,1.8s
KIP                                  MLR     MLR
      comp=Z,23µm,19.0s
HLK   Haleakala          67.83  30   PFAKE            05 20 40.0  +10
HLK                                  LR      LR
      comp=Z,34µm,20.0s
KHLH  Kahului Airpor     67.89  30   PFAKE            05 20 40.0  +10
KHLH                                 LR      LR
      comp=Z,36µm,20.0s
JCJI  Jatiwangi          67.91 281   P       P        05 20 28.7 -1.5
VNA1  Neumayer--Stat     67.96 179   P       P        05 20 31.1 +1.4
PBKI  Pangkalan Bun      68.02 287   P       P        05 20 30.5 -0.3
OPA   Opana              68.05  28   PFAKE            05 20 40.0 +9.2
OPA                                  LR      LR
      comp=Z,27µm,19.0s
LEM   Lembang            68.17 281   P       P        05 20 31.3 -0.7
      comp=Z,140nm,0.8s,baz=35,slow=2.8,SNR=14
SKJI  Sukabumi           68.83 280   P       P        05 20 36.1 +0.2
LLP   Lapu-Lapu          69.39 306  eP       P        05 20 37.9 -1.4
LLP                                 eS       S        05 29 44.1 -1.7
CGJI  Cibinong           69.73 279   P       P        05 20 40.3 -1.2
MIDW  Midway             69.97   8   PFAKE            05 20 50.0 +7.5
MIDW                                 LR      LR
      comp=Z,33µm,21.0s
USHA  Ushuaia            69.98 147   P       P        05 20 44.8 +2.3
      comp=Z,12nm,0.9s,baz=248,slow=9.4,SNR=3.5
USHA                                 LR      LR       05 43 50.7
      comp=Z,29µm,21.9s,baz=224,slow=29
GO10  Punta Arenas       70.05 144  eP       P        05 20 42.5 -0.5
      comp=Z,303nm,1.3s
GO10                                 LR      LR
      comp=Z,31µm,18.0s
STKI  Sintang            70.08 289   P       P        05 20 41.8 -1.9
SDKM  Sandakan           70.15 297   P       P        05 20 43.0 -1.1
GO09  Cerro Castillo     70.77 142   PFAKE            05 21 00.0  +13
GO09                                 LR      LR
      comp=Z,37µm,19.0s
TPI   Tanjungpandan      70.88 284   P       P        05 20 47.2 -1.4
KKM   Kota Kinabalu      71.10 297  eP       P        05 20 48.7 -1.3
      comp=Z,166nm,1.0s
KKM                                  LR      LR
      comp=Z,27µm,21.0s
KKM   Kota Kinabalu      71.10 297   P       P        05 20 55.0 +5.0
SBUM  Sibu               71.24 291  eP       P        05 20 49.8 -0.9
      comp=Z,120nm,1.4s
SBUM                                 LR      LR
      comp=Z,14µm,19.0s
SBUM  Sibu               71.24 291   P       P        05 20 51.0 +0.3
KASI  Kota Agung         71.33 279   P       P        05 20 51.4 +0.1
KLSI                     71.72 280   P       P        05 20 51.4 -2.2
KSM   Kuching            71.90 289  eP       P        05 20 53.4 -1.3
      comp=Z,142nm,1.2s
KSM                                  LR      LR
      comp=Z,29µm,22.0s
KSM   Kuching            71.90 289   P       P        05 20 54.0 -0.7
LWLI  Liwa               72.00 280   P       P        05 20 54.0 -1.4
MDSI  Maura Dua          72.26 280   P       P        05 20 55.3 -1.6
PPBI  Pangkal Pinang     72.39 283   P       P        05 20 55.9 -1.8
LHSI  Lahat              73.19 280   P       P        05 21 01.9 -0.5
MNAI  Manna              73.25 279   PFAKE            05 21 10.0 +7.2
MNAI                                 LR      LR
      comp=Z,30µm,19.0s
TGY   Tagaytay City      74.18 306   P       P        05 21 07.3 -0.9
      comp=Z,110nm,0.4s,baz=259,slow=6.3,SNR=4.2
KRJI  Kerinci            75.87 280   P       P        05 21 15.8 -2.3
EFI   East Falkland      76.47 149   PFAKE            05 21 30.0 +9.2
EFI                                  LR      LR
      comp=Z,20µm,19.0s
EFI   East Falkland      76.47 149⇓eP       P        05 21 19.4 -1.4
EFI                                  pmax    pmax
      comp=Z,176nm,0.9s
PPSI  Pulau Pagai        76.49 278   P       P        05 21 21.3 -0.2
MYKOM Kota Tinggi        76.75 285  eP       P        05 21 21.3 -1.7
      comp=Z,504nm,2.0s
MYKOM                                LR      LR
      comp=Z,38µm,20.0s
MYKOM Kota Tinggi        76.75 285   P       P        05 21 23.0 +0.1
PDSI  Padang             77.40 280   P       P        05 21 23.4 -3.3
BKNI  Bangkinang         77.81 281  eP       P        05 21 26.8 -2.1
      comp=Z,413nm,1.4s
BKNI                                 LR      LR
      comp=Z,38µm,18.0s
BKNI  Bangkinang         77.81 281   P       P        05 21 27.4 -1.5
      comp=Z,158nm,1.0s,comp=Z,5µm
SISI  Saibi              78.13 279   P       P        05 21 31.1 +0.4
PLCA  Paso Flores        79.09 136   P       P        05 21 38.2 +2.4
      comp=Z,62nm,1.1s,baz=231,slow=6.1,SNR=20
PLCA                                 LR      LR       05 48 54.2
      comp=Z,13µm,21.7s,baz=244,slow=30
PLCA  Paso Flores        79.09 136  eP       P        05 21 36.1 +0.3
      comp=Z,39nm,1.6s
PLCA  Paso Flores        79.09 136  eP       P        05 21 36.1 +0.3
PLCA                                 pmax    pmax
      comp=Z,39nm,1.6s
PLCA  Paso Flores        79.09 136  eP       P        05 21 34.8 -0.9
JRMM  Jerantut           79.18 285   P       P        05 21 36.0 -0.4
MNSI  Mandailing Nat     79.19 281   P       P        05 21 34.1 -2.5
      comp=Z,138nm,1.0s,comp=Z,4µmcomp=Z,324µm
PBSI  Pulau Batu         79.58 279   P       P        05 21 39.2 +0.5
      comp=Z,209nm,1.7s,comp=Z,5µm
JOW   Kunigami           80.40 319   P       P        05 21 42.2 -0.6
      comp=Z,2.0nm,0.7s,baz=158,slow=14,SNR=7.7
JOW   Kunigami           80.40 319  eP       P        05 21 41.4 -1.4
      comp=Z,94nm,1.7s
DLV   T  Lat             80.59 295  eP       P        05 21 43.2 -1.1
      comp=Z,547nm,2.0s
IPM   Ipoh               80.63 285  eP       P        05 21 43.1 -1.3
      comp=Z,66nm,0.9s
IPM                                  LR      LR
      comp=Z,29µm,19.0s
IPM   Ipoh               80.63 285   P       P        05 21 43.0 -1.3
HOPE  Hope Point         80.81 162  eP       P        05 21 44.5 -0.2
      comp=Z,419nm,1.4s
HOPE                                 LR      LR
      comp=Z,29µm,20.0s
JHJ2  Mitsune            80.93 331   PFAKE            05 22 00.0  +15
JHJ2                                 LR      LR
      comp=Z,15µm,19.0s
GSI   Gunungsitoli       81.01 280  eP       P        05 21 45.8 -0.6
      comp=Z,931nm,1.7s
GSI                                  LR      LR
      comp=Z,28µm,19.0s
GSI   Gunungsitoli       81.01 280   P       P        05 21 46.4  0.0
      comp=Z,236nm,0.9s,comp=Z,9µm
PSI   Prapat             81.03 282  eP       P        05 21 44.0 -2.6
      comp=Z,90nm,1.1s
PSI                                  LR      LR
      comp=Z,47µm,19.0s
PSI   Prapat             81.03 282  eP       P        05 21 44.0 -2.6
PSI                                  pmax    pmax
      comp=Z,90nm,1.1s
PSI                                  MLR     MLR
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	comp=Z,47µm,19.0s						
YOJ	**Yonaguni jima**	**81.17**	**314**	*e*P	**P**	**05 21 46.2**	**-0.7**
	comp=Z,399nm,1.4s						
YOJ				LR	LR		
	comp=Z,15µm,20.0s						
YOJ	**Yonaguni jima**	**81.17**	**314**	*e*P	**P**	**05 21 46.2**	**-0.7**
YOJ				pmax	pmax		
	comp=Z,399nm,1.4s						
YOJ				MLR	MLR		
	comp=Z,15µm,20.0s						
YULB	**Yu-li**	**81.26**	**312**	*e*P	**P**	**05 21 44.8**	**-2.7**
	comp=Z,45nm,0.4s						
KULM	**Kulim**	**81.46**	**285**	*e*P	**P**	**05 21 47.6**	**-1.1**
	comp=Z,180nm,1.4s						
KULM				LR	LR		
	comp=Z,35µm,19.0s						
KULM	**Kulim**	**81.46**	**285**	P	**P**	**05 21 48.0**	**-0.7**
TPUB	**Ta-pu**	**81.56**	**311**	*e*P	**P**	**05 21 47.2**	**-1.9**
	comp=Z,55nm,1.0s						
TPUB				LR	LR		
	comp=Z,10µm,21.0s						
NACB	**Ninganchiao**	**81.71**	**313**	PFAKE		05 22 00.0	+10
NACB				LR	LR		
	comp=Z,12µm,19.0s						
SSLB	**Suanglung**	**81.76**	**312**	*e*P	**P**	**05 21 47.8**	**-2.3**
	comp=Z,121nm,1.2s						
TSI	**Tuntungan**	**81.76**	**282**	P	**P**	**05 21 49.1**	**-1.2**
	comp=Z,290nm,1.3s,comp=Z,8µm						
KCSI	**Kotacane, Aceh**	**82.36**	**282**	P	**P**	**05 21 51.5**	**-2.0**
	comp=Z,85nm,1.6s,comp=Z,3µm						
TATO	**Taipei**	**82.41**	**313**	*e*P	**P**	**05 21 52.7**	**-0.7**
	comp=Z,116nm,0.9s						
TATO				LR	LR		
	comp=Z,14µm,20.0s						
GO05	**Huala**	**82.46**	**131**	*e*P	**P**	**05 21 54.0**	**+0.1**
	comp=Z,206nm,1.4s						
GO05				LR	LR		
	comp=Z,13µm,18.0s						
TPTI		**82.62**	**281**	P	**P**	**05 21 53.7**	**-1.1**
	comp=Z,68nm,0.8s,comp=Z,3µm						
SKLT	**Songkhla**	**82.76**	**286**	P	**P**	**05 21 55.0**	**-0.5**
MLSI	**Meulaboh, Aceh**	**83.86**	**281**	P	**P**	**05 21 59.8**	**-1.5**
	comp=Z,346nm,1.1s,comp=Z,5µm						
TRTT	**Trang**	**83.89**	**286**	P	**P**	**05 22 00.6**	**-0.7**
INU	**Inuyama**	**83.96**	**330**	*e*P	**P**	**05 22 00.0**	**-1.1**
	comp=Z,112nm,0.9s						
INU				LR	LR		
	comp=Z,21µm,21.0s						
QZH	**Quanzhou**	**83.99**	**311**	⇑*i*P	**P**	**05 22 01.0**	**-0.6**
QZH				S	**S**	**05 32 25.9**	**+0.9**
QZH				pmax	pmax		
	comp=Z,2µm,7.8s						
QZH				LR	LR		
	comp=Z,5µm,25.1s						
QZH				LR	LR		
	comp=Z,10µm,24.6s						
QZH				LR	LR		
	comp=Z,15µm,29.6s						
LHMI	**Lhok Sumawe**	**84.11**	**282**	PFAKE		05 22 10.0	+7.5
LHMI				LR	LR		
	comp=Z,34µm,20.0s						
JNU	**Nakatsue**	**84.50**	**325**	P	**P**	**05 22 02.7**	**-1.4**
	comp=Z,73nm,0.8s,baz=107,slow=3.8,SNR=35						
JNU	**Nakatsue**	**84.50**	**325**	*e*P	**P**	**05 22 03.1**	**-0.9**
	comp=Z,134nm,0.9s						
JNU				LR	LR		
	comp=Z,19µm,22.0s						
PEL	**Peldehue**	**84.53**	**130**	*e*P	**P**	**05 22 04.8**	**+0.3**
	comp=Z,189nm,1.1s						
PEL				LR	LR		
	comp=Z,12µm,18.0s						
HKPS	**Hong Kong Po S**	**84.56**	**306**	PFAKE		05 22 10.0	+5.5
HKPS				LR	LR		
	comp=Z,13µm,21.0s						
MJAR	**Matsushiro Arr**	**84.59**	**331**	P	**P**	**05 22 03.2**	**-1.1**
	comp=Z,12nm,0.9s,baz=167,slow=5.4,SNR=27						
MAJO	**Matsushiro**	**84.59**	**331**	*e*P	**P**	**05 22 03.5**	**-0.9**
	comp=Z,85nm,1.1s						
MAJO	**Matsushiro**	**84.59**	**331**	*c i*P	**P**	**05 22 02.6**	**-1.8**
MAJO				pmax	pmax		
	comp=Z,102nm,1.6s						
MAJO				MLR	MLR		
	comp=Z,10µm,18.0s						
MAT	**Matsushiro**	**84.59**	**331**	P	**P**	**05 22 02.7**	**-1.7**
MAT				S	**S**	**05 32 27.0**	**-3.6**
MJB9	**Matsu-Tunnel**	**84.59**	**331**	*e*P	**P**	**05 22 03.8**	**-0.6**
	comp=Z,91nm,1.2s						
QIZ	**Qiongzhong**	**84.83**	**301**	PFAKE		05 22 20.0	+14
QIZ				LR	LR		
	comp=Z,12µm,20.0s						
QIZ	**Qiongzhong**	**84.83**	**301**	P	**P**	**05 22 06.3**	**+0.3**
QIZ				sP	**sP**	**05 22 15.4**	**+2.0**
QIZ				S	**S**	**05 32 29.3**	**-4.3**
QIZ				sS	**sS**	**05 32 41.9**	**-0.7**
QIZ				SS	**SS**	**05 38 11.3**	**+4.8**
QIZ				pmax	pmax		
	comp=Z,2µm,9.6s						
QIZ				LR	LR		
	comp=Z,9µm,23.5s						
QIZ				LR	LR		
	comp=Z,7µm,19.6s						
QIZ				LR	LR		
	comp=Z,12µm,23.5s						
PKDT	**Phuket**	**84.90**	**285**	P	**P**	**05 22 07.6**	**+1.1**
TRQA	**Tornquist**	**85.47**	**139**	*e*P	**P**	**05 22 08.1**	**-1.1**
GZH	**Guangzhou**	**85.65**	**306**	P	**P**	**05 22 11.1**	**+1.2**
GZH				PP	**PP**	**05 25 31.4**	**+2.1**
GZH				SKS	**SKSac**	**05 32 35.8**	**+1.1**
GZH				S	**SKKSac**	**05 32 45.8**	**+4.2**
GZH				SS	**SS**	**05 38 25.1**	**+6.6**
GZH				LR	LR		
	comp=Z,6µm,18.0s						
GZH				LR	LR		
	comp=Z,11µm,19.2s						
GO04	**Tololo Observa**	**86.63**	**128**	PFAKE		05 22 30.0	+15
GO04				LR	LR		
	comp=Z,12µm,19.0s						
PANO	**Nakornpanom**	**86.92**	**296**	P	**P**	**05 22 15.8**	**-0.6**
CFA	**Coronel Fontan**	**87.06**	**131**	LR	LR	05 55 41.9	
	comp=Z,7µm,18.1s,baz=202,slow=32						
PHET	**Kaeng Krachan**	**87.41**	**290**	P	**P**	**05 22 18.9**	**+0.1**
SSE	**Sheshan**	**87.44**	**317**	P	**P**	**05 22 18.4**	**-0.2**
SSE				S	**S**	**05 32 57.6**	**-1.0**
SSE				pmax	pmax		
	comp=Z,550nm,7.1s						
SSE				LR	LR		
	comp=Z,7µm,23.6s						
SSE				LR	LR		
	comp=Z,6µm,22.4s						
CMBY	**CAMPBELL BAY**	**87.52**	**282**	*e*P	**P**	**05 22 19.0**	**-0.4**
LCO	**Las Campanas**	**87.53**	**127**	*e*P	**P**	**05 22 19.7**	**0.0**
	comp=Z,92nm,1.2s						
LCO				LR	LR		
	comp=Z,17µm,19.0s						
LCO	**Las Campanas**	**87.53**	**127**	*e*P	**P**	**05 22 19.7**	**0.0**
LCO				pmax	pmax		
	comp=Z,92nm,1.2s						
LCO				MLR	MLR		
	comp=Z,17µm,19.0s						
LCO	**Las Campanas**	**87.53**	**127**	*e*P	**P**	**05 22 17.9**	**-1.8**
CHAI	**Chaiyaphum**	**87.83**	**293**	P	**P**	**05 22 20.3**	**-0.5**
ERM	**Erimo**	**87.96**	**337**	PFAKE		05 22 30.0	+9.3
ERM				LR	LR		
	comp=Z,21µm,21.0s						
ERM	**Erimo**	**87.96**	**337**	*c i*P	**P**	**05 22 21.6**	**+0.9**
ERM				pmax	pmax		
	comp=Z,72nm,1.9s						
ERM				MLR	MLR		
	comp=Z,21µm,20.0s						
NONG	**Nongkai**	**88.55**	**296**	P	**P**	**05 22 23.6**	**-0.6**
SRDT	**SRDT**	**88.75**	**290**	P	**P**	**05 22 25.9**	**+0.7**
TJN	**Taejon**	**88.79**	**324**	⇑*e*P	**P**	**05 22 25.2**	**+0.3**
GO03	**Copiap**	**88.85**	**127**	*e*P	**P**	**05 22 25.4**	**-0.4**
	comp=Z,182nm,1.5s						
GO03				LR	LR		
	comp=Z,11µm,20.0s						
YUK	**Yuzh-Kuril'sk**	**89.09**	**340**	*d i*P	**P**	**05 22 27.5**	**+1.5**
YUK				*i*		05 25 56.8	
YUK				*e*S	**SKSac**	**05 32 56.9**	**+2.2**
YUK				*i* SS	**SS**	**05 39 12.9**	**+4.6**
YUK				*e*SSS	SSS	05 42 49.6	
YUK				pmax	pmax		
	comp=Z,468nm,2.7s						
YUK				pmax	pmax		
	comp=N,155nm,1.4s						
YUK				pmax	pmax		
	comp=Z,226nm,1.4s						
YUK				pmax	pmax		
	comp=E,100nm,1.1s						
UTHA	**Uthaitani**	**89.35**	**291**	P	**P**	**05 22 27.9**	**-0.1**
NJ2	**Nanjing**	**89.41**	**316**	*e*P	**P**	**05 22 27.0**	**-0.9**
NJ2				pP	**pP**	**05 22 32.1**	**-1.2**
NJ2				sP	**sP**	**05 22 36.0**	**+0.8**
NJ2				PP	**PP**	**05 26 00.9**	**+1.4**
NJ2				SKS	**SKSac**	**05 32 57.5**	**+0.3**
NJ2				S	**S**	**05 33 18.8**	**+1.6**
NJ2				sS	**sS**	**05 33 26.4**	**+0.2**
NJ2				SS	**SS**	**05 39 15.8**	**+2.5**
NJ2				pmax	pmax		
	comp=E,2µm,6.2s						
NJ2				LR	LR		
	comp=E,9µm,21.8s						
NJ2				LR	LR		
	comp=E,12µm,18.0s						
NJ2				LR	LR		
	comp=E,15µm,18.9s						
KSRS	**Korea Array**	**89.45**	**325**	P	**P**	**05 22 28.0**	**+0.1**
	comp=E,48nm,0.9s,baz=146,slow=4.8,SNR=55						
KSRS				LR	LR	05 59 39.1	
	comp=E,11µm,21.0s,baz=149,slow=34						
KSRS	**Korea Array**	**89.45**	**325**	P	**P**	**05 22 28.0**	**+0.1**
KS15	**Wonju Array Si**	**89.46**	**325**	*e*P	**P**	**05 22 27.8**	**-0.1**
	comp=E,44nm,1.8s						
KUR	**Kuril'sk**	**89.72**	**342**	*d i*P	**P**	**05 22 32.9**	**+3.9**
KUR				*e*		05 26 02.8	
KUR				*e*S	**SKSac**	**05 33 04.6**	**+6.3**
KUR				pmax	pmax		
	comp=Z,2µm,3.4s						
KUR				pmax	pmax		
	comp=Z,361nm,1.6s						
KUR				pmax	pmax		
	comp=N,88nm,1.4s						
KUR				pmax	pmax		
	comp=E,74nm,1.1s						
ASAJ	**Asahikawa**	**90.05**	**338**	P	**P**	**05 22 30.5**	**-0.1**
	comp=E,22nm,0.8s,baz=227,slow=9.8,SNR=11						
UTTA	**Uttaradit**	**90.09**	**294**	P	**P**	**05 22 31.5**	**+0.1**
UMPA	**Umpang Tak**	**90.20**	**292**	P	**P**	**05 22 31.9**	**-0.1**
SLVN	**Son La**	**90.34**	**299**	*e*P	**P**	**05 22 32.5**	**-0.1**
	comp=E,89nm,1.2s						
WHN	**Wuhan**	**90.69**	**312**	⇓P	**P**	**05 22 33.5**	**-0.4**
WHN				pP	**sP**	**05 22 43.9**	**+2.7**
WHN				PP	**PP**	**05 26 12.3**	**+2.6**
WHN				SKS	**SKSac**	**05 32 58.6**	**-6.1**
WHN				S	**S**	**05 33 29.9**	**+0.8**
WHN				LR	LR		
	comp=E,14µm,16.4s						
WHN				LR	LR		
	comp=E,22µm,22.9s						
WHN				LR	LR		
	comp=E,37µm,24.3s						
GO02	**Mina Guanaco**	**91.03**	**125**	PFAKE		05 22 50.0	+14
GO02				LR	LR		
	comp=Z,12µm,19.0s						
PB10	**IPOC Station P**	**91.64**	**124**	PFAKE		05 22 50.0	+11
PB10				LR	LR		
	comp=Z,16µm,21.0s						
CM31	**Chiang Mai Arr**	**91.69**	**293**	*e*P	**P**	**05 22 38.8**	**-0.1**
	comp=Z,6.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**91.69**	**293**	P	**P**	**05 22 38.8**	**-0.1**
	comp=Z,28nm,0.9s,baz=151,slow=3.4,SNR=113						
CMAR				PP	**PP**	**05 26 15.2**	**-2.6**
	comp=Z,3.9nm,0.7s,baz=147,slow=5.3,SNR=5.8						
CMAR				LR	LR	06 07 45.9	
	comp=Z,10µm,18.5s,baz=143,slow=38						
CMAR	**Chiang Mai Arr**	**91.69**	**293**	*i* P	**P**	**05 22 38.7**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,30nm,0.9s						
CMMT	**Chiang Mai**	**91.93**	**293**	P	**P**	**05 22 39.8**	**-0.2**
CHTO	**Chiang Mai**	**91.93**	**293**	*e*P	**P**	**05 22 39.8**	**-0.2**
	comp=Z,84nm,1.1s						
CHTO				LR	LR		
	comp=Z,14µm,19.0s						
CHTO	**Chiang Mai**	**91.93**	**293**	*e*P	**P**	**05 22 39.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,84nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,14µm,19.0s						
GYA	**Guiyang**	**92.22**	**304**	⇑*i*P	**P**	**05 22 40.6**	**-0.7**
GYA				pP	sP	05 22 49.8	+1.1
GYA				PP	**PP**	**05 26 21.5**	**-0.6**
GYA				SKS	**SKSac**	**05 33 10.3**	**-3.6**
GYA				S	**S**	**05 33 43.9**	**+0.4**
GYA				SS	**SS**	**05 39 49.3**	**-5.1**
GYA				pmax	pmax		
	comp=Z,60nm,0.8s						
GYA				pmax	pmax		
	comp=Z,830nm,10.0s						
GYA				LR	LR		
	comp=Z,4µm,24.9s						
GYA				LR	LR		
	comp=Z,7µm,22.1s						
GYA				LR	LR		
	comp=Z,11µm,23.7s						
DGPR	**DIGLIPUR**	**92.37**	**285**	*e*P	**P**	**05 22 38.8**	**-3.2**
DGPR				IAmb	IAmb	05 22 39.6	
	comp=Z,111nm,1.3s						
DGPR				IAMs_20	IAMs_20	05 34 59.1	
	comp=Z,5µm,9.1s						
YSS	**Yuzh-Sakhalins**	**92.62**	**339**	*e*P	**P**	**05 22 42.5**	**+0.2**
	comp=Z,197nm,1.6s						
YSS				LR	LR		
	comp=Z,21µm,20.0s						
YSS	**Yuzh-Sakhalins**	**92.62**	**339**	*c i*P	**P**	**05 22 42.6**	**+0.2**
YSS				*e*		05 33 09.0	
YSS				*e*S	**S**	**05 33 46.6**	**+0.8**
YSS				*e*PS	PS	05 34 59.7	+0.2
YSS				pmax	pmax		
	comp=Z,2µm,11.0s						
YSS				smax	smax		
	comp=N,5µm,12.0s						
YSS				smax	smax		
	comp=E,12µm,12.0s						
TEY	**Ternei**	**92.71**	**334**	⇑*e*P	**P**	**05 22 40.2**	**-2.7**
TEY				*e*		05 33 53.9	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
PB04	**IPOC Station P**	**92.76**	**123**	PFAKE		05 22 50.0	+5.9
PB04				LR	LR		
	comp=Z,11µm,20.0s						
LVC	**Limon Verde**	**93.33**	**124**	LR	LR	05 55 42.4	
	comp=Z,15µm,21.4s,baz=242,slow=30						
LVC	**Limon Verde**	**93.33**	**124**	PFAKE		05 23 00.0	+13
LVC				LR	LR		
	comp=Z,15µm,21.0s						
LVC	**Limon Verde**	**93.33**	**124**	*e*P	**P**	**05 22 45.5**	**-1.5**
SKR	**Severo-Kuril's**	**93.36**	**348**	*e*P	**P**	**05 22 45.4**	**-0.3**
SKR				*e*		05 26 27.1	
SKR				*e*S	**S**	**05 33 55.5**	**+3.3**
SKR				pmax	pmax		
	comp=Z,1µm,10.2s						
SKR				pmax	pmax		
	comp=Z,31nm,1.1s						
DL2	**Dalian**	**93.47**	**322**	SKS	**SKSac**	**05 33 09.5**	**-10**
DL2	**Dalian**	**93.47**	**322**	S	S	05 33 44.3	-9.4
DL2	**Dalian**	**93.47**	**322**	SS	SS	05 39 57.8	-14
DL2				pmax	pmax		
	comp=Z,20nm,0.9s						
DL2				pmax	pmax		
	comp=Z,970nm,10.6s						
DL2				LR	LR		
	comp=N,5µm,23.4s						
DL2				LR	LR		
	comp=E,7µm,20.2s						
DL2				LR	LR		
	comp=Z,10µm,26.0s						
ADK	**Adak**	**93.52**	**6**	PFAKE		05 23 00.0	+14
ADK				LR	LR		
	comp=Z,18µm,20.0s						
TIA	**Tai'an**	**93.55**	**317**	P	**P**	**05 22 46.3**	**-0.7**
TIA				PP	**PP**	**05 26 36.5**	**+4.3**
TIA				SKS	**SKSac**	**05 33 20.0**	**-0.5**
TIA				S	**ScS**	**05 33 58.5**	**+2.3**
TIA				pmax	pmax		
	comp=Z,940nm,8.5s						
TIA				LR	LR		
	comp=Z,5µm,20.6s						
TIA				LR	LR		
	comp=Z,9µm,24.9s						
TIA				LR	LR		
	comp=Z,12µm,23.5s						
PAYG	**Puerto Ayora**	**93.56**	**94**	PFAKE		05 23 00.0	+12
PAYG				LR	LR		
	comp=Z,7µm,18.0s						
USA0B	**Ussuriysk Arra**	**93.57**	**331**	PFAKE		05 23 00.0	+13
USA0B				LR	LR		
	comp=Z,13µm,22.0s						
USRK	**Ussuriysk Ar.**	**93.57**	**331**	P	**P**	**05 22 47.2**	**+0.3**
	comp=Z,4.5nm,0.9s,baz=132,slow=3.5,SNR=7.2						
USRK				LR	LR	06 01 37.6	
	comp=Z,9µm,21.9s,baz=143,slow=34						
KMI	**Kunming**	**93.76**	**300**	P	**P**	**05 22 49.1**	**+0.5**
KMI				pP	pP	05 22 54.3	+0.3
KMI				sP	sP	05 22 57.0	+1.0
KMI				PP	**PP**	**05 26 34.8**	**+0.5**
KMI				SKS	**SKSac**	**05 33 23.3**	**+0.6**
KMI				S	**S**	**05 33 56.8**	**-0.7**
KMI				sS	sS	05 34 07.0	+0.5
KMI				pmax	pmax		
	comp=Z,1µm,11.7s						
KMI				LR	LR		
	comp=Z,7µm,21.6s						
KMI				LR	LR		
	comp=Z,8µm,23.0s						
KMI				LR	LR		
	comp=Z,18µm,23.9s						
DGAR	**Diego Garcia**	**93.92**	**257**	PFAKE		05 23 00.0	+11
DGAR				LR	LR		
	comp=Z,16µm,18.0s						
SMY	**Shemya**	**94.04**	**360**	PFAKE		05 23 00.0	+11
SMY				LR	LR		
	comp=Z,42µm,22.0s						
PB01	**IPOC Station P**	**94.12**	**123**	PFAKE		05 23 00.0	+10
PB01				LR	LR		
	comp=Z,16µm,21.0s						
PLTB	**Pedras Altas**	**94.60**	**141**	*e*P	**P**	**05 22 51.1**	**-1.1**
MDJ	**Mudanjiang**	**94.82**	**330**	P	P	05 22 58.5	+5.9
MDJ				pP	sP	05 23 05.3	+5.3
MDJ				sP	pP	05 23 08.3	+10
MDJ				PP	PP	05 26 19.5	-22
MDJ	**Mudanjiang**	**94.82**	**330**	S	**SKSac**	**05 33 22.6**	**-4.4**
MDJ	**Mudanjiang**	**94.82**	**330**	SKS	**SKKSac**	**05 33 44.0**	**-5.1**
MDJ	**Mudanjiang**	**94.82**	**330**	SS	SS	05 39 51.6	-39
MDJ				pmax	pmax		
	comp=Z,20nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,2µm,12.4s						
MDJ				LR	LR		
	comp=N,7µm,28.2s						
MDJ				LR	LR		
	comp=E,9µm,25.5s						
MDJ				LR	LR		
	comp=Z,19µm,20.7s						
SNY	**Shenyang**	**94.95**	**324**	⇑P	**P**	**05 22 50.3**	**-2.9**
SNY				PP	**PP**	**05 26 40.3**	**-2.7**
SNY				SKS	**SKSac**	**05 33 23.6**	**-4.2**
SNY				S	**ScS**	**05 34 09.8**	**+2.3**
SNY				SS	**SS**	**05 40 29.0**	**-3.7**
SNY				pmax	pmax		
	comp=Z,1µm,12.8s						
SNY				LR	LR		
	comp=Z,9µm,23.9s						
SNY				LR	LR		
	comp=Z,10µm,24.7s						
SNY				LR	LR		
	comp=Z,5µm,16.9s						
PB11	**IPOC Station P**	**94.96**	**122**	PFAKE		05 23 00.0	+5.8
PB11				LR	LR		
	comp=Z,22µm,22.0s						
MRIV	**Mauritius Mete**	**95.12**	**237**	PFAKE		05 23 00.0	+5.2
MRIV				LR	LR		
	comp=Z,9µm,19.0s						
PET	**Petropavlovsk**	**95.31**	**351**	PFAKE		05 23 00.0	+5.4
PET				LR	LR		
	comp=Z,17µm,21.0s						
PET	**Petropavlovsk**	**95.31**	**351**	*c i*P	**P**	**05 22 52.5**	**-2.1**
PET				*e*		05 26 51.9	
PET				*e*		05 33 28.5	
PET				*e*S	**S**	**05 34 04.0**	**-5.0**
PET				*e*PS	PS	05 35 25.6	-3.4
PET				*e*PPS	PPS	05 36 09.3	
PET				*e*SS	**SS**	**05 40 39.0**	**+1.7**
PET				*e*SSS	SSS	05 44 18.3	
PET				pmax	pmax		
	comp=Z,1µm,14.6s						
PET				pmax	pmax		
	comp=Z,1µm,14.5s						
PET				pmax	pmax		
	comp=Z,900nm,13.2s						
PET				smax	smax		
	comp=E,4µm,13.8s						
GO01	**Chusmiza**	**95.32**	**122**	PFAKE		05 23 10.0	+14
GO01				LR	LR		
	comp=Z,20µm,21.0s						
NIKH	**Nikolski High**	**95.39**	**10**	PFAKE		05 23 10.0	+15
NIKH				LR	LR		
	comp=Z,30µm,22.0s						
MNMC	**Minye Minye**	**95.46**	**121**	PFAKE		05 23 10.0	+13
MNMC				LR	LR		
	comp=Z,19µm,22.0s						
PEA0B	**Petropavlovsk-**	**95.51**	**350**	PFAKE		05 23 10.0	+14
PEA0B				LR	LR		
	comp=Z,22µm,19.0s						
PETK	**Petropavlovsk-**	**95.51**	**350**	P	**P**	**05 22 56.1**	**+0.5**
	comp=Z,5.8nm,0.8s,baz=112,slow=2.4,SNR=9.4						
PETK				LR	LR	06 00 35.6	
	comp=Z,21µm,21.5s,baz=160,slow=32						
RER	**Riviere de l'E**	**95.57**	**235**	PFAKE		05 23 10.0	+13
RER				LR	LR		
	comp=Z,31µm,20.0s						
NNA	**Nana**	**95.71**	**111**	LR	LR	05 57 04.0	
	comp=Z,29µm,20.7s,baz=230,slow=30						
NNA	**Nana**	**95.71**	**111**	PFAKE		05 23 10.0	+12
NNA				LR	LR		
	comp=Z,32µm,20.0s						
CPSB	**Cacapava Do Su**	**95.80**	**140**	*e*P	**P**	**05 22 56.2**	**-1.5**
TYV	**Tymovskoe**	**96.24**	**340**	*e*P	**P**	**05 23 02.3**	**+3.4**
TYV				pmax	pmax		
	comp=Z,700nm,9.0s						
TYV				pmax	pmax		
	comp=Z,12nm,1.6s						
XAN	**Xi'an**	**96.35**	**311**	*e*P	**P**	**05 22 58.0**	**-1.9**
	comp=Z,32nm,0.9s						
XAN				LR	LR		
	comp=Z,12µm,22.0s						
XAN	**Xi'an**	**96.35**	**311**	P	**P**	**05 22 59.1**	**-0.9**
XAN				pP	pP	05 23 04.0	-1.4
XAN				sP	sP	05 23 06.3	-1.0
XAN				SKS	**SKSac**	**05 33 30.0**	**-5.8**
XAN				pmax	pmax		
	comp=Z,1µm,10.0s						
XAN				LR	LR		
	comp=Z,6µm,19.6s						
XAN				LR	LR		
	comp=Z,5µm,20.6s						
XAN				LR	LR		
	comp=Z,10µm,21.1s						
XAN	**Xi'an**	**96.35**	**311**	*e*P	**P**	**05 22 58.0**	**-1.9**
XAN				pmax	pmax		
	comp=Z,32nm,0.9s						
XAN				MLR	MLR		
	comp=Z,12µm,22.0s						
SRIG	**Santa Rosalia**	**96.44**	**59**	PFAKE		05 23 10.0	+10
SRIG				LR	LR		
	comp=Z,35µm,22.0s						
SCI2	**San Clemente I**	**96.54**	**51**	P	**P**	**05 23 00.1**	**-0.6**
	baz=224						
UNV	**Unalaska Valle**	**96.57**	**11**	PFAKE		05 23 10.0	+10
UNV				LR	LR		
	comp=Z,23µm,20.0s						
SCZ2	**Santa Cruz Isl**	**96.64**	**50**	P	**P**	**05 23 00.3**	**-0.9**
	baz=223						
CIS	**Catalina Islan**	**96.92**	**51**	P	**P**	**05 23 01.6**	**-0.9**
	baz=224						
SBC	**Santa Barbara**	**96.92**	**49**	P	**P**	**05 23 03.2**	**+0.7**
	baz=223						
AKUT	**Akutan**	**96.96**	**12**	PFAKE		05 23 10.0	+7.9
AKUT				LR	LR		
	comp=Z,20µm,20.0s						
BJT	**Baijiatuau**	**96.96**	**319**	PFAKE		05 23 10.0	+7.5
BJT				LR	LR		
	comp=Z,11µm,20.0s						
BJI	**Beijing**	**96.97**	**319**	P	**P**	**05 23 04.8**	**+2.3**
BJI				PP	**PP**	**05 27 04.8**	**+6.1**
BJI				pmax	pmax		
	comp=Z,540nm,9.6s						

BJI				LR	LR		
	comp=Z,5µm,25.7s						
BJI				LR	LR		
	comp=Z,6µm,21.1s						
BJI				LR	LR		
	comp=Z,7µm,30.7s						
SIMRM	**Sittwe**	**97.03**	**291**	PFAKE		05 23 10.0	+6.6
SIMRM				LR	LR		
	comp=Z,5µm,19.0s						
BLG	**Laguna Peak, P**	**97.05**	**50**	P	**P**	**05 23 02.6**	**-0.4**
	baz=224						
TIY	**Taiyuan**	**97.12**	**315**	*e*P	Pdif	05 23 06.9	+3.4
TIY				SKS	**SKSac**	**05 33 39.8**	**+0.2**
TIY				S	**ScS**	**05 34 28.3**	**+2.2**
TIY				pmax	pmax		
	comp=Z,560nm,7.1s						
TIY				LR	LR		
	comp=Z,9µm,17.9s						
TIY				LR	LR		
	comp=Z,10µm,19.6s						
TIY				LR	LR		
	comp=Z,10µm,25.8s						
CPUP	**Villa Florida**	**97.15**	**135**	P	Pdif	05 23 05.5	+1.5
	comp=Z,7.6nm,0.9s,baz=225,slow=3.0,SNR=9.1						
CPUP				LR	LR	06 00 07.9	
	comp=Z,8µm,20.6s,baz=213,slow=31						
CPUP	**Villa Florida**	**97.15**	**135**	*e*P	**P**	**05 23 02.8**	**-1.1**
	comp=Z,26nm,1.3s						
CPUP	**Villa Florida**	**97.15**	**135**	*e*P	**P**	**05 23 02.8**	**-1.1**
CPUP				pmax	pmax		
	comp=Z,26nm,1.3s						
CPUP	**Villa Florida**	**97.15**	**135**	*e*P	**P**	**05 23 02.5**	**-1.4**
CD2	**Chengdu**	**97.17**	**305**	P	Pdif	05 23 04.4	+0.5
CD2				sP	sP	05 23 18.3	+7.1
CD2				PP	**PP**	**05 27 03.3**	**+2.8**
CD2				SKS	**SKSac**	**05 33 35.0**	**-5.2**
CD2				S	**ScS**	**05 34 28.3**	**+1.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,1µm,13.1s						
CD2				LR	LR		
	comp=Z,22µm,41.4s						
CD2				LR	LR		
	comp=Z,19µm,44.3s						
CD2				LR	LR		
	comp=Z,17µm,25.7s						
PKM	**Mcpherson Peak**	**97.19**	**49**	P	**P**	**05 23 03.7**	**-0.2**
	baz=223						
FMP	**Fort Macarthur**	**97.21**	**51**	P	**P**	**05 23 03.2**	**-0.6**
	baz=224						
109C	**Camp Elliot, M**	**97.32**	**52**	P	Pdif	05 23 05.0	+0.6
	baz=224						
CPE	**Camp Elliot**	**97.32**	**52**	PFAKE		05 23 10.0	+5.6
CPE				LR	LR		
	comp=Z,22µm,22.0s						
SMMC	**Simmler**	**97.39**	**49**	P	**P**	**05 23 04.1**	**-0.6**
	baz=223						
PALK	**Pallekele**	**97.51**	**273**	PFAKE		05 23 20.0	+14
PALK				LR	LR		
	comp=Z,20µm,18.0s						
PAGB	**Antelope Grade**	**97.55**	**48**	PFAKE		05 23 20.0	+15
PAGB				LR	LR		
	comp=Z,25µm,21.0s						
DECC	**Green Verdugo**	**97.58**	**50**	P	**P**	**05 23 04.9**	**-0.6**
	baz=224						
PASC	**Pasadena Art C**	**97.60**	**51**	PFAKE		05 23 20.0	+14
PASC				LR	LR		
	comp=Z,25µm,21.0s						
OSI	**Osito Audit: C**	**97.61**	**50**	PFAKE		05 23 20.0	+14
OSI				LR	LR		
	comp=Z,30µm,21.0s						
OSI	**Osito Audit: C**	**97.61**	**50**	P	**P**	**05 23 04.9**	**-0.8**
	baz=224						
SAO	**San Andreas Ge**	**97.64**	**47**	PFAKE		05 23 20.0	+14
SAO				LR	LR		
	comp=Z,33µm,18.0s						
MWC	**Mount Wilson**	**97.72**	**51**	PFAKE		05 23 20.0	+14
MWC				LR	LR		
	comp=Z,26µm,21.0s						
MONP2	**Monument Peak**	**97.73**	**53**	P	**P**	**05 23 05.9**	**-0.5**
	baz=225,SNR=9.0						
IKP	**In-Ko-Pah, Jac**	**97.75**	**53**	P	**P**	**05 23 06.1**	**-0.2**
	baz=225,SNR=5.7						
MURC	**Murrieta**	**97.77**	**52**	P	Pdif	05 23 06.6	+0.2
	baz=224,SNR=12						
GRNR	**Gornyy**	**97.86**	**337**	*e*P	Pdif	05 23 14.9	+8.6
GRNR				*e*		05 27 06.9	
GRNR				pmax	pmax		
	comp=Z,11nm,1.0s						
MCCM	**Marconi Confer**	**97.89**	**45**	PFAKE		05 23 20.0	+13
MCCM				LR	LR		
	comp=Z,30µm,21.0s						
ARVC	**Arvin**	**97.92**	**50**	P	**P**	**05 23 07.0**	**0.0**
	baz=224						
CNLB	**Canela**	**97.94**	**141**	*e*P	**P**	**05 23 06.0**	**-1.5**
BFSC	**Mount Baldy Ra**	**97.96**	**51**	P	**P**	**05 23 06.6**	**-0.7**
	baz=224						
ATAH	**Atahualpa**	**97.97**	**107**	LR	LR	06 00 34.0	
	comp=Z,9µm,18.6s,baz=247,slow=31						
KLR	**Kul'dur**	**97.99**	**333**	P	**P**	**05 23 06.5**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=185,slow=4.3,SNR=8.4						
KLR				PP	**PP**	**05 27 08.6**	**+2.2**
	comp=Z,8.3nm,1.1s,baz=186,slow=5.4,SNR=2.6						
KLR	**Kul'dur**	**97.99**	**333**	*ce*P	**P**	**05 23 06.7**	**-0.2**
KLR				pmax	pmax		
	comp=Z,31nm,1.6s						
KLR				MLR	MLR		
	comp=Z,15µm,20.0s						
FALS	**False Pass**	**98.03**	**13**	PFAKE		05 23 20.0	+13
FALS				LR	LR		
	comp=Z,40µm,21.0s						
SWSC	**Sam W. Stewart**	**98.14**	**53**	P	**P**	**05 23 07.9**	**-0.1**
	baz=225,SNR=9.5						
PFO	**Pinyon Flats O**	**98.22**	**52**	PFAKE		05 23 20.0	+11
PFO				LR	LR		
	comp=Z,24µm,18.0s						
PFO	**Pinyon Flats O**	**98.22**	**52**	*i* P	Pdif	05 23 13.8	+5.3
PFO	**Pinyon Flats O**	**98.22**	**52**	P	**P**	**05 23 08.4**	**-0.1**
	baz=225,SNR=5.5						
EDW2	**Edwards Air Fo**	**98.22**	**50**	P	**P**	**05 23 08.4**	**0.0**
	baz=224,SNR=8.4						
VES	**Vestal, Richgr**	**98.29**	**49**	P	**P**	**05 23 07.7**	**-0.9**
	baz=224						
BBRC	**Big Bear Solar**	**98.40**	**51**	P	**P**	**05 23 08.6**	**-0.8**
	baz=225						
HOPS	**Hopland Field**	**98.41**	**44**	PFAKE		05 23 20.0	+11
HOPS				LR	LR		
	comp=Z,38µm,20.0s						
GDXM	**Geysers**	**98.42**	**45**	PFAKE		05 23 20.0	+11
GDXM				LR	LR		
	comp=Z,42µm,21.0s						
HSIG		**98.43**	**59**	PFAKE		05 23 20.0	+11
HSIG				LR	LR		
	comp=Z,27µm,18.0s						
VOG	**Valley Oaks Go**	**98.46**	**48**	P	**P**	**05 23 08.8**	**-0.6**
	baz=224						
LPAZ	**La Paz**	**98.49**	**121**	P	Pdif	05 23 12.4	+1.5
	comp=Z,2.9nm,1.0s,baz=227,slow=2.7,SNR=7.0						
LPAZ				LR	LR	05 57 11.0	
	comp=Z,5µm,19.3s,baz=223,slow=29						
LPAZ	**La Paz**	**98.49**	**121**	*e*P	**P**	**05 23 09.4**	**-1.5**
	comp=Z,8.4nm,1.0s						
LPAZ	**La Paz**	**98.49**	**121**	*e*P	**P**	**05 23 09.4**	**-1.5**
LPAZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LPAZ	**La Paz**	**98.49**	**121**	*e*P	**P**	**05 23 08.4**	**-2.4**
ISA	**Isabella, Lake**	**98.50**	**49**	PFAKE		05 23 20.0	+10
ISA				LR	LR		
	comp=Z,42µm,21.0s						
ISA	**Isabella, Lake**	**98.50**	**49**	P	Pdif	05 23 10.5	+0.8
	baz=224						
SAIH	**SAIHA**	**98.51**	**292**	*e*P	**P**	**05 23 08.8**	**-1.3**
KCPM	**Cahto Peak**	**98.66**	**44**	PFAKE		05 23 20.0	+10
KCPM				LR	LR		
	comp=Z,34µm,19.0s						
BELC	**Belle Mtn. Jos**	**98.76**	**52**	P	Pdif	05 23 11.4	+0.4
	baz=225,SNR=5.6						
RRX	**Edison Barstow**	**98.79**	**51**	P	**P**	**05 23 10.3**	**-0.6**
	baz=225						
GLA	**Glamis**	**98.80**	**53**	PFAKE		05 23 20.0	+9.0
GLA				LR	LR		
	comp=Z,23µm,20.0s						
GLA	**Glamis**	**98.80**	**53**	P	**P**	**05 23 11.0**	**-0.1**
	baz=226,SNR=6.7						
KAAM	**Kaadhehdhoo**	**98.81**	**263**	PFAKE		05 23 20.0	+8.4
KAAM				LR	LR		
	comp=Z,17µm,19.0s						
LRMC	**Laurel Mtn Rad**	**98.83**	**50**	P	**P**	**05 23 10.8**	**-0.4**
	baz=224						
NKL	**Nikolayevsk**	**98.83**	**340**	*e*P	**P**	**05 23 06.7**	**-3.8**
NKL				*e*PS	PS	05 36 02.8	-4.6
NKL				MLR	MLR		
	comp=Z,9µm,24.0s						
NKL				MLR	MLR		
	comp=E,3µm,20.0s						
BC3	**Big Chuckawall**	**98.84**	**53**	P	Pdif	05 23 11.4	+0.1
	baz=225						
KMRM	**Mail Ridge**	**98.99**	**43**	PFAKE		05 23 20.0	+8.2
KMRM				LR	LR		
	comp=Z,27µm,20.0s						
SDPT	**Sand Point**	**99.01**	**14**	PFAKE		05 23 20.0	+8.7
SDPT				LR	LR		
	comp=Z,11µm,20.0s						
ITAB	**Concordia**	**99.06**	**139**	*e*P	**Pdif**	**05 23 12.2**	**-0.3**
CMB	**Columbia Colle**	**99.15**	**47**	PFAKE		05 23 20.0	+7.5
CMB				LR	LR		
	comp=Z,23µm,19.0s						
HEC	**Hector,Ludlow**	**99.15**	**51**	P	**Pdif**	**05 23 13.3**	**+0.7**
	baz=225						
GSC	**Goldstone, Bar**	**99.20**	**51**	P	**Pdif**	**05 23 13.5**	**+0.6**
	baz=225,SNR=6.4						
113A	**Mohawk Valley,**	**99.24**	**54**	PFAKE		05 23 20.0	+7.1
113A				LR	LR		
	comp=Z,27µm,21.0s						
214A	**Organ Pipe Nat**	**99.27**	**55**	P	**Pdif**	**05 23 13.5**	**+0.4**
	baz=226,SNR=7.5						
JCC	**Jacoby Creek,**	**99.27**	**43**	PFAKE		05 23 20.0	+7.2
JCC				LR	LR		
	comp=Z,25µm,22.0s						
CWC	**Cottonwood Cre**	**99.28**	**49**	P	**Pdif**	**05 23 13.7**	**+0.4**
	baz=224						
TLIG	**Tlapa**	**99.34**	**75**	PFAKE		05 23 20.0	+6.1
TLIG				LR	LR		
	comp=Z,14µm,19.0s						
SPIA	**Saint Paul Isl**	**99.34**	**8**	PFAKE		05 23 20.0	+7.3
SPIA				LR	LR		
	comp=Z,40µm,22.0s						
MPMC	**Manual Prospec**	**99.35**	**50**	P	**Pdif**	**05 23 13.3**	**-0.3**
	baz=225,SNR=6.2						
IRM	**Iron Mountain**	**99.38**	**52**	P	**Pdif**	**05 23 13.9**	**+0.3**
	baz=226,SNR=5.3						
IMP	**Imphal**	**99.40**	**295**	*e*P	**Pdif**	**05 23 12.6**	**-1.4**
IMP				IAmb	IAmb	05 23 15.8	
O02D	**Mt. Diablo Mer**	**99.43**	**44**	P	**Pdif**	**05 23 14.7**	**+1.0**
	baz=222						
DAC	**Darwin (Calif)**	**99.44**	**49**	PFAKE		05 23 20.0	+6.0
DAC				LR	LR		
	comp=Z,36µm,21.0s						
Y12C	**Blythe**	**99.46**	**53**	PFAKE		05 23 20.0	+6.1
Y12C				LR	LR		
	comp=Z,21µm,21.0s						
Y12C	**Blythe**	**99.46**	**53**	P	**Pdif**	**05 23 13.6**	**-0.3**
	baz=226,SNR=8.2						
KHMM	**Horse Mountain**	**99.47**	**43**	PFAKE		05 23 20.0	+6.1
KHMM				LR	LR		
	comp=Z,25µm,21.0s						
AFDM	**Forest Hills D**	**99.49**	**46**	PFAKE		05 23 20.0	+6.1
AFDM				LR	LR		
	comp=Z,30µm,21.0s						
GMRC	**Granite Mounta**	**99.51**	**52**	P	**Pdif**	**05 23 13.6**	**-0.6**
	baz=225,SNR=6.2						
MDPB	**Devils Postpil**	**99.57**	**48**	PFAKE		05 23 30.0	+15
MDPB				LR	LR		
	comp=Z,25µm,20.0s						
OMMB	**Old Mammoth Mi**	**99.60**	**48**	PFAKE		05 23 30.0	+15
OMMB				LR	LR		
	comp=Z,30µm,20.0s						
TIN	**Tinemaha, Big**	**99.63**	**49**	P	**Pdif**	**05 23 14.3**	**-0.4**
	baz=224						
ORV	**Oroville**	**99.65**	**45**	PFAKE		05 23 30.0	+15
ORV				LR	LR		
	comp=Z,26µm,21.0s						
MLAC	**Mammoth, Mammo**	**99.71**	**48**	P	**Pdif**	**05 23 14.3**	**-0.9**
	baz=224						
LKP	**Lekhapani**	**99.78**	**298**	*e*x	**Pdif**	**05 23 10.6**	**-4.9**
TUQ	**Turquoise Moun**	**99.81**	**51**	P	**Pdif**	**05 23 14.3**	**-1.3**
	baz=225						
WDC	**Whiskeytown Da**	**99.86**	**44**	PFAKE		05 23 30.0	+15
WDC				LR	LR		
	comp=Z,24µm,20.0s						
ZAIG	**Zacatecas**	**99.88**	**68**	PFAKE		05 23 30.0	+14
ZAIG				LR	LR		
	comp=Z,18µm,20.0s						
HHC	**Hu-ho-hao-te**	**99.90**	**317**	P	**Pdif**	**05 23 18.0**	**+2.2**
HHC				PP	**PP**	**05 27 23.5**	**+2.2**
HHC				SKS	**SKSac**	**05 33 50.0**	**-3.6**
HHC				S	**S**	**05 34 53.8**	**+4.5**
HHC				LR	LR		
	comp=Z,9µm,20.6s						
HHC				LR	LR		
	comp=Z,13µm,19.8s						
SHOC	**Shoshone, Teco**	**99.93**	**50**	P	**Pdif**	**05 23 15.0**	**-1.0**
	baz=225						
FURC	**Furnace Creek,**	**99.99**	**50**	P	**Pdif**	**05 23 15.3**	**-0.9**
	baz=225						
MOKO	**MOKOCHONG**	**100.00**	**296**	*e*P	**Pdif**	**05 23 15.6**	**-1.0**
WAKR	**Walker**	**100.00**	**47**	PFAKE		05 23 30.0	+14
WAKR				LR	LR		
	comp=Z,25µm,22.0s						
RUBR	**Rubicon Trail**	**100.01**	**46**	PFAKE		05 23 30.0	+14
RUBR				LR	LR		
	comp=Z,36µm,22.0s						
O03E	**Paynes Creek**	**100.03**	**44**	P	**Pdif**	**05 23 15.2**	**-1.2**
	baz=223						
LDFC	**Landfair**	**100.04**	**52**	PFAKE		05 23 30.0	+13
LDFC				LR	LR		
	comp=Z,26µm,22.0s						
N02D	**Trinity Center**	**100.06**	**43**	P	**Pdif**	**05 23 16.3**	**-0.2**
	baz=222						
PDMCI	**Parker Dam,Lak**	**100.08**	**53**	P	**Pdif**	**05 23 16.1**	**-0.5**
	baz=226						
GRAC	**Grapevine Rang**	**100.08**	**49**	P	**Pdif**	**05 23 15.6**	**-1.0**
	baz=225						
M02C	**Callahan**	**100.30**	**43**	P	**Pdif**	**05 23 17.1**	**-0.4**
	baz=222						
CHGN	**Chignik**	**100.30**	**15**	PFAKE		05 23 30.0	+13
CHGN				LR	LR		
	comp=Z,19µm,21.0s						
PNTR	**Pine Nut**	**100.33**	**46**	PFAKE		05 23 30.0	+12
PNTR				LR	LR		
	comp=Z,32µm,22.0s						
CHIR	**Chirikof Islan**	**100.42**	**17**	PFAKE		05 23 30.0	+12
CHIR				LR	LR		
	comp=Z,28µm,20.0s						
YERR	**Yerington**	**100.45**	**47**	PFAKE		05 23 30.0	+12
YERR				LR	LR		
	comp=Z,23µm,18.0s						
L02E	**Cave Junction**	**100.48**	**42**	P	**Pdif**	**05 23 18.3**	**+0.1**
	baz=222						
BEKR	**Beckworth**	**100.48**	**45**	PFAKE		05 23 30.0	+11
BEKR				LR	LR		
	comp=Z,30µm,21.0s						
HPIG		**100.49**	**63**	PFAKE		05 23 30.0	+11
HPIG				LR	LR		
	comp=Z,31µm,22.0s						
Y14A	**Wickenburg**	**100.51**	**54**	PFAKE		05 23 30.0	+11
Y14A				LR	LR		
	comp=Z,31µm,21.0s						
NVAR	**Mina Array Bea**	**100.57**	**47**	P	**Pdif**	**05 23 20.4**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=216,slow=4.3,SNR=3.3						
NVAR				PP	**PP**	**05 27 29.4**	**+2.8**
	comp=Z,2.2nm,0.9s,baz=222,slow=9.4,SNR=5.3						
NVAR				PKKPbc	**PKKPbc**	**05 39 33.7**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=74,slow=3.0,SNR=6.3						
NVAR				PKPPKP		05 47 48.5	
	comp=Z,0.1nm,0.3s,baz=53,slow=3.7,SNR=2.7						
RYN	**Ryan**	**100.59**	**47**	PFAKE		05 23 30.0	+11
RYN				LR	LR		
	comp=Z,22µm,22.0s						
YBH	**Yreka Blue Hor**	**100.62**	**43**	P	**Pdif**	**05 23 25.2**	**+6.2**
	comp=Z,2.7nm,1.0s,baz=72,slow=20,SNR=1.2						
YBH				PP	**PP**	**05 27 27.5**	**+0.8**
	comp=Z,6.0nm,1.1s,baz=197,slow=9.0,SNR=3.2						
YBH	**Yreka Blue Hor**	**100.62**	**43**	PFAKE		05 23 30.0	+11
YBH				LR	LR		
	comp=Z,23µm,21.0s						
KEBM	**Edson Butte**	**100.65**	**41**	PFAKE		05 23 30.0	+11
KEBM				LR	LR		
	comp=Z,25µm,21.0s						
NV11	**Mina Array Sit**	**100.65**	**48**	PFAKE		05 23 30.0	+11
NV11				LR	LR		
	comp=Z,2µm,19.0s						
TPNV	**Topopah Spring**	**100.68**	**50**	PFAKE		05 23 30.0	+11
TPNV				LR	LR		
	comp=Z,32µm,21.0s						
TPNV	**Topopah Spring**	**100.68**	**50**	P	**Pdif**	**05 23 18.6**	**-0.9**
	baz=225						
LZH	**Lanzhou**	**100.73**	**309**	⇑P	**Pdif**	**05 23 19.3**	**-0.4**
LZH				pP	pPdif	05 23 24.6	-0.6
LZH				sP	sPdif	05 23 26.8	-0.3
LZH				PP	**PP**	**05 27 31.5**	**+3.7**
LZH				SKS	**SKSac**	**05 33 55.8**	**-2.2**
LZH				S	**Sdif**	**05 34 55.3**	**-1.2**
LZH				sS	pS	05 35 02.8	-0.8
LZH				SS	**SS**	**05 41 56.5**	**+1.8**
LZH				pmax	pmax		
	comp=Z,59nm,1.3s						
LZH				pmax	pmax		
	comp=Z,720nm,6.8s						
LZH				LR	LR		
	comp=Z,8µm,17.3s						
LZH				LR	LR		
	comp=Z,7µm,16.8s						
LZH				LR	LR		
	comp=Z,13µm,19.5s						
TUC	**Tucson**	**100.76**	**56**	PFAKE		05 23 30.0	+10
TUC				LR	LR		
	comp=Z,27µm,19.0s						
TUC	**Tucson**	**100.76**	**56**	P	**Pdif**	**05 23 18.0**	**-1.8**
	baz=227						
W13A	**Hualapai Mount**	**100.78**	**52**	PFAKE		05 23 30.0	+10
W13A				LR	LR		
	comp=Z,21µm,18.0s						
K02D	**Willamette Mer**	**100.85**	**42**	P	**Pdif**	**05 23 20.0**	**0.0**
	baz=222						
SHPR	**Sheep Range**	**101.00**	**51**	PFAKE		05 23 30.0	+9.1
SHPR				LR	LR		
	comp=Z,22µm,22.0s						
J01E	**Myrtle Point**	**101.06**	**41**	P	**Pdif**	**05 23 20.7**	**0.0**
	baz=222						
319A	**Douglas**	**101.08**	**58**	PFAKE		05 23 30.0	+8.7
319A				LR	LR		
	comp=Z,26µm,21.0s						
M04C	**Macdoel**	**101.10**	**43**	P	**Pdif**	**05 23 20.6**	**-0.6**
	baz=223						
KVN	**Kaiserville**	**101.12**	**47**	PFAKE		05 23 30.0	+8.6
KVN				LR	LR		
	comp=Z,21µm,19.0s						
HUMO	**Hull Mountain**	**101.14**	**42**	PFAKE		05 23 30.0	+8.8
HUMO				LR	LR		
	comp=Z,23µm,19.0s						
L04D	**Klamath Falls**	**101.18**	**43**	P	**Pdif**	**05 23 22.3**	**+0.7**
	baz=223						
PTGB	**Pitanga**	**101.19**	**138**	*e*P	**Pdif**	**05 23 21.3**	**-0.9**
SHL	**Shillong**	**101.29**	**294**	*e*P	**Pdif**	**05 23 21.5**	**-1.0**
SHL				*e*S	**SKSac**	**05 33 59.0**	**-2.2**
SII	**Sitkinak Islan**	**101.42**	**17**	PFAKE		05 23 30.0	+8.0
SII				LR	LR		
	comp=Z,27µm,20.0s						
K04D	**Chiloquin, OR**	**101.75**	**43**	P	**Pdif**	**05 23 23.8**	**-0.2**
	baz=223						
X16A	**Lo Mia Camp, P**	**101.78**	**54**	PFAKE		05 23 40.0	+16
X16A				LR	LR		
	comp=Z,29µm,21.0s						
I02D	**Swisshome**	**101.80**	**40**	P	**Pdif**	**05 23 24.6**	**+0.6**
	baz=222						
GUWA	**GUWAHATI**	**101.83**	**294**	*e*P	**Pdif**	**05 23 24.5**	**-0.1**
GUWA				IAmb	IAmb	05 23 26.5	
	comp=Z,8.9nm,0.4s						
MOD	**Modoc Plateau**	**101.98**	**44**	PFAKE		05 23 40.0	+15
MOD				LR	LR		
	comp=Z,26µm,21.0s						
J04D	**Umpqua Nationa**	**102.02**	**42**	P	**Pdif**	**05 23 25.0**	**-0.3**
	baz=223						
R11A	**Troy Canyon, C**	**102.03**	**49**	PFAKE		05 23 40.0	+15
R11A				LR	LR		
	comp=Z,30µm,21.0s						
R11A	**Troy Canyon, C**	**102.03**	**49**	P	**Pdif**	**05 23 24.0**	**-1.5**
	baz=226						
OHAK	**Old Harbor**	**102.23**	**17**	PFAKE		05 23 40.0	+14
OHAK				LR	LR		
	comp=Z,33µm,20.0s						
I04A	**Tendick Farm,**	**102.28**	**41**	P	**Pdif**	**05 23 26.2**	**0.0**
	baz=223						
LVIG	**Laguna Verde**	**102.28**	**75**	PFAKE		05 23 40.0	+13
LVIG				LR	LR		
	comp=Z,8µm,18.0s						
ABPO	**Ambohimpanom**	**102.31**	**231**	PFAKE		05 23 40.0	+13
ABPO				LR	LR		
	comp=Z,45µm,19.0s						
TURI	**Tura**	**102.34**	**293**	*e*P	**Pdif**	**05 23 24.7**	**-2.2**
SUR	**Sutherland**	**102.37**	**203**	P	**Pdif**	**05 23 27.9**	**+0.5**
	comp=Z,5.5nm,1.0s,baz=54,slow=19,SNR=3.2						
SUR	**Sutherland**	**102.37**	**203**	*e*Pdif	**Pdif**	**05 23 23.5**	**-3.9**
SUR				LR	LR		
	comp=Z,39µm,18.0s						
COR	**Corvallis**	**102.42**	**40**	PFAKE		05 23 40.0	+13
COR				LR	LR		
	comp=Z,46µm,21.0s						
J05D	**Fort Rock, OR**	**102.50**	**42**	P	**Pdif**	**05 23 28.7**	**+1.4**
	baz=224						
WUAZ	**Wupatki**	**102.56**	**54**	PFAKE		05 23 40.0	+12
WUAZ				LR	LR		
	comp=Z,25µm,21.0s						
WUAZ	**Wupatki**	**102.56**	**54**	P	**Pdif**	**05 23 27.0**	**-0.9**
	baz=228						
BMN	**Battle Mountai**	**102.58**	**47**	PFAKE		05 23 40.0	+12
BMN				LR	LR		
	comp=Z,22µm,18.0s						
U15A	**North Rim**	**102.63**	**52**	PFAKE		05 23 40.0	+12
U15A				LR	LR		
	comp=Z,14µm,18.0s						
H04D	**Lebanon**	**102.65**	**41**	P	**Pdif**	**05 23 28.0**	**+0.2**
	baz=223						
OPO	**Ambohidratompo**	**102.68**	**231**	Pdiff	**Pdif**	**05 23 29.6**	**+0.7**
	comp=Z,4.7nm,1.0s,baz=41,slow=1.9,SNR=8.3						
OPO				PP	**PP**	**05 27 42.6**	**+0.9**
	comp=Z,17nm,1.2s,baz=129,slow=6.0,SNR=5.6						
MA2	**Magadan**	**102.77**	**348**	PFAKE		05 23 40.0	+12
MA2				LR	LR		
	comp=Z,17µm,20.0s						
X18A	**Snowflake**	**102.77**	**55**	PFAKE		05 23 40.0	+11
X18A				LR	LR		
	comp=Z,17µm,18.0s						
121A	**Cookes Peak, D**	**102.80**	**58**	P	**Pdif**	**05 23 28.2**	**-0.8**
	baz=228						
G03D	**McMinnville, O**	**102.89**	**40**	P	**Pdif**	**05 23 29.3**	**+0.4**
	baz=223						
PINE	**Pine Mountain**	**103.01**	**42**	PFAKE		05 23 40.0	+10
PINE				LR	LR		
	comp=Z,19µm,19.0s						
H04A	**Detroit Lake**	**103.03**	**41**	PFAKE		05 23 40.0	+10
H04A				LR	LR		
	comp=Z,32µm,22.0s						
I05D	**Terrebonne, OR**	**103.20**	**42**	P	**Pdif**	**05 23 30.4**	**+0.1**
	baz=224						
CCIG	**Comitan**	**103.21**	**80**	PFAKE		05 23 40.0	+8.8
CCIG				LR	LR		
	comp=Z,12µm,18.0s						
WVOR	**Wild Horse Val**	**103.23**	**44**	PFAKE		05 23 40.0	+9.4
WVOR				LR	LR		
	comp=Z,27µm,20.0s						
W18A	**Petrified Fore**	**103.29**	**55**	PFAKE		05 23 40.0	+8.9
W18A				LR	LR		
	comp=Z,19µm,21.0s						
W18A	**Petrified Fore**	**103.29**	**55**	P	**Pdif**	**05 23 30.1**	**-1.1**
	baz=228						
ZEA	**Zeya**	**103.30**	**333**	*e*P	**Pdif**	**05 23 33.0**	**+2.6**
ZEA				*e*		05 34 08.0	
ZEA				*e*		05 42 30.0	
ZEA				pmax	pmax		
	comp=Z,600nm,13.0s						
ZEA				MLR	MLR		
	comp=E,3µm,17.0s						
TXAR	**Lajitas Array**	**103.39**	**63**	Pdiff	**Pdif**	**05 23 36.7**	**+5.1**
	comp=E,1.9nm,1.3s,baz=208,slow=5.1,SNR=5.7						
TXAR				PP	**PP**	**05 27 45.5**	**-2.3**
	comp=E,1.1nm,1.0s,baz=212,slow=8.5,SNR=4.1						
TXAR				PKKPbc	**PKKPbc**	**05 39 26.0**	**+1.2**
	comp=E,1.4nm,0.6s,baz=69,slow=3.9,SNR=13						
LNIG	**Linares**	**103.42**	**69**	PFAKE		05 23 40.0	+8.3
LNIG				LR	LR		
	comp=Z,13µm,18.0s						
F04D	**Rainier, OR**	**103.65**	**40**	P	**Pdif**	**05 23 32.3**	**+0.1**
	baz=223						
MNTX	**Cornudas Mount**	**103.79**	**60**	PFAKE		05 23 40.0	+6.8
MNTX				LR	LR		

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      comp=Z,24µm,21.0s
MNTX  Cornudas Mount  103.79  60  P        Pdif     05 23 31.5 -1.7
      baz=229
G05D  Wamic, OR       103.86  41  P        Pdif     05 23 34.2 +1.0
      baz=224
ELK   Elko            103.88  48  Pdiff    Pdif     05 23 36.8 +3.1
      comp=Z,0.2nm,0.3s,baz=215,slow=8.1,SNR=4.1
ELK                               PKiKP    PP       05 27 53.8 +2.3
      comp=Z,3.4nm,1.0s,baz=224,slow=6.9,SNR=5.6
ELK   Elko            103.88  48  PFAKE             05 23 40.0 +6.3
ELK                               LR       LR
      comp=Z,27µm,18.0s
I07A  Izee            103.94  43  PFAKE             05 23 40.0 +6.3
I07A                              LR       LR
      comp=Z,20µm,21.0s
J08A  Circle Bar Ran  103.96  44  PFAKE             05 23 40.0 +6.2
J08A                              LR       LR
      comp=Z,28µm,18.0s
NLWA  Neilton Lookou  104.21  38  PFAKE             05 23 50.0  +15
NLWA                              LR       LR
      comp=Z,33µm,20.0s
E04D  Cinebar         104.21  39  P        Pdif     05 23 35.4 +0.8
      baz=223
F05D  White Salmon    104.26  40  P        Pdif     05 23 36.6 +1.7
      baz=224
Y22D  IRIS PASSCAL I  104.35  57  PFAKE             05 23 50.0  +14
Y22D                              LR       LR
      comp=Z,39µm,19.0s
Y22D  IRIS PASSCAL I  104.35  57  P        Pdif     05 23 35.0 -0.9
      baz=229
SPB   Sao Paulo       104.40 141  PFAKE             05 23 50.0  +14
SPB                               LR       LR
      comp=Z,12µm,18.0s
BOSA  Boshof          104.44 208  Pdiff    Pdif     05 23 34.9 -1.7
      comp=Z,5.2nm,1.1s,baz=79,slow=5.2,SNR=2.9
BOSA                              PKiKP    PP       05 27 54.5 +0.2
      comp=Z,7.3nm,1.1s,baz=148,slow=13,SNR=4.1
BOSA                              PKKPbc   PKKPbc   05 39 21.4  0.0
      comp=Z,4.4nm,1.1s,baz=270,slow=5.1,SNR=2.0
LSA   Lhasa           104.45 297  PFAKE             05 23 50.0  +13
LSA                               LR       LR
      comp=Z,7µm,22.0s
LSA   Lhasa           104.45 297  P        PKiKP    05 27 52.3 -0.7
LSA                               S        PS       05 37 08.8 -0.2
LSA                               pmax     pmax
      comp=Z,10µm,3.0s
LSA                               pmax     pmax
      comp=Z,530nm,5.0s
LSA                               LR       LR
      comp=N,23µm,25.1s
LSA                               LR       LR
      comp=E,20µm,24.9s
LSA                               LR       LR
      comp=Z,15µm,21.8s
D04E  Lakebay         104.56  39  P        Pdif     05 23 37.4 +1.2
      baz=223
GTK   Tadong          104.67 293 ex        Pdif     05 23 31.9 -5.4
D03D  Eldon           104.67  38  P        Pdif     05 23 37.2 +0.5
      baz=223
LON   Longmire        104.71  40  PFAKE             05 23 50.0  +13
LON                               LR       LR
      comp=Z,32µm,21.0s
JTS   Las Juntas de   104.73  89  PFAKE             05 23 50.0  +12
JTS                               LR       LR
      comp=Z,11µm,21.0s
CNPM  China Poot      104.78  17  PFAKE             05 23 50.0  +13
CNPM                              LR       LR
      comp=Z,35µm,20.0s
HOM   Homer           104.81  17  PFAKE             05 23 50.0  +13
HOM                               LR       LR
      comp=Z,32µm,20.0s
DUG   Dugway, Tooele  104.86  49  PFAKE             05 23 50.0  +12
DUG                               LR       LR
      comp=Z,23µm,21.0s
DUG   Dugway, Tooele  104.86  49  P        Pdif     05 23 41.4 +3.5
      baz=228
D05A  Enumclaw        104.94  39  PFAKE             05 23 50.0  +12
D05A                              LR       LR
      comp=Z,19µm,21.0s
DIB   Dawson Inlet,   105.02  30  PFAKE             05 28 00.0 +7.4
DIB                               LR       LR
      comp=Z,18µm,20.0s
BBAC  Balboa, Cauca   105.04 101 eP        PP       05 28 04.5 +4.4
BRLK  Bradley Lake    105.07  17  PFAKE             05 28 00.0 +7.4
BRLK                              LR       LR
      comp=Z,28µm,20.0s
G08A  Pilot Rock      105.07  42  PFAKE             05 28 00.0 +6.8
G08A                              LR       LR
      comp=Z,24µm,19.0s
HDC   Heredia         105.17  90  PFAKE             05 28 00.0 +5.7
HDC                               LR       LR
      comp=Z,13µm,21.0s
ANMO  Albuquerque     105.21  57  Pdiff    Pdif     05 23 41.3 +1.6
      baz=173,slow=10
ANMO                              PKiKP    PKiKP    05 27 56.7 +2.8
      comp=Z,2.6nm,1.0s,baz=158,slow=3.6,SNR=3.2
ANMO  Albuquerque     105.21  57 ePdif     Pdif     05 23 37.6 -2.1
ANMO                              LR       LR
      comp=Z,37µm,18.0s
ANMO  Albuquerque     105.21  57 eP        Pdif     05 23 37.6 -2.1
ANMO                              MLR      MLR
      comp=Z,37µm,18.0s
ANMO  Albuquerque     105.21  57  P        Pdif     05 23 41.0 +1.3
      baz=230
SVW2  Sparrevohn      105.32  15  PFAKE             05 28 00.0 +7.0
SVW2                              LR       LR
      comp=Z,14µm,21.0s
MFID  Camas Ranch     105.39  45  PFAKE             05 28 00.0 +6.2
MFID                              LR       LR
      comp=Z,19µm,21.0s
TGUH  Tegucigalpa,Un  105.41  85  PFAKE             05 28 10.0  +15
TGUH                              LR       LR
      comp=Z,6µm,19.0s
MVCO  Mesa Verde      105.42  54  PFAKE             05 28 10.0  +16
MVCO                              LR       LR
      comp=Z,24µm,20.0s
MVCO  Mesa Verde      105.42  54  P        Pdif     05 23 42.4 +1.8
      baz=229
ESTN  Estel           105.47  86  PFAKE             05 28 10.0  +15
ESTN                              LR       LR
      comp=Z,7µm,19.0s
HAWA  Hanford         105.56  41  PFAKE             05 28 00.0 +6.1
HAWA                              LR       LR
      comp=Z,30µm,21.0s
BMO   Blue Mountains  105.61  43  PFAKE             05 28 00.0 +5.8
BMO                               LR       LR
      comp=Z,33µm,21.0s
LTY   Liberty         105.62  40  PFAKE             05 28 00.0 +5.9
LTY                               LR       LR
      comp=Z,36µm,21.0s
HYB   Hyderabad       105.63 279 i Pdiff   Pdif     05 23 48.0 +6.2
HYB                              ePP       PP       05 28 08.0 +3.6
HYB                              eSKS      SKSac    05 34 20.0 -1.4
HYB                              eSdiff    SKKSac   05 35 38.0  +30
HYB                              ePS       PS       05 37 16.0 -4.6
HYB                              ePPS      PPS      05 38 10.0
HYB                              eSS       SS       05 43 10.0 +7.7
833A  Chaparral WMA,  105.63  66  P        Pdif     05 23 43.6 +2.2
      baz=231
ACON  Acoyapa         105.64  88  PFAKE             05 28 10.0  +15
ACON                              LR       LR
      comp=Z,10µm,22.0s
B05A  Bryant          105.66  38  P        Pdif     05 23 43.9 +2.9
      baz=224
GAMB  Gambell         105.70   6  PFAKE             05 28 00.0 +6.5
GAMB                              LR       LR
      comp=Z,18µm,21.0s
SEW   Seward          105.70  18  PFAKE             05 28 00.0 +6.3
SEW                               LR       LR
      comp=Z,16µm,20.0s
A04D  Lummi Island    105.71  38  P        Pdif     05 23 41.2 -0.1
      baz=224
SEY   Seymchan        105.75 350  PKiKP    PKiKP    05 27 55.0 +1.3
      comp=Z,1.5nm,0.7s,baz=81,slow=19,SNR=2.3
PV17  East Wray Mesa  105.84  53  PFAKE             05 28 10.0  +15
PV17                              LR       LR
      comp=Z,29µm,22.0s
PV13  Radium Mtn., P  105.84  53  PFAKE             05 28 10.0  +15
PV13                              LR       LR
      comp=Z,27µm,22.0s
PV19  Morning Glory   105.85  53  PFAKE             05 28 10.0  +15
PV19                              LR       LR
      comp=Z,24µm,22.0s
PV18  Skein Mesa, Pa  105.85  53  PFAKE             05 28 10.0  +15
PV18                              LR       LR
      comp=Z,26µm,22.0s
PV10  Paradox Valley  105.86  53  PFAKE             05 28 10.0  +15
PV10                              LR       LR
      comp=Z,24µm,21.0s
E08A  Dider Farm, El  105.86  41  PFAKE             05 28 10.0  +16
E08A                              LR       LR
      comp=Z,30µm,22.0s
PV14  Lion Creek, Pa  105.86  53  PFAKE             05 28 10.0  +15
PV14                              LR       LR
      comp=Z,27µm,22.0s
PCON  Cinco Dias      105.87 101 eP        PP       05 28 10.2 +3.7
PV20  West Nyswonger  105.88  53  PFAKE             05 28 10.0  +15
PV20                              LR       LR
      comp=Z,24µm,22.0s
PV16  Nyswonger Mesa  105.89  53  PFAKE             05 28 10.0  +15
PV16                              LR       LR
      comp=Z,26µm,22.0s
PV03  Paradox Valley  105.89  53  PFAKE             05 28 10.0  +15
PV03                              LR       LR
      comp=Z,27µm,22.0s
PV11  David Mesa, Pa  105.90  53  PFAKE             05 28 10.0  +15
PV11                              LR       LR
      comp=Z,28µm,21.0s
FLOC  Florencia       105.91 102 eP        PP       05 28 10.7 +4.4
PV23  Carpenter Ridg  105.92  53  PFAKE             05 28 10.0  +15
PV23                              LR       LR
      comp=Z,27µm,22.0s
PV02  Paradox Valley  105.93  53  PFAKE             05 28 10.0  +15
PV02                              LR       LR
      comp=Z,26µm,21.0s
PV04  Paradox Valley  105.95  53  PFAKE             05 28 10.0  +15
PV04                              LR       LR
      comp=Z,30µm,22.0s
PV12  Saucer Basin,   105.96  53  PFAKE             05 28 10.0  +15
PV12                              LR       LR
      comp=Z,32µm,22.0s
PV01  Paradox Valley  105.98  53  PFAKE             05 28 10.0  +15
PV01                              LR       LR
      comp=Z,27µm,22.0s
C06D  Leavenworth     105.98  39  P        Pdif     05 23 43.6 +1.0
      baz=225
PV21  Cone Mtn., Par  106.01  53  PFAKE             05 28 10.0  +15
PV21                              LR       LR
      comp=Z,18µm,19.0s
PV22  Blue Mesa, Par  106.11  53  PFAKE             05 28 10.0  +15
PV22                              LR       LR
      comp=Z,23µm,22.0s
PV07  Paradox Valley  106.13  53  PFAKE             05 28 10.0  +14
PV07                              LR       LR
      comp=Z,26µm,22.0s
KVTX  Kingsville      106.18  67  PFAKE             05 28 10.0  +14
KVTX                              LR       LR
      comp=Z,14µm,18.0s
HLID  Hailey          106.25  46  PFAKE             05 28 10.0  +14
HLID                              LR       LR
      comp=Z,13µm,19.0s
HLID  Hailey          106.25  46  P        Pdif     05 23 45.0 +0.9
      baz=228
ESAR  Angra dos Reis  106.27 143 eP        Pdif     05 23 41.7 -2.9
D08A  Wollman Farm,   106.33  41  PFAKE             05 28 10.0  +15
D08A                              LR       LR
      comp=Z,34µm,22.0s
E09A  Wood Farm, Sta  106.33  42  PFAKE             05 28 10.0  +15
E09A                              LR       LR
      comp=Z,18µm,22.0s
F10A  Beach Ranch, E  106.42  43  PFAKE             05 28 10.0  +14
F10A                              LR       LR
      comp=Z,18µm,18.0s
PLID  Pearl Lake      106.44  44  PFAKE             05 28 10.0  +14
PLID                              LR       LR
      comp=Z,24µm,21.0s
ESPN  Las Esperanzas  106.44  88  PFAKE             05 28 10.0  +14
ESPN                              LR       LR
      comp=Z,9µm,20.0s
HWUT  Hardware Ranch  106.51  49  PFAKE             05 28 10.0  +14
HWUT                              LR       LR
      comp=Z,27µm,21.0s
RC01  Rabbit Creek A  106.51  17  PFAKE             05 28 10.0  +15
RC01                              LR       LR
      comp=Z,18µm,21.0s
MARP  Paez Belalcaza  106.54 101 eP        PP       05 28 16.5 +5.2
JCT   Junction City   106.71  64  PFAKE             05 28 10.0  +13
JCT                               LR       LR
      comp=Z,22µm,20.0s
JCT   Junction City   106.71  64  P        Pdif     05 23 48.5 +2.2
      baz=231
S22A  4UR Ranch, Cre  106.78  54  P        Pdif     05 23 47.8 +1.1
      baz=230
MSTX  Muleshoe        106.93  60  PFAKE             05 28 10.0  +13
MSTX                              LR       LR
      comp=Z,19µm,20.0s
MSTX  Muleshoe        106.93  60  P        Pdif     05 23 49.9 +2.7
      baz=231
TTA   Tatalina        106.93  14  PFAKE             05 28 10.0  +14
TTA                               LR       LR
      comp=Z,20µm,21.0s
GLI   Glacier Island  106.94  19  PFAKE             05 28 10.0  +14
GLI                               LR       LR
      comp=Z,18µm,20.0s
FID   Port Fidalgo    106.97  19  PFAKE             05 28 10.0  +14
FID                               LR       LR
      comp=Z,20µm,20.0s
EYAK  Cordova Ski Ar  106.98  19  PFAKE             05 28 10.0  +14
EYAK                              LR       LR
      comp=Z,21µm,20.0s
B08A  Colville Reser  107.03  40  PFAKE             05 28 10.0  +13
B08A                              LR       LR
      comp=Z,26µm,21.0s
KNK   Knik Glacier    107.09  18  PFAKE             05 28 10.0  +14
KNK                               LR       LR
      comp=Z,15µm,21.0s
PMR   Palmer          107.10  17  PFAKE             05 28 10.0  +14
PMR                               LR       LR
      comp=Z,12µm,21.0s
ANM   Nome            107.11   9  PFAKE             05 28 10.0  +14
ANM                               LR       LR
      comp=Z,19µm,22.0s
C09A  Chrisman Ranch  107.16  41  PFAKE             05 28 10.0  +13
C09A                              LR       LR
      comp=Z,39µm,22.0s
HMT   Hamilton        107.17  20  PFAKE             05 28 10.0  +14
HMT                               LR       LR
      comp=Z,31µm,20.0s
ULN   Ulaanbaatar     107.17 319  PFAKE             05 28 10.0  +13
ULN                               LR       LR
      comp=Z,10µm,20.0s
ULN   Ulaanbaatar     107.17 319⇑iP        Pdif     05 23 48.2 +0.2
GHO   Glory Hole Cre  107.30  17  PFAKE             05 28 10.0  +13
GHO                               LR       LR
      comp=Z,12µm,21.0s
LLLB  Lillooet        107.44  37  PFAKE             05 28 10.0  +13
LLLB                              LR       LR
      comp=Z,29µm,22.0s
O20A  White River Ci  107.47  52  PFAKE             05 28 10.0  +12
O20A                              LR       LR
      comp=Z,11µm,20.0s
O20A  White River Ci  107.47  52  P        Pdif     05 23 50.7 +1.1
      baz=230
SML   Sawmill         107.47  18  PFAKE             05 28 10.0  +13
SML                               LR       LR
      comp=Z,13µm,20.0s
SONM  Songino Array   107.47 319  Pdiff    Pdif     05 23 48.3 -1.0
      comp=Z,0.8nm,0.6s,baz=164,slow=5.6,SNR=5.1
SONM                              PKiKP    PKiKP    05 27 56.2 -1.4
      comp=Z,1.8nm,0.8s,baz=146,slow=5.7,SNR=4.0
SONM                              PKKPbc   PKKPbc   05 39 13.8 +0.9
      comp=Z,0.7nm,0.5s,baz=269,slow=2.1,SNR=3.0
AHID  Auburn Hatcher  107.53  48  PFAKE             05 28 10.0  +12
AHID                              LR       LR
      comp=Z,22µm,21.0s
WRAK  Wrangell Islan  107.58  28  PFAKE             05 28 10.0  +13
WRAK                              LR       LR
      comp=Z,25µm,22.0s
SDCO  Great Sand Dun  107.59  55  PFAKE             05 28 10.0  +12
SDCO                              LR       LR
      comp=Z,12µm,21.0s
SDCO  Great Sand Dun  107.59  55  P        Pdif     05 23 50.2 -0.1
      baz=231
SMCO  Snowmass        107.61  53  PFAKE             05 28 10.0  +12
SMCO                              LR       LR
      comp=Z,22µm,18.0s
MACC  Macarena, Meta  107.61 103 eP        PP       05 28 22.3 +3.5
PPLA  Purkeypile      107.62  15  PFAKE             05 28 10.0  +13
PPLA                              LR       LR
      comp=Z,15µm,20.0s
SCM   Sheep Creek Mo  107.72  18  PFAKE             05 28 10.0  +12
SCM                               LR       LR
      comp=Z,14µm,21.0s
ORTC  Ortega, Tolima  107.78 101 eP        PP       05 28 23.9 +3.9
CRQM  Cirque          107.82  20  PFAKE             05 28 10.0  +12
CRQM                              LR       LR
      comp=Z,26µm,20.0s
BCIP  Isla Barro Col  107.83  94  PFAKE             05 28 10.0  +11
BCIP                              LR       LR
      comp=Z,12µm,22.0s
MSEY  Mahe Island     107.88 246  PFAKE             05 28 10.0  +11
MSEY                              LR       LR
      comp=Z,16µm,18.0s
T25A  Trinidad        107.88  56  P        Pdif     05 23 51.7 +0.2
      baz=231
TGL   Tana Glacier    107.90  21  PFAKE             05 28 10.0  +12
TGL                               LR       LR
      comp=Z,23µm,21.0s
PRAC  Prado           107.91 101 eP        PP       05 28 23.9 +2.9
MYIG  Mrida           107.91  78  PFAKE             05 28 10.0  +11
MYIG                              LR       LR
      comp=Z,7µm,18.0s
NEW   Newport         108.04  41  Pdiff    Pdif     05 23 55.4 +3.7
      comp=Z,0.8nm,0.7s,baz=73,slow=17,SNR=3.4
NEW                               PKiKP    PKiKP    05 28 00.0 +1.5
      comp=Z,2.1nm,0.7s,baz=214,slow=4.1,SNR=4.4
NEW   Newport         108.04  41  PFAKE             05 28 10.0  +12
NEW                               LR       LR
      comp=Z,39µm,22.0s
NEW   Newport         108.04  41  P        Pdif     05 23 54.1 +2.3
      baz=227
PCA   Pinnacle        108.05  22  PFAKE             05 28 10.0  +12
PCA                               LR       LR
      comp=Z,26µm,20.0s
TPAW  Teton Pass      108.08  48  PFAKE             05 28 10.0  +11
TPAW                              LR       LR
      comp=Z,22µm,21.0s
BCPM  Bancas Point    108.10  22  PFAKE             05 28 10.0  +12
BCPM                              LR       LR
      comp=Z,21µm,20.0s
CAST  Castle Rocks    108.11  15  PFAKE             05 28 10.0  +12
CAST                              LR       LR
      comp=Z,18µm,22.0s
ABTX  Abilene, Hawle  108.14  62  PFAKE             05 28 10.0  +11
ABTX                              LR       LR
      comp=Z,27µm,22.0s
ABTX  Abilene, Hawle  108.14  62  P        Pdif     05 23 54.1 +1.5
      baz=232
JBP   Jabalpur        108.17 285 eP        Pdif     05 23 51.7 -1.1
JBP                               IAmb     IAmb     05 24 16.4
      comp=Z,283nm,6.0s
JBP                               IAMs_20  IAMs_20  06 15 51.1
      comp=Z,2µm,6.9s
SNOW  Snow King Moun  108.18  48  PFAKE             05 28 10.0  +11
SNOW                              LR       LR
      comp=Z,20µm,20.0s
AMTX  Amarillo        108.20  59  PFAKE             05 28 10.0  +11
AMTX                              LR       LR
      comp=Z,21µm,21.0s
AMTX  Amarillo        108.20  59  P        Pdif     05 23 56.1 +3.2
      baz=232
JIS   Juneau Island   108.35  26  PFAKE             05 28 10.0  +11
JIS                               LR       LR
      comp=Z,40µm,22.0s
IMW   Indian Meadow   108.36  47  PFAKE             05 28 10.0  +10
IMW                               LR       LR
      comp=Z,22µm,22.0s
LOHW  Long Hollow     108.36  48  PFAKE             05 28 10.0  +11
LOHW                              LR       LR
      comp=Z,21µm,18.0s
RREF  El Recreo       108.37 100 eP        PP       05 28 31.4 +6.3
MOOW  Moose Ponds     108.37  47  PFAKE             05 28 10.0  +10
MOOW                              LR       LR
      comp=Z,25µm,18.0s
435B  Jarrell         108.39  65  P        Pdif     05 23 55.5 +1.8
      baz=232
BW06  Boulder Array   108.40  49  PFAKE             05 28 10.0  +10
BW06                              LR       LR
      comp=Z,30µm,22.0s
BW06  Boulder Array   108.40  49  P        Pdif     05 23 57.5 +3.8
      baz=230
PDAR  Pinedale Array  108.40  49  Pdiff    Pdif     05 23 58.9 +5.2
      comp=Z,0.1nm,0.3s,baz=17,slow=29,SNR=2.0
PDAR                              PKiKP    PKiKP    05 28 03.1 +3.4
      comp=Z,0.6nm,0.8s,baz=162,slow=3.4,SNR=3.0
PDAR                              PKKPbc   PKKPbc   05 39 10.3 +0.3
      comp=Z,2.6nm,0.8s,baz=78,slow=4.4,SNR=11
PDAR                              PKKP     PKKPdf   05 39 23.0 -2.0
      comp=Z,4.7nm,0.8s,baz=56,slow=9.1,SNR=7.4
DLMT  Dillon          108.41  45  PFAKE             05 28 10.0  +11
DLMT                              LR       LR
      comp=Z,17µm,18.0s
BESE  Bessie Mountai  108.44  25  PFAKE             05 28 10.0  +11
BESE                              LR       LR
      comp=Z,30µm,22.0s
KTH   Kantishna Hill  108.47  16  PFAKE             05 28 10.0  +11
KTH                               LR       LR
      comp=Z,22µm,21.0s
TEIG  Tepich          108.53  79  PFAKE             05 28 10.0  +10
TEIG                              LR       LR
      comp=Z,7µm,19.0s
Q24A  Divide          108.57  54  P        Pdif     05 23 57.8 +3.1
      baz=231
FLWY  Flagg Ranch     108.61  47  PFAKE             05 28 10.0  +10
FLWY                              LR       LR
      comp=Z,22µm,21.0s
MSO   Missoula        108.67  43  PFAKE             05 28 10.0  +10
MSO                               LR       LR
      comp=Z,38µm,19.0s
MSO   Missoula        108.67  43  P        Pdif     05 23 58.1 +3.4
      baz=229
RND   Reindeer        108.76  17  PFAKE             05 28 10.0  +11
RND                               LR       LR
      comp=Z,32µm,20.0s
DHY   Denali Highway  108.80  17  PFAKE             05 28 10.0  +10
DHY                               LR       LR
      comp=Z,10µm,18.0s
H17A  Grant Village   108.88  47  P        Pdif     05 23 58.5 +2.6
      baz=230
BPAW  Bear Paw Mtn.   108.94  15  PFAKE             05 28 10.0  +10
BPAW                              LR       LR
      comp=Z,16µm,20.0s
SKAG  Skagway         108.99  25  PFAKE             05 28 10.0  +10
SKAG                              LR       LR
      comp=Z,30µm,20.0s
MCK   McKinley        109.03  16  PFAKE             05 28 10.0  +10
MCK                               LR       LR
      comp=Z,34µm,20.0s
RWWY  Rawlins         109.06  51  PFAKE             05 28 10.0 +9.1
RWWY                              LR       LR
      comp=Z,19µm,22.0s
ROSC  El Rosal        109.08 101  PKKPbc   PKKPbc   05 39 06.9 -0.1
      comp=Z,6.4nm,0.7s,baz=185,slow=12,SNR=6.3
ROSC  El Rosal        109.08 101  PFAKE             05 28 10.0 +8.0
ROSC                              LR       LR
      comp=Z,10µm,21.0s
HKT   Hockley         109.08  67  PFAKE             05 28 10.0 +9.1
HKT                               LR       LR
      comp=Z,20µm,19.0s
BOZ   Bozeman (W)     109.08  46  PFAKE             05 28 10.0 +9.3
BOZ                               LR       LR
      comp=Z,16µm,20.0s
BOZ   Bozeman (W)     109.08  46  P        Pdif     05 23 58.5 +1.9
      baz=230
PAX   Paxson          109.14  18  PFAKE             05 28 10.0  +10
PAX                               LR       LR
      comp=Z,17µm,21.0s
WHTX  Lake Whitney,   109.22  64  PFAKE             05 28 10.0 +8.8
WHTX                              LR       LR
      comp=Z,22µm,19.0s
WHTX  Lake Whitney,   109.22  64  P        Pdif     05 23 58.8 +1.5
      baz=232
N23A  Red Feather La  109.30  52  P        Pdif     05 23 59.7 +1.8
      baz=231
BWN   Browne          109.31  16  PFAKE             05 28 10.0  +10
BWN                               LR       LR
      comp=Z,45µm,21.0s
YAK   Yakutsk         109.46 339  PFAKE             05 28 10.0 +9.4
YAK                               LR       LR
      comp=Z,10µm,21.0s
YAK   Yakutsk         109.46 339 eP        Pdif     05 24 00.6 +3.0
MENT  Mentasta        109.53  19  PFAKE             05 28 10.0 +9.2
MENT                              LR       LR
      comp=Z,20µm,20.0s
BILL  Bilibino        109.57 357  PFAKE             05 28 10.0 +9.3
BILL                              LR       LR
      comp=Z,15µm,21.0s
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BILL	**Bilibino**	**109.57**	**357**	*i* P	**Pdif**	**05 23 57.6**	**-0.4**
SPBC	**San Pablo de B**	**109.81**	**100**	*e*P	**PP**	**05 28 34.7**	**-0.2**
MLY	**Manley**	**109.83**	**15**	PFAKE		05 28 10.0	+8.7
MLY				LR	LR		
	comp=Z,21µm,22.0s						
PHWY	**Pilot Hill**	**109.84**	**52**	PFAKE		05 28 10.0	+7.6
PHWY				LR	LR		
	comp=Z,12µm,18.0s						
WRH	**Wood River Hil**	**109.86**	**16**	PFAKE		05 28 10.0	+8.7
WRH				LR	LR		
	comp=Z,30µm,20.0s						
DLBC	**Dease Lake**	**109.94**	**28**	PKiKP	**PKiKP**	**05 28 00.9**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=259,slow=7.4,SNR=1.9						
DLBC				PKKPbc	**PKKPbc**	**05 39 05.2**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=339,slow=1.0,SNR=8.3						
RIDG	**Independent Ri**	**109.95**	**18**	PFAKE		05 28 10.0	+8.4
RIDG				LR	LR		
	comp=Z,17µm,20.0s						
WMOK	**Wichita Mounta**	**110.00**	**61**	PFAKE		05 28 10.0	+7.4
WMOK				LR	LR		
	comp=Z,28µm,18.0s						
WMOK	**Wichita Mounta**	**110.00**	**61**	P	**Pdif**	**05 24 01.8**	**+1.0**
	baz=233						
DOT	**Dot Lake**	**110.05**	**18**	PFAKE		05 28 10.0	+8.2
DOT				LR	LR		
	comp=Z,17µm,20.0s						
HDA	**Harding Lake**	**110.05**	**17**	PFAKE		05 28 10.0	+8.3
HDA				LR	LR		
	comp=Z,11µm,20.0s						
HDA	**Harding Lake**	**110.05**	**17**	P	**Pdif**	**05 24 02.2**	**+1.9**
	baz=210						
K22A	**Casper**	**110.06**	**50**	PFAKE		05 28 10.0	+7.4
K22A				LR	LR		
	comp=Z,31µm,22.0s						
K22A	**Casper**	**110.06**	**50**	P	**Pdif**	**05 24 00.8**	**-0.2**
	baz=231						
RLMT	**Red Lodge**	**110.06**	**47**	PFAKE		05 28 10.0	+7.4
RLMT				LR	LR		
	comp=Z,17µm,22.0s						
RLMT	**Red Lodge**	**110.06**	**47**	P	**Pdif**	**05 24 00.5**	**-0.5**
	baz=231						
CCB	**Clear Creek Bu**	**110.08**	**16**	PFAKE		05 28 10.0	+8.3
CCB				LR	LR		
	comp=Z,30µm,20.0s						
KSCO	**Kaye Shedlock'**	**110.14**	**55**	PFAKE		05 28 10.0	+7.1
KSCO				LR	LR		
	comp=Z,17µm,19.0s						
KSCO	**Kaye Shedlock'**	**110.14**	**55**	P	**Pdif**	**05 24 01.5**	**+0.1**
	baz=232						
MDM	**Murphy Dome**	**110.26**	**16**	PFAKE		05 28 10.0	+7.9
MDM				LR	LR		
	comp=Z,23µm,20.0s						
TCOL	**CIGO, UAF Yank**	**110.27**	**16**	P	**Pdif**	**05 24 03.4**	**+2.3**
	baz=209						
COLA	**College**	**110.27**	**16**	PFAKE		05 28 10.0	+8.0
COLA				LR	LR		
	comp=Z,31µm,20.0s						
COLA	**College**	**110.27**	**16**	*i* P	**Pdif**	**05 24 02.1**	**+1.0**
SCRK	**Sand Creek**	**110.35**	**18**	PFAKE		05 28 10.0	+7.6
SCRK				LR	LR		
	comp=Z,14µm,19.0s						
ILAR	**Eielson Array**	**110.38**	**17**	Pdiff	**Pdif**	**05 24 04.8**	**+3.1**
	comp=Z,0.1nm,0.4s,baz=34,slow=29,SNR=2.7						
ILAR				PKiKP	**PKiKP**	**05 28 03.8**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=255,slow=2.0,SNR=11						
ILAR				PKKPbc	**PKKPbc**	**05 39 03.9**	**-0.1**
	comp=Z,6.7nm,1.2s,baz=352,slow=2.1,SNR=7.8						
ILB	**Eielson Array**	**110.38**	**17**	*e*Pdif	**Pdif**	**05 23 56.5**	**-5.2**
POKR	**Poker Plat Res**	**110.57**	**16**	P	**Pdif**	**05 24 04.8**	**+2.3**
	baz=210						
MATP	**Matopo**	**110.58**	**214**	PKiKP	**PKiKP**	**05 28 04.2**	**-0.2**
	comp=Z,5.4nm,0.6s,baz=221,slow=0.8,SNR=10.0						
RDOG	**Red Dog Mine**	**110.75**	**9**	PFAKE		05 28 10.0	+7.1
RDOG				LR	LR		
	comp=Z,28µm,22.0s						
BDFB	**Brasilia**	**110.83**	**136**	PKKPbc	PKKPbc	05 38 59.8	-1.5
	comp=Z,2.7nm,1.0s,baz=180,slow=17,SNR=1.7						
BDFB	**Brasilia**	**110.83**	**136**	PFAKE		05 28 20.0	+15
BDFB				LR	LR		
	comp=Z,17µm,19.0s						
NATX	**Nacogdoches**	**110.97**	**66**	PFAKE		05 28 20.0	+16
NATX				LR	LR		
	comp=Z,20µm,20.0s						
NATX	**Nacogdoches**	**110.97**	**66**	P	**Pdif**	**05 24 05.7**	**+0.5**
	baz=233						
ETX06	**Route 59 and C**	**111.18**	**66**	PFAKE		05 28 20.0	+15
ETX06				LR	LR		
	comp=Z,11µm,19.0s						
PRP	**Porcupine Dome**	**111.32**	**17**	PFAKE		05 28 20.0	+16
PRP				LR	LR		
	comp=Z,15µm,22.0s						
EGMT	**Eagleton**	**111.62**	**44**	PFAKE		05 28 20.0	+15
EGMT				LR	LR		
	comp=Z,23µm,18.0s						
EGMT	**Eagleton**	**111.62**	**44**	P	**Pdif**	**05 24 08.1**	**+0.4**
	baz=231						
OGNE	**Ogallala**	**111.68**	**54**	PFAKE		05 28 20.0	+14
OGNE				LR	LR		
	comp=Z,24µm,21.0s						
OGNE	**Ogallala**	**111.68**	**54**	P	**Pdif**	**05 24 08.4**	**+0.2**
	baz=233						
EGAK	**Eagle**	**111.69**	**19**	PFAKE		05 28 20.0	+15
EGAK				LR	LR		
	comp=Z,21µm,20.0s						
CBKS	**Cedar Bluff**	**111.83**	**57**	PFAKE		05 28 20.0	+14
CBKS				LR	LR		
	comp=Z,22µm,20.0s						
CBKS	**Cedar Bluff**	**111.83**	**57**	P	**Pdif**	**05 24 10.4**	**+1.5**
	baz=234						
COLD	**Coldfoot**	**111.88**	**14**	PFAKE		05 28 20.0	+15
COLD				LR	LR		
	comp=Z,17µm,20.0s						
FYU	**Fort Yukon**	**112.28**	**16**	PFAKE		05 28 20.0	+14
FYU				LR	LR		
	comp=Z,26µm,20.0s						
RSSD	**Black Hills**	**112.39**	**50**	PFAKE		05 28 20.0	+13
RSSD				LR	LR		
	comp=Z,30µm,22.0s						
RSSD	**Black Hills**	**112.39**	**50**	P	**Pdif**	**05 24 12.3**	**+0.9**
	baz=233						
TUL1	**Leonard**	**112.66**	**62**	PFAKE		05 28 20.0	+12
TUL1				LR	LR		
	comp=Z,35µm,18.0s						
TUL1	**Leonard**	**112.66**	**62**	P	**Pdif**	**05 24 11.8**	**-0.8**
	baz=234						
WIN	**Windhoek**	**112.69**	**203**	PFAKE		05 28 20.0	+12
WIN				LR	LR		
	comp=Z,46µm,20.0s						
LAO	**LASA Array**	**112.70**	**47**	PFAKE		05 28 20.0	+13
LAO				LR	LR		
	comp=Z,19µm,21.0s						
LAO	**LASA Array**	**112.70**	**47**	P	**Pdif**	**05 24 11.7**	**-0.8**
	baz=233						
Z41A	**Richland Creek**	**113.12**	**66**	P	**Pdif**	**05 24 15.8**	**+1.1**
	baz=234						
WLAR	**White Oak Lake**	**113.16**	**65**	PFAKE		05 28 20.0	+11
WLAR				LR	LR		
	comp=Z,21µm,22.0s						
TOLK	**Toolik Lake Re**	**113.25**	**14**	PFAKE		05 28 20.0	+12
TOLK				LR	LR		
	comp=Z,24µm,21.0s						
TOLK	**Toolik Lake Re**	**113.25**	**14**	P	**Pdif**	**05 24 16.3**	**+1.9**
	baz=209						
MIAR	**Mount Ida**	**113.34**	**64**	PFAKE		05 28 20.0	+11
MIAR				LR	LR		
	comp=Z,18µm,19.0s						
MIAR	**Mount Ida**	**113.34**	**64**	P	**Pdif**	**05 24 16.2**	**+0.6**
	baz=234						
W39A	**Magazine**	**113.58**	**63**	PFAKE		05 28 20.0	+11
W39A				LR	LR		
	comp=Z,32µm,21.0s						
X40A	**Basin Creek Fa**	**113.81**	**64**	PFAKE		05 28 20.0	+10
X40A				LR	LR		
	comp=Z,16µm,19.0s						
KSU1	**Kansas State U**	**113.97**	**58**	PFAKE		05 28 20.0	+10
KSU1				LR	LR		
	comp=Z,25µm,19.0s						
KSU1	**Kansas State U**	**113.97**	**58**	P	**Pdif**	**05 24 23.9**	**+5.6**
	baz=235						
EPYK	**Eagle Plains**	**114.08**	**19**	PFAKE		05 28 20.0	+11
EPYK				LR	LR		
	comp=Z,18µm,21.0s						
EPYK	**Eagle Plains**	**114.08**	**19**	P	**Pdif**	**05 24 18.0**	**-0.1**
	baz=218						
VBMS	**Vicksburg**	**114.09**	**68**	PFAKE		05 28 20.0	+10
VBMS				LR	LR		
	comp=Z,10µm,20.0s						
VBMS	**Vicksburg**	**114.09**	**68**	P	**Pdif**	**05 24 24.4**	**+5.4**
	baz=235						
HHAR	**Hobbs**	**114.10**	**62**	PFAKE		05 28 20.0	+10
HHAR				LR	LR		
	comp=Z,29µm,20.0s						
CCAR	**Cane Creek**	**114.21**	**65**	PFAKE		05 28 20.0	+9.4
CCAR				LR	LR		
	comp=Z,18µm,22.0s						
UALR	**University of**	**114.31**	**64**	PFAKE		05 28 20.0	+9.3
UALR				LR	LR		
	comp=Z,16µm,20.0s						
BGNE	**Belgrade**	**114.32**	**56**	PFAKE		05 28 20.0	+9.4
BGNE				LR	LR		
	comp=Z,20µm,19.0s						
BGNE	**Belgrade**	**114.32**	**56**	P	**Pdif**	**05 24 23.0**	**+3.2**
	baz=235						
SDV	**Santo Domingo**	**114.49**	**100**	PFAKE		05 28 20.0	+8.0
SDV				LR	LR		
	comp=Z,10µm,21.0s						
SDV	**Santo Domingo**	**114.49**	**100**	*e*P	**Pdif**	**05 24 18.6**	**-2.8**
W41B	**Gary Mavity, V**	**114.60**	**64**	P	**Pdif**	**05 24 22.9**	**+1.7**
	baz=235						
WHAR	**Wooly Hollow**	**114.64**	**64**	PFAKE		05 28 20.0	+8.6
WHAR				LR	LR		
	comp=Z,26µm,19.0s						
DGMT	**Dagmar**	**114.86**	**46**	PFAKE		05 28 20.0	+8.6
DGMT				LR	LR		
	comp=Z,14µm,18.0s						
DGMT	**Dagmar**	**114.86**	**46**	P	**Pdif**	**05 24 22.2**	**+0.2**
	baz=235						
U40A	**Yellville**	**114.86**	**63**	P	**Pdif**	**05 24 22.1**	**-0.2**
	baz=235						
FCAR	**Ozark Folk Cen**	**115.09**	**63**	PFAKE		05 28 20.0	+7.8
FCAR				LR	LR		
	comp=Z,27µm,21.0s						
WMQ	**Urumqi**	**115.19**	**307**	*e*PKP	**PKiKP**	**05 28 12.4**	**+0.2**
WMQ				LR	LR		
	comp=Z,3µm,17.1s						
WMQ				LR	LR		
	comp=Z,5µm,18.9s						
WMQ				LR	LR		
	comp=Z,7µm,27.5s						
LSZ	**Lusaka**	**115.28**	**216**	PKP	**PKPdf**	**05 28 13.7**	**+0.3**
	comp=Z,10nm,0.9s,baz=190,slow=1.4,SNR=8.4						
LSZ	**Lusaka**	**115.28**	**216**	*e*PKiKP	**PKPdf**	**05 28 14.2**	**+0.7**
LSZ				LR	LR		
	comp=Z,32µm,19.0s						
MTDJ	**Mount Denham**	**115.29**	**88**	PFAKE		05 28 20.0	+6.8
MTDJ				LR	LR		
	comp=Z,8µm,20.0s						
PTGA	**Pitinga**	**115.36**	**116**	PKP	**PKPdf**	**05 28 13.2**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=310,slow=20,SNR=3.5						
PTGA	**Pitinga**	**115.36**	**116**	*e*PKPdf	**PKPdf**	**05 28 12.4**	**-1.1**
PTGA				LR	LR		
	comp=Z,12µm,20.0s						
SUSD	**Miller**	**115.55**	**52**	P	**Pdif**	**05 24 27.9**	**+2.7**
	baz=236						
TSUM	**Tsumeb**	**115.71**	**204**	PKP	**PKiKP**	**05 28 13.7**	**-0.5**
	comp=Z,5.3nm,0.9s,baz=167,slow=4.6,SNR=7.9						
TSUM	**Tsumeb**	**115.71**	**204**	*e*PKPdf	**PKiKP**	**05 28 12.1**	**-2.2**
TSUM				LR	LR		
	comp=Z,28µm,20.0s						
HBAR	**Harrisburg**	**115.89**	**65**	PFAKE		05 28 20.0	+6.3
HBAR				LR	LR		
	comp=Z,22µm,20.0s						
147A	**Livingston**	**115.91**	**68**	PFAKE		05 28 20.0	+6.1
147A				LR	LR		
	comp=Z,8µm,21.0s						
BRAL	**Brewton**	**115.92**	**70**	PFAKE		05 28 20.0	+6.1
BRAL				LR	LR		
	comp=Z,6µm,19.0s						
BRAL	**Brewton**	**115.92**	**70**	P	**Pdif**	**05 24 26.9**	**-0.3**
	baz=235						
450A	**Crestview**	**116.04**	**71**	P	**Pdif**	**05 24 28.1**	**+0.4**
	baz=235						
MET	**Memphis--Engin**	**116.14**	**65**	PFAKE		05 28 30.0	+16
MET				LR	LR		
	comp=Z,16µm,18.0s						
DHRM	**DHARAMSHALA**	**116.16**	**291**	IAmb	IAmb	05 21 59.5	
	comp=Z,12nm,0.5s						
OXF	**Oxford**	**116.16**	**66**	PFAKE		05 28 30.0	+16
OXF				LR	LR		
	comp=Z,10µm,22.0s						
OXF	**Oxford**	**116.16**	**66**	P	**Pdif**	**05 24 29.3**	**+1.2**
	baz=236						
249A	**Camden**	**116.33**	**70**	P	**Pdif**	**05 24 30.6**	**+1.7**
	baz=236						
INK	**Inuvik**	**116.36**	**19**	PKP	**PKPdf**	**05 28 12.6**	**-1.0**
	comp=Z,6.5nm,0.9s,baz=234,slow=0.3,SNR=7.9						
INK				PKKPbc	**PKKPbc**	**05 38 43.6**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=23,slow=4.8,SNR=2.8						
INK	**Inuvik**	**116.36**	**19**	*e*PKPdf	**PKPdf**	**05 28 13.4**	**-0.2**
INK				LR	LR		
	comp=Z,20µm,21.0s						
INK	**Inuvik**	**116.36**	**19**	*e*PKIKP	**PKPdf**	**05 28 13.4**	**-0.2**
INK				MLR	MLR		
	comp=Z,20µm,21.0s						
148A	**Greensboro**	**116.39**	**69**	P	**Pdif**	**05 24 30.2**	**+1.1**
	baz=236						
451A	**Vernon**	**116.53**	**72**	PFAKE		05 28 30.0	+15
451A				LR	LR		
	comp=Z,7µm,19.0s						
GNAR	**Gosnell**	**116.55**	**64**	PFAKE		05 28 30.0	+15
GNAR				LR	LR		
	comp=Z,21µm,20.0s						
ECSD	**EROS Data Cent**	**116.56**	**54**	*e*PKPdf	**PKPdf**	**05 28 14.2**	**-0.6**
ECSD				LR	LR		
	comp=Z,16µm,20.0s						
ECSD	**EROS Data Cent**	**116.56**	**54**	P	**Pdif**	**05 24 32.9**	**+3.1**
	baz=237						
PBMO	**Poplar Bluff**	**116.72**	**64**	PFAKE		05 28 30.0	+15
PBMO				LR	LR		
	comp=Z,29µm,22.0s						
CCM	**Cathedral Cave**	**116.88**	**62**	PFAKE		05 28 30.0	+14
CCM				LR	LR		
	comp=Z,29µm,21.0s						
250A	**Grady**	**116.93**	**70**	PFAKE		05 28 30.0	+14
250A				LR	LR		
	comp=Z,6µm,18.0s						
HALT	**Halls**	**116.98**	**65**	PFAKE		05 28 30.0	+14
HALT				LR	LR		
	comp=Z,19µm,20.0s						
LRAL	**Lakeview Retre**	**117.00**	**69**	PFAKE		05 28 30.0	+14
LRAL				LR	LR		
	comp=Z,12µm,20.0s						
PVMO	**Portageville**	**117.01**	**64**	PFAKE		05 28 30.0	+14
PVMO				LR	LR		
	comp=Z,20µm,19.0s						
PARMO	**Parma**	**117.11**	**64**	PFAKE		05 28 30.0	+14
PARMO				LR	LR		
	comp=Z,22µm,22.0s						
GLAT	**Glass**	**117.21**	**65**	PFAKE		05 28 30.0	+14
GLAT				LR	LR		
	comp=Z,20µm,20.0s						
X47A	**Russelville**	**117.23**	**67**	P	**Pdif**	**05 24 31.4**	**-1.5**
	baz=236						
061Z	**Ochoppi**	**117.33**	**79**	PFAKE		05 28 30.0	+13
061Z				LR	LR		
	comp=Z,9µm,19.0s						
PLAL	**Pickwick Lake**	**117.33**	**66**	*e*PKPdf	**PKPdf**	**05 28 15.7**	**-0.8**
PLAL				LR	LR		
	comp=Z,14µm,20.0s						
957A	**Wimauma**	**117.39**	**76**	PFAKE		05 28 30.0	+13
957A				LR	LR		
	comp=Z,8µm,19.0s						
TIXI	**Tiksi**	**117.52**	**345**	PFAKE		05 28 30.0	+14
TIXI				LR	LR		
	comp=Z,12µm,20.0s						
TIXI	**Tiksi**	**117.52**	**345**	⇑*i*PKIKP	**PKiKP**	**05 28 16.6**	**+0.8**
352A	**Blakely**	**117.60**	**71**	PFAKE		05 28 30.0	+13
352A				LR	LR		
	comp=Z,9µm,21.0s						
SCIA	**State Center**	**117.68**	**57**	PFAKE		05 28 30.0	+13
SCIA				LR	LR		
	comp=Z,28µm,19.0s						
453A	**Whigham**	**117.68**	**72**	PFAKE		05 28 30.0	+13
453A				LR	LR		
	comp=Z,7µm,20.0s						
X48A	**Hartselle**	**117.75**	**67**	*e*PKPdf	**PKPdf**	**05 28 16.0**	**-1.4**
X48A				LR	LR		
	comp=Z,9µm,19.0s						
059A	**Moore Haven**	**117.79**	**78**	PFAKE		05 28 30.0	+12
059A				LR	LR		
	comp=Z,8µm,18.0s						
SLM	**Saint Louis**	**117.86**	**62**	PFAKE		05 28 30.0	+13
SLM				LR	LR		
	comp=Z,30µm,21.0s						
Y49A	**Blount Mountai**	**117.86**	**68**	PFAKE		05 28 30.0	+12
Y49A				LR	LR		
	comp=Z,21µm,20.0s						
Z50A	**Ashland**	**117.88**	**69**	PFAKE		05 28 30.0	+12
Z50A				LR	LR		
	comp=Z,7µm,20.0s						
T45A	**Paducah**	**118.05**	**64**	PFAKE		05 28 30.0	+12
T45A				LR	LR		
	comp=Z,18µm,22.0s						
WVT	**Waverly**	**118.12**	**65**	*e*PKPdf	**PKPdf**	**05 28 17.2**	**-0.8**
WVT				LR	LR		
	comp=Z,14µm,20.0s						
WVT	**Waverly**	**118.12**	**65**	*e*PKIKP	**PKPdf**	**05 28 17.2**	**-0.8**
WVT				MLR	MLR		
	comp=Z,14µm,20.0s						
656A	**Willston**	**118.13**	**75**	PFAKE		05 28 30.0	+12
656A				LR	LR		
	comp=Z,6µm,20.0s						
GTBY	**Guantanamo Bay**	**118.14**	**88**	PFAKE		05 28 30.0	+11
GTBY				LR	LR		
	comp=Z,10µm,22.0s						
DWPF	**Disney Wildern**	**118.23**	**76**	PFAKE		05 28 30.0	+12
DWPF				LR	LR		
	comp=Z,8µm,18.0s						
555A	**McAlpin**	**118.24**	**74**	PFAKE		05 28 30.0	+12
555A				LR	LR		
	comp=Z,8µm,21.0s						
YKA	**Yellowknife Ar**	**118.28**	**30**	PKP	**PKPdf**	**05 28 16.4**	**-1.1**
	comp=Z,17nm,0.9s,baz=233,slow=1.5,SNR=80						
YKA				PKKPbc	**PKKPab**	**05 38 35.2**	**-0.7**
	comp=Z,6.8nm,0.7s,baz=48,slow=4.1,SNR=50						
YKW3	**Yellowknife Ar**	**118.32**	**30**	*e*PKPdf	**PKPdf**	**05 28 16.7**	**-0.9**
060A	**Indiantown**	**118.40**	**78**	PFAKE		05 28 30.0	+11
060A				LR	LR		
	comp=Z,8µm,19.0s						
152A	**Waverly Hall**	**118.40**	**70**	PFAKE		05 28 30.0	+11
152A				LR	LR		
	comp=Z,7µm,20.0s						
253A	**Americus**	**118.48**	**71**	PFAKE		05 28 30.0	+11
253A				LR	LR		
	comp=Z,7µm,18.0s						
TIGA	**Tifton**	**118.53**	**72**	PFAKE		05 28 30.0	+11
TIGA				LR	LR		
	comp=Z,6µm,18.0s						
N41A	**Harden Midland**	**118.55**	**60**	PFAKE		05 28 30.0	+11
N41A				LR	LR		
	comp=Z,19µm,18.0s						
T46A	**Princeton**	**118.57**	**65**	P	**PKiKP**	**05 28 19.4**	**+0.5**
	baz=238						
V48A	**Smith Brothers**	**118.60**	**66**	PFAKE		05 28 30.0	+11
V48A				LR	LR		
	comp=Z,17µm,22.0s						
W49A	**Belvidere**	**118.65**	**67**	P	**PKiKP**	**05 28 19.6**	**+0.5**
	baz=237						
X50B	**Fort Payne**	**118.72**	**68**	P	**PKiKP**	**05 28 19.6**	**+0.3**
	baz=237						
ZSN	**Zaisan**	**118.82**	**309**	*e*PP	PP	05 29 33.2	-5.3
Z52A	**Williamson**	**118.90**	**70**	P	**PKPdf**	**05 28 17.3**	**-2.3**
	baz=237						
SWET	**Sewanee**	**118.93**	**67**	PFAKE		05 28 30.0	+10
SWET				LR	LR		
	comp=Z,14µm,21.0s						
L40A	**Anamosa**	**119.03**	**58**	PFAKE		05 28 30.0	+10
L40A				LR	LR		
	comp=Z,22µm,19.0s						
NIL	**Nilore**	**119.06**	**291**	PFAKE		05 28 30.0	+10
NIL				LR	LR		
	comp=Z,5µm,21.0s						
T47A	**Sharon Grove**	**119.07**	**65**	*e*PKPdf	**PKPdf**	**05 28 18.2**	**-1.6**
T47A				LR	LR		
	comp=Z,18µm,20.0s						
658A	**Bunnell**	**119.09**	**75**	PFAKE		05 28 30.0	+10
658A				LR	LR		
	comp=Z,6µm,21.0s						
CLTN	**Cedars of Leba**	**119.12**	**66**	*e*PKPdf	**PKPdf**	**05 28 19.4**	**-0.5**
CLTN				LR	LR		
	comp=Z,9µm,22.0s						
USIN	**University of**	**119.21**	**64**	PFAKE		05 28 30.0	+10
USIN				LR	LR		
	comp=Z,22µm,22.0s						
V49A	**McMinnville**	**119.25**	**67**	P	**PKiKP**	**05 28 20.7**	**+0.4**
	baz=238						
456A	**Hilliard**	**119.25**	**74**	PFAKE		05 28 30.0	+10
456A				LR	LR		
	comp=Z,9µm,19.0s						
OLIL	**Olney**	**119.32**	**63**	PFAKE		05 28 30.0	+10
OLIL				LR	LR		
	comp=Z,31µm,18.0s						
X51A	**Calhoun**	**119.33**	**68**	PFAKE		05 28 30.0	+10
X51A				LR	LR		
	comp=Z,12µm,21.0s						
X51A	**Calhoun**	**119.33**	**68**	P	**PKPdf**	**05 28 20.3**	**-0.1**
	baz=237						
W50A	**Signal Mountai**	**119.35**	**68**	*e*PKPdf	**PKPdf**	**05 28 20.1**	**-0.4**
W50A				LR	LR		
	comp=Z,17µm,21.0s						
W50A	**Signal Mountai**	**119.35**	**68**	P	**PKiKP**	**05 28 20.9**	**+0.3**
	baz=238						
AGMN	**Agassiz Nation**	**119.42**	**50**	*e*PKPdf	**PKPdf**	**05 28 18.5**	**-1.6**
AGMN				LR	LR		
	comp=Z,19µm,22.0s						
AGMN	**Agassiz Nation**	**119.42**	**50**	P	**PKiKP**	**05 28 22.1**	**+1.9**
	baz=239						
FFC	**Flin Flon**	**119.45**	**41**	*e*PKPdf	**PKPdf**	**05 28 19.0**	**-1.0**
FFC				LR	LR		
	comp=Z,15µm,20.0s						
FFC	**Flin Flon**	**119.45**	**41**	*e*PKIKP	**PKPdf**	**05 28 19.0**	**-1.0**
FFC				MLR	MLR		
	comp=Z,15µm,20.0s						
HDIL	**Hopedale**	**119.48**	**60**	PFAKE		05 28 30.0	+9.4
HDIL				LR	LR		
	comp=Z,27µm,18.0s						
HDIL	**Hopedale**	**119.48**	**60**	P	**PKiKP**	**05 28 20.7**	**+0.1**
	baz=239						
154A	**Montrose**	**119.51**	**71**	PFAKE		05 28 30.0	+9.1
154A				LR	LR		
	comp=Z,7µm,20.0s						
Y52A	**Lilburn**	**119.51**	**69**	PFAKE		05 28 30.0	+9.1
Y52A				LR	LR		
	comp=Z,14µm,20.0s						
Y52A	**Lilburn**	**119.51**	**69**	P	**PKiKP**	**05 28 21.9**	**+1.0**
	baz=237						
Z53A	**Monticello**	**119.54**	**70**	P	**PKPdf**	**05 28 20.2**	**-0.6**
	baz=237						
255A	**Hazlehurst**	**119.59**	**72**	PFAKE		05 28 30.0	+9.0
255A				LR	LR		
	comp=Z,7µm,19.0s						
SPMN	**Marine on St.**	**119.67**	**54**	*e*PKPdf	**PKPdf**	**05 28 19.9**	**-0.8**
SPMN				LR	LR		
	comp=Z,20µm,20.0s						
SPMN	**Marine on St.**	**119.67**	**54**	P	**PKiKP**	**05 28 21.4**	**+0.6**
	baz=239						
GOGA	**Godfrey**	**119.69**	**70**	PFAKE		05 28 30.0	+8.8
GOGA				LR	LR		
	comp=Z,8µm,19.0s						
W51A	**Cleveland**	**119.72**	**68**	P	**PKPdf**	**05 28 21.0**	**-0.1**
	baz=238						
U49A	**Red Boiling Sp**	**119.73**	**66**	P	**PKPdf**	**05 28 20.6**	**-0.5**
	baz=238						
V50A	**Pikevile**	**119.75**	**67**	P	**PKPdf**	**05 28 20.8**	**-0.4**
	baz=238						
O44A	**Mansfield**	**119.82**	**61**	P	**PKiKP**	**05 28 21.8**	**+0.6**
	baz=239						
Y53A	**Monroe**	**119.84**	**70**	P	**PKiKP**	**05 28 21.9**	**+0.4**
	baz=238						
155A	**Kite**	**119.97**	**72**	P	**PKiKP**	**05 28 23.0**	**+1.2**
	baz=237						
L42A	**Oliver, Polo**	**119.99**	**59**	PFAKE		05 28 30.0	+8.5
L42A				LR	LR		
	comp=Z,18µm,19.0s						
L42A	**Oliver, Polo**	**119.99**	**59**	P	**PKiKP**	**05 28 22.1**	**+0.6**
	baz=239						
MK31	**Makanchi Array**	**120.00**	**308**	*e*PKPdf	**PKPdf**	**05 28 19.6**	**-1.7**
MK31	**Makanchi Array**	**120.00**	**308**	*i* PKIKP	**PKPdf**	**05 28 18.7**	**-2.7**
MK31				pmax	pmax		
	comp=Z,12nm,0.7s						
MKAR	**Makanchi Array**	**120.00**	**308**	PKP	**PKPdf**	**05 28 19.1**	**-2.2**
	comp=Z,15nm,0.8s,baz=37,slow=1.1,SNR=22						
MKAR				PKKPbc	**PKKPbc**	**05 38 30.9**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=300,slow=2.7,SNR=4.7						
X52A	**Dahlonega**	**120.02**	**69**	P	**PKPdf**	**05 28 21.6**	**-0.2**
	baz=238						
CPCT	**Cooper Cave**	**120.03**	**68**	PFAKE		05 28 30.0	+8.2
CPCT				LR	LR		

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                comp=Z,16µm,21.0s
Z54A  Sparta           120.03  71  P          PKiKP    05 28 22.1 +0.2
                baz=237
JFWS  Jewell Farm      120.08  58  ePKPdf     PKPdf    05 28 21.3 -0.3
JFWS                                LR        LR
                comp=Z,20µm,19.0s
JFWS  Jewell Farm      120.08  58  P          PKiKP    05 28 22.3 +0.6
                baz=239
UZB   Uzynbulak        120.16 303  ePKIKP     PKiKP    05 28 23.3 +1.3
UZB                                e                   05 29 50.0
UZB   Uzynbulak        120.16 303  ePKP       PKiKP    05 28 23.3 +1.3
UZB                                ePP        PP       05 29 50.1 +2.1
MAKZ  Makanchi         120.19 307  ePKPdf     PKPdf    05 28 19.6 -2.1
MAKZ                                LR        LR
                comp=Z,5µm,19.0s
MAKZ  Makanchi         120.19 307  ePKIKP     PKPdf    05 28 19.6 -2.1
MAKZ                                MLR       MLR
                comp=Z,5µm,19.0s
T49A  Edmonton         120.20  66  ePKPdf     PKPdf    05 28 21.1 -1.0
T49A                                LR        LR
                comp=Z,17µm,21.0s
PRZ   Przheval'sk      120.22 302   PFAKE              05 28 30.0 +7.8
PRZ                                 LR        LR
                comp=Z,6µm,19.0s
W52A  Murphy           120.26  68   PFAKE              05 28 30.0 +7.7
W52A                                LR        LR
                comp=Z,14µm,21.0s
W52A  Murphy           120.26  68   P         PKPdf    05 28 20.7 -1.6
                baz=238
WCI   Wyandotte Cave   120.27  64  ePKPdf     PKPdf    05 28 21.0 -1.1
WCI                                 LR        LR
                comp=Z,18µm,22.0s
WCI   Wyandotte Cave   120.27  64  ePKIKP     PKPdf    05 28 21.0 -1.1
WCI                                 MLR       MLR
                comp=Z,18µm,22.0s
WCI   Wyandotte Cave   120.27  64   P         PKPdf    05 28 21.7 -0.4
                baz=239
KSH   Kashi            120.29 298  ePKP       PKiKP    05 28 23.3 +0.9
KSH                                 PP        PP       05 29 54.6 +5.7
KSH                                 PKS       PKSdf    05 31 59.3 +0.3
KSH                                 SKS       SKSdf    05 35 33.8 +0.2
KSH                                 SKKS      SKKSac   05 36 47.4  0.0
KSH                                 SS        SS       05 46 21.5 +5.0
KSH                                 AMB       AMB
                comp=Z,590nm,8.7s
KSH                                 LR        LR
                comp=Z,4µm,20.3s
KSH                                 LR        LR
                comp=Z,6µm,20.0s
KSH                                 LR        LR
                comp=Z,11µm,22.3s
U50A  Jamestown        120.32  67   P         PKiKP    05 28 23.7 +1.3
                baz=238
V51A  Loudon           120.34  67   PFAKE              05 28 30.0 +7.6
V51A                                LR        LR
                comp=Z,17µm,22.0s
V51A  Loudon           120.34  67   P         PKiKP    05 28 23.7 +1.3
                baz=238
ULM   Lac du Bonnet    120.40  48   PKP       PKPdf    05 28 21.7 -0.3
                comp=Z,7.5nm,0.5s,baz=244,slow=2.6,SNR=8.4
ULM                                 PP        PP       05 29 57.5 +8.3
                comp=Z,14nm,0.9s,baz=238,slow=6.4,SNR=4.2
ULM                                 PKKPbc    PKKPab   05 38 28.0 +0.4
                comp=Z,3.8nm,0.7s,baz=10,slow=3.1,SNR=4.1
ULM   Lac du Bonnet    120.40  48  ePKPdf     PKPdf    05 28 21.5 -0.4
ULM                                 LR        LR
                comp=Z,19µm,18.0s
ULM   Lac du Bonnet    120.40  48  ePKIKP     PKPdf    05 28 21.5 -0.4
ULM                                 MLR       MLR
                comp=Z,19µm,18.0s
SDDR  Presa de Saban   120.43  91   PFAKE              05 28 30.0 +6.9
SDDR                                LR        LR
                comp=Z,6µm,19.0s
Y54A  Tignall          120.47  70   P         PKPdf    05 28 22.0 -0.6
                baz=238
SATY  Saty             120.51 302  ePKIKP     PKPdf    05 28 21.6 -1.0
SATY                               e                   05 29 49.8
SATY  Saty             120.51 302  ePKP       PKPdf    05 28 21.7 -1.0
SATY                               ePP        PP       05 29 49.8 -0.5
Z55A  Blythe           120.53  71   P         PKiKP    05 28 23.1 +0.2
                baz=238
KPKS  Kokpek           120.54 303  ePP        PP       05 29 49.2 -1.2
BLO   Bloomington      120.60  63   PFAKE              05 28 30.0 +7.2
BLO                                 LR        LR
                comp=Z,29µm,19.0s
T50A  Nancy            120.64  66   P         PKPdf    05 28 21.4 -1.5
                baz=239
257A  Skidaway Islan   120.65  73   PFAKE              05 28 30.0 +6.9
257A                                LR        LR
                comp=Z,9µm,20.0s
TKL   Tuckaleechee C   120.66  68   PKP       PKiKP    05 28 24.3 +1.2
                comp=Z,8.1nm,0.8s,baz=175,slow=7.5,SNR=8.0
G39A  Holcombe         120.70  55   P         PKiKP    05 28 24.5 +1.7
                baz=240
M44A  Midewin, Midew   120.72  60   PFAKE              05 28 30.0 +7.0
M44A                                LR        LR
                comp=Z,22µm,18.0s
M44A  Midewin, Midew   120.72  60   P         PKPdf    05 28 21.6 -1.2
                baz=240
KDJ   Kajisay          120.83 301   PFAKE              05 28 30.0 +6.6
KDJ                                 LR        LR
                comp=Z,6µm,20.0s
W53A  Cullowhee        120.83  69   P         PKiKP    05 28 24.6 +1.1
                baz=238
SFIN  Lafayette        120.83  62   PFAKE              05 28 30.0 +6.8
SFIN                                LR        LR
                comp=Z,33µm,19.0s
V52A  Sevierville      120.88  68  ePKPdf     PKiKP    05 28 23.8 +0.3
V52A                                LR        LR
                comp=Z,18µm,22.0s
V52A  Sevierville      120.88  68   P         PKPdf    05 28 23.3  0.0
                baz=238,SNR=7.5
I41A  Arkdale          120.89  57   PFAKE              05 28 30.0 +6.8
I41A                                LR        LR
                comp=Z,25µm,19.0s
BG3   Lake Jocassee    120.90  69   PFAKE              05 28 30.0 +6.4
BG3                                 LR        LR
                comp=Z,9µm,21.0s
HODGE Hodges           120.97  70   PFAKE              05 28 30.0 +6.3
HODGE                               LR        LR
                comp=Z,17µm,19.0s
Q48A  North Vernon     121.01  64   P         PKiKP    05 28 24.2 +0.5
                baz=239
R49A  Shelbyville      121.06  65   PFAKE              05 28 30.0 +6.2
R49A                                LR        LR
                comp=Z,16µm,22.0s
R49A  Shelbyville      121.06  65   P         PKPdf    05 28 23.3 -0.3
                baz=239
Y55A  Saluda           121.10  71   P         PKPdf    05 28 23.4 -0.5
                baz=238
E38A  The Farm, Brul   121.11  53   PFAKE              05 28 30.0 +6.4
E38A                                LR        LR
                comp=Z,26µm,19.0s
Z56A  Williston        121.12  71   PFAKE              05 28 30.0 +6.0
Z56A                                LR        LR
                comp=Z,7µm,22.0s
SDD   Santo Domingo    121.14  92   PFAKE              05 28 40.0  +16
SDD                                 LR        LR
                comp=Z,14µm,19.0s
K43A  Burlington       121.20  59   PFAKE              05 28 30.0 +6.1
K43A                                LR        LR
                comp=Z,14µm,20.0s
K43A  Burlington       121.20  59   P         PKiKP    05 28 24.4 +0.6
                baz=240
L44A  Lake County Fo   121.20  59   P         PKPdf    05 28 23.5 -0.3
                baz=240
T51A  Gray             121.22  67   P         PKiKP    05 28 24.2 +0.1
                baz=239
NRN   Naryn            121.24 300  ePKPdf     PKPdf    05 28 22.1 -2.2
NRN                                 LR        LR
                comp=Z,8µm,20.0s
NRN   Naryn            121.24 300  ePKIKP     PKPdf    05 28 22.1 -2.2
NRN                                 MLR       MLR
                comp=Z,8µm,20.0s
S50A  Richmond         121.27  66   P         PKPdf    05 28 22.6 -1.4
                baz=239
TZTN  Tazewell         121.28  67   PFAKE              05 28 30.0 +5.7
TZTN                                LR        LR
                comp=Z,15µm,18.0s
TZTN  Tazewell         121.28  67   P         PKPdf    05 28 22.6 -1.5
                baz=239
G40A  Rib Lake         121.28  55   PFAKE              05 28 30.0 +6.0
G40A                                LR        LR
                comp=Z,19µm,20.0s
G40A  Rib Lake         121.28  55   P         PKiKP    05 28 24.6 +0.6
                baz=241
U52A  Thorn Hill       121.32  67   P         PKPdf    05 28 23.7 -0.6
                baz=239
V53A  Saluda           121.33  68   PFAKE              05 28 40.0  +16
V53A                                LR        LR
                comp=Z,16µm,21.0s
V53A  Saluda           121.33  68   P         PKiKP    05 28 24.6 +0.2
                baz=239
I42A  Draeger Farm,    121.41  57   PFAKE              05 28 30.0 +5.7
I42A                                LR        LR
                comp=Z,23µm,19.0s
I42A  Draeger Farm,    121.41  57   P         PKiKP    05 28 24.7 +0.4
                baz=241
MDOK  Medeo            121.42 302  ePKIKP     PKPdf    05 28 24.3  0.0
MDOK                               e                   05 29 53.0
MDOK  Medeo            121.42 302  ePKP       PKPdf    05 28 24.4  0.0
MDOK                               ePP        PP       05 29 53.1 -3.5
MDOK                               eSS        SS       05 47 07.4  +36
W54A  Cherokee Point   121.47  69   P         PKiKP    05 28 25.6 +0.9
                baz=238
P48A  Milroy           121.48  63   PFAKE              05 28 40.0  +15
P48A                                LR        LR
                comp=Z,27µm,22.0s
P48A  Milroy           121.48  63   P         PKPdf    05 28 24.1 -0.3
                baz=240
X55A  Gracelyn & Ava   121.54  70   P         PKPdf    05 28 23.6 -1.1
                baz=238
PAULI Pauline          121.59  70   PFAKE              05 28 40.0  +15
PAULI                               LR        LR
                comp=Z,12µm,21.0s
Q49A  Aurora           121.61  64   P         PKiKP    05 28 26.1 +1.3
                baz=240
R50A  Paris            121.63  65   PFAKE              05 28 40.0  +15
R50A                                LR        LR
                comp=Z,15µm,18.0s
R50A  Paris            121.63  65   P         PKiKP    05 28 26.6 +1.7
                baz=240
JSC   Jenkinsville     121.70  71   PFAKE              05 28 40.0  +15
JSC                                 LR        LR
                comp=Z,13µm,20.0s
EYMN  Ely              121.80  52  ePKPdf     PKPdf    05 28 24.0 -0.7
EYMN                                LR        LR
                comp=Z,32µm,21.0s
EYMN  Ely              121.80  52   P         PKiKP    05 28 25.1 +0.2
                baz=241
BOOM  Boomskoye usch121.80 301     ePKPdf     PKPdf    05 28 24.2 -0.9
BOOM                                LR        LR
                comp=Z,7µm,18.0s
BOOM  Boomskoye usch121.80 301     ePKIKP     PKPdf    05 28 24.3 -0.9
BOOM                                MLR       MLR
                comp=Z,7µm,18.0s
S51A  Beattyville      121.80  66  ePKPdf     PKPdf    05 28 24.5 -0.6
S51A                                LR        LR
                comp=Z,16µm,19.0s
S51A  Beattyville      121.80  66   P         PKiKP    05 28 26.3 +1.0
                baz=239
U53A  Fall Branch      121.86  68   P         PKiKP    05 28 26.4 +0.9
                baz=239
NHSC  New Hope         121.86  72   PFAKE              05 28 40.0  +15
NHSC                                LR        LR
                comp=Z,7µm,19.0s
NHSC  New Hope         121.86  72   P         PKiKP    05 28 25.7 +0.3
                baz=238
T52A  Hallie           121.95  67   PFAKE              05 28 40.0  +14
T52A                                LR        LR
                comp=Z,14µm,19.0s
T52A  Hallie           121.95  67   P         PKPdf    05 28 23.9 -1.5
                baz=239
X56A  White Oak        121.97  70   P         PKiKP    05 28 25.6  0.0
                baz=239
V54A  Nebo             121.99  69   P         PKiKP    05 28 25.9 +0.2
                baz=239
P49A  Miami Univ. Ec   121.99  64   P         PKiKP    05 28 27.3 +1.7
                baz=240
N47A  Urbana           122.01  62   P         PKiKP    05 28 26.0 +0.4
                baz=240
O48A  Farmland         122.06  63   P         PKPdf    05 28 25.6 +0.1
                baz=240
ZAA0  Zalesovo Array   122.06 316  ePKPdf     PKPdf    05 28 22.4 -2.6
ZAA0                                LR        LR
                comp=Z,7µm,21.0s
ZALV  Zalesovo Beam    122.06 316   PKP       PKPdf    05 28 23.2 -1.8
                comp=Z,6.6nm,0.6s,baz=163,slow=2.8,SNR=14
ZALV                                PKKPbc    PKKPbc   05 38 23.6 +1.4
                comp=Z,1.3nm,0.8s,baz=336,slow=3.2,SNR=3.0
GRTK  Grand Turk       122.06  89   PFAKE              05 28 40.0  +14
GRTK                                LR        LR
                comp=Z,8µm,20.0s
KMSC  Kings Mountain   122.10  70   PFAKE              05 28 40.0  +14
KMSC                                LR        LR
                comp=Z,16µm,20.0s
KMSC  Kings Mountain   122.10  70   P         PKiKP    05 28 27.0 +1.1
                baz=239
R51A  Hillsboro        122.14  65   P         PKiKP    05 28 26.2 +0.3
                baz=240
Q50A  Georgetown       122.15  65   P         PKPdf    05 28 24.6 -1.1
                baz=240,SNR=5.3
L46A  Eue Claire       122.17  60   PFAKE              05 28 40.0  +14
L46A                                LR        LR
                comp=Z,23µm,18.0s
L46A  Eue Claire       122.17  60   P         PKiKP    05 28 27.3 +1.5
                baz=241
S52A  Salyersville     122.18  66   P         PKiKP    05 28 27.2 +1.2
                baz=240
Y57A  Sumter           122.18  71   PFAKE              05 28 40.0  +14
Y57A                                LR        LR
                comp=Z,14µm,20.0s
Y57A  Sumter           122.18  71   P         PKPdf    05 28 24.8 -1.1
                baz=238
T53A  Wise             122.20  67   P         PKiKP    05 28 27.3 +1.2
                baz=239
KUU   Kurty            122.23 302  ePKIKP     PKPdf    05 28 23.3 -2.4
KUU                                e                   05 30 00.2
KUU                                 MLR       MLR
                comp=Z,4µm,20.0s
KUU   Kurty            122.23 302  ePKP       PKPdf    05 28 23.4 -2.4
KUU                                ePP        PP       05 30 00.2 -1.6
KUU                                eLR        LR       06 22 25.8
                comp=Z,4µm,20.3s
Z58A  St. Stephen      122.24  72   P         PKiKP    05 28 26.3 +0.1
                baz=238
M47A  Cromwell         122.29  61   P         PKPdf    05 28 25.6 -0.3
                baz=241
COWI  Conover          122.34  55  ePKPdf     PKPdf    05 28 25.4 -0.5
COWI                                LR        LR
                comp=Z,19µm,20.0s
KMBO  Kilima Mbogo     122.39 234   PFAKE              05 28 40.0  +13
KMBO                                LR        LR
                comp=Z,28µm,18.0s
H43A  Windswept, Lux   122.41  57   PFAKE              05 28 40.0  +14
H43A                                LR        LR
                comp=Z,19µm,18.0s
H43A  Windswept, Lux   122.41  57   P         PKiKP    05 28 26.6 +0.4
                baz=241
N48A  Decatur          122.44  62   P         PKiKP    05 28 26.9 +0.5
                baz=241
BIRD  Birdtown, Kers   122.45  71   PFAKE              05 28 40.0  +13
BIRD                                LR        LR
                comp=Z,10µm,20.0s
U54A  Nelsons Funny    122.46  68   PFAKE              05 28 40.0  +13
U54A                                LR        LR
                comp=Z,13µm,18.0s
U54A  Nelsons Funny    122.46  68   P         PKPdf    05 28 25.8 -0.7
                baz=239
KBL   Kabul            122.50 289   PFAKE              05 28 40.0  +13
KBL                                 LR        LR
                comp=Z,5µm,19.0s
V55A  Taylorsville     122.54  69   P         PKPdf    05 28 25.0 -1.5
                baz=239
O49A  Covington        122.57  63  ePKPdf     PKPdf    05 28 26.4 -0.1
O49A                                LR        LR
                comp=Z,34µm,21.0s
O49A  Covington        122.57  63   P         PKiKP    05 28 27.1 +0.5
                baz=240
W56A  Indian Trail     122.62  70   P         PKiKP    05 28 27.1 +0.2
                baz=239
X57A  Johnson Farm,    122.62  71   P         PKiKP    05 28 27.8 +0.9
                baz=239
Y58A  Scranton         122.64  72   PFAKE              05 28 40.0  +13
Y58A                                LR        LR
                comp=Z,12µm,19.0s
Y58A  Scranton         122.64  72   P         PKiKP    05 28 27.2 +0.2
                baz=239
P50A  Jamestown        122.65  64   P         PKPdf    05 28 26.2 -0.4
                baz=240
SHEL  Horse Pasture    122.65 180   PFAKE              05 28 40.0  +12
SHEL                                LR        LR
                comp=Z,49µm,22.0s
Q51A  Peebles          122.67  65  ePKPdf     PKPdf    05 28 25.9 -0.9
Q51A                                LR        LR
                comp=Z,15µm,18.0s
Q51A  Peebles          122.67  65   P         PKPdf    05 28 25.4 -1.4
                baz=240,SNR=5.3
F42A  Maple Grove Fa   122.79  56   P         PKiKP    05 28 27.6 +0.7
                baz=242
J45A  Montague         122.80  59   PFAKE              05 28 40.0  +13
J45A                                LR        LR
                comp=Z,24µm,18.0s
J45A  Montague         122.80  59   P         PKiKP    05 28 27.0  0.0
                baz=242
R52A  Catlettsburg     122.80  66   P         PKPdf    05 28 26.6 -0.3
                baz=240
FRU1  Bishkek          122.80 300   PFAKE              05 28 40.0  +13
FRU1                                LR        LR
                comp=Z,9µm,22.0s
AAK   Ala-Archa        122.81 300  ePKPdf     PKPdf    05 28 26.2 -0.9
AAK                                 LR        LR
                comp=Z,8µm,21.0s
AAK   Ala-Archa        122.81 300   PKiKP     PKiKP    05 28 27.6 +0.3
AAK   Ala-Archa        122.81 300c iPKIKP     PKPdf    05 28 27.1  0.0
AAK                                 MLR       MLR
                comp=Z,8µm,20.0s
K46A  Dorr             122.83  60   P         PKPdf    05 28 26.1 -0.8
                baz=241
S53A  Williamson       122.83  67   P         PKiKP    05 28 27.6 +0.3
                baz=240
L47A  Sherwood         122.87  61   P         PKiKP    05 28 27.6 +0.4
                baz=241
T54A  Tazewell         122.90  68   P         PKPdf    05 28 26.5 -0.8
                baz=240
M48A  Edgerton         122.95  62   PFAKE              05 28 40.0  +13
M48A                                LR        LR
                comp=Z,36µm,19.0s
M48A  Edgerton         122.95  62   P         PKPdf    05 28 26.8 -0.3
                baz=241
U55A  TA2, Sparta      122.99  68   P         PKiKP    05 28 27.8 +0.1
                baz=240
V56A  Mocksville       123.03  69   PFAKE              05 28 40.0  +12
V56A                                LR        LR
                comp=Z,18µm,21.0s
V56A  Mocksville       123.03  69   P         PKiKP    05 28 27.7  0.0
                baz=239
N49A  Columbus Grove   123.03  62   PFAKE              05 28 40.0  +12
N49A                                LR        LR
                comp=Z,34µm,21.0s
N49A  Columbus Grove   123.03  62   P         PKPdf    05 28 27.0 -0.4
                baz=241
O50A  Cable            123.03  63   P         PKiKP    05 28 28.6 +1.0
                baz=241
W57A  Gilead           123.05  70   PFAKE              05 28 40.0  +12
W57A                                LR        LR
                comp=Z,11µm,20.0s
W57A  Gilead           123.05  70   P         PKPdf    05 28 27.4 -0.1
                baz=239
P51A  Williamsport     123.08  64   PFAKE              05 28 40.0  +12
P51A                                LR        LR
                comp=Z,13µm,22.0s
P51A  Williamsport     123.08  64   P         PKPdf    05 28 27.2 -0.3
                baz=241
SGDS  Sogindy          123.11 301  ePKP       PKPdf    05 28 25.1 -2.4
SGDS                               ePP        PP       05 30 07.4 -0.5
SGDS                               eLR        LR       06 22 47.5
                comp=Z,7µm,22.7s
D41A  Chassel          123.13  54  ePKPdf     PKPdf    05 28 26.5 -0.8
D41A                                LR        LR
                comp=Z,19µm,19.0s
D41A  Chassel          123.13  54   P         PKiKP    05 28 28.0 +0.4
                baz=242
ARSB  Arslanbob        123.17 298  ePKPdf     PKPdf    05 28 25.7 -2.1
ARSB                                LR        LR
                comp=Z,12µm,21.0s
C40A  Isle Royale Na   123.17  53  ePKPdf     PKPdf    05 28 24.6 -2.7
C40A                                LR        LR
                comp=Z,17µm,19.0s
C40A  Isle Royale Na   123.17  53   P         PKiKP    05 28 28.2 +0.7
                baz=243
I45A  Fountain         123.18  58   PFAKE              05 28 40.0  +12
I45A                                LR        LR
                comp=Z,25µm,18.0s
I45A  Fountain         123.18  58   P         PKiKP    05 28 28.2 +0.5
                baz=242
X58A  Rowland          123.20  71   PFAKE              05 28 40.0  +12
X58A                                LR        LR
                comp=Z,12µm,19.0s
X58A  Rowland          123.20  71   P         PKiKP    05 28 28.2 +0.1
                baz=239
J46A  Howard City      123.23  59   P         PKPdf    05 28 27.4 -0.3
                baz=242
Y59A  Loris            123.25  72   P         PKPdf    05 28 26.2 -1.7
                baz=239
R53A  Hurricane        123.27  66   PFAKE              05 28 40.0  +12
R53A                                LR        LR
                comp=Z,18µm,18.0s
R53A  Hurricane        123.27  66   P         PKiKP    05 28 28.5 +0.3
                baz=240
K47A  Vermontville     123.33  60   P         PKPdf    05 28 27.5 -0.3
                baz=242
L48A  N Adams          123.35  61   P         PKPdf    05 28 27.7 -0.2
                baz=242
OBIP  Obispado Ponce   123.36  95   PFAKE              05 28 40.0  +11
OBIP                                LR        LR
                comp=Z,10µm,22.0s
Q52A  Bidwell          123.37  65   P         PKiKP    05 28 28.5 +0.3
                baz=241
U56A  King             123.37  69   P         PKPdf    05 28 28.0 -0.1
                baz=240
NBLI  Livramento-PB    123.39 142  eP         PKPdf    05 28 28.5 -0.5
M49A  Liberty Center   123.43  62   P         PKPdf    05 28 27.6 -0.5
                baz=241
S54A  Dingess, Beckl   123.45  67   P         PKPdf    05 28 28.2 -0.1
                baz=240
T55A  Pulaski          123.48  68   P         PKiKP    05 28 28.7 +0.1
                baz=240
ACSO  Alum Creek Sta   123.50  64  ePKPdf     PKiKP    05 28 28.4 -0.1
ACSO                                LR        LR
                comp=Z,31µm,21.0s
ACSO  Alum Creek Sta   123.50  64   P         PKiKP    05 28 28.7 +0.2
                baz=241,SNR=5.7
W58A  Raeford          123.52  71   P         PKiKP    05 28 28.6 -0.1
                baz=239
V57A  Coltrane Farms   123.57  70   P         PKPdf    05 28 27.9 -0.6
                baz=240
H45A  Beulah           123.57  58   P         PKiKP    05 28 28.8 +0.3
                baz=242
I46A  Reed City        123.64  59   P         PKPdf    05 28 27.7 -0.7
                baz=242
N50A  Nevada           123.65  63   P         PKPdf    05 28 28.3 -0.2
                baz=241
J47A  Sunmer           123.71  60   PFAKE              05 28 40.0  +11
J47A                                LR        LR
                comp=Z,24µm,18.0s
J47A  Sunmer           123.71  60   P         PKPdf    05 28 27.3 -1.2
                baz=242
O51A  Pataskala        123.71  64   P         PKPdf    05 28 28.7  0.0
                baz=241
Y60A  Bolivia          123.72  72   PFAKE              05 28 40.0  +11
Y60A                                LR        LR
                comp=Z,6µm,20.0s
X59A  McDuffie Farm,   123.73  72   P         PKiKP    05 28 29.2 +0.1
                baz=239
SJG   San Juan         123.74  95   PFAKE              05 28 40.0  +10
SJG                                 LR        LR
                comp=Z,6µm,20.0s
BLA   Blacksburg       123.78  68   PFAKE              05 28 40.0  +11
BLA                                 LR        LR
                comp=Z,14µm,19.0s
BLA   Blacksburg       123.78  68   P         PKPdf    05 28 28.5 -0.5
                baz=240,SNR=6.6
E43A  Lone Tree Farm   123.78  55  ePKPdf     PKPdf    05 28 28.1 -0.5
E43A                                LR        LR
                comp=Z,24µm,20.0s
E43A  Lone Tree Farm   123.78  55   P         PKPdf    05 28 28.4 -0.2
                baz=243
P52A  Corning          123.78  65   P         PKiKP    05 28 29.1 +0.1
                baz=241
Q53A  Leroy            123.82  66   P         PKPdf    05 28 28.4 -0.5
                baz=241
GAR   Garm             123.84 294  ePKPdf     PKPdf    05 28 28.0 -1.1
GAR                                 LR        LR
                comp=Z,17µm,20.0s
R54A  Victor           123.86  67   P         PKiKP    05 28 29.5 +0.1
                baz=241
L49A  Milan            123.87  61   P         PKiKP    05 28 29.5 +0.4
                baz=242
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T56A	**Rocky Mt**	**123.96**	**68**	P	**PKPdf**	**05 28 28.8**	**-0.4**
	baz=240						
K48A	**Perry**	**123.96**	**60**	P	**PKiKP**	**05 28 29.2**	**-0.1**
	baz=242						
V58A	**Windy Hill, Pi**	**123.99**	**70**	P	**PKPdf**	**05 28 28.6**	**-0.8**
	baz=240						
KURK	**Kurchatov**	**123.99**	**310**	*e*PKPdf	**PKPdf**	**05 28 27.1**	**-1.7**
KURK				LR	LR		
	comp=Z,8μm,20.0s						
KURK	**Kurchatov**	**123.99**	**310**	*c i*PKIKP	**PKPdf**	**05 28 26.7**	**-2.1**
KURK				pmax	pmax		
	comp=Z,22nm,0.7s						
KURK				MLR	MLR		
	comp=Z,8μm,20.0s						
S55A	**Lewisburg**	**124.00**	**67**	P	**PKiKP**	**05 28 29.8**	**+0.2**
	baz=241						
KURBB	**Kurchatov Arra**	**124.00**	**310**	PKP	**PKPdf**	**05 28 26.9**	**-2.0**
	comp=Z,25nm,0.8s,baz=115,slow=1.8,SNR=74						
KURBB				PKKPbc	**PKKPbc**	**05 38 15.9**	**+1.3**
	comp=Z,2.2nm,1.0s,baz=286,slow=5.2,SNR=4.0						
BTK	**Batken**	**124.01**	**296**	*e*PKPdf	**PKPdf**	**05 28 28.1**	**-1.3**
BTK				LR	LR		
	comp=Z,11μm,20.0s						
BTK	**Batken**	**124.01**	**296**	*e*PKIKP	**PKPdf**	**05 28 28.1**	**-1.3**
BTK				MLR	MLR		
	comp=Z,11μm,20.0s						
G45A	**Suttons Bay**	**124.01**	**57**	PFAKE		05 28 40.0	+11
G45A				LR	LR		
	comp=Z,30μm,19.0s						
G45A	**Suttons Bay**	**124.01**	**57**	P	**PKPdf**	**05 28 28.7**	**-0.4**
	baz=243						
M50A	**Fremont**	**124.02**	**62**	PFAKE		05 28 40.0	+11
M50A				LR	LR		
	comp=Z,31μm,20.0s						
M50A	**Fremont**	**124.02**	**62**	P	**PKPdf**	**05 28 28.8**	**-0.4**
	baz=242						
AAM	**Ann Arbor**	**124.03**	**61**	PFAKE		05 28 40.0	+11
AAM				LR	LR		
	comp=Z,29μm,19.0s						
AAM	**Ann Arbor**	**124.03**	**61**	P	**PKPdf**	**05 28 28.9**	**-0.3**
	baz=242						
H46A	**Fife Lake**	**124.07**	**58**	P	**PKiKP**	**05 28 30.0**	**+0.5**
	baz=243						
W59A	**Clinton**	**124.15**	**71**	P	**PKPdf**	**05 28 29.5**	**-0.2**
	baz=240						
U57A	**Blanch**	**124.15**	**69**	P	**PKiKP**	**05 28 29.8**	**-0.1**
	baz=240						
X60A	**Albert Glenn T**	**124.18**	**72**	P	**PKPdf**	**05 28 29.1**	**-0.6**
	baz=240						
O52A	**Adamsville**	**124.21**	**64**	*e*PKPdf	**PKiKP**	**05 28 30.1**	**+0.1**
O52A				LR	LR		
	comp=Z,21μm,22.0s						
O52A	**Adamsville**	**124.21**	**64**	P	**PKPdf**	**05 28 29.3**	**-0.3**
	baz=242						
BTLS	**Baital**	**124.22**	**302**	*e*PKIKP	**PKPdf**	**05 28 27.6**	**-1.8**
BTLS				*e*		05 30 15.1	
BTLS				*e*SS	SS	05 47 07.8	+1.7
BTLS	**Baital**	**124.22**	**302**	*e*PKP	**PKPdf**	**05 28 27.7**	**-1.8**
BTLS				*e*PP	**PP**	**05 30 15.2**	**-0.1**
BTLS				*e*SS	SS	05 47 07.9	+1.8
BTLS				*e*LR	LR	06 26 26.3	
	comp=Z,2μm,20.8s						
P53A	**Whipple**	**124.22**	**65**	*e*PKPdf	**PKPdf**	**05 28 29.0**	**-0.7**
P53A				LR	LR		
	comp=Z,13μm,18.0s						
P53A	**Whipple**	**124.22**	**65**	P	**PKPdf**	**05 28 28.2**	**-1.4**
	baz=241						
N51A	**Ashland**	**124.23**	**63**	PFAKE		05 28 40.0	+10
N51A				LR	LR		
	comp=Z,32μm,21.0s						
N51A	**Ashland**	**124.23**	**63**	P	**PKiKP**	**05 28 30.6**	**+0.7**
	baz=242						
SVB	**Belmont**	**124.27**	**104**	PFAKE		05 28 40.0	+9.2
SVB				LR	LR		
	comp=Z,9μm,22.0s						
I47A	**Gladwin**	**124.27**	**59**	PFAKE		05 28 40.0	+10
I47A				LR	LR		
	comp=Z,17μm,18.0s						
I47A	**Gladwin**	**124.27**	**59**	P	**PKPdf**	**05 28 29.5**	**-0.1**
	baz=243						
Q54A	**Coxs Mills**	**124.35**	**66**	PFAKE		05 28 40.0	+10
Q54A				LR	LR		
	comp=Z,16μm,19.0s						
Q54A	**Coxs Mills**	**124.35**	**66**	P	**PKPdf**	**05 28 29.3**	**-0.6**
	baz=241						
K49A	**Clarkson**	**124.39**	**61**	P	**PKPdf**	**05 28 29.1**	**-0.8**
	baz=242						
F45A	**CMU Biological**	**124.39**	**57**	P	**PKPdf**	**05 28 29.4**	**-0.3**
	baz=243						
J48A	**Bridge Port**	**124.41**	**60**	*e*PKPdf	**PKPdf**	**05 28 29.8**	**-0.1**
J48A				LR	LR		
	comp=Z,21μm,18.0s						
J48A	**Bridge Port**	**124.41**	**60**	P	**PKiKP**	**05 28 30.8**	**+0.6**
	baz=243						
PLIO	**Pelee Island,**	**124.45**	**62**	P	**PKPdf**	**05 28 29.2**	**-0.8**
	baz=242						
CHGR	**Chuyangaron**	**124.47**	**294**	PFAKE		05 28 40.0	+9.4
CHGR				LR	LR		
	comp=Z,18μm,22.0s						
L50A	**Kingsville**	**124.47**	**62**	P	**PKPdf**	**05 28 29.5**	**-0.5**
	baz=242						
T57A	**Hurt**	**124.48**	**69**	PFAKE		05 28 40.0	+9.4
T57A				LR	LR		
	comp=Z,16μm,22.0s						
T57A	**Hurt**	**124.48**	**69**	P	**PKiKP**	**05 28 30.6**	**+0.1**
	baz=241						
R55A	**Marlinton**	**124.51**	**67**	PFAKE		05 28 40.0	+9.3
R55A				LR	LR		
	comp=Z,14μm,19.0s						
R55A	**Marlinton**	**124.51**	**67**	P	**PKPdf**	**05 28 30.5**	**+0.1**
	baz=241						
E44A	**Grand Marais A**	**124.55**	**56**	PFAKE		05 28 40.0	+10
E44A				LR	LR		
	comp=Z,25μm,21.0s						
E44A	**Grand Marais A**	**124.55**	**56**	P	**PKiKP**	**05 28 30.7**	**+0.3**
	baz=244						
M51A	**Elyria**	**124.55**	**63**	P	**PKPdf**	**05 28 27.9**	**-2.3**
	baz=242						
MDP	**Montagnes des**	**124.57**	**118**	PKP	**PKiKP**	**05 28 33.4**	**+1.9**
	comp=Z,7.3nm,0.7s,baz=221,slow=4.7,SNR=5.5						
GLMI	**Grayling**	**124.57**	**58**	PFAKE		05 28 40.0	+10
GLMI				LR	LR		
	comp=Z,20μm,18.0s						
CNNC	**Cliffs of the**	**124.58**	**71**	PFAKE		05 28 40.0	+9.2
CNNC				LR	LR		
	comp=Z,10μm,19.0s						
CNNC	**Cliffs of the**	**124.58**	**71**	P	**PKiKP**	**05 28 30.8**	**0.0**
	baz=240						
V59A	**Middlesex**	**124.59**	**71**	P	**PKPdf**	**05 28 28.9**	**-1.6**
	baz=240						
S56A	**Natural Bridge**	**124.60**	**68**	P	**PKPdf**	**05 28 29.4**	**-1.0**
	baz=241						
W60A	**Pink Hill**	**124.61**	**72**	P	**PKPdf**	**05 28 30.0**	**-0.5**
	baz=240						
G46A	**Petoskey**	**124.64**	**57**	P	**PKPdf**	**05 28 30.0**	**-0.2**
	baz=243						
N52A	**McGinn's Farm,**	**124.64**	**64**	P	**PKPdf**	**05 28 29.5**	**-0.9**
	baz=242						
U58A	**Oxford**	**124.68**	**70**	P	**PKiKP**	**05 28 31.4**	**+0.5**
	baz=240						
O53A	**New Philadelph**	**124.70**	**64**	P	**PKPdf**	**05 28 28.5**	**-2.1**
	baz=242,SNR=5.9						
H47A	**Mio**	**124.73**	**58**	P	**PKPdf**	**05 28 29.7**	**-0.7**
	baz=243						
J49A	**Marlette**	**124.86**	**60**	P	**PKPdf**	**05 28 30.4**	**-0.3**
	baz=243						
I48A	**Sherman Twp**	**124.87**	**59**	P	**PKPdf**	**05 28 30.5**	**-0.3**
	baz=243						
Q55A	**Buckhannon**	**124.88**	**66**	P	**PKPdf**	**05 28 30.6**	**-0.4**
	baz=242						
P54A	**Burton**	**124.89**	**65**	P	**PKPdf**	**05 28 30.3**	**-0.7**
	baz=242						
K50A	**Casco**	**124.93**	**61**	PFAKE		05 28 40.0	+8.8
K50A				LR	LR		
	comp=Z,29μm,19.0s						
K50A	**Casco**	**124.93**	**61**	P	**PKPdf**	**05 28 28.7**	**-2.2**
	baz=243						
T58A	**Grand View Acr**	**124.96**	**69**	P	**PKPdf**	**05 28 29.8**	**-1.3**
	baz=241						
R56A	**Bull Pasture M**	**125.06**	**67**	P	**PKPdf**	**05 28 30.8**	**-0.6**
	baz=241						
S57A	**Dark Hollow, R**	**125.06**	**68**	PFAKE		05 28 40.0	+8.3
S57A				LR	LR		
	comp=Z,14μm,18.0s						
S57A	**Dark Hollow, R**	**125.06**	**68**	P	**PKiKP**	**05 28 31.8**	**+0.2**
	baz=241						
FCC	**Fort Churchill**	**125.17**	**40**	*e*PKPdf	**PKPdf**	**05 28 29.8**	**-1.0**
FCC				LR	LR		
	comp=Z,41μm,22.0s						
FCC	**Fort Churchill**	**125.17**	**40**	*e*PKIKP	**PKPdf**	**05 28 29.8**	**-1.0**
FCC				MLR	MLR		
	comp=Z,41μm,22.0s						
W61A	**Ground Anchor**	**125.18**	**72**	P	**PKiKP**	**05 28 32.0**	**+0.1**
	baz=240						
U59A	**Littleton**	**125.19**	**70**	PFAKE		05 28 40.0	+8.0
U59A				LR	LR		
	comp=Z,13μm,20.0s						
U59A	**Littleton**	**125.19**	**70**	P	**PKiKP**	**05 28 32.0**	**0.0**
	baz=241						
M52A	**Chesterland**	**125.20**	**63**	PFAKE		05 28 40.0	+8.2
M52A				LR	LR		
	comp=Z,32μm,21.0s						
M52A	**Chesterland**	**125.20**	**63**	P	**PKPdf**	**05 28 31.5**	**0.0**
	baz=243						
G47A	**Hillman**	**125.21**	**58**	P	**PKPdf**	**05 28 31.1**	**-0.2**
	baz=244						
N53A	**Lisbon**	**125.21**	**64**	*e*PKPdf	**PKPdf**	**05 28 30.8**	**-0.8**
N53A				LR	LR		
	comp=Z,29μm,22.0s						
N53A	**Lisbon**	**125.21**	**64**	P	**PKPdf**	**05 28 31.1**	**-0.4**
	baz=242						
RCBR	**Riachuelo**	**125.23**	**142**	PFAKE		05 28 40.0	+7.1
RCBR				LR	LR		
	comp=Z,9μm,19.0s						
RCBR	**Riachuelo**	**125.23**	**142**	*e*P	**PKPdf**	**05 28 32.0**	**-0.5**
O54A	**Avella**	**125.23**	**65**	P	**PKPdf**	**05 28 30.7**	**-0.9**
	baz=242,SNR=8.1						
V60A	**Jim Taylor Roa**	**125.28**	**71**	PFAKE		05 28 40.0	+7.9
V60A				LR	LR		
	comp=Z,12μm,20.0s						
V60A	**Jim Taylor Roa**	**125.28**	**71**	P	**PKPdf**	**05 28 31.0**	**-0.8**
	baz=240						
P55A	**Reedsville**	**125.29**	**66**	P	**PKiKP**	**05 28 32.2**	**+0.1**
	baz=242						
FDF	**Fort de France**	**125.30**	**102**	PFAKE		05 28 40.0	+7.2
FDF				LR	LR		
	comp=Z,6μm,20.0s						
I49A	**Point Hope**	**125.32**	**60**	PFAKE		05 28 40.0	+8.0
I49A				LR	LR		
	comp=Z,19μm,18.0s						
I49A	**Point Hope**	**125.32**	**60**	P	**PKPdf**	**05 28 31.8**	**+0.2**
	baz=243						
H48A	**Harrisville**	**125.34**	**59**	PFAKE		05 28 40.0	+8.0
H48A				LR	LR		
	comp=Z,25μm,18.0s						
H48A	**Harrisville**	**125.34**	**59**	P	**PKiKP**	**05 28 32.3**	**+0.3**
	baz=244						
MCWV	**Mont Chateau**	**125.35**	**66**	*e*PKPdf	**PKPdf**	**05 28 31.4**	**-0.4**
MCWV				LR	LR		
	comp=Z,8μm,20.0s						
MCWV	**Mont Chateau**	**125.35**	**66**	P	**PKPdf**	**05 28 31.3**	**-0.4**
	baz=242						
BBGH	**Gun Hill**	**125.41**	**105**	PFAKE		05 28 40.0	+7.0
BBGH				LR	LR		
	comp=Z,15μm,22.0s						
E46A	**Sault Ste Mari**	**125.45**	**56**	*e*PKPdf	**PKPdf**	**05 28 30.6**	**-1.1**
E46A				LR	LR		
	comp=Z,22μm,19.0s						
E46A	**Sault Ste Mari**	**125.45**	**56**	P	**PKiKP**	**05 28 32.0**	**-0.1**
	baz=244						
IUG	**Iuzhnay**	**125.51**	**298**	*e*PKIKP	**PKPdf**	**05 28 31.4**	**-0.8**
IUG	**Iuzhnay**	**125.51**	**298**	*e*PKP	**PKPdf**	**05 28 31.4**	**-0.8**
Q56A	**Snyder Ridge,**	**125.51**	**67**	P	**PKPdf**	**05 28 32.1**	**-0.1**
	baz=242						
SABA	**Saba**	**125.60**	**98**	PFAKE		05 28 40.0	+6.7
SABA				LR	LR		
	comp=Z,7μm,20.0s						
M53A	**WI Miller and**	**125.61**	**63**	P	**PKPdf**	**05 28 32.3**	**0.0**
	baz=243						
R57A	**Stanardsville**	**125.62**	**68**	P	**PKiKP**	**05 28 32.8**	**0.0**
	baz=242						
KK31	**Karatay Array**	**125.62**	**299**	*e*PKPdf	**PKPdf**	**05 28 31.2**	**-1.1**
KK31	**Karatay Array**	**125.62**	**299**	*i* PKIKP	**PKPdf**	**05 28 30.9**	**-1.4**
KK31				pmax	pmax		
	comp=Z,22nm,1.0s						
KKAR	**Karatay Array**	**125.62**	**299**	*e*PKPdf	**PKPdf**	**05 28 31.3**	**-1.0**
KKAR	**Karatay Array**	**125.62**	**299**	*e*PKIKP	**PKPdf**	**05 28 31.3**	**-1.0**
S58A	**Poland Farm, P**	**125.62**	**69**	PFAKE		05 28 40.0	+7.2
S58A				LR	LR		
	comp=Z,12μm,21.0s						
S58A	**Poland Farm, P**	**125.62**	**69**	P	**PKiKP**	**05 28 32.8**	**0.0**
	baz=241						
K51A	**Iona Station**	**125.64**	**62**	P	**PKiKP**	**05 28 33.3**	**+0.6**
	baz=243						
T59A	**Double "B" Far**	**125.66**	**70**	PFAKE		05 28 40.0	+7.1
T59A				LR	LR		
	comp=Z,15μm,20.0s						
T59A	**Double "B" Far**	**125.66**	**70**	P	**PKiKP**	**05 28 33.3**	**+0.4**
	baz=241						
U60A	**Pendleton**	**125.70**	**70**	P	**PKPdf**	**05 28 32.1**	**-0.4**
	baz=241						
SEUS	**St. Eustatius**	**125.71**	**98**	PFAKE		05 28 40.0	+6.5
SEUS				LR	LR		
	comp=Z,5μm,18.0s						
V61A	**Roper**	**125.78**	**71**	PFAKE		05 28 40.0	+6.9
V61A				LR	LR		
	comp=Z,10μm,20.0s						
V61A	**Roper**	**125.78**	**71**	P	**PKiKP**	**05 28 33.1**	**-0.1**
	baz=241						
SKI	**Saint Kitts**	**125.79**	**99**	PFAKE		05 28 40.0	+6.3
SKI				LR	LR		
	comp=Z,12μm,21.0s						
D46A	**Sault St. Mari**	**125.84**	**56**	P	**PKPdf**	**05 28 30.9**	**-1.6**
	baz=245,SNR=7.2						
N54A	**Moraine State**	**125.85**	**64**	*e*PKPdf	**PKPdf**	**05 28 31.3**	**-1.4**
N54A				LR	LR		
	comp=Z,27μm,22.0s						
N54A	**Moraine State**	**125.85**	**64**	P	**PKPdf**	**05 28 32.0**	**-0.8**
	baz=243,SNR=10						
R58B	**Mineral**	**125.91**	**68**	PFAKE		05 28 40.0	+6.7
R58B				LR	LR		
	comp=Z,13μm,19.0s						
R58B	**Mineral**	**125.91**	**68**	P	**PKPdf**	**05 28 32.4**	**-0.5**
	baz=242						
P56A	**Dayton Farm, R**	**125.97**	**66**	P	**PKiKP**	**05 28 33.9**	**+0.5**
	baz=242						
O55A	**Ligonier**	**125.97**	**65**	P	**PKPdf**	**05 28 32.1**	**-1.0**
	baz=242						
R58A	**Rapidan**	**125.98**	**68**	P	**PKiKP**	**05 28 33.3**	**-0.2**
	baz=242						
SMRT	**St. Maarten**	**125.99**	**98**	PFAKE		05 28 40.0	+5.9
SMRT				LR	LR		
	comp=Z,6μm,21.0s						
Q57A	**Strasburg**	**126.04**	**67**	P	**PKiKP**	**05 28 33.6**	**0.0**
	baz=242						
ALLY	**Alegheny Colle**	**126.06**	**63**	*e*PKPdf	**PKPdf**	**05 28 33.2**	**+0.1**
ALLY				LR	LR		
	comp=Z,34μm,21.0s						
BASO	**Ashfield**	**126.11**	**60**	P	**PKPdf**	**05 28 33.3**	**+0.2**
	baz=244						
V62A	**Hyde County Ai**	**126.11**	**72**	PFAKE		05 28 40.0	+6.2
V62A				LR	LR		
	comp=Z,10μm,22.0s						
V62A	**Hyde County Ai**	**126.11**	**72**	P	**PKiKP**	**05 28 34.1**	**+0.3**
	baz=241						
L53A	**Girard**	**126.12**	**63**	P	**PKiKP**	**05 28 33.8**	**+0.1**
	baz=243						
E47A	**Iron Bridge**	**126.13**	**57**	P	**PKPdf**	**05 28 32.4**	**-0.7**
	baz=245						
U61A	**Possum Corner**	**126.13**	**71**	PFAKE		05 28 40.0	+6.2
U61A				LR	LR		
	comp=Z,13μm,20.0s						
U61A	**Possum Corner**	**126.13**	**71**	P	**PKPdf**	**05 28 32.3**	**-1.1**
	baz=241						
K52A	**Tillsonburg**	**126.19**	**62**	P	**PKiKP**	**05 28 33.9**	**+0.2**
	baz=244						
S59A	**Mechanicsville**	**126.22**	**69**	P	**PKiKP**	**05 28 33.9**	**0.0**
	baz=242						
F48A	**Evansville**	**126.28**	**58**	P	**PKPdf**	**05 28 32.7**	**-0.7**
	baz=245						
T60A	**Surry**	**126.32**	**70**	PFAKE		05 28 40.0	+5.8
T60A				LR	LR		
	comp=Z,18μm,21.0s						
T60A	**Surry**	**126.32**	**70**	P	**PKPdf**	**05 28 31.2**	**-2.5**
	baz=242						
M54A	**Oil Creek Stat**	**126.32**	**64**	*e*PKPdf	**PKPdf**	**05 28 33.3**	**-0.3**
M54A				LR	LR		
	comp=Z,29μm,22.0s						
M54A	**Oil Creek Stat**	**126.32**	**64**	P	**PKiKP**	**05 28 34.1**	**+0.1**
	baz=243						
BRCO	**Bruce Peninsul**	**126.35**	**60**	P	**PKiKP**	**05 28 34.0**	**0.0**
	baz=244						
CBN	**Corbin Frederi**	**126.37**	**68**	PFAKE		05 28 40.0	+5.8
CBN				LR	LR		
	comp=Z,11μm,20.0s						
CBN	**Corbin Frederi**	**126.37**	**68**	P	**PKPdf**	**05 28 33.7**	**-0.1**
	baz=242						
ERPA	**Erie**	**126.37**	**63**	*e*PKPdf	**PKPdf**	**05 28 33.5**	**-0.2**
ERPA				LR	LR		
	comp=Z,28μm,21.0s						
ERPA	**Erie**	**126.37**	**63**	P	**PKPdf**	**05 28 33.8**	**+0.1**
	baz=244						
I51A	**Listowel**	**126.43**	**61**	P	**PKPdf**	**05 28 33.6**	**-0.2**
	baz=244						
N55A	**Marion Center**	**126.45**	**65**	*e*PKPdf	**PKPdf**	**05 28 32.7**	**-1.3**
N55A				LR	LR		
	comp=Z,18μm,22.0s						
N55A	**Marion Center**	**126.45**	**65**	P	**PKPdf**	**05 28 33.9**	**-0.1**
	baz=243						
D47A	**Chapleau**	**126.49**	**56**	P	**PKPdf**	**05 28 33.7**	**-0.1**
	baz=245						
Q58A	**Fox Den Farm,**	**126.50**	**67**	P	**PKPdf**	**05 28 33.5**	**-0.5**
	baz=242						
O56A	**Blue Knob Stat**	**126.50**	**65**	*e*PKPdf	**PKPdf**	**05 28 33.1**	**-1.0**
O56A				LR	LR		
	comp=Z,14μm,18.0s						
O56A	**Blue Knob Stat**	**126.50**	**65**	P	**PKPdf**	**05 28 33.4**	**-0.6**
	baz=243,SNR=6.3						
P57A	**Homestead Farm**	**126.52**	**67**	P	**PKiKP**	**05 28 34.5**	**0.0**
	baz=243						
J52A	**Paris**	**126.55**	**61**	P	**PKPdf**	**05 28 33.8**	**-0.2**
	baz=244						
R59A	**King George, V**	**126.55**	**68**	P	**PKPdf**	**05 28 33.6**	**-0.5**
	baz=242						
MBAR	**Mbarara**	**126.59**	**228**	*e*PKPdf	**PKPdf**	**05 28 34.5**	**-0.8**
MBAR				LR	LR		
	comp=Z,42μm,20.0s						
MBAR	**Mbarara**	**126.59**	**228**	*e*PKIKP	**PKPdf**	**05 28 34.5**	**-0.8**
MBAR				MLR	MLR		
	comp=Z,42μm,20.0s						
F49A	**Sandfield**	**126.61**	**58**	P	**PKPdf**	**05 28 34.2**	**+0.2**
	baz=245						
S60A	**Water View**	**126.64**	**69**	P	**PKPdf**	**05 28 33.9**	**-0.5**
	baz=242						
BMRO	**Meriville Lake**	**126.65**	**60**	P	**PKPdf**	**05 28 33.8**	**-0.3**
	baz=245						
OTUK	**Ortayu**	**126.66**	**305**	PKIKP	**PKPdf**	**05 28 32.3**	**-1.8**
OTUK				pmax	pmax		
	comp=Z,32nm,1.2s						
ANWB	**Willy Bob**	**126.71**	**99**	PFAKE		05 28 50.0	+15
ANWB				LR	LR		
	comp=Z,8μm,22.0s						
TOBO	**Tobermory, Bru**	**126.72**	**59**	P	**PKPdf**	**05 28 33.5**	**-0.7**
	baz=245						
ASHO	**Ashiyiah**	**126.74**	**272**	PKiKP	**PKiKP**	**05 28 42.6**	**+7.1**
HATD	**Hatta, Dubai**	**126.77**	**272**	PKiKP	**PKiKP**	**05 28 41.8**	**+6.3**
UOSS	**Minazif**	**126.78**	**272**	PFAKE		05 28 50.0	+14
UOSS				LR	LR		
	comp=Z,8μm,18.0s						
UOSS	**Minazif**	**126.78**	**272**	PKiKP	**PKiKP**	**05 28 39.9**	**+4.4**
E48A	**Lockeyer**	**126.84**	**57**	P	**PKiKP**	**05 28 35.3**	**+0.4**
	baz=245						
L54A	**Sinclairville**	**126.87**	**63**	P	**PKPdf**	**05 28 34.7**	**0.0**
	baz=244						
TYNO	**Tyneside**	**126.88**	**62**	P	**PKiKP**	**05 28 35.3**	**+0.2**
	baz=244						
M55A	**Ridgway**	**126.91**	**64**	P	**PKiKP**	**05 28 35.1**	**-0.2**
	baz=244,SNR=8.9						
R60A	**Leonardtown, M**	**126.95**	**69**	P	**PKPdf**	**05 28 34.8**	**-0.1**
	baz=242						
ACTO	**Acton**	**126.98**	**61**	P	**PKiKP**	**05 28 35.4**	**+0.1**
	baz=244						
N56A	**West Decatur**	**126.98**	**65**	P	**PKPdf**	**05 28 34.0**	**-0.9**
	baz=243,SNR=8.0						
P58A	**Pank, Wackersv**	**127.02**	**67**	P	**PKiKP**	**05 28 35.6**	**+0.1**
	baz=243						
I52A	**Shelburne**	**127.10**	**61**	P	**PKiKP**	**05 28 36.6**	**+1.0**
	baz=245						
O57A	**Amberson**	**127.11**	**66**	P	**PKiKP**	**05 28 35.6**	**-0.1**
	baz=243						
FAQ	**Al Faqa, Dubai**	**127.12**	**272**	PKiKP	**PKiKP**	**05 28 41.7**	**+5.5**
SSPA	**Standing Stone**	**127.13**	**65**	*e*PKPdf	**PKPdf**	**05 28 34.7**	**-0.5**
SSPA				LR	LR		
	comp=Z,18μm,18.0s						
SSPA	**Standing Stone**	**127.13**	**65**	P	**PKPdf**	**05 28 33.8**	**-1.4**
	baz=243						
BRZS	**Berezniki**	**127.15**	**308**	*e*PKIKP	**PKPdf**	**05 28 32.5**	**-2.4**
BRZS				*e*		05 30 33.8	
BRZS	**Berezniki**	**127.15**	**308**	*e*PKP	**PKPdf**	**05 28 32.6**	**-2.4**
BRZS				*e*PP	**PP**	**05 30 33.9**	**-0.8**
BRZS				*e*LR	LR	06 24 55.8	
	comp=Z,4μm,20.4s						
Q59A	**Harwood**	**127.18**	**68**	P	**PKPdf**	**05 28 34.6**	**-0.7**
	baz=243						
CLWO	**Collingwood**	**127.18**	**60**	P	**PKPdf**	**05 28 35.3**	**+0.1**
	baz=245						
ASUD	**Al Ashush, Dub**	**127.25**	**271**	PKiKP	**PKiKP**	**05 28 44.2**	**+7.7**
SDMD	**Soldier's Deli**	**127.30**	**67**	*e*PKPdf	**PKiKP**	**05 28 35.9**	**-0.2**
SDMD				LR	LR		
	comp=Z,8μm,20.0s						
M56A	**Emporium**	**127.31**	**64**	P	**PKPdf**	**05 28 34.6**	**-1.0**
	baz=244,SNR=12						
S61A	**Accomac**	**127.32**	**70**	PFAKE		05 28 50.0	+14
S61A				LR	LR		
	comp=Z,12μm,20.0s						
S61A	**Accomac**	**127.32**	**70**	P	**PKPdf**	**05 28 35.5**	**-0.1**
	baz=242						
I53A	**Kortright Cn E**	**127.38**	**61**	P	**PKPdf**	**05 28 35.2**	**-0.3**
	baz=245						
N57A	**Milroy**	**127.41**	**65**	P	**PKPdf**	**05 28 34.3**	**-1.4**
	baz=244,SNR=9.3						
L55A	**Hinsdale**	**127.44**	**63**	P	**PKiKP**	**05 28 36.7**	**+0.4**
	baz=244						
TORO	**Toronto--Lesli**	**127.45**	**61**	P	**PKPdf**	**05 28 35.8**	**+0.1**
	baz=245						
K54A	**Basiliko Farm,**	**127.45**	**63**	P	**PKPdf**	**05 28 35.8**	**0.0**
	baz=244						
H52A	**Wyevale**	**127.53**	**60**	P	**PKPdf**	**05 28 35.9**	**+0.1**
	baz=245						
O58A	**Lewisberry**	**127.56**	**66**	P	**PKiKP**	**05 28 36.5**	**-0.1**
	baz=243						
KLBO	**Killbear Provi**	**127.61**	**59**	P	**PKPdf**	**05 28 35.2**	**-0.7**
	baz=246						
D49A	**Beulah Townshi**	**127.67**	**56**	P	**PKPdf**	**05 28 35.8**	**-0.2**
	baz=246						
P59A	**Jarrettsville**	**127.67**	**67**	P	**PKiKP**	**05 28 36.8**	**0.0**
	baz=243						
E50A	**Wahnapitae**	**127.71**	**58**	P	**PKPdf**	**05 28 35.9**	**-0.2**
	baz=246						
PAGS	**Pennsylvania G**	**127.75**	**66**	*e*PKPdf	**PKPdf**	**05 28 35.8**	**-0.6**
PAGS				LR	LR		
	comp=Z,13μm,19.0s						
J54A	**Appleton**	**127.77**	**62**	PFAKE		05 28 50.0	+13
J54A				LR	LR		
	comp=Z,38μm,19.0s						
J54A	**Appleton**	**127.77**	**62**	P	**PKiKP**	**05 28 36.7**	**-0.2**
	baz=245						
PKRO	**Pickering**	**127.78**	**61**	P	**PKPdf**	**05 28 36.0**	**-0.3**
	baz=245						
Q60A	**Greensboro**	**127.80**	**68**	P	**PKPdf**	**05 28 36.1**	**-0.4**
	baz=243						
MEDO	**Medina**	**127.85**	**62**	PFAKE		05 28 50.0	+13
MEDO				LR	LR		
	comp=Z,36μm,19.0s						
MEDO	**Medina**	**127.85**	**62**	P	**PKiKP**	**05 28 37.2**	**+0.1**
	baz=245						
MVL	**Millersville**	**127.90**	**67**	*e*PKPdf	**PKPdf**	**05 28 36.5**	**-0.2**
MVL				LR	LR		
	comp=Z,15μm,21.0s						
K55A	**Perry**	**127.92**	**63**	P	**PKiKP**	**05 28 37.6**	**+0.4**
	baz=245						
DRWO	**Darlington Wes**	**127.96**	**61**	P	**PKiKP**	**05 28 37.4**	**+0.2**
	baz=245						
N58A	**Sunbury**	**128.02**	**66**	P	**PKiKP**	**05 28 37.3**	**-0.1**
	baz=244						
MMNY	**Mt. Morris Dam**	**128.03**	**63**	PFAKE		05 28 50.0	+13
MMNY				LR	LR		
	comp=Z,30μm,21.0s						
F51A	**Arnstein**	**128.04**	**59**	P	**PKiKP**	**05 28 37.4**	**+0.1**
	baz=246						
Q61A	**Milford**	**128.11**	**68**	P	**PKPdf**	**05 28 37.3**	**+0.2**
	baz=243						
O59A	**Robesonia**	**128.15**	**66**	P	**PKPdf**	**05 28 36.6**	**-0.5**
	baz=244						
BUKO	**Buck Lake**	**128.17**	**59**	P	**PKPdf**	**05 28 36.7**	**-0.3**
	baz=246						
ATD	**Arta Tunnel**	**128.18**	**249**	PFAKE		05 28 50.0	+11
ATD				LR	LR		
	comp=Z,10μm,21.0s						
ATD	**Arta Tunnel**	**128.18**	**249**	*e*P	**PKiKP**	**05 28 40.8**	**+2.1**

ATD	Arta Tunnel	128.18	249	eP	PKiKP	05 28 40.8	+2.1
ATD				eS	SP	05 40 38.3	-8.8
WLVO	Wesleyville	128.20	61	P	PKiKP	05 28 37.7	0.0
	baz=246						
P60A	Greenville	128.31	67	P	PKPdf	05 28 36.9	-0.5
	baz=244						
J55A	Hilton	128.31	62	PFAKE		05 28 50.0	+12
J55A				LR	LR		
	comp=Z,34µm,19.0s						
J55A	Hilton	128.31	62	P	PKiKP	05 28 37.9	0.0
	baz=245						
F52A	Sundridge	128.36	59	P	PKiKP	05 28 38.0	0.0
	baz=246						
M58A	Price's Panora	128.42	65	P	PKPdf	05 28 37.2	-0.5
	baz=244						
PSUB	Penn St. - Bra	128.49	67	PFAKE		05 28 50.0	+12
PSUB				LR	LR		
	comp=Z,14µm,19.0s						
G53A	Haliburton	128.54	60	P	PKPdf	05 28 37.3	-0.5
	baz=246						
E51A	G1948 Merrick	128.55	58	P	PKPdf	05 28 37.9	+0.2
	baz=247						
O60A	Telford	128.69	67	P	PKiKP	05 28 38.7	-0.1
	baz=244						
N59A	State Game Lan	128.70	66	PFAKE		05 28 50.0	+11
N59A				LR	LR		
	comp=Z,15µm,18.0s						
N59A	State Game Lan	128.70	66	P	PKiKP	05 28 39.0	+0.2
	baz=244						
I55A	Frankford	128.79	61	P	PKiKP	05 28 38.6	-0.2
	baz=246						
P61A	Hammonton	128.83	68	P	PKPdf	05 28 37.9	-0.5
	baz=244						
LUPA	Lehigh Univers	128.83	66	PFAKE		05 28 50.0	+11
LUPA				LR	LR		
	comp=Z,1µm,19.0s						
ANKE	Ethiopia-Afar	128.95	244	eP	PKPdf	05 28 39.5	-0.5
ANKE	Ethiopia-Afar	128.95	244	eP	PKPdf	05 28 39.5	-0.5
BANO	Bancroft	128.96	60	P	PKPdf	05 28 38.3	-0.2
	baz=246						
DELO	Deloro Mine	128.96	61	PFAKE		05 28 50.0	+11
DELO				LR	LR		
	comp=Z,29µm,18.0s						
DELO	Deloro Mine	128.96	61	P	PKPdf	05 28 38.3	-0.2
	baz=246						
KSPA	Keystone Colle	128.97	65	PFAKE		05 28 50.0	+11
KSPA				LR	LR		
	comp=Z,20µm,22.0s						
E52A	Mattawa	128.98	59	P	PKPdf	05 28 38.2	-0.3
	baz=247						
BINY	Binghamton	129.09	64	ePKPdf	PKPdf	05 28 38.2	-0.7
BINY				LR	LR		
	comp=Z,28µm,21.0s						
BINY	Binghamton	129.09	64	P	PKPdf	05 28 38.9	0.0
	baz=245						
L58A	Harry Jones Me	129.12	65	P	PKPdf	05 28 37.5	-1.4
	baz=245						
PECO	Prince Edward	129.13	62	PFAKE		05 28 50.0	+10
PECO				LR	LR		
	comp=Z,35µm,19.0s						
PECO	Prince Edward	129.13	62	P	PKiKP	05 28 39.5	-0.1
	baz=246						
N60A	Cedar Hill Far	129.14	66	P	PKPdf	05 28 38.9	0.0
	baz=245						
FURI	Furi	129.15	243	PFAKE		05 28 50.0	+9.0
FURI				LR	LR		
	comp=Z,18µm,20.0s						
FURI	Furi	129.15	243	eP	PKiKP	05 28 43.1	+2.1
FURI	Furi	129.15	243	eP	PKiKP	05 28 43.1	+2.1
FURI				eS	Sdif	05 39 00.8	+5.9
O61A	Allentown	129.18	67	P	PKiKP	05 28 39.5	-0.3
	baz=244						
AAE	Adis Abeba	129.19	243	eP	PKiKP	05 28 43.1	+2.1
AAE				eS	Sdif	05 39 13.3	+18
AAE	Adis Abeba	129.19	243	eP	PKiKP	05 28 43.1	+2.1
AAE				eS	Sdif	05 39 13.3	+18
M59A	Waymart	129.19	65	P	PKiKP	05 28 39.6	-0.3
	baz=245						
ALGO	Algonquin Park	129.24	59	P	PKPdf	05 28 38.9	-0.1
	baz=247						
H55A	Tweed	129.25	61	P	PKiKP	05 28 40.1	+0.3
	baz=246						
D52A	ZEK Kipawa Sen	129.40	58	P	PKiKP	05 28 40.0	-0.1
	baz=248						
PLVO	Plevna	129.52	61	P	PKiKP	05 28 40.2	-0.1
	baz=247						
E53A	Dumoine, Ponti	129.65	59	P	PKiKP	05 28 40.5	-0.1
	baz=248						
PEMO	Pembroke	129.65	60	P	PKPdf	05 28 39.6	-0.2
	baz=247						
BRVK	Borovoye	129.66	310	ePKPdf	PKPdf	05 28 36.6	-3.0
BRVK				LR	LR		
	comp=Z,7µm,19.0s						
BRVK	Borovoye	129.66	310	c iPKIKP	PKPdf	05 28 37.9	-1.7
BRVK				MLR	MLR		
	comp=Z,10µm,22.0s						
G55A	Calabogie	129.83	60	P	PKiKP	05 28 41.8	+0.9
	baz=247						
H56A	Elgin	129.88	61	P	PKPdf	05 28 39.9	-0.3
	baz=247						
CPNY	Central Park	129.89	67	PFAKE		05 28 50.0	+8.8
CPNY				LR	LR		
	comp=Z,14µm,19.0s						
RES	Resolute Bay	129.89	20	PKP	PKiKP	05 28 40.7	+0.5
	comp=Z,13nm,0.9s,baz=230,slow=3.0,SNR=4.9						
RES	Resolute Bay	129.89	20	ePKPdf	PKPdf	05 28 38.3	-1.1
RES				LR	LR		
	comp=Z,13µm,20.0s						
RES	Resolute Bay	129.89	20	ePKIKP	PKPdf	05 28 38.3	-1.1
RES				MLR	MLR		
	comp=Z,13µm,20.0s						
D53A	Lac Vacive, Po	129.89	58	ePKPdf	PKPdf	05 28 38.7	-1.5
D53A				LR	LR		
	comp=Z,17µm,18.0s						
D53A	Lac Vacive, Po	129.89	58	P	PKPdf	05 28 40.1	-0.1
	baz=248						
E54A	Lac Daplat, Po	129.98	59	P	PKiKP	05 28 41.2	0.0
	baz=248						
ASCN	Ascension	129.98	169	PFAKE		05 28 50.0	+7.7
ASCN				LR	LR		
	comp=Z,50µm,18.0s						
PAL	Palisades	130.01	67	PFAKE		05 28 50.0	+8.6
PAL				LR	LR		
	comp=Z,14µm,20.0s						
PAL	Palisades	130.01	67	P	PKiKP	05 28 42.1	+0.6
	baz=245						
DESE	Dese	130.11	246	eP	PKiKP	05 28 48.7	+5.8
DESE	Dese	130.11	246	eP	PKPdf	05 28 29.7	-12
M61A	Granite Spring	130.24	66	P	PKiKP	05 28 42.5	+0.6
	baz=246						
F55A	Otter Lake	130.29	60	P	PKiKP	05 28 42.6	+0.8
	baz=248						
VLDQ	Val d'Or	130.42	57	ePKPdf	PKPdf	05 28 39.1	-2.1
VLDQ				LR	LR		
	comp=Z,23µm,19.0s						
D54A	Lac Fusel, La	130.58	58	P	PKiKP	05 28 42.2	-0.2
	baz=249						
KSCT	Kent School, K	130.60	66	PFAKE		05 28 50.0	+7.4
KSCT				LR	LR		
	comp=Z,15µm,22.0s						
ORIO	Orleans, Innes	130.70	61	P	PKPdf	05 28 41.5	-0.3
	baz=248						
YLE	Yale	130.81	67	PFAKE		05 28 50.0	+7.0
YLE				LR	LR		
	comp=Z,17µm,18.0s						
TRY	Troy	130.88	65	PFAKE		05 28 50.0	+6.9
TRY				LR	LR		
	comp=Z,31µm,22.0s						
MATQ	Matagami	130.88	55	P	PKiKP	05 28 42.8	-0.1
	baz=250						
NCB	Newcomb	130.99	63	PFAKE		05 28 50.0	+6.6
NCB				LR	LR		
	comp=Z,22µm,21.0s						
LONY	Lake Ozonia	130.99	62	PFAKE		05 28 50.0	+6.7
LONY				LR	LR		
	comp=Z,29µm,19.0s						
LONY	Lake Ozonia	130.99	62	P	PKiKP	05 28 43.0	-0.4
	baz=248						
LSQQ	Lebel-sur-Quev	131.05	56	P	PKiKP	05 28 43.5	+0.2
	baz=250						
QUA2	Belchertown	131.59	66	PFAKE		05 28 50.0	+5.4
QUA2				LR	LR		
	comp=Z,19µm,22.0s						
FRNY	Flat Rock	131.73	62	PFAKE		05 28 50.0	+5.2
FRNY				LR	LR		
	comp=Z,34µm,19.0s						
GEYT	Alibeck	131.87	288	PKP	PKPdf	05 28 44.4	+0.1
	comp=Z,5.8nm,0.8s,baz=194,slow=0.6,SNR=9.9						
GYA0B	ALIBECK ARRAY	131.87	288	PFAKE		05 29 00.0	+15
GYA0B				LR	LR		
	comp=Z,13µm,21.0s						
BRYW	Bryant College	132.01	66	PFAKE		05 29 00.0	+15
BRYW				LR	LR		
	comp=Z,16µm,18.0s						
VT1	Waterbury	132.10	63	PFAKE		05 29 00.0	+14
VT1				LR	LR		
	comp=Z,24µm,20.0s						
HNH	Hanover	132.19	64	PFAKE		05 29 00.0	+14
HNH				LR	LR		
	comp=Z,29µm,22.0s						
HRV	Adam Dziewonsk	132.22	66	PFAKE		05 29 00.0	+14
HRV				LR	LR		
	comp=Z,20µm,22.0s						
HRV	Adam Dziewonsk	132.22	66	P	PKiKP	05 28 46.2	+0.3
	baz=247						
WES	Weston	132.34	66	PFAKE		05 29 00.0	+14
WES				LR	LR		
	comp=Z,14µm,19.0s						
BCX	Boston College	132.42	66	PFAKE		05 29 00.0	+14
BCX				LR	LR		
	comp=Z,13µm,18.0s						
M65A	Busby, Falmout	132.49	67	P	PKiKP	05 28 46.1	-0.3
	baz=247						
FFD	Franklin Falls	132.52	64	PFAKE		05 29 00.0	+14
FFD				LR	LR		
	comp=Z,36µm,22.0s						
LBNH	Lisbon	132.62	63	PFAKE		05 29 00.0	+13
LBNH				LR	LR		
	comp=Z,24µm,20.0s						
LBNH	Lisbon	132.62	63	P	PKiKP	05 28 46.7	+0.1
	baz=249						
BBSR	BB Station	132.76	81	PFAKE		05 29 00.0	+13
BBSR				LR	LR		
	comp=Z,6µm,19.0s						
CHGQ	Chibougamau	132.93	55	P	PKPdf	05 28 46.1	+0.2
	baz=252						
RAYN	Ar Rayn	133.97	263	ePKPdf	PKPdf	05 28 47.0	-1.8
RAYN				LR	LR		
	comp=Z,12µm,19.0s						
RAYN	Ar Rayn	133.97	263	PKiKP	PKiKP	05 28 49.6	-0.5
RAYN	Ar Rayn	133.97	263	ePKIKP	PKPdf	05 28 47.0	-1.8
RAYN				MLR	MLR		
	comp=Z,12µm,19.0s						
WVL	Waterville	134.26	64	PFAKE		05 29 00.0	+10
WVL				LR	LR		
	comp=Z,26µm,20.0s						
AB31	Akbulak array	134.70	303	i PKHKP	PKPpre	05 28 37.7	
AB31				pmax	pmax		
	comp=Z,12nm,0.9s						
ABKAR	Akbulak array	134.70	303	ePKPdf	PKPdf	05 28 48.4	-0.8
PKME	Peaks-Kenny Pk	134.74	63	PFAKE		05 29 00.0	+9.2
PKME				LR	LR		
	comp=Z,32µm,19.0s						
PKME	Peaks-Kenny Pk	134.74	63	P	PKiKP	05 28 50.3	-0.5
	baz=251						
EMMW	East Machias	135.79	64	PFAKE		05 29 00.0	+7.0
EMMW				LR	LR		
	comp=Z,33µm,22.0s						
SVE	Sverdlovsk	135.98	314	⇓iPKIKP	PKPdf	05 28 51.0	-0.4
SVE				e		05 31 26.5	
SVE				ePPP	PPP	05 34 31.2	
SVE				e		05 54 30.3	
SVE				pmax	pmax		
	comp=Z,46nm,1.1s						
SVE				MLR	MLR		
	comp=Z,14µm,23.0s						
SVE				MLR	MLR		
	comp=E,12µm,23.0s						
PQI	Presque Isle	136.02	61	PFAKE		05 29 00.0	+6.6
PQI				LR	LR		
	comp=Z,31µm,18.0s						
AKTO	Aktyubinsk	136.21	304	PKHKP	PKPpre	05 28 42.5	
AKTO				pmax	pmax		
	comp=Z,26nm,1.0s						
TULEG	Thule	136.33	18	PFAKE		05 29 00.0	+6.8
TULEG				LR	LR		
	comp=Z,14µm,21.0s						
GGN	Saint George	136.33	64	PFAKE		05 29 00.0	+5.9
GGN				LR	LR		
	comp=Z,30µm,21.0s						
ARU	Arti	137.05	313	SKPbc	SKPbc	05 32 22.2	-3.4
	comp=Z,5.9nm,0.8s,baz=122,slow=5.7,SNR=4.5						
ARU	Arti	137.05	313	ePKPdf	PKPdf	05 28 53.5	+0.1
ARU				LR	LR		
	comp=Z,9µm,18.0s						
ARU	Arti	137.05	313	i PKIKP	PKPdf	05 28 52.8	-0.6
FRB	Frobisher Bay	138.17	36	PKhKP	PKPdf	05 28 50.5	-4.7
	comp=Z,9.2nm,0.6s,baz=259,slow=7.1,SNR=3.7						
FRB				SKPbc	SKPbc	05 32 29.7	+1.2
	comp=Z,32nm,1.0s,baz=82,slow=1.7,SNR=4.1						
HAL	Halifax	138.39	66	PFAKE		05 29 10.0	+12
HAL				LR	LR		
	comp=Z,22µm,22.0s						
SCHQ	Schefferville	138.52	50	PKhKP	PKPdf	05 28 52.1	-4.1
	comp=Z,5.7nm,0.8s,baz=223,slow=18,SNR=2.6						
SCHQ	Schefferville	138.52	50	ePKPdf	PKPdf	05 28 53.0	-3.1
AKT	Akhty	140.62	288	ePKIKP	PKPdf	05 28 59.5	-1.1
AKT				e		05 31 56.5	
AKT				pmax	pmax		
	comp=Z,39nm,1.0s						
MAK	Makhachkala	141.23	290	i P	Pdif	05 26 19.5	+0.1
MAK				e		05 28 58.3	
MAK				e		05 32 08.4	
MAK				ePPP	PPP	05 35 09.3	
MAK				e		05 36 10.5	
MAK				eSS	SS	05 50 27.7	-5.1
MAK				eSSS	SSS	05 55 51.1	
MAK				pmax	pmax		
	comp=Z,23nm,0.4s						
KBS	Kingsbay	142.01	355	PFAKE		05 29 10.0	+5.2
KBS				LR	LR		
	comp=Z,11µm,21.0s						
KBS	Kingsbay	142.01	355	ePKPdf	PKPdf	05 29 02.1	+0.2
KBS				eSS	SS	05 50 42.3	+2.6
KBS				IVMs_BB	IVMs_BB	06 22 55.6	
	comp=Z,5µm,21.8s						
SPA0	Spitsbergen Ar	142.33	353	ePKPdf	PKPdf	05 29 02.6	+0.1
SPA0	Spitsbergen Ar	142.33	353	ePP	PP	05 32 09.8	0.0
SPITS	Spitsbergen Ar	142.33	353	PKhKP	PKPdf	05 28 57.7	-4.7
	comp=Z,16nm,0.7s,baz=83,slow=6.8,SNR=20						
SPITS				SKPbc	SKPbc	05 32 37.8	-1.5
	comp=Z,16nm,0.9s,baz=68,slow=8.0,SNR=3.6						
GNI	Garni	142.34	285	ePKPdf	PKPdf	05 29 03.1	-0.6
GNI				LR	LR		
	comp=Z,9µm,19.0s						
GNI	Garni	142.34	285	i PKiKP	PKiKP	05 29 05.4	-1.4
	SNR=6.4						
GNI	Garni	142.34	285	⇑iPKIKP	PKPdf	05 28 59.7	-4.1
GNI				i		05 29 04.7	
GROC	Groznyy	142.50	290	ePKIKP	PKPdf	05 29 01.5	-2.2
GROC				e		05 32 13.9	
GROC				pmax	pmax		
	comp=Z,125nm,1.0s						
TBLG	Delisi	142.83	287	ePKPdf	PKPdf	05 29 00.7	-3.7
TBLG	Delisi	142.83	287	ePKIKP	PKPdf	05 29 00.7	-3.7
HSPB	Hornsund (broa	143.46	352	ePdif	Pdif	05 26 27.7	-0.9
HSPB				ePKPdf	PKiKP	05 29 13.7	+5.9
HSPB	Hornsund (broa	143.46	352	ePKIKP	PKiKP	05 29 13.7	+5.9
HSPB	Hornsund (broa	143.46	352	ePKPdf	PKPdf	05 29 04.1	-0.3
HSPB				eSS	SS	05 50 58.9	+2.5
AKH	Akhalkalaki	143.63	286	ePKPdf	PKPbc	05 29 03.2	-0.3
AKH				LR	LR		
	comp=Z,7µm,21.0s						
AKH	Akhalkalaki	143.63	286	⇑iP	PKPbc	05 29 03.8	+0.3
AKH	Akhalkalaki	143.63	286	ePKIKP	PKPbc	05 29 03.2	-0.3
AKH				MLR	MLR		
	comp=Z,7µm,21.0s						
PRGR	Permogore	143.70	321	ePKHKP	PKPab	05 28 59.4	-2.6
PRGR				pmax	pmax		
	comp=Z,98nm,0.9s						
ZEI	Tsey	143.73	289	i PKIKP	PKPbc	05 29 04.0	+0.2
ZEI				pmax	pmax		
	comp=Z,50nm,1.0s						
ILULI	Ilulissat	143.75	25	ePKPdf	PKPdf	05 29 05.5	+0.4
ILULI				LR	LR		
	comp=Z,17µm,20.0s						
ILULI	Ilulissat	143.75	25	i PKIKP	PKPab	05 29 02.2	+0.2
ILULI	Ilulissat	143.75	25	i P	PKPab	05 29 02.2	+0.2
NCK	Nalchik	144.13	290	⇓ePKIKP	PKPab	05 29 03.6	-0.7
SVAN	Silvan-Diyarba	144.25	280	P	PKPab	05 29 04.4	-0.5
DAG	Danmarks Havn	144.37	5	i P	PKPab	05 29 01.8	-2.4
MAZI	Mazidag	144.55	279	P	PKPab	05 29 05.3	-0.9
KBZ	Khabaz	144.68	290	PKP	PKPab	05 29 05.5	-0.7
	comp=Z,44nm,0.7s,baz=95,slow=2.6,SNR=35						
NEY	Neytrino	144.68	289	dePKIKP	PKPab	05 29 06.5	-0.1
NEY				i		05 29 10.2	
LIC	Lamto	144.68	181	ePKP1	PKPab	05 29 06.1	-1.0
	comp=Z,469nm,0.8s						
KIC	Kosan Boka	144.81	182	ePKP1	PKPab	05 29 06.8	-0.8
	comp=Z,451nm,0.8s						
SFJD	Kangerlussuaq	144.83	29	PKP	PKPab	05 29 05.9	-0.2
	comp=Z,66nm,0.9s,baz=198,slow=1.3						
SFJD	Kangerlussuaq	144.83	29	ePKPdf	PKPab	05 29 04.9	-1.2
SFJD				LR	LR		
	comp=Z,26µm,20.0s						
SFJD	Kangerlussuaq	144.83	29	ePKIKP	PKPab	05 29 04.9	-1.2
SFJD				MLR	MLR		
	comp=Z,26µm,20.0s						
SFJD	Kangerlussuaq	144.83	29	i P	PKPab	05 29 04.7	-1.4
	comp=Z,23µm,19.0s						
GOF	Gofitskoye	144.87	292	⇑iPKIKP	PKPab	05 29 05.7	-1.3
GOF				pmax	pmax		
	comp=Z,313nm,1.4s						
KIV	Kislovodsk	144.88	290	ePKPdf	PKPab	05 29 06.0	-1.2
KIV				LR	LR		
	comp=Z,7µm,19.0s						
KIV	Kislovodsk	144.88	290	⇑iP	PKPab	05 29 05.7	-1.5
KIV	Kislovodsk	144.88	290	i PKPdf	PKPab	05 29 07.1	0.0
	SNR=43						
KIV	Kislovodsk	144.88	290	ePKHKP	PKPab	05 29 01.0	-6.2
KIV				i		05 29 05.4	
KIV				e		05 32 21.0	
KIV				eSS	SS	05 51 08.2	-7.0
KIV				pmax	pmax		
	comp=Z,106nm,1.0s						
BNGB	Bingl	144.92	281	P	PKPab	05 29 06.1	-1.4
DYBB	Diyarbakir	144.96	279	P	PKPab	05 29 07.4	-0.2
BATM	Batumi	144.98	286	⇓iP	PKPbc	05 29 06.3	-1.2
BCA	Borcka	144.99	286	⇑iP	PKPbc	05 29 06.6	-0.9
ASF	Jabal al Asfar	145.00	268	PKP	PKPbc	05 29 07.0	-1.0
	comp=Z,39nm,0.8s,baz=66,slow=2.2						
ASF	Jabal al Asfar	145.00	268	PKIKP	PKPbc	05 29 07.0	-0.9
TIC	Toumodi	145.10	181	ePKP1	PKPbc	05 29 07.6	-1.0
DBIC	Dimbokro	145.12	181	PKPbc	PKPdf	05 29 09.1	-0.1
	comp=Z,133nm,0.8s,baz=174,slow=3.8,SNR=75						
DBIC	Dimbokro	145.12	181	ePKPbc	PKPdf	05 29 09.4	+0.2
BJO1	Bjornoya	145.21	349	ePKPbc	PKPbc	05 29 06.5	-0.6
BJO1				epPKPdf	pPKPdf	05 29 13.5	+0.5
EIL	Elat	145.22	263	PKP	PKPbc	05 29 07.8	-0.8
SUMG	Summit	145.23	17	ePKPbc	PKPbc	05 29 07.6	-0.2
SUMG				LR	LR		
	comp=Z,21µm,20.0s						
SUMG	Summit	145.23	17	ePKIKP	PKPbc	05 29 07.6	-0.2
SUMG				MLR	MLR		
	comp=Z,21µm,20.0s						
SUMG	Summit	145.23	17	i P	PKPbc	05 29 07.1	-0.8
	comp=Z,56µm,20.0s						
SVRC	Sivrice-ELAZID	145.72	280	P	PKPbc	05 29 10.3	+0.1
URFA	Urfa	145.75	278	P	PKPdf	05 29 09.8	+0.1
LVZ	Lovozero	146.04	334	ePKPdf	PKPdf	05 29 08.5	-0.7
LVZ				LR	LR		
	comp=Z,12µm,22.0s						
LVZ	Lovozero	146.04	334	⇓ePKP2	PKPdf	05 29 08.4	-0.7
KTUT	Trabzon	146.20	284	⇑iP	PKPdf	05 29 09.2	-1.0
RCY	Rachaya	146.40	270	eP	PKPbc	05 29 12.3	0.0
APA	Apatity	146.62	334	⇓iPKIKP	PKPdf	05 29 09.6	-0.5
APA				i		05 32 34.0	
APA				i		05 36 16.0	
APA				i PS		05 45 20.0	
APA				i SS	SS	05 51 27.0	-6.0
APA				pmax	pmax		
	comp=Z,23nm,1.0s						
BHL	Bhannes	146.71	270	eP	PKPbc	05 29 12.6	-0.5
GAZ	Gaziantep	146.85	277	P	PKPdf	05 29 10.7	-0.9
SOC	Sochi	146.89	289	c iPKIKP	PKPdf	05 29 09.1	-2.2
SOC				e		05 32 34.7	
SOC				ePPP	PPP	05 36 03.4	
SOC				eSSS	SSS	05 57 09.3	
SOC				pmax	pmax		
	comp=Z,51nm,0.8s						
DARE	Darende-Malaty	147.13	279	P	PKPdf	05 29 10.9	-1.1
KMRS	Kahramanmaras	147.20	277	P	PKPdf	05 29 13.2	+1.1
HAMF	Hammerfest	147.39	342	ePKPdf	PKPdf	05 29 11.0	-0.3
HAMF				IVmBBB		05 29 22.9	
	comp=Z,4µm,3.3s						
HAMF				ePP	PP	05 32 39.2	-0.8
HAMF				eSKSdf	SKSdf	05 36 19.0	+0.4
HAMF				eSS	SS	05 51 43.7	+2.3
ARCES	ARCESS Array B	147.74	340	PKPbc	PKPdf	05 29 12.6	+0.6
	comp=Z,42nm,0.7s,baz=58,slow=2.3,SNR=82						
ARCES				SKPbc	SKiKP	05 32 53.7	+1.6
	comp=Z,13nm,0.9s,baz=6.7,slow=3.1,SNR=5.9						
ARE0	ARCESS Array S	147.75	340	ePKPdf	PKPdf	05 29 10.8	-1.2
ARE0				ePKPbc	PKPbc	05 29 14.4	-0.4
ARE0				LR	LR		
	comp=Z,600nm,22.0s						
ARE0	ARCESS Array S	147.75	340	ePKPdf	PKPdf	05 29 10.5	-1.5
ARE0				ePP	PP	05 32 42.2	0.0
ARE0				eSKSdf	SKSdf	05 36 19.6	+0.4
ARE0				eSS	SS	05 51 47.5	+1.9
ARE0				IVMs_BB	IVMs_BB	06 26 19.6	
	comp=Z,3µm,24.4s						
CEYT	Ceyhan	147.88	276	P	PKPbc	05 29 16.1	-0.1
IVI	Ivigtut	147.88	38	ePKPdf	PKPdf	05 29 12.3	0.0
IVI				ePKPbc	PKPbc	05 29 15.3	-0.1
IVI				ePKPab	PKPab	05 29 18.0	+0.1
IVI				LR	LR		
	comp=Z,18µm,21.0s						
YURE	YUREGIR	147.90	275	P	PKPbc	05 29 17.1	+0.8
KRTS	Karatas	148.00	275	P	PKiKP	05 29 17.4	-0.9
VORD	Divnogorie	148.06	302	ePKP2	PKPdf	05 29 14.0	+1.0
VORD				pmax	pmax		
	comp=Z,50nm,0.7s						
VORR	Voronezh	148.11	304	ePKIKP	PKPdf	05 29 14.0	+1.0
VORR				pmax	pmax		
	comp=Z,500nm,2.0s						
VSR	Storozhevoye	148.14	303	ePKIKP	PKPdf	05 29 13.3	+0.2
VSR				pmax	pmax		
	comp=Z,110nm,1.5s						
VSR				MLR	MLR		
	comp=Z,7µm,20.0s						
LPSR	Galich'ya Gora	148.27	306	ePKP2	PKPbc	05 29 15.2	-1.5
LPSR				ePPP	PPP	05 36 06.6	
LPSR				pmax	pmax		
	comp=Z,160nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,9µm,23.0s						
PHNC	Paralimni	148.39	271	P	PKiKP	05 29 19.5	+0.3
BNN	Bunyan	148.44	279	P	PKPdf	05 29 15.9	+1.7
KARA	Karaisali	148.49	276	P	PKPbc	05 29 18.4	+0.6
EREN	Erenkoy	148.50	272	P	PKPab	05 29 21.5	+0.2
KTK1	Kautokeino	148.69	340	ePKPdf	PKPdf	05 29 13.5	0.0
KTK1				epPKPbc	pPKPbc	05 29 23.0	+0.1
ANN	Anapa	148.74	290	ePKHKP	PKPdf	05 29 11.3	-3.0
ANN				i		05 29 17.4	
ANN				e		05 32 46.8	
ANN				e		05 36 20.9	
ANN				eSS	SS	05 51 59.6	+1.0
ANN				pmax	pmax		
	comp=Z,590nm,2.4s						
MERS	Mersin	148.74	275	P	PKPbc	05 29 18.0	-0.5
MOS	Moscow	148.75	312	ePKIKP	PKPdf	05 29 14.2	+0.3
MOS				e		05 32 57.2	
MOS				pmax	pmax		
	comp=Z,238nm,1.4s						
MOS				pmax	pmax		
	comp=Z,2µm,3.2s						
KIZK	Mersin	148.88	274	P	PKiKP	05 29 20.3	+0.2
CSS	Mathiatis	148.90	270	P	PKPbc	05 29 18.9	0.0
CSS	Mathiatis	148.90	270	ePKPdf	PKPdf	05 29 14.7	-0.3
CSS				LR	LR		
	comp=Z,9µm,20.0s						
CSS	Mathiatis	148.90	270	P	PKPab	05 29 22.4	-0.6
CSS	Mathiatis	148.90	270	P	PKiKP	05 29 20.3	0.0
SILI	Silifke-Mersin	149.00	273	P	PKPbc	05 29 18.2	-0.9
IKL	Isikli	149.13	273	P	PKPab	05 29 23.0	-0.8
SZAC	Souni	149.15	270	P	PKiKP	05 29 20.3	-0.5
NRS	Narsarsuaq	149.16	37	PFAKE		05 29 30.0	+6.9
NRS				LR	LR		
	comp=Z,22µm,19.0s						
NRS	Narsarsuaq	149.16	37	ePKIKP	PKPbc	05 29 17.1	-1.6
NRS				MLR	MLR		
	comp=Z,15µm,24.0s						
NRS	Narsarsuaq	149.16	37	i P	PKPbc	05 29 17.1	-1.6

	comp=Z,15μm,24.0s						
SACV	Santiago Islan	149.17	144	ePKPdf	PKPdf	05 29 14.1	-1.8
SACV				LR	LR		
	comp=Z,14μm,20.0s						
KEBE	Keben-Mersin	149.19	273	P	PKiKP	05 29 21.3	+0.4
AKKU	Akkuyu-Mersin	149.20	273	P	PKPab	05 29 23.2	-0.9
TRO	Tromso	149.22	343	ePKPdf	PKPdf	05 29 14.6	+0.3
TRO				epPKPdf	pPKPdf	05 29 20.0	+0.1
TRO				eSS	SS	05 52 04.5	+2.6
TRO				IVMs_BB	IVMs_BB	06 27 57.0	
	comp=Z,2μm,28.3s						
LEF	Lefka	149.29	270	P	PKPdf	05 29 17.2	+1.7
LEF	Lefka	149.29	270	⇑iP	PKPdf	05 29 14.9	-0.6
TEVE	Tevekalti-Mers	149.39	273	P	PKPbc	05 29 20.3	+0.1
OBN	Obninsk	149.43	311	PKPbc	PKPbc	05 29 18.0	-1.5
	comp=Z,17nm,0.6s,baz=109,slow=4.9,SNR=10						
OBN	Obninsk	149.43	311	ePKPdf	PKPdf	05 29 14.4	-0.7
OBN				LR	LR		
	comp=Z,9μm,20.0s						
OBN	Obninsk	149.43	311	⇑iP	PKPdf	05 29 15.0	0.0
OBN	Obninsk	149.43	311	⇓ePKIKP	PKPdf	05 29 14.3	-0.7
OBN				e		05 32 50.4	
OBN				pmax	pmax		
	comp=Z,70nm,0.9s						
BERE	Bereket-Mersin	149.52	273	P	PKPab	05 29 24.2	-1.4
ALFC	Alefka	149.52	270	P	PKPdf	05 29 18.0	+2.0
TEKE	Tekeli-Mersin	149.53	272	P	PKPbc	05 29 19.6	-0.8
PPCY	Paphos	149.60	270	P	PKPab	05 29 24.1	-1.7
DIKM	Dikmen	149.65	284	⇑iP	PKPdf	05 29 14.5	-1.4
SCO	Scoresbysund	149.95	11	PFAKE		05 29 30.0	+3.9
SCO				LR	LR		
	comp=Z,12μm,20.0s						
SCO	Scoresbysund	149.95	11	ePKIKP	PKPdf	05 29 13.5	-2.0
SCO				MLR	MLR		
	comp=Z,11μm,20.0s						
SCO	Scoresbysund	149.95	11	i P	PKPdf	05 29 13.5	-2.0
	comp=Z,11μm,20.0s						
SULT	Sultanhani-AKS	149.95	276	P	PKPdf	05 29 18.3	+1.7
ANGG	Ammassalik, Gr	150.05	26	PFAKE		05 29 30.0	+3.4
ANGG				LR	LR		
	comp=Z,17μm,22.0s						
BRTR	Keskin Array B	150.33	279	PKPbc	PKPbc	05 29 21.4	-1.0
	comp=Z,12nm,0.7s,baz=145,slow=5.6,SNR=37						
BRTR				SKPbc		05 33 01.3	
	comp=Z,4.6nm,0.9s,baz=153,slow=1.6,SNR=3.8						
JMIC	Jan Mayen	150.59	2	PKPbc	PKiKP	05 29 23.6	+1.0
	comp=Z,100nm,0.8s,baz=274,slow=10.0,SNR=4.9						
JMIC	Jan Mayen	150.59	2	epPKPdf	pPKPdf	05 29 22.2	+0.1
JMIC				ePKPab	PKPab	05 29 28.6	-0.2
JMIC				eSKPdf	SKPdf	05 32 49.0	-0.2
BZK	Bozkurt	150.63	284	⇑iP	PKPdf	05 29 16.9	-0.5
KONT	Konya--Tatoy	150.73	275	P	PKPdf	05 29 15.5	-2.3
LADK	Ladik-KONYA	150.81	276	P	PKPdf	05 29 20.1	+2.1
TOC4	Torodi Ar. Sit	150.83	195	PFAKE		05 29 30.0	-1.2
TOC4				LR	LR		
	comp=Z,27μm,19.0s						
TOC3	Torodi Ar. Sit	150.84	195	PFAKE		05 29 30.0	-1.3
TOC3				LR	LR		
	comp=Z,26μm,18.0s						
TOC5	Torodi Ar. Sit	150.84	195	PFAKE		05 29 30.0	-1.3
TOC5				LR	LR		
	comp=Z,33μm,19.0s						
TOB3	Torodi Ar. Sit	150.85	195	PFAKE		05 29 30.0	-1.3
TOB3				LR	LR		
	comp=Z,27μm,19.0s						
TOB4	Torodi Ar. Sit	150.85	195	PFAKE		05 29 30.0	-1.3
TOB4				LR	LR		
	comp=Z,28μm,19.0s						
TOA3	Torodi Ar. Sit	150.85	195	PFAKE		05 29 30.0	-1.3
TOA3				LR	LR		
	comp=Z,26μm,19.0s						
TOA2	Torodi Ar. Sit	150.86	195	PFAKE		05 29 30.0	-1.3
TOA2				LR	LR		
	comp=Z,27μm,19.0s						
TOA0	Torodi Ar. Sit	150.86	195	ePKPdf	PKPdf	05 29 17.4	-1.2
TOA0				LR	LR		
	comp=Z,27μm,18.0s						
TORD	Torodi Ar. Bea	150.86	195	PKP	PKPdf	05 29 17.4	-1.2
	comp=Z,34nm,1.2s,baz=354,slow=3.1,SNR=47						
TORD				PKPbc	PKiKP	05 29 24.6	-0.2
	comp=Z,116nm,0.8s,baz=163,slow=1.5,SNR=84						
TORD				SKPbc		05 33 04.6	
	comp=Z,3.1nm,0.4s,baz=160,slow=4.6,SNR=8.9						
TOB2	Torodi Ar. Sit	150.86	195	PFAKE		05 29 30.0	-1.3
TOB2				LR	LR		
	comp=Z,27μm,19.0s						
TOC2	Torodi Ar. Sit	150.86	195	PFAKE		05 29 30.0	-1.3
TOC2				LR	LR		
	comp=Z,25μm,19.0s						
TOA1	Torodi Ar. Sit	150.86	195	PFAKE		05 29 30.0	-1.3
TOA1				LR	LR		
	comp=Z,27μm,18.0s						
TOB5	Torodi Ar. Sit	150.87	195	PFAKE		05 29 30.0	-1.4
TOB5				LR	LR		
	comp=Z,28μm,19.0s						
TOB1	Torodi Ar. Sit	150.87	195	PFAKE		05 29 30.0	-1.4
TOB1				LR	LR		
	comp=Z,200nm,18.0s						
TOC7	Torodi Ar. Sit	150.88	195	PFAKE		05 29 30.0	-1.4
TOC7				LR	LR		
	comp=Z,27μm,19.0s						
TOC1	Torodi Ar. Sit	150.88	195	PFAKE		05 29 30.0	-1.4
TOC1				LR	LR		
	comp=Z,30μm,18.0s						
ANTO	Ankara	151.00	279	ePKPdf	PKPdf	05 29 17.2	-1.0
ANTO				LR	LR		
	comp=Z,7μm,18.0s						
ANTO	Ankara	151.00	279	⇑iP	PKPdf	05 29 16.9	-1.3
ANTO	Ankara	151.00	279	ePKIKP	PKPdf	05 29 17.2	-1.0
ANTO				MLR	MLR		
	comp=Z,7μm,18.0s						
SIM	Simferopol'	151.09	290	i PKIKP	PKPdf	05 29 17.0	-1.0
SIM				e		05 33 09.6	
SIM				PPP	PPP	05 36 35.9	
SIM				SS	SS	05 52 28.4	+3.5
SIM				pmax	pmax		
	comp=Z,62nm,0.8s						
SIM				pmax	pmax		
	comp=Z,2μm,11.0s						
KIZT	Kizilcal	151.39	277	P	PKPdf	05 29 17.6	-1.3
STEI	Steigen	151.39	344	ePKPdf	PKPdf	05 29 17.2	-0.6
STEI				ePKPab	PKPab	05 29 31.9	-0.2
STEI				ePP	PP	05 33 03.2	0.0
STEI				eSS	SS	05 52 28.0	+2.0
PUL	Pulkovo	151.43	322	eP	PKPdf	05 29 15.4	-2.7
PUL	Pulkovo	151.43	322	⇓ePKIKP	PKPdf	05 29 20.7	+2.7
LOF	Lofoten	151.56	345	epPKPdf	pPKPdf	05 29 23.6	0.0
LOF				eSKPdf	SKPdf	05 32 50.3	-0.2
LOF				ePP	PP	05 33 04.3	+0.1
LOF				eSS	SS	05 52 29.9	+2.0
ANTB	Antalya	151.65	272	P	PKPdf	05 29 20.3	+1.2
BCK	Bucak	151.89	273	P	PKPdf	05 29 17.1	-2.5
KORT	Korkueli	151.91	272	P	PKPdf	05 29 17.1	-2.6
ISP	Isparta	152.06	274	P	PKPdf	05 29 16.9	-3.0
ISP	Isparta	152.06	274	PFAKE		05 29 30.0	+3.2
ISP				LR	LR		
	comp=Z,8μm,21.0s						
ISP	Isparta	152.06	274	P	PKPdf	05 29 16.9	-3.0
ISP	Isparta	152.06	274	⇓iP	PKPdf	05 29 18.5	-1.4
ISP	Isparta	152.06	274	⇓PKIKP	PKPdf	05 29 18.5	-1.4
ELL	Elmali	152.15	272	P	PKPdf	05 29 19.6	-0.5
KSL	Kastellorizon	152.17	270	P	PKPdf	05 29 21.3	+1.4
AKAS	Kas	152.19	270	P	PKPdf	05 29 20.9	+0.7
SHUT	Suhut-Afyon	152.28	276	P	PKPdf	05 29 19.2	-1.0
MDUB	Mudurnu	152.34	280	ePKPdf	PKPdf	05 29 19.3	-0.9
MDUB				LR	LR		
	comp=Z,23μm,20.0s						
FIA1	FINESS Array S	152.52	327	ePKPdf	PKPdf	05 29 18.5	-1.2
FIA1				ePKPab	PKPab	05 29 35.8	-1.2
FIA0	FINESS Array S	152.52	327	ePKPbc	PKPbc	05 29 24.4	-2.2
FIA0	FINESS Array S	152.52	327	ePKIKP	PKPbc	05 29 24.4	-2.2
FINES	FINESS Array B	152.52	327	PKPbc	PKPbc	05 29 24.4	-2.2
	comp=Z,22nm,0.7s,baz=148,slow=8.7,SNR=4.5						
FETY	Fethiye	152.73	271	P	PKPdf	05 29 18.6	-2.2
FETY	Fethiye	152.73	271	P	PKPdf	05 29 21.1	+0.3
MOR8	Moi Rana	153.03	342	epPKPdf	pPKPdf	05 29 25.7	-0.2
MOR8				ePKSdf	PKSdf	05 32 54.3	0.0
MOR8				ePP	PP	05 33 11.9	-0.7
MOR8				eSS	SS	05 52 44.0	-0.1
KONS	Konsvik	153.04	343	epPKPdf	pPKPdf	05 29 25.9	0.0
DALY	Dalyan (Mula)	153.11	271	P	PKPdf	05 29 20.7	-0.6
TURN	Turunc	153.17	271	P	PKPdf	05 29 24.2	+2.8
STOK	Stokkvaagen	153.21	343	ePKPdf	PKPdf	05 29 20.2	-0.3
STOK				epPKPbc	pPKPbc	05 29 34.1	+0.7
ARG	Arkhangelos	153.29	269	P	PKPdf	05 29 23.9	+2.3
YER	Yerkesik	153.50	271	P	PKPdf	05 29 22.4	+0.4
SILT	Sile	153.64	281	⇑iP	PKPdf	05 29 20.1	-1.8
VSU	Vasula	153.66	321	eP	PKPdf	05 29 19.9	-1.5
VSU				IAmb	IAmb	05 29 51.6	
	comp=Z,526nm,1.2s						
VSU				ePP	PP	05 33 11.1	-5.4
VSU	Vasula	153.66	321	d iPKIKP	PKPdf	05 29 23.7	+2.3
KULA	Kula-Manisa	153.67	275	P	PKPdf	05 29 21.1	-1.1
KULA	Kula-Manisa	153.67	275	P	PKPdf	05 29 21.4	-0.8
YLV	Yalova	153.71	279	⇑iP	PKPdf	05 29 21.3	-0.9
YLV	Yalova	153.71	279	⇑PKIKP	PKPdf	05 29 21.3	-0.9
KARP	Karpathos	153.75	267	P	PKPdf	05 29 25.1	+2.8
KARP	Karpathos	153.75	267	PFAKE		05 29 30.0	-0.2
KARP				LR	LR		
	comp=Z,13μm,20.0s						
DAT	Datca	153.89	270	P	PKPdf	05 29 21.1	-1.5
ISK	Istanbul-Kandi	154.05	280	P	PKPdf	05 29 24.0	+1.5
AYDB	Zeytinkoy-Aydi	154.07	273	P	PKPdf	05 29 21.3	-1.5
KLYT	Kilyos	154.11	281	⇑iP	PKPdf	05 29 21.7	-0.9
BODT	Bodrum	154.21	271	P	PKPdf	05 29 21.9	-1.0
AKASG	Malin Array Be	154.44	303	PKP	PKPdf	05 29 20.9	-1.8
	comp=Z,2.6nm,0.9s,baz=68,slow=1.9,SNR=6.5						
AKASG				PKPbc	PKPbc	05 29 30.8	-0.3
	comp=Z,11nm,0.6s,baz=60,slow=2.7,SNR=22						
MICGM	Minsk	154.47	312	⇓ePKP1	PKPdf	05 29 25.0	+2.3
MICGM				PKPM		05 29 30.0	
	comp=Z,2.6nm,8.0s						
MICGM				ePKP2	PKPab	05 29 48.0	+2.4
MICGM				ePKS	PKSdf	05 32 50.0	-6.6
MICGM				ePP	PP	05 33 24.0	+2.6
MICGM				ePPP	PPP	05 37 06.0	
MICGM				eSKKS		05 40 08.0	
MICGM				eSKSP		05 43 28.0	
MICGM				eLQ	LQ	06 18 56.0	
MICGM				eLR	LR	06 28 32.0	
MICGM				LRM	MLR	06 44 00.0	
	comp=Z,9.0nm,20.0s						
MNK	Minsk	154.47	312	⇓ePKIKP	PKPdf	05 29 25.0	+2.3
MNK				e		05 33 24.0	
MNK				pmax	pmax		
	comp=Z,3μm,8.0s						
GCAM	G?zelcaml?	154.48	272	P	PKPdf	05 29 21.3	-1.9
BALB	Balikesir	154.58	277	PFAKE		05 29 30.0	-1.8
BALB				LR	LR		
	comp=Z,23μm,21.0s						
CTYL	Yalikoy Yolu	154.71	281	⇓iP	PKPdf	05 29 21.8	-1.6
SMG	Samos	154.78	272	P	PKPdf	05 29 23.3	-0.4
BLCB	Balcova	154.84	273	P	PKPdf	05 29 20.7	-3.0
LAST	Lasithi	154.85	265	P	PKPdf	05 29 24.6	+0.6
KIS	Kishinev	154.92	294	⇓iPKIKP	PKPdf	05 29 20.0	-3.5
KIS				i PP	PP	05 33 24.0	-0.3
KIS				pmax	pmax		
	comp=Z,1μm,20.0s						
MILM	Milestii Mici	154.93	294	⇑iP	PKPdf	05 29 23.1	-0.4
NACGM	Naroch	154.96	313	ePKP	PKPab	05 29 43.0	-4.6
NACGM				ePP	PP	05 33 38.0	+14
NACGM				ePPP	PPP	05 37 12.0	
NACGM				eSKKS		05 40 04.0	
NACGM				eSKSP		05 43 44.0	
NACGM				eSS	SS	05 53 05.0	-1.3
NACGM				eSSS	SSS	05 57 45.0	
NACGM				eLQ	LQ	06 24 26.0	
NACGM				eLR	LR	06 34 20.0	
NACGM				LRM	MLR	06 42 08.0	
	comp=Z,20nm,22.0s						
IZAR	Zarasai	154.97	315	eP	PKPdf	05 29 23.0	-0.3
IZAR				IAmb	IAmb	05 29 56.2	
	comp=Z,30nm,0.9s						
NSS	Namsos	154.97	342	ePKPdf	PKPdf	05 29 22.8	-0.2
NSS				ePKPab	PKPab	05 29 47.3	0.0
NSS				ePP	PP	05 33 23.8	+0.3
NSS				eSS	SS	05 53 07.5	+2.2
TIRR	Tirgusor	155.07	288	PFAKE		05 29 30.0	+6.2
TIRR				LR	LR		
	comp=Z,16μm,20.0s						
TIRR	Tirgusor	155.07	288	⇑iP	PKPdf	05 29 22.3	-1.5
TIRR	Tirgusor	155.07	288	⇑PKIKP	PKPdf	05 29 22.3	-1.5
ISAL	Salakas	155.09	315	eP	PKPdf	05 29 20.3	-3.2
ISAL				IAmb	IAmb	05 29 59.4	
	comp=Z,14nm,0.8s						
IIGN	Ignalina	155.12	314	eP	PKPdf	05 29 23.0	-0.5
IIGN				IAmb	IAmb	05 29 59.6	
	comp=Z,18nm,0.8s						
BORG	Borgarnes	155.21	16	PKPbc	PKPbc	05 29 34.1	
	comp=Z,25nm,1.0s,baz=108,slow=3.2,SNR=3.2						
BORG	Borgarnes	155.21	16	ePKPbc	PKPbc	05 29 34.1	
BORG				LR	LR		
	comp=Z,14μm,22.0s						
SIVA	Sivas	155.29	264	P	PKPdf	05 29 23.9	-0.5
PHSR	Pinarhisar	155.30	281	⇓iP	PKPdf	05 29 22.9	-1.4
CFR	Carcaliu	155.33	290	⇑iP	PKPdf	05 29 22.6	-1.5
CFR	Carcaliu	155.33	290	⇑PKIKP	PKPdf	05 29 22.6	-1.5
IDI	Anoyia	155.34	265	P	PKPdf	05 29 23.8	-0.8
IDI	Anoyia	155.34	265	PKP	PKPdf	05 29 23.8	-0.8
	comp=Z,11nm,1.0s,baz=44,slow=19,SNR=3.0						
IDI				PKPbc	PKPbc	05 29 33.7	
	comp=Z,18nm,0.8s,baz=178,slow=3.6,SNR=5.5						
IDI				PKPab	PKPab	05 29 49.5	-0.5
	comp=Z,95nm,1.1s,baz=110,slow=3.5,SNR=8.4						
APE	Apeiranthos	155.54	269	P	PKPdf	05 29 25.3	+0.5
CHOS	Chios island	155.58	273	P	PKPdf	05 29 27.5	+2.7
CHOS	Chios island	155.58	273	P	PKPdf	05 29 27.5	+2.7
IOSP	Ios island	155.60	269	P	PKPdf	05 29 25.9	+1.1
PRK	Paraskevi	155.67	275	P	PKPdf	05 29 26.1	+1.3
GVD	Gavdhos	155.76	263	P	PKPdf	05 29 23.6	-1.5
GVD	Gavdhos	155.76	263	P	PKPdf	05 29 27.5	+2.4
EZN	Ezine	155.78	276	P	PKPdf	05 29 22.9	-2.0
EZN	Ezine	155.78	276	⇑iP	PKPdf	05 29 23.5	-1.4
EZN	Ezine	155.78	276	⇑PKIKP	PKPdf	05 29 23.5	-1.4
EDRB	Edirne	155.92	281	P	PKPdf	05 29 23.3	-1.8
SIGR	SIGRI	155.97	275	P	PKPdf	05 29 25.3	+0.1
CHAN	Chania	156.07	265	P	PKPdf	05 29 28.7	+3.3
IMMV	Iera Moni Meta	156.09	265	P	PKPdf	05 29 28.0	+2.5
IMMV	Iera Moni Meta	156.09	265	P	PKPdf	05 29 23.9	-1.6
SLIT	Slitere, Latvi	156.14	321	eP	PKPdf	05 29 21.8	-2.9
SLIT				IAmb	IAmb	05 30 00.3	
	comp=Z,658nm,1.4s						
SLIT				ePP	PP	05 33 26.7	-3.6
ALN	Alexandroupoli	156.24	279	PFAKE		05 29 40.0	-14
ALN				LR	LR		
	comp=Z,6μm,20.0s						
ALN	Alexandroupoli	156.24	279	P	PKPdf	05 29 25.8	+0.3
VRI	Vrincioaia	156.35	291	⇑iP	PKPdf	05 29 24.4	-1.1
VRI	Vrincioaia	156.35	291	⇑PKIKP	PKPdf	05 29 24.4	-1.1
SERI	Serifos	156.36	269	P	PKPdf	05 29 25.8	0.0
PLOR	Plostina	156.41	291	⇓iP	PKPdf	05 29 24.7	-0.9
PLOR	Plostina	156.41	291	⇓PKIKP	PKPdf	05 29 24.7	-0.9
TBLU	Trondheim	156.46	342	ePKPdf	PKPdf	05 29 24.6	-0.5
TBLU				eSKPdf	SKPdf	05 32 56.3	-0.6
TBLU				eSS	SS	05 53 21.3	-0.1
SMTH	Samothraki Isl	156.53	277	P	PKPdf	05 29 24.0	-1.9
SULR		156.63	288	⇓iP	PKPdf	05 29 24.3	-1.6
LIA	Limnos Island	156.65	276	P	PKPdf	05 29 25.1	-1.0
RDO	Rodhopi	156.67	279	P	PKPdf	05 29 24.0	-2.1
ANKY	Antikythira Is	156.76	265	P	PKPdf	05 29 27.8	+1.4
BIZ	Bicaz	156.78	294	⇑iP	PKPdf	05 29 25.6	-0.4
DIM	Dimitrovgrad	156.84	281	P	PKPdf	05 29 23.2	-3.0
MLR	Muntele Rosu	156.89	290	PKP	PKPdf	05 29 26.4	0.0
	comp=Z,6.1nm,1.0s,baz=153,slow=12,SNR=5.8						
MLR				PKPab	PKPab	05 29 54.3	-2.1
	comp=Z,18nm,0.9s,baz=229,slow=1.4,SNR=5.7						
MLR	Muntele Rosu	156.89	290	PFAKE		05 29 40.0	+14
MLR				LR	LR		
	comp=Z,18μm,22.0s						
MLR	Muntele Rosu	156.89	290	⇑iP	PKPdf	05 29 24.6	-1.8
PTL	Penteli	157.12	271	P	PKPdf	05 29 27.5	+0.7
KTHR	Kythira	157.14	266	P	PKPdf	05 29 25.8	-1.1
THAS	Thassos island	157.16	277	P	PKPdf	05 29 24.0	-2.7
EREA	Eretria	157.18	272	P	PKPdf	05 29 25.5	-1.4
ATH	Athens Observa	157.20	270	P	PKPdf	05 29 26.6	-0.2
SUW	Suwalki	157.24	313	ePKPdf	PKPdf	05 29 24.4	-2.0
SUW				ePPP	PPP	05 37 12.2	
SUW	Suwalki	157.24	313	PFAKE		05 29 40.0	+14
SUW				LR	LR		
	comp=Z,11μm,22.0s						
SUW	Suwalki	157.24	313	ePKIKP	PKPdf	05 29 24.4	-2.0
SUW				ePPP	PPP	05 37 12.2	
DOPR	Dopca	157.29	291	⇑iP	PKPdf	05 29 25.8	-0.9
COPA	Copaceanca	157.33	287	⇑iP	PKPdf	05 29 25.4	-1.4
BURAR	Bucovina Array	157.36	296	⇑iP	PKPdf	05 29 25.4	-1.5
BURAR	Bucovina Array	157.36	296	⇑PKIKP	PKPdf	05 29 25.4	-1.5
RZN	Rozhen	157.38	280	P	PKPdf	05 29 25.1	-2.1
KAVA	Kavala	157.40	278	P	PKPdf	05 29 25.2	-1.8
DID	Didima	157.41	269	P	PKPdf	05 29 26.4	-0.8
KRND	KRANIDI	157.43	269	P	PKPdf	05 29 24.8	-2.4
VOIR		157.52	290	⇓iP	PKPdf	05 29 25.5	-1.6
VOIR		157.52	290	⇓PKIKP	PKPdf	05 29 25.5	-1.6
MRKA	Markates	157.52	272	P	PKPdf	05 29 25.5	-1.8
HUMR	Humele	157.53	288	⇓iP	PKPdf	05 29 25.0	-2.0
OUR	Ouranopolis	157.65	276	P	PKPdf	05 29 25.5	-1.8
MOL	Molde	157.66	344	ePKPdf	PKPdf	05 29 26.1	-0.4
MOL				eSKPdf	SKPdf	05 32 56.4	-1.9
MOL				ePP	PP	05 33 39.1	+0.7
MOL				eSKSdf	SKSdf	05 36 31.3	+0.1
MOL				eSS	SS	05 53 36.2	+2.0
PLVB	Pleven	157.69	285	⇑iP	PKPdf	05 29 26.0	-1.3
SKIA	Skiathos	157.74	273	P	PKPdf	05 29 27.5	0.0
DOMB	Dombas	157.79	342	ePKPdf	PKPdf	05 29 25.9	-0.9
DOMB				IVmBBB		05 29 33.0	
	comp=Z,1μm,3.9s						
DOMB				ePKPab	PKPab	05 29 59.3	-0.3
DOMB				ePP	PP	05 33 39.4	+0.2
DOMB				eSS	SS	05 53 38.1	+2.4
DOMB				IVMs_BB	IVMs_BB	06 23 44.3	
	comp=Z,1μm,13.5s						
ARR	Arges	157.81	290	⇑iP	PKPdf	05 29 26.3	-1.2
DYR	Agios Nikonas	157.82	266	P	PKPdf	05 29 28.8	+1.1
SMIA	Simia	157.86	272	P	PKPdf	05 29 27.1	-0.6
LVV	L'vov	157.87	302	i PKIKP	PKPdf	05 29 28.6	+1.3
LVV				e		05 33 42.3	
LVV				eSSS	SSS	05 59 46.5	
VLAD	Vladila	157.90	286	⇓iP	PKPdf	05 29 26.5	-1.0
ATAL	Atalanti	157.94	272	P	PKPdf	05 29 27.2	-0.6
LKR	Lokris	157.95	272	P	PKPdf	05 29 24.9	-2.9
NVR	Nevrokopi	157.95	279	P	PKPdf	05 29 24.8	-2.9
NEO	Neokhori	157.96	273	P	PKPdf	05 29 27.7	-0.1
ARCR	ARCALIA	157.97	294	⇓iP	PKPdf	05 29 26.7	-0.8
XOR	Xorichti	158.00	274	P	PKPdf	05 29 27.8	-0.1
NC204	NORSAR Array S	158.00	339	ePKPdf	PKPdf	05 29 26.9	-0.3
THAL	Thalero	158.01	270	P	PKPdf	05 29 27.8	-0.1
HFS	Hagfors	158.02	334	PKP	PKPdf	05 29 27.8	+0.7
	comp=Z,1.7nm,0.7s,baz=72,slow=28,SNR=2.7						
HFS				PKPab	PKPab	05 30 00.4	-0.2
	comp=Z,3.0nm,0.5s,baz=90,slow=3.1,SNR=6.4						
PLG	Polygyros	158.06	276	P	PKPdf	05 29 25.3	-2.6
NB2	NORSAR Subarra	158.07	338	PKPdf	PKPdf	05 29 25.7	-1.6
	comp=Z,493nm,3.3s,baz=20,slow=1.2						
NB2	NORSAR Subarra	158.07	338	PKPdf	PKPdf	05 29 25.7	-1.6
	baz=20,slow=1.2						
NOA	NORSAR Array B	158.07	338	PKP	PKPdf	05 29 25.5	-1.8
	comp=Z,4.2nm,1.1s,baz=52,slow=1.4,SNR=4.5						
NOA				PKPab	PKPab	05 30 01.8	+0.9
	comp=Z,10nm,0.8s,baz=39,slow=4.7,SNR=17						
MMB	Musomiste	158.09	280	P	PKPdf	05 29 25.4	-2.5
SRS	Serrai	158.11	278	P	PKPdf	05 29 25.5	-2.4
AKN	Aaknes	158.13	344	epPKPdf	pPKPdf	05 29 32.6	-0.2
AKN				ePP	PP	05 33 41.0	+0.1
AKN				eSS	SS	05 53 41.6	+2.4
TRIP	Tripoli	158.14	268	P	PKPdf	05 29 31.0	+2.9
NBO00	NORSAR Array S	158.20	338	ePKPdf	PKPdf	05 29 25.7	-1.7
GUR	Goura	158.22	269	P	PKPdf	05 29 28.0	-0.3
SOH	Sokhos	158.22	277	P	PKPdf	05 29 26.9	-1.2
NC602	NORSAR Array S	158.23	337	ePKPdf	PKPdf	05 29 27.2	-0.2
NC602				ePP	PP	05 33 41.8	+0.2
NC602				eSS	SS	05 53 41.9	+1.4
NC602				IVMs_BB	IVMs_BB	06 26 33.0	
	comp=Z,798nm,15.2s						
DSF	Desfina	158.23	271	P	PKPdf	05 29 28.1	-0.1
ITM	Ithomi	158.28	267	P	PKPdf	05 29 27.2	-1.1
ITM	Ithomi	158.28	267	ePKPab	PKPab	05 30 01.4	-1.2
ITM				LR	LR		
	comp=Z,10μm,21.0s						
ITM	Ithomi	158.28	267	P	PKPdf	05 29 27.1	-1.2
PYL	PYLOS	158.32	266	P	PKPdf	05 29 26.5	-1.8
MPEP	Malo Peshtene	158.33	284	P	PKPdf	05 29 31.7	+3.6
HORT	Hortiatis	158.37	277	P	PKPdf	05 29 28.8	+0.5
TRAZ	Trapeza	158.39	270	P	PKPdf	05 29 29.7	+1.3
KLV	Kalavryta, Ach	158.40	270	P	PKPdf	05 29 27.1	-1.3
LOT	Lotru	158.42	290	⇑iP	PKPdf	05 29 27.2	-1.1
THE	Thessaloniki	158.47	277	P	PKPdf	05 29 26.4	-1.9
CJR	Cluj-Napoca	158.51	293	⇓iP	PKPdf	05 29 26.5	-1.8
CJR	Cluj-Napoca	158.51	293	⇓PKIKP	PKPdf	05 29 26.5	-1.8
KALE	Kalithea	158.51	270	P	PKPdf	05 29 25.6	-3.0
AGG	Agios Georgios	158.55	272	PFAKE		05 29 40.0	+11
AGG				LR	LR		
	comp=Z,12μm,22.0s						
AGG	Agios Georgios	158.55	272	P	PKPdf	05 29 25.8	-2.7
TRIZ	Trizonia	158.56	270	P	PKPdf	05 29 18.9	-10
AMT	Artemida-Makis	158.56	268	P	PKPdf	05 29 31.5	+2.9
LAKA	Lakka	158.59	270	P	PKPdf	05 29 27.5	-1.1
KLNR	Kaliningrad	158.60	316	dePKIKP	PKPdf	05 29 30.5	+2.5
VTS	Vitosha	158.61	282	ePKPdf	PKPdf	05 29 26.9	-1.8
VTS				LR	LR		
	comp=Z,12μm,19.0s						
VTS	Vitosha	158.61	282	P	PKPdf	05 29 26.6	-2.1
VTS	Vitosha	158.61	282	⇑iP	PKPdf	05 29 27.1	-1.6
VTS	Vitosha	158.61	282	ePKIKP	PKPdf	05 29 26.9	-1.8
VTS				MLR	MLR		
	comp=Z,12μm,19.0s						
VTS	Vitosha	158.61	282	P	PKPdf	05 29 26.1	-2.6
KKB	Krupnik	158.62	280	P	PKPdf	05 29 27.1	-1.4
KNT	Kendrikon	158.63	278	P	PKPdf	05 29 26.1	-2.4
LIT	Litokhoron	158.71	275	PFAKE		05 29 40.0	+11
LIT				LR	LR		
	comp=Z,13μm,20.0s						
LIT	Litokhoron	158.71	275	P	PKPdf	05 29 26.6	-2.1
ANX	Ano Chora	158.74	271	P	PKPdf	05 29 28.7	-0.2
KWP	Kalwaria Pacla	158.75	302	ePKPdf	PKPdf	05 29 28.8	+0.4
KWP				ePP	PP	05 33 49.3	+4.0
KWP	Kalwaria Pacla	158.75	302	ePKIKP	PKPdf	05 29 28.8	+0.4
KWP				e		05 33 49.3	
SRE	Strehaia	158.80	288	⇓iP	PKPdf	05 29 27.4	-1.2
SRE	Strehaia	158.80	288	⇓PKIKP	PKPdf	05 29 27.4	-1.2
VAY	Valandovo	158.90	278	i PKP	PKPdf	05 29 32.3	+3.5
EVR	Evrytania	158.91	272	P	PKPdf	05 29 27.1	-2.0
RLS	Riolos of Patr	158.91	269	P	PKPdf	05 29 26.5	-2.4
THL	Klokotos Trika	158.93	273	P	PKPdf	05 29 28.0	-0.9
TAM	Tamanrasset	158.96	210	ePKPdf	PKPdf	05 29 29.9	+0.2
TAM				LR	LR		
	comp=Z,19μm,22.0s						
PVO	Paravola	159.04	271	P	PKPdf	05 29 28.2	-0.9
TRPA	Tarpa	159.10	298	⇓iP	PKPdf	05 29 26.8	-2.0
TRPA	Tarpa	159.10	298	⇓eP	PKPdf	05 29 26.1	-2.7
TRPA				ePP	PP	05 33 45.0	-2.2
TRPA				eSS	SS	05 52 34.1	-77
DRGR		159.12	294	⇑iP	PKPdf	05 29 27.7	-1.3
DRGR		159.12	294	⇑PKIKP	PKPdf	05 29 27.7	-1.3
GZR	Gura Zlata	159.12	290	⇑iP	PKPdf	05 29 28.5	-0.5
GZR	Gura Zlata	159.12	290	⇑PKIKP	PKPdf	05 29 28.5	-0.5
SKAR	Skarslia	159.15	341	ePKPdf	PKPdf	05 29 27.4	-1.1
SKAR				IVmBBB		05 29 34.9	
	comp=Z,1μm,4.6s						
SKAR				ePKPab	PKPab	05 30 05.6	0.0
SKAR				ePKSdf	PKSdf	05 33 01.7	-0.1
SKAR				ePP	PP	05 33 45.9	-0.8
SKAR				eSS	SS	05 53 52.1	+1.9
SKAR				IVMs_BB	IVMs_BB	06 26 00.2	
	comp=Z,1μm,31.5s						
KOLS	Kolonicke sedl	159.15	300	ePKIKP	PKPdf	05 29 28.2	-0.7
KOLS				e		05 29 36.0	
KOLS	Kolonicke sedl	159.15	300	ePKP	PKPdf	05 29 28.2	-0.7
KOLS				e		05 29 36.0	
UZH	Uzhgorod	159.19	299	ePKIKP	PKPdf	05 29 31.6	+2.7
UZH				e		05 30 05.6	
UZH				i		05 33 43.8	
UZH				e		05 36 31.4	
UZH				e		05 53 56.8	
HYA	Hoyanger	159.21	344	ePKPdf	PKPdf	05 29 27.5	-1.0
HYA				ePKPab	PKPab	05 30 05.5	-0.2
HYA				eSKPdf	SKPdf	05 32 59.6	-0.3
KZN	Kozani	159.29	275	P	PKPdf	05 29 26.8	-2.6
BEL	Belsk	159.35	308	ePKPdf	PKPdf	05 29 28.3	-0.7
BEL				ePP	PP	05 33 52.5	+4.1
BEL	Belsk	159.35	308	ePKIKP	PKPdf	05 29 28.3	-0.7
BEL				e		05 33 52.5	
HERR	Herculane	159.37	288	⇓iP	PKPdf	05 29 27.7	-1.5
KFL	Anninata	159.44	269	P	PKPdf	05 29 26.9	-2.7
KPRO	Kipourio	159.52	274	P	PKPdf	05 29 28.1	-1.6
SUE	Sulen	159.59	345	ePKPdf	PKPdf	05 29 28.5	-0.4
SUE				IVmBBB		05 29 35.1	
	comp=Z,1μm,3.7s						

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SUE                                eSKPdf   SKPdf    05 32 59.9  -0.5
SUE                                eSS      SS       05 53 56.6  +2.0
LTVH  Ltavrtes, Hu     159.62 296⇓eP       PKPdf    05 29 30.0  +0.6
LTVH                               ePP      PP       05 33 49.1  -1.0
LTVH                               eSS      SS       05 54 35.1  +38
KONO  Kongsberg        159.68 337  PFAKE             05 29 40.0  +11
KONO                               LR       LR
      comp=Z,10µm,21.0s
KONO  Kongsberg        159.68 337 ePKPdf   PKPdf    05 29 28.4  -0.7
KONO                               ePKPab   PKPab    05 30 07.7  -0.1
KONO                               ePKSdf   PKSdf    05 33 02.5  +0.3
KONO                               ePP      PP       05 33 49.6  +0.1
KONO                               eSS      SS       05 53 57.5  +1.8
KONO                               IVMs_BB  IVMs_BB  06 23 21.4
      comp=Z,1µm,39.6s
FSK   Fiskardo         159.72 270  P        PKPdf    05 29 29.6  -0.2
PENT  Pentalofos       159.74 275  P        PKPdf    05 29 31.3  +1.3
LKD2  Lefkada island   159.74 271  P        PKPdf    05 29 28.8  -1.1
JAN   Janina           159.83 273  P        PKPdf    05 29 29.1  -0.9
SKO   Skopje           159.84 280 i PKP     PKPdf    05 29 33.8  +3.9
MDVR  Moldovita        159.87 288⇓iP       PKPdf    05 29 28.8  -1.1
SIRR  Siria            159.87 292⇑iP       PKPdf    05 29 27.9  -1.9
BZS   Buzias           159.93 290⇑iP       PKPdf    05 29 28.3  -1.6
BZS   Buzias           159.93 290 ⇑PKIKP   PKPdf    05 29 28.3  -1.6
ASK   Askoy            160.04 344 epPKPdf  pPKPdf   05 29 34.2  -0.8
BER   Bergen           160.10 344 ePKPdf   PKPdf    05 29 29.1  -0.4
BER                               ePKPab   PKPab    05 30 09.7  +0.1
BER                               eSKPdf   SKPdf    05 33 00.6  -0.2
BER                               ePP      PP       05 33 52.6  +1.0
BER                               eSS      SS       05 54 02.1  +2.2
OHR   Ohrid            160.18 277 i PKP     PKPdf    05 29 34.6  +4.2
IGT   Igoumenitsa      160.18 272  P        PKPdf    05 29 29.1  -1.3
ODD1  Odda             160.23 342 ePKPdf   PKPdf    05 29 28.9  -1.0
ODD1                              ePKPab   PKPab    05 30 10.1  -0.2
ODD1                              ePP      PP       05 33 52.5   0.0
ODD1                              eSS      SS       05 54 03.4  +1.8
NIE   Niedzica         160.33 302 ePKPdf   PKPdf    05 29 29.2  -1.0
NIE                               ePP      PP       05 34 01.6  +7.7
NIE   Niedzica         160.33 302 ePKIKP   PKPdf    05 29 29.2  -1.0
NIE                               e                 05 34 01.6
OJC   Ojcow            160.44 305 ePKPdf   PKPdf    05 29 29.2  -1.1
OJC                               ePP      PP       05 34 01.6  +7.2
OJC   Ojcow            160.44 305 ePKPdf   PKPdf    05 29 29.0  -1.3
OJC                               ePKPab   PKPab    05 30 10.2  -1.4
OJC   Ojcow            160.44 305 ePKIKP   PKPdf    05 29 29.2  -1.1
OJC                               e                 05 34 01.6
H07S1 FLORES T-PHASE160.45  88 ePKPdf   PKPdf    05 29 35.8  +5.1
AMBH  Ambrzfalva       160.51 293 eP       PKPdf    05 29 32.0  +1.6
AMBH                              ePP      PP       05 33 53.1  -1.9
SRN   Sarande          160.52 273  P        PKPdf    05 29 29.4  -1.3
PHP   Peshkopia        160.54 279  P        PKPdf    05 29 28.4  -2.4
H07N1 FLORES T-PHASE160.59  87 ePKPdf   PKPdf    05 29 36.5  +5.7
TPE   Tepelena         160.60 274  P        PKPdf    05 29 33.1  +2.3
KEK   Kerkira          160.63 273  P        PKPdf    05 29 27.2  -3.7
BLS5  Blasjo           160.71 341 ePKPdf   PKPdf    05 29 29.8  -0.5
BLS5                              ePKPab   PKPab    05 30 12.9  +0.6
BLS5                              ePP      PP       05 33 55.1  +0.1
BLS5                              eSS      SS       05 54 08.3  +1.7
BLS5                               IVMs_BB  IVMs_BB  06 25 05.1
      comp=Z,934nm,16.9s
GKP   Gorka Klasztor   160.77 315 ePKPdf   PKPdf    05 29 29.0  -1.5
GKP                               ePP      PP       05 33 57.1  +1.2
GKP   Gorka Klasztor   160.77 315 ePKIKP   PKPdf    05 29 29.0  -1.5
GKP                               e                 05 33 57.1
PSZ   Piszkesteto      160.89 298⇑iP       PKPdf    05 29 28.8  -2.2
PSZ   Piszkesteto      160.89 298 ⇑PKIKP   PKPdf    05 29 28.8  -2.2
PSZ   Piszkesteto      160.89 298 eP       PKPdf    05 29 31.0  +0.1
PSZ                               ePP      PP       05 33 49.1  -8.0
PSZ                               eSS      SS       05 54 43.1  +33
TIR   Tirane           160.91 278 ePKPdf   PKPdf    05 29 29.2  -1.9
TIR                               ePKPab   PKPab    05 30 13.1  -0.7
TIR   Tirane           160.91 278  P        PKPdf    05 29 29.3  -1.9
TIR   Tirane           160.91 278⇑iP       PKPdf    05 29 29.6  -1.5
TIR   Tirane           160.91 278 ePKIKP   PKPdf    05 29 29.2  -1.9
TIR                               e                 05 30 13.1
LANS  Liptovska Anna   160.92 302 ePKIKP   PKPdf    05 29 40.3  +9.4
LANS  Liptovska Anna   160.92 302 ePKP     PKPdf    05 29 40.3  +9.4
LANS                              e                 05 30 15.5
BSD   Bornholm Skovb   160.95 322 i PKIKP   PKPdf    05 29 27.1  -3.5
BSD   Bornholm Skovb   160.95 322 i P       PKPdf    05 29 27.1  -3.5
PVY   Plav             161.01 281⇓iPKP     PKPdf    05 29 29.4  -1.9
DIVS  Divibare         161.09 286 i P       PKPdf    05 29 29.5  -1.8
IVA   Berane           161.09 282⇓iPKP     PKPdf    05 29 29.6  -1.8
HOMB  Homborsund       161.14 336 ePKPdf   PKPdf    05 29 30.3  -0.4
HOMB                              ePKPab   PKPab    05 30 14.2   0.0
HOMB                              ePP      PP       05 33 57.7  +0.4
KMY   Karmoy           161.18 342 ePKPdf   PKPdf    05 29 30.3  -0.4
KMY                               ePKPab   PKPab    05 30 14.2  -0.1
FRGS  Fruska Gora      161.22 289 i P       PKPdf    05 29 29.4  -1.9
LRW   Lerwick          161.32 353 eP       PKPdf    05 29 27.9  -2.9
LRW                                IAMs_20  IAMs_20  07 01 44.2
      comp=Z,13µm,17.8s
KOME  Kolasin          161.36 282⇓iPKP     PKPdf    05 29 30.1  -1.6
SNART Snartemo         161.45 338 epPKPdf  pPKPdf   05 29 36.5  -0.2
SNART                             ePKPab   PKPab    05 30 15.1  -0.4
RAC   Raciborz         161.46 305 ePKIKP   PKPdf    05 29 30.5  -0.9
RAC                               e                 05 33 55.0
RAC                               eSS      SS       05 54 17.3  +1.4
ULC   Ulcinj           161.46 279⇓iPKP     PKPdf    05 29 30.0  -1.7
VYHS  Vyhne            161.47 300 ePKIKP   PKPdf    05 29 32.9  +1.4
VYHS                              e                 05 29 37.9
VYHS  Vyhne            161.47 300 ePKP     PKPdf    05 29 32.9  +1.4
VYHS                              e                 05 29 37.9
VYHS                              e                 05 30 19.2
PLE   Pljevlja         161.49 283⇓iPKP     PKPdf    05 29 30.1  -1.7
BBLS  Lazi&#263;i      161.50 285 i P       PKPdf    05 29 28.3  -3.4
PDG   Podgorica        161.51 281⇑iP       PKPdf    05 29 30.0  -1.7
PDG   Podgorica        161.51 281 eP       PKPdf    05 29 29.7  -1.9
TTG   Podgorica        161.51 281⇓iPKP     PKPdf    05 29 29.8  -1.9
TTG   Podgorica        161.51 281 ePKPdf   PKPdf    05 29 29.9  -1.9
TTG                               ePKPab   PKPab    05 30 14.6  -1.9
TTG   Podgorica        161.51 281 ePKIKP   PKPdf    05 29 29.9  -1.7
TTG                               e                 05 30 14.6
DRME  Dracevica, Mon   161.54 280⇓iPKP     PKPdf    05 29 29.2  -2.5
DRME  Dracevica, Mon   161.54 280 eP       PKPdf    05 29 30.0  -1.7
BUD   Budapest         161.54 297 eP       PKPdf    05 29 27.1  -4.5
OKC   Ostrava-Krasne   161.57 304 ePKIKP   PKPdf    05 29 30.8  -0.7
OKC                               e                 05 30 16.3
OKC                                MLR      MLR
      comp=Z,10µm,22.7s
OKC   Ostrava-Krasne   161.57 304 ePKPDF   PKPdf    05 29 30.8  -0.7
OKC                               ex       x        05 29 44.8
OKC                               ePKPAB   PKPab    05 30 16.3  -0.1
OKC                               epPKP    sPKPab   05 30 25.0  +1.1
OKC                                AMS      AMS      06 46 30.0
      comp=Z,10µm,22.7s
COP   Copenhagen       161.68 326 i PKIKP   PKPdf    05 29 28.5  -2.9
COP                                MLR      MLR
      comp=Z,8µm,20.0s
COP   Copenhagen       161.68 326 i P       PKPdf    05 29 28.5  -2.9
      comp=Z,7µm,20.0s
BUM   Brajici-Budva    161.76 280⇓iPKP     PKPdf    05 29 30.1  -2.0
NKME  Niksic           161.76 282⇓iPKP     PKPdf    05 29 30.7  -1.3
CEME  Cevo             161.77 281⇓iPKP     PKPdf    05 29 29.8  -2.3
UPM   Unac-Piva        161.83 283⇓iPKP     PKPdf    05 29 30.3  -2.0
MORC  Moravsky Berou   161.96 305 ePKPdf   PKPdf    05 29 30.9  -1.1
MORC  Moravsky Berou   161.96 305⇓iP       PKPdf    05 29 31.5  -0.5
MORC  Moravsky Berou   161.96 305 ePKIKP   PKPdf    05 29 30.9  -1.1
MORC  Moravsky Berou   161.96 305 ePKP     PKPdf    05 29 29.7  -2.3
MORC                              eSS      SS       05 54 20.0  -1.2
MORH  Mrgy, Hungar     161.96 293 i P       PKPdf    05 29 29.6  -2.4
MORH  Mrgy, Hungar     161.96 293⇓eP       PKPdf    05 29 31.0  -1.0
MORH                              ePP      PP       05 33 50.1   -13
MORH                              eSS      SS       05 54 55.1  +33
CSKK  Cskako           162.07 297 eP       PKPdf    05 29 31.0  -1.1
CSKK                              ePP      PP       05 34 02.1  -1.3
HCY   Herceg Novi      162.07 281⇓iPKP     PKPdf    05 29 30.5  -1.8
BRY   Bratogost        162.08 282⇓iPKP     PKPdf    05 29 30.5  -2.0
PCED  Cedros           162.12  92 ePKPdf   PKPdf    05 29 37.0  +4.6
JAVC  Velka Javorina   162.14 302 ePKP     PKPdf    05 29 31.3  -0.9
JAVC                              eSS      SS       05 54 29.0  +5.7
HOR   Horta            162.14  93 ePKPdf   PKPdf    05 29 45.0  +13
PCAN  Candelaria       162.23  93 ePKPdf   PKPdf    05 29 38.2  +5.6
PICO  Pico             162.29  93 ePKPdf   PKPdf    05 29 38.0  +5.3
KSP   Ksiaz            162.34 309 ePKPdf   PKPdf    05 29 30.9  -1.4
KSP                               ePP      PP       05 34 06.8  +2.4
KSP   Ksiaz            162.34 309 ePKIKP   PKPdf    05 29 30.9  -1.4
KSP                               e                 05 34 06.9
MUD   Monsted U'grnd   162.38 332 i PKIKP   PKPdf    05 29 29.0  -3.1
MUD                                MLR      MLR
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      comp=Z,11µm,19.0s
MUD   Monsted U'grnd   162.38 332 i P       PKPdf    05 29 29.0  -3.1
      comp=Z,11µm,19.0s
TIH   Tihany           162.39 295 eP       PKPdf    05 29 29.1  -3.4
TIH                               ePP      PP       05 33 52.1   -13
TIH                               eSS      SS       05 53 42.1   -44
PPNO  Prainha do Nor   162.40  93 ePKPdf   PKPdf    05 29 38.5  +5.7
ROSA  Rosais           162.49  92 ePKPdf   PKPdf    05 29 37.5  +4.7
OSTC  Ostas            162.50 308 ePKPDF   PKPdf    05 29 31.4  -1.1
OSTC                              ePKPAB   PKPab    05 30 22.7  +2.2
OSTC                               AMS      AMS      06 43 00.0
      comp=Z,17µm,23.0s
DPC   Dobruska-Polom   162.51 307 ePKIKP   PKPdf    05 29 31.3  -1.2
DPC                                MLR      MLR
      comp=Z,10µm,21.6s
DPC   Dobruska-Polom   162.51 307 ePKPDF   PKPdf    05 29 31.3  -1.2
DPC                               ePKPAB   PKPab    05 30 20.5  -0.1
DPC                               ex       x        05 30 28.7
DPC                                AMS      AMS      06 47 20.0
      comp=Z,10µm,21.6s
MODS  Modra-Piesok     162.51 300 ePKIKP   PKPdf    05 29 33.7  +1.1
MODS  Modra-Piesok     162.51 300 ePKP     PKPdf    05 29 33.7  +1.1
PMAN  Manadas          162.58  93 ePKPdf   PKPdf    05 29 38.7  +5.8
UPC   Upice            162.63 308 ePKIKP   PKPdf    05 29 36.9  +4.3
UPC                               e                 05 30 20.9
UPC                                MLR      MLR
      comp=Z,17µm,24.4s
UPC   Upice            162.63 308 ePKPDF   PKPdf    05 29 36.9  +4.3
UPC                               ePKPAB   PKPab    05 30 20.9  -0.2
UPC                               epPKP    sPKPab   05 30 29.2  +0.7
UPC                                AMS      AMS      06 42 50.0
      comp=Z,17µm,24.4s
ZST   Bratislava       162.67 300 ePKIKP   PKPdf    05 29 33.7  +1.0
ZST   Bratislava       162.67 300 ePKP     PKPdf    05 29 33.7  +1.0
VRAC  Vranov           162.69 304  PKP      PKPdf    05 29 33.2  +0.5
      comp=Z,8.9nm,1.1s,baz=148,slow=1.6,SNR=12
VRAC                               PKPab    PKPab    05 30 21.5  +0.1
      comp=Z,12nm,0.9s,baz=89,slow=3.3,SNR=6.0
VRAC  Vranov           162.69 304⇑iP       PKPdf    05 29 31.1  -1.6
VRAC  Vranov           162.69 304 ePKP     PKPdf    05 29 31.0  -1.6
VRAC                              eSS      SS       05 54 23.0  -5.8
STON  Ston             162.69 282 eP       PKPdf    05 29 30.5  -2.3
TIP   Timpagrande      162.77 269 ePKPdf   PKPdf    05 29 32.1  -1.1
TIP                               ePKPab   PKPab    05 30 19.3  -2.9
TIP   Timpagrande      162.77 269  P        PKPdf    05 29 31.6  -1.6
TIP   Timpagrande      162.77 269⇑iP       PKPdf    05 29 32.1  -1.1
PGRA  Graciosa         162.77  91 ePKPdf   PKPdf    05 29 38.0  +4.9
KRUC  Moravsky         162.89 303 ePKP     PKPdf    05 29 30.4  -2.5
KRUC                              eSS      SS       05 54 36.0  +5.1
BLY   Banja Luka       163.09 288 ePKPdf   PKPdf    05 29 31.4  -1.8
BLY                               ePKPab   PKPab    05 30 21.8  -1.5
BLY   Banja Luka       163.09 288⇑iP       PKPdf    05 29 31.8  -1.4
BLY   Banja Luka       163.09 288 i P       PKPdf    05 29 30.6  -2.6
BIGH  Upper Bighouse   163.14 357 eP       PKPdf    05 29 31.0  -1.8
BIGH                               IAMs_20  IAMs_20  06 52 37.9
      comp=Z,13µm,20.8s
SOP   Sopron           163.14 298 eP       PKPdf    05 29 30.1  -3.1
SOP                               ePP      PP       05 33 59.1   -10
SOP                               eSS      SS       05 54 42.1  +8.4
MATE  Matera           163.15 274⇓iP       PKPdf    05 29 31.3  -2.1
BEHE  Becsehely        163.22 294 i P       PKPdf    05 29 30.7  -2.6
BEHE  Becsehely        163.22 294 eP       PKPdf    05 29 30.0  -3.2
BEHE  Becsehely        163.22 294 ePP      PP       05 33 54.0   -15
ADH   Angra Heroismo   163.22  93 ePKPdf   PKPdf    05 29 40.6  +7.1
PSCM  Serra do Cume    163.33  93 ePKPdf   PKPdf    05 29 37.7  +4.0
TREC  Trest            163.38 304  AMS      AMS      06 51 00.0
      comp=Z,13µm,19.1s
PVCC  Panska Ves       163.47 309 ePKIKP   PKPdf    05 29 37.3  +3.9
PVCC                               MLR      MLR
      comp=Z,11µm,19.5s
PVCC  Panska Ves       163.47 309 ePKPDF   PKPdf    05 29 37.3  +3.9
PVCC                              ePP      PP       05 34 20.1   +10
PVCC                               AMS      AMS      06 50 40.0
      comp=Z,11µm,19.5s
CONA  Conrad Observa   163.54 300 ePKPdf   PKPdf    05 29 30.9  -2.8
      comp=Z,8.9nm,1.0s
GOPC  GO Pecny, Ondr   163.59 307 ePKIKP   PKPdf    05 29 32.4  -1.1
GOPC                               MLR      MLR
      comp=Z,14µm,19.4s
GOPC  GO Pecny, Ondr   163.59 307 ePKPDF   PKPdf    05 29 32.4  -1.1
GOPC                              ePKPAB   PKPab    05 30 25.5  +0.2
GOPC                              ex       x        05 30 33.8
GOPC                               AMS      AMS      06 50 00.0
      comp=Z,14µm,19.4s
BRG   Berggiesshubel   163.68 311 i PKP     PKPdf    05 29 32.0  -1.6
      comp=Z,12nm,1.5s
BRG                               i                 05 29 40.1
      comp=Z,35nm,1.2s
BRG                                PP       PP       05 34 17.0  +5.5
BRG                                SKKS              05 45 08.0
BRG                                SS       SS       05 54 09.0   -30
      comp=N,13µm,25.1s
      comp=E,6µm,23.3s
      comp=Z,16µm,25.3s
BRG   Berggiesshubel   163.68 311 i PKIKP   PKPdf    05 29 32.0  -1.6
BRG                               i                 05 29 40.1
BRG                                                  05 34 17.0
BRG                                pmax     pmax
      comp=Z,12nm,1.5s
BRG                                MLR      MLR
      comp=N,13µm,25.1s
BRG                                MLR      MLR
      comp=E,6µm,23.3s
BRG                                MLR      MLR
      comp=Z,16µm,25.3s
PRU   Pruhonice        163.71 307 ePKIKP   PKPdf    05 29 35.3  +1.7
PRU                               e                 05 30 25.1
PRU                                MLR      MLR
      comp=Z,15µm,22.7s
PRU   Pruhonice        163.71 307 ePKPDF   PKPdf    05 29 35.3  +1.7
PRU                               ePKPAB   PKPab    05 30 25.1  -0.7
PRU                               epPKP    sPKPab   05 30 34.6  +1.4
PRU                                AMS      AMS      06 44 10.0
      comp=Z,15µm,22.7s
ARSA  Arzberg          163.92 297 ePKPdf   PKPdf    05 29 31.2  -2.7
      comp=Z,12nm,1.0s
VAE   Valguarnera      163.99 261  PKP      PKPdf    05 29 35.7  +1.3
      comp=Z,8.3nm,0.8s,baz=191,slow=21,SNR=6.7
VAE                                PKPab    PKPab    05 30 28.2  +0.7
      comp=Z,13nm,0.8s,baz=212,slow=4.6,SNR=4.0
CLL   Collm            164.00 313 ePKPdf   PKPdf    05 29 31.9  -1.9
CLL                               ePKPab   PKPab    05 30 26.5  -0.6
CLL   Collm            164.00 313 ePKIKP   PKPdf    05 29 32.0  -1.8
CLL                               e                 05 30 25.0
CLL                                MLR      MLR
      comp=Z,10µm,18.3s
CLL   Collm            164.00 313 ePKPdf   PKPdf    05 29 32.0  -1.8
CLL                               esPKPdf  sPKPdf   05 29 41.0  -0.3
      comp=Z,282nm,2.7s
CLL                               ePKPab   PKPab    05 30 25.0  -2.0
CLL                               esPKPab  sPKPab   05 30 36.0  +1.6
      comp=Z,74nm,1.4s
CLL                               ePP      PP       05 34 16.0  +2.9
CLL                               ePPP     PPP      05 38 00.0
CLL                               e                 05 39 30.0
CLL                               eSKKSac  SKKSac   05 40 54.0  -5.7
CLL                               ePSKS             05 44 39.0
CLL                               e                 05 45 23.0
CLL                               e(PPS)            05 47 36.0
CLL                               eSS      SS       05 54 40.0  -1.8
CLL                               eSSS     SSS      06 00 54.0
CLL                               eSSSS             06 05 48.0
CLL                                LmH               06 58 00.0
      comp=N,9µm,21.1s
CLL                                LmH               06 58 00.0
      comp=E,8µm,18.4s
CLL                                LmV               07 02 00.0
      comp=Z,10µm,18.3s
PSET  Sete Cidades     164.09  97 ePKPdf   PKPdf    05 29 38.2  +3.8
CMLA  Cha da Macela    164.21  98 ePKPdf   PKPdf    05 29 38.7  +4.2
CRES  Cresnjev         164.21 292 i P       PKPdf    05 29 31.5  -2.7
PSMA  Santa Maria      164.22 101 ePKPdf   PKPdf    05 29 39.4  +4.9
PCALD Caldeiras da R   164.25  98 ePKPdf   PKPdf    05 29 39.7  +5.2
PSMN  Pico do Norte,   164.27 101 ePKPdf   PKPdf    05 29 38.2  +3.6
PERS  Pernice          164.32 295 ePKPdf   PKPdf    05 29 32.2  -2.2
PERS                              e                 05 54 44.6
KPL   Plockton         164.33   0 eP       PKPdf    05 29 31.6  -2.3
KPL                                IAMs_20  IAMs_20  06 42 40.0
      comp=Z,20µm,19.9s
SOKA  Soboth           164.37 296 ePKPdf   PKPdf    05 29 32.3  -2.1
      comp=Z,6.7nm,1.0s
BART  Pico Bartolome   164.48  98 ePKPdf   PKPdf    05 29 37.5  +2.7
MOA   Molln            164.59 300 ePKPdf   PKPdf    05 29 32.2  -2.4
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      comp=Z,3.3nm,1.1s
KHC   Kasperske Hory   164.61 305 ePKPdf   PKPdf    05 29 32.4  -2.0
KHC   Kasperske Hory   164.61 305 ePKIKP   PKPdf    05 29 32.5  -2.0
KHC                                MLR      MLR
      comp=Z,17µm,22.3s
KHC   Kasperske Hory   164.61 305 ePKPDF   PKPdf    05 29 32.5  -2.0
KHC                               ePKPAB   PKPab    05 30 30.1  +0.2
KHC                               epPKP    sPKPab   05 30 38.5  +1.2
KHC                                AMS      AMS      06 44 30.0
      comp=Z,17µm,22.3s
GEC2  GERESS Array S   164.64 304 ePKPdf   PKPdf    05 29 33.3  -1.3
GEC2                              ePKPab   PKPab    05 30 28.8  -1.3
GEC2  GERESS Array S   164.64 304 ePKIKP   PKPdf    05 29 33.3  -1.3
GEC2                              e                 05 30 28.8
GERES GERESS Array B   164.64 304  PKP      PKPdf    05 29 33.0  -1.6
      comp=Z,2.9nm,0.9s,baz=256,slow=0.6,SNR=15
GERES                              PKPab    PKPab    05 30 29.8  -0.3
      comp=Z,9.4nm,0.9s,baz=72,slow=4.3,SNR=9.5
OBKA  Obir             164.72 295 ePKPdf   PKPdf    05 29 32.6  -2.1
      comp=Z,3.8nm,0.8s
NKC   Novy Kostel      164.82 310 ePKIKP   PKPdf    05 29 36.8  +2.2
NKC                               e                 05 30 30.5
NKC                               e                 05 34 16.6
NKC                                MLR      MLR
      comp=Z,12µm,19.6s
NKC   Novy Kostel      164.82 310 ePKPDF   PKPdf    05 29 36.8  +2.2
NKC                               ePKPAB   PKPab    05 30 30.5  -0.3
NKC                               ePP      PP       05 34 16.6  -0.9
NKC                                AMS      AMS      06 52 30.0
      comp=Z,12µm,19.6s
LJU   Ljubljana        164.82 293 ePKPdf   PKPdf    05 29 33.3  -1.4
LJU                               e                 05 30 39.5
LJU                               e                 05 34 05.4
LJU                               e                 05 34 18.5
LJU                               e                 05 44 43.0
LJU                               e                 05 48 01.3
LJU   Ljubljana        164.82 293 i P       PKPdf    05 29 33.3  -1.4
CEY   Cerknica         164.94 292 ePKPdf   PKPdf    05 29 33.1  -1.8
CEY                               e                 05 44 44.5
CEY                               e                 05 48 02.4
CEY                               e                 05 54 49.5
CEY   Cerknica         164.94 292 eP       PKPdf    05 29 31.4  -3.5
RIY   Rijeka           164.96 291 eP       PKPdf    05 29 33.2  -1.7
MYKA  Terra Mystica    165.31 296 ePKPdf   PKPdf    05 29 33.0  -2.3
      comp=Z,9.0nm,1.2s
KBA   Koelnbreinsper   165.40 298 ePKPdf   PKPdf    05 29 32.7  -2.8
      comp=Z,11nm,1.1s
EAB   Aberfoyle        165.46 357 eP       PKPdf    05 29 31.9  -3.1
ESY   Stoneypath       165.62 353 eP       PKPdf    05 29 33.3  -1.7
EDI   Edinburgh        165.66 354 eP       PKPdf    05 29 32.8  -2.3
EDI                                IAMs_20  IAMs_20  06 44 44.6
      comp=Z,19µm,19.9s
AQU   L'Aquila         165.82 279 ePKPdf   PKPdf    05 29 33.9  -1.9
AQU                               ePKPab   PKPab    05 30 34.2  -1.3
AQU   L'Aquila         165.82 279 ePKIKP   PKPdf    05 29 33.9  -1.9
AQU                               e                 05 30 34.2
AQU   L'Aquila         165.82 279 i P       PKPdf    05 29 33.6  -2.2
ABTA  Abfaltersbach    166.04 297 ePKPdf   PKPdf    05 29 33.5  -2.3
      comp=Z,10.0nm,1.1s
EKA   Eskdalemuir Ar   166.25 354  PKP      PKPdf    05 29 33.6  -2.0
      comp=Z,4.7nm,1.0s,baz=357,slow=26,SNR=4.5
EKA                                PKPab    PKPab    05 30 36.2  -0.4
      comp=Z,5.7nm,0.9s,baz=26,slow=4.0,SNR=4.1
ESK   Eskdalemuir      166.26 354 eP       PKPdf    05 29 32.4  -3.2
ESK                                IAMs_20  IAMs_20  06 58 24.6
      comp=Z,17µm,19.2s
WTTA  Wattenberg       166.47 300 ePKPdf   PKPdf    05 29 34.2  -2.1
      comp=Z,17nm,1.2s,SNR=9.5
WATA  Walderalm        166.49 301 ePKPdf   PKPdf    05 29 34.7  -1.5
      comp=Z,8.3nm,0.9s
CLGH  Cloghs, Cushen   166.59   1 eP       PKPdf    05 29 33.9  -2.0
CLGH                               IAMs_20  IAMs_20  06 56 57.2
      comp=Z,16µm,18.4s
EDMD  Edmundbyers      166.62 351 eP       PKPdf    05 29 32.6  -3.3
EDMD                               IAMs_20  IAMs_20  06 45 24.7
      comp=Z,18µm,20.4s
WTSB  Winterswijk      166.67 325 ePKP     PKPdf    05 29 32.7  -3.3
      comp=Z,354nm,2.7s
WTSB                              ePP      PP       05 34 19.9  -6.8
SQTA  Sankt Quirin     166.76 300 i PKPdf   PKPdf    05 29 34.6  -1.9
      comp=Z,17nm,1.0s
MOTA  Moosalm          166.79 301 ePKPdf   PKPdf    05 29 34.9  -1.6
      comp=Z,21nm,0.9s,SNR=21
GAL1  Galloway         166.79 358 eP       PKPdf    05 29 33.2  -2.8
GAL1                               IAMs_20  IAMs_20  06 42 06.3
      comp=Z,14µm,21.8s
KEST  Kesra            166.88 248  PKP      PKPdf    05 29 36.5  -0.4
      comp=Z,7.2nm,0.9s,baz=150,slow=8.1,SNR=4.4
KEST                               PKPab    PKPab    05 30 40.7  +0.3
      comp=Z,20nm,0.8s,baz=240,slow=2.2,SNR=6.7
KEST  Kesra            166.88 248 ePKPdf   PKPdf    05 29 36.1  -0.8
RETA  Reutte           166.96 302 ePKPdf   PKPdf    05 29 34.6  -2.0
      comp=Z,10nm,1.3s,SNR=10
KESW  Keswick, Cumbr   166.98 353 eP       PKPdf    05 29 33.5  -2.6
KESW                               IAMs_20  IAMs_20  06 58 25.7
      comp=Z,17µm,19.0s
FETA  Feichten         167.13 300 ePKPdf   PKPdf    05 29 34.8  -2.0
      comp=Z,23nm,1.1s,SNR=11
PMOZ  Porto Moniz, M   167.24 130 ePKPdf   PKPdf    05 29 38.8  +1.5
PMOZ  Porto Moniz, M   167.24 130 ePP      PP       05 34 31.6  +1.4
PMOZ  Porto Moniz, M   167.24 130 eLQ      LQ       06 19 41.8
PMOZ                              eLR      LR       06 29 15.2
      comp=Z,19µm,20.0s
IOMK  Kirk Michael     167.40 357 eP       PKPdf    05 29 33.1  -3.3
IOMK                               IAMs_20  IAMs_20  06 46 59.5
      comp=Z,34µm,19.9s
HPK   Haverah Park     167.43 349 eP       PKPdf    05 29 33.8  -2.7
HPK                                IAMs_20  IAMs_20  06 45 33.1
      comp=Z,16µm,20.3s
FUORN Ofenpass-Fuorn   167.56 299 ePKPdf   PKPdf    05 29 35.8  -1.5
FUORN                             ePKPab   PKPab    05 30 42.6  -0.7
DAVA  Damuels          167.59 302 i PKPdf   PKPdf    05 29 35.0  -2.2
      comp=Z,9.1nm,1.2s
DAVOX Davos/Dischmat   167.76 300  PKP      PKPdf    05 29 37.1  -0.2
      comp=Z,13nm,0.9s,baz=127,slow=2.2,SNR=8.1
DAVOX                              PKPab    PKPab    05 30 42.8  -1.3
      comp=Z,18nm,0.7s,baz=112,slow=7.9,SNR=7.6
HGN   Heimansgroeve    167.90 323 ePKP     PKPdf    05 29 39.8  +2.8
      comp=Z,433nm,3.4s
HGN                               ePP      PP       05 34 34.2  +1.1
MEM   Membach          167.98 322 ⇓PKP     PKPdf    05 29 40.0  +3.0
MEM                               ⇑PKPab   PKPab    05 30 44.8  +0.2
LBWR  Ladybower, Pea   167.99 349 eP       PKPdf    05 29 33.4  -3.6
LBWR                               IAMs_20  IAMs_20  06 42 21.4
      comp=Z,18µm,22.7s
BEBN  Eben Emael       168.00 323 ⇓PKP     PKPdf    05 29 38.2  +1.2
BEBN                              ⇓PKPab   PKPab    05 30 47.1  +2.5
BFO   Black Forest     168.10 309 ePKPdf   PKPdf    05 29 36.2  -1.0
BFO                               ePKPab   PKPab    05 30 43.5  -1.7
TUE   Stuetta          168.21 299 ePKPdf   PKPdf    05 29 36.2  -1.4
STNC  Stoke            168.36 350 eP       PKPdf    05 29 36.6  -0.6
STNC                               IAMs_20  IAMs_20  06 48 29.0
      comp=Z,16µm,19.4s
WLF1  Llynfaes         168.36 356 eP       PKPdf    05 29 34.5  -2.6
WLF1                               IAMs_20  IAMs_20  07 01 46.1
      comp=Z,24µm,19.2s
BCLA  Clavier          168.43 323 ⇑PKP     PKPdf    05 29 40.8  +3.4
BCLA                              ⇑PKPab   PKPab    05 30 46.7  +0.1
WLF   Walferdange      168.53 318 ePKPdf   PKPdf    05 29 36.1  -1.3
WLF                               ePKPab   PKPab    05 30 45.6  -1.5
WLF   Walferdange      168.53 318 ePKIKP   PKPdf    05 29 36.1  -1.3
WLF                               e                 05 30 45.6
WLF   Walferdange      168.53 318 ⇑PKP     PKPdf    05 29 36.9  -0.6
WLF                               ⇓PKPab   PKPab    05 30 47.8  +0.7
CWF   Charnwood Fore   168.56 347 eP       PKPdf    05 29 35.2  -2.1
CWF                                IAMs_20  IAMs_20  06 48 47.1
      comp=Z,16µm,19.3s
UCC   Uccle            168.56 326 ⇑PKP     PKPdf    05 29 37.2  -0.2
UCC                               ⇑PKPab   PKPab    05 30 47.5  +0.3
FOEL  Foel Wylfa       168.67 352 eP       PKPdf    05 29 35.4  -2.0
FOEL                               IAMs_20  IAMs_20  06 52 23.1
      comp=Z,19µm,20.4s
SNF   Seneffe          168.81 325 ⇑PKP     PKPdf    05 29 38.0  +0.4
SNF                               ⇓PKPab   PKPab    05 30 46.1  -2.1
ECH   Echery           168.83 310 ePKPdf   PKPdf    05 29 36.2  -1.5
ECH                               ePKPab   PKPab    05 30 46.6  -1.9
ECH   Echery           168.83 310 ePKIKP   PKPdf    05 29 36.2  -1.5
ECH                               e                 05 30 46.6
DOU   Dourbes          168.98 323 ⇑PKP     PKPdf    05 29 39.7  +2.0
DOU                               ⇓PKPab   PKPab    05 30 49.8  +0.8
HLM1  Long Mynd        169.00 351 eP       PKPdf    05 29 33.4  -4.3
HLM1                               IAMs_20  IAMs_20  06 55 12.6
      comp=Z,18µm,20.5s
IWEX  Carrickbyrne,    169.28   4 eP       PKPdf    05 29 35.7  -2.1
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IWEX				IAMs_20	IAMs_20	06 40 57.4	
	comp=Z,37µm,22.9s						
ELSH	**Elham, Standar**	**169.45**	**336**	*e*P	**PKPdf**	**05 29 36.6**	**-1.3**
ELSH				IAMs_20	IAMs_20	06 44 19.0	
	comp=Z,26µm,22.9s						
MCH1	**Michaelchurch**	**169.53**	**351**	*e*P	**PKPdf**	**05 29 35.1**	**-2.9**
MCH1				IAMs_20	IAMs_20	06 55 28.4	
	comp=Z,17µm,19.1s						
SENIN	**Lac Senin/Sane**	**169.58**	**301**	*e*PKPdf	**PKPdf**	**05 29 37.6**	**-0.9**
STRD	**Stroud**	**169.63**	**348**	*e*P	**PKPdf**	**05 29 35.1**	**-3.0**
STRD				IAMs_20	IAMs_20	06 53 45.3	
	comp=Z,22µm,19.6s						
MONM	**Monmouth**	**169.66**	**350**	*e*P	**PKPdf**	**05 29 36.1**	**-1.9**
MONM				IAMs_20	IAMs_20	06 54 52.2	
	comp=Z,22µm,20.0s						
RSBS	**Rosebush, Pemb**	**169.71**	**357**	*e*P	**PKPdf**	**05 29 35.9**	**-2.2**
RSBS				IAMs_20	IAMs_20	06 45 49.9	
	comp=Z,11µm,20.6s						
BNI	**Bardonecchia**	**170.42**	**295**	*e*PKPdf	**PKPdf**	**05 29 38.2**	**-0.7**
BNI	**Bardonecchia**	**170.42**	**295**	*e*PKIKP	**PKPdf**	**05 29 38.2**	**-0.7**
MDT	**Midelt**	**171.11**	**186**	PKP	**PKPdf**	**05 29 40.4**	**+0.8**
	comp=Z,14nm,1.0s,baz=56,slow=1.5,SNR=15						
MDT				PKPab	**PKPab**	**05 30 59.9**	**+1.0**
	comp=Z,16nm,1.2s,baz=214,slow=2.7,SNR=2.5						
CZD	**Col de Zad**	**171.35**	**183**	P	PP	05 34 59.0	+8.7
CLF	**Chambon-Foret**	**171.54**	**321**	*e*PKPdf	**PKPdf**	**05 29 37.7**	**-1.5**
ZHG	**ZHG**	**171.74**	**174**	P	PP	05 34 60.0	+8.1
SSB	**Saint Sauveur**	**171.77**	**299**	*e*PKPdf	**PKPdf**	**05 29 38.7**	**-0.8**
SSB	**Saint Sauveur**	**171.77**	**299**	*e*PKIKP	**PKPdf**	**05 29 38.7**	**-0.8**
LCRM	**LCR**	**171.99**	**185**	P	PP	05 35 02.0	+8.7
JSA	**Saint Aubin**	**172.11**	**343**	*e*P	**PKPdf**	**05 29 37.0**	**-2.4**
JSA				IAMs_20	IAMs_20	06 48 52.6	
	comp=Z,22µm,20.4s						
RTC	**Rabat Centre**	**172.25**	**172**	P	PP	05 35 03.0	+8.6
MAHO	**Mahon**	**172.27**	**260**	PKP1	**PKPdf**	**05 29 39.9**	**+0.1**
MAHO				SKKS	**SKKSac**	**05 41 49.6**	**+8.3**
SICH	**Sidi Chahed**	**172.43**	**182**	P	PP	05 35 04.0	+8.7
MELI	**Melilla**	**173.28**	**199**	PKP1	**PKPdf**	**05 29 39.9**	**-0.4**
MELI				SKKS	**SKKSac**	**05 41 48.9**	**+3.1**
CHEFC	**Chefchaouen**	**173.43**	**182**	P	PP	05 35 09.0	+8.7
CEU	**Ceuta**	**174.22**	**182**	PKP1	**PKPdf**	**05 29 41.0**	**+0.3**
CEU				SKKS	**SKKSac**	**05 41 52.6**	**+2.5**
SFS	**San Fernando**	**174.77**	**175**	PKP1	**PKPdf**	**05 29 42.0**	**+1.1**
SFS				SKKS	**SKKSac**	**05 41 55.9**	**+3.1**
PFVI	**Vila Bisbo**	**174.83**	**150**	*e*PKPdf	**PKPdf**	**05 29 41.5**	**+0.6**
PFVI	**Vila Bisbo**	**174.83**	**150**	*e*PKPab	**PKPab**	**05 31 20.2**	**+5.0**
PFVI	**Vila Bisbo**	**174.83**	**150**	*e*PP	PP	05 35 07.8	+0.5
EMAL	**Malaga-Limoner**	**174.99**	**191**	PKP1	**PKPdf**	**05 29 40.1**	**-0.8**
EMAL				SKKS	**SKKSac**	**05 41 53.9**	**+0.1**
MORF	**Marmelete**	**175.05**	**151**	*e*PKPdf	**PKPdf**	**05 29 40.6**	**-0.5**
MORF				*e*PP	**PP**	**05 35 08.1**	**-0.3**
MORF				*e*PP	PP	05 35 08.3	-0.1
MORF				*e*SS	SS	05 56 32.1	+1.1
MORF				AMS	AMS	06 46 09.8	
	comp=Z,18µm,22.7s						
MORF	**Marmelete**	**175.05**	**151**	*e*PKPdf	**PKPdf**	**05 29 41.7**	**+0.7**
MORF	**Marmelete**	**175.05**	**151**	*e*PKPab	**PKPab**	**05 31 20.8**	**+4.5**
MORF	**Marmelete**	**175.05**	**151**	*e*PKIKP	**PKPdf**	**05 29 40.5**	**-0.5**
MORF				*e*		05 35 08.3	
MORF				*e*SS	SS	05 56 32.1	+1.1
PBDV	**Barranco-do-Ve**	**175.22**	**157**	*e*PKPdf	**PKPdf**	**05 29 42.0**	**+1.0**
PBDV	**Barranco-do-Ve**	**175.22**	**157**	*e*PKPab	**PKPab**	**05 31 21.0**	**+4.0**
PBDV	**Barranco-do-Ve**	**175.22**	**157**	*e*PP	PP	05 35 09.2	+0.1
PTEO	**Sao Teotonio**	**175.23**	**149**	*e*PKPdf	**PKPdf**	**05 29 41.6**	**+0.6**
PTEO	**Sao Teotonio**	**175.23**	**149**	*e*PKPab	**PKPab**	**05 31 23.8**	**+6.8**
PTEO	**Sao Teotonio**	**175.23**	**149**	*e*PP	PP	05 35 12.7	+3.4
PVAQ	**Vaqueiros**	**175.43**	**159**	*e*PKPdf	**PKPdf**	**05 29 41.1**	**+0.1**
PVAQ	**Vaqueiros**	**175.43**	**159**	*e*PKPab	**PKPab**	**05 31 22.3**	**+4.4**
PVAQ	**Vaqueiros**	**175.43**	**159**	*e*PP	PP	05 35 10.6	+0.6
PVAQ	**Vaqueiros**	**175.43**	**159**	*e*LQ	LQ	06 22 58.5	
PVAQ				*e*LR	LR	06 32 53.1	
	comp=Z,22µm,22.0s						
PVAQ	**Vaqueiros**	**175.43**	**159**	*e*PKPdf	**PKPdf**	**05 29 40.2**	**-0.9**
PCVE	**Castro Verde**	**175.55**	**155**	*e*PKPdf	**PKPdf**	**05 29 41.8**	**+0.7**
PCVE	**Castro Verde**	**175.55**	**155**	*e*PKPab	**PKPab**	**05 31 23.8**	**+5.4**
PCVE	**Castro Verde**	**175.55**	**155**	*e*PP	PP	05 35 11.0	+0.3
PNCL	**Nicolau / Gran**	**175.80**	**147**	*e*PKPdf	**PKPdf**	**05 29 40.9**	**-0.2**
PNCL	**Nicolau / Gran**	**175.80**	**147**	*e*PKPab	**PKPab**	**05 31 24.1**	**+4.6**
PNCL	**Nicolau / Gran**	**175.80**	**147**	*e*PP	PP	05 35 11.2	-0.8
PBEJ	**Beja**	**175.96**	**154**	*e*PKPdf	**PKPdf**	**05 29 42.4**	**+1.2**
PBEJ	**Beja**	**175.96**	**154**	*e*PKPab	**PKPab**	**05 31 27.0**	**+6.7**
LIS	**Lisbon**	**176.00**	**137**	*e*PKPdf	**PKPdf**	**05 29 40.8**	**-0.3**
LIS				*e*PP	**PP**	**05 35 12.3**	**-0.9**
LIS				*e*PP	PP	05 35 12.6	-0.6
LIS				*e*SS	SS	05 56 41.2	+0.6
LIS				AMS	AMS	06 49 30.2	
	comp=Z,35µm,22.6s						
LIS	**Lisbon**	**176.00**	**137**	*e*PKIKP	**PKPdf**	**05 29 40.8**	**-0.3**
LIS				*e*		05 35 12.6	
LIS				*e*SS	SS	05 56 41.1	+0.5
PMAFR	**Mafra**	**176.10**	**133**	*e*PKPdf	**PKPdf**	**05 29 42.4**	**+1.2**
PMAFR	**Mafra**	**176.10**	**133**	*e*PKPab	**PKPab**	**05 31 25.1**	**+4.1**
PMAFR	**Mafra**	**176.10**	**133**	*e*PP	PP	05 35 13.5	-0.4
ALMR	**Almeirim**	**176.62**	**137**	*e*PKPdf	**PKPdf**	**05 29 41.2**	**0.0**
ALMR				*e*PP	**PP**	**05 35 15.7**	**-0.5**
ALMR				AMS	AMS	06 48 00.3	
	comp=Z,34µm,24.4s						
ALMR	**Almeirim**	**176.62**	**137**	*e*PKPdf	**PKPdf**	**05 29 42.5**	**+1.3**
ALMR	**Almeirim**	**176.62**	**137**	*e*PKPab	**PKPab**	**05 31 27.7**	**+4.5**
ALMR	**Almeirim**	**176.62**	**137**	*e*PP	PP	05 35 18.0	+1.8
ALMR	**Almeirim**	**176.62**	**137**	*e*PKIKP	**PKPdf**	**05 29 41.2**	**0.0**
ALMR				*e*		05 35 15.7	
PMTG	**Montargil**	**176.72**	**142**	*e*PKPdf	**PKPdf**	**05 29 41.5**	**+0.2**
PMTG	**Montargil**	**176.72**	**142**	*e*PKPab	**PKPab**	**05 31 28.1**	**+4.4**
PMTG	**Montargil**	**176.72**	**142**	*e*PP	PP	05 35 15.7	-0.9
PTOM	**Tomar**	**177.05**	**134**	*e*PKPdf	**PKPdf**	**05 29 41.8**	**+0.5**
PTOM	**Tomar**	**177.05**	**134**	*e*PP	PP	05 35 21.9	+3.6
PCAS	**Casmilo, Conde**	**177.29**	**126**	*e*PKPdf	**PKPdf**	**05 29 41.9**	**+0.5**
PCAS	**Casmilo, Conde**	**177.29**	**126**	*e*PP	PP	05 35 20.0	+0.3
PMRV	**Marv??o**	**177.38**	**149**	*e*PKPdf	**PKPdf**	**05 29 41.3**	**-0.1**
PMRV	**Marv??o**	**177.38**	**149**	*e*PP	PP	05 35 19.6	+0.1
PMRV	**Marv??o**	**177.38**	**149**	*e*LQ	LQ	06 22 28.2	
PMRV	**Marv??o**	**177.38**	**149**	*e*LR	LR	06 34 06.5	
	comp=Z,15µm,20.0s						
COI	**Coimbra**	**177.43**	**124**	*e*PKPdf	**PKPdf**	**05 29 41.8**	**+0.5**
COI	**Coimbra**	**177.43**	**124**	*e*PP	PP	05 35 20.3	-0.1
COI	**Coimbra**	**177.43**	**124**	*e*PKPdf	**PKPdf**	**05 29 41.6**	**+0.2**
ESDC	**Sonseca Array**	**177.62**	**213**	PKP	**PKPdf**	**05 29 41.9**	**+0.4**
	comp=Z,18nm,1.0s,baz=352,slow=1.4,SNR=76						
ESDC				PKPab	PKPab	05 31 27.9	+0.2
	comp=Z,18nm,1.0s,baz=134,slow=3.1,SNR=9.3						
ESLA	**Sonseca Array**	**177.62**	**213**	*e*PKPdf	**PKPdf**	**05 29 42.0**	**+0.5**
PAB	**San Pablo**	**177.65**	**205**	*e*PKPdf	**PKPdf**	**05 29 40.8**	**-0.8**
PAB	**San Pablo**	**177.65**	**205**	*e*PKIKP	**PKPdf**	**05 29 40.8**	**-0.8**
PCBR	**Castelo Branco**	**177.69**	**142**	*e*PKPdf	**PKPdf**	**05 29 42.0**	**+0.6**
PCBR	**Castelo Branco**	**177.69**	**142**	*e*PP	PP	05 35 23.4	+2.3
UCM	**Universidad Co**	**177.72**	**234**	PKP1	**PKPdf**	**05 29 41.1**	**-0.4**
UCM				SKKS		05 42 28.8	
PGAV	**Gavieira, Arco**	**178.02**	**81**	*e*PKPdf	**PKPdf**	**05 29 41.1**	**-0.4**
PGAV	**Gavieira, Arco**	**178.02**	**81**	*e*PP	PP	05 35 23.6	-0.1
PGAV	**Gavieira, Arco**	**178.02**	**81**	*e*LR	LR	06 34 17.1	
	comp=Z,34µm,20.0s						
PVIS	**Viseu**	**178.04**	**119**	*e*PKPdf	**PKPdf**	**05 29 41.5**	**0.0**
MTE	**Manteigas**	**178.07**	**131**	*e*PKPdf	**PKPdf**	**05 29 41.5**	**0.0**
MTE	**Manteigas**	**178.07**	**131**	*e*PP	PP	05 35 22.9	-0.4
MTE	**Manteigas**	**178.07**	**131**	*e*LQ	LQ	06 24 06.0	
MTE				*e*LR	LR	06 33 39.1	
	comp=Z,25µm,22.0s						
MTE	**Manteigas**	**178.07**	**131**	*e*PKPdf	**PKPdf**	**05 29 41.4**	**-0.2**
PCAB	**Cabril**	**178.21**	**88**	*e*PKPdf	**PKPdf**	**05 29 42.2**	**+0.7**
PCAB	**Cabril**	**178.21**	**88**	*e*PP	PP	05 35 27.4	+2.8
POLO	**Lamas de Olo**	**178.35**	**100**	*e*PKPdf	**PKPdf**	**05 29 41.3**	**-0.3**
POLO	**Lamas de Olo**	**178.35**	**100**	*e*PP	PP	05 35 23.9	-1.4
PVRL	**Vila Real**	**178.39**	**104**	*e*PKPdf	**PKPdf**	**05 29 42.0**	**+0.5**
PVRL	**Vila Real**	**178.39**	**104**	*e*PP	PP	05 35 29.4	+4.0
MVO	**Moncorvo**	**178.83**	**116**	*e*PKPdf	**PKPdf**	**05 29 42.2**	**+0.6**
MVO	**Moncorvo**	**178.83**	**116**	*e*PP	PP	05 35 26.5	-0.8
MVO	**Moncorvo**	**178.83**	**116**	*e*LQ	LQ	06 22 36.5	
MVO	**Moncorvo**	**178.83**	**116**	*e*LR	LR	06 33 40.9	
	comp=Z,26µm,20.0s						

WEL 21 05:13:12.2, 42°S±9°×17°4E±°, h12km, M4.6/10, ML5.4/8, MLv4.6/10, Error ellipse: s-maj=0.0km s-min=0.0km az=175.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSWZ	**Blackbirch Sta**	**0.34**	**255**	P	Pg	05 13 19.4	+0.4
BSWZ				S	Sb	05 13 25.0	-0.4
TUWZ	**Tuamarina**	**0.34**	**306**	P	Pg	05 13 19.6	+0.5
TUWZ				S	Sb	05 13 24.7	-0.8
TCW	**Tory Channel**	**0.42**	**357**	P	Pb	05 13 21.1	-0.4
TCW				S	Sg	05 13 26.8	+0.7
BHW	**Baring Head**	**0.48**	**62**	P	Pb	05 13 22.8	+0.3
BHW				S	Sb	05 13 30.4	+0.9
PLWZ	**Palliser**	**0.71**	**85**	P	Pn	05 13 27.7	-0.4
MSWZ	**Moikau Station**	**0.74**	**73**	P	Pn	05 13 28.1	-0.4
CAW	**Cannon Point**	**0.77**	**48**	P	Pn	05 13 28.8	-0.1
NNZ	**Nelson**	**0.81**	**300**	P	Pg	05 13 27.8	-0.1
PAWZ	**Paruwai Farm**	**0.88**	**74**	P	Pn	05 13 30.6	+0.3
DUWZ	**D'Urville Isla**	**0.88**	**340**	P	Pb	05 13 29.7	+0.3
OGWZ	**Otaki Gorge**	**1.04**	**39**	P	Pn	05 13 32.8	+0.2

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*IDC **21** 05:13:47.5±1.0, 41°.47S×174°.24E, h0km, mb5.0/2, mb1 5.3/3, mb1mx4.4/37, mbtmp5.1/3, ML4.7/1, Error ellipse: s-maj=35.7km s-min=26.8km az=136.0*

*ISCJB **21** 05:13:48.0±0.3, 41°.58S±0°.04×174°.18E±0°.04, h10km, mb5.3/33, Error ellipse: s-maj=6.3km s-min=3.3km az=144.1*

*WEL **21** 05:13:50.2, 41°.5S±0°.6×174°.4E±0°.6, h14km±2km, M5.2/10, ML5.5/7, MLv5.2/10, Error ellipse: s-maj=0.0km s-min=0.0km az=122.1*

*NEIC **21** 05:13:50.2±0.0, 41°.54S×174°.37E, h13km, mb5.3/33, ML5.2(WEL), After WEL.*

ISC 21 05:13:49.2±0.4, 41°.55S±0°.03×174°.35E±0°.03, h10km, n100, σ1ˢ.31/106, mb5.3/33, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.23**	**206**	S	**Sg**	**05 14 00.4**	**+3.3**
TUWZ	**Tuamarina**	**0.33**	**291**	P	**Pb**	**05 13 57.7**	**+0.6**
TUWZ				S	**Sb**	**05 14 02.9**	**+0.5**
TCW	**Tory Channel**	**0.34**	**351**	P	**Pb**	**05 13 57.9**	**+0.6**
TCW				S	**Sb**	**05 14 03.1**	**+0.3**
SNZO	**South Karori**	**0.36**	**49**	*e*Pg	**Pg**	**05 13 56.5**	**+0.2**
PLWZ	**Palliser**	**0.68**	**92**	P	**Pb**	**05 14 04.7**	**+1.5**
MSWZ	**Moikau Station**	**0.69**	**79**	P	**Pb**	**05 14 04.2**	**+0.9**
MSWZ				S	**Sb**	**05 14 14.0**	**+1.0**
CAW	**Cannon Point**	**0.70**	**51**	P	**Pb**	**05 14 04.2**	**+0.8**
NNZ	**Nelson**	**0.80**	**294**	P	**Pg**	**05 14 05.9**	**+1.3**
DUWZ	**D'Urville Isla**	**0.81**	**336**	P	**Pb**	**05 14 06.9**	**+1.5**
OGWZ	**Otaki Gorge**	**0.96**	**41**	P	**Pb**	**05 14 08.5**	**+0.6**
KHZ	**Kahutara**	**1.06**	**214**	*e*Pn	**Pg**	**05 14 10.5**	**+0.9**
THZ	**Tophouse**	**1.10**	**258**	*e*Pn	**Pg**	**05 14 11.7**	**+1.3**
MRZ	**Mangatainoka R**	**1.28**	**47**	P	**Pn**	**05 14 14.0**	**+0.8**
OHWZ	**Ohakea**	**1.53**	**29**	P	**Pg**	**05 14 19.8**	**+1.3**
BFZ	**Birch Farm**	**1.67**	**60**	*e*Pn	**Pn**	**05 14 19.1**	**+0.5**
LTZ	**Lake Taylor**	**1.98**	**231**	*e*Pn	**Pn**	**05 14 22.9**	**+0.1**
LTZ	**Lake Taylor**	**1.98**	**231**	P	**Pb**	**05 14 26.7**	**+1.4**
PNHZ	**Pukenui**	**2.15**	**41**	P	**Pb**	**05 14 29.9**	**+1.6**
KHEZ	**Kahui Hut**	**2.26**	**353**	P	**Pn**	**05 14 27.8**	**+1.1**
CRLZ	**Canterbury Las**	**2.40**	**212**	*e*Pn	**Pn**	**05 14 29.2**	**+0.7**
BHHZ	**Black Hill Sta**	**2.44**	**33**	P	**Pb**	**05 14 33.8**	**+0.7**
FWVZ	**Far West T-bar**	**2.47**	**22**	P	**Pb**	**05 14 32.5**	**-1.2**
OXZ	**Oxford**	**2.47**	**223**	*e*Pn	**Pn**	**05 14 29.9**	**+0.4**
NGZ	**Ngauruhoe**	**2.55**	**22**	P	**Pb**	**05 14 36.8**	**+1.6**
WTVZ	**West Tongariro**	**2.61**	**22**	P	**Pb**	**05 14 36.2**	**+0.1**
KRVZ	**Karewarewa**	**2.64**	**22**	P	**Pb**	**05 14 38.2**	**+1.6**
KWHZ	**Kaweka Forest**	**2.65**	**37**	P	**Pn**	**05 14 32.7**	**+0.7**
BKZ	**Black Stump Fm**	**2.89**	**35**	*e*Pn	**Pn**	**05 14 35.9**	**+0.6**
BKZ	**Black Stump Fm**	**2.89**	**35**	P	**Pb**	**05 14 42.6**	**+1.8**
RATZ	**Rangitukua**	**2.89**	**23**	P	**Pb**	**05 14 41.8**	**+0.9**
HATZ	**Hinemaiaia**	**2.97**	**27**	P	**Pb**	**05 14 43.3**	**+1.1**
WVZ	**Waitaha Valley**	**3.08**	**239**	P	**Pn**	**05 14 40.4**	**+2.4**
RPZ	**Rata Peaks**	**3.26**	**227**	Pn	**Pn**	**05 14 37.7**	**-2.6**
	80nm,0.3s,baz=63,slow=2.3,SNR=3.2						
RPZ				Pg	**Pb**	**05 14 47.4**	**+0.3**
	465nm,0.3s,baz=316,slow=3.9,SNR=9.9						
RPZ				Sn	**Sn**	**05 15 17.5**	**-1.7**
	53nm,0.3s,baz=312,slow=21,SNR=2.4						
RPZ				Lg	Lg	05 15 34.7	
	77nm,0.3s,baz=2.1,slow=17,SNR=2.0						
RPZ	**Rata Peaks**	**3.26**	**227**	*e*Pn	**Pn**	**05 14 40.2**	**-0.1**
PRRZ	**Plateau Road**	**3.42**	**28**	P	**Pb**	**05 14 48.4**	**-1.6**
FOZ	**Fox Glacier**	**3.89**	**238**	*e*Pn	**Pn**	**05 14 48.6**	**-0.5**
LBZ	**Lake Benmore**	**4.17**	**226**	*e*Pn	**Pn**	**05 14 52.4**	**-0.5**
ODZ	**Otahua Downs**	**4.42**	**216**	*e*Pn	**Pn**	**05 14 56.9**	**+0.6**
MBAZ	**Motutapu North**	**4.79**	**5**	P	Pb	05 15 08.4	-4.8
JCZ	**Jackson Bay**	**4.81**	**236**	P	**Pn**	**05 15 04.6**	**+2.8**
MXZ	**Matakaoa Point**	**5.02**	**39**	*e*Pn	**Pn**	**05 15 03.7**	**-0.8**
CTZ	**Chatham Island**	**7.01**	**111**	P	**Pn**	**05 15 30.4**	**-1.5**
MCQ	**Macquarie Isla**	**16.50**	**213**	*e*Pn	**Pn**	**05 17 41.3**	**+0.7**
	417nm,1.5s						
DZM	**Mont Dzumac**	**20.53**	**339**	*e*P	**P**	**05 18 27.7**	**0.0**
	19nm,1.0s						
ARMA	**Armidale**	**21.41**	**294**	*e*P	**P**	**05 18 36.8**	**-0.6**
	87nm,1.3s						
TOO	**Toolangi**	**22.55**	**271**	*e*P	**P**	**05 18 48.2**	**-1.3**
EIDS	**Eidsvold**	**25.12**	**303**	*e*P	**P**	**05 19 14.0**	**-0.3**
	30nm,1.2s						
STKA	**Stephens Creek**	**27.83**	**280**	*e*P	**P**	**05 19 37.0**	**-1.7**
	15nm,1.5s						
RAR	**Rarotonga**	**29.79**	**55**	*e*P	**P**	**05 19 53.5**	**-2.7**
	201nm,1.4s						
BBOO	**Buckleboo**	**31.52**	**273**	*e*P	**P**	**05 20 10.9**	**-0.5**
	42nm,1.4s						
AS31	**Alice Springs**	**38.05**	**285**	*e*P	**P**	**05 21 07.3**	**-0.6**
	5.5nm,0.9s						
ASAR	**Alice Springs**	**38.05**	**285**	P	**P**	**05 21 06.9**	**-1.0**
	5.0nm,0.4s,baz=120,slow=6.3,SNR=4.7						
FORT	**Forrest**	**38.48**	**271**	*e*P	**P**	**05 21 11.2**	**-0.2**
	106nm,1.3s						
COEN	**Coen**	**38.57**	**306**	*e*P	**P**	**05 21 12.4**	**+0.1**
	27nm,1.1s						
PPTF	**Pamatai, Papee**	**39.01**	**63**	*e*P	**P**	**05 21 15.8**	**-0.2**
	192nm,1.4s						
PPT	**Papeete**	**39.02**	**63**	*e*P	**P**	**05 21 16.3**	**+0.2**
PMG	**Port Moresby**	**39.99**	**315**	*e*P	**P**	**05 21 24.9**	**+0.7**
	33nm,0.9s						
WC3	**Warramunga Arr**	**40.07**	**290**	*e*P	**P**	**05 21 23.8**	**-1.1**
	50nm,0.9s						
WB2	**Warramunga Arr**	**40.09**	**290**	*e*P	**P**	**05 21 24.2**	**-0.8**
	45nm,0.6s						
WRAB	**Tennant Creek**	**40.10**	**290**	*e*P	**P**	**05 21 23.8**	**-1.3**
	48nm,0.6s						
WR1	**Warramunga Arr**	**40.10**	**290**	*e*P	**P**	**05 21 24.1**	**-0.9**
WRA	**Warramunga Arr**	**40.10**	**290**	P	**P**	**05 21 24.2**	**-0.9**
	45nm,0.6s,baz=125,slow=8.6,SNR=15						
MTN	**Manton Dam**	**47.20**	**294**	*e*P	**P**	**05 22 22.4**	**+0.1**
	65nm,1.3s						
MORW	**Morawa**	**48.35**	**265**	*e*P	**P**	**05 22 30.1**	**-1.0**
	43nm,1.3s						
PSAD2	**Pilbara Seismi**	**49.55**	**276**	*e*P	**P**	**05 22 39.1**	**-1.3**
	29nm,1.1s						
PSAC2	**Pilbara Seismi**	**49.63**	**276**	*e*P	**P**	**05 22 39.5**	**-1.5**
	58nm,1.3s						
PSAB3	**Pilbara Seismi**	**49.65**	**276**	*e*P	**P**	**05 22 39.8**	**-1.3**
	24nm,0.8s						
PSAC3	**Pilbara Seismi**	**49.65**	**276**	*e*P	**P**	**05 22 40.1**	**-1.1**
	27nm,1.1s						
PSAA3	**Pilbara Seismi**	**49.66**	**276**	*e*P	**P**	**05 22 39.5**	**-1.8**
	37nm,1.1s						
PSAB2	**Pilbara Seismi**	**49.67**	**276**	*e*P	**P**	**05 22 40.2**	**-1.1**
	36nm,1.2s						
PSA00	**Pilbara Seismi**	**49.67**	**276**	*e*P	**P**	**05 22 40.1**	**-1.2**
	37nm,1.3s						
PSAA1	**Pilbara Seismi**	**49.67**	**276**	*e*P	**P**	**05 22 40.2**	**-1.1**
	44nm,1.3s						
PSAA2	**Pilbara Seismi**	**49.67**	**276**	*e*P	**P**	**05 22 40.3**	**-1.1**
	54nm,1.4s						
PSAD3	**Pilbara Seismi**	**49.67**	**276**	*e*P	**P**	**05 22 40.4**	**-0.9**
	51nm,1.3s						
PSAB1	**Pilbara Seismi**	**49.69**	**276**	*e*P	**P**	**05 22 40.2**	**-1.2**
	57nm,1.4s						
PSAC1	**Pilbara Seismi**	**49.72**	**276**	*e*P	**P**	**05 22 40.6**	**-1.1**
	57nm,1.3s						
PSAD1	**Pilbara Seismi**	**49.75**	**276**	*e*P	**P**	**05 22 40.7**	**-1.2**
	52nm,1.4s						
GIRL	**Giralia**	**53.24**	**271**	*e*P	**P**	**05 23 07.5**	**-0.5**
	327nm,1.4s						
FAKI	**Fak Fak**	**53.87**	**304**	*e*P	**P**	**05 23 11.5**	**-1.1**
	58nm,1.3s						
LPH	**Laupahoehoe**	**67.34**	**31**	*e*P	**P**	**05 24 44.9**	**+0.5**
JHJ2	**Mitsune**	**80.81**	**331**	*e*P	**P**	**05 26 03.7**	**+0.9**
	212nm,1.1s						
SHPR	**Sheep Range**	**100.92**	**51**	*e*Pdif	**Pdif**	**05 27 39.2**	**+0.6**
MFID	**Camas Ranch**	**105.30**	**45**	*e*Pdif	**Pdif**	**05 27 58.8**	**+1.0**
MCMT	**McKenzie Canyo**	**107.84**	**46**	*e*Pdif	**Pdif**	**05 28 06.4**	**-2.9**
YKA	**Yellowknife Ar**	**118.16**	**30**	PKP	**PKPdf**	**05 32 35.0**	**-0.3**
	1.0nm,0.9s,baz=256,slow=2.1,SNR=2.8						
YKA				PKKPbc	**PKKPab**	**05 42 54.3**	**-0.3**
	0.6nm,0.6s,baz=53,slow=4.3,SNR=4.7						
YKB5	**Yellowknife Ar**	**118.16**	**30**	*e*PKPdf	**PKPdf**	**05 32 35.0**	**-0.3**
YKB5				*e*PKKPab	**PKKPab**	**05 42 54.4**	**-0.3**
KURBB	**Kurchatov Arra**	**123.90**	**310**	PKP	**PKPdf**	**05 32 44.5**	**-2.3**
	1.4nm,0.7s,baz=116,slow=1.6,SNR=4.4						
SPITS	**Spitsbergen Ar**	**142.19**	**353**	PKP	**PKPdf**	**05 33 21.3**	**+0.9**
	3.1nm,0.6s,baz=75,slow=6.1,SNR=2.6						
DBIC	**Dimbokro**	**145.26**	**181**	PKPbc	**PKPbc**	**05 33 27.6**	**+0.3**
	9.5nm,0.6s,baz=156,slow=5.4,SNR=6.1						
ARA0	**ARCESS Array S**	**147.61**	**340**	*e*PKPdf	**PKPdf**	**05 33 30.6**	**+0.8**
ARCES	**ARCESS Array B**	**147.61**	**340**	PKPbc	**PKPdf**	**05 33 30.7**	**+0.8**
	4.2nm,0.8s,baz=57,slow=3.3,SNR=2.8						
BR101	**Keskin Array S**	**150.30**	**280**	*e*PKPbc	**PKPbc**	**05 33 40.9**	**+0.3**
BRTR	**Keskin Array B**	**150.30**	**280**	PKPbc	**PKPbc**	**05 33 40.9**	**+0.3**
	3.6nm,1.0s,baz=122,slow=4.8,SNR=3.1						
TORD	**Torodi Ar. Bea**	**150.99**	**195**	PKPbc	**PKPbc**	**05 33 42.9**	**+0.2**
	4.0nm,0.5s,baz=164,slow=2.7,SNR=4.6						
TOA1	**Torodi Ar. Sit**	**151.00**	**195**	*e*PKPbc	**PKPbc**	**05 33 42.9**	**+0.2**
FIA0	**FINESS Array S**	**152.40**	**327**	*e*PKPbc	**PKPdf**	**05 33 42.0**	**+4.4**
FINES	**FINESS Array B**	**152.40**	**327**	PKPbc	**PKPdf**	**05 33 42.0**	**+4.4**
	1.9nm,0.5s,baz=2.6,slow=6.1,SNR=3.9						
HFS	**Hagfors**	**157.89**	**334**	PKPab	**PKPab**	**05 34 19.1**	**+0.9**
	4.1nm,0.8s,baz=89,slow=12,SNR=4.5						
NB200	**NORSAR Array S**	**157.94**	**338**	*e*PKPdf	**PKPdf**	**05 33 45.1**	**-0.2**
NOA	**NORSAR Array B**	**157.94**	**338**	PKP	**PKPdf**	**05 33 45.1**	**-0.2**
	1.8nm,1.0s,baz=35,slow=5.4,SNR=3.7						

IDC 21 05:14:40.7±1.2, 42°.17S×173°.55E, h0km, mb4.5/2, mb1 4.8/2, mb1mx4.0/37, mbtmp4.5/2, Error ellipse: s-maj=86.1km s-min=37.2km az=16.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**37.64**	**287**	P	P	05 21 57.8	+0.3
	2.9nm,0.7s,baz=117,slow=5.3,SNR=2.9						
WRA	**Warramunga Arr**	**39.77**	**292**	P	P	05 22 14.3	-1.0
	8.2nm,0.6s,baz=127,slow=7.9,SNR=2.3						
YKA	**Yellowknife Ar**	**119.00**	**30**	PKP	PKPdf	05 33 29.7	-0.5
	1.1nm,0.7s,baz=230,slow=1.8,SNR=3.7						
KURBB	**Kurchatov Arra**	**123.85**	**310**	PKP	PKiKP	05 33 40.3	+0.2
	0.3nm,0.5s,baz=107,slow=2.1,SNR=2.2						
ARCES	**ARCESS Array B**	**147.99**	**339**	PKPbc	PKPbc	05 34 26.5	-0.2
	3.8nm,0.6s,baz=29,slow=2.1,SNR=2.5						
BRTR	**Keskin Array B**	**149.81**	**279**	PKPbc	PKiKP	05 34 33.4	-0.1
	1.2nm,0.6s,baz=145,slow=5.2,SNR=3.1						
TORD	**Torodi Ar. Bea**	**150.23**	**196**	PKPbc	PKPbc	05 34 32.9	-1.1
	6.5nm,0.7s,baz=154,slow=4.1,SNR=5.4						
FINES	**FINESS Array B**	**152.59**	**326**	PKPbc	PKPbc	05 34 36.7	-1.3
	4.6nm,0.8s,baz=83,slow=4.3,SNR=2.9						

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*IDC **21** 05:15:08.4±1.1, 41°.40S×174°.36E, h0km, mb4.5/2, mb1 4.9/3, mb1mx4.2/38, mbtmp4.7/3, Error ellipse: s-maj=40.6km s-min=29.8km az=150.0*

ISC 21 05:15:10.3±1.2, 41°.4S±0°.2×174°.3E±0°.2, h10km, n9, σ0ˢ.92/10, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**3.35**	**225**	Pn	**Pn**	**05 16 03.2**	**+0.6**
	baz=6.7,slow=17,SNR=3.1						
RPZ				Sn	**Sn**	**05 16 42.0**	**-0.4**
	baz=45,slow=14,SNR=2.1						
ASAR	**Alice Springs**	**37.98**	**285**	P	**P**	**05 22 28.0**	**-0.3**
	2.5nm,0.4s,baz=126,slow=6.8,SNR=3.8						
WRA	**Warramunga Arr**	**40.02**	**290**	P	**P**	**05 22 45.7**	**+0.2**
	6.0nm,0.6s,baz=125,slow=8.7,SNR=2.9						
YKA	**Yellowknife Ar**	**118.04**	**30**	PKP	**PKPdf**	**05 33 56.2**	**0.0**
	1.0nm,0.6s,baz=258,slow=1.9,SNR=4.7						
KURBB	**Kurchatov Arra**	**123.78**	**310**	PKP	**PKPdf**	**05 34 06.8**	**-0.8**
	0.3nm,0.3s,baz=115,slow=1.7,SNR=5.0						
ARCES	**ARCESS Array B**	**147.45**	**340**	PKPbc	**PKPdf**	**05 34 52.6**	**+1.9**
	3.9nm,0.6s,baz=46,slow=2.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**151.14**	**195**	PKPbc	**PKPbc**	**05 35 03.7**	**-0.4**
	3.3nm,0.5s,baz=159,slow=3.1,SNR=3.4						
FINES	**FINESS Array B**	**152.25**	**327**	PKPbc	**PKPbc**	**05 35 04.6**	**-0.6**
	3.8nm,0.6s,baz=46,slow=4.0,SNR=3.5						
ESDC	**Sonseca Array**	**177.84**	**218**	PKP	**PKPdf**	**05 35 20.1**	**-0.6**
	1.6nm,0.9s,baz=128,slow=2.2,SNR=3.8						

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*NEIC **21** 05:17:00.2±0.0, 41°.52S×174°.43E, h8km, ML4.6(WEL), After WEL.*

WEL 21 05:16:60.0, 41°S±1°×17°4E±°, h16km±3km, M4.5/14, ML4.7/14, MLv4.5/14, Error ellipse: s-maj=0.0km s-min=0.0km az=142.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNZO	**South Karori**	**0.28**	**49**	*e*Pg	Pg	05 17 05.6	-0.4
SNZO				*e*Sg	Sb	05 17 12.0	+0.9
CMWZ	**Cape Campbell**	**0.30**	**212**	P	Pb	05 17 07.6	+0.6
CMWZ				S	Sb	05 17 12.1	+0.3
TCW	**Tory Channel**	**0.31**	**338**	P	Pb	05 17 07.6	+0.5
TCW				S	Sb	05 17 12.4	+0.6
BHW	**Baring Head**	**0.35**	**76**	P	Pb	05 17 08.1	+0.3
BHW				S	Sb	05 17 13.1	0.0
TUWZ	**Tuamarina**	**0.37**	**280**	P	Pb	05 17 07.9	-0.3
TUWZ				S	Sg	05 17 13.1	+0.4
BSWZ	**Blackbirch Sta**	**0.47**	**242**	P	Pg	05 17 09.5	+0.2
CAW	**Cannon Point**	**0.62**	**51**	P	Pb	05 17 12.9	+0.5
MSWZ	**Moikau Station**	**0.62**	**83**	P	Pb	05 17 12.9	+0.4
PLWZ	**Palliser**	**0.63**	**97**	P	Pb	05 17 12.9	+0.3
PAWZ	**Paruwai Farm**	**0.76**	**82**	P	Pb	05 17 15.4	+0.5
DUWZ	**D'Urville Isla**	**0.79**	**331**	P	Pg	05 17 15.9	+0.5
NNZ	**Nelson**	**0.83**	**289**	P	Pg	05 17 16.6	+0.4
MTW	**Mount Morrison**	**0.88**	**68**	P	Pn	05 17 17.5	-0.2
OGWZ	**Otaki Gorge**	**0.88**	**40**	P	Pn	05 17 17.4	-0.3
TRWZ	**Traveller**	**0.95**	**85**	P	Pn	05 17 18.8	0.0
HOWZ	**Holdsworth Sta**	**1.02**	**54**	P	Pg	05 17 19.7	+0.1
KHZ	**Kahutara**	**1.13**	**215**	*e*Pg	Pn	05 17 20.5	-0.7
KHZ				*e*Sg	Sb	05 17 35.5	-0.2
KHZ	**Kahutara**	**1.13**	**215**	P	Pn	05 17 20.3	-0.9
THZ	**Tophouse**	**1.17**	**256**	*e*Pg	Pn	05 17 21.4	-0.4
TMWZ	**Te Maipa**	**1.17**	**71**	P	Pn	05 17 21.5	-0.2
MRZ	**Mangatainoka R**	**1.21**	**47**	P	Pn	05 17 22.0	-0.2
CPWZ	**Castlepoint**	**1.46**	**67**	P	Pg	05 17 27.8	-0.3
QRZ	**Quartz Range**	**1.58**	**294**	P	Pb	05 17 28.7	-0.2
BFZ	**Birch Farm**	**1.60**	**60**	*e*Pn	Pb	05 17 28.6	-0.5
BFZ	**Birch Farm**	**1.60**	**60**	P	Pn	05 17 27.4	-0.2
LTZ	**Lake Taylor**	**2.05**	**231**	*e*Pn	Pb	05 17 35.5	-1.5
LTZ	**Lake Taylor**	**2.05**	**231**	P	Pn	05 17 33.6	-0.3
MOVZ	**Moawhango**	**2.32**	**26**	P	Pb	05 17 41.0	-0.5
PKE	**Pukeiti**	**2.32**	**352**	P	Pb	05 17 41.1	-0.4

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*IDC **21** 05:18:09.7±1.0, 41°.58S×174°.27E, h0km, mb4.5/2, mb1 4.8/3, mb1mx4.0/38, mbtmp4.5/3, ML4.1/1, Error ellipse: s-maj=38.6km s-min=33.2km az=174.0*

*ISCJB **21** 05:18:11.9±0.4, 41°.58S±0°.03×174°.33E±0°.04, h10km, mb4.5/2, Error ellipse: s-maj=5.8km s-min=3.6km az=138.6*

*NEIC **21** 05:18:13.0±0.0, 41°.55S×174°.33E, h5km, ML4.4(WEL), After WEL.*

*WEL **21** 05:18:12.6, 42°S±4°×17°4E±°, h12km, M4.4/9, ML4.7/9, MLv4.4/9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.8*

ISC 21 05:18:11.6±0.6, 41°.58S±0°.04×174°.34E±0°.03, h10km, n42, σ1ˢ.31/45, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.19**	**210**	S	**Sg**	**05 18 21.8**	**+3.4**
TUWZ	**Tuamarina**	**0.34**	**297**	P	**Pb**	**05 18 19.7**	**0.0**
BSWZ	**Blackbirch Sta**	**0.37**	**249**	P	**Pg**	**05 18 20.6**	**+1.6**
TCW	**Tory Channel**	**0.38**	**353**	P	**Pg**	**05 18 19.9**	**+0.8**
TCW				S	**Sb**	**05 18 25.2**	**-1.0**
SNZO	**South Karori**	**0.39**	**45**	*e*Pg	**Pg**	**05 18 20.2**	**+1.0**
SNZO				*e*Sg	**Sg**	**05 18 24.3**	**0.0**
BHW	**Baring Head**	**0.43**	**66**	P	**Pg**	**05 18 21.1**	**+1.0**
PLWZ	**Palliser**	**0.69**	**89**	P	**Pg**	**05 18 26.2**	**+1.4**
MSWZ	**Moikau Station**	**0.70**	**76**	P	**Pg**	**05 18 26.0**	**+0.9**
NNZ	**Nelson**	**0.81**	**297**	P	**Pb**	**05 18 28.2**	**+0.5**
DUWZ	**D'Urville Isla**	**0.84**	**338**	P	**Pb**	**05 18 28.8**	**+0.5**
KHZ	**Kahutara**	**1.02**	**215**	*e*Pg	**Pg**	**05 18 32.1**	**+0.9**
KHZ	**Kahutara**	**1.02**	**215**	P	**Pg**	**05 18 32.2**	**+0.9**
TRWZ	**Traveller**	**1.03**	**80**	P	**Pg**	**05 18 32.0**	**+0.6**
THZ	**Tophouse**	**1.09**	**260**	*e*Pg	**Pn**	**05 18 34.2**	**+1.2**
THZ	**Tophouse**	**1.09**	**260**	P	**Pb**	**05 18 33.5**	**+0.9**
HOWZ	**Holdsworth Sta**	**1.12**	**53**	P	**Pb**	**05 18 33.9**	**+0.9**
BFZ	**Birch Farm**	**1.70**	**59**	*e*Pn	**Pn**	**05 18 42.8**	**+1.5**
LTZ	**Lake Taylor**	**1.95**	**231**	*e*Pn	**Pn**	**05 18 45.5**	**+0.7**
LTZ	**Lake Taylor**	**1.95**	**231**	P	**Pn**	**05 18 45.2**	**+0.4**
OXZ	**Oxford**	**2.44**	**224**	*e*Pn	**Pn**	**05 18 53.8**	**+2.4**

MQZ	McQueen's Vall	2.46	210	P	Pn	05 18 49.9	-1.8
RPZ	Rata Peaks	3.23	228	Pn	Pn	05 19 01.3	-1.0
	20nm,0.3s,baz=333,slow=11,SNR=3.0						
RPZ				Sn	Sn	05 19 38.2	-2.6
	37nm,0.3s,baz=335,slow=3.7,SNR=4.3						
HHSZ	Highcliff Hill	5.08	211	P	Pn	05 19 26.4	-1.4
OUZ	Omahuta	6.38	355	*e*Pn	Pn	05 19 47.3	+1.7
DCZ	Deep Cove	6.51	231	*e*Pn	Pn	05 19 49.2	+1.9
ASAR	Alice Springs	38.05	285	P	P	05 25 29.2	-1.1
	1.7nm,0.4s,baz=120,slow=6.7,SNR=6.9						
WR1	Warramunga Arr	40.11	290	*e*P	P	05 25 46.8	-0.7
WRA	Warramunga Arr	40.11	290	P	P	05 25 46.8	-0.7
	5.1nm,0.3s,baz=132,slow=7.7,SNR=27						
YKA	Yellowknife Ar	118.20	30	PKP	PKPdf	05 36 56.6	-1.2
	0.7nm,0.8s,baz=232,slow=1.4,SNR=4.1						
YKB5	Yellowknife Ar	118.20	30	*e*PKPdf	PKPdf	05 36 56.5	-1.3
KBZ	Khabaz	144.63	290	PKP	PKPab	05 37 45.7	-0.9
	1.9nm,0.6s,baz=21,slow=1.0,SNR=2.7						
DBIC	Dimbokro	145.23	181	PKPbc	PKPbc	05 37 49.2	-0.2
	4.5nm,0.9s,baz=86,slow=5.7,SNR=3.8						
ARA0	ARCESS Array S	147.64	340	*e*PKPdf	PKPdf	05 37 53.7	+1.4
ARCES	ARCESS Array B	147.64	340	PKPbc	PKPdf	05 37 53.7	+1.4
	1.7nm,0.8s,baz=89,slow=1.7,SNR=4.9						
BR101	Keskin Array S	150.30	280	*e*PKPbc	PKPbc	05 38 02.5	-0.3
BRTR	Keskin Array B	150.30	280	PKPbc	PKPbc	05 38 02.5	-0.3
	1.0nm,0.9s,baz=125,slow=3.5,SNR=2.5						
TORD	Torodi Ar. Bea	150.95	195	PKPbc	PKPbc	05 38 04.1	-0.8
	1.8nm,0.5s,baz=160,slow=3.1,SNR=6.9						
TOA1	Torodi Ar. Sit	150.96	195	*e*PKPdf	PKPbc	05 38 04.1	-0.9
FIA0	FINESS Array S	152.43	327	*e*PKPbc	PKPbc	05 38 05.3	-1.5
FINES	FINESS Array B	152.43	327	PKPbc	PKPbc	05 38 05.3	-1.5
	1.6nm,0.6s,baz=82,slow=2.0,SNR=3.7						
EKA	Eskdalemuir Ar	166.14	354	PKPab	PKPab	05 39 17.7	+1.0
	1.6nm,0.8s,baz=165,slow=3.5,SNR=5.3						
ESDC	Sonseca Array	177.70	215	PKP	PKPdf	05 38 22.5	+0.5
	0.6nm,0.6s,baz=99,slow=1.0,SNR=2.6						

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*IDC **21** 05:21:26.8±1.0, 41°.54S×174°.47E, h0^{km}, mb4.1/3, mb1 4.3/4, mb1mx3.9/35, mbtmp4.1/4, ML4.0/1, Error ellipse: s-maj=30.6km s-min=19.4km az=134.0*

*NEIC **21** 05:21:29.0±0.0, 41°.63S×174°.31E, h15^{km}, mb4.1/2, ML4.3(WEL), After WEL.*

*WEL **21** 05:21:29.4, 42°S±6°×17°4E±°, h5^{km}, M4.2/12, ML4.6/15, MLv4.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=169.7*

ISC 21 05:21:29.6±0.9**, 41°.63S**±0°.03×**174°.29E**±0°.03**, h16**^{km}±6^{km}**, n68,** σ1^{s}**06**/71**, mb4.2**/4**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.13	206	P	Pb	05 21 33.2	-0.6
CMWZ				S	Sg	05 21 36.5	+0.6
BSWZ	Blackbirch Sta	0.32	254	P	Pb	05 21 36.6	-0.4
BSWZ				S	Sb	05 21 42.6	+0.6
TUWZ	Tuamarina	0.33	307	P	Pb	05 21 36.4	-0.6
TUWZ				S	Sb	05 21 42.1	0.0
TCW	Tory Channel	0.42	358	P	Pg	05 21 37.6	-0.4
SNZO	South Karori	0.44	45	*e*Pg	Pg	05 21 37.8	-0.7
BHW	Baring Head	0.49	63	P	Pg	05 21 38.2	-1.1
PLWZ	Palliser	0.72	86	P	Pg	05 21 43.2	-0.6
MSWZ	Moikau Station	0.75	74	P	Pg	05 21 43.5	-0.7
NNZ	Nelson	0.80	301	P	Pb	05 21 45.2	+0.1
DUWZ	D'Urville Isla	0.87	341	P	Pg	05 21 46.0	-0.5
PAWZ	Paruwai Farm	0.89	74	P	Pg	05 21 46.3	-0.5
KHZ	Kahutara	0.97	215	*e*Pn	Pn	05 21 48.7	+0.2
KHZ	Kahutara	0.97	215	P	Pn	05 21 48.7	+0.2
MTW	Mount Morrison	1.02	63	P	Pb	05 21 48.7	-0.3
OGWZ	Otaki Gorge	1.05	40	P	Pb	05 21 48.7	-0.6
THZ	Tophouse	1.05	262	*e*Pn	Pn	05 21 50.7	+1.0
THZ	Tophouse	1.05	262	P	Pn	05 21 50.3	+0.6
TRWZ	Traveller	1.07	78	P	Pn	05 21 50.5	+0.5
HOWZ	Holdsworth Sta	1.18	52	P	Pn	05 21 51.3	-0.1
MRZ	Mangatainoka R	1.37	46	P	Pn	05 21 54.3	+0.2
QRZ	Quartz Range	1.55	301	P	Pg	05 21 58.6	-0.8
OHWZ	Ohakea	1.62	29	P	Pn	05 21 58.6	+1.2
LTZ	Lake Taylor	1.89	232	*e*Pn	Pn	05 22 01.6	+0.3
WAZ	Wanganui	1.94	16	P	Pb	05 22 05.5	+0.9
PREZ	Palmer Road	2.29	357	P	Pb	05 22 10.8	+0.3
MOVZ	Moawhango	2.48	27	P	Pb	05 22 13.6	-0.3
BHHZ	Black Hill Sta	2.53	33	P	Pb	05 22 14.0	-0.6
FWVZ	Far West T-bar	2.56	23	P	Pb	05 22 14.2	-1.0
NGZ	Ngauruhoe	2.65	23	P	Pb	05 22 16.6	-0.1
WTVZ	West Tongariro	2.70	22	P	Pb	05 22 17.7	+0.1
TWVZ	Taurewa	2.70	19	P	Pb	05 22 17.7	+0.1
KRVZ	Karewarewa	2.73	23	P	Pb	05 22 18.6	+0.5
KATZ	Kakaramea	2.86	23	P	Pb	05 22 20.3	0.0
RITZ	Rihia Road	2.91	25	P	Pb	05 22 20.8	-0.2
BKZ	Black Stump Fm	2.98	35	P	Pb	05 22 22.7	+0.4
RATZ	Rangitukua	2.98	23	P	Pb	05 22 22.3	0.0
HATZ	Hinemaiaia	3.06	27	P	Pb	05 22 22.2	-1.5
WATZ	Wairara	3.12	21	P	Pb	05 22 25.6	+0.9
RPZ	Rata Peaks	3.17	228	Pn	Pn	05 22 19.1	+0.3
	17nm,0.3s,baz=290,slow=7.0,SNR=2.9						
RPZ				Pg	Pg	05 22 27.9	-2.5
	87nm,0.3s,baz=307,slow=2.0,SNR=9.5						
RPZ				Sn	Sn	05 22 57.0	+0.8
	4.4nm,0.3s,baz=315,slow=22,SNR=3.4						
RPZ				Lg	Lg	05 23 12.9	
	218nm,0.3s,baz=313,slow=3.1,SNR=14						
TLZ	Tolley Road	3.43	17	P	Pb	05 22 30.0	0.0
GRRZ	Galatos Road	3.56	24	P	Pb	05 22 34.2	+2.1
RTZ	Ruatahuna	3.65	35	P	Pb	05 22 35.6	+1.9
RRRZ	Republican Roa	3.70	28	P	Pb	05 22 37.4	+2.8
NGRZ	Ngongotaha	3.81	23	P	Pb	05 22 38.8	+2.3
KARZ	Kaharoa	3.90	23	P	Pg	05 22 42.1	-2.3
RAGZ	Rawiri	3.94	38	P	Pg	05 22 45.9	+0.8
KMRZ	Kaimai	3.99	19	P	Pb	05 22 42.1	+2.7
TOZ	Tahuroa Road	4.00	14	P	Pg	05 22 43.3	-3.0
LBZ	Lake Benmore	4.08	226	*e*Pg	Pg	05 22 49.4	+1.6
WIZ	White Island	4.67	30	P	Pn	05 22 44.8	+5.5
ETAZ	East Tamaki Re	4.69	6	P	Pn	05 22 45.3	+5.6
AS31	Alice Springs	38.03	285	*e*P	P	05 28 47.8	+0.6
	5.3nm,1.5s						
ASAR	Alice Springs	38.03	285	P	P	05 28 47.8	+0.6
	0.7nm,0.4s,baz=124,slow=7.0,SNR=5.8						
WR1	Warramunga Arr	40.09	290	*e*P	P	05 29 04.2	-0.2
WRA	Warramunga Arr	40.09	290	P	P	05 29 04.2	-0.2
	4.7nm,0.7s,baz=129,slow=7.9,SNR=8.5						
SNAA	Sanae	66.99	181	P	P	05 32 21.1	0.0
	1.5nm,0.8s,baz=160,slow=12,SNR=4.0						
SNAA	Sanae	66.99	181	*e*P	P	05 32 21.1	0.0
	17nm,1.6s						
YKA	Yellowknife Ar	118.26	30	PKP	PKPdf	05 40 13.5	-1.4
	0.8nm,0.8s,baz=194,slow=1.2,SNR=2.7						
YKB5	Yellowknife Ar	118.26	30	*e*PKPdf	PKPdf	05 40 13.5	-1.4
DBIC	Dimbokro	145.18	181	PKPbc	PKPbc	05 41 05.8	-0.5
	4.9nm,1.0s,baz=170,slow=11,SNR=2.4						
ARA0	ARCESS Array S	147.67	340	*e*PKPbc	PKPbc	05 41 11.3	-0.8
ARCES	ARCESS Array B	147.67	340	PKPbc	PKPbc	05 41 11.4	-0.8
	2.2nm,0.9s,baz=139,slow=1.8,SNR=2.9						
BR101	Keskin Array S	150.27	280	*e*PKPbc	PKiKP	05 41 21.4	+0.8
BRTR	Keskin Array B	150.27	280	PKPbc	PKiKP	05 41 21.4	+0.8
	1.1nm,0.8s,baz=128,slow=4.4,SNR=2.5						
TORD	Torodi Ar. Bea	150.90	195	PKPbc	PKPbc	05 41 21.8	0.0
	2.3nm,0.9s,baz=175,slow=3.3,SNR=7.8						
TOA1	Torodi Ar. Sit	150.91	195	*e*PKPbc	PKPbc	05 41 21.8	0.0
FIA0	FINESS Array S	152.45	327	*e*PKPbc	PKPbc	05 41 23.7	-0.2
FINES	FINESS Array B	152.45	327	PKPbc	PKPbc	05 41 23.7	-0.2
	1.8nm,0.8s,baz=2.3,slow=7.0,SNR=3.9						

IDC 21 05:22:09.4±1.6**, 41°.02S**×**174°.61E, h0**^{km}**, mb4.2**/2**, mb1 4.4**/2**, mb1mx3.8**/34**, mbtmp4.2**/2**, Error ellipse: s-maj=101.4km s-min=42.4km az=18.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	38.10	284	P	P	05 29 29.9	-0.2
	0.8nm,0.4s,baz=125,slow=7.0,SNR=3.0						
WRA	Warramunga Arr	40.11	289	P	P	05 29 46.8	-0.1
	3.9nm,0.6s,baz=129,slow=7.8,SNR=6.7						
YKA	Yellowknife Ar	117.61	30	PKP	PKiKP	05 40 56.8	+0.5
	0.5nm,0.7s,baz=256,slow=1.5,SNR=3.3						
TORD	Torodi Ar. Bea	151.54	195	PKPbc	PKPbc	05 42 05.0	-0.9
	4.3nm,1.0s,baz=156,slow=2.0,SNR=4.2						
FINES	FINESS Array B	152.07	328	PKPbc	PKPbc	05 42 05.6	0.0
	2.0nm,0.7s,baz=30,slow=5.3,SNR=3.6						

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*IDC **21** 05:23:50.7±1.6, 41°.61S×174°.49E, h0^{km}, mb3.8/2, mb1 4.1/3, mb1mx3.7/36, mbtmp3.9/3, Error ellipse: s-maj=47.7km s-min=39.4km az=167.0*

*ISCJB **21** 05:23:54.8±0.3, 41°.61S±0°.03×174°.28E±0°.04, h22^{km}±3^{km}, mb3.7/2, Error ellipse: s-maj=6.3km s-min=3.4km az=147.1*

*WEL **21** 05:23:54.3, 42°S±1°×174°.3E±1°.0, h10^{km}±3^{km}, M4.3/18, ML4.7/13, MLv4.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=150.8*

*NEIC **21** 05:23:54.8±0.0, 41°.59S×174°.29E, h13^{km}, ML4.3(WEL), After WEL.*

ISC 21 05:23:54.4±0.8**, 41°.60S**±0°.03×**174°.30E**±0°.03**, h17**^{km}±6^{km}**, n45,** σ**0**^{s}**93**/53**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	203	P	Pg	05 23 58.7	0.0
CMWZ				S	Sg	05 24 01.4	-0.3
TUWZ	Tuamarina	0.32	302	P	Pb	05 24 01.3	-0.2
TUWZ				S	Sb	05 24 06.1	-0.2
BSWZ	Blackbirch Sta	0.34	250	P	Pg	05 24 01.5	0.0
BSWZ				S	Sg	05 24 06.2	-0.2
TCW	Tory Channel	0.39	358	P	Pb	05 24 02.7	-0.2
TCW				S	Sb	05 24 08.5	0.0
SNZO	South Karori	0.42	47	*e*Pg	Pb	05 24 03.5	+0.2
SNZO				*e*Sg	Sg	05 24 07.5	-1.3
BHW	Baring Head	0.47	66	P	Pb	05 24 04.6	+0.4
PLWZ	Palliser	0.72	88	P	Pn	05 24 09.9	+0.1
MSWZ	Moikau Station	0.74	76	P	Pb	05 24 09.6	+0.8
CAW	Cannon Point	0.76	50	P	Pb	05 24 09.7	+0.5
NNZ	Nelson	0.79	299	P	Pb	05 24 10.7	+1.0
PAWZ	Paruwai Farm	0.88	76	P	Pb	05 24 12.2	+1.0
KHZ	Kahutara	0.99	214	*e*Pn	Pg	05 24 13.6	-0.1
KHZ				*e*Sg	Sb	05 24 27.1	+1.2
KHZ	Kahutara	0.99	214	P	Pg	05 24 13.5	-0.1
MTW	Mount Morrison	1.01	64	P	Pb	05 24 14.1	+0.8
OGWZ	Otaki Gorge	1.02	40	P	Pb	05 24 14.2	+0.5
THZ	Tophouse	1.05	261	*e*Pn	Pg	05 24 14.4	-0.5
THZ				*e*Sg	Sb	05 24 28.6	+0.8
THZ	Tophouse	1.05	261	P	Pn	05 24 15.4	+0.9
TRWZ	Traveller	1.06	80	P	Pg	05 24 14.4	-0.6
HOWZ	Holdsworth Sta	1.16	53	P	Pb	05 24 16.3	+0.4
TMWZ	Te Maipa	1.30	68	P	Pn	05 24 17.8	+0.1
MRZ	Mangatainoka R	1.35	46	P	Pn	05 24 19.2	+0.8
TIWZ	Tintock	1.45	56	P	Pg	05 24 22.6	+0.2
OHWZ	Ohakea	1.59	29	P	Pg	05 24 24.6	-0.4
PRWZ	Pori Road	1.64	51	P	Pn	05 24 23.1	+0.7
BFZ	Birch Farm	1.73	59	*e*Pn	Pn	05 24 23.6	-0.1
LTZ	Lake Taylor	1.91	231	*e*Pn	Pn	05 24 26.6	+0.3
LTZ	Lake Taylor	1.91	231	P	Pn	05 24 26.3	0.0
DVHZ	Dannevirke	1.92	48	P	Pn	05 24 26.2	-0.2
OXZ	Oxford	2.40	223	*e*Pn	Pn	05 24 35.3	+2.4
PKE	Pukeiti	2.42	354	P	Pg	05 24 40.6	-0.2
MQZ	McQueen's Vall	2.43	209	*e*Pn	Pn	05 24 31.4	-1.8
MOVZ	Moawhango	2.46	27	P	Pb	05 24 39.4	+1.3
TUVZ	Tukino	2.55	24	P	Pg	05 24 42.6	-0.7
NGZ	Ngauruhoe	2.62	23	P	Pb	05 24 42.8	+1.9
WTVZ	West Tongariro	2.67	22	P	Pb	05 24 43.5	+1.7
RPZ	Rata Peaks	3.19	227	Pn	Pn	05 24 42.5	-1.3
	baz=15,slow=1.3,SNR=2.4						
RPZ				Sn	Sn	05 25 19.1	-2.3
	17nm,0.3s,baz=134,slow=23,SNR=6.9						
ASAR	Alice Springs	38.02	285	P	P	05 31 12.5	+0.7
	0.3nm,0.4s,baz=125,slow=6.5,SNR=3.3						
WR1	Warramunga Arr	40.08	290	*e*P	P	05 31 28.9	-0.1
WRA	Warramunga Arr	40.08	290	P	P	05 31 28.9	-0.1
	1.2nm,0.4s,baz=126,slow=8.0,SNR=4.3						
ARA0	ARCESS Array S	147.65	340	*e*PKPdf	PKPdf	05 43 35.1	+1.2
ARCES	ARCESS Array B	147.65	340	PKPbc	PKPdf	05 43 35.1	+1.2
	1.6nm,0.8s,baz=79,slow=1.9,SNR=3.7						
TORD	Torodi Ar. Bea	150.93	195	PKPbc	PKPbc	05 43 46.4	-0.1
	0.5nm,0.4s,baz=170,slow=3.2,SNR=5.3						
TOA1	Torodi Ar. Sit	150.93	195	*e*PKPbc	PKPbc	05 43 46.4	-0.1
FIA0	FINESS Array S	152.43	327	*e*PKPbc	PKPbc	05 43 47.2	-1.2
FINES	FINESS Array B	152.43	327	PKPbc	PKPbc	05 43 47.2	-1.2
	1.2nm,0.8s,baz=60,slow=8.7,SNR=3.6						

WEL 21 05:27:38.0, 42°S±4°×**17°4E**±°**, h12**^{km}**, M3.4**/9**, ML3.8**/7**, MLv3.4**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=0.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUWZ	Tuamarina	0.39	297	P	Pg	05 27 45.9	0.0
TUWZ				S	Sg	05 27 51.2	+0.1
BHW	Baring Head	0.40	60	P	Pb	05 27 46.7	-0.4
BHW				S	Sb	05 27 53.2	+0.1
TCW	Tory Channel	0.41	346	P	Pg	05 27 45.9	-0.3
TCW				S	Sg	05 27 51.2	-0.4
BSWZ	Blackbirch Sta	0.41	255	P	Pb	05 27 47.0	-0.3
BSWZ				S	Sb	05 27 53.6	0.0
MSWZ	Moikau Station	0.66	73	P	Pb	05 27 51.6	+0.2
DUWZ	D'Urville Isla	0.89	335	P	Pg	05 27 54.6	-0.5
MTW	Mount Morrison	0.94	62	P	Pb	05 27 56.6	+0.4
KHZ	Kahutara	1.04	218	P	Pn	05 27 58.9	+0.5
KHZ				S	Sn	05 28 13.8	+1.0
HOWZ	Holdsworth Sta	1.09	50	P	Pn	05 27 59.7	+0.5
TMWZ	Te Maipa	1.22	66	P	Pb	05 28 01.1	0.0

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*IDC **21** 05:29:27.0±0.8, 41°.46S×174°.35E, h0^{km}, mb4.4/4, mb1 4.5/6, mb1mx4.1/34, mbtmp4.3/6, ML3.6/2, Error ellipse: s-maj=28.3km s-min=12.6km az=130.0*

*ISCJB **21** 05:29:30.6±0.4, 41°.76S±0°.03×174°.45E±0°.03, h29^{km}±3^{km}, mb4.3/6, Error ellipse: s-maj=5.6km s-min=2.6km az=135.7*

*WEL **21** 05:29:30.7, 41°.6S±0°.9×174°.3E±0°.9, h24^{km}±1^{km}, M4.7/30, ML5.0/23, MLv4.7/30, Error ellipse: s-maj=0.0km s-min=0.0km az=132.0*

*NEIC **21** 05:29:31.1±0.0, 41°.55S×174°.32E, h20^{km}, mb4.4/3, ML4.8(WEL), After WEL.*

ISC 21 05:29:30.8±0.9**, 41°.59S**±0°.03×**174°.35E**±0°.03**, h24**^{km}±6^{km}**, n162,** σ**1**^{s}**45**/170**, mb4.4**/6**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.19	212	S	Sb	05 29 41.0	+1.1
TUWZ	Tuamarina	0.34	298	P	Pb	05 29 38.0	-0.5
TUWZ				S	Sb	05 29 42.9	-0.7
BSWZ	Blackbirch Sta	0.37	251	P	Pb	05 29 38.9	-0.1
BSWZ				S	Sb	05 29 44.6	+0.2
TCW	Tory Channel	0.38	352	P	Pb	05 29 38.7	-0.4
TCW				S	Sb	05 29 44.2	-0.5
SNZO	South Karori	0.39	44	*e*Pg	Pb	05 29 39.3	+0.2
BHW	Baring Head	0.43	65	P	Pb	05 29 40.4	+0.5
PLWZ	Palliser	0.68	88	P	Pn	05 29 45.1	+0.1
MSWZ	Moikau Station	0.70	76	P	Pn	05 29 45.4	+0.1
CAW	Cannon Point	0.73	48	P	Pn	05 29 45.3	-0.3
NNZ	Nelson	0.82	297	P	Pb	05 29 46.1	-0.3
PAWZ	Paruwai Farm	0.84	76	P	Pn	05 29 47.7	+0.6
DUWZ	D'Urville Isla	0.85	338	P	Pn	05 29 46.9	-0.4
MTW	Mount Morrison	0.97	64	P	Pb	05 29 49.7	+0.7
OGWZ	Otaki Gorge	0.99	39	P	Pb	05 29 49.6	+0.3
KHZ	Kahutara	1.02	216	*e*Pn	Pb	05 29 50.1	+0.3
KHZ				*e*Sn	Sn	05 30 04.8	+1.6
KHZ	Kahutara	1.02	216	P	Pb	05 29 50.0	+0.3
TRWZ	Traveller	1.02	80	P	Pb	05 29 50.2	+0.2
THZ	Tophouse	1.09	261	*e*Pn	Pb	05 29 50.9	-0.2
THZ				*e*Sg	Sn	05 30 07.4	+2.3
THZ	Tophouse	1.09	261	P	Pb	05 29 50.9	-0.2
HOWZ	Holdsworth Sta	1.12	52	P	Pb	05 29 51.6	+0.1
TMWZ	Te Maipa	1.26	68	P	Pn	05 29 53.1	+0.1
MRZ	Mangatainoka R	1.31	45	P	Pb	05 29 54.7	-0.2
TIWZ	Tintock	1.42	55	P	Pn	05 29 55.4	+0.2
CPWZ	Castlepoint	1.56	65	P	Pn	05 29 57.7	+0.7
OHWZ	Ohakea	1.57	28	P	Pb	05 29 59.7	+0.6
QRZ	Quartz Range	1.57	299	P	Pb	05 29 59.0	-0.1
PRWZ	Pori Road	1.61	50	P	Pn	05 29 58.4	+0.7
POWZ	Post Office Ro	1.61	42	P	Pn	05 29 58.4	+0.6
GVZ	Greta Valley S	1.69	215	P	Pn	05 29 58.7	-0.1
BFZ	Birch Farm	1.70	58	*e*Pn	Pn	05 29 58.5	-0.4
BFZ	Birch Farm	1.70	58	P	Pn	05 29 58.6	-0.4
DVHZ	Dannevirke	1.89	47	P	Pn	05 30 01.7	+0.1
WAZ	Wanganui	1.90	15	P	Pb	05 30 05.7	+0.9
LTZ	Lake Taylor	1.95	232	*e*Pn	Pn	05 30 03.0	+0.5
LTZ	Lake Taylor	1.95	232	P	Pn	05 30 03.1	+0.7
ANWZ	Angora Road	1.97	56	P	Pn	05 30 02.8	+0.2
AMCZ	Amberley	2.02	218	P	Pn	05 30 03.5	+0.1
LREZ	Lake Rotokare	2.13	1	P	Pb	05 30 09.4	+0.7
PRHZ	Porangahau	2.18	53	P	Pn	05 30 05.6	0.0
PNHZ	Pukenui	2.19	41	P	Pn	05 30 06.2	+0.5
WPHZ	Waipukurau	2.20	47	P	Pn	05 30 06.6	+0.7
WPHZ				P	Pb	05 30 13.0	+3.0
NMEZ	Namu Road	2.21	350	P	Pb	05 30 11.0	+1.0
PREZ	Palmer Road	2.25	356	P	Pb	05 30 11.4	+0.6
KHEZ	Kahui Hut	2.31	354	P	Pb	05 30 12.3	+0.4
OKCZ	Okains Bay	2.33	204	P	Pn	05 30 06.9	-0.8
CRLZ	Canterbury Las	2.36	212	*e*Pn	Pn	05 30 06.8	-1.2
CRLZ	Canterbury Las	2.36	212	P	Pn	05 30 07.3	-0.6
MTVZ	Mangateitei	2.37	22	P	Pb	05 30 14.5	+1.8
DREZ	Durham Road	2.40	357	P	Pb	05 30 12.5	-0.8
PKE	Pukeiti	2.41	353	P	Pb	05 30 12.7	-0.9
PKVZ	Pokaka	2.42	19	P	Pb	05 30 14.8	+1.1
MOVZ	Moawhango	2.43	27	P	Pb	05 30 13.9	0.0
OXZ	Oxford	2.43	224	*e*Pn	Pn	05 30 08.3	-0.8
OXZ	Oxford	2.43	224	P	Pn	05 30 08.9	-0.2
INZ	Inchbonnie	2.44	241	P	Pn	05 30 10.4	+1.3
MQZ	McQueen's Vall	2.46	210	*e*Pn	Pn	05 30 07.8	-1.6
MQZ	McQueen's Vall	2.46	210	P	Pn	05 30 07.9	-1.4
PXZ	Pawanui	2.46	52	P	Pn	05 30 08.9	-0.6
BHHZ	Black Hill Sta	2.47	32	P	Pb	05 30 15.2	+0.6
KRHZ	Kereru	2.48	39	P	Pn	05 30 10.1	+0.3
KRHZ				P	Pb	05 30 16.6	+1.8
VRZ	Vera Road	2.48	7	P	Pb	05 30 13.6	-1.2
DRZ	Dome Shelter	2.49	22	P	Pb	05 30 16.1	+1.0
FWVZ	Far West T-bar	2.51	22	P	Pb	05 30 15.3	0.0
MHEZ	Mangahewa	2.51	360	P	Pb	05 30 18.7	+3.5
AKCZ	Akaroa Harbour	2.51	204	P	Pn	05 30 09.3	-0.9
TUVZ	Tukino	2.53	24	P	Pb	05 30 15.5	-0.1
NGZ	Ngauruhoe	2.60	22	P	Pb	05 30 17.0	+0.3
KAHZ	Kahuranaki	2.63	48	P	Pn	05 30 11.6	-0.2
WTVZ	West Tongariro	2.65	21	P	Pb	05 30 18.3	+0.7
TWVZ	Taurewa	2.65	19	P	Pb	05 30 18.2	+0.5
KWHZ	Kaweka Forest	2.68	37	P	Pb	05 30 20.1	+2.0
KRVZ	Karewarewa	2.68	22	P	Pb	05 30 18.9	+0.7
KATZ	Kakaramea	2.81	22	P	Pb	05 30 21.7	+1.3
CKHZ	Cape Kidnapper	2.84	48	P	Pb	05 30 22.4	+1.6
RITZ	Rihia Road	2.86	24	P	Pb	05 30 21.5	+0.4
BKZ	Black Stump Fm	2.92	35	P	Pb	05 30 23.6	+1.2
RATZ	Rangitukua	2.93	22	P	Pb	05 30 23.0	+0.6
HATZ	Hinemaiaia	3.01	27	P	Pb	05 30 23.3	-0.4
WVZ	Waitaha Valley	3.06	240	P	Pn	05 30 21.0	+3.3
WATZ	Wairara	3.07	21	P	Pb	05 30 24.6	-0.2
ARHZ	Aropaoanui	3.08	42	P	Pn	05 30 19.2	+1.3
HIZ	Hauiti	3.10	7	*e*Pn	Pb	05 30 22.1	-3.2
HIZ	Hauiti	3.10	7	P	Pb	05 30 23.0	-2.2
MRHZ	Matea Rd	3.18	31	P	Pn	05 30 19.8	+0.4
RPZ	Rata Peaks	3.23	228	Pn	Pn	05 30 19.1	-0.9
	5.3nm,0.3s,baz=217,slow=2.8,SNR=12						
RPZ				Pg	Pb	05 30 28.3	+0.9
	102nm,0.3s,baz=309,slow=2.0,SNR=24						
RPZ				Sn	Sn	05 30 56.2	-1.4
	39nm,0.3s,baz=324,slow=21,SNR=11						
RPZ				Lg	Lg	05 31 12.4	
	47nm,0.3s,baz=272,slow=20,SNR=3.6						
RPZ	Rata Peaks	3.23	228	*e*Pn	Pn	05 30 18.6	-1.4
RPZ	Rata Peaks	3.23	228	P	Pn	05 30 20.4	+0.5
RPZ				P	Pb	05 30 26.6	-0.8
MTHZ	Maungataniwha	3.34	36	P	Pb	05 30 28.5	-0.8
TLZ	Tolley Road	3.38	16	P	Pb	05 30 28.4	-1.7
ALRZ	Allen Road	3.39	27	P	Pb	05 30 29.4	-0.8
RAHZ	Arahi	3.40	39	P	Pn	05 30 25.2	+2.9
PRRZ	Plateau Road	3.46	28	P	Pb	05 30 29.7	-1.8
HSRZ	Hossack Road	3.59	25	P	Pb	05 30 33.0	-0.5
KNZ	Kokohu	3.61	46	P	Pn	05 30 24.8	-0.5
MHGZ	Mahia Peninsul	3.65	49	P	Pn	05 30 24.9	-0.9
RRRZ	Republican Roa	3.65	28	P	Pb	05 30 32.1	-2.6
TARZ	Mount Tarawera	3.74	27	P	Pb	05 30 33.7	-2.5
NGRZ	Ngongotaha	3.76	23	P	Pb	05 30 36.0	-0.5
PRGZ	Paritu Road	3.80	47	P	Pn	05 30 26.6	-1.3
FOZ	Fox Glacier	3.87	238	*e*Pn	Pn	05 30 30.8	+2.0
FOZ	Fox Glacier	3.87	238	P	Pn	05 30 31.8	+3.1
RAGZ	Rawiri	3.89	38	P	Pn	05 30 30.8	+1.7
RIGZ	Rimuhau	3.89	43	P	Pn	05 30 29.0	-0.2
URZ	Urewera	3.95	33	Pn	Pn	05 30 27.8	-2.1
	5.8nm,0.3s,baz=232,slow=5.3,SNR=8.1						
URZ				Pg	Pb	05 30 37.2	-2.5
	26nm,0.3s,baz=256,slow=8.2,SNR=13						
URZ				Sn	Sn	05 31 13.0	-2.4
	4.1nm,0.3s,baz=288,slow=20,SNR=2.8						
URZ				Lg	Lg	05 31 28.3	
	19nm,0.3s,baz=15,slow=13,SNR=4.6						
URZ	Urewera	3.95	33	*e*Pn	Pn	05 30 31.2	+1.3
URZ	Urewera	3.95	33	P	Pn	05 30 31.8	+1.9
TOZ	Tahuroa Road	3.96	13	P	Pb	05 30 34.8	-5.0
MWZ	Matawai	4.07	38	P	Pn	05 30 31.9	+0.3
OPRZ	Ohinepanea	4.11	25	P	Pn	05 30 34.6	+2.4
LBZ	Lake Benmore	4.14	226	*e*Pn	Pn	05 30 33.2	+0.7
LBZ	Lake Benmore	4.14	226	P	Pn	05 30 32.7	+0.2
TKGZ	Te Karaka	4.14	42	P	Pn	05 30 32.7	+0.2
ODZ	Otahua Downs	4.38	217	*e*Pn	Pn	05 30 35.0	-0.8
ODZ	Otahua Downs	4.38	217	P	Pn	05 30 35.3	-0.6
TWGZ	Tauwhareparae	4.41	41	P	Pn	05 30 36.9	+0.6
RUGZ	Raukumara Rang	4.44	36	P	Pn	05 30 36.6	-0.2
KBAZ	Karaka Road Bo	4.51	6	P	Pn	05 30 41.6	+4.0
MKAZ	Moumakai	4.53	8	P	Pn	05 30 41.0	+3.1
AWAZ	Awhitu Peninsu	4.53	3	P	Pn	05 30 41.1	+3.2
ETAZ	East Tamaki Re	4.65	6	P	Pn	05 30 42.9	+3.4
WTAZ	Waiatarua	4.66	2	P	Pn	05 30 43.7	+4.0
HAZ	Te Kaha	4.66	36	P	Pn	05 30 41.5	+1.9
EPAZ	Eden Park BICE	4.72	4	P	Pb	05 30 47.0	-5.9
JCZ	Jackson Bay	4.78	237	P	Pn	05 30 45.6	+4.2
WIAZ	Waiheke Island	4.83	8	P	Pn	05 30 45.5	+3.4
MBAZ	Motutapu North	4.83	5	P	Pn	05 30 45.5	+3.4
KUZ	Kuaotunu	4.96	13	P	Pn	05 30 47.3	+3.6
MXZ	Matakaoa Point	5.05	39	*e*Pn	Pn	05 30 43.2	-1.9
MXZ	Matakaoa Point	5.05	39	P	Pn	05 30 46.5	+1.5
WKZ	Wanaka	5.06	229	*e*Pn	Pn	05 30 45.4	+0.1
HHSZ	Highcliff Hill	5.08	211	P	Pn	05 30 44.6	-0.8
EAZ	Earnscleugh	5.17	224	P	Pn	05 30 47.6	+0.9
GRZ	Great Barrier	5.40	10	P	Pb	05 30 58.2	-6.3
TUZ	Tuapeka	5.54	216	P	Pn	05 30 51.0	-0.7
MSZ	Milford Sound	5.62	235	P	Pn	05 30 58.4	+5.6
WCZ	Waipu Caves	5.64	360	P	Pn	05 30 56.1	+2.9
MLZ	Mavora Lakes	5.90	228	*e*Pn	Pn	05 30 56.0	-0.7
SYZ	Scrubby Hill	6.21	215	P	Pn	05 31 01.0	+0.1
WHZ	Wether Hill Ro	6.32	225	*e*Pn	Pn	05 31 02.1	-0.3
OUZ	Omahuta	6.39	354	*e*Pn	Pn	05 31 06.1	+2.7
OUZ	Omahuta	6.39	354	P	Pn	05 31 06.3	+2.9
APZ	The Paps	6.95	219	P	Pn	05 31 11.3	+0.2
CTZ	Chatham Island	7.00	111	P	Pn	05 31 11.1	-0.6
AS31	Alice Springs	38.06	285	*e*P	P	05 36 46.3	-1.2
	2.2nm,1.1s						
ASAR	Alice Springs	38.06	285	P	P	05 36 46.8	-0.7
	1.6nm,0.6s,baz=125,slow=6.7,SNR=13						
WB2	Warramunga Arr	40.11	290	*e*P	P	05 37 04.4	-0.2
	9.8nm,0.6s						
WR1	Warramunga Arr	40.12	290	*e*P	P	05 37 04.1	-0.6
WRA	Warramunga Arr	40.12	290	P	P	05 37 04.1	-0.6
	6.4nm,0.6s,baz=121,slow=8.5,SNR=38						
SNAA	Sanae	67.03	181	P	P	05 40 22.0	+0.7
	1.7nm,0.9s,baz=195,slow=12,SNR=4.1						
SNAA	Sanae	67.03	181	*e*P	P	05 40 22.3	+0.9
	4.1nm,1.2s						
CMAR	Chiang Mai Arr	91.64	293	P	P	05 42 36.9	+0.8
	1.0nm,0.3s,baz=166,slow=4.6,SNR=2.7						
YKA	Yellowknife Ar	118.20	30	PKP	PKiKP	05 48 15.2	+0.4
	0.2nm,0.7s,baz=246,slow=1.7,SNR=4.1						
YKB5	Yellowknife Ar	118.20	30	*e*PKPdf	PKiKP	05 48 15.2	+0.4
DBIC	Dimbokro	145.22	181	PKPbc	PKPab	05 49 06.5	0.0
	3.2nm,0.7s,baz=138,slow=2.9,SNR=5.0						
ARA0	ARCESS Array S	147.65	340	*e*PKPbc	PKPbc	05 49 11.2	-0.9
ARCES	ARCESS Array B	147.65	340	PKPbc	PKPbc	05 49 11.1	-0.9
	2.0nm,0.9s,baz=38,slow=2.2,SNR=8.0						
BR101	Keskin Array S	150.31	280	*e*PKPbc	PKPbc	05 49 19.2	-0.6
BRTR	Keskin Array B	150.31	280	PKPbc	PKPbc	05 49 19.2	-0.6
	0.4nm,0.6s,baz=134,slow=4.2,SNR=2.7						
TORD	Torodi Ar. Bea	150.95	195	PKPbc	PKPbc	05 49 22.1	+0.2
	0.9nm,0.7s,baz=170,slow=2.3,SNR=15						
TOA1	Torodi Ar. Sit	150.95	195	*e*PKPbc	PKPbc	05 49 22.1	+0.2
FIA0	FINESS Array S	152.44	327	*e*PKPbc	PKPbc	05 49 22.6	-1.3
FINES	FINESS Array B	152.44	327	PKPbc	PKPbc	05 49 22.6	-1.3
	1.0nm,0.7s,baz=72,slow=4.5,SNR=4.4						

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*IDC **21** 05:31:35.1±0.9, 41°.47S×174°.35E, h0^{km}, mb4.6/5, mb1 4.7/7, mb1mx4.2/31, mbtmp4.5/7, ML4.5/1, Error ellipse: s-maj=28.6km s-min=16.0km az=134.0*

*WEL **21** 05:31:37.7, 42°S±4°×17°4E±°, h12^{km}, M4.6/23, ML4.9/19, MLv4.6/23, Error ellipse: s-maj=0.0km s-min=0.0km az=0.1*

*NEIC **21** 05:31:38.1±0.0, 41°.57S×174°.37E, h6^{km}, ML4.6(WEL),* *After WEL.*

ISC 21 05:31:38.0±0.5,**41°.61S**±0°.03×**174°.37E**±0°.03,**h20**^{km}±2^{km},**n105**,σ**1^{s}.43**/107,**mb4.3**/5,**Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.18**	**220**	P	**Pb**	**05 31 43.8**	**+0.1**
CMWZ				S	**Sb**	**05 31 47.1**	**-0.6**
TUWZ	**Tuamarina**	**0.37**	**299**	P	**Pb**	**05 31 45.7**	**0.0**
TUWZ				S	**Sb**	**05 31 51.3**	**+0.4**
BSWZ	**Blackbirch Sta**	**0.38**	**254**	P	**Pb**	**05 31 46.8**	**+0.7**
BSWZ				S	**Sb**	**05 31 52.8**	**+1.4**
SNZO	**South Karori**	**0.39**	**40**	*e*Pg	**Pb**	**05 31 46.2**	**+0.1**
TCW	**Tory Channel**	**0.41**	**350**	P	**Pb**	**05 31 46.3**	**-0.1**
TCW				S	**Sb**	**05 31 51.4**	**-0.6**
BHW	**Baring Head**	**0.43**	**62**	P	**Pb**	**05 31 47.1**	**+0.3**
PLWZ	**Palliser**	**0.67**	**87**	P	**Pb**	**05 31 51.7**	**+0.7**
MSWZ	**Moikau Station**	**0.69**	**74**	P	**Pb**	**05 31 52.0**	**+0.6**
CAW	**Cannon Point**	**0.73**	**47**	P	**Pb**	**05 31 52.1**	**+0.1**
PAWZ	**Paruwai Farm**	**0.83**	**74**	P	**Pn**	**05 31 55.0**	**+0.5**
NNZ	**Nelson**	**0.84**	**298**	P	**Pn**	**05 31 54.4**	**-0.3**
DUWZ	**D'Urville Isla**	**0.88**	**337**	P	**Pn**	**05 31 54.6**	**-0.5**
MTW	**Mount Morrison**	**0.96**	**62**	P	**Pb**	**05 31 57.2**	**+1.2**
OGWZ	**Otaki Gorge**	**1.00**	**38**	P	**Pn**	**05 31 56.7**	**-0.1**
TRWZ	**Traveller**	**1.01**	**78**	P	**Pb**	**05 31 57.9**	**+1.1**
KHZ	**Kahutara**	**1.01**	**217**	*e*Pg	**Pb**	**05 31 58.3**	**+1.4**
KHZ	**Kahutara**	**1.01**	**217**	P	**Pb**	**05 31 58.4**	**+1.6**
THZ	**Tophouse**	**1.11**	**262**	*e*Pg	**Pn**	**05 31 59.2**	**+0.9**
THZ	**Tophouse**	**1.11**	**262**	P	**Pn**	**05 31 59.2**	**+0.9**
HOWZ	**Holdsworth Sta**	**1.12**	**51**	P	**Pn**	**05 31 59.4**	**+0.8**
TMWZ	**Te Maipa**	**1.25**	**67**	P	**Pn**	**05 32 01.0**	**+0.7**
MRZ	**Mangatainoka R**	**1.32**	**44**	P	**Pn**	**05 32 02.1**	**+0.9**
TIWZ	**Tintock**	**1.42**	**54**	P	**Pn**	**05 32 03.1**	**+0.5**
OHWZ	**Ohakea**	**1.58**	**27**	P	**Pb**	**05 32 07.7**	**+1.2**
QRZ	**Quartz Range**	**1.59**	**299**	P	**Pb**	**05 32 07.0**	**+0.2**
PRWZ	**Pori Road**	**1.61**	**49**	P	**Pn**	**05 32 06.0**	**+0.8**
POWZ	**Post Office Ro**	**1.61**	**41**	P	**Pn**	**05 32 06.4**	**+1.0**
GVZ	**Greta Valley S**	**1.68**	**216**	P	**Pn**	**05 32 07.0**	**+0.8**
BFZ	**Birch Farm**	**1.69**	**57**	*e*Pn	**Pb**	**05 32 08.9**	**+0.4**
DVHZ	**Dannevirke**	**1.89**	**47**	P	**Pn**	**05 32 10.1**	**+1.0**
WAZ	**Wanganui**	**1.91**	**14**	P	**Pb**	**05 32 13.6**	**+1.4**
LTZ	**Lake Taylor**	**1.95**	**232**	*e*Pn	**Pn**	**05 32 11.0**	**+1.0**
LTZ	**Lake Taylor**	**1.95**	**232**	P	**Pn**	**05 32 10.9**	**+1.0**
AMCZ	**Amberley**	**2.02**	**219**	P	**Pn**	**05 32 11.5**	**+0.7**
LREZ	**Lake Rotokare**	**2.15**	**1**	P	Pb	05 32 21.3	+5.1
PNHZ	**Pukenui**	**2.19**	**40**	P	**Pb**	**05 32 18.9**	**+1.9**
PREZ	**Palmer Road**	**2.27**	**356**	P	**Pb**	**05 32 21.5**	**+3.2**
OKCZ	**Okains Bay**	**2.32**	**204**	P	**Pn**	**05 32 15.1**	**0.0**
KHEZ	**Kahui Hut**	**2.33**	**353**	P	**Pb**	**05 32 21.9**	**+2.6**
CRLZ	**Canterbury Las**	**2.35**	**213**	*e*Pn	**Pn**	**05 32 14.8**	**-0.6**
CRLZ	**Canterbury Las**	**2.35**	**213**	P	**Pn**	**05 32 15.7**	**+0.3**
DREZ	**Durham Road**	**2.42**	**357**	P	**Pb**	**05 32 23.7**	**+2.8**
OXZ	**Oxford**	**2.43**	**224**	*e*Pn	**Pn**	**05 32 16.6**	**0.0**
OXZ	**Oxford**	**2.43**	**224**	P	**Pn**	**05 32 18.0**	**+1.5**
PKE	**Pukeiti**	**2.43**	**353**	P	**Pb**	**05 32 21.6**	**+0.6**
PKVZ	**Pokaka**	**2.44**	**18**	P	Pb	05 32 26.3	+5.2
MOVZ	**Moawhango**	**2.44**	**26**	P	**Pb**	**05 32 22.4**	**+1.1**
INZ	**Inchbonnie**	**2.44**	**242**	P	**Pb**	**05 32 22.8**	**+1.6**
MQZ	**McQueen's Vall**	**2.45**	**211**	*e*Pn	**Pn**	**05 32 16.1**	**-0.6**
MQZ	**McQueen's Vall**	**2.45**	**211**	P	**Pn**	**05 32 16.2**	**-0.6**
BHHZ	**Black Hill Sta**	**2.48**	**32**	P	**Pb**	**05 32 24.0**	**+2.1**
KRHZ	**Kereru**	**2.49**	**38**	P	**Pb**	**05 32 22.7**	**+0.7**
VRZ	**Vera Road**	**2.50**	**7**	P	**Pb**	**05 32 24.6**	**+2.4**
AKCZ	**Akaroa Harbour**	**2.50**	**205**	P	**Pn**	**05 32 17.6**	**0.0**
DRZ	**Dome Shelter**	**2.50**	**22**	P	Pb	05 32 27.2	+4.8
TUVZ	**Tukino**	**2.54**	**23**	P	**Pb**	**05 32 25.7**	**+2.8**
NGZ	**Ngauruhoe**	**2.61**	**22**	P	**Pb**	**05 32 28.5**	**+4.3**
KAHZ	**Kahuranaki**	**2.63**	**47**	P	**Pb**	**05 32 25.6**	**+1.1**
WTVZ	**West Tongariro**	**2.66**	**21**	P	**Pb**	**05 32 29.1**	**+4.0**
TWVZ	**Taurewa**	**2.67**	**18**	P	**Pb**	**05 32 28.8**	**+3.7**
KWHZ	**Kaweka Forest**	**2.69**	**36**	P	**Pb**	**05 32 28.8**	**+3.4**
KRVZ	**Karewarewa**	**2.69**	**22**	P	**Pb**	**05 32 27.8**	**+2.2**
KATZ	**Kakaramea**	**2.82**	**22**	P	**Pb**	**05 32 30.3**	**+2.6**
BKZ	**Black Stump Fm**	**2.93**	**34**	P	**Pb**	**05 32 31.6**	**+2.0**
HATZ	**Hinemaiaia**	**3.02**	**26**	P	**Pb**	**05 32 33.5**	**+2.4**
HIZ	**Hauiti**	**3.12**	**7**	P	**Pb**	**05 32 33.6**	**+0.9**
RPZ	**Rata Peaks**	**3.22**	**228**	Pn	**Pn**	**05 32 27.3**	**-0.1**
	50nm,0.3s,baz=52,slow=3.1,SNR=8.4						
RPZ				Pg	**Pb**	**05 32 36.4**	**+1.8**
	107nm,0.3s,baz=233,slow=4.6,SNR=6.7						
RPZ				Sn	**Sn**	**05 33 04.7**	**-0.5**
	54nm,0.3s,baz=132,slow=23,SNR=9.1						
RPZ				Lg	Lg	05 33 20.6	
	81nm,0.3s,baz=100,slow=23,SNR=4.7						
RPZ	**Rata Peaks**	**3.22**	**228**	*e*Pn	**Pn**	**05 32 27.6**	**+0.2**
RPZ	**Rata Peaks**	**3.22**	**228**	P	**Pn**	**05 32 28.4**	**+0.9**
TARZ	**Mount Tarawera**	**3.75**	**27**	P	**Pb**	**05 32 40.5**	**-3.0**
URZ	**Urewera**	**3.96**	**33**	Pn	**Pn**	**05 32 37.2**	**-0.3**
	baz=348,slow=14,SNR=1.1						
URZ				Sn	**Sn**	**05 33 23.3**	**+0.1**
	16nm,0.3s,baz=77,slow=17,SNR=2.1						
URZ				Lg	Lg	05 33 40.2	
	6.9nm,0.3s,baz=293,slow=18,SNR=2.2						
LBZ	**Lake Benmore**	**4.14**	**226**	*e*Pn	**Pn**	**05 32 41.0**	**+1.0**
ODZ	**Otahua Downs**	**4.38**	**217**	*e*Pn	**Pn**	**05 32 43.0**	**-0.3**
ODZ	**Otahua Downs**	**4.38**	**217**	P	**Pn**	**05 32 43.7**	**+0.4**
AWAZ	**Awhitu Peninsu**	**4.55**	**3**	P	Pb	05 32 52.9	-4.2
ETAZ	**East Tamaki Re**	**4.67**	**6**	P	Pb	05 32 54.4	-4.8
JCZ	**Jackson Bay**	**4.79**	**237**	P	Pn	05 32 55.8	+6.8
WIAZ	**Waiheke Island**	**4.85**	**7**	P	Pb	05 32 57.7	-4.5
HHSZ	**Highcliff Hill**	**5.07**	**211**	P	**Pn**	**05 32 52.7**	**-0.1**
TUZ	**Tuapeka**	**5.53**	**217**	P	**Pn**	**05 33 00.3**	**+1.2**
SYZ	**Scrubby Hill**	**6.20**	**216**	P	**Pn**	**05 33 09.5**	**+1.2**
CTA	**Charters Tower**	**32.05**	**303**	P	**P**	**05 38 04.1**	**+0.7**
	4.4nm,1.0s,baz=175,slow=4.6,SNR=3.9						
ASAR	**Alice Springs**	**38.08**	**285**	P	**P**	**05 38 54.9**	**-0.5**
	2.5nm,0.5s,baz=125,slow=6.6,SNR=20						
WR1	**Warramunga Arr**	**40.14**	**290**	*e*P	**P**	**05 39 12.4**	**-0.2**
WRA	**Warramunga Arr**	**40.14**	**290**	P	**P**	**05 39 12.4**	**-0.2**
	12nm,0.4s,baz=124,slow=8.2,SNR=80						
KSRS	**Korea Array**	**89.39**	**325**	P	**P**	**05 44 31.1**	**-1.7**
	0.8nm,0.5s,baz=171,slow=5.2,SNR=3.4						
CMAR	**Chiang Mai Arr**	**91.67**	**293**	P	**P**	**05 44 44.9**	**+1.0**
	1.7nm,0.3s,baz=147,slow=3.4,SNR=4.5						
YKA	**Yellowknife Ar**	**118.21**	**30**	PKP	**PKiKP**	**05 50 22.7**	**+0.2**
	1.0nm,0.6s,baz=258,slow=1.6,SNR=15						
YKA				PKKPbc	**PKKPbc**	**06 00 42.1**	**+0.1**
	0.4nm,0.6s,baz=48,slow=4.2,SNR=7.4						
YKB5	**Yellowknife Ar**	**118.21**	**30**	*e*PKPdf	**PKiKP**	**05 50 22.7**	**+0.2**
YKB5				*e*PKKPab	**PKKPbc**	**06 00 42.1**	**+0.1**
MK32	**Makanchi Array**	**119.96**	**308**	*e*PKPdf	**PKPdf**	**05 50 25.6**	**-0.8**
MKAR	**Makanchi Array**	**119.96**	**308**	PKP	**PKPdf**	**05 50 25.6**	**-0.8**
	0.4nm,0.6s,baz=150,slow=0.8,SNR=4.2						
SPITS	**Spitsbergen Ar**	**142.25**	**353**	PKhKP	**PKPdf**	**05 51 04.8**	**-2.6**
	5.0nm,0.8s,baz=351,slow=7.3,SNR=2.8						
LIC	**Lamto**	**144.76**	**181**	*e*P	**PKPdf**	**05 51 13.4**	**-0.4**
	117nm,1.7s						
KIC	**Kosan Boka**	**144.89**	**182**	*e*P	**PKPdf**	**05 51 13.6**	**-0.4**
	17nm,0.6s						
TIC	**Toumodi**	**145.18**	**181**	*e*P	**PKPbc**	**05 51 11.3**	**-2.7**
DBIC	**Dimbokro**	**145.20**	**181**	PKPbc	**PKPdf**	**05 51 15.3**	**+0.8**
	6.1nm,0.6s,baz=154,slow=5.0,SNR=11						
ARA0	**ARCESS Array S**	**147.68**	**340**	*e*PKPdf	**PKPbc**	**05 51 19.3**	**-0.5**
ARCES	**ARCESS Array B**	**147.68**	**340**	PKPbc	**PKPbc**	**05 51 19.3**	**-0.5**
	1.8nm,0.5s,baz=30,slow=2.1,SNR=14						
BR101	**Keskin Array S**	**150.32**	**280**	*e*PKPdf	**PKPbc**	**05 51 26.5**	**-1.1**
BRTR	**Keskin Array B**	**150.32**	**280**	PKPbc	**PKPbc**	**05 51 26.5**	**-1.1**
	1.3nm,0.9s,baz=111,slow=3.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**150.93**	**195**	PKPbc	**PKiKP**	**05 51 29.9**	**-0.3**
	6.2nm,0.8s,baz=155,slow=1.5,SNR=28						
TOA1	**Torodi Ar. Sit**	**150.94**	**195**	*e*PKPbc	**PKiKP**	**05 51 29.9**	**-0.3**
FIA0	**FINESS Array S**	**152.47**	**327**	*e*PKPbc	**PKPbc**	**05 51 30.9**	**-0.8**
FINES	**FINESS Array B**	**152.47**	**327**	PKPbc	**PKPbc**	**05 51 30.9**	**-0.8**
	2.0nm,0.6s,baz=47,slow=2.8,SNR=12						
ESDC	**Sonseca Array**	**177.69**	**214**	PKP	**PKPdf**	**05 51 48.4**	**+1.8**
	0.2nm,0.4s,baz=286,slow=1.7,SNR=5.5						

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*IDC **21** 05:33:43.0±0.5,36°.19N×141°.78E,h0^{km},mb4.5/31, mb1 4.5/37,mb1mx4.4/55,mbtmp4.4/37,ML3.9/5,MS4.8/2, Ms1 4.9/2,ms1mx4.1/37,Error ellipse: s-maj=13.6km s-min=11.7km az=130.0*

*ISCJB **21** 05:33:44.6±0.2,36°.27N±0°.03×141°.84E±0°.03,h19^{km}, mb4.7/91,Error ellipse: s-maj=4.2km s-min=2.9km az=138.9*

*JMA **21** 05:33:45.7±0.2,36°.25N×141°.84E,h61^{km},M4.7*

*BJI **21** 05:33:45.8±0.0,36°.45N×141°.65E,h27^{km},mb4.9/38, mB5.3/19,Ms5.4/21,Ms7 5.1/21*

*MOS **21** 05:33:47.7±1.1,36°.48N×141°.73E,h33^{km},mb5.0/40,Error ellipse: s-maj=8.0km s-min=5.0km az=108.8*

*NEIC **21** 05:33:48.4±1.4,36°.32N×141°.76E,h32^{km}±4^{km},mb4.8/51, Error ellipse: s-maj=8.0km s-min=3.9km az=155.0*

ISC 21 05:33:46.2±0.4,**36°.31N**±0°.04×**141°.80E**±0°.04,**h19**^{km},**n246**,σ**1^{s}.54**/262,**mb4.8**/91,**8C-6D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.98**	**232**	P	**Pb**	**05 34 03.5**	**-1.0**
CHOJ				*e*S	**Sb**	**05 34 16.7**	**-0.3**
JHYU	**Hitachinakayam**	**0.98**	**272**	P	**Pb**	**05 34 04.1**	**-0.4**
JHYU				*e*S	**Sn**	**05 34 18.4**	**+0.1**
JHO	**Hitachi**	**1.03**	**287**	P	**Pb**	**05 34 04.7**	**-0.8**
JIHU	**Itakohorinouch**	**1.09**	**252**	P	**Pb**	**05 34 06.0**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.12**	**315**	P	**Pb**	**05 34 06.5**	**-0.6**
JFK	**Kawauchi**	**1.29**	**325**	P	**Pn**	**05 34 09.1**	**-0.1**
JFT	**Otama**	**1.68**	**316**	P	**Pn**	**05 34 15.5**	**+0.9**
JMM	**Marumori**	**1.75**	**333**	P	**Pn**	**05 34 15.8**	**+0.3**
BSO1	**Boso 1**	**1.79**	**202**	P	**Pn**	**05 34 14.1**	**-1.4**
BSO1				*e*S	**Sn**	**05 34 34.9**	**-2.5**
BSO3	**Boso 3**	**1.84**	**215**	P	**Pn**	**05 34 15.4**	**-1.1**
JAG	**Ashikaga**	**1.90**	**274**	P	**Pn**	**05 34 17.0**	**-0.6**
JRY	**Ryogami san**	**2.36**	**264**	P	**Pn**	**05 34 23.8**	**-0.2**
MJAR	**Matsushiro Arr**	**2.90**	**276**	Pn	**Pn**	**05 34 32.0**	**+0.6**
	6.3nm,0.3s,baz=112,slow=7.9,SNR=626						
MJAR				Sn	**Sb**	**05 35 10.8**	**-1.8**
	3.5nm,0.3s,baz=131,slow=7.3,SNR=4.9						
MJAR				LR	LR	05 35 55.2	
	comp=Z,4µm,19.1s,baz=110,slow=46						
MAJO	**Matsushiro**	**2.91**	**276**	*e*Pn	**Pn**	**05 34 33.2**	**+1.8**
MAJO				*e*Sg	**Sb**	**05 35 10.8**	**-1.8**
MAJO	**Matsushiro**	**2.91**	**276**	*e*P	**Pn**	**05 34 33.2**	**+1.8**
MAJO				*e*		05 35 10.8	
MAT	**Matsushiro**	**2.91**	**276**	P	**Pn**	**05 34 32.6**	**+1.1**
MAT				S	**Sn**	**05 35 07.6**	**+1.7**
MJB9	**Matsu-Tunnel**	**2.91**	**276**	*e*Pn	**Pn**	**05 34 33.2**	**+1.7**
JHJ2	**Mitsune**	**3.59**	**208**	*e*Pn	**Pn**	**05 34 39.8**	**-1.0**
JHJ2				*e*Sn	**Sn**	**05 35 21.9**	**-0.7**
JHJ	**Hachijo jima 2**	**3.59**	**208**	Pn	**Pn**	**05 34 39.2**	**-1.7**
	55nm,0.3s,baz=328,slow=18,SNR=33						
JHJ				Sn	**Sn**	**05 35 19.4**	**-3.3**
	222nm,0.3s,baz=294,slow=22,SNR=15						
INU	**Inuyama**	**4.00**	**257**	*e*Pn	**Pn**	**05 34 48.1**	**+1.5**
ERM	**Erimo**	**5.79**	**10**	*e*Pn	**Pn**	**05 35 10.5**	**-0.5**
ERM				*e*Sn	**Sn**	**05 36 15.6**	**-1.3**
ERM	**Erimo**	**5.79**	**10**	*e*P	**Pn**	**05 35 10.5**	**-0.5**
ERM				*e*		05 36 15.6	
ASAJ	**Asahikawa**	**7.82**	**4**	Pn	**Pn**	**05 35 38.9**	**0.0**
	2.6nm,0.3s,baz=210,slow=13,SNR=16						
ASAJ				Sn	**Sn**	**05 37 04.8**	**-2.0**
	1.4nm,0.3s,baz=49,slow=20,SNR=4.7						
GRPR	**Tuman**	**8.25**	**20**	*e*P	**Pn**	**05 35 41.8**	**-3.0**
GRPR				*i* S	**Sn**	**05 37 09.6**	**-7.8**
GRPR				pmax	pmax		
	comp=Z,61nm,0.6s						
LAGR	**Lagunnoye**	**8.31**	**20**	*e*P	**Pn**	**05 35 44.9**	**-0.7**
LAGR				*i* S	**Sn**	**05 37 15.3**	**-3.6**
LAGR				pmax	pmax		
	comp=Z,157nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**8.31**	**21**	*e*P	**Pn**	**05 35 43.0**	**-2.7**
YUK				*i* S	**Sn**	**05 37 11.9**	**-7.1**
YUK				pmax	pmax		
	comp=N,51nm,0.2s						
YUK				pmax	pmax		
	comp=Z,94nm,0.2s						
YUK				pmax	pmax		
	comp=E,99nm,0.3s						
JNU	**Nakatsue**	**9.54**	**254**	Pn	**Pn**	**05 36 01.9**	**-0.6**
	comp=E,1.4nm,0.3s,baz=59,slow=5.8,SNR=7.3						
JNU	**Nakatsue**	**9.54**	**254**	*e*Pn	**Pn**	**05 36 03.7**	**+1.2**
TEY	**Ternei**	**9.56**	**337**	⇓*e*P	**Pn**	**05 36 07.2**	**+4.4**
TEY				pmax	pmax		
	comp=N,20nm,0.7s						
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
KUR	**Kuril'sk**	**10.03**	**25**	P	**Pn**	**05 36 09.3**	**+0.2**
KUR				*e*S	**Sn**	**05 37 54.4**	**-6.6**
KUR				pmax	pmax		
	comp=Z,27nm,0.8s						
KUR				smax	smax		
	comp=N,53nm,0.5s						
KUR				smax	smax		
	comp=E,59nm,0.5s						
YSS	**Yuzh-Sakhalins**	**10.66**	**4**	*e*Pn	**Pn**	**05 36 16.6**	**-1.1**
YSS	**Yuzh-Sakhalins**	**10.66**	**4**	⇓*i*P	**Pn**	**05 36 18.0**	**+0.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
USRK	**Ussuriysk Ar.**	**10.87**	**319**	Pn	**Pn**	**05 36 22.7**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=138,slow=13,SNR=11						
USA0B	**Ussuriysk Arra**	**10.87**	**319**	*e*Pn	**Pn**	**05 36 21.7**	**+1.1**
KSRS	**Korea Array**	**11.17**	**280**	Pn	**Pn**	**05 36 29.2**	**+4.3**
	comp=Z,0.2nm,0.3s,baz=92,slow=13,SNR=26						
KS15	**Wonju Array Si**	**11.20**	**280**	*e*Pn	**Pn**	**05 36 26.6**	**+1.3**
TJN	**Taejon**	**11.64**	**275**	*ce*P	**Pn**	**05 36 33.9**	**+2.6**
TYV	**Tymovskoe**	**14.56**	**2**	*e*P	**P**	**05 37 17.7**	**+0.2**
TYV				pmax	pmax		
	comp=Z,19nm,0.6s						
CN2	**Changchun**	**14.57**	**306**	*e*P	**Pn**	**05 37 13.6**	**+2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
KLR	**Kul'dur**	**14.85**	**333**	Pn	**Pn**	**05 37 14.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=130,slow=11,SNR=5.6						
JOW	**Kunigami**	**14.89**	**234**	Pn	**Pn**	**05 37 18.6**	**+2.8**
	baz=86,slow=26,SNR=5.3						
JOW	**Kunigami**	**14.89**	**234**	*e*Pn	**Pn**	**05 37 16.1**	**+0.4**
DL2	**Dalian**	**16.19**	**285**	P	**Pn**	**05 37 34.0**	**+1.4**
DL2				pmax	pmax		
	comp=Z,17nm,0.7s						
NJ2	**Nanjing**	**19.44**	**264**	*e*P	**Pn**	**05 38 13.0**	**+0.2**
TIA	**Tai'an**	**19.89**	**277**	P	**P**	**05 38 15.0**	**-1.4**
ZEA	**Zeya**	**20.16**	**334**	*e*P	**P**	**05 38 19.8**	**+0.6**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
PEA0B	**Petropavlovsk-**	**20.16**	**29**	*e*P	**P**	**05 38 19.6**	**+0.4**
	comp=Z,12nm,1.0s						
PETK	**Petropavlovsk-**	**20.16**	**29**	P	**P**	**05 38 20.4**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=196,slow=6.7,SNR=8.5						
PEA1	**Petropavlovsk-**	**20.16**	**29**	*e*P	**P**	**05 38 20.4**	**+1.1**
HIA	**Hailar**	**20.63**	**316**	*i* P	**P**	**05 38 25.1**	**+0.6**
HIA				pmax	pmax		
	comp=Z,32nm,0.9s						
GUMO	**Guam**	**22.80**	**172**	P	**P**	**05 38 50.4**	**+2.6**
	comp=Z,17nm,0.8s,baz=49,slow=20,SNR=2.0						
WHN	**Wuhan**	**23.58**	**264**	P	**P**	**05 38 53.4**	**-2.3**
MA2	**Magadan**	**24.00**	**11**	P	**P**	**05 39 00.3**	**+0.9**
	comp=Z,7.2nm,0.9s,baz=337,slow=15,SNR=4.0						
MA2	**Magadan**	**24.00**	**11**	*i* P	**P**	**05 39 00.4**	**+0.9**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**24.00**	**290**	P	**P**	**05 38 58.6**	**-1.2**
YAK	**Yakutsk**	**26.84**	**347**	*e*P	**P**	**05 39 25.0**	**-0.1**
	comp=Z,64nm,1.0s						
YAK	**Yakutsk**	**26.84**	**347**	*e*P	**P**	**05 39 23.8**	**-1.3**
YAK				pmax	pmax		
	comp=Z,54nm,0.9s						
YAK				pmax	pmax		
	comp=N,23nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
XAN	**Xi'an**	**26.90**	**275**	P	**P**	**05 39 25.3**	**-0.8**
XAN				pP	pwP	05 39 35.0	+1.3
XAN				sP	sP	05 39 38.8	+5.7
XAN				pmax	pmax		
	comp=E,16nm,0.8s						
SEY	**Seymchan**	**27.44**	**11**	P	**P**	**05 39 32.6**	**+2.1**
	comp=E,3.3nm,0.9s,baz=160,slow=15,SNR=3.4						
SEY	**Seymchan**	**27.44**	**11**	*i* P	**P**	**05 39 31.6**	**+1.1**
H11N2	**WAKE ISLAND Hy**	**27.52**	**120**	T	T	06 08 43.2	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**27.52**	**120**	T	T	06 08 49.8	
	baz=312,slow=74						
H11N3	**WAKE ISLAND Hy**	**27.53**	**120**	T	T	06 08 53.1	
	baz=312,slow=74						
ULN	**Ulaanbaatar**	**28.02**	**305**	*e*P	**P**	**05 39 33.1**	**-3.0**
	comp=E,11nm,0.7s						
ULN	**Ulaanbaatar**	**28.02**	**305**	*i* P	**P**	**05 39 33.9**	**-2.2**
ULN				pmax	pmax		
	comp=Z,12nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**28.21**	**122**	T	T	06 09 01.9	
	baz=311						
H11S3	**WAKE ISLAND Hy**	**28.21**	**122**	T	T	06 09 39.2	
	baz=311,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.23**	**122**	T	T	06 09 28.0	
	baz=311,slow=74						
SONA0	**Songino Array**	**28.45**	**305**	*e*P	**P**	**05 39 40.5**	**+0.6**
SONM	**Songino Array**	**28.45**	**305**	P	**P**	**05 39 40.5**	**+0.6**
	comp=Z,14nm,0.8s,baz=102,slow=8.7,SNR=28						
LZH	**Lanzhou**	**30.50**	**281**	*e*P	**P**	**05 39 55.4**	**-2.9**
LZH				pP	pP	05 40 04.6	+1.1
LZH				sP	pwP	05 40 08.1	+2.1
LZH				*e*PP	**PnPn**	**05 40 54.5**	**-2.7**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,85nm,5.0s						
LZH				LR	LR		
	comp=Z,370nm,12.7s						
LZH				LR	LR		
	comp=Z,370nm,13.2s						
LZH				LR	LR		
	comp=Z,490nm,16.8s						
ZAK	**Zakamensk**	**30.96**	**309**	*e*P	**P**	**05 40 00.3**	**-1.8**
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s						
GYA	**Guiyang**	**31.41**	**262**	⇓*i*P	**P**	**05 40 05.1**	**-1.3**
GYA				pP	pwP	05 40 14.4	+0.3
GYA				PP	**PnPn**	**05 41 06.8**	**-2.4**
GYA				S	**S**	**05 45 09.3**	**-3.9**
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA				pmax	pmax		
	comp=Z,120nm,14.9s						
GYA				LR	LR		
	comp=Z,490nm,17.2s						
GYA				LR	LR		
	comp=Z,410nm,17.0s						
GYA				LR	LR		
	comp=Z,470nm,16.9s						
CD2	**Chengdu**	**31.99**	**271**	⇓*i*P	**P**	**05 40 10.3**	**-1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BILL	**Bilibino**	**34.63**	**16**	⇓*e*P	**P**	**05 40 34.9**	**+1.1**
BILL				*e*		05 41 48.9	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.6s						
BILL				MLR	MLR		
	comp=Z,3µm,20.0s						
KMI	**Kunming**	**35.17**	**263**	P	**P**	**05 40 40.8**	**+1.6**
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				LR	LR		
	comp=Z,7µm,21.4s						
KMI				LR	LR		
	comp=Z,5µm,18.3s						
KMI				LR	LR		
	comp=Z,11µm,36.7s						
TIXI	**Tiksi**	**36.04**	**353**	*i* P	**P**	**05 40 46.8**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ	**Urumqi**	**41.44**	**298**	*e*P	**P**	**05 41 33.3**	**+1.6**
WMQ				sP	pwP	05 41 44.1	+4.5
WMQ				PP	**PnPn**	**05 43 13.4**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,30nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,7.1s						
WMQ				LR	LR		
	comp=Z,5µm,23.3s						
WMQ				LR	LR		
	comp=Z,3µm,23.3s						
WMQ				LR	LR		
	comp=Z,6µm,28.8s						
CM31	**Chiang Mai Arr**	**41.62**	**256**	*e*P	**P**	**05 41 32.6**	**-0.7**
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.62**	**256**	P	**P**	**05 41 33.0**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=46,slow=5.8,SNR=11						
CMAR	**Chiang Mai Arr**	**41.62**	**256**	*i* P	**P**	**05 41 32.7**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAA1	**Zalesovo Array**	**42.63**	**313**	*e*P	**P**	**05 41 41.5**	**+0.5**
ZAA0	**Zalesovo Array**	**42.63**	**313**	*e*P	**P**	**05 41 41.1**	**+0.1**
	comp=Z,13nm,0.8s						
ZALV	**Zalesovo Beam**	**42.63**	**313**	P	**P**	**05 41 41.5**	**+0.5**
	comp=Z,13nm,0.8s,baz=94,slow=6.7,SNR=24						
MK31	**Makanchi Array**	**44.77**	**303**	*e*P	**P**	**05 41 58.5**	**+0.1**
	comp=Z,13nm,0.9s						
MK31	**Makanchi Array**	**44.77**	**303**	*i* P	**P**	**05 41 58.3**	**-0.1**
MK31				pmax	pmax		
	comp=Z,14nm,0.8s						
MK32	**Makanchi Array**	**44.77**	**303**	*e*P	**P**	**05 41 59.0**	**+0.5**
MKAR	**Makanchi Array**	**44.77**	**303**	P	**P**	**05 41 59.0**	**+0.5**
	comp=Z,8.5nm,0.7s,baz=89,slow=9.3,SNR=24						
MKAR				PcP	**PcP**	**05 43 40.9**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=113,slow=3.3,SNR=2.7						
MAKZ	**Makanchi**	**44.98**	**303**	*e*P	**P**	**05 42 00.3**	**+0.2**
	comp=Z,18nm,0.9s						
MAKZ	**Makanchi**	**44.98**	**303**	*e*P	**P**	**05 42 00.3**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,18nm,0.9s						
KAPI	**Kappang**	**46.00**	**211**	*e*P	**P**	**05 42 09.2**	**+0.7**
	comp=Z,40nm,1.1s						
KAPI	**Kappang**	**46.00**	**211**	*e*P	**P**	**05 42 09.2**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,40nm,1.1s						
KURK	**Kurchatov**	**46.62**	**309**	*e*P	**P**	**05 42 12.9**	**-0.1**
	comp=Z,23nm,0.8s						
KURK	**Kurchatov**	**46.62**	**309**	*ce*P	**P**	**05 42 13.4**	**+0.4**
KURK				pmax	pmax		
	comp=Z,13nm,0.6s						
KURBB	**Kurchatov Arra**	**46.69**	**309**	P	**P**	**05 42 13.2**	**-0.3**
	comp=Z,14nm,0.7s,baz=85,slow=7.9,SNR=4.1						
JIRN	**Jiri**	**47.40**	**276**	*e*P	**P**	**05 42 20.3**	**+0.5**
	comp=Z,112nm,1.1s						
KDAK	**Kodiak Island**	**47.43**	**41**	P	**P**	**05 42 19.6**	**+0.4**
	comp=Z,7.3nm,0.8s,baz=208,slow=2.4,SNR=4.3						
KDAK	**Kodiak Island**	**47.43**	**41**	*e*P	**P**	**05 42 19.8**	**+0.6**
	comp=Z,30nm,1.2s						
KDAK	**Kodiak Island**	**47.43**	**41**	*e*P	**P**	**05 42 19.8**	**+0.6**
KDAK				pmax	pmax		
	comp=Z,30nm,1.2s						
GUN	**Gumba**	**47.54**	**277**	*e*P	**P**	**05 42 21.1**	**+0.2**
	comp=Z,50nm,0.8s						
PKI	**Pulchoki**	**48.06**	**276**	*e*P	**P**	**05 42 24.7**	**-0.2**
PKIN	**Phulchoki**	**48.07**	**276**	*e*P	**P**	**05 42 24.7**	**-0.2**
	comp=Z,20nm,0.8s						
KKN	**Kakani**	**48.07**	**277**	*e*P	**P**	**05 42 25.0**	**+0.1**
	comp=Z,44nm,0.9s						
PRZ	**Przheval'sk**	**48.37**	**298**	*e*P	**P**	**05 42 27.3**	**+0.3**
	comp=Z,25nm,1.0s						
PRZ	**Przheval'sk**	**48.37**	**298**	*e*P	**P**	**05 42 27.3**	**+0.3**
PRZ				pmax	pmax		
	comp=Z,25nm,1.0s						
GKN	**Gorkha**	**48.50**	**277**	*e*P	**P**	**05 42 28.1**	**0.0**
	comp=Z,105nm,0.9s						
SOEI	**Soe**	**48.71**	**203**	*e*P	**P**	**05 42 29.5**	**-0.1**
	comp=Z,23nm,0.9s						
DANN	**Dangsing**	**49.05**	**278**	*e*P	**P**	**05 42 32.8**	**+0.3**
	comp=Z,47nm,0.6s						
KDJ	**Kajisay**	**49.34**	**298**	*e*P	**P**	**05 42 35.1**	**+0.7**
	comp=Z,6.4nm,0.8s						
KDJ	**Kajisay**	**49.34**	**298**	*e*P	**P**	**05 42 35.1**	**+0.7**
KDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KOLN	**Koldanda**	**49.43**	**277**	*e*P	**P**	**05 42 34.1**	**-1.2**
	comp=Z,80nm,1.2s						
PYUN	**Piuthan**	**49.77**	**278**	*e*P	**P**	**05 42 38.0**	**+0.1**
	comp=Z,160nm,1.2s						
ILAR	**Eielson Array**	**49.94**	**32**	P	**P**	**05 42 39.1**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=268,slow=6.3,SNR=16						
ILB	**Eielson Array**	**49.94**	**32**	*e*P	**P**	**05 42 38.7**	**+0.3**
	comp=Z,4.1nm,0.8s						
BOOM	**Boomskoye usch**	**50.12**	**298**	*e*P	**P**	**05 42 40.4**	**0.0**
	comp=Z,12nm,0.9s						
BOOM	**Boomskoye usch**	**50.12**	**298**	*e*P	**P**	**05 42 40.4**	**0.0**
BOOM				pmax	pmax		
	comp=Z,12nm,0.9s						
OTUK	**Ortayu**	**51.10**	**306**	P	**P**	**05 42 47.1**	**-0.4**
OTUK				pmax	pmax		
	comp=Z,13nm,0.9s						
AAK	**Ala-Archa**	**51.11**	**299**	P	**P**	**05 42 48.9**	**+1.1**
	comp=Z,2.8nm,0.4s,baz=130,slow=4.2,SNR=4.6						
BVAR	**Borovoye Array**	**51.29**	**313**	P	**P**	**05 42 49.0**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=75,slow=6.3,SNR=15						
BVAR				PcP	**PcP**	**05 44 03.8**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=108,slow=3.3,SNR=4.4						

BRVK	Borovoye	51.34	313	eP	P	05 42 49.6	+0.4
	comp=Z,12nm,0.9s						
BRVK	Borovoye	51.34	313c	eP	P	05 42 49.9	+0.7
BRVK				pmax	pmax		
	comp=Z,35nm,2.5s						
BKNI	Bangkinang	52.04	236	eP	P	05 42 55.1	+0.3
	comp=Z,70nm,0.5s						
KK31	Karatay Array	53.76	301	eP	P	05 43 07.2	0.0
	comp=Z,7.9nm,0.9s						
KK31	Karatay Array	53.76	301	eP	P	05 43 07.2	0.0
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	53.76	301	eP	P	05 43 07.2	0.0
	comp=Z,7.9nm,0.9s						
KKAR	Karatay Array	53.76	301	eP	P	05 43 07.2	0.0
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
INK	Inuvik	54.88	27	P	P	05 43 16.1	+1.2
	comp=Z,2.4nm,0.6s,baz=328,slow=7.4,SNR=5.1						
INK	Inuvik	54.88	27	eP	P	05 43 15.7	+0.7
	comp=Z,11nm,1.3s						
INK	Inuvik	54.88	27	eP	P	05 43 15.7	+0.7
INK				pmax	pmax		
	comp=Z,11nm,1.3s						
SVE	Sverdlovsk	55.89	319	eP	P	05 43 23.2	+0.8
SVE				pmax	pmax		
	comp=Z,19nm,1.1s						
WRAB	Tennant Creek	56.38	188	i P	P	05 43 28.3	+2.0
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WR1	Warramunga Arr	56.39	188	eP	P	05 43 24.6	-1.8
WRA	Warramunga Arr	56.39	188	P	P	05 43 24.6	-1.8
	comp=Z,2.8nm,0.8s,baz=356,slow=8.4,SNR=6.2						
ARU	Arti	57.10	319	P	P	05 43 30.6	-0.5
	comp=Z,3.2nm,0.8s,baz=291,slow=0.6,SNR=10						
ARU	Arti	57.10	319	eP	P	05 43 31.0	-0.1
	comp=Z,18nm,1.0s						
ARU	Arti	57.10	319c	iP	P	05 43 30.4	-0.7
ARU				S	S	05 51 24.8	-0.1
ARU				SS	SS	05 55 06.1	-7.1
ARU				pmax	pmax		
	comp=Z,22nm,1.1s						
AB31	Akbulak array	58.64	311	i P	P	05 43 41.2	-0.8
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ABKAR	Akbulak array	58.64	311	eP	P	05 43 41.8	-0.2
	comp=Z,6.8nm,0.7s						
AKTO	Aktyubinsk	59.39	312	P	P	05 43 47.1	0.0
	comp=Z,6.6nm,0.8s,baz=80,slow=12,SNR=15						
AKTO	Aktyubinsk	59.39	312	P	P	05 43 45.9	-1.3
AKTO				pmax	pmax		
	comp=Z,13nm,1.0s						
AS31	Alice Springs	60.12	188	eP	P	05 43 51.5	-0.9
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	60.12	188	P	P	05 43 51.1	-1.3
	comp=Z,1.2nm,0.7s,baz=12,slow=7.2,SNR=10.0						
KIRV	Kirov	61.01	323	P	P	05 43 56.9	-1.1
	comp=Z,10nm,0.4s,baz=351,slow=3.8,SNR=5.4						
PRGR	Permogore	61.54	327	eP	P	05 43 53.3	-8.3
PRGR				pmax	pmax		
	comp=Z,13nm,0.8s						
RES	Resolute Bay	63.22	14	P	P	05 44 13.2	+0.6
	comp=Z,8.9nm,0.9s,baz=338,slow=5.4,SNR=3.3						
RES	Resolute Bay	63.22	14	eP	P	05 44 12.9	+0.2
	comp=Z,24nm,1.2s						
RES	Resolute Bay	63.22	14	eP	P	05 44 12.9	+0.2
RES				pmax	pmax		
	comp=Z,24nm,1.2s						
YKA	Yellowknife Ar	64.28	30	P	P	05 44 20.4	+0.6
	comp=Z,1.6nm,0.8s,baz=299,slow=6.6,SNR=8.7						
YKA				LR	LR	06 14 15.1	
	comp=Z,3µm,19.5s,baz=240,slow=38						
YKB5	Yellowknife Ar	64.28	30	eP	P	05 44 20.4	+0.6
ARA0	ARCESS Array S	64.78	340	eP	P	05 44 23.9	+0.9
ARCES	ARCESS Array B	64.78	340	P	P	05 44 23.9	+0.9
	comp=Z,6.0nm,0.8s,baz=53,slow=9.2,SNR=9.5						
STKA	Stephens Creek	67.83	180	P	P	05 44 42.4	-0.6
	comp=Z,4.5nm,1.0s,baz=285,slow=11,SNR=3.0						
STKA	Stephens Creek	67.83	180	eP	P	05 44 43.1	+0.1
STKA	Stephens Creek	67.83	180	eP	P	05 44 43.1	+0.1
OBN	Obninsk	68.86	324⇓	eP	P	05 44 49.7	+0.5
OBN				e		05 47 18.7	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,2µm,19.0s						
FIA0	FINESS Array S	69.59	332	eP	P	05 44 54.1	+0.5
FIA0	FINESS Array S	69.59	332	eP	P	05 44 54.2	+0.5
FINES	FINESS Array B	69.59	332	P	P	05 44 54.1	+0.5
	comp=Z,8.6nm,0.8s,baz=56,slow=7.1,SNR=18						
AKT	Akhty	69.76	307	eP	P	05 44 55.4	+0.2
AKT				e		05 45 17.2	
AKT				e		05 47 36.3	
AKT				pmax	pmax		
	comp=Z,18nm,1.2s						
PINE	Pine Mountain	70.57	50	eP	P	05 45 01.3	+1.0
	comp=Z,9.6nm,1.0s						
VSU	Vasula	71.23	330c	eP	P	05 45 05.0	+1.3
VSU				pmax	pmax		
	comp=Z,67nm,2.5s						
KBZ	Khabaz	71.61	311	P	P	05 45 06.7	+0.5
	comp=Z,4.5nm,0.9s,baz=21,slow=1.9,SNR=6.5						
KIV	Kislovodsk	71.61	311	eP	P	05 45 06.9	+0.5
	comp=Z,13nm,1.0s						
KIV	Kislovodsk	71.61	311	eP	P	05 45 07.5	+1.1
KIV				pmax	pmax		
	comp=Z,42nm,1.1s						
HRY	Holter Researc	74.27	43	eP	P	05 45 22.8	+0.7
NC405	NORSAR Array S	74.76	337	eP	P	05 45 24.1	-0.5
	comp=Z,34nm,1.0s						
NC204	NORSAR Array S	74.92	338	eP	P	05 45 24.7	-0.9
	comp=Z,24nm,0.8s						
NB2	NORSAR Subarra	74.97	337	P	P	05 45 26.2	+0.3
	comp=Z,2.8nm,0.7s,baz=40,slow=5.9						
NB200	NORSAR Array S	74.97	337	eP	P	05 45 25.9	0.0
NOA	NORSAR Array B	74.97	337	P	P	05 45 25.9	0.0
	comp=Z,6.5nm,0.8s,baz=39,slow=5.8,SNR=26						
BOZ	Bozeman (W)	75.04	44	eP	P	05 45 27.4	+0.7
	comp=Z,4.1nm,1.0s						
BOZ	Bozeman (W)	75.04	44	eP	P	05 45 27.4	+0.7
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKASG	Malin Array Be	75.06	323	P	P	05 45 26.4	-0.1
	comp=Z,6.0nm,0.6s,baz=46,slow=6.0,SNR=30						
AKBB	Malin Array Si	75.06	323	eP	P	05 45 24.2	-2.3
	comp=Z,12nm,0.8s						
AKBB	Malin Array Si	75.06	323	eP	P	05 45 24.2	-2.3
AKBB				pmax	pmax		
	comp=Z,12nm,0.8s						
NV01	Mina Array Sit	75.17	53	eP	P	05 45 28.8	+1.1
NVAR	Mina Array Bea	75.17	53	P	P	05 45 28.8	+1.1
	comp=Z,0.9nm,0.8s,baz=279,slow=7.1,SNR=5.4						
H17A	Grant Village	76.36	45	eP	P	05 45 34.7	+0.3
	comp=Z,7.4nm,1.0s						
PD31	Pinedale Array	77.95	46	eP	P	05 45 44.0	+0.6
PDAR	Pinedale Array	77.95	46	P	P	05 45 44.0	+0.6
	comp=Z,0.8nm,0.6s,baz=280,slow=2.0,SNR=6.9						
BUR08	Bucovina Ar. S	79.06	322	eP	P	05 45 49.3	+0.1
	comp=Z,6.0nm,1.0s						
P17A	Butcher Ranch,	79.30	49	eP	P	05 45 51.4	+0.6
	comp=Z,6.3nm,1.0s						
KNB	Kanab	79.51	52	eP	P	05 45 53.3	+1.3
	comp=Z,9.9nm,1.3s						
KNB	Kanab	79.51	52	eP	P	05 45 53.3	+1.3
KNB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BR101	Keskin Array S	79.56	312	eP	P	05 45 52.7	+0.6
BR131	Keskin Array S	79.56	312	eP	P	05 45 51.0	-1.2
	comp=Z,4.9nm,0.9s						
BRTR	Keskin Array B	79.56	312	P	P	05 45 52.7	+0.6
	comp=Z,4.3nm,1.0s,baz=97,slow=5.1,SNR=13						
KOLS	Kolonicke sedl	79.59	324	eP	P	05 45 52.9	+1.0
KOLS	Kolonicke sedl	79.59	324	eP	P	05 45 52.9	+1.0
SRU	San Rafael Swe	79.65	49	eP	P	05 45 53.5	+0.8
	comp=Z,5.2nm,0.9s						
SRU	San Rafael Swe	79.65	49	eP	P	05 45 53.5	+0.8
SRU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LANS	Liptovska Anna	80.73	326	eP	P	05 45 59.8	+1.7
LANS	Liptovska Anna	80.73	326	eP	P	05 45 59.8	+1.7
PV21	Cone Mtn., Par	80.94	49	eP	P	05 46 00.8	+1.1
	comp=Z,5.4nm,0.9s						
PV14	Lion Creek, Pa	81.03	49	eP	P	05 46 01.0	+0.8
	comp=Z,11nm,1.0s						
PV20	West Nyswonger	81.08	49	eP	P	05 46 01.6	+1.1
	comp=Z,8.2nm,1.0s						
PV04	Paradox Valley	81.09	49	eP	P	05 46 01.2	+0.7
	comp=Z,9.0nm,1.0s						
OSTC	Ostas	81.12	328	eP	P	05 46 00.6	+0.4
PV17	East Wray Mesa	81.12	49	eP	P	05 45 59.9	-0.8
	comp=Z,18nm,1.2s						
MORC	Moravsky Berou	81.13	327	eP	P	05 46 00.7	+0.4
PV16	Nyswonger Mesa	81.13	49	eP	P	05 46 02.5	+1.8
	comp=Z,12nm,1.2s						
PV03	Paradox Valley	81.21	49	eP	P	05 46 00.1	-1.1
	comp=Z,7.8nm,1.1s						
RAYN	Ar Rayn	81.22	293	eP	P	05 46 00.9	-0.3
	comp=Z,8.6nm,1.1s						
RAYN	Ar Rayn	81.22	293	eP	P	05 46 00.9	-0.3
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DPC	Dobruska-Polom	81.23	328	eP	P	05 46 01.8	+1.0
DPC				e		05 46 17.6	
DPC	Dobruska-Polom	81.23	328	eP	P	05 46 01.8	+1.0
DPC				ex	x	05 46 17.6	
UPC	Upice	81.25	328	eP	P	05 46 01.6	+0.8
UPC	Upice	81.25	328	eP	P	05 46 01.6	+0.8
PV13	Radium Mtn., P	81.29	49	eP	P	05 46 01.2	-0.4
	comp=Z,17nm,1.3s						
PV01	Paradox Valley	81.45	49	eP	P	05 46 03.4	+1.0
	comp=Z,7.2nm,1.1s						
VYHS	Vyhne	81.49	326	eP	P	05 46 02.9	+0.7
VYHS	Vyhne	81.49	326	eP	P	05 46 02.9	+0.7
JAVC	Velka Javorina	81.75	326	eP	P	05 46 05.1	+1.5
BRG	Berggiesshubel	81.83	330	eP	P	05 46 05.0	+1.1
	comp=Z,2.1nm,0.7s						
BRG	Berggiesshubel	81.83	330	eP	P	05 46 05.0	+1.1
	comp=Z,2.1nm,0.7s						
BRG	Berggiesshubel	81.83	330	eP	P	05 46 05.0	+1.1
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CLL	Collm	81.87	330	eP	P	05 46 04.0	-0.1
	comp=Z,8.2nm,0.9s						
CLL	Collm	81.87	330⇑	iP	P	05 46 04.1	0.0
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	Collm	81.87	330⇑	iP	P	05 46 04.1	0.0
	comp=Z,10.0nm,1.0s						
CLL				e(sP)	pwP	05 46 20.0	+7.5
VRAC	Vranov	81.89	327	eP	P	05 46 04.9	+0.6
KRUC	Moravsky	82.16	327	eP	P	05 46 05.7	0.0
GOPC	GO Pecny, Ondr	82.21	329	eP	P	05 46 06.3	+0.4
GOPC	GO Pecny, Ondr	82.21	329	eP	P	05 46 06.3	+0.4
PRU	Pruhonice	82.26	329	eP	P	05 46 06.5	+0.4
PRU				e		05 46 23.1	
PRU	Pruhonice	82.26	329	eP	P	05 46 06.5	+0.4
PRU				ex	x	05 46 23.1	
MODS	Modra-Piesok	82.29	326	eP	P	05 46 06.4	0.0
MODS	Modra-Piesok	82.29	326	eP	P	05 46 06.4	0.0
NKC	Novy Kostel	82.93	330	eP	P	05 46 09.9	+0.2
NKC	Novy Kostel	82.93	330	eP	P	05 46 09.9	+0.2
KHC	Kasperske Hory	83.32	329	eP	P	05 46 11.6	-0.1
	comp=Z,1.9nm,0.8s						
KHC	Kasperske Hory	83.32	329	eP	P	05 46 11.6	-0.1
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	83.32	329	eP	P	05 46 11.8	+0.1
KHC				ex	x	05 46 26.8	
GEC2	GERESS Array S	83.49	328	eP	P	05 46 12.3	-0.4
	comp=Z,5.7nm,1.3s						
GEC2	GERESS Array S	83.49	328	eP	P	05 46 12.3	-0.4
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GERES	GERESS Array B	83.49	328	P	P	05 46 12.7	0.0
	comp=Z,1.7nm,0.7s,baz=32,slow=5.3,SNR=18						
VTS	Vitosha	83.53	319	eP	P	05 46 13.2	+0.1
	comp=Z,12nm,1.2s						
VTS	Vitosha	83.53	319	eP	P	05 46 13.2	+0.1
VTS				pmax	pmax		
	comp=Z,12nm,1.2s						
ANMO	Albuquerque	84.81	50	eP	P	05 46 20.4	+0.6
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
BFO	Black Forest	86.08	331c	eP	P	05 46 26.2	+0.5
LTX	Lajitas	90.31	53	eP	P	05 46 47.1	+0.9
LTX	Lajitas	90.31	53	eP	P	05 46 47.2	+0.9
TXAR	Lajitas Array	90.31	53	P	P	05 46 47.1	+0.8
	comp=Z,0.7nm,0.8s,baz=291,slow=3.1,SNR=9.6						
LPAZ	La Paz	146.78	61	PKPbc	PKPdf	05 53 28.2	+1.7
	comp=Z,2.5nm,0.6s,baz=323,slow=1.7,SNR=16						
LPAZ	La Paz	146.78	61	ePKPbc	PKPdf	05 53 27.9	+1.4
LPAZ	La Paz	146.78	61	ePKP2	PKPdf	05 53 27.9	+1.4
SIV	San Ignacio	151.30	51	PKPbc	PKPbc	05 53 38.7	-0.4
	comp=Z,3.6nm,0.8s,baz=14,slow=1.4,SNR=22						

WEL 21 05:36:24.5,41.6S±0.8×174.4E±0.7,h12km±2km,M3.7/8, ML4.0/8,MLv3.7/8,Error ellipse: s-maj=0.0km s-min=0.0km az=143.0,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.23	206	S	Sg	05 36 34.1	+1.5
TUWZ	Tuamarina	0.33	291	P	Pb	05 36 31.8	-0.4
TUWZ				S	Sb	05 36 36.8	-0.5
TCW	Tory Channel	0.34	351	P	Pb	05 36 32.1	-0.4
TCW				S	Sb	05 36 37.4	-0.4
BSWZ	Blackbirch Sta	0.39	244	P	Pg	05 36 32.1	-0.3
BSWZ				S	Sb	05 36 38.6	-0.7
BHW	Baring Head	0.42	71	P	Pb	05 36 33.5	-0.2
BHW				S	Sb	05 36 40.1	+0.1
PLWZ	Palliser	0.68	92	P	Pb	05 36 38.3	0.0
PLWZ				S	Sn	05 36 50.3	-0.1
MSWZ	Moikau Station	0.69	79	P	Pb	05 36 38.5	+0.1
CAW	Cannon Point	0.70	51	P	Pb	05 36 38.5	0.0
NNZ	Nelson	0.80	294	P	Pb	05 36 40.2	0.0
MTW	Mount Morrison	0.95	66	P	Pb	05 36 43.2	+0.3
OGWZ	Otaki Gorge	0.96	41	P	Pn	05 36 43.8	+0.2
HOWZ	Holdsworth Sta	1.09	54	P	Pg	05 36 45.5	0.0

WEL 21 05:38:06.8,41.6S±0.9×174.2E±1.0,h10km±2km,M3.8/14, ML4.0/14,MLv3.8/14,Error ellipse: s-maj=0.0km s-min=0.0km az=122.5,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	189	P	Pb	05 38 10.8	-0.7
CMWZ				S	Sg	05 38 13.7	+1.4
TUWZ	Tuamarina	0.29	308	P	Pb	05 38 13.8	-0.2
TUWZ				S	Sb	05 38 18.7	-0.2
BSWZ	Blackbirch Sta	0.30	249	P	Pb	05 38 13.5	-0.6
BSWZ				S	Sb	05 38 18.2	-0.9
TCW	Tory Channel	0.40	3	P	Pb	05 38 15.8	-0.1
TCW				S	Sb	05 38 21.4	-0.6
BHW	Baring Head	0.51	67	P	Pb	05 38 17.5	-0.3
NNZ	Nelson	0.76	301	P	Pb	05 38 21.8	-0.3
PLWZ	Palliser	0.76	87	P	Pg	05 38 21.6	+0.2
MSWZ	Moikau Station	0.78	76	P	Pb	05 38 22.6	+0.2
CAW	Cannon Point	0.80	51	P	Pb	05 38 22.7	0.0
DUWZ	D'Urville Isla	0.84	343	P	Pn	05 38 24.7	0.0
PAWZ	Paruwai Farm	0.92	76	P	Pn	05 38 25.6	-0.1
KHZ	Kahutara	0.96	213	P	Pg	05 38 25.2	-0.1
MTW	Mount Morrison	1.05	65	P	Pn	05 38 27.4	-0.1
OGWZ	Otaki Gorge	1.06	42	P	Pb	05 38 27.3	+0.2
TRWZ	Traveller	1.10	79	P	Pn	05 38 28.4	+0.1
HOWZ	Holdsworth Sta	1.19	54	P	Pg	05 38 30.0	+0.3
TMWZ	Te Maipa	1.34	68	P	Pb	05 38 32.0	+0.1
MRZ	Mangatainoka R	1.38	47	P	Pg	05 38 33.6	+0.2
TIWZ	Tintock	1.49	57	P	Pg	05 38 35.9	+0.5
QRZ	Quartz Range	1.51	301	P	Pb	05 38 35.1	+0.2
OHWZ	Ohakea	1.62	30	P	Pg	05 38 37.6	-0.2
GVZ	Greta Valley S	1.63	213	P	Pn	05 38 34.5	-1.0
PRWZ	Pori Road	1.68	52	P	Pb	05 38 38.1	+0.4
BFZ	Birch Farm	1.77	59	P	Pg	05 38 41.4	+0.7
LTZ	Lake Taylor	1.88	231	P	Pn	05 38 38.3	-0.6
WAZ	Wanganui	1.94	17	P	Pg	05 38 43.2	-0.7
DVHZ	Dannevirke	1.96	49	P	Pb	05 38 42.5	0.0
AMCZ	Amberley	1.96	216	P	Pn	05 38 38.5	-1.5
BHHZ	Black Hill Sta	2.53	34	P	Pb	05 38 52.2	-0.1
NGZ	Ngauruhoe	2.64	24	P	Pb	05 38 54.8	+0.5
WTVZ	West Tongariro	2.69	23	P	Pg	05 38 56.8	-1.6
KRVZ	Karewarewa	2.73	23	P	Pb	05 38 57.4	+1.7
KWHZ	Kaweka Forest	2.74	38	P	Pg	05 38 58.3	-1.0
BKZ	Black Stump Fm	2.98	36	P	Pb	05 39 01.8	+1.8

WEL 21 05:39:12.5,41.6S±0.6×174.4E±0.7,h15km±2km,M3.8/12, ML3.9/12,MLv3.8/12,Error ellipse: s-maj=0.0km s-min=0.0km az=128.9,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.22	208	P	Pb	05 39 18.4	+0.1
CMWZ				S	Sb	05 39 22.1	-0.1
TUWZ	Tuamarina	0.33	291	P	Pb	05 39 19.9	-0.2
TUWZ				S	Sb	05 39 25.3	0.0
TCW	Tory Channel	0.35	350	P	Pb	05 39 20.5	+0.2
TCW				S	Sb	05 39 25.7	0.0
BSWZ	Blackbirch Sta	0.39	245	P	Pb	05 39 21.1	-0.1
BHW	Baring Head	0.41	70	P	Pb	05 39 21.6	+0.1
MSWZ	Moikau Station	0.69	79	P	Pb	05 39 26.6	+0.4
CAW	Cannon Point	0.70	51	P	Pb	05 39 26.5	+0.1
NNZ	Nelson	0.81	294	P	Pg	05 39 28.4	+0.2
MTW	Mount Morrison	0.95	66	P	Pn	05 39 31.3	0.0
OGWZ	Otaki Gorge	0.96	40	P	Pg	05 39 31.1	0.0
KHZ	Kahutara	1.06	215	P	Pb	05 39 32.5	0.0
HOWZ	Holdsworth Sta	1.09	54	P	Pg	05 39 33.5	-0.2
MRZ	Mangatainoka R	1.28	47	P	Pb	05 39 36.3	-0.1
PRWZ	Pori Road	1.58	51	P	Pn	05 39 40.2	+0.3

ISCJB ***21*** *05:40:52.8±0.3,43.53N±0.02×13.71E±0.03,h10km±2km, Error ellipse: s-maj=3.5km s-min=2.6km az=29.1*

ROM ***21*** *05:40:52.6±0.3,43.51N±0.01×13.71E±0.02,h9km, ML2.5/44,Error ellipse: s-maj=2.4km s-min=0.7km az=53.0*

PRU ***21*** *05:40:53.7±0.0,43.59N×13.86E,h0km*

ISC 21 05:40:53.3±0.9,43.44N±0.02×13.66E±0.02,h19km±2km, n68,σ0.86/70,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	Ancona	0.12	338	P	Pb	05 40 55.2	0.0
AOI				S	Sb	05 40 57.4	+1.3
AOI				AML	AML		
	comp=E,8190µm,0.2s						
AOI				AML	AML		
	comp=N,8325µm,0.1s						
AOI				AML	AML		
	comp=E,8190µm,0.2s						
AOI				AML	AML		
	comp=N,8325µm,0.1s						
AOI				AML	AML		
	comp=E,8190µm,0.2s						
AOI				AML	AML		
	comp=N,8330µm,0.1s						
AOI				AML	AML		
	comp=N,8330µm,0.1s						
AOI				AML	AML		
	comp=E,8190µm,0.2s						
AOI				AML	AML		
	comp=N,8330µm,0.1s						
AOI				AML	AML		
	comp=E,8190µm,0.2s						
CIMA	Civitanova Mar	0.14	178	P	Pg	05 40 57.9	+0.4
CIMA				AML	AML		
	comp=E,10650µm,0.4s						
CIMA				AML	AML		
	comp=N,12950µm,0.4s						
CIMA				AML	AML		
	comp=E,10610µm,0.4s						
CIMA				AML	AML		
	comp=N,12950µm,0.4s						
CIMA				AML	AML		
	comp=E,10610µm,0.4s						
CIMA				AML	AML		
	comp=N,12950µm,0.4s						
CIMA				AML	AML		
	comp=N,12950µm,0.4s						
CIMA				AML	AML		
	comp=E,10610µm,0.4s						
CIMA				AML	AML		
	comp=N,12950µm,0.4s						
CIMA				AML	AML		
	comp=E,10610µm,0.4s						
PCRO	Pietralacroce	0.19	330	P	Pb	05 40 56.4	-1.2
PCRO				S	Sb	05 40 60.0	-0.4
PCRO				AML	AML		
	comp=E,4765µm,1.3s						
PCRO				AML	AML		
	comp=N,4055µm,0.3s						
PCRO				AML	AML		
	comp=E,4765µm,1.3s						
PCRO				AML	AML		
	comp=N,4050µm,0.3s						
PCRO				AML	AML		
	comp=E,4765µm,1.3s						
PCRO				AML	AML		
	comp=N,4055µm,0.3s						
PCRO				AML	AML		
	comp=N,4055µm,0.3s						
PCRO				AML	AML		
	comp=E,4765µm,1.3s						
PCRO				AML	AML		
	comp=N,4055µm,0.3s						
PCRO				AML	AML		
	comp=E,4765µm,1.3s						
CADA	Capodarco di F	0.26	164	P	Pb	05 40 59.6	+0.4
CADA				S	Sn	05 41 05.8	-1.8
MNTP	Montappone	0.34	205	P	Pb	05 41 01.3	+0.5
CING	Cingoli	0.35	259	P	Pb	05 41 00.8	-0.2
CING				S	Sn	05 41 08.0	-1.9
CING				AML	AML		
	comp=E,454µm,0.6s						
CING				AML	AML		
	comp=N,553µm,0.2s						
CING				AML	AML		
	comp=E,454µm,0.6s						
CING				AML	AML		
	comp=N,553µm,0.2s						
CING				AML	AML		
	comp=E,454µm,0.6s						
CING				AML	AML		
	comp=N,553µm,0.2s						
SENI	Senigallia	0.41	310	P	Pg	05 41 01.4	-0.4
SENI				AML	AML		
	comp=E,485µm,0.6s						
SENI				AML	AML		
	comp=N,445µm,0.3s						
SENI				AML	AML		
	comp=E,485µm,0.6s						
SENI				AML	AML		
	comp=N,445µm,0.3s						
SENI				AML	AML		
	comp=E,485µm,0.6s						
SENI				AML	AML		
	comp=N,445µm,0.3s						
EL6	Elcito	0.42	255	P	Pb	05 41 02.3	-0.1
EL6				AML	AML		
	comp=E,468µm,0.5s						
EL6				AML	AML		
	comp=N,524µm,0.4s						
EL6				AML	AML		
	comp=E,476µm,0.5s						
EL6				AML	AML		
	comp=N,520µm,0.4s						
EL6				AML	AML		
	comp=E,476µm,0.5s						
EL6				AML	AML		
	comp=N,520µm,0.4s						
EL6				AML	AML		
	comp=E,476µm,0.5s						
EL6				AML	AML		
	comp=N,520µm,0.4s						
CSP1	Cessapalombo	0.48	224	P	Pb	05 41 03.6	+0.2
ARVD	Arcevia	0.53	276	P	Pb	05 41 03.5	-0.5
ARVD				AML	AML		
	comp=E,126µm,1.2s						
ARVD				AML	AML		
	comp=N,204µm,0.6s						
ARVD				AML	AML		
	comp=E,126µm,1.2s						
ARVD				AML	AML		
	comp=N,203µm,0.6s						
ARVD				AML	AML		
	comp=E,126µm,1.2s						
ARVD				AML	AML		
	comp=N,203µm,0.6s						
ARVD				AML	AML		
	comp=N,203µm,0.6s						
ARVD				AML	AML		
	comp=E,126µm,1.2s						
ARVD				AML	AML		

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      comp=N,203µm,0.6s
ARVD                           AML    AML
      comp=E,126µm,1.2s
SNTG  Esanatoglia     0.56 251 P      Pb      05 41 04.6 +0.1
SNTG                           AML    AML
      comp=E,140µm,0.4s
SNTG                           AML    AML
      comp=N,237µm,1.0s
SNTG                           AML    AML
      comp=E,140µm,0.4s
SNTG                           AML    AML
      comp=N,237µm,1.0s
SNTG                           AML    AML
      comp=E,140µm,0.4s
SNTG                           AML    AML
      comp=N,237µm,1.0s
SNTG                           AML    AML
      comp=E,140µm,0.4s
SNTG                           AML    AML
      comp=N,237µm,1.0s
SNTG                           AML    AML
      comp=E,140µm,0.4s
SNTG                           AML    AML
      comp=N,237µm,1.0s
FDMO  Fiordimonte     0.58 226 P      Pb      05 41 05.3 +0.4
FDMO                           AML    AML
      comp=E,249µm,0.5s
FDMO                           AML    AML
      comp=N,271µm,0.2s
FDMO                           AML    AML
      comp=E,249µm,0.5s
FDMO                           AML    AML
      comp=N,271µm,0.2s
FDMO                           AML    AML
      comp=E,249µm,0.5s
FDMO                           AML    AML
      comp=N,271µm,0.2s
FDMO                           AML    AML
      comp=E,249µm,0.5s
FDMO                           AML    AML
      comp=N,271µm,0.2s
SSFR  Montelago di S  0.64 270 P      Pg      05 41 05.7 -0.4
SSFR                           AML    AML
      comp=E,522µm,0.8s
SSFR                           AML    AML
      comp=N,548µm,1.1s
SSFR                           AML    AML
      comp=E,500µm,0.8s
SSFR                           AML    AML
      comp=N,504µm,0.2s
SSFR                           AML    AML
      comp=E,522µm,0.8s
SSFR                           AML    AML
      comp=N,548µm,1.1s
SSFR                           AML    AML
      comp=E,500µm,0.8s
SSFR                           AML    AML
      comp=N,504µm,0.2s
SSFR                           AML    AML
      comp=N,548µm,1.1s
SSFR                           AML    AML
      comp=E,500µm,0.8s
SSFR                           AML    AML
      comp=E,522µm,0.8s
SSFR                           AML    AML
      comp=N,504µm,0.2s
SSFR                           AML    AML
      comp=N,548µm,1.1s
SSFR                           AML    AML
      comp=E,500µm,0.8s
SSFR                           AML    AML
      comp=E,522µm,0.8s
SSFR                           AML    AML
      comp=N,504µm,0.2s
FOSV  Fossato di Vic  0.67 258 P      Pg      05 41 06.4 -0.3
FOSV                           AML    AML
      comp=E,266µm,0.3s
FOSV                           AML    AML
      comp=N,224µm,0.3s
FOSV                           AML    AML
      comp=E,266µm,0.3s
FOSV                           AML    AML
      comp=N,224µm,0.3s
FOSV                           AML    AML
      comp=N,224µm,0.3s
FOSV                           AML    AML
      comp=E,266µm,0.3s
FOSV                           AML    AML
      comp=N,224µm,0.3s
FOSV                           AML    AML
      comp=E,266µm,0.3s
MPAG  Monte Paganucc  0.68 286 P      Pg      05 41 06.5 -0.4
MPAG                           AML    AML
      comp=E,298µm,1.6s
MPAG                           AML    AML
      comp=N,278µm,0.6s
MPAG                           AML    AML
      comp=E,296µm,1.6s
MPAG                           AML    AML
      comp=N,278µm,0.6s
MPAG                           AML    AML
      comp=E,296µm,1.6s
MPAG                           AML    AML
      comp=N,278µm,0.6s
MPAG                           AML    AML
      comp=E,296µm,1.6s
MPAG                           AML    AML
      comp=N,278µm,0.6s
FRON  Frontone        0.69 277 P      Pg      05 41 06.4 -0.5
FRON                           AML    AML
      comp=E,275µm,0.4s
FRON                           AML    AML
      comp=N,286µm,0.6s
FRON                           AML    AML
      comp=E,276µm,0.4s
FRON                           AML    AML
      comp=N,286µm,0.6s
FRON                           AML    AML
      comp=E,276µm,0.4s
FRON                           AML    AML
      comp=N,286µm,0.6s
FRON                           AML    AML
      comp=E,276µm,0.4s
FRON                           AML    AML
      comp=N,286µm,0.6s
FSSB  Fossombrone     0.69 292 P      Pg      05 41 06.8 -0.2
FSSB                           AML    AML
      comp=E,896µm,0.4s
FSSB                           AML    AML
      comp=N,1350µm,0.4s
FSSB                           AML    AML
      comp=E,896µm,0.4s
FSSB                           AML    AML
      comp=N,1350µm,0.4s
FSSB                           AML    AML
      comp=N,1350µm,0.4s
FSSB                           AML    AML
      comp=E,896µm,0.4s
FSSB                           AML    AML
      comp=N,1350µm,0.4s
FSSB                           AML    AML
      comp=E,896µm,0.4s
CESI  CESI - Serrava  0.71 232 P      Pn      05 41 07.7 -0.7
CESI                           AML    AML
      comp=E,57µm,0.4s
CESI                           AML    AML
      comp=N,132µm,0.9s
CESI                           AML    AML
      comp=E,57µm,0.4s
CESI                           AML    AML
      comp=N,132µm,0.9s
CESI                           AML    AML
      comp=E,57µm,0.4s
CESI                           AML    AML
      comp=N,132µm,0.9s
CESI                           AML    AML
      comp=E,57µm,0.4s
CESI                           AML    AML
      comp=N,132µm,0.9s
NRCA  Norcia          0.73 214 P      Pg      05 41 07.7  0.0
NRCA                           AML    AML
      comp=E,452µm,1.4s
NRCA                           AML    AML
      comp=N,429µm,0.1s
NRCA                           AML    AML
      comp=E,452µm,1.4s
NRCA                           AML    AML
      comp=N,429µm,0.1s
NRCA                           AML    AML
      comp=N,429µm,0.1s
NRCA                           AML    AML
      comp=E,452µm,1.4s
NRCA                           AML    AML
      comp=N,429µm,0.1s
NRCA                           AML    AML
      comp=E,452µm,1.4s
PESA  Pesaro          0.78 310 AML    AML
      comp=N,561µm,0.4s
PESA                           AML    AML
      comp=E,369µm,1.1s
PESA                           AML    AML
      comp=N,561µm,0.4s
PESA                           AML    AML
      comp=E,370µm,1.1s
PESA                           AML    AML
      comp=N,561µm,0.4s
PESA                           AML    AML
      comp=N,561µm,0.4s
PESA                           AML    AML
      comp=E,370µm,1.1s
PESA                           AML    AML
      comp=E,370µm,1.1s
ATCC  AVT- Casa Cast  0.79 251 P      Pn      05 41 08.7 -0.8
ATCC                           AML    AML
      comp=E,307µm,0.5s
ATCC                           AML    AML
      comp=N,384µm,0.4s
ATCC                           AML    AML
      comp=E,308µm,0.5s
ATCC                           AML    AML
      comp=N,384µm,0.4s
ATCC                           AML    AML
      comp=N,384µm,0.4s
ATCC                           AML    AML
      comp=E,308µm,0.5s
ATCC                           AML    AML
      comp=N,384µm,0.4s
ATCC                           AML    AML
      comp=E,308µm,0.5s
ATFO  Monte Foce - G  0.80 265 P      Pn      05 41 09.0 -0.8
ATFO                           AML    AML
      comp=E,334µm,0.6s
ATFO                           AML    AML
      comp=N,346µm,1.4s
ATFO                           AML    AML
      comp=E,334µm,0.6s
ATFO                           AML    AML
      comp=N,346µm,1.4s
ATFO                           AML    AML
      comp=N,346µm,1.4s
ATFO                           AML    AML
      comp=E,334µm,0.6s
ATFO                           AML    AML
      comp=N,346µm,1.4s
ATFO                           AML    AML
      comp=E,334µm,0.6s
TERO  Teramo          0.82 183 P      Pn      05 41 09.8 -0.1
TERO                           AML    AML
      comp=E,108µm,0.7s
TERO                           AML    AML
      comp=N,74µm,0.3s
TERO                           AML    AML
      comp=E,108µm,0.7s
TERO                           AML    AML
      comp=N,74µm,0.3s
TERO                           AML    AML
      comp=E,108µm,0.7s
TERO                           AML    AML
      comp=N,74µm,0.3s
TERO                           AML    AML
      comp=E,108µm,0.7s
TERO                           AML    AML
      comp=N,74µm,0.3s
ASSB  Assisi San Ben  0.83 242 P      Pn      05 41 09.7 -0.5
ASSB                           AML    AML
      comp=E,320µm,0.3s
ASSB                           AML    AML
      comp=N,266µm,0.4s
ASSB                           AML    AML
      comp=E,320µm,0.3s
ASSB                           AML    AML
      comp=N,266µm,0.4s
ASSB                           AML    AML
      comp=N,266µm,0.4s
ASSB                           AML    AML
      comp=E,320µm,0.3s
ASSB                           AML    AML
      comp=N,266µm,0.4s
ASSB                           AML    AML
      comp=E,320µm,0.3s
SMA1  SAN MARTINO     0.85 197 P      Pg      05 41 09.8 -0.1
SMA1                           AML    AML
      comp=E,419µm,0.5s
SMA1                           AML    AML
      comp=N,430µm,0.5s
SMA1                           AML    AML
      comp=E,420µm,0.5s
SMA1                           AML    AML
      comp=N,430µm,0.5s
SMA1                           AML    AML
      comp=E,420µm,0.5s
SMA1                           AML    AML
      comp=N,430µm,0.5s
SMA1                           AML    AML
      comp=E,420µm,0.5s
SMA1                           AML    AML
      comp=N,430µm,0.5s
MURB  Monte Urbino    0.85 258 AML    AML
      comp=E,532µm,0.4s
MURB                           AML    AML
      comp=E,462µm,0.3s
MURB                           AML    AML
      comp=N,784µm,0.3s
MURB                           AML    AML
      comp=E,532µm,0.4s
MURB                           AML    AML
      comp=N,782µm,0.3s
MURB                           AML    AML
      comp=E,532µm,0.4s
MURB                           AML    AML
      comp=N,782µm,0.3s
MURB                           AML    AML
      comp=E,532µm,0.4s
MURB                           AML    AML
      comp=N,782µm,0.3s
MURB                           AML    AML
      comp=N,782µm,0.3s
ATVO  AVT- Monte Val  0.92 267 P      Pn      05 41 11.1 -0.2
ATVO                           AML    AML
      comp=E,154µm,1.4s
ATVO                           AML    AML
      comp=N,154µm,0.5s
ATVO                           AML    AML
      comp=E,154µm,1.4s
ATVO                           AML    AML
      comp=N,154µm,0.5s
ATVO                           AML    AML
      comp=N,154µm,0.5s
ATVO                           AML    AML
      comp=E,154µm,1.4s
ATVO                           AML    AML
      comp=N,154µm,0.5s
ATVO                           AML    AML
      comp=E,154µm,1.4s
LNSS  Leonessa        0.95 209 P      Pg      05 41 11.6 -0.4
LNSS                           AML    AML
      comp=E,294µm,0.9s
LNSS                           AML    AML
      comp=N,274µm,0.6s
LNSS                           AML    AML
      comp=E,294µm,0.9s
LNSS                           AML    AML
      comp=N,274µm,0.6s
LNSS                           AML    AML
      comp=N,274µm,0.6s
LNSS                           AML    AML
      comp=E,294µm,0.9s
LNSS                           AML    AML
      comp=N,274µm,0.6s
LNSS                           AML    AML
      comp=E,294µm,0.9s
MOMA  Monte Martano   1.02 232 P      Pg      05 41 13.1 -0.1
MOMA                           AML    AML
      comp=E,157µm,0.2s
MOMA                           AML    AML
      comp=N,174µm,0.4s
MOMA                           AML    AML
      comp=E,157µm,0.2s
MOMA                           AML    AML
      comp=N,174µm,0.4s
MOMA                           AML    AML
      comp=N,174µm,0.4s
MOMA                           AML    AML
      comp=E,157µm,0.2s
MOMA                           AML    AML
      comp=N,174µm,0.4s
MOMA                           AML    AML
      comp=E,157µm,0.2s
PARC  Parchiule       1.06 282 AML    AML
      comp=N,196µm,1.1s
PARC                           AML    AML
      comp=E,236µm,0.8s
PARC                           AML    AML
      comp=N,196µm,1.1s
PARC                           AML    AML
      comp=E,236µm,0.8s
PARC                           AML    AML
      comp=E,236µm,0.8s
PARC                           AML    AML
      comp=N,196µm,1.1s
PARC                           AML    AML
      comp=E,236µm,0.8s
PARC                           AML    AML
      comp=N,196µm,1.1s
ARRO  Arrone          1.08 218 P      Pg      05 41 15.1 +0.7
ARRO                           AML    AML
      comp=E,110µm,1.6s
ARRO                           AML    AML
      comp=N,131µm,0.4s
ARRO                           AML    AML
      comp=E,110µm,1.6s
ARRO                           AML    AML
      comp=N,130µm,0.4s
ARRO                           AML    AML
      comp=N,130µm,0.4s
ARRO                           AML    AML
      comp=E,110µm,1.6s
ARRO                           AML    AML
      comp=N,130µm,0.4s
ARRO                           AML    AML
      comp=E,110µm,1.6s
T0104 Madonna delle   1.11 193 AML    AML
      comp=N,274µm,1.5s
T0104                          AML    AML
      comp=E,288µm,0.7s
T0104                          AML    AML
      comp=N,274µm,1.5s
T0104                          AML    AML
      comp=E,284µm,0.7s
T0104                          AML    AML
      comp=N,245µm,1.5s
T0104                          AML    AML
      comp=E,288µm,0.7s
T0104                          AML    AML
      comp=E,284µm,0.7s
T0104                          AML    AML
      comp=N,245µm,1.5s
T0104                          AML    AML
      comp=E,288µm,0.7s
T0104                          AML    AML
      comp=E,284µm,0.7s
T0104                          AML    AML
      comp=N,274µm,1.5s
T0104                          AML    AML
      comp=N,245µm,1.5s
DUGI  Dugi Otok       1.15  61 i Pg   Pn      05 41 13.2 -1.3
DUGI                             Sg   Sb      05 41 28.2 -1.0
CAFI  Castiglion Fio  1.24 265 P      Pg      05 41 18.1 +0.8
CAFI                           AML    AML
      comp=E,101µm,0.6s
CAFI                           AML    AML
      comp=N,109µm,0.6s
CAFI                           AML    AML
      comp=E,101µm,0.6s
CAFI                           AML    AML
      comp=N,109µm,0.6s
CAFI                           AML    AML
      comp=N,109µm,0.6s
CAFI                           AML    AML
      comp=E,101µm,0.6s
CAFI                           AML    AML
      comp=N,109µm,0.6s
CAFI                           AML    AML
      comp=E,101µm,0.6s
MGAB  Montegabbione   1.25 246 P      Pg      05 41 18.2 +0.6
MGAB                           AML    AML
      comp=E,172µm,0.4s
MGAB                           AML    AML
      comp=N,213µm,0.5s
MGAB                           AML    AML
      comp=E,172µm,0.4s
MGAB                           AML    AML
      comp=N,213µm,0.5s
MGAB                           AML    AML
      comp=E,172µm,0.4s
MGAB                           AML    AML
      comp=N,213µm,0.5s
SACS  San Casciano d  1.41 246 AML    AML
      comp=E,49µm,1.6s
SACS                           AML    AML
      comp=N,53µm,0.5s
SACS                           AML    AML
      comp=N,53µm,0.5s
SACS                           AML    AML
      comp=E,49µm,1.6s
SACS                           AML    AML
      comp=N,53µm,0.5s
SACS                           AML    AML
      comp=E,49µm,1.6s
NVLJ  Novalja         1.42  37 ePn    Pn      05 41 16.7 -1.5
NVLJ                             Sn   Sn      05 41 35.6 -0.7
INTR  Introdacqua     1.44 173 P      Pg      05 41 20.5 -0.6
INTR                           AML    AML
      comp=E,156µm,1.6s
INTR                           AML    AML
      comp=N,148µm,1.6s
INTR                           AML    AML
      comp=N,148µm,1.6s
INTR                           AML    AML
      comp=E,156µm,1.6s
INTR                           AML    AML
      comp=N,148µm,1.6s
INTR                           AML    AML
      comp=E,156µm,1.6s
ZIRJ  Zirje           1.46  81 i Pn   Pn      05 41 18.1 -0.5
ZIRJ                             Sn   Sb      05 41 38.4 +0.4
MORI  Morici          1.54  73 i Pn   Pn      05 41 19.6 -0.2
MORI                             Sn   Sb      05 41 41.1 +0.6
VVLD  Villa Vallelon  1.57 181 AML    AML
      comp=N,51µm,1.1s
VVLD                           AML    AML
      comp=E,55µm,0.7s
VVLD                           AML    AML
      comp=N,51µm,1.1s
VVLD                           AML    AML
      comp=E,55µm,0.7s
VVLD                           AML    AML
      comp=N,51µm,1.1s
VVLD                           AML    AML
      comp=E,55µm,0.7s
MTCE  Montecelio      1.57 206 AML    AML
      comp=E,63µm,0.6s
MTCE                           AML    AML
      comp=E,63µm,0.6s
MTCE                           AML    AML
      comp=N,43µm,1.6s
MTCE                           AML    AML
      comp=E,63µm,0.6s
MTCE                           AML    AML
      comp=N,43µm,1.6s
MTCE                           AML    AML
      comp=N,43µm,1.6s
UDBI  Udbina          1.86  54 i Pn   Pn      05 41 24.5 +0.2
UDBI                             Sn   Sn      05 41 48.5 +1.0
RIY   Rijeka          1.97  17   iPn          05 41 25.7
RIY                              Sn   Sn      05 41 50.1 +0.1
SKDS  Skadanscina     2.12   7 i Pn   Pn      05 41 27.1 -0.8
SKDS                           i Sn   Sn      05 41 54.1 +0.4
      comp=Z,14nm,0.3s
MAKA  Makarska        2.45  92 ePn    Pn      05 41 32.8 +0.4
MAKA                             Sn   Sn      05 42 02.6 +0.8
LJU   Ljubljana       2.67  13 AML    AML
      comp=E,71µm,1.1s
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LJU				AML	AML		
	comp=E,71µm,1.1s						
LJU				AML	AML		
	comp=N,88µm,1.4s						
LJU				AML	AML		
	comp=E,71µm,1.1s						
LJU				AML	AML		
	comp=N,88µm,1.4s						
LJU				AML	AML		
	comp=N,88µm,1.4s						
STAL	STALIGIAL	2.90	347	AML	AML		
	comp=E,50µm,1.3s						
STAL				AML	AML		
	comp=N,40µm,0.8s						
STAL				AML	AML		
	comp=E,50µm,1.3s						
STAL				AML	AML		
	comp=N,40µm,0.8s						
STAL				AML	AML		
	comp=E,50µm,1.3s						
STAL				AML	AML		
	comp=N,40µm,0.8s						
CTI	Castel Tesino	2.98	332	AML	AML		
	comp=N,40µm,1.3s						
CTI				AML	AML		
	comp=E,36µm,1.3s						
CTI				AML	AML		
	comp=N,40µm,1.3s						
CTI				AML	AML		
	comp=E,36µm,1.3s						
CTI				AML	AML		
	comp=N,40µm,1.3s						
CTI				AML	AML		
	comp=E,36µm,1.3s						
OBKA	Obir	3.13	11	ePn	Pn	05 41 41.9	+0.1
	comp=E,0.9nm,0.1s						
OBKA				Sg	Sg	05 42 33.7	-0.2
	comp=E,6.6nm,0.3s						
MAGA	Magasa	3.18	318	AML	AML		
	comp=N,54µm,1.0s						
MAGA				AML	AML		
	comp=E,71µm,0.7s						
MAGA				AML	AML		
	comp=N,54µm,1.0s						
MAGA				AML	AML		
	comp=N,54µm,1.0s						
MAGA				AML	AML		
	comp=E,71µm,0.7s						
MAGA				AML	AML		
	comp=E,71µm,0.7s						
MYKA	Terra Mystica	3.19	360	ePn	Pn	05 41 42.5	0.0
	comp=E,1.0nm,0.1s						
MYKA				Sg	Sg	05 42 35.8	0.0
	comp=E,6.8nm,0.8s						
SOKA	Soboth	3.38	16	ePn	Pn	05 41 45.9	+0.7
SOKA				Sg	Sg	05 42 40.1	-1.8
	comp=E,1.9nm,0.6s						
ABTA	Abfaltersbach	3.41	347	ePn	Pn	05 41 45.9	+0.3
	comp=E,1.0nm,0.2s						
KOSI	Kohlern	3.43	333	AML	AML		
	comp=E,45µm,1.6s						
KOSI				AML	AML		
	comp=N,45µm,1.6s						
KOSI				AML	AML		
	comp=N,45µm,1.6s						
KOSI				AML	AML		
	comp=E,45µm,1.6s						
KOSI				AML	AML		
	comp=N,45µm,1.6s						
KOSI				AML	AML		
	comp=E,45µm,1.6s						
KBA	Koelnbreinsper	3.64	357	ePn	Pn	05 41 49.4	+0.5
	comp=E,1.3nm,0.2s						
KBA				eSn	Sn	05 42 31.8	+0.3
	comp=E,1.1nm,0.4s						
KBA				Sg	Sg	05 42 51.4	+1.1
	comp=E,3.7nm,0.6s						
RISI	Rein	3.68	343	AML	AML		
	comp=E,78µm,1.2s						
RISI				AML	AML		
	comp=E,78µm,1.2s						
RISI				AML	AML		
	comp=N,76µm,0.4s						
RISI				AML	AML		
	comp=E,78µm,1.2s						
RISI				AML	AML		
	comp=N,76µm,0.4s						
RISI				AML	AML		
	comp=N,76µm,0.4s						
ABSI	Aberstueckl	3.68	334	AML	AML		
	comp=E,54µm,0.8s						
ABSI				AML	AML		
	comp=N,46µm,0.5s						
ABSI				AML	AML		
	comp=N,46µm,0.5s						
ABSI				AML	AML		
	comp=E,54µm,0.8s						
ABSI				AML	AML		
	comp=N,46µm,0.5s						
ABSI				AML	AML		
	comp=E,54µm,0.8s						
ROSI	Rosskopf	3.83	336	AML	AML		
	comp=N,94µm,0.4s						
ROSI				AML	AML		
	comp=E,73µm,1.0s						
ROSI				AML	AML		
	comp=N,94µm,0.4s						
ROSI				AML	AML		
	comp=E,73µm,1.0s						
ROSI				AML	AML		
	comp=N,94µm,0.4s						
ROSI				AML	AML		
	comp=E,73µm,1.0s						
ARSA	Arzberg	4.03	18	ePn	Pn	05 41 54.6	+0.5
	comp=E,0.4nm,0.3s						
WTTA	Wattenberg	4.08	340	ePn	Pn	05 41 56.5	+1.6
	comp=E,1.9nm,0.3s						
FETA	Feichten	4.14	331	ePn	Pn	05 41 57.0	+1.4
	comp=E,1.4nm,0.4s						
SQTA	Sankt Quirin	4.16	336	ePn	Pn	05 41 57.5	+1.6
	comp=E,4.1nm,0.3s						
SQTA				Sn	Sn	05 42 44.1	+0.1
	comp=E,3.5nm,0.3s						
MOTA	Moosalm	4.30	336	ePn	Pn	05 41 59.6	+1.7
	comp=E,0.9nm,0.3s						
MOA	Molln	4.43	5	ePn	Pn	05 42 00.2	+0.6
	comp=E,0.6nm,0.2s						
RETA	Reutte	4.53	334	ePn	Pn	05 42 02.7	+1.7
	comp=E,2.6nm,0.3s						
DAVA	Damuels	4.68	327	ePn	Pn	05 42 05.2	+2.1
	comp=E,1.2nm,0.2s						
KHC	Kasperske Hory	5.69	359	ePN	Pn	05 42 16.0	-0.9
KHC				ex	x	05 42 24.8	

WEL 21 05:43:16.0, 42°S±1°×174°.3E±0°.7, h13^{km}±2^{km}, M3.5/18, ML3.8/18, MLv3.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=159.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.15	212	P	Pb	05 43 20.4	-0.2
CMWZ				S	Sb	05 43 23.2	-0.5
TUWZ	Tuamarina	0.34	304	P	Pb	05 43 23.5	-0.4
TUWZ				S	Sb	05 43 28.8	-0.4
BSWZ	Blackbirch Sta	0.34	255	P	Pb	05 43 23.5	-0.4
BSWZ				S	Sb	05 43 28.9	-0.4
TCW	Tory Channel	0.41	356	P	Pb	05 43 24.8	-0.3
BHW	Baring Head	0.47	63	P	Pb	05 43 25.9	-0.1
PLWZ	Palliser	0.70	86	P	Pb	05 43 30.7	+0.6
MSWZ	Moikau Station	0.73	74	P	Pb	05 43 30.9	+0.4
CAW	Cannon Point	0.76	48	P	Pb	05 43 31.0	-0.1
NNZ	Nelson	0.81	300	P	Pg	05 43 31.6	-0.2
PAWZ	Paruwai Farm	0.87	74	P	Pn	05 43 33.6	-0.3
DUWZ	D'Urville Isla	0.87	340	P	Pg	05 43 32.9	0.0
KHZ	Kahutara	0.98	216	P	Pn	05 43 35.7	+0.3
MTW	Mount Morrison	1.00	63	P	Pn	05 43 35.9	+0.2
OGWZ	Otaki Gorge	1.03	39	P	Pb	05 43 35.5	-0.1
TRWZ	Traveller	1.05	78	P	Pb	05 43 35.9	-0.1
THZ	Tophouse	1.07	262	P	Pg	05 43 36.5	0.0
HOWZ	Holdsworth Sta	1.16	52	P	Pg	05 43 38.1	-0.2
TMWZ	Te Maipa	1.29	67	P	Pb	05 43 39.9	-0.2
MRZ	Mangatainoka R	1.35	45	P	Pb	05 43 40.9	-0.2
TIWZ	Tintock	1.46	55	P	Pb	05 43 42.9	0.0
QRZ	Quartz Range	1.57	300	P	Pb	05 43 45.3	+0.5
OHWZ	Ohakea	1.61	28	P	Pg	05 43 46.3	-0.5
PRWZ	Pori Road	1.64	50	P	Pn	05 43 44.6	+0.1
GVZ	Greta Valley S	1.65	215	P	Pn	05 43 44.4	-0.2
POWZ	Post Office Ro	1.65	42	P	Pb	05 43 45.4	-0.7
BFZ	Birch Farm	1.73	58	P	Pn	05 43 46.4	+0.7
LTZ	Lake Taylor	1.91	232	P	Pn	05 43 46.5	-1.7
DVHZ	Dannevirke	1.93	47	P	Pn	05 43 49.2	+0.7
WAZ	Wanganui	1.94	15	P	Pb	05 43 51.8	+0.8
PNHZ	Pukenui	2.23	41	P	Pn	05 43 52.6	+0.1
NMEZ	Namu Road	2.23	351	P	Pg	05 43 59.5	+0.7
PREZ	Palmer Road	2.28	357	P	Pg	05 44 00.2	+0.5
OKCZ	Okains Bay	2.29	203	P	Pn	05 43 52.5	-1.0
KHEZ	Kahui Hut	2.34	354	P	Pg	05 44 00.9	+0.1
INZ	Inchbonnie	2.40	242	P	Pn	05 43 56.2	+1.3
MTVZ	Mangateitei	2.40	22	P	Pg	05 44 01.4	-0.7
MQZ	McQueen's Vall	2.42	210	P	Pn	05 43 54.0	-1.1
DREZ	Durham Road	2.43	358	P	Pg	05 44 02.8	+0.2
PKE	Pukeiti	2.44	354	P	Pg	05 44 02.5	-0.3
PKVZ	Pokaka	2.46	19	P	Pg	05 44 04.4	+1.2
MOVZ	Moawhango	2.47	27	P	Pb	05 44 00.8	+0.6
AKCZ	Akaroa Harbour	2.48	204	P	Pn	05 43 55.6	-0.3
PXZ	Pawanui	2.50	51	P	Pb	05 44 00.6	-0.1
BHHZ	Black Hill Sta	2.51	33	P	Pb	05 44 01.9	+0.9
VRZ	Vera Road	2.52	8	P	Pg	05 44 03.7	-0.6
KRHZ	Kereru	2.52	39	P	Pg	05 44 02.7	-1.5
WHVZ	Whangaehu Hut	2.53	23	P	Pg	05 44 03.2	-1.3
FWVZ	Far West T-bar	2.55	22	P	Pb	05 44 02.5	+0.9
TUVZ	Tukino	2.56	24	P	Pg	05 44 03.8	-1.3
NGZ	Ngauruhoe	2.63	22	P	Pb	05 44 04.2	+1.2
WTVZ	West Tongariro	2.69	22	P	Pb	05 44 05.2	+1.2
TWVZ	Taurewa	2.69	19	P	Pg	05 44 06.6	-0.9
KRVZ	Karewarewa	2.72	22	P	Pb	05 44 05.8	+1.2
KWHZ	Kaweka Forest	2.72	37	P	Pg	05 44 07.6	-0.5
RITZ	Rihia Road	2.89	25	P	Pb	05 44 09.3	+1.9
BKZ	Black Stump Fm	2.96	35	P	Pb	05 44 10.2	+1.6
HIZ	Hauiti	3.13	8	P	Pb	05 44 11.8	+0.3
RPZ	Rata Peaks	3.19	228	P	Pn	05 44 06.7	+0.9
MRHZ	Matea Rd	3.22	31	P	Pb	05 44 14.9	+2.0
MKAZ	Moumakai	4.56	9	P	Pb	05 44 32.1	-3.7
JCZ	Jackson Bay	4.75	237	P	Pn	05 44 32.8	+5.5
RVAZ	Riverhead Bore	4.85	2	P	Pn	05 44 27.1	-1.5
CTZ	Chatham Island	7.00	111	P	Pn	05 44 57.9	-0.3

WEL 21 05:45:01.5, 41°.5S±0°.7×174°.4E±0°.8, h13^{km}±2^{km}, M3.5/24, ML3.8/18, MLv3.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=129.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.27	212	P	Pb	05 45 08.0	-0.3
TCW	Tory Channel	0.32	342	P	Pb	05 45 09.1	-0.1
TCW				S	Sb	05 45 14.1	-0.2
TUWZ	Tuamarina	0.36	284	P	Pg	05 45 09.3	+0.4
TUWZ				S	Sb	05 45 14.6	-0.8
BHW	Baring Head	0.36	72	P	Pb	05 45 09.8	0.0
BHW				S	Sb	05 45 15.4	-0.1
BSWZ	Blackbirch Sta	0.45	244	P	Pg	05 45 10.7	+0.3
PLWZ	Palliser	0.64	95	P	Pb	05 45 14.6	+0.1
MSWZ	Moikau Station	0.64	81	P	Pb	05 45 14.7	+0.1
CAW	Cannon Point	0.64	50	P	Pb	05 45 14.6	-0.1
PAWZ	Paruwai Farm	0.78	80	P	Pb	05 45 17.0	0.0
DUWZ	D'Urville Isla	0.81	333	P	Pb	05 45 17.9	+0.4
NNZ	Nelson	0.83	291	P	Pg	05 45 17.6	0.0
MTW	Mount Morrison	0.90	67	P	Pn	05 45 19.5	-0.4
OGWZ	Otaki Gorge	0.91	40	P	Pg	05 45 18.9	-0.2
TRWZ	Traveller	0.97	83	P	Pb	05 45 20.1	-0.1
HOWZ	Holdsworth Sta	1.04	54	P	Pn	05 45 22.2	+0.3
KHZ	Kahutara	1.11	216	P	Pb	05 45 22.3	-0.2
THZ	Tophouse	1.15	257	P	Pb	05 45 23.1	-0.2
TMWZ	Te Maipa	1.19	70	P	Pn	05 45 23.7	-0.2
MRZ	Mangatainoka R	1.23	46	P	Pb	05 45 24.8	+0.2
TIWZ	Tintock	1.34	57	P	Pb	05 45 26.3	-0.3
OHWZ	Ohakea	1.48	28	P	Pg	05 45 29.7	-0.3
PRWZ	Pori Road	1.52	51	P	Pn	05 45 28.5	+0.1
POWZ	Post Office Ro	1.53	43	P	Pb	05 45 29.3	-0.3
QRZ	Quartz Range	1.58	295	P	Pb	05 45 30.2	-0.3
BFZ	Birch Farm	1.62	60	P	Pn	05 45 30.1	+0.3
GVZ	Greta Valley S	1.77	215	P	Pn	05 45 30.9	-0.9
WAZ	Wanganui	1.82	14	P	Pg	05 45 35.6	-0.8
LTZ	Lake Taylor	2.03	231	P	Pn	05 45 35.2	-0.3
PNHZ	Pukenui	2.10	41	P	Pn	05 45 36.7	+0.3
PREZ	Palmer Road	2.18	355	P	Pb	05 45 41.2	+0.3
KHEZ	Kahui Hut	2.24	352	P	Pb	05 45 42.0	+0.1
MTVZ	Mangateitei	2.28	21	P	Pb	05 45 43.5	+0.9
NBEZ	Newall Road No	2.29	349	P	Pb	05 45 42.1	-0.5
PKVZ	Pokaka	2.34	18	P	Pg	05 45 46.0	-0.4
PKE	Pukeiti	2.34	352	P	Pg	05 45 46.3	-0.2
MOVZ	Moawhango	2.35	26	P	Pb	05 45 44.1	+0.4
BHHZ	Black Hill Sta	2.39	32	P	Pb	05 45 45.6	+1.2
KRHZ	Kereru	2.40	39	P	Pg	05 45 46.7	-0.8
VRZ	Vera Road	2.41	6	P	Pg	05 45 46.6	-1.1
DRZ	Dome Shelter	2.41	22	P	Pg	05 45 47.3	-0.5
WHVZ	Whangaehu Hut	2.41	22	P	Pb	05 45 46.0	+1.1
OKCZ	Okains Bay	2.42	204	P	Pn	05 45 39.2	-1.5
FWVZ	Far West T-bar	2.42	22	P	Pb	05 45 46.2	+1.0
TUVZ	Tukino	2.44	23	P	Pb	05 45 46.6	+1.2
NGZ	Ngauruhoe	2.51	22	P	Pb	05 45 47.8	+1.2
WTVZ	West Tongariro	2.57	21	P	Pb	05 45 48.7	+1.2
TWVZ	Taurewa	2.57	18	P	Pb	05 45 48.9	+1.4
KWHZ	Kaweka Forest	2.60	37	P	Pg	05 45 50.5	-0.8
AKCZ	Akaroa Harbour	2.60	205	P	Pn	05 45 42.1	-1.1
KRVZ	Karewarewa	2.60	22	P	Pb	05 45 49.2	+1.1
KATZ	Kakaramea	2.73	22	P	Pg	05 45 52.5	-1.3
RITZ	Rihia Road	2.77	24	P	Pb	05 45 52.5	+1.6
BKZ	Black Stump Fm	2.84	35	P	Pb	05 45 53.5	+1.4
RATZ	Rangitukua	2.85	22	P	Pg	05 45 54.3	-1.8
HATZ	Hinemaiaia	2.92	27	P	Pb	05 45 54.5	+0.9
WATZ	Wairara	2.99	20	P	Pb	05 45 56.7	+2.1
HIZ	Hauiti	3.02	7	P	Pb	05 45 55.9	+0.8
MRHZ	Matea Rd	3.09	30	P	Pb	05 45 58.3	+1.9
KUTZ	Kaahu Road	3.22	20	P	Pb	05 46 00.6	+2.1
TLZ	Tolley Road	3.30	16	P	Pb	05 46 01.3	+1.3
ALRZ	Allen Road	3.31	27	P	Pb	05 46 01.8	+1.7
AWAZ	Awhitu Peninsu	4.45	2	P	Pn	05 46 13.5	+4.8
JCZ	Jackson Bay	4.86	236	P	Pn	05 46 19.1	+4.7

ZUR 21 05:45:54.4, 47°.42N×9°.32E, h4^{km}, MLh0.7/5, 4C-1D, Error ellipse: s-maj=1.4km s-min=0.7km az=278.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGT00	Sennhlsen	0.01	272	⇑Pg	Pg	05 45 55.3	+0.1
SGT00				Sg	Sg	05 45 56.1	+0.3
SGT01	Gaiserwald	0.01	349	⇑Pg	Pg	05 45 55.4	+0.2
SGT01				Sg	Sg	05 45 56.4	+0.4
STGK	St. Gallen Klo	0.04	89	Pg	Pg	05 45 55.8	+0.3
STGK				Sg	Sg	05 45 56.9	+0.7
SGT04	Schlatt-Haslen	0.08	166	⇓Pg	Pg	05 45 56.6	+0.5
SGT04				Sg	Sg	05 45 58.6	+1.3
SGT05	Eggersriet	0.09	79	⇑Pg	Pg	05 45 56.8	+0.4
SGT05				Sg	Sg	05 45 58.8	+1.1
SGT03	Degersheim	0.10	235	⇑Pg	Pg	05 45 56.9	+0.4
SGT03				Sg	Sg	05 45 59.0	+1.1
SGT02	Zihlschlacht	0.10	331	Pg	Pg	05 45 57.0	+0.4
SGT02				Sg	Sg	05 45 59.0	+1.0
LIENZ	Kamor/St.Gall	0.17	138	Pg	Pg	05 45 59.0	+1.1

ROM 21 05:46:47.8±0.5, 43°.53N±0°.02×13°.76E±0°.03, h9^{km}±1^{km}, ML1.6/3, Error ellipse: s-maj=3.1km s-min=1.2km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	Ancona	0.12	282	P	Pg	05 46 50.8	+0.2
AOI				S	Sg	05 46 53.0	+0.5
PCRO	Pietralacroce	0.19	297	P	Pg	05 46 52.9	+1.2
PCRO				S	Sg	05 46 55.5	+1.2
CIMA	Civitanova Mar	0.23	197	P	Pg	05 46 53.4	+1.0
CING	Cingoli	0.44	250	P	Pg	05 46 56.8	+0.5
CING				S	Sb	05 47 03.7	-0.7
EL6	Elcito	0.52	248	P	Pb	05 46 59.1	0.0
CSP1	Cessapalombo	0.59	223	P	Pg	05 46 59.5	+0.2
ARVD	Arcevia	0.60	268	P	Pg	05 46 59.8	+0.4
SNTG	Esanatoglia	0.66	246	P	Pg	05 47 00.1	-0.4
FDMO	Fiordimonte	0.69	225	P	Pg	05 47 00.8	-0.3
FDMO				S	Sb	05 47 11.8	+0.1
FDMO				AML	AML		
	comp=E,38µm,0.8s						
FDMO				AML	AML		
	comp=N,33µm,0.6s						
FDMO				AML	AML		
	comp=E,38µm,0.8s						
FDMO				AML	AML		
	comp=N,33µm,0.6s						
SSFR	Montelago di S	0.72	263	P	Pg	05 47 01.8	+0.2
SSFR				AML	AML		
	comp=E,58µm,0.3s						
SSFR				AML	AML		
	comp=N,64µm,0.2s						
SSFR				AML	AML		
	comp=E,58µm,0.3s						
SSFR				AML	AML		
	comp=N,64µm,0.2s						
NRCA	Norcia	0.84	215	P	Pg	05 47 03.5	-0.4
NRCA				AML	AML		
	comp=E,79µm,0.5s						
NRCA				AML	AML		
	comp=N,77µm,0.1s						
NRCA				AML	AML		
	comp=N,77µm,0.1s						
NRCA				AML	AML		
	comp=E,79µm,0.5s						
DUGI	Dugi Otok	1.05	63	i Pg	Pn	05 47 08.7	0.0
DUGI				Sg	Sn	05 47 24.5	+1.0
NVLJ	Novalja	1.31	37	ePn	Pn	05 47 12.3	+0.1
NVLJ				Sn	Sg	05 47 31.5	+1.6
ZIRJ	Zirje	1.37	84	i Pn	Pn	05 47 11.6	-1.6
ZIRJ				Sn	Sg	05 47 33.6	+1.6
MORI	Morici	1.45	76	ePn	Pb	05 47 14.7	-0.3
MORI				Sn	Sg	05 47 35.5	+1.0

IDC **21** *05:47:26.9±8.2, 40°.43S×175°.32E, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.6/23, mbtmp3.7/2, Error ellipse: s-maj=508.5km s-min=46.6km az=31.0*
ISCJB **21** *05:47:31.9±0.6, 41°.83S±0°.03×174°.26E±0°.04, h8^{km}±4^{km}, mb3.5/2, Error ellipse: s-maj=5.9km s-min=3.4km az=135.6*
WEL **21** *05:47:32.0, 42°S±2°×17°4E±°, h7^{km}±2^{km}, M3.9/21, ML4.2/17, MLv3.9/21, Error ellipse: s-maj=0.0km s-min=0.0km az=164.7*
NEIC **21** *05:47:32.6±0.0, 41°.67S×174°.18E, h5^{km}, ML4.0(WEL), After WEL.*

ISC 21 05:47:32.3±0.9, 41°.71S±0°.03×174°.27E±0°.03, h12^{km}±6^{km}, n79, σ1^{s}41/81, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.05	227	P	Pg	05 47 34.6	0.0
CMWZ				S	Sg	05 47 37.1	+0.8
BSWZ	Blackbirch Sta	0.29	269	P	Pg	05 47 38.3	+0.1
BSWZ				S	Sg	05 47 43.2	+1.0
TUWZ	Tuamarina	0.37	319	P	Pg	05 47 39.4	-0.3
TUWZ				S	Sg	05 47 44.7	0.0
TCW	Tory Channel	0.50	1	P	Pg	05 47 41.5	-0.6
TCW				S	Sg	05 47 47.9	-0.9
SNZO	South Karori	0.52	40	ePg	Pb	05 47 42.2	-1.1
BHW	Baring Head	0.55	56	P	Pb	05 47 43.5	-0.3
PLWZ	Palliser	0.76	79	P	Pn	05 47 48.6	-0.2
MSWZ	Moikau Station	0.80	68	P	Pn	05 47 49.2	-0.1
NNZ	Nelson	0.83	306	P	Pg	05 47 47.3	-1.0
CAW	Cannon Point	0.85	45	P	Pn	05 47 50.4	+0.2
KHZ	Kahutara	0.89	217	ePg	Pn	05 47 51.0	+0.4
KHZ	Kahutara	0.89	217	P	Pn	05 47 51.0	+0.4
PAWZ	Paruwai Farm	0.93	70	P	Pn	05 47 51.2	0.0
DUWZ	D'Urville Isla	0.95	344	P	Pb	05 47 50.8	+0.2
THZ	Tophouse	1.02	267	ePg	Pb	05 47 51.7	-0.2
THZ	Tophouse	1.02	267	P	Pg	05 47 51.5	-0.4
MTW	Mount Morrison	1.08	60	P	Pn	05 47 53.7	+0.3
TRWZ	Traveller	1.11	74	P	Pb	05 47 53.3	-0.2
OGWZ	Otaki Gorge	1.13	38	P	Pn	05 47 53.7	-0.2
HOWZ	Holdsworth Sta	1.25	50	P	Pn	05 47 56.1	+0.6
TMWZ	Te Maipa	1.36	64	P	Pn	05 47 57.0	-0.2
GVZ	Greta Valley S	1.55	216	P	Pn	05 47 60.0	+0.2
QRZ	Quartz Range	1.58	304	P	Pn	05 48 00.8	+0.7
OHWZ	Ohakea	1.70	28	P	Pg	05 48 03.5	-1.4
POWZ	Post Office Ro	1.74	41	P	Pb	05 48 03.9	-0.3
BFZ	Birch Farm	1.82	56	ePn	Pb	05 48 04.8	-0.6
BFZ	Birch Farm	1.82	56	P	Pg	05 48 10.3	+3.2
LTZ	Lake Taylor	1.83	234	ePn	Pn	05 48 03.8	+0.3
LTZ	Lake Taylor	1.83	234	P	Pn	05 48 04.0	+0.5
AMCZ	Amberley	1.89	219	P	Pn	05 48 04.0	-0.4
WAZ	Wanganui	2.03	16	P	Pb	05 48 09.3	+0.2
OKCZ	Okains Bay	2.20	203	P	Pn	05 48 07.7	-1.0
CRLZ	Canterbury Las	2.22	213	ePn	Pn	05 48 08.0	-0.9
CRLZ	Canterbury Las	2.22	213	P	Pn	05 48 08.3	-0.6
OXZ	Oxford	2.30	225	ePn	Pn	05 48 09.4	-0.7
OXZ	Oxford	2.30	225	P	Pn	05 48 09.4	-0.7
NMEZ	Namu Road	2.32	353	P	Pg	05 48 14.7	-1.9
MQZ	McQueen's Vall	2.32	210	ePn	Pn	05 48 08.7	-1.6
MQZ	McQueen's Vall	2.32	210	P	Pn	05 48 08.7	-1.6
INZ	Inchbonnie	2.33	243	P	Pn	05 48 11.6	+1.2
AKCZ	Akaroa Harbour	2.38	204	P	Pn	05 48 09.9	-1.3
NBEZ	Newall Road No	2.46	353	P	Pb	05 48 16.4	-0.1
BHHZ	Black Hill Sta	2.61	32	P	Pg	05 48 20.6	-1.7
VRZ	Vera Road	2.61	8	P	Pg	05 48 21.7	-0.7
DRZ	Dome Shelter	2.63	23	P	Pg	05 48 22.4	-0.3
WHVZ	Whangaehu Hut	2.63	23	P	Pb	05 48 20.0	+0.5
FWVZ	Far West T-bar	2.64	22	P	Pg	05 48 20.7	-2.3
TUVZ	Tukino	2.66	24	P	Pg	05 48 22.9	-0.3
NGZ	Ngauruhoe	2.73	22	P	Pb	05 48 21.8	+0.7
WTVZ	West Tongariro	2.79	22	P	Pg	05 48 24.5	-1.1
KRVZ	Karewarewa	2.82	22	P	Pg	05 48 25.2	-1.1
WVZ	Waitaha Valley	2.95	241	P	Pb	05 48 23.8	-0.9
RITZ	Rihia Road	2.99	25	P	Pg	05 48 27.0	-2.6
BKZ	Black Stump Fm	3.06	34	ePn	Pn	05 48 22.1	+1.6
BKZ	Black Stump Fm	3.06	34	P	Pg	05 48 29.4	-1.5
RPZ	Rata Peaks	3.10	229	ePn	Pn	05 48 20.7	-0.4
RPZ	Rata Peaks	3.10	229	P	Pn	05 48 21.1	+0.1
HIZ	Hauiti	3.23	8	P	Pb	05 48 29.9	+0.4
FOZ	Fox Glacier	3.75	240	ePn	Pn	05 48 30.6	+0.6
FOZ	Fox Glacier	3.75	240	P	Pb	05 48 36.7	-1.8
LBZ	Lake Benmore	4.01	227	ePn	Pn	05 48 34.3	+0.7
URZ	Urewera	4.08	33	ePn	Pn	05 48 35.3	+0.8
ODZ	Otahua Downs	4.25	217	ePn	Pn	05 48 35.6	-1.2
ODZ	Otahua Downs	4.25	217	P	Pn	05 48 36.5	-0.3
AWAZ	Awhitu Peninsu	4.65	4	P	Pb	05 48 50.1	-3.7
MKAZ	Moumakai	4.66	9	P	Pb	05 48 48.3	-5.5
JCZ	Jackson Bay	4.67	238	P	Pn	05 48 46.6	+3.9
ETAZ	East Tamaki Re	4.78	6	P	Pb	05 48 51.3	-4.7
HHSZ	Highcliff Hill	4.94	211	P	Pn	05 48 45.9	-0.4
WIAZ	Waiheke Island	4.96	8	P	Pb	05 48 53.6	-5.4
TUZ	Tuapeka	5.40	217	P	Pn	05 48 53.5	+0.8
SYZ	Scrubby Hill	6.07	216	P	Pn	05 49 02.3	+0.5
WHZ	Wether Hill Ro	6.19	225	ePn	Pn	05 49 03.5	0.0
DCZ	Deep Cove	6.38	232	ePn	Pn	05 49 06.8	+0.7
OUZ	Omahuta	6.50	355	eSn	Sn	05 50 27.5	+5.5
CTZ	Chatham Island	7.01	110	P	Pn	05 49 16.8	+2.1
ASAR	Alice Springs	38.03	285	P	P	05 54 50.3	-0.3
	0.3nm,0.4s,baz=122,slow=6.8,SNR=5.8						
WRA	Warramunga Arr	40.10	290	P	P	05 55 07.4	-0.5
	1.0nm,0.6s,baz=135,slow=8.3,SNR=3.9						
TORD	Torodi Ar. Bea	150.81	195	PKPbc	PKPbc	06 07 24.9	-0.1
	0.3nm,0.4s,baz=166,slow=4.5,SNR=6.9						

WEL 21 05:49:55.5, 41°.5S±0°.7×174°.4E±0°.7, h13^{km}±2^{km}, M3.9/13, ML4.2/13, MLv3.9/13, Error ellipse: s-maj=0.0km s-min=0.0km az=127.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.24	207	S	Sb	05 50 05.9	-0.2
TCW	Tory Channel	0.33	348	P	Pb	05 50 03.2	0.0
TCW				S	Sb	05 50 08.1	-0.3
TUWZ	Tuamarina	0.33	288	P	Pg	05 50 02.6	+0.4
TUWZ				S	Sb	05 50 07.9	-0.6
BHW	Baring Head	0.40	72	P	Pb	05 50 04.3	-0.1
BHW				S	Sb	05 50 10.2	-0.3
BSWZ	Blackbirch Sta	0.41	243	P	Pb	05 50 04.2	-0.4
PLWZ	Palliser	0.67	94	P	Pb	05 50 09.1	0.0
MSWZ	Moikau Station	0.68	80	P	Pb	05 50 09.1	0.0
CAW	Cannon Point	0.68	52	P	Pb	05 50 09.5	+0.3
DUWZ	D'Urville Isla	0.80	335	P	Pb	05 50 11.9	+0.6
NNZ	Nelson	0.81	293	P	Pb	05 50 11.5	+0.1
PAWZ	Paruwai Farm	0.81	80	P	Pb	05 50 11.9	+0.4
MTW	Mount Morrison	0.93	67	P	Pb	05 50 13.8	+0.3
OGWZ	Otaki Gorge	0.94	41	P	Pn	05 50 14.1	-0.3
TRWZ	Traveller	1.00	83	P	Pb	05 50 14.8	0.0

HOWZ	Holdsworth Sta	1.07	54	P	Pg	05 50 16.2	0.0
THZ	Tophouse	1.12	258	P	Pb	05 50 16.4	-0.3
TMWZ	Te Maipa	1.23	70	P	Pn	05 50 17.4	-1.0
MRZ	Mangatainoka R	1.27	47	P	Pb	05 50 19.1	-0.1
TIWZ	Tintock	1.38	57	P	Pn	05 50 19.9	-0.5
OHWZ	Ohakea	1.51	29	P	Pg	05 50 24.1	-0.3
QRZ	Quartz Range	1.55	296	P	Pb	05 50 23.9	-0.2
PRWZ	Pori Road	1.56	52	P	Pn	05 50 22.5	-0.4
JCZ	Jackson Bay	4.83	236	P	Pn	05 51 10.6	+2.6

DDA ***21*** *05:50:29.4, 36°.82N×27°.41E, h7^{km}±1^{km}, ML2.6*
ISK ***21*** *05:50:29.6, 36°.80N×27°.50E, h15^{km}±1^{km}, ML2.3/6*
ISC 21 05:50:30.0±1.0**, 36°.85N**±0°.06×**27°.70E**±0°.04**, h14**^{km}±9^{km}**,**
n9, σ1^s.60/14**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DATC	Datca-Mugla	0.09	202	PG	Pg	05 50 33.5	+0.4
DATC				SG	Sg	05 50 36.4	+1.3
DAT	Datca	0.15	221	PG	Pg	05 50 33.3	-0.7
DAT				SG	Sg	05 50 35.4	-1.3
DAT	Datca	0.15	221	*i* P	Pg	05 50 33.3	-0.7
DAT				IAML_P			
	comp=Z,14μm,0.1s						
BODT	Bodrum	0.38	304	PG	Pg	05 50 36.3	-1.4
BODT				SG	Sg	05 50 41.1	-1.9
YER	Yerkesik	0.55	58	PG	Pn	05 50 43.9	+0.5
ARG	Arkhangelos	0.71	152	PG	Pn	05 50 44.9	-0.7
TURN	Turunc	0.72	88	PG	Pg	05 50 41.2	-2.8
TURN	Turunc	0.72	88	*i* P	Pg	05 50 43.7	-0.4
TURN				*i* S	Sg	05 50 53.0	-0.5
TURN				IAML_P			
	comp=Z,515nm,0.1s						
AYDN	Tasoluk	0.82	10	*i* P	Pb	05 50 47.2	+1.1
AYDN				*i* S	Sn	05 51 01.5	+2.3
AYDN				IAML_P			
	comp=Z,573nm,0.2s						

WEL 21 05:51:07.2, 41°S±13°×**17°4E**±°**, h12**^{km}**, M3.6**/10**, ML3.9**/6**,**
MLv3.6/10**, Error ellipse: s-maj=0.0km s-min=0.0km**
az=169.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCW	Tory Channel	0.27	333	P	Pb	05 51 14.0	+0.2
TCW				S	Sb	05 51 18.9	+0.6
BHW	Baring Head	0.33	83	P	Pb	05 51 14.5	-0.5
BHW				S	Sb	05 51 20.3	0.0
CMWZ	Cape Campbell	0.34	209	S	Sg	05 51 17.7	-1.0
BSWZ	Blackbirch Sta	0.50	237	P	Pg	05 51 15.6	-1.3
BSWZ				S	Sg	05 51 22.3	-1.2
MSWZ	Moikau Station	0.61	87	P	Pb	05 51 19.5	-0.3
PLWZ	Palliser	0.63	101	P	Pg	05 51 19.5	+0.1
PAWZ	Paruwai Farm	0.75	85	P	Pb	05 51 22.2	+0.1
DUWZ	D'Urville Isla	0.75	329	P	Pn	05 51 23.8	+0.2
DUWZ				S	Sn	05 51 33.9	-1.0
NNZ	Nelson	0.83	286	P	Pg	05 51 20.9	-2.2
MTW	Mount Morrison	0.85	71	P	Pn	05 51 24.6	-0.4
HOWZ	Holdsworth Sta	0.98	56	P	Pn	05 51 27.4	+0.6

WEL 21 05:53:03.0, 41°.6S±0°.9×**17°4E**±°**, h8**^{km}±2^{km}**, M3.4**/15**,**
ML3.7/9**, MLv3.4**/15**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=96.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.16	222	P	Pg	05 53 06.0	-0.3
CMWZ				S	Sg	05 53 10.2	+1.6
BSWZ	Blackbirch Sta	0.37	257	P	Pb	05 53 11.1	-0.7
BSWZ				S	Sb	05 53 17.2	-0.5
TUWZ	Tuamarina	0.37	303	P	Pb	05 53 11.2	-0.6
TCW	Tory Channel	0.42	352	P	Pb	05 53 12.1	-0.6
TCW				S	Sb	05 53 18.6	-0.7
BHW	Baring Head	0.45	60	P	Pb	05 53 13.3	+0.2
PLWZ	Palliser	0.68	85	P	Pn	05 53 19.2	+0.3
CAW	Cannon Point	0.75	46	P	Pb	05 53 18.5	+0.3
PAWZ	Paruwai Farm	0.84	73	P	Pb	05 53 19.9	0.0
DUWZ	D'Urville Isla	0.89	338	P	Pn	05 53 22.4	+0.5
DUWZ				S	Sb	05 53 33.5	+0.8
KHZ	Kahutara	0.99	218	P	Pg	05 53 21.7	-0.3
OGWZ	Otaki Gorge	1.02	37	P	Pb	05 53 22.8	0.0
THZ	Tophouse	1.09	263	P	Pb	05 53 24.3	+0.1
HOWZ	Holdsworth Sta	1.14	50	P	Pn	05 53 26.4	+1.1
MRZ	Mangatainoka R	1.34	44	P	Pg	05 53 28.6	0.0
QRZ	Quartz Range	1.60	300	P	Pn	05 53 31.7	+0.2
BFZ	Birch Farm	1.71	57	P	Pg	05 53 44.4	+8.5
DVHZ	Dannevirke	1.91	46	P	Pg	05 53 42.9	+3.3
WAZ	Wanganui	1.94	15	P	Pg	05 53 40.5	+0.5
PNHZ	Pukenui	2.21	40	P	Pg	05 53 46.7	+1.3
PREZ	Palmer Road	2.29	356	P	Pg	05 53 48.0	+1.1
MOVZ	Moawhango	2.46	26	P	Pb	05 53 48.6	+1.1
BHHZ	Black Hill Sta	2.50	32	P	Pg	05 53 50.0	-0.9
DRZ	Dome Shelter	2.53	22	P	Pg	05 53 51.5	0.0
FWVZ	Far West T-bar	2.54	21	P	Pg	05 53 50.5	-1.2
NGZ	Ngauruhoe	2.63	22	P	Pg	05 53 52.0	-1.4
WTVZ	West Tongariro	2.68	21	P	Pg	05 53 53.2	-1.3
KWHZ	Kaweka Forest	2.71	36	P	Pg	05 53 57.2	+2.3
KRVZ	Karewarewa	2.72	22	P	Pg	05 53 53.5	-1.5
RITZ	Rihia Road	2.89	24	P	Pg	05 53 56.9	-1.4

WEL 21 05:54:27.4, 41°.6S±0°.7×**174°.3E**±0°.7**, h15**^{km}±1^{km}**, M3.6**/16**,**
ML3.9/12**, MLv3.6**/16**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=128.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.15	201	P	Pb	05 54 32.0	-0.1
CMWZ				S	Sb	05 54 35.0	-0.1
TUWZ	Tuamarina	0.31	304	P	Pb	05 54 34.4	-0.3
BSWZ	Blackbirch Sta	0.33	250	P	Pg	05 54 34.4	+0.3
BSWZ				S	Sb	05 54 39.6	-0.5
TCW	Tory Channel	0.40	359	P	Pb	05 54 36.0	-0.2
TCW				S	Sb	05 54 41.9	-0.1
BHW	Baring Head	0.48	66	P	Pb	05 54 37.6	0.0
BHW				S	Sb	05 54 44.9	+0.4
PLWZ	Palliser	0.73	87	P	Pn	05 54 42.7	-0.5
CAW	Cannon Point	0.77	50	P	Pb	05 54 42.6	0.0
NNZ	Nelson	0.79	299	P	Pg	05 54 42.4	-0.2
DUWZ	D'Urville Isla	0.85	341	P	Pb	05 54 44.2	+0.3
PAWZ	Paruwai Farm	0.89	76	P	Pg	05 54 44.6	0.0
KHZ	Kahutara	0.98	214	P	Pb	05 54 46.1	-0.1
MTW	Mount Morrison	1.02	64	P	Pn	05 54 47.6	+0.4
OGWZ	Otaki Gorge	1.03	40	P	Pb	05 54 47.1	+0.1
THZ	Tophouse	1.05	261	P	Pb	05 54 47.1	-0.2
HOWZ	Holdsworth Sta	1.17	53	P	Pb	05 54 49.4	+0.1
MRZ	Mangatainoka R	1.36	46	P	Pn	05 54 52.2	+0.3
QRZ	Quartz Range	1.54	300	P	Pb	05 54 55.5	-0.1
OHWZ	Ohakea	1.60	29	P	Pb	05 54 57.4	+0.7
GVZ	Greta Valley S	1.65	214	P	Pn	05 54 55.0	-0.9
BFZ	Birch Farm	1.74	59	P	Pg	05 55 01.4	+0.5
LTZ	Lake Taylor	1.90	231	P	Pn	05 54 58.8	-0.6
OKCZ	Okains Bay	2.30	203	P	Pn	05 55 02.7	-2.1

WEL 21 05:55:27.3, 42°S±1°×**17°4E**±°**, h19**^{km}±4^{km}**, M3.3**/7**, ML3.6**/6**,**
MLv3.3/7**, Error ellipse: s-maj=0.0km s-min=0.0km**
az=133.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCW	Tory Channel	0.34	345	P	Pb	05 55 35.6	+0.8
TCW				S	Sb	05 55 40.5	+0.7
TUWZ	Tuamarina	0.35	288	P	Pb	05 55 35.2	+0.2
TUWZ				S	Sb	05 55 40.8	+0.6
BHW	Baring Head	0.39	70	P	Pb	05 55 36.3	+0.7
BHW				S	Sb	05 55 42.2	+1.0
BSWZ	Blackbirch Sta	0.42	245	P	Pb	05 55 36.6	+0.3
PLWZ	Palliser	0.65	93	P	Pb	05 55 40.1	+0.1
MSWZ	Moikau Station	0.66	80	P	Pg	05 55 40.7	+0.3
OGWZ	Otaki Gorge	0.93	40	P	Pn	05 55 45.3	0.0
KHZ	Kahutara	1.08	216	P	Pb	05 55 45.5	-1.9
THZ	Tophouse	1.14	258	P	Pg	05 55 49.0	-0.3

WEL 21 05:57:18.6, 42°S±1°×**174°.3E**±0°.7**, h10**^{km}±2^{km}**, M3.4**/18**,**
ML3.6/13**, MLv3.4**/18**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=167.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.17	213	P	Pg	05 57 22.9	+0.8
CMWZ				S	Sg	05 57 26.1	+1.4
TUWZ	Tuamarina	0.34	301	P	Pg	05 57 26.1	+0.7
TUWZ				S	Sb	05 57 31.5	-0.9
BSWZ	Blackbirch Sta	0.36	253	P	Pg	05 57 26.2	+0.5
TCW	Tory Channel	0.40	354	P	Pb	05 57 27.3	-0.5
TCW				S	Sb	05 57 33.2	-0.8
BHW	Baring Head	0.45	64	P	Pb	05 57 28.4	-0.2
PLWZ	Palliser	0.69	87	P	Pb	05 57 33.3	+0.5
MSWZ	Moikau Station	0.71	75	P	Pb	05 57 33.0	-0.1
NNZ	Nelson	0.82	298	P	Pg	05 57 34.5	+0.2
PAWZ	Paruwai Farm	0.85	75	P	Pb	05 57 35.4	-0.1
DUWZ	D'Urville Isla	0.87	339	P	Pb	05 57 36.1	+0.4
MTW	Mount Morrison	0.99	63	P	Pn	05 57 38.3	-0.2
KHZ	Kahutara	1.00	216	P	Pb	05 57 38.3	+0.3
OGWZ	Otaki Gorge	1.01	39	P	Pg	05 57 38.0	0.0
TRWZ	Traveller	1.04	79	P	Pn	05 57 39.1	-0.1
THZ	Tophouse	1.08	261	P	Pb	05 57 39.5	0.0
HOWZ	Holdsworth Sta	1.14	52	P	Pg	05 57 40.5	+0.1
TMWZ	Te Maipa	1.27	67	P	Pn	05 57 42.4	-0.1
MRZ	Mangatainoka R	1.33	45	P	Pn	05 57 43.4	+0.1
OXZ	Oxford	2.41	224	P	Pb	05 58 00.3	-1.8

WEL 21 05:58:56.7, 42°S±1°×**17°4E**±°**, h12**^{km}±2^{km}**, M3.3**/16**,**
ML3.5/13**, MLv3.3**/16**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=139.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.28	216	S	Sb	05 59 07.8	-0.6
TCW	Tory Channel	0.33	339	P	Pb	05 59 04.1	-0.5
BHW	Baring Head	0.35	71	P	Pb	05 59 04.6	-0.2
BHW				S	Sb	05 59 10.3	+0.1
PLWZ	Palliser	0.62	95	P	Pb	05 59 09.5	0.0
MSWZ	Moikau Station	0.62	81	P	Pb	05 59 09.6	+0.1
CAW	Cannon Point	0.63	49	P	Pb	05 59 09.9	+0.2
PAWZ	Paruwai Farm	0.76	80	P	Pb	05 59 11.8	-0.1
DUWZ	D'Urville Isla	0.82	331	P	Pn	05 59 14.5	+0.5
NNZ	Nelson	0.85	291	P	Pb	05 59 13.6	+0.2
NNZ				S	Sb	05 59 25.7	+1.0
MTW	Mount Morrison	0.88	66	P	Pn	05 59 14.5	-0.4
OGWZ	Otaki Gorge	0.90	39	P	Pb	05 59 14.4	+0.3
TRWZ	Traveller	0.95	83	P	Pb	05 59 15.2	+0.1
HOWZ	Holdsworth Sta	1.02	53	P	Pn	05 59 16.9	0.0
KHZ	Kahutara	1.12	216	P	Pb	05 59 16.4	-1.6
THZ	Tophouse	1.17	258	P	Pb	05 59 18.8	-0.2
TMWZ	Te Maipa	1.17	70	P	Pb	05 59 18.3	-0.6
MRZ	Mangatainoka R	1.22	46	P	Pn	05 59 19.5	0.0
TIWZ	Tintock	1.32	56	P	Pn	05 59 20.9	-0.1
OKCZ	Okains Bay	2.42	204	P	Pn	05 59 33.7	-2.5

WEL 21 06:00:12.1, 41°.5S±0°.9×**174°.4E**±0°.7**, h14**^{km}±3^{km}**, M3.8**/10**,**
ML4.0/8**, MLv3.8**/10**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=10.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.23	207	P	Pb	06 00 17.8	-0.3
CMWZ				S	Sb	06 00 22.0	-0.1
TUWZ	Tuamarina	0.33	290	P	Pb	06 00 19.5	-0.2
TUWZ				S	Sb	06 00 24.6	-0.2
TCW	Tory Channel	0.34	350	P	Pb	06 00 19.8	0.0
TCW				S	Sb	06 00 25.0	-0.1
BHW	Baring Head	0.41	71	P	Pb	06 00 21.0	-0.1
BHW				S	Sb	06 00 27.2	0.0
PLWZ	Palliser	0.68	92	P	Pb	06 00 25.8	+0.2
PLWZ				S	Sb	06 00 35.9	+1.1
DUWZ	D'Urville Isla	0.81	336	P	Pb	06 00 28.3	+0.4
OGWZ	Otaki Gorge	0.95	41	P	Pg	06 00 30.5	0.0
HOWZ	Holdsworth Sta	1.09	54	P	Pn	06 00 32.9	0.0
TMWZ	Te Maipa	1.24	70	P	Pn	06 00 34.2	-0.7
OHWZ	Ohakea	1.52	29	P	Pg	06 00 41.2	-0.1
POWZ	Post Office Ro	1.57	43	P	Pn	06 00 39.8	+0.2
PRWZ	Pori Road	1.57	52	P	Pn	06 00 39.3	-0.3
GVZ	Greta Valley S	1.73	214	P	Pn	06 00 40.9	-0.8
DREZ	Durham Road	2.35	357	P	Pb	06 00 54.3	0.0
PKVZ	Pokaka	2.38	19	P	Pb	06 00 54.5	-0.2
PXZ	Pawanui	2.43	52	P	Pn	06 00 49.8	-1.5
FWVZ	Far West T-bar	2.46	22	P	Pn	06 00 54.0	+2.1
WTVZ	West Tongariro	2.60	22	P	Pb	06 00 59.5	+0.9
TWVZ	Taurewa	2.60	19	P	Pb	06 00 59.9	+1.3
KWHZ	Kaweka Forest	2.64	37	P	Pb	06 01 00.4	+1.2
RITZ	Rihia Road	2.81	25	P	Pb	06 01 02.6	+0.6
BKZ	Black Stump Fm	2.88	35	P	Pb	06 01 04.8	+1.5
RATZ	Rangitukua	2.89	23	P	Pg	06 01 10.9	+3.5
HATZ	Hinemaiaia	2.96	27	P	Pg	06 01 10.3	+1.4
WATZ	Wairara	3.02	21	P	Pg	06 01 12.0	+2.0
WHTZ	Whakaora	3.13	24	P	Pg	06 01 15.7	+3.7
KUTZ	Kaahu Road	3.25	21	P	Pg	06 01 16.2	+1.8
TLZ	Tolley Road	3.34	16	P	Pg	06 01 14.1	-1.8
ALRZ	Allen Road	3.35	28	P	Pg	06 01 17.2	+1.0
PRRZ	Plateau Road	3.42	28	P	Pg	06 01 15.8	-1.8
RRRZ	Republican Roa	3.60	28	P	Pg	06 01 23.3	+2.2
TARZ	Mount Tarawera	3.69	27	P	Pg	06 01 25.4	+2.6
NGRZ	Ngongotaha	3.72	23	P	Pg	06 01 21.9	-1.3
TOZ	Tahuroa Road	3.91	13	P	Pg	06 01 29.3	+2.4
TGRZ	Tauranga	4.08	22	P	Pg	06 01 27.3	-3.0

IDC ***21*** *06:00:21.9±1.4, 40°.80N×19°.51E, h0^{km}, mb3.5/4,*
mb1 3.5/5, mb1mx3.3/27, mbtmp3.5/5, ML3.3/1, Error
ellipse: s-maj=26.8km s-min=17.3km az=68.0
SKO ***21*** *06:00:22.7, 40°.58N×19°.38E, h0^{km}*
ATH ***21*** *06:00:24.8, 40°.69N×19°.58E, h30^{km}±4^{km}, ML3.1/4, Error*
ellipse: s-maj=5.2km s-min=1.5km az=350.0
LDG ***21*** *06:00:24.7±0.2, 40°.69N×19°.61E, h2^{km}, Ml3.7/7, Error*
ellipse: s-maj=5.2km s-min=2.6km az=48.0
PDG ***21*** *06:00:24.5±0.5, 40°.69N×19°.56E, h14^{km}, ML3.3/11, Error*
ellipse: s-maj=0.5km s-min=0.8km az=0.0
TIR ***21*** *06:00:24.4, 40°.62N×19°.81E, h18^{km}, Md3.2/6*
BEO ***21*** *06:00:24.5±0.5, 40°.68N×19°.53E, h5^{km}, ML3.2/6*
THE ***21*** *06:00:25.6, 40°.68N×19°.67E, h1^{km}±1^{km}, ML3.0/6, Error*
ellipse: s-maj=1.9km s-min=0.6km az=285.0
ISCJB ***21*** *06:00:25.3±0.4, 40°.69N±0°.01×19°.51E±0°.02, h25^{km}±4^{km},*
mb3.5/4, Error ellipse: s-maj=3.0km s-min=2.0km
az=140.5
ISC 21 06:00:24.4±0.9**, 40°.68N**±0°.01×**19°.58E**±0°.02**, h16**^{km}±7^{km}**,**
n205, σ1^s.65/267**, mb3.5**/4**, 25C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLO	Vlora	0.22	197	P	Pg	06 00 29.9	+0.4
VLO				S	Sb	06 00 34.5	+0.8
VLO	Vlora	0.22	197	*i* PG	Pb	06 00 30.5	+0.5
VLO				*i* SG	Sb	06 00 35.9	+2.2
TPE	Tepelena	0.51	139	P	Pg	06 00 33.7	-0.8
TPE				S	Sg	06 00 40.7	-0.6
TPE	Tepelena	0.51	139	*i* PG	Pg	06 00 32.4	-2.1
TPE				*i* SG	Sg	06 00 38.2	-3.1
TIR	Tirane	0.70	18	*e*Pg	Pb	06 00 38.4	+0.1
TIR				*e*Sg	Sg	06 00 47.0	-0.6
TIR	Tirane	0.70	18	P	Pg	06 00 39.0	+0.8
TIR				S	Sb	06 00 48.9	+1.1
TIR	Tirane	0.70	18	⇓*i*P	Pg	06 00 38.6	+0.4
TIR	Tirane	0.70	18	*i* Pg	Pb	06 00 38.1	-0.2
TIR	Tirane	0.70	18	*i* PG	Pg	06 00 39.0	+0.8
TIR				*i* SG	Sn	06 00 49.9	-0.4
TIR	Tirane	0.70	18	P	Pg	06 00 39.1	+0.8
SRN	Sarande	0.86	158	P	Pg	06 00 41.5	+0.4
SRN				S	Sg	06 00 53.3	+0.9
SRN	Sarande	0.86	158	*i* PG	Pb	06 00 39.7	-1.3
SRN				*i* SG	Sb	06 00 50.6	-1.5
KEK	Kerkira	0.98	170	P	Pg	06 00 44.1	+0.7
KEK				S	Sn	06 00 57.0	+0.1
	1μm,0.3s						
KEK	Kerkira	0.98	170	P	Pg	06 00 44.2	+0.8
KEK				S	Sn	06 00 58.4	+1.5
KEK				AML	AML	06 01 02.1	
	comp=E,2208μm,0.3s						
KEK				AML	AML	06 01 02.5	
	comp=N,2510μm,0.3s						
OHR	Ohrid	1.02	64	⇑*i*Pg	Pb	06 00 43.8	+0.1
OHR				*i* Sg	Sn	06 01 00.9	+2.8
SCTE	Santa Cesarea	1.04	235	P	Pg	06 00 45.6	+1.0
SCTE				S	Sn	06 01 00.6	+2.1
NEST	Nestorio	1.15	103	P	Pn	06 00 45.5	-0.4
NEST				S	Sn	06 01 01.4	0.0
	comp=N,502nm,0.4s						
NEST	Nestorio	1.15	103	P	Pn	06 00 45.3	-0.6
NEST				AML	AML	06 01 08.0	
	comp=N,1151μm,0.5s						
NEST				AML	AML	06 01 09.1	
	comp=E,1497μm,0.4s						
PHP	Peshkopia	1.20	33	P	Pn	06 00 46.3	-0.3
PHP				S	Sg	06 01 03.0	-0.3
PHP	Peshkopia	1.20	33	*i* PG	Pn	06 00 46.5	-0.1
PHP				*i* SG	Sg	06 01 03.4	+0.1
IGT	Igoumenitsa	1.28	153	P	Pb	06 00 48.6	+0.5
IGT				S	Sg	06 01 07.9	+2.1
	comp=E,612nm,0.5s						
IGT	Igoumenitsa	1.28	153	P	Pb	06 00 48.6	+0.5
IGT				S	Sg	06 01 06.9	+1.0
IGT				AML	AML	06 01 08.7	
	comp=E,1502μm,0.6s						
IGT				AML	AML	06 01 12.3	
	comp=N,1378μm,0.5s						
PENT	Pentalofos	1.28	111	P	Pg	06 00 49.1	-0.1
PENT	Pentalofos	1.28	111	P	Pn	06 00 47.8	+0.1
ULC	Ulcinj	1.31	349	⇑*i*Pg	Pb	06 00 49.2	+0.6
ULC				*e*Sg	Sg	06 01 09.1	+2.3
JAN	Janina	1.41	136	P	Pb	06 00 50.5	+0.1
JAN				S	Sg	06 01 10.2	+0.2
	comp=N,960nm,0.5s						
JAN	Janina	1.41	136	P	Pb	06 00 51.2	+0.8
DRME	Dracevica, Mon	1.54	349	⇑*i*Pg	Pb	06 00 52.8	+0.3
DRME				*e*Sg	Sg	06 01 14.9	+0.9
DRME	Dracevica, Mon	1.54	349	*e*Pn	Pb	06 00 52.5	0.0
KPRO	Kipourio	1.54	117	P	Pb	06 00 52.6	-0.1
KPRO				S	Sg	06 01 14.8	+0.6
	comp=N,450nm,0.4s						
KPRO	Kipourio	1.54	117	P	Pb	06 00 52.3	-0.4
MEV	Metsovon	1.55	125	P	Pb	06 00 52.6	-0.1
CGL1	Ceglie Messapi	1.60	270	⇑*i*Pg	Pn	06 00 52.9	+0.9
FASA	Fasano	1.69	275	⇑*i*Pg	Pn	06 00 54.3	+1.0
BUM	Brajici-Budva	1.70	343	⇑*i*Pn	Pb	06 00 55.0	-0.4
BUM				*e*Sn	Sg	06 01 18.6	-0.7
KZN	Kozani	1.71	102	P	Pb	06 00 55.1	-0.4
KZN				S	Sb	06 01 18.3	+1.5
	comp=N,515nm,0.4s						
KZN	Kozani	1.71	102	P	Pb	06 00 55.3	-0.3
BCI	Bajram Curri	1.73	12	*i* PG	Pg	06 00 56.9	-0.8
BCI				*i* SG	Sg	06 01 21.4	+1.3
TAR1	Taranto	1.75	266	*e*Pg	Pn	06 00 55.0	+0.9
PDG	Podgorica	1.77	352	*e*Pg	Pb	06 00 56.1	-0.5
PDG				*e*Sg	Sg	06 01 20.9	-0.5
PDG	Podgorica	1.77	352	⇑*i*P	Pb	06 00 55.9	-0.5
PDG	Podgorica	1.77	352	S	Sg	06 01 20.1	-1.3
PDG	Podgorica	1.77	352	*i* Pg	Pb	06 00 55.9	-0.5
PDG				*i* Sg	Sg	06 01 20.9	-0.5
PDG	Podgorica	1.77	352	*e*Pn	Pb	06 00 55.7	-0.7
TTG	Podgorica	1.77	352	⇓*i*Pn	Pb	06 00 56.0	-0.5
TTG				*e*Sn	Sg	06 01 20.4	-1.0
MASS	Massafra	1.85	269	⇑*i*Pg	Pn	06 00 56.4	+0.9
SKO	Skopje	1.91	47	*e*Pg	Pb	06 00 58.9	+0.1
SKO				*e*Sg	Sg	06 01 25.3	-0.6
SKO	Skopje	1.91	47	*i* Pn	Pb	06 00 59.0	+0.1
NOCI	Noci	1.91	274	P	Pn	06 00 57.2	+0.9
CEME	Cevo	1.93	345	⇑*i*Pn	Pn	06 00 57.8	+1.2
CEME				*e*Sn	Sb	06 01 24.5	+1.3
PVY	Plav	1.94	8	⇑*i*Pn	Pb	06 00 58.6	-0.8
PVY				*e*Sn	Sb	06 01 24.3	+0.9
HCY	Herceg Novi	1.95	336	⇑*i*Pn	Pn	06 00 57.7	+0.9
HCY				*e*Sn	Sb	06 01 24.6	+1.1
HCY	Herceg Novi	1.95	336	*e*Pn	Pn	06 00 57.2	+0.4
KTI	Kastanea	1.96	98	P	Pb	06 00 58.7	-1.0
TSLK	Tsoukalades, L	2.03	155	P	Pn	06 00 59.4	+1.5
TSLK	Tsoukalades, L	2.03	155	P	Pn	06 00 59.2	+1.3
LKD2	Lefkada island	2.06	156	P	Pb	06 01 00.3	-1.1
LKD2	Lefkada island	2.06	156	P	Pn	06 00 59.4	+1.0
LKD2				AML	AML	06 01 33.2	
	comp=E,808μm,0.7s						
LKD2				AML	AML	06 01 36.2	
	comp=N,587μm,0.4s						
BAI	Bari	2.09	283	⇑*i*Pg	Pn	06 01 00.3	+1.6
NKME	Niksic	2.14	348	*e*Pn	Pn	06 01 00.9	+1.4
NKME				*e*Sn	Sb	06 01 28.9	-0.2
KOME	Kolasin	2.17	359	⇑*i*Pn	Pb	06 01 02.2	-1.2
KOME				*e*Sn	Sb	06 01 30.8	+0.7
THL	Klokotos Trika	2.17	120	P	Pb	06 01 02.5	-0.8
THL	Klokotos Trika	2.17	120	P	Pb	06 01 01.9	-1.4
NKY	Niksic	2.18	349	⇓*i*Pn	Pn	06 01 01.5	+1.4
NKY				*e*Sn	Sb	06 01 29.9	-0.4
MATE	Matera	2.19	270	⇓*i*P	Pn	06 01 00.9	+0.9
BEY	Berane	2.21	6	*i* Pn	Pb	06 01 02.4	-1.6
IVA	Berane	2.21	6	⇑*i*Pn	Pn	06 01 02.1	+1.7
IVA				*e*Sn	Sb	06 01 30.6	-0.4
SG1	Sgolgore (BA)	2.21	275	⇑*i*Pg	Pn	06 01 01.4	+1.0
EVGI	Lefkada island	2.22	158	P	Pn	06 01 02.0	+1.5
EVGI	Lefkada island	2.22	158	P	Pn	06 01 01.5	+1.1
TREB	Trebinje	2.24	336	*e*Pn	Pn	06 01 01.5	+0.7
TREB				*e*Sn	Sb	06 01 30.0	-1.8
TREB	Trebinje	2.24	336	*e*Pn	Pn	06 01 01.1	+0.3
DBRK	Dubrovnik	2.26	332	*e*Pn	Pn	06 01 02.0	+1.0
DBRK				Sn	Sb	06 01 30.7	-1.8
LIT	Litokhoron	2.30	104	P	Pb	06 01 03.9	-1.6
LIT	Litokhoron	2.30	104	*i* Pn	Pb	06 01 03.7	-1.8
LIT	Litokhoron	2.30	104	P	Pb	06 01 03.7	-1.8
FSK	Fiskardo	2.34	161	P	Pn	06 01 02.3	+0.1
VAY	Valandovo	2.35	73	*e*Pn	Pn	06 01 03.8	+1.4
VAY	Valandovo	2.35	73	*i* Pn	Pn	06 01 04.3	+1.9
BRY	Bratogost	2.35	341	⇑*i*Pn	Pn	06 01 03.6	+1.1
BRY				*e*Sn	Sb	06 01 33.8	-1.6
BRY	Bratogost	2.35	341	*e*Pn	Pn	06 01 02.9	+0.4
EVR	Evrytania	2.46	135	P	Pb	06 01 06.3	-2.0
EVR	Evrytania	2.46	135	P	Pb	06 01 06.2	-2.0
PVO	Paravola	2.55	143	P	Pn	06 01 06.5	+1.5
KNT	Kendrikon	2.56	78	P	Pn	06 01 06.5	+1.2
KNT	Kendrikon	2.56	78	P	Pn	06 01 06.4	+1.2
UPM	Unac-Piva	2.57	349	⇓*i*Pn	Pn	06 01 06.8	+1.2
UPM				*e*Sn	Sb	06 01 39.5	-2.2
UPM	Unac-Piva	2.57	349	*e*Pn	Pn	06 01 07.1	+1.5
SJES	Sjenica	2.60	6	*e*Pn	Pn	06 01 08.1	+2.2
SJES				*e*Sg	Sg	06 01 47.3	-0.7
STON	Ston	2.60	328	*e*Pn	Pn	06 01 06.5	+0.7
STON				*e*Sn	Sn	06 01 38.6	+1.6
STON	Ston	2.60	328	*i* Pn	Pn	06 01 06.5	+0.7
STON				Sn	Sn	06 01 38.0	+1.0
STON	Ston	2.60	328	*e*Pn	Pn	06 01 05.6	-0.2
VLS	Valsamata	2.62	162	P	Pn	06 01 05.6	-0.4
TIP	Timpagrande	2.63	236	⇓*i*P	Pn	06 01 06.8	+0.5
TIP	Timpagrande	2.63	236	P	Pn	06 01 06.8	+0.5
PLE	Pljevlja	2.66	357	⇑*i*Pn	Pn	06 01 07.8	+1.2
PLE				*e*Sn	Sn	06 01 41.2	+2.7
HORT	Hortiatis	2.68	91	P	Pn	06 01 08.4	+1.4
AGG	Agios Georgios	2.69	127	P	Pn	06 01 09.0	+2.0
AGG	Agios Georgios	2.69	127	P	Pn	06 01 08.5	+1.5
BARS	Barje	2.71	37	*e*Pn	Pg	06 01 25.2	+8.7
KFL	Anninata	2.73	160	P	Pn	06 01 07.7	+0.1
ANX	Ano Chora	2.76	138	P	Pn	06 01 10.5	+2.5
ANX	Ano Chora	2.76	138	P	Pn	06 01 10.3	+2.3
SELS	Selova	2.79	24	*e*Pn	Pn	06 01 09.7	+1.3
SOH	Sokhos	2.87	86	P	Pn	06 01 10.9	+1.3
VLMS	Volimes, Zakyn	2.92	163	P	Pn	06 01 09.9	-0.2
IVAS	Ivanjica	2.93	8	*e*Pn	Pn	06 01 11.6	+1.3
RUDO	Rudo	2.94	357	*e*Pn	Pn	06 01 08.8	-1.7
CUC	Castrocucco	2.96	258	P	Pn	06 01 12.3	+1.6
PLG	Polygyros	2.96	95	P	Pn	06 01 12.7	+1.9
PLG	Polygyros	2.96	95	P	Pn	06 01 12.6	+1.8
SERG	Sergoula	2.96	139	P	Pn	06 01 13.1	+2.3
SERG	Sergoula	2.96	139	P	Pn	06 01 13.0	+2.3
KALE	Kalithea	3.02	138	P	Pn	06 01 14.2	+2.6
LAKA	Lakka	3.06	142	P	Pn	06 01 13.7	+1.6
XOR	Xorichti	3.07	114	P	Pn	06 01 13.9	+1.7
XOR	Xorichti	3.07	114	P	Pn	06 01 13.3	+1.1
SRS	Serrai	3.07	80	P	Pn	06 01 13.6	+1.3
SRS	Serrai	3.07	80	P	Pn	06 01 13.5	+1.3
NEO	Neokhori	3.12	115	P	Pn	06 01 14.8	+2.0
DRO	Drossia	3.18	148	P	Pn	06 01 14.7	+0.9
BBLS	Lazići	3.19	358	*e*Pn	Pn	06 01 15.6	+1.6
BBLS	Lazići	3.19	358	*e*Pn	Pn	06 01 15.5	+1.6
DSF	Desfina	3.21	134	P	Pn	06 01 15.6	+1.4
MAKA	Makarska	3.23	325	*e*Pn	Pn	06 01 15.3	+0.9
MAKA				Sn	Sn	06 01 53.1	+0.6
TRAZ	Trapeza	3.23	140	P	Pn	06 01 16.5	+2.0
NVR	Nevrokopi	3.31	77	P	Pn	06 01 17.2	+1.6

NVR	Nevrokopi	3.31	77	P	Pn	06 01 16.9	+1.4
GRUS	Gruza	3.32	14	*e*Pn	Pn	06 01 17.2	+1.6
BOVS	Bovan	3.35	27	*e*Pn	Pn	06 01 17.6	+1.5
VTS	Vitosha	3.36	54	⇑*i*P	Pn	06 01 18.2	+1.9
VTS	Vitosha	3.36	54	S	Sn	06 01 57.5	+1.6
HVAR	Hvar	3.42	318	*e*Pn	Pn	06 01 19.3	+2.3
HVAR				Sn	Sn	06 01 56.5	-0.7
DIVS	Divibare	3.43	5	*e*Pn	Pn	06 01 18.4	+1.1
DIVS	Divibare	3.43	5	*e*Pn	Pn	06 01 18.3	+1.0
HAPS	Han Pijesak,BI	3.44	352	*e*Pn	Pn	06 01 18.0	+0.6
HAPS	Han Pijesak,BI	3.44	352	*e*Pn	Pn	06 01 17.0	-0.4
ZAPS	Zavoj	3.45	40	*e*Pn	Pn	06 01 19.9	+2.4
GUR	Goura	3.48	141	P	Pn	06 01 19.4	+1.5
GUR	Goura	3.48	141	P	Pn	06 01 19.3	+1.3
TRUS	Trudelj	3.60	10	*e*Pn	Pn	06 01 20.9	+1.4
ZAGS	Zajecar	3.70	31	*e*Pn	Pn	06 01 22.8	+1.9
BLKB	Belogradchik	3.74	37	S	Sn	06 02 06.9	+1.8
TEKS	Tekeris	3.87	359	*e*Pn	Pn	06 01 24.0	+0.8
KUBS	Kucevo	4.04	22	*e*Pn	Pn	06 01 26.3	+0.7
PLD	Plovdiv	4.11	68	*e*Pn	Pn	06 01 29.0	+2.5
ZIRJ	Zirje	4.17	317	*i* Pn	Pn	06 01 28.0	+0.6
ZIRJ				Sn	Sn	06 02 15.8	+0.1
MORI	Morici	4.29	319	*e*Pn	Pn	06 01 30.4	+1.4
MORI				Sn	Sn	06 02 19.9	+1.3
MDVR	Moldovita	4.39	20	⇓*i*P	Pn	06 01 31.4	+1.0
MDVR	Moldovita	4.39	20	S	Sn	06 02 23.2	+1.9
BLY	Banja Luka	4.43	337	⇓*i*P	Pn	06 01 32.6	+1.6
BLY	Banja Luka	4.43	337	S	Sn	06 02 23.6	+1.4
BLY	Banja Luka	4.43	337	*e*Pn	Pn	06 01 33.5	+2.5
FRGS	Fruska Gora	4.48	2	*e*Pn	Pn	06 01 32.3	+0.7
FRGS	Fruska Gora	4.48	2	*e*Pn	Pn	06 01 32.0	+0.4
PLVB	Pleven	4.63	53	⇑*i*P	Pn	06 01 34.8	+1.2
HERR	Herculane	4.69	25	⇑*i*P	Pn	06 01 35.7	+1.2
DUGI	Dugi Otok	4.71	316	*e*Pn	Pn	06 01 36.1	+1.3
DUGI				Sn	Sn	06 02 30.2	+1.2
UDBI	Udbina	4.77	325	*i* Pn	Pn	06 01 37.0	+1.4
UDBI				Sn	Sn	06 02 32.8	+2.3
AQU	L'Aquila	4.93	292	*e*Pn	Pn	06 01 38.4	+0.6
BZS	Buzias	5.16	16	⇑*i*P	Pn	06 01 41.4	+0.5
BZS	Buzias	5.16	16	S	Sn	06 02 40.5	+0.5
NVLJ	Novalja	5.21	320	*e*Pn	Pn	06 01 42.7	+1.2
NVLJ				Sn	Sn	06 02 41.0	-0.2
GZR	Gura Zlata	5.26	25	⇑*i*P	Pn	06 01 44.1	+1.7
GZR	Gura Zlata	5.26	25	S	Sn	06 02 45.5	+2.8
MORH	Mrgy, Hungar	5.58	353	*e*Pn	Pn	06 01 46.1	-0.5
BOJS	Bojanci	5.77	328	*i* Pn	Pn	06 01 50.6	+1.3
BOJS				*e*Sn	Sn	06 02 55.1	0.0
	comp=Z,10.0nm,0.3s						
OZLJ	Ozalj	5.78	330	*i* Pn	Pn	06 01 50.7	+1.3
PTJ	Puntijarka	5.85	334	ePn	Pn	06 01 50.6	+0.1
KALN	Kalnik	5.91	338	*e*Pn	Pn	06 01 51.8	+0.6
RIY	Rijeka	5.96	323	ePn	Pn	06 01 53.1	+1.2
CRES	Cresnjev	5.96	331	*e*Pn	Pn	06 01 52.3	+0.4
VOIR		6.22	38	⇑*i*P	Pn	06 01 57.2	+1.6
CEY	Cerknica	6.30	325	*e*Pn	Pn	06 01 57.3	+0.6
LJU	Ljubljana	6.50	327	*e*Pn	Pn	06 02 00.4	+1.0
MLR	Muntele Rosu	6.70	42	⇑*i*P	Pn	06 02 03.9	+1.7
SOKA	Soboth	6.84	333	*e*Pn	Pn	06 02 04.5	+0.4
	comp=Z,0.8nm,0.2s						
SOKA				*e*Sn	Sn	06 03 19.3	-2.3
	comp=Z,1.4nm,0.4s						
OBKA	Obir	6.88	330	*e*Pn	Pn	06 02 05.9	+1.4
	comp=Z,0.8nm,0.2s						
OBKA				*e*Sn	Sn	06 03 24.0	+1.5
	comp=Z,14nm,0.5s						
ARSA	Arzberg	7.19	337	*e*Pn	Pn	06 02 09.8	+1.0
ARSA				Sn	Sn	06 03 30.4	+0.3
	comp=Z,0.8nm,0.4s						
MYKA	Terra Mystica	7.34	326	*e*Pn	Pn	06 02 12.9	+2.0
	comp=Z,0.9nm,0.4s						
MYKA				*e*Sn	Sn	06 03 34.7	+0.8
	comp=Z,3.4nm,0.3s						
VRI	Vrincioaia	7.36	43	⇑*i*P	Pn	06 02 12.6	+1.5
KBA	Koelnbreinsper	7.82	327	*e*Pn	Pn	06 02 20.7	+3.1
	comp=Z,0.5nm,0.3s						
KBA				*e*Sn	Sn	06 03 44.2	-1.7
	comp=Z,1.3nm,0.4s						
VYHS	Vyhne	7.83	356	*e*PN	Pn	06 02 17.3	-0.3
VYHS				*e*SN	Sn	06 03 45.9	0.0
ABTA	Abfaltersbach	7.94	322	*e*Pn	Pn	06 02 20.4	+1.3
	comp=Z,0.2nm,0.2s						
ABTA				*e*Sn	Sn	06 03 46.1	-2.5
	comp=Z,6.4nm,0.4s						
MOA	Molln	8.12	334	*e*Pn	Pn	06 02 24.1	+2.5
	comp=Z,0.7nm,0.2s						
MOA				*e*Sn	Sn	06 03 51.3	-1.6
	comp=Z,1.1nm,0.3s						
KOLS	Kolonicke sedl	8.47	12	*e*PN	Pn	06 02 28.1	+1.7
WTTA	Wattenberg	8.72	322	*e*Pn	Pn	06 02 31.7	+1.7
	comp=Z,0.6nm,0.2s						
WTTA				Sn	Sn	06 04 09.4	+1.4
	comp=Z,6.5nm,0.4s						
WATA	Walderalm	8.80	322	*e*Pn	Pn	06 02 33.0	+2.0
	comp=Z,0.7nm,0.2s						
SQTA	Sankt Quirin	8.90	320	*e*Pn	Pn	06 02 34.3	+2.0
	comp=Z,1.5nm,0.4s						
SQTA				Sn	Sn	06 04 11.0	-1.2
	comp=Z,3.7nm,0.5s						
FETA	Feichten	9.00	318	*e*Pn	Pn	06 02 37.3	+3.6
	comp=Z,1.9nm,0.6s						
FETA				Sn	Sn	06 04 16.0	+1.2
	comp=Z,2.7nm,0.6s						
MOTA	Moosalm	9.04	320	*e*Pn	Pn	06 02 35.2	+0.9
	comp=Z,1.2nm,0.3s						
GERES	GERESS Array B	9.17	335	Pn	Pn	06 02 34.0	-2.0
	comp=Z,0.1nm,0.3s,baz=157,slow=14,SNR=4.2						
GERES				Sn	Sn	06 04 16.3	-2.6
	comp=Z,0.4nm,0.3s,baz=152,slow=21,SNR=4.7						
RETA	Reutte	9.30	320	*e*Sn	Sn	06 04 21.6	-0.5
	comp=Z,3.9nm,0.6s						
DAVA	Damuels	9.61	317	Sn	Sn	06 04 28.1	-1.8
	comp=Z,2.2nm,0.5s						
LPG	La Plagne	10.54	301	*e*Sn	Sn	06 04 47.8	-5.0
	comp=Z,1.6nm,0.3s						
LPL	La Plagne	10.56	301	*e*Sn	Sn	06 04 47.7	-5.5
	comp=Z,3.5nm,0.4s						
CABF	La Chapelle	11.43	306	*e*Sn	Sn	06 05 08.9	-5.3
	comp=Z,1.3nm,0.5s						
HINF	Hinteralfeld	11.58	312	*e*Sn	Sn	06 05 11.9	-5.9
	comp=Z,3.2nm,0.4s						
HAU	Haudompre	11.96	312	*e*Sn	Sn	06 05 19.9	-7.3
	comp=Z,3.2nm,0.3s						
LOR	Lormes	13.09	305	*e*Sn	Sn	06 05 46.0	-8.7
	comp=Z,3.0nm,0.4s						
SSF	Saint Saulge	13.22	304	*e*Sn	Sn	06 05 49.1	-8.9
	comp=Z,2.2nm,0.4s						
FINES	FINESS Array B	21.17	9	P	P	06 05 08.1	-0.6
	comp=Z,1.1nm,0.5s,baz=183,slow=14,SNR=7.4						
TORD	Torodi Ar. Bea	31.59	215	P	P	06 06 47.1	+0.8
	comp=Z,0.3nm,0.6s,baz=16,slow=10,SNR=3.1						
ZALV	Zalesovo Beam	44.60	50	P	P	06 08 35.5	-0.1
	comp=Z,0.7nm,0.4s,baz=279,slow=9.9,SNR=3.6						
MKAR	Makanchi Array	44.66	60	P	P	06 08 35.6	-0.6
	comp=Z,0.2nm,0.3s,baz=281,slow=7.2,SNR=6.2						

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*IDC **21** 06:06:19.5±0.9, 41°.40S×174°.32E, h0^{km}, mb4.6/2, mb1 4.6/4, mb1mx4.0/28, mbtmp4.3/4, ML3.6/2, Error ellipse: s-maj=34.3km s-min=12.8km az=132.0*

*ISCJB **21** 06:06:22.4±0.4, 41°.67S±0°.02×174°.49E±0°.03, h26^{km}±3^{km}, mb4.8/11, MS4.5/1, Error ellipse: s-maj=5.2km s-min=2.5km az=135.2*

*WEL **21** 06:06:22.6, 41°.5S±0°.5×174°.4E±0°.7, h21^{km}±2^{km}, M4.5/27, ML4.8/21, MLv4.5/27, Error ellipse: s-maj=0.0km s-min=0.0km az=108.1*

*NEIC **21** 06:06:22.8±0.0, 41°.52S×174°.39E, h16^{km}, mb4.6/7, ML4.6(WEL), After WEL.*

ISC 21 06:06:22.1±1.2, **41°.56S**±0°.03×**174°.44E**±0°.02, **h15**^{km}±8^{km}, **n162**, σ**1^{s}.49**/173, **mb4.7**/11, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.25	221	P	Pg	06 06 29.2	+1.6
SNZO	South Karori	0.32	39	*e*Pg	Pb	06 06 30.1	+0.6
SNZO				*e*Sg	Sb	06 06 35.2	+0.8
BHW	Baring Head	0.36	65	P	Pb	06 06 31.2	+1.1
TCW	Tory Channel	0.37	341	P	Pb	06 06 30.1	-0.2
TCW				S	Sb	06 06 35.3	-0.6
TUWZ	Tuamarina	0.39	289	P	Pb	06 06 30.3	-0.4
TUWZ				S	Sb	06 06 35.8	-0.8
BSWZ	Blackbirch Sta	0.45	250	P	Pb	06 06 31.8	+0.2
PLWZ	Palliser	0.61	91	P	Pn	06 06 36.2	-0.1
MSWZ	Moikau Station	0.63	77	P	Pn	06 06 36.3	-0.1
CAW	Cannon Point	0.66	47	P	Pb	06 06 35.9	+0.8
PAWZ	Paruwai Farm	0.77	77	P	Pn	06 06 39.0	+0.7
DUWZ	D’Urville Isla	0.85	333	P	Pb	06 06 38.8	+0.3
NNZ	Nelson	0.87	293	P	Pb	06 06 38.9	+0.1
MTW	Mount Morrison	0.90	64	P	Pn	06 06 40.9	+0.8
OGWZ	Otaki Gorge	0.93	37	P	Pb	06 06 40.5	+0.7
TRWZ	Traveller	0.95	81	P	Pn	06 06 41.5	+0.6
HOWZ	Holdsworth Sta	1.05	51	P	Pn	06 06 43.0	+0.8
KHZ	Kahutara	1.09	218	*e*Pn	Pn	06 06 42.8	+0.1
KHZ	Kahutara	1.09	218	P	Pn	06 06 43.0	+0.3
THZ	Tophouse	1.17	259	*e*Pn	Pn	06 06 43.9	0.0
THZ				*e*Sn	Sn	06 07 00.4	+0.9
THZ	Tophouse	1.17	259	P	Pn	06 06 43.9	0.0
TMWZ	Te Maipa	1.19	68	P	Pb	06 06 44.3	+0.1
MRZ	Mangatainoka R	1.25	44	P	Pn	06 06 45.8	+0.9
TIWZ	Tintock	1.34	55	P	Pg	06 06 46.7	-1.3
CPWZ	Castlepoint	1.48	65	P	Pn	06 06 48.4	+0.3
OHWZ	Ohakea	1.51	27	P	Pg	06 06 51.1	0.0
PRWZ	Pori Road	1.53	50	P	Pn	06 06 49.4	+0.5
POWZ	Post Office Ro	1.54	41	P	Pn	06 06 49.8	+0.8
QRZ	Quartz Range	1.62	296	P	Pg	06 06 51.7	-1.4
BFZ	Birch Farm	1.62	58	*e*Pn	Pn	06 06 49.9	-0.2
BFZ				*e*Sn	Sn	06 07 10.9	+0.2
BFZ	Birch Farm	1.62	58	P	Pn	06 06 49.9	-0.2
GVZ	Greta Valley S	1.75	216	P	Pn	06 06 52.0	+0.1
DVHZ	Dannevirke	1.82	47	P	Pn	06 06 52.6	-0.2
WAZ	Wanganui	1.85	13	P	Pg	06 06 56.5	-1.1
ANWZ	Angora Road	1.89	55	P	Pn	06 06 53.4	-0.4
LTZ	Lake Taylor	2.02	232	*e*Pn	Pn	06 06 55.7	+0.1
LTZ	Lake Taylor	2.02	232	P	Pn	06 06 55.8	+0.2
AMCZ	Amberley	2.09	219	P	Pn	06 06 57.8	+1.3
AMCZ				P	Pg	06 07 03.0	+0.8
LREZ	Lake Rotokare	2.10	359	P	Pb	06 07 00.2	+0.4
PRHZ	Porangahau	2.11	53	P	Pn	06 06 56.1	-0.7
PNHZ	Pukenui	2.12	40	P	Pn	06 06 57.3	+0.3
WPHZ	Waipukurau	2.13	46	P	Pn	06 06 57.1	0.0
NMEZ	Namu Road	2.19	349	P	Pb	06 07 00.8	-0.4
PREZ	Palmer Road	2.23	354	P	Pb	06 07 02.0	+0.1
KHEZ	Kahui Hut	2.29	352	P	Pb	06 07 03.0	-0.1
MOVZ	Moawhango	2.37	25	P	Pn	06 07 02.2	+1.8
DREZ	Durham Road	2.38	356	P	Pb	06 07 03.8	-0.7
PKE	Pukeiti	2.39	352	P	Pb	06 07 03.7	-1.1
OKCZ	Okains Bay	2.39	205	P	Pn	06 06 59.4	-1.3
PXZ	Pawanui	2.39	51	P	Pn	06 06 59.7	-0.9
BHHZ	Black Hill Sta	2.41	31	P	Pn	06 07 02.6	+1.6
KRHZ	Kereru	2.42	38	P	Pn	06 07 01.0	0.0
CRLZ	Canterbury Las	2.42	213	*e*Pn	Pn	06 06 59.8	-1.2
CRLZ	Canterbury Las	2.42	213	P	Pn	06 07 00.0	-1.0
VRZ	Vera Road	2.44	6	P	Pb	06 07 04.3	-1.4
FWVZ	Far West T-bar	2.46	21	P	Pb	06 07 06.4	+0.4
MHEZ	Mangahewa	2.48	358	P	Pb	06 07 05.7	-0.6
OXZ	Oxford	2.50	224	*e*Pn	Pn	06 07 00.9	-1.3
OXZ	Oxford	2.50	224	P	Pn	06 07 01.0	-1.3
INZ	Inchbonnie	2.51	241	P	Pn	06 07 02.6	+0.3
MQZ	McQueen’s Vall	2.52	211	*e*Pn	Pn	06 07 00.6	-1.8
MQZ				*e*Sn	Sn	06 07 30.0	-2.7
MQZ	McQueen’s Vall	2.52	211	P	Pn	06 07 00.6	-1.8
KAHZ	Kahuranaki	2.56	47	P	Pn	06 07 03.0	0.0
AKCZ	Akaroa Harbour	2.57	205	P	Pn	06 07 02.7	-0.4
WTVZ	West Tongariro	2.60	20	P	Pg	06 07 10.4	-1.5
TWVZ	Taurewa	2.60	17	P	Pg	06 07 10.0	-2.0
KWHZ	Kaweka Forest	2.62	36	P	Pg	06 07 11.2	-1.0
KRVZ	Karewarewa	2.63	21	P	Pg	06 07 10.5	-2.0
KATZ	Kakaramea	2.75	21	P	Pg	06 07 13.4	-1.4
CKHZ	Cape Kidnapper	2.77	47	P	Pn	06 07 06.9	+1.2
RITZ	Rihia Road	2.80	23	P	Pg	06 07 13.6	-2.2
BKZ	Black Stump Fm	2.86	34	*e*Pn	Pn	06 07 07.7	+0.5
BKZ	Black Stump Fm	2.86	34	P	Pg	06 07 14.9	-2.0
RATZ	Rangitukua	2.88	21	P	Pg	06 07 15.8	-1.5
HATZ	Hinemaiaia	2.95	26	P	Pb	06 07 15.7	+1.3
ARHZ	Aropaoanui	3.01	41	P	Pn	06 07 09.9	+0.7
WATZ	Wairara	3.02	20	P	Pg	06 07 17.4	-2.5
HIZ	Hauiti	3.06	6	*e*Pn	Pn	06 07 11.6	+1.7
HIZ	Hauiti	3.06	6	P	Pb	06 07 14.2	-2.0
MRHZ	Matea Rd	3.12	30	P	Pb	06 07 17.2	0.0
WVZ	Waitaha Valley	3.13	240	P	Pb	06 07 15.4	-2.0
RPZ	Rata Peaks	3.30	228	Pn	Pn	06 07 11.7	-1.4
	7.1nm,0.3s,baz=201,slow=1.5,SNR=7.4						
RPZ				Pg	Pb	06 07 21.1	+0.9
	162nm,0.3s,baz=333,slow=2.3,SNR=72						
RPZ				Sn	Sn	06 07 48.6	-3.4
	31nm,0.3s,baz=336,slow=23,SNR=7.7						
RPZ				Lg	Lg	06 08 05.3	
	19nm,0.3s,baz=115,slow=2.0,SNR=3.1						
RPZ	Rata Peaks	3.30	228	*e*Pn	Pn	06 07 12.6	-0.5
RPZ	Rata Peaks	3.30	228	P	Pb	06 07 17.7	-2.5
ALRZ	Allen Road	3.33	27	P	Pb	06 07 20.0	-0.9
TLZ	Tolley Road	3.33	15	P	Pb	06 07 18.9	-2.0
PRRZ	Plateau Road	3.41	27	P	Pb	06 07 20.9	-1.2
KNZ	Kokohu	3.54	45	P	Pn	06 07 16.9	+0.4
SNGZ	Shannon Statio	3.56	40	P	Pb	06 07 22.0	-2.6
MUGZ	Murupara	3.56	31	P	Pn	06 07 18.9	+2.1
MHGZ	Mahia Peninsul	3.58	49	P	Pn	06 07 16.3	-0.6
TARZ	Mount Tarawera	3.68	26	P	Pb	06 07 25.6	-1.2
PRGZ	Paritu Road	3.73	46	P	Pn	06 07 17.9	-1.2
RAGZ	Rawiri	3.82	38	P	Pn	06 07 20.5	+0.2
RIGZ	Rimuhau	3.82	43	P	Pn	06 07 19.7	-0.7
URZ	Urewera	3.88	33	Pn	Pn	06 07 21.2	0.0
	4.2nm,0.3s,baz=234,slow=5.3,SNR=8.7						
URZ				Pg	Pb	06 07 28.3	-1.9
	14nm,0.3s,baz=237,slow=7.2,SNR=13						
URZ				Sn	Sn	06 08 05.1	-1.4
	17nm,0.3s,baz=225,slow=6.1,SNR=5.2						
URZ				Lg	Lg	06 08 19.4	
	21nm,0.3s,baz=275,slow=21,SNR=6.0						
URZ	Urewera	3.88	33	*e*Pn	Pn	06 07 20.8	-0.4
URZ	Urewera	3.88	33	P	Pn	06 07 23.2	+2.0
TOZ	Tahuroa Road	3.91	12	P	Pb	06 07 26.6	-4.0
FOZ	Fox Glacier	3.94	238	*e*Pn	Pn	06 07 21.9	-0.1
FOZ	Fox Glacier	3.94	238	P	Pn	06 07 23.8	+1.9
MARZ	Manawahe	3.96	27	P	Pb	06 07 29.9	-1.7
OPRZ	Ohinepanea	4.05	24	P	Pn	06 07 25.1	+1.6
TKGZ	Te Karaka	4.07	41	P	Pn	06 07 24.7	+1.0
LBZ	Lake Benmore	4.21	226	*e*Pn	Pn	06 07 25.5	-0.2
LBZ	Lake Benmore	4.21	226	P	Pn	06 07 27.0	+1.4
CNGZ	Carnagh Statio	4.22	45	P	Pn	06 07 25.9	+0.1
TWGZ	Tauwhareparae	4.34	40	P	Pn	06 07 26.9	-0.6
RUGZ	Raukumara Rang	4.37	36	P	Pn	06 07 28.8	+0.8
ODZ	Otahua Downs	4.45	217	*e*Pn	Pn	06 07 27.4	-1.6
ODZ	Otahua Downs	4.45	217	P	Pn	06 07 28.6	-0.3
KBAZ	Karaka Road Bo	4.47	5	P	Pn	06 07 33.1	+3.8
MKAZ	Moumakai	4.49	7	P	Pn	06 07 32.6	+3.2
AWAZ	Awhitu Peninsu	4.49	2	P	Pn	06 07 32.6	+3.0
PUZ	Puketiti	4.56	41	P	Pn	06 07 29.9	-0.6
HAZ	Te Kaha	4.59	35	P	Pn	06 07 31.7	+0.9
ETAZ	East Tamaki Re	4.62	5	P	Pn	06 07 34.5	+3.3
WTAZ	Waiatarua	4.62	1	P	Pn	06 07 35.1	+3.8
EPAZ	Eden Park BICE	4.68	3	P	Pb	06 07 40.3	-3.5
MBAZ	Motutapu North	4.80	4	P	Pn	06 07 37.4	+3.7
JCZ	Jackson Bay	4.86	237	P	Pn	06 07 37.2	+2.6
KUZ	Kuaotunu	4.91	12	P	Pn	06 07 38.7	+3.4
MXZ	Matakaoa Point	4.99	38	*e*Pn	Pn	06 07 36.2	-0.1
MXZ	Matakaoa Point	4.99	38	P	Pn	06 07 38.6	+2.3
WKZ	Wanaka	5.13	229	*e*Pn	Pn	06 07 38.1	-0.3
WKZ	Wanaka	5.13	229	P	Pn	06 07 37.5	-0.9
HHSZ	Highcliff Hill	5.14	211	P	Pn	06 07 38.4	-0.1
EAZ	Earnscleugh	5.24	224	P	Pn	06 07 40.5	+0.7
TUZ	Tuapeka	5.60	217	P	Pn	06 07 45.0	+0.2
WCZ	Waipu Caves	5.61	359	P	Pn	06 07 48.2	+3.2
MSZ	Milford Sound	5.69	235	P	Pn	06 07 51.1	+5.1
MLZ	Mavora Lakes	5.97	228	*e*Pn	Pn	06 07 51.0	+1.2
SYZ	Scrubby Hill	6.27	216	P	Pn	06 07 54.6	+0.7
OUZ	Omahuta	6.36	354	*e*Pn	Pn	06 07 55.7	+0.5
OUZ	Omahuta	6.36	354	P	Pn	06 07 57.7	+2.5
WHZ	Wether Hill Ro	6.39	225	*e*Pn	Pn	06 07 56.0	+0.4
DCZ	Deep Cove	6.58	231	*e*Pn	Pn	06 07 59.8	+1.6
CTZ	Chatham Island	6.95	111	P	Pn	06 08 02.6	-0.6
AS31	Alice Springs	38.11	285	*e*P	P	06 13 39.6	-0.9
	1.1nm,0.6s						
ASAR	Alice Springs	38.12	285	P	P	06 13 39.1	-1.4
	1.8nm,0.4s,baz=125,slow=6.4,SNR=41						
WB2	Warramunga Arr	40.16	290	*e*P	P	06 13 56.5	-1.1
	12nm,0.7s						
WR1	Warramunga Arr	40.17	290	*e*P	P	06 13 56.4	-1.3
WRA	Warramunga Arr	40.17	290	P	P	06 13 56.4	-1.3
	12nm,0.5s,baz=133,slow=8.1,SNR=80						
CASY	Casey	42.44	213	*e*P	P	06 14 16.6	+0.8
	7.6nm,1.1s						
MORW	Morawa	48.41	265	*e*P	P	06 15 02.5	-1.1
	8.3nm,1.0s						
QSPA	South Pole Qui	48.57	180	*e*P	P	06 15 05.0	+0.5
	4.7nm,1.0s						
PSAB3	Pilbara Seismi	49.72	276	*e*P	P	06 15 12.5	-1.1
	10nm,1.1s						
NJ2	Nanjing	89.36	316	*e*P	P	06 19 18.5	+0.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI	Kunming	93.75	300	P	P	06 19 41.6	+3.0
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
CD2	Chengdu	97.15	305	*e*P	P	06 19 54.3	+0.6
HHC	Hu-ho-hao-te	99.85	317	P	Pdif	06 20 07.5	+1.9
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,17nm,6.5s						
LZH	Lanzhou	100.69	309	*e*P	Pdif	06 20 10.3	+0.7
LZH				pP	sP	06 20 13.5	-3.1
LZH				sP	sPdif	06 20 15.3	-1.2
LZH				*e*PP	PP	06 24 22.5	+4.9
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,9.2s						
LZH				LR	LR		
	comp=N,93nm,17.0s						
LZH				LR	LR		
	comp=E,100nm,17.3s						
LZH				LR	LR		
	comp=Z,150nm,19.6s						
YKA	Yellowknife Ar	118.14	30	PKP	PKPdf	06 25 06.5	-0.7
	comp=Z,0.4nm,0.7s,baz=230,slow=1.5,SNR=5.1						
YKB5	Yellowknife Ar	118.14	30	*e*PKPdf	PKPdf	06 25 06.5	-0.7
DBIC	Dimbokro	145.25	181	PKPbc	PKPbc	06 25 59.6	+0.5
	comp=Z,2.1nm,0.5s,baz=86,slow=0.8,SNR=5.8						
ARA0	ARCESS Array S	147.65	340	*e*PKPdf	PKPdf	06 26 03.1	+1.2
ARCES	ARCESS Array B	147.65	340	PKPbc	PKPdf	06 26 03.1	+1.2
	comp=Z,1.7nm,0.7s,baz=38,slow=2.1,SNR=10						
BR101	Keskin Array S	150.37	280	*e*PKPbc	PKiKP	06 26 14.3	+0.9
BRTR	Keskin Array B	150.37	280	PKPbc	PKiKP	06 26 14.3	+0.9
	comp=Z,0.7nm,0.6s,baz=190,slow=0.9,SNR=3.9						
TORD	Torodi Ar. Bea	150.99	195	PKPbc	PKPbc	06 26 14.3	-0.3
	comp=Z,0.9nm,0.5s,baz=154,slow=0.7,SNR=22						
TOA1	Torodi Ar. Sit	151.00	195	*e*PKPbc	PKPbc	06 26 14.3	-0.3
FIA0	FINESS Array S	152.45	327	*e*PKPbc	PKPbc	06 26 14.7	-1.8
FINES	FINESS Array B	152.45	327	PKPbc	PKPbc	06 26 14.7	-1.8
	comp=Z,1.0nm,0.6s,baz=282,slow=1.8,SNR=6.7						

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*IDC **21** 06:08:47.6±1.7, 41°.46S×174°.02E, h0^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.7/28, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=42.2km s-min=17.0km az=129.0*

*ISCJB **21** 06:08:50.0±0.4, 41°.62S±0°.03×174°.24E±0°.04, h12^{km}±3^{km}, mb3.6/2, Error ellipse: s-maj=5.8km s-min=3.7km az=144.5*

*WEL **21** 06:08:49.0, 42°S±1°×174°.3E±0°.6, h9^{km}±2^{km}, M4.0/19, ML4.2/13, MLv4.0/19, Error ellipse: s-maj=0.0km s-min=0.0km az=173.3*

*NEIC **21** 06:08:49.8±0.0, 41°.59S×174°.27E, h5^{km}, ML4.0(WEL), After WEL.*

ISC 21 06:08:49.3±0.9, **41°.59S**±0°.03×**174°.23E**±0°.03, **h13**^{km}±7^{km}, **n41**, σ**0^{s}.80**/47, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.16	186	P	Pg	06 08 52.6	-0.6
CMWZ				S	Sg	06 08 55.5	-0.3
TUWZ	Tuamarina	0.27	307	P	Pb	06 08 56.2	+0.1
TUWZ				S	Sb	06 09 01.0	+0.5
BSWZ	Blackbirch Sta	0.29	245	S	Sg	06 09 00.5	+1.0
TCW	Tory Channel	0.38	5	P	Pb	06 08 58.0	+0.1
SNZO	South Karori	0.45	52	*e*Pg	Pb	06 08 59.3	+0.2
BHW	Baring Head	0.51	69	P	Pb	06 09 00.4	+0.4
BHW				S	Sb	06 09 08.3	+0.9
NNZ	Nelson	0.74	300	P	Pb	06 09 04.4	+0.3
PLWZ	Palliser	0.77	89	P	Pb	06 09 05.1	+0.6
MSWZ	Moikau Station	0.78	77	P	Pb	06 09 05.3	+0.5
CAW	Cannon Point	0.79	53	P	Pb	06 09 05.4	+0.5
DUWZ	D’Urville Isla	0.82	343	P	Pn	06 09 07.9	+1.3
PAWZ	Paruwai Farm	0.92	77	P	Pn	06 09 08.2	+0.3
KHZ	Kahutara	0.97	212	*e*Pg	Pb	06 09 08.7	+0.7
KHZ	Kahutara	0.97	212	P	Pb	06 09 08.7	+0.7
THZ	Tophouse	1.01	260	*e*Pg	Pb	06 09 09.2	+0.7
THZ	Tophouse	1.01	260	P	Pb	06 09 09.3	+0.7
MTW	Mount Morrison	1.05	66	P	Pn	06 09 10.1	+0.5
OGWZ	Otaki Gorge	1.05	43	P	Pn	06 09 09.8	+0.2
TRWZ	Traveller	1.11	80	P	Pb	06 09 10.6	+0.3
HOWZ	Holdsworth Sta	1.19	55	P	Pn	06 09 12.3	+0.8
TMWZ	Te Maipa	1.34	69	P	Pn	06 09 13.9	+0.3
MRZ	Mangatainoka R	1.38	48	P	Pg	06 09 15.1	-0.6
QRZ	Quartz Range	1.50	300	P	Pg	06 09 17.8	-0.2
OHWZ	Ohakea	1.61	31	P	Pg	06 09 20.1	-0.1
PRWZ	Pori Road	1.67	52	P	Pn	06 09 19.1	+0.9
BFZ	Birch Farm	1.77	60	*e*Pn	Pn	06 09 20.7	+1.1
LTZ	Lake Taylor	1.88	230	*e*Pn	Pn	06 09 22.0	+0.9
LTZ	Lake Taylor	1.88	230	P	Pn	06 09 21.9	+0.8
WAZ	Wanganui	1.92	18	P	Pg	06 09 25.2	-1.0
AMCZ	Amberley	1.97	216	P	Pb	06 09 25.2	+0.3
CRLZ	Canterbury Las	2.31	210	*e*Pn	Pn	06 09 28.2	+1.3
OXZ	Oxford	2.38	222	*e*Pn	Pb	06 09 30.7	-1.2
MQZ	McQueen’s Vall	2.41	208	*e*Pn	Pn	06 09 30.1	+1.7
BKZ	Black Stump Fm	2.98	36	*e*Pn	Pn	06 09 36.7	+0.5
RPZ	Rata Peaks	3.16	227	Pn	Pn	06 09 39.1	+0.4
	7.9nm,0.3s,baz=162,slow=6.4,SNR=2.3						
RPZ				Pg	Pb	06 09 45.7	+0.4
	36nm,0.3s,baz=294,slow=4.6,SNR=3.8						
RPZ				Sn	Sn	06 10 15.0	-1.3
	17nm,0.3s,baz=119,slow=14,SNR=5.4						
RPZ				Lg	Lg	06 10 26.6	
	12nm,0.3s,baz=60,slow=8.1,SNR=1.9						
URZ	Urewera	4.00	35	Pn	Pn	06 09 51.0	+0.8
	baz=254,slow=5.6,SNR=1.7						
URZ				Sn	Sn	06 10 37.3	+0.5
	5.7nm,0.3s,baz=174,slow=7.0,SNR=1.8						
ASAR	Alice Springs	37.98	285	P	P	06 16 04.9	-2.0
	0.4nm,0.4s,baz=124,slow=7.1,SNR=3.1						
WR1	Warramunga Arr	40.04	290	*e*P	P	06 16 23.4	-0.7
WRA	Warramunga Arr	40.04	290	P	P	06 16 23.4	-0.7
	0.9nm,0.4s,baz=138,slow=7.1,SNR=3.6						
TORD	Torodi Ar. Bea	150.92	195	PKPbc	PKPbc	06 28 42.1	+0.1
	0.3nm,0.4s,baz=162,slow=3.7,SNR=5.8						
TOA1	Torodi Ar. Sit	150.93	195	*e*PKPbc	PKPbc	06 28 42.1	+0.1

SJA 21 06:08:54.6±0.6, **31°.49S**×**65°.07W**, **h10**^{km}±10^{km}, **ML2.5**, **MW3.6**, **Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCA	Tanti	0.43	70	*i* P	Pg	06 09 03.4	+0.2
TCA				*e*S	Sb	06 09 10.4	-0.6
TCA				*i* S	Sg	06 09 10.6	+1.7
TCA				IAML		06 09 11.0	
	comp=Z,239nm,0.3s						
MRA	San Martin	1.08	211	*i* P	Pb	06 09 15.6	+0.2
MRA				*i* S	Sn	06 09 30.3	-0.6
MRA				*e*S	Sb	06 09 30.5	+0.9
MRA				IAML		06 09 31.9	
	comp=Z,157nm,0.4s						
ACAN	Cantantal	1.96	246	*i* P	Pb	06 09 30.0	-0.5
ACAN				*i* S	Sb	06 09 56.4	+1.3

WEL 21 06:13:49.1, **42°S**±1°×**174°.3E**±0°.7, **h11**^{km}±2^{km}, **M3.3**/21, **ML3.6**/17, **MLv3.3**/21, **Error ellipse: s-maj=0.0km s-min=0.0km az=160.6**, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.12	196	P	Pg	06 13 52.9	+0.7
CMWZ				S	Sg	06 13 55.7	+1.2
BSWZ	Blackbirch Sta	0.30	253	P	Pg	06 13 55.6	+0.4
BSWZ				S	Sb	06 14 00.6	-0.9
TUWZ	Tuamarina	0.31	310	P	Pb	06 13 56.1	-0.6
TUWZ				S	Sb	06 14 01.1	-0.7
TCW	Tory Channel	0.42	2	P	Pg	06 13 57.9	+0.6
TCW				S	Sb	06 14 04.0	-0.8
BHW	Baring Head	0.51	65	P	Pb	06 13 59.8	-0.2
PLWZ	Palliser	0.75	86	P	Pb	06 14 04.6	+0.4
MSWZ	Moikau Station	0.77	74	P	Pb	06 14 04.9	+0.3
NNZ	Nelson	0.78	302	P	Pg	06 14 04.2	0.0
CAW	Cannon Point	0.80	50	P	Pb	06 14 04.9	-0.2
DUWZ	D’Urville Isla	0.86	343	P	Pb	06 14 06.1	-0.1
PAWZ	Paruwai Farm	0.91	75	P	Pn	06 14 07.4	-0.5

KHZ	Kahutara	0.95	214	P	Pb	06 14 07.9	+0.3
THZ	Tophouse	1.02	262	P	Pg	06 14 08.4	-0.5
MTW	Mount Morrison	1.05	64	P	Pn	06 14 09.9	+0.2
OGWZ	Otaki Gorge	1.06	41	P	Pg	06 14 09.6	0.0
TRWZ	Traveller	1.10	78	P	Pb	06 14 09.8	-0.3
HOWZ	Holdsworth Sta	1.20	53	P	Pg	06 14 12.5	+0.4
TMWZ	Te Maipa	1.33	67	P	Pn	06 14 13.6	-0.1
MRZ	Mangatainoka R	1.39	46	P	Pn	06 14 14.5	+0.1
TIWZ	Tintock	1.49	56	P	Pb	06 14 17.1	+0.2
QRZ	Quartz Range	1.53	301	P	Pb	06 14 17.4	-0.1
GVZ	Greta Valley S	1.62	214	P	Pn	06 14 16.7	-0.9
CPWZ	Castlepoint	1.63	64	P	Pg	06 14 22.4	+2.0
OHWZ	Ohakea	1.63	30	P	Pg	06 14 19.8	-0.6
PRWZ	Pori Road	1.68	51	P	Pg	06 14 21.1	-0.2
LTZ	Lake Taylor	1.87	231	P	Pn	06 14 20.8	-0.4
AMCZ	Amberley	1.95	217	P	Pn	06 14 20.9	-1.3
WAZ	Wanganui	1.95	17	P	Pg	06 14 25.7	-0.9
PNHZ	Pukenui	2.26	41	P	Pb	06 14 29.3	-0.7
OKCZ	Okains Bay	2.27	203	P	Pn	06 14 24.6	-2.1
PREZ	Palmer Road	2.29	358	P	Pg	06 14 31.9	-1.1
INZ	Inchbonnie	2.36	241	P	Pn	06 14 27.9	+0.1
OXZ	Oxford	2.36	223	P	Pn	06 14 25.9	-1.9
AKCZ	Akaroa Harbour	2.45	203	P	Pn	06 14 29.8	+0.7
PKVZ	Pokaka	2.48	20	P	Pb	06 14 34.5	+0.7
MOVZ	Moawhango	2.49	28	P	Pb	06 14 33.7	-0.3
BHHZ	Black Hill Sta	2.54	33	P	Pb	06 14 36.0	+1.2
WHVZ	Whangaehu Hut	2.55	24	P	Pg	06 14 37.7	-0.4
FWVZ	Far West T-bar	2.57	23	P	Pb	06 14 36.4	+1.0
TUVZ	Tukino	2.59	25	P	Pg	06 14 37.2	-1.5
NGZ	Ngauruhoe	2.66	23	P	Pb	06 14 38.0	+1.2
WTVZ	West Tongariro	2.71	22	P	Pb	06 14 38.6	+1.0
TWVZ	Taurewa	2.71	20	P	Pb	06 14 39.1	+1.5
KRVZ	Karewarewa	2.74	23	P	Pb	06 14 39.2	+1.0
KWHZ	Kaweka Forest	2.75	38	P	Pg	06 14 41.0	-0.8
BKZ	Black Stump Fm	2.99	35	P	Pb	06 14 44.0	+1.5
WATZ	Wairara	3.13	22	P	Pb	06 14 46.8	+2.0
HIZ	Hauiti	3.15	9	P	Pb	06 14 45.7	+0.7
TLZ	Tolley Road	3.44	17	P	Pb	06 14 51.1	+1.0
SNGZ	Shannon Statio	3.69	41	P	Pn	06 14 45.1	-1.1
LBZ	Lake Benmore	4.07	226	P	Pn	06 14 52.0	+0.8
ODZ	Otahua Downs	4.31	216	P	Pn	06 14 53.0	-1.6
WCZ	Waipu Caves	5.68	1	P	Pn	06 15 12.5	-1.0
GLKZ	Green Lake	13.88	30	S	Sn	06 19 33.9	-5.9

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*IDC **21** 06:15:17.2±1.8, 41°.60S×174°.39E, h0km, mb3.6/2, mb1 3.7/4, mb1mx3.6/27, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=47.9km s-min=14.0km az=131.0*

*ISCJB **21** 06:15:19.6±0.6, 41°.66S±0°.03×174°.26E±0°.04, h1km±5km, mb3.4/2, Error ellipse: s-maj=5.6km s-min=4.0km az=149.0*

*WEL **21** 06:15:19.8, 42°S±2°×17°4E±°, h13km±3km, M3.8/17, ML4.1/10, MLv3.8/17, Error ellipse: s-maj=0.0km s-min=0.0km az=133.1*

ISC 21 06:15:19.5±0.9**, 41°.66S**±0°.03×**174°.23E**±0°.03**, h13**km±7km**,**
n47, σ1s.08/54**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	187	P	Pg	06 15 22.5	0.0
BSWZ	Blackbirch Sta	0.27	258	P	Pb	06 15 25.9	-0.3
BSWZ				S	Sb	06 15 30.8	0.0
TUWZ	Tuamarina	0.31	317	P	Pb	06 15 26.2	-0.7
TUWZ				S	Sg	06 15 31.1	+0.8
TCW	Tory Channel	0.45	5	P	Pg	06 15 28.3	-0.1
TCW				S	Sg	06 15 34.1	-0.3
BHW	Baring Head	0.54	63	P	Pb	06 15 30.6	-0.3
PLWZ	Palliser	0.77	84	P	Pb	06 15 34.9	0.0
NNZ	Nelson	0.78	304	P	Pb	06 15 34.6	-0.2
MSWZ	Moikau Station	0.80	73	P	Pg	06 15 33.3	-1.8
CAW	Cannon Point	0.84	49	P	Pb	06 15 35.3	-0.6
DUWZ	D'Urville Isla	0.89	345	P	Pn	06 15 37.9	+0.2
DUWZ				S	Sb	06 15 48.5	0.0
KHZ	Kahutara	0.92	214	P	Pn	06 15 38.7	+0.6
PAWZ	Paruwai Farm	0.94	73	P	Pn	06 15 37.8	-0.6
THZ	Tophouse	1.00	264	P	Pn	06 15 39.4	+0.1
MTW	Mount Morrison	1.08	63	P	Pg	06 15 40.1	-0.2
OGWZ	Otaki Gorge	1.10	41	P	Pb	06 15 39.7	-0.7
TRWZ	Traveller	1.13	77	P	Pn	06 15 40.5	-0.4
HOWZ	Holdsworth Sta	1.23	52	P	Pn	06 15 42.3	-0.2
TMWZ	Te Maipa	1.37	67	P	Pn	06 15 44.1	-0.2
MRZ	Mangatainoka R	1.43	46	P	Pb	06 15 45.5	-0.4
QRZ	Quartz Range	1.53	302	P	Pg	06 15 48.3	-0.6
TIWZ	Tintock	1.53	55	P	Pg	06 15 49.2	+0.3
GVZ	Greta Valley S	1.58	214	P	Pg	06 15 51.4	+1.6
CPWZ	Castlepoint	1.66	64	P	Pg	06 15 54.4	+3.0
OHWZ	Ohakea	1.67	30	P	Pg	06 15 51.3	-0.2
PRWZ	Pori Road	1.72	51	P	Pg	06 15 52.2	-0.2
POWZ	Post Office Ro	1.72	43	P	Pg	06 15 53.7	+1.3
BFZ	Birch Farm	1.81	58	P	Pg	06 15 56.1	+1.9
LTZ	Lake Taylor	1.84	232	P	Pb	06 15 52.1	-0.9
AMCZ	Amberley	1.92	217	P	Pg	06 15 59.2	+3.0
WAZ	Wanganui	1.99	17	P	Pb	06 15 56.6	+1.1
DVHZ	Dannevirke	2.00	48	P	Pg	06 15 58.2	+0.4
NMEZ	Namu Road	2.26	353	P	Pg	06 16 04.0	+1.2
PNHZ	Pukenui	2.30	41	P	Pg	06 16 03.0	-0.5
WPHZ	Waipukurau	2.31	47	P	Pg	06 16 04.6	+0.7
PREZ	Palmer Road	2.31	359	P	Pg	06 16 04.1	+0.3
MQZ	McQueen's Vall	2.35	209	P	Pn	06 15 57.4	-0.5
KHEZ	Kahui Hut	2.37	356	P	Pg	06 16 06.0	+1.1
MTVZ	Mangateitei	2.46	23	P	Pb	06 16 05.0	+1.4
PKE	Pukeiti	2.47	356	P	Pg	06 16 07.0	+0.2
MOVZ	Moawhango	2.53	28	P	Pb	06 16 04.7	-0.1
BHHZ	Black Hill Sta	2.58	33	P	Pb	06 16 05.6	0.0
KRHZ	Kereru	2.59	40	P	Pb	06 16 06.8	+1.0
RPZ	Rata Peaks	3.12	228	Pn	Pn	06 16 08.5	+0.2
	2.3nm,0.3s,baz=65,slow=12,SNR=2.9						
RPZ				Pg	Pg	06 16 16.2	-3.0
	18nm,0.3s,baz=348,slow=2.2,SNR=14						
RPZ				Sn	Sn	06 16 45.2	-0.2
	8.4nm,0.3s,baz=144,slow=23,SNR=8.0						
RPZ				Lg	Lg	06 16 59.5	
	6.3nm,0.3s,baz=55,slow=9.4,SNR=3.8						
URZ	Urewera	4.05	34	Pn	Pn	06 16 20.9	-0.3
	baz=197,slow=16,SNR=2.3						
URZ				Pg	Pb	06 16 28.6	-2.1
	1.9nm,0.3s,baz=258,slow=12,SNR=3.0						
URZ				Lg	Lg	06 17 20.2	
	2.3nm,0.3s,baz=306,slow=19,SNR=2.1						
ASAR	Alice Springs	37.99	285	P	P	06 22 38.6	+1.4
	0.3nm,0.4s,baz=125,slow=6.7,SNR=6.8						
WRA	Warramunga Arr	40.06	290	P	P	06 22 54.0	-0.6
	0.9nm,0.7s,baz=130,slow=8.2,SNR=4.0						
TORD	Torodi Ar. Bea	150.86	195	PKPbc	PKiKP	06 35 12.0	-0.7
	0.2nm,0.5s,baz=159,slow=3.5,SNR=3.7						

WEL 21 06:19:55.6, 42°S±1°×**174°.3E**±0°.7**, h10**km±2km**, M3.4**/11**,**
ML3.7/8**, MLv3.4**/11**, Error ellipse: s-maj=0.0km s-min=0.0km az=10.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	202	P	Pg	06 20 00.0	+0.8
CMWZ				S	Sg	06 20 03.0	+1.4
TUWZ	Tuamarina	0.32	303	P	Pg	06 20 02.6	+0.7
TUWZ				S	Sb	06 20 07.5	-1.0
BSWZ	Blackbirch Sta	0.34	250	P	Pg	06 20 02.2	-0.1
BSWZ				S	Sb	06 20 08.0	-1.1
TCW	Tory Channel	0.39	358	P	Pg	06 20 04.0	+0.7
TCW				S	Sb	06 20 09.6	-1.0
PLWZ	Palliser	0.72	88	P	Pg	06 20 09.9	+0.3
MSWZ	Moikau Station	0.74	76	P	Pg	06 20 09.9	0.0
NNZ	Nelson	0.79	299	P	Pg	06 20 10.8	0.0
DUWZ	D'Urville Isla	0.85	340	P	Pb	06 20 13.0	+0.5
PAWZ	Paruwai Farm	0.88	76	P	Pb	06 20 13.4	+0.4
KHZ	Kahutara	0.99	214	P	Pg	06 20 14.7	0.0
OGWZ	Otaki Gorge	1.02	40	P	Pn	06 20 16.0	0.0
ARHZ	Aropaoanui	3.11	42	P	Pn	06 20 47.2	+2.4
TLZ	Tolley Road	3.40	17	P	Pn	06 20 46.3	-2.5
KNZ	Kokohu	3.65	46	P	Pn	06 20 42.2	-10
MHGZ	Mahia Peninsul	3.69	50	P	Pn	06 20 44.6	-8.1

WEL 21 06:21:31.7, 42°S±4°×**17°4E**±°**, h5**km**, M3.4**/16**, ML3.6**/12**,**
MLv3.4/16**, Error ellipse: s-maj=0.0km s-min=0.0km az=68.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	226	P	Pg	06 21 36.7	+0.9
CMWZ				S	Sg	06 21 40.3	+1.9
TUWZ	Tuamarina	0.39	297	P	Pb	06 21 40.5	-0.7
TUWZ				S	Sb	06 21 46.2	-1.3
BHW	Baring Head	0.40	60	P	Pb	06 21 41.9	+0.6
BSWZ	Blackbirch Sta	0.41	255	P	Pg	06 21 40.4	+0.6
PLWZ	Palliser	0.64	87	P	Pn	06 21 46.5	-0.9
MSWZ	Moikau Station	0.66	73	P	Pn	06 21 46.8	-1.0
CAW	Cannon Point	0.70	45	P	Pb	06 21 47.3	+0.9
PAWZ	Paruwai Farm	0.80	74	P	Pn	06 21 49.3	-0.4
NNZ	Nelson	0.87	296	P	Pb	06 21 48.8	-0.4
DUWZ	D'Urville Isla	0.89	335	P	Pn	06 21 50.9	0.0
MTW	Mount Morrison	0.94	62	P	Pn	06 21 51.8	+0.2
OGWZ	Otaki Gorge	0.98	36	P	Pn	06 21 52.2	+0.1
TRWZ	Traveller	0.98	78	P	Pn	06 21 53.0	+0.8
KHZ	Kahutara	1.04	218	P	Pb	06 21 52.5	+0.3
HOWZ	Holdsworth Sta	1.09	50	P	Pn	06 21 54.2	+0.5
THZ	Tophouse	1.14	262	P	Pb	06 21 53.9	0.0
PNHZ	Pukenui	2.17	39	P	Pn	06 22 09.0	+0.5
INZ	Inchbonnie	2.47	242	P	Pn	06 22 12.4	-0.3

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*IDC **21** 06:23:23.6±1.3, 41°.53S×174°.40E, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.7/26, mbtmp3.8/4, ML3.2/2, Error ellipse: s-maj=41.7km s-min=19.0km az=135.0*

*ISCJB **21** 06:23:25.5±0.6, 41°.82S±0°.03×174°.49E±0°.04, h7km±4km, mb3.8/2, Error ellipse: s-maj=6.4km s-min=3.0km az=136.8*

*WEL **21** 06:23:26.0, 42°S±1°×174°.4E±0°.9, h8km±2km, M3.7/5, ML4.7/19, MLv3.7/5, Error ellipse: s-maj=0.0km s-min=0.0km az=150.8*

*NEIC **21** 06:23:26.2±0.0, 41°.62S×174°.37E, h9km, ML4.5(WEL), After WEL.*

ISC 21 06:23:25.8±1.0**, 41°.67S**±0°.03×**174°.46E**±0°.03**, h14**km±6km**,**
n114, σ1s.30/116**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	247	P	Pg	06 23 30.4	0.0
CMWZ				S	Sg	06 23 33.7	+0.3
SNZO	South Karori	0.41	27	*e*Pg	Pb	06 23 35.2	+0.4
BHW	Baring Head	0.41	50	P	Pb	06 23 35.6	+0.8
BSWZ	Blackbirch Sta	0.44	264	P	Pg	06 23 34.0	-0.6
TUWZ	Tuamarina	0.46	302	P	Pg	06 23 32.1	-2.8
TUWZ				P	Pb	06 23 34.1	-1.5
TCW	Tory Channel	0.48	344	P	Pg	06 23 35.2	-0.2
PLWZ	Palliser	0.61	81	P	Pn	06 23 40.1	0.0
MSWZ	Moikau Station	0.65	67	P	Pn	06 23 40.4	-0.2
CAW	Cannon Point	0.73	39	P	Pb	06 23 40.8	+0.6
PAWZ	Paruwai Farm	0.78	69	P	Pn	06 23 43.0	+0.5
NNZ	Nelson	0.93	299	P	Pg	06 23 42.4	-1.3
MTW	Mount Morrison	0.94	57	P	Pn	06 23 45.5	+0.9
DUWZ	D'Urville Isla	0.96	335	P	Pg	06 23 43.8	-0.5
TRWZ	Traveller	0.96	74	P	Pn	06 23 45.9	+0.9
KHZ	Kahutara	1.01	222	*e*Pg	Pn	06 23 45.8	+0.3
KHZ	Kahutara	1.01	222	P	Pn	06 23 45.9	+0.3
OGWZ	Otaki Gorge	1.01	32	P	Pn	06 23 46.0	+0.4
HOWZ	Holdsworth Sta	1.11	46	P	Pn	06 23 48.1	+1.1
THZ	Tophouse	1.17	265	*e*Pg	Pb	06 23 47.4	-0.4
THZ	Tophouse	1.17	265	P	Pb	06 23 47.6	-0.2
TMWZ	Te Maipa	1.22	63	P	Pg	06 23 49.8	+0.5
MRZ	Mangatainoka R	1.32	40	P	Pg	06 23 51.1	-0.1
TIWZ	Tintock	1.40	51	P	Pb	06 23 52.2	+0.4
CPWZ	Castlepoint	1.52	61	P	Pb	06 23 53.8	0.0
PRWZ	Pori Road	1.60	46	P	Pb	06 23 54.6	-0.5
OHWZ	Ohakea	1.60	24	P	Pb	06 23 55.6	+0.4
POWZ	Post Office Ro	1.62	38	P	Pb	06 23 55.1	-0.3
GVZ	Greta Valley S	1.67	219	P	Pn	06 23 54.9	+0.2
BFZ	Birch Farm	1.67	54	*e*Pn	Pn	06 23 55.1	+0.4
BFZ	Birch Farm	1.67	54	P	Pb	06 23 56.3	-0.1
QRZ	Quartz Range	1.68	300	P	Pn	06 23 55.4	+0.6
DVHZ	Dannevirke	1.89	44	P	Pn	06 23 58.2	+0.6
ANWZ	Angora Road	1.95	52	P	Pb	06 24 00.3	-0.8
WAZ	Wanganui	1.96	12	P	Pg	06 24 03.0	-0.3
LTZ	Lake Taylor	1.97	235	*e*Pn	Pn	06 23 58.7	-0.1
LTZ	Lake Taylor	1.97	235	P	Pn	06 23 59.0	+0.2
AMCZ	Amberley	2.01	221	P	Pn	06 23 59.4	+0.1
PNHZ	Pukenui	2.20	38	P	Pn	06 24 02.9	+1.0
WPHZ	Waipukurau	2.20	44	P	Pb	06 24 04.9	-0.5
OKCZ	Okains Bay	2.29	206	P	Pn	06 24 02.5	-0.8
NMEZ	Namu Road	2.30	349	P	Pb	06 24 08.3	+1.2
CRLZ	Canterbury Las	2.33	215	*e*Pn	Pn	06 24 02.9	-0.8
CRLZ	Canterbury Las	2.33	215	P	Pg	06 24 10.5	-0.1
PREZ	Palmer Road	2.34	354	P	Pb	06 24 08.7	+0.9
KHEZ	Kahui Hut	2.40	352	P	Pb	06 24 09.5	+0.6
MTVZ	Mangateitei	2.41	19	P	Pg	06 24 11.3	-0.7
MQZ	McQueen's Vall	2.43	213	*e*Pn	Pn	06 24 03.5	-1.5
MQZ	McQueen's Vall	2.43	213	P	Pn	06 24 03.8	-1.2
OXZ	Oxford	2.44	226	*e*Pn	Pn	06 24 04.3	-0.9
OXZ	Oxford	2.44	226	P	Pb	06 24 10.0	+0.6
MOVZ	Moawhango	2.47	24	P	Pb	06 24 10.1	+0.1
INZ	Inchbonnie	2.47	244	P	Pn	06 24 06.2	+0.5
PKVZ	Pokaka	2.48	16	P	Pg	06 24 11.8	-1.4
AKCZ	Akaroa Harbour	2.48	207	P	Pn	06 24 05.1	-0.7
DREZ	Durham Road	2.49	355	P	Pb	06 24 10.9	+0.6
KRHZ	Kereru	2.50	36	P	Pn	06 24 06.7	+0.7
BHHZ	Black Hill Sta	2.50	30	P	Pb	06 24 08.5	-2.1
PKE	Pukeiti	2.50	352	P	Pb	06 24 09.7	-0.9
DRZ	Dome Shelter	2.54	20	P	Pg	06 24 14.8	+0.3
WHVZ	Whangaehu Hut	2.54	20	P	Pb	06 24 11.2	-0.1
FWVZ	Far West T-bar	2.56	19	P	Pb	06 24 12.8	+1.2
VRZ	Vera Road	2.56	5	P	Pb	06 24 11.7	+0.3
TUVZ	Tukino	2.57	21	P	Pb	06 24 11.2	-0.6
KAHZ	Kahuranaki	2.63	45	P	Pn	06 24 08.3	+0.5
NGZ	Ngauruhoe	2.64	20	P	Pb	06 24 14.4	+1.4
WTVZ	West Tongariro	2.70	19	P	Pb	06 24 15.3	+1.4
TWVZ	Taurewa	2.70	16	P	Pg	06 24 15.9	-1.7
KRVZ	Karewarewa	2.73	20	P	Pb	06 24 15.6	+1.1
KATZ	Kakaramea	2.85	20	P	Pg	06 24 18.7	-1.8
RITZ	Rihia Road	2.90	22	P	Pb	06 24 19.0	+1.7
BKZ	Black Stump Fm	2.95	32	*e*Pn	Pn	06 24 12.5	+0.3
BKZ	Black Stump Fm	2.95	32	P	Pg	06 24 20.6	-1.7
WVZ	Waitaha Valley	3.09	242	P	Pn	06 24 16.3	+2.1
HIZ	Hauiti	3.17	6	*e*Pn	Pb	06 24 20.7	-1.2
HIZ	Hauiti	3.17	6	P	Pb	06 24 21.4	-0.5
RPZ	Rata Peaks	3.23	230	Pn	Pn	06 24 15.3	-0.9
	8.1nm,0.3s,baz=23,slow=0.6,SNR=9.1						
RPZ				Pg	Pb	06 24 24.5	+1.5
	22nm,0.3s,baz=297,slow=3.0,SNR=17						
RPZ				Sn	Sn	06 24 58.1	+3.7
	79nm,0.3s,baz=4.1,slow=6.3,SNR=8.0						
RPZ	Rata Peaks	3.23	230	*e*Pn	Pn	06 24 15.6	-0.5
RPZ	Rata Peaks	3.23	230	P	Pn	06 24 15.9	-0.3
TLZ	Tolley Road	3.44	14	P	Pb	06 24 26.0	-0.6
MUGZ	Murupara	3.65	30	P	Pn	06 24 23.5	+1.6
FOZ	Fox Glacier	3.90	240	*e*Pn	Pn	06 24 25.4	+0.2
FOZ	Fox Glacier	3.90	240	P	Pn	06 24 29.3	+4.1
URZ	Urewera	3.97	32	Pn	Pn	06 24 25.3	-1.0
	0.6nm,0.3s,baz=240,slow=7.1,SNR=5.3						
URZ				Pg	Pb	06 24 37.1	+1.5
	6.1nm,0.3s,baz=244,slow=7.2,SNR=6.5						
URZ				Sn	Sn	06 25 11.1	-1.5
	33nm,0.3s,baz=251,slow=8.9,SNR=9.4						
URZ	Urewera	3.97	32	*e*Pn	Pn	06 24 27.2	+0.9
MWZ	Matawai	4.08	36	P	Pn	06 24 27.5	-0.3
LBZ	Lake Benmore	4.14	228	*e*Pn	Pn	06 24 29.2	+0.6
LBZ	Lake Benmore	4.14	228	P	Pn	06 24 29.7	+1.1
ODZ	Otahua Downs	4.37	218	*e*Pn	Pn	06 24 31.3	-0.4
ODZ	Otahua Downs	4.37	218	P	Pn	06 24 31.2	-0.5
RUGZ	Raukumara Rang	4.46	35	P	Pn	06 24 34.2	+1.1
MKAZ	Moumakai	4.59	7	P	Pb	06 24 41.2	-4.9
AWAZ	Awhitu Peninsu	4.60	2	P	Pn	06 24 39.1	+4.1
HAZ	Te Kaha	4.68	34	P	Pn	06 24 37.9	+1.9
ETAZ	East Tamaki Re	4.73	5	P	Pn	06 24 40.7	+4.1
JCZ	Jackson Bay	4.81	238	P	Pn	06 24 40.9	+3.0
RVAZ	Riverhead Bore	4.90	1	P	Pb	06 24 45.8	-5.5
WIAZ	Waiheke Island	4.90	6	P	Pb	06 24 45.7	-5.7
MBAZ	Motutapu North	4.91	4	P	Pn	06 24 43.6	+4.4
WMGZ	Waiomatatini S	4.91	40	P	Pn	06 24 38.5	-0.6
TUZ	Tuapeka	5.52	218	P	Pn	06 24 47.9	+0.3
WCZ	Waipu Caves	5.72	359	P	Pn	06 24 52.1	+1.7
SYZ	Scrubby Hill	6.19	216	P	Pn	06 24 57.5	+0.9
OUZ	Omahuta	6.48	354	P	Pn	06 25 06.4	+5.7
ASAR	Alice Springs	38.16	285	P	P	06 30 44.5	-0.3
	0.5nm,0.4s,baz=127,slow=7.2,SNR=8.4						
WR1	Warramunga Arr	40.22	290	*e*P	P	06 31 00.9	-1.2
WRA	Warramunga Arr	40.22	290	P	P	06 31 00.9	-1.2
	1.7nm,0.7s,baz=133,slow=7.7,SNR=10						
YKA	Yellowknife Ar	118.23	30	PKP	PKiKP	06 42 11.8	+0.4
	0.3nm,0.6s,baz=253,slow=1.6,SNR=5.7						
YKB5	Yellowknife Ar	118.23	30	*e*PKPdf	PKiKP	06 42 11.8	+0.4
ARA0	ARCESS Array S	147.76	340	*e*PKPdf	PKPbc	06 43 08.0	-0.9
ARCES	ARCESS Array B	147.76	340	PKPbc	PKPbc	06 43 08.0	-0.9
	1.4nm,0.7s,baz=29,slow=2.1,SNR=4.6						
TORD	Torodi Ar. Bea	150.89	195	PKPbc	PKPbc	06 43 18.8	+0.4
	0.7nm,0.6s,baz=158,slow=2.4,SNR=4.7						
TOA1	Torodi Ar. Sit	150.90	195	*e*PKPbc	PKPbc	06 43 18.8	+0.4
FIA0	FINESS Array S	152.55	327	*e*PKPbc	PKPbc	06 43 19.3	-1.4
FINES	FINESS Array B	152.55	327	PKPbc	PKPbc	06 43 19.3	-1.4
	1.5nm,0.9s,baz=40,slow=3.2,SNR=4.7						

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*ISCJB **21** 06:23:53.2±0.7, 41°.5S±0°.1×174°.3E±0°.2, h10km, mb3.9/2, Error ellipse: s-maj=22.0km s-min=7.0km az=39.1*

*IDC **21** 06:23:53.6±1.7, 41°.47S×174°.31E, h0km, mb4.0/2, mb1 4.3/4, mb1mx3.9/25, mbtmp4.1/4, ML3.9/2, Error ellipse: s-maj=43.9km s-min=13.2km az=132.0*

ISC 21 06:23:55.0±0.9**, 41°.5S**±0°.1×**174°.2E**±0°.2**, h10**km**, n8,**
σ0s.81/12**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	3.26	225	Pn	Pn	06 24 46.0	-0.1
	19nm,0.3s,baz=76,slow=12,SNR=9.5						
RPZ				Pg	Pb	06 24 53.6	+0.8
	39nm,0.3s,baz=163,slow=6.9,SNR=7.1						
RPZ				Sn	Sn	06 25 22.9	-2.0
	18nm,0.3s,baz=316,slow=23,SNR=7.2						
RPZ				Lg	Lg	06 25 39.0	
	8.7nm,0.3s,baz=161,slow=21,SNR=3.4						
URZ	Urewera	3.89	35	Pn	Pn	06 24 54.5	-0.3
	6.0nm,0.3s,baz=203,slow=7.7,SNR=4.1						
URZ				Pg	Pb	06 25 03.6	0.0
	15nm,0.3s,baz=214,slow=12,SNR=7.6						
URZ				Sn	Sn	06 25 40.1	-0.4
	10.0nm,0.3s,baz=309,slow=14,SNR=3.2						
URZ				Lg	Lg	06 25 57.5	
	12nm,0.3s,baz=355,slow=19,SNR=3.3						
ASAR	Alice Springs	37.95	285	P	P	06 31 12.7	-0.2
	0.4nm,0.4s,baz=125,slow=6.7,SNR=7.0						
WRA	Warramunga Arr	40.00	290	P	P	06 31 30.8	+0.8
	5.9nm,0.8s,baz=130,slow=8.0,SNR=16						
SNAA	Sanae	67.15	181	P	P	06 34 48.5	+0.1
VNA3	Neumayer Olymp	67.56	179	P	P	06 34 51.4	+0.3
VNA1	Neumayer--Stat	68.18	179	P	P	06 34 55.3	+0.4
TORD	Torodi Ar. Bea	151.05	195	PKPbc	PKPbc	06 43 48.5	0.0
	1.1nm,0.5s,baz=152,slow=2.0,SNR=4.2						

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*IDC **21** 06:27:49.4±1.5, 41°.45S×173°.95E, h0km, mb3.8/2, mb1 3.9/4, mb1mx3.7/27, mbtmp3.7/4, ML3.0/2, Error ellipse: s-maj=41.0km s-min=18.7km az=131.0*

*WEL **21** 06:27:51.7, 41°.6S±0°.9×17°4E±°, h13km±2km, M3.9/23, ML4.2/18, MLv3.9/23, Error ellipse: s-maj=0.0km s-min=0.0km az=127.2*

ISC 21 06:27:51.1±0.8**, 41°.56S**±0°.03×**174°.24E**±0°.03**, h18**km**, n84,**
σ1s.60/88**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.19	185	P	Pb	06 27 57.8	+2.0
CMWZ				S	Sg	06 28 00.1	+0.9
TUWZ	Tuamarina	0.26	300	P	Pg	06 27 58.9	+2.1
BSWZ	Blackbirch Sta	0.31	240	P	Pb	06 27 59.4	+1.2
BSWZ				S	Sn	06 28 04.9	-2.0
TCW	Tory Channel	0.35	5	P	Pb	06 27 60.0	+1.1
BHW	Baring Head	0.50	73	P	Pg	06 28 01.2	0.0
NNZ	Nelson	0.73	298	P	Pn	06 28 07.4	+0.9
PLWZ	Palliser	0.77	91	P	Pb	06 28 06.0	+0.1
CAW	Cannon Point	0.77	55	P	Pb	06 28 06.3	+0.3
MSWZ	Moikau Station	0.78	80	P	Pb	06 28 06.4	+0.3
DUWZ	D'Urville Isla	0.79	343	P	Pn	06 28 08.3	+0.9
PAWZ	Paruwai Farm	0.91	79	P	Pb	06 28 09.2	+0.8
KHZ	Kahutara	1.00	211	P	Pg	06 28 11.2	+0.6
THZ	Tophouse	1.02	258	P	Pg	06 28 11.9	+1.1
OGWZ	Otaki Gorge	1.02	44	P	Pb	06 28 10.9	+0.6
MTW	Mount Morrison	1.03	68	P	Pb	06 28 11.0	+0.5
TRWZ	Traveller	1.10	82	P	Pn	06 28 11.5	-0.2
HOWZ	Holdsworth Sta	1.17	56	P	Pn	06 28 13.2	+0.6
TMWZ	Te Maipa	1.33	71	P	Pn	06 28 15.2	+0.4
MRZ	Mangatainoka R	1.35	49	P	Pn	06 28 16.1	+1.0
TIWZ	Tintock	1.47	58	P	Pn	06 28 17.3	+0.5
QRZ	Quartz Range	1.48	299	P	Pg	06 28 20.2	+0.5
OHWZ	Ohakea	1.58	32	P	Pg	06 28 21.5	0.0
POWZ	Post Office Ro	1.65	45	P	Pn	06 28 20.9	+1.8
PRWZ	Pori Road	1.65	53	P	Pn	06 28 20.9	+1.7
GVZ	Greta Valley S	1.67	212	P	Pn	06 28 19.8	+0.4
WAZ	Wanganui	1.89	18	P	Pg	06 28 27.1	-0.3
LTZ	Lake Taylor	1.90	229	P	Pn	06 28 23.8	+1.0
AMCZ	Amberley	2.00	215	P	Pn	06 28 24.0	0.0
KHEZ	Kahui Hut	2.27	356	P	Pg	06 28 35.5	+0.9
NBEZ	Newall Road No	2.31	353	P	Pg	06 28 36.1	+0.7
OKCZ	Okains Bay	2.33	201	P	Pn	06 28 27.8	-0.8
CRLZ	Canterbury Las	2.34	210	P	Pn	06 28 28.4	-0.3
DREZ	Durham Road	2.37	359	P	Pg	06 28 37.5	+1.0
MTVZ	Mangateitei	2.37	24	P	Pg	06 28 38.7	+2.2
PKE	Pukeiti	2.37	355	P	Pg	06 28 37.5	+0.9
INZ	Inchbonnie	2.38	240	P	Pb	06 28 34.3	+0.9
OXZ	Oxford	2.40	222	P	Pn	06 28 29.8	+0.2
PKVZ	Pokaka	2.42	21	P	Pg	06 28 36.8	-0.8
MOVZ	Moawhango	2.44	29	P	Pb	06 28 35.7	+1.2
MQZ	McQueen's Vall	2.44	208	P	Pn	06 28 28.9	-1.2
VRZ	Vera Road	2.46	10	P	Pg	06 28 37.7	-0.7
MHEZ	Mangahewa	2.48	2	P	Pg	06 28 42.0	+3.3
BHHZ	Black Hill Sta	2.49	35	P	Pb	06 28 37.0	+1.6
DRZ	Dome Shelter	2.50	24	P	Pg	06 28 38.7	-0.3
WHVZ	Whangaehu Hut	2.50	25	P	Pb	06 28 37.4	+1.9
AKCZ	Akaroa Harbour	2.51	202	P	Pn	06 28 30.3	-0.7
FWVZ	Far West T-bar	2.51	24	P	Pb	06 28 37.9	+2.1
KRHZ	Kereru	2.51	41	P	Pb	06 28 37.3	+1.6
PXZ	Pawanui	2.51	53	P	Pb	06 28 37.9	+2.2
TUVZ	Tukino	2.53	26	P	Pb	06 28 38.1	+2.0
NGZ	Ngauruhoe	2.60	24	P	Pb	06 28 39.2	+1.9
TWVZ	Taurewa	2.65	21	P	Pg	06 28 40.5	-1.4
WTVZ	West Tongariro	2.65	23	P	Pb	06 28 40.4	+2.2
KAHZ	Kahuranaki	2.67	50	P	Pb	06 28 39.1	+0.6
KRVZ	Karewarewa	2.69	24	P	Pb	06 28 40.9	+2.1
KWHZ	Kaweka Forest	2.71	39	P	Pg	06 28 42.3	-0.7
KATZ	Kakaramea	2.81	24	P	Pg	06 28 44.6	-0.5
RITZ	Rihia Road	2.86	26	P	Pg	06 28 44.6	-1.4
RATZ	Rangitukua	2.94	24	P	Pg	06 28 47.2	-0.2
BKZ	Black Stump Fm	2.95	37	P	Pb	06 28 45.4	+2.3
WVZ	Waitaha Valley	3.00	239	P	Pb	06 28 44.3	+0.3
WATZ	Wairara	3.07	22	P	Pg	06 28 48.3	-1.6
HIZ	Hauiti	3.08	9	P	Pb	06 28 47.1	+1.7
RPZ	Rata Peaks	3.19	226	Pn	Pn	06 28 40.6	+0.2
	3.5nm,0.3s,baz=219,slow=2.4,SNR=8.7						
RPZ				Pg	Pb	06 28 47.9	+0.8
	25nm,0.3s,baz=295,slow=3.5,SNR=13						
RPZ				Sn	Sn	06 29 16.9	-0.9
	12nm,0.3s,baz=181,slow=22,SNR=15						
RPZ	Rata Peaks	3.19	226	P	Pn	06 28 41.3	+1.0
MTHZ	Maungataniwha	3.36	37	P	Pb	06 28 51.0	+0.8
TLZ	Tolley Road	3.38	18	P	Pb	06 28 52.6	+2.1
FOZ	Fox Glacier	3.81	237	P	Pb	06 28 55.1	-2.7
TOZ	Tahuroa Road	3.95	15	P	Pb	06 28 59.9	-0.2
URZ	Urewera	3.97	35	Pn	Pn	06 28 53.9	+2.9
	0.6nm,0.3s,baz=249,slow=9.4,SNR=3.9						
URZ				Pg	Pb	06 29 02.4	+1.9
	5.7nm,0.3s,baz=239,slow=8.8,SNR=13						
ODZ	Otahua Downs	4.36	216	P	Pn	06 28 56.2	-0.3
AWAZ	Awhitu Peninsu	4.50	4	P	Pb	06 29 05.5	-4.0
MKAZ	Moumakai	4.51	9	P	Pb	06 29 06.3	-3.4
ETAZ	East Tamaki Re	4.63	7	P	Pb	06 29 08.8	-3.0
JCZ	Jackson Bay	4.73	236	P	Pn	06 29 07.0	+5.3
WIAZ	Waiheke Island	4.81	9	P	Pb	06 29 11.5	-3.4
MBAZ	Motutapu North	4.81	6	P	Pb	06 29 11.9	-2.9
HHSZ	Highcliff Hill	5.06	210	P	Pn	06 29 05.8	-0.3
TUZ	Tuapeka	5.51	216	P	Pn	06 29 13.4	+1.2
SYZ	Scrubby Hill	6.18	215	P	Pn	06 29 22.2	+0.7
CTZ	Chatham Island	7.09	111	P	Pn	06 29 37.9	+4.0
ASAR	Alice Springs	37.97	285	P	P	06 35 08.8	+0.9
	0.4nm,0.5s,baz=128,slow=7.1,SNR=6.1						
WRA	Warramunga Arr	40.03	290	P	P	06 35 22.2	-3.0
	1.5nm,0.7s,baz=135,slow=8.3,SNR=6.4						
TORD	Torodi Ar. Bea	150.96	195	PKPbc	PKPbc	06 47 43.4	+0.3
	0.4nm,0.7s,baz=186,slow=4.4,SNR=3.1						

IDC 21 06:33:19.6±21.0**, 16°.93S**×**176°.94W, h587**km±192km**,**
mb3.2/3**, mb1 3.4**/4**, mb1mx2.9**/31**, mbtmp4.3**/4**, Error**

ellipse: s-maj=268.3km s-min=130.2km az=134.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.47	249	P	P	06 36 41.8	-0.2
	0.3nm,0.3s,baz=85,slow=19,SNR=3.4						
CTA	Charters Tower	34.99	259	P	P	06 39 25.1	+0.8
	1.8nm,0.8s,baz=95,slow=11,SNR=6.6						
WRA	Warramunga Arr	46.19	258	P	P	06 40 51.9	-1.3
	1.5nm,0.9s,baz=88,slow=7.6,SNR=3.9						
ASAR	Alice Springs	46.41	253	P	P	06 40 54.9	+0.1
	6.2nm,0.6s,baz=85,slow=8.1,SNR=58						
BRTR	Keskin Array B	145.06	317	PKPbc	PKPdf	06 51 51.5	+0.2
	0.9nm,0.7s,baz=15,slow=1.6,SNR=4.6						

UCR 21 06:36:57.0±3.7, 7.°37N×82.°01W, h0^{km}±21^{km}, MW4.3, 1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	Volcan	1.57	335	*e*P	Pn	06 37 24.8	-1.6
AZU	Azuero	1.77	76⇓	*e*P	Pn	06 37 28.5	-0.4
AZU				*e*S	Sb	06 37 53.0	-0.2
ZANG	Zanguenga, Cho	2.65	53	*e*P	Pn	06 37 41.4	+0.4
BCIP	Isla Barro Col	2.80	50	*e*P	Pn	06 37 42.9	-0.1
BCIP				*e*S	Sb	06 38 20.6	-2.1
UPA	Univ. de Panam	2.93	57	*e*P	Pn	06 37 46.0	+1.2
LCR2	La Lucha 2	3.08	320	*e*P	Pn	06 37 46.3	-0.8
CVTR	Volcan Turrial	3.15	327	*e*P	Pn	06 37 50.8	+2.5
HDC	Heredia	3.34	322	*e*P	Pn	06 37 50.4	-0.3
SRA1	San Ramn	3.64	318	*e*P	Pb	06 38 00.8	-1.6
ARE1	Arenal 1	4.08	319	*e*P	Pn	06 38 03.0	+2.3
CEDE	Laguna Cedeo	4.09	320	*e*P	Pb	06 38 05.5	-4.5
JTS	Las Juntas de	4.11	315	*e*P	Pb	06 38 06.7	-3.7

WEL 21 06:37:12.9, 42°S±2°×17°4E±°, h12^{km}±3^{km}, M3.1/8, ML4.0/11, MLv3.1/8, Error ellipse: s-maj=0.0km s-min=0.0km az=136.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.23	208	P	Pb	06 37 20.6	+1.6
CMWZ				S	Sg	06 37 22.4	+1.4
TUWZ	Tuamarina	0.33	291	P	Pb	06 37 20.3	-0.5
TUWZ				S	Sb	06 37 25.6	-0.5
TCW	Tory Channel	0.34	350	P	Pb	06 37 20.7	-0.3
TCW				S	Sb	06 37 26.1	-0.4
BHW	Baring Head	0.41	70	P	Pb	06 37 22.1	0.0
BHW				S	Sb	06 37 28.4	0.0
PLWZ	Palliser	0.68	92	P	Pb	06 37 26.9	+0.2
MSWZ	Moikau Station	0.68	79	P	Pb	06 37 26.9	+0.1
CAW	Cannon Point	0.69	51	P	Pb	06 37 27.0	0.0
NNZ	Nelson	0.81	294	P	Pb	06 37 28.9	+0.1
PAWZ	Paruwai Farm	0.82	79	P	Pb	06 37 29.7	+0.5
MTW	Mount Morrison	0.95	66	P	Pn	06 37 31.7	-0.4
OGWZ	Otaki Gorge	0.96	40	P	Pb	06 37 31.4	0.0
HOWZ	Holdsworth Sta	1.09	54	P	Pn	06 37 34.0	-0.1
THZ	Tophouse	1.11	258	P	Pb	06 37 34.2	+0.1
TMWZ	Te Maipa	1.24	70	P	Pn	06 37 35.6	-0.5

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*IDC **21** 06:37:51.8±1.3, 41.°85S×174.°15E, h0^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.8/21, mbtmp3.8/4, ML3.5/2, Error ellipse: s-maj=39.9km s-min=18.6km az=136.0*

*WEL **21** 06:37:52.3, 42°S±4°×17°5E±°, h12^{km}, M3.9/13, ML4.3/9, MLv3.9/13, Error ellipse: s-maj=0.0km s-min=0.0km az=179.5*

*ISCJB **21** 06:37:53.1±0.6, 41.°63S±0.°05×174.°48E±0.°04, h10^{km}, mb3.7/2, Error ellipse: s-maj=7.2km s-min=4.2km az=166.9*

ISC 21 06:37:51.9±0.8, 41.°67S±0.°05×174.°48E±0.°04, h10^{km}, n21, σ1§90/24, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.21	249	P	Pg	06 37 58.5	+2.2
CMWZ				S	Sg	06 38 02.0	+2.6
BHW	Baring Head	0.40	48	P	Pg	06 38 00.5	+0.8
TUWZ	Tuamarina	0.47	301	P	Pg	06 38 02.2	+1.1
TUWZ				S	Sg	06 38 07.8	+0.5
TCW	Tory Channel	0.49	342	S	Sg	06 38 09.4	+1.6
PLWZ	Palliser	0.59	80	P	Pb	06 38 05.2	+0.8
MSWZ	Moikau Station	0.63	66	P	Pg	06 38 05.5	+1.3
CAW	Cannon Point	0.72	38	P	Pg	06 38 06.2	+0.4
PAWZ	Paruwai Farm	0.77	68	P	Pb	06 38 08.3	+0.9
MTW	Mount Morrison	0.93	56	P	Pg	06 38 10.7	+1.0
NNZ	Nelson	0.94	299	P	Pg	06 38 10.5	+0.4
OGWZ	Otaki Gorge	1.00	32	P	Pg	06 38 10.7	-0.5
HOWZ	Holdsworth Sta	1.10	45	P	Pb	06 38 13.8	+0.8
THZ	Tophouse	1.18	265	P	Pn	06 38 15.3	+0.7
RPZ	Rata Peaks	3.25	230	Pn	Pn	06 38 38.5	-4.4
	5.0nm,0.3s,baz=162,slow=16,SNR=6.1						
RPZ				Sn	Sn	06 39 16.8	-4.8
	6.6nm,0.3s,baz=270,slow=5.1,SNR=2.5						
URZ	Urewera	3.96	32	Pn	Pb	06 38 59.7	-2.2
	3.6nm,0.3s,baz=186,slow=13,SNR=4.3						
URZ				Lg	Lg	06 40 05.6	
	4.2nm,0.3s,baz=21,slow=19,SNR=3.4						
ASAR	Alice Springs	38.18	285	P	P	06 45 12.8	+1.2
	0.5nm,0.4s,baz=126,slow=6.9,SNR=13						
WRA	Warramunga Arr	40.24	290	P	P	06 45 27.9	-1.0
	1.3nm,0.6s,baz=133,slow=7.6,SNR=8.1						
YKA	Yellowknife Ar	118.22	30	PKP	PKiKP	06 56 39.6	+1.4
	0.3nm,0.6s,baz=239,slow=1.6,SNR=5.2						
ARCES	ARCESS Array B	147.76	340	PKPbc	PKPbc	06 57 36.5	+0.8
	1.2nm,0.7s,baz=29,slow=2.8,SNR=6.3						
TORD	Torodi Ar. Bea	150.89	195	PKPbc	PKiKP	06 57 46.9	+1.2
	0.7nm,0.5s,baz=154,slow=2.3,SNR=10						
FINES	FINESS Array B	152.56	327	PKPbc	PKPbc	06 57 47.5	0.0
	1.0nm,0.6s,baz=70,slow=1.6,SNR=5.2						

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*IDC **21** 06:49:26.7±1.5, 41.°59S×174.°40E, h0^{km}, mb3.9/2, mb1 4.0/4, mb1mx3.7/23, mbtmp3.8/4, ML3.4/2, Error ellipse: s-maj=42.0km s-min=13.1km az=132.0*

*NEIC **21** 06:49:27.9±0.0, 41.°70S×174.°39E, h10^{km}, ML4.2(WEL), After WEL.*

*WEL **21** 06:49:29.6, 41.°6S±0.°9×174.°3E±0.°7, h14^{km}±2^{km}, M4.1/21, ML4.4/19, MLv4.1/21, Error ellipse: s-maj=0.0km s-min=0.0km az=3.7*

ISC 21 06:49:29.5±1.3, 41.°61S±0.°02×174.°32E±0.°02, h16^{km}±9^{km}, n142, σ1§48/149, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	211	P	Pb	06 49 34.4	+0.3
CMWZ				S	Sb	06 49 37.6	+0.4
TUWZ	Tuamarina	0.34	302	P	Pb	06 49 36.9	-0.2
TUWZ				S	Sb	06 49 42.1	-0.1
BSWZ	Blackbirch Sta	0.35	253	P	Pg	06 49 37.2	+0.4
BSWZ				S	Sb	06 49 42.7	+0.1
TCW	Tory Channel	0.40	355	P	Pb	06 49 37.9	-0.2
TCW				S	Sb	06 49 43.6	-0.5
SNZO	South Karori	0.41	44	*e*Pg	Pb	06 49 38.4	0.0
BHW	Baring Head	0.46	64	P	Pb	06 49 39.3	+0.2
PLWZ	Palliser	0.70	87	P	Pb	06 49 44.0	+0.7
MSWZ	Moikau Station	0.72	75	P	Pb	06 49 44.1	+0.5
CAW	Cannon Point	0.75	48	P	Pb	06 49 44.4	+0.3
NNZ	Nelson	0.81	299	P	Pb	06 49 45.3	+0.1
PAWZ	Paruwai Farm	0.86	75	P	Pb	06 49 46.6	+0.6
DUWZ	D'Urville Isla	0.86	339	P	Pn	06 49 46.7	-0.2
KHZ	Kahutara	0.99	216	*e*Pg	Pb	06 49 48.1	-0.2
KHZ				*e*Sg	Sn	06 50 04.1	+1.7
KHZ	Kahutara	0.99	216	P	Pn	06 49 49.3	+0.6
MTW	Mount Morrison	0.99	63	P	Pn	06 49 48.9	+0.1
OGWZ	Otaki Gorge	1.02	39	P	Pg	06 49 48.9	-0.3
TRWZ	Traveller	1.05	79	P	Pb	06 49 48.5	-0.7
THZ	Tophouse	1.07	261	*e*Pn	Pb	06 49 49.7	0.0
THZ				*e*Sg	Sn	06 50 06.6	+2.1
THZ	Tophouse	1.07	261	P	Pb	06 49 49.9	+0.2
HOWZ	Holdsworth Sta	1.15	52	P	Pn	06 49 51.1	+0.3
TMWZ	Te Maipa	1.28	67	P	Pn	06 49 52.8	+0.1
MRZ	Mangatainoka R	1.34	45	P	Pb	06 49 54.1	0.0
TIWZ	Tintock	1.44	55	P	Pn	06 49 55.2	+0.3
QRZ	Quartz Range	1.56	299	P	Pg	06 49 59.0	-0.6
CPWZ	Castlepoint	1.58	64	P	Pg	06 50 02.3	+2.5
OHWZ	Ohakea	1.59	28	P	Pg	06 49 59.7	-0.3
PRWZ	Pori Road	1.63	50	P	Pn	06 49 58.0	+0.5
POWZ	Post Office Ro	1.64	42	P	Pn	06 49 58.4	+0.9
GVZ	Greta Valley S	1.66	215	P	Pn	06 49 58.1	+0.2
BFZ	Birch Farm	1.72	58	*e*Pn	Pn	06 49 58.0	-0.7
BFZ	Birch Farm	1.72	58	P	Pn	06 49 58.6	-0.1
DVHZ	Dannevirke	1.91	47	P	Pn	06 50 01.2	-0.1
WAZ	Wanganui	1.92	15	P	Pg	06 50 05.2	-1.2
LTZ	Lake Taylor	1.92	232	*e*Pn	Pn	06 50 01.8	+0.3
LTZ	Lake Taylor	1.92	232	P	Pn	06 50 02.0	+0.5
AMCZ	Amberley	2.00	218	P	Pn	06 50 02.2	-0.2
LREZ	Lake Rotokare	2.15	2	P	Pg	06 50 09.7	-0.9
PRHZ	Porangahau	2.21	53	P	Pn	06 50 05.0	-0.4
PNHZ	Pukenui	2.21	41	P	Pn	06 50 05.8	+0.3
NMEZ	Namu Road	2.22	351	P	Pg	06 50 11.2	-0.9
WPHZ	Waipukurau	2.23	47	P	Pn	06 50 06.9	+1.2
PREZ	Palmer Road	2.27	357	P	Pb	06 50 10.8	+0.8
OKCZ	Okains Bay	2.31	203	P	Pn	06 50 05.8	-1.0
KHEZ	Kahui Hut	2.33	354	P	Pb	06 50 12.4	+1.3
CRLZ	Canterbury Las	2.33	212	*e*Pn	Pn	06 50 05.8	-1.3
CRLZ	Canterbury Las	2.33	212	P	Pn	06 50 06.3	-0.8
NBEZ	Newall Road No	2.37	351	P	Pg	06 50 13.1	-1.7
MTVZ	Mangateitei	2.39	22	P	Pb	06 50 13.5	+1.4
OXZ	Oxford	2.41	224	*e*Pn	Pn	06 50 07.0	-1.1
OXZ				*e*Sn	Sn	06 50 36.3	-1.0
OXZ	Oxford	2.41	224	P	Pn	06 50 07.4	-0.7
INZ	Inchbonnie	2.41	242	P	Pn	06 50 09.1	+0.9
DREZ	Durham Road	2.42	358	P	Pg	06 50 14.5	-1.4
PKE	Pukeiti	2.43	354	P	Pb	06 50 11.9	-0.8
MQZ	McQueen's Vall	2.43	210	*e*Pn	Pn	06 50 06.8	-1.7
MQZ	McQueen's Vall	2.43	210	P	Pn	06 50 06.9	-1.5
PKVZ	Pokaka	2.45	19	P	Pb	06 50 13.3	+0.2
MOVZ	Moawhango	2.46	27	P	Pb	06 50 13.6	+0.3
AKCZ	Akaroa Harbour	2.49	204	P	Pn	06 50 08.4	-0.8
BHHZ	Black Hill Sta	2.50	33	P	Pb	06 50 14.5	+0.6
VRZ	Vera Road	2.50	8	P	Pb	06 50 13.2	-0.8
KRHZ	Kereru	2.51	39	P	Pn	06 50 09.6	+0.1
DRZ	Dome Shelter	2.52	22	P	Pb	06 50 15.7	+1.2
WHVZ	Whangaehu Hut	2.52	23	P	Pb	06 50 14.9	+0.5
MHEZ	Mangahewa	2.53	360	P	Pg	06 50 17.5	-0.4
FWVZ	Far West T-bar	2.53	22	P	Pb	06 50 15.2	+0.5
TUVZ	Tukino	2.55	24	P	Pb	06 50 15.5	+0.6
NGZ	Ngauruhoe	2.62	22	P	Pb	06 50 17.1	+1.0
KAHZ	Kahuranaki	2.66	48	P	Pn	06 50 11.2	-0.4
WTVZ	West Tongariro	2.67	22	P	Pb	06 50 18.1	+1.1
TWVZ	Taurewa	2.68	19	P	Pb	06 50 17.7	+0.7
KRVZ	Karewarewa	2.71	22	P	Pb	06 50 18.5	+0.9
KWHZ	Kaweka Forest	2.71	37	P	Pg	06 50 19.9	-1.5
KATZ	Kakaramea	2.83	22	P	Pb	06 50 21.0	+1.3
RITZ	Rihia Road	2.88	25	P	Pb	06 50 21.8	+1.3
BKZ	Black Stump Fm	2.95	35	*e*Pn	Pb	06 50 20.4	-1.3
BKZ	Black Stump Fm	2.95	35	P	Pb	06 50 23.2	+1.5
RATZ	Rangitukua	2.96	22	P	Pb	06 50 23.7	+2.0
HATZ	Hinemaiaia	3.04	27	P	Pb	06 50 24.1	+1.1
WVZ	Waitaha Valley	3.04	240	P	Pn	06 50 17.6	+0.9
WATZ	Wairara	3.09	21	P	Pb	06 50 25.6	+1.5
ARHZ	Aropaoanui	3.11	42	P	Pn	06 50 18.5	+0.8
HIZ	Hauiti	3.12	8	*e*Pn	Pb	06 50 23.7	-0.9
HIZ	Hauiti	3.12	8	P	Pb	06 50 24.3	-0.2
RPZ	Rata Peaks	3.20	228	Pn	Pn	06 50 18.3	-0.8
	14nm,0.3s,baz=258,slow=1.2,SNR=23						
RPZ				Pg	Pb	06 50 27.2	+1.3
	48nm,0.3s,baz=287,slow=2.7,SNR=49						
RPZ				Sn	Sn	06 50 54.7	-2.2
	29nm,0.3s,baz=342,slow=23,SNR=17						
RPZ				Lg	Lg	06 51 11.4	
	6.3nm,0.3s,baz=21,slow=17,SNR=2.0						
RPZ	Rata Peaks	3.20	228	*e*Pn	Pn	06 50 18.6	-0.5
RPZ	Rata Peaks	3.20	228	P	Pn	06 50 18.7	-0.3
TLZ	Tolley Road	3.41	16	P	Pb	06 50 29.3	-0.2
PRGZ	Paritu Road	3.82	47	P	Pn	06 50 26.1	-1.5
FOZ	Fox Glacier	3.84	239	*e*Pn	Pn	06 50 27.9	+0.1
FOZ	Fox Glacier	3.84	239	P	Pn	06 50 29.9	+2.1
RAGZ	Rawiri	3.91	38	P	Pn	06 50 31.9	+3.0
RIGZ	Rimuhau	3.92	43	P	Pn	06 50 28.3	-0.7
URZ	Urewera	3.97	34	Pn	Pn	06 50 29.4	-0.2
	0.9nm,0.3s,baz=254,slow=14,SNR=3.8						
URZ				Pg	Pb	06 50 38.7	-0.3
	6.3nm,0.3s,baz=256,slow=7.7,SNR=8.0						
URZ				Sn	Sn	06 51 15.8	0.0
	8.4nm,0.3s,baz=344,slow=14,SNR=3.1						
URZ				Lg	Lg	06 51 31.7	
	6.0nm,0.3s,baz=88,slow=20,SNR=2.4						
URZ	Urewera	3.97	34	*e*Pn	Pn	06 50 30.6	+0.9
URZ	Urewera	3.97	34	P	Pb	06 50 35.3	-3.8
TOZ	Tahuroa Road	3.98	14	P	Pb	06 50 36.0	-3.1
MWZ	Matawai	4.09	38	P	Pn	06 50 30.6	-0.7
LBZ	Lake Benmore	4.11	226	*e*Pn	Pn	06 50 31.4	-0.1
LBZ	Lake Benmore	4.11	226	P	Pn	06 50 31.5	-0.1
TKGZ	Te Karaka	4.17	42	P	Pn	06 50 32.2	-0.1
ODZ	Otahua Downs	4.36	217	*e*Pn	Pn	06 50 33.5	-1.4
ODZ				*e*Sn	Sn	06 51 22.3	-3.0
ODZ	Otahua Downs	4.36	217	P	Pn	06 50 33.9	-1.1
TWGZ	Tauwhareparae	4.43	41	P	Pn	06 50 36.3	+0.2
RUGZ	Raukumara Rang	4.46	36	P	Pn	06 50 37.5	+1.0
KBAZ	Karaka Road Bo	4.53	6	P	Pb	06 50 45.2	-3.4
AWAZ	Awhitu Peninsu	4.55	3	P	Pn	06 50 42.3	+4.7
MKAZ	Moumakai	4.55	8	P	Pn	06 50 41.4	+3.9
PUZ	Puketiti	4.65	42	P	Pn	06 50 37.9	-1.1
ETAZ	East Tamaki Re	4.67	6	P	Pn	06 50 43.6	+4.4
WTAZ	Waiatarua	4.68	2	P	Pn	06 50 45.1	+5.8
HAZ	Te Kaha	4.68	36	P	Pn	06 50 41.4	+2.0
JCZ	Jackson Bay	4.76	237	P	Pn	06 50 42.4	+1.9
RVAZ	Riverhead Bore	4.84	2	P	Pb	06 50 48.0	-5.8
WIAZ	Waiheke Island	4.85	8	P	Pn	06 50 46.4	+4.7
MBAZ	Motutapu North	4.86	5	P	Pn	06 50 45.8	+4.0
KUZ	Kuaotunu	4.98	13	P	Pb	06 50 51.2	-5.0
WKZ	Wanaka	5.04	229	*e*Pn	Pn	06 50 43.8	-0.5
WKZ	Wanaka	5.04	229	P	Pn	06 50 44.6	+0.3
HHSZ	Highcliff Hill	5.05	211	P	Pn	06 50 43.7	-0.8
MXZ	Matakaoa Point	5.08	39	*e*Pn	Pn	06 50 45.1	+0.3
MXZ	Matakaoa Point	5.08	39	P	Pb	06 50 52.3	-5.6
EAZ	Earnscleugh	5.14	224	P	Pn	06 50 46.4	+0.7
TUZ	Tuapeka	5.51	216	P	Pn	06 50 50.2	-0.5
MSZ	Milford Sound	5.59	235	P	Pn	06 50 57.8	+6.0
WCZ	Waipu Caves	5.66	0	P	Pn	06 50 57.7	+4.8
MLZ	Mavora Lakes	5.87	228	*e*Pn	Pn	06 50 54.5	-1.2
MLZ	Mavora Lakes	5.87	228	P	Pn	06 50 58.2	+2.5
SYZ	Scrubby Hill	6.18	215	P	Pn	06 50 59.6	-0.3
WHZ	Wether Hill Ro	6.30	225	*e*Pn	Pn	06 51 00.0	-1.5
WHZ	Wether Hill Ro	6.30	225	P	Pn	06 51 03.5	+1.9
OUZ	Omahuta	6.41	355	*e*Pn	Pn	06 51 05.8	+2.8
OUZ	Omahuta	6.41	355	P	Pn	06 51 06.6	+3.5
DCZ	Deep Cove	6.48	231	*e*Pn	Pn	06 51 03.5	-0.5
APZ	The Paps	6.92	219	P	Pn	06 51 10.2	0.0
CTZ	Chatham Island	7.01	111	P	Pn	06 51 10.3	-1.0
ASAR	Alice Springs	38.05	285	P	P	06 56 47.2	+0.1
	0.5nm,0.5s,baz=123,slow=7.0,SNR=13						
WR1	Warramunga Arr	40.11	290	*e*P	P	06 57 04.1	-0.3
WRA	Warramunga Arr	40.11	290	P	P	06 57 04.1	-0.3
	0.8nm,0.3s,baz=135,slow=9.0,SNR=24						
ARA0	ARCESS Array S	147.66	340	*e*PKPdf	PKPdf	07 09 10.8	+1.7
ARCES	ARCESS Array B	147.66	340	PKPbc	PKPdf	07 09 10.9	+1.7
	2.5nm,0.9s,baz=43,slow=2.3,SNR=5.5						
TORD	Torodi Ar. Bea	150.92	195	PKPbc	PKPbc	07 09 21.2	-0.5
	0.3nm,0.4s,baz=168,slow=3.1,SNR=7.0						
TOA1	Torodi Ar. Sit	150.93	195	*e*PKPbc	PKPbc	07 09 21.2	-0.5

WEL 21 06:50:06.9, 40°S±334°×17°7E±7°8, h93^{km}±156^{km}, M3.4/6, ML3.6/6, MLv3.4/6, Error ellipse: s-maj=0.5km s-min=0.1km az=173.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHZ	Cape Kidnapper	0.64	41	P	Pn	06 50 28.5	+5.4
MCHZ	McNeill Hill	0.71	11	P	Pn	06 50 24.3	+0.5
RAHZ	Arahi	1.30	20	P	Pn	06 50 30.7	+0.4
MTHZ	Maungataniwha	1.31	11	P	Pn	06 50 31.5	+1.0
MHGZ	Mahia Peninsul	1.45	48	P	Pn	06 50 33.2	+1.0
ALRZ	Allen Road	1.58	355	P	Pn	06 50 31.4	-2.4
WPRZ	Whakapapatarin	1.65	350	P	Pn	06 50 35.9	+1.2
MUGZ	Murupara	1.67	7	P	Pn	06 50 36.0	+1.0
HSRZ	Hossack Road	1.84	353	P	Pn	06 50 37.3	+0.1

WEL 21 06:51:35.1, 42°S±1°×17°4E±°, h14^{km}±2^{km}, M3.5/13, ML3.8/10, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=147.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	198	S	Sb	06 51 43.0	-0.2
TUWZ	Tuamarina	0.30	302	P	Pb	06 51 42.0	-0.3
TUWZ				S	Sb	06 51 46.9	-0.2
BSWZ	Blackbirch Sta	0.33	248	P	Pg	06 51 42.1	+0.1
BSWZ				S	Sg	06 51 47.1	+0.5
TCW	Tory Channel	0.38	359	P	Pb	06 51 43.5	-0.2
TCW				S	Sb	06 51 49.2	-0.3
BHW	Baring Head	0.48	68	P	Pb	06 51 45.4	+0.1
BHW				S	Sb	06 51 52.8	+0.6
PLWZ	Palliser	0.73	88	P	Pb	06 51 50.0	+0.4
MSWZ	Moikau Station	0.75	77	P	Pb	06 51 50.1	+0.1
CAW	Cannon Point	0.76	51	P	Pg	06 51 50.0	0.0
NNZ	Nelson	0.78	299	P	Pg	06 51 50.2	0.0
MTW	Mount Morrison	1.01	65	P	Pn	06 51 55.2	+0.2
OGWZ	Otaki Gorge	1.02	41	P	Pb	06 51 54.8	+0.1
HOWZ	Holdsworth Sta	1.16	54	P	Pg	06 51 57.5	0.0
MRZ	Mangatainoka R	1.35	47	P	Pn	06 51 59.6	+0.1

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*IDC **21** 06:59:12.0±0.7, 41.°38S×174.°45E, h0^{km}, mb4.4/6, mb1 4.5/8, mb1mx4.3/26, mbtmp4.3/8, ML3.9/2, Error ellipse: s-maj=24.1km s-min=16.3km az=120.0*

*BJI **21** 06:59:12.9±0.0, 41.°23S×174.°84E, h5^{km}, mb5.2/4, mB5.2/1, Ms5.0/2, Ms7 4.8/2*

*ISCJB **21** 06:59:13.4±0.2, 41.°71S±0.°02×174.°47E±0.°03, h10^{km}, mb4.6/20, MS4.8/2, Error ellipse: s-maj=3.9km s-min=1.9km az=41.8*

*WEL **21** 06:59:15.0, 41.°5S±0.°6×174.°4E±0.°7, h16^{km}±2^{km}, M4.8/26, ML5.0/20, MLv4.8/26, Error ellipse: s-maj=0.0km s-min=0.0km az=131.8*

*NEIC **21** 06:59:15.0±0.0, 41.°54S×174.°40E, h16^{km}, mb4.7/16, MW4.7, ML4.9(WEL), Moment Tensor Solution. s24 Moment tensor: Scale 10^{16}Nm; M_{rr}1.22; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-1.17; $M_{r\theta}$0.23; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.54; Best double couple: $M_0$1.40000×10^{16} NP1:ϕ_s194.00000°, δ33.00000°, λ85.00000°. NP2:ϕ_s19.00000°, δ58.00000°, λ93.00000°. Principal axes: T 1.3500, Plg77.0000°, Azm299.0000°; N 0.0600, Plg3.0000°, Azm198.0000°; P -1.4100, Plg13.0000°, Azm107.0000°; After WEL.*

ISC 21 06:59:14.4±0.4, 41.°56S±0.°03×174.°45E±0.°02, h10^{km}, n213, σ1§52/217, mb4.8/20, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.25	223	P	Pg	06 59 21.2	+1.6
CMWZ				S	Sg	06 59 25.3	+2.2
SNZO	South Karori	0.32	37	*e*Pg	Pb	06 59 22.5	+0.3
SNZO				*e*Sg	Sg	06 59 22.6	-2.4
BHW	Baring Head	0.35	64	P	Pb	06 59 23.4	+0.6
BHW				S	Sb	06 59 29.4	+1.0
TCW	Tory Channel	0.38	340	P	Pb	06 59 22.7	-0.5
TUWZ	Tuamarina	0.40	289	P	Pb	06 59 22.9	-0.7
TUWZ				S	Sb	06 59 28.6	-1.1
BSWZ	Blackbirch Sta	0.45	250	P	Pb	06 59 24.1	-0.4
PLWZ	Palliser	0.61	91	P	Pb	06 59 28.3	+1.1
MSWZ	Moikau Station	0.62	76	P	Pb	06 59 28.4	+1.1
CAW	Cannon Point	0.65	46	P	Pb	06 59 28.5	+0.6
PAWZ	Paruwai Farm	0.76	76	P	Pb	06 59 30.9	+1.1
DUWZ	D'Urville Isla	0.86	332	P	Pb	06 59 31.6	+0.2
NNZ	Nelson	0.88	293	P	Pb	06 59 31.3	-0.3
MTW	Mount Morrison	0.89	63	P	Pb	06 59 33.3	+1.3
OGWZ	Otaki Gorge	0.93	36	P	Pg	06 59 33.0	+0.8
TRWZ	Traveller	0.95	80	P	Pb	06 59 34.1	+1.1
HOWZ	Holdsworth Sta	1.05	51	P	Pb	06 59 35.4	+0.8
KHZ	Kahutara	1.09	218	*e*Pn	Pg	06 59 35.9	+0.6
KHZ	Kahutara	1.09	218	P	Pg	06 59 35.9	+0.6
THZ	Tophouse	1.17	260	*e*Pn	Pb	06 59 36.6	-0.2
THZ	Tophouse	1.17	260	P	Pb	06 59 36.8	0.0
TMWZ	Te Maipa	1.18	68	P	Pb	06 59 37.3	+0.4
MRZ	Mangatainoka R	1.24	44	P	Pb	06 59 38.6	+0.7
TIWZ	Tintock	1.34	55	P	Pn	06 59 39.6	+0.4
CPWZ	Castlepoint	1.48	64	P	Pn	06 59 41.5	+0.5
OHWZ	Ohakea	1.51	26	P	Pg	06 59 43.7	+0.4
PRWZ	Pori Road	1.53	49	P	Pn	06 59 42.4	+0.6
POWZ	Post Office Ro	1.54	41	P	Pn	06 59 42.8	+0.9
BFZ	Birch Farm	1.62	58	*e*Pn	Pn	06 59 42.9	-0.2
BFZ	Birch Farm	1.62	58	P	Pn	06 59 42.8	-0.2
QRZ	Quartz Range	1.62	296	P	Pb	06 59 44.4	0.0
GVZ	Greta Valley S	1.75	216	P	Pn	06 59 44.6	-0.2
DVHZ	Dannevirke	1.82	46	P	Pn	06 59 45.8	+0.1
WAZ	Wanganui	1.85	13	P	Pg	06 59 49.6	-0.3
ANWZ	Angora Road	1.89	55	P	Pn	06 59 46.5	-0.3
LTZ	Lake Taylor	2.02	232	*e*Pn	Pn	06 59 48.7	0.0
LTZ	Lake Taylor	2.02	232	P	Pn	06 59 48.6	0.0
AMCZ	Amberley	2.09	219	P	Pn	06 59 48.9	-0.6
LREZ	Lake Rotokare	2.10	359	P	Pb	06 59 53.4	+0.8
PRHZ	Porangahau	2.10	53	P	Pn	06 59 49.2	-0.5
PNHZ	Pukenui	2.12	39	P	Pn	06 59 50.3	+0.4
WPHZ	Waipukurau	2.13	46	P	Pn	06 59 50.3	+0.3
NMEZ	Namu Road	2.19	348	P	Pb	06 59 54.5	+0.4
PREZ	Palmer Road	2.23	354	P	Pb	06 59 55.5	+0.7
KHEZ	Kahui Hut	2.29	352	P	Pb	06 59 56.2	+0.3
MTVZ	Mangateitei	2.31	20	P	Pb	06 59 55.6	-0.7
NBEZ	Newall Road No	2.34	349	P	Pb	06 59 56.2	-0.4
MOVZ	Moawhango	2.37	25	P	Pn	06 59 54.8	+1.4
PKVZ	Pokaka	2.37	17	P	Pb	06 59 56.0	-1.2
DREZ	Durham Road	2.38	355	P	Pb	06 59 57.1	-0.2
OKCZ	Okains Bay	2.39	205	P	Pn	06 59 52.4	-1.2
PXZ	Pawanui	2.39	51	P	Pn	06 59 52.8	-0.8
PKE	Pukeiti	2.39	351	P	Pb	06 59 57.0	-0.6
BHHZ	Black Hill Sta	2.41	31	P	Pn	06 59 55.1	+1.1
KRHZ	Kereru	2.41	38	P	Pn	06 59 54.1	+0.2
CRLZ	Canterbury Las	2.42	213	*e*Pn	Pn	06 59 52.5	-1.5
CRLZ	Canterbury Las	2.42	213	P	Pn	06 59 52.6	-1.5
DRZ	Dome Shelter	2.44	21	P	Pb	06 59 57.1	-1.5
WHVZ	Whangaehu Hut	2.44	21	P	Pn	06 59 56.6	+2.1
VRZ	Vera Road	2.45	6	P	Pb	06 59 57.6	-0.9
FWVZ	Far West T-bar	2.46	20	P	Pn	06 59 57.0	+2.2
TUVZ	Tukino	2.47	22	P	Pn	06 59 57.0	+2.1
MHEZ	Mangahewa	2.49	358	P	Pb	07 00 00.5	+1.3
OXZ	Oxford	2.50	225	*e*Pn	Pn	06 59 53.9	-1.3
OXZ	Oxford	2.50	225	P	Pn	06 59 53.9	-1.3
INZ	Inchbonnie	2.52	242	P	Pn	06 59 55.6	+0.2
MQZ	McQueen's Vall	2.52	211	*e*Pn	Pn	06 59 53.5	-1.8
MQZ	McQueen's Vall	2.52	211	P	Pn	06 59 53.5	-1.8
NGZ	Ngauruhoe	2.54	21	P	Pn	06 59 58.2	+2.3
KAHZ	Kahuranaki	2.56	47	P	Pn	06 59 55.4	-0.5
AKCZ	Akaroa Harbour	2.57	206	P	Pn	06 59 54.7	-1.4
WTVZ	West Tongariro	2.60	20	P	Pn	06 59 59.0	+2.5
TWVZ	Taurewa	2.60	17	P	Pn	06 59 58.7	+2.1
KWHZ	Kaweka Forest	2.62	36	P	Pn	06 59 57.7	+1.0
KRVZ	Karewarewa	2.63	21	P	Pn	06 59 59.3	+2.3
MCHZ	McNeill Hill	2.73	40	P	Pn	06 59 58.3	+0.1
KATZ	Kakaramea	2.76	21	P	Pb	07 00 02.5	-1.4
CKHZ	Cape Kidnapper	2.76	47	P	Pn	06 59 58.4	-0.4
RITZ	Rihia Road	2.80	23	P	Pn	07 00 01.0	+1.7
BKZ	Black Stump Fm	2.86	34	*e*Pn	Pn	07 00 00.1	-0.1
BKZ	Black Stump Fm	2.86	34	P	Pn	07 00 00.1	-0.1
RATZ	Rangitukua	2.88	21	P	Pb	07 00 04.1	-1.8
HATZ	Hinemaiaia	2.95	26	P	Pb	07 00 06.4	-0.7
ARHZ	Aropaoanui	3.01	41	P	Pn	07 00 02.0	-0.2
WATZ	Wairara	3.02	19	P	Pn	07 00 03.8	+1.5
HIZ	Hauiti	3.06	6	*e*Pn	Pn	07 00 06.0	+3.1
HIZ	Hauiti	3.06	6	P	Pn	07 00 06.0	+3.1
MRHZ	Matea Rd	3.12	30	P	Pn	07 00 04.4	+0.7
WHTZ	Whakaora	3.12	22	P	Pn	07 00 06.3	+2.6
WVZ	Waitaha Valley	3.14	240	P	Pn	07 00 03.8	-0.1
KUTZ	Kaahu Road	3.25	19	P	Pb	07 00 11.6	-0.6
MTHZ	Maungataniwha	3.27	35	P	Pn	07 00 05.5	-0.3
WHHZ	Waihua	3.27	42	P	Pn	07 00 05.4	-0.3
RPZ	Rata Peaks	3.30	228	Pn	Pn	07 00 05.0	-1.2
	27nm,0.3s,baz=86,slow=1.9,SNR=54						
RPZ				Pg	Pb	07 00 15.2	+2.2
	162nm,0.3s,baz=328,slow=3.5,SNR=58						
RPZ				Sn	Sn	07 00 42.3	-3.1
	32nm,0.3s,baz=329,slow=23,SNR=11						
RPZ				Lg	Lg	07 01 03.9	
	12nm,0.3s,baz=55,slow=11,SNR=7.2						
RPZ	Rata Peaks	3.30	228	P	Pn	07 00 05.2	-0.9
WPRZ	Whakapapatarin	3.31	24	P	Pn	07 00 07.4	+1.1
RAHZ	Arahi	3.33	38	P	Pn	07 00 05.9	-0.6
ALRZ	Allen Road	3.33	26	P	Pn	07 00 06.7	+0.1
TLZ	Tolley Road	3.34	15	P	Pn	07 00 08.9	+2.3
PRRZ	Plateau Road	3.41	27	P	Pn	07 00 07.6	0.0
GRRZ	Galatos Road	3.46	22	P	Pn	07 00 09.3	+1.0
HRRZ	Handcock Road	3.47	25	P	Pn	07 00 09.3	+0.8
HSRZ	Hossack Road	3.53	24	P	Pb	07 00 15.9	-1.1
KNZ	Kokohu	3.54	45	P	Pn	07 00 08.5	-0.9
SNGZ	Shannon Statio	3.56	40	P	Pn	07 00 08.8	-0.8
MHGZ	Mahia Peninsul	3.58	49	P	Pn	07 00 08.7	-1.2

RRRZ	Republican Roa	3.59	27	P	Pn	07 00 10.0	-0.1
HLRZ	Highlands Stat	3.62	25	P	Pn	07 00 13.8	+3.3
UTU	Utuhina	3.64	22	P	Pb	07 00 15.9	-2.9
TARZ	Mount Tarawera	3.68	26	P	Pn	07 00 11.6	+0.2
NGRZ	Ngongotaha	3.71	22	P	Pb	07 00 17.1	-2.9
PRGZ	Paritu Road	3.73	46	P	Pn	07 00 10.5	-1.5
OMRZ	Omania	3.76	24	P	Pb	07 00 18.5	-2.4
KARZ	Kaharoa	3.80	22	P	Pb	07 00 20.3	-1.2
RAGZ	Rawiri	3.82	38	P	Pn	07 00 12.1	-1.2
RIGZ	Rimuhau	3.82	43	P	Pn	07 00 12.0	-1.3
EDRZ	Edgecumbe	3.88	28	P	Pn	07 00 17.0	+2.9
URZ	Urewera	3.88	33	Pn	Pn	07 00 09.8	-4.3
	3.5nm,0.3s,baz=133,slow=20,SNR=14						
URZ				Pg	Pb	07 00 21.0	-1.9
	18nm,0.3s,baz=196,slow=7.4,SNR=20						
URZ				Sn	Sn	07 00 57.3	-2.5
	23nm,0.3s,baz=3.2,slow=6.9,SNR=3.3						
URZ				Lg	Lg	07 01 13.7	
	20nm,0.3s,baz=209,slow=16,SNR=3.3						
URZ	Urewera	3.88	33	*e*Pn	Pn	07 00 13.7	-0.4
TOZ	Tahuroa Road	3.91	12	P	Pn	07 00 16.5	+1.9
FOZ	Fox Glacier	3.95	239	*e*Pn	Pn	07 00 14.2	-0.8
FOZ	Fox Glacier	3.95	239	P	Pn	07 00 15.1	+0.1
MWZ	Matawai	4.00	37	P	Pn	07 00 14.3	-1.5
TKGZ	Te Karaka	4.07	41	P	Pn	07 00 15.1	-1.6
TGRZ	Tauranga	4.08	21	P	Pb	07 00 23.7	-2.6
WHRZ	Whale Island	4.18	29	P	Pn	07 00 22.0	+3.7
LBZ	Lake Benmore	4.21	227	*e*Pn	Pn	07 00 18.4	-0.3
LBZ	Lake Benmore	4.21	227	P	Pn	07 00 18.0	-0.6
CNGZ	Carnagh Statio	4.22	44	P	Pn	07 00 18.2	-0.5
TWGZ	Tauwhareparae	4.34	40	P	Pn	07 00 19.0	-1.4
RUGZ	Raukumara Rang	4.37	36	P	Pn	07 00 20.0	-1.0
ODZ	Otahua Downs	4.45	217	*e*Pn	Pn	07 00 20.2	-1.7
ODZ	Otahua Downs	4.45	217	P	Pn	07 00 20.2	-1.7
KBAZ	Karaka Road Bo	4.48	5	P	Pn	07 00 25.6	+3.3
MKAZ	Moumakai	4.49	7	P	Pn	07 00 24.4	+1.9
AWAZ	Awhitu Peninsu	4.50	2	P	Pn	07 00 25.6	+3.0
HAZ	Te Kaha	4.59	35	P	Pn	07 00 23.4	-0.5
ETAZ	East Tamaki Re	4.62	5	P	Pn	07 00 27.3	+3.1
WTAZ	Waiatarua	4.63	1	P	Pn	07 00 28.7	+4.3
EPAZ	Eden Park BICE	4.69	3	P	Pn	07 00 30.8	+5.6
HBAZ	Herne Bay Bore	4.71	3	P	Pn	07 00 31.4	+5.9
RVAZ	Riverhead Bore	4.79	1	P	Pn	07 00 31.0	+4.4
WIAZ	Waiheke Island	4.79	7	P	Pn	07 00 29.0	+2.4
MBAZ	Motutapu North	4.80	4	P	Pn	07 00 29.5	+2.7
JCZ	Jackson Bay	4.86	237	P	Pn	07 00 27.9	+0.2
KUZ	Kuaotunu	4.91	12	P	Pn	07 00 29.7	+1.5
MXZ	Matakaoa Point	4.99	38	*e*Pn	Pn	07 00 28.9	-0.4
MXZ	Matakaoa Point	4.99	38	P	Pn	07 00 27.8	-1.5
WKZ	Wanaka	5.14	229	*e*Pn	Pn	07 00 30.5	-0.9
WKZ	Wanaka	5.14	229	P	Pn	07 00 30.4	-0.9
HHSZ	Highcliff Hill	5.14	212	P	Pn	07 00 30.2	-1.2
EAZ	Earnscleugh	5.24	224	P	Pn	07 00 32.2	-0.6
TUZ	Tuapeka	5.60	217	P	Pn	07 00 36.2	-1.5
WCZ	Waipu Caves	5.62	359	P	Pn	07 00 40.9	+3.0
MSZ	Milford Sound	5.69	235	P	Pn	07 00 44.0	+5.1
MLZ	Mavora Lakes	5.97	228	*e*Pn	Pn	07 00 42.1	-0.7
MLZ	Mavora Lakes	5.97	228	P	Pn	07 00 43.3	+0.4
SYZ	Scrubby Hill	6.27	216	P	Pn	07 00 45.9	-1.0
OUZ	Omahuta	6.37	354	*e*Pn	Pn	07 00 49.6	+1.3
OUZ	Omahuta	6.37	354	P	Pn	07 00 51.1	+2.8
WHZ	Wether Hill Ro	6.39	225	*e*Pn	Pn	07 00 47.5	-1.1
WHZ	Wether Hill Ro	6.39	225	P	Pn	07 00 48.0	-0.7
DCZ	Deep Cove	6.58	231	*e*Pn	Pn	07 00 51.4	+0.2
CTZ	Chatham Island	6.94	111	P	Pn	07 00 55.3	-0.8
APZ	The Paps	7.02	219	P	Pn	07 00 56.5	-0.7
DZM	Mont Dzumac	20.57	338	*e*P	P	07 03 52.8	-0.6
	12nm,0.9s						
EIDS	Eidsvold	25.20	303	*e*P	P	07 04 40.0	-0.2
	5.5nm,0.8s						
BBOO	Buckleboo	31.59	273	*e*P	P	07 05 36.5	-0.8
	14nm,1.0s						
CTA	Charters Tower	32.08	303	P	P	07 05 40.0	-1.6
	1.8nm,0.6s,baz=122,slow=9.5,SNR=2.4						
CTAO	Charters Tower	32.08	303	*e*P	P	07 05 40.0	-1.6
	8.0nm,1.1s						
VNDA	Vanda	36.44	185	P	P	07 06 20.3	+1.5
	1.2nm,0.9s,baz=354,slow=8.1,SNR=3.9						
VNDA	Vanda	36.44	185	*e*P	P	07 06 18.1	-0.7
SBA	Scott Base	36.53	183	*e*P	P	07 06 21.6	+2.0
	6.9nm,1.1s						
AS31	Alice Springs	38.12	285	*e*P	P	07 06 32.6	-1.1
	3.8nm,1.1s						
ASAR	Alice Springs	38.12	285	P	P	07 06 32.4	-1.4
	3.2nm,0.4s,baz=124,slow=6.7,SNR=61						
WC3	Warramunga Arr	40.14	290	*e*P	P	07 06 49.5	-1.1
	17nm,0.6s						
WB2	Warramunga Arr	40.17	290	*e*P	P	07 06 49.8	-1.1
	18nm,0.8s						
WR1	Warramunga Arr	40.18	290	*e*P	P	07 06 49.6	-1.3
WRA	Warramunga Arr	40.18	290	P	P	07 06 49.6	-1.3
	18nm,0.6s,baz=130,slow=7.7,SNR=118						
CASY	Casey	42.44	213	*e*P	P	07 07 09.5	+0.6
	6.3nm,0.8s						
NWAO	Narrogin (SRO)	45.63	262	*e*P	P	07 07 33.6	-1.3
	13nm,1.0s						
MORW	Morawa	48.42	265	*e*P	P	07 07 55.7	-1.2
	11nm,1.0s						
QSPA	South Pole Qui	48.56	180	*e*P	P	07 07 59.4	+1.8
	13nm,0.9s						
PSAD2	Pilbara Seismi	49.63	276	*e*P	P	07 08 04.9	-1.3
	19nm,1.0s						
GIRL	Giralia	53.32	271	*e*P	P	07 08 32.8	-1.0
MAW	Mawson	59.68	204	P	P	07 09 18.5	0.0
	2.7nm,1.0s,baz=131,slow=9.3,SNR=3.3						
MAW	Mawson	59.68	204	*e*P	P	07 09 18.4	0.0
	1.0nm,1.1s						
SNAA	Sanae	67.05	181	P	P	07 10 08.0	+0.7
SNAA	Sanae	67.05	181	*e*P	P	07 10 08.2	+0.9
	4.5nm,0.9s						
VNA3	Neumayer Olymp	67.46	179	P	P	07 10 10.6	+0.8
VNA1	Neumayer--Stat	68.08	179	P	P	07 10 14.7	+1.0
NJ2	Nanjing	89.37	316	*e*P	P	07 12 13.1	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	Chiang Mai Arr	91.70	293	P	P	07 12 22.7	+0.5
	1.5nm,0.4s,baz=139,slow=5.6,SNR=4.6						
KMI	Kunming	93.76	300	P	P	07 12 33.8	+2.0
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CD2	Chengdu	97.16	305	*e*P	Pdif	07 12 47.5	+0.4
HHC	Hu-ho-hao-te	99.86	317	P	Pdif	07 13 00.5	+1.6
HHC				pmax	pmax		
	comp=Z,24nm,6.4s						
LZH	Lanzhou	100.70	309	*e*P	Pdif	07 13 05.1	+2.2
LZH				pP	sP	07 13 08.3	+0.9
LZH				sP	sPdif	07 13 09.8	+2.5
LZH				*e*PP	PP	07 17 16.5	+5.7
LZH				LR	LR		
	comp=N,100nm,17.1s						
LZH				LR	LR		
	comp=E,110nm,17.4s						
LZH				LR	LR		
	comp=Z,170nm,19.5s						
WMQ	Urumqi	115.17	307	*e*PKP	PKPdf	07 17 55.8	+0.3
WMQ				LR	LR		
	comp=E,460nm,29.1s						
WMQ				LR	LR		
	comp=Z,560nm,25.7s						
YKA	Yellowknife Ar	118.14	30	PKP	PKPdf	07 17 59.3	-1.2
	0.5nm,0.7s,baz=263,slow=1.4,SNR=8.7						
YKB5	Yellowknife Ar	118.14	30	*e*PKPdf	PKPdf	07 17 59.3	-1.2
MK32	Makanchi Array	119.98	308	*e*PKPdf	PKPdf	07 18 02.3	-2.3
MKAR	Makanchi Array	119.98	308	PKP	PKPdf	07 18 02.3	-2.3
	0.3nm,0.5s,baz=107,slow=3.6,SNR=3.0						
LIC	Lamto	144.81	181	*e*P	PKPdf	07 18 53.4	+1.4
	60nm,1.2s						
KIC	Kosan Boka	144.94	181	*e*P	PKPdf	07 18 53.9	+1.6
	125nm,1.7s						
TIC	Toumodi	145.22	181	*e*P	PKPbc	07 18 51.2	-1.1
DBIC	Dimbokro	145.25	181	PKPbc	PKPbc	07 18 52.7	+0.3
	8.6nm,0.7s,baz=172,slow=4.5,SNR=10						
ARA0	ARCESS Array S	147.65	340	*e*PKPdf	PKPdf	07 18 56.0	+0.9
ARCES	ARCESS Array B	147.65	340	PKPbc	PKPdf	07 18 56.0	+0.9
	1.6nm,0.6s,baz=51,slow=1.8,SNR=11						
BR101	Keskin Array S	150.38	280	*e*PKPbc	PKPbc	07 19 04.5	-1.3
BRTR	Keskin Array B	150.38	280	PKPbc	PKPbc	07 19 04.5	-1.3
	0.3nm,0.4s,baz=45,slow=2.2,SNR=2.8						
TORD	Torodi Ar. Bea	150.99	195	PKPbc	PKPbc	07 19 06.6	-1.2
	1.7nm,0.5s,baz=161,slow=2.3,SNR=20						
TOA1	Torodi Ar. Sit	151.00	195	*e*PKPbc	PKPbc	07 19 06.6	-1.2
FIA0	FINESS Array S	152.46	327	*e*PKPbc	PKPbc	07 19 08.2	-1.5
FINES	FINESS Array B	152.46	327	PKPbc	PKPbc	07 19 08.2	-1.5
	2.6nm,0.7s,baz=112,slow=2.1,SNR=7.4						

WEL 21 07:00:26.3±0.6,**42°S**±3°×**17°4E**±°,**h5**^{km}±5^{km},**M3.2**/1, **ML4.0**/7,**MLv3.2**/1,**Error ellipse: s-maj=0.0km s-min=0.0km az=155.3,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	194	P	Pg	07 00 31.4	+1.9
CMWZ				S	Sg	07 00 33.1	+1.6
BSWZ	Blackbirch Sta	0.31	248	P	Pg	07 00 32.6	+0.2
BSWZ				S	Sg	07 00 37.9	+1.4
BHW	Baring Head	0.49	68	S	Sg	07 00 43.0	+0.8
MSWZ	Moikau Station	0.76	77	P	Pg	07 00 40.9	0.0
MSWZ				S	Sg	07 00 51.4	+0.6
NNZ	Nelson	0.77	299	P	Pg	07 00 40.6	-0.4
CAW	Cannon Point	0.78	51	P	Pg	07 00 41.6	+0.3
DUWZ	D'Urville Isla	0.84	342	S	Sb	07 00 54.4	-0.5
PAWZ	Paruwai Farm	0.90	77	S	Sb	07 00 57.2	+0.4
KHZ	Kahutara	0.98	213	P	Pg	07 00 44.8	-0.3
KHZ				S	Sb	07 00 59.0	+0.1
MTW	Mount Morrison	1.03	65	P	Pg	07 00 45.3	-0.7
MTW				S	Sb	07 01 01.0	+0.6
OGWZ	Otaki Gorge	1.04	42	P	Pb	07 00 46.9	+0.2
QRZ	Quartz Range	1.52	300	S	Sg	07 01 18.3	+3.2

WEL 21 07:01:04.4±0.3,**42°S**±3°×**17°4E**±°,**h5**^{km},**M3.5**/13, **ML3.8**/12,**MLv3.5**/13,**Error ellipse: s-maj=0.0km s-min=0.0km az=157.4,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	205	P	Pg	07 01 08.3	+0.5
CMWZ				S	Sg	07 01 11.7	+1.5
TUWZ	Tuamarina	0.32	300	P	Pg	07 01 11.1	+0.5
TUWZ				S	Sg	07 01 16.1	+1.3
BSWZ	Blackbirch Sta	0.35	249	P	Pg	07 01 11.4	+0.3
BSWZ				S	Sb	07 01 17.4	-1.6
TCW	Tory Channel	0.38	356	P	Pg	07 01 11.5	-0.3
TCW				S	Sg	07 01 17.4	+0.7
BHW	Baring Head	0.46	67	P	Pg	07 01 13.1	-0.2
BHW				S	Sg	07 01 20.5	+1.3
PLWZ	Palliser	0.71	89	P	Pg	07 01 17.9	-0.1
CAW	Cannon Point	0.75	50	P	Pb	07 01 19.6	-0.2
NNZ	Nelson	0.79	298	P	Pg	07 01 19.0	-0.7
DUWZ	D'Urville Isla	0.84	339	P	Pg	07 01 19.8	-0.8
DUWZ				S	Sb	07 01 33.4	+0.3
PAWZ	Paruwai Farm	0.86	76	P	Pg	07 01 21.1	+0.1
PAWZ				S	Sb	07 01 34.8	+0.9
MTW	Mount Morrison	0.99	65	P	Pg	07 01 22.9	-0.6
MTW				S	Sb	07 01 38.3	+0.8
KHZ	Kahutara	1.00	215	P	Pg	07 01 23.8	+0.1
KHZ				S	Sg	07 01 36.8	+0.1
OGWZ	Otaki Gorge	1.01	40	P	Pg	07 01 23.6	-0.2
THZ	Tophouse	1.07	260	S	Sn	07 01 40.9	-0.4
MRZ	Mangatainoka R	1.33	46	P	Pn	07 01 28.0	-1.7
TIWZ	Tintock	1.44	56	P	Pn	07 01 29.9	-1.3
QRZ	Quartz Range	1.55	299	P	Pn	07 01 33.0	+0.3

WEL 21 07:02:26.6±0.8,**42°S**±3°×**17°4E**±°,**h6**^{km}±6^{km},**M3.2**/5, **ML3.5**/5,**MLv3.2**/5,**Error ellipse: s-maj=0.0km s-min=0.0km az=136.1,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	208	P	Pg	07 02 30.4	+0.5
CMWZ				S	Sg	07 02 33.4	+1.1
TUWZ	Tuamarina	0.33	301	P	Pg	07 02 33.6	+0.6
TUWZ				S	Sb	07 02 38.9	-1.5
BSWZ	Blackbirch Sta	0.35	251	P	Pg	07 02 33.7	+0.3
BSWZ				S	Sg	07 02 39.4	+1.4
BHW	Baring Head	0.46	66	P	Pg	07 02 35.8	+0.4
KHZ	Kahutara	1.00	215	P	Pg	07 02 45.8	0.0
KHZ				S	Sb	07 03 00.6	+0.8

IDC ***21*** *07:02:54.9±0.6,27°.31S×177°.05W,h0^{km},mb4.4/13, mb1 4.6/13,mb1mx4.5/23,mbtmp4.4/13,Error ellipse: s-maj=21.1km s-min=19.5km az=98.0*

ISCJB ***21*** *07:03:01.4±0.4,27°.34S±0°.06×177°.17W±0°.09,h55^{km}, mb4.5/23,Error ellipse: s-maj=12.0km s-min=7.5km az=18.3*

NEIC ***21*** *07:03:02.4±1.6,27°.33S×177°.13W,h55^{km}±5^{km},mb4.5/16, Error ellipse: s-maj=20.5km s-min=12.0km az=108.0*

ISC 21 07:03:02.5±0.4,**27°.34S**±0°.08×**177°.1W**±0°.1,**h55**^{km}**,n77,** σ**1^{s}02**/81,**mb4.5**/23,**1D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.04	201	*e*Pn	Pn	07 03 34.8	+0.3
RAO				*e*Sn	Sn	07 03 58.1	-0.7
CTA	Charters Tower	34.25	274	P	P	07 09 44.0	+0.6
	4.5nm,0.4s,baz=96,slow=11,SNR=16						
CTAO	Charters Tower	34.25	274	*e*P	P	07 09 44.5	+1.1
	7.2nm,0.9s						
STKA	Stephens Creek	36.06	253	P	P	07 09 58.9	0.0
	2.5nm,0.5s,baz=101,slow=12,SNR=6.5						
STKA	Stephens Creek	36.06	253	*e*P	P	07 09 59.2	+0.3
	0.7nm,0.8s						
AS31	Alice Springs	44.17	263	*e*P	P	07 11 05.9	-0.3
	1.4nm,0.6s						
ASAR	Alice Springs	44.17	263	P	P	07 11 05.7	-0.6
	3.1nm,0.6s,baz=92,slow=7.3,SNR=34						
ASAR				PcP	PP	07 12 49.6	-0.3
	0.9nm,0.5s,baz=124,slow=4.2,SNR=6.9						
WR1	Warramunga Arr	44.89	269	*e*P	P	07 11 11.2	-0.7
WRA	Warramunga Arr	44.89	269	P	P	07 11 11.2	-0.7
	5.9nm,0.5s,baz=98,slow=8.7,SNR=42						
VNDA	Vanda	51.21	186	P	P	07 12 01.1	+1.2
	2.4nm,0.8s,baz=4.6,slow=7.1,SNR=14						
VNDA	Vanda	51.21	186	*e*P	P	07 12 01.2	+1.3
	2.6nm,0.8s						
QSPA	South Pole Qui	62.76	180	*e*P	P	07 13 22.7	+0.8
	7.1nm,0.8s						
MAW	Mawson	75.45	200	P	P	07 14 40.6	+0.4
	6.6nm,0.7s,baz=164,slow=6.4,SNR=12						
MAW	Mawson	75.45	200	*e*P	P	07 14 39.8	-0.4
	1.8nm,0.9s						
MJAR	Matsushiro Arr	76.22	324	P	P	07 14 44.7	-0.4
	2.3nm,0.5s,baz=166,slow=5.8,SNR=7.7						
MAJO	Matsushiro	76.22	324	*e*P	P	07 14 44.7	-0.4
MYKOM	Kota Tinggi	81.12	277	*e*P	P	07 15 12.7	+0.2
	10nm,0.7s						
SNAA	Sanae	81.18	178	P	P	07 15 11.2	-0.7
VNA3	Neumayer Olymp	81.29	176	P	P	07 15 11.6	-0.9
VNA1	Neumayer--Stat	81.96	176	P	P	07 15 15.5	-0.5
YSS	Yuzh-Sakhalins	82.37	334	*e*P	P	07 15 17.7	-0.5
	17nm,1.1s						
KSRS	Korea Array	82.56	319	P	P	07 15 21.1	+1.6
	1.4nm,0.6s,baz=136,slow=5.8,SNR=5.7						
KS15	Wonju Array Si	82.58	319	*e*P	P	07 15 19.4	-0.2
	20nm,1.4s						
PETK	Petropavlovsk-	83.07	345	P	P	07 15 22.7	+0.9
	6.4nm,0.7s,baz=127,slow=7.3,SNR=18						
PEA1	Petropavlovsk-	83.07	345	*e*P	P	07 15 22.7	+0.9
PLCA	Paso Flores	83.99	133	P	P	07 15 27.3	+0.1
	1.7nm,0.7s,baz=231,slow=8.0,SNR=4.3						
PLCA	Paso Flores	83.99	133	*e*P	P	07 15 27.9	+0.7
	12nm,1.4s						
USRK	Ussuriysk Ar.	85.08	326	P	P	07 15 33.5	+1.3
	2.7nm,0.9s,baz=121,slow=5.4,SNR=4.4						
Y14A	Wickenburg	86.02	49	*e*P	P	07 15 37.0	-0.2
	4.1nm,1.1s						
TUC	Tucson	86.57	51	*e*P	P	07 15 40.4	+0.4
	2.2nm,0.8s						
X16A	Lo Mia Camp, P	87.34	49	*e*P	P	07 15 43.7	-0.2
	2.7nm,0.9s						
G08A	Pilot Rock	89.54	37	*e*P	P	07 15 55.3	+1.4
	5.2nm,0.8s						
LTX	Lajitas	90.05	57	*e*P	P	07 15 58.3	+1.6
TXAR	Lajitas Array	90.05	57	P	P	07 15 58.3	+1.6
	1.0nm,1.0s,baz=217,slow=7.9,SNR=9.2						
CCIG	Comitan	92.98	73	*e*P	P	07 16 09.0	-1.6
	11nm,1.0s						
ILAR	Eielson Array	94.78	12	P	P	07 16 16.8	-0.7
	0.3nm,0.7s,baz=220,slow=5.2,SNR=4.8						
ILB	Eielson Array	94.78	12	*e*P	P	07 16 17.3	-0.2
	2.7nm,1.1s						
ZALV	Zalesovo Beam	116.27	319	PKP	PKPdf	07 21 38.4	-1.0
	1.4nm,0.6s,baz=17,slow=1.5,SNR=5.7						
ZAA1	Zalesovo Array	116.27	319	*e*PKPdf	PKPdf	07 21 38.4	-1.0
MK31	Makanchi Array	116.40	311	*e*PKPdf	PKPdf	07 21 39.1	-0.8
MK32	Makanchi Array	116.40	311	*e*PKPdf	PKPdf	07 21 39.0	-0.8
MKAR	Makanchi Array	116.40	311	PKP	PKPdf	07 21 39.0	-0.8
	1.9nm,0.6s,baz=136,slow=0.5,SNR=13						
KURK	Kurchatov	119.50	315	*e*PKPdf	PKPdf	07 21 45.0	-0.6
BOSA	Boshof	120.38	203	PKP	PKPdf	07 21 48.0	-0.3
	5.2nm,1.0s,baz=170,slow=3.7,SNR=6.3						
KKAR	Karatay Array	124.02	305	*e*PKPdf	PKPdf	07 21 54.5	-0.1
SPA0	Spitsbergen Ar	128.71	356	*e*PKPdf	PKPdf	07 22 00.1	-2.6
GEYT	Alibeck	132.93	298	PKP	PKPdf	07 22 12.0	+0.2
	2µm,1.3s,baz=260,slow=0.9,SNR=4.9						
ARA0	ARCESS Array S	135.77	349	*e*PKPdf	PKPdf	07 22 15.4	-0.7
ARCES	ARCESS Array B	135.77	349	PKP	PKPdf	07 22 15.4	-0.7
	1.1nm,0.5s,baz=241,slow=2.2,SNR=11						
FIA0	FINESS Array S	142.53	342	*e*PKPpre	PKPdf	07 22 24.6	-4.1
FINES	FINESS Array B	142.53	342	PKhKP	PKPdf	07 22 24.6	-4.1
	1.7nm,0.5s,baz=57,slow=3.9,SNR=15						
KBZ	Khabaz	143.98	308	PKP	PKPdf	07 22 33.0	+1.3
	1.5nm,0.6s,baz=137,slow=5.0,SNR=3.9						
NC405	NORSAR Array S	145.71	352	*e*PKPdf	PKPab	07 22 35.3	+0.2
NB2	NORSAR Subarra	145.84	353	PKP	PKPbc	07 22 35.0	-0.1
	comp=Z,4.1nm,0.9s,baz=17,slow=2.6						
NB200	NORSAR Array S	145.84	353	*e*PKPdf	PKPdf	07 22 34.8	+0.3
NOA	NORSAR Array B	145.84	353	PKPbc	PKPdf	07 22 34.8	+0.3
	comp=Z,4.5nm,0.6s,baz=17,slow=2.7,SNR=14						
AKASG	Malin Array Be	149.28	327	PKPbc	PKPbc	07 22 44.5	-0.2
	comp=Z,11nm,0.6s,baz=42,slow=3.6,SNR=50						
AKBB	Malin Array Si	149.28	327	*e*PKPbc	PKPbc	07 22 44.5	-0.3
BR101	Keskin Array S	151.72	304	*e*PKPbc	PKPbc	07 22 50.8	-0.4
BR131	Keskin Array S	151.72	304	*e*PKPbc	PKPbc	07 22 50.8	-0.4
BRTR	Keskin Array B	151.72	304	PKPbc	PKPbc	07 22 50.8	-0.4
	comp=Z,3.2nm,0.5s,baz=136,slow=4.3,SNR=15						
BUR08	Bucovina Ar. S	153.28	325	*e*PKPbc	PKiKP	07 22 55.2	+0.7
DPC	Dobruska-Polom	154.84	340	*e*PKPAB	PKPab	07 23 14.1	+1.3
CLL	Collm	154.87	345	⇓*i*PKPab	PKPab	07 23 13.1	+0.3
	comp=Z,7.0nm,0.7s						
BRG	Berggiesshubel	155.05	343	*i* PKP	PKPab	07 23 14.0	+0.4
	comp=Z,4.1nm,0.8s						
GOPC	GO Pecny, Ondr	155.69	341	*e*PKPAB	PKPab	07 23 17.1	+0.7
KHC	Kasperske Hory	156.74	342	*e*PKPAB	PKPab	07 23 21.2	+0.3
GEC2	GERESS Array S	156.96	342	*e*PKPab	PKPab	07 23 21.7	-0.3
GERES	GERESS Array B	156.96	342	PKPab	PKPab	07 23 21.7	-0.3
	comp=Z,0.2nm,0.4s,baz=30,slow=2.7,SNR=4.1						
CONA	Conrad Observa	157.10	337	*e*PKPab	PKPab	07 23 23.9	+1.3
	comp=Z,2.2nm,0.7s						
WATA	Walderalm	158.91	343	PKPab	PKPab	07 23 31.0	+0.5
	comp=Z,1.4nm,0.5s						
WTTA	Wattenberg	158.97	343	*e*PKPab	PKPab	07 23 30.8	0.0
	comp=Z,3.7nm,0.5s						
MOTA	Moosalm	159.02	344	*e*PKPab	PKPab	07 23 31.0	0.0
	comp=Z,0.7nm,0.5s						
DAVA	Damuels	159.35	346	*e*PKPab	PKPab	07 23 32.6	+0.1
	comp=Z,3.4nm,0.8s						
FUORN	Ofenpass-Fuorn	159.90	345	*e*PKPab	PKPab	07 23 36.2	+1.2
TORD	Torodi Ar. Bea	165.83	175	PKP	PKPdf	07 23 01.5	-0.4
	comp=Z,1.0nm,0.7s,baz=151,slow=1.4,SNR=3.8						
TORD				PKPab	PKPab	07 24 01.0	-0.4
	comp=Z,1.2nm,0.5s,baz=181,slow=3.7,SNR=9.1						
TOA1	Torodi Ar. Sit	165.84	175	*e*PKPdf	PKPdf	07 23 01.5	-0.4
TOA1				*e*PKPab	PKPab	07 24 01.0	-0.4

WEL 21 07:03:09.7,**42°S**±2°×**17°4E**±°,**h9**^{km}±4^{km},**M3.6**/15, **ML3.9**/15,**MLv3.6**/15,**Error ellipse: s-maj=0.0km s-min=0.0km az=134.3,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	210	P	Pg	07 03 13.8	+0.7
CMWZ				S	Sg	07 03 17.1	+1.7
TUWZ	Tuamarina	0.34	303	P	Pb	07 03 17.2	-0.6
TUWZ				S	Sb	07 03 23.0	-0.3
BSWZ	Blackbirch Sta	0.35	253	P	Pb	07 03 17.3	-0.7
TCW	Tory Channel	0.40	355	P	Pb	07 03 18.3	-0.7
TCW				S	Sb	07 03 24.7	-0.6
BHW	Baring Head	0.46	64	P	Pb	07 03 19.7	-0.2
PLWZ	Palliser	0.70	87	P	Pb	07 03 24.1	0.0
MSWZ	Moikau Station	0.72	75	P	Pb	07 03 24.1	-0.4
MSWZ				S	Sn	07 03 36.5	-0.8
CAW	Cannon Point	0.76	48	P	Pb	07 03 24.9	-0.1
NNZ	Nelson	0.81	299	P	Pg	07 03 25.4	+0.2
NNZ				S	Sb	07 03 36.4	-0.5
PAWZ	Paruwai Farm	0.86	75	P	Pn	07 03 29.3	+1.3
DUWZ	D'Urville Isla	0.86	340	P	Pn	07 03 28.2	+0.1
DUWZ				S	Sn	07 03 40.5	-0.3
KHZ	Kahutara	0.99	216	P	Pn	07 03 29.9	+0.2
MTW	Mount Morrison	1.00	63	P	Pn	07 03 30.8	+0.9
OGWZ	Otaki Gorge	1.02	39	P	Pn	07 03 31.9	+1.7
TRWZ	Traveller	1.05	79	P	Pn	07 03 31.7	+1.1
THZ	Tophouse	1.07	262	P	Pn	07 03 32.9	+2.0
HOWZ	Holdsworth Sta	1.15	52	P	Pn	07 03 33.2	+1.2
TMWZ	Te Maipa	1.29	67	P	Pn	07 03 33.6	-0.2
MRZ	Mangatainoka R	1.34	45	P	Pb	07 03 35.1	0.0
CPWZ	Castlepoint	1.58	64	P	Pg	07 03 42.4	+2.4
MOVZ	Moawhango	2.46	27	P	Pb	07 03 54.0	-0.1

NIED ***21*** *07:03:00,35°.70N×140°.70E,h50^{km},Mw4.7 Best double couple: M$_0$1.33000×10^{16} NP1:ϕ_s137.00000°,δ25.00000°, λ12.00000°. NP2:ϕ_s36.00000°,δ85.00000°,λ115.00000°.*

BJI ***21*** *07:03:13.6±0.0,35°.51N×141°.06E,h40^{km},mb4.9/61, mB5.1/21,Ms4.8/14,Ms7 4.7/13*

NEIC ***21*** *07:03:18.9±1.4,35°.67N×140°.75E,h34^{km}±4^{km},mb4.7/120, Error ellipse: s-maj=10.1km s-min=7.1km az=102.0*

NEIC Felt at Asahi, Narita and Tokyo. Recorded [3 JMA] in Chiba.

MOS ***21*** *07:03:19.5±1.0,35°.84N×140°.61E,h48^{km},mb5.0/73,Error ellipse: s-maj=7.5km s-min=4.3km az=107.9*

ISCJB ***21*** *07:03:19.6±0.3,35°.67N±0°.02×140°.61E±0°.03,h53^{km}±2^{km}, mb4.7/179,Error ellipse: s-maj=4.1km s-min=3.8km az=140.1*

JMA ***21*** *07:03:20.1±0.2,35°.71N×140°.65E,h49^{km}±2^{km},M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s9.00000°,δ76.00000°,λ88.00000°. NP2:ϕ_s197.00000°, δ14.00000°,λ97.00000°. Principal axes: T Plg59.0000°, Azm277.0000°; N Plg2.0000°, Azm10.0000°; P Plg31.0000°, Azm101.0000°;*

JMA Felt III J1.

IDC ***21*** *07:03:21.6±1.5,35°.64N×140°.51E,h57^{km}±14^{km},mb4.3/25, mb1 4.5/28,mb1mx4.4/38,mbtmp4.6/28,MS4.0/2, Ms1 4.0/2,ms1mx3.7/35 Error ellipse: s-maj=13.7km s-min=9.1km az=86.0*

ISC 21 07:03:19.8±0.5,**35°.69N**±0°.03×**140°.74E**±0°.04,**h45**^{km}±3^{km}**,** **h45**^{km}**:pP-P,n391,**σ**1^{s}44**/427,**mb4.7**/190,**32C-12D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.10	83	⇑P	Pn	07 03 28.0	+1.0
CHOJ				S	Sn	07 03 33.7	+1.6
JSMT	Sammumatsuo	0.24	259	⇓P	Pn	07 03 28.5	+0.6
JIHU	Itakohorinouch	0.32	328	⇓P	Pn	07 03 29.5	+0.7
JCN	Nagara	0.51	238	⇓P	Pn	07 03 31.6	+0.6
JYT	Yasato	0.69	321	⇓P	Pn	07 03 32.9	-0.4
JYT				S	Sn	07 03 42.0	-1.0
BSO4	Boso 4	0.77	205	P	Pn	07 03 34.6	+0.3
BSO3	Boso 3	0.91	192	P	Pn	07 03 36.2	+0.3
JHO	Hitachi	0.93	352	⇓P	Pn	07 03 36.7	+0.2
BSO1	Boso 1	1.05	169	P	Pn	07 03 38.1	+0.4
MJAR	Matsushiro Arr	2.22	293	P	Pn	07 03 54.5	+0.3
	20nm,0.3s,baz=102,slow=7.1,SNR=811						
MJAR				LR	LR	07 04 54.9	
	comp=Z,3µm,18.7s,baz=120,slow=46						
MAJO	Matsushiro	2.22	293	*e*Pn	Pn	07 03 55.3	+1.1
MAJO	Matsushiro	2.22	293	*e*P	Pn	07 03 55.3	+1.1
MAT	Matsushiro	2.22	293	P	Pn	07 03 55.1	+0.9
MAT				S	Sn	07 04 19.5	-0.9
MJB9	Matsu-Tunnel	2.22	293	*e*Pn	Pn	07 03 55.3	+1.1
JHJ2	Mitsune	2.68	197	*e*Pn	Pn	07 03 59.4	-1.1
JHJ2				*e*Pg	Pn	07 04 00.3	-0.2
JHJ2				*e*Sn	Sn	07 04 30.4	-1.3
JHJ2				*e*Sg	Sn	07 04 33.2	+1.4
JHJ	Hachijo jima 2	2.68	197	P	Pn	07 04 00.5	0.0
	103nm,0.3s,baz=325,slow=21,SNR=66						
JHJ				S	Sn	07 04 31.9	0.0
	434nm,0.3s,baz=241,slow=23,SNR=9.2						
INU	Inuyama	3.05	265	*e*Pn	Pn	07 04 06.4	+0.8
ERM	Erimo	6.59	16	*e*Pn	Pn	07 04 53.1	-1.0
ERM				*e*		07 04 53.4	
ERM				*e*Sn	Sn	07 06 06.3	-1.6
ERM				*e*		07 06 07.0	
ERM	Erimo	6.59	16	*e*P	Pn	07 04 53.1	-1.0

ERM				*e*		07 06 07.0	
ASAJ	**Asahikawa**	8.54	9	P	Pn	07 05 19.5	-1.3
	4.3nm,0.3s,baz=218,slow=12,SNR=39						
ASAJ				S	Sn	07 06 54.3	-1.4
	3.6nm,0.3s,baz=108,slow=19,SNR=3.7						
JNU	**Nakatsue**	8.54	255	P	Pn	07 05 22.9	+1.9
	0.7nm,0.3s,baz=72,slow=10,SNR=14						
JNU	**Nakatsue**	8.54	255	*e*Pn	Pn	07 05 20.5	-0.4
GRPR	**Tuman**	9.15	23	*e*P	Pn	07 05 26.0	-3.2
GRPR				*i* S	Sn	07 07 02.6	-8.1
GRPR				pmax	pmax		
	comp=Z,91nm,0.3s						
LAGR	**Lagunnoye**	9.21	23	*e*P	Pn	07 05 27.5	-2.5
LAGR				*i* S	Sn	07 07 05.5	-6.7
LAGR				pmax	pmax		
	comp=Z,169nm,0.4s						
YUK	**Yuzh-Kuril'sk**	9.21	24	*e*P	Pn	07 05 27.3	-2.8
YUK				*i* S	Sn	07 07 05.0	-7.3
YUK				pmax	pmax		
	comp=Z,103nm,0.3s						
TEY	**Ternei**	9.85	343	⇓*e*P	Pn	07 05 39.3	+0.5
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=N,20nm,0.7s						
KSRS	**Korea Array**	10.46	283	P	Pn	07 05 51.0	+3.9
	comp=N,0.8nm,0.3s,baz=101,slow=14,SNR=52						
KSRS				LR	LR	07 09 52.3	
	comp=N,1µm,19.6s,baz=341,slow=38						
KSRS	**Korea Array**	10.46	283	P	Pn	07 05 51.0	+3.9
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,1µm,19.6s						
KS15	**Wonju Array Si**	10.48	283	*e*Pn	Pn	07 05 47.4	-0.1
USRK	**Ussuriysk Ar.**	10.82	324	P	Pn	07 05 54.1	+2.0
	comp=Z,0.5nm,0.3s,baz=137,slow=12,SNR=14						
USA0B	**Ussuriysk Arra**	10.82	324	*e*Pn	Pn	07 05 52.9	+0.8
KUR	**Kuril'sk**	10.96	27	*e*P	Pn	07 05 52.9	-1.1
KUR				*e*S	Sn	07 07 48.0	-7.2
KUR				pmax	pmax		
	comp=Z,35nm,0.6s						
KUR				pmax	pmax		
	comp=N,19nm,0.4s						
KUR				pmax	pmax		
	comp=E,14nm,0.4s						
KUR				smax	smax		
	comp=N,89nm,0.5s						
KUR				smax	smax		
	comp=E,78nm,0.5s						
YSS	**Yuzh-Sakhalins**	11.35	7	*e*Pn	Pn	07 05 57.8	-1.5
YSS	**Yuzh-Sakhalins**	11.35	7	⇑*e*P	Pn	07 05 57.8	-1.5
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
MDJ	**Mudanjiang**	12.32	320	P	Pn	07 06 17.6	+5.0
MDJ				pmax	pmax		
	comp=Z,20nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,380nm,11.3s						
CN2	**Changchun**	14.27	309	*e*P	Pn	07 06 38.6	-0.4
CN2				*e*S	Sn	07 09 21.9	+6.1
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
CN2				LR	LR		
	comp=Z,880nm,17.0s						
CN2				LR	LR		
	comp=Z,900nm,17.0s						
KLR	**Kul'dur**	15.05	337	P	Pn	07 06 47.0	-2.4
	comp=Z,0.4nm,0.3s,baz=151,slow=11,SNR=8.5						
KLR	**Kul'dur**	15.05	337	*c* *i*P	Pn	07 06 47.2	-2.2
TYV	**Tymovskoe**	15.23	5	*e*P	Pn	07 06 49.9	-1.8
TYV				*e*S	Sn	07 09 37.0	-2.1
TYV				pmax	pmax		
	comp=Z,39nm,0.8s						
TYV				smax	smax		
	comp=E,3.0nm,1.2s						
GRNR	**Gornyy**	15.39	350	*e*P	P	07 06 57.4	-0.4
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
DL2	**Dalian**	15.54	288	P	P	07 06 58.3	-1.2
DL2				pmax	pmax		
	comp=Z,50nm,1.1s						
NJ2	**Nanjing**	18.52	265	*e*P	Pn	07 07 33.4	+0.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
SKR	**Severo-Kuril’s**	18.66	32	*e*P	Pn	07 07 35.3	+0.8
SKR				pmax	pmax		
	comp=Z,36nm,1.0s						
BJT	**Baijiatuau**	19.86	290	*e*P	P	07 07 45.5	-1.5
	comp=Z,27nm,1.0s						
BJT	**Baijiatuau**	19.86	290	*e*P	P	07 07 45.5	-1.5
BJT				pmax	pmax		
	comp=Z,27nm,1.0s						
ZEA	**Zeya**	20.37	337	*e*P	P	07 07 49.8	-2.6
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
HIA	**Hailar**	20.50	318	*e*P	P	07 07 52.5	-1.4
	comp=Z,12nm,0.4s						
HIA	**Hailar**	20.50	318	*e*P	P	07 07 52.5	-1.4
HIA				pmax	pmax		
	comp=Z,12nm,0.4s						
PEA0B	**Petropavlovsk-**	21.12	29	*e*P	P	07 08 02.6	+2.0
	comp=Z,27nm,1.1s						
PETK	**Petropavlovsk-**	21.12	29	P	P	07 08 02.4	+1.8
	comp=Z,15nm,0.9s,baz=218,slow=8.9,SNR=25						
PEA1	**Petropavlovsk-**	21.12	29	*e*P	P	07 08 02.4	+1.8
TPUB	**Ta-pu**	21.37	240	*e*P	P	07 08 00.6	-2.9
	comp=Z,41nm,1.5s						
GUMO	**Guam**	22.32	169	P	P	07 08 14.9	+1.3
	comp=Z,33nm,0.9s,baz=10,slow=11,SNR=3.3						
WHN	**Wuhan**	22.66	264	⇓P	P	07 08 16.1	-1.1
WHN				pmax	pmax		
	comp=Z,58nm,0.7s						
HHC	**Hu-ho-hao-te**	23.42	292	P	P	07 08 24.5	-0.5
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
MA2	**Magadan**	24.78	12	P	P	07 08 38.5	+1.4
	comp=Z,28nm,0.7s,baz=193,slow=8.5,SNR=14						
MA2	**Magadan**	24.78	12	*e*P	P	07 08 37.4	+0.2
	comp=Z,36nm,0.9s						
MA2	**Magadan**	24.78	12	*ce*P	P	07 08 38.1	+0.9
MA2				pmax	pmax		
	comp=Z,30nm,0.7s						
XAN	**Xi'an**	26.10	276	*e*P	P	07 08 47.7	-1.8
XAN	**Xi'an**	26.10	276	P	P	07 08 47.9	-1.6
XAN				pmax	pmax		
	comp=Z,23nm,0.8s						
XAN	**Xi'an**	26.10	276	*e*P	P	07 08 47.7	-1.8
ENH	**Enshi**	26.70	267	*e*P	P	07 08 52.7	-2.2
YAK	**Yakutsk**	27.27	349	*e*P	P	07 08 59.4	-0.2
	comp=Z,38nm,0.9s						
YAK	**Yakutsk**	27.27	349	*e*P	P	07 08 58.1	-1.5
YAK				pmax	pmax		
	comp=Z,21nm,1.1s						
YAK				pmax	pmax		
	comp=N,18nm,1.3s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
ULN	**Ulaanbaatar**	27.68	307	*e*P	P	07 09 03.1	-0.6
	comp=E,10nm,0.8s						
ULN	**Ulaanbaatar**	27.68	307	*ce*P	P	07 09 03.1	-0.6
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
SONA0	**Songino Array**	28.11	306	*e*P	P	07 09 06.3	-1.2
SONM	**Songino Array**	28.11	306	P	P	07 09 06.3	-1.2
	comp=Z,5.8nm,0.7s,baz=101,slow=9.3,SNR=16						
SEY	**Seymchan**	28.21	11	P	P	07 09 09.0	+1.0
	comp=Z,10nm,0.9s,baz=227,slow=5.4,SNR=7.9						
SEY	**Seymchan**	28.21	11	*i* P	P	07 09 09.3	+1.3
BOD	**Bodaibo**	28.39	330	*e*P	P	07 09 09.5	-0.2
BOD				pmax	pmax		
	comp=Z,15nm,0.8s						
LZH	**Lanzhou**	29.78	282	*e*P	P	07 09 21.5	-1.0
LZH				pP	pP	07 09 34.3	-0.1
LZH				sP	sP	07 09 40.1	+0.3
LZH				*e*PP	PnPn	07 10 18.0	-1.3
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,4.9s						
LZH				LR	LR		
	comp=Z,370nm,12.9s						
LZH				LR	LR		
	comp=Z,380nm,13.2s						
LZH				LR	LR		
	comp=Z,500nm,16.5s						
GYA	**Guiyang**	30.48	262	⇓*i*P	P	07 09 26.8	-1.8
GYA				pP	pP	07 09 38.0	-2.6
GYA				PP	PnPn	07 10 23.8	-4.8
GYA				S	S	07 14 20.0	-6.9
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,740nm,18.3s						
GYA				LR	LR		
	comp=Z,820nm,16.8s						
GYA				LR	LR		
	comp=Z,1µm,17.4s						
ZAK	**Zakamensk**	30.70	310	*e*P	P	07 09 44.8	+14
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CD2	**Chengdu**	31.15	272	*e*P	P	07 09 32.5	-2.0
KMI	**Kunming**	34.23	263	P	P	07 10 02.0	+0.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BILL	**Bilibino**	35.47	16	*e*P	P	07 10 12.7	+1.1
	comp=Z,14nm,1.1s						
BILL	**Bilibino**	35.47	16	⇑*i*P	P	07 10 13.2	+1.6
BILL				*e*S	S	07 15 38.8	-4.5
BILL				pmax	pmax		
	comp=Z,18nm,1.7s						
BILL				MLR	MLR		
	comp=Z,7µm,19.0s						
TIXI	**Tiksi**	36.56	354	*i* P	P	07 10 20.9	+0.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NONG	**Nongkai**	37.57	252	P	P	07 10 29.3	-0.7
	comp=Z,0.5nm,0.9s						
FAKI	**Fak Fak**	39.22	193	*e*P	P	07 10 43.8	-0.1
	comp=Z,38nm,1.1s						
CHAI	**Chaiyaphum**	39.73	250	P	P	07 10 48.5	+0.3
	comp=Z,18µm,1.0s,comp=Z,382µm						
UTTA	**Uttaradit**	39.77	254	P	P	07 10 49.5	+1.0
PBKT	**Sadao Pong**	40.12	252	P	P	07 10 51.4	0.0
	comp=Z,9.6nm,0.9s						
CMMT	**Chiang Mai**	40.44	257	P	P	07 10 58.1	+4.0
	comp=Z,4.2nm,1.0s						
CHTO	**Chiang Mai**	40.44	257	P	P	07 10 58.1	+4.0
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CM31	**Chiang Mai Arr**	40.64	256	*e*P	P	07 10 54.7	-1.0
	comp=Z,7.4nm,0.4s						
CMAR	**Chiang Mai Arr**	40.64	256	P	P	07 10 53.9	-1.8
	comp=Z,1.0nm,0.4s,baz=45,slow=7.9,SNR=4.2						
CMAR	**Chiang Mai Arr**	40.64	256	*i* P	P	07 11 00.3	+4.6
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	**Urumqi**	40.97	298	*e*P	P	07 11 00.1	+1.8
WMQ				pmax	pmax		
	comp=Z,29nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,340nm,11.9s						
WMQ				LR	LR		
	comp=Z,1µm,20.3s						
WMQ				LR	LR		
	comp=Z,2µm,19.1s						
WMQ				LR	LR		
	comp=Z,3µm,20.3s						
LSA	**Lhasa**	41.80	276	*e*P	P	07 11 06.2	+0.5
	comp=Z,19nm,0.9s						
LSA	**Lhasa**	41.80	276	*e*P	P	07 11 06.2	+0.5
LSA				pmax	pmax		
	comp=Z,19nm,0.9s						
ZAA0	**Zalesovo Array**	42.43	313	*e*P	P	07 11 09.6	-0.3
	comp=Z,17nm,0.9s						
ZAA1	**Zalesovo Array**	42.43	313	*e*P	P	07 11 10.0	+0.1
ZALV	**Zalesovo Beam**	42.43	313	P	P	07 11 10.0	+0.1
	comp=Z,15nm,0.8s,baz=92,slow=6.5,SNR=47						
ZALV				PcP	PcP	07 13 01.8	-0.5
	comp=Z,1.6nm,0.4s,baz=94,slow=2.7,SNR=3.2						
MK31	**Makanchi Array**	44.38	303	*e*P	P	07 11 25.8	0.0
	comp=Z,15nm,1.0s						
MK31	**Makanchi Array**	44.38	303	*e*P	P	07 11 25.8	0.0
MK31				pmax	pmax		
	comp=Z,15nm,1.0s						
MK32	**Makanchi Array**	44.38	303	*e*P	P	07 11 25.8	-0.1
MKAR	**Makanchi Array**	44.38	303	P	P	07 11 25.8	-0.1
	comp=Z,13nm,0.7s,baz=87,slow=9.6,SNR=91						
MAKZ	**Makanchi**	44.59	303	*e*P	P	07 11 27.5	0.0
	comp=Z,16nm,1.0s						
MAKZ	**Makanchi**	44.59	303	*e*P	P	07 11 27.5	0.0
MAKZ				pmax	pmax		
	comp=Z,16nm,1.0s						
SURA	**Surathani**	45.77	245	P	P	07 11 38.0	+0.9
	comp=Z,167nm,2.5s,comp=Z,186µm						
KURK	**Kurchatov**	46.34	309	*e*P	P	07 11 41.0	-0.2
	comp=Z,66nm,1.0s						
KURK	**Kurchatov**	46.34	309	*ce*P	P	07 11 41.0	-0.2
KURK				pmax	pmax		
	comp=Z,63nm,1.0s						
JIRN	**Jiri**	46.60	276	*e*P	P	07 11 43.3	-0.8
	comp=Z,44nm,0.5s						
GUN	**Gumba**	46.76	277	*e*P	P	07 11 45.8	+0.6
	comp=Z,72nm,0.8s						
PDGK	**Podgornoye**	46.93	299	P	P	07 11 45.6	-0.5
PDGK				pmax	pmax		
	comp=Z,31nm,0.8s						
PKI	**Pulchoki**	47.27	276	*e*P	P	07 11 47.2	-2.0
	comp=Z,16nm,0.7s						
PKIN	**Phulchoki**	47.28	276	*e*P	P	07 11 47.3	-1.9
	comp=Z,12nm,0.6s						
KKN	**Kakani**	47.29	277	*e*P	P	07 11 47.9	-1.3
	comp=Z,22nm,0.6s						
DMN	**Daman**	47.50	277	*e*P	P	07 11 48.8	-2.1
	comp=Z,17nm,0.8s						
GKN	**Gorkha**	47.72	277	*e*P	P	07 11 52.3	-0.2
	comp=Z,56nm,0.6s						
PRZ	**Przheval'sk**	47.90	298	*e*P	P	07 11 54.3	+0.5
	comp=Z,25nm,0.8s						
PRZ	**Przheval'sk**	47.90	298	*e*P	P	07 11 54.3	+0.5
PRZ				pmax	pmax		
	comp=Z,25nm,0.8s						
DANN	**Dangsing**	48.29	278	*e*P	P	07 11 56.5	-0.6
	comp=Z,99nm,0.8s						
CAST	**Castle Rocks**	48.64	34	*e*P	P	07 12 00.9	+2.0
	comp=Z,5.2nm,1.0s						
KOLN	**Koldanda**	48.65	278	*e*P	P	07 11 58.2	-1.6
	comp=Z,47nm,0.9s						
KDJ	**Kajisay**	48.87	298	*e*P	P	07 12 01.2	0.0
	comp=Z,10nm,0.6s						
KDJ	**Kajisay**	48.87	298	*e*P	P	07 12 01.2	0.0
KDJ				pmax	pmax		
	comp=Z,11nm,0.6s						
MTN	**Manton Dam**	49.12	192	*e*P	P	07 12 02.3	-0.7
	comp=Z,27nm,1.1s						
BOOM	**Boomskoye usch**	49.66	299	*e*P	P	07 12 07.3	0.0
	comp=Z,6.9nm,0.8s						
BOOM	**Boomskoye usch**	49.66	299	*e*P	P	07 12 07.3	0.0
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NRN	**Naryn**	49.90	297	*e*P	P	07 12 09.5	+0.3
	comp=Z,8.1nm,0.7s						
NRN	**Naryn**	49.90	297	*e*P	P	07 12 09.5	+0.3
NRN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RND	**Reindeer**	50.09	34	*e*P	P	07 12 11.3	+1.2
	comp=Z,7.7nm,1.1s						
RND	**Reindeer**	50.09	34	*e*P	P	07 12 11.3	+1.2
RND				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SML	**Sawmill**	50.40	36	*e*P	P	07 12 13.4	+1.0
	comp=Z,7.4nm,0.9s						
SML	**Sawmill**	50.40	36	*e*P	P	07 12 13.4	+1.0
SML				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WRH	**Wood River Hil**	50.41	32	*e*P	P	07 12 13.4	+1.1
	comp=Z,5.8nm,1.2s						
KSH	**Kashi**	50.46	295	P	P	07 12 17.3	+4.0
KSH				pP	sP	07 12 30.1	-1.0
KSH				sP	pP	07 12 35.8	+10
KSH				PcP	PcP	07 13 33.5	+2.5
KSH				S	S	07 19 26.8	+2.9
KSH				SS	SS	07 22 58.8	+0.9
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH				LR	LR		
	comp=Z,770nm,14.1s						
KSH				LR	LR		
	comp=Z,3µm,17.6s						
COLA	**College**	50.51	32	*i* P	P	07 12 15.5	+2.5
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FRU1	**Bishkek**	50.51	299	*e*P	P	07 12 14.2	+0.6
	comp=Z,25nm,0.4s						
FRU1	**Bishkek**	50.51	299	*e*P	P	07 12 14.2	+0.6
FRU1				pmax	pmax		
	comp=Z,25nm,0.4s						
AAK	**Ala-Archa**	50.66	299	*e*P	P	07 12 14.7	-0.1
	comp=Z,16nm,1.3s						
AAK	**Ala-Archa**	50.66	299	*ce*P	P	07 12 15.1	+0.3
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DHY	**Denali Highway**	50.77	34	*e*P	P	07 12 16.8	+1.4
	comp=Z,3.2nm,0.6s						
OTUK	**Ortayu**	50.78	307	P	P	07 12 14.5	-0.9
OTUK				pmax	pmax		
	comp=Z,27nm,0.9s						
ILAR	**Eielson Array**	50.92	32	P	P	07 12 17.4	+1.2
	comp=Z,6.2nm,0.8s,baz=271,slow=6.3,SNR=69						
ILB	**Eielson Array**	50.92	32	*e*P	P	07 12 17.3	+1.1
	comp=Z,7.1nm,0.8s						
BRVK	**Borovoye**	51.14	313	*e*P	P	07 12 17.8	-0.2
	comp=Z,18nm,0.9s						
BRVK	**Borovoye**	51.14	313	*ce*P	P	07 12 18.1	+0.1
BRVK				pmax	pmax		
	comp=Z,22nm,1.0s						
FYU	**Fort Yukon**	51.54	29	*e*P	P	07 12 24.0	+3.2
	comp=Z,14nm,1.1s						
ARSB	**Arslanbob**	52.11	298	*e*P	P	07 12 26.2	+0.6
	comp=Z,21nm,0.9s						
DOT	**Dot Lake**	52.22	33	*e*P	P	07 12 27.6	+1.6
	comp=Z,9.9nm,0.8s						
MENT	**Mentasta**	52.45	34	*e*P	P	07 12 29.7	+2.0
	comp=Z,11nm,1.2s						
MDSI	**Maura Dua**	52.65	228	P	P	07 12 28.0	-1.6
KK31	**Karatay Array**	53.33	301	*e*P	P	07 12 34.2	-0.3
	comp=Z,12nm,1.0s						
KK31	**Karatay Array**	53.33	301	*e*P	P	07 12 34.2	-0.3
KK31				pmax	pmax		
	comp=Z,12nm,1.0s						
KKAR	**Karatay Array**	53.33	301	*e*P	P	07 12 34.6	+0.1
	comp=Z,12nm,1.0s						
KKAR	**Karatay Array**	53.33	301	*e*P	P	07 12 34.6	+0.1
KKAR				pmax	pmax		
	comp=Z,12nm,1.0s						
EGAK	**Eagle**	53.37	32	*e*P	P	07 12 35.4	+1.0
	comp=Z,4.3nm,0.7s						
DAWY	**Dawson**	54.23	32	*e*P	P	07 12 42.1	+1.3
	comp=Z,3.7nm,1.2s						
NIL	**Nilore**	54.52	289	*e*P	P	07 12 43.3	-0.1
	comp=Z,14nm,0.8s						
NIL	**Nilore**	54.52	289	*e*P	P	07 12 43.3	-0.1
NIL				pmax	pmax		
	comp=Z,14nm,0.8s						
GAR	**Garm**	54.79	296	*e*P	P	07 12 45.2	0.0
	comp=Z,22nm,1.2s						
GAR	**Garm**	54.79	296	*e*P	P	07 12 45.3	0.0
GAR				pmax	pmax		
	comp=Z,23nm,1.2s						
EPYK	**Eagle Plains**	54.96	29	*e*P	P	07 12 48.2	+2.2
	comp=Z,23nm,1.0s						
WB2	**Warramunga Arr**	55.66	187	*e*P	P	07 12 51.9	+0.4
	comp=Z,17nm,0.9s						
WR1	**Warramunga Arr**	55.66	187	*e*P	P	07 12 50.8	-0.6
WRA	**Warramunga Arr**	55.66	187	P	P	07 12 50.8	-0.6
	comp=Z,2.6nm,0.3s,baz=0.5,slow=8.3,SNR=10						
HYT	**Haines Junctio**	55.70	36	*e*P	P	07 12 52.1	+0.6
	comp=Z,5.7nm,0.8s						
SVE	**Sverdlovsk**	55.80	319	⇓*e*P	P	07 12 52.7	+0.6
SVE				pmax	pmax		
	comp=Z,30nm,0.9s						
ARU	**Arti**	57.01	319	*e*P	P	07 13 00.8	0.0
	comp=Z,42nm,0.9s						
ARU	**Arti**	57.01	319	*c* *i*P	P	07 13 00.4	-0.3
ARU				*PP	pP	07 13 13.4	0.0
ARU						07 13 52.8	
ARU				S	S	07 20 54.0	+2.3
ARU				pmax	pmax		
	comp=Z,47nm,1.0s						
HYB	**Hyderabad**	57.63	269	*i* P	P	07 13 05.5	-0.2
AB31	**Akbulak array**	58.39	311	*i* P	P	07 13 10.3	-0.2
AB31				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ABKAR	**Akbulak array**	58.39	311	*e*P	P	07 13 10.2	-0.3
	comp=Z,42nm,1.4s						
AKTO	**Aktyubinsk**	59.17	312	P	P	07 13 15.0	-1.0
AKTO				pmax	pmax		
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	59.39	187	*e*P	P	07 13 17.9	+0.2
	comp=Z,2.2nm,0.5s						
ASAR	**Alice Springs**	59.39	187	P	P	07 13 18.0	+0.4
	comp=Z,1.7nm,0.6s,baz=19,slow=10.0,SNR=14						
EIDS	**Eidsvold**	61.51	169	*e*P	P	07 13 32.4	+0.4
	comp=Z,5.5nm,1.1s						
PRGR	**Permogore**	61.59	327	*e*P	P	07 13 31.6	-0.7
PRGR				pmax	pmax		
	comp=Z,17nm,0.8s						
KBS	**Kingsbay**	61.88	350	*ce*P	P	07 13 35.5	+1.5
GEYT	**Alibeck**	64.01	299	P	P	07 13 48.4	-0.4
	comp=Z,143nm,0.3s,baz=77,slow=1.9,SNR=5.1						
RES	**Resolute Bay**	64.03	14	*e*P	P	07 13 48.8	+0.5
	comp=Z,15nm,0.9s						
RES	**Resolute Bay**	64.03	14	*e*P	P	07 13 48.8	+0.5
RES				pmax	pmax		
	comp=Z,15nm,0.9s						
ARA0	**ARCESS Array S**	65.06	339	*e*P	P	07 13 55.5	+0.3
ARCES	**ARCESS Array B**	65.06	339	P	P	07 13 55.5	+0.3
	comp=Z,6.8nm,0.8s,baz=54,slow=8.2,SNR=15						
YKA	**Yellowknife Ar**	65.24	30	P	P	07 13 57.3	+1.0
	comp=Z,2.2nm,0.8s,baz=299,slow=6.5,SNR=20						
YKB5	**Yellowknife Ar**	65.24	30	*e*P	P	07 13 57.4	+1.0
MSF	**Maaselka**	66.04	335	P	P	07 14 03.0	+1.5
MSF				pmax	pmax		
	comp=Z,16nm,0.9s						
FORT	**Forrest**	67.19	192	*e*P	P	07 14 09.1	0.0
	comp=Z,30nm,0.6s						
STKA	**Stephens Creek**	67.22	179	P	P	07 14 10.0	+0.7
	comp=Z,3.4nm,0.7s,baz=334,slow=7.2,SNR=3.7						
STKA	**Stephens Creek**	67.22	179	*e*P	P	07 14 09.9	+0.6
	comp=Z,1.3nm,0.9s						
STKA	**Stephens Creek**	67.22	179	*e*P	P	07 14 09.9	+0.6
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MOS	**Moscow**	68.00	324	*e*P	P	07 14 13.1	-1.0
MOS				pmax	pmax		
	comp=Z,30nm,0.9s						
OBN	**Obninsk**	68.84	323	⇑*e*P	P	07 14 19.3	0.0
OBN				*e*		07 16 56.4	
OBN				*e*S	S	07 23 21.2	+1.5
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,888nm,16.0s						
LPSR	**Galich'ya Gora**	68.98	320	*e*P	P	07 14 19.7	-0.5
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
AKT	**Akhty**	69.44	307	*e*P	P	07 14 23.4	-0.1
AKT				*e*		07 14 44.9	
AKT				pmax	pmax		
	comp=Z,24nm,1.2s						
VSR	**Storozhevoye**	69.58	319	*e*P	P	07 14 22.8	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FIA0	**FINESS Array S**	69.75	332	*e*P	P	07 14 24.9	+0.1
FIA0	**FINESS Array S**	69.75	332	*e*P	P	07 14 24.9	+0.1
FINES	**FINESS Array B**	69.75	332	P	P	07 14 24.9	+0.1
	comp=Z,3.8nm,0.4s,baz=51,slow=5.8,SNR=39						
NCK	**Nalchik**	71.05	310	*i* P	P	07 14 32.7	-0.5
NCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
C09A	**Chrisman Ranch**	71.07	44	*e*P	P	07 14 34.4	+1.1
	comp=Z,6.5nm,1.0s						
D08A	**Wollman Farm,**	71.10	45	*e*P	P	07 14 34.7	+1.3
	comp=Z,6.6nm,1.1s						
ZEI	**Tsey**	71.23	309	*e*P	P	07 14 32.8	-1.7
ZEI				pmax	pmax		
	comp=Z,11nm,0.8s						
VSU	**Vasula**	71.33	330	*ce*P	P	07 14 35.8	+1.3
VSU				pmax	pmax		
	comp=Z,53nm,1.7s						
KBZ	**Khabaz**	71.36	311	P	P	07 14 35.1	+0.2
	comp=Z,14nm,0.9s,baz=64,slow=4.1,SNR=24						
KIV	**Kislovodsk**	71.37	311	*e*P	P	07 14 35.5	+0.3

	comp=Z,25nm,0.8s						
KIV	Kislovodsk	71.37	311	⇑iP	P	07 14 36.2	+1.0
KIV	Kislovodsk	71.37	311	eP	P	07 14 35.5	+0.3
KIV				pmax	pmax		
	comp=Z,97nm,1.0s						
NEW	Newport	71.47	44	eP	P	07 14 36.8	+1.1
	comp=Z,7.6nm,1.2s						
NEW	Newport	71.47	44	eP	P	07 14 36.8	+1.1
NEW				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SHA1	Shidzhatmaz	71.50	311	i P	P	07 14 36.8	+0.6
E09A	Wood Farm, Sta	71.84	45	eP	P	07 14 38.9	+1.0
	comp=Z,6.5nm,1.0s						
GNI	Garni	72.07	307	ceP	P	07 14 39.8	+0.3
GNI				pmax	pmax		
	comp=Z,119nm,1.3s						
AKH	Akhalkalaki	72.21	308	eP	P	07 14 41.2	+0.8
	comp=Z,9.5nm,0.7s						
AKH	Akhalkalaki	72.21	308	⇑iP	P	07 14 40.5	+0.1
AKH	Akhalkalaki	72.21	308	eP	P	07 14 41.2	+0.8
AKH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BMO	Blue Mountains	73.24	47	eP	P	07 14 47.5	+1.1
	comp=Z,3.4nm,1.0s						
BMO	Blue Mountains	73.24	47	eP	P	07 14 47.5	+1.1
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
J08A	Circle Bar Ran	73.37	48	eP	P	07 14 47.8	+0.7
	comp=Z,5.6nm,1.2s						
ISAL	Salakas	73.41	327	eP	P	07 14 47.8	+0.8
ISAL				IAmb	IAmb	07 14 48.8	
	comp=Z,14nm,1.1s						
IIGN	Ignalina	73.51	327	eP	P	07 14 48.2	+0.6
IIGN				IAmb	IAmb	07 14 48.6	
	comp=Z,4.7nm,0.6s						
MSO	Missoula	74.06	44	eP	P	07 14 51.7	+0.6
	comp=Z,3.1nm,0.9s						
BEKR	Beckworth	74.11	52	eP	P	07 14 53.1	+1.5
	comp=Z,4.7nm,0.8s						
PAHR	Pah Rah Range	74.82	52	eP	P	07 14 56.1	+0.4
	comp=Z,3.7nm,1.0s						
MFID	Camas Ranch	74.93	47	eP	P	07 14 56.8	+0.5
	comp=Z,3.8nm,1.1s						
NC405	NORSAR Array S	75.00	337	eP	P	07 14 56.3	+0.2
	comp=Z,92nm,1.4s						
AKASG	Malin Array Be	75.02	322	P	P	07 14 56.2	-0.3
	comp=Z,8.7nm,0.6s,baz=47,slow=6.1,SNR=25						
AKBB	Malin Array Si	75.02	322	eP	P	07 14 56.3	-0.2
	comp=Z,14nm,0.8s						
AKBB	Malin Array Si	75.02	322	eP	P	07 14 56.3	-0.2
AKBB				pmax	pmax		
	comp=Z,14nm,0.8s						
CMB	Columbia Colle	75.10	54	eP	P	07 14 57.2	0.0
	comp=Z,4.9nm,1.2s						
CMB	Columbia Colle	75.10	54	eP	P	07 14 57.2	0.0
CMB				pmax	pmax		
	comp=Z,5.0nm,1.2s						
FFC	Flin Flon	75.13	32	eP	P	07 14 57.8	+0.8
	comp=Z,107nm,1.1s						
FFC	Flin Flon	75.13	32	eP	P	07 14 57.8	+0.8
FFC				pmax	pmax		
	comp=Z,107nm,1.1s						
NC204	NORSAR Array S	75.17	337	eP	P	07 14 57.6	+0.4
	comp=Z,46nm,0.9s						
NB2	NORSAR Subarra	75.21	337	P	P	07 14 57.5	0.0
	comp=Z,5.9nm,0.6s,baz=40,slow=6.2						
NB200	NORSAR Array S	75.21	337	eP	P	07 14 57.5	0.0
NOA	NORSAR Array B	75.21	337	P	P	07 14 57.5	0.0
	comp=Z,5.8nm,0.6s,baz=34,slow=5.6,SNR=4.6						
HRY	Holter Researc	75.31	43	eP	P	07 14 59.8	+1.4
YERR	Yerington	75.31	53	eP	P	07 15 00.5	+1.8
	comp=Z,9.9nm,1.4s						
EGMT	Eagleton	75.64	41	eP	P	07 15 01.5	+1.3
	comp=Z,13nm,0.9s						
KVN	Kaiserville	76.01	52	eP	P	07 15 03.8	+1.2
	comp=Z,8.3nm,1.4s						
KVN	Kaiserville	76.01	52	eP	P	07 15 03.8	+1.2
KVN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BOZ	Bozeman (W)	76.09	44	eP	P	07 15 04.7	+1.8
	comp=Z,6.2nm,0.9s						
BOZ	Bozeman (W)	76.09	44	eP	P	07 15 04.7	+1.8
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NV01	Mina Array Sit	76.23	53	eP	P	07 15 06.1	+2.2
NVAR	Mina Array Bea	76.23	53	P	P	07 15 06.1	+2.1
	comp=Z,2.7nm,0.9s,baz=287,slow=5.8,SNR=18						
ELK	Elko	76.83	49	eP	P	07 15 05.8	-1.4
	comp=Z,2.7nm,0.8s						
ELK	Elko	76.83	49	eP	P	07 15 05.9	-1.4
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YHB	Horse Butte	76.84	44	eP	P	07 15 08.2	+1.0
	comp=Z,6.5nm,0.9s						
YHH	Holmes Hill	77.01	44	eP	P	07 15 08.2	-0.1
	comp=Z,4.0nm,1.1s						
YPP	Pitchstone Pla	77.36	44	eP	P	07 15 10.6	+0.3
	comp=Z,1.6nm,0.8s						
H17A	Grant Village	77.41	44	eP	P	07 15 10.9	+0.4
	comp=Z,9.4nm,0.9s						
HVU	Hansel Valley	77.72	47	eP	P	07 15 12.7	+0.6
	comp=Z,4.1nm,0.8s						
HVU	Hansel Valley	77.72	47	eP	P	07 15 12.7	+0.6
HVU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
R11A	Troy Canyon, C	78.02	51	eP	P	07 15 15.2	+1.3
	comp=Z,2.2nm,0.9s						
SPUT	South Promonto	78.20	47	eP	P	07 15 15.1	+0.3
	comp=Z,2.9nm,1.0s						
LAO	LASA Array	78.35	40	eP	P	07 15 15.9	+0.5
	comp=Z,9.8nm,0.9s						
TPNV	Topopah Spring	78.42	53	eP	P	07 15 15.8	-0.3
	comp=Z,3.8nm,1.1s						
TPNV	Topopah Spring	78.42	53	eP	P	07 15 15.8	-0.3
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HWUT	Hardware Ranch	78.54	47	eP	P	07 15 16.6	-0.1
	comp=Z,4.3nm,0.9s						
DUG	Dugway, Tooele	78.65	49	eP	P	07 15 18.1	+0.8
	comp=Z,3.6nm,0.8s						
DUG	Dugway, Tooele	78.65	49	eP	P	07 15 18.1	+0.8
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BW06	Boulder Array	79.00	45	eP	P	07 15 19.0	-0.3
	comp=Z,1.9nm,0.8s						
PD31	Pinedale Array	79.00	45	eP	P	07 15 20.3	+1.0
PDAR	Pinedale Array	79.00	45	P	P	07 15 20.3	+1.0
	comp=Z,1.8nm,0.7s,baz=276,slow=2.4,SNR=18						
PSUT	Pine Spring	79.00	50	eP	P	07 15 19.4	0.0
	comp=Z,5.0nm,1.1s						
BUR08	Bucovina Ar. S	79.01	322	eP	P	07 15 19.3	+0.2
	comp=Z,3.9nm,0.8s						
BIZ	Bicaz	79.02	321	⇑iP	P	07 15 19.7	+0.7
GSC	Goldstone, Bar	79.02	54	eP	P	07 15 19.5	+0.2
	comp=Z,8.1nm,1.3s						
GSC	Goldstone, Bar	79.02	54	eP	P	07 15 19.5	+0.2
GSC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BURAR	Bucovina Array	79.02	322	⇓iP	P	07 15 19.6	+0.4
BR101	Keskin Array S	79.33	311	eP	P	07 15 21.2	+0.2
BR131	Keskin Array S	79.33	311	eP	P	07 15 21.4	+0.3
	comp=Z,7.1nm,0.9s						
BRTR	Keskin Array B	79.33	311	P	P	07 15 21.2	+0.2
	comp=Z,6.6nm,1.0s,baz=98,slow=3.4,SNR=21						
VRI	Vrincioaia	79.39	320	⇑iP	P	07 15 21.3	+0.2
KOLS	Kolonicke sedl	79.58	324	eP	P	07 15 23.1	+1.0
KOLS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KOLS	Kolonicke sedl	79.58	324	eP	P	07 15 23.1	+1.0
OJC	Ojcow	79.85	326	eP	P	07 15 22.2	-1.3
OJC				epP	pP	07 15 37.5	+0.8
OJC	Ojcow	79.85	326	eP	P	07 15 22.9	-0.5
	comp=Z,12nm,0.9s						
OJC	Ojcow	79.85	326	eP	P	07 15 22.9	-0.5
OJC				pmax	pmax		
	comp=Z,12nm,0.9s						
TRPA	Tarpa	80.01	323	⇑iP	P	07 15 25.2	+0.9
NIE	Niedzica	80.18	325	eP	P	07 15 26.5	+1.2
NIE				epP	pP	07 15 40.2	+1.6
NIE	Niedzica	80.18	325	eP	P	07 15 26.5	+1.2
NIE				e*PP	pP	07 15 40.2	+1.6
LCMT	Little Creek M	80.31	51	eP	P	07 15 26.2	-0.2
	comp=Z,4.9nm,1.4s						
MTPU	Mount Pierson	80.35	50	eP	P	07 15 28.1	+1.2
	comp=Z,2.7nm,1.0s						
P17A	Butcher Ranch,	80.35	48	eP	P	07 15 27.9	+1.3
	comp=Z,4.6nm,0.9s						
KNB	Kanab	80.57	51	eP	P	07 15 27.5	-0.4
	comp=Z,7.2nm,1.3s						
KNB	Kanab	80.57	51	eP	P	07 15 27.5	-0.4
KNB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
RAYN	Ar Rayn	80.66	292	eP	P	07 15 27.8	-0.5
	comp=Z,14nm,0.8s						
RAYN	Ar Rayn	80.66	292	eP	P	07 15 27.8	-0.5
RAYN				pmax	pmax		
	comp=Z,14nm,0.8s						
SRU	San Rafael Swe	80.71	48	eP	P	07 15 28.6	+0.1
	comp=Z,3.6nm,0.8s						
SRU	San Rafael Swe	80.71	48	eP	P	07 15 28.6	+0.1
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	Liptovska Anna	80.75	325	eP	P	07 15 30.4	+2.0
LANS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LANS	Liptovska Anna	80.75	325	eP	P	07 15 30.4	+2.0
OKC	Ostrava-Krasne	80.87	326	eP	P	07 15 29.4	+0.5
OKC	Ostrava-Krasne	80.87	326	eP	P	07 15 29.4	+0.5
ULM	Lac du Bonnet	80.92	33	P	P	07 15 28.8	-0.4
	comp=Z,3.3nm,0.6s,baz=306,slow=6.3,SNR=3.6						
KSP	Ksiaz	80.95	328	eP	P	07 15 30.2	+0.8
KSP	Ksiaz	80.95	328	eP	P	07 15 30.2	+0.8
MORC	Moravsky Berou	81.18	327	eP	P	07 15 31.2	+0.5
	comp=Z,8.7nm,1.1s						
MORC	Moravsky Berou	81.18	327	⇑iP	P	07 15 31.3	+0.6
MORC	Moravsky Berou	81.18	327	eP	P	07 15 31.2	+0.5
MORC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MORC	Moravsky Berou	81.18	327	eP	P	07 15 31.3	+0.6
OSTC	Ostas	81.19	328	eP	P	07 15 31.8	+1.1
DPC	Dobruska-Polom	81.30	328	eP	P	07 15 32.0	+0.7
DPC	Dobruska-Polom	81.30	328	eP	P	07 15 32.0	+0.7
UPC	Upice	81.32	328	eP	P	07 15 31.7	+0.4
UPC	Upice	81.32	328	eP	P	07 15 31.7	+0.4
O20A	White River Ci	81.43	46	eP	P	07 15 33.1	+0.8
	comp=Z,5.4nm,1.1s						
PSZ	Piszkesteto	81.43	324	eP	P	07 15 32.5	+0.4
	comp=Z,10nm,0.9s						
PSZ	Piszkesteto	81.43	324	⇑iP	P	07 15 33.1	+1.0
PSZ	Piszkesteto	81.43	324	eP	P	07 15 32.5	+0.4
PSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PSZ	Piszkesteto	81.43	324	eP	P	07 15 33.1	+1.0
VYHS	Vyhne	81.52	325	eP	P	07 15 33.2	+0.8
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	Vyhne	81.52	325	eP	P	07 15 33.2	+0.8
GZR	Gura Zlata	81.77	321	⇑iP	P	07 15 34.2	+0.3
JAVC	Velka Javorina	81.79	326	eP	P	07 15 35.8	+1.9
PVCC	Panska Ves	81.92	329	eP	P	07 15 35.4	+0.9
PVCC	Panska Ves	81.92	329	eP	P	07 15 35.4	+0.9
BRG	Berggiesshubel	81.93	329	eP	P	07 15 34.6	+0.1
	comp=Z,4.5nm,0.8s						
BRG	Berggiesshubel	81.93	329	eP	P	07 15 34.6	+0.1
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VRAC	Vranov	81.95	327	⇑iP	P	07 15 34.9	+0.2
VRAC	Vranov	81.95	327	eP	P	07 15 35.1	+0.4
CLL	Collm	81.98	330	eP	P	07 15 34.7	-0.1
	comp=Z,12nm,0.8s						
CLL	Collm	81.98	330	⇑iP	P	07 15 34.9	+0.1
CLL				e*PP	pP	07 15 48.0	-0.1
CLL				pmax	pmax		
	comp=Z,15nm,0.9s						
CLL	Collm	81.98	330	⇑iP	P	07 15 34.9	+0.1
	comp=Z,15nm,0.9s						
CLL				e(pP)	pP	07 15 48.0	-0.1
CLL				e(sP)	sP	07 15 53.0	-0.2
CLL				ePP	PP	07 18 43.0	+0.9
PV22	Blue Mesa, Par	82.12	48	eP	P	07 15 35.6	-0.5
	comp=Z,5.5nm,1.3s						
KRUC	Moravsky	82.22	327	eP	P	07 15 36.4	+0.3
GOPC	GO Pecny, Ondr	82.29	328	eP	P	07 15 37.0	+0.5
GOPC				e		07 15 50.6	
GOPC	GO Pecny, Ondr	82.29	328	eP	P	07 15 37.0	+0.5
GOPC				epP	pP	07 15 50.6	+0.8
MODS	Modra-Piesok	82.32	326	eP	P	07 15 37.6	+0.9
MODS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MODS	Modra-Piesok	82.32	326	eP	P	07 15 37.6	+0.9
PRU	Pruhonice	82.34	328	eP	P	07 15 37.1	+0.4
PRU	Pruhonice	82.34	328	eP	P	07 15 37.1	+0.4
PV13	Radium Mtn., P	82.34	48	eP	P	07 15 37.5	+0.3
	comp=Z,8.1nm,1.1s						
PV01	Paradox Valley	82.51	48	eP	P	07 15 38.4	+0.3
	comp=Z,2.8nm,0.9s						
CSKK	Cskako	82.60	325	eP	P	07 15 41.1	+2.9
MDVR	Moldovita	82.73	321	⇑iP	P	07 15 39.0	+0.1
NKC	Novy Kostel	83.03	329	eP	P	07 15 40.9	+0.6
NKC	Novy Kostel	83.03	329	eP	P	07 15 40.9	+0.6
X16A	Lo Mia Camp, P	83.06	52	eP	P	07 15 41.1	+0.1
	comp=Z,2.7nm,0.9s						
MVCO	Mesa Verde	83.14	49	eP	P	07 15 41.2	-0.3
	comp=Z,4.1nm,0.9s						
CONA	Conrad Observa	83.29	326	ePcP	P	07 15 42.7	+0.9
	comp=Z,7.9nm,1.2s						
KHC	Kasperske Hory	83.40	328	eP	P	07 15 42.5	+0.2
	comp=Z,3.7nm,1.2s						
KHC	Kasperske Hory	83.40	328	eP	P	07 15 42.5	+0.2
KHC				e		07 15 57.0	
KHC	Kasperske Hory	83.40	328	eP	P	07 15 42.5	+0.2
KHC				epP	pP	07 15 57.0	+1.4
VTS	Vitosha	83.43	319	eP	P	07 15 43.8	+1.1
	comp=Z,13nm,1.1s						
VTS	Vitosha	83.43	319	⇑iP	P	07 15 43.8	+1.1
GEC2	GERESS Array S	83.56	328	eP	P	07 15 42.9	-0.3
	comp=Z,3.7nm,0.9s						
GEC2	GERESS Array S	83.56	328	eP	P	07 15 42.9	-0.3
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GERES	GERESS Array B	83.56	328	P	P	07 15 43.2	0.0
	comp=Z,3.4nm,1.0s,baz=49,slow=6.1,SNR=14						
EZN	Ezine	83.60	315	⇑iP	P	07 15 43.8	+0.4
ARSA	Arzberg	83.95	326	ePcP	P	07 15 45.5	+0.4
	comp=Z,3.8nm,1.1s						
MOA	Molln	84.06	327	ePcP	P	07 15 47.2	+1.5
	comp=Z,4.7nm,1.0s						
SOKA	Soboth	84.60	326	ePcP	P	07 15 48.9	+0.4
	comp=Z,15nm,1.1s						
SDCO	Great Sand Dun	84.60	47	eP	P	07 15 49.0	+0.1
	comp=Z,5.0nm,1.1s						
VAY	Valandovo	84.69	318	i P	P	07 15 49.5	+0.6
SKO	Skopje	84.84	319	i P	P	07 15 51.1	+1.4
KBA	Koelnbreinsper	85.06	327	ePcP	P	07 15 50.9	0.0
	comp=Z,3.8nm,1.1s						
MEM	Membach	85.26	333	⇑P	P	07 15 51.4	-0.2
MEM				⇑pP	pP	07 16 04.7	-0.2
MYKA	Terra Mystica	85.27	327	P	P	07 15 51.2	-0.6
	comp=Z,4.0nm,0.6s						
ECSD	EROS Data Cent	85.31	38	eP	P	07 15 52.4	+0.4
	comp=Z,5.7nm,0.8s						
TTG	Podgorica	85.66	321	eP	P	07 15 53.8	0.0
	comp=Z,17nm,1.0s						
TTG	Podgorica	85.66	321	eP	P	07 15 53.8	0.0
TTG				pmax	pmax		
	comp=Z,17nm,1.0s						
BCLA	Clavier	85.67	333	⇑P	P	07 15 53.4	-0.3
BCLA				⇑pP	pP	07 16 06.6	-0.4
RETA	Reutte	85.86	329	ePcP	P	07 15 55.8	+1.0
	comp=Z,10.0nm,1.4s						
WLF	Walferdange	85.97	332	⇓P	P	07 15 55.5	+0.4
WLF				⇓pP	pP	07 16 09.8	+1.2
	comp=Z,14nm,2.0s						
BFO	Black Forest	86.20	330	eP	P	07 15 56.6	+0.2
	comp=Z,12nm,1.0s						
BFO	Black Forest	86.20	330	eP	P	07 15 56.6	+0.2
BFO				pmax	pmax		
	comp=Z,12nm,1.0s						
FETA	Feichten	86.24	328	ePcP	P	07 15 56.4	-0.4
	comp=Z,4.2nm,0.9s						
DAVA	Damuels	86.39	329	ePcP	P	07 15 58.3	+0.8
	comp=Z,12nm,1.3s						
FUORN	Ofenpass-Fuorn	86.75	328	eP	P	07 15 59.7	+0.3
	comp=Z,10nm,1.0s						
ECH	Echery	86.76	331	eP	P	07 15 57.7	-1.4
	comp=Z,8.2nm,1.0s						
ECH	Echery	86.76	331	eP	P	07 15 57.7	-1.4
ECH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SCHQ	Schefferville	86.78	16	P	P	07 16 00.0	+1.0
	comp=Z,7.1nm,0.8s,baz=284,slow=8.3,SNR=4.5						
SCHQ	Schefferville	86.78	16	eP	P	07 16 00.0	+1.0
	comp=Z,12nm,0.9s						
AQU	L'Aquila	88.63	324	eP	P	07 16 09.4	+1.2
	comp=Z,15nm,1.0s						
AQU	L'Aquila	88.63	324	eP	P	07 16 09.4	+1.2
AQU				pmax	pmax		
	comp=Z,15nm,1.0s						
LPL	La Plagne	89.12	330	eP	P	07 16 10.4	-0.3
LPL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SSF	Saint Saulge	89.12	332	eP	P	07 16 10.4	0.0
SSF				pmax	pmax		
	comp=Z,10.0nm,1.4s						
WMOK	Wichita Mounta	90.61	45	eP	P	07 16 18.6	+1.0
	comp=Z,4.4nm,1.1s						
WMOK	Wichita Mounta	90.61	45	eP	P	07 16 18.6	+1.0
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TX31	Lajitas Ar. Si	91.37	52	eP	P	07 16 21.6	+0.3
	comp=Z,3.2nm,1.1s						
LTX	Lajitas	91.37	52	eP	P	07 16 23.1	+1.8
LTX	Lajitas	91.37	52	eP	P	07 16 23.1	+1.8
TXAR	Lajitas Array	91.37	52	P	P	07 16 23.1	+1.7
	comp=Z,1.1nm,0.8s,baz=288,slow=3.1,SNR=9.9						
TUL1	Leonard	91.45	43	eP	P	07 16 22.1	+0.7
	comp=Z,9.9nm,1.0s						
CAF	Calviac	91.46	332	eP	P	07 16 22.0	+0.6
CAF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ABTX	Abilene, Hawle	91.60	47	eP	P	07 16 22.8	+0.6
	comp=Z,11nm,1.2s						
MIAR	Mount Ida	93.68	42	eP	P	07 16 32.0	+0.3
	comp=Z,6.1nm,1.0s						
MIAR	Mount Ida	93.68	42	eP	P	07 16 32.0	+0.3
MIAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TOA1	Torodi Ar. Sit	117.87	314	ePKPdf	PKPdf	07 22 01.0	-1.0
TORD	Torodi Ar. Bea	117.88	314	PKP	PKPdf	07 22 01.0	-1.0
	comp=Z,0.6nm,0.6s,baz=58,slow=0.7,SNR=3.5						
CBYP	Canovanas	120.71	30	ePdif	Pdif	07 18 34.0	+1.2
LPAZ	La Paz	147.84	61	PKPbc	PKiKP	07 23 02.2	-0.9
	comp=Z,5.6nm,0.8s,baz=347,slow=3.8,SNR=23						
LPAZ	La Paz	147.84	61	ePKPbc	PKPbc	07 23 01.9	+0.8
LPAZ	La Paz	147.84	61	ePKP2	PKPbc	07 23 01.9	+0.8

WEL 21 07:06:51.6, 42°S±2°×17°4E±°, h15^{km}±5^{km}, M3.9/15, ML4.3/1, ML4.0/15, MLv4.1/1, MLv3.7/15, Error ellipse: s-maj=0.0km s-min=0.0km az=132.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.16	201	P	Pb	07 06 56.2	-0.2
CMWZ				S	Sb	07 06 59.7	+0.1
TUWZ	Tuamarina	0.31	302	P	Pb	07 06 58.7	-0.1
TUWZ				S	Sb	07 07 04.1	+0.4
BSWZ	Blackbirch Sta	0.33	249	P	Pg	07 06 58.7	+0.2
BSWZ				S	Sb	07 07 04.5	+0.1
TCW	Tory Channel	0.39	358	P	Pb	07 07 00.0	-0.1
TCW				S	Sb	07 07 06.3	+0.5
BHW	Baring Head	0.47	67	P	Pb	07 07 01.8	+0.2
BHW				S	Sb	07 07 09.0	+0.6
PLWZ	Palliser	0.72	88	P	Pb	07 07 06.4	+0.5
MSWZ	Moikau Station	0.74	76	P	Pb	07 07 06.6	+0.4
MSWZ				S	Sn	07 07 18.8	+0.3
CAW	Cannon Point	0.76	50	P	Pb	07 07 06.9	+0.4
CAW				S	Sb	07 07 17.7	+1.0
NNZ	Nelson	0.78	299	P	Pg	07 07 06.8	0.0
NNZ				S	Sb	07 07 17.6	+0.3
DUWZ	D'Urville Isla	0.84	340	P	Pg	07 07 08.4	+0.5
DUWZ				S	Sb	07 07 19.7	+0.7
PAWZ	Paruwai Farm	0.88	76	P	Pn	07 07 09.0	-0.4
PAWZ				S	Sn	07 07 23.0	+1.1
KHZ	Kahutara	0.99	214	P	Pg	07 07 10.6	-0.1
MTW	Mount Morrison	1.01	65	P	Pg	07 07 11.0	-0.1
OGWZ	Otaki Gorge	1.02	41	P	Pg	07 07 11.2	-0.1
THZ	Tophouse	1.05	260	P	Pb	07 07 11.4	-0.1
TRWZ	Traveller	1.07	80	P	Pb	07 07 11.4	-0.4
HOWZ	Holdsworth Sta	1.16	53	P	Pb	07 07 13.4	+0.2
TMWZ	Te Maipa	1.30	68	P	Pn	07 07 14.4	-0.8
MRZ	Mangatainoka R	1.35	47	P	Pn	07 07 16.2	+0.3
TIWZ	Tintock	1.46	56	P	Pn	07 07 17.4	+0.1
QRZ	Quartz Range	1.54	299	P	Pb	07 07 19.7	0.0
OHWZ	Ohakea	1.59	30	P	Pg	07 07 21.6	-0.6
CPWZ	Castlepoint	1.59	65	P	Pb	07 07 20.3	-0.4
PRWZ	Pori Road	1.64	51	P	Pn	07 07 19.6	-0.3
POWZ	Post Office Ro	1.64	43	P	Pn	07 07 20.2	+0.4
GVZ	Greta Valley S	1.66	214	P	Pn	07 07 18.9	-1.3
BFZ	Birch Farm	1.74	59	P	Pn	07 07 20.6	-0.6
LTZ	Lake Taylor	1.91	231	P	Pn	07 07 23.3	-0.3
WAZ	Wanganui	1.91	16	P	Pg	07 07 27.3	-1.0
DVHZ	Dannevirke	1.92	48	P	Pn	07 07 23.4	-0.4
AMCZ	Amberley	1.99	217	P	Pn	07 07 23.3	-1.4
NMEZ	Namu Road	2.20	352	P	Pg	07 07 33.9	+0.1
PNHZ	Pukenui	2.22	41	P	Pg	07 07 33.9	-0.3
PREZ	Palmer Road	2.25	357	P	Pg	07 07 35.5	+0.8
KHEZ	Kahui Hut	2.31	355	P	Pg	07 07 36.4	+0.5
OKCZ	Okains Bay	2.31	203	P	Pn	07 07 27.4	-1.7
CRLZ	Canterbury Las	2.33	211	P	Pn	07 07 26.9	-2.4
MTVZ	Mangateitei	2.38	23	P	Pg	07 07 36.5	-0.8
INZ	Inchbonnie	2.40	241	P	Pn	07 07 31.6	+1.3
OXZ	Oxford	2.40	223	P	Pb	07 07 34.8	+0.3
DREZ	Durham Road	2.41	358	P	Pg	07 07 38.0	+0.3
PKE	Pukeiti	2.41	354	P	Pb	07 07 36.1	+1.4
MQZ	McQueen's Vall	2.43	209	P	Pn	07 07 28.6	-2.1
PKVZ	Pokaka	2.44	20	P	Pg	07 07 36.9	-1.5
MOVZ	Moawhango	2.45	27	P	Pb	07 07 36.1	+0.7
AKCZ	Akaroa Harbour	2.49	204	P	Pn	07 07 29.9	-1.7
VRZ	Vera Road	2.49	8	P	Pg	07 07 38.2	-1.2
BHHZ	Black Hill Sta	2.50	33	P	Pb	07 07 37.7	+1.5
PXZ	Pawanui	2.50	52	P	Pn	07 07 31.4	-0.3
KRHZ	Kereru	2.51	40	P	Pg	07 07 39.3	-0.4
WHVZ	Whangaehu Hut	2.51	24	P	Pb	07 07 38.0	+1.4
FWVZ	Far West T-bar	2.53	23	P	Pg	07 07 39.3	-0.7
TUVZ	Tukino	2.55	25	P	Pg	07 07 39.2	-1.2
NGZ	Ngauruhoe	2.62	23	P	Pb	07 07 39.8	+1.6
WTVZ	West Tongariro	2.67	22	P	Pb	07 07 40.6	+1.5
TWVZ	Taurewa	2.67	20	P	Pg	07 07 41.2	-1.5
KRVZ	Karewarewa	2.70	23	P	Pb	07 07 41.4	+1.7
KATZ	Kakaramea	2.83	23	P	Pb	07 07 43.6	+1.8
WVZ	Waitaha Valley	3.02	240	P	Pb	07 07 44.1	-0.9
HIZ	Hauiti	3.11	8	P	Pb	07 07 47.5	+1.0
RPZ	Rata Peaks	3.19	227	P	Pb	07 07 44.8	-3.1
HRRZ	Handcock Road	3.55	26	P	Pn	07 07 49.9	+3.7
FOZ	Fox Glacier	3.83	238	P	Pb	07 07 54.7	-4.1
PRGZ	Paritu Road	3.83	47	P	Pb	07 07 56.5	-2.4
RAGZ	Rawiri	3.92	39	P	Pb	07 07 58.5	-1.8
RIGZ	Rimuhau	3.92	44	P	Pb	07 07 56.4	-4.1
ODZ	Otahua Downs	4.35	216	P	Pn	07 07 56.2	-1.0
AWAZ	Awhitu Peninsu	4.53	4	P	Pn	07 08 04.8	+5.2
MKAZ	Moumakai	4.54	9	P	Pb	07 08 06.7	-4.1
JCZ	Jackson Bay	4.75	237	P	Pn	07 08 06.6	+4.0
CTZ	Chatham Island	7.03	111	P	Pn	07 08 34.5	+0.5

DDA ***21*** *07:07:01.9, 37°.72N×26°.56E, h6^{km}±3^{km}, ML2.5*
ATH ***21*** *07:07:02.5, 37°.75N×26°.74E, h28^{km}±3^{km}, ML2.4/2, Error ellipse: s-maj=5.4km s-min=1.3km az=76.0*
ISCJB ***21*** *07:07:03.6±0.6, 37°.81N±0°.03×26°.63E±0°.04, h3^{km}±6^{km}, Error ellipse: s-maj=4.9km s-min=4.4km az=144.2*
ISK ***21*** *07:07:03.9, 37°.85N×26°.70E, h7^{km}, ML2.6/10*
THE ***21*** *07:07:05.0, 37°.82N×26°.69E, h2^{km}±3^{km}, ML2.2/2, Error ellipse: s-maj=4.9km s-min=0.5km az=231.0*

ISC 21 07:07:04.0±0.9, 37°.79N±0°.02×26°.66E±0°.02, h14^{km}±7^{km}, n25, σ0^{s}.97/36, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.17	119	P	Pg	07 07 08.2	+0.2
SMG				S	Sg	07 07 11.0	+0.3
	1µm,0.1s						
SMG	Samos	0.17	119	P	Pg	07 07 08.2	+0.2
SMG				S	Sg	07 07 11.0	+0.3
SMG				AML	AML	07 07 11.3	
	comp=E,3076µm,0.2s						
SMG				AML	AML	07 07 11.5	
	comp=N,2164µm,0.1s						
GMLD	Gumuldur	0.35	36	PG	Pg	07 07 10.2	-1.0
GMLD				SG	Sg	07 07 14.7	-1.3
GCAM	G?zelcaml?	0.47	101	PG	Pg	07 07 13.2	-0.1
GCAM				SG	Sb	07 07 20.1	-0.6

GCAM	G?zelcaml?	0.47	101	*i* P	Pg	07 07 13.2	-0.1
GCAM				*i* S	Sb	07 07 20.9	+0.2
GCAM				IAML_P			
	comp=Z,7µm,0.1s						
URLA	Izmir	0.57	355	PG	Pg	07 07 14.4	-0.9
URLA	Izmir	0.57	355	*i* P	Pg	07 07 14.3	-0.9
URLA				IAML_P			
	comp=Z,2µm,0.3s						
BLCB	Balcova	0.67	27	PG	Pg	07 07 16.1	-0.9
CHOS	Chios island	0.76	322	PG	Pg	07 07 18.7	-0.1
CHOS	Chios island	0.76	322	P	Pb	07 07 19.6	+0.6
CHOS				S	Sb	07 07 30.6	+1.3
	comp=Z,265nm,0.2s						
CHOS	Chios island	0.76	322	P	Pg	07 07 18.8	0.0
CHOS				S	Sb	07 07 30.7	+1.4
CHOS				AML	AML	07 07 31.9	
	comp=E,768µm,0.2s						
CHOS				AML	AML	07 07 32.6	
	comp=N,420µm,0.3s						
BODT	Bodrum	0.90	144	PG	Pb	07 07 22.0	+0.7
BODT	Bodrum	0.90	144	P	Pb	07 07 22.4	+1.1
BODT				S	Sn	07 07 36.1	+1.2
AYDN	Tasoluk	0.98	97	*i* P	Pg	07 07 22.1	-0.8
AYDN				IAML_P			
	comp=Z,1µm,0.2s						
AYDB	Zeytinkoy-Aydi	0.99	81	PG	Pb	07 07 22.8	-0.2
AMGA	Amorgos Island	1.13	213	P	Pg	07 07 23.0	-2.9
AMGA				S	Sg	07 07 39.6	-1.0
APE	Apeiranthos	1.15	232	PN	Pg	07 07 26.3	+0.2
APE	Apeiranthos	1.15	232	P	Pg	07 07 25.7	-0.5
APE				S	Sg	07 07 41.6	+0.5
DAT	Datca	1.29	145	*i* P	Pn	07 07 26.0	-1.6
DAT				IAML_P			
	comp=Z,133nm,0.8s						
DKL	Dikili	1.29	9	PN	Pn	07 07 27.9	+0.3
SIGR	SIGRI	1.55	336	P	Pn	07 07 32.0	+0.9
SIGR	SIGRI	1.55	336	P	Pn	07 07 31.0	-0.1
MANT	Manisa	1.66	64	*i* P	Pg	07 07 36.0	+0.2
MANT				*i* S	Sg	07 07 56.4	-0.9
MANT				IAML_P			
	comp=Z,444nm,0.2s						
KULA	Kula-Manisa	1.74	65	PN	Pn	07 07 34.6	+0.8
EZN	Ezine	2.05	353	P	Pb	07 07 39.7	-1.2

IDC 21 07:08:40.8±10.0,**36˚.11N**×**141˚.77E**,**h0km**,**mb3.8**/3,**mb1 3.7**/4,**mb1mx3.4**/28,**mbtmp3.7**/4,**ML3.0**/1,**Error ellipse: s-maj=256.2km s-min=52.6km az=169.0,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	2.91	280	Pn	Pn	07 09 28.8	+0.5
	2.1nm,0.3s,baz=123,slow=8.5,SNR=28						
MJAR				Sn	Sn	07 10 02.9	-1.2
	0.8nm,0.3s,baz=42,slow=23,SNR=4.3						
MAT	Matsushiro	2.91	280	P	Pn	07 09 29.4	+1.0
MAT				S	Sn	07 09 59.0	-5.1
SONM	Songino Array	28.55	305	P	P	07 14 38.9	+0.6
	1.0nm,0.7s,baz=105,slow=9.9,SNR=3.7						
ZALV	Zalesovo Beam	42.75	313	P	P	07 16 39.7	+0.1
	1.1nm,0.5s,baz=103,slow=6.4,SNR=3.5						
MKAR	Makanchi Array	44.86	303	P	P	07 16 55.8	-0.9
	0.6nm,0.8s,baz=87,slow=8.8,SNR=2.8						

WEL 21 07:09:44.2,42˚S±3˚×**17˚4E**±˚,**h10km**±4km,**M3.7**/19,**ML4.0**/19,**MLv3.7**/19,**Error ellipse: s-maj=0.0km s-min=0.0km az=139.9,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.10	201	P	Pg	07 09 47.4	+0.6
CMWZ				S	Sg	07 09 49.9	+1.1
BSWZ	Blackbirch Sta	0.29	259	P	Pg	07 09 50.7	+0.6
BSWZ				S	Sb	07 09 55.7	-0.8
TUWZ	Tuamarina	0.33	314	P	Pb	07 09 51.6	-0.6
TUWZ				S	Sb	07 09 56.8	-0.7
TCW	Tory Channel	0.45	2	P	Pb	07 09 53.6	-0.5
BHW	Baring Head	0.52	62	P	Pb	07 09 55.1	-0.4
PLWZ	Palliser	0.75	84	P	Pb	07 09 60.0	+0.6
MSWZ	Moikau Station	0.78	72	P	Pb	07 10 00.1	+0.3
MSWZ				S	Sn	07 10 14.3	+1.3
NNZ	Nelson	0.80	303	P	Pg	07 09 59.6	+0.1
CAW	Cannon Point	0.82	48	P	Pb	07 10 01.0	+0.5
DUWZ	D’Urville Isla	0.89	343	P	Pn	07 10 03.1	+0.3
PAWZ	Paruwai Farm	0.92	73	P	Pn	07 10 02.9	-0.3
KHZ	Kahutara	0.93	215	*e*Sn	Pn	07 10 03.3	0.0
KHZ	Kahutara	0.93	215	P	Pn	07 10 03.3	+0.1
KHZ				S	Sn	07 10 16.9	+0.3
THZ	Tophouse	1.02	264	*e*S	Pb	07 10 04.1	+0.1
THZ	Tophouse	1.02	264	P	Pg	07 10 03.7	-0.2
MTW	Mount Morrison	1.06	62	P	Pn	07 10 04.9	-0.1
OGWZ	Otaki Gorge	1.08	40	P	Pg	07 10 05.1	0.0
TRWZ	Traveller	1.10	77	P	Pb	07 10 05.4	0.0
HOWZ	Holdsworth Sta	1.21	52	P	Pb	07 10 07.3	+0.1
TMWZ	Te Maipa	1.34	66	P	Pn	07 10 08.2	-0.8
MRZ	Mangatainoka R	1.41	45	P	Pb	07 10 10.2	-0.3
TIWZ	Tintock	1.51	55	P	Pn	07 10 11.5	+0.2
QRZ	Quartz Range	1.55	302	P	Pb	07 10 12.8	-0.1
OHWZ	Ohakea	1.66	29	P	Pb	07 10 15.1	+0.4
PRWZ	Pori Road	1.70	50	P	Pn	07 10 13.8	-0.1
BFZ	Birch Farm	1.79	58	P	Pn	07 10 14.6	-0.5
LTZ	Lake Taylor	1.86	232	*e*Sn	Pb	07 10 18.9	+0.7
LTZ	Lake Taylor	1.86	232	P	Pn	07 10 15.9	-0.2
WAZ	Wanganui	1.98	16	P	Pb	07 10 20.7	+0.3
OKCZ	Okains Bay	2.25	203	P	Pn	07 10 20.7	-0.7
CRLZ	Canterbury Las	2.27	212	*e*Sn	Pg	07 10 31.2	+3.6
PNHZ	Pukenui	2.28	41	P	Pn	07 10 21.4	-0.6
OXZ	Oxford	2.34	224	P	Pb	07 10 27.4	+1.0
INZ	Inchbonnie	2.35	242	P	Pb	07 10 26.3	-0.3
MQZ	McQueen’s Vall	2.37	210	*e*Sn	Pg	07 10 31.5	+2.0
MQZ	McQueen’s Vall	2.37	210	P	Pn	07 10 22.3	-0.7
AKCZ	Akaroa Harbour	2.43	204	P	Pn	07 10 25.4	+1.5
DREZ	Durham Road	2.47	359	P	Pg	07 10 31.4	-0.1
PKE	Pukeiti	2.47	355	P	Pg	07 10 30.9	-0.7
MOVZ	Moawhango	2.52	27	P	Pb	07 10 30.8	+1.2
BHHZ	Black Hill Sta	2.56	33	P	Pg	07 10 32.2	-1.2
WHVZ	Whangaehu Hut	2.58	24	P	Pg	07 10 33.3	-0.4
FWVZ	Far West T-bar	2.59	23	P	Pg	07 10 32.6	-1.4
TUVZ	Tukino	2.61	24	P	Pg	07 10 33.1	-1.2
WTVZ	West Tongariro	2.73	22	P	Pg	07 10 35.3	-1.4
KRVZ	Karewarewa	2.77	23	P	Pg	07 10 35.8	-1.5
WVZ	Waitaha Valley	2.97	240	P	Pb	07 10 35.8	-1.3
BKZ	Black Stump Fm	3.02	35	P	Pg	07 10 40.3	-1.8
RPZ	Rata Peaks	3.13	228	P	Pn	07 10 36.5	+2.9
FOZ	Fox Glacier	3.78	239	P	Pb	07 10 48.2	-2.8
AWAZ	Awhitu Peninsu	4.60	4	P	Pn	07 10 57.9	+4.2
MKAZ	Moumakai	4.60	9	P	Pb	07 11 00.2	-4.7
JCZ	Jackson Bay	4.69	237	P	Pn	07 10 59.1	+4.0
WIZ	White Island	4.71	30	P	Pb	07 11 02.9	-3.9
MBAZ	Motutapu North	4.91	6	P	Pb	07 11 05.1	-5.1
CTZ	Chatham Island	7.03	110	P	Pn	07 11 26.6	-0.5

WEL 21 07:10:48.9,42˚S±2˚×**17˚4E**±˚,**h15km**±4km,**M3.4**/18,**ML3.7**/15,**MLv3.4**/18,**Error ellipse: s-maj=0.0km s-min=0.0km az=125.8,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.16	201	P	Pg	07 10 52.6	-0.4
CMWZ				S	Sb	07 10 57.2	+0.3
TUWZ	Tuamarina	0.31	302	P	Pb	07 10 56.2	0.0
TUWZ				S	Sb	07 11 01.1	+0.1
BSWZ	Blackbirch Sta	0.33	249	P	Pg	07 10 55.8	0.0
BSWZ				S	Sg	07 11 01.0	+0.5
TCW	Tory Channel	0.39	358	P	Pb	07 10 57.5	+0.1
TCW				S	Sb	07 11 03.6	+0.4
BHW	Baring Head	0.47	67	P	Pb	07 10 59.2	+0.3
PLWZ	Palliser	0.72	88	P	Pn	07 11 04.0	-0.6
PLWZ				S	Sn	07 11 15.1	-0.4
MSWZ	Moikau Station	0.74	76	P	Pn	07 11 04.4	-0.5
CAW	Cannon Point	0.76	50	P	Pb	07 11 04.0	+0.2
CAW				S	Sn	07 11 15.6	-0.8
NNZ	Nelson	0.78	299	P	Pg	07 11 03.8	-0.3
DUWZ	D’Urville Isla	0.84	340	S	Sn	07 11 17.4	-1.0
PAWZ	Paruwai Farm	0.88	76	P	Pg	07 11 06.4	+0.4
PAWZ				S	Sb	07 11 18.2	+0.7
KHZ	Kahutara	0.99	214	P	Pg	07 11 08.1	+0.1
KHZ				S	Sn	07 11 22.4	+0.3
MTW	Mount Morrison	1.01	65	P	Pb	07 11 08.2	+0.1
MTW				S	Sn	07 11 23.6	+1.0
OGWZ	Otaki Gorge	1.02	41	P	Pb	07 11 08.4	0.0
OGWZ				S	Sg	07 11 22.4	+0.4
THZ	Tophouse	1.05	260	P	Pb	07 11 08.9	0.0
TRWZ	Traveller	1.07	80	P	Pg	07 11 09.5	0.0
TMWZ	Te Maipa	1.30	68	P	Pn	07 11 12.2	-0.4
MRZ	Mangatainoka R	1.35	47	P	Pn	07 11 13.5	+0.3
MRZ				S	Sg	07 11 32.5	+0.1
QRZ	Quartz Range	1.54	299	P	Pb	07 11 17.5	+0.4
OHWZ	Ohakea	1.59	30	P	Pg	07 11 18.7	-0.7

WEL 21 07:11:18.3,41˚S±3˚×**17˚4E**±˚,**h15km**±6km,**M3.3**/17,**ML3.6**/9,**MLv3.3**/17,**Error ellipse: s-maj=0.0km s-min=0.0km az=126.9,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.28	207	S	Sb	07 11 29.5	-0.2
TUWZ	Tuamarina	0.34	281	S	Sb	07 11 31.2	0.0
BHW	Baring Head	0.38	77	S	Sb	07 11 32.7	+0.5
BSWZ	Blackbirch Sta	0.44	240	S	Sb	07 11 34.2	0.0
CAW	Cannon Point	0.64	53	P	Pb	07 11 31.2	0.0
CAW				S	Sb	07 11 41.0	+1.0
MSWZ	Moikau Station	0.65	83	P	Pb	07 11 31.8	+0.4
MSWZ				S	Sn	07 11 42.2	-0.9
PLWZ	Palliser	0.66	97	P	Pb	07 11 31.5	+0.1
DUWZ	D’Urville Isla	0.78	333	P	Pb	07 11 33.6	+0.1
DUWZ				S	Sn	07 11 46.1	-0.1
PAWZ	Paruwai Farm	0.79	82	P	Pn	07 11 34.5	-0.4
PAWZ				S	Sb	07 11 45.2	+0.9
NNZ	Nelson	0.81	290	S	Sg	07 11 44.6	0.0
OGWZ	Otaki Gorge	0.90	41	P	Pn	07 11 36.9	+0.5
MTW	Mount Morrison	0.91	68	P	Pn	07 11 36.6	+0.1
HOWZ	Holdsworth Sta	1.04	55	P	Pg	07 11 38.7	+0.3
KHZ	Kahutara	1.11	214	P	Pb	07 11 39.0	-0.3
THZ	Tophouse	1.14	256	P	Pn	07 11 39.8	+0.1
THZ				S	Sg	07 11 57.0	+1.8
MRZ	Mangatainoka R	1.23	48	P	Pn	07 11 40.7	-0.2
MRZ				S	Sg	07 11 58.8	+0.8
QRZ	Quartz Range	1.55	295	S	Sb	07 12 07.1	+0.9

WEL 21 07:12:30.9,42˚S±2˚×**17˚4E**±˚,**h14km**±5km,**M3.0**/11,**ML3.5**/9,**MLv3.0**/11,**Error ellipse: s-maj=0.0km s-min=0.0km az=132.5,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.14	200	P	Pb	07 12 35.1	-0.4
CMWZ				S	Sb	07 12 38.5	0.0
TUWZ	Tuamarina	0.31	306	P	Pg	07 12 37.6	+0.3
TUWZ				S	Sb	07 12 43.6	+0.3
BSWZ	Blackbirch Sta	0.32	252	P	Pb	07 12 38.0	-0.5
BSWZ				S	Sb	07 12 43.3	-0.2
TCW	Tory Channel	0.41	360	P	Pb	07 12 39.7	-0.2
TCW				S	Sb	07 12 46.2	+0.3
BHW	Baring Head	0.49	65	P	Pb	07 12 41.6	+0.3
PLWZ	Palliser	0.73	87	P	Pn	07 12 46.6	-0.3
MSWZ	Moikau Station	0.76	75	P	Pb	07 12 46.0	+0.1
CAW	Cannon Point	0.78	50	P	Pg	07 12 45.9	-0.2
NNZ	Nelson	0.79	300	P	Pb	07 12 46.5	+0.2
NNZ				S	Sb	07 12 57.8	+0.9
DUWZ	D’Urville Isla	0.86	342	P	Pg	07 12 47.3	-0.2
KHZ	Kahutara	0.97	214	P	Pn	07 12 50.0	-0.2
KHZ				S	Sn	07 13 04.8	+1.0
THZ	Tophouse	1.04	261	S	Sn	07 13 06.3	+0.8

WEL 21 07:12:53.7,42˚S±2˚×**17˚4E**±˚,**h15km**±4km,**M3.3**/13,**ML3.6**/13,**MLv3.3**/13,**Error ellipse: s-maj=0.0km s-min=0.0km az=122.9,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.17	207	P	Pb	07 12 58.5	-0.2
CMWZ				S	Sb	07 13 02.0	+0.1
TUWZ	Tuamarina	0.33	300	P	Pb	07 13 01.0	-0.3
TUWZ				S	Sb	07 13 06.1	-0.3
BSWZ	Blackbirch Sta	0.35	250	P	Pg	07 13 01.1	+0.2
BSWZ				S	Sg	07 13 06.4	+0.6
TCW	Tory Channel	0.39	355	P	Pb	07 13 02.4	+0.1
TCW				S	Sb	07 13 08.2	+0.1
BHW	Baring Head	0.46	66	P	Pg	07 13 03.0	+0.2
BHW				S	Sb	07 13 10.1	0.0
PLWZ	Palliser	0.70	88	P	Pg	07 13 07.5	+0.1
MSWZ	Moikau Station	0.72	76	P	Pn	07 13 09.1	-0.3
CAW	Cannon Point	0.74	49	P	Pb	07 13 08.4	0.0
NNZ	Nelson	0.80	298	P	Pg	07 13 09.1	-0.2
NNZ				S	Sg	07 13 19.7	-0.1
DUWZ	D’Urville Isla	0.85	339	P	Pn	07 13 11.3	+0.2
DUWZ				S	Sb	07 13 22.3	+0.9
PAWZ	Paruwai Farm	0.86	76	S	Sn	07 13 23.8	+0.1
MTW	Mount Morrison	0.99	64	P	Pn	07 13 13.4	+0.3
MTW				S	Sn	07 13 28.5	+1.6
KHZ	Kahutara	1.00	215	P	Pb	07 13 12.5	-0.3
KHZ				S	Sn	07 13 27.3	+0.2
OGWZ	Otaki Gorge	1.01	40	P	Pg	07 13 13.2	0.0
OGWZ				S	Sn	07 13 29.2	+1.9
THZ	Tophouse	1.07	261	S	Sn	07 13 29.5	+0.5
HOWZ	Holdsworth Sta	1.14	53	S	Sn	07 13 32.8	+2.2
TMWZ	Te Maipa	1.28	68	P	Pg	07 13 18.4	0.0
MRZ	Mangatainoka R	1.33	46	S	Sg	07 13 37.5	+0.7
OHWZ	Ohakea	1.58	29	P	Pn	07 13 20.9	-0.3

WEL 21 07:27:47.6±0.4,**42˚S**±5˚×**17˚4E**±˚,**h0km**±5km,**M3.5**/15,**ML3.4**/5,**ML3.7**/15,**MLv3.5**/15,**Error ellipse: s-maj=0.0km s-min=0.0km az=150.4,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.13	208	P	Pg	07 27 52.1	+2.1
BSWZ	Blackbirch Sta	0.32	256	P	Pg	07 27 52.4	-1.4
TUWZ	Tuamarina	0.34	308	P	Pg	07 27 52.5	-1.4
TCW	Tory Channel	0.43	358	P	Pn	07 28 00.2	-0.8
BHW	Baring Head	0.49	62	P	Pb	07 27 58.2	-0.8
PLWZ	Palliser	0.72	85	P	Pg	07 28 00.7	-0.7
MSWZ	Moikau Station	0.75	73	P	Pg	07 28 01.2	-0.7
CAW	Cannon Point	0.79	48	P	Pg	07 28 02.5	-0.1
PAWZ	Paruwai Farm	0.89	74	P	Pn	07 28 06.8	-0.6
KHZ	Kahutara	0.96	216	P	Pg	07 28 04.7	-1.3
MTW	Mount Morrison	1.03	63	P	Pg	07 28 05.6	-1.6
THZ	Tophouse	1.05	263	P	Pg	07 28 07.6	0.0
OGWZ	Otaki Gorge	1.05	39	P	Pg	07 28 07.4	-0.3
TRWZ	Traveller	1.07	78	P	Pg	07 28 07.9	-0.3
TMWZ	Te Maipa	1.31	67	P	Pg	07 28 09.5	-3.2
MRZ	Mangatainoka R	1.38	45	P	Pg	07 28 12.1	-1.8
GVZ	Greta Valley S	1.62	215	P	Pb	07 28 18.0	-0.4
LTZ	Lake Taylor	1.89	232	P	Pn	07 28 21.7	+0.6
MOVZ	Moawhango	2.49	27	P	Pn	07 28 30.5	+1.1

*IDC **21** 07:28:47.1±1.1,41˚.56S×174˚.36E,h0km,mb4.2/2,mb1 4.3/4,mb1mx3.9/30,mbtmp4.1/4,ML3.6/2,Error ellipse: s-maj=39.6km s-min=14.6km az=134.0*

*ISCJB **21** 07:28:49.5±0.9,41˚.82S±0˚.02×174˚.39E±0˚.03,h15km±8km,mb4.1/2,Error ellipse: s-maj=4.9km s-min=2.4km az=135.4*

*WEL **21** 07:28:49.3,42˚S±2˚×17˚4E±˚,h10km±4km,M4.3/14,ML4.7/9,ML4.7/14,MLv4.3/14,Error ellipse: s-maj=0.0km s-min=0.0km az=129.2*

*NEIC **21** 07:28:49.1±0.0,41˚.65S×174˚.30E,h17km,ML4.5(WEL),After WEL.*

ISC 21 07:28:49.3±1.0,**41˚.66S**±0˚.03×**174˚.33E**±0˚.02,**h14km**±6km,**n161**,σ1.s**53**/169,**Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.13	224	P	Pb	07 28 53.3	-0.3
CMWZ				S	Sg	07 28 56.3	+1.1
BSWZ	Blackbirch Sta	0.35	260	P	Pg	07 28 56.5	+0.1
BSWZ				S	Sb	07 29 02.3	-0.3
TUWZ	Tuamarina	0.37	307	P	Pb	07 28 56.7	-0.9
TUWZ				S	Sb	07 29 02.2	-1.0
SNZO	South Karori	0.44	39	*e*Pg	Pb	07 28 58.7	-0.1
TCW	Tory Channel	0.45	354	P	Pb	07 28 58.2	-0.7
TCW				S	Sb	07 29 04.5	-0.9
BHW	Baring Head	0.47	59	P	Pb	07 28 59.7	+0.3
BHW				S	Sb	07 29 06.7	+0.5
PLWZ	Palliser	0.70	83	P	Pn	07 29 04.5	-0.2
MSWZ	Moikau Station	0.73	71	P	Pb	07 29 04.6	+0.9
CAW	Cannon Point	0.78	45	P	Pb	07 29 04.8	+0.2
NNZ	Nelson	0.84	301	P	Pb	07 29 05.0	-0.6
PAWZ	Paruwai Farm	0.86	72	P	Pn	07 29 07.2	+0.2
DUWZ	D’Urville Isla	0.91	340	P	Pb	07 29 06.7	-0.1
KHZ	Kahutara	0.96	218	*e*Pg	Pn	07 29 08.9	+0.5
KHZ	Kahutara	0.96	218	P	Pn	07 29 08.9	+0.5
MTW	Mount Morrison	1.01	61	P	Pn	07 29 09.7	+0.7
OGWZ	Otaki Gorge	1.05	37	P	Pb	07 29 09.3	+0.1
TRWZ	Traveller	1.05	76	P	Pb	07 29 09.8	+0.6
THZ	Tophouse	1.07	264	*e*Pn	Pg	07 29 09.5	-0.5
THZ	Tophouse	1.07	264	P	Pb	07 29 09.6	0.0
HOWZ	Holdsworth Sta	1.17	50	P	Pg	07 29 11.9	+0.1
TMWZ	Te Maipa	1.29	65	P	Pn	07 29 13.4	+0.4
MRZ	Mangatainoka R	1.37	44	P	Pb	07 29 14.7	+0.1
TIWZ	Tintock	1.46	54	P	Pn	07 29 15.9	+0.6
CPWZ	Castlepoint	1.59	63	P	Pb	07 29 18.1	-0.3
QRZ	Quartz Range	1.59	301	P	Pb	07 29 18.3	-0.1
GVZ	Greta Valley S	1.63	216	P	Pn	07 29 17.8	+0.2
OHWZ	Ohakea	1.63	28	P	Pg	07 29 19.9	-0.7
PRWZ	Pori Road	1.66	49	P	Pn	07 29 18.5	+0.6
POWZ	Post Office Ro	1.67	41	P	Pb	07 29 19.2	-0.5
BFZ	Birch Farm	1.74	57	*e*Pn	Pn	07 29 18.8	-0.3
BFZ	Birch Farm	1.74	57	P	Pn	07 29 19.0	-0.1
LTZ	Lake Taylor	1.90	233	*e*Pn	Pn	07 29 21.7	+0.3
LTZ	Lake Taylor	1.90	233	P	Pn	07 29 21.9	+0.6
DVHZ	Dannevirke	1.94	46	P	Pn	07 29 21.8	0.0
WAZ	Wanganui	1.96	15	P	Pg	07 29 25.6	-1.4
AMCZ	Amberley	1.96	219	P	Pn	07 29 22.0	-0.1
ANWZ	Angora Road	2.01	54	P	Pn	07 29 23.0	+0.2
LREZ	Lake Rotokare	2.19	1	P	Pg	07 29 30.1	-1.3
PRHZ	Porangahau	2.23	52	P	Pn	07 29 25.4	-0.4
PNHZ	Pukenui	2.24	40	P	Pn	07 29 26.4	+0.3
WPHZ	Waipukurau	2.25	46	P	Pn	07 29 26.4	+0.3
NMEZ	Namu Road	2.27	351	P	Pg	07 29 31.3	-1.5
OKCZ	Okains Bay	2.27	204	P	Pn	07 29 25.6	-0.8
CRLZ	Canterbury Las	2.30	213	*e*Pn	Pn	07 29 25.4	-1.3
CRLZ	Canterbury Las	2.30	213	P	Pn	07 29 26.1	-0.6
PREZ	Palmer Road	2.31	357	P	Pb	07 29 31.0	+0.2
KHEZ	Kahui Hut	2.37	354	P	Pb	07 29 31.7	-0.1
OXZ	Oxford	2.38	225	*e*Pn	Pn	07 29 27.0	-0.9
OXZ	Oxford	2.38	225	P	Pn	07 29 27.2	-0.7
MQZ	McQueen’s Vall	2.40	211	*e*Pn	Pn	07 29 26.6	-1.4
MQZ	McQueen’s Vall	2.40	211	P	Pn	07 29 26.6	-1.4
INZ	Inchbonnie	2.40	243	P	Pn	07 29 28.8	+0.8
NBEZ	Newall Road No	2.41	351	P	Pb	07 29 32.5	+0.1
MTVZ	Mangateitei	2.43	21	P	Pb	07 29 32.9	+0.2
AKCZ	Akaroa Harbour	2.45	205	P	Pn	07 29 28.0	-0.9
DREZ	Durham Road	2.47	358	P	Pb	07 29 33.0	-0.4
PKE	Pukeiti	2.47	354	P	Pb	07 29 32.0	-1.5
PKVZ	Pokaka	2.49	18	P	Pb	07 29 33.6	-0.1
MOVZ	Moawhango	2.49	26	P	Pb	07 29 32.4	-1.5
PXZ	Pawanui	2.51	51	P	Pn	07 29 28.9	-0.7
BHHZ	Black Hill Sta	2.53	32	P	Pn	07 29 32.0	+2.0
KRHZ	Kereru	2.54	38	P	Pn	07 29 30.1	+0.1
VRZ	Vera Road	2.55	7	P	Pb	07 29 33.6	-1.1
DRZ	Dome Shelter	2.56	22	P	Pb	07 29 36.0	+0.9
WHVZ	Whangaehu Hut	2.56	22	P	Pb	07 29 34.5	-0.5
FWVZ	Far West T-bar	2.57	22	P	Pb	07 29 35.2	-0.1
MHEZ	Mangahewa	2.58	360	P	Pg	07 29 37.9	-0.7
TUVZ	Tukino	2.59	23	P	Pb	07 29 33.7	-1.8
NGZ	Ngauruhoe	2.66	22	P	Pb	07 29 36.3	-0.5
KAHZ	Kahuranaki	2.68	47	P	Pn	07 29 31.6	-0.5
WTVZ	West Tongariro	2.71	21	P	Pb	07 29 37.5	-0.1
TWVZ	Taurewa	2.72	18	P	Pb	07 29 36.5	-1.1
KWHZ	Kaweka Forest	2.74	36	P	Pg	07 29 39.7	-2.1
KRVZ	Karewarewa	2.75	22	P	Pb	07 29 37.9	-0.3
MCHZ	McNeill Hill	2.85	40	P	Pn	07 29 34.7	+0.4
KATZ	Kakaramea	2.87	22	P	Pb	07 29 41.3	+0.9
RITZ	Rihia Road	2.92	24	P	Pb	07 29 41.8	+0.7
BKZ	Black Stump Fm	2.98	34	*e*Pn	Pn	07 29 38.4	+2.2
BKZ	Black Stump Fm	2.98	34	P	Pn	07 29 38.5	+2.3
RATZ	Rangitukua	3.00	22	P	Pb	07 29 43.9	+1.5
WVZ	Waitaha Valley	3.02	241	P	Pn	07 29 37.4	+0.8
HATZ	Hinemaiaia	3.07	27	P	Pb	07 29 44.5	+0.8
WATZ	Wairara	3.13	20	P	Pb	07 29 45.0	+0.3
ARHZ	Aropaoanui	3.14	41	P	Pn	07 29 39.5	+1.3
HIZ	Hauiti	3.16	7	*e*Pn	Pb	07 29 41.8	-3.4
HIZ	Hauiti	3.16	7	P	Pb	07 29 42.6	-2.7
RPZ	Rata Peaks	3.17	228	Pn	Pn	07 29 38.4	-0.4
	17nm,0.3s,baz=44,slow=3.7,SNR=32						
RPZ				Pg	Pb	07 29 46.0	+0.6
	86nm,0.3s,baz=300,slow=2.5,SNR=98						
RPZ				Sn	Sn	07 30 15.4	-1.0
	25nm,0.3s,baz=173,slow=16,SNR=5.1						
RPZ				Lg	Lg	07 30 30.7	
	16nm,0.3s,baz=252,slow=20,SNR=2.9						
RPZ	Rata Peaks	3.17	228	*e*Pn	Pn	07 29 37.9	-0.9
RPZ	Rata Peaks	3.17	228	P	Pn	07 29 38.4	-0.4
MRHZ	Matea Rd	3.24	30	P	Pn	07 29 43.0	+3.3
KUTZ	Kaahu Road	3.36	20	P	Pb	07 29 50.2	+1.6
MTHZ	Maungataniwha	3.39	35	P	Pn	07 29 44.5	+2.6
WHHZ	Waihua	3.40	42	P	Pn	07 29 44.0	+2.1
TLZ	Tolley Road	3.45	16	P	Pb	07 29 46.7	-3.4
ALRZ	Allen Road	3.45	27	P	Pb	07 29 47.8	-2.4
RAHZ	Arahi	3.45	38	P	Pn	07 29 44.1	+1.5
PRRZ	Plateau Road	3.53	27	P	Pb	07 29 49.3	-2.2
KNZ	Kokohu	3.67	45	P	Pn	07 29 48.3	+2.8
SNGZ	Shannon Statio	3.68	40	P	Pb	07 29 51.1	-3.0
MUGZ	Murupara	3.68	31	P	Pn	07 29 48.4	+2.6
MHGZ	Mahia Peninsul	3.70	49	P	Pn	07 29 48.4	+2.4
RRRZ	Republican Roa	3.71	28	P	Pb	07 29 52.5	-2.2
TARZ	Mount Tarawera	3.80	27	P	Pn	07 29 51.2	+3.7
FOZ	Fox Glacier	3.83	239	*e*Pn	Pn	07 29 47.2	-0.5
FOZ	Fox Glacier	3.83	239	P	Pn	07 29 48.3	+0.6
RAGZ	Rawiri	3.94	38	P	Pn	07 29 50.4	+1.0
RIGZ	Rimuhau	3.95	43	P	Pn	07 29 48.6	-0.8
URZ	Urewera	4.01	33	Pn	Pn	07 29 48.9	-1.3
	1.8nm,0.3s,baz=245,slow=5.0,SNR=16						
URZ				Pg	Pb	07 29 57.7	-2.0
	7.1nm,0.3s,baz=234,slow=12,SNR=27						
URZ				Sn	Sn	07 30 37.0	+0.1
	9.7nm,0.3s,baz=144,slow=15,SNR=4.1						
URZ	Urewera	4.01	33	*e*Pn	Pn	07 29 51.1	+0.9
URZ	Urewera	4.01	33	P	Pn	07 29 50.9	+0.7
TOZ	Tahuroa Road	4.02	13	P	Pn	07 29 53.6	+3.2
MARZ	Manawahe	4.08	27	P	Pn	07 29 54.6	+3.3
LBZ	Lake Benmore	4.09	227	*e*Pn	Pn	07 29 50.6	-0.7
LBZ	Lake Benmore	4.09	227	P	Pn	07 29 51.6	+0.3
OPRZ	Ohinepanea	4.17	25	P	Pn	07 29 57.1	+4.7
TGRZ	Tauranga	4.19	21	P	Pb	07 30 01.3	-1.5
TKGZ	Te Karaka	4.19	41	P	Pn	07 29 52.1	-0.7
ODZ	Otahua Downs	4.33	217	*e*Pn	Pn	07 29 53.9	-0.7
ODZ	Otahua Downs	4.33	217	P	Pn	07 29 53.7	-0.8
TWGZ	Tauwhareparae	4.46	40	P	Pn	07 29 55.9	-0.7
RUGZ	Raukumara Rang	4.50	36	P	Pn	07 29 56.3	-0.8
MKAZ	Moumakai	4.59	8	P	Pn	07 30 01.4	+3.2
AWAZ	Awhitu Peninsu	4.59	3	P	Pn	07 30 01.9	+3.7
HAZ	Te Kaha	4.71	35	P	Pn	07 29 59.9	-0.1
ETAZ	East Tamaki Re	4.72	6	P	Pn	07 30 03.5	+3.5
WTAZ	Waiatarua	4.72	2	P	Pn	07 30 04.2	+4.1
JCZ	Jackson Bay	4.74	237	P	Pn	07 30 00.4	0.0
WIAZ	Waiheke Island	4.89	8	P	Pn	07 30 06.2	+3.7
MBAZ	Motutapu North	4.90	5	P	Pn	07 30 06.3	+3.8
WKZ	Wanaka	5.01	229	*e*Pn	Pn	07 30 03.6	-0.4
WKZ	Wanaka	5.01	229	P	Pn	07 30 04.2	+0.2
HHSZ	Highcliff Hill	5.02	211	P	Pn	07 30 03.3	-0.8
KUZ	Kuaotunu	5.02	13	P	Pn	07 30 07.7	+3.6
MXZ	Matakaoa Point	5.11	38	*e*Pn	Pn	07 30 05.0	-0.4
MXZ	Matakaoa Point	5.11	38	P	Pn	07 30 08.1	+2.7
EAZ	Earnscleugh	5.11	224	P	Pn	07 30 07.0	+1.6
TUZ	Tuapeka	5.48	217	P	Pn	07 30 10.2	-0.2
MSZ	Milford Sound	5.57	235	P	Pn	07 30 17.5	+5.8
WCZ	Waipu Caves	5.71	0	P	Pn	07 30 16.9	+3.4
MLZ	Mavora Lakes	5.85	229	*e*Pn	Pn	07 30 15.5	0.0
MLZ	Mavora Lakes	5.85	229	P	Pn	07 30 17.3	+1.8
SYZ	Scrubby Hill	6.15	216	P	Pn	07 30 19.5	-0.1
WHZ	Wether Hill Ro	6.27	225	*e*Pn	Pn	07 30 20.6	-0.7
WHZ	Wether Hill Ro	6.27	225	P	Pn	07 30 23.3	+2.0
OUZ	Omahuta	6.45	355	P	Pn	07 30 26.8	+3.0
DCZ	Deep Cove	6.46	231	*e*Pn	Pn	07 30 23.7	-0.1
APZ	The Paps	6.89	219	P	Pn	07 30 30.7	+0.9
CTZ	Chatham Island	6.98	110	P	Pn	07 30 30.7	-0.4
ASAR	Alice Springs	38.06	285	P	P	07 36 07.8	+0.4
	2.3nm,0.9s,baz=123,slow=6.7,SNR=25						
WR1	Warramunga Arr	40.13	290	*e*P	P	07 36 24.1	-0.6
WRA	Warramunga Arr	40.13	290	P	P	07 36 24.2	-0.6
	3.9nm,0.7s,baz=122,slow=8.3,SNR=9.2						
YKA	Yellowknife Ar	118.26	30	PKP	PKPdf	07 47 34.8	-0.1

	0.6nm,0.7s,baz=258,slow=1.5,SNR=6.4						
YKB5	**Yellowknife Ar**	**118.26**	**30**	*e*PKPdf	**PKPdf**	**07 47 34.8**	**-0.1**
ARA0	**ARCESS Array S**	**147.71**	**340**	*e*PKPbc	**PKPdf**	**07 48 31.0**	**+1.6**
ARCES	**ARCESS Array B**	**147.71**	**340**	PKPbc	**PKPdf**	**07 48 31.0**	**+1.6**
	2.9nm,0.8s,baz=29,slow=2.8,SNR=9.6						
BR101	**Keskin Array S**	**150.31**	**280**	*e*PKPbc	**PKiKP**	**07 48 42.1**	**+1.4**
BRTR	**Keskin Array B**	**150.31**	**280**	PKPbc	**PKiKP**	**07 48 42.1**	**+1.4**
	0.6nm,0.8s,baz=88,slow=3.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**150.88**	**195**	PKPbc	**PKPbc**	**07 48 42.2**	**+0.5**
	2.1nm,0.8s,baz=326,slow=0.8,SNR=7.6						
TOA1	**Torodi Ar. Sit**	**150.89**	**195**	*e*PKPbc	**PKPbc**	**07 48 42.2**	**+0.4**
FIA0	**FINESS Array S**	**152.49**	**327**	*e*PKPbc	**PKPbc**	**07 48 42.9**	**-1.1**
FINES	**FINESS Array B**	**152.49**	**327**	PKPbc	**PKPbc**	**07 48 42.9**	**-1.1**
	2.9nm,0.9s,baz=337,slow=4.4,SNR=6.9						

WEL 21 07:30:47.2, 42˚S±3˚×17˚4E±˚, h15^{km}±6^{km}, M3.3/9, ML3.6/9, MLv3.3/9, Error ellipse: s-maj=0.0km s-min=0.0km az=131.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCW	**Tory Channel**	**0.33**	**348**	P	Pb	07 30 55.0	+0.2
TCW				S	Sb	07 30 60.0	0.0
TUWZ	**Tuamarina**	**0.34**	**288**	P	Pb	07 30 54.8	-0.1
TUWZ				S	Sb	07 30 59.9	-0.2
BHW	**Baring Head**	**0.40**	**72**	P	Pb	07 30 55.9	-0.1
BHW				S	Sb	07 31 02.0	+0.2
BSWZ	**Blackbirch Sta**	**0.41**	**244**	P	Pg	07 30 55.7	+0.2
BSWZ				S	Sb	07 31 02.0	-0.2
PLWZ	**Palliser**	**0.67**	**93**	P	Pb	07 31 00.8	+0.3
PLWZ				S	Sb	07 31 10.2	+0.5
MSWZ	**Moikau Station**	**0.67**	**80**	P	Pb	07 31 00.9	+0.2
CAW	**Cannon Point**	**0.68**	**51**	P	Pb	07 31 00.9	+0.2
NNZ	**Nelson**	**0.81**	**293**	P	Pg	07 31 02.9	0.0
MTW	**Mount Morrison**	**0.93**	**67**	P	Pn	07 31 05.7	-0.1
OGWZ	**Otaki Gorge**	**0.94**	**40**	P	Pg	07 31 05.4	0.0
KHZ	**Kahutara**	**1.08**	**215**	P	Pn	07 31 07.8	+0.1
MRZ	**Mangatainoka R**	**1.27**	**47**	P	Pb	07 31 10.8	0.0

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*ISCJB **21** 07:33:05.9±0.5, 17˚.10N±0˚.08×94˚.09W±0˚.04, h166^{km}±5^{km}, mb3.5/3, Error ellipse: s-maj=13.7km s-min=5.8km az=15.9*

*IDC **21** 07:33:06.5±0.6, 17˚.14N×94˚.04W, h160^{km}±11^{km}, mb3.3/3, mb1 3.3/6, mb1mx3.1/36, mbtmp3.6/6, Error ellipse: s-maj=41.1km s-min=10.4km az=36.0*

*MEX **21** 07:33:08.3±0.7, 17˚.09N×94˚.06W, h166^{km}±5^{km}, MD4.1*

*NEIC **21** 07:33:09.2±0.0, 16˚.90N×94˚.14W, h157^{km}, MD4.1(MEX), After MEX.*

ISC 21 07:33:06.6±0.8, 17˚.08N±0˚.08×94˚.10W±0˚.04, h166^{km}±6^{km}, n22, σ1^{s}03/35, mb3.5/3, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.75**	**271**	P	**Pn**	**07 33 31.4**	**+0.3**
	274nm,0.3s,baz=89,slow=7.4,SNR=4469						
CMIG				S	**Sn**	**07 33 49.9**	**0.0**
	166nm,0.3s,baz=322,slow=19,SNR=49						
CMIG	**Matias Romero**	**0.75**	**271**	*e*Pn	**Pn**	**07 33 31.7**	**+0.6**
CMIG				*e*Sn	**Sn**	**07 33 48.7**	**-1.2**
CMIG	**Matias Romero**	**0.75**	**271**	*i* P	**Pn**	**07 33 31.7**	**+0.6**
CMIG				*i* S	**Sn**	**07 33 49.9**	**0.0**
TGIG		**0.98**	**107**	*e*Pn	**Pn**	**07 33 32.7**	**-0.1**
TGIG				*e*Sn	**Sn**	**07 33 51.4**	**-1.5**
TGIG		**0.98**	**107**	*e*P	**Pn**	**07 33 32.7**	**-0.1**
TGIG				*i* S	**Sn**	**07 33 52.0**	**-1.0**
PCIG		**1.60**	**148**	*e*Pn	**Pn**	**07 33 39.2**	**+0.7**
PCIG				*e*Sn	**Sn**	**07 34 02.1**	**-0.9**
PCIG		**1.60**	**148**	*e*P	**Pn**	**07 33 39.1**	**+0.6**
PCIG				*e*S	**Sn**	**07 34 02.7**	**-0.4**
CCIG	**Comitan**	**2.04**	**112**	*e*Pn	**Pn**	**07 33 43.4**	**0.0**
CCIG				*e*Sn	**Sn**	**07 34 11.6**	**-0.2**
HUIG	**Huatulco**	**2.33**	**236**	*e*Pn	**Pn**	**07 33 45.2**	**-1.2**
HUIG				*e*Sn	**Sn**	**07 34 14.8**	**-2.5**
HUIG	**Huatulco**	**2.33**	**236**	*i* P	**Pn**	**07 33 45.2**	**-1.2**
HUIG				*e*S	**Sn**	**07 34 17.7**	**+0.4**
VHO	**Vista Hermosa**	**2.52**	**270**	*e*Pn	**Pn**	**07 33 50.3**	**+1.4**
VHO				*e*Sn	**Sn**	**07 34 20.6**	**-1.1**
VHO	**Vista Hermosa**	**2.52**	**270**	*e*P	**Pn**	**07 33 50.4**	**+1.4**
VHO				*e*S	**Sn**	**07 34 21.6**	**-0.1**
APG	**El Apazote**	**4.06**	**120**	P	**Pn**	**07 34 08.4**	**+0.1**
	0.6nm,0.3s,baz=320,slow=18,SNR=4.1						
APG				S	**Sn**	**07 34 56.1**	**-0.3**
	6.0nm,0.3s,baz=64,slow=19,SNR=7.0						
TLIG	**Tlapa**	**4.29**	**277**	*e*Pn	**Pn**	**07 34 12.8**	**+1.5**
TEIG	**Tepich**	**6.35**	**60**	*e*Pn	**Pn**	**07 34 35.8**	**-2.2**
TGUH	**Tegucigalpa,Un**	**7.23**	**114**	*e*Pn	**Pn**	**07 34 51.4**	**+1.6**
JTS	**Las Juntas de**	**11.16**	**126**	P	**Pn**	**07 35 41.5**	**-0.1**
	0.3nm,0.3s,baz=17,slow=20,SNR=2.6						
TXAR	**Lajitas Array**	**15.03**	**326**	P	**P**	**07 36 32.5**	**+0.4**
	0.0nm,0.3s,baz=145,slow=13,SNR=5.3						
LPAZ	**La Paz**	**41.89**	**141**	P	**P**	**07 40 42.0**	**+0.5**
	0.3nm,0.4s,baz=315,slow=4.3,SNR=4.4						
YKA	**Yellowknife Ar**	**47.59**	**347**	P	**P**	**07 41 25.2**	**-0.1**
	1.0nm,0.7s,baz=152,slow=7.5,SNR=14						
INK	**Inuvik**	**56.93**	**344**	P	**P**	**07 42 34.2**	**+0.2**
	baz=146,slow=5.0						
ARCES	**ARCESS Array B**	**83.86**	**18**	P	**P**	**07 45 16.9**	**-0.4**
	1.5nm,0.8s,baz=305,slow=4.3,SNR=8.3						

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*IDC **21** 07:38:46.1±1.6, 41˚.51S×174˚.30E, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.5/25, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=43.5km s-min=13.2km az=132.0*

*ISCJB **21** 07:38:49.0±0.5, 41˚.72S±0˚.03×174˚.33E±0˚.03, h6^{km}±4^{km}, mb3.4/2, Error ellipse: s-maj=5.0km s-min=2.9km az=145.7*

*WEL **21** 07:38:49.2, 42˚S±2˚×17˚4E±˚, h15^{km}±4^{km}, M3.8/17, ML4.1/17, MLv3.8/17, Error ellipse: s-maj=0.0km s-min=0.0km az=126.0*

ISC 21 07:38:49.6±0.9, 41˚.62S±0˚.02×174˚.30E±0˚.02, h18^{km}±4^{km}, n81, σ1^{s}45/90, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.14**	**205**	P	**Pg**	**07 38 53.2**	**-0.6**
CMWZ				S	**Sg**	**07 38 57.8**	**+1.2**
TUWZ	**Tuamarina**	**0.33**	**305**	P	**Pg**	**07 38 56.5**	**-0.1**
TUWZ				S	**Sg**	**07 39 01.3**	**0.0**
BSWZ	**Blackbirch Sta**	**0.33**	**253**	P	**Pg**	**07 38 56.6**	**0.0**
BSWZ				S	**Sg**	**07 39 02.0**	**+0.6**
TCW	**Tory Channel**	**0.41**	**358**	P	**Pg**	**07 38 57.4**	**-0.6**
TCW				S	**Sb**	**07 39 03.5**	**-0.7**
BHW	**Baring Head**	**0.48**	**64**	P	**Pb**	**07 38 59.2**	**-0.3**
BHW				S	**Sb**	**07 39 06.5**	**+0.3**
PLWZ	**Palliser**	**0.72**	**86**	P	**Pb**	**07 39 03.9**	**+0.2**
MSWZ	**Moikau Station**	**0.74**	**75**	P	**Pb**	**07 39 04.1**	**0.0**
CAW	**Cannon Point**	**0.77**	**49**	P	**Pb**	**07 39 04.1**	**-0.4**
NNZ	**Nelson**	**0.80**	**300**	P	**Pg**	**07 39 04.5**	**-0.6**
NNZ				S	**Sg**	**07 39 15.6**	**-0.1**
DUWZ	**D'Urville Isla**	**0.86**	**341**	P	**Pb**	**07 39 06.3**	**+0.2**
DUWZ				S	**Sg**	**07 39 16.9**	**-0.9**
PAWZ	**Paruwai Farm**	**0.88**	**75**	P	**Pb**	**07 39 06.4**	**0.0**
PAWZ				S	**Sn**	**07 39 20.9**	**+1.3**
KHZ	**Kahutara**	**0.98**	**215**	P	**Pg**	**07 39 08.7**	**+0.1**
KHZ				S	**Sb**	**07 39 22.9**	**+2.4**
MTW	**Mount Morrison**	**1.02**	**64**	P	**Pn**	**07 39 09.4**	**+0.4**
MTW				S	**Sn**	**07 39 24.4**	**+1.6**
OGWZ	**Otaki Gorge**	**1.04**	**40**	P	**Pb**	**07 39 09.0**	**-0.1**
THZ	**Tophouse**	**1.05**	**262**	P	**Pg**	**07 39 09.6**	**-0.4**
TRWZ	**Traveller**	**1.07**	**79**	P	**Pg**	**07 39 08.5**	**-1.9**
HOWZ	**Holdsworth Sta**	**1.17**	**52**	P	**Pn**	**07 39 11.8**	**+0.8**
TMWZ	**Te Maipa**	**1.30**	**67**	P	**Pn**	**07 39 13.0**	**+0.1**
MRZ	**Mangatainoka R**	**1.36**	**46**	P	**Pn**	**07 39 14.0**	**+0.3**
MRZ				S	**Sn**	**07 39 31.9**	**+0.6**
TIWZ	**Tintock**	**1.47**	**55**	P	**Pn**	**07 39 15.3**	**+0.2**
QRZ	**Quartz Range**	**1.55**	**300**	P	**Pn**	**07 39 17.5**	**+1.2**
CPWZ	**Castlepoint**	**1.60**	**64**	P	**Pg**	**07 39 23.5**	**+3.1**
OHWZ	**Ohakea**	**1.61**	**29**	P	**Pg**	**07 39 19.9**	**-0.7**
GVZ	**Greta Valley S**	**1.64**	**214**	P	**Pn**	**07 39 17.5**	**-0.1**
PRWZ	**Pori Road**	**1.65**	**51**	P	**Pn**	**07 39 18.4**	**+0.7**
POWZ	**Post Office Ro**	**1.66**	**43**	P	**Pg**	**07 39 24.6**	**+3.1**
BFZ	**Birch Farm**	**1.75**	**58**	P	**Pg**	**07 39 24.5**	**+1.4**
LTZ	**Lake Taylor**	**1.90**	**232**	P	**Pn**	**07 39 21.7**	**+0.5**
WAZ	**Wanganui**	**1.93**	**16**	P	**Pg**	**07 39 26.7**	**-0.1**
DVHZ	**Dannevirke**	**1.94**	**48**	P	**Pg**	**07 39 27.1**	**+0.3**
NMEZ	**Namu Road**	**2.23**	**352**	P	**Pg**	**07 39 31.1**	**-1.2**
PRHZ	**Porangahau**	**2.23**	**53**	P	**Pg**	**07 39 32.1**	**-0.2**
PNHZ	**Pukenui**	**2.23**	**41**	P	**Pn**	**07 39 26.6**	**+0.9**
PREZ	**Palmer Road**	**2.28**	**357**	P	**Pb**	**07 39 31.3**	**+1.1**
CRLZ	**Canterbury Las**	**2.31**	**212**	P	**Pn**	**07 39 25.8**	**-1.0**
KHEZ	**Kahui Hut**	**2.33**	**355**	P	**Pg**	**07 39 33.3**	**-1.0**
NBEZ	**Newall Road No**	**2.37**	**352**	P	**Pg**	**07 39 33.5**	**-1.6**
OXZ	**Oxford**	**2.39**	**224**	P	**Pn**	**07 39 27.1**	**-0.8**
INZ	**Inchbonnie**	**2.39**	**242**	P	**Pb**	**07 39 31.8**	**-0.3**
MTVZ	**Mangateitei**	**2.40**	**22**	P	**Pg**	**07 39 34.5**	**-1.2**
MQZ	**McQueen's Vall**	**2.41**	**210**	P	**Pn**	**07 39 26.3**	**-1.9**
DREZ	**Durham Road**	**2.43**	**358**	P	**Pg**	**07 39 35.2**	**-0.9**
PKE	**Pukeiti**	**2.43**	**354**	P	**Pg**	**07 39 34.6**	**-1.6**
PKVZ	**Pokaka**	**2.46**	**19**	P	**Pb**	**07 39 34.2**	**+0.9**
MOVZ	**Moawhango**	**2.47**	**27**	P	**Pb**	**07 39 34.1**	**+0.5**
AKCZ	**Akaroa Harbour**	**2.47**	**204**	P	**Pn**	**07 39 27.8**	**-1.2**
PXZ	**Pawanui**	**2.51**	**52**	P	**Pn**	**07 39 29.3**	**-0.2**
VRZ	**Vera Road**	**2.52**	**8**	P	**Pb**	**07 39 35.6**	**+1.4**
BHHZ	**Black Hill Sta**	**2.52**	**33**	P	**Pg**	**07 39 35.7**	**-2.2**
WHVZ	**Whangaehu Hut**	**2.53**	**23**	P	**Pb**	**07 39 35.9**	**+1.2**
FWVZ	**Far West T-bar**	**2.55**	**23**	P	**Pg**	**07 39 37.0**	**-1.4**
TUVZ	**Tukino**	**2.57**	**24**	P	**Pg**	**07 39 37.5**	**-1.3**
NGZ	**Ngauruhoe**	**2.64**	**23**	P	**Pb**	**07 39 37.5**	**+1.1**
WTVZ	**West Tongariro**	**2.69**	**22**	P	**Pb**	**07 39 38.5**	**+1.2**
TWVZ	**Taurewa**	**2.69**	**19**	P	**Pb**	**07 39 38.7**	**+1.4**
KWHZ	**Kaweka Forest**	**2.73**	**37**	P	**Pg**	**07 39 40.4**	**-1.5**
WVZ	**Waitaha Valley**	**3.01**	**240**	P	**Pn**	**07 39 39.8**	**+3.4**
HIZ	**Hauiti**	**3.13**	**8**	P	**Pb**	**07 39 43.5**	**-1.2**
RPZ	**Rata Peaks**	**3.18**	**228**	Pn	**Pn**	**07 39 37.4**	**-1.3**
	3.2nm,0.3s,baz=64,slow=17,SNR=6.1						
RPZ				Pg	**Pb**	**07 39 46.3**	**+0.7**
	18nm,0.3s,baz=289,slow=3.5,SNR=20						
RPZ				Sn	**Sn**	**07 40 14.4**	**-1.8**
	17nm,0.3s,baz=147,slow=22,SNR=9.0						
RPZ				Lg	Lg	07 40 29.1	
	9.0nm,0.3s,baz=23,slow=5.8,SNR=3.5						
FOZ	**Fox Glacier**	**3.82**	**238**	P	Pn	07 39 52.5	+5.0
PRGZ	**Paritu Road**	**3.84**	**47**	P	**Pn**	**07 39 47.9**	**+0.1**
RAGZ	**Rawiri**	**3.93**	**39**	P	**Pn**	**07 39 51.5**	**+2.4**
TOZ	**Tahuroa Road**	**3.99**	**14**	P	**Pb**	**07 39 57.1**	**-2.3**
URZ	**Urewera**	**3.99**	**34**	Pn	**Pn**	**07 39 47.6**	**-2.3**
	1.2nm,0.3s,baz=315,slow=6.6,SNR=3.1						
URZ				Pg	**Pb**	**07 39 58.2**	**-1.1**
	4.3nm,0.3s,baz=225,slow=7.5,SNR=9.1						
URZ				Sn	**Sn**	**07 40 35.8**	**-0.3**
	3.0nm,0.3s,baz=221,slow=5.3,SNR=3.8						
URZ				Lg	Lg	07 40 48.8	
	4.5nm,0.3s,baz=75,slow=23,SNR=4.5						
LBZ	**Lake Benmore**	**4.09**	**226**	P	**Pn**	**07 39 52.4**	**+1.2**
MWZ	**Matawai**	**4.11**	**38**	P	**Pn**	**07 39 53.1**	**+1.5**
ODZ	**Otahua Downs**	**4.34**	**217**	P	**Pn**	**07 39 53.5**	**-1.2**
AWAZ	**Awhitu Peninsu**	**4.56**	**3**	P	**Pn**	**07 40 02.0**	**+4.4**
MKAZ	**Moumakai**	**4.56**	**9**	P	Pn	07 40 03.3	+5.7
ETAZ	**East Tamaki Re**	**4.68**	**6**	P	Pn	07 40 04.8	+5.4
JCZ	**Jackson Bay**	**4.74**	**237**	P	**Pn**	**07 40 04.4**	**+4.2**
WIAZ	**Waiheke Island**	**4.86**	**8**	P	Pn	07 40 07.4	+5.6
MBAZ	**Motutapu North**	**4.87**	**6**	P	**Pn**	**07 40 06.0**	**+4.1**
HHSZ	**Highcliff Hill**	**5.04**	**211**	P	**Pn**	**07 40 03.1**	**-1.1**
TUZ	**Tuapeka**	**5.49**	**216**	P	**Pn**	**07 40 10.4**	**-0.1**
WCZ	**Waipu Caves**	**5.67**	**0**	P	Pn	07 40 20.6	+7.6
SYZ	**Scrubby Hill**	**6.16**	**215**	P	**Pn**	**07 40 19.4**	**-0.2**
OUZ	**Omahuta**	**6.41**	**355**	P	Pn	07 40 28.5	+5.4
ASAR	**Alice Springs**	**38.03**	**285**	P	**P**	**07 46 06.5**	**-0.3**
	0.3nm,0.5s,baz=122,slow=6.9,SNR=8.8						
WRA	**Warramunga Arr**	**40.09**	**290**	P	**P**	**07 46 22.4**	**-1.8**
	0.7nm,0.6s,baz=121,slow=9.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**150.91**	**195**	PKPbc	**PKPbc**	**07 58 41.0**	**-0.5**
	0.3nm,0.4s,baz=162,slow=2.6,SNR=6.2						

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*ISCJB **21** 07:38:53.4±0.5, 36˚.85N±0˚.02×140˚.60E±0˚.04, h10^{km}±4^{km}, mb3.5/4, Error ellipse: s-maj=6.1km s-min=4.0km az=7.8*

*JMA **21** 07:38:53.8, 36˚.85N×140˚.56E, h7^{km}±1^{km}, M3.6*
Broadband fault plane solution: P waves. NP1: ϕ_s198.00000°, δ62.00000°, λ-82.00000°. NP2: ϕ_s2.00000°, δ29.00000°, λ-104.00000°. Principal axes: T Plg17.0000°, Azm282.0000°; N Plg7.0000°, Azm14.0000°; P Plg72.0000°, Azm125.0000°;

JMA Felt II J1.

*IDC **21** 07:38:53.5±1.0, 36˚.84N×140˚.63E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.5/36, mbtmp3.6/6, ML3.4/2 Error ellipse: s-maj=23.1km s-min=18.5km az=111.0*

ISC 21 07:38:54.0±1.2, 36˚.85N±0˚.03×140˚.57E±0˚.04, h3^{km}±8^{km}, n22, σ0^{s}53/26, mb3.6/4, 6C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.24**	**181**	P	**Pg**	**07 38 58.7**	**+0.2**
JHO				S	**Sg**	**07 39 01.8**	**+0.2**
JFFD	**Fukushimafurud**	**0.24**	**358**	⇑P	**Pg**	**07 38 58.8**	**+0.1**
JFFD				S	**Sg**	**07 39 02.1**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.31**	**35**	⇑P	**Pg**	**07 39 00.2**	**+0.2**
ONAJ				S	**Sg**	**07 39 04.6**	**+0.5**
JSB	**Shiboa**	**0.54**	**283**	⇑P	**Pg**	**07 39 04.7**	**+0.4**
JSB				S	**Sg**	**07 39 11.6**	**+0.4**
JFK	**Kawauchi**	**0.57**	**25**	⇑P	**Pg**	**07 39 04.7**	**-0.3**
JYT	**Yasato**	**0.69**	**206**	⇑P	**Pg**	**07 39 06.8**	**-0.4**
JYT				S	**Sg**	**07 39 16.0**	**-0.1**
JFT	**Otama**	**0.69**	**344**	⇑P	**Pg**	**07 39 07.2**	**-0.1**
JFT				S	**Sg**	**07 39 16.6**	**+0.2**
JFY	**Yanaizu**	**0.89**	**309**	P	**Pg**	**07 39 10.4**	**-0.7**
JFY				S	**Sg**	**07 39 22.1**	**-0.5**
MJAR	**Matsushiro Arr**	**1.92**	**262**	Pn	**Pn**	**07 39 26.8**	**-0.8**
	6.0nm,0.3s,baz=81,slow=16,SNR=192						
MJAR				Sn	**Sn**	**07 39 52.2**	**-0.1**
	8.1nm,0.3s,baz=81,slow=28,SNR=25						
MAT	**Matsushiro**	**1.93**	**262**	P	**Pn**	**07 39 27.6**	**-0.1**
MAT				S	**Sn**	**07 39 53.1**	**+0.7**
JHJ	**Hachijo jima 2**	**3.77**	**190**	Pn	**Pn**	**07 39 52.4**	**-0.7**
	9.5nm,0.3s,baz=348,slow=9.3,SNR=4.3						
JHJ				Sn	**Sn**	**07 40 38.6**	**+0.6**
	7.3nm,0.3s,baz=105,slow=20,SNR=2.5						
ASAJ	**Asahikawa**	**7.42**	**11**	Pn	**Pn**	**07 40 43.0**	**-0.2**
	0.6nm,0.3s,baz=238,slow=15,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**28.64**	**119**	T	T	08 14 35.7	
	baz=312,slow=75,SNR=114						
H11N1	**WAKE ISLAND Hy**	**28.65**	**119**	T	T	08 14 37.6	
	baz=312,slow=75,SNR=128						
H11N3	**WAKE ISLAND Hy**	**28.66**	**119**	T	T	08 14 38.2	
	baz=312,slow=75,SNR=126						
H11S1	**WAKE ISLAND Hy**	**29.33**	**121**	T	T	08 15 27.3	
	baz=314,slow=76,SNR=232						
H11S3	**WAKE ISLAND Hy**	**29.33**	**121**	T	T	08 15 29.2	
	baz=314,slow=76,SNR=108						
H11S2	**WAKE ISLAND Hy**	**29.35**	**121**	T	T	08 15 30.7	
	baz=314,slow=76,SNR=113						
MKAR	**Makanchi Array**	**43.65**	**302**	P	**P**	**07 47 00.8**	**+1.1**
	0.1nm,0.5s,baz=95,slow=9.0,SNR=2.7						
ASAR	**Alice Springs**	**60.52**	**187**	P	**P**	**07 49 06.2**	**+0.7**
	0.8nm,1.0s,baz=13,slow=8.6,SNR=3.8						
NVAR	**Mina Array Bea**	**75.64**	**53**	P	**P**	**07 50 40.0**	**-0.7**
	0.4nm,0.7s,baz=312,slow=5.4,SNR=4.5						
TXAR	**Lajitas Array**	**90.77**	**52**	P	**P**	**07 51 58.3**	**-0.6**
	0.2nm,0.5s,baz=303,slow=3.3,SNR=5.5						

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*ROM **21** 07:44:49.4±0.4, 43˚.53N±0˚.02×13˚.82E±0˚.03, h9^{km}±1^{km}, ML2.6/20, Error ellipse: s-maj=2.5km s-min=1.0km az=240.0*

*ISCJB **21** 07:44:50.1±0.4, 43˚.52N±0˚.02×13˚.79E±0˚.03, h6^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=2.6km az=36.7*

ISC 21 07:44:50.4±0.8, 43˚.50N±0˚.02×13˚.82E±0˚.02, h12^{km}±6^{km}, n46, σ1^{s}38/61, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.17**	**287**	P	**Pg**	**07 44 53.4**	**-0.9**
AOI				S	**Sg**	**07 44 55.9**	**-1.2**
CIMA	**Civitanova Mar**	**0.23**	**210**	P	**Pg**	**07 44 55.3**	**0.0**
CIMA				S	**Sb**	**07 45 00.3**	**+1.8**
PCRO	**Pietralacroce**	**0.24**	**297**	P	**Pg**	**07 44 54.7**	**-0.7**
CADA	**Capodarco di F**	**0.31**	**188**	P	**Pb**	**07 44 57.0**	**-0.9**
CADA				S	**Sb**	**07 45 02.9**	**+0.1**
CING	**Cingoli**	**0.47**	**255**	P	**Pg**	**07 44 58.9**	**-0.8**
CING				S	**Sb**	**07 45 06.2**	**-1.4**
CING				AML	AML		
	comp=E,498µm,0.4s						
CING				AML	AML		
	comp=N,478µm,0.2s						
CING				AML	AML		
	comp=E,498µm,0.4s						
CING				AML	AML		
	comp=N,478µm,0.2s						
CING				AML	AML		
	comp=E,498µm,0.4s						
CING				AML	AML		
	comp=N,478µm,0.2s						
SENI	**Senigallia**	**0.47**	**296**	P	**Pb**	**07 44 59.7**	**-0.9**
EL6	**Elcito**	**0.55**	**252**	P	**Pg**	**07 45 00.3**	**-0.9**
EL6				AML	AML		
	comp=E,665µm,0.4s						
EL6				AML	AML		
	comp=N,826µm,1.1s						
EL6				AML	AML		
	comp=E,665µm,0.4s						
EL6				AML	AML		
	comp=N,826µm,1.1s						
EL6				AML	AML		
	comp=N,826µm,1.1s						
EL6				AML	AML		
	comp=E,665µm,0.4s						
EL6				AML	AML		
	comp=N,826µm,1.1s						
EL6				AML	AML		
	comp=E,665µm,0.4s						
MDAR	**Monte D'Aria**	**0.58**	**238**	P	**Pb**	**07 45 02.0**	**-0.6**
CSP1	**Cessapalombo**	**0.61**	**228**	P	**Pg**	**07 45 01.4**	**-1.0**
ARVD	**Arcevia**	**0.64**	**270**	P	**Pg**	**07 45 01.6**	**-1.3**
ARVD				AML	AML		
	comp=E,201µm,0.5s						
ARVD				AML	AML		
	comp=N,236µm,0.6s						
ARVD				AML	AML		
	comp=E,202µm,0.5s						
ARVD				AML	AML		
	comp=N,236µm,0.6s						
ARVD				AML	AML		
	comp=N,236µm,0.6s						
ARVD				AML	AML		
	comp=E,202µm,0.5s						
ARVD				AML	AML		
	comp=N,236µm,0.6s						
ARVD				AML	AML		
	comp=E,202µm,0.5s						
FDMO	**Fiordimonte**	**0.71**	**229**	P	**Pg**	**07 45 03.0**	**-1.2**
FDMO				S	**Sb**	**07 45 15.4**	**+1.0**
FDMO				AML	AML		
	comp=E,798µm,0.2s						
FDMO				AML	AML		
	comp=N,329µm,0.2s						
FDMO				AML	AML		
	comp=E,798µm,0.2s						
FDMO				AML	AML		
	comp=N,329µm,0.2s						
FDMO				AML	AML		
	comp=E,798µm,0.2s						
FDMO				AML	AML		
	comp=N,329µm,0.2s						
CESI	**CESI - Serrava**	**0.83**	**234**	P	**Pg**	**07 45 05.2**	**-1.4**
CESI				AML	AML		
	comp=E,129µm,0.3s						
CESI				AML	AML		
	comp=N,272µm,0.5s						
CESI				AML	AML		
	comp=E,128µm,0.3s						
CESI				AML	AML		
	comp=N,272µm,0.5s						
CESI				AML	AML		
	comp=E,128µm,0.3s						
CESI				AML	AML		
	comp=N,272µm,0.5s						
CESI				AML	AML		
	comp=E,128µm,0.3s						
CESI				AML	AML		
	comp=N,272µm,0.5s						
NRCA	**Norcia**	**0.84**	**218**	P	**Pg**	**07 45 05.4**	**-1.4**
NRCA				S	**Sb**	**07 45 18.7**	**+0.4**
NRCA				AML	AML		
	comp=E,489µm,0.2s						
NRCA				AML	AML		
	comp=N,603µm,1.3s						
NRCA				AML	AML		
	comp=E,489µm,0.2s						
NRCA				AML	AML		
	comp=N,603µm,1.3s						
NRCA				AML	AML		
	comp=E,489µm,0.2s						
NRCA				AML	AML		
	comp=N,603µm,1.3s						
TERO	**Teramo**	**0.89**	**190**	P	**Pg**	**07 45 06.8**	**-0.9**
TERO				AML	AML		
	comp=E,123µm,0.5s						
TERO				AML	AML		
	comp=N,102µm,0.3s						
TERO				AML	AML		
	comp=E,123µm,0.5s						
TERO				AML	AML		
	comp=N,102µm,0.3s						
TERO				AML	AML		
	comp=E,123µm,0.5s						
TERO				AML	AML		
	comp=N,102µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.92**	**250**	P	**Pg**	**07 45 07.0**	**-1.2**
ATCC				AML	AML		
	comp=E,618µm,1.1s						
ATCC				AML	AML		
	comp=N,478µm,0.4s						
ATCC				AML	AML		
	comp=E,618µm,1.1s						
ATCC				AML	AML		
	comp=N,478µm,0.4s						
ATCC				AML	AML		
	comp=E,618µm,1.1s						
ATCC				AML	AML		
	comp=N,478µm,0.4s						
ATCC				AML	AML		
	comp=E,618µm,1.1s						
ATCC				AML	AML		
	comp=N,478µm,0.4s						
ATFO	**Monte Foce - G**	**0.92**	**262**	P	**Pb**	**07 45 07.5**	**-0.9**
ATFO				AML	AML		
	comp=E,469µm,0.5s						
ATFO				AML	AML		
	comp=N,310µm,0.9s						
ATFO				AML	AML		
	comp=E,468µm,0.5s						
ATFO				AML	AML		
	comp=N,311µm,0.9s						
ATFO				AML	AML		
	comp=N,311µm,0.9s						
ATFO				AML	AML		
	comp=E,468µm,0.5s						
ATFO				AML	AML		
	comp=N,311µm,0.9s						
ATFO				AML	AML		
	comp=E,468µm,0.5s						
SMA1	**SAN MARTINO**	**0.94**	**202**	P	**Pg**	**07 45 07.1**	**-1.5**
SMA1				AML	AML		
	comp=E,655µm,0.6s						
SMA1				AML	AML		
	comp=N,606µm,0.4s						
SMA1				AML	AML		
	comp=N,606µm,0.4s						
SMA1				AML	AML		
	comp=E,655µm,0.6s						
SMA1				AML	AML		
	comp=N,606µm,0.4s						
SMA1				AML	AML		
	comp=E,655µm,0.6s						
ASSB	**Assisi San Ben**	**0.97**	**242**	P	**Pg**	**07 45 07.5**	**-1.6**
ASSB				AML	AML		
	comp=E,459µm,0.4s						
ASSB				AML	AML		
	comp=N,404µm,0.5s						
ASSB				AML	AML		
	comp=E,459µm,0.4s						
ASSB				AML	AML		
	comp=N,404µm,0.5s						
ASSB				AML	AML		
	comp=N,404µm,0.5s						
ASSB				AML	AML		
	comp=E,459µm,0.4s						
ASSB				AML	AML		
	comp=N,404µm,0.5s						
ASSB				AML	AML		
	comp=E,459µm,0.4s						
PE3	**Peglio**	**0.98**	**282**	P	**Pn**	**07 45 08.9**	**-1.1**
PE3				AML	AML		
	comp=E,1780µm,0.5s						
PE3				AML	AML		
	comp=N,1123µm,0.5s						
PE3				AML	AML		

	comp=N,1123µm,0.5s						
PE3				AML	AML		
	comp=E,1780µm,0.5s						
PE3				AML	AML		
	comp=N,1123µm,0.5s						
PE3				AML	AML		
	comp=E,1780µm,0.5s						
DUGI	Dugi Otok	1.02	61	*e*Pg	Pn	07 45 10.4	-0.1
DUGI				Sg	Sn	07 45 26.2	+1.5
ATVO	AVT- Monte Val	1.04	264	P	Pg	07 45 09.1	-1.4
ATVO				AML	AML		
	comp=E,224µm,0.6s						
ATVO				AML	AML		
	comp=N,182µm,0.7s						
ATVO				AML	AML		
	comp=E,224µm,0.6s						
ATVO				AML	AML		
	comp=N,182µm,0.7s						
ATVO				AML	AML		
	comp=E,224µm,0.6s						
ATVO				AML	AML		
	comp=N,182µm,0.7s						
ATVO				AML	AML		
	comp=E,224µm,0.6s						
ATVO				AML	AML		
	comp=N,182µm,0.7s						
LNSS	Leonessa	1.07	213	P	Pg	07 45 09.2	-1.8
LNSS				AML	AML		
	comp=E,535µm,0.6s						
LNSS				AML	AML		
	comp=N,456µm,0.6s						
LNSS				AML	AML		
	comp=E,536µm,0.6s						
LNSS				AML	AML		
	comp=N,456µm,0.6s						
LNSS				AML	AML		
	comp=E,536µm,0.6s						
LNSS				AML	AML		
	comp=N,456µm,0.6s						
LNSS				AML	AML		
	comp=E,536µm,0.6s						
LNSS				AML	AML		
	comp=N,456µm,0.6s						
ATTE	AVT- Monte Tez	1.11	255	P	Pn	07 45 11.3	-0.6
CPGN	Carpegna, Ital	1.13	286	P	Pn	07 45 12.2	0.0
MOMA	Monte Martano	1.15	233	P	Pg	07 45 11.0	-1.6
MOMA				AML	AML		
	comp=E,262µm,0.4s						
MOMA				AML	AML		
	comp=N,1098µm,1.0s						
MOMA				AML	AML		
	comp=E,241µm,0.3s						
MOMA				AML	AML		
	comp=N,310µm,0.6s						
MOMA				AML	AML		
	comp=N,310µm,0.6s						
MOMA				AML	AML		
	comp=E,262µm,0.4s						
MOMA				AML	AML		
	comp=N,1098µm,1.0s						
MOMA				AML	AML		
	comp=E,241µm,0.3s						
MOMA				AML	AML		
	comp=N,310µm,0.6s						
MOMA				AML	AML		
	comp=E,262µm,0.4s						
MOMA				AML	AML		
	comp=N,1098µm,1.0s						
MOMA				AML	AML		
	comp=E,241µm,0.3s						
FAGN	Fagnano	1.25	188	P	Pg	07 45 14.6	+0.2
FAGN				AML	AML		
	comp=E,864µm,0.5s						
FAGN				AML	AML		
	comp=N,540µm,0.6s						
FAGN				AML	AML		
	comp=E,864µm,0.5s						
FAGN				AML	AML		
	comp=N,540µm,0.6s						
FAGN				AML	AML		
	comp=E,864µm,0.5s						
FAGN				AML	AML		
	comp=N,540µm,0.6s						
CESX	Cesi	1.27	226	P	Pn	07 45 13.0	-1.0
CESX				AML	AML		
	comp=E,292µm,0.4s						
CESX				AML	AML		
	comp=N,294µm,0.5s						
CESX				AML	AML		
	comp=N,294µm,0.5s						
CESX				AML	AML		
	comp=E,292µm,0.4s						
CESX				AML	AML		
	comp=N,294µm,0.5s						
CESX				AML	AML		
	comp=E,292µm,0.4s						
NVLJ	Novalja	1.30	35	*e*Pg	Pg	07 45 14.4	-1.1
NVLJ				Sg	Sn	07 45 32.9	+1.2
ZIRJ	Zirje	1.33	83	*e*Pn	Pg	07 45 15.3	-0.7
ZIRJ				Sn	Sg	07 45 34.8	+1.5
CAFI	Castiglion Fio	1.36	263	P	Pg	07 45 16.3	-0.3
CAFI				AML	AML		
	comp=E,112µm,0.9s						
CAFI				AML	AML		
	comp=N,172µm,0.6s						
CAFI				AML	AML		
	comp=E,112µm,0.9s						
CAFI				AML	AML		
	comp=N,172µm,0.6s						
CAFI				AML	AML		
	comp=E,112µm,0.9s						
CAFI				AML	AML		
	comp=N,172µm,0.6s						
MGAB	Montegabbione	1.38	245	P	Pg	07 45 16.1	-0.8
MGAB				AML	AML		
	comp=E,244µm,0.4s						
MGAB				AML	AML		
	comp=N,284µm,0.7s						
MGAB				AML	AML		
	comp=E,244µm,0.4s						
MGAB				AML	AML		
	comp=N,284µm,0.7s						
MGAB				AML	AML		
	comp=E,244µm,0.4s						
MGAB				AML	AML		
	comp=N,284µm,0.7s						
MORI	Morici	1.42	74	*e*Pn	Pg	07 45 16.8	-0.8
MORI				Sn	Sg	07 45 36.7	+0.8
INTR	Introdacqua	1.49	178	P	Pb	07 45 18.2	+0.2
INTR				AML	AML		
	comp=E,237µm,1.2s						
INTR				AML	AML		
	comp=N,322µm,0.6s						
INTR				AML	AML		
	comp=N,322µm,0.6s						
INTR				AML	AML		
	comp=E,237µm,1.2s						
INTR				AML	AML		
	comp=N,322µm,0.6s						
INTR				AML	AML		
	comp=E,237µm,1.2s						
UDBI	Udbina	1.74	53	*e*Pn	Pg	07 45 22.1	-1.7
UDBI				Sn	Sg	07 45 46.8	+0.5
RIY	Rijeka	1.88	14	ePn		07 45 23.2	
HVAR	Hvar	1.94	99	*e*Pn	Pn	07 45 22.7	-0.5
SKDS	Skadanscina	2.05	4	*i* Pn	Pn	07 45 25.0	+0.3
SKDS				*i* Sn	Sb	07 45 51.8	-1.2
MAKA	Makarska	2.34	94	*e*Pn	Pn	07 45 27.0	-1.6
OBKA	Obir	3.05	9	*e*Pn	Pb	07 45 41.8	-2.9
	comp=E,0.3nm,0.2s						
MYKA	Terra Mystica	3.13	358	*e*Pn	Pn	07 45 40.7	+1.2
	comp=E,1.8nm,0.4s						
MYKA				Sg	Sg	07 46 33.1	+2.1
	comp=E,3.8nm,0.6s						
SOKA	Soboth	3.29	15	Pg	Pg	07 45 50.8	-2.7
	comp=E,0.4nm,0.3s						
SOKA				Sg	Sg	07 46 38.0	+2.0
	comp=E,2.0nm,0.6s						
ABTA	Abfaltersbach	3.38	345	*e*Pn	Pn	07 45 43.9	+1.0
	comp=E,4.1nm,0.7s,SNR=6.5						
KBA	Koelnbreinsper	3.59	355	*e*Pn	Pn	07 45 46.4	+0.4
	comp=E,0.4nm,0.3s						
KBA				Pg	Pg	07 45 58.5	-0.7
	comp=E,2.2nm,0.6s						
WTTA	Wattenberg	4.07	338	*e*Pn	Pn	07 45 54.8	+2.2
	comp=E,1.3nm,0.3s						
WTTA				Sn	Sn	07 46 43.3	+3.3
	comp=E,4.7nm,0.8s						
WATA	Walderalm	4.15	338	*e*Pn	Pn	07 45 55.8	+2.2
	comp=E,0.8nm,0.2s						
SQTA	Sankt Quirin	4.15	335	*e*Pn	Pn	07 45 56.0	+2.4
	comp=E,2.1nm,0.4s						

*IDC **21** 07:45:56.8±1.4, 41°.55S×174°.20E, h0^{km}, mb3.9/2, mb1 4.0/4, mb1mx3.7/22, mbtmp3.8/4, ML3.5/2, Error ellipse: s-maj=41.4km s-min=15.0km az=132.0*

*ISCJB **21** 07:45:59.2±0.4, 41°.81S±0°.03×174°.40E±0°.04, h22^{km}±3^{km}, mb3.8/2, Error ellipse: s-maj=5.6km s-min=2.6km az=44.5*

*WEL **21** 07:45:59.4, 42°S±2°×17°4E±°, h13^{km}±4^{km}, M4.4/23, ML4.8/23, MLv4.4/23, Error ellipse: s-maj=0.0km s-min=0.0km az=108.9*

*NEIC **21** 07:45:59.0±0.0, 41°.65S×174°.25E, h22^{km}, ML4.4(WEL), After WEL.*

ISC 21 07:45:58.8±1.3**, 41°.63S**±0°.03×**174°.25E**±0°.03**, h13**^{km}±10^{km}**, n149, σ1§41**/149**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	194	P	Pb	07 46 03.6	+0.6
CMWZ				S	Sb	07 46 07.0	+1.1
BSWZ	Blackbirch Sta	0.30	253	P	Pb	07 46 06.5	+0.5
BSWZ				S	Sb	07 46 11.0	+0.2
TUWZ	Tuamarina	0.31	310	P	Pb	07 46 05.9	-0.2
TCW	Tory Channel	0.42	2	P	Pb	07 46 07.3	-0.7
SNZO	South Karori	0.46	47	*e*Pg	Pb	07 46 09.2	+0.4
BHW	Baring Head	0.51	65	P	Pb	07 46 10.1	+0.4
PLWZ	Palliser	0.75	86	P	Pn	07 46 14.9	-0.3
NNZ	Nelson	0.78	302	P	Pn	07 46 14.8	-0.6
MSWZ	Moikau Station	0.78	75	P	Pn	07 46 15.1	-0.4
CAW	Cannon Point	0.80	50	P	Pb	07 46 15.1	+0.5
DUWZ	D’Urville Isla	0.86	343	P	Pn	07 46 16.5	-0.2
PAWZ	Paruwai Farm	0.92	75	P	Pn	07 46 17.5	+0.1
KHZ	Kahutara	0.95	214	*e*Pn	Pn	07 46 18.7	+0.9
KHZ	Kahutara	0.95	214	P	Pn	07 46 18.7	+0.9
KHZ				S	Sn	07 46 33.2	+1.9
THZ	Tophouse	1.02	262	*e*Pn	Pn	07 46 20.1	+1.2
THZ	Tophouse	1.02	262	P	Pn	07 46 19.5	+0.6
MTW	Mount Morrison	1.05	64	P	Pn	07 46 19.6	+0.4
MTW				S	Sn	07 46 36.0	+2.2
OGWZ	Otaki Gorge	1.06	41	P	Pn	07 46 19.6	+0.2
TRWZ	Traveller	1.10	78	P	Pn	07 46 20.0	+0.1
HOWZ	Holdsworth Sta	1.20	53	P	Pg	07 46 21.8	0.0
TMWZ	Te Maipa	1.34	68	P	Pn	07 46 23.2	0.0
MRZ	Mangatainoka R	1.39	46	P	Pb	07 46 24.7	+0.1
TIWZ	Tintock	1.50	56	P	Pn	07 46 25.8	+0.4
QRZ	Quartz Range	1.53	301	P	Pg	07 46 28.0	-0.1
GVZ	Greta Valley S	1.62	214	P	Pn	07 46 27.5	+0.5
OHWZ	Ohakea	1.63	30	P	Pg	07 46 30.0	-0.1
CPWZ	Castlepoint	1.63	65	P	Pn	07 46 27.6	+0.3
PRWZ	Pori Road	1.68	51	P	Pn	07 46 28.4	+0.4
POWZ	Post Office Ro	1.69	43	P	Pb	07 46 29.2	-0.4
BFZ	Birch Farm	1.78	59	*e*Pn	Pn	07 46 28.7	-0.4
BFZ	Birch Farm	1.78	59	P	Pn	07 46 28.8	-0.4
LTZ	Lake Taylor	1.87	231	*e*Pn	Pn	07 46 31.4	+0.9
LTZ	Lake Taylor	1.87	231	P	Pn	07 46 31.5	+0.9
AMCZ	Amberley	1.95	217	P	Pn	07 46 31.8	+0.2
WAZ	Wanganui	1.95	17	P	Pg	07 46 35.4	-0.9
DVHZ	Dannevirke	1.96	48	P	Pn	07 46 31.7	-0.1
ANWZ	Angora Road	2.05	56	P	Pn	07 46 32.1	-0.8
LREZ	Lake Rotokare	2.17	3	P	Pg	07 46 39.1	-1.3
NMEZ	Namu Road	2.23	352	P	Pb	07 46 39.9	+0.9
PRHZ	Porangahau	2.26	54	P	Pn	07 46 35.4	-0.5
PNHZ	Pukenui	2.26	41	P	Pn	07 46 36.2	+0.3
OKCZ	Okains Bay	2.27	202	P	Pn	07 46 35.5	-0.6
WPHZ	Waipukurau	2.28	47	P	Pn	07 46 36.4	+0.3
PREZ	Palmer Road	2.28	358	P	Pb	07 46 40.9	+1.0
CRLZ	Canterbury Las	2.29	211	*e*Pn	Pn	07 46 35.3	-0.9
CRLZ	Canterbury Las	2.29	211	P	Pn	07 46 35.4	-0.9
KHEZ	Kahui Hut	2.34	355	P	Pb	07 46 41.6	+0.8
INZ	Inchbonnie	2.36	241	P	Pn	07 46 38.4	+1.2
OXZ	Oxford	2.36	223	*e*Pn	Pn	07 46 36.7	-0.6
OXZ	Oxford	2.36	223	P	Pn	07 46 36.8	-0.4
NBEZ	Newall Road No	2.38	353	P	Pb	07 46 42.2	+0.8
MQZ	McQueen’s Vall	2.39	209	*e*Pn	Pn	07 46 36.1	-1.5
MQZ	McQueen’s Vall	2.39	209	P	Pn	07 46 36.2	-1.5
MTVZ	Mangateitei	2.42	23	P	Pb	07 46 41.0	-1.3
DREZ	Durham Road	2.44	359	P	Pb	07 46 41.3	-1.2
PKE	Pukeiti	2.44	355	P	Pb	07 46 41.3	-1.3
AKCZ	Akaroa Harbour	2.45	203	P	Pn	07 46 37.4	-1.1
PKVZ	Pokaka	2.48	20	P	Pb	07 46 41.6	-1.7
MOVZ	Moawhango	2.50	28	P	Pn	07 46 40.4	+1.2
VRZ	Vera Road	2.53	9	P	Pb	07 46 43.2	-0.8
BHHZ	Black Hill Sta	2.54	33	P	Pn	07 46 40.9	+1.1
PXZ	Pawanui	2.54	52	P	Pn	07 46 38.9	-0.8
MHEZ	Mangahewa	2.55	1	P	Pb	07 46 44.3	-0.1
DRZ	Dome Shelter	2.55	23	P	Pb	07 46 42.6	-2.1
KRHZ	Kereru	2.55	40	P	Pn	07 46 39.6	-0.3
WHVZ	Whangaehu Hut	2.55	24	P	Pb	07 46 42.9	-1.8
FWVZ	Far West T-bar	2.57	23	P	Pb	07 46 43.1	-1.7
TUVZ	Tukino	2.59	25	P	Pb	07 46 43.0	-2.1
NGZ	Ngauruhoe	2.66	23	P	Pb	07 46 44.5	-1.8
KAHZ	Kahuranaki	2.71	48	P	Pn	07 46 41.6	-0.5
WTVZ	West Tongariro	2.71	23	P	Pb	07 46 45.9	-1.3
TWVZ	Taurewa	2.71	20	P	Pb	07 46 46.1	-1.1
KRVZ	Karewarewa	2.74	23	P	Pb	07 46 46.2	-1.6
KWHZ	Kaweka Forest	2.75	38	P	Pb	07 46 49.1	+1.2
MCHZ	McNeill Hill	2.87	41	P	Pn	07 46 44.7	+0.5
KATZ	Kakaramea	2.87	23	P	Pb	07 46 51.0	+1.1
RITZ	Rihia Road	2.92	25	P	Pb	07 46 51.8	+1.1
WVZ	Waitaha Valley	2.98	240	P	Pn	07 46 47.0	+1.2
RATZ	Rangitukua	2.99	23	P	Pg	07 46 53.9	-2.2
BKZ	Black Stump Fm	3.00	36	*e*Pn	Pn	07 46 45.7	-0.3
BKZ	Black Stump Fm	3.00	36	P	Pn	07 46 48.7	+2.7
HATZ	Hinemaiaia	3.07	28	P	Pb	07 46 54.4	+1.1
WATZ	Wairara	3.13	22	P	Pb	07 46 54.5	+0.2
HIZ	Hauiti	3.15	9	*e*Pn	Pb	07 46 51.6	-2.9
HIZ	Hauiti	3.15	9	P	Pb	07 46 51.9	-2.6
RPZ	Rata Peaks	3.15	227	Pn	Pn	07 46 47.9	-0.2
	13nm,0.3s,baz=71,slow=3.8,SNR=50						
RPZ				Pg	Pb	07 46 55.5	+0.9
	30nm,0.3s,baz=60,slow=8.3,SNR=69						
RPZ				Sn	Sn	07 47 24.1	-1.5
	12nm,0.3s,baz=131,slow=23,SNR=6.8						
RPZ				Lg	Lg	07 47 37.8	
	19nm,0.3s,baz=332,slow=6.5,SNR=3.6						
RPZ	Rata Peaks	3.15	227	P	Pn	07 46 48.1	0.0
ARHZ	Aropaoanui	3.15	42	P	Pn	07 46 49.1	+0.9
MRHZ	Matea Rd	3.25	31	P	Pn	07 46 50.7	+1.2
MTHZ	Maungataniwha	3.41	36	P	Pn	07 46 53.4	+1.8
TLZ	Tolley Road	3.44	17	P	Pb	07 46 56.0	-3.6
ALRZ	Allen Road	3.46	28	P	Pb	07 47 00.8	+0.9
RAHZ	Arahi	3.47	40	P	Pn	07 46 53.2	+0.7
PRRZ	Plateau Road	3.53	28	P	Pb	07 47 02.0	+0.9
MUGZ	Murupara	3.69	32	P	Pn	07 46 57.9	+2.4
MHGZ	Mahia Peninsul	3.73	50	P	Pn	07 46 56.2	+0.1
FOZ	Fox Glacier	3.79	238	*e*Pn	Pb	07 47 01.6	-3.9
FOZ	Fox Glacier	3.79	238	P	Pn	07 46 59.2	+2.4
TARZ	Mount Tarawera	3.81	28	P	Pb	07 47 04.1	-1.7
PRGZ	Paritu Road	3.87	47	P	Pn	07 46 56.8	-1.2
RAGZ	Rawiri	3.96	39	P	Pn	07 46 59.9	+0.7
RIGZ	Rimuhau	3.97	44	P	Pn	07 46 58.2	-1.2
TOZ	Tahuroa Road	4.01	14	P	Pn	07 47 03.7	+3.9
URZ	Urewera	4.02	34	Pn	Pn	07 46 59.0	-1.0
	1.6nm,0.3s,baz=231,slow=11,SNR=9.2						
URZ				Pg	Pb	07 47 11.3	+1.9
	9.7nm,0.3s,baz=242,slow=6.6,SNR=17						
URZ				Sn	Sn	07 47 46.4	-0.6
	10nm,0.3s,baz=48,slow=19,SNR=3.3						
URZ				Lg	Lg	07 48 08.3	
	8.2nm,0.3s,baz=85,slow=15,SNR=4.8						
URZ	Urewera	4.02	34	*e*Pn	Pn	07 47 00.0	0.0
URZ	Urewera	4.02	34	P	Pn	07 47 00.5	+0.5
LBZ	Lake Benmore	4.06	226	*e*Pn	Pn	07 47 04.9	+4.2
LBZ	Lake Benmore	4.06	226	P	Pn	07 47 01.6	+0.9
MARZ	Manawahe	4.09	28	P	Pn	07 47 03.2	+2.2
MWZ	Matawai	4.14	38	P	Pn	07 47 01.1	-0.6
TKGZ	Te Karaka	4.21	42	P	Pn	07 47 01.7	-1.0
ODZ	Otahua Downs	4.31	216	*e*Pn	Pn	07 47 03.5	-0.5
ODZ	Otahua Downs	4.31	216	P	Pn	07 47 03.3	-0.8
TWGZ	Tauwhareparae	4.48	41	P	Pn	07 47 06.4	-0.1
RUGZ	Raukumara Rang	4.51	37	P	Pn	07 47 06.8	-0.1
KBAZ	Karaka Road Bo	4.55	6	P	Pb	07 47 16.4	-2.1
AWAZ	Awhitu Peninsu	4.57	4	P	Pn	07 47 11.7	+4.2
MKAZ	Moumakai	4.57	9	P	Pn	07 47 10.9	+3.3
WTAZ	Waiatarua	4.70	3	P	Pb	07 47 15.9	-5.1
ETAZ	East Tamaki Re	4.70	7	P	Pn	07 47 14.0	+4.7
PUZ	Puketiti	4.70	42	P	Pn	07 47 12.4	+3.0
JCZ	Jackson Bay	4.70	237	P	Pn	07 47 11.1	+1.5
HAZ	Te Kaha	4.73	36	P	Pn	07 47 10.2	+0.4
WIAZ	Waiheke Island	4.88	8	P	Pn	07 47 16.4	+4.6
MBAZ	Motutapu North	4.88	6	P	Pn	07 47 16.4	+4.6
WMGZ	Waiomatatini S	4.97	42	P	Pn	07 47 13.6	+0.4
WKZ	Wanaka	4.99	228	*e*Pn	Pn	07 47 12.1	-1.2
WKZ	Wanaka	4.99	228	P	Pn	07 47 13.6	+0.3
KUZ	Kuaotunu	5.01	14	P	Pn	07 47 18.6	+5.0
HHSZ	Highcliff Hill	5.01	211	P	Pn	07 47 13.1	-0.6
MXZ	Matakaoa Point	5.13	39	*e*Pn	Pn	07 47 14.5	-0.7
MXZ	Matakaoa Point	5.13	39	P	Pn	07 47 20.8	+5.5
TUZ	Tuapeka	5.47	216	P	Pn	07 47 20.4	+0.5
MSZ	Milford Sound	5.54	235	P	Pn	07 47 27.2	+6.3
WCZ	Waipu Caves	5.68	1	P	Pn	07 47 29.0	+6.1
MLZ	Mavora Lakes	5.82	228	*e*Pn	Pn	07 47 23.2	-1.6
SYZ	Scrubby Hill	6.13	215	P	Pn	07 47 29.2	+0.2
WHZ	Wether Hill Ro	6.25	225	*e*Pn	Pn	07 47 29.8	-0.8
WHZ	Wether Hill Ro	6.25	225	P	Pn	07 47 34.2	+3.6
OUZ	Omahuta	6.42	355	P	Pn	07 47 36.7	+3.7
APZ	The Paps	6.88	219	P	Pn	07 47 39.9	+0.6
CTZ	Chatham Island	7.05	110	P	Pn	07 47 41.0	-0.7
ASAR	Alice Springs	38.00	285	P	P	07 53 15.9	-0.7
	0.4nm,0.4s,baz=124,slow=7.1,SNR=9.6						
WR1	Warramunga Arr	40.06	290	*e*P	P	07 53 33.4	-0.5
WRA	Warramunga Arr	40.06	290	P	P	07 53 33.4	-0.5
	1.6nm,0.5s,baz=126,slow=8.3,SNR=6.5						
ARA0	ARCESS Array S	147.66	340	*e*PKPbc	PKPbc	08 05 40.6	-1.2
ARCES	ARCESS Array B	147.66	340	PKPbc	PKPbc	08 05 40.6	-1.2
	1.3nm,0.7s,baz=58,slow=2.2,SNR=3.7						
TORD	Torodi Ar. Bea	150.89	195	PKPbc	PKPbc	08 05 51.4	-0.1
	0.4nm,0.4s,baz=175,slow=2.9,SNR=9.9						
TOA1	Torodi Ar. Sit	150.90	195	*e*PKPbc	PKPbc	08 05 51.4	-0.1

WEL 21 07:50:08.8, 42°S±2°×**17°4E**±°**, h15**^{km}±4^{km}**, M3.5**/14**, ML3.5**/4**, ML3.6**/14**, MLv3.6**/1**, MLv3.4**/14**, Error ellipse: s-maj=0.0km s-min=0.0km az=115.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	201	P	Pg	07 50 13.1	+0.3
CMWZ				S	Sb	07 50 16.6	-0.1
TUWZ	Tuamarina	0.31	303	P	Pb	07 50 15.9	-0.1
BSWZ	Blackbirch Sta	0.33	250	P	Pg	07 50 15.9	+0.3
BSWZ				S	Sb	07 50 21.0	-0.5
TCW	Tory Channel	0.39	358	P	Pb	07 50 17.5	+0.1
TCW				S	Sb	07 50 23.4	+0.2
BHW	Baring Head	0.48	66	P	Pb	07 50 19.3	+0.4
BHW				S	Sb	07 50 26.2	+0.5
PLWZ	Palliser	0.72	88	P	Pn	07 50 24.0	-0.5
MSWZ	Moikau Station	0.74	76	P	Pn	07 50 24.2	-0.6
CAW	Cannon Point	0.76	50	P	Pb	07 50 24.1	+0.4
NNZ	Nelson	0.79	299	P	Pb	07 50 24.2	+0.1
DUWZ	D’Urville Isla	0.85	341	P	Pb	07 50 25.5	+0.3
PAWZ	Paruwai Farm	0.88	76	P	Pn	07 50 26.4	-0.3
KHZ	Kahutara	0.99	214	P	Pn	07 50 28.0	-0.1
KHZ				S	Sn	07 50 42.1	+0.3
MTW	Mount Morrison	1.01	64	P	Pn	07 50 28.6	+0.1
OGWZ	Otaki Gorge	1.03	41	P	Pn	07 50 28.8	+0.1
OGWZ				S	Sn	07 50 42.6	-0.2
THZ	Tophouse	1.05	261	P	Pg	07 50 29.1	0.0
TRWZ	Traveller	1.07	80	P	Pb	07 50 28.9	-0.1
HOWZ	Holdsworth Sta	1.16	53	P	Pn	07 50 30.5	0.0
TMWZ	Te Maipa	1.30	68	P	Pn	07 50 32.3	-0.1
MRZ	Mangatainoka R	1.35	46	P	Pb	07 50 33.7	-0.1
TIWZ	Tintock	1.46	56	P	Pn	07 50 34.5	-0.1
QRZ	Quartz Range	1.54	300	P	Pb	07 50 37.6	+0.6
PRWZ	Pori Road	1.65	51	P	Pn	07 50 37.4	+0.3
POWZ	Post Office Ro	1.65	43	P	Pb	07 50 38.1	-0.7
GVZ	Greta Valley S	1.65	214	P	Pn	07 50 37.0	-0.3
BFZ	Birch Farm	1.74	59	P	Pn	07 50 38.0	-0.5
LTZ	Lake Taylor	1.91	231	P	Pn	07 50 41.0	+0.1
WAZ	Wanganui	1.92	16	P	Pg	07 50 44.9	-0.7
DVHZ	Dannevirke	1.93	48	P	Pn	07 50 40.8	-0.3
AMCZ	Amberley	1.99	217	P	Pn	07 50 41.4	-0.4
ANWZ	Angora Road	2.01	56	P	Pn	07 50 41.9	-0.2
LREZ	Lake Rotokare	2.14	2	P	Pg	07 50 49.6	-0.1
NMEZ	Namu Road	2.21	352	P	Pg	07 50 50.2	-0.8
PRHZ	Porangahau	2.22	54	P	Pn	07 50 44.6	-0.5
PNHZ	Pukenui	2.22	41	P	Pn	07 50 45.3	+0.1
WPHZ	Waipukurau	2.24	47	P	Pn	07 50 45.4	0.0
PREZ	Palmer Road	2.26	357	P	Pb	07 50 50.2	+0.9
OKCZ	Okains Bay	2.31	203	P	Pn	07 50 44.7	-1.6
KHEZ	Kahui Hut	2.31	355	P	Pb	07 50 51.4	+1.2
NBEZ	Newall Road No	2.35	352	P	Pb	07 50 52.3	+1.4
MTVZ	Mangateitei	2.39	22	P	Pb	07 50 51.2	-0.3
INZ	Inchbonnie	2.40	241	P	Pn	07 50 48.7	+1.2
DREZ	Durham Road	2.41	358	P	Pb	07 50 52.8	+1.0
PKE	Pukeiti	2.42	354	P	Pg	07 50 53.5	-1.5
MQZ	McQueen’s Vall	2.43	209	P	Pn	07 50 45.7	-2.2
PKVZ	Pokaka	2.44	20	P	Pb	07 50 53.7	+1.2
MOVZ	Moawhango	2.46	27	P	Pb	07 50 53.0	+0.3
AKCZ	Akaroa Harbour	2.49	204	P	Pn	07 50 47.1	-1.7
VRZ	Vera Road	2.50	8	P	Pb	07 50 52.6	-0.8
BHHZ	Black Hill Sta	2.50	33	P	Pn	07 50 50.2	+1.2
PXZ	Pawanui	2.50	52	P	Pn	07 50 47.9	-1.0
KRHZ	Kereru	2.52	40	P	Pn	07 50 49.1	-0.1
WHVZ	Whangaehu Hut	2.52	24	P	Pb	07 50 52.2	-1.6
MHEZ	Mangahewa	2.52	1	P	Pg	07 50 57.6	+0.5
FWVZ	Far West T-bar	2.53	23	P	Pb	07 50 52.4	-1.7
TUVZ	Tukino	2.55	25	P	Pb	07 50 52.6	-1.7
NGZ	Ngauruhoe	2.62	23	P	Pb	07 50 56.1	+0.6
KAHZ	Kahuranaki	2.67	48	P	Pn	07 50 50.7	-0.6
WTVZ	West Tongariro	2.67	22	P	Pb	07 50 57.5	+1.1
TWVZ	Taurewa	2.67	20	P	Pb	07 50 57.1	+0.6
KRVZ	Karewarewa	2.71	23	P	Pb	07 50 58.0	+1.0
KWHZ	Kaweka Forest	2.71	37	P	Pg	07 50 59.9	-0.9
KATZ	Kakaramea	2.83	23	P	Pg	07 51 01.2	-1.9
BKZ	Black Stump Fm	2.96	35	P	Pb	07 51 03.2	+2.0
WVZ	Waitaha Valley	3.02	240	P	Pb	07 51 02.4	+0.2
HIZ	Hauiti	3.12	8	P	Pb	07 51 01.4	-2.5
ARHZ	Aropaoanui	3.12	42	P	Pn	07 50 58.2	+0.8
TLZ	Tolley Road	3.41	17	P	Pb	07 51 08.0	-0.8
MUGZ	Murupara	3.66	32	P	Pn	07 51 05.9	+1.1
RIGZ	Rimuhau	3.93	44	P	Pn	07 51 07.9	-0.7
URZ	Urewera	3.98	34	P	Pn	07 51 10.4	+1.2
ODZ	Otahua Downs	4.35	216	P	Pn	07 51 13.1	-1.2
TWGZ	Tauwhareparae	4.44	41	P	Pn	07 51 16.0	+0.3
RUGZ	Raukumara Rang	4.47	37	P	Pn	07 51 16.5	+0.4
AWAZ	Awhitu Peninsu	4.54	4	P	Pn	07 51 20.9	+3.9
MKAZ	Moumakai	4.54	9	P	Pb	07 51 23.7	-4.5
ETAZ	East Tamaki Re	4.67	6	P	Pb	07 51 25.8	-4.5
HAZ	Te Kaha	4.69	36	P	Pn	07 51 20.2	+1.2
WIAZ	Waiheke Island	4.85	8	P	Pb	07 51 28.6	-4.8
WCZ	Waipu Caves	5.65	0	P	Pn	07 51 38.8	+6.6
CTZ	Chatham Island	7.03	111	P	Pn	07 51 51.6	+0.4

*MOS **21** 07:51:21.6±0.8, 33°.14N×137°.65E, h335^{km}, mb4.4/34, Error ellipse: s-maj=9.2km s-min=4.9km az=94.2*

*JMA **21** 07:51:21.5±0.2, 33°.22N×137°.77E, h365^{km}±3^{km}, M4.2*

*ISCJB **21** 07:51:23.4±0.2, 33°.22N±0°.03×137°.62E±0°.03, h348^{km}±1^{km}, mb4.3/132, Error ellipse: s-maj=5.0km s-min=3.4km az=153.9*

*IDC **21** 07:51:23.3±0.5, 33°.20N×137°.67E, h338^{km}±4^{km}, mb3.9/23, mb1 4.1/29, mb1mx4.0/42, mbtmp4.6/29, Error ellipse: s-maj=9.5km s-min=7.6km az=88.0*

*NEIC **21** 07:51:23.6±1.6, 33°.19N×137°.68E, h341^{km}±5^{km}, mb4.3/98, Error ellipse: s-maj=11.9km s-min=10.6km az=146.0*

ISC 21 07:51:23.9±0.5**, 33°.19N**±0°.05×**137°.70E**±0°.04**, h345**^{km}±4^{km}**, n380, σ1§19**/420**, mb4.3**/138**, 22C-12D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	Tokai 1	0.58	351	P	Pn	07 52 07.4	+0.1
TK01				S	S	07 52 43.3	+1.2
TTO3	TONANKAI O.B.S	0.72	340	⇑P	Pn	07 52 08.4	+0.6
TTO3				S	S	07 52 44.7	+1.6
TK02	Tokai 2	0.76	4	⇑P	Pn	07 52 08.2	+0.3
TTO2	TONANKAI O.B.S	0.78	315	⇑P	Pn	07 52 08.5	+0.7
TTO4	TONANKAI O.B.S	0.83	351	⇑P	Pn	07 52 08.4	+0.4
TTO1	TONANKAI O.B.S	0.88	300	⇑P	Pn	07 52 08.5	+0.3
TK03	Tokai 3	1.00	13	⇑P	Pn	07 52 09.4	+0.6
TK03				*e*S	S	07 52 46.5	+1.6
TTO5	TONANKAI O.B.S	1.06	1	⇑P	Pn	07 52 09.4	+0.3
TTO5				*e*S	S	07 52 46.4	+1.1
TK04	Tokai 4	1.21	7	P	Pn	07 52 10.2	+0.5

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TK04                                     eS      S      07 52 47.8 +1.2
JIE    Ise                  1.46 326    ⇑P      Pn     07 52 11.1 -0.1
JIE                                      eS      S      07 52 48.5 -0.6
JHJ    Hachijo jima 2       1.75  92     P      Pn     07 52 12.7 -0.4
       43nm,0.3s,baz=123,slow=23,SNR=28
JHJ                                      S      S      07 52 50.8 -1.6
       212nm,0.3s,baz=79,slow=21,SNR=7.7
JHJ2   Mitsune              1.78  92    ePn     Pn     07 52 12.5 -0.7
JHJ2   Mitsune              1.78  92     P      Pn     07 52 12.5 -0.7
JTNC   Tanabenakahech       1.85 290    ⇑P      Pn     07 52 13.3 -0.4
JTNC                                     eS      S      07 52 52.7 -0.9
JAOM   Aogashimamukai       1.89 112     P      Pn     07 52 13.5 -0.5
JWY    Kouya                2.03 301    ⇑P      Pn     07 52 15.1 +0.1
JWY                                      eS      S      07 52 55.0 -1.0
JFNN   Fujinakano           2.16  22    ⇓P      Pn     07 52 15.6 -0.2
INU    Inuyama              2.23 346    ePn     Pn     07 52 16.1 -0.2
JOD2   Odawara 2            2.37  29    ⇓P      Pn     07 52 16.7 -0.7
JOD2                                     eS      S      07 52 59.5 -1.0
JYN    Shimob               2.41  17    ⇓P      Pn     07 52 17.4 -0.4
JYTA   Yamagatataniai       2.53 342    ⇑P      Pn     07 52 18.6 -0.1
JYTA                                     S      S      07 53 03.9 +1.2
JAI    Aioi                 2.78 283    ⇑P      Pn     07 52 20.6 -0.2
JAI                                      eS      S      07 53 04.9 -1.7
JWT    Wachi                2.83 318    ⇑P      Pn     07 52 21.2  0.0
JWT                                      eS      S      07 53 05.7 -1.6
JRY    Ryogami san          2.99  19    ⇓P      Pn     07 52 22.3 -0.4
JRY                                      S      S      07 53 10.0 -0.1
BSO1   Boso 1               3.10  61     P      Pn     07 52 20.2 -2.9
BSO1                                     eS      S      07 53 06.0 -4.7
JMN    Monobe               3.23 281    ⇑P      Pn     07 52 25.1  0.0
JMN                                      eS      S      07 53 13.2 -1.0
JKG    Kaga                 3.28 340     P      Pn     07 52 25.0 -0.3
JKG                                      S      S      07 53 14.3 -0.5
MJAR   Matsushiro Arr       3.37   7     P      Pn     07 52 25.4 -0.9
       7.2nm,0.3s,baz=187,slow=10,SNR=1163
MJAR                                     S      S      07 53 14.7 -1.8
       1.3nm,0.3s,baz=191,slow=18,SNR=5.9
MAJO   Matsushiro           3.38   7    ePn     Pn     07 52 25.4 -0.9
MAJO                                     eS      S      07 53 14.7 -1.8
MAJO   Matsushiro           3.38   7d iP     Pn     07 52 25.4 -0.9
MAT    Matsushiro           3.38   7     P      Pn     07 52 25.6 -0.7
MAT                                      S      S      07 53 14.2 -2.3
MAT    Matsushiro           3.38   7     P      Pn     07 52 25.3 -1.0
MAT                                      eS      S      07 53 14.0 -2.5
MJB9   Matsu-Tunnel         3.38   7    ePn     Pn     07 52 25.6 -0.7
JAG    Ashikaga             3.54  24    ⇓P      Pn     07 52 25.5 -2.4
JAG                                      eS      S      07 53 14.7 -4.7
JTO    Tosashimizu          4.12 267    ⇑P      Pn     07 52 33.7 -0.1
JTO                                      eS      S      07 53 28.7 -1.5
JHS    Saijyo               4.21 297     P      Pn     07 52 34.6 -0.1
JHS                                      eS      S      07 53 30.7 -1.1
JNU    Nakatsue             5.72 271     P      Pn     07 52 51.6 +0.2
       3.2nm,0.3s,baz=104,slow=2.3,SNR=37
JNU    Nakatsue             5.72 271    ePn     Pn     07 52 51.0 -0.3
KSRS   Korea Array          9.05 301     P      Pn     07 53 31.2 +0.9
       1.1nm,0.3s,baz=113,slow=13,SNR=35
KS15   Wonju Array Si       9.07 301    eP      Pn     07 53 30.1 -0.5
ERM    Erimo                9.82  25    ePn     Pn     07 53 37.5 -2.0
ERM    Erimo                9.82  25d eP     Pn     07 53 37.9 -1.6
ERM                                      pmax    pmax
       comp=Z,62nm,0.8s
JOW    Kunigami            10.33 235     P      Pn     07 53 45.4 -0.5
       comp=Z,0.5nm,0.3s,baz=98,slow=16,SNR=13
JOW    Kunigami            10.33 235    eP      Pn     07 53 43.6 -2.3
MSHR   Mys Shultsa         10.70 333    i P     Pn     07 53 49.3 -0.8
ASAJ   Asahikawa           11.56  18     P      Pn     07 53 58.7 -1.7
       comp=Z,5.7nm,0.3s,baz=221,slow=12,SNR=27
ASAJ                                     S      S      07 56 03.8 -5.6
       comp=Z,1.4nm,0.3s,baz=107,slow=33,SNR=6.3
USRK   Ussuriysk Ar.       11.86 340     P      Pn     07 54 03.7 -0.2
       comp=Z,1.0nm,0.3s,baz=148,slow=10,SNR=17
TEY    Ternei              11.86 356⇓  eP      P      07 54 04.2 +0.2
TEY                                      pmax    pmax
       comp=Z,10.0nm,1.3s
GRPR   Tuman               12.49  28d iP     Pn     07 54 11.3 -0.1
GRPR                                     eS      S      07 56 25.2 -4.1
GRPR                                     pmax    pmax
       comp=Z,83nm,0.9s
LAGR   Lagunnoye           12.55  28d iP     Pn     07 54 12.9 +0.8
LAGR                                     i S     S      07 56 28.1 -2.4
LAGR                                     pmax    pmax
       comp=Z,174nm,0.6s
YUK    Yuzh-Kuril'sk       12.56  28    eP      Pn     07 54 12.4 +0.2
YUK                                      i S     S      07 56 27.2 -3.5
YUK                                      pmax    pmax
       comp=Z,91nm,1.0s
YUK                                      pmax    pmax
       comp=N,50nm,0.9s
YUK                                      pmax    pmax
       comp=E,39nm,0.4s
YSS    Yuzh-Sakhalins      14.28  14    eP      P      07 54 31.0 +0.3
YSS                                      eS      S      07 57 10.0 +4.5
YSS    Yuzh-Sakhalins      14.28  14    eP      P      07 54 31.0 +0.3
YSS                                      eS      S      07 57 10.0 +4.5
KUR    Kuril'sk            14.37  30    eP      Pn     07 54 34.9 +1.5
KUR                                      eS      S      07 57 14.3 +7.0
KUR                                      pmax    pmax
       comp=Z,34nm,0.9s
KUR                                      smax    smax
       comp=N,25nm,0.4s
KUR                                      smax    smax
       comp=E,33nm,0.4s
KLR    Kul'dur             16.63 346     P      P      07 54 55.5 -0.7
       comp=E,1.3nm,0.3s,baz=157,slow=8.4,SNR=23
KLR    Kul'dur             16.63 346c iP     P      07 54 55.2 -1.0
ZEA    Zeya                21.85 343    eP      P      07 55 48.8 -0.1
ZEA                                      pmax    pmax
       comp=Z,26nm,0.8s
PETK   Petropavlovsk-      24.54  30     P      P      07 56 13.9 +0.7
       comp=Z,2.1nm,0.6s,baz=222,slow=2.0,SNR=5.5
PEA1   Petropavlovsk-      24.54  30    eP      P      07 56 13.8 +0.7
ULN    Ulaanbaatar         27.30 312ceP     P      07 56 39.1 +1.0
ULN                                      pmax    pmax
       comp=Z,3.0nm,0.7s
SONA0  Songino Array       27.71 311    eP      P      07 56 42.3 +0.7
SONM   Songino Array       27.71 311     P      P      07 56 42.3 +0.7
       comp=Z,2.3nm,0.7s,baz=111,slow=7.9,SNR=7.8
MA2    Magadan             27.79  14     P      P      07 56 41.6 -0.4
       comp=Z,13nm,0.6s,baz=197,slow=10,SNR=6.7
MA2    Magadan             27.79  14    i P     P      07 56 42.3 +0.3
MA2                                      pmax    pmax
       comp=Z,12nm,0.7s
YAK    Yakutsk             29.32 352    i P     P      07 56 55.0 -0.4
YAK                                      pmax    pmax
       comp=Z,11nm,0.9s
SEY    Seymchan            31.18  13     P      P      07 57 12.2 +0.6
       comp=Z,6.7nm,0.7s,baz=181,slow=6.4,SNR=12
SEY    Seymchan            31.18  13    i P     P      07 57 12.4 +0.7
NONG   Nongkai             34.41 253     P      P      07 57 40.0 -0.1
       comp=Z,0.6nm,0.8s
CHAI   Chaiyaphum          36.53 251     P      P      07 57 57.3 -0.6
       comp=Z,48µm,0.8s,comp=Z,607µm
UTTA   Uttaradit           36.67 254     P      P      07 57 58.8 -0.3
       comp=Z,34µm,0.7s
PBKT   Sadao Pong          36.97 252     P      P      07 58 01.5 -0.1
       comp=Z,7.4nm,0.8s,comp=Z,4µm
CMAR   Chiang Mai Arr      37.61 257     P      P      07 58 06.7 -0.2
       comp=Z,4.0nm,0.5s,baz=47,slow=7.8,SNR=17
BILL   Bilibino            38.58  17d iP     P      07 58 15.5 +1.3
BILL                                     e*PP    pP     07 59 25.2 +3.4
BILL                                     e              07 59 49.7
BILL                                     i SS    ScS    08 07 51.9 +7.6
BILL                                     pmax    pmax
       comp=Z,18nm,0.5s
TIXI   Tiksi               38.81 356    i P     P      07 58 15.3 -0.8
TIXI                                     pmax    pmax
       comp=Z,8.0nm,0.6s
KSM    Kuching             40.69 225    eP      P      07 58 31.8 -0.4
       comp=Z,16nm,0.6s
ZAA0   Zalesovo Array      42.39 316    eP      P      07 58 44.8 -0.5
       comp=Z,8.1nm,1.4s
ZALV   Zalesovo Beam       42.39 316     P      P      07 58 45.0 -0.3
       comp=Z,1.4nm,0.3s,baz=99,slow=6.5,SNR=9.2
ZALV                                     PcP     PcP    08 00 30.7 -0.6
       comp=Z,5.5nm,0.6s,baz=104,slow=2.6,SNR=20
ZALV                                     ScP     ScP    08 03 47.1 -1.3
       comp=Z,0.7nm,0.2s,baz=113,slow=3.7,SNR=4.8
ZAA1   Zalesovo Array      42.39 316    eP      P      07 58 45.0 -0.3
MK31   Makanchi Array      43.70 305    eP      P      07 58 55.3 -0.6
       comp=Z,1.4nm,0.8s
MK31   Makanchi Array      43.70 305    eP      P      07 58 55.3 -0.6
MK32   Makanchi Array      43.70 305    eP      P      07 58 55.8 -0.2
MKAR   Makanchi Array      43.70 305     P      P      07 58 55.8 -0.2
       comp=Z,1.9nm,0.4s,baz=86,slow=9.8,SNR=44
MKAR                                     PcP     PcP    08 00 35.7 -0.3
       comp=Z,1.2nm,0.3s,baz=86,slow=7.3,SNR=14
MKAR                                     ScP     ScP    08 03 53.1 -0.9
       comp=Z,1.2nm,0.8s,baz=103,slow=2.9,SNR=5.9
MAKZ   Makanchi            43.91 305    eP      P      07 58 56.6 -1.0
       comp=Z,4.7nm,0.3s
MAKZ   Makanchi            43.91 305    eP      P      07 58 56.6 -1.0
MAKZ                                     pmax    pmax
       comp=Z,5.0nm,0.3s
JIRN   Jiri                44.39 277    eP      P      07 59 02.2 +0.2
       comp=Z,91nm,0.4s
GUN    Gumba               44.56 278    eP      P      07 59 04.0 +0.6
       comp=Z,13nm,0.3s
PKI    Pulchoki            45.07 277    eP      P      07 59 07.1 -0.2
       comp=Z,8.7nm,0.5s
PKIN   Phulchoki           45.08 277    eP      P      07 59 07.2 -0.1
       comp=Z,9.0nm,0.4s
GKN    Gorkha              45.57 278    eP      P      07 59 11.1 +0.2
       comp=Z,9.7nm,0.3s
KURK   Kurchatov           46.01 311    eP      P      07 59 13.2 -0.6
       comp=Z,8.7nm,0.6s
KURK   Kurchatov           46.01 311    eP      P      07 59 13.3 -0.6
KURK                                     pmax    pmax
       comp=Z,9.0nm,0.6s
DANN   Dangsing            46.17 279    eP      P      07 59 16.4 +0.6
       comp=Z,21nm,0.4s
MTN    Manton Dam          46.20 189    eP      P      07 59 14.3 -1.3
       comp=Z,21nm,0.6s
KOLN   Koldanda            46.51 278    eP      P      07 59 18.4 +0.1
       comp=Z,7.4nm,0.2s
BRVK   Borovoye            51.04 314ceP     P      07 59 52.4 +0.7
BRVK                                     pmax    pmax
       comp=Z,3.0nm,0.8s
RSO    Redoubt South       51.80  36    eP      P      07 59 58.9 +1.4
PPLA   Purkeypile          52.05  33    eP      P      08 00 00.4 +1.2
       comp=Z,8.8nm,0.7s
KK31   Karatay Array       52.48 302    eP      P      08 00 01.7 -0.8
       comp=Z,4.8nm,1.0s
KK31   Karatay Array       52.48 302    eP      P      08 00 01.7 -0.8
KK31                                     pmax    pmax
       comp=Z,5.0nm,1.0s
KKAR   Karatay Array       52.48 302    eP      P      08 00 02.4 -0.1
       comp=Z,4.8nm,1.0s
KKAR   Karatay Array       52.48 302    eP      P      08 00 02.4 -0.1
KKAR                                     pmax    pmax
       comp=Z,5.0nm,1.0s
BPAW   Bear Paw Mtn.       52.60  32    eP      P      07 59 60.0 -3.0
       comp=Z,7.8nm,1.0s
WRAB   Tennant Creek       52.92 184ceP     P      08 00 05.8  0.0
WRAB                                     pmax    pmax
       comp=Z,12nm,0.7s
WB2    Warramunga Arr      52.93 184    eP      P      08 00 05.9 +0.1
       comp=Z,18nm,0.8s
WR1    Warramunga Arr      52.93 184    eP      P      08 00 05.4 -0.5
WRA    Warramunga Arr      52.93 184     P      P      08 00 05.4 -0.5
       comp=Z,11nm,0.3s,baz=358,slow=8.8,SNR=227
RC01   Rabbit Creek A      53.26  35    eP      P      08 00 08.3 +0.6
       comp=Z,8.0nm,0.8s
TOLK   Toolik Lake Re      53.27  26     P      P      08 00 09.2 +1.4
       baz=268
PMR    Palmer              53.52  35    eP      P      08 00 09.3 -0.3
       comp=Z,7.2nm,0.6s
PMR    Palmer              53.52  35    eP      P      08 00 09.3 -0.3
PMR                                      pmax    pmax
       comp=Z,7.0nm,0.6s
RND    Reindeer            53.56  32    eP      P      08 00 10.7 +0.7
       comp=Z,19nm,0.7s
RND    Reindeer            53.56  32    eP      P      08 00 10.7 +0.7
RND                                      pmax    pmax
       comp=Z,19nm,0.7s
MDM    Murphy Dome         53.78  30    eP      P      08 00 12.2 +0.7
       comp=Z,19nm,0.7s
KNK    Knik Glacier        53.85  35    eP      P      08 00 12.9 +0.8
       comp=Z,16nm,0.8s
SML    Sawmill             53.89  34    eP      P      08 00 13.0 +0.6
       comp=Z,29nm,1.2s
SML    Sawmill             53.89  34    eP      P      08 00 13.0 +0.6
SML                                      pmax    pmax
       comp=Z,29nm,1.2s
TCOL   CIGO, UAF Yank      53.94  31     P      P      08 00 14.1 +1.6
       baz=272
COLA   College             53.94  31    eP      P      08 00 13.8 +1.3
       comp=Z,10.0nm,0.8s
COLA   College             53.94  31d iP     P      08 00 13.9 +1.3
COLA                                     pmax    pmax
       comp=Z,8.0nm,0.9s
CCB    Clear Creek Bu      53.97  31    eP      P      08 00 13.6 +0.7
       comp=Z,4.9nm,0.4s
POKR   Poker Plat Res      54.11  30     P      P      08 00 15.6 +1.7
       baz=272,SNR=7.9
DHY    Denali Highway      54.24  33    ePcP    PcP    08 01 09.3 -5.1
HDA    Harding Lake        54.35  31    eP      P      08 00 15.6  0.0
       comp=Z,17nm,1.0s
HDA    Harding Lake        54.35  31     P      P      08 00 15.6  0.0
       baz=273,SNR=13
ILAR   Eielson Array       54.36  31     P      P      08 00 15.7  0.0
       comp=Z,5.6nm,0.7s,baz=282,slow=5.5,SNR=64
ILAR                                     PcP     PcP    08 01 13.9 -0.6
       comp=Z,0.6nm,0.5s,baz=273,slow=3.7,SNR=3.1
ILB    Eielson Array       54.36  31    eP      P      08 00 15.4 -0.3
       comp=Z,5.4nm,0.6s
SCM    Sheep Creek Mo      54.36  34    eP      P      08 00 16.4 +0.6
       comp=Z,21nm,0.8s
SCM    Sheep Creek Mo      54.36  34    eP      P      08 00 16.4 +0.6
SCM                                      pmax    pmax
       comp=Z,21nm,0.8s
FYU    Fort Yukon          54.95  28    eP      P      08 00 21.6 +1.8
       comp=Z,17nm,1.4s
DOT    Dot Lake            55.68  32    eP      P      08 00 25.6 +0.5
       comp=Z,17nm,0.6s
MENT   Mentasta            55.92  33    eP      P      08 00 27.5 +0.8
       comp=Z,21nm,0.6s
AS31   Alice Springs       56.65 184    eP      P      08 00 32.5 +0.2
       comp=Z,7.2nm,0.4s
ASAR   Alice Springs       56.65 184     P      P      08 00 32.6 +0.3
       comp=Z,8.4nm,0.5s,baz=16,slow=12,SNR=114
ASAR                                     PcP     PcP    08 01 24.6 +0.5
       comp=Z,0.8nm,0.5s,baz=12,slow=5.1,SNR=2.9
EGAK   Eagle               56.80  30    eP      P      08 00 33.1 +0.3
       comp=Z,5.8nm,0.6s
ARU    Arti                57.26 320    eP      P      08 00 35.4 -0.7
       comp=Z,8.3nm,0.4s
ARU    Arti                57.26 320c iP     P      08 00 35.5 -0.7
ARU                                      S      S      08 08 04.3  0.0
ARU                                      pmax    pmax
       comp=Z,4.0nm,0.5s
DAWY   Dawson              57.67  31    eP      P      08 00 39.4 +0.5
       comp=Z,3.3nm,0.6s
ABKAR  Akbulak array       58.12 311    eP      P      08 00 41.6 -0.6
       comp=Z,5.4nm,0.4s
EPYK   Eagle Plains        58.36  28    eP      P      08 00 44.8 +1.2
       comp=Z,32nm,1.1s
EPYK   Eagle Plains        58.36  28     P      P      08 00 45.0 +1.4
       baz=281
INK    Inuvik              59.18  26    eP      P      08 00 49.7 +0.6
       comp=Z,7.4nm,0.6s
INK    Inuvik              59.18  26    eP      P      08 00 49.7 +0.6
INK                                      pmax    pmax
       comp=Z,7.0nm,0.6s
HYT    Haines Junctio      59.19  35    eP      P      08 00 50.7 +1.2
       comp=Z,6.2nm,0.8s
PRGR   Permogore           62.34 327    eP      P      08 01 08.9 -1.4
PRGR                                     pmax    pmax
       comp=Z,8.0nm,0.5s
DLBC   Dease Lake          63.52  36    eP      P      08 01 19.1 +0.8
       comp=Z,8.0nm,1.1s
STKA   Stephens Creek      64.82 176     P      P      08 01 27.3 +0.6
       comp=Z,0.8nm,0.3s,baz=348,slow=4.7,SNR=4.3
STKA   Stephens Creek      64.82 176    eP      P      08 01 26.9 +0.2
       comp=Z,0.3nm,0.8s
STKA   Stephens Creek      64.82 176    eP      P      08 01 26.9 +0.2
HAMF   Hammerfest          66.43 341    eP      P      08 01 35.1 -1.3
ARA0   ARCESS Array S      66.51 339    eP      P      08 01 37.1 +0.1
ARCES  ARCESS Array B      66.51 339     P      P      08 01 37.1 +0.1
       comp=Z,9.4nm,0.5s,baz=68,slow=8.9,SNR=146
ARE0   ARCESS Array S      66.51 339    eP      P      08 01 37.3 +0.3
KTK1   Kautokeino          67.47 339    eP      P      08 01 43.4 +0.4
TRO    Tromso              68.34 341    eP      P      08 01 48.2 -0.1
NWAO   Narrogin (SRO)      68.53 198     P      P      08 01 49.8 -0.2
       comp=Z,9.1nm,0.5s,baz=25,slow=9.0,SNR=7.7
YKW3   Yellowknife Ar      68.61  28    eP      P      08 01 50.1  0.0
       comp=Z,7.0nm,1.2s
YKA    Yellowknife Ar      68.65  28     P      P      08 01 50.4 +0.1
       comp=Z,2.2nm,0.5s,baz=302,slow=6.0,SNR=60
YKB5   Yellowknife Ar      68.65  28    eP      P      08 01 50.4 +0.1
STEI   Steigen             70.47 340    eP      P      08 02 01.1 -0.1
FIA0   FINESS Array S      70.77 332    eP      P      08 02 02.7 -0.5
FIA0   FINESS Array S      70.77 332    eP      P      08 02 02.7 -0.5
FINES  FINESS Array B      70.77 332     P      P      08 02 02.7 -0.5
       comp=Z,6.0nm,0.5s,baz=57,slow=5.5,SNR=73
KBZ    Khabaz              71.07 310     P      P      08 02 05.6 +0.3
       comp=Z,4.4nm,0.7s,baz=63,slow=3.4,SNR=12
KIV    Kislovodsk          71.10 310    eP      P      08 02 05.5 -0.1
KIV                                      pmax    pmax
       comp=Z,26nm,1.1s
LLLB   Lillooet            71.14  41    eP      P      08 02 06.5 +0.8
       comp=Z,11nm,0.9s
MOR8   Moi Rana            71.88 339    eP      P      08 02 08.3 -1.4
D03D   Eldon               71.96  45     P      P      08 02 12.4 +1.9
       baz=300
KONS   Konsvik             72.05 340    eP      P      08 02 11.2 +0.5
B05A   Bryant              72.18  44     P      P      08 02 13.1 +1.4
       baz=300
E04D   Cinebar             72.76  45     P      P      08 02 16.7 +1.5
       baz=300
H04D   Lebanon             73.68  47     P      P      08 02 22.1 +1.6
       baz=301
I03D   Drain, OR           73.72  48     P      P      08 02 22.7 +1.9
       baz=300
NSS    Namsos              73.77 339    eP      P      08 02 21.0 +0.3
K02D   Willamette Mer      74.03  49     P      P      08 02 23.4 +0.7
       baz=300
G05D   Wamic, OR           74.18  46     P      P      08 02 24.8 +1.3
       baz=301
SUMG   Summit              74.49 359    eP      P      08 02 25.1 -0.1
       comp=Z,12nm,0.6s
SUMG   Summit              74.49 359    i P     P      08 02 26.2 +1.0
SUMG                                     pmax    pmax
       comp=Z,28nm,0.7s
SUMG   Summit              74.49 359    i P     P      08 02 26.2 +1.0
       comp=Z,28nm,0.7s
C09A   Chrisman Ranch      74.62  43    eP      P      08 02 26.6 +0.6
       comp=Z,6.0nm,0.6s
I05D   Terrebonne, OR      74.63  47     P      P      08 02 27.3 +1.2
       baz=302
D08A   Wollman Farm,       74.64  44    eP      P      08 02 26.4 +0.4
       comp=Z,5.9nm,0.9s
J04D   Umpqua Nationa      74.73  48     P      P      08 02 28.3 +1.4
       baz=301
NEW    Newport             75.02  42    eP      P      08 02 28.9 +0.7
       comp=Z,4.2nm,0.8s
NEW    Newport             75.02  42    eP      P      08 02 28.9 +0.7
NEW                                      pmax    pmax
       comp=Z,4.0nm,0.8s
NEW    Newport             75.02  42     P      P      08 02 29.0 +0.7
       baz=303
L04D   Klamath Falls       75.14  49     P      P      08 02 30.3 +1.1
       baz=301
PINE   Pine Mountain       75.17  47    eP      P      08 02 30.9 +1.6
       comp=Z,17nm,0.8s
M02C   Callahan            75.21  50     P      P      08 02 31.0 +1.5
       baz=301
J05D   Fort Rock, OR       75.25  48     P      P      08 02 31.3 +1.6
       baz=302
AKASG  Malin Array Be      75.43 321     P      P      08 02 29.8 -0.7
       comp=Z,4.3nm,0.4s,baz=51,slow=6.2,SNR=19
AKASG  Malin Array Be      75.43 321ceP     P      08 02 29.7 -0.7
AKASG                                    pmax    pmax
       comp=Z,3.0nm,0.3s
AKBB   Malin Array Si      75.43 321    eP      P      08 02 29.4 -1.1
       comp=Z,7.7nm,0.4s
AKBB   Malin Array Si      75.43 321    eP      P      08 02 29.4 -1.1
AKBB                                     pmax    pmax
       comp=Z,8.0nm,0.4s
N02D   Trinity Center      75.53  50     P      P      08 02 32.1 +0.8
       baz=302
M04C   Macdoel             75.66  49     P      P      08 02 33.4 +1.3
       baz=302
O02D   Mt. Diablo Mer      75.89  51     P      P      08 02 34.8 +1.5
       baz=302
F10A   Beach Ranch, E      76.21  44    eP      P      08 02 35.5 +0.5
       comp=Z,7.0nm,1.4s
NC405  NORSAR Array S      76.29 336    eP      P      08 02 34.4 -0.7
       comp=Z,45nm,1.5s
WALA   Waterton Lakes      76.33  40    eP      P      08 02 36.0 +0.3
       comp=Z,6.1nm,0.8s
O03E   Paynes Creek        76.47  51     P      P      08 02 36.9 +0.4
       baz=302
DOMB   Dombas              76.48 338    eP      P      08 02 36.0 -0.2
NC204  NORSAR Array S      76.49 337    eP      P      08 02 36.2 -0.1
       comp=Z,22nm,1.0s
NB2    NORSAR Subarra      76.51 336     P      P      08 02 35.5 -0.8
       comp=Z,1.7nm,0.5s,baz=44,slow=5.6
NB2    NORSAR Subarra      76.51 336     P      P      08 02 35.5 -0.8
       baz=44,slow=5.6
NB200  NORSAR Array S      76.51 336    eP      P      08 02 35.9 -0.4
NOA    NORSAR Array B      76.51 336     P      P      08 02 35.9 -0.4
       comp=Z,3.2nm,0.5s,baz=55,slow=6.5,SNR=22
MOL    Molde               76.56 339    eP      P      08 02 36.0 -0.5
NC602  NORSAR Array S      76.62 336    eP      P      08 02 36.2 -0.7
BMO    Blue Mountains      76.79  45    eP      P      08 02 39.4 +1.1
       comp=Z,4.7nm,0.9s
BMO    Blue Mountains      76.79  45    eP      P      08 02 39.4 +1.1
BMO                                      pmax    pmax
       comp=Z,5.0nm,0.9s
J08A   Circle Bar Ran      76.91  47    eP      P      08 02 40.0 +1.0
       comp=Z,8.7nm,0.6s
AKN    Aaknes              77.02 339    eP      P      08 02 39.6 +0.4
WVOR   Wild Horse Val      77.32  48    eP      P      08 02 41.7 +0.4
       comp=Z,3.0nm,0.6s
WVOR   Wild Horse Val      77.32  48    eP      P      08 02 41.7 +0.4
WVOR                                     pmax    pmax
       comp=Z,3.0nm,0.6s
MSO    Missoula            77.60  42     P      P      08 02 43.1 +0.3
       baz=306
BEKR   Beckworth           77.63  50    eP      P      08 02 43.4 +0.3
       comp=Z,8.2nm,0.8s
SKAR   Skarslia            77.74 337    eP      P      08 02 43.3 +0.1
HYA    Hoyanger            78.05 338    eP      P      08 02 44.9 +0.2
MFID   Camas Ranch         78.48  45    eP      P      08 02 48.5 +0.9
       comp=Z,2.7nm,0.6s
PNTR   Pine Nut            78.55  51    eP      P      08 02 49.1 +0.9
       comp=Z,7.5nm,1.0s
FFC    Flin Flon           78.57  31ceP     P      08 02 48.5 +0.8
CMB    Columbia Colle      78.61  52    eP      P      08 02 47.5 -0.8
       comp=Z,3.0nm,0.6s
CMB    Columbia Colle      78.61  52    eP      P      08 02 47.5 -0.8
CMB                                      pmax    pmax
       comp=Z,3.0nm,0.6s
YERR   Yerington           78.84  51    eP      P      08 02 49.8 +0.1
       comp=Z,9.5nm,1.1s
HRY    Holter Researc      78.84  41    eP      P      08 02 49.7 +0.2
ASK    Askoy               78.89 338    eP      P      08 02 49.5 +0.3
BER    Bergen              78.92 338    eP      P      08 02 49.7 +0.3
LRM    Limekiln Ridge      79.03  42    eP      P      08 02 51.7 +1.0
BR101  Keskin Array S      79.06 310    eP      P      08 02 51.2 +0.3
BR131  Keskin Array S      79.06 310    eP      P      08 02 50.7 -0.2
       comp=Z,4.4nm,0.8s
BRTR   Keskin Array B      79.06 310     P      P      08 02 51.2 +0.3
       comp=Z,3.7nm,0.7s,baz=112,slow=4.7,SNR=21
EGMT   Eagleton            79.17  39    eP      P      08 02 51.9 +0.7
       comp=Z,6.9nm,0.9s
EGMT   Eagleton            79.17  39     P      P      08 02 51.9 +0.7
       baz=308
HLID   Hailey              79.23  45    eP      P      08 02 52.6 +0.9
       comp=Z,2.7nm,0.9s
HLID   Hailey              79.23  45     P      P      08 02 52.9 +1.1
       baz=306
RAYN   Ar Rayn             79.24 291    eP      P      08 02 51.7 -0.2
       comp=Z,4.9nm,0.8s
RAYN   Ar Rayn             79.24 291    eP      P      08 02 51.7 -0.2
RAYN                                     pmax    pmax
       comp=Z,5.0nm,0.8s
BLS5   Blasjo              79.30 337    eP      P      08 02 50.7 -0.9
BUR08  Bucovina Ar. S      79.37 321    eP      P      08 02 52.4 +0.1
       comp=Z,3.3nm,0.8s
RYN    Ryan                79.50  51    eP      P      08 02 53.0 -0.3
       comp=Z,3.3nm,0.7s
KVN    Kaiserville         79.54  50    eP      P      08 02 54.4 +1.0
       comp=Z,6.0nm,0.7s
BOZ    Bozeman (W)         79.63  42    eP      P      08 02 53.8  0.0
       comp=Z,3.0nm,0.6s
BOZ    Bozeman (W)         79.63  42    eP      P      08 02 53.8  0.0
BOZ                                      pmax    pmax
       comp=Z,3.0nm,0.6s
BOZ    Bozeman (W)         79.63  42     P      P      08 02 54.5 +0.7
       baz=307,SNR=7.6
NV01   Mina Array Sit      79.75  51    eP      P      08 02 55.6 +0.9
NVAR   Mina Array Bea      79.75  51     P      P      08 02 55.6 +0.9
       comp=Z,2.3nm,0.6s,baz=295,slow=5.3,SNR=21
ELK    Elko                80.37  47    eP      P      08 02 58.0 +0.1
       comp=Z,2.1nm,0.5s
ELK    Elko                80.37  47    eP      P      08 02 58.0 +0.1
ELK                                      pmax    pmax
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	comp=Z,2.0nm,0.5s						
YHH	Holmes Hill	80.56	42	*e*P	P	08 02 59.1	+0.2
	comp=Z,2.3nm,1.0s						
GCMT	Greycliff	80.60	41	*e*P	P	08 02 58.8	-0.2
VES	Vestal, Richgr	80.69	53	P	P	08 02 59.3	-0.1
	baz=304						
PKM	Mcpherson Peak	80.73	54	P	P	08 03 00.6	+0.8
	baz=304						
YPP	Pitchstone Pla	80.90	43	*e*P	P	08 03 02.6	+1.8
	comp=Z,2.4nm,0.9s						
H17A	Grant Village	80.95	42	*e*P	P	08 03 02.9	+1.9
	comp=Z,8.1nm,0.8s						
H17A	Grant Village	80.95	42	P	P	08 03 03.7	+2.8
	baz=308,SNR=9.2						
GRAC	Grapevine Rang	81.18	52	P	P	08 03 03.0	+1.0
	baz=305						
RLMT	Red Lodge	81.23	41	*e*P	P	08 03 01.3	-1.0
	comp=Z,2.8nm,0.6s						
RLMT	Red Lodge	81.23	41	P	P	08 03 03.4	+1.1
	baz=309						
HVU	Hansel Valley	81.26	45	*e*P	P	08 03 03.6	+1.2
	comp=Z,4.9nm,0.6s						
HVU	Hansel Valley	81.26	45	*e*P	P	08 03 03.7	+1.2
HVU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
R11A	Troy Canyon, C	81.55	50	*e*P	P	08 03 04.3	+0.3
	comp=Z,3.1nm,0.6s						
R11A	Troy Canyon, C	81.55	50	P	P	08 03 04.9	+0.8
	baz=306,SNR=11						
MPMC	Manual Prospec	81.63	52	P	P	08 03 05.2	+0.6
	baz=305						
DGMT	Dagmar	81.74	36	P	P	08 03 04.9	+0.2
	baz=312						
FURC	Furnace Creek,	81.81	52	P	P	08 03 06.2	+1.0
	baz=305						
LRMC	Laurel Mtn Rad	81.84	53	P	P	08 03 06.2	+0.7
	baz=305						
MORC	Moravsky Berou	81.85	326	*e*P	P	08 03 05.0	-0.2
	comp=Z,4.0nm,0.9s						
MORC	Moravsky Berou	81.85	326	*e*P	P	08 03 05.0	-0.2
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORC	Moravsky Berou	81.85	326	*e*P	P	08 03 05.2	0.0
LAO	LASA Array	81.87	39	P	P	08 03 06.0	+0.6
	baz=311						
OSTC	Ostas	81.94	327	*e*P	P	08 03 07.0	+1.4
TPNV	Topopah Spring	81.94	51	*e*P	P	08 03 06.3	+0.2
	comp=Z,4.5nm,0.7s						
TPNV	Topopah Spring	81.94	51	*e*P	P	08 03 06.3	+0.2
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TPNV	Topopah Spring	81.94	51	P	P	08 03 06.7	+0.6
	baz=306,SNR=6.2						
EDW2	Edwards Air Fo	81.97	54	P	P	08 03 06.8	+0.6
	baz=305						
DPC	Dobruska-Polom	82.03	326	*e*P	P	08 03 06.5	+0.3
DPC	Dobruska-Polom	82.03	326	*e*P	P	08 03 06.5	+0.3
UPC	Upice	82.06	327	*e*P	P	08 03 06.3	0.0
UPC	Upice	82.06	327	*e*P	P	08 03 06.3	0.0
HWUT	Hardware Ranch	82.09	45	*e*P	P	08 03 07.5	+0.7
VYHS	Vyhne	82.09	324	*e*P	P	08 03 06.7	+0.2
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VYHS	Vyhne	82.09	324	*e*P	P	08 03 06.7	+0.2
DUG	Dugway, Tooele	82.19	47	*e*P	P	08 03 07.5	+0.2
	comp=Z,7.0nm,1.1s						
DUG	Dugway, Tooele	82.19	47	*e*P	P	08 03 07.5	+0.2
DUG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DUG	Dugway, Tooele	82.19	47	P	P	08 03 08.5	+1.2
	baz=307,SNR=7.1						
JAVC	Velka Javorina	82.42	325	*e*P	P	08 03 09.1	+0.9
GSC	Goldstone, Bar	82.52	53	P	P	08 03 09.6	+0.5
	baz=306						
BW06	Boulder Array	82.54	43	*e*P	P	08 03 09.4	+0.2
	comp=Z,2.7nm,0.8s						
BW06	Boulder Array	82.54	43	P	P	08 03 09.4	+0.2
	baz=309,SNR=5.1						
PD31	Pinedale Array	82.54	43	*e*P	P	08 03 09.7	+0.5
PDAR	Pinedale Array	82.54	43	P	P	08 03 09.7	+0.5
	comp=Z,1.9nm,0.7s,baz=277,slow=3.5,SNR=22						
VRAC	Vranov	82.62	326	*e*P	P	08 03 09.2	0.0
PVCC	Panska Ves	82.71	327	*e*P	P	08 03 09.8	+0.2
PVCC	Panska Ves	82.71	327	*e*P	P	08 03 09.8	+0.2
BRG	Berggiesshubel	82.75	328	*i* PKP	P	08 03 09.5	-0.2
	comp=Z,5.7nm,0.8s						
BRG	Berggiesshubel	82.75	328	*i* P	P	08 03 09.5	-0.2
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NLU	North Lily Min	82.79	47	*e*P	P	08 03 11.1	+0.6
	comp=Z,15nm,1.3s						
CLL	Collm	82.85	329	*e*P	P	08 03 09.3	-0.9
	comp=Z,8.9nm,0.8s						
CLL	Collm	82.85	329	*i* P	P	08 03 09.9	-0.3
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	Collm	82.85	329	*i* P	P	08 03 09.9	-0.3
	comp=Z,9.0nm,0.8s						
KRUC	Moravsky	82.89	326	*e*P	P	08 03 10.2	-0.3
SHPR	Sheep Range	82.91	51	*e*P	P	08 03 10.8	-0.3
	comp=Z,2.6nm,0.8s						
MODS	Modra-Piesok	82.94	325	*e*P	P	08 03 09.8	-1.0
MODS	Modra-Piesok	82.94	325	*e*P	P	08 03 09.8	-1.0
MPU	Maple Canyon	83.02	46	*e*P	P	08 03 10.4	-1.3
	comp=Z,4.9nm,0.8s						
GOPC	GO Pecny, Ondr	83.04	327	*e*P	P	08 03 11.3	0.0
GOPC	GO Pecny, Ondr	83.04	327	*e*P	P	08 03 11.3	0.0
PRU	Pruhonice	83.10	327	*e*P	P	08 03 11.7	+0.1
PRU	Pruhonice	83.10	327	*e*P	P	08 03 11.7	+0.1
GMRC	Granite Mounta	83.59	53	P	P	08 03 15.1	+0.6
	baz=306						
TMUT	Trail Mountain	83.72	47	*e*P	P	08 03 15.0	-0.3
	comp=Z,2.5nm,0.8s						
PFO	Pinyon Flats O	83.74	54	*e*P	P	08 03 14.4	-0.9
	comp=Z,7.2nm,0.9s						
PFO	Pinyon Flats O	83.74	54	*e*P	P	08 03 14.4	-0.9
PFO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PFO	Pinyon Flats O	83.74	54	P	P	08 03 15.7	+0.4
	baz=306,SNR=6.0						
BELC	Belle Mtn. Jos	83.82	53	P	P	08 03 15.7	0.0
	baz=306,SNR=5.7						
LCMT	Little Creek M	83.84	50	*e*P	P	08 03 15.9	+0.1
	comp=Z,4.9nm,1.1s						
NKC	Novy Kostel	83.87	328	*e*P	P	08 03 15.3	-0.2
NKC	Novy Kostel	83.87	328	*e*P	P	08 03 15.3	-0.2
MTPU	Mount Pierson	83.88	48	*e*P	P	08 03 16.8	+0.6
	comp=Z,3.4nm,0.8s						
P17A	Butcher Ranch,	83.89	46	*e*P	P	08 03 16.7	+0.7
	comp=Z,10nm,0.6s						
CONA	Conrad Observa	83.93	325	*e*PcP	P	08 03 16.2	+0.3
	comp=Z,3.6nm,0.7s						
KNB	Kanab	84.10	49	*e*P	P	08 03 17.1	0.0
	comp=Z,4.9nm,0.7s						
KHC	Kasperske Hory	84.15	327	*e*P	P	08 03 15.1	-1.8
	comp=Z,1.8nm,0.6s						
KHC	Kasperske Hory	84.15	327	*e*P	P	08 03 15.1	-1.8
KHC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KHC	Kasperske Hory	84.15	327	*e*P	P	08 03 16.7	-0.2
MONP2	Monument Peak	84.18	54	P	P	08 03 18.0	+0.4
	baz=306						
SRU	San Rafael Swe	84.25	47	*e*P	P	08 03 18.5	+0.7
	comp=Z,9.2nm,0.7s						
IRM	Iron Mountain	84.30	53	P	P	08 03 18.6	+0.7
	baz=306						
GEC2	GERESS Array S	84.30	327	*e*P	P	08 03 17.5	-0.3
	comp=Z,2.7nm,0.6s						
GEC2	GERESS Array S	84.30	327	*e*P	P	08 03 17.5	-0.3
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GERES	GERESS Array B	84.30	327	P	P	08 03 17.0	-0.7
	comp=Z,2.1nm,0.6s,baz=42,slow=6.0,SNR=22						
K22A	Casper	84.34	42	P	P	08 03 18.5	+0.4
	baz=311						
BC3	Big Chuckawall	84.39	53	P	P	08 03 19.1	+0.6
	baz=306						
IKP	In-Ko-Pah, Jac	84.54	54	P	P	08 03 19.8	+0.5
	baz=306						
ARSA	Arzberg	84.57	325	*e*PcP	P	08 03 19.3	+0.3
	comp=Z,0.5nm,0.4s						
U15A	North Rim	84.80	50	*e*P	P	08 03 21.5	+0.8
	comp=Z,2.6nm,0.7s						
PDMCI	Parker Dam,Lak	84.88	52	P	P	08 03 21.4	+0.6
	baz=307						
Y12C	Blythe	84.96	53	P	P	08 03 21.9	+0.7
	baz=307						
O20A	White River Ci	84.97	45	*e*P	P	08 03 21.5	+0.1
	comp=Z,3.5nm,0.8s						
O20A	White River Ci	84.97	45	P	P	08 03 22.0	+0.6
	baz=310						
GLA	Glamis	85.17	54	P	P	08 03 23.1	+0.8
	baz=307						
SOKA	Soboth	85.21	324	*e*PcP	P	08 03 22.2	-0.1
	comp=Z,1.8nm,0.5s						
PV21	Cone Mtn., Par	85.54	46	*e*P	P	08 03 24.4	+0.2
	comp=Z,4.2nm,0.7s						
PV22	Blue Mesa, Par	85.67	46	*e*P	P	08 03 24.6	-0.2
	comp=Z,6.0nm,1.2s						
PV12	Saucer Basin,	85.80	46	*e*P	P	08 03 26.4	+0.9
	comp=Z,4.1nm,0.8s						
PV03	Paradox Valley	85.81	46	*e*P	P	08 03 25.7	+0.2
	comp=Z,4.3nm,1.0s						
N23A	Red Feather La	85.81	43	P	P	08 03 26.9	+1.3
	baz=311						
AGMN	Agassiz Nation	85.82	33	P	P	08 03 24.9	-0.3
	baz=318						
MYKA	Terra Mystica	85.92	325	*e*PcP	P	08 03 25.1	-0.6
	comp=Z,1.1nm,0.4s						
ABTA	Abfaltersbach	86.37	326	*e*P	P	08 03 26.5	-1.4
	comp=Z,1.3nm,0.5s						
SQTA	Sankt Quirin	86.63	327	*e*PcP	P	08 03 28.3	-1.0
	comp=Z,1.8nm,0.5s						
RETA	Reutte	86.64	327	*e*P	P	08 03 27.9	-1.3
	comp=Z,2.4nm,0.5s						
SUSD	Miller	87.14	37	P	P	08 03 31.8	+0.2
	baz=316						
DAVA	Damuels	87.19	327	*e*PcP	P	08 03 31.3	-0.6
	comp=Z,2.9nm,0.5s						
S22A	4UR Ranch, Cre	87.35	46	P	P	08 03 34.0	+1.0
	baz=311						
FUORN	Ofenpass-Fuorn	87.51	327	*e*P	P	08 03 33.0	-0.5
	comp=Z,10nm,0.6s						
EYMN	Ely	88.00	31	P	P	08 03 35.9	+0.4
	baz=321						
TUE	Stuetta	88.04	327	*e*P	P	08 03 35.0	-1.0
	comp=Z,3.0nm,0.6s						
ECSD	EROS Data Cent	88.82	36	P	P	08 03 39.4	0.0
	baz=317						
C40A	Isle Royale Na	89.01	29	P	P	08 03 40.4	+0.2
	baz=322						
E38A	The Farm, Brul	89.01	31	P	P	08 03 39.6	-0.7
	baz=321						
T25A	Trinidad	89.20	45	P	P	08 03 42.1	+0.5
	baz=312						
SPMN	Marine on St.	89.52	33	P	P	08 03 42.7	+0.1
	baz=320						
G40A	Rib Lake	90.65	32	P	P	08 03 48.2	+0.3
	baz=322						
CBKS	Cedar Bluff	90.72	41	P	P	08 03 48.3	-0.1
	baz=315						
MATQ	Matagami	91.66	22	P	P	08 03 52.2	-0.3
	baz=331						
D46A	Sault St. Mari	91.88	27	P	P	08 03 53.5	0.0
	baz=326						
MNTX	Cornudas Mount	92.22	50	P	P	08 03 56.0	+0.6
	baz=312						
TX31	Lajitas Ar. Si	94.90	50	*e*P	P	08 04 05.7	-2.2
	comp=Z,1.6nm,0.8s						
LTX	Lajitas	94.90	50	*e*P	P	08 04 08.7	+0.8
LTX	Lajitas	94.90	50	*e*P	P	08 04 08.7	+0.8
TXAR	Lajitas Array	94.90	50	P	P	08 04 08.7	+0.8
	comp=Z,1.6nm,0.7s,baz=288,slow=2.6,SNR=24						
TOA1	Torodi Ar. Sit	117.67	310	*e*PKPdf	PKPdf	08 09 28.5	-1.5
TORD	Torodi Ar. Bea	117.68	310	PKP	PKPdf	08 09 28.5	-1.5
	comp=Z,0.8nm,0.5s,baz=33,slow=1.8,SNR=16						
BOSA	Boshof	122.75	255	PKP	PKPdf	08 09 39.0	-0.4
	comp=Z,2.6nm,0.8s,baz=304,slow=3.6,SNR=3.7						
DBIC	Dimbokro	126.76	311	PKP	PKPdf	08 09 47.0	-0.5
	comp=Z,2.3nm,0.4s,baz=19,slow=2.9,SNR=5.1						
DBIC	Dimbokro	126.76	311	*e*PKPdf	PKPdf	08 09 46.7	-0.8
DBIC	Dimbokro	126.76	311	*e*PKIKP	PKPdf	08 09 46.7	-0.8
LPAZ	La Paz	151.25	60	PKPbc	PKiKP	08 10 38.6	0.0
	comp=Z,2.5nm,0.6s,baz=355,slow=2.7,SNR=15						
USHA	Ushuaia	151.63	148	PKPbc	PKiKP	08 10 37.9	+0.4
	comp=Z,7.9nm,0.7s,baz=160,slow=1.4,SNR=8.7						

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*NEIC **21** 07:55:58.9±0.0, 41.°73S×174.°24E, h11km, ML4.0(WEL), After WEL.*

WEL 21 07:55:59.8, 42°S±3°×17°4E±°, h17km±4km, M4.3/23, ML4.4/4, ML4.2/23, MLv4.5/2, MLv4.0/23, Error ellipse: s-maj=0.0km s-min=0.0km az=139.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	192	P	Pb	07 56 03.9	+0.3
CMWZ				S	Sb	07 56 06.9	+0.9
BSWZ	Blackbirch Sta	0.29	254	P	Pb	07 56 06.5	0.0
BSWZ				S	Sb	07 56 11.4	+0.3
TUWZ	Tuamarina	0.31	312	P	Pb	07 56 06.9	0.0
TUWZ				S	Sb	07 56 12.0	+0.4
TCW	Tory Channel	0.43	3	P	Pb	07 56 08.9	0.0
SNZO	South Karori	0.48	47	*e*Pg	Pb	07 56 09.9	+0.2
SNZO				*e*Sg	Sg	07 56 13.4	-2.4
BHW	Baring Head	0.52	64	P	Pb	07 56 10.7	+0.2
PLWZ	Palliser	0.76	85	P	Pn	07 56 15.4	-0.4
PLWZ	Palliser	0.76	85	P	Pn	07 56 15.5	-0.3
NNZ	Nelson	0.78	303	P	Pg	07 56 15.0	0.0
MSWZ	Moikau Station	0.79	74	P	Pn	07 56 15.9	-0.2
MSWZ				S	Sn	07 56 28.9	+1.4
MSWZ	Moikau Station	0.79	74	P	Pn	07 56 15.7	-0.5
CAW	Cannon Point	0.81	50	P	Pg	07 56 16.0	+0.3
DUWZ	D'Urville Isla	0.87	344	P	Pn	07 56 17.4	+0.1
DUWZ				S	Sg	07 56 28.5	+0.3
PAWZ	Paruwai Farm	0.92	74	P	Pn	07 56 18.1	0.0
PAWZ	Paruwai Farm	0.92	74	P	Pn	07 56 18.1	+0.1
PAWZ				S	Sn	07 56 33.4	+2.4
KHZ	Kahutara	0.94	214	*e*Pg	Pn	07 56 18.7	+0.5
KHZ	Kahutara	0.94	214	P	Pn	07 56 18.7	+0.5
THZ	Tophouse	1.01	262	*e*Pg	Pg	07 56 19.4	0.0
THZ				*e*Sn	Sg	07 56 32.8	+0.1
THZ	Tophouse	1.01	262	P	Pn	07 56 19.2	0.0
MTW	Mount Morrison	1.06	64	P	Pg	07 56 20.2	-0.2
MTW	Mount Morrison	1.06	64	P	Pn	07 56 19.9	0.0
MTW				S	Sn	07 56 36.7	+2.4
OGWZ	Otaki Gorge	1.08	41	P	Pn	07 56 20.1	0.0
TRWZ	Traveller	1.11	78	P	Pb	07 56 20.2	-0.4
TRWZ	Traveller	1.11	78	P	Pb	07 56 19.9	-0.7
TRWZ				S	Sg	07 56 40.5	+4.7
HOWZ	Holdsworth Sta	1.21	53	P	Pb	07 56 22.5	+0.3
HOWZ	Holdsworth Sta	1.21	53	P	Pn	07 56 21.9	0.0
TMWZ	Te Maipa	1.35	67	P	Pn	07 56 23.8	-0.1
TMWZ	Te Maipa	1.35	67	P	Pn	07 56 23.8	-0.1
MRZ	Mangatainoka R	1.40	46	P	Pn	07 56 25.1	+0.5
TIWZ	Tintock	1.51	56	P	Pb	07 56 27.1	-0.3
TIWZ	Tintock	1.51	56	P	Pn	07 56 26.7	+0.6
TIWZ				S	Sg	07 56 51.2	+2.7
QRZ	Quartz Range	1.53	302	P	Pb	07 56 27.9	+0.2
GVZ	Greta Valley S	1.60	214	P	Pn	07 56 27.7	+0.3
CPWZ	Castlepoint	1.64	64	P	Pb	07 56 29.0	-0.7
CPWZ	Castlepoint	1.64	64	P	Pg	07 56 32.7	+1.3
CPWZ				S	Sg	07 56 57.4	+4.6
OHWZ	Ohakea	1.65	30	P	Pb	07 56 30.3	+0.6
PRWZ	Pori Road	1.69	51	P	Pn	07 56 29.2	+0.5
PRWZ	Pori Road	1.69	51	P	Pn	07 56 28.8	+0.2
POWZ	Post Office Ro	1.70	43	P	Pn	07 56 29.4	+0.8
BFZ	Birch Farm	1.79	58	*e*Pn	Pn	07 56 30.3	+0.4
BFZ	Birch Farm	1.79	58	P	Pb	07 56 32.0	-0.1
BFZ	Birch Farm	1.79	58	P	Pn	07 56 28.8	-1.1
LTZ	Lake Taylor	1.86	231	*e*Pn	Pn	07 56 31.4	+0.5
LTZ	Lake Taylor	1.86	231	P	Pn	07 56 31.7	+0.8
AMCZ	Amberley	1.94	217	P	Pn	07 56 31.9	0.0
WAZ	Wanganui	1.96	17	P	Pg	07 56 37.0	-0.5
DVHZ	Dannevirke	1.98	48	P	Pb	07 56 36.0	+0.7
DVHZ	Dannevirke	1.98	48	S	Pn	07 56 32.2	-0.4
ANWZ	Angora Road	2.06	56	P	Pg	07 56 40.1	+0.8
ANWZ	Angora Road	2.06	56	P	Pn	07 56 32.2	-1.4
LREZ	Lake Rotokare	2.18	3	P	Pg	07 56 41.3	-0.3
NMEZ	Namu Road	2.24	353	P	Pg	07 56 41.8	-0.9
OKCZ	Okains Bay	2.26	202	P	Pn	07 56 35.7	-0.7
PRHZ	Porangahau	2.27	54	P	Pg	07 56 42.9	-0.4
PRHZ	Porangahau	2.27	54	P	Pn	07 56 35.0	-1.6
PNHZ	Pukenui	2.27	41	P	Pb	07 56 41.9	+1.5
CRLZ	Canterbury Las	2.28	211	*e*Pn	Pn	07 56 35.5	-1.1
CRLZ	Canterbury Las	2.28	211	P	Pn	07 56 36.2	-0.4
WPHZ	Waipukurau	2.29	47	P	Pg	07 56 44.0	+0.3
PREZ	Palmer Road	2.29	358	P	Pb	07 56 41.6	+0.9
OXZ	Oxford	2.35	223	*e*Pn	Pn	07 56 37.2	-0.4
OXZ	Oxford	2.35	223	P	Pn	07 56 37.1	-0.5
INZ	Inchbonnie	2.35	242	P	Pn	07 56 38.9	+1.4
KHEZ	Kahui Hut	2.35	356	P	Pb	07 56 43.3	+1.6
MQZ	McQueen's Vall	2.38	209	*e*Pn	Pn	07 56 36.6	-1.4
MQZ	McQueen's Vall	2.38	209	P	Pn	07 56 36.7	-1.3
NBEZ	Newall Road No	2.38	353	P	Pg	07 56 44.3	-1.3
MTVZ	Mangateitei	2.44	23	P	Pb	07 56 44.8	+1.6
AKCZ	Akaroa Harbour	2.44	203	P	Pn	07 56 38.0	-0.9
DREZ	Durham Road	2.45	359	P	Pb	07 56 43.3	0.0
PKE	Pukeiti	2.45	355	P	Pb	07 56 44.6	+1.2
PKVZ	Pokaka	2.49	20	P	Pb	07 56 45.6	+1.4
MOVZ	Moawhango	2.51	28	P	Pb	07 56 44.8	+0.4
VRZ	Vera Road	2.54	9	P	Pb	07 56 44.5	-0.5
PXZ	Pawanui	2.55	52	P	Pn	07 56 41.6	+1.2
PXZ	Pawanui	2.55	52	P	Pn	07 56 37.7	-2.7
BHHZ	Black Hill Sta	2.55	33	P	Pb	07 56 46.2	+1.0
DRZ	Dome Shelter	2.56	24	P	Pg	07 56 47.6	-1.4
KRHZ	Kereru	2.57	40	P	Pb	07 56 46.7	+1.4
WHVZ	Whangaehu Hut	2.57	24	P	Pb	07 56 46.4	+0.8
FWVZ	Far West T-bar	2.58	23	P	Pb	07 56 47.0	+1.2
TUVZ	Tukino	2.60	25	P	Pb	07 56 46.7	+0.7
NGZ	Ngauruhoe	2.67	23	P	Pb	07 56 48.8	+1.6
KAHZ	Kahuranaki	2.72	48	P	Pn	07 56 44.6	+1.8
KAHZ	Kahuranaki	2.72	48	P	Pn	07 56 42.4	-0.4
TWVZ	Taurewa	2.72	20	P	Pb	07 56 49.3	+1.2
WTVZ	West Tongariro	2.72	23	P	Pb	07 56 49.3	+1.2
KRVZ	Karewarewa	2.75	23	P	Pb	07 56 49.9	+1.2
KWHZ	Kaweka Forest	2.77	38	P	Pb	07 56 50.8	+2.0
MCHZ	McNeill Hill	2.88	41	P	Pb	07 56 52.6	+1.9
KATZ	Kakaramea	2.88	23	P	Pb	07 56 52.3	+1.4
RITZ	Rihia Road	2.93	25	P	Pb	07 56 53.8	+2.2
WVZ	Waitaha Valley	2.97	240	P	Pn	07 56 48.8	+2.7
RATZ	Rangitukua	3.00	23	P	Pg	07 56 55.6	-1.8
BKZ	Black Stump Fm	3.01	36	*e*Pg	Pb	07 56 54.2	+1.3
BKZ	Black Stump Fm	3.01	36	P	Pb	07 56 54.4	+1.5
HATZ	Hinemaiaia	3.09	28	P	Pb	07 56 56.3	+2.1
RPZ	Rata Peaks	3.14	228	*e*Pn	Pn	07 56 48.2	-0.2
RPZ	Rata Peaks	3.14	228	P	Pn	07 56 48.4	-0.1
WATZ	Wairara	3.14	22	P	Pb	07 56 56.9	+1.7
HIZ	Hauiti	3.16	9	*e*Pn	Pb	07 56 53.6	-1.8
HIZ	Hauiti	3.16	9	P	Pb	07 56 53.9	-1.6
ARHZ	Aropaoanui	3.17	42	P	Pn	07 56 48.9	0.0
WHTZ	Whakaora	3.25	24	P	Pg	07 57 00.4	-1.6
MRHZ	Matea Rd	3.26	31	P	Pb	07 56 58.7	+1.6
KUTZ	Kaahu Road	3.37	22	P	Pb	07 57 01.0	+1.9
MTHZ	Maungataniwha	3.42	36	P	Pn	07 56 55.4	+3.0
MTHZ				S	Sg	07 57 54.8	+5.2
TLZ	Tolley Road	3.45	17	P	Pb	07 56 59.7	-0.8
ALRZ	Allen Road	3.47	28	P	Pb	07 57 02.1	+1.3
ALRZ	Allen Road	3.47	28	S	Sg	07 57 54.2	+3.0
RAHZ	Arahi	3.48	40	P	Pn	07 56 54.6	+1.4
PRRZ	Plateau Road	3.54	28	P	Pb	07 57 03.7	+1.7
GRRZ	Galatos Road	3.58	24	P	Pg	07 57 07.8	-0.7
HRRZ	Handcock Road	3.60	26	P	Pb	07 57 02.7	-0.4
HSRZ	Hossack Road	3.66	25	P	Pb	07 57 06.6	+2.6
MUGZ	Murupara	3.70	32	P	Pn	07 56 50.5	-5.8
RRRZ	Republican Roa	3.73	29	P	Pb	07 57 05.8	+0.6
RRRZ				S	Sg	07 58 09.2	+10
FOZ	Fox Glacier	3.78	238	*e*Pg	Pb	07 57 07.4	+1.4
FOZ	Fox Glacier	3.78	238	P	Pb	07 57 02.9	-3.1
TOZ	Tahuroa Road	4.02	14	P	Pb	07 57 06.0	-4.2
URZ	Urewera	4.03	34	*e*Pn	Pn	07 57 01.3	+0.6
URZ	Urewera	4.03	34	P	Pb	07 57 08.0	-2.3
LBZ	Lake Benmore	4.05	226	*e*Pg	Pb	07 57 13.5	+2.8
LBZ	Lake Benmore	4.05	226	P	Pn	07 57 02.4	+1.3
MWZ	Matawai	4.15	38	P	Pn	07 57 05.2	+2.8
ODZ	Otahua Downs	4.30	216	*e*Pn	Pn	07 57 03.2	-1.2
ODZ	Otahua Downs	4.30	216	P	Pn	07 57 03.6	-0.8
WHRZ	Whale Island	4.32	30	P	Pb	07 57 11.7	-3.7
AWAZ	Awhitu Peninsu	4.58	4	P	Pn	07 57 12.2	+4.0
MKAZ	Moumakai	4.58	9	P	Pn	07 57 12.5	+4.2
JCZ	Jackson Bay	4.69	237	P	Pn	07 57 14.6	+4.6
WTAZ	Waiatarua	4.71	3	P	Pn	07 57 15.6	+5.5
ETAZ	East Tamaki Re	4.71	7	P	Pn	07 57 15.2	+5.2
HAZ	Te Kaha	4.74	36	P	Pn	07 57 15.3	+4.8
WIAZ	Waiheke Island	4.89	8	P	Pn	07 57 17.0	+4.5
MBAZ	Motutapu North	4.89	6	P	Pn	07 57 16.7	+4.2
HHSZ	Highcliff Hill	5.00	211	P	Pn	07 57 16.9	+2.9
MXZ	Matakaoa Point	5.14	39	*e*Pg	Pb	07 57 31.9	+2.6
TUZ	Tuapeka	5.46	216	P	Pn	07 57 20.6	+0.4
MLZ	Mavora Lakes	5.81	228	*e*Pg	Pg	07 57 50.4	-0.5
OUZ	Omahuta	6.43	355	*e*Pn	Pb	07 57 46.7	-4.5
OUZ				*e*Sn	Sn	07 58 51.7	+5.0
OUZ				*e*Sg	Sb	07 59 10.8	+3.1

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*ISCJB **21** 08:01:35.1±0.9, 26.°49S±0.°08×178.°2E±0.°1, h650km, mb3.9/7, Error ellipse: s-maj=17.2km s-min=8.1km az=155.3*

*IDC **21** 08:01:35.6±2.2, 26.°62S×178.°06E, h633km±26km, mb3.3/7, mb1 3.5/9, mb1mx3.2/33, mbtmp4.4/9, Error ellipse: s-maj=28.0km s-min=16.1km az=33.0*

ISC 21 08:01:35.9±1.0, 26.°7S±0.°1×178.°2E±0.°1, h650km, n31, σ1.ˢ81/36, mb4.2/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUZ	Omahuta	9.43	204	P	P	08 03 52.8	+2.7
WCZ	Waipu Caves	9.84	199	P	P	08 03 56.7	+2.7
GRZ	Great Barrier	9.86	193	P	P	08 03 56.0	+1.8
KUZ	Kuaotunu	10.29	191	P	P	08 03 59.7	+1.4
WIAZ	Waiheke Island	10.45	194	P	P	08 04 02.1	+2.2
MBAZ	Motutapu North	10.48	195	P	P	08 04 02.3	+2.2
ETAZ	East Tamaki Re	10.65	195	P	P	08 04 03.8	+2.0
MKAZ	Moumakai	10.75	193	P	P	08 04 04.8	+2.0
KBAZ	Karaka Road Bo	10.80	194	P	P	08 04 05.7	+2.5
AWAZ	Awhitu Peninsu	10.82	196	P	P	08 04 05.6	+2.2
MXZ	Matakaoa Point	10.88	180	P	P	08 04 01.5	-2.5
HAZ	Te Kaha	11.08	182	P	P	08 04 04.2	-1.7
HAZ				S	S	08 06 05.0	-3.7
WMGZ	Waiomatatini S	11.14	179	P	P	08 04 06.5	+0.1
PKGZ	Pakihiroa	11.21	181	P	P	08 04 06.8	-0.3
RUGZ	Raukumara Rang	11.29	182	P	P	08 04 06.3	-1.8
RUGZ				S	S	08 06 12.7	+0.3
PUZ	Puketiti	11.39	180	P	P	08 04 05.8	-3.0
PUZ				S	S	08 06 12.9	-1.0
URZ	Urewera	11.62	184	P	P	08 04 08.6	-2.2
	2.1nm,0.3s,baz=339,slow=2.5,SNR=13						
URZ				S	S	08 06 16.1	-1.4
	0.4nm,0.3s,baz=72,slow=20,SNR=3.8						
DZM	Mont Dzumac	11.68	290	P	P	08 04 09.7	-2.2
	1.9nm,0.3s,baz=189,slow=22,SNR=19						
RAGZ	Rawiri	11.83	183	P	P	08 04 12.8	-0.1
MUGZ	Murupara	11.86	186	P	P	08 04 12.5	-0.6
CTA	Charters Tower	30.03	276	P	P	08 06 55.0	-0.6
	11nm,0.4s,baz=97,slow=10,SNR=42						
STKA	Stephens Creek	32.29	252	P	P	08 07 14.9	+0.4
	3.4nm,0.6s,baz=100,slow=10.0,SNR=9.9						
ASAR	Alice Springs	40.10	264	P	P	08 08 17.6	-0.7
	4.7nm,0.5s,baz=92,slow=7.5,SNR=105						
ASAR				S	S	08 13 39.6	-0.8
	0.7nm,1.0s,baz=94,slow=14,SNR=4.0						
WRA	Warramunga Arr	40.72	270	P	P	08 08 21.8	-1.5
	3.8nm,0.4s,baz=98,slow=8.1,SNR=31						
VNDA	Vanda	51.52	184	P	P	08 09 45.6	+2.1
	0.7nm,0.4s,baz=11,slow=9.1,SNR=5.4						
MAW	Mawson	74.63	201	P	P	08 12 11.1	+0.7
	1.2nm,0.6s,baz=159,slow=8.6,SNR=4.5						
SNAA	Sanae	81.95	180	P	P	08 12 49.6	+0.3
VNA3	Neumayer Olymp	82.22	177	P	P	08 12 50.7	0.0
TXAR	Lajitas Array	93.22	59	P	P	08 13 44.9	+1.6
	0.6nm,1.1s,baz=230,slow=4.7,SNR=3.5						
FINES	FINESS Array B	140.49	339	PKhKP	PKPpre	08 19 42.3	
	2.9nm,1.0s,baz=35,slow=3.4,SNR=4.5						
FINES				PKP	PKPdf	08 19 52.9	+0.6
	2.6nm,0.9s,baz=67,slow=2.6,SNR=4.1						
TORD	Torodi Ar. Bea	166.18	194	PKPab	PKPab	08 21 34.4	0.0
	1.1nm,1.1s,baz=171,slow=3.8,SNR=3.7						

WEL 21 08:03:07.4, 42°S±3°×17°4E±°, h15km±6km, M3.2/14, ML3.5/14, MLv3.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=124.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.18	224	P	Pg	08 03 12.1	+0.2
TUWZ	Tuamarina	0.38	299	P	Pb	08 03 15.8	0.0
TUWZ				S	Sb	08 03 21.8	+0.3
BSWZ	Blackbirch Sta	0.39	255	P	Pg	08 03 15.6	+0.3
BSWZ				S	Sb	08 03 22.4	+0.5
TCW	Tory Channel	0.41	349	P	Pb	08 03 16.5	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCW				S	Sb	08 03 22.9	+0.5
BHW	Baring Head	0.42	61	P	Pb	08 03 16.6	+0.1
PLWZ	Palliser	0.66	86	P	Pb	08 03 20.8	+0.2
MSWZ	Moikau Station	0.68	73	P	Pb	08 03 21.4	+0.5
CAW	Cannon Point	0.72	46	P	Pb	08 03 22.2	+0.5
PAWZ	Paruwai Farm	0.82	74	P	Pb	08 03 23.7	+0.4
NNZ	Nelson	0.85	297	P	Pb	08 03 23.8	0.0
DUWZ	D'Urville Isla	0.89	337	P	Pg	08 03 24.9	+0.4
MTW	Mount Morrison	0.96	62	P	Pg	08 03 25.8	-0.1
OGWZ	Otaki Gorge	0.99	37	P	Pb	08 03 26.4	+0.1
TRWZ	Traveller	1.00	78	P	Pn	08 03 26.9	0.0
KHZ	Kahutara	1.02	218	P	Pn	08 03 27.3	+0.2
KHZ				S	Sn	08 03 42.0	+0.9
HOWZ	Holdsworth Sta	1.11	50	P	Pg	08 03 28.9	0.0
THZ	Tophouse	1.12	262	P	Pg	08 03 28.8	-0.2
TMWZ	Te Maipa	1.24	66	P	Pn	08 03 30.2	0.0
MRZ	Mangatainoka R	1.31	44	P	Pb	08 03 31.6	-0.2
TIWZ	Tintock	1.41	54	P	Pn	08 03 32.8	+0.3
OHWZ	Ohakea	1.57	27	P	Pg	08 03 37.4	-0.3
PRWZ	Pori Road	1.60	49	P	Pn	08 03 34.7	-0.4
QRZ	Quartz Range	1.61	299	P	Pb	08 03 37.3	+0.6
GVZ	Greta Valley S	1.68	216	P	Pn	08 03 36.1	-0.2
BFZ	Birch Farm	1.69	57	P	Pn	08 03 36.2	-0.1
DVHZ	Dannevirke	1.88	46	P	Pn	08 03 38.8	-0.2
WAZ	Wanganui	1.91	14	P	Pg	08 03 43.2	-0.9
LTZ	Lake Taylor	1.96	233	P	Pn	08 03 40.0	-0.1
AMCZ	Amberley	2.02	219	P	Pn	08 03 40.1	-0.8
PNHZ	Pukenui	2.19	40	P	Pn	08 03 44.6	+1.3
OKCZ	Okains Bay	2.32	204	P	Pn	08 03 43.9	-1.2
MQZ	McQueen's Vall	2.45	211	P	Pn	08 03 45.2	-1.5
INZ	Inchbonnie	2.45	242	P	Pn	08 03 48.9	+2.1
KRHZ	Kereru	2.48	38	P	Pn	08 03 48.0	+0.7
KAHZ	Kahuranaki	2.63	47	P	Pn	08 03 50.2	+1.0
WVZ	Waitaha Valley	3.07	240	P	Pb	08 03 59.3	-2.4
RPZ	Rata Peaks	3.23	228	P	Pn	08 03 57.4	-0.2
KUTZ	Kaahu Road	3.31	20	P	Pb	08 04 07.5	+1.6
ALRZ	Allen Road	3.40	27	P	Pb	08 04 09.0	+1.7
TLZ	Tolley Road	3.40	15	P	Pb	08 04 09.1	+1.8
KMRZ	Kaimai	3.95	18	P	Pn	08 04 11.0	+3.5
URZ	Urewera	3.95	33	P	Pn	08 04 09.7	+2.2
URZ	Urewera	3.95	33	P	Pn	08 04 07.4	0.0
URZ				S		08 06 16.8	
TOZ	Tahuroa Road	3.97	13	P	Pn	08 04 10.3	+2.6
TOZ	Tahuroa Road	3.97	13	P	Pn	08 04 09.5	+1.8
MWZ	Matawai	4.07	37	P	Pn	08 04 08.8	-0.3
MWZ	Matawai	4.07	37	P	Pn	08 04 05.9	-3.3
MWZ				S	Sg	08 06 17.8	+60
TKGZ	Te Karaka	4.14	41	P	Pn	08 04 12.0	+2.0
TKGZ	Te Karaka	4.14	41	P	Pn	08 04 10.3	+0.3
LBZ	Lake Benmore	4.14	227	P	Pn	08 04 11.3	+1.2
CNGZ	Carnagh Statio	4.29	44	P	Pn	08 04 13.1	+1.0
CNGZ	Carnagh Statio	4.29	44	P	Pn	08 04 10.5	-1.5
ODZ	Otahua Downs	4.38	217	P	Pn	08 04 12.3	-1.0
EPAZ	Eden Park BICE	4.74	3	P	Pn	08 04 10.7	-7.5

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*IDC **21** 08:03:56.2±8.4, 26°.38S×178°.87E, h650km±74km, mb3.1/4, mb1 3.3/6, mb1mx2.9/35, mbtmp4.3/6, Error ellipse: s-maj=164.8km s-min=35.2km az=65.0*

ISC 21 08:03:57.8±5.6**, 26°.5S**±0°.3×**178°.6E**±0°.6**, h650**km**, n6,** σ1s.06/7**, mb3.9**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	11.76	186	P	P	08 06 34.6	+0.5
	0.7nm,0.3s,baz=346,slow=19,SNR=3.5						
URZ				S	S	08 08 40.6	-1.3
	0.3nm,0.3s,baz=233,slow=20,SNR=2.1						
DZM	Mont Dzumac	11.97	289	P	P	08 06 35.4	-1.0
	0.7nm,0.3s,baz=133,slow=19,SNR=6.4						
CTA	Charters Tower	30.37	275	P	P	08 09 20.5	+0.2
	4.7nm,0.5s,baz=97,slow=11,SNR=11						
STKA	Stephens Creek	32.66	252	P	P	08 09 40.7	+1.2
	1.8nm,0.5s,baz=86,slow=13,SNR=2.7						
ASAR	Alice Springs	40.46	264	P	P	08 10 43.4	+0.2
	1.5nm,0.5s,baz=94,slow=7.7,SNR=14						
WRA	Warramunga Arr	41.07	270	P	P	08 10 47.5	-0.5
	1.2nm,0.3s,baz=108,slow=8.1,SNR=13						

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*IDC **21** 08:10:49.2±1.1, 41°.54S×174°.26E, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.8/22, mbtmp3.9/5, ML3.6/2, Error ellipse: s-maj=38.1km s-min=19.0km az=136.0*

*ISCJB **21** 08:10:52.4±0.3, 41°.74S±0°.03×174°.29E±0°.03, h25km±2km, mb4.0/7, Error ellipse: s-maj=5.2km s-min=2.7km az=137.7*

*WEL **21** 08:10:52.6, 42°S±2°×17°4E±°, h15km±4km, M4.4/23, ML4.8/5, ML4.7/23, MLv4.4/23, Error ellipse: s-maj=0.0km s-min=0.0km az=124.3*

*NEIC **21** 08:10:52.5±0.0, 41°.63S×174°.28E, h22km, mb4.0/4, ML4.4(WEL), After WEL.*

ISC 21 08:10:51.4±1.3**, 41°.64S**±0°.03×**174°.31E**±0°.02**, h14**km±9km**, n104,** σ1s.11/117**, mb3.9**/7**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.13	213	P	Pb	08 10 57.0	+1.3
CMWZ				S	Sb	08 11 00.4	+1.8
BSWZ	Blackbirch Sta	0.34	256	P	Pb	08 10 59.7	+0.6
BSWZ				S	Sb	08 11 04.9	+0.5
TUWZ	Tuamarina	0.35	307	P	Pb	08 10 59.8	+0.5
TUWZ				S	Sb	08 11 05.1	+0.5
TCW	Tory Channel	0.43	356	P	Pb	08 11 01.3	+0.6
TCW				S	Sb	08 11 07.3	+0.3
SNZO	South Karori	0.44	42	*e*Pg	Pn	08 11 02.1	-1.2
SNZO				*e*Sg	Sn	08 11 09.2	-1.8
BHW	Baring Head	0.48	62	P	Pn	08 11 03.0	-0.8
PLWZ	Palliser	0.71	85	P	Pn	08 11 07.8	+0.7
MSWZ	Moikau Station	0.74	73	P	Pn	08 11 07.9	+0.5
CAW	Cannon Point	0.78	47	P	Pn	08 11 08.0	+0.1
NNZ	Nelson	0.82	301	P	Pn	08 11 08.1	-0.4
PAWZ	Paruwai Farm	0.88	73	P	Pn	08 11 10.4	+1.1
DUWZ	D'Urville Isla	0.89	340	P	Pn	08 11 09.5	0.0
KHZ	Kahutara	0.97	216	*e*Pn	Pn	08 11 11.5	+0.9
KHZ	Kahutara	0.97	216	P	Pn	08 11 11.5	+0.9
KHZ				S	Sn	08 11 25.9	+1.9
MTW	Mount Morrison	1.01	62	P	Pg	08 11 12.1	+1.1
MTW				S	Sn	08 11 28.3	+3.0
OGWZ	Otaki Gorge	1.04	39	P	Pg	08 11 12.5	+0.9
THZ	Tophouse	1.06	263	*e*Pn	Pg	08 11 12.3	+0.5
THZ				*e*Sg	Sb	08 11 24.2	-1.1
THZ	Tophouse	1.06	263	P	Pg	08 11 12.5	+0.7
TRWZ	Traveller	1.06	77	P	Pg	08 11 12.4	+0.5
HOWZ	Holdsworth Sta	1.17	51	P	Pg	08 11 14.6	+0.6
TMWZ	Te Maipa	1.30	66	P	Pg	08 11 16.0	-0.5
MRZ	Mangatainoka R	1.37	45	P	Pg	08 11 17.4	-0.2
TIWZ	Tintock	1.47	55	P	Pb	08 11 18.7	+0.3
QRZ	Quartz Range	1.57	301	P	Pg	08 11 21.0	-0.5
OHWZ	Ohakea	1.62	28	P	Pg	08 11 22.6	+0.1
GVZ	Greta Valley S	1.63	215	P	Pb	08 11 20.3	-1.0
PRWZ	Pori Road	1.66	50	P	Pb	08 11 21.1	-0.6
POWZ	Post Office Ro	1.66	42	P	Pb	08 11 21.7	-0.1
BFZ	Birch Farm	1.75	57	*e*Pn	Pn	08 11 21.5	+0.2
BFZ	Birch Farm	1.75	57	P	Pn	08 11 21.9	+0.7
LTZ	Lake Taylor	1.90	232	*e*Pn	Pb	08 11 24.2	-1.6
LTZ	Lake Taylor	1.90	232	P	Pb	08 11 24.3	-1.6
DVHZ	Dannevirke	1.94	47	P	Pn	08 11 24.6	+0.6
WAZ	Wanganui	1.95	15	P	Pg	08 11 28.3	-0.5
AMCZ	Amberley	1.97	218	P	Pn	08 11 24.5	+0.2
ANWZ	Angora Road	2.02	55	P	Pn	08 11 25.8	+0.9
LREZ	Lake Rotokare	2.17	2	P	Pb	08 11 31.6	+1.1
PRHZ	Porangahau	2.23	53	P	Pn	08 11 28.2	+0.3
PNHZ	Pukenui	2.24	40	P	Pn	08 11 29.0	+0.9
NMEZ	Namu Road	2.25	351	P	Pb	08 11 32.3	+0.6
WPHZ	Waipukurau	2.25	46	P	Pn	08 11 29.7	+1.4
OKCZ	Okains Bay	2.28	203	P	Pn	08 11 28.2	-0.4
PREZ	Palmer Road	2.29	357	P	Pb	08 11 33.6	+1.0
CRLZ	Canterbury Las	2.30	212	*e*Pn	Pn	08 11 28.0	-0.9
CRLZ	Canterbury Las	2.30	212	P	Pn	08 11 28.4	-0.4
KHEZ	Kahui Hut	2.35	354	P	Pb	08 11 34.0	+0.4
OXZ	Oxford	2.38	224	*e*Pn	Pn	08 11 29.4	-0.6
OXZ	Oxford	2.38	224	P	Pn	08 11 29.6	-0.4
NBEZ	Newall Road No	2.39	352	P	Pb	08 11 33.6	-0.5
MQZ	McQueen's Vall	2.40	210	*e*Pn	Pn	08 11 29.2	-1.0
MQZ	McQueen's Vall	2.40	210	P	Pn	08 11 29.2	-1.0
MTVZ	Mangateitei	2.42	22	P	Pb	08 11 35.8	+1.1
DREZ	Durham Road	2.45	358	P	Pb	08 11 34.7	-0.4
PKE	Pukeiti	2.45	354	P	Pb	08 11 34.4	-0.9
AKCZ	Akaroa Harbour	2.46	204	P	Pn	08 11 30.6	-0.5
MOVZ	Moawhango	2.48	27	P	Pb	08 11 33.7	-2.1
PXZ	Pawanui	2.51	51	P	Pn	08 11 31.9	+0.1
BHHZ	Black Hill Sta	2.53	32	P	Pb	08 11 34.2	-2.3
VRZ	Vera Road	2.53	8	P	Pb	08 11 36.0	-0.6
KRHZ	Kereru	2.53	39	P	Pn	08 11 32.9	+0.8
DRZ	Dome Shelter	2.54	22	P	Pg	08 11 39.4	-0.8
WHVZ	Whangaehu Hut	2.55	23	P	Pb	08 11 35.8	-1.2
MHEZ	Mangahewa	2.56	0	P	Pb	08 11 37.9	+0.9
TUVZ	Tukino	2.58	24	P	Pb	08 11 35.9	-1.6
NGZ	Ngauruhoe	2.65	22	P	Pb	08 11 37.3	-1.4
KAHZ	Kahuranaki	2.68	47	P	Pn	08 11 34.6	+0.5
WTVZ	West Tongariro	2.70	22	P	Pb	08 11 38.6	-0.9
TWVZ	Taurewa	2.70	19	P	Pb	08 11 38.3	-1.3
KWHZ	Kaweka Forest	2.73	37	P	Pb	08 11 40.0	-0.1
KRVZ	Karewarewa	2.73	22	P	Pb	08 11 39.0	-1.2
MCHZ	McNeill Hill	2.85	40	P	Pn	08 11 37.9	+1.5
BKZ	Black Stump Fm	2.98	35	*e*Pn	Pn	08 11 38.9	+0.7
BKZ	Black Stump Fm	2.98	35	P	Pn	08 11 39.8	+1.6
WVZ	Waitaha Valley	3.01	240	P	Pn	08 11 39.6	+1.0
ARHZ	Aropaoanui	3.13	42	P	Pn	08 11 41.7	+1.4
HIZ	Hauiti	3.15	8	*e*Pn	Pb	08 11 44.0	-3.1
RPZ	Rata Peaks	3.17	228	Pn	Pn	08 11 40.6	-0.3
	13nm,0.3s,baz=210,slow=1.8,SNR=42						
RPZ				Pg	Pb	08 11 47.8	+0.2
	32nm,0.3s,baz=30,slow=3.8,SNR=32						
RPZ				Sn	Sn	08 12 17.1	-1.4
	18nm,0.3s,baz=0.1,slow=16,SNR=5.8						
RPZ				Lg	Lg	08 12 31.7	
	17nm,0.3s,baz=12,slow=17,SNR=5.6						
FOZ	Fox Glacier	3.82	239	*e*Pn	Pn	08 11 50.0	+0.2
URZ	Urewera	4.00	33	Pn	Pn	08 11 51.3	-0.9
	2.4nm,0.3s,baz=264,slow=6.3,SNR=8.6						
URZ				Pg	Pb	08 12 00.4	-1.2
	12nm,0.3s,baz=247,slow=9.7,SNR=21						
URZ				Sn	Sn	08 12 38.2	-0.7
	11nm,0.3s,baz=292,slow=19,SNR=3.8						
URZ	Urewera	4.00	33	*e*Pn	Pn	08 11 52.2	0.0
LBZ	Lake Benmore	4.09	226	*e*Pn	Pn	08 11 53.6	+0.2
ODZ	Otahua Downs	4.33	217	*e*Pn	Pn	08 11 55.7	-1.0
WKZ	Wanaka	5.01	229	*e*Pn	Pn	08 12 05.9	-0.2
MXZ	Matakaoa Point	5.11	38	*e*Pn	Pn	08 12 07.6	+0.2
MLZ	Mavora Lakes	5.85	228	*e*Pn	Pn	08 12 17.5	-0.1
WHZ	Wether Hill Ro	6.27	225	*e*Pn	Pn	08 12 22.8	-0.6
OUZ	Omahuta	6.43	355	*e*Pn	Pn	08 12 26.2	+0.5
OUZ				*e*Sn	Sn	08 13 44.2	+5.4
DCZ	Deep Cove	6.46	231	*e*Pn	Pn	08 12 25.8	-0.1
AS31	Alice Springs	38.04	285	*e*P	P	08 18 09.1	-0.4
	1.1nm,1.1s						
ASAR	Alice Springs	38.04	285	P	P	08 18 08.6	-0.8
	0.5nm,0.4s,baz=121,slow=6.8,SNR=24						
WB2	Warramunga Arr	40.10	290	*e*P	P	08 18 25.9	-0.7
	4.5nm,1.0s						
WR1	Warramunga Arr	40.11	290	*e*P	P	08 18 25.9	-0.7
WRA	Warramunga Arr	40.11	290	P	P	08 18 25.9	-0.7
	1.6nm,0.6s,baz=122,slow=8.6,SNR=13						
QSPA	South Pole Qui	48.49	180	*e*P	P	08 19 33.6	+0.2
	5.9nm,1.1s						
SNAA	Sanae	66.98	181	*e*P	P	08 21 43.1	0.0
	0.9nm,1.0s						
KSRS	Korea Array	89.39	325	P	P	08 23 48.1	+0.9
	1.1nm,0.7s,baz=136,slow=5.4,SNR=4.2						
YKA	Yellowknife Ar	118.26	30	PKP	PKiKP	08 29 37.1	+0.1
	0.3nm,0.6s,baz=252,slow=1.9,SNR=6.4						
YKB5	Yellowknife Ar	118.26	30	*e*PKPdf	PKiKP	08 29 37.1	+0.1
ARA0	ARCESS Array S	147.69	340	*e*PKPbc	PKPbc	08 30 33.3	-1.0
ARCES	ARCESS Array B	147.69	340	PKPbc	PKPbc	08 30 33.3	-1.0
	1.5nm,0.7s,baz=23,slow=2.0,SNR=9.8						
TORD	Torodi Ar. Bea	150.90	195	PKPbc	PKiKP	08 30 44.2	-0.3
	1.1nm,0.4s,baz=166,slow=2.6,SNR=24						
TOA1	Torodi Ar. Sit	150.90	195	*e*PKPbc	PKiKP	08 30 44.2	-0.3
FIA0	FINESS Array S	152.46	327	*e*PKPbc	PKPbc	08 30 44.8	-1.2
FINES	FINESS Array B	152.46	327	PKPbc	PKPbc	08 30 44.8	-1.2
	2.0nm,0.8s,baz=45,slow=3.0,SNR=5.7						

WEL 21 08:14:54.7, 42°S±2°×**17°4E**±°**, h10**km±3km**, M3.2**/11**, ML3.5**/11**, MLv3.2**/11**, Error ellipse: s-maj=0.0km s-min=0.0km az=158.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.10	171	P	Pg	08 14 58.0	+0.7
CMWZ				S	Sg	08 15 00.2	+1.0
BSWZ	Blackbirch Sta	0.25	255	P	Pg	08 15 00.3	+0.6
BSWZ				S	Sg	08 15 04.5	+1.4
TUWZ	Tuamarina	0.29	320	P	Pb	08 15 01.4	-0.6
TUWZ				S	Sb	08 15 06.4	-0.5
TCW	Tory Channel	0.44	8	P	Pg	08 15 03.9	+0.5
BHW	Baring Head	0.56	65	P	Pb	08 15 06.6	-0.1
BHW				S	Sb	08 15 15.2	+0.4
NNZ	Nelson	0.75	305	P	Pg	08 15 09.4	+0.3
PLWZ	Palliser	0.80	85	P	Pn	08 15 12.0	-0.1
MSWZ	Moikau Station	0.83	74	P	Pn	08 15 11.9	-0.6
CAW	Cannon Point	0.85	51	P	Pn	08 15 12.2	-0.6
KHZ	Kahutara	0.91	212	P	Pb	08 15 12.9	+0.4
KHZ				S	Sn	08 15 27.6	+0.9
PAWZ	Paruwai Farm	0.96	74	P	Pn	08 15 14.5	+0.2
MTW	Mount Morrison	1.10	64	P	Pn	08 15 16.7	+0.5
OGWZ	Otaki Gorge	1.11	42	P	Pg	08 15 16.2	+0.1
HOWZ	Holdsworth Sta	1.25	53	P	Pg	08 15 19.4	+0.7

WEL 21 08:19:46.4, 42°S±2°×**17°4E**±°**, h15**km±4km**, M3.4**/17**, ML3.7**/7**, ML3.6**/17**, MLv3.4**/17**, Error ellipse: s-maj=0.0km s-min=0.0km az=122.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.26	208	S	Sb	08 19 57.2	+0.1
TCW	Tory Channel	0.32	346	P	Pb	08 19 54.0	+0.2
TUWZ	Tuamarina	0.34	285	P	Pb	08 19 53.9	-0.2
TUWZ				S	Sb	08 19 59.0	-0.4
BHW	Baring Head	0.39	73	P	Pb	08 19 55.0	+0.1
BHW				S	Sb	08 20 01.0	+0.4
BSWZ	Blackbirch Sta	0.42	243	P	Pg	08 19 55.2	+0.3
BSWZ				S	Sb	08 20 01.7	-0.1
PLWZ	Palliser	0.66	95	P	Pb	08 19 59.9	+0.4
CAW	Cannon Point	0.66	52	P	Pb	08 19 59.8	+0.2
MSWZ	Moikau Station	0.66	81	P	Pb	08 20 00.1	+0.4
DUWZ	D'Urville Isla	0.80	334	P	Pb	08 20 02.4	+0.5
DUWZ				S	Sb	08 20 13.4	+0.9
PAWZ	Paruwai Farm	0.80	80	P	Pb	08 20 02.3	+0.3
PAWZ				S	Sn	08 20 14.0	-0.8
NNZ	Nelson	0.81	292	P	Pb	08 20 02.3	+0.1
MTW	Mount Morrison	0.92	67	P	Pn	08 20 04.6	-0.2
OGWZ	Otaki Gorge	0.92	41	P	Pg	08 20 04.5	+0.2
TRWZ	Traveller	0.99	83	P	Pb	08 20 04.9	-0.4
HOWZ	Holdsworth Sta	1.06	54	P	Pg	08 20 06.8	0.0
KHZ	Kahutara	1.09	215	P	Pb	08 20 05.5	-1.5
THZ	Tophouse	1.13	257	P	Pb	08 20 07.2	-0.5
TMWZ	Te Maipa	1.21	71	P	Pn	08 20 08.3	-0.5
MRZ	Mangatainoka R	1.25	47	P	Pb	08 20 09.6	0.0
TIWZ	Tintock	1.36	57	P	Pn	08 20 10.2	-0.6
OHWZ	Ohakea	1.49	29	P	Pg	08 20 14.5	-0.5
CPWZ	Castlepoint	1.50	67	P	Pg	08 20 17.4	+2.1
POWZ	Post Office Ro	1.54	43	P	Pn	08 20 13.8	+0.5
PRWZ	Pori Road	1.54	52	P	Pn	08 20 13.3	0.0
QRZ	Quartz Range	1.56	296	P	Pb	08 20 15.1	+0.2
BFZ	Birch Farm	1.64	60	P	Pn	08 20 13.8	-0.9
GVZ	Greta Valley S	1.76	214	P	Pn	08 20 15.3	-1.0
DVHZ	Dannevirke	1.82	49	P	Pn	08 20 16.7	-0.5
WAZ	Wanganui	1.82	15	P	Pg	08 20 20.6	-0.8
ANWZ	Angora Road	1.91	57	P	Pn	08 20 17.7	-0.6
LTZ	Lake Taylor	2.01	230	P	Pn	08 20 19.5	-0.3
LREZ	Lake Rotokare	2.06	0	P	Pg	08 20 26.0	+0.1
PNHZ	Pukenui	2.12	41	P	Pn	08 20 21.1	-0.2
PRHZ	Porangahau	2.12	55	P	Pn	08 20 20.6	-0.7
WPHZ	Waipukurau	2.14	48	P	Pn	08 20 21.2	-0.3
NMEZ	Namu Road	2.14	350	P	Pg	08 20 26.2	-1.2
PREZ	Palmer Road	2.18	355	P	Pb	08 20 26.3	+0.8
KHEZ	Kahui Hut	2.24	353	P	Pb	08 20 27.5	+0.9
NBEZ	Newall Road No	2.28	350	P	Pg	08 20 29.9	-0.3
MTVZ	Mangateitei	2.29	22	P	Pg	08 20 29.2	-1.1
DREZ	Durham Road	2.33	357	P	Pg	08 20 30.6	-0.5
PKE	Pukeiti	2.34	353	P	Pb	08 20 28.2	-0.1
PKVZ	Pokaka	2.35	19	P	Pb	08 20 29.8	+1.4
MOVZ	Moawhango	2.36	27	P	Pn	08 20 26.3	+1.7
BHHZ	Black Hill Sta	2.40	33	P	Pn	08 20 27.0	+1.8
PXZ	Pawanui	2.40	53	P	Pn	08 20 23.8	-1.3
OKCZ	Okains Bay	2.41	203	P	Pn	08 20 23.1	-2.2
VRZ	Vera Road	2.41	7	P	Pb	08 20 29.5	0.0
KRHZ	Kereru	2.41	40	P	Pn	08 20 24.9	-0.4
WHVZ	Whangaehu Hut	2.42	23	P	Pb	08 20 29.9	+0.2
FWVZ	Far West T-bar	2.43	22	P	Pb	08 20 30.3	+0.3
TUVZ	Tukino	2.45	24	P	Pb	08 20 28.6	-1.6
INZ	Inchbonnie	2.49	240	P	Pb	08 20 30.8	-0.1
NGZ	Ngauruhoe	2.52	22	P	Pb	08 20 32.3	+0.9
MQZ	McQueen's Vall	2.53	210	P	Pn	08 20 24.2	-2.7
KAHZ	Kahuranaki	2.56	49	P	Pn	08 20 26.4	-1.0
WTVZ	West Tongariro	2.57	21	P	Pb	08 20 33.4	+1.1
TWVZ	Taurewa	2.58	19	P	Pb	08 20 33.6	+1.3
AKCZ	Akaroa Harbour	2.59	204	P	Pn	08 20 25.6	-2.1
KRVZ	Karewarewa	2.61	22	P	Pb	08 20 33.7	+0.8
MCHZ	McNeill Hill	2.72	41	P	Pn	08 20 29.5	0.0
KATZ	Kakaramea	2.73	22	P	Pg	08 20 36.9	-1.9
RITZ	Rihia Road	2.78	24	P	Pb	08 20 36.9	+1.2
BKZ	Black Stump Fm	2.85	35	P	Pb	08 20 38.4	+1.4
ARHZ	Aropaoanui	3.01	42	P	Pn	08 20 34.2	+0.6
HIZ	Hauiti	3.03	7	P	Pb	08 20 38.4	-1.5
WHTZ	Whakaora	3.10	24	P	Pn	08 20 34.2	-0.6
MRHZ	Matea Rd	3.10	31	P	Pn	08 20 34.8	0.0
TLZ	Tolley Road	3.31	16	P	Pb	08 20 43.0	-1.8
RIGZ	Rimuhau	3.82	44	P	Pn	08 20 42.9	-1.9
MWZ	Matawai	4.00	38	P	Pn	08 20 46.2	-0.9
TWGZ	Tauwhareparae	4.34	41	P	Pn	08 20 51.8	0.0
RUGZ	Raukumara Rang	4.37	37	P	Pn	08 20 51.6	-0.6
MKAZ	Moumakai	4.45	8	P	Pn	08 20 58.3	+5.0
ODZ	Otahua Downs	4.45	216	P	Pn	08 20 51.9	-1.5
AWAZ	Awhitu Peninsu	4.46	3	P	Pn	08 20 56.5	+3.1
HAZ	Te Kaha	4.59	36	P	Pn	08 20 55.2	0.0
WMGZ	Waiomatatini S	4.83	41	P	Pn	08 20 57.9	-0.6
JCZ	Jackson Bay	4.84	236	P	Pn	08 21 04.2	+5.4

WEL 21 08:23:43.3, 42°S±2°×**17°4E**±°**, h15**km±5km**, M3.3**/12**, ML3.1**/1**, ML3.6**/12**, MLv3.3**/12**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.27	209	P	Pb	08 23 49.5	-0.3
CMWZ				S	Sb	08 23 54.4	+0.1
TCW	Tory Channel	0.31	345	P	Pb	08 23 50.8	+0.3
TCW				S	Sb	08 23 55.8	+0.3
TUWZ	Tuamarina	0.34	284	P	Pb	08 23 50.8	-0.3
TUWZ				S	Sb	08 23 56.1	-0.3
BHW	Baring Head	0.38	74	P	Pb	08 23 51.7	0.0
BHW				S	Sb	08 23 57.5	+0.2
BSWZ	Blackbirch Sta	0.43	242	P	Pg	08 23 52.2	+0.2
BSWZ				S	Sg	08 23 58.4	+0.5
CAW	Cannon Point	0.65	52	P	Pb	08 23 56.5	+0.1
PLWZ	Palliser	0.65	95	P	Pb	08 23 56.4	0.0
MSWZ	Moikau Station	0.66	82	P	Pb	08 23 56.5	0.0
DUWZ	D'Urville Isla	0.79	334	P	Pb	08 23 59.3	+0.5
PAWZ	Paruwai Farm	0.79	81	P	Pb	08 23 59.0	+0.2
NNZ	Nelson	0.81	291	P	Pg	08 23 59.0	-0.1
OGWZ	Otaki Gorge	0.91	41	P	Pg	08 24 01.0	+0.1
HOWZ	Holdsworth Sta	1.05	54	P	Pg	08 24 04.0	+0.4
KHZ	Kahutara	1.10	215	P	Pb	08 24 03.7	-0.4
KHZ				S	Sb	08 24 18.1	0.0
THZ	Tophouse	1.14	257	P	Pb	08 24 04.7	0.0
MRZ	Mangatainoka R	1.24	47	P	Pb	08 24 06.5	+0.1
OHWZ	Ohakea	1.48	29	P	Pg	08 24 12.1	+0.3
CPWZ	Castlepoint	1.50	67	P	Pg	08 24 14.8	+2.7
POWZ	Post Office Ro	1.53	43	P	Pg	08 24 14.5	+1.8
PRWZ	Pori Road	1.53	52	P	Pg	08 24 14.6	+1.8
BFZ	Birch Farm	1.63	60	P	Pg	08 24 17.1	+2.4
GVZ	Greta Valley S	1.77	214	P	Pn	08 24 11.9	-1.5
DVHZ	Dannevirke	1.81	49	P	Pg	08 24 18.8	+0.7
WAZ	Wanganui	1.81	15	P	Pg	08 24 18.4	+0.2
ANWZ	Angora Road	1.90	57	P	Pg	08 24 22.4	+2.7
LTZ	Lake Taylor	2.02	230	P	Pn	08 24 16.6	-0.2
LREZ	Lake Rotokare	2.05	0	P	Pg	08 24 23.0	+0.4
PNHZ	Pukenui	2.11	41	P	Pg	08 24 24.0	+0.3
PRHZ	Porangahau	2.11	55	P	Pg	08 24 24.7	+0.9
NMEZ	Namu Road	2.13	349	P	Pg	08 24 23.2	-1.0
PREZ	Palmer Road	2.18	355	P	Pg	08 24 23.9	-1.1
KHEZ	Kahui Hut	2.23	353	P	Pb	08 24 24.6	+1.1
NBEZ	Newall Road No	2.28	350	P	Pb	08 24 25.4	+1.4
MTVZ	Mangateitei	2.28	22	P	Pg	08 24 26.4	-0.6
DREZ	Durham Road	2.33	356	P	Pb	08 24 25.2	+0.3
PKE	Pukeiti	2.34	352	P	Pb	08 24 25.0	-0.2
PKVZ	Pokaka	2.34	19	P	Pg	08 24 27.0	-1.1
MOVZ	Moawhango	2.35	27	P	Pb	08 24 25.8	+0.4
BHHZ	Black Hill Sta	2.39	33	P	Pg	08 24 27.8	-1.3
PXZ	Pawanui	2.39	53	P	Pb	08 24 26.8	+0.7
KRHZ	Kereru	2.40	40	P	Pg	08 24 29.3	-0.1
VRZ	Vera Road	2.40	7	P	Pb	08 24 25.5	-0.7
WHVZ	Whangaehu Hut	2.41	23	P	Pb	08 24 27.6	+1.2
OKCZ	Okains Bay	2.42	203	P	Pn	08 24 20.1	-2.2
FWVZ	Far West T-bar	2.43	22	P	Pb	08 24 27.4	+0.6
MHEZ	Mangahewa	2.44	359	P	Pg	08 24 30.8	+0.9
TUVZ	Tukino	2.44	24	P	Pb	08 24 28.2	+1.2
INZ	Inchbonnie	2.50	240	P	Pn	08 24 25.1	+1.7
OXZ	Oxford	2.51	223	P	Pb	08 24 28.3	+0.2
NGZ	Ngauruhoe	2.51	22	P	Pb	08 24 29.8	+1.6
MQZ	McQueen's Vall	2.54	210	P	Pn	08 24 21.2	-2.7
KAHZ	Kahuranaki	2.56	49	P	Pb	08 24 30.3	+1.4
WTVZ	West Tongariro	2.57	21	P	Pb	08 24 30.5	+1.4
TWVZ	Taurewa	2.57	19	P	Pg	08 24 31.3	-1.2
AKCZ	Akaroa Harbour	2.60	204	P	Pn	08 24 22.7	-2.1
KRVZ	Karewarewa	2.60	22	P	Pb	08 24 31.3	+1.6
KWHZ	Kaweka Forest	2.60	37	P	Pg	08 24 32.8	-0.3
KATZ	Kakaramea	2.73	22	P	Pg	08 24 34.3	-1.3
RITZ	Rihia Road	2.77	24	P	Pb	08 24 33.9	+1.3
BKZ	Black Stump Fm	2.84	35	P	Pg	08 24 35.8	-2.0
RATZ	Rangitukua	2.85	22	P	Pg	08 24 36.3	-1.6
WATZ	Wairara	2.99	21	P	Pg	08 24 38.5	-2.0
HIZ	Hauiti	3.02	7	P	Pb	08 24 37.3	+0.6
MRHZ	Matea Rd	3.10	31	P	Pb	08 24 37.4	-0.6
WVZ	Waitaha Valley	3.12	239	P	Pb	08 24 37.4	-1.1
KUTZ	Kaahu Road	3.22	21	P	Pg	08 24 42.7	-2.2
MTHZ	Maungataniwha	3.26	36	P	Pg	08 24 43.5	-2.1
TLZ	Tolley Road	3.30	16	P	Pb	08 24 40.5	-1.1
URZ	Urewera	3.87	34	P	Pb	08 24 50.0	-1.2
TOZ	Tahuroa Road	3.88	13	P	Pb	08 24 50.4	-0.9
FOZ	Fox Glacier	3.94	238	P	Pb	08 24 49.4	-3.0
TWGZ	Tauwhareparae	4.33	41	P	Pb	08 24 57.5	-1.6
MKAZ	Moumakai	4.44	8	P	Pn	08 24 54.7	+4.6
AWAZ	Awhitu Peninsu	4.45	3	P	Pn	08 24 53.4	+3.3
ODZ	Otahua Downs	4.46	216	P	Pn	08 24 48.7	-1.7
ETAZ	East Tamaki Re	4.57	5	P	Pn	08 24 55.6	+3.7
WIAZ	Waiheke Island	4.75	7	P	Pn	08 24 57.9	+3.6
MBAZ	Motutapu North	4.75	5	P	Pn	08 24 58.6	+4.2
JCZ	Jackson Bay	4.85	236	P	Pn	08 24 59.3	+3.6
KUZ	Kuaotunu	4.87	13	P	Pb	08 25 04.1	-4.2
WCZ	Waipu Caves	5.57	360	P	Pn	08 25 12.7	+7.1
OUZ	Omahuta	6.32	354	P	Pn	08 25 18.5	+2.7

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*IDC **21** 08:27:16.3±1.9, 41°.56S×174°.35E, h0km, mb3.6/2, mb1 3.7/4, mb1mx3.6/35, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=47.0km s-min=25.9km az=136.0*

*ISCJB **21** 08:27:18.4±0.5, 41°.80S±0°.03×174°.49E±0°.04, h18km±4km, mb3.5/2, Error ellipse: s-maj=6.2km s-min=2.8km az=137.3*

*WEL **21** 08:27:18.2, 42°S±3°×17°4E±°, h15km±6km, M3.7/13, ML4.3/13, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=133.4*

ISC 21 08:27:17.9±0.9**, 41°.63S**±0°.03×**174°.38E**±0°.03**, h17**km±6km**, n111,** σ1s.61/112**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	227	P	Pg	08 27 22.7	+0.3
CMWZ				S	Sg	08 27 26.8	+1.4
TUWZ	Tuamarina	0.39	301	P	Pb	08 27 26.4	+0.1
TUWZ				S	Sb	08 27 32.4	+0.5
BSWZ	Blackbirch Sta	0.39	257	P	Pb	08 27 26.4	+0.1
TCW	Tory Channel	0.43	349	P	Pb	08 27 27.2	+0.2
BHW	Baring Head	0.43	59	P	Pb	08 27 27.8	+0.8
BHW				S	Sb	08 27 35.0	+1.8
PLWZ	Palliser	0.66	85	P	Pn	08 27 32.4	0.0
MSWZ	Moikau Station	0.69	72	P	Pn	08 27 32.7	-0.1
CAW	Cannon Point	0.73	45	P	Pn	08 27 33.2	-0.3
PAWZ	Paruwai Farm	0.82	73	P	Pn	08 27 35.2	+0.4
NNZ	Nelson	0.86	298	P	Pn	08 27 34.8	-0.3
DUWZ	D'Urville Isla	0.90	337	P	Pn	08 27 36.2	+0.5
MTW	Mount Morrison	0.97	61	P	Pn	08 27 37.7	+1.0
KHZ	Kahutara	1.00	218	P	Pn	08 27 38.3	+1.1
OGWZ	Otaki Gorge	1.01	36	P	Pn	08 27 37.8	+0.5

TRWZ	**Traveller**	1.01	77	P	Pn	08 27 38.3	+1.1
THZ	**Tophouse**	1.11	263	P	Pn	08 27 40.0	+1.2
HOWZ	**Holdsworth Sta**	1.13	50	P	Pn	08 27 40.1	+1.2
TMWZ	**Te Maipa**	1.25	66	P	Pg	08 27 41.6	-0.4
MRZ	**Mangatainoka R**	1.33	43	P	Pg	08 27 43.3	-0.1
TIWZ	**Tintock**	1.42	54	P	Pg	08 27 44.3	-1.0
CPWZ	**Castlepoint**	1.55	63	P	Pb	08 27 46.4	+0.3
OHWZ	**Ohakea**	1.59	27	P	Pg	08 27 48.6	+0.1
PRWZ	**Pori Road**	1.61	49	P	Pb	08 27 47.0	-0.2
QRZ	**Quartz Range**	1.61	299	P	Pg	08 27 48.2	-0.7
POWZ	**Post Office Ro**	1.62	41	P	Pg	08 27 47.6	-1.5
GVZ	**Greta Valley S**	1.67	216	P	Pn	08 27 47.2	+0.9
BFZ	**Birch Farm**	1.70	57	P	Pn	08 27 47.4	+0.6
DVHZ	**Dannevirke**	1.90	46	P	Pn	08 27 50.3	+0.9
WAZ	**Wanganui**	1.93	14	P	Pg	08 27 54.6	-0.4
LTZ	**Lake Taylor**	1.94	233	P	Pn	08 27 51.4	+1.2
ANWZ	**Angora Road**	1.97	54	P	Pn	08 27 51.0	+0.6
AMCZ	**Amberley**	2.01	219	P	Pn	08 27 51.5	+0.6
LREZ	**Lake Rotokare**	2.17	0	P	Pg	08 27 59.9	+0.3
PRHZ	**Porangahau**	2.19	52	P	Pn	08 27 54.1	+0.6
PNHZ	**Pukenui**	2.20	39	P	Pn	08 27 55.0	+1.3
WPHZ	**Waipukurau**	2.21	46	P	Pn	08 27 54.9	+1.1
NMEZ	**Namu Road**	2.25	350	P	Pg	08 28 00.3	-0.8
PREZ	**Palmer Road**	2.29	356	P	Pg	08 28 00.4	-1.5
OKCZ	**Okains Bay**	2.31	205	P	Pn	08 27 55.0	-0.2
CRLZ	**Canterbury Las**	2.34	213	P	Pn	08 27 58.1	+2.6
KHEZ	**Kahui Hut**	2.35	353	P	Pg	08 28 01.4	-1.7
MTVZ	**Mangateitei**	2.39	21	P	Pg	08 28 01.6	-2.2
NBEZ	**Newall Road No**	2.39	350	P	Pg	08 28 01.3	-2.5
OXZ	**Oxford**	2.42	225	P	Pn	08 27 56.7	0.0
MQZ	**McQueen's Vall**	2.43	211	P	Pn	08 27 56.1	-0.7
INZ	**Inchbonnie**	2.44	242	P	Pn	08 27 58.4	+1.5
DREZ	**Durham Road**	2.44	357	P	Pg	08 28 02.1	-2.7
PKVZ	**Pokaka**	2.45	18	P	Pg	08 28 02.6	-2.4
PKE	**Pukeiti**	2.45	353	P	Pb	08 28 01.8	+0.2
MOVZ	**Moawhango**	2.46	26	P	Pb	08 28 00.0	-1.6
PXZ	**Pawanui**	2.47	50	P	Pn	08 27 57.3	0.0
AKCZ	**Akaroa Harbour**	2.49	205	P	Pn	08 27 57.5	-0.1
BHHZ	**Black Hill Sta**	2.49	31	P	Pb	08 28 00.0	-2.2
KRHZ	**Kereru**	2.50	38	P	Pn	08 27 58.8	+1.0
DRZ	**Dome Shelter**	2.52	21	P	Pg	08 28 07.0	+0.7
VRZ	**Vera Road**	2.52	7	P	Pb	08 28 02.7	0.0
WHVZ	**Whangaehu Hut**	2.52	22	P	Pb	08 28 01.7	-1.2
FWVZ	**Far West T-bar**	2.54	21	P	Pb	08 28 02.7	-0.4
MHEZ	**Mangahewa**	2.55	359	P	Pg	08 28 06.3	-0.6
TUVZ	**Tukino**	2.55	23	P	Pb	08 28 01.8	-1.5
NGZ	**Ngauruhoe**	2.62	21	P	Pb	08 28 03.1	-1.5
KAHZ	**Kahuranaki**	2.64	47	P	Pn	08 28 00.0	+0.3
WTVZ	**West Tongariro**	2.68	21	P	Pb	08 28 06.1	+0.7
TWVZ	**Taurewa**	2.68	18	P	Pg	08 28 08.0	-1.4
KWHZ	**Kaweka Forest**	2.70	36	P	Pb	08 28 04.0	-1.7
KRVZ	**Karewarewa**	2.71	21	P	Pb	08 28 05.3	-0.7
MCHZ	**McNeill Hill**	2.81	40	P	Pn	08 28 03.3	+1.3
KATZ	**Kakaramea**	2.84	21	P	Pb	08 28 09.2	+1.0
RITZ	**Rihia Road**	2.88	24	P	Pg	08 28 10.8	-2.3
BKZ	**Black Stump Fm**	2.94	34	P	Pn	08 28 05.3	+1.4
RATZ	**Rangitukua**	2.96	22	P	Pg	08 28 12.8	-1.8
WVZ	**Waitaha Valley**	3.06	241	P	Pn	08 28 07.1	+1.6
ARHZ	**Aropaoanui**	3.10	41	P	Pn	08 28 07.4	+1.5
WATZ	**Wairara**	3.10	20	P	Pg	08 28 14.9	-2.4
HIZ	**Hauiti**	3.14	7	P	Pb	08 28 11.1	-2.1
MRHZ	**Matea Rd**	3.20	30	P	Pn	08 28 09.0	+1.5
RPZ	**Rata Peaks**	3.22	229	Pn	Pn	08 28 07.4	-0.2
	4.7nm,0.3s,baz=73,slow=3.5,SNR=12						
RPZ				Sn	Sn	08 28 44.6	-0.9
	6.0nm,0.3s,baz=321,slow=23,SNR=8.3						
RPZ	**Rata Peaks**	3.22	229	P	Pn	08 28 08.0	+0.4
MTHZ	**Maungataniwha**	3.35	35	P	Pn	08 28 11.5	+1.9
WHHZ	**Waihua**	3.36	41	P	Pb	08 28 15.7	-1.3
RAHZ	**Arahi**	3.41	38	P	Pn	08 28 13.7	+3.4
TLZ	**Tolley Road**	3.42	15	P	Pb	08 28 14.6	-3.4
SNGZ	**Shannon Statio**	3.64	39	P	Pn	08 28 14.7	+1.3
MUGZ	**Murupara**	3.65	31	P	Pn	08 28 15.9	+2.3
PRGZ	**Paritu Road**	3.81	46	P	Pn	08 28 16.7	+0.9
FOZ	**Fox Glacier**	3.87	239	P	Pn	08 28 19.9	+3.3
RIGZ	**Rimuhau**	3.91	43	P	Pn	08 28 17.7	+0.6
URZ	**Urewera**	3.97	33	Pn	Pn	08 28 17.4	-0.5
	1.2nm,0.3s,baz=247,slow=5.2,SNR=7.8						
URZ				Sn	Sn	08 29 04.8	+0.8
	4.0nm,0.3s,baz=114,slow=19,SNR=3.9						
URZ	**Urewera**	3.97	33	P	Pn	08 28 19.4	+1.5
TOZ	**Tahuroa Road**	3.99	13	P	Pb	08 28 25.1	-2.6
LBZ	**Lake Benmore**	4.13	227	P	Pn	08 28 21.8	+1.6
TKGZ	**Te Karaka**	4.15	41	P	Pn	08 28 24.5	+4.0
ODZ	**Otahua Downs**	4.37	217	P	Pn	08 28 23.6	+0.2
TWGZ	**Tauwhareparae**	4.42	40	P	Pn	08 28 24.7	+0.5
RUGZ	**Raukumara Rang**	4.46	36	P	Pn	08 28 25.3	+0.5
MKAZ	**Moumakai**	4.56	8	P	Pn	08 28 30.8	+4.8
AWAZ	**Awhitu Peninsu**	4.57	3	P	Pn	08 28 30.7	+4.6
PUZ	**Puketiti**	4.64	41	P	Pn	08 28 27.9	+0.6
HAZ	**Te Kaha**	4.67	35	P	Pn	08 28 28.4	+0.8
ETAZ	**East Tamaki Re**	4.69	5	P	Pb	08 28 35.9	-3.7
JCZ	**Jackson Bay**	4.78	237	P	Pb	08 28 36.9	-4.4
WIAZ	**Waiheke Island**	4.87	7	P	Pb	08 28 36.4	-6.2
MBAZ	**Motutapu North**	4.87	5	P	Pn	08 28 36.1	+5.7
WMGZ	**Waiomatatini S**	4.92	41	P	Pn	08 28 30.5	-0.5
TUZ	**Tuapeka**	5.52	217	P	Pn	08 28 41.1	+1.9
WCZ	**Waipu Caves**	5.69	360	P	Pn	08 28 47.1	+5.6
SYZ	**Scrubby Hill**	6.19	216	P	Pn	08 28 50.0	+1.6
OUZ	**Omahuta**	6.43	354	P	Pn	08 28 57.7	+5.9
ASAR	**Alice Springs**	38.09	285	P	P	08 34 36.7	+0.8
	0.6nm,0.8s,baz=126,slow=7.0,SNR=6.6						
WRA	**Warramunga Arr**	40.15	290	P	P	08 34 53.6	+0.5
	0.8nm,0.7s,baz=134,slow=8.2,SNR=2.9						
TORD	**Torodi Ar. Bea**	150.91	195	PKPbc	PKiKP	08 47 11.5	+1.0
	0.3nm,0.5s,baz=164,slow=3.4,SNR=4.4						

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*IDC **21** 08:27:20.0±1.6, 0°.82N×92°.63E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.7/46, mbtmp3.8/8, ML4.4/2, MS4.0/1, Ms1 4.0/1, ms1mx3.2/33, Error ellipse: s-maj=43.5km s-min=26.2km az=48.0*

*ISCJB **21** 08:27:21.4±0.7, 1°.08N±0°.07×92°.94E±0°.05, h10^{km}, mb4.0/7, MS4.0/1, Error ellipse: s-maj=9.7km s-min=6.5km az=5.3*

*NEIC **21** 08:27:21.4±2.1, 0°.94N×92°.74E, h10^{km}±2^{km}, mb4.3/2, Error ellipse: s-maj=16.8km s-min=6.8km az=47.0*

*DJA **21** 08:27:30.4±0.5, 1°N±4°×9°3E±°, h10^{km}, M4.4/6, mb4.5/4, mB5.9/2, MLv4.3/6, Mw(mB)5.5/2*

ISC 21 08:27:21.7±0.8**, 0°.95N**±0°.08×**92°.79E**±0°.06**, h10^{km}, n32, σ2^{s}48**/42**, mb4.0**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	3.82	68	P	Pn	08 28 21.7	+1.0
SNSI				S	Sn	08 29 01.2	-4.5
GSI	**Gunungsitoli**	4.80	86	*e*Pn	Pn	08 28 35.5	+1.4
GSI				*e*Sn	Sn	08 29 30.9	+1.1
GSI	**Gunungsitoli**	4.80	86	P	Pn	08 28 34.9	+0.8
GSI				Pg	Pb	08 28 49.7	+3.7
GSI				S	Sn	08 29 24.6	-5.3
MLSI	**Meulaboh, Aceh**	4.89	48	P	Pn	08 28 36.7	+1.3
MLSI				S	Sn	08 29 27.6	-4.4
TPTI		4.95	62	P	Pn	08 28 37.6	+1.4
TPTI				S	Sn	08 29 29.3	-4.3
PBSI	**Pulau Batu**	5.58	100	P	Pn	08 28 46.6	+1.7
PBSI				S	Sn	08 29 45.7	-3.5
KCSI	**Kotacane, Aceh**	5.59	63	P	Pn	08 28 46.3	+1.2
PSI	**Prapat**	6.40	73	*e*Pn	Pn	08 28 54.8	-1.5
PSI				*e*Sn	Sn	08 30 09.2	-0.4
MNSI	**Mandailing Nat**	6.79	91	P	Pn	08 29 04.6	+3.1
MNSI				S	Sn	08 30 14.0	-5.0
PDSI	**Padang**	7.89	104	P	Pn	08 29 17.6	+0.9
	34nm,0.9s,3μm0.2nm						
PDSI				S	Sn	08 30 40.5	-5.7
	34nm,0.9s,3μm0.2nm						
PPSI	**Pulau Pagai**	8.11	117	P	Pn	08 29 21.5	+1.9
	110nm,0.4s,0.5nm						
BKNI	**Bangkinang**	8.27	94	*e*Pn	Pn	08 29 20.7	-1.3
SDSI	**Sungai Dareh**	8.84	102	P	Pn	08 29 27.2	-2.5
IPM	**Ipoh**	8.94	67	*e*Pn	Pn	08 29 30.2	-0.9
KULM	**Kulim**	8.95	61	*e*Pn	Pn	08 29 31.6	+0.3
PALK	**Pallekele**	13.59	298	Pn	Pn	08 30 33.9	-0.9
	1.0nm,0.3s,baz=116,slow=9.7,SNR=4.1						
PALK				Sn	Sn	08 32 51.8	-14
	0.9nm,0.3s,baz=116,slow=12,SNR=3.3						
PALK	**Pallekele**	13.59	298	*e*Pn	Pn	08 30 31.5	-3.3
PALK				*e*		08 32 51.8	
CMAR	**Chiang Mai Arr**	18.42	19	P	Pn	08 31 40.5	+3.1
	0.8nm,0.3s,baz=212,slow=12,SNR=4.1						
WR1	**Warramunga Arr**	45.70	119	*e*P	P	08 35 43.8	+0.4
WRA	**Warramunga Arr**	45.70	119	P	P	08 35 43.8	+0.4
	1.6nm,0.5s,baz=295,slow=10.0,SNR=7.9						
MK32	**Makanchi Array**	46.57	350	*e*P	P	08 35 50.2	+0.4
MKAR	**Makanchi Array**	46.57	350	P	P	08 35 50.2	+0.4
	0.4nm,0.6s,baz=150,slow=9.6,SNR=2.8						
SONA0	**Songino Array**	48.17	12	*e*P	P	08 36 03.4	+1.0
SONM	**Songino Array**	48.17	12	P	P	08 36 03.4	+1.0
	0.7nm,0.5s,baz=187,slow=8.1,SNR=3.2						
KS15	**Wonju Array Si**	48.61	38	*e*P	P	08 36 06.3	+0.5
	5.5nm,0.9s						
KSRS	**Korea Array**	48.65	38	P	P	08 36 07.2	+1.2
	1.0nm,0.7s,baz=226,slow=7.8,SNR=4.7						
KSRS				LR	LR	08 58 21.5	
	comp=Z,157nm,18.5s,baz=134,slow=38						
ZALV	**Zalesovo Beam**	53.23	354	P	P	08 36 39.9	-0.3
	0.6nm,0.4s,baz=182,slow=5.6,SNR=2.5						
ZAA1	**Zalesovo Array**	53.23	354	*e*P	P	08 36 39.9	-0.4
GEC2	**GERESS Array S**	82.10	319	*e*P	P	08 39 40.1	-2.6
	1.0nm,0.7s						
GERES	**GERESS Array B**	82.10	319	P	P	08 39 43.4	+0.6
	0.2nm,0.5s,baz=105,slow=5.8,SNR=3.7						
LTX	**Lajitas**	146.02	26	*e*PKPdf	PKPbc	08 47 02.2	-0.5
TXAR	**Lajitas Array**	146.02	26	PKPbc	PKPbc	08 47 02.2	-0.5
	0.9nm,0.8s,baz=298,slow=1.9,SNR=13						

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*IDC **21** 08:28:12.7±0.8, 41°.46S×174°.31E, h0^{km}, mb4.2/6, mb1 4.4/7, mb1mx4.1/33, mbtmp4.2/7, ML4.0/1, Error ellipse: s-maj=25.1km s-min=19.2km az=114.0*

*ISCJB **21** 08:28:15.4±0.4, 41°.62S±0°.03×174°.29E±0°.04, h30^{km}±3^{km}, mb4.4/14, Error ellipse: s-maj=6.5km s-min=4.0km az=39.5*

*WEL **21** 08:28:15.6, 41°.6S±0°.7×174°.3E±0°.6, h21^{km}±3^{km}, M4.7/7, ML5.1/7, MLv4.7/7, Error ellipse: s-maj=0.0km s-min=0.0km az=149.6*

*NEIC **21** 08:28:15.6±0.0, 41°.59S×174°.31E, h21^{km}, mb4.6/10, ML4.7(WEL), After WEL.*

ISC 21 08:28:15.9±1.1**, 41°.62S**±0°.03×**174°.32E**±0°.03**, h20^{km}**±4^{km}**, n67, σ1^{s}17**/76**, mb4.5**/14**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	0.15	211	P	Pg	08 28 20.8	+0.3
TUWZ	**Tuamarina**	0.34	303	P	Pg	08 28 23.1	-0.1
TUWZ				S	Sb	08 28 28.4	+0.1
BSWZ	**Blackbirch Sta**	0.35	253	P	Pb	08 28 23.5	+0.1
TCW	**Tory Channel**	0.41	355	P	Pg	08 28 24.1	-0.3
TCW				S	Sb	08 28 30.3	0.0
SNZO	**South Karori**	0.42	44	*e*Pg	Pb	08 28 24.8	+0.1
SNZO				*e*Sg	Sb	08 28 31.1	+0.4
BHW	**Baring Head**	0.46	64	P	Pb	08 28 25.5	+0.1
MSWZ	**Moikau Station**	0.73	74	P	Pg	08 28 30.5	+0.3
CAW	**Cannon Point**	0.76	48	P	Pg	08 28 30.7	-0.1
NNZ	**Nelson**	0.81	299	P	Pb	08 28 31.5	+0.2
KHZ	**Kahutara**	0.99	216	*e*Pn	Pg	08 28 35.3	+0.1
THZ	**Tophouse**	1.07	262	*e*Pn	Pn	08 28 36.0	+0.1
THZ				*e*Sn	Sn	08 28 50.0	-0.2
BFZ	**Birch Farm**	1.73	58	*e*Pn	Pn	08 28 44.9	+0.1
LTZ	**Lake Taylor**	1.92	232	*e*Pn	Pn	08 28 47.1	-0.4
CRLZ	**Canterbury Las**	2.32	212	*e*Pn	Pn	08 28 51.8	-1.2
OXZ	**Oxford**	2.40	224	*e*Pn	Pn	08 28 53.6	-0.6
MQZ	**McQueen's Vall**	2.42	210	*e*Pn	Pn	08 28 52.9	-1.5
MQZ				*e*Sn	Sn	08 29 21.4	-2.1
BKZ	**Black Stump Fm**	2.96	35	*e*Pn	Pn	08 29 01.0	-0.8
HIZ	**Hauiti**	3.13	8	*e*Pn	Pn	08 29 02.9	-1.2
RPZ	**Rata Peaks**	3.19	228	Pn	Pn	08 29 05.1	+0.1
	16nm,0.3s,baz=45,slow=2.9,SNR=18						
RPZ				Pg	Pb	08 29 13.2	+1.2
	128nm,0.3s,baz=345,slow=2.5,SNR=45						
RPZ				Sn	Sn	08 29 41.1	-1.4
	52nm,0.3s,baz=323,slow=20,SNR=26						
RPZ	**Rata Peaks**	3.19	228	*e*Pn	Pn	08 29 04.8	-0.2
URZ	**Urewera**	3.98	34	Pg	Pb	08 29 23.5	-1.8
	21nm,0.3s,baz=216,slow=6.3,SNR=14						
URZ				Sn	Sn	08 30 00.2	-1.6
	42nm,0.3s,baz=120,slow=20,SNR=3.2						
URZ	**Urewera**	3.98	34	*e*Pn	Pn	08 29 16.9	+1.1
LBZ	**Lake Benmore**	4.11	226	*e*Pn	Pn	08 29 18.4	+0.8
ODZ	**Otahua Downs**	4.35	217	*e*Pn	Pn	08 29 19.6	-1.3
WKZ	**Wanaka**	5.03	229	*e*Pn	Pn	08 29 30.1	-0.2
WHZ	**Wether Hill Ro**	6.29	225	*e*Pn	Pn	08 29 46.8	-0.7
OUZ	**Omahuta**	6.41	355	*e*Pn	Pn	08 29 51.5	+2.2
OUZ				*e*Sn	Sn	08 31 05.5	+3.7
DCZ	**Deep Cove**	6.47	231	*e*Pn	Pn	08 29 49.2	-0.8
EIDS	**Eidsvold**	25.14	303	*e*P	P	08 33 38.2	-1.5
	6.6nm,0.8s						
CTA	**Charters Tower**	32.03	304	P	P	08 34 40.8	-0.4
	1.8nm,0.6s,baz=118,slow=10,SNR=2.8						
CTAO	**Charters Tower**	32.03	304	*e*P	P	08 34 39.8	-1.4
	6.6nm,1.1s						
VNDA	**Vanda**	36.38	185	P	P	08 35 20.6	+2.2
	2.2nm,1.1s,baz=10,slow=9.0,SNR=4.8						
VNDA	**Vanda**	36.38	185	*e*P	P	08 35 17.4	-0.9
SBA	**Scott Base**	36.48	183	*e*P	P	08 35 21.3	+2.1
	16nm,1.3s						
AS31	**Alice Springs**	38.04	285	*e*P	P	08 35 31.7	-1.3
	1.4nm,0.9s						
ASAR	**Alice Springs**	38.04	285	P	P	08 35 32.1	-1.0
	2.0nm,0.5s,baz=122,slow=6.9,SNR=23						
COEN	**Coen**	38.59	306	*e*P	P	08 35 35.7	-1.9
	33nm,1.5s						
WB2	**Warramunga Arr**	40.10	290	*e*P	P	08 35 50.0	-0.3
	10nm,0.6s						
WR1	**Warramunga Arr**	40.10	290	*e*P	P	08 35 49.3	-1.0
WRA	**Warramunga Arr**	40.10	290	P	P	08 35 49.3	-1.0
	9.2nm,0.6s,baz=136,slow=7.7,SNR=38						
MTN	**Manton Dam**	47.21	295	*e*P	P	08 36 46.8	-0.7
	12nm,0.8s						
QSPA	**South Pole Qui**	48.51	180	*e*P	P	08 36 59.6	+2.4
	13nm,0.9s						
SNAA	**Sanae**	67.00	181	P	P	08 39 08.0	+1.1
SNAA	**Sanae**	67.00	181	*e*P	P	08 39 08.0	+1.1
	3.8nm,1.0s						
VNA3	**Neumayer Olymp**	67.41	179	P	P	08 39 10.6	+1.2
VNA1	**Neumayer--Stat**	68.03	179	P	P	08 39 13.9	+0.7
MJAR	**Matsushiro Arr**	84.51	332	P	P	08 40 46.9	-0.3
	0.3nm,0.4s,baz=176,slow=5.8,SNR=2.7						
MAJO	**Matsushiro**	84.52	332	*e*P	P	08 40 46.9	-0.3
KSRS	**Korea Array**	89.38	325	P	P	08 41 11.3	+0.6
	1.7nm,0.6s,baz=143,slow=5.2,SNR=7.9						
YKA	**Yellowknife Ar**	118.23	30	PKP	PKPdf	08 47 00.3	-0.3
	0.7nm,0.7s,baz=264,slow=1.8,SNR=11						
YKB5	**Yellowknife Ar**	118.23	30	*e*PKPdf	PKPdf	08 47 00.3	-0.3
MK32	**Makanchi Array**	119.93	308	*e*PKPdf	PKPdf	08 47 03.2	-1.2
MKAR	**Makanchi Array**	119.93	308	PKP	PKPdf	08 47 03.2	-1.2
	0.2nm,0.5s,baz=119,slow=1.8,SNR=3.1						
KBZ	**Khabaz**	144.62	290	PKP	PKPab	08 47 49.3	0.0
	2.0nm,0.7s,baz=157,slow=3.1,SNR=5.7						
DBIC	**Dimbokro**	145.19	181	PKPbc	PKPdf	08 47 52.8	+0.2
	9.4nm,0.9s,baz=170,slow=4.3,SNR=5.9						
DBIC	**Dimbokro**	145.19	181	*e*PKPbc	PKPbc	08 47 50.9	-1.1
ARA0	**ARCESS Array S**	147.67	340	*e*PKPdf	PKPdf	08 47 56.5	+1.4
ARCES	**ARCESS Array B**	147.67	340	PKPbc	PKPdf	08 47 56.5	+1.4
	2.0nm,0.6s,baz=61,slow=2.9,SNR=16						
BR101	**Keskin Array S**	150.29	280	*e*PKPbc	PKPbc	08 48 05.2	-0.3
BRTR	**Keskin Array B**	150.29	280	PKPbc	PKPbc	08 48 05.2	-0.3
	1.2nm,0.9s,baz=85,slow=3.1,SNR=4.7						
TORD	**Torodi Ar. Bea**	150.92	195	PKPbc	PKPbc	08 48 06.8	-0.8
	2.1nm,0.4s,baz=169,slow=3.8,SNR=15						
TOA1	**Torodi Ar. Sit**	150.92	195	*e*PKPbc	PKPbc	08 48 06.8	-0.8
FIA0	**FINESS Array S**	152.45	327	*e*PKPbc	PKPbc	08 48 08.4	-1.1
FINES	**FINESS Array B**	152.45	327	PKPbc	PKPbc	08 48 08.4	-1.1
	2.7nm,0.6s,baz=33,slow=4.0,SNR=15						
NB2	**NORSAR Subarra**	158.00	338	PKP	PKPab	08 48 46.4	+2.7
	comp=Z,2.2nm,0.9s,baz=35,slow=4.4						
GEC2	**GERESS Array S**	164.57	304	*e*PKPab	PKPab	08 49 13.1	+0.1
GERES	**GERESS Array B**	164.57	304	PKPab	PKPab	08 49 13.1	+0.1
	comp=Z,0.4nm,0.5s,baz=70,slow=6.4,SNR=3.1						

WEL 21 08:29:36.4, 42°S±2°×**17°4E**±°**, h15^{km}**±5^{km}**, M3.7**/10**, ML3.9**/10**, MLv3.7**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=145.2, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	0.17	200	P	Pb	08 29 41.0	-0.3
CMWZ				S	Sb	08 29 45.0	+0.4
TUWZ	**Tuamarina**	0.31	301	P	Pb	08 29 43.6	+0.1
TUWZ				S	Sb	08 29 48.3	0.0
BSWZ	**Blackbirch Sta**	0.34	247	P	Pg	08 29 43.7	+0.4
BSWZ				S	Sb	08 29 49.2	-0.1
TCW	**Tory Channel**	0.38	358	P	Pb	08 29 44.8	+0.1
TCW				S	Sb	08 29 50.3	0.0
BHW	**Baring Head**	0.47	68	P	Pb	08 29 46.1	-0.2
PLWZ	**Palliser**	0.72	89	P	Pb	08 29 50.9	+0.2
MSWZ	**Moikau Station**	0.74	77	P	Pb	08 29 51.2	+0.3
CAW	**Cannon Point**	0.75	51	P	Pb	08 29 51.4	+0.2
NNZ	**Nelson**	0.78	298	P	Pg	08 29 51.5	0.0
DUWZ	**D'Urville Isla**	0.83	340	S	Sb	08 30 04.2	+0.7
KHZ	**Kahutara**	1.00	214	P	Pb	08 29 55.3	-0.1
KHZ				S	Sn	08 30 09.9	+0.2
MTW	**Mount Morrison**	1.00	65	P	Pn	08 29 56.4	+0.5
OGWZ	**Otaki Gorge**	1.01	41	P	Pn	08 29 56.1	+0.1

WEL 21 08:30:03.4, 42°S±3°×**17°4E**±°**, h16^{km}**±6^{km}**, M3.4**/8**, ML3.6**/8**, MLv3.4**/8**, Error ellipse: s-maj=0.0km s-min=0.0km az=113.9, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	0.17	204	S	Sb	08 30 11.7	+0.3
TUWZ	**Tuamarina**	0.32	301	P	Pb	08 30 10.7	0.0
TUWZ				S	Sb	08 30 15.9	+0.3
BSWZ	**Blackbirch Sta**	0.34	249	P	Pb	08 30 10.9	-0.3
BSWZ				S	Sb	08 30 16.6	+0.2
TCW	**Tory Channel**	0.39	357	P	Pb	08 30 12.0	+0.1
TCW				S	Sb	08 30 17.9	+0.3
BHW	**Baring Head**	0.46	66	P	Pb	08 30 13.1	-0.1
PLWZ	**Palliser**	0.71	88	P	Pn	08 30 18.9	+0.1
CAW	**Cannon Point**	0.75	50	P	Pg	08 30 17.9	-0.1
NNZ	**Nelson**	0.79	298	P	Pb	08 30 17.7	-1.1
DUWZ	**D'Urville Isla**	0.84	340	P	Pg	08 30 20.0	+0.2
MTW	**Mount Morrison**	1.00	65	P	Pn	08 30 23.0	+0.3
KHZ	**Kahutara**	1.00	215	P	Pg	08 30 22.9	+0.1
OGWZ	**Otaki Gorge**	1.01	40	P	Pg	08 30 23.0	0.0

ROM 21 08:34:24.4±0.1**, 43°.411N**±0°.003×**12°.483E**±0°.005**, h7^{km}**±1^{km}**, ML0.8**/5**, Error ellipse: s-maj=0.3km s-min=0.3km az=130.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	0.06	243	P	Pg	08 34 26.3	+0.2
ATVO				S	Sg	08 34 27.5	+0.2
ATVO				AML	AML		
	comp=E,183μm,0.1s						
ATVO				AML	AML		
	comp=N,240μm,0.1s						
ATVO				AML	AML		
	comp=N,240μm,0.1s						
ATVO				AML	AML		
	comp=E,183μm,0.1s						
ATVO				AML	AML		
	comp=N,240μm,0.1s						
ATVO				AML	AML		
	comp=E,183μm,0.1s						
ATPI	**Pietralunga -**	0.07	304	P	Pg	08 34 26.6	+0.3
ATPI				S	Sg	08 34 28.1	+0.5
ATPI				AML	AML		
	comp=E,88μm,0.5s						
ATPI				AML	AML		
	comp=N,110μm,0.4s						
ATPI				AML	AML		
	comp=N,110μm,0.4s						
ATPI				AML	AML		
	comp=E,88μm,0.5s						
ATPI				AML	AML		
	comp=N,110μm,0.4s						
ATPI				AML	AML		
	comp=E,88μm,0.5s						
ATFO	**Monte Foce - G**	0.08	125	P	Pg	08 34 26.6	+0.2
ATFO				S	Sg	08 34 28.1	+0.4
ATFO				AML	AML		
	comp=E,144μm,0.3s						
ATFO				AML	AML		
	comp=N,138μm,0.3s						
ATFO				AML	AML		
	comp=E,144μm,0.3s						
ATFO				AML	AML		
	comp=N,138μm,0.3s						
ATFO				AML	AML		
	comp=E,144μm,0.3s						
ATFO				AML	AML		
	comp=N,138μm,0.3s						
MURB	**Monte Urbino**	0.15	168	P	Pg	08 34 28.0	+0.5
MURB				S	Sg	08 34 30.9	+1.3
MURB				AML	AML		
	comp=E,130μm,0.2s						
MURB				AML	AML		
	comp=N,101μm,0.3s						
MURB				AML	AML		
	comp=E,130μm,0.2s						
MURB				AML	AML		
	comp=N,101μm,0.3s						
MURB				AML	AML		
	comp=E,130μm,0.2s						
MURB				AML	AML		
	comp=N,101μm,0.3s						
FRON	**Frontone**	0.21	59	P	Pg	08 34 29.0	+0.5
FRON				S	Sg	08 34 32.7	+1.4
FRON				AML	AML		
	comp=E,17μm,1.3s						
FRON				AML	AML		
	comp=N,36μm,0.9s						
FRON				AML	AML		
	comp=E,17μm,1.3s						
FRON				AML	AML		
	comp=N,36μm,0.9s						
FRON				AML	AML		
	comp=E,17μm,1.3s						
FRON				AML	AML		
	comp=N,36μm,0.9s						
NARO	**Abbazia di Nar**	0.21	20	P	Pg	08 34 29.0	+0.4
NARO				S	Sg	08 34 33.0	+1.6
NARO				AML	AML		
	comp=E,24μm,0.9s						
NARO				AML	AML		
	comp=N,20μm,1.6s						
NARO				AML	AML		
	comp=E,24μm,0.9s						
NARO				AML	AML		
	comp=N,20μm,1.6s						
NARO				AML	AML		
	comp=E,24μm,0.9s						
NARO				AML	AML		
	comp=N,20μm,1.6s						
VLC	**Villacollemand**	1.69	297	AML	AML		
	comp=N,398μm,0.1s						
VLC				AML	AML		
	comp=E,380μm,0.1s						
VLC				AML	AML		
	comp=N,398μm,0.1s						
VLC				AML	AML		
	comp=E,436μm,0.1s						
VLC				AML	AML		
	comp=N,406μm,0.1s						
VLC				AML	AML		
	comp=E,436μm,0.1s						
VLC				AML	AML		
	comp=E,380μm,0.1s						
VLC				AML	AML		
	comp=N,406μm,0.1s						
VLC				AML	AML		
	comp=E,436μm,0.1s						
VLC				AML	AML		
	comp=E,380μm,0.1s						
VLC				AML	AML		
	comp=N,406μm,0.1s						
VLC				AML	AML		
	comp=N,398μm,0.1s						
GRAM	**Graiana**	2.05	303	AML	AML		
	comp=E,458μm,1.3s						
GRAM				AML	AML		
	comp=E,458μm,1.3s						
GRAM				AML	AML		
	comp=N,607μm,0.4s						
GRAM				AML	AML		
	comp=N,607μm,0.4s						
GRAM				AML	AML		
	comp=N,607μm,0.4s						
GRAM				AML	AML		
	comp=E,458μm,1.3s						

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*GEN **21** 08:34:35.1, 44°.18N×10°.16E, h3^{km}, Ml0.7*

ROM 21 08:34:34.9±0.1, 44°.190N±0°.005×10°.152E±0°.006, h5^{km}±1^{km}, Md1.2/4, Error ellipse: s-maj=0.4km s-min=0.4km az=6.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	**Equi**	0.02	179	P	Pg	08 34 36.0	+0.1
EQUI				S	Sg	08 34 36.5	-0.1
EQUI	**Equi**	0.02	179	P	Pg	08 34 36.0	+0.1
EQUI				S	Sg	08 34 36.6	-0.1
EQUI	comp=E,5555µm,0.1s			AML	AML		
EQUI	comp=N,2520µm,0.1s			AML	AML		
EQUI				END			
EQUI	**Equi** comp=N,2520µm,0.1s	0.02	179	AML	AML		
EQUI	comp=E,5555µm,0.1s			AML	AML		
EQUI	comp=N,2520µm,0.1s			AML	AML		
EQUI	comp=E,5555µm,0.1s			AML	AML		
EQUI	comp=N,2520µm,0.1s			AML	AML		
EQUI	comp=E,5555µm,0.1s			AML	AML		
T0912	**Minucciano (LU**	0.05	118	P	Pg	08 34 36.4	+0.2
T0912				S	Sg	08 34 37.4	+0.3
T0912	comp=E,8715µm,0.2s			AML	AML		
T0912	comp=N,17150µm,0.2s			AML	AML		
T0912	comp=E,8480µm,0.2s			AML	AML		
T0912	comp=N,17200µm,0.2s			AML	AML		
T0912				END			
T0912	**Minucciano (LU** comp=N,17150µm,0.2s	0.05	118	AML	AML		
T0912	comp=E,8715µm,0.2s			AML	AML		
T0912	comp=N,17150µm,0.2s			AML	AML		
T0912	comp=E,8480µm,0.2s			AML	AML		
T0912	comp=N,17200µm,0.2s			AML	AML		
T0912	comp=E,8480µm,0.2s			AML	AML		
T0912	comp=E,8715µm,0.2s			AML	AML		
T0912	comp=N,17150µm,0.2s			AML	AML		
T0912	comp=N,17200µm,0.2s			AML	AML		
T0912	comp=E,8715µm,0.2s			AML	AML		
T0912	comp=E,8480µm,0.2s			AML	AML		
T0912	comp=N,17200µm,0.2s			AML	AML		
T0911	**Castelpoggio (**	0.10	216	P	Pg	08 34 37.5	+0.6
T0911				S	Sg	08 34 39.2	+0.9
VLC	**Villacollemand**	0.17	100	P	Pg	08 34 38.8	+0.5
VLC				S	Sg	08 34 41.6	+1.0
VLC	comp=E,380µm,0.1s			AML	AML		
VLC	comp=N,398µm,0.1s			AML	AML		
VLC	comp=E,436µm,0.1s			AML	AML		
VLC	comp=N,406µm,0.1s			AML	AML		
VLC				END			
SARO	**Sassorosso**	0.18	92	P	Pg	08 34 39.0	+0.5
SARO				S	Sg	08 34 41.8	+1.0
PLMA	**Palmaria, Port**	0.26	237	P	Pb	08 34 41.1	-0.9
PLMA				S	Sg	08 34 44.3	+1.0
PLMA	comp=E,155µm,0.5s			AML	AML		
PLMA	comp=N,192µm,0.6s			AML	AML		
PLMA	**Palmaria, Port** comp=N,192µm,0.6s	0.26	237	AML	AML		
PLMA	comp=E,155µm,0.5s			AML	AML		
PLMA	comp=E,155µm,0.5s			AML	AML		
PLMA	comp=N,192µm,0.6s			AML	AML		
PLMA	comp=E,155µm,0.5s			AML	AML		
PLMA	comp=N,192µm,0.6s			AML	AML		
GRAM	**Graiana**	0.31	348	P	Pg	08 34 41.8	+0.9
GRAM				S	Sb	08 34 46.6	-1.6
GRAM	**Graiana**	0.31	348	P	Pg	08 34 41.8	+1.0
GRAM				S	Sb	08 34 46.9	-1.4
GRAM	comp=E,458µm,1.3s			AML	AML		
GRAM	comp=N,607µm,0.4s			AML	AML		
GRAM				END			
MSSA	**Maissana**	0.47	286	P	Pg	08 34 44.6	+0.6
ATPI	**Pietralunga -** comp=E,88µm,0.5s	1.79	114	AML	AML		
ATPI	comp=N,110µm,0.4s			AML	AML		
ATVO	**AVT- Monte Val** comp=E,183µm,0.1s	1.82	116	AML	AML		
ATVO	comp=N,240µm,0.1s			AML	AML		
NARO	**Abbazia di Nar** comp=E,24µm,0.9s	1.85	107	AML	AML		
NARO	comp=N,20µm,1.6s			AML	AML		
ATFO	**Monte Foce - G** comp=E,144µm,0.3s	1.94	114	AML	AML		
ATFO	comp=N,138µm,0.3s			AML	AML		
MURB	**Monte Urbino** comp=E,130µm,0.2s	1.95	117	AML	AML		
MURB	comp=N,101µm,0.3s			AML	AML		
FRON	**Frontone** comp=N,36µm,0.9s	1.98	109	AML	AML		
FRON	comp=E,17µm,1.3s			AML	AML		

ISCJB ***21*** *08:35:17.2±0.9, 23°.10N±0°.08×100°.68E±0°.09, h10^{km}, mb3.6/3, MS3.4/1, Error ellipse: s-maj=13.8km s-min=8.2km az=40.3*

IDC ***21*** *08:35:18.1±1.4, 22°.97N×100°.48E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.3/45, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=32.8km s-min=20.8km az=91.0*

BJI ***21*** *08:35:18.0±0.0, 22°.95N×100°.78E, h12^{km}, mb4.1/2, mB4.1/2, ML4.0/7, Ms3.6/3, Ms7 3.5/3*

ISC 21 08:35:18.7±0.8, 23°.11N±0°.08×100°.61E±0°.09, h10^{km}, n8, σ3^{s}.19/13, mb3.6/3, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	2.79	44	Pg	Pg	08 36 11.0	-1.2
KMI				Sg	Sg	08 36 48.3	-0.1
KMI	comp=N,260nm,0.9s			smax	smax		
KMI	comp=E,220nm,1.2s			smax	smax		
CMAR	**Chiang Mai Arr** 1.5nm,0.3s,baz=12,slow=13,SNR=6.9	4.89	199	Pn	Pn	08 36 29.1	-3.3
CMAR	6.3nm,0.3s,baz=10,slow=16,SNR=30			Pg	Pb	08 36 45.6	+1.1
CMAR	8.5nm,0.3s,baz=16,slow=33,SNR=11			Lg	Lg	08 37 47.1	
GYA	**Guiyang**	6.43	58	*e*Pn	Pb	08 37 01.3	-10
GYA				Pg	Pg	08 37 25.5	+3.6
GYA				Sg	Sb	08 38 23.9	-3.9
GYA	comp=N,40nm,1.2s			smax	smax		
GYA	comp=E,40nm,1.2s			smax	smax		
HHC	**Hu-ho-hao-te**	19.95	25	P	Pn	08 39 54.1	+1.5
HHC	comp=E,6.0nm,0.8s			pmax	pmax		
HHC	comp=E,16nm,5.0s			pmax	pmax		
WMQ	**Urumqi**	23.24	336	*e*P	P	08 40 25.0	-1.2
WMQ				pP	pP	08 40 29.9	+0.4
WMQ				PP	PnPn	08 40 57.5	+5.7
WMQ				S	S	08 44 34.0	-4.3
WMQ	comp=E,140nm,21.3s			LR	LR		
WMQ	comp=E,110nm,26.3s			LR	LR		
WMQ	comp=E,160nm,23.1s			LR	LR		
MKAR	**Makanchi Array** comp=E,0.4nm,0.5s,baz=143,slow=10,SNR=4.7	27.86	332	P	P	08 41 09.9	+1.4
WRA	**Warramunga Arr** comp=E,1.2nm,0.9s,baz=334,slow=7.4,SNR=2.6	53.98	140	P	P	08 44 43.0	-0.2
ASAR	**Alice Springs** comp=E,0.4nm,0.7s,baz=323,slow=6.7,SNR=5.4	56.65	143	P	P	08 45 04.1	+1.8

WEL 21 08:35:54.6, 42°S±2°×17°4E±°, h5^{km}±3^{km}, M3.7/43, mB4.7/1, ML3.2/25, MLv3.7/43, Mw(mB)4.0/1, Error ellipse: s-maj=0.0km s-min=0.0km az=123.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.13	251	P	Pg	08 36 06.1	+8.9
BSWZ	**Blackbirch Sta**	0.38	269	P	Pb	08 36 02.9	-0.8
TUWZ	**Tuamarina**	0.43	310	P	Pb	08 36 03.8	-0.8
BHW	**Baring Head**	0.47	51	P	Pb	08 36 05.7	+0.4
TCW	**Tory Channel**	0.50	351	P	Pg	08 36 04.5	+0.3
WEL	**Wellington**	0.51	35	P	Pb	08 36 05.8	-0.2
PLWZ	**Palliser**	0.67	78	P	Pn	08 36 10.9	+0.1
MSWZ	**Moikau Station**	0.71	66	P	Pn	08 36 10.9	-0.5
CAW	**Cannon Point**	0.79	41	P	Pb	08 36 10.8	0.0
PAWZ	**Paruwai Farm**	0.85	68	P	Pn	08 36 13.7	+0.4
NNZ	**Nelson**	0.90	303	P	Pb	08 36 12.4	-0.2
KHZ	**Kahutara**	0.95	221	P	Pn	08 36 16.5	+2.0
DUWZ	**D’Urville Isla**	0.97	339	P	Pb	08 36 14.2	+0.4
MTW	**Mount Morrison**	1.01	57	P	Pn	08 36 15.5	+0.1
TRWZ	**Traveller**	1.03	73	P	Pn	08 36 16.2	+0.6
OGWZ	**Otaki Gorge**	1.07	34	P	Pb	08 36 15.4	-0.2
THZ	**Tophouse**	1.10	267	P	Pn	08 36 18.3	+1.6
HOWZ	**Holdsworth Sta**	1.18	47	P	Pn	08 36 17.9	+0.2
TMWZ	**Te Maipa**	1.28	63	P	Pb	08 36 19.4	+0.2
MRZ	**Mangatainoka R**	1.38	41	P	Pn	08 36 20.6	+0.1
TIWZ	**Tintock**	1.47	51	P	Pb	08 36 22.2	-0.1
GVZ	**Greta Valley S**	1.61	218	P	Pg	08 36 25.3	-0.1
QRZ	**Quartz Range**	1.65	302	P	Pg	08 36 26.4	+0.2
OHWZ	**Ohakea**	1.66	26	P	Pg	08 36 26.2	-0.1
PRWZ	**Pori Road**	1.66	47	P	Pn	08 36 24.5	+0.2
BFZ	**Birch Farm**	1.74	55	P	Pg	08 36 30.9	+2.9
LTZ	**Lake Taylor**	1.90	235	P	Pb	08 36 29.4	-0.3
DVHZ	**Dannevirke**	1.95	44	P	Pn	08 36 28.6	+0.3
WAZ	**Wanganui**	2.00	13	P	Pg	08 36 32.3	-0.6
OKCZ	**Okains Bay**	2.24	205	P	Pn	08 36 33.1	+0.8
PNHZ	**Pukenui**	2.26	38	P	Pn	08 36 32.4	-0.2
PREZ	**Palmer Road**	2.37	356	P	Pg	08 36 39.8	-0.1
MQZ	**McQueen’s Vall**	2.37	212	P	Pn	08 36 34.1	+0.1
INZ	**Inchbonnie**	2.41	244	P	Pb	08 36 36.9	-1.5
AKCZ	**Akaroa Harbour**	2.42	206	P	Pn	08 36 35.9	+1.1
KHEZ	**Kahui Hut**	2.43	353	P	Pg	08 36 40.2	-0.9
MTVZ	**Mangateitei**	2.46	20	P	Pg	08 36 40.6	-1.1
NBEZ	**Newall Road No**	2.47	351	P	Pg	08 36 41.5	-0.3
DREZ	**Durham Road**	2.52	357	P	Pg	08 36 42.2	-0.6
MOVZ	**Moawhango**	2.52	25	P	Pb	08 36 40.1	-0.3
PKE	**Pukeiti**	2.53	353	P	Pg	08 36 42.1	-0.9
KRHZ	**Kereru**	2.56	37	P	Pg	08 36 42.4	-1.1
BHHZ	**Black Hill Sta**	2.56	31	P	Pb	08 36 41.3	+0.3
WHVZ	**Whangaehu Hut**	2.59	21	P	Pb	08 36 41.9	+0.3
VRZ	**Vera Road**	2.59	7	P	Pb	08 36 42.2	+0.6
FWVZ	**Far West T-bar**	2.61	20	P	Pb	08 36 42.1	+0.2
TUVZ	**Tukino**	2.62	22	P	Pb	08 36 42.4	+0.3
KAHZ	**Kahuranaki**	2.69	46	P	Pn	08 36 37.9	-0.7
NGZ	**Ngauruhoe**	2.69	21	P	Pb	08 36 43.6	+0.3
WTVZ	**West Tongariro**	2.75	20	P	Pb	08 36 44.9	+0.6
KRVZ	**Karewarewa**	2.78	21	P	Pb	08 36 45.1	+0.3
KATZ	**Kakaramea**	2.91	21	P	Pb	08 36 47.7	+0.7
BKZ	**Black Stump Fm**	3.01	33	P	Pb	08 36 49.6	+1.0
HIZ	**Hauiti**	3.21	7	P	Pb	08 36 51.4	-0.6
TLZ	**Tolley Road**	3.49	15	P	Pb	08 36 56.9	+0.1
KMRZ	**Kaimai**	4.04	18	P	Pn	08 37 00.6	+3.5
ODZ	**Otahua Downs**	4.31	218	P	Pn	08 37 01.8	+1.1
WTAZ	**Waiatarua**	4.77	2	P	Pn	08 37 08.8	+1.7
WMGZ	**Waiomatatini S**	4.97	40	P	Pb	08 37 16.8	-5.3
HHSZ	**Highcliff Hill**	4.99	212	P	Pn	08 37 13.8	+3.6

WEL 21 08:37:37.4, 42°S±7°×17°4E±°, h5^{km}±3^{km}, M3.7/58, ML3.9/41, MLv3.7/58, Error ellipse: s-maj=0.0km s-min=0.0km az=148.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.09	258	P	Pg	08 37 44.4	+5.0
BSWZ	**Blackbirch Sta**	0.34	272	P	Pb	08 37 46.8	+0.9
TUWZ	**Tuamarina**	0.42	316	P	Pb	08 37 46.5	-0.7
BHW	**Baring Head**	0.52	52	P	Pb	08 37 49.1	+0.2
TCW	**Tory Channel**	0.52	355	P	Pg	08 37 47.7	+0.2
WEL	**Wellington**	0.55	36	P	Pb	08 37 49.2	-0.3
PLWZ	**Palliser**	0.71	77	P	Pn	08 37 54.0	-0.1
MSWZ	**Moikau Station**	0.76	66	P	Pn	08 37 54.1	-0.6
CAW	**Cannon Point**	0.83	42	P	Pb	08 37 54.5	+0.2
NNZ	**Nelson**	0.88	305	P	Pb	08 37 54.9	-0.3
PAWZ	**Paruwai Farm**	0.89	67	P	Pn	08 37 56.8	+0.2
KHZ	**Kahutara**	0.91	221	P	Pn	08 37 58.7	+2.0
DUWZ	**D’Urville Isla**	0.98	341	P	Pg	08 37 56.4	+0.3
MTW	**Mount Morrison**	1.05	57	P	Pn	08 37 58.6	-0.1
THZ	**Tophouse**	1.07	268	P	Pn	08 37 59.7	+0.6
TRWZ	**Traveller**	1.07	72	P	Pn	08 37 59.2	+0.2
OGWZ	**Otaki Gorge**	1.11	35	P	Pg	08 37 58.8	+0.1
HOWZ	**Holdsworth Sta**	1.22	47	P	Pn	08 38 01.3	+0.2
TMWZ	**Te Maipa**	1.33	62	P	Pn	08 38 02.5	-0.1
MRZ	**Mangatainoka R**	1.42	42	P	Pn	08 38 03.8	-0.1
TIWZ	**Tintock**	1.51	51	P	Pg	08 38 08.2	+1.9
GVZ	**Greta Valley S**	1.57	217	P	Pg	08 38 07.5	0.0
CPWZ	**Castlepoint**	1.63	60	P	Pg	08 38 13.1	+4.5
QRZ	**Quartz Range**	1.63	303	P	Pb	08 38 08.0	+0.1
OHWZ	**Ohakea**	1.69	26	P	Pb	08 38 09.4	+0.4
PRWZ	**Pori Road**	1.71	47	P	Pn	08 38 08.1	+0.3
POWZ	**Post Office Ro**	1.72	40	P	Pg	08 38 12.2	+1.8
BFZ	**Birch Farm**	1.78	55	P	Pg	08 38 13.7	+2.1
LTZ	**Lake Taylor**	1.86	235	P	Pb	08 38 11.5	-0.3
AMCZ	**Amberley**	1.91	220	P	Pb	08 38 11.7	-0.9
DVHZ	**Dannevirke**	1.99	45	P	Pg	08 38 16.4	+0.9
WAZ	**Wanganui**	2.04	14	P	Pb	08 38 15.3	+0.5
ANWZ	**Angora Road**	2.06	53	P	Pg	08 38 18.9	+2.1
OKCZ	**Okains Bay**	2.20	205	P	Pn	08 38 15.3	+0.7
CRLZ	**Canterbury Las**	2.23	214	P	Pn	08 38 15.9	+0.9
LREZ	**Lake Rotokare**	2.27	1	P	Pg	08 38 20.2	-0.7
PNHZ	**Pukenui**	2.30	39	P	Pg	08 38 21.0	-0.5
OXZ	**Oxford**	2.33	226	P	Pn	08 38 17.1	+0.7
MQZ	**McQueen’s Vall**	2.33	212	P	Pn	08 38 16.4	+0.1
NMEZ	**Namu Road**	2.34	351	P	Pg	08 38 21.4	-0.8
INZ	**Inchbonnie**	2.37	244	P	Pb	08 38 19.3	-1.1
AKCZ	**Akaroa Harbour**	2.38	206	P	Pn	08 38 17.9	+0.8
PREZ	**Palmer Road**	2.39	357	P	Pg	08 38 22.5	-0.7
KHEZ	**Kahui Hut**	2.45	354	P	Pb	08 38 22.9	+1.1
NBEZ	**Newall Road No**	2.49	352	P	Pg	08 38 24.0	-1.0
MTVZ	**Mangateitei**	2.50	21	P	Pg	08 38 24.2	-1.1
DREZ	**Durham Road**	2.54	358	P	Pg	08 38 25.4	-0.7
PKE	**Pukeiti**	2.55	354	P	Pg	08 38 25.2	-1.0
PKVZ	**Pokaka**	2.56	18	P	Pb	08 38 24.0	+0.2
MOVZ	**Moawhango**	2.56	25	P	Pb	08 38 23.2	-0.6
PXZ	**Pawanui**	2.56	49	P	Pg	08 38 25.1	-1.3
BHHZ	**Black Hill Sta**	2.60	31	P	Pb	08 38 24.5	+0.1
KRHZ	**Kereru**	2.60	37	P	Pb	08 38 25.6	+1.2
VRZ	**Vera Road**	2.62	7	P	Pb	08 38 25.4	+0.6
DRZ	**Dome Shelter**	2.63	21	P	Pb	08 38 26.3	+1.2
WHVZ	**Whangaehu Hut**	2.63	22	P	Pb	08 38 25.0	0.0
FWVZ	**Far West T-bar**	2.64	21	P	Pb	08 38 25.4	+0.1
TUVZ	**Tukino**	2.66	23	P	Pb	08 38 25.4	-0.1
NGZ	**Ngauruhoe**	2.73	21	P	Pb	08 38 26.8	+0.1
KAHZ	**Kahuranaki**	2.73	46	P	Pb	08 38 27.6	+0.8
WTVZ	**West Tongariro**	2.78	21	P	Pb	08 38 27.8	+0.1
TWVZ	**Taurewa**	2.79	18	P	Pb	08 38 28.1	+0.4
KWHZ	**Kaweka Forest**	2.80	35	P	Pg	08 38 29.5	-1.5
KRVZ	**Karewarewa**	2.82	21	P	Pb	08 38 28.5	+0.3
KATZ	**Kakaramea**	2.94	21	P	Pb	08 38 30.8	+0.4
WVZ	**Waitaha Valley**	2.98	242	P	Pb	08 38 32.0	+1.1
BKZ	**Black Stump Fm**	3.05	33	P	Pb	08 38 32.7	+0.6
RPZ	**Rata Peaks**	3.13	230	P	Pn	08 38 28.8	+1.5
HIZ	**Hauiti**	3.24	7	P	Pb	08 38 34.7	-0.6
ODZ	**Otahua Downs**	4.26	218	P	Pn	08 38 43.6	+0.7
MKAZ	**Moumakai**	4.66	8	P	Pn	08 38 54.0	+5.6
AWAZ	**Awhitu Peninsu**	4.67	3	P	Pn	08 38 52.5	+4.0
JCZ	**Jackson Bay**	4.70	238	P	Pb	08 38 54.7	-5.6
ETAZ	**East Tamaki Re**	4.79	6	P	Pb	08 38 56.4	-5.4
TUZ	**Tuapeka**	5.42	217	P	Pn	08 39 01.0	+2.2
SYZ	**Scrubby Hill**	6.09	216	P	Pn	08 39 09.7	+1.8

WEL 21 08:39:53.9, 41°.5S±0°.8×174°.4E±0°.9, h12^{km}±2^{km}, M3.6/32, ML3.7/27, MLv3.6/32, Error ellipse: s-maj=0.0km s-min=0.0km az=130.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.24	209	P	Pb	08 40 04.9	+4.7
TCW	**Tory Channel**	0.34	348	P	Pb	08 40 01.6	-0.3
TUWZ	**Tuamarina**	0.34	289	P	Pb	08 40 01.4	-0.5
WEL	**Wellington**	0.40	50	P	Pb	08 40 02.7	-0.2
BHW	**Baring Head**	0.40	71	P	Pb	08 40 02.7	-0.3
BSWZ	**Blackbirch Sta**	0.41	245	P	Pb	08 40 02.7	-0.4
PLWZ	**Palliser**	0.67	93	P	Pb	08 40 07.6	+0.1
MSWZ	**Moikau Station**	0.67	80	P	Pb	08 40 07.7	+0.1
CAW	**Cannon Point**	0.68	51	P	Pb	08 40 07.8	0.0
NNZ	**Nelson**	0.81	293	P	Pb	08 40 09.8	-0.2
PAWZ	**Paruwai Farm**	0.81	79	P	Pb	08 40 10.6	+0.6
DUWZ	**D’Urville Isla**	0.81	335	P	Pb	08 40 10.0	0.0
MTW	**Mount Morrison**	0.94	66	P	Pn	08 40 12.5	-0.4
OGWZ	**Otaki Gorge**	0.94	40	P	Pg	08 40 12.1	0.0
TRWZ	**Traveller**	1.00	82	P	Pb	08 40 13.4	+0.2
KHZ	**Kahutara**	1.07	215	P	Pb	08 40 14.1	-0.3
HOWZ	**Holdsworth Sta**	1.08	54	P	Pn	08 40 15.1	+0.2
THZ	**Tophouse**	1.12	258	P	Pn	08 40 15.7	+0.2
TMWZ	**Te Maipa**	1.23	70	P	Pg	08 40 18.2	+0.7
MRZ	**Mangatainoka R**	1.27	47	P	Pb	08 40 17.9	+0.1
TIWZ	**Tintock**	1.38	57	P	Pb	08 40 19.4	-0.3
OHWZ	**Ohakea**	1.52	29	P	Pg	08 40 23.6	+0.6
CPWZ	**Castlepoint**	1.52	66	P	Pg	08 40 25.8	+2.7
QRZ	**Quartz Range**	1.56	297	P	Pg	08 40 23.6	-0.3
PRWZ	**Pori Road**	1.56	51	P	Pg	08 40 24.2	+0.3
BFZ	**Birch Farm**	1.66	59	P	Pg	08 40 26.8	+1.1
GVZ	**Greta Valley S**	1.74	214	P	Pg	08 40 28.9	+1.7
DVHZ	**Dannevirke**	1.84	48	P	Pg	08 40 29.6	+0.3
LTZ	**Lake Taylor**	1.99	231	P	Pb	08 40 30.8	+0.6
AMCZ	**Amberley**	2.07	217	P	Pg	08 40 35.1	+1.4
PRHZ	**Porangahau**	2.14	54	P	Pg	08 40 37.5	+2.6
PNHZ	**Pukenui**	2.14	41	P	Pg	08 40 35.2	+0.2
NMEZ	**Namu Road**	2.16	350	P	Pg	08 40 35.3	0.0
PREZ	**Palmer Road**	2.20	356	P	Pg	08 40 36.6	+0.4
KHEZ	**Kahui Hut**	2.26	353	P	Pg	08 40 37.1	-0.2
NBEZ	**Newall Road No**	2.30	350	P	Pg	08 40 38.1	+0.1
MTVZ	**Mangateitei**	2.31	22	P	Pg	08 40 39.1	+0.9
DREZ	**Durham Road**	2.35	357	P	Pg	08 40 39.0	0.0
PKE	**Pukeiti**	2.36	353	P	Pg	08 40 38.4	-0.8
MOVZ	**Moawhango**	2.38	27	P	Pb	08 40 37.4	+0.6
OKCZ	**Okains Bay**	2.38	203	P	Pn	08 40 33.0	+0.1
BHHZ	**Black Hill Sta**	2.42	33	P	Pg	08 40 39.4	-1.0
KRHZ	**Kereru**	2.43	39	P	Pg	08 40 39.2	-1.4
TUVZ	**Tukino**	2.47	24	P	Pg	08 40 40.5	-0.8
INZ	**Inchbonnie**	2.48	240	P	Pb	08 40 38.2	-0.2
OXZ	**Oxford**	2.48	223	P	Pg	08 40 41.1	-0.4
KRVZ	**Karewarewa**	2.63	22	P	Pb	08 40 42.5	+1.4
BKZ	**Black Stump Fm**	2.87	35	P	Pb	08 40 46.2	+1.0
WVZ	**Waitaha Valley**	3.10	239	P	Pb	08 40 48.0	-0.9
RPZ	**Rata Peaks**	3.27	227	P	Pb	08 40 53.1	+1.1
SNGZ	**Shannon Statio**	3.58	41	P	Pb	08 40 54.5	-2.6
ETAZ	**East Tamaki Re**	4.60	6	P	Pb	08 41 10.5	-4.1
JCZ	**Jackson Bay**	4.82	236	P	Pn	08 41 10.0	+3.5

IDC ***21*** *08:42:21.7±1.2, 41°.54S×174°.14E, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.6/22, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=40.5km s-min=18.0km az=135.0*

ISCJB ***21*** *08:42:25.0±0.4, 41°.68S±0°.04×174°.19E±0°.06, h27^{km}±4^{km}, mb3.4/2, Error ellipse: s-maj=9.5km s-min=3.8km az=135.7*

WEL ***21*** *08:42:25.1, 42°S±2°×17°4E±°, h9^{km}±3^{km}, M4.2/6, ML4.5/6, MLv4.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=97.9*

NEIC ***21*** *08:42:25.1±0.0, 41°.64S×174°.24E, h9^{km}, ML4.2(WEL), After WEL.*

ISC 21 08:42:24.9±1.2, 41°.68S±0°.04×174°.19E±0°.03, h18^{km}±4^{km}, n54, σ1^{s}.48/56, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.08	166	P	Pg	08 42 28.6	+0.1
BSWZ	**Blackbirch Sta**	0.24	260	P	Pg	08 42 30.8	+0.4
TUWZ	**Tuamarina**	0.31	323	P	Pb	08 42 32.0	+0.2
TCW	**Tory Channel**	0.47	8	P	Pg	08 42 34.1	-0.3
SNZO	**South Karori**	0.53	47	*e*Pg	Pg	08 42 35.5	-0.1
SNZO				*e*Sg	Sb	08 42 43.5	+0.6
BHW	**Baring Head**	0.58	63	P	Pb	08 42 36.3	-0.1
PLWZ	**Palliser**	0.81	83	P	Pg	08 42 41.0	+0.3
MSWZ	**Moikau Station**	0.84	72	P	Pg	08 42 41.2	-0.1
CAW	**Cannon Point**	0.87	50	P	Pg	08 42 41.8	-0.1
KHZ	**Kahutara**	0.89	213	*e*Pg	Pn	08 42 43.3	+0.9
KHZ	**Kahutara**	0.89	213	P	Pn	08 42 43.3	+0.9
THZ	**Tophouse**	0.96	264	*e*Pg	Pg	08 42 44.0	+0.3
OGWZ	**Otaki Gorge**	1.13	41	P	Pb	08 42 46.3	+0.4
LTZ	**Lake Taylor**	1.80	232	*e*Pn	Pn	08 42 55.9	+0.8
BFZ	**Birch Farm**	1.84	58	*e*Pn	Pn	08 42 54.9	-0.7
ANWZ	**Angora Road**	2.11	56	P	Pg	08 43 08.3	+2.8
CRLZ	**Canterbury Las**	2.22	211	*e*Pn	Pn	08 43 00.6	-0.2
OXZ	**Oxford**	2.29	223	*e*Pn	Pn	08 43 01.3	-0.5
OXZ	**Oxford**	2.29	223	P	Pg	08 43 11.3	+2.5
INZ	**Inchbonnie**	2.29	242	P	Pg	08 43 09.0	+0.1
MQZ	**McQueen’s Vall**	2.32	209	*e*Pn	Pn	08 43 00.4	-1.8
PXZ	**Pawanui**	2.61	52	P	Pg	08 43 15.8	+0.9
BKZ	**Black Stump Fm**	3.06	36	*e*Pn	Pn	08 43 13.4	+1.0
RPZ	**Rata Peaks** 4.7nm,0.3s,baz=11,slow=10,SNR=3.0	3.08	228	Pn	Pn	08 43 12.5	-0.1
RPZ	20nm,0.3s,baz=68,slow=0.7,SNR=27			Pg	Pb	08 43 20.3	+1.2
RPZ	16nm,0.3s,baz=141,slow=23,SNR=9.0			Sn	Sn	08 43 48.4	-0.6
RPZ	**Rata Peaks**	3.08	228	*e*Pn	Pn	08 43 14.6	+2.0
HIZ	**Hauiti**	3.20	9	*e*Pn	Pn	08 43 14.3	+0.1
HIZ	**Hauiti**	3.20	9	P	Pb	08 43 22.1	+1.0
FOZ	**Fox Glacier**	3.72	239	*e*Pn	Pn	08 43 23.1	+1.8
LBZ	**Lake Benmore**	3.99	226	*e*Pn	Pn	08 43 26.2	+1.1
URZ	**Urewera** 2.0nm,0.3s,baz=240,slow=5.6,SNR=3.3	4.08	34	Pn	Pn	08 43 25.7	-0.7
URZ	6.1nm,0.3s,baz=211,slow=7.5,SNR=6.8			Pg	Pb	08 43 35.3	-0.9
URZ	11nm,0.3s,baz=150,slow=18,SNR=4.1			Sn	Sn	08 44 12.7	-0.9
URZ	9.4nm,0.3s,baz=275,slow=19,SNR=3.8			Lg	Lg	08 44 26.7	
ODZ	**Otahua Downs**	4.24	216	*e*Pn	Pn	08 43 29.0	+0.4
ODZ	**Otahua Downs**	4.24	216	P	Pn	08 43 29.2	+0.6
RUGZ	**Raukumara Rang**	4.58	37	P	Pn	08 43 36.4	+3.2
MKAZ	**Moumakai**	4.63	10	P	Pn	08 43 39.0	+5.2
JCZ	**Jackson Bay**	4.64	237	P	Pb	08 43 42.5	-3.2
PUZ	**Puketiti**	4.77	42	P	Pn	08 43 39.3	+3.4
WKZ	**Wanaka**	4.92	228	*e*Pn	Pn	08 43 39.9	+2.0
WIAZ	**Waiheke Island**	4.93	9	P	Pn	08 43 43.9	+5.9
HHSZ	**Highcliff Hill**	4.95	210	P	Pn	08 43 40.7	+2.5
WMGZ	**Waiomatatini S**	5.04	42	P	Pn	08 43 42.7	+3.1
MXZ	**Matakaoa Point**	5.19	39	*e*Pn	Pn	08 43 42.1	+0.5
TUZ	**Tuapeka**	5.40	216	P	Pn	08 43 45.5	+1.1
WCZ	**Waipu Caves**	5.73	1	P	Pn	08 43 55.7	+6.7
MLZ	**Mavora Lakes**	5.75	228	*e*Pn	Pn	08 43 51.5	+2.1
SYZ	**Scrubby Hill**	6.07	215	P	Pn	08 43 54.3	+0.7
WHZ	**Wether Hill Ro**	6.18	225	*e*Pn	Pn	08 43 57.3	+2.2
DCZ	**Deep Cove**	6.36	231	*e*Pn	Pn	08 43 59.9	+2.3
OUZ	**Omahuta**	6.46	356	*e*Pn	Pn	08 44 00.1	+1.0
CTZ	**Chatham Island**	7.08	110	P	Pn	08 44 07.2	-0.2
ASAR	**Alice Springs** 0.4nm,0.7s,baz=125,slow=7.6,SNR=5.1	37.97	285	P	P	08 49 40.5	-1.1
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=125,slow=7.9,SNR=4.5	40.03	290	P	P	08 49 58.2	-0.7
YKA	**Yellowknife Ar** 0.2nm,0.8s,baz=252,slow=1.8,SNR=3.2	118.33	30	PKP	PKiKP	09 01 10.9	+0.9
TORD	**Torodi Ar. Bea** 1.0nm,0.6s,baz=160,slow=3.8,SNR=9.2	150.84	195	PKPbc	PKPbc	09 02 15.6	-0.9
FINES	**FINESS Array B** 1.4nm,0.9s,baz=72,slow=3.2,SNR=3.2	152.44	327	PKPbc	PKPbc	09 02 17.1	-1.7

IDC ***21*** *08:57:52.9±5.1, 6°.12N×74°.71W, h134km±67km, Error ellipse: s-maj=371.7km s-min=83.6km az=83.0*
ISCJB ***21*** *08:57:53.5±0.4, 5°.17N±0°.02×75°.50W±0°.03, h125km±5km, Error ellipse: s-maj=4.9km s-min=2.9km az=33.4*
RSNC ***21*** *08:57:55.4±1.3, 5°.16N×75°.47W, h112km±5km, ML3.5, Mw3.7*

ISC 21 08:57:53.9±1.0**, 5°.17N**±0°.03×**75°.51W**±0°.03**, h125**km±6km**, n40, σ1**s**.39**/72**, 6C-4D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RREF	El Recreo	0.31	149	eP	Pn	08 58 12.0	-0.2
RREF				eS	Sn	08 58 24.2	-1.8
NORC	Norcasia	0.75	59	⇑iP	Pn	08 58 13.6	-0.5
NORC				eS	Sn	08 58 27.7	-1.8
NORC				i		08 58 30.0	
	comp=N,1μm,0.2s						
PLMC	San Jos del P	0.81	251	⇓eP	Pn	08 58 15.2	+0.5
PLMC				eS	Sn	08 58 31.1	+0.6
PLMC				i		08 58 33.9	
	comp=Z,2μm,0.2s						
HELC	Santa Helena	1.01	359	⇑iP	Pn	08 58 17.1	+0.2
HELC				eS	Sn	08 58 33.9	-0.3
HELC				i		08 58 35.1	
	comp=Z,1μm,0.4s						
ROSC	El Rosal	1.23	105	P	Pn	08 58 19.7	+0.6
	comp=Z,143nm,0.3s,baz=0.0,slow=10,SNR=203						
ROSC				S	Sn	08 58 40.4	+2.2
	comp=Z,20nm,0.3s,baz=187,slow=17,SNR=22						
ROSC	El Rosal	1.23	105	⇑iP	Pn	08 58 20.1	+1.0
ROSC				eS	Sn	08 58 40.3	+2.2
ORTC	Ortega, Tolima	1.28	168	⇓iP	Pn	08 58 19.3	+0.1
ORTC				eS	Sn	08 58 37.9	-0.7
ORTC				i		08 58 41.8	
	comp=N,290nm,0.3s						
YOTC	Yotoco, Valle	1.44	215	eP	Pn	08 58 20.4	-0.7
YOTC				eS	Sn	08 58 39.9	-2.0
SPBC	San Pablo de B	1.51	71	⇑iP	Pn	08 58 22.0	+0.1
SPBC				eS	Sn	08 58 42.2	-0.9
CVER	Cruz Verde, Cu	1.57	114	eP	Pn	08 58 23.9	+1.0
PRAC	Prado	1.58	157	⇓iP	Pn	08 58 22.6	+0.1
PRAC				eS	Sn	08 58 43.6	-0.8
PTBC	PUERTO BERRIO,	1.72	38	⇑iP	Pn	08 58 24.1	-0.1
PTBC				eS	Sn	08 58 46.0	-1.3
PTBC				i		08 58 47.1	
	comp=Z,374nm,0.3s						
CHIC	Chingaza	1.85	107	eP	Pn	08 58 27.2	+1.0
CHIC				eS	Sn	08 58 51.8	+1.0
CHIC				i		08 58 57.9	
	comp=Z,205nm,0.9s						
DBBC	Dabeiba	1.96	339	eP	Pn	08 58 28.6	+1.4
VILC	Villavicencio,	2.10	120	eP	Pn	08 58 30.4	+1.5
VILC				eS	Sn	08 58 57.8	+2.1
VILC				i		08 59 01.7	
	comp=Z,227nm,0.6s						
MALC	Bahia Malaga	2.15	238	eP	Pn	08 58 31.5	+2.1
MALC				eS	Sn	08 59 00.7	+4.0
SOLC	Bahia Solano	2.16	299	eP	Pn	08 58 31.2	+1.6
SOLC				eS	Sn	08 58 58.4	+1.5
SOLC				i		08 59 06.5	
	comp=N,193nm,0.4s						
MARP	Paez Belalcaza	2.35	191	eP	Pn	08 58 32.6	+0.2
MARP				eS	Sn	08 59 01.5	-0.3
MARP				i		08 59 04.1	
	comp=Z,130nm,0.3s						
ZARC	Zaragoza, Cauc	2.40	16	⇓iP	Pn	08 58 33.3	+0.7
ZARC				eS	Sn	08 59 02.0	-0.3
ZARC				i		08 59 02.9	
	comp=Z,894nm,0.4s						
BETC	Betania	2.47	178	eP	Pn	08 58 33.2	-0.4
RUSC	La Rusia	2.52	73	eP	Pn	08 58 35.2	+0.6
RUSC				i		08 58 36.8	
	comp=Z,86nm,0.4s						
RUSC				eS	Sn	08 59 04.7	-1.1
BRRC	Barranca, Sant	2.63	43	⇑iP	Pn	08 58 35.5	0.0
BRRC				eS	Sn	08 59 06.6	-0.9
BRRC				i		08 59 10.0	
	comp=Z,158nm,0.3s						
BARC	Barichara	2.71	59	eP	Pn	08 58 37.5	+0.6
BARC				eS	Sn	08 59 09.7	-0.2
BARC				i		08 59 12.3	
	comp=Z,180nm,0.7s						
PCON	Cinco Dias	2.96	197	eP	Pn	08 58 42.0	+1.7
PCON				eS	Sn	08 59 16.6	+0.6
PCON				i		08 59 19.9	
	comp=Z,157nm,0.5s						
GIRC	Giron, Santand	2.98	50	eP	Pn	08 58 40.7	+0.5
GIRC				eS	Sn	08 59 15.3	-0.7
GIRC				i		08 59 17.4	
	comp=Z,215nm,0.4s						
YOPC	Yopal, Colombi	3.08	86	eP	Pn	08 58 42.4	+0.8
YOPC				i		08 58 44.3	
	comp=Z,71nm,0.3s						
YOPC				eS	Sn	08 59 18.6	+0.3
GRGC	Isla de Gorgon	3.41	231	eP	Pn	08 58 45.1	-0.7
GRGC				eS	Sn	08 59 22.3	-3.6
MACC	Macarena, Meta	3.43	151	eP	Pn	08 58 45.2	-0.8
PAMC	Pamplona, Colo	3.53	52	eP	Pn	08 58 48.0	+0.3
PAMC				eS	Sn	08 59 27.9	-1.5
FLOC	Florencia	3.57	182	eP	Pn	08 58 47.4	-0.4
FLOC				eS	Sn	08 59 29.1	-0.5
FLOC				i		08 59 39.9	
	comp=N,44nm,0.5s						
BBAC	Balboa, Cauca	3.58	209	eP	Pn	08 58 48.0	-0.1
BBAC				eS	Sn	08 59 28.5	-1.6
OCAC	Ocana	3.75	35	eP	Pn	08 58 50.6	+0.3
OCAC				eS	Sn	08 59 33.5	-0.5
OCAC				i		08 59 36.9	
	comp=Z,160nm,0.5s						
CRUC	La Cruz	3.86	202	eP	Pn	08 58 52.5	+0.5
CRUC				eS	Sn	08 59 36.6	-0.3
CRUC				i		08 59 40.6	
	comp=Z,94nm,0.4s						
SMLC	San Martn de	3.88	22	eP	Pn	08 58 51.8	-0.1
SMLC				eS	Sn	08 59 34.3	-2.7
TAMC	Tame, Arauca	3.91	71	eP	Pn	08 58 52.7	+0.3
CPAS2	Pasto	4.29	204	eS	Sn	08 59 45.9	-1.4
GCUF	Volcan Galeras	4.33	205	eP	Pn	08 58 58.6	+0.2
GCUF				eS	Sn	08 59 43.6	-4.7
GCUF				i		08 59 52.8	
	comp=Z,59nm,0.4s						
CODC	Agustn Codazz	5.16	23	eP	Pn	08 59 09.5	+0.5
CODC				eS	Sn	09 00 04.6	-3.0
CODC				i		09 00 09.0	
	comp=N,51nm,0.4s						
ASAR	Alice Springs	146.22	234	PKPbc	PKPbc	09 17 21.1	+0.5
	comp=N,0.3nm,0.3s,baz=125,slow=3.9,SNR=7.4						
WRA	Warramunga Arr	147.46	241	PKPbc	PKPbc	09 17 24.7	+0.5
	comp=N,0.7nm,0.6s,baz=105,slow=3.2,SNR=5.0						

IDC 21 09:02:02.5±13.0**, 6°.36S**×**129°.39E, h308**km±153km**, mb3.1**/1**, mb1 3.2**/3**, mb1mx2.9**/19**, mbtmp3.9**/3**, Error ellipse: s-maj=110.0km s-min=53.7km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.34	161	P	P	09 05 11.8	-0.1
	0.3nm,0.3s,baz=340,slow=12,SNR=7.6						
WRA				S	S	09 07 49.5	+0.2
	0.1nm,0.3s,baz=340,slow=20,SNR=4.2						
ASAR	Alice Springs	17.75	166	P	P	09 05 49.2	+0.1
	0.6nm,0.3s,baz=343,slow=11,SNR=48						
MKAR	Makanchi Array	67.36	327	P	P	09 12 25.0	0.0
	0.5nm,0.5s,baz=118,slow=7.6,SNR=5.9						

WEL 21 09:10:46.8, 42°S±4°×**17°4E**±°**, h9**km±2km**, M3.4**/54**, ML3.5**/18**, MLv3.4**/54**, Error ellipse: s-maj=0.0km s-min=0.0km az=139.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	200	P	Pg	09 10 51.3	+0.9
TUWZ	Tuamarina	0.31	301	P	Pb	09 10 53.6	-0.8
BSWZ	Blackbirch Sta	0.34	248	P	Pg	09 10 53.6	+0.2
TCW	Tory Channel	0.38	358	P	Pb	09 10 55.1	-0.6
WEL	Wellington	0.47	50	P	Pb	09 10 56.9	-0.3
BHW	Baring Head	0.47	68	P	Pb	09 10 56.8	-0.4
PLWZ	Palliser	0.72	89	P	Pb	09 11 01.5	0.0
MSWZ	Moikau Station	0.74	77	P	Pb	09 11 01.8	0.0
CAW	Cannon Point	0.76	51	P	Pb	09 11 02.3	+0.2
NNZ	Nelson	0.78	298	P	Pg	09 11 01.9	+0.1
DUWZ	D'Urville Isla	0.83	340	P	Pb	09 11 03.4	0.0
PAWZ	Paruwai Farm	0.88	77	P	Pb	09 11 04.7	+0.5
KHZ	Kahutara	1.00	214	P	Pg	09 11 06.0	0.0
MTW	Mount Morrison	1.01	65	P	Pb	09 11 06.5	+0.2
OGWZ	Otaki Gorge	1.02	41	P	Pb	09 11 06.5	0.0
THZ	Tophouse	1.05	260	P	Pg	09 11 06.6	-0.4
TRWZ	Traveller	1.07	80	P	Pg	09 11 07.0	-0.3
HOWZ	Holdsworth Sta	1.15	54	P	Pn	09 11 09.4	+0.3
TMWZ	Te Maipa	1.30	69	P	Pn	09 11 10.2	-0.9
MRZ	Mangatainoka R	1.34	47	P	Pn	09 11 11.6	-0.1
TIWZ	Tintock	1.45	57	P	Pg	09 11 14.6	-0.1
QRZ	Quartz Range	1.53	299	P	Pb	09 11 15.3	0.0
OHWZ	Ohakea	1.58	30	P	Pg	09 11 17.1	-0.1
CPWZ	Castlepoint	1.59	65	P	Pg	09 11 21.9	+4.6
PRWZ	Pori Road	1.64	51	P	Pn	09 11 15.9	+0.2
GVZ	Greta Valley S	1.66	214	P	Pn	09 11 15.0	-1.1
BFZ	Birch Farm	1.73	59	P	Pg	09 11 19.4	-0.6
WAZ	Wanganui	1.91	16	P	Pb	09 11 22.5	+0.8
LTZ	Lake Taylor	1.92	231	P	Pn	09 11 19.3	-0.3
DVHZ	Dannevirke	1.92	48	P	Pg	09 11 24.0	+0.4
ANWZ	Angora Road	2.00	56	P	Pb	09 11 23.0	-0.3
LREZ	Lake Rotokare	2.13	2	P	Pg	09 11 27.6	+0.1
NMEZ	Namu Road	2.20	352	P	Pg	09 11 28.1	-0.7
PNHZ	Pukenui	2.21	42	P	Pg	09 11 28.6	-0.6
WPHZ	Waipukurau	2.23	48	P	Pg	09 11 31.4	+1.8
PREZ	Palmer Road	2.25	357	P	Pb	09 11 28.0	+0.5
KHEZ	Kahui Hut	2.30	355	P	Pb	09 11 29.2	+0.7
OKCZ	Okains Bay	2.32	203	P	Pn	09 11 22.6	-2.5
NBEZ	Newall Road No	2.34	352	P	Pb	09 11 30.2	+1.1
MTVZ	Mangateitei	2.38	23	P	Pb	09 11 30.7	+0.9
DREZ	Durham Road	2.40	358	P	Pg	09 11 32.0	-0.7
INZ	Inchbonnie	2.40	241	P	Pb	09 11 28.2	-1.9
PKE	Pukeiti	2.40	354	P	Pg	09 11 31.6	-1.3
OXZ	Oxford	2.41	223	P	Pb	09 11 28.8	-1.4
PKVZ	Pokaka	2.44	20	P	Pb	09 11 31.3	+0.5
MOVZ	Moawhango	2.45	28	P	Pb	09 11 30.7	-0.3
VRZ	Vera Road	2.49	8	P	Pb	09 11 30.3	-1.3
BHHZ	Black Hill Sta	2.50	33	P	Pb	09 11 31.9	+0.1
PXZ	Pawanui	2.50	52	P	Pb	09 11 33.0	+1.3
AKCZ	Akaroa Harbour	2.50	204	P	Pn	09 11 25.7	-1.9
KRHZ	Kereru	2.51	40	P	Pb	09 11 33.2	+1.3
WHVZ	Whangaehu Hut	2.51	24	P	Pb	09 11 32.6	+0.5
MHEZ	Mangahewa	2.51	1	P	Pg	09 11 35.1	+0.2
FWVZ	Far West T-bar	2.52	23	P	Pb	09 11 32.9	+0.6
TUVZ	Tukino	2.54	25	P	Pb	09 11 32.6	0.0
NGZ	Ngauruhoe	2.61	23	P	Pb	09 11 34.3	+0.5
KAHZ	Kahuranaki	2.66	48	P	Pg	09 11 36.4	-1.4
WTVZ	West Tongariro	2.66	22	P	Pb	09 11 35.1	+0.4
TWVZ	Taurewa	2.66	20	P	Pb	09 11 35.9	+1.3
KRVZ	Karewarewa	2.70	23	P	Pb	09 11 35.7	+0.5
KWHZ	Kaweka Forest	2.71	38	P	Pg	09 11 37.2	-1.4
KATZ	Kakaramea	2.82	23	P	Pb	09 11 38.1	+0.7
RITZ	Rihia Road	2.87	25	P	Pg	09 11 40.4	-1.4
BKZ	Black Stump Fm	2.95	36	P	Pb	09 11 40.3	+0.8
WVZ	Waitaha Valley	3.02	239	P	Pb	09 11 39.1	-1.7
WATZ	Wairara	3.08	21	P	Pb	09 11 43.3	+1.5
HIZ	Hauiti	3.10	8	P	Pb	09 11 40.0	-2.0
RPZ	Rata Peaks	3.20	227	P	Pb	09 11 43.9	+0.2
MRHZ	Matea Rd	3.20	31	P	Pb	09 11 44.5	+0.8
KUTZ	Kaahu Road	3.31	21	P	Pb	09 11 47.2	+1.5
TLZ	Tolley Road	3.39	17	P	Pb	09 11 46.8	-0.3
ALRZ	Allen Road	3.41	28	P	Pb	09 11 49.1	+1.8
RTZ	Ruatahuna	3.62	36	P	Pn	09 11 46.7	+3.7
FOZ	Fox Glacier	3.83	238	P	Pb	09 11 50.2	-4.3
TOZ	Tahuroa Road	3.96	14	P	Pb	09 11 54.5	-2.3
ODZ	Otahua Downs	4.36	216	P	Pn	09 11 51.3	-1.8
MKAZ	Moumakai	4.53	9	P	Pb	09 12 01.9	-4.5
JCZ	Jackson Bay	4.75	237	P	Pn	09 12 02.5	+3.9
WIAZ	Waiheke Island	4.83	8	P	Pb	09 12 06.5	-5.1

IDC 21 09:23:43.1±52.0**, 19°.44S**×**176°.12W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/28**, mbtmp4.1**/3**, Error ellipse: s-maj=963.2km s-min=163.8km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.84	243	P	P	09 31 18.1	-0.4
	2.6nm,1.0s,baz=85,slow=11,SNR=2.9						
ASAR	Alice Springs	46.49	256	P	P	09 32 12.4	0.0
	1.9nm,0.5s,baz=93,slow=8.1,SNR=41						
WRA	Warramunga Arr	46.51	261	P	P	09 32 12.5	0.0
	1.0nm,0.3s,baz=96,slow=7.5,SNR=20						

WEL 21 09:28:26.7±0.3**, 42°S**±2°×**17°4E**±°**, h8**km±3km**, M3.3**/14**, ML3.6**/14**, MLv3.3**/14**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	208	P	Pg	09 28 32.0	+1.9
BHW	Baring Head	0.46	65	P	Pg	09 28 36.0	+0.4
BHW				S	Sb	09 28 43.8	-0.2
WEL	Wellington	0.47	47	P	Pb	09 28 36.4	-0.7
WEL				S	Sb	09 28 43.7	-0.4
PLWZ	Palliser	0.70	88	P	Pg	09 28 39.7	-0.5
MSWZ	Moikau Station	0.73	75	P	Pg	09 28 40.5	-0.2
CAW	Cannon Point	0.75	49	P	Pg	09 28 41.6	+0.4
CAW				S	Sb	09 28 52.1	-0.2
DUWZ	D'Urville Isla	0.85	339	P	Pg	09 28 42.4	-0.7
DUWZ				S	Sb	09 28 55.9	+0.5
PAWZ	Paruwai Farm	0.86	76	P	Pb	09 28 43.9	0.0
MTW	Mount Morrison	1.00	64	P	Pb	09 28 46.2	0.0
KHZ	Kahutara	1.00	215	P	Pg	09 28 45.5	-0.4
OGWZ	Otaki Gorge	1.02	40	P	Pg	09 28 46.1	-0.1
TRWZ	Traveller	1.05	79	P	Pg	09 28 46.4	-0.4
THZ	Tophouse	1.07	261	P	Pg	09 28 47.0	-0.2
HOWZ	Holdsworth Sta	1.15	52	P	Pg	09 28 48.6	-0.1
TMWZ	Te Maipa	1.28	68	P	Pn	09 28 50.2	-0.8
MRZ	Mangatainoka R	1.34	46	P	Pn	09 28 51.3	-0.4
TIWZ	Tintock	1.44	56	P	Pn	09 28 53.2	+0.1
QRZ	Quartz Range	1.56	299	P	Pb	09 28 55.4	-0.3
CPWZ	Castlepoint	1.58	65	P	Pg	09 29 00.4	+3.4
OHWZ	Ohakea	1.59	29	P	Pg	09 28 57.1	0.0
PRWZ	Pori Road	1.63	51	P	Pn	09 28 55.2	-0.4
POWZ	Post Office Ro	1.63	43	P	Pg	09 29 02.5	+4.4
GVZ	Greta Valley S	1.66	214	P	Pn	09 28 55.3	-0.9
BFZ	Birch Farm	1.72	58	P	Pb	09 28 58.0	-0.6
DVHZ	Dannevirke	1.91	48	P	Pn	09 28 58.4	-1.2
WAZ	Wanganui	1.92	16	P	Pg	09 29 02.7	-0.6
LTZ	Lake Taylor	1.92	232	P	Pn	09 28 59.0	-0.7
ANWZ	Angora Road	1.99	56	P	Pb	09 29 02.6	-0.6
PNHZ	Pukenui	2.21	41	P	Pn	09 29 03.3	-0.4
PREZ	Palmer Road	2.26	357	P	Pg	09 29 10.0	0.0
OKCZ	Okains Bay	2.31	203	P	Pn	09 29 02.4	-2.7
KHEZ	Kahui Hut	2.32	354	P	Pg	09 29 11.2	+0.1
NBEZ	Newall Road No	2.36	352	P	Pg	09 29 12.4	+0.6
MTVZ	Mangateitei	2.38	22	P	Pg	09 29 12.1	-0.3
INZ	Inchbonnie	2.41	241	P	Pn	09 29 06.6	+0.2
DREZ	Durham Road	2.41	358	P	Pg	09 29 13.2	+0.3
PKE	Pukeiti	2.42	354	P	Pg	09 29 12.1	-0.9
MQZ	McQueen's Vall	2.43	210	P	Pn	09 29 04.1	-2.6
PKVZ	Pokaka	2.44	19	P	Pb	09 29 11.4	+0.5
MOVZ	Moawhango	2.45	27	P	Pb	09 29 10.7	-0.3
AKCZ	Akaroa Harbour	2.49	204	P	Pn	09 29 08.8	+1.2
BHHZ	Black Hill Sta	2.50	33	P	Pb	09 29 11.8	+0.1
VRZ	Vera Road	2.50	8	P	Pb	09 29 11.0	-0.8
KRHZ	Kereru	2.50	39	P	Pn	09 29 06.8	-0.9
WHVZ	Whangaehu Hut	2.51	23	P	Pb	09 29 12.8	+0.6
FWVZ	Far West T-bar	2.53	22	P	Pb	09 29 12.7	+0.3
TUVZ	Tukino	2.55	24	P	Pb	09 29 12.6	-0.1
NGZ	Ngauruhoe	2.62	22	P	Pb	09 29 14.4	+0.5
KAHZ	Kahuranaki	2.66	48	P	Pn	09 29 08.4	-1.4
WTVZ	West Tongariro	2.67	22	P	Pb	09 29 15.4	+0.6
KRVZ	Karewarewa	2.70	22	P	Pb	09 29 15.9	+0.6
KATZ	Kakaramea	2.83	22	P	Pb	09 29 18.4	+0.9
BKZ	Black Stump Fm	2.95	35	P	Pb	09 29 20.4	+0.9
WVZ	Waitaha Valley	3.03	240	P	Pb	09 29 19.5	-1.4
HIZ	Hauiti	3.11	8	P	Pb	09 29 21.5	-0.8
RPZ	Rata Peaks	3.20	228	P	Pn	09 29 15.9	-1.4

IDC ***21*** *09:32:11.5±0.7, 41°.47S×174°.20E, h0km, mb4.1/7, mb1 4.2/9, mb1mx4.0/40, mbtmp4.1/9, ML3.7/2, MS3.8/5, Ms1 3.8/5, ms1mx3.5/23, Error ellipse: s-maj=25.1km s-min=18.8km az=101.0*
BJI ***21*** *09:32:12.5±0.0, 42°.01S×173°.95E, h10km, mb4.8/2, mB4.8/1, Ms4.8/1, Ms7 4.6/2*
ISCJB ***21*** *09:32:13.1±0.4, 41°.79S±0°.02×174°.39E±0°.03, h19km±3km, mb4.5/15, MS4.1/6, Error ellipse: s-maj=4.8km s-min=2.3km az=135.8*
WEL ***21*** *09:32:13.3, 42°S±1°×174°.3E±0°.9, h13km±2km, M4.7/12, ML5.0/11, MLv4.7/12, Error ellipse: s-maj=0.0km s-min=0.0km az=145.8*
NEIC ***21*** *09:32:13.3±0.0, 41°.65S×174°.30E, h13km, mb4.7/10, MW4.5, ML4.7(WEL), Moment Tensor Solution. s28 Moment tensor: Scale 10^{15}Nm; M_{rr}5.69; $M_{\theta\theta}$-1.74; $M_{\phi\phi}$-3.95; $M_{r\theta}$1.82; $M_{\theta\phi}$-4.20; $M_{\phi r}$3.42; Best double couple: $M_0$7.60000×10^{15} NP1:ϕ_s31.00000°, δ61.00000°, λ83.00000°. NP2:ϕ_s226.00000°, δ30.00000°, λ102.00000°. Principal axes: T 6.8100, Plg73.0000°, Azm284.0000°; N 1.4300, Plg6.0000°, Azm35.0000°; P -8.2400, Plg15.0000°, Azm127.0000°; After WEL.*

ISC 21 09:32:13.5±0.9**, 41°.67S**±0°.03×**174°.37E**±0°.03**, h12**km±5km**, n201, σ1**s**.52**/202**, mb4.5**/15**, MS4.1**/6**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	235	P	Pg	09 32 17.0	0.0
CMWZ				S	Sg	09 32 19.9	+0.5
BSWZ	Blackbirch Sta	0.37	263	P	Pg	09 32 20.6	-0.4
BSWZ				S	Sb	09 32 26.1	-1.7
TUWZ	Tuamarina	0.40	307	P	Pb	09 32 21.0	-1.5
TUWZ				S	Sb	09 32 26.6	-1.9
SNZO	South Karori	0.44	35	ePg	Pb	09 32 23.0	-0.2
SNZO				eSg	Sb	09 32 30.3	+0.6
BHW	Baring Head	0.46	56	P	Pb	09 32 23.8	+0.2
TCW	Tory Channel	0.46	352	P	Pb	09 32 22.6	-1.0
WEL	Wellington	0.49	38	P	Pb	09 32 24.1	+0.1
PLWZ	Palliser	0.67	82	P	Pn	09 32 28.5	-0.4
MSWZ	Moikau Station	0.71	69	P	Pn	09 32 28.7	-0.7
CAW	Cannon Point	0.77	43	P	Pn	09 32 29.1	-1.1
PAWZ	Paruwai Farm	0.85	70	P	Pn	09 32 31.2	-0.1
NNZ	Nelson	0.87	301	P	Pg	09 32 29.3	-1.0
DUWZ	D'Urville Isla	0.93	339	P	Pg	09 32 25.0	-6.5
DUWZ				P	Pb	09 32 30.9	-0.7
KHZ	Kahutara	0.97	219	ePn	Pn	09 32 32.8	-0.1
KHZ				eSn	Sn	09 32 47.5	+1.0
KHZ	Kahutara	0.97	219	P	Pn	09 32 32.9	-0.1
MTW	Mount Morrison	0.99	59	P	Pn	09 32 33.6	+0.4
TRWZ	Traveller	1.03	75	P	Pn	09 32 33.8	+0.1
OGWZ	Otaki Gorge	1.04	36	P	Pn	09 32 33.6	-0.3
THZ	Tophouse	1.10	265	ePn	Pg	09 32 33.6	-1.1
THZ				eSn	Sn	09 32 49.8	-0.1
THZ	Tophouse	1.10	265	P	Pg	09 32 33.7	-1.0
HOWZ	Holdsworth Sta	1.16	49	P	Pn	09 32 36.0	+0.5
TMWZ	Te Maipa	1.28	64	P	Pb	09 32 37.2	-0.3
MRZ	Mangatainoka R	1.36	43	P	Pg	09 32 38.9	-0.8
TIWZ	Tintock	1.45	53	P	Pb	09 32 39.9	-0.6
CPWZ	Castlepoint	1.58	62	P	Pb	09 32 41.7	-0.9
QRZ	Quartz Range	1.62	301	P	Pb	09 32 42.6	-0.8
OHWZ	Ohakea	1.63	26	P	Pg	09 32 44.2	-0.6
GVZ	Greta Valley S	1.63	217	P	Pn	09 32 41.7	-0.4
PRWZ	Pori Road	1.65	48	P	Pn	09 32 42.5	+0.3
POWZ	Post Office Ro	1.66	40	P	Pb	09 32 43.2	-0.8
BFZ	Birch Farm	1.73	56	ePn	Pn	09 32 42.7	-0.7
BFZ	Birch Farm	1.73	56	P	Pn	09 32 42.8	-0.5
LTZ	Lake Taylor	1.91	234	ePn	Pn	09 32 45.5	-0.5
LTZ	Lake Taylor	1.91	234	P	Pn	09 32 45.8	-0.1
DVHZ	Dannevirke	1.93	45	P	Pn	09 32 45.9	-0.3
AMCZ	Amberley	1.97	220	P	Pn	09 32 46.1	-0.6
WAZ	Wanganui	1.97	14	P	Pg	09 32 49.7	-1.6
ANWZ	Angora Road	2.00	54	P	Pn	09 32 46.7	-0.4
LREZ	Lake Rotokare	2.21	1	P	Pg	09 32 53.8	-2.1
PRHZ	Porangahau	2.22	52	P	Pn	09 32 49.6	-0.5
PNHZ	Pukenui	2.24	39	P	Pn	09 32 50.4	-0.1
WPHZ	Waipukurau	2.25	45	P	Pn	09 32 50.4	-0.1
OKCZ	Okains Bay	2.27	205	P	Pn	09 32 49.5	-1.3
NMEZ	Namu Road	2.28	350	P	Pb	09 32 54.9	+0.3
CRLZ	Canterbury Las	2.30	213	ePn	Pn	09 32 49.4	-1.8
CRLZ	Canterbury Las	2.30	213	P	Pn	09 32 50.0	-1.2
PREZ	Palmer Road	2.33	356	P	Pb	09 32 55.2	-0.3
KHEZ	Kahui Hut	2.39	353	P	Pb	09 32 55.5	-1.0
OXZ	Oxford	2.39	225	ePn	Pn	09 32 50.8	-1.6
OXZ	Oxford	2.39	225	P	Pn	09 32 51.1	-1.4
MQZ	McQueen's Vall	2.40	211	ePn	Pn	09 32 50.5	-2.0
MQZ	McQueen's Vall	2.40	211	P	Pn	09 32 50.6	-2.0
INZ	Inchbonnie	2.41	243	P	Pn	09 32 52.9	+0.1
NBEZ	Newall Road No	2.43	351	P	Pb	09 32 55.1	-2.0
MTVZ	Mangateitei	2.43	21	P	Pb	09 32 56.0	-1.2
AKCZ	Akaroa Harbour	2.45	205	P	Pn	09 32 51.9	-1.4
DREZ	Durham Road	2.48	357	P	Pb	09 32 56.3	-1.7
PKE	Pukeiti	2.49	353	P	Pb	09 32 56.0	-2.1
PKVZ	Pokaka	2.49	18	P	Pb	09 32 56.5	-1.8
MOVZ	Moawhango	2.50	26	P	Pn	09 32 55.2	+1.2
PXZ	Pawanui	2.50	50	P	Pn	09 32 53.0	-1.0
BHHZ	Black Hill Sta	2.53	31	P	Pn	09 32 55.4	+0.9
KRHZ	Kereru	2.53	38	P	Pn	09 32 54.2	-0.3
DRZ	Dome Shelter	2.56	21	P	Pb	09 32 59.7	+0.2
VRZ	Vera Road	2.56	7	P	Pb	09 32 57.8	-1.5
WHVZ	Whangaehu Hut	2.56	22	P	Pb	09 32 57.1	-2.4
FWVZ	Far West T-bar	2.58	21	P	Pb	09 32 57.5	-2.3
MHEZ	Mangahewa	2.59	359	P	Pb	09 33 00.3	+0.4
TUVZ	Tukino	2.59	23	P	Pb	09 32 57.3	-2.7
NGZ	Ngauruhoe	2.66	21	P	Pb	09 32 58.6	-2.6
KAHZ	Kahuranaki	2.67	46	P	Pn	09 32 55.6	-0.8
WTVZ	West Tongariro	2.72	21	P	Pb	09 32 59.8	-2.3
TWVZ	Taurewa	2.72	18	P	Pb	09 33 00.6	-1.6
KWHZ	Kaweka Forest	2.74	36	P	Pn	09 32 57.5	+0.2
KRVZ	Karewarewa	2.75	21	P	Pb	09 32 59.9	-2.8
MCHZ	McNeill Hill	2.84	39	P	Pn	09 32 58.4	-0.3
KATZ	Kakaramea	2.88	21	P	Pb	09 33 02.5	-2.4
CKHZ	Cape Kidnapper	2.88	47	P	Pn	09 32 59.2	+0.1
RITZ	Rihia Road	2.92	23	P	Pb	09 33 04.3	-1.3
BKZ	Black Stump Fm	2.98	34	ePn	Pn	09 32 60.0	-0.7
BKZ	Black Stump Fm	2.98	34	P	Pn	09 33 00.3	-0.3
RATZ	Rangitukua	3.00	21	P	Pb	09 33 07.4	+0.6
WVZ	Waitaha Valley	3.03	241	P	Pn	09 33 01.3	0.0
HATZ	Hinemaiaia	3.07	26	P	Pb	09 33 08.0	-0.1
ARHZ	Aropaoanui	3.13	41	P	Pn	09 33 02.1	-0.5
WATZ	Wairara	3.14	20	P	Pb	09 33 07.1	-2.2
HIZ	Hauiti	3.17	7	ePn	Pn	09 33 05.5	+2.2
HIZ	Hauiti	3.17	7	P	Pb	09 33 06.1	-3.7
RPZ	Rata Peaks	3.19	229	Pn	Pn	09 33 02.1	-1.3
	11nm,0.3s,baz=89,slow=0.2,SNR=34						
RPZ				Pg	Pb	09 33 10.5	+0.5
	68nm,0.3s,baz=335,slow=4.3,SNR=36						
RPZ				Sn	Sn	09 33 39.2	-2.1
	40nm,0.3s,baz=144,slow=22,SNR=9.9						
RPZ	Rata Peaks	3.19	229	ePn	Pn	09 33 01.6	-1.8
RPZ	Rata Peaks	3.19	229	P	Pn	09 33 02.4	-1.0
MRHZ	Matea Rd	3.24	30	P	Pn	09 33 04.1	0.0
KUTZ	Kaahu Road	3.37	20	P	Pb	09 33 12.7	-0.5
MTHZ	Maungataniwha	3.39	35	P	Pn	09 33 05.8	-0.5
WHHZ	Waihua	3.39	41	P	Pn	09 33 05.9	-0.3
RAHZ	Arahi	3.45	38	P	Pn	09 33 06.5	-0.5
ALRZ	Allen Road	3.45	27	P	Pn	09 33 08.4	+1.3
TLZ	Tolley Road	3.46	15	P	Pn	09 33 09.7	+2.5
HRRZ	Handcock Road	3.59	25	P	Pb	09 33 16.2	-0.7
RTZ	Ruatahuna	3.65	34	P	Pn	09 33 09.5	-0.3
KNZ	Kokohu	3.66	45	P	Pn	09 33 08.4	-1.5
MUGZ	Murupara	3.68	31	P	Pn	09 33 10.4	+0.2
MHGZ	Mahia Peninsul	3.69	48	P	Pn	09 33 09.4	-1.0
RRRZ	Republican Roa	3.71	27	P	Pn	09 33 14.2	+3.5
TARZ	Mount Tarawera	3.80	26	P	Pn	09 33 13.1	+1.1
FOZ	Fox Glacier	3.84	239	ePn	Pn	09 33 11.8	-0.6
FOZ	Fox Glacier	3.84	239	P	Pn	09 33 12.4	0.0
PRGZ	Paritu Road	3.84	46	P	Pn	09 33 10.9	-1.5
RAGZ	Rawiri	3.94	37	P	Pn	09 33 12.4	-1.5
RIGZ	Rimuhau	3.94	42	P	Pn	09 33 11.9	-1.9
EDRZ	Edgecumbe	4.00	28	P	Pb	09 33 18.7	-5.2
URZ	Urewera	4.01	33	Pn	Pn	09 33 12.8	-1.8
	3.8nm,0.3s,baz=242,slow=6.7,SNR=18						
URZ				Sn	Sn	09 34 00.2	-1.2
	21nm,0.3s,baz=158,slow=19,SNR=6.0						
URZ				LR	LR	09 35 09.5	
	comp=Z,970nm,18.3s,baz=220,slow=46						
URZ	Urewera	4.01	33	ePn	Pn	09 33 12.4	-2.3
URZ	Urewera	4.01	33	P	Pn	09 33 13.4	-1.3
TOZ	Tahuroa Road	4.03	13	P	Pn	09 33 17.6	+2.6
MARZ	Manawahe	4.09	27	P	Pn	09 33 18.4	+2.6
LBZ	Lake Benmore	4.09	227	ePn	Pn	09 33 15.3	-0.6
LBZ	Lake Benmore	4.09	227	P	Pn	09 33 16.2	+0.2
OPRZ	Ohinepanea	4.18	25	P	Pn	09 33 18.0	+1.0
TGRZ	Tauranga	4.20	21	P	Pb	09 33 21.8	-5.5
ODZ	Otahua Downs	4.33	218	ePn	Pn	09 33 18.0	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ODZ	**Otahua Downs**	**4.33**	**218**	P	**Pn**	**09 33 17.5**	**-1.6**
CNGZ	**Carnagh Statio**	**4.34**	**44**	P	**Pn**	**09 33 18.6**	**-0.6**
TWGZ	**Tauwhareparae**	**4.46**	**40**	P	**Pn**	**09 33 19.3**	**-1.6**
RUGZ	**Raukumara Rang**	**4.49**	**36**	P	**Pn**	**09 33 19.9**	**-1.5**
KBAZ	**Karaka Road Bo**	**4.59**	**5**	P	**Pn**	**09 33 26.3**	**+3.7**
MKAZ	**Moumakai**	**4.60**	**8**	P	**Pn**	**09 33 24.7**	**+1.9**
AWAZ	**Awhitu Peninsu**	**4.60**	**3**	P	**Pn**	**09 33 25.2**	**+2.3**
HAZ	**Te Kaha**	**4.71**	**35**	P	**Pn**	**09 33 23.1**	**-1.3**
ETAZ	**East Tamaki Re**	**4.73**	**5**	P	**Pn**	**09 33 27.7**	**+3.1**
WTAZ	**Waiatarua**	**4.73**	**2**	P	**Pn**	**09 33 27.7**	**+3.0**
JCZ	**Jackson Bay**	**4.75**	**238**	P	**Pn**	**09 33 24.8**	**-0.3**
EPAZ	**Eden Park BICE**	**4.80**	**4**	P	Pn	09 33 29.8	+4.3
HBAZ	**Herne Bay Bore**	**4.82**	**3**	P	Pb	09 33 32.7	-5.1
WIAZ	**Waiheke Island**	**4.91**	**7**	P	**Pn**	**09 33 29.6**	**+2.5**
MBAZ	**Motutapu North**	**4.91**	**5**	P	**Pn**	**09 33 30.6**	**+3.5**
HHSZ	**Highcliff Hill**	**5.02**	**212**	P	**Pn**	**09 33 27.4**	**-1.2**
WKZ	**Wanaka**	**5.02**	**229**	*e*Pn	**Pn**	**09 33 26.6**	**-2.1**
WKZ	**Wanaka**	**5.02**	**229**	P	**Pn**	**09 33 28.3**	**-0.4**
KUZ	**Kuaotunu**	**5.03**	**13**	P	**Pn**	**09 33 30.8**	**+2.1**
MXZ	**Matakaoa Point**	**5.11**	**38**	*e*Pn	**Pn**	**09 33 27.9**	**-1.9**
MXZ	**Matakaoa Point**	**5.11**	**38**	P	**Pn**	**09 33 28.5**	**-1.3**
EAZ	**Earnscleugh**	**5.12**	**224**	P	**Pn**	**09 33 30.5**	**+0.5**
GRZ	**Great Barrier**	**5.48**	**9**	P	Pn	09 33 40.9	+6.0
TUZ	**Tuapeka**	**5.48**	**217**	P	**Pn**	**09 33 33.9**	**-1.0**
MSZ	**Milford Sound**	**5.58**	**235**	P	Pn	09 33 41.5	+5.2
WCZ	**Waipu Caves**	**5.72**	**360**	P	**Pn**	**09 33 41.2**	**+2.9**
MLZ	**Mavora Lakes**	**5.86**	**229**	*e*Pn	**Pn**	**09 33 39.6**	**-0.5**
MLZ	**Mavora Lakes**	**5.86**	**229**	P	**Pn**	**09 33 42.1**	**+2.0**
SYZ	**Scrubby Hill**	**6.15**	**216**	P	**Pn**	**09 33 43.4**	**-0.7**
WHZ	**Wether Hill Ro**	**6.28**	**226**	*e*Pn	**Pn**	**09 33 45.2**	**-0.6**
WHZ	**Wether Hill Ro**	**6.28**	**226**	P	**Pn**	**09 33 47.3**	**+1.5**
DCZ	**Deep Cove**	**6.47**	**232**	*e*Pn	**Pn**	**09 33 47.8**	**-0.7**
OUZ	**Omahuta**	**6.47**	**354**	*e*Pn	**Pn**	**09 33 50.3**	**+1.8**
OUZ	**Omahuta**	**6.47**	**354**	P	**Pn**	**09 33 50.9**	**+2.4**
APZ	**The Paps**	**6.90**	**219**	P	**Pn**	**09 33 54.7**	**+0.2**
CTZ	**Chatham Island**	**6.96**	**110**	P	**Pn**	**09 33 54.6**	**-0.5**
STKA	**Stephens Creek**	**27.87**	**280**	LR	LR	09 48 04.4	
	comp=Z,103nm,19.0s,baz=181,slow=34						
AS31	**Alice Springs**	**38.09**	**285**	*e*P	**P**	**09 39 30.9**	**-1.4**
	1.2nm,1.0s						
ASAR	**Alice Springs**	**38.09**	**285**	P	**P**	**09 39 30.7**	**-1.6**
	1.2nm,0.7s,baz=122,slow=6.7,SNR=26						
ASAR				PcP	**PcP**	**09 41 45.0**	**-2.2**
	0.4nm,0.7s,baz=114,slow=3.5,SNR=3.7						
WB2	**Warramunga Arr**	**40.15**	**290**	*e*P	**P**	**09 39 47.5**	**-1.9**
	5.0nm,0.6s						
WR1	**Warramunga Arr**	**40.16**	**290**	*e*P	**P**	**09 39 47.8**	**-1.7**
WRA	**Warramunga Arr**	**40.16**	**290**	P	**P**	**09 39 47.8**	**-1.7**
	3.8nm,0.7s,baz=125,slow=7.2,SNR=19						
MTN	**Manton Dam**	**47.26**	**295**	*e*P	**P**	**09 40 44.9**	**-1.8**
MORW	**Morawa**	**48.35**	**266**	*e*P	**P**	**09 40 54.2**	**-0.9**
	6.9nm,1.0s						
QSPA	**South Pole Qui**	**48.46**	**180**	P	**P**	**09 40 57.8**	**+2.2**
	2.6nm,0.9s,baz=24,slow=3.7,SNR=6.7						
QSPA	**South Pole Qui**	**48.46**	**180**	*e*P	**P**	**09 40 57.8**	**+2.2**
	10nm,1.3s						
MAW	**Mawson**	**59.56**	**204**	P	**P**	**09 42 17.5**	**+1.1**
	0.4nm,0.4s,baz=166,slow=12,SNR=2.7						
MAW				LR	LR	10 07 40.9	
	comp=Z,155nm,18.1s,baz=89,slow=36						
MAW	**Mawson**	**59.56**	**204**	*e*P	**P**	**09 42 17.5**	**+1.1**
	1.2nm,1.4s						
PMSA	**Palmer Station**	**64.51**	**156**	*e*P	**P**	**09 42 50.1**	**+0.4**
	18nm,0.8s						
SNAA	**Sanae**	**66.95**	**181**	P	**P**	**09 43 05.4**	**0.0**
SNAA	**Sanae**	**66.95**	**181**	P	**P**	**09 43 06.3**	**+0.9**
	0.9nm,0.8s,baz=198,slow=10,SNR=6.7						
SNAA	**Sanae**	**66.95**	**181**	*e*P	**P**	**09 43 06.5**	**+1.1**
	5.7nm,1.4s						
VNA3	**Neumayer Olymp**	**67.36**	**179**	P	**P**	**09 43 09.1**	**+1.2**
HOPE	**Hope Point**	**80.83**	**162**	*e*P	**P**	**09 44 25.4**	**-1.4**
	44nm,1.3s						
NJ2	**Nanjing**	**89.40**	**316**	P	**P**	**09 45 11.6**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSRS	**Korea Array**	**89.44**	**325**	P	**P**	**09 45 10.4**	**+0.6**
	1.2nm,0.7s,baz=138,slow=7.7,SNR=5.1						
KS15	**Wonju Array Si**	**89.45**	**325**	*e*P	**P**	**09 45 10.4**	**+0.5**
	6.5nm,0.9s						
CM31	**Chiang Mai Arr**	**91.69**	**293**	*e*P	**P**	**09 45 20.1**	**-0.7**
	5.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**91.69**	**293**	P	**P**	**09 45 20.1**	**-0.7**
	1.0nm,0.3s,baz=155,slow=3.0,SNR=5.6						
KMI	**Kunming**	**93.76**	**300**	P	**P**	**09 45 32.4**	**+1.8**
NNA	**Nana**	**95.71**	**111**	LR	LR	10 21 02.6	
	comp=Z,52nm,18.1s,baz=208,slow=31						
CD2	**Chengdu**	**97.17**	**305**	*e*P	Pdif	09 45 46.0	+0.1
ATAH	**Atahualpa**	**97.97**	**107**	LR	LR	10 23 18.2	
	comp=Z,35nm,18.3s,baz=181,slow=31						
HHC	**Hu-ho-hao-te**	**99.89**	**317**	P	**Pdif**	**09 46 02.3**	**+4.5**
HHC				pmax	pmax		
	comp=Z,11nm,6.0s						
LZH	**Lanzhou**	**100.72**	**309**	*e*P	**Pdif**	**09 46 04.0**	**+2.3**
LZH				pP	sP	09 46 08.5	+1.2
LZH				sP	sPdif	09 46 10.3	+3.0
LZH				*e*PP	**PP**	**09 50 15.3**	**+5.6**
LZH				LR	LR		
	comp=N,110nm,17.2s						
LZH				LR	LR		
	comp=E,120nm,17.4s						
LZH				LR	LR		
	comp=Z,170nm,19.7s						
WMQ	**Urumqi**	**115.18**	**307**	*e*PKP	**PKiKP**	**09 50 54.3**	**0.0**
WMQ				LR	LR		
	comp=Z,230nm,28.3s						
YKA	**Yellowknife Ar**	**118.26**	**30**	PKP	**PKPdf**	**09 50 59.0**	**-0.5**
	0.3nm,0.6s,baz=250,slow=1.7,SNR=6.9						
YKB5	**Yellowknife Ar**	**118.26**	**30**	*e*PKPdf	**PKPdf**	**09 50 59.0**	**-0.5**
DBIC	**Dimbokro**	**145.14**	**181**	PKPbc	**PKPdf**	**09 51 51.1**	**-0.2**
	3.7nm,0.7s,baz=225,slow=1.4,SNR=3.6						
DBIC	**Dimbokro**	**145.14**	**181**	*e*PKPbc	**PKPbc**	**09 51 48.6**	**-2.2**
ARA0	**ARCESS Array S**	**147.73**	**340**	*e*PKPbc	**PKPbc**	**09 51 55.4**	**-1.4**
ARCES	**ARCESS Array B**	**147.73**	**340**	PKPbc	**PKPbc**	**09 51 55.4**	**-1.4**
	1.0nm,0.5s,baz=32,slow=2.4,SNR=11						
ARE0	**ARCESS Array S**	**147.73**	**340**	*e*PKPbc	**PKPbc**	**09 51 56.5**	**-0.4**
BR101	**Keskin Array S**	**150.33**	**279**	*e*PKPbc	**PKPbc**	**09 52 04.3**	**-0.3**
BRTR	**Keskin Array B**	**150.33**	**279**	PKPbc	**PKPbc**	**09 52 04.3**	**-0.3**
	0.5nm,0.7s,baz=116,slow=3.4,SNR=3.2						
TOA0	**Torodi Ar. Sit**	**150.88**	**195**	*e*PKPbc	**PKPbc**	**09 52 06.2**	**-0.1**
TORD	**Torodi Ar. Bea**	**150.88**	**195**	PKPbc	**PKPbc**	**09 52 06.3**	**0.0**
	2.3nm,0.8s,baz=172,slow=3.5,SNR=17						
TOA1	**Torodi Ar. Sit**	**150.88**	**195**	*e*PKPbc	**PKPbc**	**09 52 06.3**	**0.0**
FIA0	**FINESS Array S**	**152.51**	**327**	*e*PKPbc	**PKPbc**	**09 52 06.6**	**-2.0**
FINES	**FINESS Array B**	**152.51**	**327**	PKPbc	**PKPbc**	**09 52 06.6**	**-2.0**
	1.7nm,0.6s,baz=27,slow=1.6,SNR=8.8						

WEL 21 09:34:28.3±0.3**,42°S**±2°×**17°4E**±°**,h10**^{km}**,M3.3**/7**,ML3.5**/7**,**
MLv3.3/7**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.17**	**202**	P	Pg	09 34 32.8	+0.8
CMWZ				S	Sg	09 34 36.3	+1.7
TUWZ	**Tuamarina**	**0.31**	**301**	P	Pb	09 34 35.4	-0.6
TUWZ				S	Sb	09 34 40.3	-0.7
BSWZ	**Blackbirch Sta**	**0.34**	**248**	P	Pg	09 34 35.5	+0.5
BSWZ				S	Sb	09 34 41.2	-0.8
TCW	**Tory Channel**	**0.38**	**358**	P	Pb	09 34 36.6	-0.5
TCW				S	Sb	09 34 42.1	-0.9
WEL	**Wellington**	**0.47**	**49**	P	Pb	09 34 38.4	-0.2
WEL				S	Sb	09 34 45.4	-0.1
CAW	**Cannon Point**	**0.75**	**50**	P	Pb	09 34 43.2	-0.3
NNZ	**Nelson**	**0.79**	**298**	P	Pn	09 34 44.8	-0.6
KHZ	**Kahutara**	**1.00**	**214**	P	Pb	09 34 47.9	+0.2
OGWZ	**Otaki Gorge**	**1.01**	**41**	P	Pn	09 34 48.9	+0.3

ISCJB ***21*** *09:40:16.7±0.2,24°97N±0°02×121°79E±0°02,*
h124^{km}*±1*^{km}*,mb3.6/11,Error ellipse: s-maj=2.8km*
s-min=2.2km az=150.6
JMA ***21*** *09:40:17.9±0.1,24°89N×121°80E,h115*^{km}*±1*^{km}*,M3.2*
IDC ***21*** *09:40:17.0±4.9,24°95N×121°75E,h117*^{km}*±49*^{km}*,*
mb3.3/12,mb1 3.4/12,mb1mx3.3/38,mbtmp3.7/12,MS3.0/1,
Ms1 3.0/1,ms1mx2.4/26,Error ellipse: s-maj=37.9km
s-min=19.2km az=67.0
TAP ***21*** *09:40:17.5,24°97N×121°79E,h122*^{km}*,ML4.1,B*
ISC 21 09:40:17.4±0.7**,24°99N**±0°03×**121°79E**±0°02**,h124**^{km}±4^{km}**,**
n126,σ**0**^{s}**78**/229**,mb3.6**/11**,30C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWF	**Wu-fen Shan**	**0.09**	**354**	⇑P	**Pn**	**09 40 34.2**	**-0.1**
	baz=357						
NWF				S	**Sn**	**09 40 46.2**	**-1.0**
	baz=357						
WFSB	**Wu-fen Shan**	**0.09**	**354**	⇑P	**Pn**	**09 40 34.3**	**0.0**
	baz=356						
WFSB				S	**Sn**	**09 40 46.2**	**-0.8**
	baz=356						
NTC	**Toucheng**	**0.14**	**165**	P	**Pn**	**09 40 34.1**	**-0.2**
	baz=161						
NTC				S	**Sn**	**09 40 45.9**	**-1.1**
	baz=161						
TWA	**Mucha**	**0.19**	**268**	⇑P	**Pn**	**09 40 34.4**	**0.0**
	baz=271						
TWA				S	**Sn**	**09 40 47.3**	**0.0**
	baz=271						
ILA	**Ilan**	**0.22**	**190**	P	**Pn**	**09 40 34.9**	**+0.4**
	baz=187						
ILA				S	**Sn**	**09 40 47.2**	**-0.2**
	baz=187						
NHDH	**Xindian Distri**	**0.24**	**265**	⇑P	**Pn**	**09 40 34.4**	**-0.1**
	baz=267						
NHDH				S	**Sn**	**09 40 46.3**	**-1.2**
	baz=267						
YM01	**YM01**	**0.26**	**309**	*e*P	**Pn**	**09 40 34.7**	**0.0**
	baz=311						
YM01				S	**Sn**	**09 40 47.7**	**0.0**
	baz=311						
TAP	**Taipei**	**0.26**	**282**	P	**Pn**	**09 40 33.8**	**-0.8**
	baz=284						
TAP				S	**Sn**	**09 40 46.5**	**-1.1**
	baz=284						
YM10	**YM10**	**0.27**	**309**	*e*P	**Pn**	**09 40 35.1**	**+0.4**
	baz=311						
YM05	**YM05**	**0.27**	**311**	*e*P	**Pn**	**09 40 34.9**	**+0.2**
	baz=313						
YM08	**YM08**	**0.27**	**318**	*e*P	**Pn**	**09 40 35.0**	**+0.3**
	baz=320						
TATO	**Taipei**	**0.28**	**268**	⇑P	**Pn**	**09 40 34.5**	**-0.1**
	baz=270						
TATO				S	**Sn**	**09 40 46.5**	**-1.1**
	baz=270						
YM04	**YM04**	**0.28**	**306**	P	**Pn**	**09 40 34.6**	**-0.1**
	baz=308						
YM04				*e*S	**Sn**	**09 40 46.7**	**-1.2**
	baz=308						
TWE	**Neicheng**	**0.29**	**203**	P	**Pn**	**09 40 34.8**	**0.0**
	baz=200						
TWE				S	**Sn**	**09 40 47.5**	**-0.2**
	baz=200						
YM03	**YM03**	**0.30**	**310**	*e*P	**Pn**	**09 40 34.5**	**-0.3**
	baz=312						
YM03				*e*S	**Sn**	**09 40 47.0**	**-1.0**
	baz=312						
TWY	**Chenhua**	**0.34**	**329**	P	**Pn**	**09 40 35.1**	**+0.2**
	baz=331						
TWY				*e*S	**Sn**	**09 40 47.9**	**-0.3**
	baz=331						
NTST	**Danshui**	**0.36**	**300**	⇑P	**Pn**	**09 40 35.1**	**+0.2**
	baz=301						
NTST				S	**Sn**	**09 40 48.7**	**+0.4**
	baz=301						
TWS1	**Kuangyinshan**	**0.36**	**289**	P	**Pn**	**09 40 35.2**	**+0.3**
	baz=291						
TWS1				S	**Sn**	**09 40 48.5**	**+0.2**
	baz=291						
TWC	**Suao**	**0.38**	**172**	P	**Pn**	**09 40 35.3**	**+0.2**
	baz=169						
TWC				S	**Sn**	**09 40 48.2**	**-0.2**
	baz=169						
ENTT	**Nioudou**	**0.40**	**211**	P	**Pn**	**09 40 35.2**	**0.0**
	baz=210						
ENTT				*e*S	**Sn**	**09 40 47.5**	**-1.2**
	baz=210						
NDT	**Datong Townshi**	**0.46**	**213**	⇑P	**Pn**	**09 40 35.4**	**-0.2**
	baz=213						
NDT				S	**Sn**	**09 40 47.9**	**-1.3**
	baz=213						
YHNB	**Yeheng**	**0.49**	**230**	⇑P	**Pn**	**09 40 35.4**	**-0.4**
	baz=231						
YHNB				*e*S	**Sn**	**09 40 48.2**	**-1.4**
	baz=231						
NSK	**Sanguang**	**0.50**	**232**	⇑P	**Pn**	**09 40 35.4**	**-0.4**
	baz=232						
NSK				S	**Sn**	**09 40 48.1**	**-1.6**
	baz=232						
WLTB	**Daxi**	**0.51**	**255**	⇑P	**Pn**	**09 40 36.0**	**+0.3**
	baz=256						
WLTB				S	**Sn**	**09 40 49.3**	**-0.3**
	baz=256						
EOS1	**EOS1**	**0.53**	**145**	P	**Pn**	**09 40 36.0**	**+0.1**
	baz=143						
EOS1				S	**Sn**	**09 40 50.0**	**+0.1**
	baz=143						
NCU	**National Centr**	**0.55**	**268**	⇑P	**Pn**	**09 40 36.2**	**+0.2**
	baz=269						
NCU				S	**Sn**	**09 40 49.9**	**-0.2**
	baz=269						
NCUH	**Zhongli**	**0.55**	**268**	*e*P	**Pn**	**09 40 36.1**	**+0.1**
	baz=269						
NCUH				*e*S	**Sn**	**09 40 49.7**	**-0.4**
	baz=269						
ENA	**Nanau**	**0.56**	**185**	P	**Pn**	**09 40 36.4**	**+0.3**
	baz=183						
ENA				*e*S	**Sn**	**09 40 50.1**	**-0.2**
	baz=183						
NANB	**Nanao**	**0.56**	**184**	P	**Pn**	**09 40 36.3**	**+0.1**
	baz=183						
NANB				S	**Sn**	**09 40 50.3**	**+0.1**
	baz=183						
NNS	**Nan Shan**	**0.66**	**215**	⇑P	**Pn**	**09 40 37.0**	**0.0**
	baz=214						
NNS				S	**Sn**	**09 40 51.3**	**-0.5**
	baz=214						
NNSB	**Datong**	**0.67**	**214**	⇑P	**Pn**	**09 40 37.0**	**0.0**
	baz=214						
NNSB				S	**Sn**	**09 40 51.0**	**-0.9**
	baz=214						
SBCB	**Hsinchu**	**0.76**	**255**	*e*P	**Pn**	**09 40 37.7**	**+0.1**
	baz=256						
SBCB				*e*S	**Sn**	**09 40 52.4**	**-0.3**
	baz=256						
HSN	**Hsinchu**	**0.77**	**256**	*e*P	**Pn**	**09 40 37.6**	**0.0**
	baz=258						
HSN				S	**Sn**	**09 40 51.9**	**-1.0**
	baz=258						
LIOB	**Emei**	**0.78**	**244**	⇑P	**Pn**	**09 40 38.0**	**+0.2**
	baz=245						
LIOB				S	**Sn**	**09 40 52.6**	**-0.6**
	baz=245						
NSTT	**Nanjuang**	**0.80**	**244**	⇑P	**Pn**	**09 40 38.0**	**0.0**
	baz=244						
NSTT				S	**Sn**	**09 40 52.6**	**-0.8**
	baz=244						
ETLH	**Xiulin Townshi**	**0.82**	**200**	⇑P	**Pn**	**09 40 37.6**	**-0.6**
	baz=199						
ETLH				S	**Sn**	**09 40 53.0**	**-1.0**
	baz=199						
NACB	**Ninganchiao**	**0.83**	**192**	⇑P	**Pn**	**09 40 37.0**	**-1.2**
	baz=192						
NACB				*e*S	**Sn**	**09 40 52.6**	**-1.2**
	baz=192						
TWD	**Chiawan**	**0.92**	**191**	*e*P	**Pn**	**09 40 38.5**	**-0.5**
	baz=190						
TWD				*e*S	**Sn**	**09 40 53.7**	**-1.5**
	baz=190						
TWT	**Tachien**	**0.92**	**218**	P	**Pn**	**09 40 39.9**	**+0.7**
	baz=218						
TWT				S	**Sn**	**09 40 55.9**	**+0.2**
	baz=218						
TDCB	**Techi**	**0.93**	**218**	⇑P	**Pn**	**09 40 39.5**	**+0.3**
	baz=218						
TDCB				S	**Sn**	**09 40 55.0**	**-0.8**
	baz=218						
WHF	**Hehuan Shan**	**0.96**	**210**	⇑P	**Pn**	**09 40 40.0**	**+0.2**
	baz=209						
WHF				S	**Sn**	**09 40 56.4**	**-0.4**
	baz=209						
NMLH	**Miaoli**	**1.01**	**244**	*e*P	**Pn**	**09 40 40.0**	**+0.1**
	baz=244						
NMLH				S	**Sn**	**09 40 56.6**	**-0.2**
	baz=244						
HWA	**Hwalien**	**1.02**	**190**	*e*P	**Pn**	**09 40 39.2**	**-0.7**
	baz=189						
HWA				*e*S	**Sn**	**09 40 57.8**	**+0.9**
	baz=189						
CHGB	**Renai**	**1.08**	**211**	⇑P	**Pn**	**09 40 41.2**	**+0.4**
	baz=211						
CHGB				S	**Sn**	**09 40 57.9**	**-0.5**
	baz=211						
ENLB	**Shoufeng**	**1.09**	**189**	*e*P	**Pn**	**09 40 42.5**	**+1.9**
	baz=188						
ENLB				*e*S	**Sn**	**09 40 59.5**	**+1.3**
	baz=188						
NSY	**Sanyi**	**1.09**	**239**	⇑*e*P	**Pn**	**09 40 41.1**	**+0.4**
	baz=238						
NSY				S	**Sn**	**09 40 58.4**	**+0.1**
	baz=238						
TWQ1	**Liyutan**	**1.12**	**236**	⇑*e*P	**Pn**	**09 40 41.1**	**+0.1**
	baz=235						
TWQ1				S	**Sn**	**09 40 58.2**	**-0.6**
	baz=235						
PTSB	**Yuanli**	**1.12**	**242**	P	**Pn**	**09 40 41.2**	**+0.2**
	baz=241						
PTSB				S	**Sn**	**09 40 58.5**	**-0.3**
	baz=241						
JYNG	**Yonagunijimaku**	**1.18**	**117**	P	**Pn**	**09 40 41.3**	**-0.2**
JYNG				S	**Sn**	**09 40 58.9**	**-0.9**
ESL	**Shilin**	**1.21**	**196**	*e*P	**Pn**	**09 40 41.0**	**-0.9**
	baz=195						
ESL				*e*S	**Sn**	**09 40 59.4**	**-1.1**
	baz=195						
WDJ	**Dajia District**	**1.22**	**239**	*e*S	**Sn**	**09 41 01.0**	**+0.4**
	baz=239						
YOJ	**Yonaguni jima**	**1.23**	**115**	⇓P	**Pn**	**09 40 41.5**	**-0.5**
	baz=114						
YOJ				S	**Sn**	**09 40 59.5**	**-1.1**
	baz=114						
YOJ	**Yonaguni jima**	**1.23**	**115**	P	**Pn**	**09 40 41.8**	**-0.2**
YOJ				S	**Sn**	**09 40 59.7**	**-1.0**
DPDB	**Guoxing**	**1.23**	**220**	⇑*e*P	**Pn**	**09 40 42.5**	**+0.3**
	baz=219						
DPDB				S	**Sn**	**09 41 00.2**	**-0.7**
	baz=219						
TCU	**Taichung**	**1.31**	**231**	⇑*e*P	**Pn**	**09 40 43.3**	**+0.3**
	baz=230						
TCU				*e*S	**Sn**	**09 41 02.1**	**-0.3**
	baz=230						
EGFH	**Guangfu**	**1.35**	**194**	*e*P	**Pn**	**09 40 43.5**	**0.0**
	baz=194						
EGFH				*e*S	**Sn**	**09 41 02.1**	**-1.0**
	baz=194						
VWDT	**VWDT**	**1.36**	**206**	*e*P	**Pn**	**09 40 44.0**	**+0.5**
	baz=205						
VWDT				S	**Sn**	**09 41 03.9**	**+0.5**
	baz=205						
SMLT	**Sun Moon Lake**	**1.37**	**217**	⇑*e*P	**Pn**	**09 40 43.8**	**+0.1**
	baz=216						
SMLT				S	**Sn**	**09 41 03.0**	**-0.6**
	baz=216						
SSLB	**Suanglung**	**1.42**	**213**	⇑P	**Pn**	**09 40 44.4**	**+0.2**
	baz=212						
SSLB				S	**Sn**	**09 41 03.9**	**-0.6**
	baz=212						
WCHH	**Zhanghua**	**1.44**	**231**	*e*P	**Pn**	**09 40 44.4**	**0.0**
	baz=231						
WCHH				*e*S	**Sn**	**09 41 04.2**	**-0.6**
	baz=231						
WNT	**Mingjian**	**1.50**	**223**	*e*P	**Pn**	**09 40 45.3**	**+0.3**
	baz=222						
WNT				*e*S	**Sn**	**09 41 05.7**	**-0.3**
	baz=222						
WJS	**Zhushan**	**1.51**	**220**	*e*P	**Pn**	**09 40 45.1**	**-0.1**
	baz=220						
WJS				*e*S	**Sn**	**09 41 05.5**	**-0.8**
	baz=220						
HGSD	**Ruisui**	**1.52**	**193**	⇑*e*P	**Pn**	**09 40 45.1**	**-0.2**
	baz=192						
HGSD				S	**Sn**	**09 41 06.3**	**-0.3**
	baz=192						
EHY	**Hungye**	**1.54**	**196**	*e*P	**Pn**	**09 40 45.6**	**+0.1**
	baz=195						
EHY				*e*S	**Sn**	**09 41 05.9**	**-0.9**
	baz=195						
WHYT	**Xinyi Township**	**1.54**	**214**	⇑P	**Pn**	**09 40 45.7**	**+0.1**
	baz=213						
WHYT				S	**Sn**	**09 41 06.7**	**-0.4**
	baz=213						
YULB	**Yu-li**	**1.65**	**196**	*e*P	**Pn**	**09 40 46.3**	**-0.5**
	baz=195						
YULB				*e*S	**Sn**	**09 41 06.9**	**-2.4**
	baz=195						
YUS	**Yu-Shan**	**1.68**	**207**	*e*P	**Pn**	**09 40 48.0**	**+0.4**
	baz=207						
YUS				*e*S	**Sn**	**09 41 10.2**	**-0.3**
	baz=207						
TWF1	**Yuli**	**1.69**	**196**	*e*P	**Pn**	**09 40 47.2**	**-0.1**
	baz=195						
TWF1				*e*S	**Sn**	**09 41 09.0**	**-1.1**
	baz=195						
RLNB	**Erlin**	**1.70**	**230**	*e*P	**Pn**	**09 40 47.1**	**-0.2**
	baz=230						
RLNB				*e*S	**Sn**	**09 41 09.9**	**-0.3**
	baz=230						
WGK	**Gukeng**	**1.71**	**221**	*e*P	**Pn**	**09 40 48.0**	**+0.4**
	baz=220						
WGK				*e*S	**Sn**	**09 41 10.2**	**-0.3**
	baz=220						
CHN5	**Tsauling**	**1.72**	**217**	*e*P	**Pn**	**09 40 47.6**	**0.0**
	baz=216						
CHN5				*e*S	**Sn**	**09 41 10.4**	**-0.4**
	baz=216						
ALS	**Alishan**	**1.72**	**212**	*e*P	**Pn**	**09 40 48.0**	**0.0**
	baz=211						
ALS				*e*S	**Sn**	**09 41 11.3**	**0.0**
	baz=211						
WDLH	**Douliu**	**1.72**	**222**	*e*P	**Pn**	**09 40 47.8**	**+0.1**
	baz=221						
WDLH				*e*S	**Sn**	**09 41 10.8**	**0.0**
	baz=221						
WTCT	**Ta-ch'eng**	**1.77**	**231**	*e*S	**Sn**	**09 41 11.4**	**-0.4**
	baz=230						
IRIF	**Iriomote-Funau**	**1.88**	**110**	P	**Pn**	**09 40 49.1**	**-0.4**
IRIF				S	**Sn**	**09 41 12.7**	**-1.4**
PTTC	**Pingtan**	**1.90**	**286**	⇓*e*P	**Pn**	**09 40 49.6**	**-0.2**
	baz=286						
PTTC				*e*S	**Sn**	**09 41 12.9**	**-1.6**
	baz=286						
CHKT	**Chengkung**	**1.92**	**192**	*e*P	**Pn**	**09 40 50.9**	**+0.9**
	baz=191						
CHKT				*e*S	**Sn**	**09 41 13.5**	**-1.5**
	baz=191						
ELDTW	**Lidau**	**1.92**	**202**	*e*P	**Pn**	**09 40 50.5**	**+0.3**
	baz=201						
ELDTW				*e*S	**Sn**	**09 41 15.0**	**-0.3**
	baz=201						
CHY	**Chiayi**	**1.94**	**220**	*e*P	**Pn**	**09 40 50.2**	**-0.1**
	baz=220						
CHY				*e*S	**Sn**	**09 41 15.2**	**-0.2**
	baz=220						
CHN4	**Tsaushan**	**1.96**	**214**	*e*P	**Pn**	**09 40 51.0**	**+0.4**
	baz=214						
CHN4				*e*S	**Sn**	**09 41 15.9**	**0.0**
	baz=214						
TPUB	**Ta-pu**	**1.98**	**213**	⇑P	**Pn**	**09 40 50.8**	**-0.1**
	baz=212						
TPUB				S	**Sn**	**09 41 16.0**	**-0.5**
	baz=212						
MATB	**Ma-tsu**	**2.03**	**305**	*e*P	**Pn**	**09 40 51.4**	**0.0**
	baz=305						
WTP	**Ta-pu**	**2.04**	**212**	*e*P	**Pn**	**09 40 51.5**	**-0.1**
	baz=211						
WTP				*e*S	**Sn**	**09 41 17.2**	**-0.5**
	baz=211						
STYT	**Tauyuan**	**2.05**	**208**	*e*P	**Pn**	**09 40 51.9**	**+0.2**
	baz=207						
STYT				*e*S	**Sn**	**09 41 17.2**	**-0.7**
	baz=207						
HATJ	**Hateruma jima**	**2.06**	**116**	P	**Pn**	**09 40 51.7**	**0.0**
HATJ				*e*S	**Sn**	**09 41 16.7**	**-1.2**
TWK	**Hsinying**	**2.08**	**215**	*e*P	**Pn**	**09 40 51.9**	**-0.3**
	baz=214						
TWK				*e*S	**Sn**	**09 41 17.4**	**-1.4**
	baz=214						
SNST	**Tainan City**	**2.12**	**214**	*e*S	**Sn**	**09 41 19.2**	**-0.2**
	baz=214						
JKRS	**Kuro-shima**	**2.15**	**110**	P	**Pn**	**09 40 53.1**	**+0.2**
JKRS				*e*S	**Sn**	**09 41 19.1**	**-1.0**
SGST	**Jiashian**	**2.19**	**210**	*e*P	**Pn**	**09 40 53.6**	**+0.1**
	baz=210						
SGST				*e*S	**Sn**	**09 41 21.0**	**-0.1**
	baz=210						
JIJ	**Ishigaki jima**	**2.23**	**106**	P	**Pn**	**09 40 53.7**	**-0.2**
JIJ				S	**Sn**	**09 41 20.5**	**-1.3**
SLGT	**Liugui**	**2.24**	**208**	*e*P	**Pn**	**09 40 54.4**	**+0.2**
	baz=207						
SLGT				*e*S	**Sn**	**09 41 22.3**	**+0.1**
	baz=207						

TWG	**Pinlang**	**2.25**	**197**	*e*P	**Pn**	**09 40 53.5**	**-0.8**
	baz=196						
TWG				*e*S	**Sn**	**09 41 20.6**	**-1.8**
	baz=196						
TWGBT	**Beinan**	**2.25**	**197**	*e*P	**Pn**	**09 40 54.0**	**-0.3**
	baz=196						
TWGBT				*e*S	**Sn**	**09 41 20.5**	**-2.0**
	baz=196						
JISG	**Ishigakijimahi**	**2.33**	**99**	P	**Pn**	**09 40 55.3**	**+0.2**
JISG				S	**Sn**	**09 41 23.1**	**-0.9**
LYJJ	**Jianjiangzhen**	**2.40**	**311**	*e*P	**Pn**	**09 40 56.2**	**+0.1**
	baz=310						
LYJJ				*e*S	**Sn**	**09 41 24.0**	**-1.8**
	baz=310						
XPSS	**Dashiqiu**	**2.41**	**324**	*e*P	**Pn**	**09 40 56.2**	**0.0**
	baz=323						
XPSS				*e*S	**Sn**	**09 41 24.2**	**-1.7**
	baz=323						
PTMZ	**Houxiangcun**	**2.42**	**272**	*e*P	**Pn**	**09 40 56.3**	**0.0**
	baz=271						
PTMZ				*e*S	**Sn**	**09 41 24.6**	**-1.6**
	baz=271						
SSD	**Sandimen**	**2.47**	**206**	*e*P	**Pn**	**09 40 57.7**	**+0.7**
	baz=205						
SSD				*e*S	**Sn**	**09 41 25.7**	**-1.6**
	baz=205						
PNG	**Penghu**	**2.48**	**236**	*e*P	**Pn**	**09 40 56.7**	**-0.4**
	baz=235						
PNG				*e*S	**Sn**	**09 41 25.8**	**-1.7**
	baz=235						
ECL	**Taimali**	**2.50**	**198**	*e*P	**Pn**	**09 40 58.3**	**+0.9**
	baz=197						
ECL				*e*S	**Sn**	**09 41 27.4**	**-0.6**
	baz=197						
PHUB	**P'eng-hu**	**2.50**	**235**	*e*P	**Pn**	**09 40 56.3**	**-1.0**
	baz=234						
PHUB				*e*S	**Sn**	**09 41 25.9**	**-2.1**
	baz=234						
MASBT	**Mashibuluo**	**2.59**	**204**	*e*P	**Pn**	**09 40 58.8**	**+0.2**
	baz=204						
MASBT				*e*S	**Sn**	**09 41 28.3**	**-1.8**
	baz=204						
WDGT	**Dungji**	**2.60**	**229**	*e*P	**Pn**	**09 40 58.8**	**+0.3**
	baz=228						
WDGT				*e*S	**Sn**	**09 41 28.8**	**-1.5**
	baz=228						
JTJ	**Tarama**	**2.67**	**97**	P	**Pn**	**09 41 00.2**	**+0.7**
JTJ				S	**Sn**	**09 41 32.3**	**+0.5**
MHZQ	**Yeshan**	**2.73**	**295**	*e*P	**Pn**	**09 41 00.1**	**-0.2**
	baz=294						
MHZQ				*e*S	**Sn**	**09 41 34.8**	**+1.6**
	baz=294						
VCHM	**Qimei**	**2.79**	**231⇑**	*e*P	**Pn**	**09 41 00.6**	**-0.4**
	baz=230						
VCHM				*e*S	**Sn**	**09 41 33.2**	**-1.5**
	baz=230						
SCZT	**Fangliau**	**2.81**	**203**	*e*P	**Pn**	**09 41 01.7**	**+0.3**
	baz=202						
SCZT				*e*S	**Sn**	**09 41 34.1**	**-1.2**
	baz=202						
JIRB	**Irabujima**	**3.08**	**92**	P	**Pn**	**09 41 05.5**	**+0.7**
JIRB				S	**Sn**	**09 41 40.6**	**-0.7**
JIKM	**Ikemajima**	**3.14**	**90**	P	**Pn**	**09 41 06.4**	**+0.8**
JIKM				S	**Sn**	**09 41 43.0**	**+0.2**
JMJ2	**Miyako jima3**	**3.22**	**94**	P	**Pn**	**09 41 07.7**	**+1.0**
JMJ2				S	**Sn**	**09 41 44.7**	**-0.1**
JOGS	**Gusukube**	**3.29**	**93**	S	**Sn**	**09 41 47.4**	**+1.0**
JOW	**Kunigami**	**6.12**	**71**	P	**Pn**	**09 41 44.7**	**-0.8**
	0.4nm,0.3s,baz=212,slow=21,SNR=6.1						
JOW				S	**Sn**	**09 42 51.4**	**-2.9**
	0.3nm,0.3s,baz=203,slow=14,SNR=3.5						
KSRS	**Korea Array**	**13.48**	**21**	P	**P**	**09 43 27.4**	**-1.2**
	0.1nm,0.3s,baz=193,slow=13,SNR=9.3						
DAV	**Davao City (W)**	**18.18**	**168**	LR	LR	09 51 52.4	
	comp=Z,41nm,18.8s,baz=185,slow=38						
USRK	**Ussuriysk Ar.**	**20.89**	**21**	P	**P**	**09 44 51.3**	**+1.5**
	1.0nm,0.7s,baz=188,slow=9.9,SNR=4.0						
KLR	**Kul'dur**	**25.42**	**15**	P	**P**	**09 45 34.3**	**+0.9**
	1.2nm,0.7s,baz=207,slow=2.4,SNR=5.8						
SONM	**Songino Array**	**25.86**	**336**	P	**P**	**09 45 38.6**	**+1.1**
	1.0nm,0.5s,baz=149,slow=11,SNR=6.0						
MKAR	**Makanchi Array**	**38.16**	**315**	P	**P**	**09 47 25.6**	**+0.9**
	0.6nm,0.5s,baz=106,slow=9.6,SNR=6.4						
ZALV	**Zalesovo Beam**	**39.88**	**326**	P	**P**	**09 47 38.3**	**-0.5**
	0.6nm,0.4s,baz=125,slow=7.4,SNR=2.7						
KURBB	**Kurchatov Arra**	**41.86**	**319**	P	**P**	**09 47 55.2**	**+0.1**
	0.1nm,0.3s,baz=109,slow=9.5,SNR=3.7						
BVAR	**Borovoye Array**	**47.41**	**320**	P	**P**	**09 48 39.2**	**+0.1**
	0.7nm,0.6s,baz=106,slow=7.5,SNR=5.1						
ASAR	**Alice Springs**	**49.77**	**165**	P	**P**	**09 48 57.8**	**+0.3**
	0.3nm,0.8s,baz=349,slow=8.6,SNR=3.7						
ARCES	**ARCESS Array B**	**69.00**	**338**	P	**P**	**09 51 09.1**	**0.0**
	1.5nm,0.9s,baz=62,slow=5.7,SNR=3.9						
FINES	**FINESS Array B**	**71.03**	**330**	P	**P**	**09 51 21.9**	**+0.3**
	1.9nm,0.7s,baz=52,slow=5.2,SNR=14						
AKASG	**Malin Array Be**	**72.64**	**318**	P	**P**	**09 51 30.7**	**-0.7**
	0.6nm,0.4s,baz=62,slow=6.4,SNR=4.5						
BRTR	**Keskin Array B**	**73.14**	**306**	P	**P**	**09 51 35.8**	**+1.0**
	0.3nm,0.4s,baz=106,slow=9.1,SNR=4.3						

IGQ 21 09:43:59.4±0.3**,1°S**±1°×**7°8W**±°**,h3^{km},MLv3.5,Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIS1	**Pisayambo**	**0.23**	**324**	P	Pg	09 44 04.5	+0.5
PIS1				S	Sg	09 44 08.1	+1.1
PISA	**Pisayambo**	**0.23**	**324**	P	Pg	09 44 04.5	+0.5
BRUN	**Tungurahua Vol**	**0.24**	**223**	P	Pg	09 44 04.5	+0.5
BRUN				S	Sg	09 44 07.6	+0.5
BULB	**Ulba Tungurahu**	**0.25**	**220**	P	Pg	09 44 04.6	+0.4
POND	**Pondoa**	**0.27**	**229**	P	Pg	09 44 04.9	+0.4
POND				S	Sg	09 44 08.5	+0.4
BBIL	**Ulba Tungurahu**	**0.31**	**230**	P	Pg	09 44 05.6	+0.2
BBIL				S	Sg	09 44 09.6	0.0
BPAT	**Tungurahua Vol**	**0.32**	**216**	P	Pg	09 44 06.0	+0.4
BPAT				S	Sg	09 44 10.3	+0.5
PAT1	**Patacocha**	**0.32**	**216**	P	Pg	09 44 06.0	+0.3
BIL2	**Estacion Bilba**	**0.33**	**231**	P	Pg	09 44 05.8	+0.1
ARRY	**Arrayan**	**0.33**	**219**	P	Pg	09 44 05.9	+0.1
BMAS	**Trigal station**	**0.34**	**222**	P	Pg	09 44 06.1	+0.1
BMAS				S	Sg	09 44 10.5	-0.1
IGUA	**Igualata**	**0.46**	**238**	P	Pg	09 44 09.0	+0.7
ARDO	**Archidona, Ten**	**0.51**	**61**	P	Pg	09 44 10.1	+0.8
ARDO				S	Sb	09 44 17.5	-1.5
BMOR	**Cotopaxi Volca**	**0.55**	**338**	P	Pg	09 44 10.3	+0.2
BMOR				S	Sg	09 44 18.3	+1.1
BTAM	**Cotopaxi Volca**	**0.59**	**345**	P	Pg	09 44 10.6	-0.1
BTAM				S	Sg	09 44 18.8	+0.5
COV1	**Cotopaxi Volc**	**0.59**	**351**	P	Pg	09 44 11.3	+0.6
BREF	**Cotopaxi Volca**	**0.60**	**342**	P	Pb	09 44 12.3	-0.7
BREF				S	Sb	09 44 20.9	-1.3
BVC2	**Cotopaxi Volca**	**0.61**	**344**	P	Pg	09 44 11.1	+0.1
BNAS	**Cotopaxi Volca**	**0.62**	**338**	P	Pg	09 44 11.5	+0.3
VC1	**Cotopaxi 1**	**0.62**	**346**	P	Pg	09 44 11.3	-0.1
ANTM	**Antisana-La Mi**	**0.71**	**2**	P	Pg	09 44 12.5	-0.5
ANTM				S	Sg	09 44 21.9	-0.3
PITA	**Cotopaxi Volc**	**0.71**	**345**	P	Pg	09 44 12.9	-0.1
ILLI	**Illinizas Sur**	**0.71**	**318**	P	Pg	09 44 13.1	+0.1
ANTG	**Antisana-Guama**	**0.74**	**360**	P	Pg	09 44 13.1	-0.4
ANTS	**Antisana-Sarah**	**0.75**	**6**	P	Pg	09 44 13.5	-0.3
ANTI	**Antisana**	**0.80**	**6**	P	Pg	09 44 14.0	-0.7
JSCH	**Cashca Tororas**	**0.87**	**237**	P	Pg	09 44 16.0	0.0
JSCH				S	Sg	09 44 27.6	+0.3
TERV	**Terraza Guagua**	**1.12**	**342**	P	Pg	09 44 20.7	-0.2
YANA	**Yana**	**1.17**	**344**	P	Pg	09 44 21.0	-0.8
PULU	**Pululahua**	**1.28**	**349**	P	Pg	09 44 23.0	-1.0
REVS	**Reventador Sur**	**1.30**	**29**	P	Pg	09 44 23.4	-0.9
REVS				S	Sg	09 44 40.5	-0.6
LAV4	**Lava4-Reventad**	**1.30**	**28**	P	Pg	09 44 23.5	-0.9
IMBA	**Imbabura, San**	**1.51**	**2**	P	Pb	09 44 28.3	-0.1
CUIC	**Cuicocha-Domo**	**1.54**	**356**	P	Pb	09 44 28.8	-0.1
COHC	**Cochancay**	**1.57**	**220**	P	Pn	09 44 28.3	0.0
PAC1	**Pacto, Paraso**	**1.60**	**340**	P	Pn	09 44 29.0	+0.2
YAHU	**Yahuarcocha**	**1.61**	**6**	P	Pb	09 44 29.8	-0.3
CASC	**Dorado de Casc**	**1.65**	**34**	P	Pn	09 44 29.5	+0.1
CASC				S	Sb	09 44 51.8	0.0
MILO	**Milagro-Astudi**	**1.66**	**232**	P	Pn	09 44 29.0	-0.4
MILO				S	Sn	09 44 51.1	-0.2
URCU	**Urcuqui**	**1.67**	**360**	P	Pb	09 44 30.8	-0.3
LITE1	**Lita**	**2.03**	**357**	P	Pn	09 44 35.5	+0.8

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*IDC **21** 09:47:40.6±1.2,41°.56S×174°.17E,h0^{km},mb4.3/2, mb1 4.6/2,mb1mx3.8/24,mbtmp4.3/2,MS3.8/1,Ms1 3.8/1, ms1mx3.1/20,Error ellipse: s-maj=85.4km s-min=36.6km az=15.0*

*ISCJB **21** 09:47:42.0±0.5,41°.80S±0°.03×174°.57E±0°.04,h21^{km}±4^{km}, mb4.2/5,MS3.8/1,Error ellipse: s-maj=6.6km s-min=2.6km az=41.4*

*WEL **21** 09:47:43.4,41°.5S±0°.8×174°.4E±0°.9,h14^{km}±2^{km},M4.6/18, ML4.8/18,MLv4.6/18,Error ellipse: s-maj=0.0km s-min=0.0km az=134.0*

*NEIC **21** 09:47:43.4±0.0,41°.54S×174°.35E,h14^{km},mb4.3/3, ML4.6(WEL),ML4.5(WEL),After WEL.*

ISC 21 09:47:43.0±1.0**,41°.60S**±0°.03×**174°.44E**±0°.03**,h18**^{km}±4^{km}**, n157,σ1**^{s}**34**/159**,mb4.4**/5**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.23**	**230**	P	**Pg**	**09 47 49.1**	**+0.8**
CMWZ				S	**Sg**	**09 47 53.5**	**+1.5**
SNZO	**South Karori**	**0.35**	**34**	*e*Pg	**Pb**	**09 47 51.5**	**+0.8**
SNZO				*e*Sg	**Sn**	**09 47 58.0**	**-1.6**
BHW	**Baring Head**	**0.38**	**59**	P	**Pn**	**09 47 52.4**	**-1.0**
BHW				S	**Sn**	**09 47 58.9**	**-1.3**
TCW	**Tory Channel**	**0.41**	**342**	P	**Pg**	**09 47 51.2**	**-0.3**
TUWZ	**Tuamarina**	**0.41**	**295**	P	**Pg**	**09 47 50.7**	**-0.8**
TUWZ				S	**Sg**	**09 47 55.8**	**-1.4**
BSWZ	**Blackbirch Sta**	**0.44**	**255**	P	**Pg**	**09 47 51.7**	**-0.3**
BSWZ				S	**Sg**	**09 47 57.8**	**-0.3**
PLWZ	**Palliser**	**0.61**	**87**	P	**Pn**	**09 47 57.2**	**+0.5**
MSWZ	**Moikau Station**	**0.63**	**73**	P	**Pn**	**09 47 57.4**	**+0.3**
NNZ	**Nelson**	**0.89**	**295**	P	**Pb**	**09 47 59.1**	**-0.7**
DUWZ	**D'Urville Isla**	**0.89**	**334**	P	**Pb**	**09 47 59.5**	**-0.4**
KHZ	**Kahutara**	**1.05**	**219**	*e*Pn	**Pg**	**09 48 03.4**	**0.0**
THZ	**Tophouse**	**1.16**	**262**	*e*Pn	**Pn**	**09 48 04.2**	**-0.1**
THZ	**Tophouse**	**1.16**	**262**	P	**Pn**	**09 48 04.2**	**-0.1**
MRZ	**Mangatainoka R**	**1.27**	**43**	P	**Pg**	**09 48 07.2**	**-0.4**
CPWZ	**Castlepoint**	**1.50**	**63**	P	**Pb**	**09 48 10.0**	**-0.2**
OHWZ	**Ohakea**	**1.54**	**26**	P	**Pg**	**09 48 12.3**	**-0.4**
PRWZ	**Pori Road**	**1.56**	**48**	P	**Pb**	**09 48 10.8**	**-0.4**
POWZ	**Post Office Ro**	**1.57**	**40**	P	**Pb**	**09 48 11.2**	**-0.3**
QRZ	**Quartz Range**	**1.64**	**298**	P	**Pb**	**09 48 11.9**	**-0.7**
BFZ	**Birch Farm**	**1.64**	**57**	*e*Pn	**Pn**	**09 48 10.9**	**0.0**
BFZ	**Birch Farm**	**1.64**	**57**	P	**Pn**	**09 48 11.3**	**+0.4**
GVZ	**Greta Valley S**	**1.72**	**217**	P	**Pn**	**09 48 12.1**	**+0.2**
DVHZ	**Dannevirke**	**1.84**	**46**	P	**Pn**	**09 48 14.1**	**+0.5**
WAZ	**Wanganui**	**1.89**	**13**	P	**Pb**	**09 48 18.1**	**+1.2**
ANWZ	**Angora Road**	**1.92**	**54**	P	**Pn**	**09 48 14.8**	**+0.2**
LTZ	**Lake Taylor**	**2.00**	**233**	*e*Pn	**Pn**	**09 48 15.9**	**+0.1**
LTZ	**Lake Taylor**	**2.00**	**233**	P	**Pn**	**09 48 16.1**	**+0.3**
AMCZ	**Amberley**	**2.06**	**220**	P	**Pn**	**09 48 16.4**	**-0.2**
PRHZ	**Porangahau**	**2.13**	**52**	P	**Pn**	**09 48 17.7**	**+0.1**
LREZ	**Lake Rotokare**	**2.14**	**359**	P	**Pb**	**09 48 22.1**	**+1.0**
PNHZ	**Pukenui**	**2.15**	**39**	P	**Pn**	**09 48 18.6**	**+0.7**
WPHZ	**Waipukurau**	**2.16**	**45**	P	**Pn**	**09 48 18.5**	**+0.5**
NMEZ	**Namu Road**	**2.23**	**349**	P	**Pb**	**09 48 23.9**	**+1.2**
PREZ	**Palmer Road**	**2.27**	**354**	P	**Pb**	**09 48 24.0**	**+0.6**
KHEZ	**Kahui Hut**	**2.33**	**352**	P	**Pb**	**09 48 25.2**	**+0.8**
MTVZ	**Mangateitei**	**2.35**	**20**	P	**Pb**	**09 48 26.1**	**+1.3**
OKCZ	**Okains Bay**	**2.35**	**205**	P	**Pn**	**09 48 20.0**	**-0.6**
NBEZ	**Newall Road No**	**2.37**	**349**	P	**Pb**	**09 48 25.7**	**+0.6**
CRLZ	**Canterbury Las**	**2.38**	**214**	*e*Pn	**Pn**	**09 48 19.9**	**-1.1**
CRLZ	**Canterbury Las**	**2.38**	**214**	P	**Pn**	**09 48 20.0**	**-1.0**
MOVZ	**Moawhango**	**2.41**	**25**	P	**Pn**	**09 48 23.3**	**+1.8**
PKVZ	**Pokaka**	**2.41**	**17**	P	**Pb**	**09 48 25.3**	**-0.6**
PXZ	**Pawanui**	**2.42**	**50**	P	**Pn**	**09 48 21.2**	**-0.3**
DREZ	**Durham Road**	**2.42**	**356**	P	**Pb**	**09 48 25.8**	**-0.1**
PKE	**Pukeiti**	**2.43**	**352**	P	**Pb**	**09 48 25.5**	**-0.6**
BHHZ	**Black Hill Sta**	**2.45**	**31**	P	**Pn**	**09 48 23.7**	**+1.7**
KRHZ	**Kereru**	**2.45**	**37**	P	**Pn**	**09 48 22.4**	**+0.4**
OXZ	**Oxford**	**2.48**	**225**	*e*Pn	**Pn**	**09 48 21.3**	**-1.0**
OXZ	**Oxford**	**2.48**	**225**	P	**Pn**	**09 48 21.4**	**-1.0**
DRZ	**Dome Shelter**	**2.48**	**21**	P	**Pb**	**09 48 28.2**	**+1.1**
WHVZ	**Whangaehu Hut**	**2.48**	**21**	P	**Pb**	**09 48 25.3**	**-1.7**
MQZ	**McQueen's Vall**	**2.48**	**212**	*e*Pn	**Pn**	**09 48 21.0**	**-1.4**
MQZ	**McQueen's Vall**	**2.48**	**212**	P	**Pn**	**09 48 21.1**	**-1.3**
VRZ	**Vera Road**	**2.49**	**6**	P	**Pb**	**09 48 26.5**	**-0.6**
FWVZ	**Far West T-bar**	**2.49**	**20**	P	**Pb**	**09 48 25.5**	**-1.8**
INZ	**Inchbonnie**	**2.50**	**242**	P	**Pn**	**09 48 23.0**	**+0.4**
TUVZ	**Tukino**	**2.51**	**22**	P	**Pb**	**09 48 25.5**	**-2.1**
AKCZ	**Akaroa Harbour**	**2.53**	**206**	P	**Pn**	**09 48 22.4**	**-0.8**
NGZ	**Ngauruhoe**	**2.58**	**20**	P	**Pb**	**09 48 26.7**	**-2.0**
KAHZ	**Kahuranaki**	**2.59**	**46**	P	**Pn**	**09 48 23.8**	**-0.1**
WTVZ	**West Tongariro**	**2.63**	**20**	P	**Pb**	**09 48 29.7**	**0.0**
TWVZ	**Taurewa**	**2.64**	**17**	P	**Pb**	**09 48 28.9**	**-0.9**
KWHZ	**Kaweka Forest**	**2.65**	**35**	P	**Pn**	**09 48 25.7**	**+0.9**
KRVZ	**Karewarewa**	**2.67**	**20**	P	**Pb**	**09 48 31.0**	**+0.8**
MCHZ	**McNeill Hill**	**2.76**	**39**	P	**Pn**	**09 48 26.6**	**+0.4**
CKHZ	**Cape Kidnapper**	**2.79**	**47**	P	**Pn**	**09 48 26.5**	**-0.2**
KATZ	**Kakaramea**	**2.79**	**20**	P	**Pb**	**09 48 31.9**	**-0.5**
RITZ	**Rihia Road**	**2.84**	**23**	P	**Pb**	**09 48 30.9**	**-2.2**
BKZ	**Black Stump Fm**	**2.90**	**33**	*e*Pn	**Pn**	**09 48 28.1**	**0.0**
BKZ				*e*Pg	**Pb**	**09 48 35.8**	**+1.7**
BKZ	**Black Stump Fm**	**2.90**	**33**	P	**Pn**	**09 48 28.4**	**+0.2**
RATZ	**Rangitukua**	**2.92**	**21**	P	**Pb**	**09 48 35.8**	**+1.4**
HATZ	**Hinemaiaia**	**2.99**	**26**	P	**Pb**	**09 48 36.7**	**+1.1**
ARHZ	**Aropaoanui**	**3.04**	**41**	P	**Pn**	**09 48 30.0**	**-0.1**
WATZ	**Wairara**	**3.06**	**19**	P	**Pb**	**09 48 37.0**	**+0.2**
HIZ	**Hauiti**	**3.10**	**6**	P	**Pb**	**09 48 35.4**	**-2.2**
WVZ	**Waitaha Valley**	**3.12**	**241**	P	**Pn**	**09 48 31.2**	**+0.1**
MRHZ	**Matea Rd**	**3.15**	**29**	P	**Pn**	**09 48 32.1**	**+0.4**
RPZ	**Rata Peaks**	**3.27**	**229**	*e*Pn	**Pn**	**09 48 32.1**	**-1.1**
RPZ	**Rata Peaks**	**3.27**	**229**	P	**Pn**	**09 48 32.6**	**-0.7**
KUTZ	**Kaahu Road**	**3.29**	**19**	P	**Pb**	**09 48 41.4**	**+0.7**
WHHZ	**Waihua**	**3.30**	**41**	P	**Pn**	**09 48 34.6**	**+0.8**
MTHZ	**Maungataniwha**	**3.31**	**35**	P	**Pn**	**09 48 33.9**	**+0.2**
RAHZ	**Arahi**	**3.36**	**38**	P	**Pn**	**09 48 34.6**	**+0.1**
ALRZ	**Allen Road**	**3.37**	**26**	P	**Pn**	**09 48 35.3**	**+0.7**
TLZ	**Tolley Road**	**3.38**	**15**	P	**Pb**	**09 48 39.6**	**-2.6**
PRRZ	**Plateau Road**	**3.44**	**26**	P	**Pn**	**09 48 36.3**	**+0.6**
RTZ	**Ruatahuna**	**3.56**	**34**	P	**Pn**	**09 48 37.8**	**+0.5**
KNZ	**Kokohu**	**3.57**	**45**	P	**Pn**	**09 48 36.7**	**-0.7**
SNGZ	**Shannon Statio**	**3.59**	**39**	P	**Pn**	**09 48 37.4**	**-0.2**
MUGZ	**Murupara**	**3.60**	**31**	P	**Pn**	**09 48 38.2**	**+0.4**
MHGZ	**Mahia Peninsul**	**3.60**	**48**	P	**Pn**	**09 48 37.4**	**-0.5**
RRRZ	**Republican Roa**	**3.63**	**27**	P	**Pb**	**09 48 42.5**	**-4.0**
TARZ	**Mount Tarawera**	**3.72**	**26**	P	**Pn**	**09 48 40.2**	**+0.7**
NGRZ	**Ngongotaha**	**3.75**	**22**	P	**Pb**	**09 48 48.2**	**-0.4**
PRGZ	**Paritu Road**	**3.75**	**46**	P	**Pn**	**09 48 38.9**	**-1.0**
OMRZ	**Omania**	**3.79**	**24**	P	**Pb**	**09 48 47.3**	**-2.1**
RAGZ	**Rawiri**	**3.85**	**37**	P	**Pn**	**09 48 40.7**	**-0.6**
URZ	**Urewera**	**3.92**	**32**	*e*Pn	**Pn**	**09 48 40.6**	**-1.6**
URZ	**Urewera**	**3.92**	**32**	P	**Pn**	**09 48 41.5**	**-0.7**
FOZ	**Fox Glacier**	**3.92**	**239**	*e*Pn	**Pn**	**09 48 42.6**	**+0.4**
FOZ	**Fox Glacier**	**3.92**	**239**	P	**Pn**	**09 48 42.4**	**+0.2**
TOZ	**Tahuroa Road**	**3.95**	**12**	P	**Pn**	**09 48 45.7**	**+3.0**
MARZ	**Manawahe**	**4.00**	**26**	P	**Pn**	**09 48 44.8**	**+1.5**
OPRZ	**Ohinepanea**	**4.09**	**24**	P	**Pn**	**09 48 45.6**	**+1.0**
LBZ	**Lake Benmore**	**4.18**	**227**	*e*Pn	**Pn**	**09 48 45.1**	**-0.7**
LBZ	**Lake Benmore**	**4.18**	**227**	P	**Pn**	**09 48 45.3**	**-0.5**
CNGZ	**Carnagh Statio**	**4.25**	**44**	P	**Pn**	**09 48 46.0**	**-0.7**
TWGZ	**Tauwhareparae**	**4.37**	**40**	P	**Pn**	**09 48 47.4**	**-1.1**
RUGZ	**Raukumara Rang**	**4.41**	**35**	P	**Pn**	**09 48 48.0**	**-1.0**
ODZ	**Otahua Downs**	**4.42**	**218**	*e*Pn	**Pn**	**09 48 47.7**	**-1.3**
ODZ	**Otahua Downs**	**4.42**	**218**	P	**Pn**	**09 48 47.8**	**-1.2**
KBAZ	**Karaka Road Bo**	**4.52**	**5**	P	Pn	09 48 55.0	+4.6
MKAZ	**Moumakai**	**4.53**	**7**	P	**Pn**	**09 48 53.4**	**+2.9**
AWAZ	**Awhitu Peninsu**	**4.54**	**2**	P	**Pn**	**09 48 53.9**	**+3.3**
HAZ	**Te Kaha**	**4.63**	**35**	P	**Pn**	**09 48 51.3**	**-0.6**
ETAZ	**East Tamaki Re**	**4.66**	**5**	P	**Pn**	**09 48 55.8**	**+3.4**
EPAZ	**Eden Park BICE**	**4.73**	**3**	P	**Pb**	**09 49 01.3**	**-4.0**
WIAZ	**Waiheke Island**	**4.83**	**7**	P	**Pn**	**09 48 57.9**	**+3.1**
JCZ	**Jackson Bay**	**4.84**	**237**	P	**Pn**	**09 48 54.8**	**-0.1**
MBAZ	**Motutapu North**	**4.84**	**4**	P	**Pn**	**09 48 59.0**	**+4.2**
KUZ	**Kuaotunu**	**4.95**	**12**	P	**Pn**	**09 48 59.4**	**+3.1**
MXZ	**Matakaoa Point**	**5.02**	**38**	*e*Pn	**Pn**	**09 48 55.0**	**-2.3**
MXZ	**Matakaoa Point**	**5.02**	**38**	P	**Pn**	**09 48 56.2**	**-1.1**
HHSZ	**Highcliff Hill**	**5.11**	**212**	P	**Pn**	**09 48 57.4**	**-1.0**
WKZ	**Wanaka**	**5.11**	**229**	*e*Pn	**Pn**	**09 48 56.9**	**-1.6**
WKZ	**Wanaka**	**5.11**	**229**	P	**Pn**	**09 48 57.7**	**-0.8**
EAZ	**Earnscleugh**	**5.21**	**224**	P	**Pn**	**09 48 59.6**	**-0.3**
GRZ	**Great Barrier**	**5.40**	**9**	P	Pb	09 49 10.7	-6.0
TUZ	**Tuapeka**	**5.57**	**217**	P	**Pn**	**09 49 04.1**	**-0.7**
WCZ	**Waipu Caves**	**5.66**	**359**	P	Pn	09 49 10.8	+4.8
MLZ	**Mavora Lakes**	**5.94**	**229**	*e*Pn	**Pn**	**09 49 09.2**	**-0.8**
MLZ	**Mavora Lakes**	**5.94**	**229**	P	**Pn**	**09 49 09.9**	**-0.1**
SYZ	**Scrubby Hill**	**6.24**	**216**	P	**Pn**	**09 49 13.4**	**-0.6**
WHZ	**Wether Hill Ro**	**6.36**	**225**	*e*Pn	**Pn**	**09 49 14.0**	**-1.8**
WHZ	**Wether Hill Ro**	**6.36**	**225**	P	**Pn**	**09 49 14.4**	**-1.4**
OUZ	**Omahuta**	**6.41**	**354**	P	**Pn**	**09 49 19.3**	**+2.9**
DCZ	**Deep Cove**	**6.55**	**231**	*e*Pn	**Pn**	**09 49 17.8**	**-0.5**
CTZ	**Chatham Island**	**6.92**	**111**	P	**Pn**	**09 49 23.8**	**+0.3**
APZ	**The Paps**	**6.99**	**219**	P	**Pn**	**09 49 23.6**	**-0.7**
RAO	**Raoul Island**	**13.80**	**29**	*e*Pn	**Pn**	**09 50 55.7**	**-1.9**
AS31	**Alice Springs**	**38.13**	**285**	*e*P	**P**	**09 55 00.0**	**-1.0**
	0.8nm,0.8s						
ASAR	**Alice Springs**	**38.13**	**285**	P	**P**	**09 54 59.8**	**-1.3**
	0.7nm,0.3s,baz=118,slow=6.8,SNR=31						
PMG	**Port Moresby**	**40.09**	**315**	LR	LR	10 11 49.1	
	comp=Z,138nm,21.4s,baz=33,slow=36						
WRA	**Warramunga Arr**	**40.19**	**290**	P	**P**	**09 55 17.0**	**-1.3**
	9.0nm,0.8s,baz=122,slow=8.3,SNR=36						
QSPA	**South Pole Qui**	**48.52**	**180**	*e*P	**P**	**09 56 27.8**	**+3.3**
	5.5nm,1.0s						
SNAA	**Sanae**	**67.02**	**181**	*e*P	**P**	**09 58 36.0**	**+1.7**
	3.3nm,1.1s						
YKA	**Yellowknife Ar**	**118.18**	**30**	PKP	**PKiKP**	**10 06 30.0**	**+2.3**
	0.3nm,0.8s,baz=256,slow=1.7,SNR=2.8						
YKB5	**Yellowknife Ar**	**118.18**	**30**	*e*PKPdf	**PKiKP**	**10 06 30.0**	**+2.3**
ARA0	**ARCESS Array S**	**147.69**	**340**	*e*PKPdf	**PKPbc**	**10 07 24.2**	**-0.9**
ARCES	**ARCESS Array B**	**147.69**	**340**	PKPbc	**PKPbc**	**10 07 24.2**	**-0.9**
	2.7nm,0.9s,baz=46,slow=3.9,SNR=3.1						
BR101	**Keskin Array S**	**150.38**	**280**	*e*PKPbc	**PKiKP**	**10 07 33.4**	**-0.4**
BRTR	**Keskin Array B**	**150.38**	**280**	PKPbc	**PKiKP**	**10 07 33.4**	**-0.4**
	0.7nm,0.6s,baz=111,slow=3.0,SNR=2.5						
TOA0	**Torodi Ar. Sit**	**150.95**	**195**	*e*PKPbc	**PKiKP**	**10 07 37.1**	**+1.6**
TORD	**Torodi Ar. Bea**	**150.95**	**195**	PKPbc	**PKPbc**	**10 07 35.0**	**+0.1**
	1.2nm,0.9s,baz=166,slow=4.1,SNR=5.6						
TOA1	**Torodi Ar. Sit**	**150.96**	**195**	*e*PKPbc	**PKPbc**	**10 07 35.0**	**+0.1**
FIA0	**FINESS Array S**	**152.49**	**327**	*e*PKPbc	**PKPbc**	**10 07 35.9**	**-1.0**
FINES	**FINESS Array B**	**152.49**	**327**	PKPbc	**PKPbc**	**10 07 35.9**	**-1.0**
	5.6nm,1.2s,baz=72,slow=3.4,SNR=2.9						

WEL 21 09:50:22.6±0.3**,42°S**±2°×**17°4E**±°**,h10**^{km}**,M3.5**/6**,ML3.8**/6**, MLv3.5**/6**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.10**	**194**	P	Pg	09 50 25.1	0.0
CMWZ				S	Sg	09 50 28.2	+1.3
TUWZ	**Tuamarina**	**0.32**	**315**	P	Pg	09 50 29.3	+0.4
TUWZ				S	Sb	09 50 34.7	-0.9
BHW	**Baring Head**	**0.53**	**62**	P	Pb	09 50 35.0	+1.0
PLWZ	**Palliser**	**0.76**	**84**	P	Pg	09 50 34.9	-2.4
NNZ	**Nelson**	**0.78**	**304**	P	Pg	09 50 33.8	-3.9
NNZ				S	Sn	09 50 51.3	-0.2
MSWZ	**Moikau Station**	**0.79**	**73**	P	Pb	09 50 38.5	+0.1
CAW	**Cannon Point**	**0.83**	**49**	P	Pn	09 50 39.9	-0.4
DUWZ	**D'Urville Isla**	**0.89**	**344**	P	Pg	09 50 35.4	-4.3
DUWZ				S	Sn	09 50 53.3	-0.8
KHZ	**Kahutara**	**0.92**	**214**	P	Pb	09 50 40.7	0.0
KHZ				S	Sn	09 50 56.2	+1.3
PAWZ	**Paruwai Farm**	**0.93**	**73**	P	Pg	09 50 39.9	-0.5
THZ	**Tophouse**	**1.01**	**264**	P	Pn	09 50 43.6	+0.7
MTW	**Mount Morrison**	**1.07**	**63**	P	Pg	09 50 42.3	-0.9
OGWZ	**Otaki Gorge**	**1.09**	**40**	P	Pg	09 50 43.7	+0.2
TRWZ	**Traveller**	**1.11**	**77**	P	Pn	09 50 44.7	+0.5
HOWZ	**Holdsworth Sta**	**1.22**	**52**	P	Pg	09 50 47.2	+1.2
TMWZ	**Te Maipa**	**1.36**	**67**	P	Pg	09 50 50.0	+1.4
MRZ	**Mangatainoka R**	**1.42**	**46**	P	Pg	09 50 50.7	+0.9
QRZ	**Quartz Range**	**1.54**	**302**	P	Pg	09 50 52.0	-0.1
BFZ	**Birch Farm**	**1.80**	**58**	P	Pg	09 51 00.2	+3.1
AMCZ	**Amberley**	**1.92**	**217**	P	Pg	09 51 03.2	+3.8
MOVZ	**Moawhango**	**2.52**	**28**	P	Pg	09 51 10.8	-0.2
WVZ	**Waitaha Valley**	**2.96**	**240**	P	Pg	09 51 17.9	-1.4

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*DJA **21** 09:51:09.4±0.4,6°S±3°×14°6E±°,h47^{km}±4^{km},M5.2/53, mB5.7/23,mb5.2/53,MLv5.4/4,Mw(mB)5.2/23,Mwp7.8/1*

*ISCJB **21** 09:51:10.5±0.2,5°.49S±0°.02×145°.97E±0°.03,h69^{km}, mb5.1/102,Error ellipse: s-maj=4.3km s-min=3.4km az=168.3*

*IDC **21** 09:51:11.2±2.5,5°.51S×146°.02E,h63^{km}±22^{km},mb4.6/17, mb1 4.7/22,mb1mx4.6/34,mbtmp4.9/22,MS4.0/8, Ms1 4.0/8,ms1mx3.7/24,Error ellipse: s-maj=17.2km s-min=10.3km az=80.0*

*NEIC **21** 09:51:11.7±2.0,5°.51S×145°.96E,h63^{km}±4^{km},mb5.2/91, Error ellipse: s-maj=10.8km s-min=8.1km az=92.0*

NEIC Felt [IV] at Madang.

*GCMT **21** 09:51:13.7±0.4,5°.42S±0°.03×146°.20E±0°.03,h57^{km}±2^{km}, MW5.0/52,Moment Tensor Solution. s31,c43; s52,c72; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.77±.32; $M_{\theta\theta}$-3.93±.23; $M_{\phi\phi}$-0.83±.27; $M_{r\theta}$0.27±.17; $M_{\theta\phi}$1.57±.14; $M_{\phi r}$-0.92±.19; Best double couple: $M_0$4.77200×10^{16} NP1:ϕ_s121.00000°,δ49.00000°,λ101.00000°. NP2: ϕ_s285.00000°,δ42.00000°,λ78.00000°. Principal axes: T 4.9180, Plg81.0000°, Azm89.0000°; N -0.2900, Plg8.0000°, Azm294.0000°; P -4.6260, Plg4.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **21** 09:51:13.6±0.0,4°.80S×145°.79E,h54^{km},mb5.0/29, mB5.0/15,Ms4.8/11,Ms7 4.5/11*

ISC 21 09:51:12.2±0.3**,5°.54S**±0°.04×**145°.96E**±0°.05**,h69**^{km}**,n224, σ1**^{s}**23**/222**,mb5.1**/101**,1D,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.75**	**22**	*e*Pn	**Pn**	**09 52 05.3**	**-2.4**
PMG	**Port Moresby**	**4.03**	**163**	P	**Pn**	**09 52 10.1**	**-1.4**
	58nm,0.3s,baz=352,slow=10.0,SNR=45						
PMG				S	**Sn**	**09 52 55.4**	**-1.9**
	33nm,0.3s,baz=253,slow=19,SNR=3.4						
RABL	**Rabaul**	**6.33**	**78**	*e*Pn	**Pn**	**09 52 40.9**	**-2.1**
GENI	**Genyem**	**6.47**	**297**	P	**Pn**	**09 52 43.9**	**-1.0**
COEN	**Coen**	**8.80**	**198**	*e*Pn	**Pn**	**09 53 16.5**	**-0.3**
COEN				*e*Sn	**Sn**	**09 54 51.9**	**-2.7**
COEN	**Coen**	**8.80**	**198**	P	**Pn**	**09 53 17.0**	**+0.2**
	baz=8.8,SNR=171						
SRPI	**Serui, Papua**	**10.36**	**290**	P	**Pn**	**09 53 35.2**	**-2.8**
MTSU	**Mount Surprise**	**12.62**	**187**	P	**Pn**	**09 54 09.2**	**+0.2**
	baz=13,SNR=8.3						
FAKI	**Fak Fak**	**13.91**	**280**	*e*Pn	**Pn**	**09 54 26.0**	**-0.3**
HNR	**Honiara**	**14.40**	**106**	P	**P**	**09 54 37.0**	**-0.6**
	12nm,0.3s,baz=235,slow=2.5,SNR=6.1						
HNR				LR	LR	09 59 23.8	
	comp=Z,154nm,19.7s,baz=268,slow=34						
HNR	**Honiara**	**14.40**	**106**	*e*P	**P**	**09 54 38.4**	**+0.7**
CTA	**Charters Tower**	**14.47**	**179**	P	**Pn**	**09 54 34.2**	**+0.7**
	0.7nm,0.3s,baz=0.1,slow=15,SNR=8.8						
CTA				LR	LR	10 00 46.6	
	comp=Z,704nm,19.4s,baz=5.5,slow=40						
CTAO	**Charters Tower**	**14.47**	**179**	*e*Pn	**Pn**	**09 54 35.4**	**+1.8**
CTAO				*e*P	**P**	**09 54 39.3**	**+0.9**
SIJI	**Sorong**	**15.38**	**287**	P	**Pn**	**09 54 44.9**	**-0.5**
	9.9nm,0.3s,baz=88,slow=8.4,SNR=16						
SWI	**Sorong**	**15.38**	**287**	P	**Pn**	**09 54 44.1**	**-1.3**
QIS	**Mount Isa**	**16.16**	**202**	P	**Pn**	**09 54 55.5**	**+0.4**
	baz=16,SNR=10						
MTN	**Manton Dam**	**16.33**	**243**	*e*Pn	**Pn**	**09 54 57.0**	**-0.3**
	88nm,0.6s						
MTN	**Manton Dam**	**16.33**	**243**	P	**Pn**	**09 54 57.5**	**+0.3**
	baz=16,SNR=30						
MSAI	**Masohi**	**17.11**	**277**	P	**Pn**	**09 55 06.7**	**-0.4**
AAI	**Ambon**	**17.80**	**275**	P	**P**	**09 55 15.6**	**+0.3**
WRAB	**Tennant Creek**	**18.23**	**217**	*e*P	**P**	**09 55 20.9**	**+0.9**
	39nm,0.7s						
WB2	**Warramunga Arr**	**18.23**	**217**	*e*P	**P**	**09 55 17.4**	**-2.7**
	29nm,0.8s						
WR1	**Warramunga Arr**	**18.24**	**217**	*e*P	**P**	**09 55 17.0**	**-3.2**
WR1				*e*Pn	**Pn**	**09 55 20.8**	**0.0**
WR1				*e*PcP	**PcP**	**09 59 51.0**	**+0.7**
WRA	**Warramunga Arr**	**18.24**	**217**	P	**P**	**09 55 20.8**	**+0.6**
	5.1nm,0.3s,baz=46,slow=9.4,SNR=113						
WRA				PcP	**PcP**	**09 59 51.0**	**+0.7**
	0.5nm,0.3s,baz=24,slow=2.0,SNR=4.2						
NLAI	**Namlea**	**18.94**	**276**	P	**P**	**09 55 27.4**	**-0.4**
GUMO	**Guam**	**19.03**	**357**	P	**P**	**09 55 28.4**	**-0.4**
	4.0nm,0.3s,baz=177,slow=12,SNR=7.4						
GUMO	**Guam**	**19.03**	**357**	*e*P	**P**	**09 55 29.5**	**+0.7**
	144nm,1.0s						
LBMI	**Labuha**	**19.05**	**284**	P	**P**	**09 55 29.0**	**-0.1**
KNRA	**Kununurra**	**19.66**	**238**	P	**P**	**09 55 35.7**	**+0.1**
	baz=20,SNR=21						
SANI	**Sanana**	**20.22**	**279**	P	**P**	**09 55 41.4**	**-0.4**
EIDS	**Eidsvold**	**20.32**	**167**	*e*P	**P**	**09 55 43.9**	**+1.1**
	28nm,0.9s						
EIDS	**Eidsvold**	**20.32**	**167**	P	**P**	**09 55 43.8**	**+1.0**
	baz=20,SNR=11						
RMQ	**Roma**	**21.00**	**173**	P	**P**	**09 55 52.5**	**+2.4**
	baz=21,SNR=24						

AS31	Alice Springs	21.44	212	eP	P	09 55 56.5	+1.6
	11nm,0.9s						
ASAR	Alice Springs	21.44	212	P	P	09 55 54.4	-0.5
	16nm,0.8s,baz=42,slow=7.7,SNR=113						
ASAR				S	S	09 59 44.6	-4.6
	1.9nm,0.8s,baz=37,slow=22,SNR=2.4						
ASAR				PcP	PcP	09 59 56.0	0.0
	2.9nm,0.8s,baz=20,slow=3.0,SNR=4.6						
ASAR				LR	LR	10 05 32.6	
	comp=Z,460nm,18.5s,baz=32,slow=40						
ANA2	Anatahan	21.74	359	eP	P	09 55 58.4	+0.3
	71nm,0.7s						
SOEI	Soe	21.89	258	eP	P	09 56 01.3	+1.3
	270nm,1.0s						
SOEI	Soe	21.89	258	P	P	09 55 59.1	-0.9
SARN	Sarigan	22.09	360	eP	P	09 56 01.4	-0.5
	24nm,1.0s						
BATI	Baumata	22.56	257	P	P	09 56 07.8	+0.8
	394nm,0.6s,baz=133,slow=2.4,SNR=40						
BATI				LR	LR	10 07 08.1	
	comp=Z,694nm,20.6s,baz=88,slow=42						
BATI	Baumata	22.56	257	P	P	09 56 07.3	+0.3
LUWI	Luwuk	23.57	280	eP	P	09 56 18.4	+1.5
	472nm,1.2s						
LUWI	Luwuk	23.57	280	P	P	09 56 17.5	+0.6
MMRI	Maumere	23.73	261	eP	P	09 56 18.4	0.0
	180nm,0.5s						
MMRI	Maumere	23.73	261	P	P	09 56 17.5	-0.9
EDFI	Ende, Flores	24.28	261	P	P	09 56 21.8	-1.7
	160nm,0.7s,1µm						
ARMA	Armidale	25.32	168	eP	P	09 56 33.7	+0.9
	18nm,0.8s						
ARMA	Armidale	25.32	168	P	P	09 56 33.3	+0.5
	baz=25,SNR=18						
BKSI	Bulukumba	25.72	269	P	P	09 56 37.5	+1.1
WRKA	Warakurna	25.75	219	P	P	09 56 36.2	-0.3
	baz=26,SNR=36						
DZM	Mont Dzumac	25.75	132	P	P	09 56 35.8	-0.9
	28nm,1.0s,baz=281,slow=12,SNR=9.3						
DZM	Mont Dzumac	25.75	132	eP	P	09 56 36.2	-0.5
	38nm,1.1s						
BNSI	Bone	25.77	271	P	P	09 56 37.5	+0.6
CMSA	Cobar Meteorol	25.87	181	P	P	09 56 38.2	+0.7
	baz=26,SNR=15						
KAPI	Kappang	26.10	270	P	P	09 56 39.9	+0.1
	26nm,0.6s,baz=112,slow=4.2,SNR=24						
KAPI	Kappang	26.10	270	eP	P	09 56 40.6	+0.7
	31nm,0.8s						
SPSI	Sidrap Palu	26.14	272	P	P	09 56 40.4	+0.2
TTSI	Tana Toraja	26.18	274	P	P	09 56 41.7	+1.1
STKA	Stephens Creek	26.52	188	P	P	09 56 42.9	-0.6
	23nm,0.7s,baz=352,slow=8.5,SNR=45						
STKA				LR	LR	10 08 04.0	
	comp=Z,404nm,19.2s,baz=10,slow=38						
STKA	Stephens Creek	26.52	188	eP	P	09 56 43.4	-0.1
	5.7nm,0.8s						
STKA	Stephens Creek	26.52	188	P	P	09 56 43.2	-0.2
	baz=27,SNR=32						
WBSI	Waikabubak, Su	26.64	260	P	P	09 56 44.0	-0.8
HTT	Hallett	28.52	192	P	P	09 57 01.2	-0.1
	baz=29,SNR=16						
LHI	Lord Howe Isla	28.62	156	eP	P	09 57 04.0	+1.8
	500nm,1.9s						
LHI	Lord Howe Isla	28.62	156	P	P	09 57 04.2	+2.0
	baz=29,SNR=3.3						
BBOO	Buckleboo	28.66	198	eP	P	09 57 03.1	+0.5
	180nm,1.8s						
BBOO	Buckleboo	28.66	198	P	P	09 57 03.1	+0.5
	baz=29,SNR=9.9						
CAN	Canberra	29.77	175	eP	P	09 57 13.4	+0.9
	87nm,1.8s						
CNB	Canberra Magne	29.80	174	P	P	09 57 14.0	+1.2
	baz=30,SNR=5.5						
PSA00	Pilbara Seismi	29.89	235	eP	P	09 57 14.5	+0.9
	36nm,1.3s						
FORT	Forrest	30.23	212	eP	P	09 57 17.1	+0.6
	52nm,0.7s						
FORT	Forrest	30.23	212	P	P	09 57 17.1	+0.6
	baz=30,SNR=13						
ARPS	Mount Arapiles	31.31	186	P	P	09 57 28.1	+2.1
	baz=31,SNR=6.6						
H11S3	WAKE ISLAND Hy	31.43	40	T	T	10 30 36.8	
	baz=222						
H11S2	WAKE ISLAND Hy	31.44	40	T	T	10 30 36.8	
	baz=222						
H11S1	WAKE ISLAND Hy	31.45	40	T	T	10 30 37.3	
	baz=222						
MILA	Mila	31.51	175	P	P	09 57 29.0	+1.3
	baz=32,SNR=4.0						
TOO	Toolangi	31.89	181	eP	P	09 57 32.3	+1.2
	36nm,1.3s						
TOO	Toolangi	31.89	181	P	P	09 57 31.9	+0.9
	baz=32,SNR=6.2						
H11N1	WAKE ISLAND Hy	32.47	39	T	T	10 31 50.8	
	baz=221						
H11N3	WAKE ISLAND Hy	32.48	39	T	T	10 31 53.2	
	baz=221,slow=74						
H11N2	WAKE ISLAND Hy	32.48	39	T	T	10 31 56.7	
	baz=221,slow=74						
MEEK	Meekatharra	33.47	228	P	P	09 57 46.1	+1.0
	baz=34,SNR=56						
KMBL	Kambalda	34.20	218	P	P	09 57 52.1	+0.8
	baz=34,SNR=43						
SBUM	Sibu	34.62	282	eP	P	09 57 55.7	+0.6
	19nm,1.1s						
GIRL	Giralia	35.02	238	eP	P	09 58 00.2	+1.6
	425nm,1.5s						
GIRL	Giralia	35.02	238	P	P	09 58 00.1	+1.6
	baz=35,SNR=4.7						
UGM	Wanagama	35.26	264	eP	P	09 58 00.4	-0.3
	715nm,1.9s						
KSM	Kuching	36.28	280	eP	P	09 58 08.7	-0.7
	64nm,1.1s						
MORW	Morawa	36.71	227	eP	P	09 58 13.0	+0.1
	78nm,1.6s						
YOJ	Yonaguni jima	37.26	324	eP	P	09 58 17.9	+0.3
	153nm,1.3s						
YULB	Yu-li	37.50	321	eP	P	09 58 20.6	+1.0
	8.8nm,0.8s						
NACB	Ninganchiao	37.89	322	eP	P	09 58 22.8	-0.1
	53nm,1.3s						
CISI	Cisompet, Garu	37.94	265	eP	P	09 58 22.3	-1.2
	84nm,0.7s						
CISI	Cisompet, Garu	37.94	265	P	P	09 58 22.0	-1.5
NWAO	Narrogin (SRO)	38.19	221	eP	P	09 58 26.0	+0.7
	62nm,1.5s						
YHNB	Yeheng	38.39	322	eP	P	09 58 27.6	+0.4
	52nm,1.0s						
TATO	Taipei	38.55	323	eP	P	09 58 29.0	+0.6
	78nm,0.6s						
OUZ	Omahuta	39.01	143	eP	P	09 58 33.7	+1.6
	26nm,0.8s						
PPBI	Pangkal Pinang	39.86	273	P	P	09 58 40.0	+0.5
CGJI	Cibinong	40.04	266	P	P	09 58 38.4	-2.6
XMIS	Christmas Isla	40.19	260	eP	P	09 58 43.2	+1.0
	152nm,0.8s						
KLSI		41.06	269	P	P	09 58 49.9	+0.4
	24nm,1.3s						
KASI	Kota Agung	41.26	268	P	P	09 58 48.9	-2.2
MDSI	Maura Dua	41.62	269	P	P	09 58 53.5	-0.6
LWLI	Liwa	41.72	269	P	P	09 58 55.4	+0.4
LHSI	Lahat	42.32	270	P	P	09 58 59.1	-0.6
MJAR	Matsushiro Arr	42.48	351	P	P	09 58 59.3	-1.4
	24nm,1.2s,baz=170,slow=7.0,SNR=4.7						
MAJO	Matsushiro	42.48	351	eP	P	09 58 59.8	-0.9
	52nm,1.4s						
MJB9	Matsu-Tunnel	42.49	351	eP	P	09 58 59.9	-0.8
	56nm,1.4s						
MYKOM	Kota Tinggi	42.68	279	eP	P	09 59 03.2	+0.6
	30nm,1.1s						
QIZ	Qiongzhong	43.14	305	P	P	09 59 07.4	+1.1
QIZ				S	S	10 05 30.0	+2.0
QIZ				pmax	pmax		
	comp=Z,140nm,3.3s						
QIZ				LR	LR		
	comp=N,660nm,13.7s						
QIZ				LR	LR		
	comp=E,560nm,17.7s						
QIZ				LR	LR		
	comp=Z,590nm,17.7s						
URZ	Urewera	43.14	143	eP	P	09 59 05.8	-0.2
	30nm,1.3s						
MXZ	Matakaoa Point	43.41	142	eP	P	09 59 08.9	+0.6
	35nm,1.2s						
DCZ	Deep Cove	43.85	158	eP	P	09 59 14.7	+3.2
	59nm,1.3s						
RPZ	Rata Peaks	43.98	154	eP	P	09 59 14.0	+1.3
	22nm,0.8s						
MLZ	Mavora Lakes	44.12	158	eP	P	09 59 15.5	+1.7
	125nm,1.7s						
LBZ	Lake Benmore	44.14	155	eP	P	09 59 14.6	+0.6
	98nm,1.8s						
BFZ	Birch Farm	44.28	147	eP	P	09 59 15.4	+0.3
	192nm,0.5s						
WHZ	Wether Hill Ro	44.50	158	eP	P	09 59 17.5	+0.6
	90nm,1.8s						
SDSI	Sungai Dareh	44.67	274	P	P	09 59 18.1	-0.6
BKNI	Bangkinang	45.22	276	eP	P	09 59 22.9	-0.2
	103nm,1.1s						
BKNI	Bangkinang	45.22	276	P	P	09 59 23.0	-0.1
NJ2	Nanjing	45.42	327	eP	P	09 59 24.6	+0.3
NJ2				pmax	pmax		
	comp=Z,21nm,0.9s						
PDSI	Padang	45.64	274	P	P	09 59 24.6	-1.8
KSRS	Korea Array	45.96	340	P	P	09 59 28.1	-0.2
	13nm,1.0s,baz=158,slow=9.2,SNR=19						
KSRS				LR	LR	10 15 36.1	
	comp=Z,254nm,19.7s,baz=156,slow=32						
KS15	Wonju Array Si	45.96	340	eP	P	09 59 27.6	-0.8
	18nm,1.0s						
IPM	Ipoh	45.96	282	eP	P	09 59 28.7	-0.2
	17nm,0.6s						
KULM	Kulim	46.50	283	eP	P	09 59 33.0	-0.1
	88nm,1.6s						
PANO	Nakornpanom	46.65	300	P	P	09 59 34.9	+0.7
	0.3nm,1.1s						
MNSI	Mandailing Nat	46.73	276	P	P	09 59 34.8	-0.2
SKLT	Songkhla	46.97	285	P	P	09 59 39.0	+2.3
	12nm,0.9s						
CHBT	CHBT	47.00	293	P	P	09 59 39.9	+2.9
	60nm,0.5s,1µm						
PSI	Prapat	47.70	279	eP	P	09 59 42.4	-0.3
	39nm,1.2s						
TRTT	Trang	48.02	286	P	P	09 59 45.8	+0.9
	20nm,0.7s						
NONG	Nongkai	48.30	300	P	P	09 59 47.9	+0.9
	0.3nm,1.0s						
CHAI	Chaiyaphum	48.45	297	P	P	09 59 48.8	+0.6
	40µm,0.7s,382µm						
GSI	Gunungsitoli	48.79	277	eP	P	09 59 50.5	-0.4
	27nm,0.7s						
KCSI	Kotacane, Aceh	48.96	280	P	P	09 59 49.8	-2.4
DL2	Dalian	49.63	335	eP	P	10 00 10.6	+14
DL2				pmax	pmax		
	comp=Z,15nm,0.8s						
UTTA	Uttaradit	50.43	298	P	P	10 00 04.0	+0.8
	comp=Z,24µm,0.8s,comp=Z,315µm						
MLSI	Meulaboh, Aceh	50.44	280	P	P	10 00 02.0	-1.4
UTHA	Uthaitani	50.60	295	P	P	10 00 11.6	+7.0
USA0B	Ussuriysk Arra	51.08	347	eP	P	10 00 07.9	+0.2
	comp=Z,18nm,0.9s						
USRK	Ussuriysk Ar.	51.08	347	P	P	10 00 07.5	-0.2
	comp=Z,8.3nm,0.7s,baz=177,slow=7.9,SNR=10						
USRK				LR	LR	10 20 06.2	
	comp=Z,51nm,21.1s,baz=139,slow=34						
PAYA	Payao	51.67	300	P	P	10 00 13.3	+0.8
	comp=Z,57µm,0.7s						
KMI	Kunming	51.89	308	P	P	10 00 13.9	-0.5
KMI				pP	pP	10 00 28.5	-3.5
KMI				sP	sP	10 00 36.4	-3.5
KMI				S	S	10 07 33.5	+1.0
KMI				pmax	pmax		
	comp=Z,28nm,1.1s						
KMI				pmax	pmax		
	comp=Z,120nm,5.0s						
KMI				LR	LR		
	comp=Z,320nm,11.9s						
KMI				LR	LR		
	comp=Z,260nm,13.8s						
KMI				LR	LR		
	comp=Z,320nm,13.3s						
CM31	Chiang Mai Arr	52.12	298	eP	P	10 00 15.9	0.0
	comp=Z,10nm,0.6s						
CMAR	Chiang Mai Arr	52.12	298	P	P	10 00 16.4	+0.5
	comp=Z,6.0nm,0.8s,baz=122,slow=6.0,SNR=27						
CMMT	Chiang Mai	52.25	299	P	P	10 00 24.6	+7.7
CD2	Chengdu	54.21	315	eP	P	10 00 31.5	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	55.90	329	P	P	10 00 45.8	+2.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,16nm,5.4s						
KLR	Kul'dur	55.93	349	P	P	10 00 43.4	+0.3
	comp=Z,12nm,0.9s,baz=151,slow=3.5,SNR=9.2						
LZH	Lanzhou	57.19	320	eP	P	10 00 52.5	0.0
LZH				pP	pP	10 01 07.3	-3.1
LZH				sP	sP	10 01 13.8	-4.4
LZH				ePP	PP	10 03 01.6	+1.3
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,92nm,7.5s						
LZH				LR	LR		
	comp=Z,400nm,15.5s						
LZH				LR	LR		
	comp=Z,410nm,15.4s						
LZH				LR	LR		
	comp=Z,700nm,18.2s						
PEA0B	Petropavlovsk-	59.26	8	eP	P	10 01 07.0	+0.5
	comp=Z,22nm,1.0s						
PETK	Petropavlovsk-	59.26	8	P	P	10 01 06.2	-0.2
	comp=Z,23nm,0.9s,baz=158,slow=4.3,SNR=17						
PEA1	Petropavlovsk-	59.27	8	eP	P	10 01 06.2	-0.2
GTA	Gaotai	61.73	321	eP	P	10 01 23.4	-0.3
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONA0	Songino Array	63.50	331	eP	P	10 01 34.8	-0.6
SONM	Songino Array	63.50	331	P	P	10 01 34.8	-0.6
	comp=Z,3.2nm,0.8s,baz=160,slow=6.2,SNR=4.0						
SONM				PKP2bc		10 30 37.9	
	comp=Z,1.3nm,0.8s,baz=331,slow=1.0,SNR=10						
CASY	Casey	65.43	195	eP	P	10 01 47.4	0.0
	comp=Z,25nm,0.8s						
SEY	Seymchan	68.45	3	P	P	10 02 06.2	-0.4
	comp=Z,3.7nm,0.7s,baz=188,slow=8.8,SNR=4.7						
YAK	Yakutsk	68.53	352	eP	P	10 02 07.4	+0.3
	comp=Z,15nm,0.7s						
HYB	Hyderabad	70.33	291	i P	P	10 02 15.0	-4.2
WMQ	Urumqi	71.77	320	eP	P	10 02 29.1	+1.7
WMQ				pmax	pmax		
	comp=Z,24nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,40nm,3.6s						
WMQ				LR	LR		
	comp=Z,210nm,18.1s						
WMQ				LR	LR		
	comp=Z,160nm,14.9s						
WMQ				LR	LR		
	comp=Z,180nm,18.1s						
AKUT	Akutan	71.80	28	eP	P	10 02 29.0	+1.7
	comp=Z,139nm,1.3s						
VNDA	Vanda	72.43	176	P	P	10 02 30.9	+0.1
	comp=Z,13nm,0.7s,baz=328,slow=6.9,SNR=70						
VNDA				LR	LR	10 32 02.9	
	comp=Z,114nm,19.8s,baz=346,slow=34						
VNDA	Vanda	72.43	176	eP	P	10 02 30.8	0.0
	comp=Z,14nm,0.7s						
SBA	Scott Base	73.10	175	eP	P	10 02 36.5	+1.9
	comp=Z,8.8nm,1.1s						
MKAR	Makanchi Array	76.48	321	P	P	10 02 54.1	-0.7
	comp=Z,3.6nm,0.7s,baz=104,slow=6.9,SNR=4.3						
CHGN	Chignik	76.49	28	eP	P	10 02 54.3	-0.2
	comp=Z,18nm,0.8s						
ZALV	Zalesovo Beam	78.07	328	P	P	10 03 01.4	-2.0
	comp=Z,4.3nm,0.7s,baz=99,slow=5.2,SNR=4.0						
ZAA1	Zalesovo Array	78.07	328	eP	P	10 03 01.4	-2.0
KSH	Kashi	78.30	312	eP	P	10 03 09.3	+4.1
KSH				PcP	PcP	10 03 17.1	+2.7
KSH				pP	pP	10 03 24.4	+0.5
KSH				pmax	pmax		
	comp=Z,18nm,1.2s						
NIL	Nilore	78.81	306	eP	P	10 03 08.6	+0.5
	comp=Z,23nm,0.6s						
BOOM	Boomskoye usch	79.22	315	eP	P	10 03 10.4	+0.2
	comp=Z,44nm,1.3s						
SVW2	Sparrevohn	80.26	25	eP	P	10 03 16.0	+0.7
	comp=Z,7.0nm,0.9s						
CNPM	China Poot	81.41	27	eP	P	10 03 21.4	-0.1
	comp=Z,24nm,1.0s						
MAW	Mawson	82.27	203	P	P	10 03 24.9	-0.9
	comp=Z,9.5nm,0.4s,baz=97,slow=11,SNR=55						
MAW	Mawson	82.27	203	eP	P	10 03 25.4	-0.4
	comp=Z,3.2nm,0.8s						
RC01	Rabbit Creek A	82.77	26	eP	P	10 03 27.6	-0.9
	comp=Z,16nm,0.5s						
PMR	Palmer	83.24	26	eP	P	10 03 30.0	-0.9
	comp=Z,8.0nm,0.7s						
MCK	McKinley	84.23	24	eP	P	10 03 34.8	-1.2
	comp=Z,16nm,0.7s						
QSPA	South Pole Qui	84.43	180	eP	P	10 03 36.9	-0.3
	comp=Z,30nm,0.6s						
TCOL	CIGO, UAF Yank	85.13	23	P	P	10 03 39.2	-1.2
	baz=246						
COLA	College	85.13	23	eP	P	10 03 39.2	-1.2
	comp=Z,19nm,0.7s						
HDA	Harding Lake	85.30	24	P	P	10 03 40.0	-1.3
	baz=247						
POKR	Poker Flat Res	85.39	23	P	P	10 03 40.9	-0.8
	baz=246						
ILAR	Eielson Array	85.47	23	P	P	10 03 40.0	-2.2
	comp=Z,18nm,0.6s,baz=252,slow=5.0,SNR=54						
TOLK	Toolik Lake Re	86.10	19	P	P	10 03 45.9	+0.6
	baz=244						
EGAK	Eagle	87.77	24	eP	P	10 03 52.8	-0.6
	comp=Z,6.9nm,0.8s						
EPYK	Eagle Plains	89.98	23	P	P	10 04 03.3	-0.5
	baz=256						
SYO	Syowa Base	90.67	200	⇓iX	P	10 04 05.4	-1.5
M04C	Macdoel	95.30	49	P	P	10 04 26.6	-2.4
	baz=267						
WAKR	Walker	97.02	52	eP	P	10 04 41.0	+3.9
	comp=Z,7.1nm,1.1s						
NV11	Mina Array Sit	98.02	52	eP	Pdif	10 04 44.3	+2.8
	comp=Z,0.3nm,1.0s						
BMN	Battle Mountai	98.75	50	eP	P	10 04 42.1	-2.6
	comp=Z,5.2nm,1.0s						
YKA	Yellowknife Ar	99.25	28	PKKPbc	PKKPbc	10 21 09.8	-3.2
	comp=Z,0.3nm,0.5s,baz=90,slow=2.9,SNR=10						
R11A	Troy Canyon, C	100.04	52	ePdif	Pdif	10 04 52.0	+1.5
PSUT	Pine Spring	101.40	52	ePdif	Pdif	10 04 57.2	+0.6
ARCES	ARCESS Array B	105.49	342	PKKPbc	PKKPbc	10 20 51.7	-3.2
	comp=Z,1.6nm,1.0s,baz=256,slow=2.7,SNR=4.7						
O20A	White River Ci	105.63	50	ePdif	Pdif	10 05 15.5	+0.2
TXAR	Lajitas Array	110.45	61	PKKPbc	PKKPbc	10 20 38.4	+0.3
	comp=Z,0.2nm,0.5s,baz=110,slow=4.4,SNR=5.8						
TXAR				PKKPab	PKKPab	10 20 49.4	+1.0
	comp=Z,1.5nm,0.8s,baz=116,slow=6.6,SNR=19						
PLCA	Paso Flores	123.07	147	PKP	PKPdf	10 10 01.4	0.0
	comp=Z,1.3nm,0.5s,baz=249,slow=3.2,SNR=7.3						
CFA	Coronel Fontan	130.73	141	PKP	PKPdf	10 10 16.1	-0.2
	comp=Z,2.0nm,0.4s,baz=269,slow=1.6,SNR=7.1						
LPAZ	La Paz	139.91	123	PKhKP	PKPpre	10 10 25.7	
	comp=Z,0.6nm,0.5s,baz=194,slow=4.2,SNR=5.8						
LPAZ				PKP	PKPdf	10 10 34.8	+0.3
	comp=Z,1.9nm,0.9s,baz=302,slow=2.5,SNR=5.7						
CPUP	Villa Florida	141.10	146	PKhKP	PKPpre	10 10 27.7	
	comp=Z,2.4nm,0.8s,baz=224,slow=4.8,SNR=4.6						
CPUP				PKP	PKPdf	10 10 35.4	-0.1
	comp=Z,2.6nm,0.8s,baz=250,slow=1.8,SNR=4.7						
BANI	BANI	142.34	67	ePKPpre	PKPpre	10 10 30.1	
TOA0	Torodi Ar. Sit	143.97	285	ePKPdf	PKPab	10 10 37.7	-0.6
TORD	Torodi Ar. Bea	143.97	285	PKP	PKPab	10 10 37.9	-0.4
	comp=Z,4.1nm,0.7s,baz=82,slow=3.9,SNR=29						
CRPR	Cabo Rojo, PR	145.42	66	ePKPbc	PKPbc	10 10 41.1	-2.2
SIV	San Ignacio	145.75	129	PKPbc	PKPdf	10 10 43.8	-0.2
	comp=Z,28nm,0.6s,baz=245,slow=3.9,SNR=150						
EMPR	Esperanza - Ma	145.80	65	ePKPdf	PKPdf	10 10 43.0	-0.9
CBYP	Canovanas	146.47	65	ePKPdf	PKPdf	10 10 44.8	-0.4
HUMP	Col San Antoni	146.52	65	ePKPdf	PKPdf	10 10 45.0	-0.2
STVI	Saint Thomas	147.26	64	ePKPbc	PKPdf	10 10 47.4	+1.0
SPB	Sao Paulo	148.24	156	ePKPbc	PKPbc	10 10 51.6	+0.3
KIC	Kosan Boka	150.84	273	ePKIKP	PKPbc	10 10 57.4	-0.7
	comp=Z,38nm,1.0s						
DBIC	Dimbokro	150.96	274	PKPbc	PKPbc	10 10 57.6	-0.7
	comp=Z,13nm,0.8s,baz=40,slow=1.9,SNR=12						
DBIC				PKPab	PKPab	10 11 05.2	-0.7
	comp=Z,8.3nm,0.6s,baz=90,slow=3.7,SNR=7.6						
TIC	Toumodi	151.12	274	ePKIKP	PKPbc	10 10 57.9	-0.8
LIC	Lamto	151.13	273	ePKIKP	PKPbc	10 10 57.4	-1.3
	comp=Z,38nm,0.6s						
BDFB	Brasilia	154.82	147	PKPbc	PKPbc	10 11 06.6	-0.3
	comp=Z,6.0nm,0.7s,baz=164,slow=3.7,SNR=7.1						
BDFB				PKPab	PKPab	10 11 21.3	-0.7
	comp=Z,5.0nm,0.8s,baz=243,slow=2.3,SNR=3.5						
BDFB	Brasilia	154.82	147	ePKPbc	PKPbc	10 11 07.2	+0.3
RCBR	Riachuelo	168.56	171	ePKPab	PKPab	10 12 22.0	+0.2

JMA 21 09:51:53.7, 36°.59N×140°.58E, h5km±1km, M1.2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.02	337	P	Pg	09 51 54.7	0.0
JHO				S	Sg	09 51 55.5	0.0
JHYU	Hitachinakayam	0.25	179	P	Pg	09 51 59.2	+0.7
JHYU				S	Sg	09 52 02.3	+0.5
JYT	Yasato	0.48	221	P	Pg	09 52 02.9	0.0
JYT				eS	Sg	09 52 09.9	+0.8
ONAJ	Iwakimizuishiy	0.54	19	P	Pg	09 52 04.2	+0.1
ONAJ				eS	Sg	09 52 11.8	+0.6
JAG	Ashikaga	0.92	260	P	Pg	09 52 10.7	-0.7
JAG				eS	Sg	09 52 22.6	-0.8
JFT	Otama	0.95	348	P	Pg	09 52 11.9	0.0
JFT				eS	Sg	09 52 24.2	0.0

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*NEIC **21** 09:52:44.6±2.7, 36°.29N×141°.96E, h10km±4km, mb4.2/9, Error ellipse: s-maj=13.6km s-min=10.5km az=112.0*

*IDC **21** 09:52:48.4±6.6, 36°.85N×142°.03E, h0km, mb3.8/4, mb1 3.7/5, mb1mx3.5/37, mbtmp3.8/5, ML3.3/1, MS4.1/1, Ms1 4.1/1, ms1mx3.0/22, Error ellipse: s-maj=138.9km s-min=61.0km az=132.0*

*ISCJB **21** 09:52:55.3±1.4, 37°.35N±0°.08×142°.0E±0°.1, h48km±10km, mb4.1/12, MS4.1/1, Error ellipse: s-maj=19.8km s-min=9.1km az=36.3*

*JMA **21** 09:52:59.7±0.1, 37°.52N×141°.56E, h44km±2km, M3.7*

ISC 21 09:52:55.1±2.0, **37°.39N**±0°.07×**141°.83E**±0°.08, **h30**km±12km, **n39**, σ1^{s}**96**/36, **mb4.0**/12, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.76	269	P	Pn	09 53 11.4	+1.6
JMST	Minamisoumatoc	0.82	295	P	Pn	09 53 11.4	+0.8
JMST				S	Sb	09 53 19.6	-2.0
ONAJ	Iwakimizuishiy	0.87	251	P	Pn	09 53 13.6	+2.3
ONAJ				S	Sn	09 53 23.1	+0.1
JMM	Marumori	0.95	301	P	Pb	09 53 13.4	+0.4
JMM				S	Sb	09 53 23.0	-2.3
JIKH	Ishinomakikobu	0.97	343	P	Pb	09 53 14.5	+1.2
JIKH				S	Sb	09 53 24.5	-1.2
JFFD	Fukushimafurud	1.05	254	P	Pb	09 53 16.0	+1.2
JIO	Ouri	1.13	341	P	Pb	09 53 16.7	+0.6
JIO				S	Sn	09 53 28.3	-1.1
JFT	Otama	1.20	277	P	Pb	09 53 17.7	+0.6
JOU	Okura	1.34	317	P	Pn	09 53 19.0	+1.2
JYS	Shirataka	1.63	301	P	Pn	09 53 23.1	+1.4
JMK	Ichinoseki	1.64	343	P	Pb	09 53 24.0	-0.6
JFY	Yanaizu	1.69	271	P	Pb	09 53 24.5	-1.1
JYK	Kaneyama	1.92	323	P	Pn	09 53 27.4	+1.7
MAJO	Matsushiro	3.02	255	ePn	Pn	09 53 31.6	-9.2
MJB9	Matsu-Tunnel	3.02	255	ePn	Pn	09 53 31.7	-9.2
JHJ2	Mitsune	4.57	202	ePn	Pn	09 53 40.4	-22
ERM	Erimo	4.74	12	ePn	Pn	09 54 09.6	+5.3
ASAJ	Asahikawa	6.75	5	Pn	Pn	09 54 36.0	+3.9
	0.5nm,0.3s,baz=208,slow=9.9,SNR=4.6						
ASAJ	Asahikawa	6.75	5	ePn	Pn	09 54 36.0	+3.9
YSS	Yuzh-Sakhalins	9.59	4	ePn	Pn	09 55 17.7	+6.8
KS15	Wonju Array Si	11.09	275	ePn	Pn	09 55 26.7	-4.9
NIKH	Nikolski High	37.29	49	eP	P	10 00 02.6	-1.6
	37nm,1.1s						
UNV	Unalaska Valle	38.76	48	eP	P	10 00 12.9	-3.6
	14nm,1.2s						
ZALV	Zalesovo Beam	41.92	312	P	P	10 00 44.1	+1.4
	0.9nm,0.6s,baz=98,slow=7.8,SNR=3.7						
MK32	Makanchi Array	44.22	302	eP	P	10 01 02.6	+1.3
MKAR	Makanchi Array	44.22	302	P	P	10 01 02.6	+1.3
	0.4nm,0.5s,baz=84,slow=9.2,SNR=5.4						
SCM	Sheep Creek Mo	48.99	36	eP	P	10 01 37.9	-0.7
	5.1nm,1.1s						
ILB	Eielson Array	49.02	33	eP	P	10 01 38.7	+0.1
	0.3nm,1.0s						
ABKAR	Akbulak array	57.97	310	eP	P	10 02 45.3	+0.8
	0.8nm,0.6s						
AKTO	Aktyubinsk	58.69	312	LR	LR	10 27 42.0	

	comp=Z,155nm,20.9s,baz=66,slow=35						
DZM	Mont Dzumac	63.52	154	*e*P	P	10 03 08.1	-14
FIA0	FINESS Array S	68.66	332	*e*P	P	10 03 56.8	+1.8
FIA0	FINESS Array S	68.66	332	*e*P	P	10 03 56.8	+1.8
FINES	FINESS Array B	68.66	332	P	P	10 03 56.8	+1.8
	1.3nm,0.7s,baz=38,slow=7.0,SNR=5.2						
ILULI	Ilulissat	73.28	5	*e*P	P	10 04 23.5	+0.5
	11nm,0.8s						
ILULI	Ilulissat	73.28	5	*e*P	P	10 04 23.5	+0.5
ILULI				pmax	pmax		
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	74.22	322	P	P	10 04 29.8	+1.0
	comp=Z,0.5nm,0.4s,baz=47,slow=5.6,SNR=3.7						
SNOW	Snow King Moun	76.06	46	*e*P	P	10 04 35.9	-4.0
	comp=Z,0.7nm,0.8s						
PV17	East Wray Mesa	80.40	49	*e*P	P	10 05 00.6	-3.4
	comp=Z,1.9nm,0.6s						

NIED ***21*** *09:52:00, 36°.30N×141°.80E, h20^{km}, Mw4.9 Best double couple: $M_0$2.83000×10^{16} NP1:ϕ_s179.00000°, δ18.00000°, λ65.00000°. NP2:ϕ_s25.00000°, δ74.00000°, λ98.00000°.*

IDC ***21*** *09:52:54.6±0.5, 36°.25N×141°.75E, h0^{km}, mb4.5/24, mb1 4.6/29, mb1mx4.5/43, mbtmp4.5/29, ML4.0/4, MS4.6/5, Ms1 4.6/5, ms1mx3.8/20, Error ellipse: s-maj=14.7km s-min=12.7km az=105.0*

BJI ***21*** *09:52:55.0±0.0, 36°.33N×141°.51E, h7^{km}, mb4.9/72, mB5.0/50, Ms4.9/75, Ms7 4.8/67*

ISCJB ***21*** *09:52:57.1±0.6, 36°.30N±0°.02×141°.80E±0°.03, h26^{km}±4^{km}, mb4.8/122, MS4.8/43, Error ellipse: s-maj=4.1km s-min=3.3km az=147.3*

JMA ***21*** *09:52:57.4±0.3, 36°.27N×141°.81E, h54^{km}, M5.0*

JMA Felt II J1.

NEIC ***21*** *09:52:57.0±1.5, 36°.28N×141°.84E, h16^{km}±3^{km}, mb4.9/113, Error ellipse: s-maj=10.0km s-min=7.4km az=113.0*

NEIC Felt at Tsukuba. Recorded [2 JMA] in Fukushima, Ibaraki and Tochigi.

MOS ***21*** *09:52:59.5±0.9, 36°.55N×141°.62E, h31^{km}, mb5.2/57, MS4.8/19, Error ellipse: s-maj=7.7km s-min=4.5km az=115.1*

GCMT ***21*** *09:53:03.0±0.5, 36°.29N±0°.03×142°.04E±0°.04, h38^{km}±1^{km}, MW5.0/58, Moment Tensor Solution. s24,c25; s58,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.05±.41; $M_{\theta\theta}$1.26±.30; $M_{\phi\phi}$-4.31±.25; $M_{r\theta}$0.60±.28; $M_{\theta\phi}$-1.26±.14; $M_{\phi r}$2.15±.18; Best double couple: $M_0$4.42300×10^{16} NP1:ϕ_s15.00000°, δ60.00000°, λ94.00000°. NP2: ϕ_s188.00000°, δ30.00000°, λ83.00000°. Principal axes: T 3.6610, Plg74.0000°, Azm295.0000°; N 1.5240, Plg3.0000°, Azm193.0000°; P -5.1850, Plg15.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 09:52:59.1±0.6, **36°.30N**±0°.04×**141°.77E**±0°.04, **h31**^{km}±3^{km}, **n357**, σ**1s.72**/395, **mb4.9**/130, **MS5.0**/43, **20C-11D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.95	232	⇓P	Pn	09 53 14.9	-1.3
CHOJ				*e*S	Sn	09 53 28.4	-0.2
JHYU	Hitachinakayam	0.96	273	⇓P	Pn	09 53 15.3	-1.0
JHYU				*e*S	Sn	09 53 28.6	-0.3
JHO	Hitachi	1.02	288	⇓P	Pn	09 53 15.9	-1.3
JHO				*e*S	Sn	09 53 30.0	-0.4
JIHU	Itakohorinouch	1.06	252	P	Pn	09 53 17.5	-0.2
ONAJ	Iwakimizuishiy	1.12	316	P	Pn	09 53 18.7	0.0
ONAJ				*e*S	Sn	09 53 32.8	-0.2
JSMT	Sammumatsuo	1.25	239	P	Pn	09 53 20.3	-0.1
JYT	Yasato	1.27	267	⇓P	Pn	09 53 19.4	-1.3
JFK	Kawauchi	1.29	326	P	Pn	09 53 21.0	+0.1
JFT	Otama	1.68	317	P	Pb	09 53 27.6	-1.7
BSO1	Boso 1	1.76	202	P	Pn	09 53 25.7	-1.2
BSO3	Boso 3	1.81	215	P	Pn	09 53 27.0	-0.8
JAG	Ashikaga	1.87	275	⇓P	Pn	09 53 28.1	-0.9
JYN	Shimob	2.74	254	⇑P	Pn	09 53 41.3	+0.4
MJAR	Matsushiro Arr	2.88	276	Pn	Pn	09 53 43.0	+0.1
	9.2nm,0.3s,baz=106,slow=7.7,SNR=844						
MJAR				Sn	Sn	09 54 18.5	+2.1
	17nm,0.3s,baz=75,slow=21,SNR=6.0						
MJAR	Matsushiro Arr	2.88	276	P	Pn	09 53 43.0	+0.1
MAJO	Matsushiro	2.88	276	*e*Pn	Pn	09 53 43.8	+0.9
MAJO				*e*Sn	Sn	09 54 18.8	+2.3
MAJO	Matsushiro	2.88	276	*e*P	Pn	09 53 43.8	+0.9
MAJO				*e*		09 54 18.8	
MAT	Matsushiro	2.88	276	P	Pn	09 53 43.8	+0.9
MAT				S	Sb	09 54 21.8	-2.9
MJB9	Matsu-Tunnel	2.89	276	*e*Pn	Pn	09 53 43.5	+0.6
JNG	Nsakai	2.96	273	⇓P	Pn	09 53 44.7	+0.7
JNY	Yasuok	3.31	255	⇑P	Pn	09 53 50.1	+1.3
JHJ2	Mitsune	3.56	207	*e*Pn	Pn	09 53 51.3	-0.9
JHJ2				*e*Sn	Sn	09 54 31.1	-2.1
JHJ	Hachijo jima 2	3.57	208	Pn	Pn	09 53 51.6	-0.7
	106nm,0.3s,baz=330,slow=22,SNR=40						
JHJ				Sn	Sn	09 54 29.9	-3.5
	322nm,0.3s,baz=66,slow=19,SNR=9.1						
JGN	Niukaw	3.60	270	⇑P	Pn	09 53 54.2	+1.4
JGF	Kuroka	3.65	260	⇑P	Pn	09 53 55.1	+1.7
INU	Inuyama	3.98	258	*e*Pn	Pn	09 53 59.6	+1.7
JYTA	Yamagatataniai	4.14	262	P	Pn	09 54 01.6	+1.4
ERM	Erimo	5.81	10	*e*Pn	Pn	09 54 21.1	-1.9
ERM				*e*Sn	Sn	09 55 29.5	+0.9
ERM	Erimo	5.81	10	*e*P	Pn	09 54 21.1	-1.9
ERM				*e*		09 55 29.5	
ASAJ	Asahikawa	7.84	4	Pn	Pn	09 54 49.1	-1.7
	3.0nm,0.3s,baz=224,slow=12,SNR=19						
ASAJ				Sn	Sn	09 56 15.5	-2.9
	3.0nm,0.3s,baz=123,slow=29,SNR=5.6						
GRPR	Tuman	8.28	20	*e*P	Pn	09 54 53.1	-3.8
GRPR				*i* S	Sn	09 56 21.6	-7.6
GRPR				pmax	pmax		
	comp=Z,84nm,0.3s						
LAGR	Lagunnoye	8.34	20	P	Pn	09 54 55.2	-2.5
LAGR				*i* S	Sn	09 56 25.7	-5.0
LAGR				pmax	pmax		
	comp=Z,251nm,0.6s						
YUK	Yuzh-Kuril'sk	8.34	21	*e*P	Pn	09 54 54.5	-3.2
YUK				*i* S	Sn	09 56 24.4	-6.4
YUK				pmax	pmax		
	comp=Z,105nm,0.3s						
JNU	Nakatsue	9.51	254	Pn	Pn	09 55 15.1	+1.2
	comp=Z,0.6nm,0.3s,baz=71,slow=11,SNR=9.2						
JNU	Nakatsue	9.51	254	*e*Pn	Pn	09 55 14.6	+0.7
TEY	Ternei	9.57	337	⇑*e*P	Pn	09 55 23.8	+9.2
TEY				pmax	pmax		
	comp=E,30nm,0.8s						
TEY				pmax	pmax		
	comp=N,40nm,1.0s						
TEY				pmax	pmax		
	comp=Z,40nm,0.9s						
TEY				MLR	MLR		
	comp=N,3µm,16.0s						
TEY				MLR	MLR		
	comp=Z,3µm,17.0s						
KUR	Kuril'sk	10.05	25	P	Pn	09 55 18.9	-2.3
KUR				*i* S	Sn	09 57 07.8	-5.0
KUR				pmax	pmax		
	comp=Z,20nm,0.3s						
MSHR	Mys Shultsa	10.33	311	*i* P	Pn	09 55 25.8	+0.8
YSS	Yuzh-Sakhalins	10.68	4	*e*Pn	Pn	09 55 28.4	-1.3
YSS	Yuzh-Sakhalins	10.68	4	⇓*e*P	Pn	09 55 28.7	-1.0
YSS				*e*S	Sn	09 57 19.7	-8.4
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1µm,13.0s						
YSS				MLR	MLR		
	comp=N,1µm,17.0s						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
USRK	Ussuriysk Ar.	10.86	320	Pn	Pn	09 55 33.2	+0.9
	comp=E,0.7nm,0.3s,baz=116,slow=13,SNR=12						
KSRS	Korea Array	11.15	280	Pn	Pn	09 55 38.4	+2.0
	comp=E,0.4nm,0.3s,baz=93,slow=13,SNR=35						
KS15	Wonju Array Si	11.18	280	*e*Pn	Pn	09 55 39.2	+2.5
TJN	Taejon	11.62	275	*ce*P	Pn	09 55 45.1	+2.4
MDJ	Mudanjiang	12.44	316	*e*Pn	Pn	09 55 55.6	+1.7
MDJ	Mudanjiang	12.44	316	P	P	09 56 00.0	-5.4
MDJ				S	Sn	09 58 13.9	+2.5
MDJ				pmax	pmax		
	comp=Z,25nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,350nm,4.1s						
MDJ				LR	LR		
	comp=N,3µm,18.2s						
MDJ				LR	LR		
	comp=E,2µm,19.1s						
MDJ				LR	LR		
	comp=Z,5µm,17.5s						
CN2	Changchun	14.56	306	*e*P	Pn	09 56 22.4	-0.4
CN2				*e*PP	PnPn	09 56 33.9	+3.1
CN2				*e*S	Sn	09 59 03.4	+0.3
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,3µm,15.0s						
TYV	Tymovskoe	14.58	2	*e*P	Pn	09 56 23.4	+0.4
TYV				*e*S	Sn	09 59 03.4	+0.1
TYV				pmax	pmax		
	comp=Z,200nm,4.4s						
TYV				pmax	pmax		
	comp=Z,26nm,0.8s						
TYV				smax	smax		
	comp=E,7.0nm,1.2s						
TYV				MLR	MLR		
	comp=N,3µm,16.0s						
TYV				MLR	MLR		
	comp=Z,3µm,16.0s						
KLR	Kul'dur	14.85	334	Pn	Pn	09 56 25.3	-1.5
	comp=Z,0.4nm,0.3s,baz=142,slow=8.3,SNR=7.9						
KLR	Kul'dur	14.85	334	*i* P	Pn	09 56 25.8	-1.0
JOW	Kunigami	14.86	234	Pn	P	09 56 29.9	-2.5
	comp=Z,0.1nm,0.3s,baz=88,slow=18,SNR=9.2						
JOW	Kunigami	14.86	234	*e*Pn	Pn	09 56 25.8	-1.2
GRNR	Gornyy	14.97	347	*e*P	Pn	09 56 27.4	-0.9
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
SNY	Shenyang	15.16	297	⇑P	Pn	09 56 30.6	-0.3
SNY				pmax	pmax		
	comp=Z,30nm,1.1s						
SNY				pmax	pmax		
	comp=Z,340nm,7.4s						
SNY				LR	LR		
	comp=Z,2µm,14.8s						
SNY				LR	LR		
	comp=Z,3µm,15.9s						
SNY				LR	LR		
	comp=Z,5µm,16.9s						
DL2	Dalian	16.17	285	P	Pn	09 56 42.3	-1.7
DL2				sP	pP	09 56 55.3	+0.7
DL2				*e*S	Sn	09 59 42.5	+0.2
DL2				pmax	pmax		
	comp=Z,28nm,1.1s						
DL2				pmax	pmax		
	comp=Z,250nm,9.2s						
DL2				LR	LR		
	comp=Z,2µm,11.8s						
DL2				LR	LR		
	comp=Z,4µm,13.5s						
DL2				LR	LR		
	comp=Z,4µm,14.9s						
NKL	Nikolayevsk	16.87	358	*e*P	Pn	09 56 53.0	+0.3
OKH	Okha	17.27	2	*de*P	P	09 57 02.0	+3.1
OKH				*e*S	Sn	10 00 07.3	-1.4
OKH				pmax	pmax		
	comp=Z,100nm,17.4s						
OKH				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR	Severo-Kuril's	17.70	31	*e*P	P	09 57 10.1	+6.4
SKR				*e*S	S	10 00 24.1	-1.7
SKR				pmax	pmax		
	comp=Z,200nm,3.1s						
SKR				MLR	MLR		
	comp=Z,800nm,15.0s						
SKR				MLR	MLR		
	comp=Z,800nm,16.0s						
SSE	Sheshan	17.89	259	P	P	09 57 07.3	+1.4
SSE				S	S	10 00 28.4	-1.3
SSE				pmax	pmax		
	comp=Z,19nm,0.6s						
SSE				pmax	pmax		
	comp=Z,72nm,3.7s						
SSE				LR	LR		
	comp=Z,580nm,14.7s						
SSE				LR	LR		
	comp=Z,560nm,13.0s						
NJ2	Nanjing	19.41	264	*e*P	P	09 57 20.4	-2.3
NJ2				S	S	10 00 58.1	-2.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s						
NJ2				LR	LR		
	comp=Z,680nm,13.7s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
TIA	Tai'an	19.87	277	P	P	09 57 25.8	-1.8
TIA				sP	sP	09 57 38.4	-0.9
TIA				pmax	pmax		
	comp=Z,18nm,1.4s						
TIA				LR	LR		
	comp=Z,1µm,14.9s						
TIA				LR	LR		
	comp=Z,640nm,17.1s						
TIA				LR	LR		
	comp=Z,760nm,19.2s						
ZEA	Zeya	20.17	334	*e*P	P	09 57 27.8	-2.9
ZEA				pmax	pmax		
	comp=N,43nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,64nm,1.2s						
ZEA				MLR	MLR		
	comp=N,2µm,14.0s						
ZEA				MLR	MLR		
	comp=E,1µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
PETK	Petropavlovsk-	20.19	29	P	P	09 57 31.1	+0.1
	comp=Z,3.4nm,0.8s,baz=209,slow=7.0,SNR=7.8						
PEA1	Petropavlovsk-	20.19	29	*e*P	P	09 57 31.1	+0.1
BJT	Baijiatuau	20.45	288	*e*P	P	09 57 32.2	-1.7
	comp=Z,38nm,1.3s						
BJT	Baijiatuau	20.45	288	*e*P	P	09 57 32.2	-1.7
BJT				pmax	pmax		
	comp=Z,38nm,1.3s						
PET	Petropavlovsk	20.50	30	*e*P	Pn	09 57 41.6	+5.0
PET				*e*S	S	10 01 22.0	+0.1
PET				pmax	pmax		
	comp=Z,36nm,1.1s						
PET				MLR	MLR		
	comp=Z,500nm,18.0s						
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
HIA	Hailar	20.63	316	*e*P	P	09 57 33.1	-2.7
	comp=Z,19nm,1.0s						
HIA	Hailar	20.63	316	*e*P	P	09 57 33.1	-2.7
HIA				pmax	pmax		
	comp=Z,19nm,1.0s						
SSLB	Suanglung	21.86	241	*e*P	P	09 57 46.1	-3.0
	comp=Z,14nm,0.9s						
YULB	Yu-li	21.87	240	*e*P	P	09 57 46.7	-2.6
	comp=Z,7.8nm,0.7s						
TPUB	Ta-pu	22.39	240	*e*P	P	09 57 52.5	-2.5
	comp=Z,47nm,1.3s						
GUMO	Guam	22.78	172	*e*P	P	09 57 57.5	-1.5
	comp=Z,111nm,1.1s						
GUMO	Guam	22.78	172	*e*P	P	09 57 57.5	-1.5
GUMO				pmax	pmax		
	comp=Z,111nm,1.1s						
QZH	Quanzhou	22.87	247	*e*P	P	09 58 01.8	+1.8
QZH				LR	LR		
	comp=Z,490nm,20.1s						
QZH				LR	LR		
	comp=Z,1µm,16.9s						
QZH				LR	LR		
	comp=Z,1µm,17.9s						
TIY	Taiyuan	23.43	282	P	P	09 58 07.1	+1.5
WHN	Wuhan	23.55	264	⇑P	P	09 58 05.5	-1.2
WHN				S	S	10 02 17.4	-1.4
WHN				pmax	pmax		
	comp=Z,50nm,0.8s						
WHN				LR	LR		
	comp=Z,2µm,13.4s						
WHN				LR	LR		
	comp=Z,4µm,14.1s						
WHN				LR	LR		
	comp=Z,5µm,14.6s						
HHC	Hu-ho-hao-te	23.98	290	P	P	09 58 10.3	-0.6
HHC				S	S	10 02 28.0	+2.2
HHC				sS	pS	10 02 32.8	-2.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				LR	LR		
	comp=Z,2µm,12.4s						
HHC				LR	LR		
	comp=Z,2µm,13.7s						
MA2	Magadan	24.02	11	P	P	09 58 11.0	+0.1
	comp=Z,9.0nm,0.8s,baz=187,slow=13,SNR=5.9						
MA2	Magadan	24.02	11	*e*P	P	09 58 11.2	+0.4
	comp=Z,27nm,0.9s						
MA2	Magadan	24.02	11	*ce*P	P	09 58 12.3	+1.4
MA2				pmax	pmax		
	comp=Z,16nm,1.3s						
YAK	Yakutsk	26.85	347	*e*P	P	09 58 36.6	+0.2
	comp=Z,82nm,0.8s						
YAK	Yakutsk	26.85	347	*c* *i*P	P	09 58 36.8	+0.3
YAK				*e*PPP	PPP	09 59 29.5	
YAK				*e*S	S	10 03 10.6	-0.1
YAK				*e*SSS	SSS	10 04 21.1	
YAK				pmax	pmax		
	comp=Z,108nm,1.0s						
YAK				pmax	pmax		
	comp=E,26nm,1.3s						
YAK				pmax	pmax		
	comp=N,85nm,1.3s						
YAK				smax	smax		
	comp=N,35nm,1.8s						
YAK				smax	smax		
	comp=E,91nm,2.1s						
YAK				MLR	MLR		
	comp=Z,950nm,17.0s						
YAK				MLR	MLR		
	comp=N,763nm,15.0s						
YAK				MLR	MLR		
	comp=E,570nm,16.0s						
XAN	Xi'an	26.88	275	*e*P	P	09 58 36.6	-0.5
	comp=E,31nm,0.8s						
XAN	Xi'an	26.88	275	P	P	09 58 35.9	-1.2
XAN				pP	pwP	09 58 46.5	-1.2
XAN				PP	PnPn	09 59 25.8	+6.2
XAN				S	S	10 03 13.4	+1.6
XAN				pmax	pmax		
	comp=E,39nm,1.3s						
XAN				pmax	pmax		
	comp=E,210nm,4.1s						
XAN				LR	LR		
	comp=E,520nm,15.7s						
XAN				LR	LR		
	comp=E,1µm,13.6s						
XAN				LR	LR		
	comp=E,1µm,14.4s						
XAN	Xi'an	26.88	275	*e*P	P	09 58 36.6	-0.5
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
SEY	Seymchan	27.46	11	P	P	09 58 43.4	+1.4
	comp=Z,3.5nm,0.8s,baz=209,slow=13,SNR=6.4						
SEY	Seymchan	27.46	11	*e*P	P	09 58 43.2	+1.2
H11N2	WAKE ISLAND Hy	27.53	120	T	T	10 28 08.5	
	baz=313,slow=75						
H11N1	WAKE ISLAND Hy	27.54	120	T	T	10 28 18.1	
	baz=313						
H11N3	WAKE ISLAND Hy	27.55	120	T	T	10 28 23.2	
	baz=313,slow=75						
ENH	Enshi	27.57	267	*e*P	P	09 58 43.1	-0.2
	comp=Z,67nm,0.8s						
H11S1	WAKE ISLAND Hy	28.22	122	T	T	10 28 59.1	
	baz=314,slow=74						
H11S3	WAKE ISLAND Hy	28.22	122	T	T	10 29 04.7	
	baz=314						
H11S2	WAKE ISLAND Hy	28.24	122	T	T	10 29 06.8	
	baz=314,slow=74						
BOD	Bodaibo	28.30	328	*e*P	P	09 58 48.5	-1.1
BOD				pmax	pmax		
	comp=Z,45nm,1.7s						
SONA0	Songino Array	28.44	305	*e*P	P	09 58 50.2	-0.8
SONM	Songino Array	28.44	305	P	P	09 58 50.2	-0.8
	comp=Z,28nm,0.8s,baz=102,slow=7.6,SNR=86						
LZH	Lanzhou	30.48	281	*e*P	P	09 59 09.3	0.0
LZH				pP	pP	09 59 16.0	-1.9
LZH				sP	pwP	09 59 18.0	-2.2
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,3µm,16.3s						
IRK	Irkutsk	30.81	313	*e*P	P	09 59 10.1	-1.7
IRK				pmax	pmax		
	comp=Z,40nm,2.3s						
ZAK	Zakamensk	30.95	309	*e*P	P	09 59 13.5	+0.2
ZAK				pmax	pmax		
	comp=Z,28nm,1.2s						
GYA	Guiyang	31.39	262	⇓*i*P	P	09 59 16.8	-0.6
GYA				pP	pP	09 59 25.4	-0.5
GYA				PP	PnPn	10 00 20.0	-0.5
GYA				S	S	10 04 19.9	-3.1
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,5.1s						
GYA				LR	LR		
	comp=Z,660nm,15.9s						
GYA				LR	LR		
	comp=Z,1µm,15.2s						
GYA				LR	LR		
	comp=Z,1µm,16.5s						
CD2	Chengdu	31.97	271	P	P	09 59 21.6	-0.8
CD2				sP	sP	09 59 35.8	+1.3
CD2				S	S	10 04 33.3	+1.5
CD2				sS	pS	10 04 43.5	+1.9
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,190nm,9.6s						
CD2				LR	LR		
	comp=Z,2µm,13.9s						
CD2				LR	LR		
	comp=Z,1µm,15.1s						
CD2				LR	LR		
	comp=Z,2µm,17.1s						
MOY	Mondy	32.63	311	*e*P	P	09 59 29.0	+1.0
MOY				pmax	pmax		
	comp=Z,38nm,1.5s						
GTA	Gaotai	33.06	288	*e*P	P	09 59 31.9	0.0
GTA				pmax	pmax		
	comp=Z,17nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,8.6s						
GTA				LR	LR		
	comp=Z,460nm,16.8s						
GTA				LR	LR		
	comp=Z,1µm,17.9s						
GTA				LR	LR		
	comp=Z,1µm,17.2s						
BILL	Bilibino	34.65	16	⇑*e*P	P	09 59 45.6	+0.3
BILL				*e*		10 01 03.7	
BILL				*e*S	S	10 05 12.4	-0.2
BILL				pmax	pmax		
	comp=Z,13nm,1.8s						
BILL				MLR	MLR		
	comp=Z,495nm,18.0s						
KMI	Kunming	35.14	263	*e*P	P	09 59 49.4	-0.8
	comp=Z,35nm,1.0s						
KMI	Kunming	35.14	263	P	P	09 59 49.4	-0.8
KMI				pP	pP	09 59 57.4	-1.4
KMI				sP	pwP	09 59 59.8	-1.3
KMI				PP	PnPn	10 01 08.3	+0.1
KMI				S	S	10 05 20.8	-0.6
KMI				sS	sS	10 05 34.1	-1.7
KMI				SS	SnSn	10 07 35.8	-3.5
KMI				pmax	pmax		
	comp=Z,22nm,1.3s						
KMI				LR	LR		

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       comp=Z,620nm,18.2s
KMI                                LR       LR
       comp=Z,420nm,16.4s
KMI                                LR       LR
       comp=Z,390nm,18.7s
KMI    Kunming           35.14 263 eP       P        09 59 49.4 -0.8
KMI                                pmax     pmax
       comp=Z,35nm,1.0s
TIXI   Tiksi             36.05 353 eP       P        09 59 57.4 +0.2
TIXI                               pmax     pmax
       comp=Z,11nm,1.7s
NIKH   Nikolski High     38.05  48 eP       P        10 00 14.3 -0.1
       comp=Z,76nm,1.0s
WMQ    Urumqi            41.43 298 eP       P        10 00 44.3 +1.5
WMQ                                pP       pP       10 00 51.8 +0.4
WMQ                                sP       sP       10 00 54.8 -0.2
WMQ                                PcS      PcS      10 06 31.3 -0.2
WMQ                                pmax     pmax
       comp=Z,51nm,1.3s
WMQ                                pmax     pmax
       comp=Z,300nm,3.7s
WMQ                                LR       LR
       comp=Z,470nm,14.3s
WMQ                                LR       LR
       comp=Z,670nm,20.1s
WMQ                                LR       LR
       comp=Z,690nm,17.1s
ZAA0   Zalesovo Array    42.62 313 eP       P        10 00 52.7 +0.5
       comp=Z,24nm,0.8s
ZAA1   Zalesovo Array    42.62 313 eP       P        10 00 44.1 -8.2
ZAA1                               ePcP     PcP      10 02 44.4 +0.5
ZALV   Zalesovo Beam     42.62 313 P        P        10 00 52.7 +0.5
       comp=Z,20nm,0.8s,baz=93,slow=6.4,SNR=60
ZALV                               PcP      PcP      10 02 44.4 +0.5
       comp=Z,3.2nm,0.8s,baz=108,slow=4.7,SNR=2.5
ZALV   Zalesovo Beam     42.62 313 i P      P        10 00 53.0 +0.8
ZALV                               pmax     pmax
       comp=Z,21nm,0.8s
SHL    Shillong          43.69 270 P        P        10 01 03.7 +2.3
SHL                                pmax     pmax
       comp=Z,15nm,0.7s
SHL    Shillong          43.69 270 eP       P        10 01 03.5 +2.1
MK31   Makanchi Array    44.76 303 i P      P        10 01 09.3 -0.2
MK31                               pmax     pmax
       comp=Z,53nm,1.1s
MK32   Makanchi Array    44.76 303 eP       P        10 01 10.1 +0.5
MKAR   Makanchi Array    44.76 303 P        P        10 01 10.1 +0.5
       comp=Z,25nm,0.9s,baz=90,slow=9.9,SNR=72
MAKZ   Makanchi          44.97 303 eP       P        10 01 11.5 +0.3
       comp=Z,51nm,1.1s
MAKZ   Makanchi          44.97 303 P        P        10 01 10.5 -0.7
MAKZ                               pmax     pmax
       comp=Z,49nm,1.1s
KSM    Kuching           45.26 227 eP       P        10 01 13.8 +0.1
       comp=Z,7.8nm,0.9s
KAPI   Kappang           45.98 211 P        P        10 01 20.4 +0.9
       comp=Z,9.1nm,0.5s,baz=53,slow=20,SNR=5.5
KAPI   Kappang           45.98 211 eP       P        10 01 19.2 -0.2
       comp=Z,75nm,1.4s
KAPI   Kappang           45.98 211 eP       P        10 01 19.2 -0.2
KAPI                               pmax     pmax
       comp=Z,75nm,1.4s
KURK   Kurchatov         46.61 309 eP       P        10 01 24.2 +0.2
       comp=Z,60nm,0.8s
KURK   Kurchatov         46.61 309c iP      P        10 01 24.3 +0.2
KURK                               pmax     pmax
       comp=Z,41nm,0.8s
JIRN   Jiri              47.37 276 eP       P        10 01 31.6 +0.8
       comp=Z,273nm,1.0s
PDGK   Podgornoye        47.37 299 P        P        10 01 30.8 +0.5
PDGK                               pmax     pmax
       comp=Z,79nm,1.1s
GUN    Gumba             47.52 277 eP       P        10 01 32.6 +0.7
       comp=Z,206nm,1.0s
CAST   Castle Rocks      47.67  34 eP       P        10 01 34.2 +2.0
       comp=Z,3.4nm,1.0s
PKI    Pulchoki          48.04 276 eP       P        10 01 36.1 +0.2
       comp=Z,60nm,1.1s
PKIN   Phulchoki         48.05 276 eP       P        10 01 35.9  0.0
       comp=Z,83nm,1.1s
KKN    Kakani            48.05 277 eP       P        10 01 36.5 +0.6
       comp=Z,128nm,1.1s
DMN    Daman             48.27 277 eP       P        10 01 37.9 +0.3
       comp=Z,55nm,0.9s
GKN    Gorkha            48.48 277 eP       P        10 01 39.5 +0.4
       comp=Z,320nm,1.1s
TOLK   Toolik Lake Re    49.00  27 P        P        10 01 44.0 +1.6
       baz=266
IPM    Ipoh              49.01 240 eP       P        10 01 43.1  0.0
       comp=Z,7.6nm,0.8s
DANN   Dangsing          49.03 278 eP       P        10 01 44.3 +0.8
       comp=Z,156nm,0.8s
PMR    Palmer            49.05  36 eP       P        10 01 44.1 +1.3
       comp=Z,5.2nm,0.8s
PMR    Palmer            49.05  36 eP       P        10 01 44.1 +1.3
PMR                                pmax     pmax
       comp=Z,5.0nm,0.8s
BATI   Baumata           49.30 204 LR       LR       10 21 57.2
       comp=Z,107nm,19.2s,baz=326,slow=35
KDJ    Kajisay           49.33 298 eP       P        10 01 46.3 +0.8
       comp=Z,12nm,0.9s
KDJ    Kajisay           49.33 298 eP       P        10 01 46.3 +0.8
KDJ                                pmax     pmax
       comp=Z,12nm,0.9s
KOLN   Koldanda          49.41 277 eP       P        10 01 46.7 +0.4
       comp=Z,236nm,1.4s
POKR   Poker Plat Res    49.73  32 P        P        10 01 48.8 +0.8
       baz=271
SCM    Sheep Creek Mo    49.89  36 eP       P        10 01 50.7 +1.3
       comp=Z,6.5nm,0.8s
SCM    Sheep Creek Mo    49.89  36 eP       P        10 01 50.7 +1.3
SCM                                pmax     pmax
       comp=Z,7.0nm,0.8s
HDA    Harding Lake      49.95  33 P        P        10 01 49.1 -0.5
       baz=272
ILAR   Eielson Array     49.97  32 P        P        10 01 50.4 +0.6
       comp=Z,3.1nm,0.7s,baz=267,slow=6.0,SNR=32
ILB    Eielson Array     49.97  32 eP       P        10 01 50.6 +0.8
       comp=Z,5.8nm,0.8s
TKM2   Tokmak 2          50.23 299 P        P        10 01 53.8 +1.4
       SNR=18
KBK    Karagaybulak      50.77 299 P        P        10 01 57.6 +1.2
       SNR=8.9
CHMS   Chumysh           50.81 299 P        P        10 01 56.8 +0.3
       SNR=6.0
USP    Ospenovka         50.91 300 P        P        10 01 58.3 +1.0
       SNR=6.7
KSH    Kashi             50.97 295 eP       P        10 02 02.3 +4.4
KSH                                pP       pwP      10 02 08.6 -0.6
KSH                                sP       sP       10 02 11.1 +0.8
KSH                                PP       PP       10 04 00.3 +6.0
KSH                                S        S        10 09 18.3 +5.4
KSH                                ScS      ScS      10 11 47.8 +1.4
KSH                                SS       SS       10 12 51.6 +3.9
KSH                                pmax     pmax
       comp=Z,95nm,2.2s
KSH                                pmax     pmax
       comp=Z,150nm,6.6s
KSH                                LR       LR
       comp=Z,910nm,18.0s
KSH                                LR       LR
       comp=Z,1μm,15.9s
KSH                                LR       LR
       comp=Z,1μm,17.0s
OTUK   Ortayu            51.09 306 P        P        10 01 58.6  0.0
OTUK                               pmax     pmax
       comp=Z,32nm,1.1s
AAK    Ala-Archa         51.09 299 LR       LR       10 25 03.8
       comp=Z,2μm,18.7s,baz=62,slow=38
AAK    Ala-Archa         51.09 299 eP       P        10 01 59.5 +0.7
       comp=Z,31nm,1.2s
AAK    Ala-Archa         51.09 299 eP       P        10 01 59.5 +0.7
AAK                                pmax     pmax
       comp=Z,31nm,1.2s
BRVK   Borovoye          51.34 313 eP       P        10 02 01.8 +1.5
       comp=Z,18nm,0.9s
BRVK   Borovoye          51.34 313 P        P        10 01 59.7 -0.6
BRVK                               pmax     pmax
       comp=Z,20nm,1.0s
MENT   Mentasta          51.48  34 eP       P        10 02 02.8 +1.6
       comp=Z,6.9nm,0.9s
EKS2   Erkin-Say         51.59 299 P        P        10 02 03.4 +0.9
       SNR=7.2
BKNI   Bangkinang        52.01 236 eP       P        10 02 06.5 +0.8
       comp=Z,97nm,1.1s
EGAK   Eagle             52.41  32 eP       P        10 02 09.2 +1.1
       comp=Z,9.1nm,1.5s
KK31   Karatay Array     53.74 301 eP       P        10 02 18.6 +0.3
       comp=Z,37nm,1.1s
KK31   Karatay Array     53.74 301 eP       P        10 02 18.6 +0.3
KK31                               pmax     pmax
       comp=Z,37nm,1.1s
EPYK   Eagle Plains      54.02  30 P        P        10 02 21.5 +1.5
       baz=279
BTK    Batken            54.54 297 eP       P        10 02 24.7 +0.5
       comp=Z,31nm,1.4s
BTK    Batken            54.54 297 eP       P        10 02 24.7 +0.5
BTK                                pmax     pmax
       comp=Z,31nm,1.4s
INK    Inuvik            54.91  27 P        P        10 02 27.6 +1.2
       comp=Z,4.1nm,0.8s,baz=307,slow=7.4,SNR=8.9
NIL    Nilore            55.12 289 eP       P        10 02 29.2 +0.7
       comp=Z,28nm,0.9s
NIL    Nilore            55.12 289 eP       P        10 02 29.2 +0.7
NIL                                pmax     pmax
       comp=Z,28nm,0.9s
SVE    Sverdlovsk        55.89 319⇓eP       P        10 02 34.6 +1.0
SVE                                pmax     pmax
       comp=Z,44nm,1.3s
SVE                                MLR      MLR
       comp=Z,1μm,16.0s
WR1    Warramunga Arr    56.37 188 eP       P        10 02 36.6 -0.7
WRA    Warramunga Arr    56.37 188 P        P        10 02 36.6 -0.7
       comp=Z,6.2nm,0.9s,baz=2.0,slow=7.2,SNR=5.5
ARU    Arti              57.10 319 LR       LR       10 29 34.6
       comp=Z,981nm,18.1s,baz=72,slow=38
ARU    Arti              57.10 319 eP       P        10 02 42.3 +0.1
       comp=Z,37nm,1.0s
ARU    Arti              57.10 319c iP      P        10 02 42.6 +0.4
ARU                                                  10 03 37.7
ARU                                                  10 04 45.6
ARU                                S        S        10 10 35.5 +0.6
ARU                                SS       SS       10 14 15.9 -7.5
ARU                                pmax     pmax
       comp=Z,51nm,1.2s
ARU                                MLR      MLR
       comp=Z,1μm,16.0s
KBL    Kabul             57.95 292 eP       P        10 02 48.6 -0.2
       comp=Z,20nm,0.9s
KBL    Kabul             57.95 292 eP       P        10 02 48.6 -0.2
KBL                                pmax     pmax
       comp=Z,20nm,0.9s
AB31   Akbulak array     58.63 311 i P      P        10 02 52.3 -0.8
AB31                               pmax     pmax
       comp=Z,10.0nm,0.8s
AKTO   Aktyubinsk        59.38 312 P        P        10 02 57.1 -1.1
AKTO                               pmax     pmax
       comp=Z,14nm,1.0s
AS31   Alice Springs     60.10 188 eP       P        10 03 03.3  0.0
       comp=Z,2.4nm,0.9s
ASAR   Alice Springs     60.10 188 P        P        10 03 02.1 -1.3
       comp=Z,2.0nm,0.8s,baz=12,slow=9.5,SNR=4.4
DZM    Mont Dzumac       62.56 154 eLR      LR       10 21 53.8
       comp=Z,510nm,21.1s
YKA    Yellowknife Ar    64.30  30 P        P        10 03 31.5 +0.5
       comp=Z,1.3nm,0.8s,baz=299,slow=6.6,SNR=13
YKB5   Yellowknife Ar    64.30  30 eP       P        10 03 31.6 +0.5
GYA0B  ALIBECK ARRAY     64.44 299 eP       P        10 03 33.0 +0.5
       comp=Z,13nm,1.1s
ARCES  ARCESS Array B    64.79 340 P        P        10 03 34.7 +0.5
       comp=Z,6.5nm,0.8s,baz=46,slow=8.7,SNR=14
ARE0   ARCESS Array S    64.79 340 eP       P        10 03 35.1 +0.9
       comp=Z,0.7nm,1.4s
MSF    Maaselka          65.84 335 P        P        10 03 42.5 +1.5
MSF                                pmax     pmax
       comp=Z,23nm,1.9s
D03D   Eldon             67.39  47 P        P        10 03 52.0 +0.7
       baz=299
STKA   Stephens Creek    67.82 180 P        P        10 03 53.9 -0.1
       comp=Z,2.3nm,0.8s,baz=27,slow=12,SNR=2.9
STKA   Stephens Creek    67.82 180 eP       P        10 03 54.8 +0.9
       comp=Z,1.4nm,0.9s
STKA   Stephens Creek    67.82 180 eP       P        10 03 54.8 +0.9
STKA                               pmax     pmax
       comp=Z,1.0nm,0.9s
MOS    Moscow            68.01 324 eP       P        10 03 54.3 -0.7
MOS                                pmax     pmax
       comp=Z,50nm,1.0s
MOS                                MLR      MLR
       comp=Z,700nm,16.0s
SUF    Sumiainen         68.77 334 P        P        10 04 00.6 +1.0
SUF                                pmax     pmax
       comp=Z,24nm,1.1s
OBN    Obninsk           68.86 324 eP       P        10 04 00.4 +0.2
       comp=Z,13nm,0.6s
OBN    Obninsk           68.86 324⇓iP       P        10 04 01.0 +0.7
OBN                                e                 10 06 37.5
OBN                                eS       S        10 13 04.1 +2.2
OBN                                pmax     pmax
       comp=Z,67nm,2.5s
OBN                                MLR      MLR
       comp=Z,742nm,16.0s
LPSR   Galich'ya Gora    69.05 320 eP       P        10 04 01.0 -0.5
LPSR                               pmax     pmax
       comp=Z,20nm,0.9s
LPSR                               MLR      MLR
       comp=Z,2μm,18.0s
MAK    Makhachkala       69.14 308 eP       P        10 03 59.7 -2.5
MAK                                e                 10 06 33.7
MAK                                ePPP     PPP      10 08 14.0
MAK                                eS       S        10 12 58.2 -7.5
MAK                                pmax     pmax
       comp=Z,119nm,1.1s
MAK                                MLR      MLR
       comp=Z,710nm,17.0s
FIA1   FINESS Array S    69.60 332 eP       P        10 04 05.5 +0.8
       comp=Z,29nm,1.0s
FINES  FINESS Array B    69.60 332 P        P        10 04 05.1 +0.3
       comp=Z,12nm,0.9s,baz=69,slow=7.6,SNR=26
VSR    Storozhevoye      69.67 319 eP       P        10 04 04.4 -1.0
VSR                                pmax     pmax
       comp=Z,20nm,0.9s
VSR                                MLR      MLR
       comp=Z,1μm,15.0s
VORD   Divnogorie        69.74 319 eP       P        10 04 05.4 -0.4
VORD                               pmax     pmax
       comp=Z,10.0nm,1.0s
AKT    Akhty             69.75 307 eP       P        10 04 06.4 +0.2
AKT                                e                 10 04 29.0
AKT                                pmax     pmax
       comp=Z,19nm,1.2s
PINE   Pine Mountain     70.60  50 eP       P        10 04 14.0 +2.5
       comp=Z,11nm,1.0s
GOF    Gofitskoye        70.80 312⇑eP       P        10 04 12.7 +0.3
GOF                                pmax     pmax
       comp=Z,21nm,0.7s
VSU    Vasula            71.23 330 eP       P        10 04 14.3 -0.5
VSU                                IAmb     IAmb     10 04 16.1
       comp=Z,79nm,1.0s
VSU    Vasula            71.23 330ceP       P        10 04 16.2 +1.4
VSU                                pmax     pmax
       comp=Z,102nm,2.5s
NCK    Nalchik           71.30 310 i P      P        10 04 17.0 +1.5
NCK                                pmax     pmax
       comp=Z,9.0nm,1.2s
SUMG   Summit            71.42   0 eP       P        10 04 16.9 +0.7
       comp=Z,8.1nm,0.9s
SUMG   Summit            71.42   0 i P      P        10 04 17.4 +1.2
SUMG                               pmax     pmax
       comp=Z,20nm,0.9s
SUMG   Summit            71.42   0 i P      P        10 04 17.4 +1.2
       comp=Z,20nm,0.9s
KBZ    Khabaz            71.60 311 P        P        10 04 18.1 +0.8
       comp=Z,6.9nm,0.9s,baz=72,slow=4.0,SNR=16
KIV    Kislovodsk        71.61 311 eP       P        10 04 18.4 +1.0
       comp=Z,18nm,0.9s
KIV    Kislovodsk        71.61 311 eP       P        10 04 18.3 +0.8
KIV                                pmax     pmax
       comp=Z,59nm,1.0s
KIV                                MLR      MLR
       comp=Z,802nm,18.0s
SHA1   Shidzhatmaz       71.74 311 i P      P        10 04 19.0 +0.5
NEY    Neytrino          71.97 311 i P      P        10 04 20.3 +0.5
NEY                                pmax     pmax
       comp=Z,1.0nm,1.0s
GNI    Garni             72.38 307 eP       P        10 04 22.7 +0.4
       comp=Z,22nm,1.3s
GNI    Garni             72.38 307 eP       P        10 04 22.7 +0.4
GNI                                pmax     pmax
       comp=Z,22nm,1.3s
IZAR   Zarasai           73.18 328 eP       P        10 04 26.3 -0.2
IZAR                               IAmb     IAmb     10 04 28.1
       comp=Z,5.5nm,0.7s
ISAL   Salakas           73.35 328 eP       P        10 04 26.9 -0.6
ISAL                               IAmb     IAmb     10 04 29.1
       comp=Z,8.5nm,0.9s
IIGN   Ignalina          73.45 327 eP       P        10 04 27.4 -0.8
IIGN                               IAmb     IAmb     10 04 30.6
       comp=Z,12nm,1.1s
SOC    Sochi             73.60 312 eP       P        10 04 28.7 -0.5
SOC                                e                 10 07 12.9
SOC                                ePPP     PPP      10 08 57.9
SOC                                eS       S        10 13 55.4 -1.9
SOC                                eSS      SS       10 18 40.0 +0.1
SOC                                eSSS     SSS      10 21 52.6
SOC                                pmax     pmax
       comp=Z,19nm,0.7s
SOC                                MLR      MLR
       comp=Z,532nm,16.0s
PAHR   Pah Rah Range     73.79  53 eP       P        10 04 32.8 +2.2
       comp=Z,5.2nm,1.0s
FFC    Flin Flon         74.17  33 eP       P        10 04 33.0 +0.7
       comp=Z,63nm,1.0s
FFC    Flin Flon         74.17  33 eP       P        10 04 33.0 +0.7
FFC                                pmax     pmax
       comp=Z,63nm,1.0s
EGMT   Eagleton          74.64  41 P        P        10 04 34.7 -0.6
       baz=307
NB2    NORSAR Subarra    74.98 337 P        P        10 04 37.3 +0.3
       comp=Z,23nm,1.1s,baz=39,slow=5.9
NB2    NORSAR Subarra    74.98 337 P        P        10 04 37.3 +0.3
       baz=39,slow=5.9
NOA    NORSAR Array B    74.98 337 P        P        10 04 37.5 +0.5
       comp=Z,8.4nm,0.8s,baz=39,slow=5.7,SNR=29
KVN    Kaiserville       74.98  53 eP       P        10 04 39.4 +1.8
       comp=Z,12nm,1.2s
AKASG  Malin Array Be    75.06 323 P        P        10 04 37.8 +0.2
       comp=Z,9.1nm,0.7s,baz=46,slow=6.1,SNR=33
AKASG                              LR       LR       10 40 39.4
       comp=Z,790nm,18.2s,baz=25,slow=38
BOZ    Bozeman (W)       75.07  44 eP       P        10 04 39.6 +1.6
       comp=Z,11nm,1.4s
BOZ    Bozeman (W)       75.07  44 eP       P        10 04 39.6 +1.6
BOZ                                pmax     pmax
       comp=Z,11nm,1.4s
BOZ    Bozeman (W)       75.07  44 P        P        10 04 38.5 +0.6
       baz=307
NVAR   Mina Array Bea    75.20  53 P        P        10 04 40.7 +1.8
       comp=Z,1.1nm,0.7s,baz=282,slow=5.4,SNR=12
NVAR                               LR       LR       10 34 38.4
       comp=Z,93nm,18.2s,baz=326,slow=33
MLAC   Mammoth, Mammo75.31  54 P        P        10 04 39.8 +0.2
       baz=305
SIM    Simferopol'       76.05 316 P        P        10 04 43.8 +0.4
SIM                                S        S        10 14 17.0 -7.6
SIM                                pmax     pmax
       comp=Z,9.0nm,0.6s
SIM                                MLR      MLR
       comp=Z,240nm,16.0s
VES    Vestal, Richgr    76.16  56 P        P        10 04 45.1 +0.9
       baz=305
CWC    Cottonwood Cre    76.48  55 P        P        10 04 47.3 +1.1
       baz=305
IMW    Indian Meadow     76.49  45 eP       P        10 04 48.3 +2.0
       comp=Z,9.9nm,1.3s
GRAC   Grapevine Rang    76.63  54 P        P        10 04 47.4 +0.5
       baz=305
ISA    Isabella, Lake    76.67  56 P        P        10 04 48.1 +0.9
       baz=305
RLMT   Red Lodge         76.68  43 P        P        10 04 47.7 +0.5
       baz=308
HVU    Hansel Valley     76.69  48 eP       P        10 04 48.7 +1.4
       comp=Z,3.0nm,0.9s
HVU    Hansel Valley     76.69  48 eP       P        10 04 48.7 +1.4
HVU                                pmax     pmax
       comp=Z,3.0nm,0.9s
R11A   Troy Canyon, C    76.99  52 P        P        10 04 49.7 +0.6
       baz=306
MPMC   Manual Prospec    77.09  55 P        P        10 04 49.4 -0.3
       baz=306
LAO    LASA Array        77.34  41 P        P        10 04 50.5 -0.2
       baz=310
TPNV   Topopah Spring    77.39  53 P        P        10 04 50.7 -0.6
       baz=306
EDW2   Edwards Air Fo    77.44  56 P        P        10 04 51.6 +0.1
       baz=306
DUG    Dugway, Tooele    77.62  49 P        P        10 04 53.1 +0.6
       baz=307
BW06   Boulder Array     77.98  46 P        P        10 04 53.7 -0.8
       baz=309
PDAR   Pinedale Array    77.98  46 P        P        10 04 55.2 +0.6
       comp=Z,1.0nm,0.7s,baz=299,slow=2.2,SNR=11
KWP    Kalwaria Pacla    78.89 325 eP       P        10 05 00.1 +1.0
       comp=Z,300nm,0.6s
KWP    Kalwaria Pacla    78.89 325 eP       P        10 05 00.2 +1.0
BUR08  Bucovina Ar. S    79.06 322 eP       P        10 05 00.6 +0.4
       comp=Z,6.4nm,0.9s
KNB    Kanab             79.54  52 epP      P        10 05 07.4 +4.2
KNB    Kanab             79.54  52 eP       P        10 05 07.4 +4.2
BRTR   Keskin Array B    79.55 312 P        P        10 05 03.9 +0.7
       comp=Z,4.8nm,0.9s,baz=78,slow=3.4,SNR=21
BRTR   Keskin Array B    79.55 312 i P      P        10 05 04.3 +1.1
BRTR                               pmax     pmax
       comp=Z,5.0nm,0.9s
KOLS   Kolonicke sedl    79.59 324 eP       P        10 05 04.4 +1.4
KOLS                               pmax     pmax
       comp=Z,9.0nm,1.4s
KOLS   Kolonicke sedl    79.59 324 eP       P        10 05 04.4 +1.4
OJC    Ojcow             79.81 326 eP       P        10 05 04.9 +0.7
TRPA   Tarpa             80.02 324⇑eP       P        10 05 06.0 +0.7
NIE    Niedzica          80.16 326 eP       P        10 05 07.0 +0.9
U15A   North Rim         80.24  52 eP       P        10 05 07.2 +0.1
       comp=Z,1.8nm,0.8s
O20A   White River Ci    80.41  47 P        P        10 05 08.5 +0.6
       baz=310
Y12C   Blythe            80.42  55 P        P        10 05 08.7 +1.0
       baz=307
MDUB   Mudurnu           80.53 314 eP       P        10 05 08.8 +0.4
       comp=Z,65nm,1.1s
LANS   Liptovska Anna    80.73 326 eP       P        10 05 11.3 +2.1
LANS                               pmax     pmax
       comp=Z,4.0nm,0.9s
LANS   Liptovska Anna    80.73 326 eP       P        10 05 11.3 +2.1
OKC    Ostrava-Krasne    80.82 327 eP       P        10 05 10.9 +1.3
OKC                                e                 10 05 25.5
OKC                                MLR      MLR
       comp=Z,500nm,16.8s
OKC    Ostrava-Krasne    80.82 327 eP       P        10 05 10.9 +1.3
OKC                                ex       x        10 05 25.5
OKC                                AMS      AMS      10 44 00.0
       comp=Z,500nm,16.8s
KSP    Ksiaz             80.88 328 eP       P        10 05 10.9 +1.0
OSTC   Ostas             81.12 328 eP       P        10 05 12.5 +1.3
OSTC                               AMS      AMS      10 49 10.0
       comp=Z,500nm,15.4s
MORC   Moravsky Berou    81.13 327 eP       P        10 05 12.2 +0.9
       comp=Z,8.0nm,1.1s
MORC   Moravsky Berou    81.13 327 eP       P        10 05 12.2 +0.9
MORC                               pmax     pmax
       comp=Z,8.0nm,1.1s
MORC   Moravsky Berou    81.13 327 eP       P        10 05 12.1 +0.8
RAYN   Ar Rayn           81.20 293 eP       P        10 05 12.4 +0.2
       comp=Z,7.2nm,1.1s
RAYN   Ar Rayn           81.20 293 eP       P        10 05 12.4 +0.2
RAYN                               pmax     pmax
       comp=Z,7.0nm,1.1s
UPC    Upice             81.25 328 eP       P        10 05 13.2 +1.3
UPC                                MLR      MLR
       comp=Z,500nm,15.8s
UPC    Upice             81.25 328 eP       P        10 05 13.2 +1.3
UPC                                AMS      AMS      10 44 50.0
       comp=Z,500nm,15.8s
N23A   Red Feather La    81.25  45 P        P        10 05 13.1 +0.7
       baz=311
WUAZ   Wupatki           81.39  52 P        P        10 05 12.5 -0.7
       baz=309
PSZ    Piszkesteto       81.42 325 eP       P        10 05 14.0 +1.1
VYHS   Vyhne             81.49 326 eP       P        10 05 14.2 +1.0
VYHS                               pmax     pmax
       comp=Z,5.0nm,1.2s
VYHS   Vyhne             81.49 326 eP       P        10 05 14.1 +0.9
JAVC   Velka Javorina    81.75 326 eP       P        10 05 16.5 +1.9
BRG    Berggiesshubel    81.83 330 i P      P        10 05 15.2 +0.3
       comp=Z,4.7nm,0.8s
BRG                                i                 10 05 26.1
       comp=Z,5.2nm,0.9s
BRG                                ePP      PP       10 08 20.3 -1.4
       comp=Z,3.1nm,1.0s
       comp=N,349nm,15.5s
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	comp=E,165nm,12.9s						
	comp=Z,588nm,14.5s						
BRG	Berggiesshubel	81.83	330	*i* P	P	10 05 15.2	+0.3
BRG				*i*		10 05 26.1	
BRG				*e*		10 08 20.3	
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG				MLR	MLR		
	comp=N,349nm,15.5s						
BRG				MLR	MLR		
	comp=E,165nm,12.9s						
BRG				MLR	MLR		
	comp=Z,588nm,14.5s						
PVCC	Panska Ves	81.84	329	AMS	AMS	10 46 20.0	
	comp=Z,600nm,14.7s						
CLL	Collm	81.88	330	⇑*i*P	P	10 05 15.4	+0.2
CLL				*i* *PP	pwP	10 05 25.8	-1.2
CLL				*i* *SP	sP	10 05 29.6	+1.8
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
CLL	Collm	81.88	330	⇑*i*P	P	10 05 15.4	+0.2
	comp=Z,12nm,1.0s						
CLL				*i* PcP	PcP	10 05 20.9	+0.1
CLL				*i* pPcP		10 05 25.8	
CLL				*i* (sPcP)		10 05 29.6	
CLL				*e*PP	PP	10 08 20.0	-2.0
VRAC	Vranov	81.89	327	*e*P	P	10 05 16.1	+0.8
MVCO	Mesa Verde	82.12	49	P	P	10 05 16.3	-0.7
	baz=310						
KRUC	Moravsky	82.17	327	*e*P	P	10 05 17.3	+0.6
GOPC	GO Pecny, Ondr	82.21	329	*e*P	P	10 05 17.9	+0.9
GOPC				*e*		10 05 31.6	
GOPC				MLR	MLR		
	comp=Z,500nm,14.6s						
GOPC	GO Pecny, Ondr	82.21	329	*e*P	P	10 05 17.9	+0.9
GOPC				*e*x	x	10 05 31.6	
GOPC				AMS	AMS	10 49 20.0	
	comp=Z,500nm,14.6s						
PRU	Pruhonice	82.26	329	*e*P	P	10 05 18.4	+1.2
PRU				*e*		10 05 31.2	
PRU				MLR	MLR		
	comp=Z,500nm,16.0s						
PRU	Pruhonice	82.26	329	*e*P	P	10 05 18.4	+1.2
PRU				*e*x	x	10 05 31.2	
PRU				AMS	AMS	10 45 50.0	
	comp=Z,500nm,16.0s						
MODS	Modra-Piesok	82.29	326	*e*P	P	10 05 17.9	+0.5
MODS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MODS	Modra-Piesok	82.29	326	*e*P	P	10 05 17.9	+0.5
TREC	Trest	82.38	328	*e*P	P	10 05 19.0	+1.1
TREC				MLR	MLR		
	comp=Z,500nm,16.5s						
TREC	Trest	82.38	328	*e*P	P	10 05 19.0	+1.1
TREC				AMS	AMS	10 46 10.0	
	comp=Z,500nm,16.5s						
ZST	Bratislava	82.50	326	*e*P	P	10 05 19.1	+0.6
ZST	Bratislava	82.50	326	*e*P	P	10 05 19.1	+0.6
NKC	Novy Kostel	82.93	330	AMS	AMS	10 45 50.0	
	comp=Z,500nm,15.6s						
Q24A	Divide	82.98	46	P	P	10 05 20.6	-1.0
	baz=312						
SOP	Sopron	83.12	326	*e*P	P	10 05 22.1	+0.4
CONA	Conrad Observa	83.25	327	*e*PcP	P	10 05 23.7	+1.2
	comp=Z,9.4nm,1.2s						
KHC	Kasperske Hory	83.32	329	*e*P	P	10 05 23.6	+0.8
	comp=Z,2.2nm,0.8s						
KHC	Kasperske Hory	83.32	329	*e*P	P	10 05 23.6	+0.8
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	83.32	329	*e*P	P	10 05 23.3	+0.5
KHC				*e*x	x	10 05 44.0	
KHC				AMS	AMS	10 47 00.0	
	comp=Z,600nm,16.3s						
GEC2	GERESS Array S	83.49	328	*e*P	P	10 05 23.8	+0.1
	comp=Z,6.6nm,1.3s						
GEC2	GERESS Array S	83.49	328	*e*P	P	10 05 23.8	+0.1
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GERES	GERESS Array B	83.49	328	P	P	10 05 24.0	+0.3
	comp=Z,2.0nm,0.7s,baz=36,slow=5.0,SNR=18						
GERES	GERESS Array B	83.49	328	P	P	10 05 24.0	+0.3
PMOR	Pomariorio Ree	83.62	114	*e*T	T	11 37 32.7	
	comp=Z,3.9nm,0.2s						
GRA1	Grafenberg Arr	83.85	330	*e*P	P	10 05 26.4	+0.9
	comp=Z,14nm,1.0s						
GRF	Grafenberg Arr	83.85	330	*e*P	P	10 05 26.4	+0.9
GRF				pmax	pmax		
	comp=Z,14nm,1.0s						
ARSA	Arzberg	83.91	326	*e*P	P	10 05 26.5	+0.7
	comp=Z,5.2nm,1.3s						
MOA	Molln	84.01	328	*e*P	P	10 05 26.7	+0.4
	comp=Z,5.6nm,1.2s						
PPT2	Papeete2	84.06	117	*e*LR	LR	10 31 47.9	
	comp=Z,308nm,21.2s,baz=300						
ECSD	EROS Data Cent	84.32	38	P	P	10 05 28.0	0.0
	baz=316						
SOKA	Soboth	84.56	326	*e*P	P	10 05 29.7	+0.5
	comp=Z,10.0nm,1.1s						
T25A	Trinidad	84.63	47	P	P	10 05 30.2	+0.3
	baz=312						
VAY	Valandovo	84.79	319	*i* P	P	10 05 31.5	+1.2
ANMO	Albuquerque	84.84	50	*e*P	P	10 05 32.1	+1.0
	comp=Z,2.4nm,1.0s						
ANMO	Albuquerque	84.84	50	c*e*P	P	10 05 31.7	+0.7
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ANMO	Albuquerque	84.84	50	P	P	10 05 31.0	0.0
	baz=311						
SKO	Skopje	84.92	320	*i* P	P	10 05 32.5	+1.5
WTTA	Wattenberg	85.59	329	*e*P	P	10 05 33.1	-1.4
	comp=Z,6.4nm,1.6s						
TAOE	Nuku Hiva Isla	85.72	104	*e*LR	LR	10 32 36.9	
	comp=Z,383nm,25.6s						
MOTA	Moosalm	85.75	329	*e*PcP	P	10 05 36.2	+0.9
	comp=Z,1.8nm,0.8s						
RETA	Reutte	85.78	329	*e*PcP	P	10 05 35.8	+0.5
	comp=Z,4.2nm,0.9s						
OHR	Ohrid	85.88	319	*i* P	P	10 05 34.4	-1.5
BFO	Black Forest	86.09	331	*e*P	P	10 05 37.2	+0.5
	comp=Z,8.6nm,0.9s						
BFO	Black Forest	86.09	331	c*e*P	P	10 05 37.3	+0.5
FETA	Feichten	86.16	329	*e*PcP	P	10 05 37.6	+0.3
	comp=Z,3.9nm,1.3s						
DAVA	Damuels	86.30	329	*e*PcP	P	10 05 38.4	+0.4
	comp=Z,4.7nm,0.8s						
TBI	Tubuai	87.90	121	*e*LR	LR	10 33 36.8	
	comp=Z,381nm,23.2s						
TBI	Tubuai	87.90	121	*e*T	T	11 42 53.1	
	comp=Z,13nm,0.3s						
TX31	Lajitas Ar. Si	90.34	53	*e*P	P	10 05 58.3	+0.8
	comp=Z,3.0nm,1.1s						
TXAR	Lajitas Array	90.34	53	P	P	10 05 58.1	+0.6
	comp=Z,0.7nm,0.7s,baz=294,slow=3.0,SNR=10.0						
ESDC	Sonseca Array	98.08	334	P	P	10 06 31.9	-0.7
	comp=Z,0.1nm,0.3s,baz=32,slow=3.2,SNR=3.4						
LPAZ	La Paz	146.81	61	PKPbc	PKPbc	10 12 39.7	+0.4
	comp=Z,2.2nm,0.7s,baz=343,slow=3.8,SNR=6.4						
LVC	Limon Verde	150.15	71	PKPbc	PKPbc	10 12 47.5	0.0
	comp=Z,3.5nm,0.7s,baz=310,slow=7.9,SNR=2.8						
SIV	San Ignacio	151.33	51	PKPbc	PKPbc	10 12 49.8	-0.3
	comp=Z,3.0nm,0.8s,baz=319,slow=4.4,SNR=3.5						
GO09	Cerro Castillo	151.49	132	*e*PKPbc	PKiKP	10 12 52.6	+2.8
CFA	Coronel Fontan	154.73	88	PKPab	PKPab	10 13 12.7	+0.5
	comp=Z,1.8nm,0.7s,baz=272,slow=8.6,SNR=3.7						

*IDC **21** 10:00:18.8±1.9, 41°.52S×174°.29E, h0^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.5/28, mbtmp3.4/3, ML2.9/1, MS4.1/1, Ms1 4.1/1, ms1mx3.0/13, Error ellipse: s-maj=48.6km s-min=23.6km az=143.0*

*ISCJB **21** 10:00:21.5±0.4, 41°.79S±0°.03×174°.41E±0°.03, h20^{km}±3^{km}, mb3.4/2, MS4.0/1, Error ellipse: s-maj=5.6km s-min=2.7km az=138.6*

*WEL **21** 10:00:21.9, 41°.6S±0°.7×174°.3E±0°.6, h14^{km}±2^{km}, M3.8/14, ML4.1/6, MLv3.8/14, Error ellipse: s-maj=0.0km s-min=0.0km az=142.7*

ISC 21 10:00:21.7±1.1**, 41°.62S**±0°.03×**174°.30E**±0°.02**, h16**^{km}±8^{km}**, n108, σ1^{s}.45**/117**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.15	206	P	Pg	10 00 26.2	+0.4
CMWZ				S	Sb	10 00 29.9	+0.8
TUWZ	Tuamarina	0.33	305	P	Pb	10 00 28.8	-0.3
TUWZ				S	Sb	10 00 33.9	-0.2
BSWZ	Blackbirch Sta	0.33	253	P	Pg	10 00 29.0	+0.2
BSWZ				S	Sb	10 00 34.3	0.0
TCW	Tory Channel	0.41	357	P	Pb	10 00 30.2	-0.3
TCW				S	Sb	10 00 35.9	-0.5
BHW	Baring Head	0.48	64	P	Pb	10 00 31.9	+0.2
BHW				S	Sb	10 00 39.2	+0.8
WEL	Wellington	0.48	47	P	Pb	10 00 32.0	+0.2
WEL				S	Sb	10 00 39.3	+0.7
PLWZ	Palliser	0.72	87	P	Pb	10 00 36.6	+0.8
MSWZ	Moikau Station	0.74	75	P	Pb	10 00 36.8	+0.6
MSWZ				S	Sn	10 00 50.0	+1.6
CAW	Cannon Point	0.77	49	P	Pb	10 00 37.1	+0.4
NNZ	Nelson	0.80	300	P	Pg	10 00 37.1	-0.2
DUWZ	D’Urville Isla	0.86	341	P	Pb	10 00 38.4	+0.1
DUWZ				S	Sb	10 00 50.4	+0.8
PAWZ	Paruwai Farm	0.88	75	P	Pb	10 00 39.3	+0.7
PAWZ				S	Sn	10 00 53.7	+1.9
KHZ	Kahutara	0.98	215	P	Pb	10 00 40.9	+0.6
KHZ				S	Sn	10 00 55.3	+1.0
MTW	Mount Morrison	1.01	64	P	Pg	10 00 41.3	0.0
MTW				S	Sn	10 00 57.1	+2.0
OGWZ	Otaki Gorge	1.03	40	P	Pg	10 00 41.5	-0.2
THZ	Tophouse	1.05	262	P	Pb	10 00 41.7	+0.1
THZ				S	Sn	10 00 58.6	+2.4
TRWZ	Traveller	1.06	79	P	Pb	10 00 41.8	0.0
HOWZ	Holdsworth Sta	1.16	52	P	Pb	10 00 43.6	+0.1
TMWZ	Te Maipa	1.30	68	P	Pn	10 00 44.9	-0.3
MRZ	Mangatainoka R	1.36	46	P	Pn	10 00 46.4	+0.5
TIWZ	Tintock	1.46	55	P	Pn	10 00 47.6	+0.2
QRZ	Quartz Range	1.55	300	P	Pb	10 00 50.1	+0.1
CPWZ	Castlepoint	1.60	64	P	Pg	10 00 54.5	+2.1
OHWZ	Ohakea	1.60	29	P	Pg	10 00 52.0	-0.6
GVZ	Greta Valley S	1.65	214	P	Pn	10 00 49.7	-0.2
PRWZ	Pori Road	1.65	51	P	Pn	10 00 50.1	+0.2
POWZ	Post Office Ro	1.65	43	P	Pn	10 00 50.8	+0.8
BFZ	Birch Farm	1.74	58	P	Pn	10 00 50.6	-0.6
LTZ	Lake Taylor	1.91	232	P	Pn	10 00 53.7	+0.1
DVHZ	Dannevirke	1.93	48	P	Pn	10 00 53.5	-0.4
WAZ	Wanganui	1.93	16	P	Pg	10 00 57.6	-1.2
AMCZ	Amberley	1.98	218	P	Pn	10 00 54.0	-0.6
ANWZ	Angora Road	2.01	56	P	Pn	10 00 54.7	-0.2
LREZ	Lake Rotokare	2.15	2	P	Pg	10 01 03.3	+0.2
NMEZ	Namu Road	2.22	352	P	Pg	10 01 03.6	-0.8
PNHZ	Pukenui	2.23	41	P	Pn	10 00 58.0	0.0
WPHZ	Waipukurau	2.25	47	P	Pn	10 00 58.1	-0.1
PREZ	Palmer Road	2.27	357	P	Pb	10 01 03.5	+1.1
OKCZ	Okains Bay	2.30	203	P	Pn	10 00 57.6	-1.3
CRLZ	Canterbury Las	2.32	212	P	Pn	10 00 58.2	-1.0
KHEZ	Kahui Hut	2.33	355	P	Pb	10 01 04.2	+0.8
NBEZ	Newall Road No	2.37	352	P	Pb	10 01 04.2	+0.2
OXZ	Oxford	2.39	224	P	Pn	10 00 59.0	-1.2
INZ	Inchbonnie	2.40	241	P	Pn	10 01 00.6	+0.4
MTVZ	Mangateitei	2.40	22	P	Pb	10 01 05.1	+0.5
MQZ	McQueen’s Vall	2.42	210	P	Pn	10 00 58.7	-1.8
DREZ	Durham Road	2.42	358	P	Pb	10 01 05.2	+0.3
PKE	Pukeiti	2.43	354	P	Pb	10 01 05.1	0.0
PKVZ	Pokaka	2.46	19	P	Pb	10 01 04.4	-1.1
MOVZ	Moawhango	2.47	27	P	Pn	10 01 03.6	+2.3
AKCZ	Akaroa Harbour	2.48	204	P	Pn	10 01 00.0	-1.4
PXZ	Pawanui	2.51	52	P	Pn	10 01 00.7	-1.1
BHHZ	Black Hill Sta	2.51	33	P	Pn	10 01 03.1	+1.2
VRZ	Vera Road	2.51	8	P	Pb	10 01 05.3	-1.1
KRHZ	Kereru	2.52	39	P	Pn	10 01 01.8	-0.2
WHVZ	Whangaehu Hut	2.53	23	P	Pb	10 01 05.2	-1.7
MHEZ	Mangahewa	2.54	0	P	Pg	10 01 10.1	-0.2
FWVZ	Far West T-bar	2.54	22	P	Pb	10 01 05.6	-1.5
TUVZ	Tukino	2.56	24	P	Pn	10 01 04.7	+2.0
NGZ	Ngauruhoe	2.63	23	P	Pb	10 01 06.3	-2.2
KAHZ	Kahuranaki	2.67	48	P	Pn	10 01 03.4	-0.7
WTVZ	West Tongariro	2.69	22	P	Pb	10 01 07.5	-1.9
TWVZ	Taurewa	2.69	19	P	Pb	10 01 10.8	+1.4
KRVZ	Karewarewa	2.72	23	P	Pb	10 01 10.1	+0.1
KWHZ	Kaweka Forest	2.72	37	P	Pb	10 01 11.8	+1.8
MCHZ	McNeill Hill	2.83	41	P	Pn	10 01 06.7	+0.4
KATZ	Kakaramea	2.84	22	P	Pb	10 01 13.2	+1.0
RITZ	Rihia Road	2.89	25	P	Pb	10 01 14.1	+1.1
BKZ	Black Stump Fm	2.96	35	P	Pn	10 01 08.9	+0.7
RATZ	Rangitukua	2.97	23	P	Pg	10 01 16.4	-2.2
WVZ	Waitaha Valley	3.02	240	P	Pn	10 01 09.2	+0.4
WATZ	Wairara	3.10	21	P	Pb	10 01 18.2	+1.6
HIZ	Hauiti	3.13	8	P	Pb	10 01 14.0	-2.9
RPZ	Rata Peaks	3.18	228	P	Pn	10 01 10.4	-0.7
MRHZ	Matea Rd	3.22	31	P	Pn	10 01 11.9	+0.3
MTHZ	Maungataniwha	3.38	36	P	Pb	10 01 19.6	-1.6
TLZ	Tolley Road	3.42	17	P	Pb	10 01 21.2	-0.7
FOZ	Fox Glacier	3.83	238	P	Pn	10 01 21.8	+1.9
RAGZ	Rawiri	3.93	39	P	Pb	10 01 26.9	-3.7
RIGZ	Rimuhau	3.93	44	P	Pb	10 01 27.0	-3.7
URZ	Urewera	3.99	34	Pn	Pn	10 01 20.9	-1.2
	0.8nm,0.3s,baz=254,slow=8.2,SNR=5.2						
URZ				Pg	Pb	10 01 29.4	-2.2
	1.5nm,0.3s,baz=248,slow=5.7,SNR=14						
URZ				Sn	Sn	10 02 08.8	+0.3
	1.0nm,0.3s,baz=284,slow=19,SNR=2.0						
URZ	Urewera	3.99	34	P	Pn	10 01 23.5	+1.4
TOZ	Tahuroa Road	3.99	14	P	Pb	10 01 27.9	-3.7
LBZ	Lake Benmore	4.10	226	P	Pn	10 01 23.8	+0.2
MWZ	Matawai	4.11	38	P	Pn	10 01 23.4	-0.5
TKGZ	Te Karaka	4.18	42	P	Pn	10 01 26.1	+1.4
CNGZ	Carnagh Statio	4.33	45	P	Pn	10 01 29.3	+2.4
ODZ	Otahua Downs	4.34	217	P	Pn	10 01 25.5	-1.5
TWGZ	Tauwhareparae	4.45	41	P	Pn	10 01 28.9	+0.4
RUGZ	Raukumara Rang	4.48	37	P	Pn	10 01 29.2	+0.3
AWAZ	Awhitu Peninsu	4.55	3	P	Pn	10 01 34.2	+4.3
MKAZ	Moumakai	4.55	9	P	Pn	10 01 33.7	+3.8
PUZ	Puketiti	4.67	42	P	Pn	10 01 32.0	+0.5
ETAZ	East Tamaki Re	4.68	6	P	Pn	10 01 36.6	+5.0
HAZ	Te Kaha	4.70	36	P	Pn	10 01 33.1	+1.2
JCZ	Jackson Bay	4.74	237	P	Pn	10 01 37.0	+4.4
WIAZ	Waiheke Island	4.86	8	P	Pn	10 01 40.3	+6.2
MBAZ	Motutapu North	4.86	6	P	Pn	10 01 38.4	+4.2
HHSZ	Highcliff Hill	5.04	211	P	Pn	10 01 35.5	-1.1
TUZ	Tuapeka	5.50	216	P	Pn	10 01 43.1	+0.2
WCZ	Waipu Caves	5.67	0	P	Pn	10 01 52.1	+6.8
SYZ	Scrubby Hill	6.17	215	P	Pn	10 01 51.5	-0.5
OUZ	Omahuta	6.41	355	P	Pn	10 02 03.1	+7.7
CTZ	Chatham Island	7.02	111	P	Pn	10 02 03.4	-0.3
HNR	Honiara	34.47	334	LR	LR	10 20 55.9	
	comp=Z,279nm,20.4s,baz=330,slow=36						
ASAR	Alice Springs	38.03	285	P	P	10 07 39.0	-0.3
	0.2nm,0.4s,baz=120,slow=6.8,SNR=5.2						
WRA	Warramunga Arr	40.09	290	P	P	10 07 55.3	-1.2
	1.1nm,0.9s,baz=126,slow=8.0,SNR=4.1						
TORD	Torodi Ar. Bea	150.91	195	PKPbc	PKPbc	10 20 13.6	-0.3
	0.3nm,0.5s,baz=172,slow=2.4,SNR=6.4						

*IDC **21** 10:05:18.9±8.4, 41°.03S×174°.59E, h0^{km}, mb3.5/2, mb1 3.8/2, mb1mx3.4/31, mbtmp3.5/2, Error ellipse: s-maj=514.7km s-min=45.9km az=33.0*

*WEL **21** 10:05:22.9, 41°.5S±0°.7×174°.3E±0°.7, h17^{km}±2^{km}, M3.4/19, ML3.7/19, MLv3.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=133.1*

ISC 21 10:05:22.4±1.4**, 41°.56S**±0°.03×**174°.35E**±0°.02**, h16**^{km}±11^{km}**, n82, σ1^{s}.08**/89**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.21	208	P	Pb	10 05 28.5	+0.6
CMWZ				S	Sb	10 05 33.2	+1.6
TUWZ	Tuamarina	0.33	293	P	Pb	10 05 30.2	+0.3
TUWZ				S	Sb	10 05 35.2	+0.3
TCW	Tory Channel	0.35	351	P	Pb	10 05 30.6	+0.3
TCW				S	Sb	10 05 35.7	+0.1
BSWZ	Blackbirch Sta	0.39	246	P	Pb	10 05 31.2	+0.4
BSWZ				S	Sb	10 05 37.1	+0.5
WEL	Wellington	0.42	49	P	Pb	10 05 32.0	+0.6
WEL				S	Sb	10 05 38.4	+0.9
BHW	Baring Head	0.42	69	P	Pb	10 05 31.9	+0.5
BHW				S	Sb	10 05 38.5	+1.0
PLWZ	Palliser	0.68	91	P	Pb	10 05 36.7	+0.8
MSWZ	Moikau Station	0.69	78	P	Pb	10 05 36.9	+0.8
MSWZ				S	Sn	10 05 49.7	+1.8
CAW	Cannon Point	0.71	50	P	Pb	10 05 37.0	+0.8
NNZ	Nelson	0.81	295	P	Pg	10 05 38.6	+0.5
DUWZ	D’Urville Isla	0.82	337	P	Pn	10 05 40.4	+1.1
PAWZ	Paruwai Farm	0.83	78	P	Pg	10 05 39.3	+0.8
MTW	Mount Morrison	0.96	65	P	Pn	10 05 41.6	+0.5
OGWZ	Otaki Gorge	0.97	40	P	Pn	10 05 41.6	+0.3
TRWZ	Traveller	1.02	81	P	Pb	10 05 42.2	+0.5
KHZ	Kahutara	1.04	215	P	Pn	10 05 42.9	+0.6
THZ	Tophouse	1.10	259	P	Pn	10 05 43.7	+0.6
HOWZ	Holdsworth Sta	1.10	53	P	Pg	10 05 43.9	+0.2
TMWZ	Te Maipa	1.25	69	P	Pn	10 05 45.3	+0.2
MRZ	Mangatainoka R	1.29	46	P	Pb	10 05 46.7	+0.4
TIWZ	Tintock	1.40	56	P	Pn	10 05 47.8	+0.5
OHWZ	Ohakea	1.54	29	P	Pg	10 05 52.3	+0.3
CPWZ	Castlepoint	1.54	66	P	Pg	10 05 54.5	+2.5
QRZ	Quartz Range	1.56	298	P	Pb	10 05 51.6	+0.9
PRWZ	Pori Road	1.59	51	P	Pn	10 05 50.5	+0.7
POWZ	Post Office Ro	1.59	43	P	Pb	10 05 51.1	-0.2
BFZ	Birch Farm	1.68	59	P	Pn	10 05 50.9	-0.2
GVZ	Greta Valley S	1.71	214	P	Pn	10 05 51.7	+0.2
DVHZ	Dannevirke	1.87	48	P	Pn	10 05 53.8	+0.1
WAZ	Wanganui	1.87	15	P	Pg	10 05 58.3	0.0
ANWZ	Angora Road	1.95	56	P	Pn	10 05 54.9	+0.1
LTZ	Lake Taylor	1.97	231	P	Pn	10 05 55.6	+0.6
AMCZ	Amberley	2.04	217	P	Pn	10 05 55.9	-0.2
PRHZ	Porangahau	2.16	54	P	Pg	10 06 04.2	+0.4
PNHZ	Pukenui	2.17	41	P	Pn	10 05 58.3	+0.6
NMEZ	Namu Road	2.18	350	P	Pg	10 06 04.6	+0.5
WPHZ	Waipukurau	2.18	47	P	Pb	10 05 60.0	-1.5
PREZ	Palmer Road	2.22	356	P	Pg	10 06 05.4	+0.4
KHEZ	Kahui Hut	2.28	353	P	Pg	10 06 06.1	0.0
NBEZ	Newall Road No	2.32	351	P	Pg	10 06 07.0	+0.2
MTVZ	Mangateitei	2.34	22	P	Pg	10 06 07.0	-0.2
OKCZ	Okains Bay	2.36	203	P	Pn	10 05 59.5	-0.9
DREZ	Durham Road	2.37	357	P	Pg	10 06 07.8	0.0
CRLZ	Canterbury Las	2.38	212	P	Pn	10 06 00.1	-0.6
PKE	Pukeiti	2.38	353	P	Pg	10 06 07.8	-0.3
PKVZ	Pokaka	2.40	19	P	Pb	10 06 06.8	+1.7
MOVZ	Moawhango	2.41	27	P	Pb	10 06 06.3	+1.1
PXZ	Pawanui	2.45	52	P	Pn	10 06 01.0	-0.6
BHHZ	Black Hill Sta	2.45	33	P	Pb	10 06 07.8	+1.8
INZ	Inchbonnie	2.45	241	P	Pn	10 06 02.6	+0.9
VRZ	Vera Road	2.46	7	P	Pg	10 06 08.3	-1.2
OXZ	Oxford	2.46	223	P	Pn	10 06 01.1	-0.6
KRHZ	Kereru	2.46	39	P	Pn	10 06 02.2	+0.4
WHVZ	Whangaehu Hut	2.47	23	P	Pb	10 06 07.4	+1.0
FWVZ	Far West T-bar	2.48	22	P	Pb	10 06 08.1	+1.4
MQZ	McQueen’s Vall	2.48	210	P	Pn	10 06 00.6	-1.5
TUVZ	Tukino	2.50	24	P	Pb	10 06 08.1	+1.2
AKCZ	Akaroa Harbour	2.54	204	P	Pn	10 06 01.9	-1.0
NGZ	Ngauruhoe	2.57	22	P	Pb	10 06 09.8	+1.7
KAHZ	Kahuranaki	2.61	48	P	Pn	10 06 03.9	0.0
WTVZ	West Tongariro	2.62	22	P	Pb	10 06 10.8	+1.8
TWVZ	Taurewa	2.62	19	P	Pg	10 06 11.3	-1.3
KRVZ	Karewarewa	2.66	22	P	Pb	10 06 11.3	+1.7
KATZ	Kakaramea	2.78	22	P	Pb	10 06 13.8	+2.1
BKZ	Black Stump Fm	2.90	35	P	Pb	10 06 15.1	+1.3
HIZ	Hauiti	3.07	7	P	Pb	10 06 17.4	+0.8
WVZ	Waitaha Valley	3.08	239	P	Pn	10 06 11.2	+1.0
MRHZ	Matea Rd	3.15	31	P	Pb	10 06 17.6	-0.4
RPZ	Rata Peaks	3.25	227	P	Pn	10 06 12.9	+0.3
MTHZ	Maungataniwha	3.31	36	P	Pb	10 06 20.0	-0.7
FOZ	Fox Glacier	3.88	238	P	Pn	10 06 23.6	+2.3
URZ	Urewera	3.92	34	P	Pb	10 06 28.8	-2.3
LBZ	Lake Benmore	4.16	226	P	Pn	10 06 26.2	+1.0
ODZ	Otahua Downs	4.41	217	P	Pn	10 06 27.5	-1.0
RUGZ	Raukumara Rang	4.41	37	P	Pb	10 06 35.1	-4.4
HHSZ	Highcliff Hill	5.10	211	P	Pn	10 06 37.5	-0.6
TUZ	Tuapeka	5.56	216	P	Pn	10 06 44.4	0.0
SYZ	Scrubby Hill	6.23	215	P	Pn	10 06 53.5	-0.1
CTZ	Chatham Island	7.01	111	P	Pn	10 07 03.9	-0.3
ASAR	Alice Springs	38.05	285	P	P	10 12 39.1	-1.0
	0.2nm,0.4s,baz=126,slow=7.5,SNR=4.7						
WRA	Warramunga Arr	40.11	290	P	P	10 12 56.4	-1.0
	0.4nm,0.3s,baz=130,slow=8.4,SNR=6.3						
TORD	Torodi Ar. Bea	150.97	195	PKPbc	PKPbc	10 25 15.1	+0.4
	0.2nm,0.6s,baz=157,slow=3.1,SNR=3.2						

*SOME **21** 10:08:12.5, 40°.77N×80°.08E, h10^{km}*

NNC 21 10:08:16.0±6.8**, 40°.69N**×**79°.33E, h0**^{km}**, mb3.6, mpv3.2, 2C-1D, Error ellipse: s-maj=97.8km s-min=46.6km az=86.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	2.46	344	Pg	Pb	10 09 00.8	-0.4
	9.0nm,0.3s						
SATY				Lg	Lg	10 09 36.1	
	13nm,0.5s						
SATY	Saty	2.46	344	⇓*i*P	Pb	10 09 00.8	-0.4
	8.5nm,0.3s						
SATY				*e*S	Sg	10 09 35.7	+0.6
	15nm,0.5s						
UZB	Uzynbulak	2.46	355	Pg	Pn	10 08 58.5	+0.9
	3.4nm,0.3s						
UZB				Lg	Lg	10 09 32.0	
	6.6nm,0.5s						
UZB	Uzynbulak	2.46	355	*e*P	Pn	10 08 58.5	+0.9
	2.0nm,0.4s						
UZB				*e*S	Sb	10 09 31.6	-0.6
	7.1nm,0.5s						
PDGK	Podgornoye	2.64	3	Pg	Pn	10 09 01.3	+1.4
	4.0nm,0.4s						
PDGK				Lg	Lg	10 09 36.6	
	3.4nm,0.6s						
PDGK	Podgornoye	2.64	3	⇑Pn	Pn	10 09 00.8	+0.9
	4.4nm,0.4s						
PDGK				⇑Sn	Sb	10 09 35.2	-2.0
	5.7nm,0.6s						
KTMS	Ketmen	2.85	15	Pg	Pn	10 09 02.2	-0.7
	8.6nm,0.3s						
KTMS				Lg	Lg	10 09 38.1	
	8.6nm,0.5s						
KTMS	Ketmen	2.85	15	*e*P	Pn	10 09 02.2	-0.7
	8.6nm,0.3s						
KTMS				*e*S	Sn	10 09 38.1	+0.1
	18nm,0.6s						
MNBS	Baschi	3.45	349	Pg	Pb	10 09 18.4	+0.3
	2.6nm,0.3s						
MNBS	Baschi	3.45	349	*e*P	Pb	10 09 18.4	+0.3
	2.6nm,0.3s						
MNBS				*e*S	Sg	10 10 05.8	-1.0
	5.0nm,0.4s						
CHKK	Chushkaly	3.60	332	*e*P	Pb	10 09 22.1	+1.5
	1.6nm,0.3s						
CHKK				*e*S	Sg	10 10 11.9	+0.1
	6.2nm,0.4s						

WEL 21 10:10:28.2, 42°S±2°×**17°4E**±°**, h20**^{km}±2^{km}**, M3.3**/43**, ML3.7**/7**, MLv3.3**/43**, Error ellipse: s-maj=0.0km s-min=0.0km az=134.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.17	217	P	Pb	10 10 33.5	-0.3
TUWZ	Tuamarina	0.36	300	P	Pb	10 10 36.1	+0.3
BSWZ	Blackbirch Sta	0.38	254	P	Pb	10 10 37.1	+1.0
TCW	Tory Channel	0.40	351	P	Pb	10 10 36.5	0.0
BHW	Baring Head	0.44	63	P	Pb	10 10 37.7	+0.5
WEL	Wellington	0.45	44	P	Pb	10 10 37.8	+0.5
PLWZ	Palliser	0.68	87	P	Pn	10 10 42.5	-0.2
MSWZ	Moikau Station	0.70	74	P	Pn	10 10 42.6	-0.3
CAW	Cannon Point	0.73	47	P	Pb	10 10 42.8	+0.5
NNZ	Nelson	0.83	298	P	Pn	10 10 44.5	-0.2
PAWZ	Paruwai Farm	0.84	75	P	Pn	10 10 45.1	+0.3
DUWZ	D’Urville Isla	0.87	338	P	Pn	10 10 45.0	-0.3
MTW	Mount Morrison	0.97	63	P	Pn	10 10 47.4	+0.7
OGWZ	Otaki Gorge	1.00	38	P	Pn	10 10 47.3	+0.2
KHZ	Kahutara	1.01	217	P	Pn	10 10 48.6	+1.5
TRWZ	Traveller	1.02	78	P	Pn	10 10 48.0	+0.6
THZ	Tophouse	1.10	262	P	Pb	10 10 49.6	+1.1
HOWZ	Holdsworth Sta	1.13	51	P	Pb	10 10 49.9	+0.9
TMWZ	Te Maipa	1.26	67	P	Pb	10 10 51.3	+0.1
MRZ	Mangatainoka R	1.32	45	P	Pb	10 10 52.5	+0.2
TIWZ	Tintock	1.42	55	P	Pb	10 10 53.6	-0.4
CPWZ	Castlepoint	1.56	64	P	Pb	10 11 01.2	+4.9
OHWZ	Ohakea	1.58	28	P	Pb	10 10 58.2	+1.6
QRZ	Quartz Range	1.58	299	P	Pb	10 10 57.1	+0.3
PRWZ	Pori Road	1.61	50	P	Pb	10 10 56.8	-0.5
POWZ	Post Office Ro	1.62	42	P	Pb	10 10 58.0	+0.6
GVZ	Greta Valley S	1.67	215	P	Pb	10 10 57.4	-0.9
BFZ	Birch Farm	1.70	58	P	Pn	10 10 57.4	+0.6
DVHZ	Dannevirke	1.90	47	P	Pb	10 11 04.3	+2.2
WAZ	Wanganui	1.91	15	P	Pb	10 11 04.3	+1.9
LTZ	Lake Taylor	1.94	232	P	Pb	10 11 01.5	-1.4

ANWZ	Angora Road	1.97	55	P	Pb	10 11 02.1	-1.3
AMCZ	Amberley	2.01	218	P	Pn	10 11 01.8	+0.9
PNHZ	Pukenui	2.20	40	P	Pn	10 11 04.5	+1.0
WPHZ	Waipukurau	2.21	46	P	Pb	10 11 10.8	+3.4
NMEZ	Namu Road	2.22	350	P	Pb	10 11 10.6	+3.0
PREZ	Palmer Road	2.27	356	P	Pb	10 11 11.0	+2.5
OKCZ	Okains Bay	2.32	204	P	Pn	10 11 05.3	+0.1
KHEZ	Kahui Hut	2.33	353	P	Pb	10 11 12.0	+2.5
CRLZ	Canterbury Las	2.34	213	P	Pn	10 11 06.0	+0.5
NBEZ	Newall Road No	2.37	351	P	Pb	10 11 12.9	+2.8
MTVZ	Mangateitei	2.38	21	P	Pb	10 11 11.8	+1.4
DREZ	Durham Road	2.42	357	P	Pb	10 11 13.9	+2.9
OXZ	Oxford	2.42	224	P	Pn	10 11 07.3	+0.7
PKE	Pukeiti	2.43	353	P	Pb	10 11 13.7	+2.5
INZ	Inchbonnie	2.43	242	P	Pn	10 11 08.6	+1.8
PKVZ	Pokaka	2.44	18	P	Pb	10 11 13.4	+2.1
MQZ	McQueen's Vall	2.44	210	P	Pn	10 11 06.3	-0.5
MOVZ	Moawhango	2.44	26	P	Pb	10 11 12.4	+0.9
PXZ	Pawanui	2.47	51	P	Pb	10 11 13.2	+1.3
BHHZ	Black Hill Sta	2.49	32	P	Pb	10 11 13.3	+1.1
KRHZ	Kereru	2.49	39	P	Pn	10 11 08.9	+1.3
AKCZ	Akaroa Harbour	2.50	205	P	Pn	10 11 07.7	0.0
VRZ	Vera Road	2.50	7	P	Pb	10 11 14.0	+1.6
WHVZ	Whangaehu Hut	2.51	22	P	Pb	10 11 14.0	+1.3
FWVZ	Far West T-bar	2.52	22	P	Pb	10 11 14.1	+1.2
TUVZ	Tukino	2.54	23	P	Pb	10 11 14.5	+1.4
NGZ	Ngauruhoe	2.61	22	P	Pb	10 11 15.6	+1.3
KAHZ	Kahuranaki	2.64	47	P	Pn	10 11 09.8	+0.2
WTVZ	West Tongariro	2.66	21	P	Pb	10 11 16.6	+1.4
TWVZ	Taurewa	2.67	18	P	Pb	10 11 17.2	+1.9
KRVZ	Karewarewa	2.70	22	P	Pb	10 11 17.1	+1.3
KATZ	Kakaramea	2.82	22	P	Pb	10 11 20.0	+2.0
BKZ	Black Stump Fm	2.94	34	P	Pb	10 11 21.4	+1.5
HIZ	Hauiti	3.12	7	P	Pb	10 11 23.5	+0.6
ODZ	Otahua Downs	4.37	217	P	Pn	10 11 33.6	+0.2

IDC ***21*** *10:27:13.5±9.6, 41°.53S×174°.15E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.7/14, mbtmp3.7/2, Error ellipse: s-maj=580.1km s-min=47.6km az=34.0*

ISCJB ***21*** *10:27:16.1±0.8, 41°.76S±0°.04×174°.22E±0°.04, h5km±6km, mb3.5/2, Error ellipse: s-maj=6.7km s-min=4.6km az=142.7*

WEL ***21*** *10:27:16.3, 42°S±1°×174°.3E±0°.8, h11km±2km, M4.2/10, ML4.6/7, MLv4.2/10, Error ellipse: s-maj=0.0km s-min=0.0km az=170.4*

ISC 21 10:27:16.2±1.0, 41°.63S±0°.03×174°.23E±0°.03, h18km±5km, n60, σ1§27/62, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	186	P	Pg	10 27 20.1	0.0
CMWZ				S	Sg	10 27 23.0	+0.3
TUWZ	Tuamarina	0.29	313	P	Pb	10 27 23.2	+0.2
TUWZ				S	Sb	10 27 28.0	+0.5
TCW	Tory Channel	0.42	5	P	Pb	10 27 25.2	+0.1
NNZ	Nelson	0.76	302	P	Pg	10 27 31.2	+0.1
PLWZ	Palliser	0.77	86	P	Pb	10 27 32.0	+0.8
CAW	Cannon Point	0.82	51	P	Pb	10 27 32.5	+0.6
DUWZ	D'Urville Isla	0.86	344	P	Pg	10 27 31.4	-1.5
DUWZ				S	Sb	10 27 45.1	+1.2
PAWZ	Paruwai Farm	0.93	75	P	Pn	10 27 34.8	+0.3
KHZ	Kahutara	0.94	213	P	Pb	10 27 34.9	+0.8
THZ	Tophouse	1.00	262	P	Pg	10 27 35.5	-0.2
MTW	Mount Morrison	1.06	64	P	Pn	10 27 37.1	+0.8
OGWZ	Otaki Gorge	1.08	41	P	Pn	10 27 37.0	+0.5
TRWZ	Traveller	1.12	79	P	Pb	10 27 37.0	0.0
HOWZ	Holdsworth Sta	1.21	53	P	Pg	10 27 39.5	-0.2
TMWZ	Te Maipa	1.35	68	P	Pb	10 27 41.4	+0.3
MRZ	Mangatainoka R	1.40	47	P	Pb	10 27 41.9	0.0
TIWZ	Tintock	1.51	56	P	Pb	10 27 44.2	+0.4
QRZ	Quartz Range	1.51	301	P	Pb	10 27 44.4	+0.6
GVZ	Greta Valley S	1.61	213	P	Pn	10 27 43.7	0.0
OHWZ	Ohakea	1.64	30	P	Pg	10 27 47.2	-0.6
POWZ	Post Office Ro	1.70	44	P	Pb	10 27 47.0	0.0
PRWZ	Pori Road	1.70	51	P	Pn	10 27 46.2	+1.2
BFZ	Birch Farm	1.79	59	P	Pn	10 27 41.2	-5.1
WAZ	Wanganui	1.96	17	P	Pg	10 27 52.9	-1.0
DVHZ	Dannevirke	1.98	48	P	Pn	10 27 49.1	+0.2
ANWZ	Angora Road	2.06	56	P	Pn	10 27 51.1	+1.1
NMEZ	Namu Road	2.23	353	P	Pg	10 27 58.0	-1.0
KHEZ	Kahui Hut	2.34	356	P	Pb	10 27 59.2	+1.3
INZ	Inchbonnie	2.34	241	P	Pn	10 27 54.7	+0.8
PKVZ	Pokaka	2.49	20	P	Pb	10 27 59.9	-0.6
VRZ	Vera Road	2.53	9	P	Pb	10 28 00.4	-0.8
BHHZ	Black Hill Sta	2.55	34	P	Pb	10 28 02.3	+0.7
DRZ	Dome Shelter	2.56	24	P	Pb	10 28 03.1	+1.3
FWVZ	Far West T-bar	2.58	23	P	Pb	10 28 02.5	+0.4
TUVZ	Tukino	2.60	25	P	Pb	10 28 02.6	+0.3
TWVZ	Taurewa	2.72	20	P	Pb	10 28 04.6	+0.3
WTVZ	West Tongariro	2.72	23	P	Pb	10 28 05.5	+1.1
KRVZ	Karewarewa	2.75	24	P	Pb	10 28 06.1	+1.1
KWHZ	Kaweka Forest	2.76	38	P	Pb	10 28 07.0	+1.8
KATZ	Kakaramea	2.88	23	P	Pb	10 28 08.2	+1.0
MCHZ	McNeill Hill	2.88	42	P	Pb	10 28 07.4	+0.3
RITZ	Rihia Road	2.93	26	P	Pb	10 28 08.9	+1.0
WVZ	Waitaha Valley	2.97	240	P	Pn	10 28 04.6	+2.2
RATZ	Rangitukua	3.00	24	P	Pb	10 28 10.9	+1.7
BKZ	Black Stump Fm	3.01	36	P	Pn	10 27 56.7	-6.3
BKZ				P	Pb	10 28 10.7	+1.5
HATZ	Hinemaiaia	3.08	28	P	Pb	10 28 11.6	+1.0
RPZ	Rata Peaks	3.14	227	P	Pn	10 28 04.3	-0.5
WATZ	Wairara	3.14	22	P	Pb	10 28 12.6	+1.1
HIZ	Hauiti	3.15	9	P	Pb	10 28 09.6	-2.1
ARHZ	Aropaoanui	3.17	43	P	Pn	10 28 06.7	+1.5
MRHZ	Matea Rd	3.25	32	P	Pb	10 28 14.7	+1.2
RAHZ	Arahi	3.48	40	P	Pb	10 28 14.0	-3.3
PRRZ	Plateau Road	3.54	29	P	Pb	10 28 16.5	-1.8
RAGZ	Rawiri	3.97	39	P	Pn	10 28 20.1	+3.7
LBZ	Lake Benmore	4.05	226	P	Pn	10 28 17.8	+0.4
TKGZ	Te Karaka	4.22	42	P	Pb	10 28 26.1	-4.0
ODZ	Otahua Downs	4.30	216	P	Pn	10 28 19.5	-1.3
ASAR	Alice Springs	37.98	285	P	P	10 34 32.3	-1.0
	0.4nm,0.5s,baz=126,slow=8.2,SNR=5.8						
WRA	Warramunga Arr	40.05	290	P	P	10 34 49.6	-0.9
	1.2nm,0.7s,baz=130,slow=8.4,SNR=5.5						
TORD	Torodi Ar. Bea	150.89	195	PKPbc	PKPbc	10 47 08.3	+0.2
	0.3nm,0.5s,baz=153,slow=2.7,SNR=5.2						

WEL 21 10:32:56.9, 41°.6S±0°.9×17°4E±°, h8km±1km, M3.4/42, ML3.6/31, MLv3.4/42, Error ellipse: s-maj=0.0km s-min=0.0km az=109.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	202	P	Pg	10 33 01.4	+0.9
TUWZ	Tuamarina	0.31	301	P	Pg	10 33 03.9	+0.8
BSWZ	Blackbirch Sta	0.34	249	P	Pg	10 33 04.0	+0.4
TCW	Tory Channel	0.38	357	P	Pb	10 33 05.2	-0.7
BHW	Baring Head	0.47	67	P	Pb	10 33 06.9	-0.3
WEL	Wellington	0.47	49	P	Pb	10 33 07.0	-0.3
PLWZ	Palliser	0.72	89	P	Pb	10 33 11.9	+0.3
MSWZ	Moikau Station	0.73	76	P	Pb	10 33 11.9	0.0
CAW	Cannon Point	0.75	50	P	Pb	10 33 12.1	0.0
NNZ	Nelson	0.79	298	P	Pg	10 33 12.2	+0.1
DUWZ	D'Urville Isla	0.84	340	P	Pb	10 33 13.9	+0.2
PAWZ	Paruwai Farm	0.87	76	P	Pb	10 33 14.7	+0.4
KHZ	Kahutara	1.00	214	P	Pg	10 33 16.0	-0.1
MTW	Mount Morrison	1.00	65	P	Pb	10 33 16.3	-0.1
OGWZ	Otaki Gorge	1.01	41	P	Pg	10 33 16.5	+0.1
THZ	Tophouse	1.06	260	P	Pg	10 33 17.1	-0.1
TRWZ	Traveller	1.06	80	P	Pg	10 33 17.2	0.0
HOWZ	Holdsworth Sta	1.15	53	P	Pn	10 33 19.5	+0.3
TMWZ	Te Maipa	1.29	68	P	Pn	10 33 20.7	-0.5
MRZ	Mangatainoka R	1.34	46	P	Pn	10 33 21.5	-0.4
TIWZ	Tintock	1.45	56	P	Pg	10 33 29.1	+4.5
QRZ	Quartz Range	1.54	299	P	Pb	10 33 25.8	+0.2
OHWZ	Ohakea	1.58	29	P	Pg	10 33 31.5	+4.3
CPWZ	Castlepoint	1.59	65	P	Pg	10 33 33.8	+6.5
PRWZ	Pori Road	1.63	51	P	Pg	10 33 28.8	+0.6
GVZ	Greta Valley S	1.67	214	P	Pn	10 33 25.1	-1.2
BFZ	Birch Farm	1.73	59	P	Pg	10 33 30.8	+0.8
WAZ	Wanganui	1.91	16	P	Pg	10 33 34.4	+0.9
DVHZ	Dannevirke	1.91	48	P	Pg	10 33 33.4	-0.2
LTZ	Lake Taylor	1.92	231	P	Pn	10 33 29.2	-0.7
AMCZ	Amberley	2.00	217	P	Pb	10 33 32.3	-1.2
PNHZ	Pukenui	2.21	41	P	Pg	10 33 38.7	-0.5
PREZ	Palmer Road	2.25	357	P	Pg	10 33 40.8	+0.8
KHEZ	Kahui Hut	2.31	354	P	Pg	10 33 41.4	+0.3
OKCZ	Okains Bay	2.32	203	P	Pn	10 33 36.0	+0.7
CRLZ	Canterbury Las	2.34	211	P	Pn	10 33 36.4	+0.9
NBEZ	Newall Road No	2.34	352	P	Pg	10 33 41.6	-0.1
MTVZ	Mangateitei	2.38	22	P	Pg	10 33 42.0	-0.5
INZ	Inchbonnie	2.41	241	P	Pb	10 33 39.3	-1.1
PKE	Pukeiti	2.41	354	P	Pg	10 33 42.8	-0.2
OXZ	Oxford	2.41	223	P	Pn	10 33 37.5	+0.9
PKVZ	Pokaka	2.43	19	P	Pg	10 33 42.9	-0.6
MOVZ	Moawhango	2.45	27	P	Pb	10 33 41.6	+0.5
VRZ	Vera Road	2.49	8	P	Pg	10 33 43.4	-1.2
BHHZ	Black Hill Sta	2.49	33	P	Pb	10 33 42.7	+0.8
AKCZ	Akaroa Harbour	2.50	204	P	Pn	10 33 38.4	+0.7
KRHZ	Kereru	2.50	40	P	Pb	10 33 42.8	+0.7
FWVZ	Far West T-bar	2.52	23	P	Pg	10 33 44.4	-0.8
TUVZ	Tukino	2.54	24	P	Pb	10 33 43.4	+0.7
NGZ	Ngauruhoe	2.61	23	P	Pb	10 33 44.8	+0.8
WTVZ	West Tongariro	2.66	22	P	Pb	10 33 45.4	+0.6
KRVZ	Karewarewa	2.70	23	P	Pb	10 33 46.2	+0.8
KATZ	Kakaramea	2.82	23	P	Pb	10 33 48.9	+1.3
BKZ	Black Stump Fm	2.94	35	P	Pb	10 33 50.8	+1.2
WVZ	Waitaha Valley	3.03	240	P	Pb	10 33 52.1	+1.1
HIZ	Hauiti	3.10	8	P	Pb	10 33 52.7	+0.4
RPZ	Rata Peaks	3.20	227	P	Pn	10 33 49.2	+1.8
URZ	Urewera	3.97	34	P	Pn	10 34 01.9	+4.0
LBZ	Lake Benmore	4.11	226	P	Pn	10 34 02.9	+2.9
ODZ	Otahua Downs	4.36	216	P	Pn	10 34 04.0	+0.6
AWAZ	Awhitu Peninsu	4.53	3	P	Pb	10 34 13.7	-2.9
JCZ	Jackson Bay	4.75	237	P	Pb	10 34 15.2	-5.2

WEL 21 10:36:08.5±0.1, 42°S±2°×17°4E±°, h12km±1km, M3.6/38, ML3.8/38, MLv3.6/38, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	210	P	Pb	10 36 15.2	+1.1
CMWZ				S	Sg	10 36 19.5	+3.6
TUWZ	Tuamarina	0.34	296	P	Pb	10 36 16.4	0.0
TUWZ				S	Sb	10 36 21.5	-0.3
TCW	Tory Channel	0.37	352	P	Pb	10 36 16.9	-0.2
TCW				S	Sb	10 36 21.9	-0.9
BSWZ	Blackbirch Sta	0.38	249	P	Pb	10 36 17.5	+0.3
BSWZ				S	Sb	10 36 23.7	+0.7
BHW	Baring Head	0.43	67	P	Pb	10 36 18.0	0.0
BHW				S	Sb	10 36 24.3	-0.1
WEL	Wellington	0.43	47	P	Pb	10 36 18.0	-0.1
PLWZ	Palliser	0.68	90	P	Pb	10 36 22.8	+0.5
MSWZ	Moikau Station	0.70	77	P	Pb	10 36 23.0	+0.4
CAW	Cannon Point	0.72	49	P	Pb	10 36 22.9	0.0
NNZ	Nelson	0.81	296	P	Pb	10 36 24.8	+0.2
PAWZ	Paruwai Farm	0.83	77	P	Pn	10 36 25.6	-0.5
DUWZ	D'Urville Isla	0.84	337	P	Pb	10 36 25.2	+0.2
MTW	Mount Morrison	0.96	65	P	Pn	10 36 27.6	-0.2
OGWZ	Otaki Gorge	0.98	39	P	Pb	10 36 27.4	-0.1
TRWZ	Traveller	1.02	80	P	Pg	10 36 28.2	0.0
KHZ	Kahutara	1.03	215	P	Pn	10 36 29.0	+0.2
THZ	Tophouse	1.10	260	P	Pn	10 36 29.9	+0.2
HOWZ	Holdsworth Sta	1.11	53	P	Pg	10 36 30.1	+0.2
TMWZ	Te Maipa	1.25	68	P	Pn	10 36 31.5	-0.4
MRZ	Mangatainoka R	1.31	46	P	Pb	10 36 32.8	-0.2
TIWZ	Tintock	1.41	56	P	Pn	10 36 33.9	-0.1
CPWZ	Castlepoint	1.55	65	P	Pg	10 36 40.5	+2.3
OHWZ	Ohakea	1.56	28	P	Pg	10 36 38.0	-0.3
QRZ	Quartz Range	1.56	298	P	Pb	10 36 37.4	0.0
PRWZ	Pori Road	1.60	51	P	Pn	10 36 36.5	0.0
POWZ	Post Office Ro	1.60	43	P	Pn	10 36 37.0	+0.4
BFZ	Birch Farm	1.69	59	P	Pn	10 36 37.2	-0.7
GVZ	Greta Valley S	1.70	215	P	Pn	10 36 37.7	-0.2
DVHZ	Dannevirke	1.88	48	P	Pn	10 36 40.2	-0.3
WAZ	Wanganui	1.89	15	P	Pg	10 36 44.3	-0.4
LTZ	Lake Taylor	1.96	231	P	Pn	10 36 41.7	+0.1
ANWZ	Angora Road	1.96	56	P	Pn	10 36 41.5	0.0
AMCZ	Amberley	2.03	218	P	Pn	10 36 42.0	-0.6
LREZ	Lake Rotokare	2.12	1	P	Pb	10 36 47.9	+1.2
PRHZ	Porangahau	2.17	54	P	Pn	10 36 45.0	+0.6
PNHZ	Pukenui	2.18	41	P	Pn	10 36 44.4	-0.2
NMEZ	Namu Road	2.19	350	P	Pb	10 36 49.1	+1.1
WPHZ	Waipukurau	2.19	47	P	Pn	10 36 45.6	+0.9
PREZ	Palmer Road	2.24	356	P	Pb	10 36 48.7	-0.2
KHEZ	Kahui Hut	2.30	354	P	Pb	10 36 49.6	-0.3
NBEZ	Newall Road No	2.34	351	P	Pb	10 36 50.5	-0.1
OKCZ	Okains Bay	2.34	203	P	Pn	10 36 45.6	-1.3
MTVZ	Mangateitei	2.35	22	P	Pb	10 36 52.0	+1.1
CRLZ	Canterbury Las	2.37	212	P	Pn	10 36 46.2	-1.0
DREZ	Durham Road	2.39	357	P	Pb	10 36 51.0	-0.4
PKE	Pukeiti	2.40	353	P	Pb	10 36 50.2	-1.4
PKVZ	Pokaka	2.41	19	P	Pb	10 36 52.5	+0.7
MOVZ	Moawhango	2.42	27	P	Pb	10 36 51.8	-0.2
INZ	Inchbonnie	2.44	241	P	Pn	10 36 48.6	+0.4
OXZ	Oxford	2.44	224	P	Pn	10 36 47.1	-1.1
PXZ	Pawanui	2.46	52	P	Pn	10 36 48.2	-0.2
BHHZ	Black Hill Sta	2.46	33	P	Pn	10 36 50.0	+1.5
MQZ	McQueen's Vall	2.47	210	P	Pn	10 36 46.6	-1.8
KRHZ	Kereru	2.47	39	P	Pn	10 36 48.2	-0.5
VRZ	Vera Road	2.47	7	P	Pb	10 36 51.7	-1.1
DRZ	Dome Shelter	2.48	22	P	Pg	10 36 55.8	-0.3
WHVZ	Whangaehu Hut	2.48	23	P	Pb	10 36 53.5	+0.3
FWVZ	Far West T-bar	2.50	22	P	Pb	10 36 53.7	+0.3
MHEZ	Mangahewa	2.50	360	P	Pg	10 36 57.1	+0.7
TUVZ	Tukino	2.51	24	P	Pb	10 36 53.0	-0.7
AKCZ	Akaroa Harbour	2.53	204	P	Pn	10 36 47.9	-1.4
NGZ	Ngauruhoe	2.58	22	P	Pb	10 36 55.4	+0.6
KAHZ	Kahuranaki	2.62	48	P	Pn	10 36 50.4	-0.3
WTVZ	West Tongariro	2.64	21	P	Pb	10 36 56.4	+0.6
TWVZ	Taurewa	2.64	19	P	Pb	10 36 56.3	+0.5
KRVZ	Karewarewa	2.67	22	P	Pb	10 36 56.6	+0.2
KWHZ	Kaweka Forest	2.67	37	P	Pb	10 36 57.7	+1.4
MCHZ	McNeill Hill	2.78	41	P	Pb	10 36 58.1	0.0
KATZ	Kakaramea	2.80	22	P	Pb	10 36 59.5	+1.0
RITZ	Rihia Road	2.84	24	P	Pb	10 37 00.9	+1.7
BKZ	Black Stump Fm	2.91	35	P	Pb	10 36 58.7	-1.7
RATZ	Rangitukua	2.92	22	P	Pg	10 37 02.5	-2.0
WATZ	Wairara	3.06	21	P	Pb	10 37 04.4	+1.5
WVZ	Waitaha Valley	3.07	240	P	Pn	10 36 57.1	+0.3
ARHZ	Aropaoanui	3.07	42	P	Pn	10 36 58.5	+1.7
HIZ	Hauiti	3.09	7	P	Pb	10 37 01.3	-2.0
MRHZ	Matea Rd	3.17	31	P	Pb	10 37 03.3	-1.4
RPZ	Rata Peaks	3.23	228	P	Pn	10 36 58.5	-0.6
MTHZ	Maungataniwha	3.33	36	P	Pb	10 37 06.3	-1.1
TLZ	Tolley Road	3.37	16	P	Pb	10 37 06.5	-1.8
PRGZ	Paritu Road	3.79	47	P	Pb	10 37 11.1	-4.2
MKRZ	Makatiti	3.80	26	P	Pn	10 37 10.0	+3.0
FOZ	Fox Glacier	3.88	238	P	Pn	10 37 09.6	+1.7
RIGZ	Rimuhau	3.88	43	P	Pn	10 37 12.3	+4.2
URZ	Urewera	3.94	34	P	Pn	10 37 10.7	+2.0
TOZ	Tahuroa Road	3.94	13	P	Pn	10 37 13.3	+4.5
MWZ	Matawai	4.06	38	P	Pn	10 37 09.4	-1.0
LBZ	Lake Benmore	4.15	226	P	Pn	10 37 11.8	+0.1
ODZ	Otahua Downs	4.39	217	P	Pn	10 37 13.7	-1.3
TWGZ	Tauwhareparae	4.40	41	P	Pb	10 37 20.8	-4.9
RUGZ	Raukumara Rang	4.43	36	P	Pn	10 37 18.0	+2.4
MKAZ	Moumakai	4.51	8	P	Pn	10 37 20.2	+3.6
AWAZ	Awhitu Peninsu	4.51	3	P	Pn	10 37 19.5	+2.8
ETAZ	East Tamaki Re	4.64	6	P	Pn	10 37 21.9	+3.6
HAZ	Te Kaha	4.65	36	P	Pn	10 37 23.4	+5.0
PKGZ	Pakihiroa	4.67	39	P	Pn	10 37 20.6	+1.7
JCZ	Jackson Bay	4.79	237	P	Pn	10 37 24.1	+3.6
RVAZ	Riverhead Bore	4.80	2	P	Pn	10 37 23.6	+3.0
WIAZ	Waiheke Island	4.82	8	P	Pn	10 37 25.8	+5.0
MBAZ	Motutapu North	4.82	5	P	Pn	10 37 24.5	+3.6
KUZ	Kuaotunu	4.94	13	P	Pb	10 37 30.0	-4.9
HHSZ	Highcliff Hill	5.09	211	P	Pn	10 37 23.8	-0.8
TUZ	Tuapeka	5.55	216	P	Pn	10 37 30.6	-0.3
SYZ	Scrubby Hill	6.22	215	P	Pn	10 37 39.7	-0.3
CTZ	Chatham Island	7.00	111	P	Pn	10 37 49.9	-0.8

IDC 21 10:40:48.6±2.8, 4°.19S×135°.06E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.6/21, mbtmp3.8/4, ML3.4/2, Error ellipse: s-maj=147.1km s-min=28.2km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.68	183	Pn	Pn	10 44 30.1	-1.0
	0.1nm,0.3s,baz=1.2,slow=12,SNR=3.9						
WRA				Sn	Sn	10 47 11.3	-14
	0.1nm,0.3s,baz=2.4,slow=24,SNR=3.5						
ASAR	Alice Springs	19.40	183	P	P	10 45 16.9	+0.4
	0.3nm,0.3s,baz=8.2,slow=11,SNR=37						
MKAR	Makanchi Array	68.78	324	P	P	10 51 55.1	+0.4
	0.4nm,0.7s,baz=112,slow=6.9,SNR=3.6						
ZALV	Zalesovo Beam	71.42	331	P	P	10 52 10.4	-0.3
	0.5nm,0.4s,baz=125,slow=7.6,SNR=3.1						

SJA ***21*** *10:49:00.6±0.3, 24°.16S×66°.97W, h208km±3km, ML2.2, MW2.6*

ISCJB ***21*** *10:49:02.6±0.5, 24°.18S±0°.05×67°.07W±0°.04, h181km, Error ellipse: s-maj=7.7km s-min=5.2km az=15.7*

GUC ***21*** *10:49:02.5±0.5, 24°.20S×67°.52W, h237km±23km, ML3.7*

ISC 21 10:49:02.9±1.2, 24°.19S±0°.07×67°.07W±0°.04, h181km, n11, σ1§11/19, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.52	111	*e*P	Pn	10 49 37.1	+1.9
SLA				*e*S	Sn	10 50 00.8	+0.5
FSA	Cafayete	2.15	153	*e*P	Pn	10 49 41.8	-0.1
FSA				IAML		10 49 44.8	
	comp=Z,6.5nm,0.3s						
FSA				*e*S	Sn	10 50 12.7	+0.5
YJA	Yavi	2.46	36	*e*P	Pn	10 49 45.4	-0.3
YJA				IAML		10 49 46.1	
	comp=Z,4.6nm,0.4s						
YJA				*e*S	Sn	10 50 18.5	-0.3
GO02	Mina Guanaco	2.49	247	⇑*i*P	Pn	10 49 47.1	+1.3
GO02				*i* S	Sn	10 50 21.2	+1.9
GO02				IAML		10 50 22.8	
	comp=N,306nm,0.1s						
AHML	Horco Molle	3.02	149	*e*P	Pn	10 49 51.4	-0.5
AHML				IAML		10 49 52.6	
	comp=Z,10nm,0.4s						
PB14	IPOC Station P	3.07	261	*e*P	Pn	10 49 52.8	+0.1
PB14				*e*S	Sn	10 50 31.4	-0.2
PB14				IAML		10 50 35.3	
	comp=E,74nm,0.5s						
PB05	IPOC Station P	3.17	294	⇑*e*P	Pn	10 49 54.0	+0.2
PB05				*e*S	Sn	10 50 31.3	-2.1
PB10	IPOC Station P	3.26	281	*e*P	Pn	10 49 55.2	+0.4
PB10				*e*S	Sn	10 50 35.6	+0.4
PB10	IPOC Station P	3.26	281	*e*P	Pn	10 49 55.2	+0.4
PB10				*e*S	Sn	10 50 34.3	-1.0
PB10				IAML		10 50 38.1	
	comp=E,76nm,0.3s						
CYA	Choya	4.39	165	*e*P	Pn	10 50 08.3	-0.6
TCA	Tanti	7.45	163	*e*P	Pn	10 50 47.1	-1.8

MEX 21 10:53:35.0±0.7, 16°.51N×98°.23W, h15km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.09	343	*e*P	Pb	10 53 52.2	-3.5
TLIG				*i* S	Sb	10 54 05.6	-4.3
VHO	Vista Hermosa	1.54	69	*i* P	Pn	10 53 57.8	-4.3
VHO				*i* S	Sn	10 54 16.8	-5.2
CAIG	El Cayaco	2.02	286	*i* P	Pn	10 54 04.6	-3.9
CAIG				*i* S	Sn	10 54 28.3	-5.2
HUIG	Huatulco	2.17	110	*i* P	Pn	10 54 07.1	-3.5
HUIG				*i* S	Sn	10 54 32.6	-4.7

WEL 21 10:55:37.0, 42°S±2°×17°4E±°, h13km±2km, M3.4/36, ML3.7/37, MLv3.4/36, Error ellipse: s-maj=0.0km s-min=0.0km az=135.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.24	214	P	Pb	10 55 42.8	-0.3
TCW	Tory Channel	0.35	346	P	Pb	10 55 44.7	-0.3
TUWZ	Tuamarina	0.36	290	P	Pb	10 55 44.7	-0.5
BHW	Baring Head	0.39	69	P	Pb	10 55 45.5	-0.2
WEL	Wellington	0.39	47	P	Pb	10 55 45.6	-0.1
BSWZ	Blackbirch Sta	0.42	247	P	Pg	10 55 45.7	+0.4
PLWZ	Palliser	0.65	92	P	Pb	10 55 50.2	+0.1
MSWZ	Moikau Station	0.66	78	P	Pb	10 55 50.4	+0.1
CAW	Cannon Point	0.68	49	P	Pb	10 55 50.6	0.0
PAWZ	Paruwai Farm	0.80	78	P	Pb	10 55 52.9	+0.2
DUWZ	D'Urville Isla	0.83	335	P	Pn	10 55 54.0	-0.3
NNZ	Nelson	0.83	293	P	Pb	10 55 53.2	-0.1
MTW	Mount Morrison	0.92	65	P	Pn	10 55 55.3	-0.3
OGWZ	Otaki Gorge	0.94	39	P	Pb	10 55 55.2	+0.1
TRWZ	Traveller	0.99	82	P	Pn	10 55 56.3	-0.3
HOWZ	Holdsworth Sta	1.07	53	P	Pn	10 55 58.1	+0.4
KHZ	Kahutara	1.07	216	P	Pb	10 55 57.5	+0.1
THZ	Tophouse	1.13	259	P	Pg	10 55 58.7	-0.1
TMWZ	Te Maipa	1.21	69	P	Pn	10 55 59.5	-0.2
MRZ	Mangatainoka R	1.26	46	P	Pb	10 56 00.8	+0.2
TIWZ	Tintock	1.37	56	P	Pb	10 56 02.5	0.0
CPWZ	Castlepoint	1.51	65	P	Pg	10 56 08.6	+2.7
OHWZ	Ohakea	1.52	28	P	Pg	10 56 06.3	+0.2
PRWZ	Pori Road	1.56	51	P	Pn	10 56 04.9	+0.5
POWZ	Post Office Ro	1.56	42	P	Pg	10 56 07.4	+0.6
QRZ	Quartz Range	1.58	297	P	Pg	10 56 06.9	-0.4
BFZ	Birch Farm	1.65	59	P	Pn	10 56 06.0	+0.4
GVZ	Greta Valley S	1.74	215	P	Pn	10 56 06.5	-0.3
DVHZ	Dannevirke	1.84	48	P	Pn	10 56 08.9	+0.6
WAZ	Wanganui	1.85	14	P	Pg	10 56 12.7	+0.3
ANWZ	Angora Road	1.92	56	P	Pn	10 56 10.4	+1.1
LTZ	Lake Taylor	2.00	231	P	Pn	10 56 10.5	-0.1
AMCZ	Amberley	2.07	218	P	Pn	10 56 10.6	-0.9
PNHZ	Pukenui	2.14	41	P	Pn	10 56 13.3	+0.9
WPHZ	Waipukurau	2.15	47	P	Pg	10 56 17.9	-0.3
NMEZ	Namu Road	2.17	349	P	Pg	10 56 19.0	+0.4
PREZ	Palmer Road	2.21	355	P	Pg	10 56 20.1	+0.7
KHEZ	Kahui Hut	2.27	353	P	Pg	10 56 20.6	+0.1
MTVZ	Mangateitei	2.31	21	P	Pg	10 56 20.6	-0.7
NBEZ	Newall Road No	2.31	350	P	Pg	10 56 22.4	+1.0
DREZ	Durham Road	2.36	356	P	Pg	10 56 22.1	-0.2
PKE	Pukeiti	2.37	352	P	Pg	10 56 22.8	+0.3
PKVZ	Pokaka	2.37	18	P	Pb	10 56 20.8	+1.2
MOVZ	Moawhango	2.38	26	P	Pb	10 56 20.3	+0.6
OKCZ	Okains Bay	2.38	204	P	Pn	10 56 14.1	-1.6
PXZ	Pawanui	2.41	52	P	Pb	10 56 20.6	+0.4
BHHZ	Black Hill Sta	2.42	32	P	Pb	10 56 21.4	+0.9
KRHZ	Kereru	2.43	39	P	Pn	10 56 16.5	+0.1
KRHZ				P	Pb	10 56 20.9	+0.3
VRZ	Vera Road	2.44	7	P	Pg	10 56 22.8	-0.9
WHVZ	Whangaehu Hut	2.44	22	P	Pb	10 56 22.2	+1.3
FWVZ	Far West T-bar	2.46	22	P	Pb	10 56 22.3	+1.1
TUVZ	Tukino	2.48	23	P	Pb	10 56 19.9	-1.5
INZ	Inchbonnie	2.49	241	P	Pn	10 56 17.8	+0.7
OXZ	Oxford	2.49	224	P	Pn	10 56 15.9	-1.3
MQZ	McQueen's Vall	2.51	210	P	Pn	10 56 15.2	-2.2
NGZ	Ngauruhoe	2.55	22	P	Pb	10 56 23.8	+1.2
AKCZ	Akaroa Harbour	2.56	205	P	Pn	10 56 16.7	-1.6
KAHZ	Kahuranaki	2.58	48	P	Pn	10 56 19.3	+0.8
WTVZ	West Tongariro	2.60	21	P	Pb	10 56 24.7	+1.2
TWVZ	Taurewa	2.60	18	P	Pb	10 56 25.1	+1.5
KWHZ	Kaweka Forest	2.63	37	P	Pg	10 56 27.0	-0.4
KRVZ	Karewarewa	2.63	22	P	Pb	10 56 25.2	+1.1
KATZ	Kakaramea	2.76	22	P	Pb	10 56 27.8	+1.6
RITZ	Rihia Road	2.81	24	P	Pg	10 56 29.2	-1.5
BKZ	Black Stump Fm	2.87	35	P	Pb	10 56 29.5	+1.4
HIZ	Hauiti	3.06	7	P	Pb	10 56 31.7	+0.5
RPZ	Rata Peaks	3.28	228	P	Pn	10 56 27.7	-0.4
TLZ	Tolley Road	3.34	16	P	Pb	10 56 36.7	+0.7
MWZ	Matawai	4.02	38	P	Pn	10 56 38.0	-0.2
LBZ	Lake Benmore	4.19	226	P	Pn	10 56 41.3	+0.7
ODZ	Otahua Downs	4.43	217	P	Pn	10 56 42.4	-1.5

WEL 21 10:58:27.8, 42°S±1°×17°4E±°, h5km±1km, M3.5/41, ML3.8/38, MLv3.5/41, Error ellipse: s-maj=0.0km s-min=0.0km az=130.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	204	P	Pg	10 58 30.9	+0.8
BSWZ	Blackbirch Sta	0.30	257	P	Pg	10 58 34.4	+0.6
TUWZ	Tuamarina	0.33	312	P	Pb	10 58 35.3	-1.0
TCW	Tory Channel	0.44	0	P	Pb	10 58 37.4	-0.7
BHW	Baring Head	0.51	62	P	Pb	10 58 39.2	-0.1
WEL	Wellington	0.52	46	P	Pg	10 58 33.6	-4.3
WEL				P	Pb	10 58 39.3	-0.2
PLWZ	Palliser	0.74	84	P	Pb	10 58 43.9	+0.7
MSWZ	Moikau Station	0.77	73	P	Pb	10 58 44.1	+0.3
NNZ	Nelson	0.80	302	P	Pg	10 58 43.5	+0.4
CAW	Cannon Point	0.81	48	P	Pb	10 58 44.4	+0.1

DUWZ	**D'Urville Isla**	**0.89**	**343**	P	Pn	10 58 46.8	-0.2
PAWZ	**Paruwai Farm**	**0.91**	**73**	P	Pn	10 58 47.1	-0.2
KHZ	**Kahutara**	**0.94**	**215**	P	Pb	10 58 47.0	+0.4
THZ	**Tophouse**	**1.03**	**263**	P	Pb	10 58 47.9	-0.3
MTW	**Mount Morrison**	**1.05**	**62**	P	Pn	10 58 48.9	-0.3
OGWZ	**Otaki Gorge**	**1.07**	**39**	P	Pb	10 58 49.1	+0.2
TRWZ	**Traveller**	**1.09**	**77**	P	Pg	10 58 49.0	+0.2
HOWZ	**Holdsworth Sta**	**1.20**	**52**	P	Pn	10 58 51.8	+0.5
TMWZ	**Te Maipa**	**1.33**	**67**	P	Pn	10 58 52.7	-0.5
MRZ	**Mangatainoka R**	**1.40**	**45**	P	Pn	10 58 54.0	+0.1
TIWZ	**Tintock**	**1.50**	**55**	P	Pg	10 58 56.6	+0.1
QRZ	**Quartz Range**	**1.55**	**301**	P	Pg	10 58 57.6	+0.1
GVZ	**Greta Valley S**	**1.60**	**214**	P	Pn	10 58 57.4	+0.5
CPWZ	**Castlepoint**	**1.63**	**64**	P	Pg	10 59 02.4	+3.3
OHWZ	**Ohakea**	**1.65**	**29**	P	Pg	10 58 59.9	+0.5
PRWZ	**Pori Road**	**1.69**	**50**	P	Pn	10 58 58.4	+0.4
POWZ	**Post Office Ro**	**1.69**	**42**	P	Pg	10 59 04.6	+4.4
BFZ	**Birch Farm**	**1.78**	**58**	P	Pg	10 59 04.3	+2.4
LTZ	**Lake Taylor**	**1.87**	**232**	P	Pn	10 59 00.5	-0.1
AMCZ	**Amberley**	**1.94**	**218**	P	Pg	10 59 06.3	+1.2
DVHZ	**Dannevirke**	**1.97**	**47**	P	Pg	10 59 05.8	+0.2
WAZ	**Wanganui**	**1.97**	**16**	P	Pg	10 59 05.8	+0.2
OKCZ	**Okains Bay**	**2.26**	**203**	P	Pn	10 59 04.1	-1.7
PNHZ	**Pukenui**	**2.27**	**41**	P	Pb	10 59 09.2	-0.1
OXZ	**Oxford**	**2.35**	**224**	P	Pb	10 59 11.5	+0.8
INZ	**Inchbonnie**	**2.36**	**242**	P	Pb	10 59 10.0	-0.8
MQZ	**McQueen's Vall**	**2.38**	**210**	P	Pn	10 59 08.3	+0.8
NBEZ	**Newall Road No**	**2.40**	**352**	P	Pg	10 59 14.8	+1.0
AKCZ	**Akaroa Harbour**	**2.44**	**204**	P	Pb	10 59 11.1	-1.1
MTVZ	**Mangateitei**	**2.44**	**22**	P	Pg	10 59 14.4	-0.2
DREZ	**Durham Road**	**2.46**	**359**	P	Pg	10 59 16.0	+1.1
PKE	**Pukeiti**	**2.46**	**355**	P	Pg	10 59 14.5	-0.5
MOVZ	**Moawhango**	**2.51**	**27**	P	Pb	10 59 13.3	-0.1
VRZ	**Vera Road**	**2.55**	**9**	P	Pg	10 59 15.7	-1.0
BHHZ	**Black Hill Sta**	**2.55**	**33**	P	Pb	10 59 14.6	+0.4
WHVZ	**Whangaehu Hut**	**2.57**	**23**	P	Pb	10 59 15.1	+0.6
FWVZ	**Far West T-bar**	**2.58**	**23**	P	Pb	10 59 15.8	+1.0
TUVZ	**Tukino**	**2.60**	**24**	P	Pb	10 59 15.2	+0.1
NGZ	**Ngauruhoe**	**2.67**	**23**	P	Pb	10 59 17.3	+1.1
WTVZ	**West Tongariro**	**2.72**	**22**	P	Pg	10 59 19.1	-1.0
KRVZ	**Karewarewa**	**2.76**	**23**	P	Pb	10 59 18.6	+0.9
KWHZ	**Kaweka Forest**	**2.76**	**37**	P	Pg	10 59 19.6	-1.1
WVZ	**Waitaha Valley**	**2.98**	**240**	P	Pb	10 59 20.4	-1.0
BKZ	**Black Stump Fm**	**3.00**	**35**	P	Pb	10 59 23.2	+1.3
RPZ	**Rata Peaks**	**3.14**	**228**	P	Pn	10 59 20.4	+2.3
HIZ	**Hauiti**	**3.17**	**8**	P	Pb	10 59 24.6	0.0
MWZ	**Matawai**	**4.15**	**38**	P	Pn	10 59 30.9	-1.0
AWAZ	**Awhitu Peninsu**	**4.59**	**4**	P	Pn	10 59 41.4	+3.6
JCZ	**Jackson Bay**	**4.70**	**237**	P	Pn	10 59 43.3	+3.8
WTAZ	**Waiatarua**	**4.72**	**3**	P	Pn	10 59 37.9	-1.7
RVAZ	**Riverhead Bore**	**4.88**	**3**	P	Pn	10 59 45.7	+3.9
CTZ	**Chatham Island**	**7.03**	**110**	P	Pn	11 00 10.2	-1.2

*ISCJB **21** 11:00:25.5±1.3,24°.5S±0°.1×179°.9W±0°.2,h500^{km},mb3.6/4, Error ellipse: s-maj=25.1km s-min=15.2km az=178.6*

*IDC **21** 11:00:25.2±5.8,24°.58S×179°.79W,h487^{km}±62^{km},mb3.2/5, mb1 3.5/6,mb1mx3.0/32,mbtmp4.2/6,Error ellipse: s-maj=40.9km s-min=24.6km az=29.0*

ISC 21 11:00:25.7±1.0**,24°.6S**±0°.1×**179°.8W**±0°.2**,h500**^{km}**,n11,** σ**1ˢ.04**/12**,mb3.6**/4**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.86**	**190**	P	**P**	**11 03 22.8**	**-1.0**
	1.5nm,0.3s,baz=45,slow=2.9,SNR=10						
URZ				S	**S**	**11 05 50.7**	**+0.1**
	0.6nm,0.3s,baz=86,slow=15,SNR=9.3						
RPZ	**Rata Peaks**	**20.48**	**199**	P	**P**	**11 04 28.9**	**+0.3**
	8.8nm,0.6s,baz=357,slow=0.4,SNR=5.1						
STKA	**Stephens Creek**	**34.66**	**249**	P	**P**	**11 06 33.9**	**+1.0**
	0.8nm,0.3s,baz=103,slow=12,SNR=3.8						
ASAR	**Alice Springs**	**42.13**	**261**	P	**P**	**11 07 34.2**	**+0.4**
	1.3nm,0.8s,baz=95,slow=6.8,SNR=30						
WRA	**Warramunga Arr**	**42.57**	**267**	P	**P**	**11 07 36.9**	**-0.4**
	2.4nm,0.4s,baz=92,slow=8.7,SNR=26						
TXAR	**Lajitas Array**	**90.63**	**58**	P	**P**	**11 12 36.1**	**+1.3**
	0.3nm,0.7s,baz=214,slow=7.0,SNR=5.7						
ARCES	**ARCESS Array B**	**132.63**	**348**	PKP	**PKPdf**	**11 18 42.3**	**-0.1**
	0.7nm,0.6s,baz=1.9,slow=2.7,SNR=3.4						
FINES	**FINESS Array B**	**139.19**	**341**	PKhKP	PKPpre	11 18 46.7	
	1.4nm,0.9s,baz=96,slow=1.4,SNR=3.0						
FINES				PKP	**PKPdf**	**11 18 53.0**	**-1.7**
	3.1nm,1.1s,baz=51,slow=2.2,SNR=3.4						
AKASG	**Malin Array Be**	**145.69**	**327**	PKPbc	**PKPbc**	**11 19 07.1**	**-0.9**
	0.3nm,0.3s,baz=46,slow=4.2,SNR=4.3						
BRTR	**Keskin Array B**	**148.17**	**306**	PKPbc	**PKiKP**	**11 19 15.4**	**-1.1**
	0.5nm,0.6s,baz=112,slow=5.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**168.51**	**187**	PKPab	**PKPab**	**11 20 48.8**	**+0.7**
	0.4nm,0.6s,baz=165,slow=6.0,SNR=4.0						

*ISK **21** 11:07:02.7,38°.80N×43°.16E,h12^{km},ML2.7/4*

*ISCJB **21** 11:07:03.9±0.7,38°.74N±0°.03×43°.11E±0°.07,h3^{km}±11^{km}, Error ellipse: s-maj=9.8km s-min=4.8km az=160.2*

*DDA **21** 11:07:03.1,38°.70N×43°.06E,h7^{km}±3^{km},ML3.4*

ISC 21 11:07:03.0±1.3**,38°.75N**±0°.03×**43°.13E**±0°.03**,h5**^{km}±13^{km}**, n13,**σ**0ˢ.73**/18**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.25**	**126**	PG	**Pb**	**11 07 10.0**	**-0.1**
VANB				SG	**Sb**	**11 07 15.6**	**+0.8**
TVAN	**Van**	**0.31**	**135**	*i* P	**Pg**	**11 07 10.0**	**+1.1**
TVAN				*i* S	**Sb**	**11 07 15.3**	**-1.2**
TVAN				IAML_P			
	comp=Z,18μm,0.1s						
ERCV	**ERCIS-VAN**	**0.32**	**31**	PG	**Pg**	**11 07 08.5**	**-0.7**
VMUR	**Van-Muradiye**	**0.42**	**55**	*i* P	**Pb**	**11 07 13.8**	**+0.7**
VMUR				IAML_P			
	comp=Z,6μm,0.1s						
GEVA	**Gevas**	**0.44**	**187**	*i* P	**Pg**	**11 07 11.4**	**0.0**
GEVA				IAML_P			
	comp=Z,9μm,0.1s						
TUTA	**Tutak**	**0.70**	**340**	*i* P	**Pb**	**11 07 18.0**	**+0.2**
TUTA				*i* S	**Sb**	**11 07 27.8**	**-0.1**
CLDR	**Caldiran**	**0.73**	**57**	PG	**Pg**	**11 07 16.8**	**-0.2**
EATA	**Eleskirt**	**1.22**	**336**	*i* P	**Pn**	**11 07 26.6**	**-0.4**
EATA				*i* S	**Sn**	**11 07 45.0**	**+0.9**
HAKT	**HAKKARI**	**1.27**	**159**	*i* P	**Pn**	**11 07 27.1**	**-0.5**
CUKT	**Cukurca**	**1.54**	**166**	PN	**Pn**	**11 07 30.9**	**-0.3**
BNGL	**BINGOL**	**1.56**	**278**	*i* P	**Pg**	**11 07 33.9**	**+1.1**
SVAN	**Silvan-Diyarba**	**1.63**	**249**	PN	**Pb**	**11 07 32.6**	**-0.9**
BTMN	**Batman**	**1.69**	**240**	*i* P	**Pb**	**11 07 34.5**	**-0.2**
BTMN				*i* S	**Sg**	**11 07 57.3**	**0.0**
BTMN				IAML_P			
	comp=Z,619nm,0.3s						

WEL 21 11:10:46.3,42°S±5°×**17°4E**±°**,h10**^{km}**,M3.4**/17**,ML3.8**/17**, MLv3.4**/17**,Error ellipse: s-maj=0.0km s-min=0.0km az=3.5,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.10**	**176**	P	Pg	11 10 49.4	+0.6
CMWZ				S	Sg	11 10 51.9	+1.3
BSWZ	**Blackbirch Sta**	**0.26**	**256**	P	Pb	11 10 52.8	-0.1
BSWZ				S	Sb	11 10 57.5	0.0
TUWZ	**Tuamarina**	**0.30**	**319**	P	Pb	11 10 53.3	-0.3
TCW	**Tory Channel**	**0.45**	**7**	P	Pb	11 10 55.6	-0.6
TCW				S	Sb	11 11 02.1	-0.9
BHW	**Baring Head**	**0.56**	**64**	P	Pg	11 10 57.4	+0.3
WEL	**Wellington**	**0.56**	**49**	P	Pg	11 10 50.0	-7.1
WEL				P	Pb	11 10 57.4	-0.7
WEL				S	Sb	11 11 06.6	+0.3
NNZ	**Nelson**	**0.76**	**305**	P	Pb	11 11 01.7	+0.1
PLWZ	**Palliser**	**0.79**	**84**	P	Pn	11 11 02.9	-0.6
MSWZ	**Moikau Station**	**0.82**	**73**	P	Pb	11 11 02.5	-0.1
CAW	**Cannon Point**	**0.85**	**50**	P	Pg	11 11 02.7	+0.2
DUWZ	**D'Urville Isla**	**0.88**	**346**	P	Pn	11 11 04.9	+0.2
KHZ	**Kahutara**	**0.91**	**213**	P	Pn	11 11 05.3	+0.3
PAWZ	**Paruwai Farm**	**0.96**	**74**	P	Pn	11 11 05.4	-0.4
THZ	**Tophouse**	**0.98**	**263**	P	Pn	11 11 07.2	+1.1
MTW	**Mount Morrison**	**1.09**	**63**	P	Pn	11 11 07.5	-0.1
OGWZ	**Otaki Gorge**	**1.11**	**41**	P	Pb	11 11 07.0	-0.5
TRWZ	**Traveller**	**1.14**	**78**	P	Pb	11 11 07.4	-0.7
HOWZ	**Holdsworth Sta**	**1.24**	**53**	P	Pg	11 11 10.1	0.0
TMWZ	**Te Maipa**	**1.38**	**67**	P	Pn	11 11 11.5	-0.1
MRZ	**Mangatainoka R**	**1.44**	**47**	P	Pn	11 11 12.3	0.0
QRZ	**Quartz Range**	**1.51**	**303**	P	Pg	11 11 15.2	0.0
TIWZ	**Tintock**	**1.54**	**56**	P	Pb	11 11 14.6	-0.3
GVZ	**Greta Valley S**	**1.57**	**213**	P	Pn	11 11 14.6	+0.4
OHWZ	**Ohakea**	**1.67**	**31**	P	Pb	11 11 17.6	+0.5
CPWZ	**Castlepoint**	**1.68**	**64**	P	Pg	11 11 20.6	+2.2
PRWZ	**Pori Road**	**1.73**	**51**	P	Pn	11 11 16.6	+0.3
POWZ	**Post Office Ro**	**1.73**	**44**	P	Pg	11 11 20.7	+1.3
BFZ	**Birch Farm**	**1.82**	**58**	P	Pb	11 11 19.3	-0.3
LTZ	**Lake Taylor**	**1.83**	**231**	P	Pn	11 11 18.4	+0.6
AMCZ	**Amberley**	**1.91**	**217**	P	Pn	11 11 18.8	0.0
AMCZ				P	Pg	11 11 24.6	+1.8
WAZ	**Wanganui**	**1.99**	**18**	P	Pg	11 11 23.5	-0.8
DVHZ	**Dannevirke**	**2.01**	**48**	P	Pb	11 11 23.6	+0.7
ANWZ	**Angora Road**	**2.09**	**56**	P	Pg	11 11 28.4	+2.1
OKCZ	**Okains Bay**	**2.23**	**202**	P	Pn	11 11 22.3	-1.0
CRLZ	**Canterbury Las**	**2.25**	**211**	P	Pn	11 11 23.2	-0.3
NMEZ	**Namu Road**	**2.25**	**354**	P	Pg	11 11 29.3	-0.1
PNHZ	**Pukenui**	**2.31**	**42**	P	Pb	11 11 28.8	+0.8
PREZ	**Palmer Road**	**2.31**	**359**	P	Pg	11 11 29.6	-0.9
INZ	**Inchbonnie**	**2.31**	**242**	P	Pn	11 11 26.0	+1.6
OXZ	**Oxford**	**2.31**	**223**	P	Pn	11 11 23.8	-0.6
WPHZ	**Waipukurau**	**2.32**	**48**	P	Pg	11 11 31.0	+0.3
MQZ	**McQueen's Vall**	**2.35**	**209**	P	Pn	11 11 23.2	-1.7
KHEZ	**Kahui Hut**	**2.36**	**356**	P	Pg	11 11 30.6	-0.9
NBEZ	**Newall Road No**	**2.40**	**354**	P	Pg	11 11 31.4	-0.8
AKCZ	**Akaroa Harbour**	**2.41**	**203**	P	Pn	11 11 25.4	-0.3
DREZ	**Durham Road**	**2.46**	**360**	P	Pg	11 11 33.2	-0.2
PKE	**Pukeiti**	**2.46**	**356**	P	Pb	11 11 31.1	+0.5
MTVZ	**Mangateitei**	**2.46**	**23**	P	Pb	11 11 32.0	+1.4
PKVZ	**Pokaka**	**2.52**	**21**	P	Pb	11 11 32.0	+0.5
MOVZ	**Moawhango**	**2.54**	**28**	P	Pb	11 11 31.8	-0.1
VRZ	**Vera Road**	**2.56**	**10**	P	Pb	11 11 33.4	+1.2
BHHZ	**Black Hill Sta**	**2.58**	**34**	P	Pb	11 11 32.7	0.0
WHVZ	**Whangaehu Hut**	**2.59**	**24**	P	Pb	11 11 33.6	+0.6
KRHZ	**Kereru**	**2.60**	**40**	P	Pb	11 11 33.8	+0.9
FWVZ	**Far West T-bar**	**2.61**	**24**	P	Pb	11 11 33.8	+0.6
TUVZ	**Tukino**	**2.63**	**25**	P	Pb	11 11 33.5	0.0
NGZ	**Ngauruhoe**	**2.69**	**24**	P	Pb	11 11 35.3	+0.6
WTVZ	**West Tongariro**	**2.75**	**23**	P	Pb	11 11 35.9	+0.4
KRVZ	**Karewarewa**	**2.78**	**24**	P	Pb	11 11 36.8	+0.6
KWHZ	**Kaweka Forest**	**2.80**	**38**	P	Pb	11 11 37.2	+0.9
KATZ	**Kakaramea**	**2.91**	**24**	P	Pb	11 11 39.5	+1.2
WVZ	**Waitaha Valley**	**2.94**	**240**	P	Pb	11 11 38.8	+0.1
RITZ	**Rihia Road**	**2.96**	**26**	P	Pb	11 11 40.3	+1.3
BKZ	**Black Stump Fm**	**3.04**	**36**	P	Pb	11 11 41.2	+0.7
RPZ	**Rata Peaks**	**3.10**	**227**	P	Pn	11 11 35.3	0.0
HIZ	**Hauiti**	**3.18**	**9**	P	Pb	11 11 43.2	+0.4
FOZ	**Fox Glacier**	**3.75**	**238**	P	Pb	11 11 50.6	-1.8
LBZ	**Lake Benmore**	**4.02**	**226**	P	Pn	11 11 49.3	+1.4
ODZ	**Otahua Downs**	**4.27**	**216**	P	Pn	11 11 50.3	-0.9
JCZ	**Jackson Bay**	**4.66**	**237**	P	Pb	11 12 03.9	-4.2
RVAZ	**Riverhead Bore**	**4.89**	**4**	P	Pb	11 12 07.1	-4.8
CTZ	**Chatham Island**	**7.07**	**110**	P	Pn	11 12 28.7	-1.1

MEX 21 11:22:15.9±0.5**,18°.74N**×**103°.50W,h16**^{km}±6^{km}**,MD3.6, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.47**	**162**	*i* P	Pg	11 22 23.6	-1.8
MMIG				*e*S	Sg	11 22 30.5	-1.2
EZ5V		**0.74**	**353**	*e*P	Pg	11 22 28.3	-2.2
EZ5V				*e*S	Sg	11 22 37.2	-3.1
CJM	**Chamela**	**1.64**	**298**	*e*P	Pn	11 22 40.7	-3.5
CJM				*i* S	Sn	11 23 00.1	-4.9

MEX 21 11:25:38.5±0.5**,16°.21N**×**98°.06W,h13**^{km}±11^{km}**,MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**1.43**	**340**	*e*P	Pn	11 26 00.5	-3.8
TLIG				*e*S	Sn	11 26 18.1	-5.0
VHO	**Vista Hermosa**	**1.53**	**56**	*e*P	Pn	11 26 02.2	-3.5
VHO				*i* S	Sn	11 26 20.8	-4.9
HUIG	**Huatulco**	**1.93**	**103**	*i* P	Pn	11 26 07.9	-3.1
HUIG				*i* S	Sn	11 26 30.4	-4.7

*ISCJB **21** 11:27:33.0±1.0,20°.20S±0°.04×69°.1W±0°.1,h109^{km}±8^{km}, Error ellipse: s-maj=15.8km s-min=5.7km az=174.7*

*GUC **21** 11:27:33.3±0.7,20°.20S×69°.06W,h99^{km}±4^{km},ML2.8*

ISC 21 11:27:34.2±1.9**,20°.19S**±0°.04×**69°.1W**±0°.1**,h98**^{km}±11^{km}**, n17,**σ**0ˢ.59**/27**,2C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.09**	**303**	⇓*i*P	**Pn**	**11 27 47.9**	**-0.5**
PB08				*e*S	**Sn**	**11 27 59.2**	**+0.2**
PB08				IAML		11 28 01.8	
	comp=N,353nm,0.2s						
GO01	**Chusmiza**	**0.53**	**348**	⇓*i*P	**Pn**	**11 27 50.1**	**-0.5**
GO01				*e*S	**Sn**	**11 28 03.1**	**+0.3**
GO01				IAML		11 28 04.1	
	comp=N,871nm,0.1s						
PB11	**IPOC Station P**	**0.69**	**308**	*e*P	**Pn**	**11 27 51.1**	**-0.4**
PB11				*e*S	**Sn**	**11 28 05.0**	**+0.4**
PB11				IAML		11 28 05.6	
	comp=N,532nm,0.2s						
PB01	**IPOC Station P**	**0.93**	**204**	⇓*i*P	**Pn**	**11 27 53.4**	**-0.5**
PB01				*e*S	**Sn**	**11 28 08.9**	**+0.3**
PB01				IAML		11 28 09.9	
	comp=E,301nm,0.2s						
PSGC	**Pisagua**	**1.15**	**301**	⇑*i*P	**Pn**	**11 27 55.6**	**-0.7**
PSGC				*e*S	**Sn**	**11 28 13.0**	**+0.1**
PSGC				IAML		11 28 14.3	
	comp=N,256nm,0.2s						
MNMC	**Minye Minye**	**1.16**	**335**	⇓*i*P	**Pn**	**11 27 56.6**	**0.0**
MNMC				*e*S	**Sn**	**11 28 14.0**	**+0.6**
PB02	**IPOC Station P**	**1.36**	**214**	*e*P	**Pn**	**11 27 58.7**	**-0.1**
PB02				*e*S	**Sn**	**11 28 18.9**	**+1.5**
PB02	**IPOC Station P**	**1.36**	**214**	⇑*i*P	**Pn**	**11 27 58.4**	**-0.4**
PB02				*e*S	**Sn**	**11 28 17.6**	**+0.2**
PB02				IAML		11 28 21.2	
	comp=E,172nm,0.3s						
PB09	**IPOC Station P**	**1.61**	**186**	*e*P	**Pn**	**11 28 01.7**	**-0.1**
PB07	**IPOC Station P**	**1.71**	**206**	*e*P	**Pn**	**11 28 02.7**	**-0.4**
PB07				*e*S	**Sn**	**11 28 25.9**	**+0.8**
PB16	**IPOC Station P**	**1.89**	**347**	*e*P	**Pn**	**11 28 05.9**	**+0.1**
PB03	**IPOC Station P**	**1.96**	**199**	*e*P	**Pn**	**11 28 05.9**	**-0.4**
PB12	**IPOC Station P**	**1.96**	**323**	*e*P	**Pn**	**11 28 05.5**	**-0.9**
PB12				*e*S	**Sn**	**11 28 31.6**	**+0.7**
PB04	**IPOC Station P**	**2.36**	**205**	*e*P	**Pn**	**11 28 11.0**	**-0.6**
LVC	**Limon Verde**	**2.41**	**176**	*e*P	**Pn**	**11 28 12.0**	**-0.5**
LVC				IAML		11 28 54.3	
	comp=Z,5.4nm,0.2s						
PB06	**IPOC Station P**	**2.55**	**190**	*e*P	**Pn**	**11 28 13.4**	**-0.7**
PB05	**IPOC Station P**	**2.85**	**201**	*e*P	**Pn**	**11 28 17.5**	**-0.5**

MEX 21 11:27:55.8±0.6**,16°.35N**×**98°.11W,h16**^{km}±11^{km}**,MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**1.28**	**340**	*e*P	Pn	11 28 15.6	-3.5
TLIG				*e*S	Sb	11 28 30.4	-5.5
VHO	**Vista Hermosa**	**1.50**	**61**	*e*P	Pn	11 28 18.1	-4.1
VHO				*i* S	Sn	11 28 36.6	-4.9
HUIG	**Huatulco**	**2.01**	**107**	*i* P	Pn	11 28 25.7	-3.3
HUIG				*i* S	Sn	11 28 48.8	-5.1

WEL 21 11:33:31.8,41°S±5°×**17°5E**±°**,h5**^{km}±1^{km}**,M3.5**/44**, ML3.7**/43**,MLv3.5**/44**,Error ellipse: s-maj=0.0km s-min=0.0km az=168.5,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHW	**Baring Head**	**0.17**	**64**	P	Pg	11 33 36.2	+1.0
WEL	**Wellington**	**0.21**	**22**	P	Pg	11 33 35.6	-0.4
TCW	**Tory Channel**	**0.40**	**313**	P	Pg	11 33 33.1	-6.5
MSWZ	**Moikau Station**	**0.45**	**82**	P	Pb	11 33 41.8	-0.4
PLWZ	**Palliser**	**0.45**	**101**	P	Pb	11 33 41.8	-0.5
CAW	**Cannon Point**	**0.48**	**39**	P	Pg	11 33 40.7	-0.4
TUWZ	**Tuamarina**	**0.55**	**275**	P	Pg	11 33 33.2	-9.1
PAWZ	**Paruwai Farm**	**0.58**	**80**	P	Pb	11 33 44.3	-0.2
MTW	**Mount Morrison**	**0.71**	**63**	P	Pb	11 33 46.1	-0.5
OGWZ	**Otaki Gorge**	**0.77**	**30**	P	Pg	11 33 44.9	-1.6
TRWZ	**Traveller**	**0.78**	**84**	P	Pn	11 33 48.7	-0.7
HOWZ	**Holdsworth Sta**	**0.87**	**48**	P	Pg	11 33 48.0	-0.5
DUWZ	**D'Urville Isla**	**0.88**	**320**	P	Pg	11 33 42.3	-6.4
TMWZ	**Te Maipa**	**1.00**	**68**	P	Pg	11 33 51.1	+0.1
NNZ	**Nelson**	**1.00**	**285**	P	Pg	11 33 43.1	-8.0
MRZ	**Mangatainoka R**	**1.07**	**40**	P	Pg	11 33 50.9	-1.5
TIWZ	**Tintock**	**1.16**	**53**	P	Pg	11 33 52.9	-1.2
CPWZ	**Castlepoint**	**1.29**	**64**	P	Pg	11 33 59.1	+2.5
PRWZ	**Pori Road**	**1.36**	**47**	P	Pn	11 33 55.3	-2.1
OHWZ	**Ohakea**	**1.37**	**21**	P	Pn	11 33 55.3	-2.2
POWZ	**Post Office Ro**	**1.37**	**38**	P	Pn	11 33 56.1	-1.6
BFZ	**Birch Farm**	**1.44**	**57**	P	Pn	11 33 56.9	-1.7
DVHZ	**Dannevirke**	**1.64**	**44**	P	Pn	11 34 01.4	0.0
ANWZ	**Angora Road**	**1.71**	**54**	P	Pb	11 34 03.5	-0.3
QRZ	**Quartz Range**	**1.74**	**291**	P	Pn	11 33 55.4	-7.3
WAZ	**Wanganui**	**1.74**	**8**	P	Pn	11 34 01.2	-1.5
GVZ	**Greta Valley S**	**1.91**	**219**	P	Pn	11 34 02.0	-3.1
PRHZ	**Porangahau**	**1.93**	**52**	P	Pn	11 34 04.0	-1.3
PNHZ	**Pukenui**	**1.96**	**37**	P	Pn	11 34 03.8	-1.8
WPHZ	**Waipukurau**	**1.96**	**44**	P	Pg	11 34 08.8	-0.5
NMEZ	**Namu Road**	**2.15**	**344**	P	Pn	11 34 07.5	-0.8
PREZ	**Palmer Road**	**2.17**	**350**	P	Pn	11 34 08.5	-0.2
MTVZ	**Mangateitei**	**2.19**	**17**	P	Pn	11 34 09.4	+0.6
LTZ	**Lake Taylor**	**2.20**	**233**	P	Pn	11 34 04.2	-4.9
PXZ	**Pawanui**	**2.21**	**50**	P	Pn	11 34 10.2	+1.0
MOVZ	**Moawhango**	**2.23**	**22**	P	Pn	11 34 09.2	-0.4
KHEZ	**Kahui Hut**	**2.24**	**347**	P	Pn	11 34 09.4	-0.3
KRHZ	**Kereru**	**2.25**	**36**	P	Pn	11 34 11.2	+1.5
PKVZ	**Pokaka**	**2.25**	**14**	P	Pn	11 34 09.9	+0.1
AMCZ	**Amberley**	**2.26**	**221**	P	Pn	11 34 08.1	-1.7
BHHZ	**Black Hill Sta**	**2.26**	**29**	P	Pn	11 34 10.3	+0.4
NBEZ	**Newall Road No**	**2.29**	**344**	P	Pn	11 34 10.1	-0.2
WHVZ	**Whangaehu Hut**	**2.31**	**18**	P	Pn	11 34 10.8	+0.1
DREZ	**Durham Road**	**2.32**	**351**	P	Pn	11 34 11.7	+1.1
FWVZ	**Far West T-bar**	**2.33**	**17**	P	Pn	11 34 11.1	+0.1
TUVZ	**Tukino**	**2.34**	**19**	P	Pn	11 34 11.5	+0.4
PKE	**Pukeiti**	**2.34**	**347**	P	Pn	11 34 11.2	+0.2
VRZ	**Vera Road**	**2.36**	**2**	P	Pn	11 34 11.1	-0.1
KAHZ	**Kahuranaki**	**2.38**	**46**	P	Pn	11 34 10.0	-1.5
NGZ	**Ngauruhoe**	**2.41**	**18**	P	Pn	11 34 13.0	+0.9
KWHZ	**Kaweka Forest**	**2.46**	**34**	P	Pb	11 34 14.9	-1.6
WTVZ	**West Tongariro**	**2.47**	**17**	P	Pn	11 34 13.7	+0.9
TWVZ	**Taurewa**	**2.48**	**14**	P	Pn	11 34 14.0	+1.0
KRVZ	**Karewarewa**	**2.50**	**18**	P	Pn	11 34 14.3	+1.1
MCHZ	**McNeill Hill**	**2.56**	**38**	P	Pb	11 34 18.9	+0.7
KATZ	**Kakaramea**	**2.63**	**18**	P	Pn	11 34 17.2	+2.2
RITZ	**Rihia Road**	**2.67**	**20**	P	Pb	11 34 17.9	-2.1
MQZ	**McQueen's Vall**	**2.67**	**213**	P	Pn	11 34 11.9	-3.6
OXZ	**Oxford**	**2.68**	**226**	P	Pn	11 34 16.0	+0.4
BKZ	**Black Stump Fm**	**2.70**	**32**	P	Pb	11 34 18.7	-2.0
RATZ	**Rangitukua**	**2.75**	**18**	P	Pb	11 34 19.5	-2.0
WATZ	**Wairara**	**2.89**	**17**	P	Pb	11 34 21.4	-2.5
MRHZ	**Matea Rd**	**2.97**	**27**	P	Pb	11 34 23.5	-1.7
HIZ	**Hauiti**	**2.97**	**3**	P	Pn	11 34 21.5	+1.9
MTHZ	**Maungataniwha**	**3.11**	**33**	P	Pb	11 34 27.1	-0.6
KUTZ	**Kaahu Road**	**3.12**	**17**	P	Pb	11 34 26.1	-1.7
TLZ	**Tolley Road**	**3.22**	**12**	P	Pb	11 34 26.7	-2.9
PRRZ	**Plateau Road**	**3.26**	**25**	P	Pb	11 34 27.9	-2.3
WVZ	**Waitaha Valley**	**3.32**	**240**	P	Pn	11 34 24.8	+0.4
RPZ	**Rata Peaks**	**3.48**	**229**	P	Pn	11 34 27.2	+0.7
MKAZ	**Moumakai**	**4.39**	**5**	P	Pn	11 34 40.6	+1.5
ETAZ	**East Tamaki Re**	**4.53**	**3**	P	Pn	11 34 42.4	+1.4

WEL 21 11:39:56.1,41°S±30°×**17°4E**±1°0**,h141**^{km}±39^{km}**,M3.3**/9**, ML3.6**/5**,MLv3.3**/9**,Error ellipse: s-maj=0.0km s-min=0.0km az=166.3,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NMEZ	**Namu Road**	**1.54**	**349**	P	Pn	11 40 25.7	+0.3
PREZ	**Palmer Road**	**1.59**	**357**	P	Pn	11 40 27.1	+1.1
KHEZ	**Kahui Hut**	**1.65**	**354**	P	Pn	11 40 26.7	0.0
NBEZ	**Newall Road No**	**1.69**	**350**	P	Pn	11 40 27.4	+0.3
DREZ	**Durham Road**	**1.74**	**359**	P	Pn	11 40 30.4	+2.8
PKE	**Pukeiti**	**1.75**	**353**	P	Pn	11 40 27.3	-0.5
NGZ	**Ngauruhoe**	**2.04**	**31**	P	Pn	11 40 31.5	+0.2
TWVZ	**Taurewa**	**2.07**	**27**	P	Pn	11 40 37.4	+5.7
WTVZ	**West Tongariro**	**2.08**	**30**	P	Pn	11 40 32.5	+0.7
KRVZ	**Karewarewa**	**2.12**	**31**	P	Pn	11 40 32.6	+0.3
PXZ	**Pawanui**	**2.19**	**67**	P	Pn	11 40 33.9	+1.0
KWHZ	**Kaweka Forest**	**2.24**	**49**	P	Pn	11 40 34.4	+0.7
RATZ	**Rangitukua**	**2.37**	**30**	P	Pn	11 40 43.2	+7.9
BKZ	**Black Stump Fm**	**2.46**	**45**	P	Pn	11 40 37.3	+0.9
TLZ	**Tolley Road**	**2.78**	**21**	P	Pn	11 40 44.9	+4.5
MTHZ	**Maungataniwha**	**2.88**	**45**	P	Pn	11 40 45.5	+3.9

*IDC **21** 11:41:30.6±1.0,49°.34N×95°.42E,h0^{km},mb3.6/4, mb1 3.4/9,mb1mx3.2/51,mbtmp3.4/9,ML2.7/5,MS2.9/1, Ms1 2.9/1,ms1mx2.2/43,Error ellipse: s-maj=29.9km s-min=13.6km az=14.0*

*ISCJB **21** 11:41:33.3±0.6,49°.18N±0°.05×95°.35E±0°.04,h10^{km}, mb3.4/4,MS3.0/1,Error ellipse: s-maj=6.7km s-min=4.2km az=180.0*

ISC 21 11:41:33.5±0.8**,49°.17N**±0°.07×**95°.36E**±0°.05**,h10**^{km}**,n31,** σ**2ˢ.38**/49**,mb3.4**/4**,Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZLR	**Kyzyl**	**2.61**	**348**	P	**Pn**	**11 42 17.8**	**+2.1**
KZLR				S	**Sn**	**11 42 47.0**	**-0.5**
TDJR	**Todzha**	**3.27**	**8**	P	**Pn**	**11 42 27.2**	**+2.3**
TDJR				S	**Sn**	**11 43 06.7**	**+2.7**
TEL	**Teeli**	**3.81**	**301**	P	**Pn**	**11 42 35.9**	**+3.6**
TEL				S	**Sn**	**11 43 19.3**	**+2.2**
DJOS	**Djoyskaya Sosn**	**4.41**	**327**	P	**Pn**	**11 42 43.5**	**+3.0**
DJOS				S	**Sn**	**11 43 33.5**	**+1.6**
CERR	**Cheremushki**	**4.45**	**328**	P	**Pn**	**11 42 43.5**	**+2.4**
CERR				S	**Sn**	**11 43 34.5**	**+1.6**
DJO	**Djoy, Khakassi**	**4.47**	**326**	P	**Pn**	**11 42 41.8**	**+0.5**
DJO				S	**Sn**	**11 43 35.6**	**+2.3**
CUR	**Chagan-Uzun**	**4.65**	**284**	P	**Pn**	**11 42 46.5**	**+2.6**
CUR				S	**Sn**	**11 43 40.3**	**+2.3**
AKAR	**Aktash**	**5.15**	**286**	P	**Pn**	**11 42 53.5**	**+2.8**
AKAR				S	**Sn**	**11 43 51.7**	**+1.4**
VEH	**Verkhnyaya Baz**	**5.17**	**324**	P	**Pn**	**11 42 49.9**	**-1.2**
VEH				S	**Sn**	**11 43 50.5**	**-0.4**
ABNR	**Abakan**	**5.18**	**333**	P	**Pn**	**11 42 51.5**	**+0.4**
ABNR				S	**Sn**	**11 43 48.8**	**-2.1**
DGZ	**Jazzator, Alta**	**5.20**	**279**	P	**Pn**	**11 42 52.9**	**+1.4**
CHBI	**Chibit, Altay**	**5.22**	**286**	P	**Pn**	**11 42 55.2**	**+3.5**
CHBI				S	**Sn**	**11 43 54.5**	**+2.5**
ZAK	**Zakamensk**	**5.28**	**74**	P	**Pn**	**11 42 54.5**	**+2.0**
ZAK				S	**Sn**	**11 43 56.4**	**+3.1**
ARTR	**Artybash**	**5.79**	**300**	P	**Pn**	**11 43 00.5**	**+1.1**
TASR	**Tashtagol**	**5.94**	**310**	P	**Pn**	**11 43 05.2**	**+3.8**
TASR				S	**Sn**	**11 44 08.6**	**-1.0**
TUNR	**Tungur**	**5.95**	**283**	P	**Pn**	**11 43 05.1**	**+3.4**
TUNR				S	**Sn**	**11 44 13.1**	**+3.2**
ELDR	**Elanda**	**6.30**	**293**	P	**Pn**	**11 43 09.3**	**+2.9**
ELDR				S	**Sn**	**11 44 21.7**	**+3.4**
GALT	**Gorno-Altaysk,**	**6.62**	**299**	P	**Pn**	**11 43 14.0**	**+3.3**
GALT				S	**Sn**	**11 44 27.8**	**+1.6**
ELT	**Eltsovka**	**7.04**	**309**	P	**Pn**	**11 43 18.7**	**+2.0**
ELT				S	**Sn**	**11 44 37.0**	**+0.3**
UKR	**Ust'-Kan**	**7.04**	**289**	S	**Sn**	**11 44 39.2**	**+2.4**
SHTK	**Zheleznogorsk-**	**7.26**	**352**	P	**Pn**	**11 43 21.4**	**+1.8**
SONM	**Songino Array**	**7.45**	**96**	Pn	**Pn**	**11 43 21.2**	**-1.1**
	0.2nm,0.3s,baz=288,slow=13,SNR=2.4						
SONM				Pg	**Pb**	**11 43 45.0**	**+2.1**
	0.7nm,0.3s,baz=284,slow=17,SNR=4.1						
SONM				Lg	Lg	11 45 24.8	
	1.0nm,0.3s,baz=277,slow=26,SNR=3.4						
ZALV	**Zalesovo Beam**	**8.13**	**310**	Pn	**Pn**	**11 43 30.2**	**-1.2**
	0.2nm,0.3s,baz=115,slow=13,SNR=3.1						
ZALV				Pg	**Pb**	**11 43 55.4**	**+1.1**
	0.3nm,0.3s,baz=123,slow=16,SNR=4.2						
ZALV				Lg	Lg	11 45 37.8	
	1.2nm,0.3s,baz=125,slow=28,SNR=5.8						
MKAR	**Makanchi Array**	**9.08**	**260**	Pn	**Pn**	**11 43 44.3**	**-0.4**
	0.1nm,0.3s,baz=78,slow=17,SNR=2.6						
MKAR				Pg		11 44 13.2	
	0.5nm,0.3s,baz=70,slow=19,SNR=8.2						
MKAR				Lg	Lg	11 46 08.6	
	0.5nm,0.3s,baz=69,slow=30,SNR=3.7						
KURBB	**Kurchatov Arra**	**10.96**	**284**	Pn	**Pn**	**11 44 07.1**	**-3.1**
	0.1nm,0.3s,baz=94,slow=15,SNR=2.7						
KURBB				Lg	Lg	11 47 10.1	
	0.1nm,0.3s,baz=92,slow=32,SNR=6.3						
BVAR	**Borovoye Array**	**16.12**	**293**	Pn	**Pn**	**11 45 15.6**	**-4.5**
	0.0nm,0.3s,baz=106,slow=11,SNR=2.1						
ARCES	**ARCESS Array B**	**38.21**	**328**	P	**P**	**11 48 50.7**	**-2.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.7nm,0.6s,baz=76,slow=10,SNR=5.2						
FINES	**FINESS Array B**	**39.36**	**315**	P	**P**	**11 49 00.3**	**-2.3**
	0.2nm,0.3s,baz=91,slow=7.6,SNR=4.5						
BRTR	**Keskin Array B**	**43.94**	**282**	P	**P**	**11 49 38.5**	**-2.1**
	0.8nm,0.7s,baz=76,slow=5.2,SNR=4.9						
VRAC	**Vranov**	**49.15**	**302**	LR	LR	12 11 50.8	
	comp=Z,13nm,18.9s,baz=152,slow=37						
ASAR	**Alice Springs**	**80.24**	**145**	P	**P**	**11 53 43.9**	**-0.3**
	0.2nm,0.6s,baz=350,slow=4.7,SNR=4.1						

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*ISCJB **21** 11:43:33.8±1.3, 17.3°S±0.5°×179.0°W±0.3°, h600km, mb3.8/8, Error ellipse: s-maj=81.9km s-min=14.2km az=150.8*

*IDC **21** 11:43:35.0±5.0, 17.33°S×178.95°W, h602km±60km, mb3.2/8, mb1 3.5/9, mb1mx3.1/38, mbtmp4.2/9, Error ellipse: s-maj=74.7km s-min=23.5km az=149.0*

ISC 21 11:43:34.8±1.4**, 17.4°S**±0.5°×**179.0°W**±0.3°**, h600**km**, n10, σ0.50s**/10**, mb3.7**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.53**	**249**	P	**P**	**11 46 38.6**	**-0.2**
	0.5nm,0.3s,baz=69,slow=17,SNR=4.7						
CTA	**Charters Tower**	**33.03**	**260**	P	**P**	**11 49 22.6**	**+0.2**
	3.0nm,0.9s,baz=95,slow=11,SNR=3.7						
STKA	**Stephens Creek**	**38.45**	**240**	P	**P**	**11 50 06.7**	**-0.2**
	5.2nm,0.7s,baz=86,slow=10,SNR=12						
WRA	**Warramunga Arr**	**44.23**	**259**	P	**P**	**11 50 52.4**	**-0.1**
	1.8nm,0.5s,baz=86,slow=8.5,SNR=19						
ASAR	**Alice Springs**	**44.45**	**254**	P	**P**	**11 50 54.4**	**+0.1**
	18nm,0.6s,baz=89,slow=7.8,SNR=460						
ASAR				PcP	**PcP**	**11 52 25.0**	**+0.5**
	0.5nm,0.5s,baz=99,slow=3.6,SNR=4.6						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**11 54 40.4**	**+0.3**
	0.7nm,0.7s,baz=228,slow=8.9,SNR=7.1						
ILAR	**Eielson Array**	**85.47**	**13**	P	**P**	**11 55 09.8**	**0.0**
	0.3nm,0.4s,baz=222,slow=5.3,SNR=6.6						
TXAR	**Lajitas Array**	**86.14**	**58**	P	**P**	**11 55 14.2**	**+0.3**
	0.6nm,0.7s,baz=180,slow=4.9,SNR=6.2						
PDAR	**Pinedale Array**	**87.31**	**44**	P	**P**	**11 55 18.1**	**-1.1**
	0.5nm,0.6s,baz=250,slow=2.2,SNR=4.0						
BRTR	**Keskin Array B**	**144.03**	**315**	PKP	PKPbc	12 02 01.0	-2.0
	1.5nm,1.1s,baz=99,slow=7.6,SNR=4.3						

WEL 21 11:46:24.6, 42°S±2°×**17°4E**±°**, h5**km±2km**, M3.6**/13**, ML3.9**/13**, MLv3.6**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=113.9, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.11**	**192**	P	Pg	11 46 27.6	+0.8
BSWZ	**Blackbirch Sta**	**0.28**	**256**	P	Pb	11 46 31.1	-1.0
BSWZ				S	Sb	11 46 36.1	-1.2
BHW	**Baring Head**	**0.53**	**64**	P	Pb	11 46 36.3	0.0
BHW				S	Sb	11 46 44.5	+0.3
PLWZ	**Palliser**	**0.76**	**85**	P	Pb	11 46 40.9	+0.6
MSWZ	**Moikau Station**	**0.79**	**74**	P	Pb	11 46 41.0	+0.3
MSWZ				S	Sn	11 46 55.1	+0.6
CAW	**Cannon Point**	**0.82**	**49**	P	Pb	11 46 41.8	+0.6
PAWZ	**Paruwai Farm**	**0.93**	**74**	P	Pg	11 46 39.9	-2.4
KHZ	**Kahutara**	**0.93**	**214**	P	Pn	11 46 43.8	-0.4
THZ	**Tophouse**	**1.01**	**263**	P	Pb	11 46 44.5	0.0
MTW	**Mount Morrison**	**1.06**	**63**	P	Pn	11 46 45.8	-0.3
OGWZ	**Otaki Gorge**	**1.08**	**40**	P	Pb	11 46 46.0	+0.2
TRWZ	**Traveller**	**1.11**	**78**	P	Pg	11 46 45.9	0.0
HOWZ	**Holdsworth Sta**	**1.21**	**53**	P	Pn	11 46 48.3	+0.1
TMWZ	**Te Maipa**	**1.35**	**67**	P	Pn	11 46 49.4	-0.7
TIWZ	**Tintock**	**1.51**	**56**	P	Pb	11 46 52.7	-0.4
QRZ	**Quartz Range**	**1.53**	**302**	P	Pg	11 46 54.1	+0.2
GVZ	**Greta Valley S**	**1.60**	**214**	P	Pn	11 46 53.5	0.0
CPWZ	**Castlepoint**	**1.65**	**64**	P	Pg	11 46 56.9	+0.8
LTZ	**Lake Taylor**	**1.85**	**232**	P	Pn	11 46 57.3	+0.3
WAZ	**Wanganui**	**1.97**	**17**	P	Pg	11 47 01.7	-0.6
DVHZ	**Dannevirke**	**1.98**	**48**	P	Pn	11 46 58.1	-0.6
ANWZ	**Angora Road**	**2.06**	**56**	P	Pn	11 47 01.0	+1.2
LREZ	**Lake Rotokare**	**2.19**	**3**	P	Pg	11 47 06.1	-0.3
NMEZ	**Namu Road**	**2.25**	**353**	P	Pg	11 47 06.8	-0.8
CRLZ	**Canterbury Las**	**2.27**	**211**	P	Pb	11 47 04.6	-1.4
WPHZ	**Waipukurau**	**2.29**	**47**	P	Pb	11 47 07.0	+0.6
PREZ	**Palmer Road**	**2.30**	**358**	P	Pb	11 47 07.2	+0.7
INZ	**Inchbonnie**	**2.34**	**242**	P	Pn	11 47 04.7	+1.0
KHEZ	**Kahui Hut**	**2.35**	**356**	P	Pb	11 47 07.6	+0.1
MQZ	**McQueen's Vall**	**2.37**	**209**	P	Pn	11 47 01.8	-2.3
NBEZ	**Newall Road No**	**2.39**	**353**	P	Pb	11 47 07.8	-0.3
MTVZ	**Mangateitei**	**2.44**	**23**	P	Pb	11 47 09.7	+0.7
DREZ	**Durham Road**	**2.45**	**359**	P	Pb	11 47 08.5	-0.6
PKE	**Pukeiti**	**2.46**	**355**	P	Pb	11 47 07.8	-1.4
PKVZ	**Pokaka**	**2.50**	**20**	P	Pb	11 47 10.8	+0.8
MOVZ	**Moawhango**	**2.51**	**28**	P	Pb	11 47 10.6	+0.4
VRZ	**Vera Road**	**2.55**	**9**	P	Pb	11 47 09.5	-1.2
BHHZ	**Black Hill Sta**	**2.56**	**33**	P	Pb	11 47 11.4	+0.4
MHEZ	**Mangahewa**	**2.57**	**1**	P	Pg	11 47 15.3	+1.6
WHVZ	**Whangaehu Hut**	**2.57**	**24**	P	Pb	11 47 11.8	+0.5
FWVZ	**Far West T-bar**	**2.59**	**23**	P	Pb	11 47 12.0	+0.5
KAHZ	**Kahuranaki**	**2.72**	**48**	P	Pn	11 47 08.2	-0.7
TWVZ	**Taurewa**	**2.73**	**20**	P	Pb	11 47 15.2	+1.3
WTVZ	**West Tongariro**	**2.73**	**23**	P	Pn	11 47 05.0	-4.1
WTVZ				P	Pb	11 47 13.8	0.0
KRVZ	**Karewarewa**	**2.76**	**23**	P	Pb	11 47 15.5	+1.1
KWHZ	**Kaweka Forest**	**2.77**	**38**	P	Pg	11 47 16.4	-1.2
KATZ	**Kakaramea**	**2.89**	**23**	P	Pg	11 47 18.4	-1.5
RITZ	**Rihia Road**	**2.94**	**25**	P	Pb	11 47 18.7	+1.4
WVZ	**Waitaha Valley**	**2.97**	**240**	P	Pb	11 47 15.9	-2.0
RATZ	**Rangitukua**	**3.01**	**23**	P	Pg	11 47 20.7	-1.5
RPZ	**Rata Peaks**	**3.13**	**228**	P	Pn	11 47 16.5	+1.9
HIZ	**Hauiti**	**3.16**	**9**	P	Pb	11 47 18.2	-3.0
KUTZ	**Kaahu Road**	**3.38**	**22**	P	Pb	11 47 27.0	+2.1
MTHZ	**Maungataniwha**	**3.42**	**36**	P	Pb	11 47 24.3	-1.4
TLZ	**Tolley Road**	**3.46**	**17**	P	Pb	11 47 23.3	-2.9
FOZ	**Fox Glacier**	**3.77**	**239**	P	Pb	11 47 27.5	-4.1
TOZ	**Tahuroa Road**	**4.03**	**14**	P	Pn	11 47 31.2	+4.4
URZ	**Urewera**	**4.04**	**34**	P	Pb	11 47 34.5	-1.6
LBZ	**Lake Benmore**	**4.05**	**226**	P	Pn	11 47 31.1	+4.0
MWZ	**Matawai**	**4.16**	**38**	P	Pn	11 47 28.6	-0.1
ODZ	**Otahua Downs**	**4.29**	**216**	P	Pn	11 47 29.4	-1.1
RUGZ	**Raukumara Rang**	**4.53**	**37**	P	Pn	11 47 36.3	+2.5
AWAZ	**Awhitu Peninsu**	**4.58**	**4**	P	Pn	11 47 37.4	+2.9
MKAZ	**Moumakai**	**4.59**	**9**	P	Pn	11 47 38.0	+3.5
JCZ	**Jackson Bay**	**4.69**	**237**	P	Pn	11 47 40.0	+4.0
WTAZ	**Waiatarua**	**4.71**	**3**	P	Pn	11 47 40.6	+4.3
ETAZ	**East Tamaki Re**	**4.71**	**7**	P	Pn	11 47 39.9	+3.7
RVAZ	**Riverhead Bore**	**4.87**	**3**	P	Pn	11 47 41.7	+3.3
WIAZ	**Waiheke Island**	**4.89**	**8**	P	Pn	11 47 42.6	+3.9
MBAZ	**Motutapu North**	**4.89**	**6**	P	Pn	11 47 42.4	+3.6
WCZ	**Waipu Caves**	**5.70**	**1**	P	Pn	11 47 55.6	+5.8
OUZ	**Omahuta**	**6.43**	**355**	P	Pn	11 48 03.3	+3.4
CTZ	**Chatham Island**	**7.05**	**110**	P	Pn	11 48 08.8	+0.4

DJA 21 11:59:24.1±0.6**, 7°S**±4°×**10°6E**±°**, h28**km±5km**, M3.8**/8**, MLv3.8**/8**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.58**	**54**	P	Pn	11 59 36.8	+0.4
SKJI				S	Sn	11 59 45.5	+0.5
CGJI	**Cibinong**	**0.83**	**332**	P	Pb	11 59 40.0	0.0
CGJI				S	Sb	11 59 51.0	+0.2
SBJI	**Serang**	**1.22**	**2**	P	Pn	11 59 45.4	0.0
SBJI				S	Sn	12 00 01.0	0.0
LEM	**Lembang**	**1.60**	**71**	P	Pb	11 59 52.0	-1.2
CISI	**Cisompet, Garu**	**1.72**	**97**	P	Pn	11 59 52.4	+0.1
CISI				S	Sn	12 00 12.9	-0.5
CMJI	**Cimerak**	**2.38**	**101**	P	Pn	12 00 02.5	+1.3
KASI	**Kota Agung**	**2.41**	**319**	P	Pn	12 00 02.0	+0.3
KLSI		**2.97**	**333**	P	Pn	12 00 10.2	+0.8

WEL 21 12:03:02.5, 42°S±1°×**17°4E**±°**, h10**km±3km**, M3.9**/42**, ML4.1**/42**, MLv3.9**/42**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.18**	**245**	P	Pb	12 03 10.4	+2.5
BSWZ	**Blackbirch Sta**	**0.42**	**264**	P	Pb	12 03 13.0	+1.0
BHW	**Baring Head**	**0.42**	**51**	P	Pb	12 03 12.5	+0.5
TUWZ	**Tuamarina**	**0.44**	**303**	P	Pg	12 03 11.6	+0.5
WEL	**Wellington**	**0.46**	**33**	P	Pb	12 03 12.5	-0.2
TCW	**Tory Channel**	**0.48**	**346**	P	Pg	12 03 11.6	-0.2
PLWZ	**Palliser**	**0.62**	**81**	P	Pn	12 03 17.4	-0.1
MSWZ	**Moikau Station**	**0.67**	**67**	P	Pn	12 03 17.5	-0.4
CAW	**Cannon Point**	**0.74**	**40**	P	Pb	12 03 17.4	0.0
PAWZ	**Paruwai Farm**	**0.80**	**69**	P	Pn	12 03 20.0	+0.1
NNZ	**Nelson**	**0.91**	**300**	P	Pg	12 03 20.0	-0.1
DUWZ	**D'Urville Isla**	**0.95**	**336**	P	Pg	12 03 20.3	-0.5
MTW	**Mount Morrison**	**0.95**	**58**	P	Pn	12 03 22.3	+0.4
TRWZ	**Traveller**	**0.98**	**74**	P	Pn	12 03 22.9	+0.6
KHZ	**Kahutara**	**1.00**	**222**	P	Pn	12 03 24.4	+1.9
OGWZ	**Otaki Gorge**	**1.02**	**33**	P	Pg	12 03 21.8	-0.3
HOWZ	**Holdsworth Sta**	**1.13**	**47**	P	Pn	12 03 24.3	0.0
THZ	**Tophouse**	**1.15**	**265**	P	Pn	12 03 25.3	+0.7
TMWZ	**Te Maipa**	**1.23**	**63**	P	Pg	12 03 26.3	+0.1
MRZ	**Mangatainoka R**	**1.33**	**41**	P	Pb	12 03 27.5	0.0
TIWZ	**Tintock**	**1.42**	**51**	P	Pb	12 03 28.9	-0.1
CPWZ	**Castlepoint**	**1.54**	**61**	P	Pg	12 03 32.5	+0.6
OHWZ	**Ohakea**	**1.61**	**25**	P	Pb	12 03 32.5	+0.2
PRWZ	**Pori Road**	**1.61**	**47**	P	Pn	12 03 31.3	+0.4
POWZ	**Post Office Ro**	**1.63**	**39**	P	Pn	12 03 31.7	+0.5
GVZ	**Greta Valley S**	**1.66**	**218**	P	Pb	12 03 33.2	+0.1
QRZ	**Quartz Range**	**1.67**	**300**	P	Pb	12 03 32.5	-0.7
BFZ	**Birch Farm**	**1.69**	**55**	P	Pn	12 03 32.3	+0.3
DVHZ	**Dannevirke**	**1.90**	**44**	P	Pn	12 03 34.6	-0.3
LTZ	**Lake Taylor**	**1.95**	**235**	P	Pb	12 03 37.2	-0.9
ANWZ	**Angora Road**	**1.96**	**53**	P	Pn	12 03 36.1	+0.3
WAZ	**Wanganui**	**1.96**	**13**	P	Pb	12 03 37.7	-0.6
AMCZ	**Amberley**	**2.00**	**221**	P	Pn	12 03 37.5	+1.2
PRHZ	**Porangahau**	**2.18**	**51**	P	Pn	12 03 39.1	+0.3
LREZ	**Lake Rotokare**	**2.21**	**359**	P	Pb	12 03 42.2	-0.3
PNHZ	**Pukenui**	**2.21**	**38**	P	Pn	12 03 39.2	0.0
WPHZ	**Waipukurau**	**2.21**	**44**	P	Pn	12 03 39.5	+0.3
OKCZ	**Okains Bay**	**2.29**	**206**	P	Pn	12 03 40.9	+0.7
NMEZ	**Namu Road**	**2.30**	**349**	P	Pb	12 03 43.3	-0.7
CRLZ	**Canterbury Las**	**2.32**	**215**	P	Pn	12 03 41.6	+0.9
PREZ	**Palmer Road**	**2.34**	**355**	P	Pb	12 03 43.8	-0.9
KHEZ	**Kahui Hut**	**2.40**	**352**	P	Pb	12 03 44.2	-1.6
MQZ	**McQueen's Vall**	**2.42**	**212**	P	Pn	12 03 42.0	0.0
MTVZ	**Mangateitei**	**2.42**	**19**	P	Pn	12 03 44.1	+1.9
OXZ	**Oxford**	**2.42**	**226**	P	Pn	12 03 42.9	+0.8
NBEZ	**Newall Road No**	**2.44**	**350**	P	Pb	12 03 44.6	-1.8
INZ	**Inchbonnie**	**2.46**	**244**	P	Pn	12 03 44.3	+1.8
AKCZ	**Akaroa Harbour**	**2.47**	**207**	P	Pn	12 03 43.4	+0.7
MOVZ	**Moawhango**	**2.48**	**24**	P	Pn	12 03 43.5	+0.5
PKVZ	**Pokaka**	**2.48**	**17**	P	Pn	12 03 44.8	+1.8
DREZ	**Durham Road**	**2.49**	**356**	P	Pb	12 03 48.5	+1.2
PKE	**Pukeiti**	**2.50**	**352**	P	Pn	12 03 45.1	+1.9
KRHZ	**Kereru**	**2.51**	**37**	P	Pn	12 03 42.9	-0.4
BHHZ	**Black Hill Sta**	**2.51**	**30**	P	Pn	12 03 44.0	+0.7
DRZ	**Dome Shelter**	**2.55**	**20**	P	Pb	12 03 48.5	+0.1
WHVZ	**Whangaehu Hut**	**2.55**	**21**	P	Pn	12 03 45.4	+1.4
VRZ	**Vera Road**	**2.56**	**6**	P	Pn	12 03 46.2	+2.2
FWVZ	**Far West T-bar**	**2.56**	**20**	P	Pn	12 03 45.6	+1.4
TUVZ	**Tukino**	**2.58**	**22**	P	Pn	12 03 45.4	+1.0
MHEZ	**Mangahewa**	**2.60**	**358**	P	Pb	12 03 48.5	-0.6
KAHZ	**Kahuranaki**	**2.64**	**45**	P	Pn	12 03 44.7	-0.4
NGZ	**Ngauruhoe**	**2.65**	**20**	P	Pn	12 03 46.8	+1.5
WTVZ	**West Tongariro**	**2.70**	**19**	P	Pn	12 03 47.9	+1.8
KWHZ	**Kaweka Forest**	**2.71**	**35**	P	Pb	12 03 52.0	+0.9
TWVZ	**Taurewa**	**2.71**	**17**	P	Pn	12 03 48.6	+2.4
KRVZ	**Karewarewa**	**2.74**	**20**	P	Pn	12 03 48.6	+2.0
MCHZ	**McNeill Hill**	**2.82**	**38**	P	Pn	12 03 48.5	+1.0
CKHZ	**Cape Kidnapper**	**2.85**	**46**	P	Pb	12 03 54.9	+1.6
KATZ	**Kakaramea**	**2.86**	**20**	P	Pb	12 03 54.0	+0.3
RITZ	**Rihia Road**	**2.91**	**22**	P	Pb	12 03 54.2	-0.2
BKZ	**Black Stump Fm**	**2.96**	**33**	P	Pb	12 03 55.2	-0.1
RATZ	**Rangitukua**	**2.98**	**21**	P	Pb	12 03 55.8	+0.1
HATZ	**Hinemaiaia**	**3.06**	**25**	P	Pb	12 03 56.8	-0.2
WVZ	**Waitaha Valley**	**3.08**	**242**	P	Pb	12 03 57.4	+0.1
ARHZ	**Aropaoanui**	**3.10**	**40**	P	Pn	12 03 53.2	+1.8
WATZ	**Wairara**	**3.12**	**19**	P	Pb	12 03 57.6	-0.5
HIZ	**Hauiti**	**3.17**	**6**	P	Pn	12 03 54.7	+2.3
MRHZ	**Matea Rd**	**3.22**	**29**	P	Pn	12 03 52.5	-0.6
MRHZ				P	Pb	12 04 00.2	+0.4
RPZ	**Rata Peaks**	**3.22**	**230**	P	Pn	12 03 54.5	+1.4
KUTZ	**Kaahu Road**	**3.35**	**19**	P	Pb	12 04 02.4	+0.4
MTHZ	**Maungataniwha**	**3.37**	**34**	P	Pn	12 03 56.0	+0.8
RAHZ	**Arahi**	**3.42**	**37**	P	Pb	12 04 00.4	-2.7
ALRZ	**Allen Road**	**3.44**	**26**	P	Pb	12 04 01.5	-1.9
TLZ	**Tolley Road**	**3.45**	**15**	P	Pn	12 03 58.9	+2.7
PRRZ	**Plateau Road**	**3.51**	**26**	P	Pb	12 04 02.2	-2.4
KNZ	**Kokohu**	**3.63**	**44**	P	Pb	12 04 03.9	-2.7
MHGZ	**Mahia Peninsul**	**3.66**	**48**	P	Pb	12 04 04.5	-2.6
MUGZ	**Murupara**	**3.66**	**30**	P	Pn	12 03 59.8	+0.7
PRGZ	**Paritu Road**	**3.81**	**45**	P	Pn	12 04 05.4	+4.2
FOZ	**Fox Glacier**	**3.88**	**240**	P	Pn	12 04 06.3	+4.1
RIGZ	**Rimuhau**	**3.91**	**42**	P	Pn	12 04 07.0	+4.4
RAGZ	**Rawiri**	**3.91**	**37**	P	Pb	12 04 08.1	-3.5
URZ	**Urewera**	**3.98**	**32**	P	Pn	12 04 03.2	-0.3
TOZ	**Tahuroa Road**	**4.02**	**12**	P	Pn	12 04 07.1	+3.0
MARZ	**Manawahe**	**4.07**	**26**	P	Pb	12 04 12.7	-1.5
MWZ	**Matawai**	**4.10**	**36**	P	Pn	12 04 03.9	-1.3
LBZ	**Lake Benmore**	**4.13**	**228**	P	Pn	12 04 07.7	+2.1
TKGZ	**Te Karaka**	**4.16**	**40**	P	Pn	12 04 10.2	+4.2
ODZ	**Otahua Downs**	**4.36**	**218**	P	Pn	12 04 09.3	+0.7
TWGZ	**Tauwhareparae**	**4.43**	**39**	P	Pn	12 04 11.0	+1.2
RUGZ	**Raukumara Rang**	**4.47**	**35**	P	Pn	12 04 09.6	-0.8
KBAZ	**Karaka Road Bo**	**4.59**	**5**	P	Pn	12 04 14.5	+2.7
MKAZ	**Moumakai**	**4.60**	**7**	P	Pn	12 04 14.0	+2.0
AWAZ	**Awhitu Peninsu**	**4.61**	**2**	P	Pn	12 04 14.1	+2.0
PUZ	**Puketiti**	**4.65**	**41**	P	Pn	12 04 16.0	+3.2
HAZ	**Te Kaha**	**4.69**	**35**	P	Pn	12 04 13.5	+0.3
PKGZ	**Pakihiroa**	**4.71**	**38**	P	Pn	12 04 17.8	+4.2
ETAZ	**East Tamaki Re**	**4.73**	**5**	P	Pn	12 04 16.2	+2.3
WTAZ	**Waiatarua**	**4.74**	**1**	P	Pn	12 04 17.7	+3.7
JCZ	**Jackson Bay**	**4.79**	**238**	P	Pb	12 04 21.2	-5.4
RVAZ	**Riverhead Bore**	**4.90**	**1**	P	Pn	12 04 18.2	+2.1
WIAZ	**Waiheke Island**	**4.90**	**7**	P	Pn	12 04 18.7	+2.4
MBAZ	**Motutapu North**	**4.91**	**4**	P	Pn	12 04 19.0	+2.7
KUZ	**Kuaotunu**	**5.02**	**12**	P	Pn	12 04 21.0	+3.1
WCZ	**Waipu Caves**	**5.73**	**359**	P	Pn	12 04 31.1	+3.6
SYZ	**Scrubby Hill**	**6.18**	**216**	P	Pn	12 04 36.0	+2.3
OUZ	**Omahuta**	**6.48**	**354**	P	Pn	12 04 39.4	+1.6
CTZ	**Chatham Island**	**6.91**	**110**	P	Pn	12 04 44.5	+0.8

GEN 21 12:05:17.5, 44.21°N×10.12°E, h4km±1km**, Ml0.5, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.05**	**152**	P	Pg	12 05 19.0	+0.3
EQUI				S	Sg	12 05 20.0	+0.5
SARO	**Sassorosso**	**0.20**	**96**	P	Pg	12 05 21.7	+0.3
SARO				S	Sg	12 05 25.0	+0.9
GRAM	**Graiana**	**0.29**	**352**	P	Pg	12 05 23.7	+0.6
GRAM				S	Sg	12 05 28.1	+1.2

ZUR 21 12:06:20.7, 47.42°N×9.32°E, h5km**, MLh1.4**/11**, 2C-2D, Error ellipse: s-maj=1.7km s-min=0.9km az=278.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGT00	**Sennhlsen**	**0.01**	**306**	⇑Pg	Pg	12 06 21.7	+0.1
SGT00				Sg	Sg	12 06 22.5	+0.2
SGT01	**Gaiserwald**	**0.01**	**9**	Pg	Pg	12 06 21.8	+0.2
SGT01				Sg	Sg	12 06 22.7	+0.4
STGK	**St. Gallen Klo**	**0.04**	**86**	Pg	Pg	12 06 22.2	+0.3
STGK				Sg	Sg	12 06 23.4	+0.7
SGT04	**Schlatt-Haslen**	**0.08**	**163**	⇓Pg	Pg	12 06 22.9	+0.5
SGT04				Sg	Sg	12 06 24.9	+1.3
SGT03	**Degersheim**	**0.10**	**235**	⇑Pg	Pg	12 06 23.2	+0.4
SGT03				Sg	Sg	12 06 25.1	+1.0
SGT05	**Eggersriet**	**0.10**	**78**	⇓Pg	Pg	12 06 23.3	+0.5
SGT05				Sg	Sg	12 06 25.3	+1.1
SGT02	**Zihlschlacht**	**0.10**	**333**	Pg	Pg	12 06 23.3	+0.4
SGT02				Sg	Sg	12 06 25.4	+1.1

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*ISCJB **21** 12:07:29.7±0.3, 24.20°S±0.02°×67.26°W±0.03°, h188km±4km, mb3.6/9, Error ellipse: s-maj=5.0km s-min=3.6km az=164.8*

*SJA **21** 12:07:29.5±0.6, 24.18°S×67.15°W, h198km±6km, ML3.0, MW3.6*

*IDC **21** 12:07:30.4±1.0, 24.13°S×67.15°W, h177km±8km, mb3.4/8, mb1 3.6/15, mb1mx3.5/31, mbtmp3.9/15, Error ellipse: s-maj=15.9km s-min=12.5km az=45.0*

*GUC **21** 12:07:32.6±0.6, 24.11°S×67.67W, h205km±10km, ML4.2*

*NEIC **21** 12:07:32.0±0.0, 24.11°S×67.68W, h204km, mb4.6/2, ML4.2(GUC), After GUC.*

ISC 21 12:07:30.1±0.7**, 24.17°S**±0.04°×**67.23°W**±0.04°**, h182**km±7km**, n49, σ1.62s**/74**, mb3.8**/9**, 7C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.66**	**110**	*e*P	**Pn**	**12 08 05.1**	**+1.2**
SLA				IAML		12 08 06.9	
	comp=Z,377nm,0.7s						
HJA	**Humahuaca**	**1.92**	**60**	*e*P	**Pn**	**12 08 08.0**	**+1.1**
HJA				IAML		12 08 09.2	
	comp=Z,156nm,0.5s						
LVC	**Limon Verde**	**2.19**	**315**	P	**Pn**	**12 08 11.4**	**+1.6**
	comp=Z,66nm,0.3s,baz=134,slow=5.8,SNR=113						
LVC				S	**Sn**	**12 08 40.9**	**+0.3**
	comp=Z,84nm,0.3s,baz=72,slow=20,SNR=21						
LVC	**Limon Verde**	**2.19**	**315**	*e*P	**Pn**	**12 08 11.8**	**+2.0**
LVC				*e*S	**Sn**	**12 08 42.6**	**+2.0**
FSA	**Cafayete**	**2.24**	**150**	*e*P	**Pn**	**12 08 10.8**	**+0.8**
FSA				IAML		12 08 12.1	
	comp=Z,23nm,0.4s						
FSA				*e*S	**Sn**	**12 08 41.3**	**+0.1**
PB15	**IPOC Station P**	**2.27**	**295**	⇑*i*P	**Pn**	**12 08 12.2**	**+1.7**
PB15				*i* S	**Sn**	**12 08 41.8**	**0.0**
GO02	**Mina Guanaco**	**2.37**	**245**	*e*Pn	**Pn**	**12 08 13.5**	**+1.9**
GO02				*e*Sn	**Sn**	**12 08 45.1**	**+1.2**
GO02	**Mina Guanaco**	**2.37**	**245**	⇑*i*P	**Pn**	**12 08 13.4**	**+1.9**
GO02				*e*S	**Sn**	**12 08 44.8**	**+0.9**
GO02				IAML		12 08 46.7	
	comp=N,1μm,0.5s						
YJA	**Yavi**	**2.54**	**39**	*e*P	**Pn**	**12 08 14.9**	**+1.1**
YJA				IAML		12 08 16.3	
	comp=Z,32nm,0.3s						
YJA				*e*S	**Sn**	**12 08 48.3**	**+0.6**
PB06	**IPOC Station P**	**2.60**	**304**	⇑*i*P	**Pn**	**12 08 15.8**	**+1.6**
PB06				*e*S	**Sn**	**12 08 48.2**	**-0.4**
PB06				IAML		12 08 49.6	
	comp=E,1μm,0.3s						
PB14	**IPOC Station P**	**2.93**	**261**	⇑*i*P	**Pn**	**12 08 19.4**	**+1.1**
PB14				*e*S	**Sn**	**12 08 54.8**	**-1.0**
PB14				IAML		12 09 00.9	
	comp=N,409nm,0.3s						
PB09	**IPOC Station P**	**3.01**	**321**	⇑*i*P	**Pn**	**12 08 20.8**	**+1.7**
PB09				*e*S	**Sn**	**12 08 57.6**	**+0.4**
PB09				IAML		12 08 59.9	
	comp=N,672nm,0.2s						
PB05	**IPOC Station P**	**3.03**	**295**	⇑*i*P	**Pn**	**12 08 20.3**	**+1.0**
PB05				*e*S	**Sn**	**12 08 56.0**	**-1.7**
PB05				IAML		12 09 00.7	
	comp=E,355nm,0.3s						
AHML	**Horco Molle**	**3.11**	**147**	*e*P	**Pn**	**12 08 20.7**	**+0.5**
AHML				IAML		12 08 22.1	
	comp=Z,12nm,0.5s						
AHML				*e*S	**Sn**	**12 08 58.1**	**-1.3**
PB10	**IPOC Station P**	**3.12**	**281**	*e*Pn	**Pn**	**12 08 21.4**	**+1.2**
PB10				*e*Sn	**Sn**	**12 08 57.8**	**-1.5**
PB10	**IPOC Station P**	**3.12**	**281**	⇓*i*P	**Pn**	**12 08 20.9**	**+0.7**
PB10				*e*S	**Sn**	**12 08 57.1**	**-2.2**
PB10				IAML		12 09 03.4	
	comp=E,249nm,0.2s						
PB03	**IPOC Station P**	**3.14**	**312**	⇑*i*P	**Pn**	**12 08 21.8**	**+1.0**
PB03				*e*S	**Sn**	**12 08 58.9**	**-1.3**
PB04	**IPOC Station P**	**3.25**	**304**	*e*Pn	**Pn**	**12 08 23.1**	**+1.0**
PB04				*e*Sn	**Sn**	**12 09 00.8**	**-1.8**
PB01	**IPOC Station P**	**3.75**	**326**	*e*Pn	**Pn**	**12 08 28.7**	**+0.4**
PB01				*e*Sn	**Sn**	**12 09 11.2**	**-2.4**
PB01	**IPOC Station P**	**3.75**	**326**	IAML		12 09 14.4	
	comp=N,419nm,0.4s						
GO03	**Copiap**	**4.35**	**218**	*e*Pn	**Pn**	**12 08 36.1**	**+0.3**
GO03				*e*Sn	**Sn**	**12 09 26.2**	**-1.1**
GO03	**Copiap**	**4.35**	**218**	*e*P	**Pn**	**12 08 36.5**	**+0.7**
CYA	**Choya**	**4.44**	**164**	*e*P	**Pn**	**12 08 36.9**	**+0.1**
CYA				IAML		12 09 28.7	
	comp=Z,5.2nm,0.9s						
VCA	**Vinchina**	**4.63**	**191**	*e*P	**Pn**	**12 08 40.0**	**+0.7**
VCA				IAML		12 10 00.2	
	comp=Z,12nm,0.3s						
GO01	**Chusmiza**	**4.84**	**337**	*e*Pn	**Pn**	**12 08 44.0**	**+1.5**
GO01				*e*Sn	**Sn**	**12 09 38.9**	**-0.4**
PB11	**IPOC Station P**	**4.94**	**332**	*e*Pn	**Pn**	**12 08 42.5**	**-0.9**
PB11				*e*Sn	**Sn**	**12 09 37.2**	**-3.8**
MNMC	**Minye Minye**	**5.48**	**336**	*e*Pn	**Pn**	**12 08 51.1**	**+0.5**
MNMC				*e*Sn	**Sn**	**12 09 51.1**	**-2.8**
LCO	**Las Campanas**	**5.73**	**212**	*e*Pn	**Pn**	**12 08 53.1**	**-0.8**
LCO				*e*Sn	**Sn**	**12 09 58.1**	**-1.7**
GO04	**Tololo Observa**	**6.77**	**207**	*e*Pn	**Pn**	**12 09 06.7**	**-0.7**
GO04				*e*Sn	**Sn**	**12 10 23.5**	**-0.7**
CFA	**Coronel Fontan**	**7.46**	**187**	P	**Pn**	**12 09 16.1**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=325,slow=9.1,SNR=7.9						
CFA				S	**Sn**	**12 10 36.9**	**-3.3**
	comp=Z,1.2nm,0.3s,baz=299,slow=19,SNR=7.6						
LPAZ	**La Paz**	**7.89**	**354**	P	**Pn**	**12 09 23.6**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=168,slow=7.8,SNR=23						
LPAZ				S	**Sn**	**12 10 50.3**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=181,slow=7.0,SNR=3.9						
LPAZ	**La Paz**	**7.89**	**354**	*e*Pn	**Pn**	**12 09 24.0**	**+1.4**
CPUP	**Villa Florida**	**9.21**	**106**	P	**Pn**	**12 09 38.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=252,slow=5.8,SNR=4.5						
SIV	**San Ignacio**	**9.98**	**37**	P	**Pn**	**12 09 47.6**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=228,slow=13,SNR=16						
SIV				S	**Sn**	**12 11 33.6**	**-7.2**
	comp=Z,0.1nm,0.3s,baz=241,slow=19,SNR=3.2						
PLCA	**Paso Flores**	**16.75**	**189**	P	**Pn**	**12 11 14.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=37,slow=20,SNR=2.2						
BDFB	**Brasilia**	**19.94**	**68**	P	**P**	**12 11 48.7**	**+0.3**
	comp=Z,3.0nm,0.3s,baz=246,slow=11,SNR=38						
BDFB	**Brasilia**	**19.94**	**68**	*e*P	**P**	**12 11 49.1**	**+0.7**
	comp=Z,30nm,0.7s						
PTGA	**Pitinga**	**24.34**	**18**	P	**P**	**12 12 31.9**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=180,slow=11,SNR=3.1						
RCBR	**Riachuelo**	**35.19**	**64**	*e*P	**P**	**12 14 08.3**	**+1.3**
	comp=Z,9.3nm,1.1s						
TXAR	**Lajitas Array**	**63.70**	**325**	P	**P**	**12 17 41.6**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=151,slow=8.0,SNR=2.6						
TORD	**Torodi Ar. Bea**	**76.83**	**69**	P	**P**	**12 19 02.8**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=269,slow=5.5,SNR=8.4						
PDAR	**Pinedale Array**	**77.19**	**329**	P	**P**	**12 19 05.0**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=134,slow=5.1,SNR=2.8						
NVAR	**Mina Array Bea**	**78.54**	**321**	P	**P**	**12 19 13.9**	**+2.4**
	comp=Z,0.2nm,0.6s,baz=148,slow=5.8,SNR=3.5						
BOSA	**Boshof**	**80.84**	**117**	P	**P**	**12 19 25.3**	**+1.1**
	comp=Z,3.7nm,1.1s,baz=249,slow=3.9,SNR=6.1						
KEST	**Kesra**	**93.68**	**52**	P	**P**	**12 20 24.9**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=126,slow=2.1,SNR=5.6						
YKA	**Yellowknife Ar**	**94.22**	**340**	P	**P**	**12 20 28.1**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=125,slow=4.6,SNR=3.6						
ASAR	**Alice Springs**	**128.21**	**205**	PKP	**PKPdf**	**12 26 14.7**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=163,slow=2.3,SNR=4.8						
WRA	**Warramunga Arr**	**131.38**	**207**	PKP	**PKiKP**	**12 26 23.3**	**+0.8**
	comp=Z,1.5nm,1.0s,baz=143,slow=0.5,SNR=4.3						
MKAR	**Makanchi Array**	**146.79**	**40**	PKPbc	**PKPbc**	**12 26 51.2**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=284,slow=3.9,SNR=3.3						

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*ISCJB **21** 12:09:11.6±0.5, 24.06°N±0.02°×122.21°E±0.02°, h9km±3km, Error ellipse: s-maj=3.2km s-min=2.2km az=149.1*

*JMA **21** 12:09:12.6±0.1, 24.01°N×122.18°E, h24km±2km, M2.3*

*TAP **21** 12:09:12.4, 24.08°N×122.20°E, h8km±1km, ML2.8, D*

ISC 21 12:09:11.5±1.1**, 24.05°N**±0.02°×**122.20°E**±0.02°**, h10**km±9km**, n79, σ0.56s**/123**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.51**	**353**	*e*P	**Pg**	**12 09 21.8**	**+0.5**
	baz=352						
EOS1				*e*S	**Sg**	**12 09 28.6**	**+0.6**
	baz=352						
HWA	**Hwalien**	**0.55**	**263**	*e*P	**Pb**	**12 09 22.9**	**-0.2**
	baz=259						
TWD	**Chiawan**	**0.55**	**274**	*e*P	**Pb**	**12 09 23.4**	**+0.2**
	baz=270						
NANB	**Nanao**	**0.56**	**313**	P	**Pg**	**12 09 22.4**	**0.0**
	baz=310						
NANB				*e*S	**Sg**	**12 09 30.0**	**+0.2**
	baz=310						
ENLB	**Shoufeng**	**0.56**	**256**	*e*P	**Pb**	**12 09 23.5**	**0.0**
	baz=252						
NACB	**Ninganchiao**	**0.57**	**283**	*e*P	**Pb**	**12 09 23.5**	**0.0**
	baz=279						
NACB				*e*S	**Sb**	**12 09 31.8**	**+0.2**
	baz=279						
TWC	**Suao**	**0.65**	**330**	P	**Pg**	**12 09 23.6**	**-0.4**
	baz=329						
TWC				*e*S	**Sg**	**12 09 31.9**	**-0.6**

	baz=329						
ETLH	Xiulin Townshi	0.68	284	*e*P	Pg	12 09 25.2	+0.6
	baz=281						
ETLH				*e*S	Sb	12 09 35.1	+0.3
	baz=281						
ESL	Shilin	0.74	252	*e*P	Pg	12 09 26.0	+0.2
	baz=249						
ESL				*e*S	Sb	12 09 36.7	+0.1
	baz=249						
JYNG	Yonagunijimaku	0.79	59	P	Pb	12 09 28.0	+0.7
JYNG				S	Sb	12 09 38.2	+0.2
EGFH	Guangfu	0.80	242	*e*P	Pg	12 09 27.2	+0.2
	baz=240						
EGFH				*e*S	Sb	12 09 39.0	+0.6
	baz=240						
ILA	Ilan	0.83	330	*e*P	Pg	12 09 27.3	-0.2
	baz=329						
ENTT	Nioudou	0.83	316	*e*P	Pg	12 09 27.4	0.0
	baz=314						
TWE	Neicheng	0.83	324	P	Pg	12 09 26.9	-0.5
	baz=323						
NDT	Datong Townshi	0.84	312	*e*P	Pg	12 09 27.7	+0.1
	baz=309						
NNSB	Datong	0.84	297	*e*P	Pb	12 09 28.2	0.0
	baz=295						
NNSB				*e*S	Sg	12 09 39.0	+0.4
	baz=295						
YOJ	Yonaguni jima	0.85	61	*e*P	Pb	12 09 28.6	+0.4
	baz=61						
YOJ				*e*S	Sb	12 09 39.9	+0.2
	baz=61						
YOJ	Yonaguni jima	0.85	61	P	Pb	12 09 28.9	+0.6
YOJ				S	Sb	12 09 40.2	+0.5
NNS	Nan Shan	0.85	298	*e*P	Pg	12 09 28.4	+0.5
	baz=295						
WHF	Hehuan Shan	0.86	277	P	Pg	12 09 28.5	+0.4
	baz=274						
WHF				*e*S	Sb	12 09 40.4	-0.1
	baz=274						
NTC	Toucheng	0.87	337	*e*P	Pg	12 09 27.7	-0.7
	baz=336						
NTC				*e*S	Sb	12 09 40.7	+0.2
	baz=336						
HGSD	Ruisui	0.90	232	*e*P	Pg	12 09 28.6	-0.3
	baz=230						
CHGB	Renai	0.94	271	*e*P	Pg	12 09 29.8	+0.2
	baz=269						
CHGB				*e*S	Sg	12 09 42.2	+0.4
	baz=269						
TWT	Tachien	0.96	283	*e*P	Pg	12 09 29.9	0.0
	baz=280						
EHY	Hungye	0.97	236	P	Pg	12 09 29.9	-0.3
	baz=234						
TDCB	Techi	0.97	282	*e*P	Pg	12 09 30.1	-0.2
	baz=280						
YHNB	Yeheng	0.97	310	*e*P	Pg	12 09 30.4	+0.1
	baz=308						
NSK	Sanguang	0.99	309	*e*P	Pg	12 09 30.6	0.0
	baz=308						
VWDT	VWDT	1.01	253	*e*P	Pg	12 09 30.7	-0.2
	baz=251						
VWDT				*e*S	Sg	12 09 44.3	+0.2
	baz=251						
YULB	Yu-li	1.05	232	*e*P	Pg	12 09 30.9	-0.8
	baz=230						
TWF1	Yuli	1.08	230	*e*P	Pg	12 09 31.6	-0.6
	baz=228						
TWA	Mucha	1.09	329	*e*P	Pg	12 09 32.6	+0.2
	baz=328						
NWF	Wu-fen Shan	1.09	340	*e*P	Pg	12 09 32.1	-0.4
	baz=339						
WFSB	Wu-fen Shan	1.09	340	*e*P	Pg	12 09 32.1	-0.3
	baz=339						
NHDH	Xindian Distri	1.10	326	*e*P	Pb	12 09 33.1	+0.5
	baz=325						
TATO	Taipei	1.13	325	*e*P	Pg	12 09 33.2	0.0
	baz=324						
TATO				*e*S	Sg	12 09 46.7	-1.2
	baz=324						
DPDB	Guoxing	1.17	270	*e*P	Pb	12 09 33.3	-0.5
	baz=267						
SSLB	Suanglung	1.17	258	*e*P	Pb	12 09 33.2	-0.5
	baz=255						
WLTB	Daxi	1.18	313	*e*P	Pb	12 09 33.6	-0.4
	baz=311						
SMLT	Sun Moon Lake	1.20	262	P	Pb	12 09 33.9	-0.4
	baz=260						
SMLT				S	Sg	12 09 50.1	-0.1
	baz=260						
CHKT	Chengkung	1.22	219	*e*P	Pg	12 09 35.5	+0.6
	baz=217						
LIOB	Emei	1.23	299	*e*P	Pn	12 09 35.1	+0.3
	baz=297						
LIOB				*e*S	Sb	12 09 50.6	-0.3
	baz=297						
YM01	YM01	1.24	332	*e*P	Pn	12 09 33.8	-1.1
	baz=331						
YM01				*e*S	Sb	12 09 50.6	-0.3
	baz=331						
TYC	Yuchr	1.24	264	*e*P	Pn	12 09 34.5	-0.3
	baz=262						
TYC				*e*S	Sb	12 09 50.4	-0.5
	baz=262						
NSTT	Nanjuang	1.24	298	*e*P	Pn	12 09 35.1	+0.3
	baz=296						
NSTT				*e*S	Sb	12 09 51.1	+0.2
	baz=296						
YM10	YM10	1.25	332	*e*P	Pn	12 09 34.5	-0.5
	baz=331						
YM10				*e*S	Sb	12 09 51.0	-0.3
	baz=331						
YM05	YM05	1.25	333	*e*P	Pn	12 09 34.4	-0.7
	baz=332						
YM04	YM04	1.26	331	*e*P	Pn	12 09 34.4	-0.7
	baz=330						
YM08	YM08	1.27	334	*e*P	Pn	12 09 34.7	-0.5
	baz=333						
YM03	YM03	1.28	332	*e*P	Pn	12 09 34.8	-0.7
	baz=331						
WHYT	Xinyi Township	1.28	254	*e*P	Pg	12 09 36.1	0.0
	baz=252						
WHYT				*e*S	Sn	12 09 53.2	+0.5
	baz=252						
TWQ1	Liyutan	1.34	283	*e*P	Pn	12 09 36.5	+0.3
	baz=281						
TWY	Chenhua	1.34	336	*e*P	Pn	12 09 35.2	-1.0
	baz=335						
WJS	Zhushan	1.36	261	*e*P	Pb	12 09 37.5	+0.4
	baz=259						
WJS				*e*S	Sg	12 09 55.9	+0.4
	baz=259						
ALS	Alishan	1.39	248	*e*P	Pb	12 09 37.7	+0.1
	baz=245						
ALS				*e*S	Sb	12 09 54.5	-1.0
	baz=245						
WNT	Mingjian	1.40	263	*e*P	Pb	12 09 37.8	+0.2
	baz=261						
WNT				*e*S	Sn	12 09 56.0	+0.6
	baz=261						
IRIF	Iriomote-Funau	1.43	78	P	Pb	12 09 38.2	+0.1
IRIF				S	Sn	12 09 56.2	0.0
WGK	Gukeng	1.54	257	*e*P	Pn	12 09 39.0	+0.1
	baz=255						
WGK				*e*S	Sg	12 10 01.1	0.0
	baz=255						
WDLH	Douliu	1.56	257	*e*P	Pb	12 09 40.2	-0.2
	baz=255						
WDLH				*e*S	Sg	12 10 01.9	+0.1
	baz=255						
STYT	Tauyuan	1.59	237	*e*P	Pb	12 09 40.8	-0.2
	baz=235						
STYT				*e*S	Sn	12 09 59.9	-0.5
	baz=235						
TWG	Pinlang	1.60	221	*e*P	Pn	12 09 38.1	-1.7
	baz=219						
TPUB	Ta-pu	1.62	243	*e*P	Pb	12 09 41.0	-0.4
	baz=241						
TPUB				*e*S	Sn	12 10 01.4	+0.4
	baz=241						
CHN4	Tsaushan	1.63	245	P	Pb	12 09 41.8	+0.3
	baz=243						
CHN4				S	Sg	12 10 03.3	-0.5
	baz=243						
WTP	Ta-pu	1.66	242	P	Pb	12 09 41.7	-0.4
	baz=240						
WTP				S	Sb	12 10 03.6	+0.6
	baz=240						
JKRS	Kuro-shima	1.66	83	P	Pb	12 09 41.9	-0.3
RLNB	Erlin	1.69	265	*e*P	Pn	12 09 41.7	+0.7
	baz=263						
RLNB				*e*S	Sb	12 10 04.4	+0.4
	baz=263						
TWK	Hsinying	1.75	244	P	Pn	12 09 42.9	+1.0
	baz=242						
TWK				S	Sb	12 10 05.9	+0.1
	baz=242						
SNST	Tainan City	1.77	243	*e*P	Pb	12 09 43.6	-0.3
	baz=241						
SNST				*e*S	Sb	12 10 06.1	0.0
	baz=241						
SLGT	Liugui	1.77	234	P	Pb	12 09 43.6	-0.4
	baz=232						
SLGT				S	Sb	12 10 06.4	+0.1
	baz=232						
JIJ	Ishigaki jima	1.80	80	P	Pn	12 09 42.8	+0.2
JIJ				S	Sn	12 10 05.0	-0.5
ECL	Taimali	1.84	219	*e*P	Pb	12 09 44.5	-0.7
	baz=217						
SSD	Sandimen	1.94	228	*e*P	Pb	12 09 45.7	-1.1
	baz=227						
SSD				*e*S	Sb	12 10 10.9	-0.1
	baz=227						
JISG	Ishigakijimahi	2.00	74	P	Pn	12 09 45.7	+0.4
JISG				S	Sn	12 10 09.3	-1.0
MASBT	Mashibuluo	2.03	226	*e*P	Pn	12 09 45.7	+0.1
	baz=224						
MASBT				*e*S	Sb	12 10 12.7	-1.0
	baz=224						
EAST	Anshuo	2.07	217	*e*P	Pn	12 09 47.6	+1.3
	baz=216						
SCZT	Fangliau	2.21	221	*e*P	Pb	12 09 50.0	-1.5
	baz=220						
SCZT				*e*S	Sn	12 10 16.8	+1.2
	baz=220						
WDGT	Dungji	2.46	252	*e*P	Pn	12 09 52.5	+0.9
	baz=250						
WDGT				*e*S	Sn	12 10 22.4	+0.8
	baz=250						
PHUB	P'eng-hu	2.46	258	*e*P	Pn	12 09 53.3	+1.6
	baz=256						
PHUB				*e*S	Sn	12 10 21.9	0.0
	baz=256						
PTMZ	Houxiangcun	2.97	290	*e*P	Pn	12 09 58.1	-0.6
	baz=288						

WEL 21 12:10:48.3,41°.5S±1°.0×17°4E±°,h11^{km}±2^{km},M3.5/20, ML3.8/20,MLv3.5/20,Error ellipse: s-maj=0.0km s-min=0.0km az=134.0,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCW	Tory Channel	0.24	357	P	Pb	12 10 54.4	-0.2
TUWZ	Tuamarina	0.26	274	P	Pb	12 10 54.4	-0.7
CMWZ	Cape Campbell	0.30	191	P	Pb	12 10 55.4	-0.4
WEL	Wellington	0.39	65	P	Pb	12 10 57.0	-0.3
BSWZ	Blackbirch Sta	0.41	230	P	Pg	12 10 56.9	+0.5
BHW	Baring Head	0.44	85	P	Pb	12 10 57.6	-0.4
CAW	Cannon Point	0.68	60	P	Pb	12 11 02.0	-0.1
DUWZ	D'Urville Isla	0.70	336	P	Pb	12 11 02.8	+0.2
MSWZ	Moikau Station	0.72	88	P	Pb	12 11 03.1	+0.3
NNZ	Nelson	0.73	288	P	Pb	12 11 02.8	-0.2
PLWZ	Palliser	0.73	100	P	Pb	12 11 03.2	+0.1
PAWZ	Paruwai Farm	0.85	86	P	Pb	12 11 05.5	+0.3
OGWZ	Otaki Gorge	0.92	47	P	Pg	12 11 01.3	-4.7
OGWZ				P	Pb	12 11 06.3	+0.1
MTW	Mount Morrison	0.96	73	P	Pn	12 11 07.4	-0.2
TRWZ	Traveller	1.05	88	P	Pn	12 11 09.0	0.0
HOWZ	Holdsworth Sta	1.07	60	P	Pg	12 11 09.1	+0.2
THZ	Tophouse	1.09	253	P	Pb	12 11 09.0	-0.1
KHZ	Kahutara	1.12	210	P	Pn	12 11 10.2	+0.3
MRZ	Mangatainoka R	1.25	51	P	Pb	12 11 12.1	+0.1
TMWZ	Te Maipa	1.25	75	P	Pb	12 11 12.0	+0.1
TIWZ	Tintock	1.38	61	P	Pb	12 11 14.1	0.0
OHWZ	Ohakea	1.47	32	P	Pg	12 11 16.6	+0.2
QRZ	Quartz Range	1.47	294	P	Pg	12 11 16.2	-0.3
CPWZ	Castlepoint	1.54	70	P	Pg	12 11 20.4	+2.6
POWZ	Post Office Ro	1.54	47	P	Pb	12 11 17.0	+0.2
PRWZ	Pori Road	1.55	55	P	Pb	12 11 16.6	-0.4
BFZ	Birch Farm	1.66	63	P	Pn	12 11 17.2	-0.2
WAZ	Wanganui	1.77	18	P	Pg	12 11 22.1	-0.2
GVZ	Greta Valley S	1.78	211	P	Pn	12 11 18.9	-0.1
DVHZ	Dannevirke	1.83	52	P	Pn	12 11 20.0	+0.3
ANWZ	Angora Road	1.93	60	P	Pn	12 11 21.6	+0.6
LREZ	Lake Rotokare	1.99	2	P	Pg	12 11 30.1	+3.7
LTZ	Lake Taylor	2.01	228	P	Pn	12 11 22.7	+0.5
NMEZ	Namu Road	2.06	351	P	Pg	12 11 28.7	+0.9
PREZ	Palmer Road	2.11	357	P	Pg	12 11 28.3	-0.3
PNHZ	Pukenui	2.11	44	P	Pn	12 11 24.5	+0.9
AMCZ	Amberley	2.11	215	P	Pn	12 11 23.3	-0.3
WPHZ	Waipukurau	2.14	50	P	Pn	12 11 24.9	+0.9
KHEZ	Kahui Hut	2.16	354	P	Pg	12 11 29.0	-0.8
NBEZ	Newall Road No	2.20	351	P	Pg	12 11 30.0	-0.5
MTVZ	Mangateitei	2.25	24	P	Pg	12 11 30.4	-1.0
DREZ	Durham Road	2.26	358	P	Pg	12 11 31.7	+0.1
PKE	Pukeiti	2.27	354	P	Pb	12 11 30.2	+1.0
PKVZ	Pokaka	2.30	21	P	Pb	12 11 30.8	+0.9
MOVZ	Moawhango	2.33	29	P	Pb	12 11 30.5	+0.3
VRZ	Vera Road	2.35	9	P	Pb	12 11 30.7	+0.1
BHHZ	Black Hill Sta	2.38	35	P	Pn	12 11 29.1	+1.8
WHVZ	Whangaehu Hut	2.38	25	P	Pb	12 11 31.7	+0.4
FWVZ	Far West T-bar	2.39	24	P	Pb	12 11 31.8	+0.3
KRHZ	Kereru	2.40	42	P	Pn	12 11 28.1	+0.6
TUVZ	Tukino	2.42	26	P	Pb	12 11 31.0	-0.9
OKCZ	Okains Bay	2.45	201	P	Pn	12 11 27.0	-1.3
CRLZ	Canterbury Las	2.46	210	P	Pn	12 11 27.4	-0.9
INZ	Inchbonnie	2.47	238	P	Pn	12 11 29.5	+1.0
NGZ	Ngauruhoe	2.48	24	P	Pb	12 11 32.9	0.0
OXZ	Oxford	2.51	221	P	Pn	12 11 28.2	-0.9
TWVZ	Taurewa	2.53	21	P	Pb	12 11 34.4	+0.6
WTVZ	West Tongariro	2.53	23	P	Pb	12 11 34.7	+0.9
MQZ	McQueen's Vall	2.56	208	P	Pn	12 11 27.8	-1.9
KRVZ	Karewarewa	2.57	24	P	Pb	12 11 35.1	+0.6
KAHZ	Kahuranaki	2.57	51	P	Pn	12 11 30.1	+0.2
KWHZ	Kaweka Forest	2.59	39	P	Pb	12 11 36.3	+1.4
AKCZ	Akaroa Harbour	2.63	202	P	Pn	12 11 29.4	-1.3
KATZ	Kakaramea	2.69	24	P	Pg	12 11 38.4	-1.5
MCHZ	McNeill Hill	2.72	43	P	Pg	12 11 39.9	-0.4
RITZ	Rihia Road	2.75	26	P	Pg	12 11 39.4	-1.5
RATZ	Rangitukua	2.82	24	P	Pb	12 11 40.4	+1.7
BKZ	Black Stump Fm	2.83	37	P	Pb	12 11 39.1	+0.2
HATZ	Hinemaiaia	2.90	29	P	Pg	12 11 42.7	-1.2
WATZ	Wairara	2.95	22	P	Pb	12 11 42.7	+1.7
HIZ	Hauiti	2.96	9	P	Pb	12 11 39.8	-1.3
MRHZ	Matea Rd	3.08	33	P	Pb	12 11 45.0	+1.9
WVZ	Waitaha Valley	3.10	237	P	Pn	12 11 40.2	+3.1
KUTZ	Kaahu Road	3.18	22	P	Pb	12 11 46.9	+2.0
MTHZ	Maungataniwha	3.25	38	P	Pb	12 11 43.1	-2.8
TLZ	Tolley Road	3.26	17	P	Pb	12 11 44.8	-1.4
ALRZ	Allen Road	3.29	29	P	Pb	12 11 48.6	+2.0
RPZ	Rata Peaks	3.29	225	P	Pn	12 11 41.1	+1.3
PRRZ	Plateau Road	3.36	29	P	Pb	12 11 49.3	+1.4
MUGZ	Murupara	3.53	33	P	Pb	12 11 49.8	-0.9
TOZ	Tahuroa Road	3.83	15	P	Pb	12 11 55.1	-0.8
URZ	Urewera	3.85	35	P	Pb	12 11 52.0	-4.3
FOZ	Fox Glacier	3.91	236	P	Pn	12 11 52.0	+3.7
MWZ	Matawai	3.98	40	P	Pn	12 11 51.9	+2.5
LBZ	Lake Benmore	4.21	224	P	Pn	12 11 53.1	+0.7
AWAZ	Awhitu Peninsu	4.39	4	P	Pb	12 12 02.9	-2.4
MKAZ	Moumakai	4.39	9	P	Pb	12 12 01.5	-3.9
ODZ	Otahua Downs	4.47	215	P	Pn	12 11 55.6	-0.5
ETAZ	East Tamaki Re	4.52	6	P	Pb	12 12 03.1	-4.5
WIAZ	Waiheke Island	4.70	8	P	Pb	12 12 06.4	-4.2
MBAZ	Motutapu North	4.70	6	P	Pb	12 12 06.2	-4.5
WMGZ	Waiomatatini S	4.82	43	P	Pb	12 12 07.8	-5.0
JCZ	Jackson Bay	4.83	235	P	Pn	12 12 05.3	+4.3

WEL 21 12:18:14.9,42°S±1°×17°4E±°,h5^{km}±1^{km},M3.5/47, ML3.6/23,MLv3.5/47,Error ellipse: s-maj=0.0km s-min=0.0km az=130.4,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	201	P	Pg	12 18 18.6	+0.8
TUWZ	Tuamarina	0.32	306	P	Pb	12 18 22.1	-0.9
BSWZ	Blackbirch Sta	0.32	252	P	Pg	12 18 21.9	+0.8
TCW	Tory Channel	0.41	359	P	Pb	12 18 23.8	-0.7
BHW	Baring Head	0.49	65	P	Pb	12 18 25.8	-0.1
WEL	Wellington	0.49	48	P	Pb	12 18 25.8	-0.2
PLWZ	Palliser	0.73	87	P	Pb	12 18 30.8	+0.7
MSWZ	Moikau Station	0.75	75	P	Pb	12 18 30.9	+0.4
CAW	Cannon Point	0.78	49	P	Pb	12 18 30.8	-0.1
NNZ	Nelson	0.79	300	P	Pg	12 18 30.4	+0.5
DUWZ	D'Urville Isla	0.86	341	P	Pb	12 18 32.0	-0.2
PAWZ	Paruwai Farm	0.89	75	P	Pn	12 18 33.5	-0.6
KHZ	Kahutara	0.97	214	P	Pb	12 18 34.4	+0.2
MTW	Mount Morrison	1.03	64	P	Pn	12 18 35.7	-0.2
THZ	Tophouse	1.04	262	P	Pb	12 18 35.2	-0.2
OGWZ	Otaki Gorge	1.04	40	P	Pb	12 18 35.3	-0.1
TRWZ	Traveller	1.08	79	P	Pb	12 18 36.2	+0.2
HOWZ	Holdsworth Sta	1.18	53	P	Pn	12 18 37.9	-0.1
TMWZ	Te Maipa	1.31	68	P	Pn	12 18 39.7	-0.2
MRZ	Mangatainoka R	1.37	46	P	Pn	12 18 40.7	+0.1
TIWZ	Tintock	1.47	56	P	Pb	12 18 42.5	-0.3
QRZ	Quartz Range	1.54	300	P	Pb	12 18 43.9	0.0
CPWZ	Castlepoint	1.61	65	P	Pg	12 18 49.2	+3.5
OHWZ	Ohakea	1.61	29	P	Pg	12 18 45.9	+0.1
GVZ	Greta Valley S	1.64	214	P	Pn	12 18 43.8	-0.6
PRWZ	Pori Road	1.66	51	P	Pn	12 18 44.7	0.0
POWZ	Post Office Ro	1.66	43	P	Pb	12 18 45.7	-0.2
BFZ	Birch Farm	1.75	58	P	Pn	12 18 46.1	+0.2
LTZ	Lake Taylor	1.89	231	P	Pn	12 18 47.7	-0.2
WAZ	Wanganui	1.94	16	P	Pg	12 18 51.3	-0.7
DVHZ	Dannevirke	1.94	48	P	Pn	12 18 48.0	-0.5
AMCZ	Amberley	1.97	217	P	Pb	12 18 51.4	+0.2
NMEZ	Namu Road	2.22	352	P	Pg	12 18 57.4	0.0
PNHZ	Pukenui	2.24	41	P	Pn	12 18 52.6	0.0
WPHZ	Waipukurau	2.25	47	P	Pg	12 18 58.5	+0.5
PREZ	Palmer Road	2.27	358	P	Pb	12 18 57.1	+0.7
KHEZ	Kahui Hut	2.33	355	P	Pb	12 18 57.3	-0.1
NBEZ	Newall Road No	2.37	352	P	Pg	12 18 59.2	-1.0
OXZ	Oxford	2.38	223	P	Pn	12 18 56.3	+1.8
MTVZ	Mangateitei	2.41	22	P	Pb	12 18 59.4	+0.7
MQZ	McQueen's Vall	2.41	209	P	Pn	12 18 52.5	-2.4
DREZ	Durham Road	2.43	359	P	Pb	12 19 00.1	+1.2
PKE	Pukeiti	2.43	355	P	Pb	12 18 57.7	-1.4
PKVZ	Pokaka	2.46	20	P	Pb	12 18 58.1	-1.5
AKCZ	Akaroa Harbour	2.47	204	P	Pn	12 18 56.3	+0.5
MOVZ	Moawhango	2.48	27	P	Pb	12 18 59.7	-0.1
VRZ	Vera Road	2.52	8	P	Pb	12 18 59.3	-1.2
BHHZ	Black Hill Sta	2.52	33	P	Pn	12 18 58.1	+1.6
KRHZ	Kereru	2.53	40	P	Pn	12 18 56.3	-0.3
WHVZ	Whangaehu Hut	2.54	24	P	Pb	12 19 01.2	+0.2
FWVZ	Far West T-bar	2.55	23	P	Pb	12 19 01.8	+0.5
TUVZ	Tukino	2.57	24	P	Pn	12 18 59.0	+1.8
NGZ	Ngauruhoe	2.64	23	P	Pb	12 19 02.5	-0.2
KAHZ	Kahuranaki	2.68	48	P	Pn	12 19 00.5	+1.7
WTVZ	West Tongariro	2.69	22	P	Pb	12 19 04.0	+0.5
TWVZ	Taurewa	2.69	20	P	Pb	12 19 04.5	+1.0
KRVZ	Karewarewa	2.73	23	P	Pb	12 19 04.9	+0.8
KWHZ	Kaweka Forest	2.73	37	P	Pg	12 19 05.7	-1.5
KATZ	Kakaramea	2.85	23	P	Pb	12 19 07.8	+1.5
RITZ	Rihia Road	2.90	25	P	Pb	12 19 08.2	+1.2
BKZ	Black Stump Fm	2.97	35	P	Pb	12 19 09.2	+0.9
RATZ	Rangitukua	2.97	23	P	Pg	12 19 10.2	-1.7
WVZ	Waitaha Valley	3.00	240	P	Pb	12 19 09.2	+0.4
WATZ	Wairara	3.11	21	P	Pb	12 19 12.0	+1.3
HIZ	Hauiti	3.13	8	P	Pb	12 19 08.1	-2.9
RPZ	Rata Peaks	3.17	228	P	Pn	12 19 07.9	+2.5
TLZ	Tolley Road	3.42	17	P	Pb	12 19 16.3	+0.3
PRGZ	Paritu Road	3.85	47	P	Pb	12 19 19.7	-3.6
URZ	Urewera	4.00	34	P	Pb	12 19 23.9	-1.8
OPRZ	Ohinepanea	4.16	26	P	Pn	12 19 20.3	+1.4
AWAZ	Awhitu Peninsu	4.55	4	P	Pn	12 19 28.4	+4.0
MKAZ	Moumakai	4.56	9	P	Pn	12 19 28.2	+3.8
ETAZ	East Tamaki Re	4.68	6	P	Pn	12 19 29.5	+3.3

LDG ***21*** *12:19:22.4±0.2, 43°.50N×13°.70E, h10^{km}, Ml3.1/2, Error ellipse: s-maj=4.5km s-min=2.2km az=74.0*
ISCJB ***21*** *12:19:23.3±0.3, 43°.50N±0°.02×13°.71E±0°.02, h11^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.5km az=41.6*
ROM ***21*** *12:19:23.2±0.3, 43°.49N±0°.01×13°.69E±0°.03, h8^{km}±1^{km}, ML2.8/41, Error ellipse: s-maj=2.3km s-min=0.4km az=59.0*
ISC 21 12:19:22.9±0.9**, 43°.47N**±0°.02×**13°.70E**±0°.02**, h11**^{km}±6^{km}**, n92,** σ1^{s}.**43**/104**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	Ancona	0.11	319	P	Pg	12 19 25.4	-0.4
AOI				S	Sg	12 19 27.5	-0.4
AOI				AML	AML		
	comp=E,13100µm,0.5s						
AOI				AML	AML		
	comp=N,16700µm,0.4s						
AOI				AML	AML		
	comp=E,13100µm,0.5s						
AOI				AML	AML		
	comp=N,16700µm,0.4s						
AOI				AML	AML		
	comp=E,13100µm,0.5s						
AOI				AML	AML		
	comp=N,16650µm,0.4s						
AOI				AML	AML		
	comp=E,13100µm,0.5s						
AOI				AML	AML		
	comp=N,16650µm,0.4s						
AOI				AML	AML		
	comp=E,13100µm,0.5s						
AOI				AML	AML		
	comp=N,16650µm,0.4s						
CIMA	Civitanova Mar	0.16	188	P	Pb	12 19 28.2	+0.2
CIMA				AML	AML		
	comp=E,14450µm,0.9s						
CIMA				AML	AML		
	comp=N,34300µm,0.3s						
CIMA				AML	AML		
	comp=E,14450µm,1.0s						
CIMA				AML	AML		
	comp=N,34350µm,0.3s						
CIMA				AML	AML		
	comp=E,14450µm,1.0s						
CIMA				AML	AML		
	comp=N,34350µm,0.3s						
CIMA				AML	AML		
	comp=E,14450µm,1.0s						
CIMA				AML	AML		
	comp=N,34350µm,0.3s						
CIMA				AML	AML		
	comp=E,14450µm,1.0s						
CIMA				AML	AML		
	comp=N,34350µm,0.3s						
PCRO	Pietralacroce	0.18	319	P	Pg	12 19 27.1	+0.1
PCRO				S	Sg	12 19 30.5	+0.7
PCRO				AML	AML		
	comp=E,18000µm,0.4s						
PCRO				AML	AML		
	comp=N,13100µm,0.8s						
PCRO				AML	AML		
	comp=E,18050µm,0.4s						
PCRO				AML	AML		
	comp=N,13100µm,0.8s						
PCRO				AML	AML		
	comp=E,18050µm,0.4s						
PCRO				AML	AML		
	comp=N,13100µm,0.8s						
PCRO				AML	AML		
	comp=N,13100µm,0.8s						
PCRO				AML	AML		
	comp=E,18050µm,0.4s						
PCRO				AML	AML		
	comp=N,13100µm,0.8s						
PCRO				AML	AML		
	comp=E,18050µm,0.4s						
CADA	Capodarco di F	0.28	171	P	Pb	12 19 30.0	+0.1
CADA				S	Sb	12 19 35.9	+1.4
CADA				AML	AML		
	comp=E,7620µm,1.5s						
CADA				AML	AML		
	comp=N,5760µm,1.2s						
CADA				AML	AML		
	comp=E,7620µm,1.5s						
CADA				AML	AML		
	comp=N,5760µm,1.2s						
MNTP	Montappone	0.37	207	P	Pb	12 19 31.7	+0.2
CING	Cingoli	0.38	256	P	Pb	12 19 31.1	-0.5
CING				S	Sb	12 19 37.9	+0.4
CING				AML	AML		
	comp=E,855µm,0.7s						
CING				AML	AML		
	comp=N,951µm,0.4s						

CING	comp=E,855µm,0.7s		AML	AML		
CING	comp=N,951µm,0.4s		AML	AML		
CING	comp=E,855µm,0.7s		AML	AML		
CING	comp=N,951µm,0.4s		AML	AML		
SENI	**Senigallia**	**0.41 305**	P	**Pb**	**12 19 32.1**	**-0.1**
SENI	comp=E,1395µm,0.7s		AML	AML		
SENI	comp=N,1305µm,1.0s		AML	AML		
SENI	comp=E,3640µm,1.6s		AML	AML		
SENI	comp=N,5595µm,1.2s		AML	AML		
SENI	comp=E,1390µm,0.7s		AML	AML		
SENI	comp=N,1305µm,1.0s		AML	AML		
SENI	comp=E,1390µm,0.7s		AML	AML		
SENI	comp=N,1310µm,1.0s		AML	AML		
SENI	comp=N,1310µm,1.0s		AML	AML		
SENI	comp=E,1390µm,0.7s		AML	AML		
SENI	comp=N,1310µm,1.0s		AML	AML		
SENI	comp=E,1390µm,0.7s		AML	AML		
EL6	**Elcito**	**0.46 253**	P	**Pb**	**12 19 32.6**	**-0.4**
EL6	comp=E,1098µm,0.8s		AML	AML		
EL6	comp=N,1235µm,1.4s		AML	AML		
CSP1	**Cessapalombo**	**0.52 224**	P	**Pb**	**12 19 33.9**	**-0.2**
COR1	**Corinaldo**	**0.53 288**	P	**Pb**	**12 19 34.5**	**+0.2**
ARVD	**Arcevia**	**0.55 273**	P	**Pg**	**12 19 34.1**	**+0.4**
ARVD			S	**Sb**	**12 19 43.0**	**+0.5**
ARVD	comp=E,254µm,1.0s		AML	AML		
ARVD	comp=N,363µm,0.5s		AML	AML		
ARVD	comp=E,254µm,1.0s		AML	AML		
ARVD	comp=N,363µm,0.5s		AML	AML		
ARVD	comp=N,363µm,0.5s		AML	AML		
ARVD	comp=E,254µm,1.0s		AML	AML		
ARVD	comp=N,363µm,0.5s		AML	AML		
ARVD	comp=E,254µm,1.0s		AML	AML		
SNTG	**Esanatoglia**	**0.59 249**	P	**Pg**	**12 19 34.7**	**+0.3**
SNTG	comp=E,380µm,0.6s		AML	AML		
SNTG	comp=N,602µm,0.4s		AML	AML		
SNTG	comp=E,380µm,0.6s		AML	AML		
SNTG	comp=N,602µm,0.4s		AML	AML		
SNTG	comp=E,380µm,0.6s		AML	AML		
SNTG	comp=N,601µm,0.4s		AML	AML		
SNTG	comp=N,601µm,0.4s		AML	AML		
SNTG	comp=E,380µm,0.6s		AML	AML		
SNTG	comp=N,601µm,0.4s		AML	AML		
SNTG	comp=E,380µm,0.6s		AML	AML		
FDMO	**Fiordimonte**	**0.62 226**	P	**Pg**	**12 19 35.4**	**+0.4**
FDMO	comp=E,784µm,0.9s		AML	AML		
FDMO	comp=N,471µm,0.4s		AML	AML		
FDMO	comp=E,784µm,0.9s		AML	AML		
FDMO	comp=N,471µm,0.4s		AML	AML		
FDMO	comp=E,784µm,0.9s		AML	AML		
FDMO	comp=N,471µm,0.4s		AML	AML		
FDMO	comp=E,784µm,0.9s		AML	AML		
FDMO	comp=N,471µm,0.4s		AML	AML		
TRTR	**Tortoreto Alta**	**0.68 167**	P	**Pn**	**12 19 38.4**	**0.0**
TRTR	comp=E,3560µm,0.3s		AML	AML		
TRTR	comp=N,2815µm,1.2s		AML	AML		
TRTR	comp=E,3560µm,0.3s		AML	AML		
TRTR	comp=N,2815µm,1.2s		AML	AML		
TRTR	comp=N,2815µm,1.2s		AML	AML		
TRTR	comp=E,3560µm,0.3s		AML	AML		
TRTR	comp=N,2815µm,1.2s		AML	AML		
TRTR	comp=E,3560µm,0.3s		AML	AML		
MPAG	**Monte Paganucc**	**0.70 284**	P	**Pg**	**12 19 36.8**	**+0.3**
MPAG	comp=E,368µm,0.6s		AML	AML		
MPAG	comp=N,480µm,0.7s		AML	AML		
MPAG	comp=E,368µm,0.6s		AML	AML		
MPAG	comp=N,479µm,0.7s		AML	AML		
MPAG	comp=E,368µm,0.6s		AML	AML		
MPAG	comp=N,479µm,0.7s		AML	AML		
MPAG	comp=E,368µm,0.6s		AML	AML		
MPAG	comp=N,479µm,0.7s		AML	AML		
FOSV	**Fossato di Vic** comp=N,423µm,0.4s	**0.71 256**	AML	AML		
FOSV	comp=E,382µm,1.4s		AML	AML		
FOSV	comp=N,423µm,0.4s		AML	AML		
FOSV	comp=E,382µm,1.4s		AML	AML		
FOSV	comp=N,423µm,0.4s		AML	AML		
FOSV	comp=E,382µm,1.4s		AML	AML		
FOSV	comp=N,423µm,0.4s		AML	AML		
FOSV	comp=E,382µm,1.4s		AML	AML		
FSSB	**Fossombrone**	**0.71 289**	P	**Pg**	**12 19 36.8**	**+0.2**
FSSB	comp=E,1024µm,0.4s		AML	AML		
FSSB	comp=N,970µm,0.3s		AML	AML		
FSSB	comp=E,1028µm,0.4s		AML	AML		
FSSB	comp=N,970µm,0.3s		AML	AML		
FSSB	comp=N,970µm,0.3s		AML	AML		
FSSB	comp=E,1028µm,0.4s		AML	AML		
FSSB	comp=N,970µm,0.3s		AML	AML		
FSSB	comp=E,1028µm,0.4s		AML	AML		
CESI	**CESI - Serrava**	**0.74 232**	P	**Pb**	**12 19 37.8**	**0.0**
CESI	comp=E,328µm,0.4s		AML	AML		
CESI	comp=N,382µm,0.5s		AML	AML		
CESI	comp=E,328µm,0.4s		AML	AML		
CESI	comp=N,383µm,0.5s		AML	AML		
CESI	comp=E,328µm,0.4s		AML	AML		
CESI	comp=N,383µm,0.5s		AML	AML		
CESI	comp=E,328µm,0.4s		AML	AML		
CESI	comp=N,383µm,0.5s		AML	AML		
NRCA	**Norcia**	**0.77 214**	P	**Pg**	**12 19 38.1**	**+0.3**
NRCA	comp=E,1280µm,1.0s		AML	AML		
NRCA	comp=N,1230µm,0.3s		AML	AML		
NRCA	comp=E,1280µm,1.0s		AML	AML		
NRCA	comp=N,1230µm,0.3s		AML	AML		
NRCA	comp=N,1230µm,0.3s		AML	AML		
NRCA	comp=E,1280µm,1.0s		AML	AML		
NRCA	comp=N,1230µm,0.3s		AML	AML		
NRCA	comp=E,1280µm,1.0s		AML	AML		
ATCC	**AVT- Casa Cast**	**0.82 250**	P	**Pb**	**12 19 39.4**	**+0.2**
ATCC	comp=E,618µm,0.6s		AML	AML		
ATCC	comp=N,941µm,0.6s		AML	AML		
ATCC	comp=E,618µm,0.6s		AML	AML		
ATCC	comp=N,939µm,0.6s		AML	AML		
ATCC	comp=E,618µm,0.6s		AML	AML		
ATCC	comp=N,939µm,0.6s		AML	AML		
ATCC	comp=E,618µm,0.6s		AML	AML		
ATCC	comp=N,939µm,0.6s		AML	AML		
NARO	**Abbazia di Nar**	**0.83 280**	P	**Pb**	**12 19 39.5**	**+0.2**
NARO	comp=E,189µm,0.6s		AML	AML		
NARO	comp=N,261µm,0.6s		AML	AML		
NARO	comp=E,188µm,0.6s		AML	AML		
NARO	comp=N,261µm,0.6s		AML	AML		
NARO	comp=E,188µm,0.6s		AML	AML		
NARO	comp=N,261µm,0.6s		AML	AML		
NARO	comp=E,188µm,0.6s		AML	AML		
NARO	comp=N,261µm,0.6s		AML	AML		
ATFO	**Monte Foce - G**	**0.83 263**	P	**Pb**	**12 19 39.5**	**+0.2**
ATFO	comp=E,512µm,0.7s		AML	AML		
ATFO	comp=N,364µm,0.4s		AML	AML		
ATFO	comp=E,512µm,0.7s		AML	AML		
ATFO	comp=N,364µm,0.4s		AML	AML		
ATFO	comp=N,364µm,0.4s		AML	AML		
ATFO	comp=E,512µm,0.7s		AML	AML		
ATFO	comp=N,364µm,0.4s		AML	AML		
ATFO	comp=E,512µm,0.7s		AML	AML		
TERO	**Teramo**	**0.85 185**	P	**Pg**	**12 19 39.6**	**+0.3**
TERO	comp=E,1265µm,1.2s		AML	AML		
TERO	comp=N,820µm,0.3s		AML	AML		
TERO	comp=E,374µm,1.6s		AML	AML		
TERO	comp=N,342µm,0.3s		AML	AML		
TERO	comp=E,1264µm,1.2s		AML	AML		
TERO	comp=N,819µm,0.3s		AML	AML		
TERO	comp=E,374µm,1.6s		AML	AML		
TERO	comp=N,342µm,0.3s		AML	AML		
TERO	comp=N,342µm,0.3s		AML	AML		
TERO	comp=E,1264µm,1.2s		AML	AML		
TERO	comp=E,374µm,1.6s		AML	AML		
TERO	comp=N,819µm,0.3s		AML	AML		
TERO	comp=N,342µm,0.3s		AML	AML		
TERO	comp=E,1264µm,1.2s		AML	AML		
TERO	comp=E,374µm,1.6s		AML	AML		
TERO	comp=N,819µm,0.3s		AML	AML		
PIEI	**Pieia**	**0.85 275**	P	**Pg**	**12 19 39.3**	**0.0**
PIEI	comp=E,260µm,0.4s		AML	AML		
PIEI	comp=N,252µm,0.4s		AML	AML		
PIEI	comp=E,260µm,0.4s		AML	AML		
PIEI	comp=N,251µm,0.4s		AML	AML		
PIEI	comp=N,251µm,0.4s		AML	AML		
PIEI	comp=E,260µm,0.4s		AML	AML		
PIEI	comp=N,251µm,0.4s		AML	AML		
PIEI	comp=E,260µm,0.4s		AML	AML		
ASSB	**Assisi San Ben**	**0.87 241**	P	**Pg**	**12 19 39.8**	**+0.1**
ASSB	comp=E,690µm,0.4s		AML	AML		
ASSB	comp=N,645µm,0.6s		AML	AML		
ASSB	comp=E,690µm,0.4s		AML	AML		
ASSB	comp=N,645µm,0.6s		AML	AML		
ASSB	comp=E,690µm,0.4s		AML	AML		
ASSB	comp=N,645µm,0.6s		AML	AML		
ASSB	comp=E,690µm,0.4s		AML	AML		
ASSB	comp=N,645µm,0.6s		AML	AML		
LNSS	**Leonessa**	**0.99 209**	P	**Pb**	**12 19 41.9**	**-0.3**
LNSS	comp=E,990µm,0.7s		AML	AML		
LNSS	comp=N,1680µm,0.5s		AML	AML		
LNSS	comp=E,986µm,0.7s		AML	AML		
LNSS	comp=N,1680µm,0.5s		AML	AML		
LNSS	comp=N,1680µm,0.5s		AML	AML		
LNSS	comp=E,986µm,0.7s		AML	AML		
LNSS	comp=N,1680µm,0.5s		AML	AML		
LNSS	comp=E,986µm,0.7s		AML	AML		
CPGN	**Carpegna, Ital**	**1.05 289**	P	**Pn**	**12 19 44.6**	**+0.9**
MOMA	**Monte Martano**	**1.06 232**	P	**Pb**	**12 19 43.3**	**0.0**
MOMA	comp=E,497µm,0.4s		AML	AML		
MOMA	comp=N,1169µm,1.6s		AML	AML		
MOMA	comp=E,516µm,0.9s		AML	AML		
MOMA	comp=N,614µm,0.6s		AML	AML		
MOMA	comp=E,497µm,0.4s		AML	AML		
MOMA	comp=N,1167µm,1.6s		AML	AML		
MOMA	comp=E,516µm,0.9s		AML	AML		
MOMA	comp=N,613µm,0.6s		AML	AML		
MOMA	comp=N,613µm,0.6s		AML	AML		
MOMA	comp=N,1167µm,1.6s		AML	AML		
MOMA	comp=E,516µm,0.9s		AML	AML		
MOMA	comp=E,497µm,0.4s		AML	AML		
MOMA	comp=N,613µm,0.6s		AML	AML		
MOMA	comp=N,1167µm,1.6s		AML	AML		
MOMA	comp=E,497µm,0.4s		AML	AML		
MOMA	comp=E,516µm,0.9s		AML	AML		
PARC	**Parchiule**	**1.08 280**	P	**Pn**	**12 19 43.8**	**-0.1**
PARC	comp=E,233µm,0.5s		AML	AML		
PARC	comp=N,358µm,1.1s		AML	AML		
PARC	comp=E,233µm,0.5s		AML	AML		
PARC	comp=N,359µm,1.1s		AML	AML		
PARC	comp=N,359µm,1.1s		AML	AML		
PARC	comp=E,233µm,0.5s		AML	AML		
PARC	comp=N,359µm,1.1s		AML	AML		
PARC	comp=E,233µm,0.5s		AML	AML		
DUGI	**Dugi Otok**	**1.11 62**	*i* Pg	**Pb**	**12 19 44.2**	**0.0**
DUGI			Sg	**Sb**	**12 19 58.8**	**0.0**
ARRO	**Arrone**	**1.12 218**	P	**Pg**	**12 19 44.6**	**+0.2**
ARRO	comp=E,342µm,0.6s		AML	AML		
ARRO	comp=N,388µm,0.7s		AML	AML		
ARRO	comp=E,342µm,0.6s		AML	AML		
ARRO	comp=N,388µm,0.7s		AML	AML		
ARRO	comp=E,342µm,0.6s		AML	AML		
ARRO	comp=N,388µm,0.7s		AML	AML		
ARRO	comp=E,342µm,0.6s		AML	AML		
ARRO	comp=N,388µm,0.7s		AML	AML		
AQU	**L'Aquila**	**1.14 191**	*e*Pn	**Pb**	**12 19 44.3**	**-0.3**
AQU	**L'Aquila**	**1.14 191**	P	**Pb**	**12 19 44.6**	**0.0**
AQU	comp=E,645µm,1.1s		AML	AML		
AQU	comp=N,568µm,1.5s		AML	AML		
AQU	comp=E,609µm,1.0s		AML	AML		
AQU	comp=N,602µm,1.5s		AML	AML		
AQU	comp=E,645µm,1.1s		AML	AML		
AQU	comp=E,609µm,1.0s		AML	AML		
AQU	comp=N,602µm,1.5s		AML	AML		
AQU	comp=N,568µm,1.5s		AML	AML		
AQU	comp=E,609µm,1.0s		AML	AML		
AQU	comp=E,645µm,1.1s		AML	AML		
AQU	comp=N,602µm,1.5s		AML	AML		
AQU	comp=N,568µm,1.5s		AML	AML		
T0104	**Madonna delle**	**1.14 194**	P	**Pb**	**12 19 44.5**	**-0.2**
T0104	comp=E,1220µm,1.0s		AML	AML		
T0104	comp=N,973µm,0.9s		AML	AML		
T0104	comp=N,973µm,0.9s		AML	AML		
T0104	comp=E,1220µm,1.0s		AML	AML		
T0104	comp=N,973µm,0.9s		AML	AML		
T0104	comp=E,1220µm,1.0s		AML	AML		
FAGN	**Fagnano** comp=E,1790µm,0.6s	**1.20 184**	AML	AML		
FAGN	comp=N,1875µm,1.4s		AML	AML		
FAGN	comp=E,1785µm,0.6s		AML	AML		
FAGN	comp=N,1905µm,1.4s		AML	AML		
FAGN	comp=N,1905µm,1.4s		AML	AML		
FAGN	comp=E,1785µm,0.6s		AML	AML		
FAGN	comp=N,1905µm,1.4s		AML	AML		
FAGN	comp=E,1785µm,0.6s		AML	AML		
CAFI	**Castiglion Fio**	**1.27 264**	P	**Pg**	**12 19 47.9**	**+0.5**
CAFI	comp=E,210µm,0.6s		AML	AML		
CAFI	comp=N,296µm,0.8s		AML	AML		
CAFI	comp=E,210µm,0.6s		AML	AML		
CAFI	comp=N,296µm,0.8s		AML	AML		
CAFI	comp=N,296µm,0.8s		AML	AML		
CAFI	comp=E,210µm,0.6s		AML	AML		
CAFI	comp=N,296µm,0.8s		AML	AML		
CAFI	comp=E,210µm,0.6s		AML	AML		
FIAM	**Fiamignano**	**1.27 200**	P	**Pn**	**12 19 46.5**	**-0.2**
FIAM	comp=E,864µm,0.6s		AML	AML		
FIAM	comp=N,568µm,0.9s		AML	AML		
FIAM	comp=E,864µm,0.6s		AML	AML		
FIAM	comp=N,568µm,0.9s		AML	AML		
FIAM	comp=E,864µm,0.6s		AML	AML		
FIAM	comp=N,568µm,0.9s		AML	AML		
MGAB	**Montegabbione**	**1.29 245**	P	**Pg**	**12 19 48.6**	**+0.9**
MGAB	comp=E,522µm,0.6s		AML	AML		
MGAB	comp=N,594µm,0.5s		AML	AML		
MGAB	comp=E,522µm,0.6s		AML	AML		
MGAB	comp=N,594µm,0.5s		AML	AML		
MGAB	comp=E,522µm,0.6s		AML	AML		
MGAB	comp=N,594µm,0.5s		AML	AML		
CAFR	**Castel Frentan** comp=N,1290µm,0.9s	**1.33 159**	AML	AML		
CAFR	comp=E,1460µm,0.6s		AML	AML		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CAFR				AML	AML		
	comp=N,1290µm,0.9s						
CAFR				AML	AML		
	comp=E,1460µm,0.6s						
CAFR				AML	AML		
	comp=N,1290µm,0.9s						
CAFR				AML	AML		
	comp=E,1460µm,0.6s						
NVLJ	**Novalja**	**1.38**	**37**	*e*Pn	**Pn**	**12 19 47.8**	**-0.3**
NVLJ				Sg	**Sg**	**12 20 07.3**	**-0.2**
ZIRJ	**Zirje**	**1.43**	**82**	*e*Pn	**Pn**	**12 19 48.9**	**+0.2**
ZIRJ				Sn	**Sg**	**12 20 08.6**	**-0.1**
SACS	**San Casciano d**	**1.45**	**245**	P	**Pg**	**12 19 51.5**	**+0.8**
SACS				AML	AML		
	comp=E,165µm,0.8s						
SACS				AML	AML		
	comp=N,236µm,0.6s						
SACS				AML	AML		
	comp=N,236µm,0.6s						
SACS				AML	AML		
	comp=E,165µm,0.8s						
SACS				AML	AML		
	comp=N,236µm,0.6s						
SACS				AML	AML		
	comp=E,165µm,0.8s						
INTR	**Introdacqua**	**1.46**	**174**	P	**Pg**	**12 19 51.4**	**+0.4**
INTR				AML	AML		
	comp=E,620µm,0.4s						
INTR				AML	AML		
	comp=N,904µm,0.7s						
INTR				AML	AML		
	comp=E,620µm,0.4s						
INTR				AML	AML		
	comp=N,904µm,0.7s						
INTR				AML	AML		
	comp=E,620µm,0.4s						
INTR				AML	AML		
	comp=N,904µm,0.7s						
LPEL	**Lama dei Pelig**	**1.46**	**166**	AML	AML		
	comp=E,535µm,1.6s						
LPEL				AML	AML		
	comp=E,535µm,1.6s						
LPEL				AML	AML		
	comp=N,308µm,0.8s						
LPEL				AML	AML		
	comp=N,308µm,0.8s						
LPEL				AML	AML		
	comp=E,535µm,1.6s						
LPEL				AML	AML		
	comp=N,308µm,0.8s						
MORI	**Morici**	**1.51**	**74**	*i* Pn	**Pb**	**12 19 50.8**	**-0.1**
MORI				Sn	**Sg**	**12 20 11.2**	**-0.3**
UDBI	**Udbina**	**1.83**	**54**	*e*Pn	**Pb**	**12 19 55.7**	**-0.7**
UDBI				Sn	**Sb**	**12 20 19.5**	**+0.2**
RIY	**Rijeka**	**1.94**	**17**	iPn	**Pb**	**12 19 57.0**	**-1.2**
RIY				Sn	**Sb**	**12 20 21.3**	**-1.1**
RIY	**Rijeka**	**1.94**	**17**	*e*Pn	**Pn**	**12 19 56.1**	**+0.3**
HVAR	**Hvar**	**2.03**	**97**	*e*Pn	**Pn**	**12 19 56.6**	**-0.3**
HVAR				Sn	**Sb**	**12 20 24.1**	**-0.9**
SKDS	**Skadanscina**	**2.09**	**6**	*i* Pn	**Pn**	**12 19 58.1**	**+0.2**
SKDS				*e*Sn	**Sn**	**12 20 24.4**	**+0.5**
	comp=Z,21nm,0.3s						
TRI	**Trieste**	**2.24**	**1**	AML	AML		
	comp=E,73µm,1.0s						
TRI				AML	AML		
	comp=E,73µm,1.0s						
TRI				AML	AML		
	comp=N,63µm,0.9s						
TRI				AML	AML		
	comp=N,63µm,0.9s						
TRI				AML	AML		
	comp=N,63µm,0.9s						
TRI				AML	AML		
	comp=E,73µm,1.0s						
BOJS	**Bojanci**	**2.32**	**28**	AML	AML		
	comp=E,87µm,0.5s						
BOJS				AML	AML		
	comp=E,87µm,0.5s						
BOJS				AML	AML		
	comp=N,86µm,0.4s						
BOJS				AML	AML		
	comp=E,87µm,0.5s						
BOJS				AML	AML		
	comp=N,86µm,0.4s						
BOJS				AML	AML		
	comp=N,86µm,0.4s						
CEY	**Cerknica**	**2.33**	**13**	*e*Pn	**Pn**	**12 20 01.9**	**+0.7**
MAKA	**Makarska**	**2.43**	**93**	*i* Pn	**Pn**	**12 20 03.5**	**+1.0**
OZLJ	**Ozalj**	**2.49**	**30**	*e*Pn	**Pn**	**12 20 04.7**	**+1.4**
LJU	**Ljubljana**	**2.64**	**13**	*e*Pn	**Pn**	**12 20 06.1**	**+0.6**
LJU	**Ljubljana**	**2.64**	**13**	AML	AML		
	comp=E,156µm,0.7s						
LJU				AML	AML		
	comp=E,156µm,0.7s						
LJU				AML	AML		
	comp=N,172µm,0.7s						
LJU				AML	AML		
	comp=N,172µm,0.7s						
LJU				AML	AML		
	comp=N,172µm,0.7s						
LJU				AML	AML		
	comp=E,156µm,0.7s						
CRES	**Cresnjev**	**2.67**	**27**	*e*Pn	**Pb**	**12 20 09.5**	**-1.2**
BLY	**Banja Luka**	**2.82**	**62**	*e*Pn	**Pb**	**12 20 11.3**	**-1.9**
MCRV	**Calabrutti - M**	**2.90**	**157**	AML	AML		
	comp=E,80µm,0.7s						
MCRV				AML	AML		
	comp=E,80µm,0.7s						
MCRV				AML	AML		
	comp=N,59µm,0.5s						
MCRV				AML	AML		
	comp=N,59µm,0.5s						
MCRV				AML	AML		
	comp=N,59µm,0.5s						
MCRV				AML	AML		
	comp=E,80µm,0.7s						
STON	**Ston**	**2.99**	**100**	*e*Pn	**Pn**	**12 20 10.7**	**+0.6**
STON	**Ston**	**2.99**	**100**	*e*Pn	**Pn**	**12 20 10.5**	**+0.4**
OBKA	**Obir**	**3.10**	**11**	*e*Pn	**Pn**	**12 20 13.4**	**+1.6**
	comp=E,1.2nm,0.2s						
MYKA	**Terra Mystica**	**3.16**	**359**	*e*Pn	**Pn**	**12 20 14.2**	**+1.5**
	comp=E,4.0nm,0.5s						
MYKA				*e*Sn	**Sn**	**12 20 51.8**	**+1.4**
	comp=E,2.9nm,0.4s						
MYKA				Sg	**Sg**	**12 21 06.1**	**+1.6**
	comp=E,9.9nm,0.5s						
CMPR	**Campora**	**3.37**	**159**	AML	AML		
	comp=N,21µm,0.6s						
CMPR				AML	AML		
	comp=E,46µm,0.6s						
CMPR				AML	AML		
	comp=N,21µm,0.6s						
CMPR				AML	AML		
	comp=E,46µm,0.6s						
CMPR				AML	AML		
	comp=N,21µm,0.6s						
CMPR				AML	AML		
	comp=E,46µm,0.6s						
ABTA	**Abfaltersbach**	**3.38**	**346**	*e*Pn	**Pn**	**12 20 17.0**	**+1.2**
	comp=E,4.2nm,0.5s						
ABTA				Sn	**Sn**	**12 20 56.8**	**+0.9**
	comp=E,11nm,0.8s						
TREB	**Trebinje**	**3.49**	**101**	*e*Pn	**Pn**	**12 20 18.0**	**+0.9**
MTSN	**Montesano sull**	**3.55**	**154**	AML	AML		
	comp=N,32µm,0.8s						
MTSN				AML	AML		
	comp=E,27µm,1.5s						
MTSN				AML	AML		
	comp=N,32µm,0.8s						
MTSN				AML	AML		
	comp=N,32µm,0.8s						
MTSN				AML	AML		
	comp=E,27µm,1.5s						
MTSN				AML	AML		
	comp=E,27µm,1.5s						
BRY	**Bratogost**	**3.58**	**97**	*e*Pn	**Pn**	**12 20 19.6**	**+1.1**
ABSI	**Aberstueckl**	**3.67**	**334**	AML	AML		
	comp=N,118µm,0.6s						
ABSI				AML	AML		
	comp=E,108µm,0.6s						
ABSI				AML	AML		
	comp=N,118µm,0.6s						
ABSI				AML	AML		
	comp=N,118µm,0.6s						
ABSI				AML	AML		
	comp=E,108µm,0.6s						
ABSI				AML	AML		
	comp=E,108µm,0.6s						
UPM	**Unac-Piva**	**3.81**	**92**	*e*Pn	**Pn**	**12 20 23.7**	**+2.1**
HAPS	**Han Pijesak,Bl**	**3.85**	**79**	*e*Pn	**Pn**	**12 20 21.6**	**-0.6**
ARSA	**Arzberg**	**4.00**	**18**	*e*Pn	**Pn**	**12 20 25.4**	**+1.3**
	comp=E,0.8nm,0.3s						
WTTA	**Wattenberg**	**4.07**	**340**	*e*Pn	**Pn**	**12 20 27.9**	**+2.7**
	comp=E,0.7nm,0.3s						
WTTA				Sn	**Sn**	**12 21 14.5**	**+1.7**
	comp=E,3.6nm,0.4s						
FETA	**Feichten**	**4.13**	**330**	Pn	**Pn**	**12 20 27.5**	**+1.5**
	comp=E,0.3nm,0.2s						
FETA				Sn	**Sn**	**12 21 15.6**	**+1.3**
	comp=E,2.2nm,0.5s						
SQTA	**Sankt Quirin**	**4.14**	**336**	*e*Pn	**Pn**	**12 20 24.7**	**-1.4**
	comp=E,0.5nm,0.1s						
SQTA				*e*Sn	**Sn**	**12 21 15.5**	**+0.9**
	comp=E,2.7nm,0.3s						
WATA	**Walderalm**	**4.15**	**340**	*e*Pn	**Pn**	**12 20 28.6**	**+2.4**
	comp=E,4.4nm,0.3s						
DRME	**Dracevica, Mon**	**4.23**	**106**	*e*Pn	**Pn**	**12 20 27.9**	**+0.6**
MOTA	**Moosalm**	**4.29**	**336**	*e*Pn	**Pn**	**12 20 31.0**	**+2.9**
	comp=E,0.1nm,0.1s						
MOA	**Molln**	**4.40**	**5**	*e*Pn	**Pn**	**12 20 31.3**	**+1.7**
	comp=E,1.3nm,0.3s						
MOA				*e*Sn	**Sn**	**12 21 21.7**	**+0.8**
	comp=E,5.3nm,0.5s						
SBF	**Sospel**	**4.56**	**277**	*e*P	**Pn**	**12 20 33.3**	**+1.4**
CONA	**Conrad Observa**	**4.71**	**18**	*e*Pn	**Pn**	**12 20 35.0**	**+1.0**
	comp=E,0.7nm,0.2s						
CONA				*e*Sn	**Sn**	**12 21 29.7**	**+1.1**
	comp=E,1.8nm,0.4s						
FRF	**La Foret Royal**	**5.13**	**273**	*e*P	**Pn**	**12 20 41.3**	**+1.7**
FRF				*e*Sn	**Sn**	**12 21 32.7**	**-6.1**
	comp=E,12nm,1.0s						
MBDF	**Montbardon**	**5.15**	**287**	*e*P	**Pn**	**12 20 41.6**	**+1.6**
LMR	**La Mourre**	**5.24**	**271**	*e*P	**Pn**	**12 20 42.9**	**+1.8**
LMR				*e*Sn	**Sn**	**12 21 35.4**	**-6.1**
	comp=E,17nm,1.0s						
LPL	**La Plagne**	**5.39**	**295**	*e*Pn	**Pn**	**12 20 40.8**	**-2.6**
LPL	**La Plagne**	**5.39**	**295**	*e*Pg	**Pg**	**12 21 02.2**	**-3.9**
ORIF	**Oris-en-Rattie**	**5.81**	**287**	*e*P	**Pn**	**12 20 50.7**	**+1.7**
CABF	**La Chapelle**	**6.24**	**303**	*e*P	**Pn**	**12 20 56.6**	**+1.6**
HINF	**Hinteralfeld**	**6.47**	**315**	*e*P	**Pn**	**12 21 00.0**	**+1.9**
CDF	**Champ du Feu**	**6.67**	**320**	*e*P	**Pn**	**12 21 02.7**	**+1.9**
SMF	**Signal de Mont**	**7.67**	**298**	*e*P	**Pn**	**12 21 16.9**	**+2.4**

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*IDC **21** 12:21:36.3±1.9, 41°.66S×174°.47E, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.6/22, mbtmp3.5/4, ML3.1/2, Error ellipse: s-maj=46.5km s-min=26.4km az=136.0*

*ISCJB **21** 12:21:39.4±0.7, 41°.80S±0°.03×174°.43E±0°.04, h5^{km}±5^{km}, mb3.5/2, Error ellipse: s-maj=6.7km s-min=3.2km az=44.5*

*WEL **21** 12:21:39.2, 42°S±1°×17°4E±°, h16^{km}±3^{km}, M3.8/30, ML4.0/30, MLv3.8/30, Error ellipse: s-maj=0.0km s-min=0.0km az=101.8*

ISC 21 12:21:40.0±1.2**, 41°.63S**±0°.03×**174°.30E**±0°.03**, h17**^{km}±9^{km}**, n95,** σ1^{s}**44**/96**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.13**	**210**	P	**Pb**	**12 21 44.1**	**+0.1**
BSWZ	**Blackbirch Sta**	**0.33**	**256**	P	**Pg**	**12 21 46.4**	**-0.6**
TUWZ	**Tuamarina**	**0.34**	**307**	P	**Pg**	**12 21 46.3**	**-0.8**
TCW	**Tory Channel**	**0.42**	**357**	P	**Pb**	**12 21 48.9**	**0.0**
BHW	**Baring Head**	**0.48**	**62**	P	**Pg**	**12 21 49.7**	**0.0**
WEL	**Wellington**	**0.49**	**45**	P	**Pg**	**12 21 49.8**	**-0.1**
PLWZ	**Palliser**	**0.72**	**85**	P	**Pb**	**12 21 54.5**	**+0.4**
MSWZ	**Moikau Station**	**0.74**	**73**	P	**Pb**	**12 21 54.7**	**+0.3**
CAW	**Cannon Point**	**0.78**	**48**	P	**Pg**	**12 21 55.1**	**-0.2**
NNZ	**Nelson**	**0.81**	**301**	P	**Pb**	**12 21 56.0**	**+0.5**
DUWZ	**D'Urville Isla**	**0.88**	**341**	P	**Pn**	**12 21 57.8**	**+0.2**
PAWZ	**Paruwai Farm**	**0.88**	**74**	P	**Pn**	**12 21 57.9**	**+0.3**
KHZ	**Kahutara**	**0.97**	**216**	P	**Pg**	**12 21 58.8**	**+0.1**
MTW	**Mount Morrison**	**1.02**	**63**	P	**Pg**	**12 21 59.7**	**0.0**
OGWZ	**Otaki Gorge**	**1.05**	**39**	P	**Pb**	**12 21 59.6**	**-0.1**
THZ	**Tophouse**	**1.05**	**263**	P	**Pn**	**12 22 01.0**	**+1.0**
TRWZ	**Traveller**	**1.07**	**78**	P	**Pn**	**12 22 00.7**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.17**	**52**	P	**Pn**	**12 22 02.1**	**+0.5**
TMWZ	**Te Maipa**	**1.31**	**67**	P	**Pn**	**12 22 03.7**	**+0.3**
MRZ	**Mangatainoka R**	**1.37**	**45**	P	**Pn**	**12 22 05.0**	**+0.7**
TIWZ	**Tintock**	**1.47**	**55**	P	**Pn**	**12 22 06.2**	**+0.4**
QRZ	**Quartz Range**	**1.56**	**301**	P	**Pg**	**12 22 09.6**	**-0.5**
CPWZ	**Castlepoint**	**1.60**	**64**	P	**Pg**	**12 22 13.3**	**+2.4**
OHWZ	**Ohakea**	**1.62**	**29**	P	**Pg**	**12 22 10.5**	**-0.6**
GVZ	**Greta Valley S**	**1.63**	**215**	P	**Pn**	**12 22 08.7**	**+0.9**
PRWZ	**Pori Road**	**1.66**	**50**	P	**Pn**	**12 22 08.8**	**+0.6**
POWZ	**Post Office Ro**	**1.67**	**42**	P	**Pn**	**12 22 09.4**	**+1.1**
BFZ	**Birch Farm**	**1.75**	**58**	P	**Pn**	**12 22 10.1**	**+0.6**
LTZ	**Lake Taylor**	**1.90**	**232**	P	**Pn**	**12 22 12.8**	**+1.2**
DVHZ	**Dannevirke**	**1.94**	**47**	P	**Pn**	**12 22 12.1**	**-0.1**
WAZ	**Wanganui**	**1.95**	**16**	P	**Pg**	**12 22 16.5**	**-0.9**
AMCZ	**Amberley**	**1.97**	**218**	P	**Pn**	**12 22 13.0**	**+0.5**
ANWZ	**Angora Road**	**2.02**	**55**	P	**Pn**	**12 22 14.0**	**+0.8**
LREZ	**Lake Rotokare**	**2.17**	**2**	P	**Pg**	**12 22 21.2**	**-0.5**
NMEZ	**Namu Road**	**2.24**	**352**	P	**Pg**	**12 22 21.7**	**-1.3**
PNHZ	**Pukenui**	**2.24**	**41**	P	**Pn**	**12 22 16.7**	**+0.3**
WPHZ	**Waipukurau**	**2.26**	**47**	P	**Pn**	**12 22 17.7**	**+1.2**
OKCZ	**Okains Bay**	**2.28**	**203**	P	**Pn**	**12 22 16.7**	**-0.2**
PREZ	**Palmer Road**	**2.29**	**357**	P	**Pb**	**12 22 21.9**	**+1.0**
CRLZ	**Canterbury Las**	**2.30**	**212**	P	**Pn**	**12 22 17.7**	**+0.6**
KHEZ	**Kahui Hut**	**2.35**	**355**	P	**Pb**	**12 22 22.8**	**+1.0**
OXZ	**Oxford**	**2.38**	**224**	P	**Pb**	**12 22 21.7**	**-0.6**
INZ	**Inchbonnie**	**2.39**	**242**	P	**Pn**	**12 22 19.9**	**+1.6**
NBEZ	**Newall Road No**	**2.39**	**352**	P	**Pb**	**12 22 23.7**	**+1.3**
MQZ	**McQueen's Vall**	**2.40**	**210**	P	**Pn**	**12 22 17.7**	**-0.7**
MTVZ	**Mangateitei**	**2.42**	**22**	P	**Pb**	**12 22 24.7**	**+1.6**
DREZ	**Durham Road**	**2.44**	**358**	P	**Pb**	**12 22 23.6**	**+0.2**
PKE	**Pukeiti**	**2.45**	**354**	P	**Pb**	**12 22 23.6**	**0.0**
AKCZ	**Akaroa Harbour**	**2.46**	**204**	P	**Pn**	**12 22 19.4**	**+0.1**
PKVZ	**Pokaka**	**2.47**	**19**	P	**Pb**	**12 22 24.9**	**+0.9**
MOVZ	**Moawhango**	**2.48**	**27**	P	**Pb**	**12 22 24.4**	**+0.2**
BHHZ	**Black Hill Sta**	**2.53**	**33**	P	**Pn**	**12 22 22.4**	**+2.1**
VRZ	**Vera Road**	**2.53**	**8**	P	**Pb**	**12 22 24.0**	**-0.9**
KRHZ	**Kereru**	**2.54**	**39**	P	**Pn**	**12 22 20.4**	**0.0**
WHVZ	**Whangaehu Hut**	**2.55**	**23**	P	**Pb**	**12 22 25.6**	**+0.3**
FWVZ	**Far West T-bar**	**2.56**	**22**	P	**Pb**	**12 22 25.9**	**+0.3**
TUVZ	**Tukino**	**2.58**	**24**	P	**Pb**	**12 22 25.6**	**-0.3**
NGZ	**Ngauruhoe**	**2.65**	**22**	P	**Pb**	**12 22 27.8**	**+0.7**
KAHZ	**Kahuranaki**	**2.69**	**48**	P	**Pn**	**12 22 22.1**	**-0.3**
WTVZ	**West Tongariro**	**2.70**	**22**	P	**Pb**	**12 22 28.2**	**+0.3**
TWVZ	**Taurewa**	**2.70**	**19**	P	**Pb**	**12 22 28.9**	**+1.0**
KRVZ	**Karewarewa**	**2.74**	**22**	P	**Pb**	**12 22 28.7**	**+0.2**
KWHZ	**Kaweka Forest**	**2.74**	**37**	P	**Pg**	**12 22 31.3**	**-1.1**
KATZ	**Kakaramea**	**2.86**	**22**	P	**Pb**	**12 22 32.4**	**+1.8**
RITZ	**Rihia Road**	**2.91**	**25**	P	**Pb**	**12 22 32.6**	**+1.2**
BKZ	**Black Stump Fm**	**2.98**	**35**	P	**Pb**	**12 22 34.0**	**+1.4**
RATZ	**Rangitukua**	**2.98**	**23**	P	**Pg**	**12 22 35.4**	**-1.8**
WVZ	**Waitaha Valley**	**3.01**	**240**	P	**Pn**	**12 22 28.5**	**+1.7**
WATZ	**Wairara**	**3.12**	**21**	P	**Pb**	**12 22 37.1**	**+2.1**
HIZ	**Hauiti**	**3.15**	**8**	P	**Pb**	**12 22 33.3**	**-2.2**
RPZ	**Rata Peaks**	**3.17**	**228**	Pn	**Pn**	**12 22 28.0**	**-1.0**
	3.9nm,0.3s,baz=49,slow=4.4,SNR=6.8						
RPZ				Sn	**Sn**	**12 23 05.9**	**-0.6**
	8.2nm,0.3s,baz=336,slow=24,SNR=6.4						
RPZ	**Rata Peaks**	**3.17**	**228**	P	**Pn**	**12 22 29.7**	**+0.7**
MTHZ	**Maungataniwha**	**3.39**	**36**	P	**Pb**	**12 22 39.4**	**-0.2**
TLZ	**Tolley Road**	**3.44**	**16**	P	**Pb**	**12 22 39.7**	**-0.7**
RTZ	**Ruatahuna**	**3.65**	**35**	P	**Pn**	**12 22 37.2**	**+1.5**
MUGZ	**Murupara**	**3.68**	**32**	P	**Pn**	**12 22 38.2**	**+2.2**
FOZ	**Fox Glacier**	**3.82**	**239**	P	**Pn**	**12 22 40.5**	**+2.6**
RIGZ	**Rimuhau**	**3.95**	**43**	P	**Pn**	**12 22 40.2**	**+0.4**
URZ	**Urewera**	**4.00**	**34**	Pn	**Pn**	**12 22 38.8**	**-1.7**
	0.7nm,0.3s,baz=247,slow=7.5,SNR=5.4						
URZ				Sn	**Sn**	**12 23 24.9**	**-2.0**
	2.1nm,0.3s,baz=139,slow=18,SNR=2.6						
URZ				Lg	Lg	12 23 47.0	
	2.5nm,0.3s,baz=312,slow=14,SNR=2.1						
URZ	**Urewera**	**4.00**	**34**	P	**Pn**	**12 22 42.0**	**+1.5**
TOZ	**Tahuroa Road**	**4.01**	**14**	P	**Pb**	**12 22 47.3**	**-2.8**
LBZ	**Lake Benmore**	**4.08**	**226**	P	**Pn**	**12 22 43.5**	**+1.9**
MWZ	**Matawai**	**4.12**	**38**	P	**Pn**	**12 22 41.7**	**-0.5**
ODZ	**Otahua Downs**	**4.33**	**217**	P	**Pn**	**12 22 44.9**	**-0.1**
TWGZ	**Tauwhareparae**	**4.46**	**41**	P	**Pn**	**12 22 49.5**	**+2.7**
RUGZ	**Raukumara Rang**	**4.49**	**36**	P	**Pn**	**12 22 47.5**	**+0.2**
AWAZ	**Awhitu Peninsu**	**4.57**	**3**	P	**Pn**	**12 22 52.5**	**+4.2**
MKAZ	**Moumakai**	**4.57**	**9**	P	**Pn**	**12 22 51.8**	**+3.5**
ETAZ	**East Tamaki Re**	**4.70**	**6**	P	**Pn**	**12 22 54.1**	**+4.1**
JCZ	**Jackson Bay**	**4.73**	**237**	P	Pn	12 22 56.2	+5.7
MBAZ	**Motutapu North**	**4.88**	**6**	P	**Pn**	**12 22 56.7**	**+4.1**
SYZ	**Scrubby Hill**	**6.15**	**215**	P	**Pn**	**12 23 14.6**	**+4.7**
ASAR	**Alice Springs**	**38.04**	**285**	P	**P**	**12 28 57.3**	**-0.2**
	0.4nm,0.6s,baz=122,slow=6.7,SNR=14						
WRA	**Warramunga Arr**	**40.10**	**290**	P	**P**	**12 29 14.9**	**+0.2**
	1.0nm,0.6s,baz=139,slow=7.2,SNR=7.4						
TORD	**Torodi Ar. Bea**	**150.90**	**195**	PKPbc	**PKPbc**	**12 41 31.0**	**-0.9**
	0.5nm,0.5s,baz=169,slow=2.7,SNR=4.8						

KRSC 21 12:26:36.4±0.7**, 55°.66N**×**162°.84E, h19**^{km}±18^{km}**, ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.55**	**359**	*e*P	Pb	12 26 47.4	0.0
KBTR				*e*S	Sg	12 26 55.2	+0.3
KBG	**Krutoberegovo**	**0.60**	**353**	*e*P	Pb	12 26 48.1	-0.1
KBG				*e*S	Sg	12 26 56.4	-0.1
SMKR	**Semkarok**	**1.20**	**321**	*e*P	Pn	12 26 58.0	-0.3
CIRR	**Tsirk**	**1.26**	**292**	*e*P	Pn	12 26 59.4	+0.2
MKZ	**Mys Kozlova**	**1.28**	**210**	*e*P	Pn	12 26 59.4	+0.2
MKZ				*e*S	Sb	12 27 16.4	+0.5
LGNR	**Loginova**	**1.28**	**290**	*e*P	Pb	12 27 00.2	0.0
BDR	**Baidarnaya**	**1.29**	**316**	*e*P	Pn	12 26 59.3	-0.2
BZWR	**Bezymyannyi-We**	**1.36**	**284**	*e*P	Pb	12 27 01.3	0.0
SRKR	**Sorokina**	**1.37**	**317**	*e*P	Pn	12 27 00.6	0.0
KLY	**Klyuchi**	**1.39**	**299**	*e*P	Pn	12 26 59.4	-1.4
KRSR	**Krestovskiy**	**1.40**	**294**	*e*P	Pn	12 27 00.8	-0.2
KRSR				*e*S	Sn	12 27 18.5	-0.5
KIRR	**Kirishev**	**1.44**	**283**	*e*P	Pn	12 27 02.2	+0.5
TUMD	**Tumrok D**	**1.47**	**253**	*e*P	Pb	12 27 03.0	-0.1
TUMD				*e*S	Sb	12 27 22.2	+0.9
KPT	**Kopyto**	**1.51**	**283**	*e*P	Pb	12 27 03.5	-0.4
KZV	**Kizimen**	**1.55**	**250**	*e*P	Pb	12 27 04.4	-0.3
TUMR	**Tumrok**	**1.58**	**257**	*e*P	Pb	12 27 05.4	+0.3
TUMR				*e*S	Sg	12 27 26.4	-1.1
KOZ	**Kozyrevsk**	**1.72**	**285**	*e*P	Pb	12 27 07.3	-0.1
KOZ				*e*S	Sb	12 27 29.7	+1.1
BKI	**Bering**	**1.84**	**103**	*e*P	Pb	12 27 09.4	-0.1
BKI				*e*S	Sb	12 27 33.4	+1.3
SRDR	**Sredinnyy**	**1.87**	**292**	*e*P	Pb	12 27 09.0	-1.1
ESO	**Esso**	**2.35**	**278**	*e*P	Pb	12 27 17.4	-0.8
SPN	**Mys Shipunski**	**3.05**	**214**	*e*P	Pn	12 27 25.2	+1.6
SPN				*e*S	Sn	12 28 00.9	+1.3
SDLR	**Sedlovina**	**3.32**	**226**	*e*P	Pn	12 27 30.8	+3.3
KRER	**Koryakskii**	**3.36**	**227**	*e*P	Pn	12 27 31.1	+3.1
KRX	**Arik**	**3.36**	**228**	*e*P	Pb	12 27 32.5	-2.9
SMAR	**Somma**	**3.37**	**226**	*e*P	Pn	12 27 30.3	+2.1
AVH	**Avacha**	**3.39**	**227**	*e*P	Pb	12 27 33.6	-2.3
UGLR	**Uglovaya**	**3.40**	**225**	*e*P	Pn	12 27 31.4	+2.9
KOK	**Koryaka**	**3.41**	**228**	*e*P	Pn	12 27 31.3	+2.6
GNL	**Ganaly**	**3.46**	**237**	*e*P	Pn	12 27 32.7	+3.3
DALK	**Dalny**	**3.56**	**224**	*e*P	Pn	12 27 33.8	+3.2
KDTR	**Khodutka, Kamc**	**4.78**	**218**	*e*P	Pn	12 27 50.9	+3.5

WEL 21 12:27:34.0, 42°S±1°×**17°4E**±°**, h5**^{km}±3^{km}**, M3.7**/29**, ML4.0**/29**, MLv3.7**/29**, Error ellipse: s-maj=0.0km s-min=0.0km az=135.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.19**	**213**	P	Pg	12 27 38.7	+0.9
TUWZ	**Tuamarina**	**0.35**	**298**	P	Pg	12 27 41.6	+0.9
BSWZ	**Blackbirch Sta**	**0.38**	**251**	P	Pg	12 27 41.7	+0.4
TCW	**Tory Channel**	**0.39**	**352**	P	Pb	12 27 42.6	-0.7
WEL	**Wellington**	**0.44**	**46**	P	Pb	12 27 43.8	-0.4
PLWZ	**Palliser**	**0.68**	**88**	P	Pb	12 27 48.4	0.0
MSWZ	**Moikau Station**	**0.70**	**76**	P	Pb	12 27 48.5	-0.1
CAW	**Cannon Point**	**0.72**	**48**	P	Pb	12 27 48.9	-0.2
NNZ	**Nelson**	**0.82**	**297**	P	Pb	12 27 51.1	+0.4
PAWZ	**Paruwai Farm**	**0.84**	**76**	P	Pb	12 27 51.6	+0.6
DUWZ	**D'Urville Isla**	**0.85**	**338**	P	Pn	12 27 52.6	-0.1
MTW	**Mount Morrison**	**0.97**	**64**	P	Pn	12 27 53.8	-0.5
OGWZ	**Otaki Gorge**	**0.99**	**39**	P	Pn	12 27 54.4	-0.2
KHZ	**Kahutara**	**1.02**	**216**	P	Pg	12 27 53.7	+0.1
TRWZ	**Traveller**	**1.02**	**80**	P	Pn	12 27 55.6	+0.5
THZ	**Tophouse**	**1.09**	**261**	P	Pn	12 27 56.3	+0.2
HOWZ	**Holdsworth Sta**	**1.12**	**52**	P	Pn	12 27 56.6	+0.3
MRZ	**Mangatainoka R**	**1.31**	**45**	P	Pn	12 27 58.7	-0.4
CPWZ	**Castlepoint**	**1.55**	**65**	P	Pg	12 28 07.5	+3.7
POWZ	**Post Office Ro**	**1.61**	**42**	P	Pb	12 28 04.1	-0.1
BFZ	**Birch Farm**	**1.70**	**58**	P	Pg	12 28 11.0	+4.5
DVHZ	**Dannevirke**	**1.89**	**47**	P	Pg	12 28 12.3	+2.1
WAZ	**Wanganui**	**1.90**	**15**	P	Pg	12 28 11.6	+1.2
LTZ	**Lake Taylor**	**1.95**	**232**	P	Pn	12 28 07.6	-0.2
LREZ	**Lake Rotokare**	**2.13**	**1**	P	Pg	12 28 15.1	+0.3
NMEZ	**Namu Road**	**2.21**	**350**	P	Pg	12 28 16.5	+0.3
PREZ	**Palmer Road**	**2.25**	**356**	P	Pg	12 28 16.6	-0.5
KHEZ	**Kahui Hut**	**2.31**	**354**	P	Pg	12 28 17.9	-0.4
OKCZ	**Okains Bay**	**2.33**	**204**	P	Pn	12 28 10.4	-2.7
NBEZ	**Newall Road No**	**2.35**	**351**	P	Pb	12 28 17.4	+0.6
CRLZ	**Canterbury Las**	**2.36**	**212**	P	Pn	12 28 11.6	-1.7
MTVZ	**Mangateitei**	**2.36**	**22**	P	Pg	12 28 19.2	-0.2
DREZ	**Durham Road**	**2.40**	**357**	P	Pg	12 28 20.0	0.0
PKE	**Pukeiti**	**2.41**	**353**	P	Pg	12 28 20.2	0.0
MOVZ	**Moawhango**	**2.43**	**27**	P	Pb	12 28 18.7	+0.4
OXZ	**Oxford**	**2.44**	**224**	P	Pg	12 28 19.9	-0.7
INZ	**Inchbonnie**	**2.44**	**241**	P	Pb	12 28 17.7	-0.7
MQZ	**McQueen's Vall**	**2.46**	**210**	P	Pn	12 28 11.7	-3.0
BHHZ	**Black Hill Sta**	**2.47**	**32**	P	Pg	12 28 20.2	-1.2
WHVZ	**Whangaehu Hut**	**2.49**	**23**	P	Pg	12 28 21.5	-0.2
AKCZ	**Akaroa Harbour**	**2.51**	**204**	P	Pn	12 28 13.8	-1.7
TUVZ	**Tukino**	**2.53**	**24**	P	Pg	12 28 21.8	-0.6
WTVZ	**West Tongariro**	**2.65**	**21**	P	Pg	12 28 23.6	-1.2
TWVZ	**Taurewa**	**2.65**	**19**	P	Pg	12 28 23.9	-0.9
KWHZ	**Kaweka Forest**	**2.68**	**37**	P	Pg	12 28 25.1	-0.2
KRVZ	**Karewarewa**	**2.68**	**22**	P	Pb	12 28 23.6	+1.1

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*ISCJB **21** 12:36:28.6±0.5, 18°.28S±0°.04×69°.60W±0°.09, h141^{km}±4^{km}, mb3.7/5, Error ellipse: s-maj=13.7km s-min=6.0km az=13.8*

*SJA **21** 12:36:28.9±0.7, 18°.29S×69°.89W, h130^{km}±7^{km}, ML3.3, MW3.7*

*GUC **21** 12:36:30.3±0.7, 18°.28S×69°.61W, h121^{km}±4^{km}, ML3.9*

*IDC **21** 12:36:30.6±1.1, 18°.35S×69°.18W, h140^{km}±8^{km}, mb3.6/5, mb1 3.8/10, mb1mx3.5/39, mbtmp4.1/10, Error ellipse: s-maj=21.0km s-min=8.8km az=100.0*

ISC 21 12:36:29.2±0.8**, 18°.26S**±0°.04×**69°.51W**±0°.08**, h131**^{km}±6^{km}**, n27,** σ1^{s}**60**/40**, mb3.9**/5**, 6C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.07**	**178**	*e*P	**Pn**	**12 36 48.4**	**+0.7**
PB16				*e*S	**Sn**	**12 37 03.4**	**+1.7**
PB16	**IPOC Station P**	**0.07**	**178**	⇑*i*P	**Pn**	**12 36 48.7**	**+1.0**
PB16				*e*S	**Sn**	**12 37 01.9**	**+0.3**
PB12	**IPOC Station P**	**0.85**	**246**	⇑*i*P	**Pn**	**12 36 50.5**	**-0.5**
PB12				*e*S	**Sn**	**12 37 06.6**	**-0.9**
PB12				IAML		12 37 07.4	
	comp=N,1µm,0.2s						
MNMC	**Minye Minye**	**0.87**	**185**	⇑*i*P	**Pn**	**12 36 52.3**	**+0.9**
MNMC				*e*S	**Sn**	**12 37 08.2**	**0.0**
MNMC				IAML		12 37 10.1	
	comp=N,4µm,0.4s						
GO01	**Chusmiza**	**1.43**	**168**	⇑*i*P	**Pn**	**12 36 58.9**	**+1.8**
GO01				*e*S	**Sn**	**12 37 20.6**	**+2.2**
GO01				IAML		12 37 27.7	
	comp=E,1µm,0.1s						
PSGC	**Pisagua**	**1.45**	**203**	⇑*i*P	**Pn**	**12 36 57.0**	**+0.1**
PSGC				*e*S	**Sn**	**12 37 17.1**	**-1.0**
PSGC				IAML		12 37 17.9	
	comp=N,3µm,0.4s						
PB11	**IPOC Station P**	**1.50**	**185**	⇑*i*P	**Pn**	**12 36 58.4**	**+0.9**
PB11				*e*S	**Sn**	**12 37 19.7**	**+0.6**
PB11				IAML		12 37 21.0	
	comp=E,2µm,0.4s						
PB11				IAML		12 37 21.4	
	comp=N,2µm,0.4s						
PB08	**IPOC Station P**	**1.90**	**170**	*e*P	**Pn**	**12 37 04.0**	**+1.6**
PB08				*e*S	**Sn**	**12 37 29.7**	**+1.9**
PB08	**IPOC Station P**	**1.90**	**170**	⇓*e*P	**Pn**	**12 37 04.2**	**+1.8**
PB08				*e*S	**Sn**	**12 37 29.6**	**+1.8**
PB08				IAML		12 37 30.6	
	comp=E,1µm,0.5s						
LPAZ	**La Paz**	**2.36**	**34**	P	**Pn**	**12 37 11.2**	**+2.8**
	comp=E,51nm,0.3s,baz=231,slow=2.6,SNR=1243						
LPAZ				S	**Sn**	**12 37 38.7**	**+0.4**
	baz=206,slow=17,SNR=3.5						
PB02	**IPOC Station P**	**3.06**	**187**	*e*P	**Pn**	**12 37 16.8**	**0.0**
PB02				*e*S	**Sn**	**12 37 52.4**	**-1.2**
PB07	**IPOC Station P**	**3.46**	**186**	*e*P	**Pn**	**12 37 22.8**	**+0.7**

PB09	**IPOC Station P**	**3.53**	**176**	*e*P	**Pn**	**12 37 23.9**	**+0.9**
PB04	**IPOC Station P**	**4.10**	**188**	*e*P	**Pn**	**12 37 30.7**	**+0.2**
LVC	**Limon Verde**	**4.36**	**173**	P	**Pn**	**12 37 35.5**	**+1.3**
	comp=E,9.8nm,0.3s,baz=359,slow=5.5,SNR=81						
LVC				S	**Sn**	**12 38 23.6**	**-0.9**
	comp=E,16nm,0.3s,baz=19,slow=14,SNR=22						
LVC	**Limon Verde**	**4.36**	**173**	*e*P	**Pn**	**12 37 35.9**	**+1.7**
LVC				IAML		12 38 25.4	
	comp=Z,28nm,0.3s						
PB06	**IPOC Station P**	**4.42**	**181**	*e*P	**Pn**	**12 37 34.7**	**-0.1**
PB05	**IPOC Station P**	**4.61**	**188**	*e*P	**Pn**	**12 37 37.2**	**-0.1**
PB10	**IPOC Station P**	**5.32**	**190**	*e*P	**Pn**	**12 37 44.9**	**-1.6**
SIV	**San Ignacio**	**8.38**	**76**	P	**Pn**	**12 38 26.8**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=285,slow=10,SNR=18						
SIV				S	**Sn**	**12 39 56.0**	**-4.9**
	comp=Z,0.3nm,0.3s,baz=184,slow=22,SNR=7.4						
CFA	**Coronel Fontan**	**13.34**	**175**	P	**Pn**	**12 39 31.1**	**-2.3**
	comp=Z,0.8nm,0.3s,baz=48,slow=23,SNR=6.5						
PTGA	**Pitinga**	**19.78**	**29**	P	**P**	**12 40 48.4**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=298,slow=22,SNR=6.9						
DBIC	**Dimbokro**	**68.40**	**75**	P	**P**	**12 47 15.1**	**-2.3**
	comp=Z,2.8nm,0.6s,baz=277,slow=5.2,SNR=3.0						
NVAR	**Mina Array Bea**	**72.61**	**322**	P	**P**	**12 47 44.5**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=102,slow=8.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**76.83**	**71**	P	**P**	**12 48 06.0**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=255,slow=4.9,SNR=11						
ESDC	**Sonseca Array**	**83.94**	**45**	P	**P**	**12 48 46.1**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=255,slow=5.2,SNR=8.1						
YKA	**Yellowknife Ar**	**87.96**	**341**	P	**P**	**12 49 04.7**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=133,slow=4.8,SNR=24						

WEL 21 12:37:43.5, 42°S±1°×**17°4E**±°**, h5**^{km}±1^{km}**, M3.8**/48, **ML3.1**/14**, MLv3.8**/48**, Error ellipse: s-maj=0.0km s-min=0.0km az=132.3, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.23**	**195**	P	Pg	12 37 49.2	+1.1
TUWZ	**Tuamarina**	**0.28**	**289**	P	Pb	12 37 50.0	-1.0
TCW	**Tory Channel**	**0.31**	**358**	P	Pb	12 37 50.9	-0.7
BSWZ	**Blackbirch Sta**	**0.37**	**238**	P	Pg	12 37 51.4	+0.8
WEL	**Wellington**	**0.43**	**57**	P	Pb	12 37 53.1	-0.5
BHW	**Baring Head**	**0.45**	**76**	P	Pb	12 37 53.4	-0.5
CAW	**Cannon Point**	**0.71**	**55**	P	Pb	12 37 58.4	-0.1
PLWZ	**Palliser**	**0.72**	**94**	P	Pb	12 37 58.9	+0.3
MSWZ	**Moikau Station**	**0.73**	**82**	P	Pb	12 37 59.0	+0.3
NNZ	**Nelson**	**0.75**	**294**	P	Pb	12 37 58.6	-0.5
DUWZ	**D'Urville Isla**	**0.77**	**339**	P	Pn	12 38 00.9	-0.2
PAWZ	**Paruwai Farm**	**0.86**	**81**	P	Pn	12 38 02.5	+0.1
OGWZ	**Otaki Gorge**	**0.97**	**44**	P	Pb	12 38 02.5	-0.2
MTW	**Mount Morrison**	**0.98**	**69**	P	Pn	12 38 03.7	-0.3
KHZ	**Kahutara**	**1.05**	**212**	P	Pb	12 38 04.4	+0.2
TRWZ	**Traveller**	**1.06**	**84**	P	Pn	12 38 09.3	+4.3
THZ	**Tophouse**	**1.07**	**257**	P	Pb	12 38 04.4	-0.1
HOWZ	**Holdsworth Sta**	**1.11**	**56**	P	Pn	12 38 06.3	+0.5
TMWZ	**Te Maipa**	**1.27**	**71**	P	Pb	12 38 11.1	+3.0
MRZ	**Mangatainoka R**	**1.30**	**49**	P	Pg	12 38 08.5	0.0
TIWZ	**Tintock**	**1.42**	**59**	P	Pg	12 38 15.2	+4.5
QRZ	**Quartz Range**	**1.50**	**297**	P	Pg	12 38 12.2	-0.2
OHWZ	**Ohakea**	**1.53**	**31**	P	Pg	12 38 13.7	+0.9
PRWZ	**Pori Road**	**1.60**	**53**	P	Pg	12 38 17.2	+3.1
BFZ	**Birch Farm**	**1.70**	**61**	P	Pg	12 38 18.3	+2.2
GVZ	**Greta Valley S**	**1.72**	**212**	P	Pg	12 38 17.3	+0.8
WAZ	**Wanganui**	**1.84**	**17**	P	Pg	12 38 20.3	+1.4
DVHZ	**Dannevirke**	**1.87**	**50**	P	Pg	12 38 21.6	+2.2
LTZ	**Lake Taylor**	**1.96**	**229**	P	Pb	12 38 20.2	+0.4
AMCZ	**Amberley**	**2.05**	**216**	P	Pg	12 38 24.8	+2.0
PNHZ	**Pukenui**	**2.16**	**43**	P	Pg	12 38 28.1	+3.1
PREZ	**Palmer Road**	**2.18**	**357**	P	Pg	12 38 26.6	+1.3
NBEZ	**Newall Road No**	**2.27**	**352**	P	Pg	12 38 28.1	+1.0
PKE	**Pukeiti**	**2.34**	**354**	P	Pg	12 38 28.8	+0.5
OKCZ	**Okains Bay**	**2.38**	**202**	P	Pn	12 38 21.9	-1.3
MOVZ	**Moawhango**	**2.39**	**28**	P	Pb	12 38 27.3	+0.2
VRZ	**Vera Road**	**2.42**	**9**	P	Pg	12 38 29.7	-0.2
BHHZ	**Black Hill Sta**	**2.44**	**34**	P	Pb	12 38 28.4	+0.5
WHVZ	**Whangaehu Hut**	**2.45**	**24**	P	Pg	12 38 30.3	-0.1
KRHZ	**Kereru**	**2.46**	**41**	P	Pg	12 38 29.4	-1.2
FWVZ	**Far West T-bar**	**2.46**	**23**	P	Pg	12 38 29.6	-1.1
TUVZ	**Tukino**	**2.48**	**25**	P	Pg	12 38 30.6	-0.5
NGZ	**Ngauruhoe**	**2.55**	**24**	P	Pg	12 38 31.1	-1.3
WTVZ	**West Tongariro**	**2.60**	**23**	P	Pg	12 38 32.1	-1.3
KRVZ	**Karewarewa**	**2.63**	**23**	P	Pb	12 38 32.4	+1.1
KWHZ	**Kaweka Forest**	**2.65**	**38**	P	Pg	12 38 33.4	-1.0
BKZ	**Black Stump Fm**	**2.89**	**36**	P	Pb	12 38 36.5	+0.9
HIZ	**Hauiti**	**3.04**	**8**	P	Pg	12 38 40.2	-1.5

*IDC **21** 12:39:05.1±0.8, 41°.46S×174°.27E, h0^{km}, mb4.4/5, mb1 4.5/7, mb1mx4.2/30, mbtmp4.3/7, ML3.7/2, MS3.8/2, Ms1 3.7/2, ms1mx3.2/18, Error ellipse: s-maj=26.4km s-min=22.0km az=113.0*

*BJI **21** 12:39:06.8±0.0, 42°.26S×173°.75E, h11^{km}, mb5.1/3, mB4.9/1, Ms4.9/2, Ms7 4.6/1*

*ISCJB **21** 12:39:07.7±0.3, 41°.73S±0°.02×174°.37E±0°.03, h21^{km}±3^{km}, mb4.7/19, MS4.2/4, Error ellipse: s-maj=4.4km s-min=2.2km az=135.0*

*WEL **21** 12:39:07.9, 41°.6S±0°.8×174°.3E±0°.8, h12^{km}±2^{km}, M4.5/17, ML4.8/17, MLv4.5/17, Error ellipse: s-maj=0.0km s-min=0.0km az=139.5*

*NEIC **21** 12:39:07.9±0.0, 41°.59S×174°.34E, h12^{km}, mb4.8/13, MW4.4, ML4.5(WEL), Moment Tensor Solution. s36 Moment tensor: Scale 10^{15}Nm; M_{rr}4.52; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$-3.92; $M_{r\theta}$0.69; $M_{\theta\phi}$-3.23; $M_{\phi r}$1.79; Best double couple: $M_0$5.70000×10^{15} NP1:ϕ_s26.00000°, δ55.00000°, λ84.00000°. NP2:ϕ_s218.00000°, δ35.00000°, λ99.00000°. Principal axes: T 4.8800, Plg79.0000°, Azm272.0000°; N 1.3400, Plg5.0000°, Azm30.0000°; P -6.2200, Plg10.0000°, Azm121.0000°; After WEL.*

ISC 21 12:39:07.4±1.3**, 41°.63S**±0°.03×**174°.35E**±0°.02**, h11**^{km}±8^{km}**, n200,** σ1^{s}.**33**/213**, mb4.8**/19**, MS4.4**/4**, 2C, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.16**	**221**	P	**Pb**	**12 39 12.8**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.36**	**257**	P	**Pb**	**12 39 15.7**	**-0.2**
TUWZ	**Tuamarina**	**0.37**	**303**	P	**Pb**	**12 39 15.3**	**-0.6**
TUWZ				S	**Sb**	**12 39 20.8**	**-0.8**
SNZO	**South Karori**	**0.42**	**40**	*e*Pg	**Pb**	**12 39 16.4**	**-0.3**
SNZO				*e*Sg	**Sb**	**12 39 23.1**	**+0.1**
TCW	**Tory Channel**	**0.42**	**352**	P	**Pb**	**12 39 16.2**	**-0.6**
TCW				S	**Sb**	**12 39 22.0**	**-1.3**
BHW	**Baring Head**	**0.45**	**60**	P	**Pb**	**12 39 17.3**	**0.0**
WEL	**Wellington**	**0.47**	**42**	P	**Pb**	**12 39 17.5**	**-0.1**
PLWZ	**Palliser**	**0.68**	**85**	P	**Pb**	**12 39 22.1**	**+0.8**
MSWZ	**Moikau Station**	**0.71**	**73**	P	**Pb**	**12 39 22.3**	**+0.6**
CAW	**Cannon Point**	**0.75**	**46**	P	**Pb**	**12 39 22.6**	**+0.1**
NNZ	**Nelson**	**0.84**	**299**	P	**Pb**	**12 39 23.7**	**-0.3**
PAWZ	**Paruwai Farm**	**0.85**	**73**	P	**Pn**	**12 39 24.9**	**-0.3**
DUWZ	**D'Urville Isla**	**0.89**	**339**	P	**Pb**	**12 39 24.6**	**-0.2**
MTW	**Mount Morrison**	**0.99**	**62**	P	**Pn**	**12 39 27.2**	**+0.1**
KHZ	**Kahutara**	**0.99**	**217**	*e*Pn	**Pn**	**12 39 27.7**	**+0.6**
KHZ				*e*Sn	**Sn**	**12 39 43.1**	**+1.9**
KHZ	**Kahutara**	**0.99**	**217**	P	**Pn**	**12 39 27.8**	**+0.6**
OGWZ	**Otaki Gorge**	**1.02**	**38**	P	**Pb**	**12 39 27.0**	**0.0**
TRWZ	**Traveller**	**1.03**	**77**	P	**Pn**	**12 39 27.8**	**0.0**
THZ	**Tophouse**	**1.09**	**263**	*e*Pn	**Pb**	**12 39 28.2**	**-0.1**
THZ				*e*Sn	**Sn**	**12 39 43.6**	**-0.2**
THZ	**Tophouse**	**1.09**	**263**	P	**Pn**	**12 39 28.5**	**-0.1**
HOWZ	**Holdsworth Sta**	**1.14**	**51**	P	**Pn**	**12 39 29.7**	**+0.3**
TMWZ	**Te Maipa**	**1.27**	**66**	P	**Pn**	**12 39 31.2**	**+0.1**
MRZ	**Mangatainoka R**	**1.34**	**44**	P	**Pb**	**12 39 32.6**	**+0.1**
TIWZ	**Tintock**	**1.44**	**54**	P	**Pn**	**12 39 33.9**	**+0.5**
CPWZ	**Castlepoint**	**1.57**	**63**	P	**Pg**	**12 39 37.5**	**0.0**
QRZ	**Quartz Range**	**1.59**	**300**	P	**Pb**	**12 39 36.9**	**+0.1**
QRZ				S	**Sg**	**12 39 58.1**	**-0.4**
OHWZ	**Ohakea**	**1.60**	**27**	P	**Pg**	**12 39 37.8**	**-0.3**
PRWZ	**Pori Road**	**1.63**	**49**	P	**Pn**	**12 39 36.4**	**+0.4**
POWZ	**Post Office Ro**	**1.64**	**41**	P	**Pb**	**12 39 36.9**	**-0.7**
GVZ	**Greta Valley S**	**1.65**	**216**	P	**Pn**	**12 39 36.6**	**+0.3**
BFZ	**Birch Farm**	**1.72**	**57**	*e*Pn	**Pn**	**12 39 36.7**	**-0.5**
BFZ	**Birch Farm**	**1.72**	**57**	P	**Pn**	**12 39 36.8**	**-0.4**
DVHZ	**Dannevirke**	**1.91**	**47**	P	**Pn**	**12 39 39.7**	**-0.2**
LTZ	**Lake Taylor**	**1.93**	**233**	*e*Pn	**Pn**	**12 39 40.5**	**+0.3**
LTZ				*e*Sn	**Sn**	**12 40 05.3**	**+1.0**
LTZ				*e*Sg	**Sg**	**12 40 09.5**	**+0.2**
LTZ	**Lake Taylor**	**1.93**	**233**	P	**Pn**	**12 39 40.7**	**+0.6**
WAZ	**Wanganui**	**1.94**	**15**	P	**Pg**	**12 39 43.4**	**-1.0**
ANWZ	**Angora Road**	**1.99**	**55**	P	**Pn**	**12 39 40.8**	**-0.1**
AMCZ	**Amberley**	**1.99**	**219**	P	**Pn**	**12 39 40.9**	**0.0**
LREZ	**Lake Rotokare**	**2.17**	**1**	P	**Pb**	**12 39 47.3**	**+0.7**
PRHZ	**Porangahau**	**2.20**	**53**	P	**Pn**	**12 39 44.1**	**+0.2**
PNHZ	**Pukenui**	**2.22**	**40**	P	**Pn**	**12 39 44.2**	**+0.1**
WPHZ	**Waipukurau**	**2.23**	**46**	P	**Pn**	**12 39 44.5**	**+0.2**
NMEZ	**Namu Road**	**2.25**	**351**	P	**Pb**	**12 39 47.7**	**-0.2**
PREZ	**Palmer Road**	**2.29**	**356**	P	**Pb**	**12 39 48.4**	**-0.4**
OKCZ	**Okains Bay**	**2.30**	**204**	P	**Pn**	**12 39 44.5**	**-0.7**
CRLZ	**Canterbury Las**	**2.32**	**213**	*e*Pn	**Pn**	**12 39 44.3**	**-1.2**
CRLZ	**Canterbury Las**	**2.32**	**213**	P	**Pn**	**12 39 44.6**	**-0.9**
KHEZ	**Kahui Hut**	**2.35**	**354**	P	**Pb**	**12 39 49.5**	**-0.3**
NBEZ	**Newall Road No**	**2.39**	**351**	P	**Pb**	**12 39 49.7**	**-0.7**
MTVZ	**Mangateitei**	**2.40**	**21**	P	**Pb**	**12 39 50.1**	**-0.5**
OXZ	**Oxford**	**2.41**	**225**	*e*Pn	**Pn**	**12 39 45.8**	**-0.9**
OXZ	**Oxford**	**2.41**	**225**	P	**Pn**	**12 39 46.0**	**-0.7**
INZ	**Inchbonnie**	**2.42**	**242**	P	**Pn**	**12 39 47.7**	**+0.8**
MQZ	**McQueen's Vall**	**2.42**	**211**	*e*Pn	**Pn**	**12 39 45.3**	**-1.6**
MQZ	**McQueen's Vall**	**2.42**	**211**	P	**Pn**	**12 39 45.6**	**-1.3**
DREZ	**Durham Road**	**2.44**	**357**	P	**Pb**	**12 39 50.5**	**-0.8**
PKE	**Pukeiti**	**2.45**	**353**	P	**Pb**	**12 39 49.7**	**-1.7**
PKVZ	**Pokaka**	**2.46**	**18**	P	**Pb**	**12 39 51.4**	**-0.3**
MOVZ	**Moawhango**	**2.47**	**26**	P	**Pn**	**12 39 48.9**	**+1.3**
AKCZ	**Akaroa Harbour**	**2.48**	**205**	P	**Pn**	**12 39 46.8**	**-0.8**
PXZ	**Pawanui**	**2.49**	**51**	P	**Pn**	**12 39 47.2**	**-0.6**
BHHZ	**Black Hill Sta**	**2.51**	**32**	P	**Pn**	**12 39 49.6**	**+1.5**
KRHZ	**Kereru**	**2.51**	**38**	P	**Pn**	**12 39 48.0**	**-0.1**
VRZ	**Vera Road**	**2.52**	**7**	P	**Pb**	**12 39 51.5**	**-1.2**
DRZ	**Dome Shelter**	**2.53**	**22**	P	**Pg**	**12 39 54.7**	**-1.1**
WHVZ	**Whangaehu Hut**	**2.53**	**22**	P	**Pb**	**12 39 51.5**	**-1.4**
FWVZ	**Far West T-bar**	**2.54**	**22**	P	**Pb**	**12 39 51.1**	**-2.1**
MHEZ	**Mangahewa**	**2.55**	**360**	P	**Pb**	**12 39 54.0**	**+0.8**
TUVZ	**Tukino**	**2.56**	**23**	P	**Pb**	**12 39 51.5**	**-1.9**
NGZ	**Ngauruhoe**	**2.63**	**22**	P	**Pb**	**12 39 54.1**	**-0.6**
KAHZ	**Kahuranaki**	**2.66**	**47**	P	**Pn**	**12 39 49.8**	**-0.3**
WTVZ	**West Tongariro**	**2.69**	**21**	P	**Pb**	**12 39 54.9**	**-0.6**
TWVZ	**Taurewa**	**2.69**	**18**	P	**Pb**	**12 39 53.9**	**-1.7**
KWHZ	**Kaweka Forest**	**2.71**	**36**	P	**Pn**	**12 39 52.7**	**+1.8**
KRVZ	**Karewarewa**	**2.72**	**22**	P	**Pb**	**12 39 56.3**	**+0.2**
MCHZ	**McNeill Hill**	**2.82**	**40**	P	**Pn**	**12 39 52.6**	**+0.2**
KATZ	**Kakaramea**	**2.85**	**22**	P	**Pb**	**12 39 59.3**	**+1.0**
RITZ	**Rihia Road**	**2.89**	**24**	P	**Pb**	**12 39 59.2**	**+0.2**
BKZ	**Black Stump Fm**	**2.96**	**34**	*e*Pn	**Pn**	**12 39 53.3**	**-1.0**
BKZ				*e*Pg	**Pb**	**12 40 01.2**	**+1.1**
BKZ	**Black Stump Fm**	**2.96**	**34**	P	**Pn**	**12 39 54.4**	**+0.1**
RATZ	**Rangitukua**	**2.97**	**22**	P	**Pb**	**12 40 01.0**	**+0.7**
WVZ	**Waitaha Valley**	**3.04**	**240**	P	**Pn**	**12 39 56.0**	**+0.6**
HATZ	**Hinemaiaia**	**3.04**	**27**	P	**Pb**	**12 40 02.9**	**+1.4**
WATZ	**Wairara**	**3.11**	**20**	P	**Pb**	**12 40 02.9**	**+0.3**
ARHZ	**Aropaoanui**	**3.11**	**41**	P	**Pn**	**12 39 56.7**	**+0.4**
HIZ	**Hauiti**	**3.14**	**7**	*e*Pn	**Pn**	**12 39 59.1**	**+2.3**
HIZ	**Hauiti**	**3.14**	**7**	P	**Pb**	**12 40 00.3**	**-2.8**
RPZ	**Rata Peaks**	**3.20**	**228**	Pn	**Pn**	**12 39 57.0**	**-0.6**
	22nm,0.3s,baz=74,slow=2.5,SNR=59						
RPZ				Sn	**Sn**	**12 40 33.8**	**-2.0**
	75nm,0.3s,baz=114,slow=20,SNR=24						
RPZ	**Rata Peaks**	**3.20**	**228**	*e*Pn	**Pn**	**12 39 56.8**	**-0.8**
RPZ				*e*Pg	**Pb**	**12 40 04.3**	**+0.1**
RPZ	**Rata Peaks**	**3.20**	**228**	P	**Pn**	**12 39 57.2**	**-0.4**
MRHZ	**Matea Rd**	**3.21**	**30**	P	**Pn**	**12 39 58.6**	**+0.8**
MTHZ	**Maungataniwha**	**3.37**	**35**	P	**Pn**	**12 40 03.0**	**+3.1**
TLZ	**Tolley Road**	**3.42**	**16**	P	**Pb**	**12 40 04.7**	**-3.3**
ALRZ	**Allen Road**	**3.42**	**27**	P	**Pn**	**12 40 01.3**	**+0.6**
ALRZ				P	**Pb**	**12 40 06.0**	**-2.0**
RAHZ	**Arahi**	**3.43**	**39**	P	**Pn**	**12 40 03.3**	**+2.6**
PRRZ	**Plateau Road**	**3.50**	**27**	P	**Pn**	**12 40 05.4**	**+3.7**
RTZ	**Ruatahuna**	**3.62**	**35**	P	**Pn**	**12 40 03.4**	**-0.1**
KNZ	**Kokohu**	**3.64**	**45**	P	**Pn**	**12 40 02.9**	**-0.7**
SNGZ	**Shannon Statio**	**3.65**	**40**	P	**Pn**	**12 40 05.4**	**+1.5**
MUGZ	**Murupara**	**3.66**	**31**	P	**Pn**	**12 40 05.1**	**+1.2**
TARZ	**Mount Tarawera**	**3.77**	**27**	P	**Pn**	**12 40 06.1**	**+0.5**
PRGZ	**Paritu Road**	**3.82**	**46**	P	**Pn**	**12 40 05.1**	**-1.1**
FOZ	**Fox Glacier**	**3.85**	**239**	*e*Pn	**Pn**	**12 40 07.8**	**+1.3**
FOZ				*e*Sn	**Sn**	**12 40 51.5**	**-0.2**
FOZ	**Fox Glacier**	**3.85**	**239**	P	**Pn**	**12 40 07.4**	**+0.9**
RAGZ	**Rawiri**	**3.92**	**38**	P	**Pn**	**12 40 07.3**	**-0.2**
RIGZ	**Rimuhau**	**3.92**	**43**	P	**Pn**	**12 40 07.0**	**-0.5**
URZ	**Urewera**	**3.98**	**33**	Pn	**Pn**	**12 40 07.4**	**-0.9**
	2.3nm,0.3s,baz=222,slow=5.9,SNR=15						
URZ				Sn	**Sn**	**12 40 52.7**	**-2.2**
	10nm,0.3s,baz=316,slow=18,SNR=4.8						
URZ				Lg	Lg	12 41 15.2	
	16nm,0.3s,baz=72,slow=20,SNR=3.7						
URZ	**Urewera**	**3.98**	**33**	*e*Pn	**Pn**	**12 40 07.9**	**-0.4**
URZ	**Urewera**	**3.98**	**33**	P	**Pn**	**12 40 09.4**	**+1.1**
TOZ	**Tahuroa Road**	**4.00**	**13**	P	**Pn**	**12 40 12.0**	**+3.5**
MARZ	**Manawahe**	**4.06**	**27**	P	**Pn**	**12 40 10.5**	**+1.1**
LBZ	**Lake Benmore**	**4.11**	**227**	*e*Pn	**Pn**	**12 40 10.3**	**+0.2**
LBZ	**Lake Benmore**	**4.11**	**227**	P	**Pn**	**12 40 10.1**	**-0.1**
ODZ	**Otahua Downs**	**4.35**	**217**	*e*Pn	**Pn**	**12 40 12.2**	**-1.2**
ODZ	**Otahua Downs**	**4.35**	**217**	P	**Pn**	**12 40 12.5**	**-0.9**
TWGZ	**Tauwhareparae**	**4.44**	**40**	P	**Pn**	**12 40 13.7**	**-0.9**
RUGZ	**Raukumara Rang**	**4.47**	**36**	P	**Pn**	**12 40 14.9**	**-0.3**
KBAZ	**Karaka Road Bo**	**4.55**	**5**	P	**Pn**	**12 40 19.7**	**+3.6**
MKAZ	**Moumakai**	**4.56**	**8**	P	**Pn**	**12 40 18.5**	**+2.2**
AWAZ	**Awhitu Peninsu**	**4.57**	**3**	P	**Pn**	**12 40 19.0**	**+2.7**
PUZ	**Puketiti**	**4.66**	**41**	P	**Pn**	**12 40 16.3**	**-1.3**
HAZ	**Te Kaha**	**4.69**	**35**	P	**Pn**	**12 40 18.1**	**0.0**
ETAZ	**East Tamaki Re**	**4.69**	**6**	P	**Pn**	**12 40 20.9**	**+2.8**
WTAZ	**Waiatarua**	**4.70**	**2**	P	**Pn**	**12 40 21.3**	**+3.2**
EPAZ	**Eden Park BICE**	**4.76**	**4**	P	Pn	12 40 24.0	+5.0
JCZ	**Jackson Bay**	**4.76**	**237**	P	**Pn**	**12 40 20.3**	**+1.1**
RVAZ	**Riverhead Bore**	**4.86**	**2**	P	**Pn**	**12 40 22.8**	**+2.4**
WIAZ	**Waiheke Island**	**4.87**	**7**	P	**Pn**	**12 40 23.2**	**+2.6**
MBAZ	**Motutapu North**	**4.87**	**5**	P	**Pn**	**12 40 23.4**	**+2.8**
WMGZ	**Waiomatatini S**	**4.93**	**41**	P	**Pn**	**12 40 20.4**	**-1.0**
KUZ	**Kuaotunu**	**4.99**	**13**	P	**Pn**	**12 40 24.4**	**+2.2**
WKZ	**Wanaka**	**5.04**	**229**	*e*Pn	**Pn**	**12 40 21.3**	**-1.6**
WKZ				*e*Sn	**Sn**	**12 41 19.6**	**-1.4**
WKZ	**Wanaka**	**5.04**	**229**	P	**Pn**	**12 40 22.5**	**-0.4**
HHSZ	**Highcliff Hill**	**5.04**	**211**	P	**Pn**	**12 40 22.2**	**-0.8**
MXZ	**Matakaoa Point**	**5.08**	**38**	*e*Pn	**Pn**	**12 40 22.8**	**-0.6**
MXZ	**Matakaoa Point**	**5.08**	**38**	P	**Pn**	**12 40 26.2**	**+2.8**
EAZ	**Earnscleugh**	**5.14**	**224**	P	**Pn**	**12 40 25.9**	**+1.6**
GRZ	**Great Barrier**	**5.44**	**9**	P	Pb	12 40 35.7	-6.8
TUZ	**Tuapeka**	**5.51**	**217**	P	**Pn**	**12 40 29.1**	**-0.2**
MSZ	**Milford Sound**	**5.60**	**235**	P	Pn	12 40 36.0	+5.5
WCZ	**Waipu Caves**	**5.68**	**360**	P	**Pn**	**12 40 34.5**	**+2.8**
MLZ	**Mavora Lakes**	**5.87**	**228**	*e*Pn	**Pn**	**12 40 34.7**	**+0.4**
MLZ				*e*Sn	**Sn**	**12 41 40.0**	**-1.6**
MLZ	**Mavora Lakes**	**5.87**	**228**	P	**Pn**	**12 40 35.4**	**+1.1**
SYZ	**Scrubby Hill**	**6.17**	**216**	P	**Pn**	**12 40 38.3**	**-0.1**
WHZ	**Wether Hill Ro**	**6.29**	**225**	*e*Pn	**Pn**	**12 40 38.1**	**-2.0**
WHZ				*e*Sn	**Sn**	**12 41 49.0**	**-2.9**
WHZ	**Wether Hill Ro**	**6.29**	**225**	P	**Pn**	**12 40 39.5**	**-0.6**
OUZ	**Omahuta**	**6.43**	**354**	*e*Pn	**Pn**	**12 40 44.3**	**+2.3**
OUZ				*e*Sn	**Sn**	**12 41 57.1**	**+1.8**
OUZ	**Omahuta**	**6.43**	**354**	P	**Pn**	**12 40 44.6**	**+2.6**
DCZ	**Deep Cove**	**6.48**	**231**	*e*Pn	**Pn**	**12 40 43.9**	**+1.3**
DCZ				*e*Sn	**Sn**	**12 41 54.4**	**-2.1**
APZ	**The Paps**	**6.92**	**219**	P	**Pn**	**12 40 49.2**	**+0.5**
CTZ	**Chatham Island**	**6.98**	**111**	P	**Pn**	**12 40 49.2**	**-0.3**
TOO	**Toolangi**	**22.55**	**271**	*e*P	**P**	**12 44 08.5**	**+1.1**
	21nm,1.3s						
EIDS	**Eidsvold**	**25.17**	**303**	*e*P	**P**	**12 44 33.4**	**+0.6**
	9.9nm,1.4s						
STKA	**Stephens Creek**	**27.85**	**280**	LR	LR	12 53 59.3	
	comp=Z,73nm,21.5s,baz=199,slow=32						
AS31	**Alice Springs**	**38.07**	**285**	*e*P	**P**	**12 46 26.6**	**+0.5**
	2.5nm,1.3s						
ASAR	**Alice Springs**	**38.07**	**285**	P	**P**	**12 46 25.3**	**-0.8**
	1.4nm,0.4s,baz=128,slow=7.1,SNR=45						
WB2	**Warramunga Arr**	**40.12**	**290**	*e*P	**P**	**12 46 42.5**	**-0.8**
	6.9nm,0.6s						
WR1	**Warramunga Arr**	**40.13**	**290**	*e*P	**P**	**12 46 42.4**	**-0.9**
WRA	**Warramunga Arr**	**40.13**	**290**	P	**P**	**12 46 42.4**	**-0.9**
	6.7nm,0.7s,baz=129,slow=7.6,SNR=32						
RABL	**Rabaul**	**42.24**	**326**	*e*P	**P**	**12 47 01.2**	**+0.5**
	20nm,0.6s						
MTN	**Manton Dam**	**47.23**	**295**	*e*P	**P**	**12 47 40.2**	**-0.3**
	15nm,1.2s						
MORW	**Morawa**	**48.34**	**266**	*e*P	**P**	**12 47 48.7**	**-0.3**
	31nm,1.4s						
QSPA	**South Pole Qui**	**48.50**	**180**	P	**P**	**12 47 51.9**	**+2.0**
	5.8nm,0.9s,baz=36,slow=2.4,SNR=15						
QSPA	**South Pole Qui**	**48.50**	**180**	*e*P	**P**	**12 47 52.1**	**+2.2**
	12nm,1.1s						
PSAD2	**Pilbara Seismi**	**49.56**	**276**	*e*P	**P**	**12 47 57.7**	**-0.8**
	23nm,1.4s						
BATI	**Baumata**	**54.27**	**290**	LR	LR	13 13 24.6	
	comp=Z,237nm,18.3s,baz=78,slow=38						
SYO	**Syowa Base**	**64.71**	**196**⇑	*e*pP	pP	12 49 48.2	-0.2
SYO	**Syowa Base**	**64.71**	**196**⇑	*e*PcP	**PcP**	**12 50 16.6**	**-1.9**
SNAA	**Sanae**	**66.99**	**181**	P	**P**	**12 50 00.5**	**+0.8**
SNAA	**Sanae**	**66.99**	**181**	*e*P	**P**	**12 50 01.0**	**+1.3**
	7.8nm,1.3s						
VNA3	**Neumayer Olymp**	**67.40**	**179**	P	**P**	**12 50 03.3**	**+1.1**
VNA1	**Neumayer--Stat**	**68.01**	**179**	P	**P**	**12 50 06.7**	**+0.7**
JNU	**Nakatsue**	**84.46**	**325**	*e*P	**P**	**12 51 40.8**	**+0.9**
	14nm,1.3s						
NJ2	**Nanjing**	**89.37**	**316**	*e*P	**P**	**12 52 05.5**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSRS	**Korea Array**	**89.40**	**325**	P	**P**	**12 52 02.0**	**-1.8**
	1.4nm,0.8s,baz=155,slow=4.8,SNR=5.7						
KS15	**Wonju Array Si**	**89.41**	**325**	*e*P	**P**	**12 52 02.0**	**-1.8**
	10nm,1.4s						
CM31	**Chiang Mai Arr**	**91.66**	**293**	*e*P	**P**	**12 52 12.7**	**-2.1**
	14nm,1.4s						
CMAR	**Chiang Mai Arr**	**91.66**	**293**	P	**P**	**12 52 12.7**	**-2.1**
	0.9nm,0.4s,baz=135,slow=2.9,SNR=5.6						
KMI	**Kunming**	**93.73**	**300**	P	**P**	**12 52 26.3**	**+1.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CD2	**Chengdu**	**97.14**	**305**	*e*P	Pdif	12 52 40.3	+0.5
HHC	**Hu-ho-hao-te**	**99.86**	**317**	P	**Pdif**	**12 52 54.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,12nm,5.1s						
LZH	**Lanzhou**	**100.69**	**309**	*e*P	**Pdif**	**12 52 57.0**	**+1.4**
LZH				pP	sP	12 53 01.3	+0.7
LZH				sP	sPdif	12 53 02.8	+2.3
LZH				LR	LR		
	comp=N,100nm,17.5s						
LZH				LR	LR		
	comp=E,110nm,17.4s						
LZH				LR	LR		
	comp=Z,160nm,19.6s						
WMQ	**Urumqi**	**115.15**	**307**	*e*PKP	**PKiKP**	**12 57 49.4**	**+1.1**
WMQ				LR	LR		
	comp=N,190nm,28.8s						
WMQ				LR	LR		
	comp=E,250nm,28.9s						
UTMT	**University of**	**117.52**	**65**	*e*PKPdf	**PKiKP**	**12 57 53.2**	**+0.2**
T45A	**Paducah**	**118.03**	**64**	*e*PKPdf	**PKiKP**	**12 57 55.5**	**+1.5**
YKA	**Yellowknife Ar**	**118.24**	**30**	PKP	**PKPdf**	**12 57 52.7**	**-0.8**
	0.6nm,0.7s,baz=256,slow=1.8,SNR=7.3						
YKB5	**Yellowknife Ar**	**118.24**	**30**	*e*PKPdf	**PKPdf**	**12 57 52.8**	**-0.7**
KSH	**Kashi**	**120.26**	**298**	*e*PKP	**PKiKP**	**12 58 00.1**	**+1.7**
KSH				PKS	**PKSdf**	**13 01 36.8**	**+1.7**
DBIC	**Dimbokro**	**145.18**	**181**	PKPbc	**PKPbc**	**12 58 43.4**	**-1.5**
	2.1nm,0.6s,baz=149,slow=5.2,SNR=3.6						
DBIC	**Dimbokro**	**145.18**	**181**	*e*PKPbc	**PKPdf**	**12 58 45.6**	**+0.1**
ARA0	**ARCESS Array S**	**147.69**	**340**	*e*PKPbc	**PKPbc**	**12 58 49.7**	**-1.1**
ARCES	**ARCESS Array B**	**147.69**	**340**	PKPbc	**PKPbc**	**12 58 49.7**	**-1.1**
	2.6nm,0.7s,baz=68,slow=2.6,SNR=8.8						
ARE0	**ARCESS Array S**	**147.69**	**340**	*e*PKPdf	**PKPbc**	**12 58 49.8**	**-1.0**
BR101	**Keskin Array S**	**150.31**	**280**	*e*PKPbc	**PKPbc**	**12 58 57.4**	**-1.1**
BRTR	**Keskin Array B**	**150.31**	**280**	PKPbc	**PKPbc**	**12 58 57.4**	**-1.1**
	0.6nm,0.6s,baz=144,slow=3.8,SNR=3.2						
TOA0	**Torodi Ar. Sit**	**150.91**	**195**	*e*PKPbc	**PKPbc**	**12 59 00.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**150.91**	**195**	PKPbc	**PKPbc**	**12 58 59.7**	**-0.7**
	2.2nm,0.4s,baz=139,slow=1.2,SNR=29						
TOA1	**Torodi Ar. Sit**	**150.91**	**195**	*e*PKPbc	**PKPbc**	**12 58 59.7**	**-0.8**
FIA0	**FINESS Array S**	**152.47**	**327**	*e*PKPbc	**PKPbc**	**12 59 00.9**	**-1.6**
FINES	**FINESS Array B**	**152.47**	**327**	PKPbc	**PKPbc**	**12 59 00.9**	**-1.6**
	1.9nm,0.8s,baz=187,slow=31,SNR=6.5						

IDC 21 12:42:36.2±13.0**, 17°.17S**×**178°.83W, h512**^{km}±169^{km}**, mb2.8**/5**, mb1 3.2**/5**, mb1mx2.8**/35**, mbtmp3.7**/5**, Error ellipse: s-maj=126.2km s-min=39.0km az=162.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.61**	**254**	P	P	12 50 02.6	-0.2
	0.4nm,0.6s,baz=86,slow=9.4,SNR=6.8						
NVAR	**Mina Array Bea**	**79.18**	**44**	P	P	12 53 48.4	+0.3
	0.4nm,0.7s,baz=230,slow=8.0,SNR=4.1						
ILAR	**Eielson Array**	**85.27**	**13**	P	P	12 54 18.1	+0.1
	0.3nm,0.4s,baz=220,slow=4.9,SNR=5.7						
TXAR	**Lajitas Array**	**85.94**	**58**	P	P	12 54 22.6	+0.3
	0.6nm,0.7s,baz=221,slow=6.3,SNR=9.3						
PDAR	**Pinedale Array**	**87.10**	**44**	P	P	12 54 26.8	-0.8
	0.3nm,0.4s,baz=224,slow=3.8,SNR=3.2						
GERES	**GERESS Array B**	**146.80**	**345**	PKPbc	PKPbc	13 01 20.1	-0.6
	0.1nm,0.3s,baz=26,slow=3.4,SNR=4.5						

WEL 21 12:48:13.8, 41°S±14°×**17°5E**±1°2**, h13**^{km}±2^{km}**, M3.5**/37**, ML3.4**/10**, MLv3.5**/37**, Error ellipse: s-maj=0.0km s-min=0.0km az=18.2, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHW	**Baring Head**	**0.08**	**123**	P	Pg	12 48 17.1	+0.6
CAW	**Cannon Point**	**0.33**	**40**	P	Pb	12 48 21.5	-0.1
PLWZ	**Palliser**	**0.41**	**120**	P	Pb	12 48 22.6	-0.3
MTW	**Mount Morrison**	**0.58**	**69**	P	Pn	12 48 26.9	-0.8
OGWZ	**Otaki Gorge**	**0.62**	**28**	P	Pg	12 48 25.7	-0.1
TUWZ	**Tuamarina**	**0.64**	**264**	P	Pg	12 48 13.9	-12
HOWZ	**Holdsworth Sta**	**0.72**	**50**	P	Pb	12 48 28.8	+0.5
DUWZ	**D'Urville Isla**	**0.86**	**311**	P	Pg	12 48 22.8	-7.6
TMWZ	**Te Maipa**	**0.87**	**73**	P	Pn	12 48 31.8	0.0
MRZ	**Mangatainoka R**	**0.93**	**41**	P	Pb	12 48 31.7	0.0
TIWZ	**Tintock**	**1.02**	**55**	P	Pn	12 48 33.7	-0.2
CPWZ	**Castlepoint**	**1.16**	**67**	P	Pg	12 48 39.7	+3.5
PRWZ	**Pori Road**	**1.21**	**48**	P	Pn	12 48 36.2	-0.3
OHWZ	**Ohakea**	**1.23**	**19**	P	Pn	12 48 36.0	-0.6
POWZ	**Post Office Ro**	**1.23**	**38**	P	Pn	12 48 36.5	-0.2
DVHZ	**Dannevirke**	**1.50**	**45**	P	Pg	12 48 42.3	-0.2
ANWZ	**Angora Road**	**1.57**	**55**	P	Pn	12 48 41.0	-0.3
WAZ	**Wanganui**	**1.62**	**6**	P	Pn	12 48 42.0	0.0
QRZ	**Quartz Range**	**1.79**	**287**	P	Pn	12 48 36.3	-8.1
PNHZ	**Pukenui**	**1.81**	**37**	P	Pn	12 48 44.0	-0.6
WPHZ	**Waipukurau**	**1.81**	**45**	P	Pg	12 48 49.6	+1.1
LREZ	**Lake Rotokare**	**1.93**	**351**	P	Pn	12 48 47.1	+0.9
MTVZ	**Mangateitei**	**2.05**	**15**	P	Pn	12 48 39.6	-8.4
MTVZ				P	Pb	12 48 49.5	-1.3
GVZ	**Greta Valley S**	**2.06**	**218**	P	Pn	12 48 42.7	-5.4
PXZ	**Pawanui**	**2.07**	**51**	P	Pg	12 48 55.8	+2.4
NMEZ	**Namu Road**	**2.07**	**340**	P	Pn	12 48 48.2	0.0
PREZ	**Palmer Road**	**2.08**	**347**	P	Pn	12 48 48.3	0.0
MOVZ	**Moawhango**	**2.09**	**21**	P	Pn	12 48 50.0	+1.4
BHHZ	**Black Hill Sta**	**2.11**	**28**	P	Pb	12 48 51.2	-0.8
PKVZ	**Pokaka**	**2.12**	**12**	P	Pn	12 48 40.5	-8.4
PKVZ				P	Pb	12 48 50.4	-1.7
KHEZ	**Kahui Hut**	**2.15**	**344**	P	Pn	12 48 50.0	+0.6
WHVZ	**Whangaehu Hut**	**2.17**	**17**	P	Pb	12 48 51.7	-1.3
FWVZ	**Far West T-bar**	**2.19**	**16**	P	Pn	12 48 41.6	-8.5
FWVZ				P	Pb	12 48 51.9	-1.4
NBEZ	**Newall Road No**	**2.21**	**341**	P	Pn	12 48 50.4	+0.3
DREZ	**Durham Road**	**2.22**	**348**	P	Pb	12 48 52.4	-1.4
KAHZ	**Kahuranaki**	**2.24**	**46**	P	Pn	12 48 49.5	-1.1
VRZ	**Vera Road**	**2.24**	**360**	P	Pn	12 48 50.6	+0.1
PKE	**Pukeiti**	**2.25**	**344**	P	Pn	12 48 51.9	+1.1
NGZ	**Ngauruhoe**	**2.27**	**16**	P	Pb	12 48 53.8	-1.0
KWHZ	**Kaweka Forest**	**2.31**	**33**	P	Pb	12 48 55.7	+0.4
WTVZ	**West Tongariro**	**2.33**	**16**	P	Pb	12 48 54.4	-1.4
TWVZ	**Taurewa**	**2.34**	**13**	P	Pb	12 48 54.6	-1.4
KRVZ	**Karewarewa**	**2.36**	**16**	P	Pb	12 48 55.0	-1.3
MCHZ	**McNeill Hill**	**2.41**	**38**	P	Pg	12 48 59.5	-0.5
KATZ	**Kakaramea**	**2.49**	**17**	P	Pb	12 48 57.5	-1.0
RITZ	**Rihia Road**	**2.52**	**19**	P	Pb	12 48 58.7	-0.2
RATZ	**Rangitukua**	**2.61**	**17**	P	Pb	12 48 59.9	-0.5
OKCZ	**Okains Bay**	**2.68**	**208**	P	Pn	12 48 47.0	-10
WATZ	**Wairara**	**2.75**	**16**	P	Pb	12 49 02.3	-0.6
MRHZ	**Matea Rd**	**2.82**	**27**	P	Pb	12 49 04.2	+0.2
OXZ	**Oxford**	**2.83**	**225**	P	Pn	12 48 55.2	-3.5
HIZ	**Hauiti**	**2.85**	**1**	P	Pn	12 49 01.1	+2.1
MTHZ	**Maungataniwha**	**2.96**	**33**	P	Pn	12 49 01.1	+0.5
KUTZ	**Kaahu Road**	**2.98**	**16**	P	Pb	12 49 06.8	0.0
ALRZ	**Allen Road**	**3.04**	**24**	P	Pb	12 49 07.9	+0.1
TLZ	**Tolley Road**	**3.09**	**11**	P	Pb	12 49 05.7	-2.9
MUGZ	**Murupara**	**3.26**	**29**	P	Pb	12 49 12.0	+0.4
TOZ	**Tahuroa Road**	**3.67**	**9**	P	Pn	12 49 14.4	+4.1
MWZ	**Matawai**	**3.69**	**36**	P	Pn	12 49 09.8	-0.8
MKAZ	**Moumakai**	**4.26**	**4**	P	Pn	12 49 21.3	+2.9
AWAZ	**Awhitu Peninsu**	**4.30**	**358**	P	Pb	12 49 24.6	-4.5
ETAZ	**East Tamaki Re**	**4.41**	**2**	P	Pn	12 49 22.9	+2.5
WIAZ	**Waiheke Island**	**4.57**	**4**	P	Pn	12 49 25.5	+2.8
MBAZ	**Motutapu North**	**4.59**	**1**	P	Pn	12 49 26.0	+3.1
RVAZ	**Riverhead Bore**	**4.59**	**358**	P	Pn	12 49 28.5	+5.6
JCZ	**Jackson Bay**	**5.18**	**237**	P	Pn	12 49 22.3	-8.8

*IDC **21** 12:50:13.6±0.8, 7°.26S×105°.82E, h0km, mb4.2/15, mb1 4.3/16, mb1mx4.0/53, mbtmp4.3/16, ML4.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/28, Error ellipse: s-maj=30.3km s-min=13.6km az=34.0*

*NEIC **21** 12:50:20.0±1.7, 7°.36S×105°.92E, h44km±6km, mb4.4/16, Error ellipse: s-maj=8.5km s-min=5.0km az=106.0*

*ISCJB **21** 12:50:21.6±0.6, 7°.30S±0°.05×106°.10E±0°.04, h77km±4km, mb4.2/25, Error ellipse: s-maj=10.3km s-min=4.4km az=33.6*

*DJA **21** 12:50:21.3±0.7, 7°S±4°×10°6E±°, h26km±6km, M4.5/15, MLv4.5/15*

ISC 21 12:50:20.9±1.0, **7°.38S**±0°.04×**106°.00E**±0°.04, **h54**km±9km, **n90**, σ1s.**32**/88, **mb4.3**/25, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.66	56	P	Pn	12 50 34.0	-0.3
SKJI				S	Sn	12 50 42.5	-1.5
CGJI	Cibinong	0.82	338	P	Pn	12 50 37.7	+1.4
SBJI	Serang	1.25	6	P	Pn	12 50 43.3	+1.2
SBJI				S	Sn	12 50 58.4	+0.5
TNG	Tangerang	1.35	28	P	Pn	12 50 44.2	+0.7
LEM	Lembang	1.69	71	Pn	Pn	12 50 48.7	+0.5
	193nm,0.3s,baz=233,slow=4.6,SNR=138						
LEM				Sn	Sn	12 51 10.5	+1.7
	310nm,0.3s,baz=315,slow=24,SNR=8.8						
LEM				LR	LR	12 51 36.4	
	comp=Z,349nm,19.4s,baz=250,slow=45						
LEM	Lembang	1.69	71	P	Pn	12 50 49.3	+1.1
CISI	Cisompet, Garu	1.81	96	*e*Pn	Pn	12 50 49.6	0.0
CISI				*e*Sn	Sn	12 51 09.3	-2.1
CISI	Cisompet, Garu	1.81	96	P	Pn	12 50 49.5	-0.1
CISI				S	Sn	12 51 09.5	-2.0
BLSI	Bandar Lampung	2.13	339	P	Pn	12 50 55.9	+1.8
KASI	Kota Agung	2.37	321	P	Pn	12 51 00.1	+2.8
JCJI	Jatiwangi	2.42	69	P	Pn	12 50 56.8	-1.1
CMJI	Cimerak	2.46	100	P	Pn	12 50 58.7	+0.2
CMJI				S	Sn	12 51 24.6	-2.7
KLI	Kotabumi	2.74	335	P	Pn	12 51 06.4	+3.9
KLSI		2.95	335	P	Pn	12 51 08.3	+3.0
LWLI	Liwa	3.04	320	P	Pn	12 51 10.4	+3.8
XMIS	Christmas Isla	3.10	186	*e*Pn	Pn	12 51 07.4	-0.1
XMIS				*e*Sn	Sn	12 51 42.5	-0.9
MDSI	Maura Dua	3.40	328	P	Pn	12 51 14.7	+3.3
MNAI	Manna	4.26	314	*e*Pn	Pn	12 51 25.4	+2.2
MNAI	Manna	4.26	314	P	Pn	12 51 26.0	+2.7
LHSI	Lahat	4.30	325	P	Pn	12 51 28.4	+4.6
UGM	Wanagama	4.51	97	*e*Pn	Pn	12 51 28.0	+1.3
UGM				*e*Sn	Sn	12 52 20.8	+2.8
TPI	Tanjungpandan	4.87	20	P	Pn	12 51 31.9	+0.2
JAGI	Jajag, Banyuwa	8.14	98	*e*Pn	Pn	12 52 19.4	+2.9
JAGI				*e*Sn	Sn	12 53 46.7	-0.6
GSI	Gunungsitoli	12.04	315	*e*Pn	Pn	12 53 06.3	-3.6
KKM	Kota Kinabalu	16.78	38	*e*P	P	12 54 15.1	+1.2
	17nm,0.9s						
GIRL	Giralia	17.12	153	*e*P	P	12 54 18.9	+1.4
	246nm,1.4s						
BATI	Baumata	17.68	100	P	Pn	12 54 23.2	-0.2
	2.5nm,0.3s,baz=262,slow=7.1,SNR=2.9						
BATI	Baumata	17.68	100	*e*P	Pn	12 54 23.2	-0.2
BATI				*e*P	Pn	12 54 23.2	-0.2
SOEI	Soe	18.21	99	*e*P	P	12 54 30.5	+0.7
	16nm,0.7s						
MTN	Manton Dam	25.32	104	*e*P	P	12 55 44.2	+1.3
	15nm,1.1s						
CMAR	Chiang Mai Arr	26.60	345	P	P	12 55 51.8	-2.5
	1.3nm,0.9s,baz=179,slow=9.5,SNR=4.1						
NWAO	Narrogin (SRO)	27.48	159	LR	LR	13 06 28.4	
	comp=Z,68nm,19.7s,baz=48,slow=35						
H01W3	Cape Leeuwin H	28.38	166	T	T	13 25 52.9	
	baz=341,slow=78,SNR=149						
H01W1	Cape Leeuwin H	28.39	166	T	T	13 25 54.3	
	baz=341,slow=78,SNR=136						
H01W2	Cape Leeuwin H	28.39	166	T	T	13 25 55.0	
	baz=341,slow=78,SNR=155						
WR1	Warramunga Arr	30.17	117	*e*P	P	12 56 27.4	+1.1
WRA	Warramunga Arr	30.17	117	P	P	12 56 27.4	+1.1
	1.3nm,0.4s,baz=290,slow=9.9,SNR=17						
WB2	Warramunga Arr	30.18	117	*e*P	P	12 56 27.6	+1.2
	4.7nm,1.0s						
AS31	Alice Springs	31.29	124	*e*P	P	12 56 38.2	+2.1
	1.0nm,1.0s						
ASAR	Alice Springs	31.29	124	P	P	12 56 37.0	+0.9
	0.4nm,0.5s,baz=302,slow=7.8,SNR=14						
H08S2	Diego Garcia H	33.22	267	T	T	13 32 15.3	
	baz=91,slow=75,SNR=45						
H08S3	Diego Garcia H	33.23	267	T	T	13 32 15.8	
	baz=91,slow=75,SNR=213						
H08S1	Diego Carcia H	33.24	267	T	T	13 32 16.4	
	baz=91,slow=75,SNR=12						
YULB	Yu-li	34.04	26	*e*P	P	12 56 59.8	-0.3
	12nm,1.3s						
H08N1	Diego Carcia H	34.75	269	T	T	13 34 31.1	
	baz=148,slow=75,SNR=12						
H08N2	Diego Garcia H	34.77	270	T	T	13 34 31.6	
	baz=148,slow=75,SNR=14						
H08N3	Diego Garcia H	34.77	269	T	T	13 34 33.9	
	baz=148,slow=75,SNR=12						
COEN	Coen	37.07	103	*e*P	P	12 57 26.6	+0.4
	16nm,1.3s						
STKA	Stephens Creek	41.13	131	P	P	12 58 01.8	+1.8
	1.3nm,0.5s,baz=325,slow=12,SNR=3.1						
STKA	Stephens Creek	41.13	131	*e*P	P	12 58 02.5	+2.5
	2.7nm,1.2s						
KBL	Kabul	54.39	322	*e*P	P	12 59 42.4	-0.4
	6.9nm,1.0s						
SONA0	Songino Array	54.97	0	*e*P	P	12 59 44.8	-1.8
SONA0				*e*PcP	PcP	13 00 48.1	+0.2
SONM	Songino Array	54.97	0	P	P	12 59 44.8	-1.8
	0.9nm,0.4s,baz=178,slow=8.9,SNR=3.6						
SONM				PcP	PcP	13 00 48.1	+0.2
	2.3nm,0.5s,baz=181,slow=3.0,SNR=9.8						
MK31	Makanchi Array	57.91	341	*e*P	P	13 00 06.0	-1.5
	2.1nm,1.4s						
MK32	Makanchi Array	57.91	341	*e*P	P	13 00 05.7	-1.8
MKAR	Makanchi Array	57.91	341	P	P	13 00 05.7	-1.8
	0.9nm,0.4s,baz=151,slow=8.6,SNR=16						
KURK	Kurchatov	62.52	341	*e*P	P	13 00 37.8	-1.0
	1.5nm,0.6s						
ZALV	Zalesovo Beam	63.65	346	P	P	13 00 45.5	-0.8
	0.9nm,0.3s,baz=150,slow=4.4,SNR=4.9						
ZAA1	Zalesovo Array	63.66	346	*e*P	P	13 00 45.5	-0.8
BRVK	Borovoye	67.40	338	*e*P	P	13 01 09.7	-0.8
	3.0nm,0.5s						
ABKAR	Akbulak array	69.23	330	*e*P	P	13 01 21.9	-0.2
	11nm,0.6s						
AKTO	Aktyubinsk	70.94	330	P	P	13 01 32.2	-0.3
	1.7nm,0.6s,baz=140,slow=12,SNR=6.8						
ARU	Arti	74.54	335	P	P	13 01 52.7	-1.0
	1.1nm,0.4s,baz=159,slow=7.7,SNR=5.0						
ARU	Arti	74.54	335	*e*P	P	13 01 53.6	-0.1
	9.9nm,1.3s						
KBZ	Khabaz	76.27	318	P	P	13 02 04.0	+0.1
	2.3nm,0.6s,baz=142,slow=6.4,SNR=5.5						
EIL	Elat	77.44	303	P	P	13 02 09.8	-1.1
	3.1nm,0.7s,baz=68,slow=18,SNR=2.6						
KIRV	Kirov	79.78	334	P	P	13 02 22.7	-0.4
	10nm,0.6s,baz=183,slow=3.3,SNR=5.0						
BR101	Keskin Array S	81.34	312	*e*P	P	13 02 31.8	-0.3
BR131	Keskin Array S	81.34	312	*e*P	P	13 02 32.5	+0.4
	2.3nm,0.7s						
BRTR	Keskin Array B	81.34	312	P	P	13 02 31.8	-0.3
	1.8nm,0.6s,baz=137,slow=7.9,SNR=11						
FINES	FINESS Array B	91.63	332	P	P	13 03 21.9	+0.1
	2.6nm,0.9s,baz=120,slow=11,SNR=4.3						
ARCES	ARCESS Array B	93.54	340	P	P	13 03 30.4	-0.2
	0.5nm,0.4s,baz=103,slow=5.2,SNR=8.4						
C40A	Isle Royale Na	137.59	15	*e*PKPdf	PKiKP	13 09 41.3	+0.4
TX31	Lajitas Ar. Si	144.55	48	*e*PKPdf	PKPdf	13 09 52.4	+0.1
LTX	Lajitas	144.55	48	*e*PKPdf	PKPdf	13 09 52.1	-0.1
TXAR	Lajitas Array	144.55	48	PKP	PKPdf	13 09 52.1	-0.1
	0.8nm,0.5s,baz=272,slow=0.7,SNR=15						
QUA2	Belchertown	145.21	358	*e*PKPbc	PKPdf	13 09 53.3	+0.5
M52A	Chesterland	145.35	10	*e*PKPbc	PKPbc	13 09 53.2	+0.2
BRYW	Bryant College	145.53	357	*e*PKPdf	PKPbc	13 09 53.8	+0.3
CCM	Cathedral Cave	145.69	25	*e*PKPdf	PKPab	13 09 54.8	+0.2
BLO	Bloomington	146.39	18	*e*PKPbc	PKPbc	13 09 56.0	-0.3
N55A	Marion Center	146.44	7	*e*PKPbc	PKPbc	13 09 57.0	+0.6
JCT	Junction City	146.64	43	*e*PKPbc	PKPab	13 09 58.4	-0.1
PBMO	Poplar Bluff	147.12	25	*e*PKPbc	PKPab	13 09 60.0	-0.1
MVL	Millersville	147.45	3	*e*PKPbc	PKPbc	13 09 59.5	+0.3
Q54A	Coxs Mills	147.93	10	*e*PKPbc	PKiKP	13 10 03.0	+0.6
WVT	Waverly	148.71	22	*e*PKPbc	PKPbc	13 10 02.9	+0.2
CLTN	Cedars of Leba	149.27	20	*e*PKPbc	PKPbc	13 10 04.3	+0.2
TZTN	Tazewell	149.68	15	*e*PKPbc	PKPbc	13 10 05.7	+0.5
CPCT	Cooper Cave	150.44	18	*e*PKPbc	PKPbc	13 10 07.3	+0.3

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*ISCJB **21** 12:51:53.5±0.4, 50°.08N±0°.03×18°.34E±0°.03, h0km, Error ellipse: s-maj=3.9km s-min=2.3km az=18.1*

*IPEC **21** 12:51:54.7±0.2, 50°.07N×18°.44E, h2km±2km, ML2.3/3, Error ellipse: s-maj=2.0km s-min=1.1km az=160.0*

*PRU **21** 12:51:55.7±0.0, 50°.02N×18°.36E, h0km*

*VIE **21** 12:51:56.0±0.9, 50°.11N×18°.19E, h0km, mb1.7/4, ml2.5/6, Error ellipse: s-maj=8.3km s-min=4.7km az=66.0, Suspected Mining induced.*

ISC 21 12:51:55.0±0.8, **50°.03N**±0°.03×**18°.43E**±0°.02, **h0**km, **n29**, σ1s.**11**/54, **4C**, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.16	291	*e*Pg	Pg	12 51 58.9	+0.8
RAC				*e*Sg	Sg	12 52 02.0	+1.8
OKC	Ostrava-Krasne	0.26	224	⇑*i*PG	Pb	12 52 01.1	-1.5
OKC				*e*SG	Sg	12 52 05.0	+1.6
	comp=Z,170nm,0.6s						
MORC	Moravsky Berou	0.63	247	*e*PG	Pg	12 52 07.0	0.0
MORC				*e*SG	Sg	12 52 15.0	-0.1
MORC	Moravsky Berou	0.63	247	*e*Pg	Pg	12 52 07.0	0.0
	baz=63						
MORC				*e*Sg	Sg	12 52 15.0	-0.1
	49nm,0.2s,baz=63						
OJC	Ojcow	0.90	77	*e*Pg	Pg	12 52 11.7	-0.6
OJC				*e*Sg	Sb	12 52 25.6	-0.4
LANS	Liptovska Anna	1.11	142	*e*PG	Pb	12 52 16.9	-0.1
LANS				*e*SG	Sn	12 52 33.6	-0.1
LANS				*e*LG	Lg	12 52 37.5	
JAVC	Velka Javorina	1.27	203	*e*PG	Pn	12 52 20.2	+0.2
NIE	Niedzica	1.36	116	*e*Pg	Pb	12 52 21.3	+0.1
NIE				*e*Sg	Sn	12 52 41.6	+1.6
DPC	Dobruska-Polom	1.39	284	*e*PG	Pg	12 52 20.6	-1.1
DPC				*e*SG	Sg	12 52 39.0	-0.7
	comp=Z,68nm,0.6s						
VRAC	Vranov	1.39	240	*e*PG	Pg	12 52 20.9	-0.8
VRAC				*e*SG	Sg	12 52 39.2	-0.5
VRAC	Vranov	1.39	240	*e*Pg	Pg	12 52 20.9	-0.8
	baz=57						
VRAC				*e*Sg	Sg	12 52 39.1	-0.6
	43nm,0.3s,baz=57						
OSTC	Ostas	1.52	291	⇑*e*PG	Pn	12 52 22.5	-0.9
OSTC				*e*SG	Sb	12 52 43.5	-0.3
	comp=Z,17nm,0.4s						
VYHS	Vyhne	1.56	170	*e*PG	Pn	12 52 24.1	+0.2
VYHS				*e*SG	Sn	12 52 42.6	-2.2
KSP	Ksiaz	1.59	302	*e*Pg	Pn	12 52 23.1	-1.3
KSP				*e*Sg	Sn	12 52 44.4	-1.3
CHVC	Chvalec	1.62	291	*e*SG	Sn	12 52 46.2	-0.3
UPC	Upice	1.62	288	⇑*e*PG	Pn	12 52 24.1	-0.8
UPC				*e*SG	Sn	12 52 46.4	-0.1
	comp=Z,25nm,0.6s						
KRUC	Moravsky	1.64	235	*e*PN	Pn	12 52 24.9	-0.2
KRUC				*e*SG	Sn	12 52 46.6	-0.2
KRUC	Moravsky	1.64	235	*e*Pn	Pn	12 52 24.8	-0.3
	baz=52						
KRUC				*e*Sg	Sn	12 52 46.6	-0.2
	23nm,0.3s,baz=52						
MODS	Modra-Piesok	1.82	205	*e*PN	Pn	12 52 27.1	-0.4
MODS				*e*SN	Sn	12 52 49.1	-2.2
MODS				*e*LG	Lg	12 52 55.5	
GOPC	GO Pecny, Ondr	2.35	269	*e*SG	Sb	12 53 08.0	+0.1
	comp=Z,10nm,0.5s						
PRU	Pruhonice	2.51	271	⇑*e*SG	Sb	12 53 12.7	+0.4
	comp=Z,8.8nm,0.5s						
CONA	Conrad Observa	2.70	220	*i* Pn	Pn	12 52 39.9	+0.2
CONA				Sn	Sn	12 53 12.1	-0.9
	3.6nm,0.3s						
KOLS	Kolonicke sedl	2.73	112	*e*PG	Pg	12 52 47.8	+0.4
BRG	Berggiesshubel	2.99	288	PG	Pb	12 52 50.1	+1.0
BRG				SG	Sb	12 53 28.3	+2.1
	9.5nm,0.8s						
KHC	Kasperske Hory	3.28	256	*e*PN	Pn	12 52 46.5	-1.2
KHC				*e*PG	Pb	12 52 54.5	+0.4
KHC				*e*SG	Sg	12 53 38.9	-1.5
	comp=Z,16nm,0.4s						
ARSA	Arzberg	3.38	216	Pn	Pn	12 52 49.7	+0.7
	0.5nm,0.3s						
MOA	Molln	3.50	233	*i* Pn	Pn	12 52 51.2	+0.5
	0.5nm,0.3s						
MOA				Pg	Pb	12 52 59.5	+1.6
	0.4nm,0.2s						
MOA				*e*Sn	Sn	12 53 33.6	+0.8
	1.0nm,0.3s						
MOA				Sg	Sg	12 53 46.0	-1.5
	11nm,0.6s						
CLL	Collm	3.68	292	*e*Pg	Pg	12 53 06.0	+0.4
CLL				*e*Sg	Sg	12 53 53.0	-0.3
	comp=Z,12nm,1.1s						
WTTA	Wattenberg	5.28	241	Sg	Sg	12 54 48.5	+3.9
	comp=Z,10nm,0.9s						

WEL 21 12:54:50.3, **42°S**±230°×**17°4E**±18°0, **h144**km±148km, **M3.2**/5, **ML3.5**/4, **MLv3.2**/5, **Error ellipse: s-maj=0.4km s-min=0.3km az=15.6**, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.75	20	P	Pn	12 55 12.7	+0.2
CMWZ	Cape Campbell	0.84	37	P	Pn	12 55 13.2	+0.1
TUWZ	Tuamarina	1.04	17	P	Pn	12 55 05.1	-10
NNZ	Nelson	1.21	354	P	Pn	12 55 08.9	-7.5
WEL	Wellington	1.46	39	P	Pn	12 55 17.9	-1.1
CAW	Cannon Point	1.74	41	P	Pn	12 55 23.1	+1.0
PAWZ	Paruwai Farm	1.75	54	P	Pn	12 55 21.8	-0.4
OGWZ	Otaki Gorge	2.02	38	P	Pn	12 55 28.3	+3.0
HOWZ	Holdsworth Sta	2.12	45	P	Pn	12 55 30.4	+3.8

MEX 21 12:57:03.1±0.4, **18°.70N**×**103°.49W**, **h43**km±8km, **MD3.8**, **Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.43	161	*i* P	Pn	12 57 11.9	-1.2
MMIG				*i* S	Sn	12 57 18.0	-2.2
EZ5V		0.79	353	*e*P	Pn	12 57 16.3	-1.8
EZ5V				*e*S	Sn	12 57 27.1	-1.7
CJM	Chamela	1.67	299	*e*P	Pn	12 57 28.1	-1.7
CJM				*i* S	Sn	12 57 48.0	-2.0
ARIG	Puente Sto Nin	3.02	97	*i* P	Pn	12 57 46.8	-1.6
ARIG				*i* S	Sn	12 58 21.0	-2.3

WEL 21 12:57:28.2, **41°.6S**±0°.9×**17°4E**±°, **h21**km±1km, **M3.6**/27, **ML3.8**/27, **MLv3.6**/27, **Error ellipse: s-maj=0.0km s-min=0.0km az=112.0**, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.13	203	P	Pb	12 57 32.8	-1.7
CMWZ				S	Sb	12 57 36.4	-2.7
BSWZ	Blackbirch Sta	0.31	255	P	Pb	12 57 35.8	+0.7
BSWZ				S	Sb	12 57 41.0	+1.2
TUWZ	Tuamarina	0.33	309	P	Pb	12 57 35.7	+0.5
TUWZ				S	Sb	12 57 40.8	+0.8
TCW	Tory Channel	0.42	360	P	Pb	12 57 37.1	+0.3
TCW				S	Sb	12 57 42.9	+0.2
BHW	Baring Head	0.50	63	P	Pb	12 57 38.8	+0.6
WEL	Wellington	0.51	47	P	Pb	12 57 38.8	+0.4
WEL				S	Sb	12 57 46.4	+1.1
PLWZ	Palliser	0.73	85	P	Pn	12 57 43.8	+0.5
MSWZ	Moikau Station	0.76	74	P	Pn	12 57 43.7	0.0
CAW	Cannon Point	0.79	49	P	Pb	12 57 40.0	-3.2
NNZ	Nelson	0.79	301	P	Pb	12 57 43.3	0.0
DUWZ	D'Urville Isla	0.87	342	P	Pb	12 57 43.9	-0.8
PAWZ	Paruwai Farm	0.90	74	P	Pn	12 57 46.3	+0.7
KHZ	Kahutara	0.96	215	P	Pb	12 57 44.7	-1.4
MTW	Mount Morrison	1.03	63	P	Pb	12 57 44.5	-2.8
THZ	Tophouse	1.04	262	P	Pb	12 57 46.8	-0.7
OGWZ	Otaki Gorge	1.06	40	P	Pn	12 57 45.2	-2.6
TRWZ	Traveller	1.08	78	P	Pn	12 57 47.2	-0.9
HOWZ	Holdsworth Sta	1.19	52	P	Pn	12 57 47.7	-1.8
TMWZ	Te Maipa	1.32	67	P	Pn	12 57 51.1	-0.3
MRZ	Mangatainoka R	1.38	46	P	Pn	12 57 49.8	-2.4
TIWZ	Tintock	1.48	55	P	Pb	12 57 54.9	-0.1
QRZ	Quartz Range	1.55	301	P	Pb	12 57 56.3	+0.2
CPWZ	Castlepoint	1.62	64	P	Pb	12 58 01.5	+4.2
GVZ	Greta Valley S	1.62	214	P	Pb	12 57 56.7	-0.7
OHWZ	Ohakea	1.63	29	P	Pb	12 57 59.0	+1.5
PRWZ	Pori Road	1.67	50	P	Pb	12 57 57.4	-0.8
POWZ	Post Office Ro	1.68	43	P	Pb	12 57 58.0	-0.3
BFZ	Birch Farm	1.76	58	P	Pn	12 57 58.3	+0.8
LTZ	Lake Taylor	1.88	232	P	Pb	12 58 00.7	-1.1
WAZ	Wanganui	1.95	16	P	Pb	12 58 04.3	+1.3
DVHZ	Dannevirke	1.95	48	P	Pn	12 58 01.2	+1.1
AMCZ	Amberley	1.96	217	P	Pn	12 58 01.0	+0.9
ANWZ	Angora Road	2.03	56	P	Pn	12 58 02.1	+1.0
LREZ	Lake Rotokare	2.17	3	P	Pb	12 58 09.9	+3.2
NMEZ	Namu Road	2.24	352	P	Pb	12 58 10.0	+2.1
PNHZ	Pukenui	2.25	41	P	Pn	12 58 05.5	+1.3
WPHZ	Waipukurau	2.27	47	P	Pn	12 58 05.9	+1.5
OKCZ	Okains Bay	2.27	203	P	Pn	12 58 04.7	+0.1
PREZ	Palmer Road	2.29	358	P	Pb	12 58 10.0	+1.2
CRLZ	Canterbury Las	2.29	212	P	Pn	12 58 05.0	+0.3
KHEZ	Kahui Hut	2.34	355	P	Pb	12 58 10.5	+0.8
OXZ	Oxford	2.37	224	P	Pn	12 58 06.0	+0.2
INZ	Inchbonnie	2.37	242	P	Pn	12 58 07.7	+1.9
NBEZ	Newall Road No	2.38	352	P	Pb	12 58 11.3	+1.0
MQZ	McQueen's Vall	2.39	210	P	Pn	12 58 05.7	-0.4
MTVZ	Mangateitei	2.42	22	P	Pb	12 58 11.4	+0.4
DREZ	Durham Road	2.44	359	P	Pb	12 58 14.2	+2.9
PKE	Pukeiti	2.45	355	P	Pb	12 58 11.6	+0.1
AKCZ	Akaroa Harbour	2.46	204	P	Pn	12 58 07.2	+0.2
PKVZ	Pokaka	2.48	20	P	Pb	12 58 12.1	+0.1
MOVZ	Moawhango	2.49	27	P	Pb	12 58 10.8	-1.4
PXZ	Pawanui	2.53	52	P	Pn	12 58 09.3	+1.3
VRZ	Vera Road	2.53	8	P	Pb	12 58 12.2	-0.7
BHHZ	Black Hill Sta	2.54	33	P	Pb	12 58 10.6	-2.4
KRHZ	Kereru	2.55	39	P	Pn	12 58 09.4	+1.2
WHVZ	Whangaehu Hut	2.55	23	P	Pb	12 58 14.2	+0.9
FWVZ	Far West T-bar	2.57	23	P	Pb	12 58 14.0	+0.4
TUVZ	Tukino	2.58	24	P	Pb	12 58 12.6	-1.3
NGZ	Ngauruhoe	2.65	23	P	Pb	12 58 15.5	+0.4
KAHZ	Kahuranaki	2.70	48	P	Pn	12 58 10.9	+0.6
WTVZ	West Tongariro	2.71	22	P	Pb	12 58 16.0	0.0
TWVZ	Taurewa	2.71	19	P	Pb	12 58 16.3	+0.3
KRVZ	Karewarewa	2.74	23	P	Pb	12 58 16.7	+0.2
KWHZ	Kaweka Forest	2.75	37	P	Pb	12 58 18.6	+2.1
KATZ	Kakaramea	2.87	23	P	Pb	12 58 20.2	+1.5
RITZ	Rihia Road	2.91	25	P	Pn	12 58 11.1	-2.2
WVZ	Waitaha Valley	3.00	240	P	Pn	12 58 16.5	+2.2
HIZ	Hauiti	3.15	8	P	Pb	12 58 21.0	-2.4
RPZ	Rata Peaks	3.16	228	P	Pn	12 58 17.7	+1.0
MTHZ	Maungataniwha	3.40	36	P	Pb	12 58 26.7	-1.0
TLZ	Tolley Road	3.44	17	P	Pb	12 58 26.6	-1.7
FOZ	Fox Glacier	3.80	239	P	Pb	12 58 30.9	-3.7
TOZ	Tahuroa Road	4.01	14	P	Pb	12 58 36.0	-2.1
LBZ	Lake Benmore	4.07	226	P	Pn	12 58 30.8	+1.6
MWZ	Matawai	4.13	38	P	Pn	12 58 31.1	+1.0
ODZ	Otahua Downs	4.32	217	P	Pn	12 58 32.4	-0.1
AWAZ	Awhitu Peninsu	4.57	4	P	Pn	12 58 41.0	+4.9
MKAZ	Moumakai	4.57	9	P	Pn	12 58 41.0	+4.9
ETAZ	East Tamaki Re	4.70	6	P	Pn	12 58 43.4	+5.6
JCZ	Jackson Bay	4.72	237	P	Pb	12 58 44.4	-5.8
WIAZ	Waiheke Island	4.88	8	P	Pb	12 58 48.3	-4.5
MBAZ	Motutapu North	4.88	6	P	Pb	12 58 47.3	-5.7
SYZ	Scrubby Hill	6.14	215	P	Pn	12 58 58.9	+1.3
CTZ	Chatham Island	7.03	110	P	Pn	12 59 10.9	+1.1

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*ISCJB **21** 13:00:20.8±0.9, 3°.50S±0°.02×135°.46E±0°.02, h26km±6km, mb5.4/195, MS4.2/38, Error ellipse: s-maj=4.1km s-min=3.6km az=135.4*

*BJI **21** 13:00:20.4±0.0, 3°.68S×135°.67E, h36km, mb5.5/70, mB5.1/48, Ms4.5/54, Ms7 4.3/47*

*MOS **21** 13:00:22.0±0.9, 3°.48S×135°.34E, h33km, mb5.7/63, Error ellipse: s-maj=8.4km s-min=4.9km az=111.2*

*NEIC **21** 13:00:22.7±1.0, 3°.49S×135°.39E, h29km±7km, mb5.4/117, MW5.2, Error ellipse: s-maj=3.6km s-min=3.2km az=216.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{16}Nm; M_{rr}7.09; $M_{\theta\theta}$1.11; $M_{\phi\phi}$-8.19; $M_{r\theta}$-0.27; $M_{\theta\phi}$4.16; $M_{\phi r}$1.24; Best double couple: $M_0$8.80000×10^{16} NP1: ϕ_s157.00000°, δ41.00000°, λ86.00000°. NP2: ϕ_s341.00000°, δ49.00000°, λ93.00000°. Principal axes: T 7.1900, Plg85.0000°, Azm278.0000°; N 2.6900, Plg2.0000°, Azm159.0000°; P -9.8800, Plg4.0000°, Azm69.0000°;*

NEIC Felt [IV] at Nabire.

*GCMT **21** 13:00:24.7±0.2, 3°.53S±0°.02×135°.39E±0°.02, h35km, MW5.0/74, Moment Tensor Solution. s48,c60; s74,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.41±.17; $M_{\theta\theta}$-2.65±.11; $M_{\phi\phi}$-0.76±.13; $M_{r\theta}$2.76±.11; $M_{\theta\phi}$-1.53±.07; $M_{\phi r}$0.14±.14; Best double couple: $M_0$4.42400×10^{16} NP1: ϕ_s76.00000°, δ65.00000°, λ104.00000°. NP2: ϕ_s227.00000°, δ29.00000°, λ63.00000°. Principal axes: T 4.5140, Plg67.0000°, Azm13.0000°; N -0.1830, Plg12.0000°, Azm250.0000°; P -4.3340, Plg18.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **21** 13:00:25.0±2.0, 3°.46S×135°.39E, h41km±18km, mb5.0/23, mb1 5.0/28, mb1mx5.0/30, mbtmp5.2/28, ML5.5/4, MS4.1/19, Ms1 4.1/19, ms1mx4.1/22 Error ellipse: s-maj=13.6km s-min=8.7km az=71.0*

*DJA **21** 13:00:25.4±0.2, 4°S±2°×13°5E±°, h35km±2km, M5.2/61, mB5.6/32, mb5.5/61, MLv5.8/12, Mw(mB)5.1/32, Mwp6.0/1*

ISC 21 13:00:24.3±0.5, **3°.60S**±0°.03×**135°.42E**±0°.04, **h43**km±4km, **n793**, σ1s.**48**/845, **mb5.4**/201, **MS4.2**/39, **33C-8D**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.90	25	P	Pn	13 00 53.6	-0.7
BAKI	Biak	2.49	16	P	Pn	13 01 02.6	+0.3
FAKI	Fak Fak	3.24	282	*e*Pn	Pn	13 01 13.2	+0.5
FAKI	Fak Fak	3.24	282	P	Pn	13 01 13.3	+0.6
GENI	Genyem	4.84	78	P	Pn	13 01 38.5	+3.8
SIJI	Sorong	4.96	303	P	Pn	13 01 36.0	-0.3
	299nm,0.3s,baz=126,slow=10,SNR=186						
SIJI				S	Sn	13 02 29.6	-3.0
	458nm,0.3s,baz=174,slow=23,SNR=22						
SIJI				LR	LR	13 04 00.1	
	comp=Z,7μm,19.1s,baz=190,slow=44						
SWI	Sorong	4.97	303	P	Pn	13 01 37.5	+1.1
BNDI	Bandanaira	5.58	260	P	Pn	13 01 46.2	+1.4
	1μm,0.8s,15μm24nm						
SAUI	Saumlaki	5.98	223	*e*Pn	Pn	13 01 52.8	+2.4
SAUI	Saumlaki	5.98	223	P	Pn	13 01 53.0	+2.7
	705nm,1.1s,9.3nm						
MSAI	Masohi	6.49	272	P	Pn	13 01 58.8	+1.5
	200nm,0.6s,2μm0.9nm						
MMPI	Merauke	6.91	135	P	Pn	13 02 06.2	+3.2
	2μm,0.8s,37μm19nm						
AAI	Ambon	7.22	269	P	Pn	13 02 08.7	+1.4
NLAI	Namlea	8.32	272	P	Pn	13 02 24.1	+1.7
	188nm,0.9s,3μm						
LBMI	Labuha	8.45	290	P	Pn	13 02 24.8	+0.6
	552nm,1.0s,4μm						
TNTI	Ternate	9.15	298	*e*Pn	Pn	13 02 31.8	-2.0
TNTI	Ternate	9.15	298	P	Pn	13 02 35.0	+1.2
KDU	Kakadu	9.49	198	P	Pn	13 02 38.6	+0.2
	baz=9.7,SNR=1000						
SANI	Sanana	9.55	279	P	Pn	13 02 39.0	-0.3
	246nm,0.5s,3μm						
MTN	Manton Dam	10.12	205	*e*Pn	Pn	13 02 48.4	+1.3
MTN	Manton Dam	10.12	205	P	Pn	13 02 47.8	+0.8
	baz=10,SNR=794						
PALU	Palau	10.91	355	P	Pn	13 02 56.0	-2.0
	baz=11,SNR=5.5						
MANU	Manus Island	12.03	83	*e*Pn	Pn	13 03 12.0	-1.3
SGSI	Sangihe	12.26	306	P	Pn	13 03 16.0	-0.3
SOEI	Soe	12.65	241	*e*Pn	Pn	13 03 20.2	-1.6
SOEI	Soe	12.65	241	P	Pn	13 03 22.5	+0.6
	485nm,1.0s,4μm						
COEN	Coen	12.82	144	*e*Pn	Pn	13 03 23.2	-0.9
COEN	Coen	12.82	144	P	Pn	13 03 23.1	-1.0
	baz=13,SNR=749						
LUWI	Luwuk	12.89	281	*e*Pn	Pn	13 03 22.2	-2.8
LUWI	Luwuk	12.89	281	P	Pn	13 03 25.5	+0.4
	211nm,0.8s,2μm						
PMG	Port Moresby	13.00	117	P	Pn	13 03 28.3	+1.8
	7.4nm,0.3s,baz=324,slow=9.4,SNR=22						
PMG				S	Sn	13 05 45.0	-5.0
	3.7nm,0.3s,baz=195,slow=20,SNR=4.3						

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PMG                               LR      LR        13 10 28.9
      comp=Z,2µm,18.4s,baz=333,slow=46
PMG   Port Moresby     13.00 117  ePn     Pn        13 03 26.8 +0.2
PMG                               eSn     Sn        13 05 45.0 -5.0
PMG   Port Moresby     13.00 117  eP      Pn        13 03 26.8 +0.2
PMG                               e                 13 05 45.0
BATI  Baumata          13.39 240  P       Pn        13 03 31.9  0.0
      42nm,0.3s,baz=141,slow=1.9,SNR=41
BATI                              S       Sn        13 05 55.0 -4.4
      22nm,0.3s,baz=18,slow=20,SNR=4.4
BATI  Baumata          13.39 240  P       Pn        13 03 32.4 +0.5
      228nm,0.7s,2µm
KNRA  Kununurra        13.68 208  P       Pn        13 03 34.6 -1.1
      baz=14,SNR=264
MMRI  Maumere          14.03 249  ePn     Pn        13 03 37.1 -3.5
MMRI  Maumere          14.03 249  P       Pn        13 03 43.5 +2.9
DAV   Davao City (W)   14.45 317  LR      LR        13 09 38.5
      comp=Z,591nm,20.1s,baz=140,slow=39
DAV   Davao City (W)   14.45 317⇓eP      Pn        13 03 44.6 -1.7
EDFI  Ende, Flores     14.58 249  P       Pn        13 03 50.1 +2.1
      69nm,1.0s,2µm
BNSI  Bone             15.30 267  P       P         13 04 00.7 -0.9
      57nm,0.7s
BKSI  Bulukumba        15.35 263  P       P         13 04 04.8 +2.6
CTBH  Cotabato--PC H   15.49 314⇑iP      Pn        13 03 59.3 -0.7
TTSI  Tana Toraja      15.59 272  P       P         13 04 04.8  0.0
      102nm,1.1s,1µm
SPSI  Sidrap Palu      15.62 268  P       Pn        13 04 03.0 +1.3
      30nm,0.7s,427nm
KAPI  Kappang          15.69 264  P       Pn        13 04 03.6 +1.1
      0.8nm,0.3s,baz=130,slow=16,SNR=2.7
KAPI  Kappang          15.69 264  ePn     Pn        13 04 01.8 -0.7
      32nm,0.9s
KAPI  Kappang          15.69 264  eP      Pn        13 04 01.8 -0.7
KAPI                              pmax    pmax
      comp=Z,32nm,0.9s
WRAB  Tennant Creek    16.27 184  ePn     Pn        13 04 07.0 -2.8
      comp=Z,423nm,0.7s
WRAB  Tennant Creek    16.27 184  eP      Pn        13 04 07.0 -2.8
WRAB                              pmax    pmax
      comp=Z,423nm,0.7s
WB2   Warramunga Arr   16.28 184  ePn     Pn        13 04 07.1 -2.9
      comp=Z,440nm,0.8s
WR1   Warramunga Arr   16.28 184  ePn     Pn        13 04 07.4 -2.6
WR1                               eSn     Sn        13 06 58.7  -11
WRA   Warramunga Arr   16.28 184  P       Pn        13 04 07.4 -2.6
      comp=Z,26nm,0.3s,baz=359,slow=13,SNR=520
WRA                               S       Sn        13 06 58.7  -11
      comp=Z,17nm,0.3s,baz=4.6,slow=23,SNR=11
RABL  Rabaul           16.71  93  ePn     Pn        13 04 15.1 -0.5
      comp=Z,105nm,0.8s
MTSU  Mount Surprise   16.87 150  P       Pn        13 04 15.7 -1.7
      baz=17,SNR=332
WBSI  Waikabubak, Su   17.01 249  P       P         13 04 28.4 +7.7
QIS   Mount Isa        17.34 167  P       Pn        13 04 20.6 -2.7
      baz=18,SNR=85
PLAI  Plampang         18.29 253  P       Pn        13 04 35.0  0.0
      comp=Z,99nm,0.7s
SMKI  Samarinda        18.47 279  P       Pn        13 04 44.2 +7.0
GUMO  Guam             19.48  29  P       P         13 04 47.8  0.0
      comp=Z,2.7nm,0.3s,baz=126,slow=4.8,SNR=7.3
GUMO  Guam             19.48  29  eP      P         13 04 47.7  0.0
      comp=Z,134nm,0.9s
GUMO  Guam             19.48  29  eP      P         13 04 47.7  0.0
GUMO                              pmax    pmax
      comp=Z,134nm,0.9s
CTA   Charters Tower   19.50 148  P       Pn        13 04 51.2 +1.7
      comp=Z,16nm,0.3s,baz=323,slow=12,SNR=239
CTA                               S       S         13 08 17.9 -8.2
      comp=Z,0.6nm,0.3s,baz=49,slow=20,SNR=2.6
CTA                               LR      LR        13 13 04.5
      comp=Z,3µm,19.4s,baz=324,slow=39
CTAO  Charters Tower   19.50 148  eP      Pn        13 04 49.1 -0.3
      comp=Z,100nm,0.9s
CTAO  Charters Tower   19.50 148  eP      Pn        13 04 49.2 -0.3
CTAO                              pmax    pmax
      comp=Z,100nm,0.9s
RCP   Roxas            19.64 320⇑eP      Pn        13 04 50.8 -0.4
AS31  Alice Springs    20.00 184  eP      Pn        13 04 55.5  0.0
      comp=Z,140nm,0.6s
ASAR  Alice Springs    20.00 184  P       Pn        13 04 56.1 +0.6
      comp=Z,257nm,0.7s,baz=4.9,slow=10,SNR=873
ASAR                              S       S         13 08 28.1 -8.1
      comp=Z,55nm,0.8s,baz=3.1,slow=28,SNR=8.1
ASAR                              LR      LR        13 13 37.1
      comp=Z,1µm,22.0s,baz=3.5,slow=39
SRBI  Singaraja        20.59 257  P       Pn        13 05 04.5 +2.1
      comp=Z,63nm,1.0s
MTKI  Muara Teweh, K   20.68 277  P       Pn        13 05 04.0 +0.5
      comp=Z,85nm,0.8s
KKM   Kota Kinabalu    21.44 296  eP      P         13 05 09.2 +0.1
      comp=Z,112nm,0.6s
KMMI  Kalianget        21.64 260  P       P         13 05 16.7 +5.6
      comp=Z,299nm,0.8s,comp=Z,2µm
WRKA  Warakurna        22.39 197  P       P         13 05 20.6 +1.5
      baz=23,SNR=366
SARN  Sarigan          22.62  27  eP      P         13 05 20.2 -1.5
      comp=Z,46nm,1.0s
TGY   Tagaytay City    22.71 321  P       P         13 05 22.2 -0.4
      comp=Z,79nm,0.4s,baz=178,slow=1.5,SNR=4.7
GRJI  Gresik           23.08 261  P       P         13 05 30.2 +3.7
      comp=Z,174nm,0.9s
PSA00 Pilbara Seismi   23.41 219  eP      P         13 05 31.1 +1.4
      comp=Z,179nm,1.3s
PBKI  Pangkalan Bun    23.73 271  P       P         13 05 37.8 +5.0
      comp=Z,222nm,0.8s,comp=Z,3µm
PWJI  Pagerwojo        23.90 258  P       P         13 05 34.5 +0.2
      comp=Z,142nm,0.8s
SBUM  Sibu             23.96 284  eP      P         13 05 36.2 +1.3
      comp=Z,69nm,1.0s
NGJI  Ngawi            24.14 260  P       P         13 05 47.8  +11
WOJI  Wonogiri, Jawa   24.73 259  P       P         13 05 47.1 +5.2
      comp=Z,76nm,1.8s
HNR   Honiara          25.03 105  P       P         13 05 47.8 +3.2
      comp=Z,73nm,0.7s,baz=134,slow=3.3,SNR=4.3
HNR                               LR      LR        13 16 59.6
      comp=Z,250nm,19.0s,baz=256,slow=40
SMRI  Semarang         25.11 261  eP      P         13 05 45.7 +0.4
      comp=Z,189nm,0.7s
SMRI  Semarang         25.11 261  P       P         13 05 49.8 +4.5
      comp=Z,300nm,1.0s
KSM   Kuching          25.60 281  eP      P         13 05 50.5 +0.7
      comp=Z,84nm,0.7s
RMQ   Roma             26.10 152  P       P         13 05 55.4 +1.2
      baz=26,SNR=14
EIDS  Eidsvold         26.36 147  eP      P         13 05 57.8 +1.2
      comp=Z,28nm,0.8s
EIDS  Eidsvold         26.36 147  P       P         13 05 58.7 +2.1
      baz=26,SNR=13
TPI   Tanjungpandan    27.74 271  P       P         13 06 12.1 +3.0
      comp=Z,27nm,1.1s
CISI  Cisompet, Garu   27.75 261  eP      P         13 06 08.0 -1.3
      comp=Z,95nm,0.7s
CISI  Cisompet, Garu   27.75 261  P       P         13 06 09.9 +0.6
      comp=Z,103nm,0.6s
LEM   Lembang          27.87 262  P       P         13 06 10.7 +0.3
      comp=Z,23nm,0.6s,baz=360,slow=16,SNR=6.2
FORT  Forrest          27.91 194  eP      P         13 06 11.7 +1.3
      comp=Z,175nm,0.8s
FORT  Forrest          27.91 194  P       P         13 06 11.9 +1.5
      baz=28,SNR=40
GIRL  Giralia          27.92 225  P       P         13 06 13.5 +2.8
      baz=28,SNR=8.4
MEEK  Meekatharra      28.00 213  P       P         13 06 12.8 +1.5
      baz=28,SNR=19
STKA  Stephens Creek   28.72 169  P       P         13 06 19.0 +1.4
      comp=Z,32nm,0.6s,baz=342,slow=9.0,SNR=73
STKA                              LR      LR        13 18 30.0
      comp=Z,835nm,21.1s,baz=348,slow=38
STKA  Stephens Creek   28.72 169  eP      P         13 06 18.2 +0.7
      comp=Z,12nm,1.0s
STKA  Stephens Creek   28.72 169  P       P         13 06 18.4 +0.7
      baz=29,SNR=50
STKA  Stephens Creek   28.72 169  eP      P         13 06 18.3 +0.7
STKA                              pmax    pmax
      comp=Z,12nm,1.0s
BBOO  Buckleboo        29.07 179  eP      P         13 06 21.6 +0.9
      comp=Z,92nm,0.8s
BBOO  Buckleboo        29.07 179  P       P         13 06 21.9 +1.3
      baz=29,SNR=9.9
CMSA  Cobar Meteorol   29.42 162  P       P         13 06 25.1 +1.2
      baz=30,SNR=23
CGJI  Cibinong         29.76 263  P       P         13 06 29.1 +2.0
      comp=Z,49nm,1.0s
HTT   Hallett          29.86 174  P       P         13 06 30.6 +2.9
      baz=30,SNR=7.4
KMBL  Kambalda         30.42 203  P       P         13 06 34.4 +1.7
      baz=31,SNR=18
SSLB  Suanglung        30.66 333  eP      P         13 06 32.3 -2.6
      comp=Z,14nm,0.8s
SSLB                              ePcP    PcP       13 09 31.7 -0.7
ARMA  Armidale         30.76 152  eP      P         13 06 37.0 +1.2
      comp=Z,17nm,1.0s
ARMA  Armidale         30.76 152  P       P         13 06 37.5 +1.7
      baz=31,SNR=14
KASI  Kota Agung       30.89 265  P       P         13 06 36.6 -0.4
      comp=Z,44nm,0.9s
JOW   Kunigami         31.03 348  P       P         13 06 38.1  0.0
      comp=Z,3.9nm,0.7s,baz=166,slow=13,SNR=22
JOW   Kunigami         31.03 348  eP      P         13 06 38.1  0.0
      comp=Z,41nm,1.0s
MDSI  Maura Dua        31.18 267  P       P         13 06 40.2 +0.6
      comp=Z,38nm,1.1s
YHNB  Yeheng           31.24 335  eP      P         13 06 39.5 -0.6
      comp=Z,19nm,0.8s
MORW  Morawa           31.31 214  eP      P         13 06 41.4 +0.8
      comp=Z,37nm,0.9s
MORW  Morawa           31.31 214  P       P         13 06 42.4 +1.8
      baz=32,SNR=9.5
LHSI  Lahat            31.83 269  P       P         13 06 46.9 +1.5
      comp=Z,63nm,0.9s
MYKOM Kota Tinggi      32.01 279  eP      P         13 06 45.9 -1.0
      comp=Z,33nm,0.8s
BLDU  Ballidu          32.16 211  P       P         13 06 50.2 +2.1
      baz=32,SNR=17
MUN   Mundaring        33.51 210  P       P         13 07 02.0 +2.2
      baz=34,SNR=4.4
ARPS  Mount Arapiles   33.53 171  P       P         13 07 01.8 +1.8
      baz=34,SNR=68
QIZ   Qiongzhong       33.76 313  P       P         13 07 01.1 -1.0
QIZ                               S       S         13 12 25.5 +2.5
QIZ                               pmax    pmax
      comp=Z,100nm,3.9s
QIZ                               LR      LR
      comp=Z,190nm,16.7s
QIZ                               LR      LR
      comp=Z,270nm,16.2s
QIZ                               LR      LR
      comp=Z,410nm,22.1s
NWAO  Narrogin (SRO)   33.78 208  P       P         13 07 03.5 +1.4
      comp=Z,14nm,0.7s,baz=32,slow=8.5,SNR=11
NWAO  Narrogin (SRO)   33.78 208  eP      P         13 07 03.4 +1.3
      comp=Z,24nm,0.8s
NWAO  Narrogin (SRO)   33.78 208  P       P         13 07 04.6 +2.4
      baz=34,SNR=8.6
NWAO  Narrogin (SRO)   33.78 208  eP      P         13 07 03.4 +1.3
NWAO                              pmax    pmax
      comp=Z,24nm,0.8s
KRJI  Kerinci          33.95 272  P       P         13 07 05.7 +1.7
      comp=Z,134nm,0.9s
SDSI  Sungai Dareh     34.07 274  P       P         13 07 05.9 +1.0
      comp=Z,40nm,0.6s,comp=Z,3µm
BKNI  Bangkinang       34.58 276  P       P         13 07 13.7 +4.3
      comp=Z,187nm,0.9s
PDSI  Padang           35.03 274  P       P         13 07 13.4 +0.1
      comp=Z,51nm,0.8s
TOO   Toolangi         35.05 166  P       P         13 07 16.2 +3.1
      baz=35,SNR=9.4
DZM   Mont Dzumac      35.24 124  eLR     LR        13 16 38.6
      comp=Z,681nm,22.6s
DZM   Mont Dzumac      35.24 124  P       P         13 07 16.3 +1.2
      comp=Z,12nm,1.0s,baz=267,slow=17,SNR=3.1
DZM   Mont Dzumac      35.24 124  eP      P         13 07 16.3 +1.2
      comp=Z,60nm,1.3s
IPM   Ipoh             35.29 283  eP      P         13 07 14.5 -1.0
      comp=Z,19nm,0.8s
RKGY  Rocky Gully      35.30 207  P       P         13 07 18.2 +3.0
      baz=36,SNR=40
KULM  Kulim            35.84 284  eP      P         13 07 18.4 -1.8
      comp=Z,12nm,0.8s
MNSI  Mandailing Nat   36.09 276  P       P         13 07 22.1 -0.2
      comp=Z,46nm,0.7s
SISI  Saibi            36.37 273  P       P         13 07 25.5 +0.8
      comp=Z,38nm,0.8s
CHBT  CHBT             36.67 297  P       P         13 07 28.8 +1.6
      comp=Z,51nm,0.5s,comp=Z,2µm
PANO  Nakornpanom      36.75 305  P       P         13 07 27.8 -0.1
      comp=Z,0.9nm,0.8s
JHJ   Hachijo jima 2   36.75   6  P       P         13 07 26.2 -1.5
      comp=Z,26nm,0.5s,baz=210,slow=10.0,SNR=3.2
JNU   Nakatsue         36.77 354  P       P         13 07 27.6 -0.3
      comp=Z,155nm,0.7s,baz=201,slow=1.8,SNR=120
JNU   Nakatsue         36.77 354  eP      P         13 07 27.1 -0.9
      comp=Z,172nm,0.8s
PSI   Prapat           37.03 279  P       P         13 07 30.0 -0.5
      comp=Z,15nm,0.8s,baz=43,slow=6.8,SNR=7.7
PSI   Prapat           37.03 279  eP      P         13 07 27.6 -2.9
      comp=Z,54nm,1.0s
PSI   Prapat           37.03 279  eP      P         13 07 27.6 -2.9
PSI                               pmax    pmax
      comp=Z,54nm,1.0s
TRTT  Trang            37.41 288  P       P         13 07 34.6 +1.0
      comp=Z,60nm,0.8s
TSI   Tuntungan        37.51 280  P       P         13 07 47.5  +13
GSI   Gunungsitoli     38.14 277  eP      P         13 07 37.6 -2.2
      comp=Z,50nm,0.9s
GSI   Gunungsitoli     38.14 277  P       P         13 07 41.1 +1.3
      comp=Z,67nm,0.9s
KCSI  Kotacane, Aceh   38.29 280  P       P         13 07 41.5 +0.5
      comp=Z,29nm,0.8s
CHAI  Chaiyaphum       38.33 301  P       P         13 07 40.8 -0.5
      comp=Z,110µm,0.7s,comp=Z,877µm
NONG  Nongkai          38.42 305  P       P         13 07 41.1 -0.9
      comp=Z,0.6nm,0.7s
INU   Inuyama          38.77   2  eP      P         13 07 43.5 -1.2
      comp=Z,77nm,1.3s
NJ2   Nanjing          38.80 337  eP      P         13 07 45.8 +0.9
NJ2                               pmax    pmax
      comp=Z,37nm,1.3s
WHN   Wuhan            39.47 331 ⇑P       P         13 07 52.1 +1.5
WHN                               S       S         13 13 53.0 +3.1
WHN                               pmax    pmax
      comp=Z,490nm,4.1s
WHN                               LR      LR
      comp=Z,260nm,8.2s
WHN                               LR      LR
      comp=Z,330nm,10.6s
WHN                               LR      LR
      comp=Z,1µm,34.9s
PBKT  Sadao Pong       39.51 301  P       P         13 07 52.4 +1.3
      comp=Z,8.0nm,0.8s
SLVN  Son La           39.59 310  eP      P         13 07 50.3 -1.5
      comp=Z,6.8nm,0.6s
MLSI  Meulaboh, Aceh   39.76 281  P       P         13 07 53.7 +0.3
      comp=Z,184nm,1.0s
MJAR  Matsushiro Arr   40.02   3  P       P         13 07 53.3 -1.8
      comp=Z,28nm,0.6s,baz=185,slow=9.0,SNR=117
MJAR                              PcP     PcP       13 10 00.4 +0.8
      comp=Z,10nm,0.8s,baz=184,slow=3.2,SNR=9.2
MAJO  Matsushiro       40.02   3  eP      P         13 07 52.7 -2.4
      comp=Z,45nm,0.6s
MAJO                              ePcP    PcP       13 09 59.7 +0.1
MAJO  Matsushiro       40.02   3  eP      P         13 07 52.7 -2.4
MAJO                              e                 13 09 59.7
MAJO                              pmax    pmax
      comp=Z,45nm,0.6s
MAT   Matsushiro       40.02   3  P       P         13 07 53.3 -1.8
MAT                               S       S         13 14 04.8 +6.8
MJB9  Matsu-Tunnel     40.02   3  eP      P         13 07 52.3 -2.9
      comp=Z,45nm,0.6s
SRDT  SRDT             40.16 297  P       P         13 07 58.4 +1.8
      comp=Z,23nm,1.8s
UTHA  Uthaitani        40.38 299  P       P         13 07 58.8 +0.4
      comp=Z,35µm,0.8s
UTTA  Uttaradit        40.41 303  P       P         13 07 58.7 +0.1
      comp=Z,24µm,0.7s
TJN   Taejon           40.48 350ceP      P         13 07 57.9 -1.0
GYA   Guiyang          40.83 319⇑iP      P         13 08 02.4 +0.3
GYA                               pP      pP        13 08 11.8 -2.2
GYA                               PcP     PcP       13 10 03.6 +1.0
GYA                               S       S         13 14 12.4 +1.9
GYA                               SS      SS        13 17 07.3 -5.7
GYA                               pmax    pmax
      comp=Z,40nm,0.9s
GYA                               pmax    pmax
      comp=Z,160nm,5.2s
GYA                               LR      LR
      comp=Z,490nm,19.9s
GYA                               LR      LR
      comp=Z,450nm,18.9s
GYA                               LR      LR
      comp=Z,460nm,19.2s
KS15  Wonju Array Si   41.43 351  eP      P         13 08 05.4 -1.3
      comp=Z,51nm,1.3s
KS15                              ePcP    PcP       13 10 05.8 +1.6
KSRS  Korea Array      41.44 351  P       P         13 08 06.5 -0.2
      comp=Z,26nm,0.8s,baz=170,slow=9.0,SNR=79
KSRS                              PcP     PcP       13 10 05.7 +1.5
      comp=Z,14nm,0.8s,baz=186,slow=3.1,SNR=19
KSRS                              LR      LR        13 22 33.8
      comp=Z,126nm,20.9s,baz=162,slow=32
LAMP  Lampang          41.54 303  P       P         13 08 09.3 +1.3
      comp=Z,39µm,0.6s
PAYA  Payao            41.75 304  P       P         13 08 09.6 -0.1
      comp=Z,68µm,0.8s,comp=Z,652µm
CM31  Chiang Mai Arr   42.09 303  eP      P         13 08 10.7 -1.8
      comp=Z,79nm,1.8s
CM31                              ePcP    PcP       13 10 08.4 +1.7
CMAR  Chiang Mai Arr   42.09 303  P       P         13 08 12.6 +0.2
      comp=Z,7.2nm,0.8s,baz=123,slow=6.4,SNR=41
CMAR                              PcP     PcP       13 10 08.4 +1.7
      comp=Z,11nm,0.8s,baz=150,slow=2.4,SNR=16
CMAR                              LR      LR        13 26 28.5
      comp=Z,64nm,19.1s,baz=168,slow=37
CMMT  Chiang Mai       42.25 303  P       P         13 08 13.8  0.0
      comp=Z,14nm,0.9s
CHTO  Chiang Mai       42.26 303  eP      P         13 08 12.5 -1.3
      comp=Z,15nm,0.6s
CHTO                              ePcP    PcP       13 10 08.2 +1.0
CHTO  Chiang Mai       42.26 303  eP      P         13 08 12.5 -1.3
CHTO                              e                 13 10 08.2
CHTO                              pmax    pmax
      comp=Z,15nm,0.6s
KMI   Kunming          42.68 314  P       P         13 08 18.1 +0.7
KMI                               pP      pP        13 08 28.8 -0.6
KMI                               sP      sP        13 08 34.0 -0.5
KMI                               pmax    pmax
      comp=Z,30nm,1.4s
KMI                               LR      LR
      comp=Z,150nm,14.5s
KMI                               LR      LR
      comp=Z,200nm,18.2s
KMI                               LR      LR
      comp=Z,350nm,28.4s
CMBY  CAMPBELL BAY     42.74 284  eP      P         13 08 17.5 -0.2
CMBY                              IAmb    IAmb      13 08 18.5
      comp=Z,62nm,0.6s
TIA   Tai'an           43.14 338  P       P         13 08 20.4 -0.3
TIA                               sP      sP        13 08 37.0 -0.7
TIA                               S       S         13 14 42.3 -1.9
TIA                               pmax    pmax
      comp=Z,44nm,0.8s
TIA                               LR      LR
      comp=Z,190nm,21.4s
TIA                               LR      LR
      comp=Z,120nm,14.2s
TIA                               LR      LR
      comp=Z,290nm,19.9s
DL2   Dalian           44.17 345  P       P         13 08 28.3 -0.6
DL2                               PcP     PcP       13 10 14.0 +0.8
DL2                               eS      S         13 15 00.3 +1.2
DL2                               pmax    pmax
      comp=Z,29nm,0.8s
DL2                               pmax    pmax
      comp=Z,120nm,4.0s
DL2                               LR      LR
      comp=Z,150nm,22.0s
DL2                               LR      LR
      comp=Z,300nm,24.7s
DL2                               LR      LR
      comp=Z,360nm,23.4s
XAN   Xi'an            45.02 328  eP      P         13 08 35.2 -0.6
XAN   Xi'an            45.02 328  P       P         13 08 35.8  0.0
XAN                               PP      PcP       13 10 17.9 +1.5
XAN                               S       S         13 15 09.3 -2.4
XAN                               pmax    pmax
      comp=Z,53nm,0.8s
XAN                               pmax    pmax
      comp=Z,120nm,3.8s
XAN                               LR      LR
      comp=Z,140nm,20.6s
XAN                               LR      LR
      comp=Z,210nm,22.2s
XAN                               LR      LR
      comp=Z,260nm,22.2s
XAN   Xi'an            45.02 328  eP      P         13 08 35.2 -0.6
CD2   Chengdu          45.72 321⇑iP      P         13 08 40.8 -0.6
CD2                               PP      PP        13 10 24.9 -4.3
CD2                               S       S         13 15 23.0 +1.1
CD2                               pmax    pmax
      comp=Z,30nm,0.5s
CD2                               pmax    pmax
      comp=Z,170nm,4.8s
CD2                               LR      LR
      comp=Z,250nm,19.3s
CD2                               LR      LR
      comp=Z,260nm,18.0s
CD2                               LR      LR
      comp=Z,330nm,19.9s
ERM   Erimo            45.94   8  eP      P         13 08 42.4 -0.5
      comp=Z,36nm,0.9s
ERM   Erimo            45.94   8  eP      P         13 08 42.4 -0.5
ERM                               pmax    pmax
      comp=Z,36nm,0.9s
MSHR  Mys Shultsa      46.13 356 i P      P         13 08 44.1 -0.3
TIY   Taiyuan          46.32 335  P       P         13 08 47.1 +1.0
VLA   Vladivostok      46.61 356 i P      P         13 08 47.9 -0.3
VLA                               pmax    pmax
      comp=Z,29nm,0.9s
BJT   Baijiatuau       46.87 340  eP      P         13 08 50.4 +0.2
      comp=Z,112nm,0.8s
BJT   Baijiatuau       46.87 340  eP      P         13 08 50.4 +0.2
BJT                               pmax    pmax
      comp=Z,112nm,0.8s
BJI   Beijing          46.89 340  P       P         13 08 50.6 +0.2
BJI                               S       S         13 15 38.8 +0.6
BJI                               pmax    pmax
      comp=Z,72nm,0.7s
BJI                               LR      LR
      comp=Z,120nm,19.3s
BJI                               LR      LR
      comp=Z,85nm,22.0s
OUZ   Omahuta          47.29 136  eP      P         13 08 54.5 +0.8
      comp=Z,14nm,0.8s
USA0B Ussuriysk Arra   47.68 357  eP      P         13 08 56.1 -0.4
      comp=Z,39nm,0.6s
USRK  Ussuriysk Ar.    47.68 357  P       P         13 08 56.9 +0.4
      comp=Z,38nm,0.6s,baz=180,slow=6.8,SNR=104
USRK                              LR      LR        13 26 57.5
      comp=Z,384nm,19.3s,baz=157,slow=34
MDJ   Mudanjiang       48.28 354  eP      P         13 09 01.0 -0.2
MDJ   Mudanjiang       48.28 354  P       P         13 09 01.4 +0.3
MDJ                               pmax    pmax
      comp=Z,160nm,0.9s
TEY   Ternei           48.43   1⇑iP      P         13 09 02.4 +0.2
TEY                               e                 13 09 13.3
TEY                               pmax    pmax
      comp=Z,50nm,0.8s
TEY                               pmax    pmax
      comp=N,30nm,0.8s
TEY                               pmax    pmax
      comp=E,10.0nm,0.8s
LZH   Lanzhou          49.30 326 ⇑P       P         13 09 10.9 +1.6
LZH                               pP      pP        13 09 21.8 +0.3
LZH                               sP      sP        13 09 26.4 -0.1
LZH                               PcP     PcP       13 10 32.8 +1.1
LZH                               eS      S         13 16 13.5 +0.6
LZH                               pmax    pmax
      comp=E,100nm,1.0s
LZH                               pmax    pmax
      comp=E,340nm,6.5s
LZH                               LR      LR
      comp=E,250nm,14.8s
LZH                               LR      LR
      comp=E,240nm,15.0s
LZH                               LR      LR
      comp=E,370nm,17.2s
HHC   Hu-ho-hao-te     49.33 336  P       P         13 09 10.6 +1.2
HHC                               S       S         13 16 15.9 +2.9
HHC                               sS      sS        13 16 30.8 -2.6
HHC                               pmax    pmax
      comp=E,27nm,1.0s
HHC                               pmax    pmax
      comp=E,21nm,5.2s
HHC                               LR      LR
      comp=E,320nm,18.6s
HHC                               LR      LR
      comp=E,180nm,14.6s
MOKO  MOKOCHONG        49.50 309  eP      P         13 09 09.8 -1.2
MOKO                              IAmb    IAmb      13 09 12.1
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      comp=Z,72nm,1.2s
KOHI  KOHIMA            49.51 308   eP     P      13 09 09.2 -2.0
BTO   Baotou            49.76 335    P     P      13 09 13.1 +0.4
JORH  JORHAT            49.92 310   ex     P      13 09 20.8 +6.8
ZIRO  ZIRO              50.62 310   eP     P      13 09 18.4 -1.2
YSS   Yuzh-Sakhalins    50.75   6   eP     P      13 09 19.1 -0.8
      comp=Z,45nm,0.8s
YSS   Yuzh-Sakhalins    50.75   6⇑eP     P      13 09 19.9  0.0
YSS                             e*PP   pP     13 09 32.5 +0.4
YSS                             eS     S      13 16 25.9 -6.5
YSS                              pmax  pmax
      comp=E,30nm,0.8s
YSS                              pmax  pmax
      comp=Z,50nm,0.8s
RPZ   Rata Peaks        50.86 147    P     P      13 09 23.0 +2.1
      comp=Z,7.5nm,0.5s,baz=69,slow=2.8,SNR=5.1
TEZP  TEZPUR            50.98 309   eP     P      13 09 21.8 -0.2
TEZP                             IAmb  IAmb   13 09 22.8
SHL   Shillong          51.20 307   eP     P      13 09 23.8 -0.1
URZ   Urewera           51.30 138    P     P      13 09 25.8 +1.6
      comp=Z,4.5nm,0.8s,baz=291,slow=5.2,SNR=5.5
URZ   Urewera           51.30 138   eP     P      13 09 25.5 +1.2
      comp=Z,33nm,1.5s
GUWA  GUWAHATI          51.64 308   eP     P      13 09 25.7 -1.3
GUWA                             IAmb  IAmb   13 09 28.2
      comp=Z,91nm,1.2s
TAWA  Tawang            52.18 309   eP     P      13 09 31.6 +0.2
TURI  Tura              52.43 306   eP     P      13 09 32.9  0.0
TURI                             IAmb  IAmb   13 09 34.8
      comp=Z,35nm,0.6s
KLR   Kul'dur           52.71 357c iP     P      13 09 34.6 +0.1
KLR                              pmax  pmax
      comp=Z,27nm,0.9s
LSA   Lhasa             53.77 311   eP     P      13 09 44.1 +0.8
      comp=Z,61nm,0.8s
LSA   Lhasa             53.77 311   i P    P      13 09 44.6 +1.4
      SNR=19
LSA   Lhasa             53.77 311   eP     P      13 09 44.1 +0.8
LSA                              pmax  pmax
      comp=Z,61nm,0.8s
GTA   Gaotai            53.90 326  ⇑P     P      13 09 45.0 +1.4
GTA                              pP    pP     13 09 54.1 -1.8
GTA                              sP    sP     13 09 58.4 -2.6
GTA                              pmax  pmax
      comp=Z,120nm,0.8s
GTA                              pmax  pmax
      comp=Z,250nm,7.9s
GTA                              LR    LR
      comp=Z,100nm,13.7s
GTA                              LR    LR
      comp=Z,130nm,17.9s
GTA                              LR    LR
      comp=Z,180nm,17.9s
GRNR  Gornyy            54.16   1   eP     P      13 09 46.4 +1.2
GRNR                             pmax  pmax
      comp=Z,14nm,1.0s
BWNR  Bhubaneshwar      54.16 298   eP     P      13 09 43.8 -1.9
TYV   Tymovskoe         54.60   6   eP     P      13 09 49.3 +1.0
TYV                             eS     S      13 17 29.1 +4.2
TYV                              pmax  pmax
      comp=Z,200nm,3.5s
TYV                              pmax  pmax
      comp=Z,28nm,1.1s
TYV                              smax  smax
      comp=E,200nm,8.2s
GTK   Tadong            54.61 307   eP     P      13 09 48.4 -0.7
BOK   Bokaro            55.37 302   eP     P      13 09 55.0 +0.6
BOK                              IAmb  IAmb   13 09 56.3
      comp=Z,31nm,1.4s
JIRN  Jiri              56.69 306   eP     P      13 10 04.3 +0.1
      comp=Z,158nm,1.0s
NKL   Nikolayevsk       56.72   4   eP     P      13 10 03.4  0.0
NKL                             e             13 10 18.0
NKL                              pmax  pmax
      comp=Z,190nm,1.8s
SONA0 Songino Array     57.19 337   eP     P      13 10 08.0 +0.9
SONA0                           ePcP   PcP    13 11 01.9 +0.6
SONM  Songino Array     57.19 337    P     P      13 10 08.0 +0.9
      comp=Z,16nm,0.7s,baz=152,slow=8.3,SNR=77
SONM                             PcP   PcP    13 11 01.9 +0.6
      comp=Z,7.3nm,0.7s,baz=156,slow=4.2,SNR=4.5
SONM                             LR    LR     13 33 35.7
      comp=Z,264nm,21.4s,baz=150,slow=35
PKI   Pulchoki          57.28 306   eP     P      13 10 08.2 -0.1
      comp=Z,77nm,0.9s
PKIN  Phulchoki         57.29 306   eP     P      13 10 08.3  0.0
      comp=Z,46nm,0.8s
KKN   Kakani            57.47 306   eP     P      13 10 10.0 +0.4
      comp=Z,158nm,0.9s
DMN   Daman             57.54 306   eP     P      13 10 10.4 +0.3
      comp=Z,193nm,1.0s
ZEA   Zeya              57.54 354   eP     P      13 10 09.0 -0.3
ZEA                              pmax  pmax
      comp=Z,29nm,1.0s
ZEA                              MLR   MLR
      comp=Z,300nm,16.0s
ZEA                              MLR   MLR
      comp=N,200nm,17.0s
GKN   Gorkha            58.08 306   eP     P      13 10 14.2 +0.5
KOLN  Koldanda          58.82 305   eP     P      13 10 19.7 +0.7
      comp=N,199nm,0.8s
DANN  Dangsing          58.92 306   eP     P      13 10 20.2 +0.4
      comp=N,152nm,0.7s
PEA0B Petropavlovsk-    59.53  15   eP     P      13 10 23.3 +0.1
      comp=N,22nm,0.8s
PETK  Petropavlovsk-    59.53  15    P     P      13 10 23.9 +0.8
      comp=N,23nm,0.8s,baz=185,slow=3.6,SNR=53
PETK                             PcP   PcP    13 11 10.3 +0.1
      comp=N,5.2nm,0.9s,baz=176,slow=3.8,SNR=3.9
PEA1  Petropavlovsk-    59.54  15   eP     P      13 10 23.9 +0.8
PEA1                            ePcP   PcP    13 11 10.3 +0.1
PET   Petropavlovsk     59.72  16   eP     P      13 10 23.3 -1.1
      comp=N,20nm,0.6s
PET   Petropavlovsk     59.72  16   eP     P      13 10 25.5 +1.1
PET                             eS     S      13 18 31.2 -0.8
PET                              pmax  pmax
      comp=Z,27nm,1.1s
PET                              MLR   MLR
      comp=Z,100nm,17.0s
PET                              MLR   MLR
      comp=Z,100nm,11.0s
HYB   Hyderabad         59.85 292   i P    P      13 10 27.0 +0.9
NGP   Nagpur            60.43 297   eP     P      13 10 29.0 -1.0
NGP                              IAmb  IAmb   13 10 31.3
      comp=Z,25nm,1.3s
ZAK   Zakamensk         60.45 337   eP     P      13 10 29.8 +0.1
ZAK                              pmax  pmax
      comp=Z,50nm,1.4s
IRK   Irkutsk           61.58 339   eP     P      13 10 37.1  0.0
IRK                              pmax  pmax
      comp=Z,80nm,2.6s
MOY   Mondy             62.36 337   eP     P      13 10 43.8 +1.2
MOY                              pmax  pmax
      comp=Z,132nm,1.8s
BHPL  Bhopal            62.48 298   eP     P      13 10 43.6 -0.2
BOD   Bodaibo           63.61 347   eP     P      13 10 51.0 +0.5
BOD                              pmax  pmax
      comp=Z,52nm,1.5s
WMQ   Urumqi            63.71 323   eP     P      13 10 53.0 +1.4
WMQ                              pP    pP     13 11 05.0 +0.8
WMQ                              sP    sP     13 11 10.4 +1.3
WMQ                              pmax  pmax
      comp=Z,44nm,1.3s
WMQ                              pmax  pmax
      comp=Z,100nm,3.8s
WMQ                              LR    LR
      comp=Z,160nm,28.9s
WMQ                              LR    LR
      comp=Z,44nm,28.3s
WMQ                              LR    LR
      comp=Z,120nm,23.1s
MA2   Magadan           64.14   9   eP     P      13 10 53.6 -0.5
      comp=Z,19nm,1.0s
MA2   Magadan           64.14   9ceP     P      13 10 54.4 +0.4
MA2                              pmax  pmax
      comp=Z,52nm,2.5s
SMY   Shemya            64.89  25   eP     P      13 10 59.5 +0.5
      comp=Z,142nm,1.1s
SMY   Shemya            64.89  25   eP     P      13 10 59.5 +0.5
SMY                              pmax  pmax
      comp=Z,142nm,1.1s
SMLA  Simla             65.28 307   eP     P      13 11 01.7 -0.3
YAK   Yakutsk           65.60 357   eP     P      13 11 03.2 -0.2
      comp=Z,59nm,0.9s
YAK   Yakutsk           65.60 357c iP     P      13 11 03.6 +0.2
YAK                             e             13 11 34.5
YAK                             e             13 13 29.6
YAK                             eS     S      13 19 42.7 -2.8
YAK                             e*SS   sS     13 20 22.1  +16
YAK                             e             13 20 46.5
YAK                              pmax  pmax
      comp=Z,53nm,0.9s
YAK                              pmax  pmax
      comp=N,25nm,1.4s
YAK                              pmax  pmax
      comp=E,2.0nm,0.8s
YAK                              pmax  pmax
      comp=Z,6.0nm,0.6s
YAK                              pmax  pmax
      comp=N,8.0nm,0.9s
YAK                              pmax  pmax
      comp=E,16nm,1.5s
YAK                              smax  smax
      comp=N,19nm,1.8s
YAK                              smax  smax
      comp=E,16nm,2.4s
DHRM  DHARAMSHALA       66.37 307   eP     P      13 11 08.8 -0.5
SEY   Seymchan          67.59   8   i P    P      13 11 16.7 +0.6
KIWB  Kanaga Island     68.29  29   eP     P      13 11 21.5 +0.7
MK31  Makanchi Array    68.53 324   eP     P      13 11 23.1 +0.7
      comp=E,35nm,0.9s
MK31  Makanchi Array    68.53 324   i P    P      13 11 22.9 +0.5
MK31                             pmax  pmax
      comp=Z,57nm,1.0s
MK32  Makanchi Array    68.53 324   eP     P      13 11 23.4 +1.0
MKAR  Makanchi Array    68.53 324    P     P      13 11 23.4 +1.0
      comp=Z,32nm,0.6s,baz=115,slow=8.0,SNR=332
MKAR                             LR    LR     13 41 35.3
      comp=Z,60nm,22.0s,baz=102,slow=36
MKAR  Makanchi Array    68.53 324   i P    P      13 11 23.3 +0.9
MKAR                             pmax  pmax
      comp=Z,32nm,0.6s
ADK   Adak              68.54  30   eP     P      13 11 23.0 +0.7
      comp=Z,60nm,0.8s
ADK   Adak              68.54  30   eP     P      13 11 23.0 +0.7
ADK                              pmax  pmax
      comp=Z,60nm,0.8s
PDGK  Podgornoye        68.57 320    P     P      13 11 23.2 +0.3
PDGK                             pmax  pmax
      comp=Z,38nm,0.9s
MAKZ  Makanchi          68.72 324   eP     P      13 11 24.3 +0.7
      comp=Z,62nm,0.9s
MAKZ  Makanchi          68.72 324   eP     P      13 11 24.3 +0.7
MAKZ                             pmax  pmax
      comp=Z,62nm,0.9s
PRZ   Przheval'sk       68.91 318   eP     P      13 11 24.8 -0.3
      comp=Z,47nm,0.8s
PRZ   Przheval'sk       68.91 318   eP     P      13 11 24.8 -0.3
PRZ                              pmax  pmax
      comp=Z,47nm,0.8s
NIL   Nilore            69.25 308   eP     P      13 11 27.2  0.0
      comp=Z,68nm,0.7s
NIL   Nilore            69.25 308   eP     P      13 11 27.3  0.0
NIL                              pmax  pmax
      comp=Z,68nm,0.7s
KSH   Kashi             69.34 315    P     P      13 11 29.4 +1.7
KSH                              pP    pP     13 11 38.0 -2.4
KSH                              sP    sP     13 11 41.6 -3.8
KSH                              PcP   PcP    13 11 53.1 +2.0
KSH                              S     S      13 20 32.3 +0.7
KSH                              ScS   ScS    13 21 26.3 +0.5
KSH                              SS    SS     13 25 03.1 +3.7
KSH                              pmax  pmax
      comp=Z,42nm,0.9s
KSH                              pmax  pmax
      comp=Z,310nm,7.9s
KSH                              LR    LR
      comp=Z,700nm,10.2s
KSH                              LR    LR
      comp=Z,280nm,8.1s
KSH                              LR    LR
      comp=Z,130nm,10.8s
KDJ   Kajisay           69.57 318   eP     P      13 11 30.1 +0.9
      comp=Z,46nm,0.7s
KDJ   Kajisay           69.57 318   eP     P      13 11 30.1 +0.9
KDJ                              pmax  pmax
      comp=Z,46nm,0.7s
NRN   Naryn             70.08 316   eP     P      13 11 32.5 -0.1
      comp=Z,22nm,0.8s
NRN   Naryn             70.08 316   eP     P      13 11 32.5 -0.1
NRN                              pmax  pmax
      comp=Z,22nm,0.8s
BOOM  Boomskoye usch    70.56 317   eP     P      13 11 35.8 +0.6
BOOM  Boomskoye usch    70.56 317   eP     P      13 11 35.8 +0.6
ZAA0  Zalesovo Array    71.09 331   eP     P      13 11 36.9 -1.1
      comp=Z,80nm,1.4s
ZALV  Zalesovo Beam     71.09 331    P     P      13 11 37.7 -0.3
      comp=Z,29nm,0.8s,baz=122,slow=5.7,SNR=69
ZALV                             LR    LR     13 41 55.2
      comp=Z,57nm,21.8s,baz=70,slow=35
ZAA1  Zalesovo Array    71.09 331   eP     P      13 11 37.7 -0.3
AAK   Ala-Archa         71.59 317   eP     P      13 11 42.0 +0.5
      comp=Z,36nm,1.1s
AAK   Ala-Archa         71.59 317   i P    P      13 11 42.6 +1.1
      SNR=9.9
AAK   Ala-Archa         71.59 317ceP     P      13 11 42.6 +1.1
AAK                              pmax  pmax
      comp=Z,34nm,1.3s
ARSB  Arslanbob         72.14 315   eP     P      13 11 45.3 +0.5
      comp=Z,57nm,0.9s
KURK  Kurchatov         72.59 326   eP     P      13 11 47.1 +0.1
      comp=Z,85nm,1.2s
KURK  Kurchatov         72.59 326ceP     P      13 11 47.4 +0.4
KURK                             pmax  pmax
      comp=Z,56nm,0.8s
KBL   Kabul             72.85 308   eP     P      13 11 48.9 -0.3
      comp=Z,44nm,0.8s
KBL   Kabul             72.85 308   eP     P      13 11 48.9 -0.3
KBL                              pmax  pmax
      comp=Z,44nm,0.8s
NIKH  Nikolski High     73.12  31   eP     P      13 11 50.3 +0.1
      comp=Z,102nm,1.2s
BTK   Batken            73.23 314   eP     P      13 11 51.4 +0.2
      comp=Z,113nm,1.7s
BTK   Batken            73.23 314   eP     P      13 11 51.4 +0.2
BTK                              pmax  pmax
      comp=Z,113nm,1.7s
GAR   Garm              73.25 312   eP     P      13 11 51.6 +0.2
      comp=Z,91nm,0.8s
GAR   Garm              73.25 312   eP     P      13 11 51.6 +0.2
GAR                              pmax  pmax
      comp=Z,91nm,0.8s
KK31  Karatay Array     74.49 316   eP     P      13 11 58.6 +0.3
      comp=Z,35nm,0.8s
KK31  Karatay Array     74.49 316   i P    P      13 11 58.7 +0.3
KK31                             pmax  pmax
      comp=Z,24nm,0.7s
KKAR  Karatay Array     74.49 316   eP     P      13 11 58.3 -0.1
      comp=Z,35nm,0.8s
KKAR  Karatay Array     74.49 316   eP     P      13 11 58.3 -0.1
KKAR                             pmax  pmax
      comp=Z,35nm,0.8s
PPT   Papeete           74.62 107    LR    LR     13 43 49.5
      comp=Z,51nm,18.4s,baz=284,slow=35
PPT2  Papeete2          74.62 107   eS     S      13 21 29.7 -3.3
      comp=Z,68nm,29.2s
PPT2  Papeete2          74.62 107   eLR    LR     13 35 01.1
      comp=Z,342nm,31.2s
BILL  Bilibino          74.66  12ceP     P      13 11 59.2 +0.3
BILL                            e             13 12 13.9
BILL                            eS     S      13 21 29.7 -1.7
BILL                             pmax  pmax
      comp=Z,2.0nm,0.4s
UNV   Unalaska Valle    74.78  31   eP     P      13 12 00.4 +0.6
      comp=Z,173nm,1.5s
TBI   Tubuai            74.92 113   eS     S      13 21 34.0 -1.9
      comp=Z,244nm,28.8s
TBI   Tubuai            74.92 113   eLR    LR     13 35 05.8
      comp=Z,240nm,25.2s
VNDA  Vanda             75.21 174    P     P      13 12 03.2 +1.3
      comp=Z,3.1nm,0.6s,baz=324,slow=6.4,SNR=27
VNDA                             LR    LR     13 45 12.0
      comp=Z,547nm,18.4s,baz=349,slow=36
VNDA  Vanda             75.21 174   eP     P      13 12 03.3 +1.3
      comp=Z,11nm,0.9s
VNDA  Vanda             75.21 174   eP     P      13 12 03.3 +1.3
VNDA                             pmax  pmax
      comp=Z,11nm,0.9s
TIXI  Tiksi             75.23 358   i P    P      13 12 02.7 +0.6
TIXI                             pmax  pmax
      comp=Z,32nm,1.6s
SBA   Scott Base        76.02 173   eP     P      13 12 06.5 -0.1
      comp=Z,11nm,1.0s
SBA   Scott Base        76.02 173   eP     P      13 12 06.5 -0.1
SBA                              pmax  pmax
      comp=Z,11nm,1.0s
FALS  False Pass        76.85  31   eP     P      13 12 11.8 +0.2
      comp=Z,108nm,0.8s
BRVK  Borovoye          78.26 326   eP     P      13 12 19.6 +0.1
      comp=Z,87nm,0.9s
BRVK  Borovoye          78.26 326ceP     P      13 12 19.9 +0.4
BRVK                             pmax  pmax
      comp=Z,128nm,1.3s
SDPT  Sand Point        78.59  32   eP     P      13 12 21.2  0.0
      comp=Z,99nm,0.8s
MAW   Mawson            80.08 202    P     P      13 12 31.2 +2.0
      comp=Z,23nm,0.8s,baz=66,slow=5.5,SNR=41
MAW                              LR    LR     13 46 51.4
      comp=Z,176nm,18.5s,baz=64,slow=35
MAW   Mawson            80.08 202   eP     P      13 12 30.6 +1.4
      comp=Z,6.3nm,0.9s
MAW   Mawson            80.08 202    P     P      13 12 31.2 +2.0
      baz=80,SNR=18
MAW   Mawson            80.08 202   eP     P      13 12 30.6 +1.4
MAW                              pmax  pmax
      comp=Z,6.0nm,0.9s
MDH   Madha             81.72 296    P     P      13 12 41.0 +2.1
UOSS  Minazif           81.76 296    P     P      13 12 39.2 +0.1
BANOM Banah             81.81 297    P     P      13 12 40.2 +0.8
HATD  Hatta, Dubai      81.81 296    P     P      13 12 39.7 +0.4
SHME  Shamm             81.97 297    P     P      13 12 40.9 +0.7
ALNE  Al Ain            82.05 295    P     P      13 12 41.4 +0.7
GEYT  Alibeck           82.23 309    P     P      13 12 42.5 +1.1
      comp=Z,20nm,0.3s,baz=151,slow=3.4,SNR=6.4
GEYT                             LR    LR     13 53 29.1
      comp=Z,52nm,20.1s,baz=95,slow=39
GYA0B ALIBECK ARRAY     82.23 309   eP     P      13 12 41.9 +0.6
      comp=Z,72nm,1.0s
SII   Sitkinak Islan    82.33  32   eP     P      13 12 41.4  0.0
      comp=Z,51nm,0.6s
ASUD  Al Ashush, Dub    82.51 295    P     P      13 12 43.5 +0.5
OHAK  Old Harbor        83.00  31   eP     P      13 12 45.8 +1.0
      comp=Z,106nm,1.5s
RDOG  Red Dog Mine      83.09  19   eP     P      13 12 45.1  0.0
      comp=Z,31nm,0.8s
SVW2  Sparrevohn        83.15  27   eP     P      13 12 46.2 +0.7
      comp=Z,8.8nm,0.7s
AB31  Akbulak array     83.29 320   i P    P      13 12 46.3 -0.2
AB31                             pmax  pmax
      comp=Z,15nm,0.6s
ABKAR Akbulak array     83.29 320   eP     P      13 12 46.4 -0.1
      comp=Z,24nm,0.6s
TTA   Tatalina          83.60  25   eP     P      13 12 48.3 +0.4
      comp=Z,23nm,0.9s
TTA   Tatalina          83.60  25   eP     P      13 12 48.3 +0.4
TTA                              pmax  pmax
      comp=Z,23nm,0.9s
SVE   Sverdlovsk        84.73 328deP     P      13 12 54.2 +0.5
SVE                              pmax  pmax
      comp=Z,68nm,1.3s
AKTO  Aktyubinsk        84.77 321    P     P      13 12 53.5 -0.5
AKTO                             pmax  pmax
      comp=Z,75nm,1.2s
BRLK  Bradley Lake      84.95  29   eP     P      13 12 54.4 -0.4
      comp=Z,14nm,0.8s
PPLA  Purkeypile        85.25  26   eP     P      13 12 56.0 -0.4
      comp=Z,61nm,1.7s
CAST  Castle Rocks      85.45  25   eP     P      13 12 57.0 -0.2
      comp=Z,13nm,0.6s
SEW   Seward            85.73  29   eP     P      13 12 58.7 +0.1
      comp=Z,19nm,0.8s
ARU   Arti              85.75 327   eP     P      13 12 57.9 -0.9
      comp=Z,40nm,0.9s
ARU   Arti              85.75 327c iP     P      13 12 58.0 -0.8
ARU                                           13 16 12.0
ARU                              S     S      13 23 20.3 -7.9
ARU                              pmax  pmax
      comp=Z,46nm,1.0s
RC01  Rabbit Creek A    85.85  28   eP     P      13 12 58.9 -0.3
      comp=Z,18nm,0.6s
KTH   Kantishna Hill    85.99  26   eP     P      13 12 59.5 -0.4
      comp=Z,29nm,1.0s
BPAW  Bear Paw Mtn.     86.11  25   eP     P      13 13 00.6 +0.1
      comp=Z,56nm,1.9s
PMR   Palmer            86.26  28   eP     P      13 13 00.8 -0.4
      comp=Z,40nm,1.4s
PMR   Palmer            86.26  28   eP     P      13 13 00.8 -0.4
PMR                              pmax  pmax
      comp=Z,40nm,1.4s
QSPA  South Pole Qui    86.35 180   eP     P      13 13 02.5 +0.7
      comp=Z,38nm,1.0s
MLY   Manley            86.48  24   eP     P      13 13 02.4 +0.2
      comp=Z,33nm,0.7s
KNK   Knik Glacier      86.53  28   eP     P      13 13 02.9 +0.3
      comp=Z,89nm,1.5s
SML   Sawmill           86.69  28   eP     P      13 13 03.3  0.0
      comp=Z,68nm,1.1s
SML   Sawmill           86.69  28   eP     P      13 13 03.3  0.0
SML                              pmax  pmax
      comp=Z,68nm,1.1s
RND   Reindeer          86.84  26   eP     P      13 13 03.6 -0.5
      comp=Z,65nm,0.7s
RND   Reindeer          86.84  26   eP     P      13 13 03.6 -0.5
RND                              pmax  pmax
      comp=Z,65nm,0.7s
MCK   McKinley          86.89  26   eP     P      13 13 03.8 -0.5
      comp=Z,38nm,0.8s
MCK   McKinley          86.89  26   eP     P      13 13 03.8 -0.5
MCK                              pmax  pmax
      comp=Z,38nm,0.8s
GLI   Glacier Island    87.05  29   eP     P      13 13 05.2 +0.1
      comp=Z,33nm,1.2s
SCM   Sheep Creek Mo    87.16  28   eP     P      13 13 06.0 +0.3
      comp=Z,54nm,0.9s
SCM   Sheep Creek Mo    87.16  28   eP     P      13 13 06.0 +0.3
SCM                              pmax  pmax
      comp=Z,54nm,0.9s
COLD  Coldfoot          87.30  22   eP     P      13 13 06.7 +0.6
      comp=Z,4.9nm,0.8s
FID   Port Fidalgo      87.32  29   eP     P      13 13 06.7 +0.3
      comp=Z,26nm,1.1s
WRH   Wood River Hil    87.43  25   eP     P      13 13 06.2 -0.7
      comp=Z,33nm,0.8s
CCB   Clear Creek Bu    87.59  25   eP     P      13 13 06.7 -0.9
      comp=Z,39nm,0.7s
TCOL  CIGO, UAF Yank    87.62  25    P     P      13 13 07.4 -0.3
      baz=256
COLA  College           87.62  25   eP     P      13 13 07.2 -0.5
      comp=Z,21nm,0.7s
COLA  College           87.62  25d iP     P      13 13 07.5 -0.2
COLA                             pmax  pmax
      comp=Z,17nm,0.7s
POKR  Poker Plat Res    87.85  24    P     P      13 13 08.5 -0.4
      baz=257
HDA   Harding Lake      87.90  25   eP     P      13 13 08.2 -0.9
      comp=Z,22nm,0.8s
HDA   Harding Lake      87.90  25    P     P      13 13 08.7 -0.4
      baz=257
TOLK  Toolik Lake Re    87.90  21   eP     P      13 13 09.1  0.0
      comp=Z,9.4nm,0.8s
TOLK  Toolik Lake Re    87.90  21    P     P      13 13 09.0 -0.1
      baz=255
ILAR  Eielson Array     88.00  25    P     P      13 13 08.4 -1.2
      comp=Z,17nm,0.6s,baz=267,slow=4.3,SNR=202
ILAR                             LR    LR     13 47 36.6
      comp=Z,116nm,22.0s,baz=274,slow=32
ILB   Eielson Array     88.00  25   eP     P      13 13 08.3 -1.2
      comp=Z,21nm,0.7s
SYO   Syowa Base        88.76 201⇑eP     P      13 13 13.0 -0.1
SYO   Syowa Base        88.76 201⇑ePcP   PcP    13 13 15.6 +1.0
SYO   Syowa Base        88.76 201⇓epP    pP     13 13 24.1 -2.2
CRQM  Cirque            88.93  29   eP     P      13 13 14.3  0.0
      comp=Z,46nm,0.9s
MENT  Mentasta          89.02  27   eP     P      13 13 14.7 +0.2
      comp=Z,8.8nm,0.7s
FYU   Fort Yukon        89.05  23   eP     P      13 13 14.5 +0.1
TGL   Tana Glacier      89.08  29   eP     P      13 13 15.0 +0.1
      comp=Z,40nm,0.9s
EGAK  Eagle             90.42  25   eP     P      13 13 20.7 -0.2
      comp=Z,7.1nm,0.8s
DAWY  Dawson            91.10  26   eP     P      13 13 23.9 -0.3
      comp=Z,8.3nm,0.8s
RAYN  Ar Rayn           91.35 293   eP     P      13 13 24.8 -1.4
      comp=Z,13nm,1.0s
RAYN  Ar Rayn           91.35 293   i P    P      13 13 26.4 +0.2
      SNR=8.8
RAYN  Ar Rayn           91.35 293   eP     P      13 13 24.8 -1.4
RAYN                             pmax  pmax
      comp=Z,13nm,1.0s
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HYT	Haines Junctio	91.68	29	eP	P	13 13 28.1	+1.0
	comp=Z,9.5nm,0.7s						
EPYK	Eagle Plains	92.41	24	eP	P	13 13 29.6	-0.6
	comp=Z,25nm,1.8s						
EPYK	Eagle Plains	92.41	24	P	P	13 13 29.9	-0.3
	baz=267						
GNI	Garni	92.82	310	i P	P	13 13 31.8	-1.0
GNI				pmax	pmax		
	comp=Z,28nm,1.2s						
PRGR	Permogore	93.05	331	eP	P	13 13 30.7	-2.4
PRGR				e		13 17 14.9	
PRGR				pmax	pmax		
	comp=Z,29nm,0.7s						
ZEI	Tsey	93.54	312	eP	P	13 13 34.4	-1.7
ZEI				pmax	pmax		
	comp=Z,18nm,0.9s						
INK	Inuvik	93.71	22	eP	P	13 13 34.8	-1.2
	comp=Z,9.2nm,1.0s						
INK	Inuvik	93.71	22	eP	P	13 13 34.8	-1.2
INK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NCK	Nalchik	93.78	313	i P	P	13 13 36.3	-0.7
NCK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKH	Akhalkalaki	93.81	311	eP	P	13 13 36.9	-0.5
	comp=Z,14nm,0.7s						
AKH	Akhalkalaki	93.81	311	⇑iP	P	13 13 37.7	+0.3
AKH	Akhalkalaki	93.81	311	eP	P	13 13 36.9	-0.5
AKH				pmax	pmax		
	comp=Z,14nm,0.7s						
KBZ	Khabaz	94.29	313	P	P	13 13 37.4	-1.9
	comp=Z,2.9nm,0.7s,baz=99,slow=5.1,SNR=7.4						
KBZ				LR	LR	14 02 12.3	
	comp=Z,40nm,18.6s,baz=71,slow=39						
NEY	Neytrino	94.41	313	i P	P	13 13 39.5	-0.6
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	Kislovodsk	94.45	314	eP	P	13 13 41.3	+1.2
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
VORD	Divnogorie	96.65	321	eP	P	13 13 47.6	-2.2
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	96.71	321	eP	P	13 13 47.6	-2.5
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
LPSR	Galich'ya Gora	96.79	322	eP	P	13 13 48.4	-2.1
LPSR				pmax	pmax		
	comp=Z,50nm,0.8s						
APA	Apatity	97.89	338	⇑iP	P	13 13 50.4	-4.7
APA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,200nm,17.0s						
OBN	Obninsk	98.01	325	deP	P	13 13 54.4	-1.5
OBN				e		13 17 55.2	
OBN				pmax	pmax		
	comp=Z,20nm,0.7s						
OBN				MLR	MLR		
	comp=Z,99nm,24.0s						
SNAA	Sanae	100.16	192	Pdiff	Pdif	13 14 06.6	+1.2
ARA0	ARCESS Array S	100.25	340	ePdif	Pdif	13 14 04.8	-0.9
ARCES	ARCESS Array B	100.25	340	P	Pdif	13 14 04.8	-0.9
	comp=Z,22nm,0.5s,baz=82,slow=6.0,SNR=131						
ARE0	ARCESS Array S	100.25	340	ePdif	Pdif	13 14 04.8	-0.9
SIM	Simferopol'	100.54	315	P	Pdif	13 14 05.6	-1.9
SIM				pmax	pmax		
	comp=Z,17nm,0.6s						
BR101	Keskin Array S	101.36	310	ePdif	Pdif	13 14 09.8	-1.7
BR101				ePP	PP	13 18 19.2	-1.9
BR131	Keskin Array S	101.36	310	ePdif	Pdif	13 14 09.6	-1.8
BRTR	Keskin Array B	101.36	310	P	Pdif	13 14 09.8	-1.7
	comp=Z,1.9nm,0.7s,baz=129,slow=4.6,SNR=12						
BRTR				PP	PP	13 18 19.2	-1.9
	comp=Z,0.8nm,0.9s,baz=86,slow=8.1,SNR=3.6						
BRTR	Keskin Array B	101.36	310	i P	Pdif	13 14 10.1	-1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VNA3	Neumayer Olymp	101.87	191	Pdiff	Pdif	13 14 14.1	+1.2
YKA	Yellowknife Ar	102.33	27	P	Pdif	13 14 14.7	-0.2
	comp=Z,1.0nm,0.7s,baz=292,slow=4.8,SNR=6.9						
YKA				PKiKP	PKiKP	13 18 37.0	+0.5
	comp=Z,0.6nm,0.6s,baz=293,slow=1.9,SNR=9.0						
YKA				PKKPbc	PKKPbc	13 30 16.4	-2.9
	comp=Z,0.3nm,0.6s,baz=108,slow=3.0,SNR=5.6						
YKB5	Yellowknife Ar	102.33	27	ePdif	Pdif	13 14 14.7	-0.2
YKB5				ePKiKP	PKiKP	13 18 37.0	+0.5
FIA0	FINESS Array S	102.33	332	ePdif	Pdif	13 14 14.2	-0.8
FIA0	FINESS Array S	102.33	332	eP	Pdif	13 14 14.3	-0.8
FINES	FINESS Array B	102.33	332	P	Pdif	13 14 14.2	-0.8
	comp=Z,6.3nm,0.8s,baz=92,slow=5.7,SNR=15						
AKASG	Malin Array Be	103.02	321	P	Pdif	13 14 17.0	-1.3
	comp=Z,3.5nm,0.8s,baz=69,slow=4.8,SNR=11						
AKASG				PP	PKiKP	13 18 35.6	-2.5
	comp=Z,0.2nm,0.2s,baz=65,slow=7.8,SNR=6.4						
AKASG	Malin Array Be	103.02	321	P	Pdif	13 14 17.0	-1.3
AKBB	Malin Array Si	103.02	321	ePdif	Pdif	13 14 16.9	-1.4
AKBB	Malin Array Si	103.02	321	eP	Pdif	13 14 16.9	-1.4
TLCR		104.23	316	⇓iP	Pdif	13 14 23.0	-0.8
TLCR		104.23	316	⇓P	Pdif	13 14 23.0	-0.8
CFR	Carcaliu	104.71	316	⇑iP	Pdif	13 14 25.1	-0.9
CFR	Carcaliu	104.71	316	⇑P	Pdif	13 14 25.1	-0.9
NV01	Mina Array Sit	104.97	51	ePKiKP	PKiKP	13 18 43.9	+1.5
NVAR	Mina Array Bea	104.97	51	Pdiff	Pdif	13 14 29.8	+2.1
	comp=Z,0.4nm,0.6s,baz=274,slow=6.1,SNR=6.0						
NVAR				PKiKP	PKiKP	13 18 43.9	+1.5
	comp=Z,0.5nm,0.8s,baz=243,slow=0.7,SNR=3.8						
VRI	Vrincioaia	105.56	317	⇑iP	Pdif	13 14 30.0	+0.2
VRI	Vrincioaia	105.56	317	⇑P	Pdif	13 14 30.0	+0.2
PLOR	Plostina	105.61	317	⇑iP	Pdif	13 14 29.5	-0.6
PLOR	Plostina	105.61	317	⇑P	Pdif	13 14 29.5	-0.6
BISRR	Bisoca	105.63	316	⇓iP	Pdif	13 14 44.0	+14
MLR	Muntele Rosu	106.17	316	ePdif	Pdif	13 14 31.6	-1.1
MLR	Muntele Rosu	106.17	316	⇑iP	Pdif	13 14 31.8	-0.9
MLR	Muntele Rosu	106.17	316	⇑P	Pdif	13 14 31.8	-0.9
BURAR	Bucovina Array	106.21	319	⇑iP	Pdif	13 14 32.4	-0.4
BURAR	Bucovina Array	106.21	319	⇑P	Pdif	13 14 32.4	-0.4
HLID	Hailey	107.03	46	P	PKiKP	13 18 48.0	+1.9
	baz=282						
BELC	Belle Mtn. Jos	107.39	56	P	PKiKP	13 18 48.4	+1.5
	baz=278						
DUG	Dugway, Tooele	108.88	49	P	PKiKP	13 18 51.3	+1.7
	baz=282						
NB2	NORSAR Subarra	109.12	335	P	Pdif	13 14 44.0	-1.3
	comp=Z,1.3nm,0.8s,baz=62,slow=4.4						
NB200	NORSAR Array S	109.12	335	ePdif	Pdif	13 14 44.0	-1.3
NB200				ePKKPbc	PKKPbc	13 29 58.5	-0.1
NOA	NORSAR Array B	109.12	335	Pdiff	Pdif	13 14 44.0	-1.3
	comp=Z,1.1nm,0.7s,baz=62,slow=4.5,SNR=5.2						
NOA				PKKPbc	PKKPbc	13 29 58.5	-0.1
	comp=Z,0.4nm,0.8s,baz=220,slow=4.4,SNR=3.2						
VYHS	Vyhne	110.10	321	i P	Pdif	13 14 51.5	+1.6
VYHS	Vyhne	110.10	321	ePDIF	Pdif	13 14 51.5	+1.6
PD31	Pinedale Array	110.67	45	ePKiKP	PKiKP	13 18 53.2	+0.3
PDAR	Pinedale Array	110.67	45	PKiKP	PKiKP	13 18 53.2	+0.3
	comp=Z,0.8nm,0.6s,baz=242,slow=1.1,SNR=7.5						
WUAZ	Wupatki	110.91	53	P	PKiKP	13 18 53.9	+0.3
	baz=281						
OSTC	Ostas	111.02	323	ePP	PP	13 19 33.7	+2.0
DPC	Dobruska-Polom	111.03	323	ePP	PP	13 19 32.7	+0.9
DPC				AMS	AMS	14 15 10.0	
	comp=Z,100nm,17.5s						
LAO	LASA Array	111.81	41	P	PKiKP	13 18 56.0	+1.2
	baz=289						
TUC	Tucson	111.97	57	P	PKiKP	13 18 56.0	+0.5
	baz=280						
GOPC	GO Pecny, Ondr	112.11	323	AMS	AMS	14 15 20.0	
	comp=Z,100nm,23.5s						
CONA	Conrad Observa	112.17	321	ePKiKP	PKiKP	13 18 52.9	-2.6
	comp=Z,2.3nm,1.2s						
CONA				ePP	PP	13 19 39.3	-0.8
	comp=Z,6.8nm,1.4s						
PRU	Pruhonice	112.23	323	ePP	PP	13 19 42.3	+2.0
PRU				AMS	AMS	14 14 40.0	
	comp=Z,100nm,23.3s						
BRG	Berggiesshubel	112.24	324	ePDIFF	Pdif	13 14 59.5	+0.2
	comp=Z,3.1nm,0.9s						
BRG	Berggiesshubel	112.24	324	ePKP	PKiKP	13 18 55.6	+0.2
	comp=Z,2.4nm,0.8s						
BRG	Berggiesshubel	112.24	324	ePKIKP	PKiKP	13 18 55.6	+0.2
O20A	White River Ci	112.30	48	P	PKiKP	13 18 57.2	+1.1
	baz=285						
DGMT	Dagmar	112.49	38	P	PKiKP	13 18 56.9	+0.9
	baz=291						
CLL	Collm	112.61	325	eP	Pdif	13 15 01.0	0.0
CLL				i		13 18 56.4	
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	Collm	112.61	325	ePdif	Pdif	13 15 01.0	0.0
CLL				i PKiKP	PKiKP	13 18 56.4	+0.4
	comp=Z,4.0nm,0.7s						
CLL				eSdif	Sdif	13 27 20.0	-1.5
CLL				ePPS	PPS	13 30 36.0	
CLL				LmV		14 08 00.0	
	comp=Z,100nm,21.4s						
CLL				LmV		16 50 00.0	
	comp=Z,100nm,21.4s						
ARSA	Arzberg	112.62	320	PP	PP	13 19 44.1	+0.8
	comp=Z,1.2nm,0.7s						
MVCO	Mesa Verde	112.82	51	P	PKiKP	13 18 58.5	+1.3
	baz=284						
SOKA	Soboth	113.13	320	ePP	PP	13 19 47.7	+0.6
	comp=Z,5.4nm,0.9s						
GERES	GERESS Array B	113.17	322	Pdiff	Pdif	13 15 03.9	+0.2
	comp=Z,0.2nm,0.5s,baz=39,slow=11,SNR=4.2						
GERES				PKiKP	PKiKP	13 18 57.8	+0.4
	comp=Z,1.4nm,0.6s,baz=83,slow=1.9,SNR=12						
GERES				PP	PP	13 19 49.1	+1.9
	comp=Z,1.9nm,1.0s,baz=70,slow=5.8,SNR=7.7						
MOA	Molln	113.20	321	PKiKP	PKiKP	13 18 55.6	-1.8
	comp=Z,2.1nm,0.8s						
S22A	4UR Ranch, Cre	113.98	50	P	PKiKP	13 19 00.9	+1.4
	baz=285						
RSSD	Black Hills	114.11	43	P	PKiKP	13 18 59.9	+0.4
	baz=290						
121A	Cookes Peak, D	114.42	56	P	PKiKP	13 19 01.6	+1.2
	baz=282						
ABTA	Abfaltersbach	114.72	321	ePKiKP	PKiKP	13 18 59.7	-0.7
	comp=Z,4.0nm,0.7s,SNR=5.8						
ANMO	Albuquerque	114.96	53c	iPKIKP	PKPdf	13 19 01.9	+0.6
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	114.96	53	P	PKPdf	13 19 02.5	+1.1
	baz=284						
SDCO	Great Sand Dun	114.99	50	P	PKPdf	13 19 02.5	+1.1
	baz=286						
WTTA	Wattenberg	115.07	321	ePKiKP	PKPdf	13 19 01.5	+0.3
	comp=Z,4.4nm,0.5s,SNR=10.0						
WTTA				ePP	PP	13 20 04.1	+3.3
	comp=Z,11nm,1.1s						
WATA	Walderalm	115.08	321	ePKiKP	PKiKP	13 19 00.8	-0.4
	comp=Z,1.5nm,0.5s						
WATA				ePP	PP	13 20 03.4	+2.7
	comp=Z,2.0nm,0.5s						
SQTA	Sankt Quirin	115.35	321	ePP	PP	13 20 05.9	+3.2
	comp=Z,7.5nm,1.1s						
MOTA	Moosalm	115.37	322	ePKiKP	PKiKP	13 19 01.6	-0.1
	comp=Z,1.2nm,0.6s,SNR=5.3						
MOTA				ePP	PP	13 20 05.8	+3.0
	comp=Z,4.1nm,0.9s						
RETA	Reutte	115.52	322	ePKiKP	PKPdf	13 19 01.9	0.0
	comp=Z,1.0nm,0.5s						
RETA				ePP	PP	13 20 07.4	+3.6
	comp=Z,5.8nm,1.1s						
FETA	Feichten	115.73	321	PKiKP	PKPdf	13 19 02.6	+0.2
	comp=Z,2.2nm,0.7s						
FETA				ePP	PP	13 20 08.7	+3.3
	comp=Z,5.1nm,1.1s						
T25A	Trinidad	115.99	50	P	PKiKP	13 19 04.5	+1.2
	baz=286						
DAVA	Damuels	116.15	322	ePKiKP	PKiKP	13 19 03.5	+0.3
	SNR=6.2						
MNTX	Cornudas Mount	116.59	56	ePKPdf	PKiKP	13 19 05.1	+0.7
MNTX	Cornudas Mount	116.59	56	P	PKiKP	13 19 05.1	+0.7
	baz=283						
ULM	Lac du Bonnet	116.64	34	PKP	PKPdf	13 19 02.6	-1.2
	comp=Z,3.7nm,0.6s,baz=6.2,slow=1.7,SNR=3.8						
TUE	Stuetta	116.83	321	ePKPdf	PKiKP	13 19 04.8	+0.2
MSTX	Muleshoe	118.15	53	ePKPdf	PKiKP	13 19 07.9	+0.5
MSTX	Muleshoe	118.15	53	P	PKiKP	13 19 08.2	+0.7
	baz=286						
TX31	Lajitas Ar. Si	118.56	59	ePKPdf	PKPdf	13 19 07.9	-0.4
LTX	Lajitas	118.56	59	ePKPdf	PKiKP	13 19 08.6	+0.3
LTX	Lajitas	118.56	59	ePKIKP	PKiKP	13 19 08.6	+0.3
TXAR	Lajitas Array	118.56	59	PKP	PKiKP	13 19 08.6	+0.3
	comp=Z,1.7nm,0.8s,baz=246,slow=1.0,SNR=17						
AMTX	Amarillo	118.76	52	P	PKiKP	13 19 08.9	+0.4
	baz=287						
CBKS	Cedar Bluff	118.97	47	P	PKiKP	13 19 09.4	+0.6
	baz=291						
BNI	Bardonecchia	119.13	321	ePKPdf	PKiKP	13 19 09.1	+0.1
BNI	Bardonecchia	119.13	321	ePKIKP	PKiKP	13 19 09.1	+0.1
BGNE	Belgrade	119.14	44	P	PKPdf	13 19 09.0	0.0
	baz=293						
ECSD	EROS Data Cent	119.21	41	P	PKPdf	13 19 09.0	-0.1
	baz=296						
EYMN	Ely	120.30	35	ePKPdf	PKPdf	13 19 10.6	-0.4
EYMN	Ely	120.30	35	P	PKPdf	13 19 10.7	-0.2
	baz=303						
CLF	Chambon-Foret	120.30	325	ePKPdf	PKiKP	13 19 11.2	+0.2
SPMN	Marine on St.	120.93	38	P	PKiKP	13 19 12.7	+0.4
	baz=300						
KEST	Kesra	120.96	310	PKP	PKPdf	13 19 12.3	-0.4
	comp=Z,2.6nm,0.4s,baz=214,slow=1.1,SNR=8.1						
E38A	The Farm, Brul	120.97	36	P	PKiKP	13 19 12.8	+0.4
	baz=302						
ABTX	Abilene, Hawle	121.05	54	P	PKPdf	13 19 12.7	-0.2
	baz=287						
WMOK	Wichita Mounta	121.07	51	ePKPdf	PKPdf	13 19 12.4	-0.5
WMOK	Wichita Mounta	121.07	51	ePKIKP	PKPdf	13 19 12.4	-0.5
WMOK	Wichita Mounta	121.07	51	P	PKPdf	13 19 12.7	-0.2
	baz=289						
KSU1	Kansas State U	121.13	46	P	PKiKP	13 19 13.2	+0.2
	baz=293						
JCT	Junction City	121.53	56	ePKPdf	PKPdf	13 19 13.7	-0.2
JCT	Junction City	121.53	56	ePKIKP	PKPdf	13 19 13.7	-0.2
C40A	Isle Royale Na	121.63	34	ePKPdf	PKPdf	13 19 13.2	-0.3
C40A	Isle Royale Na	121.63	34	P	PKPdf	13 19 13.6	+0.1
	baz=305						
G39A	Holcombe	121.89	37	P	PKPdf	13 19 13.6	-0.5
	baz=302						
833A	Chaparral WMA,	122.44	59	P	PKiKP	13 19 17.0	+1.2
	baz=285						
D41A	Chassel	122.44	34	P	PKPdf	13 19 15.1	0.0
	baz=305						
G40A	Rib Lake	122.48	37	ePKPdf	PKPdf	13 19 14.9	-0.4
G40A	Rib Lake	122.48	37	P	PKPdf	13 19 15.0	-0.2
	baz=302						
COWI	Conover	122.66	35	ePKPdf	PKPdf	13 19 15.3	-0.3
TUL1	Leonard	122.95	49	ePKPdf	PKPdf	13 19 16.5	+0.1
TUL1	Leonard	122.95	49	P	PKiKP	13 19 16.9	+0.3
	baz=292						
WHTX	Lake Whitney,	123.00	54	P	PKiKP	13 19 17.6	+0.7
	baz=289						
L40A	Anamosa	123.49	40	ePKPdf	PKPdf	13 19 16.3	-1.0
L40A	Anamosa	123.49	40	P	PKPdf	13 19 16.2	-1.0
	baz=300						
JFWS	Jewell Farm	123.69	39	P	PKPdf	13 19 17.1	-0.5
	baz=301						
E43A	Lone Tree Farm	123.72	34	P	PKPdf	13 19 16.9	-0.7
	baz=306						
N40A	Mertquake, Sal	123.83	42	P	PKPdf	13 19 17.5	-0.4
	baz=299						
I42A	Draeger Farm,	124.00	38	P	PKPdf	13 19 17.7	-0.5
	baz=303						
HHAR	Hobbs	124.19	48	ePKPdf	PKPdf	13 19 18.1	-0.7
M41A	Milan	124.28	41	P	PKPdf	13 19 18.3	-0.4
	baz=300						
N41A	Harden Midland	124.40	42	P	PKPdf	13 19 18.5	-0.6
	baz=299						
L42A	Oliver, Polo	124.52	40	P	PKPdf	13 19 19.2	-0.1
	baz=301						
W39A	Magazine	124.74	49	ePKPdf	PKPdf	13 19 19.5	-0.4
W39A	Magazine	124.74	49	P	PKPdf	13 19 19.8	-0.1
	baz=293						
U40A	Yellville	124.96	47	P	PKPdf	13 19 20.5	+0.2
	baz=295						
D46A	Sault St. Mari	125.02	32	P	PKiKP	13 19 20.5	+0.1
	baz=309						
MIAR	Mount Ida	125.15	50	ePKPdf	PKPdf	13 19 20.8	+0.2
MIAR	Mount Ida	125.15	50	P	PKiKP	13 19 21.6	+0.6
	baz=293						
E46A	Sault Ste Mari	125.21	33	P	PKiKP	13 19 20.9	+0.2
	baz=309						
CCM	Cathedral Cave	125.38	45	ePKPdf	PKPdf	13 19 20.7	-0.3
CCM	Cathedral Cave	125.38	45	ePKIKP	PKPdf	13 19 20.7	-0.3
CCM	Cathedral Cave	125.38	45	P	PKPdf	13 19 21.0	0.0
	baz=297						
D47A	Chapleau	125.41	32	P	PKPdf	13 19 20.9	+0.1
	baz=310						
HDIL	Hopedale	125.50	41	ePKPdf	PKPdf	13 19 21.2	0.0
HDIL	Hopedale	125.50	41	P	PKPdf	13 19 21.3	+0.2
	baz=301						
G46A	Petoskey	125.55	34	P	PKiKP	13 19 21.6	+0.1
	baz=308						
E47A	Iron Bridge	125.70	32	P	PKiKP	13 19 21.9	+0.1
	baz=310						
X40A	Basin Creek Fa	125.73	49	P	PKiKP	13 19 22.9	+0.7
	baz=294						
P43A	Skaggs, Pawnee	125.81	42	P	PKPdf	13 19 21.9	+0.1
	baz=300						
H46A	Fife Lake	125.82	35	P	PKiKP	13 19 22.0	-0.1
	baz=307						
SCHQ	Schefferville	125.82	16	PKP	PKPdf	13 19 20.8	-0.6
	comp=Z,7.6nm,0.6s,baz=236,slow=13,SNR=6.7						
WLAR	White Oak Lake	125.83	50	ePKPdf	PKPdf	13 19 22.2	+0.2
W41B	Gary Mavity, V	125.90	48	P	PKPdf	13 19 22.1	+0.1
	baz=295						
GLMI	Grayling	125.98	34	P	PKiKP	13 19 22.8	+0.4
	baz=308						
UALR	University of	125.99	49	ePKPdf	PKiKP	13 19 22.6	0.0
MATQ	Matagami	126.15	26	P	PKPdf	13 19 21.8	-0.3
	baz=318						
D49A	Beulah Townshi	126.16	30	P	PKiKP	13 19 22.5	-0.2
	baz=312						
G47A	Hillman	126.20	34	P	PKiKP	13 19 23.0	+0.2
	baz=309						
E48A	Lockeyer	126.27	32	P	PKiKP	13 19 23.0	0.0
	baz=311						
PBMO	Poplar Bluff	126.53	46	ePKPdf	PKPdf	13 19 23.1	-0.1
K46A	Dorr	126.57	37	P	PKPdf	13 19 23.2	0.0
	baz=305						
L46A	Eue Claire	126.64	38	P	PKiKP	13 19 23.7	-0.1
	baz=304						
S44A	Carbondale	126.94	44	P	PKPdf	13 19 23.9	-0.1
	baz=299						
LSQQ	Lebel-sur-Quev	126.96	26	P	PKPdf	13 19 23.7	0.0
	baz=318						
D50A	G1974 Best Tow	126.99	30	P	PKPdf	13 19 23.8	0.0
	baz=314						
E50A	Wahnapitae	127.05	31	P	PKiKP	13 19 24.5	+0.1
	baz=313						
PARMO	Parma	127.07	46	ePKPdf	PKiKP	13 19 24.7	0.0
D51A	Lot 18 Range I	127.27	29	P	PKPdf	13 19 24.4	+0.1
	baz=314						
L47A	Sherwood	127.33	38	P	PKPdf	13 19 24.4	-0.3
	baz=305						
J48A	Bridge Port	127.39	36	P	PKPdf	13 19 24.5	-0.2
	baz=308						
CHGQ	Chibougamau	127.41	24	P	PKPdf	13 19 24.7	+0.1
	baz=322						
VLDQ	Val d'Or	127.45	27	ePKPdf	PKPdf	13 19 24.4	-0.2
K48A	Perry	127.49	36	P	PKPdf	13 19 24.5	-0.4
	baz=307						
E51A	G1948 Merrick	127.60	30	P	PKPdf	13 19 25.1	+0.1
	baz=314						
F51A	Arnstein	127.80	31	P	PKiKP	13 19 25.7	-0.2
	baz=313						
L48A	N Adams	127.81	37	P	PKiKP	13 19 26.4	+0.3
	baz=306						
D52A	ZEK Kipawa Sen	127.82	29	P	PKiKP	13 19 26.0	0.0
	baz=316						
TAM	Tamanrasset	127.94	296	ePKPdf	PKPdf	13 19 25.6	-0.9
TAM	Tamanrasset	127.94	296	ePKIKP	PKPdf	13 19 25.6	-0.9
BLO	Bloomington	128.04	41	ePKPdf	PKiKP	13 19 26.6	-0.1
BLO	Bloomington	128.04	41	ePKIKP	PKiKP	13 19 26.6	-0.1
N48A	Decatur	128.08	39	P	PKiKP	13 19 26.4	-0.3
	baz=305						
D53A	Lac Vacive, Po	128.08	28	ePKPdf	PKPdf	13 19 25.8	-0.1
D53A	Lac Vacive, Po	128.08	28	P	PKPdf	13 19 24.8	-1.1
	baz=316						
L49A	Milan	128.12	37	P	PKiKP	13 19 27.0	+0.3
	baz=307						
E52A	Mattawa	128.19	30	P	PKPdf	13 19 25.5	-0.6
	baz=315						
F52A	Sundridge	128.19	30	P	PKPdf	13 19 25.8	-0.3
	baz=314						
T46A	Princeton	128.20	44	P	PKiKP	13 19 27.4	+0.3
	baz=300						
U46A	Springville	128.33	45	P	PKiKP	13 19 27.4	0.0
	baz=299						
O48A	Farmland	128.34	39	P	PKPdf	13 19 26.4	-0.2
	baz=304						
BUKO	Buck Lake	128.40	31	P	PKiKP	13 19 27.2	0.0
	baz=314						
D54A	Lac Fusel, La	128.52	28	P	PKiKP	13 19 27.2	-0.2
	baz=318						
N49A	Columbus Grove	128.56	38	P	PKPdf	13 19 27.0	0.0
	baz=306						
CLWO	Collingwood	128.60	32	P	PKiKP	13 19 27.7	+0.1
	baz=312						
E53A	Dumoine, Ponti	128.60	29	P	PKiKP	13 19 27.7	+0.2
	baz=316						
P48A	Milroy	128.60	40	P	PKiKP	13 19 28.1	+0.3
	baz=304						
I51A	Listowel	128.63	33	P	PKiKP	13 19 28.1	+0.4
	baz=311						
ESDC	Sonseca Array	128.64	320	PKP	PKiKP	13 19 28.3	+0.3
	comp=Z,0.5nm,0.5s,baz=27,slow=2.2,SNR=8.5						
ESLA	Sonseca Array	128.64	320	ePKPdf	PKPdf	13 19 27.1	-0.2
V46A	Holladay	128.64	46	P	PKPdf	13 19 27.3	0.0
	baz=299						
H52A	Wyevale	128.69	32	P	PKiKP	13 19 27.9	+0.1
	baz=313						
WVT	Waverly	128.69	45	ePKPdf	PKPdf	13 19 27.5	+0.1
WVT	Waverly	128.69	45	ePKIKP	PKPdf	13 19 27.5	+0.1
WVT	Waverly	128.69	45	P	PKiKP	13 19 27.9	-0.1
	baz=299						
WCI	Wyandotte Cave	128.69	42	ePKPdf	PKPdf	13 19 27.6	+0.3
WCI	Wyandotte Cave	128.69	42	ePKIKP	PKPdf	13 19 27.6	+0.3
WCI	Wyandotte Cave	128.69	42	P	PKiKP	13 19 28.0	0.0
	baz=302						
Q48A	North Vernon	128.69	41	P	PKPdf	13 19 27.2	-0.1
	baz=303						
ALGO	Algonquin Park	128.72	30	P	PKPdf	13 19 26.4	-0.7
	baz=315						
E54A	Lac Daplat, Po	128.79	29	P	PKiKP	13 19 27.8	-0.1
	baz=317						
X46A	Booneville	128.88	47	P	PKPdf	13 19 26.6	-1.2
	baz=297						
O49A	Covington	128.89	39	P	PKiKP	13 19 28.6	+0.3
	baz=305						
U47A	Clarksville	128.92	45	P	PKiKP	13 19 28.2	-0.3
	baz=300						
PAB	San Pablo	128.96	320	ePKPdf	PKiKP	13 19 28.4	-0.2
PAB	San Pablo	128.96	320	ePKIKP	PKiKP	13 19 28.4	-0.2
G53A	Haliburton	129.01	31	P	PKiKP	13 19 28.6	+0.2
	baz=314						
P49A	Miami Univ. Ec	129.02	40	P	PKPdf	13 19 27.1	-0.9
	baz=304						
W47A	Westpoint	129.28	46	P	PKPdf	13 19 28.0	-0.6
	baz=299						
PEMO	Pembroke	129.31	29	P	PKiKP	13 19 29.1	+0.1
	baz=316						
X47A	Russelville	129.43	47	P	PKPdf	13 19 28.8	0.0
	baz=298						
BANO	Bancroft	129.44	30	P	PKPdf	13 19 28.9	+0.4
	baz=315						
P50A	Jamestown	129.56	39	P	PKiKP	13 19 29.7	0.0
	baz=305						
V48A	Smith Brothers	129.59	45	ePKPdf	PKPdf	13 19 28.6	-0.5
V48A	Smith Brothers	129.59	45	P	PKPdf	13 19 29.0	-0.2
	baz=300						
S49A	Springfield	129.60	42	P	PKPdf	13 19 29.3	+0.3
	baz=303						
MVO	Moncorvo	129.67	323	ePKPdf	PKiKP	13 19 30.4	+0.4
ACSO	Alum Creek Sta	129.71	38	P	PKPdf	13 19 29.2	0.0
	baz=306						
TYNO	Tyneside	129.73	33	P	PKPdf	13 19 28.7	-0.4
	baz=312						
CLTN	Cedars of Leba	129.76	45	ePKPdf	PKPdf	13 19 29.6	+0.1
T49A	Edmonton	129.80	43	ePKPdf	PKPdf	13 19 29.5	+0.1
T49A	Edmonton	129.80	43	P	PKPdf	13 19 29.7	+0.2
	baz=302						
W48A	Pulaski	129.81	46	P	PKPdf	13 19 29.5	-0.1
	baz=299						
PLVO	Plevna	129.85	30	P	PKiKP	13 19 29.8	-0.3
	baz=316						
M52A	Chesterland	129.89	36	P	PKPdf	13 19 29.2	-0.3
	baz=309						
PLCA	Paso Flores	129.89	154	PKP	PKiKP	13 19 30.9	+0.5
	comp=Z,2.6nm,0.9s,baz=325,slow=4.9,SNR=3.0						
PLCA	Paso Flores	129.89	154	PKIKP	PKiKP	13 19 31.0	+0.5
PGAV	Gavieira, Arco	129.90	325	ePKPdf	PKiKP	13 19 30.8	+0.4
U49A	Red Boiling Sp	129.93	44	P	PKPdf	13 19 29.6	-0.2
	baz=301						
DELO	Deloro Mine	129.95	31	P	PKPdf	13 19 29.5	0.0
	baz=315						
WLVO	Wesleyville	129.96	32	P	PKiKP	13 19 30.1	-0.3

	baz=314						
O51A	Pataskala	129.99	38	P	PKiKP	13 19 30.5	0.0
	baz=307						
POLO	Lamas de Olo	129.99	324	*e*PKPdf	PKiKP	13 19 31.4	+0.8
X48A	Hartselle	130.05	47	P	PKPdf	13 19 29.7	-0.3
	baz=299						
P51A	Williamsport	130.10	39	P	PKiKP	13 19 30.6	-0.1
	baz=306						
H55A	Tweed	130.15	30	P	PKiKP	13 19 31.0	+0.3
	baz=316						
N52A	McGinn's Farm,	130.15	37	P	PKiKP	13 19 31.3	+0.5
	baz=308						
Q51A	Peebles	130.18	40	P	PKiKP	13 19 31.3	+0.3
	baz=305						
Y48A	Jasper	130.22	47	P	PKiKP	13 19 30.8	-0.4
	baz=298						
V49A	McMinnville	130.23	45	P	PKPdf	13 19 30.7	+0.3
	baz=301						
S50A	Richmond	130.25	42	P	PKPdf	13 19 30.4	+0.1
	baz=303						
W49A	Belvidere	130.29	46	P	PKPdf	13 19 30.4	-0.1
	baz=300						
ERPA	Erie	130.31	34	P	PKiKP	13 19 31.0	-0.1
	baz=311						
ORIO	Orleans, Innes	130.31	28	P	PKiKP	13 19 30.7	-0.3
	baz=318						
T50A	Nancy	130.31	43	P	PKPdf	13 19 30.2	-0.3
	baz=302						
M53A	WI Miller and	130.35	36	P	PKiKP	13 19 31.6	+0.3
	baz=310						
MTE	Manteigas	130.45	323	*e*PKPdf	PKiKP	13 19 32.0	+0.5
MTE	Manteigas	130.45	323	*e*PKPdf	PKiKP	13 19 31.1	-0.4
X49A	Woodville	130.55	46	P	PKPdf	13 19 31.4	+0.4
	baz=299						
P52A	Corning	130.59	38	P	PKPdf	13 19 31.3	+0.4
	baz=307						
L54A	Sinclairville	130.60	34	P	PKiKP	13 19 32.0	+0.3
	baz=312						
U50A	Jamestown	130.63	43	P	PKPdf	13 19 31.4	+0.3
	baz=302						
N53A	Lisbon	130.65	36	P	PKPdf	13 19 31.3	+0.3
	baz=309						
PECO	Prince Edward	130.68	31	P	PKPdf	13 19 31.0	+0.1
	baz=315						
LRAL	Lakeview Retre	130.75	48	*e*PKPdf	PKPdf	13 19 31.0	-0.4
LRAL	Lakeview Retre	130.75	48	P	PKPdf	13 19 30.8	-0.6
	baz=298						
O53A	New Philadelph	130.78	37	P	PKPdf	13 19 31.6	+0.4
	baz=308						
Y49A	Blount Mountai	130.80	47	P	PKPdf	13 19 31.8	+0.3
	baz=299						
S51A	Beattyville	130.81	41	*e*PKPdf	PKPdf	13 19 31.6	+0.3
S51A	Beattyville	130.81	41	P	PKPdf	13 19 31.2	-0.2
	baz=304						
V50A	Pikevile	130.84	44	P	PKPdf	13 19 31.7	+0.2
	baz=301						
M54A	Oil Creek Stat	130.89	35	P	PKiKP	13 19 32.1	-0.3
	baz=311						
Q52A	Bidwell	130.90	39	P	PKiKP	13 19 32.4	0.0
	baz=306						
W50A	Signal Mountai	130.93	45	P	PKiKP	13 19 32.4	-0.3
	baz=301						
PMRV	Marv??o	130.94	322	*e*PKPdf	PKiKP	13 19 32.5	0.0
T51A	Gray	130.94	42	P	PKiKP	13 19 32.4	-0.2
	baz=303						
Z49A	Columbiana	131.02	48	P	PKPdf	13 19 32.2	+0.3
	baz=298						
X50B	Fort Payne	131.06	46	P	PKPdf	13 19 32.1	+0.1
	baz=300						
S52A	Salyersville	131.12	41	P	PKiKP	13 19 32.8	-0.1
	baz=305						
L55A	Hinsdale	131.13	33	P	PKPdf	13 19 31.6	-0.3
	baz=313						
P53A	Whipple	131.14	38	P	PKiKP	13 19 32.8	-0.1
	baz=308						
PCAS	Casmilo, Conde	131.24	323	*e*PKPdf	PKiKP	13 19 33.2	+0.1
V51A	Loudon	131.29	44	P	PKiKP	13 19 33.4	+0.1
	baz=302						
LONY	Lake Ozonia	131.37	28	P	PKiKP	13 19 33.2	0.0
	baz=318						
M55A	Ridgway	131.42	34	P	PKiKP	13 19 33.5	0.0
	baz=312						
TZTN	Tazewell	131.44	43	P	PKiKP	13 19 33.9	+0.3
	baz=303						
Z50A	Ashland	131.44	48	*e*PKPdf	PKPdf	13 19 32.7	-0.1
Z50A	Ashland	131.44	48	P	PKPdf	13 19 33.2	+0.5
	baz=299						
FRNY	Flat Rock	131.67	28	*e*PKPdf	PKPdf	13 19 31.5	-1.3
150A	Eclectic	131.67	48	P	PKPdf	13 19 33.7	+0.5
	baz=298						
M56A	Emporium	131.74	34	P	PKiKP	13 19 33.7	-0.4
	baz=312						
N55A	Marion Center	131.75	35	P	PKiKP	13 19 34.3	+0.2
	baz=311						
Q54A	Coxs Mills	131.78	38	P	PKiKP	13 19 34.2	0.0
	baz=308						
V52A	Sevierville	131.79	43	*e*PKPdf	PKPdf	13 19 33.6	+0.3
V52A	Sevierville	131.79	43	P	PKiKP	13 19 34.2	-0.1
	baz=303						
T53A	Wise	131.87	41	P	PKiKP	13 19 34.2	-0.3
	baz=305						
W52A	Murphy	131.96	44	P	PKiKP	13 19 34.4	-0.3
	baz=302						
MCWV	Mont Chateau	131.97	37	P	PKiKP	13 19 34.5	-0.1
	baz=309						
NCB	Newcomb	132.02	29	*e*PKPdf	PKPdf	13 19 33.9	+0.4
N56A	West Decatur	132.05	35	P	PKiKP	13 19 34.6	-0.1
	baz=312						
U53A	Fall Branch	132.19	42	P	PKPdf	13 19 33.7	-0.4
	baz=304						
S54A	Dingess, Beckl	132.20	40	P	PKPdf	13 19 33.7	-0.4
	baz=307						
X52A	Dahlonega	132.24	45	P	PKiKP	13 19 35.1	-0.2
	baz=302						
Q55A	Buckhannon	132.24	38	P	PKPdf	13 19 34.6	+0.5
	baz=309						
O56A	Blue Knob Stat	132.33	35	P	PKPdf	13 19 34.6	+0.4
	baz=311						
251A	Midway	132.37	49	P	PKPdf	13 19 35.0	+0.5
	baz=298						
V53A	Saluda	132.42	43	P	PKPdf	13 19 35.0	+0.5
	baz=304						
BINY	Binghamton	132.43	32	P	PKPdf	13 19 34.3	0.0
	baz=315						
PNCL	Nicolau / Gran	132.44	321	*e*PKPdf	PKiKP	13 19 36.5	+1.0
W53A	Cullowhee	132.45	44	P	PKiKP	13 19 35.5	-0.4
	baz=303						
SSPA	Standing Stone	132.47	35	P	PKPdf	13 19 33.5	-0.9
	baz=312						
Y52A	Lilburn	132.50	46	*e*PKPdf	PKiKP	13 19 35.4	-0.4
Y52A	Lilburn	132.50	46	P	PKiKP	13 19 35.8	0.0
	baz=301						
Z52A	Williamson	132.58	47	P	PKiKP	13 19 35.9	-0.1
	baz=300						
N57A	Milroy	132.58	34	P	PKPdf	13 19 35.0	+0.3
	baz=313						
U54A	Nelsons Funny	132.61	41	P	PKiKP	13 19 36.8	+0.7
	baz=305						
L58A	Harry Jones Me	132.61	32	P	PKPdf	13 19 35.0	+0.3
	baz=316						
152A	Waverly Hall	132.61	48	P	PKiKP	13 19 35.7	-0.4
	baz=299						
P56A	Dayton Farm, R	132.66	36	P	PKiKP	13 19 35.8	-0.2
	baz=310						
X53A	Estanollee	132.71	45	P	PKiKP	13 19 36.2	0.0
	baz=302						
M58A	Price's Panora	132.76	33	P	PKPdf	13 19 35.2	+0.2
	baz=314						
Y53A	Monroe	132.84	46	P	PKiKP	13 19 36.7	+0.2
	baz=301						
LBNH	Lisbon	132.89	27	P	PKiKP	13 19 36.3	0.0
	baz=322						
N58A	Sunbury	132.99	33	P	PKPdf	13 19 34.8	-0.5
	baz=314						
R56A	Bull Pasture M	133.02	38	P	PKiKP	13 19 36.6	-0.2
	baz=309						
U55A	TA2, Sparta	133.13	41	P	PKPdf	13 19 36.1	+0.2
	baz=306						
HNH	Hanover	133.14	28	*e*PKPdf	PKPdf	13 19 35.8	+0.2
Z53A	Monticello	133.15	46	P	PKiKP	13 19 36.8	-0.3
	baz=301						
GOGA	Godfrey	133.15	46	P	PKiKP	13 19 36.8	-0.3
	baz=301						
W54A	Cherokee Point	133.16	43	P	PKiKP	13 19 36.8	-0.3
	baz=304						
M59A	Waymart	133.19	32	P	PKiKP	13 19 36.7	-0.3
	baz=316						
Q57A	Strasburg	133.22	37	P	PKiKP	13 19 37.2	+0.1
	baz=311						
TOA0	Torodi Ar. Sit	133.33	285	*e*PKPdf	PKPdf	13 19 36.6	-0.1
TORD	Torodi Ar. Bea	133.33	285	PKhKP	PKPpre	13 19 26.3	
	comp=Z,0.8nm,0.6s,baz=73,slow=4.1,SNR=5.2						
TORD				PKP	PKPdf	13 19 36.8	0.0
	comp=Z,8.1nm,0.8s,baz=47,slow=2.8,SNR=25						
TOA1	Torodi Ar. Sit	133.33	285	*e*PKPdf	PKPdf	13 19 36.8	0.0
O58A	Lewisberry	133.36	34	P	PKPdf	13 19 35.9	-0.2
	baz=313						
N59A	State Game Lan	133.45	33	P	PKiKP	13 19 37.9	+0.3
	baz=315						
T56A	Rocky Mt	133.47	40	P	PKPdf	13 19 36.7	+0.2
	baz=307						
Y54A	Tignall	133.47	45	P	PKPdf	13 19 36.1	-0.4
	baz=302						
P58A	Pank, Wackersv	133.57	35	P	PKPdf	13 19 35.9	-0.6
	baz=312						
O59A	Robesonia	133.64	34	P	PKPdf	13 19 37.1	+0.4
	baz=314						
Z54A	Sparta	133.69	46	P	PKPdf	13 19 37.4	+0.5
	baz=302						
Q58A	Fox Den Farm,	133.71	36	P	PKiKP	13 19 38.1	0.0
	baz=311						
KMSC	Kings Mountain	133.71	43	*e*PKPdf	PKPdf	13 19 37.1	+0.1
KMSC	Kings Mountain	133.71	43	P	PKPdf	13 19 36.7	-0.3
	baz=304						
X55A	Gracelyn & Ava	133.88	44	P	PKPdf	13 19 37.7	+0.5
	baz=304						
V56A	Mocksville	133.89	41	P	PKPdf	13 19 37.9	+0.6
	baz=306						
P59A	Jarrettsville	133.99	35	P	PKPdf	13 19 36.8	-0.5
	baz=313						
O60A	Telford	134.07	33	P	PKiKP	13 19 38.8	0.0
	baz=315						
M61A	Granite Spring	134.22	31	P	PKiKP	13 19 38.6	-0.4
	baz=317						
P60A	Greenville	134.29	34	P	PKiKP	13 19 38.7	-0.5
	baz=314						
HRV	Adam Dziewonsk	134.40	28	P	PKiKP	13 19 39.5	+0.1
	baz=321						
T58A	Grand View Acr	134.47	39	P	PKiKP	13 19 39.4	-0.2
	baz=309						
R59A	King George, V	134.53	36	P	PKiKP	13 19 40.0	+0.3
	baz=311						
455A	Stateville	134.80	49	P	PKPdf	13 19 39.6	+0.6
	baz=299						
V58A	Windy Hill, Pi	134.81	41	P	PKPdf	13 19 38.5	-0.4
	baz=307						
T59A	Double "B" Far	135.06	38	P	PKPdf	13 19 38.4	-1.0
	baz=310						
555A	McAlpin	135.15	50	P	PKiKP	13 19 41.8	+0.6
	baz=299						
Z57A	Bowman	135.17	44	P	PKiKP	13 19 41.6	+0.3
	baz=304						
W58A	Raeford	135.19	41	P	PKPdf	13 19 39.4	-0.3
	baz=307						
V59A	Middlesex	135.39	40	P	PKPdf	13 19 40.0	0.0
	baz=308						
060Z	West Palm Beac	138.76	53	P	PKPdf	13 19 44.2	-2.3
	baz=298						
KIC	Kosan Boka	140.23	276	*e*P	PKPdf	13 19 42.7	-6.9
	comp=Z,221nm,2.0s						
DBIC	Dimbokro	140.33	276	PKhKP	PKPdf	13 19 43.3	-6.4
	comp=Z,5.8nm,0.9s,baz=77,slow=3.3,SNR=4.7						
DBIC				PKP	PKiKP	13 19 50.3	-2.0
	comp=Z,5.0nm,0.4s,baz=63,slow=0.6,SNR=9.2						
TIC	Toumodi	140.50	276	*e*P	PKPdf	13 19 42.0	-8.1
LIC	Lamto	140.52	275	*e*P	PKPdf	13 19 45.4	-4.7
	comp=Z,63nm,0.7s						
NNA	Nana	144.38	116	*e*PKPdf	PKPdf	13 19 56.7	-0.3
NNA	Nana	144.38	116	*e*PKIKP	PKPdf	13 19 56.7	-0.3
LVC	Limon Verde	144.73	139	*e*PKPdf	PKPdf	13 19 59.1	+1.3
LVC	Limon Verde	144.73	139	*e*PKIKP	PKPdf	13 19 59.1	+1.3
BBSR	BB Station	145.72	31	*e*PKPdf	PKPab	13 19 59.8	+0.3
PB11	IPOC Station P	146.14	134	*e*PKPdf	PKPab	13 20 02.4	+0.7
GO01	Chusmiza	146.53	135	*e*PKPbc	PKPab	13 20 03.7	+0.2
MNMC	Minye Minye	146.59	133	*e*PKPbc	PKPab	13 20 03.5	0.0
CPUP	Villa Florida	147.79	158	PKPbc	PKiKP	13 20 07.0	-0.2
	comp=Z,42nm,0.7s,baz=216,slow=1.7,SNR=76						
LPAZ	La Paz	149.46	131	PKPbc	PKiKP	13 20 11.8	+0.1
	comp=Z,36nm,0.8s,baz=202,slow=0.2,SNR=50						
LPAZ	La Paz	149.46	131	*e*PKPdf	PKPdf	13 20 07.9	+1.8
LPAZ				*e*PKPbc	PKiKP	13 20 12.8	+1.1
LPAZ				*e*pPKPab	pPKPab	13 20 27.2	-1.5
LPAZ	La Paz	149.46	131	*e*PKHKP	PKPdf	13 20 07.9	+1.8
LPAZ				*e*		13 20 12.8	
ROSC	El Rosal	150.31	87	PKPbc	PKPdf	13 20 09.2	+1.9
	comp=Z,43nm,0.6s,baz=207,slow=5.5,SNR=7.0						
ROSC	El Rosal	150.31	87	*e*PKPdf	PKPdf	13 20 08.6	+1.3
ROSC				*e*PKPbc	PKiKP	13 20 13.7	+0.4
BDFB	Brasilia	160.58	170	PKP	PKPdf	13 20 22.4	+1.7
	comp=Z,3.3nm,0.7s,baz=111,slow=12,SNR=3.9						

WEL 21 13:10:32.8, 42°S±219°×17°3E±10°9, h12^{km}±130^{km}, M3.1/6, ML3.6/7, MLv3.1/6, Error ellipse: s-maj=0.3km s-min=0.1km az=14.2, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNZ	Nelson	1.01	11	P	Pg	13 10 52.2	0.0
TCW	Tory Channel	1.32	41	P	Pb	13 10 57.3	-0.2
BHW	Baring Head	1.53	59	P	Pb	13 11 00.6	-0.4
PLWZ	Palliser	1.71	69	P	Pg	13 11 06.1	+0.4
CAW	Cannon Point	1.82	53	P	Pb	13 11 05.4	-0.7
PAWZ	Paruwai Farm	1.91	65	P	Pg	13 11 12.7	+3.2
MTW	Mount Morrison	2.07	60	P	Pb	13 11 10.8	+0.6
OGWZ	Otaki Gorge	2.07	48	P	Pb	13 11 09.4	-0.9
HOWZ	Holdsworth Sta	2.22	55	P	Pb	13 11 13.4	+0.5

WEL 21 13:34:25.1, 42°S±1°×17°4E±°, h18^{km}±2^{km}, M3.6/48, ML3.7/4, MLv3.6/48, Error ellipse: s-maj=0.0km s-min=0.0km az=118.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.14	229	P	Pg	13 34 29.6	+0.4
BSWZ	Blackbirch Sta	0.36	261	P	Pb	13 34 33.3	+0.3
TUWZ	Tuamarina	0.38	306	P	Pb	13 34 33.3	-0.2
TCW	Tory Channel	0.45	353	P	Pg	13 34 31.0	-3.3
TCW				P	Pb	13 34 34.4	-0.1
BHW	Baring Head	0.46	58	P	Pb	13 34 34.9	+0.2
WEL	Wellington	0.49	40	P	Pb	13 34 35.4	+0.3
PLWZ	Palliser	0.68	83	P	Pn	13 34 39.5	-0.4
MSWZ	Moikau Station	0.71	71	P	Pn	13 34 39.7	-0.6
CAW	Cannon Point	0.77	45	P	Pg	13 34 40.2	+0.1
PAWZ	Paruwai Farm	0.85	71	P	Pn	13 34 42.2	-0.1
NNZ	Nelson	0.85	301	P	Pg	13 34 41.7	-0.1
DUWZ	D'Urville Isla	0.92	339	P	Pg	13 34 42.8	-0.1
KHZ	Kahutara	0.97	218	P	Pg	13 34 45.2	+1.2
MTW	Mount Morrison	1.00	60	P	Pg	13 34 44.7	+0.2
TRWZ	Traveller	1.03	76	P	Pg	13 34 45.3	+0.1
OGWZ	Otaki Gorge	1.04	37	P	Pn	13 34 45.0	+0.1
THZ	Tophouse	1.09	264	P	Pg	13 34 46.9	+0.7
HOWZ	Holdsworth Sta	1.16	49	P	Pg	13 34 47.7	+0.1
TMWZ	Te Maipa	1.28	65	P	Pb	13 34 48.6	-0.1
MRZ	Mangatainoka R	1.36	43	P	Pb	13 34 50.3	+0.3
TIWZ	Tintock	1.45	53	P	Pb	13 34 51.5	-0.1
CPWZ	Castlepoint	1.58	62	P	Pg	13 34 58.5	+3.0
QRZ	Quartz Range	1.61	301	P	Pg	13 34 55.2	-0.9
OHWZ	Ohakea	1.62	27	P	Pg	13 34 55.9	-0.4
GVZ	Greta Valley S	1.63	216	P	Pb	13 34 54.0	-0.7
PRWZ	Pori Road	1.65	49	P	Pn	13 34 54.0	+0.8
POWZ	Post Office Ro	1.66	41	P	Pb	13 34 54.8	-0.3
BFZ	Birch Farm	1.73	56	P	Pn	13 34 54.4	+0.1
LTZ	Lake Taylor	1.91	233	P	Pb	13 34 58.2	-1.2
DVHZ	Dannevirke	1.93	46	P	Pn	13 34 57.3	+0.3
WAZ	Wanganui	1.96	14	P	Pg	13 35 02.5	-0.3
AMCZ	Amberley	1.97	219	P	Pn	13 34 58.6	+1.0
ANWZ	Angora Road	2.00	54	P	Pn	13 34 59.1	+1.1
LREZ	Lake Rotokare	2.19	1	P	Pg	13 35 08.4	+1.1
PNHZ	Pukenui	2.24	39	P	Pn	13 35 02.2	+0.9
WPHZ	Waipukurau	2.25	46	P	Pb	13 35 03.6	-1.5
NMEZ	Namu Road	2.27	351	P	Pg	13 35 07.7	-1.0
OKCZ	Okains Bay	2.27	204	P	Pn	13 35 01.8	0.0
CRLZ	Canterbury Las	2.30	213	P	Pb	13 35 05.5	-0.6
PREZ	Palmer Road	2.32	356	P	Pg	13 35 08.3	-1.3
KHEZ	Kahui Hut	2.38	354	P	Pb	13 35 09.0	+1.6
OXZ	Oxford	2.39	225	P	Pn	13 35 03.7	+0.4
MQZ	McQueen's Vall	2.40	211	P	Pn	13 35 03.0	-0.5
INZ	Inchbonnie	2.41	243	P	Pn	13 35 05.4	+1.8
NBEZ	Newall Road No	2.42	351	P	Pg	13 35 11.3	-0.2
MTVZ	Mangateitei	2.42	21	P	Pg	13 35 10.2	-1.4
AKCZ	Akaroa Harbour	2.46	205	P	Pn	13 35 04.4	+0.2
PKE	Pukeiti	2.48	353	P	Pg	13 35 11.0	-1.6
PKVZ	Pokaka	2.48	18	P	Pg	13 35 11.1	-1.6
MOVZ	Moawhango	2.49	26	P	Pb	13 35 08.6	-0.7
PXZ	Pawanui	2.50	50	P	Pn	13 35 04.8	0.0
BHHZ	Black Hill Sta	2.53	32	P	Pb	13 35 08.4	-1.6
KRHZ	Kereru	2.53	38	P	Pn	13 35 05.9	+0.6
VRZ	Vera Road	2.55	7	P	Pb	13 35 10.9	+0.6
WHVZ	Whangaehu Hut	2.55	22	P	Pg	13 35 12.5	-1.6
FWVZ	Far West T-bar	2.57	21	P	Pb	13 35 12.3	+1.5
TUVZ	Tukino	2.58	23	P	Pb	13 35 09.5	-1.5
NGZ	Ngauruhoe	2.66	21	P	Pb	13 35 13.8	+1.6
KAHZ	Kahuranaki	2.67	47	P	Pn	13 35 07.4	+0.1
WTVZ	West Tongariro	2.71	21	P	Pb	13 35 14.5	+1.4
TWVZ	Taurewa	2.71	18	P	Pg	13 35 15.2	-2.0
KRVZ	Karewarewa	2.74	21	P	Pb	13 35 15.0	+1.3
KATZ	Kakaramea	2.87	21	P	Pb	13 35 17.6	+1.8
RITZ	Rihia Road	2.91	24	P	Pb	13 35 18.2	+1.7
BKZ	Black Stump Fm	2.98	34	P	Pb	13 35 15.8	-1.8
WVZ	Waitaha Valley	3.03	241	P	Pn	13 35 13.9	+1.7
HIZ	Hauiti	3.16	7	P	Pb	13 35 20.5	-0.3
RPZ	Rata Peaks	3.19	229	P	Pn	13 35 15.0	+0.7
WHHZ	Waihua	3.39	41	P	Pn	13 35 15.8	-1.3
TLZ	Tolley Road	3.45	16	P	Pb	13 35 25.4	-0.2
MHGZ	Mahia Peninsul	3.69	48	P	Pn	13 35 23.1	+1.8
FOZ	Fox Glacier	3.84	239	P	Pn	13 35 26.1	+2.9
URZ	Urewera	4.00	33	P	Pb	13 35 31.2	-3.8
LBZ	Lake Benmore	4.10	227	P	Pn	13 35 28.4	+1.6
MWZ	Matawai	4.12	37	P	Pn	13 35 27.1	-0.1
ODZ	Otahua Downs	4.33	217	P	Pn	13 35 30.4	+0.3
TWGZ	Tauwhareparae	4.46	40	P	Pb	13 35 39.0	-3.9
RUGZ	Raukumara Rang	4.49	36	P	Pn	13 35 33.1	+0.8
AWAZ	Awhitu Peninsu	4.59	3	P	Pn	13 35 38.4	+4.7
RVAZ	Riverhead Bore	4.88	2	P	Pn	13 35 42.9	+5.3
WIAZ	Waiheke Island	4.89	7	P	Pb	13 35 45.0	-5.3
OUZ	Omahuta	6.46	354	P	Pn	13 36 06.2	+7.0

JMA 21 13:36:24.7±0.1, 24°.37N×123°.44E, h14^{km}±3^{km}, M1.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.27	97	P	Pg	13 36 30.3	-0.1
IRIF				S	Sg	13 36 33.9	-0.3
YOJ	Yonaguni jima	0.40	283	P	Pg	13 36 32.7	-0.1
YOJ				S	Sg	13 36 38.3	+0.1
JKRS	Kuro-shima	0.54	104	P	Pg	13 36 35.1	-0.2
JKRS				S	Sg	13 36 41.8	-0.6
JIJ	Ishigaki jima	0.64	90	P	Pg	13 36 36.8	-0.4
JIJ				S	Sg	13 36 44.4	-1.3
JISG	Ishigakijimahi	0.82	75	P	Pb	13 36 40.9	+0.1
JISG				S	Sg	13 36 51.4	-0.1
JTJ	Tarama	1.18	77	S	Sb	13 37 02.2	+0.2

TAP 21 13:37:02.5, 24°.05N×121°.61E, h10^{km}, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	Chiawan	0.04	339	*i* P	Pg	13 37 04.6	+0.2
	baz=351						
TWD				*i* S	Sg	13 37 06.1	+0.4
	baz=351						
HWA	Hwalien	0.07	184	P	Pg	13 37 04.9	+0.2
	baz=177						
HWA				S	Sg	13 37 06.7	+0.5
	baz=177						
NACB	Ninganchiao	0.13	354	*i* P	Pg	13 37 05.8	+0.3
	baz=353						
NACB				*i* S	Sg	13 37 08.1	+0.5
	baz=353						
ENLB	Shoufeng	0.14	183	*e*P	Pg	13 37 06.0	+0.3
	baz=183						
ENLB				*e*S	Sg	13 37 08.8	+0.9
	baz=183						
ETLH	Xiulin Townshi	0.20	324	*i* P	Pg	13 37 07.3	+0.6
	baz=323						
ETLH				*i* S	Sg	13 37 10.5	+0.9
	baz=323						
ESL	Shilin	0.28	215	*e*P	Pg	13 37 08.6	+0.4
	baz=213						
ESL				*e*S	Sg	13 37 12.9	+0.8
	baz=213						
WHF	Hehuan Shan	0.33	287	*e*P	Pg	13 37 09.8	+0.5
	baz=287						
WHF				*e*S	Sg	13 37 14.6	+0.9
	baz=287						
CHGB	Renai	0.40	272	*e*P	Pb	13 37 11.2	-0.6
	baz=271						
CHGB				*e*S	Sb	13 37 18.1	+0.1
	baz=271						

WEL 21 13:39:06.9, 41°S±42°×17°4E±°, h5^{km}±23^{km}, M3.7/29, ML4.0/3, MLv3.7/29, Error ellipse: s-maj=0.1km s-min=0.0km az=173.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOWZ	Holdsworth Sta	1.05	60	P	Pg	13 39 23.8	-3.3
OHWZ	Ohakea	1.44	32	P	Pn	13 39 31.3	-2.2
CPWZ	Castlepoint	1.52	71	P	Pn	13 39 35.0	+0.4
PRWZ	Pori Road	1.53	56	P	Pn	13 39 30.8	-4.0
BFZ	Birch Farm	1.64	63	P	Pn	13 39 35.5	-0.8
WAZ	Wanganui	1.75	17	P	Pn	13 39 36.9	-0.9
DVHZ	Dannevirke	1.81	52	P	Pn	13 39 37.5	-1.1
ANWZ	Angora Road	1.90	60	P	Pb	13 39 41.3	-0.8
LREZ	Lake Rotokare	1.97	2	P	Pn	13 39 41.7	+0.8
PNHZ	Pukenui	2.09	44	P	Pn	13 39 42.7	+0.2
PREZ	Palmer Road	2.09	357	P	Pn	13 39 42.5	0.0
PRHZ	Porangahau	2.11	57	P	Pb	13 39 45.9	+0.3
WPHZ	Waipukurau	2.12	50	P	Pb	13 39 44.4	-1.3
NBEZ	Newall Road No	2.19	351	P	Pb	13 39 46.2	-0.7
MTVZ	Mangateitei	2.23	24	P	Pn	13 39 45.2	+0.7
PKVZ	Pokaka	2.28	21	P	Pn	13 39 45.3	+0.1
MOVZ	Moawhango	2.30	29	P	Pn	13 39 45.1	-0.3
VRZ	Vera Road	2.33	9	P	Pn	13 39 45.1	-0.7
BHHZ	Black Hill Sta	2.36	35	P	Pn	13 39 46.3	+0.1
WHVZ	Whangaehu Hut	2.36	25	P	Pn	13 39 47.0	+0.6
FWVZ	Far West T-bar	2.37	24	P	Pn	13 39 46.9	+0.3
KRHZ	Kereru	2.38	42	P	Pn	13 39 47.6	+1.1
TUVZ	Tukino	2.39	26	P	Pn	13 39 47.7	+0.9
NGZ	Ngauruhoe	2.46	24	P	Pn	13 39 48.8	+1.1
TWVZ	Taurewa	2.51	20	P	Pn	13 39 49.9	+1.5
WTVZ	West Tongariro	2.51	23	P	Pn	13 39 49.5	+1.1
KAHZ	Kahuranaki	2.55	51	P	Pg	13 39 57.7	+2.1
KRVZ	Karewarewa	2.55	24	P	Pn	13 39 50.1	+1.2
KWHZ	Kaweka Forest	2.57	39	P	Pn	13 39 51.1	+1.9
KATZ	Kakaramea	2.67	24	P	Pn	13 39 52.5	+1.9
MCHZ	McNeill Hill	2.69	43	P	Pb	13 39 55.9	+0.4
RITZ	Rihia Road	2.72	26	P	Pb	13 39 54.0	-2.0
RATZ	Rangitukua	2.80	24	P	Pb	13 39 55.6	-1.7
BKZ	Black Stump Fm	2.81	37	P	Pn	13 39 54.7	+2.2
WATZ	Wairara	2.93	22	P	Pb	13 39 57.1	-2.5
HIZ	Hauiti	2.94	8	P	Pn	13 39 54.5	+0.2
MRHZ	Matea Rd	3.06	33	P	Pb	13 39 59.0	-2.7
KUTZ	Kaahu Road	3.16	22	P	Pb	13 40 01.2	-2.2
TLZ	Tolley Road	3.24	17	P	Pb	13 40 01.7	-3.2
ALRZ	Allen Road	3.26	29	P	Pb	13 40 03.2	-2.0
RAHZ	Arahi	3.29	41	P	Pg	13 40 08.4	-1.5
PRRZ	Plateau Road	3.34	29	P	Pb	13 40 03.8	-2.7
GRRZ	Galatos Road	3.38	25	P	Pb	13 40 08.0	+0.8
TOZ	Tahuroa Road	3.81	14	P	Pb	13 40 11.7	-2.8
AWAZ	Awhitu Peninsu	4.37	3	P	Pn	13 40 13.3	-0.5
ETAZ	East Tamaki Re	4.50	6	P	Pn	13 40 14.5	-1.1

WEL 21 13:49:57.6, 41°S±5°×17°4E±1°1, h5^{km}±2^{km}, M3.6/49, ML3.3/27, MLv3.6/49, Error ellipse: s-maj=0.0km s-min=0.0km az=112.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCW	Tory Channel	0.27	355	P	Pb	13 50 04.0	-1.0
CMWZ	Cape Campbell	0.28	195	P	Pb	13 50 05.2	+0.2
TUWZ	Tuamarina	0.28	281	P	Pg	13 50 04.0	+1.0
BSWZ	Blackbirch Sta	0.40	234	P	Pb	13 50 06.6	-0.6
WEL	Wellington	0.40	60	P	Pb	13 50 06.6	-0.5
BHW	Baring Head	0.43	80	P	Pb	13 50 07.1	-0.6
CAW	Cannon Point	0.68	57	P	Pb	13 50 11.8	-0.1
MSWZ	Moikau Station	0.71	85	P	Pb	13 50 12.7	+0.2
PLWZ	Palliser	0.72	97	P	Pb	13 50 12.6	+0.1

DUWZ	D’Urville Isla	0.74	337	P	Pb	13 50 12.9	-0.1
NNZ	Nelson	0.75	290	P	Pb	13 50 12.9	-0.2
PAWZ	Paruwai Farm	0.85	84	P	Pb	13 50 15.3	+0.5
OGWZ	Otaki Gorge	0.93	45	P	Pg	13 50 15.8	+0.4
MTW	Mount Morrison	0.96	71	P	Pb	13 50 17.0	+0.3
TRWZ	Traveller	1.04	86	P	Pn	13 50 19.4	+0.5
HOWZ	Holdsworth Sta	1.08	58	P	Pn	13 50 19.2	-0.2
THZ	Tophouse	1.09	255	P	Pb	13 50 19.2	+0.3
KHZ	Kahutara	1.09	211	P	Pn	13 50 19.8	+0.3
TMWZ	Te Maipa	1.25	73	P	Pn	13 50 22.0	+0.3
MRZ	Mangatainoka R	1.26	50	P	Pn	13 50 22.3	+0.4
TIWZ	Tintock	1.39	60	P	Pg	13 50 26.2	+2.1
OHWZ	Ohakea	1.49	31	P	Pg	13 50 26.7	+0.6
QRZ	Quartz Range	1.50	295	P	Pn	13 50 23.5	-1.6
CPWZ	Castlepoint	1.54	69	P	Pg	13 50 34.0	+7.0
POWZ	Post Office Ro	1.55	46	P	Pg	13 50 27.6	+0.3
PRWZ	Pori Road	1.56	54	P	Pb	13 50 26.9	-0.1
BFZ	Birch Farm	1.67	62	P	Pn	13 50 27.8	+0.3
GVZ	Greta Valley S	1.76	212	P	Pn	13 50 28.7	0.0
WAZ	Wanganui	1.80	17	P	Pg	13 50 32.2	+0.1
DVHZ	Dannevirke	1.84	51	P	Pg	13 50 33.1	+0.2
ANWZ	Angora Road	1.93	59	P	Pg	13 50 34.2	-0.5
LTZ	Lake Taylor	2.00	229	P	Pn	13 50 32.6	+0.6
AMCZ	Amberley	2.09	215	P	Pg	13 50 38.9	+1.3
NMEZ	Namu Road	2.09	351	P	Pg	13 50 38.6	+0.9
PNHZ	Pukenui	2.13	43	P	Pg	13 50 37.6	-0.7
PREZ	Palmer Road	2.14	357	P	Pg	13 50 40.0	+1.3
KHEZ	Kahui Hut	2.20	354	P	Pg	13 50 40.4	+0.7
NBEZ	Newall Road No	2.24	351	P	Pg	13 50 41.0	+0.6
MTVZ	Mangateitei	2.28	23	P	Pg	13 50 40.5	-0.7
PKE	Pukeiti	2.30	354	P	Pg	13 50 41.4	-0.3
PKVZ	Pokaka	2.33	20	P	Pg	13 50 41.5	-0.8
MOVZ	Moawhango	2.35	28	P	Pb	13 50 40.1	-0.3
VRZ	Vera Road	2.38	8	P	Pg	13 50 43.4	+0.2
BHHZ	Black Hill Sta	2.40	34	P	Pb	13 50 41.2	-0.1
KRHZ	Kereru	2.42	41	P	Pb	13 50 42.2	+0.7
FWVZ	Far West T-bar	2.42	24	P	Pg	13 50 44.6	+0.7
OKCZ	Okains Bay	2.42	202	P	Pn	13 50 36.7	-1.2
PXZ	Pawanui	2.42	54	P	Pb	13 50 40.6	-1.0
TUVZ	Tukino	2.44	25	P	Pb	13 50 42.7	+0.7
INZ	Inchbonnie	2.47	239	P	Pn	13 50 39.7	+1.3
OXZ	Oxford	2.49	222	P	Pb	13 50 43.3	+0.5
NGZ	Ngauruhoe	2.51	24	P	Pb	13 50 43.9	+0.7
MQZ	McQueen’s Vall	2.54	208	P	Pn	13 50 37.5	-1.9
TWVZ	Taurewa	2.56	20	P	Pg	13 50 46.7	+0.1
WTVZ	West Tongariro	2.56	23	P	Pb	13 50 45.0	+1.0
KAHZ	Kahuranaki	2.58	50	P	Pb	13 50 44.2	-0.1
KRVZ	Karewarewa	2.59	24	P	Pb	13 50 45.3	+0.7
AKCZ	Akaroa Harbour	2.60	203	P	Pn	13 50 40.7	+0.4
KWHZ	Kaweka Forest	2.61	39	P	Pg	13 50 46.5	-1.1
KATZ	Kakaramea	2.72	23	P	Pb	13 50 47.8	+1.0
BKZ	Black Stump Fm	2.85	37	P	Pb	13 50 49.7	+0.7
HIZ	Hauiti	3.00	8	P	Pb	13 50 52.3	+0.9
WVZ	Waitaha Valley	3.09	238	P	Pb	13 50 51.4	-1.6
MTHZ	Maungataniwha	3.27	37	P	Pn	13 50 51.0	+1.5
RPZ	Rata Peaks	3.28	226	P	Pb	13 50 56.9	+0.6
TLZ	Tolley Road	3.29	17	P	Pb	13 50 57.7	+1.3
RAGZ	Rawiri	3.82	40	P	Pb	13 51 01.6	-3.9
URZ	Urewera	3.88	35	P	Pb	13 51 06.5	+0.1
MARZ	Manawahe	3.94	28	P	Pb	13 51 05.6	-2.0
MWZ	Matawai	4.00	39	P	Pb	13 51 05.6	-3.0
TKGZ	Te Karaka	4.08	43	P	Pn	13 51 05.2	+4.6

WEL 21 13:51:12.1, 41°6S±0°9×17°4E±°, h13^{km}±2^{km}, M3.7/25, ML3.9/18, MLv3.7/25, Error ellipse: s-maj=0.0km s-min=0.0km az=128.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.15	197	P	Pb	13 51 16.4	-0.4
TUWZ	Tuamarina	0.30	306	P	Pb	13 51 19.0	-0.5
BSWZ	Blackbirch Sta	0.31	250	P	Pg	13 51 18.5	-0.1
TCW	Tory Channel	0.40	1	P	Pb	13 51 20.7	-0.4
BHW	Baring Head	0.49	66	P	Pb	13 51 22.5	-0.2
WEL	Wellington	0.49	49	P	Pb	13 51 22.7	0.0
PLWZ	Palliser	0.74	87	P	Pb	13 51 27.1	+0.2
MSWZ	Moikau Station	0.76	76	P	Pb	13 51 27.4	+0.1
NNZ	Nelson	0.78	300	P	Pg	13 51 27.2	0.0
CAW	Cannon Point	0.78	50	P	Pb	13 51 27.7	+0.1
DUWZ	D’Urville Isla	0.85	342	P	Pn	13 51 29.8	0.0
PAWZ	Paruwai Farm	0.90	76	P	Pn	13 51 30.5	0.0
KHZ	Kahutara	0.97	214	P	Pb	13 51 30.7	-0.1
MTW	Mount Morrison	1.03	64	P	Pg	13 51 32.1	+0.2
THZ	Tophouse	1.03	261	P	Pb	13 51 31.7	-0.2
OGWZ	Otaki Gorge	1.04	41	P	Pg	13 51 32.2	0.0
TRWZ	Traveller	1.08	79	P	Pb	13 51 32.6	-0.2
HOWZ	Holdsworth Sta	1.18	53	P	Pg	13 51 35.3	+0.5
TMWZ	Te Maipa	1.32	68	P	Pn	13 51 36.4	+0.1
MRZ	Mangatainoka R	1.37	47	P	Pn	13 51 37.1	+0.1
TIWZ	Tintock	1.48	56	P	Pg	13 51 41.5	+1.1
QRZ	Quartz Range	1.53	300	P	Pb	13 51 40.6	+0.3
OHWZ	Ohakea	1.61	30	P	Pg	13 51 43.9	+0.8
GVZ	Greta Valley S	1.64	214	P	Pb	13 51 42.8	+0.6
PRWZ	Pori Road	1.66	51	P	Pg	13 51 45.2	+1.2
BFZ	Birch Farm	1.76	59	P	Pg	13 51 49.6	+3.8
LTZ	Lake Taylor	1.89	231	P	Pb	13 51 45.4	-1.1
WAZ	Wanganui	1.93	17	P	Pg	13 51 49.8	+0.6
AMCZ	Amberley	1.97	217	P	Pg	13 51 51.4	+1.4
PNHZ	Pukenui	2.24	41	P	Pg	13 51 55.6	+0.6
PREZ	Palmer Road	2.27	358	P	Pg	13 51 56.1	+0.6
OKCZ	Okains Bay	2.29	203	P	Pn	13 51 48.5	-1.1
KHEZ	Kahui Hut	2.32	355	P	Pg	13 51 57.1	+0.5
INZ	Inchbonnie	2.38	241	P	Pb	13 51 54.3	-0.5
DREZ	Durham Road	2.42	359	P	Pg	13 51 58.5	0.0
PKE	Pukeiti	2.42	355	P	Pg	13 51 58.2	-0.4
MOVZ	Moawhango	2.47	28	P	Pb	13 51 57.1	+0.6
BHHZ	Black Hill Sta	2.52	33	P	Pb	13 51 58.5	+1.3
FWVZ	Far West T-bar	2.55	23	P	Pg	13 51 60.0	-1.0
TUVZ	Tukino	2.57	25	P	Pg	13 52 00.2	-1.1
WTVZ	West Tongariro	2.69	22	P	Pb	13 52 01.2	+1.0
KRVZ	Karewarewa	2.72	23	P	Pb	13 52 01.7	+0.9
KATZ	Kakaramea	2.85	23	P	Pb	13 52 04.4	+1.5
BKZ	Black Stump Fm	2.97	36	P	Pb	13 52 07.0	+2.0
WVZ	Waitaha Valley	3.00	240	P	Pb	13 52 03.9	-1.5
RPZ	Rata Peaks	3.17	227	P	Pb	13 52 09.2	+0.9
FOZ	Fox Glacier	3.81	238	P	Pb	13 52 16.4	-2.8
ETAZ	East Tamaki Re	4.68	6	P	Pb	13 52 29.2	-4.8
JCZ	Jackson Bay	4.72	237	P	Pn	13 52 27.2	+4.0

WEL 21 13:54:24.4, 42°S±2°×17°4E±°, h5^{km}±2^{km}, M3.6/43, ML3.7/21, MLv3.6/43, Error ellipse: s-maj=0.0km s-min=0.0km az=144.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.13	197	P	Pg	13 54 28.0	+0.9
BSWZ	Blackbirch Sta	0.31	252	P	Pg	13 54 31.2	+0.8
TUWZ	Tuamarina	0.31	308	P	Pb	13 54 31.5	-0.9
TCW	Tory Channel	0.41	1	P	Pb	13 54 33.3	-0.8
BHW	Baring Head	0.50	65	P	Pb	13 54 35.4	-0.2
WEL	Wellington	0.51	48	P	Pb	13 54 35.5	-0.3
PLWZ	Palliser	0.74	86	P	Pb	13 54 40.5	+0.7
MSWZ	Moikau Station	0.77	75	P	Pb	13 54 40.5	+0.3
NNZ	Nelson	0.78	301	P	Pg	13 54 39.9	+0.5
CAW	Cannon Point	0.79	50	P	Pb	13 54 40.7	+0.1
DUWZ	D’Urville Isla	0.86	342	P	Pn	13 54 43.1	-0.1
PAWZ	Paruwai Farm	0.90	75	P	Pn	13 54 43.5	-0.2
KHZ	Kahutara	0.96	214	P	Pn	13 54 44.1	-0.4
THZ	Tophouse	1.03	262	P	Pb	13 54 45.0	+0.3
MTW	Mount Morrison	1.04	64	P	Pn	13 54 45.5	-0.1
OGWZ	Otaki Gorge	1.05	41	P	Pb	13 54 45.0	-0.1
TRWZ	Traveller	1.09	79	P	Pn	13 54 46.1	-0.2
HOWZ	Holdsworth Sta	1.19	53	P	Pn	13 54 48.6	+0.9
TMWZ	Te Maipa	1.33	68	P	Pg	13 54 52.4	+2.6
MRZ	Mangatainoka R	1.38	46	P	Pb	13 54 50.6	-0.1
TIWZ	Tintock	1.48	56	P	Pg	13 54 55.2	+2.4
QRZ	Quartz Range	1.53	301	P	Pb	13 54 53.5	+0.2
CPWZ	Castlepoint	1.62	65	P	Pg	13 55 01.0	+5.5
OHWZ	Ohakea	1.62	30	P	Pg	13 54 56.1	+0.7
GVZ	Greta Valley S	1.63	214	P	Pn	13 54 53.3	-0.4
PRWZ	Pori Road	1.67	51	P	Pg	13 54 58.1	+1.7
BFZ	Birch Farm	1.77	59	P	Pg	13 55 03.6	+5.4
LTZ	Lake Taylor	1.88	231	P	Pn	13 54 57.3	+0.1
WAZ	Wanganui	1.94	17	P	Pg	13 55 01.7	0.0
DVHZ	Dannevirke	1.95	48	P	Pg	13 55 04.2	+2.4
AMCZ	Amberley	1.96	217	P	Pg	13 55 03.7	+1.8
NMEZ	Namu Road	2.23	352	P	Pg	13 55 09.9	+2.9
PNHZ	Pukenui	2.25	41	P	Pg	13 55 08.7	+1.1
PREZ	Palmer Road	2.28	358	P	Pg	13 55 09.4	+1.4
OKCZ	Okains Bay	2.28	203	P	Pn	13 55 01.3	-1.4
KHEZ	Kahui Hut	2.33	355	P	Pg	13 55 10.2	+1.1
INZ	Inchbonnie	2.37	241	P	Pb	13 55 07.8	+0.3
OXZ	Oxford	2.37	223	P	Pb	13 55 08.4	+0.9
NBEZ	Newall Road No	2.37	352	P	Pg	13 55 11.2	+1.4
DREZ	Durham Road	2.43	359	P	Pg	13 55 13.0	+2.1
PKE	Pukeiti	2.44	355	P	Pg	13 55 11.9	+0.9
AKCZ	Akaroa Harbour	2.46	204	P	Pb	13 55 07.9	-1.2
MOVZ	Moawhango	2.49	28	P	Pb	13 55 10.0	+0.4
VRZ	Vera Road	2.52	9	P	Pg	13 55 12.2	-0.5
BHHZ	Black Hill Sta	2.53	33	P	Pb	13 55 10.7	+0.4
KRHZ	Kereru	2.54	40	P	Pg	13 55 13.7	+0.6
WHVZ	Whangaehu Hut	2.54	24	P	Pb	13 55 11.8	+1.1
FWVZ	Far West T-bar	2.56	23	P	Pg	13 55 12.5	-0.9
TUVZ	Tukino	2.58	25	P	Pb	13 55 12.5	+1.3
NGZ	Ngauruhoe	2.65	23	P	Pb	13 55 13.1	+0.8
WTVZ	West Tongariro	2.70	22	P	Pb	13 55 14.5	+1.3
KRVZ	Karewarewa	2.73	23	P	Pb	13 55 14.9	+1.1
KWHZ	Kaweka Forest	2.74	38	P	Pg	13 55 16.0	-0.9
KATZ	Kakaramea	2.86	23	P	Pb	13 55 17.3	+1.3
RITZ	Rihia Road	2.91	25	P	Pg	13 55 18.5	-1.6
BKZ	Black Stump Fm	2.98	35	P	Pb	13 55 19.5	+1.4
WVZ	Waitaha Valley	2.99	240	P	Pb	13 55 18.7	+0.6
WATZ	Wairara	3.12	22	P	Pb	13 55 21.7	+1.3
HIZ	Hauiti	3.14	8	P	Pb	13 55 21.1	+0.4
RPZ	Rata Peaks	3.16	227	P	Pb	13 55 22.4	+1.4
TLZ	Tolley Road	3.43	17	P	Pb	13 55 26.8	+1.2
FOZ	Fox Glacier	3.80	238	P	Pb	13 55 30.4	-1.5
AWAZ	Awhitu Peninsu	4.56	4	P	Pb	13 55 42.1	-2.8

WEL 21 14:24:31.7, 42°S±1°×17°4E±°, h22^{km}±2^{km}, M3.8/22, ML4.1/22, MLv3.8/22, Error ellipse: s-maj=0.0km s-min=0.0km az=137.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.15	205	P	Pb	14 24 36.9	-0.2
TUWZ	Tuamarina	0.33	305	P	Pb	14 24 39.2	+0.4
BSWZ	Blackbirch Sta	0.33	252	P	Pb	14 24 39.4	+0.4
TCW	Tory Channel	0.40	358	P	Pb	14 24 40.4	+0.3
BHW	Baring Head	0.48	65	P	Pb	14 24 41.9	+0.5
WEL	Wellington	0.48	47	P	Pb	14 24 42.1	+0.5
PLWZ	Palliser	0.72	87	P	Pn	14 24 46.6	0.0
MSWZ	Moikau Station	0.74	75	P	Pn	14 24 46.9	0.0
CAW	Cannon Point	0.77	49	P	Pn	14 24 46.9	-0.3
NNZ	Nelson	0.80	300	P	Pn	14 24 47.6	0.0
DUWZ	D’Urville Isla	0.86	341	P	Pn	14 24 48.6	+0.1
PAWZ	Paruwai Farm	0.88	75	P	Pn	14 24 49.5	+0.7
KHZ	Kahutara	0.98	215	P	Pn	14 24 51.3	+1.2
MTW	Mount Morrison	1.01	64	P	Pn	14 24 51.4	+0.8
OGWZ	Otaki Gorge	1.03	40	P	Pb	14 24 51.5	+0.6
THZ	Tophouse	1.05	261	P	Pb	14 24 52.3	+1.1
TRWZ	Traveller	1.07	79	P	Pb	14 24 52.0	+0.5
HOWZ	Holdsworth Sta	1.16	52	P	Pb	14 24 53.9	+0.7
TMWZ	Te Maipa	1.30	68	P	Pb	14 24 55.3	-0.2
MRZ	Mangatainoka R	1.36	46	P	Pb	14 24 56.6	+0.2
TIWZ	Tintock	1.46	56	P	Pb	14 24 58.0	-0.2
QRZ	Quartz Range	1.55	300	P	Pb	14 25 00.6	+0.9
CPWZ	Castlepoint	1.60	64	P	Pb	14 25 02.5	+2.0
OHWZ	Ohakea	1.60	29	P	Pb	14 25 02.3	+1.7
GVZ	Greta Valley S	1.65	214	P	Pb	14 25 00.6	-0.8
PRWZ	Pori Road	1.65	51	P	Pb	14 25 00.4	-1.0
POWZ	Post Office Ro	1.65	43	P	Pb	14 25 01.0	-0.4
BFZ	Birch Farm	1.74	58	P	Pn	14 25 00.9	+0.3
LTZ	Lake Taylor	1.91	232	P	Pn	14 25 04.1	+1.2
WAZ	Wanganui	1.93	16	P	Pb	14 25 08.0	+1.8
DVHZ	Dannevirke	1.93	48	P	Pn	14 25 03.7	+0.4
AMCZ	Amberley	1.98	217	P	Pn	14 25 05.0	+1.1
ANWZ	Angora Road	2.01	56	P	Pn	14 25 05.1	+0.8
LREZ	Lake Rotokare	2.15	2	P	Pb	14 25 12.2	+2.2
NMEZ	Namu Road	2.22	352	P	Pb	14 25 13.1	+1.9
PRHZ	Porangahau	2.23	54	P	Pn	14 25 08.3	+1.0
PNHZ	Pukenui	2.23	41	P	Pn	14 25 08.4	+1.0
WPHZ	Waipukurau	2.25	47	P	Pn	14 25 08.7	+1.1
PREZ	Palmer Road	2.27	357	P	Pb	14 25 13.0	+0.9
OKCZ	Okains Bay	2.30	203	P	Pn	14 25 08.0	-0.3
CRLZ	Canterbury Las	2.32	212	P	Pn	14 25 08.7	+0.1
KHEZ	Kahui Hut	2.33	355	P	Pb	14 25 13.7	+0.7
NBEZ	Newall Road No	2.37	352	P	Pb	14 25 14.3	+0.7
OXZ	Oxford	2.39	224	P	Pn	14 25 10.1	+0.6
INZ	Inchbonnie	2.39	241	P	Pn	14 25 11.1	+1.5
MTVZ	Mangateitei	2.40	22	P	Pb	14 25 15.1	+0.9
MQZ	McQueen’s Vall	2.42	210	P	Pn	14 25 09.1	-0.8
DREZ	Durham Road	2.42	358	P	Pb	14 25 15.6	+1.0
PKE	Pukeiti	2.43	354	P	Pb	14 25 13.9	-0.9
PKVZ	Pokaka	2.46	19	P	Pb	14 25 15.7	+0.5
MOVZ	Moawhango	2.47	27	P	Pb	14 25 13.8	-1.6
AKCZ	Akaroa Harbour	2.48	204	P	Pn	14 25 10.4	-0.3
PXZ	Pawanui	2.51	52	P	Pn	14 25 10.9	-0.3
VRZ	Vera Road	2.51	8	P	Pb	14 25 15.5	-0.6
BHHZ	Black Hill Sta	2.51	33	P	Pn	14 25 13.6	+2.3
KRHZ	Kereru	2.52	39	P	Pn	14 25 12.1	+0.7
DRZ	Dome Shelter	2.53	23	P	Pb	14 25 19.8	+3.2
WHVZ	Whangaehu Hut	2.53	23	P	Pb	14 25 17.5	+0.9
MHEZ	Mangahewa	2.54	0	P	Pb	14 25 19.3	+2.8
FWVZ	Far West T-bar	2.54	23	P	Pb	14 25 16.4	-0.4
TUVZ	Tukino	2.56	24	P	Pb	14 25 15.9	-1.2
NGZ	Ngauruhoe	2.63	23	P	Pb	14 25 19.0	+0.8
KAHZ	Kahuranaki	2.67	48	P	Pn	14 25 13.7	+0.2
WTVZ	West Tongariro	2.69	22	P	Pb	14 25 19.3	+0.2
TWVZ	Taurewa	2.69	19	P	Pb	14 25 20.0	+0.8
KRVZ	Karewarewa	2.72	23	P	Pb	14 25 21.0	+1.3
KWHZ	Kaweka Forest	2.72	37	P	Pn	14 25 16.0	+1.8
MCHZ	McNeill Hill	2.84	41	P	Pn	14 25 17.1	+1.4
KATZ	Kakaramea	2.84	23	P	Pb	14 25 23.3	+1.5
RITZ	Rihia Road	2.89	25	P	Pb	14 25 24.0	+1.4
BKZ	Black Stump Fm	2.96	35	P	Pn	14 25 19.6	+2.1
RATZ	Rangitukua	2.97	23	P	Pb	14 25 25.9	+1.9
WVZ	Waitaha Valley	3.02	240	P	Pn	14 25 19.5	+1.4
WATZ	Wairara	3.10	21	P	Pb	14 25 28.0	+1.8
ARHZ	Aropaoanui	3.12	42	P	Pn	14 25 21.0	+1.3
HIZ	Hauiti	3.13	8	P	Pb	14 25 24.8	-1.8
RPZ	Rata Peaks	3.18	228	P	Pn	14 25 22.4	+2.0
KUTZ	Kaahu Road	3.33	21	P	Pb	14 25 32.4	+2.2
TLZ	Tolley Road	3.42	17	P	Pb	14 25 28.1	-3.5
ALRZ	Allen Road	3.43	28	P	Pb	14 25 33.4	+1.6
PRRZ	Plateau Road	3.50	28	P	Pb	14 25 33.3	+0.3
MUGZ	Murupara	3.66	32	P	Pn	14 25 29.5	+2.4
SNGZ	Shannon Statio	3.67	40	P	Pn	14 25 28.8	+1.7
FOZ	Fox Glacier	3.83	238	P	Pn	14 25 31.6	+2.4
RIGZ	Rimuhau	3.94	44	P	Pn	14 25 30.5	-0.3
URZ	Urewera	3.99	34	P	Pn	14 25 34.4	+2.9
TOZ	Tahuroa Road	3.99	14	P	Pb	14 25 38.3	-3.0
LBZ	Lake Benmore	4.09	226	P	Pn	14 25 34.2	+1.2
MWZ	Matawai	4.11	38	P	Pn	14 25 33.1	-0.1
ODZ	Otahua Downs	4.34	217	P	Pn	14 25 36.2	-0.1
TWGZ	Tauwhareparae	4.45	41	P	Pn	14 25 38.3	+0.4
RUGZ	Raukumara Rang	4.48	37	P	Pn	14 25 38.8	+0.5
KBAZ	Karaka Road Bo	4.54	6	P	Pb	14 25 45.5	-5.1
AWAZ	Awhitu Peninsu	4.55	3	P	Pn	14 25 44.2	+4.9
MKAZ	Moumakai	4.55	9	P	Pn	14 25 43.9	+4.6
ETAZ	East Tamaki Re	4.68	6	P	Pn	14 25 46.1	+5.1
WTAZ	Waiatarua	4.68	3	P	Pb	14 25 47.1	-5.9
HAZ	Te Kaha	4.70	36	P	Pn	14 25 42.2	+0.9
JCZ	Jackson Bay	4.74	237	P	Pn	14 25 46.4	+4.5
WIAZ	Waiheke Island	4.86	8	P	Pn	14 25 48.5	+5.0
MBAZ	Motutapu North	4.86	6	P	Pn	14 25 49.2	+5.7
KUZ	Kuaotunu	4.99	13	P	Pn	14 25 51.2	+6.0
HHSZ	Highcliff Hill	5.04	211	P	Pn	14 25 44.6	-1.3
EAZ	Earnscleugh	5.12	223	P	Pn	14 25 48.4	+1.3
MSZ	Milford Sound	5.57	235	P	Pn	14 26 00.2	+7.0
WCZ	Waipu Caves	5.67	0	P	Pn	14 26 01.0	+6.4
SYZ	Scrubby Hill	6.17	215	P	Pn	14 26 03.8	+2.5
OUZ	Omahuta	6.41	355	P	Pn	14 26 10.5	+5.7
CTZ	Chatham Island	7.02	111	P	Pn	14 26 12.9	-0.2

JMA 21 14:26:42.8±0.1, 24°70N×123°45E, h7^{km}±4^{km}, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.44**	**145**	P	Pg	14 26 51.5	+0.1
IRIF				S	Sg	14 26 57.5	+0.3
YOJ	**Yonaguni jima**	**0.47**	**239**	P	Pg	14 26 51.9	+0.1
YOJ				*e*S	Sg	14 26 58.2	+0.3
JYNG	**Yonagunijimaku**	**0.52**	**242**	P	Pg	14 26 53.0	+0.1
JYNG				*e*S	Sg	14 27 00.4	+0.7
JKRS	**Kuro-shima**	**0.69**	**132**	P	Pg	14 26 56.0	0.0
JKRS				S	Sg	14 27 05.3	+0.3
JIJ	**Ishigaki jima**	**0.71**	**118**	P	Pg	14 26 56.7	+0.1
JIJ				S	Sg	14 27 05.3	-0.6
HATJ	**Hateruma jima**	**0.72**	**153**	P	Pg	14 26 56.6	0.0
HATJ				*e*S	Sg	14 27 06.7	+0.8
JISG	**Ishigakijimahi**	**0.79**	**98**	P	Pg	14 26 58.0	0.0
JISG				S	Sg	14 27 08.9	+0.6

TAP 21 14:26:48.4, 24°33N×121°41E, h5^{km}, ML0.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNSB	**Datong** baz=347	**0.10**	**347**	*e*P	Pg	14 26 51.1	+0.4
NNSB	baz=347			*e*S	Sg	14 26 52.6	+0.4
NNS	**Nan Shan** baz=347	**0.12**	**344**	*e*P	Pg	14 26 51.3	+0.3
NNS	baz=347			*e*S	Sg	14 26 53.1	+0.5
ETLH	**Xiulin Townshi** baz=159	**0.14**	**151**	*e*P	Pg	14 26 52.0	+0.8
ETLH	baz=159			*e*S	Sg	14 26 54.2	+1.0
NACB	**Ninganchiao** baz=135	**0.23**	**132**	*e*P	Pg	14 26 53.5	+0.5
NANB	**Nanao** baz=73	**0.33**	**72**	*e*P	Pg	14 26 54.7	-0.1
YHNB	**Yeheng** baz=355	**0.34**	**355**	*e*P	Pg	14 26 55.6	+0.5
YHNB	baz=355			*e*S	Sg	14 26 59.1	-0.6

*KRNET **21** 14:28:52.3±0.1, 40°83N×78°76E, mb2.8*

*NNC **21** 14:28:54.5±6.7, 40°87N×78°62E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=52.4km s-min=36.3km az=167.0*

ISC 21 14:28:54.8±3.4, 41°0N±0°1×78°60E±0°08, h3^{km}±19^{km}, n11, σ1^{s}68/18, 9C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRN	**Naryn** baz=87	**2.02**	**284**	⇑*i*P	**Pb**	**14 29 31.9**	**-0.5**
NRN	baz=87			⇑*i*S	**Sg**	**14 30 01.3**	**+1.6**
ULHL	**Ulahol** baz=8.0	**2.19**	**307**	⇑*i*P	**Pb**	**14 29 34.7**	**-0.5**
ULHL	baz=8.0			⇑*i*S	**Sg**	**14 30 05.3**	**+0.2**
PDGK	**Podgornoye** 4.6nm,1.3s	**2.46**	**15**	⇓Pn	**Pn**	**14 29 35.1**	**-0.8**
PDGK	13nm,1.0s			⇑Sn	**Sb**	**14 30 11.7**	**+1.2**
PDGK	**Podgornoye** baz=12	**2.46**	**15**	⇑*i*P	**Pn**	**14 29 37.4**	**+1.4**
PDGK	baz=12			⇑*i*S	**Sb**	**14 30 09.9**	**-0.6**
MDOK	**Medeo** 3.8nm,0.7s	**2.49**	**333**	Pg	**Pb**	**14 29 40.1**	**-0.2**
MDOK	6.6nm,0.6s			Lg	Lg	14 30 13.0	
BOOM	**Boomskoye usch** baz=9.0	**2.51**	**308**	⇓*i*P	**Pb**	**14 29 38.8**	**-1.9**
BOOM	baz=9.0			⇓*i*S	**Sb**	**14 30 13.4**	**+1.3**
KOTS	**Kotyrbulak** 2.6nm,0.4s	**2.53**	**334**	Pg	**Pg**	**14 29 43.2**	**-0.1**
KOTS	25nm,0.6s			Lg	Lg	14 30 17.8	
KZA	**Kyzart** baz=96	**2.76**	**295**	⇓*i*P	**Pb**	**14 29 43.3**	**-1.7**
KZA	baz=96			⇓*i*S	**Sb**	**14 30 19.8**	**+0.5**
TKM2	**Tokmak 2** 1.7nm,0.6s	**2.98**	**312**	⇑Pn	**Pb**	**14 29 46.6**	**-2.0**
TKM2	5.8nm,0.8s			⇑Lg	Lg	14 30 30.0	
ARLS	**Aral** baz=89	**3.34**	**287**	⇓*i*P	**Pn**	**14 29 50.4**	**+2.2**
ARLS	baz=89			⇓*i*S	**Sb**	**14 30 32.3**	**-3.7**
DJR	**Jarkent** 0.9nm,0.3s	**3.48**	**14**	Pg	**Pb**	**14 29 56.2**	**-0.9**
DJR	1.1nm,0.3s			Lg	Lg	14 30 40.5	

WEL 21 14:38:33.6, 42°S±3°×17°5E±°, h5^{km}±2^{km}, M3.6/43, ML3.7/22, MLv3.6/43, Error ellipse: s-maj=0.0km s-min=0.0km az=115.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHW	Baring Head	0.32	32	P	Pg	14 38 39.5	-0.3
WEL	Wellington	0.41	13	P	Pg	14 38 39.8	-1.6
PLWZ	Palliser	0.47	76	P	Pb	14 38 44.9	+0.5
MSWZ	Moikau Station	0.52	60	P	Pb	14 38 44.9	-0.4
BSWZ	Blackbirch Sta	0.58	266	P	Pg	14 38 37.7	-7.1
TUWZ	Tuamarina	0.59	295	P	Pg	14 38 37.5	-7.4
CAW	Cannon Point	0.66	29	P	Pg	14 38 43.7	-2.5
PAWZ	Paruwai Farm	0.66	63	P	Pb	14 38 47.8	+0.2
MTW	Mount Morrison	0.83	51	P	Pg	14 38 49.7	+0.2
TRWZ	Traveller	0.83	70	P	Pb	14 38 51.2	+0.6
OGWZ	Otaki Gorge	0.95	25	P	Pg	14 38 49.4	-2.4
HOWZ	Holdsworth Sta	1.02	40	P	Pg	14 38 51.9	-1.3
NNZ	Nelson	1.06	296	P	Pg	14 38 46.1	-7.8
TMWZ	Te Maipa	1.10	59	P	Pg	14 38 54.1	-0.6
MRZ	Mangatainoka R	1.24	35	P	Pg	14 38 55.0	-2.3
TIWZ	Tintock	1.30	46	P	Pb	14 38 58.9	+0.4
CPWZ	Castlepoint	1.40	57	P	Pg	14 39 04.1	+3.6
PRWZ	Pori Road	1.51	42	P	Pn	14 38 59.8	-1.4
POWZ	Post Office Ro	1.54	34	P	Pn	14 39 01.3	-0.4
OHWZ	Ohakea	1.56	19	P	Pn	14 39 01.0	-0.9
BFZ	Birch Farm	1.57	51	P	Pg	14 39 03.5	-0.1
DVHZ	Dannevirke	1.80	40	P	Pn	14 39 03.1	-2.2
ANWZ	Angora Road	1.84	49	P	Pn	14 39 05.1	-0.8
WAZ	Wanganui	1.94	8	P	Pn	14 39 06.5	-0.7
PRHZ	Porangahau	2.06	47	P	Pb	14 39 11.0	-0.6
AMCZ	Amberley	2.10	224	P	Pb	14 39 10.9	-1.3
WPHZ	Waipukurau	2.11	41	P	Pn	14 39 10.5	+0.9
PNHZ	Pukenui	2.12	34	P	Pn	14 39 11.1	+1.4
LREZ	Lake Rotokare	2.23	355	P	Pn	14 39 11.7	+0.5
NMEZ	Namu Road	2.34	345	P	Pn	14 39 12.7	0.0
PXZ	Pawanui	2.35	46	P	Pn	14 39 13.6	+0.7
PREZ	Palmer Road	2.37	351	P	Pn	14 39 12.8	-0.3
MTVZ	Mangateitei	2.38	16	P	Pb	14 39 15.8	-1.2
KRHZ	Kereru	2.42	33	P	Pn	14 39 11.6	-2.3
MOVZ	Moawhango	2.42	21	P	Pn	14 39 14.5	+0.5
KHEZ	Kahui Hut	2.43	348	P	Pn	14 39 13.7	-0.3
BHHZ	Black Hill Sta	2.44	27	P	Pb	14 39 16.8	-1.2
PKVZ	Pokaka	2.45	13	P	Pn	14 39 16.0	+1.7
NBEZ	Newall Road No	2.48	346	P	Pn	14 39 16.3	+1.6
WHVZ	Whangaehu Hut	2.50	17	P	Pn	14 39 16.6	+1.5
FWVZ	Far West T-bar	2.52	16	P	Pn	14 39 17.3	+1.9
TUVZ	Tukino	2.53	18	P	Pn	14 39 17.3	+1.8
KAHZ	Kahuranaki	2.53	43	P	Pn	14 39 16.1	+0.7
OXZ	Oxford	2.53	229	P	Pn	14 39 16.1	+0.7
AKCZ	Akaroa Harbour	2.54	210	P	Pn	14 39 15.5	+0.1
PKE	Pukeiti	2.54	348	P	Pn	14 39 15.9	+0.4
VRZ	Vera Road	2.56	2	P	Pn	14 39 16.1	+0.5
INZ	Inchbonnie	2.60	245	P	Pn	14 39 13.9	-2.4
NGZ	Ngauruhoe	2.61	17	P	Pn	14 39 18.1	+1.6
KWHZ	Kaweka Forest	2.63	32	P	Pb	14 39 22.0	+0.7
WTVZ	West Tongariro	2.66	16	P	Pn	14 39 19.2	+2.0
TWVZ	Taurewa	2.68	13	P	Pb	14 39 20.4	-1.7
KRVZ	Karewarewa	2.69	17	P	Pn	14 39 19.5	+1.9
KATZ	Kakaramea	2.82	17	P	Pb	14 39 22.2	-2.3
RITZ	Rihia Road	2.86	19	P	Pb	14 39 24.2	-0.8
BKZ	Black Stump Fm	2.88	30	P	Pb	14 39 24.3	-1.2
HIZ	Hauiti	3.17	3	P	Pn	14 39 26.3	+2.2
WVZ	Waitaha Valley	3.21	243	P	Pn	14 39 25.3	+0.6
TOZ	Tahuroa Road	4.00	10	P	Pn	14 39 37.9	+2.3
MWZ	Matawai	4.01	34	P	Pn	14 39 35.9	+0.2
FOZ	Fox Glacier	4.02	241	P	Pn	14 39 37.2	+1.5
LBZ	Lake Benmore	4.24	229	P	Pn	14 39 36.4	-2.4
TWGZ	Tauwhareparae	4.34	37	P	Pn	14 39 42.7	+2.4
MKAZ	Moumakai	4.59	5	P	Pn	14 39 45.8	+2.2
AWAZ	Awhitu Peninsu	4.61	360	P	Pn	14 39 44.0	+0.1
ETAZ	East Tamaki Re	4.73	3	P	Pn	14 39 48.0	+2.5
OUZ	Omahuta	6.50	352	P	Pn	14 40 10.5	+0.6

DDA ***21*** *14:48:52.5, 37°.13N×27°.83E, h5^{km}±4^{km}, ML2.6*
ISK ***21*** *14:48:53.4, 37°.24N×28°.20E, h7^{km}, ML2.3/5*
ISC 21 14:48:53.8±1.3**, 37°.24N**±0°.03×**28°.17E**±0°.04**, h3**^{km}±16^{km}**, n13, σ0^{s}83**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.14	139	PG	Pg	14 48 56.4	-0.1
YER				SG	Sg	14 48 58.9	+0.6
AYDN	Tasoluk	0.48	331	*i* P	Pb	14 49 03.9	-1.1
AYDN				*i* S	Sb	14 49 11.4	-1.1
TURN	Turunc	0.50	136	*i* P	Pg	14 49 03.1	-0.3
TURN				*i* S	Sg	14 49 09.7	-0.2
TURN				IAML_P			
	comp=Z,1μm,0.1s						
DALY	Dalyan (Mula)	0.57	137	PG	Pg	14 49 04.6	-0.2
DAT	Datca	0.69	223	PG	Pg	14 49 07.6	+0.5
BODT	Bodrum	0.71	256	PG	Pg	14 49 07.8	+0.4
AYDB	Zeytinkoy-Aydi	0.74	343	PG	Pg	14 49 08.3	+0.3
GCAM	G?zelcaml?	0.88	302	*i* P	Pn	14 49 13.4	+0.3
GCAM				IAML_P			
	comp=Z,1μm,0.2s						
FETY	Fethiye	0.95	129	PG	Pb	14 49 11.8	-1.1
ARG	Arkhangelos	1.02	182	PG	Pb	14 49 13.5	-0.6
GOLH	Golhisar	1.11	90	*i* P	Pn	14 49 18.0	+1.6
GOLH				*i* S	Sn	14 49 39.7	+7.4
GOLH				IAML_P			
	comp=Z,398nm,0.2s						
MANT	Manisa	1.29	14	*i* P	Pb	14 49 19.4	+0.5
MANT				IAML_P			
	comp=Z,549nm,0.2s						
KULA	Kula-Manisa	1.33	17	PN	Pg	14 49 18.9	-0.5

ISCJB ***21*** *14:51:21.9±0.2, 20°.43S±0°.02×69°.01W±0°.03, h104^{km}±2^{km}, mb4.4/75, Error ellipse: s-maj=4.6km s-min=3.2km az=155.4*
SJA ***21*** *14:51:22.3±0.7, 20°.46S×69°.28W, h106^{km}±3^{km}, ML3.7, MW4.5*
NEIC ***21*** *14:51:23.0±0.0, 20°.46S×69°.19W, h99^{km}, mb4.5/63, MW4.6, ML4.5(GUC), Moment Tensor Solution. s23 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-7.01; M$_{\theta\theta}$-0.35; M$_{\phi\phi}$7.36; M$_{r\theta}$2.88; M$_{\theta\phi}$-3.33; M$_{\phi r}$-1.87; Best double couple: M$_{0}$8.60000×10^{15} NP1:φ$_{s}$177.00000°, δ38.00000°, λ-62.00000°. NP2:φ$_{s}$324.00000°, δ57.00000°, λ-110.00000°. Principal axes: T 9.0900, Plg10.0000°, Azm68.0000°; N -0.9800, Plg17.0000°, Azm335.0000°; P -8.1100, Plg70.0000°, Azm187.0000°; After GUC.*
NEIC Felt [III] at Huara, La Tirana, Pica and Pozo Almonte; [II] at Alto Hospicio and Iquique.
GUC ***21*** *14:51:23.0±0.6, 20°.46S×69°.19W, h99^{km}±3^{km}, ML4.5*
IDC ***21*** *14:51:23.5±0.4, 20°.40S×68°.94W, h101^{km}±3^{km}, mb4.1/17, mb1 4.2/20, mb1mx4.1/41, mbtmp4.5/20, MS3.3/2, Ms1 3.3/2, ms1mx2.8/24, Error ellipse: s-maj=14.3km s-min=6.7km az=88.0*
VAO ***21*** *14:51:24.1±0.5, 20°.45S×69°.00W, h110^{km}±4^{km}, mb4.7*
ISC 21 14:51:22.8±0.3**, 20°.43S**±0°.03×**69°.09W**±0°.05**, h99**^{km}±2^{km}**, h100**^{km}**:pP-P, n310, σ1^{s}27**/347**, mb4.5**/78**, 8C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.29	348	*e*P	Pn	14 51 38.7	+0.8
PB08				*e*S	Sn	14 51 51.2	+2.3
PB08	IPOC Station P	0.29	348	⇓*i*P	Pn	14 51 38.6	+0.8
PB08				*e*S	Sn	14 51 50.3	+1.3
PB08				IAML		14 51 51.3	
	comp=N,25μm,0.4s						
PB01	IPOC Station P	0.72	211	*e*Pn	Pn	14 51 40.4	-0.1
PB01	IPOC Station P	0.72	211	⇑*i*P	Pn	14 51 40.3	-0.1
PB01				*i* S	Sn	14 51 53.6	-0.1
PB01				IAML		14 51 55.2	
	comp=N,34μm,0.3s						
GO01	Chusmiza	0.76	353	*e*Pn	Pn	14 51 42.1	+0.8
GO01	Chusmiza	0.76	353	⇓*i*P	Pn	14 51 42.1	+0.8
GO01				*i* S	Sn	14 51 56.8	+1.6
PB11	IPOC Station P	0.85	321	*e*Pn	Pn	14 51 42.1	+0.3
PB11	IPOC Station P	0.85	321	*e*P	Pn	14 51 41.6	-0.2
PB11				*e*S	Sn	14 51 56.4	+0.3
PB11	IPOC Station P	0.85	321	⇓*i*P	Pn	14 51 42.2	+0.4
PB11				*i* S	Sn	14 51 56.6	+0.6
PB02	IPOC Station P	1.17	220	*e*P	Pn	14 51 44.9	-0.3
PB02				*e*S	Sn	14 52 00.8	-1.2
PB02	IPOC Station P	1.17	220	⇑*i*P	Pn	14 51 45.0	-0.2
PB02				*i* S	Sn	14 52 01.8	-0.2
PSGC	Pisagua	1.28	310	⇑*i*P	Pn	14 51 46.4	-0.1
PSGC				*i* S	Sn	14 52 04.0	-0.3
PSGCX	Pisagua	1.28	310	*e*P	Pn	14 51 46.0	-0.4
PB09	IPOC Station P	1.37	186	*e*P	Pn	14 51 48.1	+0.4
PB09	IPOC Station P	1.37	186	⇑*i*P	Pn	14 51 48.1	+0.4
PB09				*i* S	Sn	14 52 06.7	+0.3
PB09				IAML		14 52 13.0	
	comp=E,8μm,0.5s						
MNMC	Minye Minye	1.38	340	*e*Pn	Pn	14 51 48.8	+1.0
MNMC	Minye Minye	1.38	340	⇓*i*P	Pn	14 51 48.9	+1.0
MNMC				*i* S	Sn	14 52 07.8	+1.1
PB07	IPOC Station P	1.49	210	*e*P	Pn	14 51 48.5	-0.6
PB07	IPOC Station P	1.49	210	⇑*i*P	Pn	14 51 48.7	-0.5
PB07				*i* S	Sn	14 52 08.5	-0.6
PB07				IAML		14 52 10.7	
	comp=E,14μm,0.8s						
PB03	IPOC Station P	1.73	201	*e*P	Pn	14 51 51.9	-0.2
PB03				*e*S	Sn	14 52 13.9	-0.4
PB03	IPOC Station P	1.73	201	⇑*i*P	Pn	14 51 51.6	-0.5
PB03				*i* S	Sn	14 52 13.7	-0.6
PB03				IAML		14 52 16.9	
	comp=E,5μm,0.4s						
PB16	IPOC Station P	2.12	349	⇓*i*P	Pn	14 51 59.2	+1.6
PB04	IPOC Station P	2.14	207	*e*Pn	Pn	14 51 56.4	-1.0
PB04	IPOC Station P	2.14	207	*e*P	Pn	14 51 56.8	-0.6
PB12	IPOC Station P	2.15	327	*e*P	Pn	14 51 57.2	-0.3
PB12	IPOC Station P	2.15	327	⇓*i*P	Pn	14 51 57.3	-0.1
PB12				*i* S	Sn	14 52 24.2	+0.3
LVC	Limon Verde	2.18	176	P	Pn	14 51 59.6	+1.6
	comp=E,103nm,0.3s,baz=29,slow=10.0,SNR=360						
LVC				S	Sn	14 52 26.0	+1.0
	comp=E,397nm,0.3s,baz=140,slow=22,SNR=34						
LVC	Limon Verde	2.18	176	*e*Pn	Pn	14 51 59.0	+0.9
LVC	Limon Verde	2.18	176	*e*P	Pn	14 51 59.4	+1.3
LVC				*e*S	Sn	14 52 25.8	+0.9
LVC				IAML		14 52 28.3	
	comp=Z,878nm,0.5s						
LVC	Limon Verde	2.18	176	*e*P	Pn	14 51 59.0	+0.9
LVC				*e*S	Sn	14 52 26.2	+1.3
LVC	Limon Verde	2.18	176	*e*P	Pn	14 51 59.2	+1.1
LVC				*e*S	Sn	14 52 26.2	+1.3
PB06	IPOC Station P	2.31	191	*e*P	Pn	14 51 59.9	+0.2
PB06	IPOC Station P	2.31	191	IAML		14 52 29.9	
	comp=E,4μm,0.7s						
PB05	IPOC Station P	2.63	203	*e*P	Pn	14 52 03.0	-0.8
PB10	IPOC Station P	3.36	204	*e*Pn	Pn	14 52 11.7	-1.7
PB10	IPOC Station P	3.36	204	*e*P	Pn	14 52 11.8	-1.6
YJA	Yavi	3.76	118	*e*P	Pn	14 52 22.4	+3.2
YJA				IAML		14 52 24.1	
	comp=Z,41nm,0.7s						
LPAZ	La Paz	4.22	13	P	Pn	14 52 28.9	+3.4
	comp=Z,14nm,0.3s,baz=182,slow=8.4,SNR=183						
LPAZ				S	Sn	14 53 10.5	-3.6
	comp=Z,4.7nm,0.3s,baz=217,slow=16,SNR=2.3						
LPAZ	La Paz	4.22	13	*e*Pn	Pn	14 52 28.3	+2.8
LPAZ				*e*Sn	Sn	14 53 10.5	-3.6
LPAZ	La Paz	4.22	13	*e*P	Pn	14 52 27.9	+2.3
LPAZ	La Paz	4.22	13	⇑*i*P	Pn	14 52 28.6	+3.0
LPAZ	La Paz	4.22	13	*e*P	Pn	14 52 28.8	+3.2
HJA	Humahuaca	4.40	130	*e*P	Pn	14 52 30.9	+3.1
HJA				IAML		14 52 33.6	
	comp=Z,83nm,0.5s						
GO02	Mina Guanaco	4.74	186	*e*Pn	Pn	14 52 30.9	-1.4
GO03	Copiap	7.21	188	*e*Pn	Pn	14 53 01.8	-3.9
LCO	Las Campanas	8.67	189	*e*P	Pn	14 53 25.1	-0.6
SIV	San Ignacio	8.80	61	P	Pn	14 53 25.8	-1.6
	comp=Z,15nm,0.3s,baz=259,slow=12,SNR=127						
GO04	Tololo Observa	9.83	189	*e*Pn	Pn	14 53 36.2	-5.2
CFA	Coronel Fontan	11.16	176	P	Pn	14 53 55.1	-4.2
	comp=Z,0.5nm,0.3s,baz=6.1,slow=12,SNR=4.0						
CFA				S	Sn	14 55 48.4	-14
	comp=Z,0.3nm,0.3s,baz=302,slow=13,SNR=2.6						
CPUP	Villa Florida	12.29	121	P	Pn	14 54 13.2	-1.2
	comp=Z,0.3nm,0.3s,baz=310,slow=12,SNR=9.5						
CPUP				LR	LR	14 59 13.4	
	comp=Z,104nm,19.3s,baz=0.0,slow=39						
CPUP	Villa Florida	12.29	121	*e*P	Pn	14 54 13.0	-1.4
AQDB	Aquidauana	12.55	93	*e*P	Pn	14 54 16.4	-1.6
GO05	Huala	14.74	189	*e*Pn	Pn	14 54 46.2	-0.1
CLDB	Colider	15.93	55	*e*P	Pn	14 55 01.2	-0.2
PTGB	Pitanga	16.29	108	*e*P	Pn	14 55 07.1	+1.2
ITAB	Concordia	16.92	117	*e*P	P	14 55 15.7	+1.8
CPSB	Cacapava Do Su	17.26	128	*e*P	P	14 55 17.5	-0.2
ITRB	Iturama	17.61	91	*e*P	P	14 55 22.1	+0.4
PLTB	Pedras Altas	17.89	132	*e*P	P	14 55 24.3	-0.3
TRQA	Tornquist	18.62	162	*e*P	P	14 55 32.9	+0.4
OGAUY	Aigu	18.81	140	*e*P	P	14 55 34.7	+0.1
BB19B	Bebedouro	19.24	96	*e*P	P	14 55 39.1	-0.4
RCLB	Rio Claro- Sao	20.17	100	*e*P	P	14 55 48.7	-0.8
PLCA	Paso Flores	20.28	183	P	P	14 55 51.3	+0.7
	comp=Z,35nm,0.9s,baz=29,slow=12,SNR=39						
PLCA	Paso Flores	20.28	183	*e*P	P	14 55 50.3	-0.3
	comp=Z,41nm,0.9s						
PLCA	Paso Flores	20.28	183	*e*P	P	14 55 51.5	+0.9
SPB	Sao Paulo	20.32	103	*e*P	P	14 55 51.1	0.0
BDFB	Brasilia	20.59	80	P	P	14 55 53.1	-1.1
	comp=Z,15nm,0.6s,baz=252,slow=13,SNR=17						
PMNB	Patos De Minas	21.44	89	*e*P	P	14 56 01.7	-1.5
PTGA	Pitinga	21.51	26	P	P	14 56 01.6	-2.4
	comp=Z,17nm,0.5s,baz=207,slow=11,SNR=25						
PTGA	Pitinga	21.51	26	*e*P	P	14 56 00.9	-3.0
	comp=Z,19nm,0.7s						
PTGA	Pitinga	21.51	26	*e*P	P	14 56 01.9	-2.1
PEXB	Peixe	21.59	71	*e*P	P	14 56 03.5	-1.2
PARB	Paraibuna	21.96	102	*e*P	P	14 56 07.8	-1.0
BSCB	Bom Sucesso	22.75	96	*e*P	P	14 56 15.7	-1.3
ESAR	Angra dos Reis	23.04	101	*e*P	P	14 56 19.4	-0.3
SMTB	Santa Maria do	23.73	64	*e*P	P	14 56 25.9	-0.3
VAS01	Vassouras-RJ	23.95	99	*e*P	P	14 56 27.4	-0.7
DUB01	Friburgo-RJ	24.94	99	*e*P	P	14 56 36.5	-0.6
CAM01	Campos-RJ	25.61	98	*e*P	P	14 56 42.9	-0.2
SJMB	Sao Joao De Ma	26.34	91	*e*P	P	14 56 49.2	-0.5
ALF01	Guarapari-ES	26.55	95	*e*P	P	14 56 51.5	-0.1
BSFB	Barra de Sao F	26.64	91	*e*P	P	14 56 51.9	-0.5
RIB01	Linhares ES	27.00	93	*e*P	P	14 56 55.0	-0.6
MDP	Montagnes des	30.08	34	P	P	14 57 22.6	-0.3
	comp=Z,15nm,1.2s,baz=180,slow=13,SNR=5.2						
PCRV	Puerto La Cruz	30.73	9	P	P	14 57 30.1	+1.4
	comp=Z,11nm,0.9s,baz=286,slow=1.1,SNR=5.5						
NBMO	Morrinhos-CE	33.02	63	*e*P	P	14 57 48.6	-0.3
NBLI	Livramento-PB	33.71	72	*e*P	P	14 57 55.0	0.0
NBPA	Parau_RN	34.30	69	*e*P	P	14 57 59.4	-0.5
USHA	Ushuaia	34.35	179	P	P	14 57 58.2	-1.7
	comp=Z,9.0nm,0.9s,baz=354,slow=10,SNR=3.2						
RCBR	Riachuelo	35.33	70	*e*P	P	14 58 06.5	-2.3
	comp=Z,16nm,0.9s						
RCBR	Riachuelo	35.33	70	*e*P	P	14 58 08.3	-0.6
OBIP	Obispado Ponce	38.31	4	*e*P	P	14 58 32.0	-1.9
	comp=Z,26nm,0.6s						
SJG	San Juan	38.41	5	P	P	14 58 33.2	-1.5
	comp=Z,14nm,0.6s,baz=145,slow=6.3,SNR=8.4						
SJG	San Juan	38.41	5	*e*P	P	14 58 33.0	-1.7
	comp=Z,20nm,0.8s						
PMSA	Palmer Station	44.45	177	*e*P	P	14 59 23.0	-0.6
251A	Midway	54.51	343	P	P	15 00 39.9	-0.5
	baz=161						
X60A	Albert Glenn T	55.35	351	P	P	15 00 45.6	-0.8
	baz=170						
X58A	Rowland	55.54	350	P	P	15 00 48.5	+0.7
	baz=168						
Z50A	Ashland	55.75	343	P	P	15 00 48.9	-0.5
	baz=161						
Z49A	Columbiana	55.86	342	P	P	15 00 49.5	-0.6
	baz=160						
Y51A	Rockmart	56.13	344	P	P	15 00 51.3	-0.7
	baz=162						
V56A	Mocksville	56.96	349	P	P	15 00 58.4	+0.5
	baz=167						
W50A	Signal Mountai	57.42	344	P	P	15 01 00.4	-0.8
	baz=162						
V49A	McMinnville	58.11	344	P	P	15 01 05.5	-0.5
	baz=162						
V48A	Smith Brothers	58.33	343	*e*P	P	15 01 06.6	-1.0
	comp=Z,7.4nm,1.0s						
V48A	Smith Brothers	58.33	343	P	P	15 01 07.1	-0.4
	baz=161						
V47A	Nunnelly	58.61	342	P	P	15 01 08.2	-1.2
	baz=160						
S55A	Lewisburg	58.88	349	P	P	15 01 11.5	+0.2
	baz=168						
WVT	Waverly	58.98	342	*e*P	P	15 01 10.3	-1.7
	comp=Z,6.0nm,0.8s						
WVT	Waverly	58.98	342	P	P	15 01 11.1	-0.9
	baz=160						
U47A	Clarksville	59.12	343	P	P	15 01 12.3	-0.6
	baz=160						
T49A	Edmonton	59.29	345	*e*P	P	15 01 13.2	-0.9
	comp=Z,6.3nm,0.6s						
T49A	Edmonton	59.29	345	P	P	15 01 13.5	-0.6
	baz=162						
MIAR	Mount Ida	59.42	337	P	P	15 01 15.0	-0.1
	baz=153						
T47A	Sharon Grove	59.58	343	*e*P	P	15 01 14.9	-1.2
	comp=Z,8.2nm,0.9s						
T47A	Sharon Grove	59.58	343	P	P	15 01 15.6	-0.5
	baz=160						
LTX	Lajitas	59.66	325	*e*P	P	15 01 17.1	+0.1
TXAR	Lajitas Array	59.66	325	P	P	15 01 17.1	+0.1
	comp=Z,0.6nm,0.6s,baz=150,slow=9.5,SNR=6.6						
T46A	Princeton	59.85	343	P	P	15 01 17.7	-0.3
	baz=160						
Q55A	Buckhannon	60.00	350	P	P	15 01 19.7	+0.7
	baz=168						
W39A	Magazine	60.08	337	P	P	15 01 19.8	+0.2
	baz=153						
Q54A	Coxs Mills	60.11	349	P	P	15 01 19.7	0.0
	baz=167						
ABTX	Abilene, Hawle	60.30	330	P	P	15 01 21.1	-0.1
	baz=147						
PBMO	Poplar Bluff	60.36	340	*e*P	P	15 01 20.6	-0.9
	comp=Z,5.7nm,0.6s						
P55A	Reedsville	60.46	350	P	P	15 01 22.6	+0.5
	baz=169						
P54A	Burton	60.66	350	P	P	15 01 24.0	+0.6
	baz=168						
P53A	Whipple	60.70	349	P	P	15 01 24.0	+0.3
	baz=167						
U40A	Yellville	60.78	338	P	P	15 01 24.3	-0.1
	baz=155						
O57A	Amberson	60.85	353	P	P	15 01 24.9	+0.2
	baz=171						
S44A	Carbondale	60.85	342	P	P	15 01 24.5	-0.3
	baz=158						
Q48A	North Vernon	61.07	345	P	P	15 01 27.5	+1.3
	baz=162						
HHAR	Hobbs	61.10	337	*e*P	P	15 01 25.9	-0.7
	comp=Z,67nm,0.6s						
VNA3	Neumayer Olymp	61.14	161	P	P	15 01 27.0	+0.6
N60A	Cedar Hill Far	61.24	355	P	P	15 01 28.0	+0.7
	baz=174						
VNA1	Neumayer--Stat	61.35	161	P	P	15 01 28.8	+1.1
O53A	New Philadelph	61.41	349	P	P	15 01 28.5	0.0
	baz=167						
TUL1	Leonard	61.47	335	P	P	15 01 29.1	+0.1
	baz=152						
CCM	Cathedral Cave	61.79	340	*e*P	P	15 01 30.4	-0.7
	comp=Z,6.1nm,1.0s						
CCM	Cathedral Cave	61.79	340	P	P	15 01 30.5	-0.6
	baz=156						
O48A	Farmland	62.20	346	P	P	15 01 32.7	-1.1
	baz=163						
MNTX	Cornudas Mount	62.42	325	*e*P	P	15 01 34.7	-0.8
	comp=Z,4.2nm,1.2s						
MNTX	Cornudas Mount	62.42	325	P	P	15 01 35.1	-0.4
	baz=142						
N49A	Columbus Grove	62.63	347	*e*P	P	15 01 36.2	-0.4
N49A				*e*pP	pP	15 02 01.4	-0.8
P43A	Skaggs, Pawnee	62.73	342	P	P	15 01 36.6	-0.7
	baz=159						
N48A	Decatur	62.75	346	P	P	15 01 36.7	-0.7
	baz=163						
MSTX	Muleshoe	62.90	329	*e*P	P	15 01 38.1	-0.6
	comp=Z,12nm,1.3s						
MSTX	Muleshoe	62.90	329	P	P	15 01 38.9	+0.2
	baz=144						
SNAA	Sanae	63.34	161	P	P	15 01 41.8	+0.7
SNAA	Sanae	63.34	161	P	P	15 01 41.8	+0.7
	comp=Z,8.2nm,0.8s,baz=272,slow=6.6,SNR=36						
SNAA				pP	pP	15 02 07.8	+0.8
	comp=Z,3.3nm,0.7s,baz=264,slow=9.3,SNR=4.1						
SNAA	Sanae	63.34	161	*e*P	P	15 01 41.8	+0.7
	comp=Z,12nm,0.9s						
SNAA				*e*pP	pP	15 02 07.8	+0.8
319A	Douglas	64.34	322	*e*P	P	15 01 49.2	+0.9
	comp=Z,10nm,0.8s						
121A	Cookes Peak, D	64.37	324	P	P	15 01 49.4	+0.9
	baz=140						
LONY	Lake Ozonia	64.92	356	P	P	15 01 51.6	-0.1
	baz=174						
ANMO	Albuquerque	65.51	327	*e*P	P	15 01 54.5	-1.4
	comp=Z,3.6nm,1.4s						
ANMO	Albuquerque	65.51	327	P	P	15 01 56.1	+0.2
	baz=142						
ORIO	Orleans, Innes	65.82	355	P	P	15 01 57.2	-0.1
	baz=174						
TUC	Tucson	65.89	322	*e*P	P	15 01 57.7	-0.6
	comp=Z,6.0nm,1.4s						
TUC	Tucson	65.89	322	P	P	15 01 58.8	+0.6
	baz=137						
BUKO	Buck Lake	66.22	352	P	P	15 02 00.2	+0.2
	baz=170						
F51A	Arnstein	66.77	352	P	P	15 02 04.4	+1.0
	baz=169						
214A	Organ Pipe Nat	66.83	320	P	P	15 02 05.8	+1.6
	baz=135						
E54A	Lac Daplat, Po	66.95	354	P	P	15 02 05.5	+0.9
	baz=172						
SDCO	Great Sand Dun	67.24	329	*e*P	P	15 02 07.4	+0.4
	comp=Z,5.5nm,1.1s						
SDCO	Great Sand Dun	67.24	329	P	P	15 02 08.0	+1.0
	baz=143,SNR=6.5						
D53A	Lac Vacive, Po	67.64	354	P	P	15 02 09.3	+0.4
	baz=171						
X16A	Lo Mia Camp, P	67.80	323	*e*P	P	15 02 11.4	+0.9
	comp=Z,4.9nm,1.1s						
S22A	4UR Ranch, Cre	67.89	328	P	P	15 02 12.1	+1.0
	baz=142						
MVCO	Mesa Verde	68.31	327	P	P	15 02 14.7	+1.0
	baz=140						
Y14A	Wickenburg	68.35	322	*e*P	P	15 02 15.2	+1.4
	comp=Z,3.0nm,0.8s						
WUAZ	Wupatki	68.57	324	*e*P	P	15 02 16.2	+1.0
	comp=Z,5.9nm,0.8s						
WUAZ	Wupatki	68.57	324	P	P	15 02 16.6	+1.4
	baz=138						
DBIC	Dimbokro	68.59	74	P	P	15 02 14.8	-0.9
	comp=Z,5.9nm,0.8s,baz=211,slow=10,SNR=4.0						
DBIC				pP	pP	15 02 40.8	-1.3
	comp=Z,8.0nm,0.8s,baz=218,slow=4.8,SNR=3.2						
DBIC				LR	LR	15 31 15.2	
	comp=Z,31nm,19.1s,baz=202,slow=35						
GLA	Glamis	68.81	320	P	P	15 02 18.1	+1.4
	baz=134						
Y12C	Blythe	69.12	321	P	P	15 02 19.9	+1.5
	baz=135						
PDMCI	Parker Dam,Lak	69.28	321	P	P	15 02 20.6	+1.2
	baz=135						
IKP	In-Ko-Pah, Jac	69.32	319	P	P	15 02 21.6	+1.7
	baz=133						
SWSC	Sam W. Stewart	69.33	319	P	P	15 02 21.4	+1.7
	baz=133						
BC3	Big Chuckawall	69.61	320	P	P	15 02 23.2	+1.6
	baz=134,SNR=5.0						
MONP2	Monument Peak	69.68	319	P	P	15 02 23.6	+1.4
	baz=133						
W13A	Hualapai Mount	69.69	322	*e*P	P	15 02 20.9	-1.4
	comp=Z,2.6nm,0.8s						
U15A	North Rim	69.74	324	*e*P	P	15 02 22.9	+0.3
	comp=Z,4.9nm,0.8s						
QSPA	South Pole Qui	69.76	180	*e*P	P	15 02 23.7	+1.6
	comp=Z,7.4nm,0.9s						
QSPA				*e*pP	pP	15 02 49.5	+1.6
IRM	Iron Mountain	69.77	320	P	P	15 02 24.1	+1.6
	baz=134,SNR=6.5						
N23A	Red Feather La	69.96	331	P	P	15 02 24.8	+0.9
	baz=143						
BELC	Belle Mtn. Jos	70.17	320	P	P	15 02 26.6	+1.5
	baz=134						
PFO	Pinyon Flats O	70.19	319	*e*P	P	15 02 26.0	+0.8
	comp=Z,7.7nm,1.3s						
PFO	Pinyon Flats O	70.19	319	P	P	15 02 26.8	+1.6
	baz=133						
KNB	Kanab	70.46	324	*e*P	P	15 02 27.8	+1.0
	comp=Z,16nm,1.1s						
GMRC	Granite Mounta	70.51	321	P	P	15 02 29.0	+1.8
	baz=134,SNR=6.2						
LCMT	Little Creek M	70.69	324	*e*P	P	15 02 29.8	+1.6
	comp=Z,5.5nm,1.1s						
SRU	San Rafael Swe	70.79	327	*e*P	P	15 02 28.9	+0.1
	comp=Z,5.7nm,0.7s						
MTPU	Mount Pierson	70.86	325	*e*P	P	15 02 29.5	0.0
	comp=Z,2.8nm,0.8s						
HEC	Hector,Ludlow	70.94	320	P	P	15 02 31.5	+1.8
	baz=134						
EYMN	Ely	70.97	344	P	P	15 02 29.5	0.0
	baz=158						
Q16A	Castle Valley	70.98	326	*e*P	P	15 02 30.6	+0.6
	comp=Z,28nm,1.8s						
SZCU	Shurtz Canyon	71.03	324	*e*P	P	15 02 31.5	+1.2
	comp=Z,2.6nm,0.7s						
TUQ	Turquoise Moun	71.11	321	P	P	15 02 32.3	+1.5
	baz=134						
CCUT	Cedar City	71.15	324	*e*P	P	15 02 32.2	+1.2
	comp=Z,8.8nm,0.8s						
P17A	Butcher Ranch,	71.17	327	*e*P	P	15 02 31.5	+0.4
	comp=Z,8.1nm,0.9s						
BFSC	Mount Baldy Ra	71.35	319	P	P	15 02 33.9	+1.7
	baz=132						
SHPR	Sheep Range	71.41	322	*e*P	P	15 02 34.2	+1.6
	comp=Z,4.6nm,0.9s						
GSC	Goldstone, Bar	71.55	320	P	P	15 02 34.9	+1.6
	baz=133						
EDW2	Edwards Air Fo	71.98	319	P	P	15 02 37.2	+1.2
	baz=132,SNR=5.1						
MPU	Maple Canyon	72.03	327	*e*P	P	15 02 37.0	+0.7
	comp=Z,4.8nm,1.0s						
PSUT	Pine Spring	72.12	325	*e*P	P	15 02 38.4	+1.5
	comp=Z,5.2nm,0.7s						
BLG	Laguna Peak, P	72.14	318	P	P	15 02 38.0	+1.2
	baz=131						
LRMC	Laurel Mtn Rad	72.19	320	P	P	15 02 38.5	+1.3
	baz=133						
TPNV	Topopah Spring	72.35	322	*e*P	P	15 02 40.1	+1.9
	comp=Z,6.7nm,1.0s						
TPNV	Topopah Spring	72.35	322	P	P	15 02 40.3	+2.1
	baz=134,SNR=7.8						
FURC	Furnace Creek,	72.38	321	P	P	15 02 40.2	+2.1
	baz=133						
JLU	Jordanelle	72.38	327	*e*P	P	15 02 39.8	+1.4
	comp=Z,6.7nm,1.1s						
MPMC	Manual Prospec	72.47	321	P	P	15 02 40.6	+1.6
	baz=133						
DAC	Darwin (Calif)	72.68	321	*e*P	P	15 02 43.1	+2.9
	comp=Z,4.9nm,0.8s						
DUG	Dugway, Tooele	72.78	326	*e*P	P	15 02 41.7	+1.1
	comp=Z,6.1nm,1.1s						
DUG	Dugway, Tooele	72.78	326	P	P	15 02 42.1	+1.5
	baz=138,SNR=5.8						
ISA	Isabella, Lake	72.80	320	*e*P	P	15 02 42.3	+1.5
	comp=Z,8.2nm,0.8s						
ISA	Isabella, Lake	72.80	320	P	P	15 02 42.6	+1.9
	baz=132,SNR=6.3						
R11A	Troy Canyon, C	72.95	323	*e*P	P	15 02 43.1	+1.4
	comp=Z,3.2nm,0.8s						
R11A	Troy Canyon, C	72.95	323	P	P	15 02 43.5	+1.8
	baz=135,SNR=8.2						
CWC	Cottonwood Cre	73.08	321	P	P	15 02 44.2	+1.7
	baz=132						
BW06	Boulder Array	73.10	330	P	P	15 02 44.4	+1.8
	baz=141						
PD31	Pinedale Array	73.10	330	*e*P	P	15 02 42.7	+0.1
PD31				*e*pP	pP	15 03 09.0	+0.3
PD31				*e*sP	sP	15 03 20.4	+0.7
PDAR	Pinedale Array	73.10	330	P	P	15 02 42.7	+0.1
	comp=Z,0.3nm,0.6s,baz=128,slow=5.8,SNR=3.7						
PDAR				pP	pP	15 03 09.0	+0.3
	comp=Z,0.5nm,0.6s,baz=141,slow=8.9,SNR=2.5						
PDAR				sP	sP	15 03 20.4	+0.7
	comp=Z,0.6nm,0.5s,baz=151,slow=7.5,SNR=3.0						
PKM	Mcpherson Peak	73.11	318	P	P	15 02 44.5	+1.7
	baz=131,SNR=5.9						
MDND	Maddock	73.27	339	P	P	15 02 44.1	+0.9
	baz=150						
VES	Vestal, Richgr	73.28	319	P	P	15 02 45.1	+1.6
	baz=132						
SPUT	South Promonto	73.41	327	*e*P	P	15 02 44.0	-0.3
	comp=Z,5.8nm,0.9s						
BGU	Big Grassy Mou	73.42	327	*e*P	P	15 02 44.7	+0.3

	comp=Z,4.3nm,1.0s						
SMMC	Simmler	73.50	319	P	P	15 02 46.9	+2.1
	baz=131						
LOHW	Long Hollow	74.24	330	eP	P	15 02 49.5	+0.3
	comp=Z,2.3nm,0.9s						
ULM	Lac du Bonnet	74.25	343	P	P	15 02 48.4	-0.4
	comp=Z,1.5nm,0.5s,baz=112,slow=4.9,SNR=3.9						
TPAW	Teton Pass	74.31	330	eP	P	15 02 50.6	+0.9
	comp=Z,3.8nm,0.9s						
OMMB	Old Mammoth Mi	74.41	321	eP	P	15 02 50.5	0.0
	comp=Z,6.9nm,0.8s						
ELK	Elko	74.45	325	eP	P	15 02 51.1	+0.6
	comp=Z,7.3nm,1.5s						
FXWY	Fox Creek	74.46	330	eP	P	15 02 51.3	+0.8
	comp=Z,2.2nm,1.0s						
NV01	Mina Array Sit	74.55	322	eP	P	15 02 52.7	+1.6
NV01				epP	pP	15 03 17.9	+0.8
NVAR	Mina Array Bea	74.55	322	P	P	15 02 52.7	+1.6
	comp=Z,2.4nm,0.8s,baz=155,slow=6.8,SNR=16						
NVAR				pP	pP	15 03 17.9	+0.8
	comp=Z,0.9nm,0.8s,baz=140,slow=7.1,SNR=2.5						
IMW	Indian Meadow	74.61	330	eP	P	15 02 52.4	+0.9
	comp=Z,6.5nm,1.2s						
FLWY	Flagg Ranch	74.64	330	eP	P	15 02 51.9	+0.3
	comp=Z,7.5nm,0.9s						
RLMT	Red Lodge	74.80	332	eP	P	15 02 52.5	+0.1
	comp=Z,12nm,1.5s						
RLMT	Red Lodge	74.80	332	P	P	15 02 53.9	+1.5
	baz=141						
KVN	Kaiserville	74.85	322	eP	P	15 02 53.4	+0.5
	comp=Z,5.5nm,0.9s						
YHH	Holmes Hill	75.25	331	eP	P	15 02 56.2	+1.0
	comp=Z,7.6nm,1.0s						
DGMT	Dagmar	75.42	337	P	P	15 02 56.8	+1.1
	baz=146						
PAHR	Pah Rah Range	76.03	322	eP	P	15 03 00.8	+1.3
	comp=Z,9.2nm,0.8s						
HLID	Hailey	76.05	328	eP	P	15 03 00.6	+1.0
	comp=Z,3.9nm,0.8s						
HLID	Hailey	76.05	328	P	P	15 03 01.3	+1.7
	baz=137						
MCMT	McKenzie Canyo	76.22	330	eP	P	15 03 01.6	+1.0
BOZ	Bozeman (W)	76.23	331	eP	P	15 03 01.6	+1.1
	comp=Z,13nm,1.8s						
BOZ	Bozeman (W)	76.23	331	P	P	15 03 01.7	+1.2
	baz=139						
TOA1	Torodi Ar. Sit	77.16	71	eP	P	15 03 05.4	-0.8
TOA1				epP	pP	15 03 31.2	-1.9
TOA0	Torodi Ar. Sit	77.16	71	eP	P	15 03 04.9	-1.3
TOA0				epP	pP	15 03 32.0	-1.1
TORD	Torodi Ar. Bea	77.16	71	P	P	15 03 05.4	-0.8
	comp=Z,4.2nm,0.5s,baz=260,slow=4.6,SNR=43						
TORD				pP	pP	15 03 31.2	-1.9
	comp=Z,5.4nm,0.7s,baz=274,slow=4.7,SNR=7.4						
SYO	Syowa Base	77.56	160⇑	eP	P	15 03 06.8	-0.7
SYO	Syowa Base	77.56	160⇓	ePcP	PcP	15 03 13.0	-4.4
VNDA	Vanda	77.87	190	P	P	15 03 11.5	+2.3
	comp=Z,1.1nm,0.7s,baz=116,slow=5.6,SNR=5.5						
PLID	Pearl Lake	77.94	328	eP	P	15 03 10.1	-0.1
	comp=Z,5.9nm,0.9s						
BMO	Blue Mountains	78.43	327	eP	P	15 03 13.3	+0.5
	comp=Z,4.4nm,0.9s						
N02D	Trinity Center	78.78	322	P	P	15 03 15.7	+1.0
	baz=130						
M04C	Macdoel	78.80	323	P	P	15 03 15.9	+1.1
	baz=131						
J05D	Fort Rock, OR	79.44	324	P	P	15 03 19.5	+1.1
	baz=131						
PINE	Pine Mountain	79.61	325	eP	P	15 03 20.6	+1.3
	comp=Z,5.8nm,0.8s						
J04D	Umpqua Nationa	79.90	324	P	P	15 03 22.0	+1.1
	baz=131						
I05D	Terrebonne, OR	80.19	325	P	P	15 03 24.1	+1.8
	baz=131						
I04A	Tendick Farm,	80.42	324	P	P	15 03 24.2	+0.7
	baz=130						
TSUM	Tsumeb	80.51	107	P	P	15 03 25.4	+0.6
	comp=Z,2.3nm,0.8s,baz=280,slow=12,SNR=3.4						
G05D	Wamic, OR	80.78	326	P	P	15 03 27.2	+1.8
	baz=132						
I03D	Drain, OR	80.88	323	P	P	15 03 27.0	+1.1
	baz=130						
C09A	Chrisman Ranch	80.97	329	eP	P	15 03 27.3	+1.0
	comp=Z,5.8nm,0.6s						
MDT	Midelt	81.19	50	P	P	15 03 28.5	+0.6
	comp=Z,1.2nm,0.8s,baz=228,slow=2.3,SNR=4.1						
B05A	Bryant	83.17	327	P	P	15 03 38.2	+0.5
	baz=131						
BOSA	Boshof	84.10	118	pP	pP	15 04 11.6	+1.0
	comp=Z,5.7nm,1.0s,baz=271,slow=4.7,SNR=3.7						
ESDC	Sonseca Array	85.19	45	pP	pP	15 04 15.0	-0.6
	comp=Z,0.1nm,0.4s,baz=244,slow=4.3,SNR=2.5						
LBTB	Lobatse	85.62	115	pP	pP	15 04 18.4	+0.1
	comp=Z,5.7nm,0.8s,baz=291,slow=4.0,SNR=5.3						
YKA	Yellowknife Ar	90.12	341	P	P	15 04 11.6	+0.4
	comp=Z,3.0nm,0.8s,baz=135,slow=4.9,SNR=26						
YKA				pP	pP	15 04 38.0	-0.3
	comp=Z,4.4nm,0.9s,baz=133,slow=4.5,SNR=8.5						
YKB5	Yellowknife Ar	90.12	341	eP	P	15 04 11.7	+0.4
YKB5				epP	pP	15 04 38.0	-0.3
YKW3	Yellowknife Ar	90.18	341	eP	P	15 04 11.8	+0.2
	comp=Z,7.4nm,1.0s						
POKR	Poker Plat Res	103.55	335	P	Pdif	15 05 11.6	-0.5
	baz=109						
TOLK	Toolik Lake Re	105.43	338	P	PKiKP	15 09 32.8	-0.8
	baz=106						
H11S2	WAKE ISLAND Hy	127.57	278	T	T	17 30 06.8	
	baz=102,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	127.58	278	T	T	17 30 07.7	
	baz=102,slow=75,SNR=74						
H11S3	WAKE ISLAND Hy	127.59	278	T	T	17 30 09.8	
	baz=102,slow=75,SNR=48						
H11N3	WAKE ISLAND Hy	127.62	280	T	T	17 30 11.6	
	baz=102,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	127.64	280	T	T	17 30 13.2	
	baz=102,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	127.64	280	T	T	17 30 11.8	
	baz=102,slow=75,SNR=28						
ABKAR	Akbulak array	130.47	42	ePKPdf	PKPdf	15 10 21.9	+0.1
ASAR	Alice Springs	130.78	208	PKP	PKPdf	15 10 23.1	-0.1
	comp=Z,1.4nm,0.8s,baz=129,slow=1.7,SNR=17						
ASAR				pPKP	pPKPdf	15 10 51.5	0.0
	comp=Z,0.4nm,0.7s,baz=129,slow=2.1,SNR=2.6						
AS31	Alice Springs	130.78	208	ePKPdf	PKPdf	15 10 23.1	-0.1
AS31				epPKPdf	pPKPdf	15 10 51.5	-0.1
WR1	Warramunga Arr	133.78	211	ePKPdf	PKPdf	15 10 29.1	+0.2
WRA	Warramunga Arr	133.78	211	PKP	PKPdf	15 10 29.1	+0.2
	comp=Z,1.3nm,0.6s,baz=171,slow=2.2,SNR=12						
ZAA1	Zalesovo Array	141.05	24	ePKPdf	PKPdf	15 10 42.2	+1.0
ZAA1				epPKPdf	pPKPdf	15 11 09.8	-0.1
ZALV	Zalesovo Beam	141.05	24	PKP	PKPdf	15 10 42.2	+1.0
	comp=Z,2.0nm,0.7s,baz=290,slow=2.7,SNR=8.1						
ZALV				pPKP	pPKPdf	15 11 09.8	-0.1
	comp=Z,2.4nm,0.7s,baz=300,slow=3.2,SNR=4.9						
KSH	Kashi	144.55	50	ePKP	PKPbc	15 10 47.8	+0.8
KSH				PKS	PKSdf	15 14 21.5	-2.2
MAKZ	Makanchi	144.68	35	ePKPdf	PKPab	15 10 47.2	+0.3
MK31	Makanchi Array	144.86	35	ePKPbc	PKPbc	15 10 48.0	+0.4
MK32	Makanchi Array	144.86	35	ePKPbc	PKPab	15 10 48.1	+0.6
MK32				epPKPdf	pPKPdf	15 11 15.8	-1.0
MKAR	Makanchi Array	144.86	35	PKP	PKPab	15 10 48.1	+0.6
	comp=Z,1.9nm,0.7s,baz=323,slow=3.8,SNR=16						
MKAR				pPKP	pPKPdf	15 11 15.8	-1.0
	comp=Z,2.7nm,0.8s,baz=338,slow=2.9,SNR=7.2						
ERM	Erimo	145.33	316	ePKPbc	PKPab	15 10 50.9	+1.5
USRK	Ussuriysk Ar.	150.52	328	PKPbc	PKiKP	15 11 03.9	+0.2
	comp=Z,3.9nm,0.8s,baz=26,slow=1.1,SNR=13						
USRK				pPKPbc	pPKPbc	15 11 30.2	-0.8
	comp=Z,2.7nm,0.8s,baz=8.4,slow=0.8,SNR=5.2						
MJAR	Matsushiro Arr	151.27	310	PKPbc	PKPbc	15 11 05.2	+0.1
	comp=Z,3.5nm,0.8s,baz=92,slow=1.4,SNR=15						
MJAR				pPKPbc	pPKPbc	15 11 32.5	-0.6
	comp=Z,2.8nm,0.8s,baz=85,slow=1.8,SNR=4.8						
MAJO	Matsushiro	151.27	310	ePKPbc	PKPbc	15 11 04.8	-0.2
MAJO				e		15 11 32.5	
MAT	Matsushiro	151.27	310	PKP	PKiKP	15 11 05.4	-0.2
MJB9	Matsu-Tunnel	151.27	310	ePKPbc	PKPbc	15 11 05.0	-0.2
SONA0	Songino Array	152.41	7	ePKPdf	PKPdf	15 11 02.1	+1.5
SONA0				ePKPbc	PKiKP	15 11 08.1	+0.3
SONM	Songino Array	152.41	7	PKP	PKPdf	15 11 02.1	+1.5
	comp=Z,0.8nm,0.8s,baz=272,slow=1.3,SNR=4.1						
SONM				PKPbc	PKiKP	15 11 08.1	+0.3
	comp=Z,2.0nm,0.5s,baz=301,slow=1.2,SNR=9.7						
SONM				pPKP	pPKPdf	15 11 28.7	-0.6
	comp=Z,1.3nm,0.7s,baz=313,slow=2.2,SNR=4.0						
SONM				pPKPbc	pPKPbc	15 11 37.1	+1.0
	comp=Z,1.8nm,0.6s,baz=358,slow=4.5,SNR=6.0						
KSRS	Korea Array	157.49	323	PKPab	PKPab	15 11 38.2	-1.5
	comp=Z,0.2nm,0.3s,baz=98,slow=2.2,SNR=4.1						
KS15	Wonju Array Si	157.52	323	ePKPab	PKPab	15 11 38.2	-1.6
LZH	Lanzhou	163.21	20	ePKP	PKPdf	15 11 21.3	+7.1
LZH				pPKP	sPKPdf	15 11 48.5	-5.3
LZH				sPKP		15 11 59.1	
LZH				PKP	PKPab	15 12 13.0	+8.1
CD2	Chengdu	167.74	30	PKP	PKPdf	15 11 16.4	-1.6

WEL 21 14:52:05.1, 42°S±1°×17°4E±°, h10^{km}±2^{km}, M3.3/46, ML3.6/44, MLv3.3/46, Error ellipse: s-maj=0.0km s-min=0.0km az=137.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	198	P	Pg	14 52 09.1	+0.8
TUWZ	Tuamarina	0.31	307	P	Pb	14 52 12.0	-0.7
BSWZ	Blackbirch Sta	0.31	251	P	Pg	14 52 06.8	-4.5
TCW	Tory Channel	0.40	1	P	Pg	14 52 13.7	+0.6
BHW	Baring Head	0.50	66	P	Pb	14 52 15.7	-0.3
WEL	Wellington	0.50	49	P	Pb	14 52 15.7	-0.3
PLWZ	Palliser	0.74	87	P	Pb	14 52 20.3	+0.2
MSWZ	Moikau Station	0.76	75	P	Pb	14 52 20.6	+0.1
NNZ	Nelson	0.78	300	P	Pg	14 52 20.2	+0.1
CAW	Cannon Point	0.79	50	P	Pb	14 52 20.7	-0.2
DUWZ	D'Urville Isla	0.85	342	P	Pb	14 52 22.2	+0.1
PAWZ	Paruwai Farm	0.90	75	P	Pb	14 52 23.3	+0.4
KHZ	Kahutara	0.97	214	P	Pg	14 52 23.9	+0.1
MTW	Mount Morrison	1.03	64	P	Pg	14 52 25.0	0.0
THZ	Tophouse	1.03	261	P	Pg	14 52 24.7	-0.3
OGWZ	Otaki Gorge	1.05	41	P	Pg	14 52 25.2	0.0
TRWZ	Traveller	1.09	79	P	Pg	14 52 25.4	-0.6
HOWZ	Holdsworth Sta	1.18	53	P	Pn	14 52 27.7	0.0
TMWZ	Te Maipa	1.32	68	P	Pn	14 52 28.9	-0.8
MRZ	Mangatainoka R	1.37	46	P	Pn	14 52 30.3	-0.1
TIWZ	Tintock	1.48	56	P	Pb	14 52 33.1	+0.3
QRZ	Quartz Range	1.53	300	P	Pb	14 52 33.4	-0.3
OHWZ	Ohakea	1.61	30	P	Pg	14 52 35.9	-0.2
CPWZ	Castlepoint	1.62	65	P	Pg	14 52 41.1	+4.9
GVZ	Greta Valley S	1.63	214	P	Pn	14 52 33.1	-0.9
PRWZ	Pori Road	1.67	51	P	Pn	14 52 34.5	+0.1
POWZ	Post Office Ro	1.67	43	P	Pb	14 52 35.7	-0.2
BFZ	Birch Farm	1.76	59	P	Pg	14 52 39.1	+0.3
LTZ	Lake Taylor	1.89	231	P	Pn	14 52 37.1	-0.4
WAZ	Wanganui	1.94	17	P	Pg	14 52 41.6	-0.6
DVHZ	Dannevirke	1.95	48	P	Pn	14 52 39.0	+0.7
AMCZ	Amberley	1.97	217	P	Pg	14 52 44.7	+1.9
LREZ	Lake Rotokare	2.15	3	P	Pg	14 52 46.0	-0.4
NMEZ	Namu Road	2.22	352	P	Pg	14 52 46.7	-1.0
PNHZ	Pukenui	2.24	41	P	Pn	14 52 43.5	+1.1
WPHZ	Waipukurau	2.26	47	P	Pg	14 52 50.9	+2.5
PREZ	Palmer Road	2.27	358	P	Pb	14 52 46.5	+0.2
OKCZ	Okains Bay	2.29	203	P	Pn	14 52 40.7	-2.4
KHEZ	Kahui Hut	2.33	355	P	Pb	14 52 47.7	+0.5
NBEZ	Newall Road No	2.37	352	P	Pb	14 52 48.6	+0.8
INZ	Inchbonnie	2.38	241	P	Pn	14 52 44.4	+0.3
OXZ	Oxford	2.38	223	P	Pb	14 52 47.9	-0.2
MQZ	McQueen's Vall	2.41	209	P	Pn	14 52 41.6	-2.9
MTVZ	Mangateitei	2.41	23	P	Pb	14 52 49.7	+1.1
DREZ	Durham Road	2.42	359	P	Pg	14 52 51.4	-0.1
PKE	Pukeiti	2.43	355	P	Pb	14 52 48.1	-0.8
PKVZ	Pokaka	2.46	20	P	Pb	14 52 50.2	+0.6
AKCZ	Akaroa Harbour	2.47	204	P	Pn	14 52 45.4	-0.1
MOVZ	Moawhango	2.48	28	P	Pb	14 52 49.7	-0.1
VRZ	Vera Road	2.52	9	P	Pb	14 52 49.7	-0.7
BHHZ	Black Hill Sta	2.52	33	P	Pb	14 52 50.9	+0.3
KRHZ	Kereru	2.54	40	P	Pg	14 52 53.4	-0.3
WHVZ	Whangaehu Hut	2.54	24	P	Pb	14 52 52.3	+1.4
FWVZ	Far West T-bar	2.55	23	P	Pg	14 52 52.7	-1.4
TUVZ	Tukino	2.57	25	P	Pb	14 52 51.7	+0.3
NGZ	Ngauruhoe	2.64	23	P	Pb	14 52 53.5	+0.9
TWVZ	Taurewa	2.69	20	P	Pb	14 52 55.1	+1.6
WTVZ	West Tongariro	2.69	22	P	Pb	14 52 54.1	+0.6
KRVZ	Karewarewa	2.73	23	P	Pb	14 52 54.9	+0.8
KWHZ	Kaweka Forest	2.73	38	P	Pg	14 52 56.3	-1.2
KATZ	Kakaramea	2.85	23	P	Pb	14 52 57.0	+0.8
RATZ	Rangitukua	2.98	23	P	Pg	14 53 01.3	-0.8
BKZ	Black Stump Fm	2.98	35	P	Pb	14 52 59.5	+1.2
WVZ	Waitaha Valley	3.00	240	P	Pb	14 52 57.0	-1.7
HIZ	Hauiti	3.13	8	P	Pb	14 52 58.7	-2.1
KUTZ	Kaahu Road	3.34	21	P	Pb	14 53 06.5	+2.0
TLZ	Tolley Road	3.42	17	P	Pb	14 53 05.2	-0.7
FOZ	Fox Glacier	3.81	238	P	Pb	14 53 08.5	-3.9
AWAZ	Awhitu Peninsu	4.55	4	P	Pn	14 53 17.1	+3.0
MKAZ	Moumakai	4.56	9	P	Pn	14 53 17.8	+3.7

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*IDC **21** 14:54:08.7±2.7, 1°.55N×30°.73W, h0^{km}, mb3.7/11, mb1 4.0/11, mb1mx3.8/55, mbtmp3.7/11, MS3.7/19, Ms1 3.7/19, ms1mx3.5/34, Error ellipse: s-maj=89.4km s-min=23.8km az=171.0*

*ISCJB **21** 14:54:10.1±0.7, 1°.9N±0°.2×30°.7W±0°.1, h10^{km}, mb3.7/11, MS3.7/19, Error ellipse: s-maj=27.3km s-min=13.6km az=136.6*

ISC 21 14:54:12.2±0.8, 2°.0N±0°.2×30°.7W±0°.2, h10^{km}, n35, σ0^{s}96/12, mb3.9/11, MS3.7/19, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	9.29	214	Pn	Pn	14 56 26.8	+0.4
	4.2nm,0.3s,baz=52,slow=0.4,SNR=6.2						
RCBR				Sn	Sn	14 58 01.1	-10
	3.1nm,0.3s,baz=243,slow=0.4,SNR=2.3						
H10N3	ASCENSION HYDR	18.89	121	T	T	15 17 56.5	
	baz=300,slow=75,SNR=76						
H10N2	ASCENSION HYDR	18.89	121	T	T	15 17 56.9	
	baz=300,slow=75,SNR=82						
H10N1	ASCENSION HYDR	18.91	121	T	T	15 17 57.4	
	baz=300,slow=75,SNR=216						
H10S3	ASCENSION HYDR	19.34	124	T	T	15 18 25.8	
	baz=307,slow=74						
H10S1	ASCENSION HYDR	19.34	124	T	T	15 18 41.7	
	baz=307						
H10S2	ASCENSION HYDR	19.35	124	T	T	15 18 40.3	
	baz=307,slow=74						
MDP	Montagnes des	22.09	279	LR	LR	15 06 45.0	
	comp=Z,181nm,20.1s,baz=72,slow=34						
BDFB	Brasilia	24.44	224	LR	LR	15 08 17.5	
	comp=Z,229nm,18.8s,baz=116,slow=35						
DBIC	Dimbokro	26.22	79	LR	LR	15 07 47.3	
	comp=Z,272nm,20.7s,baz=235,slow=31						
PTGA	Pitinga	29.35	265	LR	LR	15 10 38.1	
	comp=Z,169nm,19.2s,baz=70,slow=34						
H05S1	Guadeloupe/Mar	32.21	294	T	T	15 34 39.4	
	SNR=4.0						
H05N1	Guadeloupe/Mar	33.09	297	T	T	15 35 36.5	
TORD	Torodi Ar. Bea	33.96	69	P	P	15 00 55.1	-1.1
	3.1nm,1.0s,baz=263,slow=9.9,SNR=5.2						
TORD				LR	LR	15 12 51.3	
	comp=Z,326nm,19.3s,baz=295,slow=33						
CPUP	Villa Florida	38.08	221	LR	LR	15 16 51.8	
	comp=Z,207nm,18.9s,baz=40,slow=36						
SJG	San Juan	38.27	297	LR	LR	15 15 07.0	
	comp=Z,72nm,20.1s,baz=110,slow=33						
LPAZ	La Paz	41.14	242	LR	LR	15 18 58.5	
	comp=Z,344nm,18.7s,baz=59,slow=36						
ROSC	El Rosal	43.60	275	LR	LR	15 20 47.0	
	comp=Z,310nm,18.3s,baz=177,slow=37						
ESDC	Sonseca Array	44.75	30	P	P	15 02 28.0	+2.0
	0.1nm,0.3s,baz=228,slow=8.7,SNR=5.4						
KEST	Kesra	50.07	43	LR	LR	15 25 52.4	
	comp=Z,114nm,18.1s,baz=210,slow=38						
JTS	Las Juntas de	54.47	281	LR	LR	15 27 59.7	
	comp=Z,26nm,18.1s,baz=156,slow=37						
PLCA	Paso Flores	55.85	216	LR	LR	15 28 12.1	
	comp=Z,129nm,19.2s,baz=96,slow=37						
SUR	Sutherland	59.48	130	LR	LR	15 25 24.8	
	comp=Z,72nm,20.7s,baz=288,slow=32						
GERES	GERESS Array B	60.21	32	P	P	15 04 20.9	+0.3
	0.2nm,0.6s,baz=199,slow=5.7,SNR=3.1						
BOSA	Boshof	61.62	124	LR	LR	15 25 41.8	
	comp=Z,44nm,20.4s,baz=272,slow=31						
NOA	NORSAR Array B	66.97	21	P	P	15 05 04.8	-0.1
	0.8nm,0.9s,baz=222,slow=6.6,SNR=2.6						
NOA				LR	LR	15 30 41.1	
	comp=Z,16nm,19.8s,baz=235,slow=33						
BRTR	Keskin Array B	69.21	48	P	P	15 05 19.6	-0.1
	1.7nm,1.0s,baz=251,slow=4.4,SNR=6.9						
BRTR				LR	LR	15 36 08.9	
	comp=Z,31nm,19.9s,baz=270,slow=36						
AKASG	Malin Array Be	69.86	36	P	P	15 05 22.5	-0.7
	0.6nm,0.6s,baz=245,slow=7.0,SNR=2.5						
FINES	FINESS Array B	72.99	25	LR	LR	15 34 33.5	
	comp=Z,25nm,19.9s,baz=248,slow=33						
TXAR	Lajitas Array	74.18	300	P	P	15 05 49.9	+0.2
	0.4nm,0.8s,baz=118,slow=7.8,SNR=4.9						
KBZ	Khabaz	76.85	46	P	P	15 06 05.4	+0.9
	2.8nm,0.8s,baz=329,slow=5.9,SNR=3.7						
KBZ				LR	LR	15 43 29.9	
	comp=Z,18nm,18.5s,baz=242,slow=38						
PDAR	Pinedale Array	80.47	313	P	P	15 06 24.6	-0.3
	0.1nm,0.3s,baz=27,slow=6.1,SNR=2.8						
YKA	Yellowknife Ar	85.44	332	P	P	15 06 49.0	-0.8
	1.8nm,0.8s,baz=94,slow=5.3,SNR=7.6						
NVAR	Mina Array Bea	86.89	308	P	P	15 06 57.0	-0.9
	0.1nm,0.4s,baz=59,slow=7.4,SNR=3.3						
GEYT	Alibeck	87.91	52	LR	LR	15 50 47.1	
	comp=Z,21nm,18.4s,baz=180,slow=39						

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*WEL **21** 14:55:07.5, 40°S±287°×17°5E±7°7, h6^{km}±51^{km}, M3.4/15, ML3.6/15, MLv3.4/15, Error ellipse: s-maj=0.4km s-min=0.1km az=167.4*

*IDC **21** 14:55:14.5±1.9, 41°.82S×173°.85E, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.6/22, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=46.4km s-min=30.7km az=138.0*

ISC 21 14:55:11.4±1.3, 40°.25S±0°.08×174°.96E±0°.07, h10^{km}, n29, σ1^{s}05/25, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHWZ	Ohakea	0.27	81	P	Pg	14 55 17.0	+0.1
WAZ	Wanganui	0.49	2	P	Pb	14 55 22.6	+0.4
MTVZ	Mangateitei	0.95	25	P	Pn	14 55 31.2	+0.4
PKVZ	Pokaka	1.00	17	P	Pn	14 55 31.6	+0.1
MOVZ	Moawhango	1.04	36	P	Pb	14 55 30.9	-0.5
WHVZ	Whangaehu Hut	1.08	27	P	Pg	14 55 32.3	+0.2
FWVZ	Far West T-bar	1.09	25	P	Pg	14 55 32.9	+0.5
TUVZ	Tukino	1.11	29	P	Pn	14 55 25.3	-7.9
BHHZ	Black Hill Sta	1.14	49	P	Pn	14 55 32.3	-1.1
NGZ	Ngauruhoe	1.18	25	P	Pn	14 55 28.1	-6.0
KRHZ	Kereru	1.24	61	P	Pn	14 55 33.3	-1.5
KATZ	Kakaramea	1.39	24	P	Pg	14 55 38.3	+0.2
KWHZ	Kaweka Forest	1.39	54	P	Pb	14 55 37.4	-0.2
RATZ	Rangitukua	1.51	25	P	Pg	14 55 41.3	+0.8
MCHZ	McNeill Hill	1.56	60	P	Pg	14 55 42.1	+0.9
WATZ	Wairara	1.65	21	P	Pg	14 55 44.0	+1.0
HIZ	Hauiti	1.73	357	P	Pn	14 55 40.3	-1.3
KUTZ	Kaahu Road	1.88	21	P	Pg	14 55 47.6	+0.2
TLZ	Tolley Road	1.97	13	P	Pn	14 55 45.4	+0.6
PRRZ	Plateau Road	2.07	33	P	Pg	14 55 51.4	+0.4
RAHZ	Arahi	2.11	52	P	Pg	14 55 53.4	+1.5
KMRZ	Kaimai	2.52	18	P	Pn	14 55 52.0	-0.3
TOZ	Tahuroa Road	2.55	10	P	Pb	14 55 55.4	-1.8
URZ	Urewera	2.59	41	Pn	Pg	14 56 23.9	+23
	3.4nm,0.3s,baz=239,slow=7.8,SNR=7.8						
URZ				Sn	Sg	14 57 08.0	+33
	1.5nm,0.3s,baz=198,slow=20,SNR=1.8						
AWAZ	Awhitu Peninsu	3.19	355	P	Pn	14 55 59.3	-2.3
RPZ	Rata Peaks	4.53	219	Pn	Pn	14 56 02.7	-17
	7.7nm,0.3s,baz=109,slow=2.2,SNR=9.5						
RPZ				Sn	Sn	14 56 41.3	-31
	6.7nm,0.3s,baz=87,slow=21,SNR=6.8						
ASAR	Alice Springs	38.18	283	P	P	15 02 32.5	+1.3
	0.3nm,0.4s,baz=123,slow=6.9,SNR=14						
WRA	Warramunga Arr	40.12	288	P	P	15 02 48.7	+1.3
	0.5nm,0.6s,baz=134,slow=7.5,SNR=1.2						
TORD	Torodi Ar. Bea	152.36	194	PKPbc	PKiKP	15 15 07.3	-0.9
	0.3nm,0.5s,baz=173,slow=2.9,SNR=5.0						

WEL 21 15:12:27.0, 41°S±3°×17°4E±°, h5^{km}±1^{km}, M3.5/18, ML2.7/12, MLv3.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=14.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCW	Tory Channel	0.22	336	P	Pg	15 12 32.1	+0.9
WEL	Wellington	0.31	66	P	Pb	15 12 34.7	-0.3
TUWZ	Tuamarina	0.34	266	P	Pg	15 12 32.4	-1.3
BHW	Baring Head	0.36	90	P	Pb	15 12 35.2	-0.7
CMWZ	Cape Campbell	0.37	202	P	Pn	15 12 39.0	0.0
BSWZ	Blackbirch Sta	0.49	232	P	Pg	15 12 35.0	-1.6
CAW	Cannon Point	0.59	60	P	Pb	15 12 39.9	+0.1
MSWZ	Moikau Station	0.64	91	P	Pb	15 12 40.7	0.0
PLWZ	Palliser	0.67	104	P	Pb	15 12 40.8	-0.4
DUWZ	D'Urville Isla	0.70	329	P	Pb	15 12 42.6	+0.8
PAWZ	Paruwai Farm	0.78	88	P	Pb	15 12 43.6	+0.5
NNZ	Nelson	0.79	284	P	Pg	15 12 42.2	+0.1
OGWZ	Otaki Gorge	0.83	45	P	Pb	15 12 44.0	0.0
MTW	Mount Morrison	0.87	74	P	Pb	15 12 45.1	+0.5
TRWZ	Traveller	0.97	90	P	Pn	15 12 51.2	+3.9
HOWZ	Holdsworth Sta	0.99	59	P	Pn	15 12 48.1	+0.5
MRZ	Mangatainoka R	1.17	51	P	Pn	15 12 50.5	+0.5
TMWZ	Te Maipa	1.17	76	P	Pn	15 12 54.6	+4.5
THZ	Tophouse	1.17	252	P	Pn	15 12 50.2	+0.1
TIWZ	Tintock	1.29	61	P	Pb	15 12 56.5	+4.7
OHWZ	Ohakea	1.39	30	P	Pg	15 12 55.6	+1.9
PRWZ	Pori Road	1.47	55	P	Pg	15 12 56.9	+1.7
QRZ	Quartz Range	1.52	292	P	Pg	15 12 56.0	-0.2
GVZ	Greta Valley S	1.86	213	P	Pb	15 13 01.6	+0.1
MTVZ	Mangateitei	2.18	22	P	Pg	15 13 09.3	+0.5
MOVZ	Moawhango	2.25	28	P	Pb	15 13 09.0	+0.7
BHHZ	Black Hill Sta	2.30	34	P	Pb	15 13 10.0	+0.9
KRHZ	Kereru	2.32	41	P	Pg	15 13 11.1	-0.3
TUVZ	Tukino	2.34	25	P	Pg	15 13 14.2	+2.2
NGZ	Ngauruhoe	2.41	23	P	Pg	15 13 12.5	-0.8
KRVZ	Karewarewa	2.50	23	P	Pg	15 13 13.8	-1.2
CRLZ	Canterbury Las	2.53	211	P	Pn	15 13 08.2	-0.6

WEL 21 15:13:34.6, 41°.6S±0°.9×174°.3E±0°.7, h10^{km}±2^{km}, M4.0/14, ML3.9/14, MLv4.0/14, Error ellipse: s-maj=0.0km s-min=0.0km az=147.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	207	P	Pg	15 13 39.1	+0.8
TUWZ	Tuamarina	0.33	300	P	Pb	15 13 41.9	-0.7
TUWZ				S	Sb	15 13 47.0	-0.8
BSWZ	Blackbirch Sta	0.35	250	P	Pg	15 13 42.1	+0.5
BSWZ				S	Sb	15 13 47.7	-1.0
TCW	Tory Channel	0.38	355	P	Pb	15 13 43.0	-0.5
TCW				S	Sb	15 13 48.6	-0.9
BHW	Baring Head	0.45	66	P	Pb	15 13 44.3	-0.3
WEL	Wellington	0.46	48	P	Pb	15 13 44.5	-0.3
PLWZ	Palliser	0.70	88	P	Pb	15 13 49.1	+0.1
MSWZ	Moikau Station	0.72	76	P	Pb	15 13 49.3	+0.1
CAW	Cannon Point	0.74	49	P	Pb	15 13 49.5	-0.2
NNZ	Nelson	0.80	298	P	Pg	15 13 50.3	+0.2
DUWZ	D'Urville Isla	0.85	339	P	Pb	15 13 51.9	+0.5
DUWZ				S	Sb	15 14 03.6	+0.8
PAWZ	Paruwai Farm	0.86	76	P	Pn	15 13 52.3	-0.5
MTW	Mount Morrison	0.99	64	P	Pn	15 13 54.3	-0.3
KHZ	Kahutara	1.01	215	P	Pb	15 13 54.3	+0.1
OGWZ	Otaki Gorge	1.01	40	P	Pb	15 13 54.1	0.0
TRWZ	Traveller	1.05	80	P	Pb	15 13 54.8	0.0
THZ	Tophouse	1.07	260	P	Pb	15 13 55.5	+0.2
HOWZ	Holdsworth Sta	1.14	53	P	Pn	15 13 57.1	+0.5
TMWZ	Te Maipa	1.28	68	P	Pn	15 13 58.6	+0.1
MRZ	Mangatainoka R	1.33	46	P	Pn	15 13 59.5	+0.2
TIWZ	Tintock	1.44	56	P	Pg	15 14 03.1	+0.9
QRZ	Quartz Range	1.55	299	P	Pb	15 14 03.8	+0.3
OHWZ	Ohakea	1.58	29	P	Pg	15 14 05.3	+0.5
PRWZ	Pori Road	1.62	51	P	Pb	15 14 04.6	0.0
POWZ	Post Office Ro	1.63	43	P	Pg	15 14 09.6	+3.8
GVZ	Greta Valley S	1.67	214	P	Pn	15 14 03.2	-0.7
BFZ	Birch Farm	1.72	59	P	Pg	15 14 09.1	+1.5
DVHZ	Dannevirke	1.91	48	P	Pg	15 14 11.3	+0.2
WAZ	Wanganui	1.91	16	P	Pg	15 14 10.9	-0.3
LTZ	Lake Taylor	1.93	231	P	Pn	15 14 07.2	-0.4
AMCZ	Amberley	2.01	217	P	Pg	15 14 14.9	+1.8
PNHZ	Pukenui	2.20	41	P	Pg	15 14 16.8	-0.1
PREZ	Palmer Road	2.25	357	P	Pg	15 14 18.4	+0.7
OKCZ	Okains Bay	2.32	203	P	Pn	15 14 11.0	-1.9
MTVZ	Mangateitei	2.38	22	P	Pg	15 14 20.5	+0.3
PKE	Pukeiti	2.41	354	P	Pg	15 14 21.0	+0.2
INZ	Inchbonnie	2.42	241	P	Pn	15 14 15.2	+1.0
PKVZ	Pokaka	2.43	19	P	Pg	15 14 22.6	+1.4
MOVZ	Moawhango	2.44	27	P	Pb	15 14 18.8	+0.1
BHHZ	Black Hill Sta	2.49	33	P	Pb	15 14 20.1	+0.7
VRZ	Vera Road	2.49	8	P	Pg	15 14 21.0	-1.3
KRHZ	Kereru	2.50	39	P	Pg	15 14 21.0	-1.4

AKCZ	Akaroa Harbour	2.50	204	P	Pn	15 14 16.6	+1.2
FWVZ	Far West T-bar	2.52	22	P	Pb	15 14 20.8	+0.7
TUVZ	Tukino	2.54	24	P	Pg	15 14 22.7	-0.5
NGZ	Ngauruhoe	2.61	22	P	Pb	15 14 22.5	+1.0
WTVZ	West Tongariro	2.66	22	P	Pb	15 14 23.6	+1.2
KRVZ	Karewarewa	2.69	22	P	Pb	15 14 23.9	+0.9
KWHZ	Kaweka Forest	2.70	37	P	Pg	15 14 25.1	-1.2
KATZ	Kakaramea	2.82	22	P	Pb	15 14 26.3	+1.2
RITZ	Rihia Road	2.87	25	P	Pb	15 14 27.5	+1.7
BKZ	Black Stump Fm	2.94	35	P	Pb	15 14 28.4	+1.2
WVZ	Waitaha Valley	3.04	240	P	Pb	15 14 28.0	-0.8
HIZ	Hauiti	3.10	8	P	Pb	15 14 30.1	+0.2
LBZ	Lake Benmore	4.12	226	P	Pn	15 14 38.0	+0.4
ODZ	Otahua Downs	4.37	217	P	Pn	15 14 39.6	-1.4

BJI ***21*** *15:15:09.1±0.0, 41°.11S×174°.75E, h5^{km}, mb5.3/7, mB5.6/2, Ms4.9/3, Ms7 4.6/2*
ISCJB ***21*** *15:15:11.6±0.2, 41°.59S±0°.02×174°.36E±0°.03, h10^{km}, mb4.8/14, MS4.2/17, Error ellipse: s-maj=3.9km s-min=2.0km az=137.0*
NEIC ***21*** *15:15:11.0±0.0, 41°.46S×174°.30E, h10^{km}, mb4.9/8, MW4.9, ML4.9(WEL), Moment Tensor Solution. s41 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.20; M$_{\theta\theta}$0.39; M$_{\phi\phi}$-0.59; M$_{r\theta}$0.51; M$_{\theta\phi}$-2.92; M$_{\phi r}$-0.49; Best double couple: M$_0$3.00000×10^{16} NP1:φ$_s$84.00000°, δ80.00000°, λ171.00000°. NP2:φ$_s$176.00000°, δ81.00000°, λ11.00000°. Principal axes: T 3.0400, Plg14.0000°, Azm40.0000°; N 0.0200, Plg76.0000°, Azm217.0000°; P -3.0600, Plg1.0000°, Azm310.0000°; After WEL.*
NEIC Felt in the northern part of the South Island and the southwestern part of the North Island.
IDC ***21*** *15:15:11.3±0.8, 41°.40S×174°.22E, h0^{km}, mb4.5/6, mb1 4.7/8, mb1mx4.3/23, mbtmp4.5/8, ML3.8/2, MS4.2/13, Ms1 4.2/13, ms1mx4.1/17 Error ellipse: s-maj=28.5km s-min=17.3km az=131.0*
WEL ***21*** *15:15:11.8, 41°.5S±0°.9×17°4E±°, h10^{km}±2^{km}, M4.9/13, ML5.1/13, MLv4.9/13, Error ellipse: s-maj=0.0km s-min=0.0km az=127.7*
ISC 21 15:15:12.4±0.4**, 41°.50S**±0°.03×**174°.32E**±0°.02**, h10^{km}, n216,** σ**1^s.50**/214**, mb4.9**/14**, MS4.1**/17**, 2D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.26	198	P	Pb	15 15 18.9	-0.3
TCW	Tory Channel	0.29	353	P	Pg	15 15 18.0	-0.2
TCW				S	Sg	15 15 22.1	0.0
TUWZ	Tuamarina	0.29	283	P	Pb	15 15 18.0	-1.7
TUWZ				S	Sb	15 15 22.2	-2.4
SNZO	South Karori	0.34	57	*e*Pg	Pg	15 15 18.9	-0.3
WEL	Wellington	0.40	58	P	Pb	15 15 20.4	-1.1
BSWZ	Blackbirch Sta	0.40	237	P	Pb	15 15 20.7	-0.9
BSWZ				S	Sb	15 15 27.1	-0.6
BHW	Baring Head	0.42	78	P	Pg	15 15 20.9	+0.2
CAW	Cannon Point	0.68	55	P	Pb	15 15 25.5	-0.9
MSWZ	Moikau Station	0.70	84	P	Pb	15 15 26.4	-0.2
PLWZ	Palliser	0.70	96	P	Pb	15 15 26.6	-0.1
DUWZ	D'Urville Isla	0.76	336	P	Pb	15 15 26.9	-0.7
NNZ	Nelson	0.76	291	P	Pb	15 15 26.6	-1.1
PAWZ	Paruwai Farm	0.84	82	P	Pb	15 15 29.0	0.0
OGWZ	Otaki Gorge	0.94	44	P	Pb	15 15 29.6	-1.0
MTW	Mount Morrison	0.95	69	P	Pn	15 15 30.9	-0.8
TRWZ	Traveller	1.03	85	P	Pn	15 15 32.6	-0.3
HOWZ	Holdsworth Sta	1.08	57	P	Pn	15 15 32.9	-0.7
KHZ	Kahutara	1.09	212	*e*Pn	Pn	15 15 33.5	-0.1
KHZ	Kahutara	1.09	212	P	Pb	15 15 31.9	-1.3
THZ	Tophouse	1.09	256	*e*Pn	Pg	15 15 32.7	-0.7
THZ	Tophouse	1.09	256	P	Pn	15 15 33.1	-0.7
TMWZ	Te Maipa	1.25	72	P	Pb	15 15 35.5	-0.4
MRZ	Mangatainoka R	1.27	49	P	Pg	15 15 35.7	-0.9
TIWZ	Tintock	1.38	59	P	Pb	15 15 37.7	-0.6
OHWZ	Ohakea	1.50	31	P	Pg	15 15 40.4	-0.7
QRZ	Quartz Range	1.51	296	P	Pg	15 15 40.2	-1.1
CPWZ	Castlepoint	1.54	68	P	Pg	15 15 41.3	-0.5
POWZ	Post Office Ro	1.56	45	P	Pg	15 15 40.9	-1.3
PRWZ	Pori Road	1.56	53	P	Pb	15 15 40.4	-1.0
BFZ	Birch Farm	1.67	61	*e*Pn	Pn	15 15 40.1	-1.5
BFZ	Birch Farm	1.67	61	P	Pn	15 15 41.1	-0.5
GVZ	Greta Valley S	1.75	213	P	Pn	15 15 42.8	0.0
WAZ	Wanganui	1.81	16	P	Pg	15 15 46.3	-0.9
DVHZ	Dannevirke	1.84	50	P	Pn	15 15 43.7	-0.3
ANWZ	Angora Road	1.93	58	P	Pn	15 15 44.9	-0.4
LTZ	Lake Taylor	1.99	229	*e*Pn	Pn	15 15 46.0	-0.1
LTZ	Lake Taylor	1.99	229	P	Pn	15 15 46.6	+0.5
LREZ	Lake Rotokare	2.04	2	P	Pg	15 15 50.7	-0.7
AMCZ	Amberley	2.08	216	P	Pn	15 15 47.2	-0.1
NMEZ	Namu Road	2.11	351	P	Pg	15 15 52.1	-0.7
PNHZ	Pukenui	2.13	43	P	Pn	15 15 48.5	+0.5
PRHZ	Porangahau	2.14	56	P	Pn	15 15 47.4	-0.8
WPHZ	Waipukurau	2.15	49	P	Pn	15 15 48.4	0.0
PREZ	Palmer Road	2.16	357	P	Pg	15 15 52.1	-1.6
KHEZ	Kahui Hut	2.21	354	P	Pg	15 15 53.5	-1.3
NBEZ	Newall Road No	2.25	351	P	Pg	15 15 53.5	-2.1
MTVZ	Mangateitei	2.29	23	P	Pg	15 15 54.3	-1.8
DREZ	Durham Road	2.31	358	P	Pg	15 15 54.5	-2.1
PKE	Pukeiti	2.32	354	P	Pg	15 15 54.1	-2.6
PKVZ	Pokaka	2.34	20	P	Pg	15 15 54.7	-2.5
MOVZ	Moawhango	2.36	28	P	Pb	15 15 52.2	-2.7
VRZ	Vera Road	2.40	8	P	Pb	15 15 54.6	-0.9
BHHZ	Black Hill Sta	2.41	34	P	Pb	15 15 53.1	-2.7
OKCZ	Okains Bay	2.41	202	P	Pn	15 15 50.9	-1.0
DRZ	Dome Shelter	2.41	24	P	Pg	15 15 56.6	-2.0
MHEZ	Mangahewa	2.42	0	P	Pg	15 15 58.7	0.0
KRHZ	Kereru	2.42	41	P	Pn	15 15 51.9	-0.2
KRHZ				P	Pb	15 15 54.1	-1.9
PXZ	Pawanui	2.42	54	P	Pn	15 15 51.1	-0.9
CRLZ	Canterbury Las	2.43	211	*e*Pn	Pn	15 15 50.2	-1.9
CRLZ	Canterbury Las	2.43	211	P	Pn	15 15 51.0	-1.0
FWVZ	Far West T-bar	2.43	23	P	Pb	15 15 55.8	-0.5
TUVZ	Tukino	2.45	25	P	Pb	15 15 55.6	-0.9
OXZ	Oxford	2.49	222	*e*Pn	Pn	15 15 51.5	-1.5
OXZ	Oxford	2.49	222	P	Pn	15 15 52.3	-0.6
NGZ	Ngauruhoe	2.52	23	P	Pb	15 15 57.0	-0.8
MQZ	McQueen's Vall	2.53	209	*e*Pn	Pn	15 15 51.1	-2.3
MQZ	McQueen's Vall	2.53	209	P	Pn	15 15 51.9	-1.5
TWVZ	Taurewa	2.57	20	P	Pb	15 15 58.6	0.0
WTVZ	West Tongariro	2.57	23	P	Pb	15 15 58.7	+0.1
KAHZ	Kahuranaki	2.58	50	P	Pn	15 15 54.0	-0.3
AKCZ	Akaroa Harbour	2.59	203	P	Pn	15 15 53.3	-1.1
KRVZ	Karewarewa	2.60	23	P	Pb	15 15 59.2	0.0
KWHZ	Kaweka Forest	2.62	38	P	Pg	15 16 00.0	-2.5
KATZ	Kakaramea	2.73	23	P	Pb	15 16 01.7	+0.4
MCHZ	McNeill Hill	2.74	42	P	Pg	15 16 04.0	-0.8
RITZ	Rihia Road	2.78	26	P	Pb	15 16 02.5	+0.4
CKHZ	Cape Kidnapper	2.79	50	P	Pn	15 15 57.2	+0.1
RATZ	Rangitukua	2.85	23	P	Pb	15 16 03.8	+0.4
BKZ	Black Stump Fm	2.86	36	*e*Pn	Pn	15 15 56.7	-1.4
BKZ	Black Stump Fm	2.86	36	P	Pb	15 16 01.4	-2.1
HATZ	Hinemaiaia	2.94	28	P	Pb	15 16 04.0	-0.8
WATZ	Wairara	2.99	22	P	Pb	15 16 05.9	+0.2
HIZ	Hauiti	3.01	8	P	Pb	15 16 04.0	-2.1
ARHZ	Aropaoanui	3.03	43	P	Pn	15 16 01.4	+1.1
WVZ	Waitaha Valley	3.09	238	P	Pn	15 16 02.1	+0.9
WHTZ	Whakaora	3.10	24	P	Pb	15 16 06.3	-1.2
MRHZ	Matea Rd	3.11	32	P	Pn	15 16 01.0	-0.5
KUTZ	Kaahu Road	3.22	21	P	Pb	15 16 10.3	+0.7
MTHZ	Maungataniwha	3.27	37	P	Pn	15 16 04.8	+1.1
MTHZ				P	Pb	15 16 11.0	+0.5
RPZ	Rata Peaks	3.27	226	Pn	Pn	15 16 03.1	-0.7
	17nm,0.3s,baz=324,slow=1.2,SNR=22						
RPZ				Sn	Sn	15 16 40.8	-2.0
	70nm,0.3s,baz=157,slow=23,SNR=12						
RPZ	Rata Peaks	3.27	226	*e*Pn	Pn	15 16 02.3	-1.5
RPZ				Sn	Sn	15 16 40.8	-2.0
RPZ	Rata Peaks	3.27	226	P	Pn	15 16 03.4	-0.3
WHHZ	Waihua	3.29	44	P	Pb	15 16 08.9	-1.8
TLZ	Tolley Road	3.30	17	P	Pb	15 16 08.7	-2.3
ALRZ	Allen Road	3.32	29	P	Pn	15 16 03.9	-0.4
RAHZ	Arahi	3.34	40	P	Pb	15 16 09.3	-2.3
PRRZ	Plateau Road	3.39	29	P	Pn	15 16 05.0	-0.4
GRRZ	Galatos Road	3.43	24	P	Pb	15 16 10.3	-2.9
HRRZ	Handcock Road	3.45	27	P	Pn	15 16 06.9	+0.7
HSRZ	Hossack Road	3.51	26	P	Pb	15 16 11.4	-3.2
MUGZ	Murupara	3.56	33	P	Pn	15 16 06.7	-0.9
KNZ	Kokohu	3.56	47	P	Pn	15 16 07.2	-0.5
SNGZ	Shannon Statio	3.56	41	P	Pn	15 16 07.9	+0.1
RRRZ	Republican Roa	3.58	29	P	Pn	15 16 08.2	+0.3
RRRZ				P	Pb	15 16 14.3	-1.4
MHGZ	Mahia Peninsul	3.60	51	P	Pn	15 16 07.2	-1.1
TARZ	Mount Tarawera	3.67	28	P	Pn	15 16 09.2	0.0
OMRZ	Omania	3.74	26	P	Pb	15 16 14.5	-4.0
MKRZ	Makatiti	3.74	27	P	Pb	15 16 14.1	-4.4
PRGZ	Paritu Road	3.75	48	P	Pn	15 16 09.0	-1.2
RAGZ	Rawiri	3.83	39	P	Pn	15 16 11.5	+0.1
RIGZ	Rimuhau	3.84	45	P	Pn	15 16 10.2	-1.3
KMRZ	Kaimai	3.86	19	P	Pn	15 16 13.4	+1.7
EDRZ	Edgecumbe	3.87	30	P	Pb	15 16 15.7	-4.9
TOZ	Tahuroa Road	3.87	14	P	Pn	15 16 14.5	+2.6
URZ	Urewera	3.88	34	Pn	Pn	15 16 10.1	-2.0
	4.5nm,0.3s,baz=225,slow=6.2,SNR=10						
URZ				Sn	Sn	15 16 58.9	+1.2
	31nm,0.3s,baz=61,slow=23,SNR=3.2						
URZ				Lg	Lg	15 17 12.5	
	40nm,0.3s,baz=104,slow=18,SNR=4.4						
URZ	Urewera	3.88	34	P	Pn	15 16 13.7	+1.6
FOZ	Fox Glacier	3.90	237	*e*Pn	Pn	15 16 13.6	+1.3
FOZ	Fox Glacier	3.90	237	P	Pn	15 16 14.4	+2.1
MARZ	Manawahe	3.95	28	P	Pn	15 16 12.4	-0.6
MWZ	Matawai	4.01	39	P	Pn	15 16 12.1	-1.7
OPRZ	Ohinepanea	4.04	26	P	Pn	15 16 13.6	-0.6
TGRZ	Tauranga	4.05	22	P	Pb	15 16 20.2	-3.6
TKGZ	Te Karaka	4.08	43	P	Pn	15 16 13.4	-1.5
LBZ	Lake Benmore	4.19	225	*e*Pn	Pn	15 16 16.1	-0.2
LBZ	Lake Benmore	4.19	225	P	Pn	15 16 16.5	+0.1
CNGZ	Carnagh Statio	4.24	46	P	Pn	15 16 15.8	-1.2
RUGZ	Raukumara Rang	4.38	37	P	Pn	15 16 19.6	+0.7
KBAZ	Karaka Road Bo	4.42	6	P	Pn	15 16 22.3	+2.9
AWAZ	Awhitu Peninsu	4.43	3	P	Pn	15 16 22.7	+3.0
MKAZ	Moumakai	4.44	9	P	Pn	15 16 22.1	+2.4
ODZ	Otahua Downs	4.45	216	*e*Pn	Pn	15 16 18.2	-1.6
ODZ	Otahua Downs	4.45	216	P	Pn	15 16 18.9	-0.9
ETAZ	East Tamaki Re	4.56	6	P	Pn	15 16 24.4	+3.0
WTAZ	Waiatarua	4.56	3	P	Pb	15 16 25.8	-6.7
PUZ	Puketiti	4.57	43	P	Pn	15 16 21.0	-0.6
HAZ	Te Kaha	4.59	37	P	Pn	15 16 21.7	-0.1
EPAZ	Eden Park BICE	4.63	4	P	Pb	15 16 27.0	-6.6
HBAZ	Herne Bay Bore	4.65	4	P	Pb	15 16 27.5	-6.5
WIAZ	Waiheke Island	4.74	8	P	Pn	15 16 26.3	+2.5
MBAZ	Motutapu North	4.74	6	P	Pn	15 16 26.5	+2.6
JCZ	Jackson Bay	4.82	236	P	Pn	15 16 27.3	+2.3
WMGZ	Waiomatatini S	4.84	42	P	Pn	15 16 23.8	-1.4
KUZ	Kuaotunu	4.87	13	P	Pn	15 16 28.5	+2.8
MXZ	Matakaoa Point	4.99	39	*e*Pn	Pn	15 16 24.7	-2.6
MXZ	Matakaoa Point	4.99	39	P	Pn	15 16 26.6	-0.7
WKZ	Wanaka	5.11	228	*e*Pn	Pn	15 16 28.7	-0.3
WKZ	Wanaka	5.11	228	P	Pn	15 16 28.9	0.0
WCZ	Waipu Caves	5.55	0	P	Pn	15 16 37.6	+2.6
TUZ	Tuapeka	5.60	216	P	Pn	15 16 35.4	-0.3
MLZ	Mavora Lakes	5.95	227	*e*Pn	Pn	15 16 40.8	+0.3
OUZ	Omahuta	6.29	355	*e*Pn	Pn	15 16 46.2	+1.0
WHZ	Wether Hill Ro	6.37	224	*e*Pn	Pn	15 16 45.3	-1.0
DCZ	Deep Cove	6.55	230	*e*Pn	Pn	15 16 48.4	-0.2
DZM	Mont Dzumac	20.48	339	*e*P	Pn	15 19 55.9	+3.4
	19nm,0.8s						
DZM				*e*LR	LR	15 24 42.4	
	comp=Z,1μm,24.6s						
DZM	Mont Dzumac	20.48	339	P	Pn	15 19 50.4	-2.1
	11nm,1.1s,baz=97,slow=16,SNR=2.3						
DZM				LR	LR	15 26 58.3	
	comp=Z,749nm,21.3s,baz=174,slow=35						
DZM	Mont Dzumac	20.48	339	*e*P	Pn	15 19 50.4	-2.1
	29nm,1.2s						
STKA	Stephens Creek	27.80	280	P	P	15 21 03.9	+2.3
	5.3nm,1.1s,baz=135,slow=5.7,SNR=5.1						
STKA				LR	LR	15 30 24.2	
	comp=Z,708nm,20.2s,baz=115,slow=33						
STKA	Stephens Creek	27.80	280	*e*P	P	15 21 03.9	+2.3
	12nm,1.9s						
TBI	Tubuai	35.20	70	*e*LQ	LQ	15 30 00.5	
	790nm,24.0s						
TBI				*e*LR	LR	15 31 22.8	
	comp=Z,474nm,28.0s						
TBI	Tubuai	35.20	70	*e*T	T	15 58 44.8	
	11nm,0.4s						
VNDA	Vanda	36.50	185	LR	LR	15 36 44.1	
	comp=Z,258nm,18.1s,baz=17,slow=35						
AS31	Alice Springs	38.02	285	*e*P	P	15 22 29.4	-1.4
	4.4nm,1.0s						
ASAR	Alice Springs	38.02	285	P	P	15 22 29.6	-1.1
	5.1nm,0.9s,baz=123,slow=7.2,SNR=43						
ASAR				LR	LR	15 37 41.6	
	comp=Z,548nm,19.8s,baz=132,slow=36						
PPT2	Papeete2	39.00	63	*e*S	S	15 28 38.4	+0.3
	125nm,24.0s						
PPT2				*e*LQ	LQ	15 31 37.0	
	785nm,28.5s						
PPT2				*e*LR	LR	15 33 17.4	
	comp=Z,299nm,21.0s,baz=217						
PPT	Papeete	39.01	63	LR	LR	15 36 33.6	
	comp=Z,340nm,21.3s,baz=230,slow=33						
WB2	Warramunga Arr	40.06	290	*e*P	P	15 22 46.4	-1.5
	20nm,0.7s						
WRAB	Tennant Creek	40.06	290	*e*P	P	15 22 44.2	-3.7
	18nm,0.7s						
WR1	Warramunga Arr	40.07	290	*e*P	P	15 22 46.8	-1.1
WRA	Warramunga Arr	40.07	290	P	P	15 22 46.8	-1.1
	15nm,0.5s,baz=130,slow=7.9,SNR=67						
MTN	Manton Dam	47.16	294	*e*P	P	15 23 43.7	-1.4
	28nm,1.2s						
TAOE	Nuku Hiva Isla	51.61	64	*e*LR	LR	15 38 55.5	
	comp=Z,260nm,20.6s						
MAW	Mawson	59.71	204	LR	LR	15 50 34.2	
	comp=Z,695nm,18.5s,baz=113,slow=36						
SYO	Syowa Base	64.83	196⇓	*e*pP	P	15 25 51.4	+0.6
SYO	Syowa Base	64.83	196⇓	*e*PcP	PcP	15 26 21.0	-3.2
SNAA	Sanae	67.12	181	P	P	15 26 07.8	+2.1
VNA3	Neumayer Olymp	67.53	179	P	P	15 26 09.5	+1.3
PLCA	Paso Flores	79.24	136	LR	LR	15 53 52.3	
	comp=Z,237nm,20.6s,baz=238,slow=29						
MJAR	Matsushiro Arr	84.41	332	P	P	15 27 46.5	+1.8
	0.8nm,0.8s,baz=165,slow=5.2,SNR=5.3						
MJAR				LR	LR	15 59 58.5	
	comp=Z,36nm,22.0s,baz=160,slow=32						
MAJO	Matsushiro	84.41	332	*e*P	P	15 27 46.5	+1.8
NJ2	Nanjing	89.26	316	*e*P	P	15 28 08.1	-0.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS	Korea Array	89.28	325	P	P	15 28 09.2	+0.9
	3.4nm,0.8s,baz=149,slow=5.3,SNR=13						
KSRS				LR	LR	16 06 30.7	
	comp=Z,52nm,18.9s,baz=150,slow=34						
KS15	Wonju Array Si	89.29	325	*e*P	P	15 28 09.2	+0.8
	66nm,1.9s						
KSAR	Wonju Array Be	89.29	325	P	P	15 28 09.2	+0.8
WHN	Wuhan	90.54	312	P	P	15 28 22.0	+7.6
CM31	Chiang Mai Arr	91.59	293	*e*P	P	15 28 19.3	-0.3
	34nm,1.9s						
CMAR	Chiang Mai Arr	91.59	293	P	P	15 28 19.3	-0.3
	1.0nm,0.4s,baz=136,slow=5.8,SNR=3.3						
CMAR				LR	LR	16 14 33.7	
	comp=Z,68nm,18.2s,baz=162,slow=39						
KMI	Kunming	93.64	300	P	P	15 28 29.4	+0.1
KMI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PETK	Petropavlovsk-	95.32	350	LR	LR	16 06 13.7	
	comp=Z,131nm,20.2s,baz=156,slow=32						
CD2	Chengdu	97.04	305	*e*P	P	15 28 43.8	-0.6
CPUP	Villa Florida	97.30	135	LR	LR	16 07 35.2	
	comp=Z,123nm,18.5s,baz=213,slow=32						
LPAZ	La Paz	98.61	121	LR	LR	16 04 50.0	
	comp=Z,36nm,20.5s,baz=232,slow=30						
HHC	Hu-ho-hao-te	99.74	317	P	Pdif	15 28 57.0	+0.6
LZH	Lanzhou	100.59	309	*e*P	Pdif	15 29 00.3	0.0
LZH				pP	pP	15 29 03.5	-0.2
LZH				sP	sP	15 29 05.0	+0.1
LZH				pmax	pmax		
	comp=Z,97nm,9.5s						
LZH				LR	LR		
	comp=N,150nm,17.5s						
LZH				LR	LR		
	comp=E,160nm,17.6s						
LZH				LR	LR		
	comp=Z,210nm,19.7s						
WMQ	Urumqi	115.05	307	*e*PKP	PKPdf	15 33 52.0	-1.3
YKA	Yellowknife Ar	118.13	30	PKP	PKiKP	15 33 58.3	-0.2
	0.3nm,0.6s,baz=212,slow=1.5,SNR=2.9						
YKA				PKKPbc	PKKPbc	15 44 21.1	+2.8
	0.6nm,0.9s,baz=46,slow=4.4,SNR=3.1						
YKB5	Yellowknife Ar	118.13	30	*e*PKPdf	PKiKP	15 33 58.3	-0.2
KBZ	Khabaz	144.59	290	PKP	PKPdf	15 34 49.7	+1.1
	3.4nm,0.9s,baz=162,slow=4.2,SNR=4.8						
LIC	Lamto	144.87	181	*e*PKIKP	PKiKP	15 34 54.7	+0.8
	145nm,2.0s						
KIC	Kosan Boka	145.00	182	*e*PKIKP	PKiKP	15 34 55.1	+1.0
	45nm,0.9s						
TIC	Toumodi	145.29	181	*e*PKIKP	PKiKP	15 34 55.2	+0.5
DBIC	Dimbokro	145.31	181	PKPbc	PKPdf	15 34 51.1	+0.2
	2.0nm,0.5s,baz=270,slow=3.0,SNR=2.8						
ARA0	ARCESS Array S	147.56	340	*e*PKPbc	PKPbc	15 34 54.5	-1.1
ARCES	ARCESS Array B	147.56	340	PKPbc	PKPbc	15 34 54.5	-1.1
	4.0nm,0.7s,baz=33,slow=2.0,SNR=7.1						
BR101	Keskin Array S	150.27	280	*e*PKPbc	PKPbc	15 35 03.2	-0.4
BR101				*e*PKPab	PKPab	15 35 09.9	+0.1
BRTR	Keskin Array B	150.27	280	PKPbc	PKPbc	15 35 03.2	-0.4
	0.6nm,0.6s,baz=152,slow=4.3,SNR=3.5						
BRTR				PKPab	PKPab	15 35 09.9	+0.1
	3.1nm,0.8s,baz=142,slow=4.7,SNR=7.6						
TOA0	Torodi Ar. Sit	151.03	195	*e*PKPdf	PKPdf	15 35 01.3	+1.2
TORD	Torodi Ar. Bea	151.03	195	PKP	PKPdf	15 35 00.9	+0.7
	2.2nm,1.0s,baz=155,slow=4.1,SNR=9.0						
TORD				PKPbc	PKiKP	15 35 06.6	+0.1
	4.3nm,0.7s,baz=158,slow=2.1,SNR=21						
TOA1	Torodi Ar. Sit	151.04	195	*e*PKPdf	PKPdf	15 35 00.9	+0.7
TOA1				*e*PKPbc	PKiKP	15 35 06.6	+0.1
FIA0	FINESS Array S	152.35	327	*e*PKPbc	PKPbc	15 35 05.4	-2.1
FINES	FINESS Array B	152.35	327	PKPbc	PKPbc	15 35 05.4	-2.1
	1.8nm,0.6s,baz=343,slow=6.0,SNR=6.9						
AKASG	Malin Array Be	154.32	303	PKPbc	PKiKP	15 35 13.0	+0.8
	0.8nm,0.6s,baz=62,slow=2.2,SNR=3.7						
AKASG				PKPab	PKPab	15 35 26.8	+0.5
	0.6nm,0.5s,baz=65,slow=4.3,SNR=4.1						
AKBB	Malin Array Si	154.32	303	*e*PKPbc	PKiKP	15 35 13.0	+0.8
AKBB				*e*PKPab	PKPab	15 35 26.8	+0.5
KOLS	Kolonicke sedl	159.04	300	*e*PKP	PKPab	15 35 52.9	+6.2
VYHS	Vyhne	161.35	300	*e*PKP	PKPab	15 36 00.2	+3.4
GERES	GERESS Array B	164.51	305	PKPab	PKPab	15 36 10.6	-0.2
	1.0nm,0.9s,baz=56,slow=3.4,SNR=7.9						
ESDC	Sonseca Array	177.76	216	PKP	PKPdf	15 35 23.6	+0.9
	1.0nm,0.9s,baz=352,slow=2.9,SNR=6.2						

WEL 21 15:17:57.8, 41°S±2°×**17°4E**±°**, h5^{km}**±2^{km}**, M3.5**/10**, ML3.8**/9**, MLv3.5**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=142.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCW	Tory Channel	0.23	353	P	Pg	15 18 04.5	+2.1
TUWZ	Tuamarina	0.28	273	P	Pg	15 18 04.2	+1.0
CMWZ	Cape Campbell	0.32	194	P	Pn	15 18 10.6	+1.5
WEL	Wellington	0.38	65	P	Pb	15 18 06.8	-0.1
BHW	Baring Head	0.42	85	P	Pb	15 18 07.2	-0.5
BSWZ	Blackbirch Sta	0.43	230	P	Pb	15 18 07.1	-0.7
CAW	Cannon Point	0.66	60	P	Pb	15 18 12.1	+0.3
MSWZ	Moikau Station	0.70	88	P	Pb	15 18 12.8	+0.2
DUWZ	D'Urville Isla	0.71	335	P	Pn	15 18 14.6	+0.2
PLWZ	Palliser	0.72	100	P	Pb	15 18 12.9	+0.1
NNZ	Nelson	0.74	287	P	Pn	15 18 14.5	-0.4
PAWZ	Paruwai Farm	0.84	86	P	Pn	15 18 15.6	-0.7
OGWZ	Otaki Gorge	0.90	46	P	Pb	15 18 16.1	+0.2
MTW	Mount Morrison	0.94	73	P	Pn	15 18 17.2	-0.4
TRWZ	Traveller	1.03	88	P	Pn	15 18 23.0	+4.1
HOWZ	Holdsworth Sta	1.06	59	P	Pn	15 18 20.3	+1.1
KHZ	Kahutara	1.13	210	P	Pn	15 18 20.4	+0.2
MRZ	Mangatainoka R	1.23	51	P	Pn	15 18 24.1	+2.4
TMWZ	Te Maipa	1.23	75	P	Pn	15 18 26.4	+4.7
GVZ	Greta Valley S	1.80	212	P	Pg	15 18 33.7	+1.5
MOVZ	Moawhango	2.31	29	P	Pg	15 18 41.4	-0.7
KRVZ	Karewarewa	2.56	24	P	Pg	15 18 46.1	-0.7

GRAL ***21*** *15:18:48.3±0.3, 33°.83N×35°.76E, h32^{km}±2^{km}, MD2.6*
ISCJB ***21*** *15:18:49.3±0.7, 33°.84N±0°.03×35°.89E±0°.04, h6^{km}±5^{km}, Error ellipse: s-maj=5.9km s-min=4.7km az=41.7*
GII ***21*** *15:18:49.4±0.6, 33°.74N×35°.88E, h1^{km}, MD1.7/4*
NSSC ***21*** *15:18:54.4±1.3, 33°.65N×35°.99E, h2^{km}±24^{km}, ML1.5*
ISC 21 15:18:49.1±1.1**, 33°.83N**±0°.04×**35°.89E**±0°.04**, h13^{km}**±8^{km}**, n18,** σ**0^s.50**/30**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	Bhannes	0.21	290	*e*P	Pg	15 18 53.8	0.0
BHL				*e*S	Sg	15 18 57.8	+0.7
DQRL	Deir Qamar	0.30	245	*e*P	Pg	15 18 54.5	-0.8
DQRL				*e*S	Sg	15 18 59.1	-0.4
QRWL	Qaraoun	0.34	212	*e*P	Pg	15 18 55.4	-0.6
RCY	Rachaya	0.34	188	*e*P	Pg	15 18 56.1	+0.1
RCY				*e*S	Sb	15 19 01.8	-0.6
BRBR	Barbar	0.42	174	*e*P	Pb	15 18 58.3	-0.3
BRBR				*e*S	Sg	15 19 03.8	+0.5
BRBR				AML	AML	15 19 07.4	
	comp=N,76nm,0.4s						
BRBR				AML	AML	15 19 09.8	
	comp=E,51nm,0.3s						
QASN	Qassioun	0.44	133	*e*P	Pn	15 19 00.8	-0.4
QASN				*e*S	Sg	15 19 03.7	0.0
QASN				AML	AML	15 19 04.9	
	comp=E,172nm,0.3s						
QASN				AML	AML	15 19 07.2	
	comp=N,144nm,0.3s						
HWQ	Hawqa	0.45	6	*e*P	Pg	15 18 57.8	-0.2
NATI	Neve Ativ	0.58	193	Pg	Pg	15 19 00.6	+0.1
NATI				Sg	Sb	15 19 09.6	+0.2
TOTH	TOTAH	0.65	136	*e*P	Pn	15 19 04.5	+0.4
TOTH				*e*S	Sg	15 19 10.3	0.0
TOTH				AML	AML	15 19 20.0	
	comp=E,23nm,0.4s						
TOTH				AML	AML	15 19 26.8	
	comp=N,17nm,0.6s						
GEM	Giv'at Ha'Em	0.65	197	Pg	Pb	15 19 02.0	-0.3
GEM				Sg	Sb	15 19 12.2	+0.9
KSDI	Kefar Szold	0.67	197	Pg	Pg	15 19 02.3	+0.2
KSDI				Sg	Sb	15 19 12.6	+0.8
KSHT	Keshet	0.85	185	Pg	Pb	15 19 06.0	+0.2
MMA0B	Mount Meron ar	0.91	207	Pg	Pb	15 19 07.1	+0.2
HNTI	Hanita	0.96	219	Pg	Pb	15 19 07.8	+0.2
HNTI				Sg	Sn	15 19 21.5	-0.4
OFRI	\`Ofer	1.43	212	Pn	Pb	15 19 15.9	+0.3
OFRI				Sn	Sg	15 19 35.9	+0.8
MMLI	Mount Malkishu	1.45	196	Pn	Pb	15 19 16.3	+0.4
HMDT	Nahal Hemdat	1.60	191	Pn	Pb	15 19 18.5	-0.1
HMDT				Sn	Sg	15 19 39.9	-0.9
SLTI	Sal'it	1.74	205	Pn	Pb	15 19 20.5	-0.5

IDC ***21*** *15:22:10.6±1.1, 41°.41S×174°.34E, h0^{km}, mb4.3/2, mb1 4.4/4, mb1mx4.0/22, mbtmp4.2/4, ML3.8/2, MS3.3/1, Ms1 3.3/1, ms1mx3.1/18, Error ellipse: s-maj=35.3km s-min=17.7km az=134.0*
ISCJB ***21*** *15:22:12.9±0.4, 41°.57S±0°.02×174°.33E±0°.03, h13^{km}±3^{km}, MS4.4/1, Error ellipse: s-maj=4.2km s-min=2.2km az=136.0*
WEL ***21*** *15:22:13.0, 41°.5S±0°.7×174°.3E±0°.8, h10^{km}±1^{km}, M4.8/17, ML4.8/6, MLv4.8/17, Error ellipse: s-maj=0.0km s-min=0.0km az=123.0*
NEIC ***21*** *15:22:13.0±0.0, 41°.46S×174°.29E, h10^{km}, mb4.1/2, MW4.5, ML4.8(WEL), Moment Tensor Solution. s37 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.63; M$_{\theta\theta}$4.13; M$_{\phi\phi}$-4.76; M$_{r\theta}$0.53; M$_{\theta\phi}$-4.20; M$_{\phi r}$-3.07; Best double couple: M$_0$6.90000×10^{15} NP1:φ$_s$337.00000°, δ89.00000°, λ-26.00000°. NP2:φ$_s$68.00000°, δ64.00000°, λ-179.00000°. Principal axes: T 6.3200, Plg18.0000°, Azm25.0000°; N 1.0200, Plg64.0000°, Azm155.0000°; P -7.3400, Plg19.0000°, Azm289.0000°; After WEL.*
NEIC Felt in the Wellington area. Also felt in the northeastern part of the South Island.
ISC 21 15:22:14.0±0.8**, 41°.52S**±0°.03×**174°.33E**±0°.02**, h8^{km}**±5^{km}**, n191,** σ**1^s.74**/202**, 2C, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.25	201	P	Pg	15 22 20.0	+1.1
TUWZ	Tuamarina	0.31	287	P	Pg	15 22 19.1	-0.9
TUWZ				S	Sg	15 22 23.2	-0.9
TCW	Tory Channel	0.31	352	P	Pg	15 22 19.1	-1.0
TCW				S	Sg	15 22 23.1	-1.2
SNZO	South Karori	0.35	53	*e*Pg	Pg	15 22 20.6	-0.2
BSWZ	Blackbirch Sta	0.39	240	P	Pg	15 22 21.7	0.0
WEL	Wellington	0.40	54	P	Pg	15 22 21.8	0.0
WEL				S	Sg	15 22 28.1	+1.0
BHW	Baring Head	0.42	75	P	Pg	15 22 22.5	+0.4
BHW				S	Sg	15 22 28.7	+1.1

CAW	Cannon Point	0.69	53	P	Pg	15 22 26.8	-0.4
PLWZ	Palliser	0.69	94	P	Pg	15 22 28.0	+0.6
PLWZ				S	Sb	15 22 38.5	+0.3
MSWZ	Moikau Station	0.70	82	P	Pg	15 22 27.9	+0.5
NNZ	Nelson	0.78	293	P	Pg	15 22 27.5	-1.4
DUWZ	D'Urville Isla	0.78	336	P	Pg	15 22 27.7	-1.3
PAWZ	Paruwai Farm	0.83	81	P	Pg	15 22 30.3	+0.3
OGWZ	Otaki Gorge	0.94	42	P	Pg	15 22 31.1	-1.0
MTW	Mount Morrison	0.95	68	P	Pg	15 22 32.4	+0.1
TRWZ	Traveller	1.02	84	P	Pg	15 22 33.6	0.0
KHZ	Kahutara	1.07	213	*e*Pn	Pb	15 22 34.6	-0.2
KHZ	Kahutara	1.07	213	P	Pb	15 22 34.9	+0.1
HOWZ	Holdsworth Sta	1.09	55	P	Pg	15 22 34.1	-0.8
THZ	Tophouse	1.10	257	*e*Pg	Pg	15 22 33.5	-1.5
THZ	Tophouse	1.10	257	P	Pg	15 22 34.0	-1.1
TMWZ	Te Maipa	1.24	71	P	Pn	15 22 36.7	-1.0
MRZ	Mangatainoka R	1.27	48	P	Pn	15 22 36.9	-1.2
TIWZ	Tintock	1.39	58	P	Pn	15 22 38.8	-0.9
OHWZ	Ohakea	1.51	30	P	Pn	15 22 41.2	-0.2
QRZ	Quartz Range	1.53	296	P	Pn	15 22 41.1	-0.5
CPWZ	Castlepoint	1.54	67	P	Pn	15 22 40.9	-0.8
POWZ	Post Office Ro	1.57	44	P	Pn	15 22 41.5	-0.6
PRWZ	Pori Road	1.57	53	P	Pn	15 22 41.4	-0.8
BFZ	Birch Farm	1.67	61	*e*Pn	Pn	15 22 41.9	-1.7
BFZ	Birch Farm	1.67	61	P	Pn	15 22 42.1	-1.5
GVZ	Greta Valley S	1.74	213	P	Pn	15 22 43.8	-0.8
WAZ	Wanganui	1.83	16	P	Pn	15 22 46.8	+0.9
DVHZ	Dannevirke	1.85	49	P	Pn	15 22 44.6	-1.4
ANWZ	Angora Road	1.94	58	P	Pn	15 22 45.6	-1.7
LTZ	Lake Taylor	1.98	230	*e*Pn	Pn	15 22 47.1	-0.8
LTZ	Lake Taylor	1.98	230	P	Pn	15 22 47.6	-0.4
LREZ	Lake Rotokare	2.06	1	P	Pn	15 22 49.7	+0.8
AMCZ	Amberley	2.07	216	P	Pn	15 22 48.0	-1.1
NMEZ	Namu Road	2.13	350	P	Pn	15 22 51.7	+1.8
PNHZ	Pukenui	2.14	42	P	Pn	15 22 49.0	-1.1
PRHZ	Porangahau	2.15	55	P	Pn	15 22 48.3	-1.8
WPHZ	Waipukurau	2.16	48	P	Pn	15 22 49.0	-1.3
PREZ	Palmer Road	2.18	356	P	Pn	15 22 52.0	+1.4
KHEZ	Kahui Hut	2.24	354	P	Pn	15 22 52.9	+1.5
NBEZ	Newall Road No	2.28	351	P	Pn	15 22 53.2	+1.3
MTVZ	Mangateitei	2.30	23	P	Pn	15 22 53.7	+1.3
DREZ	Durham Road	2.33	357	P	Pn	15 22 54.5	+1.8
PKE	Pukeiti	2.34	353	P	Pn	15 22 53.9	+1.1
PKVZ	Pokaka	2.36	19	P	Pn	15 22 54.1	+1.0
MOVZ	Moawhango	2.37	28	P	Pn	15 22 53.1	-0.2
OKCZ	Okains Bay	2.39	203	P	Pn	15 22 51.7	-1.8
CRLZ	Canterbury Las	2.41	211	*e*Pn	Pn	15 22 51.5	-2.2
CRLZ	Canterbury Las	2.41	211	P	Pn	15 22 51.9	-1.9
VRZ	Vera Road	2.42	8	P	Pn	15 22 54.5	+0.7
BHHZ	Black Hill Sta	2.42	34	P	Pn	15 22 53.6	-0.4
PXZ	Pawanui	2.43	53	P	Pn	15 22 51.9	-2.1
DRZ	Dome Shelter	2.43	23	P	Pn	15 22 55.6	+1.3
WHVZ	Whangaehu Hut	2.43	24	P	Pn	15 22 55.0	+0.7
KRHZ	Kereru	2.43	40	P	Pn	15 22 52.7	-1.4
MHEZ	Mangahewa	2.44	360	P	Pn	15 22 56.2	+2.0
FWVZ	Far West T-bar	2.45	23	P	Pn	15 22 55.2	+0.7
INZ	Inchbonnie	2.46	240	P	Pn	15 22 54.4	-0.1
TUVZ	Tukino	2.47	25	P	Pn	15 22 55.2	+0.6
OXZ	Oxford	2.48	223	*e*Pn	Pn	15 22 52.8	-1.9
OXZ	Oxford	2.48	223	P	Pn	15 22 53.1	-1.6
MQZ	McQueen's Vall	2.51	209	*e*Pn	Pn	15 22 52.3	-2.8
MQZ	McQueen's Vall	2.51	209	P	Pn	15 22 52.6	-2.5
NGZ	Ngauruhoe	2.53	23	P	Pn	15 22 56.4	+0.8
AKCZ	Akaroa Harbour	2.57	204	P	Pn	15 22 54.2	-1.8
WTVZ	West Tongariro	2.59	22	P	Pn	15 22 57.0	+0.7
TWVZ	Taurewa	2.59	19	P	Pn	15 22 56.9	+0.6
KAHZ	Kahuranaki	2.59	49	P	Pn	15 22 54.4	-1.9
KRVZ	Karewarewa	2.62	23	P	Pn	15 22 57.6	+0.8
KWHZ	Kaweka Forest	2.63	38	P	Pn	15 22 55.6	-1.3
KATZ	Kakaramea	2.75	23	P	Pn	15 22 59.5	+1.0
MCHZ	McNeill Hill	2.75	42	P	Pn	15 22 57.0	-1.4
RITZ	Rihia Road	2.79	25	P	Pn	15 22 59.3	+0.3
CKHZ	Cape Kidnapper	2.80	49	P	Pn	15 22 57.2	-1.9
RATZ	Rangitukua	2.87	23	P	Pn	15 23 01.4	+1.3
BKZ	Black Stump Fm	2.87	36	*e*Pn	Pn	15 22 58.3	-1.9
BKZ	Black Stump Fm	2.87	36	P	Pn	15 22 58.7	-1.5
HATZ	Hinemaiaia	2.95	28	P	Pb	15 23 06.0	-0.8
WATZ	Wairara	3.01	21	P	Pn	15 23 02.2	+0.2
HIZ	Hauiti	3.03	8	*e*Pn	Pn	15 23 02.8	+0.5
HIZ	Hauiti	3.03	8	P	Pn	15 23 03.3	+1.0
ARHZ	Aropaoanui	3.04	43	P	Pn	15 23 00.5	-1.8
WVZ	Waitaha Valley	3.09	239	P	Pn	15 23 02.7	-0.3
WHTZ	Whakaora	3.11	24	P	Pn	15 23 06.2	+2.7
MRHZ	Matea Rd	3.12	31	P	Pn	15 23 01.9	-1.7
KUTZ	Kaahu Road	3.24	21	P	Pn	15 23 07.0	+1.9
RPZ	Rata Peaks	3.27	227	Pn	Pn	15 23 04.0	-1.5
	6.5nm,0.3s,baz=250,slow=1.9,SNR=19						
RPZ				Sn	Sn	15 23 42.1	-2.5
	30nm,0.3s,baz=142,slow=22,SNR=13						
RPZ				Lg	Lg	15 24 01.3	
	24nm,0.3s,baz=284,slow=17,SNR=4.9						
RPZ				LR	LR	15 24 01.8	
	comp=Z,536nm,21.7s,baz=7.5,slow=33						
RPZ	Rata Peaks	3.27	227	*e*Pn	Pn	15 23 04.4	-1.2
RPZ				Sn	Sn	15 23 42.1	-2.5
RPZ				Lg	Lg	15 24 01.3	
RPZ	Rata Peaks	3.27	227	P	Pn	15 23 04.3	-1.2
MTHZ	Maungataniwha	3.29	37	P	Pn	15 23 04.0	-1.9
WHHZ	Waihua	3.30	43	P	Pn	15 23 04.2	-1.8
TLZ	Tolley Road	3.32	17	P	Pn	15 23 06.7	+0.4
ALRZ	Allen Road	3.33	28	P	Pn	15 23 05.0	-1.5
RAHZ	Arahi	3.35	40	P	Pn	15 23 04.4	-2.2
PRRZ	Plateau Road	3.41	28	P	Pn	15 23 06.0	-1.5
GRRZ	Galatos Road	3.45	24	P	Pn	15 23 07.6	-0.5
HRRZ	Handcock Road	3.47	26	P	Pn	15 23 08.0	-0.4
HSRZ	Hossack Road	3.53	25	P	Pn	15 23 08.8	-0.3
RTZ	Ruatahuna	3.54	36	P	Pn	15 23 10.1	+0.7
MUGZ	Murupara	3.57	32	P	Pn	15 23 07.5	-2.2
KNZ	Kokohu	3.57	47	P	Pn	15 23 06.7	-3.0
SNGZ	Shannon Statio	3.58	41	P	Pn	15 23 07.5	-2.3
RRRZ	Republican Roa	3.59	29	P	Pn	15 23 08.5	-1.6
RRRZ				P	Pb	15 23 15.2	-2.6
MHGZ	Mahia Peninsul	3.61	50	P	Pn	15 23 07.9	-2.4
UTU	Utuhina	3.63	24	P	Pn	15 23 13.3	+2.7
TARZ	Mount Tarawera	3.68	28	P	Pn	15 23 10.2	-1.1
NGRZ	Ngongotaha	3.70	23	P	Pb	15 23 17.6	-2.1
OMRZ	Omania	3.75	25	P	Pn	15 23 11.7	-0.5
MKRZ	Makatiti	3.76	27	P	Pn	15 23 13.4	+1.0
PRGZ	Paritu Road	3.76	47	P	Pn	15 23 09.4	-2.9
KARZ	Kaharoa	3.79	23	P	Pn	15 23 13.9	+1.1
RAGZ	Rawiri	3.84	39	P	Pn	15 23 10.7	-2.8
RIGZ	Rimuhau	3.85	44	P	Pn	15 23 10.3	-3.3
KMRZ	Kaimai	3.87	19	P	Pn	15 23 14.2	+0.3
EDRZ	Edgecumbe	3.88	29	P	Pn	15 23 16.7	+2.7
TOZ	Tahuroa Road	3.89	14	P	Pn	15 23 14.4	+0.3
URZ	Urewera	3.90	34	Pn	Pn	15 23 11.2	-3.0
	9.1nm,0.3s,baz=229,slow=4.1,SNR=32						
URZ				Sn	Sn	15 23 56.4	-3.7
	36nm,0.3s,baz=244,slow=16,SNR=3.2						
URZ				Lg	Lg	15 24 11.8	
	15nm,0.3s,baz=65,slow=21,SNR=2.8						
URZ	Urewera	3.90	34	P	Pn	15 23 11.4	-2.7
FOZ	Fox Glacier	3.90	237	*e*Pn	Pn	15 23 13.6	-0.6
FOZ	Fox Glacier	3.90	237	P	Pn	15 23 14.2	0.0
MARZ	Manawahe	3.96	28	P	Pn	15 23 13.7	-1.5
MWZ	Matawai	4.02	39	P	Pn	15 23 12.6	-3.3
OPRZ	Ohinepanea	4.05	26	P	Pn	15 23 14.7	-1.6
TGRZ	Tauranga	4.07	22	P	Pn	15 23 17.5	+0.9
TGRZ				P	Pb	15 23 22.2	-3.7
TKGZ	Te Karaka	4.09	42	P	Pn	15 23 13.5	-3.4
LBZ	Lake Benmore	4.18	225	*e*Pn	Pn	15 23 17.0	-1.1
LBZ	Lake Benmore	4.18	225	P	Pn	15 23 17.2	-0.9
CNGZ	Carnagh Statio	4.25	46	P	Pn	15 23 16.6	-2.4
TWGZ	Tauwhareparae	4.36	41	P	Pn	15 23 17.7	-2.9
RUGZ	Raukumara Rang	4.39	37	P	Pn	15 23 18.3	-2.7
ODZ	Otahua Downs	4.43	216	*e*Pn	Pn	15 23 19.1	-2.5
ODZ	Otahua Downs	4.43	216	P	Pn	15 23 19.4	-2.2
KBAZ	Karaka Road Bo	4.44	6	P	Pn	15 23 22.8	+1.1
AWAZ	Awhitu Peninsu	4.46	3	P	Pn	15 23 22.7	+0.8
MKAZ	Moumakai	4.46	9	P	Pn	15 23 22.4	+0.5
ETAZ	East Tamaki Re	4.58	6	P	Pn	15 23 24.6	+1.0
WTAZ	Waiatarua	4.58	2	P	Pn	15 23 25.4	+1.8
HAZ	Te Kaha	4.61	36	P	Pn	15 23 21.4	-2.5
PKGZ	Pakihiroa	4.64	40	P	Pn	15 23 21.6	-2.8
EPAZ	Eden Park BICE	4.65	4	P	Pn	15 23 28.0	+3.5
HBAZ	Herne Bay Bore	4.67	4	P	Pn	15 23 28.6	+3.7
MBAZ	Motutapu North	4.76	5	P	Pn	15 23 27.1	+1.0
JCZ	Jackson Bay	4.81	236	P	Pn	15 23 27.2	+0.3
KUZ	Kuaotunu	4.89	13	P	Pn	15 23 28.2	+0.4
MXZ	Matakaoa Point	5.00	39	*e*Pn	Pn	15 23 25.5	-3.9
MXZ	Matakaoa Point	5.00	39	P	Pn	15 23 26.2	-3.2
WKZ	Wanaka	5.10	228	*e*Pn	Pn	15 23 29.3	-1.5
WKZ	Wanaka	5.10	228	P	Pn	15 23 29.9	-0.8
HHSZ	Highcliff Hill	5.13	211	P	Pn	15 23 29.5	-1.7
EAZ	Earnscleugh	5.21	223	P	Pn	15 23 32.6	+0.4
GRZ	Great Barrier	5.33	10	P	Pn	15 23 36.8	+2.9
WCZ	Waipu Caves	5.57	0	P	Pn	15 23 38.2	+1.0
TUZ	Tuapeka	5.59	216	P	Pn	15 23 36.9	-0.5
MSZ	Milford Sound	5.65	234	P	Pn	15 23 41.5	+3.3
MLZ	Mavora Lakes	5.94	228	*e*Pn	Pn	15 23 40.8	-1.4
SYZ	Scrubby Hill	6.26	215	P	Pn	15 23 45.4	-1.1
OUZ	Omahuta	6.32	355	*e*Pn	Pn	15 23 47.1	-0.4
OUZ	Omahuta	6.32	355	P	Pn	15 23 48.6	+1.2
WHZ	Wether Hill Ro	6.36	224	*e*Pn	Pn	15 23 45.9	-2.2
DCZ	Deep Cove	6.54	231	*e*Pn	Pn	15 23 50.1	-0.4
CTZ	Chatham Island	7.03	111	P	Pn	15 23 55.6	-1.6
AS31	Alice Springs	38.03	285	*e*P	P	15 29 30.4	-2.5
	1.9nm,1.1s						
ASAR	Alice Springs	38.03	285	P	P	15 29 30.4	-2.5
	2.3nm,0.6s,baz=128,slow=7.1,SNR=27						
WB2	Warramunga Arr	40.07	290	*e*P	P	15 29 47.3	-2.7
	13nm,1.1s						
WR1	Warramunga Arr	40.08	290	*e*P	P	15 29 47.9	-2.2
WRA	Warramunga Arr	40.08	290	P	P	15 29 47.9	-2.2
	4.1nm,0.6s,baz=132,slow=8.3,SNR=30						
SYO	Syowa Base	64.81	196⇑	*e*pP	P	15 32 54.0	+1.2
SYO	Syowa Base	64.81	196⇑	*e*X	PcP	15 33 19.0	-7.1
SNAA	Sanae	67.10	181	P	P	15 33 08.2	+0.7
VNA3	Neumayer Olymp	67.51	179	P	P	15 33 10.4	+0.3
VNA1	Neumayer--Stat	68.12	179	P	P	15 33 15.2	+1.3
NJ2	Nanjing	89.28	316	*e*P	P	15 35 09.5	-1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI	Kunming	93.66	300	P	P	15 35 30.9	-0.5
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CD2	Chengdu	97.06	305	*e*P	P	15 35 45.8	-0.7
HHC	Hu-ho-hao-te	99.77	317	P	Pdif	15 35 58.9	+0.4
HHC				pmax	pmax		
	comp=Z,170nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,6.3s						
LZH	Lanzhou	100.61	309	*e*P	Pdif	15 36 03.3	+0.9
LZH				pP	pPdif	15 36 06.5	+1.5
LZH				sP	sP	15 36 08.0	+2.1
LZH				*e*PP	PP	15 40 13.8	+3.8
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,54nm,9.2s						
LZH				LR	LR		
	comp=N,75nm,17.3s						
LZH				LR	LR		
	comp=E,81nm,17.2s						
LZH				LR	LR		
	comp=Z,110nm,19.5s						
KSH	Kashi	120.20	298	*e*PKP	PKiKP	15 41 07.8	+2.3
DBIC	Dimbokro	145.29	181	PKPbc	PKPbc	15 41 50.6	-1.8
	comp=Z,2.4nm,0.6s,baz=190,slow=6.1,SNR=2.9						
ARA0	ARCESS Array S	147.58	340	*e*PKPdf	PKPdf	15 41 54.2	-0.8
ARCES	ARCESS Array B	147.58	340	PKPbc	PKPdf	15 41 54.2	-0.8
	comp=Z,1.9nm,0.8s,baz=29,slow=2.8,SNR=8.8						
BR101	Keskin Array S	150.28	280	*e*PKPbc	PKPdf	15 42 03.5	+3.1
BR101				*e*PKPab	pPKPbc	15 42 09.8	+1.5
BRTR	Keskin Array B	150.28	280	PKPbc	PKPdf	15 42 03.5	+3.1
	comp=Z,0.5nm,0.7s,baz=145,slow=2.9,SNR=2.8						
BRTR				PKPab	pPKPbc	15 42 09.8	+1.5
	comp=Z,0.9nm,0.7s,baz=145,slow=4.5,SNR=5.4						
TORD	Torodi Ar. Bea	151.01	195	PKPbc	PKPdf	15 42 05.9	+3.7
	comp=Z,1.9nm,0.6s,baz=154,slow=2.7,SNR=14						
TOA1	Torodi Ar. Sit	151.02	195	*e*PKPbc	PKPdf	15 42 05.9	+3.7
FIA0	FINESS Array S	152.38	327	*e*pPKPdf	PKPdf	15 42 05.5	+2.8
FINES	FINESS Array B	152.38	327	PKPbc	PKPdf	15 42 05.5	+2.8
	comp=Z,0.8nm,0.5s,baz=114,slow=8.5,SNR=5.0						

ISCJB ***21*** *15:24:24.6±0.3, 43°.54N±0°.02×13°.69E±0°.02, h11^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.8km az=37.9*

ROM ***21*** *15:24:24.5±0.3, 43°.52N±0°.01×13°.67E±0°.02, h8^{km}±1^{km}, ML2.6/35, Error ellipse: s-maj=2.4km s-min=0.6km az=54.0*

ISC 21 15:24:24.7±0.8**, 43°.51N**±0°.02×**13°.68E**±0°.02**, h10**^{km}±6^{km}**, n64, σ0^{s}84**/74**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	Ancona	0.07	306	P	Pg	15 24 26.3	-0.6
AOI				S	Sg	15 24 28.2	-0.3
PCRO	Pietralacroce	0.14	313	P	Pg	15 24 28.0	0.0
PCRO				S	Sg	15 24 31.0	+0.8
PCRO				AML	AML		
	comp=E,8305μm,0.9s						
PCRO				AML	AML		
	comp=N,6240μm,0.6s						
PCRO				AML	AML		
	comp=E,8305μm,0.9s						
PCRO				AML	AML		
	comp=N,6240μm,0.6s						
PCRO				AML	AML		
	comp=E,8305μm,0.9s						
PCRO				AML	AML		
	comp=N,6245μm,0.6s						
PCRO				AML	AML		
	comp=N,6240μm,0.6s						
PCRO				AML	AML		
	comp=E,8305μm,0.9s						
PCRO				AML	AML		
	comp=N,6245μm,0.6s						
PCRO				AML	AML		
	comp=E,8305μm,0.9s						
CIMA	Civitanova Mar	0.20	182	P	Pg	15 24 29.6	+0.7
CIMA				AML	AML		
	comp=E,11890μm,0.3s						
CIMA				AML	AML		
	comp=N,16450μm,0.3s						
CIMA				AML	AML		
	comp=E,11925μm,0.3s						
CIMA				AML	AML		
	comp=N,16400μm,0.3s						
CIMA				AML	AML		
	comp=E,11900μm,0.3s						
CIMA				AML	AML		
	comp=N,16450μm,0.3s						
CIMA				AML	AML		
	comp=N,16400μm,0.3s						
CIMA				AML	AML		
	comp=E,11925μm,0.3s						
CIMA				AML	AML		
	comp=N,16450μm,0.3s						
CIMA				AML	AML		
	comp=E,11900μm,0.3s						
CADA	Capodarco di F	0.32	169	P	Pg	15 24 31.5	+0.4
CADA				S	Sb	15 24 37.9	+0.1
CING	Cingoli	0.38	249	P	Pg	15 24 32.3	+0.1
CING				S	Sb	15 24 38.6	-0.9
CING				AML	AML		
	comp=E,464μm,0.6s						
CING				AML	AML		
	comp=N,564μm,0.2s						
CING				AML	AML		
	comp=E,464μm,0.6s						
CING				AML	AML		
	comp=N,563μm,0.2s						
CING				AML	AML		
	comp=E,464μm,0.6s						
CING				AML	AML		
	comp=N,564μm,0.2s						
CING				AML	AML		
	comp=E,464μm,0.6s						
CING				AML	AML		
	comp=N,563μm,0.2s						
SENI	Senigallia	0.38	301	P	Pb	15 24 32.8	-0.7
SENI				AML	AML		
	comp=E,2400μm,0.2s						
SENI				AML	AML		
	comp=N,3325μm,0.2s						
SENI				AML	AML		
	comp=E,2405μm,0.2s						
SENI				AML	AML		
	comp=N,3320μm,0.2s						
SENI				AML	AML		
	comp=E,2405μm,0.2s						
SENI				AML	AML		
	comp=N,3325μm,0.2s						
SENI				AML	AML		
	comp=E,2405μm,0.2s						
SENI				AML	AML		
	comp=N,3320μm,0.2s						
SENI				AML	AML		
	comp=E,2405μm,0.2s						
SENI				AML	AML		
	comp=N,3325μm,0.2s						
MNTP	Montappone	0.40	202	P	Pb	15 24 33.2	-0.7
EL6	Elcito	0.46	247	P	Pg	15 24 33.7	+0.1
ARVD	Arcevia	0.54	269	P	Pg	15 24 35.0	-0.1
ARVD				S	Sb	15 24 44.1	+0.1
ARVD				AML	AML		
	comp=E,174μm,0.2s						
ARVD				AML	AML		
	comp=N,155μm,0.9s						
ARVD				AML	AML		
	comp=E,174μm,0.2s						
ARVD				AML	AML		
	comp=N,156μm,0.9s						
ARVD				AML	AML		
	comp=E,173μm,0.2s						
ARVD				AML	AML		
	comp=N,156μm,0.9s						
ARVD				AML	AML		
	comp=N,156μm,0.9s						
ARVD				AML	AML		
	comp=E,174μm,0.2s						
ARVD				AML	AML		
	comp=N,156μm,0.9s						
ARVD				AML	AML		
	comp=E,173μm,0.2s						
CSP1	Cessapalombo	0.54	220	P	Pg	15 24 35.2	-0.1
CSP1				AML	AML		
	comp=E,554μm,1.4s						
CSP1				AML	AML		
	comp=N,960μm,0.4s						
SNTG	Esanatoglia	0.59	245	P	Pg	15 24 36.0	-0.3
SNTG				S	Sb	15 24 46.0	+0.2
SNTG				AML	AML		
	comp=E,199μm,0.7s						
SNTG				AML	AML		
	comp=N,426μm,0.3s						
SNTG				AML	AML		
	comp=E,199μm,0.7s						
SNTG				AML	AML		
	comp=N,426μm,0.3s						
SNTG				AML	AML		
	comp=E,199μm,0.7s						
SNTG				AML	AML		
	comp=N,426μm,0.3s						
SNTG				AML	AML		
	comp=N,426μm,0.3s						
SNTG				AML	AML		
	comp=E,199μm,0.7s						
SNTG				AML	AML		
	comp=N,426μm,0.3s						
SNTG				AML	AML		
	comp=E,199μm,0.7s						
FDMO	Fiordimonte	0.64	223	P	Pg	15 24 36.8	-0.3
FDMO				S	Sb	15 24 47.8	+0.8
FDMO				AML	AML		
	comp=E,834μm,0.2s						
FDMO				AML	AML		
	comp=N,494μm,0.1s						
FDMO				AML	AML		
	comp=E,834μm,0.2s						
FDMO				AML	AML		
	comp=N,494μm,0.1s						
FDMO				AML	AML		
	comp=E,834μm,0.2s						
FDMO				AML	AML		
	comp=N,494μm,0.1s						
FDMO				AML	AML		
	comp=E,834μm,0.2s						
FDMO				AML	AML		
	comp=N,494μm,0.1s						
FDMO				AML	AML		
	comp=E,834μm,0.2s						
FDMO				AML	AML		
	comp=N,494μm,0.1s						
MPAG	Monte Paganucc	0.68	280	P	Pg	15 24 37.8	-0.1
MPAG				AML	AML		
	comp=E,163μm,0.6s						
MPAG				AML	AML		
	comp=N,244μm,0.7s						
MPAG				AML	AML		
	comp=E,163μm,0.6s						
MPAG				AML	AML		
	comp=N,243μm,0.7s						
MPAG				AML	AML		
	comp=N,244μm,0.7s						
MPAG				AML	AML		
	comp=E,163μm,0.6s						
MPAG				AML	AML		
	comp=N,243μm,0.7s						
MPAG				AML	AML		
	comp=E,163μm,0.6s						
TRTR	Tortoreto Alta	0.72	166	P	Pb	15 24 40.0	+0.6
TRTR				AML	AML		
	comp=E,1255μm,0.3s						
TRTR				AML	AML		
	comp=N,1235μm,0.2s						
TRTR				AML	AML		
	comp=E,1255μm,0.3s						
TRTR				AML	AML		
	comp=N,1235μm,0.2s						
TRTR				AML	AML		
	comp=N,1235μm,0.2s						
TRTR				AML	AML		
	comp=E,1255μm,0.3s						
TRTR				AML	AML		
	comp=N,1235μm,0.2s						
TRTR				AML	AML		
	comp=E,1255μm,0.3s						
PESA	Pesaro	0.74	306	AML	AML		
	comp=E,528μm,0.3s						
PESA				AML	AML		
	comp=E,528μm,0.3s						
PESA				AML	AML		
	comp=N,455μm,0.7s						
PESA				AML	AML		
	comp=E,528μm,0.3s						
PESA				AML	AML		
	comp=N,456μm,0.7s						
PESA				AML	AML		
	comp=N,455μm,0.7s						
PESA				AML	AML		
	comp=N,456μm,0.7s						
PESA				AML	AML		
	comp=E,528μm,0.3s						
CESI	CESI - Serrava	0.76	228	P	Pg	15 24 39.4	+0.1
CESI				AML	AML		
	comp=E,125μm,0.4s						
CESI				AML	AML		
	comp=N,212μm,0.4s						
CESI				AML	AML		
	comp=E,125μm,0.4s						
CESI				AML	AML		
	comp=N,213μm,0.4s						
CESI				AML	AML		
	comp=E,125μm,0.4s						
CESI				AML	AML		
	comp=N,212μm,0.4s						
CESI				AML	AML		
	comp=E,125μm,0.4s						
CESI				AML	AML		
	comp=N,213μm,0.4s						
NRCA	Norcia	0.79	212	P	Pg	15 24 39.4	-0.6
ATFO	Monte Foce - G	0.82	260	P	Pg	15 24 40.3	-0.2
ATFO				AML	AML		
	comp=E,207μm,1.6s						
ATFO				AML	AML		
	comp=N,239μm,0.8s						
ATFO				AML	AML		
	comp=E,208μm,1.6s						
ATFO				AML	AML		
	comp=N,239μm,0.8s						
ATFO				AML	AML		
	comp=E,207μm,1.6s						
ATFO				AML	AML		
	comp=N,239μm,0.8s						
ATFO				AML	AML		
	comp=E,208μm,1.6s						
ATFO				AML	AML		
	comp=N,239μm,0.8s						
PIEI	Pieia	0.83	272	P	Pg	15 24 40.6	-0.1
PIEI				AML	AML		
	comp=E,153μm,0.3s						

PIEI				AML	AML		
	comp=N,130µm,1.4s						
PIEI				AML	AML		
	comp=E,153µm,0.3s						
PIEI				AML	AML		
	comp=N,130µm,1.4s						
PIEI				AML	AML		
	comp=N,130µm,1.4s						
PIEI				AML	AML		
	comp=E,153µm,0.3s						
PIEI				AML	AML		
	comp=N,130µm,1.4s						
PIEI				AML	AML		
	comp=E,153µm,0.3s						
ASSB	**Assisi San Ben**	**0.88**	**238**	P	**Pg**	**15 24 41.2**	**-0.5**
ASSB				AML	AML		
	comp=E,567µm,0.3s						
ASSB				AML	AML		
	comp=N,496µm,0.5s						
ASSB				AML	AML		
	comp=E,567µm,0.3s						
ASSB				AML	AML		
	comp=N,496µm,0.5s						
ASSB				AML	AML		
	comp=N,496µm,0.5s						
ASSB				AML	AML		
	comp=E,567µm,0.3s						
ASSB				AML	AML		
	comp=N,496µm,0.5s						
ASSB				AML	AML		
	comp=E,567µm,0.3s						
ATVO	**AVT- Monte Val**	**0.94**	**263**	AML	AML		
	comp=E,140µm,1.5s						
ATVO				AML	AML		
	comp=E,140µm,1.5s						
ATVO				AML	AML		
	comp=N,150µm,0.3s						
ATVO				AML	AML		
	comp=E,140µm,1.5s						
ATVO				AML	AML		
	comp=N,150µm,0.3s						
ATVO				AML	AML		
	comp=N,150µm,0.3s						
ATVO				AML	AML		
	comp=N,150µm,0.3s						
ATVO				AML	AML		
	comp=E,140µm,1.5s						
LNSS	**Leonessa**	**1.02**	**208**	P	**Pg**	**15 24 43.3**	**-1.1**
LNSS				AML	AML		
	comp=E,506µm,0.3s						
LNSS				AML	AML		
	comp=N,621µm,0.8s						
LNSS				AML	AML		
	comp=E,506µm,0.3s						
LNSS				AML	AML		
	comp=N,621µm,0.8s						
LNSS				AML	AML		
	comp=N,621µm,0.8s						
LNSS				AML	AML		
	comp=E,506µm,0.3s						
LNSS				AML	AML		
	comp=N,621µm,0.8s						
LNSS				AML	AML		
	comp=E,506µm,0.3s						
ATMI	**Monte Miggiano**	**1.04**	**261**	AML	AML		
	comp=N,337µm,0.8s						
ATMI				AML	AML		
	comp=E,278µm,0.3s						
ATMI				AML	AML		
	comp=N,337µm,0.8s						
ATMI				AML	AML		
	comp=E,278µm,0.3s						
ATMI				AML	AML		
	comp=E,278µm,0.3s						
ATMI				AML	AML		
	comp=N,337µm,0.8s						
ATMI				AML	AML		
	comp=E,278µm,0.3s						
ATMI				AML	AML		
	comp=N,337µm,0.8s						
MOMA	**Monte Martano**	**1.07**	**229**	P	**Pg**	**15 24 44.2**	**-1.2**
MOMA				AML	AML		
	comp=E,288µm,0.2s						
MOMA				AML	AML		
	comp=N,254µm,1.4s						
MOMA				AML	AML		
	comp=E,285µm,0.3s						
MOMA				AML	AML		
	comp=N,1854µm,1.6s						
MOMA				AML	AML		
	comp=E,288µm,0.2s						
MOMA				AML	AML		
	comp=N,254µm,1.4s						
MOMA				AML	AML		
	comp=E,288µm,0.2s						
MOMA				AML	AML		
	comp=N,254µm,1.4s						
MOMA				AML	AML		
	comp=E,285µm,0.3s						
MOMA				AML	AML		
	comp=N,254µm,1.4s						
MOMA				AML	AML		
	comp=N,1854µm,1.6s						
MOMA				AML	AML		
	comp=E,288µm,0.2s						
DUGI	**Dugi Otok**	**1.11**	**64**	*e*Pg	**Pg**	**15 24 45.7**	**-0.4**
DUGI				Sg	**Sg**	**15 24 59.9**	**-0.6**
VCEL	**Villa Celiera**	**1.12**	**174**	P	**Pn**	**15 24 46.6**	**0.0**
VCEL				AML	AML		
	comp=E,476µm,0.7s						
VCEL				AML	AML		
	comp=N,396µm,0.5s						
VCEL				AML	AML		
	comp=E,476µm,0.7s						
VCEL				AML	AML		
	comp=N,396µm,0.5s						
VCEL				AML	AML		
	comp=E,476µm,0.7s						
VCEL				AML	AML		
	comp=N,396µm,0.5s						
VCEL				AML	AML		
	comp=E,476µm,0.7s						
VCEL				AML	AML		
	comp=N,396µm,0.5s						
T0104	**Madonna delle**	**1.18**	**192**	P	**Pg**	**15 24 46.8**	**-0.5**
T0104				AML	AML		
	comp=E,961µm,0.8s						
T0104				AML	AML		
	comp=N,596µm,0.7s						
T0104				AML	AML		
	comp=E,961µm,0.8s						
T0104				AML	AML		
	comp=N,596µm,0.7s						
T0104				AML	AML		
	comp=N,596µm,0.7s						
T0104				AML	AML		
	comp=E,961µm,0.8s						
T0104				AML	AML		
	comp=N,596µm,0.7s						
T0104				AML	AML		
	comp=E,961µm,0.8s						
FAGN	**Fagnano**	**1.25**	**183**	P	**Pg**	**15 24 48.6**	**0.0**
FAGN				AML	AML		
	comp=E,824µm,0.4s						
FAGN				AML	AML		
	comp=N,608µm,0.6s						
FAGN				AML	AML		
	comp=E,824µm,0.4s						
FAGN				AML	AML		
	comp=N,608µm,0.6s						
FAGN				AML	AML		
	comp=E,824µm,0.4s						
FAGN				AML	AML		
	comp=N,608µm,0.6s						
FAGN				AML	AML		
	comp=E,824µm,0.4s						
FAGN				AML	AML		
	comp=N,608µm,0.6s						
CAFI	**Castiglion Fio**	**1.26**	**262**	P	**Pg**	**15 24 49.2**	**+0.3**
CAFI				AML	AML		
	comp=E,82µm,1.4s						
CAFI				AML	AML		
	comp=N,89µm,0.7s						
CAFI				AML	AML		
	comp=E,82µm,1.4s						
CAFI				AML	AML		
	comp=N,89µm,0.7s						
CAFI				AML	AML		
	comp=N,89µm,0.7s						
CAFI				AML	AML		
	comp=E,82µm,1.4s						
CAFI				AML	AML		
	comp=N,89µm,0.7s						
CAFI				AML	AML		
	comp=E,82µm,1.4s						
MGAB	**Montegabbione**	**1.29**	**243**	P	**Pg**	**15 24 49.4**	**-0.1**
MGAB				AML	AML		
	comp=E,234µm,0.7s						
MGAB				AML	AML		
	comp=N,226µm,1.5s						
MGAB				AML	AML		
	comp=E,273µm,1.4s						
MGAB				AML	AML		
	comp=N,200µm,0.5s						
MGAB				AML	AML		
	comp=E,273µm,1.4s						
MGAB				AML	AML		
	comp=N,200µm,0.5s						
MGAB				AML	AML		
	comp=N,200µm,0.5s						
MGAB				AML	AML		
	comp=E,234µm,0.7s						
MGAB				AML	AML		
	comp=E,273µm,1.4s						
MGAB				AML	AML		
	comp=N,226µm,1.5s						
MGAB				AML	AML		
	comp=N,200µm,0.5s						
MGAB				AML	AML		
	comp=E,273µm,1.4s						
NVLJ	**Novalja**	**1.36**	**39**	*i* Pn	**Pn**	**15 24 49.1**	**-0.7**
NVLJ				Sn	**Sg**	**15 25 08.1**	**-0.3**
ZIRJ	**Zirje**	**1.44**	**84**	*e*Pn	**Pn**	**15 24 50.2**	**-0.6**
ZIRJ				Sn	**Sn**	**15 25 09.9**	**+0.1**
INTR	**Introdacqua**	**1.51**	**174**	P	**Pn**	**15 24 52.0**	**+0.2**
INTR				AML	AML		
	comp=E,182µm,0.8s						
INTR				AML	AML		
	comp=N,334µm,0.4s						
INTR				AML	AML		
	comp=E,182µm,0.8s						
INTR				AML	AML		
	comp=N,334µm,0.4s						
INTR				AML	AML		
	comp=N,334µm,0.4s						
INTR				AML	AML		
	comp=E,182µm,0.8s						
INTR				AML	AML		
	comp=N,334µm,0.4s						
INTR				AML	AML		
	comp=E,182µm,0.8s						
MORI	**Morici**	**1.51**	**76**	*e*Pn	**Pn**	**15 24 52.2**	**+0.4**
MORI				Sn	**Sb**	**15 25 12.5**	**+0.3**
VVLD	**Villa Vallelon**	**1.64**	**181**	AML	AML		
	comp=E,71µm,0.4s						
VVLD				AML	AML		
	comp=E,71µm,0.4s						
VVLD				AML	AML		
	comp=N,77µm,1.2s						
VVLD				AML	AML		
	comp=N,77µm,1.2s						
CERT	**Cerreto**	**1.64**	**198**	AML	AML		
	comp=N,97µm,1.1s						
CERT				AML	AML		
	comp=E,111µm,1.2s						
CERT				AML	AML		
	comp=N,97µm,1.1s						
CERT				AML	AML		
	comp=E,111µm,1.2s						
CERT				AML	AML		
	comp=N,97µm,1.1s						
CERT				AML	AML		
	comp=N,97µm,1.1s						
CERT				AML	AML		
	comp=E,111µm,1.2s						
CERT				AML	AML		
	comp=E,111µm,1.2s						
UDBI	**Udbina**	**1.82**	**55**	*e*Pn	**Pn**	**15 24 56.4**	**+0.2**
UDBI				Sn	**Sb**	**15 25 21.0**	**0.0**
TOLF	**Tolfa**	**1.90**	**221**	AML	AML		
	comp=N,45µm,1.1s						
TOLF				AML	AML		
	comp=E,49µm,1.3s						
TOLF				AML	AML		
	comp=N,45µm,1.1s						
TOLF				AML	AML		
	comp=E,49µm,1.3s						
RIY	**Rijeka**	**1.90**	**17**	ePn		15 24 57.3	
RIY				Sn	**Sb**	**15 25 22.5**	**-0.9**
HVAR	**Hvar**	**2.05**	**98**	*e*Pn	**Pn**	**15 24 58.6**	**-0.6**
HVAR				Sn	**Sn**	**15 25 25.1**	**+0.2**
SKDS	**Skadanscina**	**2.05**	**7**	*i* Pn	**Pn**	**15 24 59.0**	**-0.3**
SKDS				*i* Sn	**Sn**	**15 25 25.6**	**+0.6**
	comp=Z,11nm,0.2s						
MAKA	**Makarska**	**2.44**	**94**	*e*Pn	**Pn**	**15 25 04.1**	**-0.6**
MAKA				Sn	**Sn**	**15 25 35.4**	**+0.8**
OZLJ	**Ozalj**	**2.46**	**31**	*i* Pn	**Pn**	**15 25 06.9**	**+2.0**
SABO	**M.te Sabotino**	**2.47**	**359**	AML	AML		
	comp=N,62µm,0.5s						
SABO				AML	AML		
	comp=E,56µm,1.5s						
SABO				AML	AML		
	comp=E,56µm,1.5s						
SABO				AML	AML		
	comp=N,62µm,0.5s						
LJU	**Ljubljana**	**2.60**	**13**	AML	AML		
	comp=E,76µm,1.2s						
LJU				AML	AML		
	comp=N,100µm,0.8s						
LJU				AML	AML		
	comp=N,100µm,0.8s						
LJU				AML	AML		
	comp=E,76µm,1.2s						
STON	**Ston**	**3.01**	**101**	*e*Pn	**Pn**	**15 25 12.2**	**-0.2**
STON				Sn	**Sn**	**15 25 49.3**	**+0.8**
OBKA	**Obir**	**3.06**	**11**	*e*Pn	**Pn**	**15 25 13.8**	**+0.5**
	comp=E,1.2nm,0.1s						
MYKA	**Terra Mystica**	**3.12**	**360**	*e*Pn	**Pn**	**15 25 15.2**	**+1.1**
	comp=E,0.5nm,0.2s						
MAGA	**Magasa**	**3.14**	**317**	AML	AML		
	comp=E,76µm,0.4s						
MAGA				AML	AML		
	comp=N,55µm,0.6s						
MAGA				AML	AML		
	comp=E,76µm,0.4s						
MAGA				AML	AML		
	comp=N,55µm,0.6s						
KOSI	**Kohlern**	**3.37**	**332**	AML	AML		
	comp=N,28µm,1.6s						
KOSI				AML	AML		
	comp=E,30µm,1.0s						
KOSI				AML	AML		
	comp=E,30µm,1.0s						
KOSI				AML	AML		
	comp=N,28µm,1.6s						
MABI	**Malga Bissina**	**3.40**	**320**	AML	AML		
	comp=N,13µm,0.5s						
MABI				AML	AML		
	comp=E,11µm,1.4s						
MABI				AML	AML		
	comp=N,13µm,0.5s						
MABI				AML	AML		
	comp=E,11µm,1.4s						
KBA	**Koelnbreinsper**	**3.58**	**356**	Pn	**Pn**	**15 25 21.7**	**+1.2**
	comp=E,0.2nm,0.1s						
KBA				*e*Sn	**Sn**	**15 26 02.8**	**0.0**
	comp=E,3.3nm,0.5s						
ABSI	**Aberstueckl**	**3.62**	**333**	AML	AML		
	comp=E,56µm,0.4s						
ABSI				AML	AML		
	comp=E,56µm,0.4s						
ABSI				AML	AML		
	comp=N,60µm,1.5s						
ABSI				AML	AML		
	comp=N,60µm,1.5s						
ROSI	**Rosskopf**	**3.77**	**336**	AML	AML		
	comp=E,36µm,1.5s						
ROSI				AML	AML		
	comp=N,56µm,0.4s						
ROSI				AML	AML		
	comp=E,36µm,1.5s						
ROSI				AML	AML		
	comp=N,56µm,0.4s						
ARSA	**Arzberg**	**3.96**	**19**	*e*Pn	**Pn**	**15 25 27.5**	**+1.9**
	comp=N,0.4nm,0.3s						
ARSA				*e*Sn	**Sn**	**15 26 10.9**	**-1.2**
	comp=N,0.9nm,0.3s						
WTTA	**Wattenberg**	**4.02**	**340**	*e*Sn	**Sn**	**15 26 13.7**	**-0.1**
	comp=N,4.3nm,0.3s						
FETA	**Feichten**	**4.08**	**330**	*e*Pn	**Pn**	**15 25 25.7**	**-1.6**
	comp=N,0.7nm,0.3s						
FETA				*e*Sn	**Sn**	**15 26 15.6**	**+0.4**
	comp=N,1.4nm,0.4s						
SQTA	**Sankt Quirin**	**4.10**	**336**	*e*Pn	**Pn**	**15 25 29.5**	**+2.0**
	comp=N,1.6nm,0.2s						
SQTA				*e*Sn	**Sn**	**15 26 16.4**	**+0.7**
	comp=N,6.0nm,0.4s						
WATA	**Walderalm**	**4.10**	**340**	*e*Pn	**Pn**	**15 25 29.8**	**+2.2**
	comp=N,1.4nm,0.2s						
MOTA	**Moosalm**	**4.24**	**336**	*e*Pn	**Pn**	**15 25 30.5**	**+0.9**
	comp=N,0.5nm,0.2s						
MOA	**Molln**	**4.36**	**5**	*e*Pn	**Pn**	**15 25 32.0**	**+1.0**
	comp=N,0.8nm,0.2s						
MOA				*e*Sn	**Sn**	**15 26 22.3**	**+0.3**
	comp=N,3.2nm,0.5s						
RETA	**Reutte**	**4.47**	**334**	*e*Pn	**Pn**	**15 25 34.5**	**+1.9**
	comp=N,0.8nm,0.2s						
RETA				*e*Sn	**Sn**	**15 26 25.8**	**+1.0**
	comp=N,0.7nm,0.3s						
DAVA	**Damuels**	**4.63**	**326**	*e*Pn	**Pn**	**15 25 32.8**	**-2.1**
	comp=N,0.7nm,0.2s						
CONA	**Conrad Observa**	**4.67**	**18**	*e*Pn	**Pn**	**15 25 35.7**	**+0.2**
	comp=N,0.4nm,0.2s						
CONA				*e*Sn	**Sn**	**15 26 29.0**	**-0.8**
	comp=N,0.5nm,0.2s						

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*IDC **21** 15:26:20.4±1.6, 41°.45S×174°.11E, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.6/21, mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=41.2km s-min=31.1km az=135.0*

*WEL **21** 15:26:32.6, 42°S±2°×17°4E±°, h10^{km}±5^{km}, M3.9/4, ML4.3/4, MLv3.9/4, Error ellipse: s-maj=0.0km s-min=0.0km az=129.7*

ISC 21 15:26:23.8±1.1, **41°.65S**±0°.03×**174°.26E**±0°.03, **h17**^{km}±7^{km}, **n97**, σ**1^{s}.56**/95, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.10**	**198**	P	**Pg**	**15 26 28.1**	**+0.7**
BSWZ	**Blackbirch Sta**	**0.29**	**258**	P	Pn	15 26 40.2	+6.8
BSWZ				S	**Sn**	**15 26 45.2**	**+5.9**
TUWZ	**Tuamarina**	**0.32**	**314**	P	Pn	15 26 40.0	+6.3
TUWZ				S	**Sn**	**15 26 45.2**	**+5.1**
TCW	**Tory Channel**	**0.44**	**2**	P	Pn	15 26 41.3	+5.9
TCW				S	**Sn**	**15 26 46.9**	**+4.0**
BHW	**Baring Head**	**0.52**	**62**	P	**Pg**	**15 26 33.6**	**-0.6**
WEL	**Wellington**	**0.53**	**46**	P	Pn	15 26 42.9	+6.2
WEL				S	**Sn**	**15 26 49.7**	**+4.5**
PLWZ	**Palliser**	**0.75**	**84**	P	Pn	15 26 47.5	+7.8
MSWZ	**Moikau Station**	**0.78**	**73**	P	**Pb**	**15 26 38.6**	**-0.4**
NNZ	**Nelson**	**0.79**	**303**	P	**Pg**	**15 26 39.1**	**-0.2**
CAW	**Cannon Point**	**0.82**	**48**	P	**Pb**	**15 26 38.7**	**-0.9**
DUWZ	**D'Urville Isla**	**0.89**	**343**	P	**Pb**	**15 26 40.5**	**-0.3**
PAWZ	**Paruwai Farm**	**0.92**	**73**	P	**Pb**	**15 26 41.2**	**-0.2**
KHZ	**Kahutara**	**0.93**	**215**	P	**Pg**	**15 26 42.8**	**+0.9**
THZ	**Tophouse**	**1.02**	**263**	P	**Pg**	**15 26 44.2**	**+0.7**
MTW	**Mount Morrison**	**1.06**	**63**	P	**Pb**	**15 26 43.0**	**-0.6**
OGWZ	**Otaki Gorge**	**1.08**	**40**	P	**Pb**	**15 26 43.2**	**-0.8**
TRWZ	**Traveller**	**1.10**	**77**	P	**Pn**	**15 26 43.6**	**-0.9**
HOWZ	**Holdsworth Sta**	**1.21**	**52**	P	**Pn**	**15 26 45.6**	**-0.4**
TMWZ	**Te Maipa**	**1.35**	**67**	P	**Pn**	**15 26 46.8**	**-1.0**
MRZ	**Mangatainoka R**	**1.41**	**46**	P	**Pn**	**15 26 48.2**	**-0.4**
TIWZ	**Tintock**	**1.51**	**55**	P	**Pn**	**15 26 49.4**	**-0.7**
QRZ	**Quartz Range**	**1.54**	**302**	P	**Pb**	**15 26 52.3**	**+0.4**
GVZ	**Greta Valley S**	**1.59**	**214**	P	**Pn**	**15 26 51.7**	**+0.4**
CPWZ	**Castlepoint**	**1.64**	**64**	P	**Pg**	**15 26 57.6**	**+2.2**
OHWZ	**Ohakea**	**1.65**	**29**	P	**Pb**	**15 26 54.2**	**+0.4**
PRWZ	**Pori Road**	**1.70**	**50**	P	**Pn**	**15 26 52.1**	**-0.5**
POWZ	**Post Office Ro**	**1.70**	**43**	P	**Pn**	**15 26 53.7**	**+1.0**
BFZ	**Birch Farm**	**1.79**	**58**	P	**Pn**	**15 26 54.2**	**+0.3**
LTZ	**Lake Taylor**	**1.86**	**232**	P	**Pn**	**15 26 55.7**	**+0.8**
AMCZ	**Amberley**	**1.93**	**217**	P	**Pn**	**15 26 55.9**	**+0.1**
WAZ	**Wanganui**	**1.98**	**17**	P	**Pb**	**15 26 59.9**	**+0.6**
DVHZ	**Dannevirke**	**1.98**	**48**	P	**Pn**	**15 26 55.6**	**-0.9**
ANWZ	**Angora Road**	**2.06**	**55**	P	**Pg**	**15 27 05.6**	**+2.2**
LREZ	**Lake Rotokare**	**2.19**	**3**	P	**Pg**	**15 27 06.4**	**+0.5**
OKCZ	**Okains Bay**	**2.25**	**203**	P	**Pn**	**15 26 59.6**	**-0.7**
NMEZ	**Namu Road**	**2.26**	**353**	P	**Pg**	**15 27 05.7**	**-1.4**
CRLZ	**Canterbury Las**	**2.27**	**212**	P	**Pn**	**15 27 00.1**	**-0.4**
PRHZ	**Porangahau**	**2.27**	**53**	P	**Pg**	**15 27 08.7**	**+1.3**
PNHZ	**Pukenui**	**2.28**	**41**	P	**Pb**	**15 27 06.0**	**+1.5**
WPHZ	**Waipukurau**	**2.29**	**47**	P	**Pg**	**15 27 09.5**	**+1.7**
PREZ	**Palmer Road**	**2.31**	**358**	P	**Pb**	**15 27 06.1**	**+1.1**
OXZ	**Oxford**	**2.34**	**224**	P	**Pn**	**15 27 01.3**	**-0.2**
INZ	**Inchbonnie**	**2.35**	**242**	P	**Pn**	**15 27 03.0**	**+1.4**
KHEZ	**Kahui Hut**	**2.36**	**355**	P	**Pb**	**15 27 06.8**	**+0.8**
MQZ	**McQueen's Vall**	**2.37**	**209**	P	**Pn**	**15 27 00.6**	**-1.2**
NBEZ	**Newall Road No**	**2.40**	**353**	P	**Pg**	**15 27 08.5**	**-1.4**
AKCZ	**Akaroa Harbour**	**2.43**	**204**	P	**Pn**	**15 27 02.1**	**-0.6**
MTVZ	**Mangateitei**	**2.45**	**23**	P	**Pg**	**15 27 09.5**	**-1.3**
DREZ	**Durham Road**	**2.46**	**359**	P	**Pg**	**15 27 10.2**	**-0.8**
PKE	**Pukeiti**	**2.46**	**355**	P	**Pb**	**15 27 07.9**	**+0.3**
PKVZ	**Pokaka**	**2.50**	**20**	P	**Pb**	**15 27 09.9**	**+1.5**
MOVZ	**Moawhango**	**2.52**	**27**	P	**Pb**	**15 27 08.0**	**-0.6**
VRZ	**Vera Road**	**2.56**	**9**	P	**Pg**	**15 27 11.8**	**-1.1**
PXZ	**Pawanui**	**2.56**	**52**	P	**Pg**	**15 27 11.8**	**-1.1**
BHHZ	**Black Hill Sta**	**2.56**	**33**	P	**Pb**	**15 27 09.1**	**-0.2**
KRHZ	**Kereru**	**2.57**	**39**	P	**Pb**	**15 27 09.9**	**+0.4**
DRZ	**Dome Shelter**	**2.58**	**23**	P	**Pg**	**15 27 13.3**	**0.0**
WHVZ	**Whangaehu Hut**	**2.58**	**24**	P	**Pb**	**15 27 09.9**	**+0.2**
FWVZ	**Far West T-bar**	**2.59**	**23**	P	**Pb**	**15 27 10.0**	**0.0**
TUVZ	**Tukino**	**2.61**	**25**	P	**Pb**	**15 27 10.7**	**+0.5**
NGZ	**Ngauruhoe**	**2.68**	**23**	P	**Pb**	**15 27 11.5**	**+0.1**
KAHZ	**Kahuranaki**	**2.72**	**48**	P	**Pn**	**15 27 05.6**	**-1.2**
WTVZ	**West Tongariro**	**2.73**	**22**	P	**Pb**	**15 27 12.2**	**-0.1**
TWVZ	**Taurewa**	**2.73**	**20**	P	**Pg**	**15 27 14.3**	**-1.9**
KRVZ	**Karewarewa**	**2.77**	**23**	P	**Pb**	**15 27 13.0**	**+0.1**
KWHZ	**Kaweka Forest**	**2.77**	**37**	P	**Pb**	**15 27 14.3**	**+1.4**
MCHZ	**McNeill Hill**	**2.89**	**41**	P	**Pg**	**15 27 19.8**	**+0.7**
KATZ	**Kakaramea**	**2.89**	**23**	P	**Pb**	**15 27 15.6**	**+0.5**
RITZ	**Rihia Road**	**2.94**	**25**	P	**Pb**	**15 27 17.1**	**+1.3**
WVZ	**Waitaha Valley**	**2.97**	**240**	P	**Pb**	**15 27 14.3**	**-1.9**
BKZ	**Black Stump Fm**	**3.02**	**35**	P	**Pb**	**15 27 17.8**	**+0.8**
RATZ	**Rangitukua**	**3.02**	**23**	P	**Pg**	**15 27 19.9**	**-1.7**
RPZ	**Rata Peaks**	**3.13**	**228**	Pn	**Pn**	**15 27 12.1**	**-0.3**
	2.0nm,0.3s,baz=195,slow=5.2,SNR=6.1						
RPZ				Sn	**Sn**	**15 27 47.9**	**-1.5**
	8.6nm,0.3s,baz=186,slow=19,SNR=5.4						
RPZ	**Rata Peaks**	**3.13**	**228**	P	**Pn**	**15 27 13.0**	**+0.6**
WATZ	**Wairara**	**3.15**	**22**	P	**Pb**	**15 27 20.2**	**+0.8**
HIZ	**Hauiti**	**3.17**	**9**	P	**Pb**	**15 27 18.2**	**-1.5**
ARHZ	**Aropaoanui**	**3.17**	**42**	P	**Pb**	**15 27 22.1**	**+2.4**
MRHZ	**Matea Rd**	**3.27**	**31**	P	**Pb**	**15 27 21.9**	**+0.5**
KUTZ	**Kaahu Road**	**3.38**	**21**	P	**Pb**	**15 27 24.4**	**+1.2**
MTHZ	**Maungataniwha**	**3.43**	**36**	P	**Pg**	**15 27 26.9**	**-2.5**
TLZ	**Tolley Road**	**3.46**	**17**	P	**Pb**	**15 27 24.8**	**+0.1**
RAHZ	**Arahi**	**3.49**	**39**	P	**Pg**	**15 27 32.1**	**+1.5**
PRRZ	**Plateau Road**	**3.55**	**28**	P	**Pg**	**15 27 31.0**	**-0.9**
MUGZ	**Murupara**	**3.71**	**32**	P	**Pb**	**15 27 31.0**	**+2.1**
HLRZ	**Highlands Stat**	**3.76**	**26**	P	**Pn**	**15 27 22.8**	**+1.8**
RAGZ	**Rawiri**	**3.98**	**39**	P	**Pb**	**15 27 34.1**	**+0.6**
URZ	**Urewera**	**4.04**	**34**	Pn	**Pn**	**15 27 22.7**	**-2.1**
	0.4nm,0.3s,baz=34,slow=18,SNR=3.2						
LBZ	**Lake Benmore**	**4.04**	**226**	P	**Pn**	**15 27 26.6**	**+1.7**
MWZ	**Matawai**	**4.16**	**38**	P	**Pb**	**15 27 34.6**	**-1.9**
ODZ	**Otahua Downs**	**4.29**	**217**	P	**Pn**	**15 27 28.0**	**-0.3**
AWAZ	**Awhitu Peninsu**	**4.59**	**4**	P	Pn	15 27 37.7	+5.3
JCZ	**Jackson Bay**	**4.69**	**237**	P	Pn	15 27 39.4	+5.6
ETAZ	**East Tamaki Re**	**4.72**	**7**	P	Pn	15 27 39.0	+4.8
SYZ	**Scrubby Hill**	**6.12**	**215**	P	**Pn**	**15 27 54.5**	**+1.2**
ASAR	**Alice Springs**	**38.01**	**285**	P	**P**	**15 33 40.4**	**-0.7**
	0.3nm,0.5s,baz=118,slow=6.6,SNR=5.3						
WRA	**Warramunga Arr**	**40.07**	**290**	P	**P**	**15 33 54.2**	**-4.2**
	1.0nm,0.8s,baz=125,slow=8.3,SNR=2.1						
TORD	**Torodi Ar. Bea**	**150.87**	**195**	PKPbc	**PKPbc**	**15 46 15.5**	**-0.2**
	0.3nm,0.6s,baz=169,slow=3.5,SNR=1.7						
TORD				PKPab	**PKPab**	**15 46 22.1**	**-0.8**
	0.3nm,0.4s,baz=185,slow=4.6,SNR=4.6						

MEX 21 15:48:49.1±0.8, **16°.36N**×**98°.63W**, **h7**^{km}±10^{km}, **MD3.6**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.20**	**3**	*e*P	Pg	15 49 08.1	-4.1
TLIG				*e*S	Sg	15 49 22.9	-4.8

CAIG	El Cayaco	1.71	294	*i* P	Pn	15 49 15.9	-3.5
CAIG				*i* S	Sn	15 49 37.0	-4.6
VHO	Vista Hermosa	1.95	68	*i* P	Pn	15 49 20.3	-2.6
VHO				*e*S	Sn	15 49 43.4	-4.4
HUIG	Huatulco	2.50	103	*i* P	Pn	15 49 27.8	-2.4
HUIG				*i* S	Sn	15 49 56.7	-4.2

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*IDC **21** 15:59:08.8±1.8, 41°.70S×174°.35E, h0^{km}, mb3.3/2, mb1 3.4/4, mb1mx3.4/17, mbtmp3.2/4, ML2.9/2, MS3.2/1, Ms1 3.2/1, ms1mx2.8/7, Error ellipse: s-maj=45.0km s-min=27.0km az=135.0*

*WEL **21** 15:59:09.5, 42°S±3°×17°4E±°, h5^{km}±3^{km}, M3.5/54, ML3.6/21, MLv3.5/54, Error ellipse: s-maj=0.0km s-min=0.0km az=115.0*

*NEIC **21** 15:59:09.0±0.0, 41°.72S×174°.35E, h5^{km}, ML3.5(WEL), After WEL.*

NEIC Felt at Blenheim, Nelson and Porirua.

*ISCJB **21** 15:59:10.1±0.7, 41°.82S±0°.03×174°.39E±0°.04, h2^{km}±5^{km}, mb3.1/2, MS3.1/1, Error ellipse: s-maj=6.6km s-min=3.1km az=136.1*

ISC 21 15:59:11.2±1.1**, 41°.71S**±0°.03×**174°.35E**±0°.03**, h14**^{km}±8^{km}**, n105, σ1^{s}30**/104**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	246	P	Pg	15 59 15.1	+0.6
BSWZ	Blackbirch Sta	0.35	268	P	Pg	15 59 18.7	+0.3
TUWZ	Tuamarina	0.41	312	P	Pg	15 59 18.5	-0.9
SNZO	South Karori	0.48	34	*e*Pg	Pg	15 59 19.6	-1.1
BHW	Baring Head	0.49	53	P	Pg	15 59 20.7	-0.3
TCW	Tory Channel	0.50	354	P	Pg	15 59 19.6	-1.4
WEL	Wellington	0.53	37	P	Pg	15 59 21.0	-0.6
PLWZ	Palliser	0.69	79	P	Pb	15 59 25.4	+0.2
MSWZ	Moikau Station	0.74	67	P	Pg	15 59 25.7	+0.1
CAW	Cannon Point	0.81	42	P	Pg	15 59 26.1	-0.7
PAWZ	Paruwai Farm	0.87	69	P	Pn	15 59 28.7	-0.4
NNZ	Nelson	0.88	304	P	Pb	15 59 26.9	-1.3
KHZ	Kahutara	0.93	220	*e*Pn	Pn	15 59 30.5	+0.7
KHZ	Kahutara	0.93	220	P	Pn	15 59 30.8	+0.9
DUWZ	D'Urville Isla	0.96	340	P	Pb	15 59 27.9	-1.7
MTW	Mount Morrison	1.03	58	P	Pb	15 59 30.8	0.0
TRWZ	Traveller	1.05	73	P	Pg	15 59 31.8	+0.3
THZ	Tophouse	1.08	266	*e*Pn	Pb	15 59 31.6	-0.1
THZ	Tophouse	1.08	266	P	Pb	15 59 32.3	+0.5
OGWZ	Otaki Gorge	1.08	35	P	Pb	15 59 30.7	-1.1
HOWZ	Holdsworth Sta	1.20	48	P	Pn	15 59 33.4	-0.1
TMWZ	Te Maipa	1.31	63	P	Pn	15 59 35.0	-0.1
MRZ	Mangatainoka R	1.40	42	P	Pn	15 59 36.2	-0.1
TIWZ	Tintock	1.49	52	P	Pn	15 59 38.1	+0.6
GVZ	Greta Valley S	1.59	217	P	Pn	15 59 39.6	+0.6
CPWZ	Castlepoint	1.61	61	P	Pg	15 59 45.3	+3.2
QRZ	Quartz Range	1.63	302	P	Pn	15 59 40.5	+1.0
OHWZ	Ohakea	1.67	26	P	Pb	15 59 41.4	-0.3
PRWZ	Pori Road	1.68	47	P	Pn	15 59 40.3	+0.1
POWZ	Post Office Ro	1.70	40	P	Pb	15 59 41.5	-0.7
BFZ	Birch Farm	1.76	55	*e*Pn	Pn	15 59 40.3	-1.0
BFZ	Birch Farm	1.76	55	P	Pn	15 59 41.4	+0.1
LTZ	Lake Taylor	1.88	234	*e*Pn	Pn	15 59 43.7	+0.7
LTZ	Lake Taylor	1.88	234	P	Pn	15 59 43.8	+0.8
AMCZ	Amberley	1.93	220	P	Pn	15 59 43.9	+0.3
DVHZ	Dannevirke	1.97	45	P	Pn	15 59 43.7	-0.5
WAZ	Wanganui	2.01	14	P	Pb	15 59 47.4	-0.2
ANWZ	Angora Road	2.03	53	P	Pb	15 59 47.2	-0.7
OKCZ	Okains Bay	2.23	205	P	Pn	15 59 47.5	-0.3
LREZ	Lake Rotokare	2.24	1	P	Pb	15 59 50.9	-0.7
CRLZ	Canterbury Las	2.26	214	*e*Pn	Pn	15 59 47.7	-0.5
CRLZ	Canterbury Las	2.26	214	P	Pn	15 59 49.2	+1.1
PNHZ	Pukenui	2.28	39	P	Pn	15 59 48.1	-0.4
WPHZ	Waipukurau	2.28	45	P	Pb	15 59 51.7	-0.5
NMEZ	Namu Road	2.32	351	P	Pb	15 59 52.6	-0.1
OXZ	Oxford	2.35	226	*e*Pn	Pn	15 59 48.7	-0.8
OXZ	Oxford	2.35	226	P	Pn	15 59 49.3	-0.2
MQZ	McQueen's Vall	2.36	211	*e*Pn	Pn	15 59 48.3	-1.2
MQZ	McQueen's Vall	2.36	211	P	Pn	15 59 48.5	-0.9
PREZ	Palmer Road	2.37	356	P	Pb	15 59 52.5	-1.1
INZ	Inchbonnie	2.38	244	P	Pn	15 59 50.9	+1.0
AKCZ	Akaroa Harbour	2.41	206	P	Pn	15 59 50.6	+0.3
KHEZ	Kahui Hut	2.42	354	P	Pb	15 59 53.3	-1.3
NBEZ	Newall Road No	2.46	351	P	Pb	15 59 53.9	-1.4
MTVZ	Mangateitei	2.47	21	P	Pb	15 59 55.9	+0.5
DREZ	Durham Road	2.52	357	P	Pb	15 59 57.0	+0.8
PKE	Pukeiti	2.52	354	P	Pn	15 59 53.5	+1.6
PKVZ	Pokaka	2.53	18	P	Pb	15 59 55.9	-0.6
MOVZ	Moawhango	2.53	25	P	Pb	15 59 55.6	-1.0
PXZ	Pawanui	2.54	50	P	Pn	15 59 51.0	-0.9
BHHZ	Black Hill Sta	2.57	31	P	Pn	15 59 53.6	+1.1
KRHZ	Kereru	2.57	37	P	Pn	15 59 52.0	-0.5
VRZ	Vera Road	2.60	7	P	Pn	15 59 55.0	+2.2
WHVZ	Whangaehu Hut	2.60	22	P	Pb	15 59 57.2	-0.6
FWVZ	Far West T-bar	2.62	21	P	Pb	15 59 57.4	-0.7
TUVZ	Tukino	2.63	23	P	Pn	15 59 56.0	+2.5
NGZ	Ngauruhoe	2.70	21	P	Pb	15 59 58.2	-1.3
KAHZ	Kahuranaki	2.71	46	P	Pn	15 59 53.9	-0.5
WTVZ	West Tongariro	2.76	21	P	Pb	15 59 59.7	-0.6
TWVZ	Taurewa	2.76	18	P	Pb	16 00 00.4	-0.1
KWHZ	Kaweka Forest	2.77	35	P	Pb	16 00 02.0	+1.4
KRVZ	Karewarewa	2.79	21	P	Pb	16 00 00.2	-0.7
KATZ	Kakaramea	2.92	21	P	Pb	16 00 02.6	-0.4
RITZ	Rihia Road	2.96	23	P	Pb	16 00 04.7	+0.9
WVZ	Waitaha Valley	3.00	242	P	Pn	15 59 59.2	+0.8
BKZ	Black Stump Fm	3.02	34	*e*Pn	Pn	15 59 57.6	-1.1
BKZ	Black Stump Fm	3.02	34	P	Pb	16 00 05.0	+0.2
RATZ	Rangitukua	3.04	22	P	Pb	16 00 06.0	+0.8
RPZ	Rata Peaks	3.15	229	Pn	Pn	16 00 00.4	0.0
	3.1nm,0.3s,baz=98,slow=2.7,SNR=14						
RPZ				Sn	Sn	16 00 37.7	-0.1
	3.2nm,0.3s,baz=131,slow=19,SNR=4.8						
RPZ	Rata Peaks	3.15	229	*e*Pn	Pn	16 00 00.1	-0.3
RPZ	Rata Peaks	3.15	229	P	Pn	16 00 00.8	+0.3
WATZ	Wairara	3.18	20	P	Pb	16 00 08.2	+0.8
HIZ	Hauiti	3.21	7	*e*Pn	Pn	16 00 02.6	+1.3
HIZ	Hauiti	3.21	7	P	Pn	16 00 03.9	+2.6
TLZ	Tolley Road	3.49	16	P	Pb	16 00 09.4	-3.5
FOZ	Fox Glacier	3.81	240	*e*Pn	Pn	16 00 10.1	+0.7
FOZ	Fox Glacier	3.81	240	P	Pn	16 00 10.7	+1.3
TARZ	Mount Tarawera	3.84	26	P	Pn	16 00 10.7	+0.7
URZ	Urewera	4.04	33	Pn	Pn	16 00 12.3	-0.4
	0.3nm,0.3s,baz=236,slow=7.5,SNR=3.2						
URZ	Urewera	4.04	33	*e*Pn	Pn	16 00 12.4	-0.3
LBZ	Lake Benmore	4.06	227	*e*Pn	Pn	16 00 13.2	+0.3
LBZ	Lake Benmore	4.06	227	P	Pn	16 00 13.9	+1.0
TOZ	Tahuroa Road	4.07	13	P	Pb	16 00 19.3	-3.3
ODZ	Otahua Downs	4.29	218	*e*Pn	Pn	16 00 15.4	-0.7
ODZ	Otahua Downs	4.29	218	P	Pn	16 00 15.8	-0.3
TWGZ	Tauwhareparae	4.50	40	P	Pn	16 00 23.0	+4.0
MKAZ	Moumakai	4.64	8	P	Pn	16 00 24.8	+3.9
AWAZ	Awhitu Peninsu	4.64	3	P	Pn	16 00 24.4	+3.5
ETAZ	East Tamaki Re	4.77	6	P	Pn	16 00 26.9	+4.3
MBAZ	Motutapu North	4.95	5	P	Pn	16 00 30.1	+5.0
OUZ	Omahuta	6.50	355	*e*Pn	Pn	16 00 47.4	+0.9
VNDA	Vanda	36.30	185	LR	LR	16 18 48.6	
	comp=Z,34nm,19.4s,baz=94,slow=32						
ASAR	Alice Springs	38.09	285	P	P	16 06 29.8	+0.1
	0.1nm,0.4s,baz=122,slow=7.2,SNR=5.4						
WRA	Warramunga Arr	40.16	290	P	P	16 06 46.0	-0.9
	0.3nm,0.4s,baz=129,slow=7.6,SNR=2.5						
TORD	Torodi Ar. Bea	150.84	195	PKPbc	PKPbc	16 19 03.1	-0.6
	0.2nm,0.5s,baz=132,slow=2.1,SNR=2.9						

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*IDC **21** 16:10:04.7±2.1, 41°.36S×174°.10E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx3.4/28, mbtmp3.3/3, ML2.3/1, Error ellipse: s-maj=57.9km s-min=30.8km az=149.0*

*WEL **21** 16:10:05.7, 42°S±1°×17°4E±°, h14^{km}±2^{km}, M3.6/49, ML3.7/30, MLv3.6/49, Error ellipse: s-maj=0.0km s-min=0.0km az=129.3*

*NEIC **21** 16:10:05.0±0.0, 41°.64S×174°.35E, h14^{km}, ML3.6(WEL), After WEL.*

NEIC Felt at Blenheim.

ISC 21 16:10:06.1±1.1**, 41°.67S**±0°.03×**174°.33E**±0°.02**, h17**^{km}±8^{km}**, n96, σ1^{s}09**/97**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	227	P	Pg	16 10 10.0	+0.1
BSWZ	Blackbirch Sta	0.35	262	P	Pb	16 10 13.6	-0.2
TUWZ	Tuamarina	0.38	309	P	Pg	16 10 13.6	-0.3
SNZO	South Karori	0.45	38	*e*Pg	Pg	16 10 14.7	-0.5
TCW	Tory Channel	0.46	355	P	Pg	16 10 15.0	-0.3
BHW	Baring Head	0.48	58	P	Pg	16 10 15.4	-0.3
WEL	Wellington	0.50	41	P	Pg	16 10 15.8	-0.3
PLWZ	Palliser	0.70	82	P	Pg	16 10 20.0	+0.2
MSWZ	Moikau Station	0.73	70	P	Pb	16 10 20.3	-0.1
CAW	Cannon Point	0.79	45	P	Pb	16 10 20.9	-0.4
NNZ	Nelson	0.85	302	P	Pg	16 10 22.3	-0.3
PAWZ	Paruwai Farm	0.87	71	P	Pb	16 10 23.2	+0.5
DUWZ	D'Urville Isla	0.92	340	P	Pn	16 10 24.4	+0.2
KHZ	Kahutara	0.95	218	*e*Pn	Pn	16 10 25.3	+0.6
KHZ	Kahutara	0.95	218	P	Pn	16 10 25.6	+0.9
MTW	Mount Morrison	1.01	60	P	Pb	16 10 25.4	+0.2
TRWZ	Traveller	1.05	76	P	Pb	16 10 25.8	0.0
OGWZ	Otaki Gorge	1.06	37	P	Pb	16 10 25.7	-0.2
THZ	Tophouse	1.07	264	*e*Pg	Pb	16 10 26.2	-0.1
THZ	Tophouse	1.07	264	P	Pg	16 10 27.2	+0.3
HOWZ	Holdsworth Sta	1.18	50	P	Pn	16 10 27.8	0.0
TMWZ	Te Maipa	1.30	65	P	Pn	16 10 29.1	-0.3
MRZ	Mangatainoka R	1.38	44	P	Pn	16 10 30.8	+0.3
TIWZ	Tintock	1.47	53	P	Pn	16 10 32.7	+0.9
CPWZ	Castlepoint	1.60	62	P	Pg	16 10 39.0	+2.2
QRZ	Quartz Range	1.60	301	P	Pg	16 10 35.6	-1.2
GVZ	Greta Valley S	1.62	216	P	Pn	16 10 34.5	+0.7
OHWZ	Ohakea	1.64	27	P	Pg	16 10 37.1	-0.5
PRWZ	Pori Road	1.66	49	P	Pn	16 10 34.6	+0.2
POWZ	Post Office Ro	1.67	41	P	Pn	16 10 35.1	+0.5
BFZ	Birch Farm	1.75	56	*e*Pn	Pn	16 10 34.3	-1.3
BFZ	Birch Farm	1.75	56	P	Pn	16 10 34.9	-0.7
LTZ	Lake Taylor	1.89	233	*e*Pn	Pn	16 10 36.6	-1.0
LTZ	Lake Taylor	1.89	233	P	Pn	16 10 38.6	+1.0
DVHZ	Dannevirke	1.95	46	P	Pn	16 10 37.8	-0.6
AMCZ	Amberley	1.96	219	P	Pb	16 10 42.5	+1.3
AMCZ				P	Pg	16 10 45.5	+1.8
WAZ	Wanganui	1.97	15	P	Pb	16 10 42.7	+1.2
ANWZ	Angora Road	2.02	54	P	Pn	16 10 39.1	-0.2
LREZ	Lake Rotokare	2.20	1	P	Pg	16 10 48.2	-0.2
PNHZ	Pukenui	2.25	40	P	Pn	16 10 42.4	-0.2
OKCZ	Okains Bay	2.26	204	P	Pn	16 10 42.8	+0.2
WPHZ	Waipukurau	2.26	46	P	Pn	16 10 43.4	+0.7
NMEZ	Namu Road	2.28	351	P	Pg	16 10 49.8	+0.1
CRLZ	Canterbury Las	2.29	213	*e*Pn	Pn	16 10 41.0	-2.0
CRLZ	Canterbury Las	2.29	213	P	Pb	16 10 47.4	+0.5
PREZ	Palmer Road	2.33	357	P	Pb	16 10 48.8	+1.3
OXZ	Oxford	2.37	225	*e*Pn	Pn	16 10 43.5	-0.7
OXZ	Oxford	2.37	225	P	Pb	16 10 47.5	-0.9
KHEZ	Kahui Hut	2.38	354	P	Pb	16 10 49.4	+0.9
MQZ	McQueen's Vall	2.38	211	*e*Pn	Pn	16 10 42.8	-1.5
MQZ	McQueen's Vall	2.38	211	P	Pn	16 10 43.6	-0.7
INZ	Inchbonnie	2.39	243	P	Pn	16 10 45.7	+1.3
NBEZ	Newall Road No	2.42	351	P	Pg	16 10 51.8	-0.7
MTVZ	Mangateitei	2.44	21	P	Pg	16 10 51.7	-1.2
AKCZ	Akaroa Harbour	2.44	205	P	Pn	16 10 46.4	+1.2
DREZ	Durham Road	2.48	358	P	Pg	16 10 52.6	-1.0
PKE	Pukeiti	2.48	354	P	Pb	16 10 50.8	+0.6
PKVZ	Pokaka	2.50	18	P	Pb	16 10 51.7	+1.2
MOVZ	Moawhango	2.50	26	P	Pb	16 10 50.7	+0.1
PXZ	Pawanui	2.52	50	P	Pn	16 10 45.0	-1.2
BHHZ	Black Hill Sta	2.54	32	P	Pb	16 10 51.6	+0.4
KRHZ	Kereru	2.55	38	P	Pn	16 10 46.2	-0.4
VRZ	Vera Road	2.56	7	P	Pb	16 10 52.1	+0.6
WHVZ	Whangaehu Hut	2.57	22	P	Pb	16 10 52.7	+0.9
FWVZ	Far West T-bar	2.58	22	P	Pb	16 10 52.7	+0.6
TUVZ	Tukino	2.60	23	P	Pb	16 10 52.9	+0.6
NGZ	Ngauruhoe	2.67	22	P	Pb	16 10 53.9	+0.4
KAHZ	Kahuranaki	2.69	47	P	Pn	16 10 47.9	-0.7
WTVZ	West Tongariro	2.72	21	P	Pb	16 10 55.2	+0.8
TWVZ	Taurewa	2.73	18	P	Pb	16 10 56.0	+1.6
KWHZ	Kaweka Forest	2.75	36	P	Pb	16 10 56.1	+1.4
KRVZ	Karewarewa	2.76	22	P	Pb	16 10 55.5	+0.6
KATZ	Kakaramea	2.88	22	P	Pb	16 10 58.0	+0.9
RITZ	Rihia Road	2.93	24	P	Pb	16 10 58.9	+1.1
BKZ	Black Stump Fm	2.99	34	*e*Pn	Pn	16 10 54.9	+2.1
WVZ	Waitaha Valley	3.01	241	P	Pn	16 10 54.6	+1.6
RPZ	Rata Peaks	3.17	229	Sn	Sn	16 11 32.0	-0.5
	baz=192,slow=20						
RPZ	Rata Peaks	3.17	229	*e*Pn	Pn	16 10 55.0	-0.2
RPZ	Rata Peaks	3.17	229	P	Pn	16 10 55.6	+0.5
HIZ	Hauiti	3.17	7	*e*Pn	Pn	16 10 57.7	+2.5
HIZ	Hauiti	3.17	7	P	Pb	16 11 01.8	-0.2
TLZ	Tolley Road	3.46	16	P	Pb	16 11 06.2	-0.7
FOZ	Fox Glacier	3.82	239	*e*Pn	Pn	16 11 05.6	+1.6
FOZ	Fox Glacier	3.82	239	P	Pb	16 11 10.2	-2.8
URZ	Urewera	4.02	33	Pn	Pn	16 11 05.4	-1.3
	0.2nm,0.3s,baz=142,slow=12,SNR=0.9						
URZ				Sn	Sn	16 11 52.3	-1.1
	1.3nm,0.3s,baz=227,slow=11,SNR=3.6						
URZ	Urewera	4.02	33	*e*Pn	Pn	16 11 06.3	-0.4
LBZ	Lake Benmore	4.08	227	*e*Pn	Pn	16 11 08.1	+0.4
LBZ	Lake Benmore	4.08	227	P	Pn	16 11 09.4	+1.8
MWZ	Matawai	4.13	37	P	Pn	16 11 07.9	-0.6
ODZ	Otahua Downs	4.32	217	*e*Pn	Pn	16 11 10.5	-0.4
ODZ	Otahua Downs	4.32	217	P	Pn	16 11 11.6	+0.7
AWAZ	Awhitu Peninsu	4.60	3	P	Pn	16 11 19.4	+4.6
ETAZ	East Tamaki Re	4.73	6	P	Pb	16 11 23.0	-5.5
ASAR	Alice Springs	38.07	285	P	P	16 17 22.1	-1.8
	0.2nm,0.6s,baz=131,slow=7.4,SNR=1.4						
WRA	Warramunga Arr	40.13	290	P	P	16 17 40.9	-0.2
	1.0nm,1.0s,baz=122,slow=8.2,SNR=1.4						
TORD	Torodi Ar. Bea	150.87	195	PKPbc	PKiKP	16 29 60.0	+1.3
	0.4nm,0.7s,baz=139,slow=3.0,SNR=2.8						

WEL 21 16:10:21.8, 41°S±307°×**17°4E**±7°9**, h9**^{km}±94^{km}**, M3.6**/14**, MLv3.6**/14**, Error ellipse: s-maj=0.5km s-min=0.1km az=179.5, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATZ	Rangitukua	2.62	40	P	Pn	16 11 00.4	-3.9
WATZ	Wairara	2.73	37	P	Pn	16 11 03.5	-2.3
KUTZ	Kaahu Road	2.94	36	P	Pn	16 11 08.3	-0.5
ALRZ	Allen Road	3.14	43	P	Pn	16 11 09.0	-2.4
GRRZ	Galatos Road	3.19	38	P	Pn	16 11 13.4	+1.2
PRRZ	Plateau Road	3.21	42	P	Pn	16 11 09.6	-2.8
RRRZ	Republican Roa	3.39	42	P	Pn	16 11 18.4	+3.5
NGRZ	Ngongotaha	3.42	36	P	Pn	16 11 17.0	+1.6
RTZ	Ruatahuna	3.45	50	P	Pb	16 11 21.5	-1.6
TOZ	Tahuroa Road	3.48	25	P	Pn	16 11 14.7	-1.5
KARZ	Kaharoa	3.52	36	P	Pn	16 11 18.2	+1.6
KMRZ	Kaimai	3.54	31	P	Pn	16 11 20.0	+3.0
SNGZ	Shannon Statio	3.55	55	P	Pn	16 11 17.5	+0.3
URZ	Urewera	3.77	47	P	Pn	16 11 19.0	-1.1
RAGZ	Rawiri	3.78	52	P	Pn	16 11 22.0	+1.7
MKAZ	Moumakai	3.98	18	P	Pn	16 11 22.4	-0.5
MBAZ	Motutapu North	4.25	14	P	Pn	16 11 29.2	+2.6
TWGZ	Tauwhareparae	4.33	52	P	Pn	16 11 31.0	+3.2

WEL 21 16:14:42.3, 41°S±40°×**17°3E**±4°4**, h135**^{km}±41^{km}**, M3.2**/7**, ML3.5**/7**, MLv3.2**/7**, Error ellipse: s-maj=0.1km s-min=0.1km az=54.2, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	Nelson	0.23	58	P	Pn	16 15 11.2	+10
THZ	Tophouse	0.45	201	P	Pn	16 15 17.0	+15
TUWZ	Tuamarina	0.62	99	P	Pn	16 15 03.0	+0.3
BSWZ	Blackbirch Sta	0.68	124	P	Pn	16 15 03.1	+0.1
QRZ	Quartz Range	0.68	319	P	Pn	16 15 24.6	+22
TCW	Tory Channel	0.88	82	P	Pn	16 15 04.6	-0.1
CMWZ	Cape Campbell	0.92	117	P	Pn	16 15 05.1	+0.1
KHZ	Kahutara	1.12	164	P	Pn	16 15 15.3	+8.5
BHW	Baring Head	1.32	94	P	Pn	16 15 06.1	-2.6
LTZ	Lake Taylor	1.57	203	P	Pn	16 15 28.3	+17
MSWZ	Moikau Station	1.60	93	P	Pn	16 15 12.3	+0.4
PLWZ	Palliser	1.62	99	P	Pn	16 15 12.1	0.0
PAWZ	Paruwai Farm	1.74	92	P	Pn	16 15 14.9	+1.5

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*IDC **21** 16:15:42.4±4.1, 36°.19N×142°.05E, h0^{km}, mb3.6/2, mb1 3.4/5, mb1mx3.2/43, mbtmp3.5/5, ML2.8/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/33, Error ellipse: s-maj=71.0km s-min=32.2km az=107.0*

*ISCJB **21** 16:15:43.7±1.3, 36°.21N±0°.06×142°.0E±0°.1, h23^{km}, mb3.5/2, Error ellipse: s-maj=16.8km s-min=7.7km az=7.4*

*JMA **21** 16:15:46.7±0.2, 36°.23N×141°.79E, h59^{km}±4^{km}, M3.0*

ISC 21 16:15:43.7±1.5**, 36°.17N**±0°.06×**142°.1E**±0°.1**, h23**^{km}**, n27, σ1^{s}23**/23**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.11	246	P	Pb	16 16 03.8	-0.5
JHYU	Hitachinakayam	1.24	278	P	Pn	16 16 04.5	-1.1
JIHU	Itakohorinouch	1.29	262	P	Pn	16 16 06.2	-0.2
JHO	Hitachi	1.31	290	P	Pn	16 16 05.2	-1.5
ONAJ	Iwakimizuishiy	1.40	312	P	Pn	16 16 06.9	-1.1
JFK	Kawauchi	1.55	321	P	Pn	16 16 09.7	-0.3
BSO1	Boso 1	1.77	212	P	Pb	16 16 14.3	-0.8
BSO3	Boso 3	1.88	224	P	Pn	16 16 15.4	+1.1
JFT	Otama	1.96	314	P	Pn	16 16 15.7	+0.2
JMM	Marumori	1.99	329	P	Pn	16 16 16.3	+0.3
JAG	Ashikaga	2.16	278	P	Pn	16 16 17.4	-0.9
JFY	Yanaizu	2.29	303	P	Pn	16 16 20.6	+0.5
JKT	Katashina	2.38	285	P	Pn	16 16 21.0	-0.4
JRY	Ryogami san	2.60	268	P	Pn	16 16 23.9	-0.5
MJAR	Matsushiro Arr	3.17	278	Pn	Pn	16 16 32.3	+0.1
	0.4nm,0.3s,baz=114,slow=7.7,SNR=90						
MJAR				Sn	Sb	16 17 17.4	-0.1
	0.3nm,0.3s,baz=90,slow=15,SNR=6.7						
MAT	Matsushiro	3.17	278	P	Pn	16 16 33.0	+0.8
JHJ	Hachijo jima 2	3.59	213	Pn	Pn	16 16 39.1	+1.1
	6.0nm,0.3s,baz=130,slow=22,SNR=19						
JHJ				Sn	Sn	16 17 18.3	-1.4
	13nm,0.3s,baz=128,slow=21,SNR=6.9						
ASAJ	Asahikawa	7.95	3	Pn	Pn	16 17 38.9	+1.0
	0.2nm,0.3s,baz=256,slow=8.3,SNR=5.1						
ASAJ				Sn	Sn	16 19 03.7	-3.3
	0.1nm,0.3s,baz=75,slow=20,SNR=2.0						
KSRS	Korea Array	11.44	281	LR	LR	16 22 19.9	
	comp=Z,45nm,18.9s,baz=28,slow=35						
H11N2	WAKE ISLAND Hy	27.23	120	T	T	16 50 17.4	
	baz=312,slow=74,SNR=4.3						
H11N1	WAKE ISLAND Hy	27.24	120	T	T	16 50 03.0	
	baz=312,slow=74,SNR=4.4						
H11N3	WAKE ISLAND Hy	27.25	120	T	T	16 50 16.7	
	baz=312,slow=74,SNR=3.8						
H11S1	WAKE ISLAND Hy	27.93	122	T	T	16 51 15.0	
	baz=324,slow=74						
H11S3	WAKE ISLAND Hy	27.93	123	T	T	16 50 58.6	
	baz=324,slow=74						
H11S2	WAKE ISLAND Hy	27.94	123	T	T	16 50 59.0	
	baz=324						
SONM	Songino Array	28.73	305	P	P	16 21 41.4	+2.0
	0.9nm,0.9s,baz=96,slow=9.1,SNR=4.0						
MKAR	Makanchi Array	45.05	303	P	P	16 23 59.2	+1.5
	0.5nm,0.7s,baz=96,slow=8.0,SNR=4.4						

WEL 21 16:18:09.7, 42°S±50°×**17°4E**±3°1**, h5**^{km}±16^{km}**, M3.8**/19**, ML3.0**/5**, MLv3.8**/19**, Error ellipse: s-maj=0.1km s-min=0.0km az=149.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.40	284	P	Pb	16 18 18.5	-0.7
PLWZ	Palliser	0.69	70	P	Pb	16 18 23.9	-0.2
MSWZ	Moikau Station	0.75	58	P	Pg	16 18 23.9	-0.2
PAWZ	Paruwai Farm	0.88	61	P	Pg	16 18 23.1	-3.5
TRWZ	Traveller	1.05	67	P	Pn	16 18 30.9	-0.1
MTW	Mount Morrison	1.05	52	P	Pg	16 18 28.0	-1.9
DUWZ	D'Urville Isla	1.07	340	P	Pg	16 18 25.5	-4.7
HOWZ	Holdsworth Sta	1.24	43	P	Pg	16 18 31.2	-2.2
TMWZ	Te Maipa	1.32	58	P	Pg	16 18 38.5	+3.5
QRZ	Quartz Range	1.72	304	P	Pn	16 18 37.5	-2.7
PRWZ	Pori Road	1.73	44	P	Pn	16 18 40.0	-0.4
OHWZ	Ohakea	1.75	24	P	Pn	16 18 38.2	-2.4
DVHZ	Dannevirke	2.02	42	P	Pg	16 18 49.5	+1.2
WAZ	Wanganui	2.10	12	P	Pn	16 18 43.4	-2.0
PNHZ	Pukenui	2.34	36	P	Pn	16 18 49.5	+0.7
PREZ	Palmer Road	2.47	356	P	Pn	16 18 51.5	+0.9
KHEZ	Kahui Hut	2.53	353	P	Pn	16 18 51.9	+0.4
MTVZ	Mangateitei	2.56	19	P	Pn	16 18 51.8	0.0
NBEZ	Newall Road No	2.57	351	P	Pn	16 18 51.7	-0.2
MOVZ	Moawhango	2.61	24	P	Pn	16 18 51.9	-0.7
KRHZ	Kereru	2.63	35	P	Pn	16 18 54.0	+1.2
PKE	Pukeiti	2.63	353	P	Pn	16 18 54.9	+2.1
BHHZ	Black Hill Sta	2.64	29	P	Pn	16 18 53.1	+0.2
VRZ	Vera Road	2.70	6	P	Pn	16 18 55.1	+1.4
TUVZ	Tukino	2.71	21	P	Pn	16 18 45.3	-8.7
NGZ	Ngauruhoe	2.79	20	P	Pn	16 18 55.7	+0.6
KWHZ	Kaweka Forest	2.84	34	P	Pb	16 18 58.3	-2.6
WTVZ	West Tongariro	2.84	19	P	Pn	16 18 57.0	+1.2
KRVZ	Karewarewa	2.88	20	P	Pn	16 18 56.6	+0.4
KATZ	Kakaramea	3.00	20	P	Pn	16 18 59.3	+1.4
BKZ	Black Stump Fm	3.09	32	P	Pn	16 19 01.3	+2.3
KUTZ	Kaahu Road	3.49	19	P	Pb	16 19 09.7	-2.3

WEL 21 16:19:19.2, 42°S±2°×**17°4E**±°**, h20**^{km}±3^{km}**, M3.7**/19**, ML3.4**/18**, MLv3.7**/19**, Error ellipse: s-maj=0.0km s-min=0.0km az=135.2, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	204	P	Pb	16 19 25.2	+0.4
TUWZ	Tuamarina	0.32	296	P	Pb	16 19 26.5	+0.4
TCW	Tory Channel	0.36	355	P	Pb	16 19 27.3	+0.5
BSWZ	Blackbirch Sta	0.36	246	P	Pb	16 19 27.3	+0.4
WEL	Wellington	0.44	50	P	Pb	16 19 28.8	+0.6
BHW	Baring Head	0.44	69	P	Pb	16 19 28.9	+0.6
PLWZ	Palliser	0.70	90	P	Pn	16 19 34.1	+0.1
MSWZ	Moikau Station	0.71	78	P	Pn	16 19 34.1	0.0
CAW	Cannon Point	0.73	51	P	Pn	16 19 34.1	-0.2
NNZ	Nelson	0.79	296	P	Pn	16 19 34.8	-0.4
DUWZ	D'Urville Isla	0.82	338	P	Pn	16 19 35.6	-0.1
PAWZ	Paruwai Farm	0.85	78	P	Pn	16 19 36.3	+0.3
MTW	Mount Morrison	0.98	66	P	Pn	16 19 38.3	+0.5
OGWZ	Otaki Gorge	0.99	41	P	Pn	16 19 38.3	+0.4
KHZ	Kahutara	1.03	214	P	Pn	16 19 38.8	+0.4
TRWZ	Traveller	1.04	81	P	Pn	16 19 38.9	+0.3
THZ	Tophouse	1.08	259	P	Pn	16 19 39.8	+0.6
HOWZ	Holdsworth Sta	1.12	54	P	Pb	16 19 41.1	+1.2
TMWZ	Te Maipa	1.27	69	P	Pb	16 19 42.3	-0.1
MRZ	Mangatainoka R	1.31	47	P	Pb	16 19 43.2	0.0
TIWZ	Tintock	1.42	57	P	Pb	16 19 47.5	+2.5
QRZ	Quartz Range	1.54	298	P	Pb	16 19 47.8	+0.7
OHWZ	Ohakea	1.56	29	P	Pb	16 19 50.2	+3.0
POWZ	Post Office Ro	1.61	43	P	Pb	16 19 53.8	+5.6
PRWZ	Pori Road	1.61	51	P	Pb	16 19 50.6	+2.4
GVZ	Greta Valley S	1.69	214	P	Pn	16 19 47.6	0.0
BFZ	Birch Farm	1.70	59	P	Pb	16 19 53.8	+4.0
DVHZ	Dannevirke	1.89	48	P	Pb	16 19 56.1	+3.1
LTZ	Lake Taylor	1.95	231	P	Pn	16 19 51.7	+0.5
AMCZ	Amberley	2.03	217	P	Pn	16 19 52.5	+0.4
WPHZ	Waipukurau	2.20	48	P	Pb	16 20 02.2	+3.9
OKCZ	Okains Bay	2.34	203	P	Pn	16 19 55.5	-1.1
CRLZ	Canterbury Las	2.36	211	P	Pn	16 19 56.0	-0.8
MOVZ	Moawhango	2.42	27	P	Pb	16 20 03.4	+1.3
INZ	Inchbonnie	2.43	241	P	Pn	16 19 59.3	+1.5
MQZ	McQueen's Vall	2.46	209	P	Pn	16 19 56.5	-1.7
BHHZ	Black Hill Sta	2.47	33	P	Pb	16 20 05.0	+2.1
PXZ	Pawanui	2.47	52	P	Pb	16 20 04.4	+1.6
AKCZ	Akaroa Harbour	2.52	204	P	Pn	16 19 58.0	-1.1
KAHZ	Kahuranaki	2.63	48	P	Pb	16 20 07.9	+2.3
KRVZ	Karewarewa	2.67	23	P	Pb	16 20 08.5	+2.1
RAGZ	Rawiri	3.88	39	P	Pb	16 20 23.9	-3.1
ODZ	Otahua Downs	4.39	216	P	Pn	16 20 23.9	-0.8
WMGZ	Waiomatatini S	4.90	41	P	Pn	16 20 32.7	+1.0

WEL 21 16:20:34.1, 41°.5S±0°.8×**17°4E**±°**, h13**^{km}±2^{km}**, M3.6**/18**, ML4.0**/18**, MLv3.6**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=123.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.28	213	P	Pb	16 20 40.9	-0.2
TCW	Tory Channel	0.32	340	P	Pb	16 20 41.4	-0.2
WEL	Wellington	0.35	49	P	Pb	16 20 42.0	0.0
BHW	Baring Head	0.35	73	P	Pb	16 20 42.0	-0.2
TUWZ	Tuamarina	0.37	283	P	Pb	16 20 42.1	-0.4
BSWZ	Blackbirch Sta	0.46	244	P	Pg	16 20 43.6	+0.4
PLWZ	Palliser	0.63	95	P	Pb	16 20 46.9	0.0
MSWZ	Moikau Station	0.63	81	P	Pb	16 20 47.0	+0.1
CAW	Cannon Point	0.63	50	P	Pb	16 20 47.1	+0.1
PAWZ	Paruwai Farm	0.77	80	P	Pb	16 20 49.5	+0.2
DUWZ	D'Urville Isla	0.80	332	P	Pn	16 20 52.1	+1.0
NNZ	Nelson	0.84	290	P	Pb	16 20 50.8	+0.3
MTW	Mount Morrison	0.89	67	P	Pn	16 20 51.8	-0.4
OGWZ	Otaki Gorge	0.90	39	P	Pb	16 20 51.6	+0.1
TRWZ	Traveller	0.96	84	P	Pn	16 20 53.0	-0.3

HOWZ	Holdsworth Sta	1.03	54	P	Pn	16 20 54.5	+0.3
KHZ	Kahutara	1.12	216	P	Pb	16 20 55.2	-0.1
THZ	Tophouse	1.16	257	P	Pn	16 20 56.3	+0.2
TMWZ	Te Maipa	1.18	70	P	Pn	16 20 56.0	-0.2
MRZ	Mangatainoka R	1.22	46	P	Pg	16 20 57.5	-0.1
TIWZ	Tintock	1.33	57	P	Pb	16 20 59.1	+0.2
OHWZ	Ohakea	1.47	28	P	Pg	16 21 02.4	0.0
CPWZ	Castlepoint	1.47	66	P	Pg	16 21 05.0	+2.6
PRWZ	Pori Road	1.51	51	P	Pb	16 21 01.9	-0.1
POWZ	Post Office Ro	1.52	43	P	Pg	16 21 04.6	+1.4
QRZ	Quartz Range	1.58	295	P	Pb	16 21 03.7	+0.5
BFZ	Birch Farm	1.61	60	P	Pn	16 21 02.6	+0.5
GVZ	Greta Valley S	1.78	215	P	Pn	16 21 04.1	-0.5
DVHZ	Dannevirke	1.79	48	P	Pg	16 21 08.7	+0.2
WAZ	Wanganui	1.81	14	P	Pg	16 21 08.9	+0.1
LTZ	Lake Taylor	2.04	231	P	Pn	16 21 08.2	0.0
LREZ	Lake Rotokare	2.05	360	P	Pg	16 21 13.7	+0.2
PRHZ	Porangahau	2.09	54	P	Pg	16 21 16.6	+2.5
PNHZ	Pukenui	2.09	41	P	Pg	16 21 14.3	+0.1
WPHZ	Waipukurau	2.11	47	P	Pg	16 21 17.0	+2.5
AMCZ	Amberley	2.12	218	P	Pn	16 21 08.9	-0.2
NMEZ	Namu Road	2.14	349	P	Pg	16 21 15.7	+0.6
PREZ	Palmer Road	2.18	355	P	Pg	16 21 16.5	+0.7
KHEZ	Kahui Hut	2.24	352	P	Pg	16 21 18.2	+1.2
MTVZ	Mangateitei	2.27	21	P	Pg	16 21 17.3	-0.4
NBEZ	Newall Road No	2.28	349	P	Pg	16 21 18.2	+0.4
DREZ	Durham Road	2.33	356	P	Pg	16 21 20.1	+1.4
PKVZ	Pokaka	2.33	18	P	Pg	16 21 17.5	-1.3
MOVZ	Moawhango	2.34	26	P	Pb	16 21 16.5	+0.4
PKE	Pukeiti	2.34	352	P	Pg	16 21 19.0	0.0
PXZ	Pawanui	2.37	52	P	Pg	16 21 21.2	+1.7
BHHZ	Black Hill Sta	2.38	32	P	Pb	16 21 17.7	+0.9
KRHZ	Kereru	2.38	39	P	Pg	16 21 18.6	-1.2
DRZ	Dome Shelter	2.40	22	P	Pg	16 21 21.0	+0.9
WHVZ	Whangaehu Hut	2.40	22	P	Pb	16 21 18.3	+1.1
VRZ	Vera Road	2.40	6	P	Pg	16 21 19.1	-1.0
FWVZ	Far West T-bar	2.42	21	P	Pb	16 21 18.6	+1.1
OKCZ	Okains Bay	2.43	204	P	Pn	16 21 11.8	-1.7
TUVZ	Tukino	2.43	23	P	Pg	16 21 19.7	-1.0
CRLZ	Canterbury Las	2.45	212	P	Pn	16 21 12.7	-1.0
NGZ	Ngauruhoe	2.50	21	P	Pb	16 21 20.3	+1.3
INZ	Inchbonnie	2.52	240	P	Pb	16 21 19.5	+0.3
OXZ	Oxford	2.53	223	P	Pg	16 21 21.1	-1.5
MQZ	McQueen's Vall	2.55	210	P	Pn	16 21 13.0	-2.1
WTVZ	West Tongariro	2.56	21	P	Pg	16 21 21.7	-1.4
TWVZ	Taurewa	2.56	18	P	Pg	16 21 21.7	-1.5
KWHZ	Kaweka Forest	2.58	37	P	Pg	16 21 23.1	-0.6
KRVZ	Karewarewa	2.59	22	P	Pb	16 21 21.8	+1.3
AKCZ	Akaroa Harbour	2.61	205	P	Pn	16 21 14.3	-1.6
KATZ	Kakaramea	2.72	21	P	Pb	16 21 23.9	+1.3
RITZ	Rihia Road	2.76	24	P	Pb	16 21 24.9	+1.6
BKZ	Black Stump Fm	2.83	35	P	Pb	16 21 25.8	+1.3
RATZ	Rangitukua	2.84	22	P	Pb	16 21 26.5	+1.8
WATZ	Wairara	2.98	20	P	Pb	16 21 28.5	+1.6
HIZ	Hauiti	3.02	6	P	Pb	16 21 29.2	+1.6
MRHZ	Matea Rd	3.08	30	P	Pb	16 21 29.9	+1.2
WVZ	Waitaha Valley	3.15	239	P	Pb	16 21 30.1	+0.2
KUTZ	Kaahu Road	3.21	20	P	Pb	16 21 32.9	+2.1
TLZ	Tolley Road	3.29	15	P	Pb	16 21 33.4	+1.0
ALRZ	Allen Road	3.29	27	P	Pb	16 21 34.5	+2.2
RPZ	Rata Peaks	3.32	227	P	Pn	16 21 26.8	+1.1
PRRZ	Plateau Road	3.37	27	P	Pb	16 21 31.5	-2.1
RAGZ	Rawiri	3.79	38	P	Pb	16 21 37.2	-3.7
URZ	Urewera	3.85	33	P	Pb	16 21 41.5	-0.4
TOZ	Tahuroa Road	3.87	13	P	Pb	16 21 40.9	-1.2
MWZ	Matawai	3.97	38	P	Pn	16 21 38.0	+3.3
TKGZ	Te Karaka	4.04	42	P	Pn	16 21 39.6	+4.0
CNGZ	Carnagh Statio	4.20	45	P	Pb	16 21 43.4	-4.3
TWGZ	Tauwhareparae	4.31	41	P	Pn	16 21 41.4	+2.0
RUGZ	Raukumara Rang	4.34	36	P	Pn	16 21 41.2	+1.4
MKAZ	Moumakai	4.44	8	P	Pb	16 21 47.8	-4.1
AWAZ	Awhitu Peninsu	4.45	2	P	Pb	16 21 49.1	-2.9
ODZ	Otahua Downs	4.48	217	P	Pn	16 21 40.6	-1.0
ETAZ	East Tamaki Re	4.57	5	P	Pb	16 21 51.3	-2.8
WIAZ	Waiheke Island	4.75	7	P	Pb	16 21 52.7	-4.4
MBAZ	Motutapu North	4.75	5	P	Pb	16 21 53.7	-3.5
OUZ	Omahuta	6.32	354	P	Pb	16 22 15.5	-8.3
CTZ	Chatham Island	6.97	112	P	Pn	16 22 16.1	+0.3

IDC 21 16:38:39.5±4.4**,30°.95N**×**140°.50E,h0km,mb3.5**/2**,mb1 3.6**/3**,mb1mx3.3**/32**,mbtmp3.3**/3**,ML2.1**/1**,Error ellipse: s-maj=266.0km s-min=33.9km az=81.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	5.89	342	Pn	Pn	16 40 07.9	-0.2
	0.1nm,0.3s,baz=160,slow=11,SNR=8.0						
WRA	Warramunga Arr	50.95	187	P	P	16 47 42.4	-0.4
	2.1nm,1.1s,baz=5.4,slow=7.2,SNR=1.7						
ASAR	Alice Springs	54.68	187	P	P	16 48 10.4	+0.1
	0.1nm,0.5s,baz=1.9,slow=5.0,SNR=1.9						

JMA 21 16:39:57.5,38°.26N×**140°.64E,h12km**±1km**,M0.7,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOU	Okura	0.11	10	P	Pg	16 40 00.6	+0.1
JOU				S	Sg	16 40 02.6	0.0
JMM	Marumori	0.41	163	P	Pg	16 40 05.5	-0.2
JMM				S	Sg	16 40 10.9	-0.2
JYK	Kaneyama	0.69	342	*e*S	Sg	16 40 19.9	-0.2
MAT	Matsushiro	2.59	229	S	Sn	16 41 12.1	+1.5

IDC 21 16:44:28.1±2.1**,1°.14N**×**126°.26E,h0km,mb3.5**/3**,mb1 3.7**/3**,mb1mx3.4**/34**,mbtmp3.5**/3**,Error ellipse: s-maj=171.0km s-min=26.5km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.40	160	P	P	16 49 28.2	-0.1
	0.9nm,0.3s,baz=338,slow=12,SNR=3.7						
ASAR	Alice Springs	25.75	164	P	P	16 50 00.7	+0.1
	0.3nm,0.4s,baz=347,slow=13,SNR=15						
MKAR	Makanchi Array	59.42	326	P	P	16 54 32.6	-0.1
	0.3nm,0.4s,baz=116,slow=8.2,SNR=4.9						

BJI ***21*** *16:46:30.7±0.0,23°.72S×179°.43W,h542km,mb4.8/32, mB5.0/17*

MOS ***21*** *16:46:30.4±3.0,23°.15S×179°.86E,h475km,mb4.7/20, Error ellipse: s-maj=10.6km s-min=9.4km az=38.4*

IDC ***21*** *16:46:31.2±1.6,23°.71S×179°.93W,h512km±16km, mb4.1/21,mb1 4.2/22,mb1mx4.1/32,mbtmp4.9/22,Error ellipse: s-maj=14.8km s-min=11.5km az=104.0*

ISCJB ***21*** *16:46:33.3±0.7,23°.75S±0°.04×179°.89E±0°.03,h549km±9km, mb4.6/143,Error ellipse: s-maj=6.6km s-min=4.6km az=172.8*

NEIC ***21*** *16:46:33.1±0.4,23°.77S×179°.96W,h541km±5km, mb4.7/106,Error ellipse: s-maj=5.2km s-min=3.7km az=166.0*

ISC 21 16:46:32.1±0.5**,23°.77S**±0°.06×**179°.89W**±0°.05**, h532km**±5km**,h533km:pP-P,n483,**σ1.s**36**/514**,mb4.6**/142**, 41C-16D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.74	162	*e*P	P	16 48 09.4	+2.1
RAO	Raoul Island	5.74	162	*e*P	P	16 48 09.4	+2.1
NIUE	Niue	10.39	65	*e*P	P	16 48 53.4	-0.5
MARNC	Mare, Loyalty	11.39	279	*e*P	P	16 49 04.8	+0.5
PINNC	Pines Island,	11.70	273	*e*P	P	16 49 09.1	+1.5
DZM	Mont Dzumac	12.71	275	P	P	16 49 19.6	+1.5
	1.7nm,0.3s,baz=218,slow=18,SNR=15						
DZM				S	S	16 51 40.6	+5.8
	0.2nm,0.3s,baz=3.5,slow=19,SNR=2.1						
OUZ	Omahuta	12.73	205	*e*P	P	16 49 20.8	+2.7
MXZ	Matakaoa Point	13.83	186	*e*P	P	16 49 31.0	+1.6
URZ	Urewera	14.66	189	P	P	16 49 37.1	-1.1
	12nm,0.3s,baz=38,slow=3.3,SNR=63						
URZ				S	S	16 52 08.6	-3.0
	2.5nm,0.3s,baz=208,slow=20,SNR=14						
URZ	Urewera	14.66	189	*e*P	P	16 49 37.5	-0.6
URZ				S	S	16 52 08.6	-3.0
HIZ	Hauiti	15.36	196	*e*P	P	16 49 46.6	+1.2
	40nm,0.5s						
BKZ	Black Stump Fm	15.65	190	*e*P	P	16 49 45.8	-2.6
	38nm,0.6s						
BFZ	Birch Farm	17.17	190	*e*P	P	16 50 01.5	-1.5
	35nm,0.5s						
MTW	Mount Morrison	17.76	191	P	P	16 50 33.5	+25
CAW	Cannon Point	17.79	193	P	P	16 50 28.7	+20
WEL	Wellington	18.02	193	P	P	16 50 24.2	+13
SNZO	South Karori	18.06	193	*e*P	P	16 50 12.2	+1.0
	58nm,0.9s						
QRZ	Quartz Range	18.16	199	P	P	16 50 14.0	+1.9
NNZ	Nelson	18.29	196	P	P	16 50 15.5	+2.3
CMWZ	Cape Campbell	18.59	194	P	P	16 50 22.5	+6.5
BSWZ	Blackbirch Sta	18.63	195	P	P	16 50 21.3	+4.9
RAR	Rarotonga	18.76	86	*e*P	P	16 50 18.1	+0.3
	359nm,1.8s						
RAR	Rarotonga	18.76	86	*e*P	P	16 50 18.1	+0.3
RAR				pmax	pmax		
	comp=Z,359nm,1.8s						
THZ	Tophouse	18.92	197	*e*P	P	16 50 19.5	+0.4
	comp=Z,30nm,0.4s						
THZ	Tophouse	18.92	197	P	P	16 50 20.8	+1.7
KHZ	Kahutara	19.38	195	*e*P	P	16 50 23.0	-0.1
	comp=Z,17nm,0.6s						
KHZ	Kahutara	19.38	195	P	P	16 50 24.7	+1.6
GVZ	Greta Valley S	20.02	195	P	P	16 50 29.7	+0.7
LTZ	Lake Taylor	20.04	197	*e*P	P	16 50 28.8	-0.5
	comp=Z,40nm,0.6s						
LTZ	Lake Taylor	20.04	197	P	P	16 50 29.9	+0.6
INZ	Inchbonnie	20.22	199	P	P	16 50 32.2	+1.4
AMCZ	Amberley	20.31	196	P	P	16 50 35.8	+4.2
OXZ	Oxford	20.61	197	*e*P	P	16 50 34.2	-0.1
	comp=Z,74nm,0.5s						
OXZ	Oxford	20.61	197	P	P	16 50 35.6	+1.3
CRLZ	Canterbury Las	20.69	196	*e*P	P	16 50 34.7	-0.3
	comp=Z,18nm,0.7s						
CRLZ	Canterbury Las	20.69	196	P	P	16 50 39.8	+4.8
WVZ	Waitaha Valley	20.75	200	P	P	16 50 37.3	+1.7
MQZ	McQueen's Vall	20.81	195	*e*P	P	16 50 35.8	-0.3
	comp=Z,13nm,0.6s						
MQZ	McQueen's Vall	20.81	195	P	P	16 50 37.4	+1.3
RPZ	Rata Peaks	21.24	198	P	P	16 50 41.0	+0.9
	comp=Z,21nm,0.6s,baz=293,slow=3.9,SNR=12						
RPZ				S	S	16 53 59.4	-1.2
	comp=Z,5.3nm,0.8s,baz=169,slow=19,SNR=2.9						
RPZ	Rata Peaks	21.24	198	*e*P	P	16 50 40.1	0.0
	comp=Z,20nm,0.6s						
RPZ				S	S	16 53 59.4	-1.2
RPZ	Rata Peaks	21.24	198	P	P	16 50 42.8	+2.7
WHZ	Wether Hill Ro	24.16	201	*e*P	P	16 51 07.1	+1.0
	comp=Z,35nm,0.7s						
ARMA	Armidale	26.16	249	*e*P	P	16 51 25.6	+1.5
	comp=Z,56nm,1.6s						
EIDS	Eidsvold	26.43	261	*e*P	P	16 51 26.9	+0.4
	comp=Z,34nm,0.6s						
EIDS				*e*pP	pP	16 52 52.9	+0.8
CTA	Charters Tower	31.57	270	P	P	16 52 12.1	+0.8
	comp=Z,131nm,0.4s,baz=94,slow=11,SNR=507						
CTAO	Charters Tower	31.57	270	*e*P	P	16 52 11.8	+0.6
	comp=Z,132nm,0.5s						
CTAO	Charters Tower	31.57	270	*e*P	P	16 52 11.9	+0.6
RABL	Rabaul	33.25	302	*e*P	P	16 52 25.1	-0.4
	comp=Z,66nm,0.5s						
PMG	Port Moresby	34.55	289	P	P	16 52 36.3	-0.1
	comp=Z,110nm,0.7s,baz=85,slow=5.4,SNR=27						
PMG	Port Moresby	34.55	289	*e*P	P	16 52 36.2	-0.1
	comp=Z,117nm,0.8s						
PMG	Port Moresby	34.55	289	*ce*P	P	16 52 36.1	-0.3
STKA	Stephens Creek	34.86	248	P	P	16 52 39.6	+0.8
	comp=Z,7.2nm,0.5s,baz=99,slow=11,SNR=24						
STKA				PcP	PcP	16 54 57.0	+0.2
	comp=Z,2.5nm,0.5s,baz=360,slow=1.4,SNR=3.4						
STKA	Stephens Creek	34.86	248	*e*P	P	16 52 39.6	+0.8
	comp=Z,2.1nm,0.6s						
STKA				*e*PcP	PcP	16 54 57.0	+0.2
STKA	Stephens Creek	34.86	248	*e*P	P	16 52 39.6	+0.8
STKA				*e*		16 54 57.0	
STKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
COEN	Coen	36.19	279	*e*P	P	16 52 50.5	+0.5
	comp=Z,33nm,0.9s						
MANU	Manus Island	38.35	299	*e*P	P	16 53 07.1	-0.6
	comp=Z,97nm,1.4s						
MMPI	Merauke	40.92	285	P	P	16 53 26.0	-2.4
AS31	Alice Springs	42.15	260	*e*P	P	16 53 38.0	-0.1
	comp=Z,14nm,0.4s						
AS31				*e*pP	pP	16 55 07.5	-4.8
AS31				*e*ScP	ScP	16 58 23.7	+3.6
ASAR	Alice Springs	42.15	260	P	P	16 53 38.0	-0.2
	comp=Z,40nm,0.7s,baz=97,slow=7.3,SNR=629						
ASAR				pP	pP	16 55 07.5	-4.8
	comp=Z,1.8nm,0.6s,baz=78,slow=6.8,SNR=1.7						
ASAR				ScP	ScP	16 58 23.6	+3.5
	comp=Z,8.2nm,0.7s,baz=108,slow=4.1,SNR=18						
ASAR				S	S	16 59 17.7	-2.0
	comp=Z,1.6nm,0.6s,baz=103,slow=16,SNR=5.7						
WB2	Warramunga Arr	42.50	266	*e*P	P	16 53 40.3	-0.6
	comp=Z,66nm,0.6s						
WRAB	Tennant Creek	42.51	266	*e*P	P	16 53 40.4	-0.5
	comp=Z,62nm,0.9s						
WRAB	Tennant Creek	42.51	266	*e*P	P	16 53 40.4	-0.5
WRAB				pmax	pmax		
	comp=Z,62nm,0.9s						
WR1	Warramunga Arr	42.51	266	*e*P	P	16 53 40.7	-0.3
WR1				*e*ScP	ScP	16 58 25.1	+3.5
WRA	Warramunga Arr	42.52	266	P	P	16 53 40.7	-0.3
	comp=Z,63nm,0.5s,baz=95,slow=9.2,SNR=568						
WRA				ScP	ScP	16 58 25.1	+3.5
	comp=Z,4.9nm,0.9s,baz=85,slow=5.4,SNR=5.2						
WRA				S	S	16 59 20.6	-4.3
	comp=Z,4.9nm,0.8s,baz=89,slow=14,SNR=7.8						
GENI	Genyem	43.97	293	P	P	16 53 51.6	-0.8
FORT	Forrest	46.45	249	*e*P	P	16 54 10.7	-0.5
	comp=Z,104nm,0.6s						
MTN	Manton Dam	47.55	274	*e*P	P	16 54 18.6	-1.0
	comp=Z,30nm,0.6s						
SRPI	Serui, Papua	47.69	291	P	P	16 54 18.9	-1.8
BAKI	Biak	48.15	291	P	P	16 54 23.6	-0.6
	comp=Z,172nm,0.9s						
HPAH	Hawaii Prepara	49.52	30	*e*P	P	16 54 34.4	+0.2
	comp=Z,86nm,0.8s						
GUMO	Guam	50.66	313	P	P	16 54 42.2	-0.4
	comp=Z,94nm,0.7s,baz=162,slow=11,SNR=9.2						
SWI	Sorong	52.50	288	P	P	16 54 55.3	-0.6
	comp=Z,183nm,0.7s,comp=Z,2µm						
SOEI	Soe	54.93	275	*e*P	P	16 55 12.8	-0.5
	comp=Z,79nm,0.8s						
NLAI	Namlea	55.05	283	P	P	16 55 13.4	-0.6
	comp=Z,55nm,1.4s,comp=Z,1µm						
NWAO	Narrogin (SRO)	55.38	245	P	P	16 55 16.2	+0.2
	comp=Z,4.0nm,0.5s,baz=122,slow=5.5,SNR=11						
LBMI	Labuha	55.89	286	P	P	16 55 19.1	-0.8
	comp=Z,67nm,1.2s						
TNTI	Ternate	56.69	288	*e*P	P	16 55 24.8	-0.5
	comp=Z,62nm,1.0s						
TNTI	Ternate	56.69	288	P	P	16 55 24.6	-0.7
	comp=Z,75nm,1.2s,comp=Z,1µm						
MORW	Morawa	57.01	250	*e*P	P	16 55 27.1	-0.3
	comp=Z,70nm,1.4s						
MMRI	Maumere	57.21	275	*e*P	P	16 55 28.5	-0.4
	comp=Z,75nm,1.0s						
MMRI	Maumere	57.21	275	P	P	16 55 28.1	-0.8
	comp=Z,80nm,1.0s						
EDFI	Ende, Flores	57.67	275	P	P	16 55 31.2	-1.0
	comp=Z,72nm,0.9s						
WSI	Waingapu	58.59	273	P	P	16 55 37.8	-0.5
	comp=Z,333nm,0.8s						
BKSI	Bulukumba	60.45	278	P	P	16 55 49.7	-1.0
	comp=Z,38nm,1.1s						
BNSI	Bone	60.84	279	P	P	16 55 52.9	-0.4
	comp=Z,30nm,0.7s						
PLAI	Plampang	61.21	273	P	P	16 55 55.1	-0.6
	comp=Z,142nm,0.8s,comp=Z,1µm						
SPSI	Sidrap Palu	61.33	279	P	P	16 55 55.3	-1.2
	comp=Z,15nm,0.9s						
TTSI	Tana Toraja	61.67	280	P	P	16 55 57.9	-0.8
	comp=Z,9.9nm,0.9s,comp=Z,2µm						
QSPA	South Pole Qui	66.31	180	*e*P	P	16 56 29.9	+2.4
	comp=Z,6.4nm,0.8s						
PBKI	Pangkalan Bun	69.20	276	P	P	16 56 46.4	+0.5
	comp=Z,133nm,0.9s						
SBUM	Sibu	70.88	282	*e*P	P	16 56 55.9	0.0
	comp=Z,7.8nm,1.4s						
JOW	Kunigami	70.98	312	*e*P	P	16 56 56.4	+0.2
	comp=Z,22nm,0.8s						
LEM	Lembang	71.28	271	P	P	16 56 58.7	+0.3
LEM				pmax	pmax		
	comp=Z,46nm,0.9s						
MJAR	Matsushiro Arr	71.85	326	P	P	16 57 00.7	-0.4
	comp=Z,10nm,0.8s,baz=166,slow=6.0,SNR=62						
MAJO	Matsushiro	71.85	326	*e*P	P	16 57 00.6	-0.4
	comp=Z,14nm,0.8s						
MAJO	Matsushiro	71.85	326	*i* P	P	16 57 00.7	-0.4
MAJO				pmax	pmax		
	comp=Z,13nm,1.0s						
MAT	Matsushiro	71.85	326	P	P	16 57 00.8	-0.3
MJB9	Matsu-Tunnel	71.86	326	*e*P	P	16 57 00.3	-0.8
	comp=Z,15nm,0.9s						
KSM	Kuching	72.18	280	*e*P	P	16 57 03.3	-0.2
	comp=Z,37nm,0.6s						
JNU	Nakatsue	73.50	318	P	P	16 57 10.9	+0.3
	comp=Z,15nm,1.0s,baz=141,slow=2.9,SNR=8.0						
JNU	Nakatsue	73.50	318	*e*P	P	16 57 10.5	-0.2
	comp=Z,29nm,1.1s						
NACB	Ninganchiao	74.11	306	*e*P	P	16 57 13.4	-0.8
	comp=Z,35nm,0.8s						
TPUB	Ta-pu	74.33	305	*e*P	P	16 57 14.2	-1.4
	comp=Z,19nm,0.8s						
SSLB	Suanglung	74.36	305	*e*P	P	16 57 14.4	-1.4
	comp=Z,25nm,1.0s						
YHNB	Yeheng	74.56	306	*e*P	P	16 57 16.4	-0.5
	comp=Z,27nm,0.8s						
KASI	Kota Agung	74.64	271	P	P	16 57 16.4	-1.1
	comp=Z,50nm,1.0s						
MDSI	Maura Dua	75.33	272	P	P	16 57 19.4	-2.0
ASAJ	Asahikawa	75.80	333	P	P	16 57 25.1	+1.9
	comp=Z,12nm,0.8s,baz=129,slow=2.2,SNR=19						
SKR	Severo-Kuril's	77.11	345	*ce*P	P	16 57 30.6	+0.4
TJN	Taejon	77.83	319	*ce*P	P	16 57 35.5	+1.0
MAW	Mawson	77.90	200	P	P	16 57 36.3	+1.8
	comp=Z,5.0nm,0.6s,baz=129,slow=5.7,SNR=11						
MAW	Mawson	77.90	200	*e*P	P	16 57 35.9	+1.4
	comp=Z,1.4nm,0.8s						
YSS	Yuzh-Sakhalins	78.06	335	*e*P	P	16 57 35.8	+0.3
	comp=Z,18nm,0.8s						
YSS	Yuzh-Sakhalins	78.06	335	⇑*e*P	P	16 57 37.2	+1.7
YSS				*e*S	S	17 06 49.2	+3.3
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
MYKOM	Kota Tinggi	78.17	277	*e*P	P	16 57 36.7	-0.2
	comp=Z,18nm,0.8s						
KSRS	Korea Array	78.21	320	P	P	16 57 37.2	+0.7
	comp=Z,5.0nm,0.7s,baz=134,slow=5.6,SNR=28						
KS15	Wonju Array Si	78.23	320	*e*P	P	16 57 36.6	-0.1
	comp=Z,71nm,2.0s						
KSAR	Wonju Array Be	78.23	320	P	P	16 57 37.2	+0.6
KSAR	Wonju Array Be	78.23	320	P	P	16 57 37.3	+0.6
PEA0B	Petropavlovsk-	79.00	346	*e*P	P	16 57 40.2	-0.2
	comp=Z,14nm,0.8s						
PEA0B	Petropavlovsk-	79.00	346	*e*P	P	16 57 40.2	-0.2
PEA0B				pmax	pmax		
	comp=Z,14nm,0.8s						
PETK	Petropavlovsk-	79.00	346	P	P	16 57 40.7	+0.3
	comp=Z,11nm,0.6s,baz=100,slow=6.9,SNR=41						
PEA1	Petropavlovsk-	79.01	346	*e*P	P	16 57 40.7	+0.2
COCO	West Island	79.11	261	*i* P	P	16 57 36.9	-5.0
USRK	Ussuriysk Ar.	80.71	327	P	P	16 57 50.9	+1.3
	comp=Z,6.2nm,0.6s,baz=153,slow=4.5,SNR=22						
SCZ2	Santa Cruz Isl	81.11	47	P	P	16 57 53.7	+1.7
	baz=234						
SCI2	San Clemente I	81.25	48	P	P	16 57 54.1	+1.4
	baz=234						
TYV	Tymovskoe	81.33	337	*e*P	P	16 57 53.7	+1.1
TYV				pmax	pmax		
	comp=Z,12nm,1.1s						
PKM	Mcpherson Peak	81.52	46	P	P	16 57 56.3	+2.0
	baz=233						
SMMC	Simmler	81.66	46	P	P	16 57 56.8	+2.0
	baz=233						
IPM	Ipoh	81.84	279	*e*P	P	16 57 55.6	-0.6
	comp=Z,23nm,0.6s						
109C	Camp Elliot, M	82.19	49	P	P	16 57 59.0	+1.5
	baz=235						
ARVC	Arvin	82.31	46	P	P	16 57 59.4	+1.4
	baz=234						
KULM	Kulim	82.52	279	*e*P	P	16 57 59.6	0.0
	comp=Z,15nm,0.8s						
MURC	Murrieta	82.53	48	P	P	16 58 00.6	+1.3
	baz=235						
VES	Vestal, Richgr	82.56	46	P	P	16 58 00.3	+1.0
	baz=234						
BFSC	Mount Baldy Ra	82.58	48	P	P	16 58 00.7	+1.1
	baz=235						
MONP2	Monument Peak	82.67	49	P	P	16 58 01.9	+1.8
	baz=236,SNR=7.7						
EDW2	Edwards Air Fo	82.73	47	P	P	16 58 01.5	+1.3
	baz=234,SNR=5.6						
IKP	In-Ko-Pah, Jac	82.75	50	P	P	16 58 02.2	+1.8
	baz=236						
ISA	Isabella, Lake	82.86	46	*e*P	P	16 58 02.1	+1.2
	comp=Z,13nm,0.8s						
ISA	Isabella, Lake	82.86	46	*e*P	P	16 58 02.1	+1.2
ISA				pmax	pmax		
	comp=Z,13nm,0.8s						
ISA	Isabella, Lake	82.86	46	P	P	16 58 02.4	+1.5
	baz=234,SNR=9.3						
O02D	Mt. Diablo Mer	82.90	40	P	P	16 58 03.3	+2.3
	baz=231						
WHN	Wuhan	83.00	308	⇑P	P	16 58 02.8	+1.2
WHN				pmax	pmax		
	comp=Z,38nm,0.9s						
CMB	Columbia Colle	83.04	43	*e*P	P	16 58 02.3	+0.6
	comp=Z,11nm,1.0s						
CMB	Columbia Colle	83.04	43	*e*P	P	16 58 02.3	+0.6
CMB				pmax	pmax		
	comp=Z,11nm,1.0s						
PFO	Pinyon Flats O	83.05	49	P	P	16 58 03.4	+1.4
	baz=236						
SWSC	Sam W. Stewart	83.13	50	P	P	16 58 04.1	+1.9
	baz=236						
SYO	Syowa Base	83.16	193	⇑*e*P	P	16 58 00.8	-0.9
SYO	Syowa Base	83.16	193	⇓*e*PcP	PcP	16 58 03.8	-1.1
AFDM	Forest Hills D	83.23	42	*e*P	P	16 58 03.2	+0.6
	comp=Z,6.6nm,0.8s						
LRMC	Laurel Mtn Rad	83.28	47	P	P	16 58 04.4	+1.3
	baz=235						
N02D	Trinity Center	83.45	40	P	P	16 58 05.9	+2.1
	baz=231						
O03E	Paynes Creek	83.56	41	P	P	16 58 05.5	+1.2
	baz=231						
CWC	Cottonwood Cre	83.58	46	P	P	16 58 05.8	+1.2
	baz=234						
BELC	Belle Mtn. Jos	83.58	49	P	P	16 58 06.4	+1.8
	baz=236,SNR=8.0						
M02C	Callahan	83.63	39	P	P	16 58 07.0	+2.4
	baz=231						
MDPB	Devils Postpil	83.63	44	*e*P	P	16 58 05.0	+0.1
	comp=Z,9.8nm,1.2s						
OMMB	Old Mammoth Mi	83.67	44	*e*P	P	16 58 04.8	-0.4
	comp=Z,9.7nm,1.4s						
L02E	Cave Junction	83.68	38	P	P	16 58 06.8	+2.0
	baz=230						
GSI	Gunungsitoli	83.69	274	*e*P	P	16 58 05.7	+0.2
	comp=Z,23nm,0.7s						
GSI	Gunungsitoli	83.69	274	P	P	16 58 06.0	+0.5
	comp=Z,52nm,1.6s						
MPMC	Manual Prospec	83.74	46	P	P	16 58 06.9	+1.4
	baz=235,SNR=6.0						
BC3	Big Chuckawall	83.77	49	P	P	16 58 07.2	+1.6
	baz=236						
GSC	Goldstone, Bar	83.77	47	*e*P	P	16 58 06.3	+0.8
	comp=Z,7.7nm,0.9s						
GSC	Goldstone, Bar	83.77	47	*e*P	P	16 58 06.3	+0.8
GSC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GSC	Goldstone, Bar	83.77	47	P	P	16 58 06.8	+1.4
	baz=235,SNR=7.7						
HEC	Hector,Ludlow	83.82	48	P	P	16 58 06.9	+1.2
	baz=236,SNR=9.5						
TIN	Tinemaha, Big	83.83	45	P	P	16 58 07.6	+1.8
	baz=234						
GLA	Glamis	83.87	50	*e*P	P	16 58 07.1	+1.2
	comp=Z,14nm,0.9s						
GLA	Glamis	83.87	50	*e*P	P	16 58 07.1	+1.2
GLA				pmax	pmax		
	comp=Z,14nm,0.9s						
GLA	Glamis	83.87	50	P	P	16 58 08.0	+2.0
	baz=237,SNR=7.2						
WAKR	Walker	83.92	43	*e*P	P	16 58 07.2	+0.9
	comp=Z,10nm,1.0s						
PNTR	Pine Nut	84.17	43	*e*P	P	16 58 07.9	+0.4
	comp=Z,12nm,1.0s						
BEKR	Beckworth	84.17	42	*e*P	P	16 58 07.8	+0.4
	comp=Z,3.5nm,0.7s						

TIA	Tai'an	84.22	314	P	P	16 58 08.8	+1.3
TIA				pmax	pmax		
	comp=Z,21nm,0.5s						
GMRC	Granite Mounta	84.25	48	P	P	16 58 09.4	+1.5
	baz=236,SNR=5.2						
IRM	Iron Mountain	84.26	49	P	P	16 58 09.7	+1.8
	baz=236,SNR=8.1						
YERR	Yerington	84.33	43	eP	P	16 58 09.1	+0.8
	comp=Z,6.2nm,0.8s						
GRAC	Grapevine Rang	84.36	46	P	P	16 58 09.8	+1.5
	baz=235						
FURC	Furnace Creek,	84.39	46	P	P	16 58 09.9	+1.6
	baz=235						
TUQ	Turquoise Moun	84.44	47	P	P	16 58 10.4	+1.5
	baz=236						
M04C	Macdoel	84.46	40	P	P	16 58 10.4	+1.6
	baz=231						
Y12C	Blythe	84.46	50	eP	P	16 58 10.3	+1.5
	comp=Z,10nm,1.1s						
Y12C	Blythe	84.46	50	P	P	16 58 10.6	+1.8
	baz=237						
KLR	Kul'dur	84.47	331	P	P	16 58 09.6	+1.1
	comp=Z,1.6nm,0.5s,baz=134,slow=3.1,SNR=7.3						
HSIG		84.56	55	eP	P	16 58 10.0	+0.6
	comp=Z,11nm,0.6s						
RYN	Ryan	84.57	44	eP	P	16 58 09.7	+0.3
	comp=Z,13nm,1.6s						
NVAR	Mina Array Bea	84.59	44	P	P	16 58 11.0	+1.4
	comp=Z,1.9nm,0.6s,baz=228,slow=8.0,SNR=13						
NV01	Mina Array Sit	84.59	44	eP	P	16 58 11.0	+1.4
PAHR	Pah Rah Range	84.67	42	eP	P	16 58 10.2	+0.3
	comp=Z,4.3nm,0.8s						
NV11	Mina Array Sit	84.69	44	eP	P	16 58 10.4	+0.4
	comp=Z,0.4nm,1.1s						
214A	Organ Pipe Nat	84.71	52	P	P	16 58 11.8	+1.7
	baz=238						
LDFC	Landfair	84.79	48	eP	P	16 58 10.3	-0.2
	comp=Z,17nm,0.8s						
SNAA	Sanae	84.79	179	P	P	16 58 10.0	+0.1
I03D	Drain, OR	84.81	37	P	P	16 58 12.1	+1.9
	baz=230						
VNA3	Neumayer Olymp	85.00	177	P	P	16 58 11.1	+0.2
PDMCI	Parker Dam,Lak	85.03	49	P	P	16 58 13.3	+1.8
	baz=237						
TPNV	Topopah Spring	85.07	46	eP	P	16 58 12.8	+0.9
	comp=Z,16nm,1.5s						
TPNV	Topopah Spring	85.07	46	P	P	16 58 13.1	+1.2
	baz=235,SNR=7.0						
KVN	Kaiserville	85.08	44	eP	P	16 58 12.6	+0.6
	comp=Z,3.8nm,0.7s						
KVN	Kaiserville	85.08	44	eP	P	16 58 12.6	+0.6
KVN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
J04D	Umpqua Nationa	85.22	38	P	P	16 58 14.0	+1.5
	baz=231						
I04A	Tendick Farm,	85.40	38	P	P	16 58 14.3	+1.1
	baz=231						
MOD	Modoc Plateau	85.44	40	eP	P	16 58 14.3	+0.7
	comp=Z,4.4nm,0.8s						
SHPR	Sheep Range	85.55	47	eP	P	16 58 15.5	+1.3
	comp=Z,7.1nm,1.4s						
Y14A	Wickenburg	85.63	50	eP	P	16 58 15.2	+0.7
	comp=Z,3.3nm,0.8s						
W13A	Hualapai Mount	85.64	49	eP	P	16 58 15.4	+0.7
	comp=Z,14nm,1.5s						
J05D	Fort Rock, OR	85.75	39	P	P	16 58 16.6	+1.6
	baz=232,SNR=5.2						
NONG	Nongkai	85.81	292	P	P	16 58 17.1	+1.4
	comp=Z,0.8nm,1.0s,comp=Z,146nm						
G03D	McMinnville, O	85.83	36	P	P	16 58 17.4	+2.3
	baz=230						
MLSI	Meulaboh, Aceh	85.95	276	P	P	16 58 16.0	-0.5
	comp=Z,52nm,1.0s						
PINE	Pine Mountain	86.23	38	eP	P	16 58 18.1	+0.8
	comp=Z,37nm,1.6s						
R11A	Troy Canyon, C	86.29	45	P	P	16 58 18.8	+1.0
	baz=236						
TUC	Tucson	86.36	52	eP	P	16 58 20.8	+2.7
	comp=Z,9.8nm,0.9s						
TUC	Tucson	86.36	52	P	P	16 58 20.5	+2.4
	baz=239						
BMN	Battle Mountai	86.44	43	eP	P	16 58 17.2	-1.1
	comp=Z,4.3nm,0.9s						
BMN	Battle Mountai	86.44	43	eP	P	16 58 17.3	-1.1
BMN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ENH	Enshi	86.45	305	eP	P	16 58 17.3	-1.2
	comp=Z,21nm,0.9s						
MA2	Magadan	86.48	346	P	P	16 58 17.8	-0.1
	comp=Z,9.4nm,0.8s,baz=161,slow=7.3,SNR=6.8						
SLVN	Son La	86.64	295	eP	P	16 58 18.7	-0.9
	comp=Z,23nm,1.7s						
X16A	Lo Mia Camp, P	86.98	50	eP	P	16 58 20.5	-0.6
	comp=Z,3.6nm,0.8s						
319A	Douglas	86.99	54	eP	P	16 58 20.6	-0.5
	comp=Z,28nm,1.3s						
LCMT	Little Creek M	87.11	47	eP	P	16 58 20.3	-1.3
	comp=Z,8.1nm,1.2s						
CCUT	Cedar City	87.32	47	eP	P	16 58 21.8	-0.9
	comp=Z,3.9nm,0.9s						
J08A	Circle Bar Ran	87.39	40	eP	P	16 58 23.1	+0.4
	comp=Z,18nm,1.3s						
KNB	Kanab	87.40	48	eP	P	16 58 23.6	+0.6
	comp=Z,11nm,1.4s						
KNB	Kanab	87.40	48	eP	P	16 58 23.6	+0.6
KNB				pmax	pmax		
	comp=Z,11nm,1.4s						
D03D	Eldon	87.42	35	P	P	16 58 24.2	+1.6
	baz=230						
U15A	North Rim	87.45	48	eP	P	16 58 24.9	+1.5
	comp=Z,8.6nm,0.8s						
PSUT	Pine Spring	87.53	46	eP	P	16 58 24.4	+0.7
	comp=Z,2.6nm,0.8s						
SZCU	Shurtz Canyon	87.53	47	eP	P	16 58 24.5	+0.9
	comp=Z,15nm,1.7s						
WUAZ	Wupatki	87.60	49	eP	P	16 58 25.0	+1.1
	comp=Z,12nm,1.5s						
WUAZ	Wupatki	87.60	49	P	P	16 58 25.4	+1.5
	baz=238						
D05A	Enumclaw	87.77	35	eP	P	16 58 24.7	+0.4
	comp=Z,20nm,1.1s						
D05A				epP	pP	17 00 21.9	+1.0
ELK	Elko	87.86	43	eP	P	16 58 25.5	+0.4
ELK	Elko	87.86	43	eP	P	16 58 25.5	+0.4
X18A	Snowflake	88.09	51	eP	P	16 58 27.5	+1.2
	comp=Z,4.3nm,0.6s						
TIY	Taiyuan	88.18	313	eP	P	16 58 28.0	+1.5
TIY				pmax	pmax		
	comp=Z,20nm,0.8s						
G08A	Pilot Rock	88.27	38	eP	P	16 58 27.6	+0.9
	comp=Z,21nm,1.5s						
MTPU	Mount Pierson	88.37	47	eP	P	16 58 29.5	+1.7
	comp=Z,5.5nm,0.7s						
B05A	Bryant	88.39	34	P	P	16 58 28.6	+1.5
	baz=231						
121A	Cookes Peak, D	88.67	54	P	P	16 58 30.9	+1.9
	baz=241						
XAN	Xi'an	88.74	308	eP	P	16 58 29.6	+0.4
	comp=Z,12nm,0.6s						
XAN	Xi'an	88.74	308	P	P	16 58 30.0	+0.8
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
XAN				pmax	pmax		
	comp=Z,48nm,4.6s						
XAN	Xi'an	88.74	308	eP	P	16 58 29.6	+0.4
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
MFID	Camas Ranch	89.00	41	eP	P	16 58 30.9	+0.6
	comp=Z,9.9nm,1.1s						
PAYA	Payao	89.17	291	P	P	16 58 33.7	+2.3
	comp=Z,21µm,0.9s						
SEY	Seymchan	89.17	348	d iP	P	16 58 30.6	+0.3
KMI	Kunming	89.29	298	P	P	16 58 31.3	-0.9
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
Q16A	Castle Valley	89.51	47	eP	P	16 58 32.6	-0.2
	comp=Z,12nm,1.3s						
CM31	Chiang Mai Arr	89.58	290	eP	P	16 58 35.4	+2.0
	comp=Z,14nm,1.0s						
CMAR	Chiang Mai Arr	89.58	290	P	P	16 58 35.4	+2.0
	comp=Z,6.2nm,0.9s,baz=134,slow=3.4,SNR=29						
CAST	Castle Rocks	89.62	12	eP	P	16 58 31.6	-1.0
	comp=Z,4.9nm,0.8s						
F10A	Beach Ranch, E	89.65	38	eP	P	16 58 33.5	+0.3
	comp=Z,13nm,1.7s						
TMUT	Trail Mountain	89.68	46	eP	P	16 58 34.2	+0.5
	comp=Z,12nm,0.7s						
CMMT	Chiang Mai	89.72	291	P	P	16 58 35.8	+1.8
	comp=Z,6.5nm,1.0s						
CHTO	Chiang Mai	89.73	291	eP	P	16 58 34.7	+0.7
	comp=Z,12nm,1.0s						
CHTO	Chiang Mai	89.73	291	eP	P	16 58 34.7	+0.7
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
MPU	Maple Canyon	89.78	46	eP	P	16 58 34.8	+0.8
	comp=Z,5.5nm,0.9s						
HLID	Hailey	89.94	41	eP	P	16 58 35.8	+1.1
	comp=Z,8.5nm,1.4s						
HLID	Hailey	89.94	41	P	P	16 58 36.1	+1.5
	baz=236						
HVU	Hansel Valley	89.98	44	eP	P	16 58 35.3	+0.4
	comp=Z,26nm,1.6s						
HVU	Hansel Valley	89.98	44	eP	P	16 58 35.3	+0.4
HVU				pmax	pmax		
	comp=Z,26nm,1.6s						
SRU	San Rafael Swe	90.04	47	eP	P	16 58 35.3	+0.1
	comp=Z,8.9nm,0.7s						
SRU	San Rafael Swe	90.04	47	eP	P	16 58 35.3	+0.1
SRU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LENM	Lemitar	90.05	52	eP	P	16 58 36.3	+0.9
MNTX	Cornudas Mount	90.06	55	eP	P	16 58 36.7	+1.4
	comp=Z,3.6nm,0.6s						
MNTX	Cornudas Mount	90.06	55	P	P	16 58 37.1	+1.8
	baz=242						
LTX	Lajitas	90.28	58	eP	P	16 58 38.5	+2.1
LTX	Lajitas	90.28	58	eP	P	16 58 38.6	+2.1
TX31	Lajitas Ar. Si	90.28	58	eP	P	16 58 37.6	+1.1
	comp=Z,19nm,0.5s						
TXAR	Lajitas Array	90.28	58	P	P	16 58 38.5	+2.1
	comp=Z,3.2nm,0.6s,baz=213,slow=6.6,SNR=55						
TXAR				PKKPbc	PKKPbc	17 16 03.3	+0.5
	comp=Z,0.3nm,0.7s,baz=83,slow=3.7,SNR=4.8						
HHC	Hu-ho-hao-te	90.40	315	P	P	16 58 37.1	+0.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	90.80	52	eP	P	16 58 38.5	-0.3
	comp=Z,7.7nm,1.4s						
ANMO	Albuquerque	90.80	52	ceP	P	16 58 40.1	+1.3
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ANMO	Albuquerque	90.80	52	P	P	16 58 40.2	+1.3
	baz=241						
CD2	Chengdu	91.09	303	eP	P	16 58 39.4	-0.7
AHID	Auburn Hatcher	91.55	43	eP	P	16 58 41.8	-0.3
	comp=Z,10nm,0.5s						
COLA	College	91.77	13	iP	P	16 58 43.7	+1.4
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
S22A	4UR Ranch, Cre	91.88	49	P	P	16 58 45.5	+1.6
	baz=241						
O20A	White River Ci	92.08	47	P	P	16 58 46.1	+1.4
	baz=240						
BILL	Bilibino	92.11	355	⇓eP	P	16 58 43.7	-0.1
BILL				e		17 02 31.8	
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SMCO	Snowmass	92.47	48	eP	P	16 58 46.7	-0.1
	comp=Z,5.4nm,1.3s						
BW06	Boulder Array	92.53	44	P	P	16 58 48.1	+1.3
	baz=240						
PD31	Pinedale Array	92.53	44	eP	P	16 58 47.2	+0.5
PDAR	Pinedale Array	92.53	44	P	P	16 58 47.2	+0.5
	comp=Z,1.3nm,0.5s,baz=223,slow=3.0,SNR=11						
BOZ	Bozeman (W)	92.71	41	P	P	16 58 49.0	+1.7
	baz=238						
SDCO	Great Sand Dun	92.81	50	eP	P	16 58 48.0	-0.2
	comp=Z,2.0nm,0.8s						
SDCO	Great Sand Dun	92.81	50	P	P	16 58 49.2	+1.1
	baz=242						
T25A	Trinidad	93.29	51	P	P	16 58 51.3	+1.0
	baz=243						
LZH	Lanzhou	93.38	308	⇑P	P	16 58 49.5	-1.1
LZH				pP	pP	17 00 47.6	+0.5
LZH				sP	sP	17 01 39.3	-0.8
LZH				PP	PP	17 02 46.3	+2.0
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,76nm,9.5s						
Q24A	Divide	93.62	49	P	P	16 58 52.8	+0.9
	baz=242						
AMTX	Amarillo	94.26	54	P	P	16 58 56.0	+1.4
	baz=244						
YAK	Yakutsk	94.50	339	iP	P	16 58 53.5	-1.3
YAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ABTX	Abilene, Hawle	94.83	57	P	P	16 58 58.2	+1.0
	baz=245						
SONA0	Songino Array	97.07	319	eP	Pdif	16 59 07.8	+0.7
SONM	Songino Array	97.07	319	P	Pdif	16 59 07.8	+0.7
	comp=Z,0.4nm,0.5s,baz=111,slow=6.3,SNR=3.4						
TUL1	Leonard	99.07	55	P	Pdif	16 59 16.6	+0.5
	baz=247						
P54A	Burton	111.73	55	P	PKiKP	17 04 07.0	+0.6
	baz=257						
Q55A	Buckhannon	111.89	56	P	PKiKP	17 04 07.3	+0.5
	baz=257						
ZALV	Zalesovo Beam	111.92	321	PKiKP	PKiKP	17 04 05.3	-1.0
	comp=Z,1.2nm,0.6s,baz=178,slow=1.8,SNR=5.3						
ZAA1	Zalesovo Array	111.92	321	ePKiKP	PKiKP	17 04 05.3	-1.0
MK32	Makanchi Array	112.14	313	ePKiKP	PKiKP	17 04 06.5	-0.5
MKAR	Makanchi Array	112.14	313	PKiKP	PKiKP	17 04 06.5	-0.5
	comp=Z,1.0nm,0.6s,baz=229,slow=2.3,SNR=8.1						
R56A	Bull Pasture M	112.27	57	P	PKiKP	17 04 07.8	+0.2
	baz=257						
X60A	Albert Glenn T	112.49	61	P	PKiKP	17 04 07.9	-0.1
	baz=256						
KURK	Kurchatov	115.18	316	c iPKIKP	PKiKP	17 04 12.8	+0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KK31	Karatay Array	119.87	307	ePKPdf	PKPdf	17 04 21.6	-0.4
KK31	Karatay Array	119.87	307	ePKIKP	PKPdf	17 04 21.6	-0.4
KKAR	Karatay Array	119.87	307	ePKPdf	PKPdf	17 04 21.5	-0.4
KKAR	Karatay Array	119.87	307	ePKIKP	PKPdf	17 04 21.5	-0.4
BRVK	Borovoye	120.47	319	ePKPdf	PKPdf	17 04 22.3	-0.5
BRVK	Borovoye	120.47	319	c iPKIKP	PKiKP	17 04 22.9	0.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOSA	Boshof	122.56	206	PKP	PKiKP	17 04 28.7	+0.6
	comp=Z,2.9nm,0.8s,baz=145,slow=9.3,SNR=3.2						
ARU	Arti	126.84	324	ePKPdf	PKPdf	17 04 34.6	-0.2
ARU	Arti	126.84	324	i PKIKP	PKiKP	17 04 35.1	-0.3
ARU						17 06 37.8	
ARU						17 10 54.7	
ABKAR	Akbulak array	127.19	315	ePKPdf	PKPdf	17 04 35.4	-0.3
PRGR	Permogore	131.20	333	ePKIKP	PKPdf	17 04 39.4	-3.6
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARA0	ARCESS Array S	131.78	348	ePKPdf	PKPdf	17 04 43.6	-0.3
ARA0				eSKPbc	SKPab	17 07 21.0	-0.5
ARCES	ARCESS Array B	131.78	348	PKP	PKPdf	17 04 43.6	-0.3
	comp=Z,2.8nm,0.7s,baz=45,slow=0.5,SNR=10						
ARCES				SKPbc	SKPab	17 07 21.0	-0.5
	comp=Z,2.1nm,0.7s,baz=12,slow=4.9,SNR=7.5						
FIA0	FINESS Array S	138.36	342	ePKPdf	PKiKP	17 04 57.5	-1.1
FIA0	FINESS Array S	138.36	342	ePKIKP	PKiKP	17 04 57.5	-1.1
FINES	FINESS Array B	138.36	342	PKhKP	PKPpre	17 04 47.6	
	comp=Z,1.4nm,0.6s,baz=42,slow=3.0,SNR=10.0						
FINES				PKP	PKiKP	17 04 57.5	-1.1
	comp=Z,1.6nm,0.4s,baz=93,slow=4.3,SNR=16						
FINES				SKP		17 07 41.0	
	comp=Z,5.2nm,0.7s,baz=50,slow=3.0,SNR=12						
KIV	Kislovodsk	139.86	311	ePKIKP	PKPdf	17 04 59.4	-0.3
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DOMB	Dombas	141.26	353	ePdif	PKPdf	17 04 56.6	-5.0
NC303	NORSAR Array S	141.77	351	ePKPpre	PKPdf	17 04 57.9	-4.6
NB2	NORSAR Subarra	141.97	351	PKP	PKPdf	17 04 59.1	-3.8
	comp=Z,1.7nm,0.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	141.97	351	PKhKP	PKPdf	17 04 58.9	-4.0
	comp=Z,3.2nm,0.7s,baz=16,slow=4.7,SNR=16						
NOA				SKP	SKPbc	17 07 51.2	+0.9
	comp=Z,1.0nm,0.6s,baz=13,slow=4.1,SNR=5.5						
NC602	NORSAR Array S	142.22	351	ePdif	PKPdf	17 04 59.4	-3.9
HYA	Hoyanger	142.39	355	ePdif	PKPdf	17 05 01.3	-2.2
SKAR	Skarslia	142.68	353	ePdif	PKPdf	17 05 00.9	-3.3
IZAR	Zarasai	142.72	336	eP	PKPdf	17 05 01.1	-3.2
ISAL	Salakas	142.90	336	eP	PKPdf	17 05 02.6	-2.0
ISAL				IAmb	IAmb	17 05 04.6	
	comp=Z,4.8nm,0.8s						
IIGN	Ignalina	143.02	335	eP	PKPab	17 05 02.4	0.0
IIGN				IAmb	IAmb	17 05 03.6	
	comp=Z,5.3nm,0.5s						
ASK	Askoy	143.14	356	ePdif	PKPbc	17 05 03.0	-0.1
BER	Bergen	143.23	356	ePdif	PKPab	17 05 03.1	+0.2
KONO	Kongsberg	143.53	352	ePKPdf	PKPbc	17 05 04.3	0.0
KONO	Kongsberg	143.53	352	ePdif	PKPab	17 05 04.1	0.0
ODD1	Odda	143.60	354	ePdif	PKPab	17 05 04.5	0.0
LRW	Lerwick	143.65	1	eP	PKPab	17 05 03.9	-0.7
BLS5	Blasjo	144.10	354	ePdif	PKPdf	17 05 06.7	+0.1
AKASG	Malin Array Be	144.92	327	PKP	PKPdf	17 05 08.4	+0.1
	comp=Z,8.8nm,0.6s,baz=42,slow=4.4,SNR=58						
AKASG				SKP		17 07 58.9	
	comp=Z,4.6nm,0.8s,baz=53,slow=2.5,SNR=11						
AKBB	Malin Array Si	144.92	327	ePKPdf	PKPdf	17 05 07.5	-0.8
SNART	Snartemo	145.09	353	ePdif	PKPab	17 05 10.6	+0.4
SUW	Suwalki	145.19	336	ePKP	PKPbc	17 05 09.7	+0.1
SUW	Suwalki	145.19	336	ePKPdf	PKPbc	17 05 09.9	+0.3
SUW	Suwalki	145.19	336	ePKIKP	PKPbc	17 05 09.9	+0.3
SIM	Simferopol'	145.24	316	PKIKP	PKPbc	17 05 10.6	+0.5
SIM				pmax	pmax		
	comp=Z,23nm,0.7s						
KAC	Achnashellach	146.08	5	eP	PKPbc	17 05 12.2	+0.1
ANDN	Andirin	146.15	303	iP	PKPbc	17 05 13.3	+0.3
ANDN				IAML_P			
	comp=Z,25nm,0.1s						
KPL	Plockton	146.21	6	eP	PKPbc	17 05 12.3	-0.1
YAHY	KAYSERI_Yahyal	146.78	304	iP	PKPbc	17 05 15.6	+0.8
YAHY				IAML_P			
	comp=Z,354nm,0.5s						
DRUM	Mains of Drumt	146.84	3	eP	PKPbc	17 05 13.0	-1.2
AKO	Adana	146.87	303	iP	PKiKP	17 05 16.3	-0.5
AKO				IAML_P			
	comp=Z,168nm,0.4s						
YURE	YUREGIR	146.88	301	iP	PKiKP	17 05 16.2	-0.7
GULE	Gulek	147.44	303	iP	PKPdf	17 05 14.1	+0.9
GULE				iS	PKiKP	17 05 18.2	0.0
GULE				IAML_P			
	comp=Z,85nm,0.1s						
EAB	Aberfoyle	147.46	5	eP	PKPbc	17 05 15.7	-0.1
BR101	Keskin Array S	147.58	307	ePKPdf	PKPdf	17 05 12.5	-0.9
BR101				ePKPbc	PKPbc	17 05 17.1	+0.2
BR131	Keskin Array S	147.58	307	ePKPbc	PKPbc	17 05 16.4	-0.4
BR131				ePKPab	PKPab	17 05 21.1	+0.2
BR131	Keskin Array S	147.58	307	ePKIKP	PKPbc	17 05 16.4	-0.4
BR131				e		17 05 21.1	
BRTR	Keskin Array B	147.58	307	PKP	PKPdf	17 05 12.5	-0.9
	comp=Z,2.6nm,0.6s,baz=221,slow=4.9,SNR=4.0						
BRTR				PKPbc	PKPbc	17 05 17.1	+0.2
	comp=Z,8.8nm,0.6s,baz=145,slow=4.7,SNR=22						
EDI	Edinburgh	147.80	3	eP	PKPbc	17 05 16.6	0.0
BEL	Belsk	147.80	336	ePKP	PKiKP	17 05 17.6	-0.6
BEL	Belsk	147.80	336	ePKIKP	PKiKP	17 05 17.7	-0.6
PGBU	Glenifferbraes	147.82	5	eP	PKPbc	17 05 16.0	-0.7
ESY	Stoneypath	147.83	3	eP	PKPbc	17 05 17.0	+0.2
EAU	Auchinoon	147.86	4	eP	PKPbc	17 05 17.5	+0.7
KERG	Konya-Eregli	147.90	303	iP	PKPdf	17 05 15.7	+1.8
EBL	Broad Law	147.95	3	eP	PKPbc	17 05 17.1	0.0
ANTO	Ankara	148.15	308	ePKPbc	PKPbc	17 05 18.4	+0.2
ANTO	Ankara	148.15	308	⇑iP	PKiKP	17 05 19.0	-0.5
ANTO	Ankara	148.15	308	ePKIKP	PKPbc	17 05 18.4	+0.2
BR231	Keskin MP Arra	148.17	308	ePKPbc	PKPbc	17 05 18.6	+0.3
TLCR		148.39	320	⇑iP	PKiKP	17 05 19.2	-0.5
TLCR		148.39	320	⇑PKIKP	PKiKP	17 05 19.2	-0.5
KWP	Kalwaria Pacla	148.71	331	ePKP	PKiKP	17 05 19.8	-0.5
GAL1	Galloway	148.74	5	eP	PKPbc	17 05 18.9	-0.1
CFR	Carcaliu	148.80	320	⇑iP	PKiKP	17 05 20.1	-0.4
BIZ	Bicaz	148.89	324	⇑iP	PKiKP	17 05 21.0	+0.3
BUR08	Bucovina Ar. S	148.91	326	ePKPbc	PKPbc	17 05 20.3	+0.4
BURAR	Bucovina Array	148.92	326	⇑iP	PKiKP	17 05 20.8	-0.1
EDMD	Edmundbyers	148.94	2	eP	PKPbc	17 05 19.5	0.0
MDUB	Mudurnu	149.06	310	ePKPbc	PKPbc	17 05 20.5	0.0
CSS	Mathiatis	149.11	299	ePKPbc	PKPbc	17 05 20.8	+0.2
TLB	Topalu	149.18	319	⇑iP	PKiKP	17 05 21.4	+0.1
HARR	Harsova	149.19	319	⇑iP	PKiKP	17 05 21.4	+0.1
VRI	Vrincioaia	149.21	322	⇓iP	PKPbc	17 05 20.7	+0.2
KOLS	Kolonicke sedl	149.41	331	ePKP	PKiKP	17 05 22.2	+0.5
OJC	Ojcow	149.47	335	ePKP	PKiKP	17 05 21.5	-0.3
OJC	Ojcow	149.47	335	ePKPbc	PKPbc	17 05 21.1	+0.2
UZH	Uzhgorod	149.62	330	⇑iPKHKP	PKPbc	17 05 21.0	-0.4
UZH				e		17 05 29.2	
TRPA	Tarpa	149.87	329	⇑iP	PKiKP	17 05 22.5	-0.1
MLR	Muntele Rosu	149.88	322	ePKPbc	PKPbc	17 05 22.1	-0.2
MLR	Muntele Rosu	149.88	322	⇓iP	PKPbc	17 05 21.1	-1.2
DOPR	Dopca	149.89	324	⇑iP	PKiKP	17 05 23.3	+0.5
NIE	Niedzica	149.89	333	ePKP	PKiKP	17 05 23.2	+0.5
SECR		150.08	322	⇑iP	PKiKP	17 05 23.4	+0.2
KSP	Ksiaz	150.21	339	ePKP	PKiKP	17 05 23.6	+0.3
CJR	Cluj-Napoca	150.34	326	⇑iP	PKiKP	17 05 23.9	+0.1
OKC	Ostrava-Krasne	150.40	336	⇑ePKP	PKiKP	17 05 23.9	+0.2
OKC				ePKPAB	PKPab	17 05 32.5	+0.5
VOIR		150.41	323	⇑iP	PKiKP	17 05 24.0	0.0
LANS	Liptovska Anna	150.44	334	ePKP	PKiKP	17 05 25.1	+1.2
OSTC	Ostas	150.48	339	⇑ePKP	PKiKP	17 05 24.3	+0.4
OSTC				ePKPAB	PKPab	17 05 34.0	+1.7
CHVC	Chvalec	150.50	339	⇑ePKP	PKiKP	17 05 25.6	+1.7
ISP	Isparta	150.51	305	⇓iP	PKPbc	17 05 23.9	-0.1
UPC	Upice	150.59	339	⇑ePKP	PKiKP	17 05 24.4	+0.3
UPC				ePKPAB	PKPab	17 05 33.3	+0.5
DPC	Dobruska-Polom	150.62	339	⇑ePKP	PKiKP	17 05 24.6	+0.4
DPC				ePKPAB	PKPab	17 05 33.4	+0.4
MORC	Moravsky Berou	150.68	337	ePKPbc	PKPbc	17 05 24.1	+0.2
MORC				ePKPab	PKPab	17 05 33.6	+0.3
MORC	Moravsky Berou	150.68	337	⇓iP	PKiKP	17 05 24.5	+0.1
MORC	Moravsky Berou	150.68	337	⇓PKIKP	PKiKP	17 05 24.5	+0.1
MORC	Moravsky Berou	150.68	337	ePKP	PKiKP	17 05 24.4	+0.1
MORC				e		17 05 33.7	
ARR	Arges	150.68	323	⇑iP	PKiKP	17 05 25.9	+1.4
DRGR		150.74	327	⇑iP	PKiKP	17 05 24.8	+0.2
DRGR		150.74	327	⇑PKIKP	PKiKP	17 05 24.8	+0.2
CLL	Collm	150.76	343	ePKPbc	PKPbc	17 05 24.1	+0.1
CLL				ePKPab	PKPab	17 05 33.6	+0.1
CLL	Collm	150.76	343	⇓iPKIKP	PKiKP	17 05 24.4	0.0
CLL				i		17 05 33.8	
CLL				pmax	pmax		
	comp=Z,20nm,0.8s						
CLL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CLL	Collm	150.76	343	⇓iPKPbc	PKiKP	17 05 24.4	0.0
	comp=Z,20nm,0.8s						
CLL				⇑iPKPab	PKPab	17 05 33.8	+0.3
	comp=Z,9.0nm,0.7s						
CLL				epPKPab	pPKPab	17 07 32.0	+0.3
CLL				e		17 07 40.0	
FOEL	Foel Wylfa	150.82	4	eP	PKPbc	17 05 23.5	-0.5
BRG	Berggiesshubel	150.90	342	ePKP	PKPdf	17 05 19.1	+1.1
	comp=Z,9.9nm,1.7s						
BRG				i		17 05 24.7	
	comp=Z,14nm,1.0s						
BRG				i		17 05 34.4	
	comp=Z,5.4nm,0.7s						
BRG				epPKP	pPKPbc	17 07 29.4	+1.7
	comp=Z,3.0nm,1.0s						
BRG				ePP	PP	17 09 00.2	-6.6
	comp=Z,13nm,2.0s						
BRG	Berggiesshubel	150.90	342	ePKIKP	PKPdf	17 05 19.1	+1.1
BRG				i		17 05 24.7	
BRG				i		17 05 34.4	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BRG				pmax	pmax		
	comp=Z,14nm,1.0s						
BRG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PVCC	Panska Ves	151.02	341	ePKIKP	PKiKP	17 05 25.5	+0.5
PVCC	Panska Ves	151.02	341	⇑ePKP	PKiKP	17 05 25.5	+0.5
VYHS	Vyhne	151.22	334	ePKIKP	PKiKP	17 05 25.7	+0.2
VYHS				e		17 05 36.3	
VYHS	Vyhne	151.22	334	ePKP	PKiKP	17 05 25.7	+0.2
VYHS				e		17 05 36.3	
JAVC	Velka Javorina	151.38	335	ePKP	PKiKP	17 05 27.0	+1.2
JAVC				e		17 05 38.0	
VRAC	Vranov	151.41	337	⇓iP	PKPab	17 05 37.4	+1.1
VRAC	Vranov	151.41	337	ePKP	PKiKP	17 05 25.9	+0.1
VRAC				e		17 05 37.1	
GOPC	GO Pecny, Ondr	151.49	340	ePKIKP	PKiKP	17 05 25.9	-0.1
GOPC	GO Pecny, Ondr	151.49	340	⇑ePKP	PKiKP	17 05 25.9	-0.1
PRU	Pruhonice	151.50	340	ePKIKP	PKiKP	17 05 26.1	+0.1
PRU				e		17 05 37.8	
PRU	Pruhonice	151.50	340	⇑ePKP	PKiKP	17 05 26.1	+0.1
PRU				ePKPAB	PKPab	17 05 37.8	+1.2
GZR	Gura Zlata	151.66	325	⇓iP	PKPbc	17 05 26.2	-0.1
GZR	Gura Zlata	151.66	325	⇓PKIKP	PKPbc	17 05 26.2	-0.1
KRUC	Moravsky	151.69	337	ePKP	PKiKP	17 05 26.5	+0.1

KRUC				e		17 05 38.1	
NKC	Novy Kostel	151.89	343	ePKIKP	PKiKP	17 05 28.1	+1.3
NKC				e		17 05 38.8	
NKC	Novy Kostel	151.89	343	⇑ePKP	PKiKP	17 05 28.1	+1.3
NKC				ePKPAB	PKPab	17 05 38.8	+0.5
PLVB	Pleven	151.90	320	⇓iP	PKiKP	17 05 27.3	+0.3
MODS	Modra-Piesok	151.93	335	ePKIKP	PKiKP	17 05 26.9	0.0
MODS				e		17 05 38.7	
MODS	Modra-Piesok	151.93	335	ePKP	PKiKP	17 05 26.9	0.0
MODS				e		17 05 38.7	
BZS	Buzias	152.10	327	⇓iP	PKiKP	17 05 27.4	+0.1
BZS	Buzias	152.10	327	⇓PKIKP	PKiKP	17 05 27.4	+0.1
ZST	Bratislava	152.14	335	ePKP	PKPab	17 05 38.5	-0.9
KHC	Kasperske Hory	152.56	341	ePKIKP	PKiKP	17 05 28.5	+0.3
KHC				e		17 05 41.9	
KHC	Kasperske Hory	152.56	341	⇑ePKP	PKiKP	17 05 28.5	+0.3
KHC				ePKPAB	PKPab	17 05 41.9	+0.7
MDVR	Moldovita	152.62	325	⇑iP	PKiKP	17 05 29.0	+0.5
GEC2	GERESS Array S	152.77	340	ePKPbc	PKPbc	17 05 28.6	-0.1
GEC2	GERESS Array S	152.77	340	ePKIKP	PKPbc	17 05 28.6	-0.1
GERES	GERESS Array B	152.77	340	PKPbc	PKiKP	17 05 29.0	+0.2
	comp=Z,1.8nm,0.8s,baz=64,slow=3.1,SNR=14						
GERES				PKPab	PKPab	17 05 42.4	+0.2
	comp=Z,0.9nm,0.6s,baz=36,slow=5.0,SNR=6.6						
CONA	Conrad Observa	152.83	336	ePKPab	PKPab	17 05 43.5	+1.1
	comp=Z,7.1nm,0.6s						
VTS	Vitosha	153.17	320	ePKPbc	PKiKP	17 05 29.9	0.0
VTS				ePKPab	PKPab	17 05 45.4	+1.2
VTS	Vitosha	153.17	320	⇑iP	PKPab	17 05 45.9	+1.7
VTS	Vitosha	153.17	320	ePKIKP	PKiKP	17 05 29.9	0.0
VTS				e		17 05 45.4	
MOA	Molln	153.46	338	ePKPab	PKPab	17 05 46.0	+1.0
	comp=Z,4.5nm,1.1s						
ARSA	Arzberg	153.52	336	ePKPab	PKPab	17 05 45.8	+0.5
	comp=Z,2.7nm,0.6s						
SOKA	Soboth	154.19	336	ePKPab	PKPab	17 05 48.7	+0.4
	comp=Z,2.5nm,0.5s,SNR=5.0						
PERS	Pernice	154.19	336	i PKPbc	PKPab	17 05 48.5	+0.2
KBA	Koelnbreinsper	154.44	339	ePKPab	PKPab	17 05 50.6	+1.1
	comp=Z,2.4nm,0.6s						
OBKA	Obir	154.51	336	ePKPab	PKPab	17 05 49.8	+0.1
	comp=Z,4.4nm,0.7s						
BFO	Black Forest	154.64	347	ePKPab	PKPab	17 05 49.8	-0.3
BFO	Black Forest	154.64	347	ePKP2	PKPab	17 05 49.8	-0.3
MYKA	Terra Mystica	154.73	338	ePKPab	PKPab	17 05 50.4	-0.2
	comp=Z,4.6nm,0.7s						
WATA	Walderalm	154.76	342	ePKPab	PKPab	17 05 51.5	+0.7
	comp=Z,1.3nm,0.4s						
WTTA	Wattenberg	154.81	341	ePKPab	PKPab	17 05 51.8	+0.7
	comp=Z,6.1nm,0.5s						
RETA	Reutte	154.85	343	ePKPab	PKPab	17 05 51.8	+0.7
	comp=Z,4.2nm,0.6s						
MOTA	Moosalm	154.89	342	ePKPab	PKPab	17 05 51.9	+0.6
	comp=Z,2.2nm,0.6s						
SQTA	Sankt Quirin	154.97	342	ePKPab	PKPab	17 05 52.4	+0.8
	comp=Z,3.8nm,0.9s						
ABTA	Abfaltersbach	155.00	340	ePKPab	PKPab	17 05 51.5	-0.3
	comp=Z,5.1nm,1.1s						
GBAS	Gorenja Brezov	155.03	336	i PKPbc	PKPab	17 05 51.6	-0.3
LIT	Litokhoron	155.09	316	ePKPab	PKPab	17 05 52.1	-0.2
LIT	Litokhoron	155.09	316	ePKP2	PKPab	17 05 52.1	-0.2
DAVA	Damuels	155.27	344	ePKPab	PKPab	17 05 53.5	+0.5
	comp=Z,5.6nm,0.6s						
PDG	Podgorica	155.53	324	⇑iP	PKPab	17 05 54.7	+0.6
FUORN	Ofenpass-Fuorn	155.78	343	ePKPab	PKPab	17 05 55.9	+0.6
TUE	Stuetta	156.16	344	ePKPab	PKPab	17 05 57.0	0.0
BNI	Bardonecchia	158.11	347	ePKPab	PKPab	17 06 04.5	-0.8
BNI	Bardonecchia	158.11	347	ePKP2	PKPab	17 06 04.5	-0.8
ESDC	Sonseca Array	163.78	11	PKPab	PKPab	17 06 27.6	-2.6
	comp=Z,0.1nm,0.3s,baz=339,slow=6.9,SNR=5.8						
KEST	Kesra	165.65	328	PKPab	PKPab	17 06 39.3	+0.7
	comp=Z,2.3nm,0.6s,baz=355,slow=14,SNR=3.7						
TORD	Torodi Ar. Bea	169.32	188	PKP	PKPdf	17 05 38.3	-0.8
	comp=Z,0.4nm,0.9s,baz=343,slow=4.6,SNR=3.7						
TORD				PKPab	PKPab	17 06 55.6	+0.6
	comp=Z,1.2nm,0.8s,baz=161,slow=5.9,SNR=5.6						
TOA1	Torodi Ar. Sit	169.33	188	ePKPdf	PKPdf	17 05 38.3	-0.8
TOA1				ePKPab	PKPab	17 06 55.6	+0.5

UCR ***21*** *16:47:17.9±1.4, 10.°93N×86.°76W, h20^{km}±236^{km}, MW4.3*
IDC ***21*** *16:47:18.4±1.5, 11.°61N×86.°00W, h0^{km}, mb3.8/5, mb1 4.2/5, mb1mx3.8/27, mbtmp3.8/5, MS3.4/3, Ms1 3.4/3, ms1mx2.9/24, Error ellipse: s-maj=121.5km s-min=25.5km az=46.0*
ISCJB ***21*** *16:47:20.4±0.7, 10.°92N±0.°05×86.°67W±0.°04, h48^{km}±4^{km}, mb4.2/35, MS3.4/3, Error ellipse: s-maj=9.7km s-min=4.7km az=35.8*
SNET ***21*** *16:47:21.6±0.9, 11.°04N×86.°84W, h25^{km}±47^{km}, ML3.6*
NEIC ***21*** *16:47:23.1±0.8, 11.°08N×86.°51W, h50^{km}±7^{km}, mb4.3/32, Error ellipse: s-maj=11.5km s-min=7.3km az=214.0*
ISC 21 16:47:22.2±1.3, **10.°95N**±0.°07×**86.°65W**±0.°06, **h40**^{km}±12^{km}, **n242,** σ1^{s}19/244, **mb4.3**/35, **MS3.2**/3, **1C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUEV	Buena Vista	1.23	97	⇑eP	Pn	16 47 41.5	-1.4
BUEV				eS	Sn	16 47 58.6	+0.3
XAVN	Gruta Xavier	1.23	15	eP	Pn	16 47 42.5	-0.4
XAVN				eS	Sn	16 47 59.8	+1.5
GB1A	Borinquen Arri	1.23	96	eP	Pn	16 47 41.1	-1.9
GB1A				eS	Sn	16 47 59.0	+0.4
MOMN	Momotombo	1.45	4	eP	Pn	16 47 45.0	-0.9
CNGN	Cerro Negro	1.54	358	eP	Pn	16 47 46.4	-0.7
ACON	Acoyapa	1.76	55	ePn	Pn	16 47 48.7	-1.5
ACON	Acoyapa	1.76	55	eP	Pn	16 47 48.4	-1.7
JTS	Las Juntas de	1.79	111	ePn	Pn	16 47 49.1	-1.5
JTS	Las Juntas de	1.79	111	eP	Pn	16 47 48.8	-1.8
ARE1	Arenal 1	1.96	104	eP	Pn	16 47 52.1	-0.8
ARE1				eP		16 47 53.7	
CEDE	Laguna Cedeo	1.96	103	eP	Pn	16 47 52.2	-0.9
ESTN	Estel	2.15	7	ePn	Pn	16 47 55.1	-0.5
ESTN	Estel	2.15	7	eP	Pn	16 47 55.2	-0.5
CNCH	Conchagua	2.58	333	eP	Pn	16 48 00.7	-0.9
CNCH				eP		16 48 00.8	
CNCH				eS	Sn	16 48 30.0	-1.9
CNCH				eS		16 48 30.2	
ESPN	Las Esperanzas	2.61	62	ePn	Pn	16 48 00.4	-1.4
LCND	La Caada	2.64	333	eP	Pn	16 48 00.1	-2.2
LCND				eS	Sn	16 48 31.0	-2.1
LCND				IAML		16 48 51.4	
	comp=Z,265nm,0.4s						
HDC	Heredia	2.66	111	ePn	Pn	16 48 04.0	+1.2
CVTR	Volcan Turrial	2.99	108	eP	Pn	16 48 04.4	-3.1
TGUH	Tegucigalpa,Un	3.15	349	ePn	Pn	16 48 08.6	-0.8
VICT	Victoria	3.57	327	eP	Pn	16 48 13.9	-1.2
TLIG	Tlapa	13.29	301	ePn	Pn	16 50 30.6	+2.1
LNIG	Linares	18.45	320	eP	P	16 51 34.0	-0.5
	comp=Z,13nm,1.0s						
452A	Marianna	19.84	4	P	Pn	16 51 53.7	+2.2
	baz=184						
454A	Quitman	19.86	8	P	Pn	16 51 53.5	+1.8
	baz=188						
353A	Camilla	20.42	6	P	Pn	16 51 59.8	+1.6
	baz=186						
TIGA	Tifton	20.58	7	P	Pn	16 52 00.3	+0.1
	baz=188						
HKT	Hockley	20.75	337	eP	P	16 51 57.0	-2.5
	comp=Z,9.5nm,1.0s						
249A	Camden	20.93	359	P	Pn	16 52 02.2	-1.9
	baz=178						
250A	Grady	20.93	1	P	Pn	16 52 03.1	-1.1
	baz=181						
252A	Lumpkin	21.02	5	P	P	16 52 04.2	+1.8
	baz=185						
251A	Midway	21.07	3	P	P	16 52 06.0	+3.1
	baz=183						
151A	Opelika	21.50	3	P	P	16 52 09.1	+1.5
	baz=183						
149A	Jones	21.54	360	P	P	16 52 10.2	+2.2
	baz=179						
150A	Eclectic	21.56	1	P	P	16 52 10.6	+2.3
	baz=181						
148A	Greensboro	21.61	358	P	P	16 52 11.0	+2.3
	baz=177						
147A	Livingston	21.67	356	P	P	16 52 11.6	+2.2
	baz=175						
152A	Waverly Hall	21.68	4	eP	P	16 52 09.8	+0.2
	comp=Z,14nm,0.9s						
152A	Waverly Hall	21.68	4	P	P	16 52 11.7	+2.1
	baz=185						
155A	Kite	21.91	9	P	P	16 52 13.9	+1.9
	baz=191						
NATX	Nacogdoches	21.99	342	P	P	16 52 14.4	+1.6
	baz=158						
Z50A	Ashland	22.21	2	eP	P	16 52 15.1	-0.1
	comp=Z,6.0nm,0.8s						
Z50A	Ashland	22.21	2	P	P	16 52 15.4	+0.2
	baz=182						
Z52A	Williamson	22.23	5	P	P	16 52 16.7	+1.3
	baz=185						
Z51A	Franklin	22.30	3	P	P	16 52 17.4	+1.2
	baz=184						
Z53A	Monticello	22.40	7	P	P	16 52 18.2	+0.9
	baz=188						
Z54A	Sparta	22.45	8	P	P	16 52 18.8	+1.0
	baz=190						
GOGA	Godfrey	22.54	7	eP	P	16 52 18.2	-0.6
	comp=Z,7.6nm,0.8s						
GOGA	Godfrey	22.54	7	P	P	16 52 19.0	+0.2
	baz=188						
Y49A	Blount Mountai	22.80	1	eP	P	16 52 20.8	-0.7
	comp=Z,12nm,0.8s						
Y49A	Blount Mountai	22.80	1	P	P	16 52 21.4	-0.1
	baz=180,SNR=5.3						
Y50A	Piedmont	22.85	2	P	P	16 52 21.9	-0.1
	baz=182,SNR=5.4						
Y51A	Rockmart	22.89	3	P	P	16 52 22.2	-0.2
	baz=184,SNR=5.1						
Z57A	Bowman	22.90	13	P	P	16 52 23.2	+0.7
	baz=195						
Y53A	Monroe	22.97	7	P	P	16 52 23.7	+0.5
	baz=187						
Y54A	Tignall	23.09	8	P	P	16 52 24.6	+0.2
	baz=190						
WHTX	Lake Whitney,	23.20	336	eP	P	16 52 24.9	-0.7
	comp=Z,9.3nm,0.9s						
WHTX	Lake Whitney,	23.20	336	P	P	16 52 26.0	+0.5
	baz=152						
Y55A	Saluda	23.29	10	P	P	16 52 26.5	0.0
	baz=192						
X48A	Hartselle	23.39	359	P	P	16 52 27.5	+0.1
	baz=179						
X50B	Fort Payne	23.42	2	P	P	16 52 27.6	-0.2
	baz=182						
X49A	Woodville	23.45	1	P	P	16 52 28.1	+0.1
	baz=180						
X47A	Russelville	23.48	357	P	P	16 52 27.4	-0.9
	baz=177,SNR=7.8						
X46A	Booneville	23.56	356	P	P	16 52 28.3	-0.7
	baz=175						
X51A	Calhoun	23.56	4	P	P	16 52 28.8	-0.2
	baz=184						
X53A	Estanollee	23.64	7	P	P	16 52 30.1	+0.3
	baz=188						
Y58A	Scranton	23.72	15	P	P	16 52 30.8	+0.2
	baz=197						
X55A	Gracelyn & Ava	23.85	10	P	P	16 52 31.8	0.0
	baz=192						
PLAL	Pickwick Lake	23.95	357	eP	P	16 52 31.3	-1.4
	comp=Z,7.3nm,0.8s						
X56A	White Oak	23.98	11	P	P	16 52 33.1	+0.1
	baz=193						
W49A	Belvidere	24.06	1	P	P	16 52 33.6	-0.1
	baz=181,SNR=6.2						
W48A	Pulaski	24.08	359	P	P	16 52 33.9	0.0
	baz=179,SNR=15						
W52A	Murphy	24.16	5	P	P	16 52 34.5	-0.2
	baz=186						
W51A	Cleveland	24.16	4	P	P	16 52 34.4	-0.2
	baz=184						
W50A	Signal Mountai	24.17	3	eP	P	16 52 33.5	-1.2
	comp=Z,9.1nm,0.9s						
W50A	Signal Mountai	24.17	3	P	P	16 52 34.2	-0.6
	baz=183						
W47A	Westpoint	24.20	358	P	P	16 52 34.7	-0.3
	baz=177,SNR=12						
TXAR	Lajitas Array	24.23	321	P	P	16 52 35.5	+0.1
	comp=Z,3.4nm,0.8s,baz=136,slow=10.0,SNR=34						
TXAR				PcP	PcP	16 56 17.6	+2.4
	comp=Z,0.7nm,0.8s,baz=134,slow=3.6,SNR=6.9						
LTX	Lajitas	24.23	321	eP	P	16 52 35.5	+0.1
LTX				ePcP	PcP	16 56 17.6	+2.4
TX31	Lajitas Ar. Si	24.23	321	eP	P	16 52 34.7	-0.7
	comp=Z,4.3nm,0.9s						
W53A	Cullowhee	24.31	7	P	P	16 52 35.3	-0.9
	baz=188						
MIAR	Mount Ida	24.32	346	eP	P	16 52 34.2	-1.9
	comp=Z,5.9nm,0.9s						
MIAR	Mount Ida	24.32	346	P	P	16 52 35.9	-0.2
	baz=163,SNR=5.1						
W54A	Cherokee Point	24.36	9	P	P	16 52 36.1	-0.4
	baz=190						
X58A	Rowland	24.42	15	P	P	16 52 36.7	-0.3
	baz=197						
CPCT	Cooper Cave	24.46	4	eP	P	16 52 37.0	-0.4
	comp=Z,9.1nm,0.8s						
KMSC	Kings Mountain	24.56	11	P	P	16 52 37.5	-0.8
	baz=192						
W41B	Gary Mavity, V	24.64	349	P	P	16 52 38.1	-0.9
	baz=166						
V50A	Pikevile	24.65	3	P	P	16 52 38.3	-0.7
	baz=183						
V48A	Smith Brothers	24.68	360	eP	P	16 52 38.4	-0.9
	comp=Z,5.8nm,0.9s						
V48A	Smith Brothers	24.68	360	P	P	16 52 39.1	-0.2
	baz=179						
W56A	Indian Trail	24.70	12	P	P	16 52 38.6	-0.9
	baz=194						
H06E1	SOCORRO T-PHAS	24.70	291	T	T	17 18 17.0	
	SNR=11						
V49A	McMinnville	24.71	1	P	P	16 52 38.7	-0.9
	baz=181						
WHAR	Wooly Hollow	24.77	349	eP	P	16 52 38.6	-1.5
	comp=Z,22nm,1.6s						
V46A	Holladay	24.77	357	P	P	16 52 40.2	0.0
	baz=176						
V51A	Loudon	24.83	4	P	P	16 52 40.4	-0.3
	baz=185						
W57A	Gilead	24.84	13	P	P	16 52 40.3	-0.5
	baz=195						
V53A	Saluda	24.85	7	P	P	16 52 40.7	-0.3
	baz=189						
W58A	Raeford	24.89	15	P	P	16 52 40.7	-0.5
	baz=197						
V52A	Sevierville	24.93	6	P	P	16 52 41.3	-0.3
	baz=187						
W39A	Magazine	24.99	346	P	P	16 52 41.5	-0.6
	baz=163						
CLTN	Cedars of Leba	25.03	1	eP	P	16 52 42.9	+0.4
	comp=Z,3.9nm,0.8s						
WVT	Waverly	25.09	358	P	P	16 52 42.9	-0.1
	baz=177						
FCAR	Ozark Folk Cen	25.32	350	eP	P	16 52 43.2	-1.9
	comp=Z,5.0nm,0.9s						
V56A	Mocksville	25.37	12	P	P	16 52 44.8	-0.8
	baz=194						
U50A	Jamestown	25.40	3	P	P	16 52 45.1	-0.8
	baz=184,SNR=6.4						
U53A	Fall Branch	25.57	8	P	P	16 52 46.8	-0.6
	baz=189						
V57A	Coltrane Farms	25.59	13	P	P	16 52 47.2	-0.5
	baz=196						
V58A	Windy Hill, Pi	25.66	14	P	P	16 52 47.5	-0.7
	baz=197						
U54A	Nelsons Funny	25.83	9	P	P	16 52 49.3	-0.6
	baz=191						
U40A	Yellville	25.91	348	P	P	16 52 49.0	-1.6
	baz=166,SNR=5.4						
U56A	King	25.91	12	P	P	16 52 49.7	-0.8
	baz=194						
T47A	Sharon Grove	25.93	359	P	P	16 52 49.6	-1.1
	baz=179						
U55A	TA2, Sparta	25.93	10	P	P	16 52 50.8	-0.1
	baz=192						
T50A	Nancy	26.00	3	P	P	16 52 50.0	-1.4
	baz=184						
T49A	Edmonton	26.06	2	P	P	16 52 50.8	-1.0
	baz=182						
WMOK	Wichita Mounta	26.14	337	eP	P	16 52 53.0	+0.4
	comp=Z,14nm,1.1s						
WMOK	Wichita Mounta	26.14	337	P	P	16 52 53.7	+1.1
	baz=152,SNR=13						
TUL1	Leonard	26.19	343	P	P	16 52 52.6	-0.5
	baz=159						
U57A	Blanch	26.21	13	P	P	16 52 52.6	-0.7
	baz=196						
U58A	Oxford	26.37	15	P	P	16 52 54.0	-0.6
	baz=198						
T54A	Tazewell	26.39	9	P	P	16 52 54.5	-0.5
	baz=191						
U59A	Littleton	26.53	16	P	P	16 52 55.5	-0.5
	baz=200						
S51A	Beattyville	26.71	5	P	P	16 52 57.5	-0.3
	baz=186						
BLA	Blacksburg	26.74	11	P	P	16 52 57.7	-0.4
	baz=193						
T57A	Hurt	26.77	13	P	P	16 52 58.0	-0.4
	baz=196						
S52A	Salyersville	26.80	6	P	P	16 52 58.2	-0.4
	baz=188						
WCI	Wyandotte Cave	27.16	1	P	P	16 53 00.6	-1.2
	baz=180						
MSTX	Muleshoe	27.25	330	eP	P	16 53 01.5	-1.3
	comp=Z,4.9nm,0.8s						
MSTX	Muleshoe	27.25	330	P	P	16 53 02.2	-0.6
	baz=143						
R49A	Shelbyville	27.25	3	P	P	16 53 02.0	-0.7
	baz=183						
S55A	Lewisburg	27.27	11	P	P	16 53 02.4	-0.5
	baz=193						
R50A	Paris	27.29	4	P	P	16 53 02.3	-0.7
	baz=185						
CCM	Cathedral Cave	27.30	352	P	P	16 53 01.4	-1.6
	baz=170						
S56A	Natural Bridge	27.36	12	P	P	16 53 03.5	-0.1
	baz=195						
R51A	Hillsboro	27.37	5	P	P	16 53 03.3	-0.4
	baz=186						
S57A	Dark Hollow, R	27.57	13	P	P	16 53 04.8	-0.7
	baz=196						
R54A	Victor	27.58	10	P	P	16 53 05.0	-0.6
	baz=192						
R53A	Hurricane	27.58	8	P	P	16 53 04.6	-1.0
	baz=190						
S58A	Poland Farm, P	27.65	15	P	P	16 53 05.0	-1.2
	baz=198						
R55A	Marlinton	27.83	11	P	P	16 53 07.9	0.0
	baz=194						
Q48A	North Vernon	27.87	2	P	P	16 53 07.4	-0.7
	baz=182						
Q49A	Aurora	27.98	3	P	P	16 53 08.7	-0.4
	baz=183						
R56A	Bull Pasture M	28.10	12	P	P	16 53 10.2	-0.1
	baz=195						
Q51A	Peebles	28.11	5	eP	P	16 53 09.3	-1.0
	comp=Z,15nm,0.8s						
Q51A	Peebles	28.11	5	P	P	16 53 09.2	-1.1
	baz=187,SNR=5.1						
Q53A	Leroy	28.16	8	P	P	16 53 10.5	-0.2
	baz=190						
Q52A	Bidwell	28.16	7	P	P	16 53 10.0	-0.8
	baz=189						
R57A	Stanardsville	28.18	14	P	P	16 53 10.6	-0.3
	baz=197						
R58A	Rapidan	28.31	14	P	P	16 53 11.7	-0.4
	baz=198						
Q54A	Coxs Mills	28.39	10	P	P	16 53 12.3	-0.5
	baz=192						
P48A	Milroy	28.41	2	P	P	16 53 11.6	-1.3
	baz=182						
P49A	Miami Univ. Ec	28.52	3	P	P	16 53 12.4	-1.5
	baz=184						
Q55A	Buckhannon	28.53	11	P	P	16 53 14.2	+0.1
	baz=193						
P46A	Rosedale	28.55	359	P	P	16 53 13.3	-0.9
	baz=179						
P51A	Williamsport	28.59	6	P	P	16 53 13.7	-0.8
	baz=187						
Q56A	Snyder Ridge,	28.75	12	P	P	16 53 16.2	+0.2
	baz=195						
P53A	Whipple	28.80	8	P	P	16 53 16.1	-0.3
	baz=190						
P52A	Corning	28.84	7	P	P	16 53 15.8	-1.0
	baz=189						
P54A	Burton	29.05	10	P	P	16 53 17.7	-1.0
	baz=192						
P55A	Reedsville	29.08	11	P	P	16 53 18.4	-0.5
	baz=194						
O50A	Cable	29.20	5	P	P	16 53 18.9	-1.0
	baz=186						
P56A	Dayton Farm, R	29.27	12	P	P	16 53 20.3	-0.3
	baz=196						
SFIN	Lafayette	29.31	359	P	P	16 53 19.3	-1.6
	baz=179						
ACSO	Alum Creek Sta	29.34	6	P	P	16 53 20.5	-0.7
	baz=187						
O52A	Adamsville	29.36	8	P	P	16 53 20.5	-0.9
	baz=189						
KSU1	Kansas State U	29.41	344	P	P	16 53 21.2	-0.6
	baz=160						
P57A	Homestead Farm	29.43	14	P	P	16 53 22.0	0.0
	baz=197						
O53A	New Philadelph	29.57	8	P	P	16 53 22.3	-0.9
	baz=191,SNR=5.0						
HDIL	Hopedale	29.58	356	P	P	16 53 22.7	-0.6
	baz=174						
N49A	Columbus Grove	29.93	4	P	P	16 53 25.4	-1.0
	baz=185						
ANMO	Albuquerque	29.93	326	P	P	16 53 27.3	+0.5
	baz=138						
O56A	Blue Knob Stat	30.06	12	P	P	16 53 27.9	+0.2
	baz=196						
N53A	Lisbon	30.17	9	P	P	16 53 27.7	-0.9
	baz=191						
O57A	Amberson	30.21	14	P	P	16 53 28.7	-0.2
	baz=198						
O58A	Lewisberry	30.30	15	P	P	16 53 29.8	+0.1
	baz=199						
SSPA	Standing Stone	30.56	13	P	P	16 53 31.6	-0.4
	baz=197						
O59A	Robesonia	30.67	16	P	P	16 53 32.9	0.0
	baz=200						
N56A	West Decatur	30.74	12	P	P	16 53 33.4	-0.2
	baz=196						
M53A	WI Miller and	30.82	9	P	P	16 53 33.8	-0.4
	baz=191						
N58A	Sunbury	31.03	15	P	P	16 53 35.8	-0.3
	baz=199						
L42A	Oliver, Polo	31.04	356	P	P	16 53 34.4	-1.9
	baz=174						
M56A	Emporium	31.31	12	P	P	16 53 37.7	-0.9
	baz=196						
N59A	State Game Lan	31.35	16	P	P	16 53 39.0	0.0
	baz=201						
L53A	Girard	31.38	9	P	P	16 53 38.3	-0.9
	baz=192						
SDCO	Great Sand Dun	31.59	331	eP	P	16 53 41.6	+0.1
	comp=Z,1.4nm,0.7s						
SDCO	Great Sand Dun	31.59	331	P	P	16 53 41.8	+0.3
	baz=142						
JFWS	Jewell Farm	32.00	355	P	P	16 53 43.0	-1.6
	baz=173						
L58A	Harry Jones Me	32.38	15	P	P	16 53 47.9	-0.2
	baz=200						
BINY	Binghamton	32.49	15	P	P	16 53 48.4	-0.6
	baz=200						
TYNO	Tyneside	32.56	9	P	P	16 53 48.2	-1.3
	baz=192						
LPAZ	La Paz	32.68	146	LR	LR	17 08 33.7	
	comp=Z,47nm,20.2s,baz=342,slow=39						
I42A	Draeger Farm,	32.88	357	P	P	16 53 50.2	-2.1
	baz=176						
J54A	Appleton	32.94	11	P	P	16 53 52.1	-0.8
	baz=194						
BASO	Ashfield	33.22	7	P	P	16 53 55.0	-0.3
	baz=189						
PV13	Radium Mtn., P	33.59	327	eP	P	16 53 58.4	-0.5
	comp=Z,3.2nm,1.1s						
PV12	Saucer Basin,	33.70	328	eP	P	16 54 00.2	+0.4
	comp=Z,6.3nm,0.7s						
PV18	Skein Mesa, Pa	33.70	327	eP	P	16 53 59.1	-0.7
	comp=Z,3.7nm,0.7s						
PV11	David Mesa, Pa	33.72	328	eP	P	16 53 59.7	-0.3
	comp=Z,4.9nm,0.6s						
PV17	East Wray Mesa	33.75	327	eP	P	16 54 00.4	+0.1
	comp=Z,5.7nm,0.7s						
ECSD	EROS Data Cent	33.78	347	eP	P	16 53 57.7	-2.5
	comp=Z,6.9nm,1.0s						
ECSD	EROS Data Cent	33.78	347	P	P	16 53 58.3	-1.9
	baz=162						
CLWO	Collingwood	33.82	8	P	P	16 53 59.3	-1.3
	baz=191						
G40A	Rib Lake	34.33	356	P	P	16 54 03.0	-1.9
	baz=174						
G39A	Holcombe	34.43	354	P	P	16 54 03.8	-2.0
	baz=172						
SPMN	Marine on St.	34.56	352	eP	P	16 54 04.3	-2.6
	comp=Z,13nm,1.0s						

SPMN	**Marine on St.**	**34.56**	**352**	P	**P**	**16 54 04.7**	**-2.2**
	baz=169						
F45A	**CMU Biological**	**34.62**	**1**	P	**P**	**16 54 05.0**	**-2.4**
	baz=182						
BANO	**Bancroft**	**34.76**	**11**	P	**P**	**16 54 07.1**	**-1.5**
	baz=195						
BUKO	**Buck Lake**	**34.92**	**9**	P	**P**	**16 54 08.7**	**-1.4**
	baz=192						
LONY	**Lake Ozonia**	**35.12**	**15**	P	**P**	**16 54 10.2**	**-1.6**
	baz=201						
SRU	**San Rafael Swe**	**35.19**	**327**	*e*P	**P**	**16 54 12.5**	**-0.2**
	comp=Z,2.6nm,0.7s						
G55A	**Calabogie**	**35.22**	**12**	P	**P**	**16 54 11.6**	**-1.0**
	baz=197						
F52A	**Sundridge**	**35.28**	**9**	P	**P**	**16 54 11.8**	**-1.4**
	baz=192						
E43A	**Lone Tree Farm**	**35.30**	**360**	*e*P	**P**	**16 54 11.1**	**-2.2**
	comp=Z,6.9nm,0.9s						
E43A	**Lone Tree Farm**	**35.30**	**360**	P	**P**	**16 54 11.3**	**-2.0**
	baz=179						
E47A	**Iron Bridge**	**35.50**	**4**	P	**P**	**16 54 12.9**	**-2.0**
	baz=186						
P17A	**Butcher Ranch,**	**35.57**	**327**	*e*P	**P**	**16 54 15.7**	**-0.2**
	comp=Z,3.7nm,0.9s						
E48A	**Lockeyer**	**35.61**	**5**	P	**P**	**16 54 14.3**	**-1.6**
	baz=187						
ALGO	**Algonquin Park**	**35.64**	**10**	P	**P**	**16 54 14.8**	**-1.4**
	baz=194						
E38A	**The Farm, Brul**	**35.78**	**354**	P	**P**	**16 54 15.8**	**-1.5**
	baz=172						
E52A	**Mattawa**	**35.86**	**9**	P	**P**	**16 54 17.0**	**-1.2**
	baz=193						
E51A	**G1948 Merrick**	**35.98**	**8**	P	**P**	**16 54 18.3**	**-0.8**
	baz=192						
E53A	**Dumoine, Ponti**	**36.12**	**11**	P	**P**	**16 54 18.7**	**-1.7**
	baz=195						
D49A	**Beulah Townshi**	**36.47**	**6**	P	**P**	**16 54 21.3**	**-2.0**
	baz=188						
C40A	**Isle Royale Na**	**36.90**	**357**	P	**P**	**16 54 25.0**	**-1.9**
	baz=176						
PD31	**Pinedale Array**	**37.46**	**332**	*e*P	**P**	**16 54 31.4**	**-0.7**
PDAR	**Pinedale Array**	**37.46**	**332**	P	**P**	**16 54 31.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=124,slow=9.5,SNR=4.6						
HWUT	**Hardware Ranch**	**37.55**	**329**	*e*P	**P**	**16 54 31.8**	**-1.1**
	comp=Z,2.6nm,0.8s						
AGMN	**Agassiz Nation**	**38.02**	**350**	*e*P	**P**	**16 54 34.1**	**-2.3**
	comp=Z,9.3nm,1.1s						
AGMN	**Agassiz Nation**	**38.02**	**350**	P	**P**	**16 54 35.0**	**-1.4**
	baz=165						
NV01	**Mina Array Sit**	**39.34**	**319**	*e*P	**P**	**16 54 49.0**	**+1.0**
NV01				*e*PcP	**PcP**	**16 56 59.0**	**+3.0**
NVAR	**Mina Array Bea**	**39.34**	**319**	P	**P**	**16 54 49.0**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=134,slow=7.6,SNR=7.3						
NVAR				PcP	**PcP**	**16 56 59.0**	**+3.0**
	comp=Z,1.3nm,0.7s,baz=123,slow=4.4,SNR=8.6						
BDFB	**Brasilia**	**46.49**	**124**	P	**P**	**16 55 46.2**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=288,slow=9.6,SNR=3.7						
BDFB				LR	LR	17 17 10.2	
	comp=Z,109nm,18.9s,baz=124,slow=39						
B05A	**Bryant**	**47.55**	**328**	P	**P**	**16 55 53.3**	**-0.3**
	baz=129						
D03D	**Eldon**	**47.61**	**327**	P	**P**	**16 55 54.0**	**-0.2**
	baz=128						
YKA	**Yellowknife Ar**	**55.25**	**345**	P	**P**	**16 56 50.6**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=168,slow=6.2,SNR=2.3						
NOA	**NORSAR Array B**	**84.29**	**29**	LR	LR	17 35 34.1	
	comp=Z,7.2nm,19.3s,baz=220,slow=35						
LZH	**Lanzhou**	**132.18**	**349**	*e*PKP	**PKPdf**	**17 06 31.0**	**-1.5**
LZH				pPKP	pPKPdf	17 06 49.5	+4.3
LZH				sPKP		17 06 53.8	
CD2	**Chengdu**	**137.19**	**347**	PKP	**PKPdf**	**17 06 39.3**	**-2.6**
CM31	**Chiang Mai Arr**	**150.26**	**349**	*e*PKPbc	**PKPbc**	**17 07 09.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**150.26**	**349**	PKPbc	**PKPbc**	**17 07 09.8**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=357,slow=1.8,SNR=5.8						

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*IDC **21** 16:48:35.5±7.6, 16°.85S×175°.65W, h0^{km}, mb4.9/2, mb1 5.1/2, mb1mx3.9/31, mbtmp4.9/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/21, Error ellipse: s-maj=325.1km s-min=60.7km az=141.0*

*ISCJB **21** 16:48:50.7±0.7, 17°.7S±0°.1×175°.42W±0°.10, h150^{km}, mb4.3/7, Error ellipse: s-maj=22.4km s-min=8.9km az=152.0*

*NEIC **21** 16:48:54.2±1.0, 17°.99S×175°.28W, h178^{km}±14^{km}, mb4.1/5, Error ellipse: s-maj=20.9km s-min=11.9km az=74.0*

ISC 21 16:48:52.6±1.0, 17°.9S±0°.1×175°.3W±0°.1, h150^{km}, n13, σ1^{s}45/13, mb4.2/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.25**	**41**	*e*Pn	**Pn**	**16 50 11.7**	**+2.4**
AFI				*e*Sn	**Sn**	**16 51 06.1**	**-3.1**
NIUE	**Niue**	**5.26**	**104**	*e*Pn	**Pn**	**16 50 10.2**	**+0.8**
NIUE				*e*		16 50 52.5	
URZ	**Urewera**	**21.32**	**197**	LR	LR	17 01 29.5	
	comp=Z,43nm,18.0s,baz=88,slow=35						
CTAO	**Charters Tower**	**36.34**	**260**	*e*P	**P**	**16 55 42.0**	**-0.3**
	6.1nm,1.1s						
WC3	**Warramunga Arr**	**47.48**	**259**	*e*P	**P**	**16 57 11.8**	**-0.9**
	2.7nm,0.8s						
WB2	**Warramunga Arr**	**47.50**	**259**	*e*P	**P**	**16 57 12.1**	**-0.8**
	7.8nm,1.0s						
WRAB	**Tennant Creek**	**47.50**	**259**	*e*P	**P**	**16 57 12.8**	**-0.1**
	5.4nm,1.0s						
WR1	**Warramunga Arr**	**47.51**	**259**	*e*P	**P**	**16 57 12.5**	**-0.5**
WRA	**Warramunga Arr**	**47.51**	**259**	P	**P**	**16 57 12.5**	**-0.5**
	3.1nm,0.4s,baz=92,slow=7.0,SNR=8.4						
AS31	**Alice Springs**	**47.61**	**254**	*e*P	**P**	**16 57 12.8**	**-0.9**
	4.4nm,0.8s						
ASAR	**Alice Springs**	**47.61**	**254**	P	**P**	**16 57 13.2**	**-0.6**
	18nm,0.6s,baz=90,slow=8.3,SNR=32						
BR101	**Keskin Array S**	**146.83**	**317**	*e*PKPbc	**PKPdf**	**17 08 16.5**	**+1.0**
BRTR	**Keskin Array B**	**146.83**	**317**	PKPbc	**PKPdf**	**17 08 16.5**	**+1.0**
	0.5nm,0.7s,baz=50,slow=2.3,SNR=3.4						

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*IDC **21** 16:50:07.9±0.6, 10°.03S×161°.12E, h0^{km}, mb4.3/18, mb1 4.5/20, mb1mx4.4/28, mbtmp4.3/20, ML3.9/2, MS3.5/9, Ms1 3.5/9, ms1mx3.3/19, Error ellipse: s-maj=16.7km s-min=14.1km az=84.0*

*ISCJB **21** 16:50:11.2±0.3, 10°.13S±0°.04×161°.11E±0°.05, h35^{km}, mb4.6/42, MS3.5/10, Error ellipse: s-maj=6.8km s-min=5.5km az=156.3*

*NEIC **21** 16:50:12.6±0.5, 10°.08S×161°.07E, h32^{km}±3^{km}, mb4.8/33, Error ellipse: s-maj=6.4km s-min=5.2km az=118.0*

ISC 21 16:50:12.9±0.4, 10°.10S±0°.06×161°.09E±0°.07, h35^{km}, n86, σ0^{s}90/75, mb4.7/42, MS3.6/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.30**	**300**	Pn	**Pn**	**16 50 33.6**	**-1.0**
	731nm,0.3s,baz=159,slow=11,SNR=180						
HNR				Sn	**Sn**	**16 50 51.7**	**+1.0**
	1μm,0.3s,baz=262,slow=21,SNR=17						
DZM	**Mont Dzumac**	**12.97**	**157**	*e*Pn	**Pn**	**16 53 16.7**	**+1.9**
	12nm,0.6s						
DZM				*e*LR	LR	16 56 19.6	
	comp=Z,329nm,25.0s						
DZM	**Mont Dzumac**	**12.97**	**157**	Pn	**Pn**	**16 53 16.4**	**+1.6**
	0.7nm,0.3s,baz=32,slow=8.8,SNR=11						
DZM				Sn	**Sn**	**16 55 37.1**	**-0.9**
	0.2nm,0.3s,baz=107,slow=14,SNR=2.9						
DZM				LR	LR	16 57 22.4	
	comp=Z,196nm,19.3s,baz=344,slow=33						
DZM	**Mont Dzumac**	**12.97**	**157**	*e*Pn	**Pn**	**16 53 15.7**	**+0.9**
DZM				Sn	**Sn**	**16 55 37.1**	**-0.9**
MARNC	**Mare, Loyalty**	**13.14**	**150**	*e*Pn	**Pn**	**16 53 16.9**	**-0.2**
PATS	**Pohnpei**	**17.05**	**351**	*e*P	**P**	**16 54 10.7**	**+0.5**
	290nm,1.8s						
CTA	**Charters Tower**	**17.41**	**234**	P	**Pn**	**16 54 13.1**	**-0.1**
	0.3nm,0.3s,baz=57,slow=14,SNR=3.7						
CTAO	**Charters Tower**	**17.41**	**234**	*e*Pn	**Pn**	**16 54 11.5**	**-1.7**
	10.0nm,1.0s						
EIDS	**Eidsvold**	**17.92**	**211**	*e*Pn	**P**	**16 54 20.6**	**+0.8**
	11nm,0.9s						
COEN	**Coen**	**17.93**	**256**	*e*Pn	**P**	**16 54 19.8**	**-0.2**
	31nm,1.3s						
FUNA	**Funafuti**	**17.94**	**87**	*e*Pn	**Pn**	**16 54 19.5**	**-0.2**
	118nm,1.0s						
KWAJ	**Kwajalein Atol**	**19.86**	**19**	*e*P	**P**	**16 54 40.8**	**-0.3**
	345nm,1.0s						
WR1	**Warramunga Arr**	**27.59**	**246**	*e*P	**P**	**16 55 59.4**	**+2.3**
WRA	**Warramunga Arr**	**27.59**	**246**	P	**P**	**16 55 59.4**	**+2.3**
	3.9nm,0.5s,baz=80,slow=8.5,SNR=5.0						
STKA	**Stephens Creek**	**28.20**	**217**	P	**P**	**16 56 03.5**	**+1.1**
	2.7nm,0.6s,baz=56,slow=15,SNR=3.5						
STKA	**Stephens Creek**	**28.20**	**217**	*e*P	**P**	**16 56 02.0**	**-0.4**
	11nm,1.9s						
GUMO	**Guam**	**28.51**	**325**	LR	LR	17 06 41.7	
	comp=Z,108nm,21.9s,baz=142,slow=35						
H11S2	**WAKE ISLAND Hy**	**28.94**	**11**	T	T	17 25 34.1	
	baz=197						
H11S3	**WAKE ISLAND Hy**	**28.94**	**11**	T	T	17 25 38.2	
	baz=197,slow=74						
H11S1	**WAKE ISLAND Hy**	**28.96**	**11**	T	T	17 25 39.7	
	baz=197,slow=74						
ASAR	**Alice Springs**	**29.23**	**239**	P	**P**	**16 56 12.6**	**+0.9**
	1.3nm,0.6s,baz=72,slow=9.7,SNR=3.9						
ASAR				LR	LR	17 07 42.1	
	comp=Z,258nm,18.1s,baz=85,slow=36						
H11N1	**WAKE ISLAND Hy**	**30.17**	**11**	T	T	17 27 08.9	
	baz=192,slow=76,SNR=42						
H11N3	**WAKE ISLAND Hy**	**30.18**	**11**	T	T	17 26 52.8	
	baz=192,slow=76,SNR=27						
H11N2	**WAKE ISLAND Hy**	**30.19**	**11**	T	T	17 26 50.5	
	baz=192,slow=76,SNR=51						
URZ	**Urewera**	**31.52**	**155**	P	**P**	**16 56 31.7**	**+0.1**
	6.2nm,0.5s,baz=0.0,slow=6.1,SNR=4.1						
PPT	**Papeete**	**48.37**	**105**	LR	LR	17 15 04.2	
	comp=Z,48nm,21.2s,baz=270,slow=31						
PPT2	**Papeete2**	**48.37**	**105**	*e*LR	LR	17 12 51.5	
	comp=Z,89nm,22.5s						
PPT2	**Papeete2**	**48.37**	**105**	*e*LR	LR	16 58 47.0	
	comp=Z,254nm,26.5s						
MJAR	**Matsushiro Arr**	**51.14**	**336**	P	**P**	**16 59 10.9**	**-1.6**
	1.0nm,0.5s,baz=163,slow=7.7,SNR=6.2						
MJAR				LR	LR	17 19 25.9	
	comp=Z,11nm,20.6s,baz=125,slow=34						
MAJO	**Matsushiro**	**51.14**	**336**	*e*P	**P**	**16 59 10.9**	**-1.6**
KSRS	**Korea Array**	**56.60**	**329**	P	**P**	**16 59 52.1**	**-0.1**
	1.1nm,0.7s,baz=140,slow=6.4,SNR=4.4						
KSRS				LR	LR	17 22 45.8	
	comp=Z,25nm,20.2s,baz=156,slow=35						
KS15	**Wonju Array Si**	**56.61**	**329**	*e*P	**P**	**16 59 51.4**	**-0.9**
	52nm,1.8s						
KSAR	**Wonju Array Be**	**56.61**	**329**	P	**P**	**16 59 52.1**	**-0.2**
TAOE	**Nuku Hiva Isla**	**57.91**	**94**	*e*LR	LR	17 17 20.7	
	comp=Z,89nm,23.0s						
USRK	**Ussuriysk Ar.**	**60.14**	**336**	P	**P**	**17 00 17.3**	**+0.4**
	3.8nm,0.9s,baz=149,slow=4.5,SNR=7.2						
PETK	**Petropavlovsk-**	**63.02**	**358**	P	**P**	**17 00 36.7**	**+0.5**
	3.4nm,0.6s,baz=143,slow=4.7,SNR=14						
PEA1	**Petropavlovsk-**	**63.02**	**358**	*e*P	**P**	**17 00 36.7**	**+0.5**
KLR	**Kul'dur**	**64.45**	**339**	P	**P**	**17 00 46.0**	**+0.3**
	baz=90,slow=20						
VNDA	**Vanda**	**67.41**	**180**	P	**P**	**17 01 04.1**	**-0.2**
	1.0nm,0.6s,baz=349,slow=8.9,SNR=3.7						
VNDA	**Vanda**	**67.41**	**180**	*e*P	**P**	**17 01 03.7**	**-0.7**
CM31	**Chiang Mai Arr**	**67.55**	**295**	*e*P	**P**	**17 01 03.9**	**-2.3**
	28nm,1.8s						
CMAR	**Chiang Mai Arr**	**67.55**	**295**	P	**P**	**17 01 06.6**	**+0.4**
	0.7nm,0.6s,baz=130,slow=5.2,SNR=4.0						
CMAR				LR	LR	17 33 06.7	
	comp=Z,13nm,18.1s,baz=160,slow=38						
SONA0	**Songino Array**	**75.24**	**325**	*e*P	**P**	**17 01 52.8**	**+0.6**
SONM	**Songino Array**	**75.24**	**325**	P	**P**	**17 01 52.8**	**+0.6**
	3.9nm,0.7s,baz=140,slow=5.6,SNR=23						
SONM				LR	LR	17 36 50.1	
	comp=Z,38nm,18.2s,baz=276,slow=37						
YAK	**Yakutsk**	**75.96**	**345**	*e*P	**P**	**17 01 55.3**	**-0.5**
	9.3nm,0.7s						
BILL	**Bilibino**	**78.02**	**2**	*e*P	**P**	**17 02 08.0**	**+0.6**
	11nm,0.8s						
SVW2	**Sparrevohn**	**78.71**	**20**	*e*P	**P**	**17 02 12.4**	**+1.0**
	12nm,0.7s						
QSPA	**South Pole Qui**	**79.90**	**180**	*e*P	**P**	**17 02 17.2**	**-0.8**
	7.5nm,1.1s						
CAST	**Castle Rocks**	**81.51**	**19**	*e*P	**P**	**17 02 26.0**	**-0.5**
	9.3nm,0.6s						
KTH	**Kantishna Hill**	**81.99**	**20**	*e*P	**P**	**17 02 28.7**	**-0.3**
	6.6nm,0.7s						
BPAW	**Bear Paw Mtn.**	**82.34**	**19**	*e*P	**P**	**17 02 30.7**	**-0.1**
	18nm,1.9s						
MCK	**McKinley**	**82.77**	**20**	*e*P	**P**	**17 02 33.2**	**+0.2**
	12nm,0.8s						
MLY	**Manley**	**83.05**	**19**	*e*P	**P**	**17 02 34.7**	**+0.2**
	4.1nm,0.5s						
WRH	**Wood River Hil**	**83.53**	**20**	*e*P	**P**	**17 02 36.2**	**-0.7**
	3.7nm,0.6s						
CCB	**Clear Creek Bu**	**83.74**	**20**	*e*P	**P**	**17 02 37.1**	**-0.9**
	3.3nm,0.6s						
MAW	**Mawson**	**83.86**	**202**	P	**P**	**17 02 38.1**	**-0.5**
	4.0nm,0.7s,baz=90,slow=6.3,SNR=6.9						
MAW	**Mawson**	**83.86**	**202**	*e*P	**P**	**17 02 37.9**	**-0.8**
	1.2nm,0.8s						
COLA	**College**	**83.87**	**20**	*e*P	**P**	**17 02 38.4**	**-0.2**
	8.8nm,0.7s						
HDA	**Harding Lake**	**83.88**	**20**	*e*P	**P**	**17 02 39.1**	**+0.4**
	8.1nm,1.1s						
ILAR	**Eielson Array**	**84.13**	**20**	P	**P**	**17 02 39.5**	**-0.5**
	1.6nm,0.4s,baz=241,slow=5.0,SNR=25						
ILB	**Eielson Array**	**84.13**	**20**	*e*P	**P**	**17 02 39.7**	**-0.3**
	7.2nm,1.4s						
MENT	**Mentasta**	**84.13**	**22**	*e*P	**P**	**17 02 40.9**	**+0.8**
	4.4nm,0.5s						
EGAK	**Eagle**	**86.11**	**21**	*e*P	**P**	**17 02 51.0**	**+1.2**
	4.3nm,0.9s						
EPYK	**Eagle Plains**	**88.52**	**21**	*e*P	**P**	**17 03 02.7**	**+1.2**
	13nm,1.4s						
NV01	**Mina Array Sit**	**88.95**	**51**	*e*P	**P**	**17 03 05.2**	**+0.8**
NVAR	**Mina Array Bea**	**88.95**	**51**	P	**P**	**17 03 05.2**	**+0.8**
	1.8nm,0.7s,baz=238,slow=6.8,SNR=12						
MK31	**Makanchi Array**	**89.72**	**318**	*e*P	**P**	**17 03 07.4**	**-0.1**
	7.7nm,1.8s						
MK32	**Makanchi Array**	**89.72**	**318**	*e*P	**P**	**17 03 07.0**	**-0.5**
MKAR	**Makanchi Array**	**89.72**	**318**	P	**P**	**17 03 07.0**	**-0.5**
	0.8nm,0.5s,baz=92,slow=6.0,SNR=14						
ZALV	**Zalesovo Beam**	**90.13**	**325**	P	**P**	**17 03 09.7**	**+0.5**
	0.4nm,0.3s,baz=116,slow=3.4,SNR=2.7						
ZAA1	**Zalesovo Array**	**90.13**	**325**	*e*P	**P**	**17 03 09.7**	**+0.5**
TPNV	**Topopah Spring**	**90.20**	**53**	*e*P	**P**	**17 03 10.4**	**+0.1**
	3.4nm,0.9s						
F10A	**Beach Ranch, E**	**91.46**	**44**	*e*P	**P**	**17 03 16.4**	**+0.6**
	4.7nm,0.8s						
ELK	**Elko**	**91.76**	**49**	*e*P	**P**	**17 03 17.2**	**-0.4**
	2.3nm,0.9s						
NEW	**Newport**	**92.04**	**41**	*e*P	**P**	**17 03 18.2**	**-0.2**
	2.4nm,0.8s						
KNB	**Kanab**	**92.90**	**53**	*e*pP	pP	17 03 32.7	-0.7
HLID	**Hailey**	**92.92**	**46**	*e*P	**P**	**17 03 22.9**	**+0.2**
	2.8nm,1.1s						
DLMT	**Dillon**	**94.53**	**45**	*e*pP	pP	17 03 40.9	+0.3
YKA	**Yellowknife Ar**	**96.25**	**28**	P	**P**	**17 03 36.9**	**-0.3**
	1.0nm,0.6s,baz=260,slow=4.7,SNR=8.7						
YKB5	**Yellowknife Ar**	**96.25**	**28**	*e*P	**P**	**17 03 36.9**	**-0.3**
PD31	**Pinedale Array**	**96.30**	**48**	*e*P	**P**	**17 03 39.9**	**+1.6**
PDAR	**Pinedale Array**	**96.30**	**48**	P	**P**	**17 03 39.9**	**+1.6**
	0.3nm,0.4s,baz=222,slow=2.4,SNR=2.6						
TXAR	**Lajitas Array**	**99.41**	**62**	LR	LR	17 43 50.2	
	comp=Z,33nm,18.3s,baz=0.0,slow=32						
SCHQ	**Schefferville**	**121.59**	**30**	PKP	**PKiKP**	**17 09 03.5**	**+0.6**
	4.6nm,0.5s,baz=238,slow=18,SNR=3.4						
TORD	**Torodi Ar. Bea**	**159.59**	**281**	PKPab	**PKPab**	**17 10 46.7**	**-0.6**
	0.3nm,0.5s,baz=64,slow=3.4,SNR=3.6						
TOA1	**Torodi Ar. Sit**	**159.59**	**281**	*e*PKPab	**PKPab**	**17 10 46.7**	**-0.6**

PRU 21 17:04:18.4±0.0, 49°.83N×18°.50E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**272**	*e*PG	Pg	17 04 23.1	+0.3
OKC				*e*SG	Sg	17 04 26.3	+0.6
	comp=Z,5.8nm,0.5s						
MORC	**Moravsky Berou**	**0.62**	**265**	*e*PG	Pg	17 04 30.4	+0.1
MORC				*e*SG	Sg	17 04 38.3	-0.1
JAVC	**Velka Javorina**	**1.11**	**209**	*e*PG	Pg	17 04 40.1	+0.4
VRAC	**Vranov**	**1.35**	**248**	*e*PG	Pg	17 04 43.2	-1.0
VRAC				*e*SG	Sg	17 05 01.0	-0.6
DPC	**Dobruska-Polom**	**1.50**	**291**	*e*PG	Pn	17 04 45.8	-0.8
DPC				*e*SG	Sg	17 05 05.8	-0.6
KRUC	**Moravsky**	**1.57**	**242**	*e*PG	Pn	17 04 46.6	-1.0
KRUC				*e*SG	Sn	17 05 07.9	-0.7
OSTC	**Ostas**	**1.64**	**297**	*e*PG	Pn	17 04 48.4	-0.1
OSTC				*e*SG	Sg	17 05 11.0	0.0

MEX 21 17:04:31.8±0.9, 17°.01N×100°.27W, h6^{km}±4^{km}, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.04**	**358**	*e*P	Pg	17 04 32.0	-1.1
CAIG				*e*S	Sg	17 04 33.7	-0.3
MEIG	**Mezcala**	**1.10**	**34**	*i* P	Pg	17 04 49.1	-3.8
MEIG				*i* S	Sg	17 05 03.7	-3.5
ARIG	**Puente Sto Nin**	**1.27**	**356**	*i* P	Pg	17 04 52.2	-3.9
ARIG				*i* S	Sg	17 05 07.9	-4.6
ZIIG	**Zihuatanejo**	**1.29**	**298**	*i* P	Pn	17 04 53.3	-3.1
ZIIG				*i* S	Sg	17 05 09.5	-3.8
PLIG	**Platanillo**	**1.56**	**28**	*e*P	Pn	17 04 57.0	-3.1
PLIG				*i* S	Sn	17 05 16.0	-4.7
TLIG	**Tlapa**	**1.71**	**71**	*i* P	Pn	17 04 59.4	-3.0
TLIG				*i* S	Sn	17 05 19.5	-5.2

MEX 21 17:08:45.5±0.8, 16°.25N×98°.01W, h8^{km}±11^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.41**	**338**	*i* P	Pn	17 09 07.9	-3.7
TLIG				*i* S	Sb	17 09 24.7	-5.7
VHO	**Vista Hermosa**	**1.47**	**56**	*i* P	Pn	17 09 09.1	-3.4
VHO				*i* S	Sn	17 09 26.4	-5.7
HUIG	**Huatulco**	**1.89**	**105**	*e*P	Pn	17 09 13.9	-4.2
HUIG				*i* S	Sn	17 09 38.0	-4.2

MEX 21 17:35:23.2±0.4, 14°.69N×92°.86W, h44^{km}±16^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.61**	**69**	*i* P	Pn	17 35 34.5	-1.1
THIG				*i* S	Sn	17 35 42.3	-2.2
PCIG		**1.07**	**341**	*i* P	Pn	17 35 40.2	-1.5
PCIG				*e*S	Sn	17 35 52.9	-2.5
CCIG	**Comitan**	**1.73**	**24**	*e*P	Pn	17 35 49.5	-1.4
CCIG				*e*S	Sn	17 36 09.3	-2.6
TGIG		**2.09**	**353**	*i* P	Pn	17 35 54.8	-1.0
TGIG				*i* S	Sn	17 36 18.5	-2.2

MAN 21 17:40:17.9, 6°.86N×123°.74E, h29^{km}, mb3.6, ML2.3, MS1.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.62**	**54**	⇑*i*P	Pn	17 40 30.8	0.0
CTBH				*i* S	Sn	17 40 41.0	+1.2
SKMP	**Bagumbayan, Su**	**0.87**	**113**	*e*P	Pn	17 40 33.9	-0.3
SKMP				*e*S	Sn	17 40 46.5	+0.6
PAGZ	**Pagadian**	**1.05**	**340**	*e*P	Pn	17 40 36.4	-0.3
PAGZ				*e*S	Sn	17 40 50.5	+0.2
BUKP	**Musuan**	**1.66**	**52**	*e*P	Pb	17 40 48.5	+0.6
BUKP				*e*S	Sb	17 41 12.9	+4.5

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*IDC **21** 17:43:28.4±2.4, 2°.44S×127°.89E, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.5/27, mbtmp3.8/3, ML3.8/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/25, Error ellipse: s-maj=191.7km s-min=28.6km az=67.0*

*ISCJB **21** 17:43:30.4±0.6, 2°.10S±0°.03×128°.36E±0°.04, h10^{km}, mb3.8/2, MS3.1/4, Error ellipse: s-maj=6.3km s-min=5.0km az=175.8*

*DJA **21** 17:43:32.0±1.0, 2°S±2°×12°8E±°, h17^{km}±9^{km}, M3.9/6, MLv3.9/6*

ISC 21 17:43:30.2±0.9, 2°.16S±0°.04×128°.35E±0°.05, h10^{km}, n14, σ2^{s}65/17, MS3.0/4, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.32**	**154**	P	**Pb**	**17 43 57.4**	**+2.4**
MSAI				S	**Sb**	**17 44 13.5**	**+1.5**
AAI	**Ambon**	**1.53**	**186**	P	**Pn**	**17 43 59.0**	**+1.4**
AAI				S	**Sn**	**17 44 19.2**	**+1.7**
NLAI	**Namlea**	**1.64**	**229**	P	**Pn**	**17 43 58.8**	**-0.3**
NLAI				S	**Sn**	**17 44 22.7**	**+2.3**
LBMI	**Labuha**	**1.73**	**331**	P	**Pn**	**17 44 00.8**	**+0.5**
LBMI				S	**Sn**	**17 44 23.0**	**+0.6**
SANI	**Sanana**	**2.36**	**273**	P	**Pn**	**17 44 09.7**	**+0.7**
TNTI	**Ternate**	**3.07**	**341**	P	**Pn**	**17 44 19.9**	**+1.2**
SWI	**Sorong**	**3.19**	**66**	P	**Pn**	**17 44 21.5**	**+1.2**
SWI				S	**Sn**	**17 44 59.3**	**+0.9**
FAKI	**Fak Fak**	**3.97**	**101**	P	**Pn**	**17 44 31.2**	**0.0**
WRA	**Warramunga Arr**	**18.62**	**162**	P	**P**	**17 47 46.1**	**-1.9**
	0.3nm,0.3s,baz=339,slow=13,SNR=3.2						
WRA				S	Sn	17 51 07.5	-9.2
	0.1nm,0.3s,baz=340,slow=26,SNR=1.6						
ASAR	**Alice Springs**	**22.05**	**166**	P	**P**	**17 48 23.8**	**-1.5**
	6.5nm,0.9s,baz=347,slow=12,SNR=60						
ASAR				S	**S**	**17 52 20.4**	**-8.3**
	2.4nm,0.9s,baz=348,slow=21,SNR=11						
ASAR				LR	LR	17 57 18.7	
	comp=Z,61nm,21.7s,baz=330,slow=38						
KSRS	**Korea Array**	**39.41**	**359**	LR	LR	18 06 42.7	
	comp=Z,23nm,21.5s,baz=175,slow=35						
MJAR	**Matsushiro Arr**	**39.58**	**13**	LR	LR	18 07 14.1	
	comp=Z,20nm,20.2s,baz=250,slow=36						
MKAR	**Makanchi Array**	**63.30**	**326**	P	**P**	**17 53 58.6**	**-0.7**
	0.3nm,0.6s,baz=134,slow=6.2,SNR=2.6						
KVAR	**Kislovodsk Arr**	**88.34**	**314**	LR	LR	18 39 52.8	
	comp=Z,24nm,21.8s,baz=266,slow=38						

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*ISCJB **21** 17:48:51.3±0.5, 30°.61S±0°.06×178°.02W±0°.10, h46^{km}, mb4.7/25, MS3.6/8, Error ellipse: s-maj=12.0km s-min=8.4km az=9.5*

*IDC **21** 17:48:54.0±4.0, 30°.55S×177°.97W, h56^{km}±33^{km}, mb4.3/9, mb1 4.4/9, mb1mx4.1/22, mbtmp4.5/9, MS3.5/9, Ms1 3.5/9, ms1mx3.3/25, Error ellipse: s-maj=24.5km s-min=21.1km az=133.0*

*NEIC **21** 17:48:56.2±2.2, 30°.67S×178°.01W, h78^{km}±3^{km}, mb4.8/21, Error ellipse: s-maj=19.6km s-min=9.6km az=104.0*

ISC 21 17:48:52.3±0.5, 30°.69S±0°.07×177°.8W±0°.1, h46^{km}, n84, σ1^{s}58/73, mb4.8/25, MS3.6/8, 1C-2D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.43**	**357**	*e*Pn	Pn	17 49 20.9	+5.0
OUZ	**Omahuta**	**8.50**	**236**	*e*Pn	**Pn**	**17 50 57.4**	**+4.6**
URZ	**Urewera**	**8.63**	**208**	P	Pn	17 50 49.6	-4.9
	0.6nm,0.3s,baz=27,slow=4.5,SNR=23						
URZ				S	**Sn**	**17 52 25.4**	**-5.0**
	11nm,0.3s,baz=167,slow=21,SNR=14						
URZ	**Urewera**	**8.63**	**208**	*e*Pn	**Pn**	**17 50 55.5**	**+1.0**
BKZ	**Black Stump Fm**	**9.65**	**207**	*e*Sn	**Sn**	**17 52 51.2**	**-4.4**
LTZ	**Lake Taylor**	**14.43**	**211**	*e*Pn	**Pn**	**17 52 14.0**	**+0.3**
OXZ	**Oxford**	**14.97**	**210**	*e*Pn	**Pn**	**17 52 21.2**	**+0.4**
MQZ	**McQueen's Vall**	**15.03**	**208**	*e*Pn	**Pn**	**17 52 22.1**	**+0.6**
RPZ	**Rata Peaks**	**15.71**	**211**	P	**Pn**	**17 52 29.4**	**-1.0**
	0.4nm,0.3s,baz=51,slow=16,SNR=1.5						
RPZ				S	Sn	17 55 05.9	-17
	1.1nm,0.3s,baz=16,slow=18,SNR=1.8						
RPZ				LR	LR	17 58 34.6	
	comp=Z,70nm,20.8s,baz=63,slow=37						
FOZ	**Fox Glacier**	**16.14**	**214**	*e*P	**P**	**17 52 38.2**	**-0.3**
	35nm,1.1s						
DZM	**Mont Dzumac**	**16.48**	**298**	*e*LR	LR	17 55 48.5	
	comp=Z,443nm,25.7s						
DZM	**Mont Dzumac**	**16.48**	**298**	LR	LR	17 57 43.7	
	comp=Z,234nm,19.3s,baz=191,slow=32						
MLZ	**Mavora Lakes**	**18.32**	**213**	*e*P	**P**	**17 53 03.5**	**+0.9**
	20nm,1.1s						
ARMA	**Armidale**	**26.26**	**263**	*e*P	**P**	**17 54 25.7**	**+2.3**
	12nm,1.1s						
TBI	**Tubuai**	**26.26**	**81**	*e*T	T	18 22 03.5	
	55nm,0.3s						
EIDS	**Eidsvold**	**27.89**	**273**	*e*P	**P**	**17 54 38.2**	**+0.2**
	7.7nm,0.9s						
PAE	**Paea**	**28.76**	**70**	*e*T	T	18 25 15.4	
	20nm,0.3s						
PPT2	**Papeete2**	**28.80**	**70**	*e*LR	LR	18 01 52.3	
	comp=Z,136nm,28.2s						
PPT2	**Papeete2**	**28.80**	**70**	*e*T	T	18 25 18.4	
	9.9nm,0.3s						
TAU	**Tasmania Unive**	**30.24**	**236**	*e*P	**P**	**17 54 57.8**	**-0.8**
	11nm,0.9s						
TOO	**Toolangi**	**30.98**	**247**	*e*P	**P**	**17 55 06.3**	**+1.0**
	12nm,1.0s						
VAH	**Vaihoa**	**31.65**	**68**	*e*T	T	18 28 51.3	
	77nm,0.2s						

CTA	Charters Tower	33.99	280	P	P	17 55 31.9	+0.1
	12nm,0.6s,baz=106,slow=10,SNR=29						
CTAO	Charters Tower	33.99	280	eP	P	17 55 32.5	+0.8
	16nm,0.7s						
STKA	Stephens Creek	34.55	257	P	P	17 55 37.3	+0.7
	40nm,0.7s,baz=92,slow=9.7,SNR=50						
STKA				LR	LR	18 08 15.0	
	comp=Z,104nm,19.0s,baz=25,slow=34						
STKA	Stephens Creek	34.55	257	eP	P	17 55 37.6	+1.1
	8.7nm,0.8s						
RKT	Rikitea	38.77	89	eT	T	18 37 37.5	
	2.7nm,0.3s						
BBOO	Buckleboo	39.03	255	eP	P	17 56 14.6	0.0
	24nm,1.1s						
COEN	Coen	39.49	286	eP	P	17 56 19.2	+0.6
	11nm,1.1s						
AS31	Alice Springs	43.24	267	eP	P	17 56 48.5	-0.8
	1.5nm,0.8s						
ASAR	Alice Springs	43.24	267	P	P	17 56 48.1	-1.2
	3.0nm,0.5s,baz=107,slow=7.3,SNR=72						
ASAR				PcP	PcP	17 58 38.3	+0.3
	0.5nm,0.5s,baz=112,slow=4.2,SNR=2.8						
ASAR				ScP	ScP	18 02 24.7	-0.8
	0.4nm,0.8s,baz=102,slow=3.9,SNR=4.4						
ASAR				LR	LR	18 13 48.3	
	comp=Z,76nm,20.1s,baz=102,slow=35						
WB2	Warramunga Arr	44.24	272	eP	P	17 56 56.3	-1.1
	13nm,0.6s						
WRAB	Tennant Creek	44.25	272	eP	P	17 56 55.4	-2.0
	26nm,1.1s						
WR1	Warramunga Arr	44.25	272	eP	P	17 56 56.9	-0.6
WRA	Warramunga Arr	44.25	272	P	P	17 56 56.9	-0.6
	7.6nm,0.3s,baz=105,slow=8.9,SNR=84						
FORT	Forrest	46.11	255	eP	P	17 57 10.3	-1.8
	23nm,0.8s						
VNDA	Vanda	47.82	186	P	P	17 57 26.6	+1.9
	1.3nm,0.9s,baz=53,slow=4.3,SNR=3.7						
VNDA	Vanda	47.82	186	eP	P	17 57 27.5	+2.7
MTN	Manton Dam	50.17	279	eP	P	17 57 42.5	-1.0
	9.7nm,0.8s						
MLOA	Mauna Loa Obse	54.33	26	eP	P	17 58 12.8	-2.0
	55nm,1.1s						
CASY	Casey	54.95	208	eP	P	17 58 18.0	-0.2
	15nm,0.8s						
QSPA	South Pole Qui	59.42	180	eP	P	17 58 52.6	+2.5
	26nm,0.9s						
KAPI	Kappang	63.80	280	LR	LR	18 26 49.7	
	comp=Z,52nm,18.3s,baz=299,slow=36						
DAV	Davao City (W)	65.88	295	LR	LR	18 23 06.9	
	comp=Z,26nm,21.8s,baz=104,slow=31						
MAW	Mawson	72.09	201	P	P	18 00 12.0	+0.7
	2.9nm,0.7s,baz=68,slow=5.3,SNR=3.9						
MAW	Mawson	72.09	201	eP	P	18 00 11.2	-0.2
	0.8nm,0.9s						
LEM	Lembang	73.27	272	LR	LR	18 35 08.4	
	comp=Z,50nm,18.8s,baz=76,slow=38						
SYO	Syowa Base	76.87	193	⇑iP	P	18 00 38.4	-0.6
SYO	Syowa Base	76.87	193	⇓iP	P	18 00 39.6	+0.6
SYO	Syowa Base	76.87	193	⇓eP	P	18 00 43.2	+4.2
SNAA	Sanae	77.86	178	P	P	18 00 45.4	+0.7
SNAA	Sanae	77.86	178	eP	P	18 00 45.8	+1.1
	5.7nm,1.0s						
VNA3	Neumayer Olymp	78.01	176	P	P	18 00 46.2	+0.8
MJAR	Matsushiro Arr	78.56	325	P	P	18 00 48.2	-0.7
	0.7nm,0.6s,baz=168,slow=6.2,SNR=4.3						
MAJO	Matsushiro	78.56	325	eP	P	18 00 48.2	-0.7
VNA1	Neumayer--Stat	78.67	176	P	P	18 00 50.2	+1.2
PLCA	Paso Flores	82.21	133	LR	LR	18 35 58.1	
	comp=Z,27nm,18.0s,baz=218,slow=34						
ASAJ	Asahikawa	82.76	332	LR	LR	18 36 05.7	
	comp=Z,17nm,18.5s,baz=172,slow=34						
PETK	Petropavlovsk-	86.13	346	P	P	18 01 27.8	-0.1
	5.3nm,0.8s,baz=117,slow=6.6,SNR=14						
PEA1	Petropavlovsk-	86.13	346	eP	P	18 01 27.8	-0.1
NV01	Mina Array Sit	88.35	43	eP	P	18 01 40.5	+1.2
NVAR	Mina Array Bea	88.35	43	P	P	18 01 40.5	+1.2
	1.4nm,0.8s,baz=220,slow=8.8,SNR=12						
AMTX	Amarillo	96.87	54	epP	pP	18 02 41.1	+10
DOT	Dot Lake	97.75	14	eP	P	18 02 18.5	-3.4
	8.9nm,0.9s						
MK32	Makanchi Array	118.07	310	ePKPdf	PKPdf	18 07 32.8	-1.1
MKAR	Makanchi Array	118.07	310	PKP	PKPdf	18 07 32.8	-1.1
	0.4nm,0.6s,baz=207,slow=2.0,SNR=6.1						
ARA0	ARCESS Array S	138.90	348	ePKPpre	PKPpre	18 08 07.2	
ARA0				ePKPdf	PKPdf	18 08 12.6	0.0
ARCES	ARCESS Array B	138.90	348	PKhKP	PKPpre	18 08 07.2	
	1.4nm,0.7s,baz=11,slow=2.6,SNR=4.5						
ARCES				PKP	PKPdf	18 08 12.6	0.0
	1.4nm,0.7s,baz=31,slow=2.1,SNR=6.9						
KBZ	Khabaz	145.39	304	PKPbc	PKPbc	18 08 24.6	-0.4
	1.3nm,0.4s,baz=113,slow=1.1,SNR=5.6						
FIA0	FINESS Array S	145.46	340	ePKPdf	PKPbc	18 08 23.8	-0.8
FINES	FINESS Array B	145.46	340	PKPbc	PKPbc	18 08 23.8	-0.8
	11nm,0.6s,baz=53,slow=3.8,SNR=60						
NB2	NORSAR Subarra	149.06	351	PKP	PKPbc	18 08 34.4	-0.3
	comp=Z,1.9nm,0.6s,baz=15,slow=2.7						
NOA	NORSAR Array B	149.06	351	PKPbc	PKPbc	18 08 34.2	-0.5
	comp=Z,2.3nm,0.6s,baz=15,slow=4.2,SNR=14						
AKASG	Malin Array Be	151.62	323	PKPbc	PKPbc	18 08 40.4	-0.7
	comp=Z,5.2nm,0.6s,baz=48,slow=2.8,SNR=14						
AKBB	Malin Array Si	151.62	323	ePKPbc	PKPbc	18 08 40.5	-0.6
BR101	Keskin Array S	152.86	298	ePKPbc	PKPbc	18 08 43.8	-0.7
BR131	Keskin Array S	152.86	298	ePKPbc	PKPbc	18 08 44.3	-0.2
BRTR	Keskin Array B	152.86	298	PKPbc	PKPbc	18 08 43.8	-0.7
	comp=Z,1.6nm,0.5s,baz=132,slow=4.4,SNR=12						
CLL	Collm	157.88	342	ePKPab	PKPab	18 09 19.0	+2.5
BRG	Berggiesshubel	158.00	340	i PKP	PKPab	18 09 20.2	+3.1
	comp=Z,3.6nm,1.0s						
GERES	GERESS Array B	159.86	337	PKPab	PKPab	18 09 25.1	-0.2
	comp=Z,0.2nm,0.4s,baz=57,slow=4.9,SNR=5.0						
TORD	Torodi Ar. Bea	162.54	178	PKP	PKPdf	18 08 50.0	+0.3
	comp=Z,1.0nm,1.0s,baz=158,slow=0.3,SNR=3.3						
TORD				PKPab	PKPab	18 09 38.4	+0.7
	comp=Z,2.4nm,0.7s,baz=186,slow=3.2,SNR=10						
TOA1	Torodi Ar. Sit	162.54	178	ePKPdf	PKPdf	18 08 50.0	+0.3
TOA1				ePKPab	PKPab	18 09 38.4	+0.7
ESDC	Sonseca Array	169.73	28	PKPab	PKPab	18 10 08.2	-0.8
	comp=Z,0.3nm,0.7s,baz=325,slow=3.7,SNR=3.0						

WEL 21 17:59:58.3, 42°S±208°×**17°3E**±16°1, **h74**^{km}±133^{km}, **M3.5**/4, **ML3.8**/4, **MLv3.5**/4, **Error ellipse: s-maj=0.3km s-min=0.2km az=178.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNZ	Nelson	0.54	50	P	Pn	18 00 25.0	+13
BSWZ	Blackbirch Sta	0.79	101	P	Pn	18 00 15.3	+0.7
TUWZ	Tuamarina	0.84	81	P	Pn	18 00 15.4	+0.3
KHZ	Kahutara	1.00	149	P	Pn	18 00 28.0	+11
CMWZ	Cape Campbell	1.05	100	P	Pn	18 00 12.3	-5.4
DUWZ	D'Urville Isla	1.12	47	P	Pn	18 00 26.9	+8.4
TCW	Tory Channel	1.14	72	P	Pn	18 00 23.3	+4.5
CAW	Cannon Point	1.74	75	P	Pn	18 00 25.5	-1.2
OGWZ	Otaki Gorge	1.91	68	P	Pn	18 00 29.4	+0.4
MTW	Mount Morrison	2.05	79	P	Pn	18 00 31.9	+1.2

IDC ***21*** *18:04:39.5±8.7, 37°.16S×177°.86E, h0*^{km}*, mb3.6/2, mb1 3.8/2, mb1mx3.5/16, mbtmp3.6/2, Error ellipse: s-maj=315.9km s-min=52.4km az=37.0*

ISCJB ***21*** *18:04:57.8±0.5, 41°.69S±0°.03×174°.34E±0°.03, h8*^{km}*±4*^{km}*, mb3.4/2, Error ellipse: s-maj=5.2km s-min=3.0km az=137.0*

WEL ***21*** *18:04:57.5, 41°.7S±0°.9×174°.3E±0°.7, h12*^{km}*±2*^{km}*, M3.9/7, ML4.1/6, MLv3.9/7, Error ellipse: s-maj=0.0km s-min=0.0km az=151.2*

ISC 21 18:04:57.6±0.9, **41°.64S**±0°.03×**174°.23E**±0°.02, **h14**^{km}±6^{km}, **n107**, σ**1**^{s}**.52**/110, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.11	187	P	Pg	18 05 01.0	+0.1
CMWZ				S	Sg	18 05 03.8	+0.7
BSWZ	Blackbirch Sta	0.28	254	P	Pb	18 05 04.2	-0.3
BSWZ				S	Sb	18 05 08.8	-0.2
TUWZ	Tuamarina	0.30	314	P	Pb	18 05 04.5	-0.3
TUWZ				S	Sb	18 05 09.3	-0.4
TCW	Tory Channel	0.43	5	P	Pb	18 05 06.6	-0.4
TCW				S	Sg	18 05 12.5	+0.5
BHW	Baring Head	0.53	64	P	Pb	18 05 08.8	0.0
WEL	Wellington	0.54	49	P	Pb	18 05 08.8	-0.1
WEL				S	Sb	18 05 16.7	+0.2
NNZ	Nelson	0.77	303	P	Pb	18 05 12.8	+0.1
PLWZ	Palliser	0.77	85	P	Pn	18 05 13.6	-0.6
PLWZ				S	Sn	18 05 27.1	+1.5
MSWZ	Moikau Station	0.80	74	P	Pn	18 05 13.8	-0.7
CAW	Cannon Point	0.82	50	P	Pb	18 05 13.8	+0.1
DUWZ	D'Urville Isla	0.87	344	P	Pb	18 05 14.7	+0.2
KHZ	Kahutara	0.93	213	P	Pn	18 05 17.2	+0.9
PAWZ	Paruwai Farm	0.93	74	P	Pn	18 05 16.3	-0.1
THZ	Tophouse	1.00	263	P	Pn	18 05 17.8	+0.5
MTW	Mount Morrison	1.07	64	P	Pn	18 05 18.6	+0.3
OGWZ	Otaki Gorge	1.09	41	P	Pg	18 05 18.2	-0.3
TRWZ	Traveller	1.12	78	P	Pg	18 05 19.0	-0.2
HOWZ	Holdsworth Sta	1.22	53	P	Pg	18 05 20.8	-0.2
TMWZ	Te Maipa	1.36	67	P	Pn	18 05 22.2	0.0
MRZ	Mangatainoka R	1.41	47	P	Pb	18 05 23.7	0.0
TIWZ	Tintock	1.52	56	P	Pn	18 05 24.8	+0.4
QRZ	Quartz Range	1.52	302	P	Pg	18 05 26.5	-0.3
GVZ	Greta Valley S	1.60	213	P	Pb	18 05 27.1	+0.2
OHWZ	Ohakea	1.65	30	P	Pg	18 05 28.7	-0.6
CPWZ	Castlepoint	1.66	64	P	Pg	18 05 30.8	+1.4
PRWZ	Pori Road	1.70	51	P	Pn	18 05 27.4	+0.4
POWZ	Post Office Ro	1.71	43	P	Pb	18 05 27.9	-0.9
BFZ	Birch Farm	1.80	58	P	Pn	18 05 27.8	-0.4
LTZ	Lake Taylor	1.85	231	P	Pb	18 05 30.4	-0.9
AMCZ	Amberley	1.93	217	P	Pg	18 05 33.7	-1.0
WAZ	Wanganui	1.97	17	P	Pg	18 05 34.4	-1.0
DVHZ	Dannevirke	1.99	48	P	Pn	18 05 30.7	-0.2
ANWZ	Angora Road	2.07	56	P	Pn	18 05 31.4	-0.5
LREZ	Lake Rotokare	2.18	3	P	Pb	18 05 37.7	+0.9
NMEZ	Namu Road	2.24	353	P	Pg	18 05 40.1	-0.5
OKCZ	Okains Bay	2.25	202	P	Pn	18 05 34.7	+0.2
PRHZ	Porangahau	2.28	54	P	Pn	18 05 34.5	-0.4
PNHZ	Pukenui	2.28	42	P	Pn	18 05 35.2	+0.3
PREZ	Palmer Road	2.30	359	P	Pb	18 05 40.0	+1.1
WPHZ	Waipukurau	2.30	48	P	Pn	18 05 35.2	0.0
INZ	Inchbonnie	2.34	241	P	Pb	18 05 39.4	-0.2
OXZ	Oxford	2.34	223	P	Pn	18 05 35.9	+0.2
KHEZ	Kahui Hut	2.35	356	P	Pg	18 05 41.5	-1.2
MQZ	McQueen's Vall	2.37	209	P	Pn	18 05 35.2	-0.9
NBEZ	Newall Road No	2.39	353	P	Pb	18 05 40.3	0.0
AKCZ	Akaroa Harbour	2.43	203	P	Pn	18 05 37.9	+0.9
MTVZ	Mangateitei	2.44	23	P	Pb	18 05 42.6	+1.2
DREZ	Durham Road	2.45	359	P	Pb	18 05 41.3	-0.1
PKE	Pukeiti	2.45	356	P	Pb	18 05 40.7	-0.8
PKVZ	Pokaka	2.50	20	P	Pb	18 05 41.0	-1.3
MOVZ	Moawhango	2.51	28	P	Pn	18 05 40.2	+2.0
VRZ	Vera Road	2.54	9	P	Pb	18 05 42.3	-0.7
BHHZ	Black Hill Sta	2.56	34	P	Pn	18 05 40.2	+1.4
MHEZ	Mangahewa	2.56	2	P	Pg	18 05 46.7	0.0
PXZ	Pawanui	2.56	52	P	Pn	18 05 37.8	-1.0
DRZ	Dome Shelter	2.57	24	P	Pb	18 05 44.6	+0.9
WHVZ	Whangaehu Hut	2.57	24	P	Pb	18 05 41.6	-2.0
KRHZ	Kereru	2.57	40	P	Pn	18 05 39.0	+0.1
FWVZ	Far West T-bar	2.59	23	P	Pb	18 05 41.9	-2.0
TUVZ	Tukino	2.61	25	P	Pn	18 05 41.9	+2.4
NGZ	Ngauruhoe	2.67	23	P	Pb	18 05 43.1	-2.3
TWVZ	Taurewa	2.73	20	P	Pb	18 05 46.9	+0.6
WTVZ	West Tongariro	2.73	23	P	Pb	18 05 44.4	-1.8
KAHZ	Kahuranaki	2.73	48	P	Pn	18 05 40.4	-0.7
KRVZ	Karewarewa	2.76	23	P	Pb	18 05 47.3	+0.4
KWHZ	Kaweka Forest	2.77	38	P	Pn	18 05 42.5	+0.8
KATZ	Kakaramea	2.89	23	P	Pb	18 05 49.3	+0.3
MCHZ	McNeill Hill	2.89	41	P	Pn	18 05 43.3	+0.1
RITZ	Rihia Road	2.94	26	P	Pb	18 05 50.7	+0.9
WVZ	Waitaha Valley	2.96	240	P	Pb	18 05 48.5	-1.7
RATZ	Rangitukua	3.01	24	P	Pb	18 05 52.2	+1.2
BKZ	Black Stump Fm	3.02	36	P	Pn	18 05 45.9	+0.8
RPZ	Rata Peaks	3.13	227	P	Pn	18 05 48.0	+1.5
WATZ	Wairara	3.15	22	P	Pb	18 05 54.3	+0.9
HIZ	Hauiti	3.16	9	P	Pb	18 05 51.0	-2.6
ARHZ	Aropaoanui	3.18	43	P	Pn	18 05 48.4	+1.2
MRHZ	Matea Rd	3.26	32	P	Pn	18 05 48.5	0.0
MTHZ	Maungataniwha	3.43	36	P	Pn	18 05 51.3	+0.6
TLZ	Tolley Road	3.46	17	P	Pb	18 05 54.9	-3.7
RAHZ	Arahi	3.49	40	P	Pn	18 05 52.5	+1.0
RTZ	Ruatahuna	3.68	36	P	Pn	18 05 56.4	+2.2
MUGZ	Murupara	3.71	32	P	Pn	18 05 56.7	+2.1
SNGZ	Shannon Statio	3.72	41	P	Pn	18 05 54.9	+0.3
FOZ	Fox Glacier	3.77	238	P	Pb	18 06 02.2	-1.8
RAGZ	Rawiri	3.98	39	P	Pn	18 05 58.8	+0.5
TOZ	Tahuroa Road	4.03	15	P	Pb	18 06 07.3	-1.0
URZ	Urewera	4.04	34	P	Pn	18 05 59.7	+0.7
MWZ	Matawai	4.16	39	P	Pn	18 05 59.3	-1.5
ODZ	Otahua Downs	4.29	216	P	Pn	18 06 02.8	+0.3
TWGZ	Tauwhareparae	4.50	41	P	Pn	18 06 04.5	-1.0
RUGZ	Raukumara Rang	4.53	37	P	Pn	18 06 06.6	+0.7
AWAZ	Awhitu Peninsu	4.58	4	P	Pn	18 06 10.8	+4.3
MKAZ	Moumakai	4.59	9	P	Pn	18 06 09.3	+2.8
JCZ	Jackson Bay	4.68	237	P	Pb	18 06 14.3	-5.3
ETAZ	East Tamaki Re	4.71	7	P	Pn	18 06 12.9	+4.6
PUZ	Puketiti	4.72	42	P	Pn	18 06 07.6	-0.9
HAZ	Te Kaha	4.75	36	P	Pn	18 06 10.0	+1.2
WIAZ	Waiheke Island	4.89	9	P	Pn	18 06 14.9	+4.1
MBAZ	Motutapu North	4.89	6	P	Pb	18 06 19.2	-3.9
WMGZ	Waiomatatini S	5.00	42	P	Pn	18 06 11.4	-0.8
KUZ	Kuaotunu	5.02	14	P	Pb	18 06 20.8	-4.5
WCZ	Waipu Caves	5.69	1	P	Pn	18 06 28.6	+6.8
OUZ	Omahuta	6.43	355	P	Pn	18 06 39.0	+7.1
CTZ	Chatham Island	7.06	110	P	Pn	18 06 42.1	+1.5
ASAR	Alice Springs	37.99	285	P	P	18 12 14.6	-0.7
	0.2nm,0.4s,baz=122,slow=6.8,SNR=11						
WRA	Warramunga Arr	40.05	290	P	P	18 12 29.0	-3.5
	1.2nm,1.0s,baz=124,slow=7.8,SNR=2.0						
TORD	Torodi Ar. Bea	150.88	195	PKPab	PKPab	18 25 02.1	+4.8
	0.2nm,0.6s,baz=150,slow=3.2,SNR=1.5						

AZER ***21*** *18:06:13.0±0.7, 37°.70N×49°.31E, h11*^{km}*±1*^{km}*, ml3.2/22, Error ellipse: s-maj=7.4km s-min=6.0km az=266.0*

TEH ***21*** *18:06:13.7, 37°.65N×48°.95E, h6*^{km}*, ML3.4*

THR ***21*** *18:06:14.7, 37°.63N×48°.96E, h14*^{km}*, ML3.3*

ISCJB ***21*** *18:06:16.2±0.3, 37°.61N±0°.02×48°.94E±0°.05, h10*^{km}*, Error ellipse: s-maj=6.0km s-min=2.5km az=163.3*

ISC 21 18:06:14.7±0.8, **37°.64N**±0°.03×**48°.92E**±0°.03, **h10**^{km}, **n48**, σ**2**^{s}**.12**/68, **Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASTR	Astara	0.93	354	P	Pb	18 06 33.2	+0.3
	SNR=44						
ASTR				S	Sn	18 06 47.7	+0.5
ISRB	Sarab	1.01	281	ePn	Pg	18 06 32.5	-1.7
ISRB				IAMB	IAmb	18 06 35.0	
	comp=Z,11µm,0.1s						
LKRN	Lenkeran, Azer	1.08	354	P	Pn	18 06 36.0	+0.1
	SNR=146						
LKRN				S	Sn	18 06 52.2	+1.4
LRK	Lerik	1.11	336	P	Pg	18 06 36.0	0.0
	SNR=198						
LRK				S	Sn	18 06 51.7	-0.2
GRMI	Germi	1.43	326	AML	AML	18 07 02.5	
	comp=Z,591nm,0.5s						
GRMI				Pg	Pb	18 06 41.4	-0.1
GRMI				Sg	Sg	18 07 00.9	+0.4
GRMI				AML	AML	18 07 03.1	
	comp=Z,354nm,0.5s						
IBST	Bostanabad	1.61	273	ePn	Pn	18 06 42.0	-1.4
IBST				IAMB	IAmb	18 07 05.7	
	comp=Z,8µm,0.3s						
IGZV	Ghazvin	1.62	140	ePn	Pn	18 06 43.1	-0.4
IGZV				IAMB	IAmb	18 07 08.1	
	comp=Z,4µm,0.3s						
IHRS	Heris	1.64	295	ePn	Pb	18 06 45.0	-0.1
GLBA	Clilabad	1.66	346	P	Pb	18 06 45.0	-0.4
	SNR=19						
GLBA				S	Sg	18 07 07.4	-0.6
QALM	Alamut, Qazvin	1.83	131	ePn	Pn	18 06 47.3	+0.9
QALM				IAMB	IAmb	18 07 18.2	
	comp=Z,0.0nm,0.3s						
QABG	Abgarm-Qazvin	1.99	164	ePn	Pn	18 06 50.1	+1.4
QABG				IAMB	IAmb	18 07 16.7	
	comp=Z,0.0nm,0.3s						
ITBZ	Tabriz	2.27	286	ePn	Pn	18 06 53.7	+1.2
ITBZ				IAMB	IAmb	18 07 01.0	
	comp=Z,938nm,0.3s						
ALIB	Äli-Bayra	2.32	2	P	Pn	18 06 53.1	+0.2
ALIB				S	Sb	18 07 25.9	+0.5
THKV	Tehran--Karaj	2.33	137	ePn	Pn	18 06 54.3	+1.1
THKV	Tehran--Karaj	2.33	137	Pn	Pn	18 06 54.2	+1.1
THKV				Sg	Sb	18 07 27.0	+1.4
IAZR	Azarshahr	2.34	272	ePn	Pn	18 06 54.6	+1.2
IAZR				IAMB	IAmb	18 07 33.4	
	comp=Z,4µm,0.6s						
IRAZ	Razeghan	2.37	160	ePn	Pn	18 06 55.4	+1.6
IRAZ				IAMB	IAmb	18 07 29.9	
	comp=Z,2µm,0.4s						
IMHD	Mahdasht	2.40	144	ePn	Pb	18 06 56.7	-1.3
IMHD				IAMB	IAmb	18 07 33.7	
	comp=Z,1µm,0.1s						
HSRG	Sareghieh	2.44	192	ePn	Pn	18 06 55.7	+0.8
ORD	Ordubad	2.64	300	P	Pb	18 07 02.4	+0.3
	SNR=8.0						
ORD				S	Sg	18 07 38.7	-0.9
ISHB	Shabestar	2.69	285	ePn	Pn	18 06 59.8	+1.5
ISHB				IAMB	IAmb	18 07 45.1	
	comp=Z,930nm,0.3s						
IMRD	Marand	2.76	294	ePn	Pn	18 07 01.3	+2.2
IMRD				IAMB	IAmb	18 07 11.3	
	comp=Z,2µm,0.6s						
HAGD	Aghdareh	2.81	176	ePn	Pn	18 07 02.6	+2.7
SNGE	Sanandaj	2.84	207	ePn	Pn	18 07 01.8	+1.5
SNGE	Sanandaj	2.84	207	Pn	Pn	18 07 01.8	+1.5
GBS	Qobustan	2.90	0	S	Sb	18 07 39.4	-2.6
BRDA	Brd	2.96	333	S	Sb	18 07 41.8	-1.8
NAX	Nakhchivan	3.10	301	P	Pb	18 07 09.9	-0.1
	SNR=7.4						
NAX				S	Sg	18 07 52.5	-1.8
PQL	Pirkuli	3.16	355	P	Pn	18 07 05.4	+0.8
PQL				S	Sn	18 07 45.1	+2.6
SBZ	Shahbuz	3.18	305	P	Pb	18 07 09.5	-1.7
	SNR=4.6						
SBZ				S	Sb	18 07 51.9	+1.8
IML	Ismayilli	3.21	350	S	Sb	18 07 50.1	-0.8
ASAO	Ashtian	3.21	164	ePn	Pn	18 07 06.7	+1.3
ASAO	Ashtian	3.21	164	Pn	Pn	18 07 06.7	+1.3
ATGJ	Altiaghaj	3.22	0	S	Sn	18 07 42.9	-1.0
QBL	Gabala	3.41	346	P	Pn	18 07 11.4	+3.4
QBL				S	Sn	18 07 52.1	+3.6
HSAM	Samen	3.43	184	ePn	Pn	18 07 11.3	+2.9
SIZA	Siyzn	3.44	360	P	Pn	18 07 10.2	+1.8
SIZA				S	Sb	18 07 54.6	-3.0
XNQ	Khinaliq	3.58	350	P	Pn	18 07 11.1	+0.6
XNQ				S	Sb	18 07 59.5	-2.4
GANJ	Ganja	3.62	327	P	Pn	18 07 13.1	+2.2
GANJ				S	Sb	18 08 01.2	-1.6
IFIR	Firoozkooh	3.67	122	ePn	Pb	18 07 16.0	-3.7
HYR	Heyderabad	3.81	304	P	Pb	18 07 18.1	-3.8
HYR				S	Sb	18 08 07.0	-1.1
SEKA	Sheki	3.81	340	P	Pn	18 07 14.0	+0.5
SEKA				S	Sn	18 08 02.3	+3.9
IDOB	Doab	3.89	189	ePn	Pn	18 07 17.7	+3.0
GDB	GEDABAY	3.94	322	P	Pn	18 07 19.2	+3.8
GDB				S	Sb	18 08 07.6	-4.6
ISHM	Shahmirzad	3.96	116	ePn	Pn	18 07 18.5	+2.8
ZKTA	Zakatala	4.38	337	P	Pn	18 07 24.5	+3.3
ZKTA				S	Sn	18 08 15.8	+3.6
QZX	Qazax, Azerbai	4.39	322	P	Pn	18 07 25.9	+4.5
QZX				S	Sb	18 08 22.4	-2.5
KRSH	Karshahi	4.49	144	ePn	Pn	18 07 26.2	+3.2
KRSH				IAMB	IAmb	18 08 45.2	
	comp=Z,0.0nm,0.9s						

IDC ***21*** *18:09:39.0±9.0, 41°.30S×174°.62E, h0*^{km}*, mb3.3/2, mb1 3.6/2, mb1mx3.5/17, mbtmp3.3/2, Error ellipse: s-maj=541.5km s-min=53.6km az=33.0*

ISC 21 18:09:39.9±0.9, **41°.54S**±0°.04×**174°.59E**±0°.04, **h10**^{km}, **n76**, σ**1**^{s}**.59**/52, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.35	234	P	Pb	18 09 48.5	+0.3
CAW	Cannon Point	0.57	40	P	Pn	18 09 57.0	+3.0
PAWZ	Paruwai Farm	0.65	76	P	Pn	18 09 59.6	+4.3
MTW	Mount Morrison	0.79	61	P	Pn	18 10 01.9	+4.8
TRWZ	Traveller	0.84	80	P	Pn	18 10 02.7	+4.9
OGWZ	Otaki Gorge	0.85	31	P	Pn	18 10 01.5	+3.5
DUWZ	D'Urville Isla	0.90	326	P	Pn	18 09 59.6	+1.0
HOWZ	Holdsworth Sta	0.95	48	P	Pn	18 10 04.4	+5.0
NNZ	Nelson	0.97	289	P	Pn	18 09 59.0	-0.5
TMWZ	Te Maipa	1.07	66	P	Pn	18 10 06.1	+5.1
MRZ	Mangatainoka R	1.16	41	P	Pn	18 10 07.3	+5.1
KHZ	Kahutara	1.17	222	P	Pg	18 10 03.4	+1.0
TIWZ	Tintock	1.25	52	P	Pg	18 10 09.7	+5.9
THZ	Tophouse	1.28	260	P	Pb	18 10 04.4	+0.2
CPWZ	Castlepoint	1.37	63	P	Pg	18 10 15.8	+9.5
PRWZ	Pori Road	1.44	47	P	Pg	18 10 11.9	+4.3
OHWZ	Ohakea	1.45	23	P	Pg	18 10 12.3	+4.6
POWZ	Post Office Ro	1.46	38	P	Pg	18 10 13.2	+5.3
BFZ	Birch Farm	1.52	56	P	Pg	18 10 12.8	+3.7
QRZ	Quartz Range	1.71	294	P	Pg	18 10 12.1	-0.6
DVHZ	Dannevirke	1.73	44	P	Pg	18 10 15.9	+2.9
WAZ	Wanganui	1.81	10	P	Pg	18 10 18.5	+3.8
GVZ	Greta Valley S	1.83	218	P	Pn	18 10 12.2	+0.7
PNHZ	Pukenui	2.04	37	P	Pg	18 10 20.8	+1.8
WPHZ	Waipukurau	2.04	44	P	Pg	18 10 24.1	+5.0
LREZ	Lake Rotokare	2.09	356	P	Pg	18 10 23.2	+3.3
LTZ	Lake Taylor	2.12	234	P	Pn	18 10 16.3	+0.8
AMCZ	Amberley	2.17	221	P	Pn	18 10 16.5	+0.4
NMEZ	Namu Road	2.20	346	P	Pg	18 10 24.7	+2.7
PREZ	Palmer Road	2.22	351	P	Pg	18 10 24.1	+1.5
MTVZ	Mangateitei	2.26	18	P	Pg	18 10 26.4	+3.2
KHEZ	Kahui Hut	2.29	349	P	Pg	18 10 25.3	+1.5
PXZ	Pawanui	2.29	50	P	Pg	18 10 23.0	-1.0
MOVZ	Moawhango	2.31	23	P	Pg	18 10 26.3	+2.0
PKVZ	Pokaka	2.33	15	P	Pg	18 10 26.9	+2.4
KRHZ	Kereru	2.33	36	P	Pg	18 10 24.6	-0.1
NBEZ	Newall Road No	2.34	346	P	Pg	18 10 25.7	+0.9
BHHZ	Black Hill Sta	2.34	29	P	Pg	18 10 26.4	+1.6
WHVZ	Whangaehu Hut	2.38	19	P	Pg	18 10 27.9	+2.3
DRZ	Dome Shelter	2.39	19	P	Pg	18 10 29.6	+3.9
PKE	Pukeiti	2.39	349	P	Pg	18 10 25.3	-0.4
FWVZ	Far West T-bar	2.40	18	P	Pg	18 10 28.0	+2.0
TUVZ	Tukino	2.42	20	P	Pg	18 10 28.4	+2.2
VRZ	Vera Road	2.42	3	P	Pg	18 10 26.6	+0.3
OKCZ	Okains Bay	2.45	207	P	Pn	18 10 20.0	0.0
KAHZ	Kahuranaki	2.47	46	P	Pg	18 10 26.1	-1.1
NGZ	Ngauruhoe	2.49	18	P	Pg	18 10 29.9	+2.2
CRLZ	Canterbury Las	2.50	215	P	Pn	18 10 21.1	+0.5
KWHZ	Kaweka Forest	2.54	34	P	Pg	18 10 31.8	+3.3
WTVZ	West Tongariro	2.54	18	P	Pg	18 10 30.7	+2.0
TWVZ	Taurewa	2.56	15	P	Pg	18 10 31.3	+2.4
KRVZ	Karewarewa	2.58	19	P	Pg	18 10 31.4	+2.1
MQZ	McQueen's Vall	2.59	213	P	Pn	18 10 21.2	-0.7
OXZ	Oxford	2.59	226	P	Pn	18 10 21.6	-0.3
INZ	Inchbonnie	2.62	242	P	Pn	18 10 23.4	+1.1
AKCZ	Akaroa Harbour	2.63	207	P	Pn	18 10 22.6	0.0
KATZ	Kakaramea	2.70	19	P	Pg	18 10 33.7	+2.0
RITZ	Rihia Road	2.74	21	P	Pg	18 10 34.9	+2.4
BKZ	Black Stump Fm	2.79	32	P	Pg	18 10 35.6	+2.3
RATZ	Rangitukua	2.82	19	P	Pg	18 10 36.2	+2.1
WATZ	Wairara	2.97	18	P	Pg	18 10 38.5	+1.8
HIZ	Hauiti	3.04	4	P	Pg	18 10 37.5	-0.6
MRHZ	Matea Rd	3.05	28	P	Pg	18 10 39.9	+1.5
KUTZ	Kaahu Road	3.19	18	P	Pg	18 10 42.9	+1.8
WVZ	Waitaha Valley	3.24	241	P	Pb	18 10 36.4	-1.1
TLZ	Tolley Road	3.29	13	P	Pg	18 10 42.9	-0.2
RPZ	Rata Peaks	3.39	229	P	Pn	18 10 33.0	+0.1
RTZ	Ruatahuna	3.45	33	P	Pb	18 10 38.2	-3.1
TOZ	Tahuroa Road	3.87	11	P	Pg	18 10 50.8	-3.3
MWZ	Matawai	3.92	36	P	Pb	18 10 46.1	-3.1
MKAZ	Moumakai	4.46	6	P	Pb	18 10 59.1	+0.8
AWAZ	Awhitu Peninsu	4.47	1	P	Pb	18 10 55.6	-2.9
ODZ	Otahua Downs	4.53	218	P	Pn	18 10 48.4	-0.2
ASAR	Alice Springs	38.22	285	P	P	18 17 00.4	+0.3
	0.2nm,0.6s,baz=130,slow=7.0,SNR=4.9						
WRA	Warramunga Arr	40.27	290	P	P	18 17 16.9	-0.3
	0.8nm,0.9s,baz=132,slow=8.0,SNR=1.2						
TORD	Torodi Ar. Bea	151.04	194	PKPbc	PKiKP	18 29 34.6	+0.5
	0.6nm,0.9s,baz=175,slow=5.3,SNR=2.3						

ISCJB ***21*** *18:10:06.6±0.3, 41°.55S±0°.04×174°.33E±0°.04, h29*^{km}*±3*^{km}*, mb4.1/9, Error ellipse: s-maj=7.2km s-min=4.5km az=145.8*

WEL ***21*** *18:10:06.7, 41°.6S±0°.6×174°.4E±0°.8, h12*^{km}*±3*^{km}*, M4.1/7, ML4.5/7, MLv4.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=122.7*

NEIC ***21*** *18:10:06.0±0.0, 41°.56S×174°.36E, h12*^{km}*, mb4.2/8, ML4.1(WEL), After WEL.*

IDC ***21*** *18:10:07.2±1.4, 42°.57S×173°.37E, h0*^{km}*, mb3.9/2,* *mb1 4.2/2, mb1mx3.8/17, mbtmp3.9/2, Error ellipse: s-maj=121.1km s-min=39.9km az=27.0*

ISC 21 18:10:06.8±1.1, **41°.55S**±0°.05×**174°.33E**±0°.03, **h11**^{km}±8^{km}, **n40**, σ1^{s}**30**/49, **mb4.1**/9, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.22	203	S	Sg	18 10 16.1	+1.5
TUWZ	Tuamarina	0.31	292	P	Pb	18 10 14.1	-0.3
TUWZ				S	Sb	18 10 19.6	0.0
TCW	Tory Channel	0.34	353	P	Pb	18 10 14.8	-0.1
TCW				S	Sb	18 10 19.9	-0.4
SNZO	South Karori	0.37	50	*e*Pg	Pb	18 10 14.8	-0.6
BSWZ	Blackbirch Sta	0.38	243	P	Pb	18 10 15.1	-0.5
BSWZ				S	Sb	18 10 21.4	-0.1
WEL	Wellington	0.42	52	P	Pb	18 10 15.8	-0.6
WEL				S	Sb	18 10 22.2	-0.5
BHW	Baring Head	0.43	72	P	Pg	18 10 15.7	+0.4
BHW				S	Sb	18 10 22.0	-0.9
PLWZ	Palliser	0.70	92	P	Pg	18 10 20.4	+0.1
MSWZ	Moikau Station	0.70	80	P	Pb	18 10 20.7	-0.5
KHZ	Kahutara	1.05	214	*e*Pn	Pg	18 10 26.1	-0.9
THZ	Tophouse	1.09	258	*e*Pn	Pn	18 10 28.1	0.0
LTZ	Lake Taylor	1.97	230	*e*Pn	Pn	18 10 39.8	-0.4
CRLZ	Canterbury Las	2.39	211	*e*Pn	Pn	18 10 44.0	-1.9
OXZ	Oxford	2.46	223	*e*Pn	Pn	18 10 47.1	+0.2
MQZ	McQueen's Vall	2.49	209	*e*Pn	Pn	18 10 45.0	-2.3
BKZ	Black Stump Fm	2.90	36	*e*Pn	Pn	18 10 51.6	-1.4
RPZ	Rata Peaks	3.25	227	*e*Pn	Pn	18 10 56.8	-0.9
LBZ	Lake Benmore	4.16	226	*e*Pn	Pn	18 11 11.0	+0.7
ODZ	Otahua Downs	4.41	216	*e*Pn	Pn	18 11 11.9	-1.8
OUZ	Omahuta	6.34	355	*e*Pn	Pn	18 11 37.5	-2.8
WHZ	Wether Hill Ro	6.34	225	*e*Pn	Pn	18 11 39.7	-0.6
DCZ	Deep Cove	6.52	231	*e*Pn	Pn	18 11 42.0	-0.7
CTAO	Charters Tower	31.99	303	*e*P	P	18 16 31.9	-1.3
	2.9nm,1.1s						
AS31	Alice Springs	38.03	285	*e*P	P	18 17 24.1	-1.3
	0.7nm,1.0s						
AS31				*e*PcP	PcP	18 19 41.0	+0.4
ASAR	Alice Springs	38.03	285	P	P	18 17 24.1	-1.3
	0.5nm,0.4s,baz=122,slow=7.0,SNR=17						
ASAR				PcP	PcP	18 19 41.0	+0.4
	0.4nm,0.9s,baz=125,slow=4.0,SNR=3.0						
WB2	Warramunga Arr	40.08	290	*e*P	P	18 17 41.7	-0.7
	3.8nm,0.8s						
WRAB	Tennant Creek	40.09	290	*e*P	P	18 17 40.0	-2.4
	7.4nm,0.7s						
WR1	Warramunga Arr	40.09	290	*e*P	P	18 17 41.4	-1.1
WR1				*e*PcP	PcP	18 19 47.8	+0.7
WRA	Warramunga Arr	40.09	290	P	P	18 17 41.4	-1.1
	1.9nm,0.5s,baz=130,slow=7.2,SNR=20						
WRA				PcP	PcP	18 19 47.8	+0.6
	1.2nm,0.9s,baz=167,slow=4.1,SNR=2.8						
MTN	Manton Dam	47.18	294	*e*P	P	18 18 38.4	-1.3
	6.6nm,0.6s						
QSPA	South Pole Qui	48.58	180	*e*P	P	18 18 51.8	+1.7
	2.8nm,1.1s						
SNAA	Sanae	67.07	181	*e*P	P	18 21 00.2	+0.5
	1.2nm,1.0s						
MK32	Makanchi Array	119.89	308	*e*PKPdf	PKiKP	18 28 58.7	+1.9
MKAR	Makanchi Array	119.89	308	PKP	PKiKP	18 28 58.7	+1.9
	0.1nm,0.4s,baz=126,slow=2.0,SNR=3.0						
BR101	Keskin Array S	150.28	280	*e*PKPbc	PKiKP	18 29 59.7	+0.9
BRTR	Keskin Array B	150.28	280	PKPbc	PKiKP	18 29 59.7	+0.9
	0.6nm,0.8s,baz=111,slow=3.2,SNR=2.8						
TORD	Torodi Ar. Bea	150.99	195	PKPbc	PKPbc	18 29 58.6	-1.6
	0.5nm,0.5s,baz=156,slow=2.6,SNR=7.1						
TOA1	Torodi Ar. Sit	150.99	195	*e*PKPbc	PKPbc	18 29 58.6	-1.6
FIA0	FINESS Array S	152.39	327	*e*PKPbc	PKiKP	18 30 04.8	+2.6
FINES	FINESS Array B	152.39	327	PKPbc	PKiKP	18 30 04.8	+2.6
	2.0nm,0.8s,baz=64,slow=3.2,SNR=3.3						

DJA 21 18:14:30.4±1.3, **10°S**±8°×**11°3E**±°, **h29**^{km}±17^{km}, **M3.6**/7, **MLv3.6**/7, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	1.39	23	P	Pn	18 14 53.4	-0.5
GMJI				S	Sn	18 15 10.9	-0.4
JAGI	Jajag, Banyuwa	1.65	49	P	Pn	18 14 57.3	-0.2
JAGI				S	Sn	18 15 18.6	+0.9
PWJI	Pagerwojo	1.87	325	P	Pn	18 14 59.1	-1.3
WOJI	Wonogiri, Jawa	2.59	311	P	Pn	18 15 09.5	-0.9
WOJI				S	Sn	18 15 40.7	-0.2
NGJI	Ngawi	2.60	327	P	Pn	18 15 12.4	+1.9
UGM	Wanagama	2.86	305	P	Pn	18 15 13.8	-0.3
UGM				S	Sn	18 15 48.8	+1.3

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*ISCJB **21** 18:23:50.7±0.5, 1°.48N±0°.04×127°.37E±0°.07, h128^{km}, mb4.1/13, Error ellipse: s-maj=10.2km s-min=5.6km az=175.2*

*DJA **21** 18:23:52.3±0.6, 1°N±3°×12°7E±°, h85^{km}±7^{km}, M4.4/8, mb4.5/6, mB4.8/3, MLv4.4/8, Mw(mB)4.0/3*

*IDC **21** 18:23:52.5±2.5, 1°.41N×127°.44E, h128^{km}±24^{km}, mb3.7/13, mb1 3.8/14, mb1mx3.6/43, mbtmp4.1/14, Error ellipse: s-maj=24.8km s-min=10.9km az=85.0*

ISC 21 18:23:52.1±0.6, **1°.44N**±0°.05×**127°.27E**±0°.08, **h128**^{km}, **n25**, σ1^{s}**71**/30, **mb4.0**/13, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.67	172	P	Pn	18 24 10.0	-2.1
TNTI				S	Sn	18 24 22.5	-4.6
LBMI	Labuha	2.07	174	P	Pn	18 24 26.5	-0.4
LBMI				S	Sn	18 24 53.7	+0.1
SGSI	Sangihe	2.83	322	P	Pn	18 24 36.0	-0.5
SGSI				S	Sn	18 25 08.8	-1.9
SANI	Sanana	3.69	200	P	Pn	18 24 46.9	-0.9
NLAI	Namlea	4.65	182	P	Pn	18 25 00.1	-0.4
MSAI	Masohi	5.03	161	P	Pn	18 24 58.6	-7.0
LUWI	Luwuk	5.13	241	P	Pn	18 25 07.7	+0.8
GSPH	General Santos	5.17	333	*e*P	Sn	18 26 02.8	-3.5
TTSI	Tana Toraja	8.68	239	P	Pn	18 25 55.1	+0.3
BNSI	Bone	9.21	231	P	Pn	18 26 03.9	+1.9
	14nm,0.7s						
SPSI	Sidrap Palu	9.22	234	P	Pn	18 26 04.2	+2.1
KAPI	Kappang	9.88	229	P	Pn	18 26 13.6	+2.7
	2.2nm,0.3s,baz=68,slow=8.8,SNR=10						
KAPI				S	Sn	18 27 57.0	-3.0
	4.9nm,0.3s,baz=132,slow=20,SNR=12						
WRA	Warramunga Arr	22.35	162	P	P	18 28 38.7	-1.1
	2.8nm,0.2s,baz=340,slow=12,SNR=62						
ASAR	Alice Springs	25.77	166	P	P	18 29 10.9	-0.3
	0.7nm,0.3s,baz=348,slow=13,SNR=55						
ASAR				PcP	PcP	18 32 37.5	-0.4
	0.3nm,0.7s,baz=352,slow=1.9,SNR=3.1						
ASAR				ScP	ScP	18 36 05.9	+0.2
	0.5nm,0.8s,baz=342,slow=2.5,SNR=5.0						
NWAO	Narrogin (SRO)	35.47	195	P	P	18 30 37.0	+0.7
	16nm,1.1s,baz=108,slow=10,SNR=3.1						
STKA	Stephens Creek	35.81	159	P	P	18 30 39.3	+0.1
	1.8nm,0.6s,baz=332,slow=8.9,SNR=9.1						
KSRS	Korea Array	35.84	1	P	P	18 30 40.4	+0.9
	1.0nm,0.5s,baz=176,slow=9.5,SNR=9.8						
MJAR	Matsushiro Arr	36.37	15	P	P	18 30 42.9	-1.1
	0.7nm,0.4s,baz=192,slow=9.6,SNR=8.8						
USRK	Ussuriysk Ar.	42.78	5	P	P	18 31 37.6	+0.6
	1.7nm,0.8s,baz=206,slow=9.6,SNR=3.6						
ASAJ	Asahikawa	44.62	16	P	P	18 31 52.6	+0.9
	2.2nm,0.4s,baz=236,slow=11,SNR=11						
SONM	Songino Array	49.63	342	P	P	18 32 31.6	+1.0
	0.7nm,0.6s,baz=160,slow=9.1,SNR=4.6						
PETK	Petropavlovsk-	57.34	21	P	P	18 33 27.3	+0.6
	0.6nm,0.4s,baz=188,slow=4.5,SNR=4.0						
MKAR	Makanchi Array	59.74	326	P	P	18 33 44.9	+1.4
	3.1nm,0.6s,baz=120,slow=8.7,SNR=27						
ZALV	Zalesovo Beam	62.87	333	P	P	18 34 03.9	-0.4
	0.7nm,0.4s,baz=134,slow=7.0,SNR=4.3						
GEYT	Alibeck	72.75	309	P	P	18 35 08.0	+1.3
	1.7nm,0.6s,baz=134,slow=4.2,SNR=3.8						

IDC 21 18:31:41.3±3.7, **14°.86S**×**166°.70E**, **h58**^{km}±31^{km}, **mb3.5**/3, **mb1 3.7**/4, **mb1mx3.3**/34, **mbtmp3.7**/4, **ML3.4**/1, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.4**/15, **Error ellipse: s-maj=48.6km s-min=27.9km az=109.0**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.17	182	P	Pn	18 33 23.5	-0.1
	0.7nm,0.3s,baz=0.0,slow=20,SNR=11						
DZM				S	Sn	18 34 44.0	+0.2
	0.3nm,0.3s,baz=229,slow=22,SNR=1.7						
DZM				LR	LR	18 35 56.3	
	comp=Z,68nm,18.2s,baz=112,slow=36						
ASAR	Alice Springs	32.11	249	P	P	18 38 03.6	+0.3
	0.3nm,0.7s,baz=75,slow=9.6,SNR=5.4						
ASAR				ScP	ScP	18 44 29.6	-0.9
	0.3nm,0.6s,baz=104,slow=3.7,SNR=4.3						
ILAR	Eielson Array	86.83	18	P	P	18 44 18.1	-0.9
	0.4nm,0.7s,baz=234,slow=6.1,SNR=3.6						
YKA	Yellowknife Ar	97.92	27	P	Pdif	18 45 10.8	+0.3
	0.4nm,0.6s,baz=268,slow=4.3,SNR=2.8						
ARCES	ARCESS Array B	120.24	345	PKP	PKiKP	18 50 25.5	+0.2
	1.0nm,0.8s,baz=66,slow=4.1,SNR=3.8						

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*IDC **21** 18:32:23.1±1.3, 41°.50S×174°.40E, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.7/25, mbtmp3.6/4, ML3.2/2, MS2.6/1, Ms1 2.6/1, ms1mx2.4/14, Error ellipse: s-maj=39.9km s-min=13.7km az=132.0*

*ISCJB **21** 18:32:26.6±0.3, 41°.74S±0°.03×174°.39E±0°.03, h24^{km}±3^{km}, mb4.0/5, Error ellipse: s-maj=5.3km s-min=2.6km az=136.5*

*WEL **21** 18:32:26.8, 41°.6S±0°.7×174°.3E±0°.7, h16^{km}±2^{km}, M3.9/12, ML4.1/6, MLv3.9/12, Error ellipse: s-maj=0.0km s-min=0.0km az=141.6*

*NEIC **21** 18:32:26.0±0.0, 41°.58S×174°.31E, h16^{km}, mb4.2/3, ML3.9(WEL), After WEL.*

ISC 21 18:32:26.2±0.7, **41°.66S**±0°.03×**174°.33E**±0°.03, **h20**^{km}±1^{km}, **n140**, σ1^{s}**56**/148, **mb4.1**/5, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.13	223	P	Pb	18 32 31.8	+0.3
CMWZ				S	Sb	18 32 35.5	+0.4
BSWZ	Blackbirch Sta	0.35	260	P	Pb	18 32 34.3	+0.7
BSWZ				S	Sb	18 32 40.0	+1.4
TUWZ	Tuamarina	0.37	308	P	Pb	18 32 34.0	0.0
TUWZ				S	Sb	18 32 39.0	-0.2
SNZO	South Karori	0.45	39	*e*Pg	Pb	18 32 35.7	+0.4
TCW	Tory Channel	0.45	355	P	Pb	18 32 35.0	-0.3
TCW				S	Sb	18 32 40.6	-0.8
BHW	Baring Head	0.47	59	P	Pb	18 32 36.5	+0.7
BHW				S	Sb	18 32 43.2	+0.8
WEL	Wellington	0.50	42	P	Pb	18 32 36.6	+0.5
WEL				S	Sb	18 32 43.5	+0.5
PLWZ	Palliser	0.70	83	P	Pn	18 32 41.3	+0.3
PLWZ				S	Sn	18 32 53.1	+1.9
MSWZ	Moikau Station	0.73	71	P	Pn	18 32 41.4	+0.1
CAW	Cannon Point	0.78	46	P	Pn	18 32 41.6	-0.4
NNZ	Nelson	0.84	301	P	Pb	18 32 42.3	+0.2
PAWZ	Paruwai Farm	0.87	72	P	Pn	18 32 43.9	+0.7
DUWZ	D'Urville Isla	0.91	340	P	Pn	18 32 43.2	-0.6
KHZ	Kahutara	0.96	218	*e*Pn	Pn	18 32 46.0	+1.5
KHZ	Kahutara	0.96	218	P	Pn	18 32 46.1	+1.5
MTW	Mount Morrison	1.01	61	P	Pn	18 32 46.0	+0.8
OGWZ	Otaki Gorge	1.05	37	P	Pn	18 32 46.0	+0.2
TRWZ	Traveller	1.05	76	P	Pn	18 32 46.5	+0.8
THZ	Tophouse	1.07	264	*e*Pn	Pn	18 32 46.8	+0.7
THZ	Tophouse	1.07	264	P	Pn	18 32 46.9	+0.8
HOWZ	Holdsworth Sta	1.17	50	P	Pb	18 32 48.2	+0.5
TMWZ	Te Maipa	1.30	65	P	Pn	18 32 49.7	+0.5
MRZ	Mangatainoka R	1.37	44	P	Pb	18 32 51.1	0.0
TIWZ	Tintock	1.47	54	P	Pn	18 32 52.2	+0.7
QRZ	Quartz Range	1.59	301	P	Pb	18 32 55.1	+0.2
CPWZ	Castlepoint	1.59	63	P	Pb	18 32 57.8	+2.9
GVZ	Greta Valley S	1.62	216	P	Pn	18 32 54.9	+1.2
OHWZ	Ohakea	1.63	28	P	Pb	18 32 56.9	+1.4
PRWZ	Pori Road	1.66	49	P	Pn	18 32 54.9	+0.8
POWZ	Post Office Ro	1.67	41	P	Pb	18 32 55.4	-0.8
BFZ	Birch Farm	1.74	57	*e*Pn	Pn	18 32 55.0	-0.3
BFZ	Birch Farm	1.74	57	P	Pn	18 32 55.5	+0.3
LTZ	Lake Taylor	1.90	233	*e*Pn	Pn	18 32 58.7	+1.2
LTZ	Lake Taylor	1.90	233	P	Pn	18 32 58.9	+1.5
DVHZ	Dannevirke	1.94	46	P	Pn	18 32 58.3	+0.3
WAZ	Wanganui	1.96	15	P	Pb	18 33 02.3	+1.0
AMCZ	Amberley	1.96	219	P	Pn	18 32 59.2	+0.9
ANWZ	Angora Road	2.01	54	P	Pn	18 32 59.2	+0.2
LREZ	Lake Rotokare	2.19	1	P	Pb	18 33 05.6	+0.5
PRHZ	Porangahau	2.23	52	P	Pn	18 33 02.3	+0.3
PNHZ	Pukenui	2.25	40	P	Pn	18 33 02.9	+0.7
WPHZ	Waipukurau	2.26	46	P	Pn	18 33 02.9	+0.6
NMEZ	Namu Road	2.27	351	P	Pb	18 33 07.6	+1.3
OKCZ	Okains Bay	2.27	204	P	Pn	18 33 02.8	+0.3
CRLZ	Canterbury Las	2.29	213	*e*Pn	Pn	18 33 03.2	+0.4
CRLZ	Canterbury Las	2.29	213	P	Pn	18 33 03.7	+0.9
PREZ	Palmer Road	2.31	357	P	Pb	18 33 07.6	+0.4
KHEZ	Kahui Hut	2.37	354	P	Pb	18 33 08.3	+0.1
OXZ	Oxford	2.38	225	*e*Pn	Pn	18 33 04.3	+0.3
OXZ	Oxford	2.38	225	P	Pn	18 33 04.3	+0.3
MQZ	McQueen's Vall	2.39	211	*e*Pn	Pn	18 33 03.8	-0.4
MQZ	McQueen's Vall	2.39	211	P	Pn	18 33 03.8	-0.4
INZ	Inchbonnie	2.40	243	P	Pn	18 33 05.9	+1.7
NBEZ	Newall Road No	2.41	351	P	Pb	18 33 08.7	-0.2
MTVZ	Mangateitei	2.43	21	P	Pb	18 33 08.2	-1.0
AKCZ	Akaroa Harbour	2.45	205	P	Pn	18 33 05.2	+0.2
DREZ	Durham Road	2.47	358	P	Pb	18 33 09.6	-0.2
PKE	Pukeiti	2.47	354	P	Pb	18 33 09.4	-0.5
PKVZ	Pokaka	2.49	18	P	Pb	18 33 09.1	-1.1
MOVZ	Moawhango	2.49	26	P	Pn	18 33 07.4	+1.7
PXZ	Pawanui	2.52	51	P	Pn	18 33 05.3	-0.5
BHHZ	Black Hill Sta	2.54	32	P	Pn	18 33 07.8	+1.6
KRHZ	Kereru	2.54	38	P	Pn	18 33 06.6	+0.3
VRZ	Vera Road	2.55	8	P	Pb	18 33 09.7	-1.5
DRZ	Dome Shelter	2.56	22	P	Pb	18 33 13.1	+1.6
WHVZ	Whangaehu Hut	2.56	22	P	Pb	18 33 09.4	-2.1
FWVZ	Far West T-bar	2.57	22	P	Pb	18 33 09.6	-2.2
MHEZ	Mangahewa	2.58	360	P	Pb	18 33 13.5	+1.8
TUVZ	Tukino	2.59	23	P	Pb	18 33 09.7	-2.3
NGZ	Ngauruhoe	2.66	22	P	Pb	18 33 11.1	-2.1
KAHZ	Kahuranaki	2.68	47	P	Pn	18 33 08.1	-0.2
WTVZ	West Tongariro	2.71	21	P	Pb	18 33 12.1	-2.0
TWVZ	Taurewa	2.72	19	P	Pb	18 33 13.0	-1.1
KWHZ	Kaweka Forest	2.74	36	P	Pn	18 33 10.2	+1.2
KRVZ	Karewarewa	2.75	22	P	Pb	18 33 12.7	-2.0
MCHZ	McNeill Hill	2.85	40	P	Pn	18 33 11.4	+0.9
KATZ	Kakaramea	2.87	22	P	Pb	18 33 15.2	-1.7
RITZ	Rihia Road	2.92	24	P	Pb	18 33 18.5	+1.0
BKZ	Black Stump Fm	2.98	34	*e*Pn	Pn	18 33 12.2	-0.2
BKZ	Black Stump Fm	2.98	34	P	Pn	18 33 12.7	+0.3
RATZ	Rangitukua	3.00	22	P	Pb	18 33 20.3	+1.4
WVZ	Waitaha Valley	3.02	241	P	Pn	18 33 16.0	+3.3
WATZ	Wairara	3.13	21	P	Pb	18 33 22.2	+1.0
ARHZ	Aropaoanui	3.14	41	P	Pn	18 33 15.7	+1.2
HIZ	Hauiti	3.17	7	*e*Pn	Pn	18 33 17.6	+2.8
HIZ	Hauiti	3.17	7	P	Pb	18 33 18.3	-3.4
RPZ	Rata Peaks	3.17	228	Pn	Pn	18 33 15.2	+0.2
	2.8nm,0.3s,baz=48,slow=19,SNR=9.2						
RPZ				Pg	Pb	18 33 24.2	+2.3
	26nm,0.3s,baz=18,slow=15,SNR=58						
RPZ				Sn	Sn	18 33 51.4	-0.8
	8.9nm,0.3s,baz=328,slow=21,SNR=9.9						
RPZ				Lg	Lg	18 34 09.0	
	4.7nm,0.3s,baz=45,slow=14,SNR=3.4						
RPZ				LR	LR	18 34 24.7	
	comp=Z,80nm,18.0s,baz=17,slow=37						
RPZ	Rata Peaks	3.17	228	*e*Pn	Pn	18 33 14.8	-0.1
RPZ	Rata Peaks	3.17	228	P	Pn	18 33 15.8	+0.8
MTHZ	Maungataniwha	3.40	35	P	Pn	18 33 19.6	+1.6
TLZ	Tolley Road	3.45	16	P	Pn	18 33 21.8	+3.0
RAHZ	Arahi	3.45	39	P	Pn	18 33 20.4	+1.6
RTZ	Ruatahuna	3.65	35	P	Pn	18 33 23.1	+1.5
KNZ	Kokohu	3.67	45	P	Pn	18 33 22.6	+0.9
SNGZ	Shannon Statio	3.68	40	P	Pn	18 33 22.3	+0.4
MUGZ	Murupara	3.69	31	P	Pn	18 33 23.3	+1.3
FOZ	Fox Glacier	3.82	239	P	Pb	18 33 30.2	-2.8
RAGZ	Rawiri	3.94	38	P	Pn	18 33 25.7	+0.1
URZ	Urewera	4.01	33	Pn	Pn	18 33 24.5	-1.9
	1.8nm,0.3s,baz=217,slow=5.1,SNR=9.7						
URZ				Sn	Sn	18 34 11.9	-0.8
	4.2nm,0.3s,baz=358,slow=5.3,SNR=3.6						
URZ				Lg	Lg	18 34 25.3	
	1.6nm,0.3s,baz=100,slow=23,SNR=2.9						
URZ	Urewera	4.01	33	*e*Pn	Pn	18 33 26.3	-0.1
URZ	Urewera	4.01	33	P	Pn	18 33 27.8	+1.4
TOZ	Tahuroa Road	4.02	13	P	Pb	18 33 31.9	-4.4
LBZ	Lake Benmore	4.08	227	*e*Pn	Pn	18 33 29.4	+2.0
LBZ	Lake Benmore	4.08	227	P	Pn	18 33 30.0	+2.5
TGRZ	Tauranga	4.20	21	P	Pn	18 33 29.9	+1.0
ODZ	Otahua Downs	4.32	217	*e*Pn	Pn	18 33 30.9	+0.2
ODZ	Otahua Downs	4.32	217	P	Pn	18 33 31.1	+0.4
TWGZ	Tauwhareparae	4.47	40	P	Pn	18 33 33.0	+0.2
RUGZ	Raukumara Rang	4.50	36	P	Pn	18 33 33.6	+0.4
MKAZ	Moumakai	4.59	8	P	Pn	18 33 37.0	+2.6
AWAZ	Awhitu Peninsu	4.59	3	P	Pn	18 33 38.1	+3.7
PUZ	Puketiti	4.68	41	P	Pn	18 33 35.5	-0.3
HAZ	Te Kaha	4.72	35	P	Pn	18 33 36.7	+0.5
ETAZ	East Tamaki Re	4.72	6	P	Pn	18 33 41.2	+5.0
WTAZ	Waiatarua	4.72	2	P	Pb	18 33 42.3	-6.0
JCZ	Jackson Bay	4.74	237	P	Pb	18 33 44.8	-3.7
WIAZ	Waiheke Island	4.90	8	P	Pn	18 33 42.7	+4.1
MBAZ	Motutapu North	4.90	5	P	Pn	18 33 42.8	+4.1
HHSZ	Highcliff Hill	5.02	211	P	Pn	18 33 41.2	+1.0
KUZ	Kuaotunu	5.02	13	P	Pb	18 33 47.3	-6.0
MXZ	Matakaoa Point	5.11	38	*e*Pn	Pn	18 33 39.2	-2.3
MXZ	Matakaoa Point	5.11	38	P	Pn	18 33 44.7	+3.2
TUZ	Tuapeka	5.48	217	P	Pn	18 33 48.3	+1.7
WCZ	Waipu Caves	5.71	0	P	Pn	18 33 54.0	+4.2
SYZ	Scrubby Hill	6.15	216	P	Pn	18 33 57.1	+1.4
OUZ	Omahuta	6.45	355	*e*Pn	Pn	18 34 04.1	+4.1
OUZ	Omahuta	6.45	355	P	Pn	18 34 04.1	+4.1
CTZ	Chatham Island	6.99	110	P	Pn	18 34 09.0	+1.7
EIDS	Eidsvold	25.17	303	*e*P	P	18 37 49.9	-0.3
	5.0nm,1.1s						
ASAR	Alice Springs	38.06	285	P	P	18 39 43.9	+0.5
	0.3nm,0.4s,baz=125,slow=6.8,SNR=24						
ASAR				PcP	PcP	18 41 57.1	-1.4
	0.3nm,0.9s,baz=128,slow=3.0,SNR=2.7						
WB2	Warramunga Arr	40.12	290	*e*P	P	18 40 01.2	+0.6
	3.8nm,0.9s						
WRAB	Tennant Creek	40.12	290	*e*P	P	18 39 59.5	-1.1
	5.5nm,0.4s						
WR1	Warramunga Arr	40.13	290	*e*P	P	18 40 00.5	-0.2
WRA	Warramunga Arr	40.13	290	P	P	18 40 00.5	-0.2
	0.8nm,0.3s,baz=135,slow=7.7,SNR=17						
ARA0	ARCESS Array S	147.71	340	*e*PKPbc	PKPbc	18 52 07.0	-1.1
ARCES	ARCESS Array B	147.71	340	PKPbc	PKPbc	18 52 07.0	-1.1
	2.4nm,1.0s,baz=11,slow=2.5,SNR=4.0						
TORD	Torodi Ar. Bea	150.88	195	PKPbc	PKiKP	18 52 18.8	+0.6
	0.2nm,0.3s,baz=161,slow=2.5,SNR=9.2						
TOA1	Torodi Ar. Sit	150.89	195	*e*PKPbc	PKiKP	18 52 18.8	+0.5
FIA0	FINESS Array S	152.49	327	*e*PKPbc	PKPbc	18 52 19.2	-0.7
FINES	FINESS Array B	152.49	327	PKPbc	PKPbc	18 52 19.2	-0.7
	4.4nm,1.1s,baz=83,slow=1.4,SNR=3.5						

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*IDC **21** 18:34:00.2±2.9, 14°.21N×93°.32W, h0^{km}, mb3.7/2, mb1 3.9/5, mb1mx3.5/44, mbtmp3.5/5, ML3.5/3, MS2.9/3, Ms1 3.0/3, ms1mx2.5/24, Error ellipse: s-maj=59.0km s-min=25.4km az=18.0*

*MEX **21** 18:34:03.2±0.4, 14°.24N×93°.17W, h84^{km}±19^{km}, MD3.8*

ISC 21 18:34:04.5±3.2, **14°.3N**±0°.1×**93°.17W**±0°.08, **h29**^{km}±22^{km}, **n13**, σ1^{s}**26**/16, **MS2.8**/3, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.05	56	*e*P	Pn	18 34 22.4	-0.8
THIG				*e*S	Sb	18 34 37.1	-0.4
PCIG		1.37	358	*e*P	Pn	18 34 26.8	-1.0
PCIG				*e*S	Sn	18 34 45.4	+0.3
CCIG	Comitan	2.19	27	*e*P	Pn	18 34 40.9	+1.8
CCIG				*i* S	Sn	18 35 04.0	-1.3
TGIG		2.44	1	*e*P	Pn	18 34 43.8	+1.2
TGIG				*e*S	Sn	18 35 10.9	-0.6
APG	El Apazote	2.70	75	Pn	Pn	18 34 47.2	+1.0
	9.8nm,0.3s,baz=227,slow=17,SNR=6.8						
APG				Sn	Sb	18 35 25.5	+0.3
	8.0nm,0.3s,baz=306,slow=19,SNR=7.3						
CMIG	Matias Romero	3.21	329	Pn	Pn	18 34 52.1	-0.9
	6.3nm,0.3s,baz=51,slow=22,SNR=7.9						
CMIG				Sn	Sn	18 35 33.2	+2.8
	16nm,0.3s,baz=121,slow=3.9,SNR=7.8						
TXAR	Lajitas Array	17.82	329	P	P	18 38 10.4	-0.7
	0.0nm,0.3s,baz=156,slow=13,SNR=2.3						
TKL	Tuckaleechee C	22.86	20	LR	LR	18 48 00.9	
	comp=Z,23nm,18.8s,baz=168,slow=36						
NVAR	Mina Array Bea	32.72	322	P	P	18 40 35.0	+0.1
	0.5nm,0.7s,baz=131,slow=10,SNR=5.0						
YKA	Yellowknife Ar	50.46	347	P	P	18 42 59.3	-0.1
	1.3nm,0.7s,baz=151,slow=7.4,SNR=7.6						
BDFB	Brasilia	53.65	122	LR	LR	19 07 54.3	
	comp=Z,25nm,18.5s,baz=221,slow=38						
NOA	NORSAR Array B	84.40	28	LR	LR	19 22 50.1	
	comp=Z,4.5nm,20.5s,baz=235,slow=35						
CMAR	Chiang Mai Arr	145.31	340	PKPbc	PKPdf	18 53 40.2	-0.3
	0.5nm,0.6s,baz=333,slow=3.3,SNR=4.1						

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*IDC **21** 18:49:01.5±2.6, 41°.84S×174°.33E, h0^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.6/15, mbtmp3.5/3, ML2.7/1, Error ellipse: s-maj=52.9km s-min=42.3km az=124.0*

*ISCJB **21** 18:49:02.3±0.7, 41°.82S±0°.04×174°.40E±0°.04, h10^{km}±5^{km}, mb3.5/2, Error ellipse: s-maj=7.5km s-min=3.5km az=139.3*

*WEL **21** 18:49:02.5, 42°S±1°×17°4E±°, h18^{km}±2^{km}, M3.5/49, ML3.6/7, MLv3.5/49, Error ellipse: s-maj=0.0km s-min=0.0km az=133.9*

ISC 21 18:49:03.1±1.1, **41°.70S**±0°.03×**174°.28E**±0°.03, **h15**^{km}±8^{km}, **n82**, σ1^{s}**31**/83, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.07	222	P	Pg	18 49 07.0	+0.8
BSWZ	Blackbirch Sta	0.30	266	P	Pb	18 49 09.5	-0.7
TUWZ	Tuamarina	0.36	316	P	Pg	18 49 09.3	-1.2
TCW	Tory Channel	0.48	360	P	Pg	18 49 11.0	-1.7
BHW	Baring Head	0.53	57	P	Pb	18 49 13.4	-0.6
WEL	Wellington	0.55	42	P	Pg	18 49 13.3	-0.6
PLWZ	Palliser	0.74	81	P	Pn	18 49 18.3	-0.8
MSWZ	Moikau Station	0.78	69	P	Pn	18 49 18.4	-1.1
NNZ	Nelson	0.83	305	P	Pg	18 49 17.7	-1.4
CAW	Cannon Point	0.83	46	P	Pg	18 49 18.6	-0.7
KHZ	Kahutara	0.91	217	P	Pn	18 49 22.5	+1.2
PAWZ	Paruwai Farm	0.92	70	P	Pn	18 49 21.3	-0.2
DUWZ	D'Urville Isla	0.93	343	P	Pb	18 49 19.7	-1.3
THZ	Tophouse	1.03	266	P	Pg	18 49 22.6	-0.4
MTW	Mount Morrison	1.06	60	P	Pn	18 49 23.2	-0.3
TRWZ	Traveller	1.10	75	P	Pg	18 49 23.7	-0.5
OGWZ	Otaki Gorge	1.10	38	P	Pb	18 49 22.8	-1.0
HOWZ	Holdsworth Sta	1.23	50	P	Pb	18 49 25.4	-0.5
TMWZ	Te Maipa	1.35	65	P	Pn	18 49 27.0	-0.4
MRZ	Mangatainoka R	1.43	44	P	Pn	18 49 28.2	-0.2
TIWZ	Tintock	1.52	53	P	Pn	18 49 29.4	-0.4
GVZ	Greta Valley S	1.57	216	P	Pb	18 49 31.4	-0.4
QRZ	Quartz Range	1.58	303	P	Pn	18 49 31.0	+0.5
CPWZ	Castlepoint	1.65	62	P	Pg	18 49 37.0	+2.2
OHWZ	Ohakea	1.68	28	P	Pb	18 49 34.0	+0.3
PRWZ	Pori Road	1.71	49	P	Pn	18 49 31.9	-0.4
POWZ	Post Office Ro	1.72	41	P	Pn	18 49 32.4	-0.1
BFZ	Birch Farm	1.80	56	P	Pn	18 49 32.4	-1.1
LTZ	Lake Taylor	1.84	233	P	Pb	18 49 35.5	-1.0
AMCZ	Amberley	1.91	219	P	Pg	18 49 42.6	+2.9
DVHZ	Dannevirke	2.00	46	P	Pn	18 49 35.3	-1.0
WAZ	Wanganui	2.01	16	P	Pb	18 49 39.2	-0.2
ANWZ	Angora Road	2.07	54	P	Pn	18 49 36.3	-0.9
OKCZ	Okains Bay	2.22	203	P	Pn	18 49 39.3	0.0
LREZ	Lake Rotokare	2.23	2	P	Pb	18 49 43.3	+0.2
PRHZ	Porangahau	2.29	52	P	Pn	18 49 39.5	-0.7
NMEZ	Namu Road	2.30	352	P	Pb	18 49 44.7	+0.5
PNHZ	Pukenui	2.30	40	P	Pn	18 49 39.8	-0.7
WPHZ	Waipukurau	2.31	46	P	Pn	18 49 39.9	-0.7
OXZ	Oxford	2.32	225	P	Pn	18 49 41.0	+0.2
MQZ	McQueen's Vall	2.34	210	P	Pn	18 49 40.3	-0.7
INZ	Inchbonnie	2.34	243	P	Pb	18 49 43.2	-1.8
PREZ	Palmer Road	2.35	358	P	Pb	18 49 44.7	-0.5
AKCZ	Akaroa Harbour	2.40	204	P	Pn	18 49 41.9	+0.1
KHEZ	Kahui Hut	2.41	355	P	Pb	18 49 45.5	-0.6
NBEZ	Newall Road No	2.44	353	P	Pb	18 49 45.5	-1.2
MTVZ	Mangateitei	2.48	22	P	Pb	18 49 47.8	+0.5
DREZ	Durham Road	2.50	359	P	Pb	18 49 48.5	+0.8
PKE	Pukeiti	2.51	355	P	Pb	18 49 46.2	-1.6
PKVZ	Pokaka	2.54	19	P	Pb	18 49 48.7	+0.4
MOVZ	Moawhango	2.55	27	P	Pb	18 49 47.6	-0.9
PXZ	Pawanui	2.57	51	P	Pn	18 49 42.4	-1.7
BHHZ	Black Hill Sta	2.59	32	P	Pn	18 49 45.9	+1.4
VRZ	Vera Road	2.59	8	P	Pb	18 49 47.2	-2.0
KRHZ	Kereru	2.59	39	P	Pn	18 49 43.6	-0.9
WHVZ	Whangaehu Hut	2.61	23	P	Pb	18 49 49.4	-0.3
FWVZ	Far West T-bar	2.62	22	P	Pb	18 49 49.5	-0.4
TUVZ	Tukino	2.64	24	P	Pb	18 49 48.1	-2.1
NGZ	Ngauruhoe	2.71	22	P	Pb	18 49 50.1	-1.2
KAHZ	Kahuranaki	2.74	47	P	Pn	18 49 45.0	-1.5

WTVZ	West Tongariro	2.76	22	P	Pb	18 49 52.0	-0.2
TWVZ	Taurewa	2.77	19	P	Pb	18 49 52.7	+0.5
KWHZ	Kaweka Forest	2.79	36	P	Pn	18 49 47.0	-0.3
KRVZ	Karewarewa	2.80	22	P	Pb	18 49 52.6	-0.3
MCHZ	McNeill Hill	2.91	40	P	Pn	18 49 48.2	-0.6
KATZ	Kakaramea	2.92	22	P	Pb	18 49 54.9	-0.1
WVZ	Waitaha Valley	2.96	241	P	Pb	18 49 54.9	-0.7
RPZ	Rata Peaks	3.12	229	Pn	Pn	18 49 51.4	-0.3
	1.0nm,0.3s,baz=47,slow=19,SNR=1.5						
RPZ				Pg	Pg	18 50 00.0	-2.8
	4.6nm,0.3s,baz=325,slow=3.0,SNR=13						
RPZ				Sn	Sn	18 50 28.5	-0.2
	2.9nm,0.3s,baz=117,slow=22,SNR=7.4						
HIZ	Hauiti	3.21	8	P	Pn	18 49 55.5	+2.6
FOZ	Fox Glacier	3.77	239	P	Pb	18 50 06.2	-3.1
RAGZ	Rawiri	4.00	38	P	Pn	18 50 03.2	-0.7
LIRZ	Lichensteins R	4.03	24	P	Pn	18 50 08.4	+4.2
MWZ	Matawai	4.18	38	P	Pn	18 50 03.9	-2.5
ODZ	Otahua Downs	4.27	217	P	Pn	18 50 08.6	+1.1
TWGZ	Tauwhareparae	4.52	40	P	Pn	18 50 10.5	-0.5
RUGZ	Raukumara Rang	4.55	36	P	Pn	18 50 11.1	-0.4
AWAZ	Awhitu Peninsu	4.63	4	P	Pn	18 50 16.3	+3.9
MKAZ	Moumakai	4.63	9	P	Pn	18 50 17.3	+4.7
HAZ	Te Kaha	4.77	36	P	Pn	18 50 14.3	-0.1
ASAR	Alice Springs	38.03	285	P	P	18 56 21.6	+0.7
	0.2nm,0.5s,baz=122,slow=6.9,SNR=5.5						
WRA	Warramunga Arr	40.10	290	P	P	18 56 40.2	+2.0
	3.3nm,1.2s,baz=118,slow=8.3,SNR=1.6						
TORD	Torodi Ar. Bea	150.83	195	PKPbc	PKiKP	19 08 55.6	-0.3
	0.2nm,0.7s,baz=141,slow=3.2,SNR=1.8						

IDC ***21*** *18:58:41.5±9.0, 41°.28S×174°.28E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/14, mbtmp3.4/2, Error ellipse: s-maj=539.8km s-min=53.4km az=33.0*

ISCJB ***21*** *18:58:43.4±0.3, 41°.70S±0°.04×174°.42E±0°.04, h10km, mb3.4/2, Error ellipse: s-maj=6.3km s-min=3.0km az=141.3*

WEL ***21*** *18:58:44.1, 41°.6S±0°.9×17°4E±°, h24km±1km, M3.4/32, ML3.6/30, MLv3.4/32, Error ellipse: s-maj=0.0km s-min=0.0km az=122.3*

ISC 21 18:58:43.4±0.8**, 41°.57S**±0°.03×**174°.33E**±0°.03**, h10km, n68, σ0s.98**/68**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.20	205	P	Pg	18 58 50.1	+2.4
TUWZ	Tuamarina	0.32	295	P	Pb	18 58 51.7	+0.5
TCW	Tory Channel	0.36	354	P	Pb	18 58 52.3	+0.5
BSWZ	Blackbirch Sta	0.37	246	P	Pb	18 58 52.6	+0.5
WEL	Wellington	0.43	50	P	Pb	18 58 53.5	+0.4
BHW	Baring Head	0.44	69	P	Pb	18 58 53.4	+0.3
PLWZ	Palliser	0.69	91	P	Pb	18 58 58.2	+0.6
MSWZ	Moikau Station	0.71	78	P	Pb	18 58 58.4	+0.6
CAW	Cannon Point	0.72	51	P	Pb	18 58 58.4	+0.4
NNZ	Nelson	0.80	296	P	Pb	18 59 00.1	+0.8
DUWZ	D'Urville Isla	0.82	338	P	Pb	18 59 00.8	+1.0
PAWZ	Paruwai Farm	0.84	78	P	Pb	18 59 00.9	+0.7
MTW	Mount Morrison	0.97	66	P	Pb	18 59 02.9	+0.6
OGWZ	Otaki Gorge	0.98	41	P	Pg	18 59 02.9	+0.6
KHZ	Kahutara	1.03	215	P	Pg	18 59 04.0	+0.8
TRWZ	Traveller	1.03	81	P	Pg	18 59 03.5	+0.2
THZ	Tophouse	1.08	259	P	Pg	18 59 05.1	+0.8
HOWZ	Holdsworth Sta	1.12	54	P	Pb	18 59 05.1	+0.3
TMWZ	Te Maipa	1.26	69	P	Pn	18 59 06.6	-0.5
MRZ	Mangatainoka R	1.31	47	P	Pn	18 59 08.0	+0.3
TIWZ	Tintock	1.42	57	P	Pn	18 59 09.1	-0.1
QRZ	Quartz Range	1.55	298	P	Pb	18 59 12.8	+0.7
OHWZ	Ohakea	1.55	29	P	Pg	18 59 13.5	+0.4
CPWZ	Castlepoint	1.56	66	P	Pg	18 59 15.2	+1.9
POWZ	Post Office Ro	1.60	43	P	Pn	18 59 12.1	+0.4
PRWZ	Pori Road	1.60	51	P	Pn	18 59 11.6	-0.1
BFZ	Birch Farm	1.70	59	P	Pn	18 59 12.3	-0.7
GVZ	Greta Valley S	1.70	214	P	Pn	18 59 12.9	-0.2
WAZ	Wanganui	1.88	16	P	Pg	18 59 19.5	+0.1
DVHZ	Dannevirke	1.88	48	P	Pn	18 59 15.0	-0.6
LTZ	Lake Taylor	1.95	231	P	Pn	18 59 16.8	+0.2
ANWZ	Angora Road	1.96	56	P	Pn	18 59 16.2	-0.6
AMCZ	Amberley	2.03	217	P	Pn	18 59 18.0	+0.3
LREZ	Lake Rotokare	2.10	2	P	Pg	18 59 25.3	+1.6
PRHZ	Porangahau	2.18	54	P	Pn	18 59 19.8	+0.1
PNHZ	Pukenui	2.18	41	P	Pn	18 59 19.5	-0.2
WPHZ	Waipukurau	2.19	48	P	Pn	18 59 19.6	-0.3
PREZ	Palmer Road	2.23	357	P	Pg	18 59 27.2	+1.1
KHEZ	Kahui Hut	2.28	354	P	Pg	18 59 27.1	0.0
MTVZ	Mangateitei	2.35	22	P	Pb	18 59 27.4	+1.7
OKCZ	Okains Bay	2.35	203	P	Pn	18 59 20.7	-1.4
PKE	Pukeiti	2.38	354	P	Pg	18 59 29.3	+0.3
PKVZ	Pokaka	2.40	19	P	Pn	18 59 20.9	-2.0
MOVZ	Moawhango	2.41	27	P	Pb	18 59 27.0	+0.1
INZ	Inchbonnie	2.44	241	P	Pn	18 59 23.8	+0.6
OXZ	Oxford	2.44	223	P	Pn	18 59 23.3	0.0
BHHZ	Black Hill Sta	2.46	33	P	Pn	18 59 25.4	+1.8
PXZ	Pawanui	2.46	52	P	Pn	18 59 22.1	-1.4
VRZ	Vera Road	2.46	8	P	Pg	18 59 29.9	-0.6
KRHZ	Kereru	2.47	40	P	Pn	18 59 23.4	-0.3
MQZ	McQueen's Vall	2.47	209	P	Pn	18 59 21.8	-1.9
WHVZ	Whangaehu Hut	2.48	23	P	Pb	18 59 29.0	+1.0
FWVZ	Far West T-bar	2.49	22	P	Pb	18 59 29.4	+1.1
TUVZ	Tukino	2.51	24	P	Pb	18 59 27.4	-1.2
AKCZ	Akaroa Harbour	2.53	204	P	Pn	18 59 23.2	-1.3
NGZ	Ngauruhoe	2.58	23	P	Pb	18 59 30.9	+1.2
KAHZ	Kahuranaki	2.62	48	P	Pn	18 59 25.0	-0.8
WTVZ	West Tongariro	2.63	22	P	Pb	18 59 31.6	+1.0
KRVZ	Karewarewa	2.66	23	P	Pb	18 59 32.1	+0.8
KWHZ	Kaweka Forest	2.67	37	P	Pb	18 59 33.2	+2.0
WVZ	Waitaha Valley	3.06	239	P	Pb	18 59 37.4	-0.6
ARHZ	Aropaoanui	3.07	42	P	Pn	18 59 33.4	+1.5
RPZ	Rata Peaks	3.23	227	P	Pn	18 59 35.2	+1.0
ODZ	Otahua Downs	4.39	216	P	Pn	18 59 49.2	-1.0
RUGZ	Raukumara Rang	4.42	37	P	Pn	18 59 50.8	+0.1
ASAR	Alice Springs	38.04	285	P	P	19 06 00.5	-1.5
	0.2nm,0.6s,baz=128,slow=7.1,SNR=5.6						
WRA	Warramunga Arr	40.09	290	P	P	19 06 17.7	-1.5
	0.8nm,0.6s,baz=130,slow=8.3,SNR=1.7						
TORD	Torodi Ar. Bea	150.97	195	PKPbc	PKPbc	19 18 36.9	+0.2
	0.2nm,0.5s,baz=164,slow=4.2,SNR=1.8						

WEL 21 19:22:16.6, 42°S±1°×**17°4E**±°**, h6km**±2km**, M3.3**/24**, ML3.5**/24**, MLv3.3**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=137.3, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.17	219	P	Pg	19 22 20.9	+0.9
TUWZ	Tuamarina	0.36	301	P	Pb	19 22 24.5	-0.8
BSWZ	Blackbirch Sta	0.37	255	P	Pg	19 22 24.6	+0.8
TCW	Tory Channel	0.41	352	P	Pb	19 22 25.8	-0.4
BHW	Baring Head	0.44	62	P	Pb	19 22 26.3	-0.4
WEL	Wellington	0.46	43	P	Pb	19 22 26.7	-0.3
PLWZ	Palliser	0.68	86	P	Pb	19 22 30.9	+0.1
MSWZ	Moikau Station	0.70	74	P	Pb	19 22 31.2	0.0
CAW	Cannon Point	0.74	47	P	Pb	19 22 31.6	-0.2
NNZ	Nelson	0.83	298	P	Pb	19 22 33.1	-0.3
PAWZ	Paruwai Farm	0.84	74	P	Pb	19 22 34.1	+0.5
DUWZ	D'Urville Isla	0.88	338	P	Pn	19 22 35.6	+0.1
MTW	Mount Morrison	0.98	62	P	Pb	19 22 36.3	+0.4
KHZ	Kahutara	1.00	217	P	Pb	19 22 36.6	+0.3
OGWZ	Otaki Gorge	1.01	38	P	Pb	19 22 36.2	-0.2
TRWZ	Traveller	1.03	78	P	Pn	19 22 37.2	-0.3
THZ	Tophouse	1.09	262	P	Pn	19 22 38.4	-0.1
HOWZ	Holdsworth Sta	1.13	51	P	Pb	19 22 38.7	+0.1
TMWZ	Te Maipa	1.26	67	P	Pn	19 22 40.2	-0.6
MRZ	Mangatainoka R	1.33	44	P	Pb	19 22 41.9	0.0
TIWZ	Tintock	1.43	54	P	Pb	19 22 43.5	-0.1
CPWZ	Castlepoint	1.56	64	P	Pg	19 22 50.0	+3.5
QRZ	Quartz Range	1.59	299	P	Pg	19 22 46.8	-0.2
PRWZ	Pori Road	1.62	50	P	Pn	19 22 46.1	+0.4
POWZ	Post Office Ro	1.63	42	P	Pb	19 22 46.8	-0.2
GVZ	Greta Valley S	1.67	216	P	Pn	19 22 45.6	-0.7
BFZ	Birch Farm	1.71	57	P	Pn	19 22 47.3	+0.5
DVHZ	Dannevirke	1.90	47	P	Pn	19 22 49.3	-0.3
WAZ	Wanganui	1.92	15	P	Pg	19 22 54.1	+0.7
LTZ	Lake Taylor	1.94	232	P	Pn	19 22 49.7	-0.3
ANWZ	Angora Road	1.98	55	P	Pg	19 22 57.0	+2.5
PNHZ	Pukenui	2.21	40	P	Pb	19 22 55.5	-1.4
PREZ	Palmer Road	2.28	356	P	Pg	19 23 02.1	+1.8
OKCZ	Okains Bay	2.31	204	P	Pn	19 22 53.6	-1.6
KHEZ	Kahui Hut	2.33	354	P	Pg	19 23 01.7	+0.4
CRLZ	Canterbury Las	2.34	213	P	Pn	19 22 56.4	+1.0
INZ	Inchbonnie	2.43	242	P	Pn	19 22 56.9	+0.1
MQZ	McQueen's Vall	2.44	210	P	Pn	19 22 54.8	-2.0
PKE	Pukeiti	2.44	353	P	Pg	19 23 03.7	+0.4
PKVZ	Pokaka	2.45	18	P	Pg	19 23 03.8	+0.3
MOVZ	Moawhango	2.45	26	P	Pb	19 23 01.5	+0.5
BHHZ	Black Hill Sta	2.49	32	P	Pb	19 23 02.5	+0.7
KRHZ	Kereru	2.50	39	P	Pn	19 22 59.1	+1.4
VRZ	Vera Road	2.51	7	P	Pg	19 23 03.7	-0.9
WHVZ	Whangaehu Hut	2.52	22	P	Pg	19 23 03.6	-1.2
FWVZ	Far West T-bar	2.53	22	P	Pg	19 23 04.2	-0.9
TUVZ	Tukino	2.55	23	P	Pg	19 23 04.4	-1.0
NGZ	Ngauruhoe	2.62	22	P	Pb	19 23 05.0	+1.1
KAHZ	Kahuranaki	2.65	47	P	Pb	19 23 03.6	-0.8
WTVZ	West Tongariro	2.67	21	P	Pg	19 23 06.3	-1.5
KRVZ	Karewarewa	2.71	22	P	Pb	19 23 06.4	+1.0
KATZ	Kakaramea	2.83	22	P	Pb	19 23 08.9	+1.3
BKZ	Black Stump Fm	2.94	34	P	Pb	19 23 11.0	+1.5
RPZ	Rata Peaks	3.21	228	P	Pn	19 23 08.6	+1.0
AWAZ	Awhitu Peninsu	4.55	3	P	Pb	19 23 31.8	-5.1

IDC ***21*** *19:23:52.5±1.5, 13°.65N×120°.64E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/25, mbtmp3.6/4, Error ellipse: s-maj=63.2km s-min=23.9km az=58.0*

MAN ***21*** *19:23:53.4, 13°.58N×120°.03E, h1km, MS2.6*

ISC 21 19:23:55.2±1.2**, 13°.65N**±0°.07×**120°.34E**±0°.05**, h11km**±7km**, n11, σ1s.58**/16**, mb3.4**/4**, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.12	312	eP	Pg	19 23 58.0	-0.2
LUBP				eS	Sg	19 24 00.3	-0.1
TGY	Tagaytay City	0.73	52⇑	eP	Pn	19 24 13.5	+2.0
BOAC	Boac	1.48	97	eP	Pg	19 24 25.5	+2.0
BOAC				eS	Sn	19 24 49.6	+8.6
GQP	Guinayangan	2.06	83⇓	eP	Pg	19 24 34.3	-0.5
GQP				eS	Sn	19 24 54.4	-1.1
BALP	Baler	2.40	30	eP	Pb	19 24 38.3	0.0
BALP				eS	Sg	19 25 09.8	-2.6
SMPP	San Manuel, Pa	2.51	8	eP	Pn	19 24 37.4	+1.5
SMPP				eS	Sb	19 25 11.5	+0.4
BOLP	Bolinao	2.75	351	eP	Pn	19 24 40.6	+1.4
BOLP				eS	Sg	19 25 23.5	+0.1
CMAR	Chiang Mai Arr	21.10	286	P	P	19 28 41.3	+1.4
	0.8nm,0.7s,baz=96,slow=9.3,SNR=5.1						
SONM	Songino Array	36.01	344	P	P	19 30 56.4	0.0
	0.3nm,0.7s,baz=161,slow=9.2,SNR=2.4						
WRA	Warramunga Arr	36.11	157	P	P	19 30 55.2	-2.2
	1.3nm,0.4s,baz=340,slow=12,SNR=4.3						
ASAR	Alice Springs	39.39	160	P	P	19 31 23.5	-1.6
	0.6nm,0.5s,baz=337,slow=7.0,SNR=21						

WEL 21 19:29:23.3, 42°S±5°×**17°4E**±°**, h5km**±2km**, M3.5**/31**, ML3.7**/30**, MLv3.5**/31**, Error ellipse: s-maj=0.0km s-min=0.0km az=36.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.19	172	P	Pg	19 29 23.6	-3.5
TUWZ	Tuamarina	0.22	306	P	Pg	19 29 24.8	-2.9
BSWZ	Blackbirch Sta	0.28	236	P	Pg	19 29 26.1	-2.6
TCW	Tory Channel	0.36	12	P	Pg	19 29 24.6	-5.6
NNZ	Nelson	0.69	299	P	Pg	19 29 33.4	-3.2
PLWZ	Palliser	0.81	91	P	Pb	19 29 39.9	0.0
MSWZ	Moikau Station	0.82	80	P	Pb	19 29 39.9	0.0
PAWZ	Paruwai Farm	0.95	80	P	Pb	19 29 42.7	+0.4
KHZ	Kahutara	0.98	209	P	Pg	19 29 37.3	-4.8
MTW	Mount Morrison	1.07	68	P	Pn	19 29 44.7	-0.3
TRWZ	Traveller	1.15	82	P	Pg	19 29 45.3	+0.1
HOWZ	Holdsworth Sta	1.21	57	P	Pn	19 29 47.2	+0.3
MRZ	Mangatainoka R	1.39	50	P	Pg	19 29 49.9	-0.1
TIWZ	Tintock	1.51	59	P	Pg	19 29 52.2	0.0
OHWZ	Ohakea	1.60	33	P	Pg	19 29 55.2	+1.2
GVZ	Greta Valley S	1.64	211	P	Pg	19 29 54.7	-0.1
CPWZ	Castlepoint	1.66	68	P	Pg	19 29 59.7	+4.6
POWZ	Post Office Ro	1.68	46	P	Pb	19 29 54.1	-0.6
PRWZ	Pori Road	1.69	54	P	Pn	19 29 53.7	+0.2
BFZ	Birch Farm	1.79	61	P	Pb	19 29 55.8	-0.8
WAZ	Wanganui	1.91	19	P	Pg	19 30 00.9	+1.0
DVHZ	Dannevirke	1.96	51	P	Pn	19 29 57.6	+0.3
ANWZ	Angora Road	2.06	58	P	Pg	19 30 04.4	+1.7
PNHZ	Pukenui	2.25	44	P	Pn	19 30 01.6	+0.4
WPHZ	Waipukurau	2.28	50	P	Pg	19 30 07.6	+0.7
OKCZ	Okains Bay	2.31	201	P	Pn	19 30 02.5	+0.4
PKE	Pukeiti	2.37	356	P	Pn	19 30 03.0	+0.1
OXZ	Oxford	2.37	221	P	Pn	19 30 04.5	+1.6
MTVZ	Mangateitei	2.39	25	P	Pg	19 30 08.8	-0.2
MQZ	McQueen's Vall	2.42	207	P	Pn	19 30 03.6	+0.1
PKVZ	Pokaka	2.44	22	P	Pg	19 30 09.7	-0.3
MOVZ	Moawhango	2.46	30	P	Pb	19 30 09.0	+0.9
VRZ	Vera Road	2.47	10	P	Pb	19 30 08.9	+0.7
AKCZ	Akaroa Harbour	2.49	202	P	Pn	19 30 05.0	+0.5
WHVZ	Whangaehu Hut	2.52	26	P	Pb	19 30 10.2	+1.1
BHHZ	Black Hill Sta	2.52	35	P	Pb	19 30 09.4	+0.4
FWVZ	Far West T-bar	2.53	25	P	Pg	19 30 10.8	-1.0
KRHZ	Kereru	2.54	42	P	Pn	19 30 05.4	+0.3
TUVZ	Tukino	2.55	27	P	Pb	19 30 10.4	+0.8
NGZ	Ngauruhoe	2.62	25	P	Pg	19 30 12.3	-1.2
WTVZ	West Tongariro	2.67	24	P	Pb	19 30 12.5	+0.9
BKZ	Black Stump Fm	2.97	37	P	Pb	19 30 17.0	+0.2
RPZ	Rata Peaks	3.15	226	P	Pn	19 30 16.1	+2.5
PRRZ	Plateau Road	3.50	30	P	Pn	19 30 18.3	0.0
RTZ	Ruatahuna	3.64	37	P	Pn	19 30 20.3	-0.1
RIGZ	Rimuhau	3.96	45	P	Pb	19 30 30.5	-3.1
ODZ	Otahua Downs	4.33	215	P	Pn	19 30 30.8	+1.0
WIZ	White Island	4.65	31	P	Pn	19 30 38.7	+4.5
SYZ	Scrubby Hill	6.16	214	P	Pn	19 30 57.7	+2.9

MEX 21 19:55:24.7±0.5**, 14°.30N**×**93°.11W, h91km**±16km**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.02	53	eP	Pn	19 55 43.5	-1.2
THIG				eS	Sn	19 55 58.1	-1.6
PCIG		1.41	356	eP	Pn	19 55 48.0	-1.3
PCIG				eS	Sn	19 56 06.5	-1.5
CCIG	Comitan	2.19	25	eP	Pn	19 56 01.5	+1.9
CCIG				i S	Sn	19 56 24.9	-1.4
TGIG		2.47	360	i P	Pn	19 56 02.6	-0.6
TGIG				i S	Sn	19 56 31.0	-1.7
CMIG	Matias Romero	3.26	329	eP	Pn	19 56 13.3	-0.5

MAN 21 19:55:49.4, 13°.52N×**120°.07E, h1km, mb4.1, ML2.9, MS2.6, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.27	39	eP	Pg	19 55 54.4	-0.2
LUBP				eS	Sg	19 55 56.5	-1.7
TGY	Tagaytay City	1.02	55	eP	Pb	19 56 09.9	-0.1
SJMP	San Jose	1.47	136	eP	Pn	19 56 17.2	+0.2
SJMP				eS	Sn	19 56 37.4	+0.6
BUSP	Coron	1.51	175	eP	Pg	19 56 18.6	+0.2
BUSP				eS	Sg	19 56 39.0	+1.0
BOAC	Boac	1.73	92	eP	Pb	19 56 22.1	+0.2
BOAC				eS	Sb	19 56 43.9	-0.3
OTRP	Odiongan	2.23	121	eP	Pb	19 56 29.6	-0.8
OTRP				eS	Sn	19 56 56.1	+0.5
ENPP	El Nido	2.38	195	eP	Pn	19 56 30.9	+1.3
ENPP				eS	Sn	19 56 59.9	+0.4
BALP	Baler	2.65	33	eP	Pn	19 56 34.5	+1.3
BALP				eS	Sn	19 57 07.2	+1.3
CUYO	Cuyo Island	2.81	161	eP	Pn	19 56 36.0	+0.6
CUYO				eS	Sn	19 57 09.7	-0.4

MEX 21 19:59:27.1±0.4**, 14°.41N**×**93°.20W, h76km**±24km**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.03	61	eP	Pn	19 59 40.2	-6.1
THIG				eS	Sn	19 59 58.5	-2.0
PCIG		1.29	359	eP	Pn	19 59 48.4	-1.1
PCIG				i S	Sn	20 00 04.4	-2.1
CCIG	Comitan	2.13	29	eP	Pn	20 00 03.5	+2.7
CCIG				i S	Sn	20 00 24.4	-2.0

MEX 21 20:01:27.3±0.4**, 14°.32N**×**93°.20W, h6km**±16km**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.08	57	eP	Pg	20 01 45.4	-2.7
THIG				eS	Sg	20 01 59.0	-3.1
PCIG		1.38	359	eP	Pn	20 01 49.5	-3.5
PCIG				i S	Sb	20 02 06.2	-5.1
CCIG	Comitan	2.21	28	eP	Pn	20 02 04.8	+0.2
CCIG				i S	Sn	20 02 28.2	-4.1
TGIG		2.44	2	eP	Pn	20 02 04.2	-3.6
TGIG				eS	Sn	20 02 33.8	-4.3
CMIG	Matias Romero	3.19	330	eP	Pn	20 02 15.3	-2.7

BJI 21 20:08:41.6±0.0**, 43°.48N**×**109°.57E, h6km, ML3.7**/5**, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTO	Baotou	2.89	173	Pn	Pn	20 09 25.6	-2.7
BTO				Sn	Sn	20 09 57.4	-6.0
HHC	Hu-ho-hao-te	3.02	150	Pn	Pn	20 09 30.8	+0.8
HHC				Pg	Pb	20 09 36.8	+1.0
HHC				Sg	Sg	20 10 17.3	-1.2
HHC				smax	smax		
	comp=N,900nm,0.5s						
HHC				smax	smax		
	comp=E,630nm,0.5s						
WMQ	Urumqi	15.84	279	eP	Pn	20 12 26.3	+1.2

WEL 21 20:15:49.7, 42°S±1°×**17°4E**±°**, h5km**±2km**, M3.7**/54**, ML3.8**/22**, MLv3.7**/54**, Error ellipse: s-maj=0.0km s-min=0.0km az=107.9, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.19	256	P	Pg	20 15 58.8	+5.3
BHW	Baring Head	0.43	47	P	Pb	20 16 00.3	+0.6
BSWZ	Blackbirch Sta	0.44	268	P	Pb	20 16 01.2	+1.3
TUWZ	Tuamarina	0.47	305	P	Pb	20 15 59.7	-0.7
WEL	Wellington	0.48	29	P	Pb	20 16 00.3	-0.2
TCW	Tory Channel	0.51	344	P	Pg	20 15 59.6	+0.1
PLWZ	Palliser	0.61	78	P	Pn	20 16 05.2	+0.1
MSWZ	Moikau Station	0.66	64	P	Pn	20 16 05.4	-0.3
CAW	Cannon Point	0.75	38	P	Pb	20 16 05.2	0.0
PAWZ	Paruwai Farm	0.80	66	P	Pn	20 16 08.0	+0.4
NNZ	Nelson	0.94	301	P	Pg	20 16 08.1	+0.3
MTW	Mount Morrison	0.95	56	P	Pn	20 16 10.0	+0.2
TRWZ	Traveller	0.97	72	P	Pn	20 16 10.6	+0.6
DUWZ	D'Urville Isla	0.99	336	P	Pg	20 16 08.1	-0.5
KHZ	Kahutara	0.99	224	P	Pn	20 16 12.2	+2.0
OGWZ	Otaki Gorge	1.04	31	P	Pg	20 16 09.7	+0.1
HOWZ	Holdsworth Sta	1.13	45	P	Pn	20 16 12.1	-0.1
THZ	Tophouse	1.16	267	P	Pn	20 16 13.2	+0.5
TMWZ	Te Maipa	1.23	62	P	Pn	20 16 14.0	+0.5
MRZ	Mangatainoka R	1.34	39	P	Pb	20 16 15.3	0.0
TIWZ	Tintock	1.42	50	P	Pg	20 16 16.9	0.0
CPWZ	Castlepoint	1.53	59	P	Pg	20 16 22.7	+3.7
PRWZ	Pori Road	1.62	45	P	Pn	20 16 19.2	+0.3
OHWZ	Ohakea	1.63	24	P	Pb	20 16 20.6	+0.4
POWZ	Post Office Ro	1.64	38	P	Pb	20 16 20.0	-0.4
GVZ	Greta Valley S	1.65	219	P	Pg	20 16 20.9	-0.3
BFZ	Birch Farm	1.69	53	P	Pn	20 16 19.7	-0.2
QRZ	Quartz Range	1.70	300	P	Pn	20 16 20.4	+0.4
DVHZ	Dannevirke	1.91	43	P	Pn	20 16 23.0	+0.2
LTZ	Lake Taylor	1.95	236	P	Pb	20 16 24.9	-0.8
ANWZ	Angora Road	1.97	51	P	Pn	20 16 24.1	+0.4
WAZ	Wanganui	1.99	12	P	Pb	20 16 26.1	-0.2
AMCZ	Amberley	1.99	222	P	Pb	20 16 25.2	-1.1
PRHZ	Porangahau	2.19	50	P	Pn	20 16 26.9	+0.2
WPHZ	Waipukurau	2.22	43	P	Pg	20 16 32.9	+0.6
PNHZ	Pukenui	2.22	37	P	Pn	20 16 27.3	+0.1
LREZ	Lake Rotokare	2.24	359	P	Pg	20 16 33.7	+1.0
OKCZ	Okains Bay	2.27	207	P	Pn	20 16 28.8	+1.0
NMEZ	Namu Road	2.33	349	P	Pb	20 16 31.8	-0.4
PREZ	Palmer Road	2.37	354	P	Pb	20 16 31.8	-1.1
MQZ	McQueen's Vall	2.40	213	P	Pn	20 16 29.9	+0.2
OXZ	Oxford	2.42	227	P	Pn	20 16 30.5	+0.7
KHEZ	Kahui Hut	2.43	352	P	Pn	20 16 31.9	+1.8
MTVZ	Mangateitei	2.44	19	P	Pb	20 16 34.1	0.0
AKCZ	Akaroa Harbour	2.45	207	P	Pn	20 16 31.1	+0.8
INZ	Inchbonnie	2.46	244	P	Pn	20 16 31.9	+1.4
NBEZ	Newall Road No	2.47	349	P	Pb	20 16 33.1	-1.5
MOVZ	Moawhango	2.50	24	P	Pn	20 16 32.7	+1.7
PKVZ	Pokaka	2.50	16	P	Pb	20 16 34.3	-0.8
KRHZ	Kereru	2.52	36	P	Pn	20 16 31.3	0.0
BHHZ	Black Hill Sta	2.53	29	P	Pn	20 16 32.8	+1.4
PKE	Pukeiti	2.53	352	P	Pn	20 16 32.8	+1.3
WHVZ	Whangaehu Hut	2.57	20	P	Pb	20 16 34.6	-1.7
FWVZ	Far West T-bar	2.58	19	P	Pb	20 16 35.9	-0.7
VRZ	Vera Road	2.59	5	P	Pn	20 16 34.0	+1.8
TUVZ	Tukino	2.60	21	P	Pn	20 16 34.0	+1.5
MHEZ	Mangahewa	2.63	358	P	Pg	20 16 40.6	+0.6
KAHZ	Kahuranaki	2.65	45	P	Pn	20 16 33.3	+0.2
NGZ	Ngauruhoe	2.67	19	P	Pb	20 16 35.8	-2.3
KWHZ	Kaweka Forest	2.72	34	P	Pb	20 16 37.9	-1.1
WTVZ	West Tongariro	2.73	19	P	Pb	20 16 37.1	-1.9
TWVZ	Taurewa	2.73	16	P	Pb	20 16 38.4	-0.7
KRVZ	Karewarewa	2.76	20	P	Pb	20 16 38.0	-1.5
KATZ	Kakaramea	2.88	20	P	Pb	20 16 41.9	+0.2
BKZ	Black Stump Fm	2.97	32	P	Pb	20 16 43.6	+0.4
RATZ	Rangitukua	3.01	20	P	Pb	20 16 44.9	+1.1
HIZ	Hauiti	3.20	6	P	Pn	20 16 43.1	+2.5
RPZ	Rata Peaks	3.21	230	P	Pn	20 16 42.4	+1.6
MRHZ	Matea Rd	3.23	28	P	Pb	20 16 48.9	+1.3
MTHZ	Maungataniwha	3.38	33	P	Pb	20 16 49.1	-1.0
TLZ	Tolley Road	3.47	14	P	Pb	20 16 48.0	-3.6
SNGZ	Shannon Statio	3.66	38	P	Pb	20 16 54.7	-0.1
FOZ	Fox Glacier	3.88	240	P	Pn	20 16 52.4	+2.4
MWZ	Matawai	4.11	36	P	Pb	20 16 58.4	-4.1
LBZ	Lake Benmore	4.12	228	P	Pn	20 16 55.4	+2.1
MKAZ	Moumakai	4.62	7	P	Pn	20 17 03.8	+3.6
AWAZ	Awhitu Peninsu	4.63	2	P	Pn	20 17 02.5	+2.2
WIAZ	Waiheke Island	4.93	6	P	Pn	20 17 07.5	+3.1
HHSZ	Highcliff Hill	5.03	212	P	Pn	20 17 06.8	+1.1
TUZ	Tuapeka	5.50	218	P	Pn	20 17 14.2	+2.0
SYZ	Scrubby Hill	6.16	217	P	Pn	20 17 23.7	+2.4
CTZ	Chatham Island	6.88	110	P	Pn	20 17 32.3	+1.2

ISCJB ***21*** *20:20:04.3±0.5, 23°.93S±0°.03×67°.77W±0°.07, h139km±7km, mb4.0/9, Error ellipse: s-maj=9.8km s-min=5.3km az=0.7*

IDC ***21*** *20:20:05.5±1.4, 23°.95S×67°.54W, h130km±12km, mb4.1/6, mb1 3.9/11, mb1mx3.8/26, mbtmp4.3/11, MS2.8/1, Ms1 2.8/1, ms1mx2.3/17, Error ellipse: s-maj=17.7km s-min=15.8km az=52.0*

NEIC ***21*** *20:20:06.2±2.9, 23°.89S×67°.87W, h148km±6km, mb4.3/6, ML4.3(GUC), Error ellipse: s-maj=8.2km s-min=6.5km az=210.0*

GUC ***21*** *20:20:07.9±0.5, 23°.80S×68°.21W, h164km±7km, ML4.3*

ISC 21 20:20:04.3±0.7**, 23°.94S**±0°.04×**67°.72W**±0°.06**, h128km**±8km**, n54, σ1s.66**/74**, mb4.5**/9**, 12C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.72	320	P	Pn	20 20 37.6	+2.4
	77nm,0.3s,baz=143,slow=7.7,SNR=2018						
LVC				S	Sn	20 21 00.2	+1.6
	639nm,0.3s,baz=355,slow=18,SNR=242						
LVC	Limon Verde	1.72	320	ePn	Pn	20 20 37.8	+2.7
LVC				eSn	Sn	20 21 00.7	+2.1
PB15	IPOC Station P	1.77	294⇑	eP	Pn	20 20 37.5	+1.9
PB15				i S	Sn	20 20 60.0	+0.7
GO02	Mina Guanaco	2.09	234	ePn	Pn	20 20 41.8	+2.2
GO02				eSn	Sn	20 21 08.4	+1.8
PB06	IPOC Station P	2.10	305⇑	eP	Pn	20 20 41.3	+1.8
PB06				i S	Sn	20 21 06.8	+0.3
PB06				IAML		20 21 11.7	
	comp=E,3μm,0.3s						
PB05	IPOC Station P	2.52	295⇑	eP	Pn	20 20 45.7	+0.9
PB05				i S	Sn	20 21 14.5	-1.5
PB05				IAML		20 21 20.1	
	comp=E,979nm,0.3s						
PB14	IPOC Station P	2.54	254⇑	eP	Pn	20 20 46.0	+0.7
PB14				i S	Sn	20 21 15.8	-0.9
PB14				IAML		20 21 21.7	

	comp=E,1µm,0.4s						
PB09	IPOC Station P	2.55	326⇑	*e*P	Pn	20 20 47.8	+2.5
PB09				*i* S	Sn	20 21 18.2	+1.4
PB09				IAML		20 21 29.5	
	comp=E,1000nm,0.5s						
PB10	IPOC Station P	2.63	279	*e*Pn	Pn	20 20 47.2	+1.1
PB10				*e*Sn	Sn	20 21 15.9	-2.3
PB10	IPOC Station P	2.63	279⇑	*e*P	Pn	20 20 46.8	+0.7
PB10				*e*S	Sn	20 21 16.5	-1.7
PB10				IAML		20 21 18.9	
	comp=N,844nm,0.4s						
PB03	IPOC Station P	2.66	315⇑	*e*P	Pn	20 20 47.9	+1.3
PB03				*i* S	Sn	20 21 18.4	-0.6
PB03				IAML		20 21 20.0	
	comp=N,2µm,0.4s						
PB04	IPOC Station P	2.75	305	*e*Pn	Pn	20 20 48.7	+0.9
PB04				*e*Sn	Sn	20 21 20.1	-1.2
PB04	IPOC Station P	2.75	305⇑	*e*P	Pn	20 20 48.5	+0.8
PB04				*e*S	Sn	20 21 19.8	-1.4
PB04				IAML		20 21 22.3	
	comp=N,3µm,0.1s						
PB07	IPOC Station P	2.98	317⇑	*e*P	Pn	20 20 51.9	+1.2
PB07				*e*S	Sn	20 21 25.5	-1.0
PB07				IAML		20 21 29.9	
	comp=N,2µm,0.1s						
PB02	IPOC Station P	3.29	322⇑	*e*P	Pn	20 20 55.6	+0.8
PB02				*e*S	Sn	20 21 32.2	-1.5
PB01	IPOC Station P	3.31	330	*e*Pn	Pn	20 20 56.8	+1.7
PB01				*e*Sn	Sn	20 21 32.3	-1.9
PB01	IPOC Station P	3.31	330⇑	*e*P	Pn	20 20 56.2	+1.1
PB01				*e*S	Sn	20 21 33.9	-0.3
GO03	Copiap	4.29	211	*e*Pn	Pn	20 21 08.1	+0.2
GO01	Chusmiza	4.47	342	*e*Pn	Pn	20 21 12.4	+1.7
PB11	IPOC Station P	4.53	336	*e*Pn	Pn	20 21 11.1	-0.2
MNMC	Minye Minye	5.09	340	*e*Pn	Pn	20 21 19.7	+0.8
LCO	Las Campanas	5.71	207	*e*Pn	Pn	20 21 26.4	-0.7
GO04	Tololo Observa	6.79	203	*e*Pn	Pn	20 21 40.1	-1.5
LPAZ	La Paz	7.62	357	P	Pn	20 21 55.2	+1.9
	comp=N,1.7nm,0.3s,baz=157,slow=5.4,SNR=28						
LPAZ				S	Sn	20 23 09.1	-9.4
	baz=331,slow=19,SNR=2.6						
LPAZ	La Paz	7.62	357	*e*Pn	Pn	20 21 54.8	+1.5
LPAZ				*e*		20 21 55.6	
CFA	Coronel Fontan	7.65	183	P	Pn	20 21 53.7	+0.7
	comp=N,1.8nm,0.3s,baz=34,slow=22,SNR=36						
CFA				S	Sn	20 23 13.8	-4.4
	comp=N,3.7nm,0.3s,baz=232,slow=17,SNR=6.4						
CFA				LR	LR	20 24 56.2	
	comp=N,61nm,19.4s,baz=93,slow=38						
CPUP	Villa Florida	9.71	106	P	Pn	20 22 20.1	-0.7
	comp=N,0.1nm,0.3s,baz=277,slow=6.5,SNR=3.9						
SIV	San Ignacio	10.08	40	P	Pn	20 22 25.8	0.0
	comp=N,8.8nm,0.3s,baz=258,slow=10.0,SNR=12						
SIV				S	Sn	20 24 12.8	-4.3
	baz=246,slow=20,SNR=2.5						
NNA	Nana	14.71	322	*e*P	Pn	20 23 25.1	-1.2
PLCA	Paso Flores	16.91	187	P	Pn	20 23 54.7	+1.4
	comp=N,0.1nm,0.3s,baz=6.7,slow=16,SNR=2.4						
PLCA	Paso Flores	16.91	187	*e*P	Pn	20 23 54.3	+1.0
	comp=N,5.9nm,1.1s						
BDFB	Brasilia	20.28	70	P	P	20 24 30.1	0.0
	comp=N,50nm,0.7s,baz=240,slow=12,SNR=64						
BDFB	Brasilia	20.28	70	*e*P	P	20 24 30.1	0.0
BDFB				*e*P	P	20 24 31.5	+1.4
PTGA	Pitinga	24.27	19	P	P	20 25 10.4	+0.7
	comp=N,2.5nm,0.3s,baz=202,slow=9.5,SNR=10.0						
PTGA	Pitinga	24.27	19	*e*P	P	20 25 07.7	-2.0
	comp=N,4.9nm,0.8s						
RCBR	Riachuelo	35.49	65	*e*P	P	20 26 50.1	+1.2
	comp=N,11nm,1.1s						
SJG	San Juan	41.82	2	*e*P	P	20 27 37.7	-3.8
	comp=N,10nm,1.0s						
LTX	Lajitas	63.25	325	*e*P	P	20 30 20.9	+1.5
TXAR	Lajitas Array	63.25	325	P	P	20 30 20.9	+1.5
	comp=N,0.2nm,0.7s,baz=163,slow=9.1,SNR=3.6						
QSPA	South Pole Qui	66.26	180	*e*P	P	20 30 41.5	+2.9
	comp=N,6.8nm,0.6s						
DBIC	Dimbokro	68.41	72	P	P	20 30 52.7	0.0
	comp=N,4.8nm,0.7s,baz=228,slow=7.1,SNR=8.2						
SYO	Syowa Base	73.84	159⇑	*e*PKiKP	PKiKP	20 37 15.0	-3.7
PD31	Pinedale Array	76.76	330	*e*P	P	20 31 43.9	+2.0
PDAR	Pinedale Array	76.76	330	P	P	20 31 43.9	+2.0
	comp=N,0.2nm,0.3s,baz=133,slow=5.0,SNR=2.6						
TOA1	Torodi Ar. Sit	77.16	69	*e*P	P	20 31 44.5	+0.1
TORD	Torodi Ar. Bea	77.16	69	P	P	20 31 44.5	+0.1
	comp=N,9.1nm,0.6s,baz=262,slow=4.5,SNR=89						
BOSA	Boshof	81.34	117	P	P	20 32 07.4	+0.2
	comp=N,1.4nm,0.7s,baz=241,slow=4.3,SNR=4.8						
ASAR	Alice Springs	128.23	205	PKP	PKiKP	20 38 57.6	+0.7
	comp=N,0.8nm,0.6s,baz=134,slow=2.1,SNR=9.0						
WR1	Warramunga Arr	131.37	208	*e*PKPdf	PKiKP	20 39 04.1	+0.8
WRA	Warramunga Arr	131.37	208	PKP	PKiKP	20 39 04.1	+0.8
	comp=N,0.7nm,0.4s,baz=189,slow=1.8,SNR=7.1						
MK32	Makanchi Array	146.89	39	*e*PKPbc	PKPbc	20 39 31.2	-0.5
MKAR	Makanchi Array	146.89	39	PKPbc	PKPbc	20 39 31.2	-0.5
	comp=N,1.0nm,0.8s,baz=298,slow=3.9,SNR=5.2						
MJAR	Matsushiro Arr	154.41	305	PKPab	PKPab	20 40 05.1	+0.4
	comp=N,1.4nm,0.9s,baz=80,slow=2.3,SNR=5.4						
MAJO	Matsushiro	154.41	305	*e*PKPab	PKPab	20 40 05.1	+0.4

JMA ***21*** *20:29:10.8±0.3, 33°.42N×137°.78E, $h347^{km}{\pm}3^{km}$, M3.0*
ISCJB ***21*** *20:29:11.3±0.4, 33°.40N±0°.05×137°.78E±0°.05, $h338^{km}{\pm}3^{km}$, mb3.1/10, Error ellipse: s-maj=8.7km s-min=6.6km az=155.5*
IDC ***21*** *20:29:11.8±0.6, 33°.27N×137°.76E, $h329^{km}{\pm}6^{km}$, mb2.9/10, mb1 3.1/15, mb1mx3.0/44, mbtmp3.7/15, Error ellipse: s-maj=13.8km s-min=12.3km az=36.0*
ISC 21 20:29:12.3±0.7, **33°.42N**±0°.07×**137°.77E**±0°.05, **$h335^{km}$**$\pm6^{km}$, **n41**, σ1^s.**30**/56, **mb3.1**/10, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK01	Tokai 1	0.37	337	S	S	20 30 28.2	+0.5
TK02	Tokai 2	0.52	359	P	Pn	20 29 55.8	+1.3
TTO3	TONANKAI O.B.S	0.54	325	P	Pn	20 29 55.2	+0.5
TTO2	TONANKAI O.B.S	0.69	297	P	Pn	20 29 55.4	+0.5
TK03	Tokai 3	0.76	12	P	Pn	20 29 55.9	+0.6
TTO5	TONANKAI O.B.S	0.83	357	P	Pn	20 29 56.0	+0.5
TTO1	TONANKAI O.B.S	0.85	284	P	Pn	20 29 55.6	+0.2
TK04	Tokai 4	0.96	5	P	Pn	20 29 56.6	+0.6
TK04				*e*S	S	20 30 32.5	+1.4
JIE	Ise	1.31	318	P	Pn	20 29 57.7	-0.1
JIE				*e*S	S	20 30 33.4	-0.8
JHJ	Hachijo jima 2	1.71	100	P	Pn	20 30 00.0	-0.2
	39nm,0.3s,baz=65,slow=23,SNR=20						
JHJ				S	S	20 30 37.5	-1.1
	7.7nm,0.3s,baz=72,slow=19,SNR=1.9						
JHJ2	Mitsune	1.74	100	P	Pn	20 30 00.0	-0.4
JTNC	Tanabenakahech	1.84	283	P	Pn	20 30 00.6	-0.5
JTNC				*e*S	S	20 30 39.0	-1.1
JWY	Kouya	1.98	294	P	Pn	20 30 02.2	+0.1
JWY				*e*S	S	20 30 40.6	-1.4
JOD2	Odawara 2	2.14	30	P	Pn	20 30 03.0	-0.2
JOD2				*e*S	S	20 30 45.4	+1.5
JYN	Shimob	2.17	17	P	Pn	20 30 03.8	+0.3
JYTA	Yamagatataniai	2.33	339	P	Pn	20 30 04.9	+0.3
JYTA				*e*S	S	20 30 46.3	-0.3
JWT	Wachi	2.70	314	P	Pn	20 30 07.8	+0.1
JWT				*e*S	S	20 30 51.2	-1.0
JRY	Ryogami san	2.75	20	P	Pn	20 30 08.5	+0.3
JRY				*e*S	S	20 30 53.5	+0.4
JAI	Aioi	2.79	279	P	Pn	20 30 08.2	-0.4
JAI				*e*S	S	20 30 52.4	-1.4
BSO1	Boso 1	2.94	64	P	Pn	20 30 07.1	-2.1
BSO1				S	S	20 30 52.4	-2.6
MJAR	Matsushiro Arr	3.13	6	P	Pn	20 30 11.5	-0.2
	0.5nm,0.3s,baz=187,slow=10,SNR=97						
MJAR				S	S	20 30 57.0	-2.5
	0.2nm,0.3s,baz=185,slow=18,SNR=12						
MAT	Matsushiro	3.13	6	P	Pn	20 30 11.7	0.0
MAT				S	S	20 30 58.1	-1.4
MAT	Matsushiro	3.13	6	P	Pn	20 30 11.7	0.0
MAT				*e*S	S	20 30 58.1	-1.4
JMN	Monobe	3.26	276	P	Pn	20 30 12.9	-0.1
JAG	Ashikaga	3.30	24	P	Pn	20 30 11.7	-1.6
JHS	Saijyo	4.16	293	P	Pn	20 30 22.4	+0.3
JTO	Tosashimizu	4.20	264	P	Pn	20 30 22.1	-0.5
JNU	Nakatsue	5.78	269	P	Pn	20 30 39.1	-1.0
	0.3nm,0.3s,baz=75,slow=20,SNR=2.8						
KSRS	Korea Array	8.98	299	P	Pn	20 31 19.1	+1.1
	0.5nm,0.3s,baz=113,slow=13,SNR=20						
ASAJ	Asahikawa	11.32	18	P	Pn	20 31 45.8	-0.2
	0.6nm,0.3s,baz=238,slow=8.0,SNR=6.5						
ASAJ				S	S	20 33 46.7	-5.9
	0.2nm,0.3s,baz=240,slow=20,SNR=2.6						
USRK	Ussuriysk Ar.	11.66	339	P	P	20 31 51.9	+1.3
	0.2nm,0.3s,baz=172,slow=14,SNR=6.6						
SONM	Songino Array	27.60	311	P	P	20 34 31.0	+1.2
	1.2nm,0.9s,baz=114,slow=7.3,SNR=7.7						
CMAR	Chiang Mai Arr	37.72	257	P	P	20 35 56.6	-0.5
	0.4nm,0.5s,baz=50,slow=7.5,SNR=5.8						
ZALV	Zalesovo Beam	42.27	315	P	P	20 36 34.0	+0.4
	0.5nm,0.4s,baz=86,slow=7.4,SNR=2.6						
MKAR	Makanchi Array	43.62	305	P	P	20 36 44.6	0.0
	0.5nm,0.3s,baz=85,slow=9.3,SNR=12						
WRA	Warramunga Arr	53.16	184	P	P	20 37 55.2	-1.7
	0.6nm,0.3s,baz=350,slow=6.2,SNR=10.0						
ILAR	Eielson Array	54.13	31	P	P	20 38 04.3	+1.0
	0.3nm,0.7s,baz=256,slow=3.6,SNR=4.1						
ASAR	Alice Springs	56.89	184	P	P	20 38 22.6	-0.7
	0.4nm,0.8s,baz=16,slow=13,SNR=4.1						
FINES	FINESS Array B	70.59	332	P	P	20 39 52.0	+0.4
	0.9nm,0.4s,baz=70,slow=6.3,SNR=9.4						
NVAR	Mina Array Bea	79.56	51	P	P	20 40 44.5	+1.4
	0.1nm,0.3s,baz=284,slow=3.6,SNR=1.7						
PDAR	Pinedale Array	82.33	43	P	P	20 40 57.7	+0.1
	0.2nm,0.3s,baz=282,slow=4.4,SNR=2.7						

ISCJB ***21*** *20:36:55.8±0.8, 6°.63S±0°.07×129°.88E±0°.09, $h146^{km}$, mb3.7/2, Error ellipse: s-maj=13.8km s-min=8.7km az=24.9*
IDC ***21*** *20:36:58.8±2.1, 6°.66S×129°.91E, $h159^{km}{\pm}24^{km}$, mb3.5/2, mb1 3.6/6, mb1mx3.2/30, mbtmp4.1/6, Error ellipse: s-maj=32.8km s-min=18.6km az=82.0*
ISC 21 20:36:57.4±0.9, **6°.63S**±0°.08×**129°.9E**±0°.1, **$h146^{km}$**, **n6**, σ1^s.**94**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.88	13	P	Pn	20 38 24.4	+1.8
	1.4nm,0.3s,baz=165,slow=20,SNR=20						
SIJI				S	Sn	20 39 26.3	-2.9
	5.3nm,0.3s,baz=61,slow=23,SNR=14						
BATI	Baumata	7.12	240	P	Pn	20 38 40.8	+1.5
	12nm,0.3s,baz=77,slow=3.7,SNR=17						
BATI				S	Sn	20 39 56.9	-2.2
	14nm,0.3s,baz=144,slow=22,SNR=10						
WRA	Warramunga Arr	13.92	162	P	Pn	20 40 07.8	-0.7
	0.2nm,0.3s,baz=342,slow=12,SNR=7.4						
WRA				S	Sn	20 42 30.8	-12
	0.4nm,0.3s,baz=339,slow=23,SNR=6.1						
ASAR	Alice Springs	17.37	168	P	Pn	20 40 50.9	-0.2
	0.4nm,0.3s,baz=346,slow=9.4,SNR=25						
ASAR				S	S	20 43 50.6	-13
	0.0nm,0.3s,baz=4.3,slow=26,SNR=2.8						
STKA	Stephens Creek	27.39	158	P	P	20 42 29.1	-0.1
	1.2nm,0.5s,baz=352,slow=7.1,SNR=4.2						
MKAR	Makanchi Array	67.87	327	P	P	20 47 40.2	+0.1
	0.6nm,0.5s,baz=117,slow=7.8,SNR=6.6						

ISCJB ***21*** *21:09:22.0±0.5, 17°.38N±0°.05×94°.69W±0°.03, $h136^{km}{\pm}6^{km}$, mb4.6/1, Error ellipse: s-maj=7.9km s-min=5.1km az=11.7*
NEIC ***21*** *21:09:24.6±0.0, 17°.29N×94°.72W, $h138^{km}$, mb4.3/6, MD3.8(MEX), After MEX.*
MEX ***21*** *21:09:25.2±0.7, 17°.30N×94°.69W, $h133^{km}{\pm}6^{km}$, MD3.8*
ISC 21 21:09:22.3±0.8, **17°.34N**±0°.05×**94°.71W**±0°.04, **$h142^{km}$**$\pm7^{km}$, **n24**, σ1^s.**32**/41, **Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.30	213	*e*Pn	Pn	21 09 43.0	+1.0
CMIG				*e*Sn	Sn	21 09 55.8	-1.1
CMIG	Matias Romero	0.30	213	*e*P	Pn	21 09 43.0	+1.0
CMIG				*e*S	Sn	21 09 55.8	-1.1
TUIG	Tuzandepetl	0.74	22	*e*Pn	Pn	21 09 45.3	+1.0
TUIG				*e*Sn	Sn	21 10 00.4	-0.6
TUIG	Tuzandepetl	0.74	22	*e*P	Pn	21 09 45.3	+1.0
TUIG				*e*S	Sn	21 10 00.4	-0.6
TGIG		1.62	110	*e*Pn	Pn	21 09 53.4	+0.7
TGIG				*e*Sn	Sn	21 10 14.9	-1.0
TGIG		1.62	110	*e*P	Pn	21 09 53.4	+0.7
TGIG				*e*S	Sn	21 10 14.9	-1.0
VHO	Vista Hermosa	1.95	262	*e*Pn	Pn	21 09 57.7	+1.1
VHO				*e*Sn	Sn	21 10 22.9	0.0
VHO	Vista Hermosa	1.95	262	*e*P	Pn	21 09 57.7	+1.1
VHO				*e*S	Sn	21 10 22.9	0.0
HUIG	Huatulco	2.06	221	*e*Pn	Pn	21 09 56.8	-1.0
HUIG				*e*Sn	Sn	21 10 24.5	-0.4
HUIG	Huatulco	2.06	221	*e*P	Pn	21 09 56.8	-1.0
HUIG				*e*S	Sn	21 10 24.5	-0.4
PCIG		2.17	138	*e*Pn	Pn	21 09 59.9	+0.9
PCIG				*e*Sn	Sn	21 10 25.8	-1.4
PCIG		2.17	138	*e*P	Pn	21 09 59.9	+0.9
PCIG				*i* S	Sn	21 10 25.8	-1.4
CCIG	Comitan	2.68	113	*e*Pn	Pn	21 10 06.5	+0.9
CCIG				*e*Sn	Sn	21 10 37.8	-1.0
CCIG	Comitan	2.68	113	*i* P	Pn	21 10 06.5	+0.9
CCIG				*i* S	Sn	21 10 37.8	-1.0
LVIG	Laguna Verde	2.87	326	*e*Pn	Pn	21 10 08.0	+0.3
LVIG				*e*Sn	Sn	21 10 41.3	-1.5
TLIG	Tlapa	3.69	274	*e*Pn	Pn	21 10 19.5	+1.1
TLIG				*e*Sn	Sn	21 11 00.8	-1.0
TEIG	Tepich	6.74	64	*e*Pn	Pn	21 10 57.5	-1.3
TEIG				*e*Sn	Sn	21 12 13.1	-1.3
TGUH	Tegucigalpa,Un	7.87	113	*e*Pn	Pn	21 11 16.9	+2.8
061Z	Ochoppi	15.38	54	*e*Pn	Pn	21 12 50.3	-1.5
	56nm,0.9s						
ABTX	Abilene, Hawle	15.85	345	*e*Pn	Pn	21 12 58.0	+0.3
	4.7nm,1.3s						
PLAL	Pickwick Lake	18.54	17	*e*P	P	21 13 26.2	-1.8
	4.4nm,1.2s						
AMTX	Amarillo	18.55	342	*e*P	Pn	21 13 31.1	+1.0
	17nm,0.3s						
HSIG		18.89	311	*e*P	P	21 13 29.4	-2.5
	11nm,1.1s						
DOT	Dot Lake	57.13	336	*e*P	P	21 18 57.2	+3.4
	11nm,1.2s						

ISCJB ***21*** *21:24:45.0±0.8, 37°.05N±0°.03×20°.94E±0°.02, $h13^{km}{\pm}6^{km}$, mb3.5/7, Error ellipse: s-maj=4.5km s-min=2.8km az=22.1*
IDC ***21*** *21:24:45.0±1.2, 37°.32N×21°.19E, $h0^{km}$, mb3.5/7, mb1 3.5/11, mb1mx3.4/48, mbtmp3.4/11, ML3.4/4, MS2.6/1, Ms1 2.5/1, ms1mx1.9/34, Error ellipse: s-maj=21.8km s-min=20.8km az=97.0*
ATH ***21*** *21:24:46.5, 37°.11N×21°.14E, $h10^{km}{\pm}2^{km}$, ML3.5/15, Error ellipse: s-maj=2.7km s-min=0.9km az=42.0*
THE ***21*** *21:24:47.9, 37°.12N×21°.18E, $h0^{km}{\pm}1^{km}$, ML3.4/5, Error ellipse: s-maj=1.6km s-min=0.6km az=220.0*
BEO ***21*** *21:24:49.7±0.8, 37°.29N×20°.93E, $h10^{km}$, ML3.3/5*
ISC 21 21:24:47.0±1.0, **37°.15N**±0°.02×**21°.13E**±0°.03, **$h16^{km}$**$\pm7^{km}$, **n151**, σ1^s.**45**/200, **mb3.6**/7, **4C**, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.55	117	P	Pg	21 24 57.5	-0.4
PYL				S	Sg	21 25 05.2	-0.1
	7µm,0.2s						
PYL	PYLOS	0.55	117	P	Pg	21 24 57.3	-0.6
PYL				S	Sg	21 25 05.3	0.0
PYL				AML	AML	21 25 06.7	
	comp=E,25770µm,0.5s						
PYL				AML	AML	21 25 07.7	
	comp=N,14293µm,0.2s						
AMT	Artemida-Makis	0.60	50	P	Pb	21 24 59.3	+0.2
AMT				S	Sb	21 25 07.8	+0.4
AMT	Artemida-Makis	0.60	50	P	Pg	21 24 58.4	-0.4
AMT				S	Sb	21 25 08.0	+0.6
AMT				AML	AML	21 25 11.9	
	comp=N,45077µm,0.6s						
AMT				AML	AML	21 25 12.0	
	comp=E,41307µm,0.5s						
ZKS	Zakynthos	0.61	334	P	Pn	21 25 00.4	-0.6
ZKS				S	Sn	21 25 10.6	+0.1
ITM	Ithomi	0.64	87	P	Pg	21 24 58.5	-1.1
ITM				S	Sg	21 25 07.6	-0.5
	comp=E,8µm,0.4s						
ITM	Ithomi	0.64	87	P	Pg	21 24 58.3	-1.2
ITM				S	Sg	21 25 07.2	-0.9
ITM				AML	AML	21 25 08.5	
	comp=N,18503µm,0.3s						
ITM				AML	AML	21 25 08.9	
	comp=E,13808µm,0.5s						
VTN	Vitineika	0.77	3	P	Pn	21 25 03.0	-0.1
VLMS	Volimes, Zakyn	0.81	333	P	Pn	21 25 03.2	-0.6
VLMS				AML	AML	21 25 22.1	
	comp=E,6058µm,0.3s						
VLMS				AML	AML	21 25 25.0	
	comp=N,7595µm,0.4s						
DRO	Drossia	0.93	30	P	Pb	21 25 04.7	0.0
DRO				S	Sn	21 25 19.3	+1.0
DRO	Drossia	0.93	30	P	Pg	21 25 04.3	-0.7
DRO				S	Sn	21 25 19.0	+0.7
DRO				AML	AML	21 25 23.8	
	comp=N,26114µm,0.5s						
DRO				AML	AML	21 25 26.5	
	comp=E,22051µm,0.5s						
RLS	Riolos of Patr	0.95	16	P	Pb	21 25 05.1	+0.1
RLS				S	Sn	21 25 20.9	+2.1
RLS	Riolos of Patr	0.95	16	P	Pg	21 25 04.8	-0.6
RLS				S	Sn	21 25 19.4	+0.6
RLS				AML	AML	21 25 23.7	
	comp=N,4300µm,0.4s						
RLS				AML	AML	21 25 24.6	
	comp=E,4440µm,0.4s						
TRIP	Tripoli	0.99	67	P	Pg	21 25 05.0	-1.2
TRIP				S	Sn	21 25 20.8	+0.9
	comp=E,2µm,0.5s						
TRIP	Tripoli	0.99	67	P	Pg	21 25 04.9	-1.2
TRIP				S	Sb	21 25 19.1	+0.6
TRIP				AML	AML	21 25 25.6	
	comp=N,3504µm,0.5s						
TRIP				AML	AML	21 25 34.5	
	comp=E,2593µm,0.7s						
KFL	Anninata	1.00	344	P	Pn	21 25 06.4	+0.1
KFL				S	Sn	21 25 22.0	+2.0
KFL	Anninata	1.00	344	P	Pn	21 25 06.1	-0.2
KFL				S	Sn	21 25 21.3	+1.3
KFL				AML	AML	21 25 25.9	
	comp=E,4788µm,0.3s						
KFL				AML	AML	21 25 28.1	
	comp=N,3785µm,0.4s						
VLX	Vlachokerasia	1.02	77	P	Pb	21 25 05.6	-0.8
VLX				S	Sn	21 25 20.9	+0.1
VLX	Vlachokerasia	1.02	77	P	Pb	21 25 05.5	-0.9
VLX				S	Sb	21 25 19.8	+0.2
VLX				AML	AML	21 25 23.8	
	comp=E,10870µm,0.5s						
VLX				AML	AML	21 25 25.2	
	comp=N,7761µm,0.7s						
DYR	Agios Nikonas	1.04	111	P	Pb	21 25 06.2	-0.4
DYR				S	Sg	21 25 20.5	-0.2
DYR	Agios Nikonas	1.04	111	P	Pb	21 25 05.9	-0.7
DYR				S	Sb	21 25 20.0	0.0
DYR				AML	AML	21 25 22.5	
	comp=N,1994µm,0.4s						
DYR				AML	AML	21 25 22.7	
	comp=E,1892µm,0.3s						
VLS	Valsamata	1.11	338	P	Pn	21 25 08.3	+0.4
VLS				S	Sn	21 25 26.8	+3.9
VLS	Valsamata	1.11	338	P	Pg	21 25 07.8	-0.6
VLS				S	Sn	21 25 23.4	+0.5
VLS				AML	AML	21 25 38.2	
	comp=E,2102µm,0.8s						
VLS				AML	AML	21 25 40.2	
	comp=N,2565µm,0.4s						
KLV	Kalavryta, Ach	1.21	42	P	Pg	21 25 10.4	+0.1
KLV				S	Sn	21 25 27.5	+2.2
KLV	Kalavryta, Ach	1.21	42	P	Pb	21 25 09.5	0.0
KLV				S	Sg	21 25 25.3	-0.8
KLV				AML	AML	21 25 30.8	
	comp=N,2126µm,0.8s						
KLV				AML	AML	21 25 33.1	
	comp=E,1845µm,0.6s						
GUR	Goura	1.25	50	P	Pb	21 25 10.2	0.0
GUR				S	Sg	21 25 29.0	+1.7
GUR	Goura	1.25	50	P	Pn	21 25 09.5	-0.3
GUR				S	Sg	21 25 27.4	+0.2
GUR				AML	AML	21 25 32.8	
	comp=E,5129µm,0.8s						
GUR				AML	AML	21 25 35.0	
	comp=N,6379µm,0.5s						
UPR	University Cam	1.25	25	P	Pg	21 25 11.7	+0.7
LAKA	Lakka	1.28	32	P	Pg	21 25 12.2	+0.5
LAKA				S	Sg	21 25 31.5	+3.1
	comp=N,2µm,0.9s						
TRAZ	Trapeza	1.33	40	P	Pg	21 25 12.8	+0.1
TRAZ				S	Sg	21 25 31.6	+1.5
TRAZ	Trapeza	1.33	40	P	Pb	21 25 11.6	0.0
ALIK	Aliki, Aigiali	1.36	35	P	Pg	21 25 13.3	+0.2
FSK	Fiskardo	1.38	341	P	Pg	21 25 12.8	-0.8
FSK				S	Sg	21 25 34.7	+3.1
FSK	Fiskardo	1.38	341	P	Pg	21 25 12.8	-0.8
TRIZ	Trizonia	1.43	31	P	Pb	21 25 13.4	+0.2
TRIZ	Trizonia	1.43	31	P	Pg	21 25 13.5	-0.9
SERG	Sergoula	1.46	30	P	Pg	21 25 14.1	-1.0
SERG				S	Sg	21 25 35.0	+0.9
KALE	Kalithea	1.48	33	P	Pb	21 25 14.3	+0.2
KALE	Kalithea	1.48	33	P	Pg	21 25 14.5	-0.9
PVO	Paravola	1.50	12	P	Pg	21 25 16.1	+0.3
PVO				S	Sg	21 25 35.9	+0.6
	comp=N,905nm,0.5s						
THAL	Thalero	1.51	54	P	Pg	21 25 15.6	-0.4
THAL				S	Sg	21 25 36.8	+1.2
VLI	Veliai	1.51	106	P	Pb	21 25 14.7	+0.1
VLI	Veliai	1.51	106	P	Pb	21 25 14.4	-0.2
VLI				S	Sb	21 25 34.0	+0.5
VLI				AML	AML	21 25 42.0	
	comp=E,2437µm,0.5s						
VLI				AML	AML	21 25 44.1	
	comp=N,2080µm,0.9s						
ANX	Ano Chora	1.57	23	P	Pg	21 25 17.1	-0.1
ANX				S	Sg	21 25 38.0	+0.3
KRND	KRANIDI	1.63	81	P	Pb	21 25 16.7	+0.1
DSF	Desfina	1.68	41	P	Pg	21 25 18.3	-1.0
DSF	Desfina	1.68	41	P	Pb	21 25 18.0	+0.5
LKD2	Lefkada island	1.68	347	P	Pb	21 25 17.9	+0.4
LKD2				S	Sg	21 25 42.4	+1.3
LKD2	Lefkada island	1.68	347	P	Pg	21 25 19.4	+0.1
LOUT	Loutraki	1.69	60	P	Pb	21 25 18.1	+0.4
TSLK	Tsoukalades, L	1.71	348	P	Pg	21 25 19.0	-0.9
DID	Didima	1.72	77	P	Pb	21 25 17.7	-0.5
DID	Didima	1.72	77	P	Pb	21 25 18.2	0.0
DID				S	Sg	21 25 41.5	-0.9
DID				AML	AML	21 25 45.9	
	comp=N,1733µm,0.5s						
DID				AML	AML	21 25 47.2	
	comp=E,1583µm,0.6s						
KTHR	Kythira	1.75	120	P	Pb	21 25 19.3	+0.6
KTHR				S	Sb	21 25 40.3	-0.1
PROD	Prodromos	1.79	51	P	Pb	21 25 19.3	-0.1
KTHA	Kythira Island	1.79	119	P	Pb	21 25 19.8	+0.4
KTHA	Kythira Island	1.79	119	P	Pb	21 25 19.8	+0.4
EVR	Evrytania	1.84	17	P	Pg	21 25 21.4	-1.0
EVR				S	Sg	21 25 46.3	-0.1
EVR	Evrytania	1.84	17	P	Pg	21 25 21.6	-0.8
VILL	Villia	2.01	59	P	Pb	21 25 22.0	-1.1
AGG	Agios Georgios	2.10	27	P	Pb	21 25 24.7	+0.1
AGG				S	Sb	21 25 50.5	+0.1
LKR	Lokris	2.11	44	P	Pb	21 25 24.3	-0.5
LKR	Lokris	2.11	44	P	Pb	21 25 24.0	-0.7
ATAL	Atalanti	2.15	44	P	Pb	21 25 25.1	-0.4
ANKY	Antikythira Is	2.17	126	P	Pb	21 25 24.7	-1.1
ANKY	Antikythira Is	2.17	126	P	Pn	21 25 24.1	+1.7
ATH	Athens Observa	2.21	67	P	Pb	21 25 25.1	-1.5
VLY	Voula,Athens	2.23	71	P	Pn	21 25 24.4	+1.1
ATHU	Athens Univers	2.26	68	P	Pn	21 25 25.2	+1.5
PTL	Penteli	2.35	67	P	Pb	21 25 27.1	-1.9
SMIA	Simia	2.38	43	P	Pb	21 25 28.1	-1.4
IGT	Igoumenitsa	2.46	346	*e*Pn	Pb	21 25 28.8	-2.0
IGT				*e*Sn	Sn	21 25 55.8	-0.4
IGT	Igoumenitsa	2.46	346	P	Pb	21 25 29.0	-1.8
MRKA	Markates	2.49	51	P	Pn	21 25 29.0	+2.2
THL	Klokotos Trika	2.51	16	P	Pb	21 25 30.7	-1.0
EREA	Eretria	2.56	59	P	Pn	21 25 29.4	+1.6
EREA				S	Sb	21 26 02.9	-0.8
NEO	Neokhori	2.71	37	P	Pn	21 25 32.4	+2.5
XOR	Xorichti	2.75	36	P	Pn	21 25 32.9	+2.5
KEK	Kerkira	2.76	338	P	Pn	21 25 33.1	+2.5
KPRO	Kipourio	2.81	4	P	Pb	21 25 34.1	-2.7
IDI	Anoyia	3.56	120	Pn	Pn	21 25 42.8	+1.1
	comp=E,0.3nm,0.3s,baz=245,slow=14,SNR=2.8						
IDI				Sn	Sn	21 26 21.9	-1.5

	comp=E,4.9nm,0.3s,baz=324,slow=10,SNR=6.2						
OHR	Ohrid	3.96	356	*i* Pn	Pb	21 25 57.6	+1.1
TIP	Timpagrande	4.00	302	⇑*i*P	Pn	21 25 51.3	+3.7
KNT	Kendrikon	4.24	18	P	Pn	21 25 53.5	+2.7
TIR	Tirane	4.31	347	*e*Pn	Pn	21 25 52.9	+1.1
VAY	Valandovo	4.31	15	*i* Pn	Pn	21 25 52.1	+0.2
SRS	Serrai	4.40	25	*e*Pn	Pn	21 25 54.8	+1.7
SKO	Skopje	4.82	3	*i* Pn	Pn	21 26 00.4	+1.5
DRME	Dracevica, Mon	5.25	344	*e*Pn	Pn	21 26 05.6	+0.9
VAE	Valguarnera	5.36	276	Pn	Pn	21 26 05.6	-0.8
	comp=E,1.0nm,0.3s,baz=74,slow=7.4,SNR=3.6						
VAE				Sn	Sn	21 27 07.5	-0.3
	comp=E,1.0nm,0.3s,baz=216,slow=19,SNR=2.4						
PDG	Podgorica	5.47	345	*e*Pn	Pn	21 26 08.6	+0.9
PDG	Podgorica	5.47	345	*e*Pn	Pn	21 26 08.4	+0.7
HCY	Herceg Novi	5.67	340	*e*Pn	Pn	21 26 09.8	-0.7
PLD	Plovdiv	5.67	28	*e*Pn	Pn	21 26 13.2	+2.7
BARS	Barje	5.69	5	*e*Pn	Pn	21 26 11.6	+0.9
VTS	Vitosha	5.70	16	*e*Pn	Pn	21 26 12.5	+1.5
VTS				*e*Sn	Sn	21 27 14.2	-2.0
VTS	Vitosha	5.70	16	⇑*i*P	Pn	21 26 13.0	+2.0
TREB	Trebinje	5.96	340	*e*Pn	Pn	21 26 14.3	-0.2
TREB				*e*Sn	Sn	21 27 18.9	-3.4
TREB	Trebinje	5.96	340	*e*Pn	Pn	21 26 14.4	-0.1
DBRK	Dubrovnik	5.97	338	*e*Pn	Pn	21 26 14.7	0.0
DBRK				Sn	Sn	21 27 21.1	-1.6
SELS	Selova	6.06	360	*e*Pn	Pn	21 26 15.9	-0.1
BRY	Bratogost	6.08	342	*e*Pn	Pn	21 26 16.1	-0.2
SJES	Sjenica	6.17	352	*e*Pn	Pn	21 26 17.8	+0.3
ZAPS	Zavoj	6.22	10	*e*Pn	Pn	21 26 20.2	+2.0
UPM	Unac-Piva	6.28	345	*e*Pn	Pn	21 26 20.5	+1.4
STON	Ston	6.29	336	*e*Pn	Pn	21 26 19.1	+0.1
STON				*e*Sn	Sn	21 27 26.4	-4.1
STON	Ston	6.29	336	*e*Pn	Pn	21 26 19.1	+0.1
STON	Ston	6.29	336	*e*Pn	Pn	21 26 18.9	-0.1
IVAS	Ivanjica	6.46	354	*e*Pn	Pn	21 26 21.6	+0.1
BOVS	Bovan	6.49	4	*e*Pn	Pn	21 26 23.2	+1.4
RUDO	Rudo	6.60	349	*e*Pn	Pn	21 26 21.1	-2.2
GRUS	Gruza	6.74	357	*e*Pn	Pn	21 26 25.4	+0.2
BBLS	Lazići	6.84	349	*e*Pn	Pn	21 26 27.5	+0.9
BBLS	Lazići	6.84	349	*e*Pn	Pn	21 26 25.7	-0.9
MAKA	Makarska	6.89	334	*e*Pn	Pn	21 26 27.5	+0.3
MAKA				Sn	Sn	21 27 43.8	-1.4
DIVS	Divibare	7.00	353	*e*Pn	Pn	21 26 28.8	0.0
DIVS				*e*Sn	Sn	21 27 44.2	-3.8
DIVS	Divibare	7.00	353	*e*Pn	Pn	21 26 29.0	+0.2
HVAR	Hvar	7.00	331	*e*Pn	Pn	21 26 29.3	+0.5
HAPS	Han Pijesak,BI	7.12	347	*e*Pn	Pn	21 26 30.0	-0.6
ZIRJ	Zirje	7.73	329	*e*Pn	Pn	21 26 38.5	-0.3
ZIRJ				Sn	Sn	21 28 02.4	-3.4
MORI	Morici	7.88	330	*i* Pn	Pn	21 26 41.7	+0.9
MORI				Sn	Sn	21 28 07.9	-1.7
FRGS	Fruska Gora	8.06	353	*e*Pn	Pn	21 26 40.4	-3.0
DUGI	Dugi Otok	8.25	328	*e*Pn	Pn	21 26 45.6	-0.2
DUGI				Sn	Sn	21 28 16.6	-2.1
GZR	Gura Zlata	8.33	8	⇑*i*P	Pn	21 26 48.1	+1.0
ARR	Arges	8.62	17	⇑*i*P	Sn	21 28 21.5	-6.5
NVLJ	Novalja	8.79	329	*i* Pn	Pn	21 26 53.9	+0.5
MLR	Muntele Rosu	9.09	22	Pn	Pn	21 26 52.1	-5.4
	baz=156,slow=19,SNR=1.5						
MORH	Mrgy, Hungar	9.25	349	*e*Pn	Pn	21 26 57.0	-2.6
CRES	Cresnjev	9.65	336	*e*Pn	Pn	21 27 04.9	-0.3
CEY	Cerknica	9.94	332	*e*Pn	Pn	21 27 07.7	-1.5
SOKA	Soboth	10.54	336	*i* Pn	Pn	21 27 17.5	0.0
	comp=E,1.4nm,0.4s,SNR=4.6						
OBKA	Obir	10.56	334	*e*Pn	Pn	21 27 18.4	+0.8
	comp=E,1.0nm,0.3s						
ARSA	Arzberg	10.91	339	*e*Pn	Pn	21 27 23.9	+1.5
	comp=E,0.9nm,0.3s						
VYHS	Vyhne	11.46	352	*e*PN	Pn	21 27 31.8	+1.9
KBA	Koelnbreinsper	11.47	332	*i* Pn	Pn	21 27 32.1	+1.8
	comp=E,0.6nm,0.3s						
ABTA	Abfaltersbach	11.53	329	*e*Pn	Pn	21 27 33.3	+2.3
	comp=E,0.3nm,0.3s						
MOA	Molln	11.82	337	*e*Pn	Pn	21 27 35.5	+0.6
	comp=E,1.0nm,0.3s						
WTTA	Wattenberg	12.30	328	*e*Pn	Pn	21 27 43.8	+2.2
	comp=E,1.0nm,0.4s						
SQTA	Sankt Quirin	12.45	327	*e*Pn	Pn	21 27 47.3	+3.7
	comp=E,0.4nm,0.2s						
RETA	Reutte	12.85	327	*e*Pn	Pn	21 27 53.7	+4.7
	comp=E,1.0nm,0.2s						
GERES	GERESS Array B	12.88	337	Pn	Pn	21 27 47.7	-1.7
	comp=E,0.1nm,0.3s,baz=159,slow=16,SNR=5.5						
KBZ	Khabaz	17.80	62	LR	LR	21 36 46.5	
	comp=E,21nm,21.5s,baz=177,slow=41						
ESDC	Sonseca Array	19.81	285	P	Pn	21 29 18.1	-0.2
	comp=E,0.1nm,0.3s,baz=98,slow=11,SNR=3.4						
HFS	Hagfors	23.49	351	P	P	21 29 54.5	-1.3
	comp=E,0.9nm,0.5s,baz=156,slow=11,SNR=7.7						
FINES	FINESS Array B	24.52	6	P	P	21 30 04.0	-1.3
	comp=E,1.3nm,0.8s,baz=186,slow=10,SNR=7.0						
EKA	Eskdalemuir Ar	24.55	326	P	P	21 30 06.5	+0.8
	comp=E,1.6nm,0.8s,baz=128,slow=8.8,SNR=6.3						
NB2	NORSAR Subarra	24.72	348	P	P	21 30 07.2	-0.1
	comp=Z,4.2nm,1.4s,baz=156,slow=9.3						
NOA	NORSAR Array B	24.72	348	P	P	21 30 05.6	-1.7
	comp=Z,0.3nm,0.6s,baz=156,slow=8.8,SNR=3.3						
TORD	Torodi Ar. Bea	29.55	221	P	P	21 30 52.7	+1.7
	comp=Z,0.2nm,0.5s,baz=30,slow=9.9,SNR=3.7						
ARCES	ARCESS Array B	32.53	3	P	P	21 31 16.4	-0.4
	comp=Z,3.3nm,1.1s,baz=177,slow=9.7,SNR=8.5						
MKAR	Makanchi Array	45.44	58	P	P	21 33 04.0	-1.0
	comp=Z,0.2nm,0.4s,baz=269,slow=7.8,SNR=4.7						

WEL 21 21:41:05.1,42°S±2°×17°4E±°,h5km±2km,M3.1/37, mB6.0/1,ML3.1/19,MLv3.1/37,Mw(mB)5.6/1,Error ellipse: s-maj=0.0km s-min=0.0km az=145.1,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.13	182	P	Pg	21 41 08.5	+0.8
BSWZ	Blackbirch Sta	0.28	250	P	Pg	21 41 11.0	+0.6
TUWZ	Tuamarina	0.28	313	P	Pb	21 41 11.7	-0.9
TCW	Tory Channel	0.41	6	P	Pb	21 41 14.1	-0.8
WEL	Wellington	0.53	51	P	Pb	21 41 16.9	0.0
BHW	Baring Head	0.53	67	P	Pb	21 41 16.7	-0.2
NNZ	Nelson	0.75	302	P	Pg	21 41 19.9	+0.4
PLWZ	Palliser	0.78	87	P	Pn	21 41 22.1	-0.6
MSWZ	Moikau Station	0.80	75	P	Pb	21 41 21.9	+0.5
CAW	Cannon Point	0.82	51	P	Pb	21 41 21.8	+0.1
DUWZ	D'Urville Isla	0.85	345	P	Pb	21 41 22.2	-0.1
PAWZ	Paruwai Farm	0.94	76	P	Pn	21 41 24.8	-0.2
KHZ	Kahutara	0.94	212	P	Pb	21 41 24.3	+0.4
THZ	Tophouse	0.99	261	P	Pg	21 41 24.3	+0.2
MTW	Mount Morrison	1.07	65	P	Pb	21 41 26.4	+0.3
OGWZ	Otaki Gorge	1.08	42	P	Pb	21 41 26.1	-0.1
TRWZ	Traveller	1.12	79	P	Pn	21 41 29.4	+1.9
HOWZ	Holdsworth Sta	1.22	54	P	Pn	21 41 28.8	+0.1
TMWZ	Te Maipa	1.36	68	P	Pg	21 41 32.7	+1.6
MRZ	Mangatainoka R	1.41	47	P	Pn	21 41 31.4	+0.1
QRZ	Quartz Range	1.50	301	P	Pb	21 41 33.5	+0.1
GVZ	Greta Valley S	1.61	213	P	Pg	21 41 36.9	+1.0
PRWZ	Pori Road	1.70	52	P	Pn	21 41 35.7	+0.3
BFZ	Birch Farm	1.79	59	P	Pn	21 41 37.1	+0.4
BFZ				P	Pg	21 41 40.3	+0.8
LTZ	Lake Taylor	1.85	231	P	Pn	21 41 37.7	+0.1
WAZ	Wanganui	1.95	18	P	Pg	21 41 42.3	-0.2
DVHZ	Dannevirke	1.98	49	P	Pg	21 41 44.7	+1.7
PNHZ	Pukenui	2.27	42	P	Pg	21 41 48.9	+0.3
PREZ	Palmer Road	2.28	359	P	Pg	21 41 50.3	+1.6
KHEZ	Kahui Hut	2.33	356	P	Pg	21 41 49.4	-0.3
INZ	Inchbonnie	2.34	241	P	Pb	21 41 46.9	-0.9
MTVZ	Mangateitei	2.43	24	P	Pg	21 41 51.7	+0.1
PKE	Pukeiti	2.43	356	P	Pg	21 41 51.6	-0.1
PKVZ	Pokaka	2.48	21	P	Pb	21 41 50.9	+0.7
MOVZ	Moawhango	2.50	28	P	Pb	21 41 50.9	+0.3
VRZ	Vera Road	2.53	10	P	Pb	21 41 49.6	-1.3
BHHZ	Black Hill Sta	2.55	34	P	Pb	21 41 51.8	+0.4
WHVZ	Whangaehu Hut	2.56	25	P	Pb	21 41 52.4	+0.8
KRHZ	Kereru	2.56	40	P	Pg	21 41 53.1	-1.2
TUVZ	Tukino	2.59	25	P	Pb	21 41 52.5	+0.4
NGZ	Ngauruhoe	2.66	24	P	Pb	21 41 53.8	+0.5
TWVZ	Taurewa	2.71	20	P	Pb	21 41 55.1	+1.0
WTVZ	West Tongariro	2.71	23	P	Pb	21 41 54.8	+0.6
KRVZ	Karewarewa	2.75	24	P	Pb	21 41 55.5	+0.8
KWHZ	Kaweka Forest	2.76	38	P	Pg	21 41 56.8	-1.2
KATZ	Kakaramea	2.87	24	P	Pb	21 41 58.0	+1.1
BKZ	Black Stump Fm	3.00	36	P	Pb	21 41 56.4	-2.7
BKZ				P	Pg	21 42 00.5	-2.2
RPZ	Rata Peaks	3.13	227	P	Pb	21 42 02.2	+0.9
HIZ	Hauiti	3.14	9	P	Pb	21 41 58.9	-2.5
HAZ	Te Kaha	4.74	37	P	Pn	21 42 19.5	+2.4
WMGZ	Waiomatatini S	4.99	42	P	Pn	21 42 21.2	+0.6

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*NEIC **21** 21:43:41.7±0.0,41°14N×33°50E,h4km,mb4.5/9, ML4.1(ISK),After ISK.*

*DDA **21** 21:43:41.9,41°12N×33°53E,h13km±1km,ML4.3*

*ISK **21** 21:43:41.6,41°14N×33°49E,h5km,ML4.2/33*

*IDC **21** 21:43:41.8±0.6,41°11N×33°52E,h0km,mb3.7/10, mb1 3.9/19,mb1mx3.7/54,mbtmp3.8/19,ML3.6/8,MS3.1/14, Ms1 3.1/14,ms1mx2.9/41,Error ellipse: s-maj=8.6km s-min=7.8km az=60.0*

*ISCJB **21** 21:43:41.6±0.4,41°18N±0°01×33°46E±0°02,h5km±3km, mb4.1/27,MS3.1/8,Error ellipse: s-maj=2.2km s-min=1.9km az=34.7*

*MOS **21** 21:43:42.4±1.2,41°21N×33°35E,h9km,mb4.1/9,Error ellipse: s-maj=5.8km s-min=4.0km az=88.5*

ISC 21 21:43:42.7±0.9,**41°15N**±0°02×**33°50E**±0°02,**h7**km±6km, **n263,**σ1s**61**/307,**mb4.2**/27,**MS3.0**/8,**44C-24D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILGA	Ilgaz	0.19	121	*e*Pg	Pg	21 43 46.0	-0.7
ILGA				*e*Sg	Sg	21 43 49.1	-0.3
ILGA	Ilgaz	0.19	121	⇓*i*P	Pg	21 43 47.0	+0.3
ILGA				*i* S	Sg	21 43 49.7	+0.3
TOS	Tosya	0.41	106	PG	Pg	21 43 49.9	-0.9
TOS				SG	Sg	21 43 55.9	-0.3
CANT	Cankiri	0.55	170	PG	Pg	21 43 52.8	-0.6
CANT				SG	Sg	21 44 00.6	0.0
SAFT	Safranbolu	0.62	279	PG	Pg	21 43 53.8	-0.8
SAFT				SG	Sg	21 44 02.6	0.0
ELDT	Eldivan	0.66	185	⇑*i*P	Pg	21 43 55.3	-0.2
ELDT				*i* S	Sb	21 44 05.1	-1.0
KAGI	orum-Kargı	0.74	91	⇑*i*P	Pg	21 43 56.6	-0.4
KAGI				*i* S	Sb	21 44 07.8	-0.4
KAGI				IAML_P			
	comp=Z,68µm,0.2s						
BZK	Bozkurt	0.89	25	PG	Pg	21 43 59.7	-0.2
KURC	Kurucasile-Bar	0.90	321	PG	Pg	21 43 59.5	-0.4
CMDR	Camlidere-ANKA	1.01	230	⇑*i*P	Pg	21 44 01.4	-0.8
CMDR				*i* S	Sn	21 44 20.6	+2.6
BTIN	Bartın	1.05	298	⇓*i*P	Pg	21 44 02.0	-0.9
BTIN				*i* S	Sn	21 44 19.9	+1.1
BCAM	Yenicaga	1.13	253	⇑*i*P	Pg	21 44 04.3	-0.2
BCAM				*i* S	Sn	21 44 22.0	+1.1
DELI	KIRIKKALE	1.20	164	⇓*i*P	Pg	21 44 03.9	-1.8
DELI				*i* S	Sg	21 44 20.4	-0.7
CORM	Corum	1.30	138	PN	Pn	21 44 06.0	-1.3
LOD	Lodumlu	1.38	204	PN	Pn	21 44 07.5	-0.9
ANTO	Ankara	1.39	203	PN	Pn	21 44 07.7	-0.8
ANTO	Ankara	1.39	203	*e*Pn	Pn	21 44 08.4	-0.1
ANTO				*e*Pg	Pb	21 44 08.8	-0.2
ANTO				*e*Sn	Sb	21 44 26.2	-0.7
ANTO	Ankara	1.39	203	⇑*i*P	Pn	21 44 07.7	-0.8
ANTO	Ankara	1.39	203	*e*P	Pn	21 44 08.4	-0.1
ANTO				*e*		21 44 26.2	
DIKM	Dikmen	1.42	69	PN	Pn	21 44 08.6	-0.2
DIKM	Dikmen	1.42	69	⇓*i*P	Pn	21 44 08.2	-0.6
DIKM				S	Sb	21 44 25.2	-2.4
BR231	Keskin MP Arra	1.42	203	*e*Pn	Pn	21 44 08.4	-0.6
BR231				*e*Sn	Sn	21 44 27.8	-0.1
BR131	Keskin Array S	1.43	176	*e*Pn	Pn	21 44 08.0	-1.2
BR131				*e*Sg	Sb	21 44 26.5	-1.6
BRTR	Keskin Array B	1.43	176	Pg	Pn	21 44 07.9	-1.2
	comp=Z,164nm,0.3s,baz=357,slow=14,SNR=951						
BRTR				LR	LR	21 44 20.9	
	comp=Z,355nm,19.4s,baz=332,slow=28						
BRTR				Lg	Lg	21 44 27.9	
	comp=Z,1µm,0.3s,baz=44,slow=12,SNR=66						
COAL	Corum-Alaca	1.44	128	⇓*i*P	Pn	21 44 09.1	-0.2
COAL				*i* S	Sg	21 44 29.0	-0.1
KIBS	BOLU	1.45	240	⇑*i*P	Pb	21 44 09.9	-0.1
KIBS				*i* S	Sg	21 44 31.6	+2.4
KDZE	Karadeniz Ereo	1.56	277	PN	Pn	21 44 10.8	0.0
YIGI	Dzce	1.56	264	*i* P	Pb	21 44 11.8	0.0
YIGI				*i* S	Sg	21 44 32.9	+0.1
CDAG	Cicekdag	1.67	156	⇓*i*P	Pn	21 44 12.8	+0.5
CDAG				*i* S	Sn	21 44 34.2	+0.2
CDAG				IAML_P			
	comp=Z,18µm,0.2s						
HAVZ	Havza	1.68	92	⇑*i*P	Pb	21 44 13.4	-0.6
HAVZ				*i* S	Sg	21 44 37.5	+0.8
AMSY	Amasya-Merkez	1.85	105	⇑*i*P	Pb	21 44 16.3	-0.4
AMSY				*i* S	Sg	21 44 42.2	+0.2
MDUB	Mudurnu	1.87	249	PN	Pn	21 44 15.5	+0.3
MDUB	Mudurnu	1.87	249	*e*Pn	Pn	21 44 15.8	+0.6
MDUB				*e*Sn	Sg	21 44 42.1	-0.8
KVT	Kavak	1.93	91	PN	Pn	21 44 16.6	+0.7
BTAS	Taskesti	1.98	254	*i* P	Pn	21 44 17.6	+1.0
BTAS				*i* S	Sg	21 44 50.0	+3.7
AUMIH	MIHALICIK	2.00	231	*i* P	Pb	21 44 19.6	+0.1
AUMIH				*i* S	Sg	21 44 48.5	+1.5
SAHE	Sakarya_HENDEK	2.02	262	*i* P	Pb	21 44 18.6	-1.1
SAHE				*i* S	Sg	21 44 46.3	-1.3
KKUL	Konya-Kulu	2.03	193	*i* P	Pn	21 44 17.7	+0.4
KKUL				*i* S	Sg	21 44 49.2	+1.4
SAMS	Samsun-Alacam	2.04	83	*i* P	Pn	21 44 18.1	+0.8
SAMS				*i* S	Sg	21 44 49.1	+0.8
SAMS				IAML_P			
	comp=Z,5µm,0.4s						
KIRS	Kırehir-Merke	2.04	171	*i* P	Pn	21 44 17.6	+0.1
KIRS				*i* S	Sb	21 44 44.9	-0.8
YOZ	Yozgat	2.05	137	PN	Pn	21 44 17.0	-0.7
SIRC	Yozgat	2.21	145	⇓*i*P	Pn	21 44 20.7	+0.8
SIRC				*i* S	Sb	21 44 51.6	+1.0
SVRH	Sivrihisar-ESK	2.27	222	PN	Pn	21 44 20.6	-0.1
GULT	Gulveren	2.37	253	PN	Pn	21 44 22.1	0.0
TOKA	Tokat	2.41	109	*i* P	Pb	21 44 24.5	-1.9
TOKA				*i* S	Sb	21 44 56.4	0.0
SAUV	Serdivan-Sakar	2.44	261	PN	Pn	21 44 23.3	+0.5
SRCK	Saricakaya, Es	2.45	244	PN	Pn	21 44 22.9	-0.2
SPNC	Sapanca-Adapaz	2.46	260	PN	Pn	21 44 23.5	+0.3
TOKT	Tokat	2.46	109	PN	Pn	21 44 23.7	+0.5
TOKT	Tokat	2.46	109	*e*Pn	Pn	21 44 23.9	+0.6
CIFT	Cifteler, Eski	2.58	227	PN	Pn	21 44 25.1	+0.2
KIZT	Kizilcal	2.58	209	PN	Pn	21 44 24.8	-0.2
ESKT	Eskisehir	2.60	232	PN	Pn	21 44 25.5	+0.3
ESKT	Eskisehir	2.60	232	*e*Pn	Pn	21 44 26.0	+0.8
SILT	Sile	2.91	271	PN	Pn	21 44 29.6	+0.3
HRT	Hereke	2.92	265	PN	Pn	21 44 29.3	-0.2
BNN	Bunyan	2.92	141	PN	Pn	21 44 30.7	+1.0
BNN	Bunyan	2.92	141	*e*Pn	Pn	21 44 30.6	+1.0
ADVT	Abdulvahap	2.94	257	PN	Pb	21 44 34.9	-0.5
SULT	Sultanhani-AKS	2.95	180	PN	Pn	21 44 30.8	+0.8
LADK	Ladik-KONYA	3.07	197	PN	Pn	21 44 31.7	0.0
NIG	Nigde	3.16	164	*e*Pn	Pn	21 44 33.7	+0.7
YLV	Yalova	3.18	261	PN	Pn	21 44 33.4	+0.2
YLV	Yalova	3.18	261	⇓*i*P	Pn	21 44 35.8	+2.6
YLV	Yalova	3.18	261	P	Pn	21 44 35.8	+2.6
KONT	Konya--Tatoy	3.32	196	PN	Pn	21 44 35.2	+0.2
GEMT	Gemlik	3.35	259	PN	Pn	21 44 36.2	+0.8
ISK	Istanbul-Kandi	3.35	270	PN	Pn	21 44 36.2	+0.8
KAVV	Kandilli-Istan	3.35	270	PN	Pn	21 44 36.2	+0.8
KLYT	Kilyos	3.36	273	PN	Pn	21 44 36.5	+0.9
YAL	Yalta	3.37	8	⇑*i*P	Pn	21 44 36.7	+1.0
YAL				*e*S	Sn	21 45 17.8	+1.9
SEV	Sevastopol'	3.40	2	*e*P	Pn	21 44 35.5	-0.5
SEV				*e*S	Sn	21 45 16.3	-0.2
SHUT	Suhut-Afyon	3.44	222	PN	Pn	21 44 37.6	+0.8
TVSB	Tavsanli	3.52	242	PN	Pn	21 44 38.2	+0.3
ARMT	Armutlu	3.56	262	PN	Pn	21 44 39.3	+0.9
MDNY	Mudanya-Bursa	3.59	259	PN	Pn	21 44 39.6	+0.9
ALU	Alushta	3.59	10	*e*P	Pn	21 44 39.9	+1.2
ALU				*e*S	Sn	21 45 24.0	+2.7
SIM	Simferopol'	3.82	7	*de*P	Pn	21 44 43.2	+1.3
SIM				S	Sn	21 45 27.7	+0.6
SIM				smax	smax		
	comp=E,602nm,1.0s						
SUDU	Sudak	3.90	16	⇑*i*P	Pn	21 44 43.7	+0.8
SUDU				*e*S	Sn	21 45 31.0	+2.1
DARE	Darende-Malaty	4.01	129	PN	Pn	21 44 45.6	+1.1
ISP	Isparta	4.04	216	*e*Pn	Pn	21 44 44.1	-0.9
ISP	Isparta	4.04	216	⇓*i*P	Pn	21 44 45.5	+0.5
ISP	Isparta	4.04	216	*e*P	Pn	21 44 44.1	-0.9
KARA	Karaisali	4.07	162	PN	Pn	21 44 46.4	+1.1
FEO	Feodosiya	4.11	19	*e*P	Pn	21 44 47.1	+1.3
FEO				*e*S	Sn	21 45 37.0	+3.0
TSMN	Mangalia Port-	4.49	308	⇑*i*P	Pn	21 44 51.8	+0.8
MANR	Mangalia	4.50	308	⇑*i*P	Pn	21 44 52.9	+1.7
PHSR	Pinarhisar	4.52	278	⇑*i*P	Pn	21 44 53.9	+2.4
BALB	Balikesir	4.55	252	*e*Pn	Pn	21 44 51.2	-0.6
EFOR	EFORIE	4.63	311	⇑*i*P	Pn	21 44 54.6	+1.6
EFOR	EFORIE	4.63	311	S	Sn	21 45 48.6	+1.7
MANT	Manisa	4.64	237	*e*Pn	Pn	21 44 52.7	-0.6
MANT				*e*Sn	Sn	21 45 44.8	-2.8
ANN	Anapa	4.65	37	*e*P	Pn	21 44 53.9	+0.6
ANN				*e*S	Sn	21 45 48.0	+0.5
ANN				pmax	pmax		
	comp=Z,76nm,1.2s						
ANN				MLR	MLR		
	comp=Z,93nm,9.0s						
TSCT	Constanta Port	4.67	312	⇑*i*P	Pn	21 44 55.1	+1.6
KERU	Kerch	4.69	27	*e*P	Pn	21 44 56.7	+2.9
TIRR	Tirgusor	4.99	313	*e*Pn	Pn	21 44 58.7	+0.8
TIRR				*e*Sn	Sn	21 45 55.9	+0.1
TIRR	Tirgusor	4.99	313	⇑*i*P	Pn	21 44 58.1	+0.2
TIRR	Tirgusor	4.99	313	S	Sn	21 45 56.9	+1.1
TIRR	Tirgusor	4.99	313	*e*P	Pn	21 44 58.7	+0.8
TIRR				*e*		21 45 55.9	
CVDA	Cernavoda	5.12	310	⇑*i*P	Pn	21 45 02.3	+2.5
ICOR	Ion Corvin	5.14	307	⇑*i*P	Pn	21 45 01.9	+1.9
TLB	Topalu	5.28	312	⇑*i*P	Pn	21 45 02.4	+0.5
TLB	Topalu	5.28	312	S	Sn	21 46 03.6	+0.7
TLCR		5.29	321	⇓*i*P	Pn	21 45 02.5	+0.5
TLCR		5.29	321	P	Pn	21 45 02.5	+0.5
HARR	Harsova	5.40	313	⇑*i*P	Pn	21 45 04.3	+0.7
RASA	Rasa	5.59	305	⇓*i*P	Pn	21 45 08.4	+2.2
CFR	Carcaliu	5.62	318	⇑*i*P	Pn	21 45 06.6	+0.1
CFR	Carcaliu	5.62	318	S	Sn	21 46 11.8	+0.5
ALN	Alexandroupoli	5.64	270	*e*Pn	Pn	21 45 06.9	0.0
ALN				*e*Sn	Sn	21 46 07.8	-4.1
ALN	Alexandroupoli	5.64	270	*e*P	Pn	21 45 06.9	0.0
ALN				*e*		21 46 07.8	
AMRR	Amara	5.70	309	⇑*i*P	Pn	21 45 08.7	+1.1
GIUM	Giurgiulesti	5.80	320	⇑*i*P	Pn	21 45 09.8	+0.8
ELND	Elena	5.95	290	⇑*i*P	Pn	21 45 10.4	-0.7
TUDR		6.14	318	⇓*i*P	Pn	21 45 15.4	+1.6
SULR		6.38	306	⇑*i*P	Pn	21 45 18.8	+1.8
DOMR	Dombai	6.40	68	*ce*P	Pn	21 45 21.1	+3.6
DOMR				pmax	pmax		
	comp=Z,61nm,0.3s						
ISR	Istrita	6.45	310	⇓*i*P	Pn	21 45 20.1	+2.1
PETR	Petresti	6.46	317	⇓*i*P	Pn	21 45 19.3	+1.3
ODBI	Odobesti	6.57	317	⇓*i*P	Pn	21 45 20.8	+1.1
BISRR	Bisoca	6.62	314	⇑*i*P	Pn	21 45 22.9	+2.6
BIR	Birlad	6.65	322	⇑*i*P	Pn	21 45 21.8	+1.1
MILM	Milestii Mici	6.68	331	⇑*i*P	Pn	21 45 20.0	-1.1
SECR		6.68	308	⇑*i*P	Pn	21 45 22.6	+1.4
KIS	Kishinev	6.75	332	*e*P	Pn	21 45 22.0	0.0
KIS				*e*S	Sn	21 46 40.0	+0.9
KIS	Kishinev	6.75	332	*e*P	Pn	21 45 22.0	0.0
KIS				*e*S	Sn	21 46 40.0	+0.9
COPA	Copaceanca	6.79	299	⇑*i*P	Pn	21 45 24.3	+1.6
VRI	Vrincioaia	6.81	316	⇑*i*P	Pn	21 45 24.8	+1.8
VRI	Vrincioaia	6.81	316	P	Pn	21 45 25.6	+2.6
ERBR	Yeremizino-Bor	6.83	46	*e*P	Pn	21 45 25.8	+2.6
PLOR	Plostina	6.84	316	⇓*i*P	Pn	21 45 25.4	+2.0
PLOR	Plostina	6.84	316	P	Pn	21 45 25.3	+1.9
PLVB	Pleven	6.95	292	⇑*i*P	Pn	21 45 25.7	+0.8
MLR	Muntele Rosu	7.01	311	Pn	Pn	21 45 27.4	+1.7
	comp=Z,1.7nm,0.3s,baz=16,slow=7.4,SNR=30						
MLR				Sn	Sn	21 46 47.0	+1.3
	baz=145,slow=18,SNR=2.1						
MLR				LR	LR	21 48 48.2	
	comp=Z,184nm,21.7s,baz=118,slow=44						
MLR	Muntele Rosu	7.01	311	*e*Pn	Pn	21 45 27.4	+1.7
MLR				*e*Sn	Sn	21 46 45.0	-0.7
MLR	Muntele Rosu	7.01	311	⇓*i*P	Pn	21 45 27.5	+1.7
HUMR	Humele	7.11	301	⇓*i*P	Pn	21 45 29.3	+2.2
NEY	Neytrino	7.17	70	*i* P	Pn	21 45 31.1	+3.1
SHA1	Shidzhatmaz	7.25	66	*e*P	Pn	21 45 33.3	+4.1
GOLR		7.26	303	⇑*i*P	Pb	21 45 42.9	-6.1
KIV	Kislovodsk	7.34	65	*e*Pn	Pn	21 45 29.0	-1.3
KIV	Kislovodsk	7.34	65	*e*P	Pn	21 45 34.3	+4.0
KIV				pmax	pmax		
	comp=Z,44nm,0.9s						
KIV				MLR	MLR		
	comp=Z,84nm,10.0s						
KVAR	Kislovodsk Arr	7.35	65	Pn	Pn	21 45 31.8	+1.4
	baz=252,slow=20,SNR=4.0						
IAS	Iasi	7.39	327	⇓*i*P	Pn	21 45 31.0	+0.1
KBZ	Khabaz	7.42	67	Pn	Pn	21 45 32.3	+1.1
	comp=Z,0.1nm,0.3s,baz=243,slow=6.8,SNR=2.9						
KBZ				Sn	Sn	21 46 58.1	+2.6
	baz=288,slow=20,SNR=1.5						
OZUR		7.46	314	⇓*i*P	Pn	21 45 33.4	+1.5
VOIR		7.50	308	P	Pn	21 45 35.2	+2.7
DOPR	Dopca	7.60	312	⇑*i*P	Pn	21 45 34.9	+1.0
GIRR	Girov	7.68	321	⇓*i*P	Pn	21 45 35.5	+0.6
VTS	Vitosha	7.80	284	*e*Pn	Pn	21 45 36.3	-0.3
VTS	Vitosha	7.80	284	⇑*i*P	Pn	21 45 38.7	+2.1
VTS	Vitosha	7.80	284	*e*P	Pn	21 45 36.3	-0.3
NCK	Nalchik	7.84	69	*i* P	Pn	21 45 40.2	+3.1
BIZ	Bicaz	7.86	320	⇑*i*P	Pn	21 45 37.3	-0.1
ZEI	Tsey	7.92	75	*e*P	Pn	21 45 44.6	+6.2
ZEI				pmax	pmax		
	comp=Z,19nm,0.5s						
GOF	Gofitskoye	8.00	58	⇑*e*P	Pn	21 45 43.3	+4.0
GOF				pmax	pmax		
	comp=Z,14nm,0.6s						
MMAI	Mount Meron Ar	8.26	169	Pn	Pn	21 45 43.7	+0.7
	comp=Z,1.6nm,0.3s,baz=5.9,slow=12,SNR=9.5						
MMAI				LR	LR	21 49 34.7	
	comp=Z,167nm,18.0s,baz=0.0,slow=43						
LOT	Lotru	8.29	304	⇓*i*P	Pn	21 45 45.0	+1.6
BURAR	Bucovina Array	8.77	320	⇑*i*P	Pn	21 45 49.8	-0.1
BURAR	Bucovina Array	8.77	320	P	Pn	21 45 49.7	-0.1
BUR08	Bucovina Ar. S	8.79	320	*e*Pn	Pn	21 45 49.9	-0.4
BUR08				*e*Sn	Sn	21 47 27.7	-1.9
AGG	Agios Georgios	8.82	260	*e*Pn	Pn	21 45 47.4	-3.1
AGG	Agios Georgios	8.82	260	*e*P	Pn	21 45 47.4	-3.1
GZR	Gura Zlata	8.89	302	⇑*i*P	Pn	21 45 53.0	+1.4
HERR	Herculane	8.93	298	⇑*i*P	Pn	21 45 52.1	+0.1
IDI	Anoyia	8.95	232	Pn	Pn	21 45 54.0	+1.6
	comp=Z,0.4nm,0.3s,baz=42,slow=15,SNR=3.5						
CJR	Cluj-Napoca	9.05	311	⇑*i*P	Pn	21 45 55.0	+1.3
MDVR	Moldovita	9.37	297	⇑*i*P	Pn	21 45 58.5	+0.4
BZS	Buzias	9.73	301	⇑*i*P	Pn	21 46 04.2	+1.2
AKASG	Malin Array Be	10.00	344	Pn	Pn	21 46 04.8	-1.9
	comp=Z,12nm,0.3s,baz=156,slow=13,SNR=45						
AKASG				Sn	Sn	21 47 50.8	-8.3
	comp=Z,3.8nm,0.3s,baz=155,slow=25,SNR=12						
AKASG	Malin Array Be	10.00	344	*i* P	Pn	21 46 04.5	-2.2
AKASG				pmax	pmax		
	comp=Z,13nm,0.4s						
AKBB	Malin Array Si	10.00	344	*e*Pn	Pn	21 46 05.6	-1.1
AKBB	Malin Array Si	10.00	344	*e*P	Pn	21 46 05.6	-1.1
VORD	Divnogorie	10.61	20	*e*P	Pn	21 46 17.5	+2.6
VORD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VSR	Storozhevoye	10.80	19	*e*P	Pn	21 46 20.2	+2.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
UZH	Uzhgorod	10.90	317	*e*P	Pn	21 46 18.6	-0.4
LVV	L'vov	10.91	326	*e*P	Pn	21 46 18.5	-0.6
KOLS	Kolonicke sedl	11.11	318	*e*P	Pn	21 46 22.0	+0.2
KOLS	Kolonicke sedl	11.11	318	*e*PN	Pn	21 46 22.0	+0.2
PSZ	Piszkesteto	11.82	309	*e*Pn	Pn	21 46 30.1	-1.5
PSZ	Piszkesteto	11.82	309	*e*P	Pn	21 46 30.2	-1.5
LPSR	Galich'ya Gora	12.04	16	*e*P	Pn	21 46 36.9	+2.4
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
LANS	Liptovska Anna	12.71	314	*e*P	Pn	21 46 45.8	+2.0
LANS	Liptovska Anna	12.71	314	*e*PN	Pn	21 46 45.8	+2.0
VYHS	Vyhne	12.72	310	*e*P	Pn	21 46 46.0	+2.1
VYHS	Vyhne	12.72	310	*e*PN	Pn	21 46 46.0	+2.1
OBN	Obninsk	14.12	7	Pn	Pn	21 47 01.4	-1.4
	comp=Z,0.3nm,0.3s,baz=280,slow=18,SNR=2.1						
OBN				Sn	Sn	21 49 34.8	-4.9
	comp=Z,0.3nm,0.3s,baz=227,slow=19,SNR=2.3						
OBN	Obninsk	14.12	7	*e*Pn	Pn	21 47 02.6	-0.3
ARSA	Arzberg	14.25	301	*i* P	Pn	21 47 08.0	+3.2
	comp=Z,4.4nm,1.6s						
CONA	Conrad Observa	14.27	304	*i* P	P	21 47 10.0	-2.5
	comp=Z,4.1nm,1.7s						
SOKA	Soboth	14.40	299	*i* P	P	21 47 11.9	-2.1
	comp=Z,4.8nm,1.6s						
VRAC	Vranov	14.41	310	LR	LR	21 53 34.8	

	comp=Z,50nm,20.1s,baz=112,slow=41						
SUW	Suwalki	14.61	335	ePn	Pn	21 47 08.0	-1.6
SUW	Suwalki	14.61	335	eP	Pn	21 47 08.0	-1.6
OBKA	Obir	14.68	298	i P	P	21 47 15.6	-1.4
	comp=Z,5.6nm,1.2s						
MOS	Moscow	14.85	9	eP	P	21 47 17.4	-1.3
MOS				e		21 49 52.0	
IIGN	Ignalina	15.00	344	eP	Pn	21 47 15.2	+0.4
ISAL	Salakas	15.22	344	eP	Pn	21 47 16.7	-1.2
MOA	Molln	15.25	302	i Pn	Pn	21 47 16.9	-1.4
	comp=Z,3.3nm,1.4s						
IZAR	Zarasai	15.37	344	eP	Pn	21 47 18.6	-1.2
KBA	Koelnbreinsper	15.62	299	i Pn	Pn	21 47 23.6	+0.2
	comp=Z,2.8nm,1.2s						
PABE	Paberze	15.68	340	eP	Pn	21 47 22.1	-1.7
PABE				eP	P	21 47 23.8	-4.2
GERES	GERESS Array B	15.95	305	Pn	P	21 47 29.9	-1.2
	comp=Z,0.1nm,0.3s,baz=110,slow=10,SNR=4.7						
GERES				LR	LR	21 55 20.3	
	comp=Z,61nm,18.6s,baz=72,slow=44						
ABTA	Abfaltersbach	16.10	297	i pP	P	21 47 33.9	+1.1
	comp=Z,4.7nm,1.3s						
PBUR	Paburg	16.70	337	eP	Pn	21 47 35.0	-1.9
WTTA	Wattenberg	16.80	299	i Pn	Pn	21 47 38.0	-0.4
	comp=Z,2.4nm,1.1s						
WATA	Walderalm	16.85	299	i Pn	Pn	21 47 39.0	-0.1
	comp=Z,1.3nm,0.5s						
SQTA	Sankt Quirin	17.07	298	i Pn	Pn	21 47 40.3	-1.6
	comp=Z,1.0nm,0.5s						
MOTA	Moosalm	17.17	299	i Pn	Pn	21 47 41.4	-1.7
	comp=Z,0.9nm,0.6s						
CLL	Collm	17.39	313	eP	P	21 47 49.0	+2.1
CLL	Collm	17.39	313	e(sP)	P	21 47 49.0	+2.1
CLL				esPPP		21 48 02.0	
RETA	Reutte	17.43	299	i Pn	Pn	21 47 45.5	-0.7
	comp=Z,3.9nm,1.2s						
VSU	Vasula	17.85	348	eP	Pn	21 47 50.9	-0.4
VSU	Vasula	17.85	348	eP	Pn	21 47 51.1	-0.1
VSU				AML	AML	21 47 56.8	
	comp=Z,32nm,0.6s						
VSU				AML	AML	21 47 57.8	
	comp=N,30nm,0.5s						
VSU				AML	AML	21 48 14.9	
	comp=E,24nm,0.7s						
DAVOX	Davos/Dischmat	17.88	296	LR	LR	21 55 03.9	
	comp=E,24nm,19.8s,baz=86,slow=38						
DAVA	Damuels	17.97	298	i pP	Pn	21 47 53.1	+0.1
	comp=E,2.1nm,0.5s						
BSD	Bornholm Skovb	18.60	325	i P	P	21 47 58.5	-1.7
BSD	Bornholm Skovb	18.60	325	i P	P	21 47 58.5	-1.7
MTSE	Matsula	18.62	344	eP	P	21 47 59.7	-0.7
AKTO	Aktyubinsk	19.38	53	P	P	21 48 09.0	+0.2
	comp=E,0.2nm,0.3s,baz=252,slow=11,SNR=13						
AKTO				LR	LR	21 56 49.4	
	comp=E,26nm,20.3s,baz=261,slow=41						
MEF	Metsahovi	19.91	347	eP	Pn	21 48 16.8	+0.7
MEF				AML	AML	21 48 21.4	
	comp=Z,4.5nm,0.7s						
MEF				AML	AML	21 48 31.4	
	comp=N,3.8nm,0.4s						
MEF				AML	AML	21 48 51.3	
	comp=E,3.3nm,0.6s						
BNI	Bardonecchia	19.93	290	eP	P	21 48 15.2	+0.1
	comp=E,9.9nm,1.2s						
BNI	Bardonecchia	19.93	290	eP	P	21 48 15.2	+0.1
BNI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ABKAR	Akbulak array	20.24	57	eP	P	21 48 16.5	-1.8
	comp=Z,5.8nm,1.5s						
FINES	FINESS Array B	20.82	350	P	P	21 48 25.4	+1.0
	comp=Z,1.9nm,0.4s,baz=152,slow=12,SNR=20						
FINES	FINESS Array B	20.82	350	i P	Pn	21 48 26.7	-0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FIA1	FINESS Array S	20.82	350	eP	P	21 48 23.6	-0.8
	comp=Z,8.2nm,0.6s						
RAF	Rauma	21.16	344	eP	P	21 48 30.1	+2.1
RAF				AML	AML	21 48 39.9	
	comp=Z,5.1nm,0.6s						
RAF				AML	AML	21 48 49.3	
	comp=N,3.7nm,0.6s						
RAF				AML	AML	21 50 04.6	
	comp=E,4.8nm,0.6s						
PRGR	Permogore	21.79	16	eP	P	21 48 36.9	+2.0
PRGR				eS	S	21 52 40.3	+4.5
PRGR				pmax	pmax		
	comp=Z,19nm,1.6s						
SMF	Signal de Mont	21.99	294	eP	P	21 48 40.6	+3.4
SMF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARU	Arti	22.32	38	P	P	21 48 40.4	-0.2
	comp=Z,1.6nm,0.5s,baz=200,slow=16,SNR=12						
ARU				LR	LR	21 59 42.7	
	comp=Z,31nm,20.2s,baz=242,slow=43						
ARU	Arti	22.32	38	eP	P	21 48 40.0	-0.6
	comp=Z,9.2nm,1.0s						
ARU	Arti	22.32	38	d iP	P	21 48 40.3	-0.3
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HFS	Hagfors	22.61	334	P	P	21 48 44.6	+0.9
	comp=Z,3.0nm,0.5s,baz=140,slow=12,SNR=13						
HFS				S	S	21 52 46.9	-4.5
	comp=Z,2.0nm,0.9s,baz=164,slow=16,SNR=2.7						
HFS				LR	LR	21 59 13.1	
	comp=Z,29nm,18.4s,baz=122,slow=41						
SVE	Sverdlovsk	23.50	39	eP	P	21 48 51.3	-1.6
NC602	NORSAR Array S	23.78	333	eP	P	21 48 57.4	+1.8
	comp=Z,24nm,1.4s						
NC405	NORSAR Array S	24.00	334	eP	P	21 48 57.1	-0.5
	comp=Z,27nm,1.4s						
NB201	NORSAR Array S	24.09	333	eP	P	21 48 57.3	-1.3
	comp=Z,25nm,1.4s						
NB2	NORSAR Subarra	24.11	333	P	P	21 49 00.2	+1.4
	comp=Z,3.3nm,1.1s,baz=137,slow=9.3						
NOA	NORSAR Array B	24.11	333	P	P	21 48 58.9	+0.2
	comp=Z,1.0nm,0.6s,baz=130,slow=9.7,SNR=4.3						
NOA				LR	LR	22 00 33.5	
	comp=Z,38nm,18.7s,baz=150,slow=42						
NC303	NORSAR Array S	24.19	334	eP	P	21 48 59.2	-0.3
	comp=Z,20nm,1.4s						
NBO00	NORSAR Array S	24.26	333	eP	P	21 48 59.3	-0.7
	comp=Z,29nm,1.3s						
MFF	Saint Martin d	24.73	294	eP	P	21 49 08.2	+3.7
MFF				pmax	pmax		
	comp=Z,12nm,1.4s						
BRVK	Borovoye	27.41	52	i P	P	21 49 31.1	+2.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WSAR	Wadi Sarin	27.62	123	LR	LR	22 03 13.8	
	comp=Z,36nm,19.1s,baz=356,slow=42						
EKA	Eskdalemuir Ar	27.85	313	P	P	21 49 31.4	-1.1
	comp=Z,0.5nm,0.5s,baz=103,slow=9.7,SNR=3.8						
ESDC	Sonseca Array	28.42	280	P	P	21 49 37.2	-0.6
	comp=Z,0.6nm,0.6s,baz=68,slow=9.2,SNR=8.0						
ARCES	ARCESS Array B	28.76	354	P	P	21 49 41.2	+0.8
	comp=Z,1.5nm,0.7s,baz=155,slow=12,SNR=5.1						
AAK	Ala-Archa	30.35	73	i P	P	21 49 59.1	+4.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURBB	Kurchatov Arra	32.30	58	P	P	21 50 13.1	+1.1
	comp=Z,2.0nm,0.7s,baz=277,slow=9.4,SNR=15						
KURK	Kurchatov	32.35	57	i P	P	21 50 15.0	+2.6
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	Makanchi Array	35.10	64	P	P	21 50 37.8	+1.3
	comp=Z,0.7nm,0.8s,baz=269,slow=8.7,SNR=7.9						
MKAR				LR	LR	22 07 02.3	
	comp=Z,31nm,18.6s,baz=273,slow=40						
ZALV	Zalesovo Beam	36.13	52	LR	LR	22 08 53.7	
	comp=Z,40nm,19.1s,baz=250,slow=42						
TORD	Torodi Ar. Bea	39.34	234	P	P	21 51 12.3	-0.3
	comp=Z,0.4nm,0.5s,baz=37,slow=9.7,SNR=6.1						
WMQ	Urumqi	39.46	67	eP	P	21 51 12.9	-0.6
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,30nm,3.7s						
LZH	Lanzhou	53.83	71	eP	P	21 53 05.0	-1.3
LZH				pP	pP	21 53 08.5	-0.6
LZH				sP	sP	21 53 10.1	-0.1
LZH				ePP	PP	21 55 07.6	+0.4
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,45nm,7.2s						
CD2	Chengdu	56.34	76	eP	P	21 53 21.6	-2.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	56.94	62	P	P	21 53 27.5	-1.1
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,15nm,7.3s						
YAK	Yakutsk	57.33	34	i P	P	21 53 33.5	+2.6
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMI	Kunming	58.71	83	P	P	21 53 41.4	0.0
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
SCHQ	Schefferville	62.85	320	LR	LR	22 21 28.0	
	comp=Z,25nm,18.2s,baz=328,slow=36						
KLR	Kul'dur	64.92	46	i P	P	21 54 22.8	+0.3
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSRS	Korea Array	69.48	58	LR	LR	22 29 02.2	
	comp=Z,32nm,20.4s,baz=310,slow=39						

MEX 21 21:44:53.4±0.7, 16°.23N×97°.96W, h12^{km}±10^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.44	54	eP	Pn	21 45 16.4	-3.1
VHO				i S	Sn	21 45 33.1	-5.4
TLIG	Tlapa	1.45	336	i P	Pn	21 45 15.4	-4.1
TLIG				eS	Sn	21 45 33.5	-5.2
HUIG	Huatulco	1.83	104	i P	Pn	21 45 20.9	-3.8
HUIG				i S	Sn	21 45 43.4	-4.6
CAIG	El Cayaco	2.36	291	i P	Pn	21 45 29.0	-3.0
CAIG				i S	Sn	21 45 56.4	-4.6
CMIG	Matias Romero	3.07	73	i P	Pn	21 45 38.7	-3.0
CMIG				i S	Sn	21 46 14.7	-3.7

WEL 21 21:52:28.1, 42°S±2°×174°.2E±0°.9, h5^{km}±2^{km}, M3.4/33, ML3.7/33, MLv3.4/33, Error ellipse: s-maj=0.0km s-min=0.0km az=160.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	185	P	Pg	21 52 31.3	+0.8
BSWZ	Blackbirch Sta	0.28	253	P	Pg	21 52 34.0	+0.5
TUWZ	Tuamarina	0.30	314	P	Pb	21 52 34.9	-1.0
TCW	Tory Channel	0.43	5	P	Pb	21 52 37.4	-0.7
BHW	Baring Head	0.53	65	P	Pb	21 52 39.7	-0.2
WEL	Wellington	0.54	49	P	Pb	21 52 39.8	-0.2
NNZ	Nelson	0.76	303	P	Pg	21 52 43.1	+0.3
PLWZ	Palliser	0.77	85	P	Pb	21 52 44.8	+0.8
MSWZ	Moikau Station	0.80	74	P	Pb	21 52 44.8	+0.3
CAW	Cannon Point	0.82	50	P	Pb	21 52 45.3	+0.5
DUWZ	D'Urville Isla	0.86	344	P	Pb	21 52 45.3	-0.4
KHZ	Kahutara	0.93	213	P	Pb	21 52 46.9	+0.1
PAWZ	Paruwai Farm	0.94	75	P	Pn	21 52 47.7	-0.2
THZ	Tophouse	1.00	262	P	Pb	21 52 47.7	-0.2
MTW	Mount Morrison	1.07	64	P	Pb	21 52 49.4	+0.3
OGWZ	Otaki Gorge	1.08	41	P	Pb	21 52 49.2	-0.2
TRWZ	Traveller	1.12	78	P	Pb	21 52 50.1	+0.1
HOWZ	Holdsworth Sta	1.22	53	P	Pn	21 52 51.8	0.0
TMWZ	Te Maipa	1.36	68	P	Pb	21 52 53.9	-0.1
MRZ	Mangatainoka R	1.41	47	P	Pn	21 52 54.5	0.0
QRZ	Quartz Range	1.52	302	P	Pb	21 52 56.7	0.0
TIWZ	Tintock	1.52	56	P	Pg	21 52 58.2	+1.0
GVZ	Greta Valley S	1.60	213	P	Pn	21 52 56.3	-0.8
PRWZ	Pori Road	1.70	51	P	Pg	21 53 01.5	+0.8
BFZ	Birch Farm	1.80	59	P	Pg	21 53 04.7	+2.2
LTZ	Lake Taylor	1.85	231	P	Pn	21 53 00.4	-0.2
AMCZ	Amberley	1.93	217	P	Pg	21 53 06.3	+1.1
WAZ	Wanganui	1.97	17	P	Pg	21 53 05.8	0.0
DVHZ	Dannevirke	1.98	48	P	Pg	21 53 07.6	+1.5
LREZ	Lake Rotokare	2.18	4	P	Pg	21 53 12.2	+2.3
OKCZ	Okains Bay	2.26	202	P	Pn	21 53 04.8	-1.3
PNHZ	Pukenui	2.28	42	P	Pg	21 53 13.4	+1.6
INZ	Inchbonnie	2.34	241	P	Pb	21 53 09.5	-1.2
OXZ	Oxford	2.34	223	P	Pn	21 53 08.2	+1.0
KHEZ	Kahui Hut	2.34	356	P	Pb	21 53 12.0	+1.1
MQZ	McQueen's Vall	2.37	209	P	Pn	21 53 05.6	-2.0
AKCZ	Akaroa Harbour	2.44	203	P	Pn	21 53 08.1	-0.5
MTVZ	Mangateitei	2.44	23	P	Pg	21 53 15.4	+0.5
PKE	Pukeiti	2.45	356	P	Pg	21 53 14.0	-1.0
PKVZ	Pokaka	2.50	20	P	Pb	21 53 14.5	+1.0
MOVZ	Moawhango	2.51	28	P	Pb	21 53 14.1	+0.4
VRZ	Vera Road	2.54	9	P	Pb	21 53 14.1	-0.1
BHHZ	Black Hill Sta	2.56	34	P	Pb	21 53 15.0	+0.5
WHVZ	Whangaehu Hut	2.57	24	P	Pb	21 53 15.9	+1.1
KRHZ	Kereru	2.57	40	P	Pg	21 53 16.2	-1.2
TUVZ	Tukino	2.60	25	P	Pb	21 53 16.5	+1.2
NGZ	Ngauruhoe	2.67	24	P	Pb	21 53 17.6	+1.1
TWVZ	Taurewa	2.72	20	P	Pg	21 53 18.9	-1.4
WTVZ	West Tongariro	2.72	23	P	Pb	21 53 18.4	+1.0
KRVZ	Karewarewa	2.76	24	P	Pb	21 53 18.9	+1.0
KWHZ	Kaweka Forest	2.77	38	P	Pg	21 53 19.8	-1.4
KATZ	Kakaramea	2.88	23	P	Pb	21 53 21.4	+1.3
WVZ	Waitaha Valley	2.96	240	P	Pb	21 53 21.9	+0.6
HIZ	Hauiti	3.16	9	P	Pb	21 53 23.0	-1.7

IDC 21 21:54:56.0±2.2, 40°.26N×113°.24E, h0^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.3/56, mbtmp3.4/6, ML3.0/2, Error ellipse: s-maj=55.2km s-min=24.7km az=23.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.03	329	Pn	Pn	21 57 08.4	+0.7
	0.2nm,0.3s,baz=150,slow=13,SNR=5.5						
SONM				Lg	Lg	21 59 43.8	
	0.2nm,0.3s,baz=143,slow=25,SNR=3.6						
KSRS	Korea Array	11.79	99	Pn	Pn	21 57 46.8	+1.4
	0.1nm,0.3s,baz=290,slow=14,SNR=3.0						
MKAR	Makanchi Array	23.27	297	P	P	22 00 05.7	+0.6
	0.4nm,0.7s,baz=96,slow=12,SNR=3.7						
ZALV	Zalesovo Beam	23.50	315	P	P	22 00 08.4	+1.1
	0.6nm,0.6s,baz=115,slow=9.7,SNR=2.7						
KURBB	Kurchatov Arra	26.24	305	P	P	22 00 31.5	-1.0
	0.5nm,0.7s,baz=100,slow=9.9,SNR=2.2						
YKA	Yellowknife Ar	70.63	21	P	P	22 06 12.1	-0.7
	1.0nm,0.6s,baz=323,slow=6.2,SNR=6.4						

ISCJB ***21*** *22:03:57.7±0.3, 60°.60S±0°.07×26°.2W±0°.1, h20^{km}, mb4.8/31, MS3.9/11, Error ellipse: s-maj=11.4km s-min=7.1km az=38.9*

IDC ***21*** *22:03:57.1±0.6, 60°.43S×26°.17W, h0^{km}, mb4.4/14, mb1 4.5/15, mb1mx4.4/27, mbtmp4.5/15, ML5.2/1, MS3.9/12, Ms1 3.9/12, ms1mx3.8/20, Error ellipse: s-maj=19.1km s-min=15.9km az=176.0*

NEIC ***21*** *22:04:02.5±2.1, 60°.36S×26°.24W, h35^{km}±1^{km}, mb5.0/26, Error ellipse: s-maj=17.2km s-min=11.3km az=54.0*

GCMT ***21*** *22:04:05.5±0.3, 60°.72S±0°.02×25°.77W±0°.03, h22^{km}±1^{km}, MW4.9/71, Moment Tensor Solution. s19,c22; s71,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.16; $M_{\theta\theta}$-1.11±.13; $M_{\phi\phi}$1.31±.12; $M_{r\theta}$0.60±.21; $M_{\theta\phi}$2.47±.10; $M_{\phi r}$0.65±.20; Best double couple: $M_0$2.87200×10^{16} NP1:ϕ_s78.00000°, δ82.00000°, λ13.00000°. NP2: ϕ_s346.00000°, δ77.00000°, λ172.00000°. Principal axes: T 3.0820, Plg15.0000°, Azm302.0000°; N -0.4130, Plg75.0000°, Azm107.0000°; P -2.6620, Plg4.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 22:04:00.0±0.4, 60°.43S±0°.08×26°.21W±0°.08, h20^{km}, n72, σ1^{s}.49/71, mb4.9/31, MS3.9/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.29	313	ePn	Pn	22 05 55.9	-3.0
VNA1	Neumayer--Stat	12.60	152	P	Pn	22 06 55.3	-2.4
VNA3	Neumayer Olymp	12.73	155	P	Pn	22 06 56.8	-2.7
VNA3				S	Sn	22 09 03.0	-17
SNAA	Sanae	14.59	150	P	Pn	22 07 21.8	-3.3
SNAA				S	Sn	22 09 52.2	-14
SNAA	Sanae	14.59	150	Pn	Pn	22 07 22.2	-2.8
	11nm,0.3s,baz=318,slow=17,SNR=88						
SNAA				Sn	Sn	22 09 49.3	-17
	1.7nm,0.3s,baz=303,slow=21,SNR=6.3						
SNAA				LR	LR	22 11 33.1	
	comp=Z,555nm,20.5s,baz=303,slow=31						
PMSA	Palmer Station	17.75	240	eP	P	22 08 08.8	+2.6
	30nm,1.3s						
EFI	East Falkland	19.65	282	eP	Pn	22 08 27.8	-0.8
	145nm,1.4s						
USHA	Ushuaia	22.96	265	P	P	22 09 04.0	+1.2
	30nm,1.0s,baz=123,slow=12,SNR=5.5						
USHA				LR	LR	22 15 56.8	
	comp=Z,607nm,18.7s,baz=112,slow=31						
QSPA	South Pole Qui	29.81	180	eP	P	22 10 07.8	+2.5
	65nm,1.4s						
PLCA	Paso Flores	33.49	286	P	P	22 10 37.7	0.0
	2.7nm,0.5s,baz=173,slow=8.4,SNR=17						
PLCA				LR	LR	22 23 12.1	
	comp=Z,207nm,18.9s,baz=164,slow=34						
PLCA	Paso Flores	33.49	286	eP	P	22 10 37.7	0.0
	23nm,1.3s						
MAW	Mawson	36.38	140	LR	LR	22 24 25.3	
	comp=Z,258nm,19.8s,baz=240,slow=34						
GO05	Huala	38.72	290	eP	P	22 11 22.7	+0.3
	43nm,0.8s						
PEL	Peldehue	39.69	293	eP	P	22 11 31.3	+0.7
	115nm,0.7s						
CPUP	Villa Florida	40.17	314	P	P	22 11 34.1	-0.4
	1.6nm,0.4s,baz=153,slow=6.2,SNR=5.5						
CPUP				LR	LR	22 26 45.7	
	comp=Z,172nm,21.6s,baz=160,slow=34						
CPUP	Villa Florida	40.17	314	eP	P	22 11 34.1	-0.4
	19nm,1.3s						
SBA	Scott Base	41.74	184	eP	P	22 11 47.8	+0.8
	7.7nm,1.3s						
VNDA	Vanda	42.21	183	P	P	22 11 52.6	+1.9
	3.1nm,0.8s,baz=212,slow=6.8,SNR=5.4						
VNDA				LR	LR	22 28 16.7	
	comp=Z,83nm,18.1s,baz=172,slow=35						
GO04	Tololo Observa	42.26	295	eP	P	22 11 51.4	-0.6
	67nm,1.1s						
LCO	Las Campanas	43.21	296	eP	P	22 11 59.3	-0.4
	31nm,1.2s						
GO02	Mina Guanaco	46.06	300	eP	P	22 12 23.2	+0.6
	41nm,1.1s						
BOSA	Boshof	46.73	71	P	P	22 12 27.6	0.0
	3.0nm,0.7s,baz=210,slow=8.4,SNR=8.2						
BOSA				LR	LR	22 27 20.2	
	comp=Z,85nm,20.5s,baz=205,slow=30						
BOSA	Boshof	46.73	71	eP	P	22 12 28.0	+0.4
	13nm,1.5s						
BDFB	Brasilia	47.44	331	P	P	22 12 32.8	-0.4
	8.0nm,1.2s,baz=145,slow=11,SNR=3.4						
BDFB				LR	LR	22 29 34.2	
	comp=Z,158nm,21.9s,baz=143,slow=32						
LVC	Limon Verde	48.03	303	eP	P	22 12 37.9	-0.1
	13nm,1.0s						
PB04	IPOC Station P	48.79	301	eP	P	22 12 44.3	+0.7
	124nm,1.5s						
PB01	IPOC Station P	49.66	303	eP	P	22 12 50.8	+0.6
	64nm,1.4s						
LBTB	Lobatse	49.95	69	P	P	22 12 52.0	-0.4
	3.1nm,0.8s,baz=231,slow=7.0,SNR=4.4						
LBTB	Lobatse	49.95	69	eP	P	22 12 52.0	-0.4
	8.4nm,1.1s						
GO01	Chusmiza	50.77	304	eP	P	22 12 59.9	+0.8
	18nm,1.0s						
PB11	IPOC Station P	50.87	303	eP	P	22 12 58.9	-0.7
	39nm,1.2s						
MNMC	Minye Minye	51.41	304	eP	P	22 13 03.7	0.0
	33nm,0.7s						
TSUM	Tsumeb	51.52	57	P	P	22 13 04.9	+0.6
	1.4nm,0.7s,baz=225,slow=11,SNR=3.3						
LPAZ	La Paz	53.38	307	P	P	22 13 19.3	+0.6
	5.0nm,0.4s,baz=97,slow=5.2,SNR=42						
LPAZ				LR	LR	22 38 12.1	
	comp=Z,70nm,19.4s,baz=154,slow=38						
LPAZ	La Paz	53.38	307	eP	P	22 13 19.1	+0.4
	21nm,1.4s						
LSZ	Lusaka	59.60	65	P	P	22 14 02.1	-0.3
	2.4nm,0.7s,baz=147,slow=5.4,SNR=5.3						
LSZ	Lusaka	59.60	65	eP	P	22 14 03.5	+1.1
	4.6nm,0.9s						
DBIC	Dimbokro	68.98	23	P	P	22 15 04.5	+0.8
	3.0nm,0.5s,baz=159,slow=6.2,SNR=7.2						
DBIC				LR	LR	22 38 08.0	
	comp=Z,74nm,21.4s,baz=158,slow=30						
DBIC	Dimbokro	68.98	23	eP	P	22 15 04.5	+0.8
	19nm,1.4s						
ROSC	El Rosal	75.09	310	LR	LR	22 51 16.1	
	comp=Z,61nm,19.5s,baz=145,slow=38						
RPZ	Rata Peaks	75.26	193	P	P	22 15 40.0	-1.0
	7.0nm,0.5s,baz=303,slow=15,SNR=4.2						
TOA0	Torodi Ar. Sit	76.66	28	eP	P	22 15 51.3	+2.2
	10nm,0.7s						
TORD	Torodi Ar. Bea	76.66	28	P	P	22 15 49.0	-0.2
	3.0nm,0.3s,baz=195,slow=7.1,SNR=105						
TORD				LR	LR	22 44 50.4	
	comp=Z,42nm,18.4s,baz=285,slow=32						
TOA1	Torodi Ar. Sit	76.66	28	eP	P	22 15 49.0	-0.2
URZ	Urewera	79.81	198	eP	P	22 16 02.2	-4.3
	22nm,1.5s						
NWAO	Narrogin (SRO)	82.26	150	eP	P	22 16 14.7	-5.0
	10nm,1.0s						
ASAR	Alice Springs	94.65	162	P	P	22 17 19.4	-0.1
	0.5nm,0.7s,baz=182,slow=3.4,SNR=4.1						
AS31	Alice Springs	94.66	162	eP	P	22 17 19.4	-0.1
	1.7nm,1.4s						
PSUT	Pine Spring	121.51	293	ePKPdf	PKiKP	22 22 54.2	+2.7
J08A	Circle Bar Ran	127.47	293	ePKPdf	PKiKP	22 23 05.5	+2.4
FIA0	FINESS Array S	128.00	29	ePKPdf	PKiKP	22 23 03.2	-0.1
FINES	FINESS Array B	128.00	29	PKP	PKiKP	22 23 03.2	-0.1
	1.1nm,0.6s,baz=134,slow=4.0,SNR=3.9						
BMO	Blue Mountains	128.10	295	ePKPdf	PKiKP	22 23 05.9	+1.7
MSO	Missoula	128.15	299	ePKPdf	PKiKP	22 23 06.2	+1.9
ABKAR	Akbulak array	129.36	58	ePKPdf	PKiKP	22 23 09.4	+3.0
ARA0	ARCESS Array S	134.81	23	ePKPdf	PKiKP	22 23 16.1	-0.8
ARA0				eSKPab	SKPab	22 26 46.7	-1.3
ARCES	ARCESS Array B	134.81	23	PKP	PKiKP	22 23 16.1	-0.8
	2.5nm,1.0s,baz=201,slow=2.0,SNR=8.5						
ARCES				SKPbc	SKPab	22 26 46.7	-1.3
	1.1nm,0.7s,baz=235,slow=3.2,SNR=5.2						
TWG	Pinlang	136.05	134	ePKPdf	PKPdf	22 23 19.7	+0.5
YKA	Yellowknife Ar	139.69	314	PKP	PKPdf	22 23 25.1	+0.5
	2.3nm,0.8s,baz=124,slow=2.0,SNR=12						
YKB5	Yellowknife Ar	139.69	314	ePKPdf	PKPdf	22 23 25.1	+0.5
HYT	Haines Junctio	147.69	301	ePKPab	PKPab	22 23 44.7	+0.6
INK	Inuvik	149.42	316	PKPbc	PKPbc	22 23 45.3	-0.4
	5.2nm,0.9s,baz=99,slow=5.3,SNR=6.6						
INK	Inuvik	149.42	316	ePKPbc	PKiKP	22 23 46.6	-0.2
DAWY	Dawson	149.96	306	ePKPbc	PKiKP	22 23 48.0	-0.1
SONA0	Songino Array	150.21	93	ePKPbc	PKiKP	22 23 49.2	-0.1
SONM	Songino Array	150.21	93	PKPbc	PKiKP	22 23 49.2	-0.1
	2.0nm,0.8s,baz=208,slow=2.3,SNR=8.9						
EGAK	Eagle	150.95	307	ePKPbc	PKiKP	22 23 51.0	+0.9
RIDG	Independent Ri	152.05	304	ePKPbc	PKiKP	22 23 54.3	+1.8
ILAR	Eielson Array	153.25	305	PKPbc	PKiKP	22 23 54.8	0.0
	4.6nm,1.1s,baz=148,slow=1.7,SNR=21						
ILB	Eielson Array	153.25	305	ePKPbc	PKiKP	22 23 56.4	+1.5
WRH	Wood River Hil	153.65	304	ePKPdf	PKPbc	22 23 51.3	-4.3
BPAW	Bear Paw Mtn.	154.73	302	ePKPab	PKPab	22 24 12.0	-1.2

WEL 21 22:07:33.6, 42°S±1°×17°4E±°, h14^{km}±2^{km}, M3.6/44, ML3.9/44, MLv3.6/44, Error ellipse: s-maj=0.0km s-min=0.0km az=131.8, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.19	217	P	Pb	22 07 38.6	-0.3
TUWZ	Tuamarina	0.36	298	P	Pb	22 07 41.4	-0.3
BSWZ	Blackbirch Sta	0.38	253	P	Pb	22 07 42.0	-0.2
TCW	Tory Channel	0.40	350	P	Pb	22 07 42.1	-0.3
BHW	Baring Head	0.43	63	P	Pb	22 07 42.8	-0.1
WEL	Wellington	0.44	44	P	Pb	22 07 43.1	-0.1
PLWZ	Palliser	0.67	88	P	Pb	22 07 47.5	+0.4
MSWZ	Moikau Station	0.69	75	P	Pb	22 07 47.7	+0.3
CAW	Cannon Point	0.72	47	P	Pb	22 07 48.0	0.0
PAWZ	Paruwai Farm	0.83	75	P	Pb	22 07 50.2	+0.5
NNZ	Nelson	0.83	297	P	Pb	22 07 49.9	+0.1
DUWZ	D'Urville Isla	0.86	337	P	Pb	22 07 50.5	+0.1
MTW	Mount Morrison	0.96	63	P	Pn	22 07 52.6	-0.1
OGWZ	Otaki Gorge	0.99	38	P	Pb	22 07 52.5	0.0
TRWZ	Traveller	1.01	79	P	Pn	22 07 53.5	0.0
KHZ	Kahutara	1.02	217	P	Pn	22 07 54.1	+0.6
THZ	Tophouse	1.10	261	P	Pg	22 07 55.0	+0.1
HOWZ	Holdsworth Sta	1.12	51	P	Pg	22 07 55.1	0.0
TMWZ	Te Maipa	1.25	67	P	Pn	22 07 56.8	+0.1

MRZ	Mangatainoka R	1.31	45	P	Pb	22 07 58.3	+0.2
TIWZ	Tintock	1.41	55	P	Pb	22 08 00.0	+0.2
CPWZ	Castlepoint	1.55	64	P	Pg	22 08 05.7	+2.4
OHWZ	Ohakea	1.57	28	P	Pg	22 08 04.2	+0.5
QRZ	Quartz Range	1.59	299	P	Pb	22 08 03.2	+0.5
PRWZ	Pori Road	1.60	50	P	Pn	22 08 02.2	+0.7
POWZ	Post Office Ro	1.61	42	P	Pb	22 08 03.1	0.0
GVZ	Greta Valley S	1.69	215	P	Pn	22 08 03.0	+0.3
BFZ	Birch Farm	1.69	58	P	Pn	22 08 02.6	-0.2
DVHZ	Dannevirke	1.89	47	P	Pn	22 08 06.0	+0.6
WAZ	Wanganui	1.90	15	P	Pg	22 08 09.6	-0.5
LTZ	Lake Taylor	1.95	232	P	Pn	22 08 07.1	+0.7
ANWZ	Angora Road	1.96	55	P	Pn	22 08 07.6	+1.2
AMCZ	Amberley	2.02	218	P	Pg	22 08 15.0	+2.6
LREZ	Lake Rotokare	2.14	1	P	Pg	22 08 14.5	-0.1
PRHZ	Porangahau	2.18	53	P	Pn	22 08 09.7	+0.3
PNHZ	Pukenui	2.19	40	P	Pn	22 08 10.5	+0.9
NMEZ	Namu Road	2.22	350	P	Pg	22 08 15.5	-0.6
PREZ	Palmer Road	2.26	356	P	Pb	22 08 15.3	+1.1
KHEZ	Kahui Hut	2.32	353	P	Pb	22 08 16.3	+1.1
OKCZ	Okains Bay	2.33	204	P	Pn	22 08 10.7	-0.8
NBEZ	Newall Road No	2.36	351	P	Pg	22 08 18.2	-0.6
MTVZ	Mangateitei	2.37	21	P	Pg	22 08 18.1	-1.0
PKE	Pukeiti	2.42	353	P	Pb	22 08 16.4	-0.6
PKVZ	Pokaka	2.43	18	P	Pb	22 08 17.8	+0.8
MOVZ	Moawhango	2.43	26	P	Pb	22 08 16.8	-0.4
OXZ	Oxford	2.44	224	P	Pn	22 08 13.6	+0.6
INZ	Inchbonnie	2.44	242	P	Pn	22 08 14.2	+1.1
MQZ	McQueen's Vall	2.45	210	P	Pn	22 08 12.0	-1.2
PXZ	Pawanui	2.46	51	P	Pn	22 08 13.3	0.0
BHHZ	Black Hill Sta	2.48	32	P	Pb	22 08 15.8	-2.0
KRHZ	Kereru	2.48	39	P	Pn	22 08 14.4	+0.8
VRZ	Vera Road	2.49	7	P	Pb	22 08 17.5	-0.6
DRZ	Dome Shelter	2.50	22	P	Pg	22 08 21.2	-0.3
WHVZ	Whangaehu Hut	2.50	22	P	Pb	22 08 17.7	-0.6
AKCZ	Akaroa Harbour	2.51	205	P	Pn	22 08 13.2	-0.8
FWVZ	Far West T-bar	2.51	22	P	Pb	22 08 20.1	+1.4
TUVZ	Tukino	2.53	23	P	Pg	22 08 21.1	-1.1
NGZ	Ngauruhoe	2.60	22	P	Pb	22 08 20.0	-0.1
KAHZ	Kahuranaki	2.63	47	P	Pn	22 08 15.7	0.0
WTVZ	West Tongariro	2.65	21	P	Pb	22 08 20.6	-0.4
TWVZ	Taurewa	2.66	18	P	Pb	22 08 20.8	-0.2
KWHZ	Kaweka Forest	2.68	36	P	Pb	22 08 19.1	-2.3
KRVZ	Karewarewa	2.69	22	P	Pb	22 08 21.6	0.0
KATZ	Kakaramea	2.81	22	P	Pb	22 08 24.9	+1.2
RITZ	Rihia Road	2.86	24	P	Pb	22 08 26.4	+2.0
BKZ	Black Stump Fm	2.92	34	P	Pb	22 08 26.8	+1.3
RATZ	Rangitukua	2.94	22	P	Pg	22 08 28.1	-1.7
WATZ	Wairara	3.07	20	P	Pb	22 08 29.9	+1.8
HIZ	Hauiti	3.11	7	P	Pb	22 08 26.6	-2.0
RPZ	Rata Peaks	3.23	228	P	Pn	22 08 24.2	+0.4
TLZ	Tolley Road	3.39	16	P	Pb	22 08 32.3	-1.1
TOZ	Tahuroa Road	3.96	13	P	Pb	22 08 42.1	-1.2
MWZ	Matawai	4.07	38	P	Pb	22 08 40.5	-4.5
ODZ	Otahua Downs	4.38	217	P	Pn	22 08 39.5	-0.2
MKAZ	Moumakai	4.53	8	P	Pb	22 08 49.4	-3.6
AWAZ	Awhitu Peninsu	4.54	3	P	Pn	22 08 47.0	+5.2

*ISCJB **21** 22:08:58.9±0.6, 24.°85N±0.°03×122.°09E±0.°02, h118km±4km, Error ellipse: s-maj=5.1km s-min=3.3km az=166.8*

*JMA **21** 22:08:58.6±0.2, 24.°78N×122.°07E, h124km±2km, M2.0*

*TAP **21** 22:08:59.3, 24.°90N×122.°02E, h120km, ML3.0, C*

ISC 21 22:08:58.4±1.6**, 24.°89N**±0.°05×**122.°08E**±0.°03**, h123**km±8km**, n59, σ0.s68**/107**, 8C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	Toucheng	0.23	262	eS	Sn	22 09 26.6	-1.8
	baz=247						
ILA	Ilan	0.33	248	eS	Sn	22 09 28.7	-0.3
	baz=233						
EOS1	EOS1	0.34	173	⇑P	Pn	22 09 16.4	+0.5
	baz=154						
EOS1				S	Sn	22 09 29.7	+0.6
	baz=154						
TWC	Suao	0.35	218	P	Pn	22 09 16.0	0.0
	baz=200						
TWC				eS	Sn	22 09 28.6	-0.6
	baz=200						
TWE	Neicheng	0.41	246	P	Pn	22 09 16.9	+0.6
	baz=233						
TWE				eS	Sn	22 09 29.8	+0.1
	baz=233						
NHDH	Xindian Distri	0.51	279	eP	Pn	22 09 17.3	+0.5
	baz=275						
NHDH				eS	Sn	22 09 31.2	+0.5
	baz=275						
ENTT	Nioudou	0.53	242	⇑P	Pn	22 09 17.8	+0.8
	baz=228						
ENTT				eS	Sn	22 09 31.6	+0.7
	baz=228						
YM01	YM01	0.53	299	eP	Pn	22 09 17.2	+0.2
	baz=300						
YM01				eS	Sn	22 09 29.9	-1.1
	baz=300						
YM08	YM08	0.54	304	eS	Sn	22 09 29.7	-1.4
	baz=309						
YM10	YM10	0.54	299	eP	Pn	22 09 17.1	0.0
	baz=307						
YM10				eS	Sn	22 09 31.0	-0.2
	baz=307						
YM05	YM05	0.55	300	eP	Pn	22 09 17.2	+0.1
	baz=302						
TATO	Taipei	0.55	279	eP	Pn	22 09 17.2	+0.2
	baz=276						
TATO				eS	Sn	22 09 30.0	-1.1
	baz=276						
NANB	Nanao	0.55	214	P	Pn	22 09 17.6	+0.5
	baz=197						
NANB				S	Sn	22 09 31.2	+0.1
	baz=197						
ENA	Nanau	0.55	214	P	Pn	22 09 17.7	+0.5
	baz=197						
ENA				S	Sn	22 09 31.4	+0.2
	baz=197						
YM04	YM04	0.56	298	eP	Pn	22 09 17.0	-0.2
	baz=307						
YM04				eS	Sn	22 09 30.1	-1.2
	baz=307						
TWY	Chenhua	0.58	311	eP	Pn	22 09 17.5	+0.2
	baz=309						
ANP	Anpu	0.59	300	eP	Pn	22 09 18.3	+0.8
	baz=307						
NDT	Datong Townshi	0.59	241	⇑P	Pn	22 09 18.0	+0.6
	baz=247						
NDT				eS	Sn	22 09 31.7	+0.1
	baz=247						
TWS1	Kuangyinshan	0.64	290	eP	Pn	22 09 18.4	+0.7
	baz=289						
TWS1				eS	Sn	22 09 32.6	+0.4
	baz=289						
YHNB	Yeheng	0.68	252	⇑P	Pn	22 09 18.3	+0.2
	baz=237						
YHNB				S	Sn	22 09 32.4	-0.5
	baz=237						
NSK	Sanguang	0.69	252	⇑P	Pn	22 09 18.3	+0.2
	baz=238						
NSK				eS	Sn	22 09 32.4	-0.7
	baz=238						
WLTB	Daxi	0.76	268	eS	Sn	22 09 33.8	+0.1
	baz=265						
NNS	Nan Shan	0.79	236	eP	Pn	22 09 19.6	+0.6
	baz=228						
NNS				eS	Sn	22 09 34.4	-0.1
	baz=228						
NNSB	Datong	0.79	235	eP	Pn	22 09 19.5	+0.6
	baz=228						
NNSB				eS	Sn	22 09 34.2	-0.3
	baz=228						
NACB	Ninganchiao	0.84	212	⇑eP	Pn	22 09 19.0	-0.3
	baz=205						
NACB				eS	Sn	22 09 34.3	-0.8
	baz=205						
ETLH	Xiulin Townshi	0.87	219	eP	Pn	22 09 19.8	+0.1
	baz=218						
ETLH				eS	Sn	22 09 35.3	-0.5
	baz=218						
JYNG	Yonagunijimaku	0.90	119	P	Pn	22 09 20.0	+0.2
JYNG				eS	Sn	22 09 36.0	+0.1
TWD	Chiawan	0.92	209	eP	Pn	22 09 19.9	-0.1
	baz=211						
TWD				eS	Sn	22 09 35.7	-0.6
	baz=211						
YOJ	Yonaguni jima	0.94	116	eP	Pn	22 09 20.3	+0.1
	baz=124						
YOJ				eS	Sn	22 09 36.1	-0.5
	baz=124						
YOJ	Yonaguni jima	0.94	116	P	Pn	22 09 20.4	+0.2
YOJ				S	Sn	22 09 36.8	+0.1
LIOB	Emei	1.00	256	P	Pn	22 09 21.3	+0.5
	baz=247						
LIOB				eS	Sn	22 09 37.5	-0.2
	baz=247						
NSTT	Nanjuang	1.02	256	eP	Pn	22 09 21.3	+0.4
	baz=246						
NSTT				S	Sn	22 09 37.6	-0.4
	baz=246						
TWT	Tachien	1.04	233	eP	Pn	22 09 22.6	+1.3
	baz=227						
TWT				eS	Sn	22 09 39.5	+0.9
	baz=227						
WHF	Hehuan Shan	1.05	225	eP	Pn	22 09 22.2	+0.4
	baz=214						
WHF				eS	Sn	22 09 39.3	0.0
	baz=214						
ENLB	Shoufeng	1.07	204	eP	Pn	22 09 22.1	+0.6
	baz=193						
CHGB	Renai	1.17	225	P	Pn	22 09 23.7	+1.0
	baz=215						
CHGB				eS	Sn	22 09 40.8	-0.3
	baz=215						
ESL	Shilin	1.22	209	eP	Pn	22 09 22.4	-0.7
	baz=202						
ESL				eS	Sn	22 09 41.3	-0.4
	baz=202						
TWQ1	Liyutan	1.31	246	⇑eP	Pn	22 09 24.5	+0.5
	baz=235						
TWQ1				eS	Sn	22 09 42.8	-0.5
	baz=235						
EGFH	Guangfu	1.35	206	eP	Pn	22 09 24.6	+0.1
	baz=209						
VWDT	VWDT	1.42	217	⇑eP	Pn	22 09 26.0	+0.9
	baz=208						
VWDT				eS	Sn	22 09 45.5	0.0
	baz=208						
TYC	Yuchr	1.49	229	eP	Pn	22 09 26.7	+0.8
	baz=233						
TYC				eS	Sn	22 09 47.2	+0.4
	baz=233						
SSLB	Suanglung	1.50	223	eP	Pn	22 09 27.1	+0.9
	baz=229						
SSLB				eS	Sn	22 09 47.3	0.0
	baz=229						
HGSD	Ruisui	1.51	204	eP	Pn	22 09 26.7	+0.4
	baz=197						
HGSD				eS	Sn	22 09 47.2	-0.2
	baz=197						
EHY	Hungye	1.54	207	eP	Pn	22 09 26.3	-0.3
	baz=193						
EHY				eS	Sn	22 09 46.7	-1.3
	baz=193						
IRIF	Iriomote-Funau	1.60	110	P	Pn	22 09 27.3	+0.1
IRIF				eS	Sn	22 09 47.8	-1.3
WHYT	Xinyi Township	1.63	224	eP	Pn	22 09 28.5	+0.8
	baz=226						
WHYT				eS	Sn	22 09 50.4	+0.4
	baz=226						
YULB	Yu-li	1.65	206	eP	Pn	22 09 26.9	-1.0
	baz=194						
YULB				eS	Sn	22 09 48.2	-2.1
	baz=194						
TWF1	Yuli	1.69	205	eP	Pn	22 09 27.5	-0.8
	baz=194						
TWF1				eS	Sn	22 09 49.5	-1.6
	baz=194						
HATJ	Hateruma jima	1.77	117	eS	Sn	22 09 52.5	-0.3
JKRS	Kuro-shima	1.87	110	P	Pn	22 09 31.2	+0.8
JKRS				eS	Sn	22 09 55.4	+0.5
JIJ	Ishigaki jima	1.94	105	P	Pn	22 09 31.6	+0.2
JIJ				S	Sn	22 09 55.6	-0.9
ELDTW	Lidau	1.95	210	eP	Pn	22 09 31.6	0.0
	baz=197						
ELDTW				eS	Sn	22 09 56.5	-0.4
	baz=197						
JISG	Ishigakijimahi	2.05	98	P	Pn	22 09 33.3	+0.7
JISG				eS	Sn	22 09 58.4	-0.4
TPUB	Ta-pu	2.06	220	eP	Pn	22 09 32.8	-0.1
	baz=215						
TPUB				eS	Sn	22 09 59.3	+0.1
	baz=215						
WTP	Ta-pu	2.12	220	eP	Pn	22 09 34.0	+0.4
	baz=214						
WTP				eS	Sn	22 10 00.2	-0.2
	baz=214						
TWK	Hsinying	2.17	222	eP	Pn	22 09 34.5	+0.2
	baz=217						
TWK				eS	Sn	22 10 01.8	0.0
	baz=217						
SLGT	Liugui	2.30	215	eP	Pn	22 09 37.2	+1.4
	baz=218						
SLGT				eS	Sn	22 10 04.4	-0.1
	baz=218						
JTJ	Tarama	2.39	95	S	Sn	22 10 06.9	+0.4
PTMZ	Houxiangcun	2.69	274	eP	Pn	22 09 41.0	+0.2
	baz=272						
PTMZ				eS	Sn	22 10 12.0	-1.5
	baz=272						

*KRSC **21** 22:22:45.9±1.1, 53.°18N×158.°97E, h143km±8km, ML3.7*

*ISCJB **21** 22:22:47.2±0.6, 53.°24N±0.°05×158.°8E±0.°1, h139km±4km, mb3.5/3, Error ellipse: s-maj=11.5km s-min=5.3km az=33.0*

*IDC **21** 22:22:47.5±2.6, 53.°05N×158.°16E, h148km±11km, mb3.3/3, mb1 3.7/3, mb1mx3.0/27, mbtmp3.7/3, MS3.6/1, Ms1 3.6/1, ms1mx2.6/12, Error ellipse: s-maj=167.1km s-min=25.3km az=2.0*

ISC 21 22:22:47.6±0.9**, 53.°27N**±0.°05×**158.°79E**±0.°06**, h141**km±6km**, n27, σ1.s20**/45**, mb3.6**/3**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAR	Somma	0.01	145	eP	Pn	22 23 06.8	-0.1
AVH	Avacha	0.03	263	eP	Pn	22 23 06.7	0.0
AVH				eS	Sn	22 23 22.0	+0.9
KRER	Koryakskii	0.04	322	eP	Pn	22 23 06.7	-0.1
KRER				eS	Sn	22 23 21.5	0.0
SDLR	Sedlovina	0.06	80	i P	Pn	22 23 06.4	-0.3
UGLR	Uglovaya	0.06	164	eP	Pn	22 23 06.8	+0.1
UGLR				eS	Sn	22 23 21.8	+0.6
KOK	Koryaka	0.10	284	eP	Pn	22 23 06.7	0.0
KOK				eS	Sn	22 23 21.4	+0.1
KRX	Arik	0.13	316	eP	Pn	22 23 06.4	-0.4
DALK	Dalny	0.24	186	eP	Pn	22 23 06.3	-0.6
DALK				eS	Sn	22 23 20.9	-0.5
NLC	Nalytchevo	0.34	106	eP	Pn	22 23 07.1	-0.1
KRMR	Karymshinskiy	0.59	223	i P	Pn	22 23 07.9	-0.5
KRMR				eS	Sn	22 23 23.6	-0.6
GNL	Ganaly	0.67	310	eP	Pn	22 23 08.1	-0.9
GNL				eS	Sn	22 23 24.3	-1.0
PETK	Petropavlovsk-	0.68	257	LR	LR	22 23 05.2	
	comp=Z,12nm,20.1s,baz=215,slow=62						
PETK				P	Pn	22 23 08.3	-0.7
	51nm,0.3s,baz=77,slow=9.8,SNR=866						
PETK				S	Sn	22 23 24.4	-0.8
	6.1nm,0.3s,baz=113,slow=3.9,SNR=5.1						
SPN	Mys Shipunski	0.76	103	i P	Pn	22 23 09.1	-0.4
SPN				eS	Sn	22 23 25.9	-0.3
RUS	Russkaya	0.85	192	eP	Pn	22 23 09.6	-0.7
RUS				eS	Sn	22 23 26.5	-1.0
MTVR	Mutnovka	0.87	205	eP	Pn	22 23 11.1	+0.5
MTVR				eS	Sn	22 23 29.0	+1.0
ASAK	Asacha	1.04	212	eP	Pn	22 23 12.0	0.0
ASAK				eS	Sn	22 23 31.2	+0.7
APC	Apacha	1.04	251	i P	Pn	22 23 11.6	-0.3
APC				eS	Sn	22 23 29.6	-0.7
KDTR	Khodutka, Kamc	1.53	197	eP	Pn	22 23 16.0	-0.7
KDTR				eS	Sn	22 23 37.7	-1.3
KZV	Kizimen	2.05	25	eP	Pn	22 23 23.5	+0.7
KZV				eS	Sn	22 23 51.3	+1.4
TUMD	Tumrok D	2.15	25	eP	Pn	22 23 24.2	+0.2
TUMD				eS	Sn	22 23 52.7	+0.7
MKZ	Mys Kozlova	2.16	52	eS	Sn	22 23 50.7	-1.4
PAU	Pauzhetka	2.18	215	eP	Pn	22 23 24.4	+0.2
KBTR	Krutoberegovo	3.76	37	eP	Pn	22 23 44.6	+0.3
KBTR				eS	Sn	22 24 26.0	-2.3
BKI	Bering	4.63	62	eP	Pn	22 23 55.6	-0.2
BKI				eS	Sn	22 24 44.5	-4.5
MKAR	Makanchi Array	47.37	295	P	P	22 31 04.2	-2.8
	0.3nm,0.4s,baz=56,slow=6.4,SNR=7.6						
PDAR	Pinedale Array	58.12	60	P	P	22 32 28.5	+2.3
	0.5nm,0.4s,baz=319,slow=2.6,SNR=3.0						
TXAR	Lajitas Array	71.28	66	P	P	22 33 53.5	+1.9
	0.5nm,0.4s,baz=299,slow=5.1,SNR=9.2						
TXAR				LR	LR	23 02 28.2	
	comp=Z,41nm,21.5s,baz=0.0,slow=33						

*ISK **21** 22:22:51.9, 38.°65N×43.°64E, h5km, ML2.4/7*

*DDA **21** 22:22:52.7, 38.°64N×43.°64E, h7km±2km, ML2.5*

*ISCJB **21** 22:22:53.7±0.6, 38.°66N±0.°04×43.°65E±0.°05, h13km, Error ellipse: s-maj=5.8km s-min=4.8km az=30.9*

ISC 21 22:22:53.0±1.0**, 38.°64N**±0.°03×**43.°64E**±0.°04**, h13**km**, n18, σ0.s49**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.20	257	PG	Pg	22 22 57.7	+0.1
TVAN	Van	0.22	239	i P	Pb	22 22 58.4	-0.5
TVAN				i S	Sb	22 23 03.1	+0.3
VMUR	Van-Muradiye	0.35	351	i P	Pg	22 23 00.1	-0.1
ERCV	ERCIS-VAN	0.45	328	PG	Pg	22 23 01.7	-0.2
CLDR	Caldiran	0.55	23	PG	Pg	22 23 03.6	-0.2
BASK	Baskale_VAN	0.65	154	i P	Pb	22 23 06.4	0.0
BASK				IAML_P			
	comp=Z,2μm,0.2s						
ADCV	BITLIS_Adilcev	0.74	283	i P	Pg	22 23 07.0	-0.3
MLAZ	Malazgirt-MUS	0.99	301	PG	Pb	22 23 11.7	-0.4
MLAZ				SG	Sn	22 23 26.7	0.0
TUTA	Tutak	1.00	320	i P	Pb	22 23 12.5	+0.2
HAKT	HAKKARI	1.08	177	i P	Pb	22 23 13.0	-0.7
HAKT				IAML_P			
	comp=Z,430nm,0.1s						
BLIS	Bitlis-Merkez	1.22	260	i P	Pn	22 23 15.8	-0.1
BLIS				i S	Sn	22 23 33.4	+1.0
BLIS				IAML_P			
	comp=Z,856nm,0.2s						
IGDI	IGDIR	1.27	15	i P	Pg	22 23 18.3	+0.9
IGDI				IAML_P			
	comp=Z,75nm,0.2s						
CUKT	Cukurca	1.39	181	PN	Pg	22 23 19.5	-0.2
TASB	TASBURUN-IGDIR	1.42	19	PN	Pg	22 23 19.9	-0.4
SRTM	Siirt_Merkez	1.50	245	i P	Pg	22 23 22.6	+0.7
SRTM				IAML_P			
	comp=Z,325nm,0.2s						
EATA	Eleskirt	1.51	324	i P	Pg	22 23 21.6	-0.5
EATA				IAML_P			
	comp=Z,158nm,0.1s						
MUSM	Mu-Merkez	1.67	274	i P	Pb	22 23 23.2	-0.5
MUSM				IAML_P			
	comp=Z,210nm,0.2s						
GNI	Garni	1.73	29	PN	Pb	22 23 24.6	-0.1

WEL 21 22:31:57.0, 42°S±3°×**17°4E**±°**, h16**km±3km**, M3.9**/53**, ML4.1**/25**, MLv3.9**/53**, Error ellipse: s-maj=0.0km s-min=0.0km az=122.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.27	215	P	Pb	22 32 03.5	+0.1
TCW	Tory Channel	0.34	340	P	Pb	22 32 04.6	0.0
WEL	Wellington	0.35	47	P	Pb	22 32 05.0	+0.2
BHW	Baring Head	0.36	71	P	Pb	22 32 04.9	+0.1
TUWZ	Tuamarina	0.38	285	P	Pb	22 32 05.0	-0.2
BSWZ	Blackbirch Sta	0.45	245	P	Pb	22 32 06.6	0.0
PLWZ	Palliser	0.62	94	P	Pb	22 32 09.8	+0.3
MSWZ	Moikau Station	0.63	80	P	Pb	22 32 09.9	+0.4
CAW	Cannon Point	0.64	49	P	Pb	22 32 09.9	+0.2
PAWZ	Paruwai Farm	0.77	79	P	Pg	22 32 12.4	+0.5
DUWZ	D'Urville Isla	0.82	332	P	Pg	22 32 13.2	+0.3
NNZ	Nelson	0.85	291	P	Pg	22 32 13.4	0.0
MTW	Mount Morrison	0.89	66	P	Pn	22 32 14.7	0.0
OGWZ	Otaki Gorge	0.91	39	P	Pg	22 32 14.4	-0.1
TRWZ	Traveller	0.96	83	P	Pg	22 32 15.6	0.0
HOWZ	Holdsworth Sta	1.03	53	P	Pg	22 32 17.0	0.0
KHZ	Kahutara	1.11	216	P	Pn	22 32 17.9	+0.1
THZ	Tophouse	1.16	258	P	Pg	22 32 19.1	-0.4
TMWZ	Te Maipa	1.18	70	P	Pn	22 32 18.8	0.0
MRZ	Mangatainoka R	1.23	46	P	Pb	22 32 20.1	+0.4
TIWZ	Tintock	1.33	56	P	Pb	22 32 21.8	+0.2
CPWZ	Castlepoint	1.48	66	P	Pg	22 32 28.3	+2.9
OHWZ	Ohakea	1.48	27	P	Pg	22 32 25.3	-0.2
PRWZ	Pori Road	1.52	51	P	Pn	22 32 24.0	+0.5
POWZ	Post Office Ro	1.52	42	P	Pb	22 32 24.6	-0.2
QRZ	Quartz Range	1.59	295	P	Pb	22 32 26.2	+0.2
BFZ	Birch Farm	1.61	59	P	Pn	22 32 24.4	-0.4
GVZ	Greta Valley S	1.77	215	P	Pn	22 32 26.8	-0.2
DVHZ	Dannevirke	1.80	48	P	Pn	22 32 27.4	0.0
WAZ	Wanganui	1.82	14	P	Pg	22 32 31.4	-0.6
ANWZ	Angora Road	1.88	56	P	Pb	22 32 29.8	-1.1
LTZ	Lake Taylor	2.03	231	P	Pn	22 32 30.8	+0.3
LREZ	Lake Rotokare	2.06	360	P	Pg	22 32 36.3	-0.3
PRHZ	Porangahau	2.10	54	P	Pn	22 32 31.4	0.0
PNHZ	Pukenui	2.10	41	P	Pn	22 32 31.9	+0.4
AMCZ	Amberley	2.11	218	P	Pn	22 32 31.1	-0.4
WPHZ	Waipukurau	2.12	47	P	Pb	22 32 34.0	-0.9
NMEZ	Namu Road	2.15	349	P	Pg	22 32 37.6	-0.6
PREZ	Palmer Road	2.19	355	P	Pb	22 32 37.3	+1.1
KHEZ	Kahui Hut	2.25	352	P	Pb	22 32 38.2	+1.0
MTVZ	Mangateitei	2.28	21	P	Pg	22 32 39.3	-1.5
NBEZ	Newall Road No	2.30	349	P	Pg	22 32 41.2	+0.1
DREZ	Durham Road	2.34	356	P	Pg	22 32 41.7	-0.2
PKVZ	Pokaka	2.34	18	P	Pb	22 32 38.9	+0.1
MOVZ	Moawhango	2.35	26	P	Pb	22 32 37.5	-1.4
PKE	Pukeiti	2.35	352	P	Pb	22 32 38.7	-0.2
PXZ	Pawanui	2.38	52	P	Pn	22 32 35.0	-0.2
BHHZ	Black Hill Sta	2.39	32	P	Pb	22 32 37.8	-1.8
KRHZ	Kereru	2.40	39	P	Pn	22 32 35.8	+0.3
DRZ	Dome Shelter	2.41	22	P	Pg	22 32 42.0	-1.3
WHVZ	Whangaehu Hut	2.41	22	P	Pb	22 32 39.2	-0.9
VRZ	Vera Road	2.41	6	P	Pb	22 32 39.6	-0.4
OKCZ	Okains Bay	2.42	204	P	Pn	22 32 34.5	-1.3
FWVZ	Far West T-bar	2.43	21	P	Pb	22 32 39.7	-0.7
TUVZ	Tukino	2.44	23	P	Pb	22 32 39.2	-1.4
NGZ	Ngauruhoe	2.52	21	P	Pb	22 32 40.7	-1.1
INZ	Inchbonnie	2.52	241	P	Pn	22 32 37.7	+0.6
OXZ	Oxford	2.52	224	P	Pn	22 32 36.4	-0.8
MQZ	McQueen's Vall	2.54	210	P	Pn	22 32 35.6	-1.8
KAHZ	Kahuranaki	2.54	48	P	Pn	22 32 37.4	-0.2
WTVZ	West Tongariro	2.57	21	P	Pb	22 32 43.0	+0.3
TWVZ	Taurewa	2.57	18	P	Pb	22 32 43.0	+0.2
KWHZ	Kaweka Forest	2.59	37	P	Pn	22 32 39.2	+0.9
AKCZ	Akaroa Harbour	2.60	205	P	Pn	22 32 37.0	-1.2
KRVZ	Karewarewa	2.60	21	P	Pb	22 32 43.1	-0.2
KATZ	Kakaramea	2.73	21	P	Pb	22 32 46.1	+0.7
RITZ	Rihia Road	2.77	24	P	Pb	22 32 48.0	+1.9
BKZ	Black Stump Fm	2.84	34	P	Pn	22 32 42.9	+1.3
RATZ	Rangitukua	2.85	22	P	Pb	22 32 49.1	+1.7
WATZ	Wairara	2.99	20	P	Pb	22 32 51.3	+1.5
HIZ	Hauiti	3.03	6	P	Pb	22 32 48.8	-1.7
WVZ	Waitaha Valley	3.14	239	P	Pb	22 32 50.3	-2.1
KUTZ	Kaahu Road	3.22	20	P	Pb	22 32 56.0	+2.2
MTHZ	Maungataniwha	3.25	35	P	Pb	22 32 53.2	-1.1
TLZ	Tolley Road	3.31	15	P	Pb	22 32 54.3	-0.9
RPZ	Rata Peaks	3.31	228	P	Pn	22 32 48.1	0.0
URZ	Urewera	3.86	33	P	Pb	22 33 02.2	-2.5
TOZ	Tahuroa Road	3.88	13	P	Pb	22 33 03.8	-1.2
MWZ	Matawai	3.98	38	P	Pn	22 32 56.9	-0.5
TWGZ	Tauwhareparae	4.32	40	P	Pb	22 33 09.5	-3.1
MKAZ	Moumakai	4.45	8	P	Pb	22 33 09.7	-5.0
AWAZ	Awhitu Peninsu	4.46	2	P	Pn	22 33 08.1	+4.3
ODZ	Otahua Downs	4.47	217	P	Pn	22 33 03.3	-0.7
HAZ	Te Kaha	4.57	36	P	Pb	22 33 12.3	-4.5
WIAZ	Waiheke Island	4.76	7	P	Pb	22 33 15.8	-4.1
CTZ	Chatham Island	6.96	111	P	Pn	22 33 38.0	-0.2

JSN 21 22:33:33.6±0.5**, 18.°45N**×**77.°47W, h18**km±3km**, MD3.5, 2C-2D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBJ	Bamboo Saint A	0.21	110	i P	Pb	22 33 38.5	+0.1
CVJ	Coleyville	0.23	195	⇓iP	Pb	22 33 38.7	-0.4
MCJ	Malvern	0.56	201	⇓iP	Pb	22 33 44.1	-0.8

MCJ				iS	Sg	22 33 52.2	-0.3
STH	Stony Hill	0.73	121	⇑iP	Pb	22 33 46.7	-1.1
STH				iS	Sb	22 33 57.1	-0.4
PCJ	Portland Cotta	0.77	157	iP	Pb	22 33 47.3	-1.1
PCJ				iS	Sb	22 33 57.7	-0.9
GWJ	Greenwich	0.80	118	iP	Pb	22 33 48.2	-0.9
HOJ	Hope	0.82	123	⇑iP	Pb	22 33 48.3	-1.0
NEJ	Negril	0.84	256	iP	Pb	22 33 48.8	-0.8
CMJ	Castle Mountai	1.09	107	iP	Pb	22 33 52.5	-1.5

RSNC 21 22:36:36.2±1.3**, 5°.58N×73°.86W, h130**^{km}±4^{km}**, ML3.2, Mw3.6, 4C-2D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPBC	San Pablo de B	0.22	289	⇑iP	Pn	22 36 54.1	-0.2
SPBC				eS	Sn	22 37 07.3	-0.5
SPBC				i		22 37 09.6	
	comp=E,338nm,0.4s						
CTAU	Tausa, Cundina	0.42	206	eP	Pn	22 36 57.6	+2.1
CTAU				eS	Sn	22 37 13.2	+3.1
CTAB	Cerro Tablazo,	0.66	211	eP	Pn	22 36 57.6	+0.7
CTAB				eS	Sn	22 37 12.2	-0.3
RUSC	La Rusia	0.84	68	⇑iP	Pn	22 36 58.1	-0.1
RUSC				eS	Sn	22 37 14.6	-0.3
RUSC				i		22 37 15.7	
	comp=E,218nm,0.4s						
CROSA	EL ROSAL, CUND	0.86	212	eP	Pn	22 36 58.6	+0.2
CROSA				eS	Sn	22 37 15.7	+0.6
ROSC	El Rosal	0.86	212	⇑iP	Pn	22 36 59.1	+0.7
ROSC				eS	Sn	22 37 15.3	+0.2
CHIC	Chingaza	0.95	172	eP	Pn	22 36 58.8	-0.5
CHIC				eS	Sn	22 37 15.5	-1.1
CHIC				i		22 37 22.2	
	comp=E,98nm,0.4s						
NORC	Norcasia	1.00	269	eP	Pn	22 36 58.7	-0.5
NORC				eS	Sn	22 37 16.1	-0.6
NORC				i		22 37 19.9	
	comp=N,633nm,0.2s						
PTBC	PUERTO BERRIO,	1.12	328	eP	Pn	22 36 59.5	-0.8
PTBC				eS	Sn	22 37 17.2	-1.5
PTBC				i		22 37 19.4	
	comp=E,158nm,0.2s						
BARC	Barichara	1.21	34	eP	Pn	22 37 01.3	-0.2
BARC				eS	Sn	22 37 20.4	-0.3
BARC				i		22 37 22.0	
	comp=Z,238nm,0.4s						
YOPC	Yopal, Colombi	1.45	99	eP	Pn	22 37 03.8	-0.1
YOPC				eS	Sn	22 37 24.6	-0.4
YOPC				i		22 37 26.9	
	comp=E,287nm,0.6s						
VILC	Villavicencio,	1.47	173	eP	Pn	22 37 03.3	-0.8
VILC				eS	Sn	22 37 24.8	-0.6
VILC				i		22 37 31.1	
	comp=N,345nm,0.5s						
BRRC	Barranca, Sant	1.52	6	⇓iP	Pn	22 37 04.7	0.0
BRRC				eS	Sn	22 37 26.8	+0.4
BRRC				i		22 37 30.5	
	comp=N,326nm,0.2s						
RREF	El Recreo	1.62	246	eP	Pn	22 37 06.2	-0.1
RREF				eS	Sn	22 37 29.7	+0.3
RREF				i		22 37 33.6	
	comp=Z,94nm,0.3s						
GIRC	Giron, Santand	1.63	24	eP	Pn	22 37 05.9	-0.1
GIRC				eS	Sn	22 37 28.5	-0.2
HELC	Santa Helena	1.77	290	eP	Pn	22 37 07.8	+0.1
HELC				eS	Sn	22 37 31.4	-0.4
HELC				i		22 37 33.9	
	comp=N,177nm,0.4s						
PAMC	Pamplona, Colo	2.10	33	eP	Pn	22 37 11.4	-0.5
PAMC				eS	Sn	22 37 38.9	-0.3
PRAC	Prado	2.12	209	eP	Pn	22 37 10.8	-0.9
PRAC				eS	Sn	22 37 38.0	-0.9
PRAC				i		22 37 41.1	
	comp=E,208nm,0.4s						
ZARC	Zaragoza, Cauc	2.14	333	eP	Pn	22 37 10.0	-1.9
ZARC				eS	Sn	22 37 37.8	-1.7
ZARC				i		22 37 45.2	
	comp=E,178nm,0.4s						
ORTC	Ortega, Tolima	2.16	220	⇑iP	Pn	22 37 11.6	-0.6
ORTC				eS	Sn	22 37 39.0	-0.8
ORTC				i		22 37 41.9	
	comp=N,245nm,0.3s						
TAMC	Tame, Arauca	2.23	67	eP	Pn	22 37 12.7	-0.4
TAMC				eS	Sn	22 37 40.0	-1.3
TAMC				i		22 37 41.5	
	comp=E,96nm,0.3s						
GRMC	Gramalote, San	2.37	26	eP	Pn	22 37 17.3	+2.3
GRMC				eS	Sn	22 37 47.5	+2.8
OCAC	Ocana	2.70	12	eP	Pn	22 37 18.9	-0.2
OCAC				eS	Sn	22 37 51.8	-0.3
OCAC				i		22 37 53.5	
	comp=N,203nm,0.5s						
DBBC	Dabeiba	2.73	302	eP	Pn	22 37 18.9	-0.6
CAPV	Capacho	2.74	34	⇓iP	Pn	22 37 19.9	+0.1
YOTC	Yotoco, Valle	2.94	237	eP	Pn	22 37 21.1	-1.0
SMLC	San Martn de	3.21	356	eP	Pn	22 37 23.7	-1.9
SMLC				eS	Sn	22 38 02.2	-1.5
SMLC				i		22 38 10.3	
	comp=E,96nm,0.1s						
MACC	Macarena, Meta	3.41	180	eP	Pn	22 37 26.0	-2.3
MACC				i		22 38 06.6	
	comp=E,49nm,0.2s						
SOCV	Socops	4.02	48	eP	Pn	22 37 34.0	-2.3
CODC	Agustn Codazz	4.35	5	eP	Pn	22 37 39.3	-1.3
FLOC	Florencia	4.35	204	eP	Pn	22 37 39.4	-1.4
FLOC				i		22 38 31.8	
	comp=E,12nm,0.3s						

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*DDA **21** 22:40:44.7, 37°.34N×37°.96E, h7^{km}±2^{km}, ML2.9*

*ISK **21** 22:40:44.5, 37°.21N×37°.98E, h6^{km}, ML1.7/3*

ISC 21 22:40:45.2±1.3**, 37°.26N**±0°.08×**37°.96E**±0°.03**, h11**^{km}±12^{km}**, n7, σ0^{s}69**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GZT	Gaziantep	0.33	287	iP	Pb	22 40 52.1	-1.1
GZT				iS	Sg	22 40 56.8	+0.5
GAZ	Gaziantep	0.61	262	PG	Pg	22 40 56.7	-0.2
URFA	Urfa	0.71	75	PG	Pg	22 40 58.6	-0.3
URFA				SG	Sb	22 41 08.8	-0.6
SANL	SANLIURFA_Merk	0.82	96	iP	Pb	22 41 01.6	+0.1
SANL				iS	Sb	22 41 13.4	+0.8
SANL				IAML_P			
	comp=Z,1μm,0.2s						
KUZU	Kuzuini	0.86	236	iP	Pn	22 41 03.4	+0.2
KUZU				iS	Sn	22 41 15.5	-0.3
KUZU				IAML_P			
	comp=Z,975nm,0.1s						
KMRS	Kahramanmaras	0.88	287	PG	Pb	22 41 02.6	+0.1
KMRS				SG	Sb	22 41 15.4	+1.1
DARE	Darende-Malaty	1.36	344	PN	Pg	22 41 11.4	0.0

IDC 21 22:41:46.9±2.1**, 6°.26S×146°.21E, h0**^{km}**, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/23**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=90.8km s-min=29.6km az=115.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.84	219	P	Pn	22 45 55.2	-1.6
	0.1nm,0.3s,baz=37,slow=12,SNR=4.6						
ASAR	Alice Springs	20.97	213	P	P	22 46 32.3	+0.4
	1.2nm,0.8s,baz=42,slow=12,SNR=8.5						
MKAR	Makanchi Array	77.20	321	P	P	22 53 42.9	0.0
	0.2nm,0.4s,baz=97,slow=7.9,SNR=5.1						
ILAR	Eielson Array	86.03	23	P	P	22 54 29.1	0.0
	0.6nm,0.9s,baz=244,slow=4.4,SNR=4.2						
TORD	Torodi Ar. Bea	144.39	284	PKP	PKPdf	23 01 26.4	+0.1
	0.3nm,0.8s,baz=103,slow=4.4,SNR=3.1						

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*IDC **21** 22:47:21.8±0.7, 41°.77S×174°.32E, h0^{km}, mb4.5/9, mb1 4.6/11, mb1mx4.4/26, mbtmp4.5/11, ML4.1/2, MS4.3/9, Ms1 4.3/9, ms1mx4.1/22, Error ellipse: s-maj=22.6km s-min=19.1km az=80.0*

*ISCJB **21** 22:47:24.6±0.3, 41°.75S±0°.02×174°.34E±0°.03, h23^{km}±2^{km}, mb4.9/30, MS4.3/13, Error ellipse: s-maj=4.4km s-min=2.0km az=42.3*

*WEL **21** 22:47:24.6, 42°S±1°×17°4E±°, h16^{km}±2^{km}, M5.0/14, ML5.3/13, MLv5.0/14, Error ellipse: s-maj=0.0km s-min=0.0km az=137.5*

*NEIC **21** 22:47:25.0±0.0, 41°.60S×174°.26E, h16^{km}, mb5.0/26, ML5.0(WEL), After WEL.*

*GCMT **21** 22:47:26.0±0.4, 41°.84S±0°.02×174°.32E±0°.02, h28^{km}±1^{km}, MW5.1/67, Moment Tensor Solution. s28,c32; s67,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.55±.26; M$_{\theta\theta}$3.08±.18; M$_{\phi\phi}$-4.64±.20; M$_{r\theta}$-1.50±.35; M$_{\theta\phi}$-1.43±.12; M$_{\phi r}$2.10±.31; Best double couple: M$_0$4.99500×10^{16} NP1:φ$_s$331.00000°, δ78.00000°, λ37.00000°. NP2: φ$_s$232.00000°, δ54.00000°, λ165.00000°. Principal axes: T 4.5970, Plg34.0000°, Azm198.0000°; N 0.7850, Plg52.0000°, Azm346.0000°; P -5.3920, Plg15.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 22:47:25.0±0.8**, 41°.69S**±0°.02×**174°.31E**±0°.02**, h19**^{km}±3^{km}**, n247, σ1^{s}61**/254**, mb4.9**/30**, MS4.3**/13**, 1C, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.10	229	P	Pg	22 47 28.2	-0.7
CMWZ				S	Sg	22 47 32.3	+0.8
BSWZ	Blackbirch Sta	0.33	265	P	Pg	22 47 30.9	-1.2
TUWZ	Tuamarina	0.38	313	P	Pg	22 47 31.6	-1.4
TUWZ				S	Sg	22 47 36.3	-2.0
TCW	Tory Channel	0.47	357	P	Pg	22 47 33.0	-1.7
SNZO	South Karori	0.48	38	ePg	Pg	22 47 34.2	-0.6
SNZO				eSg	Sg	22 47 40.5	-0.8
BHW	Baring Head	0.50	57	P	Pb	22 47 35.1	-0.1
BHW				S	Sb	22 47 43.4	+1.3
WEL	Wellington	0.53	41	P	Pb	22 47 35.2	-0.4
PLWZ	Palliser	0.72	81	P	Pn	22 47 39.9	-0.3
MSWZ	Moikau Station	0.75	69	P	Pg	22 47 40.1	+0.2
CAW	Cannon Point	0.81	45	P	Pb	22 47 40.1	-0.3
NNZ	Nelson	0.84	303	P	Pb	22 47 39.4	-1.6
PAWZ	Paruwai Farm	0.89	70	P	Pn	22 47 42.6	+0.1
DUWZ	D’Urville Isla	0.93	341	P	Pb	22 47 41.0	-1.5
KHZ	Kahutara	0.93	218	ePn	Pg	22 47 43.5	+0.4
KHZ				eSg	Sb	22 47 53.7	-0.7
KHZ	Kahutara	0.93	218	P	Pg	22 47 43.7	+0.5
MTW	Mount Morrison	1.04	60	P	Pn	22 47 44.8	+0.3
THZ	Tophouse	1.05	265	ePn	Pb	22 47 43.9	-0.8
THZ				eSn	Sg	22 47 59.5	+0.1
THZ	Tophouse	1.05	265	P	Pb	22 47 43.9	-0.8
TRWZ	Traveller	1.07	75	P	Pn	22 47 45.3	+0.3
OGWZ	Otaki Gorge	1.08	37	P	Pb	22 47 44.6	-0.6
HOWZ	Holdsworth Sta	1.20	49	P	Pb	22 47 47.1	-0.1
TMWZ	Te Maipa	1.32	65	P	Pn	22 47 48.5	+0.1
MRZ	Mangatainoka R	1.40	43	P	Pn	22 47 50.0	+0.5
TIWZ	Tintock	1.50	53	P	Pn	22 47 51.2	+0.4
GVZ	Greta Valley S	1.59	216	P	Pn	22 47 52.9	+0.7
QRZ	Quartz Range	1.59	302	ePn	Pn	22 47 52.7	+0.5
QRZ				eSn	Sb	22 48 12.9	-0.6
QRZ	Quartz Range	1.59	302	P	Pn	22 47 52.7	+0.5
CPWZ	Castlepoint	1.62	62	P	Pb	22 47 53.7	-0.6
OHWZ	Ohakea	1.66	28	P	Pb	22 47 55.2	+0.2
PRWZ	Pori Road	1.69	49	P	Pn	22 47 53.7	+0.2
POWZ	Post Office Ro	1.70	41	P	Pn	22 47 54.1	+0.5
BFZ	Birch Farm	1.77	56	ePn	Pn	22 47 54.3	-0.3
BFZ	Birch Farm	1.77	56	P	Pn	22 47 54.1	-0.5
LTZ	Lake Taylor	1.87	233	ePn	Pn	22 47 56.9	+0.9
LTZ				eSn	Sb	22 48 21.1	-0.4
LTZ	Lake Taylor	1.87	233	P	Pn	22 47 56.7	+0.7
AMCZ	Amberley	1.93	219	P	Pn	22 47 56.8	0.0
DVHZ	Dannevirke	1.97	46	P	Pn	22 47 57.0	-0.4
WAZ	Wanganui	2.00	15	P	Pb	22 48 00.1	-0.6
ANWZ	Angora Road	2.04	54	P	Pn	22 47 58.1	-0.3
LREZ	Lake Rotokare	2.22	2	P	Pb	22 48 04.0	-0.5
OKCZ	Okains Bay	2.24	204	P	Pn	22 48 00.7	-0.4
PRHZ	Porangahau	2.26	52	P	Pn	22 48 00.8	-0.5
CRLZ	Canterbury Las	2.26	213	ePn	Pn	22 48 01.2	-0.1
CRLZ				eSn	Sb	22 48 31.7	-1.0
CRLZ	Canterbury Las	2.26	213	P	Pn	22 48 01.5	+0.2
PNHZ	Pukenui	2.28	40	P	Pn	22 48 01.6	0.0
WPHZ	Waipukurau	2.29	46	P	Pn	22 48 01.7	0.0
NMEZ	Namu Road	2.29	352	P	Pb	22 48 05.1	-0.7
PREZ	Palmer Road	2.34	357	P	Pb	22 48 05.1	-1.6
OXZ	Oxford	2.35	225	ePn	Pn	22 48 02.3	-0.2
OXZ	Oxford	2.35	225	P	Pn	22 48 02.3	-0.2
MQZ	McQueen’s Vall	2.36	211	ePn	Pn	22 48 01.7	-1.0
MQZ				eSn	Sn	22 48 30.4	-0.7
MQZ	McQueen’s Vall	2.36	211	P	Pn	22 48 01.5	-1.2
INZ	Inchbonnie	2.37	243	P	Pn	22 48 03.9	+1.1
KHEZ	Kahui Hut	2.40	354	P	Pb	22 48 05.6	-2.0
AKCZ	Akaroa Harbour	2.42	205	P	Pn	22 48 03.0	-0.5
NBEZ	Newall Road No	2.44	352	P	Pb	22 48 06.0	-2.2
MTVZ	Mangateitei	2.46	21	P	Pb	22 48 07.9	-0.8
DREZ	Durham Road	2.50	358	P	Pb	22 48 07.9	-1.3
PKE	Pukeiti	2.50	354	P	Pn	22 48 06.6	+2.0
PKVZ	Pokaka	2.52	19	P	Pn	22 48 07.1	+2.1
MOVZ	Moawhango	2.53	26	P	Pn	22 48 06.1	+1.0
PXZ	Pawanui	2.54	50	P	Pn	22 48 04.2	-1.0
BHHZ	Black Hill Sta	2.57	32	P	Pn	22 48 06.4	+0.8
KRHZ	Kereru	2.57	38	P	Pn	22 48 05.4	-0.3
VRZ	Vera Road	2.58	8	P	Pn	22 48 07.8	+2.1
DRZ	Dome Shelter	2.59	22	P	Pb	22 48 09.9	-1.1
WHVZ	Whangaehu Hut	2.59	23	P	Pn	22 48 07.9	+1.8
FWVZ	Far West T-bar	2.61	22	P	Pn	22 48 08.2	+2.0
TUVZ	Tukino	2.62	23	P	Pn	22 48 07.9	+1.5
NGZ	Ngauruhoe	2.69	22	P	Pn	22 48 09.2	+1.7
KAHZ	Kahuranaki	2.71	47	P	Pn	22 48 06.8	-0.8
WTVZ	West Tongariro	2.75	21	P	Pn	22 48 09.7	+1.6
TWVZ	Taurewa	2.75	19	P	Pn	22 48 09.8	+1.7
KWHZ	Kaweka Forest	2.77	36	P	Pn	22 48 07.9	-0.5
KRVZ	Karewarewa	2.78	22	P	Pn	22 48 10.5	+1.9
MCHZ	McNeill Hill	2.88	40	P	Pn	22 48 09.7	-0.2
KATZ	Kakaramea	2.91	22	P	Pn	22 48 13.0	+2.6
CKHZ	Cape Kidnapper	2.92	47	P	Pn	22 48 10.7	+0.3
RITZ	Rihia Road	2.95	24	P	Pb	22 48 14.4	-2.6
WVZ	Waitaha Valley	2.99	241	P	Pn	22 48 12.8	+1.4
BKZ	Black Stump Fm	3.02	34	ePn	Pn	22 48 12.0	+0.2
BKZ				eSn	Sn	22 48 47.0	-0.4
BKZ	Black Stump Fm	3.02	34	P	Pn	22 48 12.5	+0.7
RATZ	Rangitukua	3.03	22	P	Pb	22 48 17.0	-1.3
HATZ	Hinemaiaia	3.11	27	P	Pb	22 48 19.7	+0.1
RPZ	Rata Peaks	3.14	229	Pn	Pn	22 48 13.3	-0.2
	49nm,0.3s,baz=82,slow=3.7,SNR=131						
RPZ				Sn	Sn	22 48 50.4	-0.1
	109nm,0.3s,baz=121,slow=22,SNR=11						
RPZ				LR	LR	22 49 25.1	
	comp=Z,3μm,22.0s,baz=46,slow=40						
RPZ	Rata Peaks	3.14	229	ePn	Pn	22 48 13.5	0.0
RPZ				eSn	Sn	22 48 49.8	-0.6
RPZ	Rata Peaks	3.14	229	P	Pn	22 48 13.4	0.0
WATZ	Wairara	3.17	21	P	Pb	22 48 17.5	-3.2
ARHZ	Aropaoanui	3.17	41	P	Pn	22 48 13.7	-0.1
HIZ	Hauiti	3.20	8	ePn	Pn	22 48 16.5	+2.3
HIZ				eSn	Sb	22 48 55.8	-3.9
HIZ	Hauiti	3.20	8	P	Pn	22 48 16.4	+2.3
MTHZ	Maungataniwha	3.43	35	P	Pn	22 48 17.1	-0.4
WHHZ	Waihua	3.43	42	P	Pn	22 48 18.1	+0.7
TLZ	Tolley Road	3.48	16	P	Pn	22 48 20.3	+2.1
RAHZ	Arahi	3.49	38	P	Pn	22 48 18.9	+0.7
ALRZ	Allen Road	3.49	27	P	Pn	22 48 19.0	+0.8
ALRZ				P	Pb	22 48 24.1	-2.0
PRRZ	Plateau Road	3.56	27	P	Pb	22 48 23.9	-3.5
GRRZ	Galatos Road	3.61	23	P	Pb	22 48 25.0	-3.2
RTZ	Ruatahuna	3.69	35	P	Pn	22 48 22.2	+1.2
KNZ	Kokohu	3.70	45	P	Pn	22 48 20.2	-0.9
SNGZ	Shannon Statio	3.71	40	P	Pn	22 48 21.7	+0.4
MUGZ	Murupara	3.72	31	P	Pn	22 48 21.5	+0.2
MHGZ	Mahia Peninsul	3.73	49	P	Pn	22 48 21.3	-0.3
FOZ	Fox Glacier	3.80	239	ePn	Pn	22 48 24.1	+1.7
FOZ				eSn	Sn	22 49 06.8	+0.3
FOZ	Fox Glacier	3.80	239	P	Pn	22 48 24.1	+1.7
TARZ	Mount Tarawera	3.84	27	P	Pn	22 48 23.7	+0.6
RAGZ	Rawiri	3.98	38	P	Pn	22 48 27.3	+2.3
RIGZ	Rimuhau	3.98	43	P	Pn	22 48 23.9	-1.1
KMRZ	Kaimai	4.04	19	P	Pn	22 48 29.2	+3.4
URZ	Urewera	4.04	33	Pn	Pn	22 48 23.9	-1.9
	4.5nm,0.3s,baz=216,slow=5.6,SNR=15						
URZ				Sn	Sn	22 49 11.4	-1.1
	46nm,0.3s,baz=340,slow=18,SNR=5.6						
URZ	Urewera	4.04	33	ePn	Pn	22 48 24.6	-1.2
URZ	Urewera	4.04	33	P	Pn	22 48 25.0	-0.8
LBZ	Lake Benmore	4.05	227	ePn	Pn	22 48 28.0	+2.0
LBZ				eSn	Sn	22 49 13.1	+0.2
LBZ	Lake Benmore	4.05	227	P	Pn	22 48 26.9	+0.9
TOZ	Tahuroa Road	4.05	13	P	Pn	22 48 28.3	+2.3
MARZ	Manawahe	4.12	27	P	Pn	22 48 31.2	+4.3
MWZ	Matawai	4.16	37	P	Pn	22 48 25.7	-1.8
TKGZ	Te Karaka	4.23	41	P	Pn	22 48 27.2	-1.2
ODZ	Otahua Downs	4.29	217	ePn	Pn	22 48 29.0	-0.2
ODZ				eSn	Sn	22 49 18.1	-0.7
ODZ	Otahua Downs	4.29	217	P	Pn	22 48 28.7	-0.5
CNGZ	Carnagh Statio	4.38	44	P	Pn	22 48 30.5	+0.1
TWGZ	Tauwhareparae	4.50	40	P	Pn	22 48 31.3	-0.8
RUGZ	Raukumara Rang	4.53	36	P	Pn	22 48 31.6	-1.0
KBAZ	Karaka Road Bo	4.61	6	P	Pn	22 48 37.5	+4.0
AWAZ	Awhitu Peninsu	4.62	3	P	Pn	22 48 36.2	+2.4
MKAZ	Moumakai	4.62	8	P	Pn	22 48 35.3	+1.5
JCZ	Jackson Bay	4.71	238	P	Pn	22 48 38.8	+3.8
PUZ	Puketiti	4.72	41	P	Pn	22 48 34.2	-0.9
ETAZ	East Tamaki Re	4.75	6	P	Pn	22 48 38.4	+2.9
WTAZ	Waiatarua	4.75	3	P	Pn	22 48 38.8	+3.2
RVAZ	Riverhead Bore	4.91	3	P	Pn	22 48 42.3	+4.6
WIAZ	Waiheke Island	4.93	8	P	Pn	22 48 40.3	+2.4
MBAZ	Motutapu North	4.93	5	P	Pn	22 48 40.5	+2.5
WKZ	Wanaka	4.98	229	ePg	Pb	22 48 49.0	-2.5
WKZ	Wanaka	4.98	229	P	Pn	22 48 39.2	+0.5
HHSZ	Highcliff Hill	4.98	211	P	Pn	22 48 39.1	+0.4
WMGZ	Waiomatatini S	4.99	41	P	Pn	22 48 37.4	-1.4
KUZ	Kuaotunu	5.05	13	P	Pn	22 48 42.3	+2.6
EAZ	Earnscleugh	5.08	224	P	Pn	22 48 41.3	+1.2
ABAZ	Army Bay	5.09	5	P	Pn	22 48 43.4	+3.2
MXZ	Matakaoa Point	5.14	38	ePn	Pn	22 48 41.8	+0.8
MXZ	Matakaoa Point	5.14	38	P	Pn	22 48 40.4	-0.5
TUZ	Tuapeka	5.45	217	P	Pn	22 48 47.3	+2.2
GRZ	Great Barrier	5.50	10	P	Pn	22 48 51.5	+5.7
MSZ	Milford Sound	5.54	235	P	Pn	22 48 52.5	+6.2
WCZ	Waipu Caves	5.74	0	P	Pn	22 48 51.6	+2.5
MLZ	Mavora Lakes	5.81	229	ePn	Pn	22 48 52.3	+2.1
MLZ				eSn	Sn	22 49 55.7	-0.6
MLZ	Mavora Lakes	5.81	229	P	Pn	22 48 51.4	+1.2
SYZ	Scrubby Hill	6.11	216	P	Pn	22 48 54.5	+0.3
WHZ	Wether Hill Ro	6.24	225	ePn	Pn	22 48 55.5	-0.4
WHZ	Wether Hill Ro	6.24	225	P	Pn	22 48 58.0	+2.0
DCZ	Deep Cove	6.42	232	ePn	Pn	22 48 57.6	-0.9
OUZ	Omahuta	6.48	355	ePn	Pn	22 49 01.4	+2.1
OUZ	Omahuta	6.48	355	P	Pn	22 49 01.5	+2.1
APZ	The Paps	6.86	219	P	Pn	22 49 05.7	+1.2
CTZ	Chatham Island	6.99	110	P	Pn	22 49 06.3	0.0
I36NZ	CHATHAM INFRAS	7.13	111	i		23 30 50.0	
	baz=284,slow=318,SNR=1.9						
PINNC	Pines Island,	19.87	341	eP	P	22 51 55.2	+0.2
	225nm,1.5s						
TAU	Tasmania Unive	19.98	257	eP	P	22 51 53.7	-2.4
	131nm,1.5s						
DZM	Mont Dzumac	20.65	339	eP	Pn	22 52 05.8	-0.1
	105nm,1.4s						
DZM				eLR	LR	22 56 56.0	
	comp=Z,714nm,24.9s						
DZM	Mont Dzumac	20.65	339	P	P	22 52 04.4	+0.8
	16nm,0.9s,baz=144,slow=15,SNR=6.2						
DZM				LR	LR	22 58 35.5	
	comp=Z,368nm,20.6s,baz=178,slow=32						
DZM	Mont Dzumac	20.65	339	eP	P	22 52 03.7	+0.1
	53nm,1.3s						
EIDS	Eidsvold	25.18	303	eP	P	22 52 48.9	-0.3
	7.7nm,0.9s						
STKA	Stephens Creek	27.83	280	LR	LR	23 02 26.4	
	comp=Z,698nm,21.7s,baz=126,slow=32						
STKA	Stephens Creek	27.83	280	eP	P	22 53 10.8	-2.2
	5.8nm,1.5s						
AFI	Afiamalu	30.20	28	eP	P	22 53 34.2	-0.1
	79nm,1.3s						
TBI	Tubuai	35.27	70	eLQ	LQ	23 02 15.0	
	555nm,24.0s						
TBI				eLR	LR	23 03 44.8	
	comp=Z,445nm,26.2s						
TBI	Tubuai	35.27	70	eT	T	23 32 11.0	
	17nm,0.3s						
VNDA	Vanda	36.31	185	P	P	22 54 24.6	-2.3
	0.3nm,0.5s,baz=8.8,slow=10.0,SNR=2.6						
VNDA	Vanda	36.31	185	eP	P	22 54 27.0	+0.1
	6.9nm,1.3s						
SBA	Scott Base	36.41	183	eP	P	22 54 28.6	+0.9
	24nm,1.2s						
AS31	Alice Springs	38.06	285	eP	P	22 54 42.4	0.0
	4.6nm,1.3s						
ASAR	Alice Springs	38.06	285	P	P	22 54 41.5	-0.9
	3.7nm,0.6s,baz=127,slow=7.3,SNR=30						
ASAR				LR	LR	23 09 43.7	
	comp=Z,500nm,19.8s,baz=131,slow=35						
FORT	Forrest	38.45	271	eP	P	22 54 44.3	-1.2
	16nm,0.8s						
PPT2	Papeete2	39.09	63	eLQ	LQ	23 03 51.2	
	784nm,27.0s						
PPT2				eLR	LR	23 05 25.4	
	comp=Z,378nm,22.5s						
PPT	Papeete	39.10	63	LR	LR	23 09 00.6	
	comp=Z,459nm,18.0s,baz=219,slow=33						
PMG	Port Moresby	40.07	316	P	P	22 54 59.8	+0.7
	6.9nm,0.6s,baz=176,slow=13,SNR=1.8						
PMG	Port Moresby	40.07	316	eP	P	22 54 56.2	-3.0
	31nm,0.9s						
WB2	Warramunga Arr	40.12	290	eP	P	22 54 59.5	-0.1
	14nm,0.7s						
WR1	Warramunga Arr	40.12	290	eP	P	22 54 58.7	-0.9
WRA	Warramunga Arr	40.12	290	P	P	22 54 58.7	-0.9
	14nm,0.6s,baz=126,slow=8.4,SNR=18						
RABL	Rabaul	42.27	326	eP	P	22 55 15.4	-1.8
	106nm,0.5s						
CASY	Casey	42.28	213	eP	P	22 55 15.7	-1.1
	8.1nm,0.8s						
MTN	Manton Dam	47.23	295	eP	P	22 55 57.0	+0.1
	18nm,0.9s						
MORW	Morawa	48.31	266	eP	P	22 56 03.5	-1.6
	38nm,1.4s						
QSPA	South Pole Qui	48.44	180	eP	P	22 56 09.6	+3.7
	27nm,1.0s						
TAOE	Nuku Hiva Isla	51.70	64	eLR	LR	23 11 17.4	
	comp=Z,472nm,26.1s						
GIRL	Giralia	53.22	271	eP	P	22 56 42.1	-0.1
	311nm,1.4s						
MAW	Mawson	59.53	204	LR	LR	23 22 42.2	
	comp=Z,831nm,18.2s,baz=112,slow=36						
MAW	Mawson	59.53	204	eP	P	22 57 22.6	-3.9
	2.3nm,1.4s						
RPN	Rapa Nui	62.74	103	eP	P	22 57 46.2	-2.7
	112nm,1.1s						
SARN	Sarigan	63.80	329	eP	P	22 57 53.6	-2.4
	24nm,1.0s						
SYO	Syowa Base	64.65	196	⇑eP	P	22 58 00.7	-0.1
AIN	Ainahou	66.89	31	eP	P	22 58 14.7	-1.3
	267nm,1.4s						
SNAA	Sanae	66.93	181	P	P	22 58 17.6	+1.9
SNAA	Sanae	66.93	181	eP	P	22 58 17.3	+1.6
	13nm,1.2s						
MLOA	Mauna Loa Obse	66.99	31	eP	P	22 58 11.8	-5.2
	114nm,1.2s						
VNA3	Neumayer Olymp	67.34	179	P	P	22 58 19.6	+1.4
VNA1	Neumayer--Stat	67.96	179	P	P	22 58 24.6	+2.6
LEM	Lembang	68.13	281	LR	LR	23 26 43.1	
	comp=Z,257nm,21.6s,baz=104,slow=35						
PLCA	Paso Flores	79.11	136	P	P	22 59 29.0	+0.7
	5.5nm,1.0s,baz=231,slow=7.2,SNR=3.7						
PLCA				LR	LR	23 26 35.0	
	comp=Z,167nm,19.8s,baz=246,slow=30						
PLCA	Paso Flores	79.11	136	eP	P	22 59 29.0	+0.7
	12nm,1.2s						
PSI	Prapat	80.99	282	LR	LR	23 36 34.2	
	comp=Z,234nm,19.7s,baz=132,slow=36						
MJAR	Matsushiro Arr	84.57	332	P	P	22 59 58.2	+1.5
	1.1nm,0.6s,baz=156,slow=5.5,SNR=5.1						
MAJO	Matsushiro	84.57	332	eP	P	22 59 58.2	+1.5
NJ2	Nanjing	89.38	316	eP	P	23 00 23.3	+3.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSRS	Korea Array	89.43	325	P	P	23 00 21.6	+1.4
	comp=Z,7.0nm,0.9s,baz=145,slow=5.7,SNR=18						
KS15	Wonju Array Si	89.44	325	eP	P	23 00 21.6	+1.4
CM31	Chiang Mai Arr	91.66	293	eP	P	23 00 31.8	+0.7
	comp=Z,9.8nm,1.3s						
CMAR	Chiang Mai Arr	91.66	293	P	P	23 00 31.8	+0.7
	comp=Z,0.7nm,0.3s,baz=145,slow=3.5,SNR=4.5						
KMI	Kunming	93.73	300	P	P	23 00 43.9	+3.1
KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CD2	Chengdu	97.14	305	eP	Pdif	23 00 57.8	+1.7
HHC	Hu-ho-hao-te	99.88	317	eP	Pdif	23 01 12.4	+4.4
LZH	Lanzhou	100.70	309	eP	Pdif	23 01 13.0	+1.1

LZH				pP	pPdif	23 01 14.6	-3.8
LZH				sP	pP	23 01 15.3	-3.2
LZH				*e*PP	**PP**	**23 05 25.3**	**+5.4**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,67nm,9.5s						
LZH				LR	LR		
	comp=N,76nm,17.3s						
LZH				LR	LR		
	comp=E,83nm,17.5s						
LZH				LR	LR		
	comp=Z,110nm,19.7s						
MCK	**McKinley**	**109.05**	**16**	*e*Sdif	Sdif	23 14 00.5	+4.3
WMQ	**Urumqi**	**115.16**	**307**	*e*P	**PKiKP**	**23 06 05.8**	**+1.3**
WMQ				LR	LR		
	comp=N,110nm,29.0s						
WMQ				LR	LR		
	comp=E,200nm,29.2s						
WMQ				LR	LR		
	comp=Z,60nm,29.1s						
YKA	**Yellowknife Ar**	**118.30**	**30**	PKP	**PKPdf**	**23 06 08.7**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=260,slow=1.9,SNR=4.2						
YKB5	**Yellowknife Ar**	**118.30**	**30**	*e*PKPdf	**PKPdf**	**23 06 08.7**	**-1.1**
MK32	**Makanchi Array**	**119.97**	**308**	*e*PKPdf	**PKPdf**	**23 06 12.6**	**-1.0**
MKAR	**Makanchi Array**	**119.97**	**308**	PKP	**PKPdf**	**23 06 12.6**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=118,slow=2.1,SNR=3.2						
KSH	**Kashi**	**120.26**	**298**	*e*PKP	**PKiKP**	**23 06 16.9**	**+2.3**
BRVK	**Borovoye**	**129.63**	**311**	*e*Pdif	**Pdif**	**23 03 18.6**	**-1.3**
KBZ	**Khabaz**	**144.64**	**290**	PKP	**PKPdf**	**23 06 59.4**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=94,slow=2.8,SNR=8.8						
LIC	**Lamto**	**144.68**	**181**	*e*P	**PKPab**	**23 06 58.5**	**-1.0**
	comp=Z,70nm,1.4s						
KIC	**Kosan Boka**	**144.81**	**182**	*e*P	**PKPdf**	**23 07 00.7**	**-0.4**
	comp=Z,108nm,1.6s						
TIC	**Toumodi**	**145.10**	**181**	*e*P	**PKPbc**	**23 06 57.1**	**-3.9**
DBIC	**Dimbokro**	**145.12**	**181**	PKPbc	**PKPbc**	**23 07 00.5**	**-0.5**
	comp=Z,4.5nm,0.7s,baz=166,slow=5.2,SNR=7.3						
SUMG	**Summit**	**145.24**	**17**	*e*PKPbc	**PKPdf**	**23 07 00.8**	**+0.4**
SUMG	**Summit**	**145.24**	**17**	*i* P	**PKPdf**	**23 07 01.0**	**+0.5**
ARA0	**ARCESS Array S**	**147.73**	**340**	*e*PKPdf	**PKPdf**	**23 07 05.2**	**+0.9**
ARCES	**ARCESS Array B**	**147.73**	**340**	PKPbc	**PKPdf**	**23 07 05.2**	**+0.9**
	comp=Z,7.9nm,0.9s,baz=50,slow=2.0,SNR=12						
BR101	**Keskin Array S**	**150.30**	**279**	*e*PKPbc	**PKPbc**	**23 07 13.6**	**-1.2**
BRTR	**Keskin Array B**	**150.30**	**279**	PKPbc	**PKPbc**	**23 07 13.5**	**-1.2**
	comp=Z,1.9nm,0.8s,baz=134,slow=4.3,SNR=7.9						
TOA0	**Torodi Ar. Sit**	**150.85**	**195**	*e*PKPbc	**PKiKP**	**23 07 17.8**	**+0.6**
TORD	**Torodi Ar. Bea**	**150.85**	**195**	PKP	**PKPdf**	**23 07 11.1**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=291,slow=2.0,SNR=4.6						
TORD				PKPbc	**PKPbc**	**23 07 15.7**	**-0.9**
	comp=Z,6.9nm,0.8s,baz=318,slow=1.3,SNR=62						
TOA1	**Torodi Ar. Sit**	**150.85**	**195**	*e*PKPdf	**PKPdf**	**23 07 11.1**	**+0.2**
TOA1				*e*PKPbc	**PKPbc**	**23 07 15.7**	**-0.9**
FIA0	**FINESS Array S**	**152.50**	**327**	*e*PKPbc	**PKPbc**	**23 07 18.4**	**-0.5**
FINES	**FINESS Array B**	**152.50**	**327**	PKPbc	**PKPbc**	**23 07 18.4**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=28,slow=3.6,SNR=20						
AKASG	**Malin Array Be**	**154.41**	**303**	PKPbc	**PKiKP**	**23 07 24.4**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=75,slow=1.4,SNR=2.9						
AKBB	**Malin Array Si**	**154.41**	**303**	*e*PKPbc	**PKiKP**	**23 07 24.4**	**+1.0**
NB2	**NORSAR Subarra**	**158.06**	**338**	PKP	**PKPab**	**23 07 58.2**	**+5.0**
	comp=Z,1.1nm,0.7s,baz=38,slow=4.4						
NB200	**NORSAR Array S**	**158.06**	**338**	*e*PKPab	**PKPab**	**23 07 54.9**	**+1.7**
NOA	**NORSAR Array B**	**158.06**	**338**	PKPab	**PKPab**	**23 07 54.9**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=38,slow=4.5,SNR=3.3						
GEC2	**GERESS Array S**	**164.61**	**304**	*e*PKPab	**PKPab**	**23 08 23.5**	**+1.2**
GERES	**GERESS Array B**	**164.61**	**304**	PKPab	**PKPab**	**23 08 23.5**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=52,slow=3.8,SNR=5.2						
ESDC	**Sonseca Array**	**177.60**	**214**	PKP	**PKPdf**	**23 07 34.8**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=310,slow=1.1,SNR=6.4						
ESLA	**Sonseca Array**	**177.60**	**214**	*e*PKPdf	**PKPdf**	**23 07 36.8**	**+2.9**

WEL 21 22:50:01.9, 41˚S±3˚×17˚4E±˚, h7^{km}±2^{km}, M3.6/7, ML3.9/7, MLv3.6/7, Error ellipse: s-maj=0.0km s-min=0.0km az=136.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	**Tuamarina**	**0.23**	**281**	P	Pg	22 50 07.5	+0.9
TCW	**Tory Channel**	**0.27**	**5**	P	Pn	22 50 15.0	+2.8
CMWZ	**Cape Campbell**	**0.28**	**185**	P	Pb	22 50 08.4	-0.8
BSWZ	**Blackbirch Sta**	**0.37**	**229**	P	Pg	22 50 07.5	-1.7
WEL	**Wellington**	**0.44**	**64**	P	Pb	22 50 11.6	-0.4
BHW	**Baring Head**	**0.47**	**82**	P	Pg	22 50 11.7	+0.6
CAW	**Cannon Point**	**0.72**	**59**	P	Pb	22 50 17.4	+0.6
OGWZ	**Otaki Gorge**	**0.96**	**47**	P	Pn	22 50 21.6	-0.2
MTW	**Mount Morrison**	**1.00**	**72**	P	Pn	22 50 22.0	-0.3
KHZ	**Kahutara**	**1.08**	**209**	P	Pg	22 50 20.4	-2.2
HOWZ	**Holdsworth Sta**	**1.12**	**59**	P	Pn	22 50 24.8	+0.8
GVZ	**Greta Valley S**	**1.74**	**211**	P	Pb	22 50 33.9	-0.3

WEL 21 22:51:09.5, 42˚S±3˚×17˚4E±˚, h5^{km}±2^{km}, M3.3/8, ML3.6/7, MLv3.3/8, Error ellipse: s-maj=0.0km s-min=0.0km az=136.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.13**	**193**	P	Pg	22 51 16.4	+4.2
BSWZ	**Blackbirch Sta**	**0.30**	**252**	P	Pb	22 51 16.4	-0.9
TUWZ	**Tuamarina**	**0.30**	**310**	P	Pg	22 51 16.3	+0.9
TCW	**Tory Channel**	**0.41**	**2**	P	Pb	22 51 18.8	-0.4
BHW	**Baring Head**	**0.51**	**65**	P	Pb	22 51 20.6	-0.3
WEL	**Wellington**	**0.51**	**49**	P	Pb	22 51 20.4	-0.6
PLWZ	**Palliser**	**0.75**	**86**	P	Pn	22 51 26.7	-0.1
NNZ	**Nelson**	**0.77**	**301**	P	Pn	22 51 26.4	-0.6
MSWZ	**Moikau Station**	**0.78**	**75**	P	Pn	22 51 28.6	+1.5
CAW	**Cannon Point**	**0.80**	**50**	P	Pb	22 51 26.4	+0.5
KHZ	**Kahutara**	**0.95**	**214**	P	Pn	22 51 29.2	-0.4
MTW	**Mount Morrison**	**1.05**	**64**	P	Pn	22 51 31.1	+0.3
OGWZ	**Otaki Gorge**	**1.06**	**41**	P	Pn	22 51 31.1	+0.1
HOWZ	**Holdsworth Sta**	**1.20**	**53**	P	Pn	22 51 33.6	+0.7
LTZ	**Lake Taylor**	**1.87**	**231**	P	Pg	22 51 45.6	+0.2
RPZ	**Rata Peaks**	**3.15**	**227**	P	Pb	22 52 07.9	+1.9

MEX 21 22:52:41.3±0.7, 16˚.25N×97˚.98W, h12^{km}±8^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.43**	**337**	*e*P	Pn	22 53 03.7	-3.5
TLIG				*e*S	Sn	22 53 20.6	-5.4
VHO	**Vista Hermosa**	**1.45**	**55**	*i* P	Pn	22 53 04.2	-3.3
VHO				*i* S	Sn	22 53 22.2	-4.4
HUIG	**Huatulco**	**1.86**	**105**	*i* P	Pn	22 53 09.0	-4.0
HUIG				*i* S	Sn	22 53 31.5	-5.0
CAIG	**El Cayaco**	**2.34**	**290**	*i* P	Pn	22 53 16.6	-3.0
CAIG				*i* S	Sn	22 53 44.4	-3.9

KRSC 21 22:53:45.6±2.1, 54˚.79N×167˚.74E, h60^{km}±25^{km}, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.10**	**293**	*e*P	Pn	22 54 05.4	+0.6
BKI				*e*S	Sn	22 54 20.4	+1.2
KBTR	**Krutoberegovo**	**3.14**	**299**	*e*P	Pn	22 54 34.2	+1.7
KBTR				*e*S	Sn	22 55 11.1	+2.4
MKZ	**Mys Kozlova**	**3.50**	**269**	*e*P	Pn	22 54 41.7	+4.3
MKZ				*e*S	Sn	22 55 21.3	+3.9
SPN	**Mys Shipunski**	**4.86**	**253**	*e*P	Pn	22 54 59.0	+2.9
SPN				*e*S	Sn	22 55 53.3	+2.3
SDLR	**Sedlovina**	**5.43**	**257**	*e*P	Pn	22 55 08.3	+4.3
SDLR				*e*S	Sn	22 56 09.3	+4.1
SMAR	**Somma**	**5.49**	**257**	*e*P	Pn	22 55 09.3	+4.5
KRER	**Koryakskii**	**5.50**	**258**	*e*P	Pn	22 55 08.9	+3.9
AVH	**Avacha**	**5.52**	**258**	*e*P	Pn	22 55 09.7	+4.5
AVH				*e*S	Sn	22 56 12.1	+4.8
KRX	**Arik**	**5.54**	**259**	*e*P	Pn	22 55 09.8	+4.3
KRX				*e*S	Sn	22 56 11.3	+3.4
KOK	**Koryaka**	**5.57**	**258**	*e*P	Pn	22 55 09.7	+3.8
GNL	**Ganaly**	**5.85**	**263**	*e*P	Pn	22 55 14.3	+4.6
KRMR	**Karymshinskiy**	**6.02**	**255**	*e*S	Sn	22 56 24.3	+4.9
ASAK	**Asacha**	**6.34**	**252**	*e*P	Pn	22 55 18.8	+2.5
KDTR	**Khodutka, Kamc**	**6.52**	**247**	*e*S	Sn	22 56 32.2	+0.7

*ISCJB **21** 22:55:00.8±0.8, 14˚.36N±0˚.05×93˚.22W±0˚.04, h36^{km}±7^{km}, mb4.1/18, MS2.9/1, Error ellipse: s-maj=9.4km s-min=5.0km az=26.9*

*GCG **21** 22:55:01.0±0.7, 16˚.11N×92˚.51W, h38^{km}±999^{km}, MD4.1*

*IDC **21** 22:55:03.0±3.5, 14˚.29N×93˚.03W, h40^{km}±27^{km}, mb3.6/6, mb1 3.9/10, mb1mx3.7/39, mbtmp3.8/10, ML3.6/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/24, Error ellipse: s-maj=54.5km s-min=17.6km az=40.0*

*NEIC **21** 22:55:02.4±0.0, 14˚.32N×93˚.23W, h21^{km}, mb4.2/24, MD4.2(MEX), After MEX.*

*MEX **21** 22:55:02.4±0.5, 14˚.32N×93˚.23W, h21^{km}±30^{km}, MD4.2*

ISC 21 22:55:01.3±1.8, 14˚.38N±0˚.06×93˚.21W±0˚.04, h25^{km}±13^{km}, n53, σ1ˢ.51/68, mb4.0/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.05**	**60**	*e*Pn	**Pn**	**22 55 19.9**	**-0.6**
THIG				*e*Sn	**Sb**	**22 55 32.8**	**-1.4**
THIG		**1.05**	**60**	*e*P	**Pn**	**22 55 19.9**	**-0.6**
THIG				*e*S	**Sb**	**22 55 32.8**	**-1.4**
PCIG		**1.32**	**359**	*e*Pn	**Pn**	**22 55 23.4**	**-0.8**
PCIG				*e*Sn	**Sn**	**22 55 39.7**	**-1.3**
PCIG		**1.32**	**359**	*e*P	**Pn**	**22 55 23.4**	**-0.8**
PCIG				*i* S	**Sn**	**22 55 39.7**	**-1.3**
STG3	**Santiaguito 3,**	**1.62**	**78**	*e*P	**Pn**	**22 55 28.2**	**-0.2**
CCIG	**Comitan**	**2.16**	**28**	*e*Pn	**Pb**	**22 55 38.2**	**-1.6**
CCIG				*e*Pn	**Pb**	**22 55 38.7**	**-1.1**
CCIG				*e*Sn	**Sn**	**22 56 00.2**	**-1.7**
CCIG				*e*Sn	**Sn**	**22 56 01.5**	**-0.5**
CCIG	**Comitan**	**2.16**	**28**	*e*P	**Pb**	**22 55 38.7**	**-1.1**
CCIG				*i* S	**Sn**	**22 56 01.5**	**-0.5**
FUG	**Fuego 3**	**2.29**	**88**	*e*P	**Pn**	**22 55 37.2**	**-0.5**
FUG				*e*S	**Sn**	**22 56 05.8**	**+0.6**
TGIG		**2.39**	**2**	*e*Pn	**Pn**	**22 55 39.3**	**+0.3**
TGIG				*e*Sn	**Sn**	**22 56 07.7**	**+0.1**
TGIG		**2.39**	**2**	*e*P	**Pn**	**22 55 39.3**	**+0.3**
TGIG				*e*S	**Sn**	**22 56 07.7**	**+0.1**
PCG	**Pacaya**	**2.52**	**89**	*e*P	**Pn**	**22 55 40.5**	**-0.4**
PCG				*e*S	**Sn**	**22 56 10.7**	**-0.3**
APG	**El Apazote**	**2.73**	**76**	Pn	**Pn**	**22 55 44.0**	**+0.2**
	24nm,0.3s,baz=188,slow=7.7,SNR=74						
APG				Sn	Sn	22 56 07.2	-8.9
	26nm,0.3s,baz=231,slow=22,SNR=6.6						
APG				Lg	Lg	22 56 23.0	
	36nm,0.3s,baz=345,slow=15,SNR=7.6						
NBG	**Las Nubes**	**2.78**	**85**	*e*P	**Pn**	**22 55 44.8**	**+0.3**
HUIG	**Huatulco**	**3.13**	**297**	*e*Pn	**Pn**	**22 55 47.9**	**-1.2**
HUIG				*e*Sn	**Sn**	**22 56 24.1**	**-1.6**
HUIG	**Huatulco**	**3.13**	**297**	*e*P	**Pn**	**22 55 47.9**	**-1.2**
HUIG				*i* S	**Sn**	**22 56 24.1**	**-1.6**
CMIG	**Matias Romero**	**3.15**	**329**	Pn	**Pn**	**22 55 50.1**	**+0.8**
	14nm,0.3s,baz=156,slow=11,SNR=38						
CMIG				Sn	**Sn**	**22 56 22.8**	**-3.4**
	15nm,0.3s,baz=131,slow=13,SNR=4.6						
CMIG				LR	LR	22 57 21.1	
	comp=Z,148nm,19.7s,baz=154,slow=42						
CMIG	**Matias Romero**	**3.15**	**329**	*e*Pn	**Pn**	**22 55 49.5**	**+0.1**
CMIG	**Matias Romero**	**3.15**	**329**	*e*P	**Pn**	**22 55 49.5**	**+0.1**
LVIG	**Laguna Verde**	**6.14**	**330**	*e*Pn	**Pn**	**22 56 30.1**	**-0.5**
TEIG	**Tepich**	**7.48**	**38**	*e*Pn	**Pn**	**22 56 48.9**	**-0.1**
TEIG				*e*Sn	**Sn**	**22 58 06.2**	**-6.8**
ACON	**Acoyapa**	**8.18**	**106**	*e*Pn	**Pn**	**22 56 59.5**	**+0.9**
JTS	**Las Juntas de**	**9.03**	**116**	Pn	**Pn**	**22 57 07.9**	**-2.3**
	0.1nm,0.3s,baz=270,slow=19,SNR=1.9						
JTS				Lg	Lg	22 59 30.4	
	0.3nm,0.3s,baz=186,slow=20,SNR=3.5						
JTS	**Las Juntas de**	**9.03**	**116**	*e*Pn	**Pn**	**22 57 10.6**	**+0.4**
TXAR	**Lajitas Array**	**17.75**	**329**	P	**P**	**22 59 09.4**	**+1.7**
	0.1nm,0.3s,baz=152,slow=11,SNR=17						
TX31	**Lajitas Ar. Si**	**17.75**	**329**	*e*P	**P**	**22 59 09.6**	**+1.9**
	4.5nm,0.9s						
555A	**McAlpin**	**18.29**	**29**	*e*P	**Pn**	**22 59 13.2**	**-0.3**
	36nm,1.2s						
250A	**Grady**	**18.64**	**19**	*e*P	**P**	**22 59 16.6**	**-0.6**
	29nm,1.4s						
147A	**Livingston**	**18.76**	**13**	*e*P	**Pn**	**22 59 19.8**	**+0.6**
	40nm,1.4s						
152A	**Waverly Hall**	**19.79**	**22**	*e*P	**P**	**22 59 28.7**	**-1.1**
	5.2nm,0.9s						
Z50A	**Ashland**	**19.93**	**18**	*e*P	**P**	**22 59 29.4**	**-2.0**
	6.6nm,1.1s						
X40A	**Basin Creek Fa**	**20.03**	**1**	*e*P	**P**	**22 59 32.2**	**-0.2**
	1.7nm,0.8s						
MIAR	**Mount Ida**	**20.09**	**359**	*e*P	**P**	**22 59 32.7**	**-0.4**
	8.9nm,0.9s						
JAKH	**Jacmel**	**20.22**	**76**	*e*P	**P**	**22 59 35.6**	**+0.9**
	181nm,0.7s						
MSTX	**Muleshoe**	**21.35**	**338**	*e*P	**P**	**22 59 48.5**	**+1.6**
	8.4nm,1.0s						
FCAR	**Ozark Folk Cen**	**21.45**	**2**	*e*P	**P**	**22 59 47.8**	**0.0**
	4.1nm,0.7s						
AMTX	**Amarillo**	**21.80**	**341**	*e*P	**P**	**22 59 53.0**	**+1.3**
	11nm,0.8s						
ANMO	**Albuquerque**	**23.71**	**332**	P	**P**	**23 00 13.0**	**+1.4**
	1.0nm,0.7s,baz=146,slow=12,SNR=4.7						
TUC	**Tucson**	**24.00**	**321**	*e*P	**P**	**23 00 17.8**	**+3.5**
	3.4nm,0.9s						
SDCO	**Great Sand Dun**	**25.71**	**337**	*e*P	**P**	**23 00 30.5**	**+0.5**
	2.1nm,0.8s						
SJG	**San Juan**	**26.23**	**78**	LR	LR	23 10 16.7	
	comp=Z,36nm,21.3s,baz=141,slow=35						
OGNE	**Ogallala**	**27.57**	**345**	*e*P	**P**	**23 00 46.8**	**+0.2**
	58nm,0.6s						
NVAR	**Mina Array Bea**	**32.65**	**322**	P	**P**	**23 01 33.7**	**+2.0**
	1.3nm,0.8s,baz=135,slow=6.7,SNR=9.4						
SNOW	**Snow King Moun**	**32.66**	**336**	*e*P	**P**	**23 01 31.1**	**-0.7**
	11nm,1.1s						
E46A	**Sault Ste Mari**	**32.76**	**11**	*e*P	**P**	**23 01 33.8**	**+1.6**
	17nm,1.5s						
TPAW	**Teton Pass**	**32.76**	**336**	*e*P	**P**	**23 01 32.5**	**-0.2**
	8.4nm,1.3s						
CMB	**Columbia Colle**	**33.68**	**319**	*e*P	**P**	**23 01 41.6**	**+1.0**
	1.4nm,0.9s						
F10A	**Beach Ranch, E**	**37.43**	**332**	*e*P	**P**	**23 02 14.3**	**+1.7**
	3.5nm,0.8s						
SIV	**San Ignacio**	**43.80**	**132**	P	**P**	**23 03 03.6**	**-2.0**
	0.3nm,0.4s,baz=314,slow=9.0,SNR=4.1						
YKA	**Yellowknife Ar**	**50.40**	**347**	P	**P**	**23 03 57.3**	**+0.9**
	2.9nm,0.7s,baz=152,slow=7.3,SNR=14						
YKW3	**Yellowknife Ar**	**50.46**	**347**	*e*P	**P**	**23 03 56.6**	**-0.2**
	7.1nm,0.8s						
ILAR	**Eielson Array**	**62.04**	**337**	P	**P**	**23 05 19.4**	**-0.1**
	0.7nm,0.8s,baz=104,slow=3.8,SNR=5.5						
ESDC	**Sonseca Array**	**80.40**	**52**	P	**P**	**23 07 09.0**	**-2.1**
	0.4nm,0.6s,baz=298,slow=6.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**145.25**	**339**	PKPbc	**PKPbc**	**23 14 37.4**	**-0.1**
	1.4nm,0.7s,baz=337,slow=2.8,SNR=7.9						

JMA 21 22:55:37.8±0.2, 25˚.03N×123˚.25E, h158^{km}±3^{km}, M3.3, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.61**	**201**	P	Pn	22 56 00.9	+0.3
YOJ				*e*S	Sn	22 56 18.4	+0.4
JYNG	**Yonagunijimaku**	**0.64**	**206**	P	Pn	22 56 01.1	+0.3
JYNG				S	Sn	22 56 18.8	+0.4
IRIF	**Iriomote-Funau**	**0.82**	**148**	P	Pn	22 56 02.0	0.0
IRIF				S	Sn	22 56 20.2	-0.2
JIJ	**Ishigaki jima**	**1.05**	**129**	P	Pn	22 56 03.8	+0.1
JIJ				S	Sn	22 56 22.6	-1.0
JKRS	**Kuro-shima**	**1.05**	**139**	P	Pn	22 56 04.3	+0.6
JKRS				S	Sn	22 56 23.7	+0.1
JISG	**Ishigakijimahi**	**1.06**	**114**	P	Pn	22 56 03.8	0.0
JISG				S	Sn	22 56 23.5	-0.2
HATJ	**Hateruma jima**	**1.09**	**152**	P	Pn	22 56 04.8	+0.7
HATJ				*e*S	Sn	22 56 24.6	+0.3
JTJ	**Tarama**	**1.38**	**106**	P	Pn	22 56 07.0	+0.3
JTJ				S	Sn	22 56 28.8	0.0
JIRB	**Irabujima**	**1.76**	**96**	P	Pn	22 56 10.5	-0.2
JIRB				S	Sn	22 56 34.7	-1.2
JIKM	**Ikemajima**	**1.82**	**93**	S	Sn	22 56 36.2	-0.9
JMJ2	**Miyako jima3**	**1.91**	**98**	P	Pn	22 56 12.7	+0.3
JMJ2				S	Sn	22 56 38.1	-0.8
JOGS	**Gusukube**	**1.98**	**97**	P	Pn	22 56 14.0	+0.9
JOGS				S	Sn	22 56 40.0	-0.3
JKE	**Kume jima 2**	**3.44**	**67**	*e*S	Sn	22 57 10.2	-2.2

TAP 21 22:55:45.6, 23˚.91N×121˚.53E, h17^{km}±1^{km}, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.10**	**45**	*e*P	Pg	22 55 49.9	+0.7
	baz=48						
HWA				*e*S	Sg	22 55 53.9	+2.3
	baz=48						
ESL	**Shilin**	**0.13**	**224**	P	Pb	22 55 49.9	+0.4
	baz=220						
ESL				S	Sb	22 55 52.7	+0.6
	baz=220						
TWD	**Chiawan**	**0.18**	**19**	P	Pb	22 55 50.9	+0.4
	baz=21						
TWD				*e*S	Sb	22 55 55.2	+1.4
	baz=21						
EGFH	**Guangfu**	**0.25**	**202**	*e*P	Pb	22 55 51.7	-0.1
	baz=201						
EGFH				*e*S	Sb	22 55 56.1	+0.3
	baz=201						
NACB	**Ninganchiao**	**0.27**	**13**	P	Pb	22 55 52.3	+0.2
	baz=12						
NACB				*e*S	Sb	22 55 57.0	+0.6
	baz=12						
ETLH	**Xiulin Townshi**	**0.30**	**352**	*e*P	Pb	22 55 52.8	+0.1
	baz=351						
ETLH				S	Sb	22 55 57.4	+0.1
	baz=351						
WHF	**Hehuan Shan**	**0.34**	**315**	*e*P	Pb	22 55 53.6	+0.2
	baz=315						
WHF				*e*S	Sb	22 55 59.2	+0.5
	baz=315						
CHGB	**Renai**	**0.36**	**295**	*e*P	Pb	22 55 54.0	+0.3
	baz=295						
CHGB				*e*S	Sb	22 55 59.8	+0.7
	baz=295						
VWDT	**VWDT**	**0.39**	**247**	P	Pb	22 55 54.6	+0.6
	baz=246						
VWDT				S	Sb	22 56 00.8	+1.2
	baz=246						
HGSD	**Ruisui**	**0.42**	**193**	*e*P	Pb	22 55 54.8	+0.2
	baz=193						
HGSD				*e*S	Sb	22 56 01.8	+1.1
	baz=193						
NNSB	**Datong**	**0.54**	**346**	*e*P	Pb	22 55 56.7	+0.1
	baz=345						
NNSB				*e*S	Sb	22 56 04.5	+0.3
	baz=345						
SSLB	**Suanglung**	**0.54**	**257**	*e*P	Pb	22 55 56.9	+0.3
	baz=257						
SSLB				*e*S	Sb	22 56 04.6	+0.5
	baz=257						
NNS	**Nan Shan**	**0.55**	**345**	*e*P	Pb	22 55 57.0	+0.2
	baz=345						
NNS				*e*S	Sb	22 56 04.8	+0.3
	baz=345						
YULB	**Yu-li**	**0.55**	**203**	*e*P	Pg	22 55 56.3	-0.4
	baz=202						
YULB				*e*S	Sb	22 56 05.6	+1.1
	baz=202						
NANB	**Nanao**	**0.56**	**21**	*e*P	Pb	22 55 57.4	+0.5
	baz=21						
TWF1	**Yuli**	**0.59**	**201**	*e*P	Pb	22 55 57.5	0.0
	baz=200						
TWF1				*e*S	Sb	22 56 06.6	+1.1
	baz=200						
NDT	**Datong Townshi**	**0.69**	**359**	*e*P	Pg	22 55 59.9	+0.7
	baz=358						
ALS	**Alishan**	**0.77**	**239**	*e*P	Pb	22 56 00.6	-0.1
	baz=238						
EOS1	**EOS1**	**0.84**	**40**	*e*P	Pn	22 56 04.7	+2.1
	baz=40						

WEL 21 22:57:44.7, 42˚S±5˚×17˚4E±˚, h15^{km}, M3.9/31, ML4.2/31, MLv3.9/31, Error ellipse: s-maj=0.0km s-min=0.0km az=169.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.07**	**238**	P	Pg	22 57 48.8	+1.0
CMWZ				S	Sg	22 57 51.8	+2.1
BSWZ	**Blackbirch Sta**	**0.32**	**269**	P	Pb	22 57 51.8	-0.2
BSWZ				S	Sb	22 57 57.0	0.0
TUWZ	**Tuamarina**	**0.39**	**317**	P	Pg	22 57 52.3	-0.3
TUWZ				S	Sg	22 57 57.5	-0.4
TCW	**Tory Channel**	**0.50**	**358**	P	Pg	22 57 54.1	-0.6
BHW	**Baring Head**	**0.53**	**55**	P	Pb	22 57 56.1	+0.4
WEL	**Wellington**	**0.55**	**40**	P	Pb	22 57 56.1	0.0
WEL				S	Sb	22 58 04.0	+0.2
PLWZ	**Palliser**	**0.73**	**79**	P	Pn	22 58 00.8	+0.2
MSWZ	**Moikau Station**	**0.77**	**68**	P	Pn	22 58 01.0	-0.1
CAW	**Cannon Point**	**0.84**	**44**	P	Pg	22 58 01.2	+0.2
NNZ	**Nelson**	**0.85**	**305**	P	Pb	22 58 00.6	-0.5
NNZ				S	Sb	22 58 11.8	-0.5
KHZ	**Kahutara**	**0.90**	**218**	P	Pn	22 58 04.5	+1.7
PAWZ	**Paruwai Farm**	**0.91**	**69**	P	Pn	22 58 03.8	+0.8
DUWZ	**D’Urville Isla**	**0.95**	**343**	P	Pb	22 58 02.2	-0.7
THZ	**Tophouse**	**1.04**	**267**	P	Pg	22 58 05.0	+0.1
MTW	**Mount Morrison**	**1.06**	**59**	P	Pg	22 58 05.8	+0.6
TRWZ	**Traveller**	**1.09**	**74**	P	Pg	22 58 06.2	+0.4
OGWZ	**Otaki Gorge**	**1.11**	**37**	P	Pb	22 58 05.6	0.0
HOWZ	**Holdsworth Sta**	**1.23**	**49**	P	Pg	22 58 08.1	-0.3
TMWZ	**Te Maipa**	**1.34**	**64**	P	Pb	22 58 09.5	-0.1
MRZ	**Mangatainoka R**	**1.43**	**43**	P	Pb	22 58 10.9	-0.1
TIWZ	**Tintock**	**1.52**	**53**	P	Pb	22 58 12.8	+0.2
GVZ	**Greta Valley S**	**1.57**	**216**	P	Pb	22 58 13.5	+0.1
QRZ	**Quartz Range**	**1.60**	**303**	P	Pb	22 58 13.9	-0.1
CPWZ	**Castlepoint**	**1.64**	**62**	P	Pg	22 58 19.5	+3.2
OHWZ	**Ohakea**	**1.69**	**28**	P	Pb	22 58 16.2	+0.7
PRWZ	**Pori Road**	**1.71**	**48**	P	Pn	22 58 14.8	+0.8
POWZ	**Post Office Ro**	**1.73**	**41**	P	Pb	22 58 15.5	-0.6
BFZ	**Birch Farm**	**1.79**	**56**	P	Pn	22 58 15.3	+0.1
LTZ	**Lake Taylor**	**1.85**	**234**	P	Pb	22 58 17.6	-0.6
DVHZ	**Dannevirke**	**2.00**	**46**	P	Pn	22 58 18.2	+0.2
WAZ	**Wanganui**	**2.02**	**15**	P	Pb	22 58 21.2	0.0
ANWZ	**Angora Road**	**2.07**	**54**	P	Pn	22 58 20.1	+1.2
OKCZ	**Okains Bay**	**2.21**	**204**	P	Pn	22 58 21.8	+0.9
LREZ	**Lake Rotokare**	**2.25**	**2**	P	Pb	22 58 26.0	+0.9
PRHZ	**Porangahau**	**2.28**	**52**	P	Pn	22 58 23.4	+1.5
PNHZ	**Pukenui**	**2.30**	**39**	P	Pb	22 58 24.8	-1.2
WPHZ	**Waipukurau**	**2.31**	**45**	P	Pn	22 58 23.5	+1.2
NMEZ	**Namu Road**	**2.32**	**352**	P	Pg	22 58 28.0	-1.2
OXZ	**Oxford**	**2.32**	**225**	P	Pg	22 58 28.4	-0.8
MQZ	**McQueen’s Vall**	**2.33**	**211**	P	Pn	22 58 22.5	-0.1
INZ	**Inchbonnie**	**2.35**	**243**	P	Pb	22 58 25.3	-1.4
PREZ	**Palmer Road**	**2.37**	**357**	P	Pb	22 58 27.7	+0.6
AKCZ	**Akaroa Harbour**	**2.39**	**205**	P	Pn	22 58 24.0	+0.7
KHEZ	**Kahui Hut**	**2.42**	**355**	P	Pb	22 58 27.5	-0.5
NBEZ	**Newall Road No**	**2.46**	**352**	P	Pb	22 58 29.4	+0.7
MTVZ	**Mangateitei**	**2.49**	**21**	P	Pb	22 58 29.5	+0.3
DREZ	**Durham Road**	**2.52**	**358**	P	Pb	22 58 29.9	+0.2
PKE	**Pukeiti**	**2.52**	**355**	P	Pb	22 58 28.0	-1.8
PKVZ	**Pokaka**	**2.55**	**19**	P	Pb	22 58 28.7	-1.5
MOVZ	**Moawhango**	**2.56**	**26**	P	Pb	22 58 28.3	-2.0
PXZ	**Pawanui**	**2.57**	**50**	P	Pn	22 58 25.5	-0.3
BHHZ	**Black Hill Sta**	**2.59**	**32**	P	Pn	22 58 28.3	+2.1
KRHZ	**Kereru**	**2.60**	**38**	P	Pn	22 58 26.6	+0.4
VRZ	**Vera Road**	**2.61**	**8**	P	Pb	22 58 29.6	-1.5
DRZ	**Dome Shelter**	**2.62**	**22**	P	Pb	22 58 33.1	+1.6
WHVZ	**Whangaehu Hut**	**2.62**	**23**	P	Pb	22 58 30.2	-1.3
FWVZ	**Far West T-bar**	**2.63**	**22**	P	Pb	22 58 30.6	-1.2
TUVZ	**Tukino**	**2.65**	**23**	P	Pb	22 58 29.7	-2.2
NGZ	**Ngauruhoe**	**2.72**	**22**	P	Pb	22 58 31.8	-1.3
KAHZ	**Kahuranaki**	**2.74**	**47**	P	Pn	22 58 28.2	0.0
WTVZ	**West Tongariro**	**2.77**	**21**	P	Pb	22 58 32.5	-1.5
TWVZ	**Taurewa**	**2.78**	**19**	P	Pb	22 58 31.7	-2.4
KWHZ	**Kaweka Forest**	**2.80**	**36**	P	Pb	22 58 34.7	+0.2
KRVZ	**Karewarewa**	**2.81**	**22**	P	Pb	22 58 33.2	-1.5
KATZ	**Kakaramea**	**2.93**	**22**	P	Pb	22 58 36.2	-0.6
WVZ	**Waitaha Valley**	**2.97**	**241**	P	Pb	22 58 37.7	+0.4
RITZ	**Rihia Road**	**2.98**	**24**	P	Pb	22 58 38.4	+0.9
BKZ	**Black Stump Fm**	**3.04**	**34**	P	Pb	22 58 38.3	-0.3
RATZ	**Rangitukua**	**3.06**	**22**	P	Pb	22 58 40.4	+1.6
RPZ	**Rata Peaks**	**3.12**	**229**	P	Pn	22 58 34.6	+1.2
WATZ	**Wairara**	**3.19**	**21**	P	Pb	22 58 42.2	+1.0
HIZ	**Hauiti**	**3.22**	**8**	P	Pb	22 58 38.5	-3.2
MRHZ	**Matea Rd**	**3.30**	**30**	P	Pb	22 58 44.5	+1.6
TLZ	**Tolley Road**	**3.51**	**16**	P	Pb	22 58 46.5	-0.1
FOZ	**Fox Glacier**	**3.77**	**240**	P	Pb	22 58 48.0	-3.0
URZ	**Urewera**	**4.07**	**33**	P	Pb	22 58 54.4	-1.6
TOZ	**Tahuroa Road**	**4.08**	**14**	P	Pb	22 58 55.4	-0.9
MWZ	**Matawai**	**4.19**	**37**	P	Pn	22 58 49.8	+1.7
ODZ	**Otahua Downs**	**4.26**	**217**	P	Pn	22 58 49.7	+0.7
AWAZ	**Awhitu Peninsu**	**4.65**	**3**	P	Pn	22 58 58.0	+3.7
MKAZ	**Moumakai**	**4.65**	**9**	P	Pn	22 58 58.8	+4.5
HAZ	**Te Kaha**	**4.78**	**35**	P	Pn	22 58 58.0	+1.9
WIAZ	**Waiheke Island**	**4.95**	**8**	P	Pn	22 59 04.1	+5.6
WCZ	**Waipu Caves**	**5.76**	**0**	P	Pn	22 59 16.4	+6.7
OUZ	**Omahuta**	**6.50**	**355**	P	Pn	22 59 27.1	+7.2
CTZ	**Chatham Island**	**6.99**	**110**	P	Pn	22 59 28.8	+2.3

WEL 21 23:01:34.2, 42°S±1°×17°4E±°, h5^{km}±1^{km}, M3.2/18, ML3.6/19, MLv3.2/18, Error ellipse: s-maj=0.0km s-min=0.0km az=144.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.15	192	P	Pg	23 01 38.2	+0.9
TUWZ	Tuamarina	0.29	306	P	Pb	23 01 40.9	-1.0
BSWZ	Blackbirch Sta	0.31	248	P	Pg	23 01 40.8	+0.6
TCW	Tory Channel	0.39	2	P	Pg	23 01 42.5	+0.8
WEL	Wellington	0.50	51	P	Pb	23 01 44.9	-0.5
BHW	Baring Head	0.50	68	P	Pb	23 01 45.0	-0.5
PLWZ	Palliser	0.75	88	P	Pb	23 01 50.0	+0.2
NNZ	Nelson	0.76	300	P	Pb	23 01 49.6	-0.4
MSWZ	Moikau Station	0.77	77	P	Pb	23 01 50.1	0.0
CAW	Cannon Point	0.78	51	P	Pb	23 01 50.2	-0.2
DUWZ	D'Urville Isla	0.84	342	P	Pb	23 01 51.9	+0.7
PAWZ	Paruwai Farm	0.91	76	P	Pn	23 01 54.0	+0.3
KHZ	Kahutara	0.97	213	P	Pb	23 01 53.7	+0.1
THZ	Tophouse	1.02	260	P	Pb	23 01 54.4	-0.1
MTW	Mount Morrison	1.04	65	P	Pn	23 01 55.1	-0.3
OGWZ	Otaki Gorge	1.04	42	P	Pg	23 01 54.4	+0.2
TRWZ	Traveller	1.09	80	P	Pn	23 01 56.5	+0.3
HOWZ	Holdsworth Sta	1.18	54	P	Pn	23 01 57.5	+0.1
TMWZ	Te Maipa	1.33	69	P	Pg	23 01 59.7	0.0
MRZ	Mangatainoka R	1.37	47	P	Pn	23 02 00.1	+0.1
TIWZ	Tintock	1.48	57	P	Pg	23 02 05.4	+2.8
QRZ	Quartz Range	1.51	300	P	Pb	23 02 02.7	-0.1
OHWZ	Ohakea	1.61	30	P	Pb	23 02 04.4	+0.1
GVZ	Greta Valley S	1.64	213	P	Pn	23 02 04.0	+0.3
POWZ	Post Office Ro	1.66	44	P	Pg	23 02 06.5	+0.4
PRWZ	Pori Road	1.67	52	P	Pb	23 02 05.4	0.0
BFZ	Birch Farm	1.76	59	P	Pb	23 02 06.8	-0.2
LTZ	Lake Taylor	1.89	231	P	Pn	23 02 07.8	+0.6
WAZ	Wanganui	1.93	17	P	Pg	23 02 11.9	+0.8
DVHZ	Dannevirke	1.95	49	P	Pg	23 02 14.2	+2.7
LREZ	Lake Rotokare	2.14	3	P	Pg	23 02 16.8	+1.6
OKCZ	Okains Bay	2.30	202	P	Pn	23 02 10.9	-1.9
KHEZ	Kahui Hut	2.31	355	P	Pg	23 02 18.4	-0.1
NBEZ	Newall Road No	2.35	353	P	Pg	23 02 20.1	+0.9
MQZ	McQueen's Vall	2.41	209	P	Pn	23 02 12.8	-1.5
MOVZ	Moawhango	2.47	28	P	Pb	23 02 19.5	+0.4
AKCZ	Akaroa Harbour	2.48	203	P	Pn	23 02 13.4	-1.8

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*NIED **21** 23:02:00, 42°.80N×146°.60E, h20^{km}, Mw3.8 Best double couple: M$_0$4.94000×10^{14} NP1:φ$_s$206.00000°, δ38.00000°, λ101.00000°. NP2:φ$_s$12.00000°, δ53.00000°, λ81.00000°.*

*IDC **21** 23:02:23.0±1.6, 42°.62N×146°.53E, h0^{km}, mb4.0/10, mb1 4.0/13, mb1mx3.7/33, mbtmp3.9/13, ML3.1/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/37, Error ellipse: s-maj=39.3km s-min=18.7km az=167.0*

*ISCJB **21** 23:02:23.4±1.0, 42°.60N±0°.03×146°.65E±0°.04, h19^{km}±7^{km}, mb4.9/44, MS3.4/1, Error ellipse: s-maj=5.7km s-min=4.8km az=6.8*

*MOS **21** 23:02:25.7±1.1, 42°.57N×146°.59E, h35^{km}, mb4.9/12, Error ellipse: s-maj=12.3km s-min=7.1km az=93.6*

*JMA **21** 23:02:26.3±0.2, 42°.78N×146°.56E, h31^{km}±3^{km}, M3.8*

*SKHL **21** 23:02:26.9±0.5, 42°.68N×146°.49E, h36^{km}±2^{km}, mb4.0/4*

*NEIC **21** 23:02:28.0±1.8, 42°.48N×146°.70E, h43^{km}±7^{km}, mb4.8/36, Error ellipse: s-maj=11.9km s-min=10.7km az=140.0*

ISC 21 23:02:25.1±2.6**, 42°.65N**±0°.04×**146°.57E**±0°.04**, h17**^{km}±16^{km}**, n115, σ1^{s}62**/123**, mb4.8**/44**, 1C-4D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.94	320	P	Pb	23 02 42.0	-0.8
NEM2				eS	Sb	23 02 53.1	-1.8
JKHN	Kushirohamanak	1.12	293	P	Pn	23 02 45.5	-0.4
JKHN				eS	Sb	23 02 59.9	-0.3
JAK	Akkeshi	1.42	285	P	Pn	23 02 50.1	+0.1
GRPR	Tuman	1.46	337	d iPN	Pn	23 02 49.7	-0.9
GRPR				i S	Sn	23 03 06.7	-2.7
GRPR				pmax	pmax		
	comp=N,888nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,2µm,0.3s						
GRPR				pmax	pmax		
	comp=E,669nm,0.2s						
GRPR				smax	smax		
	comp=N,6µm,0.4s						
GRPR				smax	smax		
	comp=E,3µm,0.4s						
GRPR	Tuman	1.46	337	i P	Pn	23 02 49.0	-1.6
GRPR				AMB	AMB	23 02 51.0	
	comp=E,10.0nm,0.3s						
GRPR				AMB	AMB	23 02 51.0	
	comp=E,50nm,0.3s						
GRPR				i S	Sn	23 03 06.0	-3.4
GRPR				A	A	23 03 07.0	
	comp=E,600nm,0.3s						
GRPR				A	A	23 03 07.0	
	comp=E,320nm,0.3s						
YUK	Yuzh-Kuril'sk	1.48	340	d iPN	Pn	23 02 50.3	-0.5
YUK				i S	Sn	23 03 07.5	-2.2
YUK				pmax	pmax		
	comp=E,78nm,0.5s						
YUK				pmax	pmax		
	comp=Z,671nm,0.5s						
YUK				pmax	pmax		
	comp=N,73nm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
YUK	Yuzh-Kuril'sk	1.48	340	i P	Pn	23 02 50.4	-0.4
YUK				AMB	AMB	23 02 50.5	
	comp=E,50nm,0.3s						
YUK				AMB	AMB	23 02 50.5	
	comp=E,70nm,0.3s						
YUK				AMB	AMB	23 02 50.5	
	comp=E,30nm,0.3s						
YUK				i S	Sn	23 03 07.6	-2.2
YUK				A	A	23 03 12.0	
	comp=E,210nm,0.2s						
YUK				A	A	23 03 12.0	
	comp=E,300nm,0.2s						
LAGR	Lagunnoye	1.52	338	d iPN	Pn	23 02 50.7	-0.7
LAGR				eS	Sn	23 03 07.4	-3.3
LAGR				pmax	pmax		
	comp=Z,2µm,0.4s						
LAGR				pmax	pmax		
	comp=E,327nm,0.2s						
LAGR				pmax	pmax		
	comp=N,168nm,0.1s						
LAGR				smax	smax		
	comp=N,8µm,0.4s						
LAGR				smax	smax		
	comp=E,8µm,0.3s						
LAGR	Lagunnoye	1.52	338	i P	Pn	23 02 50.0	-1.4
LAGR				AMB	AMB	23 02 51.2	
	comp=E,20nm,0.3s						
LAGR				AMB	AMB	23 02 51.2	
	comp=E,30nm,0.3s						
LAGR				AMB	AMB	23 02 51.2	
	comp=E,70nm,0.3s						
LAGR				eS	Sn	23 03 07.0	-3.7
LAGR				A	A	23 03 09.0	
	comp=E,770nm,0.4s						
LAGR				A	A	23 03 09.0	
	comp=E,780nm,0.4s						
JNSB	Nemuroshibetsu	1.60	315	P	Pn	23 02 51.8	-0.8
JNK	Nakash	1.65	305	P	Pn	23 02 52.6	-0.5
JNK				eS	Sn	23 03 11.0	-2.9
JRA	Rausu	1.67	321	P	Pn	23 02 52.9	-0.5
JRA				eS	Sn	23 03 12.5	-1.8
JOB	Onbets	2.03	278	P	Pn	23 02 59.0	+0.6
JAR	Ashorobuto	2.15	288	P	Pn	23 03 00.3	+0.2
JAR				eS	Sn	23 03 25.8	-0.6
JTKR	Abashiri--Toko	2.35	305	P	Pn	23 03 03.6	+0.8
JTKR				eS	Sn	23 03 30.7	-0.5
JCH	Churui	2.37	270	P	Pn	23 03 05.0	+2.0
JCH				eS	Sn	23 03 33.2	+1.6
JEM	Erimo	2.61	257	P	Pb	23 03 09.4	-1.9
ERM	Erimo	2.61	257	ePn	Pn	23 03 09.2	+2.9
ERM	Erimo	2.61	257	d iPN	Pn	23 03 09.2	+2.9
JMP	Maruseppu	2.71	301	P	Pn	23 03 09.4	+1.7
KUR	Kuril'sk	2.75	20	ePN	Pn	23 03 09.3	+1.0
KUR				eS	Sn	23 03 41.2	+0.2
KUR				pmax	pmax		
	comp=N,27nm,0.1s						
KUR				pmax	pmax		
	comp=E,29nm,0.1s						
KUR				pmax	pmax		
	comp=Z,32nm,0.1s						
KUR				smax	smax		
	comp=N,100nm,0.4s						
KUR				smax	smax		
	comp=E,114nm,0.4s						
KUR	Kuril'sk	2.75	20	eP	Pn	23 03 09.0	+0.7
KUR				AMB	AMB	23 03 12.0	
	comp=E,30nm,0.4s						
KUR				eS	Sn	23 03 41.0	0.0
KUR				A	A	23 03 43.0	
	comp=E,100nm,0.4s						
KUR				A	A	23 03 43.0	
	comp=E,110nm,0.4s						
JKA	Kamikawa-asahi	3.24	298	eP	Pn	23 03 16.9	+1.8
ASAJ	Asahikawa	3.25	298	Pn	Pn	23 03 16.9	+1.8
	comp=E,7.1nm,0.3s,baz=139,slow=9.4,SNR=22						
ASAJ				Sn	Sn	23 03 56.8	+3.5
	comp=E,7.6nm,0.3s,baz=12,slow=31,SNR=6.6						
YSS	Yuzh-Sakhalins	5.09	329	ePN	Pn	23 03 42.4	+2.0
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
YSS	Yuzh-Sakhalins	5.09	329	eP	Pn	23 03 42.4	+2.0
MAJO	Matsushiro	8.88	229	ePn	Pn	23 04 32.4	-0.1
MAJO	Matsushiro	8.88	229	ePN	Pn	23 04 32.4	-0.1
MJAR	Matsushiro Arr	8.88	229	Pn	Pn	23 04 32.4	-0.1
	comp=Z,0.1nm,0.3s,baz=25,slow=14,SNR=2.7						
KLR	Kul'dur	12.22	308	LR	LR	23 09 40.1	
	comp=Z,29nm,21.9s,baz=109,slow=36						
PETK	Petropavlovsk-	12.84	32	Pn	Pn	23 05 27.3	+0.7
	comp=Z,0.1nm,0.3s,baz=184,slow=8.7,SNR=3.1						
PEA1	Petropavlovsk-	12.84	32	ePn	Pn	23 05 27.3	+0.6
SARN	Sarigan	25.87	182	eP	P	23 07 54.9	-1.0
	comp=Z,48nm,1.3s						
GSTR	Great Sitkin T	26.75	56	eP	P	23 08 04.1	+0.6
TATO	Taipei	27.14	237	eP	P	23 08 05.2	-2.0
	comp=Z,62nm,0.8s						
BILL	Bilibino	27.53	16	⇑eP	P	23 08 16.5	+6.1
BILL				e		23 09 02.3	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BILL				MLR	MLR		
	comp=Z,125nm,24.0s						
BILL	Bilibino	27.53	16	eP	P	23 08 16.5	+6.1
SONA0	Songino Array	28.52	294	eP	P	23 08 20.5	+0.9
SONM	Songino Array	28.52	294	P	P	23 08 20.5	+0.9
	comp=Z,2.5nm,0.6s,baz=85,slow=8.5,SNR=16						
H11N2	WAKE ISLAND Hy	28.57	137	T	T	23 39 21.1	
	baz=328,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	28.58	137	T	T	23 39 26.5	
	baz=328,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	28.59	137	T	T	23 39 19.6	
	baz=328,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	29.51	138	T	T	23 40 33.4	
	baz=329,slow=76,SNR=139						
H11S3	WAKE ISLAND Hy	29.51	138	T	T	23 40 26.8	
	baz=329,slow=76,SNR=69						
H11S2	WAKE ISLAND Hy	29.52	138	T	T	23 40 31.8	
	baz=329,slow=76,SNR=9.7						
GAMB	Gambell	31.85	34	eP	P	23 08 49.6	+0.9
	comp=Z,100nm,1.3s						
MIDW	Midway	32.45	105	eP	P	23 08 52.9	-1.4
	comp=Z,54nm,0.8s						
SDPT	Sand Point	36.10	51	eP	P	23 09 25.1	-0.5
	comp=Z,66nm,1.1s						
CHGN	Chignik	37.23	49	eP	P	23 09 36.7	+1.5
	comp=Z,36nm,1.1s						
KWAJ	Kwajalein Atol	38.45	145	eP	P	23 09 44.0	-1.9
	comp=Z,474nm,1.3s						
KWAJ	Kwajalein Atol	38.45	145	eP	P	23 09 44.0	-1.9
TTA	Tatalina	38.55	38	eP	P	23 09 45.9	-0.6
	comp=Z,10nm,1.7s						
TTA	Tatalina	38.55	38	eP	P	23 09 45.9	-0.6
TTA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
RND	Reindeer	41.81	38	eS	S	23 16 29.6	-0.4
ILAR	Eielson Array	42.63	35	P	P	23 10 21.2	+1.2
	comp=Z,0.3nm,0.9s,baz=240,slow=5.1,SNR=3.2						
ILB	Eielson Array	42.63	35	eP	P	23 10 21.2	+1.2
	comp=Z,3.7nm,1.4s						
MK31	Makanchi Array	44.73	298	eP	P	23 10 38.1	+1.0
	comp=Z,2.9nm,1.0s						
MK31	Makanchi Array	44.73	298	eP	P	23 10 38.2	+1.0
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK32	Makanchi Array	44.73	298	eP	P	23 10 37.7	+0.6
MKAR	Makanchi Array	44.73	298	P	P	23 10 37.7	+0.6
	comp=Z,1.3nm,0.6s,baz=82,slow=9.5,SNR=12						
MAKZ	Makanchi	44.92	299	epP	pP	23 10 51.6	+8.5
INK	Inuvik	47.57	30	P	P	23 11 00.8	+1.7
	comp=Z,1.0nm,0.5s,baz=270,slow=8.1,SNR=3.5						
INK	Inuvik	47.57	30	eP	P	23 11 00.8	+1.7
	comp=Z,7.6nm,1.4s						
INK	Inuvik	47.57	30	eP	P	23 11 00.8	+1.7
INK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
PMG	Port Moresby	51.80	179	eP	P	23 11 30.3	-1.6
	comp=Z,28nm,1.1s						
PMG	Port Moresby	51.80	179	eP	P	23 11 30.3	-1.6
PMG				pmax	pmax		
	comp=Z,28nm,1.1s						
OBL	Observatory Le	53.80	97	eP	P	23 11 44.3	-2.7
	comp=Z,1µm,1.1s						
UWB	Uwekahuna B	53.80	97	eP	P	23 11 44.8	-2.2
	comp=Z,1µm,1.4s						
SBLHI	Steaming Bluff	53.81	97	eP	P	23 11 46.0	-1.1
	comp=Z,497nm,0.9s						
HLP	Hilina Pali	53.86	97	eP	P	23 11 44.8	-2.6
	comp=Z,298nm,1.0s						
PUH	Pauahi	53.88	97	eP	P	23 11 46.5	-1.0
	comp=Z,334nm,1.4s						
KULM	Kulim	55.05	241	eP	P	23 11 55.6	-0.3
	comp=Z,8.2nm,1.1s						
RES	Resolute Bay	56.14	16	P	P	23 12 04.1	+1.1
	comp=Z,2.5nm,0.5s,baz=334,slow=7.3,SNR=10						
RES	Resolute Bay	56.14	16	eP	P	23 12 04.1	+1.1
	comp=Z,14nm,1.0s						
RES	Resolute Bay	56.14	16	eP	P	23 12 04.1	+1.1
RES				pmax	pmax		
	comp=Z,15nm,1.0s						
ABKAR	Akbulak array	57.42	309	eP	P	23 12 13.6	+1.1
	comp=Z,3.3nm,0.5s						
JAGI	Jajag, Banyuwa	58.85	218	eP	P	23 12 21.1	-1.6
	comp=Z,54nm,0.7s						
ARA0	ARCESS Array S	60.13	340	eP	P	23 12 31.4	+0.4
ARCES	ARCESS Array B	60.13	340	P	P	23 12 31.4	+0.4
	comp=Z,1.2nm,0.8s,baz=41,slow=8.4,SNR=3.4						
SUMG	Summit	65.02	2	eP	P	23 13 05.2	+1.1
	comp=Z,6.8nm,1.1s						
SUMG	Summit	65.02	2	eP	P	23 13 05.2	+1.1
SUMG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FIA1	FINESS Array S	65.66	333	eP	P	23 13 08.9	+1.1
	comp=Z,38nm,1.5s						
FIA0	FINESS Array S	65.66	333	eP	P	23 13 08.7	+0.9
FIA0	FINESS Array S	65.66	333	eP	P	23 13 08.7	+0.9
FINES	FINESS Array B	65.66	333	P	P	23 13 08.7	+0.9
	comp=Z,4.5nm,0.7s,baz=45,slow=8.4,SNR=29						
FINES	FINESS Array B	65.66	333	eP	P	23 13 08.7	+0.9
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MCCM	Marconi Confer	65.82	60	eP	P	23 13 09.1	-0.2
	comp=Z,50nm,0.8s						
SCO	Scoresbysund	66.87	356	eP	P	23 13 16.9	+1.4
	comp=Z,16nm,1.4s						
SCO	Scoresbysund	66.87	356	eP	P	23 13 16.9	+1.4
SCO				pmax	pmax		
	comp=Z,16nm,1.4s						
YERR	Yerington	67.61	57	eP	P	23 13 21.1	+0.2
	comp=Z,11nm,1.6s						
MDPB	Devils Postpil	68.53	58	eP	P	23 13 25.4	-1.5
	comp=Z,6.3nm,1.1s						
ELK	Elko	68.96	54	eP	P	23 13 28.6	-0.9
	comp=Z,9.4nm,2.0s						
ELK	Elko	68.96	54	eP	P	23 13 28.6	-0.9
ELK				pmax	pmax		
	comp=Z,9.0nm,2.0s						
YNR	Norris Junctio	69.07	48	eP	P	23 13 28.6	-1.4
	comp=Z,3.6nm,0.8s						
NB2	NORSAR Subarra	70.47	339	P	P	23 13 38.5	+0.3
	comp=Z,0.7nm,0.6s,baz=33,slow=6.5						
NB200	NORSAR Array S	70.47	339	eP	P	23 13 38.2	+0.1
NOA	NORSAR Array B	70.47	339	P	P	23 13 38.2	+0.1
	comp=Z,1.5nm,0.8s,baz=35,slow=6.0,SNR=6.7						
NOA	NORSAR Array B	70.47	339	eP	P	23 13 39.0	+0.8
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	72.21	324	P	P	23 13 48.5	-0.3
	comp=Z,0.6nm,0.5s,baz=42,slow=6.5,SNR=2.9						
BUR08	Bucovina Ar. S	76.25	324	eP	P	23 14 13.7	+1.1
	comp=Z,16nm,1.9s						
CLL	Collm	78.09	332	eP	P	23 14 23.1	+0.5
	comp=Z,9.7nm,1.8s						
CLL	Collm	78.09	332	eP	P	23 14 23.1	+0.5
CLL				pmax	pmax		
	comp=Z,10.0nm,1.8s						
CLL	Collm	78.09	332	eP	P	23 14 23.0	+0.3
PSZ	Piszkesteto	78.28	327	eP	P	23 14 25.2	+1.3
	comp=Z,3.4nm,0.9s						
PSZ	Piszkesteto	78.28	327	eP	P	23 14 25.2	+1.3
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPM	Los Pinos Moun	78.33	54	eP	P	23 14 23.5	-1.0
VTS	Vitosha	81.02	321	eP	P	23 14 40.0	+1.0
	comp=Z,7.5nm,1.5s						
VTS	Vitosha	81.02	321	eP	P	23 14 40.0	+1.0
VTS				pmax	pmax		
	comp=Z,8.0nm,1.5s						
LIT	Litokhoron	83.34	320	eP	P	23 14 51.2	+0.2
	comp=Z,14nm,0.9s						
LIT	Litokhoron	83.34	320	eP	P	23 14 51.2	+0.2
LIT				pmax	pmax		
	comp=Z,14nm,0.9s						
LTX	Lajitas	83.62	56	eP	P	23 14 54.1	+1.4
LTX	Lajitas	83.62	56	eP	P	23 14 54.1	+1.4
TXAR	Lajitas Array	83.62	56	P	P	23 14 54.1	+1.4
	comp=Z,0.1nm,0.5s,baz=211,slow=4.7,SNR=2.9						
KARP	Karpathos	84.53	314	eP	P	23 14 55.2	-2.0
	comp=Z,61nm,0.9s						
MEDO	Medina	85.49	31	eP	P	23 15 01.6	-0.2
	comp=Z,16nm,0.9s						

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*IDC **21** 23:21:33.8±7.0, 19°.70S×179°.01W, h0^{km}, mb4.3/2, mb1 4.6/2, mb1mx3.7/28, mbtmp4.3/2, Error ellipse: s-maj=345.1km s-min=47.1km az=148.0*

*ISCJB **21** 23:22:33.0±0.8, 20°.8S±0°.2×179°.9E±0°.1, h550^{km}, mb4.7/8, Error ellipse: s-maj=22.7km s-min=13.1km az=156.8*

*NEIC **21** 23:22:33.8±1.1, 20°.75S×179°.84E, h537^{km}±15^{km}, mb4.5/8, Error ellipse: s-maj=32.3km s-min=9.9km az=121.0*

ISC 21 23:22:33.8±0.8**, 20°.8S**±0°.2×**179°.9E**±0°.1**, h550**^{km}**, n16, σ1^{s}24**/16**, mb4.5**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	9.73	82	eP	P	23 24 49.4	+0.3
SNZO	South Karori	20.96	191	eP	P	23 26 38.6	+0.2
	68nm,1.0s						
LHI	Lord Howe Isla	21.51	236	eP	P	23 26 44.1	+0.6
	354nm,1.9s						
ARMA	Armidale	27.17	244	eP	P	23 27 32.5	-1.4
	41nm,1.9s						
CTAO	Charters Tower	31.49	265	eP	P	23 28 12.3	+1.1
	7.4nm,0.6s						
JOHN	Johnston Islan	38.67	16	eP	P	23 29 11.2	+0.4
	208nm,1.1s						
ASAR	Alice Springs	42.52	257	P	P	23 29 40.6	-1.1
	2.3nm,0.8s,baz=94,slow=7.9,SNR=17						
WC3	Warramunga Arr	42.56	263	eP	P	23 29 42.5	+0.5
	21nm,1.4s						
WB2	Warramunga Arr	42.59	263	eP	P	23 29 42.2	+0.1
	32nm,1.8s						
WR1	Warramunga Arr	42.60	263	eP	P	23 29 43.0	+0.7
WRA	Warramunga Arr	42.60	263	P	P	23 29 43.0	+0.7
	4.0nm,0.5s,baz=95,slow=9.3,SNR=21						
AKASG	Malin Array Be	142.24	329	PKhKP	PKPdf	23 41 01.4	-2.3
	1.0nm,0.4s,baz=40,slow=3.9,SNR=5.3						
BR101	Keskin Array S	145.51	311	ePKPbc	PKPab	23 41 12.1	-0.7
BRTR	Keskin Array B	145.51	311	PKPbc	PKPab	23 41 12.1	-0.7
	0.7nm,0.7s,baz=90,slow=2.9,SNR=4.9						
CLL	Collm	147.81	344	i PKPbc	PKPbc	23 41 15.5	-1.4
GERES	GERESS Array B	149.85	342	PKPbc	PKiKP	23 41 25.1	+2.3
	0.1nm,0.3s,baz=32,slow=3.9,SNR=3.5						

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*IDC **21** 23:23:49.9±2.9, 8°.66S×112°.06E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.5/33, mbtmp3.8/4, Error ellipse: s-maj=162.4km s-min=24.1km az=49.0*

*ISCJB **21** 23:24:06.3±0.6, 8°.3S±0°.1×112°.80E±0°.06, h150^{km}, mb3.6/4, Error ellipse: s-maj=19.8km s-min=7.3km az=13.4*

*DJA **21** 23:24:07.7±0.7, 9°S±9°×11°3E±°, h127^{km}±6^{km}, M3.5/7, MLv3.5/7*

ISC 21 23:24:07.1±1.1**, 8°.4S**±0°.1×**112°.79E**±0°.06**, h150**^{km}**, n12, σ1^{s}72**/15**, mb3.7**/4**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	0.67	77	P	Pn	23 24 28.2	-1.2
GMJI				S	Sn	23 24 43.7	-2.6
PWJI	Pagerwojo	1.05	292	P	Pn	23 24 31.1	-1.2
PWJI				S	Sn	23 24 48.9	-2.6
JAGI	Jajag, Banyuwa	1.35	92	P	Pn	23 24 34.7	-0.4
JAGI				S	Sn	23 24 54.4	-2.2
GRJI	Gresik	1.53	348	P	Pn	23 24 37.5	+0.5
KMMI	Kalianget	1.80	41	P	Pn	23 24 39.9	0.0
WOJI	Wonogiri, Jawa	1.94	287	P	Pn	23 24 41.6	+0.1
UGM	Wanagama	2.30	283	P	Pn	23 24 45.5	-0.3
SRBI	Singaraja	2.42	82	P	Pn	23 24 46.7	-0.6
WRA	Warramunga Arr	23.79	121	P	P	23 29 08.7	+2.5
	0.4nm,0.3s,baz=293,slow=10,SNR=1.6						
ASAR	Alice Springs	25.27	129	P	P	23 29 22.2	+2.6
	1.3nm,0.6s,baz=304,slow=8.5,SNR=8.9						
MKAR	Makanchi Array	61.32	337	P	P	23 34 07.6	+0.8
	0.5nm,0.5s,baz=141,slow=6.7,SNR=4.9						
ZALV	Zalesovo Beam	66.48	342	P	P	23 34 40.4	0.0
	1.0nm,0.4s,baz=162,slow=4.7,SNR=4.1						

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*NEIC **21** 23:35:52.0±0.0, 41°.67S×174°.23E, h14^{km}, ML4.7(WEL), After WEL.*

WEL 21 23:35:52.0, 42°S±1°×17°4E±°, h14^{km}±2^{km}, M4.7/55, mB5.2/1, ML4.8/5, MLv4.7/55, Mw(mB)4.5/1, Error ellipse: s-maj=0.0km s-min=0.0km az=124.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.08	191	P	Pg	23 35 55.4	+0.4
BSWZ	Blackbirch Sta	0.27	261	P	Pb	23 35 58.4	-0.2
BSWZ				S	Sb	23 36 03.3	+0.1
TUWZ	Tuamarina	0.33	318	P	Pb	23 35 59.3	-0.3
TUWZ				S	Sb	23 36 04.3	-0.4
TCW	Tory Channel	0.46	4	P	Pg	23 36 01.5	+0.3
TCW				S	Sg	23 36 08.1	+0.6
SNZO	South Karori	0.51	45	ePg	Pb	23 36 02.7	0.0
BHW	Baring Head	0.55	61	P	Pb	23 36 03.7	+0.3
WEL	Wellington	0.56	46	P	Pb	23 36 03.7	+0.1
PLWZ	Palliser	0.77	83	P	Pn	23 36 08.4	-0.1
NNZ	Nelson	0.79	305	P	Pb	23 36 07.5	0.0
MSWZ	Moikau Station	0.81	72	P	Pn	23 36 08.6	-0.3
CAW	Cannon Point	0.84	48	P	Pb	23 36 08.6	+0.2
DUWZ	D'Urville Isla	0.90	345	P	Pg	23 36 09.5	0.0
KHZ	Kahutara	0.91	215	ePg	Pn	23 36 10.9	+0.6
KHZ	Kahutara	0.91	215	P	Pn	23 36 11.1	+0.8
PAWZ	Paruwai Farm	0.94	72	P	Pn	23 36 11.1	+0.2
THZ	Tophouse	1.00	264	ePn	Pn	23 36 11.6	0.0
THZ	Tophouse	1.00	264	P	Pn	23 36 11.6	-0.1
MTW	Mount Morrison	1.08	62	P	Pg	23 36 13.3	+0.3
OGWZ	Otaki Gorge	1.11	40	P	Pn	23 36 13.1	-0.1
TRWZ	Traveller	1.13	76	P	Pg	23 36 13.7	0.0
HOWZ	Holdsworth Sta	1.24	52	P	Pb	23 36 15.5	+0.3
TMWZ	Te Maipa	1.37	66	P	Pn	23 36 16.9	+0.2
MRZ	Mangatainoka R	1.43	46	P	Pb	23 36 18.4	-0.1
TIWZ	Tintock	1.54	55	P	Pb	23 36 19.7	-0.5
QRZ	Quartz Range	1.54	303	ePn	Pb	23 36 20.6	+0.3
QRZ	Quartz Range	1.54	303	P	Pb	23 36 20.6	+0.3
GVZ	Greta Valley S	1.57	214	P	Pb	23 36 20.2	-0.7
CPWZ	Castlepoint	1.67	63	P	Pb	23 36 22.9	+0.4
OHWZ	Ohakea	1.68	30	P	Pg	23 36 23.6	-0.7
PRWZ	Pori Road	1.72	50	P	Pn	23 36 22.1	+0.5
POWZ	Post Office Ro	1.73	43	P	Pn	23 36 22.4	+0.8
BFZ	Birch Farm	1.81	58	P	Pn	23 36 22.5	-0.3
LTZ	Lake Taylor	1.83	232	ePn	Pn	23 36 24.2	+1.1
LTZ	Lake Taylor	1.83	232	P	Pn	23 36 24.2	+1.1
AMCZ	Amberley	1.91	217	P	Pn	23 36 24.5	+0.4
WAZ	Wanganui	2.00	17	P	Pb	23 36 28.7	+0.6

DVHZ	Dannevirke	2.01	47	P	Pn	23 36 25.4	-0.1
ANWZ	Angora Road	2.08	55	P	Pn	23 36 26.4	-0.1
LREZ	Lake Rotokare	2.21	3	P	Pb	23 36 32.4	+0.6
OKCZ	Okains Bay	2.22	202	P	Pn	23 36 28.2	-0.3
CRLZ	Canterbury Las	2.24	211	*e*Pn	Pn	23 36 28.3	-0.3
CRLZ	Canterbury Las	2.24	211	P	Pn	23 36 30.3	+1.6
NMEZ	Namu Road	2.27	353	P	Pb	23 36 33.6	+0.7
PRHZ	Porangahau	2.30	53	P	Pn	23 36 28.9	-0.6
PNHZ	Pukenui	2.31	41	P	Pn	23 36 29.9	+0.3
OXZ	Oxford	2.32	224	*e*Pn	Pn	23 36 29.5	-0.3
OXZ	Oxford	2.32	224	P	Pn	23 36 29.6	-0.1
WPHZ	Waipukurau	2.32	47	P	Pb	23 36 32.0	-1.6
INZ	Inchbonnie	2.32	242	P	Pn	23 36 31.2	+1.4
PREZ	Palmer Road	2.33	359	P	Pn	23 36 28.9	-1.0
PREZ				P	Pb	23 36 34.6	+0.8
MQZ	McQueen's Vall	2.34	209	*e*Pn	Pn	23 36 29.1	-0.9
MQZ	McQueen's Vall	2.34	209	P	Pn	23 36 29.2	-0.9
KHEZ	Kahui Hut	2.38	356	P	Pb	23 36 34.6	-0.1
NBEZ	Newall Road No	2.42	353	P	Pb	23 36 35.0	-0.3
MTVZ	Mangateitei	2.47	23	P	Pb	23 36 35.6	-0.7
DREZ	Durham Road	2.48	359	P	Pb	23 36 36.4	0.0
PKE	Pukeiti	2.48	356	P	Pb	23 36 35.8	-0.6
PKVZ	Pokaka	2.53	20	P	Pb	23 36 35.4	-1.8
MOVZ	Moawhango	2.54	28	P	Pn	23 36 34.3	+1.4
VRZ	Vera Road	2.58	9	P	Pb	23 36 37.4	-0.7
PXZ	Pawanui	2.58	51	P	Pn	23 36 32.6	-0.8
BHHZ	Black Hill Sta	2.59	33	P	Pn	23 36 34.9	+1.4
KRHZ	Kereru	2.60	39	P	Pn	23 36 33.7	0.0
DRZ	Dome Shelter	2.60	23	P	Pb	23 36 39.1	+0.4
WHVZ	Whangaehu Hut	2.60	24	P	Pn	23 36 36.1	+2.2
FWVZ	Far West T-bar	2.62	23	P	Pb	23 36 39.6	+0.8
TUVZ	Tukino	2.64	25	P	Pn	23 36 36.5	+2.2
NGZ	Ngauruhoe	2.71	23	P	Pn	23 36 37.6	+2.3
KAHZ	Kahuranaki	2.75	48	P	Pn	23 36 35.2	-0.6
WTVZ	West Tongariro	2.76	23	P	Pn	23 36 38.3	+2.4
TWVZ	Taurewa	2.76	20	P	Pn	23 36 38.2	+2.3
KRVZ	Karewarewa	2.79	23	P	Pn	23 36 39.0	+2.6
KWHZ	Kaweka Forest	2.80	37	P	Pn	23 36 37.0	+0.6
MCHZ	McNeill Hill	2.91	41	P	Pn	23 36 38.0	+0.1
KATZ	Kakaramea	2.92	23	P	Pb	23 36 42.2	-1.7
WVZ	Waitaha Valley	2.94	240	P	Pn	23 36 39.8	+1.4
CKHZ	Cape Kidnapper	2.96	48	P	Pn	23 36 39.6	+1.1
RITZ	Rihia Road	2.97	25	P	Pb	23 36 45.5	+0.8
BKZ	Black Stump Fm	3.04	35	*e*Pn	Pn	23 36 40.7	+1.0
BKZ	Black Stump Fm	3.04	35	P	Pn	23 36 39.9	+0.1
RATZ	Rangitukua	3.04	23	P	Pb	23 36 46.6	+0.6
RPZ	Rata Peaks	3.11	228	*e*Pn	Pn	23 36 40.9	+0.3
RPZ	Rata Peaks	3.11	228	P	Pn	23 36 41.0	+0.3
WATZ	Wairara	3.18	22	P	Pb	23 36 48.3	0.0
HIZ	Hauiti	3.19	9	*e*Pn	Pn	23 36 44.8	+3.0
HIZ	Hauiti	3.19	9	P	Pn	23 36 44.9	+3.1
MRHZ	Matea Rd	3.29	31	P	Pb	23 36 51.7	+1.4
TLZ	Tolley Road	3.49	17	P	Pn	23 36 48.8	+2.9
ALRZ	Allen Road	3.50	28	P	Pb	23 36 52.7	-1.1
FOZ	Fox Glacier	3.75	239	*e*Pn	Pb	23 36 54.4	-3.7
FOZ	Fox Glacier	3.75	239	P	Pn	23 36 52.0	+2.5
PRGZ	Paritu Road	3.92	47	P	Pb	23 36 56.6	-4.2
RIGZ	Rimuhau	4.01	44	P	Pn	23 36 52.7	-0.4
LBZ	Lake Benmore	4.02	226	*e*Pn	Pn	23 36 57.6	+4.5
LBZ	Lake Benmore	4.02	226	P	Pn	23 36 53.8	+0.7
TOZ	Tahuroa Road	4.06	14	P	Pn	23 36 57.5	+3.9
URZ	Urewera	4.06	34	*e*Pn	Pn	23 36 54.6	+0.8
URZ	Urewera	4.06	34	P	Pn	23 36 54.6	+0.9
MWZ	Matawai	4.19	38	P	Pn	23 36 54.3	-1.2
ODZ	Otahua Downs	4.27	217	*e*Pn	Pn	23 36 56.7	+0.1
ODZ	Otahua Downs	4.27	217	P	Pn	23 36 56.1	-0.4
CNGZ	Carnagh Statio	4.41	45	P	Pn	23 37 00.1	+1.6
AWAZ	Awhitu Peninsu	4.61	4	P	Pn	23 37 05.3	+3.9
MKAZ	Moumakai	4.62	9	P	Pn	23 37 03.7	+2.3
JCZ	Jackson Bay	4.67	237	P	Pn	23 37 06.9	+4.8
WTAZ	Waiatarua	4.74	3	P	Pn	23 37 08.4	+5.3
WIAZ	Waiheke Island	4.92	8	P	Pn	23 37 08.6	+3.0
MBAZ	Motutapu North	4.92	6	P	Pn	23 37 11.6	+6.0
WKZ	Wanaka	4.94	229	*e*Pn	Pn	23 37 06.3	+0.4
WKZ	Wanaka	4.94	229	P	Pn	23 37 10.4	+4.5
HHSZ	Highcliff Hill	4.96	211	P	Pn	23 37 06.8	+0.7
ABAZ	Army Bay	5.09	5	P	Pb	23 37 15.2	-5.6
MXZ	Matakaoa Point	5.17	39	*e*Pn	Pn	23 37 09.6	+0.6
WCZ	Waipu Caves	5.73	1	P	Pn	23 37 21.3	+4.7
MLZ	Mavora Lakes	5.78	228	*e*Pn	Pn	23 37 18.4	+1.1
SYZ	Scrubby Hill	6.09	215	P	Pn	23 37 22.1	+0.5
WHZ	Wether Hill Ro	6.20	225	*e*Pn	Pn	23 37 23.1	0.0
DCZ	Deep Cove	6.39	231	*e*Pn	Pn	23 37 28.2	+2.5
OUZ	Omahuta	6.46	355	*e*Pn	Pn	23 37 30.2	+3.5
OUZ	Omahuta	6.46	355	P	Pn	23 37 33.3	+6.6
CTZ	Chatham Island	7.05	110	P	Pn	23 37 35.0	+0.3

ISCJB ***21*** *23:45:54.9±0.1, 34°.48N±0°.01×104°.20E±0°.01, h8^{km}, mb5.9/400, MS6.1/729, Error ellipse: s-maj=1.7km s-min=1.4km az=38.2*

IDC ***21*** *23:45:55.0±0.3, 34°.50N×104°.21E, h0^{km}, mb5.6/32, mb1 5.7/36, mb1mx5.7/36, mbtmp5.6/36, ML5.0/4, MS5.8/36, Ms1 5.8/36, ms1mx5.8/38, Error ellipse: s-maj=8.7km s-min=5.7km az=15.0*

NEIC ***21*** *23:45:55.0±0.0, 34°.58N×104°.26E, h15^{km}, Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}6.93; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-6.65; $M_{r\theta}$-1.07; $M_{\theta\phi}$2.61; $M_{\phi r}$-4.09; Best double couple: $M_0$8.40000×10^{17} NP1:ϕ_s177.00000°, δ60.00000°, λ108.00000°. NP2:ϕ_s324.00000°, δ34.00000°, λ62.00000°. Principal axes: T 8.4200, Plg69.0000°, Azm124.0000°; N -0.0100, Plg15.0000°, Azm347.0000°; P -8.4100, Plg13.0000°, Azm253.0000°;*

NEIC ***21*** *23:45:56.7±1.6, 34°.51N×104°.26E, h8^{km}, mb6.1/420, ME6.4, MS6.2/697, MW5.9, MW5.9 Error ellipse: s-maj=10.5km s-min=9.1km az=286.0, Moment Tensor Solution. s79 Moment tensor: Scale 10^{17}Nm; M_{rr}3.35; $M_{\theta\theta}$3.17; $M_{\phi\phi}$-6.52; $M_{r\theta}$-4.27; $M_{\theta\phi}$4.45; $M_{\phi r}$1.43; Best double couple: $M_0$8.50000×10^{17} NP1:ϕ_s198.00000°, δ51.00000°, λ158.00000°. NP2:ϕ_s302.00000°, δ73.00000°, λ41.00000°. Principal axes: T 7.8800, Plg40.0000°, Azm167.0000°; N 1.1000, Plg46.0000°, Azm320.0000°; P -8.9800, Plg14.0000°, Azm65.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s199.00000°, δ59.00000°, λ150.00000°. NP2:ϕ_s305.00000°, δ65.00000°, λ35.00000°. Principal axes: T Plg42.0000°, Azm164.0000°; N Plg0.0000°, Azm0.0000°; P Plg4.0000°, Azm70.0000°; Apparent Stress 2.01 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least 94 people killed, 1,001 injured, 5 missing and 31,250 displaced in Gansu. At least 1,968 houses collapsed, 22,496 damaged, 6 roads damaged, some dams damaged, rockslides occurred and communication interrupted in Mianxian, Zhangxian and Lixian. Felt [III] at Xian. Also felt at Chengdu, Hanzhong, Lanzhou and Qincheng.

BJI ***21*** *23:45:56.5±0.0, 34°.54N×104°.21E, h15^{km}, mb5.9/45, mB6.3/41, ML6.6/5, Ms6.7/76, Ms7 6.5/72*

MOS ***21*** *23:45:57.0±0.8, 34°.50N×104°.21E, h23^{km}, mb6.1/110, MS6.0/93, Error ellipse: s-maj=4.8km s-min=3.3km az=126.5*

GCMT ***21*** *23:45:58.7±0.1, 34°.60N±0°.01×104°.31E, h17^{km}, MW6.0/138, Moment Tensor Solution. s127, c256; s138, c423; Duration: 2^{s}4 Moment tensor: Scale 10^{18} Nm; M_{rr}0.61±.01; $M_{\theta\theta}$0.44±.01; $M_{\phi\phi}$-1.05±.01; $M_{r\theta}$-0.47±.02; $M_{\theta\phi}$0.69±.01; $M_{\phi r}$0.02±.02; Best double couple: $M_0$1.21900×10^{18} NP1:ϕ_s303.00000°, δ66.00000°, λ37.00000°. NP2:ϕ_s196.00000°, δ57.00000°, λ151.00000°. Principal axes: T 1.1000, Plg42.0000°, Azm163.0000°; N 0.2410, Plg47.0000°, Azm331.0000°; P -1.3380, Plg6.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 21 23:45:55.9±0.7**, 34°.51N**±0°.02×**104°.26E**±0°.02**, h5**^{km}±3^{km}**, n2141, **σ**1**^{s}**43**/1924**, mb6.0**/448**, MS6.2**/763**, 269C-39D, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	1.61	348	Pg	Pn	23 46 25.0	-0.2
LZH				Sg	Sn	23 46 45.8	-0.7
CD2	Chengdu	3.61	187	Pn	Pn	23 46 51.3	-1.3
CD2				Pg	Pg	23 47 04.6	-0.5
CD2				Sn	Sn	23 47 33.0	-2.6
CD2				Sg	Sg	23 47 52.4	+0.5
XAN	Xi'an	3.89	96	*e*Pn	Pn	23 46 57.4	+1.0
XAN	Xi'an	3.89	96	Pn	Pn	23 46 57.3	+0.9
XAN				Pg	Pb	23 47 06.8	+1.8
XAN				Sn	Sn	23 47 46.0	+3.6
XAN				Sg	Sg	23 47 58.8	-2.0
XAN				smax	smax		
	comp=N,139μm,1.2s						
XAN				smax	smax		
	comp=E,113μm,0.8s						
XAN				LR	LR		
	comp=N,737μm,7.2s						
XAN				LR	LR		
	comp=E,523μm,5.3s						
XAN				LR	LR		
	comp=Z,442μm,9.0s						
XAN	Xi'an	3.89	96	*e*P	Pn	23 46 57.4	+1.0
GTA	Gaotai	6.05	325	Pn	Pn	23 47 26.8	+0.6
GTA				Pg	Pb	23 47 42.0	+0.1
GTA				Sg	Sb	23 48 59.8	+5.1
GTA				LR	LR		
	comp=N,500μm,8.2s						
GTA				LR	LR		
	comp=E,291μm,10.3s						
GTA				LR	LR		
	comp=Z,665μm,11.3s						
ENH	Enshi	6.11	132	*e*Pn	Pn	23 47 27.1	+0.2
ENH				*e*Pg	Pn	23 47 28.1	+1.2
TIY	Taiyuan	7.35	62	*e*Pn	Pn	23 47 43.8	-0.1
TIY				Sg	Sg	23 49 46.1	-5.7
BTO	Baotou	7.62	35	*e*Pn	Pn	23 47 46.9	-0.7
BTO				Sn	Sn	23 49 18.1	+3.8
GYA	Guiyang	8.28	165	⇑*i*P	Pn	23 47 57.0	+0.2
GYA				PP	PnPn	23 48 04.5	0.0
GYA				S	Sn	23 49 30.3	-0.6
GYA				SS	SnSn	23 49 47.3	+4.7
GYA				pmax	pmax		
	comp=Z,3μm,1.2s						
GYA				LR	LR		
	comp=N,111μm,7.7s						
GYA				LR	LR		
	comp=E,85μm,5.2s						
GYA				LR	LR		
	comp=Z,114μm,7.2s						
HHC	Hu-ho-hao-te	8.58	40	*e*P	Pn	23 48 03.8	+3.0
WHN	Wuhan	9.39	112	⇑P	Pn	23 48 11.3	-0.5
WHN				S	Sn	23 49 57.3	-0.5
WHN				LR	LR		
	comp=Z,778μm,10.4s						
KMI	Kunming	9.44	188	*e*Pn	Pn	23 48 12.9	+0.1
KMI	Kunming	9.44	188	P	Pn	23 48 12.3	-0.5
KMI				pP		23 48 16.5	
KMI				PP		23 48 23.3	
KMI				S	Sn	23 50 00.3	+0.8
KMI				SS	SnSn	23 50 14.3	+2.9
KMI				pmax	pmax		
	comp=Z,970nm,1.0s						
KMI				pmax	pmax		
	comp=Z,4μm,3.1s						
KMI				LR	LR		
	comp=N,206μm,12.1s						
KMI				LR	LR		
	comp=E,708μm,11.5s						
KMI				LR	LR		
	comp=Z,244μm,10.9s						
KMI	Kunming	9.44	188	*e*P	Pn	23 48 12.9	+0.1
TIA	Tai'an	10.64	77	P	Pn	23 48 28.9	-0.1
TIA				S	Sn	23 50 39.1	+10
TIA				pmax	pmax		
	comp=Z,4μm,10.0s						
TIA				LR	LR		
	comp=N,101μm,10.7s						
TIA				LR	LR		
	comp=E,158μm,15.0s						
TIA				LR	LR		
	comp=Z,151μm,13.5s						
BJT	Baijiatuau	10.96	56	*e*Pn	Pn	23 48 33.3	-0.1
BJT	Baijiatuau	10.96	56	*e*P	Pn	23 48 33.3	-0.1
BJI	Beijing	10.98	56	P	Pn	23 48 33.0	-0.6
BJI				S	Sn	23 50 38.3	+1.5
BJI				LR	LR		
	comp=N,177μm,6.6s						
BJI				LR	LR		
	comp=E,134μm,5.9s						
ZIRO	ZIRO	11.31	235	*e*P	Pn	23 48 37.5	-0.9
JORH	JORHAT	11.58	231	*e*P	Pn	23 48 41.9	+0.1
JORH				IAmb	IAmb	23 48 47.3	
	comp=Z,7μm,2.5s						
MOKO	MOKOCHONG	11.71	228	*e*P	Pn	23 48 42.5	-1.3
LSA	Lhasa	12.10	250	*e*Pn	Pn	23 48 49.8	+0.3
LSA				*e*		23 48 50.1	
LSA	Lhasa	12.10	250	P	Pn	23 48 50.3	+0.8
LSA				pP		23 48 58.1	
LSA				S	Sn	23 51 06.5	+1.4
LSA				pmax	pmax		
	comp=Z,420nm,1.3s						
LSA				pmax	pmax		
	comp=Z,510nm,5.0s						
LSA				LR	LR		
	comp=Z,76μm,9.3s						
LSA				LR	LR		
	comp=Z,47μm,7.0s						
LSA				LR	LR		
	comp=Z,43μm,9.3s						
LSA	Lhasa	12.10	250	*i* P	Pn	23 48 50.2	+0.8
	SNR=44						
LSA	Lhasa	12.10	250	*e*P	Pn	23 48 49.8	+0.3
NJ2	Nanjing	12.46	97	⇑P	Pn	23 48 53.5	-0.3
NJ2				pP		23 48 57.1	
NJ2				PP	PnPn	23 49 03.3	+1.8
NJ2				S	Sn	23 51 13.3	+0.3
NJ2				SS	SnSn	23 51 30.8	+5.9
NJ2				pmax	pmax		
	comp=Z,3μm,3.5s						
NJ2				LR	LR		
	comp=Z,34μm,9.9s						
NJ2				LR	LR		
	comp=Z,64μm,13.7s						
TEZP	TEZPUR	12.62	235	*e*P	Pn	23 48 54.0	-2.1
TEZP				IAmb	IAmb	23 48 57.8	
	comp=Z,300nm,1.0s						
TAWA	Tawang	12.66	240	*e*P	Pn	23 48 55.7	-1.3
TAWA				IAmb	IAmb	23 49 02.1	
	comp=Z,470nm,0.7s						
SLVN	Son La	13.12	181	*e*Pn	Pn	23 49 01.6	-1.5
SONA0	Songino Array	13.41	6	*e*Pn	Pn	23 49 05.9	-1.1
SONA0				*e*		23 52 55.8	
SONM	Songino Array	13.41	6	Pn	Pn	23 49 05.9	-1.1
	comp=Z,2.5nm,0.3s,baz=188,slow=13,SNR=104						
SONM				Lg	Lg	23 52 55.8	
	comp=Z,3.1nm,0.3s,baz=192,slow=26,SNR=3.2						
SONM				LR	LR	23 55 01.3	
	comp=Z,63μm,18.9s,baz=188,slow=41						
GUWA	GUWAHATI	13.64	236	*e*P	Pn	23 49 08.3	-1.7
GZH	Guangzhou	13.88	143	⇑*i*P	Pn	23 49 06.8	-6.5
GZH				S	Sn	23 51 36.6	-11
GZH				sS	Sn	23 51 44.6	-3.2
GZH				pmax	pmax		
	comp=Z,850nm,1.0s						
GZH				LR	LR		
	comp=N,274μm,8.6s						
GZH				LR	LR		
	comp=E,142μm,10.4s						
SHL	Shillong	13.93	234	*e*P	Pn	23 49 13.8	-0.4
SHL				*e*P	Pn	23 49 15.0	+0.8
	comp=Z,71nm,1.0s						
SHL				IAmb	IAmb	23 49 16.9	
	comp=Z,828nm,1.3s						
DL2	Dalian	14.61	67	⇓*i*P	Pn	23 49 20.3	-2.9
DL2				sP	P	23 49 32.8	+3.1
DL2				*e*S	Sn	23 52 02.0	-3.4
DL2				sS	S	23 52 16.8	-8.1
DL2				pmax	pmax		
	comp=Z,400nm,1.2s						
DL2				pmax	pmax		
	comp=Z,5μm,3.9s						
DL2				LR	LR		
	comp=Z,60μm,13.2s						
DL2				LR	LR		
	comp=Z,87μm,12.7s						
DL2				LR	LR		
	comp=Z,132μm,12.8s						
SSE	Sheshan	14.64	99	*e*Pn	Pn	23 49 23.6	0.0
SSE	Sheshan	14.64	99	P	Pn	23 49 23.3	-0.3
SSE				S	Sn	23 52 13.3	+7.1
SSE				pmax	pmax		
	comp=Z,2μm,6.0s						
MCO	Taipa Grande	14.79	144	P	Pn	23 49 23.0	-2.9
HKC	Hong Kong Obse	14.95	142	⇑P	Pn	23 49 25.0	-2.9
HKPS	Hong Kong Po S	14.95	142	*e*Pn	Pn	23 49 26.2	-1.8
TURI	Tura	14.99	237	*e*x	Pn	23 49 26.7	-1.8
GTK	Tadong	15.22	246	*e*P	Pn	23 49 30.4	-1.3
GTK				IAmb	IAmb	23 49 36.0	
	comp=Z,2μm,1.9s						
PAYA	Payao	15.58	196	P	Pn	23 49 36.4	+0.1
QZH	Quanzhou	15.66	124	⇑*i*P	Pn	23 49 35.3	-2.0
QZH				S	Sn	23 52 34.0	+2.7
QZH				pmax	pmax		
	comp=Z,910nm,1.6s						
QZH				pmax	pmax		
	comp=Z,6μm,6.1s						
QZH				LR	LR		
	comp=Z,326μm,10.7s						
QZH				LR	LR		
	comp=Z,117μm,9.8s						
WMQ	Urumqi	15.84	311	*e*P	Pn	23 49 38.9	-0.7
WMQ				pP	P	23 49 41.8	-1.7
WMQ				sP	pP	23 49 47.3	+1.6
WMQ				S	Sn	23 52 33.4	-2.1
WMQ				SS	S	23 52 52.1	+1.8
WMQ				PcP	PcP	23 54 41.5	+2.9
WMQ				pmax	pmax		
	comp=Z,2μm,6.1s						
WMQ				LR	LR		
	comp=Z,176μm,9.7s						
WMQ				LR	LR		
	comp=Z,160μm,10.3s						
WMQ				LR	LR		
	comp=Z,71μm,4.1s						
KNMB	Chin-men Tao	15.84	125	*e*Pn	Pn	23 49 38.5	-1.2
	comp=Z,3μm,1.4s						
ZAK	Zakamensk	15.88	358	*e*P	Pn	23 49 40.7	+0.5
ZAK				pmax	pmax		
	comp=Z,430nm,2.0s						
BRDH	Bariadhala	16.16	226	Pn	Pn	23 49 41.8	-2.0
	comp=Z,28nm,0.3s,baz=72,slow=9.8,SNR=40						
BRDH				Sn	Sn	23 52 43.5	+0.1
	comp=Z,28nm,0.3s,baz=197,slow=19,SNR=2.2						
BRDH				LR	LR	23 57 00.0	
	comp=Z,41μm,18.7s,baz=59,slow=41						
QIZ	Qiongzhong	16.19	161	*e*Pn	Pn	23 49 42.7	-1.6
	comp=Z,5μm,1.5s						
QIZ	Qiongzhong	16.19	161	P	Pn	23 49 41.6	-2.7
QIZ				LR	LR		
	comp=Z,215μm,11.8s						
QIZ				LR	LR		
	comp=Z,102μm,6.9s						
QIZ				LR	LR		
	comp=Z,268μm,10.8s						
CHTO	Chiang Mai	16.33	198	*e*Pn	Pn	23 49 46.1	+0.1
	comp=Z,3μm,1.4s						
CHTO	Chiang Mai	16.33	198	*e*P	Pn	23 49 46.1	+0.1
CHTO				pmax	pmax		
	comp=Z,3μm,1.4s						
CHTO	Chiang Mai	16.33	198	P	Pn	23 49 46.4	+0.4
	SNR=961						
CMMT	Chiang Mai	16.33	198	P	Pn	23 49 46.3	+0.3
	comp=Z,1μm,1.8s,comp=Z,24μm						
NONG	Nongkai	16.41	184	P	Pn	23 49 47.3	+0.3
	comp=Z,36nm,1.6s,comp=Z,546nm						
LAMP	Lampang	16.44	196	P	Pn	23 49 48.1	+0.6
CM31	Chiang Mai Arr	16.67	198	*e*Pn	Pn	23 49 50.5	+0.2
	comp=Z,2μm,1.4s						
CM31				*e*Sn	Sn	23 52 58.8	+2.9
CM31	Chiang Mai Arr	16.67	198	P	Pn	23 49 51.0	+0.6
	SNR=598						
CMAR	Chiang Mai Arr	16.67	198	Pn	Pn	23 49 50.5	+0.1
	comp=Z,1.5nm,0.3s,baz=11,slow=10,SNR=210						
CMAR				Sn	Sn	23 52 58.8	+2.9
	baz=38,slow=10,SNR=2.0						
CMAR				LR	LR	23 56 58.2	
	comp=Z,41μm,18.5s,baz=14,slow=40						
SNY	Shenyang	16.84	59	⇓P	Pn	23 49 51.8	-0.5
SNY				S	Sn	23 53 00.5	+0.8
SNY				pmax	pmax		
	comp=Z,510nm,1.2s						
SNY				pmax	pmax		
	comp=Z,9μm,8.9s						
SNY				LR	LR		
	comp=Z,82μm,9.5s						
SNY				LR	LR		
	comp=Z,123μm,9.2s						
SNY				LR	LR		
	comp=Z,146μm,9.9s						
JIRN	Jiri	16.91	251	*e*P	Pn	23 49 51.8	-1.9
	comp=Z,2μm,1.8s						
UTTA	Uttaradit	17.02	192	P	Pn	23 49 54.6	-0.1
PANO	Nakornpanom	17.29	179	P	Pn	23 49 58.3	+0.2
	comp=Z,28nm,1.7s,comp=Z,479nm						
MOY	Mondy	17.32	353	*e*P	Pn	23 49 58.0	-0.4
MOY				pmax	pmax		
	comp=Z,3μm,2.5s						
SIMRM	Sittwe	17.50	218	*e*P	Pn	23 49 59.5	-1.3
	comp=Z,789nm,1.2s						
PKI	Pulchoki	17.56	252	*e*P	Pn	23 49 59.8	-2.0
	comp=Z,649nm,0.7s						
KKN	Kakani	17.56	253	*e*P	Pn	23 49 59.8	-1.9
	comp=Z,5μm,1.6s						
PKIN	Phulchoki	17.57	252	*e*P	Pn	23 49 59.8	-2.0
	comp=Z,399nm,0.8s						
TATO	Taipei	17.70	118	*e*Pn	Pn	23 50 03.2	0.0
	comp=Z,487nm,1.1s						
TATO	Taipei	17.70	118	P	P	23 50 05.9	+1.8
	SNR=36						
IRK	Irkutsk	17.73	0	*e*P	Pn	23 50 03.0	-0.4
IRK				*e*S	Sn	23 53 19.1	-2.1
IRK				pmax	pmax		
	comp=Z,3μm,2.9s						
DMN	Daman	17.78	252	*e*P	Pn	23 50 02.6	-1.9
	comp=Z,4μm,1.8s						
YHNB	Yeheng	17.80	119	*e*P	Pn	23 50 04.4	-0.2
	comp=Z,772nm,1.3s						
GKN	Gorkha	17.97	254	*e*P	Pn	23 50 04.4	-2.4
	comp=Z,5μm,1.5s						
SSLB	Suanglung	18.05	122	*e*P	P	23 50 07.9	-0.1
	comp=Z,1μm,1.4s						
PBKT	Sadao Pong	18.10	190	P	Pn	23 50 08.0	-0.2
	comp=Z,506nm,1.2s,comp=Z,19μm						
TPUB	Ta-pu	18.14	124	*e*P	Pn	23 50 08.6	-0.1
	comp=Z,783nm,1.1s						
NACB	Ninganchiao	18.26	120	*e*P	P	23 50 11.3	+1.0
	comp=Z,2μm,1.5s						
DANN	Dangsing	18.53	256	*e*P	P	23 50 11.5	-2.1
	comp=Z,281nm,0.6s						
YULB	Yu-li	18.54	122	*e*P	Pn	23 50 15.4	+1.8
	comp=Z,959nm,1.4s						
CHAI	Chaiyaphum	18.64	187	P	P	23 50 14.2	-0.3
HIA	Hailar	18.66	33	*e*P	Pn	23 50 15.9	+1.0
	comp=Z,654nm,1.0s						
HIA	Hailar	18.66	33	*e*P	Pn	23 50 15.9	+1.0
HIA				pmax	pmax		
	comp=Z,654nm,1.0s						
CIT	Chita	18.74	18	*e*P	P	23 50 14.8	-0.7
CIT				pmax	pmax		
	comp=Z,2μm,1.7s						
TWG	Pinlang	18.76	124	*e*P	Pn	23 50 18.0	+1.8
	comp=Z,6μm,1.5s						
CN2	Changchun	18.83	54	*e*P	Pn	23 50 17.3	+0.4
CN2				*e*pP	pP	23 50 20.5	+1.8
CN2				*e*S	Sn	23 53 39.9	-8.0
CN2				sS	S	23 53 52.8	+1.8
CN2				pmax	pmax		
	comp=Z,11μm,5.2s						
CN2				LR	LR		
	comp=Z,173μm,15.0s						
CN2				LR	LR		
	comp=Z,112μm,15.0s						
CN2				LR	LR		
	comp=Z,125μm,15.0s						
UMPA	Umpang Tak	18.86	196	P	Pn	23 50 20.8	+3.3
TJN	Taejon	18.91	78	d*e*P	Pn	23 50 18.6	+0.6
YOJ	Yonaguni jima	19.12	117	*e*P	Pn	23 50 21.1	+0.5
	comp=Z,1μm,1.4s						
YOJ	Yonaguni jima	19.12	117	*e*P	Pn	23 50 21.1	+0.5
YOJ				pmax	pmax		
	comp=Z,1μm,1.4s						
BOK	Bokaro	19.24	241	*e*P	P	23 50 20.1	-1.0
BOK				IAmb	IAmb	23 50 23.6	
	comp=Z,2μm,1.9s						

KS15	**Wonju Array Si**	19.33	74	eP	Pn	23 50 23.3	+0.3
KSRS	**Korea Array**	19.36	74	P	Pn	23 50 23.3	-0.1
	comp=Z,5.9nm,0.3s,baz=264,slow=10,SNR=276						
KSRS				S	S	23 54 01.6	-0.2
	baz=242,slow=9.1,SNR=2.5						
KSRS				Lg	Lg	23 56 10.2	
	comp=Z,0.3nm,0.3s,baz=266,slow=27,SNR=5.1						
KSRS				LR	LR	23 58 36.5	
	comp=Z,33µm,18.4s,baz=257,slow=39						
ZSN	**Zaisan**	19.47	317	c iP	P	23 50 23.3	-0.2
ZSN				pmax	pmax		
	comp=Z,2µm,3.3s						
ZSN				MLR	MLR		
	comp=Z,18µm,15.0s						
ZSN	**Zaisan**	19.47	317	⇑iP	P	23 50 23.3	-0.2
	comp=Z,2µm,3.3s						
ZSN				eS	S	23 54 08.3	+4.5
	comp=Z,745nm,4.3s						
ZSN				eLR	LR	23 57 41.4	
	comp=Z,18µm,14.6s						
SRAK	**Srakaew**	20.50	186	P	P	23 50 35.1	+0.2
SRDT	**SRDT**	20.60	194	P	P	23 50 37.1	+1.2
	comp=Z,878nm,1.9s,comp=Z,17µm						
MK31	**Makanchi Array**	20.62	313	eP	P	23 50 35.5	-0.5
	comp=Z,234nm,1.2s						
MK31	**Makanchi Array**	20.62	313	eP	P	23 50 35.6	-0.5
MK31				pmax	pmax		
	comp=Z,234nm,1.2s						
MKAR	**Makanchi Array**	20.62	313	P	P	23 50 34.6	-1.5
	comp=Z,77nm,0.9s,baz=110,slow=13,SNR=65						
MKAR				S	S	23 54 24.7	-2.2
	comp=Z,19nm,0.8s,baz=111,slow=8.2,SNR=2.0						
MKAR				Lg	Lg	23 56 48.6	
	comp=Z,14nm,1.0s,baz=124,slow=33,SNR=2.6						
MKAR				LR	LR	23 58 28.1	
	comp=Z,36µm,20.4s,baz=96,slow=37						
MKAR				PKiKP	PKiKP	00 02 33.3	-1.1
	comp=Z,2.4nm,1.0s,baz=213,slow=1.9,SNR=6.1						
MKAR	**Makanchi Array**	20.62	313	i P	P	23 50 35.4	-0.7
MKAR				pmax	pmax		
	comp=Z,77nm,0.9s						
MAKZ	**Makanchi**	20.82	313	eP	P	23 50 38.0	-0.2
	comp=Z,865nm,1.4s						
MAKZ				LR	LR		
	comp=Z,40µm,20.0s						
MAKZ	**Makanchi**	20.82	313	eP	P	23 50 38.0	-0.2
MAKZ				pmax	pmax		
	comp=Z,865nm,1.4s						
MAKZ				MLR	MLR		
	comp=Z,40µm,20.0s						
PTH	**Pithoragarh**	20.96	263	eP	P	23 50 40.7	+0.7
PTH				eS	S	23 54 34.8	+0.7
TMDB	**BangkokBB_BH_I**	21.01	190	P		23 50 43.2	
	comp=Z,101nm,1.3s,comp=Z,4µm						
PDGK	**Podgornoye**	21.13	302	i P	P	23 50 40.7	-1.0
PDGK				pmax	pmax		
	comp=Z,685nm,1.1s						
UZB	**Uzynbulak**	21.41	301	c iP	P	23 50 44.4	-0.3
UZB				eS	S	23 54 42.4	-0.4
UZB				pmax	pmax		
	comp=Z,1µm,3.4s						
UZB				smax	smax		
	comp=E,658nm,2.5s						
UZB				MLR	MLR		
	comp=Z,9µm,11.0s						
UZB	**Uzynbulak**	21.41	301	⇑iP	P	23 50 44.5	-0.3
	comp=Z,1µm,3.4s						
UZB				eS	S	23 54 42.4	-0.4
	comp=Z,658nm,2.5s						
UZB				eLR	LR	23 58 50.9	
	comp=Z,9µm,10.6s						
PRZ	**Przheval'sk**	21.69	299	eP	P	23 50 48.5	+0.7
	comp=Z,2µm,1.5s						
PRZ				LR	LR		
	comp=Z,79µm,18.0s						
PRZ	**Przheval'sk**	21.69	299	eP	P	23 50 48.5	+0.7
PRZ				pmax	pmax		
	comp=Z,2µm,1.5s						
PRZ				MLR	MLR		
	comp=Z,79µm,18.0s						
CHBT	**CHBT**	21.73	185	P	P	23 50 49.7	+1.6
	comp=Z,644nm,1.0s						
KPKS	**Kokpek**	21.73	302	c iP	P	23 50 47.7	-0.5
KPKS				eS	S	23 54 53.7	+4.6
KPKS				pmax	pmax		
	comp=Z,1µm,2.7s						
KPKS				MLR	MLR		
	comp=Z,5µm,7.0s						
KPKS	**Kokpek**	21.73	302	⇑iP	P	23 50 47.7	-0.5
	comp=Z,1µm,2.7s						
KPKS				eS	Sn	23 54 53.8	-4.2
KPKS				eLR	LR	00 00 45.6	
	comp=Z,5µm,7.0s						
SATY	**Saty**	21.83	301	c iP	P	23 50 49.3	+0.1
SATY				eS	S	23 54 53.0	+2.1
SATY				pmax	pmax		
	comp=Z,2µm,2.7s						
SATY				MLR	MLR		
	comp=Z,10µm,10.0s						
SATY	**Saty**	21.83	301	⇑iP	P	23 50 49.3	+0.1
	comp=Z,2µm,2.7s						
SATY				eS	S	23 54 53.1	+2.1
SATY				eLR	LR	23 59 09.8	
	comp=Z,10µm,9.9s						
MDJ	**Mudanjiang**	21.91	55	eP	P	23 50 50.7	+0.9
	comp=Z,1µm,1.4s						
MDJ				LR	LR		
	comp=Z,54µm,19.0s						
MDJ	**Mudanjiang**	21.91	55	P	P	23 50 51.9	+2.0
MDJ				PP	PnPn	23 51 16.0	+4.9
MDJ				S	S	23 54 50.3	-1.9
MDJ				SS	SnSn	23 55 20.8	+3.6
MDJ				pmax	pmax		
	comp=Z,240nm,1.0s						
MDJ				LR	LR		
	comp=Z,141µm,15.5s						
MDJ				LR	LR		
	comp=Z,42µm,7.0s						
MDJ				LR	LR		
	comp=Z,116µm,14.2s						
JOW	**Kunigami**	21.99	104	P	P	23 50 49.6	-1.3
	comp=Z,21nm,1.1s,baz=190,slow=15,SNR=42						
JOW	**Kunigami**	21.99	104	PFAKE		23 51 00.0	+9.1
JOW				LR	LR		
	comp=Z,46µm,19.0s						
JNU	**Nakatsue**	22.14	86	P	P	23 50 52.8	+0.2
	comp=Z,394nm,1.0s,baz=292,slow=4.0,SNR=104						
JNU				S	S	23 54 58.4	+1.4
	comp=Z,21nm,1.0s,baz=217,slow=20,SNR=1.8						
JNU				Lg	Lg	23 57 38.8	
	comp=Z,26nm,1.0s,baz=24,slow=20,SNR=2.9						
JNU				LR	LR	23 59 16.8	
	comp=Z,34µm,21.0s,baz=287,slow=36						
JNU	**Nakatsue**	22.14	86	PFAKE		23 51 00.0	+7.5
JNU				LR	LR		
	comp=Z,35µm,18.0s						
TDK	**Taldyqorghan**	22.38	306	eP	P	23 50 54.7	-0.3
TDK				eS	S	23 55 03.5	+2.2
TDK				pmax	pmax		
	comp=Z,1µm,2.3s						
TDK				MLR	MLR		
	comp=Z,41µm,12.0s						
TDK	**Taldyqorghan**	22.38	306	eP	P	23 50 54.8	-0.3
	comp=Z,1µm,2.3s						
TDK				eS	S	23 55 03.6	+2.2
TDK				eLR	LR	00 00 38.0	
	comp=Z,41µm,12.2s						
MSHR	**Mys Shultsa**	22.46	61	d iP	P	23 50 56.7	+0.9
KDJ	**Kajisay**	22.51	298	eP	P	23 50 57.0	+0.5
	comp=Z,421nm,1.2s						
KDJ				LR	LR		
	comp=Z,74µm,19.0s						
KDJ	**Kajisay**	22.51	298	eP	P	23 50 57.0	+0.5
KDJ				pmax	pmax		
	comp=Z,421nm,1.2s						
KDJ				MLR	MLR		
	comp=Z,74µm,19.0s						
DLV	**T Lat**	22.79	169	PFAKE		23 51 10.0	+10
DLV				LR	LR		
	comp=Z,41µm,20.0s						
MDOK	**Medeo**	22.82	300	eP	P	23 51 00.0	+0.2
MDOK				pmax	pmax		
	comp=Z,10µm,4.0s						
MDOK				MLR	MLR		
	comp=Z,37µm,15.0s						
MDOK	**Medeo**	22.82	300	eP	P	23 51 00.0	+0.2
	comp=Z,10µm,4.0s						
MDOK				eS	S	23 55 12.7	+3.0
	comp=Z,14µm,7.5s						
MDOK				eLR	LR	00 01 15.3	
	comp=Z,37µm,15.1s						
TNSS	**Tian-Shan**	22.86	300	eP	P	23 51 00.3	-0.2
TNSS	**Tian-Shan**	22.86	300	eP	P	23 51 00.3	-0.2
AAA	**Alma-Ata**	22.92	300	c iP	P	23 51 01.0	+0.2
AAA				pmax	pmax		
	comp=Z,3µm,3.6s						
AAA				MLR	MLR		
	comp=Z,27µm,15.0s						
AAA	**Alma-Ata**	22.92	300	⇑iP	P	23 51 01.0	+0.2
	comp=Z,3µm,3.6s						
AAA				eS	S	23 55 16.1	+4.8
	comp=Z,8µm,6.4s						
AAA				eLR	LR	00 01 21.0	
	comp=Z,27µm,15.1s						
SMLA	**Simla**	22.99	269	eP	P	23 51 00.3	-1.2
CHKK	**Chushkaly**	23.02	302	⇑iP	P	23 51 00.5	-1.3
CHKK	**Chushkaly**	23.02	302	⇑iP	P	23 51 00.6	-1.3
KSH	**Kashi**	23.09	291	⇑P	P	23 51 06.0	+3.4
KSH				pP	sP	23 51 11.4	+5.4
KSH				sP	pP	23 51 13.1	+8.2
KSH				PP		23 51 37.4	
KSH				S	S	23 55 16.1	+1.7
KSH				SS	SnSn	23 56 01.9	+15
KSH				pmax	pmax		
	comp=Z,1µm,1.5s						
KSH				pmax	pmax		
	comp=Z,8µm,5.3s						
KSH				LR	LR		
	comp=Z,51µm,10.4s						
KSH				LR	LR		
	comp=Z,49µm,12.4s						
KSH				LR	LR		
	comp=Z,70µm,14.8s						
VLA	**Vladivostok**	23.10	60	d iP	P	23 51 03.5	+1.0
VLA				pmax	pmax		
	comp=Z,449nm,1.2s						
VLA				MLR	MLR		
	comp=Z,29µm,16.0s						
ULHL	**Ulahol**	23.21	298	P	P	23 51 04.3	+0.3
	SNR=34						
MTBS	**Maitube**	23.25	300	eP	P	23 51 04.3	+0.1
MTBS	**Maitube**	23.25	300	eP	P	23 51 04.3	+0.1
NRN	**Naryn**	23.26	296	PFAKE		23 51 20.0	+15
NRN				LR	LR		
	comp=Z,32µm,19.0s						
DHRM	**DHARAMSHALA**	23.43	272	eP	P	23 51 05.6	-0.7
DHRM				IAmb	IAmb	23 51 15.3	
	comp=Z,4µm,1.9s						
USA0B	**Ussuriysk Arra**	23.43	57	eP	P	23 51 06.3	+0.4
	comp=Z,792nm,1.4s						
USRK	**Ussuriysk Ar.**	23.43	57	P	P	23 51 06.0	+0.2
	comp=Z,187nm,0.9s,baz=259,slow=8.9,SNR=154						
USRK				S	S	23 55 22.4	+2.7
	comp=Z,11nm,0.9s,baz=260,slow=14,SNR=2.0						
USRK				Lg	Lg	23 58 04.7	
	comp=Z,22nm,1.2s,baz=265,slow=33,SNR=2.8						
USRK				LR	LR	00 01 43.2	
	comp=Z,15µm,20.1s,baz=231,slow=40						
KUU	**Kurty**	23.49	302	c iP	P	23 51 05.7	-0.8
KUU				pmax	pmax		
	comp=Z,3µm,3.9s						
KUU				MLR	MLR		
	comp=Z,17µm,9.0s						
KUU	**Kurty**	23.49	302	⇑iP	P	23 51 05.8	-0.8
	comp=Z,3µm,3.9s						
KUU				i S	S	23 55 25.7	+5.0
	comp=Z,2µm,4.7s						
KUU				eLR	LR	00 01 32.5	
	comp=Z,17µm,9.5s						
DGPR	**DIGLIPUR**	23.59	209	eP	P	23 51 06.9	-0.7
DGPR				IAmb	IAmb	23 51 10.6	
SEM	**Semipalatinsk**	23.64	320	eP	P	23 51 07.2	-1.0
SEM				eS	S	23 55 24.0	+0.6
SEM				pmax	pmax		
	comp=Z,2µm,3.2s						
SEM				smax	smax		
	comp=N,3µm,4.9s						
SEM				MLR	MLR		
	comp=Z,20µm,12.0s						
SEM	**Semipalatinsk**	23.64	320	eP	P	23 51 07.3	-1.0
	comp=Z,2µm,3.2s						
SEM				eS	S	23 55 24.0	+0.6
	comp=Z,3µm,4.9s						
SEM				eLR	LR	23 59 53.6	
	comp=Z,20µm,12.0s						
NDI	**New Delhi**	23.72	263	eP	P	23 51 09.0	+0.1
ZAA0	**Zalesovo Array**	23.77	331	eP	P	23 51 07.9	-1.3
	comp=Z,472nm,1.4s						
ZAA0				LR	LR		
	comp=Z,10µm,18.0s						
ZALV	**Zalesovo Beam**	23.77	331	P	P	23 51 07.8	-1.4
	comp=Z,63nm,0.8s,baz=123,slow=5.5,SNR=121						
ZALV				S	S	23 55 24.9	-0.1
	comp=Z,16nm,1.0s,baz=222,slow=25,SNR=2.7						
ZALV				LR	LR	00 00 42.4	
	comp=Z,42µm,19.6s,baz=156,slow=37						
TKM2	**Tokmak 2**	23.81	299	P	P	23 51 10.4	+0.5
	SNR=100						
KZA	**Kyzart**	23.91	297	P	P	23 51 12.3	+1.1
	SNR=43						
BOD	**Bodaibo**	24.23	13	eP	P	23 51 13.8	+0.4
BOD				pmax	pmax		
	comp=Z,557nm,2.3s						
KBK	**Karagaybulak**	24.23	298	P	P	23 51 14.7	+0.9
	SNR=73						
CHMS	**Chumysh**	24.43	299	P	P	23 51 15.9	+0.4
	SNR=32						
UCH	**Uchtor**	24.48	297	P	P	23 51 17.6	+1.2
	SNR=82						
FRU1	**Bishkek**	24.48	299	eP	P	23 51 17.1	+1.1
	comp=Z,432nm,1.5s						
FRU1				eS	S	23 55 38.3	+1.6
FRU1				LR	LR		
	comp=Z,56µm,20.0s						
FRU1	**Bishkek**	24.48	299	eP	P	23 51 17.2	+1.1
FRU1				eS	S	23 55 38.3	+1.6
FRU1				pmax	pmax		
	comp=Z,432nm,1.5s						
FRU1				MLR	MLR		
	comp=Z,56µm,20.0s						
AAK	**Ala-Archa**	24.55	298	P	P	23 51 16.7	-0.1
	comp=Z,35nm,1.0s,baz=86,slow=10.0,SNR=49						
AAK				S	S	23 55 38.7	+0.7
	comp=Z,15nm,0.8s,baz=344,slow=20,SNR=1.4						
AAK				Lg	Lg	23 58 57.4	
	comp=Z,6.3nm,0.7s,baz=327,slow=15,SNR=2.0						
AAK				LR	LR	00 00 36.4	
	comp=Z,48µm,21.4s,baz=94,slow=36						
AAK	**Ala-Archa**	24.55	298	eP	P	23 51 17.5	+0.7
	comp=Z,107nm,1.1s						
AAK				LR	LR		
	comp=Z,75µm,20.0s						
AAK	**Ala-Archa**	24.55	298	i P	P	23 51 17.6	+0.7
	SNR=114						
AAK	**Ala-Archa**	24.55	298	P	P	23 51 17.7	+0.9
	SNR=113						
AAK				P	P	23 51 17.7	+0.9
	SNR=113						
AAK	**Ala-Archa**	24.55	298	P	P	23 51 18.2	+1.5
	SNR=18						
SGDS	**Sogindy**	24.60	300	⇑iP	P	23 51 17.3	+0.2
	comp=Z,2µm,3.5s						
SGDS				eS	S	23 55 40.9	+2.3
	comp=Z,895nm,5.8s						
SGDS				eLR	LR	00 03 08.4	
	comp=Z,24µm,13.4s						
USP	**Ospenovka**	24.66	300	P	P	23 51 17.7	+0.1
	SNR=73						
KURK	**Kurchatov**	24.69	319	eP	P	23 51 17.5	-0.2
	comp=Z,912nm,1.4s						
KURK				LR	LR		
	comp=Z,21µm,18.0s						
KURK	**Kurchatov**	24.69	319	eP	P	23 51 17.5	-0.2
KURK				pmax	pmax		
	comp=Z,912nm,1.4s						
KURK				MLR	MLR		
	comp=Z,21µm,18.0s						
KURK	**Kurchatov**	24.69	319	P	P	23 51 17.8	+0.1
	SNR=346						
KURK				P	P	23 51 17.8	+0.1
	SNR=346						
KURBB	**Kurchatov Arra**	24.69	319	P	P	23 51 17.3	-0.4
	comp=Z,77nm,0.5s,baz=129,slow=9.1,SNR=272						
KURBB				PcP	PcP	23 54 54.8	+0.1
	comp=Z,30nm,0.8s,baz=118,slow=2.1,SNR=7.4						
KURBB				S	S	23 55 37.9	-1.8
	comp=Z,11nm,0.9s,baz=114,slow=9.2,SNR=3.1						
KURBB				Lg	Lg	23 58 58.4	
	comp=Z,23nm,1.2s,baz=107,slow=29,SNR=4.1						
KURBB				PKiKP	PKiKP	00 02 34.5	-1.7
	comp=Z,4.4nm,0.7s,baz=99,slow=0.6,SNR=9.4						
KLR	**Kul'dur**	25.03	46	P	P	23 51 21.4	+0.5
	comp=Z,266nm,1.1s,baz=257,slow=9.6,SNR=266						
KLR				S	S	23 55 43.0	-2.3
	comp=Z,16nm,0.9s,baz=219,slow=19,SNR=1.5						
KLR				Lg	Lg	23 58 52.3	
	comp=Z,31nm,1.2s,baz=338,slow=19,SNR=2.3						
KLR				LR	LR	00 02 35.9	
	comp=Z,54µm,18.2s,baz=244,slow=40						
KLR	**Kul'dur**	25.03	46	d iP	P	23 51 21.3	+0.5
KLR				pmax	pmax		
	comp=Z,471nm,1.1s						
EKS2	**Erkin-Say**	25.08	298	P	P	23 51 22.1	+0.6
	SNR=45						
ZEA	**Zeya**	25.14	33	eP	P	23 51 22.4	+0.7
ZEA				e		23 51 34.5	
ZEA				ePPP	PPP	23 52 11.0	
ZEA				e		23 54 54.0	
ZEA				eS	S	23 55 43.0	-4.0
ZEA				eSS	SnSn	23 56 46.0	+10
ZEA				pmax	pmax		
	comp=N,170nm,1.2s						
ZEA				pmax	pmax		
	comp=E,120nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,280nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,3µm,8.0s						
ZEA				pmax	pmax		
	comp=E,2µm,6.0s						
ZEA				pmax	pmax		
	comp=N,2µm,5.0s						
ZEA				smax	smax		
	comp=N,28µm,14.0s						
ZEA				smax	smax		
	comp=E,27µm,14.0s						
ZEA				smax	smax		
	comp=Z,21µm,14.0s						
TGY	**Tagaytay City**	25.30	139	P	P	23 51 23.2	-0.3
	comp=Z,117nm,0.4s,baz=350,slow=3.7,SNR=7.8						
TGY				LR	LR	00 01 00.8	
	comp=Z,32µm,20.3s,baz=328,slow=36						
BTLS	**Baital**	25.36	304	c iP	P	23 51 23.7	-0.1
BTLS				eS	S	23 55 49.8	-0.8
BTLS				pmax	pmax		
	comp=Z,704nm,3.7s						
BTLS				MLR	MLR		
	comp=Z,8µm,12.0s						
BTLS	**Baital**	25.36	304	⇑iP	P	23 51 23.7	-0.1
	comp=Z,704nm,3.7s						
BTLS				eS	S	23 55 49.8	-0.8
BTLS				eLR	LR	00 02 01.4	
	comp=Z,8µm,11.6s						
ARSB	**Arslanbob**	25.51	295	PFAKE		23 51 40.0	+15
ARSB				LR	LR		
	comp=Z,54µm,18.0s						
NIL	**Nilore**	25.65	277	eP	P	23 51 26.5	-0.1
	comp=Z,537nm,1.1s						
NIL	**Nilore**	25.65	277	eP	P	23 51 26.5	-0.1
NIL				pmax	pmax		
	comp=Z,537nm,1.1s						
NGP	**Nagpur**	25.88	246	i P	P	23 51 28.5	-0.2
NGP				ex	x	23 56 06.6	
BHPL	**Bhopal**	25.96	252	eP	P	23 51 28.8	-0.7
BHPL				IAmb	IAmb	23 51 30.8	
	comp=Z,442nm,1.6s						
INU	**Inuyama**	26.81	79	eS	S	23 56 09.9	-3.7
INU				LR	LR		
	comp=Z,32µm,18.0s						
TEY	**Ternei**	26.83	57	⇑iP	P	23 51 38.5	+1.4
TEY				eS	S	23 56 13.0	-0.8
TEY				pmax	pmax		
	comp=Z,500nm,3.2s						
TEY				pmax	pmax		
	comp=Z,370nm,1.3s						
TEY				pmax	pmax		
	comp=E,400nm,1.5s						
TEY				pmax	pmax		
	comp=N,70nm,1.1s						
TEY				MLR	MLR		
	comp=E,23µm,9.0s						
TEY				MLR	MLR		
	comp=N,52µm,12.0s						
TEY				MLR	MLR		
	comp=Z,69µm,10.0s						
TRTT	**Trang**	26.87	190	P	P	23 51 38.0	+0.3
	comp=Z,409nm,1.7s						
PKDT	**Phuket**	27.04	193	P	P	23 51 40.2	+1.0
	comp=Z,224nm,2.0s,comp=Z,8µm						
BTK	**Batken**	27.08	292	eP	P	23 51 39.8	+0.3
	comp=Z,146nm,1.0s						
BTK	**Batken**	27.08	292	eP	P	23 51 39.8	+0.3
BTK				pmax	pmax		
	comp=Z,146nm,1.0s						
SKLT	**Songkhla**	27.41	188	P	P	23 51 43.1	+0.6
	comp=Z,162nm,1.9s,comp=Z,4µm						
JBG	**Jabagly**	27.42	297	c iP	P	23 51 42.9	+0.2
JBG				eS	S	23 56 27.1	+3.6
JBG				pmax	pmax		
	comp=Z,441nm,3.8s						
JBG				MLR	MLR		
	comp=Z,6µm,12.0s						
GAR	**Garm**	27.47	289	PFAKE		23 52 00.0	+17
GAR				LR	LR		
	comp=Z,125µm,20.0s						
KKAR	**Karatay Array**	27.52	298	eP	P	23 51 43.3	-0.1
	comp=Z,56nm,0.9s						
KKAR	**Karatay Array**	27.52	298	eP	P	23 51 43.3	-0.1
KKAR				pmax	pmax		
	comp=Z,56nm,0.9s						
MJB9	**Matsu-Tunnel**	27.62	76	eP	P	23 51 43.5	-0.9
	comp=Z,107nm,1.2s						
MAJO	**Matsushiro**	27.62	76	eP	P	23 51 44.1	-0.2
	comp=Z,100nm,1.1s						
MAJO				ePcP	PcP	23 55 03.2	+1.4
MAJO	**Matsushiro**	27.62	76	c iP	P	23 51 43.0	-1.4
MAJO				pmax	pmax		
	comp=Z,108nm,1.2s						
MAJO				MLR	MLR		
	comp=Z,10µm,16.0s						
MAT	**Matsushiro**	27.62	76	P	P	23 51 43.2	-1.2
MAT				S	S	23 56 24.0	-2.6
MJAR	**Matsushiro Arr**	27.62	76	P	P	23 51 44.7	+0.3
	comp=Z,91nm,1.1s,baz=279,slow=9.5,SNR=155						
MJAR				PcP	PcP	23 55 02.1	+0.3
	comp=Z,22nm,0.9s,baz=225,slow=1.2,SNR=5.1						
MJAR				S	S	23 56 28.1	+1.5
	comp=Z,3.6nm,0.8s,baz=289,slow=3.7,SNR=2.3						
MJAR				LR	LR	00 03 09.2	
	comp=Z,9µm,18.4s,baz=280,slow=37						
BRZS	**Berezniki**	27.77	313	c iP	P	23 51 45.7	+0.2
BRZS				eS	S	23 56 30.6	+2.0
BRZS				pmax	pmax		
	comp=Z,607nm,2.6s						
BRZS				smax	smax		
	comp=N,725nm,6.8s						
BRZS				MLR	MLR		
	comp=Z,13µm,11.0s						
BRZS	**Berezniki**	27.77	313	⇑iP	P	23 51 45.8	+0.2
	comp=Z,607nm,2.6s						
BRZS				eS	S	23 56 30.6	+2.0
	comp=Z,725nm,6.8s						
BRZS				eLR	LR	00 03 46.3	
	comp=Z,13µm,11.5s						
IUG	**Iuzhnay**	27.78	296	eP	P	23 51 45.9	+0.1
IUG				eS	S	23 56 33.6	+4.5
IUG	**Iuzhnay**	27.78	296	eP	P	23 51 46.0	+0.1
IUG				eS	S	23 56 33.6	+4.5
IUG				eLR	LR	00 03 12.2	
	comp=Z,1µm,15.1s						
BRLS	**Borolday**	28.00	298	eS	S	23 56 33.6	+1.2
CHM	**Chimkent**	28.11	296	c eP	P	23 51 48.1	-0.5
CHM				eS	S	23 56 35.1	+1.0
CHM				MLR	MLR		
	comp=Z,9µm,14.0s						
CHM	**Chimkent**	28.11	296	⇑eP	P	23 51 48.1	-0.5
CHM				eS	S	23 56 35.1	+1.0
CHM				eLR	LR	00 03 05.0	
	comp=Z,9µm,13.6s						
TAS	**Tashkent**	28.28	294	P	P	23 51 53.8	+3.6

TAS				pmax	pmax		
	comp=Z,212nm,1.7s						
RCP	**Roxas**	**28.38**	**139**⇑	*e*P	**P**	**23 51 52.0**	**+0.8**
CHGR	**Chuyangaron**	**28.38**	**289**	*e*P	P	23 52 01.8	+11
	comp=Z,406nm,0.9s						
CHGR				LR	LR		
	comp=Z,89µm,21.0s						
GRNR	**Gornyy**	**28.41**	**45**	*e*P	**P**	**23 51 52.6**	**+1.4**
GRNR				pmax	pmax		
	comp=E,48nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,84nm,1.0s						
HYB	**Hyderabad**	**28.58**	**240**	*i* P	**P**	**23 51 53.0**	**0.0**
	comp=Z,250nm,1.4s						
HYB				*e*		23 55 20.0	
HYB				*e*S	**S**	**23 56 42.0**	**+0.2**
HYB				*e*ScP	**ScP**	**23 58 45.0**	**-1.3**
HYB				LR	LR		
	comp=Z,9.8nm,12.0s						
HYB	**Hyderabad**	**28.58**	**240**	*e*P	**P**	**23 51 51.7**	**-1.3**
HYB				IAmb	IAmb	23 51 55.7	
	comp=Z,973nm,2.6s						
KBL	**Kabul**	**28.93**	**280**	*e*P	**P**	**23 51 56.9**	**+0.6**
	comp=Z,248nm,1.4s						
KBL	**Kabul**	**28.93**	**280**	*e*P	**P**	**23 51 56.9**	**+0.6**
KBL				pmax	pmax		
	comp=Z,248nm,1.4s						
CMBY	**CAMPBELL BAY**	**28.98**	**202**	*e*P	**P**	**23 51 53.8**	**-2.7**
CMBY				IAmb	IAmb	23 51 57.4	
	comp=Z,2µm,2.0s						
KULM	**Kulim**	**29.26**	**187**	PFAKE		23 52 10.0	+11
KULM				LR	LR		
	comp=Z,57µm,19.0s						
JHJ	**Hachijo jima 2**	**29.46**	**83**	P	**P**	**23 51 57.6**	**-3.1**
	comp=Z,68nm,0.8s,baz=278,slow=7.1,SNR=2.5						
JHJ				S	**S**	**23 56 57.4**	**+1.9**
	comp=Z,28nm,0.3s,baz=47,slow=7.0,SNR=2.3						
JHJ				LR	LR	00 04 39.9	
	comp=Z,17µm,18.3s,baz=288,slow=38						
JHJ2	**Mitsune**	**29.49**	**83**	*e*P	**P**	**23 51 59.6**	**-1.4**
	comp=Z,565nm,1.5s						
LHMI	**Lhok Sumawe**	**29.91**	**195**	PFAKE		23 52 20.0	+15
LHMI				LR	LR		
	comp=Z,30µm,18.0s						
LHMI	**Lhok Sumawe**	**29.91**	**195**	P	**P**	**23 52 06.8**	**+2.0**
	comp=Z,316nm,1.9s,comp=Z,8µm						
IPM	**Ipoh**	**30.03**	**186**	*e*P	**P**	**23 52 05.2**	**-0.6**
	comp=Z,178nm,1.3s						
IPM				LR	LR		
	comp=Z,70µm,18.0s						
LLP	**Lapu-Lapu**	**30.07**	**139**⇑	*e*P	**P**	**23 52 06.7**	**+0.5**
LLP				*e*S	S	23 57 16.8	+12
BRVK	**Borovoye**	**30.35**	**318**	*e*P	**P**	**23 52 08.5**	**+0.1**
	comp=Z,63nm,0.9s						
BRVK				LR	LR		
	comp=Z,47µm,19.0s						
BRVK	**Borovoye**	**30.35**	**318**c	*e*P	**P**	**23 52 08.5**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,277nm,2.5s						
BRVK				MLR	MLR		
	comp=Z,31µm,16.0s						
BRVK	**Borovoye**	**30.35**	**318**	P	**P**	**23 52 08.7**	**+0.3**
	SNR=72						
KKM	**Kota Kinabalu**	**30.40**	**156**	PFAKE		23 52 20.0	+11
KKM				LR	LR		
	comp=Z,20µm,21.0s						
MDRS	**Chennai**	**30.48**	**231**	*e*P	**P**	**23 52 10.2**	**+0.4**
MLSI	**Meulaboh, Aceh**	**30.96**	**195**	P	**P**	**23 52 14.1**	**0.0**
	comp=Z,243nm,1.4s,comp=Z,8µm						
ERM	**Erimo**	**31.24**	**64**	*e*P	**P**	**23 52 16.3**	**-0.1**
	comp=Z,80nm,1.0s						
ERM				LR	LR		
	comp=Z,37µm,22.0s						
ERM	**Erimo**	**31.24**	**64**c	*e*P	**P**	**23 52 16.3**	**-0.1**
ERM				pmax	pmax		
	comp=Z,85nm,1.7s						
POO	**Poona**	**31.36**	**247**	*e*P	**P**	**23 52 15.1**	**-2.6**
POO				IAmb	IAmb	23 52 19.6	
	comp=Z,114nm,1.2s						
YSS	**Yuzh-Sakhalins**	**31.40**	**55**	*e*P	**P**	**23 52 18.7**	**+1.0**
	comp=Z,635nm,1.0s						
YSS	**Yuzh-Sakhalins**	**31.40**	**55**⇑	*i*P	**P**	**23 52 18.7**	**+1.0**
YSS				*e*		23 52 23.6	
YSS				*e*		23 53 21.9	
YSS				*e*S	**S**	**23 57 23.0**	**-2.5**
YSS				pmax	pmax		
	comp=Z,2µm,3.5s						
YSS				pmax	pmax		
	comp=Z,530nm,1.1s						
YSS				MLR	MLR		
	comp=Z,30µm,9.0s						
YSS				MLR	MLR		
	comp=N,30µm,13.0s						
YSS				MLR	MLR		
	comp=E,52µm,11.0s						
KCSI	**Kotacane, Aceh**	**31.41**	**192**	P	**P**	**23 52 19.4**	**+1.3**
	comp=E,124nm,1.4s,comp=E,3µm						
NKL	**Nikolayevsk**	**31.75**	**43**	*e*P	**P**	**23 52 21.1**	**+0.5**
NKL				*e*		23 53 23.6	
NKL				*e*S	**S**	**23 57 29.6**	**-1.2**
NKL				pmax	pmax		
	comp=Z,31nm,0.9s						
NKL				pmax	pmax		
	comp=E,6.0nm,0.5s						
NKL				pmax	pmax		
	comp=N,10.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,269nm,5.4s						
NKL				smax	smax		
	comp=N,294nm,3.6s						
NKL				smax	smax		
	comp=E,197nm,3.2s						
YAK	**Yakutsk**	**31.90**	**23**	*e*P	**P**	**23 52 22.6**	**+0.6**
	comp=E,206nm,1.0s						
YAK				LR	LR		
	comp=Z,40µm,18.0s						
YAK	**Yakutsk**	**31.90**	**23**	*e*P	**P**	**23 52 22.1**	**+0.2**
YAK				*e**PP	sP	23 52 36.1	+11
YAK				*e*		23 53 22.7	
YAK				*e*		23 55 09.2	
YAK				*e*S	**S**	**23 57 32.6**	**-0.5**
YAK				*e*SSS	SSS	23 59 41.2	
YAK				pmax	pmax		
	comp=Z,248nm,1.0s						
YAK				pmax	pmax		
	comp=N,129nm,1.1s						
YAK				pmax	pmax		
	comp=E,129nm,1.0s						
YAK				pmax	pmax		
	comp=Z,194nm,1.5s						
YAK				pmax	pmax		
	comp=E,161nm,1.4s						
YAK				pmax	pmax		
	comp=N,191nm,1.6s						
YAK				smax	smax		
	comp=E,980nm,3.3s						
YAK				smax	smax		
	comp=N,965nm,3.2s						
YAK				MLR	MLR		
	comp=Z,40µm,8.0s						
YAK				MLR	MLR		
	comp=N,20µm,8.0s						
YAK				MLR	MLR		
	comp=E,38µm,7.0s						
PSI	**Prapat**	**31.93**	**190**	PFAKE		23 52 40.0	+17
PSI				LR	LR		
	comp=Z,26µm,18.0s						
BHJ	**Bhuj**	**32.16**	**259**	*e*P	**P**	**23 52 25.9**	**+1.2**
BHJ				IAmb	IAmb	23 52 27.8	
	comp=Z,98nm,0.6s						
TYV	**Tymovskoe**	**32.18**	**48**	*e*P	**P**	**23 52 26.4**	**+1.9**
TYV				*e*S	**S**	**23 57 42.6**	**+4.9**
TYV				pmax	pmax		
	comp=Z,132nm,1.3s						
TYV				pmax	pmax		
	comp=Z,1µm,3.5s						
TYV				smax	smax		
	comp=N,2µm,3.9s						
TYV				smax	smax		
	comp=E,36nm,1.5s						
TYV				MLR	MLR		
	comp=E,132µm,13.0s						
TYV				MLR	MLR		
	comp=Z,195µm,13.0s						
MYKOM	**Kota Tinggi**	**32.55**	**181**	PFAKE		23 52 40.0	+12
MYKOM				LR	LR		
	comp=Z,11µm,20.0s						
SBUM	**Sibu**	**32.74**	**165**	PFAKE		23 52 40.0	+10
SBUM				LR	LR		
	comp=Z,7µm,20.0s						
SNSI	**Sinabang, Aceh**	**32.78**	**195**	P	**P**	**23 52 30.8**	**+0.8**
	comp=Z,744nm,1.8s,comp=Z,17µm						
CTBH	**Cotabato--PC H**	**32.81**	**141**⇑	*i*P	**P**	**23 52 30.8**	**+0.5**
SBSI	**Sibolga**	**33.17**	**190**	P	**P**	**23 52 33.7**	**+0.2**
	comp=Z,89nm,0.7s,comp=Z,3µm						
GOA	**Goa**	**33.26**	**243**	*e*P	**P**	**23 52 33.9**	**-0.4**
GOA				IAmb	IAmb	23 52 36.7	
	comp=Z,642nm,1.6s						
YUK	**Yuzh-Kuril'sk**	**33.28**	**61**⇑	*i*P	**P**	**23 52 34.9**	**+0.7**
YUK				*i* S	**S**	**23 57 55.6**	**+0.7**
YUK				pmax	pmax		
	comp=Z,2µm,1.3s						
KSM	**Kuching**	**33.34**	**169**	PFAKE		23 52 50.0	+15
KSM				LR	LR		
	comp=Z,21µm,20.0s						
TPRI	**Tanjung Pinang**	**33.41**	**180**	P	**P**	**23 52 36.6**	**+1.0**
	comp=Z,390nm,1.9s,comp=Z,23µmcomp=Z,7µm						
GSI	**Gunungsitoli**	**33.62**	**192**	PFAKE		23 52 50.0	+13
GSI				LR	LR		
	comp=Z,30µm,22.0s						
GSI	**Gunungsitoli**	**33.62**	**192**	P	**P**	**23 52 37.5**	**+0.1**
	comp=Z,678nm,1.9s,comp=Z,17µm						
DAV	**Davao City (W)**	**33.64**	**139**	*e*P	**P**	**23 52 39.1**	**+1.5**
	comp=Z,942nm,1.2s						
DAV				LR	LR		
	comp=Z,31µm,19.0s						
DAV	**Davao City (W)**	**33.64**	**139**	P	**P**	**23 52 39.9**	**+2.3**
	SNR=38						
DAV				P	**P**	**23 52 39.9**	**+2.3**
	SNR=38						
DAV				P	**P**	**23 52 39.9**	**+2.3**
	SNR=38						
DAV	**Davao City (W)**	**33.64**	**139**⇓	*e*P	**P**	**23 52 35.4**	**-2.3**
BKNI	**Bangkinang**	**34.13**	**186**	PFAKE		23 52 50.0	+8.1
BKNI				LR	LR		
	comp=Z,87µm,18.0s						
BKNI	**Bangkinang**	**34.13**	**186**	P	**P**	**23 52 42.9**	**+1.0**
	comp=Z,2µm,1.6s,comp=Z,33µmcomp=Z,14µm						
PALK	**Pallekele**	**34.72**	**224**	*e*P	**P**	**23 52 47.9**	**+0.8**
	comp=Z,109nm,1.2s						
PALK				LR	LR		
	comp=Z,21µm,22.0s						
PALK	**Pallekele**	**34.72**	**224**	*i* P	**P**	**23 52 47.6**	**+0.5**
	SNR=13						
PALK	**Pallekele**	**34.72**	**224**	*e*P	**P**	**23 52 47.9**	**+0.8**
PALK				pmax	pmax		
	comp=Z,109nm,1.2s						
PALK				MLR	MLR		
	comp=Z,21µm,22.0s						
KUR	**Kuril'sk**	**34.76**	**59**⇑	*i*P	**P**	**23 52 47.8**	**+0.8**
KUR				*e*		23 54 11.4	
KUR				*e*S	**S**	**23 58 14.2**	**-3.6**
KUR				pmax	pmax		
	comp=Z,2µm,6.1s						
KUR				pmax	pmax		
	comp=Z,716nm,1.4s						
KUR				pmax	pmax		
	comp=N,352nm,1.5s						
KUR				pmax	pmax		
	comp=E,251nm,1.1s						
KUR				MLR	MLR		
	comp=Z,25µm,14.0s						
KUR				MLR	MLR		
	comp=N,14µm,12.0s						
STKI	**Sintang**	**34.92**	**167**	P	**P**	**23 52 50.7**	**+2.0**
	comp=N,740nm,1.9s						
PDSI	**Padang**	**35.41**	**187**	P	**P**	**23 52 51.1**	**-1.8**
	comp=N,86nm,2.2s,comp=N,8µm						
AB31	**Akbulak array**	**35.60**	**308**	*i* P	**P**	**23 52 54.2**	**0.0**
AB31				pmax	pmax		
	comp=Z,38nm,0.7s						
JMBI	**JAMBI**	**35.95**	**181**	P	**P**	**23 52 59.9**	**+2.4**
	comp=Z,2µm,1.5s,comp=Z,26µm						
SISI	**Saibi**	**35.97**	**189**	P	**P**	**23 52 58.2**	**+0.5**
	comp=Z,130nm,1.4s,comp=Z,6µm						
TRD	**Trivandrum**	**36.02**	**230**	*e*P	**P**	**23 52 58.0**	**-0.2**
SGSI	**Sangihe**	**36.48**	**142**	P	**P**	**23 53 05.0**	**+2.9**
	comp=Z,152nm,1.5s						
KRJI	**Kerinci**	**36.50**	**185**	P	**P**	**23 53 03.2**	**+0.9**
	comp=Z,295nm,1.5s,comp=Z,5µm						
PPBI	**Pangkal Pinang**	**36.52**	**177**	P	**P**	**23 53 03.5**	**+1.1**
	comp=Z,647nm,1.9s,comp=Z,14µm						
MTKI	**Muara Teweh, K**	**36.65**	**162**	P	**P**	**23 53 04.4**	**+0.9**
	comp=Z,619nm,2.1s,comp=Z,16µm						
SMKI	**Samarinda**	**36.83**	**158**	P	**P**	**23 53 07.7**	**+2.7**
	comp=Z,674nm,2.0s,comp=Z,15µm						
SVE	**Sverdlovsk**	**36.90**	**321**d	*i*P	**P**	**23 53 06.0**	**+0.7**
SVE				*e*S	**S**	**23 58 49.9**	**-0.5**
SVE				*e*		00 01 19.0	
SVE				pmax	pmax		
	comp=Z,427nm,1.2s						
SVE				MLR	MLR		
	comp=Z,24µm,13.0s						
SVE				MLR	MLR		
	comp=N,17µm,15.0s						
SVE				MLR	MLR		
	comp=E,13µm,11.0s						
AKTO	**Aktyubinsk**	**36.99**	**310**	*i* P	**P**	**23 53 04.9**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,130nm,1.2s						
GEYT	**Alibeck**	**37.09**	**289**	P	**P**	**23 53 08.4**	**+1.1**
	comp=Z,115nm,0.8s,baz=90,slow=4.4,SNR=96						
GEYT				S	**S**	**23 58 54.1**	**+0.2**
	comp=Z,6.2nm,1.0s,baz=122,slow=5.4,SNR=1.9						
GEYT				LR	LR	00 10 18.6	
	comp=Z,29µm,19.8s,baz=45,slow=40						
GYA0B	**ALIBECK ARRAY**	**37.09**	**289**	PFAKE		23 53 20.0	+13
GYA0B				LR	LR		
	comp=Z,28µm,20.0s						
TPI	**Tanjungpandan**	**37.20**	**174**	P	**P**	**23 53 09.5**	**+1.3**
	comp=Z,539nm,1.8s,comp=Z,10µm						
PPSI	**Pulau Pagai**	**37.28**	**187**	P	**P**	**23 53 10.1**	**+1.2**
	comp=Z,785nm,1.9s,comp=Z,16µm						
BKB	**Balikpapan**	**37.50**	**159**	P	**P**	**23 53 12.2**	**+1.4**
	comp=Z,2µm,1.8s,comp=Z,32µm						
PBKI	**Pangkalan Bun**	**37.66**	**168**	P	**P**	**23 53 13.8**	**+1.7**
	comp=Z,1µm,1.4s,comp=Z,20µm						
ARU	**Arti**	**37.88**	**320**	*e*P	**P**	**23 53 13.7**	**+0.1**
	comp=Z,462nm,0.9s						
ARU				LR	LR		
	comp=Z,13µm,19.0s						
ARU	**Arti**	**37.88**	**320**c	*i*P	**P**	**23 53 13.7**	**+0.1**
ARU						23 54 41.4	
ARU				PPP	PPP	23 54 58.0	
ARU						23 55 26.8	
ARU				S	**S**	**23 59 07.7**	**+2.4**
ARU						00 03 24.1	
ARU				pmax	pmax		
	comp=Z,582nm,1.0s						
ARU				MLR	MLR		
	comp=Z,17µm,14.0s						
LHSI	**Lahat**	**38.13**	**181**	P	**P**	**23 53 16.8**	**+0.7**
	comp=Z,872nm,2.2s,comp=Z,23µm						
MNAI	**Manna**	**38.68**	**182**	*e*P	**P**	**23 53 19.4**	**-1.3**
	comp=Z,147nm,0.9s						
MNAI				LR	LR		
	comp=Z,21µm,20.0s						
MDSI	**Maura Dua**	**38.78**	**180**	P	**P**	**23 53 21.2**	**-0.3**
	comp=Z,525nm,2.0s,comp=Z,11µm						
KLSI		**38.99**	**179**	P	**P**	**23 53 23.8**	**+0.5**
	comp=Z,1µm,1.9s,comp=Z,31µm						
KLI	**Kotabumi**	**39.16**	**179**	P	**P**	**23 53 25.7**	**+1.0**
	comp=Z,1µm,1.7s,comp=Z,24µm						
MA2	**Magadan**	**39.22**	**36**	*e*P	**P**	**23 53 25.2**	**+0.3**
	comp=Z,116nm,1.1s						
MA2				LR	LR		
	comp=Z,10µm,20.0s						
MA2	**Magadan**	**39.22**	**36**	*e*P	**P**	**23 53 25.2**	**+0.3**
MA2				pmax	pmax		
	comp=Z,116nm,1.1s						
MA2				MLR	MLR		
	comp=Z,10µm,20.0s						
KBKI	**Kotabaru**	**39.24**	**161**	P	**P**	**23 53 25.8**	**+0.4**
	comp=Z,296nm,1.1s,comp=Z,3µm						
LWLI	**Liwa**	**39.31**	**180**	P	**P**	**23 53 25.2**	**-0.9**
	comp=Z,173nm,2.0s,comp=Z,11µm						
LUWI	**Luwuk**	**39.39**	**150**	PFAKE		23 53 40.0	+13
LUWI				LR	LR		
	comp=Z,10µm,19.0s						
LUWI	**Luwuk**	**39.39**	**150**	P	**P**	**23 53 26.5**	**-0.2**
	comp=Z,1µm,1.4s,comp=Z,15µm						
TIXI	**Tiksi**	**39.40**	**12**	P	**P**	**23 53 26.0**	**-0.2**
	comp=Z,139nm,1.1s,baz=240,slow=8.3,SNR=38						
TIXI	**Tiksi**	**39.40**	**12**	*e*P	**P**	**23 53 25.6**	**-0.5**
	comp=Z,197nm,1.0s						
TIXI				LR	LR		
	comp=Z,47µm,20.0s						
TIXI	**Tiksi**	**39.40**	**12**c	*e*P	**P**	**23 53 25.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,267nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,33µm,10.0s						
BLSI	**Bandar Lampung**	**39.67**	**178**	P	**P**	**23 53 31.1**	**+2.1**
	comp=Z,390nm,2.2s,comp=Z,13µm						
KASI	**Kota Agung**	**39.81**	**180**	P	**P**	**23 53 28.6**	**-1.6**
	comp=Z,191nm,1.2s,comp=Z,3µm						
TNTI	**Ternate**	**39.91**	**142**	*e*P	**P**	**23 53 31.6**	**+0.6**
	comp=Z,856nm,1.4s						
TNTI				LR	LR		
	comp=Z,4µm,22.0s						
TNTI	**Ternate**	**39.91**	**142**	P	**P**	**23 53 31.6**	**+0.6**
	comp=Z,426nm,1.7s,comp=Z,8µm						
TTSI	**Tana Toraja**	**40.12**	**155**	P	**P**	**23 53 33.1**	**+0.4**
	comp=Z,1µm,1.9s,comp=Z,16µm						
SBJI	**Serang**	**40.44**	**177**	P	**P**	**23 53 37.0**	**+1.6**
	comp=Z,282nm,1.6s,comp=Z,8µm						
TNG	**Tangerang**	**40.52**	**176**	P	**P**	**23 53 38.3**	**+2.3**
	comp=Z,2µm,0.5s,comp=Z,93µm						
SKR	**Severo-Kuril's**	**40.57**	**50**	*e*P	**P**	**23 53 35.6**	**-0.6**
SKR				*e*		23 55 10.5	
SKR				*e*S	**S**	**23 59 45.1**	**-0.8**
SKR				*e*SS	**SS**	**00 02 37.9**	**-7.4**
SKR				pmax	pmax		
	comp=Z,117nm,1.0s						
SKR				pmax	pmax		
	comp=Z,1µm,3.9s						
SKR				pmax	pmax		
	comp=Z,600nm,4.5s						
SKR				MLR	MLR		
	comp=Z,37µm,14.0s						
SKR				MLR	MLR		
	comp=Z,39µm,14.0s						
CGJI	**Cibinong**	**40.92**	**178**	P	**P**	**23 53 37.0**	**-2.3**
	comp=Z,253nm,1.3s,comp=Z,5µm						
SPSI	**Sidrap Palu**	**40.96**	**156**	P	**P**	**23 53 39.6**	**-0.1**
	comp=Z,825nm,1.4s,comp=Z,14µm						
JLN	**Jalan Bani Buh**	**41.05**	**265**	P	**P**	**23 53 41.3**	**+0.9**
	SNR=8.8						
JLN				P	**P**	**23 53 41.3**	**+0.9**
	SNR=8.8						
SARN	**Sarigan**	**41.09**	**105**	*e*P	**P**	**23 53 40.9**	**0.0**
	comp=Z,66nm,1.0s						
SEY	**Seymchan**	**41.09**	**31**	P	**P**	**23 53 40.9**	**+0.6**
	comp=Z,34nm,0.7s,baz=262,slow=8.3,SNR=42						
SEY				PcP	**PcP**	**23 55 41.0**	**+1.2**
	comp=Z,56nm,0.8s,baz=220,slow=6.9,SNR=5.3						
LBMI	**Labuha**	**41.19**	**143**	P	**P**	**23 53 42.4**	**+0.8**
	comp=Z,624nm,2.1s,comp=Z,12µm						
WSAR	**Wadi Sarin**	**41.20**	**267**	P	**P**	**23 53 42.9**	**+1.1**
	SNR=12						
ANA2	**Anatahan**	**41.24**	**105**	*e*P	**P**	**23 53 42.2**	**+0.2**
	comp=Z,346nm,1.1s						
SKJI	**Sukabumi**	**41.34**	**177**	P	**P**	**23 53 42.2**	**-0.6**
	comp=Z,395nm,1.8s,comp=Z,6µm						
BNSI	**Bone**	**41.48**	**156**	P	**P**	**23 53 43.8**	**-0.2**
	comp=Z,663nm,1.7s,comp=Z,10µm						
BIDO	**Bidbid**	**41.49**	**267**	P	**P**	**23 53 46.0**	**+1.9**
	SNR=10						
SANI	**Sanana**	**41.70**	**146**	P	**P**	**23 53 45.2**	**-0.6**
	comp=Z,256nm,1.4s,comp=Z,7µm						
PEA0B	**Petropavlovsk-**	**41.71**	**47**	*e*P	**P**	**23 53 46.3**	**+0.7**
	comp=Z,197nm,1.1s						
PEA0B				LR	LR		
	comp=Z,32µm,18.0s						
PEA1	**Petropavlovsk-**	**41.71**	**47**	*e*PcP	**PcP**	**23 55 42.0**	**0.0**
PETK	**Petropavlovsk-**	**41.71**	**47**	P	**P**	**23 53 46.4**	**+0.8**
	comp=Z,108nm,0.9s,baz=209,slow=3.4,SNR=180						
PETK				PcP	**PcP**	**23 55 42.0**	**0.0**
	comp=Z,31nm,1.0s,baz=258,slow=1.3,SNR=3.6						
PETK				S	**S**	**00 00 03.6**	**+0.7**
	comp=Z,2.6nm,1.0s,baz=258,slow=40,SNR=2.5						
PETK				LR	LR	00 12 25.6	
	comp=Z,23µm,18.1s,baz=262,slow=38						
SMRI	**Semarang**	**41.74**	**171**	*e*P	**P**	**23 53 47.7**	**+1.6**
	comp=Z,659nm,1.1s						
SMRI				LR	LR		
	comp=Z,13µm,18.0s						
SMRI	**Semarang**	**41.74**	**171**	P	**P**	**23 53 48.5**	**+2.4**
	comp=Z,1µm,2.0s,comp=Z,38µm						
GRJI	**Gresik**	**41.92**	**168**	P	**P**	**23 53 50.0**	**+2.5**
	comp=Z,624nm,0.7s,comp=Z,7µm						
KAPI	**Kappang**	**41.94**	**157**	*e*P	**P**	**23 53 48.0**	**+0.3**
	comp=Z,1µm,1.0s						
KAPI				LR	LR		
	comp=Z,7µm,22.0s						
KAPI	**Kappang**	**41.94**	**157**	*e*P	**P**	**23 53 48.0**	**+0.3**
KAPI				pmax	pmax		
	comp=Z,1µm,1.0s						
KAPI				MLR	MLR		
	comp=Z,7µm,22.0s						
KAPI	**Kappang**	**41.94**	**157**	P	**P**	**23 53 48.1**	**+0.3**
	SNR=164						
CISI	**Cisompet, Garu**	**41.97**	**175**	*e*P	**P**	**23 53 46.5**	**-1.5**
	comp=Z,161nm,0.8s						
CISI				LR	LR		
	comp=Z,13µm,18.0s						
CISI	**Cisompet, Garu**	**41.97**	**175**	P	**P**	**23 53 46.8**	**-1.2**
	comp=Z,236nm,1.0s,comp=Z,6µm						
KDI	**Kendari**	**41.98**	**152**	P	**P**	**23 53 48.1**	**0.0**
	comp=Z,151nm,1.8s,comp=Z,5µm						
SHME	**Shamm**	**42.08**	**272**	*i* P	**P**	**23 53 49.0**	**+0.1**
	SNR=7.6						
GUMO	**Guam**	**42.16**	**109**	*e*P	**P**	**23 53 49.9**	**+0.3**
	comp=Z,752nm,1.2s						
GUMO				LR	LR		
	comp=Z,8µm,21.0s						
NGJI	**Ngawi**	**42.20**	**169**	P	**P**	**23 53 53.0**	**+3.2**
	comp=Z,1µm,1.6s,comp=Z,22µm						
PET	**Petropavlovsk**	**42.28**	**47**	*e*P	**P**	**23 53 49.4**	**-0.8**
	comp=Z,304nm,1.5s						
PET				LR	LR		
	comp=Z,18µm,20.0s						
PET	**Petropavlovsk**	**42.28**	**47**α	*i*P	**P**	**23 53 50.1**	**-0.1**
PET				*i*		23 55 33.4	
PET				*i* S	**S**	**00 00 09.1**	**-2.0**
PET				*e*SS	**SS**	**00 03 17.4**	**-1.7**
PET				pmax	pmax		
	comp=Z,2µm,7.3s						
PET				pmax	pmax		
	comp=Z,1µm,17.3s						
PET				pmax	pmax		
	comp=Z,151nm,1.6s						
PET				pmax	pmax		
	comp=Z,1µm,15.2s						
PET				smax	smax		
	comp=N,2µm,19.2s						
PET				smax	smax		
	comp=E,5µm,24.7s						
PET				MLR	MLR		
	comp=Z,49µm,15.0s						
PET				MLR	MLR		
	comp=Z,52µm,14.0s						
KMMI	**Kalianget**	**42.34**	**166**	P	**P**	**23 53 53.4**	**+2.5**
	comp=Z,489nm,1.4s,comp=Z,5µm						
MSFE	**Esma-Masafi**	**42.34**	**271**	*i* P	**P**	**23 53 51.1**	**+0.1**
	SNR=7.8						
BKSI	**Bulukumba**	**42.35**	**156**	P	**P**	**23 53 50.9**	**-0.1**
	comp=Z,326nm,1.2s,comp=Z,7µmcomp=Z,5µm						
UOSS	**Minazif**	**42.47**	**270**	*e*P	**P**	**23 53 53.3**	**+1.2**
	comp=Z,46nm,1.1s						
UOSS				LR	LR		
	comp=Z,14µm,22.0s						
UOSS	**Minazif**	**42.47**	**270**	P	**P**	**23 53 51.9**	**-0.2**
YOGI	**Yogyakarta**	**42.48**	**171**	P	P	23 53 56.9	+4.8
HATD	**Hatta, Dubai**	**42.58**	**270**	*i* P	**P**	**23 53 53.3**	**+0.2**
	SNR=8.6						
HATD	**Hatta, Dubai**	**42.58**	**270**	P	**P**	**23 53 54.8**	**+1.8**
	SNR=6.8						
HATD				P	**P**	**23 53 54.8**	**+1.8**
	SNR=6.8						
HATD				P	**P**	**23 53 54.8**	**+1.8**
	SNR=6.8						
WOJI	**Wonogiri, Jawa**	**42.58**	**170**	P	**P**	**23 53 53.6**	**+0.7**
	comp=Z,565nm,1.7s,comp=Z,10µm						
BSY	**Bisya**	**42.60**	**267**	P	**P**	**23 53 56.2**	**+3.0**
	SNR=7.2						
UGM	**Wanagama**	**42.60**	**171**	PFAKE		23 54 10.0	+17
UGM				LR	LR		
	comp=Z,11µm,20.0s						
UGM	**Wanagama**	**42.60**	**171**	P	**P**	**23 53 54.5**	**+1.4**
	comp=Z,1µm,1.8s,comp=Z,30µm						

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UMQ   Umm Al-Quwin      42.68 271   iP        P         23 53 55.3 +1.5
      SNR=7.2
MHTO  MHTO              42.78 264    P        P         23 53 53.9  -0.7
      SNR=9.8
MHTO                                 P        P         23 53 53.9  -0.7
      SNR=9.8
MHTO                                 P        P         23 53 53.9  -0.7
      SNR=9.8
NAZ   Nazwa, Dubai      42.90 271   iP        P         23 53 56.3 +0.7
      SNR=11
NAZ   Nazwa, Dubai      42.90 271    P        P         23 53 56.6 +1.0
      SNR=15
NAZ                                  P        P         23 53 56.6 +1.0
      SNR=15
NAZ                                  P        P         23 53 56.6 +1.0
      SNR=15
FAQ   Al Faqa, Dubai    43.06 270   iP        P         23 53 57.6 +0.8
      SNR=11
FAQ   Al Faqa, Dubai    43.06 270    P        P         23 53 58.6 +1.8
      SNR=13
FAQ                                  P        P         23 53 58.6 +1.8
      SNR=13
ALNE  Al Ain            43.22 269   iP        P         23 53 59.0 +0.8
      SNR=17
NLAI  Namlea            43.26 146    P        P         23 53 59.7 +1.2
      comp=Z,239nm,1.9s,comp=Z,6µm
ASUD  Al Ashush, Dub    43.33 270   iP        P         23 53 60.0 +0.9
      SNR=32
ASUD  Al Ashush, Dub    43.33 270    P        P         23 54 00.5 +1.4
      SNR=16
ASUD                                 P        P         23 54 00.5 +1.4
      SNR=16
SIJI  Sorong            43.35 139    LR       LR        00 13 48.6
      comp=Z,4µm,19.1s,baz=276,slow=39
SRBI  Singaraja         43.61 164    P        P         23 54 02.7 +1.5
      comp=Z,574nm,1.8s,comp=Z,13µm
AJN   Ajban             43.64 271   iP        P         23 54 01.9 +0.4
      SNR=8.7
AJN   Ajban             43.64 271    P        P         23 54 02.5 +1.0
      SNR=8.3
AJN                                  P        P         23 54 02.5 +1.0
      SNR=8.3
JAGI  Jajag, Banyuwa    43.76 166   eP        P         23 54 02.1  -0.3
      comp=Z,2µm,1.4s
JAGI                                 LR       LR
      comp=Z,10µm,19.0s
JAGI  Jajag, Banyuwa    43.76 166    P        P         23 54 02.5 +0.1
      comp=Z,1µm,1.5s,comp=Z,18µm
LKRN  Lenkeran, Azer    44.16 292    P        P         23 54 05.9 +0.3
AAI   Ambon             44.17 144    P        P         23 54 07.0 +1.2
      comp=Z,249nm,1.9s,comp=Z,6µm
MSAI  Masohi            44.23 143    P        P         23 54 09.1 +2.8
      comp=Z,82nm,1.0s,comp=Z,2µm
MAK   Makhachkala       44.34 299d  iP        P         23 54 07.5 +0.6
MAK                                 e                   23 55 47.9
MAK                                 ePPP      PPP       23 56 23.1
MAK                                 eS        S         00 00 45.1 +3.6
MAK                                 eSS       ScS       00 04 06.9 +1.0
MAK                                 eSSS      SSS       00 04 38.6
MAK                                  pmax     pmax
      comp=Z,148nm,1.1s
MAK                                  MLR      MLR
      comp=Z,33µm,14.0s
AKT   Akhty             44.41 296⇑  iP        P         23 54 07.9 +0.2
AKT                                 e                   23 55 51.1
AKT                                 eS        S         00 00 47.9 +4.9
AKT                                 eSS       ScS       00 04 04.7  -2.1
AKT                                  pmax     pmax
      comp=Z,248nm,1.1s
KAAM  Kaadhehdhoo       44.71 228   eP        P         23 54 10.9 +0.8
      comp=Z,314nm,0.9s
XMIS  Christmas Isla    44.76 178   eP        P         23 54 10.6 +0.2
      comp=Z,260nm,1.0s
XMIS                                 LR       LR
      comp=Z,8µm,20.0s
SEKA  Sheki             44.86 296    P        P         23 54 11.6 +0.4
PLAI  Plampang          44.96 161    P        P         23 54 12.4 +0.3
      comp=Z,346nm,1.0s,comp=Z,8µm
MNGR  Mingechevir, A    45.02 296    P        P         23 54 13.4 +1.0
ZKTA  Zakatala          45.20 297    P        P         23 54 14.9 +1.0
PRGR  Permogore         45.52 325   eP        P         23 54 13.1  -2.9
PRGR                                 pmax     pmax
      comp=Z,178nm,0.6s
GROC  Groznyy           45.53 299   eP        P         23 54 16.5   0.0
GROC                                e                   23 56 01.9
GROC                                eS        S         00 00 59.9 +1.0
GROC                                 pmax     pmax
      comp=Z,689nm,1.2s
FAKI  Fak Fak           45.59 139   eP        P         23 54 16.6  -0.6
      comp=Z,213nm,1.4s
FAKI                                 LR       LR
      comp=Z,6µm,20.0s
GANJ  Ganja             45.62 296    P        P         23 54 17.9 +0.7
EDFI  Ende, Flores      46.08 156    P        P         23 54 19.2  -1.9
      comp=Z,357nm,1.8s,comp=Z,7µm
WBSI  Waikabubak, Su    46.19 159    P        P         23 54 19.9  -2.0
      comp=Z,3µm,0.8s,comp=Z,26µm
BAKI  Biak              46.39 133    P        P         23 54 24.5 +1.0
      comp=Z,1µm,1.7s,comp=Z,24µm
WSI   Waingapu          46.49 158    P        P         23 54 22.8  -1.4
      comp=Z,1µm,1.4s
NAX   Nakhchivan        46.56 294    P        P         23 54 24.3  -0.4
GNI   Garni             46.90 295   eP        P         23 54 28.3 +0.8
      comp=Z,307nm,1.3s
GNI                                  LR       LR
      comp=Z,10µm,22.0s
GNI   Garni             46.90 295   iP        P         23 54 28.7 +1.2
      SNR=44
GNI   Garni             46.90 295   eP        P         23 54 28.3 +0.8
GNI                                  pmax     pmax
      comp=Z,307nm,1.3s
GNI                                  MLR      MLR
      comp=Z,10µm,22.0s
GNI   Garni             46.90 295    P        P         23 54 29.1 +1.6
      SNR=61
GNI                                  P        P         23 54 29.1 +1.6
      SNR=61
ZEI   Tsey              46.98 299   eP        P         23 54 25.2  -2.9
ZEI                                  pmax     pmax
      comp=Z,167nm,4.8s
ZEI                                  pmax     pmax
      comp=Z,177nm,1.2s
ZEI                                  pmax     pmax
      comp=N,97nm,1.0s
ZEI                                  pmax     pmax
      comp=E,133nm,0.9s
SRPI  Serui, Papua      47.01 134    P        P         23 54 29.6 +1.3
      comp=E,533nm,1.7s,comp=E,17µm
NCK   Nalchik           47.06 300c  iP        P         23 54 28.5   0.0
NCK                                  pmax     pmax
      comp=Z,115nm,0.9s
GOF   Gofitskoye        47.19 302⇑  iP        P         23 54 29.9 +0.5
GOF                                 eS        S         00 01 26.9 +4.3
GOF                                  pmax     pmax
      comp=Z,699nm,1.2s
GOF                                  smax     smax
      comp=E,97nm,1.3s
GOF                                  smax     smax
      comp=N,200nm,1.6s
TASB  TASBURUN-IGDIR    47.31 295   eP        P         23 54 31.9 +1.3
KBZ   Khabaz            47.52 300    P        P         23 54 32.0   0.0
      comp=N,60nm,0.9s,baz=80,slow=9.3,SNR=45
KBZ                                  S        S         00 01 28.1 +0.8
      comp=N,17nm,1.4s,baz=252,slow=20,SNR=1.9
KBZ                                  LR       LR        00 17 10.5
      comp=N,25µm,18.5s,baz=71,slow=40
AKH   Akhalkalaki       47.55 297   eP        P         23 54 33.8 +1.2
      comp=N,240nm,1.1s
AKH                                  LR       LR
      comp=Z,16µm,21.0s
AKH   Akhalkalaki       47.55 297⇓  iP        P         23 54 34.1 +1.5
AKH   Akhalkalaki       47.55 297    P        P         23 54 34.0 +1.5
KIV   Kislovodsk        47.63 301   eP        P         23 54 33.5 +0.6
      comp=Z,339nm,1.3s
KIV                                  LR       LR
      comp=Z,17µm,18.0s
KIV   Kislovodsk        47.63 301⇓  iP        P         23 54 34.2 +1.2
KIV   Kislovodsk        47.63 301   iP        P         23 54 33.6 +0.6
      SNR=68
KIV   Kislovodsk        47.63 301   eP        P         23 54 33.1 +0.1
KIV                                 eS        S         00 01 29.3 +0.2
KIV                                  pmax     pmax
      comp=Z,2µm,4.6s
KIV                                  pmax     pmax
      comp=Z,697nm,1.1s
KIV                                  MLR      MLR
      comp=Z,39µm,16.0s
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KIV   Kislovodsk        47.63 301    P        P         23 54 34.0 +1.0
      SNR=78
NEY   Neytrino          47.73 300   iP        P         23 54 35.0 +1.0
NEY                                  pmax     pmax
      comp=Z,41nm,0.8s
CLDR  Caldiran          47.76 294   eP        P         23 54 35.7 +1.5
SOEI  Soe               47.93 153   eP        P         23 54 33.5  -2.1
      comp=Z,1µm,1.4s
SOEI                                 LR       LR
      comp=Z,8µm,20.0s
SOEI  Soe               47.93 153    P        P         23 54 34.0  -1.6
      comp=Z,837nm,1.7s,comp=Z,12µm
BILL  Bilibino          48.07  27   eP        P         23 54 34.8  -1.1
      comp=Z,198nm,1.2s
BILL                                 LR       LR
      comp=Z,44µm,18.0s
BILL  Bilibino          48.07  27d  iP        P         23 54 36.3 +0.4
BILL                                e                   23 56 03.4
BILL                                e                   23 56 22.8
BILL                                iS        S         00 01 37.4 +2.9
BILL                                 pmax     pmax
      comp=Z,380nm,1.8s
BILL                                 MLR      MLR
      comp=Z,22µm,18.0s
BATI  Baumata           48.12 154    LR       LR        00 16 22.9
      comp=Z,5µm,20.7s,baz=280,slow=38
BATI  Baumata           48.12 154    P        P         23 54 35.5  -1.5
      comp=Z,481nm,1.3s,comp=Z,6µm
VANB  Van               48.29 294   eP        P         23 54 39.3 +1.0
CUKT  Cukurca           48.48 292   eP        P         23 54 39.9 +0.1
SENK  Senkaya-Erzuru    48.59 296   eP        P         23 54 42.0 +1.4
ADCV  BITLIS_Adilcev    48.74 294   iP        P         23 54 45.0 +3.2
ADCV                                 IAML_P
      comp=Z,49nm,0.5s
MLAZ  Malazgirt-MUS     48.79 294   eP        P         23 54 43.6 +1.5
BATM  Batumi            48.83 298⇑  iP        P         23 54 43.2 +1.0
VORR  Voronezh          48.84 311   eP        P         23 54 41.0  -1.1
VORR                                 pmax     pmax
      comp=Z,350nm,1.6s
VORD  Divnogorie        48.87 310   eP        P         23 54 42.2  -0.1
VORD                                eS        S         00 01 43.1  -3.1
VORD                                 pmax     pmax
      comp=Z,130nm,0.9s
VORD                                 smax     smax
      comp=N,120nm,3.4s
BCA   Borcka            48.91 298   eP        P         23 54 43.7 +0.8
BCA   Borcka            48.91 298⇑  iP        P         23 54 43.9 +1.0
VSR   Storozhevoye      48.92 311   eP        P         23 54 42.4  -0.3
VSR                                 eS        S         00 01 43.1  -3.8
VSR                                  pmax     pmax
      comp=Z,390nm,1.4s
VSR                                  smax     smax
      comp=N,2µm,10.3s
VSR                                  MLR      MLR
      comp=Z,21µm,15.0s
LPSR  Galich'ya Gora    48.92 313   eP        P         23 54 42.3  -0.4
LPSR                                eS        S         00 01 45.9  -1.0
LPSR                                 pmax     pmax
      comp=Z,270nm,1.0s
LPSR                                 smax     smax
      comp=N,2µm,10.4s
LPSR                                 MLR      MLR
      comp=Z,24µm,14.0s
KOPR  Koprukoy-ERZUR    49.09 296   eP        P         23 54 46.1 +1.6
BLIS  Bitlis-Merkez     49.30 294   iP        P         23 54 48.9 +2.7
BLIS                                 IAML_P
      comp=Z,1µm,0.5s
SIRN  Sırnak            49.33 292   iP        P         23 54 48.2 +2.0
SIRN                                 IAML_P
      comp=Z,177nm,0.2s
AKDA  Akdag             49.43 296   iP        P         23 54 49.6 +2.6
MOS   Moscow            49.44 317α  iP        P         23 54 45.9  -0.7
MOS                                 e                   23 54 53.3
MOS                                 i                   23 56 38.7
MOS                                 iS        S         00 01 54.1   0.0
MOS                                 i                   00 04 34.6
MOS                                 iSS       SS        00 05 23.7  -1.7
MOS                                  pmax     pmax
      comp=Z,2µm,2.3s
MOS                                  pmax     pmax
      comp=Z,492nm,1.5s
MOS                                  smax     smax
      comp=N,5µm,5.9s
MOS                                  smax     smax
      comp=E,2µm,3.9s
MOS                                  MLR      MLR
      comp=E,21µm,19.0s
MOS                                  MLR      MLR
      comp=Z,25µm,19.0s
MOS                                  MLR      MLR
      comp=N,8µm,15.0s
SRTM  Siirt_Merkez      49.57 293   iP        P         23 54 49.5 +1.5
SRTM                                 IAML_P
      comp=Z,57nm,0.3s
VRTB  Varto-Mus         49.60 295   eP        P         23 54 50.8 +2.4
MUSM  Mu-Merkez         49.68 294   iP        P         23 54 50.5 +1.6
MUSM                                 IAML_P
      comp=Z,4.2nm,0.5s
SOC   Sochi             49.81 301c  iP        P         23 54 49.2  -0.5
SOC                                 ePPP      PPP       23 57 47.3
SOC                                 eS        S         00 01 59.8 +0.2
SOC                                 eSS       SS        00 05 26.3  -5.5
SOC                                 eSSS      SSS       00 06 46.1
SOC                                  pmax     pmax
      comp=Z,105nm,0.8s
SOC                                  MLR      MLR
      comp=Z,30µm,15.0s
BNGL  BINGOL            49.89 295   iP        P         23 54 53.4 +2.8
GENI  Genyem            49.99 130    P        P         23 54 52.5 +1.2
      comp=Z,2µm,1.6s,comp=Z,31µm
SVAN  Silvan-Diyarba    50.07 294   eP        P         23 54 52.6 +0.8
OBN   Obninsk           50.09 316   eP        P         23 54 51.4  -0.1
      comp=Z,180nm,1.1s
OBN                                  LR       LR
      comp=Z,24µm,19.0s
OBN   Obninsk           50.09 316c  iP        P         23 54 51.1  -0.4
OBN                                 e                   23 56 16.4
OBN                                 e                   23 56 43.4
OBN                                 iS        S         00 02 03.2 +0.1
OBN                                  pmax     pmax
      comp=Z,153nm,1.0s
OBN                                  MLR      MLR
      comp=Z,24µm,17.0s
BTMN  Batman            50.09 293   iP        P         23 54 53.7 +1.7
BTMN                                 IAML_P
      comp=Z,567nm,1.1s
KOPT  Kop Dagi          50.09 296   iP        P         23 54 55.7 +3.5
KOPT                                 IAML_P
      comp=Z,12nm,0.1s
YEDI  Yedisu-Bingol     50.21 295   eP        P         23 54 53.4 +0.4
BNGB  Bingl             50.23 295   eP        P         23 54 53.9 +0.8
BGOL  Bingol            50.24 295   iP        P         23 54 55.8 +2.7
BGOL                                 IAML_P
      comp=Z,352nm,0.6s
KTUT  Trabzon           50.38 298   eP        P         23 54 54.5 +0.4
KTUT  Trabzon           50.38 298⇑  iP        P         23 54 54.4 +0.4
BINT  Bingol            50.40 295    P        P         23 54 53.8  -0.6
HANI  Diyarbakir_Han    50.60 294   iP        P         23 54 57.3 +1.4
HANI                                 IAML_P
      comp=Z,93nm,0.4s
MARD  Mardin            50.63 293   iP        P         23 54 57.2 +1.0
EUZM  Uzumlu            50.77 296   iP        P         23 54 59.9 +2.8
EUZM                                 IAML_P
      comp=Z,193nm,0.1s
MAZI  Mazidag           50.84 293   eP        P         23 54 57.9 +0.2
LVZ   Lovozero          50.89 333   eP        P         23 54 57.2  -0.3
      comp=Z,77nm,0.8s
LVZ                                  LR       LR
      comp=Z,15µm,19.0s
LVZ   Lovozero          50.89 333c  eP        P         23 54 57.8 +0.3
LVZ                                  pmax     pmax
      comp=Z,296nm,2.5s
DYBB  Diyarbakir        50.93 294   eP        P         23 54 59.2 +0.9
DIYA  Diyarbakir        50.95 294   iP        P         23 55 00.3 +1.8
DIYA                                 IAML_P
      comp=Z,80nm,0.1s
TNCL  Tunceli-Merkez    51.05 295   iP        P         23 55 01.7 +2.4
TNCL                                 IAML_P
      comp=Z,194nm,0.9s
ANN   Anapa             51.15 303c  iP        P         23 54 59.0  -0.7
ANN                                 eS        S         00 02 18.4 +0.3
ANN                                  pmax     pmax
      comp=Z,355nm,0.9s
ANN                                  MLR      MLR
      comp=Z,27µm,18.0s
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H08N2 Diego Garcia H    51.34 224    P        P         23 54 57.5  -3.6
      baz=12,slow=5.2,SNR=6.2
APA   Apatity           51.34 332⇓  iP        P         23 54 57.6  -3.3
APA                                 iPPP      PPP       23 58 00.0
APA                                 iS        S         00 02 11.0  -9.3
APA                                 i                   00 04 52.0
APA                                 iSS       SS        00 05 52.0  -3.4
APA                                  MLR      MLR
      comp=Z,10µm,14.0s
H08N1 Diego Carcia H    51.34 224    P        P         23 54 57.6  -3.6
      baz=12,slow=5.2,SNR=8.8
H08N3 Diego Garcia H    51.36 224    P        P         23 54 57.7  -3.6
      baz=12,slow=5.2,SNR=6.2
DGAR  Diego Garcia      51.41 222   eP        P         23 55 02.3 +0.3
      comp=Z,405nm,1.3s
DGAR                                 LR       LR
      comp=Z,8µm,20.0s
DGAR  Diego Garcia      51.41 222   eP        P         23 55 02.3 +0.3
DGAR                                 pmax     pmax
      comp=Z,405nm,1.3s
DGAR                                 MLR      MLR
      comp=Z,8µm,20.0s
DGAR  Diego Garcia      51.41 222    P        P         23 55 02.8 +0.8
      SNR=5.8
DGAR                                 P        P         23 55 02.8 +0.8
      SNR=5.8
SMY   Shemya            51.63  47    PFAKE              23 55 20.0  +17
SMY                                  LR       LR
      comp=Z,15µm,22.0s
ELZG  Elazig            51.64 295   iP        P         23 55 06.9 +3.1
ELZG                                 IAML_P
      comp=Z,127nm,0.1s
KEMA  Kemaliye          51.79 296   iP        P         23 55 06.3 +1.5
KEMA                                 IAML_P
      comp=Z,828nm,1.1s
RAYN  Ar Rayn           51.91 274   eP        P         23 55 05.2  -0.6
      comp=Z,46nm,1.3s
RAYN  Ar Rayn           51.91 274   iP        P         23 55 05.1  -0.6
      SNR=8.7
RAYN  Ar Rayn           51.91 274   eP        P         23 55 05.2  -0.6
RAYN                                 pmax     pmax
      comp=Z,46nm,1.3s
URFA  Urfa              52.08 293   eP        P         23 55 07.3 +0.3
ATAB  Bozova            52.47 294   iP        P         23 55 11.2 +1.5
ATAB                                 IAML_P
      comp=Z,755nm,0.2s
DARE  Darende-Malaty    52.74 295   eP        P         23 55 12.8 +0.9
TOKT  Tokat             52.92 298   eP        P         23 55 13.3 +0.2
PUL   Pulkovo           52.99 322   eP        P         23 55 13.2   0.0
PUL                                  IAmb     IAmb      23 55 16.5
      comp=Z,201nm,0.8s
PUL   Pulkovo           52.99 322c  eP        P         23 55 13.7 +0.5
PUL                                  pmax     pmax
      comp=Z,375nm,1.3s
KVT   Kavak             53.07 299   eP        P         23 55 14.7 +0.5
GAZ   Gaziantep         53.38 294   eP        P         23 55 16.9 +0.3
SIM   Simferopol'       53.40 304c  eP        P         23 55 16.1  -0.4
SIM                                 eS        S         00 02 48.6  -0.5
SIM                                  pmax     pmax
      comp=Z,202nm,0.9s
SIM                                  MLR      MLR
      comp=Z,7µm,13.0s
DIKM  Dikmen            53.48 299⇑  iP        P         23 55 17.6 +0.5
KMRS  Kahramanmaras     53.51 294   eP        P         23 55 17.8 +0.3
SEVA  Sevastopol        53.81 303⇑  iP        P         23 55 19.8 +0.3
BNN   Bunyan            53.88 296   eP        P         23 55 20.5 +0.2
YOZ   Yozgat            54.02 297   eP        P         23 55 21.3   0.0
ARCES ARCESS Array B    54.23 335    P        P         23 55 22.3 +0.1
      comp=Z,145nm,1.0s,baz=80,slow=6.8,SNR=68
ARCES                                S        S         00 03 00.8 +1.1
      comp=Z,2.5nm,0.9s,baz=90,slow=10,SNR=2.1
ARCES                                LR       LR        00 21 48.8
      comp=Z,9µm,18.9s,baz=97,slow=40
ARE0  ARCESS Array S    54.23 335    PFAKE              23 55 30.0 +7.8
ARE0                                 LR       LR
      comp=Z,800nm,22.0s
ARE0  ARCESS Array S    54.23 335⇑  iP        P         23 55 22.6 +0.4
ARE0                                 IVmB_BB            23 55 24.9
      comp=Z,4µm,2.4s
ARE0                                eS        S         00 03 01.1 +1.4
ARE0                                 IVMs_BB  IVMs_BB   00 20 34.1
      comp=Z,22µm,12.6s
HOPEN Hopen             54.25 343⇑  eP        P         23 55 22.5 +0.3
HOPEN                                IVmB_BB            23 55 25.3
      comp=Z,5µm,3.1s
HOPEN                               eS        S         00 03 02.1 +2.4
HOPEN                                IVMs_BB  IVMs_BB   00 24 40.8
      comp=Z,13µm,13.0s
BZK   Bozkurt           54.29 300⇓  iP        P         23 55 23.5 +0.5
CORM  Corum             54.37 298   eP        P         23 55 24.2 +0.4
CEYT  Ceyhan            54.54 294   eP        P         23 55 25.9 +1.0
MMPI  Merauke           54.73 134    P        P         23 55 28.6 +2.1
      comp=Z,768nm,0.4s,comp=Z,39µm
ILGA  Ilgaz             54.76 299   eP        P         23 55 27.7 +0.9
      comp=Z,195nm,1.0s
HAMF  Hammerfest        54.78 336⇑  iP        P         23 55 26.5 +0.4
HAMF                                 IVmB_BB            23 55 28.0
      comp=Z,5µm,3.9s
HAMF                                eS        S         00 03 08.8 +1.8
HAMF                                eScS      ScS       00 05 14.7  -0.9
HAMF                                 IVMs_BB  IVMs_BB   00 21 08.9
      comp=Z,12µm,11.1s
FIA1  FINESS Array S    54.84 325   eP        P         23 55 26.9 +0.1
      comp=Z,349nm,1.4s
FINES FINESS Array B    54.84 325    P        P         23 55 26.7  -0.1
      comp=Z,78nm,0.9s,baz=83,slow=6.5,SNR=85
FINES                                LR       LR        00 20 52.9
      comp=Z,17µm,18.2s,baz=94,slow=38
CANT  Cankiri           54.97 299   eP        P         23 55 28.7 +0.6
KARA  Karaisali         54.98 294   eP        P         23 55 28.6 +0.4
VSU   Vasula            55.01 321   eP        P         23 55 27.6  -0.4
VSU                                  IAmb     IAmb      23 55 31.4
      comp=Z,500nm,0.8s
VSU   Vasula            55.01 321c  eP        P         23 55 28.1 +0.1
VSU                                  pmax     pmax
      comp=Z,755nm,1.3s
KTK1  Kautokeino        55.08 334   eP        P         23 55 29.1 +0.7
KTK1                                 IVmB_BB            23 55 31.1
      comp=Z,2µm,2.7s
KTK1                                eS        S         00 03 12.1 +1.0
MICGM Minsk             55.15 316⇓  iP        P         23 55 28.0  -1.1
MICGM                                PM                 23 50 31.0
      comp=E,0.3nm,1.5s
MICGM                                PM                 23 55 30.0
      comp=Z,0.4nm,1.5s
MICGM                                PM                 23 55 31.0
      comp=Z,10nm,4.0s
MICGM                               ePcP      PcP       23 56 30.0  -0.2
MICGM                               ePP       PP        23 57 30.0  -2.1
MICGM                               ePPP      PPP       23 59 10.0
MICGM                               ePcS      PcS       00 00 12.0   -18
MICGM                               eS        S         00 03 08.0  -4.3
MICGM                                SM                 00 03 16.0
      comp=E,2.9nm,5.0s
MICGM                               ePS       PnS       00 03 20.0  -1.0
MICGM                               eScS      ScS       00 05 12.0  -6.8
MICGM                               eSS       SS        00 07 00.0 +4.2
MICGM                               eSSS      SSS       00 09 18.0
MICGM                               eLQ       LQ        00 13 24.0
MICGM                               eLR       LR        00 15 22.0
MICGM                                LRM      MLR       00 20 56.0
      comp=N,15nm,10.0s
MICGM                                LRM      MLR       00 20 56.0
      comp=N,15nm,10.0s
MICGM                                LRM      MLR       00 21 08.0
      comp=Z,55nm,10.0s
MICGM                                LRM      MLR       00 21 08.0
      comp=Z,22nm,10.0s
MICGM                                LRM      MLR       00 21 10.0
      comp=E,40nm,10.0s
MICGM                                LRM      MLR       00 21 10.0
      comp=E,12nm,10.0s
MNK   Minsk             55.15 316⇓  iP        P         23 55 28.0  -1.1
MNK                                 e                   23 56 30.0
MNK                                 e                   23 57 30.0
MNK                                 eS        S         00 03 08.0  -4.3
MNK                                 e                   00 03 20.0
MNK                                 e                   00 05 12.0
MNK                                 e                   00 07 00.0
MNK                                  pmax     pmax
      comp=Z,380nm,1.5s
MNK                                  pmax     pmax
      comp=E,320nm,1.5s
MNK                                  smax     smax
      comp=E,3µm,5.0s
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MNK                               MLR      MLR
      comp=N,15µm,10.0s
MNK                               MLR      MLR
      comp=N,15µm,10.0s
MNK                               MLR      MLR
      comp=Z,55µm,10.0s
MNK                               MLR      MLR
      comp=Z,22µm,10.0s
MNK                               MLR      MLR
      comp=E,40µm,10.0s
MNK                               MLR      MLR
      comp=E,11µm,10.0s
AKASG Malin Array Be   55.20 312  P        P        23 55 29.0 -0.5
      comp=E,10nm,0.4s,baz=66,slow=7.0,SNR=85
AKASG                             S        S        00 03 13.1  0.0
      comp=E,0.2nm,0.3s,baz=56,slow=5.7,SNR=2.6
AKASG                             LR       LR       00 20 03.3
      comp=E,19µm,19.7s,baz=75,slow=37
BR101 Keskin Array S   55.23 298  eScS     ScS      00 05 19.4 -0.9
BR131 Keskin Array S   55.23 298  P        P        23 55 30.3 +0.2
      SNR=45
BRTR  Keskin Array B   55.23 298  P        P        23 55 29.9 -0.2
      comp=E,47nm,0.8s,baz=94,slow=5.5,SNR=99
BRTR                              S        S        00 03 14.5 +0.3
      comp=E,2.5nm,1.1s,baz=57,slow=10,SNR=2.4
BRTR                              ScS      ScS      00 05 19.4 -0.9
      comp=E,0.2nm,0.3s,baz=81,slow=10,SNR=3.2
BRTR                              LR       LR       00 24 09.4
      comp=E,8µm,18.8s,baz=58,slow=42
TOTH  TOTAH            55.29 289  eP       P        23 55 30.9 +0.4
QASN  Qassioun         55.35 290  eP       P        23 55 31.6 +0.6
ASF   Jabal al Asfar   55.36 288  P        P        23 55 32.4 +1.3
MERS  Mersin           55.51 294  eP       P        23 55 31.7 -0.4
BRBR  Barbar           55.64 290  eP       P        23 55 33.4 +0.1
BHL   Bhannes          55.69 290  eP       P        23 55 33.8 +0.3
RCY   Rachaya          55.70 290  eP       P        23 55 34.2 +0.6
ANTO  Ankara           55.80 298  eP       P        23 55 34.4 +0.2
      comp=E,236nm,1.3s
ANTO                              LR       LR
      comp=Z,6µm,19.0s
ANTO  Ankara           55.80 298⇑iP       P        23 55 34.3 +0.2
ANTO  Ankara           55.80 298  eP       P        23 55 34.4 +0.2
ANTO                              pmax     pmax
      comp=Z,236nm,1.3s
ANTO                              MLR      MLR
      comp=Z,6µm,19.0s
ANTO  Ankara           55.80 298  P        P        23 55 34.8 +0.6
      SNR=39
ANTO                              P        P        23 55 34.8 +0.6
      SNR=39
IZAR  Zarasai          55.80 318  eP       P        23 55 33.6 -0.1
IZAR                              IAmb     IAmb     23 55 37.4
      comp=Z,57nm,0.9s
LOD   Lodumlu          55.82 298  eP       P        23 55 34.4 +0.2
SULT  Sultanhani-AKS   55.82 296  eP       P        23 55 34.8 +0.5
SHBL  Chebaa           55.83 290  eP       P        23 55 35.1 +0.6
BJO1  Bjornoya         55.84 341⇑iP       P        23 55 33.6 +0.2
BJO1                              ePP      PP       23 57 34.6 -2.9
BJO1                              IVMs_BB  IVMs_BB  00 26 06.8
      comp=Z,10µm,14.3s
IIGN  Ignalina         55.90 318  eP       P        23 55 34.6 +0.1
IIGN                              IAmb     IAmb     23 55 38.2
      comp=Z,84nm,0.9s
ISAL  Salakas          55.91 318  eP       P        23 55 34.8 +0.2
ISAL                              IAmb     IAmb     23 55 38.2
      comp=Z,56nm,0.9s
KIZK  Mersin           55.93 294  eP       P        23 55 34.2 -0.8
KSDI  Kefar Szold      55.95 290  P        P        23 55 35.9 +0.7
SHMJ  Saham            56.04 289  P        P        23 55 38.5 +2.6
SPA0  Spitsbergen Ar   56.08 346  eP       P        23 55 35.9 +0.5
SPA0                              IVmB_BB           23 55 37.6
      comp=Z,5µm,4.2s
SPA0                              eS       S        00 03 26.0 +1.7
IKL   Isikli           56.36 294  eP       P        23 55 37.2 -0.9
HSPB  Hornsund (broa   56.40 344  eP       P        23 55 38.4 +0.7
HSPB                              eS       S        00 03 31.5 +3.0
HSPB                              LMZ      LR       00 23 07.5
      comp=Z,133µm,20.6s
HSPB  Hornsund (broa   56.40 344  eP       P        23 55 38.4 +0.7
HSPB                              eS       S        00 03 31.5 +3.0
HSPB                              MLR      MLR
      comp=Z,133µm,20.6s
HSPB  Hornsund (broa   56.40 344  eP       P        23 55 38.4 +0.7
HSPB                              IVmB_BB           23 55 40.0
      comp=Z,5µm,4.2s
HSPB                              eS       S        00 03 29.3 +0.9
HSPB                              eSS      SS       00 07 19.6 +4.9
HSPB                              IVMs_BB  IVMs_BB  00 23 52.8
      comp=Z,13µm,15.8s
KIS   Kishinev         56.41 307⇑iP       P        23 55 38.0 -0.3
      comp=Z,1µm,2.5s
KIS   Kishinev         56.41 307  i PcP    PcP      23 56 32.0 -3.3
KIS   Kishinev         56.41 307  ePP      PP       23 57 45.0 +1.4
KIS   Kishinev         56.41 307⇑iP       P        23 55 38.0 -0.3
KIS                               i                 23 56 32.0
KIS                               e                 23 57 45.0
KIS                               i S      S        00 03 30.0 +0.5
KIS                               e                 00 03 50.0
KIS                               pmax     pmax
      comp=Z,1µm,2.5s
KIS                               pmax     pmax
      comp=Z,3µm,4.0s
KIS                               smax     smax
      comp=N,3µm,6.0s
KIS                               MLR      MLR
      comp=Z,18µm,18.0s
MMLI  Mount Malkishu   56.42 289  P        P        23 55 39.6 +1.0
MILM  Milestii Mici    56.44 307⇓iP       P        23 55 38.1 -0.4
WALJ  Wala             56.45 288  P        P        23 55 39.8 +1.0
TRO   Tromso           56.51 335⇑iP       P        23 55 38.9 +0.3
TRO                               IVmB_BB           23 55 40.9
      comp=Z,4µm,2.9s
TRO                               ePP      PP       23 57 45.1 +1.2
TRO                               eS       S        00 03 31.9 +1.7
TRO                               IVMs_BB  IVMs_BB  00 21 49.4
      comp=Z,18µm,13.7s
LADK  Ladik-KONYA      56.67 296  eP       P        23 55 39.8 -0.6
BERE  Bereket-Mersin   56.67 294  eP       P        23 55 40.1 -0.4
KONT  Konya--Tatoy     56.76 296  eP       P        23 55 40.5 -0.5
MDUB  Mudurnu          56.76 299  eP       P        23 55 40.9 -0.1
MDUB  Mudurnu          56.76 299  PFAKE             23 55 50.0 +9.0
MDUB                              LR       LR
      comp=Z,41µm,20.0s
PATS  Pohnpei          56.76 106  eP       P        23 55 42.5 +1.3
      comp=Z,1µm,1.5s
PATS                              LR       LR
      comp=Z,5µm,20.0s
KIZT  Kizilcal         56.80 297  eP       P        23 55 40.6 -0.7
TEKE  Tekeli-Mersin    56.83 294  eP       P        23 55 40.7 -0.7
LISJ  El Lisan         56.84 287  P        P        23 55 43.1 +1.7
KBS   Kingsbay         56.85 347  eP       P        23 55 41.7 +0.8
      comp=Z,53nm,0.9s
KBS                               LR       LR
      comp=Z,17µm,18.0s
KBS   Kingsbay         56.85 347  eP       P        23 55 41.7 +0.8
KBS                               pmax     pmax
      comp=Z,53nm,0.9s
KBS                               MLR      MLR
      comp=Z,17µm,18.0s
KBS   Kingsbay         56.85 347  eP       P        23 55 41.3 +0.4
KBS                               IVmB_BB           23 55 43.4
      comp=Z,2µm,3.0s
KBS                               eS       S        00 03 36.6 +2.2
KBS                               IVMs_BB  IVMs_BB  00 23 33.8
      comp=Z,7µm,17.9s
SVRH  Sivrihisar-ESK   56.87 298  eP       P        23 55 41.3 -0.5
WAKE  Wake Island      56.87  88  eP       P        23 55 42.1 +0.2
      comp=Z,225nm,1.3s
WAKE                              LR       LR
      comp=Z,4µm,21.0s
TLCR                   56.95 305⇑iP       P        23 55 42.3 +0.2
TLCR                   56.95 305  P        P        23 55 42.3 +0.2
GAMB  Gambell          57.09  32  eP       P        23 55 43.1 +0.4
      comp=Z,261nm,1.5s
GAMB                              LR       LR
      comp=Z,29µm,18.0s
CSS   Mathiatis        57.09 292  eP       P        23 55 42.4 -0.9
      comp=Z,139nm,1.0s
CSS                               LR       LR
      comp=Z,8µm,21.0s
CSS   Mathiatis        57.09 292  P        P        23 55 43.7 +0.4
CSS   Mathiatis        57.09 292  P        P        23 55 42.6 -0.7
      comp=Z,40nm,1.0s
AMAZ  Amatzia          57.17 288  P        P        23 55 44.7 +0.8
IAS   Iasi             57.18 308⇑iP       P        23 55 43.4 -0.3
CIFT  Cifteler, Eski   57.23 298  eP       P        23 55 43.6 -0.7
GULT  Gulveren         57.27 299  eP       P        23 55 44.3 -0.3
MBWA  Marble Bar       57.28 163  PFAKE             23 56 00.0  +15
MBWA                              LR       LR
      comp=Z,3µm,22.0s
MBWA  Marble Bar       57.28 163  P        P        23 55 44.4 -0.1
      SNR=13
MBWA                              P        P        23 55 44.4 -0.1
      SNR=13
SRCK  Saricakaya, Es   57.32 299  eP       P        23 55 44.2 -0.6
ADK   Adak             57.34  46  eP       P        23 55 43.7 -1.0
      comp=Z,65nm,1.3s
ADK                               LR       LR
      comp=Z,15µm,21.0s
ADK   Adak             57.34  46  eP       P        23 55 43.7 -1.0
ADK                               pmax     pmax
      comp=Z,65nm,1.3s
ADK                               MLR      MLR
      comp=Z,15µm,21.0s
LEF   Lefka            57.37 293  eP       P        23 55 44.5 -0.8
CFR   Carcaliu         57.40 305⇑iP       P        23 55 45.2 -0.1
EFOR  EFORIE           57.41 304⇑iP       P        23 55 45.6 +0.2
BIR   Birlad           57.41 307⇓iP       P        23 55 46.3 +0.9
TIRR  Tirgusor         57.44 305  PFAKE             23 56 00.0  +14
TIRR                              LR       LR
      comp=Z,40µm,18.0s
TIRR  Tirgusor         57.44 305⇓iP       P        23 55 46.2 +0.6
TIRR  Tirgusor         57.44 305  P        P        23 55 45.5 -0.1
SLIT  Slitere, Latvi   57.49 321  eP       P        23 55 44.5 -1.2
SLIT                              IAmb     IAmb     23 55 48.4
      comp=Z,901nm,1.0s
SZAC  Souni            57.51 292  P        P        23 55 46.4 +0.1
MFTR  Murfatlar        57.52 304⇑iP       P        23 55 46.2  0.0
ALFC  Alefka           57.58 293  P        P        23 55 45.7 -1.1
TUDR                   57.59 306⇑iP       P        23 55 50.8 +4.2
GIRL  Giralia          57.62 169  eP       P        23 55 46.9  0.0
GSTR  Great Sitkin T   57.65  46  eP       P        23 55 47.2 +0.2
TLB   Topalu           57.65 305⇓iP       P        23 55 47.5 +0.4
HRFI  Mount Harif      57.66 286  P        P        23 55 47.8 +0.3
HARR  Harsova          57.69 305⇑iP       P        23 55 47.6 +0.2
HRT   Hereke           57.74 300  eP       P        23 55 47.2 -0.7
KZIT  Kziot            57.82 288  P        P        23 55 48.9 +0.4
ADVT  Abdulvahap       57.82 300  eP       P        23 55 47.6 -0.8
PETR  Petresti         57.84 306⇑iP       P        23 55 49.7 +1.3
PSN   Preselentsi      57.84 304  eP       P        23 55 49.3 +0.9
PPCY  Paphos           57.87 293  P        P        23 55 48.5 -0.3
EIL   Elat             57.88 286  P        P        23 55 49.1 +0.1
      comp=Z,123nm,0.9s
SHUT  Suhut-Afyon      57.88 297  eP       P        23 55 48.7 -0.3
SUW   Suwalki          57.94 317  eP       P        23 55 48.6 -0.4
SUW                               eS       S        00 03 51.8 +2.4
SUW                               eScS     ScS      00 05 38.0 -1.0
SUW                               LMZ      LR       00 21 25.4
      comp=Z,18µm,18.6s
SUW   Suwalki          57.94 317  PFAKE             23 56 00.0  +11
SUW                               LR       LR
      comp=Z,19µm,19.0s
SUW   Suwalki          57.94 317  eP       P        23 55 48.6 -0.4
SUW                               eS       S        00 03 51.8 +2.4
SUW                               e                 00 05 38.0
SUW                               MLR      MLR
      comp=Z,18µm,18.5s
ODBI  Odobesti         57.95 306⇓iP       P        23 55 50.3 +1.2
ICOR  Ion Corvin       57.97 304⇓iP       P        23 55 50.0 +0.7
PRAR  RASCA            58.00 308⇑iP       P        23 55 49.6 +0.1
YLV   Yalova           58.04 300  eP       P        23 55 48.5 -1.5
YLV   Yalova           58.04 300⇑iP       P        23 55 51.1 +1.1
KLYT  Kilyos           58.04 301⇓iP       P        23 55 49.9  0.0
ISK   Istanbul-Kandi   58.09 301  eP       P        23 55 50.3  0.0
ISK   Istanbul-Kandi   58.09 301  P        P        23 55 53.1 +2.8
KAVV  Kandilli-Istan   58.09 301  eP       P        23 55 50.2 -0.1
GRER                   58.12 306⇑iP       P        23 55 52.3 +1.9
AMRR  Amara            58.12 305⇑iP       P        23 55 51.2 +0.8
VRI   Vrincioaia       58.13 307⇑iP       P        23 55 51.2 +0.7
VRI   Vrincioaia       58.13 307  P        P        23 55 51.1 +0.6
ISP   Isparta          58.16 297  PFAKE             23 56 00.0 +9.0
ISP                               LR       LR
      comp=Z,5µm,22.0s
ISP   Isparta          58.16 297⇑iP       P        23 55 50.5 -0.5
STEI  Steigen          58.17 334⇑iP       P        23 55 49.9 -0.4
STEI                              IVmB_BB           23 55 52.4
      comp=Z,4µm,2.7s
STEI                              eS       S        00 03 50.2 -1.7
STEI                              eSS      SS       00 07 46.1 +3.3
STEI                              IVMs_BB  IVMs_BB  00 22 58.0
      comp=Z,16µm,13.1s
PLOR  Plostina         58.19 307⇑iP       P        23 55 51.9 +1.0
BIZ   Bicaz            58.21 308⇑iP       P        23 55 51.3 +0.3
PGOR  Pogoanele        58.26 305⇑iP       P        23 55 51.4  0.0
TVSB  Tavsanli         58.36 299  eP       P        23 55 52.1 -0.2
RASA  Rasa             58.38 305⇓iP       P        23 55 52.5 +0.3
ARMT  Armutlu          58.41 300  eP       P        23 55 51.9 -0.6
CTKS  Kestanelik-??a   58.43 301  eP       P        23 55 51.9 -0.7
ISR   Istrita          58.49 306⇓iP       P        23 55 54.6 +1.5
CTYL  Yalikoy Yolu     58.50 301  eP       P        23 55 53.1  0.0
CTYL  Yalikoy Yolu     58.50 301⇑iP       P        23 55 53.0  0.0
LEHL  Lehliu           58.52 305⇑iP       P        23 55 54.3 +1.2
BURAR Bucovina Array   58.57 309⇑iP       P        23 55 53.7 +0.1
KORT  Korkueli         58.59 296  eP       P        23 55 51.5 -2.5
LVV   L'vov            58.64 312  eP       P        23 55 54.0  0.0
LVV                               e                 23 56 44.2
LVV                               e                 23 58 03.8
LVV                               eS       S        00 03 55.3 -3.4
LVV                               ePS      PnS      00 04 18.2 +9.0
LVV                               eSS      SS       00 07 45.2 -5.8
LVV                               pmax     pmax
      comp=Z,500nm,1.4s
LVV                               MLR      MLR
      comp=E,10µm,16.0s
LVV                               MLR      MLR
      comp=N,6µm,18.0s
LVV                               MLR      MLR
      comp=Z,10µm,17.0s
OZUR                   58.68 307⇓iP       P        23 55 55.4 +1.0
LOF   Lofoten          58.74 334  eP       P        23 55 53.4 -0.9
LOF                               IVmB_BB           23 55 54.9
      comp=Z,3µm,5.0s
LOF                               ePP      PP       23 58 04.5 +0.7
LOF                               eS       S        00 04 01.0 +1.6
LOF                               IVMs_BB  IVMs_BB  00 23 16.8
      comp=Z,18µm,14.4s
MLR   Muntele Rosu     58.77 306  PFAKE             23 56 10.0  +15
MLR                               LR       LR
      comp=Z,12µm,22.0s
MLR   Muntele Rosu     58.77 306⇓iP       P        23 55 56.2 +1.1
SECR                   58.84 306⇑iP       P        23 55 56.6 +1.2
MOR8  Moi Rana         58.91 332  eP       P        23 55 54.1 -1.5
MOR8                              IVmB_BB           23 55 56.5
      comp=Z,4µm,2.9s
MOR8                              eS       S        00 04 01.0 -0.8
MOR8                              IVMs_BB  IVMs_BB  00 22 58.9
      comp=Z,16µm,13.8s
DOPR  Dopca            58.98 307⇑iP       P        23 55 57.5 +1.1
PHSR  Pinarhisar       58.99 302⇑iP       P        23 55 56.5  0.0
RAZG  Razgrad          59.03 304⇓iP       P        23 55 57.1 +0.3
SGRR  Singureni        59.17 305⇑iP       P        23 55 58.3 +0.6
EDC   Edincik          59.20 300  eP       P        23 55 57.5 -0.5
RABL  Rabaul           59.25 121  eP       P        23 55 59.1 +0.5
      comp=Z,1µm,1.4s
KULA  Kula-Manisa      59.28 298  eP       P        23 55 57.9 -0.8
KULA  Kula-Manisa      59.28 298  P        P        23 55 57.8 -0.9
ARCR  ARCALIA          59.30 309⇑iP       P        23 55 59.8 +1.2
KONS  Konsvik          59.34 332  eP       P        23 55 58.1 -0.4
MANT  Manisa           59.37 298  PFAKE             23 56 10.0  +11
MANT                              LR       LR
      comp=Z,27µm,20.0s
VOIR                   59.38 307⇑iP       P        23 55 59.5 +0.2
STOK  Stokkvaagen      59.42 332  eP       P        23 55 59.4 +0.4
BALB  Balikesir        59.44 299  eP       P        23 55 59.5 -0.1
BALB  Balikesir        59.44 299  PFAKE             23 56 10.0  +10
BALB                              LR       LR
      comp=Z,31µm,21.0s
MTUR  Matau            59.45 306⇑iP       P        23 55 59.4 -0.3
SPIA  Saint Paul Isl   59.45  39  eP       P        23 55 59.9 +0.5
      comp=Z,354nm,1.2s
SPIA                              LR       LR
      comp=Z,19µm,18.0s
EDRB  Edirne           59.46 302  eP       P        23 55 59.5 -0.2
EDRB  Edirne           59.46 302  P        P        23 55 59.5 -0.2
KWP   Kalwaria Pacla   59.52 312  eP       P        23 56 00.6 +0.6
KWP                               eS       S        00 04 14.0 +3.9
KWP                               LMZ      LR       00 22 30.7
      comp=Z,16µm,21.3s
KWP   Kalwaria Pacla   59.52 312  eP       P        23 56 00.4 +0.4
      comp=Z,4µm,1.1s
KWP                               LR       LR
      comp=Z,141µm,21.0s
KWP   Kalwaria Pacla   59.52 312  eP       P        23 56 00.6 +0.6
KWP                               eS       S        00 04 14.0 +3.9
KWP                               MLR      MLR
      comp=Z,16µm,21.3s
RDOG  Red Dog Mine     59.52  26  PFAKE             23 56 10.0  +10
RDOG                              LR       LR
      comp=Z,27µm,18.0s
ANM   Nome             59.58  30  eP       P        23 56 01.4 +1.2
      comp=Z,72nm,1.1s
ANM                               LR       LR
      comp=Z,37µm,18.0s
ANM   Nome             59.58  30  eP       P        23 56 01.4 +1.2
ANM                               pmax     pmax
      comp=Z,72nm,1.1s
ANM                               MLR      MLR
      comp=Z,37µm,18.0s
MDB   Medias           59.59 307⇓iP       P        23 56 02.1 +1.5
PMG   Port Moresby     59.64 129  LR       LR       00 24 26.9
      comp=Z,2µm,18.1s,baz=326,slow=39
PMG   Port Moresby     59.64 129  eP       P        23 56 01.8 +0.5
      comp=Z,551nm,1.4s
PMG   Port Moresby     59.64 129ceP       P        23 56 02.1 +0.9
PMG                               pmax     pmax
      comp=Z,4µm,2.5s
GOLR                   59.64 306⇓iP       P        23 56 01.0  0.0
BMR   Baia Mare        59.66 309⇑iP       P        23 56 01.9 +0.9
ELND  Elena            59.68 304⇑iP       P        23 56 01.5 +0.2
ARR   Arges            59.68 307⇓iP       P        23 56 02.0 +0.7
COPA  Copaceanca       59.71 305⇑iP       P        23 56 01.4  0.0
HUMR  Humele           59.74 306⇑iP       P        23 56 01.5 -0.1
ZIMR                   59.78 304⇑iP       P        23 56 02.6 +0.7
CJR   Cluj-Napoca      59.91 308⇑iP       P        23 56 03.7 +0.9
BEL   Belsk            59.97 315  eP       P        23 56 03.2 +0.1
BEL                               ePcP     PcP      23 56 50.1 +0.9
BEL                               eS       S        00 04 19.2 +3.4
BEL                               LMZ      LR       00 21 53.3
      comp=Z,18µm,16.3s
BEL   Belsk            59.97 315  eP       P        23 56 03.2 +0.1
BEL                               e                 23 56 50.1
BEL                               eS       S        00 04 19.2 +3.4
BEL                               MLR      MLR
      comp=Z,18µm,16.3s
KOLS  Kolonicke sedl   60.01 311  eP       P        23 56 03.5  0.0
KOLS                              pmax     pmax
      comp=Z,73nm,1.2s
KOLS  Kolonicke sedl   60.01 311  eP       P        23 56 03.5  0.0
ATD   Arta Tunnel      60.05 263  eP       P        23 56 05.4 +1.2
      comp=Z,153nm,1.1s
ATD                               LR       LR
      comp=Z,4µm,22.0s
ATD   Arta Tunnel      60.05 263  P        P        23 56 05.2 +1.0
      SNR=13
AYDB  Zeytinkoy-Aydi   60.06 298  eP       P        23 56 03.7 -0.4
YER   Yerkesik         60.07 297  eP       P        23 56 02.8 -1.3
YER   Yerkesik         60.07 297  eP       P        23 56 02.9 -1.2
YER   Yerkesik         60.07 297  P        P        23 56 02.9 -1.2
YER   Yerkesik         60.07 297  eP       P        23 56 02.9 -1.2
UZH   Uzhgorod         60.10 311  eP       P        23 56 04.1 +0.1
UZH                               e                 23 56 14.9
UZH                               e                 23 56 51.9
UZH                               eS       S        00 04 13.1 -4.4
UZH                               e                 00 04 39.1
UZH                               e                 00 05 52.7
TRPA  Tarpa            60.11 310⇑iP       P        23 56 04.8 +0.7
TRPA  Tarpa            60.11 310⇑eP       P        23 56 04.1 -0.1
GELI  Tayfur-Gelibol   60.17 301  eP       P        23 56 04.6  0.0
MSEY  Mahe Island      60.22 240  eP       P        23 56 05.5 +0.2
      comp=Z,90nm,1.1s
MSEY                              LR       LR
      comp=Z,6µm,19.0s
MSEY  Mahe Island      60.22 240  i P      P        23 56 05.1 -0.2
      SNR=8.2
MSEY  Mahe Island      60.22 240  eP       P        23 56 05.5 +0.2
MSEY                              pmax     pmax
      comp=Z,90nm,1.1s
MSEY                              MLR      MLR
      comp=Z,6µm,19.0s
MSEY  Mahe Island      60.22 240  P        P        23 56 05.5 +0.2
      SNR=8.4
MSEY                              P        P        23 56 05.5 +0.2
      SNR=8.4
LOT   Lotru            60.23 307⇑iP       P        23 56 05.6 +0.5
ALN   Alexandroupoli   60.29 301  PFAKE             23 56 20.0  +15
ALN                               LR       LR
      comp=Z,5µm,20.0s
ALN   Alexandroupoli   60.29 301  P        P        23 56 04.9 -0.6
VLAD  Vladila          60.31 305⇓iP       P        23 56 05.5 -0.1
DKL   Dikili           60.35 299  eP       P        23 56 04.4 -1.5
PLVB  Pleven           60.38 304⇑iP       P        23 56 06.6 +0.6
NSS   Namsos           60.39 330⇑iP       P        23 56 04.8 -0.9
NSS                               IVmB_BB           23 56 07.4
      comp=Z,4µm,2.8s
NSS                               ePP      PP       23 58 18.7 +0.3
NSS                               eS       S        00 04 22.0 +1.3
NSS                               IVMs_BB  IVMs_BB  00 24 06.5
      comp=Z,16µm,15.7s
DRGR                   60.46 309⇑iP       P        23 56 07.4 +0.8
DRGR                   60.46 309  P        P        23 56 07.3 +0.7
KDZ   Kurdzhali        60.46 302  eP       P        23 56 07.5 +0.9
EZN   Ezine            60.48 300  eP       P        23 56 06.5 -0.3
EZN   Ezine            60.48 300  eP       P        23 56 06.7 -0.1
EZN   Ezine            60.48 300  P        P        23 56 06.7 -0.1
EZN   Ezine            60.48 300⇑iP       P        23 56 06.8 -0.1
EZN   Ezine            60.48 300  eP       P        23 56 06.7 -0.1
RDO   Rodhopi          60.56 302  eP       P        23 56 06.8 -0.5
RDO   Rodhopi          60.56 302  P        P        23 56 06.8 -0.5
DEV   Deva             60.65 308⇑iP       P        23 56 08.9 +1.1
PRK   Paraskevi        60.74 299  P        P        23 56 08.9 +0.3
COEN  Coen             60.74 136  eP       P        23 56 09.2 +0.4
      comp=Z,631nm,1.1s
DAT   Datca            60.75 296  eP       P        23 56 07.9 -0.9
LTVH  Ltavrtes, Hu     60.77 309⇑eP       P        23 56 09.1 +0.4
BODT  Bodrum           60.82 297  eP       P        23 56 08.5 -0.8
BODT  Bodrum           60.82 297  eP       P        23 56 08.4 -0.8
BODT  Bodrum           60.82 297  P        P        23 56 08.4 -0.8
SRE   Strehaia         60.88 306⇑iP       P        23 56 09.8 +0.3
GZR   Gura Zlata       60.90 307⇓iP       P        23 56 10.2 +0.5
SMG   Samos            60.92 298  P        P        23 56 09.4 -0.4
RZN   Rozhen           60.93 303  eP       P        23 56 11.4 +1.3
PGB   Panagyurishte    60.99 304  eP       P        23 56 11.6 +1.3
BAIL  Bailesti         61.02 305⇓iP       P        23 56 10.9 +0.5
NIE   Niedzica         61.07 312  eP       P        23 56 11.6 +0.9
NIE                               eS       S        00 04 34.5 +4.4
NIE                               LMZ      LR       00 23 42.7
      comp=Z,12µm,21.8s
NIE   Niedzica         61.07 312  eP       P        23 56 11.6 +0.9
NIE                               eS       S        00 04 34.5 +4.4
NIE                               MLR      MLR
      comp=Z,12µm,21.8s
OJC   Ojcow            61.10 313  eP       P        23 56 11.0 +0.2
OJC                               ePcP     PcP      23 56 54.5 +0.7
OJC                               eS       S        00 04 33.7 +3.4
OJC                               LMZ      LR       00 23 53.2
      comp=Z,22µm,19.8s
OJC   Ojcow            61.10 313  eP       P        23 56 11.1 +0.2
      comp=Z,193nm,1.0s
OJC   Ojcow            61.10 313  eP       P        23 56 11.0 +0.2
OJC                               e                 23 56 54.6
OJC                               eS       S        00 04 33.7 +3.4
OJC                               MLR      MLR
      comp=Z,22µm,19.8s
CHOS  Chios island     61.23 299  P        P        23 56 11.7 -0.3
WC1   Warramunga Arr   61.23 147  PFAKE             23 56 20.0 +8.0
WC1                               LR       LR
      comp=Z,3µm,20.0s
WRAB  Tennant Creek    61.24 147  eP       P        23 56 11.8 -0.3
      comp=Z,667nm,1.2s
WRAB                              LR       LR
      comp=Z,4µm,21.0s
WRAB  Tennant Creek    61.24 147  eP       P        23 56 11.8 -0.3
WRAB                              pmax     pmax
      comp=Z,667nm,1.2s
WRAB                              MLR      MLR
      comp=Z,4µm,21.0s
WRA   Warramunga Arr   61.24 147  P        P        23 56 11.7 -0.3
      comp=Z,252nm,0.8s,baz=321,slow=7.7,SNR=389
WRA                               S        S        00 04 29.6 -3.1
      comp=Z,8.2nm,1.1s,baz=342,slow=13,SNR=3.2
WB2   Warramunga Arr   61.25 147  PFAKE             23 56 20.0 +7.9
WB2                               LR       LR
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	comp=Z,4µm,21.0s						
SIRR	**Siria**	61.32	308	⇓*i*P	P	23 56 13.4	+1.0
HERR	**Herculane**	61.33	307	⇓*i*P	P	23 56 13.0	+0.5
KAVA	**Kavala**	61.33	302	*e*P	P	23 56 12.5	0.0
KAVA	**Kavala**	61.33	302	P	P	23 56 12.5	0.0
TBLU	**Trondheim**	61.52	329	⇑*i*P	P	23 56 12.1	-1.4
TBLU				IVmB_BB		23 56 14.6	
	comp=Z,3µm,2.8s						
TBLU				*e*PP	PP	23 58 28.1	-0.3
TBLU				*e*S	S	00 04 35.9	+0.6
TBLU				IVMs_BB	IVMs_BB	00 24 55.6	
	comp=Z,14µm,13.4s						
KARP	**Karpathos**	61.53	295	*e*P	P	23 56 13.3	-0.8
	comp=Z,230nm,1.0s						
KARP				LR	LR		
	comp=Z,4µm,20.0s						
GKP	**Gorka Klasztor**	61.54	317	*e*P	P	23 56 13.9	+0.3
GKP				*e*S	S	00 04 37.5	+1.8
GKP	**Gorka Klasztor**	61.54	317	*e*P	P	23 56 14.0	+0.3
GKP				*e*S	S	00 04 37.5	+1.8
NIKH	**Nikolski High**	61.56	43	*e*P	P	23 56 14.8	+0.9
	comp=Z,115nm,1.4s						
NIKH				LR	LR		
	comp=Z,11µm,20.0s						
BZS	**Buzias**	61.58	308	⇑*i*P	P	23 56 14.5	+0.3
VTS	**Vitosha**	61.61	304	*e*P	P	23 56 15.1	+0.5
VTS				*e*P	P	23 56 15.1	+0.5
VTS				LR	LR		
	comp=Z,12µm,20.0s						
VTS	**Vitosha**	61.61	304	P	P	23 56 15.1	+0.5
VTS	**Vitosha**	61.61	304	⇑*i*P	P	23 56 15.5	+0.9
VTS	**Vitosha**	61.61	304	*e*P	P	23 56 15.1	+0.5
VTS				MLR	MLR		
	comp=Z,12µm,20.0s						
VTS	**Vitosha**	61.61	304	*e*P	P	23 56 15.5	+0.9
NVR	**Nevrokopi**	61.65	302	P	P	23 56 14.5	-0.3
MMB	**Musomiste**	61.65	303	*e*P	P	23 56 14.9	+0.1
LANS	**Liptovska Anna**	61.67	312	*e*P	P	23 56 15.9	+1.1
LANS	**Liptovska Anna**	61.67	312	*e*P	P	23 56 15.9	+1.1
MDVR	**Moldovita**	61.83	307	⇑*i*P	P	23 56 16.5	+0.6
NC602	**NORSAR Array S**	61.84	326	⇑*i*P	P	23 56 14.9	-0.8
NC602				IVmB_BB		23 56 17.4	
	comp=Z,3µm,2.9s						
NC602				*e*S	S	00 04 39.1	-0.3
NC602				*e*ScS	ScS	00 06 07.4	-0.5
NC602				*e*SS	SS	00 08 43.8	+3.2
NC602				IVMs_BB	IVMs_BB	00 25 28.5	
	comp=Z,8µm,14.4s						
PSZ	**Piszkesteto**	61.85	311	PFAKE		23 56 30.0	+14
PSZ				LR	LR		
	comp=Z,27µm,18.0s						
PSZ	**Piszkesteto**	61.85	311	⇑*i*P	P	23 56 16.8	+0.7
PSZ	**Piszkesteto**	61.85	311	⇑*e*P	P	23 56 16.1	0.0
NB2	**NORSAR Subarra**	61.88	327	P	P	23 56 15.4	-0.6
	comp=Z,2µm,3.3s,baz=70,slow=6.9						
NB2	**NORSAR Subarra**	61.88	327	P	P	23 56 15.4	-0.6
	baz=70,slow=6.9						
NOA	**NORSAR Array B**	61.88	327	P	P	23 56 15.2	-0.8
	comp=Z,85nm,0.7s,baz=70,slow=6.8,SNR=130						
NOA				S	S	00 04 37.9	-2.2
	comp=Z,1.0nm,0.9s,baz=64,slow=13,SNR=2.4						
NOA				LR	LR	00 22 08.6	
	comp=Z,6µm,19.1s,baz=80,slow=35						
NOA				PKP2bc		00 25 29.9	
	comp=Z,6.1nm,1.2s,baz=251,slow=1.7,SNR=4.6						
AMBH	**Ambrzfalva**	61.89	309	*e*P	P	23 56 17.0	+0.8
SRS	**Serrai**	61.93	302	P	P	23 56 15.7	-0.9
BANR	**Banloc**	61.98	308	⇑*i*P	P	23 56 17.6	+0.7
KKB	**Krupnik**	61.99	303	*e*P	P	23 56 17.8	+0.7
RAC	**Raciborz**	62.11	313	*e*P	P	23 56 18.4	+0.8
RAC				*e*		23 58 33.7	
RAC				*e*S	S	00 04 44.5	+1.4
RAC				MLR	MLR		
	comp=Z,17µm,19.7s						
APE	**Apeiranthos**	62.12	297	⇑*i*P	P	23 56 17.1	-1.0
BSD	**Bornholm Skovb**	62.16	319	*i* P	P	23 56 17.1	-0.8
BSD	**Bornholm Skovb**	62.16	319	*i* P	P	23 56 17.1	-0.8
	comp=Z,417nm,0.9s						
SOH	**Sokhos**	62.21	302	P	P	23 56 18.0	-0.6
OKC	**Ostrava-Krasne**	62.23	313	*e*P	P	23 56 18.9	+0.5
OKC				*e*S	S	00 04 46.6	+2.0
OKC				MLR	MLR		
	comp=Z,14µm,13.4s						
OKC	**Ostrava-Krasne**	62.23	313	⇑*e*P	P	23 56 18.9	+0.5
OKC				*e*S	S	00 04 46.6	+2.0
OKC				AMS	AMS	00 23 20.0	
	comp=Z,14µm,13.4s						
VYHS	**Vyhne**	62.30	312	*e*P	P	23 56 19.7	+0.7
VYHS				pmax	pmax		
	comp=Z,221nm,1.6s						
VYHS	**Vyhne**	62.30	312	*e*P	P	23 56 19.7	+0.7
PLG	**Polygyros**	62.32	302	P	P	23 56 18.7	-0.6
KNT	**Kendrikon**	62.40	303	P	P	23 56 19.2	-0.6
HORT	**Hortiatis**	62.47	302	P	P	23 56 19.2	-1.2
DOMB	**Dombas**	62.48	328	*e*P	P	23 56 19.2	-0.8
DOMB				IVmB_BB		23 56 21.9	
	comp=Z,3µm,2.8s						
DOMB				*e*S	S	00 04 47.4	-0.2
DOMB				IVMs_BB	IVMs_BB	00 24 59.9	
	comp=Z,12µm,18.5s						
OSL	**Oslo**	62.51	325	*e*P	P	23 56 20.1	0.0
BUD	**Budapest**	62.56	310	⇑*e*P	P	23 56 21.0	+0.4
VAY	**Valandovo**	62.56	303	*i* P	P	23 56 20.4	-0.4
UNV	**Unalaska Valle**	62.56	42	*e*P	P	23 56 20.1	-0.4
	comp=Z,62nm,0.9s						
UNV				LR	LR		
	comp=Z,11µm,22.0s						
MORC	**Moravsky Berou**	62.61	313	*e*P	P	23 56 21.0	-0.1
	comp=Z,103nm,0.9s						
MORC				LR	LR		
	comp=Z,14µm,18.0s						
MORC	**Moravsky Berou**	62.61	313	⇑*i*P	P	23 56 21.7	+0.6
MORC	**Moravsky Berou**	62.61	313	*e*P	P	23 56 21.0	-0.1
MORC				pmax	pmax		
	comp=Z,103nm,0.9s						
MORC				MLR	MLR		
	comp=Z,14µm,18.0s						
MORC	**Moravsky Berou**	62.61	313	⇑*i*P	P	23 56 21.5	+0.4
MORC				*e*S	S	00 04 52.8	+3.2
EREA	**Eretria**	62.74	299	P	P	23 56 21.8	-0.4
AKUT	**Akutan**	62.86	41	*e*P	P	23 56 22.5	-0.1
	comp=Z,239nm,1.2s						
AKUT				LR	LR		
	comp=Z,9µm,19.0s						
MRKA	**Markates**	62.88	300	P	P	23 56 22.3	-0.7
SRO	**Srobarova**	62.88	311	*e*P	P	23 56 23.7	+0.9
SRO	**Srobarova**	62.88	311	*e*P	P	23 56 23.7	+0.9
JAVC	**Velka Javorina**	62.88	312	⇑*i*P	P	23 56 24.5	+1.6
JAVC				*e*S	S	00 04 56.8	+3.8
MOL	**Molde**	62.93	329	*e*P	P	23 56 22.9	0.0
MOL				IVmB_BB		23 56 24.6	
	comp=Z,4µm,3.7s						
MOL				*e*S	S	00 04 54.6	+1.6
MOL				IVMs_BB	IVMs_BB	00 25 46.4	
	comp=Z,16µm,14.3s						
FRGS	**Fruska Gora**	62.94	308	*i* P	P	23 56 23.0	-0.3
LAST	**Lasithi**	62.94	296	P	P	23 56 23.4	-0.2
PTL	**Penteli**	62.94	299	*e*P	P	23 56 22.5	-1.0
PTL	**Penteli**	62.94	299	P	P	23 56 22.5	-1.0
KSP	**Ksiaz**	62.96	315	*e*P	P	23 56 23.9	+0.6
KSP				*e*S	S	00 04 56.0	+2.2
KSP				LMZ	LR	00 24 00.5	
	comp=Z,16µm,16.7s						
KSP	**Ksiaz**	62.96	315	*e*P	P	23 56 23.9	+0.6
KSP				*e*S	S	00 04 56.0	+2.2
KSP				MLR	MLR		
	comp=Z,16µm,16.7s						
ATHU	**Athens Univers**	63.03	299	*e*P	P	23 56 22.8	-1.3
ATHU	**Athens Univers**	63.03	299	P	P	23 56 22.8	-1.3
VLY	**Voula,Athens**	63.07	299	*e*P	P	23 56 22.9	-1.4
VLY	**Voula,Athens**	63.07	299	P	P	23 56 22.9	-1.4
SMIA	**Simia**	63.08	300	P	P	23 56 23.4	-1.0
ATH	**Athens Observa**	63.08	299	P	P	23 56 23.0	-1.3
CSKK	**Cskako**	63.08	310	⇑*e*P	P	23 56 24.0	-0.2
SKO	**Skopje**	63.09	304	*i* P	P	23 56 24.5	+0.2
LIT	**Litokhoron**	63.10	302	PFAKE		23 56 40.0	+16
LIT				LR	LR		
	comp=Z,6µm,20.0s						
LIT	**Litokhoron**	63.10	302	P	P	23 56 23.2	-1.3
OSTC	**Ostas**	63.11	314	⇑*i*P	P	23 56 24.9	+0.5
OSTC				*e*S	S	00 04 59.1	+3.3
OSTC				AMS	AMS	00 24 00.0	
	comp=Z,15µm,13.7s						
DPC	**Dobruska-Polom**	63.13	314	⇑*i*P	P	23 56 25.3	+0.8
DPC				*e*S	S	00 04 57.8	+1.8
DPC				MLR	MLR		
	comp=Z,17µm,15.6s						
DPC	**Dobruska-Polom**	63.13	314	⇑*i*P	P	23 56 25.3	+0.8
DPC				*e*x	x	23 56 45.3	
DPC				*e*S	S	00 04 57.8	+1.8
DPC				AMS	AMS	00 24 10.0	
	comp=Z,17µm,15.6s						
KWAJ	**Kwajalein Atol**	63.14	98	*e*P	P	23 56 24.3	-0.7
	comp=Z,672nm,1.3s						
KWAJ				LR	LR		
	comp=Z,4µm,18.0s						
KWAJ	**Kwajalein Atol**	63.14	98	*e*P	P	23 56 24.3	-0.7
KWAJ				pmax	pmax		
	comp=Z,671nm,1.3s						
KWAJ				MLR	MLR		
	comp=Z,4µm,18.0s						
KONO	**Kongsberg**	63.15	325	*e*P	P	23 56 24.1	-0.3
	comp=Z,141nm,1.4s						
KONO				LR	LR		
	comp=Z,12µm,19.0s						
KONO	**Kongsberg**	63.15	325	*e*P	P	23 56 24.1	-0.3
KONO				pmax	pmax		
	comp=Z,141nm,1.4s						
KONO				MLR	MLR		
	comp=Z,12µm,19.0s						
KONO	**Kongsberg**	63.15	325	⇑*i*P	P	23 56 24.1	-0.3
KONO				IVmB_BB		23 56 26.6	
	comp=Z,3µm,3.5s						
KONO				*e*S	S	00 04 56.4	+0.5
KONO				*e*SS	SS	00 09 02.9	+1.8
KONO				IVMs_BB	IVMs_BB	00 27 42.1	
	comp=Z,7µm,10.4s						
CHVC	**Chvalec**	63.20	314	*e*P	P	23 56 26.0	+1.1
CHVC				*e*S	S	00 05 00.2	+3.4
DIVS	**Divibare**	63.23	307	*i* P	P	23 56 25.1	-0.2
RGN	**Rugen**	63.23	319	PFAKE		23 56 40.0	+15
RGN				LR	LR		
	comp=Z,30µm,18.0s						
UPC	**Upice**	63.25	314	⇑*i*P	P	23 56 25.9	+0.6
UPC				*e*		23 56 36.8	
UPC				*e*S	S	00 04 59.7	+2.2
UPC				MLR	MLR		
	comp=Z,15µm,15.1s						
UPC	**Upice**	63.25	314	⇑*i*P	P	23 56 25.9	+0.6
UPC				*e*x	x	23 56 36.8	
UPC				*e*S	S	00 04 59.7	+2.2
UPC				AMS	AMS	00 24 00.0	
	comp=Z,15µm,15.1s						
COP	**Copenhagen**	63.27	321	⇑*i*P	P	23 56 25.7	+0.5
COP				pmax	pmax		
	comp=Z,230nm,0.8s						
COP	**Copenhagen**	63.27	321	⇑*i*P	P	23 56 25.7	+0.5
	comp=Z,234nm,0.8s						
MORH	**Mrgy, Hungar**	63.28	309	*i* P	P	23 56 25.6	+0.1
MORH	**Mrgy, Hungar**	63.28	309	*e*P	P	23 56 25.1	-0.4
ATAL	**Atalanti**	63.29	300	*e*P	P	23 56 24.1	-1.6
ATAL	**Atalanti**	63.29	300	P	P	23 56 24.1	-1.6
VILL	**Villia**	63.30	299	P	P	23 56 23.9	-1.9
MODS	**Modra-Piesok**	63.31	312	*e*P	P	23 56 25.5	-0.2
MODS				pmax	pmax		
	comp=Z,360nm,1.6s						
MODS	**Modra-Piesok**	63.31	312	*e*P	P	23 56 25.5	-0.2
AKN	**Aaknes**	63.32	329	*e*P	P	23 56 25.8	+0.2
AKN				IVmB_BB		23 56 27.5	
	comp=Z,3µm,4.0s						
AKN				*e*S	S	00 04 55.2	-2.8
AKN				*e*SKSac	ScS	00 06 19.2	+0.1
AKN				IVMs_BB	IVMs_BB	00 26 00.1	
	comp=Z,15µm,13.2s						
LKR	**Lokris**	63.32	300	P	P	23 56 24.3	-1.6
SKAR	**Skarslia**	63.34	327	⇑*i*P	P	23 56 26.1	+0.4
SKAR				IVmB_BB		23 56 28.6	
	comp=Z,3µm,2.9s						
SKAR				*e*S	S	00 04 59.7	+1.3
SKAR				*e*ScS	ScS	00 06 20.6	+1.2
SKAR				IVMs_BB	IVMs_BB	00 25 29.1	
	comp=Z,12µm,14.4s						
TEKS	**Tekeris**	63.36	307	*i* P	P	23 56 26.3	+0.2
VRAC	**Vranov**	63.36	313	⇑*i*P	P	23 56 27.1	+1.0
VRAC	**Vranov**	63.36	313	⇑*i*P	P	23 56 26.7	+0.6
VRAC				*e*S	S	00 05 01.7	+2.8
ZST	**Bratislava**	63.48	312	*e*P	P	23 56 26.9	+0.1
ZST	**Bratislava**	63.48	312	*e*P	P	23 56 26.8	0.0
TIH	**Tihany**	63.49	310	⇑*e*P	P	23 56 27.0	+0.1
SIVA	**Sivas**	63.50	296	P	P	23 56 26.8	-0.4
KZN	**Kozani**	63.52	302	P	P	23 56 26.2	-1.1
DAG	**Danmarks Havn**	63.55	348	⇑*i*P	P	23 56 26.1	-0.7
DAG				pmax	pmax		
	comp=Z,47nm,1.0s						
DAG	**Danmarks Havn**	63.55	348	⇑*i*P	P	23 56 26.1	-0.7
	comp=Z,47nm,1.0s						
KRUC	**Moravsky**	63.58	313	⇑*i*P	P	23 56 28.0	+0.5
KRUC				*e*S	S	00 05 03.5	+1.9
LOUT	**Loutraki**	63.61	299	P	P	23 56 25.4	-2.5
DID	**Didima**	63.62	299	*e*P	P	23 56 25.3	-2.7
DID	**Didima**	63.62	299	P	P	23 56 25.3	-2.7
AGG	**Agios Georgios**	63.65	301	*e*P	P	23 56 27.2	-0.9
	comp=Z,298nm,1.0s						
AGG				LR	LR		
	comp=Z,7µm,19.0s						
AGG	**Agios Georgios**	63.65	301	P	P	23 56 26.8	-1.3
AGG	**Agios Georgios**	63.65	301	*e*P	P	23 56 27.2	-0.9
AGG				pmax	pmax		
	comp=Z,298nm,1.0s						
AGG				MLR	MLR		
	comp=Z,7µm,19.0s						
THL	**Klokotos Trika**	63.65	301	P	P	23 56 27.1	-1.0
ANKE	**Ethiopia-Afar**	63.66	263	*i* P	P	23 56 30.8	+1.8
ANKE	**Ethiopia-Afar**	63.66	263	*e*P	P	23 56 23.5	-5.5
ANKE	**Ethiopia-Afar**	63.66	263	*i* P	P	23 56 30.8	+1.8
ANKE	**Ethiopia-Afar**	63.66	263	*i* S	S	00 05 05.0	+0.7
ANKE	**Ethiopia-Afar**	63.66	263	*i* S	S	00 05 11.5	+7.2
BBLS	**Lazići**	63.71	307	*i* P	P	23 56 28.4	-0.1
KRND	**KRANIDI**	63.73	299	P	P	23 56 25.8	-2.9
DSF	**Desfina**	63.76	300	P	P	23 56 26.6	-2.3
IVA	**Berane**	63.78	305	⇑*i*P	P	23 56 29.5	+0.5
VAM	**Vamos**	63.79	296	P	P	23 56 27.8	-1.3
THAL	**Thalero**	63.81	299	P	P	23 56 26.4	-2.8
RUDO	**Rudo**	63.83	306	*e*P	P	23 56 29.1	-0.1
PVY	**Plav**	63.84	305	⇑*i*P	P	23 56 29.2	-0.3
FALS	**False Pass**	63.85	40	*e*P	P	23 56 29.2	+0.1
	comp=Z,79nm,0.9s						
FALS				LR	LR		
	comp=Z,10µm,18.0s						
TOLK	**Toolik Lake Re**	63.87	23	PFAKE		23 56 40.0	+11
TOLK				LR	LR		
	comp=Z,22µm,19.0s						
TOLK	**Toolik Lake Re**	63.87	23	P	P	23 56 29.6	+0.4
	baz=298,SNR=12						
OHR	**Ohrid**	63.87	303	*i* P	P	23 56 27.1	-2.5
PHP	**Peshkopia**	63.88	304	P	P	23 56 28.8	-0.9
HAPS	**Han Pijesak,Bl**	63.92	307	*i* P	P	23 56 28.9	-1.1
IMMV	**Iera Moni Meta**	63.93	296	P	P	23 56 28.4	-1.6
PLE	**Pljevlja**	63.93	306	⇑*i*P	P	23 56 30.2	+0.1
KPRO	**Kipourio**	63.95	302	P	P	23 56 28.8	-1.4
NEST	**Nestorio**	63.98	302	P	P	23 56 29.1	-1.3
SOP	**Sopron**	64.02	311	⇑*e*P	P	23 56 31.0	+0.6
TREC	**Trest**	64.03	313	*e*P	P	23 56 31.2	+0.7
TREC				*e*S	S	00 05 10.5	+3.2
TREC				MLR	MLR		
	comp=Z,16µm,17.6s						
TREC	**Trest**	64.03	313	⇑*e*P	P	23 56 31.2	+0.7
TREC				*e*S	S	00 05 10.5	+3.2
TREC				AMS	AMS	00 24 50.0	
	comp=Z,16µm,17.6s						
KOME	**Kolasin**	64.04	305	⇑*i*P	P	23 56 30.7	0.0
KALE	**Kalithea**	64.04	300	*e*P	P	23 56 29.0	-1.8
KALE	**Kalithea**	64.04	300	P	P	23 56 29.0	-1.8
TTA	**Tatalina**	64.05	30	*e*P	P	23 56 30.7	+0.3
	comp=Z,159nm,1.2s						
TTA	**Tatalina**	64.05	30	*e*P	P	23 56 30.7	+0.3
TTA				pmax	pmax		
	comp=Z,159nm,1.2s						
EVR	**Evrytania**	64.06	301	P	P	23 56 29.6	-1.4
TRAZ	**Trapeza**	64.08	300	P	P	23 56 29.2	-1.8
GUR	**Goura**	64.09	300	*e*P	P	23 56 28.9	-2.2
GUR	**Goura**	64.09	300	P	P	23 56 28.9	-2.2
HYA	**Hoyanger**	64.09	328	*e*P	P	23 56 30.4	-0.1
HYA				IVmB_BB		23 56 32.9	
	comp=Z,2µm,2.1s						
HYA				*e*S	S	00 05 08.8	+1.3
PVCC	**Panska Ves**	64.09	315	⇑*i*P	P	23 56 31.3	+0.5
PVCC				*e*S	S	00 05 09.7	+1.8
PVCC				MLR	MLR		
	comp=Z,13µm,14.8s						
PVCC	**Panska Ves**	64.09	315	⇑*i*P	P	23 56 31.3	+0.5
PVCC				*e*S	S	00 05 09.7	+1.8
PVCC				AMS	AMS	00 24 30.0	
	comp=Z,13µm,14.8s						
SERG	**Sergoula**	64.09	300	P	P	23 56 29.2	-1.9
TRIZ	**Trizonia**	64.10	300	P	P	23 56 29.2	-1.9
ANX	**Ano Chora**	64.11	300	P	P	23 56 29.9	-1.4
VLI	**Veliai**	64.17	298	*e*P	P	23 56 28.9	-2.6
VLI	**Veliai**	64.17	298	P	P	23 56 28.9	-2.6
KLV	**Kalavryta, Ach**	64.18	300	P	P	23 56 29.5	-2.2
MORW	**Morawa**	64.20	169	*e*P	P	23 56 32.4	+0.8
	comp=Z,385nm,1.4s						
GOPC	**GO Pecny, Ondr**	64.21	314	*e*P	P	23 56 32.1	+0.5
GOPC				*e*S	S	00 05 13.4	+4.0
GOPC				MLR	MLR		
	comp=Z,19µm,14.7s						
GOPC	**GO Pecny, Ondr**	64.21	314	⇑*e*P	P	23 56 32.1	+0.5
GOPC				*e*S	S	00 05 13.4	+4.0
GOPC				AMS	AMS	00 24 50.0	
	comp=Z,19µm,14.7s						
HOMB	**Homborsund**	64.22	324	*e*P	P	23 56 31.1	-0.4
HOMB				IVmB_BB		23 56 32.8	
	comp=Z,3µm,4.2s						
HOMB				*e*S	S	00 05 10.2	+1.1
HOMB				IVMs_BB	IVMs_BB	00 25 12.0	
	comp=Z,9µm,11.3s						
DOB	**Doboj**	64.22	308	*e*P	P	23 56 31.4	-0.3
LAKA	**Lakka**	64.22	300	*e*P	P	23 56 30.0	-1.9
LAKA	**Lakka**	64.22	300	P	P	23 56 30.0	-1.9
ANKY	**Antikythira Is**	64.26	297	*e*P	P	23 56 30.0	-2.1
ANKY	**Antikythira Is**	64.26	297	P	P	23 56 30.0	-2.1
KTHA	**Kythira Island**	64.27	298	P	P	23 56 29.7	-2.5
VLX	**Vlachokerasia**	64.30	299	*e*P	P	23 56 30.4	-2.1
VLX	**Vlachokerasia**	64.30	299	P	P	23 56 30.4	-2.1
UPM	**Unac-Piva**	64.31	306	⇑*i*P	P	23 56 32.4	-0.2
UPM	**Unac-Piva**	64.31	306	*e*P	P	23 56 32.5	-0.2
TRIP	**Tripoli**	64.31	299	P	P	23 56 30.6	-2.0
KTHR	**Kythira**	64.31	298	P	P	23 56 30.4	-2.1
BRG	**Berggiesshubel**	64.32	315	⇑*i*P	P	23 56 32.6	+0.3
	comp=Z,297nm,1.6s						
BRG				S	S	00 05 10.0	-0.7
BRG				SS	SS	00 09 17.0	-2.7
BRG				*e*PKPPKP		00 25 20.5	
	comp=Z,47nm,1.8s						
	comp=N,15µm,16.4s						
	comp=E,11µm,15.2s						
	comp=Z,17µm,13.8s						
BRG	**Berggiesshubel**	64.32	315	⇑*i*P	P	23 56 32.6	+0.3
BRG				S	S	00 05 10.0	-0.7
BRG				SS	SS	00 09 17.0	-2.7
BRG				pmax	pmax		
	comp=Z,297nm,1.6s						
BRG				MLR	MLR		
	comp=N,15µm,16.4s						
BRG				MLR	MLR		
	comp=E,11µm,15.2s						
BRG				MLR	MLR		
	comp=Z,17µm,13.8s						
PRU	**Pruhonice**	64.32	314	⇑*i*P	P	23 56 32.7	+0.4
PRU				*e*S	S	00 05 11.0	+0.2
PRU				MLR	MLR		
	comp=Z,18µm,14.7s						
PRU	**Pruhonice**	64.32	314	⇑*i*P	P	23 56 32.7	+0.4
PRU				*e*S	S	00 05 11.0	+0.2
PRU				AMS	AMS	00 24 50.0	
	comp=Z,18µm,14.7s						
COLD	**Coldfoot**	64.32	25	PFAKE		23 56 40.0	+7.9
COLD				LR	LR		
	comp=Z,27µm,21.0s						
ASAR	**Alice Springs**	64.34	150	P	P	23 56 32.8	+0.1
	comp=Z,90nm,0.6s,baz=332,slow=6.6,SNR=649						
ASAR				S	S	00 05 10.7	-0.8
	comp=Z,2.8nm,1.1s,baz=334,slow=12,SNR=4.5						
ASAR				PKP2bc		00 25 27.6	
	comp=Z,3.2nm,0.8s,baz=145,slow=2.5,SNR=12						
ASAR				LR	LR	00 26 31.3	
	comp=Z,2µm,21.1s,baz=337,slow=38						
CONA	**Conrad Observa**	64.35	312	*i* pP	P	23 56 33.4	+0.7
	comp=Z,179nm,1.4s,SNR=91						
CONA				S	S	00 05 09.2	-2.2
	comp=Z,4.3nm,1.2s						
BEHE	**Becsehely**	64.37	310	*i* P	P	23 56 33.3	+0.6
BEHE	**Becsehely**	64.37	310	⇑*e*P	P	23 56 33.1	+0.4
PVO	**Paravola**	64.39	300	P	P	23 56 31.8	-1.2
PDG	**Podgorica**	64.39	305	⇑*i*P	P	23 56 33.2	+0.3
PDG	**Podgorica**	64.39	305	*i* P	P	23 56 32.8	-0.1
TTG	**Podgorica**	64.39	305	⇑*i*P	P	23 56 32.9	0.0
TTG	**Podgorica**	64.39	305	PFAKE		23 56 50.0	+17
TTG				LR	LR		
	comp=Z,19µm,22.0s						
NKY	**Niksic**	64.41	306	⇑*i*P	P	23 56 33.1	-0.1
TIR	**Tirane**	64.42	304	*e*P	P	23 56 32.4	-0.7
	comp=Z,124nm,0.9s						
TIR				LR	LR		
	comp=Z,11µm,20.0s						
TIR	**Tirane**	64.42	304	P	P	23 56 32.5	-0.6
TIR	**Tirane**	64.42	304	⇓*i*P	P	23 56 33.3	+0.2
ODD1	**Odda**	64.42	326	*e*P	P	23 56 32.6	-0.2
ODD1				IVMsBB		23 56 36.6	
	comp=Z,2µm,4.0s						
ODD1				*e*S	S	00 05 13.4	+1.7
ODD1				IVMs_BB	IVMs_BB	00 26 19.4	
	comp=Z,11µm,13.3s						
JAN	**Janina**	64.43	302	*e*P	P	23 56 32.2	-1.1
JAN	**Janina**	64.43	302	P	P	23 56 32.2	-1.1
JAN	**Janina**	64.43	302	*e*P	P	23 56 32.2	-1.1
NKME	**Niksic**	64.45	306	⇑*i*P	P	23 56 33.4	0.0
DRO	**Drossia**	64.53	300	P	P	23 56 32.6	-1.4
DRME	**Dracevica, Mon**	64.53	305	⇑*i*P	P	23 56 34.0	+0.1
DRME	**Dracevica, Mon**	64.53	305	*i* P	P	23 56 34.0	+0.1
CEME	**Cevo**	64.57	305	⇑*i*P	P	23 56 33.9	-0.3
DYR	**Agios Nikonas**	64.58	298	P	P	23 56 33.0	-1.3
ULC	**Ulcinj**	64.59	305	⇑*i*P	P	23 56 34.1	-0.2
MUD	**Monsted U'grnd**	64.64	322	⇑*i*P	P	23 56 34.7	+0.5
MUD				pmax	pmax		
	comp=Z,280nm,1.0s						
MUD	**Monsted U'grnd**	64.64	322	⇑*i*P	P	23 56 34.7	+0.5
	comp=Z,279nm,1.0s						
JMIC	**Jan Mayen**	64.66	340	*e*P	P	23 56 35.2	+1.0
JMIC				IVmB_BB		23 56 38.9	
	comp=Z,6µm,2.6s						
JMIC				*e*PP	PP	23 58 57.4	+1.6
JMIC				*e*S	S	00 05 17.2	+2.9
JMIC				IVMs_BB	IVMs_BB	00 27 17.8	
	comp=Z,5µm,19.5s						
RLS	**Riolos of Patr**	64.66	300	P	P	23 56 33.3	-1.5
BRY	**Bratogost**	64.67	306	⇑*i*P	P	23 56 34.9	-0.1
BRY	**Bratogost**	64.67	306	*e*P	P	23 56 34.6	-0.4
BUM	**Brajici-Budva**	64.69	305	⇑*i*P	P	23 56 34.6	-0.3
CLL	**Collm**	64.69	316	PFAKE		23 56 50.0	+15
CLL				LR	LR		
	comp=Z,13µm,19.0s						
CLL	**Collm**	64.69	316	⇑*i*P	P	23 56 34.7	0.0
CLL				*e*		23 56 46.0	
CLL				*e*S	S	00 05 15.0	-0.2
CLL				pmax	pmax		
	comp=Z,225nm,1.4s						
CLL	**Collm**	64.69	316	⇑*i*P	P	23 56 34.7	0.0
	comp=Z,225nm,1.4s						
CLL				Lmax		00 27 00.0	
CLL				*e*		23 56 46.0	
CLL				*e*PcP	PcP	23 57 07.0	-1.4
CLL				*e*PP	PP	23 58 58.0	+1.5
CLL				*e*S	S	00 05 15.0	-0.2
CLL				*e*ScS	ScS	00 06 30.0	+0.2
CLL				*e*SS	SS	00 09 30.0	+4.6
CLL				*e*		00 10 30.0	
CLL				*e*SSS	SSS	00 12 26.0	
CLL				LmH		00 21 00.0	
	comp=N,22µm,21.4s						
CLL				LmH		00 21 00.0	
	comp=E,10µm,21.9s						
CLL				*e*PKPPKPdf	P'P'df	00 25 18.0	-10
ITM	**Ithomi**	64.70	299	PFAKE		23 56 50.0	+15
ITM				LR	LR		
	comp=Z,6µm,22.0s						
ITM	**Ithomi**	64.70	299	P	P	23 56 33.0	-2.1
BLS5	**Blasjo**	64.70	326	*e*P	P	23 56 34.7	0.0
BLS5				IVmB_BB		23 56 37.3	
	comp=Z,3µm,3.0s						

BLS5				*e*S	**S**	**00 05 15.4**	**+0.1**
BLS5				*e*SKSac	**ScS**	**00 06 29.9**	**+0.1**
BLS5				IVMs_BB	IVMs_BB	00 28 56.4	
	comp=Z,8µm,10.5s						
KALN	**Kalnik**	**64.71**	**310**	*i* P	**P**	**23 56 35.3**	**+0.3**
AMT	**Artemida-Makis**	**64.71**	**299**	P	**P**	**23 56 33.1**	**-2.0**
TPE	**Tepelena**	**64.75**	**303**	P	**P**	**23 56 34.2**	**-1.1**
SUE	**Sulen**	**64.76**	**328**	⇑*i*P	**P**	**23 56 34.8**	**-0.2**
SUE				IVmB_BB		23 56 36.6	
	comp=Z,3µm,4.5s						
SUE				*e*S	**S**	**00 05 16.1**	**+0.3**
SUE				*e*SKSac	**ScS**	**00 06 30.4**	**+0.4**
SUE				IVMs_BB	IVMs_BB	00 26 15.2	
	comp=Z,8µm,12.0s						
BER	**Bergen**	**64.80**	**327**	*e*P	**P**	**23 56 35.2**	**0.0**
BER				IVmB_BB		23 56 36.8	
	comp=Z,3µm,4.5s						
BER				*e*PP	**PP**	**23 58 58.4**	**+1.1**
BER				*e*S	**S**	**00 05 17.2**	**+0.9**
BER				IVMs_BB	IVMs_BB	00 26 23.7	
	comp=Z,14µm,12.6s						
BLY	**Banja Luka**	**64.81**	**308**	PFAKE		23 56 50.0	+14
BLY				LR	LR		
	comp=Z,20µm,20.0s						
BLY	**Banja Luka**	**64.81**	**308**	⇑*i*P	**P**	**23 56 35.8**	**+0.2**
BLY	**Banja Luka**	**64.81**	**308**	*i* P	**P**	**23 56 35.9**	**+0.3**
SNART	**Snartemo**	**64.81**	**325**	⇑*i*P	**P**	**23 56 35.3**	**0.0**
ASK	**Askoy**	**64.82**	**327**	*e*P	**P**	**23 56 35.2**	**-0.2**
ASK				*e*S	**S**	**00 05 18.5**	**+1.9**
ASK				*e*		00 08 50.5	
ARSA	**Arzberg**	**64.84**	**311**	*i* pP	**P**	**23 56 35.9**	**+0.1**
	comp=Z,92nm,1.4s,SNR=65						
ARSA				*i* S	**S**	**00 05 14.9**	**-2.4**
	comp=Z,5.9nm,1.4s						
IGT	**Igoumenitsa**	**64.85**	**302**	*e*P	**P**	**23 56 34.3**	**-1.7**
IGT	**Igoumenitsa**	**64.85**	**302**	P	**P**	**23 56 34.3**	**-1.7**
IGT	**Igoumenitsa**	**64.85**	**302**	*e*P	**P**	**23 56 34.3**	**-1.7**
TREB	**Trebinje**	**64.88**	**306**	*i* P	**P**	**23 56 35.9**	**-0.2**
HCY	**Herceg Novi**	**64.89**	**305**	⇑*i*P	**P**	**23 56 36.1**	**-0.1**
HCY	**Herceg Novi**	**64.89**	**305**	*e*P	**P**	**23 56 36.1**	**-0.1**
FURI	**Furi**	**64.91**	**263**	*e*P	**P**	**23 56 39.2**	**+2.1**
	comp=Z,201nm,1.4s						
FURI				LR	LR		
	comp=Z,5µm,21.0s						
LKD2	**Lefkada island**	**64.93**	**301**	P	**P**	**23 56 34.7**	**-1.9**
SRN	**Sarande**	**64.93**	**302**	P	**P**	**23 56 34.8**	**-1.7**
PYL	**PYLOS**	**64.96**	**299**	*e*P	**P**	**23 56 34.7**	**-2.0**
PYL	**PYLOS**	**64.96**	**299**	P	**P**	**23 56 34.7**	**-2.0**
EVGI	**Lefkada island**	**65.00**	**301**	P	**P**	**23 56 35.1**	**-1.9**
SVW2	**Sparrevohn**	**65.03**	**32**	PFAKE		23 56 50.0	+13
SVW2				LR	LR		
	comp=Z,16µm,18.0s						
DBRK	**Dubrovnik**	**65.03**	**306**	*i* P	**P**	**23 56 36.8**	**-0.4**
PTJ	**Puntijarka**	**65.11**	**310**	P	**P**	**23 56 37.5**	**-0.2**
FSK	**Fiskardo**	**65.14**	**301**	P	**P**	**23 56 35.7**	**-2.1**
KEK	**Kerkira**	**65.14**	**302**	*e*P	**P**	**23 56 36.2**	**-1.7**
KEK				*e*P	**P**	**23 56 36.2**	**-1.7**
KEK	**Kerkira**	**65.14**	**302**	P	**P**	**23 56 36.2**	**-1.7**
MLY	**Manley**	**65.17**	**27**	PFAKE		23 56 50.0	+12
MLY				LR	LR		
	comp=Z,16µm,20.0s						
SDPT	**Sand Point**	**65.19**	**39**	*e*P	**P**	**23 56 36.0**	**-1.9**
	comp=Z,125nm,1.1s						
SDPT				LR	LR		
	comp=Z,9µm,19.0s						
VLS	**Valsamata**	**65.24**	**300**	P	**P**	**23 56 36.5**	**-2.0**
KHC	**Kasperske Hory**	**65.25**	**314**	PFAKE		23 56 50.0	+12
KHC				LR	LR		
	comp=Z,7µm,18.0s						
KHC	**Kasperske Hory**	**65.25**	**314**	⇑*i*P	**P**	**23 56 38.7**	**+0.3**
KHC				*e*		23 56 52.0	
KHC				*e*S	**S**	**00 05 24.4**	**+2.1**
KHC				MLR	MLR		
	comp=Z,19µm,14.8s						
KHC	**Kasperske Hory**	**65.25**	**314**	⇑*i*P	**P**	**23 56 38.7**	**+0.3**
KHC				*e*x	x	23 56 52.0	
KHC				*e*S	**S**	**00 05 24.4**	**+2.1**
KHC				AMS	AMS	00 25 20.0	
	comp=Z,19µm,14.8s						
STON	**Ston**	**65.25**	**306**	*i* P	**P**	**23 56 36.8**	**-1.7**
STON	**Ston**	**65.25**	**306**	*i* P	**P**	**23 56 37.6**	**-0.9**
GEC2	**GERESS Array S**	**65.29**	**313**	PFAKE		23 56 50.0	+11
GEC2				LR	LR		
	comp=Z,20µm,18.0s						
GERES	**GERESS Array B**	**65.29**	**313**	P	**P**	**23 56 39.1**	**+0.3**
	comp=Z,72nm,1.0s,baz=70,slow=5.8,SNR=113						
GERES				S	**S**	**00 05 23.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=59,slow=4.7,SNR=2.6						
GERES				PKP2bc		00 25 23.6	
	comp=Z,6.0nm,1.1s,baz=236,slow=1.4,SNR=12						
GERES				LR	LR	00 26 16.7	
	comp=Z,17µm,18.8s,baz=78,slow=37						
PERS	**Pernice**	**65.34**	**311**	*i* P	**P**	**23 56 39.2**	**+0.1**
PERS				*e*S	**S**	**00 05 24.9**	**+1.2**
KMY	**Karmoy**	**65.35**	**326**	*e*P	**P**	**23 56 38.3**	**-0.6**
KMY				IVmB_BB		23 56 40.7	
	comp=Z,2µm,3.8s						
MOA	**Molln**	**65.36**	**312**	*i* pP	**P**	**23 56 39.9**	**+0.7**
	comp=Z,211nm,1.4s,SNR=108						
MOA				*i* S	**S**	**00 05 21.9**	**-1.8**
	comp=Z,9.0nm,1.8s						
SOKA	**Soboth**	**65.38**	**311**	*i* pP	**P**	**23 56 39.5**	**+0.1**
	comp=Z,209nm,1.3s,SNR=152						
SOKA				*i* S	**S**	**00 05 22.7**	**-1.4**
	comp=Z,16nm,2.3s						
CAST	**Castle Rocks**	**65.42**	**29**	PFAKE		23 56 50.0	+11
CAST				LR	LR		
	comp=Z,46µm,18.0s						
NKC	**Novy Kostel**	**65.45**	**315**	⇑*i*P	**P**	**23 56 40.0**	**+0.3**
NKC				*e*S	**S**	**00 05 26.9**	**+2.1**
NKC				MLR	MLR		
	comp=Z,18µm,14.1s						
NKC	**Novy Kostel**	**65.45**	**315**	⇑*i*P	**P**	**23 56 40.0**	**+0.3**
NKC				*e*S	**S**	**00 05 26.9**	**+2.1**
NKC				AMS	AMS	00 26 00.0	
	comp=Z,18µm,14.1s						
CRES	**Cresnjev**	**65.47**	**310**	*i* P	**P**	**23 56 40.1**	**+0.2**
MAKA	**Makarska**	**65.53**	**307**	*i* P	**P**	**23 56 39.4**	**-0.9**
BPAW	**Bear Paw Mtn.**	**65.53**	**28**	PFAKE		23 56 50.0	+10
BPAW				LR	LR		
	comp=Z,35µm,18.0s						
OZLJ	**Ozalj**	**65.55**	**310**	*i* P	**P**	**23 56 40.4**	**0.0**
PPLA	**Purkeypile**	**65.63**	**29**	PFAKE		23 56 50.0	+9.2
PPLA				LR	LR		
	comp=Z,14µm,21.0s						
MIDW	**Midway**	**65.66**	**72**	*e*P	**P**	**23 56 42.0**	**+0.6**
	comp=Z,64nm,0.7s						
MIDW				LR	LR		
	comp=Z,5µm,22.0s						
BOJS	**Bojanci**	**65.74**	**310**	*i* P	**P**	**23 56 42.0**	**+0.3**
OBKA	**Obir**	**65.75**	**311**	*i* pP	**P**	**23 56 42.0**	**+0.2**
	comp=Z,94nm,1.3s,SNR=35						
OBKA				*i* S	**S**	**00 05 27.3**	**-1.4**
	comp=Z,9.9nm,1.4s						
KTH	**Kantishna Hill**	**65.82**	**28**	PFAKE		23 56 50.0	+8.1
KTH				LR	LR		
	comp=Z,37µm,18.0s						
UDBI	**Udbina**	**65.82**	**308**	*i* P	**P**	**23 56 42.2**	**0.0**
CHGN	**Chignik**	**65.83**	**37**	PFAKE		23 56 50.0	+8.0
CHGN				LR	LR		
	comp=Z,10µm,20.0s						
LJU	**Ljubljana**	**65.97**	**310**	*i* P	**P**	**23 56 43.1**	**0.0**
LJU				*e*S	**S**	**00 05 31.1**	**0.0**
LJU				*e*SKSac	**ScS**	**00 06 39.8**	**-0.1**
LJU	**Ljubljana**	**65.97**	**310**	*i* P	**P**	**23 56 43.1**	**0.0**
BWN	**Browne**	**66.08**	**27**	PFAKE		23 57 00.0	+17
BWN				LR	LR		
	comp=Z,19µm,18.0s						
MDM	**Murphy Dome**	**66.14**	**26**	PFAKE		23 57 00.0	+16
MDM				LR	LR		
	comp=Z,16µm,19.0s						
MORI	**Morici**	**66.14**	**308**	*i* P	**P**	**23 56 43.7**	**-0.5**
CEY	**Cerknica**	**66.16**	**310**	*i* P	**P**	**23 56 44.3**	**-0.1**
GORS	**Gorjuse**	**66.18**	**311**	*i* P	**P**	**23 56 44.0**	**-0.6**
KBA	**Koelnbreinsper**	**66.26**	**312**	*i* pP	**P**	**23 56 45.4**	**+0.2**
	comp=Z,109nm,0.8s,SNR=49						
KBA				*i* S	**S**	**00 05 32.5**	**-2.5**
	comp=Z,10nm,1.1s						
MYKA	**Terra Mystica**	**66.27**	**311**	*i* pP	**P**	**23 56 44.8**	**-0.3**
	comp=Z,50nm,1.5s,SNR=20						
MYKA				*i* S	**S**	**00 05 33.9**	**-1.0**
	comp=Z,8.7nm,1.7s						
ZIRJ	**Zirje**	**66.28**	**308**	*i* P	**P**	**23 56 44.3**	**-0.8**
RIY	**Rijeka**	**66.30**	**310**	P	**P**	**23 56 45.1**	**-0.1**
RIY	**Rijeka**	**66.30**	**310**	*i* P	**P**	**23 56 45.0**	**-0.2**
TCOL	**CIGO, UAF Yank**	**66.32**	**26**	P	**P**	**23 56 45.6**	**+0.6**
	baz=301,SNR=96						
COLA	**College**	**66.32**	**26**	*e*P	**P**	**23 56 45.5**	**+0.5**
	comp=Z,513nm,1.0s						
COLA				LR	LR		
	comp=Z,12µm,19.0s						
COLA	**College**	**66.32**	**26**	*e*P	**P**	**23 56 45.5**	**+0.5**
COLA				pmax	pmax		
	comp=Z,513nm,1.0s						
COLA				MLR	MLR		
	comp=Z,12µm,19.0s						
POKR	**Poker Plat Res**	**66.35**	**26**	P	**P**	**23 56 45.9**	**+0.6**
	baz=301,SNR=77						
FYU	**Fort Yukon**	**66.35**	**24**	PFAKE		23 57 00.0	+15
FYU				LR	LR		
	comp=Z,17µm,20.0s						
NVLJ	**Novalja**	**66.38**	**309**	*i* P	**P**	**23 56 45.1**	**-0.6**
GRA1	**Grafenberg Arr**	**66.40**	**315**	PFAKE		23 57 00.0	+14
GRA1				LR	LR		
	comp=Z,15µm,21.0s						
GRFO	**Grafenberg**	**66.40**	**315**	PFAKE		23 57 00.0	+14
GRFO				LR	LR		
	comp=Z,14µm,21.0s						
WRH	**Wood River Hil**	**66.44**	**27**	PFAKE		23 57 00.0	+14
WRH				LR	LR		
	comp=Z,20µm,19.0s						
CCB	**Clear Creek Bu**	**66.46**	**27**	PFAKE		23 57 00.0	+14
CCB				LR	LR		
	comp=Z,14µm,18.0s						
MCK	**McKinley**	**66.50**	**28**	PFAKE		23 57 00.0	+14
MCK				LR	LR		
	comp=Z,32µm,19.0s						
DUGI	**Dugi Otok**	**66.51**	**308**	*i* P	**P**	**23 56 46.0**	**-0.6**
TRI	**Trieste**	**66.59**	**310**	PFAKE		23 57 00.0	+13
TRI				LR	LR		
	comp=Z,11µm,18.0s						
RND	**Reindeer**	**66.70**	**28**	PFAKE		23 57 00.0	+12
RND				LR	LR		
	comp=Z,39µm,19.0s						
ILAR	**Eielson Array**	**66.73**	**26**	P	**P**	**23 56 46.8**	**-0.9**
	comp=Z,114nm,1.1s,baz=283,slow=4.7,SNR=283						
ILAR				S	**S**	**00 05 38.0**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=325,slow=8.8,SNR=2.8						
ILAR				PKP2bc		00 25 18.5	
	comp=Z,5.0nm,1.1s,baz=153,slow=2.8,SNR=4.7						
ILAR				LR	LR	00 28 00.1	
	comp=Z,15µm,18.1s,baz=324,slow=38						
PRP	**Porcupine Dome**	**66.82**	**25**	PFAKE		23 57 00.0	+12
PRP				LR	LR		
	comp=Z,20µm,18.0s						
MATE	**Matera**	**66.88**	**304**	⇑*i*P	**P**	**23 56 49.2**	**+0.2**
HDA	**Harding Lake**	**66.90**	**27**	PFAKE		23 57 00.0	+11
HDA				LR	LR		
	comp=Z,15µm,19.0s						
HDA	**Harding Lake**	**66.90**	**27**	P	**P**	**23 56 47.9**	**-0.8**
	baz=302						
ABTA	**Abfaltersbach**	**66.92**	**312**	*i* P	**P**	**23 56 48.4**	**-0.8**
	comp=Z,120nm,1.5s,SNR=62						
ABTA				*i* S	**S**	**00 05 41.1**	**-1.7**
	comp=Z,4.7nm,1.1s						
WTTA	**Wattenberg**	**67.22**	**312**	*i* pP	**P**	**23 56 51.3**	**0.0**
	comp=Z,280nm,1.3s,SNR=172						
WTTA				*i* S	**S**	**00 05 44.8**	**-1.9**
	comp=Z,22nm,1.5s						
WATA	**Walderalm**	**67.23**	**313**	*i* pP	**P**	**23 56 51.3**	**0.0**
	comp=Z,161nm,1.0s,SNR=95						
CTAO	**Charters Tower**	**67.39**	**137**	*e*P	**P**	**23 56 53.0**	**+0.6**
	comp=Z,298nm,1.2s						
CTAO				LR	LR		
	comp=Z,3µm,22.0s						
CTAO	**Charters Tower**	**67.39**	**137**	*e*P	**P**	**23 56 53.0**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,298nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,3µm,22.0s						
HOM	**Homer**	**67.44**	**32**	PFAKE		23 57 00.0	+7.8
HOM				LR	LR		
	comp=Z,11µm,19.0s						
CHIR	**Chirikof Islan**	**67.44**	**37**	*e*P	**P**	**23 56 53.2**	**+0.9**
	comp=Z,251nm,1.1s						
DHY	**Denali Highway**	**67.44**	**28**	*e*P	**P**	**23 56 52.0**	**-0.5**
	comp=Z,156nm,1.0s						
DHY				LR	LR		
	comp=Z,26µm,18.0s						
TIP	**Timpagrande**	**67.50**	**303**	PFAKE		23 57 10.0	+17
TIP				LR	LR		
	comp=Z,7µm,21.0s						
TIP	**Timpagrande**	**67.50**	**303**	P	**P**	**23 56 52.9**	**-0.2**
TIP	**Timpagrande**	**67.50**	**303**	⇓*i*P	**P**	**23 56 53.5**	**+0.4**
SQTA	**Sankt Quirin**	**67.50**	**313**	*i* pP	**P**	**23 56 52.8**	**-0.2**
	comp=Z,233nm,1.2s,SNR=129						
SQTA				*i* S	**S**	**00 05 48.6**	**-1.4**
	comp=Z,20nm,2.2s						
MOTA	**Moosalm**	**67.51**	**313**	*i* pP	**P**	**23 56 52.9**	**-0.2**
	comp=Z,107nm,0.9s,SNR=127						
MOTA				*i* S	**S**	**00 05 49.6**	**-0.5**
	comp=Z,8.8nm,1.4s						
GHO	**Glory Hole Cre**	**67.51**	**30**	PFAKE		23 57 10.0	+17
GHO				LR	LR		
	comp=Z,28µm,21.0s						
PMR	**Palmer**	**67.52**	**30**	PFAKE		23 57 00.0	+7.3
PMR				LR	LR		
	comp=Z,20µm,18.0s						
RC01	**Rabbit Creek A**	**67.53**	**30**	PFAKE		23 57 10.0	+17
RC01				LR	LR		
	comp=Z,18µm,18.0s						
RETA	**Reutte**	**67.65**	**313**	*i* pP	**P**	**23 56 53.9**	**-0.1**
	comp=Z,138nm,1.7s,SNR=55						
RETA				*i* S	**S**	**00 05 48.5**	**-3.2**
	comp=Z,9.3nm,1.9s						
CNPM	**China Poot**	**67.68**	**32**	PFAKE		23 57 10.0	+16
CNPM				LR	LR		
	comp=Z,24µm,18.0s						
BRLK	**Bradley Lake**	**67.72**	**32**	PFAKE		23 57 10.0	+16
BRLK				LR	LR		
	comp=Z,13µm,18.0s						
SML	**Sawmill**	**67.73**	**29**	PFAKE		23 57 10.0	+16
SML				LR	LR		
	comp=Z,22µm,21.0s						
LRW	**Lerwick**	**67.78**	**329**	⇑*e*P	**P**	**23 56 53.9**	**-0.5**
LRW				IAmb	IAmb	23 56 57.3	
	comp=Z,82nm,0.8s						
LRW				IAMs_20	IAMs_20	00 28 38.8	
	comp=Z,28µm,15.9s						
SII	**Sitkinak Islan**	**67.79**	**36**	*e*P	**P**	**23 56 54.8**	**+0.2**
	comp=Z,406nm,1.5s						
SII				LR	LR		
	comp=Z,14µm,20.0s						
WTSB	**Winterswijk**	**67.87**	**319**	*e*P	**P**	**23 56 54.7**	**-0.4**
	comp=Z,1µm,1.9s						
FETA	**Feichten**	**67.89**	**313**	*i* pP	**P**	**23 56 55.2**	**-0.4**
	comp=Z,224nm,1.3s,SNR=133						
FETA				*i* S	**S**	**00 05 54.2**	**-0.4**
	comp=Z,26nm,2.6s						
KNK	**Knik Glacier**	**67.89**	**30**	PFAKE		23 57 10.0	+15
KNK				LR	LR		
	comp=Z,28µm,18.0s						
OHAK	**Old Harbor**	**67.89**	**35**	*e*P	**P**	**23 56 55.0**	**-0.2**
	comp=Z,128nm,1.0s						
OHAK				LR	LR		
	comp=Z,10µm,19.0s						
STU	**Stuttgart**	**68.00**	**315**	PFAKE		23 57 10.0	+14
STU				LR	LR		
	comp=Z,12µm,19.0s						
RIDG	**Independent Ri**	**68.04**	**27**	PFAKE		23 57 10.0	+14
RIDG				LR	LR		
	comp=Z,22µm,18.0s						
SCM	**Sheep Creek Mo**	**68.12**	**29**	PFAKE		23 57 10.0	+13
SCM				LR	LR		
	comp=Z,25µm,21.0s						
SEW	**Seward**	**68.16**	**31**	PFAKE		23 57 10.0	+13
SEW				LR	LR		
	comp=Z,25µm,18.0s						
NWAO	**Narrogin (SRO)**	**68.17**	**168**	*e*P	**P**	**23 56 57.6**	**+0.5**
	comp=Z,305nm,1.0s						
NWAO				LR	LR		
	comp=Z,5µm,21.0s						
NWAO	**Narrogin (SRO)**	**68.17**	**168**	*e*P	**P**	**23 56 57.6**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,305nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,5µm,21.0s						
NWAO	**Narrogin (SRO)**	**68.17**	**168**	P	**P**	**23 56 57.8**	**+0.8**
	SNR=27						
SCRK	**Sand Creek**	**68.22**	**26**	PFAKE		23 57 10.0	+13
SCRK				LR	LR		
	comp=Z,15µm,19.0s						
PAX	**Paxson**	**68.23**	**27**	PFAKE		23 57 10.0	+13
PAX				LR	LR		
	comp=Z,26µm,19.0s						
DAVA	**Damuels**	**68.28**	**313**	*i* pP	**P**	**23 56 57.9**	**-0.1**
	comp=Z,104nm,1.2s,SNR=40						
DAVA				*i* S	**S**	**00 05 58.0**	**-1.3**
	comp=Z,8.6nm,1.6s						
AQU	**L'Aquila**	**68.33**	**307**	*e*P	**P**	**23 56 58.6**	**+0.4**
	comp=Z,267nm,1.0s						
AQU				LR	LR		
	comp=Z,11µm,21.0s						
AQU	**L'Aquila**	**68.33**	**307**	*e*P	**P**	**23 56 58.6**	**+0.4**
AQU				pmax	pmax		
	comp=Z,267nm,1.0s						
AQU				MLR	MLR		
	comp=Z,11µm,21.0s						
AQU	**L'Aquila**	**68.33**	**307**	*i* P	**P**	**23 56 58.8**	**+0.6**
FUORN	**Ofenpass-Fuorn**	**68.35**	**312**	PFAKE		23 57 10.0	+11
FUORN				LR	LR		
	comp=Z,17µm,18.0s						
DOT	**Dot Lake**	**68.38**	**26**	PFAKE		23 57 10.0	+12
DOT				LR	LR		
	comp=Z,17µm,18.0s						
HNR	**Honiara**	**68.44**	**119**	*e*P	**P**	**23 56 59.7**	**+0.6**
	comp=Z,513nm,1.5s						
HNR	**Honiara**	**68.44**	**119**	P	**P**	**23 56 59.0**	**-0.1**
SCO	**Scoresbysund**	**68.46**	**343**	PFAKE		23 57 10.0	+12
SCO				LR	LR		
	comp=Z,9µm,21.0s						
SCO	**Scoresbysund**	**68.46**	**343**	⇑*i*P	**P**	**23 56 59.0**	**+0.5**
SCO				pmax	pmax		
	comp=Z,300nm,1.7s						
SCO	**Scoresbysund**	**68.46**	**343**	⇑*i*P	**P**	**23 56 59.0**	**+0.5**
	comp=Z,300nm,1.7s						
FORT	**Forrest**	**68.70**	**158**	*e*P	**P**	**23 57 00.5**	**+0.1**
	comp=Z,338nm,1.1s						
BFO	**Black Forest**	**68.71**	**315**	*e*P	**P**	**23 56 59.6**	**-0.8**
	comp=Z,121nm,1.2s						
BFO				LR	LR		
	comp=Z,12µm,20.0s						
BFO	**Black Forest**	**68.71**	**315**	*e*P	**P**	**23 56 59.7**	**-0.8**
BFO				pmax	pmax		
	comp=Z,121nm,1.2s						
BFO				MLR	MLR		
	comp=Z,12µm,20.0s						
GLI	**Glacier Island**	**68.73**	**30**	PFAKE		23 57 10.0	+10
GLI				LR	LR		
	comp=Z,21µm,18.0s						
EGAK	**Eagle**	**68.76**	**25**	PFAKE		23 57 10.0	+10
EGAK				LR	LR		
	comp=Z,13µm,20.0s						
MENT	**Mentasta**	**68.91**	**27**	PFAKE		23 57 10.0	+8.5
MENT				LR	LR		
	comp=Z,23µm,18.0s						
INK	**Inuvik**	**68.91**	**20**	LR	LR	00 32 09.2	
	comp=Z,11µm,18.3s,baz=328,slow=40						
INK	**Inuvik**	**68.91**	**20**	PFAKE		23 57 10.0	+8.7
INK				LR	LR		
	comp=Z,18µm,20.0s						
HGN	**Heimansgroeve**	**68.92**	**318**	*e*P	**P**	**23 57 01.8**	**+0.1**
	comp=Z,708nm,2.0s						
MEM	**Membach**	**68.96**	**317**	⇑P	**P**	**23 57 02.1**	**+0.2**
	comp=Z,84nm,1.7s						
TUE	**Stuetta**	**68.98**	**312**	PFAKE		23 57 10.0	+7.6
TUE				LR	LR		
	comp=Z,27µm,18.0s						
BEBN	**Eben Emael**	**69.05**	**318**	⇑P	**P**	**23 57 02.7**	**+0.2**
FID	**Port Fidalgo**	**69.06**	**30**	PFAKE		23 57 10.0	+7.6
FID				LR	LR		
	comp=Z,26µm,18.0s						
TULEG	**Thule**	**69.14**	**358**	PFAKE		23 57 10.0	+7.4
TULEG				LR	LR		
	comp=Z,9µm,19.0s						
EPYK	**Eagle Plains**	**69.23**	**22**	PFAKE		23 57 20.0	+17
EPYK				LR	LR		
	comp=Z,14µm,20.0s						
EPYK	**Eagle Plains**	**69.23**	**22**	P	**P**	**23 57 03.6**	**+0.1**
	baz=310						
WLF	**Walferdange**	**69.33**	**317**	PFAKE		23 57 20.0	+16
WLF				LR	LR		
	comp=Z,63µm,19.0s						
WLF	**Walferdange**	**69.33**	**317**	P	**P**	**23 57 04.7**	**+0.4**
WLF	**Walferdange**	**69.33**	**317**	⇓P	**P**	**23 57 05.0**	**+0.7**
	comp=Z,282nm,1.4s						
VLC	**Villacollemand**	**69.43**	**310**	PFAKE		23 57 20.0	+15
VLC				LR	LR		
	comp=Z,14µm,22.0s						
BCLA	**Clavier**	**69.44**	**318**	⇑P	**P**	**23 57 05.1**	**+0.2**
ECH	**Echery**	**69.46**	**315**	PFAKE		23 57 20.0	+15
ECH				LR	LR		
	comp=Z,10µm,20.0s						
EYAK	**Cordova Ski Ar**	**69.47**	**30**	*e*P	**P**	**23 57 05.7**	**+0.8**
	comp=Z,279nm,1.3s						
EYAK				LR	LR		
	comp=Z,28µm,22.0s						
GLB	**Gilahina Butte**	**69.74**	**28**	*e*P	**P**	**23 57 06.5**	**-0.2**
	comp=Z,181nm,1.1s						
UCC	**Uccle**	**69.78**	**318**	PFAKE		23 57 20.0	+13
UCC				LR	LR		
	comp=Z,31µm,19.0s						
UCC	**Uccle**	**69.78**	**318**	⇑P	**P**	**23 57 07.1**	**+0.2**
DAWY	**Dawson**	**69.80**	**25**	PFAKE		23 57 20.0	+13
DAWY				LR	LR		
	comp=Z,12µm,18.0s						
BIGH	**Upper Bighouse**	**69.84**	**328**	⇑*e*P	**P**	**23 57 06.6**	**-0.6**
BIGH				IAmb	IAmb	23 57 09.6	
	comp=Z,401nm,1.5s						
BIGH				IAMs_20	IAMs_20	00 29 60.0	
	comp=Z,20µm,14.2s						
SNF	**Seneffe**	**69.96**	**318**	⇑P	**P**	**23 57 08.1**	**0.0**
DOU	**Dourbes**	**70.00**	**317**	⇑P	**P**	**23 57 08.4**	**+0.1**
RAGM	**Ragged Mountai**	**70.00**	**30**	PFAKE		23 57 20.0	+12
RAGM				LR	LR		
	comp=Z,35µm,22.0s						
DRUM	**Mains of Drumt**	**70.06**	**326**	⇑*e*P	**P**	**23 57 08.2**	**-0.4**
DRUM				IAmb	IAmb	23 57 11.2	
	comp=Z,173nm,1.0s						
SUMG	**Summit**	**70.14**	**349**	*e*P	**P**	**23 57 09.4**	**0.0**
	comp=Z,315nm,1.5s						
SUMG				LR	LR		
	comp=Z,16µm,19.0s						
SUMG	**Summit**	**70.14**	**349**	⇑*i*P	**P**	**23 57 09.4**	**0.0**
SUMG				pmax	pmax		
	comp=Z,1µm,1.7s						
SUMG	**Summit**	**70.14**	**349**	⇑*i*P	**P**	**23 57 09.4**	**0.0**
	comp=Z,1µm,1.7s						
HMT	**Hamilton**	**70.20**	**29**	*e*P	**P**	**23 57 10.0**	**+0.6**
	comp=Z,297nm,1.4s						
HMT				LR	LR		
	comp=Z,33µm,19.0s						
SENIN	**Lac Senin/Sane**	**70.28**	**313**	PFAKE		23 57 20.0	+10
SENIN				LR	LR		
	comp=Z,10µm,20.0s						
MRIV	**Mauritius Mete**	**70.33**	**227**	*e*P	**P**	**23 57 10.5**	**-0.3**
	comp=Z,150nm,1.1s						
MRIV				LR	LR		
	comp=Z,1µm,20.0s						
RES	**Resolute Bay**	**70.35**	**5**	PFAKE		23 57 20.0	+10
RES				LR	LR		
	comp=Z,9µm,19.0s						
KAIM	**Kayak Island**	**70.37**	**30**	*e*P	**P**	**23 57 11.0**	**+0.5**
	comp=Z,164nm,1.0s						
KAIM				LR	LR		
	comp=Z,32µm,18.0s						
CRQM	**Cirque**	**70.40**	**29**	PFAKE		23 57 20.0	+9.1
CRQM				LR	LR		
	comp=Z,23µm,22.0s						
KULLO	**Kullorsuaq**	**70.50**	**355**	⇑*i*P	**P**	**23 57 11.6**	**+0.6**
KULLO	**Kullorsuaq**	**70.50**	**355**	⇑*i*P	**P**	**23 57 11.6**	**+0.6**
EDU	**Dundee**	**70.51**	**326**	⇑*e*P	**P**	**23 57 11.3**	**0.0**
TGL	**Tana Glacier**	**70.53**	**29**	PFAKE		23 57 20.0	+8.4
TGL				LR	LR		
	comp=Z,21µm,18.0s						
WDD	**Wied Dalam**	**70.62**	**301**	PFAKE		23 57 20.0	+7.6
WDD				LR	LR		
	comp=Z,5µm,20.0s						
ESY	**Stoneypath**	**70.67**	**325**	⇑*e*P	**P**	**23 57 11.8**	**-0.6**
CLTB	**Caltabellotta**	**70.70**	**303**	PFAKE		23 57 30.0	+17
CLTB				LR	LR		
	comp=Z,9µm,21.0s						
WACR	**West Acre**	**70.78**	**321**	⇑*e*P	**P**	**23 57 13.0**	**-0.1**
WACR				IAmb	IAmb	23 57 16.0	
	comp=Z,438nm,0.9s						
WACR				IAMs_20	IAMs_20	00 30 44.1	

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      comp=Z,11µm,13.8s
LMK   Market Rasen     70.88 322⇑eP       P        23 57 13.2 -0.5
LMK                              IAmb     IAmb     23 57 15.0
      comp=Z,562nm,1.3s
LMK                              IAMs_20  IAMs_20  00 30 16.4
      comp=Z,11µm,15.2s
EBH   Black Hill       70.90 326 eP       P        23 57 13.5 -0.3
EDI   Edinburgh        70.93 325⇑eP       P        23 57 13.8 -0.2
EDI                              IAmb     IAmb     23 57 15.1
      comp=Z,270nm,1.5s
EDI                              IAMs_20  IAMs_20  00 33 48.6
      comp=Z,12µm,12.5s
EBL   Broad Law        70.95 325⇑eP       P        23 57 13.8 -0.2
EDMD  Edmundbyers      70.95 324⇑eP       P        23 57 13.2 -0.9
EDMD                             IAmb     IAmb     23 57 16.6
      comp=Z,170nm,1.1s
CTGM  Chitina Glacie   70.99  28 PFAKE             23 57 30.0 +16
CTGM                             LR       LR
      comp=Z,20µm,19.0s
KAC   Achnashellach    71.01 327⇑eP       P        23 57 14.0 -0.4
LPL   La Plagne        71.04 313 eP       P        23 57 14.4 -0.7
LPL                              pmax     pmax
      comp=Z,366nm,1.0s
EAU   Auchinoon        71.10 325⇑eP       P        23 57 14.9 -0.1
HPK   Haverah Park     71.26 323⇑eP       P        23 57 15.7 -0.3
HPK                              IAmb     IAmb     23 57 18.4
      comp=Z,140nm,1.0s
HPK                              IAMs_20  IAMs_20  00 30 49.0
      comp=Z,17µm,15.4s
KPL   Plockton         71.26 327⇑eP       P        23 57 14.7 -1.2
KPL                              IAmb     IAmb     23 57 17.2
      comp=Z,246nm,1.6s
KPL                              IAMs_20  IAMs_20  00 30 52.6
      comp=Z,24µm,14.8s
ESK   Eskdalemuir      71.28 325 eP       P        23 57 15.9 -0.2
      comp=Z,216nm,1.5s
ESK                              LR       LR
      comp=Z,7µm,20.0s
ESK   Eskdalemuir      71.28 325 eP       P        23 57 15.9 -0.2
ESK                              pmax     pmax
      comp=Z,216nm,1.5s
ESK                              MLR      MLR
      comp=Z,7µm,20.0s
BNI   Bardonecchia     71.31 312 PFAKE             23 57 30.0 +13
BNI                              LR       LR
      comp=Z,8µm,21.0s
EAB   Aberfoyle        71.32 326⇑eP       P        23 57 16.1 -0.2
ELSH  Elham, Standar   71.35 320⇑eP       P        23 57 16.5 -0.1
ELSH                             IAmb     IAmb     23 57 19.8
      comp=Z,276nm,0.9s
ELSH                             IAMs_20  IAMs_20  00 30 20.1
      comp=Z,22µm,14.4s
BHH   Howats Hill      71.41 325⇑eP       P        23 57 16.6 -0.2
SBF   Sospel           71.44 311 eP       P        23 57 16.1 -1.2
SBF                              pmax     pmax
      comp=Z,224nm,0.9s
PGBU  Gleniffebraes    71.60 326⇑eP       P        23 57 17.9 -0.2
PGBU                             IAmb     IAmb     23 57 19.5
      comp=Z,546nm,1.6s
PGBU                             IAMs_20  IAMs_20  00 33 15.1
      comp=Z,13µm,13.7s
LBWR  Ladybower, Pea   71.61 323⇑eP       P        23 57 17.4 -0.7
LBWR                             IAmb     IAmb     23 57 21.0
      comp=Z,256nm,1.0s
LBWR                             IAMs_20  IAMs_20  00 32 45.6
      comp=Z,10µm,13.5s
KESW  Keswick, Cumbr   71.64 324⇑eP       P        23 57 17.4 -0.8
KESW                             IAmb     IAmb     23 57 21.2
      comp=Z,198nm,1.1s
KESW                             IAMs_20  IAMs_20  00 30 54.9
      comp=Z,18µm,14.3s
TARA  Tarawa           71.72 101 eP       P        23 57 19.1 -0.3
      comp=Z,279nm,1.0s
TARA                             LR       LR
      comp=Z,3µm,20.0s
CWF   Charnwood Fore   71.77 322⇑eP       P        23 57 18.2 -0.8
CWF                              IAmb     IAmb     23 57 21.7
      comp=Z,84nm,1.2s
CWF                              IAMs_20  IAMs_20  00 35 50.0
      comp=Z,10µm,12.2s
KMBO  Kilima Mbogo     71.85 256 eP       P        23 57 20.6 +0.2
      comp=Z,320nm,1.4s
KMBO                             LR       LR
      comp=Z,5µm,21.0s
KMBO  Kilima Mbogo     71.85 256 eP       P        23 57 20.6 +0.2
KMBO                             pmax     pmax
      comp=Z,320nm,1.4s
KMBO                             MLR      MLR
      comp=Z,5µm,21.0s
HMNX  Herstmonceux     71.92 320⇑eP       P        23 57 20.3 +0.3
HMNX                             IAmb     IAmb     23 57 23.5
      comp=Z,432nm,0.8s
PCA   Pinnacle         71.94  28 eP       P        23 57 21.3 +1.2
      comp=Z,376nm,1.3s
PCA                              LR       LR
      comp=Z,18µm,19.0s
STNC  Stoke            72.03 323⇑eP       P        23 57 20.5 -0.1
STNC                             IAmb     IAmb     23 57 22.1
      comp=Z,576nm,2.0s
STNC                             IAMs_20  IAMs_20  00 31 25.2
      comp=Z,12µm,13.9s
RER   Riviere de l'E   72.05 227 eP       P        23 57 20.3 -0.8
      comp=Z,313nm,1.0s
SSF   Saint Saulge     72.17 315 eP       P        23 57 20.0 -1.6
SSF                              pmax     pmax
      comp=Z,191nm,1.6s
GAL1  Galloway         72.25 325⇑eP       P        23 57 21.7 -0.2
GAL1                             IAmb     IAmb     23 57 23.2
      comp=Z,288nm,1.6s
GAL1                             IAMs_20  IAMs_20  00 31 53.9
      comp=Z,10µm,16.9s
BCPM  Bancas Point     72.28  28 eP       P        23 57 22.9 +0.9
      comp=Z,165nm,1.1s
BCPM                             LR       LR
      comp=Z,15µm,19.0s
BORG  Borgarnes        72.35 339 eP       P        23 57 23.0 +0.7
      comp=Z,149nm,1.3s
BORG                             LR       LR
      comp=Z,8µm,18.0s
BORG  Borgarnes        72.35 339 eP       P        23 57 23.0 +0.7
BORG                             pmax     pmax
      comp=Z,149nm,1.3s
BORG                             MLR      MLR
      comp=Z,8µm,18.0s
CLF   Chambon-Foret    72.38 316 eP       P        23 57 22.9  0.0
      comp=Z,430nm,1.2s
CLF                              LR       LR
      comp=Z,11µm,19.0s
SSB   Saint Sauveur    72.49 313 eP       P        23 57 23.4 -0.2
      comp=Z,171nm,1.5s
SSB                              LR       LR
      comp=Z,10µm,18.0s
SSB   Saint Sauveur    72.49 313 eP       P        23 57 23.4 -0.2
SSB                              pmax     pmax
      comp=Z,171nm,1.5s
SSB                              MLR      MLR
      comp=Z,10µm,18.0s
WOL   Wolverton        72.50 321⇑eP       P        23 57 23.1 -0.4
WOL                              IAmb     IAmb     23 57 24.7
      comp=Z,411nm,1.6s
WOL                              IAMs_20  IAMs_20  00 32 55.3
      comp=Z,11µm,13.8s
IOMK  Kirk Michael     72.53 324⇑eP       P        23 57 23.2 -0.4
IOMK                             IAmb     IAmb     23 57 25.0
      comp=Z,731nm,1.5s
IOMK                             IAMs_20  IAMs_20  00 31 30.7
      comp=Z,36µm,13.5s
HYT   Haines Junctio   72.53  27 PFAKE             23 57 40.0 +16
HYT                              LR       LR
      comp=Z,12µm,18.0s
YKU2  Yakutat          72.54  29 eP       P        23 57 23.3 -0.2
      comp=Z,553nm,1.1s
VIVF  Saint-Julien-l   72.63 313 eP       P        23 57 23.2 -1.3
VIVF                             pmax     pmax
      comp=Z,125nm,1.5s
FOEL  Foel Wylfa       72.64 323⇑eP       P        23 57 24.0 -0.3
FOEL                             IAmb     IAmb     23 57 26.3
      comp=Z,191nm,1.2s
FOEL                             IAMs_20  IAMs_20  00 31 42.9
      comp=Z,13µm,15.6s
WIM   Isle of Man      72.64 324⇑eP       P        23 57 24.4 +0.1
HLM1  Long Mynd        72.69 322⇑eP       P        23 57 24.2 -0.4
HLM1                             IAmb     IAmb     23 57 27.6
      comp=Z,162nm,1.1s
HLM1                             IAMs_20  IAMs_20  00 31 22.5
      comp=Z,13µm,13.7s
SWN1  Swindon          72.69 321⇑eP       P        23 57 23.9 -0.7
SWN1                             IAmb     IAmb     23 57 27.1
      comp=Z,274nm,1.0s
SWN1                             IAMs_20  IAMs_20  00 31 54.1
      comp=Z,18µm,13.7s
STRD  Stroud           72.74 321⇑eP       P        23 57 24.6 -0.3
STRD                             IAmb     IAmb     23 57 26.1
      comp=Z,426nm,1.1s
STRD                             IAMs_20  IAMs_20  00 32 10.2
      comp=Z,12µm,14.2s
CLGH  Cloghs, Cushen   72.78 326⇑eP       P        23 57 24.9 -0.2
CLGH                             IAmb     IAmb     23 57 26.4
      comp=Z,237nm,1.6s
LLW   Llanuwychllyn    72.89 323⇑eP       P        23 57 24.3 -1.5
LLW                              IAmb     IAmb     23 57 28.3
      comp=Z,54nm,1.1s
WME   Myndd Eilian     72.89 324⇑eP       P        23 57 25.5 -0.3
YLL   Llanberis        72.98 323⇑eP       P        23 57 25.9 -0.4
WPS   Cemaes, Angles   72.99 324⇑eP       P        23 57 26.0 -0.3
WPS                              IAmb     IAmb     23 57 27.6
      comp=Z,187nm,1.4s
WPS                              IAMs_20  IAMs_20  00 31 52.7
      comp=Z,9µm,14.5s
OLDB  Oldbury-Upon-S   73.00 321⇑eP       P        23 57 26.0 -0.4
OLDB                             IAmb     IAmb     23 57 29.2
      comp=Z,195nm,0.9s
OLDB                             IAMs_20  IAMs_20  00 32 19.6
      comp=Z,11µm,12.9s
WLF1  Llynfaes         73.00 324⇑eP       P        23 57 25.8 -0.6
WLF1                             IAmb     IAmb     23 57 27.8
      comp=Z,514nm,1.5s
WLF1                             IAMs_20  IAMs_20  00 33 42.4
      comp=Z,20µm,14.4s
BATH  Bath             73.01 321⇑eP       P        23 57 26.0 -0.5
BATH                             IAmb     IAmb     23 57 28.8
      comp=Z,211nm,1.0s
BATH                             IAMs_20  IAMs_20  00 32 11.3
      comp=Z,18µm,14.2s
MONM  Monmouth         73.03 322⇑eP       P        23 57 25.3 -1.3
MONM                             IAmb     IAmb     23 57 27.8
      comp=Z,348nm,1.6s
MONM                             IAMs_20  IAMs_20  00 32 10.2
      comp=Z,15µm,13.9s
MCH1  Michaelchurch    73.04 322⇑eP       P        23 57 26.1 -0.6
MCH1                             IAmb     IAmb     23 57 29.5
      comp=Z,128nm,0.9s
MCH1                             IAMs_20  IAMs_20  00 32 10.7
      comp=Z,10µm,15.5s
YRC   Rhoscolyn        73.11 324⇑eP       P        23 57 26.1 -1.0
GMM   Mts of Mourne    73.20 325⇑eP       P        23 57 27.3 -0.2
RSBS  Rosebush, Pemb   73.95 322⇑eP       P        23 57 31.6 -0.4
RSBS                             IAmb     IAmb     23 57 33.8
      comp=Z,62nm,1.1s
RSBS                             IAMs_20  IAMs_20  00 31 22.0
      comp=Z,6µm,18.8s
DSB   Dublin           73.99 324 eP       P        23 57 32.4 +0.1
      comp=Z,112nm,1.2s
DSB                              LR       LR
      comp=Z,10µm,18.0s
JQE   Queens East      74.12 319 eP       P        23 57 32.0 -1.1
CAF   Calviac          74.16 314 eP       P        23 57 32.8 -0.7
CAF                              pmax     pmax
      comp=Z,198nm,1.6s
JSA   Saint Aubin      74.20 319⇑eP       P        23 57 33.2 -0.3
JSA                              IAmb     IAmb     23 57 34.8
      comp=Z,190nm,1.2s
JSA                              IAMs_20  IAMs_20  00 32 15.3
      comp=Z,22µm,17.1s
SKAG  Skagway          74.26  27 PFAKE             23 57 50.0 +16
SKAG                             LR       LR
      comp=Z,30µm,19.0s
KEST  Kesra            74.32 303 P        P        23 57 34.9 +0.2
      comp=Z,62nm,1.1s,baz=17,slow=2.1,SNR=30
KEST                             LR       LR       00 35 25.4
      comp=Z,8µm,18.7s,baz=358,slow=40
KEST  Kesra            74.32 303 PFAKE             23 57 50.0 +15
KEST                             LR       LR
      comp=Z,8µm,18.0s
HTL   Hartland         74.38 322⇑eP       P        23 57 34.3 -0.2
HTL                              IAmb     IAmb     23 57 37.7
      comp=Z,125nm,0.9s
HTL                              IAMs_20  IAMs_20  00 33 00.7
      comp=Z,15µm,17.8s
STKA  Stephens Creek   74.79 148 P        P        23 57 37.4 +0.3
      comp=Z,166nm,0.7s,baz=333,slow=6.2,SNR=183
STKA  Stephens Creek   74.79 148 PFAKE             23 57 50.0 +13
STKA                             LR       LR
      comp=Z,1µm,21.0s
LFF   La Frestale      74.94 314 eP       P        23 57 37.3 -0.6
LFF                              pmax     pmax
      comp=Z,264nm,1.9s
ILULI Ilulissat        75.00 351 PFAKE             23 57 50.0 +12
ILULI                            LR       LR
      comp=Z,13µm,18.0s
ILULI Ilulissat        75.00 351⇑iP       P        23 57 37.6 -0.2
ILULI                            pmax     pmax
      comp=Z,130nm,1.1s
ILULI Ilulissat        75.00 351⇑iP       P        23 57 37.6 -0.2
      comp=Z,134nm,1.1s
BESE  Bessie Mountai   75.03  28 PFAKE             23 57 50.0 +12
BESE                             LR       LR
      comp=Z,20µm,18.0s
CMAH  Djebel Manchou   75.18 304 P        P        23 57 39.7 +0.1
CCA1  Carnmenellis     75.24 321⇑eP       P        23 57 38.9 -0.7
CCA1                             IAmb     IAmb     23 57 40.6
      comp=Z,122nm,1.4s
CCA1                             IAMs_20  IAMs_20  00 33 37.9
      comp=Z,22µm,13.8s
ABSA  Djebel Ababsia   75.33 304 P        P        23 57 39.1 -1.4
JIS   Juneau Island    75.42  28 PFAKE             23 57 50.0 +10
JIS                              LR       LR
      comp=Z,13µm,20.0s
CAEH  'Ain El Ouahch   75.48 305 P        P        23 57 41.6 +0.3
MAHO  Mahon            75.52 309 eP       P        23 57 40.1 -1.3
MAHO                             i S      S        00 07 25.6 +3.1
CKFL  Kef-Lekhel       75.78 304 P        P        23 57 43.2 +0.1
SIT   Sitka            75.89  29 eP       P        23 57 44.5 +1.4
      comp=Z,324nm,1.4s
SIT                              LR       LR
      comp=Z,14µm,21.0s
ANGG  Ammassalik, Gr   75.92 345 PFAKE             23 58 00.0 +17
ANGG                             LR       LR
      comp=Z,12µm,22.0s
ABPO  Ambohimpanom     75.97 235 eP       P        23 57 44.2 -0.1
      comp=Z,196nm,1.2s
ABPO                             LR       LR
      comp=Z,5µm,19.0s
ABPO  Ambohimpanom     75.97 235 eP       P        23 57 44.2 -0.1
ABPO                             pmax     pmax
      comp=Z,197nm,1.2s
ABPO                             MLR      MLR
      comp=Z,5µm,19.0s
CASM  Ain Smara        76.01 304 P        P        23 57 44.8 +0.5
CTEI  Djebel Teioual   76.17 304 P        P        23 57 45.6 +0.3
DFRA  Djebel Bou Aff   76.27 305 P        P        23 57 46.4 +0.5
SET   Setif            76.78 305 P        P        23 57 50.0 +1.2
MBAR  Mbarara          76.80 260 eP       P        23 57 49.4 +0.1
      comp=Z,233nm,1.4s
MBAR                             LR       LR
      comp=Z,4µm,20.0s
MBAR  Mbarara          76.80 260 eP       P        23 57 49.4 +0.1
MBAR                             pmax     pmax
      comp=Z,233nm,1.4s
MBAR                             MLR      MLR
      comp=Z,4µm,20.0s
CKHR  Kef el Ahmar     76.80 305 P        P        23 57 49.7 +0.8
DLBC  Dease Lake       76.94  26 PFAKE             23 58 00.0 +11
DLBC                             LR       LR
      comp=Z,22µm,18.0s
SFJD  Kangerlussuaq    77.02 350 eP       P        23 57 49.7 +0.3
      comp=Z,160nm,1.1s
SFJD                             LR       LR
      comp=Z,15µm,20.0s
SFJD  Kangerlussuaq    77.02 350 eP       P        23 57 49.7 +0.3
SFJD                             pmax     pmax
      comp=Z,160nm,1.1s
SFJD                             MLR      MLR
      comp=Z,15µm,20.0s
SFJD  Kangerlussuaq    77.02 350⇑iP       P        23 57 49.3 -0.1
      comp=Z,109nm,1.1s
WRAK  Wrangell Islan   77.51  28 eP       P        23 57 53.6 +1.3
      comp=Z,163nm,1.2s
WRAK                             LR       LR
      comp=Z,10µm,20.0s
JOHN  Johnston Islan   77.66  78 eP       P        23 57 53.7 -0.1
      comp=Z,170nm,0.9s
CRAG  Craig            77.87  29 eP       P        23 57 55.3 +1.0
YKW3  Yellowknife Ar   78.35  17 PFAKE             23 58 10.0 +13
YKW3                             LR       LR
      comp=Z,7µm,21.0s
YKA   Yellowknife Ar   78.41  17 P        P        23 57 57.5 +0.3
      comp=Z,70nm,0.7s,baz=326,slow=5.2,SNR=161
YKA                              S        S        00 07 52.4 -0.8
      comp=Z,0.6nm,0.8s,baz=314,slow=9.1,SNR=2.9
YKA                              PKKPbc   PKKPbc   00 16 51.4 -3.0
      comp=Z,2.4nm,0.5s,baz=158,slow=1.8,SNR=18
YKA                              LR       LR       00 34 52.2
      comp=Z,818nm,20.6s,baz=312,slow=38
EBNR  Beni Rached      79.32 307 P        P        23 58 03.5 +0.7
ECHA  Ech Chlef        79.51 307 P        P        23 58 04.7 +1.0
EANR  'Ain N'Sour      79.80 307 P        P        23 58 06.5 +1.0
ETRT  Tiaret           79.99 306 P        P        23 58 07.8 +1.2
UCM   Universidad Co   80.02 312⇑iP       P        23 58 04.8 -1.7
UCM                              i S      S        00 08 10.3 -0.9
ESDC  Sonseca Array    80.84 312 P        P        23 58 11.1 +0.1
      comp=Z,6.5nm,0.7s,baz=46,slow=5.2,SNR=76
ESDC                             S        S        00 08 20.1 +0.2
      comp=Z,0.0nm,0.3s,baz=345,slow=4.4,SNR=3.0
ESDC                             PKKPbc   PKKPbc   00 16 49.6 +1.1
      comp=Z,3.1nm,0.9s,baz=279,slow=1.8,SNR=16
ESDC                             LR       LR       00 37 25.1
      comp=Z,4µm,18.6s,baz=60,slow=38
ESLA  Sonseca Array    80.84 312 PFAKE             23 58 20.0 +9.0
ESLA                             LR       LR
      comp=Z,6µm,20.0s
SESP  Santiago Espad   80.89 310 P        P        23 58 12.3 +0.9
SESP  Santiago Espad   80.89 310 P        P        23 58 11.5 +0.1
CAN   Canberra         81.07 144 PFAKE             23 58 20.0 +8.0
CAN                              LR       LR
      comp=Z,3µm,22.0s
PAB   San Pablo        81.15 312 eP       P        23 58 12.8 +0.1
      comp=Z,46nm,1.4s
PAB                              LR       LR
      comp=Z,8µm,18.0s
PAB   San Pablo        81.15 312 eP       P        23 58 12.8 +0.1
PAB                              pmax     pmax
      comp=Z,46nm,1.4s
PAB                              MLR      MLR
      comp=Z,8µm,18.0s
NRS   Narsarsuaq       81.52 346 eP       P        23 58 13.3 -0.7
      comp=Z,128nm,1.4s
NRS                              LR       LR
      comp=Z,12µm,21.0s
NRS   Narsarsuaq       81.52 346 eP       P        23 58 13.3 -0.7
NRS                              pmax     pmax
      comp=Z,128nm,1.4s
NRS                              MLR      MLR
      comp=Z,12µm,21.0s
DZM   Mont Dzumac      81.56 124 eP       P        23 58 16.6 +1.7
      comp=Z,1µm,1.4s
DZM   Mont Dzumac      81.56 124 eLR      LR       00 23 50.7
      comp=Z,7µm,33.1s
DZM   Mont Dzumac      81.56 124 PFAKE             23 58 30.0 +15
DZM                              LR       LR
      comp=Z,2µm,20.0s
MVO   Moncorvo         81.76 315⇑iP       P        23 58 16.3 +0.5
      comp=Z,96nm,1.6s
MVO   Moncorvo         81.76 315 ePP      PP       00 01 22.1 -0.1
MVO                              eS       S        00 08 31.5 +2.1
MVO   Moncorvo         81.76 315 eLR      LR       00 31 25.5
      comp=Z,6µm,18.0s
PGAV  Gavieira, Arco   81.97 316⇑iP       P        23 58 17.6 +0.6
      comp=Z,170nm,1.7s
PGAV  Gavieira, Arco   81.97 316 ePP      PP       00 01 24.2 +0.2
PGAV                             eS       S        00 08 33.2 +1.5
PGAV  Gavieira, Arco   81.97 316 eLQ      LQ       00 24 55.4
PGAV                             eLR      LR       00 28 18.5
      comp=Z,5µm,18.0s
PCAB  Cabril           81.99 316⇑iP       P        23 58 17.5 +0.5
      comp=Z,192nm,1.5s
PCAB  Cabril           81.99 316 ePP      PP       00 01 24.8 +0.7
IVI   Ivigtut          82.01 347 eP       P        23 58 16.9 +0.3
      comp=Z,136nm,1.2s
IVI                              LR       LR
      comp=Z,15µm,20.0s
POLO  Lamas de Olo     82.07 315⇑iP       P        23 58 18.0 +0.5
      comp=Z,49nm,1.5s
POLO  Lamas de Olo     82.07 315 ePP      PP       00 01 24.9 +0.1
PVRL  Vila Real        82.09 315⇑iP       P        23 58 18.0 +0.5
      comp=Z,80nm,1.6s
PVRL  Vila Real        82.09 315 ePP      PP       00 01 25.1 +0.2
MARNC Mare, Loyalty    82.26 123 eP       P        23 58 18.5  0.0
      comp=Z,876nm,1.4s
BBB   Bella Bella      82.30  29 PFAKE             23 58 30.0 +12
BBB                              LR       LR
      comp=Z,8µm,18.0s
MTE   Manteigas        82.54 314⇑iP       P        23 58 20.7 +0.7
      comp=Z,135nm,1.6s
MTE   Manteigas        82.54 314 ePP      PP       00 01 29.3 +0.6
MTE                              eS       S        00 08 40.5 +3.0
MTE   Manteigas        82.54 314 eLQ      LQ       00 28 57.7
MTE                              eLR      LR       00 31 18.3
      comp=Z,7µm,18.0s
MTE   Manteigas        82.54 314 PFAKE             23 58 30.0 +10
MTE                              LR       LR
      comp=Z,7µm,20.0s
PVIS  Viseu            82.55 315⇑iP       P        23 58 20.6 +0.6
      comp=Z,121nm,1.6s
PVIS  Viseu            82.55 315 ePP      PP       00 01 28.6 -0.1
KEKH  Kekaha           82.57  69 eP       P        23 58 17.2 -3.0
      comp=Z,142nm,1.1s
FUNA  Funafuti         82.57 106 eP       P        23 58 22.1 +1.7
      comp=Z,304nm,1.4s
PINNC Pines Island,    82.61 124 eP       P        23 58 21.2 +0.9
      comp=Z,237nm,1.2s
HORN  Hornachuelos     82.76 311 P        P        23 58 21.5 +0.4
HORN  Hornachuelos     82.76 311 P        P        23 58 21.2 +0.2
HORN  Hornachuelos     82.76 311 P        P        23 58 21.4 +0.4
TAF   Taforalt         82.79 307 P        P        23 58 24.0 +2.6
TAF   Taforalt         82.79 307 P        P        23 58 23.0 +1.6
MELI  Melilla          82.84 308 i P      P        23 58 19.8 -1.7
MELI                             i S      S        00 08 42.8 +2.3
PCBR  Castelo Branco   82.86 314⇑iP       P        23 58 22.0 +0.5
      comp=Z,85nm,1.6s
PCBR  Castelo Branco   82.86 314 ePP      PP       00 01 32.5 +1.3
EMAL  Malaga-Limoner   82.91 310⇑iP       P        23 58 19.9 -1.9
EMAL                             i S      S        00 08 37.9 -3.2
PMRV  Marv??o          83.07 314⇑iP       P        23 58 23.2 +0.6
      comp=Z,162nm,1.5s
PMRV  Marv??o          83.07 314 ePP      PP       00 01 33.4 +0.5
PMRV                             eS       S        00 08 42.1 -0.7
PMRV  Marv??o          83.07 314 eLR      LR       00 31 16.4
      comp=Z,9µm,18.0s
COI   Coimbra          83.18 315⇑iP       P        23 58 24.0 +0.9
      comp=Z,180nm,1.4s
COI   Coimbra          83.18 315 ePP      PP       00 01 34.4 +0.6
COI   Coimbra          83.18 315 PFAKE             23 58 30.0 +6.9
COI                              LR       LR
      comp=Z,9µm,19.0s
JBK   JBK              83.18 307 P        P        23 58 24.2 +0.7
JBK   JBK              83.18 307 P        P        23 58 25.0 +1.4
PCAS  Casmilo, Conde   83.33 315⇑iP       P        23 58 24.6 +0.6
      comp=Z,106nm,1.5s
PCAS  Casmilo, Conde   83.33 315 ePP      PP       00 01 35.4 +0.4
LIJA  Lijar            83.43 311 i P      P        23 58 23.2 -1.4
LHI   Lord Howe Isla   83.50 135 eP       P        23 58 26.1 +1.4
      comp=Z,299nm,1.2s
PALE  Palemas          83.54 308 P        P        23 58 26.0 +0.8
PTOM  Tomar            83.55 314⇑iP       P        23 58 25.7 +0.6
      comp=Z,159nm,2.0s
PTOM  Tomar            83.55 314 ePP      PP       00 01 36.6 -0.3
TDRA  Tendrara         83.60 306 P        P        23 58 27.0 +1.2
TDRA  Tendrara         83.60 306 P        P        23 58 28.0 +2.2
FIGM  Figuig           83.63 305 P        P        23 58 26.0 +0.2
FIGM  Figuig           83.63 305 P        P        23 58 27.0 +1.2
PMTG  Montargil        83.80 314⇑iP       P        23 58 26.7 +0.3
      comp=Z,93nm,1.4s
PMTG  Montargil        83.80 314 ePP      PP       00 01 39.0 +0.1
AKLM  AKL              83.92 308 P        P        23 58 28.0 +0.8
ALMR  Almeirim         83.95 314 eP       P        23 58 27.3 +0.2
ALMR                             eS       SKSac    00 08 49.5 -1.6
ALMR                             AMS      AMS      00 39 31.8
      comp=E,9µm,23.7s
ALMR  Almeirim         83.95 314⇑iP       P        23 58 28.4 +1.3
      comp=E,182nm,1.5s
ALMR  Almeirim         83.95 314 ePP      PP       00 01 41.0 +0.9
CEUT  Ceuta            84.02 310 P        P        23 58 26.9 -0.6
CEUT  Ceuta            84.02 310 P        P        23 58 27.1 -0.5
CEU   Ceuta            84.04 310 i P      P        23 58 24.5 -3.1
CEU                              i S      SKSac    00 08 49.4 -2.3
OPA   Opana            84.04  68 eP       P        23 58 27.7 -0.1
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             comp=E,108nm,1.0s
OPA                                 LR       LR
             comp=Z,3µm,22.0s
SMIR   Smir Dam           84.18 310  P       P        23 58 28.0  -0.4
SMIR   Smir Dam           84.18 310  P       P        23 58 29.0 +0.6
TAM    Tamanrasset        84.18 294  PFAKE            23 58 40.0  +11
TAM                                  LR      LR
             comp=Z,5µm,22.0s
KIP    Kipapa             84.18  68 eP       P        23 58 28.9 +0.3
             comp=Z,123nm,1.1s
KIP                                  LR      LR
             comp=Z,3µm,20.0s
SFS    San Fernando       84.21 311 eP       P        23 58 29.9 +1.4
             comp=Z,150nm,1.2s
SFS                                  LR      LR
             comp=Z,8µm,18.0s
SFS    San Fernando       84.21 311 i P      P        23 58 26.9  -1.6
SFS                                 i S      SKKSac   00 08 58.6 +0.6
PBEJ   Beja               84.25 313⥣iP       P        23 58 30.3 +1.6
             comp=Z,99nm,1.4s
PBEJ   Beja               84.25 313 ePP      PP       00 01 43.4 +0.8
HON    Honolulu           84.25  68 eP       P        23 58 25.2  -3.7
             comp=Z,218nm,1.0s
HON                                  LR      LR
             comp=Z,4µm,21.0s
HON    Honolulu           84.25  68 eP       P        23 58 25.2  -3.7
HON                                  pmax    pmax
             comp=Z,218nm,1.0s
HON                                  MLR     MLR
             comp=Z,4µm,21.0s
PMAFR  Mafra              84.50 314⥣iP       P        23 58 30.2 +0.2
             comp=Z,226nm,1.6s
CHEFC  Chefchaouen        84.51 309  P       P        23 58 31.0 +0.8
CHEFC  Chefchaouen        84.51 309  P       P        23 58 30.0  -0.2
PVAQ   Vaqueiros          84.55 312⥣iP       P        23 58 31.0 +0.8
             comp=Z,111nm,1.5s
PVAQ   Vaqueiros          84.55 312 ePP      PP       00 01 46.0 +0.9
PVAQ                                eS       SKSac    00 08 54.4  -0.6
PVAQ   Vaqueiros          84.55 312 eLQ      LQ       00 25 10.1
PVAQ                                eLR      LR       00 30 59.3
             comp=Z,6µm,20.0s
PVAQ   Vaqueiros          84.55 312  PFAKE            23 58 40.0  +10
PVAQ                                 LR      LR
             comp=Z,8µm,21.0s
PVAQ   Vaqueiros          84.55 312  P       P        23 58 31.0 +0.8
LIS    Lisbon             84.57 314 eP       P        23 58 30.4 +0.1
LIS                                 eSKSac   SKSac    00 08 53.7  -1.4
LIS                                  AMS     AMS      00 40 07.0
             comp=E,10µm,16.3s
LIS    Lisbon             84.57 314 eP       P        23 58 30.4 +0.1
LIS                                 e                 00 08 53.7
PNCL   Nicolau / Gran     84.59 313⥣iP       P        23 58 31.1 +0.7
             comp=E,115nm,1.5s
PNCL   Nicolau / Gran     84.59 313 ePP      PP       00 01 45.7 +0.3
PCVE   Castro Verde       84.60 312⥣iP       P        23 58 31.1 +0.6
             comp=E,119nm,1.4s
PCVE   Castro Verde       84.60 312 ePP      PP       00 01 45.6 +0.1
PBDV   Barranco-do-Ve     84.79 312⥣iP       P        23 58 32.1 +0.6
             comp=E,171nm,1.6s
PBDV   Barranco-do-Ve     84.79 312 ePP      PP       00 01 46.8  -0.2
RSA    Sarsar             84.96 309  P       P        23 58 34.0 +1.6
PTEO   Sao Teotonio       85.08 313⥣iP       P        23 58 33.3 +0.4
             comp=E,188nm,1.8s
PTEO   Sao Teotonio       85.08 313 ePP      PP       00 01 50.5 +1.2
LCRM   LCR                85.08 308  P       P        23 58 35.1 +1.9
SICH   Sidi Chahed        85.12 308  P       P        23 58 34.0 +0.8
SICH   Sidi Chahed        85.12 308  P       P        23 58 35.0 +1.8
MORF   Marmelete          85.19 313 eP       P        23 58 33.5   0.0
MORF                                eSKSac   SKSac    00 08 57.6  -1.6
MORF                                 AMS     AMS      00 39 08.3
             comp=E,7µm,15.6s
MORF   Marmelete          85.19 313⥣iP       P        23 58 34.0 +0.5
             comp=E,176nm,1.5s
MORF   Marmelete          85.19 313 ePP      PP       00 01 50.8 +0.5
PFVI   Vila Bisbo         85.40 312⥣iP       P        23 58 35.1 +0.6
             comp=E,204nm,1.7s
PFVI   Vila Bisbo         85.40 312 ePP      PP       00 01 52.4 +0.4
PFVI   Vila Bisbo         85.40 312 eP       P        23 58 35.1 +0.6
             comp=E,174nm,1.5s
PFVI                                 LR      LR
             comp=Z,6µm,18.0s
PFVI   Vila Bisbo         85.40 312  P       P        23 58 35.7 +1.2
MDT    Midelt             85.45 307  P       P        23 58 36.1 +1.1
CZD    Col de Zad         85.61 307  P       P        23 58 38.0 +2.0
KHLH   Kahului Airpor     85.70  68 eP       P        23 58 36.5 +0.3
             comp=Z,77nm,0.9s
KHLH                                 LR      LR
             comp=Z,3µm,20.0s
FCC    Fort Churchill     85.83   9  PFAKE            23 58 50.0  +14
FCC                                  LR      LR
             comp=Z,11µm,20.0s
HLK    Haleakala          85.92  68 eP       P        23 58 37.2  -0.5
             comp=Z,258nm,1.4s
HLK                                  LR      LR
             comp=Z,3µm,19.0s
LLLB   Lillooet           85.98  27  PFAKE            23 58 50.0  +13
LLLB                                 LR      LR
             comp=Z,13µm,20.0s
RTC    Rabat Centre       86.18 309 eP       P        23 58 38.7 +0.2
             comp=Z,364nm,1.0s
RTC                                  LR      LR
             comp=Z,10µm,20.0s
RTC    Rabat Centre       86.18 309  P       P        23 58 40.1 +1.6
GOLM   Goulmima           86.37 306  P       P        23 58 41.0 +1.4
ZHG    ZHG                86.39 308  P       P        23 58 42.0 +2.4
TAU    Tasmania Unive     86.52 150 eP       P        23 58 40.5 +0.9
             comp=Z,346nm,1.3s
TAU    Tasmania Unive     86.52 150 eP       P        23 58 40.5 +0.9
TAU                                  pmax    pmax
             comp=Z,346nm,1.3s
KNTN   Kanton             86.63  96 eP       P        23 58 41.1 +0.2
             comp=Z,210nm,1.4s
HPAH   Hawaii Prepara     86.75  68  PFAKE            23 58 50.0 +8.4
HPAH                                 LR      LR
             comp=Z,3µm,20.0s
HUH    Hualalai           86.85  68 eP       P        23 58 43.2 +0.9
             comp=Z,225nm,1.4s
KHLU   Kahalu`u           86.86  68 eP       P        23 58 42.2 +0.1
             comp=Z,104nm,1.0s
KHLU                                 LR      LR
             comp=Z,2µm,21.0s
PGC    Sidney             86.93  29 eP       P        23 58 41.9 +0.1
             comp=Z,84nm,1.4s
POHA   Pohakuloa          87.04  68 eP       P        23 58 44.1 +1.0
             comp=Z,167nm,1.1s
POHA                                 LR      LR
             comp=Z,2µm,19.0s
MLOA   Mauna Loa Obse     87.13  68 eP       P        23 58 42.6  -1.3
             comp=Z,120nm,1.1s
MLOA                                 LR      LR
             comp=Z,3µm,20.0s
MWH    Moku‘aweowe        87.15  68 eP       P        23 58 42.8  -1.3
             comp=Z,109nm,1.1s
HMH    Humu‘ula Sheep     87.17  68 eP       P        23 58 45.2 +1.3
             comp=Z,167nm,1.3s
A04D   Lummi Island       87.17  29  P       P        23 58 44.1 +1.1
             baz=323
KHU    Kahuku             87.27  69 eP       P        23 58 44.8 +0.5
             comp=Z,349nm,1.4s
KHU                                  LR      LR
             comp=Z,3µm,22.0s
MLH    Mauna Loa          87.30  68 eP       P        23 58 43.8  -0.7
             comp=Z,180nm,1.1s
MLH    Mauna Loa          87.30  68 eP       P        23 58 43.8  -0.7
MLH                                  pmax    pmax
             comp=Z,180nm,1.1s
AIN    Ainahou            87.32  68 eP       P        23 58 43.0  -1.4
             comp=Z,251nm,1.3s
UWE    Uwekahuna          87.42  68 eP       P        23 58 44.0  -0.9
             comp=Z,224nm,1.0s
SBLHI  Steaming Bluff     87.43  68 eP       P        23 58 44.0  -0.9
             comp=Z,266nm,1.1s
HATHI  Halema‘uma‘u T     87.44  68 eP       P        23 58 43.0  -1.9
             comp=Z,460nm,1.4s
RIM    Rim                87.45  68 eP       P        23 58 44.5  -0.5
             comp=Z,200nm,0.8s
BYL    Byron's Ledge      87.45  68 eP       P        23 58 43.5  -1.5
             comp=Z,321nm,1.0s
KKO    Keanakako`i        87.45  68 eP       P        23 58 44.5  -0.5
             comp=Z,157nm,0.9s
LSZ    Lusaka             87.47 250 eP       P        23 58 44.8  -0.2
             comp=Z,54nm,1.1s
LSZ                                  LR      LR
             comp=Z,6µm,18.0s
LSZ    Lusaka             87.47 250 eP       P        23 58 44.8  -0.2
LSZ                                  pmax    pmax
             comp=Z,54nm,1.1s
LSZ                                  MLR     MLR
             comp=Z,6µm,18.0s
HLP    Hilina Pali        87.48  68 eP       P        23 58 44.2  -0.9
             comp=Z,328nm,1.1s
PUH    Pauahi             87.50  68 eP       P        23 58 46.1 +0.8
             comp=Z,459nm,1.4s
STCH   Steam Cracks       87.57  68 eP       P        23 58 45.7 +0.1
             comp=Z,319nm,1.2s
NPOC   North of Pu‘u      87.57  68 eP       P        23 58 46.3 +0.7
             comp=Z,330nm,0.5s
JCUZ   Jacuzzi            87.59  68 eP       P        23 58 44.2  -1.4
             comp=Z,298nm,0.9s
NLWA   Neilton Lookou     87.75  30 eP       P        23 58 47.0 +1.1
             comp=Z,70nm,1.4s
NLWA                                 LR      LR
             comp=Z,10µm,18.0s
B05A   Bryant             87.78  29  P       P        23 58 46.4 +0.5
             baz=323,SNR=14
SRHM   Skhour des Reh     87.82 308  P       P        23 58 48.0 +1.4
D03D   Eldon              87.96  30  P       P        23 58 48.2 +1.4
             baz=323,SNR=9.7
OUZM   OUZ                88.07 307  P       P        23 58 49.0 +1.1
OUZM   OUZ                88.07 307  P       P        23 58 50.0 +2.1
FFC    Flin Flon          88.30  15 eP       P        23 58 48.2  -0.1
             comp=Z,2µm,1.1s
FFC                                  LR      LR
             comp=Z,11µm,21.0s
FFC    Flin Flon          88.30  15 eP       P        23 58 48.2  -0.1
FFC                                  MLR     MLR
             comp=Z,11µm,21.0s
D04E   Lakebay            88.38  30  P       P        23 58 49.7 +0.9
             baz=323
C06D   Leavenworth        88.53  28  P       P        23 58 49.8 +0.2
             baz=324
D05A   Enumclaw           88.69  30 eP       P        23 58 51.6 +1.3
             comp=Z,59nm,1.1s
D05A                                 LR      LR
             comp=Z,8µm,20.0s
B08A   Colville Reser     88.78  27 eP       P        23 58 51.4 +0.6
             comp=Z,36nm,0.8s
B08A                                 LR      LR
             comp=Z,14µm,20.0s
E04D   Cinebar            88.96  30  P       P        23 58 52.4 +0.9
             baz=323,SNR=19
LON    Longmire           89.11  30 eP       P        23 58 52.7 +0.3
             comp=Z,32nm,1.4s
LON                                  LR      LR
             comp=Z,7µm,20.0s
LON    Longmire           89.11  30 eP       P        23 58 52.7 +0.3
LON                                  pmax    pmax
             comp=Z,32nm,1.4s
LON                                  MLR     MLR
             comp=Z,7µm,20.0s
F04D   Rainier, OR        89.15  31  P       P        23 58 53.1 +0.6
             baz=323
LTY    Liberty            89.16  29  PFAKE            23 59 00.0 +7.4
LTY                                  LR      LR
             comp=Z,8µm,20.0s
TTIG   Tnine Tigouga,     89.42 307  P       P        23 58 56.0 +1.8
ITZ    Itezhi-Tezhi       89.43 251⥣iP       P        23 58 53.5  -0.8
ITZ                                 i S      SKSac    00 09 24.2  -1.3
EAH    EAH                89.44 309  P       P        23 58 57.0 +2.8
C09A   Chrisman Ranch     89.64  27  PFAKE            23 59 10.0  +15
C09A                                 LR      LR
             comp=Z,15µm,19.0s
NEW    Newport            89.69  26  PFAKE            23 59 10.0  +15
NEW                                  LR      LR
             comp=Z,13µm,22.0s
NEW    Newport            89.69  26  P       P        23 58 56.0 +1.0
             baz=327,SNR=56
G03D   McMinnville, O     89.73  31  P       P        23 58 56.7 +1.5
             baz=323,SNR=8.5
F05D   White Salmon       89.95  30  P       P        23 58 57.3 +1.1
             baz=324,SNR=9.6
D08A   Wollman Farm,      90.01  28  PFAKE            23 59 10.0  +13
D08A                                 LR      LR
             comp=Z,8µm,20.0s
WALA   Waterton Lakes     90.14  24  PFAKE            23 59 10.0  +13
WALA                                 LR      LR
             comp=Z,14µm,18.0s
COR    Corvallis          90.21  32 eP       P        23 58 59.1 +1.6
             comp=Z,274nm,1.4s
COR                                  LR      LR
             comp=Z,7µm,21.0s
COR    Corvallis          90.21  32 eP       P        23 58 59.1 +1.6
COR                                  pmax    pmax
             comp=Z,274nm,1.4s
COR                                  MLR     MLR
             comp=Z,7µm,21.0s
HAWA   Hanford            90.32  29  PFAKE            23 59 10.0  +12
HAWA                                 LR      LR
             comp=Z,7µm,20.0s
I02D   Swisshome          90.35  32  P       P        23 58 59.9 +1.8
             baz=322
E08A   Dider Farm, El     90.43  28  PFAKE            23 59 10.0  +12
E08A                                 LR      LR
             comp=Z,8µm,18.0s
H04D   Lebanon            90.51  32  P       P        23 59 00.1 +1.2
             baz=323,SNR=12
G05D   Wamic, OR          90.53  30  P       P        23 59 00.1 +1.1
             baz=324
H04A   Detroit Lake       90.62  31 eP       P        23 59 00.6 +1.2
             comp=Z,116nm,1.3s
H04A                                 LR      LR
             comp=Z,6µm,22.0s
SCHQ   Schefferville      90.69 355  P       P        23 58 58.8  -0.7
             comp=Z,16nm,0.8s,baz=15,slow=7.5,SNR=7.6
SCHQ                                 LR      LR       00 42 12.6
             comp=Z,5µm,18.3s,baz=348,slow=37
SCHQ   Schefferville      90.69 355  PFAKE            23 59 10.0  +10
SCHQ                                 LR      LR
             comp=Z,6µm,19.0s
E09A   Wood Farm, Sta     90.76  28  PFAKE            23 59 10.0  +10
E09A                                 LR      LR
             comp=Z,9µm,20.0s
I03D   Drain, OR          90.90  32  P       P        23 59 02.1 +1.4
             baz=322,SNR=11
J01E   Myrtle Point       91.06  33  P       P        23 59 02.4 +1.0
             baz=322,SNR=5.4
KEBM   Edson Butte        91.10  33 eP       P        23 59 03.0 +1.2
             comp=Z,236nm,1.4s
KEBM                                 LR      LR
             comp=Z,5µm,22.0s
I04A   Tendick Farm,      91.23  32  P       P        23 59 03.3 +1.0
             baz=323,SNR=40
I05D   Terrebonne, OR     91.25  31  P       P        23 59 03.0 +0.6
             baz=324,SNR=24
G08A   Pilot Rock         91.46  29  PFAKE            23 59 10.0 +6.6
G08A                                 LR      LR
             comp=Z,5µm,20.0s
K02D   Willamette Mer     91.55  33  P       P        23 59 04.1 +0.3
             baz=322,SNR=8.1
F10A   Beach Ranch, E     91.56  28  PFAKE            23 59 20.0  +16
F10A                                 LR      LR
             comp=Z,9µm,21.0s
J04D   Umpqua Nationa     91.81  32  P       P        23 59 06.1 +0.9
             baz=323,SNR=8.0
PINE   Pine Mountain      91.86  31  PFAKE            23 59 20.0  +15
PINE                                 LR      LR
             comp=Z,8µm,20.0s
HUMO   Hull Mountain      91.94  33 eP       P        23 59 06.9 +1.3
             comp=Z,48nm,1.4s
HUMO                                 LR      LR
             comp=Z,7µm,19.0s
L02E   Cave Junction      92.00  33  P       P        23 59 07.2 +1.3
             baz=322
MSO    Missoula           92.04  25  PFAKE            23 59 20.0  +14
MSO                                  LR      LR
             comp=Z,12µm,18.0s
MSO    Missoula           92.04  25  P       P        23 59 06.4 +0.3
             baz=329,SNR=73
J05D   Fort Rock, OR      92.15  31  P       P        23 59 08.1 +1.4
             baz=324,SNR=30
I07A   Izee               92.23  30 eP       P        23 59 08.1 +1.1
             comp=Z,50nm,1.4s
I07A                                 LR      LR
             comp=Z,7µm,22.0s
EGMT   Eagleton           92.38  22  PFAKE            23 59 20.0  +12
EGMT                                 LR      LR
             comp=Z,10µm,20.0s
EGMT   Eagleton           92.38  22  P       P        23 59 08.0 +0.4
             baz=332
K04D   Chiloquin, OR      92.45  32  P       P        23 59 09.4 +1.3
             baz=324
BMO    Blue Mountains     92.47  28  PFAKE            23 59 20.0  +12
BMO                                  LR      LR
             comp=Z,8µm,19.0s
L04D   Klamath Falls      92.54  33  P       P        23 59 09.0 +0.5
             baz=323,SNR=8.8
TOC2   Torodi Ar. Sit     92.70 288  PFAKE            23 59 20.0  +10
TOC2                                 LR      LR
             comp=Z,4µm,22.0s
TOC1   Torodi Ar. Sit     92.71 288  PFAKE            23 59 20.0  +10
TOC1                                 LR      LR
             comp=Z,4µm,22.0s
TOC3   Torodi Ar. Sit     92.71 288  PFAKE            23 59 20.0  +10
TOC3                                 LR      LR
             comp=Z,4µm,22.0s
TOB2   Torodi Ar. Sit     92.71 288  PFAKE            23 59 20.0  +10
TOB2                                 LR      LR
             comp=Z,4µm,22.0s
TOA2   Torodi Ar. Sit     92.72 288  PFAKE            23 59 20.0  +10
TOA2                                 LR      LR
             comp=Z,4µm,22.0s
TOB3   Torodi Ar. Sit     92.72 288  PFAKE            23 59 20.0  +10
TOB3                                 LR      LR
             comp=Z,4µm,18.0s
TOA1   Torodi Ar. Sit     92.73 288  PFAKE            23 59 20.0  +10
TOA1                                 LR      LR
             comp=Z,4µm,18.0s
TOA0   Torodi Ar. Sit     92.73 288  PFAKE            23 59 20.0  +10
TOA0                                 LR      LR
             comp=Z,4µm,22.0s
TOA0   Torodi Ar. Sit     92.73 288  P       P        23 59 08.9  -0.8
             SNR=23
TORD   Torodi Ar. Bea     92.73 288  P       P        23 59 08.3  -1.3
             comp=Z,55nm,1.2s,baz=164,slow=5.5,SNR=65
TORD                                 S       SKSac    00 09 38.9  -5.6
             comp=Z,0.5nm,0.9s,baz=204,slow=35,SNR=3.0
TORD                                 PKKPbc  PKKPdf   00 16 18.5 +1.1
             comp=Z,3.6nm,0.9s,baz=203,slow=2.3,SNR=8.6
TORD                                 LR      LR       00 46 51.9
             comp=Z,2µm,18.1s,baz=0.0,slow=40
TOC7   Torodi Ar. Sit     92.73 288  PFAKE            23 59 20.0  +10
TOC7                                 LR      LR
             comp=Z,4µm,22.0s
TOA3   Torodi Ar. Sit     92.73 288  PFAKE            23 59 20.0  +10
TOA3                                 LR      LR
             comp=Z,4µm,18.0s
TOB5   Torodi Ar. Sit     92.73 288  PFAKE            23 59 20.0  +10
TOB5                                 LR      LR
             comp=Z,4µm,22.0s
TOC4   Torodi Ar. Sit     92.74 288  PFAKE            23 59 20.0  +10
TOC4                                 LR      LR
             comp=Z,4µm,22.0s
TOB4   Torodi Ar. Sit     92.74 288  PFAKE            23 59 20.0  +10
TOB4                                 LR      LR
             comp=Z,4µm,22.0s
YBH    Yreka Blue Hor     92.74  33 eP       P        23 59 10.3 +0.9
             comp=Z,40nm,1.4s
YBH                                  LR      LR
             comp=Z,6µm,21.0s
YBH    Yreka Blue Hor     92.74  33 eP       P        23 59 10.3 +0.9
YBH                                  pmax    pmax
             comp=Z,40nm,1.4s
YBH                                  MLR     MLR
             comp=Z,6µm,21.0s
TOC5   Torodi Ar. Sit     92.75 288  PFAKE            23 59 20.0  +10
TOC5                                 LR      LR
             comp=Z,4µm,22.0s
PLID   Pearl Lake         92.78  27 eP       P        23 59 09.8 +0.1
             comp=Z,108nm,1.4s
JCC    Jacoby Creek,      92.86  35 eP       P        23 59 10.2 +0.4
             comp=Z,129nm,1.4s
JCC                                  LR      LR
             comp=Z,4µm,20.0s
AFI    Afiamalu           92.89 105 eP       P        23 59 10.7 +0.4
             comp=Z,261nm,1.3s
AFI    Afiamalu           92.89 105 eP       P        23 59 10.7 +0.4
AFI                                  pmax    pmax
             comp=Z,261nm,1.3s
M02C   Callahan           92.95  34  P       P        23 59 11.6 +1.3
             baz=323,SNR=10
KHMM   Horse Mountain     92.95  34 eP       P        23 59 10.9 +0.4
             comp=Z,42nm,1.3s
KHMM                                 LR      LR
             comp=Z,5µm,18.0s
M04C   Macdoel            93.09  33  P       P        23 59 12.4 +1.3
             baz=324,SNR=6.2
J08A   Circle Bar Ran     93.25  30  PFAKE            23 59 20.0 +8.3
J08A                                 LR      LR
             comp=Z,4µm,20.0s
N02D   Trinity Center     93.35  34  P       P        23 59 13.4 +1.3
             baz=323,SNR=7.0
PMOZ   Porto Moniz, M     93.36 314 eLR      LR       00 34 36.1
             comp=Z,3µm,18.0s
PMOZ   Porto Moniz, M     93.36 314 eP       P        23 59 12.6 +0.2
LRM    Limekiln Ridge     93.43  25 eP       P        23 59 11.7  -1.0
KMRM   Mail Ridge         93.48  35 eP       P        23 59 12.7  -0.1
             comp=Z,93nm,1.5s
KMRM                                 LR      LR
             comp=Z,6µm,19.0s
DGMT   Dagmar             93.57  19 eP       P        23 59 13.5 +0.5
             comp=Z,136nm,1.1s
DGMT                                 LR      LR
             comp=Z,10µm,22.0s
DGMT   Dagmar             93.57  19  P       P        23 59 13.8 +0.7
             baz=337
MOD    Modoc Plateau      93.67  32  PFAKE            23 59 30.0  +16
MOD                                  LR      LR
             comp=Z,7µm,20.0s
WDC    Whiskeytown Da     93.74  34 eP       P        23 59 14.9 +1.0
             comp=Z,42nm,1.4s
WDC                                  LR      LR
             comp=Z,7µm,21.0s
ULM    Lac du Bonnet      93.75  13  P       P        23 59 13.0  -0.7
             comp=Z,35nm,1.1s,baz=347,slow=4.5,SNR=20
ULM                                  PKKP    PKKPdf   00 16 13.9  -1.0
             comp=Z,2.0nm,0.5s,baz=198,slow=3.7,SNR=3.6
ULM                                  LR      LR       00 45 42.6
             comp=Z,8µm,19.6s,baz=338,slow=38
ULM    Lac du Bonnet      93.75  13  PFAKE            23 59 30.0  +16
ULM                                  LR      LR
             comp=Z,10µm,19.0s
DLMT   Dillon             93.78  25 eP       P        23 59 13.7  -0.5
             comp=Z,68nm,1.5s
DLMT                                 LR      LR
             comp=Z,10µm,19.0s
BOZ    Bozeman (W)        93.91  24 eP       P        23 59 14.7  -0.1
             comp=Z,56nm,1.5s
BOZ                                  LR      LR
             comp=Z,11µm,18.0s
BOZ    Bozeman (W)        93.91  24 eP       P        23 59 14.7  -0.1
BOZ                                  pmax    pmax
             comp=Z,56nm,1.5s
BOZ                                  MLR     MLR
             comp=Z,11µm,18.0s
BOZ    Bozeman (W)        93.91  24  P       P        23 59 15.4 +0.7
             baz=331,SNR=23
O02D   Mt. Diablo Mer     93.94  34  P       P        23 59 16.0 +1.0
             baz=323,SNR=6.3
WVOR   Wild Horse Val     93.94  30 eP       P        23 59 16.3 +1.3
             comp=Z,47nm,1.4s
WVOR                                 LR      LR
             comp=Z,7µm,19.0s
WVOR   Wild Horse Val     93.94  30 eP       P        23 59 16.3 +1.3
WVOR                                 pmax    pmax
             comp=Z,47nm,1.4s
WVOR                                 MLR     MLR
             comp=Z,7µm,19.0s
KCPM   Cahto Peak         93.96  35  PFAKE            23 59 30.0  +15
KCPM                                 LR      LR
             comp=Z,5µm,20.0s
MFID   Camas Ranch        94.26  28  PFAKE            23 59 30.0  +14
MFID                                 LR      LR
             comp=Z,8µm,20.0s
CMLA   Cha da Macela      94.30 322  PFAKE            23 59 30.0  +13
CMLA                                 LR      LR
             comp=Z,6µm,20.0s
O03E   Paynes Creek       94.30  34  P       P        23 59 16.8 +0.2
             baz=324,SNR=5.5
LAO    LASA Array         94.64  21 eP       P        23 59 18.6 +0.7
             comp=Z,63nm,1.2s
LAO                                  LR      LR
             comp=Z,11µm,22.0s
LAO    LASA Array         94.64  21  P       P        23 59 18.7 +0.7
             baz=335
HLID   Hailey             94.67  27  PFAKE            23 59 30.0  +12
HLID                                 LR      LR
             comp=Z,9µm,19.0s
HLID   Hailey             94.67  27  P       P        23 59 19.6 +1.2
             baz=329
HOPS   Hopland Field      94.75  35 eP       P        23 59 19.9 +1.3
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	comp=Z,76nm,1.5s						
HOPS				LR	LR		
	comp=Z,7µm,19.0s						
YHB	**Horse Butte**	**94.80**	**25**	*e*P	**P**	**23 59 20.0**	**+1.0**
	comp=Z,24nm,1.0s						
OUZ	**Omahuta**	**94.88**	**130**	*e*P	**P**	**23 59 19.3**	**+0.4**
	comp=Z,29nm,1.3s						
OUZ				LR	LR		
	comp=Z,2µm,22.0s						
ROSA	**Rosais**	**94.89**	**325**	*e*P	**P**	**23 59 18.9**	**-0.3**
	comp=Z,114nm,1.4s						
ROSA				LR	LR		
	comp=Z,3µm,19.0s						
YMR	**Madison River**	**94.95**	**24**	*e*P	**P**	**23 59 20.5**	**+0.8**
	comp=Z,20nm,1.1s						
GDXM	**Geysers**	**95.03**	**35**	*e*P	**P**	**23 59 21.8**	**+1.9**
	comp=Z,86nm,1.5s						
GDXM				LR	LR		
	comp=Z,8µm,18.0s						
ORV	**Oroville**	**95.04**	**34**	PFAKE		23 59 30.0	+10
ORV				LR	LR		
	comp=Z,4µm,19.0s						
RLMT	**Red Lodge**	**95.11**	**23**	PFAKE		23 59 30.0	+10
RLMT				LR	LR		
	comp=Z,13µm,20.0s						
RLMT	**Red Lodge**	**95.11**	**23**	P	**P**	**23 59 20.7**	**+0.3**
	baz=333,SNR=22						
YFT	**Old Faithful**	**95.19**	**24**	*e*P	**P**	**23 59 23.3**	**+2.5**
	comp=Z,56nm,1.4s						
LKWY	**Lake**	**95.23**	**24**	PFAKE		23 59 30.0	+9.0
LKWY				LR	LR		
	comp=Z,17µm,21.0s						
MDND	**Maddock**	**95.28**	**16**	PFAKE		23 59 30.0	+9.2
MDND				LR	LR		
	comp=Z,10µm,19.0s						
MDND	**Maddock**	**95.28**	**16**	P	**P**	**23 59 20.8**	**0.0**
	baz=340						
BEKR	**Beckworth**	**95.30**	**33**	PFAKE		23 59 30.0	+8.7
BEKR				LR	LR		
	comp=Z,5µm,20.0s						
H17A	**Grant Village**	**95.32**	**24**	*e*P	**P**	**23 59 23.8**	**+2.4**
	comp=Z,45nm,1.1s						
H17A				LR	LR		
	comp=Z,19µm,22.0s						
H17A	**Grant Village**	**95.32**	**24**	P	**P**	**23 59 23.6**	**+2.2**
	baz=332,SNR=10						
YPP	**Pitchstone Pla**	**95.36**	**24**	*e*P	**P**	**23 59 23.4**	**+1.8**
	comp=Z,63nm,1.4s						
MCCM	**Marconi Confer**	**95.51**	**35**	PFAKE		23 59 30.0	+8.0
MCCM				LR	LR		
	comp=Z,6µm,21.0s						
FLWY	**Flagg Ranch**	**95.56**	**25**	PFAKE		23 59 30.0	+7.6
FLWY				LR	LR		
	comp=Z,13µm,19.0s						
AGMN	**Agassiz Nation**	**95.63**	**13**	PFAKE		23 59 30.0	+7.6
AGMN				LR	LR		
	comp=Z,12µm,21.0s						
AGMN	**Agassiz Nation**	**95.63**	**13**	P	**P**	**23 59 21.8**	**-0.6**
	baz=344						
IMW	**Indian Meadow**	**95.64**	**25**	PFAKE		23 59 30.0	+7.1
IMW				LR	LR		
	comp=Z,12µm,18.0s						
XMAS	**Kiritimati**	**95.69**	**84**	*e*P	**P**	**23 59 23.6**	**+0.4**
	comp=Z,378nm,1.3s						
AFDM	**Forest Hills D**	**95.77**	**34**	*e*P	**P**	**23 59 24.1**	**+0.9**
	comp=Z,13nm,1.2s						
AFDM				LR	LR		
	comp=Z,3µm,19.0s						
MOOW	**Moose Ponds**	**95.83**	**25**	PFAKE		23 59 40.0	+16
MOOW				LR	LR		
	comp=Z,13µm,18.0s						
PAHR	**Pah Rah Range**	**95.87**	**32**	*e*P	**P**	**23 59 24.8**	**+1.0**
	comp=Z,18nm,1.3s						
PAHR				LR	LR		
	comp=Z,6µm,19.0s						
CHGQ	**Chibougamau**	**95.94**	**359**	P	**P**	**23 59 23.4**	**-0.4**
	baz=1.1,SNR=10.0						
TPAW	**Teton Pass**	**95.99**	**25**	PFAKE		23 59 40.0	+16
TPAW				LR	LR		
	comp=Z,9µm,20.0s						
LOHW	**Long Hollow**	**96.00**	**25**	PFAKE		23 59 40.0	+16
LOHW				LR	LR		
	comp=Z,14µm,20.0s						
RUBR	**Rubicon Trail**	**96.06**	**33**	PFAKE		23 59 40.0	+15
RUBR				LR	LR		
	comp=Z,8µm,22.0s						
SNOW	**Snow King Moun**	**96.08**	**25**	*e*P	**P**	**23 59 26.1**	**+1.2**
	comp=Z,15nm,1.4s						
SNOW				LR	LR		
	comp=Z,11µm,19.0s						
VCNR	**Virginia City**	**96.08**	**33**	PFAKE		23 59 40.0	+15
VCNR				LR	LR		
	comp=Z,4µm,20.0s						
MATQ	**Matagami**	**96.09**	**1**	P	**P**	**23 59 24.2**	**-0.2**
	baz=358,SNR=10						
BMN	**Battle Mountai**	**96.20**	**31**	PFAKE		23 59 40.0	+15
BMN				LR	LR		
	comp=Z,4µm,20.0s						
PNTR	**Pine Nut**	**96.28**	**33**	*e*P	**P**	**23 59 26.9**	**+1.1**
	comp=Z,10nm,0.8s						
PNTR				LR	LR		
	comp=Z,5µm,18.0s						
YERR	**Yerington**	**96.52**	**33**	*e*P	**P**	**23 59 27.8**	**+0.9**
	comp=Z,27nm,1.4s						
YERR				LR	LR		
	comp=Z,6µm,20.0s						
AHID	**Auburn Hatcher**	**96.57**	**25**	PFAKE		23 59 40.0	+13
AHID				LR	LR		
	comp=Z,10µm,21.0s						
EYMN	**Ely**	**96.72**	**11**	PFAKE		23 59 40.0	+13
EYMN				LR	LR		
	comp=Z,8µm,20.0s						
EYMN	**Ely**	**96.72**	**11**	P	**P**	**23 59 26.8**	**-0.6**
	baz=347						
ELK	**Elko**	**96.75**	**29**	*e*P	**P**	**23 59 28.8**	**+0.8**
	comp=Z,17nm,1.4s						
ELK				LR	LR		
	comp=Z,7µm,20.0s						
CMB	**Columbia Colle**	**96.78**	**34**	*e*P	**P**	**23 59 28.8**	**+0.9**
	comp=Z,17nm,1.4s						
CMB				LR	LR		
	comp=Z,5µm,22.0s						
CMB	**Columbia Colle**	**96.78**	**34**	*e*P	**P**	**23 59 28.8**	**+0.9**
CMB				pmax	pmax		
	comp=Z,17nm,1.4s						
CMB				MLR	MLR		
	comp=Z,5µm,22.0s						
LSQQ	**Lebel-sur-Quev**	**96.80**	**1**	P	**P**	**23 59 27.2**	**-0.4**
	baz=359						
WAKR	**Walker**	**96.83**	**33**	*e*P	**P**	**23 59 28.8**	**+0.5**
	comp=Z,4.3nm,0.9s						
WAKR				LR	LR		
	comp=Z,6µm,19.0s						
KVN	**Kaiserville**	**96.97**	**32**	*e*P	**P**	**23 59 29.6**	**+0.7**
	comp=Z,24nm,1.4s						
KVN				LR	LR		
	comp=Z,5µm,19.0s						
KVN	**Kaiserville**	**96.97**	**32**	*e*P	**P**	**23 59 29.6**	**+0.7**
KVN				pmax	pmax		
	comp=Z,24nm,1.4s						
KVN				MLR	MLR		
	comp=Z,5µm,19.0s						
C40A	**Isle Royale Na**	**97.08**	**9**	PFAKE		23 59 40.0	+11
C40A				LR	LR		
	comp=Z,10µm,18.0s						
C40A	**Isle Royale Na**	**97.08**	**9**	P	**P**	**23 59 28.4**	**-0.5**
	baz=349						
BW06	**Boulder Array**	**97.11**	**24**	PFAKE		23 59 40.0	+10
BW06				LR	LR		
	comp=Z,14µm,19.0s						
BW06	**Boulder Array**	**97.11**	**24**	P	**P**	**23 59 29.3**	**-0.2**
	baz=332						
PDAR	**Pinedale Array**	**97.11**	**24**	P	**P**	**23 59 28.8**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=349,slow=2.6,SNR=15						
PDAR				PP	**PP**	**00 03 18.6**	**-5.7**
	comp=Z,4.0nm,1.1s,baz=337,slow=4.4,SNR=4.3						
PDAR				PKKPbc	**PKKPbc**	**00 16 07.8**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=168,slow=4.6,SNR=3.6						
RYN	**Ryan**	**97.13**	**32**	*e*P	Pdif	23 59 29.9	+0.1
	comp=Z,26nm,1.4s						
RYN				LR	LR		
	comp=Z,4µm,19.0s						
SAO	**San Andreas Ge**	**97.30**	**35**	PFAKE		23 59 40.0	+10
SAO				LR	LR		
	comp=Z,4µm,19.0s						
SPUT	**South Promonto**	**97.35**	**27**	*e*P	**P**	**23 59 30.0**	**-0.6**
	comp=Z,10.0nm,1.3s						
NVAR	**Mina Array Bea**	**97.39**	**32**	P	Pdif	23 59 31.2	+0.3
	comp=Z,1.6nm,0.7s,baz=321,slow=3.4,SNR=12						
NVAR				PP	**PP**	**00 03 27.6**	**+0.8**
	comp=Z,8.2nm,1.1s,baz=308,slow=7.2,SNR=7.5						
NVAR				PKKPbc	**PKKPbc**	**00 16 08.2**	**0.0**
	comp=Z,2.7nm,1.1s,baz=144,slow=6.3,SNR=4.8						
NVAR				PKPPKP	**P'P'df**	**00 24 21.4**	**-7.1**
	comp=Z,0.1nm,0.3s,baz=164,slow=5.2,SNR=3.7						
NVAR				LR	LR	00 43 05.2	
	comp=Z,3µm,19.9s,baz=342,slow=35						
HWUT	**Hardware Ranch**	**97.42**	**26**	PFAKE		23 59 40.0	+9.0
HWUT				LR	LR		
	comp=Z,10µm,20.0s						
NV11	**Mina Array Sit**	**97.46**	**32**	*e*P	Pdif	23 59 31.5	+0.3
	comp=Z,1.4nm,1.4s						
NV11				LR	LR		
	comp=Z,300nm,20.0s						
BGU	**Big Grassy Mou**	**97.46**	**28**	*e*P	**P**	**23 59 31.0**	**-0.1**
	comp=Z,18nm,1.4s						
BOSA	**Boshof**	**97.48**	**241**	P	**P**	**23 59 29.4**	**-1.7**
	comp=Z,21nm,1.0s,baz=46,slow=6.3,SNR=12						
BOSA				LR	LR	00 43 34.8	
	comp=Z,2µm,18.3s,baz=47,slow=36						
RSSD	**Black Hills**	**97.61**	**20**	*e*P	Pdif	23 59 32.5	+0.7
	comp=Z,120nm,1.3s						
RSSD				LR	LR		
	comp=Z,9µm,20.0s						
RSSD	**Black Hills**	**97.61**	**20**	*e*P	Pdif	23 59 32.5	+0.7
RSSD				pmax	pmax		
	comp=Z,120nm,1.3s						
RSSD				MLR	MLR		
	comp=Z,9µm,20.0s						
RSSD	**Black Hills**	**97.61**	**20**	P	Pdif	23 59 32.5	+0.6
	baz=337						
MDPB	**Devils Postpil**	**97.70**	**33**	PFAKE		23 59 40.0	+7.6
MDPB				LR	LR		
	comp=Z,5µm,22.0s						
HIZ	**Hauiti**	**97.73**	**132**	PFAKE		23 59 40.0	+8.1
HIZ				LR	LR		
	comp=Z,2µm,20.0s						
VLDQ	**Val d'Or**	**97.74**	**1**	*e*P	**P**	**23 59 31.8**	**-0.1**
	comp=Z,20nm,1.2s						
VLDQ				LR	LR		
	comp=Z,11µm,18.0s						
OMMB	**Old Mammoth Mi**	**97.75**	**33**	*e*P	Pdif	23 59 33.3	+0.6
	comp=Z,9.8nm,1.2s						
OMMB				LR	LR		
	comp=Z,5µm,20.0s						
QRZ	**Quartz Range**	**97.77**	**135**	PFAKE		23 59 40.0	+8.0
QRZ				LR	LR		
	comp=Z,2µm,20.0s						
MLAC	**Mammoth, Mammo**	**97.81**	**33**	P	Pdif	23 59 34.5	+1.6
	baz=325						
D41A	**Chassel**	**97.99**	**9**	PFAKE		23 59 40.0	+6.9
D41A				LR	LR		
	comp=Z,12µm,18.0s						
D41A	**Chassel**	**97.99**	**9**	P	**P**	**23 59 32.7**	**-0.3**
	baz=349						
TSUM	**Tsumeb**	**98.00**	**252**	*e*P	Pdif	23 59 34.1	+0.4
	comp=Z,15nm,1.4s						
TSUM				LR	LR		
	comp=Z,4µm,18.0s						
E38A	**The Farm, Brul**	**98.01**	**11**	PFAKE		23 59 40.0	+6.8
E38A				LR	LR		
	comp=Z,6µm,18.0s						
E38A	**The Farm, Brul**	**98.01**	**11**	P	**P**	**23 59 32.8**	**-0.4**
	baz=347						
DUG	**Dugway, Tooele**	**98.18**	**28**	*e*P	Pdif	23 59 34.8	+0.5
	comp=Z,17nm,1.3s						
DUG				LR	LR		
	comp=Z,8µm,22.0s						
DUG	**Dugway, Tooele**	**98.18**	**28**	*e*P	Pdif	23 59 34.8	+0.5
DUG				pmax	pmax		
	comp=Z,17nm,1.3s						
DUG				MLR	MLR		
	comp=Z,8µm,22.0s						
DUG	**Dugway, Tooele**	**98.18**	**28**	P	Pdif	23 59 34.7	+0.4
	baz=330						
K22A	**Casper**	**98.21**	**22**	*e*P	Pdif	23 59 34.9	+0.5
	comp=Z,47nm,1.5s						
K22A				LR	LR		
	comp=Z,9µm,19.0s						
K22A	**Casper**	**98.21**	**22**	P	Pdif	23 59 34.5	+0.1
	baz=335						
D49A	**Beulah Townshi**	**98.44**	**4**	P	**P**	**23 59 35.1**	**0.0**
	baz=355,SNR=5.4						
LATQ	**La Tuque**	**98.44**	**358**	P	Pdif	23 59 35.3	+0.2
	baz=2.5						
D47A	**Chapleau**	**98.54**	**5**	P	**P**	**23 59 35.5**	**-0.1**
	baz=354,SNR=9.7						
TIN	**Tinemaha, Big**	**98.56**	**33**	P	Pdif	23 59 37.2	+1.2
	baz=326						
THZ	**Tophouse**	**98.58**	**135**	PFAKE		23 59 50.0	+14
THZ				LR	LR		
	comp=Z,3µm,22.0s						
D46A	**Sault St. Mari**	**98.63**	**6**	P	**P**	**23 59 35.4**	**-0.5**
	baz=353,SNR=7.0						
VOG	**Valley Oaks Go**	**98.63**	**34**	P	**P**	**23 59 36.0**	**-0.1**
	baz=325						
R11A	**Troy Canyon, C**	**98.63**	**31**	PFAKE		23 59 50.0	+14
R11A				LR	LR		
	comp=Z,5µm,19.0s						
R11A	**Troy Canyon, C**	**98.63**	**31**	P	Pdif	23 59 36.6	+0.1
	baz=328						
SUSD	**Miller**	**98.64**	**17**	P	**P**	**23 59 35.8**	**-0.3**
	baz=341						
PAGB	**Antelope Grade**	**98.70**	**35**	PFAKE		23 59 50.0	+13
PAGB				LR	LR		
	comp=Z,5µm,20.0s						
D54A	**Lac Fusel, La**	**98.71**	**1**	P	**P**	**23 59 36.1**	**-0.2**
	baz=359						
D51A	**Lot 18 Range I**	**98.71**	**3**	P	**P**	**23 59 35.9**	**-0.4**
	baz=357						
LBZ	**Lake Benmore**	**98.72**	**139**	PFAKE		23 59 50.0	+14
LBZ				LR	LR		
	comp=Z,4µm,21.0s						
E44A	**Grand Marais A**	**98.73**	**7**	*e*P	Pdif	23 59 36.7	+0.3
	comp=Z,50nm,1.2s						
E44A				LR	LR		
	comp=Z,7µm,21.0s						
E44A	**Grand Marais A**	**98.73**	**7**	P	**P**	**23 59 36.0**	**-0.4**
	baz=352						
RPZ	**Rata Peaks**	**98.76**	**138**	PFAKE		23 59 50.0	+14
RPZ				LR	LR		
	comp=Z,5µm,21.0s						
D53A	**Lac Vacive, Po**	**98.77**	**1**	*e*P	**P**	**23 59 36.2**	**-0.3**
	comp=Z,25nm,1.3s						
D53A				LR	LR		
	comp=Z,11µm,18.0s						
D53A	**Lac Vacive, Po**	**98.77**	**1**	P	**P**	**23 59 36.5**	**-0.1**
	baz=358,SNR=6.4						
E43A	**Lone Tree Farm**	**98.85**	**8**	*e*P	**P**	**23 59 36.3**	**-0.6**
	comp=Z,26nm,1.0s						
E43A				LR	LR		
	comp=Z,7µm,20.0s						
E43A	**Lone Tree Farm**	**98.85**	**8**	P	**P**	**23 59 36.4**	**-0.6**
	baz=351,SNR=8.0						
D52A	**ZEK Kipawa Sen**	**98.86**	**2**	P	**P**	**23 59 36.6**	**-0.4**
	baz=358,SNR=6.3						
RWWY	**Rawlins**	**98.86**	**23**	PFAKE		23 59 50.0	+13
RWWY				LR	LR		
	comp=Z,14µm,18.0s						
COWI	**Conover**	**98.86**	**9**	PFAKE		23 59 50.0	+13
COWI				LR	LR		
	comp=Z,10µm,18.0s						
PQI	**Presque Isle**	**98.90**	**355**	PFAKE		23 59 50.0	+13
PQI				LR	LR		
	comp=Z,7µm,20.0s						
URZ	**Urewera**	**98.98**	**130**	PFAKE		23 59 50.0	+13
URZ				LR	LR		
	comp=Z,2µm,20.0s						
GRAC	**Grapevine Rang**	**99.00**	**33**	P	**Pdif**	**23 59 39.0**	**+1.1**
	baz=326						
OXZ	**Oxford**	**99.07**	**137**	PFAKE		23 59 50.0	+12
OXZ				LR	LR		
	comp=Z,2µm,22.0s						
E47A	**Iron Bridge**	**99.13**	**5**	P	**Pdif**	**23 59 37.6**	**-0.5**
	baz=354						
E46A	**Sault Ste Mari**	**99.13**	**6**	*e*P	**Pdif**	**23 59 37.9**	**-0.3**
	comp=Z,29nm,1.2s						
E46A				LR	LR		
	comp=Z,10µm,18.0s						
E46A	**Sault Ste Mari**	**99.13**	**6**	P	**Pdif**	**23 59 37.9**	**-0.3**
	baz=353						
CWC	**Cottonwood Cre**	**99.14**	**33**	P	**Pdif**	**23 59 38.6**	**-0.1**
	baz=326						
BKZ	**Black Stump Fm**	**99.14**	**131**	PFAKE		23 59 50.0	+12
BKZ				LR	LR		
	comp=Z,2µm,21.0s						
SPMN	**Marine on St.**	**99.15**	**12**	PFAKE		23 59 50.0	+12
SPMN				LR	LR		
	comp=Z,8µm,20.0s						
SPMN	**Marine on St.**	**99.15**	**12**	P	**Pdif**	**23 59 38.4**	**+0.1**
	baz=346						
SMMC	**Simmler**	**99.16**	**35**	P	**Pdif**	**23 59 39.0**	**+0.3**
	baz=324						
VES	**Vestal, Richgr**	**99.16**	**34**	P	**Pdif**	**23 59 37.6**	**-1.0**
	baz=325						
E48A	**Lockeyer**	**99.18**	**4**	P	**Pdif**	**23 59 38.0**	**-0.4**
	baz=355						
PSUT	**Pine Spring**	**99.19**	**29**	*e*P	**Pdif**	**23 59 39.8**	**+0.8**
	comp=Z,25nm,1.5s						
E51A	**G1948 Merrick**	**99.26**	**3**	P	**Pdif**	**23 59 38.4**	**-0.4**
	baz=357,SNR=7.1						
E50A	**Wahnapitae**	**99.32**	**4**	P	**Pdif**	**23 59 38.8**	**-0.2**
	baz=356,SNR=6.5						
F42A	**Maple Grove Fa**	**99.33**	**9**	P	**Pdif**	**23 59 38.7**	**-0.4**
	baz=350						
SNZO	**South Karori**	**99.36**	**134**	PFAKE		23 59 50.0	+11
SNZO				LR	LR		
	comp=Z,3µm,20.0s						
G39A	**Holcombe**	**99.36**	**11**	P	**Pdif**	**23 59 38.5**	**-0.8**
	baz=347						
LMN	**Caledonia Moun**	**99.41**	**352**	PFAKE		23 59 50.0	+11
LMN				LR	LR		
	comp=Z,7µm,19.0s						
E54A	**Lac Daplat, Po**	**99.42**	**1**	P	**Pdif**	**23 59 38.8**	**-0.7**
	baz=359						
GBN	**Guysborough**	**99.42**	**350**	PFAKE		23 59 50.0	+11
GBN				LR	LR		
	comp=Z,8µm,22.0s						
E53A	**Dumoine, Ponti**	**99.47**	**1**	P	**Pdif**	**23 59 39.3**	**-0.5**
	baz=358						
DAC	**Darwin (Calif)**	**99.49**	**33**	PFAKE		23 59 50.0	+10
DAC				LR	LR		
	comp=Z,5µm,19.0s						
G40A	**Rib Lake**	**99.52**	**10**	PFAKE		23 59 50.0	+10
G40A				LR	LR		
	comp=Z,7µm,18.0s						
G40A	**Rib Lake**	**99.52**	**10**	P	**Pdif**	**23 59 39.7**	**-0.3**
	baz=348,SNR=7.1						
TPNV	**Topopah Spring**	**99.53**	**32**	PFAKE		23 59 50.0	+10
TPNV				LR	LR		
	comp=Z,5µm,18.0s						
TPNV	**Topopah Spring**	**99.53**	**32**	P	**Pdif**	**23 59 40.2**	**-0.2**
	baz=327						
E52A	**Mattawa**	**99.54**	**2**	P	**Pdif**	**23 59 39.4**	**-0.7**
	baz=358						
TMUT	**Trail Mountain**	**99.57**	**27**	*e*P	**Pdif**	**23 59 41.7**	**+1.0**
	comp=Z,12nm,1.2s						
P17A	**Butcher Ranch,**	**99.59**	**27**	*e*P	**Pdif**	**23 59 40.5**	**-0.1**
	comp=Z,21nm,1.4s						
ISA	**Isabella, Lake**	**99.59**	**34**	PFAKE		23 59 50.0	+9.4
ISA				LR	LR		
	comp=Z,7µm,21.0s						
ISA	**Isabella, Lake**	**99.59**	**34**	P	**Pdif**	**23 59 40.5**	**-0.1**
	baz=326						
PKM	**Mcpherson Peak**	**99.59**	**35**	P	**Pdif**	**23 59 41.2**	**+0.4**
	baz=324						
FURC	**Furnace Creek,**	**99.66**	**33**	P	**Pdif**	**23 59 41.5**	**+0.8**
	baz=327						
F45A	**CMU Biological**	**99.69**	**7**	P	**Pdif**	**23 59 40.2**	**-0.5**
	baz=352						
MPMC	**Manual Prospec**	**99.72**	**33**	P	**Pdif**	**23 59 42.1**	**+0.8**
	baz=326						
PHWY	**Pilot Hill**	**99.77**	**22**	PFAKE		23 59 50.0	+8.5
PHWY				LR	LR		
	comp=Z,12µm,19.0s						
F48A	**Evansville**	**99.80**	**5**	P	**Pdif**	**23 59 40.3**	**-0.9**
	baz=354						
ECSD	**EROS Data Cent**	**99.84**	**15**	*e*Pdif	**Pdif**	**23 59 41.0**	**-0.4**
	comp=Z,37nm,1.4s						
ECSD				LR	LR		
	comp=Z,8µm,19.0s						
ECSD	**EROS Data Cent**	**99.84**	**15**	P	**Pdif**	**23 59 41.2**	**-0.3**
	baz=343,SNR=12						
F51A	**Arnstein**	**99.85**	**3**	P	**Pdif**	**23 59 41.1**	**-0.3**
	baz=356						
ARVC	**Arvin**	**99.87**	**35**	P	**Pdif**	**23 59 41.9**	**+0.1**
	baz=325						
ALGO	**Algonquin Park**	**99.89**	**2**	P	**Pdif**	**23 59 41.4**	**-0.1**
	baz=358,SNR=5.4						
BFZ	**Birch Farm**	**99.90**	**133**	PFAKE		23 59 50.0	+8.5
BFZ				LR	LR		
	comp=Z,3µm,19.0s						
O20A	**White River Ci**	**99.90**	**25**	PFAKE		23 59 50.0	+8.0
O20A				LR	LR		
	comp=Z,9µm,20.0s						
O20A	**White River Ci**	**99.90**	**25**	P	**Pdif**	**23 59 41.9**	**-0.2**
	baz=333						
F49A	**Sandfield**	**99.90**	**4**	P	**Pdif**	**23 59 41.1**	**-0.6**
	baz=355						
N23A	**Red Feather La**	**99.98**	**23**	P	**Pdif**	**23 59 43.0**	**+0.5**
	baz=335						
SRU	**San Rafael Swe**	**99.99**	**27**	*e*Pdif	**Pdif**	**23 59 42.4**	**0.0**
	comp=Z,5.5nm,1.1s						
SRU	**San Rafael Swe**	**99.99**	**27**	*e*P	**Pdif**	**23 59 42.4**	**0.0**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SBC	**Santa Barbara**	**100.00**	**36**	P	**Pdif**	**23 59 42.5**	**+0.2**
	baz=324						
F52A	**Sundridge**	**100.01**	**3**	P	**Pdif**	**23 59 41.8**	**-0.4**
	baz=357						
LRMC	**Laurel Mtn Rad**	**100.11**	**34**	P	**Pdif**	**23 59 42.6**	**-0.4**
	baz=326						
G46A	**Petoskey**	**100.12**	**7**	P	**Pdif**	**23 59 42.4**	**-0.2**
	baz=352						
PEMO	**Pembroke**	**100.18**	**1**	P	**Pdif**	**23 59 42.2**	**-0.7**
	baz=359						
WIN	**Windhoek**	**100.22**	**250**	PFAKE		00 00 00.0	+16
WIN				LR	LR		
	comp=Z,3µm,18.0s						
G45A	**Suttons Bay**	**100.32**	**7**	PFAKE		23 59 50.0	+6.5
G45A				LR	LR		
	comp=Z,8µm,19.0s						
G45A	**Suttons Bay**	**100.32**	**7**	P	**Pdif**	**23 59 42.9**	**-0.6**
	baz=352						
OSI	**Osito Audit: C**	**100.34**	**35**	PFAKE		00 00 00.0	+16
OSI				LR	LR		
	comp=Z,3µm,20.0s						
OSI	**Osito Audit: C**	**100.34**	**35**	P	**Pdif**	**23 59 43.9**	**0.0**
	baz=325						
GGN	**Saint George**	**100.34**	**354**	PFAKE		23 59 50.0	+6.4
GGN				LR	LR		
	comp=Z,7µm,21.0s						
G47A	**Hillman**	**100.35**	**6**	P	**Pdif**	**23 59 43.2**	**-0.4**
	baz=353						
BUKO	**Buck Lake**	**100.36**	**3**	P	**Pdif**	**23 59 43.1**	**-0.6**
	baz=357						
SHPR	**Sheep Range**	**100.37**	**31**	PFAKE		00 00 00.0	+16
SHPR				LR	LR		
	comp=Z,7µm,18.0s						
PKME	**Peaks-Kenny Pk**	**100.39**	**355**	PFAKE		00 00 00.0	+16
PKME				LR	LR		
	comp=Z,8µm,19.0s						
PKME	**Peaks-Kenny Pk**	**100.39**	**355**	P	**Pdif**	**23 59 42.8**	**-1.0**
	baz=5.4						
SCZ2	**Santa Cruz Isl**	**100.40**	**36**	P	**Pdif**	**23 59 43.3**	**-0.8**
	baz=324						
KLBO	**Killbear Provi**	**100.41**	**3**	P	**Pdif**	**23 59 43.7**	**-0.2**
	baz=356						
ORIO	**Orleans, Innes**	**100.42**	**360**	P	**Pdif**	**23 59 42.6**	**-1.3**
	baz=0.2						
EDW2	**Edwards Air Fo**	**100.46**	**34**	P	**Pdif**	**23 59 45.1**	**+0.6**
	baz=326						
HAL	**Halifax**	**100.46**	**351**	PFAKE		00 00 00.0	+16
HAL				LR	LR		
	comp=Z,11µm,20.0s						
TOBO	**Tobermory, Bru**	**100.47**	**4**	P	**Pdif**	**23 59 43.7**	**-0.4**
	baz=355						
CASY	**Casey**	**100.58**	**177**	PFAKE		00 00 00.0	+16
CASY				LR	LR		
	comp=Z,5µm,21.0s						
G55A	**Calabogie**	**100.61**	**1**	P	**Pdif**	**23 59 44.6**	**-0.2**
	baz=359						
GLMI	**Grayling**	**100.63**	**6**	PFAKE		00 00 00.0	+15
GLMI				LR	LR		
	comp=Z,8µm,18.0s						
GLMI	**Grayling**	**100.63**	**6**	P	**Pdif**	**23 59 44.7**	**-0.3**
	baz=353						
H43A	**Windswept, Lux**	**100.64**	**9**	PFAKE		00 00 00.0	+15
H43A				LR	LR		
	comp=Z,5µm,20.0s						
H43A	**Windswept, Lux**	**100.64**	**9**	P	**Pdif**	**23 59 44.6**	**-0.3**

	baz=350						
GSC	Goldstone, Bar	100.65	33	PFAKE		00 00 00.0	+15
GSC				LR	LR		
	comp=Z,4µm,20.0s						
GSC	Goldstone, Bar	100.65	33	P	Pdif	23 59 45.5	+0.1
	baz=327						
G53A	Haliburton	100.70	2	P	Pdif	23 59 45.1	-0.1
	baz=358						
I41A	Arkdale	100.75	10	PFAKE		00 00 00.0	+15
I41A				LR	LR		
	comp=Z,7µm,18.0s						
I41A	Arkdale	100.75	10	P	Pdif	23 59 45.2	-0.3
	baz=348						
EMMW	East Machias	100.80	354	PFAKE		00 00 00.0	+14
EMMW				LR	LR		
	comp=Z,8µm,22.0s						
DECC	Green Verdugo	100.81	35	P	Pdif	23 59 45.6	-0.4
	baz=325						
PLVO	Plevna	100.82	1	PFAKE		00 00 00.0	+14
PLVO				LR	LR		
	comp=Z,7µm,20.0s						
PLVO	Plevna	100.82	1	P	Pdif	23 59 44.9	-0.8
	baz=359						
BANO	Bancroft	100.82	2	P	Pdif	23 59 45.3	-0.5
	baz=358						
H48A	Harrisville	100.87	6	PFAKE		00 00 00.0	+14
H48A				LR	LR		
	comp=Z,8µm,21.0s						
H48A	Harrisville	100.87	6	P	Pdif	23 59 45.2	-0.7
	baz=354						
H47A	Mio	100.89	6	P	Pdif	23 59 45.5	-0.6
	baz=353						
TUQ	Turquoise Moun	100.94	32	P	Pdif	23 59 46.6	-0.1
	baz=327						
PASC	Pasadena Art C	100.95	35	PFAKE		00 00 00.0	+13
PASC				LR	LR		
	comp=Z,4µm,19.0s						
MWC	Mount Wilson	100.97	35	PFAKE		00 00 00.0	+13
MWC				LR	LR		
	comp=Z,4µm,22.0s						
FRNY	Flat Rock	101.01	358	PFAKE		00 00 00.0	+13
FRNY				LR	LR		
	comp=Z,6µm,19.0s						
PV21	Cone Mtn., Par	101.04	26	PFAKE		00 00 00.0	+13
PV21				LR	LR		
	comp=Z,10µm,19.0s						
I42A	Draeger Farm,	101.06	10	PFAKE		00 00 00.0	+13
I42A				LR	LR		
	comp=Z,12µm,18.0s						
I42A	Draeger Farm,	101.06	10	P	Pdif	23 59 47.0	+0.1
	baz=349						
WVL	Waterville	101.11	356	PFAKE		00 00 00.0	+13
WVL				LR	LR		
	comp=Z,9µm,20.0s						
OGNE	Ogallala	101.11	20	PFAKE		00 00 00.0	+13
OGNE				LR	LR		
	comp=Z,10µm,22.0s						
BMRO	Meriville Lake	101.11	4	P	Pdif	23 59 46.6	-0.5
	baz=355						
PV23	Carpenter Ridg	101.12	26	PFAKE		00 00 00.0	+12
PV23				LR	LR		
	comp=Z,13µm,21.0s						
PV22	Blue Mesa, Par	101.13	26	*e*Pdif	Pdif	23 59 48.1	+0.5
PV22				LR	LR		
	comp=Z,9µm,19.0s						
BFSC	Mount Baldy Ra	101.14	34	P	Pdif	23 59 47.3	-0.3
	baz=326						
PV10	Paradox Valley	101.18	26	PFAKE		00 00 00.0	+12
PV10				LR	LR		
	comp=Z,11µm,19.0s						
PV14	Lion Creek, Pa	101.19	26	PFAKE		00 00 00.0	+12
PV14				LR	LR		
	comp=Z,12µm,18.0s						
SMCO	Snowmass	101.19	24	*e*Pdif	Pdif	23 59 48.6	+0.6
SMCO				LR	LR		
	comp=Z,10µm,19.0s						
PV04	Paradox Valley	101.21	26	PFAKE		00 00 00.0	+12
PV04				LR	LR		
	comp=Z,12µm,20.0s						
PV20	West Nyswonger	101.24	26	PFAKE		00 00 00.0	+12
PV20				LR	LR		
	comp=Z,11µm,19.0s						
LONY	Lake Ozonia	101.24	359	PFAKE		00 00 00.0	+12
LONY				LR	LR		
	comp=Z,5µm,21.0s						
LONY	Lake Ozonia	101.24	359	P	Pdif	23 59 48.0	+0.3
	baz=1.0						
I45A	Fountain	101.25	8	PFAKE		00 00 00.0	+12
I45A				LR	LR		
	comp=Z,8µm,19.0s						
PV19	Morning Glory	101.26	26	PFAKE		00 00 00.0	+12
PV19				LR	LR		
	comp=Z,10µm,18.0s						
HEC	Hector,Ludlow	101.26	33	P	Pdif	23 59 47.8	-0.2
	baz=327						
PV07	Paradox Valley	101.27	26	*e*Pdif	Pdif	23 59 47.4	-0.8
PV07				LR	LR		
	comp=Z,9µm,20.0s						
H56A	Elgin	101.27	0	P	Pdif	23 59 47.4	-0.4
	baz=360						
PV16	Nyswonger Mesa	101.28	26	PFAKE		00 00 00.0	+12
PV16				LR	LR		
	comp=Z,10µm,18.0s						
PV17	East Wray Mesa	101.29	26	PFAKE		00 00 00.0	+12
PV17				LR	LR		
	comp=Z,11µm,19.0s						
H55A	Tweed	101.31	1	P	Pdif	23 59 47.5	-0.4
	baz=359						
CLWO	Collingwood	101.31	3	P	Pdif	23 59 47.3	-0.7
	baz=356						
PV11	David Mesa, Pa	101.31	26	PFAKE		00 00 00.0	+12
PV11				LR	LR		
	comp=Z,13µm,19.0s						
PV12	Saucer Basin,	101.32	26	PFAKE		00 00 00.0	+12
PV12				LR	LR		
	comp=Z,12µm,18.0s						
DELO	Deloro Mine	101.33	1	PFAKE		00 00 00.0	+12
DELO				LR	LR		
	comp=Z,6µm,19.0s						
DELO	Deloro Mine	101.33	1	P	Pdif	23 59 47.4	-0.6
	baz=358						
PV18	Skein Mesa, Pa	101.34	26	PFAKE		00 00 00.0	+11
PV18				LR	LR		
	comp=Z,10µm,19.0s						
PV03	Paradox Valley	101.36	26	*e*Pdif	Pdif	23 59 49.2	+0.6
PV03				LR	LR		
	comp=Z,10µm,18.0s						
PV05	Paradox Valley	101.42	26	PFAKE		00 00 00.0	+11
PV05				LR	LR		
	comp=Z,10µm,19.0s						
PV02	Paradox Valley	101.44	26	PFAKE		00 00 00.0	+11
PV02				LR	LR		
	comp=Z,12µm,20.0s						
I47A	Gladwin	101.44	6	PFAKE		00 00 00.0	+11
I47A				LR	LR		
	comp=Z,9µm,21.0s						
PV13	Radium Mtn., P	101.45	26	PFAKE		00 00 00.0	+11
PV13				LR	LR		
	comp=Z,11µm,18.0s						
CIS	Catalina Islan	101.47	35	P	Pdif	23 59 49.2	+0.2
	baz=325						
VT1	Waterbury	101.49	358	PFAKE		00 00 00.0	+11
VT1				LR	LR		
	comp=Z,7µm,21.0s						
LBNH	Lisbon	101.55	357	PFAKE		00 00 00.0	+11
LBNH				LR	LR		
	comp=Z,6µm,19.0s						
LBNH	Lisbon	101.55	357	P	Pdif	23 59 49.3	+0.3
	baz=3.2						
PV01	Paradox Valley	101.56	26	PFAKE		00 00 00.0	+10
PV01				LR	LR		
	comp=Z,8µm,21.0s						
LDFC	Landfair	101.60	32	PFAKE		00 00 00.0	+10
LDFC				LR	LR		
	comp=Z,7µm,19.0s						
GMRC	Granite Mounta	101.60	33	P	Pdif	23 59 50.0	+0.4
	baz=327						
U15A	North Rim	101.63	29	PFAKE		00 00 00.0	+10
U15A				LR	LR		
	comp=Z,7µm,20.0s						
I49A	Point Hope	101.66	5	PFAKE		00 00 00.0	+10
I49A				LR	LR		
	comp=Z,8µm,20.0s						
BASO	Ashfield	101.67	4	P	Pdif	23 59 49.2	-0.4
	baz=355						
BGNE	Belgrade	101.70	17	PFAKE		00 00 00.0	+10
BGNE				LR	LR		
	comp=Z,10µm,18.0s						
BGNE	Belgrade	101.70	17	P	Pdif	23 59 49.6	-0.2
	baz=341						
DBIC	Dimbokro	101.75	287	PP	PP	00 04 03.1	+2.3
	comp=Z,14nm,0.9s,baz=62,slow=11,SNR=5.0						
JFWS	Jewell Farm	101.82	11	*e*Pdif	Pdif	23 59 50.8	+0.6
JFWS				LR	LR		
	comp=Z,9µm,19.0s						
JFWS	Jewell Farm	101.82	11	*e*P	Pdif	23 59 50.8	+0.6
JFWS				MLR	MLR		
	comp=Z,9µm,19.0s						
JFWS	Jewell Farm	101.82	11	P	Pdif	23 59 50.0	-0.3
	baz=348						
J45A	Montague	101.82	8	PFAKE		00 00 00.0	+10
J45A				LR	LR		
	comp=Z,7µm,20.0s						
KIC	Kosan Boka	101.84	286	*e*P	PP	00 04 04.5	+3.0
	comp=Z,106nm,1.4s						
NCB	Newcomb	101.88	359	PFAKE		00 00 00.0	+9.4
NCB				LR	LR		
	comp=Z,5µm,19.0s						
TIC	Toumodi	101.89	287	*e*P	PP	00 04 04.0	+2.1
WLVO	Wesleyville	101.91	2	P	Pdif	23 59 50.1	-0.5
	baz=358						
I51A	Listowel	101.92	4	P	Pdif	23 59 50.4	-0.3
	baz=356						
PECO	Prince Edward	101.92	1	PFAKE		00 00 00.0	+9.3
PECO				LR	LR		
	comp=Z,8µm,20.0s						
PECO	Prince Edward	101.92	1	P	Pdif	23 59 50.1	-0.6
	baz=359						
HNH	Hanover	102.10	357	PFAKE		00 00 00.0	+8.5
HNH				LR	LR		
	comp=Z,7µm,19.0s						
W13A	Hualapai Mount	102.11	31	PFAKE		00 00 00.0	+8.0
W13A				LR	LR		
	comp=Z,5µm,21.0s						
LIC	Lamto	102.15	286	*e*P	PP	00 04 03.0	-0.9
	comp=Z,204nm,1.9s						
ACTO	Acton	102.16	3	P	Pdif	23 59 51.7	-0.1
	baz=356						
J47A	Sunmer	102.19	7	PFAKE		00 00 00.0	+8.1
J47A				LR	LR		
	comp=Z,9µm,20.0s						
J47A	Sunmer	102.19	7	P	Pdif	23 59 51.9	+0.1
	baz=352						
PFO	Pinyon Flats O	102.22	34	*e*Pdif	Pdif	23 59 53.1	+0.7
PFO				LR	LR		
	comp=Z,4µm,20.0s						
PFO	Pinyon Flats O	102.22	34	*e*P	Pdif	23 59 53.1	+0.7
PFO				MLR	MLR		
	comp=Z,4µm,20.0s						
PFO	Pinyon Flats O	102.22	34	P	Pdif	23 59 52.8	+0.4
	baz=327						
J48A	Bridge Port	102.22	6	PFAKE		00 00 00.0	+8.0
J48A				LR	LR		
	comp=Z,9µm,18.0s						
SCIA	State Center	102.28	13	PFAKE		00 00 00.0	+7.6
SCIA				LR	LR		
	comp=Z,8µm,21.0s						
K43A	Burlington	102.30	9	PFAKE		00 00 00.0	+7.6
K43A				LR	LR		
	comp=Z,10µm,18.0s						
FFD	Franklin Falls	102.31	357	PFAKE		00 00 00.0	+7.6
FFD				LR	LR		
	comp=Z,9µm,21.0s						
IRM	Iron Mountain	102.36	33	P	Pdif	23 59 53.1	+0.3
	baz=328						
MVCO	Mesa Verde	102.41	26	PFAKE		00 00 00.0	+6.7
MVCO				LR	LR		
	comp=Z,8µm,18.0s						
MVCO	Mesa Verde	102.41	26	P	Pdif	23 59 53.1	-0.2
	baz=333						
L40A	Anamosa	102.49	12	PFAKE		00 00 00.0	+6.8
L40A				LR	LR		
	comp=Z,9µm,18.0s						
L40A	Anamosa	102.49	12	P	Pdif	23 59 52.7	-0.5
	baz=347						
CPE	Camp Elliot	102.52	35	PFAKE		00 00 00.0	+6.5
CPE				LR	LR		
	comp=Z,4µm,18.0s						
S22A	4UR Ranch, Cre	102.53	25	P	Pdif	23 59 53.0	-0.9
	baz=334						
J54A	Appleton	102.55	2	PFAKE		00 00 00.0	+6.5
J54A				LR	LR		
	comp=Z,7µm,20.0s						
J55A	Hilton	102.58	2	PFAKE		00 00 00.0	+6.4
J55A				LR	LR		
	comp=Z,8µm,19.0s						
MEDO	Medina	102.66	2	PFAKE		00 00 10.0	+16
MEDO				LR	LR		
	comp=Z,7µm,19.0s						
K48A	Perry	102.68	6	P	Pdif	23 59 53.2	-0.9
	baz=353						
K47A	Vermontville	102.73	7	P	Pdif	23 59 54.0	-0.3
	baz=352						
KSCO	Kaye Shedlock’	102.73	21	PFAKE		00 00 10.0	+15
KSCO				LR	LR		
	comp=Z,8µm,20.0s						
KSCO	Kaye Shedlock’	102.73	21	P	Pdif	23 59 54.4	-0.2
	baz=338						
SUR	Sutherland	102.76	240	PFAKE		00 00 10.0	+15
SUR				LR	LR		
	comp=Z,5µm,21.0s						
WUAZ	Wupatki	102.79	29	PFAKE		00 00 10.0	+15
WUAZ				LR	LR		
	comp=Z,6µm,20.0s						
WUAZ	Wupatki	102.79	29	P	Pdif	23 59 55.1	+0.2
	baz=331						
L42A	Oliver, Polo	102.80	11	PFAKE		00 00 10.0	+15
L42A				LR	LR		
	comp=Z,9µm,18.0s						
K50A	Casco	102.83	5	PFAKE		00 00 10.0	+15
K50A				LR	LR		
	comp=Z,8µm,20.0s						
MONP2	Monument Peak	102.83	34	P	Pdif	23 59 54.3	-1.0
	baz=327						
BAR	Barrett	102.89	35	PFAKE		00 00 10.0	+15
BAR				LR	LR		
	comp=Z,5µm,18.0s						
K52A	Tillsonburg	102.95	4	P	Pdif	23 59 54.9	-0.4
	baz=356						
Y12C	Blythe	102.98	32	PFAKE		00 00 10.0	+14
Y12C				LR	LR		
	comp=Z,5µm,20.0s						
SDCO	Great Sand Dun	102.98	24	*e*Pdif	Pdif	23 59 56.6	+0.7
SDCO				LR	LR		
	comp=Z,9µm,19.0s						
SDCO	Great Sand Dun	102.98	24	P	Pdif	23 59 55.8	-0.2
	baz=335						
K55A	Perry	103.11	2	P	Pdif	23 59 55.4	-0.6
	baz=358						
MMNY	Mt. Morris Dam	103.11	2	PFAKE		00 00 10.0	+14
MMNY				LR	LR		
	comp=Z,7µm,20.0s						
TRY	Troy	103.11	358	PFAKE		00 00 10.0	+14
TRY				LR	LR		
	comp=Z,7µm,20.0s						
IKP	In-Ko-Pah, Jac	103.18	34	P	Pdif	23 59 56.4	-0.3
	baz=327						
AAM	Ann Arbor	103.22	6	PFAKE		00 00 10.0	+14
AAM				LR	LR		
	comp=Z,11µm,18.0s						
L46A	Eue Claire	103.24	8	PFAKE		00 00 10.0	+13
L46A				LR	LR		
	comp=Z,7µm,19.0s						
HRV	Adam Dziewonsk	103.26	357	PFAKE		00 00 10.0	+13
HRV				LR	LR		
	comp=Z,10µm,20.0s						
WES	Weston	103.38	357	PFAKE		00 00 10.0	+13
WES				LR	LR		
	comp=Z,10µm,19.0s						
L47A	Sherwood	103.40	7	P	Pdif	23 59 56.6	-0.7
	baz=352						
L49A	Milan	103.40	6	P	Pdif	23 59 57.0	-0.3
	baz=353						
BCX	Boston College	103.42	357	PFAKE		00 00 10.0	+13
BCX				LR	LR		
	comp=Z,10µm,19.0s						
GLA	Glamis	103.43	33	PFAKE		00 00 10.0	+12
GLA				LR	LR		
	comp=Z,5µm,22.0s						
Y14A	Wickenburg	103.48	31	PFAKE		00 00 10.0	+12
Y14A				LR	LR		
	comp=Z,6µm,19.0s						
L48A	N Adams	103.50	7	P	Pdif	23 59 57.7	-0.1
	baz=353						
QUA2	Belchertown	103.52	357	PFAKE		00 00 10.0	+12
QUA2				LR	LR		
	comp=Z,7µm,21.0s						
L50A	Kingsville	103.55	5	P	Pdif	23 59 57.5	-0.4
	baz=354						
L54A	Sinclairville	103.56	3	P	Pdif	23 59 57.1	-0.9
	baz=357						
M44A	Midewin, Midew	103.63	9	PFAKE		00 00 10.0	+12
M44A				LR	LR		
	comp=Z,7µm,18.0s						
L55A	Hinsdale	103.64	2	P	Pdif	23 59 57.1	-1.3
	baz=358						
ERPA	Erie	103.65	3	PFAKE		00 00 10.0	+12
ERPA				LR	LR		
	comp=Z,9µm,20.0s						
BINY	Binghamton	103.67	0	PFAKE		00 00 10.0	+11
BINY				LR	LR		
	comp=Z,10µm,19.0s						
X16A	Lo Mia Camp, P	103.72	30	PFAKE		00 00 10.0	+11
X16A				LR	LR		
	comp=Z,9µm,20.0s						
CBKS	Cedar Bluff	103.73	19	PFAKE		00 00 10.0	+11
CBKS				LR	LR		
	comp=Z,10µm,18.0s						
CBKS	Cedar Bluff	103.73	19	P	Pdif	23 59 57.8	-1.1
	baz=340						
W18A	Petrified Fore	103.79	28	PFAKE		00 00 10.0	+11
W18A				LR	LR		
	comp=Z,8µm,21.0s						
L58A	Harry Jones Me	103.82	0	P	Pdif	23 59 58.2	-1.0
	baz=360						
BRYW	Bryant College	103.85	357	PFAKE		00 00 10.0	+11
BRYW				LR	LR		
	comp=Z,10µm,19.0s						
PLIO	Pelee Island,	103.85	5	P	Pdif	23 59 58.2	-1.1
	baz=354						
N41A	Harden Midland	103.87	12	PFAKE		00 00 10.0	+11
N41A				LR	LR		
	comp=Z,8µm,19.0s						
M48A	Edgerton	103.93	7	PFAKE		00 00 10.0	+10
M48A				LR	LR		
	comp=Z,9µm,20.0s						
M49A	Liberty Center	104.01	6	P	Pdif	23 59 59.0	-1.0
	baz=353						
ALLY	Alegheny Colle	104.11	3	PFAKE		00 00 10.0	+10
ALLY				LR	LR		
	comp=Z,7µm,20.0s						
KSCT	Kent School, K	104.11	358	PFAKE		00 00 10.0	+10
KSCT				LR	LR		
	comp=Z,10µm,20.0s						
113A	Mohawk Valley,	104.14	32	PFAKE		00 00 10.0	+9.2
113A				LR	LR		
	comp=Z,5µm,20.0s						
M52A	Chesterland	104.15	4	PFAKE		00 00 10.0	+9.3
M52A				LR	LR		
	comp=Z,7µm,20.0s						
M50A	Fremont	104.16	6	PFAKE		00 00 10.0	+9.3
M50A				LR	LR		
	comp=Z,6µm,18.0s						
X18A	Snowflake	104.22	29	PFAKE		00 00 10.0	+8.6
X18A				LR	LR		
	comp=Z,7µm,21.0s						
KSU1	Kansas State U	104.25	17	PFAKE		00 00 10.0	+8.8
KSU1				LR	LR		
	comp=Z,10µm,18.0s						
KSU1	Kansas State U	104.25	17	P	Pdif	23 59 60.0	-1.2
	baz=342						
HDIL	Hopedale	104.27	11	PFAKE		00 00 10.0	+8.8
HDIL				LR	LR		
	comp=Z,8µm,19.0s						
M54A	Oil Creek Stat	104.27	3	PFAKE		00 00 10.0	+8.8
M54A				LR	LR		
	comp=Z,10µm,19.0s						
M53A	WI Miller and	104.29	4	P	Pdif	00 00 00.1	-1.2
	baz=356						
KSPA	Keystone Colle	104.31	0	PFAKE		00 00 10.0	+8.6
KSPA				LR	LR		
	comp=Z,8µm,18.0s						
YLE	Yale	104.51	358	PFAKE		00 00 10.0	+7.8
YLE				LR	LR		
	comp=Z,7µm,18.0s						
N49A	Columbus Grove	104.54	7	PFAKE		00 00 10.0	+7.6
N49A				LR	LR		
	comp=Z,12µm,18.0s						
N49A	Columbus Grove	104.54	7	P	Pdif	00 00 00.7	-1.7
	baz=353						
SFIN	Lafayette	104.75	9	PFAKE		00 00 10.0	+6.7
SFIN				LR	LR		
	comp=Z,7µm,19.0s						
ODNJ	Ogdensburg	104.78	359	PFAKE		00 00 10.0	+6.6
ODNJ				LR	LR		
	comp=Z,9µm,19.0s						
N54A	Moraine State	104.80	3	PFAKE		00 00 10.0	+6.4
N54A				LR	LR		
	comp=Z,8µm,19.0s						
N54A	Moraine State	104.80	3	P	Pdif	00 00 02.4	-1.2
	baz=356						
PAL	Palisades	104.84	359	PFAKE		00 00 20.0	+16
PAL				LR	LR		
	comp=Z,9µm,20.0s						
N53A	Lisbon	104.91	4	PFAKE		00 00 20.0	+16
N53A				LR	LR		
	comp=Z,7µm,19.0s						
N59A	State Game Lan	104.95	0	PFAKE		00 00 20.0	+16
N59A				LR	LR		
	comp=Z,6µm,18.0s						
N59A	State Game Lan	104.95	0	P	Pdif	00 00 03.1	-1.2
	baz=360						
N55A	Marion Center	105.02	3	PFAKE		00 04 30.0	+11
N55A				LR	LR		
	comp=Z,8µm,19.0s						
ANMO	Albuquerque	105.17	26	*e*Pdif	Pdif	00 00 10.2	+4.6
ANMO				LR	LR		
	comp=Z,6µm,19.0s						
ANMO	Albuquerque	105.17	26	*e*P	Pdif	00 00 10.2	+4.6
ANMO				MLR	MLR		
	comp=Z,6µm,19.0s						
BRNJ	Basking Ridge	105.17	359	PFAKE		00 04 30.0	+11
BRNJ				LR	LR		
	comp=Z,8µm,19.0s						
SSPA	Standing Stone	105.20	2	PFAKE		00 04 30.0	+10
SSPA				LR	LR		
	comp=Z,8µm,19.0s						
O49A	Covington	105.25	7	PFAKE		00 04 30.0	+10
O49A				LR	LR		
	comp=Z,10µm,18.0s						
LUPA	Lehigh Univers	105.27	360	PFAKE		00 04 30.0	+10
LUPA				LR	LR		
	comp=Z,700nm,21.0s						
ACSO	Alum Creek Sta	105.33	6	PFAKE		00 04 30.0	+10
ACSO				LR	LR		
	comp=Z,8µm,19.0s						
O52A	Adamsville	105.53	5	PFAKE		00 04 30.0	+10
O52A				LR	LR		
	comp=Z,6µm,20.0s						
O52A	Adamsville	105.53	5	P	PKiKP	00 04 19.4	-0.8
	baz=355						
O56A	Blue Knob Stat	105.55	2	PFAKE		00 04 30.0	+10
O56A				LR	LR		
	comp=Z,8µm,19.0s						
O59A	Robesonia	105.55	0	P	PKiKP	00 04 19.3	-1.0
	baz=360						
PAGS	Pennsylvania G	105.63	1	PFAKE		00 04 30.0	+10
PAGS				LR	LR		
	comp=Z,7µm,20.0s						
O58A	Lewisberry	105.73	1	P	PKiKP	00 04 20.2	-0.4
	baz=359						
Y22D	IRIS PASSCAL I	105.78	27	PFAKE		00 04 30.0	+9.0
Y22D				LR	LR		
	comp=Z,8µm,21.0s						
Y22D	IRIS PASSCAL I	105.78	27	P	PKiKP	00 04 20.6	-0.5
	baz=334						
TUC	Tucson	105.82	30	PFAKE		00 04 30.0	+9.0
TUC				LR	LR		
	comp=Z,6µm,21.0s						
TUC	Tucson	105.82	30	P	PKiKP	00 04 19.9	-1.1
	baz=331						
P48A	Milroy	105.86	8	PFAKE		00 04 30.0	+9.2
P48A				LR	LR		
	comp=Z,9µm,19.0s						
P48A	Milroy	105.86	8	P	PKiKP	00 04 19.6	-1.2
	baz=352						
MVL	Millersville	105.86	0	PFAKE		00 04 30.0	+9.2
MVL				LR	LR		

	comp=Z,6µm,18.0s						
P49A	**Miami Univ. Ec**	**105.86**	**7**	P	**PKiKP**	**00 04 19.9**	**-0.9**
	baz=352						
P50A	**Jamestown**	**105.88**	**6**	P	**PKiKP**	**00 04 20.0**	**-0.8**
	baz=353						
PSUB	**Penn St. - Bra**	**105.94**	**360**	PFAKE		00 04 30.0	+9.1
PSUB				LR	LR		
	comp=Z,9µm,18.0s						
P52A	**Corning**	**105.99**	**5**	P	**PKiKP**	**00 04 20.1**	**-1.0**
	baz=354						
SLM	**Saint Louis**	**106.00**	**12**	PFAKE		00 04 30.0	+8.9
SLM				LR	LR		
	comp=Z,9µm,19.0s						
BLO	**Bloomington**	**106.01**	**9**	PFAKE		00 04 30.0	+8.9
BLO				LR	LR		
	comp=Z,8µm,18.0s						
P60A	**Greenville**	**106.05**	**360**	P	**PKiKP**	**00 04 20.4**	**-0.7**
	baz=0.1						
P51A	**Williamsport**	**106.07**	**6**	PFAKE		00 04 30.0	+8.8
P51A				LR	LR		
	comp=Z,10µm,22.0s						
MCWV	**Mont Chateau**	**106.11**	**3**	PFAKE		00 04 30.0	+8.7
MCWV				LR	LR		
	comp=Z,3µm,19.0s						
P53A	**Whipple**	**106.19**	**5**	PFAKE		00 04 30.0	+8.6
P53A				LR	LR		
	comp=Z,9µm,19.0s						
OLIL	**Olney**	**106.23**	**10**	PFAKE		00 04 30.0	+8.5
OLIL				LR	LR		
	comp=Z,8µm,20.0s						
P59A	**Jarrettsville**	**106.25**	**1**	P	**PKiKP**	**00 04 21.1**	**-0.4**
	baz=359						
P56A	**Dayton Farm, R**	**106.30**	**2**	P	**PKiKP**	**00 04 21.0**	**-0.6**
	baz=357						
P57A	**Homestead Farm**	**106.35**	**2**	P	**PKiKP**	**00 04 20.7**	**-1.0**
	baz=358						
CCM	**Cathedral Cave**	**106.38**	**13**	PFAKE		00 04 30.0	+8.2
CCM				LR	LR		
	comp=Z,8µm,18.0s						
CCM	**Cathedral Cave**	**106.38**	**13**	P	**PKiKP**	**00 04 20.9**	**-0.9**
	baz=347						
SDMD	**Soldier's Deli**	**106.45**	**1**	PFAKE		00 04 30.0	+8.1
SDMD				LR	LR		
	comp=Z,4µm,19.0s						
MAW	**Mawson**	**106.47**	**195**	PFAKE		00 04 30.0	+9.2
MAW				LR	LR		
	comp=Z,600nm,19.0s						
Q51A	**Peebles**	**106.50**	**6**	PFAKE		00 04 30.0	+8.0
Q51A				LR	LR		
	comp=Z,8µm,20.0s						
Q51A	**Peebles**	**106.50**	**6**	P	**PKiKP**	**00 04 20.9**	**-1.1**
	baz=354						
Q50A	**Georgetown**	**106.62**	**7**	P	**PKiKP**	**00 04 21.0**	**-1.2**
	baz=353						
Q52A	**Bidwell**	**106.65**	**5**	P	**PKiKP**	**00 04 21.6**	**-0.7**
	baz=354						
Q54A	**Coxs Mills**	**106.73**	**4**	PFAKE		00 04 30.0	+7.6
Q54A				LR	LR		
	comp=Z,10µm,20.0s						
Q56A	**Snyder Ridge,**	**106.75**	**3**	P	**PKiKP**	**00 04 21.6**	**-0.9**
	baz=357						
Q55A	**Buckhannon**	**106.76**	**4**	P	**PKiKP**	**00 04 21.1**	**-1.4**
	baz=356						
Q57A	**Strasburg**	**106.79**	**2**	P	**PKiKP**	**00 04 20.6**	**-1.9**
	baz=358						
AMTX	**Amarillo**	**106.83**	**22**	PFAKE		00 04 30.0	+7.1
AMTX				LR	LR		
	comp=Z,16µm,18.0s						
AMTX	**Amarillo**	**106.83**	**22**	P	**PKiKP**	**00 04 22.4**	**-0.5**
	baz=338						
121A	**Cookes Peak, D**	**106.83**	**28**	P	**PKiKP**	**00 04 21.5**	**-1.5**
	baz=333						
Q58A	**Fox Den Farm,**	**106.90**	**2**	P	**PKiKP**	**00 04 21.9**	**-0.9**
	baz=358						
WCI	**Wyandotte Cave**	**106.97**	**9**	PFAKE		00 04 30.0	+7.1
WCI				LR	LR		
	comp=Z,8µm,20.0s						
WCI	**Wyandotte Cave**	**106.97**	**9**	P	**PKiKP**	**00 04 22.2**	**-0.7**
	baz=351						
R49A	**Shelbyville**	**107.04**	**8**	PFAKE		00 04 30.0	+7.0
R49A				LR	LR		
	comp=Z,7µm,18.0s						
USIN	**University of**	**107.05**	**10**	PFAKE		00 04 30.0	+7.0
USIN				LR	LR		
	comp=Z,10µm,19.0s						
R50A	**Paris**	**107.14**	**7**	PFAKE		00 04 30.0	+6.8
R50A				LR	LR		
	comp=Z,10µm,19.0s						
R50A	**Paris**	**107.14**	**7**	P	**PKiKP**	**00 04 22.4**	**-0.8**
	baz=353						
R52A	**Catlettsburg**	**107.24**	**6**	P	**PKiKP**	**00 04 22.8**	**-0.6**
	baz=354						
319A	**Douglas**	**107.25**	**30**	PFAKE		00 04 40.0	+16
319A				LR	LR		
	comp=Z,7µm,20.0s						
R53A	**Hurricane**	**107.30**	**5**	PFAKE		00 04 40.0	+16
R53A				LR	LR		
	comp=Z,8µm,21.0s						
MSTX	**Muleshoe**	**107.32**	**23**	PFAKE		00 04 40.0	+16
MSTX				LR	LR		
	comp=Z,7µm,20.0s						
MSTX	**Muleshoe**	**107.32**	**23**	P	**PKiKP**	**00 04 23.2**	**-0.6**
	baz=337						
R55A	**Marlinton**	**107.47**	**4**	PFAKE		00 04 40.0	+16
R55A				LR	LR		
	comp=Z,9µm,21.0s						
TUL1	**Leonard**	**107.49**	**17**	PFAKE		00 04 40.0	+16
TUL1				LR	LR		
	comp=Z,9µm,18.0s						
TUL1	**Leonard**	**107.49**	**17**	P	**PKiKP**	**00 04 23.3**	**-0.6**
	baz=343						
R54A	**Victor**	**107.52**	**4**	P	**PKiKP**	**00 04 22.7**	**-1.3**
	baz=356						
S49A	**Springfield**	**107.53**	**8**	P	**PKiKP**	**00 04 21.7**	**-2.3**
	baz=352						
HHAR	**Hobbs**	**107.56**	**15**	PFAKE		00 04 40.0	+16
HHAR				LR	LR		
	comp=Z,11µm,22.0s						
CBN	**Corbin Frederi**	**107.64**	**1**	PFAKE		00 04 40.0	+16
CBN				LR	LR		
	comp=Z,7µm,19.0s						
U40A	**Yellville**	**107.72**	**14**	P	**PKiKP**	**00 04 23.0**	**-1.4**
	baz=345						
S50A	**Richmond**	**107.73**	**7**	P	**PKiKP**	**00 04 24.5**	**+0.2**
	baz=352						
PBMO	**Poplar Bluff**	**107.77**	**12**	PFAKE		00 04 40.0	+16
PBMO				LR	LR		
	comp=Z,9µm,19.0s						
WMOK	**Wichita Mounta**	**107.82**	**20**	PFAKE		00 04 40.0	+15
WMOK				LR	LR		
	comp=Z,9µm,19.0s						
T45A	**Paducah**	**107.83**	**11**	PFAKE		00 04 40.0	+15
T45A				LR	LR		
	comp=Z,10µm,18.0s						
S51A	**Beattyville**	**107.85**	**7**	PFAKE		00 04 40.0	+15
S51A				LR	LR		
	comp=Z,10µm,20.0s						
S51A	**Beattyville**	**107.85**	**7**	P	**PKiKP**	**00 04 25.2**	**+0.6**
	baz=353						
R58B	**Mineral**	**107.87**	**2**	PFAKE		00 04 40.0	+15
R58B				LR	LR		
	comp=Z,7µm,19.0s						
S54A	**Dingess, Beckl**	**107.88**	**5**	P	**PKiKP**	**00 04 25.5**	**+0.9**
	baz=355						
S53A	**Williamson**	**107.93**	**5**	P	**PKiKP**	**00 04 23.5**	**-1.3**
	baz=354						
S55A	**Lewisburg**	**107.95**	**4**	P	**PKiKP**	**00 04 24.7**	**-0.1**
	baz=356						
PARMO	**Parma**	**108.00**	**12**	PFAKE		00 04 40.0	+15
PARMO				LR	LR		
	comp=Z,9µm,19.0s						
S57A	**Dark Hollow, R**	**108.04**	**3**	PFAKE		00 04 40.0	+15
S57A				LR	LR		
	comp=Z,7µm,19.0s						
T47A	**Sharon Grove**	**108.09**	**10**	PFAKE		00 04 40.0	+15
T47A				LR	LR		
	comp=Z,9µm,20.0s						
T49A	**Edmonton**	**108.17**	**8**	PFAKE		00 04 40.0	+15
T49A				LR	LR		
	comp=Z,8µm,19.0s						
S61A	**Accomac**	**108.18**	**360**	PFAKE		00 04 40.0	+15
S61A				LR	LR		
	comp=Z,6µm,18.0s						
S58A	**Poland Farm, P**	**108.22**	**2**	PFAKE		00 04 40.0	+15
S58A				LR	LR		
	comp=Z,7µm,18.0s						
PVMO	**Portageville**	**108.25**	**12**	PFAKE		00 04 40.0	+15
PVMO				LR	LR		
	comp=Z,10µm,20.0s						
FCAR	**Ozark Folk Cen**	**108.32**	**14**	PFAKE		00 04 40.0	+15
FCAR				LR	LR		
	comp=Z,8µm,20.0s						
T52A	**Hallie**	**108.43**	**6**	PFAKE		00 04 40.0	+14
T52A				LR	LR		
	comp=Z,12µm,18.0s						
GLAT	**Glass**	**108.46**	**12**	PFAKE		00 04 40.0	+14
GLAT				LR	LR		
	comp=Z,11µm,18.0s						
MNTX	**Cornudas Mount**	**108.48**	**26**	PFAKE		00 04 40.0	+14
MNTX				LR	LR		
	comp=Z,6µm,20.0s						
BLA	**Blacksburg**	**108.52**	**4**	PFAKE		00 04 40.0	+14
BLA				LR	LR		
	comp=Z,10µm,18.0s						
HSIG		**108.59**	**32**	PFAKE		00 04 40.0	+14
HSIG				LR	LR		
	comp=Z,4µm,20.0s						
GNAR	**Gosnell**	**108.64**	**12**	PFAKE		00 04 40.0	+14
GNAR				LR	LR		
	comp=Z,9µm,19.0s						
W39A	**Magazine**	**108.64**	**16**	PFAKE		00 04 40.0	+14
W39A				LR	LR		
	comp=Z,9µm,19.0s						
T60A	**Surry**	**108.71**	**1**	PFAKE		00 04 40.0	+14
T60A				LR	LR		
	comp=Z,9µm,18.0s						
T57A	**Hurt**	**108.79**	**3**	PFAKE		00 04 40.0	+14
T57A				LR	LR		
	comp=Z,10µm,19.0s						
HALT	**Halls**	**108.81**	**12**	PFAKE		00 04 40.0	+14
HALT				LR	LR		
	comp=Z,8µm,19.0s						
WVT	**Waverly**	**108.83**	**10**	PFAKE		00 04 40.0	+14
WVT				LR	LR		
	comp=Z,10µm,19.0s						
WHAR	**Wooly Hollow**	**108.86**	**14**	PFAKE		00 04 40.0	+13
WHAR				LR	LR		
	comp=Z,10µm,20.0s						
T59A	**Double "B" Far**	**108.87**	**2**	PFAKE		00 04 40.0	+14
T59A				LR	LR		
	comp=Z,7µm,20.0s						
HBAR	**Harrisburg**	**108.92**	**13**	PFAKE		00 04 40.0	+13
HBAR				LR	LR		
	comp=Z,10µm,20.0s						
TZTN	**Tazewell**	**108.94**	**7**	PFAKE		00 04 40.0	+13
TZTN				LR	LR		
	comp=Z,9µm,18.0s						
W41B	**Gary Mavity, V**	**108.98**	**14**	P	**PKiKP**	**00 04 25.7**	**-1.0**
	baz=346						
CLTN	**Cedars of Leba**	**109.07**	**9**	PFAKE		00 04 40.0	+13
CLTN				LR	LR		
	comp=Z,5µm,21.0s						
U54A	**Nelsons Funny**	**109.11**	**5**	PFAKE		00 04 40.0	+13
U54A				LR	LR		
	comp=Z,8µm,21.0s						
MIAR	**Mount Ida**	**109.31**	**16**	PFAKE		00 04 40.0	+13
MIAR				LR	LR		
	comp=Z,6µm,19.0s						
UALR	**University of**	**109.35**	**14**	PFAKE		00 04 40.0	+13
UALR				LR	LR		
	comp=Z,11µm,22.0s						
V48A	**Smith Brothers**	**109.35**	**10**	PFAKE		00 04 40.0	+13
V48A				LR	LR		
	comp=Z,8µm,18.0s						
SRIG	**Santa Rosalia**	**109.46**	**34**	PFAKE		00 04 40.0	+12
SRIG				LR	LR		
	comp=Z,4µm,20.0s						
MET	**Memphis--Engin**	**109.47**	**12**	PFAKE		00 04 40.0	+12
MET				LR	LR		
	comp=Z,10µm,18.0s						
U59A	**Littleton**	**109.48**	**2**	PFAKE		00 04 40.0	+12
U59A				LR	LR		
	comp=Z,6µm,19.0s						
U61A	**Possum Corner**	**109.52**	**1**	PFAKE		00 04 40.0	+12
U61A				LR	LR		
	comp=Z,10µm,18.0s						
X40A	**Basin Creek Fa**	**109.52**	**15**	PFAKE		00 04 40.0	+12
X40A				LR	LR		
	comp=Z,7µm,19.0s						
ABTX	**Abilene, Hawle**	**109.55**	**21**	PFAKE		00 04 40.0	+12
ABTX				LR	LR		
	comp=Z,12µm,19.0s						
V51A	**Loudon**	**109.59**	**7**	PFAKE		00 04 40.0	+12
V51A				LR	LR		
	comp=Z,10µm,19.0s						
V52A	**Sevierville**	**109.63**	**7**	PFAKE		00 04 40.0	+12
V52A				LR	LR		
	comp=Z,7µm,19.0s						
W47A	**Westpoint**	**109.72**	**10**	P	**PKiKP**	**00 04 25.6**	**-2.6**
	baz=350						
V53A	**Saluda**	**109.88**	**6**	PFAKE		00 04 40.0	+12
V53A				LR	LR		
	comp=Z,10µm,19.0s						
V56A	**Mocksville**	**109.91**	**4**	PFAKE		00 04 40.0	+12
V56A				LR	LR		
	comp=Z,12µm,18.0s						
PLAL	**Pickwick Lake**	**109.92**	**11**	PFAKE		00 04 40.0	+12
PLAL				LR	LR		
	comp=Z,6µm,18.0s						
CPCT	**Cooper Cave**	**109.92**	**8**	PFAKE		00 04 40.0	+11
CPCT				LR	LR		
	comp=Z,12µm,18.0s						
SWET	**Sewanee**	**109.99**	**9**	PFAKE		00 04 40.0	+11
SWET				LR	LR		
	comp=Z,9µm,21.0s						
W49A	**Belvidere**	**110.04**	**9**	P	**PKiKP**	**00 04 27.7**	**-1.0**
	baz=351						
V61A	**Roper**	**110.06**	**1**	PFAKE		00 04 40.0	+11
V61A				LR	LR		
	comp=Z,10µm,18.0s						
V60A	**Jim Taylor Roa**	**110.08**	**1**	PFAKE		00 04 40.0	+11
V60A				LR	LR		
	comp=Z,6µm,21.0s						
W50A	**Signal Mountai**	**110.08**	**8**	PFAKE		00 04 40.0	+11
W50A				LR	LR		
	comp=Z,8µm,19.0s						
W50A	**Signal Mountai**	**110.08**	**8**	P	**PKiKP**	**00 04 29.4**	**+0.5**
	baz=352						
OXF	**Oxford**	**110.16**	**12**	PFAKE		00 04 40.0	+11
OXF				LR	LR		
	comp=Z,8µm,21.0s						
SACV	**Santiago Islan**	**110.19**	**306**	PFAKE		00 04 40.0	+11
SACV				LR	LR		
	comp=Z,3µm,19.0s						
WLAR	**White Oak Lake**	**110.23**	**15**	PFAKE		00 04 40.0	+11
WLAR				LR	LR		
	comp=Z,8µm,18.0s						
CCAR	**Cane Creek**	**110.30**	**14**	PFAKE		00 04 40.0	+11
CCAR				LR	LR		
	comp=Z,10µm,19.0s						
V62A	**Hyde County Ai**	**110.30**	**0**	PFAKE		00 04 40.0	+11
V62A				LR	LR		
	comp=Z,8µm,18.0s						
W52A	**Murphy**	**110.34**	**7**	PFAKE		00 04 40.0	+11
W52A				LR	LR		
	comp=Z,11µm,18.0s						
KMSC	**Kings Mountain**	**110.52**	**5**	PFAKE		00 04 40.0	+10
KMSC				LR	LR		
	comp=Z,12µm,18.0s						
BG3	**Lake Jocassee**	**110.54**	**6**	PFAKE		00 04 40.0	+10
BG3				LR	LR		
	comp=Z,8µm,18.0s						
CNNC	**Cliffs of the**	**110.59**	**2**	PFAKE		00 04 40.0	+10
CNNC				LR	LR		
	comp=Z,9µm,19.0s						
W57A	**Gilead**	**110.59**	**4**	PFAKE		00 04 40.0	+10
W57A				LR	LR		
	comp=Z,7µm,19.0s						
X48A	**Hartselle**	**110.59**	**10**	PFAKE		00 04 40.0	+10
X48A				LR	LR		
	comp=Z,9µm,20.0s						
X51A	**Calhoun**	**110.76**	**8**	PFAKE		00 04 40.0	+10
X51A				LR	LR		
	comp=Z,8µm,19.0s						
X51A	**Calhoun**	**110.76**	**8**	P	**PKiKP**	**00 04 31.4**	**+1.3**
	baz=352						
X50B	**Fort Payne**	**110.77**	**9**	P	**PKiKP**	**00 04 30.2**	**0.0**
	baz=351						
WHTX	**Lake Whitney,**	**110.77**	**20**	PFAKE		00 04 40.0	+10
WHTX				LR	LR		
	comp=Z,10µm,22.0s						
PAULI	**Pauline**	**110.80**	**5**	PFAKE		00 04 40.0	+10
PAULI				LR	LR		
	comp=Z,9µm,19.0s						
BIRD	**Birdtown, Kers**	**111.07**	**4**	PFAKE		00 04 40.0	+9.3
BIRD				LR	LR		
	comp=Z,5µm,19.0s						
X58A	**Rowland**	**111.22**	**3**	PFAKE		00 04 40.0	+9.1
X58A				LR	LR		
	comp=Z,8µm,22.0s						
TXAR	**Lajitas Array**	**111.24**	**26**	PKiKP	**PKiKP**	**00 04 31.2**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=120,slow=0.5,SNR=13						
TXAR				PP	**PP**	**00 05 05.9**	**-3.7**
	comp=Z,3.4nm,1.0s,baz=0.0,slow=6.3,SNR=6.4						
TXAR				PKKPbc	**PKKPbc**	**00 15 26.8**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=161,slow=6.4,SNR=11						
Y49A	**Blount Mountai**	**111.26**	**10**	PFAKE		00 04 40.0	+8.9
Y49A				LR	LR		
	comp=Z,8µm,20.0s						
HODGE	**Hodges**	**111.35**	**6**	PFAKE		00 04 40.0	+8.8
HODGE				LR	LR		
	comp=Z,10µm,19.0s						
JSC	**Jenkinsville**	**111.38**	**5**	PFAKE		00 04 40.0	+8.7
JSC				LR	LR		
	comp=Z,12µm,20.0s						
JCT	**Junction City**	**111.49**	**22**	PFAKE		00 04 40.0	+8.3
JCT				LR	LR		
	comp=Z,15µm,18.0s						
Y52A	**Lilburn**	**111.54**	**7**	PFAKE		00 04 40.0	+8.4
Y52A				LR	LR		
	comp=Z,9µm,18.0s						
ETX06	**Route 59 and C**	**111.67**	**17**	PFAKE		00 04 40.0	+8.1
ETX06				LR	LR		
	comp=Z,5µm,19.0s						
Y57A	**Sumter**	**111.70**	**4**	PFAKE		00 04 40.0	+8.1
Y57A				LR	LR		
	comp=Z,7µm,18.0s						
NATX	**Nacogdoches**	**111.72**	**17**	PFAKE		00 04 40.0	+8.0
NATX				LR	LR		
	comp=Z,10µm,20.0s						
Y60A	**Bolivia**	**111.81**	**2**	PFAKE		00 04 40.0	+7.9
Y60A				LR	LR		
	comp=Z,10µm,19.0s						
Y58A	**Scranton**	**111.85**	**4**	PFAKE		00 04 40.0	+7.8
Y58A				LR	LR		
	comp=Z,9µm,18.0s						
Z50A	**Ashland**	**111.92**	**9**	PFAKE		00 04 40.0	+7.6
Z50A				LR	LR		
	comp=Z,7µm,20.0s						
LRAL	**Lakeview Retre**	**111.99**	**10**	PFAKE		00 04 40.0	+7.5
LRAL				LR	LR		
	comp=Z,8µm,18.0s						
GOGA	**Godfrey**	**112.05**	**7**	PFAKE		00 04 40.0	+7.4
GOGA				LR	LR		
	comp=Z,8µm,19.0s						
147A	**Livingston**	**112.14**	**11**	PFAKE		00 04 40.0	+7.2
147A				LR	LR		
	comp=Z,10µm,18.0s						
VBMS	**Vicksburg**	**112.19**	**14**	PFAKE		00 04 40.0	+7.2
VBMS				LR	LR		
	comp=Z,10µm,18.0s						
Z56A	**Williston**	**112.32**	**5**	PFAKE		00 04 40.0	+6.9
Z56A				LR	LR		
	comp=Z,9µm,19.0s						
NHSC	**New Hope**	**112.61**	**4**	PFAKE		00 04 50.0	+16
NHSC				LR	LR		
	comp=Z,7µm,18.0s						
HPIG		**112.64**	**29**	PFAKE		00 04 50.0	+16
HPIG				LR	LR		
	comp=Z,5µm,20.0s						
152A	**Waverly Hall**	**112.65**	**8**	PFAKE		00 04 50.0	+16
152A				LR	LR		
	comp=Z,9µm,18.0s						
BBSR	**BB Station**	**112.67**	**350**	PFAKE		00 04 50.0	+16
BBSR				LR	LR		
	comp=Z,5µm,19.0s						
PPT2	**Papeete2**	**112.87**	**96**	*e*PP	**PP**	**00 05 20.7**	**-2.1**
	comp=Z,221nm,27.2s						
PPT2				*e*SP	SP	00 14 54.6	-2.6
	comp=Z,1µm,27.2s						
PPT2				*e*SS	**SS**	**00 21 06.8**	**-0.1**
	comp=Z,1µm,24.8s						
PPT2	**Papeete2**	**112.87**	**96**	*e*LQ	LQ	00 33 36.5	
	comp=Z,7µm,37.8s						
PPT2				*e*LR	LR	00 38 18.4	
	comp=Z,3µm,21.8s						
154A	**Montrose**	**112.88**	**7**	PFAKE		00 04 50.0	+16
154A				LR	LR		
	comp=Z,10µm,18.0s						
250A	**Grady**	**113.13**	**10**	PFAKE		00 04 50.0	+15
250A				LR	LR		
	comp=Z,11µm,20.0s						
HKT	**Hockley**	**113.14**	**19**	PFAKE		00 04 50.0	+15
HKT				LR	LR		
	comp=Z,8µm,18.0s						
253A	**Americus**	**113.32**	**8**	PFAKE		00 04 50.0	+15
253A				LR	LR		
	comp=Z,8µm,20.0s						
SYO	**Syowa Base**	**113.50**	**201**	⇑*i*P	**PKiKP**	**00 04 32.3**	**-1.7**
255A	**Hazlehurst**	**113.62**	**6**	PFAKE		00 04 50.0	+14
255A				LR	LR		
	comp=Z,10µm,19.0s						
257A	**Skidaway Islan**	**113.69**	**5**	PFAKE		00 04 50.0	+14
257A				LR	LR		
	comp=Z,9µm,20.0s						
352A	**Blakely**	**113.80**	**9**	PFAKE		00 04 50.0	+14
352A				LR	LR		
	comp=Z,7µm,19.0s						
BRAL	**Brewton**	**113.81**	**11**	PFAKE		00 04 50.0	+14
BRAL				LR	LR		
	comp=Z,11µm,18.0s						
TIGA	**Tifton**	**113.99**	**7**	PFAKE		00 04 50.0	+14
TIGA				LR	LR		
	comp=Z,12µm,20.0s						
452A	**Marianna**	**114.39**	**9**	P	**PKiKP**	**00 04 37.1**	**0.0**
	baz=352						
453A	**Whigham**	**114.49**	**8**	PFAKE		00 04 50.0	+13
453A				LR	LR		
	comp=Z,11µm,18.0s						
451A	**Vernon**	**114.54**	**9**	PFAKE		00 04 50.0	+13
451A				LR	LR		
	comp=Z,10µm,19.0s						
KVTX	**Kingsville**	**114.82**	**22**	PFAKE		00 04 50.0	+12
KVTX				LR	LR		
	comp=Z,10µm,18.0s						
456A	**Hilliard**	**114.85**	**6**	PFAKE		00 04 50.0	+12
456A				LR	LR		
	comp=Z,10µm,18.0s						
554A	**Perry**	**115.32**	**8**	P	**PKiKP**	**00 04 38.3**	**-0.6**
	baz=353						
555A	**McAlpin**	**115.36**	**7**	PFAKE		00 04 50.0	+11
555A				LR	LR		
	comp=Z,7µm,20.0s						
555A	**McAlpin**	**115.36**	**7**	P	**PKiKP**	**00 04 39.0**	**0.0**
	baz=353						
TBI	**Tubuai**	**115.78**	**102**	*e*SP	SP	00 15 23.1	-0.5
	comp=Z,1µm,28.2s						
TBI				*e*SS	**SS**	**00 21 48.1**	**+3.0**
	comp=Z,805nm,29.2s						
TBI	**Tubuai**	**115.78**	**102**	*e*LQ	LQ	00 34 42.0	
	comp=Z,4µm,40.2s						
TBI				*e*LR	LR	00 39 35.7	
	comp=Z,3µm,37.8s						
TAOE	**Nuku Hiva Isla**	**116.03**	**83**	*e*PS	PS	00 15 27.7	+1.2
	comp=Z,2µm,27.8s						
TAOE				*e*SS	SS	00 21 51.2	+2.9
	comp=Z,2µm,31.9s						
TAOE	**Nuku Hiva Isla**	**116.03**	**83**	*e*LR	LR	00 39 46.5	
	comp=Z,5µm,26.7s						
656A	**Willston**	**116.15**	**7**	PFAKE		00 04 50.0	+9.5
656A				LR	LR		
	comp=Z,8µm,18.0s						
LNIG	**Linares**	**116.78**	**24**	PFAKE		00 04 50.0	+8.1
LNIG				LR	LR		
	comp=Z,6µm,19.0s						
VNDA	**Vanda**	**117.01**	**168**	PKP	**PKPdf**	**00 04 39.8**	**-0.8**
	comp=Z,12nm,0.9s,baz=309,slow=4.7,SNR=29						
DWPF	**Disney Wildern**	**117.49**	**6**	PFAKE		00 04 50.0	+6.9
DWPF				LR	LR		
	comp=Z,11µm,20.0s						
ZAIG	**Zacatecas**	**117.59**	**28**	PFAKE		00 05 00.0	+16
ZAIG				LR	LR		
	comp=Z,5µm,19.0s						
957A	**Wimauma**	**117.86**	**7**	PFAKE		00 05 00.0	+16
957A				LR	LR		
	comp=Z,9µm,18.0s						
ASCN	**Ascension**	**117.98**	**280**	PFAKE		00 05 00.0	+16

ASCN				LR	LR		
	comp=Z,2µm,20.0s						
060A	**Indiantown**	**118.64**	**5**	PFAKE		00 05 00.0	+15
060A				LR	LR		
	comp=Z,10µm,22.0s						
059A	**Moore Haven**	**118.65**	**5**	PFAKE		00 05 00.0	+15
059A				LR	LR		
	comp=Z,5µm,19.0s						
061Z	**Ochoppi**	**119.76**	**5**	PFAKE		00 05 00.0	+12
061Z				LR	LR		
	comp=Z,8µm,18.0s						
TLIG	**Tlapa**	**123.85**	**26**	PFAKE		00 05 10.0	+14
TLIG				LR	LR		
	comp=Z,6µm,22.0s						
GRTK	**Grand Turk**	**124.12**	**355**	PFAKE		00 05 10.0	+14
GRTK				LR	LR		
	comp=Z,5µm,19.0s						
QSPA	**South Pole Qui**	**124.27**	**180**	*e*PKPdf	**PKPdf**	**00 04 53.8**	**-1.1**
QSPA				LR	LR		
	comp=Z,4µm,21.0s						
TEIG	**Tepich**	**124.28**	**14**	*e*PKPdf	**PKiKP**	**00 04 56.5**	**-0.1**
TEIG				LR	LR		
	comp=Z,5µm,20.0s						
GTBY	**Guantanamo Bay**	**125.87**	**359**	PFAKE		00 05 10.0	+10
GTBY				LR	LR		
	comp=Z,7µm,19.0s						
CBCY	**The Bluff, Cay**	**125.92**	**5**	*e*PKPdf	**PKPdf**	**00 04 59.4**	**-0.1**
SMRT	**St. Maarten**	**126.36**	**345**	PFAKE		00 05 10.0	+9.1
SMRT				LR	LR		
	comp=Z,5µm,22.0s						
ANWB	**Willy Bob**	**126.44**	**343**	PFAKE		00 05 10.0	+9.0
ANWB				LR	LR		
	comp=Z,3µm,21.0s						
CUPR	**Culebra, Puert**	**126.55**	**348**	*e*PKPdf	**PKPdf**	**00 04 59.6**	**-1.2**
SDDR	**Presa de Saban**	**126.64**	**355**	PFAKE		00 05 10.0	+8.5
SDDR				LR	LR		
	comp=Z,6µm,20.0s						
MTP	**Monte Pirata**	**126.80**	**348**	*e*PKPdf	**PKPdf**	**00 05 00.2**	**-1.0**
SABA	**Saba**	**126.82**	**345**	PFAKE		00 05 10.0	+8.2
SABA				LR	LR		
	comp=Z,5µm,21.0s						
SEUS	**St. Eustatius**	**126.89**	**345**	PFAKE		00 05 10.0	+8.1
SEUS				LR	LR		
	comp=Z,4µm,21.0s						
SJG	**San Juan**	**126.89**	**349**	PFAKE		00 05 10.0	+8.1
SJG				LR	LR		
	comp=Z,4µm,19.0s						
SDD	**Santo Domingo**	**127.04**	**353**	PFAKE		00 05 10.0	+7.8
SDD				LR	LR		
	comp=Z,10µm,21.0s						
CCIG	**Comitan**	**127.14**	**20**	*e*PKPdf	**PKPdf**	**00 05 02.2**	**0.0**
CCIG				LR	LR		
	comp=Z,6µm,22.0s						
MTDJ	**Mount Denham**	**127.53**	**2**	PFAKE		00 05 10.0	+6.7
MTDJ				LR	LR		
	comp=Z,5µm,18.0s						
SNAA	**Sanae**	**127.72**	**202**	PKPdf	**PKPdf**	**00 05 01.3**	**-0.1**
SNAA	**Sanae**	**127.72**	**202**	PKP	**PKPdf**	**00 04 59.7**	**-1.6**
	comp=Z,28nm,1.1s,baz=40,slow=2.2,SNR=8.5						
SNAA				PP	**PP**	**00 07 01.9**	**-1.5**
	comp=Z,6.7nm,1.1s,baz=97,slow=9.1,SNR=4.7						
SNAA	**Sanae**	**127.72**	**202**	*e*PKPdf	**PKPdf**	**00 05 00.9**	**-0.5**
SNAA				LR	LR		
	comp=Z,2µm,22.0s						
SNAA	**Sanae**	**127.72**	**202**	*e*PKIKP	**PKPdf**	**00 05 00.9**	**-0.5**
SNAA				MLR	MLR		
	comp=Z,2µm,22.0s						
FDF	**Fort de France**	**129.11**	**342**	*e*PKPdf	**PKPdf**	**00 05 05.8**	**0.0**
FDF				LR	LR		
	comp=Z,4µm,21.0s						
FDF	**Fort de France**	**129.11**	**342**	*e*PKIKP	**PKPdf**	**00 05 05.8**	**0.0**
FDF				MLR	MLR		
	comp=Z,4µm,21.0s						
VNA1	**Neumayer--Stat**	**129.57**	**204**	PKPdf	**PKiKP**	**00 05 05.6**	**0.0**
VNA3	**Neumayer Olymp**	**129.94**	**203**	PKPdf	**PKiKP**	**00 05 06.0**	**-0.4**
BBGH	**Gun Hill**	**130.18**	**339**	PFAKE		00 05 20.0	+11
BBGH				LR	LR		
	comp=Z,4µm,20.0s						
TGUH	**Tegucigalpa,Un**	**130.48**	**15**	PFAKE		00 05 20.0	+11
TGUH				LR	LR		
	comp=Z,4µm,22.0s						
ESTN	**Estel**	**131.59**	**14**	PFAKE		00 05 20.0	+8.5
ESTN				LR	LR		
	comp=Z,5µm,20.0s						
GRGR	**Grenville**	**131.73**	**341**	PFAKE		00 05 20.0	+8.3
GRGR				LR	LR		
	comp=Z,3µm,21.0s						
ESPN	**Las Esperanzas**	**132.85**	**11**	PFAKE		00 05 20.0	+6.1
ESPN				LR	LR		
	comp=Z,3µm,21.0s						
ACON	**Acoyapa**	**132.92**	**13**	PFAKE		00 05 20.0	+5.9
ACON				LR	LR		
	comp=Z,5µm,22.0s						
RCBR	**Riachuelo**	**133.45**	**299**	PFAKE		00 05 30.0	+15
RCBR				LR	LR		
	comp=Z,3µm,21.0s						
JTS	**Las Juntas de**	**134.60**	**13**	PFAKE		00 05 30.0	+12
JTS				LR	LR		
	comp=Z,3µm,20.0s						
HDC	**Heredia**	**135.03**	**12**	PFAKE		00 05 30.0	+11
HDC				LR	LR		
	comp=Z,4µm,21.0s						
BCIP	**Isla Barro Col**	**136.40**	**6**	PFAKE		00 05 30.0	+8.8
BCIP				LR	LR		
	comp=Z,4µm,21.0s						
SDV	**Santo Domingo**	**136.58**	**353**	PKP	**PKPdf**	**00 05 19.2**	**-0.8**
	comp=Z,55nm,0.7s,baz=341,slow=2.2						
SDV	**Santo Domingo**	**136.58**	**353**	*e*PKPdf	**PKPdf**	**00 05 20.7**	**+0.6**
SDV				LR	LR		
	comp=Z,3µm,22.0s						
SDV	**Santo Domingo**	**136.58**	**353**	*e*P	**PKPdf**	**00 05 20.8**	**+0.8**
ROSC	**El Rosal**	**140.84**	**358**	PKhKP	PKPpre	00 05 22.0	
	comp=Z,12nm,0.6s,baz=18,slow=4.1,SNR=11						
ROSC				PKP	**PKPdf**	**00 05 28.7**	**+0.6**
	comp=Z,58nm,0.8s,baz=11,slow=2.8,SNR=22						
PTGA	**Pitinga**	**143.31**	**333**	PKhKP	PKPab	00 05 26.3	-1.5
	comp=Z,26nm,0.7s,baz=31,slow=4.2,SNR=24						
PTGA	**Pitinga**	**143.31**	**333**	*e*PKPpre	PKPab	00 05 28.4	+0.5
PTGA				*e*PKPdf	**PKPdf**	**00 05 33.0**	**+1.0**
PTGA				LR	LR		
	comp=Z,3µm,21.0s						
PAYG	**Puerto Ayora**	**143.70**	**25**	*e*PKPdf	PKPbc	00 05 31.4	+1.3
PAYG				LR	LR		
	comp=Z,2µm,20.0s						
HOPE	**Hope Point**	**146.28**	**222**	*e*PKPdf	**PKPdf**	**00 05 36.3**	**+0.5**
BDFB	**Brasilia**	**148.80**	**300**	PKP	**PKPdf**	**00 05 40.1**	**-1.2**
	comp=Z,15nm,1.2s,baz=32,slow=5.2,SNR=9.5						
BDFB				PKPbc	**PKPbc**	**00 05 44.7**	**-0.5**
	comp=Z,53nm,1.2s,baz=92,slow=0.7,SNR=22						
BDFB	**Brasilia**	**148.80**	**300**	*e*PKPdf	**PKPdf**	**00 05 41.4**	**+0.1**
BDFB				LR	LR		
	comp=Z,4µm,21.0s						
BDFB	**Brasilia**	**148.80**	**300**	*e*PKIKP	**PKPdf**	**00 05 41.4**	**+0.1**
BDFB				MLR	MLR		
	comp=Z,4µm,21.0s						
PMSA	**Palmer Station**	**148.88**	**190**	PKP	**PKPdf**	**00 05 38.6**	**-1.2**
	comp=Z,69nm,0.9s,baz=86,slow=2.1,SNR=13						
PMSA				PKPbc	**PKPbc**	**00 05 43.5**	**-0.2**
	comp=Z,69nm,0.9s,baz=171,slow=4.5,SNR=20						
PMSA	**Palmer Station**	**148.88**	**190**	*e*P	**PKPdf**	**00 05 38.6**	**-1.2**
RPN	**Rapa Nui**	**150.32**	**85**	PKPbc	**PKiKP**	**00 05 50.0**	**+0.7**
	comp=Z,353nm,1.2s,baz=320,slow=7.9,SNR=6.1						
RPN	**Rapa Nui**	**150.32**	**85**	*e*PKPdf	**PKPdf**	**00 05 42.6**	**-0.7**
RPN				*e*		00 05 51.1	
RPN	**Rapa Nui**	**150.32**	**85**	*e*PKIKP	**PKPdf**	**00 05 42.6**	**-0.7**
RPN				*e*		00 05 51.1	
ATAH	**Atahualpa**	**152.65**	**6**	PKP	**PKPdf**	**00 05 48.1**	**+0.3**
	comp=Z,70nm,1.2s,baz=5.8,slow=3.3,SNR=29						
ATAH				PKPbc	**PKiKP**	**00 05 56.0**	**+1.0**
	comp=Z,96nm,0.9s,baz=321,slow=3.8,SNR=33						
SPB	**Sao Paulo**	**153.06**	**286**	PFAKE		00 06 00.0	+4.9
SPB				LR	LR		
	comp=Z,4µm,20.0s						
SPB	**Sao Paulo**	**153.06**	**286**	*e*P	**PKPdf**	**00 05 48.3**	**+0.8**
PTGB	**Pitanga**	**157.27**	**289**	*e*P	**PKPdf**	**00 05 55.6**	**+2.2**
SIV	**San Ignacio**	**157.34**	**321**	PKP	**PKPdf**	**00 05 53.2**	**-0.5**
	comp=Z,25nm,1.2s,baz=66,slow=1.6,SNR=32						
SIV				PKPab	**PKPab**	**00 06 24.4**	**-0.2**
	comp=Z,36nm,1.1s,baz=65,slow=5.1,SNR=18						
NNA	**Nana**	**157.56**	**3**	PFAKE		00 06 10.0	-16
NNA				LR	LR		
	comp=Z,2µm,21.0s						
CNLB	**Canela**	**158.27**	**277**	*e*P	**PKPdf**	**00 05 56.4**	**+1.9**
USHA	**Ushuaia**	**159.04**	**192**	PKPab	**PKPab**	**00 06 30.6**	**-0.3**
	comp=Z,40nm,0.8s,baz=182,slow=6.9,SNR=13						
LPAZ	**La Paz**	**160.62**	**337**	PKP	**PKPdf**	**00 05 57.8**	**-0.5**
	comp=Z,43nm,1.0s,baz=16,slow=3.8,SNR=78						
LPAZ				PKKPab		00 12 25.2	
	comp=Z,2.3nm,0.3s,baz=249,slow=2.4,SNR=25						
LPAZ	**La Paz**	**160.62**	**337**	*e*pPKPdf	**PKPdf**	**00 05 58.3**	**+0.1**
LPAZ	**La Paz**	**160.62**	**337**	*e*P	**PKPdf**	**00 05 58.2**	**0.0**
LPAZ	**La Paz**	**160.62**	**337**	*e*PKIKP	**PKPdf**	**00 05 58.3**	**+0.1**
GO10	**Punta Arenas**	**161.06**	**189**	*e*PKPdf	**PKPdf**	**00 05 58.0**	**+1.2**
PLTB	**Pedras Altas**	**161.26**	**272**	*e*P	**PKPdf**	**00 05 59.9**	**+2.2**
CPUP	**Villa Florida**	**162.17**	**292**	PKP	**PKPdf**	**00 05 58.3**	**-0.5**
	comp=Z,26nm,1.0s,baz=60,slow=1.7,SNR=25						
CPUP				PKPab	**PKPab**	**00 06 43.7**	**-1.9**
	comp=Z,15nm,0.9s,baz=67,slow=7.6,SNR=5.1						
PB16	**IPOC Station P**	**162.96**	**339**	*e*P	**PKPdf**	**00 06 01.8**	**+1.2**
PB16				*e*S	**PKPab**	**00 06 50.6**	**+0.9**
PB12	**IPOC Station P**	**163.46**	**342**	*e*P	**PKPdf**	**00 06 01.4**	**+1.1**
MNMCX	**Minye Minye**	**163.74**	**339**	*e*P	**PKPdf**	**00 06 01.8**	**+0.9**
MNMCX				*e*S	**PKPab**	**00 06 51.6**	**-1.2**
PB11	**IPOC Station P**	**164.35**	**338**	*e*S	**PKPdf**	**00 06 02.4**	**+1.2**
PB11				IAML		00 06 03.6	
	comp=Z,45nm,3.4s						
PB08	**IPOC Station P**	**164.55**	**336**	*e*P	**PKPdf**	**00 06 02.8**	**+1.0**
YJA	**Yavi**	**164.78**	**321**	*e*P	**PKPdf**	**00 06 03.0**	**+1.1**
PB02	**IPOC Station P**	**165.89**	**337**	*e*P	**PKPdf**	**00 06 02.8**	**+0.3**
PB02				*e*S	**PKPab**	**00 07 02.1**	**+0.1**
PB02				IAML		00 07 13.9	
	comp=Z,8.2nm,1.8s						
PB09	**IPOC Station P**	**166.11**	**334**	*e*P	**PKPdf**	**00 06 04.4**	**+1.7**
AZAP	**Zapla**	**166.17**	**315**	*e*P	**PKPdf**	**00 06 02.9**	**+0.1**
PB07	**IPOC Station P**	**166.27**	**336**	*e*P	**PKPdf**	**00 06 03.7**	**+0.9**
PB07				*e*S	**PKPab**	**00 07 00.8**	**-2.9**
PB07				IAML		00 07 04.9	
	comp=Z,12nm,1.6s						
PB03	**IPOC Station P**	**166.52**	**335**	*e*P	**PKPdf**	**00 06 03.4**	**+0.4**
PB03				*e*S	**PKPab**	**00 07 05.0**	**+0.2**
PB03				IAML		00 07 10.2	
	comp=Z,5.5nm,1.5s						
LVC	**Limon Verde**	**166.72**	**331**	PKP	**PKPdf**	**00 06 03.8**	**+0.4**
	comp=Z,17nm,0.8s,baz=101,slow=2.3,SNR=16						
LVC				PKPab	**PKPab**	**00 07 05.1**	**-0.8**
	comp=Z,16nm,0.7s,baz=53,slow=6.4,SNR=6.3						
LVC	**Limon Verde**	**166.72**	**331**	*e*P	**PKPdf**	**00 06 04.4**	**+1.0**
LVC				*e*S	**PKPab**	**00 07 06.7**	**+0.7**
LVC				IAML		00 07 07.8	
	comp=Z,20nm,1.6s						
PB06	**IPOC Station P**	**167.06**	**334**	*e*P	**PKPdf**	**00 06 03.4**	**0.0**
PB05	**IPOC Station P**	**167.42**	**336**	*e*P	**PKPdf**	**00 06 05.0**	**+1.4**
PB05				*e*S	**PKPab**	**00 07 09.9**	**+1.3**
PB05				IAML		00 07 25.0	
	comp=Z,6.0nm,1.2s						
PB15	**IPOC Station P**	**167.48**	**332**	*e*P	**PKPdf**	**00 06 05.0**	**+1.3**
PB15				*e*S	**PKPab**	**00 07 09.9**	**+0.9**
PB15				IAML		00 07 16.5	
	comp=Z,35nm,1.8s						
FSA	**Cafayete**	**168.13**	**312**	*e*P	**PKPdf**	**00 06 04.5**	**+0.4**
AHML	**Horco Molle**	**168.20**	**308**	*e*P	**PKPdf**	**00 06 04.2**	**+0.2**
APLL	**PUNTA DE LOS L**	**171.21**	**295**	*e*S	**PKPdf**	**00 06 05.4**	**-0.3**
GO03	**Copiap**	**171.65**	**324**	*e*PKPdf	**PKPdf**	**00 06 07.3**	**+1.3**
AGUA	**GUANDACOL**	**172.07**	**307**	*e*S	**PKPdf**	**00 06 07.0**	**+0.8**
PLCA	**Paso Flores**	**172.54**	**212**	PKP	**PKPdf**	**00 06 06.5**	**+0.6**
	comp=Z,28nm,0.9s,baz=217,slow=0.4,SNR=0.8						
PLCA				PKPab	**PKPab**	**00 07 30.9**	**-0.1**
	comp=Z,20nm,0.9s,baz=205,slow=9.3,SNR=3.0						
CFA	**Coronel Fontan**	**173.07**	**293**	PKP	**PKPdf**	**00 06 06.8**	**+0.4**
	comp=Z,36nm,0.6s,baz=35,slow=2.2,SNR=6.3						
AROD	**Rodeo**	**173.16**	**307**	*e*S	**PKPdf**	**00 06 08.0**	**+1.1**

WEL 22 00:02:31.9, 42°S±2°×**17°4E**±°**, h16**^{km}±2^{km}**, M3.4**/25**, ML3.7**/24**, MLv3.4**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=145.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.08**	**204**	P	Pg	00 02 35.5	+0.4
BSWZ	**Blackbirch Sta**	**0.29**	**262**	P	Pb	00 02 38.7	0.0
TUWZ	**Tuamarina**	**0.34**	**316**	P	Pb	00 02 39.4	-0.2
TCW	**Tory Channel**	**0.47**	**2**	P	Pg	00 02 41.3	+0.1
BHW	**Baring Head**	**0.53**	**60**	P	Pb	00 02 43.1	+0.2
WEL	**Wellington**	**0.55**	**45**	P	Pb	00 02 43.3	+0.1
PLWZ	**Palliser**	**0.76**	**82**	P	Pn	00 02 47.7	-0.3
MSWZ	**Moikau Station**	**0.79**	**71**	P	Pn	00 02 48.0	-0.5
NNZ	**Nelson**	**0.80**	**305**	P	Pg	00 02 47.6	0.0
CAW	**Cannon Point**	**0.83**	**47**	P	Pg	00 02 48.3	+0.2
DUWZ	**D'Urville Isla**	**0.91**	**344**	P	Pb	00 02 49.4	+0.1
KHZ	**Kahutara**	**0.91**	**216**	P	Pn	00 02 51.1	+1.0
PAWZ	**Paruwai Farm**	**0.93**	**72**	P	Pn	00 02 50.7	+0.4
THZ	**Tophouse**	**1.01**	**265**	P	Pn	00 02 51.8	+0.2
MTW	**Mount Morrison**	**1.07**	**61**	P	Pg	00 02 52.6	+0.1
OGWZ	**Otaki Gorge**	**1.10**	**39**	P	Pn	00 02 52.8	+0.1
TRWZ	**Traveller**	**1.11**	**76**	P	Pn	00 02 52.9	+0.1
HOWZ	**Holdsworth Sta**	**1.23**	**51**	P	Pb	00 02 55.0	+0.2
MRZ	**Mangatainoka R**	**1.42**	**45**	P	Pb	00 02 57.9	-0.2
TIWZ	**Tintock**	**1.52**	**54**	P	Pg	00 03 01.6	+0.4
QRZ	**Quartz Range**	**1.56**	**303**	P	Pb	00 03 00.9	+0.5
GVZ	**Greta Valley S**	**1.58**	**215**	P	Pb	00 03 00.2	-0.6
OHWZ	**Ohakea**	**1.67**	**29**	P	Pg	00 03 04.4	+0.3
PRWZ	**Pori Road**	**1.71**	**50**	P	Pn	00 03 01.7	+0.6
POWZ	**Post Office Ro**	**1.72**	**42**	P	Pb	00 03 02.3	-0.8
BFZ	**Birch Farm**	**1.80**	**57**	P	Pn	00 03 02.2	-0.1
LTZ	**Lake Taylor**	**1.84**	**232**	P	Pn	00 03 04.1	+1.1
DVHZ	**Dannevirke**	**2.00**	**47**	P	Pn	00 03 05.1	+0.1
WAZ	**Wanganui**	**2.00**	**16**	P	Pb	00 03 08.9	+1.0
TSZ	**Takapari Road**	**2.07**	**39**	P	Pn	00 03 06.9	+0.8
LREZ	**Lake Rotokare**	**2.22**	**3**	P	Pg	00 03 13.6	-0.8
OKCZ	**Okains Bay**	**2.23**	**203**	P	Pn	00 03 07.9	-0.3
NMEZ	**Namu Road**	**2.28**	**353**	P	Pg	00 03 15.4	-0.2
PRHZ	**Porangahau**	**2.29**	**53**	P	Pn	00 03 09.9	+0.9
PNHZ	**Pukenui**	**2.30**	**41**	P	Pn	00 03 10.7	+1.5
PREZ	**Palmer Road**	**2.33**	**358**	P	Pg	00 03 16.0	-0.7
INZ	**Inchbonnie**	**2.34**	**242**	P	Pb	00 03 11.7	-1.9
MQZ	**McQueen's Vall**	**2.35**	**210**	P	Pn	00 03 08.9	-0.9
KHEZ	**Kahui Hut**	**2.39**	**355**	P	Pb	00 03 15.5	+1.0
AKCZ	**Akaroa Harbour**	**2.41**	**204**	P	Pn	00 03 10.5	-0.2
NBEZ	**Newall Road No**	**2.42**	**353**	P	Pg	00 03 16.9	-1.4
MTVZ	**Mangateitei**	**2.47**	**22**	P	Pb	00 03 17.4	+1.5
PKE	**Pukeiti**	**2.49**	**355**	P	Pg	00 03 18.0	-1.6
PKVZ	**Pokaka**	**2.52**	**20**	P	Pb	00 03 17.5	+0.6
MOVZ	**Moawhango**	**2.54**	**27**	P	Pb	00 03 16.9	-0.3
BHHZ	**Black Hill Sta**	**2.58**	**33**	P	Pb	00 03 15.9	-1.9
KRHZ	**Kereru**	**2.59**	**39**	P	Pn	00 03 13.6	+0.4
WHVZ	**Whangaehu Hut**	**2.60**	**23**	P	Pb	00 03 18.0	-0.3
TUVZ	**Tukino**	**2.63**	**24**	P	Pb	00 03 20.1	+1.3
NGZ	**Ngauruhoe**	**2.70**	**23**	P	Pb	00 03 20.2	+0.2
KAHZ	**Kahuranaki**	**2.74**	**47**	P	Pn	00 03 16.1	+0.8
WTVZ	**West Tongariro**	**2.75**	**22**	P	Pb	00 03 20.7	-0.1
TWVZ	**Taurewa**	**2.75**	**20**	P	Pb	00 03 21.4	+0.6
KRVZ	**Karewarewa**	**2.79**	**23**	P	Pb	00 03 22.3	+0.9
KWHZ	**Kaweka Forest**	**2.79**	**37**	P	Pb	00 03 23.1	+1.7
KATZ	**Kakaramea**	**2.91**	**23**	P	Pb	00 03 24.4	+0.8
WVZ	**Waitaha Valley**	**2.96**	**241**	P	Pb	00 03 24.5	+0.2
BKZ	**Black Stump Fm**	**3.03**	**35**	P	Pb	00 03 26.9	+1.3
HIZ	**Hauiti**	**3.19**	**8**	P	Pb	00 03 26.4	-1.8
MRHZ	**Matea Rd**	**3.29**	**31**	P	Pb	00 03 31.0	+1.1
TLZ	**Tolley Road**	**3.48**	**17**	P	Pb	00 03 33.6	+0.3
FOZ	**Fox Glacier**	**3.77**	**239**	P	Pb	00 03 37.3	-0.7
MWZ	**Matawai**	**4.18**	**38**	P	Pn	00 03 37.9	+2.9

SJA ***22*** *00:02:34.4*±*0.6, 36°.56S*×*74°.03W, h10*^{km}*, ML4.6, MW4.2*
IDC ***22*** *00:02:40.4*±*0.9, 36°.48S*×*73°.39W, h0*^{km}*, mb4.3/10, mb1 4.5/12, mb1mx4.3/33, mbtmp4.3/12, ML4.3/2, MS4.7/2, Ms1 4.7/2, ms1mx3.8/20, Error ellipse: s-maj=28.0km s-min=21.1km az=88.0*
ISCJB ***22*** *00:02:42.8*±*0.5, 36°.39S*±*0°.04*×*73°.45W*±*0°.06, h27*^{km}*, mb4.5/15, Error ellipse: s-maj=6.9km s-min=5.3km az=165.0*
NEIC ***22*** *00:02:43.0*±*0.0, 36°.53S*×*73°.59W, h12*^{km}*, mb4.7/9, ML4.1(GUC), After GUC.*
NEIC Felt [III] at Concepcion and Talcahuano.
GUC ***22*** *00:02:43.6*±*0.6, 36°.53S*×*73°.59W, h12*^{km}±*3*^{km}*, ML4.1*
ISC 22 00:02:43.7±0.6**, 36°.52S**±0°.05×**73°.57W**±0°.06**, h27**^{km}**, n63,** σ1^{s}**87**/70**, mb4.7**/15**, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCSP	**San Pedro de C**	**0.50**	**131**	⇑*e*P	**Pb**	**00 02 53.0**	**-0.9**
CCSP				*i* S	**Sb**	**00 02 59.4**	**-1.5**
CCSP				IAML		00 03 03.1	
	comp=E,58µm,0.4s						
COCH	**Cobquecura**	**0.74**	**59**	⇓*e*P	**Pb**	**00 02 56.8**	**-1.2**
COCH				*i* S	**Sb**	**00 03 07.0**	**-0.7**
COCH				IAML		00 03 08.6	
	comp=N,14µm,0.5s						
CCHI	**Chillan**	**1.21**	**95**	⇑*e*P	**Pn**	**00 03 04.4**	**-0.4**
CCHI				*i* S	**Sn**	**00 03 20.5**	**+0.2**
CCHI				IAML		00 03 26.8	
	comp=E,13µm,0.4s						
GO05	**Huala**	**2.01**	**42**	*e*Pn	**Pn**	**00 03 15.2**	**-0.7**
EDS3	**Malargue**	**3.46**	**79**	*i* P	**Pb**	**00 03 41.6**	**-2.8**
EDS3				*e*S	**Sb**	**00 04 32.9**	**+6.9**
PEL	**Peldehue**	**4.12**	**36**	*e*Pn	**Pn**	**00 03 44.5**	**-0.5**
PEL	**Peldehue**	**4.12**	**36**	*e*P	**Pn**	**00 03 44.4**	**-0.5**
PEL				*e*S	Sb	00 04 53.8	+8.9
PLCA	**Paso Flores**	**4.83**	**152**	Pn	**Pn**	**00 03 56.0**	**+1.4**
	comp=E,3.3nm,0.3s,baz=351,slow=13,SNR=72						
PLCA				Lg	Lg	00 05 04.3	
	comp=E,2.8nm,0.3s,baz=142,slow=19,SNR=3.8						
PLCA	**Paso Flores**	**4.83**	**152**	*e*Pn	**Pn**	**00 03 55.8**	**+1.1**
RTLS	**Leoncito**	**5.89**	**38**	*i* P	**Pn**	**00 04 10.4**	**+0.9**
RTLS				*e*S	**Sb**	**00 05 43.8**	**+7.8**
RTCV	**Cerro Valdivia**	**6.24**	**43**	*i* P	**Pn**	**00 04 13.7**	**-0.3**
CFA	**Coronel Fontan**	**6.60**	**44**	Pn	**Pn**	**00 04 17.4**	**-1.7**
	comp=E,4.8nm,0.3s,baz=213,slow=13,SNR=41						
CFA				Sn	**Sn**	**00 05 31.0**	**-2.5**
	comp=E,1.7nm,0.3s,baz=207,slow=18,SNR=2.3						
CFA				Lg	Lg	00 05 53.5	
	comp=E,2.5nm,0.3s,baz=243,slow=13,SNR=3.8						
GO04	**Tololo Observa**	**6.74**	**21**	*e*P	**Pn**	**00 04 19.4**	**-1.7**
GO04				*e*S	**Sn**	**00 05 31.6**	**-5.5**
ACAN	**Cantantal**	**6.76**	**53**	*e*P	**Pn**	**00 04 21.2**	**0.0**
AMOG	**MOGNA**	**6.99**	**39**	*i* P	**Pn**	**00 04 22.9**	**-1.5**
AMOG				*e*P	**Pn**	**00 04 23.4**	**-0.9**
ACCO	**Cerro Coronel**	**7.01**	**34**	*e*P	**Pn**	**00 04 24.1**	**-0.8**
AROD	**Rodeo**	**7.20**	**30**	*i* P	**Pn**	**00 04 26.1**	**-1.4**
AROD				*e*P	**Pn**	**00 04 27.3**	**-0.2**
LCO	**Las Campanas**	**7.87**	**19**	*e*Pn	**Pn**	**00 04 34.8**	**-1.8**
LCO	**Las Campanas**	**7.87**	**19**	*e*P	**Pn**	**00 04 37.2**	**+0.6**
AGUA	**GUANDACOL**	**8.21**	**33**	*e*P	**Pn**	**00 04 40.6**	**-0.5**
APLL	**PUNTA DE LOS L**	**8.48**	**46**	*e*P	**Pn**	**00 04 42.2**	**-2.6**
VCA	**Vinchina**	**8.98**	**32**	*e*P	**Pn**	**00 04 50.6**	**-1.2**
ACLC	**CERRO LA CRUZ**	**8.99**	**40**	*e*P	**Pn**	**00 04 49.2**	**-2.8**
TCA	**Tanti**	**9.07**	**58**	*e*P	**Pn**	**00 04 51.3**	**-1.7**
GO03	**Copiap**	**9.34**	**19**	*e*Pn	**Pn**	**00 04 54.1**	**-2.4**
GO03	**Copiap**	**9.34**	**19**	*e*P	**Pn**	**00 04 54.6**	**-2.0**
TRQA	**Tornquist**	**9.37**	**103**	*e*Pn	**Pn**	**00 04 57.1**	**+0.2**
CYA	**Choya**	**10.38**	**41**	*e*P	Pn	00 05 05.8	-5.1
GO02	**Mina Guanaco**	**11.82**	**18**	*e*Pn	**Pn**	**00 05 29.5**	**-1.4**
LPAZ	**La Paz**	**20.72**	**15**	P	Pn	00 07 23.7	-1.5
	comp=E,8.4nm,0.9s,baz=190,slow=6.1,SNR=2.8						
LPAZ	**La Paz**	**20.72**	**15**	*e*P	Pn	00 07 24.1	-1.1
	comp=E,14nm,0.9s						
SIV	**San Ignacio**	**23.27**	**32**	P	**P**	**00 07 49.2**	**0.0**
	comp=E,19nm,1.1s,baz=1.6,slow=3.7,SNR=3.3						
SIV				LR	LR	00 16 39.7	
	comp=E,246nm,18.1s,baz=129,slow=36						
SPB	**Sao Paulo**	**25.94**	**68**	*e*P	**P**	**00 08 13.4**	**-0.5**
PTGA	**Pitinga**	**37.77**	**23**	P	**P**	**00 09 56.9**	**-0.7**
	comp=E,6.9nm,0.7s,baz=175,slow=11,SNR=3.4						
PTGA	**Pitinga**	**37.77**	**23**	*e*P	**P**	**00 09 57.3**	**-0.3**
	comp=E,16nm,1.1s						
MDP	**Montagnes des**	**45.80**	**30**	P	**P**	**00 11 02.9**	**-0.3**
	comp=E,12nm,1.0s,baz=224,slow=8.9,SNR=8.5						
MAW	**Mawson**	**71.12**	**164**	LR	LR	00 45 40.2	
	comp=E,3µm,19.0s,baz=22,slow=36						
LTX	**Lajitas**	**71.35**	**332**	*e*P	**P**	**00 14 02.4**	**+1.3**
TXAR	**Lajitas Array**	**71.35**	**332**	P	**P**	**00 14 02.4**	**+1.3**
	comp=E,1.2nm,0.8s,baz=149,slow=8.4,SNR=9.1						
V48A	**Smith Brothers**	**72.94**	**349**	*e*P	**P**	**00 14 10.6**	**+0.2**
	comp=E,20nm,0.8s						
WVT	**Waverly**	**73.48**	**348**	*e*P	**P**	**00 14 14.0**	**+0.4**
	comp=E,11nm,1.1s						
W39A	**Magazine**	**73.79**	**343**	*e*P	**P**	**00 14 16.7**	**+1.3**
	comp=E,7.1nm,0.9s						
DBIC	**Dimbokro**	**77.17**	**72**	P	**P**	**00 14 35.8**	**+0.5**
	comp=E,6.0nm,0.8s,baz=227,slow=4.3,SNR=6.2						
BOSA	**Boshof**	**80.00**	**118**	P	**P**	**00 14 51.6**	**+0.6**
	comp=E,5.2nm,1.1s,baz=307,slow=6.6,SNR=3.1						
ECSD	**EROS Data Cent**	**82.58**	**343**	*e*P	**P**	**00 15 04.7**	**+0.8**
	comp=E,7.7nm,0.8s						
HWUT	**Hardware Ranch**	**85.17**	**332**	*e*P	**P**	**00 15 18.4**	**+0.9**
	comp=E,6.5nm,1.0s						
NV01	**Mina Array Sit**	**85.25**	**326**	*e*P	**P**	**00 15 20.1**	**+2.1**
NVAR	**Mina Array Bea**	**85.25**	**326**	P	**P**	**00 15 20.1**	**+2.1**
	comp=E,0.9nm,0.7s,baz=142,slow=6.6,SNR=5.7						
PD31	**Pinedale Array**	**85.46**	**334**	*e*P	**P**	**00 15 19.2**	**+0.3**
PDAR	**Pinedale Array**	**85.46**	**334**	P	**P**	**00 15 19.2**	**+0.3**
	comp=E,0.4nm,0.3s,baz=151,slow=7.7,SNR=3.6						
HVU	**Hansel Valley**	**85.78**	**332**	*e*P	**P**	**00 15 19.2**	**-1.2**
	comp=E,5.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**86.24**	**71**	P	**P**	**00 15 22.1**	**-1.0**
	comp=E,1.5nm,0.7s,baz=231,slow=4.5,SNR=8.2						
TOA1	**Torodi Ar. Sit**	**86.24**	**71**	*e*P	**P**	**00 15 22.1**	**-1.0**
VYHS	**Vyhne**	**117.70**	**49**	*e*PDIF	**Pdif**	**00 17 45.2**	**+0.5**
PSI	**Prapat**	**145.74**	**167**	PKPbc	**PKPdf**	**00 22 19.9**	**-0.6**
	comp=E,11nm,0.8s,baz=284,slow=13,SNR=4.9						
BVAR	**Borovoye Array**	**149.96**	**45**	PKPbc	**PKiKP**	**00 22 31.6**	**-0.3**
	comp=E,1.0nm,0.5s,baz=310,slow=3.6,SNR=11						
KSH	**Kashi**	**155.88**	**74**	*e*PKP	**PKPab**	**00 23 02.3**	**0.0**
KSH				pPKP	sPKPab	00 23 13.4	-0.7
KSH				sPKP		00 23 17.4	
KSH				PP	PP	00 27 01.5	+21
KSH				LR	LR		
	comp=N,6µm,14.7s						
KSH				LR	LR		
	comp=E,4µm,13.6s						
ZAA1	**Zalesovo Array**	**157.01**	**34**	*e*PKPab	**PKPab**	**00 23 07.5**	**+1.0**
ZALV	**Zalesovo Beam**	**157.02**	**34**	PKPab	**PKPab**	**00 23 07.5**	**+1.0**
	comp=E,1.5nm,0.7s,baz=284,slow=6.0,SNR=4.6						
MK32	**Makanchi Array**	**159.32**	**53**	*e*PKPdf	**PKPdf**	**00 22 39.5**	**+0.3**
MK32				*e*PKPab	**PKPab**	**00 23 16.9**	**+0.1**
MKAR	**Makanchi Array**	**159.32**	**53**	PKP	**PKPdf**	**00 22 39.5**	**+0.3**
	comp=E,0.8nm,0.8s,baz=40,slow=2.1,SNR=3.8						
MKAR				PKPab	**PKPab**	**00 23 16.9**	**+0.1**
	comp=E,0.7nm,0.7s,baz=261,slow=3.8,SNR=4.1						
CD2	**Chengdu**	**173.98**	**158**	PKP	**PKPdf**	**00 22 50.3**	**-0.6**
CD2				PKP	sPKPdf	00 23 14.1	+11
LZH	**Lanzhou**	**177.87**	**101**	*e*PKP	**PKPdf**	**00 22 49.8**	**-2.0**
LZH				pPKP	pPKPdf	00 22 56.8	-4.0
LZH				sPKP		00 22 59.3	
LZH				PKP	PKPab	00 24 39.6	+0.3
LZH				LR	LR		
	comp=N,170nm,18.3s						
LZH				LR	LR		
	comp=E,170nm,18.1s						
LZH				LR	LR		
	comp=Z,230nm,20.2s						

ISCJB ***22*** *00:05:01.8*±*0.2, 61°.79S*±*0°.04*×*58°.5W*±*0°.1, h10*^{km}*, mb5.1/58, Error ellipse: s-maj=7.5km s-min=5.4km az=165.7*
NEIC ***22*** *00:05:04.0*±*2.4, 61°.71S*×*58°.59W, h14*^{km}±*3*^{km}*, mb5.2/49, Error ellipse: s-maj=14.0km s-min=9.6km az=102.0*
MOS ***22*** *00:05:05.3*±*1.1, 61°.69S*×*58°.57W, h33*^{km}*, mb5.3/17, Error ellipse: s-maj=30.3km s-min=8.9km az=93.2*
IDC ***22*** *00:05:10.4*±*2.2, 61°.77S*×*58°.58W, h67*^{km}±*19*^{km}*, mb4.6/24, mb1 4.6/26, mb1mx4.6/33, mbtmp4.9/26, MS4.1/3, Ms1 4.1/3, ms1mx3.9/15, Error ellipse: s-maj=15.8km s-min=9.4km az=71.0*
ISC 22 00:05:03.2±0.2**, 61°.72S**±0°.05×**58°.55W**±0°.06**, h10**^{km}**, n311,** σ1^{s}**66**/321**, mb5.2**/58**, 22C-3D, South Shetland Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**3.95**	**217**	P	**Pn**	**00 06 06.6**	**+2.9**
	90nm,0.3s,baz=22,slow=11,SNR=115						
PMSA				S	**Sb**	**00 06 56.3**	**-4.2**
	baz=285,slow=19,SNR=2.1						
PMSA	**Palmer Station**	**3.95**	**217**	*e*Pn	**Pn**	**00 06 07.2**	**+3.4**
USHA	**Ushuaia**	**8.64**	**319**	P	**Pn**	**00 07 11.8**	**+3.6**
	1.0nm,0.3s,baz=195,slow=9.5,SNR=8.8						
USHA				S	**Sn**	**00 08 42.7**	**-2.8**
	1.1nm,0.3s,baz=341,slow=19,SNR=4.9						
EFI	**East Falkland**	**10.07**	**2**	*e*Pn	**Pn**	**00 07 30.9**	**+3.1**
EFI	**East Falkland**	**10.07**	**2**	*e*P	**Pn**	**00 07 30.9**	**+3.1**
HOPE	**Hope Point**	**13.81**	**67**	*e*Pn	**Pn**	**00 08 18.2**	**-0.6**
VNA3	**Neumayer Olymp**	**21.04**	**137**	P	**P**	**00 09 50.6**	**+3.8**
I27DE	**GEORG VON NEUM**	**21.48**	**136**	*i*		02 04 30.0	
	baz=267,slow=350,SNR=0.4						
VNA1	**Neumayer--Stat**	**21.50**	**136**	P	**P**	**00 09 55.8**	**+4.2**
PLCA	**Paso Flores**	**22.24**	**335**	P	**P**	**00 10 00.9**	**+0.9**
	20nm,1.0s,baz=186,slow=11,SNR=4.0						
PLCA				PcP	**PcP**	**00 13 55.8**	**0.0**

	2.2nm,0.7s,baz=79,slow=11,SNR=1.3						
PLCA				LR	LR	00 17 40.0	
	comp=Z,372nm,21.1s,baz=242,slow=34						
PLCA	Paso Flores	22.24	335	eP	P	00 10 00.9	+0.9
	48nm,1.2s						
PLCA				ePcP	PcP	00 13 55.8	0.0
PLCA	Paso Flores	22.24	335	eP	P	00 10 02.1	+2.1
SNAA	Sanae	23.22	138	P	P	00 10 13.2	+3.2
SNAA	Sanae	23.22	138	P	P	00 10 12.0	+2.0
	39nm,0.8s,baz=268,slow=7.6,SNR=56						
SNAA				PcP	PcP	00 13 57.4	+0.1
	3.0nm,0.6s,baz=277,slow=4.3,SNR=5.4						
SNAA				LR	LR	00 19 02.1	
	comp=Z,423nm,18.4s,baz=296,slow=36						
SNAA	Sanae	23.22	138	eP	P	00 10 12.4	+2.4
	50nm,0.9s						
SNAA				ePcP	PcP	00 13 57.4	+0.1
SNAA	Sanae	23.22	138	eP	P	00 10 12.4	+2.4
SNAA				e		00 13 57.4	
SNAA				pmax	pmax		
	comp=Z,50nm,0.9s						
GO05	Huala	28.05	336	eP	P	00 10 55.7	+1.2
	comp=Z,55nm,1.0s						
QSPA	South Pole Qui	28.51	180	eP	P	00 11 00.9	+2.4
	comp=Z,26nm,0.8s						
PEL	Peldehue	29.64	339	eP	P	00 11 09.2	+0.5
	comp=Z,104nm,1.4s						
PEL	Peldehue	29.64	339	eP	P	00 11 09.2	+0.5
PEL				pmax	pmax		
	comp=Z,104nm,1.4s						
CFA	Coronel Fontan	30.78	344	PcP	PcP	00 14 15.6	-0.3
	comp=Z,9.8nm,0.8s,baz=226,slow=3.3,SNR=6.8						
GO04	Tololo Observa	32.56	340	eP	P	00 11 35.0	+0.3
	comp=Z,41nm,0.8s						
LCO	Las Campanas	33.69	341	eP	P	00 11 44.9	+0.5
	comp=Z,21nm,0.8s						
LCO	Las Campanas	33.69	341	eP	P	00 11 44.9	+0.5
LCO				pmax	pmax		
	comp=Z,21nm,0.8s						
LCO	Las Campanas	33.69	341	eP	P	00 11 45.0	+0.5
GO03	Copiap	35.01	342	eP	P	00 11 56.0	+0.4
	comp=Z,36nm,1.1s						
CPUP	Villa Florida	35.39	2	P	P	00 11 59.0	+0.1
	comp=Z,9.7nm,0.9s,baz=172,slow=6.1,SNR=11						
CPUP				PcP	PcP	00 14 28.2	-0.5
	comp=Z,7.3nm,0.8s,baz=170,slow=5.1,SNR=5.6						
CPUP				LR	LR	00 26 12.0	
	comp=Z,327nm,20.8s,baz=146,slow=36						
CPUP	Villa Florida	35.39	2	eP	P	00 11 59.0	+0.1
	comp=Z,61nm,1.8s						
CPUP				ePcP	PcP	00 14 28.2	-0.5
SYO	Syowa Base	37.26	144	⇓iP	P	00 12 15.1	+0.7
SYO	Syowa Base	37.26	144	⇑eX	P	00 12 25.0	+11
SYO	Syowa Base	37.26	144	⇑ePP	PP	00 13 37.5	-1.5
GO02	Mina Guanaco	37.30	343	eP	P	00 12 15.6	0.0
	comp=Z,34nm,0.8s						
SBA	Scott Base	37.97	194	eP	P	00 12 22.8	+2.5
	comp=Z,10.0nm,0.8s						
SBA	Scott Base	37.97	194	eP	P	00 12 22.8	+2.5
SBA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VNDA	Vanda	38.80	193	P	P	00 12 28.2	+0.8
	comp=Z,0.8nm,0.5s,baz=165,slow=11,SNR=3.1						
VNDA	Vanda	38.80	193	eP	P	00 12 28.2	+0.8
VNDA				epP	P	00 12 28.8	+1.5
FRTB	Fartura	38.85	13	eP	P	00 12 31.5	+3.1
SPB	Sao Paulo	38.86	16	eP	P	00 12 29.4	+1.0
	comp=Z,32nm,0.8s						
SPB	Sao Paulo	38.86	16	eP	P	00 12 30.7	+2.4
PB10	IPOC Station P	39.06	342	eP	P	00 12 31.2	+1.1
	comp=Z,83nm,0.7s						
LVC	Limon Verde	39.73	345	P	P	00 12 37.2	+1.2
	comp=Z,18nm,0.6s,baz=187,slow=6.4,SNR=16						
LVC				PcP	PcP	00 14 42.7	+0.2
	comp=Z,15nm,0.6s,baz=158,slow=1.7,SNR=11						
LVC	Limon Verde	39.73	345	eP	P	00 12 37.5	+1.4
	comp=Z,79nm,1.4s						
LVC	Limon Verde	39.73	345	eP	P	00 12 37.5	+1.4
LVC				pmax	pmax		
	comp=Z,79nm,1.4s						
LVC	Limon Verde	39.73	345	eP	P	00 12 38.2	+2.1
ESAR	Angra dos Reis	39.87	21	eP	P	00 12 39.0	+2.2
RCLB	Rio Claro- Sao	40.00	16	eP	P	00 12 40.3	+2.3
PB04	IPOC Station P	40.16	343	eP	P	00 12 40.5	+1.0
	comp=Z,197nm,1.8s						
DUB01	Friburgo-RJ	41.16	23	eP	P	00 12 50.1	+2.6
BB19B	Bebedouro	41.21	14	eP	P	00 12 49.9	+1.9
AQDB	Aquidauana	41.26	4	eP	P	00 12 49.1	+0.8
PB01	IPOC Station P	41.35	344	eP	P	00 12 50.4	+1.3
	comp=Z,38nm,0.7s						
CAM01	Campos-RJ	41.54	24	eP	P	00 12 53.2	+2.6
ITRB	Iturama	42.37	11	eP	P	00 12 59.0	+1.6
PB11	IPOC Station P	42.63	344	eP	P	00 13 01.2	+1.4
	comp=Z,70nm,0.9s						
GO01	Chusmiza	42.67	345	eP	P	00 13 02.0	+1.7
	comp=Z,42nm,0.9s						
ALF01	Guarapari-ES	42.90	25	eP	P	00 13 04.3	+2.6
MNMC	Minye Minye	43.25	345	eP	P	00 13 06.6	+1.7
	comp=Z,45nm,0.7s						
MAW	Mawson	44.19	152	P	P	00 13 12.4	+0.8
	comp=Z,13nm,1.0s,baz=222,slow=8.2,SNR=10						
MAW				PcP	PcP	00 14 55.6	-0.4
	comp=Z,12nm,0.6s,baz=209,slow=4.4,SNR=14						
MAW	Mawson	44.19	152	eP	P	00 13 14.3	+2.7
	comp=Z,3.2nm,0.8s						
MAW				ePcP	PcP	00 14 56.9	+0.9
MAW	Mawson	44.19	152	eP	P	00 13 14.3	+2.7
MAW				e		00 14 56.9	
MAW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RIB01	Linhares ES	44.23	25	eP	P	00 13 14.3	+1.8
BSFB	Barra de Sao F	44.61	24	eP	P	00 13 17.4	+1.9
SJMB	Sao Joao De Ma	44.67	24	eP	P	00 13 17.4	+1.4
SIV	San Ignacio	45.70	357	P	P	00 13 24.7	+0.5
	comp=Z,7.7nm,0.8s,baz=178,slow=8.4,SNR=8.2						
SIV				PcP	PcP	00 15 02.1	0.0
	comp=Z,13nm,0.7s,baz=199,slow=5.6,SNR=14						
LPAZ	La Paz	45.88	347	P	P	00 13 27.2	+0.9
	comp=Z,5.7nm,0.5s,baz=134,slow=3.7,SNR=21						
LPAZ				PcP	PcP	00 15 03.9	+0.5
	comp=Z,18nm,0.7s,baz=158,slow=3.3,SNR=11						
LPAZ	La Paz	45.88	347	eP	P	00 13 26.7	+0.4
LPAZ				epP	P	00 13 27.4	+1.1
LPAZ				ePcP	PcP	00 15 03.9	+0.5
LPAZ	La Paz	45.88	347	eP	P	00 13 26.7	+0.4
LPAZ				e		00 15 03.9	
LPAZ	La Paz	45.88	347	eP	P	00 13 28.2	+1.9
BDFB	Brasilia	46.63	14	P	P	00 13 32.5	+0.9
	comp=Z,50nm,0.7s,baz=181,slow=4.8,SNR=49						
BDFB	Brasilia	46.63	14	eP	P	00 13 32.5	+0.9
BDFB				eP	P	00 13 32.7	+1.1
RPN	Rapa Nui	48.15	292	eP	P	00 13 43.9	+0.7
	comp=Z,362nm,1.4s						
RPN	Rapa Nui	48.15	292	eP	P	00 13 43.9	+0.7
RPN				pmax	pmax		
	comp=Z,362nm,1.4s						
PEXB	Peixe	50.09	13	eP	P	00 13 59.6	+1.4
CLDB	Colider	50.80	3	eP	P	00 14 04.6	+1.1
NNA	Nana	51.40	337	P	P	00 14 08.8	+0.7
	comp=Z,12nm,0.7s,baz=221,slow=8.9,SNR=3.4						
NNA	Nana	51.40	337	eP	P	00 14 08.8	+0.7
	comp=Z,139nm,1.8s						
CASY	Casey	52.05	174	eP	P	00 14 12.6	+0.3
	comp=Z,27nm,1.4s						
SMTB	Santa Maria do	53.37	14	eP	P	00 14 24.3	+1.6
ATAH	Atahualpa	56.42	336	P	P	00 14 47.1	+1.9
	comp=Z,44nm,0.8s,baz=158,slow=6.3,SNR=24						
NBLI	Livramento-PB	56.55	26	eP	P	00 14 46.6	+0.9
SUR	Sutherland	57.11	98	P	P	00 14 50.9	+1.1
	comp=Z,16nm,0.6s,baz=206,slow=8.2,SNR=36						
SUR	Sutherland	57.11	98	eP	P	00 14 50.2	+0.5
	comp=Z,109nm,1.9s						
NBPA	Parau_RN	58.09	25	eP	P	00 14 58.3	+1.8
RCBR	Riachuelo	58.27	27	P	P	00 14 58.5	+0.7
	comp=Z,31nm,0.7s,baz=183,slow=5.4,SNR=8.0						
RCBR	Riachuelo	58.27	27	eP	P	00 14 58.2	+0.4
	comp=Z,22nm,0.7s						
RCBR	Riachuelo	58.27	27	eP	P	00 14 58.2	+0.4
RCBR				pmax	pmax		
	comp=Z,22nm,0.7s						
RCBR	Riachuelo	58.27	27	eP	P	00 14 58.9	+1.1
NBMO	Morrinhos-CE	59.91	21	eP	P	00 15 10.0	+0.9
PTGA	Pitinga	60.84	358	P	P	00 15 15.5	0.0
	comp=Z,9.8nm,0.8s,baz=195,slow=7.5,SNR=13						
PTGA	Pitinga	60.84	358	eP	P	00 15 16.0	+0.5
	comp=Z,56nm,1.6s						
PTGA	Pitinga	60.84	358	eP	P	00 15 15.8	+0.3
H10S3	ASCENSION HYDR	61.64	51	T	T	01 22 48.5	
	baz=202,slow=74,SNR=569						
H10S2	ASCENSION HYDR	61.64	51	T	T	01 22 51.9	
	baz=202,slow=74,SNR=772						
H10S1	ASCENSION HYDR	61.65	51	T	T	01 22 42.8	
	baz=202,slow=74,SNR=22						
BOSA	Boshof	62.35	99	iP	P	00 15 26.2	+0.4
BOSA	Boshof	62.35	99	P	P	00 15 25.6	-0.2
	comp=Z,17nm,0.8s,baz=207,slow=5.3,SNR=35						
BOSA	Boshof	62.35	99	eP	P	00 15 25.8	0.0
	comp=Z,32nm,1.0s						
BOSA	Boshof	62.35	99	eP	P	00 15 25.8	0.0
BOSA				pmax	pmax		
	comp=Z,32nm,1.0s						
BOSA	Boshof	62.35	99	iP	P	00 15 26.2	+0.4
ASCN	Ascension	62.69	51	eP	P	00 15 28.2	+0.2
	comp=Z,179nm,1.2s						
H10N3	ASCENSION HYDR	62.72	51	T	T	01 24 06.3	
	baz=201,slow=75,SNR=24						
H10N1	ASCENSION HYDR	62.72	51	T	T	01 24 04.2	
	baz=201,slow=75,SNR=28						
H10N2	ASCENSION HYDR	62.74	51	T	T	01 24 05.2	
	baz=201,slow=75,SNR=531						
PTLC	Puerto Leguiza	62.96	342	eP	P	00 15 28.6	-1.2
WIN	Windhoek	63.60	89	eP	P	00 15 34.2	-0.1
	comp=Z,25nm,1.0s						
WIN	Windhoek	63.60	89	eP	P	00 15 34.2	-0.1
WIN				pmax	pmax		
	comp=Z,25nm,1.0s						
GUVC	San Jose del G	64.99	344	eP	P	00 15 43.3	+0.2
BBAC	Balboa, Cauca	65.16	339	eP	P	00 15 45.2	+0.7
LBTB	Lobatse	65.56	98	eP	P	00 15 46.8	-0.1
	comp=Z,61nm,0.7s						
LBTB	Lobatse	65.56	98	eP	P	00 15 46.8	-0.1
LBTB				pmax	pmax		
	comp=Z,61nm,0.7s						
MARP	Paez Belalcaza	65.76	341	eP	P	00 15 49.8	+1.4
PRAC	Prado	66.45	342	eP	P	00 15 53.5	+1.0
TSUM	Tsumeb	66.71	87	iP	P	00 15 54.6	+0.2
TSUM	Tsumeb	66.71	87	P	P	00 15 53.7	-0.8
	comp=Z,7.3nm,0.9s,baz=184,slow=8.0,SNR=14						
TSUM	Tsumeb	66.71	87	eP	P	00 15 54.5	0.0
	comp=Z,8.0nm,0.8s						
TSUM	Tsumeb	66.71	87	iP	P	00 15 54.6	+0.2
MDP	Montagnes des	66.78	6	P	P	00 15 53.6	-1.0
	comp=Z,32nm,0.8s,baz=187,slow=6.2,SNR=15						
YOTC	Yotoco, Valle	66.94	341	eP	P	00 15 55.8	0.0
CHIC	Chingaza	67.19	344	eP	P	00 15 58.2	+0.5
ROSC	El Rosal	67.48	343	P	P	00 16 00.1	+0.6
	comp=Z,23nm,0.6s,baz=167,slow=8.3,SNR=12						
ROSC	El Rosal	67.48	343	eP	P	00 16 00.5	+1.0
	comp=Z,16nm,0.7s						
PLMC	San Jos del P	67.83	341	eP	P	00 16 01.6	+0.2
RUSC	La Rusia	68.35	344	eP	P	00 16 04.8	-0.3
BFZ	Birch Farm	68.77	222	eP	P	00 16 07.1	+0.1
	comp=Z,66nm,1.5s						
THZ	Tophouse	68.81	219	eP	P	00 16 07.8	+0.5
	comp=Z,39nm,1.3s						
PTBC	PUERTO BERRIO,	69.17	343	eP	P	00 16 08.3	-1.4
QRZ	Quartz Range	69.78	219	eP	P	00 16 12.5	-0.8
	comp=Z,98nm,1.6s						
MSNA	Messina	69.92	100	iP	P	00 16 14.0	-0.4
MSNA	Messina	69.92	100	iP	P	00 16 14.0	-0.4
BKZ	Black Stump Fm	70.06	223	eP	P	00 16 15.3	+0.2
	comp=Z,35nm,1.7s						
ZARC	Zaragoza, Cauc	70.16	343	eP	P	00 16 15.4	-0.3
MATP	Matopo	70.85	97	iP	P	00 16 20.3	+0.1
MATP	Matopo	70.85	97	iP	P	00 16 20.3	+0.1
SDV	Santo Domingo	71.02	347	eP	P	00 16 20.9	-0.3
BLWY	Bulawayo	71.15	97	iP	P	00 16 21.8	-0.2
BLWY	Bulawayo	71.15	97	iP	P	00 16 21.8	-0.2
SMLC	San Martn de	71.34	344	eP	P	00 16 21.9	-1.0
SJCC	San Jacinto, C	72.57	343	eP	P	00 16 30.2	-0.2
LSZ	Lusaka	75.14	95	eP	P	00 16 46.1	+0.4
	comp=Z,45nm,0.9s						
LSZ	Lusaka	75.14	95	eP	P	00 16 46.1	+0.4
LSZ				pmax	pmax		
	comp=Z,45nm,0.9s						
TGUH	Tegucigalpa,Un	78.87	332	eP	P	00 17 05.8	-0.6
	comp=Z,48nm,1.1s						
LIC	Lamto	79.23	54	eP	P	00 17 08.3	-0.1
	comp=Z,112nm,1.2s						
KIC	Kosan Boka	79.47	55	eP	P	00 17 09.3	-0.4
	comp=Z,41nm,1.1s						
TIC	Toumodi	79.62	54	eP	P	00 17 11.1	+0.6
DBIC	Dimbokro	79.71	54	P	P	00 17 10.4	-0.6
	comp=Z,8.3nm,0.8s,baz=200,slow=6.9,SNR=7.9						
DBIC	Dimbokro	79.71	54	eP	P	00 17 10.4	-0.6
	comp=Z,34nm,1.4s						
OPO	Ambohidratompo	81.04	112	P	P	00 17 18.8	+0.4
	comp=Z,7.1nm,0.8s,baz=235,slow=7.9,SNR=6.2						
TEIG	Tepich	85.06	332	eP	P	00 17 38.7	0.0
	comp=Z,23nm,0.7s						
TLIG	Tlapa	85.17	322	eP	P	00 17 41.1	+1.7
	comp=Z,12nm,0.9s						
STKA	Stephens Creek	85.31	197	P	P	00 17 38.8	-1.4
	comp=Z,3.1nm,0.8s,baz=170,slow=4.1,SNR=5.3						
STKA	Stephens Creek	85.31	197	eP	P	00 17 38.8	-1.4
	comp=Z,10nm,1.8s						
TOA0	Torodi Ar. Sit	88.19	58	eP	P	00 17 53.9	-0.3
	comp=Z,7.4nm,0.8s						
TORD	Torodi Ar. Bea	88.19	58	P	P	00 17 53.0	-1.2
	comp=Z,4.1nm,0.8s,baz=195,slow=7.4,SNR=23						
TORD				PP	PP	00 21 19.1	-2.3
	comp=Z,2.5nm,1.0s,baz=210,slow=6.6,SNR=5.4						
TOA1	Torodi Ar. Sit	88.20	58	eP	P	00 17 53.0	-1.3
058A	Arcadia	90.44	339	P	P	00 18 05.3	+1.0
	baz=169						
ZAIG	Zacatecas	91.27	320	eP	P	00 18 10.9	+2.1
	comp=Z,21nm,0.5s						
ASAR	Alice Springs	94.33	191	P	P	00 18 20.2	-2.6
	comp=Z,1.0nm,0.5s,baz=172,slow=4.3,SNR=9.2						
ASAR				PKKPbc	PKKPbc	00 35 19.7	0.0
	comp=Z,0.9nm,0.6s,baz=355,slow=2.3,SNR=9.8						
AS31	Alice Springs	94.33	191	eP	P	00 18 20.2	-2.6
	comp=Z,2.5nm,0.4s						
150A	Eclectic	96.60	337	P	P	00 18 32.7	+0.1
	baz=167						
149A	Jones	96.73	336	P	P	00 18 33.5	+0.2
	baz=167						
Z52A	Williamson	96.88	338	P	P	00 18 34.3	+0.4
	baz=168						
Y55A	Saluda	97.18	341	P	P	00 18 35.2	-0.1
	baz=169						
Z50A	Ashland	97.21	337	P	P	00 18 35.5	+0.1
	baz=167						
Z49A	Columbiana	97.27	337	P	P	00 18 35.5	-0.1
	baz=167						
Y53A	Monroe	97.38	339	P	P	00 18 36.0	-0.1
	baz=168						
TXAR	Lajitas Array	97.76	321	P	P	00 18 36.2	-1.9
	comp=Z,0.3nm,0.5s,baz=161,slow=7.3,SNR=5.1						
TXAR				PKKP	PKKPbc	00 35 12.6	+1.1
	comp=Z,0.7nm,0.8s,baz=318,slow=1.2,SNR=10.0						
Y49A	Blount Mountai	97.89	337	P	P	00 18 38.6	+0.2
	baz=167						
WR1	Warramunga Arr	97.97	192	eP	P	00 18 37.1	-2.3
WRA	Warramunga Arr	97.97	192	P	P	00 18 37.1	-2.3
	comp=Z,2.6nm,0.6s,baz=173,slow=4.8,SNR=7.1						
ESDC	Sonseca Array	110.25	42	PP	PP	00 24 06.5	-3.1
	comp=Z,0.1nm,0.2s,baz=208,slow=6.9,SNR=5.4						
NVAR	Mina Array Bea	110.84	313	PKKPbc	PKKPbc	00 34 31.8	-0.5
	comp=Z,0.6nm,0.7s,baz=288,slow=11,SNR=3.7						
PDAR	Pinedale Array	111.97	322	PKiKP	PKiKP	00 23 36.5	-1.4
	comp=Z,0.3nm,0.5s,baz=150,slow=7.3,SNR=4.0						
PALK	Pallekele	117.94	133	PKP	PKPdf	00 23 49.0	-0.9
	comp=Z,5.2nm,0.7s,baz=115,slow=18,SNR=1.4						
PSI	Prapat	118.82	154	PKP	PKPdf	00 23 50.1	-1.7
	comp=Z,3.7nm,0.5s,baz=166,slow=9.9,SNR=1.8						
UDBI	Udbina	121.49	54	Sn	PKPdf	00 23 54.1	-1.7
DAVA	Damuels	121.66	48	iPKPdf	PKPdf	00 23 55.7	-0.4
	comp=Z,8.1nm,0.9s						
FETA	Feichten	121.73	49	iPKPdf	PKPdf	00 23 55.7	-0.6
	comp=Z,4.2nm,1.2s						
SQTA	Sankt Quirin	122.08	49	iPKPdf	PKPdf	00 23 56.3	-0.6
	comp=Z,4.1nm,0.6s						
RETA	Reutte	122.14	49	iPKPdf	PKPdf	00 23 56.7	-0.2
	comp=Z,3.7nm,0.8s						
MOTA	Moosalm	122.14	49	iPKPdf	PKPdf	00 23 56.1	-1.0
	comp=Z,0.9nm,0.5s						
WTTA	Wattenberg	122.27	49	iPKPdf	PKPdf	00 23 56.6	-0.8
	comp=Z,5.0nm,0.8s						
MYKA	Terra Mystica	122.47	51	iPKPdf	PKPdf	00 23 57.2	-0.4
	comp=Z,4.4nm,0.9s						
OBKA	Obir	122.70	52	iPKPdf	PKPdf	00 23 57.7	-0.4
	comp=Z,8.1nm,1.2s						
VTS	Vitosha	122.89	60	⇑iP	PKPdf	00 23 57.2	-1.5
VTS	Vitosha	122.89	60	⇑PKIKP	PKPdf	00 23 57.2	-1.5
SOKA	Soboth	123.02	52	iPKiKP	PKiKP	00 23 59.6	+0.7
	comp=Z,2.2nm,0.8s						
ARSA	Arzberg	123.69	52	iPKPdf	PKPdf	00 23 59.3	-0.6
	comp=Z,6.4nm,1.0s						
MOA	Molln	123.72	51	iPKPdf	PKPdf	00 23 59.8	-0.2
	comp=Z,3.8nm,0.8s						
GEC2	GERESS Array S	124.35	50	ePKPdf	PKPdf	00 24 00.2	-1.0
GEC2	GERESS Array S	124.35	50	ePKIKP	PKPdf	00 24 00.2	-1.0
GERES	GERESS Array B	124.35	50	PKP	PKPdf	00 23 59.4	-1.8
	comp=Z,3.3nm,0.7s,baz=207,slow=1.5,SNR=34						
CONA	Conrad Observa	124.38	52	iPKPdf	PKPdf	00 24 00.5	-0.8
	comp=Z,3.8nm,1.0s						
HERR	Herculane	124.42	58	⇑iP	PKPdf	00 24 00.1	-1.2
KHC	Kasperske Hory	124.54	49	ePKIKP	PKPdf	00 24 00.0	-1.5
KHC				e		00 24 13.0	
KHC	Kasperske Hory	124.54	49	ePKPDF	PKPdf	00 24 00.0	-1.5
KHC				ex	x	00 24 13.0	
BZS	Buzias	124.70	57	⇑iP	PKPdf	00 23 58.7	-3.1
BZS	Buzias	124.70	57	⇑PKIKP	PKPdf	00 23 58.7	-3.1
GZR	Gura Zlata	124.98	58	⇑iP	PKPdf	00 24 01.6	-0.9
GZR	Gura Zlata	124.98	58	⇑PKIKP	PKPdf	00 24 01.6	-0.9
BRTR	Keskin Array B	125.01	70	PKP	PKPdf	00 24 00.7	-2.2
	comp=Z,1.3nm,0.7s,baz=191,slow=2.6,SNR=6.9						
NKC	Novy Kostel	125.06	48	ePKIKP	PKPdf	00 24 02.1	-0.3
NKC	Novy Kostel	125.06	48	ePKPDF	PKPdf	00 24 02.1	-0.3
TREC	Trest	125.37	51	ePKIKP	PKPdf	00 24 02.3	-0.7
TREC				e		00 24 14.3	
TREC	Trest	125.37	51	ePKPDF	PKPdf	00 24 02.3	-0.7
TREC				ex	x	00 24 14.3	
KRUC	Moravsky	125.52	51	ePKP	PKPdf	00 24 01.9	-1.4
PRU	Pruhonice	125.60	49	ePKIKP	PKPdf	00 24 02.5	-0.9
PRU	Pruhonice	125.60	49	ePKPDF	PKPdf	00 24 02.5	-0.9
VRAC	Vranov	125.79	51	ePKP	PKPdf	00 24 02.2	-1.6
JAVC	Velka Javorina	125.83	52	ePKP	PKPdf	00 24 03.9	-0.1
VOIR		125.95	60	⇓iP	PKPdf	00 24 03.1	-1.2
VOIR		125.95	60	⇓PKIKP	PKPdf	00 24 03.1	-1.2
VYHS	Vyhne	125.97	53	ePKIKP	PKPdf	00 24 03.2	-1.0
VYHS	Vyhne	125.97	53	ePKP	PKPdf	00 24 03.2	-1.0
PVCC	Panska Ves	126.06	49	ePKIKP	PKPdf	00 24 03.7	-0.6
PVCC				e		00 24 16.7	
PVCC	Panska Ves	126.06	49	ePKPDF	PKPdf	00 24 03.7	-0.6
PVCC				ex	x	00 24 16.7	
BRG	Berggiesshubel	126.12	48	ePKP	PKPdf	00 24 03.6	-0.8
	comp=Z,4.0nm,0.9s						
BRG				e		00 25 26.3	
	comp=Z,47nm,1.8s						
CLL	Collm	126.15	48	ePKPdf	PKPdf	00 24 03.8	-0.6
CLL	Collm	126.15	48	iPKIKP	PKPdf	00 24 03.9	-0.5
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CLL	Collm	126.15	48	iPKiKP	PKPdf	00 24 03.9	-0.5
	comp=Z,8.0nm,1.0s						
MLR	Muntele Rosu	126.36	60	⇑iP	PKPdf	00 24 02.9	-2.3
MLR	Muntele Rosu	126.36	60	⇑PKIKP	PKPdf	00 24 02.9	-2.3
MORC	Moravsky Berou	126.53	52	⇑iP	PKPdf	00 24 04.6	-0.7
MORC	Moravsky Berou	126.53	52	⇑PKIKP	PKPdf	00 24 04.6	-0.7
MORC	Moravsky Berou	126.53	52	ePKP	PKPdf	00 24 04.5	-0.7
DPC	Dobruska-Polom	126.55	50	ePKIKP	PKPdf	00 24 04.8	-0.5
DPC				e		00 24 18.5	
DPC	Dobruska-Polom	126.55	50	ePKPDF	PKPdf	00 24 04.8	-0.5
DPC				ex	x	00 24 18.5	
OKC	Ostrava-Krasne	126.81	52	ePKIKP	PKPdf	00 24 05.7	0.0
OKC	Ostrava-Krasne	126.81	52	ePKPDF	PKPdf	00 24 05.7	0.0
VRI	Vrincioaia	126.99	61	⇑iP	PKPdf	00 24 02.2	-4.0
VRI	Vrincioaia	126.99	61	⇑PKIKP	PKPdf	00 24 02.2	-4.0
CFR	Carcaliu	127.02	62	⇑iP	PKPdf	00 24 04.6	-1.7
CFR	Carcaliu	127.02	62	⇑PKIKP	PKPdf	00 24 04.6	-1.7
TRPA	Tarpa	127.11	56	⇑iP	PKPdf	00 24 05.8	-0.5
BIZ	Bicaz	127.59	59	⇑iP	PKPdf	00 24 06.8	-0.5
KOLS	Kolonicke sedl	127.66	55	ePKIKP	PKiKP	00 24 11.3	+3.3
KOLS	Kolonicke sedl	127.66	55	ePKP	PKiKP	00 24 11.3	+3.3
BURAR	Bucovina Array	127.77	58	⇑iP	PKPdf	00 24 05.9	-1.9
BURAR	Bucovina Array	127.77	58	⇑PKIKP	PKPdf	00 24 05.9	-1.9
BUR08	Bucovina Ar. S	127.79	58	ePKPdf	PKPdf	00 24 07.4	-0.5
MILM	Milestii Mici	128.70	61	⇑iP	PKPdf	00 24 08.2	-1.2
YKA	Yellowknife Ar	130.94	329	PKP	PKPdf	00 24 12.5	-0.7
	comp=Z,3.3nm,0.5s,baz=161,slow=2.1,SNR=37						
YKA				SKPbc	SKPbc	00 27 31.1	-6.0
	comp=Z,5.2nm,0.8s,baz=146,slow=3.9,SNR=15						
YKB5	Yellowknife Ar	130.94	329	ePKPdf	PKPdf	00 24 12.5	-0.7
YKW3	Yellowknife Ar	131.00	329	ePKPdf	PKPdf	00 24 12.8	-0.5
AKASG	Malin Array Be	131.82	59	PKP	PKPdf	00 24 13.4	-1.9
	comp=Z,1.6nm,0.6s,baz=257,slow=1.7,SNR=6.8						
NB200	NORSAR Array S	133.47	39	ePKPdf	PKPdf	00 24 16.7	-1.4
NOA	NORSAR Array B	133.47	39	PKP	PKPdf	00 24 16.7	-1.4
	comp=Z,0.5nm,0.7s,baz=215,slow=1.9,SNR=7.4						
NOA				SKPab	SKPbc	00 27 40.8	-5.3
	comp=Z,1.5nm,0.9s,baz=46,slow=3.7,SNR=4.0						
CM31	Chiang Mai Arr	133.98	150	ePKPdf	PKPdf	00 24 21.4	+1.0
CMAR	Chiang Mai Arr	133.98	150	PKP	PKPdf	00 24 20.3	0.0
	comp=Z,2.2nm,0.4s,baz=218,slow=3.7,SNR=10						
FINES	FINESS Array B	138.56	46	PKhKP	PKPpre	00 24 15.2	
	comp=Z,2.1nm,0.7s,baz=238,slow=3.6,SNR=6.6						
FINES				PKP	PKPdf	00 24 26.4	-1.1
	comp=Z,3.6nm,0.8s,baz=174,slow=2.5,SNR=5.6						
FINES				SKPbc	SKPbc	00 27 55.0	-6.6
	comp=Z,4.8nm,1.0s,baz=204,slow=3.0,SNR=3.6						
DAWY	Dawson	139.15	318	ePKPdf	PKPdf	00 24 27.7	-0.8
EPYK	Eagle Plains	139.94	322	ePKPpre	PKPpre	00 24 21.4	
INK	Inuvik	140.39	326	PKhKP	PKPpre	00 24 20.2	
	comp=Z,4.2nm,0.6s,baz=136,slow=2.8,SNR=12						
INK	Inuvik	140.39	326	ePKPpre	PKPpre	00 24 21.6	
KMI	Kunming	141.28	152	PKP	PKiKP	00 24 36.9	+0.3
ILAR	Eielson Array	142.05	316	PKhKP	PKPpre	00 24 27.9	
	comp=Z,6.1nm,0.6s,baz=193,slow=1.0,SNR=46						
ILAR				SKPbc	SKPbc	00 28 04.3	-6.5
	comp=Z,1.6nm,0.8s,baz=169,slow=2.3,SNR=4.9						
WRH	Wood River Hil	142.26	315	ePKPpre	PKPpre	00 24 29.7	
ARCES	ARCESS Array B	143.69	36	PKhKP	PKPab	00 24 33.0	-0.3
	comp=Z,7.5nm,0.4s,baz=223,slow=3.0,SNR=70						
ARCES				SKPbc	SKPbc	00 28 08.3	-6.4
	comp=Z,2.0nm,0.7s,baz=261,slow=3.1,SNR=4.6						
ARCES	ARCESS Array B	143.69	36	PKIKP	PKPab	00 24 33.0	-0.3
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ARE0	ARCESS Array S	143.69	36	ePKPpre	PKPab	00 24 33.2	-0.1
TTA	Tatalina	144.11	309	ePKPdf	PKPab	00 24 35.5	+0.3
TTA	Tatalina	144.11	309	ePKIKP	PKPab	00 24 35.5	+0.3
AKTO	Aktyubinsk	144.31	79	PKP	PKPab	00 24 34.3	-1.9
	comp=Z,8.6nm,0.5s,baz=142,slow=3.4,SNR=23						
AKTO	Aktyubinsk	144.31	79	PKHKP	PKPab	00 24 32.9	-3.3
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AB31	Akbulak array	144.40	82	ePKHKP	PKPab	00 24 33.9	-2.7
AB31				pmax	pmax		
	comp=Z,13nm,0.6s						
JOW	Kunigami	144.82	191	PKP	PKPab	00 24 37.8	-0.9
	comp=Z,1.2nm,0.7s,baz=163,slow=14,SNR=6.1						
KK31	Karatay Array	144.94	98	iPKIKP	PKPab	00 24 37.5	-1.3
KK31				pmax	pmax		
	comp=Z,17nm,0.7s						
LVZ	Lovozero	145.48	42	ePKPdf	PKPdf	00 24 39.4	-0.3
LVZ	Lovozero	145.48	42	ePKIKP	PKPdf	00 24 39.4	-0.3
KIRV	Kirov	145.69	62	PKPbc	PKPdf	00 24 38.4	-1.8
	comp=Z,9.4nm,0.4s,baz=116,slow=2.3,SNR=14						
PRGR	Permogore	145.92	56	ePKIKP	PKPdf	00 24 37.6	-2.9
PRGR				pmax	pmax		
	comp=Z,50nm,0.8s						
ADK	Adak	146.02	282	ePKPdf	PKPdf	00 24 41.1	+0.1
ADK	Adak	146.02	282	ePKP2	PKPdf	00 24 41.1	+0.1
KBS	Kingsbay	146.30	19	ePKPbc	PKPab	00 24 43.0	+0.1
KBS	Kingsbay	146.30	19	ePKP2	PKPab	00 24 43.0	+0.1
AAK	Ala-Archa	146.44	103	PKPbc	PKPdf	00 24 43.1	+0.8
	comp=Z,9.9nm,0.5s,baz=201,slow=3.3,SNR=13						
AAK	Ala-Archa	146.44	103	ePKPdf	PKPdf	00 24 43.3	+1.0
AAK	Ala-Archa	146.44	103	PKIKP	PKPdf	00 24 41.4	-0.9
AAK				pmax	pmax		
	comp=Z,12nm,0.7s						
SPA0	Spitsbergen Ar	146.60	21	ePKPbc	PKPbc	00 24 43.1	+0.1
CD2	Chengdu	147.08	151	PKPbc	PKPdf	00 24 44.5	+0.9
KDJ	Kajisay	147.28	106	ePKPbc	PKPdf	00 24 45.4	+1.6
KDJ	Kajisay	147.28	106	ePKP2	PKPdf	00 24 45.4	+1.6
PRZ	Przheval'sk	148.12	107	ePKPbc	PKPbc	00 24 49.1	+0.8
ARU	Arti	148.40	71	PKPbc	PKPdf	00 24 46.2	+1.3
	comp=Z,4.8nm,0.7s,baz=195,slow=2.4,SNR=17						
ARU	Arti	148.40	71	ePKPdf	PKPdf	00 24 46.3	+1.5
ARU	Arti	148.40	71	PKP2	PKPdf	00 24 46.4	+1.6
SVE	Sverdlovsk	149.56	71	ePKP2	PKPbc	00 24 50.2	-1.1
SVE				pmax	pmax		
	comp=Z,11nm,0.8s						
OTUK	Ortayu	149.59	93	PKHKP	PKPdf	00 24 49.0	+1.9

OTUK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2	Nanjing	150.27	176	ePKPbc	PKPdf	00 24 51.1	+2.4
JNU	Nakatsue	150.75	196	PKPbc	PKPbc	00 24 54.0	-1.0
	comp=Z,10nm,0.7s,baz=90,slow=5.8,SNR=7.7						
JNU	Nakatsue	150.75	196	ePKPbc	PKPbc	00 24 54.5	-0.5
XAN	Xi'an	151.16	158	PKPbc	PKPbc	00 24 54.8	-1.2
BRVK	Borovoye	151.80	84	ePKPbc	PKPbc	00 24 55.6	-1.1
BRVK	Borovoye	151.80	84	PKIKP	PKPdf	00 24 52.7	+2.4
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BVAR	Borovoye Array	151.83	84	PKPbc	PKPbc	00 24 55.7	-1.1
	comp=Z,13nm,0.4s,baz=177,slow=3.6,SNR=107						
LZH	Lanzhou	152.05	148	ePKPbc	PKPbc	00 24 56.5	-1.6
LZH				pPKP	pPKPbc	00 25 01.6	+0.2
LZH				sPKP		00 25 03.3	
LZH				PKPab	sPKPab	00 25 14.8	+2.8
LZH				LR	LR		
	comp=Z,170nm,17.9s						
LZH				LR	LR		
	comp=Z,180nm,18.1s						
LZH				LR	LR		
	comp=Z,250nm,20.0s						
MJAR	Matsushiro Arr	152.69	210	PKPbc	PKPbc	00 24 58.1	-1.2
	comp=Z,1.9nm,0.5s,baz=204,slow=4.1,SNR=7.3						
MAJO	Matsushiro	152.69	210	ePKPbc	PKPbc	00 24 58.1	-1.2
MAJO	Matsushiro	152.69	210	ePKIKP	PKPbc	00 24 58.1	-1.2
MK31	Makanchi Array	153.21	106	i PKIKP	PKPdf	00 24 55.2	+2.5
MK31				pmax	pmax		
	comp=Z,16nm,0.8s						
MK32	Makanchi Array	153.21	106	ePKPbc	PKPbc	00 24 58.4	-1.7
MKAR	Makanchi Array	153.21	106	PKPbc	PKPbc	00 24 58.4	-1.7
	comp=Z,3.9nm,0.8s,baz=237,slow=3.5,SNR=12						
MKAR				PKPab	PKPab	00 25 12.0	0.0
	comp=Z,15nm,0.8s,baz=222,slow=5.4,SNR=14						
WMQ	Urumqi	153.29	117	ePKPbc	PKPdf	00 24 55.8	+2.9
WMQ				LR	LR		
	comp=Z,890nm,16.7s						
WMQ				LR	LR		
	comp=Z,410nm,17.3s						
GTA	Gaotai	154.03	139	ePKPbc	PKPbc	00 25 02.4	+0.1
KURBB	Kurchatov Arra	154.16	96	PKPbc	PKPbc	00 25 00.7	-1.3
	comp=Z,1.7nm,0.6s,baz=226,slow=2.8,SNR=18						
KURBB				PKPab	PKPab	00 25 15.3	-0.6
	comp=Z,5.5nm,1.0s,baz=232,slow=4.1,SNR=9.5						
KURK	Kurchatov	154.26	96	PKIKP	PKPbc	00 25 00.7	-1.5
KURK						00 25 15.3	
KSRS	Korea Array	155.38	192	PKP	PKPdf	00 24 53.1	-2.8
	comp=Z,1.1nm,0.7s,baz=89,slow=5.3,SNR=5.2						
HHC	Hu-ho-hao-te	158.26	159	PKP	PKPdf	00 25 03.9	+4.2
ZALV	Zalesovo Beam	159.25	95	PKPab	PKPab	00 25 36.3	-1.4
	comp=Z,6.5nm,0.5s,baz=218,slow=4.9,SNR=14						
ZAK	Zakamensk	164.84	130	ePKIKP	PKPdf	00 25 02.6	-3.6
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.6s						
SEY	Seymchan	165.65	288	PKPab	PKPab	00 26 05.2	-0.3
	comp=Z,3.4nm,0.7s,baz=141,slow=6.4,SNR=6.6						
TIXI	Tiksi	169.61	347	PKPab	PKPab	00 26 22.8	0.0
	comp=Z,9.0nm,0.7s,baz=11,slow=5.2,SNR=3.7						

IDC ***22*** *00:06:37.1±1.0, 34°.49N×104°.27E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.4/48, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=77.7km s-min=19.0km az=57.0*

BJI ***22*** *00:06:40.0±0.0, 34°.54N×104°.25E, h6km, ML3.6/7*

ISC 22 00:06:39.4±1.1**, 34°.5N**±0°.1×**104°.22E**±0°.08**, h10**km**, n9, σ2s20**/13**, mb4.0**/4**, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	Lanzhou	1.60	349	Pg	Pb	00 07 09.0	-0.1
LZH				Sg	Sn	00 07 29.0	+0.3
LZH				smax	smax		
	comp=N,630nm,0.9s						
LZH				smax	smax		
	comp=E,740nm,1.0s						
XAN	Xi'an	3.92	96	Pn	Pn	00 07 40.3	+0.6
XAN				Pg	Pb	00 07 49.5	+0.9
XAN				Sn	Sn	00 08 29.8	+4.0
XAN				Sg	Sg	00 08 40.8	-4.5
XAN				smax	smax		
	comp=N,140nm,0.8s						
XAN				smax	smax		
	comp=E,130nm,0.9s						
SONM	Songino Array	13.41	6	Pn	Pn	00 09 50.9	+1.1
	0.2nm,0.3s,baz=185,slow=15,SNR=2.5						
WMQ	Urumqi	15.81	311	eP	Pn	00 10 23.4	+1.3
MKAR	Makanchi Array	20.59	313	P	P	00 11 19.8	+1.3
	0.5nm,0.5s,baz=111,slow=10,SNR=5.8						
KURBB	Kurchatov Arra	24.66	319	P	P	00 12 00.2	+0.1
	0.5nm,0.6s,baz=128,slow=9.4,SNR=11						
WRA	Warramunga Arr	61.27	147	P	P	00 16 53.6	-1.3
	0.7nm,0.5s,baz=332,slow=8.7,SNR=3.3						
NOA	NORSAR Array B	61.86	327	P	P	00 16 56.4	-2.1
	0.5nm,0.7s,baz=71,slow=7.0,SNR=2.9						
ASAR	Alice Springs	64.36	150	P	P	00 17 15.2	-0.4
	0.5nm,0.4s,baz=334,slow=6.7,SNR=9.5						

ISCJB ***22*** *00:09:41.3±0.2, 34°.55N±0°.02×104°.44E±0°.03, h10km, mb4.7/103, Error ellipse: s-maj=3.8km s-min=3.1km az=145.9*

BJI ***22*** *00:09:42.9±0.0, 34°.55N×104°.22E, h7km, mb4.4/17, mB4.6/1, ML4.5/14*

NEIC ***22*** *00:09:43.0±1.6, 34°.55N×104°.39E, h10km±1km, mb4.9/73, Error ellipse: s-maj=13.1km s-min=11.1km az=49.0*

MOS ***22*** *00:09:43.2±1.3, 34°.51N×104°.46E, h22km, mb4.8/33, Error ellipse: s-maj=8.7km s-min=5.7km az=119.2*

IDC ***22*** *00:09:47.5±3.1, 34°.54N×104°.37E, h45km±30km, mb4.1/23, mb1 4.2/26, mb1mx4.1/51, mbtmp4.3/26, ML4.0/3, Error ellipse: s-maj=15.8km s-min=10.4km az=46.0*

ISC 22 00:09:43.0±0.3**, 34°.60N**±0°.03×**104°.43E**±0°.03**, h10**km**, n217, σ1s71**/232**, mb4.8**/111**, 16C-4D, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	Lanzhou	1.56	342	Pg	Pn	00 10 11.6	+0.6
LZH				Sg	Sn	00 10 32.5	+1.1
LZH				smax	smax		
	comp=N,8µm,0.9s						
LZH				smax	smax		
	comp=E,4µm,1.0s						
CD2	Chengdu	3.72	189	⇑iPg	Pg	00 10 52.3	-2.0
CD2				Sn	Sn	00 11 26.8	+2.3
CD2				Sg	Sg	00 11 41.5	-1.0
CD2				smax	smax		
	comp=N,890nm,0.9s						
CD2				smax	smax		
	comp=E,730nm,1.0s						
CD2	Chengdu	3.72	189	Pn	Pn	00 10 40.9	+0.3
CD2				Pg	Pg	00 10 52.3	-2.0
CD2				Sn	Sn	00 11 26.5	+2.0
CD2				Sg	Sg	00 11 40.4	-2.1
CD2				smax	smax		
	comp=E,900nm,0.9s						
CD2				smax	smax		
	comp=E,730nm,0.8s						
XAN	Xi'an	3.75	97	ePn	Pn	00 10 43.4	+2.3
XAN	Xi'an	3.75	97	Pn	Pn	00 10 43.3	+2.3
XAN				Pg	Pg	00 10 53.3	-1.7
XAN				Sn	Sb	00 11 33.5	-1.5
XAN				Sg	Sg	00 11 44.3	+0.7
XAN				smax	smax		
	comp=E,1µm,0.4s						
XAN				smax	smax		
	comp=E,1µm,0.6s						
XAN	Xi'an	3.75	97	eP	Pn	00 10 43.4	+2.3
GTA	Gaotai	6.06	324	Pn	Pn	00 11 13.0	+0.2
GTA				Pg	Pb	00 11 31.8	+3.0
GTA				Sn	Sn	00 12 20.9	-1.4
GTA				Sg	Sg	00 12 50.8	-6.8
ENH	Enshi	6.07	134	ePn	Pn	00 11 14.7	+1.9
TIY	Taiyuan	7.18	62	ePg	Pg	00 11 56.5	-4.0
TIY				Sg	Sg	00 13 28.4	-5.0
TIY				smax	smax		
	comp=E,200nm,0.6s						
TIY				smax	smax		
	comp=E,250nm,0.9s						
BTO	Baotou	7.46	35	ePn	Pn	00 11 38.3	+6.4
BTO				Sn	Sn	00 12 58.9	+2.3
GYA	Guiyang	8.34	166	⇓iP	Pn	00 11 44.4	+0.3
GYA				S	Sn	00 13 15.5	-2.8
GYA				pmax	pmax		
	comp=E,10.0nm,0.6s						
HHC	Hu-ho-hao-te	8.42	40	P	Pn	00 11 47.3	+2.2
KMI	Kunming	9.55	189	P	Pn	00 12 04.1	+3.2
KMI				pP		00 12 05.4	
KMI				sP		00 12 07.8	
KMI				PP	PnPn	00 12 12.3	+3.7
KMI				S	Sn	00 13 47.5	-0.9
KMI				sS		00 13 53.3	
KMI				SS	SnSn	00 14 08.5	+8.1
KMI				pmax	pmax		
	comp=E,19nm,0.6s						
NJ2	Nanjing	12.33	98	eP	Pn	00 12 39.3	+0.8
NJ2				pmax	pmax		
	comp=E,13nm,0.5s						
SONA0	Songino Array	13.31	6	ePn	Pn	00 12 53.2	+1.2
SONM	Songino Array	13.31	6	P	Pn	00 12 53.2	+1.2
	comp=E,0.3nm,0.3s,baz=187,slow=13,SNR=4.9						
WMQ	Urumqi	15.89	310	eP	P	00 13 30.9	+0.5
CHTO	Chiang Mai	16.46	199	ePn	Pn	00 13 33.8	-0.3
	comp=E,22nm,1.3s						
CHTO	Chiang Mai	16.46	199	eP	Pn	00 13 33.8	-0.3
CHTO				pmax	pmax		
	comp=Z,23nm,1.3s						
CMAR	Chiang Mai Arr	16.80	198	P	Pn	00 13 37.5	-1.0
	comp=Z,0.3nm,0.3s,baz=11,slow=9.1,SNR=4.8						
SSLB	Suanglung	17.98	122	eP	P	00 13 53.8	+0.1
	comp=Z,9.5nm,0.8s						
YULB	Yu-li	18.47	123	eP	Pn	00 13 59.2	0.0
	comp=Z,30nm,1.5s						
HIA	Hailar	18.51	33	i P	Pn	00 14 00.7	+1.2
HIA				pmax	pmax		
	comp=Z,73nm,1.1s						
TJN	Taejon	18.75	78	ceP	Pn	00 14 03.3	+0.8
KSRS	Korea Array	19.20	75	P	Pn	00 14 08.8	+0.9
	comp=Z,0.5nm,0.3s,baz=264,slow=11,SNR=10						
MK31	Makanchi Array	20.66	313	eP	Pn	00 14 24.3	-0.9
	comp=Z,5.8nm,1.0s						
MK31	Makanchi Array	20.66	313	eP	Pn	00 14 24.3	-0.9
MK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK32	Makanchi Array	20.66	313	eP	P	00 14 23.6	+0.7
MKAR	Makanchi Array	20.66	313	P	P	00 14 23.6	+0.7
	comp=Z,4.2nm,0.7s,baz=118,slow=13,SNR=28						
MAKZ	Makanchi	20.86	313	eP	Pn	00 14 26.6	-0.9
	comp=Z,6.9nm,0.8s						
MAKZ	Makanchi	20.86	313	eP	Pn	00 14 26.6	-0.9
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JNU	Nakatsue	21.99	86	P	P	00 14 38.4	+1.0
	comp=Z,7.9nm,0.9s,baz=287,slow=9.4,SNR=3.8						
KDJ	Kajisay	22.59	298	eP	P	00 14 42.0	-1.8
	comp=Z,9.7nm,0.9s						
KDJ	Kajisay	22.59	298	eP	P	00 14 42.0	-1.8
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH	Kashi	23.19	291	eP	P	00 14 56.3	+6.3
KSH				pP	sP	00 15 00.6	+5.4
KSH				sP	pP	00 15 03.3	+10
KSH				pmax	pmax		
	comp=Z,17nm,1.1s						
USRK	Ussuriysk Ar.	23.26	57	P	P	00 14 51.9	+1.3
	comp=Z,2.5nm,0.8s,baz=256,slow=7.7,SNR=6.5						
ZAA0	Zalesovo Array	23.76	330	eP	P	00 14 56.5	+1.1
	comp=Z,11nm,1.1s						
ZALV	Zalesovo Beam	23.76	330	P	P	00 14 55.8	+0.4
	comp=Z,4.8nm,0.8s,baz=132,slow=9.6,SNR=13						
ZAA1	Zalesovo Array	23.77	331	eP	P	00 14 55.8	+0.4
KURK	Kurchatov	24.71	319	eP	P	00 15 05.0	+0.8
	comp=Z,27nm,1.3s						
KURK	Kurchatov	24.71	319	ceP	P	00 15 03.9	-0.3
KURK				pmax	pmax		
	comp=Z,54nm,2.5s						
KURBB	Kurchatov Arra	24.72	318	P	P	00 15 04.4	+0.1
	comp=Z,8.4nm,0.8s,baz=126,slow=9.7,SNR=46						
KURBB				PcP	PcP	00 18 40.1	-0.9
	comp=Z,1.1nm,0.6s,baz=112,slow=2.1,SNR=5.8						
KLR	Kul'dur	24.86	46	P	P	00 15 06.3	+0.7
	comp=Z,3.6nm,0.9s,baz=268,slow=9.2,SNR=7.8						
NIL	Nilore	25.78	277	eP	P	00 15 14.5	+0.4
	comp=Z,12nm,0.9s						
NIL	Nilore	25.78	277	eP	P	00 15 14.5	+0.4
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
BVAR	Borovoye Array	30.31	318	PcP	PcP	00 18 53.9	-0.6
	comp=Z,1.9nm,0.6s,baz=110,slow=2.8,SNR=8.7						
BRVK	Borovoye	30.38	318	eP	P	00 15 55.1	+0.1
	comp=Z,4.7nm,0.8s						
BRVK	Borovoye	30.38	318	ceP	P	00 15 58.0	+3.0
BRVK				pmax	pmax		
	comp=Z,17nm,2.5s						
YSS	Yuzh-Sakhalins	31.23	55	eP	P	00 16 02.3	-0.2
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
ABKAR	Akbulak array	35.65	308	eP	P	00 16 41.9	+0.8
ABKAR				eS	S	00 22 15.3	-2.0
SVE	Sverdlovsk	36.92	321	⇓eP	P	00 16 55.2	+3.4
SVE				pmax	pmax		
	comp=Z,22nm,1.0s						
GEYT	Alibeck	37.20	289	P	P	00 16 54.8	+0.3
	comp=Z,3.7nm,0.8s,baz=96,slow=7.4,SNR=5.8						
ARU	Arti	37.90	320	eP	P	00 17 00.2	0.0
	comp=Z,25nm,0.9s						
ARU	Arti	37.90	320	c iP	P	00 17 02.2	+2.1
ARU				S	S	00 22 56.6	+5.2
ARU				pmax	pmax		
	comp=Z,29nm,0.9s						
MNAI	Manna	38.77	182	eP	P	00 17 07.2	-0.6
	comp=Z,190nm,1.1s						
TIXI	Tiksi	39.28	12	eP	P	00 17 10.7	-0.8
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PEA1	Petropavlovsk-	41.55	47	eP	P	00 17 31.6	+1.0
PETK	Petropavlovsk-	41.55	47	P	P	00 17 31.6	+1.0
	comp=Z,2.5nm,0.9s,baz=325,slow=1.8,SNR=5.7						
KAPI	Kappang	41.96	157	P	P	00 17 34.2	0.0
	comp=Z,16nm,0.6s,baz=332,slow=7.3,SNR=11						
KAPI	Kappang	41.96	157	eP	P	00 17 34.2	0.0
	comp=Z,23nm,0.8s						
PRGR	Permogore	45.52	325	eP	P	00 17 59.1	-3.3
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV	Kislovodsk	47.70	301	eP	P	00 18 20.6	+0.7
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
BILL	Bilibino	47.92	27	i P	P	00 18 20.0	-1.1
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LPSR	Galich'ya Gora	48.97	313	eP	P	00 18 31.3	+1.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	48.97	311	eP	P	00 18 30.7	+1.3
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBN	Obninsk	50.12	316	i P	P	00 18 39.5	+1.4
OBN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ARA0	ARCESS Array S	54.21	335	eP	P	00 19 09.4	+1.0
ARCES	ARCESS Array B	54.21	335	P	P	00 19 09.4	+1.0
	comp=Z,5.7nm,0.8s,baz=80,slow=8.1,SNR=12						
FIA0	FINESS Array S	54.85	325	eP	P	00 19 13.8	+0.7
FIA0	FINESS Array S	54.85	325	eP	P	00 19 13.8	+0.7
FINES	FINESS Array B	54.85	325	P	P	00 19 13.8	+0.7
	comp=Z,2.2nm,0.6s,baz=70,slow=6.5,SNR=8.7						
FINES	FINESS Array B	54.85	325	ceP	P	00 19 14.6	+1.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	55.24	312	P	P	00 19 15.4	-0.7
	comp=Z,2.8nm,0.6s,baz=67,slow=6.7,SNR=8.2						
BR101	Keskin Array S	55.31	298	eP	P	00 19 16.2	-0.8
BR131	Keskin Array S	55.31	298	eP	P	00 19 15.3	-1.7
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	55.31	298	P	P	00 19 16.2	-0.8
	comp=Z,1.9nm,0.7s,baz=95,slow=6.6,SNR=10						
BRTR	Keskin Array B	55.31	298	ceP	P	00 19 19.6	+2.6
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SPA0	Spitsbergen Ar	56.03	346	eP	P	00 19 21.3	-0.1
	comp=Z,35nm,1.5s						
WAKE	Wake Island	56.72	88	eP	P	00 19 25.6	-1.5
	comp=Z,97nm,1.2s						
MDUB	Mudurnu	56.84	299	eP	P	00 19 26.4	-1.5
	comp=Z,50nm,1.0s						
PLOR	Plostina	58.25	307	⇓iP	P	00 19 41.6	+4.0
PLOR	Plostina	58.25	307	⇓P	P	00 19 41.6	+4.0
BURAR	Bucovina Array	58.63	309	⇑iP	P	00 19 42.8	+2.5
BURAR	Bucovina Array	58.63	309	⇑P	P	00 19 42.8	+2.5
BUR08	Bucovina Ar. S	58.63	309	eP	P	00 19 40.5	+0.1
MLR	Muntele Rosu	58.83	306	eP	P	00 19 42.0	+0.2
	comp=Z,7.6nm,1.1s						
MLR	Muntele Rosu	58.83	306	eP	P	00 19 42.0	+0.2
MLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANM	Nome	59.43	30	eP	P	00 19 46.4	+0.9
	comp=Z,44nm,1.2s						
KWP	Kalwaria Pacla	59.56	312	eP	P	00 19 45.9	-0.8
	comp=Z,142nm,0.6s						
KWP	Kalwaria Pacla	59.56	312	eP	P	00 19 45.9	-0.8
HUMR	Humele	59.80	306	⇑iP	P	00 19 51.1	+2.7
KOLS	Kolonicke sedl	60.06	311	eP	P	00 19 53.0	+2.9
KOLS	Kolonicke sedl	60.06	311	eP	P	00 19 53.0	+2.9
TRPA	Tarpa	60.16	310	⇑iP	P	00 19 54.4	+3.7
COEN	Coen	60.71	136	eP	P	00 19 53.9	-0.9
	comp=Z,32nm,1.2s						
WRA	Warramunga Arr	61.24	148	P	P	00 19 57.9	-0.5
	comp=Z,10nm,0.6s,baz=320,slow=7.7,SNR=22						
WB2	Warramunga Arr	61.25	148	eP	P	00 19 58.3	-0.1
	comp=Z,13nm,0.6s						
WC3	Warramunga Arr	61.27	148	eP	P	00 19 58.2	-0.4
	comp=Z,10nm,0.8s						
HERR	Herculane	61.38	307	⇑iP	P	00 20 01.5	+2.3
NC405	NORSAR Array S	61.63	327	eP	P	00 20 00.3	-0.3
BZS	Buzias	61.64	308	⇑iP	P	00 20 03.7	+2.8
BZS	Buzias	61.64	308	⇑P	P	00 20 03.7	+2.8
NC303	NORSAR Array S	61.75	327	eP	P	00 20 01.2	-0.2
NB201	NORSAR Array S	61.85	327	eP	P	00 20 01.2	-0.9
	comp=Z,3.8nm,0.6s						
NC602	NORSAR Array S	61.85	326	eP	P	00 20 01.5	-0.5
NB2	NORSAR Subarra	61.89	327	P	P	00 20 01.1	-1.2
	comp=Z,3.0nm,0.6s,baz=69,slow=6.9						
NB200	NORSAR Array S	61.89	327	eP	P	00 20 01.4	-0.9
NOA	NORSAR Array B	61.89	327	P	P	00 20 01.4	-0.9
	comp=Z,5.2nm,0.8s,baz=70,slow=6.8,SNR=18						
NC204	NORSAR Array S	62.01	327	eP	P	00 20 02.6	-0.6
	comp=Z,28nm,0.8s						
NBO00	NORSAR Array S	62.09	327	eP	P	00 20 03.8	+0.1
	comp=Z,22nm,1.4s						
NAO01	NORSAR Array S	62.11	326	eP	P	00 20 03.8	0.0
	comp=Z,8.1nm,0.8s						
VYHS	Vyhne	62.34	312	eP	P	00 20 08.9	+3.3
VYHS	Vyhne	62.34	312	eP	P	00 20 08.9	+3.3
MORC	Moravsky Berou	62.66	313	eP	P	00 20 07.9	+0.2
MORC	Moravsky Berou	62.66	313	⇑iP	P	00 20 07.3	-0.4
MORC	Moravsky Berou	62.66	313	eP	P	00 20 07.9	+0.2
KWAJ	Kwajalein Atol	63.01	98	eP	P	00 20 09.6	-0.8
	comp=Z,572nm,1.4s						
KWAJ	Kwajalein Atol	63.01	98	eP	P	00 20 09.6	-0.8
KONO	Kongsberg	63.15	325	eP	P	00 20 10.8	+0.1
	comp=Z,5.8nm,1.1s						
KONO	Kongsberg	63.15	325	eP	P	00 20 10.8	+0.1
KONO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DPC	Dobruska-Polom	63.17	314	eP	P	00 20 10.8	-0.3
DPC	Dobruska-Polom	63.17	314	eP	P	00 20 10.8	-0.3
LIT	Litokhoron	63.17	302	eP	P	00 20 10.1	-1.1
	comp=Z,11nm,1.0s						
LIT	Litokhoron	63.17	302	eP	P	00 20 10.1	-1.1
LIT				pmax	pmax		
	comp=Z,11nm,1.0s						
CHVC	Chvalec	63.23	314	eP	P	00 20 12.1	+0.6
AGG	Agios Georgios	63.72	301	eP	P	00 20 14.8	-0.1
	comp=Z,11nm,0.9s						
AGG	Agios Georgios	63.72	301	eP	P	00 20 14.9	-0.1
AGG				pmax	pmax		
	comp=Z,11nm,0.9s						
PVCC	Panska Ves	64.13	315	eP	P	00 20 20.7	+3.4
PVCC	Panska Ves	64.13	315	eP	P	00 20 20.7	+3.4
AS31	Alice Springs	64.35	150	eP	P	00 20 18.6	-0.4
	comp=Z,2.5nm,0.4s						
ASAR	Alice Springs	64.35	150	P	P	00 20 18.5	-0.5
	comp=Z,5.3nm,0.5s,baz=334,slow=6.7,SNR=72						
BRG	Berggiesshubel	64.35	315	eP	P	00 20 21.1	+2.3
	comp=Z,6.9nm,0.9s						
PRU	Pruhonice	64.36	314	eP	P	00 20 21.8	+2.9
PRU	Pruhonice	64.36	314	eP	P	00 20 21.8	+2.9
CONA	Conrad Observa	64.40	312	i pP	P	00 20 19.8	+0.6
	comp=Z,4.1nm,1.4s						
CLL	Collm	64.72	316	eP	P	00 20 22.7	+1.5
	comp=Z,4.8nm,0.9s						
CLL	Collm	64.72	316	eP	P	00 20 22.7	+1.5
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	64.72	316	eP	P	00 20 24.0	+2.8
ARSA	Arzberg	64.89	311	eP	P	00 20 24.6	+2.2
	comp=Z,3.9nm,1.0s						
MLY	Manley	65.03	27	eP	P	00 20 22.8	-0.3
	comp=Z,3.0nm,0.9s						
KHC	Kasperske Hory	65.29	314	eP	P	00 20 24.9	-0.1
KHC	Kasperske Hory	65.29	314	eP	P	00 20 24.9	-0.1
GERES	GERESS Array B	65.33	313	P	P	00 20 25.1	-0.2
	comp=Z,2.3nm,0.8s,baz=66,slow=6.4,SNR=18						
BPAW	Bear Paw Mtn.	65.38	28	eP	P	00 20 26.9	+1.6
	comp=Z,4.0nm,1.1s						
MOA	Molln	65.41	312	i pP	P	00 20 25.9	+0.1
	comp=Z,3.8nm,0.8s						
SOKA	Soboth	65.43	311	i P	P	00 20 28.7	+2.7
	comp=Z,8.1nm,0.9s						
PPLA	Purkeypile	65.48	29	eP	P	00 20 26.9	+0.8
	comp=Z,4.9nm,0.9s						
MIDW	Midway	65.50	72	eP	P	00 20 26.8	+0.2
	comp=Z,42nm,0.8s						
OBKA	Obir	65.80	311	i pP	P	00 20 28.0	-0.4
	comp=Z,3.7nm,0.9s						
SKT	Skwentna	66.19	30	eP	P	00 20 29.3	-1.3
WRH	Wood River Hil	66.30	27	eP	P	00 20 32.3	+1.1
	comp=Z,6.8nm,1.4s						
KBA	Koelnbreinsper	66.30	312	i P	P	00 20 30.5	-1.3
	comp=Z,5.5nm,0.9s						
CCB	Clear Creek Bu	66.31	27	eP	P	00 20 31.9	+0.6
	comp=Z,1.7nm,1.0s						
SPU	Mount Spurr	66.36	31	eP	P	00 20 31.5	-0.2
GRA1	Grafenberg Arr	66.44	315	eP	P	00 20 33.1	+0.7
	comp=Z,12nm,0.8s						
GRF	Grafenberg Arr	66.44	315	eP	P	00 20 33.1	+0.7
GRF				pmax	pmax		
	comp=Z,12nm,0.8s						
GRFO	Grafenberg	66.44	315	eP	P	00 20 32.1	-0.3
	comp=Z,20nm,1.1s						
GRFO	Grafenberg	66.44	315	eP	P	00 20 32.1	-0.3
GRFO				pmax	pmax		
	comp=Z,20nm,1.1s						
ILAR	Eielson Array	66.58	26	P	P	00 20 32.2	-0.8
	comp=Z,1.4nm,0.8s,baz=291,slow=5.1,SNR=14						
PRP	Porcupine Dome	66.67	25	eP	P	00 20 34.4	+0.6
	comp=Z,4.9nm,0.9s						
ABTA	Abfaltersbach	66.96	312	i P	P	00 20 37.7	+1.8
	comp=Z,7.0nm,1.4s						
WTTA	Wattenberg	67.27	312	i pP	P	00 20 37.7	-0.2
	comp=Z,8.9nm,0.8s						
WATA	Walderalm	67.27	313	i pP	P	00 20 37.9	+0.1
	comp=Z,2.3nm,0.4s						
CTA	Charters Tower	67.36	137	P	P	00 20 37.4	-1.1
	comp=Z,4.9nm,0.6s,baz=304,slow=6.4,SNR=4.6						
CTAO	Charters Tower	67.36	137	eP	P	00 20 38.3	-0.2
	comp=Z,12nm,1.1s						
CTAO	Charters Tower	67.36	137	eP	P	00 20 38.3	-0.2
CTAO				pmax	pmax		
	comp=Z,12nm,1.1s						
SQTA	Sankt Quirin	67.55	313	i pP	P	00 20 39.3	-0.3
	comp=Z,5.1nm,0.8s						
MOTA	Moosalm	67.55	313	i pP	P	00 20 39.5	-0.2
	comp=Z,4.8nm,0.8s						
TIP	Timpagrande	67.57	303	eP	P	00 20 39.1	-0.7
	comp=Z,5.0nm,0.9s						
SML	Sawmill	67.58	29	eP	P	00 20 40.5	+1.0
	comp=Z,11nm,1.3s						
SML	Sawmill	67.58	29	eP	P	00 20 40.5	+1.0
SML				pmax	pmax		
	comp=Z,11nm,1.3s						
RETA	Reutte	67.70	313	i P	P	00 20 42.5	+2.1
	comp=Z,2.2nm,0.8s						
OHAK	Old Harbor	67.74	35	eP	P	00 20 39.6	-0.8
	comp=Z,16nm,1.1s						
RIDG	Independent Ri	67.89	27	eP	P	00 20 41.6	+0.2
	comp=Z,10nm,1.2s						
FETA	Feichten	67.93	313	i pP	P	00 20 41.5	-0.5
	comp=Z,7.5nm,1.0s						
SCM	Sheep Creek Mo	67.97	29	eP	P	00 20 43.4	+1.4
	comp=Z,20nm,1.5s						
SCM	Sheep Creek Mo	67.97	29	eP	P	00 20 43.4	+1.4
SCM				pmax	pmax		
	comp=Z,20nm,1.5s						
SEW	Seward	68.01	31	eP	P	00 20 42.3	+0.3

	comp=Z,11nm,1.1s						
SCRK	Sand Creek	68.08	26	eP	P	00 20 42.1	-0.5
	comp=Z,5.0nm,0.8s						
AQU	L'Aquila	68.39	307	eP	P	00 20 44.8	-0.1
	comp=Z,30nm,1.4s						
AQU	L'Aquila	68.39	307	eP	P	00 20 44.8	-0.1
AQU				pmax	pmax		
	comp=Z,30nm,1.4s						
FUORN	Ofenpass-Fuorn	68.40	312	eP	P	00 20 45.1	-0.1
	comp=Z,7.8nm,0.8s						
BFO	Black Forest	68.75	315	eP	P	00 20 48.2	+1.2
	comp=Z,3.4nm,0.9s						
BFO	Black Forest	68.75	315	ceP	P	00 20 50.3	+3.3
INK	Inuvik	68.78	20	P	P	00 20 46.5	-0.2
	comp=Z,2.2nm,0.6s,baz=309,slow=4.2,SNR=4.1						
INK	Inuvik	68.78	20	eP	P	00 20 46.5	-0.2
	comp=Z,4.8nm,1.0s						
INK	Inuvik	68.78	20	eP	P	00 20 46.6	-0.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUE	Stuetta	69.03	313	eP	P	00 20 48.8	-0.2
	comp=Z,5.2nm,0.7s						
CDF	Champ du Feu	69.33	315	eP	P	00 20 49.3	-1.4
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WLF	Walferdange	69.36	317	eP	P	00 20 49.7	-1.1
	comp=Z,47nm,0.8s						
WLF	Walferdange	69.36	317	eP	P	00 20 49.7	-1.1
WLF				pmax	pmax		
	comp=Z,47nm,0.8s						
VLC	Villacollemand	69.48	310	eP	P	00 20 51.6	-0.1
	comp=Z,6.0nm,0.8s						
ECH	Echery	69.49	315	eP	P	00 20 52.1	+0.5
	comp=Z,2.6nm,0.9s						
ECH	Echery	69.49	315	eP	P	00 20 52.1	+0.5
ECH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SENIN	Lac Senin/Sane	70.32	313	eP	P	00 20 57.1	+0.2
	comp=Z,3.0nm,0.8s						
LPL	La Plagne	71.08	313	eP	P	00 21 00.9	-0.8
LPL				pmax	pmax		
	comp=Z,13nm,0.7s						
BNI	Bardonecchia	71.35	312	eP	P	00 21 03.7	+0.5
	comp=Z,5.7nm,0.8s						
BNI	Bardonecchia	71.35	312	eP	P	00 21 03.7	+0.5
BNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BCPM	Bancas Point	72.13	28	eP	P	00 21 07.4	0.0
	comp=Z,60nm,1.0s						
SSF	Saint Saulge	72.21	315	eP	P	00 21 09.9	+1.8
SSF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HYT	Haines Junctio	72.39	27	eP	P	00 21 09.6	+0.5
	comp=Z,4.7nm,0.9s						
CLF	Chambon-Foret	72.41	316	eP	P	00 21 10.3	+1.0
	comp=Z,18nm,0.7s						
SSB	Saint Sauveur	72.53	313	eP	P	00 21 10.1	0.0
	comp=Z,2.4nm,1.0s						
SSB	Saint Sauveur	72.53	313	eP	P	00 21 10.1	0.0
SSB				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CAF	Calviac	74.20	314	eP	P	00 21 22.7	+2.7
CAF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	74.79	148	P	P	00 21 23.1	-0.3
	comp=Z,5.9nm,0.5s,baz=317,slow=7.9,SNR=11						
STKA	Stephens Creek	74.79	148	eP	P	00 21 23.1	-0.3
	comp=Z,1.8nm,0.9s						
JOHN	Johnston Islan	77.50	78	eP	P	00 21 38.6	-0.6
	comp=Z,161nm,1.0s						
YKW3	Yellowknife Ar	78.22	17	eP	P	00 21 42.8	+0.4
	comp=Z,4.0nm,1.1s						
YKA	Yellowknife Ar	78.28	17	P	P	00 21 43.1	+0.4
	comp=Z,2.0nm,0.6s,baz=331,slow=5.5,SNR=8.4						
YKB5	Yellowknife Ar	78.28	17	eP	P	00 21 43.1	+0.4
ESDC	Sonseca Array	80.88	312	P	P	00 21 56.2	-1.2
	comp=Z,0.4nm,0.5s,baz=38,slow=6.0,SNR=4.5						
PGC	Sidney	86.78	30	eP	P	00 22 27.5	+0.2
	comp=Z,12nm,0.8s						
SBLHI	Steaming Bluff	87.27	68	eP	P	00 22 30.3	-0.1
	comp=Z,42nm,0.8s						
KKO	Keanakako`i	87.28	68	eP	P	00 22 29.9	-0.6
	comp=Z,87nm,1.0s						
FFC	Flin Flon	88.18	15	eP	P	00 22 34.2	+0.3
	comp=Z,45nm,0.9s						
FFC	Flin Flon	88.18	15	eP	P	00 22 34.3	+0.3

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*ISCJB **22** 00:16:42.6±0.6, 34°.51N±0°.04×104°.2E±0°.1, h10^{km}, mb3.9/6, Error ellipse: s-maj=12.5km s-min=4.5km az=168.2*

*IDC **22** 00:16:42.4±1.1, 34°.76N×104°.68E, h0^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.5/59, mbtmp3.7/8, Error ellipse: s-maj=67.2km s-min=17.8km az=53.0*

*BJI **22** 00:16:46.0±0.0, 34°.53N×104°.27E, h7^{km}, ML3.9/8*

ISC 22 00:16:45.3±0.6, **34°.53N**±0°.05×**104°.25E**±0°.05, **h10**^{km}, **n15**, σ**2^{s}10**/22, **mb3.9**/6, **1C, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	1.59	348	Pg	Pn	00 17 14.4	+0.7
LZH				Sg	Sn	00 17 35.3	+0.9
LZH				smax	smax		
	comp=N,950nm,1.0s						
LZH				smax	smax		
	comp=E,2µm,1.0s						
CD2	Chengdu	3.63	187	Pg	Pg	00 17 53.8	-1.1
CD2				Sg	Sg	00 18 42.9	+1.0
CD2				smax	smax		
	comp=N,180nm,0.8s						
CD2				smax	smax		
	comp=E,730nm,1.0s						
XAN	Xi'an	3.90	96	Pn	Pn	00 17 45.3	0.0
XAN				Pg	Pb	00 17 55.0	+0.9
XAN				Sn	Sn	00 18 35.6	+4.5
XAN				Sg	Sg	00 18 47.1	-3.4
XAN				smax	smax		
	comp=N,260nm,0.6s						
XAN				smax	smax		
	comp=E,260nm,0.7s						
GTA	Gaotai	6.03	325	Pn	Pn	00 18 18.4	+3.8
GTA				Pg	Pg	00 18 36.8	-3.9
GTA				Sn	Sn	00 19 23.8	0.0
GTA				Sg	Sg	00 19 55.6	-3.2
GYA	Guiyang	8.31	165	⇑iP	Pn	00 18 46.4	+0.5
GYA				S	Sn	00 20 16.6	-3.3
WHN	Wuhan	9.40	112	eP	Pn	00 19 11.6	+11
WMQ	Urumqi	15.82	311	eP	Pn	00 20 29.8	+1.7
CMAR	Chiang Mai Arr	16.69	198	P	P	00 20 42.9	+1.2
	baz=12,slow=11,SNR=6.2						
MKAR	Makanchi Array	20.60	313	P	P	00 21 25.9	+1.4
	0.6nm,0.6s,baz=120,slow=9.8,SNR=6.3						
KURBB	Kurchatov Arra	24.67	319	P	P	00 22 05.5	-0.6
	0.6nm,0.4s,baz=129,slow=9.0,SNR=13						
AKASG	Malin Array Be	55.17	312	P	P	00 26 17.3	-0.6
	0.7nm,0.5s,baz=63,slow=7.6,SNR=3.5						
BRTR	Keskin Array B	55.21	298	P	P	00 26 17.6	-1.0
	0.3nm,0.6s,baz=93,slow=6.2,SNR=2.6						
WRA	Warramunga Arr	61.27	147	P	P	00 26 59.4	-1.4
	1.6nm,0.5s,baz=322,slow=7.9,SNR=5.1						
NOA	NORSAR Array B	61.86	327	P	P	00 27 03.2	-1.2
	0.6nm,0.8s,baz=71,slow=6.7,SNR=2.6						
ASAR	Alice Springs	64.36	150	P	P	00 27 20.5	-0.9
	0.9nm,0.4s,baz=331,slow=6.5,SNR=18						

WEL 22 00:20:57.7, 42°S±4°×**17°4E**±°, **h15**^{km}, **M3.8**/27, **ML4.1**/24, **MLv3.8**/27, **Error ellipse: s-maj=0.0km s-min=0.0km az=0.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	85	P	Pg	00 21 01.3	+0.4
CMWZ				S	Sg	00 21 04.0	+1.0
BSWZ	Blackbirch Sta	0.17	285	P	Pb	00 21 03.1	+0.6
BSWZ				S	Sb	00 21 06.8	+1.1
TUWZ	Tuamarina	0.35	341	P	Pb	00 21 05.6	0.0
TUWZ				S	Sb	00 21 10.6	-0.2
TCW	Tory Channel	0.56	14	P	Pg	00 21 08.8	0.0
TCW				S	Sb	00 21 17.2	0.0
BHW	Baring Head	0.68	59	P	Pb	00 21 11.5	+0.3
WEL	Wellington	0.69	47	P	Pb	00 21 11.6	+0.1
NNZ	Nelson	0.76	315	P	Pb	00 21 13.2	+0.6
KHZ	Kahutara	0.78	212	P	Pn	00 21 15.5	+1.4
KHZ				S	Sn	00 21 29.2	+3.8
THZ	Tophouse	0.89	269	P	Pn	00 21 16.5	+0.8
PLWZ	Palliser	0.89	78	P	Pn	00 21 16.1	+0.4
MSWZ	Moikau Station	0.93	69	P	Pn	00 21 16.4	+0.1
DUWZ	D'Urville Isla	0.96	352	P	Pb	00 21 16.2	0.0
CAW	Cannon Point	0.98	49	P	Pg	00 21 16.6	0.0
PAWZ	Paruwai Farm	1.07	70	P	Pg	00 21 18.5	+0.1
MTW	Mount Morrison	1.22	61	P	Pb	00 21 20.4	0.0
OGWZ	Otaki Gorge	1.24	41	P	Pb	00 21 21.0	+0.2
TRWZ	Traveller	1.25	74	P	Pn	00 21 20.7	0.0
HOWZ	Holdsworth Sta	1.37	52	P	Pn	00 21 22.7	+0.4
GVZ	Greta Valley S	1.44	213	P	Pg	00 21 25.4	0.0
QRZ	Quartz Range	1.50	308	P	Pg	00 21 26.6	0.0
TMWZ	Te Maipa	1.50	65	P	Pn	00 21 24.1	0.0
MRZ	Mangatainoka R	1.57	46	P	Pn	00 21 25.6	+0.6
TIWZ	Tintock	1.67	55	P	Pb	00 21 28.4	+0.2
LTZ	Lake Taylor	1.69	232	P	Pb	00 21 29.3	+0.7
AMCZ	Amberley	1.77	216	P	Pb	00 21 30.3	+0.4
CPWZ	Castlepoint	1.80	63	P	Pg	00 21 33.8	+1.5
OHWZ	Ohakea	1.81	31	P	Pb	00 21 31.1	+0.7
PRWZ	Pori Road	1.86	50	P	Pn	00 21 29.3	+0.3
POWZ	Post Office Ro	1.86	43	P	Pn	00 21 30.0	+0.9
BFZ	Birch Farm	1.95	57	P	Pn	00 21 29.7	-0.6
OKCZ	Okains Bay	2.11	201	P	Pn	00 21 33.5	+1.0
WAZ	Wanganui	2.11	19	P	Pb	00 21 36.2	+0.5
DVHZ	Dannevirke	2.14	48	P	Pn	00 21 32.7	-0.3
OXZ	Oxford	2.18	223	P	Pb	00 21 37.7	+0.8
INZ	Inchbonnie	2.19	243	P	Pb	00 21 36.7	-0.3
MQZ	McQueen's Vall	2.22	208	P	Pn	00 21 34.3	+0.4
ANWZ	Angora Road	2.22	55	P	Pn	00 21 34.3	+0.4
AKCZ	Akaroa Harbour	2.29	202	P	Pn	00 21 35.8	+0.9
LREZ	Lake Rotokare	2.31	6	P	Pb	00 21 39.3	+0.3
NMEZ	Namu Road	2.35	356	P	Pb	00 21 40.6	+0.9
PREZ	Palmer Road	2.41	1	P	Pb	00 21 40.8	-0.1
PRHZ	Porangahau	2.43	53	P	Pn	00 21 36.8	-0.2
PNHZ	Pukenui	2.44	42	P	Pn	00 21 37.4	+0.4
WPHZ	Waipukurau	2.46	47	P	Pg	00 21 44.5	-0.3
KHEZ	Kahui Hut	2.46	359	P	Pb	00 21 41.6	-0.1
NBEZ	Newall Road No	2.49	356	P	Pb	00 21 41.9	-0.2
PKE	Pukeiti	2.56	358	P	Pb	00 21 41.8	-1.6
DREZ	Durham Road	2.57	2	P	Pg	00 21 46.1	-0.8
MTVZ	Mangateitei	2.59	24	P	Pb	00 21 43.5	-0.5
PKVZ	Pokaka	2.65	22	P	Pb	00 21 43.1	-1.7
MOVZ	Moawhango	2.67	29	P	Pn	00 21 41.7	+1.5
VRZ	Vera Road	2.68	11	P	Pb	00 21 44.1	-1.3
BHHZ	Black Hill Sta	2.72	34	P	Pn	00 21 42.1	+1.2
PXZ	Pawanui	2.72	52	P	Pn	00 21 40.1	-0.7
DRZ	Dome Shelter	2.72	25	P	Pb	00 21 47.3	+1.0
WHVZ	Whangaehu Hut	2.72	25	P	Pb	00 21 44.3	-1.9
KRHZ	Kereru	2.73	40	P	Pn	00 21 41.0	0.0
FWVZ	Far West T-bar	2.74	25	P	Pb	00 21 47.0	+0.5
TUVZ	Tukino	2.76	26	P	Pb	00 21 45.0	-1.8
WVZ	Waitaha Valley	2.81	241	P	Pb	00 21 49.4	+1.8
NGZ	Ngauruhoe	2.83	25	P	Pb	00 21 46.2	-1.8
TWVZ	Taurewa	2.87	21	P	Pb	00 21 46.1	-2.7
WTVZ	West Tongariro	2.88	24	P	Pb	00 21 47.0	-1.8
KAHZ	Kahuranaki	2.88	48	P	Pn	00 21 42.8	-0.4
KRVZ	Karewarewa	2.91	24	P	Pb	00 21 48.9	-0.5
KWHZ	Kaweka Forest	2.93	38	P	Pb	00 21 50.8	+1.2
RPZ	Rata Peaks	2.97	228	P	Pn	00 21 46.5	+2.1
KATZ	Kakaramea	3.04	24	P	Pb	00 21 51.8	+0.2
RITZ	Rihia Road	3.09	26	P	Pb	00 21 54.1	+1.8
RATZ	Rangitukua	3.16	25	P	Pb	00 21 54.9	+1.3
BKZ	Black Stump Fm	3.17	36	P	Pn	00 21 50.3	+3.2
HIZ	Hauiti	3.29	10	P	Pb	00 21 52.3	-3.5
WATZ	Wairara	3.29	23	P	Pb	00 21 55.0	-0.9
MRHZ	Matea Rd	3.42	32	P	Pb	00 21 59.0	+1.0
MTHZ	Maungataniwha	3.58	37	P	Pb	00 21 58.8	-2.0
TLZ	Tolley Road	3.60	18	P	Pn	00 21 56.0	+3.0
FOZ	Fox Glacier	3.62	239	P	Pb	00 21 59.6	-1.7
ODZ	Otahua Downs	4.13	216	P	Pn	00 22 01.2	+0.9
TOZ	Tahuroa Road	4.17	16	P	Pb	00 22 08.7	-2.0
MWZ	Matawai	4.32	39	P	Pn	00 22 02.5	-0.4
AWAZ	Awhitu Peninsu	4.71	5	P	Pn	00 22 12.1	+4.0
MKAZ	Moumakai	4.72	10	P	Pn	00 22 11.2	+2.9
WIAZ	Waiheke Island	5.02	10	P	Pn	00 22 16.1	+3.6
CTZ	Chatham Island	7.12	109	P	Pn	00 22 40.9	-0.4

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*ISCJB **22** 00:21:13.7±0.3, 41°.96N±0°.02×23°.13E±0°.03, h7^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=2.6km az=161.8*

*SOF **22** 00:21:14.5, 41°.97N×23°.26E, h2^{km}*

*SKO **22** 00:21:14.6, 41°.93N×23°.17E, h3^{km}, M1.8, ML2.1*

*BEO **22** 00:21:15.6±0.3, 41°.94N×23°.15E, h10^{km}, ML2.0/8*

*THE **22** 00:21:16.6, 41°.84N×23°.20E, h5^{km}, ML2.0/6, Error ellipse: s-maj=1.1km s-min=0.6km az=171.0*

*ATH **22** 00:21:16.0, 41°.84N×23°.20E, h20^{km}±3^{km}, ML2.1/8, Error ellipse: s-maj=4.7km s-min=1.8km az=167.0*

ISC 22 00:21:15.3±0.9, **41°.93N**±0°.02×**23°.19E**±0°.02, **h9**^{km}±7^{km}, **n41**, σ**0^{s}92**/68, **4C, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.10	232	⇑iPg	Pg	00 21 17.8	-0.1
KKB				i Sg	Sg	00 21 20.0	+0.3
KKB	Krupnik	0.10	232	i Pg	Pg	00 21 17.7	-0.1
MMB	Musomiste	0.53	130	⇑iPg	Pg	00 21 25.9	+0.3
MMB				i Sg	Sg	00 21 33.8	+1.3
MMB	Musomiste	0.53	130	i Pg	Pg	00 21 25.9	+0.3
VTS	Vitosha	0.69	3	ePg	Pg	00 21 27.4	-1.2
VTS				eSg	Sg	00 21 36.0	-1.7
VTS	Vitosha	0.69	3	⇑iPg	Pg	00 21 27.4	-1.2
VTS				i Sg	Sg	00 21 36.1	-1.6
VTS	Vitosha	0.69	3	i Pg	Pg	00 21 27.4	-1.2
VAY	Valandovo	0.77	218	ePg	Pg	00 21 29.7	-0.4
VAY				eSg	Sg	00 21 39.9	-0.1
VAY	Valandovo	0.77	218	i Pg	Pg	00 21 29.6	-0.5
VAY				i Sg	Sg	00 21 39.9	-0.1
VAY				eLg	Lg	00 21 40.1	
	comp=N,42nm,0.4s						
VAY				eLg	Lg	00 21 40.4	
	comp=E,40nm,0.2s						
NVR	Nevrokopi	0.77	139	P	Pg	00 21 29.5	-0.6
NVR				S	Sg	00 21 40.0	-0.1
	comp=E,170nm,0.2s						
NVR	Nevrokopi	0.77	139	P	Pg	00 21 29.6	-0.6
NVR				AML	AML	00 21 40.0	
	comp=E,267µm,0.2s						
NVR				S	Sg	00 21 40.0	-0.1
NVR				AML	AML	00 21 43.9	
	comp=N,406µm,0.2s						
KNT	Kendrikon	0.80	196	P	Pg	00 21 29.8	-0.9
KNT				S	Sg	00 21 40.2	-0.8
	comp=N,262nm,0.1s						
KNT	Kendrikon	0.80	196	i Pg	Pg	00 21 29.9	-0.9
KNT				i Sg	Sg	00 21 40.3	-0.8
KNT	Kendrikon	0.80	196	P	Pg	00 21 30.0	-0.7
KNT				S	Sg	00 21 39.6	-1.5
KNT				AML	AML	00 21 40.7	
	comp=E,440µm,0.2s						
KNT				AML	AML	00 21 41.1	
	comp=N,565µm,0.1s						
SRS	Serrai	0.87	160	ePg	Pg	00 21 31.5	-0.5
SRS				eSg	Sg	00 21 44.0	+0.7
SRS	Serrai	0.87	160	P	Pg	00 21 31.4	-0.5
SRS				S	Sg	00 21 42.5	-0.8
	comp=N,98nm,0.2s						
SRS	Serrai	0.87	160	⇑iPg	Pg	00 21 31.4	-0.6
SRS				i Sg	Sg	00 21 43.9	+0.6
SRS	Serrai	0.87	160	P	Pg	00 21 31.4	-0.6
SRS				S	Sg	00 21 41.9	-1.3
SRS				AML	AML	00 21 47.2	
	comp=E,177µm,0.1s						
SRS				AML	AML	00 21 48.2	
	comp=N,199µm,0.2s						
PGB	Panagyurishte	0.95	49	i Pg	Pg	00 21 32.2	-1.5
SOH	Sokhos	1.11	174	P	Pg	00 21 35.8	-0.9
SOH				S	Sg	00 21 50.6	-0.6
	comp=N,112nm,0.5s						
SOH	Sokhos	1.11	174	P	Pg	00 21 35.8	-0.9
SOH				AML	AML	00 21 51.8	
	comp=E,154µm,0.4s						
SOH				AML	AML	00 21 52.2	
	comp=N,254µm,0.4s						
PLD	Plovdiv	1.14	81	ePg	Pg	00 21 37.3	+0.1
PLD				eSg	Sb	00 21 52.6	+0.5
PLD	Plovdiv	1.14	81	i Pg	Pg	00 21 37.3	+0.1
PLD				i Sg	Sb	00 21 52.9	+0.8
RZN	Rozhen	1.17	101	i Pg	Pg	00 21 37.0	-0.7
THE	Thessaloniki	1.31	188	i Pg	Pn	00 21 39.3	-0.4
THE				i Sg	Sg	00 21 56.9	-0.5
THE	Thessaloniki	1.31	188	P	Pn	00 21 39.3	-0.4
THE				AML	AML	00 21 58.5	
	comp=E,207µm,0.4s						
THE				AML	AML	00 21 58.7	
	comp=N,195µm,0.3s						
HORT	Hortiatis	1.33	183	P	Pn	00 21 39.4	-0.8
HORT				S	Sg	00 21 57.5	-0.7
	comp=N,52nm,0.3s						
HORT	Hortiatis	1.33	183	P	Pn	00 21 39.5	-0.6
HORT				S	Sg	00 21 57.5	-0.7
HORT				AML	AML	00 21 59.3	
	comp=E,85µm,0.2s						
HORT				AML	AML	00 21 59.8	
	comp=N,108µm,0.4s						
BARS	Barje	1.35	311	ePg	Pn	00 21 39.5	-0.8
BARS				eSg	Sb	00 21 57.6	-0.6
KAVA	Kavala	1.36	133	P	Pn	00 21 40.5	0.0
KAVA				S	Sb	00 21 58.9	+0.4
	comp=N,68nm,0.3s						
KAVA	Kavala	1.36	133	P	Pn	00 21 39.9	-0.6
KAVA				S	Sb	00 21 58.2	-0.3
KAVA				AML	AML	00 22 00.0	
	comp=E,137µm,0.2s						
KAVA				AML	AML	00 22 00.1	
	comp=N,120µm,0.2s						
ZAPS	Zavoj	1.40	343	ePg	Pn	00 21 41.6	+0.5
ZAPS				eSg	Sb	00 22 00.5	+0.8
PLG	Polygyros	1.57	173	P	Pn	00 21 43.0	-0.3
OUR	Ouranopolis	1.70	159	P	Pn	00 21 44.8	-0.4
THAS	Thassos island	1.75	138	P	Pn	00 21 47.2	+1.4
RDO	Rodhopi	1.93	113	P	Pb	00 21 50.5	-0.1
RDO				AML	AML	00 22 19.1	
	comp=E,102µm,0.2s						
RDO				AML	AML	00 22 20.5	
	comp=N,97µm,0.2s						
SELS	Selova	2.00	311	eSg	Sb	00 22 18.6	+1.7
BOVS	Bovan	2.02	328	ePg	Pn	00 21 51.1	+1.5
BOVS				eSg	Sb	00 22 19.2	+1.7
GRUS	Gruza	2.67	318	ePg	Pb	00 22 03.9	+0.6
GRUS				eSg	Sb	00 22 39.2	+3.0
KUBS	Kucevo	2.72	336	ePn	Pn	00 21 59.4	+0.3
IVAS	Ivanjica	2.78	307	ePg	Pb	00 22 05.4	+0.3

LJU 22 00:22:34.2, 46°.01N×15°.80E, h8^{km}, ML0.7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLS	Golise	0.12	272	i Pg	Pg	00 22 36.6	-0.2
GOLS				i Sg	Sg	00 22 38.8	0.0
	comp=Z,9.0nm,0.1s						
PTJ	Puntijarka	0.16	129	ePg	Pg	00 22 37.5	0.0
PTJ				Sg	Sg	00 22 40.0	+0.2
GCIS	Gornji Cirnik	0.18	220	i Pg	Pg	00 22 38.1	+0.1
GCIS				i Sg	Sg	00 22 40.8	+0.3
	comp=Z,6.0nm,0.1s						
CESS	Cesta pri Krsk	0.23	262	i Pg	Pg	00 22 39.2	+0.3
	comp=Z,4.0nm,0.1s						
DOBS	Dobrina	0.27	302	i Pg	Pg	00 22 39.6	+0.1
DOBS				eSg	Sg	00 22 43.9	+0.7
	comp=Z,3.0nm,0.1s						
CRES	Cresnjev	0.30	233	i Pg	Pg	00 22 40.3	+0.2
CRES				i Sg	Sg	00 22 44.7	+0.7
	comp=Z,3.0nm,0.2s						
LEGS	Legarje	0.34	260	i Pg	Pg	00 22 41.2	+0.3
LEGS				eSg	Sg	00 22 46.2	+0.9
OZLJ	Ozalj	0.45	211	ePg	Pg	00 22 43.1	+0.1
OZLJ				Sg	Sg	00 22 49.0	0.0
KALN	Kalnik	0.48	75	i Pg	Pg	00 22 43.8	+0.3
KALN				Sg	Sg	00 22 50.8	+1.1
GROS	Grobnik	0.50	336	i Pg	Pg	00 22 44.0	+0.1
GROS				i Sg	Sg	00 22 50.8	+0.4
	comp=Z,2.0nm,0.1s						
KOGS	Kog	0.54	35	i Pg	Pg	00 22 45.2	+0.5
KOGS				i Sg	Sg	00 22 52.9	+1.1
	comp=Z,3.0nm,0.1s						
PDKS	Podkum	0.56	276	i Pg	Pg	00 22 45.3	+0.3
PDKS				eSg	Sb	00 22 53.7	-0.7
BISS	Bistriski jare	0.79	324	i Pg	Pg	00 22 49.2	-0.3
	comp=Z,5.0nm,0.1s						

OMAN 22 00:53:35.7±2.5, **25°.58N**×**62°.32E**, **h10**^{km}, **ml3.9**/4, **Error ellipse: s-maj=29.4km s-min=17.7km az=97.0, Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	4.09	236	P	Pn	00 54 38.3	-0.1
	SNR=7.2						
WSAR				S	Sn	00 55 27.1	+0.7
WBK	Wadi Bani Khal	4.26	227	P	Pn	00 54 40.3	-0.3
	SNR=8.7						
WBK				S	Sn	00 55 31.7	+1.2
JLN	Jalan Bani Buh	4.33	219	P	Pn	00 54 40.8	-0.8
	SNR=10						
JLN				S	Sn	00 55 34.2	+1.9
BIDO	Bidbid	4.34	243	P	Pn	00 54 43.3	+1.6
SMDO	Samad	4.64	238	P	Pn	00 54 46.1	+0.1
	SNR=19						
HOQ	Hoqain	4.98	247	P	Pn	00 54 50.4	-0.1
JMDO	Jabal Madar	5.01	231	P	Pn	00 54 52.3	+1.3
	SNR=8.1						
BSY	Bisya	5.46	240	P	Pn	00 54 59.1	+1.9
	SNR=13						
MHTO	MHTO	6.08	222	P	Pn	00 55 05.5	-0.1
	SNR=37						

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*NEIC **22** 00:59:57.7±3.1, 19°.26N×70°.29W, h32^{km}±12^{km}, ML3.6, Error ellipse: s-maj=8.0km s-min=6.1km az=85.0*

NEIC Felt [IV] at San Francisco de Macoris. Also felt at Nagua and Santo Domingo.

*OSPL **22** 00:59:57.1±2.7, 19°.20N×70°.08W, h0^{km}±25^{km}, ML3.1, Fault plane solution: NP1:ϕ_s2.70000°, δ75.30000°, λ-120.30000°.*

ISC 22 00:59:55.6±1.5, **19°.22N**±0°.05×**70°.15W**±0°.04, **h16**^{km}±12^{km}, **n31**, σ**1^{s}91**/38, **2C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BON1	Bonao	0.36	220	⇑iP	Pb	01 00 03.5	-0.1
BON1				AMPG		01 00 03.8	
BON1				eS	Sb	01 00 10.2	+1.2
SC01	Santiago de lo	0.58	291	⇑iP	Pg	01 00 07.5	+0.4
SC01				AMPG		01 00 09.8	
SC01				eS	Sn	01 00 18.9	+0.4
SC01				IAML		01 00 26.8	
	comp=Z,927nm,0.3s						
SDD	Santo Domingo	0.79	163	ePn	Pb	01 00 10.0	-1.0
SDD				eSn	Sb	01 00 20.2	-1.2
SDD	Santo Domingo	0.79	163	⇓iP	Pb	01 00 10.0	-1.0
SDD				AMPG		01 00 11.6	
SDD				eS	Sb	01 00 20.4	-1.0
SDD				IAML		01 00 24.5	
	comp=Z,397nm,0.3s						
BANI	BANI	0.84	193	ePn	Pb	01 00 11.6	-0.4
BANI	BANI	0.84	193	⇓iP	Pb	01 00 11.6	-0.4
BANI				AMPG		01 00 12.6	
BANI				eS	Sn	01 00 24.6	-0.6
BANI				IAML		01 00 25.0	
	comp=Z,276nm,0.2s						
SJM1	San Juan de la	1.09	248	i P	Pg	01 00 17.1	+0.4
SJM1				AMPG		01 00 17.3	
SJM1				eS	Sn	01 00 33.2	+2.1
SJM1				AMPG		01 00 35.5	
SDDR	Presa de Saban	1.10	258	ePn	Pb	01 00 15.3	-1.0
SDDR	Presa de Saban	1.10	258	i P	Pb	01 00 16.3	0.0
SDDR				AMPG		01 00 18.2	
SDDR				IAML		01 00 37.2	
	comp=Z,554nm,0.4s						
LGNH	Logne	2.43	254	ePn	Pn	01 00 33.4	-1.2
LGNH	Logne	2.43	254	i P	Pb	01 00 37.9	-1.0
LGNH				i		01 00 44.8	
GRTK	Grand Turk	2.46	338	ePn	Pn	01 00 33.8	-1.3
AGP	Aguadilla	2.96	105	ePn	Pn	01 00 43.1	+1.0
AGPR	Aguadilla, PR	2.98	104	i P	Pn	01 00 44.3	+2.0
AGPR				AMPG		01 00 48.3	
AGPR				IAML		01 01 38.5	
	comp=Z,134nm,0.2s						
MPR	Mayaguez	3.03	109	ePn	Pn	01 00 44.4	+1.4
CRPR	Cabo Rojo, PR	3.13	112	ePn	Pn	01 00 45.8	+1.5

AOPR	Arecibo Observ	3.34	105	ePn	Pn	01 00 50.3	+3.1
AOPR				eSn	Sb	01 01 32.7	-2.2
EMPR	Esperanza - Ma	3.51	102	ePn	Pn	01 00 53.1	+3.5
OBIP	Obispado Ponce	3.56	109	ePn	Pn	01 00 52.1	+1.9
SJG	San Juan	3.95	106	ePn	Pn	01 00 58.7	+3.1
CBYP	Canovanas	4.18	102	ePn	Pn	01 00 59.5	+0.7
HUMP	Col San Antoni	4.22	104	ePn	Pn	01 00 59.1	-0.2
MTP	Monte Pirata	4.50	104	ePn	Pn	01 01 06.2	+3.0
CUPR	Culebra, Puert	4.70	100	ePn	Pn	01 01 09.5	+3.5
GTBY	Guantanamo Bay	4.73	279	ePn	Pn	01 01 06.1	-0.2
STVI	Saint Thomas	5.00	99	ePn	Pn	01 01 13.3	+3.2
ABVI	Anegada Island	5.53	94	ePn	Pn	01 01 20.6	+3.3
MTDJ	Mount Denham	7.06	263	ePn	Pn	01 01 36.1	-2.5
ANWB	Willy Bob	8.09	100	ePn	Pn	01 01 53.6	+1.1
CBCY	The Bluff, Cay	9.07	275	ePn	Pn	01 02 04.3	-1.8
GRGR	Grenville	10.80	129	ePn	Pn	01 02 31.7	+2.1

IDC **22** *01:12:33.0±0.3, 34.°54N×104.°20E, h0km, mb5.2/43, mb1 5.3/47, mb1mx5.3/53, mbtmp5.2/47, ML4.8/4, MS4.8/28, Ms1 4.8/28, ms1mx4.6/38, Error ellipse: s-maj=11.0km s-min=7.7km az=45.0*

ISCJB **22** *01:12:33.9±0.1, 34.°55N±0.°01×104.°19E±0.°02, h14km, mb5.4/195, MS5.1/242, Error ellipse: s-maj=2.1km s-min=1.9km az=28.5*

MOS **22** *01:12:34.5±0.9, 34.°52N×104.°18E, h19km, mb5.7/83, MS5.0/50, Error ellipse: s-maj=5.0km s-min=3.4km az=122.4*

NEIC **22** *01:12:34.9±1.8, 34.°53N×104.°18E, h10km±2km, mb5.6/288, MS5.1/189, Error ellipse: s-maj=9.3km s-min=8.9km az=221.0*

BJI **22** *01:12:36.0±0.0, 34.°56N×104.°21E, h14km, mb5.4/55, mB5.6/33, ML5.7/13, Ms5.6/81, Ms7 5.5/76*

GCMT **22** *01:12:36.9±0.1, 34.°65N±0.°01×104.°35E±0.°01, h19km, MW5.4/108, Moment Tensor Solution. s70,c98; s108,c198; Duration: 1.s2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.23±.04; $M_{\theta\theta}$-0.34±.02; $M_{\phi\phi}$-0.88±.03; $M_{r\theta}$-0.37±.06; $M_{\theta\phi}$0.81±.02; $M_{\phi r}$0.24±.05; Best double couple: $M_0$1.42200×10^{17} NP1:ϕ_s316.00000°, δ54.00000°, λ80.00000°. NP2:ϕ_s153.00000°, δ37.00000°, λ103.00000°. Principal axes: T 1.3140, Plg78.0000°, Azm189.0000°; N 0.2210, Plg8.0000°, Azm322.0000°; P -1.5300, Plg9.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 01:12:35.6±0.5, **34.°57N**±0.°02×**104.°20E**±0.°02, **h14**km±3km, **h14**km**:pP-P, n1043,** σ**1.s46**/1005, **mb5.5**/237, **MS5.2**/263, **150C-28D, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	1.54	349	Pg	Pn	01 13 03.3	+0.4
LZH				Sg	Sb	01 13 23.9	+0.3
LZH				smax	smax		
	comp=N,102µm,0.9s						
LZH				smax	smax		
	comp=E,121µm,0.9s						
CD2	Chengdu	3.67	186	Pn	Pn	01 13 33.0	+1.0
CD2				Sn	Sn	01 14 18.5	+3.4
CD2				Sg	Sg	01 14 34.4	+0.9
CD2				smax	smax		
	comp=N,9µm,1.3s						
XAN	Xi'an	3.94	96	ePn	Pn	01 13 35.7	-0.1
XAN	Xi'an	3.94	96	Pn	Pn	01 13 36.0	+0.2
XAN				Pg	Pb	01 13 46.8	+1.8
XAN				Sn	Sn	01 14 25.6	+3.7
XAN				Sg	Sg	01 14 38.1	-4.2
XAN				smax	smax		
	comp=N,23µm,1.2s						
XAN				smax	smax		
	comp=E,17µm,1.1s						
XAN				LR	LR		
	comp=N,72µm,6.8s						
XAN				LR	LR		
	comp=E,60µm,4.9s						
XAN				LR	LR		
	comp=Z,47µm,5.7s						
XAN	Xi'an	3.94	96	eP	Pn	01 13 35.7	-0.1
GTA	Gaotai	5.97	325	⇑Pn	Pn	01 14 04.6	+0.9
GTA				Pg	Pb	01 14 22.6	+3.0
GTA				Sn	Sn	01 15 11.9	-0.1
GTA				Sg	Sg	01 15 40.3	-7.0
GTA				LR	LR		
	comp=N,46µm,7.9s						
GTA				LR	LR		
	comp=E,35µm,9.2s						
GTA				LR	LR		
	comp=Z,60µm,9.8s						
ENH	Enshi	6.19	132	ePn	Pn	01 14 07.5	+0.8
ENH				eSn	Sn	01 15 06.8	-11
TIY	Taiyuan	7.36	62	Pn	Pn	01 14 22.9	+0.1
TIY				Pg	Pg	01 14 50.8	-5.8
TIY				Sg	Sg	01 16 24.8	-7.1
TIY				smax	smax		
	comp=N,6µm,1.0s						
TIY				smax	smax		
	comp=E,7µm,1.1s						
BTO	Baotou	7.59	36	ePn	Pn	01 14 27.8	+1.9
GYA	Guiyang	8.36	165	⇑iP	Pn	01 14 36.0	-0.5
GYA				S	Sn	01 16 09.3	-1.5
GYA				pmax	pmax		
	comp=Z,230nm,0.7s						
GYA				pmax	pmax		
	comp=Z,690nm,5.4s						
GYA				LR	LR		
	comp=N,7µm,13.2s						
GYA				LR	LR		
	comp=E,6µm,20.7s						
GYA				LR	LR		
	comp=Z,10µm,13.7s						
HHC	Hu-ho-hao-te	8.56	41	P	Pn	01 14 39.1	-0.2
HHC				S	Sn	01 16 21.1	+5.4
HHC				pmax	pmax		
	comp=Z,40nm,0.7s						
HHC				LR	LR		
	comp=N,38µm,5.2s						
HHC				LR	LR		
	comp=E,56µm,6.2s						
WHN	Wuhan	9.46	112	⇓P	Pn	01 14 50.3	-1.2
WHN				S	Sn	01 16 33.5	-4.1
WHN				LR	LR		
	comp=E,55µm,7.5s						
WHN				LR	LR		
	comp=Z,58µm,9.6s						
KMI	Kunming	9.50	188	ePn	Pn	01 14 51.5	-0.8
KMI	Kunming	9.50	188	P	Pn	01 14 52.4	+0.1
KMI				PP	PnPn	01 15 03.5	+3.5
KMI				S	Sn	01 16 38.0	-1.0
KMI				SS	SnSn	01 16 56.4	+5.5
KMI				pmax	pmax		
	comp=Z,150nm,0.7s						
KMI				pmax	pmax		
	comp=Z,1µm,3.6s						
KMI				LR	LR		
	comp=N,20µm,10.2s						
KMI				LR	LR		
	comp=E,69µm,10.4s						
KMI				LR	LR		
	comp=Z,15µm,9.6s						
KMI	Kunming	9.50	188	eP	Pn	01 14 51.5	-0.8
TIA	Tai'an	10.68	77	P	Pn	01 15 10.8	+2.6
TIA				S	Sn	01 17 17.8	+10
TIA				pmax	pmax		
	comp=Z,54nm,1.2s						
TIA				LR	LR		
	comp=N,11µm,12.3s						
TIA				LR	LR		
	comp=E,17µm,13.3s						
TIA				LR	LR		
	comp=Z,20µm,10.4s						
BJT	Baijiatuau	10.97	57	ePn	Pn	01 15 11.2	-1.0
BJT	Baijiatuau	10.97	57	eP	Pn	01 15 11.2	-1.0
BJI	Beijing	10.98	57	P	Pn	01 15 13.5	+1.2
BJI				S	Sn	01 17 17.9	+2.9
BJI				LR	LR		
	comp=N,7µm,7.0s						
BJI				LR	LR		
	comp=E,7µm,6.3s						
LSA	Lhasa	12.08	250	ePn	Pn	01 15 27.2	-0.6
LSA	Lhasa	12.08	250	P	Pn	01 15 28.5	+0.7
LSA				pmax	pmax		
	comp=Z,120nm,1.6s						
LSA				LR	LR		
	comp=N,39µm,9.0s						
LSA				LR	LR		
	comp=E,28µm,7.7s						
LSA				LR	LR		
	comp=Z,28µm,6.6s						
LSA	Lhasa	12.08	250	eP	Pn	01 15 27.2	-0.6
NJ2	Nanjing	12.51	97	eP	Pn	01 15 33.8	+0.5
NJ2				pP	P	01 15 36.4	-8.6
NJ2				S	Sn	01 17 50.0	-2.5
NJ2				pmax	pmax		
	comp=Z,55nm,1.0s						
NJ2				LR	LR		
	comp=N,21µm,8.1s						
NJ2				LR	LR		
	comp=E,22µm,13.3s						
NJ2				LR	LR		
	comp=Z,22µm,12.3s						
SLVN	Son La	13.19	181	ePn	Pn	01 15 41.1	-1.5
SONA0	Songino Array	13.35	6	ePn	Pn	01 15 43.9	-0.9
SONM	Songino Array	13.35	6	Pn	Pn	01 15 43.9	-0.9
	3.5nm,0.3s,baz=185,slow=13,SNR=40						
SHL	Shillong	13.93	233	ePn	Pn	01 15 50.8	-2.0
SHL	Shillong	13.93	233	eP	Pn	01 15 50.8	-2.0
GZH	Guangzhou	13.96	143	P	Pn	01 15 46.6	-6.5
GZH				S	Sn	01 18 15.4	-12
GZH				pmax	pmax		
	comp=Z,200nm,0.9s						
GZH				LR	LR		
	comp=N,23µm,9.2s						
GZH				LR	LR		
	comp=E,11µm,8.7s						
DL2	Dalian	14.63	68	P	Pn	01 16 01.1	-1.0
DL2				eS	Sn	01 18 43.8	-0.2
DL2				SS	SnSn	01 18 59.6	+3.1
DL2				pmax	pmax		
	comp=E,400nm,1.0s						
DL2				pmax	pmax		
	comp=E,570nm,6.1s						
DL2				LR	LR		
	comp=E,9µm,15.7s						
DL2				LR	LR		
	comp=E,9µm,14.3s						
DL2				LR	LR		
	comp=E,13µm,13.7s						
SSE	Sheshan	14.70	99	P	Pn	01 16 03.1	0.0
SSE				S	Sn	01 18 50.1	+4.4
SSE				pmax	pmax		
	comp=E,16nm,0.9s						
SSE				pmax	pmax		
	comp=E,240nm,6.1s						
SSE				LR	LR		
	comp=E,10µm,12.6s						
SSE				LR	LR		
	comp=E,6µm,11.2s						
HKPS	Hong Kong Po S	15.04	142	ePn	Pn	01 16 04.5	-3.2
	comp=E,152nm,1.0s						
PAYA	Payao	15.63	195	P	Pn	01 16 16.7	+1.1
	comp=E,373µm,1.2s						
QZH	Quanzhou	15.74	124	P	Pn	01 16 16.3	-0.7
QZH				eS	Sn	01 19 15.1	+3.9
QZH				pmax	pmax		
	comp=E,110nm,0.9s						
QZH				LR	LR		
	comp=E,26µm,7.6s						
QZH				LR	LR		
	comp=E,23µm,8.1s						
QZH				LR	LR		
	comp=E,9µm,8.6s						
WMQ	Urumqi	15.76	311	ePn	Pn	01 16 15.3	-1.9
	comp=E,113nm,0.9s						
WMQ	Urumqi	15.76	311	eP	Pn	01 16 17.4	+0.2
WMQ				sP	pP	01 16 25.0	-0.8
WMQ				PP	sP	01 16 33.3	+5.3
WMQ				S	Sn	01 19 13.5	+1.9
WMQ				PcP	PcP	01 21 20.3	+3.6
WMQ				pmax	pmax		
	comp=E,81nm,1.1s						
WMQ				pmax	pmax		
	comp=E,580nm,5.3s						
WMQ				LR	LR		
	comp=E,16µm,11.1s						
WMQ				LR	LR		
	comp=E,16µm,9.7s						
WMQ				LR	LR		
	comp=E,16µm,9.9s						
WMQ	Urumqi	15.76	311	eP	Pn	01 16 15.3	-1.9
WMQ				pmax	pmax		
	comp=Z,113nm,0.9s						
ZAK	Zakamensk	15.82	358	eP	Pn	01 16 18.8	+0.9
ZAK				pmax	pmax		
	comp=Z,55nm,1.1s						
KNMB	Chin-men Tao	15.92	125	ePn	Pn	01 16 18.1	-1.2
	comp=Z,301nm,1.1s						
BRDH	Bariadhala	16.17	226	Pn	Pn	01 16 22.6	+0.1
	comp=Z,17nm,0.3s,baz=63,slow=11,SNR=7.6						
QIZ	Qiongzhong	16.27	161	ePn	Pn	01 16 23.0	-0.8
	comp=Z,226nm,1.3s						
QIZ	Qiongzhong	16.27	161	P	Pn	01 16 23.0	-0.8
QIZ				sP	pP	01 16 32.3	+0.8
QIZ				S	Sn	01 19 26.3	+2.1
QIZ				pmax	pmax		
	comp=Z,630nm,6.1s						
QIZ				LR	LR		
	comp=Z,9µm,10.3s						
QIZ				LR	LR		
	comp=Z,9µm,13.7s						
QIZ				LR	LR		
	comp=Z,14µm,10.8s						
CHTO	Chiang Mai	16.38	198	ePn	Pn	01 16 23.7	-1.5
	comp=Z,208nm,1.2s						
CHTO	Chiang Mai	16.38	198	eP	Pn	01 16 23.7	-1.5
CHTO				pmax	pmax		
	comp=Z,208nm,1.2s						
CHTO	Chiang Mai	16.38	198	P	P	01 16 27.1	-0.9
	SNR=70						
CMMT	Chiang Mai	16.38	198	P	P	01 16 27.4	-0.6
	comp=Z,81nm,1.4s,comp=Z,2µm						
NONG	Nongkai	16.47	184	P	Pn	01 16 27.7	+1.4
LAMP	Lampang	16.49	195	P	P	01 16 29.0	-0.3
	comp=Z,271µm,0.8s						
CM31	Chiang Mai Arr	16.72	198	eP	Pn	01 16 30.7	+1.2
	comp=Z,118nm,0.9s						
CM31				ePcP	PcP	01 21 18.9	+0.5
CM31	Chiang Mai Arr	16.72	198	P	P	01 16 32.5	+0.7
	SNR=41						
CMAR	Chiang Mai Arr	16.72	198	Pn	Pn	01 16 29.9	+0.4
	comp=Z,0.4nm,0.3s,baz=12,slow=11,SNR=44						
CMAR				PcP	PcP	01 21 18.9	+0.5
	comp=Z,0.5nm,0.3s,baz=311,slow=1.9,SNR=8.3						
CMAR				LR	LR	01 23 37.7	
	comp=Z,3µm,19.9s,baz=14,slow=40						
CMAR	Chiang Mai Arr	16.72	198	ceP	Pn	01 16 29.8	+0.3
CMAR				pmax	pmax		
	comp=Z,15nm,0.9s						
SNY	Shenyang	16.85	59	⇑P	P	01 16 33.8	+0.7
SNY				S	S	01 19 48.3	-0.2
SNY				pmax	pmax		
	comp=Z,50nm,1.0s						
SNY				pmax	pmax		
	comp=Z,790nm,3.2s						
SNY				LR	LR		
	comp=Z,6µm,9.8s						
SNY				LR	LR		
	comp=Z,10µm,9.2s						
SNY				LR	LR		
	comp=Z,12µm,10.0s						
JIRN	Jiri	16.88	251	eP	Pn	01 16 30.0	-1.9
	comp=Z,252nm,0.9s						
UTTA	Uttaradit	17.07	192	P	P	01 16 34.9	-0.8
	comp=Z,163µm,0.7s						
MOY	Mondy	17.25	353	eP	Pn	01 16 36.1	0.0
MOY				pmax	pmax		
	comp=Z,241nm,2.0s						
PANO	Nakornpanom	17.36	179	P	P	01 16 38.3	-0.5
	comp=Z,2.7nm,1.1s						
SIMRM	Sittwe	17.52	218	eP	Pn	01 16 39.2	-0.4
	comp=Z,83nm,0.8s						
KKN	Kakani	17.53	252	eP	Pn	01 16 37.6	-2.3
	comp=Z,387nm,1.1s						
PKI	Pulchoki	17.53	252	eP	Pn	01 16 37.7	-2.3
	comp=Z,222nm,0.7s						
PKIN	Phulchoki	17.54	252	eP	Pn	01 16 37.7	-2.4
	comp=Z,188nm,0.9s						
IRK	Irkutsk	17.67	0	eP	P	01 16 42.3	+0.2
IRK				pmax	pmax		
	comp=Z,265nm,1.3s						
DMN	Daman	17.75	252	eP	Pn	01 16 40.5	-2.2
	comp=Z,931nm,1.4s						
TATO	Taipei	17.77	118	ePn	Pn	01 16 41.6	-1.1
	comp=Z,113nm,1.1s						
YHNB	Yeheng	17.88	119	eP	Pn	01 16 44.0	0.0
	comp=Z,56nm,0.8s						
GKN	Gorkha	17.94	254	eP	Pn	01 16 42.3	-2.7
	comp=Z,903nm,1.2s						
SSLB	Suanglung	18.12	122	eP	Pn	01 16 47.2	+0.2
	comp=Z,78nm,0.9s						
PBKT	Sadao Pong	18.16	190	P	P	01 16 48.7	+1.0
	comp=Z,41nm,1.1s,comp=Z,2µm						
NACB	Ninganchiao	18.34	120	eP	P	01 16 50.0	+0.3
	comp=Z,93nm,1.0s						
DANN	Dangsing	18.49	256	eP	P	01 16 49.6	-2.1
HIA	Hailar	18.64	33	eP	Pn	01 16 54.8	+1.7
	comp=Z,348nm,1.0s						
HIA	Hailar	18.64	33	eP	Pn	01 16 54.8	+1.7
HIA				pmax	pmax		
	comp=Z,348nm,1.0s						
CHAI	Chaiyaphum	18.70	187	P	P	01 16 53.8	+0.2
	comp=Z,183µm,0.6s						
CIT	Chita	18.70	18	eP	Pn	01 16 54.4	+0.5
CIT				pmax	pmax		
	comp=Z,277nm,1.1s						
CN2	Changchun	18.83	54	⇑P	Pn	01 16 56.4	+0.9
CN2				epP	pP	01 17 00.0	+0.4
CN2				eS	Sn	01 20 22.8	-3.2
CN2				pmax	pmax		
	comp=Z,230nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,8µm,10.0s						
CN2				LR	LR		
	comp=Z,7µm,10.0s						
CN2				LR	LR		
	comp=Z,11µm,14.0s						
TWG	Pinlang	18.84	124	eP	Pn	01 16 57.3	+1.6
	comp=Z,437nm,1.0s						
UMPA	Umpang Tak	18.91	196	P	Pn	01 17 01.2	+4.6
	comp=Z,261µm,0.9s						
TJN	Taejon	18.95	78	deP	Pn	01 16 57.8	+0.8
YOJ	Yonaguni jima	19.19	117	eP	Pn	01 16 59.8	-0.2
	comp=Z,243nm,1.3s						
YOJ	Yonaguni jima	19.19	117	eP	Pn	01 16 59.8	-0.2
YOJ				pmax	pmax		
	comp=Z,243nm,1.3s						
KS15	Wonju Array Si	19.36	75	eP	Pn	01 17 03.0	+1.0
	comp=Z,308nm,1.3s						
ZSN	Zaisan	19.39	317	c iP	P	01 17 01.0	0.0
ZSN				eS	S	01 20 44.5	+4.6
ZSN	Zaisan	19.39	317	⇑iP	P	01 17 01.0	0.0
ZSN				eS	S	01 20 44.6	+4.6
ZSN				eLR	LR	01 24 22.3	
KSRS	Korea Array	19.40	75	P	Pn	01 17 02.0	-0.3
	comp=Z,3.5nm,0.3s,baz=266,slow=8.5,SNR=83						
KSRS				LR	LR	01 24 53.5	
	comp=Z,4µm,18.8s,baz=266,slow=38						
UTHA	Uthaitani	19.41	194	P	Pn	01 17 03.7	+1.1
	comp=Z,415µm,0.8s						
MK31	Makanchi Array	20.54	313	i P	P	01 17 13.2	-0.5
MK31				pmax	pmax		
	comp=Z,41nm,0.8s						
MK32	Makanchi Array	20.54	313	ePcP	PcP	01 21 25.2	+0.6
MKAR	Makanchi Array	20.54	313	P	P	01 17 13.3	-0.4
	comp=Z,28nm,0.7s,baz=113,slow=10,SNR=105						
MKAR				PcP	PcP	01 21 25.2	+0.6
	comp=Z,7.6nm,0.9s,baz=161,slow=0.9,SNR=4.2						
MKAR				LR	LR	01 26 13.2	
	comp=Z,2µm,19.1s,baz=112,slow=40						
SRAK	Srakaew	20.56	186	P	P	01 17 14.2	+0.2
SRDT	SRDT	20.65	194	P	Pn	01 17 16.4	-0.9
	comp=Z,95nm,0.8s,comp=Z,2µm						
MAKZ	Makanchi	20.74	313	eP	P	01 17 15.6	-0.2
	comp=Z,210nm,1.4s						
MAKZ	Makanchi	20.74	313	eP	P	01 17 15.6	-0.2
MAKZ				pmax	pmax		
	comp=Z,210nm,1.4s						
PTH	Pithoragarh	20.92	263	eP	P	01 17 17.4	-0.6
PDGK	Podgornoye	21.06	302	P	P	01 17 19.0	-0.4
PDGK				pmax	pmax		
	comp=Z,230nm,1.1s						
UZB	Uzynbulak	21.34	301	c iP	P	01 17 22.4	0.0
UZB				eS	S	01 21 21.6	+2.6
UZB				pmax	pmax		
	comp=Z,251nm,1.7s						
UZB				MLR	MLR		
	comp=Z,1µm,13.0s						
UZB	Uzynbulak	21.34	301	⇑iP	P	01 17 22.4	0.0
	comp=Z,251nm,1.7s						
UZB				eS	S	01 21 21.7	+2.6
UZB				eLR	LR	01 27 58.0	
	comp=Z,1µm,12.8s						
PRZ	Przheval'sk	21.62	299	PFAKE		01 17 40.0	+15
PRZ				LR	LR		
	comp=Z,7µm,22.0s						
KPKS	Kokpek	21.66	302	c iP	P	01 17 25.6	-0.2
KPKS				eS	Sn	01 21 34.7	+0.5
KPKS				pmax	pmax		
	comp=Z,231nm,1.6s						
KPKS				MLR	MLR		
	comp=Z,1µm,10.0s						
KPKS	Kokpek	21.66	302	⇑iP	P	01 17 25.7	-0.1
	comp=Z,231nm,1.6s						
KPKS				eS	Sn	01 21 34.8	+0.6
KPKS				eLR	LR	01 28 14.6	
	comp=Z,1µm,9.8s						
SATY	Saty	21.75	301	c iP	P	01 17 27.4	+0.6
SATY				pmax	pmax		
	comp=Z,155nm,0.8s						
SATY				MLR	MLR		
	comp=Z,1µm,11.0s						
SATY	Saty	21.75	301	⇑iP	P	01 17 27.4	+0.6
	comp=Z,155nm,0.8s						
SATY				eS	Sn	01 21 36.9	+0.4
SATY				eLR	LR	01 28 59.9	
	comp=Z,1µm,10.6s						
CHBT	CHBT	21.79	185	P	P	01 17 30.4	+3.2
	comp=Z,213nm,0.7s,comp=Z,2µm						
MDJ	Mudanjiang	21.91	55	PFAKE		01 17 40.0	+12
MDJ				LR	LR		
	comp=Z,4µm,19.0s						
MDJ	Mudanjiang	21.91	55	P	P	01 17 30.0	+1.6
MDJ				S	S	01 21 30.0	0.0
MDJ				pmax	pmax		
	comp=Z,50nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,2µm,4.4s						
MDJ				LR	LR		
	comp=Z,7µm,13.9s						
MDJ	Mudanjiang	21.91	55	P	P	01 17 29.1	+0.7
MDJ				pP	pP	01 17 32.5	-0.6
MDJ				S	S	01 21 31.9	+1.9
MDJ				sS	pS	01 21 34.5	-2.7
MDJ				ScP	ScP	01 25 08.0	+3.9
MDJ				PcS	PcS	01 25 09.3	+3.7
MDJ				pmax	pmax		
	comp=Z,170nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.8s						
MDJ				LR	LR		
	comp=Z,5µm,10.8s						
MDJ				LR	LR		
	comp=Z,8µm,8.4s						
MDJ				LR	LR		
	comp=Z,11µm,10.4s						
PHET	Kaeng Krachan	21.96	192	P	P	01 17 30.9	+1.8
	comp=Z,334µm,0.8s						
JOW	Kunigami	22.06	104	P	P	01 17 29.1	-0.9
	comp=Z,1.4nm,0.5s,baz=351,slow=8.2,SNR=3.7						
JOW	Kunigami	22.06	104	eP	P	01 17 30.6	+0.5
	comp=Z,35nm,0.8s						
JNU	Nakatsue	22.19	86	P	P	01 17 30.9	-0.6
	comp=Z,51nm,0.7s,baz=259,slow=3.6,SNR=26						
JNU				LR	LR	01 25 55.2	
	comp=Z,3µm,19.5s,baz=287,slow=36						
JNU	Nakatsue	22.19	86	eP	P	01 17 31.9	+0.4
	comp=Z,305nm,1.5s						
JNU				LR	LR		
	comp=Z,4µm,19.0s						
TDK	Taldyqorghan	22.30	306	eP	P	01 17 32.6	0.0
TDK				eS	S	01 21 41.1	+3.6

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TDK                                  pmax    pmax
       comp=Z,304nm,1.8s
TDK                                  MLR     MLR
       comp=Z,3µm,11.0s
TDK    Taldyqorghan     22.30 306  eP       P        01 17 32.7   0.0
       comp=Z,304nm,1.8s
TDK                                eS       S        01 21 41.2 +3.6
TDK                                eLR      LR       01 27 09.7
       comp=Z,3µm,10.6s
KDJ    Kajisay          22.43 298   PFAKE            01 17 50.0  +16
KDJ                                 LR      LR
       comp=Z,4µm,20.0s
MSHR   Mys Shultsa      22.47  61d iP       P        01 17 35.7 +1.3
MDOK   Medeo            22.74 300  eP       P        01 17 37.9 +0.4
MDOK                               eS       S        01 21 45.9 +0.1
MDOK                                MLR     MLR
       comp=Z,3µm,14.0s
MDOK   Medeo            22.74 300  eP       P        01 17 37.9 +0.4
MDOK                               eS       S        01 21 46.0 +0.1
MDOK                               eLR      LR       01 27 38.4
       comp=Z,3µm,14.3s
TNSS   Tian-Shan        22.79 300⇑iP        P        01 17 38.7 +0.5
TNSS   Tian-Shan        22.79 300⇑iP        P        01 17 38.7 +0.5
AAA    Alma-Ata         22.85 300  eP       P        01 17 41.2 +2.7
AAA                                 pmax    pmax
       comp=Z,2µm,3.4s
AAA                                 MLR     MLR
       comp=Z,3µm,14.0s
DLV    T  Lat           22.86 169   PFAKE            01 17 50.0  +11
DLV                                 LR      LR
       comp=Z,2µm,20.0s
CHKK   Chushkaly        22.95 302⇑iP        P        01 17 38.7  -0.7
CHKK   Chushkaly        22.95 302⇑iP        P        01 17 38.8  -0.7
KSH    Kashi            23.02 291   P       P        01 17 43.9 +3.5
KSH                                 pP      sP       01 17 48.3 +1.0
KSH                                 sP      pP       01 17 51.4 +6.2
KSH                                 PP      PnPn     01 18 14.9  +10
KSH                                 S       S        01 21 51.8 +1.1
KSH                                 SS      SnSn     01 22 38.6  +16
KSH                                 pmax    pmax
       comp=Z,190nm,1.2s
KSH                                 pmax    pmax
       comp=Z,2µm,6.7s
KSH                                 LR      LR
       comp=Z,3µm,8.5s
KSH                                 LR      LR
       comp=Z,5µm,10.9s
KSH                                 LR      LR
       comp=Z,7µm,15.0s
VLA    Vladivostok      23.11  60d iP       P        01 17 42.5 +1.4
VLA                                 pmax    pmax
       comp=Z,497nm,1.5s
ULHL   Ulahol           23.14 298   P       P        01 17 42.3 +0.6
       SNR=43
BOOM   Boomskoye usch   23.40 298   PFAKE            01 17 50.0 +5.7
BOOM                                LR      LR
       comp=Z,3µm,20.0s
KUU    Kurty            23.41 302c iP       P        01 17 43.7  -0.5
KUU                                 pmax    pmax
       comp=Z,248nm,1.9s
KUU                                 MLR     MLR
       comp=Z,2µm,11.0s
KUU    Kurty            23.41 302⇑iP        P        01 17 43.8  -0.5
       comp=Z,248nm,1.9s
KUU                                eS       S        01 22 05.2 +8.3
       comp=Z,925nm,6.7s
KUU                                eLR      LR       01 28 11.6
       comp=Z,2µm,11.3s
USA0B  Ussuriysk Arra   23.44  57   PFAKE            01 18 00.0  +16
USA0B                               LR      LR
       comp=Z,4µm,18.0s
USRK   Ussuriysk Ar.    23.44  57   P       P        01 17 44.7 +0.3
       comp=Z,136nm,1.1s,baz=251,slow=5.8,SNR=56
USRK                                LR      LR       01 27 36.6
       comp=Z,1µm,21.3s,baz=214,slow=38
SEM    Semipalatinsk    23.56 319c iP       P        01 17 44.8  -1.0
SEM                                 pmax    pmax
       comp=Z,222nm,1.9s
SEM                                 MLR     MLR
       comp=Z,2µm,12.0s
SEM    Semipalatinsk    23.56 319⇑iP        P        01 17 44.8  -1.0
       comp=Z,222nm,1.9s
SEM                                eLR      LR       01 26 29.0
       comp=Z,2µm,11.5s
ZAA0   Zalesovo Array   23.69 331  eP       P        01 17 45.8  -1.0
       comp=Z,73nm,1.1s
ZAA0                                LR      LR
       comp=Z,300nm,18.0s
ZALV   Zalesovo Beam    23.69 331   P       P        01 17 45.6  -1.2
       comp=Z,24nm,0.8s,baz=135,slow=9.2,SNR=84
ZALV                                PcP     PcP      01 21 29.8  -0.9
       comp=Z,4.3nm,0.7s,baz=157,slow=2.4,SNR=3.6
ZALV                                LR      LR       01 27 20.4
       comp=Z,2µm,18.8s,baz=104,slow=37
ZAA1   Zalesovo Array   23.69 331  eP       P        01 17 45.6  -1.2
ZAA1                               ePcP     PcP      01 21 29.8  -0.9
TKM2   Tokmak 2         23.73 299   P       P        01 17 48.2 +0.7
       SNR=85
KZA    Kyzart           23.84 297   P       P        01 17 50.2 +1.4
       SNR=46
KBK    Karagaybulak     24.15 298   P       P        01 17 52.9 +1.4
       SNR=75
BOD    Bodaibo          24.17  13  eP       P        01 17 52.1 +0.8
BOD                                 pmax    pmax
       comp=Z,103nm,1.4s
CHMS   Chumysh          24.36 299   P       P        01 17 53.5 +0.3
       SNR=19
UCH    Uchtor           24.40 297   P       P        01 17 55.7 +1.6
       SNR=73
FRU1   Bishkek          24.41 299   PFAKE            01 18 00.0 +6.3
FRU1                                LR      LR
       comp=Z,4µm,21.0s
AAK    Ala-Archa        24.48 298   P       P        01 17 54.6 +0.1
       comp=Z,14nm,0.6s,baz=90,slow=13,SNR=36
AAK                                 LR      LR       01 28 10.1
       comp=Z,4µm,21.9s,baz=94,slow=38
AAK    Ala-Archa        24.48 298  eP       P        01 17 55.6 +1.1
       comp=Z,56nm,1.0s
AAK                                 LR      LR
       comp=Z,4µm,18.0s
AAK    Ala-Archa        24.48 298  i P      P        01 17 55.3 +0.8
       SNR=13
AAK    Ala-Archa        24.48 298ceP        P        01 17 55.4 +0.9
AAK                                 pmax    pmax
       comp=Z,101nm,1.6s
AAK    Ala-Archa        24.48 298   P       P        01 17 55.2 +0.8
       SNR=50
AAK    Ala-Archa        24.48 298   P       P        01 17 55.1 +0.6
       SNR=13
SGDS   Sogindy          24.53 300⇑iP        P        01 17 55.3 +0.5
       comp=Z,254nm,2.4s
SGDS                               eS       S        01 22 22.5 +7.6
SGDS                               eLR      LR       01 29 39.1
       comp=Z,2µm,12.1s
USP    Ospenovka        24.59 300   P       P        01 17 56.2 +0.9
       SNR=114
KURK   Kurchatov        24.61 319  eP       P        01 17 55.3   0.0
       comp=Z,158nm,1.0s
KURK                               ePcP     PcP      01 21 31.1  -1.6
KURK                                LR      LR
       comp=Z,600nm,18.0s
KURK   Kurchatov        24.61 319  eP       P        01 17 55.3   0.0
KURK                               e                 01 21 31.1
KURK                                pmax    pmax
       comp=Z,158nm,1.0s
KURK                                MLR     MLR
       comp=Z,600nm,18.0s
KURK   Kurchatov        24.61 319   P       P        01 17 55.4 +0.1
       SNR=115
KURBB  Kurchatov Arra   24.61 318   P       P        01 17 54.9  -0.4
       comp=Z,86nm,1.1s,baz=126,slow=10,SNR=246
KURBB                               PcP     PcP      01 21 32.6  -0.1
       comp=Z,11nm,0.7s,baz=122,slow=2.1,SNR=8.5
EKS2   Erkin-Say        25.01 298   P       P        01 18 00.0 +0.8
       SNR=17
KLR    Kul'dur          25.02  46   P       P        01 17 59.5 +0.4
       comp=Z,108nm,1.1s,baz=261,slow=9.9,SNR=56
KLR                                 LR      LR       01 29 05.1
       comp=Z,3µm,19.8s,baz=256,slow=40
KLR    Kul'dur          25.02  46c iP       P        01 17 59.2 +0.1
KLR                                 pmax    pmax
       comp=Z,107nm,1.1s
PBA    Port Blair       25.08 207  eP       P        01 18 00.8 +0.9
       comp=Z,240nm,0.9s
ZEA    Zeya             25.12  33  eP       P        01 18 00.5 +0.6
ZEA                                eS       S        01 22 22.0  -2.1
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ZEA                                 pmax    pmax
       comp=E,59nm,1.0s
ZEA                                 pmax    pmax
       comp=Z,81nm,1.0s
ZEA                                 pmax    pmax
       comp=N,500nm,7.0s
ZEA                                 pmax    pmax
       comp=Z,700nm,7.0s
ZEA                                 pmax    pmax
       comp=E,400nm,6.0s
ZEA                                 smax    smax
       comp=E,3µm,9.0s
ZEA                                 smax    smax
       comp=N,3µm,10.0s
ZEA                                 MLR     MLR
       comp=Z,14µm,11.0s
ZEA                                 MLR     MLR
       comp=E,10µm,8.0s
ZEA                                 MLR     MLR
       comp=N,11µm,10.0s
BTLS   Baital           25.28 303c iP       P        01 18 01.7 +0.2
BTLS                                pmax    pmax
       comp=Z,89nm,1.8s
BTLS   Baital           25.28 303⇑iP        P        01 18 01.7 +0.2
       comp=Z,89nm,1.8s
BTLS                               eS       S        01 22 39.3  +12
       comp=Z,67nm,5.5s
TGY    Tagaytay City    25.38 139   LR      LR       01 27 48.6
       comp=Z,2µm,19.3s,baz=352,slow=36
NIL    Nilore           25.59 277  eP       P        01 18 04.8 +0.3
       comp=Z,238nm,1.1s
NIL    Nilore           25.59 277  eP       P        01 18 04.8 +0.3
NIL                                 pmax    pmax
       comp=Z,238nm,1.1s
TEY    Ternei           26.84  57⇑eP        P        01 18 16.2 +0.7
TEY                                eS       S        01 22 51.0  -0.4
TEY                                 pmax    pmax
       comp=N,10.0nm,2.1s
TEY                                 pmax    pmax
       comp=Z,50nm,1.5s
TEY                                 pmax    pmax
       comp=E,20nm,1.3s
INU    Inuyama          26.84  79   PFAKE            01 18 30.0  +14
INU                                 LR      LR
       comp=Z,2µm,18.0s
TRTT   Trang            26.93 190   P       P        01 18 21.5 +4.9
       comp=Z,23nm,1.5s
BTK    Batken           27.01 292   PFAKE            01 18 30.0  +13
BTK                                 LR      LR
       comp=Z,3µm,18.0s
OTUK   Ortayu           27.30 310   P       P        01 18 20.0 +0.2
OTUK                                pmax    pmax
       comp=Z,130nm,1.2s
JBG    Jabagly          27.35 297c iP       P        01 18 21.4 +1.0
JBG                                 pmax    pmax
       comp=Z,36nm,1.1s
GAR    Garm             27.40 289   PFAKE            01 18 30.0 +9.1
GAR                                 LR      LR
       comp=Z,8µm,18.0s
KK31   Karatay Array    27.44 298  i P      P        01 18 21.0  -0.1
KK31                                pmax    pmax
       comp=Z,14nm,0.7s
SKLT   Songkhla         27.47 188   P       P        01 18 26.6 +5.2
       comp=Z,20nm,1.3s
MAJO   Matsushiro       27.66  76  eP       P        01 18 22.4  -0.7
       comp=Z,34nm,1.2s
MAJO                               ePcP     PcP      01 21 41.5 +1.4
MAJO   Matsushiro       27.66  76  eP       P        01 18 22.4  -0.7
MAJO                               e                 01 21 41.5
MAJO                                pmax    pmax
       comp=Z,34nm,1.2s
MAT    Matsushiro       27.66  76   P       P        01 18 21.5  -1.5
MAT                                 S       S        01 23 04.0  -0.6
MJAR   Matsushiro Arr   27.66  76   P       P        01 18 22.1  -1.0
       comp=Z,29nm,1.1s,baz=280,slow=8.3,SNR=34
MJAR                                PcP     PcP      01 21 41.5 +1.4
       comp=Z,4.9nm,0.7s,baz=259,slow=2.4,SNR=5.2
MJAR                                LR      LR       01 31 21.7
       comp=Z,782nm,18.2s,baz=290,slow=41
BRZS   Berezniki        27.69 313c iP       P        01 18 23.5 +0.3
BRZS                                pmax    pmax
       comp=Z,84nm,1.4s
BRZS                                MLR     MLR
       comp=Z,1µm,11.0s
BRZS   Berezniki        27.69 313⇑iP        P        01 18 23.6 +0.3
       comp=Z,84nm,1.4s
BRZS                               eLR      LR       01 30 56.8
       comp=Z,1µm,10.6s
IUG    Iuzhnay          27.70 296c iP       P        01 18 23.9 +0.4
IUG    Iuzhnay          27.70 296⇑iP        P        01 18 24.0 +0.4
GRNR   Gornyy           28.40  45  eP       P        01 18 30.8 +1.3
GRNR                                pmax    pmax
       comp=Z,50nm,1.1s
HYB    Hyderabad        28.57 240  i P      P        01 18 31.0  -0.3
KBL    Kabul            28.87 280  eP       P        01 18 34.8 +0.7
       comp=Z,120nm,1.5s
KBL                                ePcP     PcP      01 21 43.6 +0.3
KBL    Kabul            28.87 280  eP       P        01 18 34.8 +0.7
KBL                                e                 01 21 43.6
KBL                                 pmax    pmax
       comp=Z,120nm,1.5s
KULM   Kulim            29.32 187  eP       P        01 18 37.7  -0.2
       comp=Z,15nm,1.0s
KULM                                LR      LR
       comp=Z,3µm,19.0s
JHJ    Hachijo jima 2   29.50  83   LR      LR       01 30 08.8
       comp=Z,2µm,18.2s,baz=277,slow=36
JHJ2   Mitsune          29.53  83  eP       P        01 18 39.1  -0.6
       comp=Z,150nm,1.0s
IPM    Ipoh             30.09 186  eP       P        01 18 44.2  -0.5
       comp=Z,30nm,1.2s
IPM                                 LR      LR
       comp=Z,4µm,19.0s
BRVK   Borovoye         30.27 318  eP       P        01 18 46.5 +0.4
       comp=Z,33nm,0.8s
BRVK                                LR      LR
       comp=Z,700nm,19.0s
BRVK   Borovoye         30.27 318  eP       P        01 18 46.5 +0.4
BRVK                                pmax    pmax
       comp=Z,33nm,0.8s
BRVK                                MLR     MLR
       comp=Z,700nm,19.0s
BRVK   Borovoye         30.27 318   P       P        01 18 46.5 +0.4
       SNR=38
ASAJ   Asahikawa        30.95  60   P       P        01 18 51.8  -0.4
       comp=Z,45nm,1.0s,baz=266,slow=15,SNR=16
ASAJ                                LR      LR       01 31 20.7
       comp=Z,2µm,20.0s,baz=292,slow=36
ERM    Erimo            31.26  65  eP       P        01 18 55.5 +0.6
       comp=Z,18nm,0.8s
ERM                                 LR      LR
       comp=Z,2µm,19.0s
ERM    Erimo            31.26  65  eP       P        01 18 55.5 +0.6
ERM                                 pmax    pmax
       comp=Z,18nm,0.8s
ERM                                 MLR     MLR
       comp=Z,2µm,19.0s
YSS    Yuzh-Sakhalins   31.40  55  eP       P        01 18 57.0 +0.9
       comp=Z,470nm,1.3s
YSS    Yuzh-Sakhalins   31.40  55αeP        P        01 18 56.4 +0.3
YSS                                e                 01 19 07.5
YSS                                eS       S        01 24 02.0  -1.1
YSS                                eSS      SnSn     01 25 54.5 +7.5
YSS                                 pmax    pmax
       comp=Z,800nm,6.4s
YSS                                 pmax    pmax
       comp=Z,250nm,1.2s
YSS                                 MLR     MLR
       comp=E,700nm,10.0s
YSS                                 MLR     MLR
       comp=Z,3µm,10.0s
YSS                                 MLR     MLR
       comp=N,2µm,12.0s
NKL    Nikolayevsk      31.73  43  eP       P        01 18 58.5  -0.4
NKL                                 pmax    pmax
       comp=Z,61nm,1.0s
YAK    Yakutsk          31.86  23  eP       P        01 19 00.7 +0.7
       comp=Z,94nm,0.8s
YAK                                 LR      LR
       comp=Z,4µm,21.0s
YAK    Yakutsk          31.86  23  eP       P        01 19 00.7 +0.7
YAK                                e                 01 20 00.9
YAK                                eS       S        01 24 11.7 +1.7
YAK                                 pmax    pmax
       comp=Z,96nm,0.9s
YAK                                 pmax    pmax
       comp=N,34nm,0.9s
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YAK                                 pmax    pmax
       comp=E,32nm,0.9s
YAK                                 pmax    pmax
       comp=Z,72nm,2.8s
YAK                                 pmax    pmax
       comp=N,76nm,2.8s
YAK                                 pmax    pmax
       comp=E,105nm,3.3s
YAK                                 smax    smax
       comp=E,73nm,2.3s
YAK                                 smax    smax
       comp=N,75nm,2.4s
YAK                                 MLR     MLR
       comp=Z,3µm,7.0s
YAK                                 MLR     MLR
       comp=N,857nm,6.0s
YAK                                 MLR     MLR
       comp=E,3µm,6.0s
PSI    Prapat           31.99 190  eP       P        01 19 01.4  -0.2
       comp=E,80nm,1.3s
PSI                                 LR      LR
       comp=Z,2µm,20.0s
PSI    Prapat           31.99 190  eP       P        01 19 01.4  -0.2
PSI                                 pmax    pmax
       comp=Z,80nm,1.3s
PSI                                 MLR     MLR
       comp=Z,2µm,20.0s
TYV    Tymovskoe        32.17  48  eP       P        01 19 04.7 +1.9
TYV                                eS       S        01 24 20.5 +5.4
TYV                                 pmax    pmax
       comp=Z,91nm,1.4s
TYV                                 pmax    pmax
       comp=Z,600nm,6.3s
TYV                                 smax    smax
       comp=E,11nm,1.8s
TYV                                 smax    smax
       comp=E,600nm,10.4s
TYV                                 MLR     MLR
       comp=E,11µm,12.0s
TYV                                 MLR     MLR
       comp=Z,14µm,12.0s
MYKOM  Kota Tinggi      32.61 181   PFAKE            01 19 20.0  +13
MYKOM                               LR      LR
       comp=Z,2µm,22.0s
SBUM   Sibu             32.82 165  eP       P        01 19 08.3  -0.4
       comp=Z,29nm,1.0s
SBUM                               ePcP     PcP      01 21 54.2 +0.5
SBUM                                LR      LR
       comp=Z,300nm,20.0s
YUK    Yuzh-Kuril'sk    33.29  61  i P      P        01 19 14.9 +2.2
KSM    Kuching          33.42 169  eP       P        01 19 13.6  -0.4
       comp=Z,25nm,0.8s
KSM                                 LR      LR
       comp=Z,1µm,20.0s
GSI    Gunungsitoli     33.67 192   PFAKE            01 19 30.0  +14
GSI                                 LR      LR
       comp=Z,3µm,20.0s
DAV    Davao City (W)   33.72 139   PFAKE            01 19 30.0  +13
DAV                                 LR      LR
       comp=Z,3µm,18.0s
DAV    Davao City (W)   33.72 139⇑iP        P        01 19 17.2 +0.4
BKNI   Bangkinang       34.19 186   PFAKE            01 19 30.0 +9.2
BKNI                                LR      LR
       comp=Z,2µm,22.0s
PALK   Pallekele        34.73 224   P       P        01 19 26.4 +0.9
AB31   Akbulak array    35.52 308  i P      P        01 19 32.2 +0.3
AB31                                pmax    pmax
       comp=Z,23nm,0.7s
SVE    Sverdlovsk       36.82 321d iP       P        01 19 43.9 +0.9
SVE                                eS       S        01 25 28.2 +1.6
SVE                                 pmax    pmax
       comp=Z,181nm,1.3s
SVE                                 MLR     MLR
       comp=Z,2µm,10.0s
AKTO   Aktyubinsk       36.91 310   P       P        01 19 44.1 +0.3
AKTO                                pmax    pmax
       comp=Z,93nm,1.5s
GEYT   Alibeck          37.03 289   P       P        01 19 46.3 +1.3
       comp=Z,40nm,0.8s,baz=83,slow=4.9,SNR=102
GEYT                                LR      LR       01 37 30.8
       comp=Z,2µm,18.1s,baz=60,slow=40
GYA0B  ALIBECK ARRAY    37.03 289   PFAKE            01 20 00.0  +15
GYA0B                               LR      LR
       comp=Z,2µm,18.0s
ARU    Arti             37.80 320  eP       P        01 19 51.5 +0.2
       comp=Z,217nm,1.0s
ARU                                 LR      LR
       comp=Z,700nm,19.0s
ARU    Arti             37.80 320c iP       P        01 19 51.6 +0.3
ARU                                                  01 21 18.6
ARU                                                  01 22 01.4
ARU                                 S       S        01 25 44.4 +2.9
ARU                                 SS      SnSn     01 28 18.8  -3.0
ARU                                 SSS     SSS      01 28 46.8
ARU                                                  01 29 58.9
ARU                                 pmax    pmax
       comp=Z,256nm,1.1s
MA2    Magadan          39.20  36   P       P        01 20 02.9  -0.1
       comp=Z,29nm,0.8s,baz=260,slow=11
MA2    Magadan          39.20  36  eP       P        01 20 03.4 +0.4
       comp=Z,51nm,1.0s
MA2                                 LR      LR
       comp=Z,1µm,22.0s
MA2    Magadan          39.20  36  i P      P        01 20 03.2 +0.2
MA2                                 pmax    pmax
       comp=Z,67nm,1.1s
TIXI   Tiksi            39.35  12   P       P        01 20 03.0  -1.1
       comp=Z,95nm,1.2s,baz=200,slow=4.9,SNR=12
TIXI   Tiksi            39.35  12  eP       P        01 20 03.5  -0.6
       comp=Z,134nm,1.4s
TIXI                                LR      LR
       comp=Z,3µm,18.0s
TIXI   Tiksi            39.35  12ceP        P        01 20 03.2  -0.9
TIXI                                pmax    pmax
       comp=Z,93nm,1.3s
LUWI   Luwuk            39.47 150  eP       P        01 20 04.9  -0.8
       comp=Z,162nm,1.0s
SKR    Severo-Kuril’s   40.57  50  eP       P        01 20 14.0  -0.5
SKR                                 pmax    pmax
       comp=Z,48nm,0.9s
SKR                                 MLR     MLR
       comp=Z,2µm,18.0s
SKR                                 MLR     MLR
       comp=Z,3µm,16.0s
SEY    Seymchan         41.06  31  i P      P        01 20 19.1 +0.7
WSAR   Wadi Sarin       41.15 267   P       P        01 20 20.3 +0.6
       SNR=5.9
LEM    Lembang          41.30 175   P       P        01 20 21.1 +0.1
       comp=Z,63nm,0.8s,baz=15,slow=9.8,SNR=4.0
PEA0B  Petropavlovsk-   41.71  47  eP       P        01 20 24.6 +0.8
       comp=Z,60nm,1.0s
PEA0B                               LR      LR
       comp=Z,3µm,18.0s
PETK   Petropavlovsk-   41.71  47   P       P        01 20 24.2 +0.3
       comp=Z,29nm,0.8s,baz=218,slow=2.9,SNR=34
PETK                                PcP     PcP      01 22 19.4  -0.9
       comp=Z,12nm,0.9s,baz=242,slow=3.1,SNR=4.3
PETK                                LR      LR       01 39 50.8
       comp=Z,2µm,19.5s,baz=261,slow=39
SMRI   Semarang         41.81 171  eP       P        01 20 25.6 +0.6
       comp=Z,269nm,1.5s
KAPI   Kappang          42.02 156   P       P        01 20 26.1  -0.6
       comp=Z,116nm,0.8s,baz=335,slow=4.9,SNR=37
KAPI   Kappang          42.02 156  eP       P        01 20 26.6  -0.1
       comp=Z,170nm,0.9s
KAPI   Kappang          42.02 156  eP       P        01 20 26.6  -0.1
KAPI                                pmax    pmax
       comp=Z,170nm,0.9s
KAPI   Kappang          42.02 156   P       P        01 20 26.9 +0.2
       SNR=18
SHME   Shamm            42.02 272   P       P        01 20 26.6  -0.2
CISI   Cisompet, Garu   42.03 175  eP       P        01 20 26.0  -0.9
       comp=Z,138nm,1.4s
CISI                                LR      LR
       comp=Z,2µm,18.0s
GUMO   Guam             42.23 109   P       P        01 20 28.0  -0.5
       comp=Z,160nm,1.1s,baz=15,slow=20,SNR=2.9
GUMO   Guam             42.23 109  eP       P        01 20 28.9 +0.4
       comp=Z,185nm,1.1s
GUMO   Guam             42.23 109  eP       P        01 20 28.9 +0.4
GUMO                                pmax    pmax
       comp=Z,185nm,1.1s
PET    Petropavlovsk    42.27  47  eP       P        01 20 29.0 +0.5
       comp=Z,105nm,1.4s
PET                                 LR      LR
       comp=Z,2µm,18.0s
PET    Petropavlovsk    42.27  47  eP       P        01 20 28.9 +0.5
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PET				*e*		01 22 24.0	
PET				*e*S	S	01 26 48.6	+0.1
PET				pmax	pmax		
	comp=Z,59nm,1.4s						
PET				MLR	MLR		
	comp=Z,3µm,14.0s						
PET				MLR	MLR		
	comp=Z,4µm,14.0s						
MSFE	Esma-Masafi	42.29	271	P	P	01 20 30.1	+1.1
UOSS	Minazif	42.42	270	PFAKE		01 20 40.0	+10
UOSS				LR	LR		
	comp=Z,1µm,22.0s						
UOSS	Minazif	42.42	270	P	P	01 20 31.3	+1.2
NAZ	Nazwa, Dubai	42.85	271	P	P	01 20 34.9	+1.3
FAQ	Al Faqa, Dubai	43.01	270	P	P	01 20 35.8	+1.0
ASUD	Al Ashush, Dub	43.28	270	*i* P	P	01 20 38.4	+1.4
	SNR=11						
ASUD	Al Ashush, Dub	43.28	270	P	P	01 20 38.3	+1.3
	SNR=6.4						
ASUD				P	P	01 20 38.3	+1.3
	SNR=6.4						
SIJI	Sorong	43.43	139	P	P	01 20 36.6	-1.6
	comp=Z,21nm,0.8s,baz=313,slow=23,SNR=3.4						
JAGI	Jajag, Banyuwa	43.83	166	*e*P	P	01 20 40.0	-1.4
	comp=Z,152nm,0.9s						
MAK	Makhachkala	44.26	298	*e*P	P	01 20 38.7	-5.9
MAK				*e*		01 22 22.8	
MAK				*e*S	S	01 27 09.6	-8.3
MAK				*e*SS	SS	01 30 30.7	-5.3
MAK				pmax	pmax		
	comp=Z,115nm,1.0s						
MAK				MLR	MLR		
	comp=Z,2µm,13.0s						
AKT	Akhty	44.34	296	⇑*i*P	P	01 20 46.2	+0.7
AKT				*e*		01 22 29.9	
AKT				*e*S	S	01 27 21.3	+1.9
AKT				pmax	pmax		
	comp=Z,81nm,1.0s						
SEKA	Sheki	44.78	296	P	P	01 20 49.9	+0.9
MNGR	Mingechevir, A	44.95	295	P	P	01 20 51.9	+1.7
ZKTA	Zakatala	45.13	297	P	P	01 20 52.9	+1.2
PRGR	Permogore	45.43	325	⇑*i*P	P	01 20 53.7	0.0
PRGR				pmax	pmax		
	comp=Z,120nm,1.1s						
GROC	Groznyy	45.46	299	*e*P	P	01 20 54.5	+0.3
GROC				*e*		01 22 33.0	
GROC				*e*S	S	01 27 36.7	+1.4
GROC				pmax	pmax		
	comp=Z,158nm,1.0s						
GANJ	Ganja	45.54	295	P	P	01 20 55.7	+0.7
MMRI	Maumere	46.24	155	*e*P	P	01 20 59.2	-1.4
	comp=Z,160nm,0.9s						
NAX	Nakhchivan	46.49	294	P	P	01 21 02.9	+0.4
GNI	Garni	46.83	295	*e*P	P	01 21 06.7	+1.5
	comp=Z,119nm,1.4s						
GNI				LR	LR		
	comp=Z,500nm,20.0s						
GNI	Garni	46.83	295	*i* P	P	01 21 06.7	+1.5
	SNR=17						
GNI	Garni	46.83	295	*e*P	P	01 21 06.7	+1.5
GNI				pmax	pmax		
	comp=Z,119nm,1.4s						
GNI				MLR	MLR		
	comp=Z,500nm,20.0s						
GNI	Garni	46.83	295	P	P	01 21 07.0	+1.8
	SNR=15						
GNI				P	P	01 21 07.0	+1.8
	SNR=15						
ZEI	Tsey	46.90	299	*e*P	P	01 21 02.9	-2.9
ZEI				pmax	pmax		
	comp=Z,103nm,1.5s						
GOF	Gofitskoye	47.11	302	⇑*i*P	P	01 21 08.2	+1.0
GOF				pmax	pmax		
	comp=Z,149nm,0.6s						
IGDI	IGDIR	47.39	295	*i* P	P	01 21 11.9	+2.4
IGDI				IAML_P			
	comp=Z,164nm,0.8s						
KBZ	Khabaz	47.44	300	P	P	01 21 09.7	-0.1
	comp=Z,20nm,0.8s,baz=101,slow=5.3,SNR=35						
KBZ				LR	LR	01 43 50.6	
	comp=Z,1µm,18.1s,baz=86,slow=40						
AKH	Akhalkalaki	47.48	297	PFAKE		01 21 20.0	+10
AKH				LR	LR		
	comp=Z,1µm,21.0s						
AKH	Akhalkalaki	47.48	297	⇓*i*P	P	01 21 12.4	+2.1
AKH	Akhalkalaki	47.48	297	P	P	01 21 12.3	+2.0
AKH				pmax	pmax		
	comp=Z,72nm,1.0s						
EAK	Akyaka	47.55	296	*i* P	P	01 21 13.4	+2.5
EAK				IAML_P			
	comp=Z,32nm,0.5s						
KIV	Kislovodsk	47.55	301	*e*P	P	01 21 12.1	+1.3
	comp=Z,52nm,0.8s						
KIV				LR	LR		
	comp=Z,800nm,18.0s						
KIV	Kislovodsk	47.55	301	⇑*i*P	P	01 21 11.4	+0.6
KIV	Kislovodsk	47.55	301	*i* P	P	01 21 12.1	+1.3
	SNR=20						
KIV	Kislovodsk	47.55	301	*e*P	P	01 21 11.3	+0.5
KIV				*e*S	S	01 28 06.4	+0.9
KIV				pmax	pmax		
	comp=Z,386nm,4.5s						
KIV				pmax	pmax		
	comp=Z,219nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,16.0s						
KIV	Kislovodsk	47.55	301	P	P	01 21 11.9	+1.2
	SNR=24						
KIV				P	P	01 21 11.9	+1.2
	SNR=24						
SHA1	Shidzhatmaz	47.61	300	*i* P	P	01 21 12.2	+0.8
NEY	Neytrino	47.66	300	*c i*P	P	01 21 13.2	+1.5
NEY				pmax	pmax		
	comp=Z,17nm,0.7s						
DIGO	Kars	47.79	296	*i* P	P	01 21 15.2	+2.4
DIGO				IAML_P			
	comp=Z,24nm,0.2s						
VMUR	Van-Muradiye	47.98	294	*i* P	P	01 21 16.9	+2.6
VMUR				IAML_P			
	comp=Z,314nm,0.8s						
BILL	Bilibino	48.03	27	*c i*P	P	01 21 14.5	+0.5
BILL				*i*		01 22 42.5	
BILL				pmax	pmax		
	comp=Z,100nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s						
BATI	Baumata	48.20	154	P	P	01 21 13.6	-2.4
	comp=Z,115nm,0.6s,baz=276,slow=3.2,SNR=9.9						
HAKT	HAKKARI	48.25	292	*i* P	P	01 21 17.4	+1.0
HAKT				IAML_P			
	comp=Z,353nm,0.6s						
DOMR	Dombai	48.44	300	*e*P	P	01 21 16.4	-1.3
EATA	Eleskirt	48.58	295	*i* P	P	01 21 21.6	+2.6
EATA				IAML_P			
	comp=Z,353nm,0.7s						
ADCV	BITLIS_Adilcev	48.67	294	*i* P	P	01 21 21.7	+2.1
ADCV				IAML_P			
	comp=Z,37nm,0.3s						
VORR	Voronezh	48.76	311	*e*P	P	01 21 19.0	-0.8
VORR				pmax	pmax		
	comp=Z,300nm,1.6s						
VORD	Divnogorie	48.79	310	*e*P	P	01 21 20.3	+0.3
VORD				pmax	pmax		
	comp=Z,50nm,0.9s						
VSR	Storozhevoye	48.84	311	*e*P	P	01 21 20.5	+0.1
VSR				pmax	pmax		
	comp=Z,150nm,1.5s						
VSR				MLR	MLR		
	comp=Z,1µm,16.0s						
BCA	Borcka	48.84	298	⇓*i*P	P	01 21 21.9	+1.2
LPSR	Galich'ya Gora	48.84	313	*e*P	P	01 21 20.4	0.0
LPSR				pmax	pmax		
	comp=Z,80nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,1µm,13.0s						
HOMI	Horasan	48.97	296	*i* P	P	01 21 24.4	+2.4
HOMI				IAML_P			
	comp=Z,198nm,0.1s						
BLIS	Bitlis-Merkez	49.23	294	*i* P	P	01 21 26.1	+2.2
BLIS				IAML_P			
	comp=Z,648nm,0.5s						
AKDA	Akdag	49.35	296	*i* P	P	01 21 27.0	+2.2
MOS	Moscow	49.36	317	*c i*P	P	01 21 24.3	0.0
MOS				*e*		01 22 41.5	
MOS				*e*		01 23 22.1	
MOS				*e*S	S	01 28 31.6	+1.2
MOS				pmax	pmax		
	comp=Z,178nm,0.9s						
MOS				pmax	pmax		
	comp=Z,600nm,1.7s						
MOS				MLR	MLR		
	comp=N,1µm,17.0s						
MOS				MLR	MLR		
	comp=E,1µm,17.0s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
SRTM	Siirt_Merkez	49.49	293	*i* P	P	01 21 27.3	+1.4
SRTM				IAML_P			
	comp=Z,465nm,0.8s						
MUSM	Mu-Merkez	49.60	294	*i* P	P	01 21 28.4	+1.7
MUSM				IAML_P			
	comp=Z,167nm,0.6s						
KRIK	Erzurum-spir	49.62	296	*i* P	P	01 21 29.9	+3.0
KRIK				IAML_P			
	comp=Z,735nm,0.5s						
SOC	Sochi	49.73	301	*c i*P	P	01 21 27.5	+0.1
SOC				*e*		01 23 16.3	
SOC				*e*S	S	01 28 38.2	+2.2
SOC				*e*SSS	SSS	01 33 37.5	
SOC				pmax	pmax		
	comp=Z,71nm,0.9s						
SOC				MLR	MLR		
	comp=Z,2µm,15.0s						
BNGL	BINGOL	49.81	295	*i* P	P	01 21 30.6	+2.2
OBN	Obninsk	50.01	316	*e*P	P	01 21 29.3	0.0
	comp=Z,167nm,1.5s						
OBN				LR	LR		
	comp=Z,2µm,20.0s						
OBN	Obninsk	50.01	316	*c i*P	P	01 21 29.0	-0.3
OBN				*i*		01 22 45.8	
OBN				*e*		01 23 21.9	
OBN				pmax	pmax		
	comp=Z,99nm,1.6s						
OBN				MLR	MLR		
	comp=Z,1µm,18.0s						
BTMN	Batman	50.02	293	*i* P	P	01 21 31.6	+1.8
BTMN				IAML_P			
	comp=Z,409nm,0.6s						
KOPT	Kop Dagi	50.02	296	*i* P	P	01 21 32.5	+2.5
KOPT				IAML_P			
	comp=Z,239nm,0.7s						
KTUT	Trabzon	50.31	297	⇑*i*P	P	01 21 32.7	+0.9
JAY	Jayapura	50.35	129	P	P	01 21 31.9	-0.6
	comp=Z,23nm,0.8s,baz=305,slow=6.7,SNR=18						
HANI	Diyarbakir_Han	50.53	294	*i* P	P	01 21 36.0	+2.3
HANI				IAML_P			
	comp=Z,156nm,0.4s						
EUZM	Uzumlu	50.70	296	*i* P	P	01 21 37.2	+2.3
EUZM				IAML_P			
	comp=Z,151nm,0.3s						
LVZ	Lovozero	50.81	333	*e*P	P	01 21 35.2	0.0
	comp=Z,67nm,1.1s						
LVZ				LR	LR		
	comp=Z,500nm,18.0s						
LVZ	Lovozero	50.81	333	*ce*P	P	01 21 34.9	-0.3
LVZ				pmax	pmax		
	comp=Z,88nm,1.7s						
TNCL	Tunceli-Merkez	50.97	295	*i* P	P	01 21 38.4	+1.4
TNCL				IAML_P			
	comp=Z,2.8nm,0.4s						
ANN	Anapa	51.07	303	*e*P	P	01 21 36.5	-1.0
ANN				*e*		01 23 35.3	
ANN				*e*S	S	01 28 52.7	-1.8
ANN				pmax	pmax		
	comp=Z,155nm,1.0s						
ANN				MLR	MLR		
	comp=N,1µm,18.0s						
ANN				MLR	MLR		
	comp=Z,2µm,18.0s						
ANN				MLR	MLR		
	comp=E,2µm,18.0s						
APA	Apatity	51.26	332	⇑*i*P	P	01 21 37.0	-1.6
APA				*i* S	S	01 28 51.0	-5.6
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,700nm,14.0s						
SMY	Shemya	51.62	47	*e*P	P	01 21 40.8	-0.7
	comp=Z,201nm,1.0s						
SMY				LR	LR		
	comp=Z,1µm,22.0s						
SMY	Shemya	51.62	47	*e*P	P	01 21 40.8	-0.7
SMY				pmax	pmax		
	comp=Z,201nm,1.0s						
SMY				MLR	MLR		
	comp=Z,1µm,22.0s						
RAYN	Ar Rayn	51.85	274	*e*P	P	01 21 43.0	-0.7
	comp=Z,17nm,1.1s						
RAYN	Ar Rayn	51.85	274	*i* P	P	01 21 42.8	-0.9
	SNR=9.2						
RAYN	Ar Rayn	51.85	274	*e*P	P	01 21 43.0	-0.7
RAYN				pmax	pmax		
	comp=Z,17nm,1.1s						
PUL	Pulkovo	52.91	322	*e*P	P	01 21 50.4	-0.6
PUL				IAmb	IAmb	01 21 54.9	
	comp=Z,119nm,0.6s						
PUL	Pulkovo	52.91	322	*ce*P	P	01 21 51.8	+0.9
PUL				pmax	pmax		
	comp=Z,105nm,0.6s						
SIM	Simferopol'	53.32	304	P	P	01 21 54.4	+0.1
SIM				pmax	pmax		
	comp=Z,68nm,0.7s						
SIM				MLR	MLR		
	comp=Z,700nm,12.0s						
SEVA	Sevastopol	53.73	303	⇑*i*P	P	01 21 57.6	+0.4
ARCES	ARCESS Array B	54.15	335	P	P	01 21 59.6	-0.3
	comp=Z,31nm,0.7s,baz=79,slow=8.8,SNR=70						
ARCES				PcP	PcP	01 23 02.2	-2.2
	comp=Z,5.4nm,0.7s,baz=76,slow=7.5,SNR=1.8						
ARCES				LR	LR	01 49 58.2	
	comp=Z,567nm,18.3s,baz=106,slow=41						
ARE0	ARCESS Array S	54.15	335	*e*P	P	01 22 00.4	+0.4
	comp=Z,3.4nm,0.9s						
ARE0				*e*PcP	PcP	01 23 03.5	-0.9
ARE0	ARCESS Array S	54.15	335	*e*P	P	01 22 00.3	+0.3
HAMF	Hammerfest	54.70	336	*e*P	P	01 22 04.3	+0.4
FIA1	FINESS Array S	54.76	325	*e*P	P	01 22 03.5	-0.9
	comp=Z,126nm,1.4s						
FINES	FINESS Array B	54.76	325	P	P	01 22 03.8	-0.7
	comp=Z,16nm,0.6s,baz=73,slow=7.9,SNR=41						
FINES				LR	LR	01 46 24.2	
	comp=Z,933nm,18.4s,baz=80,slow=37						
FINES	FINESS Array B	54.76	325	*ce*P	P	01 22 04.4	-0.1
FINES				pmax	pmax		
	comp=Z,16nm,0.6s						
VSU	Vasula	54.92	321	*e*P	P	01 22 05.2	-0.5
VSU				IAmb	IAmb	01 22 06.7	
	comp=Z,205nm,0.9s						
VSU	Vasula	54.92	321	*ce*P	P	01 22 05.8	+0.1
VSU				pmax	pmax		
	comp=Z,472nm,1.7s						
KTK1	Kautokeino	55.00	334	*e*P	P	01 22 06.4	+0.3
AKASG	Malin Array Be	55.11	312	P	P	01 22 06.8	-0.4
	comp=Z,20nm,0.6s,baz=66,slow=6.8,SNR=96						
AKASG				LR	LR	01 46 53.6	
	comp=Z,929nm,20.0s,baz=65,slow=37						
AKASG	Malin Array Be	55.11	312	*ce*P	P	01 22 07.0	-0.2
AKASG				pmax	pmax		
	comp=Z,31nm,0.6s						
BR131	Keskin Array S	55.16	298	P	P	01 22 08.3	+0.4
	SNR=14						
BRTR	Keskin Array B	55.16	298	P	P	01 22 08.2	+0.3
	comp=Z,17nm,0.6s,baz=94,slow=6.0,SNR=124						
BRTR				LR	LR	01 51 09.1	
	comp=Z,433nm,18.1s,baz=5.5,slow=42						
BHL	Bhannes	55.62	290	*e*P	P	01 22 11.0	-0.3
RCY	Rachaya	55.63	290	*e*P	P	01 22 12.4	+1.0
IZAR	Zarasai	55.72	318	*e*P	P	01 22 11.9	+0.4
IZAR				IAmb	IAmb	01 22 13.8	
	comp=Z,43nm,1.4s						
ANTO	Ankara	55.73	298	*e*P	P	01 22 12.5	+0.5
	comp=Z,67nm,1.2s						
ANTO	Ankara	55.73	298	⇑*i*P	P	01 22 12.4	+0.5
ANTO	Ankara	55.73	298	*e*P	P	01 22 12.5	+0.5
ANTO				pmax	pmax		
	comp=Z,67nm,1.2s						
ANTO	Ankara	55.73	298	P	P	01 22 12.2	+0.3
	SNR=10						
ANTO				P	P	01 22 12.2	+0.3
	SNR=10						
SHBL	Chebaa	55.76	290	*e*P	P	01 22 13.4	+1.1
IIGN	Ignalina	55.82	318	*e*P	P	01 22 12.9	+0.7
IIGN				IAmb	IAmb	01 22 14.6	
	comp=Z,61nm,1.3s						
ISAL	Salakas	55.83	318	*e*P	P	01 22 12.9	+0.6
ISAL				IAmb	IAmb	01 22 14.6	
	comp=Z,31nm,1.3s						
KSDI	Kefar Szold	55.88	290	P	P	01 22 14.2	+1.2
SPA0	Spitsbergen Ar	56.00	346	*e*P	P	01 22 13.6	+0.4
HSPB	Hornsund (broa	56.32	344	*e*P	P	01 22 16.2	+0.7
HSPB				LMZ	LR	01 46 43.1	
	comp=Z,8µm,19.8s						
HSPB	Hornsund (broa	56.32	344	*e*P	P	01 22 16.2	+0.7
HSPB				MLR	MLR		
	comp=Z,8µm,19.8s						
HSPB	Hornsund (broa	56.32	344	*e*P	P	01 22 16.2	+0.7
KIS	Kishinev	56.34	307	⇑*i*P	P	01 22 15.0	-1.0
	comp=Z,210nm,2.0s						
KIS				LQM		01 48 48.0	
	comp=Z,1µm,18.0s						
KIS				LRM	MLR	01 50 18.0	
	comp=Z,900nm,17.0s						
KIS	Kishinev	56.34	307	⇑*i*P	P	01 22 15.0	-1.0
KIS				*i*		01 22 19.0	
KIS				*e*		01 25 48.0	
KIS				*e*		01 30 30.0	
KIS				pmax	pmax		
	comp=Z,210nm,2.0s						
MMLI	Mount Malkishu	56.35	289	P	P	01 22 17.7	+1.3
MILM	Milestii Mici	56.36	307	⇑*i*P	P	01 22 16.1	-0.1
TRO	Tromso	56.43	335	*e*P	P	01 22 16.3	0.0
MDUB	Mudurnu	56.69	299	PFAKE		01 22 30.0	+11
MDUB				LR	LR		
	comp=Z,2µm,20.0s						
KBS	Kingsbay	56.78	347	PFAKE		01 22 30.0	+11
KBS				LR	LR		
	comp=Z,1µm,19.0s						
KBS	Kingsbay	56.78	347	*e*P	P	01 22 19.4	+0.7
JDRJ	Daraweish	56.82	287	P	P	01 22 20.5	+0.5
TLCR		56.87	305	⇓*i*P	P	01 22 20.2	+0.4
TLCR		56.87	305	P	P	01 22 20.2	+0.4
CSS	Mathiatis	57.02	292	PFAKE		01 22 30.0	+8.9
CSS				LR	LR		
	comp=Z,500nm,22.0s						
CSS	Mathiatis	57.02	292	P	P	01 22 21.6	+0.5
CSS	Mathiatis	57.02	292	P	P	01 22 21.0	-0.1
	comp=Z,13nm,0.9s						
GAMB	Gambell	57.06	32	PFAKE		01 22 30.0	+9.1
GAMB				LR	LR		
	comp=Z,1µm,19.0s						
IAS	Iasi	57.10	308	⇑*i*P	P	01 22 21.4	-0.1
LEF	Lefka	57.30	293	⇑*i*P	P	01 22 23.0	-0.1
CFR	Carcaliu	57.33	305	⇑*i*P	P	01 22 23.2	+0.1
ADK	Adak	57.33	46	PFAKE		01 22 40.0	+17
ADK				LR	LR		
	comp=Z,1µm,22.0s						
TIRR	Tirgusor	57.36	304	PFAKE		01 22 40.0	+17
TIRR				LR	LR		
	comp=Z,2µm,18.0s						
TIRR	Tirgusor	57.36	304	⇑*i*P	P	01 22 23.8	+0.5
SLIT	Slitere, Latvi	57.41	321	*e*P	P	01 22 22.9	-0.6
SLIT				IAmb	IAmb	01 22 23.7	
	comp=Z,410nm,1.1s						
SZAC	Souni	57.44	292	P	P	01 22 24.4	+0.3
TUDR		57.51	306	⇑*i*P	P	01 22 25.5	+1.1
TLB	Topalu	57.57	305	⇑*i*P	P	01 22 25.2	+0.4
HRFI	Mount Harif	57.60	286	P	P	01 22 25.9	+0.6
HARR	Harsova	57.62	305	⇓*i*P	P	01 22 25.6	+0.5
KZIT	Kziot	57.75	287	P	P	01 22 27.0	+0.7
PETR	Petresti	57.76	306	⇑*i*P	P	01 22 28.0	+1.8
PSN	Preselentsi	57.77	304	*e*P	P	01 22 27.4	+1.2
EIL	Elat	57.82	286	P	P	01 22 27.2	+0.4
	comp=Z,71nm,1.2s						
SUW	Suwalki	57.86	316	*e*P	P	01 22 26.6	-0.1
SUW				*e*pP	pP	01 22 31.0	-1.0
SUW				LMZ	LR	01 48 19.6	
	comp=Z,1µm,18.2s						
SUW	Suwalki	57.86	316	PFAKE		01 22 40.0	+13
SUW				LR	LR		
	comp=Z,1µm,18.0s						
SUW	Suwalki	57.86	316	*e*P	P	01 22 26.6	-0.1
SUW				*e**PP	pP	01 22 31.0	-1.0
SUW				MLR	MLR		
	comp=Z,1µm,18.2s						
ODBI	Odobesti	57.87	306	⇑*i*P	P	01 22 28.6	+1.7
ICOR	Ion Corvin	57.89	304	⇑*i*P	P	01 22 28.1	+1.0
PRAR	RASCA	57.92	308	⇑*i*P	P	01 22 27.6	+0.3
YLV	Yalova	57.97	300	⇑*i*P	P	01 22 28.6	+0.8
YLV	Yalova	57.97	300	P	P	01 22 28.6	+0.8
AMRR	Amara	58.05	305	⇑*i*P	P	01 22 29.3	+1.2
VRI	Vrincioaia	58.05	306	⇑*i*P	P	01 22 29.2	+1.0
VRI	Vrincioaia	58.05	306	P	P	01 22 29.2	+1.0
STEI	Steigen	58.09	334	*e*P	P	01 22 27.9	-0.2
ISP	Isparta	58.09	296	⇑*i*P	P	01 22 28.5	-0.3
PLOR	Plostina	58.11	307	⇓*i*P	P	01 22 29.4	+0.7
BIZ	Bicaz	58.13	308	⇑*i*P	P	01 22 29.3	+0.6
ISR	Istrita	58.41	306	⇑*i*P	P	01 22 31.8	+1.0
BURAR	Bucovina Array	58.49	309	⇑*i*P	P	01 22 31.8	+0.4
LVV	L'vov	58.56	312	*i* P	P	01 22 31.9	+0.2
LVV				*e*S	S	01 30 32.0	-3.1
LVV				pmax	pmax		
	comp=Z,160nm,1.3s						
OZUR		58.60	307	⇑*i*P	P	01 22 32.9	+0.8
LOF	Lofoten	58.66	334	*e*P	P	01 22 31.3	-0.7
MLR	Muntele Rosu	58.69	306	PFAKE		01 22 40.0	+7.1
MLR				LR	LR		
	comp=Z,2µm,22.0s						
MLR	Muntele Rosu	58.69	306	⇑*i*P	P	01 22 33.8	+0.9
SULR		58.75	305	⇑*i*P	P	01 22 34.3	+1.2
SECR		58.76	306	⇑*i*P	P	01 22 34.2	+1.0
MOR8	Moi Rana	58.83	332	*e*P	P	01 22 31.5	-1.8
PHSR	Pinarhisar	58.91	302	⇑*i*P	P	01 22 34.8	+0.5
RAZG	Razgrad	58.95	304	⇑*i*P	P	01 22 35.1	+0.6
SGRR	Singureni	59.09	305	⇑*i*P	P	01 22 36.3	+0.8
ARCR	ARCALIA	59.22	308	⇓*i*P	P	01 22 37.8	+1.5
KONS	Konsvik	59.26	332	*e*P	P	01 22 35.8	-0.4
VOIR		59.31	306	⇓*i*P	P	01 22 37.5	+0.4
KLNR	Kaliningrad	59.36	318	*e*P	P	01 22 36.6	-0.5
KLNR				pmax	pmax		
	comp=Z,143nm,1.1s						
BALB	Balikesir	59.36	299	PFAKE		01 22 50.0	+13
BALB				LR	LR		
	comp=Z,2µm,20.0s						
SPIA	Saint Paul Isl	59.43	39	*e*P	P	01 22 38.1	+0.5
	comp=Z,215nm,1.2s						
SPIA				LR	LR		
	comp=Z,1µm,19.0s						
KWP	Kalwaria Pacla	59.44	312	*e*P	P	01 22 38.7	+0.9
KWP				*e*pP	pP	01 22 43.0	-0.1
KWP				LMZ	LR	01 49 20.1	
	comp=Z,800nm,23.1s						
KWP	Kalwaria Pacla	59.44	312	PFAKE		01 22 50.0	+12
KWP				LR	LR		
	comp=Z,8µm,20.0s						
KWP	Kalwaria Pacla	59.44	312	*e*P	P	01 22 38.7	+0.9
KWP				*e**PP	pP	01 22 43.0	-0.1
KWP				MLR	MLR		
	comp=Z,800nm,23.1s						
RDOG	Red Dog Mine	59.49	26	PFAKE		01 22 50.0	+12
RDOG				LR	LR		
	comp=Z,2µm,19.0s						
ANM	Nome	59.55	30	*e*P	P	01 22 38.9	+0.6
	comp=Z,62nm,1.0s						
ANM				LR	LR		
	comp=Z,2µm,18.0s						
ANM	Nome	59.55	30	*e*P	P	01 22 38.9	+0.6
ANM				pmax	pmax		
	comp=Z,62nm,1.0s						
ANM				MLR	MLR		
	comp=Z,2µm,18.0s						
BMR	Baia Mare	59.58	309	⇑*i*P	P	01 22 40.0	+1.2
FETY	Fethiye	59.60	296	P	P	01 22 42.8	+3.7
ARR	Arges	59.60	307	⇓*i*P	P	01 22 39.9	+0.8
COPA	Copaceanca	59.64	305	⇑*i*P	P	01 22 39.6	+0.4
HUMR	Humele	59.66	305	⇑*i*P	P	01 22 39.6	+0.2
ZIMR		59.70	304	⇓*i*P	P	01 22 42.2	+2.5
PMG	Port Moresby	59.72	129	P	P	01 22 40.4	+0.3
	comp=Z,26nm,0.7s,baz=15,slow=9.1,SNR=5.6						
PMG	Port Moresby	59.72	129	*e*P	P	01 22 39.6	-0.5
	comp=Z,51nm,0.9s						
PMG	Port Moresby	59.72	129	*ce*P	P	01 22 43.5	+3.4
PMG				pmax	pmax		
	comp=Z,156nm,0.8s						
CJR	Cluj-Napoca	59.83	308	⇑*i*P	P	01 22 41.8	+1.2

BEL	Belsk	59.89	315	eP	P	01 22 41.4	+0.6
BEL				LMZ	LR	01 53 03.5	
	comp=Z,1µm,16.5s						
BEL	Belsk	59.89	315	eP	P	01 22 41.4	+0.6
BEL				MLR	MLR		
	comp=Z,1µm,16.5s						
KOLS	Kolonicke sedl	59.93	311	eP	P	01 22 41.7	+0.5
KOLS				pmax	pmax		
	comp=Z,60nm,1.6s						
KOLS	Kolonicke sedl	59.93	311	eP	P	01 22 41.7	+0.5
KOLS				eL	L	01 49 27.4	
ATD	Arta Tunnel	60.01	263	eP	P	01 22 40.6	-1.6
	comp=Z,79nm,1.3s						
ATD	Arta Tunnel	60.01	263	P	P	01 22 43.1	+0.9
	SNR=5.1						
UZH	Uzhgorod	60.02	311	⇑eP	P	01 22 41.9	+0.1
UZH				e		01 22 46.2	
UZH				i		01 22 54.0	
UZH				e		01 23 28.6	
UZH				e		01 24 59.5	
UZH				e		01 26 19.8	
UZH				eS	S	01 30 49.6	-4.3
UZH				e		01 31 09.7	
UZH				e		01 32 25.8	
UZH				MLR	MLR		
	comp=N,180nm,14.0s						
UZH				MLR	MLR		
	comp=E,210nm,14.0s						
UZH				MLR	MLR		
	comp=Z,120nm,14.0s						
TRPA	Tarpa	60.03	310	⇑iP	P	01 22 42.4	+0.5
TRPA	Tarpa	60.03	310	⇑iP	P	01 22 42.1	+0.2
LOT	Lotru	60.15	307	⇓iP	P	01 22 43.3	+0.4
VLAD	Vladila	60.23	305	⇓iP	P	01 22 43.8	+0.5
PLVB	Pleven	60.30	304	⇓iP	P	01 22 44.1	+0.3
NSS	Namsos	60.30	330	eP	P	01 22 42.6	-0.9
DRGR		60.38	309	⇓iP	P	01 22 45.1	+0.7
DRGR		60.38	309	P	P	01 22 45.1	+0.7
KDZ	Kurdzhali	60.38	302	eP	P	01 22 43.9	-0.5
EZN	Ezine	60.41	300	P	P	01 22 44.6	0.0
EZN	Ezine	60.41	300	⇑iP	P	01 22 44.8	+0.2
RDO	Rodhopi	60.48	302	P	P	01 22 45.4	+0.3
DEV	Deva	60.57	308	⇑iP	P	01 22 46.8	+1.2
LTVH	Ltavrtes, Hu	60.69	309	⇑iP	P	01 22 47.0	+0.7
BODT	Bodrum	60.75	297	P	P	01 22 46.3	-0.7
SRE	Strehaia	60.80	306	⇓iP	P	01 22 47.7	+0.5
GZR	Gura Zlata	60.82	307	⇓iP	P	01 22 48.3	+0.9
SMG	Samos	60.84	298	P	P	01 22 47.4	-0.2
RZN	Rozhen	60.85	303	eP	P	01 22 47.7	-0.2
BAIL	Bailesti	60.94	305	⇑iP	P	01 22 48.9	+0.8
NIE	Niedzica	60.99	312	eP	P	01 22 49.6	+1.2
NIE				epP	pP	01 22 53.7	-0.1
NIE				LMZ	LR	01 50 09.0	
	comp=Z,600nm,20.3s						
NIE	Niedzica	60.99	312	eP	P	01 22 49.6	+1.2
NIE				e*PP	pP	01 22 53.7	-0.1
NIE				MLR	MLR		
	comp=Z,600nm,20.3s						
OJC	Ojcow	61.02	313	eP	P	01 22 49.2	+0.6
OJC				LMZ	LR	01 50 28.7	
	comp=Z,1µm,20.5s						
OJC	Ojcow	61.02	313	eP	P	01 22 49.2	+0.6
SIRR	Siria	61.24	308	⇓iP	P	01 22 50.5	+0.3
HERR	Herculane	61.25	307	⇑iP	P	01 22 51.0	+0.8
WRA	Warramunga Arr	61.32	147	P	P	01 22 50.0	-0.9
	comp=Z,56nm,0.7s,baz=309,slow=7.8,SNR=99						
TBLU	Trondheim	61.44	329	eP	P	01 22 49.9	-1.3
GKP	Gorka Klasztor	61.45	317	eP	P	01 22 51.9	+0.4
GKP				LMZ	LR	01 50 35.6	
	comp=Z,1µm,18.8s						
GKP	Gorka Klasztor	61.45	317	eP	P	01 22 51.9	+0.4
GKP				MLR	MLR		
	comp=Z,1µm,18.8s						
BZS	Buzias	61.50	308	⇑iP	P	01 22 52.4	+0.4
VTS	Vitosha	61.53	304	PFAKE		01 23 00.0	+7.6
VTS				LR	LR		
	comp=Z,600nm,21.0s						
VTS	Vitosha	61.53	304	⇑iP	P	01 22 53.4	+1.0
VTS	Vitosha	61.53	304	eP	P	01 22 53.4	+1.0
NIKH	Nikolski High	61.55	43	PFAKE		01 23 00.0	+7.9
NIKH				LR	LR		
	comp=Z,1µm,18.0s						
NVR	Nevrokopi	61.58	302	P	P	01 22 52.1	-0.5
MMB	Musomiste	61.58	303	eP	P	01 22 52.1	-0.5
LANS	Liptovska Anna	61.59	312	eP	P	01 22 53.8	+1.2
LANS				pmax	pmax		
	comp=Z,11nm,1.2s						
LANS	Liptovska Anna	61.59	312	eP	P	01 22 53.8	+1.2
MDVR	Moldovita	61.75	307	⇓iP	P	01 22 54.3	+0.6
NC602	NORSAR Array S	61.76	326	eP	P	01 22 52.9	-0.5
PSZ	Piszkesteto	61.77	311	⇓iP	P	01 22 54.8	+1.0
PSZ	Piszkesteto	61.77	311	⇑iP	P	01 22 54.0	+0.2
NB2	NORSAR Subarra	61.80	327	P	P	01 22 53.1	-0.7
	comp=Z,43nm,0.7s,baz=69,slow=6.9						
NB2	NORSAR Subarra	61.80	327	P	P	01 22 53.1	-0.7
	baz=69,slow=6.9						
NOA	NORSAR Array B	61.80	327	P	P	01 22 52.9	-0.9
	comp=Z,30nm,0.6s,baz=70,slow=6.8,SNR=136						
NOA				LR	LR	01 51 09.2	
	comp=Z,774nm,20.0s,baz=75,slow=38						
AMBH	Ambrzfalva	61.81	309	i P	P	01 22 55.1	+1.1
SRS	Serrai	61.85	302	P	P	01 22 54.0	-0.4
KKB	Krupnik	61.92	303	eP	P	01 22 54.5	-0.3
NC204	NORSAR Array S	61.92	327	eP	P	01 22 54.3	-0.3
	comp=Z,148nm,0.8s						
BSD	Bornholm Skovb	62.08	319	⇑iP	P	01 22 55.4	-0.3
BSD				pmax	pmax		
	comp=Z,64nm,0.8s						
BSD				MLR	MLR		
	comp=Z,2µm,20.0s						
BSD	Bornholm Skovb	62.08	319	⇑iP	P	01 22 55.4	-0.3
	comp=Z,64nm,0.8s						
	comp=Z,2µm,20.0s						
OKC	Ostrava-Krasne	62.15	313	eP	P	01 22 56.8	+0.6
OKC				e		01 23 00.9	
OKC				MLR	MLR		
	comp=Z,1µm,12.4s						
OKC	Ostrava-Krasne	62.15	313	eP	P	01 22 56.8	+0.6
OKC				epP	pP	01 23 00.9	-0.7
OKC				ex	x	01 23 17.4	
OKC				AMS	AMS	01 51 50.0	
	comp=Z,1µm,12.4s						
VYHS	Vyhne	62.22	311	eP	P	01 22 57.8	+1.0
VYHS				pmax	pmax		
	comp=Z,90nm,1.5s						
VYHS	Vyhne	62.22	311	eP	P	01 22 57.8	+1.0
PLG	Polygyros	62.24	302	P	P	01 22 56.8	-0.3
KNT	Kendrikon	62.32	303	P	P	01 22 57.2	-0.3
DOMB	Dombas	62.40	328	eP	P	01 22 57.2	-0.5
OSL	Oslo	62.43	325	eP	P	01 22 58.0	+0.1
BUD	Budapest	62.48	310	i P	P	01 22 59.1	+0.6
VAY	Valandovo	62.48	303	i P	P	01 22 58.6	0.0
MORC	Moravsky Berou	62.53	313	PFAKE		01 23 10.0	+11
MORC				LR	LR		
	comp=Z,600nm,19.0s						
MORC	Moravsky Berou	62.53	313	⇓iP	P	01 22 59.4	+0.5
MORC	Moravsky Berou	62.53	313	⇑iP	P	01 22 59.6	+0.7
UNV	Unalaska Valle	62.55	42	eP	P	01 22 58.5	-0.2
	comp=Z,47nm,1.2s						
UNV				LR	LR		
	comp=Z,700nm,22.0s						
EREA	Eretria	62.67	299	P	P	01 23 00.0	0.0
SRO	Srobarova	62.80	311	eP	P	01 23 01.9	+1.3
SRO	Srobarova	62.80	311	eP	P	01 23 01.8	+1.2
JAVC	Velka Javorina	62.80	312	⇑eP	P	01 23 02.6	+1.9
XOR	Xorichti	62.82	301	P	P	01 23 00.1	-0.8
AKUT	Akutan	62.84	41	eP	P	01 23 00.9	+0.2
	comp=Z,62nm,0.8s						
MOL	Molde	62.85	329	eP	P	01 23 01.0	+0.4
FRGS	Fruska Gora	62.86	308	i P	P	01 23 01.4	+0.3
LAST	Lasithi	62.87	295	P	P	01 23 01.1	-0.3
PTL	Penteli	62.87	299	P	P	01 23 00.8	-0.5
KSP	Ksiaz	62.88	315	eP	P	01 23 01.8	+0.7
KSP				epP	pP	01 23 06.0	-0.4
KSP				LMZ	LR	01 50 41.9	
	comp=Z,900nm,16.7s						
KSP	Ksiaz	62.88	315	eP	P	01 23 01.8	+0.7
KSP				e*PP	pP	01 23 06.1	-0.4
KSP				MLR	MLR		
	comp=Z,900nm,16.7s						
VLY	Voula,Athens	63.00	299	P	P	01 23 01.2	-0.9
CSKK	Cskako	63.00	310	⇑iP	P	01 23 01.0	-0.9
ATH	Athens Observa	63.01	299	P	P	01 23 01.2	-0.9
SKO	Skopje	63.01	304	i P	P	01 23 02.7	+0.6
LIT	Litokhoron	63.02	302	PFAKE		01 23 10.0	+7.7
LIT				LR	LR		
	comp=Z,500nm,20.0s						
LIT	Litokhoron	63.02	302	P	P	01 23 01.2	-1.1
OSTC	Ostas	63.03	314	eP	P	01 23 02.8	+0.6
OSTC				AMS	AMS	01 53 00.0	
	comp=Z,900nm,11.1s						
DPC	Dobruska-Polom	63.05	314	eP	P	01 23 03.3	+1.0
DPC				e		01 23 07.4	
DPC				MLR	MLR		
	comp=Z,1µm,10.0s						
DPC	Dobruska-Polom	63.05	314	eP	P	01 23 03.3	+1.0
DPC				epP	pP	01 23 07.4	-0.3
DPC				AMS	AMS	01 52 30.0	
	comp=Z,1µm,10.0s						
KONO	Kongsberg	63.07	325	eP	P	01 23 01.9	-0.3
	comp=Z,72nm,1.3s						
KONO				LR	LR		
	comp=Z,1µm,18.0s						
KONO	Kongsberg	63.07	325	eP	P	01 23 01.9	-0.3
KONO				pmax	pmax		
	comp=Z,72nm,1.3s						
KONO				MLR	MLR		
	comp=Z,1µm,18.0s						
KONO	Kongsberg	63.07	325	eP	P	01 23 01.3	-0.9
SMOL	Smolenice	63.08	312	eP	P	01 23 03.7	+1.2
SMOL	Smolenice	63.08	312	eP	P	01 23 03.7	+1.2
CHVC	Chvalec	63.11	314	eP	P	01 23 03.2	+0.5
CHVC				AMS	AMS	01 52 20.0	
	comp=Z,1µm,11.7s						
DIVS	Divibare	63.15	307	i P	P	01 23 03.3	+0.2
RGN	Rugen	63.15	319	PFAKE		01 23 10.0	+7.2
RGN				LR	LR		
	comp=Z,2µm,18.0s						
UPC	Upice	63.17	314	eP	P	01 23 03.7	+0.6
UPC				e		01 23 07.9	
UPC				MLR	MLR		
	comp=Z,1µm,12.4s						
UPC	Upice	63.17	314	eP	P	01 23 03.7	+0.6
UPC				epP	pP	01 23 07.9	-0.5
UPC				AMS	AMS	01 52 30.0	
	comp=Z,1µm,12.4s						
COP	Copenhagen	63.19	321	⇑iP	P	01 23 03.8	+0.8
COP				pmax	pmax		
	comp=Z,86nm,0.8s						
COP	Copenhagen	63.19	321	⇑iP	P	01 23 03.8	+0.8
	comp=Z,86nm,0.8s						
MORH	Mrgy, Hungar	63.20	309	i P	P	01 23 03.7	+0.4
MORH	Mrgy, Hungar	63.20	309	⇑iP	P	01 23 03.1	-0.2
ATAL	Atalanti	63.21	300	P	P	01 23 02.6	-0.9
MODS	Modra-Piesok	63.23	312	eP	P	01 23 03.6	+0.1
MODS				pmax	pmax		
	comp=Z,129nm,1.4s						
MODS	Modra-Piesok	63.23	312	eP	P	01 23 03.6	+0.1
MODS				eL	L	01 51 50.8	
AKN	Aaknes	63.24	329	eP	P	01 23 03.5	+0.2
LKR	Lokris	63.24	300	P	P	01 23 02.4	-1.3
SKAR	Skarslia	63.26	327	eP	P	01 23 03.8	+0.3
VRAC	Vranov	63.28	313	⇓iP	P	01 23 04.7	+0.9
VRAC	Vranov	63.28	313	⇑iP	P	01 23 04.9	+1.1
ZST	Bratislava	63.40	312	eP	P	01 23 04.9	+0.3
ZST	Bratislava	63.40	312	eP	P	01 23 04.9	+0.3
TIH	Tihany	63.41	310	⇑iP	P	01 23 03.1	-1.6
SIVA	Sivas	63.43	296	P	P	01 23 04.8	-0.2
KZN	Kozani	63.44	302	P	P	01 23 04.1	-1.0
DAG	Danmarks Havn	63.48	348	⇑iP	P	01 23 03.7	-0.9
DAG				MLR	MLR		
	comp=Z,740nm,16.0s						
DAG	Danmarks Havn	63.48	348	⇑iP	P	01 23 03.7	-0.9
	comp=Z,730nm,16.0s						
KRUC	Moravsky	63.50	313	⇑iP	P	01 23 06.1	+0.9
AGG	Agios Georgios	63.57	301	PFAKE		01 23 20.0	+14
AGG				LR	LR		
	comp=Z,400nm,22.0s						
AGG	Agios Georgios	63.57	301	P	P	01 23 05.0	-0.9
THL	Klokotos Trika	63.57	301	P	P	01 23 05.2	-0.7
BBLS	Lazići	63.63	306	i P	P	01 23 06.8	+0.5
IVA	Berane	63.70	305	⇑iP	P	01 23 07.9	+1.1
VAM	Vamos	63.72	296	P	P	01 23 06.0	-0.9
RUDO	Rudo	63.75	306	eP	P	01 23 06.4	-0.6
PVY	Plav	63.77	305	⇑iP	P	01 23 08.0	+0.7
OHR	Ohrid	63.79	303	i P	P	01 23 09.1	+1.7
PHP	Peshkopia	63.81	304	P	P	01 23 06.8	-0.7
TOLK	Toolik Lake Re	63.83	23	PFAKE		01 23 20.0	+13
TOLK				LR	LR		
	comp=Z,2µm,20.0s						
TOLK	Toolik Lake Re	63.83	23	P	P	01 23 07.7	+0.6
	baz=298						
FALS	False Pass	63.83	40	PFAKE		01 23 20.0	+13
FALS				LR	LR		
	comp=Z,800nm,21.0s						
HAPS	Han Pijesak,Bl	63.84	307	eP	P	01 23 07.4	-0.3
IMMV	Iera Moni Meta	63.85	296	P	P	01 23 07.5	-0.3
PLE	Pljevlja	63.85	306	⇑iP	P	01 23 08.5	+0.7
KPRO	Kipourio	63.87	302	P	P	01 23 06.9	-1.1
NEST	Nestorio	63.90	302	P	P	01 23 07.2	-1.0
PENT	Pentalofos	63.93	302	P	P	01 23 07.4	-1.0
SOP	Sopron	63.94	311	⇑iP	P	01 23 08.1	-0.1
TREC	Trest	63.95	313	eP	P	01 23 09.0	+0.7
TREC				e		01 23 13.0	
TREC				MLR	MLR		
	comp=Z,1µm,23.9s						
TREC	Trest	63.95	313	eP	P	01 23 09.0	+0.7
TREC				epP	pP	01 23 13.0	-0.7
TREC				AMS	AMS	01 56 20.0	
	comp=Z,1µm,23.9s						
KOME	Kolasin	63.96	305	⇑iP	P	01 23 09.4	+0.9
EVR	Evrytania	63.98	301	P	P	01 23 07.7	-1.1
HYA	Hoyanger	64.01	328	eP	P	01 23 08.3	0.0
PVCC	Panska Ves	64.01	315	eP	P	01 23 09.6	+1.0
PVCC				MLR	MLR		
	comp=Z,1µm,13.4s						
PVCC	Panska Ves	64.01	315	eP	P	01 23 09.6	+1.0
PVCC				AMS	AMS	01 51 10.0	
	comp=Z,1µm,13.4s						
ANX	Ano Chora	64.04	300	P	P	01 23 08.3	-0.8
VLI	Veliai	64.09	298	P	P	01 23 06.8	-2.5
GOPC	GO Pecny, Ondr	64.13	314	eP	P	01 23 09.8	+0.4
GOPC				e		01 23 14.1	
GOPC				MLR	MLR		
	comp=Z,1µm,17.9s						
GOPC	GO Pecny, Ondr	64.13	314	eP	P	01 23 09.8	+0.4
GOPC				epP	pP	01 23 14.1	-0.7
GOPC				AMS	AMS	01 54 40.0	
	comp=Z,1µm,17.9s						
HOMB	Homborsund	64.14	324	eP	P	01 23 08.7	-0.6
DOB	Doboj	64.14	308	eP	P	01 23 09.2	-0.3
LAKA	Lakka	64.14	300	P	P	01 23 08.5	-1.2
ANKY	Antikythira Is	64.18	297	P	P	01 23 08.8	-1.2
KTHA	Kythira Island	64.19	297	P	P	01 23 08.2	-1.9
UPM	Unac-Piva	64.23	306	⇑iP	P	01 23 10.5	+0.1
UPM	Unac-Piva	64.23	306	eP	P	01 23 12.3	+1.9
BRG	Berggiesshubel	64.24	315	⇑iP	P	01 23 10.5	+0.4
	comp=Z,49nm,0.9s						
PRU	Pruhonice	64.24	314	eP	P	01 23 10.8	+0.7
PRU				e		01 23 15.0	
PRU				MLR	MLR		
	comp=Z,1µm,11.2s						
PRU	Pruhonice	64.24	314	eP	P	01 23 10.8	+0.7
PRU				epP	pP	01 23 15.0	-0.5
PRU				AMS	AMS	01 53 00.0	
	comp=Z,1µm,11.2s						
CONA	Conrad Observa	64.27	312	i pP	P	01 23 11.6	+1.1
	comp=Z,90nm,1.4s,SNR=60						
MORW	Morawa	64.28	168	eP	P	01 23 09.9	-0.5
	comp=Z,36nm,1.1s						
COLD	Coldfoot	64.28	25	PFAKE		01 23 20.0	+10
COLD				LR	LR		
	comp=Z,2µm,20.0s						
BEHE	Becsehely	64.29	310	i P	P	01 23 11.3	+0.8
BEHE	Becsehely	64.29	310	⇑iP	P	01 23 10.1	-0.4
PDG	Podgorica	64.31	305	⇑iP	P	01 23 11.1	+0.4
PDG	Podgorica	64.31	305	i P	P	01 23 10.9	+0.2
TTG	Podgorica	64.31	305	⇑iP	P	01 23 11.1	+0.4
TTG	Podgorica	64.31	305	PFAKE		01 23 20.0	+9.3
TTG				LR	LR		
	comp=Z,1µm,22.0s						
PVO	Paravola	64.31	300	P	P	01 23 09.9	-0.9
ODD1	Odda	64.34	326	eP	P	01 23 10.3	-0.4
TIR	Tirane	64.34	304	PFAKE		01 23 20.0	+9.1
TIR				LR	LR		
	comp=Z,800nm,20.0s						
TIR	Tirane	64.34	304	P	P	01 23 10.6	-0.3
TIR	Tirane	64.34	304	⇑iP	P	01 23 10.9	0.0
JAN	Janina	64.35	302	P	P	01 23 10.4	-0.7
NKME	Niksic	64.38	306	⇑iP	P	01 23 11.6	+0.4
ASAR	Alice Springs	64.42	150	P	P	01 23 11.1	-0.4
	comp=Z,18nm,0.4s,baz=331,slow=6.6,SNR=240						
ASAR				PKPPKP	P'P'df	01 51 59.0	+4.7
	comp=Z,1.5nm,0.8s,baz=150,slow=3.9,SNR=4.6						
ASAR				PKP2bc		01 52 06.0	
	comp=Z,1.8nm,0.8s,baz=141,slow=2.9,SNR=8.1						
DRME	Dracevica, Mon	64.46	305	⇑iP	P	01 23 12.2	+0.5
DRME	Dracevica, Mon	64.46	305	i P	P	01 23 12.1	+0.4
CEME	Cevo	64.49	305	⇑iP	P	01 23 12.1	+0.1
ULC	Ulcinj	64.51	305	⇑iP	P	01 23 12.2	+0.2
DYR	Agios Nikonas	64.51	298	P	P	01 23 10.6	-1.5
MUD	Monsted U'grnd	64.56	322	⇑iP	P	01 23 12.8	+0.8
MUD				pmax	pmax		
	comp=Z,140nm,1.1s						
MUD				MLR	MLR		
	comp=Z,1µm,17.0s						
MUD	Monsted U'grnd	64.56	322	⇑iP	P	01 23 12.8	+0.8
	comp=Z,137nm,1.1s						
	comp=Z,1µm,17.0s						
RLS	Riolos of Patr	64.59	300	P	P	01 23 11.6	-1.0
BRY	Bratogost	64.60	306	⇑iP	P	01 23 12.7	0.0
BRY	Bratogost	64.60	306	eP	P	01 23 11.2	-1.5
CLL	Collm	64.60	316	PFAKE		01 23 20.0	+7.5
CLL				LR	LR		
	comp=Z,1µm,20.0s						
CLL	Collm	64.60	316	⇑iP	P	01 23 12.6	+0.1
CLL				i		01 23 15.8	
CLL				pmax	pmax		
	comp=Z,90nm,1.4s						
CLL				MLR	MLR		
	comp=Z,900nm,19.0s						
CLL	Collm	64.60	316	⇑iP	P	01 23 12.6	+0.1
	comp=Z,90nm,1.4s						
CLL				i pP	pP	01 23 15.8	-2.0
CLL				LmH		01 48 00.0	
	comp=N,1µm,19.6s						
CLL				LmH		01 48 00.0	
	comp=E,500nm,20.9s						
CLL				LmV		01 53 00.0	
	comp=Z,900nm,19.0s						
BUM	Brajici-Budva	64.61	305	⇑iP	P	01 23 13.1	+0.4
BLS5	Blasjo	64.62	326	eP	P	01 23 12.7	+0.2
KALN	Kalnik	64.63	310	i P	P	01 23 13.4	+0.6
KOGS	Kog	64.63	310	i P	P	01 23 12.8	+0.1
TPE	Tepelena	64.67	303	P	P	01 23 12.4	-0.7
BER	Bergen	64.72	327	eP	P	01 23 13.0	-0.1
BLY	Banja Luka	64.73	308	PFAKE		01 23 30.0	+17
BLY				LR	LR		
	comp=Z,1µm,21.0s						
BLY	Banja Luka	64.73	308	⇓iP	P	01 23 14.1	+0.7
BLY	Banja Luka	64.73	308	i P	P	01 23 13.9	+0.5
SNART	Snartemo	64.73	325	eP	P	01 23 13.3	+0.2
ASK	Askoy	64.74	327	eP	P	01 23 13.1	0.0
ARSA	Arzberg	64.76	311	i pP	P	01 23 14.2	+0.6
	comp=Z,38nm,1.2s,SNR=21						
IGT	Igoumenitsa	64.77	302	P	P	01 23 12.3	-1.5
TREB	Trebinje	64.80	306	eP	P	01 23 13.9	0.0
HCY	Herceg Novi	64.81	305	⇑iP	P	01 23 14.0	0.0
HCY	Herceg Novi	64.81	305	eP	P	01 23 12.9	-1.1
LKD2	Lefkada island	64.85	301	P	P	01 23 12.9	-1.5
FURI	Furi	64.87	263	eP	P	01 23 15.8	+0.7
	comp=Z,65nm,1.3s						
PYL	PYLOS	64.88	299	P	P	01 23 11.9	-2.6
DBRK	Dubrovnik	64.96	306	i P	P	01 23 14.6	-0.4
SVW2	Sparrevohn	65.00	32	PFAKE		01 23 30.0	+15
SVW2				LR	LR		
	comp=Z,1µm,19.0s						
PTJ	Puntijarka	65.03	310	P	P	01 23 15.9	+0.4
KEK	Kerkira	65.07	302	P	P	01 23 13.9	-1.8
MLY	Manley	65.14	27	PFAKE		01 23 30.0	+14
MLY				LR	LR		
	comp=Z,2µm,19.0s						
KHC	Kasperske Hory	65.17	314	PFAKE		01 23 30.0	+14
KHC				LR	LR		
	comp=Z,400nm,20.0s						
KHC	Kasperske Hory	65.17	314	eP	P	01 23 16.9	+0.7
KHC				e		01 23 21.0	
KHC				MLR	MLR		
	comp=Z,1µm,17.0s						
KHC	Kasperske Hory	65.17	314	eP	P	01 23 16.9	+0.7
KHC				epP	pP	01 23 21.0	-0.6
KHC				ex	x	01 23 57.5	
KHC				ex	x	01 24 24.5	
KHC				AMS	AMS	01 57 00.0	
	comp=Z,1µm,17.0s						
STON	Ston	65.17	306	i P	P	01 23 14.6	-1.7
STON	Ston	65.17	306	i P	P	01 23 15.6	-0.7
SDPT	Sand Point	65.17	39	PFAKE		01 23 30.0	+14
SDPT				LR	LR		
	comp=Z,700nm,20.0s						
GEC2	GERESS Array S	65.21	313	PFAKE		01 23 30.0	+13
GEC2				LR	LR		
	comp=Z,700nm,18.0s						
GERES	GERESS Array B	65.21	313	P	P	01 23 16.8	+0.2
	comp=Z,24nm,1.0s,baz=64,slow=6.1,SNR=153						
DOBS	Dobrina	65.25	310	eP	P	01 23 16.9	+0.2
PERS	Pernice	65.27	311	i P	P	01 23 17.2	+0.3
KMY	Karmoy	65.27	326	eP	P	01 23 16.7	0.0
MOA	Molln	65.28	312	i pP	P	01 23 17.9	+0.9
	comp=Z,79nm,1.5s,SNR=71						
SOKA	Soboth	65.30	311	i pP	P	01 23 17.7	+0.5
	comp=Z,121nm,1.5s,SNR=68						
NKC	Novy Kostel	65.37	315	eP	P	01 23 18.1	+0.6
NKC				e		01 23 21.9	
NKC				MLR	MLR		
	comp=Z,2µm,12.3s						
NKC	Novy Kostel	65.37	315	eP	P	01 23 18.1	+0.6
NKC				ex	x	01 23 21.9	
NKC				AMS	AMS	01 55 20.0	
	comp=Z,2µm,12.3s						
CRES	Cresnjev	65.39	310	i P	P	01 23 18.2	+0.5
CAST	Castle Rocks	65.39	29	PFAKE		01 23 30.0	+13
CAST				LR	LR		
	comp=Z,3µm,18.0s						
MAKA	Makarska	65.45	307	i P	P	01 23 17.6	-0.4
OZLJ	Ozalj	65.47	310	i P	P	01 23 18.8	+0.6
BPAW	Bear Paw Mtn.	65.49	28	PFAKE		01 23 30.0	+12
BPAW				LR	LR		
	comp=Z,3µm,20.0s						
PPLA	Purkeypile	65.60	29	PFAKE		01 23 30.0	+11
PPLA				LR	LR		
	comp=Z,2µm,21.0s						
BOJS	Bojanci	65.66	309	i P	P	01 23 20.2	+0.8
BOJS				i S	S	01 32 10.4	+5.7
OBKA	Obir	65.67	311	i pP	P	01 23 20.1	+0.5
	comp=Z,58nm,1.8s,SNR=22						
UDBI	Udbina	65.74	308	i P	P	01 23 19.8	-0.2
KTH	Kantishna Hill	65.78	28	PFAKE		01 23 30.0	+10
KTH				LR	LR		
	comp=Z,2µm,18.0s						
VISS	Visnje	65.79	310	i P	P	01 23 20.7	+0.4
CHGN	Chignik	65.81	37	PFAKE		01 23 30.0	+10
CHGN				LR	LR		
	comp=Z,800nm,20.0s						
HVAR	Hvar	65.87	307	i P	P	01 23 19.8	-1.0
LJU	Ljubljana	65.89	310	i P	P	01 23 21.2	+0.3
BWN	Browne	66.04	27	PFAKE		01 23 30.0	+8.4
BWN				LR	LR		
	comp=Z,2µm,19.0s						
MORI	Morici	66.06	308	i P	P	01 23 21.2	-0.8
CEY	Cerknica	66.08	310	i P	P	01 23 22.3	+0.1
KBA	Koelnbreinsper	66.18	312	i pP	P	01 23 23.4	+0.4
	comp=Z,34nm,0.7s,SNR=24						
MYKA	Terra Mystica	66.19	311	i pP	P	01 23 23.0	+0.1
	comp=Z,16nm,0.9s,SNR=11						
ZIRJ	Zirje	66.19	308	i P	P	01 23 22.5	-0.3
RIY	Rijeka	66.22	310	P	P	01 23 22.7	-0.3
RIY	Rijeka	66.22	310	i P	P	01 23 22.9	-0.1
JAVS	Javornik	66.24	310	i P	P	01 23 23.1	-0.2
JAVS				i S	S	01 32 16.9	+4.8
TCOL	CIGO, UAF Yank	66.28	26	P	P	01 23 23.2	+0.2
	baz=301						
COLA	College	66.28	26	eP	P	01 23 23.6	+0.5
	comp=Z,188nm,0.9s						
COLA	College	66.28	26	eP	P	01 23 23.6	+0.5
COLA				pmax	pmax		
	comp=Z,188nm,0.9s						
NVLJ	Novalja	66.30	309	i P	P	01 23 22.7	-0.8
POKR	Poker Plat Res	66.31	26	P	P	01 23 23.5	+0.2
	baz=301						

FYU	**Fort Yukon**	**66.31**	**24**	PFAKE		01 23 40.0	+17
FYU				LR	LR		
	comp=Z,1μm,18.0s						
GRA1	**Grafenberg Arr**	**66.32**	**315**	PFAKE		01 23 40.0	+16
GRA1				LR	LR		
	comp=Z,700nm,20.0s						
GRFO	**Grafenberg**	**66.32**	**315**	PFAKE		01 23 40.0	+16
GRFO				LR	LR		
	comp=Z,900nm,22.0s						
WRH	**Wood River Hil**	**66.41**	**27**	PFAKE		01 23 40.0	+16
WRH				LR	LR		
	comp=Z,2μm,20.0s						
DUGI	**Dugi Otok**	**66.43**	**308**	*i* P	**P**	**01 23 23.6**	**-0.9**
MCK	**McKinley**	**66.47**	**28**	PFAKE		01 23 40.0	+16
MCK				LR	LR		
	comp=Z,3μm,18.0s						
RND	**Reindeer**	**66.66**	**28**	PFAKE		01 23 40.0	+14
RND				LR	LR		
	comp=Z,3μm,19.0s						
ILAR	**Eielson Array**	**66.69**	**26**	P	**P**	**01 23 24.9**	**-0.8**
	comp=Z,29nm,0.8s,baz=288,slow=6.2,SNR=71						
ILAR				PP	**PP**	**01 25 52.0**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=293,slow=6.3,SNR=3.2						
ILAR				PKPPKP	**P'P'df**	**01 51 55.6**	**-7.3**
	comp=Z,0.5nm,0.9s,baz=145,slow=3.3,SNR=4.0						
ILAR				LR	LR	01 54 46.7	
	comp=Z,792nm,20.0s,baz=332,slow=38						
PRP	**Porcupine Dome**	**66.78**	**25**	PFAKE		01 23 40.0	+14
PRP				LR	LR		
	comp=Z,1μm,20.0s						
MATE	**Matera**	**66.80**	**304**	⇑*i*P	**P**	**01 23 26.7**	**-0.1**
ABTA	**Abfaltersbach**	**66.84**	**312**	*i* pP	**P**	**01 23 26.8**	**-0.3**
	comp=Z,70nm,1.8s,SNR=22						
HDA	**Harding Lake**	**66.86**	**27**	PFAKE		01 23 40.0	+13
HDA				LR	LR		
	comp=Z,1μm,20.0s						
HDA	**Harding Lake**	**66.86**	**27**	P	**P**	**01 23 25.6**	**-1.2**
	baz=302						
WTTA	**Wattenberg**	**67.14**	**312**	*i* pP	**P**	**01 23 29.6**	**+0.5**
	comp=Z,124nm,1.4s,SNR=56						
WATA	**Walderalm**	**67.15**	**312**	*i* pP	**P**	**01 23 29.3**	**+0.2**
	comp=Z,154nm,1.3s,SNR=62						
DHY	**Denali Highway**	**67.41**	**28**	PFAKE		01 23 40.0	+10
DHY				LR	LR		
	comp=Z,2μm,18.0s						
HOM	**Homer**	**67.41**	**32**	PFAKE		01 23 40.0	+10
HOM				LR	LR		
	comp=Z,1μm,18.0s						
TIP	**Timpagrande**	**67.42**	**303**	⇑*i*P	**P**	**01 23 31.0**	**+0.1**
SQTA	**Sankt Quirin**	**67.42**	**313**	*i* pP	**P**	**01 23 31.2**	**+0.3**
	comp=Z,162nm,1.6s,SNR=64						
MOTA	**Moosalm**	**67.43**	**313**	*i* pP	**P**	**01 23 31.1**	**+0.2**
	comp=Z,34nm,0.8s,SNR=73						
CTA	**Charters Tower**	**67.48**	**137**	P	**P**	**01 23 30.3**	**-1.0**
	comp=Z,18nm,0.8s,baz=329,slow=8.6,SNR=14						
CTAO	**Charters Tower**	**67.48**	**137**	*e*P	**P**	**01 23 31.3**	**+0.1**
	comp=Z,38nm,1.0s						
CTAO	**Charters Tower**	**67.48**	**137**	*e*P	**P**	**01 23 31.3**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,38nm,1.0s						
RETA	**Reutte**	**67.57**	**313**	*i* pP	**P**	**01 23 31.9**	**+0.2**
	comp=Z,54nm,1.4s,SNR=32						
CNPM	**China Poot**	**67.65**	**32**	PFAKE		01 23 40.0	+8.1
CNPM				LR	LR		
	comp=Z,1μm,18.0s						
BRLK	**Bradley Lake**	**67.69**	**32**	PFAKE		01 23 40.0	+7.8
BRLK				LR	LR		
	comp=Z,900nm,18.0s						
LRW	**Lerwick**	**67.70**	**329**	*e*P	**P**	**01 23 32.1**	**0.0**
LRW				IAmb	IAmb	01 23 32.7	
	comp=Z,41nm,0.8s						
LRW				IAMs_20	IAMs_20	01 55 18.4	
	comp=Z,2μm,14.0s						
SML	**Sawmill**	**67.70**	**29**	PFAKE		01 23 40.0	+7.8
SML				LR	LR		
	comp=Z,2μm,18.0s						
WTSB	**Winterswijk**	**67.79**	**318**	*e*P	**P**	**01 23 32.7**	**-0.2**
	comp=Z,264nm,1.4s						
FETA	**Feichten**	**67.81**	**312**	*i* pP	**P**	**01 23 33.4**	**+0.1**
	comp=Z,81nm,1.2s,SNR=52						
KNK	**Knik Glacier**	**67.86**	**30**	PFAKE		01 23 50.0	+17
KNK				LR	LR		
	comp=Z,2μm,22.0s						
STU	**Stuttgart**	**67.92**	**315**	PFAKE		01 23 50.0	+16
STU				LR	LR		
	comp=Z,800nm,18.0s						
RIDG	**Independent Ri**	**68.00**	**27**	PFAKE		01 23 50.0	+16
RIDG				LR	LR		
	comp=Z,1μm,20.0s						
SCM	**Sheep Creek Mo**	**68.09**	**29**	PFAKE		01 23 50.0	+15
SCM				LR	LR		
	comp=Z,2μm,18.0s						
SEW	**Seward**	**68.13**	**31**	PFAKE		01 23 50.0	+15
SEW				LR	LR		
	comp=Z,2μm,18.0s						
SCRK	**Sand Creek**	**68.18**	**26**	PFAKE		01 23 50.0	+15
SCRK				LR	LR		
	comp=Z,1μm,20.0s						
PAX	**Paxson**	**68.20**	**27**	PFAKE		01 23 50.0	+15
PAX				LR	LR		
	comp=Z,2μm,20.0s						
DAVA	**Damuels**	**68.20**	**313**	*i* pP	**P**	**01 23 35.8**	**0.0**
	comp=Z,31nm,1.3s,SNR=16						
AQU	**L'Aquila**	**68.25**	**307**	*i* P	**P**	**01 23 36.9**	**+0.9**
NWAO	**Narrogin (SRO)**	**68.25**	**168**	P	**P**	**01 23 35.5**	**-0.3**
	comp=Z,26nm,0.7s,baz=349,slow=7.0,SNR=14						
NWAO	**Narrogin (SRO)**	**68.25**	**168**	*e*P	**P**	**01 23 35.7**	**-0.1**
	comp=Z,93nm,1.3s						
NWAO	**Narrogin (SRO)**	**68.25**	**168**	*e*P	**P**	**01 23 35.7**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,93nm,1.3s						
DOT	**Dot Lake**	**68.34**	**26**	PFAKE		01 23 50.0	+14
DOT				LR	LR		
	comp=Z,2μm,18.0s						
SCO	**Scoresbysund**	**68.39**	**343**	*i* P	**P**	**01 23 36.8**	**+0.5**
SCO	**Scoresbysund**	**68.39**	**343**	*i* P	**P**	**01 23 36.8**	**+0.5**
BFO	**Black Forest**	**68.63**	**315**	*e*P	**P**	**01 23 38.5**	**+0.2**
	comp=Z,50nm,1.0s						
BFO	**Black Forest**	**68.63**	**315**	*ce*P	**P**	**01 23 38.5**	**+0.2**
GLI	**Glacier Island**	**68.70**	**30**	PFAKE		01 23 50.0	+12
GLI				LR	LR		
	comp=Z,1μm,18.0s						
FORT	**Forrest**	**68.78**	**158**	*e*P	**P**	**01 23 39.0**	**-0.1**
	comp=Z,55nm,1.1s						
HGN	**Heimansgroeve**	**68.84**	**318**	*e*P	**P**	**01 23 40.0**	**+0.5**
	comp=Z,121nm,1.4s						
INK	**Inuvik**	**68.87**	**20**	PFAKE		01 23 50.0	+11
INK				LR	LR		
	comp=Z,2μm,20.0s						
MEM	**Membach**	**68.88**	**317**	⇑P	**P**	**01 23 40.1**	**+0.4**
	comp=Z,36nm,1.3s						
MENT	**Mentasta**	**68.88**	**27**	PFAKE		01 23 50.0	+10
MENT				LR	LR		
	comp=Z,2μm,19.0s						
BEBN	**Eben Emael**	**68.97**	**318**	⇑P	**P**	**01 23 40.8**	**+0.6**
FID	**Port Fidalgo**	**69.03**	**30**	PFAKE		01 23 50.0	+10
FID				LR	LR		
	comp=Z,2μm,18.0s						
EPYK	**Eagle Plains**	**69.19**	**22**	PFAKE		01 23 50.0	+8.5
EPYK				LR	LR		
	comp=Z,1μm,19.0s						
EPYK	**Eagle Plains**	**69.19**	**22**	P	**P**	**01 23 41.1**	**-0.4**
	baz=310						
WLF	**Walferdange**	**69.25**	**317**	PFAKE		01 23 50.0	+7.9
WLF				LR	LR		
	comp=Z,5μm,19.0s						
WLF	**Walferdange**	**69.25**	**317**	⇓P	**P**	**01 23 43.1**	**+1.1**
	comp=Z,133nm,1.3s						
VLC	**Villacollemand**	**69.35**	**310**	PFAKE		01 23 50.0	+7.2
VLC				LR	LR		
	comp=Z,800nm,21.0s						
BCLA	**Clavier**	**69.36**	**318**	⇑P	**P**	**01 23 43.2**	**+0.5**
	comp=Z,54nm,1.1s						
UCC	**Uccle**	**69.69**	**318**	PFAKE		01 24 00.0	+15
UCC				LR	LR		
	comp=Z,2μm,20.0s						
UCC	**Uccle**	**69.69**	**318**	⇑P	**P**	**01 23 44.7**	**-0.1**
BIGH	**Upper Bighouse**	**69.76**	**328**	*e*P	**P**	**01 23 45.5**	**+0.5**
BIGH				IAmb	IAmb	01 23 46.4	
	comp=Z,114nm,1.3s						
BIGH				IAMs_20	IAMs_20	01 58 58.0	
	comp=Z,1μm,15.5s						
DAWY	**Dawson**	**69.76**	**25**	PFAKE		01 24 00.0	+15
DAWY				LR	LR		
	comp=Z,1μm,18.0s						
SNF	**Seneffe**	**69.88**	**318**	⇑P	**P**	**01 23 46.4**	**+0.5**
DOU	**Dourbes**	**69.92**	**317**	⇑P	**P**	**01 23 46.7**	**+0.5**
RAGM	**Ragged Mountai**	**69.97**	**30**	PFAKE		01 24 00.0	+14
RAGM				LR	LR		
	comp=Z,3μm,18.0s						
DRUM	**Mains of Drumt**	**69.98**	**326**	*e*P	**P**	**01 23 46.5**	**0.0**
DRUM				IAmb	IAmb	01 23 50.6	
	comp=Z,102nm,1.3s						
SUMG	**Summit**	**70.07**	**349**	⇑*i*P	**P**	**01 23 47.2**	**0.0**
SUMG	**Summit**	**70.07**	**349**	⇑*i*P	**P**	**01 23 47.2**	**0.0**
HMT	**Hamilton**	**70.17**	**29**	PFAKE		01 24 00.0	+12
HMT				LR	LR		
	comp=Z,2μm,18.0s						
SENIN	**Lac Senin/Sane**	**70.20**	**313**	PFAKE		01 24 00.0	+12
SENIN				LR	LR		
	comp=Z,800nm,19.0s						
KAIM	**Kayak Island**	**70.34**	**30**	PFAKE		01 24 00.0	+11
KAIM				LR	LR		
	comp=Z,2μm,18.0s						
MRIV	**Mauritius Mete**	**70.34**	**227**	*e*P	**P**	**01 23 48.0**	**-1.1**
CRQM	**Cirque**	**70.37**	**29**	PFAKE		01 24 00.0	+11
CRQM				LR	LR		
	comp=Z,2μm,19.0s						
EDU	**Dundee**	**70.42**	**326**	*e*P	**P**	**01 23 49.3**	**+0.1**
KULLO	**Kullorsuaq**	**70.43**	**355**	⇑*i*P	**P**	**01 23 49.7**	**+0.8**
KULLO				pmax	pmax		
	comp=Z,120nm,0.9s						
KULLO	**Kullorsuaq**	**70.43**	**355**	⇑*i*P	**P**	**01 23 49.7**	**+0.8**
	comp=Z,121nm,0.9s						
TGL	**Tana Glacier**	**70.49**	**29**	PFAKE		01 24 00.0	+10
TGL				LR	LR		
	comp=Z,2μm,19.0s						
ESY	**Stoneypath**	**70.58**	**325**	*e*P	**P**	**01 23 49.9**	**-0.2**
CLTB	**Caltabellotta**	**70.63**	**303**	PFAKE		01 24 00.0	+9.1
CLTB				LR	LR		
	comp=Z,600nm,20.0s						
WACR	**West Acre**	**70.70**	**321**	*e*P	**P**	**01 23 50.3**	**-0.5**
WACR				IAmb	IAmb	01 23 51.8	
	comp=Z,247nm,1.1s						
WACR				IAMs_20	IAMs_20	01 57 30.1	
	comp=Z,887nm,13.6s						
LMK	**Market Rasen**	**70.80**	**322**	*e*P	**P**	**01 23 51.7**	**+0.2**
LMK				IAmb	IAmb	01 23 52.1	
	comp=Z,189nm,1.1s						
LMK				IAMs_20	IAMs_20	01 59 20.7	
	comp=Z,1μm,13.8s						
EDI	**Edinburgh**	**70.85**	**325**	*e*P	**P**	**01 23 51.7**	**0.0**
EDI				IAmb	IAmb	01 23 52.7	
	comp=Z,47nm,1.1s						
EBL	**Broad Law**	**70.86**	**325**	*e*P	**P**	**01 23 51.7**	**-0.2**
EDMD	**Edmundbyers**	**70.87**	**324**	*e*P	**P**	**01 23 51.4**	**-0.5**
EDMD				IAmb	IAmb	01 23 56.7	
	comp=Z,72nm,1.2s						
KAC	**Achnashellach**	**70.93**	**327**	*e*P	**P**	**01 23 51.9**	**-0.3**
CTGM	**Chitina Glacie**	**70.95**	**28**	PFAKE		01 24 00.0	+7.5
CTGM				LR	LR		
	comp=Z,2μm,18.0s						
LPL	**La Plagne**	**70.96**	**312**	*e*P	**P**	**01 23 52.7**	**-0.2**
LPL				pmax	pmax		
	comp=Z,168nm,0.9s						
EAU	**Auchinoon**	**71.02**	**325**	*e*P	**P**	**01 23 52.9**	**+0.1**
HPK	**Haverah Park**	**71.18**	**323**	*e*P	**P**	**01 23 53.7**	**-0.1**
HPK				IAMs_20	IAMs_20	01 57 28.2	
	comp=Z,1μm,18.5s						
KPL	**Plockton**	**71.18**	**327**	*e*P	**P**	**01 23 53.4**	**-0.3**
KPL				IAmb	IAmb	01 23 54.9	
	comp=Z,78nm,1.5s						
KPL				IAMs_20	IAMs_20	01 57 31.5	
	comp=Z,1μm,14.4s						
ESK	**Eskdalemuir**	**71.19**	**325**	*e*P	**P**	**01 23 53.8**	**0.0**
	comp=Z,24nm,0.9s						
ESK	**Eskdalemuir**	**71.19**	**325**	*e*P	**P**	**01 23 53.8**	**0.0**
ESK				pmax	pmax		
	comp=Z,24nm,0.9s						
BNI	**Bardonecchia**	**71.22**	**312**	PFAKE		01 24 10.0	+16
BNI				LR	LR		
	comp=Z,700nm,19.0s						
EAB	**Aberfoyle**	**71.24**	**326**	*e*P	**P**	**01 23 54.0**	**-0.1**
ELSH	**Elham, Standar**	**71.26**	**320**	*e*P	**P**	**01 23 54.6**	**+0.3**
ELSH				IAmb	IAmb	01 23 59.4	
	comp=Z,184nm,1.0s						
ELSH				IAMs_20	IAMs_20	01 57 27.3	
	comp=Z,1μm,16.2s						
BHH	**Howats Hill**	**71.33**	**325**	*e*P	**P**	**01 23 54.9**	**+0.2**
PGBU	**Glenifferbraes**	**71.52**	**326**	*e*P	**P**	**01 23 56.0**	**+0.2**
PGBU				IAmb	IAmb	01 23 59.6	
	comp=Z,193nm,1.5s						
PGBU				IAMs_20	IAMs_20	01 59 53.8	
	comp=Z,1μm,13.7s						
LBWR	**Ladybower, Pea**	**71.53**	**323**	*e*P	**P**	**01 23 55.5**	**-0.4**
LBWR				IAmb	IAmb	01 23 56.9	
	comp=Z,108nm,1.0s						
LBWR				IAMs_20	IAMs_20	01 59 46.3	
	comp=Z,752nm,12.4s						
KESW	**Keswick, Cumbr**	**71.55**	**324**	*e*P	**P**	**01 23 56.0**	**-0.1**
CWF	**Charnwood Fore**	**71.68**	**322**	*e*P	**P**	**01 23 56.3**	**-0.6**
CWF				IAmb	IAmb	01 24 00.6	
	comp=Z,44nm,1.2s						
KMBO	**Kilima Mbogo**	**71.82**	**256**	*e*P	**P**	**01 23 59.1**	**+0.5**
	comp=Z,68nm,1.4s						
KMBO	**Kilima Mbogo**	**71.82**	**256**	*e*P	**P**	**01 23 59.1**	**+0.5**
KMBO				pmax	pmax		
	comp=Z,68nm,1.4s						
HMNX	**Herstmonceux**	**71.84**	**320**	*e*P	**P**	**01 23 58.6**	**+0.8**
PCA	**Pinnacle**	**71.91**	**28**	PFAKE		01 24 10.0	+12
PCA				LR	LR		
	comp=Z,1μm,20.0s						
SSF	**Saint Saulge**	**72.09**	**315**	*e*P	**P**	**01 23 58.2**	**-1.2**
SSF				pmax	pmax		
	comp=Z,79nm,1.4s						
BCPM	**Bancas Point**	**72.24**	**28**	PFAKE		01 24 10.0	+10
BCPM				LR	LR		
	comp=Z,1μm,22.0s						
IOMK	**Kirk Michael**	**72.44**	**324**	*e*P	**P**	**01 24 01.4**	**0.0**
IOMK				IAmb	IAmb	01 24 02.5	
	comp=Z,282nm,1.5s						
IOMK				IAMs_20	IAMs_20	01 58 10.2	
	comp=Z,2μm,12.8s						
FOEL	**Foel Wylfa**	**72.56**	**323**	*e*P	**P**	**01 24 01.8**	**-0.3**
FOEL				IAmb	IAmb	01 24 07.1	
	comp=Z,48nm,0.9s						
FOEL				IAMs_20	IAMs_20	01 58 20.9	
	comp=Z,1μm,16.9s						
WIM	**Isle of Man**	**72.56**	**324**	*e*P	**P**	**01 24 02.6**	**+0.5**
HLM1	**Long Mynd**	**72.60**	**322**	*e*P	**P**	**01 24 02.2**	**-0.2**
HLM1				IAmb	IAmb	01 24 03.5	
	comp=Z,103nm,1.3s						
SWN1	**Swindon**	**72.61**	**321**	*e*P	**P**	**01 24 02.4**	**0.0**
SWN1				IAmb	IAmb	01 24 07.3	
	comp=Z,157nm,1.1s						
SWN1				IAMs_20	IAMs_20	01 58 32.8	
	comp=Z,1μm,14.7s						
STRD	**Stroud**	**72.65**	**321**	*e*P	**P**	**01 24 02.8**	**+0.2**
STRD				IAmb	IAmb	01 24 06.7	
	comp=Z,99nm,0.8s						
STRD				IAMs_20	IAMs_20	01 58 57.1	
	comp=Z,1μm,13.5s						
LLW	**Llanuwychllyn**	**72.81**	**323**	*e*P	**P**	**01 24 03.6**	**0.0**
LLW				IAmb	IAmb	01 24 04.6	
	comp=Z,32nm,1.1s						
YLL	**Llanberis**	**72.89**	**323**	*e*P	**P**	**01 24 03.9**	**-0.2**
WLF1	**Llynfaes**	**72.92**	**323**	*e*P	**P**	**01 24 03.4**	**-0.8**
WLF1				IAmb	IAmb	01 24 05.3	
	comp=Z,335nm,1.7s						
WLF1				IAMs_20	IAMs_20	02 00 10.9	
	comp=Z,1μm,20.4s						
BATH	**Bath**	**72.93**	**321**	*e*P	**P**	**01 24 04.2**	**-0.1**
BATH				IAmb	IAmb	01 24 08.9	
	comp=Z,199nm,1.3s						
BATH				IAMs_20	IAMs_20	01 58 50.3	
	comp=Z,1μm,12.8s						
MONM	**Monmouth**	**72.95**	**322**	*e*P	**P**	**01 24 04.4**	**0.0**
MONM				IAMs_20	IAMs_20	01 59 14.6	
	comp=Z,994nm,12.3s						
MCH1	**Michaelchurch**	**72.96**	**322**	*e*P	**P**	**01 24 04.3**	**-0.2**
MCH1				IAmb	IAmb	01 24 09.1	
	comp=Z,103nm,1.1s						
MCH1				IAMs_20	IAMs_20	02 00 06.2	
	comp=Z,882nm,12.3s						
YRC	**Rhoscolyn**	**73.03**	**324**	*e*P	**P**	**01 24 03.8**	**-1.0**
GMM	**Mts of Mourne**	**73.12**	**325**	*e*P	**P**	**01 24 05.2**	**-0.2**
RSBS	**Rosebush, Pemb**	**73.87**	**322**	*e*P	**P**	**01 24 09.6**	**-0.2**
RSBS				IAmb	IAmb	01 24 13.4	
	comp=Z,24nm,1.1s						
RSBS				IAMs_20	IAMs_20	02 00 45.3	
	comp=Z,486nm,14.9s						
DSB	**Dublin**	**73.91**	**324**	PFAKE		01 24 20.0	+10
DSB				LR	LR		
	comp=Z,700nm,18.0s						
CAF	**Calviac**	**74.08**	**314**	*e*P	**P**	**01 24 11.0**	**-0.3**
CAF				pmax	pmax		
	comp=Z,31nm,0.9s						
JSA	**Saint Aubin**	**74.12**	**319**	*e*P	**P**	**01 24 11.2**	**-0.1**
JSA				IAmb	IAmb	01 24 16.2	
	comp=Z,65nm,1.0s						
JSA				IAMs_20	IAMs_20	01 58 54.1	
	comp=Z,1μm,18.6s						
SKAG	**Skagway**	**74.22**	**27**	PFAKE		01 24 20.0	+8.3
SKAG				LR	LR		
	comp=Z,2μm,18.0s						
KEST	**Kesra**	**74.24**	**303**	P	**P**	**01 24 12.2**	**-0.3**
	comp=Z,20nm,1.0s,baz=344,slow=1.1,SNR=13						
KEST				LR	LR	02 01 55.9	
	comp=Z,298nm,19.9s,baz=306,slow=40						
HTL	**Hartland**	**74.30**	**322**	*e*P	**P**	**01 24 12.3**	**0.0**
MFF	**Saint Martin d**	**74.45**	**316**	*e*P	**P**	**01 24 12.9**	**-0.4**
MFF				pmax	pmax		
	comp=Z,99nm,0.8s						
IWEX	**Carrickbyrne,**	**74.62**	**324**	*e*P	**P**	**01 24 14.5**	**+0.3**
IWEX				IAMs_20	IAMs_20	02 06 03.2	
	comp=Z,854nm,11.6s						
STKA	**Stephens Creek**	**74.88**	**148**	P	**P**	**01 24 15.2**	**-0.6**
	comp=Z,39nm,0.7s,baz=341,slow=5.2,SNR=42						
ILULI	**Ilulissat**	**74.93**	**351**	⇑*i*P	**P**	**01 24 15.8**	**+0.1**
ILULI	**Ilulissat**	**74.93**	**351**	⇑*i*P	**P**	**01 24 15.8**	**+0.1**
BESE	**Bessie Mountai**	**75.00**	**28**	PFAKE		01 24 30.0	+14
BESE				LR	LR		
	comp=Z,1μm,19.0s						
JIS	**Juneau Island**	**75.39**	**28**	PFAKE		01 24 30.0	+11
JIS				LR	LR		
	comp=Z,2μm,18.0s						
SIT	**Sitka**	**75.85**	**29**	*e*pP	pP	01 24 25.1	-1.6
ABPO	**Ambohimpanom**	**75.96**	**235**	*e*P	**P**	**01 24 22.1**	**-0.5**
	comp=Z,38nm,1.1s						
ABPO	**Ambohimpanom**	**75.96**	**235**	*e*P	**P**	**01 24 22.1**	**-0.5**
ABPO				pmax	pmax		
	comp=Z,38nm,1.1s						
MBAR	**Mbarara**	**76.76**	**260**	*e*P	**P**	**01 24 27.6**	**+0.3**
	comp=Z,33nm,1.2s						
SFJD	**Kangerlussuaq**	**76.95**	**350**	*e*P	**P**	**01 24 26.4**	**-0.8**
	comp=Z,82nm,1.1s						
SFJD				LR	LR		
	comp=Z,800nm,20.0s						
SFJD	**Kangerlussuaq**	**76.95**	**350**	*e*P	**P**	**01 24 26.4**	**-0.8**
SFJD				pmax	pmax		
	comp=Z,82nm,1.1s						
SFJD				MLR	MLR		
	comp=Z,800nm,20.0s						
SFJD	**Kangerlussuaq**	**76.95**	**350**	⇑*i*P	**P**	**01 24 27.1**	**-0.1**
YKA	**Yellowknife Ar**	**78.36**	**17**	P	**P**	**01 24 35.4**	**+0.2**
	comp=Z,36nm,0.7s,baz=332,slow=5.4,SNR=66						
YKA				PKKPbc	**PKKPbc**	**01 43 30.3**	**-2.3**
	comp=Z,0.5nm,0.5s,baz=160,slow=1.9,SNR=4.8						
YKA				LR	LR	02 01 39.5	
	comp=Z,63nm,21.4s,baz=324,slow=38						
ESDC	**Sonseca Array**	**80.76**	**312**	P	**P**	**01 24 48.9**	**+0.1**
	comp=Z,5.8nm,0.8s,baz=45,slow=5.0,SNR=40						
ESDC				PKKPbc	**PKKPbc**	**01 43 27.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=265,slow=2.0,SNR=6.6						
ESDC				LR	LR	02 03 57.4	
	comp=Z,362nm,18.8s,baz=25,slow=38						
SESP	**Santiago Espad**	**80.81**	**310**	P	**P**	**01 24 50.2**	**+1.0**
PAB	**San Pablo**	**81.07**	**312**	*e*P	**P**	**01 24 50.9**	**+0.4**
	comp=Z,16nm,1.1s						
PAB	**San Pablo**	**81.07**	**312**	*e*P	**P**	**01 24 50.9**	**+0.4**
PAB				pmax	pmax		
	comp=Z,16nm,1.1s						
DZM	**Mont Dzumac**	**81.64**	**124**	P	**P**	**01 24 54.9**	**+1.3**
	comp=Z,34nm,0.9s,baz=332,slow=3.1,SNR=7.4						
MVO	**Moncorvo**	**81.68**	**315**	*e*P	**P**	**01 24 54.3**	**+0.6**
	comp=Z,35nm,1.9s						
PGAV	**Gavieira, Arco**	**81.89**	**316**	*e*P	**P**	**01 24 55.8**	**+1.0**
	comp=Z,61nm,1.6s						
PCAB	**Cabril**	**81.91**	**316**	*e*P	**P**	**01 24 55.8**	**+0.9**
	comp=Z,78nm,1.8s						
POLO	**Lamas de Olo**	**81.99**	**315**	*e*P	**P**	**01 24 56.0**	**+0.6**
	comp=Z,16nm,1.6s						
PVRL	**Vila Real**	**82.01**	**315**	*e*P	**P**	**01 24 56.1**	**+0.7**
	comp=Z,28nm,1.8s						
MTE	**Manteigas**	**82.46**	**314**	*e*P	**P**	**01 24 58.9**	**+1.1**
	comp=Z,54nm,1.5s						
PVIS	**Viseu**	**82.47**	**315**	*e*P	**P**	**01 24 58.5**	**+0.7**
	comp=Z,38nm,1.7s						
HORN	**Hornachuelos**	**82.68**	**311**	P	**P**	**01 24 59.5**	**+0.6**
PCBR	**Castelo Branco**	**82.78**	**314**	*e*P	**P**	**01 25 00.0**	**+0.6**
	comp=Z,21nm,1.4s						
PMRV	**Marv??o**	**82.99**	**313**	*e*P	**P**	**01 25 01.1**	**+0.6**
	comp=Z,47nm,1.8s						
COI	**Coimbra**	**83.10**	**315**	*e*P	**P**	**01 25 02.0**	**+1.0**
	comp=Z,65nm,1.7s						
COI	**Coimbra**	**83.10**	**315**	PFAKE		01 25 10.0	+9.0
COI				LR	LR		
	comp=Z,700nm,18.0s						
JBK	**JBK**	**83.10**	**307**	P	**P**	**01 25 03.0**	**+1.6**
PCAS	**Casmilo, Conde**	**83.25**	**315**	*e*P	**P**	**01 25 02.5**	**+0.7**
	comp=Z,35nm,1.6s						
PTOM	**Tomar**	**83.47**	**314**	*e*P	**P**	**01 25 03.7**	**+0.7**
	comp=Z,46nm,1.6s						
PMTG	**Montargil**	**83.72**	**314**	*e*P	**P**	**01 25 04.7**	**+0.5**
	comp=Z,36nm,1.4s						
ALMR	**Almeirim**	**83.87**	**314**	*e*P	**P**	**01 25 05.7**	**+0.7**
ALMR				AMb	AMB	01 25 12.4	
	comp=Z,54nm,1.2s						
ALMR	**Almeirim**	**83.87**	**314**	*e*P	**P**	**01 25 06.7**	**+1.7**
	comp=Z,55nm,1.4s						
CEUT	**Ceuta**	**83.94**	**310**	P	**P**	**01 25 05.2**	**-0.2**
SMIR	**Smir Dam**	**84.10**	**310**	P	**P**	**01 25 06.0**	**-0.3**
PBEJ	**Beja**	**84.17**	**313**	*e*P	**P**	**01 25 08.4**	**+1.9**
	comp=Z,28nm,1.6s						
PMAFR	**Mafra**	**84.42**	**314**	*e*P	**P**	**01 25 08.8**	**+1.0**
	comp=Z,91nm,1.4s						
CHEFC	**Chefchaouen**	**84.43**	**309**	P	**P**	**01 25 08.3**	**+0.2**
PVAQ	**Vaqueiros**	**84.47**	**312**	*e*P	**P**	**01 25 08.9**	**+0.8**
	comp=Z,43nm,1.8s						
LIS	**Lisbon**	**84.49**	**314**	*e*P	**P**	**01 25 08.4**	**+0.3**
LIS				AMb	AMB	01 25 12.2	
	comp=Z,55nm,1.8s						
PNCL	**Nicolau / Gran**	**84.51**	**313**	*e*P	**P**	**01 25 09.1**	**+0.8**
	comp=Z,31nm,1.4s						
PCVE	**Castro Verde**	**84.52**	**312**	*e*P	**P**	**01 25 09.0**	**+0.6**
	comp=Z,34nm,1.5s						
PBDV	**Barranco-do-Ve**	**84.70**	**312**	*e*P	**P**	**01 25 10.3**	**+1.0**
	comp=Z,59nm,1.7s						
PTEO	**Sao Teotonio**	**84.99**	**313**	*e*P	**P**	**01 25 10.7**	**0.0**
	comp=Z,42nm,1.3s						
MORF	**Marmelete**	**85.10**	**312**	*e*P	**P**	**01 25 11.6**	**+0.2**
MORF				AMb	AMB	01 25 14.5	
	comp=Z,46nm,1.2s						
MORF	**Marmelete**	**85.10**	**312**	*e*P	**P**	**01 25 12.0**	**+0.6**
	comp=Z,51nm,1.4s						
PFVI	**Vila Bisbo**	**85.32**	**312**	*e*P	**P**	**01 25 13.6**	**+1.2**
	comp=Z,70nm,1.6s						
MDT	**Midelt**	**85.38**	**307**	P	**P**	**01 25 13.7**	**+0.9**
FCC	**Fort Churchill**	**85.77**	**9**	PFAKE		01 25 30.0	+16
FCC				LR	LR		
	comp=Z,1μm,20.0s						
LLLB	**Lillooet**	**85.95**	**27**	PFAKE		01 25 30.0	+15
LLLB				LR	LR		
	comp=Z,1μm,20.0s						
A04D	**Lummi Island**	**87.14**	**29**	P	**P**	**01 25 22.0**	**+1.0**
	baz=323						
LSZ	**Lusaka**	**87.44**	**250**	*e*P	**P**	**01 25 23.2**	**0.0**
	comp=Z,41nm,1.3s						
LSZ	**Lusaka**	**87.44**	**250**	*e*P	**P**	**01 25 23.2**	**0.0**
LSZ				pmax	pmax		
	comp=Z,41nm,1.3s						
B05A	**Bryant**	**87.75**	**29**	P	**P**	**01 25 24.9**	**+0.8**
	baz=323						
D03D	**Eldon**	**87.93**	**30**	P	**P**	**01 25 25.2**	**+0.2**
	baz=323						
FFC	**Flin Flon**	**88.25**	**15**	*e*P	**P**	**01 25 26.2**	**-0.1**
	comp=Z,846nm,1.0s						
FFC	**Flin Flon**	**88.25**	**15**	*e*P	**P**	**01 25 26.2**	**-0.1**
E04D	**Cinebar**	**88.93**	**30**	P	**P**	**01 25 27.2**	**-2.4**
	baz=323						
LON	**Longmire**	**89.08**	**30**	PFAKE		01 25 40.0	+10
LON				LR	LR		
	comp=Z,800nm,20.0s						
NEW	**Newport**	**89.65**	**26**	PFAKE		01 25 40.0	+6.9
NEW				LR	LR		
	comp=Z,1μm,18.0s						
NEW	**Newport**	**89.65**	**26**	P	**P**	**01 25 34.0**	**+0.9**
	baz=327						

G03D	McMinnville, O	89.70	31	P	P	01 25 35.8	+2.4
	baz=323						
F05D	White Salmon	89.92	30	P	P	01 25 35.7	+1.3
	baz=324						
H04D	Lebanon	90.48	32	P	P	01 25 37.6	+0.6
	baz=323						
G05D	Wamic, OR	90.50	30	P	P	01 25 37.8	+0.7
	baz=324						
SCHQ	Schefferville	90.62	355	P	P	01 25 37.1	-0.3
	comp=Z,14nm,0.7s,baz=322,slow=4.2,SNR=5.9						
SCHQ				LR	LR	02 08 51.2	
	comp=Z,366nm,18.1s,baz=336,slow=37						
E09A	Wood Farm, Sta	90.73	28	PFAKE		01 25 50.0	+12
E09A				LR	LR		
	comp=Z,700nm,19.0s						
I03D	Drain, OR	90.87	32	P	P	01 25 40.7	+1.9
	baz=323						
J01E	Myrtle Point	91.03	33	P	P	01 25 41.3	+1.8
	baz=322						
I04A	Tendick Farm,	91.20	32	P	P	01 25 41.0	+0.5
	baz=323						
I05D	Terrebonne, OR	91.22	31	P	P	01 25 41.1	+0.5
	baz=324						
K02D	Willamette Mer	91.52	33	P	P	01 25 39.1	-2.8
	baz=322						
J04D	Umpqua Nationa	91.78	32	P	P	01 25 43.1	-0.2
	baz=323						
MSO	Missoula	92.00	25	PFAKE		01 26 00.0	+16
MSO				LR	LR		
	comp=Z,900nm,21.0s						
MSO	Missoula	92.00	25	P	P	01 25 43.9	-0.2
	baz=329						
J05D	Fort Rock, OR	92.12	31	P	P	01 25 45.4	+0.6
	baz=324						
EGMT	Eagleton	92.34	22	PFAKE		01 26 00.0	+14
EGMT				LR	LR		
	comp=Z,1µm,18.0s						
EGMT	Eagleton	92.34	22	P	P	01 25 45.5	-0.1
	baz=333						
BMO	Blue Mountains	92.44	28	PFAKE		01 26 00.0	+14
BMO				LR	LR		
	comp=Z,600nm,22.0s						
L04D	Klamath Falls	92.51	33	P	P	01 25 47.7	+1.1
	baz=323						
TOA0	Torodi Ar. Sit	92.66	288	P	P	01 25 47.3	-0.3
	SNR=6.5						
TORD	Torodi Ar. Bea	92.66	288	P	P	01 25 46.5	-1.1
	comp=Z,9.1nm,1.0s,baz=101,slow=3.3,SNR=23						
TORD				PP	PP	01 29 28.2	-0.9
	comp=Z,1.4nm,0.9s,baz=47,slow=7.0,SNR=3.8						
TORD				PKiKP	PKiKP	01 30 36.4	+0.4
	comp=Z,0.8nm,0.8s,baz=80,slow=2.3,SNR=3.1						
TORD				PKKPbc	PKKPbc	01 42 58.1	-0.1
	comp=Z,0.8nm,0.7s,baz=241,slow=1.5,SNR=3.6						
TORD				LR	LR	02 13 50.2	
	comp=Z,467nm,18.8s,baz=335,slow=40						
M02C	Callahan	92.92	33	P	P	01 25 50.2	+1.7
	baz=323						
M04C	Macdoel	93.06	33	P	P	01 25 50.4	+1.2
	baz=324						
N02D	Trinity Center	93.32	34	P	P	01 25 51.6	+1.2
	baz=323						
DGMT	Dagmar	93.53	18	PFAKE		01 26 00.0	+8.9
DGMT				LR	LR		
	comp=Z,900nm,22.0s						
DGMT	Dagmar	93.53	18	P	P	01 25 51.4	+0.3
	baz=337						
ULM	Lac du Bonnet	93.70	13	P	P	01 25 50.7	-1.0
	comp=Z,18nm,0.9s,baz=346,slow=4.4,SNR=9.4						
ULM				LR	LR	02 12 19.4	
	comp=Z,689nm,18.6s,baz=359,slow=38						
ULM	Lac du Bonnet	93.70	13	PFAKE		01 26 00.0	+8.3
ULM				LR	LR		
	comp=Z,800nm,19.0s						
DLMT	Dillon	93.74	25	PFAKE		01 26 00.0	+7.7
DLMT				LR	LR		
	comp=Z,1µm,21.0s						
BOZ	Bozeman (W)	93.87	24	PFAKE		01 26 00.0	+7.1
BOZ				LR	LR		
	comp=Z,1µm,18.0s						
BOZ	Bozeman (W)	93.87	24	P	P	01 25 53.1	+0.2
	baz=331						
O02D	Mt. Diablo Mer	93.92	34	P	P	01 25 54.9	+1.8
	baz=323						
LAO	LASA Array	94.60	20	PFAKE		01 26 10.0	+14
LAO				LR	LR		
	comp=Z,800nm,20.0s						
HLID	Hailey	94.64	27	P	P	01 25 56.5	0.0
	baz=329						
RLMT	Red Lodge	95.08	23	PFAKE		01 26 10.0	+12
RLMT				LR	LR		
	comp=Z,1µm,18.0s						
RLMT	Red Lodge	95.08	23	P	P	01 25 58.4	-0.1
	baz=333						
MDND	Maddock	95.23	16	P	P	01 25 59.4	+0.5
	baz=340						
H17A	Grant Village	95.28	24	PFAKE		01 26 10.0	+11
H17A				LR	LR		
	comp=Z,2µm,18.0s						
AGMN	Agassiz Nation	95.58	13	P	P	01 26 00.1	-0.2
	baz=344						
IMW	Indian Meadow	95.60	25	PFAKE		01 26 10.0	+9.0
IMW				LR	LR		
	comp=Z,900nm,18.0s						
CHGQ	Chibougamau	95.88	359	P	P	01 26 01.2	-0.5
	baz=1.2						
MATQ	Matagami	96.03	1	P	P	01 26 01.4	-0.9
	baz=358						
EYMN	Ely	96.66	11	P	P	01 26 04.5	-0.9
	baz=347						
LSQQ	Lebel-sur-Quev	96.74	1	P	P	01 26 05.0	-0.6
	baz=359						
BW06	Boulder Array	97.07	24	P	Pdif	01 26 07.7	0.0
	baz=333						
PDAR	Pinedale Array	97.07	24	P	P	01 26 06.7	-0.9
	comp=Z,0.5nm,0.3s,baz=359,slow=3.6,SNR=1.8						
PDAR				PP	PP	01 29 59.9	-2.6
	comp=Z,0.3nm,0.3s,baz=347,slow=7.4,SNR=4.2						
NVAR	Mina Array Bea	97.36	32	P	P	01 26 08.1	-0.9
	comp=Z,0.5nm,0.6s,baz=316,slow=3.8,SNR=2.7						
NVAR				PP	PP	01 30 04.9	0.0
	comp=Z,4.4nm,1.1s,baz=337,slow=5.9,SNR=8.5						
NVAR				LR	LR	02 10 47.3	
	comp=Z,252nm,20.0s,baz=86,slow=36						
BOSA	Boshof	97.47	240	P	P	01 26 07.2	-2.1
	comp=Z,5.0nm,1.0s,baz=24,slow=7.2,SNR=4.0						
RSSD	Black Hills	97.57	20	*e*P	Pdif	01 26 10.8	+1.0
	comp=Z,44nm,1.1s						
RSSD				LR	LR		
	comp=Z,800nm,20.0s						
RSSD	Black Hills	97.57	20	*e*P	Pdif	01 26 10.8	+0.9
RSSD				pmax	pmax		
	comp=Z,45nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,800nm,20.0s						
RSSD	Black Hills	97.57	20	P	Pdif	01 26 10.4	+0.5
	baz=337						
E38A	The Farm, Brul	97.96	11	P	P	01 26 11.2	0.0
	baz=347						
DUG	Dugway, Tooele	98.14	28	P	P	01 26 12.3	-0.1
	baz=330						
K22A	Casper	98.17	22	P	P	01 26 10.8	-1.7
	baz=335						
LATQ	La Tuque	98.37	358	P	P	01 26 11.1	-1.9
	baz=2.5						
D49A	Beulah Townshi	98.38	4	P	P	01 26 12.0	-1.0
	baz=355						
D47A	Chapleau	98.48	5	P	P	01 26 12.8	-0.8
	baz=354						
R11A	Troy Canyon, C	98.60	31	P	P	01 26 14.4	-0.1
	baz=328						
D51A	Lot 18 Range I	98.65	2	P	P	01 26 13.3	-1.0
	baz=357						
D53A	Lac Vacive, Po	98.70	1	P	P	01 26 13.9	-0.6
	baz=358						
D52A	ZEK Kipawa Sen	98.79	2	P	P	01 26 13.6	-1.3
	baz=358						
E43A	Lone Tree Farm	98.80	8	PFAKE		01 26 30.0	+15
E43A				LR	LR		
	comp=Z,800nm,19.0s						
E43A	Lone Tree Farm	98.80	8	P	P	01 26 14.7	-0.3
	baz=351						
OXZ	Oxford	99.15	137	PFAKE		01 26 30.0	+14
OXZ				LR	LR		
	comp=Z,1µm,22.0s						
BKZ	Black Stump Fm	99.22	131	PFAKE		01 26 30.0	+13
BKZ				LR	LR		
	comp=Z,1µm,22.0s						
E53A	Dumoine, Ponti	99.41	1	P	Pdif	01 26 17.7	0.0
	baz=358						
PKM	Mcpherson Peak	99.57	35	P	Pdif	01 26 17.4	-1.5
	baz=325						
F51A	Arnstein	99.79	3	P	Pdif	01 26 18.4	-1.0
	baz=357						
ECSD	EROS Data Cent	99.79	15	PFAKE		01 26 30.0	+11
ECSD				LR	LR		
	comp=Z,700nm,20.0s						
ECSD	EROS Data Cent	99.79	15	P	Pdif	01 26 19.6	+0.1
	baz=343						
GGN	Saint George	100.27	354	PFAKE		01 26 30.0	+8.5
GGN				LR	LR		
	comp=Z,800nm,20.0s						
H43A	Windswept, Lux	100.58	9	PFAKE		01 26 30.0	+7.0
H43A				LR	LR		
	comp=Z,600nm,20.0s						
I41A	Arkdale	100.70	10	PFAKE		01 26 30.0	+6.5
I41A				LR	LR		
	comp=Z,700nm,18.0s						
OGNE	Ogallala	101.07	20	PFAKE		01 26 40.0	+15
OGNE				LR	LR		
	comp=Z,800nm,22.0s						
SMCO	Snowmass	101.15	24	*e*Pdif	Pdif	01 26 25.5	-0.6
LONY	Lake Ozonia	101.17	359	P	Pdif	01 26 24.8	-0.9
	baz=1.0						
PV20	West Nyswonger	101.20	26	PFAKE		01 26 40.0	+14
PV20				LR	LR		
	comp=Z,1µm,20.0s						
PV07	Paradox Valley	101.23	26	PFAKE		01 26 40.0	+14
PV07				LR	LR		
	comp=Z,500nm,22.0s						
DELO	Deloro Mine	101.27	1	PFAKE		01 26 40.0	+14
DELO				LR	LR		
	comp=Z,800nm,22.0s						
PV11	David Mesa, Pa	101.27	26	PFAKE		01 26 40.0	+14
PV11				LR	LR		
	comp=Z,1µm,19.0s						
BGNE	Belgrade	101.65	17	PFAKE		01 26 40.0	+12
BGNE				LR	LR		
	comp=Z,700nm,19.0s						
PFO	Pinyon Flats O	102.19	34	P	Pdif	01 26 29.1	-1.5
	baz=327						
SCIA	State Center	102.23	13	PFAKE		01 26 40.0	+10
SCIA				LR	LR		
	comp=Z,700nm,21.0s						
L42A	Oliver, Polo	102.74	11	PFAKE		01 26 40.0	+7.4
L42A				LR	LR		
	comp=Z,600nm,20.0s						
SDCO	Great Sand Dun	102.94	24	PFAKE		01 26 50.0	+16
SDCO				LR	LR		
	comp=Z,800nm,21.0s						
CBKS	Cedar Bluff	103.69	19	PFAKE		01 26 50.0	+13
CBKS				LR	LR		
	comp=Z,700nm,18.0s						
P48A	Milroy	105.80	8	PFAKE		01 31 10.0	+11
P48A				LR	LR		
	comp=Z,800nm,19.0s						
SLM	Saint Louis	105.94	12	PFAKE		01 31 10.0	+11
SLM				LR	LR		
	comp=Z,900nm,18.0s						
MAW	Mawson	106.51	195	PKKPbc	PKKPbc	01 42 19.8	-1.0
	comp=Z,4.1nm,0.9s,baz=266,slow=20,SNR=4.0						
USIN	University of	106.99	10	PFAKE		01 31 10.0	+8.8
USIN				LR	LR		
	comp=Z,700nm,19.0s						
MSTX	Muleshoe	107.28	23	PFAKE		01 31 10.0	+8.0
MSTX				LR	LR		
	comp=Z,800nm,22.0s						
MIAR	Mount Ida	109.26	15	PFAKE		01 31 20.0	+15
MIAR				LR	LR		
	comp=Z,600nm,19.0s						
X40A	Basin Creek Fa	109.47	15	PFAKE		01 31 20.0	+14
X40A				LR	LR		
	comp=Z,600nm,18.0s						
ABTX	Abilene, Hawle	109.50	21	PFAKE		01 31 20.0	+14
ABTX				LR	LR		
	comp=Z,700nm,19.0s						
V53A	Saluda	109.82	6	PFAKE		01 31 20.0	+13
V53A				LR	LR		
	comp=Z,800nm,21.0s						
OXF	Oxford	110.11	12	PFAKE		01 31 20.0	+13
OXF				LR	LR		
	comp=Z,600nm,20.0s						
TXAR	Lajitas Array	111.20	26	PKiKP	PKiKP	01 31 09.3	-0.2
	comp=Z,1.6nm,0.8s,baz=194,slow=0.4,SNR=14						
TXAR				PP	PP	01 31 46.6	-1.0
	comp=Z,2.0nm,1.1s,baz=225,slow=0.5,SNR=7.4						
TXAR				PKKPbc	PKKPbc	01 42 03.9	-1.0
	comp=Z,0.5nm,0.8s,baz=151,slow=5.8,SNR=5.7						
HODGE	Hodges	111.29	6	PFAKE		01 31 20.0	+11
HODGE				LR	LR		
	comp=Z,700nm,19.0s						
JCT	Junction City	111.45	22	PFAKE		01 31 20.0	+10
JCT				LR	LR		
	comp=Z,1µm,19.0s						
Y52A	Lilburn	111.48	7	PFAKE		01 31 20.0	+10
Y52A				LR	LR		
	comp=Z,600nm,18.0s						
GOGA	Godfrey	111.99	7	PFAKE		01 31 20.0	+9.3
GOGA				LR	LR		
	comp=Z,600nm,19.0s						
154A	Montrose	112.82	7	PFAKE		01 31 20.0	+7.7
154A				LR	LR		
	comp=Z,700nm,20.0s						
SYO	Syowa Base	113.54	201⇑	*e*PKPdf	PKiKP	01 31 13.0	+0.7
SYO	Syowa Base	113.54	201⇓	*e*pPKPdf	PKiKP	01 31 18.0	+5.7
VNDA	Vanda	117.08	168	PKP	PKPdf	01 31 17.9	-1.0
	comp=Z,2.3nm,0.7s,baz=292,slow=4.7,SNR=10						
QSPA	South Pole Qui	124.33	180	*e*PKPdf	PKPdf	01 31 32.3	-0.9
CMIG	Matias Romero	125.51	23	PKP	PKPdf	01 31 36.3	-0.7
	comp=Z,5.1nm,0.7s						
SNAA	Sanae	127.76	202	PKPdf	PKPdf	01 31 39.1	-0.6
SNAA	Sanae	127.76	202	*e*PKPdf	PKPdf	01 31 39.1	-0.6
SNAA	Sanae	127.76	202	*e*PKIKP	PKPdf	01 31 39.1	-0.6
VNA1	Neumayer--Stat	129.62	204	PKPdf	PKiKP	01 31 44.2	+0.3
VNA3	Neumayer Olymp	129.98	203	PKPdf	PKPdf	01 31 43.2	-0.7
ESPN	Las Esperanzas	132.80	11	PFAKE		01 32 00.0	+8.0
ESPN				LR	LR		
	comp=Z,500nm,20.0s						
RCBR	Riachuelo	133.38	299	PFAKE		01 32 00.0	+6.7
RCBR				LR	LR		
	comp=Z,16µm,21.0s						
SDV	Santo Domingo	136.51	353	PKP	PKPdf	01 31 56.5	-1.6
	comp=Z,14nm,0.4s,baz=97,slow=5.3,SNR=3.7						
OCAC	Ocana	137.36	356	*e*P	PKiKP	01 32 01.7	+0.2
DBBC	Dabeiba	138.64	1	*e*P	PKiKP	01 32 03.2	-0.8
BARC	Barichara	138.99	356	*e*P	PKPdf	01 32 02.3	-0.5
PTBC	PUERTO BERRIO,	139.09	358	*e*P	PKPdf	01 32 01.0	-1.7
RUSC	La Rusia	139.68	356	*e*P	PKPdf	01 32 04.2	-0.2
NORC	Norcasia	140.07	359	*e*P	PKPdf	01 31 58.0	-6.5
ROSC	El Rosal	140.78	358	PKhKP	PKPdf	01 32 02.3	-3.9
	comp=Z,28nm,1.1s,baz=132,slow=14,SNR=6.2						
CHIC	Chingaza	140.96	357	*e*P	PKPdf	01 32 03.6	-3.0
VILC	Villavicencio,	141.47	357	*e*P	PKPdf	01 31 59.2	-7.9
YOTC	Yotoco, Valle	141.65	1	*e*P	PKPdf	01 32 04.4	-3.1
PRAC	Prado	141.91	359	*e*P	PKPdf	01 32 04.4	-3.4
PTGA	Pitinga	143.22	333	PKhKP	PKPab	01 32 05.9	+0.2
	comp=Z,10nm,0.7s,baz=35,slow=5.4,SNR=12						
PTGA	Pitinga	143.22	333	*e*PKPpre	PKPab	01 32 05.3	-0.4
PTGA				*e*PKPdf	PKPbc	01 32 08.4	+1.4
SOTA	Rioblanco	143.48	1	*e*P	PKPdf	01 32 09.8	-1.4
BBAC	Balboa, Cauca	143.58	2	*e*P	PKPab	01 32 06.7	-0.7
FLOC	Florencia	144.04	360	*e*P	PKPbc	01 32 09.7	+0.3
PTLC	Puerto Leguiza	145.43	358	*e*P	PKPab	01 32 14.8	+0.8
BDFB	Brasilia	148.73	300	PKPbc	PKPbc	01 32 21.7	-1.5
	comp=Z,14nm,0.8s,baz=49,slow=6.5,SNR=15						
BDFB	Brasilia	148.73	300	*e*PKPdf	PKPdf	01 32 17.9	-1.5
BDFB				*e*PKPbc	PKPbc	01 32 23.0	-0.2
BDFB	Brasilia	148.73	300	*e*PKIKP	PKPdf	01 32 18.0	-1.5
BDFB				*e*		01 32 23.0	
PMSA	Palmer Station	148.93	190	PKPbc	PKPbc	01 32 20.5	-1.6
	comp=Z,13nm,0.7s,baz=178,slow=1.9,SNR=6.3						
PMSA	Palmer Station	148.93	190	*e*PKPdf	PKPdf	01 32 16.5	-1.6
PMSA				*e*PKPbc	PKPbc	01 32 21.4	-0.7
ATAH	Atahualpa	152.59	6	PKP	PKPdf	01 32 24.7	-1.2
	comp=Z,17nm,1.2s,baz=202,slow=5.3,SNR=6.1						
ATAH				PKPbc	PKPbc	01 32 32.9	0.0
	comp=Z,45nm,0.8s,baz=46,slow=1.4,SNR=12						
SIV	San Ignacio	157.26	321	PKP	PKPdf	01 32 31.1	-0.6
	comp=Z,7.9nm,1.1s,baz=146,slow=0.2,SNR=12						
SIV				PKPab	PKPab	01 33 01.6	-1.0
	comp=Z,5.7nm,0.9s,baz=193,slow=5.1,SNR=3.3						
LPAZ	La Paz	160.54	337	PKP	PKPdf	01 32 35.6	-0.7
	comp=Z,10nm,0.9s,baz=20,slow=3.7,SNR=22						
LPAZ				PKPab	PKPab	01 33 16.0	-1.4
	comp=Z,4.1nm,0.9s,baz=340,slow=0.9,SNR=4.6						
CPUP	Villa Florida	162.10	292	PKP	PKPdf	01 32 36.0	-0.9
	comp=Z,4.1nm,0.8s,baz=237,slow=0.4,SNR=8.4						
CPUP				PKPab	PKPab	01 33 22.9	-0.6
	comp=Z,6.9nm,1.0s,baz=33,slow=4.8,SNR=5.9						
CPUP	Villa Florida	162.10	292	PKIKP	PKPdf	01 32 36.0	-0.9
CPUP						01 33 23.0	
MNMC	Minye Minye	163.66	339	*e*PKPdf	PKPdf	01 32 38.9	-0.2
LVC	Limon Verde	166.64	331	PKP	PKPdf	01 32 40.6	-0.9
	comp=Z,4.1nm,0.7s,baz=333,slow=6.8,SNR=2.7						
LVC				PKPab	PKPab	01 33 43.7	-0.1
	comp=Z,17nm,1.1s,baz=320,slow=5.0,SNR=6.8						
LVC	Limon Verde	166.64	331	*e*PKPdf	PKPdf	01 32 40.1	-1.5
LVC				*e*PKPab	PKPab	01 33 42.7	-1.1
PLCA	Paso Flores	172.57	213	PKP	PKPdf	01 32 43.2	-1.0
	comp=Z,10.0nm,1.2s,baz=315,slow=3.2,SNR=5.1						
PLCA				PKPab	PKPab	01 34 08.1	-1.3
	comp=Z,2.8nm,0.9s,baz=85,slow=4.7,SNR=3.4						
PLCA	Paso Flores	172.57	213	*e*PKPdf	PKPdf	01 32 43.6	-0.6
PLCA				*e*PKPab	PKPab	01 34 08.9	-0.4
PLCA	Paso Flores	172.57	213	*e*PKIKP	PKPdf	01 32 43.6	-0.6
CFA	Coronel Fontan	173.00	293	PKP	PKPdf	01 32 44.1	-0.5
	comp=Z,12nm,1.2s,baz=192,slow=1.9,SNR=7.8						
CFA				PKPab	PKPab	01 34 10.2	-1.4
	comp=Z,2.4nm,0.5s,baz=72,slow=6.2,SNR=4.4						

MEX 22 01:14:34.9±0.7, 16°.01N×95°.17W, h13^{km}±7^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.94	255	*e*P	Pb	01 14 49.9	-3.0
HUIG				*i* S	Sg	01 15 01.8	-3.5
CMIG	Matias Romero	1.11	14	*e*P	Pb	01 14 52.2	-3.8
CMIG				*i* S	Sb	01 15 05.8	-4.6
VHO	Vista Hermosa	1.84	305	*i* P	Pn	01 15 03.5	-2.8
VHO				*i* S	Sn	01 15 25.3	-4.3
PCIG		1.90	99	*e*P	Pn	01 15 04.2	-2.8
PCIG				*e*S	Sn	01 15 25.5	-5.3
CCIG	Comitan	2.93	84	*i* P	Pn	01 15 18.8	-2.5
CCIG				*i* S	Sn	01 15 52.3	-4.1

ISCJB ***22*** *01:22:04.2±0.4, 38°.33N±0°.02×22°.08E±0°.03, h9^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=2.9km az=168.3*

ATH ***22*** *01:22:04.5, 38°.33N×22°.07E, h7^{km}±2^{km}, ML2.3/11, Error ellipse: s-maj=2.2km s-min=0.7km az=30.0*

THE ***22*** *01:22:04.3, 38°.33N×22°.07E, h9^{km}, ML2.4/9, Error ellipse: s-maj=0.9km s-min=0.4km az=73.0*

ISC 22 01:22:04.3±1.0, 38°.33N±0°.02×22°.06E±0°.02, h9^{km}±4^{km}, n33, σ0^{s}.47/62, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.03	15	P	Pg	01 22 05.7	-0.2
TRIZ				S	Sg	01 22 06.9	-0.2
TRIZ	Trizonia	0.03	15	P	Pg	01 22 05.7	-0.2
TRIZ				S	Sg	01 22 06.8	-0.3
SERG	Sergoula	0.08	357	P	Pg	01 22 06.4	-0.1
SERG				S	Sg	01 22 08.2	+0.1
SERG	Sergoula	0.08	357	P	Pg	01 22 06.5	-0.1
SERG				S	Sg	01 22 08.1	+0.1
SERG				AML	AML	01 22 08.5	
	comp=E,19307µm,0.2s						
SERG				AML	AML	01 22 08.6	
	comp=N,28318µm,0.3s						
ALIK	Aliki, Aigiali	0.08	152	P	Pg	01 22 06.5	+0.1
ALIK				S	Sg	01 22 08.8	+0.8
KALE	Kalithea	0.08	47	P	Pg	01 22 06.6	0.0
KALE				S	Sg	01 22 08.4	+0.2
	comp=N,9µm,0.2s						
KALE	Kalithea	0.08	47	P	Pg	01 22 06.5	0.0
KALE				S	Sg	01 22 08.4	+0.2
KALE				AML	AML	01 22 08.8	
	comp=E,12885µm,0.2s						
KALE				AML	AML	01 22 09.0	
	comp=N,24301µm,0.2s						
LAKA	Lakka	0.11	215	P	Pg	01 22 06.8	-0.1
LAKA				S	Sg	01 22 08.8	-0.1
LAKA	Lakka	0.11	215	P	Pg	01 22 06.9	-0.1
LAKA				S	Sg	01 22 08.7	-0.1
LAKA				AML	AML	01 22 09.2	
	comp=E,1876µm,0.1s						
LAKA				AML	AML	01 22 09.4	
	comp=N,1494µm,0.1s						
AIG1	Aigion	0.14	153	P	Pg	01 22 07.4	+0.1
TRAZ	Trapeza	0.20	144	P	Pg	01 22 08.6	+0.2
TRAZ				S	Sg	01 22 12.2	+0.9
	comp=N,3µm,0.2s						
TRAZ	Trapeza	0.20	144	P	Pg	01 22 08.5	0.0
TRAZ				S	Sg	01 22 12.2	+0.9
TRAZ				AML	AML	01 22 12.7	
	comp=E,3211µm,0.2s						
TRAZ				AML	AML	01 22 12.9	
	comp=N,7589µm,0.2s						
UPR	University Cam	0.22	257	P	Pg	01 22 09.2	+0.4
UPR				S	Sg	01 22 11.7	-0.1
ANX	Ano Chora	0.28	337	P	Pg	01 22 09.9	0.0
ANX				S	Sg	01 22 14.6	+0.8
	comp=N,3µm,0.3s						
ANX	Ano Chora	0.28	337	P	Pg	01 22 10.0	0.0
ANX				S	Sg	01 22 14.4	+0.7
ANX				AML	AML	01 22 15.1	
	comp=N,8440µm,0.4s						
ANX				AML	AML	01 22 15.7	
	comp=E,4634µm,0.3s						
KLV	Kalavryta, Ach	0.30	166	P	Pg	01 22 09.8	-0.4
KLV				S	Sg	01 22 14.3	+0.1
KLV	Kalavryta, Ach	0.30	166	P	Pg	01 22 09.8	-0.4
KLV				S	Sg	01 22 14.8	+0.6
KLV				AML	AML	01 22 15.6	
	comp=N,250µm,0.3s						
KLV				AML	AML	01 22 18.4	
	comp=E,318µm,0.3s						
DSF	Desfina	0.37	78	P	Pg	01 22 11.2	-0.4
DSF				S	Sg	01 22 17.2	+0.6
	comp=E,530nm,0.2s						
DSF	Desfina	0.37	78	P	Pg	01 22 11.3	-0.4
DSF				S	Sg	01 22 17.2	+0.6
DSF				AML	AML	01 22 18.1	
	comp=E,911µm,0.2s						
DSF				AML	AML	01 22 18.2	
	comp=N,1110µm,0.2s						
GUR	Goura	0.45	151	P	Pg	01 22 12.6	-0.5
GUR				S	Sg	01 22 19.5	+0.4
	comp=N,300nm,0.3s						
GUR	Goura	0.45	151	P	Pg	01 22 12.6	-0.5
GUR				S	Sg	01 22 19.4	+0.4
GUR				AML	AML	01 22 21.2	
	comp=N,656µm,0.3s						
GUR				AML	AML	01 22 25.6	
	comp=E,485µm,0.4s						
DRO	Drossia	0.47	216	P	Pg	01 22 13.2	-0.2
DRO				S	Sb	01 22 20.8	-1.1
	comp=E,628nm,0.3s						
DRO	Drossia	0.47	216	P	Pg	01 22 13.2	-0.2
DRO				S	Sg	01 22 20.6	+0.9
DRO				AML	AML	01 22 22.2	
	comp=N,1153µm,0.3s						
DRO				AML	AML	01 22 23.8	
	comp=E,1340µm,0.3s						
PVO	Paravola	0.51	304	P	Pg	01 22 14.2	+0.1
PVO	Paravola	0.51	304	P	Pg	01 22 14.5	+0.4
PVO				S	Sb	01 22 22.8	-0.2
PVO				AML	AML	01 22 26.5	
	comp=E,527µm,0.4s						
PVO				AML	AML	01 22 27.8	
	comp=N,384µm,0.3s						
RLS	Riolos of Patr	0.54	240	P	Pg	01 22 14.7	-0.1
RLS	Riolos of Patr	0.54	240	P	Pg	01 22 14.8	-0.1
EVR	Evrytania	0.61	341	P	Pg	01 22 15.9	-0.3
EVR				S	Sb	01 22 26.0	-0.1
	comp=N,340nm,0.3s						
EVR	Evrytania	0.61	341	P	Pg	01 22 16.0	-0.3
EVR				S	Sb	01 22 25.9	-0.3
EVR				AML	AML	01 22 28.7	
	comp=N,647µm,0.3s						
EVR				AML	AML	01 22 30.7	
	comp=E,718µm,0.4s						
AGG	Agios Georgios	0.72	17	P	Pg	01 22 17.4	-0.8
AGG				S	Sb	01 22 28.9	-0.2
TRIP	Tripoli	0.82	168	P	Pg	01 22 19.4	-0.7

TRIP				S	Sg	01 22 31.1	+0.3
AMT	Artemida-Makis	0.85	199	P	Pg	01 22 20.2	-0.4
AMT				S	Sb	01 22 32.9	+0.2
	comp=E,325nm,0.3s						
VLS	Valsamata	1.17	263	P	Pg	01 22 25.4	-1.3
VLS				S	Sn	01 22 43.6	+0.6
	comp=E,92nm,0.2s						

BJI 22 01:23:29.0±0.0**,34°.56N**×**104°.20E,h7^{km},ML3.5**/7**,Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	1.55	349	Pg	Pn	01 23 57.1	-0.1
LZH				Sg	Sn	01 24 17.5	-0.2
LZH				smax	smax		
	comp=N,670nm,0.8s						
LZH				smax	smax		
	comp=E,520nm,0.9s						
WMQ	Urumqi	15.77	311	*e*P	Pn	01 27 12.3	+0.8

IDC 22 01:32:18.7±1.9**,1°.42N**×**126°.50E,h0^{km},mb3.8**/4**,mb1 4.0**/4**,mb1mx3.6**/21**,mbtmp3.8**/4**,Error ellipse: s-maj=178.4km s-min=23.5km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.58	160	P	P	01 37 21.8	+0.9
	3.6nm,0.4s,baz=338,slow=13,SNR=22						
ASAR	Alice Springs	25.95	164	P	P	01 37 53.5	+0.4
	0.5nm,0.3s,baz=349,slow=7.9,SNR=5.5						
STKA	Stephens Creek	36.08	158	P	P	01 39 20.9	-1.3
	2.1nm,0.6s,baz=342,slow=10,SNR=5.3						
MKAR	Makanchi Array	59.32	326	P	P	01 42 22.6	0.0
	0.2nm,0.4s,baz=129,slow=4.6,SNR=3.2						

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*IDC **22** 01:48:30.1±1.1, 41°.39S×174°.16E, h0^{km}, mb3.9/2, mb1 4.0/4, mb1mx3.8/20, mbtmp3.8/4, ML3.5/2, MS3.4/1, Ms1 3.4/1, ms1mx3.1/20, Error ellipse: s-maj=35.2km s-min=12.8km az=131.0*

*ISCJB **22** 01:48:33.4±0.4, 41°.73S±0°.03×174°.38E±0°.04, h26^{km}±3^{km}, Error ellipse: s-maj=5.8km s-min=2.8km az=44.6*

*NEIC **22** 01:48:33.9±0.0, 41°.56S×174°.33E, h14^{km}, mb4.6/3, ML4.5(WEL), After WEL.*

*WEL **22** 01:48:33.9, 41°.6S±0°.7×174°.3E±0°.7, h14^{km}±3^{km}, M4.5/8, ML4.7/8, MLv4.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=132.6*

ISC 22 01:48:33.5±0.9**,41°.59S**±0°.03×**174°.36E**±0°.03**,h26^{km}**±7^{km}**,n114,**σ**1^{s}60**/124**,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.19	215	P	Pb	01 48 39.3	+0.2
TUWZ	Tuamarina	0.35	297	P	Pb	01 48 41.1	-0.2
TUWZ				S	Sb	01 48 45.8	-0.9
SNZO	South Karori	0.38	43	*e*Pg	Pn	01 48 42.3	-1.0
BSWZ	Blackbirch Sta	0.39	251	P	Pb	01 48 41.9	0.0
BSWZ				S	Sb	01 48 47.7	+0.2
TCW	Tory Channel	0.39	350	P	Pb	01 48 41.9	0.0
TCW				S	Sb	01 48 47.2	-0.4
BHW	Baring Head	0.42	64	P	Pn	01 48 43.2	-0.7
PLWZ	Palliser	0.67	88	P	Pn	01 48 47.9	+0.6
PLWZ				S	Sn	01 48 59.6	+2.5
MSWZ	Moikau Station	0.69	75	P	Pn	01 48 48.1	+0.6
MSWZ				S	Sn	01 49 00.1	+2.6
CAW	Cannon Point	0.72	48	P	Pn	01 48 48.2	+0.3
NNZ	Nelson	0.83	297	P	Pn	01 48 49.4	0.0
DUWZ	D'Urville Isla	0.86	337	P	Pn	01 48 50.1	+0.3
KHZ	Kahutara	1.03	216	*e*Pg	Pn	01 48 53.3	+1.1
THZ	Tophouse	1.10	261	*e*Pg	Pb	01 48 54.1	+0.2
THZ				*e*Sn	Sb	01 49 05.7	-2.2
OHWZ	Ohakea	1.56	28	P	Pb	01 49 03.2	+1.6
QRZ	Quartz Range	1.58	298	*e*Pn	Pb	01 49 01.9	-0.1
QRZ	Quartz Range	1.58	298	P	Pb	01 49 02.3	+0.3
POWZ	Post Office Ro	1.60	42	P	Pb	01 49 01.8	-0.6
BFZ	Birch Farm	1.69	58	*e*Pn	Pn	01 49 01.7	+0.4
WAZ	Wanganui	1.90	15	P	Pb	01 49 08.3	+0.9
LTZ	Lake Taylor	1.96	232	*e*Pn	Pn	01 49 06.3	+1.3
LREZ	Lake Rotokare	2.13	1	P	Pb	01 49 11.8	+0.5
PNHZ	Pukenui	2.18	40	P	Pn	01 49 09.2	+1.1
WPHZ	Waipukurau	2.19	47	P	Pn	01 49 09.3	+1.0
NMEZ	Namu Road	2.21	350	P	Pb	01 49 12.5	-0.1
PREZ	Palmer Road	2.25	356	P	Pb	01 49 13.5	0.0
KHEZ	Kahui Hut	2.31	353	P	Pb	01 49 13.6	-0.8
NBEZ	Newall Road No	2.35	351	P	Pb	01 49 14.6	-0.5
CRLZ	Canterbury Las	2.36	212	*e*Pn	Pn	01 49 10.1	-0.4
MTVZ	Mangateitei	2.36	21	P	Pb	01 49 15.2	-0.1
DREZ	Durham Road	2.40	357	P	Pb	01 49 15.6	-0.4
PKE	Pukeiti	2.41	353	P	Pb	01 49 15.1	-1.1
PKVZ	Pokaka	2.42	18	P	Pb	01 49 14.8	-1.5
MOVZ	Moawhango	2.43	26	P	Pn	01 49 13.7	+2.1
OXZ	Oxford	2.44	224	*e*Pn	Pn	01 49 11.4	-0.3
INZ	Inchbonnie	2.45	241	P	Pn	01 49 13.3	+1.6
PXZ	Pawanui	2.46	51	P	Pn	01 49 12.0	+0.2
MQZ	McQueen's Vall	2.46	210	*e*Pn	Pn	01 49 11.0	-0.9
BHHZ	Black Hill Sta	2.47	32	P	Pn	01 49 14.1	+2.1
KRHZ	Kereru	2.48	39	P	Pn	01 49 13.0	+0.9
VRZ	Vera Road	2.48	7	P	Pb	01 49 16.2	-1.2
DRZ	Dome Shelter	2.49	22	P	Pb	01 49 18.5	+0.8
WHVZ	Whangaehu Hut	2.49	22	P	Pb	01 49 15.5	-2.1
FWVZ	Far West T-bar	2.50	22	P	Pb	01 49 15.9	-2.0
TUVZ	Tukino	2.52	23	P	Pb	01 49 19.4	+1.3
NGZ	Ngauruhoe	2.59	22	P	Pb	01 49 17.0	-2.4
KAHZ	Kahuranaki	2.62	48	P	Pn	01 49 14.5	+0.3
WTVZ	West Tongariro	2.65	21	P	Pb	01 49 18.3	-1.9
TWVZ	Taurewa	2.65	18	P	Pb	01 49 18.0	-2.3
KWHZ	Kaweka Forest	2.68	37	P	Pn	01 49 16.5	+1.6
KRVZ	Karewarewa	2.68	22	P	Pb	01 49 18.8	-2.0
MCHZ	McNeill Hill	2.79	40	P	Pn	01 49 17.2	+0.8
KATZ	Kakaramea	2.81	22	P	Pb	01 49 21.7	-1.2
CKHZ	Cape Kidnapper	2.83	48	P	Pn	01 49 19.0	+2.0
RITZ	Rihia Road	2.85	24	P	Pb	01 49 24.1	+0.4
BKZ	Black Stump Fm	2.92	35	*e*Pn	Pn	01 49 18.5	+0.2
BKZ	Black Stump Fm	2.92	35	P	Pn	01 49 19.3	+1.0
RATZ	Rangitukua	2.93	22	P	Pb	01 49 25.9	+0.9
WATZ	Wairara	3.07	20	P	Pb	01 49 26.2	-1.1
WVZ	Waitaha Valley	3.07	240	P	Pb	01 49 25.7	-1.6
ARHZ	Aropaoanui	3.08	42	P	Pn	01 49 21.2	+0.9
HIZ	Hauiti	3.10	7	*e*Pn	Pn	01 49 23.8	+3.1
HIZ				*e*Sn	Sn	01 49 56.1	-0.8
HIZ	Hauiti	3.10	7	P	Pb	01 49 24.3	-3.5
MRHZ	Matea Rd	3.17	30	P	Pn	01 49 22.8	+1.0
RPZ	Rata Peaks	3.23	228	Pn	Pn	01 49 22.5	0.0
	15nm,0.3s,baz=226,slow=0.9,SNR=24						
RPZ				Pg	Pb	01 49 30.4	+0.2
	142nm,0.3s,baz=270,slow=2.3,SNR=79						
RPZ				Sn	Sn	01 49 58.6	-1.6
	41nm,0.3s,baz=167,slow=23,SNR=18						
RPZ				Lg	Lg	01 50 12.0	
	26nm,0.3s,baz=315,slow=14,SNR=2.8						
RPZ				LR	LR	01 50 33.9	
	comp=Z,574nm,18.8s,baz=27,slow=38						
RPZ	Rata Peaks	3.23	228	*e*Pn	Pn	01 49 23.1	+0.6
RPZ	Rata Peaks	3.23	228	P	Pn	01 49 23.3	+0.7
MTHZ	Maungataniwha	3.33	36	P	Pn	01 49 27.7	+3.8
TLZ	Tolley Road	3.38	16	P	Pn	01 49 28.0	+3.4
KNZ	Kokohu	3.61	46	P	Pn	01 49 28.6	+1.0
MUGZ	Murupara	3.62	32	P	Pn	01 49 30.1	+2.3
FOZ	Fox Glacier	3.88	238	*e*Pn	Pn	01 49 32.4	+1.1
FOZ	Fox Glacier	3.88	238	P	Pn	01 49 32.9	+1.5
RIGZ	Rimuhau	3.89	43	P	Pn	01 49 31.5	0.0
URZ	Urewera	3.94	33	Pn	Pn	01 49 31.6	-0.6
	1.4nm,0.3s,baz=236,slow=3.4,SNR=8.2						
URZ				Pg	Pb	01 49 40.0	-2.2
	16nm,0.3s,baz=243,slow=11,SNR=37						
URZ				Sn	Sn	01 50 18.0	+0.4
	11nm,0.3s,baz=79,slow=17,SNR=6.3						
URZ				Lg	Lg	01 50 31.4	
	9.4nm,0.3s,baz=38,slow=15,SNR=4.2						
URZ	Urewera	3.94	33	*e*Pn	Pn	01 49 33.5	+1.2
URZ	Urewera	3.94	33	P	Pn	01 49 34.0	+1.7
TOZ	Tahuroa Road	3.96	13	P	Pb	01 49 37.8	-4.7
MWZ	Matawai	4.06	38	P	Pn	01 49 36.0	+2.0
LBZ	Lake Benmore	4.14	226	*e*Pn	Pn	01 49 35.8	+0.7
LBZ	Lake Benmore	4.14	226	P	Pn	01 49 36.0	+0.9
ODZ	Otahua Downs	4.39	217	P	Pn	01 49 37.9	-0.5
RUGZ	Raukumara Rang	4.43	36	P	Pn	01 49 40.5	+1.3
MKAZ	Moumakai	4.53	8	P	Pn	01 49 43.1	+2.9
HAZ	Te Kaha	4.65	36	P	Pn	01 49 42.3	+0.3
ETAZ	East Tamaki Re	4.65	6	P	Pn	01 49 47.2	+5.2
WTAZ	Waiatarua	4.66	2	P	Pn	01 49 46.3	+4.2
PKGZ	Pakihiroa	4.68	39	P	Pn	01 49 44.4	+2.0
JCZ	Jackson Bay	4.79	237	P	Pn	01 49 48.9	+4.8
WIAZ	Waiheke Island	4.83	7	P	Pn	01 49 48.3	+3.8
KUZ	Kuaotunu	4.95	13	P	Pn	01 49 50.3	+4.2
MXZ	Matakaoa Point	5.05	38	P	Pn	01 49 53.0	+5.6
HHSZ	Highcliff Hill	5.08	211	P	Pn	01 49 48.1	+0.2
TUZ	Tuapeka	5.54	217	P	Pn	01 49 54.2	0.0
MLZ	Mavora Lakes	5.90	228	P	Pn	01 50 02.4	+3.1
SYZ	Scrubby Hill	6.21	216	P	Pn	01 50 03.9	+0.5
WHZ	Wether Hill Ro	6.33	225	*e*Pn	Pn	01 50 07.1	+2.0
OUZ	Omahuta	6.39	354	*e*Pn	Pn	01 50 08.8	+2.8
OUZ	Omahuta	6.39	354	P	Pn	01 50 09.3	+3.4
DCZ	Deep Cove	6.51	231	*e*Pn	Pn	01 50 08.0	+0.5
APZ	The Paps	6.96	219	P	Pn	01 50 14.3	+0.7
CTZ	Chatham Island	6.99	111	P	Pn	01 50 14.0	-0.1
RAO	Raoul Island	13.82	29	*e*Pn	Pn	01 51 47.8	+0.2
MCQ	Macquarie Isla	16.47	213	*e*Pn	Pn	01 52 22.7	+0.3
	74nm,1.1s						
AS31	Alice Springs	38.07	285	*e*P	P	01 55 48.0	-2.0
	0.8nm,0.9s						
ASAR	Alice Springs	38.07	285	P	P	01 55 48.0	-2.0
	0.7nm,0.5s,baz=127,slow=7.0,SNR=8.7						
WRAB	Tennant Creek	40.12	290	*e*P	P	01 56 06.5	-0.8
	19nm,0.4s						
WR1	Warramunga Arr	40.13	290	*e*P	P	01 56 06.7	-0.5
WRA	Warramunga Arr	40.13	290	P	P	01 56 06.7	-0.5
	2.0nm,0.6s,baz=131,slow=7.3,SNR=8.9						
ARA0	ARCESS Array S	147.66	340	*e*PKPdf	PKPbc	02 08 14.6	+0.2
ARCES	ARCESS Array B	147.66	340	PKPbc	PKPbc	02 08 14.6	+0.2
	1.3nm,0.9s,baz=54,slow=1.6,SNR=2.9						
TORD	Torodi Ar. Bea	150.95	195	PKPbc	PKiKP	02 08 25.1	+0.3
	0.3nm,0.6s,baz=174,slow=2.4,SNR=11						
TORD				PKPab	PKPab	02 08 32.9	+1.4
	0.4nm,0.4s,baz=166,slow=0.9,SNR=10						
TOA1	Torodi Ar. Sit	150.95	195	*e*pPKPdf	PKiKP	02 08 25.1	+0.3
TOA1				*e*PKPab	PKPab	02 08 32.9	+1.4
FIA0	FINESS Array S	152.45	327	*e*PKPdf	PKPbc	02 08 25.6	-0.6
FINES	FINESS Array B	152.45	327	PKPbc	PKPbc	02 08 25.6	-0.6
	3.2nm,0.9s,baz=253,slow=5.8,SNR=4.1						

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*SOME **22** 01:48:35.9, 42°.97N×82°.90E, h10^{km}*

*NNC **22** 01:48:39.4±1.6, 43°.13N×82°.74E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=13.8km s-min=6.9km az=145.0*

ISC 22 01:48:41.0±2.0**,43°.14N**±0°.07×**82°.55E**±0°.08**,h10^{km},n44,**σ**2^{s}06**/66**,8C-14D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.63	282	Pg	Pg	01 49 11.3	-0.9
	41nm,0.1s						
KTMS				Lg	Lg	01 49 37.5	
	221nm,0.2s						
KTMS	Ketmen	1.63	282	*e*P	Pg	01 49 11.7	-0.6
	63nm,0.2s						
KTMS				*e*S	Sg	01 49 37.6	+4.2
	221nm,0.2s						
PDGK	Podgornoye	2.24	276	Pg	Pb	01 49 21.6	-0.1
	13nm,0.4s						
PDGK				Lg	Lg	01 49 55.5	
	86nm,0.4s						
PDGK	Podgornoye	2.24	276	⇓Pn	Pb	01 49 20.7	-0.9
	19nm,0.4s						
PDGK				⇓Sn	Sg	01 49 55.3	+2.3
	46nm,0.3s						
DJR	Jarkent	2.33	302	Pg	Pb	01 49 23.1	+0.1
	29nm,0.3s						
DJR				Lg	Lg	01 49 57.9	
	101nm,0.4s						
DJR	Jarkent	2.33	302	*e*P	Pb	01 49 23.1	+0.1
	29nm,0.3s						
DJR				*e*S	Sg	01 49 57.9	+2.1
	101nm,0.4s						
UZB	Uzynbulak	2.58	271	Pg	Pb	01 49 26.6	-0.8
	10nm,0.3s						
UZB				Lg	Lg	01 50 04.5	
	74nm,0.4s						
UZB	Uzynbulak	2.58	271	*e*P	Pb	01 49 26.6	-0.8
	10nm,0.3s						
UZB				*e*S	Sg	01 50 04.5	+0.6
	74nm,0.4s						
KPKS	Kokpek	2.84	278	*e*P	Pb	01 49 31.9	+0.1
	17nm,0.2s						
KPKS				*e*S	Sg	01 50 12.7	+0.5
	111nm,0.3s						
SATY	Saty	3.04	270	Pg	Pg	01 49 36.9	-2.2
	34nm,0.3s						
SATY				Lg	Lg	01 50 20.9	
	137nm,0.2s						
SATY	Saty	3.04	270	*e*P	Pb	01 49 35.0	-0.1
	34nm,0.3s						
SATY				*e*S	Sg	01 50 18.4	-0.1
	137nm,0.2s						
KAPS	Kapalarasan	3.14	314	Pg	Pb	01 49 37.2	+0.3
	10nm,0.4s						
KAPS				Lg	Lg	01 50 21.9	
	30nm,0.4s						
KAPS	Kapalarasan	3.14	314	*e*P	Pb	01 49 37.2	+0.3
	10nm,0.4s						
KAPS				*e*S	Sg	01 50 21.9	+0.2
	30nm,0.4s						
MNBS	Baschi	3.15	289	Pg	Pb	01 49 37.3	+0.1
	6.5nm,0.1s						
MNBS				Lg	Lg	01 50 21.7	
	123nm,0.4s						
MNBS	Baschi	3.15	289	*e*P	Pb	01 49 37.2	+0.1
	6.5nm,0.1s						
MNBS				*e*S	Sg	01 50 21.7	-0.6
	123nm,0.4s						
KURS	Kuram	3.21	278	Pg	Pb	01 49 39.7	+1.5
	12nm,0.6s						
KURS				Lg	Lg	01 50 25.9	
	52nm,0.6s						
KURS	Kuram	3.21	278	*e*P	Pb	01 49 39.7	+1.5
	12nm,0.6s						
KURS				*e*S	Sg	01 50 25.9	+1.8
	52nm,0.6s						
TDK	Taldyqorghan	3.52	303	Pg	Pb	01 49 44.3	+1.0
	46nm,0.3s						
TDK				Lg	Lg	01 50 33.6	
	74nm,0.4s						
TDK	Taldyqorghan	3.52	303	*e*P	Pg	01 49 45.3	-3.0
	46nm,0.3s						
TDK				*e*S	Sg	01 50 35.4	+1.5
	112nm,0.5s						
MK31	Makanchi Array	3.66	357	⇓Pn	Pn	01 49 40.1	+2.5
	0.1nm,0.1s,baz=174,slow=14,SNR=42						
MK31				⇑Pg	Pg	01 49 48.8	-2.2
	1.1nm,0.3s,baz=179,slow=16,SNR=29						
MK31				⇓Lg	Lg	01 50 36.3	
	15nm,0.5s,baz=169,slow=26,SNR=7.0						
MAKZ	Makanchi	3.69	354	⇑Pn	Pn	01 49 39.2	+1.2
	1.5nm,0.6s						
MAKZ				⇓Pg	Pg	01 49 49.0	-2.7
	3.7nm,0.7s						
MAKZ				⇓Lg	Lg	01 50 36.8	
	10nm,0.5s						
MDOK	Medeo	4.02	272	Pg	Pb	01 49 54.1	+2.1
	5.9nm,0.4s						
MDOK				Lg	Lg	01 50 50.5	
	21nm,0.6s						
MDOK	Medeo	4.02	272	*e*P	Pb	01 49 54.1	+2.1
	5.9nm,0.4s						
MDOK				*e*S	Sg	01 50 50.5	+0.4
	21nm,0.6s						
TNSS	Tian-Shan	4.10	270	Pg	Pg	01 49 56.6	-2.9
	10.0nm,0.5s						
TNSS				Lg	Lg	01 50 54.8	
	29nm,0.4s						
TNSS	Tian-Shan	4.10	270	*e*P	Pb	01 49 54.9	+1.4
	10.0nm,0.5s						
TNSS				*e*S	Sg	01 50 51.2	-1.6
	29nm,0.4s						
CHKK	Chushkaly	4.11	282	Pg	Pb	01 49 54.1	+0.7
	3.8nm,0.4s						
CHKK				Lg	Lg	01 50 51.1	
	28nm,0.3s						
CHKK	Chushkaly	4.11	282	*e*P	Pb	01 49 54.1	+0.7
	3.8nm,0.4s						
CHKK				*e*S	Sg	01 50 51.1	-1.8
	28nm,0.3s						
KTBS	Karatobe	4.31	280	Pg	Pb	01 49 58.3	+1.5
	5.7nm,0.4s						
KTBS				Lg	Lg	01 50 58.0	
	47nm,0.6s						
KTBS	Karatobe	4.31	280	*e*P	Pb	01 49 58.3	+1.5
	5.7nm,0.4s						
KTBS				*e*S	Sg	01 50 58.0	-1.4
	47nm,0.6s						
IZV	Izvestkoviy	4.35	271	Pg	Pg	01 50 00.4	-3.9
	4.4nm,0.2s						
IZV				Lg	Lg	01 51 01.7	
	45nm,0.5s						
IZV	Izvestkoviy	4.35	271	*e*P	Pg	01 50 00.4	-3.9
	4.4nm,0.2s						
IZV				*e*S	Sg	01 51 01.7	+1.1
	45nm,0.5s						
MTBS	Maitube	4.48	272	Pg	Pg	01 50 02.9	-3.8
	5.8nm,0.3s						
MTBS				Lg	Lg	01 51 05.6	
	17nm,0.5s						
MTBS	Maitube	4.48	272	*e*P	Pb	01 50 02.0	+2.3
	3.9nm,0.2s						
MTBS				*e*S	Sg	01 51 03.9	-0.8
	17nm,0.5s						
KST	Kastek	4.82	271	Pg	Pg	01 50 10.8	-2.5
	13nm,0.5s						
KST				Lg	Lg	01 51 19.4	
	30nm,0.4s						
KST	Kastek	4.82	271	*e*P	Pb	01 50 08.5	+2.9
	13nm,0.5s						
KST				*e*S	Sg	01 51 15.2	-0.6
	30nm,0.4s						
TKM2	Tokmak 2	5.10	270	⇓Pn	Pn	01 50 00.4	+2.7
	2.2nm,0.8s						
TKM2				⇓Pg	Pg	01 50 16.1	-2.5
	4.6nm,0.7s						
TKM2				⇑Lg	Lg	01 51 28.8	
	7.5nm,0.5s						
SGDS	Sogindy	5.79	276	Pg	Pg	01 50 27.4	-4.4
	4.8nm,0.9s						
SGDS				Lg	Lg	01 51 47.5	
	7.7nm,0.5s						
AAK	Ala-Archa	5.94	268	⇓Pg	Pg	01 50 32.4	-2.2
	1.5nm,0.3s						
AAK				⇓Lg	Lg	01 51 57.8	
	5.6nm,0.7s						
MRKS	Merke	6.85	270	Pg	Pg	01 50 47.9	-4.3
	3.1nm,0.3s						
MRKS				Lg	Lg	01 52 22.7	
	5.8nm,0.3s						
MRKS	Merke	6.85	270	*e*P	Pg	01 50 47.9	-4.3
	3.1nm,0.3s						
MRKS				*e*S	Sg	01 52 22.7	+1.8
	5.8nm,0.3s						
KURBB	Kurchatov Arra	7.97	341	⇓Pn	Pn	01 50 36.0	-0.8
	1.0nm,0.5s						
KURBB				⇑Sn	Sn	01 52 06.7	-0.2
	6.1nm,0.7s						
KURBB				⇑Lg	Lg	01 52 55.2	
	13nm,0.7s						
KURK	Kurchatov	8.04	342	⇑Pn	Pn	01 50 39.2	+1.5
	2.0nm,1.0s						
KURK				⇑Sn	Sn	01 52 09.7	+1.1
	4.3nm,0.8s						
KURK				⇓Lg	Lg	01 52 55.2	
	8.6nm,0.9s						
OTUK	Ortayu	8.78	309	⇑Lg	Lg	01 53 26.2	
	2.4nm,0.7s						
KK31	Karatay Array	8.81	274	⇓Pg	Pg	01 51 26.4	-3.0
	0.7nm,0.6s,baz=100,slow=16,SNR=3.8						
KK31				⇓Lg	Lg	01 53 27.8	
	3.3nm,0.7s,baz=81,slow=28,SNR=5.2						

TAP 22 01:57:23.7,24°.29N×**119°.06E,h43^{km}**±1^{km}**,ML3.5,C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNMB	Chin-men Tao	0.64	286	P	Pn	01 57 36.7	+0.4
	baz=286						
KNMB				S	Sn	01 57 45.8	+0.4
	baz=286						
PTMZ	Houxiangcun	0.75	4	*e*P	Pn	01 57 37.3	-0.6
	baz=5.0						
PTMZ				*e*S	Sn	01 57 46.6	-1.4
	baz=5.0						
PNG	Penghu	0.85	148	P	Pn	01 57 39.3	+0.1
	baz=148						
PNG				S	Sn	01 57 50.9	+0.3
	baz=148						
PHUB	P'eng-hu	0.91	149	P	Pn	01 57 40.1	+0.2
	baz=149						
PHUB				S	Sn	01 57 52.1	+0.3
	baz=149						
VCHM	Qimei	1.13	162	*e*P	Pn	01 57 43.7	+0.6
	baz=163						
VCHM				*e*S	Sn	01 57 57.7	+0.3
	baz=163						
AXDP	Jialang	1.16	302	*e*P	Pn	01 57 44.5	+1.1
	baz=301						
AXDP				*e*S	Sn	01 57 59.4	+1.2
	baz=301						
WDGT	Dungji	1.16	152	*e*P	Pn	01 57 43.9	+0.4
	baz=152						
WDGT				*e*S	Sn	01 57 58.6	+0.4
	baz=152						
WTCT	Ta-ch'eng	1.19	111	*e*S	Sn	01 58 01.4	+2.5
	baz=111						
ZPLA	Ao Xicun	1.25	254	*e*P	Pn	01 57 46.0	+1.3
	baz=253						
ZPLA				*e*S	Sn	01 58 02.1	+1.8
	baz=253						
RLNB	Erlin	1.25	108	*e*P	Pn	01 57 45.7	+1.0
	baz=98						
RLNB				*e*S	Sn	01 58 02.7	+2.3
	baz=98						
ZZJH	Jiuhuzhen	1.32	278	*e*P	Pn	01 57 48.2	+2.6
	baz=278						
ZZJH				*e*S	Sn	01 58 05.9	+4.0
	baz=278						
PTTC	Pingtan	1.37	28	*e*P	Pn	01 57 47.3	+1.0
	baz=28						
PTTC				*e*S	Sn	01 58 04.5	+1.3
	baz=28						
WCHH	Zhanghua	1.38	98	*e*S	Sn	01 58 06.7	+3.1
	baz=99						
WLGB	Puzi	1.39	125	*e*S	Sn	01 58 06.0	+2.2
	baz=126						
WDJ	Dajia District	1.44	87	*e*S	Sn	01 58 08.1	+3.0
	baz=88						
CHY	Chiayi	1.48	122	*e*P	Pn	01 57 49.4	+1.6
	baz=122						
CHY				*e*S	Sn	01 58 08.2	+2.3
	baz=122						
WDLH	Douliu	1.48	114	*e*P	Pn	01 57 49.4	+1.6
	baz=124						
WDLH				*e*S	Sn	01 58 09.0	+3.0
	baz=124						
TCU	Taichung	1.48	95	*e*S	Sn	01 58 09.5	+3.5
	baz=96						
PTSB	Yuanli	1.51	84	*e*P	Pn	01 57 50.5	+2.3
	baz=84						
PTSB				*e*S	Sn	01 58 09.7	+3.0
	baz=84						
WNT	Mingjian	1.54	105	*e*P	Pn	01 57 50.3	+1.6
	baz=105						
WNT				*e*S	Sn	01 58 10.9	+3.4
	baz=105						
TWQ1	Liyutan	1.56	88	*e*P	Pn	01 57 50.9	+1.9
	baz=88						
TWQ1				*e*S	Sn	01 58 11.5	+3.4
	baz=88						
WJS	Zhushan	1.59	107	*e*P	Pn	01 57 50.0	+0.6
	baz=98						
WJS				*e*S	Sn	01 58 11.5	+2.7
	baz=98						
NMLH	Miaoli	1.60	81	*e*S	Sn	01 58 08.1	-0.8
	baz=81						
TWK	Hsinying	1.66	128	P	Pn	01 57 51.3	+1.0
	baz=128						
TWK				*e*S	Sn	01 58 10.8	+0.4
	baz=128						
TYC	Yuchr	1.69	103	P	Pn	01 57 51.6	+1.0
	baz=103						
TYC				*e*S	Sn	01 58 14.3	+3.2
	baz=103						
DPDB	Guoxing	1.72	98	*e*P	Pn	01 57 54.6	+3.4
	baz=99						
DPDB				*e*S	Sn	01 58 15.5	+3.4
	baz=99						
TPUB	Ta-pu	1.74	124	P	Pn	01 57 52.1	+0.6

	baz=125						
TPUB	baz=125			*e*S	Sn	01 58 13.9	+1.4
WHYT	Xinyi Township baz=110	1.74	109	P	Pn	01 57 52.1	+0.6
WTP	Ta-pu baz=114	1.76	126	*e*P	Pn	01 57 52.6	+0.8
ALS	Alishan baz=116	1.78	116	*e*P	Pn	01 57 52.8	+0.6
ALS	baz=116			*e*S	Sn	01 58 14.9	+1.2
MHZQ	Yeshan baz=360	1.80	359	*e*P	Pn	01 57 55.7	+3.5
MHZQ	baz=360			*e*S	Sn	01 58 17.3	+3.4
SSLB	Suanglung baz=119	1.80	106	P	Pn	01 57 52.8	+0.5
SSLB	baz=119			*e*S	Sn	01 58 15.4	+1.4
LIOB	Emei baz=79	1.82	78	*e*P	Pn	01 57 52.8	+0.3
YUS	Yu-Shan baz=115	1.91	114	P	Pn	01 57 55.0	+0.8
STYT	Tauyuan baz=115	1.92	125	*e*P	Pn	01 57 54.9	+1.0
CHGB	Renai baz=85	1.94	96	*e*P	Pn	01 57 55.1	+0.7
CHGB	baz=85			*e*S	Sn	01 58 19.1	+1.3
SLGT	Liugui baz=119	1.94	131	*e*P	Pn	01 57 55.1	+0.8
VWDT	VWDT baz=106	1.98	105	*e*P	Pn	01 57 56.0	+1.4
WHF	Hehuan Shan baz=94	2.02	94	*e*P	Pn	01 57 56.8	+1.2
WHF	baz=94			*e*S	Sn	01 58 22.2	+2.3
MATB	Ma-tsu baz=23	2.02	23	*e*P	Pn	01 57 55.3	+0.1
MATB	baz=23			*e*S	Sn	01 58 21.8	+2.6
EHY	Hungye baz=111	2.21	110	*e*P	Pn	01 57 59.5	+1.6
ESL	Shilin baz=113	2.22	102	*e*P	Pn	01 57 59.6	+1.6
YULB	Yu-li baz=114	2.23	113	P	Pn	01 57 59.3	+1.1
YULB	baz=114			*e*S	Sn	01 58 25.6	+0.9
TWF1	Yuli baz=115	2.25	114	*e*P	Pn	01 58 00.1	+1.6
HGSD	Ruisui baz=110	2.31	110	*e*P	Pn	01 58 01.4	+2.2
HGSD	baz=110			*e*S	Sn	01 58 27.3	+1.0
LYJJ	Jianjiangzhen baz=16	2.34	16	*e*P	Pn	01 57 59.6	+0.1
LYJJ	baz=16			*e*S	Sn	01 58 29.3	+2.3
XPSS	Dashiqiu baz=22	2.82	21	*e*P	Pn	01 58 06.4	+0.2
XPSS	baz=22			*e*S	Sn	01 58 41.8	+2.9

WEL 22 02:26:31.4, 41°S±1°×17°4E±°, h8^{km}±2^{km}, M3.3/19, ML3.5/19, MLv3.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=133.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	Tuamarina	0.25	279	P	Pb	02 26 37.4	-0.9
TCW	Tory Channel	0.26	360	P	Pg	02 26 37.4	+0.8
CMWZ	Cape Campbell	0.28	189	P	Pb	02 26 38.9	+0.1
BSWZ	Blackbirch Sta	0.39	230	P	Pb	02 26 39.9	-0.7
WEL	Wellington	0.41	64	P	Pb	02 26 40.6	-0.3
BHW	Baring Head	0.45	83	P	Pb	02 26 40.9	-0.7
CAW	Cannon Point	0.70	59	P	Pb	02 26 46.2	+0.4
DUWZ	D'Urville Isla	0.72	338	P	Pb	02 26 46.0	-0.2
NNZ	Nelson	0.72	290	P	Pb	02 26 46.3	+0.1
MSWZ	Moikau Station	0.73	86	P	Pb	02 26 46.6	+0.1
PLWZ	Palliser	0.74	98	P	Pb	02 26 46.4	-0.2
PAWZ	Paruwai Farm	0.87	85	P	Pb	02 26 49.2	+0.4
OGWZ	Otaki Gorge	0.94	46	P	Pb	02 26 49.7	-0.2
MTW	Mount Morrison	0.97	72	P	Pn	02 26 51.2	-0.2
TRWZ	Traveller	1.06	87	P	Pn	02 26 55.2	+2.5
THZ	Tophouse	1.07	254	P	Pn	02 26 52.7	-0.1
HOWZ	Holdsworth Sta	1.09	59	P	Pn	02 26 53.8	+0.7
KHZ	Kahutara	1.10	210	P	Pn	02 26 53.4	+0.4
MRZ	Mangatainoka R	1.27	51	P	Pg	02 26 56.2	+0.3
TIWZ	Tintock	1.40	61	P	Pg	02 27 00.7	+2.5
QRZ	Quartz Range	1.47	295	P	Pg	02 27 00.1	+0.6
CPWZ	Castlepoint	1.56	70	P	Pg	02 27 06.1	+4.8
POWZ	Post Office Ro	1.56	47	P	Pg	02 27 04.1	+2.8
PRWZ	Pori Road	1.57	55	P	Pg	02 27 03.1	+1.5
BFZ	Birch Farm	1.68	63	P	Pg	02 27 04.1	+0.4
GVZ	Greta Valley S	1.76	211	P	Pn	02 27 02.3	+0.1
WAZ	Wanganui	1.79	18	P	Pg	02 27 08.9	+3.1
DVHZ	Dannevirke	1.85	51	P	Pg	02 27 07.7	+0.8
TSZ	Takapari Road	1.90	43	P	Pg	02 27 10.5	+2.6
LTZ	Lake Taylor	1.99	228	P	Pn	02 27 06.1	+0.7
NMEZ	Namu Road	2.08	351	P	Pg	02 27 12.1	+1.0
AMCZ	Amberley	2.09	215	P	Pg	02 27 12.5	+1.0
PREZ	Palmer Road	2.12	358	P	Pg	02 27 13.0	+0.9
PNHZ	Pukenui	2.13	44	P	Pg	02 27 14.2	+1.9
PRHZ	Porangahau	2.15	57	P	Pg	02 27 12.1	-0.6
KHEZ	Kahui Hut	2.18	355	P	Pg	02 27 14.8	+1.6
PKE	Pukeiti	2.28	354	P	Pg	02 27 15.2	+0.1
MOVZ	Moawhango	2.35	29	P	Pb	02 27 15.0	+1.0
VRZ	Vera Road	2.37	9	P	Pg	02 27 18.2	+1.4
BHHZ	Black Hill Sta	2.40	35	P	Pg	02 27 18.3	+0.9
WHVZ	Whangaehu Hut	2.40	25	P	Pg	02 27 19.9	+2.4
FWVZ	Far West T-bar	2.42	24	P	Pg	02 27 19.3	+1.6
KRHZ	Kereru	2.42	42	P	Pg	02 27 19.4	+1.5
OKCZ	Okains Bay	2.43	201	P	Pn	02 27 10.5	-0.9
PXZ	Pawanui	2.43	55	P	Pb	02 27 14.1	-1.3
INZ	Inchbonnie	2.45	238	P	Pn	02 27 13.2	+1.4
NGZ	Ngauruhoe	2.50	24	P	Pg	02 27 20.1	+0.7
MQZ	McQueen's Vall	2.54	208	P	Pn	02 27 11.4	-1.5
KAHZ	Kahuranaki	2.59	51	P	Pb	02 27 17.9	-0.3
KRVZ	Karewarewa	2.59	24	P	Pg	02 27 19.9	-1.1
AKCZ	Akaroa Harbour	2.61	202	P	Pn	02 27 13.8	0.0
KWHZ	Kaweka Forest	2.62	39	P	Pg	02 27 21.6	0.0
MCHZ	McNeill Hill	2.74	43	P	Pb	02 27 21.4	+0.8
RITZ	Rihia Road	2.77	26	P	Pg	02 27 24.9	+0.4
BKZ	Black Stump Fm	2.86	37	P	Pn	02 27 18.6	+1.2
ARHZ	Aropaoanui	3.03	44	P	Pn	02 27 19.8	+0.2

WEL 22 02:34:22.9, 42°S±1°×174°.3E±0°.9, h14^{km}±2^{km}, M3.5/17, ML3.9/17, MLv3.5/17, Error ellipse: s-maj=0.0km s-min=0.0km az=149.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	199	P	Pg	02 34 26.3	+0.2
CMWZ				S	Sb	02 34 29.5	+0.1
BSWZ	Blackbirch Sta	0.30	257	P	Pg	02 34 29.5	+0.3
BSWZ				S	Sb	02 34 34.6	-0.2
TUWZ	Tuamarina	0.32	312	P	Pb	02 34 30.1	-0.4
TUWZ				S	Sb	02 34 35.3	-0.3
TCW	Tory Channel	0.44	1	P	Pg	02 34 31.9	+0.3
BHW	Baring Head	0.52	63	P	Pb	02 34 33.9	+0.1
WEL	Wellington	0.53	47	P	Pb	02 34 33.9	0.0
PLWZ	Palliser	0.75	84	P	Pb	02 34 38.5	+0.7
MSWZ	Moikau Station	0.78	73	P	Pb	02 34 38.7	+0.5
MSWZ				S	Sn	02 34 52.5	+1.6
NNZ	Nelson	0.79	303	P	Pg	02 34 38.2	0.0
CAW	Cannon Point	0.81	49	P	Pb	02 34 38.8	0.0
DUWZ	D'Urville Isla	0.88	343	P	Pb	02 34 40.1	0.0
PAWZ	Paruwai Farm	0.92	74	P	Pn	02 34 41.4	0.0
KHZ	Kahutara	0.94	215	P	Pn	02 34 41.7	0.0
THZ	Tophouse	1.02	263	P	Pb	02 34 42.5	+0.1
MTW	Mount Morrison	1.05	63	P	Pg	02 34 43.2	-0.1
MTW				S	Sn	02 34 59.8	+2.0
OGWZ	Otaki Gorge	1.08	40	P	Pb	02 34 43.4	+0.1
TRWZ	Traveller	1.10	77	P	Pb	02 34 43.5	-0.2
HOWZ	Holdsworth Sta	1.21	52	P	Pb	02 34 45.8	+0.2
TMWZ	Te Maipa	1.34	67	P	Pn	02 34 47.0	-0.3
MRZ	Mangatainoka R	1.40	46	P	Pn	02 34 48.4	+0.4
QRZ	Quartz Range	1.54	302	P	Pb	02 34 51.7	+0.4
GVZ	Greta Valley S	1.60	214	P	Pn	02 34 50.7	-0.1
CPWZ	Castlepoint	1.64	64	P	Pg	02 34 57.8	+3.4
OHWZ	Ohakea	1.65	29	P	Pg	02 34 54.4	-0.1
PRWZ	Pori Road	1.69	50	P	Pn	02 34 52.5	+0.5
POWZ	Post Office Ro	1.69	43	P	Pb	02 34 53.9	0.0
BFZ	Birch Farm	1.78	58	P	Pn	02 34 53.9	+0.6
LTZ	Lake Taylor	1.86	232	P	Pn	02 34 54.7	+0.2
AMCZ	Amberley	1.94	217	P	Pg	02 35 02.3	+2.2
WAZ	Wanganui	1.97	16	P	Pg	02 34 59.8	-0.9
DVHZ	Dannevirke	1.97	48	P	Pn	02 34 56.8	+0.8
LREZ	Lake Rotokare	2.19	3	P	Pg	02 35 04.5	-0.4
NMEZ	Namu Road	2.25	352	P	Pg	02 35 06.3	+0.3
OKCZ	Okains Bay	2.26	203	P	Pn	02 34 58.6	-1.2
PRHZ	Porangahau	2.27	53	P	Pg	02 35 07.4	+1.0
PNHZ	Pukenui	2.27	41	P	Pn	02 35 00.6	+0.5
PREZ	Palmer Road	2.30	358	P	Pb	02 35 05.3	+1.0
INZ	Inchbonnie	2.35	242	P	Pn	02 35 01.8	+0.6
KHEZ	Kahui Hut	2.36	355	P	Pb	02 35 06.0	+0.7
MQZ	McQueen's Vall	2.38	209	P	Pn	02 34 59.6	-1.9
NBEZ	Newall Road No	2.40	353	P	Pb	02 35 07.2	+1.4
AKCZ	Akaroa Harbour	2.44	204	P	Pn	02 35 02.0	-0.3
MTVZ	Mangateitei	2.44	23	P	Pb	02 35 07.8	+1.1
PKE	Pukeiti	2.46	355	P	Pb	02 35 06.5	-0.5
PKVZ	Pokaka	2.50	20	P	Pb	02 35 08.4	+0.8
MOVZ	Moawhango	2.51	27	P	Pb	02 35 07.8	-0.1
BHHZ	Black Hill Sta	2.56	33	P	Pb	02 35 08.5	-0.1
KRHZ	Kereru	2.56	39	P	Pb	02 35 09.8	+1.1
DRZ	Dome Shelter	2.57	23	P	Pg	02 35 11.5	-0.7
WHVZ	Whangaehu Hut	2.57	24	P	Pb	02 35 08.6	-0.3
FWVZ	Far West T-bar	2.58	23	P	Pb	02 35 09.5	+0.3
TUVZ	Tukino	2.60	25	P	Pb	02 35 10.7	+1.2
NGZ	Ngauruhoe	2.67	23	P	Pb	02 35 11.2	+0.6
KAHZ	Kahuranaki	2.72	48	P	Pn	02 35 07.8	+1.6
WTVZ	West Tongariro	2.73	22	P	Pb	02 35 11.8	+0.3
TWVZ	Taurewa	2.73	20	P	Pb	02 35 12.2	+0.7
KRVZ	Karewarewa	2.76	23	P	Pb	02 35 12.2	+0.1
KWHZ	Kaweka Forest	2.77	37	P	Pb	02 35 13.6	+1.4
KATZ	Kakaramea	2.89	23	P	Pb	02 35 15.1	+0.8
RPZ	Rata Peaks	3.14	228	P	Pn	02 35 11.8	-0.2
WATZ	Wairara	3.15	21	P	Pn	02 35 10.5	-1.6
HIZ	Hauiti	3.16	8	P	Pb	02 35 18.7	-0.2
ODZ	Otahua Downs	4.30	217	P	Pn	02 35 27.2	-0.7
AWAZ	Awhitu Peninsu	4.59	4	P	Pn	02 35 36.1	+4.3

WEL 22 02:46:40.5, 42°S±2°×17°4E±°, h10^{km}±2^{km}, M3.5/25, ML3.8/24, MLv3.5/25, Error ellipse: s-maj=0.0km s-min=0.0km az=152.4, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	180	P	Pg	02 46 43.7	+0.6
BSWZ	Blackbirch Sta	0.26	257	P	Pg	02 46 46.6	+0.7
TUWZ	Tuamarina	0.31	318	P	Pb	02 46 47.4	-0.7
TCW	Tory Channel	0.45	6	P	Pb	02 46 49.9	-0.6
BHW	Baring Head	0.55	63	P	Pb	02 46 52.2	-0.1
WEL	Wellington	0.56	48	P	Pb	02 46 52.2	-0.1
NNZ	Nelson	0.77	305	P	Pg	02 46 55.5	+0.2
PLWZ	Palliser	0.79	84	P	Pn	02 46 57.1	-0.6
MSWZ	Moikau Station	0.81	73	P	Pb	02 46 57.2	+0.5
CAW	Cannon Point	0.84	50	P	Pb	02 46 57.2	-0.1
DUWZ	D'Urville Isla	0.88	345	P	Pg	02 46 57.7	+0.2
KHZ	Kahutara	0.91	213	P	Pn	02 46 59.3	0.0
PAWZ	Paruwai Farm	0.95	74	P	Pn	02 47 00.2	+0.2
THZ	Tophouse	0.99	264	P	Pb	02 47 00.0	+0.3
MTW	Mount Morrison	1.09	63	P	Pn	02 47 01.9	+0.1
OGWZ	Otaki Gorge	1.11	41	P	Pb	02 47 01.7	-0.1
TRWZ	Traveller	1.14	77	P	Pn	02 47 02.5	0.0
HOWZ	Holdsworth Sta	1.24	53	P	Pg	02 47 04.5	+0.1
TMWZ	Te Maipa	1.38	67	P	Pn	02 47 05.9	+0.1
MRZ	Mangatainoka R	1.43	46	P	Pb	02 47 07.0	-0.3
QRZ	Quartz Range	1.52	303	P	Pb	02 47 08.8	0.0
GVZ	Greta Valley S	1.57	213	P	Pn	02 47 08.5	0.0
CPWZ	Castlepoint	1.67	64	P	Pg	02 47 16.3	+3.7
PRWZ	Pori Road	1.73	51	P	Pn	02 47 11.1	+0.5
POWZ	Post Office Ro	1.73	43	P	Pb	02 47 12.7	+0.4
BFZ	Birch Farm	1.82	58	P	Pn	02 47 11.7	-0.1
LTZ	Lake Taylor	1.83	231	P	Pn	02 47 12.5	+0.5
AMCZ	Amberley	1.91	217	P	Pb	02 47 16.2	+0.8
WAZ	Wanganui	1.99	17	P	Pg	02 47 18.0	-0.7
DVHZ	Dannevirke	2.01	48	P	Pn	02 47 15.3	+0.8
TSZ	Takapari Road	2.08	40	P	Pn	02 47 16.0	+0.6
LREZ	Lake Rotokare	2.20	4	P	Pg	02 47 23.8	+1.1
OKCZ	Okains Bay	2.23	202	P	Pn	02 47 16.7	-0.9
NMEZ	Namu Road	2.26	353	P	Pg	02 47 23.7	-0.1
PRHZ	Porangahau	2.30	54	P	Pn	02 47 19.8	+1.3
PNHZ	Pukenui	2.30	42	P	Pn	02 47 20.2	+1.6
PREZ	Palmer Road	2.31	359	P	Pb	02 47 23.2	+0.9
OXZ	Oxford	2.32	223	P	Pn	02 47 20.5	+1.8
INZ	Inchbonnie	2.32	242	P	Pb	02 47 21.4	-1.0
MQZ	McQueen's Vall	2.35	209	P	Pn	02 47 17.5	-1.6
KHEZ	Kahui Hut	2.37	356	P	Pb	02 47 24.4	+1.1
NBEZ	Newall Road No	2.40	354	P	Pg	02 47 27.1	+0.5
AKCZ	Akaroa Harbour	2.41	203	P	Pn	02 47 19.3	-0.7
MTVZ	Mangateitei	2.46	23	P	Pg	02 47 27.5	-0.3
PKE	Pukeiti	2.47	356	P	Pb	02 47 24.5	-0.5
PKVZ	Pokaka	2.52	20	P	Pb	02 47 26.8	+1.0
MOVZ	Moawhango	2.54	28	P	Pb	02 47 26.4	+0.2
BHHZ	Black Hill Sta	2.58	34	P	Pb	02 47 27.1	+0.1
WHVZ	Whangaehu Hut	2.59	24	P	Pb	02 47 27.3	+0.1
KRHZ	Kereru	2.60	40	P	Pb	02 47 28.6	+1.5
NGZ	Ngauruhoe	2.70	24	P	Pb	02 47 29.7	+0.7
TWVZ	Taurewa	2.75	20	P	Pb	02 47 30.9	+1.1
KAHZ	Kahuranaki	2.75	48	P	Pb	02 47 30.5	+0.7
WTVZ	West Tongariro	2.75	23	P	Pb	02 47 30.6	+0.8
KRVZ	Karewarewa	2.78	24	P	Pb	02 47 31.3	+0.9
KWHZ	Kaweka Forest	2.79	38	P	Pb	02 47 32.0	+1.5
KATZ	Kakaramea	2.91	23	P	Pb	02 47 33.6	+1.0
BKZ	Black Stump Fm	3.04	36	P	Pb	02 47 36.1	+1.4
RPZ	Rata Peaks	3.11	228	P	Pn	02 47 29.4	-0.2
HIZ	Hauiti	3.18	9	P	Pb	02 47 34.1	-3.0
FOZ	Fox Glacier	3.75	239	P	Pb	02 47 45.8	-1.0
ODZ	Otahua Downs	4.27	216	P	Pn	02 47 45.7	+0.2
MKAZ	Moumakai	4.61	9	P	Pb	02 47 57.1	-4.3
JCZ	Jackson Bay	4.66	237	P	Pb	02 47 57.1	-5.3

*ISCJB **22** 02:48:02.8±0.8, 0°.3N±0°.1×16°.9W±0°.1, h10^{km}, mb4.3/9, MS3.5/2, Error ellipse: s-maj=22.6km s-min=13.2km az=154.6*

*IDC **22** 02:48:02.6±11.0, 0°.12N×16°.85W, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.5/40, mbtmp3.8/4, ML4.0/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/24, Error ellipse: s-maj=273.4km s-min=71.1km az=179.0*

*NEIC **22** 02:48:05.2±2.4, 0°.27N×16°.81W, h11^{km}±2^{km}, mb4.0/8, Error ellipse: s-maj=23.9km s-min=18.6km az=142.0*

ISC 22 02:48:04.8±1.0, **0°.3N**±0°.2×**16°.8W**±0°.1, **h10^{km}, n22,** σ**2^{s}23**/15, **mb4.0**/9, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR baz=341,slow=75,SNR=55	8.40	164	T	T	02 59 00.5	
H10N3	ASCENSION HYDR baz=341,slow=75,SNR=55	8.41	164	T	T	02 59 07.3	
H10N1	ASCENSION HYDR baz=341,slow=75,SNR=75	8.42	164	T	T	02 59 07.8	
H10S1	ASCENSION HYDR baz=344,slow=74,SNR=4.1	9.43	167	T	T	03 00 21.2	
H10S3	ASCENSION HYDR baz=344,slow=74,SNR=29	9.44	167	T	T	03 00 18.6	
H10S2	ASCENSION HYDR baz=344,slow=74,SNR=29	9.45	167	T	T	03 00 18.6	
LIC	Lamto 119nm,1.8s	13.11	63	*e*P	**Pn**	**02 51 15.6**	**+4.3**
TIC	Toumodi	13.31	62	*e*P	**Pn**	**02 51 14.2**	**+0.2**
KIC	Kosan Boka 104nm,1.7s	13.43	63	*e*P	Pn	02 51 12.9	-2.7
DBIC	Dimbokro 0.8nm,0.3s,baz=233,slow=16,SNR=17	13.47	62	Pn	**Pn**	**02 51 18.1**	**+2.0**
DBIC	0.3nm,0.3s,baz=342,slow=13,SNR=3.2			Sn	**Sn**	**02 53 41.2**	**-4.8**
DBIC	comp=Z,127nm,18.4s,baz=254,slow=36			LR	LR	02 56 09.3	
TOA0	Torodi Ar. Sit 9.8nm,0.9s	22.31	54	*e*P	**P**	**02 53 04.0**	**+1.3**
TOA1	Torodi Ar. Sit	22.31	54	*e*P	**P**	**02 53 03.5**	**+0.8**
TORD	Torodi Ar. Bea 2.5nm,0.8s,baz=225,slow=12,SNR=17	22.31	54	P	**P**	**02 53 03.5**	**+0.8**
TORD	comp=Z,91nm,18.0s,baz=320,slow=35			LR	LR	03 01 18.9	
TRIS	Tristan da Cun 101nm,0.3s	37.42	174	*e*P	**P**	**02 55 17.3**	**-0.9**
ESLA	Sonseca Array 1.4nm,1.0s	40.89	15	*e*P	**P**	**02 55 46.1**	**-1.1**
KEST	Kesra comp=Z,125nm,19.1s,baz=310,slow=37	42.81	32	LR	LR	03 14 18.8	
KEST	Kesra 2.9nm,1.0s	42.81	32	*e*P	**P**	**02 56 03.1**	**0.0**
FDF	Fort de France 44nm,1.0s	46.14	290	*e*P	**P**	**02 56 30.8**	**+0.8**
GERES	GERESS Array B 0.1nm,0.3s,baz=188,slow=6.5,SNR=3.1	55.02	24	P	**P**	**02 57 37.3**	**+0.7**
BR101	Keskin Array S	60.34	43	*e*P	**P**	**02 58 15.3**	**+1.0**
BRTR	Keskin Array B 0.5nm,0.6s,baz=233,slow=5.6,SNR=3.7	60.34	43	P	**P**	**02 58 15.3**	**+1.0**
SRU	San Rafael Swe 4.6nm,1.0s	92.72	309	*e*P	**P**	**03 01 15.4**	**-2.4**

*IDC **22** 02:55:46.6±0.7, 29°.30N×130°.66E, h0^{km}, mb4.0/16, mb1 4.2/21, mb1mx4.1/41, mbtmp4.0/21, ML3.0/6, MS3.6/4, Ms1 3.7/4, ms1mx3.1/34, Error ellipse: s-maj=21.4km s-min=14.7km az=90.0*

*NEIC **22** 02:55:50.5±1.8, 29°.26N×130°.50E, h23^{km}±13^{km}, mb4.5/23, Error ellipse: s-maj=8.7km s-min=5.5km az=132.0*

*ISCJB **22** 02:55:51.5±0.4, 29°.25N±0°.03×130°.60E±0°.05, h50^{km}±4^{km}, mb4.3/34, MS3.7/1, Error ellipse: s-maj=7.7km s-min=3.4km az=25.0*

*JMA **22** 02:55:51.3±0.1, 29°.27N×130°.59E, h70^{km}±3^{km}, M4.2*

ISC 22 02:55:51.5±1.2, **29°.25N**±0°.03×**130°.56E**±0°.06, **h32^{km}**±8^{km}, **n79,** σ**1^{s}22**/89, **mb4.3**/34, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.83	315	P	**Pb**	**02 56 08.0**	**+0.4**
JNN				*e*S	**Sb**	**02 56 21.4**	**+2.9**
JYAK	Yakushimahirau	0.98	358	P	**Pn**	**02 56 09.3**	**+0.2**
JYAK				*e*S	**Sb**	**02 56 23.8**	**+1.1**
JZK	Kikaishima	1.06	209	P	**Pb**	**02 56 11.3**	**-0.1**
JZK				*e*S	**Sb**	**02 56 25.0**	**0.0**
JMTN	Minamitane	1.18	15	P	**Pn**	**02 56 11.9**	**+0.1**
JMTN				*e*S	**Sb**	**02 56 27.6**	**-0.8**
JAM	Amami Oshima	1.18	225	P	**Pb**	**02 56 13.0**	**-0.4**
JAM				*e*S	**Sb**	**02 56 28.9**	**+0.6**
JTAJ	Takarajima	1.19	266	P	**Pb**	**02 56 12.9**	**-0.6**
JKC	Kuchinoerabu	1.25	346	P	**Pn**	**02 56 12.5**	**-0.2**
JKC				*e*S	**Sn**	**02 56 28.8**	**+0.5**
JTN	Tanegashima 3	1.45	15	P	**Pn**	**02 56 15.8**	**+0.4**
JTN				*e*S	**Sn**	**02 56 33.2**	**-0.1**
JAMN	Amaminishikomi	1.57	231	P	**Pn**	**02 56 18.3**	**+1.1**
JTSR	Tashiro 2	1.93	9	P	**Pn**	**02 56 23.1**	**+0.9**
JTSR				*e*S	**Sn**	**02 56 46.9**	**+1.5**
JTK	Tokunoshima	2.03	224	P	**Pn**	**02 56 24.8**	**+1.3**
JTK				*e*S	**Sn**	**02 56 48.0**	**+0.2**
JSU	Suzuyama	2.25	358	P	**Pn**	**02 56 26.9**	**+0.4**
JNAR	Kushima--Naru	2.35	15	P	**Pn**	**02 56 28.6**	**+0.7**
JNAR				*e*S	**Sn**	**02 56 56.0**	**+0.4**
JNKG	Nichinankitago	2.50	16	P	**Pn**	**02 56 30.8**	**+0.8**
JOW	Kunigami 1.2nm,0.3s,baz=97,slow=18,SNR=13	3.14	220	Pn	**Pn**	**02 56 39.5**	**+0.8**
JOW	2.2nm,0.3s,baz=83,slow=21,SNR=5.5			Sn	**Sn**	**02 57 16.3**	**+1.1**
JOW	Kunigami	3.14	220	*e*Pn	**Pn**	**02 56 40.0**	**+1.3**
JOW				*e*Sn	Sn	02 57 04.2	-11
JNU	Nakatsue 3.7nm,0.3s,baz=163,slow=6.8,SNR=29	3.87	4	Pn	**Pn**	**02 56 47.7**	**-1.1**
JNU	9.4nm,0.3s,baz=271,slow=11,SNR=4.8			Sn	**Sn**	**02 57 33.9**	**+0.8**
JNU	Nakatsue	3.87	4	*e*Pn	**Pn**	**02 56 49.6**	**+0.9**
JNU				*e*Sn	**Sn**	**02 57 26.5**	**-6.6**
INU	Inuyama	8.18	40	*e*Pn	**Pn**	**02 57 48.1**	**+0.2**
YOJ	Yonaguni jima	8.25	236	*e*Pn	**Pn**	**02 57 46.6**	**-2.4**
KS15	Wonju Array Si	8.47	345	*e*Pn	**Pn**	**02 57 50.5**	**-1.4**
KSRS	Korea Array 0.2nm,0.3s,baz=162,slow=15,SNR=2.6	8.47	346	Pn	**Pn**	**02 57 50.5**	**-1.5**
KSRS	comp=Z,394nm,18.9s,baz=170,slow=41			LR	LR	03 01 29.4	
JHJ	Hachijo jima 2 comp=Z,193nm,19.2s,baz=292,slow=36	8.79	62	LR	LR	03 00 57.5	
JHJ2	Mitsune	8.82	62	*e*Pn	**Pn**	**02 57 58.6**	**+1.9**
YHNB	Yeheng	9.37	243	*e*Pn	**Pn**	**02 58 03.8**	**-0.6**
MAJO	Matsushiro	9.70	40	*e*Pn	**Pn**	**02 58 07.2**	**-1.7**
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=232,slow=14,SNR=5.8	9.70	40	Pn	**Pn**	**02 58 07.2**	**-1.7**
MJB9	Matsu-Tunnel	9.70	39	*e*Pn	**Pn**	**02 58 09.3**	**+0.4**
USRK	Ussuriysk Ar. 0.1nm,0.3s,baz=166,slow=9.4,SNR=2.2	14.96	4	Pn	**Pn**	**02 59 19.1**	**-1.5**
MDJ	Mudanjiang 6.0nm,0.4s	15.36	357	*e*Pn	**Pn**	**02 59 25.2**	**-0.6**
ASAJ	Asahikawa comp=Z,269nm,20.3s,baz=212,slow=38	17.67	30	LR	LR	03 07 01.6	
ENH	Enshi 16nm,0.6s	18.32	278	*e*P	**P**	**03 00 02.7**	**-0.4**
XAN	Xi'an 21nm,0.8s	19.02	290	*e*P	**P**	**03 00 10.8**	**0.0**
KLR	Kul'dur 0.4nm,0.3s,baz=183,slow=6.9,SNR=11	19.97	2	P	**P**	**03 00 19.8**	**-1.2**
YSS	Yuzh-Sakhalins 14nm,0.5s	20.07	25	*e*P	**P**	**03 00 22.5**	**+0.5**
SONA0	Songino Array	26.30	322	*e*P	**P**	**03 01 23.3**	**-1.0**
SONM	Songino Array 1.5nm,0.6s,baz=132,slow=11,SNR=3.1	26.30	322	P	**P**	**03 01 23.3**	**-1.0**
CHTO	Chiang Mai 4.1nm,1.0s	30.60	257	*e*P	**P**	**03 02 00.6**	**-2.1**
CMAR	Chiang Mai Arr comp=Z,155nm,19.6s,baz=6.0,slow=36	30.75	257	LR	LR	03 14 22.4	
FAKI	Fak Fak 55nm,1.1s	32.03	177	*e*P	**P**	**03 02 16.4**	**+1.2**
MYKOM	Kota Tinggi 16nm,1.1s	37.31	228	*e*P	**P**	**03 02 59.9**	**-1.0**
MK32	Makanchi Array	41.16	309	*e*P	**P**	**03 03 32.2**	**-0.6**
MKAR	Makanchi Array 0.5nm,0.4s,baz=90,slow=9.6,SNR=7.0	41.16	309	P	**P**	**03 03 32.2**	**-0.6**
MTN	Manton Dam 19nm,0.8s	41.85	179	*e*P	**P**	**03 03 38.0**	**-0.6**
KURK	Kurchatov 5.5nm,0.8s	44.13	314	*e*P	**P**	**03 03 55.9**	**-0.9**
KURBB	Kurchatov Arra 3.7nm,0.7s,baz=103,slow=9.0,SNR=26	44.17	314	P	**P**	**03 03 56.8**	**-0.3**
WR1	Warramunga Arr	49.04	175	*e*P	**P**	**03 04 35.6**	**+0.1**
WRA	Warramunga Arr 2.1nm,0.8s,baz=358,slow=10.0,SNR=7.7	49.04	175	P	**P**	**03 04 35.6**	**+0.1**
KK31	Karatay Array 2.6nm,0.8s	49.41	303	*e*P	**P**	**03 04 38.9**	**+0.6**
KKAR	Karatay Array 2.6nm,0.8s	49.41	303	*e*P	**P**	**03 04 39.5**	**+1.2**
BRVK	Borovoye 5.8nm,0.8s	49.52	316	*e*P	**P**	**03 04 38.0**	**-0.9**
AS31	Alice Springs 1.3nm,0.5s	52.71	176	*e*P	**P**	**03 05 03.3**	**+0.2**
ASAR	Alice Springs 1.9nm,0.5s,baz=9.2,slow=12,SNR=34	52.71	176	P	**P**	**03 05 03.3**	**+0.1**
ABKAR	Akbulak array 5.2nm,0.8s	56.13	312	*e*P	**P**	**03 05 29.1**	**+1.4**
RSO	Redoubt South	58.54	34	*e*P	**P**	**03 05 46.6**	**+1.8**
BPAW	Bear Paw Mtn. 3.0nm,1.0s	59.10	30	*e*P	**P**	**03 05 48.5**	**0.0**
MCK	McKinley 5.7nm,0.9s	60.03	30	*e*P	**P**	**03 05 55.8**	**+0.9**
PMR	Palmer 10.0nm,1.2s	60.18	33	*e*P	**P**	**03 05 53.5**	**-2.4**
WRH	Wood River Hil 3.2nm,1.0s	60.33	30	*e*P	**P**	**03 05 57.5**	**+0.6**
ILAR	Eielson Array 0.6nm,0.7s,baz=270,slow=5.1,SNR=13	60.81	29	P	**P**	**03 05 59.5**	**-0.7**
HDA	Harding Lake 4.8nm,0.8s	60.83	30	*e*P	**P**	**03 05 59.7**	**-0.6**
INK	Inuvik 1.6nm,0.6s,baz=350,slow=5.9,SNR=4.1	65.30	24	P	**P**	**03 06 29.9**	**0.0**
ARA0	ARCESS Array S	67.96	339	*e*P	**P**	**03 06 47.8**	**+0.9**
ARCES	ARCESS Array B 1.5nm,0.8s,baz=74,slow=6.7,SNR=3.0	67.96	339	P	**P**	**03 06 47.8**	**+0.9**
KBZ	Khabaz 3.1nm,0.8s,baz=207,slow=12,SNR=5.8	68.85	309	P	**P**	**03 06 54.0**	**+1.2**
FIA0	FINESS Array S	71.25	331	*e*P	**P**	**03 07 07.1**	**-0.2**
FINES	FINESS Array B 1.5nm,0.7s,baz=54,slow=7.1,SNR=5.9	71.25	331	P	**P**	**03 07 07.1**	**-0.2**
AKASG	Malin Array Be 0.9nm,0.4s,baz=56,slow=6.3,SNR=5.1	74.57	320	P	**P**	**03 07 27.2**	**+0.1**
BR101	Keskin Array S	76.80	308	*e*P	**P**	**03 07 41.1**	**+0.8**
BR131	Keskin Array S 4.4nm,1.0s	76.80	308	*e*P	**P**	**03 07 41.2**	**+0.8**
BRTR	Keskin Array B 1.5nm,0.7s,baz=102,slow=4.5,SNR=9.7	76.80	308	P	**P**	**03 07 41.1**	**+0.8**
NB2	NORSAR Subarra comp=Z,1.3nm,0.8s,baz=50,slow=5.9	77.51	334	P	**P**	**03 07 44.3**	**+0.6**
NOA	NORSAR Array B	77.51	334	P	**P**	**03 07 44.0**	**+0.3**

	comp=Z,0.8nm,0.7s,baz=50,slow=5.7,SNR=3.8						
GERES	GERESS Array B	84.02	324	P	P	03 08 19.6	+0.7
	comp=Z,0.3nm,0.6s,baz=28,slow=4.4,SNR=4.1						
PAHR	Pah Rah Range	85.52	47	*e*P	P	03 08 27.1	+0.4
	comp=Z,5.2nm,1.1s						
HLID	Hailey	86.27	41	*e*P	P	03 08 30.8	+0.5
	comp=Z,2.6nm,0.8s						
KVN	Kaiserville	86.71	47	*e*P	P	03 08 32.6	0.0
	comp=Z,3.0nm,0.8s						
NVAR	Mina Array Bea	86.94	47	P	P	03 08 32.8	-1.0
	comp=Z,0.8nm,0.5s,baz=316,slow=5.0,SNR=6.3						
PDAR	Pinedale Array	89.53	40	P	P	03 08 45.1	-0.9
	comp=Z,0.5nm,0.3s,baz=281,slow=1.5,SNR=4.6						

IDC 22 03:18:52.9±1.7, 0°.70N×123°.81E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.3/24, mbtmp3.5/3, Error ellipse: s-maj=205.5km s-min=24.9km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.96	154	P	P	03 23 58.4	-0.8
	0.8nm,0.4s,baz=332,slow=12,SNR=8.2						
ASAR	Alice Springs	26.13	159	P	P	03 24 29.8	+0.9
	0.3nm,0.7s,baz=338,slow=10,SNR=2.8						
MKAR	Makanchi Array	58.45	328	P	P	03 28 50.4	-0.3
	0.4nm,0.3s,baz=121,slow=7.8,SNR=6.9						

ISC 22 03:23:16.0±1.7, 51°.42N±0°.09×16°.20E±0°.06, h0^{km}, n9, σ0ˢ.83/19, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.58	174	*i* Pg	Pg	03 23 27.4	+0.4
KSP				*i* Sg	Sg	03 23 35.4	+0.8
BRG	Berggiesshubel	1.52	250	PN	Pn	03 23 43.5	-0.9
BRG				PG	Pg	03 23 44.4	-0.7
BRG				SG	Sb	03 24 05.0	+0.1
	21nm,0.5s						
MORC	Moravsky Berou	1.85	152	*e*PN	Pn	03 23 48.2	-0.8
MORC				*e*SG	Sn	03 24 12.1	-1.1
CLL	Collm	2.01	268	*e*Pg	Pn	03 23 52.0	+0.9
CLL				*e*Sg	Sb	03 24 20.0	+1.1
	comp=Z,10.0nm,0.4s						
VRAC	Vranov	2.13	173	*e*PN	Pn	03 23 52.8	0.0
VRAC				*e*SG	Sb	03 24 22.8	+0.5
KRUC	Moravsky	2.36	177	*e*PG	Pb	03 23 59.7	+0.3
KRUC				*e*SG	Sb	03 24 30.5	+1.4
LANS	Liptovska Anna	3.09	136	*e*PG	Pg	03 24 15.2	+0.1
LANS				*e*SG	Sg	03 24 54.6	-0.6
LANS				*e*LG	Lg	03 24 59.1	
MODS	Modra-Piesok	3.13	167	*e*PG	Pg	03 24 15.3	-0.6
MODS				*e*SG	Sg	03 24 55.1	-1.3
MODS				*e*LG	Lg	03 25 00.7	
VYHS	Vyhne	3.39	149	*e*PN	Pn	03 24 10.4	+0.3
VYHS				*e*SG	Sg	03 25 05.1	+0.4

WEL 22 03:27:52.7, 41°.6S±0°.9×174°.4E±1°.0, h16^{km}±2^{km}, M3.3/25, ML3.6/26, MLv3.3/25, Error ellipse: s-maj=0.0km s-min=0.0km az=131.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.17	219	P	Pb	03 27 57.5	-0.1
TUWZ	Tuamarina	0.36	300	P	Pb	03 28 00.6	-0.1
BSWZ	Blackbirch Sta	0.38	254	P	Pb	03 28 01.0	0.0
TCW	Tory Channel	0.41	351	P	Pg	03 28 01.2	+0.3
BHW	Baring Head	0.44	62	P	Pb	03 28 02.0	0.0
WEL	Wellington	0.45	43	P	Pb	03 28 02.5	+0.3
PLWZ	Palliser	0.67	86	P	Pb	03 28 06.6	+0.5
MSWZ	Moikau Station	0.70	74	P	Pb	03 28 06.9	+0.4
CAW	Cannon Point	0.73	47	P	Pb	03 28 07.3	+0.2
NNZ	Nelson	0.84	298	P	Pg	03 28 09.1	+0.2
PAWZ	Paruwai Farm	0.84	74	P	Pn	03 28 09.4	-0.4
DUWZ	D'Urville Isla	0.88	338	P	Pg	03 28 09.7	0.0
MTW	Mount Morrison	0.97	62	P	Pn	03 28 11.8	+0.1
OGWZ	Otaki Gorge	1.00	38	P	Pn	03 28 12.0	-0.1
KHZ	Kahutara	1.01	217	P	Pg	03 28 13.1	+0.9
TRWZ	Traveller	1.02	78	P	Pg	03 28 12.6	+0.2
THZ	Tophouse	1.10	262	P	Pg	03 28 14.3	+0.4
HOWZ	Holdsworth Sta	1.13	51	P	Pg	03 28 14.3	-0.2
TMWZ	Te Maipa	1.26	67	P	Pb	03 28 15.9	-0.1
MRZ	Mangatainoka R	1.32	44	P	Pb	03 28 17.6	+0.4
OHWZ	Ohakea	1.58	28	P	Pg	03 28 25.6	+2.5
QRZ	Quartz Range	1.59	299	P	Pb	03 28 22.4	+0.7
PRWZ	Pori Road	1.61	50	P	Pb	03 28 21.4	-0.7
POWZ	Post Office Ro	1.62	42	P	Pg	03 28 23.7	-0.1
GVZ	Greta Valley S	1.67	216	P	Pn	03 28 22.0	+0.7
BFZ	Birch Farm	1.70	57	P	Pn	03 28 21.6	-0.1
DVHZ	Dannevirke	1.90	47	P	Pn	03 28 24.8	+0.4
WAZ	Wanganui	1.92	15	P	Pg	03 28 29.2	-0.3
LTZ	Lake Taylor	1.94	232	P	Pn	03 28 26.3	+1.2
TSZ	Takapari Road	1.97	39	P	Pn	03 28 26.8	+1.3
LREZ	Lake Rotokare	2.15	1	P	Pg	03 28 36.6	+2.7
PRHZ	Porangahau	2.19	53	P	Pn	03 28 28.5	+0.1
PNHZ	Pukenui	2.20	40	P	Pb	03 28 30.4	-1.8
NMEZ	Namu Road	2.23	350	P	Pg	03 28 38.0	+2.5
PREZ	Palmer Road	2.27	356	P	Pb	03 28 34.6	+1.2
OKCZ	Okains Bay	2.31	204	P	Pn	03 28 29.9	-0.3
KHEZ	Kahui Hut	2.33	353	P	Pb	03 28 35.7	+1.3
NBEZ	Newall Road No	2.37	351	P	Pg	03 28 38.2	0.0
MTVZ	Mangateitei	2.38	21	P	Pg	03 28 40.1	+1.7
INZ	Inchbonnie	2.43	242	P	Pn	03 28 33.2	+1.5
PKE	Pukeiti	2.43	353	P	Pb	03 28 36.6	+0.5
MQZ	McQueen's Vall	2.44	210	P	Pn	03 28 31.1	-0.7
PKVZ	Pokaka	2.44	18	P	Pg	03 28 38.9	-0.6
MOVZ	Moawhango	2.45	26	P	Pb	03 28 36.7	+0.4
PXZ	Pawanui	2.47	51	P	Pn	03 28 33.0	+0.7
BHHZ	Black Hill Sta	2.49	32	P	Pb	03 28 36.2	-0.8
KRHZ	Kereru	2.49	39	P	Pn	03 28 33.6	+1.0
AKCZ	Akaroa Harbour	2.50	205	P	Pn	03 28 32.4	-0.2
WHVZ	Whangaehu Hut	2.51	22	P	Pb	03 28 37.6	+0.1
TUVZ	Tukino	2.54	23	P	Pb	03 28 37.4	-0.7
NGZ	Ngauruhoe	2.61	22	P	Pb	03 28 39.3	+0.1
KAHZ	Kahuranaki	2.64	47	P	Pn	03 28 34.9	+0.2
WTVZ	West Tongariro	2.67	21	P	Pb	03 28 40.3	+0.2
TWVZ	Taurewa	2.67	18	P	Pb	03 28 41.8	+1.6
KWHZ	Kaweka Forest	2.69	36	P	Pb	03 28 42.4	+1.8
KRVZ	Karewarewa	2.70	22	P	Pb	03 28 41.9	+1.2
KATZ	Kakaramea	2.83	22	P	Pb	03 28 44.3	+1.5
RITZ	Rihia Road	2.87	24	P	Pb	03 28 45.5	+1.9
BKZ	Black Stump Fm	2.94	34	P	Pg	03 28 47.5	-1.5
HIZ	Hauiti	3.12	7	P	Pb	03 28 46.2	-1.6
RPZ	Rata Peaks	3.22	228	P	Pn	03 28 43.4	+0.8
ODZ	Otahua Downs	4.37	217	P	Pn	03 28 59.8	+1.4
MKAZ	Moumakai	4.55	8	P	Pb	03 29 09.0	-3.0

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*ISCJB **22** 03:29:33.3±0.4, 60°.85S±0°.08×25°.1W±0°.1, h10^{km}, mb4.4/19, MS3.8/10, Error ellipse: s-maj=12.6km s-min=8.6km az=37.3*

*IDC **22** 03:29:34.6±0.6, 60°.74S×25°.05W, h0^{km}, mb4.3/11, mb1 4.4/11, mb1mx4.3/17, mbtmp4.3/11, MS3.7/11, Ms1 3.7/11, ms1mx3.6/17, Error ellipse: s-maj=23.4km s-min=16.9km az=30.0*

*NEIC **22** 03:29:35.1±2.7, 60°.71S×25°.02W, h10^{km}±2^{km}, mb4.6/15, Error ellipse: s-maj=18.6km s-min=8.9km az=49.0*

ISC 22 03:29:35.2±0.5, 60°.73S±0°.08×25°.09W±0°.09, h10^{km}, n54, σ1ˢ.90/48, mb4.4/19, MS3.7/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.90	311	*e*Pn	Pn	03 31 42.6	-1.0
HOPE				*e*Sn	Sn	03 33 19.1	-4.7
VNA1	Neumayer--Stat	12.07	153	P	Pn	03 32 23.7	-3.2
VNA3	Neumayer Olymp	12.22	156	P	Pn	03 32 25.0	-4.0
SNAA	Sanae	14.05	150	P	Pn	03 32 50.4	-3.6
SNAA	Sanae	14.05	150	S	Sn	03 35 11.9	-18
SNAA	Sanae	14.05	150	Pn	Pn	03 32 50.7	-3.3
	14nm,0.3s,baz=306,slow=13,SNR=386						
SNAA				Sn	Sn	03 35 11.4	-18
	1.4nm,0.3s,baz=355,slow=18,SNR=5.0						
SNAA				LR	LR	03 37 07.2	
	comp=Z,383nm,21.9s,baz=318,slow=32						
SNAA	Sanae	14.05	150	*e*Pn	Pn	03 32 50.2	-3.9
SNAA				*e*Sn	Sn	03 35 11.4	-18
PMSA	Palmer Station	18.07	240	P	P	03 33 49.6	+3.2
	4.8nm,0.3s,baz=72,slow=9.5,SNR=24						
PMSA	Palmer Station	18.07	240	*e*Pn	P	03 33 47.6	+1.2
	30nm,1.0s						
EFI	East Falkland	20.25	282	*e*P	P	03 34 08.6	-1.7
	75nm,1.1s						
USHA	Ushuaia	23.49	265	P	P	03 34 45.4	+0.7
	17nm,1.1s,baz=105,slow=11,SNR=3.1						
TRIS	Tristan da Cun	25.03	25	*e*P	P	03 34 58.3	-0.8
	90nm,0.9s						
GO10	Punta Arenas	25.71	266	*e*P	P	03 35 04.5	-0.8
	44nm,0.9s						
QSPA	South Pole Qui	29.51	180	*e*P	P	03 35 40.0	+0.7
	6.9nm,1.0s						
TRQA	Tornquist	32.34	298	*e*P	P	03 36 02.6	-1.7
	0.2nm,0.6s						
PLCA	Paso Flores	34.10	285	P	P	03 36 20.0	+0.3
	3.8nm,0.9s,baz=162,slow=6.3,SNR=5.5						
PLCA				LR	LR	03 49 18.1	
	comp=Z,157nm,19.1s,baz=158,slow=35						
PLCA	Paso Flores	34.10	285	*e*P	P	03 36 19.6	-0.1
	9.8nm,1.1s						
MAW	Mawson	35.79	139	P	P	03 36 33.3	-0.6
	9.7nm,0.9s,baz=222,slow=6.9,SNR=6.4						
MAW				LR	LR	03 49 46.6	
	comp=Z,134nm,19.2s,baz=245,slow=34						
MAW	Mawson	35.79	139	*e*P	P	03 36 33.2	-0.6
	1.9nm,0.9s						
GO05	Huala	39.34	289	*e*P	P	03 37 04.4	+0.1
	28nm,1.1s						
PEL	Peldehue	40.32	292	*e*P	P	03 37 13.7	+1.2
	30nm,0.6s						
CPUP	Villa Florida	40.78	313	P	P	03 37 16.4	+0.1
	3.3nm,0.7s,baz=168,slow=4.9,SNR=7.5						
CPUP				LR	LR	03 52 34.1	
	comp=Z,120nm,21.8s,baz=171,slow=34						
CPUP	Villa Florida	40.78	313	*e*P	P	03 37 16.4	+0.1
	6.5nm,0.9s						
VNDA	Vanda	41.93	182	P	P	03 37 27.5	+2.3
	1.3nm,0.8s,baz=189,slow=7.9,SNR=5.6						
BOSA	Boshof	46.32	69	P	P	03 38 02.4	+1.3
	1.4nm,0.5s,baz=213,slow=4.3,SNR=6.1						
BOSA				LR	LR	03 53 27.7	
	comp=Z,138nm,18.2s,baz=210,slow=31						
BDFB	Brasilia	47.98	330	P	P	03 38 14.6	+0.5
	3.3nm,0.7s,baz=152,slow=8.2,SNR=7.4						
BDFB				LR	LR	03 55 35.8	
	comp=Z,70nm,21.7s,baz=150,slow=32						
LBTB	Lobatse	49.55	67	P	P	03 38 25.8	-0.3
	3.1nm,0.9s,baz=235,slow=7.4,SNR=3.5						
LBTB	Lobatse	49.55	67	*e*P	P	03 38 25.8	-0.3
	6.1nm,1.1s						
MNMC	Minye Minye	52.04	303	*e*P	P	03 38 45.7	+0.6
	15nm,0.6s						
H10S2	ASCENSION HYDR	52.25	13	T	T	04 35 38.1	
	baz=186,slow=75,SNR=20						
H10S3	ASCENSION HYDR	52.25	13	T	T	04 35 36.5	
	baz=186,slow=75,SNR=19						
H10S1	ASCENSION HYDR	52.27	13	T	T	04 35 37.1	
	baz=186,slow=75,SNR=11						
H10N1	ASCENSION HYDR	53.37	13	T	T	04 36 59.1	
	baz=180,slow=72,SNR=7.0						
H10N3	ASCENSION HYDR	53.37	13	T	T	04 37 02.5	
	baz=180,slow=72,SNR=17						
H10N2	ASCENSION HYDR	53.38	13	T	T	04 37 01.6	
	baz=180,slow=72,SNR=15						
LPAZ	La Paz	54.01	306	P	P	03 39 01.1	+1.0
	3.3nm,0.4s,baz=124,slow=5.1,SNR=40						
LPAZ				LR	LR	04 03 39.6	
	comp=Z,59nm,19.3s,baz=168,slow=38						
LPAZ	La Paz	54.01	306	*e*P	P	03 39 00.4	+0.4
	4.7nm,0.7s						
DBIC	Dimbokro	69.05	22	LR	LR	04 03 17.9	
	comp=Z,62nm,21.3s,baz=92,slow=29						
ROSC	El Rosal	75.71	309	LR	LR	04 14 47.5	
	comp=Z,79nm,21.9s,baz=156,slow=36						
TORD	Torodi Ar. Bea	76.67	27	P	P	03 41 28.1	+2.1
	2.1nm,0.6s,baz=201,slow=5.9,SNR=16						
TORD				LR	LR	04 07 29.9	
	comp=Z,28nm,21.1s,baz=305,slow=30						
TOA1	Torodi Ar. Sit	76.68	27	*e*P	P	03 41 28.1	+2.1
STKA	Stephens Creek	87.09	169	LR	LR	04 19 46.3	
	comp=Z,47nm,18.1s,baz=206,slow=35						
ASAR	Alice Springs	94.19	161	P	P	03 42 54.1	-0.1
	0.5nm,0.6s,baz=201,slow=7.0,SNR=2.9						
AS31	Alice Springs	94.19	161	*e*P	P	03 42 54.1	-0.1
	0.8nm,0.9s						
YKA	Yellowknife Ar	140.30	313	PKP	PKiKP	03 49 05.3	+0.3
	0.9nm,0.7s,baz=126,slow=2.7,SNR=3.1						
SONA0	Songino Array	149.64	93	*e*PKPbc	PKPbc	03 49 22.6	-1.4
SONM	Songino Array	149.64	93	PKPbc	PKPbc	03 49 22.6	-1.4
	0.7nm,0.6s,baz=219,slow=3.8,SNR=4.8						
INK	Inuvik	150.03	315	PKPbc	PKiKP	03 49 25.2	+0.3
	4.9nm,0.8s,baz=115,slow=2.2,SNR=11						
INK	Inuvik	150.03	315	*e*PKPdf	PKPdf	03 49 20.3	+1.3
INK				*e*PKPbc	PKPbc	03 49 27.6	+3.6
KS15	Wonju Array Si	151.12	132	*e*PKPbc	PKiKP	03 49 28.1	-0.1
KSRS	Korea Array	151.15	132	PKPbc	PKiKP	03 49 28.6	+0.4
	0.5nm,0.3s,baz=150,slow=41,SNR=2.9						
ILAR	Eielson Array	153.88	304	PKPbc	PKiKP	03 49 36.2	+3.2
	1.5nm,0.7s,baz=144,slow=0.5,SNR=14						
ILB	Eielson Array	153.88	304	*e*PKPdf	PKPdf	03 49 25.1	+0.2
ILB				*e*PKPbc	PKPbc	03 49 32.2	-0.8
ILB				*e*PKPab	PKPab	03 49 45.0	-1.3
SVW2	Sparrevohn	156.38	293	*e*PKPdf	PKPdf	03 49 27.1	-1.4

WEL 22 03:44:01.4, 42°S±1°×174°.3E±0°.7, h9^{km}±2^{km}, M3.9/12, ML3.3/12, MLv3.9/12, Error ellipse: s-maj=0.0km s-min=0.0km az=170.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.13	194	P	Pg	03 44 05.0	+0.7
CMWZ				S	Sg	03 44 08.0	+1.6
BSWZ	Blackbirch Sta	0.30	252	P	Pg	03 44 07.7	+0.4
BSWZ				S	Sg	03 44 12.5	+1.1
TUWZ	Tuamarina	0.30	309	P	Pg	03 44 08.2	+0.8
TUWZ				S	Sb	03 44 13.1	-1.0
TCW	Tory Channel	0.41	2	P	Pg	03 44 10.1	+0.7
BHW	Baring Head	0.51	65	P	Pb	03 44 12.3	-0.2
WEL	Wellington	0.51	49	P	Pb	03 44 12.3	-0.2
PLWZ	Palliser	0.75	86	P	Pn	03 44 17.6	-0.6
MSWZ	Moikau Station	0.77	75	P	Pb	03 44 17.5	+0.4
NNZ	Nelson	0.78	301	S	Sg	03 44 06.6	-20
NNZ				P	Pg	03 44 16.4	+0.1
CAW	Cannon Point	0.80	50	P	Pb	03 44 17.9	+0.4
PAWZ	Paruwai Farm	0.91	75	P	Pn	03 44 20.6	+0.1
KHZ	Kahutara	0.95	214	P	Pb	03 44 20.0	-0.1
THZ	Tophouse	1.02	262	P	Pb	03 44 21.3	0.0
MTW	Mount Morrison	1.05	64	P	Pn	03 44 22.2	-0.1
OGWZ	Otaki Gorge	1.06	41	P	Pg	03 44 21.8	+0.1
TRWZ	Traveller	1.10	79	P	Pn	03 44 25.0	+2.0
HOWZ	Holdsworth Sta	1.20	53	P	Pn	03 44 24.8	+0.5
TMWZ	Te Maipa	1.33	68	P	Pg	03 44 28.4	+1.4
MRZ	Mangatainoka R	1.39	46	P	Pn	03 44 26.9	-0.1
QRZ	Quartz Range	1.53	301	P	Pb	03 44 29.9	+0.1
GVZ	Greta Valley S	1.62	214	P	Pn	03 44 30.6	+0.4
PRWZ	Pori Road	1.68	51	P	Pg	03 44 34.3	+0.7
BFZ	Birch Farm	1.77	59	P	Pg	03 44 37.1	+1.7
WAZ	Wanganui	1.95	17	P	Pg	03 44 38.2	-0.5
AMCZ	Amberley	1.96	217	P	Pn	03 44 33.4	-1.4
DVHZ	Dannevirke	1.96	48	P	Pg	03 44 40.0	+1.1
PNHZ	Pukenui	2.26	41	P	Pg	03 44 45.0	+0.3
PREZ	Palmer Road	2.28	358	P	Pg	03 44 46.1	+1.0
KHEZ	Kahui Hut	2.33	355	P	Pb	03 44 44.4	+0.7
PKE	Pukeiti	2.44	355	P	Pg	03 44 48.8	+0.7
MOVZ	Moawhango	2.49	28	P	Pb	03 44 46.4	0.0
BHHZ	Black Hill Sta	2.54	33	P	Pb	03 44 47.4	+0.3
KRHZ	Kereru	2.55	40	P	Pg	03 44 50.3	0.0
WHVZ	Whangaehu Hut	2.55	24	P	Pb	03 44 47.8	+0.4
FWVZ	Far West T-bar	2.56	23	P	Pb	03 44 48.7	+1.0
TUVZ	Tukino	2.58	25	P	Pb	03 44 49.3	+1.3
NGZ	Ngauruhoe	2.65	23	P	Pb	03 44 49.8	+0.7
TWVZ	Taurewa	2.71	20	P	Pb	03 44 51.1	+1.0
WTVZ	West Tongariro	2.71	23	P	Pb	03 44 50.5	+0.4
KRVZ	Karewarewa	2.74	23	P	Pb	03 44 51.2	+0.6
KWHZ	Kaweka Forest	2.75	38	P	Pg	03 44 52.7	-1.3
KATZ	Kakaramea	2.87	23	P	Pb	03 44 53.7	+0.9
BKZ	Black Stump Fm	2.99	36	P	Pb	03 44 56.5	+1.6
HIZ	Hauiti	3.14	9	P	Pb	03 44 58.4	+1.0

WEL 22 03:44:59.4, 42°S±1°×174°.2E±0°.9, h16^{km}±2^{km}, M3.8/13, ML4.2/12, MLv3.8/13, Error ellipse: s-maj=0.0km s-min=0.0km az=149.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.11	192	P	Pb	03 45 03.2	0.0
CMWZ				S	Sb	03 45 06.4	+0.7
BSWZ	Blackbirch Sta	0.29	255	P	Pb	03 45 05.9	-0.3
BSWZ				S	Sb	03 45 10.9	+0.1
TUWZ	Tuamarina	0.31	313	P	Pb	03 45 06.4	-0.1
TUWZ				S	Sb	03 45 11.5	+0.1
TCW	Tory Channel	0.43	3	P	Pb	03 45 08.4	-0.2
BHW	Baring Head	0.53	64	P	Pb	03 45 10.4	+0.2
WEL	Wellington	0.53	48	P	Pb	03 45 10.5	+0.2
PLWZ	Palliser	0.76	85	P	Pn	03 45 15.1	-0.4
NNZ	Nelson	0.78	303	P	Pb	03 45 14.6	+0.1
MSWZ	Moikau Station	0.79	74	P	Pn	03 45 15.4	-0.5
MSWZ				S	Sn	03 45 29.2	+1.8
CAW	Cannon Point	0.82	50	P	Pg	03 45 15.4	+0.2
DUWZ	D'Urville Isla	0.87	344	P	Pg	03 45 16.5	+0.2
PAWZ	Paruwai Farm	0.93	74	P	Pn	03 45 17.9	+0.1
KHZ	Kahutara	0.94	214	P	Pn	03 45 18.2	+0.3
KHZ				S	Sn	03 45 32.8	+1.9
THZ	Tophouse	1.01	263	P	Pg	03 45 18.9	-0.1
MTW	Mount Morrison	1.06	63	P	Pg	03 45 19.9	0.0
MTW				S	Sn	03 45 36.7	+2.6
OGWZ	Otaki Gorge	1.08	41	P	Pn	03 45 19.9	0.0
TRWZ	Traveller	1.11	78	P	Pn	03 45 20.4	0.0
HOWZ	Holdsworth Sta	1.21	53	P	Pb	03 45 22.2	+0.3
TMWZ	Te Maipa	1.35	67	P	Pb	03 45 24.0	-0.3
MRZ	Mangatainoka R	1.41	46	P	Pb	03 45 24.9	-0.3
TIWZ	Tintock	1.51	56	P	Pg	03 45 28.8	+0.4
QRZ	Quartz Range	1.53	302	P	Pb	03 45 27.7	+0.4
GVZ	Greta Valley S	1.60	214	P	Pn	03 45 27.0	0.0
CPWZ	Castlepoint	1.65	64	P	Pg	03 45 33.0	+2.0
OHWZ	Ohakea	1.65	30	P	Pg	03 45 30.5	-0.6
PRWZ	Pori Road	1.70	51	P	Pn	03 45 28.9	+0.6
POWZ	Post Office Ro	1.70	43	P	Pb	03 45 29.9	-0.4
BFZ	Birch Farm	1.79	58	P	Pn	03 45 29.7	+0.1
LTZ	Lake Taylor	1.86	231	P	Pn	03 45 31.1	+0.5
AMCZ	Amberley	1.94	217	P	Pn	03 45 31.5	-0.2
WAZ	Wanganui	1.97	17	P	Pg	03 45 36.1	-1.0
DVHZ	Dannevirke	1.98	48	P	Pn	03 45 32.3	0.0
ANWZ	Angora Road	2.06	56	P	Pg	03 45 38.4	-0.5
LREZ	Lake Rotokare	2.18	3	P	Pg	03 45 40.6	-0.6
NMEZ	Namu Road	2.24	353	P	Pg	03 45 41.9	-0.5
OKCZ	Okains Bay	2.26	202	P	Pn	03 45 35.0	-1.1
PRHZ	Porangahau	2.27	54	P	Pn	03 45 36.7	+0.4
CRLZ	Canterbury Las	2.27	211	P	Pn	03 45 35.7	-0.5
PNHZ	Pukenui	2.28	41	P	Pn	03 45 37.3	+0.9
WPHZ	Waipukurau	2.29	47	P	Pg	03 45 43.4	+0.1
PREZ	Palmer Road	2.30	358	P	Pb	03 45 41.2	+0.8
OXZ	Oxford	2.34	223	P	Pn	03 45 36.8	-0.5
INZ	Inchbonnie	2.35	242	P	Pn	03 45 38.9	+1.6
KHEZ	Kahui Hut	2.35	356	P	Pb	03 45 42.3	+0.9
MQZ	McQueen's Vall	2.37	209	P	Pn	03 45 36.0	-1.7
NBEZ	Newall Road No	2.39	353	P	Pb	03 45 41.8	-0.2
AKCZ	Akaroa Harbour	2.44	203	P	Pn	03 45 37.3	-1.2
MTVZ	Mangateitei	2.44	23	P	Pb	03 45 44.3	+1.4
DREZ	Durham Road	2.45	359	P	Pg	03 45 45.9	-0.5
PKE	Pukeiti	2.45	355	P	Pb	03 45 42.4	-0.7
PKVZ	Pokaka	2.50	20	P	Pb	03 45 44.8	+1.0
MOVZ	Moawhango	2.51	28	P	Pb	03 45 44.1	0.0
VRZ	Vera Road	2.54	9	P	Pb	03 45 45.5	+0.8
PXZ	Pawanui	2.56	52	P	Pn	03 45 39.7	-0.4
BHHZ	Black Hill Sta	2.56	33	P	Pb	03 45 44.0	-1.0
DRZ	Dome Shelter	2.57	24	P	Pb	03 45 46.7	+1.5
KRHZ	Kereru	2.57	40	P	Pn	03 45 41.0	+0.6
WHVZ	Whangaehu Hut	2.57	24	P	Pb	03 45 45.5	+0.2
FWVZ	Far West T-bar	2.58	23	P	Pb	03 45 46.0	+0.5
NGZ	Ngauruhoe	2.67	23	P	Pb	03 45 47.6	+0.7
KAHZ	Kahuranaki	2.72	48	P	Pn	03 45 44.5	+2.0
TWVZ	Taurewa	2.72	20	P	Pb	03 45 48.3	+0.5
WTVZ	West Tongariro	2.72	23	P	Pb	03 45 48.6	+0.8
KRVZ	Karewarewa	2.76	23	P	Pb	03 45 49.1	+0.8
KWHZ	Kaweka Forest	2.77	38	P	Pb	03 45 49.8	+1.3
KATZ	Kakaramea	2.88	23	P	Pb	03 45 51.5	+0.9
RITZ	Rihia Road	2.93	25	P	Pb	03 45 52.2	+0.9
WVZ	Waitaha Valley	2.97	240	P	Pb	03 45 49.8	-2.1
RATZ	Rangitukua	3.01	23	P	Pb	03 45 54.8	+2.2
BKZ	Black Stump Fm	3.01	36	P	Pb	03 45 53.9	+1.3
HATZ	Hinemaiaia	3.09	28	P	Pb	03 45 54.8	+0.8
RPZ	Rata Peaks	3.13	228	P	Pn	03 45 47.9	-0.3
WATZ	Wairara	3.14	22	P	Pb	03 45 56.7	+1.8
HIZ	Hauiti	3.16	9	P	Pb	03 45 53.2	-2.0
MRHZ	Matea Rd	3.26	31	P	Pb	03 45 58.0	+1.1
KUTZ	Kaahu Road	3.37	22	P	Pb	03 46 00.5	+1.6
TLZ	Tolley Road	3.45	17	P	Pb	03 45 60.0	-0.2
FOZ	Fox Glacier	3.78	238	P	Pn	03 46 01.0	+4.1
TOZ	Tahuroa Road	4.02	14	P	Pb	03 46 06.1	-3.8
LBZ	Lake Benmore	4.05	226	P	Pn	03 46 01.9	+1.2
ODZ	Otahua Downs	4.30	216	P	Pn	03 46 03.0	-1.1
AWAZ	Awhitu Peninsu	4.58	4	P	Pn	03 46 12.0	+4.0
MKAZ	Moumakai	4.59	9	P	Pn	03 46 13.0	+5.0
PKGZ	Pakihiroa	4.77	39	P	Pb	03 46 19.6	-3.0
WIAZ	Waiheke Island	4.89	8	P	Pn	03 46 17.0	+4.7
WKZ	Wanaka	4.97	228	P	Pn	03 46 15.0	+1.6
TUZ	Tuapeka	5.45	216	P	Pn	03 46 19.9	0.0
SYZ	Scrubby Hill	6.12	215	P	Pn	03 46 29.1	0.0

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*AZER **22** 03:46:08.7±2.1, 38°.85N×43°.20E, h5^{km}, ml3.5/10, Error ellipse: s-maj=19.7km s-min=15.7km az=144.0*

*NSSP **22** 03:46:08.9, 38°.90N×43°.45E, h7^{km}, Ms3.4*

*ISK **22** 03:46:10.6, 38°.91N×43°.54E, h3^{km}, ML3.4/17*

*DDA **22** 03:46:11.0, 38°.90N×43°.50E, h7^{km}±2^{km}, ML3.5*

ISC 22 03:46:12.2±1.1, 38°.90N±0°.02×43°.51E±0°.02, h4^{km}±9^{km}, n54, σ1ˢ.03/70, 5C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.10	27	*i* P	Pg	03 46 14.1	-0.4
ERCV	ERCIS-VAN	0.18	311	PG	Pg	03 46 15.3	-0.6
VANB	Van	0.32	198	PG	Pg	03 46 19.5	+1.0
TVAN	Van	0.38	193	*i* P	Pg	03 46 19.4	-0.3
TVAN				*i* S	Sb	03 46 28.3	+0.3
CLDR	Caldiran	0.40	52	PG	Pg	03 46 18.8	-1.2
CLDR				SG	Sg	03 46 24.9	-0.3
DYDN	Diyadin	0.66	12	*i* P	Pg	03 46 24.1	-0.8
GEVA	Gevas	0.69	211	*i* P	Pg	03 46 24.1	-1.4
GEVA				IAML_P			
	comp=Z,18μm,0.2s						
TUTA	Tutak	0.74	313	*i* P	Pg	03 46 25.7	-0.8
MLAZ	Malazgirt-MUS	0.79	288	PG	Pg	03 46 26.4	-1.0
MLAZ				SG	Sg	03 46 38.7	+1.1
IGDI	IGDIR	1.06	24	*i* P	Pg	03 46 31.6	-1.0
IGDI				IAML_P			
	comp=Z,3μm,0.3s						
BLIS	Bitlis-Merkez	1.20	247	*i* P	Pg	03 46 34.5	-0.8
BLIS				*i* S	Sg	03 46 50.6	-0.2
TASB	TASBURUN-IGDIR	1.22	27	PN	Pg	03 46 34.1	-1.5
EATA	Eleskirt	1.25	321	*i* P	Pg	03 46 35.1	-1.1
EATA				IAML_P			
	comp=Z,3μm,0.1s						
HYR	Heyderabad	1.32	51	P	Pn	03 46 36.1	-1.4
HYR				S	Sn	03 46 58.9	+3.3
HAKT	HAKKARI	1.35	173	*i* P	Pn	03 46 35.7	-2.4
HAKT				IAML_P			
	comp=Z,3μm,0.2s						
ARUZ	Aruch	1.45	18	⇑*i*P	Pn	03 46 39.1	-0.2
ARUZ				⇑*i*S	Sg	03 47 00.0	+1.1
DIGO	Kars	1.52	356	*i* P	Pn	03 46 40.4	0.0
DIGO				IAML_P			
	comp=Z,5μm,0.3s						
SRTM	Siirt_Merkez	1.54	234	*i* P	Pn	03 46 40.4	-0.2
SRTM				IAML_P			
	comp=Z,3μm,0.3s						
GNI	Garni	1.57	37	PN	Pn	03 46 39.6	-1.4
GNI				SN	Sn	03 47 00.9	-0.9
GNI	Garni	1.57	37	⇑*i*P	Pn	03 46 40.3	-0.7
GNI				⇓*i*S	Sn	03 47 02.0	+0.2
NAX	Nakhchivan	1.57	79	P	Pn	03 46 40.6	-0.3
NAX				S	Sg	03 47 05.1	+2.5
MUSM	Mu-Merkez	1.57	264	*i* P	Pn	03 46 39.8	-1.3
MUSM				*i* S	Sg	03 47 03.4	+0.6
VRTB	Varto-Mus	1.62	280	PN	Pn	03 46 41.4	-0.3
SIRN	Sırnak	1.65	212	*i* P	Pb	03 46 43.2	0.0
SBZ	Shahbuz	1.66	72	P	Pn	03 46 42.4	+0.2
SBZ				S	Sg	03 47 06.1	+0.5
KOPR	Koprukoy-ERZUR	1.69	311	PN	Pn	03 46 41.7	-0.9
HOMI	Horasan	1.69	313	*i* P	Pb	03 46 44.5	+0.4
HOMI				IAML_P			
	comp=Z,2μm,0.3s						

EAK	Akyaka	1.79	2	iP	Pg	03 46 47.3	+0.8
EAK				IAML_P			
	comp=Z,3µm,0.5s						
BNGL	BINGOL	1.84	272	iP	Pb	03 46 46.7	+0.1
SENK	Senkaya-Erzuru	1.89	332	PN	Pn	03 46 44.8	-0.6
ORD	Ordubad	1.94	88	P	Pn	03 46 45.8	-0.2
ORD				S	Sg	03 47 14.4	0.0
KARO	Karliova-Bingo	1.96	283	PN	Pn	03 46 46.2	-0.2
SVAN	Silvan-Diyarba	1.96	248	PN	Pn	03 46 46.3	0.0
BTMN	Batman	2.03	241	iP	Pg	03 46 50.8	-0.4
BTMN				IAML_P			
	comp=Z,1µm,0.3s						
AKDA	Akdag	2.05	307	iP	Pg	03 46 52.0	+0.4
ECAT	Cat-ERZURUM	2.09	290	iP	Pg	03 46 52.0	-0.4
BNGB	Bingl	2.21	273	PN	Pn	03 46 49.7	-0.1
BGOL	Bingol	2.22	273	iP	Pb	03 46 52.6	-0.3
BGOL				IAML_P			
	comp=Z,1µm,0.5s						
GRS	Goris	2.27	74	⇑iP	Pb	03 46 55.0	+1.1
GRS				⇑iS	Sg	03 47 27.0	+1.8
GDB	GEDABAY	2.51	43	P	Pn	03 46 53.8	-0.1
GDB				S	Sb	03 47 27.7	-1.4
QZX	Qazax, Azerbai	2.58	33	P	Pn	03 46 53.5	-1.4
QZX				S	Sn	03 47 28.2	+1.5
GANJ	Ganja	2.78	50	P	Pn	03 46 57.4	-0.1
	SNR=11						
GANJ				S	Sn	03 47 32.5	+1.0
MAZI	Mazidag	2.81	240	PN	Pn	03 46 57.9	-0.2
DYBB	Diyarbakir	2.81	251	PN	Pn	03 46 57.8	-0.2
BCA	Borcka	2.92	331	PN	Pn	03 46 59.9	+0.4
TBLG	Delisi	2.98	18	PN	Pn	03 46 59.9	-0.3
BAYT	Aydıntepe-Bayb	3.00	301	PN	Pn	03 47 00.5	-0.2
SVRC	Sivrice-ELAZID	3.33	262	PN	Pn	03 47 05.6	+0.3
LRK	Lerik	3.78	92	P	Pn	03 47 10.8	-0.6
URFA	Urfa	3.97	250	PN	Pn	03 47 15.3	+1.3
ASTR	Astara	4.14	93	P	Pn	03 47 15.0	-1.2
XNQ	Khinaliq	4.21	56	P	Pn	03 47 16.4	-1.0
VYHS	Vyhne	20.18	306	eP	P	03 50 45.3	-2.3
KOLL	Kolacno	20.48	306	eP	P	03 50 51.5	+0.7

MEX 22 04:23:26.1±0.5, 13°.67N×92°.42W, h15^{km}, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.24	7	iP	Pn	04 23 45.2	-3.7
THIG				eS	Sb	04 24 00.3	-4.6
PCIG		2.16	339	iP	Pn	04 23 58.4	-3.2
PCIG				iS	Sn	04 24 22.8	-5.3
CCIG	Comitan	2.61	6	eP	Pn	04 24 05.5	-2.4
CCIG				iS	Sn	04 24 35.4	-4.0
TGIG		3.16	348	iP	Pn	04 24 13.6	-1.8
TGIG				eS	Sn	04 24 49.6	-3.3
CMIG	Matias Romero	4.15	325	iP	Pn	04 24 26.7	-2.2
CMIG				iS	Sn	04 25 14.3	-2.8

SJA 22 04:31:46.5±0.7, 20°.73S×68°.93W, h112^{km}±5^{km}, ML2.8, MW3.8

ISCJB 22 04:31:47.3±1.0, 20°.73S±0°.03×68°.99W±0°.09, h116^{km}±10^{km}, Error ellipse: s-maj=14.1km s-min=5.3km az=179.2

GUC 22 04:31:47.6±0.6, 20°.71S×69°.00W, h107^{km}±3^{km}, ML3.3

ISC 22 04:31:48.3±1.8, 20°.72S±0°.04×68°.98W±0°.08, h106^{km}±13^{km}, n17, σ0^{s}44/32, 6C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.57	236	⇑iP	Pn	04 32 04.9	-0.5
PB01				iS	Sn	04 32 18.3	+0.1
PB01				IAML		04 32 19.0	
	comp=E,2µm,0.2s						
PB08	IPOC Station P	0.60	344	iP	Pn	04 32 05.5	-0.4
PB08				iS	Sn	04 32 19.5	+0.4
PB08	IPOC Station P	0.60	344	⇓iP	Pn	04 32 05.6	-0.3
PB08				iS	Sn	04 32 19.2	+0.1
PB08				IAML		04 32 20.2	
	comp=E,2µm,0.2s						
PB02	IPOC Station P	1.04	235	iP	Pn	04 32 09.2	-0.6
PB02				iS	Sn	04 32 26.8	+0.8
PB02	IPOC Station P	1.04	235	⇑iP	Pn	04 32 09.6	-0.2
PB02				iS	Sn	04 32 26.3	+0.3
PB02				IAML		04 32 28.1	
	comp=E,942nm,0.2s						
GO01	Chusmiza	1.06	349	⇑iP	Pn	04 32 10.1	-0.3
GO01				eS	Sn	04 32 27.5	+0.5
PB09	IPOC Station P	1.10	193	⇓iP	Pn	04 32 10.5	0.0
PB09				eS	Sn	04 32 28.0	+0.8
PB11	IPOC Station P	1.15	326	iP	Pn	04 32 10.4	-0.5
PB11				iS	Sn	04 32 28.9	+0.9
PB11	IPOC Station P	1.15	326	⇑iP	Pn	04 32 10.6	-0.4
PB11				eS	Sn	04 32 28.1	0.0
PB11				IAML		04 32 29.7	
	comp=E,2µm,0.2s						
PB07	IPOC Station P	1.31	220	iP	Pn	04 32 12.8	-0.1
PB07				iS	Sn	04 32 32.0	+0.5
PB07	IPOC Station P	1.31	220	⇓iP	Pn	04 32 12.7	-0.2
PB07				eS	Sn	04 32 31.2	-0.2
PB07				IAML		04 32 32.8	
	comp=E,468nm,0.2s						
PB03	IPOC Station P	1.51	208	⇓iP	Pn	04 32 14.9	-0.3
PB03				eS	Sn	04 32 35.4	-0.1
PB03				IAML		04 32 36.5	
	comp=E,230nm,0.2s						
PSGC	Pisagua	1.55	316	⇑iP	Pn	04 32 15.1	-0.5
PSGC				iS	Sn	04 32 36.3	0.0
PSGC				IAML		04 32 38.2	
	comp=N,272nm,0.2s						
PSGCX	Pisagua	1.55	316	iP	Pn	04 32 15.2	-0.4
PSGCX				iS	Sn	04 32 36.9	+0.6
MNMC	Minye Minye	1.68	340	⇑iP	Pn	04 32 17.4	-0.1
MNMC				eS	Sn	04 32 39.6	+0.1
MNMCX	Minye Minye	1.68	340	iP	Pn	04 32 17.7	+0.3
HJA	Humahuaca	4.14	127	iP	Pn	04 32 49.4	-0.3
HJA				IAML		04 32 50.9	
	comp=Z,12nm,0.3s						

TEH 22 04:38:49.2, 31°.96N×47°.55E, h10^{km}, ML3.3

ISN 22 04:38:49.2±1.3, 31°.92N×47°.47E, h26^{km}±7^{km}, ML3.7

THR 22 04:38:54.0, 32°.10N×47°.78E, h14^{km}, ML3.1

ISC 22 04:38:49.2±3.7, 31°.88N±0°.07×47°.47E±0°.04, h17^{km}±28^{km}, n31, σ2^{s}01/35, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	Shooshtar-Gavs	1.15	78	ePn	Pb	04 39 10.1	-0.5
SHGR	Shooshtar-Gavs	1.15	78	AML	AML	04 39 28.7	
	comp=E,593nm,0.5s						
SHGR				Pg	Pb	04 39 10.1	-0.5
SHGR				Sg	Sb	04 39 22.4	-2.9
IKFM	Kafar-mosalman	1.67	11	ePn	Pb	04 39 18.7	-0.8
IKFM				eSg	Sb	04 39 41.8	+1.6
IKFM				IAMB	IAmb	04 39 43.0	
	comp=Z,0.0nm,0.4s						
IBDR	Badra	1.79	314	ePg	Pb	04 39 20.0	-1.5
IBDR				AML	AML	04 39 25.9	
	comp=Z,153nm,0.4s						
IBDR				eSg	Sb	04 39 44.0	+0.4
IKMR	Kamar-syah	1.81	25	ePn	Pn	04 39 20.3	+0.8
IKMR				IAMB	IAmb	04 39 45.6	
	comp=Z,0.0nm,0.4s						
IDOB	Doab	2.00	17	ePn	Pn	04 39 23.6	+1.3
IKOM	Komasi	2.29	1	ePn	Pb	04 39 28.4	-1.7
IKOM				IAMB	IAmb	04 40 03.3	
	comp=Z,0.0nm,0.8s						
HSAM	Samen	2.51	22	ePn	Pn	04 39 31.1	+1.6
HSAM				IAMB	IAmb	04 39 36.6	
	comp=Z,0.0nm,0.4s						
IVIS	Veis	2.69	349	ePn	Pn	04 39 33.9	+2.1
IVIS				IAMB	IAmb	04 40 14.8	
	comp=Z,1µm,0.4s						
JHBN	Jahan bin	2.74	82	ePn	Pn	04 39 33.9	+1.3
JHBN				IAMB	IAmb	04 40 19.2	
	comp=Z,0.0nm,0.6s						
KHMZ	Khomeyn	2.80	48	ePn	Pn	04 39 35.8	+2.4
KHMZ	Khomeyn	2.80	48	Pn	Pn	04 39 35.8	+2.4
KHMZ				Sg	Sb	04 40 11.0	-1.9
BHD	Baghdad	2.96	299	ePn	Pn	04 39 37.0	+1.7
BHD				AML	AML	04 39 39.0	
	comp=Z,7µm,0.3s						
BHD				eSn	Sn	04 40 10.0	-0.3
IDHR	Dehrash	2.96	342	ePn	Pn	04 39 37.4	+1.9
IDHR				IAMB	IAmb	04 40 23.9	
	comp=Z,0.0nm,0.6s						
ROKH	ROKH	3.06	80	ePn	Pn	04 39 37.9	+0.9
ROKH				IAMB	IAmb	04 40 33.9	
	comp=Z,0.0nm,0.5s						
HAGD	Aghdareh	3.25	25	ePn	Pn	04 39 42.0	+2.4
HAGD				IAMB	IAmb	04 40 37.6	
	comp=Z,0.0nm,0.8s						
ASAO	Ashtian	3.42	38	ePn	Pn	04 39 44.8	+2.9
ASAO	Ashtian	3.42	38	Pn	Pn	04 39 44.8	+2.9
HSRG	Sareghieh	3.42	11	ePn	Pn	04 39 44.7	+2.7
HSRG				IAMB	IAmb	04 40 37.6	
	comp=Z,0.0nm,0.7s						
IKLH	Kolahrood	3.75	66	ePn	Pn	04 39 48.1	+1.6
IKLH				IAMB	IAmb	04 41 06.0	
	comp=Z,334nm,0.4s						
IRAZ	Razeghan	4.07	30	ePn	Pn	04 39 52.9	+2.0
IRAZ				IAMB	IAmb	04 39 54.0	
	comp=Z,643nm,0.4s						
GHVR	GHOM	4.12	50	ePn	Pn	04 39 53.6	+2.1
GHVR	GHOM	4.12	50	Pn	Pn	04 39 53.6	+2.1
QABG	Abgarm-Qazvin	4.21	24	ePn	Pn	04 39 54.4	+1.7
QABG				IAMB	IAmb	04 40 12.3	
	comp=Z,0.0nm,0.8s						
IZEF	Zefreh	4.23	75	ePn	Pn	04 39 54.5	+1.4
IZEF				IAMB	IAmb	04 41 14.0	
	comp=Z,138nm,0.3s						
IKAZ	Kazeroun	4.30	118	ePn	Pn	04 39 56.1	+2.0
NASN	Na'in	4.61	77	ePn	Pn	04 40 01.1	+2.7
NASN	Na'in	4.61	77	Pn	Pn	04 40 01.1	+2.7
MSL	Mosul	5.78	322	ePn	Pn	04 40 15.0	+0.9
MSL				AML	AML	04 40 19.8	
	comp=Z,157nm,0.4s						
MSL				eSn	Sn	04 41 18.0	-2.0
GHIR	Ghir-Karzin	5.97	125	ePn	Pn	04 40 23.2	+6.3
GHIR	Ghir-Karzin	5.97	125	Pn	Pn	04 40 23.1	+6.2

JMA 22 04:41:50.3±0.2, 37°.80N×144°.53E, h46^{km}, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.47	283	P	Pn	04 42 29.3	+1.2
JIKH				S	Sn	04 42 57.8	+0.8
OFUJ	Ofunato	2.58	301	P	Pn	04 42 31.2	+1.6
OFUJ				eS	Sn	04 43 01.1	+1.3
JIO	Ouri	2.59	286	P	Pn	04 42 31.0	+1.3
JIO				eS	Sn	04 43 01.0	+1.0
JKMT	Kesennumamotoy	2.61	294	P	Pn	04 42 31.3	+1.4
JKMT				S	Sn	04 43 01.9	+1.6
JMK	Ichinoseki	2.84	295	P	Pn	04 42 34.7	+1.5
JMK				S	Sn	04 43 07.9	+1.7
JOM	Ohasama	3.04	304	P	Pn	04 42 37.8	+2.0
JOM				eS	Sn	04 43 12.7	+1.8
JFT	Otama	3.34	266	P	Pn	04 42 42.0	+2.0
JFT				eS	Sn	04 43 20.1	+1.7
JYK	Kaneyama	3.46	290	P	Pn	04 42 44.2	+2.5
JYK				eS	Sn	04 43 24.0	+2.6
BSO1	Boso 1	4.25	224	P	Pn	04 42 50.4	-1.7
BSO1				eS	Sn	04 43 36.9	-3.3
JRY	Ryogami san	4.85	250	P	Pn	04 43 01.1	+0.4
JRY				eS	Sn	04 43 53.0	-2.6
JKB	Kayabe	4.89	328	eS	Sn	04 43 57.9	+1.4
JCH	Churui	4.89	350	P	Pn	04 43 02.5	+1.2
JCH				eS	Sn	04 43 54.4	-2.1
JOD2	Odawara 2	5.06	242	eS	Sn	04 43 57.8	-3.0
NEM2	Nemuro 2	5.63	9	P	Pn	04 43 09.9	-1.5
NEM2				eS	Sn	04 44 10.2	-4.6

UCR 22 04:50:03.2±2.0, 8°.28N×82°.80W, h6^{km}±12^{km}, MW4.0, 3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	0.53	12	⇓iP	Pb	04 50 14.5	-0.5
BRU2				eS	Sb	04 50 22.1	-0.8
EDSV	San Vito	0.57	342	⇑iP	Pb	04 50 15.0	-0.7
EDSV				eS	Sb	04 50 23.4	-0.7
EDPN	Palmar Norte	0.94	316	⇑iP	Pg	04 50 20.2	-1.1
EDPN				eS	Sg	04 50 32.9	-0.7
EDBA	Buenos Aires	1.00	332	eS	Sg	04 50 35.9	+0.5
DRK0	Durika	1.07	336	⇑eP	Pg	04 50 22.6	-1.2
DRK0				eS	Sg	04 50 36.2	-1.6
EDLM	Las Mercedes	1.27	322	eP	Pg	04 50 25.8	-1.7
EDLM				eS	Sg	04 50 42.4	-1.6
LCR2	La Lucha 2	1.88	321	eP	Pn	04 50 35.0	-1.1
CVTR	Volcan Turrial	1.98	331	eP	Pn	04 50 38.2	+0.6
CVTR				eS	Sn	04 51 03.2	+0.3
HDC	Heredia	2.15	323	eP	Pn	04 50 40.2	+0.4
ARE1	Arenal 1	2.88	319	eP	Pn	04 50 50.7	+1.0
CEDE	Laguna Cedeo	2.89	320	eP	Pn	04 50 51.1	+1.2
JTS	Las Juntas de	2.92	313	eP	Pn	04 50 51.1	+0.8

BJI 22 04:50:30.1±0.0, 5°.40N×127°.14E, h108^{km}, mb4.7/32, mB4.8/25

MAN 22 04:50:32.0, 5°.69N×127°.09E, h54^{km}, mb4.8, ML3.7, MS3.7

ISCJB 22 04:50:32.4±0.5, 5°.75N±0°.03×127°.05E±0°.05, h107^{km}±4^{km}, mb4.5/45, Error ellipse: s-maj=9.1km s-min=3.8km az=157.1

IDC 22 04:50:33.3±1.3, 5°.84N×127°.09E, h101^{km}±10^{km}, mb4.1/16, mb1 4.3/19, mb1mx4.0/33, mbtmp4.5/19, MS2.8/4, Ms1 2.9/4, ms1mx2.6/31, Error ellipse: s-maj=22.1km s-min=9.3km az=64.0

NEIC 22 04:50:33.7±2.0, 5°.80N×127°.03E, h104^{km}±2^{km}, mb4.6/39, Error ellipse: s-maj=17.4km s-min=11.8km az=62.0

DJA 22 04:50:36.3±0.5, 6°N±5°×12°7E±°, h95^{km}±7^{km}, M4.8/12, mB5.2/6, mb4.9/12, MLv5.0/9, Mw(mB)4.6/6

ISC 22 04:50:32.1±0.8, 5°.74N±0°.05×127°.17E±0°.07, h92^{km}±7^{km}, n104, σ1^{s}68/113, mb4.6/46, 6C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.50	284	eP	Pn	04 50 56.9	-1.0
MATI	Mati	1.50	323	eP	Pn	04 50 57.4	-0.6
DAV	Davao City (W)	2.06	310	P	Pn	04 51 06.3	+1.2
	422nm,0.3s,baz=133,slow=0.7,SNR=40						
DAV				S	Sn	04 51 29.8	-0.7
	284nm,0.3s,baz=91,slow=16,SNR=14						
DAV				LR	LR	04 51 47.6	
	comp=Z,565nm,20.9s,baz=154,slow=38						
DAV	Davao City (W)	2.06	310	ePn	Pn	04 51 06.0	+0.8
DAV				eSn	Sn	04 51 28.3	-2.2
DMPH	Davao City--Mi	2.12	309	⇑iP	Pn	04 51 08.7	+2.6
DMPH				iS	Sn	04 51 33.8	+1.9
KCP	Kidapawan	2.42	301	⇑iP	Pn	04 51 01.1	-8.9
KCP				iS	Sn	04 51 38.4	-0.7
BIPH	Bislig	2.56	342	⇓eP	Pn	04 51 11.2	-0.5
BIPH				eS	Sn	04 51 37.3	-4.9
SGSI	Sangihe	2.62	219	P	Pn	04 51 12.3	-0.3
SKMP	Bagumbayan, Su	2.73	287	eP	Pn	04 51 13.2	-0.8
SKMP				eS	Sn	04 51 45.8	-0.4
BUKP	Musuan	2.98	315	eP	Pn	04 51 18.0	+0.5
BUKP				eS	Sn	04 51 52.2	-0.3
CTBH	Cotabato--PC H	3.26	297	⇑eP	Pn	04 51 20.9	-0.2
BUTP	Butuan	3.56	334	eP	Pn	04 51 27.6	+2.4
BUTP				eS	Sn	04 52 08.1	+1.8
CGP	Cagayan de Oro	3.65	318	⇑iP	Pn	04 51 43.9	+17
CGP				iS	Sn	04 52 08.0	-0.5
PAGZ	Pagadian	4.31	299	eP	Pn	04 51 36.0	+0.7
MSLP	Maasin	4.93	332	eP	Pn	04 51 44.3	+0.5
TNTI	Ternate	4.94	178	ePn	Pn	04 51 45.2	+1.2
TNTI				eSn	Sn	04 52 29.3	-11
TNTI	Ternate	4.94	178	P	Pn	04 51 46.4	+2.4
LBMI	Labuha	6.34	177	P	Pn	04 52 04.8	+1.7
RCP	Roxas	7.25	323	⇑eP	Pn	04 52 18.3	+2.9
SWI	Sorong	7.73	148	P	Pn	04 52 27.3	+5.4
SIJI	Sorong	7.73	148	P	Pn	04 52 24.7	+2.6
	30nm,0.3s,baz=354,slow=9.2,SNR=35						
SIJI				S	Sn	04 53 44.0	-4.1
	5.5nm,0.3s,baz=270,slow=20,SNR=4.1						
SIJI				LR	LR	04 55 34.2	
	comp=Z,82nm,21.0s,baz=87,slow=38						
SANI	Sanana	7.83	189	P	Pn	04 52 24.0	+0.7
LUWI	Luwuk	8.04	213	ePn	Pn	04 52 25.2	-1.1
LUWI	Luwuk	8.04	213	P	Pn	04 52 25.5	-0.8
NLAI	Namlea	8.92	180	P	Pn	04 52 39.4	+1.2
MSAI	Masohi	9.20	169	P	Pn	04 52 43.6	+1.6
	23nm,0.7s						
FAKI	Fak Fak	9.98	149	ePn	Pn	04 52 55.8	+3.1
FAKI				eSn	Sn	04 54 36.1	-6.9
KKM	Kota Kinabalu	10.90	272	ePn	Pn	04 53 02.8	-2.6
KKM				eSn	Sn	04 54 45.9	-20
BAKI	Biak	11.27	127	P	Pn	04 53 18.6	+8.4
	139nm,1.1s						
TTSI	Tana Toraja	11.41	220	P	Pn	04 53 25.3	+13
KAPI	Kappang	13.00	215	P	Pn	04 53 33.2	-0.2
	baz=343,slow=13,SNR=3.9						
EDFI	Ende, Flores	15.40	201	P	P	04 54 16.8	+10
SOEI	Soe	15.66	191	ePn	Pn	04 54 06.3	-1.5
	62nm,0.7s						
SOEI	Soe	15.66	191	P	P	04 54 17.4	+7.4
BATI	Baumata	16.22	192	P	P	04 54 16.5	+0.4
	6.8nm,0.3s,baz=42,slow=14,SNR=3.5						
KSM	Kuching	17.35	256	eP	P	04 54 29.3	+0.6
	17nm,0.7s						
TPUB	Ta-pu	18.56	341	eP	P	04 54 39.2	-2.6
	7.2nm,1.0s						
MTN	Manton Dam	18.88	168	eP	Pn	04 54 46.9	0.0
	19nm,0.6s						
DLV	T Lat	19.46	290	eP	P	04 54 50.7	-1.2
	43nm,1.1s						
JOW	Kunigami	21.00	3	eP	P	04 55 06.5	-1.7
	6.1nm,0.6s						
PANO	Nakornpanom	24.81	299	P	P	04 55 45.9	0.0
	0.3nm,1.6s						
MDSI	Maura Dua	25.11	247	P	P	04 55 56.2	+7.6
COEN	Coen	25.20	141	eP	P	04 55 51.1	+1.6
	7.4nm,0.8s						
WR1	Warramunga Arr	26.48	165	eP	P	04 56 02.1	+1.2
WR1				eScP	ScP	05 02 54.6	-1.1
WRA	Warramunga Arr	26.48	165	P	P	04 56 02.1	+1.2
	6.5nm,0.3s,baz=341,slow=12,SNR=51						
WRA				ScP	ScP	05 02 54.6	-1.2
	1.2nm,0.7s,baz=336,slow=1.8,SNR=3.3						
WB2	Warramunga Arr	26.48	165	eP	P	04 56 03.5	+2.6
	14nm,0.9s						
SDSI	Sungai Dareh	26.55	256	P	P	04 56 04.1	+2.5
NJ2	Nanjing	27.31	344	eP	P	04 56 09.4	+1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PDSI	Padang	27.48	257	P	P	04 56 14.3	+4.3
PBKT	Sadao Pong	27.83	295	P	P	04 56 13.1	+0.1
	6.0nm,0.7s,598nm						
ENH	Enshi	29.54	328	eP	P	04 56 27.2	-0.9
	9.3nm,0.7s						
GSI	Gunungsitoli	29.86	263	eP	P	04 56 28.4	-2.8
	36nm,0.8s						
GSI	Gunungsitoli	29.86	263	P	P	04 56 28.7	-2.5
AS31	Alice Springs	29.96	168	eP	P	04 56 33.2	+1.3
	2.2nm,0.6s						
AS31				ePcP	PcP	04 59 33.3	+0.8
AS31				eScP	ScP	05 03 06.5	-0.1
ASAR	Alice Springs	29.96	168	P	P	04 56 33.0	+1.1
	1.1nm,0.3s,baz=342,slow=7.2,SNR=25						
ASAR				PcP	PcP	04 59 33.3	+0.8
	0.8nm,0.5s,baz=350,slow=3.1,SNR=3.9						
ASAR				ScP	ScP	05 03 06.5	-0.1
	1.2nm,0.8s,baz=338,slow=2.5,SNR=6.9						
CMAR	Chiang Mai Arr	30.30	297	P	P	04 56 34.8	-0.1
	1.6nm,0.5s,baz=108,slow=7.0,SNR=5.5						
CMAR				LR	LR	05 09 44.0	
	comp=Z,31nm,18.2s,baz=134,slow=38						
KMI	Kunming	30.32	312	eP	P	04 56 35.5	+0.2
	10nm,0.7s						
KMI	Kunming	30.32	312	P	P	04 56 37.5	+2.1
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
KMI				pmax	pmax		
	comp=Z,140nm,6.5s						
CMMT	Chiang Mai	30.42	298	P	P	04 56 36.2	+0.1
KSRS	Korea Array	31.57	1	LR	LR	05 10 09.3	
	comp=Z,6.5nm,20.7s,baz=220,slow=37						
XAN	Xi'an	32.85	331	eP	P	04 56 56.8	-0.4
	9.0nm,0.8s						
XAN	Xi'an	32.85	331	P	P	04 56 56.6	-0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,57nm,5.7s						
CD2	Chengdu	33.32	322	eP	P	04 57 01.8	+0.4
FORT	Forrest	36.32	179	eP	P	04 57 28.8	+1.7
	19nm,0.8s						
LZH	Lanzhou	37.02	328	⇑P	P	04 57 34.0	+0.7
LZH				pP	pwP	04 57 59.3	+1.0
LZH				PP	PnPn	04 59 04.3	+3.6
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,78nm,5.2s						
HHC	Hu-ho-hao-te	37.65	340	P	P	04 57 41.4	+3.0
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
USRK	Ussuriysk Ar.	38.54	6	P	P	04 57 45.2	-0.4
	1.2nm,0.4s,baz=189,slow=8.4,SNR=5.7						
BBOO	Buckleboo	39.26	168	eP	P	04 57 52.9	+1.1
	15nm,1.1s						
STKA	Stephens Creek	39.86	161	P	P	04 57 58.5	+1.6
	11nm,0.7s,baz=336,slow=8.7,SNR=17						
H11S3	WAKE ISLAND Hy	40.55	68	T	T	05 42 28.8	
	baz=258,slow=75,SNR=3.4						
H11S1	WAKE ISLAND Hy	40.57	68	T	T	05 42 28.3	
	baz=258,slow=75,SNR=3.6						
H11S2	WAKE ISLAND Hy	40.57	68	T	T	05 42 26.5	
	baz=258,slow=75,SNR=5.2						
SONA0	Songino Array	45.55	340	eP	P	04 58 42.8	0.0
SONA0				ePcP	PcP	05 00 18.8	-1.2
SONM	Songino Array	45.55	340	P	P	04 58 42.8	0.0
	1.4nm,0.5s,baz=148,slow=8.7,SNR=9.4						
SONM				PcP	PcP	05 00 18.8	-1.2
	0.5nm,0.4s,baz=147,slow=2.9,SNR=2.6						
WMQ	Urumqi	51.35	324	eP	P	04 59 29.3	+1.9
WMQ				pmax	pmax		
	comp=Z,37nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,91nm,6.7s						
PETK	Petropavlovsk-	53.41	22	P	P	04 59 42.1	-0.3
	2.3nm,0.6s,baz=197,slow=4.5,SNR=4.7						
PEA1	Petropavlovsk-	53.42	22	eP	P	04 59 42.0	-0.3
MK31	Makanchi Array	56.18	324	eP	P	05 00 02.8	+0.3
	6.5nm,0.7s						
MKAR	Makanchi Array	56.18	324	P	P	05 00 02.7	+0.2
	8.8nm,0.5s,baz=122,slow=8.2,SNR=71						
KSH	Kashi	56.96	314	P	P	05 00 09.4	+1.1
KSH				PcP	PcP	05 01 05.8	+3.2
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
KSH				pmax	pmax		
	comp=Z,110nm,4.8s						
KSH				LR	LR		
	comp=N,160nm,8.8s						
KSH				LR	LR		
	comp=E,74nm,7.8s						
NIL	Nilore	57.07	307	eP	P	05 00 09.1	0.0
	17nm,0.8s						
KDJ	Kajisay	57.16	317	eP	P	05 00 10.2	+0.4
	11nm,0.6s						
ZALV	Zalesovo Beam	59.02	332	P	P	05 00 21.1	-1.1
	2.1nm,0.5s,baz=129,slow=6.5,SNR=5.2						
ZAA1	Zalesovo Array	59.02	332	eP	P	05 00 21.1	-1.1
ARSB	Arslanbob	59.74	315	eP	P	05 00 27.6	-0.1
	5.2nm,0.7s						
KURK	Kurchatov	60.30	327	eP	P	05 00 31.2	+0.1
	14nm,0.6s						
KBL	Kabul	60.67	306	eP	P	05 00 33.4	-0.8
	7.2nm,0.7s						
BRVK	Borovoye	65.97	326	eP	P	05 01 08.7	+0.2
	14nm,1.0s						
GEYT	Alibeck	70.00	308	P	P	05 01 33.5	-0.6
	5.3nm,0.6s,baz=174,slow=4.5,SNR=9.2						
ABKAR	Akbulak array	70.89	320	eP	P	05 01 39.1	-0.2
	8.7nm,0.8s						
RAYN	Ar Rayn	80.11	293	eP	P	05 02 32.1	-0.5
	5.6nm,0.6s						
TBLG	Delisi	80.56	311	eP	P	05 02 35.3	+0.6
	20nm,0.7s						
CAST	Castle Rocks	80.75	27	eP	P	05 02 35.8	+0.6
	3.6nm,0.7s						
MLY	Manley	81.48	25	eP	P	05 02 40.7	+1.6
	3.2nm,0.6s						

KBZ	Khabaz	81.93	313	P	P	05 02 41.8	0.0
	5.6nm,1.1s,baz=183,slow=4.9,SNR=5.2						
ILAR	Eielson Array	83.11	26	P	P	05 02 47.0	-0.6
	0.7nm,0.6s,baz=256,slow=5.2,SNR=8.5						
ILB	Eielson Array	83.11	26	eP	P	05 02 47.0	-0.6
	1.2nm,0.9s						
ARCES	ARCESS Array B	88.72	340	P	P	05 03 14.1	-1.0
	1.2nm,0.5s,baz=83,slow=6.4,SNR=12						
BRTR	Keskin Array B	89.09	310	P	P	05 03 16.3	-1.3
	3.0nm,0.9s,baz=130,slow=4.2,SNR=12						
FINES	FINESS Array B	90.28	332	P	P	05 03 21.2	-1.2
	2.5nm,0.6s,baz=52,slow=3.1,SNR=12						
AKASG	Malin Array Be	90.62	321	P	P	05 03 22.9	-1.4
	1.2nm,0.6s,baz=66,slow=4.6,SNR=5.5						
NOA	NORSAR Array B	97.19	334	P	P	05 03 54.2	-0.1
	0.5nm,0.7s,baz=67,slow=4.5,SNR=2.6						
NOA				LR	LR	05 51 54.8	
	comp=Z,6.4nm,18.4s,baz=275,slow=38						
TORD	Torodi Ar. Bea	122.69	290	PKP	PKPdf	05 09 17.4	-0.9
	0.7nm,0.6s,baz=46,slow=1.7,SNR=7.2						
TOA1	Torodi Ar. Sit	122.69	290	ePKPdf	PKPdf	05 09 17.4	-0.9

IDC ***22*** *05:03:00.9±0.9, 12°.37N×143°.69E, h0km, mb3.9/7, mb1 4.2/7, mb1mx3.7/40, mbtmp3.9/7, Error ellipse: s-maj=37.1km s-min=17.8km az=120.0*
ISCJB ***22*** *05:03:03.6±0.6, 12°.29N±0°.10×143°.6E±0°.1, h27km, mb4.1/8, Error ellipse: s-maj=21.5km s-min=8.1km az=33.6*
NEIC ***22*** *05:03:08.7±3.7, 12°.22N×144°.00E, h64km±5km, mb4.3/2, Error ellipse: s-maj=32.9km s-min=12.4km az=111.0*
ISC 22 05:03:05.0±0.8**, 12°.3N**±0°.1×**143°.8E**±0°.2**, h27km, n20, σ1ˢ46**/19**, mb4.2**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.71	40	Pn	Pn	05 03 31.0	-2.1
	215nm,0.3s,baz=262,slow=2.2,SNR=77						
GUMO				Sn	Sn	05 03 54.8	+0.7
	174nm,0.3s,baz=225,slow=20,SNR=11						
GUMO	Guam	1.71	40	ePn	Pn	05 03 33.4	+0.3
GUMO				eSn	Sn	05 03 54.4	+0.2
SARN	Sarigan	4.83	24	ePn	Pn	05 04 18.8	+2.7
H11N1	WAKE ISLAND Hy	23.43	69	T	T	05 32 11.7	
	baz=260						
H11N2	WAKE ISLAND Hy	23.44	69	T	T	05 32 12.5	
	baz=260						
H11N3	WAKE ISLAND Hy	23.45	69	T	T	05 32 12.4	
	baz=260						
WR1	Warramunga Arr	33.32	196	eP	P	05 09 41.3	+0.5
WRA	Warramunga Arr	33.32	196	P	P	05 09 41.3	+0.5
	1.3nm,0.8s,baz=16,slow=10,SNR=5.0						
ASAR	Alice Springs	36.98	195	P	P	05 10 12.7	+0.4
	0.4nm,0.6s,baz=22,slow=10,SNR=4.1						
BBOO	Buckleboo	45.42	189	eP	P	05 11 22.1	+0.5
	15nm,1.1s						
MK32	Makanchi Array	61.69	317	eP	P	05 13 20.9	+0.1
MKAR	Makanchi Array	61.69	317	P	P	05 13 20.9	+0.1
	0.3nm,0.7s,baz=92,slow=7.1,SNR=3.2						
ILAR	Eielson Array	70.23	25	P	P	05 14 14.2	-1.1
	0.7nm,0.5s,baz=248,slow=5.7,SNR=12						
ILB	Eielson Array	70.23	25	eP	P	05 14 12.5	-2.9
	1.0nm,0.6s						
YKB5	Yellowknife Ar	84.53	27	eP	P	05 15 35.8	+0.4
YKA	Yellowknife Ar	84.53	27	P	P	05 15 35.8	+0.4
	0.8nm,0.4s,baz=286,slow=5.1,SNR=9.5						
NV01	Mina Array Sit	88.60	51	eP	P	05 15 57.7	+1.5
NVAR	Mina Array Bea	88.60	51	P	P	05 15 57.7	+1.5
	0.9nm,0.6s,baz=261,slow=5.1,SNR=5.1						
FIA0	FINESS Array S	91.89	335	eP	P	05 16 08.9	-1.8
FINES	FINESS Array B	91.89	335	P	P	05 16 08.9	-1.8
	2.3nm,1.0s,baz=116,slow=4.4,SNR=5.6						

ISCJB ***22*** *05:05:44.8±0.6, 16°.84S±0°.07×72°.32W±0°.09, h49km, mb4.0/2, MS2.9/1, Error ellipse: s-maj=15.1km s-min=5.8km az=146.1*
IDC ***22*** *05:05:47.9±1.7, 16°.78S×72°.31W, h82km±20km, mb3.7/3, mb1 3.9/7, mb1mx3.5/28, mbtmp4.1/7, MS3.0/5, Ms1 3.0/5, ms1mx2.7/26, Error ellipse: s-maj=25.0km s-min=15.9km az=49.0*
ISC 22 05:05:46.4±0.9**, 16°.90S**±0°.07×**72°.33W**±0°.10**, h49km, n25, σ1ˢ77**/20**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	2.56	132	i P	Pn	05 06 26.1	+0.6
PSGCX	Pisagua	3.41	142	i P	Pn	05 06 37.9	+0.7
MNMCX	Minye Minye	3.42	131	i P	Pn	05 06 38.6	+1.1
PB11	IPOC Station P	3.82	139	i P	Pn	05 06 43.9	+1.1
LPAZ	La Paz	4.07	82	P	Pn	05 06 49.6	+2.9
	8.4nm,0.3s,baz=263,slow=11,SNR=359						
LPAZ				LR	LR	05 08 43.8	
	comp=Z,166nm,20.4s,baz=268,slow=44						
LPAZ	La Paz	4.07	82	i P	Pn	05 06 49.6	+2.9
PB02	IPOC Station P	4.96	153	i P	Pn	05 06 59.3	+0.7
PB03	IPOC Station P	5.67	155	i P	Pn	05 07 08.9	+0.6
PB04	IPOC Station P	5.79	160	i P	Pn	05 07 10.1	+0.2
PB04				i S	Sn	05 08 16.8	+1.7
LVC	Limon Verde	6.53	151	P	Pn	05 07 22.3	+2.0
	48nm,0.3s,baz=326,slow=11,SNR=362						
LVC				S	Sn	05 08 33.1	-0.5
	2.4nm,0.3s,baz=251,slow=15,SNR=3.1						
LVC				LR	LR	05 10 03.3	
	comp=Z,120nm,19.5s,baz=18,slow=39						
NNA	Nana	6.55	318	P	Pn	05 07 22.2	+1.9
	3.3nm,0.3s,baz=132,slow=11,SNR=9.9						
NNA				S	Sn	05 08 33.2	-0.6
	3.2nm,0.3s,baz=216,slow=17,SNR=2.5						
HJA	Humahuaca	9.04	135	i P	Pn	05 07 55.9	+1.2
HJA				IAML		05 08 11.3	
	comp=Z,7.2nm,0.4s						
SIV	San Ignacio	10.84	87	P	Pn	05 08 18.2	-0.8
	comp=Z,0.9nm,0.3s,baz=270,slow=11,SNR=18						
SIV				LR	LR	05 12 47.1	
	comp=Z,69nm,21.1s,baz=284,slow=39						
ATAH	Atahualpa	11.37	328	LR	LR	05 13 44.4	
	comp=Z,69nm,19.3s,baz=168,slow=42						
CFA	Coronel Fontan	15.11	166	P	Pn	05 09 18.3	+1.6
	comp=Z,0.3nm,0.3s,baz=348,slow=16,SNR=5.4						
PTGA	Pitinga	20.16	38	P	P	05 10 13.6	-3.2
	comp=Z,1.1nm,0.4s,baz=220,slow=16,SNR=3.2						
PLCA	Paso Flores	23.80	177	P	P	05 10 53.9	-0.9
	comp=Z,4.8nm,0.8s,baz=8.4,slow=11,SNR=3.2						
MDP	Montagnes des	29.27	43	LR	LR	05 23 10.5	
	comp=Z,32nm,20.0s,baz=190,slow=36						
TORD	Torodi Ar. Bea	78.97	73	P	P	05 17 43.3	-2.3
	comp=Z,1.4nm,0.6s,baz=255,slow=5.6,SNR=19						
H11N3	WAKE ISLAND Hy	123.93	283	T	T	07 41 27.6	
	baz=98,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	123.94	283	T	T	07 41 26.9	
	baz=98,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	123.95	283	T	T	07 41 24.7	
	baz=98,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	123.95	281	T	T	07 41 28.5	
	baz=99,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	123.96	281	T	T	07 41 27.2	
	baz=99,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	123.97	281	T	T	07 41 28.0	
	baz=99,slow=75,SNR=9.7						

ISCJB ***22*** *05:09:45.3±1.1, 36°.28N±0°.05×141°.7E±0°.1, h26km, mb3.3/2, Error ellipse: s-maj=12.2km s-min=7.0km az=7.2*
JMA ***22*** *05:09:45.8±0.3, 36°.30N×141°.72E, h40km, M3.1*
IDC ***22*** *05:09:53.1±3.9, 35°.99N×141°.19E, h75km±32km, mb3.2/2, mb1 3.3/5, mb1mx3.1/45, mbtmp3.5/5, MS2.6/1, Ms1 2.6/1, ms1mx2.1/14, Error ellipse: s-maj=39.8km s-min=11.9km az=67.0*
ISC 22 05:09:46.4±1.5**, 36°.25N**±0°.05×**141°.7E**±0°.1**, h26km, n24, σ1ˢ65**/22**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.88	231	P	Pb	05 10 02.4	-0.6
CHOJ				S	Sn	05 10 15.0	+0.1
JHYU	Hitachinakayam	0.90	276	P	Pb	05 10 02.9	-0.6
JHO	Hitachi	0.98	292	P	Pn	05 10 03.0	-1.5
JIHU	Itakohorinouch	0.99	254	P	Pb	05 10 05.3	+0.3
ONAJ	Iwakimizuishiy	1.11	320	P	Pn	05 10 04.6	-1.8
JFT	Otama	1.67	320	P	Pn	05 10 13.8	-0.2
BSO1	Boso 1	1.70	200	P	Pn	05 10 14.1	+0.2
BSO3	Boso 3	1.74	214	P	Pn	05 10 14.8	+0.1
JMM	Marumori	1.77	336	P	Pn	05 10 14.5	-0.8
JAG	Ashikaga	1.82	276	P	Pn	05 10 15.8	-0.3
JFY	Yanaizu	1.97	306	P	Pn	05 10 18.4	+0.2
JKT	Katashina	2.04	285	P	Pn	05 10 19.3	+0.1
MJAR	Matsushiro Arr	2.83	277	P	Pn	05 10 30.9	+0.9
	1.0nm,0.3s,baz=118,slow=7.9,SNR=32						
MJAR				S	Sn	05 11 00.5	-2.7
	0.4nm,0.3s,baz=93,slow=8.9,SNR=5.1						
MJAR				LR	LR	05 11 53.4	
	comp=Z,99nm,18.2s,baz=115,slow=49						
MAT	Matsushiro	2.83	277	P	Pn	05 10 31.0	+1.0
MAT				S	Sn	05 11 02.8	-0.5
JHJ	Hachijo jima 2	3.50	207	P	Pn	05 10 39.1	-0.1
	4.3nm,0.3s,baz=76,slow=16,SNR=4.7						
JHJ				S	Sn	05 11 16.0	-3.8
	12nm,0.3s,baz=17,slow=20,SNR=3.0						
USRK	Ussuriysk Ar.	10.86	320	P	Pn	05 12 24.7	+4.6
	0.3nm,0.3s,baz=140,slow=14,SNR=7.5						
H11N2	WAKE ISLAND Hy	27.56	120	T	T	05 44 10.5	
	baz=313,slow=74,SNR=5.7						
H11N1	WAKE ISLAND Hy	27.56	120	T	T	05 44 09.7	
	baz=313,slow=74,SNR=3.1						
H11N3	WAKE ISLAND Hy	27.57	120	T	T	05 44 12.0	
	baz=313,slow=74,SNR=3.8						
H11S1	WAKE ISLAND Hy	28.25	122	T	T	05 45 04.0	
	baz=313,slow=74,SNR=5.3						
H11S3	WAKE ISLAND Hy	28.25	122	T	T	05 45 04.0	
	baz=313,slow=74,SNR=5.3						
H11S2	WAKE ISLAND Hy	28.26	122	T	T	05 45 04.0	
	baz=313						
SONM	Songino Array	28.42	305	P	P	05 15 38.8	-0.1
	0.5nm,0.8s,baz=102,slow=8.3,SNR=2.4						
MKAR	Makanchi Array	44.73	303	P	P	05 17 57.3	-0.1
	0.4nm,0.8s,baz=82,slow=9.2,SNR=3.8						

ISK ***22*** *05:58:21.6, 35°.63N×38°.17E, h5km, ML2.9/5*
NSSC ***22*** *05:58:24.3±0.4, 34°.88N×37°.26E, h5km±5km, ML2.3*
ISC 22 05:58:24.5±3.0**, 34°.91N**±0°.04×**37°.2E**±0°.3**, h10km, n9, σ1ˢ34**/11**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QASN	Qassioun	1.57	209	eP	Pb	05 58 53.3	-0.4
QASN				eS	Sb	05 59 13.3	-0.3
QASN				AML	AML	05 59 31.7	
	comp=N,122nm,0.4s						
QASN				AML	AML	05 59 38.2	
	comp=E,117nm,0.4s						
TOTH	TOTAH	1.67	202	eP	Pb	05 58 54.5	-0.8
TOTH				eS	Sb	05 59 15.8	-0.6
TOTH				AML	AML	05 59 29.3	
	comp=N,42nm,0.2s						
TOTH				AML	AML	05 59 35.1	
	comp=E,47nm,0.6s						
BRBR	Barbar	1.81	215	eP	Pn	05 58 56.5	+0.6
BRBR				eS	Sn	05 59 19.8	+0.7
BRBR				AML	AML	05 59 42.1	
	comp=N,38nm,0.7s						
BRBR				AML	AML	05 59 45.7	
	comp=E,27nm,0.7s						
GAZ	Gaziantep	2.25	1	PN	Pn	05 58 53.7	-8.2
GAZ				SN	Sn	05 59 17.4	-12
YURE	YUREGIR	2.29	327	PN	Pn	05 59 02.4	+0.1
YURE				SN	Sn	05 59 33.6	+3.0
CEYT	Ceyhan	2.40	331	PN	Pn	05 59 03.7	-0.1
CEYT				SN	Sn	05 59 34.0	+0.8
KMRS	Kahramanmaras	2.60	355	PN	Pn	05 58 59.5	-7.1
URFA	Urfa	2.85	27	PN	Pn	05 58 56.3	-14
URFA				SN	Sn	05 59 21.3	-23
MERS	Mersin	2.91	313	PN	Pb	05 59 14.9	-1.7

IDC ***22*** *05:58:56.0±2.0, 6°.22S×130°.67E, h44km±21km, mb3.9/3, mb1 4.4/8, mb1mx3.9/40, mbtmp4.5/8, ML4.7/4, MS3.2/3, Ms1 3.2/3, ms1mx2.6/27, Error ellipse: s-maj=22.4km s-min=18.2km az=100.0*
NEIC ***22*** *05:58:55.6±2.1, 6°.12S×130°.67E, h35km±3km, mb4.4/14, Error ellipse: s-maj=15.1km s-min=9.6km az=127.0*
ISCJB ***22*** *05:58:57.5±0.3, 6°.17S±0°.03×130°.94E±0°.05, h100km, mb4.1/5, Error ellipse: s-maj=6.5km s-min=3.8km az=170.7*
DJA ***22*** *05:58:59.2±0.2, 6°S±2°×13°1E±°, h104km±10km, M4.7/12, mB5.5/5, mb4.7/10, MLv4.7/12, Mw(mB)4.9/5*
ISC 22 05:58:58.7±0.6**, 6°.16S**±0°.04×**130°.83E**±0°.05**, h100km, n46, σ2ˢ68**/55**, mb4.1**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.87	331	P	Pn	05 59 29.4	-0.2
SAUI	Saumlaki	1.87	165	P	Pn	05 59 32.3	+2.7
SAUI				S	Sn	05 59 53.3	+0.1
MSAI	Masohi	3.38	326	P	Pn	05 59 50.1	+0.6
MSAI				S	Sn	06 00 27.9	-0.8
FAKI	Fak Fak	3.52	24	ePn	Pn	05 59 51.3	-0.1
FAKI				eSn	Sn	06 00 29.3	-2.9
FAKI	Fak Fak	3.52	24	P	Pn	05 59 51.4	-0.1
FAKI				S	Sn	06 00 30.3	-1.9
AAI	Ambon	3.59	313	P	Pn	05 59 52.1	-0.3
NLAI	Namlea	4.71	308	P	Pn	06 00 12.5	+5.0
NLAI				S	Sn	06 01 04.9	+3.8
SIJI	Sorong	5.28	5	P	Pn	06 00 14.6	-0.6
	27nm,0.3s,baz=262,slow=23,SNR=39						
SIJI				S	Sn	06 01 09.4	-5.3
	42nm,0.3s,baz=233,slow=20,SNR=16						
SWI	Sorong	5.28	5	P	Pn	06 00 15.3	+0.1
SANI	Sanana	6.32	310	P	Pn	06 00 30.7	+1.3
LBMI	Labuha	6.41	329	P	Pn	06 00 30.3	-0.3
MTN	Manton Dam	6.65	177	ePn	Pn	06 00 34.3	+0.5
MTN				eSn	Sn	06 01 42.6	-5.6
SOEI	Soe	7.41	241	eP	Pn	06 00 46.2	+1.9
SOEI				eSn	Sn	06 02 01.3	-5.6
SOEI	Soe	7.41	241	P	Pn	06 00 46.0	+1.7
BATI	Baumata	8.15	240	P	Pn	06 00 49.4	-4.9
	3.3nm,0.3s,baz=329,slow=16,SNR=2.1						
BATI				S	Sn	06 02 19.8	-5.0
	5.7nm,0.3s,baz=126,slow=19,SNR=2.9						
BATI	Baumata	8.15	240	ePn	Pn	06 00 49.4	-4.9
BATI				ePn	Pn	06 00 49.4	-4.9
BATI				eSn	Sn	06 02 19.8	-5.0
BATI				eSn	Sn	06 02 19.8	-5.0
BATI	Baumata	8.15	240	P	Pn	06 00 56.6	+2.3
EDFI	Ende, Flores	9.42	254	P	Pn	06 01 14.3	+2.7
JAY	Jayapura	10.49	70	P	Pn	06 01 25.4	-0.8
	baz=263,slow=4.3						
JAY				LR	LR	06 07 06.7	
	comp=Z,66nm,19.9s,baz=36,slow=46						
WRAB	Tennant Creek	14.11	166	ePn	Pn	06 02 13.3	-0.9
WRAB				eSn	Sn	06 04 43.4	-6.3
WR1	Warramunga Arr	14.12	166	ePn	Pn	06 02 11.3	-2.9
WRA	Warramunga Arr	14.12	166	P	Pn	06 02 11.3	-2.9
	4.1nm,0.3s,baz=343,slow=13,SNR=82						
WRA				S	Sn	06 04 39.6	-10
	1.8nm,0.3s,baz=343,slow=23,SNR=6.3						
WB2	Warramunga Arr	14.12	166	ePn	Pn	06 02 11.3	-3.0
WC3	Warramunga Arr	14.14	166	ePn	Pn	06 02 11.7	-2.8
COEN	Coen	14.41	123	ePn	Pn	06 02 18.1	0.0
AS31	Alice Springs	17.66	171	ePn	Pn	06 02 58.7	+0.4
	11nm,0.4s						
ASAR	Alice Springs	17.66	171	P	P	06 02 58.0	+0.1
	3.8nm,0.3s,baz=346,slow=9.0,SNR=119						
ASAR				S	Sn	06 05 60.0	-15
	baz=342,slow=18,SNR=4.5						
ASAR				LR	LR	06 10 52.3	
	comp=Z,96nm,21.1s,baz=324,slow=41						
PSAD1	Pilbara Seismi	18.56	214	eP	Pn	06 03 09.8	+0.6
	82nm,1.8s						
PSAB2	Pilbara Seismi	18.62	214	eP	P	06 03 09.2	+0.7
	70nm,1.8s						
PSAC1	Pilbara Seismi	18.63	214	eP	Pn	06 03 10.1	0.0
	43nm,1.4s						
PSAA2	Pilbara Seismi	18.64	214	eP	Pn	06 03 10.3	+0.2
	13nm,0.7s						
PSA00	Pilbara Seismi	18.64	214	eP	Pn	06 03 10.1	-0.1
	14nm,0.7s						
PSAA3	Pilbara Seismi	18.64	214	eP	Pn	06 03 10.5	+0.3
	12nm,0.8s						
PSAA1	Pilbara Seismi	18.65	214	eP	Pn	06 03 10.4	+0.1
	51nm,1.5s						
PSAB1	Pilbara Seismi	18.66	214	eP	Pn	06 03 11.0	+0.7
	54nm,1.6s						
PSAB3	Pilbara Seismi	18.66	214	eP	Pn	06 03 10.6	+0.3
	16nm,0.8s						
PSAC3	Pilbara Seismi	18.69	214	eP	Pn	06 03 11.2	+0.5
	52nm,1.6s						
STKA	Stephens Creek	27.50	160	P	P	06 04 39.0	+3.2
	1.1nm,0.4s,baz=325,slow=10,SNR=3.0						
STKA				LR	LR	06 17 44.3	
	comp=Z,70nm,19.3s,baz=21,slow=41						
STKA	Stephens Creek	27.50	160	eP	P	06 04 38.9	+3.2
	10.0nm,1.9s						
SONA0	Songino Array	57.92	341	eP	P	06 08 43.6	+3.1
SONM	Songino Array	57.92	341	P	P	06 08 43.6	+3.1
	0.5nm,0.5s,baz=158,slow=8.5,SNR=2.7						
MK31	Makanchi Array	67.98	326	eP	P	06 09 49.6	+2.5
	1.6nm,0.7s						
MK32	Makanchi Array	67.98	326	eP	P	06 09 49.8	+2.7
MKAR	Makanchi Array	67.98	326	P	P	06 09 49.8	+2.7
	2.0nm,0.4s,baz=113,slow=8.5,SNR=25						
MAKZ	Makanchi	68.16	326	eP	P	06 09 50.6	+2.4
	2.7nm,0.4s						
LPAZ	La Paz	150.86	140	PKPbc	PKPab	06 18 45.9	-2.9
	1.4nm,0.9s,baz=140,slow=7.5,SNR=6.1						

NEIC ***22*** *06:04:51.8±2.1, 40°.36N×126°.42W, h10km, ML3.4(NCEDC), Error ellipse: s-maj=14.3km s-min=8.9km az=261.0*
NCEDC ***22*** *06:04:52.3±0.0, 39°.97N×126°.34W, h4km*
ANF ***22*** *06:04:52.6±1.0, 40°.55N×126°.27W, ML3.5/15, Error ellipse: s-maj=10.0km s-min=5.0km az=46.0*
ISC 22 06:04:49.9±2.4**, 40°.39N**±0°.05×**126°.5W**±0°.1**, h12km, n71, σ2ˢ17**/95**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCC	Jacoby Creek,	1.91	76	ePn	Pn	06 05 22.2	-0.1
JCC				eSn	Sb	06 05 46.5	-2.1
KMRM	Mail Ridge	2.12	94	ePn	Pn	06 05 26.8	+1.5
KMRM				eSn	Sb	06 05 53.0	-1.8
KHMM	Horse Mountain	2.15	76	ePn	Pn	06 05 26.1	+0.4
KHMM				eSn	Sb	06 05 52.9	-2.6
KCPM	Cahto Peak	2.33	107	ePn	Pn	06 05 29.4	+1.2
KCPM				eSn	Sn	06 05 57.6	+0.7
L02E	Cave Junction	2.80	50	P	Pn	06 05 35.1	+0.6
	baz=231,SNR=1000						
L02E				S	Sn	06 06 07.2	-1.0
	baz=231						
O02D	Mt. Diablo Mer	2.83	93	P	Pn	06 05 36.7	+1.6
	baz=275,SNR=510						
O02D				S	Sb	06 06 11.6	-3.5
	baz=275						
M02C	Callahan	2.92	69	P	Pn	06 05 36.9	+0.6
	baz=250,SNR=159						
M02C				S	Sn	06 06 11.5	+0.1
	baz=250						
N02D	Trinity Center	2.93	77	P	Pn	06 05 36.9	+0.5
	baz=259,SNR=114						
N02D				S	Sn	06 06 12.4	+0.9
	baz=259						
KEBM	Edson Butte	2.96	32	ePn	Pn	06 05 36.9	+0.2
HOPS	Hopland Field	2.98	117	ePn	Pn	06 05 37.6	+0.7
HOPS				eSn	Sn	06 06 10.1	-2.5
WDC	Whiskeytown Da	3.01	85	ePn	Pn	06 05 39.5	+2.1
WDC				eSn	Sn	06 06 13.2	-0.1
K02D	Willamette Mer	3.12	42	P	Pn	06 05 39.9	+0.9
	baz=222,SNR=885						
K02D				S	Sn	06 06 14.4	-2.0
	baz=222						
YBH	Yreka Blue Hor	3.15	64	ePn	Pn	06 05 41.1	+1.7
GDXM	Geysers	3.26	118	ePn	Pn	06 05 41.4	+0.6
GDXM				eSn	Sn	06 06 15.9	-3.7
J01E	Myrtle Point	3.36	34	P	Pn	06 05 42.5	+0.3
	baz=214,SNR=814						
J01E				S	Sn	06 06 20.2	-1.8
	baz=214						
HUMO	Hull Mountain	3.45	49	ePn	Pn	06 05 45.1	+1.7
O03E	Paynes Creek	3.58	90	P	Pn	06 05 46.6	+1.3
	baz=272,SNR=10						
O03E				S	Sn	06 06 29.2	+1.7
	baz=272						
MCCM	Marconi Confer	3.58	128	ePn	Pn	06 05 46.4	+1.2
L04D	Klamath Falls	3.64	59	P	Pn	06 05 48.3	+2.2
	baz=240,SNR=203						
M04C	Macdoel	3.77	67	P	Pn	06 05 50.2	+2.1
	baz=249,SNR=44						
ORV	Oroville	3.92	101	ePn	Pn	06 05 51.7	+1.9
ORV				eSn	Sn	06 06 36.5	+0.8
I03D	Drain, OR	4.04	34	P	Pn	06 05 52.0	+0.4
	baz=215,SNR=227						
I03D				S	Sn	06 06 37.6	-1.2
	baz=215						
K04D	Chiloquin, OR	4.19	56	P	Pn	06 05 55.9	+2.1
	baz=239,SNR=11						
I02D	Swisshome	4.20	27	P	Pn	06 05 53.9	+0.3
	baz=208,SNR=50						
J04D	Umpqua Nationa	4.33	47	P	Pn	06 05 58.1	+2.3
	baz=230,SNR=35						
AFDM	Forest Hills D	4.49	107	ePn	Pn	06 05 59.3	+1.5
AFDM				eSn	Sn	06 06 51.0	+1.1
I04A	Tendick Farm,	4.55	40	P	Pn	06 06 00.6	+2.0
	baz=222,SNR=42						
BEKR	Beckworth	4.72	94	ePn	Pn	06 06 04.6	+3.5
COR	Corvallis	4.80	28	ePn	Pn	06 06 03.5	+1.5
J05D	Fort Rock, OR	4.87	52	P	Pn	06 06 05.5	+2.4
	baz=235,SNR=38						
MOD	Modoc Plateau	4.90	70	ePn	Pn	06 06 04.5	+0.9
H04D	Lebanon	4.97	33	P	Pn	06 06 05.5	+1.1
	baz=214,SNR=64						
RUBR	Rubicon Trail	5.06	103	ePn	Pn	06 06 07.2	+1.5
RUBR				eSn	Sn	06 07 03.0	-1.2
CMB	Columbia Colle	5.28	114	ePn	Pn	06 06 11.8	+3.1
H04A	Detroit Lake	5.33	35	ePn	Pn	06 06 10.7	+1.3
PINE	Pine Mountain	5.34	49	ePn	Pn	06 06 12.4	+2.7
SAO	San Andreas Ge	5.35	131	ePn	Pn	06 06 10.2	+0.6
G03D	McMinnville, O	5.37	25	P	Pn	06 06 11.5	+1.7
	baz=207,SNR=7.8						
VCNR	Virginia City	5.37	100	ePn	Pn	06 06 11.7	+1.7
PNTR	Pine Nut	5.46	102	ePn	Pn	06 06 12.6	+1.3
I05D	Terrebonne, OR	5.48	42	P	Pn	06 06 13.1	+1.7
	baz=225,SNR=12						
PAHR	Pah Rah Range	5.49	95	ePn	Pn	06 06 13.8	+2.2
PAHR				eSn	Sn	06 07 16.0	+1.3
YERR	Yerington	5.76	102	ePn	Pn	06 06 17.2	+1.8
YERR				eSn	Sn	06 07 19.9	-1.5
WAKR	Walker	5.77	107	ePn	Pn	06 06 16.9	+1.4
WAKR				eSn	Sn	06 07 20.4	-1.2
G05D	Wamic, OR	6.16	36	P	Pn	06 06 22.6	+2.0
	baz=219,SNR=16						
WVOR	Wild Horse Val	6.24	68	ePn	Pn	06 06 22.8	+0.9
I07A	Izee	6.36	52	ePn	Pn	06 06 27.3	+3.8
MDPB	Devils Postpil	6.39	113	ePn	Pn	06 06 28.4	+4.4
RYN	Ryan	6.40	103	ePn	Pn	06 06 28.6	+4.4
OMMB	Old Mammoth Mi	6.45	113	ePn	Pn	06 06 29.7	+4.7
OMMB				eSn	Sn	06 07 35.3	-3.4
KVN	Kaiserville	6.60	99	ePn	Pn	06 06 29.1	+2.2
KVN				eSn	Sn	06 07 40.8	-1.3
J08A	Circle Bar Ran	6.67	61	ePn	Pn	06 06 29.9	+2.1
PAGB	Antelope Grade	6.77	131	ePn	Pn	06 06 30.2	+1.1
E04D	Cinebar	6.79	23	P	Pn	06 06 31.9	+2.6
	baz=206,SNR=26						
LON	Longmire	7.20	27	ePn	Pn	06 06 37.5	+2.4
LON				eSn	Sb	06 08 07.4	-13
G08A	Pilot Rock	7.38	46	ePn	Pn	06 06 40.5	+2.9
G08A				eSn	Sn	06 08 08.2	+6.9
D05A	Enumclaw	7.53	24	ePn	Pn	06 06 42.7	+3.2
PKM	Mcpherson Peak	7.62	134	P	Pn	06 06 42.3	+1.4
	baz=318						
HAWA	Hanford	7.84	38	ePn	Pn	06 06 46.6	+2.8
ISA	Isabella, Lake	7.88	124	ePn	Pn	06 06 47.1	+2.7
ISA				eSn	Sn	06 08 10.1	-3.5
ISA	Isabella, Lake	7.88	124	P	Pn	06 06 47.2	+2.7
	baz=309						
LTY	Liberty	8.04	30	ePn	Pn	06 06 49.4	+2.8
BMO	Blue Mountains	8.10	54	ePn	Pn	06 06 49.2	+1.8
BMO				eSn	Sn	06 08 25.7	+6.8
E08A	Dider Farm, El	8.14	39	ePn	Pn	06 06 50.2	+2.4
MPMC	Manual Prospec	8.29	119	P	Pn	06 06 53.6	+3.5
	baz=304						
F10A	Beach Ranch, E	8.76	47	ePn	Pn	06 07 00.2	+3.8
MWC	Mount Wilson	9.10	130	ePn	Pn	06 07 03.2	+1.9
GSC	Goldstone, Bar	9.18	121	ePn	Pn	06 07 05.3	+3.1
B08A	Colville Reser	9.46	30	ePn	Pn	06 07 08.5	+2.5
HLID	Hailey	9.53	67	ePn	Pn	06 07 10.3	+3.2
MCMT	McKenzie Canyo	10.98	62	ePn	Pn	06 07 28.6	+1.7
MCMT				eSn	Sn	06 09 36.5	+6.7

*JMA **22** 06:08:57.6±0.1, 23°.99N×122°.49E, h22km, M1.8*
*TAP **22** 06:08:58.8, 24°.26N×122°.60E, h57km±1km, ML2.8, C*
*ISCJB **22** 06:08:59.1±0.7, 24°.10N±0°.06×122°.53E±0°.02, h28km±5km, Error ellipse: s-maj=10.0km s-min=3.0km az=177.6*
ISC 22 06:08:58.5±1.2, **24°.07N**±0°.05×**122°.51E**±0°.02, **h25**km±13km, **n23,** σ**0s.57**/40, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.55	46	P	Pb	06 09 09.5	+0.1
JYNG				eS	Sb	06 09 17.3	+0.4
EOS1	EOS1	0.59	324	P	Pb	06 09 10.8	+0.7
	baz=313						
EOS1				S	Sn	06 09 20.5	+0.5
	baz=313						
YOJ	Yonaguni jima	0.60	50	P	Pb	06 09 10.3	0.0
	baz=55						
YOJ				S	Sb	06 09 18.1	-0.2
	baz=55						
YOJ	Yonaguni jima	0.60	50	P	Pb	06 09 10.4	+0.1
YOJ				eS	Sb	06 09 18.7	+0.3
NANB	Nanao	0.78	297	eP	Pb	06 09 13.1	-0.2
	baz=282						
NANB				eS	Sn	06 09 25.4	+0.7
	baz=282						
ENA	Nanau	0.79	297	eP	Pb	06 09 13.2	-0.3
	baz=282						
ENA				eS	Sn	06 09 25.6	+0.7
	baz=282						
TWC	Suao	0.81	311	P	Pb	06 09 13.6	-0.2
	baz=290						
TWC				S	Sb	06 09 24.9	+0.6
	baz=290						
NACB	Ninganchiao	0.84	277	eP	Pb	06 09 13.4	-1.0
	baz=264						
NACB				eS	Sn	06 09 27.7	+1.3
	baz=264						
TWE	Neicheng	1.00	310	eS	Sb	06 09 29.7	-0.2
	baz=306						
ENTT	Nioudou	1.03	303	P	Pb	06 09 17.8	+0.1
	baz=282						
ENTT				eS	Sn	06 09 31.4	+0.4
	baz=282						
NDT	Datong Townshi	1.05	300	eP	Pb	06 09 18.2	+0.2
	baz=279						
NDT				eS	Sn	06 09 32.1	+0.5
	baz=279						
IRIF	Iriomote-Funau	1.14	77	P	Pb	06 09 19.1	-0.4
IRIF				eS	Sb	06 09 34.2	+0.3
WHF	Hehuan Shan	1.14	274	eP	Pn	06 09 18.4	-0.9
	baz=255						
HGSD	Ruisui	1.15	240	eS	Sn	06 09 35.3	+1.3
	baz=234						
HATJ	Hateruma jima	1.18	91	P	Pn	06 09 19.0	-0.4
HATJ				eS	Sn	06 09 34.8	+0.1
YHNB	Yeheng	1.19	300	eP	Pb	06 09 20.0	-0.5
	baz=279						
YHNB				eS	Sn	06 09 34.9	-0.2
	baz=279						
NSK	Sanguang	1.21	300	P	Pb	06 09 20.2	-0.5
	baz=280						
CHGB	Renai	1.22	270	eP	Pn	06 09 19.2	-1.0
	baz=252						
CHGB				eS	Sn	06 09 36.2	+0.2
	baz=252						
JKRS	Kuro-shima	1.38	83	P	Pb	06 09 23.3	-0.2
JKRS				eS	Sb	06 09 41.3	+0.6
SSLB	Suanglung	1.45	259	eP	Pb	06 09 24.7	-0.2
	baz=244						
JIJ	Ishigaki jima	1.52	79	P	Pn	06 09 23.9	-0.1
JIJ				eS	Sn	06 09 42.9	-0.1
TYC	Yuchr	1.52	264	eP	Pb	06 09 25.8	-0.2
	baz=249						
WHYT	Xinyi Township	1.56	256	eP	Pb	06 09 27.8	+1.0
	baz=244						
WHYT				eS	Sb	06 09 46.4	+0.3
	baz=244						

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*ISCJB **22** 06:10:29.8±0.7, 21°.03S±0°.10×177°.8W±0°.1, h495km, mb3.6/10, Error ellipse: s-maj=18.6km s-min=11.1km az=24.4*
*IDC **22** 06:10:30.8±4.0, 20°.93S×177°.81W, h495km±46km, mb3.3/10, mb1 3.5/12, mb1mx3.4/23, mbtmp4.2/12, Error ellipse: s-maj=29.4km s-min=20.7km az=166.0*
ISC 22 06:10:30.3±0.8, **21°.1S**±0°.1×**177°.8W**±0°.1, **h495**km, **n15,** σ**1s.28**/16, **mb3.7**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.71	263	P	P	06 13 38.0	+0.2
	0.8nm,0.3s,baz=87,slow=22,SNR=8.1						
URZ	Urewera	17.65	193	P	P	06 14 08.8	+1.3
	1.1nm,0.3s,baz=350,slow=4.7,SNR=10						
URZ				S	S	06 17 01.6	-3.4
	0.1nm,0.3s,baz=26,slow=17,SNR=3.1						
STKA	Stephens Creek	37.72	245	P	P	06 17 03.6	+0.5
	1.3nm,0.5s,baz=87,slow=9.3,SNR=2.9						
ASAR	Alice Springs	44.59	257	P	P	06 17 59.0	+1.1
	2.3nm,0.5s,baz=94,slow=7.8,SNR=35						
ASAR				PcP	PcP	06 19 31.1	+0.6
	0.2nm,0.5s,baz=100,slow=4.1,SNR=4.0						
WRA	Warramunga Arr	44.73	263	P	P	06 17 59.5	+0.4
	1.0nm,0.3s,baz=97,slow=7.2,SNR=24						
MJAR	Matsushiro Arr	70.83	324	P	P	06 20 55.0	-1.6
	1.4nm,0.3s,baz=160,slow=6.1,SNR=5.2						
PETK	Petropavlovsk-	76.91	345	P	P	06 21 30.3	-0.5
	1.3nm,0.6s,baz=116,slow=6.8,SNR=4.3						
USRK	Ussuriysk Ar.	79.59	326	P	P	06 21 45.6	+0.3
	1.5nm,0.8s,baz=127,slow=9.6,SNR=3.5						
NVAR	Mina Array Bea	81.32	43	P	P	06 21 54.8	0.0
	0.8nm,0.8s,baz=224,slow=8.7,SNR=6.3						
TXAR	Lajitas Array	87.20	57	P	P	06 22 25.3	+1.4
	0.5nm,0.7s,baz=221,slow=6.9,SNR=7.2						
ILAR	Eielson Array	88.86	13	P	P	06 22 29.8	-0.9
	0.5nm,0.4s,baz=218,slow=5.3,SNR=8.2						
PDAR	Pinedale Array	89.26	43	P	P	06 22 33.7	+0.4
	0.5nm,0.5s,baz=208,slow=2.9,SNR=7.9						
AKASG	Malin Array Be	143.65	331	PKP	PKPab	06 29 05.9	-0.9
	1.1nm,0.3s,baz=45,slow=4.4,SNR=11						
BRTR	Keskin Array B	147.41	312	PKPbc	PKPbc	06 29 17.8	-0.6
	0.6nm,0.6s,baz=135,slow=3.2,SNR=3.3						
GERES	GERESS Array B	150.84	344	PKPbc	PKPbc	06 29 26.2	-0.3
	0.7nm,0.5s,baz=27,slow=6.3,SNR=5.2						

SJA 22 06:11:29.0±0.6, **28°.72S**×**67°.35W**, **h147**km±3km, **ML3.2, MW3.7, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.75	268	i P	Pn	06 11 52.3	+0.6
VCA				i S	Sn	06 12 09.6	+0.6
VCA				IAML		06 12 11.3	
	comp=Z,1µm,0.4s						
AGUA	GUANDACOL	1.26	232	i P	Pn	06 11 56.7	+0.7
CYA	Choya	1.39	79	i P	Pn	06 11 58.1	+0.9
CYA				i S	Sn	06 12 18.8	0.0
CYA				IAML		06 12 19.3	
	comp=Z,104nm,0.5s						
APLL	PUNTA DE LOS L	1.82	157	i P	Pn	06 12 03.0	+1.1
APLL				i S	Sn	06 12 27.6	+0.4
AROD	Rodeo	2.35	232	i P	Pn	06 12 09.8	+1.4
ACCO	Cerro Coronel	2.39	218	i P	Pn	06 12 10.1	+1.2
AMOG	MOGNA	2.43	204	i P	Pn	06 12 10.0	+0.9
AHML	Horco Molle	2.63	43	i P	Pn	06 12 12.5	+0.9
AHML				IAML		06 12 12.6	
	comp=Z,38nm,0.2s						
RTCV	Cerro Valdivia	3.30	198	i P	Pn	06 12 20.9	+0.8
RTLS	Leoncito	3.50	208	i P	Pn	06 12 24.1	+1.2
RTLS				IAML		06 12 27.9	
	comp=Z,19nm,0.3s						
MRA	San Martin	3.95	160	i P	Pn	06 12 29.8	+1.3
MRA				IAML		06 13 15.3	
	comp=Z,48nm,0.4s						

IDC 22 06:16:59.3±2.7, **6°.07S**×**129°.23E**, **h343**km±25km, **mb2.8**/1, **mb1 3.8**/4, **mb1mx3.2**/22, **mbtmp4.4**/4, **Error ellipse: s-maj=39.4km s-min=13.5km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	11.97	73	P	Pn	06 19 40.0	-1.0
	0.9nm,0.3s,baz=237,slow=5.3,SNR=4.1						
WRA	Warramunga Arr	14.66	161	P	Pn	06 20 11.6	-0.9
	5.0nm,0.3s,baz=340,slow=11,SNR=167						
WRA				S	S	06 22 48.2	-1.1
	0.6nm,0.3s,baz=336,slow=21,SNR=4.2						
ASAR	Alice Springs	18.07	166	P	P	06 20 48.8	+1.4
	2.8nm,0.3s,baz=346,slow=12,SNR=120						
ASAR				S	S	06 23 56.5	-0.1
	0.3nm,0.3s,baz=348,slow=21,SNR=19						
ASAR				ScP	ScP	06 28 07.6	+0.9
	0.1nm,0.3s,baz=337,slow=4.0,SNR=3.1						
MKAR	Makanchi Array	67.03	327	P	P	06 27 15.9	-0.5
	0.2nm,0.4s,baz=124,slow=7.9,SNR=3.1						
LPAZ	La Paz	151.92	143	PKPbc	PKPbc	06 36 15.8	0.0
	1.8nm,1.2s,baz=240,slow=8.1,SNR=3.6						

IDC 22 06:30:40.0±499.0, **28°.61S**×**119°.44E**, **h0**km, **Error ellipse: s-maj=256.7km s-min=129.5km az=10.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I04AU	SHANNON INFRAS	6.52	203	i		07 10 20.0	
	baz=25,slow=326,SNR=2.9						
I05AU	HOBART INFRASO	26.68	129	i		09 16 40.0	
	baz=294,slow=366,SNR=2.4						
I22FR	PORTLAGUERRE I	43.08	93	i		10 50 50.0	
	baz=247,slow=375,SNR=0.3						

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*IDC **22** 06:43:06.5±1.4, 41°.59S×174°.25E, h0km, mb4.2/3, mb1 4.3/5, mb1mx4.0/23, mbtmp4.1/5, ML3.7/2, MS3.7/3, Ms1 3.6/3, ms1mx3.3/25, Error ellipse: s-maj=40.9km s-min=24.5km az=138.0*
*ISCJB **22** 06:43:09.6±0.3, 41°.74S±0°.02×174°.23E±0°.03, h21km±2km, mb4.5/12, MS3.7/2, Error ellipse: s-maj=4.4km s-min=2.0km az=44.0*
*WEL **22** 06:43:09.3, 42°S±1°×174°.2E±1°.0, h15km±2km, M4.5/10, ML4.8/6, MLv4.5/10, Error ellipse: s-maj=0.0km s-min=0.0km az=154.1*
*NEIC **22** 06:43:09.0±0.0, 41°.65S×174°.22E, h15km, mb4.6/9, ML4.5(WEL), After WEL.*
ISC 22 06:43:09.4±0.8, **41°.67S**±0°.02×**174°.24E**±0°.02, **h16**km±5km, **n169,** σ**1s.45**/184, **mb4.3**/12, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.08	195	P	Pg	06 43 12.5	-0.2
CMWZ				S	Sg	06 43 15.8	+1.0
BSWZ	Blackbirch Sta	0.28	261	P	Pb	06 43 15.5	-0.6
BSWZ				S	Sb	06 43 19.9	-0.6
TUWZ	Tuamarina	0.33	318	P	Pb	06 43 16.2	-0.8
TUWZ				S	Sb	06 43 21.1	-0.9
TCW	Tory Channel	0.46	3	P	Pg	06 43 18.4	-0.3
TCW				S	Sg	06 43 25.0	0.0
SNZO	South Karori	0.50	44	ePg	Pb	06 43 19.8	-0.1
SNZO				eSg	Sb	06 43 27.7	+0.7
BHW	Baring Head	0.54	61	P	Pb	06 43 20.8	+0.2
WEL	Wellington	0.56	46	P	Pb	06 43 20.7	-0.1
PLWZ	Palliser	0.77	82	P	Pn	06 43 25.5	-0.1
NNZ	Nelson	0.79	305	P	Pg	06 43 24.4	-0.5
MSWZ	Moikau Station	0.80	72	P	Pb	06 43 25.7	+0.7
CAW	Cannon Point	0.84	48	P	Pg	06 43 25.6	-0.1
DUWZ	D'Urville Isla	0.90	344	P	Pg	06 43 26.3	-0.7
KHZ	Kahutara	0.91	215	ePg	Pn	06 43 28.1	+0.6
KHZ				eSg	Sb	06 43 38.5	-0.1
KHZ	Kahutara	0.91	215	P	Pn	06 43 28.1	+0.6
PAWZ	Paruwai Farm	0.94	72	P	Pn	06 43 28.3	+0.3
THZ	Tophouse	1.00	265	ePn	Pb	06 43 28.5	0.0
THZ				eSn	Sg	06 43 40.6	-1.4
THZ	Tophouse	1.00	265	P	Pb	06 43 28.5	0.0
MTW	Mount Morrison	1.08	62	P	Pn	06 43 30.4	+0.5
OGWZ	Otaki Gorge	1.11	40	P	Pb	06 43 30.1	-0.1
TRWZ	Traveller	1.12	76	P	Pg	06 43 30.8	-0.3
HOWZ	Holdsworth Sta	1.23	51	P	Pn	06 43 32.6	+0.5
TMWZ	Te Maipa	1.36	66	P	Pn	06 43 34.1	+0.3
MRZ	Mangatainoka R	1.43	45	P	Pn	06 43 35.5	+0.7
TIWZ	Tintock	1.53	55	P	Pb	06 43 37.8	+0.3
QRZ	Quartz Range	1.54	303	ePn	Pb	06 43 37.4	-0.3
QRZ				eSn	Sn	06 43 54.0	-2.0
QRZ	Quartz Range	1.54	303	P	Pb	06 43 37.5	-0.1
GVZ	Greta Valley S	1.57	214	P	Pn	06 43 37.3	+0.6
CPWZ	Castlepoint	1.66	63	P	Pb	06 43 39.3	-0.4
OHWZ	Ohakea	1.68	29	P	Pb	06 43 40.6	+0.7
PRWZ	Pori Road	1.72	50	P	Pn	06 43 39.3	+0.5
POWZ	Post Office Ro	1.73	43	P	Pn	06 43 39.5	+0.7
BFZ	Birch Farm	1.81	57	ePn	Pn	06 43 39.6	-0.3
BFZ				eSn	Sn	06 44 02.5	-0.1
BFZ	Birch Farm	1.81	57	P	Pn	06 43 39.6	-0.3
LTZ	Lake Taylor	1.83	232	ePn	Pn	06 43 41.3	+1.0
LTZ				eSn	Sn	06 44 03.5	+0.3
LTZ	Lake Taylor	1.83	232	P	Pn	06 43 41.3	+1.0
AMCZ	Amberley	1.91	218	P	Pn	06 43 41.8	+0.5
WAZ	Wanganui	2.00	17	P	Pb	06 43 45.5	+0.1
DVHZ	Dannevirke	2.00	47	P	Pn	06 43 42.5	-0.1
TSZ	Takapari Road	2.08	40	P	Pn	06 43 44.1	+0.5
ANWZ	Angora Road	2.08	55	P	Pn	06 43 43.8	+0.1
LREZ	Lake Rotokare	2.21	3	P	Pb	06 43 49.4	+0.3
OKCZ	Okains Bay	2.23	203	P	Pn	06 43 45.3	-0.4
CRLZ	Canterbury Las	2.24	212	ePn	Pn	06 43 45.3	-0.6
CRLZ				eSn	Sn	06 44 13.4	+0.2
CRLZ	Canterbury Las	2.24	212	P	Pn	06 43 45.7	-0.2
NMEZ	Namu Road	2.28	353	P	Pb	06 43 49.9	-0.2
PRHZ	Porangahau	2.29	53	P	Pn	06 43 47.5	+0.9
PNHZ	Pukenui	2.30	41	P	Pn	06 43 47.0	+0.2
WPHZ	Waipukurau	2.32	47	P	Pn	06 43 47.2	+0.3
OXZ	Oxford	2.32	224	ePn	Pn	06 43 46.5	-0.5
OXZ				eSn	Sn	06 44 14.9	-0.2
OXZ	Oxford	2.32	224	P	Pn	06 43 46.6	-0.3
INZ	Inchbonnie	2.33	242	P	Pn	06 43 48.5	+1.4
PREZ	Palmer Road	2.33	358	P	Pb	06 43 50.4	-0.6
MQZ	McQueen's Vall	2.34	209	ePn	Pn	06 43 46.2	-1.1
MQZ				eSn	Sn	06 44 15.5	-0.2
MQZ	McQueen's Vall	2.34	209	P	Pn	06 43 46.2	-1.1
KHEZ	Kahui Hut	2.38	356	P	Pb	06 43 51.0	-1.0
AKCZ	Akaroa Harbour	2.41	204	P	Pn	06 43 47.8	-0.4
NBEZ	Newall Road No	2.42	353	P	Pb	06 43 50.8	-1.8
MTVZ	Mangateitei	2.47	23	P	Pb	06 43 52.4	-1.1
DREZ	Durham Road	2.48	359	P	Pb	06 43 52.7	-1.0
PKE	Pukeiti	2.48	355	P	Pn	06 43 51.6	+2.3
PKVZ	Pokaka	2.53	20	P	Pb	06 43 52.6	-1.9
MOVZ	Moawhango	2.54	27	P	Pn	06 43 51.4	+1.3
VRZ	Vera Road	2.58	9	P	Pb	06 43 54.0	-1.3
PXZ	Pawanui	2.58	51	P	Pn	06 43 49.8	-0.7
BHHZ	Black Hill Sta	2.59	33	P	Pn	06 43 51.8	+1.1
KRHZ	Kereru	2.60	39	P	Pn	06 43 50.8	0.0
MHEZ	Mangahewa	2.60	1	P	Pb	06 43 55.3	-0.3
DRZ	Dome Shelter	2.60	23	P	Pb	06 43 55.8	-0.1
WHVZ	Whangaehu Hut	2.60	24	P	Pn	06 43 53.5	+2.5
FWVZ	Far West T-bar	2.62	23	P	Pn	06 43 53.6	+2.3
TUVZ	Tukino	2.63	25	P	Pn	06 43 53.6	+2.1
NGZ	Ngauruhoe	2.70	23	P	Pn	06 43 54.8	+2.4
KAHZ	Kahuranaki	2.75	48	P	Pn	06 43 52.6	-0.3
WTVZ	West Tongariro	2.76	22	P	Pn	06 43 55.5	+2.5
TWVZ	Taurewa	2.76	20	P	Pb	06 43 56.2	-2.2
KRVZ	Karewarewa	2.79	23	P	Pn	06 43 56.2	+2.6
KWHZ	Kaweka Forest	2.80	37	P	Pb	06 43 57.0	-2.0
MCHZ	McNeill Hill	2.91	41	P	Pn	06 43 55.0	-0.1
KATZ	Kakaramea	2.92	23	P	Pb	06 43 58.9	-2.2
WVZ	Waitaha Valley	2.95	241	P	Pn	06 43 56.8	+1.2
CKHZ	Cape Kidnapper	2.95	48	P	Pb	06 44 01.0	-0.7
RITZ	Rihia Road	2.96	25	P	Pb	06 44 00.9	-1.0
BKZ	Black Stump Fm	3.04	35	ePn	Pn	06 43 57.2	+0.3
BKZ	Black Stump Fm	3.04	35	P	Pn	06 43 57.2	+0.3
RATZ	Rangitukua	3.04	23	P	Pb	06 44 03.0	-0.2
RPZ	Rata Peaks	3.11	228	Pn	Pn	06 43 57.7	-0.2
	15nm,0.3s,baz=62,slow=3.3,SNR=24						
RPZ				Sn	Sn	06 44 32.7	-2.0
	26nm,0.3s,baz=320,slow=22,SNR=12						
RPZ	Rata Peaks	3.11	228	P	Pn	06 43 58.0	+0.1
HATZ	Hinemaiaia	3.12	28	P	Pb	06 44 05.1	+0.6
WATZ	Wairara	3.18	22	P	Pb	06 44 04.7	-0.8
HIZ	Hauiti	3.19	9	ePn	Pn	06 44 02.4	+3.5
HIZ	Hauiti	3.19	9	P	Pn	06 44 01.9	+2.9
ARHZ	Aropaoanui	3.20	42	P	Pn	06 43 59.8	+0.8
MRHZ	Matea Rd	3.29	31	P	Pn	06 44 00.7	+0.3
MRHZ				P	Pb	06 44 08.3	+0.9
MTHZ	Maungataniwha	3.45	36	P	Pn	06 44 02.8	+0.3
WHHZ	Waihua	3.46	42	P	Pn	06 44 06.4	+3.8
WPRZ	Whakapapatarin	3.48	26	P	Pb	06 44 10.9	+0.2
TLZ	Tolley Road	3.49	17	P	Pn	06 44 05.3	+2.3
ALRZ	Allen Road	3.50	28	P	Pb	06 44 11.5	+0.5
RAHZ	Arahi	3.51	39	P	Pb	06 44 09.0	-2.1
PRRZ	Plateau Road	3.58	28	P	Pb	06 44 11.2	-1.1
KNZ	Kokohu	3.73	46	P	Pn	06 44 07.1	+0.8
MUGZ	Murupara	3.74	32	P	Pn	06 44 07.6	+1.2
SNGZ	Shannon Statio	3.74	40	P	Pn	06 44 07.8	+1.4
FOZ	Fox Glacier	3.76	239	ePn	Pn	06 44 09.1	+2.4
FOZ				eSn	Sn	06 44 50.0	-0.5
FOZ	Fox Glacier	3.76	239	P	Pn	06 44 09.1	+2.4
RRRZ	Republican Roa	3.76	28	P	Pb	06 44 14.3	-1.1
MHGZ	Mahia Peninsul	3.77	49	P	Pn	06 44 10.7	+3.9
PRGZ	Paritu Road	3.91	47	P	Pn	06 44 09.5	+0.6
RIGZ	Rimuhau	4.01	43	P	Pn	06 44 09.8	-0.4
LBZ	Lake Benmore	4.02	226	ePn	Pn	06 44 10.9	+0.6
LBZ				eSn	Sn	06 44 56.7	-0.4
LBZ	Lake Benmore	4.02	226	P	Pn	06 44 11.7	+1.3
KMRZ	Kaimai	4.04	19	P	Pn	06 44 15.7	+5.1
TOZ	Tahuroa Road	4.06	14	P	Pn	06 44 13.0	+2.2
URZ	Urewera	4.06	34	Pn	Pn	06 44 09.7	-1.2
	2.4nm,0.3s,baz=216,slow=5.7,SNR=12						
URZ				Sn	Sn	06 44 55.9	-2.2
	16nm,0.3s,baz=157,slow=15,SNR=4.1						
URZ				LR	LR	06 46 06.2	
	comp=Z,647nm,18.3s,baz=203,slow=45						
URZ	Urewera	4.06	34	ePn	Pn	06 44 11.4	+0.5
URZ	Urewera	4.06	34	P	Pn	06 44 10.5	-0.4
TGRZ	Tauranga	4.24	22	P	Pn	06 44 18.2	+4.9
ODZ	Otahua Downs	4.27	217	ePn	Pn	06 44 13.2	-0.5
ODZ				eSn	Sn	06 45 00.9	-2.3
ODZ	Otahua Downs	4.27	217	P	Pn	06 44 13.0	-0.7
TWGZ	Tauwhareparae	4.52	41	P	Pn	06 44 17.6	+0.3
RUGZ	Raukumara Rang	4.55	37	P	Pn	06 44 18.2	+0.4
KBAZ	Karaka Road Bo	4.60	6	P	Pn	06 44 22.6	+4.3
AWAZ	Awhitu Peninsu	4.62	4	P	Pn	06 44 21.1	+2.6
MKAZ	Moumakai	4.62	9	P	Pn	06 44 20.7	+2.2
JCZ	Jackson Bay	4.67	237	P	Pn	06 44 21.5	+2.2
PUZ	Puketiti	4.74	42	P	Pn	06 44 22.5	+2.2
WTAZ	Waiatarua	4.74	3	P	Pn	06 44 24.0	+3.7
ETAZ	East Tamaki Re	4.74	7	P	Pn	06 44 23.5	+3.3
HAZ	Te Kaha	4.77	36	P	Pn	06 44 20.8	+0.1
PKGZ	Pakihiroa	4.80	39	P	Pn	06 44 20.6	-0.5
WIAZ	Waiheke Island	4.92	8	P	Pn	06 44 25.6	+2.8
MBAZ	Motutapu North	4.92	6	P	Pn	06 44 26.5	+3.8
WKZ	Wanaka	4.95	229	ePn	Pn	06 44 23.0	-0.1
WKZ	Wanaka	4.95	229	P	Pn	06 44 27.8	+4.7
WMGZ	Waiomatatini S	5.02	41	P	Pn	06 44 27.9	+3.9
EAZ	Earnscleugh	5.05	224	P	Pn	06 44 25.5	+1.0
KUZ	Kuaotunu	5.05	14	P	Pn	06 44 28.3	+3.7
MXZ	Matakaoa Point	5.17	39	ePn	Pn	06 44 25.3	-0.8
MXZ				eSn	Sn	06 45 25.6	+0.2
MXZ	Matakaoa Point	5.17	39	P	Pn	06 44 29.5	+3.4
TUZ	Tuapeka	5.42	216	P	Pn	06 44 29.6	0.0
WCZ	Waipu Caves	5.73	1	P	Pn	06 44 36.5	+2.7
MLZ	Mavora Lakes	5.78	228	ePn	Pn	06 44 35.4	+0.8
MLZ	Mavora Lakes	5.78	228	P	Pn	06 44 41.5	+6.9
SYZ	Scrubby Hill	6.09	215	P	Pn	06 44 39.2	+0.5
WHZ	Wether Hill Ro	6.21	225	ePn	Pn	06 44 40.9	+0.5
WHZ				ePg	Pg	06 45 07.6	-0.6
DCZ	Deep Cove	6.39	231	ePn	Pn	06 44 44.2	+1.3
OUZ	Omahuta	6.46	355	ePn	Pn	06 44 45.3	+1.4
OUZ	Omahuta	6.46	355	P	Pn	06 44 46.7	+2.8
APZ	The Paps	6.83	219	P	Pn	06 44 49.8	+0.8
CTZ	Chatham Island	7.04	110	P	Pn	06 44 51.9	+0.1
STKA	Stephens Creek	27.77	280	LR	LR	06 58 31.5	
	comp=Z,74nm,20.0s,baz=201,slow=33						
AS31	Alice Springs	38.00	285	eP	P	06 50 27.6	+0.7
	1.2nm,0.4s						
ASAR	Alice Springs	38.00	285	P	P	06 50 26.2	-0.6
	2.0nm,0.5s,baz=126,slow=7.0,SNR=27						
WC3	Warramunga Arr	40.04	290	eP	P	06 50 42.9	-0.9
	4.6nm,0.8s						
WB2	Warramunga Arr	40.06	290	eP	P	06 50 43.2	-0.8
	5.0nm,0.6s						
WR1	Warramunga Arr	40.07	290	eP	P	06 50 43.3	-0.8
WRA	Warramunga Arr	40.07	290	P	P	06 50 43.3	-0.8
	3.6nm,0.7s,baz=124,slow=8.1,SNR=12						
QSPA	South Pole Qui	48.45	180	eP	P	06 51 51.6	+0.7
	5.8nm,1.0s						
PSAC2	Pilbara Seismi	49.57	276	eP	P	06 51 57.7	-2.1
	30nm,1.4s						
PSAB3	Pilbara Seismi	49.58	276	eP	P	06 51 58.0	-1.9
	31nm,1.4s						
PSA00	Pilbara Seismi	49.60	276	eP	P	06 51 59.1	-0.9
	16nm,1.1s						
PSAB1	Pilbara Seismi	49.62	276	eP	P	06 52 01.1	+0.9
	30nm,1.4s						
DAV	Davao City (W)	65.79	305	LR	LR	07 21 40.5	
	comp=Z,163nm,20.3s,baz=87,slow=35						
SNAA	Sanae	66.94	181	eP	P	06 54 02.2	+1.5
	2.1nm,1.0s						
KSRS	Korea Array	89.39	325	P	P	06 56 03.9	-1.0
	0.5nm,0.5s,baz=158,slow=5.1,SNR=2.9						
ARA0	ARCESS Array S	147.70	340	ePKPbc	PKPdf	07 02 51.2	+2.0
ARCES	ARCESS Array B	147.70	340	PKPbc	PKPdf	07 02 51.2	+2.0
	5.0nm,1.0s,baz=40,slow=1.4,SNR=5.4						
TORD	Torodi Ar. Bea	150.85	195	PKPbc	PKPbc	07 03 01.1	-0.4
	0.9nm,0.5s,baz=148,slow=2.1,SNR=17						
TOA1	Torodi Ar. Sit	150.85	195	ePKPbc	PKPbc	07 03 01.1	-0.4

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*IDC **22** 06:45:56.4±1.7, 41°.53S×174°.18E, h0km, mb3.8/2, mb1 4.0/4, mb1mx3.8/24, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=43.8km s-min=25.8km az=137.0*
*WEL **22** 06:45:57.6, 42°S±1°×17°4E±°, h5km±3km, M4.0/13, ML4.3/13, MLv4.0/13, Error ellipse: s-maj=0.0km s-min=0.0km az=129.7*
*NEIC **22** 06:45:57.0±0.0, 41°.62S×174°.24E, h5km, mb4.3/5, ML4.0(WEL), After WEL.*
*ISCJB **22** 06:45:58.3±0.5, 41°.66S±0°.03×174°.18E±0°.03, h15km±3km, mb4.1/6, Error ellipse: s-maj=5.2km s-min=2.5km az=140.0*
ISC 22 06:45:58.5±0.9, **41°.65S**±0°.02×**174°.20E**±0°.02, **h13**km±6km, **n91,** σ**1s.13**/108, **mb4.0**/6, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.10	174	P	Pg	06 46 01.1	-0.5
BSWZ	Blackbirch Sta	0.25	255	P	Pg	06 46 04.0	+0.2
TUWZ	Tuamarina	0.29	319	P	Pg	06 46 04.6	+0.1
TCW	Tory Channel	0.44	7	P	Pg	06 46 06.8	-0.5
SNZO	South Karori	0.51	48	ePg	Pg	06 46 07.9	-0.5
SNZO				eSg	Sg	06 46 15.8	+0.6
BHW	Baring Head	0.56	65	P	Pg	06 46 08.9	-0.5
BHW				S	Sg	06 46 17.6	+0.8
WEL	Wellington	0.56	50	P	Pg	06 46 08.9	-0.6
WEL				S	Sg	06 46 17.4	+0.5
NNZ	Nelson	0.75	305	P	Pg	06 46 12.8	-0.2
PLWZ	Palliser	0.79	85	P	Pg	06 46 13.7	-0.2
MSWZ	Moikau Station	0.82	74	P	Pg	06 46 13.9	-0.5
CAW	Cannon Point	0.85	51	P	Pg	06 46 13.9	-0.9
DUWZ	D'Urville Isla	0.87	346	P	Pn	06 46 16.3	-0.2
KHZ	Kahutara	0.91	213	ePg	Pg	06 46 16.5	+0.5
KHZ				eSg	Sg	06 46 27.5	-0.5
KHZ	Kahutara	0.91	213	P	Pb	06 46 16.9	+0.8
KHZ				S	Sn	06 46 31.6	+1.7
PAWZ	Paruwai Farm	0.96	74	P	Pb	06 46 16.8	-0.1
THZ	Tophouse	0.98	263	ePg	Pb	06 46 17.1	-0.1
THZ				eSg	Sb	06 46 30.1	0.0
THZ	Tophouse	0.98	263	P	Pb	06 46 17.2	0.0
MTW	Mount Morrison	1.09	64	P	Pb	06 46 19.2	-0.1
OGWZ	Otaki Gorge	1.11	42	P	Pb	06 46 18.5	-0.9
TRWZ	Traveller	1.14	78	P	Pb	06 46 20.3	+0.3
HOWZ	Holdsworth Sta	1.24	53	P	Pn	06 46 21.8	+0.2
TMWZ	Te Maipa	1.38	67	P	Pg	06 46 26.4	+1.4
MRZ	Mangatainoka R	1.44	47	P	Pn	06 46 23.8	-0.3
QRZ	Quartz Range	1.51	303	ePn	Pn	06 46 25.4	+0.3
QRZ				eSn	Sn	06 46 44.1	-0.4
QRZ	Quartz Range	1.51	303	P	Pb	06 46 26.6	+0.3
TIWZ	Tintock	1.54	56	P	Pb	06 46 27.7	+0.8
GVZ	Greta Valley S	1.58	213	P	Pb	06 46 27.4	-0.1
CPWZ	Castlepoint	1.68	65	P	Pg	06 46 32.9	+2.2
POWZ	Post Office Ro	1.73	44	P	Pg	06 46 34.0	+2.3
PRWZ	Pori Road	1.73	51	P	Pn	06 46 29.2	+1.0
DSZ	Denniston Nort	1.80	266	P	Pb	06 46 31.0	-0.2
BFZ	Birch Farm	1.82	59	ePn	Pn	06 46 28.6	-0.9
LTZ	Lake Taylor	1.83	231	ePn	Pn	06 46 29.1	-0.4
LTZ				eSn	Sn	06 46 52.0	-0.5
LTZ	Lake Taylor	1.83	231	P	Pn	06 46 30.2	+0.7
AMCZ	Amberley	1.91	216	P	Pg	06 46 36.2	+1.1
WAZ	Wanganui	1.98	18	P	Pg	06 46 35.9	-0.7

DVHZ	Dannevirke	2.01	48	P	Pb	06 46 36.1	+1.3
TSZ	Takapari Road	2.08	41	P	Pb	06 46 37.3	+1.3
OKCZ	Okains Bay	2.24	202	P	Pn	06 46 34.5	-0.7
CRLZ	Canterbury Las	2.25	211	*e*Pn	Pn	06 46 33.8	-1.5
CRLZ				*e*Sn	Sn	06 47 04.6	+1.7
PNHZ	Pukenui	2.31	42	P	Pg	06 46 41.6	-1.0
INZ	Inchbonnie	2.31	241	P	Pb	06 46 40.3	+0.3
OXZ	Oxford	2.32	223	*e*Pn	Pn	06 46 35.1	-1.1
OXZ	Oxford	2.32	223	P	Pg	06 46 42.8	0.0
MQZ	McQueen's Vall	2.35	209	*e*Pn	Pn	06 46 34.6	-2.1
MQZ				*e*Sn	Sn	06 47 05.2	-0.2
MQZ	McQueen's Vall	2.35	209	P	Pn	06 46 35.2	-1.5
KHEZ	Kahui Hut	2.36	356	P	Pg	06 46 43.6	0.0
AKCZ	Akaroa Harbour	2.42	203	P	Pn	06 46 37.0	-0.6
PKE	Pukeiti	2.46	356	P	Pb	06 46 43.8	+1.3
PKVZ	Pokaka	2.51	21	P	Pb	06 46 45.0	+1.5
MOVZ	Moawhango	2.53	28	P	Pb	06 46 43.4	-0.4
VRZ	Vera Road	2.56	10	P	Pb	06 46 46.0	+1.8
BHHZ	Black Hill Sta	2.58	34	P	Pb	06 46 45.1	+0.5
WHVZ	Whangaehu Hut	2.59	25	P	Pb	06 46 46.4	+1.5
KRHZ	Kereru	2.60	40	P	Pb	06 46 45.7	+0.9
FWVZ	Far West T-bar	2.60	24	P	Pb	06 46 45.3	+0.2
TUVZ	Tukino	2.62	25	P	Pb	06 46 46.0	+0.6
NGZ	Ngauruhoe	2.69	24	P	Pb	06 46 47.8	+1.3
TWVZ	Taurewa	2.74	21	P	Pb	06 46 48.2	+0.8
WTVZ	West Tongariro	2.74	23	P	Pb	06 46 48.0	+0.6
KRVZ	Karewarewa	2.78	24	P	Pb	06 46 48.5	+0.5
KWHZ	Kaweka Forest	2.79	38	P	Pb	06 46 49.4	+1.1
KATZ	Kakaramea	2.91	24	P	Pb	06 46 49.7	-0.5
WVZ	Waitaha Valley	2.94	240	P	Pb	06 46 50.8	+0.2
BKZ	Black Stump Fm	3.04	36	*e*Pn	Pn	06 46 45.7	-0.5
BKZ				*e*Sn	Sn	06 47 21.2	-1.2
BKZ	Black Stump Fm	3.04	36	P	Pb	06 46 53.1	+0.8
RPZ	Rata Peaks	3.10	227	Pn	Pn	06 46 45.9	-1.2
	7.9nm,0.3s,baz=106,slow=18,SNR=4.8						
RPZ				Sn	Sn	06 47 21.9	-2.2
	4.1nm,0.3s,baz=338,slow=9.0,SNR=8.7						
RPZ	Rata Peaks	3.10	227	*e*Pn	Pn	06 46 46.4	-0.8
RPZ				*e*Sn	Sn	06 47 25.1	+1.0
HIZ	Hauiti	3.17	9	*e*Pn	Pn	06 46 47.8	-0.3
HIZ	Hauiti	3.17	9	P	Pb	06 46 55.5	+0.8
FOZ	Fox Glacier	3.75	238	*e*Pn	Pn	06 46 56.0	+0.2
FOZ				*e*Sn	Sn	06 47 39.7	0.0
LBZ	Lake Benmore	4.02	226	*e*Pn	Pn	06 47 01.1	+1.4
LBZ				*e*Sn	Sn	06 47 46.2	-0.3
URZ	Urewera	4.06	34	Pn	Pn	06 46 57.7	-2.5
	baz=191,slow=5.2,SNR=1.2						
URZ				Sn	Sn	06 47 45.8	-1.7
	4.8nm,0.3s,baz=174,slow=19,SNR=2.5						
URZ	Urewera	4.06	34	*e*Pn	Pn	06 47 01.7	+1.5
ODZ	Otahua Downs	4.27	216	*e*Pn	Pn	06 47 01.7	-1.4
ODZ				*e*Sn	Sn	06 47 52.0	-0.7
JCZ	Jackson Bay	4.66	237	P	Pb	06 47 15.7	-4.3
WKZ	Wanaka	4.94	228	*e*Pn	Pn	06 47 15.6	+3.2
MXZ	Matakaoa Point	5.17	39	*e*Pn	Pn	06 47 16.3	+0.9
MLZ	Mavora Lakes	5.78	228	*e*Pn	Pn	06 47 26.7	+2.9
OUZ	Omahuta	6.44	356	*e*Pn	Pn	06 47 35.7	+2.8
OUZ				*e*Sn	Sn	06 48 43.8	-2.4
PINNC	Pines Island,	19.81	341	*e*P	P	06 50 27.1	-1.5
	26nm,1.1s						
ASAR	Alice Springs	37.97	285	P	P	06 53 17.0	+1.0
	0.6nm,0.6s,baz=129,slow=7.2,SNR=5.3						
WC3	Warramunga Arr	40.00	290	*e*P	P	06 53 32.3	-0.7
	3.7nm,0.9s						
WB2	Warramunga Arr	40.02	290	*e*P	P	06 53 33.3	+0.1
	3.0nm,1.0s						
WRAB	Tennant Creek	40.03	290	*e*P	P	06 53 33.6	+0.3
	4.7nm,0.6s						
WR1	Warramunga Arr	40.03	290	*e*P	P	06 53 31.4	-1.8
WRA	Warramunga Arr	40.03	290	P	P	06 53 31.4	-1.9
	2.2nm,0.9s,baz=140,slow=8.2,SNR=3.7						
PSAB1	Pilbara Seismi	49.59	276	*e*P	P	06 54 48.9	-0.5
	8.5nm,1.1s						
PSAC1	Pilbara Seismi	49.62	276	*e*P	P	06 54 49.7	+0.1
TORD	Torodi Ar. Bea	150.86	195	PKPbc	PKPbc	07 05 51.8	+0.8
	0.4nm,0.5s,baz=143,slow=2.2,SNR=3.7						
TOA1	Torodi Ar. Sit	150.87	195	*e*PKPbc	PKPbc	07 05 51.8	+0.7

WEL 22 06:48:00.1,42°S±1°×**17°4E**±°**,h9**^{km}±2^{km}**,M3.4**/14,**ML3.7**/12,**MLv3.4**/14**,Error ellipse: s-maj=0.0km s-min=0.0km az=136.5,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.15	183	P	Pg	06 48 04.1	+0.8
TUWZ	Tuamarina	0.27	309	P	Pg	06 48 06.3	+0.8
BSWZ	Blackbirch Sta	0.28	247	P	Pg	06 48 05.5	-0.3
TCW	Tory Channel	0.40	6	P	Pb	06 48 10.2	+0.9
WEL	Wellington	0.52	52	P	Pb	06 48 11.0	-0.4
BHW	Baring Head	0.52	68	P	Pb	06 48 11.2	-0.3
NNZ	Nelson	0.74	301	P	Pg	06 48 14.6	+0.2
PLWZ	Palliser	0.77	88	P	Pn	06 48 16.8	-0.5
MSWZ	Moikau Station	0.79	77	P	Pn	06 48 17.2	-0.4
CAW	Cannon Point	0.81	52	P	Pb	06 48 16.7	+0.4
DUWZ	D'Urville Isla	0.83	344	P	Pn	06 48 18.1	0.0
KHZ	Kahutara	0.96	212	P	Pg	06 48 18.5	-0.1
THZ	Tophouse	1.00	260	P	Pn	06 48 21.1	+0.7
MTW	Mount Morrison	1.06	66	P	Pn	06 48 21.4	+0.2
OGWZ	Otaki Gorge	1.06	43	P	Pn	06 48 21.2	0.0
HOWZ	Holdsworth Sta	1.20	55	P	Pg	06 48 24.1	+1.0
MRZ	Mangatainoka R	1.39	48	P	Pg	06 48 29.0	+2.3
QRZ	Quartz Range	1.50	301	P	Pg	06 48 28.6	-0.2
GVZ	Greta Valley S	1.62	213	P	Pg	06 48 31.3	0.0
DSZ	Denniston Nort	1.82	265	P	Pg	06 48 34.6	-0.3
LTZ	Lake Taylor	1.87	230	P	Pn	06 48 31.9	-0.4
AMCZ	Amberley	1.96	216	P	Pg	06 48 39.8	+2.2
MQZ	McQueen's Vall	2.40	208	P	Pn	06 48 40.7	+1.1

ISCJB ***22*** *06:50:44.0±0.4, 4°.50S±0°.03×35°.93E±0°.06, h10^{km}, mb4.0/10, Error ellipse: s-maj=8.3km s-min=4.8km az=3.2*

IDC ***22*** *06:50:44.5±0.8, 4°.53S×35°.93E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.8/35, mbtmp4.0/10, ML4.8/2, Error ellipse: s-maj=25.8km s-min=18.4km az=102.0*

NEIC ***22*** *06:50:45.6±2.1, 4°.49S×35°.93E, h10^{km}±1^{km}, mb4.3/2, Error ellipse: s-maj=14.6km s-min=10.0km az=142.0*

ISC 22 06:50:45.5±0.6**,4°.49S**±0°.04×**35°.90E**±0°.05**,h10**^{km}**,n23,**σ**1^{s}78**/27**,mb4.0**/10**,2C,Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOND	Kondoa	0.43	194	*i* P	Pg	06 50 53.5	-0.5
KOND				*i* S	Sg	06 50 59.4	-0.2
KIBA	Kibaya	1.05	140	*i* P	Pg	06 51 03.0	-2.8
KIBA				*i* S	Sg	06 51 15.7	-3.8
KMBO	Kilima Mbogo	3.61	22	*e*Pn	Pn	06 51 41.1	-0.6
KMBO				*e*Sn	Sn	06 52 26.1	+1.5
MBAR	Mbarara	6.44	307	Pn	Pn	06 52 20.9	+0.3
	36nm,0.3s,baz=123,slow=17,SNR=19						
MBAR				Sn	Sn	06 53 30.3	-4.1
	124nm,0.3s,baz=218,slow=5.3,SNR=8.5						
MBAR				Lg	Lg	06 54 06.9	
	141nm,0.3s,baz=221,slow=21,SNR=10						
MBAR	Mbarara	6.44	307	*e*Pn	Pn	06 52 21.0	+0.3
MBAR				*e*Sn	Sn	06 53 33.1	-1.2
MBAR	Mbarara	6.44	307	⇑*e*P	Pn	06 52 21.0	+0.3
MBAR				⇑*e*S	Sg	06 54 07.9	-4.5
LSZ	Lusaka	13.13	215	Pn	Pn	06 53 53.2	+1.0
	0.6nm,0.3s,baz=59,slow=7.5,SNR=5.0						
LSZ				Sn	Sn	06 56 09.4	-9.1
	0.7nm,0.3s,baz=67,slow=2.6,SNR=3.2						
LSZ				Lg	Lg	06 57 31.1	
	2.4nm,0.3s,baz=315,slow=15,SNR=14						
LSZ	Lusaka	13.13	215	*e*Pn	Pn	06 53 53.4	+1.1
MATP	Matopo	17.40	204	Lg	Lg	06 59 51.9	
	0.4nm,0.3s,baz=300,slow=22,SNR=9.7						
OPO	Ambohidratompo	17.82	143	P	Pn	06 54 54.0	0.0
	baz=338,slow=11,SNR=2.8						
LBTB	Lobatse	22.68	205	P	P	06 55 47.2	-0.2
	4.6nm,0.9s,baz=24,slow=17,SNR=3.5						
LBTB				Lg	Lg	07 02 31.8	
	3.3nm,0.9s,baz=310,slow=17,SNR=3.7						
TSUM	Tsumeb	23.09	229	Lg	Lg	07 02 57.8	
	3.6nm,0.9s,baz=319,slow=20,SNR=3.4						
BOSA	Boshof	26.03	202	P	P	06 56 19.2	0.0
	2.8nm,0.7s,baz=13,slow=11,SNR=4.3						
AKASG	Malin Array Be	55.27	355	P	P	07 00 18.8	-0.1
	0.8nm,0.5s,baz=173,slow=6.0,SNR=6.4						
AKBB	Malin Array Si	55.27	355	*e*P	P	07 00 19.2	+0.3
	2.6nm,0.8s						
GERES	GERESS Array B	56.54	343	P	P	07 00 29.6	+1.5
	0.8nm,0.3s,baz=148,slow=5.8,SNR=4.7						
KKAR	Karatay Array	56.77	30	*e*P	P	07 00 29.4	-0.5
	5.4nm,1.7s						
ESDC	Sonseca Array	57.24	324	P	P	07 00 35.1	+1.8
	0.1nm,0.3s,baz=134,slow=6.4,SNR=5.5						
MK32	Makanchi Array	65.42	33	*e*P	P	07 01 28.3	-0.3
MKAR	Makanchi Array	65.42	33	P	P	07 01 28.3	-0.3
	1.7nm,1.0s,baz=226,slow=4.7,SNR=6.4						
CMAR	Chiang Mai Arr	66.14	68	P	P	07 01 34.7	+1.0
	0.4nm,0.4s,baz=239,slow=10,SNR=3.0						
SONA0	Songino Array	80.40	40	*e*P	P	07 02 58.8	+1.3
SONM	Songino Array	80.40	40	P	P	07 02 58.8	+1.3
	1.0nm,0.7s,baz=278,slow=4.0,SNR=4.8						

ISCJB ***22*** *07:01:41.3±0.1, 46°.39S±0°.03×35°.21E±0°.04, h3^{km}, mb5.7/214, MS6.0/611, Error ellipse: s-maj=4.3km s-min=3.5km az=154.8*

MOS ***22*** *07:01:41.6±1.5, 46°.17S×34°.91E, h10^{km}, mb5.9/59, MS6.0/60, Error ellipse: s-maj=13.6km s-min=6.0km az=88.8*

IDC ***22*** *07:01:41.2±0.3, 46°.13S×34°.87E, h0^{km}, mb5.2/25, mb1 5.4/25, mb1mx5.3/29, mbtmp5.2/25, MS5.8/26, Ms1 5.8/26, ms1mx5.6/29, Error ellipse: s-maj=13.8km s-min=11.9km az=64.0*

BJI ***22*** *07:01:42.8±0.0, 46°.04S×34°.78E, h20^{km}, mb5.7/23, mB6.2/42, Ms6.1/42, Ms7 5.9/41*

NEIC ***22*** *07:01:42.5±2.3, 46°.05S×34°.78E, h10^{km}, mb5.8/140, ME7.2, MS6.0/607, MW6.1, MW6.3, Error ellipse: s-maj=12.5km s-min=9.2km az=172.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.13; M$_{\theta\theta}$1.44; M$_{\phi\phi}$-1.31; M$_{r\theta}$0.08; M$_{\theta\phi}$1.56; M$_{\phi r}$0.09; Best double couple: M$_{0}$2.10000×10^{18} NP1:ϕ$_{s}$21.00000°, δ89.00000°, λ177.00000°. NP2:ϕ$_{s}$111.00000°, δ87.00000°, λ1.00000°. Principal axes: T 2.1400, Plg3.0000°, Azm336.0000°; N -0.1300, Plg87.0000°, Azm184.0000°; P -2.0100, Plg2.0000°, Azm66.0000°; Broadband fault plane solution: P waves. NP1:ϕ$_{s}$189.00000°, δ83.00000°, λ175.00000°. NP2:ϕ$_{s}$280.00000°, δ85.00000°, λ7.00000°. Principal axes: T Plg8.0000°, Azm145.0000°; N Plg0.0000°, Azm0.0000°; P Plg1.0000°, Azm55.0000°; Apparent Stress 1.19 MPa. Depth from synthetics of synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC ***22*** *07:01:42.0±0.0, 45°.84S×34°.83E, h13^{km}, Moment Tensor Solution. s21 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.03; M$_{\theta\theta}$1.96; M$_{\phi\phi}$-1.98; M$_{r\theta}$-0.96; M$_{\theta\phi}$2.26; M$_{\phi r}$-0.01; Best double couple: M$_{0}$3.10000×10^{18} NP1:ϕ$_{s}$291.00000°, δ84.00000°, λ16.00000°. NP2:ϕ$_{s}$200.00000°, δ74.00000°, λ174.00000°. Principal axes: T 3.2300, Plg15.0000°, Azm156.0000°; N -0.1600, Plg72.0000°, Azm309.0000°; P -3.0600, Plg7.0000°, Azm64.0000°;*

GCMT ***22*** *07:01:47.5±0.0, 45°.89S×34°.93E, h21^{km}, MW6.3/150, Moment Tensor Solution. s150,c338; s150,c614; Duration: 3^{s}4 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.07±.01; M$_{\theta\theta}$1.99±.02; M$_{\phi\phi}$-1.91±.01; M$_{r\theta}$0.26±.03; M$_{\theta\phi}$2.81±.01; M$_{\phi r}$-0.14±.03; Best double couple: M$_{0}$3.43300×10^{18} NP1:ϕ$_{s}$287.00000°, δ89.00000°, λ-5.00000°. NP2:ϕ$_{s}$17.00000°, δ85.00000°, λ-179.00000°. Principal axes: T 3.4680, Plg3.0000°, Azm332.0000°; N -0.0640, Plg85.0000°, Azm94.0000°; P -3.3990, Plg4.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

PRE ***22*** *07:01:54.4±2.4, 44°.82S×34°.51E, h5^{km}, mb5.7*

ISC 22 07:01:41.8±0.6**,46°.10S**±0°.04×**34°.86E**±0°.04**,h3**^{km}±3^{km}**,n1674,**σ**2^{s}43**/1345**,mb5.7**/234**,MS6.0**/633**,39C-16D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUFB	Buffelsbos	14.21	324	*e*P	Pn	07 05 01.3	-2.4
BUFB				AMB	AMB	07 05 09.1	
	comp=Z,555nm,2.8s						
BUFB				*e*S	Sn	07 07 19.0	-23
SOE	Somerset East	15.16	329	*e*P	Pn	07 05 13.9	-2.9
SOE				AMB	AMB	07 05 18.6	
	comp=Z,2μm,2.3s						
SOE				*e*S	Sn	07 07 41.2	-24
ELIM	Elim	16.24	310	*e*P	Pn	07 05 31.8	+1.0
ELIM				AMB	AMB	07 05 38.2	
	comp=Z,844nm,3.2s						
ELIM				*e*S	Sn	07 08 11.8	-19
HVD	Gariep Dam	17.10	332	*e*P	Pn	07 05 40.8	-1.0
HVD				AMB	AMB	07 05 45.6	
	comp=Z,5μm,2.4s						
HVD				*e*S	Sn	07 08 27.3	-25
SUR	Sutherland	17.45	317	P	Pn	07 05 43.4	-2.9
	comp=Z,6.8nm,0.3s,baz=134,slow=15,SNR=73						
SUR				S	Sn	07 08 45.6	-15
	comp=Z,5.0nm,0.3s,baz=234,slow=17,SNR=3.8						
SUR				LR	LR	07 11 32.2	
	comp=Z,53μm,18.1s,baz=142,slow=34						
SUR	Sutherland	17.45	317	*e*Pn	Pn	07 05 42.6	-3.8
	comp=Z,289nm,1.1s						
SUR				*e*Sn	Sn	07 08 47.0	-14
SUR	Sutherland	17.45	317	P	Pn	07 05 43.9	-2.4
	SNR=41						
CVNA	Calvinia	18.70	316	*e*P	P	07 05 59.5	-1.8
CVNA				AMB	AMB	07 06 06.9	
	comp=Z,1μm,4.7s						
BOSA	Boshof	19.02	333	*i* P	P	07 06 03.3	-1.5
BOSA	Boshof	19.02	333	P	P	07 06 02.7	-2.1
	comp=Z,5.5nm,0.3s,baz=157,slow=14,SNR=50						
BOSA				S	Sn	07 09 21.5	-17
	comp=Z,2.5nm,0.3s,baz=90,slow=19,SNR=3.8						
BOSA				LR	LR	07 12 03.1	
	comp=Z,50μm,21.2s,baz=144,slow=33						
BOSA	Boshof	19.02	333	*e*P	P	07 06 03.1	-1.7
	comp=Z,664nm,1.4s						
BOSA	Boshof	19.02	333	*e*P	P	07 06 02.7	-2.1
BOSA				AMB	AMB	07 06 09.9	
	comp=Z,20μm,7.1s						
BOSA				*e*S	Sn	07 09 12.7	-26
BOSA	Boshof	19.02	333	*e*P	P	07 06 03.1	-1.7
BOSA				pmax	pmax		
	comp=Z,664nm,1.4s						
BOSA	Boshof	19.02	333	*i* P	P	07 06 03.3	-1.5
PRYS	Parys	20.04	340	*e*P	P	07 06 15.4	-0.6
PRYS				AMB	AMB	07 06 20.0	
	comp=Z,795nm,3.0s						
PRYS				*e*S	S	07 09 44.8	-17
SWZ	Schweizer	20.34	335	*e*P	P	07 06 18.6	-0.6
SWZ				AMB	AMB	07 06 24.0	
	comp=Z,2μm,2.7s						
SWZ				*e*S	S	07 09 53.2	-15
ERPM	east rand prop	20.41	343	*e*P	P	07 06 19.9	-0.1
ERPM				AMB	AMB	07 06 26.8	
	comp=Z,907nm,2.9s						
WDLM	Western Deep L	20.51	341	*e*P	P	07 06 20.2	-0.9
WDLM				AMB	AMB	07 06 26.0	
	comp=Z,965nm,2.6s						
KEIM	Keimoes	20.52	323	*e*P	P	07 06 21.5	+0.4
KEIM				AMB	AMB	07 06 26.6	
	comp=Z,2μm,3.0s						
KEIM				*e*S	S	07 09 59.7	-12
UPI	Upington	20.70	324	*e*P	P	07 06 22.1	-1.0
UPI				AMB	AMB	07 06 27.5	
	comp=Z,2μm,2.4s						
UPI				*e*S	S	07 10 04.4	-11
KSR	Koster	21.18	340	*e*P	P	07 06 27.6	-0.8
KSR				AMB	AMB	07 06 32.4	
	comp=Z,675nm,3.3s						
KOMG	Komaggas	21.20	314	*e*P	P	07 06 29.6	+1.2
KOMG				AMB	AMB	07 06 35.3	
	comp=Z,2μm,2.1s						
KOMG				*e*S	S	07 10 18.0	-6.5
LBTB	Lobatse	22.31	337	P	P	07 06 38.9	-1.6
	comp=Z,121nm,0.8s,baz=164,slow=11,SNR=68						
LBTB				S	S	07 10 34.6	-12
	comp=Z,214nm,1.1s,baz=229,slow=20,SNR=6.6						
LBTB				LR	LR	07 14 12.2	
	comp=Z,62μm,19.7s,baz=152,slow=34						
LBTB	Lobatse	22.31	337	*e*P	P	07 06 37.7	-2.8
	comp=Z,684nm,1.3s						
LBTB	Lobatse	22.31	337	*e*P	P	07 06 38.6	-1.9
LBTB				AMB	AMB	07 06 49.6	
	comp=Z,764nm,2.2s						
LBTB				*e*S	S	07 10 34.5	-12
SYO	Syowa Base	23.10	176	⇓*i*P	P	07 06 47.2	-1.1
SYO	Syowa Base	23.10	176	⇓*i*pP	pP	07 06 50.0	+2.0
MSNA	Messina	24.02	349	*i* P	P	07 06 56.3	-1.5
MSNA	Messina	24.02	349	*e*P	P	07 06 56.5	-1.3
MSNA				AMB	AMB	07 07 00.8	
	comp=Z,1μm,2.5s						
MSNA	Messina	24.02	349	*i* P	P	07 06 56.3	-1.5
MAW	Mawson	26.00	156	P	P	07 07 15.4	0.0
	comp=Z,509nm,1.0s,baz=310,slow=8.9,SNR=138						
MAW				S	S	07 11 45.7	-0.7
	comp=Z,7.7nm,0.9s,baz=257,slow=19,SNR=1.2						
MAW				LR	LR	07 15 36.6	
	comp=Z,15μm,19.6s,baz=322,slow=32						
MAW	Mawson	26.00	156	*e*P	P	07 07 15.8	+0.4
	comp=Z,190nm,1.2s						
MAW				LR	LR		
	comp=Z,4μm,21.0s						
MAW	Mawson	26.00	156	P	P	07 07 16.1	+0.7
	baz=26,SNR=224						
MAW	Mawson	26.00	156	*e*P	P	07 07 15.8	+0.4
MAW				pmax	pmax		
	comp=Z,190nm,1.2s						
MAW				MLR	MLR		
	comp=Z,4μm,21.0s						
MATP	Matopo	26.13	346	*i* P	P	07 07 15.9	-1.2
MATP	Matopo	26.13	346	P	P	07 07 15.5	-1.6
	comp=Z,102nm,0.7s,baz=173,slow=9.3,SNR=129						
MATP				S	S	07 11 42.8	-6.6
	comp=Z,8.1nm,0.9s,baz=120,slow=20,SNR=1.5						
MATP				LR	LR	07 16 21.3	
	comp=Z,38μm,18.6s,baz=159,slow=34						
MATP	Matopo	26.13	346	*i* P	P	07 07 15.9	-1.2
BLWY	Bulawayo	26.39	347	*i* P	P	07 07 17.8	-1.8
BLWY	Bulawayo	26.39	347	*i* P	P	07 07 17.8	-1.8
WIN	Windhoek	27.55	322	*e*P	P	07 07 29.4	-0.6
	comp=Z,240nm,1.5s						
WIN				LR	LR		
	comp=Z,76μm,19.0s						
WIN	Windhoek	27.55	322	*e*P	P	07 07 29.4	-0.6
WIN				pmax	pmax		
	comp=Z,240nm,1.5s						
WIN				MLR	MLR		
	comp=Z,76μm,19.0s						
ABPO	Ambohimpanom	28.87	25	*e*P	P	07 07 42.7	+0.9
	comp=Z,498nm,1.5s						
ABPO				LR	LR		
	comp=Z,48μm,21.0s						
ABPO	Ambohimpanom	28.87	25	*e*P	P	07 07 42.7	+0.9
ABPO				pmax	pmax		
	comp=Z,498nm,1.5s						
ABPO				MLR	MLR		
	comp=Z,48μm,21.0s						
OPO	Ambohidratompo	29.28	24	P	P	07 07 46.3	+0.9
	comp=Z,38nm,1.0s,baz=197,slow=8.7,SNR=23						
OPO				LR	LR	07 15 52.2	
	comp=Z,27μm,20.9s,baz=348,slow=29						
RER	Riviere de l'E	30.17	41	*e*P	P	07 07 53.3	+0.2
	comp=Z,277nm,1.4s						
RER				LR	LR		
	comp=Z,34μm,19.0s						
TSUM	Tsumeb	30.37	326	*i* P	P	07 07 55.0	0.0
TSUM	Tsumeb	30.37	326	P	P	07 07 54.6	-0.4
	baz=154,slow=11						
TSUM	Tsumeb	30.37	326	*e*P	P	07 07 54.7	-0.4
	comp=Z,378nm,1.5s						
TSUM				LR	LR		
	comp=Z,57μm,19.0s						
TSUM	Tsumeb	30.37	326	*e*P	P	07 07 54.7	-0.4
TSUM	Tsumeb	30.37	326	*i* P	P	07 07 55.0	0.0
ITZ	Itezhi-Tezhi	31.15	343	⇑*i*P	P	07 08 00.0	-1.9
ITZ				*i*		07 08 01.2	
	baz=173,slow=11						
ITZ				*i* S	S	07 12 55.0	-13
SNAA	Sanae	31.19	202	P	P	07 08 02.2	+0.5
SNAA	Sanae	31.19	202	P	P	07 08 02.2	+0.5
	comp=Z,24nm,0.8s,baz=70,slow=6.9,SNR=35						
SNAA				LR	LR	07 17 38.4	
	comp=Z,16μm,21.6s,baz=60,slow=31						
SNAA	Sanae	31.19	202	*e*P	P	07 08 02.0	+0.3
	comp=Z,77nm,1.0s						
SNAA				LR	LR		
	comp=Z,19μm,21.0s						
SNAA	Sanae	31.19	202	*e*P	P	07 08 02.0	+0.3
SNAA				pmax	pmax		
	comp=Z,77nm,1.0s						
SNAA				MLR	MLR		
	comp=Z,19μm,21.0s						
LSZ	Lusaka	31.23	348	*e*P	P	07 08 01.6	-1.0
	comp=Z,270nm,1.0s						
LSZ				LR	LR		
	comp=Z,42μm,19.0s						
LSZ	Lusaka	31.23	348	*e*P	P	07 08 01.6	-1.0
LSZ				pmax	pmax		
	comp=Z,270nm,1.0s						
LSZ				MLR	MLR		
	comp=Z,42μm,19.0s						
MRIV	Mauritius Mete	31.73	43	*e*P	P	07 08 05.0	-1.8
	comp=Z,108nm,1.4s						
MRIV				LR	LR		
	comp=Z,14μm,19.0s						
VNA1	Neumayer--Stat	32.18	205	P	P	07 08 11.6	+1.3
VNA1	Neumayer--Stat	32.18	205	ScP	ScP	07 14 39.3	-3.7
MONG	Mongu	32.39	338	*i* P	P	07 08 10.4	-2.4
VNA3	Neumayer Olymp	32.86	205	P	P	07 08 16.6	+0.3
VNA3	Neumayer Olymp	32.86	205	ScP	ScP	07 14 52.2	+6.7
TRIS	Tristan da Cun	35.97	267	*e*P	P	07 08 43.4	-0.1
	comp=Z,472nm,1.5s						
CASY	Casey	43.41	145	*e*P	P	07 09 44.8	-0.4
	comp=Z,172nm,1.2s						
CASY				LR	LR		
	comp=Z,8μm,20.0s						
QSPA	South Pole Qui	44.12	180	*e*P	P	07 09 50.4	-0.8
	comp=Z,208nm,1.3s						
QSPA				LR	LR		
	comp=Z,19μm,20.0s						
HOPE	Hope Point	44.58	232	*e*P	P	07 09 55.4	+0.7
	comp=Z,267nm,1.1s						
HOPE				LR	LR		
	comp=Z,5μm,18.0s						
KMBO	Kilima Mbogo	44.83	3	*e*P	P	07 09 56.8	-0.6
	comp=Z,98nm,1.3s						
KMBO				LR	LR		
	comp=Z,23μm,19.0s						
MSEY	Mahe Island	44.98	30	*e*P	P	07 09 56.6	-1.8
	comp=Z,214nm,1.4s						
MSEY				LR	LR		
	comp=Z,28μm,20.0s						
MSEY	Mahe Island	44.98	30	*e*P	P	07 09 56.6	-1.8
MSEY				pmax	pmax		
	comp=Z,214nm,1.4s						
MSEY				MLR	MLR		
	comp=Z,28μm,20.0s						
SHEL	Horse Pasture	45.22	298	PFAKE		07 10 10.0	+10
SHEL				LR	LR		
	comp=Z,14μm,20.0s						
MBAR	Mbarara	45.45	354	*e*P	P	07 10 03.5	+1.3
	comp=Z,203nm,1.5s						
MBAR				LR	LR		
	comp=Z,36μm,20.0s						
MBAR	Mbarara	45.45	354	*e*P	P	07 10 03.5	+1.3
MBAR				pmax	pmax		
	comp=Z,203nm,1.5s						
MBAR				MLR	MLR		
	comp=Z,36μm,20.0s						
DGAR	Diego Garcia	50.29	52	*e*P	P	07 10 39.1	-0.4
	comp=Z,419nm,1.5s						
DGAR				LR	LR		
	comp=Z,18μm,22.0s						
DGAR	Diego Garcia	50.29	52	*e*P	P	07 10 39.1	-0.4
DGAR				pmax	pmax		
	comp=Z,419nm,1.5s						
DGAR				MLR	MLR		
	comp=Z,18μm,22.0s						
H08N3	Diego Garcia H	50.39	50	T	T	08 04 15.1	
	baz=216						
H08N1	Diego Carcia H	50.41	50	T	T	08 04 15.6	
	baz=216,slow=74						
H08N2	Diego Garcia H	50.42	50	T	T	08 04 18.6	
	baz=216,slow=74						
VNDA	Vanda	52.42	167	P	P	07 10 54.4	-0.4
	comp=Z,77nm,0.9s,baz=242,slow=8.5,SNR=127						
VNDA				LR	LR	07 31 35.0	
	comp=Z,22μm,20.2s,baz=219,slow=34						
VNDA	Vanda	52.42	167	*e*P	P	07 10 54.7	-0.1
	comp=Z,96nm,0.9s						
VNDA	Vanda	52.42	167	*e*P	P	07 10 54.7	-0.1

VNDA				pmax	pmax		
	comp=Z,97nm,0.9s						
SBA	Scott Base	52.88	169	*e*P	P	07 10 59.4	+1.2
	comp=Z,237nm,1.0s						
SBA				LR	LR		
	comp=Z,10µm,21.0s						
SBA	Scott Base	52.88	169	*e*P	P	07 10 59.4	+1.2
SBA				pmax	pmax		
	comp=Z,237nm,1.0s						
SBA				MLR	MLR		
	comp=Z,10µm,21.0s						
PMSA	Palmer Station	52.94	212	*e*P	P	07 10 59.3	+0.6
	comp=Z,142nm,1.1s						
PMSA	Palmer Station	52.94	212	*e*P	P	07 11 00.2	+1.5
FURI	Furi	54.85	5	*e*P	P	07 11 16.1	+2.5
	comp=Z,198nm,1.4s						
FURI				LR	LR		
	comp=Z,17µm,18.0s						
ANKE	Ethiopia-Afar	55.60	6	*e*P	P	07 11 19.6	+0.4
HARA	HARA	55.64	10	*i* P	P	07 11 21.4	+2.1
HARA				*i* S	S	07 19 07.1	+1.0
HARA	HARA	55.64	10	*e*P	P	07 11 18.4	-0.8
HARA				*i* S	S	07 19 07.1	+1.0
H10S2	ASCENSION HYDR	56.11	295	T	T	08 12 22.8	
	baz=140,slow=75						
H10S1	ASCENSION HYDR	56.13	295	T	T	08 12 22.8	
	baz=140,slow=75						
H10S3	ASCENSION HYDR	56.13	295	T	T	08 12 20.3	
	baz=140,slow=75						
ASCN	Ascension	56.72	296	*e*P	P	07 11 26.5	-0.3
	comp=Z,200nm,1.1s						
ASCN				LR	LR		
	comp=Z,12µm,20.0s						
DESE	Dese	57.11	6	*e*P	P	07 11 32.3	+2.5
DESE				*e*S	S	07 19 40.5	+15
KAAM	Kaadhehdhoo	57.23	47	*e*P	P	07 11 31.2	+0.8
	comp=Z,237nm,1.4s						
EFI	East Falkland	57.33	228	*e*P	P	07 11 28.6	-2.0
	comp=Z,74nm,1.2s						
EFI				LR	LR		
	comp=Z,6µm,22.0s						
EFI	East Falkland	57.33	228	*e*P	P	07 11 28.6	-2.0
EFI				pmax	pmax		
	comp=Z,74nm,1.2s						
EFI				MLR	MLR		
	comp=Z,6µm,22.0s						
ATD	Arta Tunnel	57.81	9	*e*P	P	07 11 33.8	-0.6
	comp=Z,268nm,1.5s						
ATD				LR	LR		
	comp=Z,10µm,19.0s						
ATD	Arta Tunnel	57.81	9	P	P	07 11 36.0	+1.6
	SNR=6.2						
MUN	Mundaring	62.13	108	P	P	07 12 03.8	-0.2
	baz=62,SNR=5.1						
NWAO	Narrogin (SRO)	62.21	110	*e*P	P	07 12 04.0	-0.5
	comp=Z,106nm,1.4s						
NWAO				LR	LR		
	comp=Z,12µm,19.0s						
NWAO	Narrogin (SRO)	62.21	110	*e*P	P	07 12 04.1	-0.5
NWAO				pmax	pmax		
	comp=Z,106nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,12µm,19.0s						
HMDM	Hanimaadhoo	62.74	44	*e*P	P	07 12 07.5	-0.7
	comp=Z,404nm,1.5s						
KIC	Kosan Boka	63.01	315	*e*P	P	07 12 09.8	-0.2
	comp=Z,896nm,1.9s						
LIC	Lamto	63.03	314	*e*P	P	07 12 09.9	-0.2
	comp=Z,609nm,1.9s						
DBIC	Dimbokro	63.33	315	P	P	07 12 11.7	-0.4
	comp=Z,60nm,1.0s,baz=133,slow=8.8,SNR=27						
DBIC				LR	LR	07 35 12.1	
	comp=Z,5µm,21.0s,baz=137,slow=32						
DBIC	Dimbokro	63.33	315	*e*P	P	07 12 11.2	-0.9
	comp=Z,203nm,1.2s						
DBIC	Dimbokro	63.33	315	*e*P	P	07 12 11.2	-0.9
DBIC				pmax	pmax		
	comp=Z,203nm,1.2s						
TIC	Toumodi	63.39	315	*e*P	P	07 12 12.6	+0.1
MORW	Morawa	63.86	106	*e*P	P	07 12 14.1	-1.5
	comp=Z,180nm,1.5s						
MORW				LR	LR		
	comp=Z,12µm,22.0s						
MORW	Morawa	63.86	106	P	P	07 12 15.5	-0.1
	baz=64,SNR=12						
GO09	Cerro Castillo	64.56	222	PFAKE		07 12 30.0	+10
GO09				LR	LR		
	comp=Z,7µm,19.0s						
CAM01	Campos-RJ	65.41	264	*e*P	P	07 12 27.1	+1.4
ALF01	Guarapari-ES	65.57	265	*e*P	P	07 12 27.4	+0.6
DUB01	Friburgo-RJ	65.73	263	*e*P	P	07 12 29.1	+1.2
TOC4	Torodi Ar. Sit	66.08	324	PFAKE		07 12 40.0	+10
TOC4				LR	LR		
	comp=Z,6µm,20.0s						
TOC3	Torodi Ar. Sit	66.08	324	PFAKE		07 12 40.0	+10
TOC3				LR	LR		
	comp=Z,6µm,21.0s						
TOB3	Torodi Ar. Sit	66.09	324	PFAKE		07 12 40.0	+10
TOB3				LR	LR		
	comp=Z,6µm,21.0s						
TOC5	Torodi Ar. Sit	66.09	324	PFAKE		07 12 40.0	+10
TOC5				LR	LR		
	comp=Z,7µm,21.0s						
TOA3	Torodi Ar. Sit	66.10	324	PFAKE		07 12 40.0	+10
TOA3				LR	LR		
	comp=Z,6µm,21.0s						
TOB4	Torodi Ar. Sit	66.10	324	PFAKE		07 12 40.0	+10
TOB4				LR	LR		
	comp=Z,8µm,22.0s						
TRD	Trivandrum	66.10	46	*e*P	P	07 12 28.0	-2.1
TOA2	Torodi Ar. Sit	66.10	324	PFAKE		07 12 40.0	+10
TOA2				LR	LR		
	comp=Z,8µm,22.0s						
TOC2	Torodi Ar. Sit	66.10	324	PFAKE		07 12 40.0	+10
TOC2				LR	LR		
	comp=Z,6µm,21.0s						
TOA0	Torodi Ar. Sit	66.10	324	*e*P	P	07 12 31.1	+1.0
	comp=Z,298nm,1.2s						
TOA0				LR	LR		
	comp=Z,6µm,20.0s						
TOA0	Torodi Ar. Sit	66.10	324	P	P	07 12 31.1	+1.0
	SNR=58						
TOB2	Torodi Ar. Sit	66.10	324	PFAKE		07 12 40.0	+10
TOB2				LR	LR		
	comp=Z,6µm,21.0s						
TORD	Torodi Ar. Bea	66.10	324	P	P	07 12 29.4	-0.7
	comp=Z,74nm,1.0s,baz=171,slow=9.4,SNR=113						
TORD				LR	LR	07 40 43.5	
	comp=Z,6µm,19.1s,baz=340,slow=35						
TORD				PKPPKP		07 41 05.1	
	comp=Z,2.2nm,1.1s,baz=358,slow=2.0,SNR=5.8						
TOA1	Torodi Ar. Sit	66.11	324	*e*P	P	07 12 29.4	-0.8
TOA1				LR	LR		
	comp=Z,8µm,22.0s						
TOB5	Torodi Ar. Sit	66.11	324	PFAKE		07 12 40.0	+10
TOB5				LR	LR		
	comp=Z,6µm,20.0s						
TOB1	Torodi Ar. Sit	66.11	324	PFAKE		07 12 40.0	+10
TOB1				LR	LR		
	comp=Z,100nm,19.0s						
TOC1	Torodi Ar. Sit	66.12	324	PFAKE		07 12 40.0	+10
TOC1				LR	LR		
	comp=Z,10µm,22.0s						
TOC7	Torodi Ar. Sit	66.12	324	PFAKE		07 12 40.0	+10
TOC7				LR	LR		
	comp=Z,6µm,20.0s						
RIB01	Linhares ES	66.21	266	*e*P	P	07 12 31.3	+0.4
KMBL	Kambalda	66.24	111	P	P	07 12 29.9	-1.1
	baz=66,SNR=6.9						
VAS01	Vassouras-RJ	66.34	262	*e*P	P	07 12 32.8	+1.0
CNLB	Canela	66.72	251	*e*P	P	07 12 35.2	+1.0
GIRL	Giralia	66.83	99	PFAKE		07 12 50.0	+15
GIRL				LR	LR		
	comp=Z,7µm,20.0s						
BSFB	Barra de Sao F	66.85	267	*e*P	P	07 12 35.4	+0.3
PLTB	Pedras Altas	66.92	248	*e*P	P	07 12 36.2	+0.8
PALK	Pallekele	67.01	51	*e*P	P	07 12 37.0	+0.9
	comp=Z,82nm,1.2s						
PALK				LR	LR		
	comp=Z,13µm,19.0s						
PALK	Pallekele	67.01	51	*e*P	P	07 12 37.0	+0.9
PALK				pmax	pmax		
	comp=Z,82nm,1.2s						
PALK				MLR	MLR		
	comp=Z,13µm,19.0s						
MEEK	Meekatharra	67.17	105	P	P	07 12 36.2	-0.9
	baz=67,SNR=8.5						
SJMB	Sao Joao De Ma	67.17	266	*e*P	P	07 12 37.1	0.0
SJMB				*e*S	S	07 21 35.4	+3.0
LPA	La Plata	67.59	243	*ce*P	P	07 12 41.0	+1.5
LPA				*e*PP	PP	07 15 08.0	-0.1
LPA				*e*S	S	07 21 37.0	0.0
CPSB	Cacapava Do Su	67.70	249	*e*P	P	07 12 41.3	+1.0
BSCB	Bom Sucesso	68.11	262	*e*P	P	07 12 43.6	+0.4
SPB	Sao Paulo	68.20	258	PFAKE		07 12 50.0	+6.5
SPB				LR	LR		
	comp=Z,5µm,19.0s						
ITAB	Concordia	68.94	252	*e*P	P	07 12 49.5	+1.4
RCLB	Rio Claro- Sao	69.05	259	*e*P	P	07 12 50.1	+1.1
MCQ	Macquarie Isla	69.16	149	*e*P	P	07 12 49.5	+0.5
	comp=Z,141nm,0.9s						
MCQ	Macquarie Isla	69.16	149	P	P	07 12 49.9	+0.9
	baz=69,SNR=4.4						
MCQ	Macquarie Isla	69.16	149	*e*P	P	07 12 49.5	+0.5
MCQ				pmax	pmax		
	comp=Z,141nm,0.9s						
XMIS	Christmas Isla	69.21	83	PFAKE		07 13 00.0	+10
XMIS				LR	LR		
	comp=Z,6µm,21.0s						
FRTB	Fartura	69.81	257	*e*P	P	07 12 55.3	+1.6
RAYN	Ar Rayn	69.96	10	*e*P	P	07 12 55.1	+0.8
	comp=Z,47nm,1.1s						
RAYN				LR	LR		
	comp=Z,14µm,21.0s						
RAYN	Ar Rayn	69.96	10	*i* P	P	07 12 55.9	+1.6
	SNR=30						
RAYN	Ar Rayn	69.96	10	*e*P	P	07 12 55.1	+0.8
RAYN				pmax	pmax		
	comp=Z,47nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,14µm,21.0s						
MHTO	MHTO	69.98	23	P	P	07 12 54.7	+0.3
	SNR=21						
MHTO				P	P	07 12 54.7	+0.3
	SNR=21						
PTGB	Pitanga	70.58	254	*e*P	P	07 12 59.6	+1.2
FORT	Forrest	70.59	114	*e*P	P	07 12 57.1	-1.2
	comp=Z,34nm,0.8s						
FORT				LR	LR		
	comp=Z,10µm,22.0s						
BB19B	Bebedouro	70.64	260	*e*P	P	07 12 59.6	+0.9
MZR	Muzera	70.81	18	P	P	07 13 01.5	+2.0
PMNB	Patos De Minas	70.92	263	*e*P	P	07 13 01.2	+0.6
PLCA	Paso Flores	70.96	231	P	P	07 12 59.8	-0.6
	comp=Z,18nm,1.1s,baz=139,slow=6.2,SNR=12						
PLCA				LR	LR	07 38 33.6	
	comp=Z,2µm,21.7s,baz=153,slow=31						
PLCA	Paso Flores	70.96	231	*e*P	P	07 12 59.1	-1.4
	comp=Z,20nm,0.9s						
PLCA	Paso Flores	70.96	231	*e*P	P	07 12 59.1	-1.4
PLCA				pmax	pmax		
	comp=Z,20nm,0.9s						
PLCA	Paso Flores	70.96	231	*e*P	P	07 12 59.9	-0.5
PSAD3	Pilbara Seismi	71.30	102	*e*P	P	07 13 02.2	-0.4
	comp=Z,138nm,1.4s						
PSAD3				LR	LR		
	comp=Z,10µm,18.0s						
PSAC3	Pilbara Seismi	71.34	102	*e*P	P	07 13 01.7	-1.3
	comp=Z,156nm,1.4s						
PSAC3				LR	LR		
	comp=Z,9µm,18.0s						
PSAB1	Pilbara Seismi	71.38	102	PFAKE		07 13 20.0	+17
PSAB1				LR	LR		
	comp=Z,10µm,18.0s						
PSAA1	Pilbara Seismi	71.38	102	PFAKE		07 13 20.0	+17
PSAA1				LR	LR		
	comp=Z,10µm,18.0s						
PSAB3	Pilbara Seismi	71.38	102	PFAKE		07 13 20.0	+17
PSAB3				LR	LR		
	comp=Z,10µm,18.0s						
PSA00	Pilbara Seismi	71.39	102	*e*P	P	07 13 00.8	-2.5
	comp=Z,75nm,1.1s						
PSA00				LR	LR		
	comp=Z,10µm,18.0s						
PSAC1	Pilbara Seismi	71.39	102	PFAKE		07 13 20.0	+17
PSAC1				LR	LR		
	comp=Z,10µm,18.0s						
PSAA3	Pilbara Seismi	71.39	102	*e*P	P	07 13 02.4	-0.9
	comp=Z,118nm,1.4s						
PSAA3				LR	LR		
	comp=Z,10µm,18.0s						
PSAA2	Pilbara Seismi	71.40	102	PFAKE		07 13 20.0	+17
PSAA2				LR	LR		
	comp=Z,9µm,18.0s						
PSAB2	Pilbara Seismi	71.41	102	PFAKE		07 13 20.0	+17
PSAB2				LR	LR		
	comp=Z,10µm,18.0s						
PSAC2	Pilbara Seismi	71.43	102	PFAKE		07 13 20.0	+16
PSAC2				LR	LR		
	comp=Z,10µm,18.0s						
PSAD2	Pilbara Seismi	71.44	102	PFAKE		07 13 20.0	+16
PSAD2				LR	LR		
	comp=Z,10µm,18.0s						
PSAD1	Pilbara Seismi	71.46	102	PFAKE		07 13 20.0	+16
PSAD1				LR	LR		
	comp=Z,10µm,18.0s						
JLN	Jalan Bani Buh	71.48	24	P	P	07 13 05.1	+1.6
	SNR=5.8						
JLN				P	P	07 13 05.1	+1.6
	SNR=5.8						
MBWA	Marble Bar	71.59	102	PFAKE		07 13 20.0	+16
MBWA				LR	LR		
	comp=Z,6µm,19.0s						
MDRS	Chennai	71.64	47	*e*P	P	07 13 01.2	-3.5
MNAI	Manna	71.75	77	*e*P	P	07 13 05.0	-0.5
	comp=Z,511nm,1.4s						
MNAI				LR	LR		
	comp=Z,3µm,20.0s						
SMDO	Samad	71.97	22	P	P	07 13 08.0	+1.4
	SNR=7.2						
CGJI	Cibinong	71.99	81	P	P	07 13 19.3	+12
HOQ	Hoqain	72.28	22	P	P	07 13 09.4	+1.1
	SNR=7.4						
WSAR	Wadi Sarin	72.30	23	LR	LR	07 39 03.4	
	comp=Z,10µm,21.2s,baz=208,slow=31						
WSAR	Wadi Sarin	72.30	23	P	P	07 13 09.2	+0.8
	SNR=12						
ALNE	Al Ain	72.35	20	*i* P	P	07 13 09.9	+1.1
	SNR=8.1						
GSI	Gunungsitoli	72.38	69	*e*P	P	07 13 09.1	-0.1
	comp=Z,240nm,1.5s						
GSI				LR	LR		
	comp=Z,6µm,18.0s						
GSI	Gunungsitoli	72.38	69	P	P	07 13 12.9	+3.7
	comp=Z,108nm,1.4s						
KRJI	Kerinci	72.41	74	P	P	07 13 23.7	+14
BIDO	Bidbid	72.43	22	P	P	07 13 11.0	+1.8
	SNR=9.4						
BIDO				P	P	07 13 11.0	+1.8
	SNR=9.4						
MDSI	Maura Dua	72.49	78	P	P	07 13 11.0	+1.1
	comp=Z,35nm,1.8s,comp=Z,1µm						
RCBR	Riachuelo	72.51	280	*e*P	P	07 13 07.9	-2.2
	comp=Z,67nm,1.0s						
RCBR				LR	LR		
	comp=Z,30µm,19.0s						
RCBR	Riachuelo	72.51	280	*e*P	P	07 13 07.9	-2.2
RCBR				pmax	pmax		
	comp=Z,67nm,1.0s						
RCBR				MLR	MLR		
	comp=Z,30µm,19.0s						
LHSI	Lahat	72.53	77	P	P	07 13 12.7	+2.6
	comp=Z,91nm,1.2s,comp=Z,4µm						
PDSI	Padang	72.61	73	P	P	07 13 12.9	+2.2
	comp=Z,80nm,1.3s,comp=Z,4µm						
AJN	Ajban	72.66	19	P	P	07 13 11.7	+1.2
AJN	Ajban	72.66	19	P	P	07 13 12.9	+2.4
	SNR=6.8						
AJN				P	P	07 13 12.9	+2.4
	SNR=6.8						
KLSI		72.72	79	P	P	07 13 13.4	+2.1
	comp=Z,76nm,1.8s,comp=Z,2µm						
ASUD	Al Ashush, Dub	72.80	19	*i* P	P	07 13 12.3	+1.0
	SNR=5.8						
ASUD	Al Ashush, Dub	72.80	19	P	P	07 13 12.4	+1.0
	SNR=6.0						
ASUD				P	P	07 13 12.4	+1.0
	SNR=6.0						
ITRB	Iturama	72.82	259	*e*P	P	07 13 12.8	+0.9
CPUP	Villa Florida	72.97	250	P	P	07 13 12.7	+0.2
	comp=Z,61nm,0.9s,baz=128,slow=5.7,SNR=76						
CPUP				LR	LR	07 38 44.7	
	comp=Z,1µm,21.7s,baz=141,slow=30						
CPUP	Villa Florida	72.97	250	*e*P	P	07 13 12.8	+0.2
	comp=Z,107nm,1.1s						
CPUP	Villa Florida	72.97	250	*e*P	P	07 13 12.8	+0.2
CPUP				pmax	pmax		
	comp=Z,107nm,1.1s						
CPUP	Villa Florida	72.97	250	*e*P	P	07 13 12.9	+0.3
FAQ	Al Faqa, Dubai	72.97	20	*i* P	P	07 13 13.1	+0.7
	SNR=8.2						
FAQ	Al Faqa, Dubai	72.97	20	P	P	07 13 13.2	+0.8
	SNR=8.6						
FAQ				P	P	07 13 13.2	+0.8
	SNR=8.6						
ASHO	Ashiyiah	73.03	20	*i* P	P	07 13 12.4	-0.3
	SNR=14						
ASHO	Ashiyiah	73.03	20	P	P	07 13 13.2	+0.4
	SNR=12						
ASHO				P	P	07 13 13.2	+0.4
	SNR=12						
TAU	Tasmania Unive	73.03	135	PFAKE		07 13 20.0	+7.3
TAU				LR	LR		
	comp=Z,15µm,21.0s						
LEM	Lembang	73.16	82	P	P	07 13 15.9	+1.8
	comp=Z,71nm,0.9s,baz=166,slow=7.1,SNR=11						
LEM				LR	LR	07 36 44.5	
	comp=Z,4µm,21.9s,baz=216,slow=29						
HATD	Hatta, Dubai	73.18	20	*i* P	P	07 13 14.3	+0.6
	SNR=20						
HATD	Hatta, Dubai	73.18	20	P	P	07 13 14.2	+0.6
	SNR=14						
HATD				P	P	07 13 14.2	+0.6
	SNR=14						
NAZ	Nazwa, Dubai	73.22	20	*i* P	P	07 13 15.0	+1.1
	SNR=12						
NAZ	Nazwa, Dubai	73.22	20	P	P	07 13 14.9	+1.1
	SNR=13						
NAZ				P	P	07 13 14.9	+1.1
	SNR=13						
SDSI	Sungai Dareh	73.24	73	P	P	07 13 15.4	+1.1
MNSI	Mandailing Nat	73.31	71	P	P	07 13 16.7	+2.0
	comp=Z,54nm,0.9s,comp=Z,13µm						
UOSS	Minazif	73.31	20	*e*P	P	07 13 14.7	+0.3
	comp=Z,170nm,1.4s						
UOSS				LR	LR		
	comp=Z,8µm,19.0s						
UOSS	Minazif	73.31	20	*i* P	P	07 13 14.8	+0.3
	SNR=10						
UOSS	Minazif	73.31	20	P	P	07 13 14.7	+0.3
	SNR=7.6						
UOSS				P	P	07 13 14.7	+0.3
	SNR=7.6						
MOO	Moorlands	73.31	134	P	P	07 13 15.0	+0.6
	baz=73,SNR=4.4						
POO	Poona	73.36	39	*e*P	P	07 13 14.3	-0.6
TAM	Tamanrasset	73.55	332	*e*pP	P	07 13 17.3	+1.3
TAM				LR	LR		
	comp=Z,23µm,18.0s						
TAM	Tamanrasset	73.55	332	*e*P	P	07 13 17.3	+1.3
TAM				MLR	MLR		
	comp=Z,23µm,18.0s						
TPTI		73.61	67	P	P	07 13 18.9	+2.4
	comp=Z,36nm,1.3s,comp=Z,798nm						
MDH	Madha	73.67	20	*i* P	P	07 13 16.5	0.0
	SNR=7.6						
MDH	Madha	73.67	20	P	P	07 13 16.7	+0.2
	SNR=5.7						
MDH				P	P	07 13 16.7	+0.2
	SNR=5.7						
MSFE	Esma-Masafi	73.70	20	P	P	07 13 16.0	-0.7
UMQ	Umm Al-Quwin	73.74	20	P	P	07 13 17.8	+0.9
MLSI	Meulaboh, Aceh	73.88	66	P	P	07 13 21.1	+3.0
	comp=Z,107nm,1.3s						
BKNI	Bangkinang	73.92	72	*e*P	P	07 13 19.9	+1.5
	comp=Z,392nm,1.3s						
BKNI				LR	LR		
	comp=Z,7µm,20.0s						
BKNI	Bangkinang	73.92	72	P	P	07 13 23.4	+5.1
BDFB	Brasilia	74.00	264	P	P	07 13 19.8	+0.8
	comp=Z,46nm,1.0s,baz=124,slow=4.8,SNR=39						
BDFB				LR	LR	07 39 00.3	
	comp=Z,7µm,21.4s,baz=131,slow=30						
BDFB	Brasilia	74.00	264	*e*P	P	07 13 19.4	+0.4
	comp=Z,139nm,1.2s						
BDFB				*e*P	P	07 13 19.8	+0.8
BDFB				LR	LR		
	comp=Z,9µm,22.0s						
BBOO	Buckleboo	74.13	121	*e*P	P	07 13 18.3	-1.1
	comp=Z,84nm,1.1s						
BBOO				LR	LR		
	comp=Z,7µm,18.0s						
BBOO	Buckleboo	74.13	121	P	P	07 13 18.7	-0.7
	baz=74,SNR=8.0						
KCSI	Kotacane, Aceh	74.19	67	P	P	07 13 21.5	+1.6
	comp=Z,113nm,1.3s,comp=Z,2µm						
SHME	Shamm	74.36	20	P	P	07 13 20.8	+0.3
PSI	Prapat	74.39	69	P	P	07 13 22.0	+0.8
	comp=Z,18nm,0.9s,baz=183,slow=8.7,SNR=9.0						
PSI	Prapat	74.39	69	*e*P	P	07 13 18.0	-3.2
	comp=Z,46nm,1.1s						
PSI				LR	LR		
	comp=Z,5µm,19.0s						
PSI	Prapat	74.39	69	*e*P	P	07 13 18.0	-3.2
PSI				pmax	pmax		
	comp=Z,46nm,1.1s						
PSI				MLR	MLR		
	comp=Z,5µm,19.0s						
HYB	Hyderabad	74.53	43	*i* P	P	07 13 21.0	-0.7
HYB				*e*S	S	07 23 00.0	+2.2
HYB				*e*SKS	SKSac	07 23 28.0	-2.8
HYB				LR	LR		
	comp=Z,7.7nm,24.0s						
HYB	Hyderabad	74.53	43	*e*P	P	07 13 21.1	-0.7
HYB				IAmb	IAmb	07 13 22.8	
	comp=Z,91nm,1.3s						
ARPS	Mount Arapiles	74.64	127	P	P	07 13 22.4	+0.2
	baz=74,SNR=26						
WRKA	Warakurna	74.67	110	P	P	07 13 21.8	-0.9
	baz=74,SNR=11						
SMRI	Semarang	74.96	84	*e*P	P	07 13 24.5	+0.1
	comp=Z,84nm,1.1s						
LHMI	Lhok Sumawe	74.96	66	*e*P	P	07 13 25.6	+1.3
	comp=Z,277nm,1.2s						
LHMI				LR	LR		
	comp=Z,9µm,21.0s						
C2SB	Chapadao do Su	75.16	258	*e*P	P	07 13 27.1	+1.5
HTT	Hallett	75.38	123	P	P	07 13 26.0	-0.6
	baz=75,SNR=4.6						
EIL	Elat	75.41	0	P	P	07 13 27.6	+1.1
	comp=Z,101nm,2.5s						
NGJI	Ngawi	75.44	85	P	P	07 13 35.6	+8.5
HRFI	Mount Harif	75.77	0	P	P	07 13 29.6	+1.0
	comp=Z,192nm,1.4s						
GO05	Huala	75.81	234	*e*P	P	07 13 28.2	-0.9
	comp=Z,48nm,1.0s						
AQDB	Aquidauana	75.92	255	*e*P	P	07 13 30.5	+0.7
TOO	Toolangi	76.04	130	*e*P	P	07 13 30.7	+0.3
	comp=Z,116nm,1.0s						
TOO				LR	LR		
	comp=Z,4µm,21.0s						
TOO	Toolangi	76.04	130	P	P	07 13 30.7	+0.3
	baz=76,SNR=18						
TOO	Toolangi	76.04	130	*e*P	P	07 13 30.7	+0.3
TOO				pmax	pmax		
	comp=Z,116nm,1.0s						
TOO				MLR	MLR		
	comp=Z,4µm,21.0s						
TPI	Tanjungpandan	76.12	79	P	P	07 13 36.8	+5.8
GMJI	Gumukmas	76.17	88	P	P	07 13 38.7	+7.3
PEL	Peldehue	76.45	236	*e*P	P	07 13 31.6	-1.1
	comp=Z,126nm,1.2s						
PEL				LR	LR		
	comp=Z,2µm,21.0s						
PEL	Peldehue	76.45	236	*e*P	P	07 13 31.7	-1.1
PEL				pmax	pmax		
	comp=Z,126nm,1.2s						
PEL				MLR	MLR		
	comp=Z,2µm,21.0s						
JAGI	Jajag, Banyuwa	76.53	88	PFAKE		07 13 40.0	+6.6
JAGI				LR	LR		
	comp=Z,6µm,18.0s						
KZIT	Kziot	76.64	360	P	P	07 13 35.8	+2.3
	comp=Z,154nm,2.0s						
PEXB	Peixe	76.66	266	*e*P	P	07 13 34.9	+0.7
MYKOM	Kota Tinggi	76.87	73	*e*P	P	07 13 33.6	-1.7
	comp=Z,52nm,1.2s						
MYKOM				LR	LR		
	comp=Z,6µm,21.0s						

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IPM   Ipoh              77.02  69 eP        P         07 13 36.1  0.0
            comp=Z,92nm,1.3s
IPM                               LR        LR
            comp=Z,3µm,18.0s
KULM  Kulim             77.38  69 eP        P         07 13 38.5 +0.3
            comp=Z,171nm,1.3s
KULM                              LR        LR
            comp=Z,4µm,21.0s
ASF   Jabal al Asfar    77.92   2  P        P         07 13 42.2 +1.4
            comp=Z,88nm,1.9s
NGP   Nagpur            77.98  42 i P       P         07 13 41.3  0.0
NGP                               ex        x         07 23 32.4
STKA  Stephens Creek    78.06 124  P        P         07 13 41.2 -0.6
            comp=Z,121nm,1.1s,baz=203,slow=4.4,SNR=62
STKA                              LR        LR        07 42 17.4
            comp=Z,3µm,19.9s,baz=219,slow=31
STKA  Stephens Creek    78.06 124 eP        P         07 13 41.1 -0.6
            comp=Z,39nm,1.1s
STKA                              LR        LR
            comp=Z,700nm,20.0s
STKA  Stephens Creek    78.06 124  P        P         07 13 41.1 -0.6
            baz=78,SNR=54
TRTT  Trang             78.70  66  P        P         07 13 46.1 +0.7
TRTT                               P        PcP       07 13 56.1 +1.8
DGPR  DIGLIPUR          78.71  57 eP        P         07 13 46.0 +0.6
DGPR                              IAmb      IAmb      07 13 53.7
            comp=Z,297nm,1.6s
PLAI  Plampang          78.80  91  P        P         07 13 46.2 +0.1
            comp=Z,121nm,1.3s,comp=Z,2µm
KSDI  Kefar Szold       78.92   1  P        P         07 13 48.1 +2.0
            comp=Z,123nm,1.5s
BHPL  Bhopal            79.07  39 eP        P         07 13 47.6 +0.4
BHPL                              IAmb      IAmb      07 13 49.3
            comp=Z,76nm,0.8s
ASAR  Alice Springs     79.26 113  P        P         07 13 47.0 -1.6
            comp=Z,35nm,0.9s,baz=214,slow=5.9,SNR=99
ASAR                              LR        LR        07 41 56.3
            comp=Z,5µm,20.7s,baz=234,slow=30
ASAR  Alice Springs     79.26 113  P        P         07 13 47.0 -1.6
AS31  Alice Springs     79.26 113 eP        P         07 13 47.3 -1.3
            comp=Z,10.0nm,0.9s
LCO   Las Campanas      79.46 239 eP        P         07 13 48.8 -1.1
            comp=Z,110nm,1.2s
LCO   Las Campanas      79.46 239 eP        P         07 13 48.8 -1.1
LCO                               pmax      pmax
            comp=Z,110nm,1.2s
LCO   Las Campanas      79.46 239 eP        P         07 13 48.7 -1.1
WHZ   Wether Hill Ro    79.52 149 eP        P         07 13 49.7 +0.2
            comp=Z,131nm,1.0s
WHZ                               LR        LR
            comp=Z,4µm,20.0s
DCZ   Deep Cove         79.59 148 eP        P         07 13 49.5 -0.4
            comp=Z,72nm,1.1s
DCZ                               LR        LR
            comp=Z,5µm,20.0s
CAN   Canberra          79.59 131 eP        P         07 13 50.4 +0.2
            comp=Z,119nm,1.3s
CAN                               LR        LR
            comp=Z,4µm,22.0s
CAN   Canberra          79.59 131 eP        P         07 13 50.4 +0.2
CAN                               pmax      pmax
            comp=Z,119nm,1.3s
CAN                               MLR       MLR
            comp=Z,4µm,22.0s
CNB   Canberra Magne    79.79 131  P        P         07 13 51.6 +0.3
            baz=80,SNR=12
MLZ   Mavora Lakes      80.03 149 eP        P         07 13 52.5 +0.1
            comp=Z,88nm,1.1s
MLZ                               LR        LR
            comp=Z,6µm,20.0s
YNG   Young             80.05 130  P        P         07 13 53.3 +0.6
            baz=80,SNR=18
JBP   Jabalpur          80.16  41⇑eP        P         07 13 51.6 -1.5
JBP                               ex        x         07 23 43.1
GO03  Copiap            80.21 240  PFAKE              07 14 00.0 +6.3
GO03                               LR       LR
            comp=Z,3µm,22.0s
BWNR  Bhubaneshwar      80.56  48 eP        P         07 13 55.2 -0.1
BWNR                              IAmb      IAmb      07 13 58.9
            comp=Z,62nm,0.7s
CMSA  Cobar Meteorol    80.65 126  P        P         07 13 55.8 -0.1
            baz=80,SNR=24
CSS   Mathiatis         80.70 359 eP        P         07 13 59.3 +3.5
CSS   Mathiatis         80.70 359 eP        P         07 13 54.4 -1.3
            comp=Z,157nm,1.5s
CSS                               LR        LR
            comp=Z,7µm,20.0s
CSS   Mathiatis         80.70 359  P        P         07 13 57.2 +1.4
            comp=Z,18nm,2.5s
WKZ   Wanaka            80.82 149 eP        P         07 13 56.9 +0.3
            comp=Z,191nm,1.1s
WKZ                               LR        LR
            comp=Z,6µm,21.0s
LEF   Lefka             80.86 358 eP        P         07 14 01.1 +4.5
KSM   Kuching           81.00  78 eP        P         07 13 58.0 +0.1
            comp=Z,110nm,1.4s
KSM                               LR        LR
            comp=Z,4µm,20.0s
GVD   Gavdhos           81.15 351 eP        P         07 14 03.0 +4.9
ODZ   Otahua Downs      81.20 150 eP        P         07 13 58.8 +0.1
            comp=Z,89nm,1.1s
ODZ                               LR        LR
            comp=Z,4µm,21.0s
ZKR   Zakros            81.21 353 eP        P         07 14 03.7 +5.2
EREN  Erenkoy           81.25 359 eP        P         07 14 03.5 +4.8
IDI   Anoyia            81.51 352 eP        P         07 14 05.3 +5.2
KNRA  Kununurra         81.53 104  P        P         07 14 01.2 +0.4
            baz=82,SNR=7.8
KARP  Karpathos         81.56 354 eP        P         07 14 04.6 +4.2
KARP  Karpathos         81.56 354 eP        P         07 14 00.0 -0.4
            comp=Z,370nm,1.5s
KARP                              LR        LR
            comp=Z,14µm,20.0s
EDFI  Ende, Flores      81.57  94  P        P         07 14 01.1 -0.1
            comp=Z,72nm,1.1s,comp=Z,2µm
GO02  Mina Guanaco      81.59 243 eP        P         07 14 01.0 -0.4
            comp=Z,33nm,0.8s
GO02                              LR        LR
            comp=Z,3µm,19.0s
LBZ   Lake Benmore      81.61 149 eP        P         07 14 00.6 -0.2
            comp=Z,84nm,0.9s
LBZ                               LR        LR
            comp=Z,4µm,20.0s
IMMV  Iera Moni Meta    81.77 351 eP        P         07 14 06.5 +5.0
IMMV  Iera Moni Meta    81.77 351  P        P         07 14 05.7 +4.2
CHAN  Chania            81.82 351  P        P         07 14 06.3 +4.6
TEKE  Tekeli-Mersin     81.88 359 eP        P         07 14 05.8 +3.8
AKKU  Akkuyu-Mersin     81.89 359 eP        P         07 14 04.4 +2.4
IKL   Isikli            81.96 359 eP        P         07 14 06.2 +3.8
KSL   Kastellorizon     82.01 356  P        P         07 14 06.7 +4.0
MMRI  Maumere           82.03  94 eP        P         07 14 03.4  0.0
            comp=Z,173nm,1.3s
MMRI  Maumere           82.03  94  P        P         07 14 05.3 +1.8
            comp=Z,116nm,0.9s
BERE  Bereket-Mersin    82.08 359 eP        P         07 14 07.5 +4.3
AKAS  Kas               82.09 356 eP        P         07 14 05.7 +2.4
SILI  Silifke-Mersin    82.09 359 eP        P         07 14 07.4 +4.3
ARG   Arkhangelos       82.16 355 eP        P         07 14 08.1 +4.6
ARG   Arkhangelos       82.16 355  P        P         07 14 07.4 +3.9
TEVE  Tevekalti-Mers    82.16 359 eP        P         07 14 06.9 +3.3
KEBE  Keben-Mersin      82.17 359 eP        P         07 14 06.7 +3.1
KIZK  Mersin            82.20 359 eP        P         07 14 07.7 +4.0
WR1   Warramunga Arr    82.20 111 eP        P         07 14 03.2 -1.1
WRA   Warramunga Arr    82.20 111  P        P         07 14 03.2 -1.1
            comp=Z,32nm,0.9s,baz=221,slow=4.8,SNR=46
WB2   Warramunga Arr    82.21 111 eP        P         07 14 03.3 -1.1
            comp=Z,76nm,1.1s
WB2                               LR        LR
            comp=Z,5µm,18.0s
WC3   Warramunga Arr    82.21 111 eP        P         07 14 03.6 -0.8
            comp=Z,75nm,1.1s
WC1   Warramunga Arr    82.21 111  PFAKE              07 14 20.0  +16
WC1                                LR       LR
            comp=Z,3µm,20.0s
WRAB  Tennant Creek     82.22 111 eP        P         07 14 03.3 -1.1
            comp=Z,73nm,1.2s
WRAB                              LR        LR
            comp=Z,8µm,22.0s
WRAB  Tennant Creek     82.22 111 eP        P         07 14 03.3 -1.1
WRAB                              pmax      pmax
            comp=Z,73nm,1.2s
WRAB                              MLR       MLR
            comp=Z,8µm,22.0s
FOZ   Fox Glacier       82.22 149 eP        P         07 14 03.4 -0.6
            comp=Z,121nm,0.9s
FOZ                               LR        LR
            comp=Z,6µm,21.0s
WC2   Warramunga Arr    82.23 111  PFAKE              07 14 20.0  +16
WC2                                LR       LR
            comp=Z,5µm,18.0s
ANKY  Antikythira Is    82.25 351  P        P         07 14 08.6 +4.7
KRTS  Karatas           82.29   0 eP        P         07 14 08.3 +4.2
MGCD  Mangrove Creek    82.33 131  P        P         07 14 05.8 +1.0
            baz=82,SNR=4.7
RPZ   Rata Peaks        82.51 150 eP        P         07 14 05.6  0.0
            comp=Z,110nm,1.0s
RPZ                               LR        LR
            comp=Z,5µm,18.0s
FETY  Fethiye           82.52 355 eP        P         07 14 10.1 +4.7
YURE  YUREGIR           82.55   1 eP        P         07 14 19.2  +14
MERS  Mersin            82.59 360 eP        P         07 14 09.9 +4.1
ELL   Elmali            82.59 356 eP        P         07 14 09.7 +3.8
SOEI  Soe               82.65  96 eP        P         07 14 06.8 -0.1
            comp=Z,154nm,1.4s
SOEI                              LR        LR
            comp=Z,6µm,20.0s
SOEI  Soe               82.65  96  P        P         07 14 10.4 +3.6
            comp=Z,118nm,1.6s,comp=Z,2µm
KTHA  Kythira Island    82.66 350  P        P         07 14 10.8 +4.7
KTHR  Kythira           82.67 350  P        P         07 14 10.0 +3.8
ANTB  Antalya           82.70 357 eP        P         07 14 10.4 +4.1
DAT   Datca             82.71 354 eP        P         07 14 10.6 +4.1
DALY  Dalyan (Mula)     82.72 355 eP        P         07 14 11.2 +4.8
CEYT  Ceyhan            82.73   1 eP        P         07 14 11.2 +4.8
TURN  Turunc            82.78 355 eP        P         07 14 11.2 +4.5
KORT  Korkueli          82.82 356 eP        P         07 14 12.5 +5.4
KAPI  Kappang           82.87  90  P        P         07 14 07.0 -0.9
            comp=Z,30nm,1.1s,baz=217,slow=5.6,SNR=8.9
KAPI  Kappang           82.87  90 eP        P         07 14 07.0 -0.9
            comp=Z,100nm,1.5s
KAPI  Kappang           82.87  90  P        P         07 14 07.0 -0.9
KAPI  Kappang           82.87  90  P        P         07 14 07.5 -0.4
            SNR=6.2
KAPI                               P        P         07 14 07.5 -0.4
            SNR=6.2
BKSI  Bulukumba         82.91  90  P        P         07 14 08.0  0.0
            comp=Z,58nm,2.1s,comp=Z,1µm
AMGA  Amorgos Island    82.94 353  P        P         07 14 11.2 +3.6
KARA  Karaisali         82.98   0 eP        P         07 14 11.8 +4.1
SBUM  Sibu              83.01  79 eP        P         07 14 08.2 -0.4
            comp=Z,32nm,1.3s
SBUM                              LR        LR
            comp=Z,2µm,21.0s
LVC   Limon Verde       83.02 245 eP        P         07 14 09.1 +0.1
            comp=Z,60nm,0.9s
LVC   Limon Verde       83.02 245 eP        P         07 14 09.1 +0.1
LVC                               pmax      pmax
            comp=Z,60nm,0.9s
LVC   Limon Verde       83.02 245 eP        P         07 14 09.8 +0.8
BODT  Bodrum            83.06 354 eP        P         07 14 12.5 +4.3
BODT  Bodrum            83.06 354  P        P         07 14 10.1 +1.9
YER   Yerkesik          83.06 355 eP        P         07 14 13.2 +5.0
YER   Yerkesik          83.06 355  P        P         07 14 11.6 +3.4
MQZ   McQueen's Vall    83.07 151 eP        P         07 14 08.4 -0.1
            comp=Z,114nm,1.0s
MQZ                               LR        LR
            comp=Z,4µm,20.0s
VLI   Veliai            83.13 350  P        P         07 14 12.5 +4.0
CRLZ  Canterbury Las    83.17 151 eP        P         07 14 09.2 +0.2
            comp=Z,179nm,1.0s
CRLZ                              LR        LR
            comp=Z,4µm,20.0s
OXZ   Oxford            83.19 150 eP        P         07 14 09.2 +0.1
            comp=Z,76nm,1.3s
APE   Apeiranthos       83.21 352 eP        P         07 14 12.6 +3.6
APE   Apeiranthos       83.21 352  P        P         07 14 12.6 +3.6
APE   Apeiranthos       83.21 352ceP        P         07 14 12.5 +3.6
APE                               pmax      pmax
            comp=Z,209nm,2.1s
KMRS  Kahramanmaras     83.24   2 eP        P         07 14 13.7 +4.6
DYR   Agios Nikonas     83.25 350  P        P         07 14 12.5 +3.3
BCK   Bucak             83.27 357 eP        P         07 14 13.7 +4.4
PB10  IPOC Station P    83.39 243 eP        P         07 14 09.1 -1.4
            comp=Z,124nm,1.4s
PB10                              LR        LR
            comp=Z,3µm,21.0s
PYL   PYLOS             83.45 349  P        P         07 14 14.2 +4.0
BOK   Bokaro            83.52  46 eP        P         07 14 09.7 -1.2
BOK                               IAMs_20   IAMs_20   07 51 54.1
            comp=Z,5µm,11.9s
BNSI  Bone              83.56  90  P        P         07 14 14.7 +3.3
            comp=Z,32nm,1.2s,comp=Z,2µm
WDD   Wied Dalam        83.59 343 eP        P         07 14 10.5 -0.4
            comp=Z,188nm,1.3s
WDD                               LR        LR
            comp=Z,26µm,18.0s
ISP   Isparta           83.63 357 eP        P         07 14 14.5 +3.3
ISP   Isparta           83.63 357 eP        P         07 14 10.0 -1.2
            comp=Z,93nm,1.2s
ISP                               LR        LR
            comp=Z,8µm,18.0s
ISP   Isparta           83.63 357 eP        P         07 14 10.0 -1.2
ISP                               pmax      pmax
            comp=Z,93nm,1.2s
ISP                               MLR       MLR
            comp=Z,8µm,18.0s
SPSI  Sidrap Palu       83.63  89  P        P         07 14 13.1 +1.3
            comp=Z,47nm,1.5s,comp=Z,913nm
KONT  Konya--Tatoy      83.69 358 eP        P         07 14 13.2 +1.8
GCAM  G?zelcaml?        83.70 354 eP        P         07 14 15.5 +4.1
ITM   Ithomi            83.71 350 eP        P         07 14 15.5 +4.0
ITM   Ithomi            83.71 350 eP        P         07 14 10.4 -1.1
            comp=Z,56nm,1.2s
ITM                               LR        LR
            comp=Z,9µm,19.0s
ITM   Ithomi            83.71 350  P        P         07 14 14.9 +3.4
SMG   Samos             83.74 354  P        P         07 14 15.2 +3.6
NDI   New Delhi         83.75  37 eP        P         07 14 11.0 -0.9
LTZ   Lake Taylor       83.75 150 eP        P         07 14 12.0 -0.1
            comp=Z,300nm,1.0s
LTZ                               LR        LR
            comp=Z,6µm,19.0s
KRND  KRANIDI           83.77 351  P        P         07 14 15.4 +3.6
DID   Didima            83.88 351  P        P         07 14 15.4 +3.0
SULT  Sultanhani-AKS    83.92 359 eP        P         07 14 17.5 +4.8
LADK  Ladik-KONYA       83.94 358 eP        P         07 14 16.9 +4.1
TRIP  Tripoli           84.01 350  P        P         07 14 18.0 +4.9
AMT   Artemida-Makis    84.09 350  P        P         07 14 17.1 +3.7
VLY   Voula,Athens      84.16 351  P        P         07 14 14.4 +0.6
SIMRM Sittwe            84.23  53  PFAKE              07 14 30.0  +15
SIMRM                              LR       LR
            comp=Z,2µm,18.0s
ATHU  Athens Univers    84.27 351  P        P         07 14 18.4 +4.0
ATH   Athens Observa    84.28 351  P        P         07 14 18.6 +4.2
DARE  Darende-Malaty    84.32   2 eP        P         07 14 19.8 +5.1
TTSI  Tana Toraja       84.32  88  P        P         07 14 29.0  +14
PTL   Penteli           84.35 351  P        P         07 14 19.0 +4.2
SHUT  Suhut-Afyon       84.36 357 eP        P         07 14 18.9 +4.0
ZKS   Zakynthos         84.37 349  P        P         07 14 15.9 +1.0
BLCB  Balcova           84.39 354 eP        P         07 14 19.9 +5.0
URLA  Izmir             84.40 353 eP        P         07 14 19.7 +4.7
GUR   Goura             84.41 350  P        P         07 14 19.1 +3.9
KULA  Kula-Manisa       84.41 355 eP        P         07 14 20.0 +4.8
KULA  Kula-Manisa       84.41 355  P        P         07 14 20.0 +4.8
UTHA  Uthaitani         84.47  61  P        P         07 14 16.8 +1.0
THAL  Thalero           84.47 350  P        P         07 14 18.8 +3.5
CHOS  Chios island      84.47 353 eP        P         07 14 18.4 +3.0
CHOS  Chios island      84.47 353  P        P         07 14 18.4 +3.0
DRO   Drossia           84.50 350  P        P         07 14 20.0 +4.5
KHZ   Kahutara          84.51 151  PFAKE              07 14 30.0  +14
KHZ                                LR       LR
            comp=Z,8µm,19.0s
VILL  Villia            84.52 351  P        P         07 14 19.4 +3.7
PB01  IPOC Station P    84.53 245 eP        P         07 14 16.8 +0.3
            comp=Z,78nm,1.2s
PB01                              LR        LR
            comp=Z,3µm,22.0s
KLV   Kalavryta, Ach    84.53 350  P        P         07 14 18.9 +3.1
BNN   Bunyan            84.57   1 eP        P         07 14 17.7 +1.7
UMPA  Umpang Tak        84.61  60  P        P         07 14 16.5 -0.1
RLS   Riolos of Patr    84.63 349  P        P         07 14 19.4 +3.3
KIZT  Kizilcal          84.64 358 eP        P         07 14 19.8 +3.5
KEST  Kesra             84.64 339  P        P         07 14 18.2 +1.8
            comp=Z,44nm,1.3s,baz=149,slow=4.4,SNR=20
KEST                              LR        LR        07 52 01.5
            comp=Z,31µm,20.8s,baz=104,slow=36
KEST  Kesra             84.64 339 eP        P         07 14 15.5 -0.9
            comp=Z,28nm,1.3s
KEST                              LR        LR
            comp=Z,31µm,21.0s
TRAZ  Trapeza           84.65 350  P        P         07 14 19.5 +3.2
LAKA  Lakka             84.75 350  P        P         07 14 21.6 +4.8
KFL   Anninata          84.77 349  P        P         07 14 21.2 +4.3
ARMA  Armidale          84.78 129 eP        P         07 14 16.6 -0.9
            comp=Z,64nm,1.3s
ARMA                              LR        LR
            comp=Z,4µm,18.0s
ARMA  Armidale          84.78 129  P        P         07 14 17.9 +0.3
            baz=85,SNR=7.0
DSF   Desfina           84.85 350  P        P         07 14 19.7 +2.4
TRIZ  Trizonia          84.86 350  P        P         07 14 21.6 +4.3
VLS   Valsamata         84.87 349  P        P         07 14 20.1 +2.7
THZ   Tophouse          84.87 150  PFAKE              07 14 30.0  +12
THZ                                LR       LR
            comp=Z,5µm,19.0s
KALE  Kalithea          84.88 350  P        P         07 14 21.6 +4.1
ARF   Arif              84.89 327  P        P         07 14 24.0 +6.2
SERG  Sergoula          84.91 350  P        P         07 14 19.9 +2.3
LKR   Lokris            85.03 351  P        P         07 14 21.8 +3.6
ATAL  Atalanti          85.07 351  P        P         07 14 22.0 +3.6
DKL   Dikili            85.08 354 eP        P         07 14 23.3 +4.9
ANX   Ano Chora         85.11 350  P        P         07 14 22.4 +3.7
QIS   Mount Isa         85.14 115  P        P         07 14 18.9 -0.5
            baz=85,SNR=28
CIFT  Cifteler, Eski    85.14 357 eP        P         07 14 23.4 +4.6
FSK   Fiskardo          85.15 349  P        P         07 14 21.9 +3.2
MTN   Manton Dam        85.15 103 eP        P         07 14 18.8 -0.7
            comp=Z,77nm,1.3s
MTN                               LR        LR
            comp=Z,4µm,20.0s
MTN   Manton Dam        85.15 103  P        P         07 14 19.5  0.0
            baz=85,SNR=5.7
SVRH  Sivrihisar-ESK    85.21 357 eP        P         07 14 21.4 +2.2
SMIA  Simia             85.24 351  P        P         07 14 23.1 +3.9
TVSB  Tavsanli          85.30 356 eP        P         07 14 24.7 +5.1
PRK   Paraskevi         85.31 353  P        P         07 14 24.7 +5.2
SIGR  SIGRI             85.31 353 eP        P         07 14 24.4 +4.9
SIGR  SIGRI             85.31 353  P        P         07 14 23.9 +4.4
GO01  Chusmiza          85.35 247 eP        P         07 14 21.8 +0.8
            comp=Z,64nm,0.9s
GO01                              LR        LR
            comp=Z,2µm,21.0s
YOZ   Yozgat            85.35   0 eP        P         07 14 22.3 +2.4
OUZM  OUZ               85.41 325  P        P         07 14 27.0 +6.5
GOLM  Goulmima          85.41 327  P        P         07 14 27.0 +6.6
EVR   Evrytania         85.44 350  P        P         07 14 24.1 +3.8
BRTR  Keskin Array B    85.44 359  P        P         07 14 20.9 +0.5
            comp=Z,6.0nm,0.8s,baz=168,slow=7.8,SNR=21
BRTR                              LR        LR        07 55 27.0
            comp=Z,4µm,18.3s,baz=177,slow=38
BRTR  Keskin Array B    85.44 359ceP        P         07 14 21.2 +0.8
BRTR                              pmax      pmax
            comp=Z,6.0nm,0.9s
SFNM  Sidi Ifni         85.44 322  P        P         07 14 28.0 +7.5
BR101 Keskin Array S    85.45 359 eP        P         07 14 20.9 +0.5
BR131 Keskin Array S    85.45 359 eP        P         07 14 20.9 +0.5
            comp=Z,35nm,1.1s
BR131 Keskin Array S    85.45 359  P        P         07 14 22.4 +2.0
            SNR=17
LKD2  Lefkada island    85.46 349  P        P         07 14 23.9 +3.6
AGG   Agios Georgios    85.48 350 eP        P         07 14 24.9 +4.5
AGG   Agios Georgios    85.48 350 eP        P         07 14 21.7 +1.3
            comp=Z,134nm,1.2s
AGG   Agios Georgios    85.48 350  P        P         07 14 24.2 +3.8
AGG   Agios Georgios    85.48 350 eP        P         07 14 21.7 +1.3
AGG                               pmax      pmax
            comp=Z,134nm,1.2s
TDRA  Tendrara          85.54 330  P        P         07 14 28.0 +6.9
CLTB  Caltabellotta     85.54 343  PFAKE              07 14 30.0 +9.2
CLTB                               LR       LR
            comp=Z,12µm,20.0s
QRZ   Quartz Range      85.57 149  PFAKE              07 14 30.0 +8.8
QRZ                                LR       LR
            comp=Z,3µm,21.0s
PB11  IPOC Station P    85.58 246 eP        P         07 14 20.6 -1.1
            comp=Z,184nm,1.0s
PB11                              LR        LR
            comp=Z,2µm,19.0s
BALB  Balikesir         85.58 355 eP        P         07 14 25.9 +5.0
BALB  Balikesir         85.58 355 eP        P         07 14 22.7 +1.8
            comp=Z,789nm,1.4s
BALB                              LR        LR
            comp=Z,20µm,19.0s
ANTO  Ankara            85.60 358 eP        P         07 14 25.4 +4.3
ANTO  Ankara            85.60 358  PFAKE              07 14 30.0 +8.9
ANTO                               LR       LR
            comp=Z,7µm,20.0s
ANTO  Ankara            85.60 358  P        P         07 14 24.3 +3.2
            SNR=8.5
ANTO                               P        P         07 14 24.3 +3.2
            SNR=8.5
LOD   Lodumlu           85.62 358 eP        P         07 14 25.6 +4.4
ABSA  Djebel Ababsia    85.62 338  P        P         07 14 24.9 +3.6
CTEI  Djebel Teioual    85.71 337  P        P         07 14 26.5 +4.7
TTIG  Tnine Tigouga,    85.77 324  P        P         07 14 32.0  +10
TTIG  Tnine Tigouga,    85.77 324  P        P         07 14 30.0 +7.7
SRCK  Saricakaya, Es    85.84 357 eP        P         07 14 27.2 +5.0
SMLA  Simla             85.88  35 eP        P         07 14 21.1 -1.4
SMLA                              IAmb      IAmb      07 14 22.5
            comp=Z,2µm,3.8s
EZN   Ezine             85.88 353 eP        P         07 14 27.1 +4.8
EZN   Ezine             85.88 353  P        P         07 14 23.7 +1.4
EZN   Ezine             85.88 353⇓iP        P         07 14 25.8 +3.5
CORM  Corum             85.89 360 eP        P         07 14 25.7 +3.1
SNZO  South Karori      85.89 151  PFAKE              07 14 30.0 +7.2
SNZO                               LR       LR
            comp=Z,6µm,20.0s
CKHR  Kef el Ahmar      85.91 337  P        P         07 14 27.7 +4.9
BOZC  Bozcaada          85.92 353 eP        P         07 14 26.2 +3.7
CKFL  Kef-Lekhel        85.94 338  P        P         07 14 26.6 +3.7
CMAH  Djebel Manchou    85.97 338  P        P         07 14 28.1 +5.1
KBL   Kabul             85.99  28 eP        P         07 14 23.7 +0.4
            comp=Z,70nm,1.4s
KBL   Kabul             85.99  28 eP        P         07 14 23.7 +0.4
KBL                               pmax      pmax
            comp=Z,70nm,1.4s
MNMC  Minye Minye       86.00 247 eP        P         07 14 23.6 -0.5
            comp=Z,79nm,1.1s
MNMC                              LR        LR
            comp=Z,3µm,20.0s
TOKT  Tokat             86.05   1 eP        P         07 14 27.8 +4.6
LIA   Limnos Island     86.05 353  P        P         07 14 27.1 +3.9
THL   Klokotos Trika    86.05 350  P        P         07 14 25.6 +2.4
OUK   Oukaimeden        86.12 324  P        P         07 14 33.0 +8.8
KDU   Kakadu            86.17 104  P        P         07 14 24.4 -0.2
            baz=86,SNR=5.2
PBKT  Sadao Pong        86.17  61  P        P         07 14 25.0 +0.7
SAIH  SAIHA             86.17  52 eP        P         07 14 24.2 -0.2
SAIH                              IAmb      IAmb      07 14 25.8
            comp=Z,120nm,0.4s
SAIH                              IAMs_20   IAMs_20   07 43 07.7
            comp=Z,12µm,36.3s
KCTX  Karacabey (Bur    86.17 355 eP        P         07 14 28.3 +4.5
GEYT  Alibeck           86.22  18  P        P         07 14 24.3 +0.2
            comp=Z,2µm,0.3s,baz=224,slow=5.2,SNR=4.7
GEYT                              LR        LR        07 50 33.1
            comp=Z,2µm,21.4s,baz=215,slow=34
GYA0B ALIBECK ARRAY     86.22  18 eP        P         07 14 24.7 +0.5
            comp=Z,71nm,1.3s
GYA0B                             LR        LR
            comp=Z,7µm,18.0s
RMQ   Roma              86.22 125  P        P         07 14 25.0 +0.3
            baz=86,SNR=16
GULT  Gulveren          86.23 357 eP        P         07 14 29.3 +5.1
IGT   Igoumenitsa       86.23 349  P        P         07 14 28.4 +4.3
MDUB  Mudurnu           86.25 357 eP        P         07 14 28.9 +4.6
MDUB  Mudurnu           86.25 357  PFAKE              07 14 30.0 +5.7
MDUB                               LR       LR
            comp=Z,19µm,18.0s
MDNY  Mudanya-Bursa     86.25 355 eP        P         07 14 27.4 +3.3
ADVT  Abdulvahap        86.27 356 eP        P         07 14 28.6 +4.3
CAEH  'Ain El Ouahch    86.27 338  P        P         07 14 25.6 +1.2
MDT   Midelt            86.27 328  P        P         07 14 31.1 +6.5
EDC   Edincik           86.29 355 eP        P         07 14 29.2 +4.8
JAN   Janina            86.29 349  P        P         07 14 29.3 +4.9
GEMT  Gemlik            86.30 356 eP        P         07 14 29.5 +5.1
DFRA  Djebel Bou Aff    86.31 337  P        P         07 14 28.4 +3.7
GNI   Garni             86.32   8 eP        P         07 14 25.1 +0.4
            comp=Z,118nm,1.4s
GNI                               LR        LR
            comp=Z,10µm,21.0s
GNI   Garni             86.32   8 i P       P         07 14 26.4 +1.7
            SNR=26
GNI   Garni             86.32   8 eP        P         07 14 25.1 +0.4
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GNI				pmax	pmax		
	comp=Z,119nm,1.4s						
GNI				MLR	MLR		
	comp=Z,10µm,21.0s						
GNI	Garni	86.32	8	P	P	07 14 26.4	+1.7
	SNR=25						
GNI				P	P	07 14 26.4	+1.7
	SNR=25						
CANT	Cankiri	86.33	359	eP	P	07 14 28.9	+4.3
DANN	Dangsing	86.33	42	eP	P	07 14 25.0	-0.3
	comp=Z,367nm,1.3s						
DMN	Daman	86.34	43	eP	P	07 14 24.7	-0.6
	comp=Z,140nm,1.2s						
CM31	Chiang Mai Arr	86.40	59	eP	P	07 14 24.0	-1.5
	comp=Z,107nm,1.4s						
CM31	Chiang Mai Arr	86.40	59	P	P	07 14 25.3	-0.2
	SNR=13						
CMAR	Chiang Mai Arr	86.40	59	P	P	07 14 24.8	-0.6
	comp=Z,10nm,1.0s,baz=230,slow=5.2,SNR=26						
CMAR				LR	LR	07 46 57.0	
	comp=Z,5µm,19.9s,baz=211,slow=31						
CMAR	Chiang Mai Arr	86.40	59	ceP	P	07 14 25.7	+0.2
CMAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YLV	Yalova	86.42	356	eP	P	07 14 27.8	+2.7
TIP	Timpagrande	86.43	346	eP	P	07 14 26.7	+1.5
	comp=Z,82nm,1.4s						
TIP				LR	LR		
	comp=Z,12µm,18.0s						
TIP	Timpagrande	86.43	346	⇓iP	P	07 14 27.2	+2.0
GELI	Tayfur-Gelibol	86.44	354	eP	P	07 14 29.9	+4.8
ARMT	Armutlu	86.44	355	eP	P	07 14 29.6	+4.4
GKN	Gorkha	86.45	43	eP	P	07 14 25.0	-0.7
	comp=Z,456nm,1.5s						
PKIN	Phulchoki	86.45	43	eP	P	07 14 25.0	-0.8
	comp=Z,180nm,1.5s						
PKI	Pulchoki	86.45	43	eP	P	07 14 25.2	-0.7
	comp=Z,211nm,1.5s						
SPNC	Sapanca-Adapaz	86.49	357	eP	P	07 14 30.1	+4.7
KPRO	Kipourio	86.52	350	P	P	07 14 29.8	+4.2
DHRM	DHARAMSHALA	86.52	34	eP	P	07 14 24.6	-1.4
DHRM				IAmb	IAmb	07 14 27.4	
	comp=Z,175nm,1.7s						
DHRM				IAMs_20	IAMs_20	07 49 15.2	
	comp=Z,5µm,8.9s						
LIT	Litokhoron	86.53	351	P	P	07 14 25.4	-0.2
SAUV	Serdivan-Sakar	86.55	357	eP	P	07 14 30.3	+4.7
MRMT	Marmara Adasi	86.56	354	eP	P	07 14 30.4	+4.6
KKN	Kakani	86.57	43	eP	P	07 14 25.9	-0.5
	comp=Z,183nm,1.4s						
SMTH	Samothraki Isl	86.59	353	P	P	07 14 28.3	+2.5
OUR	Ouranopolis	86.60	352	eP	P	07 14 30.2	+4.4
OUR	Ouranopolis	86.60	352	P	P	07 14 29.8	+4.0
NIL	Nilore	86.62	31	PFAKE		07 14 40.0	+14
NIL				LR	LR		
	comp=Z,3µm,21.0s						
CZD	Col de Zad	86.63	327	P	P	07 14 33.1	+6.5
HRT	Hereke	86.66	356	eP	P	07 14 30.9	+4.7
RKY	Sarkoy-Tekirda	86.67	354	eP	P	07 14 30.1	+3.8
CHTO	Chiang Mai	86.68	59	eP	P	07 14 26.4	-0.5
	comp=Z,74nm,1.4s						
CHTO				LR	LR		
	comp=Z,4µm,19.0s						
CHTO	Chiang Mai	86.68	59	eP	P	07 14 26.4	-0.5
CHTO				pmax	pmax		
	comp=Z,74nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,4µm,19.0s						
CHTO	Chiang Mai	86.68	59	P	P	07 14 26.6	-0.3
	SNR=12						
CMMT	Chiang Mai	86.68	59	P	P	07 14 27.1	+0.2
PLG	Polygyros	86.69	351	P	P	07 14 30.0	+3.6
BUY	Buyukada	86.72	356	eP	P	07 14 29.8	+3.4
PENT	Pentalofos	86.78	350	P	P	07 14 31.3	+4.4
THAS	Thassos island	86.79	352	P	P	07 14 29.4	+2.6
ENEZ	Enez	86.80	353	eP	P	07 14 31.3	+4.5
KVT	Kavak	86.80	1	eP	P	07 14 31.2	+4.3
KZN	Kozani	86.81	350	P	P	07 14 30.4	+3.3
JBK	JBK	86.90	330	P	P	07 14 32.0	+4.2
JBK	JBK	86.90	330	P	P	07 14 34.0	+6.2
JIRN	Jiri	86.90	44	eP	P	07 14 27.8	-0.4
	comp=Z,307nm,1.4s						
KAVV	Kandilli-Istan	86.93	356	eP	P	07 14 31.1	+3.6
ISK	Istanbul-Kandi	86.93	356	eP	P	07 14 32.1	+4.6
ISK	Istanbul-Kandi	86.93	356	P	P	07 14 31.4	+3.9
HORT	Hortiatis	86.95	351	eP	P	07 14 30.7	+3.0
HORT	Hortiatis	86.95	351	P	P	07 14 29.6	+1.9
GUN	Gumba	86.96	44	eP	P	07 14 28.0	-0.4
	comp=Z,794nm,1.8s						
ALN	Alexandroupoli	86.97	353	eP	P	07 14 31.9	+4.2
ALN	Alexandroupoli	86.97	353	eP	P	07 14 28.0	+0.3
	comp=Z,65nm,1.4s						
ALN	Alexandroupoli	86.97	353	P	P	07 14 31.4	+3.7
ALN	Alexandroupoli	86.97	353	eP	P	07 14 28.0	+0.3
ALN				pmax	pmax		
	comp=Z,65nm,1.4s						
BFZ	Birch Farm	86.97	152	PFAKE		07 14 40.0	+12
BFZ				LR	LR		
	comp=Z,7µm,18.0s						
SILT	Sile	86.99	356	eP	P	07 14 31.5	+3.7
THE	Thessaloniki	87.00	351	P	P	07 14 29.7	+1.9
TPE	Tepelena	87.03	349	P	P	07 14 32.1	+4.1
CRLT	Corlu	87.07	355	eP	P	07 14 32.5	+4.3
KLYT	Kilyos	87.12	356	eP	P	07 14 31.5	+3.1
CTKS	Kestanelik-??a	87.13	355	eP	P	07 14 30.9	+2.5
LPAZ	La Paz	87.14	250	P	P	07 14 30.1	+0.1
	comp=Z,4.3nm,0.8s,baz=122,slow=3.9,SNR=16						
LPAZ				LR	LR	07 49 56.6	
	comp=Z,3µm,19.4s,baz=120,slow=33						
LPAZ	La Paz	87.14	250	eP	P	07 14 29.4	-0.7
	comp=Z,46nm,1.4s						
LPAZ	La Paz	87.14	250	eP	P	07 14 29.9	-0.2
LCRM	LCR	87.14	328	P	P	07 14 36.0	+7.0
KAVA	Kavala	87.20	352	P	P	07 14 32.3	+3.5
EAH	EAH	87.21	323	P	P	07 14 37.0	+7.9
TURI	Tura	87.23	48	eP	P	07 14 26.9	-2.5
SRHM	Skhour des Reh	87.24	325	P	P	07 14 37.0	+7.7
SRHM	Skhour des Reh	87.24	325	P	P	07 14 35.3	+6.0
RDO	Rodhopi	87.26	353	eP	P	07 14 32.8	+3.7
RDO	Rodhopi	87.26	353	P	P	07 14 29.5	+0.4
TAF	Taforalt	87.28	330	P	P	07 14 36.0	+6.5
DIKM	Dikmen	87.36	0	eP	P	07 14 32.7	+3.1
BCA	Borcka	87.36	5	⇑iP	P	07 14 31.5	+1.9
CTYL	Yalikoy Yolu	87.38	355	eP	P	07 14 32.9	+3.2
SRS	Serrai	87.41	352	P	P	07 14 30.8	+1.0
DLV	T Lat	87.46	70	eP	P	07 14 30.7	-0.3
	comp=Z,101nm,1.4s						
DLV				LR	LR		
	comp=Z,3µm,22.0s						
AKH	Akhalkalaki	87.46	6	eP	P	07 14 28.7	-1.6
	comp=Z,36nm,1.5s						
AKH				LR	LR		
	comp=Z,10µm,19.0s						
AKH	Akhalkalaki	87.46	6	⇑iP	P	07 14 31.2	+0.9
AKH	Akhalkalaki	87.46	6	eP	P	07 14 28.7	-1.6
AKH				pmax	pmax		
	comp=Z,36nm,1.5s						
AKH				MLR	MLR		
	comp=Z,10µm,19.0s						
AKLM	AKL	87.52	329	P	P	07 14 35.0	+4.3
AKLM	AKL	87.52	329	P	P	07 14 37.0	+6.3
KNT	Kendrikon	87.53	351	eP	P	07 14 34.2	+3.8
KNT	Kendrikon	87.53	351	P	P	07 14 32.3	+1.9
KURC	Kurucasile-Bar	87.58	358	eP	P	07 14 33.9	+3.3
PHSR	Pinarhisar	87.59	355	eP	P	07 14 34.7	+4.0
ZHG	ZHG	87.61	326	P	P	07 14 37.0	+5.9
ZHG	ZHG	87.61	326	P	P	07 14 37.0	+5.9
NVR	Nevrokopi	87.61	352	P	P	07 14 33.6	+2.7
BZK	Bozkurt	87.67	359	eP	P	07 14 34.9	+3.9
SICH	Sidi Chahed	87.69	328	P	P	07 14 38.0	+6.6
VAY	Valandovo	87.72	351	i P	P	07 14 35.9	+4.6
KDZ	Kurdzhali	87.77	353	eP	P	07 14 35.7	+4.2
KDZ	Kurdzhali	87.77	353	eP	P	07 14 35.2	+3.7
GTK	Tadong	87.80	46	ex	P	07 14 28.7	-3.5
GTK				IAmb	IAmb	07 14 32.4	
	comp=Z,3µm,6.0s						
EDRB	Edirne	87.86	354	eP	P	07 14 36.1	+4.2
EDRB	Edirne	87.86	354	P	P	07 14 33.6	+1.7
MMB	Musomiste	87.86	352	eP	P	07 14 34.7	+2.7
RZN	Rozhen	87.87	352	eP	P	07 14 35.5	+3.3
TBLG	Delisi	87.89	7	eP	P	07 14 31.8	-0.3
	comp=Z,43nm,1.2s						
TBLG	Delisi	87.89	7	eP	P	07 14 31.8	-0.3
TBLG				pmax	pmax		
	comp=Z,43nm,1.2s						
MELI	Melilla	87.89	330	i P	P	07 14 35.8	+3.5
MELI				i S	S	07 25 12.2	-3.6
SILR	SILCHAR	87.91	50	eP	P	07 14 32.3	-0.3
AKT	Akhty	87.94	10	eP	P	07 14 34.4	+1.9
AKT				e		07 17 59.4	
AKT				pmax	pmax		
	comp=Z,102nm,1.3s						
SHL	Shillong	88.06	49	eP	P	07 14 32.4	-1.2
	comp=Z,50nm,1.1s						
SHL	Shillong	88.06	49	eP	P	07 14 32.4	-1.2
SHL				pmax	pmax		
	comp=Z,50nm,1.1s						
SHL	Shillong	88.06	49	eP	P	07 14 33.0	-0.6
TIR	Tirane	88.08	349	PFAKE		07 14 40.0	+7.0
TIR				LR	LR		
	comp=Z,6µm,21.0s						
TIR	Tirane	88.08	349	P	P	07 14 37.4	+4.4
RTC	Rabat Centre	88.17	326	PFAKE		07 14 40.0	+6.4
RTC				LR	LR		
	comp=Z,37µm,19.0s						
RTC	Rabat Centre	88.17	326	P	P	07 14 40.0	+6.3
PALE	Palemas	88.18	329	P	P	07 14 39.1	+5.4
KKB	Krupnik	88.20	351	eP	P	07 14 37.8	+4.2
PLD	Plovdiv	88.28	352	eP	P	07 14 37.0	+3.1
PLD	Plovdiv	88.28	352	eP	P	07 14 38.3	+4.4
PHP	Peshkopia	88.34	349	P	P	07 14 38.2	+3.9
EIDS	Eidsvold	88.40	126	eP	P	07 14 34.2	-1.1
	comp=Z,38nm,1.1s						
EIDS				LR	LR		
	comp=Z,3µm,20.0s						
EIDS	Eidsvold	88.40	126	P	P	07 14 34.8	-0.4
	baz=88,SNR=8.1						
BKZ	Black Stump Fm	88.42	151	PFAKE		07 14 50.0	+15
BKZ				LR	LR		
	comp=Z,4µm,20.0s						
HIZ	Hauiti	88.44	150	eP	P	07 14 32.5	-2.8
	comp=Z,60nm,1.2s						
HIZ				LR	LR		
	comp=Z,3µm,19.0s						
GUWA	GUWAHATI	88.46	49	eP	P	07 14 33.3	-1.9
GUWA				IAMs_20	IAMs_20	07 48 20.4	
	comp=Z,5µm,18.4s						
SKO	Skopje	88.50	350	i P	P	07 14 39.3	+4.3
RSA	Sarsar	88.57	328	P	P	07 14 42.0	+6.4
IMP	Imphal	88.57	51	eP	P	07 14 35.6	-0.3
IMP				IAmb	IAmb	07 14 37.7	
	comp=Z,924nm,3.2s						
CHEFC	Chefchaouen	88.59	328	P	P	07 14 42.0	+6.3
PANO	Nakornpanom	88.86	64	P	P	07 14 37.5	+0.2
ZEI	Tsey	88.86	7	eP	P	07 14 37.8	+0.8
ZEI				pmax	pmax		
	comp=Z,48nm,1.5s						
VTS	Vitosha	88.93	351	eP	P	07 14 35.1	-2.1
	comp=Z,21nm,1.4s						
VTS				LR	LR		
	comp=Z,5µm,20.0s						
VTS	Vitosha	88.93	351	⇑iP	P	07 14 39.8	+2.6
VTS	Vitosha	88.93	351	eP	P	07 14 35.1	-2.1
VTS				pmax	pmax		
	comp=Z,21nm,1.4s						
VTS				MLR	MLR		
	comp=Z,5µm,20.0s						
VTS	Vitosha	88.93	351	eP	P	07 14 40.9	+3.7
ELND	Elena	89.00	353	⇑iP	P	07 14 38.8	+1.5
DRME	Dracevica, Mon	89.00	348	eP	P	07 14 41.9	+4.5
SMIR	Smir Dam	89.12	328	P	P	07 14 44.0	+5.9
PDG	Podgorica	89.23	349	eP	P	07 14 42.8	+4.4
TTG	Podgorica	89.23	349	PFAKE		07 14 50.0	+12
TTG				LR	LR		
	comp=Z,9µm,22.0s						
NEY	Neytrino	89.23	6	⇓eP	P	07 14 40.7	+2.0
NEY				pmax	pmax		
	comp=Z,3.0nm,1.6s						
CEUT	Ceuta	89.28	328	P	P	07 14 42.7	+3.9
CEU	Ceuta	89.31	328	i P	P	07 14 41.0	+2.1
CEU				i S	SKSac	07 25 16.7	+7.2
KOHI	KOHIMA	89.37	51	eP	P	07 14 39.8	+0.1
MAK	Makhachkala	89.38	9	eP	P	07 14 41.4	+2.3
MAK				eS	SKSac	07 25 09.6	+0.1
TEZP	TEZPUR	89.39	49	eP	P	07 14 37.5	-2.0
SOC	Sochi	89.40	4	c iP	P	07 14 42.7	+3.5
SOC				e		07 18 14.3	
SOC				ePPP	PPP	07 20 07.5	
SOC				eS	SKSac	07 25 12.5	+2.9
SOC				e		07 25 30.3	
SOC				eSS	SS	07 31 26.0	+0.4
SOC				eSSS	SSS	07 34 58.6	
SOC				pmax	pmax		
	comp=Z,18nm,0.5s						
SOC				MLR	MLR		
	comp=Z,4µm,18.0s						
GROC	Groznyy	89.44	8	eP	P	07 14 40.4	+1.0
GROC				eS	SKSac	07 25 09.3	-0.6
GROC				pmax	pmax		
	comp=Z,117nm,1.5s						
URZ	Urewera	89.44	151	eP	P	07 14 38.4	-1.5
	comp=Z,92nm,0.9s						
URZ				LR	LR		
	comp=Z,5µm,19.0s						
NCK	Nalchik	89.54	6	⇑eP	P	07 14 41.1	+1.2
NCK				pmax	pmax		
	comp=Z,15nm,1.3s						
PLVB	Pleven	89.56	353	⇓iP	P	07 14 41.9	+2.0
RAZG	Razgrad	89.58	354	⇑iP	P	07 14 42.7	+2.6
PSN	Preselentsi	89.59	355	eP	P	07 14 42.9	+2.9
CTAO	Charters Tower	89.62	119	eP	P	07 14 39.8	-1.2
	comp=Z,24nm,1.1s						
CTAO				LR	LR		
	comp=Z,12µm,18.0s						
CTAO	Charters Tower	89.62	119	eP	P	07 14 39.8	-1.2
CTAO				pmax	pmax		
	comp=Z,24nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,12µm,18.0s						
KBZ	Khabaz	89.72	6	P	P	07 14 41.6	+1.0
	comp=Z,8.9nm,1.1s,baz=208,slow=3.2,SNR=13						
KBZ				LR	LR	07 53 37.8	
	comp=Z,5µm,20.1s,baz=182,slow=35						
EMAL	Malaga-Limoner	89.74	329	eP	P	07 14 43.1	+2.2
EMAL				i S	SKKSac	07 25 19.1	-5.7
CHGR	Chuyangaron	89.81	26	PFAKE		07 14 50.0	+8.6
CHGR				LR	LR		
	comp=Z,13µm,20.0s						
MAHO	Mahon	89.88	337	eP	P	07 14 44.4	+2.9
MAHO				i S	SKKSac	07 25 21.5	-4.1
STON	Ston	89.89	347	eP	P	07 14 44.3	+2.9
MTSU	Mount Surprise	89.90	116	P	P	07 14 42.6	+0.2
	baz=90,SNR=4.2						
KIV	Kislovodsk	89.93	6	PFAKE		07 14 50.0	+8.2
KIV				LR	LR		
	comp=Z,5µm,20.0s						
KIV	Kislovodsk	89.93	6	i P	P	07 14 43.6	+1.8
	SNR=18						
KIV	Kislovodsk	89.93	6	eP	P	07 14 42.0	+0.2
KIV				e		07 18 15.0	
KIV				e		07 25 12.3	
KIV				eSS	SS	07 31 34.5	+0.9
KIV				eSSS	SSS	07 35 10.4	
KIV				pmax	pmax		
	comp=Z,119nm,1.1s						
KIV				pmax	pmax		
	comp=Z,890nm,4.8s						
KIV				MLR	MLR		
	comp=Z,15µm,20.0s						
KIV	Kislovodsk	89.93	6	P	P	07 14 43.7	+1.9
	SNR=16						
KIV				P	P	07 14 43.7	+1.9
	SNR=16						
MOKO	MOKOCHONG	90.07	51	eP	P	07 14 41.5	-1.4
MOKO				IAmb	IAmb	07 14 43.4	
	comp=Z,80nm,1.2s						
AQU	L'Aquila	90.11	344	PFAKE		07 14 50.0	+7.4
AQU				LR	LR		
	comp=Z,12µm,19.0s						
AQU	L'Aquila	90.11	344	eP	P	07 14 47.2	+4.6
SFS	San Fernando	90.12	328	PFAKE		07 14 50.0	+7.3
SFS				LR	LR		
	comp=Z,9µm,19.0s						
SFS	San Fernando	90.12	328	i P	P	07 14 46.7	+4.0
SFS				i S	SKKSac	07 25 23.9	-3.7
SESP	Santiago Espad	90.31	331	P	P	07 14 48.2	+4.4
TIRR	Tirgusor	90.35	355	eP	P	07 14 44.5	+0.9
	comp=Z,146nm,1.4s						
TIRR				LR	LR		
	comp=Z,14µm,20.0s						
TIRR	Tirgusor	90.35	355	⇓iP	P	07 14 45.6	+2.0
MXZ	Matakaoa Point	90.47	152	PFAKE		07 15 00.0	+15
MXZ				LR	LR		
	comp=Z,6µm,22.0s						
GAR	Garm	90.48	27	eP	P	07 14 43.8	-0.8
	comp=Z,82nm,1.4s						
GAR				LR	LR		
	comp=Z,10µm,20.0s						
GAR	Garm	90.48	27	eP	P	07 14 43.8	-0.8
GAR				pmax	pmax		
	comp=Z,82nm,1.4s						
GAR				MLR	MLR		
	comp=Z,10µm,20.0s						
ANN	Anapa	90.54	2	eP	P	07 14 45.0	+0.6
ANN				e*PP	sP	07 14 48.4	+4.5
ANN				e		07 18 20.1	
ANN				eS	SKSac	07 25 17.3	+1.2
ANN				pmax	pmax		
	comp=Z,184nm,2.3s						
ANN				MLR	MLR		
	comp=Z,5µm,18.0s						
ANN				MLR	MLR		
	comp=N,7µm,18.0s						
ANN				MLR	MLR		
	comp=E,2µm,18.0s						
BBLS	Lazići	90.62	349	eP	P	07 14 46.2	+1.2
SIM	Simferopol'	90.66	359	eP	P	07 14 46.1	+1.1
SIM				PP	PP	07 18 20.5	-0.3
SIM				SKS	SKSac	07 25 20.2	+3.3
SIM				S	ScS	07 25 44.9	+0.2
SIM				pmax	pmax		
	comp=Z,260nm,8.0s						
ZIRO	ZIRO	90.67	50	eP	P	07 14 43.2	-2.6
DIVS	Divibare	90.77	349	eP	P	07 14 48.3	+2.6
OUZ	Omahuta	90.91	147	eP	P	07 14 46.1	-0.7
	comp=Z,25nm,1.2s						
OUZ				LR	LR		
	comp=Z,6µm,19.0s						
HORN	Hornachuelos	91.00	329	P	P	07 14 48.9	+2.1
HORN	Hornachuelos	91.00	329	P	P	07 14 49.9	+3.0
HORN	Hornachuelos	91.00	329	P	P	07 14 51.4	+4.6
LSA	Lhasa	91.03	46	PFAKE		07 15 00.0	+12
LSA				LR	LR		
	comp=Z,7µm,22.0s						
LSA	Lhasa	91.03	46	P	P	07 14 48.0	+0.2
LSA				pmax	pmax		
	comp=Z,110nm,1.9s						
LSA				LR	LR		
	comp=Z,21µm,26.2s						
LSA				LR	LR		
	comp=Z,11µm,22.9s						
LSA				LR	LR		
	comp=Z,26µm,22.6s						
LSA	Lhasa	91.03	46	i P	P	07 14 48.8	+1.1
	SNR=9.5						
GOF	Gofitskoye	91.06	6	⇑eP	P	07 14 47.7	+0.8
GOF				eS	SKSac	07 25 18.6	-0.6
GOF				pmax	pmax		
	comp=Z,150nm,2.0s						
CFR	Carcaliu	91.08	355	⇓iP	P	07 14 48.3	+1.3
MDVR	Moldovita	91.24	351	⇑iP	P	07 14 48.8	+1.0
PMPS	Porto Santo	91.36	319	eP	P	07 14 54.2	+5.6
	comp=Z,174nm,2.0s						
PMPST	Porto Santo, M	91.37	319	eP	P	07 14 53.4	+4.7
	comp=Z,155nm,2.0s						
PMPST	Porto Santo, M	91.37	319	ePP	PP	07 18 26.4	-0.3
PBDV	Barranco-do-Ve	91.45	327	eP	P	07 14 54.1	+5.2
	comp=Z,174nm,1.7s						
PBDV	Barranco-do-Ve	91.45	327	ePP	PP	07 18 26.0	-1.2
PVAQ	Vaqueiros	91.51	327	eP	P	07 14 54.5	+5.3
	comp=Z,146nm,1.7s						
PVAQ	Vaqueiros	91.51	327	ePP	PP	07 18 30.0	+2.3
PVAQ				eSKS	SKKSac	07 25 31.6	-6.4
PVAQ	Vaqueiros	91.51	327	eLR	LR	07 44 41.1	
	comp=Z,4µm,16.0s						
PVAQ	Vaqueiros	91.51	327	PFAKE		07 15 00.0	+11
PVAQ				LR	LR		
	comp=Z,6µm,22.0s						
PVAQ	Vaqueiros	91.51	327	P	P	07 14 55.3	+6.2
ARR	Arges	91.52	353	⇑iP	P	07 14 51.0	+1.9
MLR	Muntele Rosu	91.54	354	eP	P	07 14 47.5	-1.8
	comp=Z,24nm,1.2s						
MLR				LR	LR		
	comp=Z,9µm,20.0s						
MLR	Muntele Rosu	91.54	354	⇑iP	P	07 14 50.3	+1.0
MLR	Muntele Rosu	91.54	354	eP	P	07 14 47.5	-1.8
MLR				pmax	pmax		
	comp=Z,24nm,1.2s						
MLR				MLR	MLR		
	comp=Z,9µm,20.0s						
PMOZ	Porto Moniz, M	91.56	318	eP	P	07 14 55.9	+6.2
	comp=Z,205nm,1.5s						
PMOZ	Porto Moniz, M	91.56	318	ePP	PP	07 18 31.1	+2.9
PMOZ				eSKS	SKKSac	07 25 36.4	-2.4
PMOZ	Porto Moniz, M	91.56	318	eLR	LR	07 43 59.2	
	comp=Z,4µm,20.0s						
PMOZ	Porto Moniz, M	91.56	318	P	P	07 14 56.5	+6.9
VOIR		91.56	353	⇑iP	P	07 14 50.2	+0.9
SLVN	Son La	91.59	61	eP	P	07 14 49.0	-1.0
	comp=Z,21nm,1.1s						
SLVN				LR	LR		
	comp=Z,6µm,22.0s						
BTK	Batken	91.61	27	PFAKE		07 15 00.0	+10
BTK				LR	LR		
	comp=Z,7µm,19.0s						
LOT	Lotru	91.68	352	eP	P	07 14 53.2	+3.3
PFVI	Vila Bisbo	91.69	326	eP	P	07 14 54.8	+4.8
	comp=Z,201nm,2.0s						
PFVI	Vila Bisbo	91.69	326	ePP	PP	07 18 28.9	-0.2
PFVI	Vila Bisbo	91.69	326	PFAKE		07 15 00.0	+10
PFVI				LR	LR		
	comp=Z,6µm,20.0s						
PFVI	Vila Bisbo	91.69	326	P	P	07 14 56.2	+6.2
MORF	Marmelete	91.78	327	eP	P	07 14 53.4	+2.9
MORF				ePP	PP	07 18 32.3	+2.4
MORF				eSKSac	SKSac	07 25 26.6	+2.8
MORF				eSS	SS	07 32 02.8	+2.4
MORF				AMS	AMS	07 56 16.8	
	comp=Z,4µm,24.1s						
MORF	Marmelete	91.78	327	eP	P	07 14 54.8	+4.3
	comp=Z,142nm,1.7s						
MORF	Marmelete	91.78	327	ePP	PP	07 18 31.4	+1.5
BLY	Banja Luka	91.80	347	PFAKE		07 15 00.0	+10
BLY				LR	LR		
	comp=Z,6µm,19.0s						
BLY	Banja Luka	91.80	347	eP	P	07 14 52.7	+2.4
PCVE	Castro Verde	91.83	327	eP	P	07 14 55.1	+4.4
	comp=Z,172nm,1.6s						
PCVE	Castro Verde	91.83	327	ePP	PP	07 18 26.8	-3.4
FRGS	Fruska Gora	91.84	349	eP	P	07 14 51.2	+0.7
VRI	Vrincioaia	91.86	354	eP	P	07 14 53.6	+3.0
VRI	Vrincioaia	91.86	354	⇑iP	P	07 14 51.8	+1.2
PTEO	Sao Teotonio	92.01	327	eP	P	07 14 57.2	+5.7
	comp=Z,181nm,1.7s						
PTEO	Sao Teotonio	92.01	327	ePP	PP	07 18 32.0	+0.4
BZS	Buzias	92.07	351	⇑iP	P	07 14 54.1	+2.5
PBEJ	Beja	92.11	328	eP	P	07 14 58.0	+6.0
	comp=Z,101nm,1.9s						
PBEJ	Beja	92.11	328	ePP	PP	07 18 34.7	+2.3
ESDC	Sonseca Array	92.19	331	P	P	07 14 54.2	+1.8
	comp=Z,6.1nm,1.0s,baz=156,slow=4.2,SNR=16						
ESDC				PP	PP	07 18 32.2	-0.9
	comp=Z,0.3nm,0.4s,baz=152,slow=7.5,SNR=4.2						
ESDC				LR	LR	07 56 34.0	
	comp=Z,6µm,20.2s,baz=140,slow=36						
ESLA	Sonseca Array	92.19	331	eP	P	07 14 49.7	-2.7
	comp=Z,16nm,1.1s						
ESLA				LR	LR		
	comp=Z,9µm,19.0s						
PAB	San Pablo	92.21	331	eP	P	07 14 52.6	+0.1
	comp=Z,23nm,1.1s						
PAB				LR	LR		
	comp=Z,8µm,18.0s						
PAB	San Pablo	92.21	331	eP	P	07 14 52.6	+0.1
PAB				pmax	pmax		
	comp=Z,23nm,1.1s						
PAB				MLR	MLR		
	comp=Z,8µm,18.0s						
COEN	Coen	92.30	113	PFAKE		07 15 00.0	+6.4
COEN				LR	LR		
	comp=Z,5µm,18.0s						
PNCL	Nicolau / Gran	92.44	327	eP	P	07 14 58.3	+4.9
	comp=Z,172nm,1.8s						

PNCL	Nicolau / Gran	92.44	327	ePP	PP	07 18 36.7	+1.7
VLC	Villacollemand	92.45	343	PFAKE		07 15 00.0	+6.6
VLC				LR	LR		
	comp=Z,11µm,21.0s						
UCM	Universidad Co	92.52	332	eP	P	07 14 55.7	+1.8
UCM				i S	SKSac	07 25 36.1	+8.3
SIRR	Siria	92.71	351	⇑iP	P	07 14 56.1	+1.6
RIY	Rijeka	92.80	346	eP	P	07 14 58.8	+3.9
PTGA	Pitinga	92.83	266	eP	P	07 14 56.5	+0.5
	comp=Z,74nm,1.3s						
PTGA				LR	LR		
	comp=Z,4µm,21.0s						
PTGA	Pitinga	92.83	266	eP	P	07 14 56.6	+0.6
BOJS	Bojanci	92.84	346	i P	P	07 14 56.9	+1.8
BOJS				i		07 14 59.0	
BOJS				ePP	PP	07 18 38.2	+0.1
BOJS				eSKSac	SKSac	07 25 33.0	+3.8
BOJS				i S	ScS	07 26 07.9	+5.1
BOJS				i PS	PS	07 27 14.9	+1.6
BOJS				eSP	SP	07 27 19.5	+6.5
BOJS				eSS	SS	07 32 10.9	-4.3
KSH	Kashi	92.84	31	P	P	07 14 53.5	-2.0
KSH				pP	sP	07 14 59.1	+4.2
KSH				sP	pwP	07 15 01.0	+0.1
KSH				PP	PP	07 18 38.1	-0.2
KSH				SKS	SKSac	07 25 26.9	-2.9
KSH				S	SKKSac	07 25 53.0	+4.9
KSH				sS	pS	07 26 02.9	+1.9
KSH				SS	SS	07 32 11.9	-3.9
KSH				pmax	pmax		
	comp=Z,13nm,1.2s						
KSH				pmax	pmax		
	comp=Z,550nm,5.8s						
KSH				LR	LR		
	comp=Z,3µm,16.0s						
KSH				LR	LR		
	comp=Z,3µm,15.4s						
KSH				LR	LR		
	comp=Z,3µm,16.8s						
KIS	Kishinev	92.86	356	eP	P	07 14 54.0	-1.2
KIS	Kishinev	92.86	356	ePP	PP	07 18 42.0	+3.9
KIS	Kishinev	92.86	356	ePS	PS	07 27 12.0	-1.4
KIS				eSS	SS	07 32 14.0	-1.5
KIS				eSSS	SSS	07 36 12.0	
KIS				eLQ	LQ	07 45 29.0	
KIS	Kishinev	92.86	356	eP	P	07 14 54.0	-1.2
KIS				e		07 18 42.0	
KIS				ePPP	PPP	07 20 40.0	
KIS				e		07 25 26.0	
KIS				eS	S	07 25 56.0	-5.0
KIS				ePS	PS	07 27 12.0	-1.4
KIS				ePPS	PPS	07 27 49.0	
KIS				eSS	SS	07 32 14.0	-1.5
AMBH	Ambrzfalva	92.90	350	eP	P	07 14 59.1	+3.8
MORH	Mrgy, Hungar	93.03	349	eP	P	07 14 55.2	-0.7
MORH	Mrgy, Hungar	93.03	349	⇑iP	P	07 14 58.1	+2.1
DRGR		93.12	352	⇑iP	P	07 14 59.0	+2.5
DRGR		93.12	352	P	P	07 14 58.9	+2.5
CRES	Cresnjev	93.12	347	eP	P	07 14 58.1	+1.7
PMTG	Montargil	93.16	328	eP	P	07 15 01.6	+4.8
	comp=Z,140nm,1.8s						
PMTG	Montargil	93.16	328	ePP	PP	07 18 41.4	+0.7
PMRV	Marv??o	93.17	329	eP	P	07 15 00.5	+3.6
	comp=Z,107nm,1.6s						
PMRV	Marv??o	93.17	329	ePP	PP	07 18 40.9	+0.1
PMRV				eSKS	SKSac	07 25 41.0	+10
PMRV	Marv??o	93.17	329	eLR	LR	07 45 56.6	
	comp=Z,6µm,18.0s						
LIS	Lisbon	93.20	327	eP	P	07 15 00.2	+3.2
LIS				ePP	PP	07 18 43.4	+2.5
LIS				eSKSac	SKSac	07 25 34.6	+3.0
LIS				eSS	SS	07 32 23.2	+2.6
LIS				AMS	AMS	07 57 04.0	
	comp=Z,6µm,25.0s						
VISS	Visnje	93.20	346	i P	P	07 14 56.9	+0.1
VISS				i		07 15 01.1	
VISS				i PP	PP	07 18 40.2	-0.6
VISS				i SKSac	SKSac	07 25 37.0	+5.8
VISS				i S	ScS	07 26 07.2	+1.3
VISS				ePS	PS	07 27 23.4	+6.1
VISS				eSP	SP	07 27 25.2	+8.2
VISS				i SS	SS	07 32 14.2	-6.3
CEY	Cerknica	93.21	346	eP	P	07 14 59.1	+2.2
TRI	Trieste	93.29	345	eP	P	07 14 55.8	-1.4
	comp=Z,25nm,1.1s						
TRI				LR	LR		
	comp=Z,6µm,19.0s						
TRI	Trieste	93.29	345	eP	P	07 14 55.8	-1.4
TRI				pmax	pmax		
	comp=Z,25nm,1.1s						
TRI				MLR	MLR		
	comp=Z,6µm,19.0s						
ALMR	Almeirim	93.37	328	eP	P	07 15 00.9	+3.2
ALMR				ePP	PP	07 18 45.1	+2.9
ALMR				eSKSac	SKSac	07 25 34.8	+2.4
ALMR				eSS	SS	07 32 26.2	+3.1
ALMR				AMS	AMS	07 57 23.7	
	comp=Z,9µm,17.9s						
ALMR	Almeirim	93.37	328	eP	P	07 15 04.0	+6.3
	comp=Z,218nm,1.4s						
ALMR	Almeirim	93.37	328	ePP	PP	07 18 43.6	+1.3
JAVS	Javornik	93.42	346	i P	P	07 14 58.7	+0.7
JAVS				i		07 15 02.5	
JAVS				i PP	PP	07 18 42.9	+0.2
JAVS				eSKSac	SKSac	07 25 37.9	+5.3
JAVS				eS	ScS	07 26 17.9	+10
JAVS				ePS	PS	07 27 26.3	+6.4
JAVS				eSP	SP	07 27 28.2	+8.8
JAVS				eSS	SS	07 32 15.6	-8.2
ARSB	Arslanbob	93.44	28	eP	P	07 14 56.4	-1.8
	comp=Z,40nm,1.4s						
ARSB				LR	LR		
	comp=Z,6µm,21.0s						
PMAFR	Mafra	93.46	327	eP	P	07 15 03.4	+5.2
	comp=Z,137nm,1.8s						
PMAFR	Mafra	93.46	327	ePP	PP	07 18 43.0	0.0
LJU	Ljubljana	93.49	346	eP	P	07 15 02.7	+4.6
BEHE	Becsehely	93.54	348	eP	P	07 15 02.4	+4.1
BEHE	Becsehely	93.54	348	⇑iP	P	07 15 02.1	+3.7
QIZ	Qiongzhong	93.56	66	PFAKE		07 15 10.0	+11
QIZ				LR	LR		
	comp=Z,5µm,21.0s						
QIZ	Qiongzhong	93.56	66	P	P	07 14 58.1	-1.0
QIZ				SS	SS	07 32 28.5	+2.3
QIZ				pmax	pmax		
	comp=Z,210nm,7.9s						
QIZ				LR	LR		
	comp=Z,3µm,23.5s						
QIZ				LR	LR		
	comp=Z,3µm,22.6s						
QIZ				LR	LR		
	comp=Z,7µm,31.4s						
PCBR	Castelo Branco	93.57	329	eP	P	07 15 03.2	+4.6
	comp=Z,61nm,1.5s						
PCBR	Castelo Branco	93.57	329	ePP	PP	07 18 44.1	+0.3
JBG	Jabagly	93.68	26	eP	P	07 14 59.7	+0.4
JBG				e		07 18 45.0	
JBG				eS	SKSac	07 25 34.1	-0.2
BURAR	Bucovina Array	93.71	353	⇓iP	P	07 15 01.9	+2.7
BURAR	Bucovina Array	93.71	353	P	P	07 15 01.8	+2.6
PTOM	Tomar	93.71	328	eP	P	07 15 03.7	+4.4
	comp=Z,91nm,1.8s						
PTOM	Tomar	93.71	328	ePP	PP	07 18 47.5	+2.5
BUR08	Bucovina Ar. S	93.74	353	eP	P	07 14 58.2	-1.2
	comp=Z,21nm,1.4s						
KMI	Kunming	93.77	57	PFAKE		07 15 10.0	+10
KMI				LR	LR		
	comp=Z,2µm,20.0s						
LTVH	Ltavrtes, Hu	93.79	351	⇑iP	P	07 15 03.1	+3.7
TIH	Tihany	93.80	348	eP	P	07 15 03.1	+3.6
OBKA	Obir	93.93	346	i PcP	P	07 15 02.8	+2.5
	comp=Z,70nm,1.8s,SNR=6.4						
OBKA				ePP	PP	07 18 48.0	+1.3
	comp=Z,9.9nm,1.2s						
OBKA				SKSac	SKSac	07 25 41.0	+5.6
	comp=Z,1.7nm,0.5s						
PERS	Pernice	93.96	347	i P	P	07 15 02.0	+1.7
PERS				i		07 15 05.1	
PERS				i PP	PP	07 18 47.1	+0.2
PERS				i SKSac	SKSac	07 25 42.1	+6.6
PERS				eS	ScS	07 26 21.4	+9.2
PERS				i SP	SP	07 27 30.5	+5.1
PERS				ePS	PS	07 27 34.5	+8.7
PERS				i SS	SS	07 32 28.9	-2.5
SOKA	Soboth	94.02	346	i pP	P	07 15 04.4	+3.8
	comp=Z,42nm,1.5s,SNR=7.7						
SOKA				i PP	PP	07 18 47.8	+0.5
	comp=Z,17nm,1.6s						
MTE	Manteigas	94.08	329	eP	P	07 15 05.6	+4.5
	comp=Z,55nm,1.9s						
MTE	Manteigas	94.08	329	ePP	PP	07 18 47.9	-0.1
MTE				eSKS	SKSac	07 25 44.3	+7.8
MTE	Manteigas	94.08	329	eLR	LR	07 46 30.1	
	comp=Z,7µm,18.0s						
MTE	Manteigas	94.08	329	PFAKE		07 15 10.0	+8.9
MTE				LR	LR		
	comp=Z,7µm,20.0s						
BNI	Bardonecchia	94.12	340	eP	P	07 15 00.3	-0.8
	comp=Z,36nm,1.5s						
BNI				LR	LR		
	comp=Z,18µm,21.0s						
BNI	Bardonecchia	94.12	340	eP	P	07 15 00.4	-0.8
BNI				pmax	pmax		
	comp=Z,36nm,1.5s						
BNI				MLR	MLR		
	comp=Z,18µm,21.0s						
PCAS	Casmilo, Conde	94.13	328	eP	P	07 15 05.9	+4.7
	comp=Z,82nm,1.7s						
PCAS	Casmilo, Conde	94.13	328	ePP	PP	07 18 48.4	+0.2
CSKK	Cskako	94.21	349	eP	P	07 15 04.1	+2.7
MYKA	Terra Mystica	94.21	346	i pP	P	07 15 04.6	+3.1
	comp=Z,7.9nm,1.1s						
MYKA				i PP	PP	07 18 49.7	+0.8
	comp=Z,20nm,1.8s						
MYKA				SKSac	SKSac	07 25 41.3	+4.5
	comp=Z,3.3nm,1.0s						
BUD	Budapest	94.22	349	eP	P	07 15 04.1	+2.6
COI	Coimbra	94.23	328	eP	P	07 15 06.6	+4.9
	comp=Z,101nm,1.9s						
COI	Coimbra	94.23	328	ePP	PP	07 18 49.9	+0.9
COI	Coimbra	94.23	328	PFAKE		07 15 10.0	+8.3
COI				LR	LR		
	comp=Z,8µm,18.0s						
KK31	Karatay Array	94.29	25	eP	P	07 15 01.3	-0.6
	comp=Z,19nm,1.5s						
KK31	Karatay Array	94.29	25	eP	P	07 15 01.3	-0.6
KK31				pmax	pmax		
	comp=Z,19nm,1.5s						
KKAR	Karatay Array	94.29	25	eP	P	07 15 01.3	-0.6
	comp=Z,19nm,1.5s						
KKAR	Karatay Array	94.29	25	eP	P	07 15 01.3	-0.6
KKAR				pmax	pmax		
	comp=Z,19nm,1.5s						
TRPA	Tarpa	94.46	352	eP	P	07 15 03.1	+0.6
PVIS	Viseu	94.49	329	eP	P	07 15 07.8	+4.9
	comp=Z,60nm,1.8s						
PVIS	Viseu	94.49	329	ePP	PP	07 18 51.5	+0.4
ARSA	Arzberg	94.50	347	i pP	P	07 15 05.7	+3.0
	comp=Z,46nm,1.5s,SNR=18						
ARSA				PP	PP	07 18 51.4	+0.4
	comp=Z,14nm,1.1s						
ARSA				SKSac	SKSac	07 25 37.0	-1.3
	comp=Z,1.5nm,0.5s						
ABTA	Abfaltersbach	94.52	345	i PcP	P	07 15 04.7	+1.8
	comp=Z,62nm,1.9s,SNR=12						
ABTA				i PP	PP	07 18 53.6	+2.3
	comp=Z,26nm,1.7s						
ABTA				S	S	07 26 24.6	+8.8
	comp=Z,1.6nm,0.4s						
PSZ	Piszkesteto	94.54	350	eP	P	07 15 03.1	+0.1
	comp=Z,36nm,1.5s						
PSZ				LR	LR		
	comp=Z,4µm,18.0s						
PSZ	Piszkesteto	94.54	350	⇑iP	P	07 15 04.9	+1.9
PSZ	Piszkesteto	94.54	350	eP	P	07 15 03.1	+0.1
PSZ				pmax	pmax		
	comp=Z,36nm,1.5s						
PSZ				MLR	MLR		
	comp=Z,4µm,18.0s						
PSZ	Piszkesteto	94.54	350	i P	P	07 15 07.0	+4.0
NRN	Naryn	94.55	30	PFAKE		07 15 10.0	+6.4
NRN				LR	LR		
	comp=Z,5µm,22.0s						
MVO	Moncorvo	94.58	330	eP	P	07 15 08.2	+4.9
	comp=Z,59nm,1.9s						
MVO	Moncorvo	94.58	330	ePP	PP	07 18 51.2	-0.6
MVO				eSKS	SKSac	07 25 45.0	+5.9
MVO	Moncorvo	94.58	330	eLR	LR	07 47 16.2	
	comp=Z,13µm,18.0s						
KBA	Koelnbreinsper	94.69	345	i PcP	P	07 15 05.8	+2.0
	comp=Z,36nm,1.6s,SNR=12						
KBA				ePP	PP	07 18 54.7	+2.0
	comp=Z,29nm,1.4s						
KBA				S	S	07 26 21.6	+4.1
	comp=Z,3.0nm,1.2s						
SOP	Sopron	94.76	348	⇑iP	P	07 15 07.0	+3.1
FUORN	Ofenpass-Fuorn	94.83	343	PFAKE		07 15 20.0	+15
FUORN				LR	LR		
	comp=Z,22µm,21.0s						
SSB	Saint Sauveur	94.84	339	eP	P	07 15 05.5	+1.1
	comp=Z,49nm,1.4s						
SSB				LR	LR		
	comp=Z,10µm,18.0s						
SSB	Saint Sauveur	94.84	339	eP	P	07 15 05.5	+1.1
SSB				pmax	pmax		
	comp=Z,49nm,1.4s						
SSB				MLR	MLR		
	comp=Z,10µm,18.0s						
TUE	Stuetta	94.88	343	eP	P	07 15 06.2	+1.4
	comp=Z,46nm,1.4s						
TUE				LR	LR		
	comp=Z,10µm,21.0s						
PVRL	Vila Real	94.92	329	eP	P	07 15 09.8	+4.9
	comp=Z,55nm,2.0s						
PVRL	Vila Real	94.92	329	ePP	PP	07 18 55.6	+1.2
UZH	Uzhgorod	94.98	352	eP	P	07 15 08.5	+3.6
UZH				e		07 15 15.7	
UZH				e		07 20 55.7	
UZH				e		07 25 38.7	
UZH				eS	S	07 26 22.8	+3.3
UZH				e		07 36 27.8	
UZH				MLR	MLR		
	comp=N,350nm,17.0s						
UZH				MLR	MLR		
	comp=E,480nm,17.0s						
UZH				MLR	MLR		
	comp=Z,220nm,17.0s						
POLO	Lamas de Olo	95.03	329	eP	P	07 15 10.4	+4.9
	comp=Z,28nm,2.1s						
POLO	Lamas de Olo	95.03	329	ePP	PP	07 18 56.3	+0.9
CONA	Conrad Observa	95.10	347	i PcP	P	07 15 07.6	+2.0
	comp=Z,41nm,1.7s,SNR=18						
CONA				i PP	PP	07 18 56.4	+0.6
	comp=Z,16nm,1.5s						
CONA				S	S	07 26 25.6	+4.7
	comp=Z,1.2nm,0.9s						
AAK	Ala-Archa	95.12	28	P	P	07 15 06.8	+0.9
	comp=Z,1.5nm,0.3s,baz=173,slow=4.9,SNR=7.3						
AAK				PP	PP	07 18 54.9	-1.2
	comp=Z,2.0nm,0.4s,baz=200,slow=7.2,SNR=7.0						
AAK	Ala-Archa	95.12	28	PFAKE		07 15 20.0	+14
AAK				LR	LR		
	comp=Z,6µm,20.0s						
AAK	Ala-Archa	95.12	28	i P	P	07 15 07.5	+1.6
	SNR=6.3						
AAK	Ala-Archa	95.12	28	⇓iP	P	07 15 05.6	-0.3
AAK				pmax	pmax		
	comp=Z,27nm,2.4s						
AAK	Ala-Archa	95.12	28	P	P	07 15 07.6	+1.7
	SNR=9.0						
AAK				P	P	07 15 07.6	+1.7
	SNR=9.0						
FETA	Feichten	95.12	344	i pP	P	07 15 08.6	+2.8
	comp=Z,20nm,1.4s,SNR=10						
FETA				i PP	PP	07 18 57.2	+1.1
	comp=Z,13nm,1.2s						
FETA				S	S	07 26 18.7	-2.5
	comp=Z,1.7nm,1.0s						
WTTA	Wattenberg	95.18	344	i PcP	P	07 15 08.7	+2.6
	comp=Z,26nm,1.3s,SNR=6.3						
WTTA				i PP	PP	07 18 57.2	+0.7
	comp=Z,20nm,1.5s						
WTTA				SKSac	SKSac	07 25 43.9	+1.6
	comp=Z,1.6nm,0.4s						
SENIN	Lac Senin/Sane	95.21	341	eP	P	07 15 06.7	+0.4
	comp=Z,12nm,1.4s						
SENIN				LR	LR		
	comp=Z,5µm,20.0s						
SQTA	Sankt Quirin	95.22	344	i pP	P	07 15 09.2	+3.0
	comp=Z,19nm,1.1s,SNR=5.3						
SQTA				i PP	PP	07 18 55.3	-1.4
	comp=Z,17nm,1.3s						
VYHS	Vyhne	95.24	349	i P	P	07 15 08.8	+2.7
VYHS	Vyhne	95.24	349	eP	P	07 15 08.8	+2.7
WATA	Walderalm	95.26	344	i pP	P	07 15 10.4	+4.0
	comp=Z,3.1nm,0.5s						
MOA	Molln	95.28	346	i PcP	P	07 15 08.2	+1.9
	comp=Z,38nm,1.5s,SNR=7.9						
MOA				i PP	PP	07 18 56.3	-0.8
	comp=Z,15nm,1.1s						
MOA				SKSac	SKSac	07 25 47.6	+5.1
	comp=Z,1.5nm,0.5s						
FRU1	Bishkek	95.32	28	PFAKE		07 15 20.0	+13
FRU1				LR	LR		
	comp=Z,6µm,20.0s						
MODS	Modra-Piesok	95.33	348	i P	P	07 15 10.2	+3.7
MODS	Modra-Piesok	95.33	348	eP	P	07 15 10.2	+3.7
MOTA	Moosalm	95.36	344	i pP	P	07 15 10.0	+3.1
	comp=Z,12nm,1.1s						
MOTA				i PP	PP	07 18 56.6	-1.3
	comp=Z,3.3nm,0.7s						
PCAB	Cabril	95.41	329	eP	P	07 15 11.2	+4.1
	comp=Z,41nm,1.5s						
PCAB	Cabril	95.41	329	ePP	PP	07 18 57.6	-0.6
BOOM	Boomskoye usch	95.47	29	PFAKE		07 15 20.0	+12
BOOM				LR	LR		
	comp=Z,5µm,19.0s						
DAVA	Damuels	95.54	343	i pP	P	07 15 11.4	+3.7
	comp=Z,13nm,1.4s,SNR=6.2						
DAVA				i PP	PP	07 18 58.7	-0.6
	comp=Z,55nm,1.4s						
DAVA				SKSac	SKSac	07 25 50.4	+6.2
	comp=Z,1.9nm,0.4s						
RETA	Reutte	95.56	344	i PcP	P	07 15 10.2	+2.5
	comp=Z,36nm,1.4s,SNR=9.6						
RETA				i PP	PP	07 18 59.7	+0.3
	comp=Z,16nm,1.1s						
RETA				SKSac	SKSac	07 25 48.1	+4.1
	comp=Z,0.7nm,0.4s						
KDJ	Kajisay	95.58	30	PFAKE		07 15 20.0	+12
KDJ				LR	LR		
	comp=Z,5µm,20.0s						
PGAV	Gavieira, Arco	95.72	329	eP	P	07 15 12.8	+4.2
	comp=Z,34nm,1.6s						
PGAV	Gavieira, Arco	95.72	329	ePP	PP	07 19 00.7	0.0
PGAV				eSKS	SKSac	07 25 55.5	+10
PGAV	Gavieira, Arco	95.72	329	eLR	LR	07 47 03.6	
	comp=Z,10µm,18.0s						
JAVC	Velka Javorina	95.75	349	eP	P	07 15 11.7	+3.2
JAVC				ePP	PP	07 19 00.2	-0.6
JAVC				eSKS	SKSac	07 25 51.0	+6.0
JAVC				ePS	PS	07 27 52.5	+7.0
SGDS	Sogindy	95.89	28	eP	P	07 15 08.8	-0.5
SGDS				i PP	PP	07 19 01.7	-0.3
KWP	Kalwaria Pacla	95.93	352	eP	P	07 15 12.4	+3.2
KWP				ePP	PP	07 19 06.7	+4.7
KWP				LMZ	LR	07 51 41.8	
	comp=Z,4µm,28.4s						
KWP	Kalwaria Pacla	95.93	352	PFAKE		07 15 20.0	+11
KWP				LR	LR		
	comp=Z,36µm,18.0s						
KWP	Kalwaria Pacla	95.93	352	eP	P	07 15 12.4	+3.2
KWP				e		07 19 06.7	
NNA	Nana	95.95	246	PFAKE		07 15 20.0	+10
NNA				LR	LR		
	comp=Z,4µm,22.0s						
NIE	Niedzica	95.97	350	eP	P	07 15 12.5	+3.0
NIE				ePP	PP	07 19 03.1	+0.6
NIE				eSKSac	SKSac	07 25 54.4	+8.3
NIE				e		07 27 55.2	
NIE				eSS	SS	07 33 08.1	+8.2
NIE				LMZ	LR	08 03 09.3	
	comp=Z,5µm,19.7s						
NIE	Niedzica	95.97	350	eP	P	07 15 12.5	+3.0
NIE				e		07 19 03.1	
NIE				e		07 27 55.2	
NIE				eSS	SS	07 33 08.1	+8.2
LVV	L'vov	95.99	353	d iP	P	07 15 11.6	+2.1
LVV				eS	S	07 26 24.7	-3.6
LVV				MLR	MLR		
	comp=Z,2µm,18.0s						
KRUC	Moravsky	96.13	348	eP	P	07 15 12.1	+2.0
KRUC				ePP	PP	07 19 01.4	-2.2
KRUC				eSKS	SKSac	07 25 51.4	+4.6
KRUC				ePS	PS	07 27 54.2	+4.7
GEC2	GERESS Array S	96.34	346	PFAKE		07 15 20.0	+8.8
GEC2				LR	LR		
	comp=Z,7µm,20.0s						
GERES	GERESS Array B	96.34	346	P	P	07 15 12.3	+1.1
	comp=Z,0.2nm,0.4s,baz=178,slow=4.9,SNR=5.9						
GERES				PP	PP	07 19 03.0	-2.4
	comp=Z,2.2nm,0.9s,baz=179,slow=7.8,SNR=3.5						
GERES				LR	LR	08 01 45.1	
	comp=Z,6µm,19.8s,baz=168,slow=37						
VRAC	Vranov	96.34	348	eP	P	07 15 13.4	+2.3
VRAC				ePP	PP	07 19 03.3	-2.0
VRAC				eSKS	SKSac	07 25 52.1	+4.1
VRAC				ePS	PS	07 27 58.2	+6.4
MDOK	Medeo	96.44	30	eP	P	07 15 12.8	+0.9
MDOK				i		07 19 03.9	
MDOK				eS	SKSac	07 25 50.5	+1.4
MDOK	Medeo	96.44	30	eP	P	07 15 12.9	+0.9
MDOK				i PP	PP	07 19 04.0	-2.4
MDOK				eS	SKSac	07 25 50.5	+1.4
TREC	Trest	96.49	347	eP	P	07 15 12.2	+0.4
TREC				MLR	MLR		
	comp=Z,7µm,18.0s						
TREC	Trest	96.49	347	eP	P	07 15 12.2	+0.4
TREC				ePP	PP	07 18 59.3	-7.2
TREC				AMS	AMS	08 00 10.0	
	comp=Z,7µm,18.0s						
AKASG	Malin Array Be	96.54	356	P	P	07 15 12.7	+0.8
	comp=Z,0.1nm,0.3s,baz=197,slow=5.2,SNR=8.2						
AKASG				PP	PP	07 19 05.4	-1.3
	comp=Z,0.5nm,0.4s,baz=186,slow=5.4,SNR=7.2						
AKASG				LR	LR	08 04 13.2	
	comp=Z,3µm,18.3s,baz=185,slow=39						
AKBB	Malin Array Si	96.54	356	eP	P	07 15 12.9	+1.0
	comp=Z,2.4nm,0.8s						
KHC	Kasperske Hory	96.64	346	eP	P	07 15 10.6	-1.9
	comp=Z,1.4nm,1.2s						
KHC				LR	LR		
	comp=Z,3µm,21.0s						
KHC	Kasperske Hory	96.64	346	eP	P	07 15 16.2	+3.7
KHC				e		07 19 05.8	
KHC				e		07 25 52.6	
KHC				eSS	SS	07 33 06.2	-3.2
KHC				MLR	MLR		
	comp=Z,8µm,21.0s						
KHC	Kasperske Hory	96.64	346	eP	P	07 15 16.2	+3.7
KHC				ex	x	07 15 38.0	
KHC				ex	x	07 16 03.5	
KHC				ePP	PP	07 19 05.8	-1.8
KHC				eSKS	SKSac	07 25 52.6	+3.0
KHC				ex	x	07 27 46.0	
KHC				eSS	SS	07 33 06.2	-3.2
KHC				AMS	AMS	08 00 10.0	
	comp=Z,8µm,21.0s						
OKC	Ostrava-Krasne	96.65	349	eP	P	07 15 07.8	-4.7
OKC				e		07 19 03.7	
OKC				e		07 25 52.6	
OKC				eSP	SP	07 27 58.3	+3.7
OKC				eSS	SS	07 33 03.9	-5.5
OKC				MLR	MLR		
	comp=Z,4µm,14.6s						
OKC	Ostrava-Krasne	96.65	349	eP	P	07 15 07.8	-4.7
OKC				ePP	PP	07 19 03.7	-3.9
OKC				eSKS	SKSac	07 25 52.6	+3.1
OKC				ePS	PS	07 27 58.3	+3.2
OKC				eSS	SS	07 33 03.9	-5.5
OKC				AMS	AMS	08 06 00.0	
	comp=Z,4µm,14.6s						
MORC	Moravsky Berou	96.67	349	eP	P	07 15 10.1	-2.5
	comp=Z,6.9nm,1.3s						
MORC				LR	LR		
	comp=Z,4µm,20.0s						
MORC	Moravsky Berou	96.67	349	eP	P	07 15 10.1	-2.5
MORC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MORC				MLR	MLR		
	comp=Z,4µm,20.0s						
MORC	Moravsky Berou	96.67	349	eP	P	07 15 14.9	+2.3
MORC				ePP	PP	07 19 05.3	-2.6
MORC				eSKS	SKSac	07 25 53.4	+3.7

MORC				ePS	PS	07 28 02.2	+6.7
OJC	**Ojcow**	**96.82**	**350**	eP	**P**	**07 15 16.1**	**+2.9**
OJC				ePP	**PP**	**07 19 08.2**	**-0.8**
OJC				eSKSac	**SKSac**	**07 25 57.9**	**+7.6**
OJC				e		07 28 03.7	
OJC				eSS	**SS**	**07 33 19.1**	**+7.3**
OJC				LMZ	LR	07 57 32.7	
	comp=Z,5µm,24.8s						
OJC	**Ojcow**	**96.82**	**350**	eP	**P**	**07 15 16.1**	**+2.9**
OJC				e		07 19 08.2	
OJC				e		07 28 03.7	
OJC				eSS	SS	07 33 19.1	+7.3
OJC				MLR	MLR		
	comp=Z,5µm,24.8s						
SATY	**Saty**	**96.83**	**31**	eP	**P**	**07 15 13.0**	**-0.6**
SATY				e		07 19 09.8	
SATY	**Saty**	**96.83**	**31**	eP	**P**	**07 15 13.0**	**-0.6**
SATY				ePP	**PP**	**07 19 09.9**	**+0.6**
KUU	**Kurty**	**96.85**	**29**	eP	**P**	**07 15 12.3**	**-1.3**
KUU				i		07 19 06.5	
KUU	**Kurty**	**96.85**	**29**	eP	**P**	**07 15 12.3**	**-1.3**
KUU				i PP	**PP**	**07 19 06.6**	**-2.7**
BFO	**Black Forest**	**96.86**	**343**	PFAKE		07 15 20.0	+6.5
BFO				LR	LR		
	comp=Z,6µm,18.0s						
ECH	**Echery**	**97.00**	**342**	PFAKE		07 15 20.0	+5.9
ECH				LR	LR		
	comp=Z,4µm,18.0s						
GYA	**Guiyang**	**97.09**	**59**	⇑iP	Pdif	07 15 15.9	+0.5
GYA				pP	pwP	07 15 26.3	+5.6
GYA				sP	sP	07 15 30.9	+16
GYA				PP	**PP**	**07 19 16.9**	**+5.3**
GYA				SKS	**SKSac**	**07 25 50.5**	**-2.7**
GYA				S	**S**	**07 26 38.3**	**-0.8**
GYA				SS	**SS**	**07 33 17.9**	**+1.3**
GYA				pmax	pmax		
	comp=Z,40nm,1.2s						
GYA				pmax	pmax		
	comp=Z,2µm,9.3s						
GYA				LR	LR		
	comp=Z,2µm,24.3s						
GYA				LR	LR		
	comp=Z,3µm,24.3s						
GYA				LR	LR		
	comp=Z,5µm,23.9s						
STU	**Stuttgart**	**97.10**	**343**	PFAKE		07 15 30.0	+15
STU				LR	LR		
	comp=Z,9µm,21.0s						
UZB	**Uzynbulak**	**97.12**	**31**	eP	**P**	**07 15 14.4**	**-0.6**
UZB				i		07 19 08.3	
UZB				eS	**SKSac**	**07 25 55.0**	**+2.4**
UZB	**Uzynbulak**	**97.12**	**31**	eP	**P**	**07 15 14.4**	**-0.6**
UZB				i PP	**PP**	**07 19 08.3**	**-3.3**
UZB				eS	**SKSac**	**07 25 55.1**	**+2.4**
BTLS	**Baital**	**97.13**	**27**	d iP	**P**	**07 15 13.8**	**-0.9**
BTLS				i		07 19 08.7	
BTLS				eS	**SKSac**	**07 25 53.4**	**+1.2**
BTLS	**Baital**	**97.13**	**27**	⇓iP	**P**	**07 15 13.9**	**-0.9**
BTLS				i PP	**PP**	**07 19 08.8**	**-2.7**
BTLS				eS	**SKSac**	**07 25 53.5**	**+1.2**
GOPC	**GO Pecny, Ondr**	**97.20**	**347**	eP	**P**	**07 15 14.3**	**-0.7**
GOPC				e		07 25 55.3	
GOPC				eSP	SP	07 28 02.7	+2.0
GOPC				MLR	MLR		
	comp=Z,4µm,18.4s						
GOPC	**GO Pecny, Ondr**	**97.20**	**347**	eP	**P**	**07 15 14.3**	**-0.7**
GOPC				ePP	PP	07 19 03.7	-8.2
GOPC				eSKS	**SKSac**	**07 25 55.3**	**+2.9**
GOPC				ePS	PS	07 28 02.7	+1.5
GOPC				eSS	**SS**	**07 33 10.4**	**-6.9**
GOPC				AMS	AMS	08 00 10.0	
	comp=Z,4µm,18.4s						
KPKS	**Kokpek**	**97.28**	**31**	eP	**P**	**07 15 15.4**	**-0.2**
KPKS				i		07 19 12.3	
KPKS	**Kokpek**	**97.28**	**31**	eP	**P**	**07 15 15.4**	**-0.2**
KPKS				i PP	**PP**	**07 19 12.4**	**-0.4**
PRU	**Pruhonice**	**97.31**	**347**	eP	**P**	**07 15 14.3**	**-1.2**
PRU				e		07 25 51.3	
PRU				eSP	SP	07 28 00.7	-1.2
PRU				MLR	MLR		
	comp=Z,5µm,19.5s						
PRU	**Pruhonice**	**97.31**	**347**	eP	**P**	**07 15 14.3**	**-1.2**
PRU				ePP	PP	07 18 57.2	-16
PRU				eSKS	**SKSac**	**07 25 51.3**	**-1.6**
PRU				eSP	SP	07 28 00.7	-1.2
PRU				eSS	SS	07 33 04.2	-15
PRU				AMS	AMS	08 02 00.0	
	comp=Z,5µm,19.5s						
DPC	**Dobruska-Polom**	**97.40**	**348**	eP	Pdif	07 15 18.9	+2.9
DPC				e		07 19 09.6	
DPC				e		07 25 57.8	
DPC				eSP	SP	07 28 06.7	+3.9
DPC				MLR	MLR		
	comp=Z,5µm,22.4s						
DPC	**Dobruska-Polom**	**97.40**	**348**	eP	Pdif	07 15 18.9	+2.9
DPC				ePP	**PP**	**07 19 09.6**	**-3.9**
DPC				eSKS	**SKSac**	**07 25 57.8**	**+4.3**
DPC				ePS	**PS**	**07 28 06.7**	**+3.3**
DPC				eSS	**SS**	**07 33 11.7**	**-8.4**
DPC				AMS	AMS	07 57 20.0	
	comp=Z,5µm,22.4s						
GRA1	**Grafenberg Arr**	**97.59**	**345**	PFAKE		07 15 30.0	+13
GRA1				LR	LR		
	comp=Z,11µm,21.0s						
UPC	**Upice**	**97.60**	**348**	eP	Pdif	07 15 21.3	+4.5
UPC				e		07 19 12.4	
UPC				e		07 25 56.7	
UPC				eSP	SP	07 28 06.6	+1.7
UPC				eSS	**SS**	**07 33 22.3**	**-0.5**
UPC				MLR	MLR		
	comp=Z,5µm,19.0s						
UPC	**Upice**	**97.60**	**348**	eP	Pdif	07 15 21.3	+4.5
UPC				ePP	**PP**	**07 19 12.4**	**-2.5**
UPC				eSKS	**SKSac**	**07 25 56.7**	**+2.3**
UPC				ePS	PS	07 28 06.6	+1.1
UPC				eSS	**SS**	**07 33 22.3**	**-0.5**
UPC				AMS	AMS	08 01 20.0	
	comp=Z,5µm,19.0s						
OSTC	**Ostas**	**97.61**	**348**	eP	Pdif	07 15 22.3	+5.4
OSTC				ePP	**PP**	**07 19 12.8**	**-2.3**
OSTC				eSKS	**SKSac**	**07 25 57.5**	**+3.0**
OSTC				ePS	PS	07 28 05.0	-0.7
OSTC				eSS	**SS**	**07 33 20.2**	**-2.9**
OSTC				AMS	AMS	08 01 20.0	
	comp=Z,5µm,18.1s						
CHVC	**Chvalec**	**97.67**	**348**	eP	Pdif	07 15 20.8	+3.6
CHVC				ePP	**PP**	**07 19 14.3**	**-1.2**
CHVC				eSKS	**SKSac**	**07 25 54.7**	**-0.1**
CHVC				eSP	SP	07 28 05.1	-0.7
CHVC				eSS	**SS**	**07 33 20.7**	**-3.2**
CHVC				AMS	AMS	08 01 20.0	
	comp=Z,5µm,18.5s						
PVCC	**Panska Ves**	**97.83**	**347**	eP	Pdif	07 15 18.7	+0.8
PVCC				e		07 19 14.5	
PVCC				e		07 25 59.1	
PVCC				eSP	SP	07 28 07.2	-0.3
PVCC				MLR	MLR		
	comp=Z,6µm,19.5s						
PVCC	**Panska Ves**	**97.83**	**347**	eP	Pdif	07 15 18.7	+0.8
PVCC				ePP	**PP**	**07 19 14.5**	**-2.2**
PVCC				eSKS	**SKSac**	**07 25 59.1**	**+3.6**
PVCC				ePS	**PS**	**07 28 07.2**	**-0.8**
PVCC				eSS	SS	07 33 12.2	-14
PVCC				AMS	AMS	08 00 40.0	
	comp=Z,6µm,19.5s						
KSP	**Ksiaz**	**97.88**	**348**	eP	Pdif	07 15 22.7	+4.7
KSP				ePP	**PP**	**07 19 15.6**	**-1.6**
KSP				eSKSac	**SKSac**	**07 26 05.1**	**+9.3**
KSP				e		07 28 15.8	
KSP				eSS	**SS**	**07 33 23.5**	**-3.3**
KSP				LMZ	LR	07 57 54.0	
	comp=Z,5µm,22.7s						
KSP	**Ksiaz**	**97.88**	**348**	eP	Pdif	07 15 22.7	+4.6
KSP				e		07 19 15.6	
KSP				e		07 28 15.8	
KSP				eSS	SS	07 33 23.5	-3.3
KSP				MLR	MLR		
	comp=Z,5µm,22.7s						
NKC	**Novy Kostel**	**97.89**	**346**	eP	Pdif	07 15 18.7	+0.5
NKC				e		07 19 13.8	
NKC				e		07 26 01.3	
NKC				eSP	SP	07 28 06.2	-2.0
NKC				MLR	MLR		
	comp=Z,10µm,19.7s						
NKC	**Novy Kostel**	**97.89**	**346**	eP	Pdif	07 15 18.7	+0.5
NKC				ePP	**PP**	**07 19 13.8**	**-3.5**
NKC				eSKS	**SKSac**	**07 26 01.3**	**+5.3**
NKC				ePS	PS	07 28 06.2	-2.6
NKC				eSS	**SS**	**07 33 18.5**	**-8.5**
NKC				AMS	AMS	08 01 00.0	
	comp=Z,10µm,19.7s						
CLF	**Chambon-Foret**	**97.98**	**339**	PFAKE		07 15 30.0	+11
CLF				LR	LR		
	comp=Z,14µm,21.0s						
AKTO	**Aktyubinsk**	**98.22**	**15**	P	Pdif	07 15 20.1	+0.6
	comp=Z,0.5nm,0.5s,baz=184,slow=5.7,SNR=4.1						
AKTO				PP	**PP**	**07 19 19.2**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=225,slow=7.1,SNR=3.6						
BRG	**Berggiesshubel**	**98.27**	**347**	ePDIFF	Pdif	07 15 22.1	+2.4
	comp=Z,2.4nm,0.9s						
BRG				i		07 15 23.9	
	comp=Z,72nm,2.6s						
BRG				ePP	**PP**	**07 19 17.9**	**-2.1**
	comp=Z,156nm,2.2s						
BRG				SKS	**SKSac**	**07 26 03.0**	**+5.3**
BRG				S	ScS	07 27 00.0	+12
BRG				SS	**SS**	**07 33 36.0**	**+3.8**
	comp=N,7µm,18.3s						
	comp=E,4µm,17.2s						
	comp=Z,9µm,17.8s						
PMG	**Port Moresby**	**98.28**	**113**	PFAKE		07 15 30.0	+9.2
PMG				LR	LR		
	comp=Z,5µm,19.0s						
BEL	**Belsk**	**98.30**	**351**	epP	Pdif	07 15 23.1	+3.3
BEL				ePP	**PP**	**07 19 19.6**	**-0.6**
BEL				eSKSac	**SKSac**	**07 26 02.9**	**+5.0**
BEL				LMZ	LR	07 52 02.6	
	comp=Z,5µm,35.2s						
BEL	**Belsk**	**98.30**	**351**	eP	Pdif	07 15 23.1	+3.2
BEL				e		07 19 19.7	
BEL				e		07 26 02.9	
WLF	**Walferdange**	**98.59**	**342**	PFAKE		07 15 30.0	+8.8
WLF				LR	LR		
	comp=Z,36µm,20.0s						
WLF	**Walferdange**	**98.59**	**342**	⇑PP	**PP**	**07 19 25.7**	**+3.2**
HKPS	**Hong Kong Po S**	**98.67**	**67**	PFAKE		07 15 30.0	+7.7
HKPS				LR	LR		
	comp=Z,3µm,19.0s						
CD2	**Chengdu**	**98.73**	**54**	P	Pdif	07 15 23.1	+0.7
CD2				PP	**PP**	**07 19 23.6**	**-0.4**
CD2				SS	SS	07 33 31.8	-7.6
CD2				pmax	pmax		
	comp=Z,20nm,1.5s						
CD2				pmax	pmax		
	comp=Z,260nm,4.8s						
CD2				LR	LR		
	comp=Z,7µm,19.4s						
CD2				LR	LR		
	comp=Z,3µm,22.1s						
CD2				LR	LR		
	comp=Z,6µm,21.4s						
CLL	**Collm**	**98.84**	**346**	PFAKE		07 15 30.0	+7.7
CLL				LR	LR		
	comp=Z,8µm,19.0s						
CLL	**Collm**	**98.84**	**346**	eP	Pdif	07 15 25.0	+2.7
CLL				e		07 15 32.0	
CLL				e		07 19 22.0	
CLL				e		07 26 08.0	
CLL				pmax	pmax		
	comp=Z,59nm,2.3s						
CLL				MLR	MLR		
	comp=Z,8µm,19.7s						
CLL	**Collm**	**98.84**	**346**	ePdif	Pdif	07 15 25.0	+2.7
	comp=Z,59nm,2.3s						
CLL				e		07 15 32.0	
CLL				e		07 15 39.0	
CLL				e		07 18 40.0	
CLL				ePP	**PP**	**07 19 22.0**	**-2.4**
	comp=Z,161nm,2.4s						
CLL				ePPP	PPP	07 21 36.0	
CLL				ePPPP		07 23 12.0	
CLL				eSKSac	**SKSac**	**07 26 08.0**	**+7.4**
CLL				e(S)	**ScS**	**07 27 00.0**	**+7.5**
CLL				ePS	PS	07 28 25.0	+6.1
CLL				eSS	**SS**	**07 33 43.0**	**+2.8**
CLL				eSSS	SSS	07 37 48.0	
CLL				eSSSS		07 41 06.0	
CLL				Lmax		08 03 00.0	
CLL				Lm	MLR	08 03 00.0	
	comp=N,8µm,19.9s						
CLL				Lm	MLR	08 03 00.0	
	comp=E,5µm,18.5s						
CLL				Lm	MLR	08 03 00.0	
	comp=Z,8µm,19.7s						
DZM	**Mont Dzumac**	**99.21**	**135**	ePP	**PP**	**07 19 19.3**	**-7.5**
	comp=Z,408nm,25.9s						
DZM	**Mont Dzumac**	**99.21**	**135**	ePS	PS	07 28 25.2	+2.0
	comp=Z,3µm,28.9s						
DZM				eSS	SS	07 33 45.7	+1.1
	comp=Z,4µm,26.6s						
DZM	**Mont Dzumac**	**99.21**	**135**	eLR	LR	07 47 45.3	
	comp=Z,17µm,31.9s						
DZM	**Mont Dzumac**	**99.21**	**135**	PFAKE		07 15 40.0	+15
DZM				LR	LR		
	comp=Z,4µm,22.0s						
PINNC	**Pines Island,**	**99.24**	**136**	PFAKE		07 15 40.0	+15
PINNC				LR	LR		
	comp=Z,3µm,21.0s						
DOU	**Dourbes**	**99.34**	**341**	⇑PP	**PP**	**07 19 26.7**	**-1.5**
BCLA	**Clavier**	**99.48**	**341**	⇑PP	**PP**	**07 19 28.3**	**-1.0**
MEM	**Membach**	**99.51**	**342**	⇑PP	**PP**	**07 19 28.8**	**-0.7**
CMLA	**Cha da Macela**	**99.52**	**316**	PFAKE		07 15 40.0	+14
CMLA				LR	LR		
	comp=Z,5µm,18.0s						
BEBN	**Eben Emael**	**99.75**	**342**	⇑PP	**PP**	**07 19 30.5**	**-0.9**
SNF	**Seneffe**	**99.80**	**341**	⇑PP	**PP**	**07 19 30.2**	**-1.5**
UCC	**Uccle**	**100.05**	**341**	PFAKE		07 15 40.0	+12
UCC				LR	LR		
	comp=Z,10µm,19.0s						
UCC	**Uccle**	**100.05**	**341**	⇑PP	**PP**	**07 19 32.8**	**-0.9**
GKP	**Gorka Klasztor**	**100.13**	**349**	epP	**Pdif**	**07 15 32.1**	**+4.1**
GKP				ePP	**PP**	**07 19 35.4**	**+1.2**
GKP				LMZ	LR	07 54 37.5	
	comp=Z,5µm,31.1s						
GKP	**Gorka Klasztor**	**100.13**	**349**	eP	**Pdif**	**07 15 32.1**	**+4.1**
GKP				e		07 19 35.4	
SUW	**Suwalki**	**100.23**	**353**	PFAKE		07 15 40.0	+12
SUW				LR	LR		
	comp=Z,3µm,22.0s						
MICGM	**Minsk**	**100.40**	**356**	e	**Pdif**	**07 15 25.0**	**-4.1**
MICGM				e		07 26 14.0	
MICGM				eLQ	LQ	07 44 28.0	
MICGM				eLR	LR	07 59 50.0	
MICGM				LRM	MLR	08 06 36.0	
	comp=Z,5.4nm,18.0s						
MNK	**Minsk**	**100.40**	**356**	eP	**Pdif**	**07 15 25.0**	**-4.1**
MNK				e		07 26 14.0	
MARNC	**Mare, Loyalty**	**100.48**	**136**	PFAKE		07 15 40.0	+9.4
MARNC				LR	LR		
	comp=Z,3µm,22.0s						
OBN	**Obninsk**	**100.85**	**1**	PFAKE		07 15 40.0	+8.9
OBN				LR	LR		
	comp=Z,4µm,20.0s						
OBN	**Obninsk**	**100.85**	**1**	eP	**Pdif**	**07 15 27.9**	**-3.2**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NACGM	**Naroch**	**100.86**	**355**	ePP	**PP**	**07 19 42.0**	**+2.3**
NACGM				ePPP	PPP	07 22 04.0	
NACGM				eSKS	**SKSac**	**07 26 12.0**	**+1.7**
NACGM				ePS	PS	07 28 32.0	-8.5
NACGM				eSS	**SS**	**07 34 08.0**	**-0.3**
NACGM				eSSS	SSS	07 38 18.0	
NACGM				eLQ	LQ	07 51 32.0	
NACGM				eLR	LR	07 59 08.0	
NACGM				LRM	MLR	08 05 07.0	
	comp=Z,5.6nm,17.0s						
WMQ	**Urumqi**	**101.02**	**36**	eP	**Pdif**	**07 15 33.3**	**+1.0**
WMQ				pP	sPdif	07 15 36.4	+4.6
WMQ				SKS	**SKSac**	**07 26 12.3**	**+0.4**
WMQ				S	**Sdif**	**07 27 09.1**	**-2.3**
WMQ				SS	**SS**	**07 34 11.6**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.3s						
WMQ				LR	LR		
	comp=Z,2µm,17.7s						
WMQ				LR	LR		
	comp=Z,2µm,19.3s						
BRZS	**Berezniki**	**101.16**	**24**	eP	**Pdif**	**07 15 32.4**	**-0.3**
BRZS	**Berezniki**	**101.16**	**24**	eP	**Pdif**	**07 15 32.5**	**-0.3**
BRZS				ePP	**PP**	**07 19 35.0**	**-7.2**
IIGN	**Ignalina**	**101.34**	**355**	ePP	**PP**	**07 19 40.3**	**-3.0**
MAKZ	**Makanchi**	**101.34**	**31**	PFAKE		07 15 40.0	+6.4
MAKZ				LR	LR		
	comp=Z,3µm,19.0s						
MK31	**Makanchi Array**	**101.44**	**31**	ePdif	**Pdif**	**07 15 34.0**	**-0.1**
MK31	**Makanchi Array**	**101.44**	**31**	eP	**Pdif**	**07 15 34.0**	**-0.1**
MK32	**Makanchi Array**	**101.44**	**31**	ePdif	**Pdif**	**07 15 33.5**	**-0.6**
MK32				ePP	**PP**	**07 19 42.9**	**-1.4**
MKAR	**Makanchi Array**	**101.44**	**31**	Pdiff	**Pdif**	**07 15 33.5**	**-0.6**
	comp=Z,1.7nm,1.0s,baz=216,slow=4.6,SNR=7.6						
MKAR				PP	**PP**	**07 19 42.9**	**-1.4**
	comp=Z,2.5nm,1.1s,baz=190,slow=5.0,SNR=3.9						
ISAL	**Salakas**	**101.56**	**355**	ePP	**PP**	**07 19 42.1**	**-2.9**
ENH	**Enshi**	**101.57**	**58**	PFAKE		07 15 50.0	+15
ENH				LR	LR		
	comp=Z,6µm,22.0s						
ROSA	**Rosais**	**101.60**	**315**	PFAKE		07 15 50.0	+15
ROSA				LR	LR		
	comp=Z,6µm,18.0s						
IZAR	**Zarasai**	**101.73**	**355**	ePP	**PP**	**07 19 43.5**	**-2.8**
RGN	**Rugen**	**101.92**	**347**	PFAKE		07 15 50.0	+14
RGN				LR	LR		
	comp=Z,7µm,20.0s						
BBGH	**Gun Hill**	**102.39**	**276**	PFAKE		07 15 50.0	+11
BBGH				LR	LR		
	comp=Z,6µm,20.0s						
HTL	**Hartland**	**102.50**	**336**	eP	**PP**	**07 19 53.3**	**+1.2**
HTL				IAMs_20	IAMs_20	08 02 17.3	
	comp=Z,12µm,18.0s						
STRD	**Stroud**	**102.56**	**337**	eP	**PP**	**07 19 52.1**	**-0.6**
STRD				IAMs_20	IAMs_20	07 59 07.5	
	comp=Z,7µm,18.6s						
LZH	**Lanzhou**	**102.65**	**51**	eP	**Pdif**	**07 15 37.8**	**-2.1**
LZH				PP	**PP**	**07 19 53.0**	**-0.8**
LZH				SKS	**SKSac**	**07 26 16.6**	**-3.7**
LZH				S	**Sdif**	**07 27 19.5**	**-6.0**
LZH				SS	**SS**	**07 34 34.4**	**+0.3**
LZH				pmax	pmax		
	comp=Z,32nm,1.0s						
LZH				pmax	pmax		
	comp=Z,210nm,5.2s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
LZH				LR	LR		
	comp=Z,4µm,17.9s						
LZH				LR	LR		
	comp=Z,5µm,20.1s						
MONM	**Monmouth**	**102.80**	**337**	eP	**PP**	**07 19 53.5**	**-0.8**
MONM				IAMs_20	IAMs_20	07 56 25.7	
	comp=Z,12µm,30.8s						
ZSN	**Zaisan**	**102.94**	**32**	i PP	**PP**	**07 19 52.6**	**-3.0**
KNMB	**Chin-men Tao**	**102.96**	**68**	PFAKE		07 15 50.0	+8.7
KNMB				LR	LR		
	comp=Z,2µm,20.0s						
MCH1	**Michaelchurch**	**102.99**	**337**	eP	**PP**	**07 19 53.0**	**-2.8**
MCH1				IAMs_20	IAMs_20	07 56 30.7	
	comp=Z,11µm,28.8s						
BVAR	**Borovoye Array**	**103.31**	**21**	Pdiff	**Pdif**	**07 15 43.2**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=231,slow=40,SNR=3.1						
BRVK	**Borovoye**	**103.31**	**21**	PFAKE		07 15 50.0	+7.8
BRVK				LR	LR		
	comp=Z,4µm,19.0s						
HLM1	**Long Mynd**	**103.43**	**337**	eP	**PP**	**07 19 54.7**	**-4.4**
HLM1				IAMs_20	IAMs_20	07 56 58.6	
	comp=Z,11µm,29.9s						
RSBS	**Rosebush, Pemb**	**103.43**	**336**	eP	**PP**	**07 19 58.4**	**-0.8**
RSBS				IAMs_20	IAMs_20	08 02 56.7	
	comp=Z,5µm,17.9s						
KURBB	**Kurchatov Arra**	**103.47**	**27**	PKKP		07 31 53.9	
	comp=Z,0.4nm,0.3s,baz=28,slow=3.5,SNR=6.2						
TWG	**Pinlang**	**103.56**	**71**	PFAKE		07 16 00.0	+16
TWG				LR	LR		
	comp=Z,7µm,20.0s						
KURK	**Kurchatov**	**103.58**	**27**	PFAKE		07 15 50.0	+6.6
KURK				LR	LR		
	comp=Z,4µm,18.0s						
TPUB	**Ta-pu**	**103.61**	**71**	PFAKE		07 16 00.0	+16
TPUB				LR	LR		
	comp=Z,2µm,18.0s						
MCLT	**Moule a Chique**	**103.74**	**276**	PFAKE		07 15 50.0	+5.0
MCLT				LR	LR		
	comp=Z,2µm,21.0s						
FOEL	**Foel Wylfa**	**103.85**	**337**	eP	**PKiKP**	**07 19 58.7**	**-3.5**
FOEL				IAMs_20	IAMs_20	07 57 25.5	
	comp=Z,10µm,28.5s						
SLIT	**Slitere, Latvi**	**103.89**	**353**	ePP	**PKiKP**	**07 20 02.1**	**+0.1**
LBWR	**Ladybower, Pea**	**103.92**	**338**	eP	**PKiKP**	**07 19 59.4**	**-2.9**
LBWR				IAMs_20	IAMs_20	08 02 11.9	
	comp=Z,9µm,20.9s						
MANU	**Manus Island**	**103.93**	**108**	PFAKE		07 16 00.0	+14
MANU				LR	LR		
	comp=Z,6µm,20.0s						
XAN	**Xi'an**	**103.97**	**55**	PFAKE		07 16 00.0	+14
XAN				LR	LR		
	comp=Z,4µm,20.0s						
ARU	**Arti**	**104.07**	**13**	PFAKE		07 16 00.0	+15
ARU				LR	LR		
	comp=Z,5µm,20.0s						
YULB	**Yu-li**	**104.11**	**71**	PFAKE		07 16 00.0	+14
YULB				LR	LR		
	comp=Z,3µm,18.0s						
VSU	**Vasula**	**104.41**	**356**	ePP	**PKiKP**	**07 20 04.2**	**+1.2**
MUD	**Monsted U'grnd**	**104.43**	**346**	i P	**PKiKP**	**07 20 00.4**	**-2.7**
	comp=Z,9µm,16.0s						
WLF1	**Llynfaes**	**104.53**	**337**	eP	**PKiKP**	**07 20 03.3**	**-0.1**
WLF1				IAMs_20	IAMs_20	08 04 10.9	
	comp=Z,18µm,18.2s						
WPS	**Cemaes, Angles**	**104.66**	**337**	eP	**PKiKP**	**07 20 04.4**	**+0.8**
WPS				IAMs_20	IAMs_20	08 04 13.9	
	comp=Z,8µm,19.2s						
DSB	**Dublin**	**105.04**	**336**	PFAKE		07 16 00.0	+10
DSB				LR	LR		
	comp=Z,12µm,20.0s						
KESW	**Keswick, Cumbr**	**105.35**	**338**	eP	**PKiKP**	**07 20 06.5**	**+1.7**
KESW				IAMs_20	IAMs_20	08 08 09.8	
	comp=Z,6µm,14.4s						
IOMK	**Kirk Michael**	**105.44**	**337**	eP	**PKiKP**	**07 20 05.3**	**+0.3**
IOMK				IAMs_20	IAMs_20	07 58 39.3	
	comp=Z,17µm,25.6s						
YOJ	**Yonaguni jima**	**105.98**	**71**	PFAKE		07 20 20.0	+13
YOJ				LR	LR		
	comp=Z,2µm,21.0s						
ESK	**Eskdalemuir**	**106.03**	**338**	PFAKE		07 20 20.0	+14
ESK				LR	LR		
	comp=Z,8µm,19.0s						
HNR	**Honiara**	**106.12**	**123**	PFAKE		07 20 20.0	+12
HNR				LR	LR		
	comp=Z,2µm,20.0s						
ROSC	**El Rosal**	**106.74**	**259**	PFAKE		07 20 20.0	+11
ROSC				LR	LR		
	comp=Z,6µm,22.0s						
SDV	**Santo Domingo**	**107.09**	**265**	PFAKE		07 20 20.0	+10
SDV				LR	LR		
	comp=Z,6µm,19.0s						
KONO	**Kongsberg**	**107.40**	**347**	PFAKE		07 20 20.0	+11
KONO				LR	LR		
	comp=Z,8µm,22.0s						
SEUS	**St. Eustatius**	**107.77**	**277**	PFAKE		07 20 20.0	+9.5
SEUS				LR	LR		
	comp=Z,3µm,20.0s						
SMRT	**St. Maarten**	**108.22**	**277**	PFAKE		07 20 20.0	+8.6
SMRT				LR	LR		
	comp=Z,3µm,20.0s						
ZAA0	**Zalesovo Array**	**108.34**	**28**	PFAKE		07 20 20.0	+10
ZAA0				LR	LR		
	comp=Z,3µm,19.0s						
ZALV	**Zalesovo Beam**	**108.34**	**28**	Pdiff	**Pdif**	**07 16 04.1**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=184,slow=5.6,SNR=2.4						
ZALV				PP	**PP**	**07 20 32.5**	**-2.9**
	comp=Z,1.4nm,0.7s,baz=224,slow=6.0,SNR=2.6						
ZAA1	**Zalesovo Array**	**108.34**	**28**	ePdif	**Pdif**	**07 16 04.1**	**-0.4**
ZAA1				ePP	**PP**	**07 20 32.5**	**-2.9**
NB2	**NORSAR Subarra**	**108.49**	**348**	PP	**PP**	**07 20 31.1**	**-5.3**
	comp=Z,392nm,3.3s,baz=163,slow=7.4						
NB2	**NORSAR Subarra**	**108.49**	**348**	PP	**PP**	**07 20 31.1**	**-5.3**
	baz=163,slow=7.4						
NB200	**NORSAR Array S**	**108.49**	**348**	ePP	**PP**	**07 20 31.5**	**-4.8**

NOA	**NORSAR Array B**	**108.49**	**348**	PP	**PP**	**07 20 31.5**	**-4.8**
	comp=Z,2.5nm,0.9s,baz=168,slow=6.8,SNR=4.3						
NJ2	**Nanjing**	**108.51**	**63**	Pdif	**Pdif**	**07 16 06.8**	**+1.0**
NJ2				PP	**PP**	**07 20 40.3**	**+3.3**
NJ2				SS	SS	07 35 50.6	-3.3
NJ2				AMB	AMB		
	comp=Z,400nm,11.4s						
NJ2				LR	LR		
	comp=Z,2µm,22.3s						
NJ2				LR	LR		
	comp=Z,1µm,22.3s						
NJ2				LR	LR		
	comp=Z,4µm,22.7s						
BTO	**Baotou**	**109.26**	**51**	*e*P	PKiKP	07 20 28.6	+16
SSE	**Sheshan**	**109.32**	**65**	PFAKE		07 20 20.0	+7.0
SSE				LR	LR		
	comp=Z,4µm,22.0s						
SSE	**Sheshan**	**109.32**	**65**	Pdif	**Pdif**	**07 16 18.8**	**+9.4**
SSE	**Sheshan**	**109.32**	**65**	SS	SS	07 36 12.1	+7.3
SSE				LR	LR		
	comp=N,1µm,20.4s						
SSE				LR	LR		
	comp=E,850nm,22.4s						
SSE				LR	LR		
	comp=Z,2µm,20.8s						
HHC	**Hu-ho-hao-te**	**110.27**	**52**	PKP	**PKiKP**	**07 20 16.3**	**+1.6**
SJG	**San Juan**	**110.38**	**275**	PFAKE		07 20 30.0	+15
SJG				LR	LR		
	comp=Z,3µm,21.0s						
OBIP	**Obispado Ponce**	**110.65**	**275**	PFAKE		07 20 30.0	+14
OBIP				LR	LR		
	comp=Z,600nm,21.0s						
TBI	**Tubuai**	**110.78**	**176**	*e*PP	**PP**	**07 20 51.0**	**-0.9**
	comp=Z,218nm,28.0s						
TBI				*e*SP	SP	07 30 21.5	-0.8
	comp=Z,1µm,28.8s						
TBI				*e*SS	**SS**	**07 36 26.0**	**+4.3**
	comp=Z,3µm,28.0s						
TBI	**Tubuai**	**110.78**	**176**	*e*LQ	LQ	07 47 31.2	
	comp=Z,8µm,36.8s						
TBI				*e*LR	LR	07 53 02.6	
	comp=Z,7µm,34.0s						
JOW	**Kunigami**	**111.07**	**73**	PFAKE		07 20 30.0	+14
JOW				LR	LR		
	comp=Z,1µm,21.0s						
BJT	**Baijiatuau**	**112.28**	**55**	PFAKE		07 20 30.0	+12
BJT				LR	LR		
	comp=Z,4µm,21.0s						
SONA0	**Songino Array**	**112.47**	**44**	*e*Pdif	**Pdif**	**07 16 26.8**	**+3.6**
SONA0				*e*PKiKP	**PKiKP**	**07 20 18.5**	**-0.2**
SONA0				*e*PP	**PP**	**07 21 03.2**	**-2.3**
SONM	**Songino Array**	**112.47**	**44**	Pdiff	**Pdif**	**07 16 26.8**	**+3.6**
	comp=Z,0.3nm,0.4s,baz=258,slow=1.3,SNR=2.9						
SONM				PKiKP	**PKiKP**	**07 20 18.5**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=243,slow=1.6,SNR=3.0						
SONM				PP	**PP**	**07 21 03.3**	**-2.3**
	comp=Z,1.3nm,0.8s,baz=213,slow=5.0,SNR=5.5						
MOY	**Mondy**	**112.74**	**38**	*e*PKIKP	PKiKP	07 20 30.4	+11
ZAK	**Zakamensk**	**112.82**	**40**	*e*PKIKP	**PKiKP**	**07 20 14.3**	**-4.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
PAYG	**Puerto Ayora**	**113.09**	**243**	PFAKE		07 20 30.0	+9.2
PAYG				LR	LR		
	comp=Z,2µm,21.0s						
BCIP	**Isla Barro Col**	**113.63**	**258**	PFAKE		07 20 30.0	+8.3
BCIP				LR	LR		
	comp=Z,3µm,20.0s						
LVZ	**Lovozero**	**113.67**	**360**	PFAKE		07 20 30.0	+10
LVZ				LR	LR		
	comp=Z,4µm,18.0s						
TLY	**Talaya**	**113.90**	**39**	PFAKE		07 20 30.0	+8.9
TLY				LR	LR		
	comp=Z,3µm,19.0s						
TLY	**Talaya**	**113.90**	**39**	*i* PKIKP	**PKiKP**	**07 20 23.9**	**+2.8**
TLY				*e*		07 21 15.4	
TLY				*e*PS	**PS**	**07 30 54.0**	**+2.3**
TLY				*e*SS	SS	07 37 05.1	-0.4
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DL2	**Dalian**	**114.75**	**59**	*e*PKP	PKPdf	07 20 16.4	-6.7
DL2				SS	SS	07 37 13.8	-3.1
DL2				AMB	AMB		
	comp=Z,380nm,5.2s						
DL2				LR	LR		
	comp=Z,2µm,20.5s						
DL2				LR	LR		
	comp=Z,2µm,19.5s						
DL2				LR	LR		
	comp=Z,5µm,36.2s						
ARA0	**ARCESS Array S**	**115.52**	**356**	*e*PKPdf	**PKiKP**	**07 20 24.7**	**+1.0**
ARCES	**ARCESS Array B**	**115.52**	**356**	PKP	**PKiKP**	**07 20 24.7**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=240,slow=2.4,SNR=5.1						
ARE0	**ARCESS Array S**	**115.52**	**356**	PFAKE		07 20 30.0	+6.3
ARE0				LR	LR		
	comp=Z,200nm,22.0s						
GRTK	**Grand Turk**	**116.13**	**274**	PFAKE		07 20 40.0	+14
GRTK				LR	LR		
	comp=Z,2µm,20.0s						
PPT2	**Papeete2**	**116.49**	**175**	*e*PP	PP	07 21 23.9	-8.7
	comp=Z,316nm,27.2s						
PPT2				*e*SP	SP	07 31 13.5	-1.6
	comp=Z,2µm,26.8s						
PPT2				*e*SS	**SS**	**07 37 38.8**	**+1.3**
	comp=Z,2µm,26.5s						
PPT2	**Papeete2**	**116.49**	**175**	*e*LR	LR	07 55 47.9	
	comp=Z,4µm,21.8s						
JNU	**Nakatsue**	**116.86**	**69**	PFAKE		07 20 40.0	+13
JNU				LR	LR		
	comp=Z,3µm,20.0s						
HDC	**Heredia**	**117.13**	**256**	PFAKE		07 20 40.0	+11
HDC				LR	LR		
	comp=Z,3µm,20.0s						
KS15	**Wonju Array Si**	**117.64**	**64**	*e*PKPdf	**PKPdf**	**07 20 26.8**	**-1.9**
KSRS	**Korea Array**	**117.67**	**64**	PKP	**PKiKP**	**07 20 28.9**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=213,slow=4.4,SNR=4.3						
SNY	**Shenyang**	**117.74**	**58**	PKP	PKiKP	07 20 37.0	+8.2
SNY				PP	PP	07 21 51.6	+9.0
SNY	**Shenyang**	**117.74**	**58**	SS	SS	07 38 17.0	+21
SNY				AMB	AMB		
	comp=Z,410nm,7.8s						
SNY				LR	LR		
	comp=N,2µm,20.1s						
SNY				LR	LR		
	comp=E,1µm,20.6s						
SNY				LR	LR		
	comp=Z,3µm,21.6s						
PATS	**Pohnpei**	**117.76**	**111**	PFAKE		07 20 40.0	+10
PATS				LR	LR		
	comp=Z,4µm,21.0s						
GTBY	**Guantanamo Bay**	**117.84**	**270**	PFAKE		07 20 40.0	+10
GTBY				LR	LR		
	comp=Z,2µm,19.0s						
JTS	**Las Juntas de**	**117.90**	**255**	PFAKE		07 20 40.0	+10
JTS				LR	LR		
	comp=Z,2µm,19.0s						
MTDJ	**Mount Denham**	**118.38**	**267**	PFAKE		07 20 40.0	+9.1
MTDJ				LR	LR		
	comp=Z,3µm,22.0s						
ESPN	**Las Esperanzas**	**118.83**	**257**	PFAKE		07 20 40.0	+8.3
ESPN				LR	LR		
	comp=Z,2µm,22.0s						
BORG	**Borgarnes**	**118.86**	**336**	PFAKE		07 20 40.0	+10
BORG				LR	LR		
	comp=Z,6µm,19.0s						
CN2	**Changchun**	**120.03**	**57**	*e*PKP	**PKPdf**	**07 20 30.0**	**-3.1**
CN2				*e*PP	**PP**	**07 21 59.6**	**+1.2**
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
HIA	**Hailar**	**120.13**	**49**	PFAKE		07 20 40.0	+6.7
HIA				LR	LR		
	comp=Z,5µm,22.0s						
HIA	**Hailar**	**120.13**	**49**	⇓*i*PKIKP	**PKPdf**	**07 20 32.5**	**-0.7**
INU	**Inuyama**	**122.24**	**71**	PFAKE		07 20 50.0	+12
INU				LR	LR		
	comp=Z,2µm,22.0s						
BOD	**Bodaibo**	**122.45**	**39**	*e*PKIKP	**PKPdf**	**07 20 36.3**	**-1.0**
BOD				pmax	pmax		
	comp=Z,21nm,1.5s						
MDJ	**Mudanjiang**	**122.93**	**58**	PFAKE		07 20 50.0	+11
MDJ				LR	LR		
	comp=Z,2µm,21.0s						
SCO	**Scoresbysund**	**123.25**	**340**	PFAKE		07 20 50.0	+11
SCO				LR	LR		
	comp=Z,7µm,20.0s						
MAJO	**Matsushiro**	**123.72**	**70**	*e*PKPdf	**PKPdf**	**07 20 39.5**	**-1.0**
MAJO				LR	LR		
	comp=Z,2µm,22.0s						
MAJO	**Matsushiro**	**123.72**	**70**	*e*PKIKP	**PKPdf**	**07 20 39.5**	**-1.0**
MAJO				MLR	MLR		
	comp=Z,2µm,22.0s						
MJB9	**Matsu-Tunnel**	**123.72**	**70**	PFAKE		07 20 50.0	+9.2
MJB9				LR	LR		
	comp=Z,2µm,22.0s						
MJAR	**Matsushiro Arr**	**123.72**	**70**	PKP	**PKPdf**	**07 20 39.5**	**-1.0**
	comp=Z,3.1nm,1.0s,baz=242,slow=6.9,SNR=7.1						
USA0B	**Ussuriysk Arra**	**124.13**	**60**	PFAKE		07 20 50.0	+8.7
USA0B				LR	LR		
	comp=Z,3µm,21.0s						
USRK	**Ussuriysk Ar.**	**124.13**	**60**	PKP	**PKPdf**	**07 20 39.0**	**-1.9**
	comp=Z,2.3nm,0.9s,baz=235,slow=6.7,SNR=4.8						
ANGG	**Ammassalik, Gr**	**124.50**	**331**	PFAKE		07 20 50.0	+8.7
ANGG				LR	LR		
	comp=Z,4µm,18.0s						
NRS	**Narsarsuaq**	**124.83**	**324**	PFAKE		07 20 50.0	+7.9
NRS				LR	LR		
	comp=Z,6µm,20.0s						
TAOE	**Nuku Hiva Isla**	**125.12**	**186**	*e*SS	SS	07 39 28.9	+0.7
	comp=Z,4µm,30.6s						
TAOE	**Nuku Hiva Isla**	**125.12**	**186**	*e*LQ	LQ	07 54 22.0	
	comp=Z,10µm,35.6s						
TAOE				*e*LR	LR	07 59 50.1	
	comp=Z,4µm,24.0s						
HAL	**Halifax**	**125.16**	**300**	PFAKE		07 20 50.0	+6.7
HAL				LR	LR		
	comp=Z,4µm,21.0s						
KWAJ	**Kwajalein Atol**	**125.17**	**117**	PFAKE		07 21 00.0	+16
KWAJ				LR	LR		
	comp=Z,3µm,19.0s						
KBS	**Kingsbay**	**125.50**	**355**	PFAKE		07 20 50.0	+7.0
KBS				LR	LR		
	comp=Z,3µm,20.0s						
061Z	**Ochoppi**	**125.74**	**271**	PFAKE		07 21 00.0	+15
061Z				LR	LR		
	comp=Z,2µm,20.0s						
IVI	**Ivigtut**	**125.98**	**324**	PFAKE		07 21 00.0	+16
IVI				LR	LR		
	comp=Z,5µm,22.0s						
060A	**Indiantown**	**126.10**	**273**	PFAKE		07 21 00.0	+14
060A				LR	LR		
	comp=Z,3µm,19.0s						
ZEA	**Zeya**	**126.51**	**48**	*e*PKIKP	**PKPdf**	**07 20 44.0**	**-1.2**
ZEA				*e*		07 22 41.0	
ZEA				*e*		07 44 35.0	
ZEA				pmax	pmax		
	comp=Z,64nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,8.0s						
ZEA				pmax	pmax		
	comp=N,200nm,5.0s						
LMN	**Caledonia Moun**	**126.53**	**301**	*e*PKPdf	**PKPdf**	**07 20 44.5**	**-1.0**
059A	**Moore Haven**	**126.60**	**272**	PFAKE		07 21 00.0	+13
059A				LR	LR		
	comp=Z,2µm,22.0s						
KLR	**Kul'dur**	**126.66**	**54**	PKP	**PKPdf**	**07 20 45.0**	**-0.6**
	comp=Z,3.3nm,1.0s,baz=285,slow=5.4,SNR=6.1						
KLR	**Kul'dur**	**126.66**	**54**	⇓*i*PKIKP	**PKPdf**	**07 20 45.3**	**-0.4**
CCIG	**Comitan**	**127.03**	**254**	PFAKE		07 21 00.0	+12
CCIG				LR	LR		
	comp=Z,2µm,19.0s						
DAG	**Danmarks Havn**	**127.12**	**347**	*e*PKIKP	**PKiKP**	**07 20 50.7**	**+4.4**
DAG				MLR	MLR		
	comp=Z,5µm,26.0s						
DAG	**Danmarks Havn**	**127.12**	**347**	*i* P	**PKiKP**	**07 20 50.7**	**+4.4**
	comp=Z,4µm,26.0s						
TEIG	**Tepich**	**127.16**	**261**	PFAKE		07 21 00.0	+12
TEIG				LR	LR		
	comp=Z,1µm,22.0s						
GGN	**Saint George**	**127.38**	**299**	PFAKE		07 21 00.0	+12
GGN				LR	LR		
	comp=Z,5µm,20.0s						
DWPF	**Disney Wildern**	**127.51**	**273**	PFAKE		07 21 00.0	+11
DWPF				LR	LR		
	comp=Z,3µm,21.0s						
EMMW	**East Machias**	**127.55**	**299**	PFAKE		07 21 00.0	+12
EMMW				LR	LR		
	comp=Z,4µm,20.0s						
957A	**Wimauma**	**127.80**	**272**	PFAKE		07 21 00.0	+11
957A				LR	LR		
	comp=Z,2µm,20.0s						
BATG	**Bathurst New B**	**128.00**	**302**	PFAKE		07 21 00.0	+11
BATG				LR	LR		
	comp=Z,3µm,19.0s						
V62A	**Hyde County Ai**	**128.13**	**284**	PFAKE		07 21 00.0	+10
V62A				LR	LR		
	comp=Z,2µm,21.0s						
658A	**Bunnell**	**128.19**	**275**	PFAKE		07 21 00.0	+10
658A				LR	LR		
	comp=Z,4µm,22.0s						
BCX	**Boston College**	**128.64**	**294**	PFAKE		07 21 00.0	+10
BCX				LR	LR		
	comp=Z,3µm,22.0s						
SUMG	**Summit**	**128.65**	**338**	*e*PKPdf	**PKPdf**	**07 20 46.1**	**-3.2**
SUMG				LR	LR		
	comp=Z,10µm,21.0s						
SUMG	**Summit**	**128.65**	**338**	*e*PKIKP	**PKiKP**	**07 20 54.6**	**+4.6**
SUMG				MLR	MLR		
	comp=Z,25µm,21.0s						
SUMG	**Summit**	**128.65**	**338**	*i* P	**PKiKP**	**07 20 54.6**	**+4.6**
	comp=Z,25µm,21.0s						
BRYW	**Bryant College**	**128.66**	**294**	PFAKE		07 21 00.0	+10
BRYW				LR	LR		
	comp=Z,3µm,22.0s						
MYIG	**Mrida**	**128.66**	**260**	PFAKE		07 21 00.0	+9.0
MYIG				LR	LR		
	comp=Z,2µm,21.0s						
V61A	**Roper**	**128.68**	**284**	PFAKE		07 21 00.0	+9.4
V61A				LR	LR		
	comp=Z,2µm,22.0s						
WES	**Weston**	**128.76**	**294**	PFAKE		07 21 00.0	+9.5
WES				LR	LR		
	comp=Z,4µm,22.0s						
Y60A	**Bolivia**	**128.78**	**281**	PFAKE		07 21 00.0	+9.1
Y60A				LR	LR		
	comp=Z,3µm,19.0s						
WVL	**Waterville**	**128.82**	**297**	PFAKE		07 21 00.0	+9.4
WVL				LR	LR		
	comp=Z,4µm,19.0s						
PQI	**Presque Isle**	**128.87**	**300**	*e*PKPdf	**PKPdf**	**07 20 49.0**	**-1.0**
PQI				LR	LR		
	comp=Z,4µm,20.0s						
U61A	**Possum Corner**	**128.89**	**285**	PFAKE		07 21 00.0	+9.0
U61A				LR	LR		
	comp=Z,2µm,21.0s						
X60A	**Albert Glenn T**	**128.94**	**282**	P	**PKiKP**	**07 20 50.8**	**-0.3**
	baz=124						
PKME	**Peaks-Kenny Pk**	**128.95**	**298**	PFAKE		07 21 00.0	+9.2
PKME				LR	LR		
	comp=Z,4µm,21.0s						
PKME	**Peaks-Kenny Pk**	**128.95**	**298**	P	**PKiKP**	**07 20 51.3**	**+0.5**
	baz=120						
HRV	**Adam Dziewonsk**	**128.97**	**294**	PFAKE		07 21 00.0	+9.0
HRV				LR	LR		
	comp=Z,3µm,21.0s						
656A	**Willston**	**129.04**	**274**	PFAKE		07 21 00.0	+8.5
656A				LR	LR		
	comp=Z,3µm,19.0s						
S61A	**Accomac**	**129.11**	**287**	P	**PKiKP**	**07 20 51.8**	**+0.4**
	baz=123						
V60A	**Jim Taylor Roa**	**129.13**	**284**	PFAKE		07 21 00.0	+8.5
V60A				LR	LR		
	comp=Z,2µm,21.0s						
R61A	**Willards**	**129.24**	**288**	P	**PKiKP**	**07 20 52.5**	**+0.9**
	baz=123						
YLE	**Yale**	**129.24**	**292**	PFAKE		07 21 00.0	+8.5
YLE				LR	LR		
	comp=Z,5µm,20.0s						
CNNC	**Cliffs of the**	**129.26**	**283**	PFAKE		07 21 00.0	+8.2
CNNC				LR	LR		
	comp=Z,3µm,21.0s						
QUA2	**Belchertown**	**129.36**	**294**	PFAKE		07 21 00.0	+8.2
QUA2				LR	LR		
	comp=Z,4µm,22.0s						
456A	**Hilliard**	**129.50**	**276**	PFAKE		07 21 00.0	+7.6
456A				LR	LR		
	comp=Z,3µm,22.0s						
FFD	**Franklin Falls**	**129.52**	**295**	PFAKE		07 21 00.0	+8.0
FFD				LR	LR		
	comp=Z,3µm,21.0s						
T60A	**Surry**	**129.53**	**286**	PFAKE		07 21 00.0	+7.7
T60A				LR	LR		
	comp=Z,2µm,20.0s						
257A	**Skidaway Islan**	**129.54**	**277**	PFAKE		07 21 00.0	+7.5
257A				LR	LR		
	comp=Z,2µm,20.0s						
NHSC	**New Hope**	**129.61**	**279**	PFAKE		07 21 00.0	+7.4
NHSC				LR	LR		
	comp=Z,2µm,18.0s						
SFJD	**Kangerlussuaq**	**129.70**	**329**	PFAKE		07 21 00.0	+8.3
SFJD				LR	LR		
	comp=Z,4µm,20.0s						
PAL	**Palisades**	**129.71**	**291**	PFAKE		07 21 00.0	+7.5
PAL				LR	LR		
	comp=Z,5µm,22.0s						
Y58A	**Scranton**	**129.72**	**280**	PFAKE		07 21 00.0	+7.2
Y58A				LR	LR		
	comp=Z,2µm,19.0s						
S60A	**Water View**	**129.78**	**286**	P	**PKiKP**	**07 20 53.5**	**+0.8**
	baz=123						
V59A	**Middlesex**	**129.79**	**283**	P	**PKiKP**	**07 20 53.1**	**+0.2**
	baz=124						
555A	**McAlpin**	**129.79**	**274**	PFAKE		07 21 00.0	+7.0
555A				LR	LR		
	comp=Z,3µm,22.0s						
KSCT	**Kent School, K**	**129.80**	**292**	PFAKE		07 21 00.0	+7.3
KSCT				LR	LR		
	comp=Z,4µm,21.0s						
U59A	**Littleton**	**129.81**	**284**	PFAKE		07 21 00.0	+7.1
U59A				LR	LR		
	comp=Z,2µm,21.0s						
X58A	**Rowland**	**129.86**	**281**	PFAKE		07 21 00.0	+7.0
X58A				LR	LR		
	comp=Z,2µm,22.0s						
X58A	**Rowland**	**129.86**	**281**	P	**PKPdf**	**07 20 52.1**	**-0.1**
	baz=124						
ERM	**Erimo**	**129.92**	**67**	PFAKE		07 21 00.0	+7.1
ERM				LR	LR		
	comp=Z,2µm,20.0s						
ERM	**Erimo**	**129.92**	**67**	⇑*i*PKIKP	**PKiKP**	**07 20 53.8**	**+0.9**
BRNJ	**Basking Ridge**	**129.97**	**291**	PFAKE		07 21 00.0	+7.0
BRNJ				LR	LR		
	comp=Z,4µm,20.0s						
T59A	**Double "B" Far**	**129.98**	**285**	PFAKE		07 21 00.0	+6.8
T59A				LR	LR		
	comp=Z,3µm,21.0s						
HNH	**Hanover**	**130.03**	**295**	PFAKE		07 21 00.0	+6.9
HNH				LR	LR		
	comp=Z,3µm,21.0s						
GRNR	**Gornyy**	**130.04**	**54**	*e*PKIKP	**PKiKP**	**07 20 53.0**	**+0.1**
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
LBNH	**Lisbon**	**130.07**	**296**	PFAKE		07 21 00.0	+6.8
LBNH				LR	LR		
	comp=Z,2µm,20.0s						
PSUB	**Penn St. - Bra**	**130.16**	**289**	PFAKE		07 21 00.0	+6.6
PSUB				LR	LR		
	comp=Z,3µm,20.0s						
ODNJ	**Ogdensburg**	**130.20**	**291**	PFAKE		07 21 00.0	+6.5
ODNJ				LR	LR		
	comp=Z,4µm,20.0s						
Y57A	**Sumter**	**130.28**	**280**	PFAKE		07 21 00.0	+6.1
Y57A				LR	LR		
	comp=Z,3µm,19.0s						
TRY	**Troy**	**130.43**	**293**	PFAKE		07 21 00.0	+6.1
TRY				LR	LR		
	comp=Z,4µm,22.0s						
CBN	**Corbin Frederi**	**130.52**	**286**	PFAKE		07 21 00.0	+5.8
CBN				LR	LR		
	comp=Z,2µm,22.0s						
Z56A	**Williston**	**130.56**	**279**	PFAKE		07 21 00.0	+5.5
Z56A				LR	LR		
	comp=Z,2µm,20.0s						
W57A	**Gilead**	**130.64**	**282**	PFAKE		07 21 00.0	+5.4
W57A				LR	LR		
	comp=Z,2µm,19.0s						
S58A	**Poland Farm, P**	**130.66**	**285**	PFAKE		07 21 00.0	+5.5
S58A				LR	LR		
	comp=Z,2µm,19.0s						
BIRD	**Birdtown, Kers**	**130.68**	**281**	PFAKE		07 21 00.0	+5.3
BIRD				LR	LR		
	comp=Z,2µm,22.0s						
R58B	**Mineral**	**130.73**	**286**	PFAKE		07 21 00.0	+5.3
R58B				LR	LR		
	comp=Z,3µm,19.0s						
ILULI	**Ilulissat**	**130.79**	**332**	PFAKE		07 21 00.0	+6.2
ILULI				LR	LR		
	comp=Z,5µm,22.0s						
ILULI	**Ilulissat**	**130.79**	**332**	*e*PKIKP	**PKiKP**	**07 20 58.2**	**+4.4**
ILULI				MLR	MLR		
	comp=Z,4µm,17.0s						
ILULI	**Ilulissat**	**130.79**	**332**	*i* P	**PKiKP**	**07 20 58.2**	**+4.4**
	comp=Z,4µm,17.0s						
SDMD	**Soldier's Deli**	**130.80**	**288**	PFAKE		07 21 00.0	+5.2
SDMD				LR	LR		
	comp=Z,1µm,20.0s						
O59A	**Robesonia**	**130.84**	**289**	P	**PKiKP**	**07 20 54.2**	**-0.6**
	baz=121						
TIGA	**Tifton**	**131.00**	**275**	PFAKE		07 21 10.0	+15
TIGA				LR	LR		
	comp=Z,3µm,22.0s						
JSC	**Jenkinsville**	**131.02**	**280**	PFAKE		07 21 10.0	+15
JSC				LR	LR		
	comp=Z,2µm,18.0s						
T57A	**Hurt**	**131.14**	**284**	PFAKE		07 21 10.0	+14
T57A				LR	LR		
	comp=Z,2µm,20.0s						
453A	**Whigham**	**131.17**	**274**	PFAKE		07 21 10.0	+14
453A				LR	LR		
	comp=Z,4µm,22.0s						
KSPA	**Keystone Colle**	**131.19**	**291**	PFAKE		07 21 10.0	+14
KSPA				LR	LR		
	comp=Z,4µm,21.0s						
V56A	**Mocksville**	**131.34**	**282**	PFAKE		07 21 10.0	+14
V56A				LR	LR		
	comp=Z,3µm,22.0s						
S57A	**Dark Hollow, R**	**131.35**	**285**	PFAKE		07 21 10.0	+14
S57A				LR	LR		
	comp=Z,2µm,20.0s						
154A	**Montrose**	**131.35**	**277**	PFAKE		07 21 10.0	+14
154A				LR	LR		
	comp=Z,3µm,18.0s						
YAK	**Yakutsk**	**131.37**	**39**	PFAKE		07 21 10.0	+15
YAK				LR	LR		
	comp=Z,2µm,21.0s						
YAK	**Yakutsk**	**131.37**	**39**	*e*PKIKP	**PKiKP**	**07 20 54.6**	**-0.5**
X55A	**Gracelyn & Ava**	**131.38**	**280**	P	**PKPdf**	**07 20 55.2**	**0.0**
	baz=124						
NCB	**Newcomb**	**131.39**	**295**	*e*PKPdf	**PKPdf**	**07 20 54.0**	**-0.9**
NCB				LR	LR		
	comp=Z,3µm,21.0s						
N58A	**Sunbury**	**131.45**	**290**	P	**PKiKP**	**07 20 55.8**	**-0.2**
	baz=120						
BINY	**Binghamton**	**131.65**	**292**	*e*PKPdf	**PKPdf**	**07 20 54.9**	**-0.6**
BINY				LR	LR		
	comp=Z,4µm,21.0s						
PAULI	**Pauline**	**131.70**	**280**	PFAKE		07 21 10.0	+13
PAULI				LR	LR		
	comp=Z,2µm,19.0s						
O57A	**Amberson**	**131.74**	**289**	P	**PKiKP**	**07 20 56.1**	**-0.6**
	baz=121						
253A	**Americus**	**131.74**	**276**	PFAKE		07 21 10.0	+13
253A				LR	LR		
	comp=Z,2µm,19.0s						
Y54A	**Tignall**	**131.77**	**278**	P	**PKPdf**	**07 20 56.1**	**+0.2**
	baz=124						
SCHQ	**Schefferville**	**131.86**	**310**	PFAKE		07 21 10.0	+14
SCHQ				LR	LR		
	comp=Z,4µm,21.0s						
LONY	**Lake Ozonia**	**131.92**	**295**	*e*PKPdf	**PKPdf**	**07 20 54.8**	**-1.0**
LONY				LR	LR		
	comp=Z,3µm,19.0s						
352A	**Blakely**	**131.96**	**274**	PFAKE		07 21 10.0	+13
352A				LR	LR		
	comp=Z,4µm,22.0s						
451A	**Vernon**	**132.02**	**273**	PFAKE		07 21 10.0	+13
451A				LR	LR		
	comp=Z,4µm,22.0s						
YSS	**Yuzh-Sakhalins**	**132.04**	**61**	PFAKE		07 21 10.0	+13
YSS				LR	LR		
	comp=Z,2µm,22.0s						
YSS	**Yuzh-Sakhalins**	**132.04**	**61**	*i* PKIKP	**PKPdf**	**07 20 54.3**	**-1.7**

YSS				*e*		07 33 25.3	
YSS				*e*SS	SS	07 40 58.4	+2.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				pmax	pmax		
	comp=Z,200nm,5.1s						
BLA	Blacksburg	132.05	284	PFAKE		07 21 10.0	+13
BLA				LR	LR		
	comp=Z,3µm,22.0s						
GOGA	Godfrey	132.05	277	PFAKE		07 21 10.0	+13
GOGA				LR	LR		
	comp=Z,2µm,22.0s						
SSPA	Standing Stone	132.12	289	PFAKE		07 21 10.0	+13
SSPA				LR	LR		
	comp=Z,2µm,19.0s						
252A	Lumpkin	132.12	275	P	PKiKP	07 20 58.3	+0.6
	baz=125						
P56A	Dayton Farm, R	132.18	287	P	PKiKP	07 20 58.2	+0.7
	baz=121						
TLIG	Tlapa	132.20	249	PFAKE		07 21 10.0	+12
TLIG				LR	LR		
	comp=Z,2µm,21.0s						
LVIG	Laguna Verde	132.33	253	PFAKE		07 21 10.0	+12
LVIG				LR	LR		
	comp=Z,1µm,21.0s						
WAKE	Wake Island	132.36	108	PFAKE		07 21 10.0	+12
WAKE				LR	LR		
	comp=Z,2µm,19.0s						
O56A	Blue Knob Stat	132.38	288	*e*PKPdf	PKPdf	07 20 56.4	-0.5
R55A	Marlinton	132.41	285	*e*PKPdf	PKPdf	07 20 57.3	+0.2
R55A				LR	LR		
	comp=Z,2µm,19.0s						
152A	Waverly Hall	132.50	276	PFAKE		07 21 10.0	+12
152A				LR	LR		
	comp=Z,2µm,20.0s						
BG3	Lake Jocassee	132.56	280	PFAKE		07 21 10.0	+11
BG3				LR	LR		
	comp=Z,1µm,20.0s						
U54A	Nelsons Funny	132.63	282	PFAKE		07 21 10.0	+11
U54A				LR	LR		
	comp=Z,3µm,22.0s						
251A	Midway	132.65	275	P	PKiKP	07 20 58.6	-0.1
	baz=125						
TRQ	Mont Tremblant	132.65	297	*e*PKPdf	PKPdf	07 20 56.3	-0.9
Y52A	Lilburn	132.72	278	PFAKE		07 21 10.0	+11
Y52A				LR	LR		
	comp=Z,2µm,21.0s						
V53A	Saluda	132.85	280	PFAKE		07 21 10.0	+11
V53A				LR	LR		
	comp=Z,2µm,20.0s						
N55A	Marion Center	132.91	288	*e*PKPdf	PKPdf	07 20 57.8	-0.1
N55A				LR	LR		
	comp=Z,2µm,20.0s						
N55A	Marion Center	132.91	288	P	PKiKP	07 20 58.7	-0.3
	baz=120						
MCWV	Mont Chateau	132.93	287	PFAKE		07 21 10.0	+11
MCWV				LR	LR		
	comp=Z,1µm,20.0s						
PECO	Prince Edward	133.13	293	PFAKE		07 21 10.0	+11
PECO				LR	LR		
	comp=Z,4µm,20.0s						
MMNY	Mt. Morris Dam	133.16	291	PFAKE		07 21 10.0	+11
MMNY				LR	LR		
	comp=Z,4µm,21.0s						
250A	Grady	133.18	274	PFAKE		07 21 10.0	+10
250A				LR	LR		
	comp=Z,3µm,22.0s						
L55A	Hinsdale	133.24	290	P	PKiKP	07 21 00.7	+1.0
	baz=119						
Q54A	Coxs Mills	133.25	285	PFAKE		07 21 10.0	+10
Q54A				LR	LR		
	comp=Z,2µm,21.0s						
BRAL	Brewton	133.25	273	PFAKE		07 21 10.0	+10
BRAL				LR	LR		
	comp=Z,3µm,20.0s						
K55A	Perry	133.26	291	P	PKiKP	07 20 59.6	-0.1
	baz=118						
W52A	Murphy	133.30	279	*e*PKPdf	PKPdf	07 20 58.1	-0.7
W52A				LR	LR		
	comp=Z,2µm,20.0s						
V52A	Sevierville	133.48	280	PFAKE		07 21 10.0	+10
V52A				LR	LR		
	comp=Z,3µm,18.0s						
F55A	Otter Lake	133.59	296	P	PKiKP	07 21 00.4	+0.3
	baz=116						
Q53A	Leroy	133.65	285	P	PKiKP	07 21 01.8	+1.3
	baz=121						
X51A	Calhoun	133.65	278	PFAKE		07 21 10.0	+9.3
X51A				LR	LR		
	comp=Z,2µm,21.0s						
Z50A	Ashland	133.66	276	PFAKE		07 21 10.0	+9.2
Z50A				LR	LR		
	comp=Z,3µm,22.0s						
R53A	Hurricane	133.66	284	PFAKE		07 21 10.0	+9.4
R53A				LR	LR		
	comp=Z,2µm,21.0s						
N54A	Moraine State	133.67	288	*e*PKPdf	PKPdf	07 20 59.6	+0.4
PLVO	Plevna	133.69	295	*e*PKPdf	PKPdf	07 20 58.9	-0.3
PLVO				LR	LR		
	comp=Z,4µm,21.0s						
MEDO	Medina	133.71	292	PFAKE		07 21 10.0	+9.5
MEDO				LR	LR		
	comp=Z,4µm,22.0s						
M54A	Oil Creek Stat	133.72	289	*e*PKPdf	PKPdf	07 20 58.2	-1.1
M54A				LR	LR		
	comp=Z,3µm,22.0s						
T52A	Hallie	133.73	282	PFAKE		07 21 10.0	+9.2
T52A				LR	LR		
	comp=Z,3µm,21.0s						
DELO	Deloro Mine	133.80	294	PFAKE		07 21 10.0	+9.3
DELO				LR	LR		
	comp=Z,4µm,21.0s						
TZTN	Tazewell	133.82	281	PFAKE		07 21 10.0	+9.0
TZTN				LR	LR		
	comp=Z,2µm,22.0s						
P53A	Whipple	133.87	286	PFAKE		07 21 10.0	+9.0
P53A				LR	LR		
	comp=Z,2µm,20.0s						
J54A	Appleton	133.88	292	PFAKE		07 21 10.0	+9.1
J54A				LR	LR		
	comp=Z,4µm,22.0s						
CPCT	Cooper Cave	133.90	279	PFAKE		07 21 10.0	+8.8
CPCT				LR	LR		
	comp=Z,2µm,20.0s						
V51A	Loudon	133.97	280	*e*PKPdf	PKPdf	07 20 58.5	-1.6
V51A				LR	LR		
	comp=Z,2µm,21.0s						
N53A	Lisbon	134.15	288	*e*PKPdf	PKPdf	07 20 59.5	-0.7
N53A				LR	LR		
	comp=Z,3µm,20.0s						
TIXI	Tiksi	134.15	26	PFAKE		07 21 10.0	+9.5
TIXI				LR	LR		
	comp=Z,3µm,20.0s						
ERPA	Erie	134.22	290	PFAKE		07 21 10.0	+8.4
ERPA				LR	LR		
	comp=Z,3µm,22.0s						
LRAL	Lakeview Retre	134.28	275	PFAKE		07 21 10.0	+8.0
LRAL				LR	LR		
	comp=Z,2µm,22.0s						
W50A	Signal Mountai	134.31	278	PFAKE		07 21 10.0	+7.9
W50A				LR	LR		
	comp=Z,2µm,19.0s						
Y49A	Blount Mountai	134.34	276	PFAKE		07 21 10.0	+7.9
Y49A				LR	LR		
	comp=Z,2µm,20.0s						
S51A	Beattyville	134.42	282	PFAKE		07 21 10.0	+7.8
S51A				LR	LR		
	comp=Z,3µm,22.0s						
KUR	Kuril'sk	134.46	66	*e*PKIKP	PKiKP	07 21 01.4	-0.5
KUR				*i*		07 21 04.2	
KUR				*e*SS	SS	07 41 26.8	+1.5
O52A	Adamsville	134.48	286	PFAKE		07 21 10.0	+7.8
O52A				LR	LR		
	comp=Z,3µm,22.0s						
X49A	Woodville	134.64	277	P	PKPdf	07 21 01.5	+0.2
	baz=123						
U50A	Jamestown	134.64	280	P	PKPdf	07 21 01.0	-0.2
	baz=122						
G53A	Haliburton	134.71	294	P	PKiKP	07 21 03.2	+0.7
	baz=116						
SWET	Sewanee	134.75	278	PFAKE		07 21 10.0	+7.0
SWET				LR	LR		
	comp=Z,2µm,22.0s						
M52A	Chesterland	134.85	288	PFAKE		07 21 10.0	+7.1
M52A				LR	LR		

	comp=Z,3µm,20.0s						
Q51A	Peebles	134.96	284	PFAKE		07 21 10.0	+6.8
Q51A				LR	LR		
	comp=Z,2µm,22.0s						
D53A	Lac Vacive, Po	134.97	297	PFAKE		07 21 10.0	+7.0
D53A				LR	LR		
	comp=Z,3µm,20.0s						
P51A	Williamsport	134.99	285	PFAKE		07 21 10.0	+6.7
P51A				LR	LR		
	comp=Z,2µm,22.0s						
X48A	Hartselle	135.10	276	PFAKE		07 21 10.0	+6.4
X48A				LR	LR		
	comp=Z,2µm,21.0s						
VLDQ	Val d'Or	135.24	298	*e*PKPdf	PKPdf	07 21 01.5	-0.4
VLDQ				LR	LR		
	comp=Z,3µm,20.0s						
R50A	Paris	135.25	283	PFAKE		07 21 10.0	+6.2
R50A				LR	LR		
	comp=Z,3µm,21.0s						
ACSO	Alum Creek Sta	135.30	286	PFAKE		07 21 10.0	+6.1
ACSO				LR	LR		
	comp=Z,3µm,19.0s						
U49A	Red Boiling Sp	135.33	280	P	PKPdf	07 21 01.9	-0.6
	baz=122						
T49A	Edmonton	135.47	280	*e*PKPdf	PKPdf	07 21 01.4	-1.4
T49A				LR	LR		
	comp=Z,2µm,20.0s						
T49A	Edmonton	135.47	280	P	PKPdf	07 21 02.6	-0.2
	baz=121						
CLTN	Cedars of Leba	135.49	279	PFAKE		07 21 10.0	+5.6
CLTN				LR	LR		
	comp=Z,1µm,20.0s						
V48A	Smith Brothers	135.64	278	PFAKE		07 21 10.0	+5.3
V48A				LR	LR		
	comp=Z,2µm,20.0s						
I51A	Listowel	135.67	291	P	PKPdf	07 21 02.1	-0.8
	baz=116						
R49A	Shelbyville	135.83	282	PFAKE		07 21 10.0	+5.0
R49A				LR	LR		
	comp=Z,3µm,22.0s						
M50A	Fremont	135.90	287	PFAKE		07 21 10.0	+5.0
M50A				LR	LR		
	comp=Z,2µm,19.0s						
O49A	Covington	136.19	285	PFAKE		07 21 20.0	+14
O49A				LR	LR		
	comp=Z,3µm,21.0s						
K50A	Casco	136.25	289	PFAKE		07 21 20.0	+14
K50A				LR	LR		
	comp=Z,3µm,21.0s						
VBMS	Vicksburg	136.27	271	PFAKE		07 21 20.0	+14
VBMS				LR	LR		
	comp=Z,4µm,22.0s						
VBMS	Vicksburg	136.27	271	P	PKPdf	07 21 04.9	+0.5
	baz=125						
U47A	Clarksville	136.33	279	P	PKiKP	07 21 05.9	-0.2
	baz=122						
N49A	Columbus Grove	136.44	286	PFAKE		07 21 20.0	+14
N49A				LR	LR		
	comp=Z,3µm,19.0s						
T47A	Sharon Grove	136.49	279	*e*PKPdf	PKPdf	07 21 03.3	-1.4
T47A				LR	LR		
	comp=Z,2µm,19.0s						
WVT	Waverly	136.54	278	*e*PKPdf	PKPdf	07 21 05.0	+0.2
WVT				LR	LR		
	comp=Z,2µm,19.0s						
WCI	Wyandotte Cave	136.56	281	*e*PKPdf	PKPdf	07 21 03.4	-1.3
WCI				LR	LR		
	comp=Z,4µm,22.0s						
WCI	Wyandotte Cave	136.56	281	*e*PKIKP	PKPdf	07 21 03.4	-1.3
WCI				MLR	MLR		
	comp=Z,4µm,22.0s						
P48A	Milroy	136.58	283	PFAKE		07 21 20.0	+14
P48A				LR	LR		
	comp=Z,2µm,20.0s						
E50A	Wahnapitae	136.60	295	P	PKiKP	07 21 07.1	+0.8
	baz=114						
AAM	Ann Arbor	136.72	288	PFAKE		07 21 20.0	+13
AAM				LR	LR		
	comp=Z,3µm,22.0s						
OXF	Oxford	136.77	275	PFAKE		07 21 20.0	+13
OXF				LR	LR		
	comp=Z,2µm,21.0s						
I49A	Point Hope	136.90	291	PFAKE		07 21 20.0	+13
I49A				LR	LR		
	comp=Z,4µm,22.0s						
M48A	Edgerton	137.06	286	PFAKE		07 21 20.0	+13
M48A				LR	LR		
	comp=Z,2µm,19.0s						
BLO	Bloomington	137.18	282	PFAKE		07 21 20.0	+12
BLO				LR	LR		
	comp=Z,3µm,21.0s						
J48A	Bridge Port	137.25	289	PFAKE		07 21 20.0	+12
J48A				LR	LR		
	comp=Z,3µm,22.0s						
USIN	University of	137.37	280	PFAKE		07 21 20.0	+12
USIN				LR	LR		
	comp=Z,2µm,20.0s						
TULEG	Thule	137.45	340	PFAKE		07 21 20.0	+13
TULEG				LR	LR		
	comp=Z,6µm,22.0s						
HALT	Halls	137.47	277	PFAKE		07 21 20.0	+12
HALT				LR	LR		
	comp=Z,2µm,20.0s						
H48A	Harrisville	137.55	291	PFAKE		07 21 20.0	+12
H48A				LR	LR		
	comp=Z,4µm,19.0s						
T45A	Paducah	137.56	279	PFAKE		07 21 20.0	+11
T45A				LR	LR		
	comp=Z,2µm,20.0s						
GLAT	Glass	137.62	277	PFAKE		07 21 20.0	+11
GLAT				LR	LR		
	comp=Z,3µm,19.0s						
X43A	Marvell	137.79	274	P	PKiKP	07 21 08.4	-0.8
	baz=123						
J47A	Sunmer	137.91	289	PFAKE		07 21 20.0	+11
J47A				LR	LR		
	comp=Z,3µm,22.0s						
LNIG	Linares	137.92	256	*e*PKPdf	PKPdf	07 21 06.7	-1.0
GNAR	Gosnell	137.97	276	PFAKE		07 21 20.0	+11
GNAR				LR	LR		
	comp=Z,2µm,20.0s						
PVMO	Portageville	137.98	277	PFAKE		07 21 20.0	+11
PVMO				LR	LR		
	comp=Z,3µm,20.0s						
I47A	Gladwin	138.03	290	PFAKE		07 21 20.0	+11
I47A				LR	LR		
	comp=Z,4µm,21.0s						
OLIL	Olney	138.04	281	PFAKE		07 21 20.0	+11
OLIL				LR	LR		
	comp=Z,3µm,22.0s						
CCAR	Cane Creek	138.09	273	PFAKE		07 21 20.0	+10
CCAR				LR	LR		
	comp=Z,3µm,22.0s						
PARMO	Parma	138.14	277	PFAKE		07 21 20.0	+10
PARMO				LR	LR		
	comp=Z,2µm,21.0s						
SFIN	Lafayette	138.14	284	PFAKE		07 21 20.0	+10
SFIN				LR	LR		
	comp=Z,3µm,20.0s						
HBAR	Harrisburg	138.19	275	PFAKE		07 21 20.0	+10
HBAR				LR	LR		
	comp=Z,2µm,19.0s						
S44A	Carbondale	138.32	279	P	PKiKP	07 21 09.1	-1.0
	baz=120						
GLMI	Grayling	138.44	291	PFAKE		07 21 20.0	+10
GLMI				LR	LR		
	comp=Z,4µm,21.0s						
Z41A	Richland Creek	138.44	271	P	PKiKP	07 21 11.0	+0.6
	baz=124						
ZAIG	Zacatecas	138.53	251	*e*PKPdf	PKPdf	07 21 08.6	-0.6
ZAIG				LR	LR		
	comp=Z,1µm,20.0s						
HKT	Hockley	138.64	265	PFAKE		07 21 20.0	+9.1
HKT				LR	LR		
	comp=Z,1µm,21.0s						
PBMO	Poplar Bluff	138.67	277	*e*PKPdf	PKPdf	07 21 07.3	-1.4
PBMO				LR	LR		
	comp=Z,2µm,21.0s						
ETX06	Route 59 and C	138.80	268	PFAKE		07 21 20.0	+8.7
ETX06				LR	LR		
	comp=Z,2µm,21.0s						
E46A	Sault Ste Mari	138.85	293	PFAKE		07 21 20.0	+9.1
E46A				LR	LR		
	comp=Z,2µm,20.0s						
NATX	Nacogdoches	138.89	268	PFAKE		07 21 20.0	+8.6
NATX				LR	LR		

	comp=Z,3µm,22.0s						
NATX	Nacogdoches	138.89	268	P	PKPdf	07 21 10.1	+0.8
	baz=125						
WLAR	White Oak Lake	138.89	271	PFAKE		07 21 20.0	+8.6
WLAR				LR	LR		
	comp=Z,4µm,22.0s						
J45A	Montague	139.02	288	PFAKE		07 21 20.0	+8.7
J45A				LR	LR		
	comp=Z,3µm,20.0s						
X40A	Basin Creek Fa	139.14	273	PFAKE		07 21 20.0	+8.1
X40A				LR	LR		
	comp=Z,2µm,22.0s						
X40A	Basin Creek Fa	139.14	273	P	PKPdf	07 21 08.8	-0.8
	baz=123						
I45A	Fountain	139.17	289	PFAKE		07 21 20.0	+8.4
I45A				LR	LR		
	comp=Z,3µm,19.0s						
G45A	Suttons Bay	139.20	291	PFAKE		07 21 20.0	+8.3
G45A				LR	LR		
	comp=Z,4µm,21.0s						
M44A	Midewin, Midew	139.24	285	PFAKE		07 21 20.0	+8.2
M44A				LR	LR		
	comp=Z,3µm,21.0s						
H45A	Beulah	139.29	290	P	PKPdf	07 21 08.9	-0.7
	baz=114						
F45A	CMU Biological	139.36	292	P	PKPdf	07 21 09.5	-0.2
	baz=113						
FCAR	Ozark Folk Cen	139.38	275	PFAKE		07 21 20.0	+7.7
FCAR				LR	LR		
	comp=Z,2µm,21.0s						
SLM	Saint Louis	139.46	280	PFAKE		07 21 20.0	+7.6
SLM				LR	LR		
	comp=Z,2µm,21.0s						
MIAR	Mount Ida	139.68	272	*e*PKPdf	PKPdf	07 21 10.0	-0.6
MIAR				LR	LR		
	comp=Z,2µm,20.0s						
MIAR	Mount Ida	139.68	272	*e*PKIKP	PKPdf	07 21 10.0	-0.6
MIAR				MLR	MLR		
	comp=Z,2µm,20.0s						
MIAR	Mount Ida	139.68	272	P	PKPdf	07 21 09.6	-1.0
	baz=123						
HDIL	Hopedale	139.71	283	PFAKE		07 21 20.0	+7.2
HDIL				LR	LR		
	comp=Z,3µm,21.0s						
CCM	Cathedral Cave	139.87	278	PFAKE		07 21 20.0	+6.8
CCM				LR	LR		
	comp=Z,3µm,22.0s						
CCM	Cathedral Cave	139.87	278	P	PKPdf	07 21 09.0	-1.8
	baz=119						
E44A	Grand Marais A	139.98	293	PFAKE		07 21 20.0	+6.8
E44A				LR	LR		
	comp=Z,3µm,20.0s						
K43A	Burlington	140.01	286	PFAKE		07 21 20.0	+6.6
K43A				LR	LR		
	comp=Z,3µm,22.0s						
K43A	Burlington	140.01	286	P	PKPdf	07 21 08.4	-2.5
	baz=115						
833A	Chaparral WMA,	140.09	260	P	PKPdf	07 21 07.0	-4.6
	baz=129						
U40A	Yellville	140.13	275	P	PKPdf	07 21 10.2	-1.2
	baz=121						
W39A	Magazine	140.17	273	*e*PKPdf	PKPdf	07 21 08.5	-3.0
W39A				LR	LR		
	comp=Z,2µm,19.0s						
W39A	Magazine	140.17	273	P	PKPdf	07 21 09.6	-1.9
	baz=122						
H43A	Windswept, Lux	140.36	289	PFAKE		07 21 20.0	+6.0
H43A				LR	LR		
	comp=Z,3µm,21.0s						
H43A	Windswept, Lux	140.36	289	P	PKPdf	07 21 10.2	-1.4
	baz=113						
E43A	Lone Tree Farm	140.58	292	PFAKE		07 21 20.0	+5.6
E43A				LR	LR		
	comp=Z,3µm,20.0s						
E43A	Lone Tree Farm	140.58	292	P	PKPdf	07 21 10.1	-1.7
	baz=112						
L42A	Oliver, Polo	140.60	285	PFAKE		07 21 20.0	+5.4
L42A				LR	LR		
	comp=Z,3µm,22.0s						
L42A	Oliver, Polo	140.60	285	P	PKPdf	07 21 08.2	-3.9
	baz=115						
MA2	Magadan	140.62	46	*e*PKPdf	PKPdf	07 21 11.0	-0.5
MA2				LR	LR		
	comp=Z,2µm,22.0s						
MA2	Magadan	140.62	46⇑	*i*PKIKP	PKPdf	07 21 11.5	0.0
MA2				pmax	pmax		
	comp=Z,40nm,2.5s						
N41A	Harden Midland	140.84	282	*e*PKPdf	PKPdf	07 21 12.6	+0.1
N41A				LR	LR		
	comp=Z,2µm,20.0s						
N41A	Harden Midland	140.84	282	P	PKPdf	07 21 10.6	-1.9
	baz=117						
M41A	Milan	140.92	283	P	PKPdf	07 21 10.5	-2.1
	baz=116						
WHTX	Lake Whitney,	140.96	266	PFAKE		07 21 20.0	+4.3
WHTX				LR	LR		
	comp=Z,2µm,21.0s						
WHTX	Lake Whitney,	140.96	266	P	PKPdf	07 21 10.3	-2.7
	baz=125						
JFWS	Jewell Farm	141.38	286	PFAKE		07 21 20.0	+3.8
JFWS				LR	LR		
	comp=Z,3µm,20.0s						
N40A	Mertquake, Sal	141.41	282	P	PKPdf	07 21 08.7	-4.8
	baz=116						
I41A	Arkdale	141.58	288	PFAKE		07 21 20.0	+3.4
I41A				LR	LR		
	comp=Z,3µm,21.0s						
SKR	Severo-Kuril's	141.61	61	*i* PKIKP	PKPdf	07 21 09.0	-4.5
SKR				*e*		07 24 16.0	
SKR				*e*SS	SS	07 42 47.3	-2.5
L40A	Anamosa	141.68	284	PFAKE		07 21 30.0	+13
L40A				LR	LR		
	comp=Z,3µm,21.0s						
L40A	Anamosa	141.68	284	P	PKPdf	07 21 09.9	-4.1
	baz=115						
JCT	Junction City	141.70	262	PFAKE		07 21 30.0	+13
JCT				LR	LR		
	comp=Z,2µm,20.0s						
JCT	Junction City	141.70	262	P	PKPdf	07 21 10.1	-4.4
	baz=127						
SEY	Seymchan	141.78	41⇓	*e*PKIKP	PKPdf	07 21 13.4	-0.1
D41A	Chassel	141.83	293	*e*PKPdf	PKPdf	07 21 13.8	-0.2
D41A				LR	LR		
	comp=Z,4µm,22.0s						
D41A	Chassel	141.83	293	P	PKPdf	07 21 10.6	-3.5
	baz=110						
COWI	Conover	141.86	291	*e*PKPdf	PKPdf	07 21 15.1	+0.9
COWI				LR	LR		
	comp=Z,4µm,21.0s						
TUL1	Leonard	141.94	272	*e*PKPdf	PKPdf	07 21 14.2	-0.5
G40A	Rib Lake	142.26	289	PFAKE		07 21 30.0	+12
G40A				LR	LR		
	comp=Z,3µm,20.0s						
G40A	Rib Lake	142.26	289	P	PKPdf	07 21 11.3	-3.6
	baz=112						
C40A	Isle Royale Na	142.49	294	PFAKE		07 21 30.0	+12
C40A				LR	LR		
	comp=Z,4µm,22.0s						
ABTX	Abilene, Hawle	142.84	265	PFAKE		07 21 30.0	+10
ABTX				LR	LR		
	comp=Z,2µm,20.0s						
ABTX	Abilene, Hawle	142.84	265	P	PKPdf	07 21 12.3	-4.1
	baz=125						
G39A	Holcombe	142.90	289	P	PKPdf	07 21 11.4	-4.7
	baz=111						
SCIA	State Center	142.96	283	P	PKPdf	07 21 13.0	-3.3
	baz=115						
PEA0B	Petropavlovsk-	143.17	58	*e*PKPdf	PKPdf	07 21 15.5	-0.8
PETK	Petropavlovsk-	143.17	58	PKP	PKPbc	07 21 13.9	+0.7
	comp=Z,2.3nm,0.7s,baz=197,slow=4.6,SNR=7.0						
PEA1	Petropavlovsk-	143.18	58	*e*PKPdf	PKPbc	07 21 13.9	+0.6
WMOK	Wichita Mounta	143.41	269	PFAKE		07 21 30.0	+9.3
WMOK				LR	LR		
	comp=Z,2µm,21.0s						
WMOK	Wichita Mounta	143.41	269	P	PKPbc	07 21 14.4	-0.1
	baz=122,SNR=27						
HPIG		143.43	252	*e*PKPdf	PKPbc	07 21 16.1	+1.1
HPIG				LR	LR		
	comp=Z,2µm,19.0s						
E38A	The Farm, Brul	143.61	291	*e*PKPpre	PKPbc	07 21 14.0	-0.7
E38A				LR	LR		
	comp=Z,4µm,21.0s						
E38A	The Farm, Brul	143.61	291	P	PKPbc	07 21 14.3	-0.4
	baz=109						
LTX	Lajitas	143.64	257	*e*PKPdf	PKPbc	07 21 15.6	+0.2
LTX	Lajitas	143.64	257	*e*PKIKP	PKPbc	07 21 15.6	+0.1

TXAR	**Lajitas Array**	**143.64**	**257**	PKP	PKPbc	07 21 15.6	+0.2
	comp=Z,13nm,0.8s,baz=144,slow=3.5,SNR=157						
TX31	**Lajitas Ar. Si**	**143.64**	**257**	*e*PKPdf	PKPbc	07 21 15.3	-0.2
PET	**Petropavlovsk**	**143.72**	**58**	*e*PKPdf	**PKPdf**	**07 21 17.1**	**-0.1**
PET				LR	LR		
	comp=Z,3µm,21.0s						
PET	**Petropavlovsk**	**143.72**	**58**	*e*PKIKP	PKPbc	07 21 15.7	+0.9
PET				*e*		07 24 33.5	
PET				*e*SS	SS	07 43 09.4	-4.7
PET				pmax	pmax		
	comp=Z,500nm,25.8s						
PET				MLR	MLR		
	comp=Z,3µm,21.0s						
SPMN	**Marine on St.**	**143.96**	**288**	*e*PKPdf	PKPbc	07 21 15.3	-0.5
SPMN				LR	LR		
	comp=Z,3µm,21.0s						
SPMN	**Marine on St.**	**143.96**	**288**	P	PKPab	07 21 14.9	-0.3
	baz=111						
EYMN	**Ely**	**144.00**	**293**	*e*PKPdf	PKPab	07 21 14.9	-0.4
EYMN				LR	LR		
	comp=Z,2µm,21.0s						
EYMN	**Ely**	**144.00**	**293**	P	PKPab	07 21 15.2	-0.1
	baz=108						
KSU1	**Kansas State U**	**144.06**	**277**	PFAKE		07 21 30.0	+8.2
KSU1				LR	LR		
	comp=Z,2µm,20.0s						
KSU1	**Kansas State U**	**144.06**	**277**	P	PKPbc	07 21 16.0	-0.3
	baz=117						
RES	**Resolute Bay**	**144.16**	**340**	PFAKE		07 21 30.0	+9.1
RES				LR	LR		
	comp=Z,4µm,22.0s						
AMTX	**Amarillo**	**145.50**	**267**	*e*PKPbc	**PKPbc**	**07 21 20.9**	**-0.2**
AMTX				LR	LR		
	comp=Z,2µm,19.0s						
AMTX	**Amarillo**	**145.50**	**267**	P	**PKPdf**	**07 21 20.8**	**-0.3**
	baz=122						
MSTX	**Muleshoe**	**145.76**	**264**	*e*PKPdf	**PKPbc**	**07 21 21.8**	**-0.2**
MSTX				LR	LR		
	comp=Z,3µm,22.0s						
MSTX	**Muleshoe**	**145.76**	**264**	P	**PKPbc**	**07 21 21.7**	**-0.3**
	baz=124						
ECSD	**EROS Data Cent**	**145.98**	**284**	*e*PKPdf	**PKPdf**	**07 21 20.9**	**-0.6**
ECSD				LR	LR		
	comp=Z,2µm,20.0s						
ECSD	**EROS Data Cent**	**145.98**	**284**	P	**PKPbc**	**07 21 21.9**	**-0.4**
	baz=111						
CBKS	**Cedar Bluff**	**146.10**	**274**	*e*PKPbc	**PKPdf**	**07 21 21.8**	**-0.1**
CBKS				LR	LR		
	comp=Z,2µm,18.0s						
CBKS	**Cedar Bluff**	**146.10**	**274**	*e*PKP2	**PKPdf**	**07 21 21.8**	**-0.1**
CBKS				MLR	MLR		
	comp=Z,2µm,18.0s						
CBKS	**Cedar Bluff**	**146.10**	**274**	P	**PKPbc**	**07 21 22.3**	**-0.6**
	baz=117						
BGNE	**Belgrade**	**146.13**	**279**	*e*PKPbc	**PKPbc**	**07 21 22.1**	**-0.7**
BGNE				LR	LR		
	comp=Z,3µm,22.0s						
BGNE	**Belgrade**	**146.13**	**279**	P	**PKPdf**	**07 21 21.2**	**-0.6**
	baz=114						
MNTX	**Cornudas Mount**	**146.26**	**259**	*e*PKPdf	**PKPdf**	**07 21 22.0**	**-0.4**
MNTX				LR	LR		
	comp=Z,3µm,22.0s						
MNTX	**Cornudas Mount**	**146.26**	**259**	P	**PKPbc**	**07 21 22.9**	**-0.5**
	baz=127						
AGMN	**Agassiz Nation**	**146.90**	**292**	*e*PKPbc	**PKPbc**	**07 21 24.1**	**-0.7**
AGMN				LR	LR		
	comp=Z,3µm,21.0s						
AGMN	**Agassiz Nation**	**146.90**	**292**	P	**PKPbc**	**07 21 24.7**	**-0.1**
	baz=105						
BILL	**Bilibino**	**146.99**	**31***c*	*i*PKP2	**PKPbc**	**07 21 24.3**	**-0.1**
BILL				pmax	pmax		
	comp=Z,72nm,1.2s						
BILL				MLR	MLR		
	comp=Z,4µm,23.0s						
FCC	**Fort Churchill**	**147.24**	**312**	*e*PKPbc	**PKPbc**	**07 21 25.6**	**+0.2**
FCC				LR	LR		
	comp=Z,4µm,20.0s						
ULM	**Lac du Bonnet**	**147.37**	**296**	PKPbc	**PKPbc**	**07 21 25.5**	**-0.5**
	comp=Z,28nm,0.8s,baz=88,slow=3.0,SNR=23						
ULM	**Lac du Bonnet**	**147.37**	**296**	*e*PKPbc	**PKPbc**	**07 21 25.0**	**-1.0**
ULM				LR	LR		
	comp=Z,4µm,20.0s						
ULM	**Lac du Bonnet**	**147.37**	**296**	*e*PKP2	**PKPbc**	**07 21 25.0**	**-1.0**
ULM				MLR	MLR		
	comp=Z,4µm,20.0s						
SUSD	**Miller**	**147.81**	**284**	P	**PKPbc**	**07 21 26.2**	**-1.3**
	baz=110						
SRIG	**Santa Rosalia**	**147.96**	**246**	PFAKE		07 21 40.0	+9.0
SRIG				LR	LR		
	comp=Z,2µm,21.0s						
KSCO	**Kaye Shedlock’**	**148.20**	**273**	*e*PKPbc	**PKPbc**	**07 21 27.7**	**-1.1**
KSCO				LR	LR		
	comp=Z,3µm,20.0s						
KSCO	**Kaye Shedlock’**	**148.20**	**273**	P	**PKPdf**	**07 21 25.1**	**-0.4**
	baz=117						
HSIG		**148.29**	**249**	*e*PKPbc	**PKPbc**	**07 21 28.9**	**-0.3**
HSIG				LR	LR		
	comp=Z,2µm,20.0s						
121A	**Cookes Peak, D**	**148.39**	**258**	P	**PKPdf**	**07 21 26.9**	**+0.8**
	baz=126						
T25A	**Trinidad**	**148.56**	**268**	P	**PKPdf**	**07 21 26.3**	**0.0**
	baz=120,SNR=25						
OGNE	**Ogallala**	**148.62**	**276**	*e*PKPbc	**PKPbc**	**07 21 30.2**	**+0.4**
OGNE				LR	LR		
	comp=Z,3µm,20.0s						
OGNE	**Ogallala**	**148.62**	**276**	P	**PKPdf**	**07 21 26.6**	**+0.5**
	baz=114						
LPM	**Los Pinos Moun**	**148.62**	**262**	*e*PKPbc	**PKPbc**	**07 21 30.2**	**+0.1**
Y22D	**IRIS PASSCAL I**	**148.69**	**261**	PFAKE		07 21 40.0	+6.1
Y22D				LR	LR		
	comp=Z,3µm,20.0s						
Y22D	**IRIS PASSCAL I**	**148.69**	**261**	P	**PKPbc**	**07 21 28.5**	**-1.8**
	baz=124						
LENM	**Lemitar**	**148.77**	**261**	*e*PKPbc	**PKiKP**	**07 21 31.3**	**-0.7**
ANMO	**Albuquerque**	**148.84**	**263**	PFAKE		07 21 40.0	+5.4
ANMO				LR	LR		
	comp=Z,2µm,19.0s						
ANMO	**Albuquerque**	**148.84**	**263***c*	*e*PKIKP	**PKPdf**	**07 21 26.9**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,36nm,1.3s						
ANMO	**Albuquerque**	**148.84**	**263**	P	**PKPdf**	**07 21 27.4**	**+0.6**
	baz=123						
MIDW	**Midway**	**149.01**	**114**	PFAKE		07 21 40.0	+4.9
MIDW				LR	LR		
	comp=Z,2µm,21.0s						
LAZ	**Ladron**	**149.02**	**261**	*e*PKPbc	**PKiKP**	**07 21 31.9**	**-0.5**
MDND	**Maddock**	**149.22**	**290**	*e*PKPbc	**PKPbc**	**07 21 30.8**	**-0.2**
MDND				LR	LR		
	comp=Z,4µm,22.0s						
MDND	**Maddock**	**149.22**	**290**	P	**PKPdf**	**07 21 26.5**	**-0.2**
	baz=104						
SDCO	**Great Sand Dun**	**149.61**	**268**	*e*PKPbc	**PKiKP**	**07 21 33.3**	**-0.4**
SDCO				LR	LR		
	comp=Z,2µm,20.0s						
SDCO	**Great Sand Dun**	**149.61**	**268**	P	**PKPdf**	**07 21 27.5**	**-0.5**
	baz=119,SNR=48						
Q24A	**Divide**	**149.93**	**271**	P	**PKPdf**	**07 21 28.7**	**+0.1**
	baz=117						
TUC	**Tucson**	**150.28**	**255**	*e*PKPbc	**PKPbc**	**07 21 33.1**	**-1.0**
TUC				LR	LR		
	comp=Z,2µm,20.0s						
TUC	**Tucson**	**150.28**	**255**	P	**PKPdf**	**07 21 29.7**	**+0.7**
	baz=128						
S22A	**4UR Ranch, Cre**	**150.53**	**267**	P	**PKPdf**	**07 21 29.6**	**+0.1**
	baz=119,SNR=61						
X18A	**Snowflake**	**151.02**	**259**	*e*PKPbc	**PKPbc**	**07 21 34.5**	**-1.4**
X18A				LR	LR		
	comp=Z,3µm,20.0s						
PHWY	**Pilot Hill**	**151.13**	**275**	PFAKE		07 21 40.0	+3.3
PHWY				LR	LR		
	comp=Z,2µm,20.0s						
RSSD	**Black Hills**	**151.15**	**281**	*e*PKPbc	**PKiKP**	**07 21 36.1**	**-0.5**
RSSD				LR	LR		
	comp=Z,3µm,22.0s						
RSSD	**Black Hills**	**151.15**	**281**	P	**PKPdf**	**07 21 30.6**	**+0.4**
	baz=108						
W18A	**Petrified Fore**	**151.19**	**260**	*e*PKPbc	**PKPbc**	**07 21 36.0**	**-0.3**
W18A				LR	LR		
	comp=Z,3µm,20.0s						
W18A	**Petrified Fore**	**151.19**	**260**	P	**PKPdf**	**07 21 30.9**	**+0.4**
	baz=123						
SMCO	**Snowmass**	**151.30**	**270**	PFAKE		07 21 40.0	+2.7
SMCO				LR	LR		
	comp=Z,4µm,22.0s						
N23A	**Red Feather La**	**151.31**	**274**	P	**PKPdf**	**07 21 31.3**	**+0.7**
	baz=114						
214A	**Organ Pipe Nat**	**151.41**	**252**	P	**PKPdf**	**07 21 31.0**	**+0.2**
	baz=129						
MVCO	**Mesa Verde**	**151.43**	**265**	*e*PKPbc	**PKiKP**	**07 21 37.2**	**-0.2**
MVCO				LR	LR		
	comp=Z,3µm,19.0s						
MVCO	**Mesa Verde**	**151.43**	**265**	P	**PKPdf**	**07 21 29.4**	**-1.5**
	baz=120,SNR=20						
FFC	**Flin Flon**	**151.57**	**304**	*e*PKPbc	**PKPbc**	**07 21 36.0**	**-0.3**
FFC				*e*PKPab	**PKPab**	**07 21 43.4**	**-1.6**
FFC				LR	LR		
	comp=Z,4µm,21.0s						
FFC	**Flin Flon**	**151.57**	**304**	*i* PKIKP	**PKiKP**	**07 21 36.6**	**-0.2**
KHU	**Kahuku**	**151.86**	**159**	PFAKE		07 21 40.0	+1.2
KHU				LR	LR		
	comp=Z,4µm,21.0s						
PV01	**Paradox Valley**	**151.93**	**267**	*e*PKPbc	**PKiKP**	**07 21 39.1**	**+0.7**
PV01				*e*PKPab	**PKPab**	**07 21 46.7**	**-0.6**
PV01				LR	LR		
	comp=Z,3µm,18.0s						
X16A	**Lo Mia Camp, P**	**151.97**	**257**	PFAKE		07 21 40.0	+1.5
X16A				LR	LR		
	comp=Z,3µm,18.0s						
AIN	**Ainahou**	**152.02**	**159**	*e*PKPab	**PKPab**	**07 21 48.5**	**+0.5**
MWH	**Moku‘aweowe**	**152.10**	**159**	*e*PKPdf	**PKPdf**	**07 21 26.2**	**-6.5**
MWH				*e*PKPab	**PKPab**	**07 21 46.8**	**-1.9**
PV13	**Radium Mtn., P**	**152.11**	**267**	PFAKE		07 21 40.0	+1.2
PV13				LR	LR		
	comp=Z,3µm,18.0s						
KHLU	**Kahalu`u**	**152.12**	**158**	*e*PKPbc	**PKiKP**	**07 21 39.4**	**+0.2**
KHLU				*e*PKPab	**PKPab**	**07 21 49.2**	**+0.9**
KHLU				LR	LR		
	comp=Z,4µm,19.0s						
PV07	**Paradox Valley**	**152.12**	**267**	PFAKE		07 21 40.0	+1.2
PV07				LR	LR		
	comp=Z,4µm,22.0s						
MLOA	**Mauna Loa Obse**	**152.15**	**159**	*e*PKPbc	**PKPbc**	**07 21 38.9**	**-0.4**
MLOA				*e*PKPab	**PKPab**	**07 21 49.6**	**+0.8**
MLOA				LR	LR		
	comp=Z,4µm,20.0s						
MLH	**Mauna Loa**	**152.16**	**159**	*e*PKPbc	**PKiKP**	**07 21 40.0**	**+0.6**
MLH				*e*PKPab	**PKPab**	**07 21 49.0**	**+0.4**
PV12	**Saucer Basin,**	**152.18**	**267**	PFAKE		07 21 40.0	+1.1
PV12				LR	LR		
	comp=Z,4µm,20.0s						
PV03	**Paradox Valley**	**152.18**	**267**	PFAKE		07 21 40.0	+1.1
PV03				LR	LR		
	comp=Z,3µm,21.0s						
PV18	**Skein Mesa, Pa**	**152.22**	**267**	PFAKE		07 21 40.0	+1.0
PV18				LR	LR		
	comp=Z,3µm,18.0s						
HMH	**Humu‘ula Sheep**	**152.24**	**159**	*e*PKPbc	**PKiKP**	**07 21 39.5**	**-0.1**
HMH				*e*PKPab	**PKPab**	**07 21 50.4**	**+1.4**
PV16	**Nyswonger Mesa**	**152.25**	**267**	*e*PKPbc	**PKiKP**	**07 21 42.1**	**+3.1**
PV16				*e*PKPab	**PKPab**	**07 21 48.5**	**-0.1**
PV05	**Paradox Valley**	**152.27**	**266**	*e*PKPbc	**PKPbc**	**07 21 38.3**	**-0.5**
PV05				*e*PKPab	**PKPab**	**07 21 49.0**	**+0.3**
PV04	**Paradox Valley**	**152.28**	**267**	PFAKE		07 21 40.0	+0.9
PV04				LR	LR		
	comp=Z,3µm,19.0s						
PV20	**West Nyswonger**	**152.30**	**267**	PFAKE		07 21 40.0	+0.9
PV20				LR	LR		
	comp=Z,3µm,20.0s						
DGMT	**Dagmar**	**152.36**	**290**	PFAKE		07 21 40.0	+1.3
DGMT				LR	LR		
	comp=Z,3µm,20.0s						
DGMT	**Dagmar**	**152.36**	**290**	P	**PKPdf**	**07 21 32.6**	**+1.0**
	baz=101						
PV10	**Paradox Valley**	**152.37**	**267**	PFAKE		07 21 40.0	+0.7
PV10				LR	LR		
	comp=Z,4µm,20.0s						
K22A	**Casper**	**152.37**	**277**	P	**PKPdf**	**07 21 31.3**	**-0.7**
	baz=110						
POHA	**Pohakuloa**	**152.37**	**159**	PFAKE		07 21 40.0	+0.2
POHA				LR	LR		
	comp=Z,3µm,20.0s						
RWWY	**Rawlins**	**152.49**	**275**	PFAKE		07 21 40.0	+0.5
RWWY				LR	LR		
	comp=Z,3µm,19.0s						
WUAZ	**Wupatki**	**152.53**	**259**	PFAKE		07 21 40.0	+0.4
WUAZ				LR	LR		
	comp=Z,2µm,20.0s						
WUAZ	**Wupatki**	**152.53**	**259**	P	**PKPdf**	**07 21 32.0**	**-0.5**
	baz=123						
113A	**Mohawk Valley,**	**152.55**	**252**	*e*PKPdf	**PKPdf**	**07 21 31.7**	**-0.6**
113A				*e*PKPbc	**PKPbc**	**07 21 40.1**	**+0.9**
113A				*e*PKPab	**PKPab**	**07 21 49.0**	**-0.7**
HPAH	**Hawaii Prepara**	**152.59**	**158**	PFAKE		07 21 40.0	-0.1
HPAH				LR	LR		
	comp=Z,3µm,20.0s						
O20A	**White River Ci**	**152.59**	**271**	PFAKE		07 21 40.0	+0.3
O20A				LR	LR		
	comp=Z,2µm,20.0s						
O20A	**White River Ci**	**152.59**	**271**	P	**PKPdf**	**07 21 32.1**	**-0.4**
	baz=115						
Y14A	**Wickenburg**	**152.75**	**255**	PFAKE		07 21 40.0	0.0
Y14A				LR	LR		
	comp=Z,3µm,20.0s						
SMY	**Shemya**	**152.95**	**61**	PFAKE		07 21 40.0	+0.3
SMY				LR	LR		
	comp=Z,2µm,21.0s						
HLK	**Haleakala**	**153.14**	**156**	PFAKE		07 21 40.0	-1.2
HLK				LR	LR		
	comp=Z,3µm,20.0s						
HON	**Honolulu**	**153.15**	**153**	*e*PKPab	**PKPab**	**07 21 53.7**	**+1.3**
HON				LR	LR		
	comp=Z,3µm,18.0s						
KEKH	**Kekaha**	**153.18**	**149**	PFAKE		07 21 40.0	-0.9
KEKH				LR	LR		
	comp=Z,3µm,19.0s						
KIP	**Kipapa**	**153.24**	**153**	*e*PKPab	**PKPab**	**07 21 53.7**	**+0.9**
LAO	**LASA Array**	**153.33**	**286**	PFAKE		07 21 40.0	-0.7
LAO				LR	LR		
	comp=Z,3µm,21.0s						
LAO	**LASA Array**	**153.33**	**286**	P	**PKPdf**	**07 21 33.6**	**+0.5**
	baz=103						
GLA	**Glamis**	**153.43**	**251**	*e*PKPdf	**PKPdf**	**07 21 32.4**	**-1.2**
GLA				*e*PKPbc	**PKPbc**	**07 21 41.6**	**+0.3**
GLA				*e*PKPab	**PKPab**	**07 21 51.6**	**-1.9**
GLA				LR	LR		
	comp=Z,2µm,21.0s						
GLA	**Glamis**	**153.43**	**251**	*e*PKIKP	**PKPdf**	**07 21 32.4**	**-1.2**
GLA				*e*		07 21 51.6	
GLA				MLR	MLR		
	comp=Z,2µm,21.0s						
GLA	**Glamis**	**153.43**	**251**	P	**PKPdf**	**07 21 33.9**	**+0.3**
	baz=128						
OPA	**Opana**	**153.48**	**152**	PFAKE		07 21 40.0	-1.6
OPA				LR	LR		
	comp=Z,3µm,20.0s						
U15A	**North Rim**	**153.65**	**260**	PFAKE		07 21 40.0	-2.0
U15A				LR	LR		
	comp=Z,4µm,19.0s						
Y12C	**Blythe**	**153.65**	**253**	PFAKE		07 21 40.0	-1.7
Y12C				LR	LR		
	comp=Z,3µm,20.0s						
Y12C	**Blythe**	**153.65**	**253**	P	**PKPdf**	**07 21 34.5**	**+0.6**
	baz=127						
PDMCI	**Parker Dam,Lak**	**153.72**	**254**	P	**PKPdf**	**07 21 34.8**	**+0.8**
	baz=126						
SWSC	**Sam W. Stewart**	**154.00**	**250**	P	**PKPdf**	**07 21 36.1**	**+1.6**
	baz=129						
W13A	**Hualapai Mount**	**154.01**	**256**	PFAKE		07 21 50.0	-6.2
W13A				LR	LR		
	comp=Z,3µm,21.0s						
IKP	**In-Ko-Pah, Jac**	**154.02**	**249**	P	**PKPdf**	**07 21 35.4**	**+0.9**
	baz=130						
BC3	**Big Chuckawall**	**154.21**	**252**	P	**PKPdf**	**07 21 34.6**	**-0.2**
	baz=128						
TMUT	**Trail Mountain**	**154.29**	**267**	*e*PKPdf	**PKPdf**	**07 21 32.4**	**-2.6**
TMUT				*e*		07 21 45.2	
TMUT				*e*PKPab	**PKPab**	**07 21 53.8**	**-3.6**
IRM	**Iron Mountain**	**154.31**	**253**	P	**PKPdf**	**07 21 35.4**	**+0.5**
	baz=127						
MONP2	**Monument Peak**	**154.37**	**249**	P	**PKPdf**	**07 21 35.3**	**0.0**
	baz=129						
MTPU	**Mount Pierson**	**154.39**	**264**	*e*PKPbc	**PKiKP**	**07 21 43.7**	**+0.1**
MTPU				*e*PKPab	**PKPab**	**07 21 52.9**	**-5.0**
BAR	**Barrett**	**154.40**	**248**	PFAKE		07 21 50.0	+6.6
BAR				LR	LR		
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	**154.51**	**275**	PFAKE		07 21 50.0	+6.4
BW06				LR	LR		
	comp=Z,3µm,22.0s						
BW06	**Boulder Array**	**154.51**	**275**	P	**PKPdf**	**07 21 35.7**	**+0.5**
	baz=110						
PD31	**Pinedale Array**	**154.51**	**275**	*e*PKPdf	**PKPdf**	**07 21 33.5**	**-1.6**
PD31				*e*PKPbc	**PKPbc**	**07 21 44.1**	**+0.6**
PD31				*e*PKPab	**PKPab**	**07 21 57.3**	**-0.9**
PDAR	**Pinedale Array**	**154.51**	**275**	PKP	**PKPdf**	**07 21 33.5**	**-1.6**
	comp=Z,3.7nm,1.0s,baz=116,slow=3.1,SNR=16						
PDAR				PKPbc	**PKPbc**	**07 21 44.1**	**+0.6**
	comp=Z,8.3nm,1.0s,baz=102,slow=3.8,SNR=13						
PDAR				PKPab	**PKPab**	**07 21 57.3**	**-0.9**
	comp=Z,6.2nm,0.7s,baz=110,slow=4.9,SNR=12						
BELC	**Belle Mtn. Jos**	**154.78**	**252**	P	**PKPdf**	**07 21 36.7**	**+1.0**
	baz=127						
109C	**Camp Elliot, M**	**154.81**	**248**	P	**PKPdf**	**07 21 35.7**	**+0.1**
	baz=130						
CPE	**Camp Elliot**	**154.81**	**248**	PFAKE		07 21 50.0	+5.8
CPE				LR	LR		
	comp=Z,3µm,20.0s						
LDFC	**Landfair**	**154.82**	**255**	PFAKE		07 21 50.0	+5.7
LDFC				LR	LR		
	comp=Z,2µm,19.0s						
PFO	**Pinyon Flats O**	**154.85**	**250**	PFAKE		07 21 50.0	+5.6
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	**Pinyon Flats O**	**154.85**	**250**	P	**PKPdf**	**07 21 35.3**	**-0.5**
	baz=128						
RLMT	**Red Lodge**	**155.01**	**281**	*e*PKPdf	**PKPdf**	**07 21 35.0**	**-0.8**
RLMT				*e*PKPbc	PKPbc	07 21 45.6	
RLMT				LR	LR		
	comp=Z,2µm,20.0s						
RLMT	**Red Lodge**	**155.01**	**281**	P	**PKPdf**	**07 21 34.6**	**-1.1**
	baz=105						
JLU	**Jordanelle**	**155.02**	**269**	*e*PKPdf	**PKPdf**	**07 21 35.8**	**-0.1**
JLU				*e*PKPab	**PKPab**	**07 22 00.7**	**+0.4**
GMRC	**Granite Mounta**	**155.02**	**254**	P	**PKPdf**	**07 21 35.1**	**-0.9**
	baz=126						
MURC	**Murrieta**	**155.32**	**250**	P	**PKPdf**	**07 21 34.4**	**-1.9**
	baz=129						
HWUT	**Hardware Ranch**	**155.49**	**272**	PFAKE		07 21 50.0	-12
HWUT				LR	LR		
	comp=Z,3µm,22.0s						
HEC	**Hector,Ludlow**	**155.50**	**253**	P	**PKPdf**	**07 21 36.2**	**-0.4**
	baz=126						
LOHW	**Long Hollow**	**155.50**	**277**	PFAKE		07 21 50.0	-12
LOHW				LR	LR		
	comp=Z,3µm,20.0s						
BBRC	**Big Bear Solar**	**155.55**	**251**	P	**PKPdf**	**07 21 36.4**	**-0.4**
	baz=127						
SNOW	**Snow King Moun**	**155.56**	**276**	PFAKE		07 21 50.0	-13
SNOW				LR	LR		
	comp=Z,4µm,19.0s						
TUQ	**Turquoise Moun**	**155.57**	**255**	P	**PKPdf**	**07 21 36.9**	**+0.2**
	baz=125						
AHID	**Auburn Hatcher**	**155.58**	**275**	PFAKE		07 21 50.0	-13
AHID				LR	LR		
	comp=Z,3µm,20.0s						
MOOW	**Moose Ponds**	**155.64**	**277**	PFAKE		07 21 50.0	-13
MOOW				LR	LR		
	comp=Z,3µm,20.0s						
SHPR	**Sheep Range**	**155.65**	**258**	PFAKE		07 21 50.0	-13
SHPR				LR	LR		
	comp=Z,2µm,19.0s						
TPAW	**Teton Pass**	**155.71**	**276**	PFAKE		07 21 50.0	+13
TPAW				LR	LR		
	comp=Z,3µm,19.0s						
FLWY	**Flagg Ranch**	**155.71**	**278**	PFAKE		07 21 50.0	-13
FLWY				LR	LR		
	comp=Z,3µm,22.0s						
H17A	**Grant Village**	**155.72**	**279**	P	**PKPdf**	**07 21 35.6**	**-1.2**
	baz=106						
DUG	**Dugway, Tooele**	**155.80**	**268**	*e*PKPdf	**PKPdf**	**07 21 35.1**	**-1.8**
DUG				*e*PKPab	**PKPab**	**07 22 03.5**	**0.0**
DUG				LR	LR		
	comp=Z,2µm,22.0s						
DUG	**Dugway, Tooele**	**155.80**	**268**	P	**PKPdf**	**07 21 36.8**	**-0.1**
	baz=115						
SCI2	**San Clemente I**	**155.80**	**247**	P	**PKPdf**	**07 21 35.9**	**-1.0**
	baz=130						
IMW	**Indian Meadow**	**155.82**	**277**	PFAKE		07 21 50.0	+13
IMW				LR	LR		
	comp=Z,3µm,22.0s						
EGMT	**Eagleton**	**155.94**	**288**	PFAKE		07 21 50.0	+13
EGMT				LR	LR		
	comp=Z,3µm,22.0s						
EGMT	**Eagleton**	**155.94**	**288**	P	**PKPdf**	**07 21 36.8**	**0.0**
	baz=99						
RRX	**Edison Barstow**	**155.96**	**252**	P	**PKPdf**	**07 21 35.2**	**-1.8**
	baz=126						
CIS	**Catalina Islan**	**155.99**	**248**	P	**PKPdf**	**07 21 36.6**	**-0.6**
	baz=130						
BFSC	**Mount Baldy Ra**	**156.02**	**250**	P	**PKPdf**	**07 21 36.4**	**-0.9**
	baz=128						
SHOC	**Shoshone, Teco**	**156.07**	**255**	P	**PKPdf**	**07 21 36.6**	**-0.6**
	baz=124						
GSC	**Goldstone, Bar**	**156.09**	**253**	PFAKE		07 21 50.0	+13
GSC				LR	LR		
	comp=Z,3µm,21.0s						
GSC	**Goldstone, Bar**	**156.09**	**253**	P	**PKPdf**	**07 21 37.5**	**+0.1**
	baz=125,SNR=8.4						
FMP	**Fort Macarthur**	**156.10**	**248**	P	**PKPdf**	**07 21 36.3**	**-0.9**
	baz=129						
YKA	**Yellowknife Ar**	**156.11**	**324**	PKP	**PKPdf**	**07 21 35.9**	**-0.4**
	comp=Z,4.4nm,1.0s,baz=39,slow=1.8,SNR=8.2						
YKA				PKPab	**pPKPab**	**07 22 05.6**	**+2.0**
	comp=Z,13nm,1.1s,baz=56,slow=4.4,SNR=11						
YKB5	**Yellowknife Ar**	**156.11**	**324**	*e*PKPdf	**PKPdf**	**07 21 35.9**	**-0.4**
YKB5				*e*pPKPab	**pPKPab**	**07 22 05.6**	**+2.0**
RDOG	**Red Dog Mine**	**156.15**	**16**	PFAKE		07 21 50.0	+14
RDOG				LR	LR		
	comp=Z,4µm,22.0s						
MWC	**Mount Wilson**	**156.27**	**250**	PFAKE		07 21 50.0	+12
MWC				LR	LR		
	comp=Z,2µm,20.0s						
PASC	**Pasadena Art C**	**156.32**	**249**	PFAKE		07 21 50.0	+12
PASC				LR	LR		
	comp=Z,3µm,19.0s						
DECC	**Green Verdugo**	**156.47**	**249**	P	**PKPdf**	**07 21 37.7**	**-0.1**
	baz=128						
EDW2	**Edwards Air Fo**	**156.63**	**251**	P	**PKPdf**	**07 21 36.3**	**-1.7**
	baz=127,SNR=10						
TPNV	**Topopah Spring**	**156.63**	**257**	PFAKE		07 21 50.0	+12
TPNV				LR	LR		
	comp=Z,3µm,22.0s						
TPNV	**Topopah Spring**	**156.63**	**257**	P	**PKPdf**	**07 21 38.5**	**+0.5**
	baz=122,SNR=5.3						
BOZ	**Bozeman (W)**	**156.75**	**281**	PFAKE		07 21 50.0	+12
BOZ				LR	LR		
	comp=Z,4µm,22.0s						
BOZ	**Bozeman (W)**	**156.75**	**281**	P	**PKPdf**	**07 21 36.1**	**-1.9**
	baz=103						
LRMC	**Laurel Mtn Rad**	**156.77**	**253**	P	**PKPdf**	**07 21 38.3**	**0.0**
	baz=126						
FURC	**Furnace Creek,**	**156.78**	**256**	P	**PKPdf**	**07 21 38.8**	**+0.8**
	baz=123,SNR=10.0						
BLG	**Laguna Peak, P**	**156.85**	**248**	P	**PKPdf**	**07 21 36.2**	**-2.1**
	baz=129						
R11A	**Troy Canyon, C**	**156.88**	**261**	PFAKE		07 21 50.0	+12
R11A				LR	LR		
	comp=Z,5µm,20.0s						
R11A	**Troy Canyon, C**	**156.88**	**261**	P	**PKPdf**	**07 21 38.4**	**0.0**
	baz=119						
GAMB	**Gambell**	**156.91**	**30**	PFAKE		07 21 50.0	+13
GAMB				LR	LR		
	comp=Z,3µm,21.0s						
INK	**Inuvik**	**156.94**	**349**	*e*PKPdf	**PKPdf**	**07 21 34.4**	**-2.8**
INK				*e*PKPab	**PKPab**	**07 22 10.9**	**+3.5**
INK				LR	LR		
	comp=Z,5µm,21.0s						
INK	**Inuvik**	**156.94**	**349**	*e*PKIKP	**PKPdf**	**07 21 34.4**	**-2.8**
INK				MLR	MLR		
	comp=Z,5µm,21.0s						
OSI	**Osito Audit: C**	**156.94**	**250**	P	**PKPdf**	**07 21 38.1**	**-0.4**
	baz=128						
MPMC	**Manual Prospec**	**156.97**	**254**	P	**PKPdf**	**07 21 38.8**	**+0.2**
	baz=124,SNR=13						
SCZ2	**Santa Cruz Isl**	**157.15**	**247**	P	**PKPdf**	**07 21 38.1**	**-0.6**
	baz=130						
TOLK	**Toolik Lake Re**	**157.28**	**4**	PFAKE		07 21 50.0	+12
TOLK				LR	LR		
	comp=Z,3µm,20.0s						
TOLK	**Toolik Lake Re**	**157.28**	**4**	P	**PKPdf**	**07 21 38.2**	**+0.4**
	baz=352						
ARVC	**Arvin**	**157.32**	**250**	P	**PKPdf**	**07 21 37.0**	**-1.8**
	baz=127						
DLMT	**Dillon**	**157.35**	**280**	PFAKE		07 21 50.0	+11
DLMT				LR	LR		
	comp=Z,3µm,22.0s						
ISA	**Isabella, Lake**	**157.40**	**252**	*e*PKPdf	**PKPdf**	**07 21 39.2**	**+0.2**

ISA				*e*PKPab	PKPab	07 22 07.4	-3.1
ISA				LR	LR		
	comp=Z,6µm,20.0s						
ISA	**Isabella, Lake**	**157.40**	**252**	*e*PKIKP	**PKPdf**	**07 21 39.2**	**+0.2**
ISA				*e*		07 22 07.4	
ISA				MLR	MLR		
	comp=Z,6µm,20.0s						
ISA	**Isabella, Lake**	**157.40**	**252**	P	**PKPdf**	**07 21 38.6**	**-0.3**
	baz=126,SNR=16						
GRAC	**Grapevine Rang**	**157.41**	**256**	P	**PKPdf**	**07 21 38.2**	**-0.7**
	baz=122						
SBC	**Santa Barbara**	**157.48**	**248**	P	**PKPdf**	**07 21 39.8**	**+0.8**
	baz=129						
CWC	**Cottonwood Cre**	**157.58**	**254**	P	**PKPdf**	**07 21 39.1**	**-0.2**
	baz=124						
ELK	**Elko**	**157.71**	**267**	PFAKE		07 21 50.0	+11
ELK				LR	LR		
	comp=Z,3µm,20.0s						
PKM	**Mcpherson Peak**	**157.82**	**249**	P	**PKPdf**	**07 21 40.7**	**+1.0**
	baz=128,SNR=6.9						
TIN	**Tinemaha, Big**	**158.02**	**255**	P	**PKPdf**	**07 21 39.4**	**-0.3**
	baz=123						
HLID	**Hailey**	**158.13**	**274**	PFAKE		07 21 50.0	+10
HLID				LR	LR		
	comp=Z,4µm,21.0s						
HLID	**Hailey**	**158.13**	**274**	P	**PKPdf**	**07 21 39.5**	**-0.2**
	baz=107						
SMMC	**Simmler**	**158.20**	**249**	P	**PKPdf**	**07 21 40.1**	**+0.1**
	baz=127						
VOG	**Valley Oaks Go**	**158.38**	**252**	P	**PKPdf**	**07 21 38.1**	**-1.9**
	baz=125						
ANM	**Nome**	**158.39**	**24**	PFAKE		07 21 50.0	+11
ANM				LR	LR		
	comp=Z,3µm,21.0s						
MSO	**Missoula**	**158.56**	**283**	*e*PKPab	**PKPab**	**07 22 14.9**	**-0.3**
MSO				LR	LR		
	comp=Z,4µm,21.0s						
MSO	**Missoula**	**158.56**	**283**	P	**PKPdf**	**07 21 38.1**	**-2.0**
	baz=100						
PAGB	**Antelope Grade**	**158.61**	**250**	PFAKE		07 21 50.0	+10
PAGB				LR	LR		
	comp=Z,4µm,20.0s						
ADK	**Adak**	**158.62**	**63**	PFAKE		07 21 50.0	+10
ADK				LR	LR		
	comp=Z,2µm,22.0s						
COLD	**Coldfoot**	**158.65**	**5**	PFAKE		07 21 50.0	+11
COLD				LR	LR		
	comp=Z,4µm,22.0s						
NV11	**Mina Array Sit**	**158.68**	**259**	PFAKE		07 21 50.0	+9.4
NV11				LR	LR		
	comp=Z,200nm,21.0s						
MLAC	**Mammoth, Mammot**	**158.74**	**256**	P	**PKPdf**	**07 21 40.3**	**-0.5**
	baz=122						
NV01	**Mina Array Sit**	**158.78**	**258**	*e*PKPdf	**PKPdf**	**07 21 41.0**	**+0.2**
NV01				*e*PKPab	**PKPab**	**07 22 15.7**	**-0.9**
NVAR	**Mina Array Bea**	**158.78**	**258**	PKP	**PKPdf**	**07 21 41.0**	**+0.2**
	comp=Z,1.9nm,1.0s,baz=119,slow=9.2,SNR=6.2						
NVAR				PKPab	**PKPab**	**07 22 15.7**	**-0.9**
	comp=Z,7.3nm,0.9s,baz=136,slow=4.2,SNR=10						
WALA	**Waterton Lakes**	**158.80**	**289**	PFAKE		07 21 50.0	+10
WALA				LR	LR		
	comp=Z,3µm,19.0s						
OMMB	**Old Mammoth Mi**	**158.84**	**256**	PFAKE		07 21 50.0	+9.0
OMMB				LR	LR		
	comp=Z,4µm,20.0s						
MDPB	**Devils Postpil**	**158.90**	**256**	PFAKE		07 21 50.0	+9.0
MDPB				LR	LR		
	comp=Z,3µm,19.0s						
BMN	**Battle Mountai**	**158.96**	**264**	PFAKE		07 21 50.0	+9.2
BMN				LR	LR		
	comp=Z,2µm,20.0s						
RYN	**Ryan**	**159.03**	**259**	PFAKE		07 21 50.0	+9.0
RYN				LR	LR		
	comp=Z,3µm,20.0s						
MFID	**Camas Ranch**	**159.06**	**273**	PFAKE		07 21 50.0	+9.2
MFID				LR	LR		
	comp=Z,4µm,20.0s						
EPYK	**Eagle Plains**	**159.18**	**350**	PFAKE		07 21 50.0	+10
EPYK				LR	LR		
	comp=Z,4µm,22.0s						
EPYK	**Eagle Plains**	**159.18**	**350**	P	**PKPdf**	**07 21 40.7**	**+0.6**
	baz=17						
FYU	**Fort Yukon**	**159.48**	**0**	PFAKE		07 21 50.0	+10
FYU				LR	LR		
	comp=Z,3µm,20.0s						
WAKR	**Walker**	**159.59**	**257**	*e*PKPab	**PKPab**	**07 22 20.1**	**0.0**
WAKR				LR	LR		
	comp=Z,4µm,20.0s						
YERR	**Yerington**	**159.69**	**259**	PFAKE		07 21 50.0	+8.2
YERR				LR	LR		
	comp=Z,3µm,22.0s						
PNTR	**Pine Nut**	**159.99**	**259**	PFAKE		07 21 50.0	+7.8
PNTR				LR	LR		
	comp=Z,4µm,22.0s						
CMB	**Columbia Colle**	**159.99**	**255**	PFAKE		07 21 50.0	+8.0
CMB				LR	LR		
	comp=Z,3µm,21.0s						
SAO	**San Andreas Ge**	**160.00**	**251**	PFAKE		07 21 50.0	+8.1
SAO				LR	LR		
	comp=Z,3µm,20.0s						
PAHR	**Pah Rah Range**	**160.13**	**260**	*e*PKPdf	**PKPdf**	**07 21 41.9**	**-0.3**
PAHR				*e*PKPab	**PKPab**	**07 22 22.8**	**+0.4**
MLY	**Manley**	**160.77**	**7**	*e*PKPdf	**PKPdf**	**07 21 41.1**	**-0.8**
MLY				*e*PKPab	**PKPab**	**07 22 27.2**	**+3.0**
AFDM	**Forest Hills D**	**160.85**	**257**	*e*PKPdf	**PKPdf**	**07 21 42.3**	**-0.6**
AFDM				*e*PKPab	**PKPab**	**07 22 24.1**	**-1.2**
NEW	**Newport**	**160.87**	**287**	*e*PKPdf	**PKPdf**	**07 21 40.2**	**-2.3**
NEW				*e*PKPab	**PKPab**	**07 22 25.0**	**-0.2**
NEW	**Newport**	**160.87**	**287**	*e*PKIKP	**PKPdf**	**07 21 40.3**	**-2.3**
NEW				*e*		07 22 25.0	
NEW	**Newport**	**160.87**	**287**	P	**PKPdf**	**07 21 43.4**	**+0.8**
	baz=94						
POKR	**Poker Plat Res**	**160.89**	**3**	P	**PKPdf**	**07 21 42.9**	**+0.9**
	baz=355						
TCOL	**CIGO, UAF Yank**	**161.12**	**4**	P	**PKPdf**	**07 21 43.6**	**+1.3**
	baz=354						
EGAK	**Eagle**	**161.15**	**355**	*e*PKPab	**PKPab**	**07 22 30.4**	**+4.7**
ILAR	**Eielson Array**	**161.25**	**2**	PKP	**PKPdf**	**07 21 41.4**	**-1.1**
	comp=Z,1.0nm,1.0s,baz=330,slow=2.3,SNR=6.6						
ILAR				PKPab	**PKPab**	**07 22 25.1**	**-1.1**
	comp=Z,2.4nm,0.9s,baz=338,slow=2.8,SNR=4.6						
ILAR				PP	**PP**	**07 26 10.4**	**+0.8**
	comp=Z,1.4nm,1.1s,baz=352,slow=5.6,SNR=3.9						
C09A	**Chrisman Ranch**	**161.61**	**285**	*e*PKPdf	**PKPdf**	**07 21 42.3**	**-1.1**
C09A				*e*PKPab	**PKPab**	**07 22 28.2**	**-0.2**
HDA	**Harding Lake**	**161.62**	**2**	P	**PKPdf**	**07 21 43.4**	**+0.6**
	baz=356						
BPAW	**Bear Paw Mtn.**	**161.66**	**8**	*e*PKPab	**PKPab**	**07 22 29.2**	**+1.2**
D08A	**Wollman Farm,**	**161.97**	**283**	*e*PKPab	**PKPab**	**07 22 30.6**	**+0.6**
O03E	**Paynes Creek**	**162.05**	**260**	P	**PKPdf**	**07 21 42.9**	**-1.3**
	baz=116						
SCRK	**Sand Creek**	**162.07**	**358**	*e*PKPab	**PKPab**	**07 22 29.9**	**-0.1**
MCK	**McKinley**	**162.19**	**6**	*e*PKPab	**PKPab**	**07 22 29.6**	**-0.8**
MCK	**McKinley**	**162.19**	**6**	*e*PKP2	**PKPab**	**07 22 29.6**	**-0.8**
KTH	**Kantishna Hill**	**162.20**	**8**	*e*PKPab	**PKPab**	**07 22 30.6**	**+0.1**
HAWA	**Hanford**	**162.30**	**280**	*e*PKPab	**PKPab**	**07 22 30.8**	**-0.7**
O02D	**Mt. Diablo Mer**	**162.67**	**258**	P	**PKPdf**	**07 21 44.4**	**-0.4**
	baz=117						
M04C	**Macdoel**	**162.69**	**264**	P	**PKPdf**	**07 21 44.2**	**-0.6**
	baz=112						
J05D	**Fort Rock, OR**	**162.79**	**269**	P	**PKPdf**	**07 21 44.3**	**-0.6**
	baz=108						
K04D	**Chiloquin, OR**	**162.94**	**267**	P	**PKPdf**	**07 21 44.0**	**-1.0**
	baz=110						
N02D	**Trinity Center**	**162.97**	**261**	P	**PKPdf**	**07 21 44.0**	**-1.0**
	baz=115						
I05D	**Terrebonne, OR**	**163.15**	**273**	P	**PKPdf**	**07 21 44.0**	**-1.1**
	baz=104						
L04D	**Klamath Falls**	**163.18**	**265**	P	**PKPdf**	**07 21 44.0**	**-1.3**
	baz=111						
M02C	**Callahan**	**163.24**	**262**	P	**PKPdf**	**07 21 44.1**	**-1.2**
	baz=114						
G05D	**Wamic, OR**	**163.34**	**276**	P	**PKPdf**	**07 21 43.5**	**-1.7**
	baz=101						
C06D	**Leavenworth**	**163.38**	**285**	P	**PKPdf**	**07 21 43.3**	**-1.8**
	baz=93						
J04D	**Umpqua Nationa**	**163.38**	**268**	P	**PKPdf**	**07 21 44.0**	**-1.5**
	baz=108						
F05D	**White Salmon**	**163.55**	**278**	P	**PKPdf**	**07 21 44.6**	**-0.7**
	baz=99						
I04A	**Tendick Farm,**	**163.75**	**270**	P	**PKPdf**	**07 21 44.6**	**-1.1**
	baz=106						
L02E	**Cave Junction**	**164.05**	**263**	P	**PKPdf**	**07 21 44.6**	**-1.3**
	baz=112						
H04D	**Lebanon**	**164.17**	**272**	P	**PKPdf**	**07 21 44.7**	**-1.2**
	baz=104						
B05A	**Bryant**	**164.19**	**286**	P	**PKPdf**	**07 21 43.6**	**-2.1**
	baz=91						
K02D	**Willamette Mer**	**164.29**	**265**	P	**PKPdf**	**07 21 44.6**	**-1.6**
	baz=110						
I03D	**Drain, OR**	**164.38**	**269**	P	**PKPdf**	**07 21 43.8**	**-2.3**
	baz=106						
E04D	**Cinebar**	**164.41**	**280**	P	**PKPdf**	**07 21 44.3**	**-1.8**
	baz=96						
HYT	**Haines Junctio**	**164.58**	**346**	*e*PKPdf	**PKPdf**	**07 21 42.9**	**-3.0**
HYT				*e*PKPab	**PKPab**	**07 22 43.2**	**+2.1**
A04D	**Lummi Island**	**164.60**	**288**	P	**PKPdf**	**07 21 45.5**	**-0.6**
	baz=88						
D04E	**Lakebay**	**164.60**	**282**	P	**PKPdf**	**07 21 45.3**	**-0.8**
	baz=94						
DLBC	**Dease Lake**	**164.61**	**329**	*e*PKPab	**PKPab**	**07 22 44.7**	**+3.4**
J01E	**Myrtle Point**	**164.62**	**267**	P	**PKPdf**	**07 21 45.3**	**-1.0**
	baz=108						
G03D	**McMinnville, O**	**164.68**	**275**	P	**PKPdf**	**07 21 45.0**	**-1.4**
	baz=101						
I02D	**Swisshome**	**164.84**	**270**	P	**PKPdf**	**07 21 45.5**	**-0.9**
	baz=105						
D03D	**Eldon**	**164.84**	**283**	P	**PKPdf**	**07 21 45.3**	**-1.1**
	baz=93						
NLWA	**Neilton Lookou**	**165.36**	**283**	*e*PKPab	**PKPab**	**07 22 45.9**	**+0.9**
SEW	**Seward**	**165.73**	**9**	*e*PKPdf	**PKPdf**	**07 21 46.2**	**-0.4**
SEW				*e*PKPab	**PKPab**	**07 22 46.6**	**+0.7**

SOME ***22*** *07:07:23.1, 39°.63N×73°.73E, h5^{km}*
KRNET ***22*** *07:07:25.1±0.1, 39°.60N×74°.01E, mb3.6*
NNC ***22*** *07:07:27.1±2.4, 39°.71N×73°.95E, h0^{km}, mb4.1, mpv3.8,*
Error ellipse: s-maj=19.0km s-min=11.2km az=171.0
ISC 22 07:07:25.0±1.5**, 39°.79N**±0°.05×**74°.00E**±0°.03**, h6**^{km}±14^{km}**,**
n65, σ1ˢ88/101**, 25C-15D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.71**	**333**	⇑*i*P	**Pg**	**07 07 59.9**	**+2.0**
	baz=36						
ARSB				⇑*i*S	**Sg**	**07 08 25.9**	**+5.8**
	baz=36						
DRK	**Karamyk**	**1.73**	**260**	⇓*i*P	**Pb**	**07 07 57.5**	**+0.2**
	baz=67						
DRK				⇓*i*S	**Sg**	**07 08 21.2**	**+0.7**
	baz=67						
ARLS	**Aral**	**2.08**	**7**	⇓*i*P	**Pg**	**07 08 05.6**	**+0.7**
	baz=6.0						
ARLS				⇓*i*S	**Sg**	**07 08 35.8**	**+3.9**
	baz=6.0						
NRN	**Naryn**	**2.24**	**42**	⇑*i*P	**Pb**	**07 08 06.8**	**+0.8**
	baz=39						
NRN				⇑*i*S	**Sg**	**07 08 37.4**	**+0.5**
	baz=39						
BTK	**Batken**	**2.46**	**277**	⇑*i*P	**Pb**	**07 08 09.2**	**-0.5**
	baz=82						
BTK				⇑*i*S	**Sb**	**07 08 40.9**	**+0.7**
	baz=82						
UCH	**Uchtor**	**2.46**	**9**	⇑*i*P	**Pg**	**07 08 11.4**	**-0.8**
	baz=8.0						
UCH				⇑*i*S	**Sg**	**07 08 45.8**	**+1.6**
	baz=8.0						
UCH	**Uchtor**	**2.46**	**9**	P	**Pg**	**07 08 11.4**	**-0.9**
	SNR=41						
KZA	**Kyzart**	**2.47**	**22**	⇓*i*P	**Pg**	**07 08 11.8**	**-0.6**
	baz=20						
KZA				⇓*i*S	**Sg**	**07 08 45.8**	**+1.4**
	baz=20						
KZA	**Kyzart**	**2.47**	**22**	P	**Pg**	**07 08 13.1**	**+0.7**
	SNR=33						
ARK	**Arkit**	**2.53**	**323**	⇑*i*P	**Pb**	**07 08 10.8**	**-0.1**
	baz=25						
ARK				⇑*i*S	**Sb**	**07 08 44.3**	**+2.0**
	baz=25						
AAK	**Ala-Archa**	**2.87**	**7**	⇓Pn	**Pb**	**07 08 17.2**	**+0.6**
	16nm,0.6s						
AAK				⇓Lg	Lg	07 09 03.0	
	58nm,0.8s						
AAK	**Ala-Archa**	**2.87**	**7**	⇑*i*P	**Pb**	**07 08 17.3**	**+0.7**
	baz=7.0						
AAK				⇑*i*S	**Sg**	**07 08 54.9**	**-2.2**
	baz=7.0						
AAK	**Ala-Archa**	**2.87**	**7**	P	**Pb**	**07 08 17.4**	**+0.7**
	SNR=6.1						
EKS2	**Erkin-Say**	**2.87**	**357**	⇑*i*P	**Pb**	**07 08 17.1**	**+0.4**
	baz=57						
EKS2				⇑*i*S	**Sg**	**07 08 55.7**	**-1.5**
	baz=57						
EKS2	**Erkin-Say**	**2.87**	**357**	P	**Pg**	**07 08 19.6**	**-0.5**
	SNR=9.1						
KBK	**Karagaybulak**	**2.95**	**14**	⇑*i*P	**Pb**	**07 08 18.6**	**+0.6**
	baz=13						
KBK				⇑*i*S	**Sg**	**07 08 57.1**	**-2.6**
	baz=13						
KBK	**Karagaybulak**	**2.95**	**14**	P	**Pb**	**07 08 19.1**	**+1.1**
	SNR=14						
ULHL	**Ulahol**	**2.98**	**34**	⇑*i*P	**Pb**	**07 08 18.7**	**+0.1**
	baz=32						
ULHL				⇑*i*S	**Sg**	**07 08 58.1**	**-2.7**
	baz=32						
ULHL	**Ulahol**	**2.98**	**34**	P	**Pg**	**07 08 22.5**	**+0.4**
	SNR=19						
MRKS	**Merke**	**3.01**	**349**	Pg	**Pg**	**07 08 22.4**	**-0.3**
	35nm,0.4s						
MRKS				Lg	Lg	07 09 02.4	
	47nm,0.5s						
MRKS	**Merke**	**3.01**	**349**	*e*P	**Pg**	**07 08 21.9**	**-0.7**
	35nm,0.4s						
MRKS				*e*S	**Sg**	**07 09 02.4**	**+0.8**
	47nm,0.5s						
BOOM	**Boomskoye usch**	**3.07**	**28**	⇑*i*P	**Pb**	**07 08 19.1**	**-1.0**
	baz=26						
BOOM				⇑*i*S	**Sb**	**07 08 58.6**	**+0.8**
	baz=26						
CHMS	**Chumysh**	**3.25**	**10**	⇑*i*P	**Pb**	**07 08 22.5**	**-0.6**
	baz=9.0						
CHMS				⇑*i*S	**Sb**	**07 09 04.3**	**+1.3**
	baz=9.0						
CHMS	**Chumysh**	**3.25**	**10**	P	**Pb**	**07 08 23.7**	**+0.5**
	SNR=6.5						
TKM2	**Tokmak 2**	**3.35**	**21**	⇑Pn	**Pb**	**07 08 23.6**	**-1.2**
	2.7nm,0.5s						
TKM2				⇓Pg	**Pg**	**07 08 29.4**	**+0.2**
	5.9nm,0.4s						
TKM2				⇓Lg	Lg	07 09 21.0	
	24nm,0.6s						
KDJ	**Kajisay**	**3.35**	**45**	⇓*e*P	**Pb**	**07 08 22.5**	**-2.5**
	baz=43						
KDJ				⇓*i*S	**Sb**	**07 09 04.1**	**-2.0**
	baz=43						
USP	**Ospenovka**	**3.49**	**6**	P	**Pg**	**07 08 31.9**	**0.0**
	SNR=14						
KST	**Kastek**	**3.57**	**24**	Pg	**Pb**	**07 08 30.4**	**+1.8**
	12nm,0.4s						
KST				Lg	Lg	07 09 17.4	
	25nm,0.5s						
KST	**Kastek**	**3.57**	**24**	*e*P	**Pb**	**07 08 29.9**	**+1.3**
	12nm,0.4s						
KST				*e*S	**Sg**	**07 09 16.2**	**-3.4**
	25nm,0.5s						
SGDS	**Sogindy**	**3.69**	**7**	Pg	**Pg**	**07 08 35.1**	**-0.6**
	38nm,0.3s						
SGDS				Lg	Lg	07 09 24.5	
	21nm,0.8s						
IZV	**Izvestkoviy**	**3.79**	**30**	Pg	**Pg**	**07 08 36.2**	**-1.4**
	14nm,0.4s						
IZV				Lg	Lg	07 09 26.4	
	31nm,0.5s						
IZV	**Izvestkoviy**	**3.79**	**30**	*e*P	**Pg**	**07 08 36.2**	**-1.4**
	14nm,0.4s						
IZV				*e*S	**Sg**	**07 09 26.4**	**-0.4**
	31nm,0.5s						
MTBS	**Maitube**	**3.80**	**28**	Pg	**Pg**	**07 08 36.8**	**-1.0**
	8.5nm,0.2s						
MTBS				Lg	Lg	07 09 27.2	
	19nm,0.3s						
MTBS	**Maitube**	**3.80**	**28**	*e*P	**Pg**	**07 08 36.8**	**-1.0**
	8.5nm,0.2s						
MTBS				*e*S	**Sg**	**07 09 27.2**	**+0.1**
	19nm,0.3s						
IUG	**Iuzhnay**	**3.81**	**309**	Pg	**Pb**	**07 08 28.9**	**-3.9**
	3.0nm,0.2s						
IUG				Lg	Lg	07 09 15.0	
	54nm,0.5s						
IUG	**Iuzhnay**	**3.81**	**309**	*e*P	**Pb**	**07 08 28.9**	**-3.9**
	3.0nm,0.2s						
IUG				*e*S	**Sb**	**07 09 15.0**	**-4.3**
	54nm,0.5s						
TNSS	**Tian-Shan**	**3.93**	**33**	Pg	**Pg**	**07 08 40.1**	**-0.2**
	12nm,0.3s						
TNSS				Lg	Lg	07 09 32.8	
	13nm,0.4s						
TNSS	**Tian-Shan**	**3.93**	**33**	*e*P	**Pg**	**07 08 40.1**	**-0.2**
	12nm,0.3s						
TNSS				*e*S	**Sg**	**07 09 32.8**	**+1.7**
	13nm,0.4s						
MDOK	**Medeo**	**4.07**	**33**	Pg	**Pg**	**07 08 42.4**	**-0.6**
	13nm,0.3s						
MDOK				Lg	Lg	07 09 37.9	
	19nm,0.8s						
MDOK	**Medeo**	**4.07**	**33**	*e*P	**Pg**	**07 08 42.4**	**-0.6**
	13nm,0.3s						
MDOK				*e*S	**Sg**	**07 09 37.9**	**+2.1**
	19nm,0.8s						
KOTS	**Kotyrbulak**	**4.16**	**33**	Pg	**Pg**	**07 08 42.9**	**-1.8**
	16nm,0.4s						
KOTS				Lg	Lg	07 09 37.8	
	28nm,0.6s						
KOTS	**Kotyrbulak**	**4.16**	**33**	*e*P	**Pg**	**07 08 42.9**	**-1.8**
	16nm,0.4s						
KOTS				*e*S	**Sg**	**07 09 37.8**	**-0.7**
	28nm,0.6s						
KK31	**Karatay Array**	**4.22**	**323**	⇓Pn	**Pn**	**07 08 33.7**	**+3.9**
	0.8nm,0.3s,baz=149,slow=16,SNR=33						
KK31				⇓Sn	**Sb**	**07 09 26.1**	**-4.7**
	14nm,0.6s,baz=144,slow=27,SNR=8.2						
KK31				⇑Lg	Lg	07 09 41.6	
	4.7nm,0.3s,baz=151,slow=30,SNR=4.3						
KTBS	**Karatobe**	**4.40**	**26**	Pg	**Pg**	**07 08 48.2**	**-1.1**
	7.5nm,0.5s						
KTBS				Lg	Lg	07 09 46.9	
	43nm,0.6s						
KTBS	**Karatobe**	**4.40**	**26**	*e*P	**Pg**	**07 08 48.2**	**-1.1**
	7.5nm,0.5s						
KTBS				*e*S	**Sg**	**07 09 47.0**	**+0.7**
	43nm,0.6s						
BRLS	**Boroldayy**	**4.50**	**317**	Pg	**Pb**	**07 08 40.3**	**-4.0**
	0.7nm,0.2s						
BRLS				Lg	Lg	07 09 33.6	
	2.0nm,0.3s						
BRLS	**Borolday**	**4.50**	**317**	*e*P	**Pb**	**07 08 41.6**	**-2.7**
	0.6nm,0.2s						
BRLS				*e*S	**Sb**	**07 09 35.6**	**-3.3**
	11nm,0.4s						
CHKK	**Chushkaly**	**4.63**	**28**	Pg	**Pg**	**07 08 53.7**	**-0.1**
	6.9nm,0.6s						
CHKK				Lg	Lg	07 09 56.3	
	18nm,0.5s						
CHKK	**Chushkaly**	**4.63**	**28**	*e*P	**Pg**	**07 08 53.7**	**-0.1**
	6.9nm,0.6s						
CHKK				*e*S	**Sg**	**07 09 56.3**	**+2.6**
	18nm,0.5s						
SATY	**Saty**	**4.65**	**44**	Pg	**Pg**	**07 08 51.4**	**-2.6**
	24nm,0.5s						
SATY				Lg	Lg	07 09 52.2	
	14nm,0.7s						
SATY	**Saty**	**4.65**	**44**	*e*P	**Pg**	**07 08 51.4**	**-2.6**
	24nm,0.5s						
SATY				*e*S	**Sg**	**07 09 52.2**	**-2.1**
	14nm,0.7s						
KURS	**Kuram**	**4.84**	**39**	Pg	**Pg**	**07 08 57.3**	**-0.3**
	7.3nm,0.5s						
KURS				Lg	Lg	07 10 02.5	
	8.0nm,1.0s						
KURS	**Kuram**	**4.84**	**39**	*e*P	**Pg**	**07 08 57.3**	**-0.3**
	7.3nm,0.5s						
KURS				*e*S	**Sg**	**07 10 02.5**	**+2.2**
	8.0nm,1.0s						
UZB	**Uzynbulak**	**5.05**	**47**	Pg	**Pg**	**07 09 00.0**	**-1.6**
	7.1nm,0.6s						
UZB				Lg	Lg	07 10 07.0	
	7.9nm,0.6s						
UZB	**Uzynbulak**	**5.05**	**47**	*e*P	**Pg**	**07 09 00.0**	**-1.6**
	7.1nm,0.6s						
UZB				*e*S	**Sg**	**07 10 07.0**	**-0.1**
	7.9nm,0.6s						
KPKS	**Kokpek**	**5.08**	**42**	*e*P	**Pg**	**07 09 00.5**	**-1.8**
	11nm,0.6s						
KPKS				*e*S	**Sg**	**07 10 08.0**	**0.0**
	14nm,0.6s						
BTLS	**Baital**	**5.24**	**0**	Pg	**Pg**	**07 09 03.3**	**-2.1**
	2.8nm,0.4s						
BTLS				Lg	Lg	07 10 12.8	
	2.7nm,0.4s						
BTLS	**Baital**	**5.24**	**0**	*e*P	**Pg**	**07 09 03.3**	**-2.1**
	2.8nm,0.4s						
BTLS				*e*S	**Sg**	**07 10 12.8**	**-0.6**
	2.7nm,0.4s						
ARXS	**Arharly**	**5.26**	**32**	Pg	**Pg**	**07 09 02.9**	**-2.8**
	7.0nm,0.5s						
ARXS				Lg	Lg	07 10 12.3	
	11nm,0.6s						
ARXS	**Arharly**	**5.26**	**32**	*e*P	**Pg**	**07 09 02.9**	**-2.8**
	7.0nm,0.5s						
ARXS				*e*S	**Sg**	**07 10 12.3**	**-1.5**
	11nm,0.6s						
MNBS	**Baschi**	**5.39**	**36**	Pg	**Pg**	**07 09 06.7**	**-1.7**
	6.0nm,0.4s						
MNBS				Lg	Lg	07 10 18.3	
	9.5nm,0.4s						
MNBS	**Baschi**	**5.39**	**36**	*e*P	**Pg**	**07 09 06.7**	**-1.7**
	6.0nm,0.4s						
MNBS				*e*S	**Sg**	**07 10 18.3**	**+0.1**
	9.5nm,0.4s						
PDGK	**Podgornoye**	**5.43**	**48**	⇑Pg	**Pg**	**07 09 09.7**	**+0.8**
	5.8nm,0.6s						
PDGK				⇓Lg	Lg	07 10 25.4	
	9.0nm,0.7s						
KTMS	**Ketmen**	**6.00**	**50**	Pg	**Pg**	**07 09 20.3**	**+0.4**
	1.2nm,0.3s						
KTMS				Lg	Lg	07 10 41.9	
	3.7nm,0.8s						
KTMS	**Ketmen**	**6.00**	**50**	*e*P	**Pg**	**07 09 19.2**	**-0.7**
	1.2nm,0.3s						
KTMS				*e*S	**Sg**	**07 10 39.2**	**+1.7**
	3.7nm,0.8s						

KRSC 22 07:16:40.1±2.6**, 49°.76N**×**157°.27E, h49**^{km}±38^{km}**, ML3.9,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.19**	**322**	*e*P	Pn	07 16 59.1	-1.2
SKR				*e*S	Sn	07 17 12.6	-2.7
KDTR	**Khodutka, Kamc**	**2.12**	**14**	*e*P	Pn	07 17 16.3	+3.3
KDTR				*e*S	Sn	07 17 42.5	+4.5
ASAK	**Asacha**	**2.66**	**8**	*e*P	Pn	07 17 23.8	+3.3
MTVR	**Mutnovka**	**2.79**	**12**	*e*P	Pn	07 17 25.7	+3.4
MTVR				*e*S	Sn	07 17 59.3	+4.5
KRMR	**Karymshinskiy**	**3.12**	**10**	*e*P	Pn	07 17 30.8	+4.0
KRMR				*e*S	Sn	07 18 07.6	+4.8
DALK	**Dalny**	**3.41**	**15**	*e*P	Pn	07 17 34.4	+3.8
DALK				*e*S	Sn	07 18 14.7	+5.0
UGLR	**Uglovaya**	**3.59**	**15**	*e*P	Pn	07 17 37.7	+4.4
UGLR				S	Sn	07 18 20.1	+5.7
AVH	**Avacha**	**3.63**	**14**	*e*P	Pn	07 17 38.2	+4.4
SMAR	**Somma**	**3.64**	**15**	*e*P	Pn	07 17 38.5	+4.5
KOK	**Koryaka**	**3.64**	**13**	*e*P	Pn	07 17 38.6	+4.6
NLC	**Nalytchevo**	**3.66**	**20**	*e*S	Sn	07 18 17.9	+2.1
SDLR	**Sedlovina**	**3.67**	**15**	*e*P	Pn	07 17 37.8	+3.5
SDLR				*e*S	Sn	07 18 21.1	+4.8
KRER	**Koryakskii**	**3.67**	**14**	*e*P	Pn	07 17 38.8	+4.3
KRX	**Arik**	**3.71**	**13**	*e*P	Pn	07 17 39.2	+4.3
SPN	**Mys Shipunski**	**3.76**	**26**	*e*P	Pn	07 17 39.2	+3.7
SPN				*e*S	Sn	07 18 22.6	+4.1
GNL	**Ganaly**	**3.96**	**6**	*e*P	Pn	07 17 41.8	+3.4
MKZ	**Mys Kozlova**	**5.53**	**28**	*e*P	Pn	07 18 02.8	+3.0
MKZ				*e*S	Sn	07 19 04.0	+2.0

NEIC ***22*** *07:22:55.0±0.0, 41°.60S×174°.30E, h16^{km}, mb4.1/3,*
ML4.3(WEL), After WEL.
WEL 22 07:22:55.3, 42°S±1°×**174°.3E**±0°.9**, h17**^{km}±2^{km}**, M4.3**/13**,**
ML4.5/6**, MLv4.3**/13**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=146.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.17**	**202**	P	Pg	07 22 59.6	+0.1
CMWZ				S	Sb	07 23 03.6	+0.6
TUWZ	**Tuamarina**	**0.31**	**302**	P	Pb	07 23 02.4	-0.1
TUWZ				S	Sb	07 23 07.4	+0.1
BSWZ	**Blackbirch Sta**	**0.34**	**249**	P	Pg	07 23 02.5	+0.2

BSWZ				S	Sg	07 23 07.5	+0.4
TCW	**Tory Channel**	**0.39**	**358**	P	Pb	07 23 03.7	0.0
SNZO	**South Karori**	**0.42**	**47**	*e*Pg	Pb	07 23 04.3	+0.1
SNZO				*e*Sg	Sg	07 23 07.9	-1.6
BHW	**Baring Head**	**0.47**	**67**	P	Pb	07 23 05.3	+0.1
WEL	**Wellington**	**0.47**	**49**	P	Pb	07 23 05.3	+0.2
PLWZ	**Palliser**	**0.72**	**88**	P	Pb	07 23 10.0	+0.6
MSWZ	**Moikau Station**	**0.74**	**76**	P	Pb	07 23 10.2	+0.5
CAW	**Cannon Point**	**0.76**	**50**	P	Pg	07 23 10.2	+0.1
NNZ	**Nelson**	**0.79**	**298**	P	Pg	07 23 10.6	+0.1
DUWZ	**D'Urville Isla**	**0.84**	**340**	P	Pg	07 23 11.7	+0.1
PAWZ	**Paruwai Farm**	**0.88**	**76**	P	Pn	07 23 12.6	-0.3
KHZ	**Kahutara**	**0.99**	**214**	*e*Pn	Pg	07 23 14.6	+0.1
KHZ				*e*Sg	Sb	07 23 25.7	-1.2
KHZ	**Kahutara**	**0.99**	**214**	P	Pg	07 23 14.5	0.0
MTW	**Mount Morrison**	**1.01**	**65**	P	Pg	07 23 14.8	0.0
OGWZ	**Otaki Gorge**	**1.02**	**41**	P	Pn	07 23 14.7	-0.2
THZ	**Tophouse**	**1.05**	**260**	*e*Pn	Pb	07 23 15.2	0.0
THZ				*e*Sg	Sb	07 23 26.9	-1.8
THZ	**Tophouse**	**1.05**	**260**	P	Pb	07 23 15.3	+0.1
TRWZ	**Traveller**	**1.06**	**80**	P	Pb	07 23 15.3	0.0
HOWZ	**Holdsworth Sta**	**1.16**	**53**	P	Pb	07 23 17.1	+0.3
TMWZ	**Te Maipa**	**1.30**	**68**	P	Pn	07 23 18.5	-0.2
MRZ	**Mangatainoka R**	**1.35**	**46**	P	Pb	07 23 20.0	-0.1
TIWZ	**Tintock**	**1.45**	**56**	P	Pn	07 23 21.2	+0.4
QRZ	**Quartz Range**	**1.54**	**299**	*e*Pn	Pb	07 23 23.4	0.0
QRZ				*e*Sn	Sn	07 23 40.4	-1.2
QRZ	**Quartz Range**	**1.54**	**299**	P	Pb	07 23 23.6	+0.2
OHWZ	**Ohakea**	**1.59**	**29**	P	Pg	07 23 25.3	-0.5
CPWZ	**Castlepoint**	**1.59**	**65**	P	Pb	07 23 24.1	-0.2
PRWZ	**Pori Road**	**1.64**	**51**	P	Pn	07 23 23.7	+0.3
POWZ	**Post Office Ro**	**1.64**	**43**	P	Pb	07 23 24.2	-0.8
GVZ	**Greta Valley S**	**1.66**	**214**	P	Pn	07 23 23.3	-0.4
BFZ	**Birch Farm**	**1.73**	**59**	*e*Pn	Pn	07 23 24.2	-0.4
BFZ				*e*Sn	Sn	07 23 46.8	+0.3
BFZ	**Birch Farm**	**1.73**	**59**	P	Pn	07 23 24.1	-0.6
DSZ	**Denniston Nort**	**1.87**	**265**	P	Pb	07 23 28.2	-0.8
WAZ	**Wanganui**	**1.91**	**16**	P	Pb	07 23 30.3	+0.6
LTZ	**Lake Taylor**	**1.92**	**231**	*e*Pn	Pn	07 23 27.3	+0.1
LTZ	**Lake Taylor**	**1.92**	**231**	P	Pn	07 23 27.3	+0.1
DVHZ	**Dannevirke**	**1.92**	**48**	P	Pn	07 23 27.0	-0.3
TSZ	**Takapari Road**	**1.99**	**40**	P	Pn	07 23 28.6	+0.4
AMCZ	**Amberley**	**1.99**	**217**	P	Pn	07 23 27.6	-0.6
ANWZ	**Angora Road**	**2.00**	**56**	P	Pn	07 23 26.5	-1.9
LREZ	**Lake Rotokare**	**2.13**	**2**	P	Pb	07 23 34.4	+0.9
NMEZ	**Namu Road**	**2.20**	**352**	P	Pb	07 23 34.8	+0.1
PRHZ	**Porangahau**	**2.21**	**54**	P	Pn	07 23 31.1	-0.2
PNHZ	**Pukenui**	**2.22**	**41**	P	Pn	07 23 31.7	+0.3
WPHZ	**Waipukurau**	**2.23**	**47**	P	Pn	07 23 31.6	0.0
PREZ	**Palmer Road**	**2.25**	**357**	P	Pb	07 23 35.3	-0.2
KHEZ	**Kahui Hut**	**2.31**	**355**	P	Pb	07 23 35.6	-0.9
OKCZ	**Okains Bay**	**2.31**	**203**	P	Pn	07 23 31.3	-1.4
CRLZ	**Canterbury Las**	**2.33**	**211**	*e*Pn	Pn	07 23 31.1	-1.8
CRLZ				*e*Sn	Sn	07 23 59.8	-1.4
CRLZ	**Canterbury Las**	**2.33**	**211**	P	Pn	07 23 31.6	-1.3
NBEZ	**Newall Road No**	**2.35**	**352**	P	Pb	07 23 35.7	-1.4
MTVZ	**Mangateitei**	**2.38**	**22**	P	Pb	07 23 37.0	-0.8
INZ	**Inchbonnie**	**2.40**	**241**	P	Pn	07 23 34.2	+0.3
OXZ	**Oxford**	**2.40**	**223**	*e*Pn	Pn	07 23 32.6	-1.3
OXZ				*e*Sn	Sn	07 24 00.7	-2.3
OXZ	**Oxford**	**2.40**	**223**	P	Pn	07 23 32.5	-1.3
DREZ	**Durham Road**	**2.41**	**358**	P	Pb	07 23 37.0	-1.2
PKE	**Pukeiti**	**2.41**	**354**	P	Pb	07 23 36.5	-1.7
MQZ	**McQueen's Vall**	**2.43**	**209**	*e*Pn	Pn	07 23 32.1	-2.2
MQZ				*e*Sn	Sn	07 24 01.7	-1.9
MQZ	**McQueen's Vall**	**2.43**	**209**	P	Pn	07 23 32.2	-2.0
PKVZ	**Pokaka**	**2.44**	**20**	P	Pb	07 23 37.4	-1.4
MOVZ	**Moawhango**	**2.45**	**27**	P	Pn	07 23 36.6	+2.0
AKCZ	**Akaroa Harbour**	**2.49**	**204**	P	Pn	07 23 33.7	-1.4
VRZ	**Vera Road**	**2.49**	**8**	P	Pb	07 23 38.9	-0.8
PXZ	**Pawanui**	**2.50**	**52**	P	Pn	07 23 34.3	-0.9
BHHZ	**Black Hill Sta**	**2.50**	**33**	P	Pn	07 23 36.6	+1.4
KRHZ	**Kereru**	**2.51**	**40**	P	Pn	07 23 35.3	-0.1
DRZ	**Dome Shelter**	**2.51**	**23**	P	Pb	07 23 41.1	+1.0
WHVZ	**Whangaehu Hut**	**2.51**	**24**	P	Pb	07 23 38.1	-2.0
MHEZ	**Mangahewa**	**2.52**	**0**	P	Pb	07 23 41.1	+1.1
FWVZ	**Far West T-bar**	**2.53**	**23**	P	Pb	07 23 38.6	-1.8
TUVZ	**Tukino**	**2.55**	**24**	P	Pb	07 23 38.6	-2.0
NGZ	**Ngauruhoe**	**2.62**	**23**	P	Pb	07 23 40.1	-1.7
KAHZ	**Kahuranaki**	**2.66**	**48**	P	Pn	07 23 37.1	-0.4
WTVZ	**West Tongariro**	**2.67**	**22**	P	Pb	07 23 41.3	-1.4
TWVZ	**Taurewa**	**2.67**	**19**	P	Pb	07 23 41.4	-1.3
KRVZ	**Karewarewa**	**2.70**	**23**	P	Pb	07 23 42.2	-1.1
KWHZ	**Kaweka Forest**	**2.71**	**37**	P	Pn	07 23 39.0	+0.8
MCHZ	**McNeill Hill**	**2.82**	**41**	P	Pn	07 23 40.0	+0.4
KATZ	**Kakaramea**	**2.83**	**23**	P	Pb	07 23 44.5	-0.9
RITZ	**Rihia Road**	**2.88**	**25**	P	Pb	07 23 46.7	+0.5
BKZ	**Black Stump Fm**	**2.95**	**35**	*e*Pn	Pn	07 23 41.5	+0.1
BKZ	**Black Stump Fm**	**2.95**	**35**	P	Pn	07 23 41.9	+0.4
RATZ	**Rangitukua**	**2.95**	**23**	P	Pb	07 23 46.9	-0.6
WVZ	**Waitaha Valley**	**3.02**	**240**	P	Pn	07 23 42.5	+0.1
HATZ	**Hinemaiaia**	**3.03**	**28**	P	Pb	07 23 49.8	+1.0
WATZ	**Wairara**	**3.09**	**21**	P	Pb	07 23 50.1	+0.3
HIZ	**Hauiti**	**3.11**	**8**	*e*Pn	Pn	07 23 46.9	+3.3
HIZ	**Hauiti**	**3.11**	**8**	P	Pn	07 23 46.3	+2.7
ARHZ	**Aropaoanui**	**3.11**	**42**	P	Pn	07 23 44.0	+0.4
RPZ	**Rata Peaks**	**3.19**	**227**	*e*Pn	Pn	07 23 43.6	-1.2
RPZ				*e*Sn	Sn	07 24 21.8	-0.7
RPZ	**Rata Peaks**	**3.19**	**227**	P	Pn	07 23 43.8	-1.0
MRHZ	**Matea Rd**	**3.20**	**31**	P	Pn	07 23 45.1	+0.2
MTHZ	**Maungataniwha**	**3.36**	**36**	P	Pn	07 23 48.3	+1.2
WHHZ	**Waihua**	**3.37**	**43**	P	Pn	07 23 48.7	+1.5
TLZ	**Tolley Road**	**3.40**	**17**	P	Pn	07 23 50.7	+3.1
PRRZ	**Plateau Road**	**3.49**	**28**	P	Pb	07 23 55.7	-0.9
SNGZ	**Shannon Statio**	**3.65**	**41**	P	Pn	07 23 52.1	+1.0
FOZ	**Fox Glacier**	**3.83**	**238**	*e*Pn	Pn	07 23 53.4	-0.1
FOZ				*e*Sn	Sn	07 24 37.9	-0.2
FOZ	**Fox Glacier**	**3.83**	**238**	P	Pn	07 23 55.2	+1.7
RIGZ	**Rimuhau**	**3.92**	**44**	P	Pn	07 23 54.7	-0.1
TOZ	**Tahuroa Road**	**3.97**	**14**	P	Pb	07 24 01.8	-3.0
URZ	**Urewera**	**3.97**	**34**	*e*Pn	Pn	07 23 56.2	+0.8
URZ	**Urewera**	**3.97**	**34**	P	Pn	07 23 56.5	+1.1
MWZ	**Matawai**	**4.10**	**38**	P	Pn	07 23 56.9	-0.3
LBZ	**Lake Benmore**	**4.11**	**226**	*e*Pn	Pn	07 23 56.8	-0.5
LBZ	**Lake Benmore**	**4.11**	**226**	P	Pn	07 23 56.8	-0.5
TGRZ	**Tauranga**	**4.15**	**22**	P	Pb	07 24 04.2	-3.6
ODZ	**Otahua Downs**	**4.36**	**216**	*e*Pn	Pn	07 23 58.8	-1.9
ODZ				*e*Sn	Sn	07 24 49.1	-2.0
ODZ	**Otahua Downs**	**4.36**	**216**	P	Pn	07 23 58.9	-1.8
TWGZ	**Tauwhareparae**	**4.44**	**41**	P	Pn	07 24 06.5	+4.7
RUGZ	**Raukumara Rang**	**4.46**	**37**	P	Pn	07 24 03.1	+0.8
KBAZ	**Karaka Road Bo**	**4.52**	**6**	P	Pb	07 24 08.9	-5.2
AWAZ	**Awhitu Peninsu**	**4.53**	**4**	P	Pn	07 24 07.0	+3.9
MKAZ	**Moumakai**	**4.54**	**9**	P	Pn	07 24 06.1	+2.9
ETAZ	**East Tamaki Re**	**4.66**	**6**	P	Pn	07 24 09.0	+4.1
WTAZ	**Waiatarua**	**4.66**	**3**	P	Pb	07 24 11.3	-5.3
HAZ	**Te Kaha**	**4.68**	**36**	P	Pn	07 24 05.4	+0.2
PKGZ	**Pakihiroa**	**4.71**	**39**	P	Pn	07 24 06.3	+0.7
JCZ	**Jackson Bay**	**4.75**	**237**	P	Pn	07 24 08.0	+1.9
RVAZ	**Riverhead Bore**	**4.83**	**3**	P	Pn	07 24 10.7	+3.6
WIAZ	**Waiheke Island**	**4.84**	**8**	P	Pn	07 24 11.1	+3.7
MBAZ	**Motutapu North**	**4.84**	**6**	P	Pn	07 24 11.4	+4.0
KUZ	**Kuaotunu**	**4.97**	**13**	P	Pn	07 24 13.6	+4.4
WKZ	**Wanaka**	**5.03**	**228**	*e*Pn	Pn	07 24 08.6	-1.4
WKZ	**Wanaka**	**5.03**	**228**	P	Pn	07 24 09.4	-0.6
HHSZ	**Highcliff Hill**	**5.05**	**211**	P	Pn	07 24 09.8	-0.6
MXZ	**Matakaoa Point**	**5.08**	**39**	*e*Pn	Pn	07 24 10.2	-0.4
EAZ	**Earnscleugh**	**5.14**	**223**	P	Pn	07 24 12.6	+1.2
TUZ	**Tuapeka**	**5.51**	**216**	P	Pn	07 24 15.9	-0.6
WCZ	**Waipu Caves**	**5.65**	**0**	P	Pn	07 24 22.1	+3.6
MLZ	**Mavora Lakes**	**5.86**	**228**	*e*Pn	Pn	07 24 20.3	-1.1
MLZ	**Mavora Lakes**	**5.86**	**228**	P	Pn	07 24 21.4	0.0
SYZ	**Scrubby Hill**	**6.18**	**215**	P	Pn	07 24 25.1	-0.6
WHZ	**Wether Hill Ro**	**6.29**	**225**	*e*Pn	Pn	07 24 25.4	-1.9
WHZ	**Wether Hill Ro**	**6.29**	**225**	P	Pn	07 24 26.7	-0.5
OUZ	**Omahuta**	**6.39**	**355**	*e*Pn	Pn	07 24 30.7	+2.1
OUZ	**Omahuta**	**6.39**	**355**	P	Pn	07 24 31.7	+3.0
DCZ	**Deep Cove**	**6.47**	**231**	*e*Pn	Pn	07 24 28.9	-0.8
APZ	**The Paps**	**6.92**	**219**	P	Pn	07 24 35.6	-0.3
CTZ	**Chatham Island**	**7.03**	**111**	P	Pn	07 24 36.3	-1.1
RAO	**Raoul Island**	**13.85**	**30**	*e*Pn	Pn	07 26 10.6	-0.2
AS31	**Alice Springs** 1.8nm,1.4s	**38.02**	**285**	*e*P	P	07 30 13.0	+0.3
WB2	**Warramunga Arr** 5.0nm,1.1s	**40.07**	**290**	*e*P	P	07 30 29.1	-0.8
WRAB	**Tennant Creek** 22nm,1.4s	**40.08**	**290**	*e*P	P	07 30 27.4	-2.5

ROM 22 07:23:50.9±0.2,**43°.352N**±0°.005×**13°.126E**±0°.006,
h26km,**Md1.2**/4,**Error ellipse: s-maj=0.5km**
s-min=0.4km az=214.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EL6	**Elcito**	**0.03**	**217**	P	Pb	07 23 55.6	+0.1
EL6				S	Sb	07 23 58.8	+0.2
EL6	comp=E,1945μm,0.4s			AML	AML		
EL6	comp=N,1815μm,0.3s			AML	AML		
EL6	comp=N,1815μm,0.3s			AML	AML		
EL6	comp=E,1945μm,0.4s			AML	AML		
EL6				END			
EL6				END			
EL6				END			
EL6				END			
CING	**Cingoli**	**0.06**	**65**	P	Pb	07 23 55.8	+0.2
CING				S	Sb	07 23 59.0	+0.2
CING	comp=E,2320μm,0.2s			AML	AML		
CING	comp=N,1545μm,0.2s			AML	AML		
CING	comp=E,2320μm,0.2s			AML	AML		
CING	comp=N,1545μm,0.2s			AML	AML		
CING				END			
CING				END			
CING				END			
CING				END			
SNTG	**Esanatoglia**	**0.17**	**234**	*e*P	Pb	07 23 56.4	0.0
SNTG				S	Sb	07 24 00.4	+0.3
SNTG	comp=E,414μm,0.2s			AML	AML		
SNTG	comp=N,808μm,0.2s			AML	AML		
SNTG	comp=E,414μm,0.2s			AML	AML		
SNTG	comp=N,808μm,0.2s			AML	AML		
SNTG				END			
SNTG				END			
SNTG				END			
SNTG				END			
CSP1	**Cessapalombo**	**0.27**	**167**	P	Pb	07 23 57.7	0.0
CSP1				S	Sb	07 24 02.9	+0.6
CSP1				END			
CSP1				END			
FOSV	**Fossato di Vic**	**0.27**	**258**	*e*P	Pb	07 23 57.7	0.0
FOSV				S	Sb	07 24 03.0	+0.7
FOSV	comp=E,498μm,0.3s			AML	AML		
FOSV	comp=N,752μm,0.3s			AML	AML		
FOSV	comp=E,499μm,0.3s			AML	AML		
FOSV	comp=N,752μm,0.3s			AML	AML		
FOSV				END			
FOSV				END			
FDMO	**Fiordimonte**	**0.32**	**185**	P	Pb	07 23 58.4	+0.1
FDMO				S	Sb	07 24 03.8	+0.5
FDMO	comp=E,806μm,0.2s			AML	AML		
FDMO	comp=N,500μm,0.2s			AML	AML		
FDMO	comp=E,806μm,0.2s			AML	AML		
FDMO	comp=N,500μm,0.2s			AML	AML		

ROM 22 07:24:24.8±0.1,**43°.339N**±0°.004×**13°.146E**±0°.007,
h24km,**ML2.1**/15,**Error ellipse: s-maj=0.4km**
s-min=0.4km az=250.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EL6	**Elcito**	**0.03**	**253**	*e*P	Pb	07 24 29.1	0.0
EL6				S	Sb	07 24 32.3	+0.3
EL6	comp=E,1960μm,0.4s			AML	AML		
EL6	comp=N,1810μm,0.3s			AML	AML		
CING	**Cingoli**	**0.05**	**45**	*e*P	Pb	07 24 29.2	+0.1
CING				S	Sb	07 24 32.4	+0.4
CING	comp=E,2320μm,0.2s			AML	AML		
CING	comp=N,1545μm,0.2s			AML	AML		
CING	comp=E,2320μm,0.2s			AML	AML		
CING	comp=N,1545μm,0.2s			AML	AML		
CING	comp=E,2320μm,0.2s			AML	AML		
CING	comp=N,1545μm,0.2s			AML	AML		
GAG1	**Gagliole**	**0.12**	**210**	*e*P	Pb	07 24 29.5	0.0
GAG1				S	Sb	07 24 33.0	+0.3
SNTG	**Esanatoglia**	**0.17**	**241**	*e*P	Pb	07 24 29.9	-0.2
SNTG				S	Sb	07 24 33.7	+0.1
SNTG	comp=E,414μm,0.2s			AML	AML		
SNTG	comp=N,808μm,0.2s			AML	AML		
SNTG	comp=E,414μm,0.2s			AML	AML		
SNTG	comp=N,808μm,0.2s			AML	AML		
SNTG	comp=E,414μm,0.2s			AML	AML		
SNTG	comp=N,808μm,0.2s			AML	AML		
SNTG	comp=E,414μm,0.2s			AML	AML		
SNTG	comp=N,808μm,0.2s			AML	AML		
ARVD	**Arcevia**	**0.22**	**317**	P	Pb	07 24 30.6	0.0
ARVD				S	Sb	07 24 35.0	+0.4
ARVD	comp=E,199μm,1.5s			AML	AML		
ARVD	comp=N,248μm,0.6s			AML	AML		
ARVD	comp=E,199μm,1.5s			AML	AML		
ARVD	comp=N,248μm,0.6s			AML	AML		
ARVD	comp=N,248μm,0.6s			AML	AML		
ARVD	comp=E,199μm,1.5s			AML	AML		
ARVD	comp=N,248μm,0.6s			AML	AML		
ARVD	comp=E,199μm,1.5s			AML	AML		
CSP1	**Cessapalombo**	**0.25**	**170**	*e*P	Pb	07 24 31.2	0.0
CSP1				S	Sb	07 24 36.1	+0.6
FOSV	**Fossato di Vic**	**0.28**	**261**	*e*P	Pb	07 24 31.4	-0.2
FOSV				S	Sb	07 24 36.4	+0.2
FOSV	comp=E,498μm,0.3s			AML	AML		
FOSV	comp=N,752μm,0.3s			AML	AML		
FOSV	comp=E,499μm,0.3s			AML	AML		
FOSV	comp=N,752μm,0.3s			AML	AML		
FOSV	comp=E,499μm,0.3s			AML	AML		
FOSV	comp=N,752μm,0.3s			AML	AML		
FDMO	**Fiordimonte**	**0.31**	**188**	*e*P	Pb	07 24 31.8	0.0
FDMO				S	Sb	07 24 37.2	+0.6
FDMO	comp=E,806μm,0.2s			AML	AML		
FDMO	comp=N,500μm,0.2s			AML	AML		
FDMO	comp=E,806μm,0.2s			AML	AML		
FDMO	comp=N,500μm,0.2s			AML	AML		
FDMO	comp=E,806μm,0.2s			AML	AML		
FDMO	comp=N,500μm,0.2s			AML	AML		
FDMO	comp=E,806μm,0.2s			AML	AML		
FDMO	comp=N,500μm,0.2s			AML	AML		
CESI	**CESI - Serrava**	**0.38**	**208**	*e*P	Pb	07 24 32.8	-0.2
CESI				S	Sb	07 24 39.2	+0.6
CESI	comp=E,125μm,0.3s			AML	AML		
CESI	comp=N,326μm,0.4s			AML	AML		
CESI	comp=N,326μm,0.4s			AML	AML		
CESI	comp=E,125μm,0.3s			AML	AML		
CESI	comp=N,326μm,0.4s			AML	AML		
CESI	comp=E,125μm,0.3s			AML	AML		
ATCC	**AVT- Casa Cast**	**0.40**	**248**	*e*P	Pb	07 24 33.5	+0.2
ATCC				S	Sb	07 24 39.8	+0.6
ATCC	comp=E,497μm,0.3s			AML	AML		
ATCC	comp=N,406μm,0.6s			AML	AML		
ATCC	comp=E,497μm,0.3s			AML	AML		
ATCC	comp=N,406μm,0.6s			AML	AML		
ATCC	comp=E,497μm,0.3s			AML	AML		
ATCC	comp=N,406μm,0.6s			AML	AML		
MPAG	**Monte Paganucc**	**0.40**	**316**	P	Pb	07 24 33.6	+0.1
MPAG				S	Sb	07 24 40.4	+1.0
ATFO	**Monte Foce - G**	**0.42**	**274**	*e*P	Pb	07 24 33.2	-0.5
ATFO				S	Sb	07 24 40.5	+0.7
ATFO	comp=E,200μm,0.2s			AML	AML		
ATFO	comp=N,158μm,0.3s			AML	AML		
ATFO	comp=E,200μm,0.2s			AML	AML		
ATFO	comp=N,158μm,0.3s			AML	AML		
ATFO	comp=E,200μm,0.2s			AML	AML		
ATFO	comp=N,158μm,0.3s			AML	AML		
MURB	**Monte Urbino**	**0.46**	**261**	*e*P	Pb	07 24 34.5	+0.1
MURB				S	Sb	07 24 41.8	+1.0
MURB	comp=E,1054μm,0.3s			AML	AML		
MURB	comp=N,821μm,0.2s			AML	AML		
MURB	comp=E,1195μm,0.3s			AML	AML		
MURB	comp=N,838μm,1.0s			AML	AML		
MURB	comp=E,1054μm,0.3s			AML	AML		
MURB	comp=N,838μm,1.0s			AML	AML		
MURB	comp=N,821μm,0.2s			AML	AML		
MURB	comp=E,1195μm,0.3s			AML	AML		
MURB	comp=E,1054μm,0.3s			AML	AML		
MURB	comp=N,838μm,1.0s			AML	AML		
MURB	comp=N,821μm,0.2s			AML	AML		
MURB	comp=E,1195μm,0.3s			AML	AML		
ASSB	**Assisi San Ben**	**0.46**	**230**	*e*P	Pb	07 24 34.1	-0.3
ASSB				S	Sb	07 24 41.7	+0.7
ASSB	comp=E,313μm,0.5s			AML	AML		
ASSB	comp=N,383μm,1.2s			AML	AML		
ASSB	comp=N,383μm,1.2s			AML	AML		
ASSB	comp=E,313μm,0.5s			AML	AML		
ASSB	comp=N,383μm,1.2s			AML	AML		
ASSB	comp=E,313μm,0.5s			AML	AML		
PIEI	**Pieia**	**0.49**	**294**	P	Pb	07 24 34.7	-0.1
PIEI				S	Sb	07 24 42.2	+0.6
PIEI	comp=E,106μm,0.2s			AML	AML		
PIEI	comp=N,64μm,0.3s			AML	AML		
PIEI	comp=E,106μm,0.2s			AML	AML		
PIEI	comp=N,64μm,0.3s			AML	AML		
PIEI	comp=E,106μm,0.2s			AML	AML		
PIEI	comp=N,64μm,0.3s			AML	AML		
NRCA	**Norcia**	**0.51**	**183**	*e*P	Pb	07 24 34.9	-0.3
NRCA				S	Sb	07 24 43.1	+0.9
NRCA	comp=E,407μm,0.1s			AML	AML		
NRCA	comp=N,272μm,0.1s			AML	AML		
NRCA	comp=E,407μm,0.1s			AML	AML		
NRCA	comp=N,272μm,0.1s			AML	AML		
NRCA	comp=E,407μm,0.1s			AML	AML		
NRCA	comp=N,272μm,0.1s			AML	AML		
ATVO	**AVT- Monte Val**	**0.54**	**275**	*e*P	Pb	07 24 35.6	-0.2
ATVO				S	Sb	07 24 43.9	+0.8
PE3	**Peglio** comp=N,136μm,0.3s	**0.59**	**307**	AML	AML		
PE3	comp=E,112μm,0.4s			AML	AML		
PE3	comp=N,136μm,0.3s			AML	AML		
PE3	comp=E,112μm,0.4s			AML	AML		
PE3	comp=N,136μm,0.3s			AML	AML		
PE3	comp=E,112μm,0.4s			AML	AML		
BADI	**Badiali**	**0.68**	**285**	*e*P	Pb	07 24 38.3	+0.2
MOMA	**Monte Martano**	**0.68**	**218**	*e*P	Pb	07 24 37.7	-0.5
MOMA				S	Sn	07 24 48.2	-0.8
MOMA	comp=E,129μm,0.2s			AML	AML		
MOMA	comp=N,108μm,0.3s			AML	AML		
MOMA	comp=E,129μm,0.2s			AML	AML		
MOMA	comp=N,108μm,0.3s			AML	AML		
MOMA	comp=E,129μm,0.2s			AML	AML		
MOMA	comp=N,108μm,0.3s			AML	AML		
SMA1	**SAN MARTINO**	**0.72**	**169**	*e*P	Pb	07 24 38.6	-0.2
SMA1				S	Sn	07 24 49.9	-0.1
MGAB	**Montegabbione**	**0.87**	**241**	P	Pn	07 24 42.0	+0.4
MGAB				S	Sn	07 24 54.1	+0.6
MGAB	comp=E,85μm,1.1s			AML	AML		
MGAB	comp=N,83μm,0.4s			AML	AML		
MGAB	comp=E,85μm,1.1s			AML	AML		
MGAB	comp=N,83μm,0.4s			AML	AML		
MGAB	comp=E,85μm,1.1s			AML	AML		
MGAB	comp=N,83μm,0.4s			AML	AML		

ROM 22 07:25:16.8±0.2**, 43°.338N**±0°.004×**13°.133E**±0°.005**,**
h24^{km}±1^{km}**, ML1.4**/4**, Error ellipse: s-maj=0.4km**
s-min=0.4km az=102.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CING	**Cingoli**	**0.06**	**51**	P	Pb	07 25 21.1	0.0
CING				S	Sb	07 25 24.3	+0.4
CING				AML	AML		
	comp=E,389µm,0.4s						
CING				AML	AML		
	comp=N,363µm,0.6s						
CING				AML	AML		
	comp=N,363µm,0.6s						
CING				AML	AML		
	comp=E,389µm,0.4s						
CING				AML	AML		
	comp=N,363µm,0.6s						
CING				AML	AML		
	comp=E,389µm,0.4s						
SNTG	**Esanatoglia**	**0.16**	**239**	P	Pb	07 25 21.8	-0.1
SNTG				S	Sb	07 25 25.5	+0.2
SNTG				AML	AML		
	comp=E,72µm,0.4s						
SNTG				AML	AML		
	comp=N,144µm,0.2s						
SNTG				AML	AML		
	comp=E,72µm,0.4s						
SNTG				AML	AML		
	comp=N,144µm,0.2s						
SNTG				AML	AML		
	comp=E,72µm,0.4s						
SNTG				AML	AML		
	comp=N,144µm,0.2s						
ARVD	**Arcevia**	**0.21**	**319**	*e*P	Pb	07 25 22.5	0.0
ARVD				S	Sb	07 25 26.9	+0.6
ARVD				AML	AML		
	comp=E,62µm,0.4s						
ARVD				AML	AML		
	comp=N,69µm,0.8s						
ARVD				AML	AML		
	comp=N,69µm,0.8s						
ARVD				AML	AML		
	comp=E,62µm,0.4s						
ARVD				AML	AML		
	comp=N,69µm,0.8s						
ARVD				AML	AML		
	comp=E,62µm,0.4s						
CSP1	**Cessapalombo**	**0.25**	**168**	P	Pb	07 25 23.2	+0.1
CSP1				S	Sb	07 25 27.9	+0.6
FDMO	**Fiordimonte**	**0.30**	**186**	P	Pb	07 25 23.9	+0.1
FDMO				S	Sb	07 25 29.0	+0.5
FDMO				AML	AML		
	comp=E,116µm,0.2s						
FDMO				AML	AML		
	comp=N,80µm,1.0s						
FDMO				AML	AML		
	comp=E,116µm,0.2s						
FDMO				AML	AML		
	comp=N,80µm,1.0s						
FDMO				AML	AML		
	comp=E,116µm,0.2s						
FDMO				AML	AML		
	comp=N,80µm,1.0s						
ASSB	**Assisi San Ben**	**0.46**	**230**	*e*P	Pb	07 25 26.2	0.0
ASSB				S	Sb	07 25 33.5	+0.9

ROM 22 07:26:32.6±0.1**, 43°.332N**±0°.004×**13°.175E**±0°.009**,**
h24^{km}**, ML2.1**/10**, Error ellipse: s-maj=0.6km**
s-min=0.5km az=86.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CING	**Cingoli**	**0.05**	**19**	P	Pb	07 26 36.6	-0.4
CING				S	Sb	07 26 40.5	+0.6
EL6	**Elcito**	**0.05**	**267**	P	Pb	07 26 37.1	+0.1
EL6				S	Sb	07 26 40.4	+0.3
GAG1	**Gagliole**	**0.12**	**220**	P	Pb	07 26 37.5	0.0
GAG1				S	Sb	07 26 41.0	+0.3
MDAR	**Monte D'Aria**	**0.14**	**190**	P	Pb	07 26 37.8	+0.1
MDAR				S	Sb	07 26 41.6	+0.5
CRM1	**Catelraimondo**	**0.15**	**215**	P	Pb	07 26 37.8	+0.1
CRM1				S	Sb	07 26 41.6	+0.5
ARVD	**Arcevia**	**0.24**	**314**	P	Pb	07 26 38.8	+0.1
ARVD				S	Sb	07 26 43.1	+0.2
ARVD				AML	AML		
	comp=E,246µm,1.6s						
ARVD				AML	AML		
	comp=N,355µm,0.7s						
ARVD				AML	AML		
	comp=E,247µm,1.6s						
ARVD				AML	AML		
	comp=N,354µm,0.7s						
ARVD				AML	AML		
	comp=N,355µm,0.7s						
ARVD				AML	AML		
	comp=E,247µm,1.6s						
ARVD				AML	AML		
	comp=N,355µm,0.7s						
ARVD				AML	AML		
	comp=E,247µm,1.6s						
FDMO	**Fiordimonte**	**0.30**	**192**	P	Pb	07 26 40.0	+0.3
FDMO				S	Sb	07 26 45.3	+0.8
FDMO				AML	AML		
	comp=E,1065µm,0.2s						
FDMO				AML	AML		
	comp=N,620µm,0.2s						
FDMO				AML	AML		
	comp=E,1065µm,0.2s						
FDMO				AML	AML		
	comp=N,620µm,0.2s						
FDMO				AML	AML		
	comp=E,1065µm,0.2s						
FDMO				AML	AML		
	comp=N,620µm,0.2s						
FDMO				AML	AML		
	comp=E,1065µm,0.2s						
FDMO				AML	AML		
	comp=N,620µm,0.2s						
CESI	**CESI - Serrava**	**0.38**	**211**	*e*P	Pb	07 26 40.9	0.0
CESI				S	Sb	07 26 47.3	+0.7
CESI				AML	AML		
	comp=E,170µm,0.2s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=E,170µm,0.2s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=E,170µm,0.2s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=E,170µm,0.2s						
ATCC	**AVT- Casa Cast**	**0.42**	**250**	*e*P	Pb	07 26 41.6	+0.1
ATCC				S	Sb	07 26 47.9	+0.4
ATCC				AML	AML		
	comp=E,546µm,0.3s						
ATCC				AML	AML		
	comp=N,452µm,0.6s						
ATCC				AML	AML		
	comp=E,546µm,0.3s						
ATCC				AML	AML		
	comp=N,452µm,0.6s						
ATCC				AML	AML		
	comp=E,546µm,0.3s						
ATCC				AML	AML		
	comp=N,452µm,0.6s						
ATCC				AML	AML		
	comp=E,546µm,0.3s						
ATCC				AML	AML		
	comp=N,452µm,0.6s						
MPAG	**Monte Paganucc**	**0.42**	**315**	*e*P	Pb	07 26 41.6	0.0
MPAG				S	Sb	07 26 48.5	+0.7
MPAG				AML	AML		
	comp=E,114µm,1.2s						
MPAG				AML	AML		
	comp=N,87µm,0.4s						
MPAG				AML	AML		
	comp=E,113µm,1.2s						
MPAG				AML	AML		
	comp=N,87µm,0.4s						
MPAG				AML	AML		
	comp=N,87µm,0.4s						
MPAG				AML	AML		
	comp=E,113µm,1.2s						
MPAG				AML	AML		
	comp=N,87µm,0.4s						
MPAG				AML	AML		
	comp=E,113µm,1.2s						
FSSB	**Fossombrone**	**0.46**	**321**	*e*P	Pb	07 26 42.4	+0.2
FSSB				S	Sn	07 26 50.2	-1.1
FSSB				AML	AML		
	comp=E,267µm,1.3s						
FSSB				AML	AML		
	comp=N,372µm,0.4s						
FSSB				AML	AML		
	comp=E,268µm,1.3s						
FSSB				AML	AML		
	comp=N,372µm,0.4s						
FSSB				AML	AML		
	comp=E,268µm,1.3s						
FSSB				AML	AML		
	comp=N,372µm,0.4s						
FSSB				AML	AML		
	comp=E,268µm,1.3s						
FSSB				AML	AML		
	comp=N,372µm,0.4s						
ASSB	**Assisi San Ben**	**0.48**	**233**	*e*P	Pb	07 26 42.4	-0.1
ASSB				S	Sb	07 26 49.8	+0.7
ASSB				AML	AML		
	comp=E,318µm,0.5s						
ASSB				AML	AML		
	comp=N,456µm,1.2s						
ASSB				AML	AML		
	comp=N,456µm,1.2s						
ASSB				AML	AML		
	comp=E,318µm,0.5s						
ASSB				AML	AML		
	comp=N,456µm,1.2s						
ASSB				AML	AML		
	comp=E,318µm,0.5s						
PIEI	**Pieia**	**0.51**	**294**	P	Pb	07 26 43.0	0.0
PIEI				S	Sb	07 26 50.3	+0.2
PIEI				AML	AML		
	comp=E,118µm,0.7s						
PIEI				AML	AML		
	comp=N,82µm,0.3s						
PIEI				AML	AML		
	comp=E,118µm,0.7s						
PIEI				AML	AML		
	comp=N,82µm,0.3s						
PIEI				AML	AML		
	comp=N,82µm,0.3s						
PIEI				AML	AML		
	comp=E,118µm,0.7s						
PIEI				AML	AML		
	comp=N,82µm,0.3s						
PIEI				AML	AML		
	comp=E,118µm,0.7s						
ATVO	**AVT- Monte Val**	**0.56**	**275**	*e*P	Pb	07 26 43.8	-0.2
ATVO				S	Sb	07 26 52.1	+0.5
ATVO				AML	AML		
	comp=E,322µm,0.4s						
ATVO				AML	AML		
	comp=N,150µm,0.2s						
ATVO				AML	AML		
	comp=E,322µm,0.4s						
ATVO				AML	AML		
	comp=N,150µm,0.2s						
ATVO				AML	AML		
	comp=E,322µm,0.4s						
ATVO				AML	AML		
	comp=N,150µm,0.2s						
ATVO				AML	AML		
	comp=E,322µm,0.4s						
ATVO				AML	AML		
	comp=N,150µm,0.2s						
LAV9	**Lanuvio**	**1.69**	**192**	AML	AML		
	comp=N,761µm,0.1s						
LAV9				AML	AML		
	comp=E,704µm,0.7s						
LAV9				AML	AML		
	comp=E,704µm,0.7s						
LAV9				AML	AML		
	comp=N,761µm,0.1s						
LAV9				AML	AML		
	comp=E,704µm,0.7s						
LAV9				AML	AML		
	comp=N,761µm,0.1s						

ROM 22 07:26:48.4±0.1**, 43°.342N**±0°.004×**13°.132E**±0°.005**,**
h25^{km}**, ML2.2**/9**, Error ellipse: s-maj=0.4km**
s-min=0.3km az=272.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EL6	**Elcito**	**0.03**	**240**	*e*P	Pb	07 26 52.8	0.0
EL6				S	Sb	07 26 56.1	+0.4
CING	**Cingoli**	**0.06**	**54**	P	Pb	07 26 53.0	+0.1
CING				S	Sb	07 26 56.2	+0.3
CING				AML	AML		
	comp=E,2870µm,0.2s						
CING				AML	AML		
	comp=N,1985µm,0.6s						
CING				AML	AML		
	comp=E,2870µm,0.2s						
CING				AML	AML		
	comp=N,1985µm,0.6s						
CING				AML	AML		
	comp=N,1985µm,0.6s						
CING				AML	AML		
	comp=E,2870µm,0.2s						
GAG1	**Gagliole**	**0.11**	**204**	*e*P	Pb	07 26 53.2	0.0
GAG1				S	Sb	07 26 56.7	+0.3
CRM1	**Catelraimondo**	**0.14**	**202**	*i* P	Pb	07 26 53.5	+0.1
CRM1				S	Sb	07 26 57.4	+0.6
CRM1				AML	AML		
	comp=E,6450µm,0.4s						
CRM1				AML	AML		
	comp=N,5170µm,0.4s						
CRM1				AML	AML		
	comp=N,5170µm,0.4s						
CRM1				AML	AML		
	comp=E,6450µm,0.4s						
CRM1				AML	AML		
	comp=N,5170µm,0.4s						
CRM1				AML	AML		
	comp=E,6450µm,0.4s						
SNTG	**Esanatoglia**	**0.17**	**238**	*e*P	Pb	07 26 53.6	-0.1
SNTG				S	Sb	07 26 57.5	+0.2
SNTG				AML	AML		
	comp=E,490µm,0.2s						
SNTG				AML	AML		
	comp=N,1000µm,0.2s						
SNTG				AML	AML		
	comp=E,490µm,0.2s						
SNTG				AML	AML		
	comp=N,1000µm,0.2s						
SNTG				AML	AML		
	comp=E,490µm,0.2s						
SNTG				AML	AML		
	comp=N,1000µm,0.2s						
SNTG				AML	AML		
	comp=N,1000µm,0.2s						
SNTG				AML	AML		
	comp=E,490µm,0.2s						
ARVD	**Arcevia**	**0.21**	**318**	*e*P	Pb	07 26 54.3	+0.1
ARVD				S	Sb	07 26 58.7	+0.6
ARVD				AML	AML		
	comp=E,246µm,1.6s						
ARVD				AML	AML		
	comp=N,355µm,0.7s						
ARVD				AML	AML		
	comp=E,247µm,1.6s						
ARVD				AML	AML		
	comp=N,354µm,0.7s						
ARVD				AML	AML		
	comp=N,355µm,0.7s						
ARVD				AML	AML		
	comp=E,247µm,1.6s						
ARVD				AML	AML		
	comp=N,355µm,0.7s						
ARVD				AML	AML		
	comp=E,247µm,1.6s						
CSP1	**Cessapalombo**	**0.26**	**168**	*e*P	Pb	07 26 55.0	+0.1
CSP1				S	Sb	07 26 59.8	+0.5
FOSV	**Fossato di Vic**	**0.28**	**260**	*e*P	Pb	07 26 55.1	0.0
FOSV				S	Sb	07 27 00.1	+0.5
FOSV				AML	AML		
	comp=E,686µm,0.3s						
FOSV				AML	AML		
	comp=N,864µm,0.3s						
FOSV				AML	AML		
	comp=E,686µm,0.3s						
FOSV				AML	AML		
	comp=N,864µm,0.3s						
FOSV				AML	AML		
	comp=E,686µm,0.3s						
FOSV				AML	AML		
	comp=N,864µm,0.3s						
FOSV				AML	AML		
	comp=E,686µm,0.3s						
FOSV				AML	AML		
	comp=N,864µm,0.3s						
FDMO	**Fiordimonte**	**0.31**	**186**	*e*P	Pb	07 26 55.5	0.0
FDMO				S	Sb	07 27 01.0	+0.6
FDMO				AML	AML		
	comp=E,1065µm,0.2s						
FDMO				AML	AML		
	comp=N,620µm,0.2s						
FDMO				AML	AML		
	comp=E,1065µm,0.2s						
FDMO				AML	AML		
	comp=N,620µm,0.2s						
FDMO				AML	AML		
	comp=E,1065µm,0.2s						
FDMO				AML	AML		
	comp=N,620µm,0.2s						
CESI	**CESI - Serrava**	**0.38**	**206**	*i* P	Pb	07 26 56.5	-0.1
CESI				S	Sb	07 27 03.0	+0.7
CESI				AML	AML		
	comp=E,170µm,0.2s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=E,170µm,0.2s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=E,170µm,0.2s						
CESI				AML	AML		
	comp=N,434µm,0.4s						
CESI				AML	AML		
	comp=E,170µm,0.2s						
ASSB	**Assisi San Ben**	**0.46**	**229**	*e*P	Pb	07 26 57.9	0.0
ASSB				S	Sb	07 27 05.5	+1.0
ASSB				AML	AML		
	comp=E,318µm,0.5s						
ASSB				AML	AML		
	comp=N,456µm,1.2s						
ASSB				AML	AML		
	comp=N,456µm,1.2s						
ASSB				AML	AML		
	comp=E,318µm,0.5s						
ASSB				AML	AML		
	comp=N,456µm,1.2s						
ASSB				AML	AML		
	comp=E,318µm,0.5s						
MGAB	**Montegabbione**	**0.86**	**240**	AML	AML		
	comp=N,112µm,1.2s						
MGAB				AML	AML		
	comp=E,103µm,0.4s						
MGAB				AML	AML		
	comp=N,112µm,1.2s						
MGAB				AML	AML		
	comp=E,103µm,0.4s						
MGAB				AML	AML		
	comp=N,112µm,1.2s						
MGAB				AML	AML		
	comp=E,103µm,0.4s						

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*ISCJB **22** 07:28:06.7±0.3, 34°.46N±0°.04×104°.12E±0°.05, h10^{km},*
mb4.2/25, Error ellipse: s-maj=7.4km s-min=4.0km
az=42.3
*IDC **22** 07:28:07.2±0.7, 34°.47N×104°.10E, h0^{km}, mb3.9/14,*
mb1 4.0/16, mb1mx3.8/40, mbtmp3.8/16, ML3.7/2, Error
ellipse: s-maj=22.3km s-min=14.9km az=45.0
*BJI **22** 07:28:08.4±0.0, 34°.54N×104°.20E, h6^{km}, mb4.3/6,*
ML3.9/17, Ms3.9/5, Ms7 3.9/4
*NEIC **22** 07:28:08.6±1.6, 34°.50N×104°.15E, h10^{km}±1^{km}, mb4.4/16,*
Error ellipse: s-maj=11.3km s-min=6.1km az=139.0
ISC 22 07:28:08.6±0.5**, 34°.54N**±0°.05×**104°.16E**±0°.04**, h10**^{km}**, n49,**
σ**1**^{s}**36**/54**, mb4.2**/25**, 1C, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**1.57**	**351**	Pg	**Pb**	**07 28 37.4**	**-0.4**
LZH				Sg	**Sb**	**07 28 57.6**	**-0.1**
LZH				smax	smax		
	comp=N,4µm,0.9s						
LZH				smax	smax		
	comp=E,6µm,0.9s						
XAN	**Xi'an**	**3.97**	**96**	*e*Pn	**Pn**	**07 29 09.5**	**-0.1**
XAN				*e*Sn	**Sn**	**07 29 57.5**	**+1.2**
XAN	**Xi'an**	**3.97**	**96**	Pn	**Pn**	**07 29 09.5**	**-0.1**
XAN				Pg	**Pb**	**07 29 19.5**	**+0.8**
XAN				Sn	**Sn**	**07 29 58.6**	**+2.3**
XAN				Sg	**Sg**	**07 30 10.9**	**-5.3**
XAN				smax	smax		
	comp=N,250nm,0.7s						
XAN				smax	smax		
	comp=E,260nm,0.7s						
ENH	**Enshi**	**6.20**	**132**	*e*Pn	**Pn**	**07 29 40.1**	**-0.1**
ENH				*e*Sn	**Sn**	**07 30 50.3**	**-0.8**
BTO	**Baotou**	**7.63**	**36**	*e*P	Pb	07 30 11.9	-9.2
BTO				S	**Sb**	**07 31 49.4**	**-2.8**
BTO				LR	LR		
	comp=N,125µm,1.1s						
BTO				LR	LR		
	comp=E,106µm,0.9s						
GYA	**Guiyang**	**8.34**	**164**	⇑*i*P	**Pn**	**07 30 10.8**	**+1.1**
GYA				S	**Sn**	**07 31 42.9**	**-1.1**
GYA				pmax	pmax		
	comp=E,10.0nm,1.0s						
GYA				LR	LR		
	comp=E,2µm,20.8s						
HHC	**Hu-ho-hao-te**	**8.61**	**41**	P	Pn	07 30 19.9	+6.6
HHC				pmax	pmax		
	comp=E,24nm,0.8s						
WHN	**Wuhan**	**9.48**	**112**	*e*P	**Pn**	**07 30 28.1**	**+3.0**
WHN				S	**Sn**	**07 32 14.0**	**+2.3**
WHN				LR	LR		
	comp=E,810nm,11.0s						
LSA	**Lhasa**	**12.04**	**250**	*e*Pn	**Pn**	**07 30 58.0**	**-2.6**
SONA0	**Songino Array**	**13.39**	**7**	*e*Pn	**Pn**	**07 31 18.4**	**-0.3**
SONM	**Songino Array**	**13.39**	**7**	Pn	**Pn**	**07 31 18.4**	**-0.3**
	comp=E,0.4nm,0.3s,baz=48,slow=2.2,SNR=4.5						
WMQ	**Urumqi**	**15.75**	**311**	*e*P	**P**	**07 31 53.1**	**-1.4**
KS15	**Wonju Array Si**	**19.40**	**75**	*e*P	**P**	**07 32 33.8**	**-1.0**
	comp=E,6.4nm,1.1s						
KSRS	**Korea Array**	**19.43**	**75**	P	**Pn**	**07 32 37.5**	**+1.2**
	comp=E,0.2nm,0.3s,baz=282,slow=7.3,SNR=3.7						
MK32	**Makanchi Array**	**20.54**	**313**	*e*P	Pn	07 32 48.7	-0.6
MKAR	**Makanchi Array**	**20.54**	**313**	P	Pn	07 32 48.7	-0.6
	comp=E,1.2nm,0.6s,baz=111,slow=12,SNR=6.7						
USRK	**Ussuriysk Ar.**	**23.48**	**57**	P	**P**	**07 33 21.1**	**+2.8**
	comp=E,1.0nm,0.7s,baz=246,slow=11,SNR=3.4						
ZALV	**Zalesovo Beam**	**23.70**	**331**	P	**P**	**07 33 21.8**	**+1.4**
	comp=E,1.0nm,0.5s,baz=107,slow=9.9,SNR=3.7						
ZAA1	**Zalesovo Array**	**23.70**	**331**	*e*P	**P**	**07 33 21.8**	**+1.4**
KURK	**Kurchatov**	**24.61**	**319**	*e*P	**P**	**07 33 29.9**	**+1.0**
	comp=E,5.8nm,1.3s						
KURBB	**Kurchatov Arra**	**24.61**	**319**	P	**P**	**07 33 29.7**	**+0.8**
	comp=E,2.4nm,0.8s,baz=128,slow=9.3,SNR=9.9						
KLR	**Kul'dur**	**25.07**	**46**	P	**P**	**07 33 33.1**	**+0.1**
	comp=E,1.2nm,0.7s,baz=278,slow=9.8,SNR=3.8						
ABKAR	**Akbulak array**	**35.51**	**308**	*e*P	**P**	**07 35 06.5**	**+1.1**
	comp=E,1.1nm,0.7s						
ARU	**Arti**	**37.80**	**320**	*e*P	**P**	**07 35 24.8**	**0.0**
	comp=E,5.0nm,0.6s						
AKASG	**Malin Array Be**	**55.11**	**312**	P	**P**	**07 37 40.3**	**-0.5**
	comp=E,1.1nm,0.6s,baz=68,slow=6.8,SNR=4.9						
AKBB	**Malin Array Si**	**55.11**	**312**	*e*P	**P**	**07 37 40.5**	**-0.2**
	comp=E,2.7nm,0.8s						
BR101	**Keskin Array S**	**55.14**	**298**	*e*P	**P**	**07 37 42.0**	**+0.7**
BR131	**Keskin Array S**	**55.14**	**298**	*e*P	**P**	**07 37 41.6**	**+0.2**
	comp=E,1.9nm,0.8s						
BRTR	**Keskin Array B**	**55.14**	**298**	P	**P**	**07 37 42.0**	**+0.7**
	comp=E,0.9nm,0.6s,baz=99,slow=7.6,SNR=5.3						
ANTO	**Ankara**	**55.71**	**298**	*e*P	**P**	**07 37 45.2**	**-0.2**

	comp=E,22nm,1.4s						
WR1	Warramunga Arr	61.31	147	*e*P	P	07 38 24.1	-0.3
WRA	Warramunga Arr	61.31	147	P	P	07 38 24.1	-0.3
	comp=E,2.4nm,0.6s,baz=328,slow=7.3,SNR=9.7						
WB2	Warramunga Arr	61.32	147	*e*P	P	07 38 24.6	+0.1
	comp=E,12nm,1.4s						
NC405	NORSAR Array S	61.56	327	*e*P	P	07 38 25.0	-0.7
	comp=E,16nm,1.4s						
NB201	NORSAR Array S	61.77	327	*e*P	P	07 38 26.7	-0.4
	comp=E,36nm,1.4s						
NB2	NORSAR Subarra	61.81	327	P	P	07 38 27.0	-0.4
	comp=Z,0.7nm,0.5s,baz=69,slow=6.9						
NB200	NORSAR Array S	61.81	327	*e*P	P	07 38 27.2	-0.2
NOA	NORSAR Array B	61.81	327	P	P	07 38 27.2	-0.2
	comp=Z,1.1nm,0.6s,baz=70,slow=6.7,SNR=5.4						
NC204	NORSAR Array S	61.93	327	*e*P	P	07 38 27.1	-1.1
	comp=Z,8.2nm,0.8s						
AS31	Alice Springs	64.41	150	*e*P	P	07 38 45.5	+0.5
	comp=Z,1.2nm,1.3s						
ASAR	Alice Springs	64.41	150	P	P	07 38 45.2	+0.2
	comp=Z,0.7nm,0.4s,baz=331,slow=6.7,SNR=16						
GERES	GERESS Array B	65.21	313	P	P	07 38 50.7	+0.5
	comp=Z,0.5nm,0.2s,baz=77,slow=5.3,SNR=3.3						
ILAR	Eielson Array	66.73	26	P	P	07 38 58.7	-0.8
	comp=Z,0.5nm,0.7s,baz=299,slow=5.8,SNR=3.0						
ILB	Eielson Array	66.73	26	*e*P	P	07 38 59.8	+0.2
	comp=Z,3.0nm,1.4s						
SUMG	Summit	70.09	349	*e*P	P	07 39 21.9	+1.0
	comp=Z,4.4nm,1.4s						
BNI	Bardonecchia	71.22	312	*e*P	P	07 39 28.9	+0.9
	comp=Z,2.1nm,0.8s						
STKA	Stephens Creek	74.87	148	P	P	07 39 49.4	0.0
	comp=Z,0.8nm,0.3s,baz=324,slow=12,SNR=3.4						
YKA	Yellowknife Ar	78.40	17	P	P	07 40 09.8	+0.7
	comp=Z,0.8nm,0.6s,baz=335,slow=5.8,SNR=3.7						
YKB5	Yellowknife Ar	78.40	17	*e*P	P	07 40 09.8	+0.7

WEL 22 07:29:25.1, 42°S±1°×17°4E±°, h6^{km}±2^{km}, M3.2/22, ML3.5/23, MLv3.2/22, Error ellipse: s-maj=0.0km s-min=0.0km az=145.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	196	P	Pg	07 29 28.5	+0.8
BSWZ	Blackbirch Sta	0.30	254	P	Pg	07 29 31.5	+0.6
TUWZ	Tuamarina	0.31	311	P	Pb	07 29 32.2	-0.8
TCW	Tory Channel	0.42	2	P	Pb	07 29 34.3	-0.7
BHW	Baring Head	0.51	64	P	Pb	07 29 36.4	-0.2
WEL	Wellington	0.52	48	P	Pb	07 29 36.4	-0.2
PLWZ	Palliser	0.75	85	P	Pb	07 29 41.0	+0.4
MSWZ	Moikau Station	0.78	74	P	Pb	07 29 41.2	+0.2
NNZ	Nelson	0.78	302	P	Pg	07 29 40.4	+0.3
CAW	Cannon Point	0.81	49	P	Pb	07 29 41.5	0.0
DUWZ	D'Urville Isla	0.87	343	P	Pb	07 29 42.6	0.0
PAWZ	Paruwai Farm	0.91	74	P	Pb	07 29 43.9	+0.5
KHZ	Kahutara	0.95	214	P	Pb	07 29 44.0	+0.1
THZ	Tophouse	1.02	262	P	Pg	07 29 44.9	+0.1
MTW	Mount Morrison	1.05	63	P	Pb	07 29 45.8	+0.1
OGWZ	Otaki Gorge	1.07	40	P	Pb	07 29 46.0	0.0
TRWZ	Traveller	1.10	78	P	Pg	07 29 46.1	-0.1
HOWZ	Holdsworth Sta	1.20	53	P	Pb	07 29 48.2	0.0
TMWZ	Te Maipa	1.34	67	P	Pn	07 29 49.7	-0.7
MRZ	Mangatainoka R	1.39	46	P	Pn	07 29 51.0	-0.1
TIWZ	Tintock	1.50	56	P	Pg	07 29 54.9	+1.0
QRZ	Quartz Range	1.53	301	P	Pb	07 29 53.9	-0.1
GVZ	Greta Valley S	1.61	214	P	Pn	07 29 53.2	-0.9
CPWZ	Castlepoint	1.64	64	P	Pg	07 30 00.4	+3.9
PRWZ	Pori Road	1.69	51	P	Pn	07 29 55.2	+0.1
POWZ	Post Office Ro	1.69	43	P	Pb	07 29 56.0	-0.6
BFZ	Birch Farm	1.78	58	P	Pb	07 29 58.0	-0.1
DSZ	Denniston Nort	1.84	266	P	Pb	07 29 58.6	-0.6
LTZ	Lake Taylor	1.87	232	P	Pn	07 29 57.0	-0.7
AMCZ	Amberley	1.95	217	P	Pg	07 30 05.6	+3.1
WAZ	Wanganui	1.96	17	P	Pg	07 30 02.4	-0.3
DVHZ	Dannevirke	1.97	48	P	Pg	07 30 02.5	-0.3
TSZ	Takapari Road	2.04	40	P	Pn	07 30 00.7	+0.7
OKCZ	Okains Bay	2.27	203	P	Pn	07 30 01.3	-1.8
PNHZ	Pukenui	2.27	41	P	Pg	07 30 08.3	-0.3
PREZ	Palmer Road	2.29	358	P	Pg	07 30 10.1	+1.1
KHEZ	Kahui Hut	2.35	355	P	Pg	07 30 10.5	+0.4
OXZ	Oxford	2.36	223	P	Pn	07 30 02.6	-1.7
INZ	Inchbonnie	2.36	242	P	Pn	07 30 04.7	+0.4
NBEZ	Newall Road No	2.38	353	P	Pg	07 30 11.4	+0.6
MQZ	McQueen's Vall	2.38	209	P	Pn	07 30 01.9	-2.8
MTVZ	Mangateitei	2.43	23	P	Pg	07 30 10.9	-0.8
PKE	Pukeiti	2.45	355	P	Pg	07 30 12.0	0.0
PKVZ	Pokaka	2.49	20	P	Pb	07 30 11.0	+0.8
MOVZ	Moawhango	2.50	28	P	Pb	07 30 10.6	+0.1
BHHZ	Black Hill Sta	2.55	33	P	Pb	07 30 11.4	+0.2
KRHZ	Kereru	2.56	40	P	Pg	07 30 13.0	-1.1
WHVZ	Whangaehu Hut	2.56	24	P	Pb	07 30 12.5	+0.9
FWVZ	Far West T-bar	2.58	23	P	Pb	07 30 12.6	+0.8
TUVZ	Tukino	2.59	25	P	Pb	07 30 13.3	+1.2
NGZ	Ngauruhoe	2.66	23	P	Pb	07 30 14.3	+1.0
WTVZ	West Tongariro	2.71	22	P	Pb	07 30 14.9	+0.8
TWVZ	Taurewa	2.72	20	P	Pb	07 30 15.2	+1.1
KRVZ	Karewarewa	2.75	23	P	Pb	07 30 15.4	+0.7
KWHZ	Kaweka Forest	2.76	37	P	Pg	07 30 16.7	-1.2
KATZ	Kakaramea	2.88	23	P	Pb	07 30 17.9	+1.0
RITZ	Rihia Road	2.92	25	P	Pg	07 30 19.4	-1.7
WVZ	Waitaha Valley	2.98	240	P	Pb	07 30 18.3	-0.3
BKZ	Black Stump Fm	3.00	35	P	Pb	07 30 20.1	+1.1
HIZ	Hauiti	3.15	9	P	Pb	07 30 22.0	+0.4
ODZ	Otahua Downs	4.31	216	P	Pn	07 30 29.0	-2.1
HHSZ	Highcliff Hill	5.01	211	P	Pn	07 30 41.6	+0.9
CTZ	Chatham Island	7.04	110	P	Pn	07 31 09.5	+0.8

ROM 22 07:29:54.0±0.1, 43°.336N±0°.005×13°.151E±0°.007, h24^{km}, ML2.2/14, Error ellipse: s-maj=0.5km s-min=0.5km az=50.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EL6	Elcito	0.04	260	P	Pb	07 29 58.3	+0.1
EL6				S	Sb	07 30 01.5	+0.4
EL6				AML	AML		
	comp=E,4135µm,0.3s						
EL6				AML	AML		
	comp=N,3705µm,1.2s						
EL6				AML	AML		
	comp=N,3705µm,1.2s						
EL6				AML	AML		
	comp=E,4135µm,0.3s						
CING	Cingoli	0.05	39	P	Pb	07 29 58.4	+0.2
CING				S	Sb	07 30 01.5	+0.4
CING				AML	AML		
	comp=E,2645µm,0.2s						
CING				AML	AML		
	comp=N,2030µm,0.2s						
CING				AML	AML		
	comp=E,2645µm,0.2s						
CING				AML	AML		
	comp=N,2030µm,0.2s						
SNTG	Esanatoglia	0.17	242	P	Pb	07 29 59.1	-0.1
SNTG				S	Sb	07 30 02.9	+0.1
SNTG				AML	AML		
	comp=E,181µm,0.2s						
SNTG				AML	AML		
	comp=N,240µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				END			
SNTG				END			
ARVD	Arcevia	0.22	317	P	Pb	07 29 59.7	-0.1
ARVD				S	Sb	07 30 04.1	+0.3
ARVD				AML	AML		
	comp=E,66µm,1.2s						
ARVD				AML	AML		
	comp=N,60µm,0.6s						
ARVD				AML	AML		
	comp=E,490µm,0.7s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=E,490µm,0.7s						
ARVD				END			
CSP1	Cessapalombo	0.25	171	*e*P	Pb	07 30 00.3	+0.1
CSP1				S	Sb	07 30 05.3	+0.8
FOSV	Fossato di Vic	0.29	262	P	Pb	07 30 00.6	-0.2
FOSV				S	Sb	07 30 05.6	+0.2
FOSV				AML	AML		
	comp=E,175µm,0.3s						
FOSV				AML	AML		
	comp=N,206µm,0.3s						
FOSV				AML	AML		
	comp=E,402µm,0.6s						
FOSV				AML	AML		
	comp=N,796µm,0.3s						
FOSV				AML	AML		
	comp=N,796µm,0.3s						
FOSV				AML	AML		
	comp=E,402µm,0.6s						
FRON	Frontone	0.36	301	*e*P	Pb	07 30 02.0	+0.2
FRON				S	Sb	07 30 08.0	+0.8
FRON				AML	AML		
	comp=E,214µm,0.4s						
FRON				AML	AML		
	comp=N,304µm,0.4s						
FRON				AML	AML		
	comp=E,214µm,0.4s						
FRON				AML	AML		
	comp=N,304µm,0.4s						
CESI	CESI - Serrava	0.38	209	P	Pb	07 30 02.0	-0.1
CESI				S	Sb	07 30 08.5	+0.8
CESI				AML	AML		
	comp=E,49µm,0.4s						
CESI				AML	AML		
	comp=N,111µm,0.2s						
CESI				AML	AML		
	comp=E,164µm,0.4s						
CESI				AML	AML		
	comp=N,344µm,0.7s						
CESI				AML	AML		
	comp=N,344µm,0.7s						
CESI				AML	AML		
	comp=E,164µm,0.4s						
CESI				END			
CESI				END			
ATCC	AVT- Casa Cast	0.40	248	*e*P	Pb	07 30 02.2	-0.4
ATCC				S	Sb	07 30 09.0	+0.6
ATCC				AML	AML		
	comp=E,596µm,0.2s						
ATCC				AML	AML		
	comp=N,519µm,0.3s						
ATCC				AML	AML		
	comp=N,519µm,0.3s						
ATCC				AML	AML		
	comp=E,596µm,0.2s						
MURB	Monte Urbino	0.46	261	*e*P	Pb	07 30 03.3	-0.3
MURB				S	Sb	07 30 11.0	+0.9
MURB				AML	AML		
	comp=E,298µm,0.3s						
MURB				AML	AML		
	comp=N,193µm,1.0s						
MURB				AML	AML		
	comp=E,1355µm,0.3s						
MURB				AML	AML		
	comp=N,1144µm,1.0s						
MURB				AML	AML		
	comp=E,1390µm,0.3s						
MURB				AML	AML		
	comp=N,1074µm,1.0s						
MURB				AML	AML		
	comp=E,1390µm,0.3s						
MURB				AML	AML		
	comp=E,1355µm,0.3s						
MURB				AML	AML		
	comp=N,1074µm,1.0s						
MURB				AML	AML		
	comp=N,1144µm,1.0s						
ASSB	Assisi San Ben	0.46	231	*e*P	Pb	07 30 03.3	-0.3
ASSB				S	Sb	07 30 10.9	+0.9
ASSB				AML	AML		
	comp=E,448µm,0.5s						
ASSB				AML	AML		
	comp=N,524µm,1.2s						
ASSB				AML	AML		
	comp=N,524µm,1.2s						
ASSB				AML	AML		
	comp=E,448µm,0.5s						
PIEI	Pieia	0.49	294	*e*P	Pb	07 30 03.8	-0.2
PIEI				S	Sb	07 30 11.3	+0.4
PIEI				AML	AML		
	comp=E,144µm,0.2s						
PIEI				AML	AML		
	comp=N,102µm,0.1s						
PIEI				AML	AML		
	comp=N,102µm,0.1s						
PIEI				AML	AML		
	comp=E,144µm,0.2s						
ATVO	AVT- Monte Val	0.55	275	P	Pb	07 30 04.7	-0.2
ATVO				S	Sb	07 30 13.0	+0.6
ATVO				AML	AML		
	comp=E,263µm,0.3s						
ATVO				AML	AML		
	comp=N,196µm,0.2s						
ATVO				AML	AML		
	comp=E,263µm,0.3s						
ATVO				AML	AML		
	comp=N,196µm,0.2s						
ATPI	Pietralunga -	0.56	282	*e*P	Pb	07 30 05.1	-0.1
ATPI				S	Sn	07 30 13.9	-1.1
ATPI				AML	AML		
	comp=E,111µm,0.5s						
ATPI				AML	AML		
	comp=N,58µm,0.4s						
ATPI				AML	AML		
	comp=E,111µm,0.5s						
ATPI				AML	AML		
	comp=N,58µm,0.4s						
CAFI	Castiglion Fio	0.86	270	*e*P	Pn	07 30 11.2	+0.5
CAFI				AML	AML		
	comp=E,41µm,1.2s						
CAFI				AML	AML		
	comp=N,35µm,0.7s						
CAFI				AML	AML		
	comp=E,41µm,1.2s						
CAFI				AML	AML		
	comp=N,35µm,0.7s						

ROM 22 07:30:25.2±0.1, 43°.343N±0°.004×13°.166E±0°.009, h25^{km}, ML2.1/9, Error ellipse: s-maj=0.5km s-min=0.5km az=272.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CING	Cingoli	0.04	34	P	Pb	07 30 29.8	+0.2
CING				S	Sb	07 30 33.0	+0.4
CING				AML	AML		
	comp=E,2645µm,0.2s						
CING				AML	AML		
	comp=N,2030µm,0.2s						
CING				AML	AML		
	comp=E,2645µm,0.2s						
CING				AML	AML		
	comp=N,2030µm,0.2s						
CING				AML	AML		
	comp=E,2645µm,0.2s						
CING				AML	AML		
	comp=N,2030µm,0.2s						
EL6	Elcito	0.05	254	P	Pb	07 30 29.7	0.0
EL6				S	Sb	07 30 32.8	+0.2
EL6				AML	AML		
	comp=E,4135µm,0.3s						
EL6				AML	AML		
	comp=N,3680µm,1.2s						
SNTG	Esanatoglia	0.19	242	P	Pb	07 30 30.5	-0.3
SNTG				S	Sb	07 30 34.3	-0.2
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,987µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
ARVD	Arcevia	0.23	314	P	Pb	07 30 31.3	0.0
ARVD				S	Sb	07 30 35.6	+0.3
ARVD				AML	AML		
	comp=E,490µm,0.7s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=E,490µm,0.7s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=E,490µm,0.7s						
CSP1	Cessapalombo	0.25	173	P	Pb	07 30 31.8	+0.1
CSP1				S	Sb	07 30 36.6	+0.6
SSFR	Montelago di S	0.29	289	AML	AML		
	comp=N,874µm,1.5s						
SSFR				AML	AML		
	comp=E,725µm,0.2s						
FDMO	Fiordimonte	0.31	191	P	Pb	07 30 32.5	0.0
FDMO				S	Sb	07 30 37.8	+0.4
FDMO				AML	AML		
	comp=E,751µm,0.2s						
FDMO				AML	AML		
	comp=N,582µm,0.2s						
FDMO				AML	AML		
	comp=E,751µm,0.2s						
FDMO				AML	AML		
	comp=N,582µm,0.2s						
FDMO				AML	AML		
	comp=E,751µm,0.2s						
FDMO				AML	AML		
	comp=N,582µm,0.2s						
FDMO				AML	AML		
	comp=E,751µm,0.2s						
FDMO				AML	AML		
	comp=N,582µm,0.2s						
FRON	Frontone	0.36	299	*e*P	Pb	07 30 33.2	0.0
FRON				S	Sb	07 30 39.1	+0.4
MPAG	Monte Paganucc	0.41	314	P	Pb	07 30 34.2	+0.2
MPAG				S	Sb	07 30 41.0	+1.0
ASSB	Assisi San Ben	0.48	231	P	Pb	07 30 35.0	-0.1
ASSB				S	Sb	07 30 42.4	+0.6
ASSB				AML	AML		
	comp=E,448µm,0.5s						
ASSB				AML	AML		
	comp=N,524µm,1.2s						
ASSB				AML	AML		
	comp=N,524µm,1.2s						
ASSB				AML	AML		
	comp=E,448µm,0.5s						
ASSB				AML	AML		
	comp=N,524µm,1.2s						
ASSB				AML	AML		
	comp=E,448µm,0.5s						
PIEI	Pieia	0.50	293	*e*P	Pb	07 30 35.3	-0.1
PIEI				S	Sb	07 30 42.9	+0.5
PIEI				AML	AML		
	comp=E,144µm,0.2s						
PIEI				AML	AML		
	comp=N,102µm,0.1s						
PIEI				AML	AML		
	comp=E,144µm,0.2s						
PIEI				AML	AML		
	comp=N,102µm,0.1s						
PIEI				AML	AML		
	comp=N,102µm,0.1s						
PIEI				AML	AML		
	comp=E,144µm,0.2s						
NARO	Abbazia di Nar	0.50	302	*e*P	Pb	07 30 35.3	-0.2
NARO				S	Sb	07 30 43.2	+0.8
NARO				AML	AML		
	comp=E,83µm,0.2s						
NARO				AML	AML		
	comp=N,89µm,0.7s						
NARO				AML	AML		
	comp=N,89µm,0.7s						
NARO				AML	AML		
	comp=E,83µm,0.2s						
NARO				AML	AML		
	comp=N,89µm,0.7s						
NARO				AML	AML		
	comp=E,83µm,0.2s						
ATVO	AVT- Monte Val	0.56	274	*e*P	Pb	07 30 36.1	-0.3
ATVO				S	Sb	07 30 44.7	+0.7
ATVO				AML	AML		
	comp=E,263µm,0.3s						
ATVO				AML	AML		
	comp=N,196µm,0.2s						
ATVO				AML	AML		
	comp=E,263µm,0.3s						
ATVO				AML	AML		
	comp=N,196µm,0.2s						
ATVO				AML	AML		
	comp=E,263µm,0.3s						
ATVO				AML	AML		
	comp=N,196µm,0.2s						
ATPI	Pietralunga -	0.57	281	*e*P	Pb	07 30 36.5	-0.1
ATPI				S	Sn	07 30 45.5	-0.9
MOMA	Monte Martano	0.69	219	*e*P	Pb	07 30 38.7	0.0
MOMA				S	Sn	07 30 48.7	-0.8
LNSS	Leonessa	0.74	187	*e*P	Pb	07 30 39.5	-0.1
ARRO	Arrone	0.82	201	*e*P	Pn	07 30 41.1	-0.1
ARRO				S	Sn	07 30 52.4	-0.1
MGAB	Montegabbione	0.88	241	*e*P	Pn	07 30 42.8	+0.7
MGAB				S	Sn	07 30 54.6	+0.5
T0912	Minucciano (LU	2.29	292	AML	AML		
	comp=E,516µm,0.1s						
T0912				AML	AML		
	comp=E,516µm,0.1s						
T0912				AML	AML		
	comp=N,584µm,0.1s						
T0912				AML	AML		
	comp=N,584µm,0.1s						
T0912				AML	AML		
	comp=E,516µm,0.1s						
T0912				AML	AML		
	comp=N,584µm,0.1s						

ROM 22 07:30:37.2±0.1, 43°.327N±0°.003×13°.142E±0°.006, h24^{km}, ML2.2/10, Error ellipse: s-maj=0.4km s-min=0.3km az=77.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EL6	Elcito	0.03	275	P	Pb	07 30 41.5	0.0
EL6				S	Sb	07 30 44.6	+0.2
EL6				AML	AML		
	comp=E,4135µm,0.3s						
EL6				AML	AML		
	comp=N,3680µm,1.2s						
EL6				AML	AML		
	comp=E,4135µm,0.3s						
EL6				AML	AML		
	comp=N,3705µm,1.2s						
EL6				AML	AML		
	comp=N,3705µm,1.2s						
EL6				AML	AML		
	comp=E,4135µm,0.3s						
EL6				AML	AML		
	comp=N,3695µm,1.2s						
EL6				AML	AML		
	comp=E,4140µm,0.3s						
CING	Cingoli	0.06	38	P	Pb	07 30 41.5	0.0
CING				S	Sb	07 30 44.8	+0.2
SSM1	San Severino M	0.10	165	*e*P	Pb	07 30 41.9	+0.1
SSM1				S	Sb	07 30 45.4	+0.5
GAG1	Gagliole	0.10	212	*i* P	Pb	07 30 41.8	0.0
GAG1				S	Sb	07 30 45.3	+0.4
CRM1	Catelraimondo	0.13	208	*e*P	Pb	07 30 42.1	+0.1
CRM1				S	Sb	07 30 46.0	+0.7
CRM1				AML	AML		
	comp=E,3670µm,0.3s						
CRM1				AML	AML		
	comp=N,10220µm,1.5s						
CRM1				AML	AML		
	comp=E,3670µm,0.3s						
CRM1				AML	AML		
	comp=N,10220µm,1.5s						
CRM1				AML	AML		

	comp=E,3670µm,0.3s						
CRM1				AML	AML		
	comp=N,10220µm,1.5s						
SNTG	**Esanatoglia**	**0.16**	**244**	*e*P	Pb	07 30 42.2	-0.2
SNTG				S	Sb	07 30 46.1	+0.2
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,988µm,0.2s						
SNTG				AML	AML		
	comp=E,327µm,0.1s						
SNTG				AML	AML		
	comp=N,987µm,0.2s						
ARVD	**Arcevia**	**0.23**	**320**	*e*P	Pb	07 30 43.0	-0.2
ARVD				S	Sb	07 30 47.4	+0.2
ARVD				AML	AML		
	comp=E,490µm,0.7s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=E,490µm,0.7s						
ARVD				AML	AML		
	comp=N,408µm,0.6s						
ARVD				AML	AML		
	comp=E,490µm,0.7s						
CSP1	**Cessapalombo**	**0.24**	**169**	*e*P	Pb	07 30 43.5	+0.1
CSP1				S	Sb	07 30 48.4	+0.8
FOSV	**Fossato di Vic**	**0.28**	**264**	*i* P	Pb	07 30 43.7	-0.2
FOSV				S	Sb	07 30 48.8	+0.3
FOSV				AML	AML		
	comp=E,402µm,0.6s						
FOSV				AML	AML		
	comp=N,796µm,0.3s						
FOSV				AML	AML		
	comp=E,402µm,0.6s						
FOSV				AML	AML		
	comp=N,796µm,0.3s						
FOSV				AML	AML		
	comp=E,402µm,0.6s						
FOSV				AML	AML		
	comp=N,796µm,0.3s						
FDMO	**Fiordimonte**	**0.29**	**188**	*e*P	Pb	07 30 44.1	0.0
FDMO				S	Sb	07 30 49.6	+0.8
FDMO				AML	AML		
	comp=E,751µm,0.2s						
FDMO				AML	AML		
	comp=N,582µm,0.2s						
FDMO				AML	AML		
	comp=N,582µm,0.2s						
FDMO				AML	AML		
	comp=E,751µm,0.2s						
FDMO				AML	AML		
	comp=N,582µm,0.2s						
FDMO				AML	AML		
	comp=E,751µm,0.2s						
CESI	**CESI - Serrava**	**0.37**	**208**	*e*P	Pb	07 30 45.2	0.0
CESI				S	Sb	07 30 51.5	+0.8
CESI				AML	AML		
	comp=E,164µm,0.4s						
CESI				AML	AML		
	comp=N,344µm,0.7s						
CESI				AML	AML		
	comp=N,344µm,0.7s						
CESI				AML	AML		
	comp=E,164µm,0.4s						
CESI				AML	AML		
	comp=N,344µm,0.7s						
CESI				AML	AML		
	comp=E,164µm,0.4s						
ATCC	**AVT- Casa Cast**	**0.39**	**249**	*e*P	Pb	07 30 45.6	-0.1
ATCC				S	Sb	07 30 52.1	+0.7
ATCC				AML	AML		
	comp=E,596µm,0.2s						
ATCC				AML	AML		
	comp=N,519µm,0.3s						
ATCC				AML	AML		
	comp=E,596µm,0.2s						
ATCC				AML	AML		
	comp=N,519µm,0.3s						
ATCC				AML	AML		
	comp=N,519µm,0.3s						
ATCC				AML	AML		
	comp=E,596µm,0.2s						
ATCC				AML	AML		
	comp=N,519µm,0.3s						
ATCC				AML	AML		
	comp=E,596µm,0.2s						
MPAG	**Monte Paganucc**	**0.41**	**317**	*e*P	Pb	07 30 45.9	-0.1
MPAG				S	Sb	07 30 52.7	+0.8
MPAG				AML	AML		
	comp=E,152µm,1.2s						
MPAG				AML	AML		
	comp=N,131µm,0.4s						
MPAG				AML	AML		
	comp=E,152µm,1.2s						
MPAG				AML	AML		
	comp=N,131µm,0.4s						
MPAG				AML	AML		
	comp=E,152µm,1.2s						
MPAG				AML	AML		
	comp=N,131µm,0.4s						
MPAG				AML	AML		
	comp=E,152µm,1.2s						
MPAG				AML	AML		
	comp=N,131µm,0.4s						
FSSB	**Fossombrone**	**0.45**	**324**	*e*P	Pb	07 30 47.2	+0.5
FSSB				S	Sb	07 30 54.0	+1.0
FSSB				AML	AML		
	comp=E,491µm,0.4s						
FSSB				AML	AML		
	comp=N,580µm,0.4s						
FSSB				AML	AML		
	comp=N,580µm,0.4s						
FSSB				AML	AML		
	comp=E,491µm,0.4s						
FSSB				AML	AML		
	comp=N,580µm,0.4s						
FSSB				AML	AML		
	comp=E,491µm,0.4s						
MURB	**Monte Urbino**	**0.46**	**262**	*e*P	Pb	07 30 46.7	0.0
MURB				S	Sb	07 30 54.2	+1.0
PIEI	**Pieia**	**0.49**	**296**	*e*P	Pb	07 30 47.5	+0.2
PIEI				S	Sb	07 30 54.6	+0.6
ATVO	**AVT- Monte Val**	**0.54**	**276**	*e*P	Pb	07 30 47.8	-0.3
ATVO				S	Sb	07 30 56.2	+0.7
MOMA	**Monte Martano**	**0.67**	**219**	*e*P	Pb	07 30 50.0	-0.4
MOMA				S	Sb	07 31 00.1	+0.8

WEL 22 07:59:35.1±0.8,**41°.6S**±0°.8×**174°.4E**±1°.0,**h21**km±2km,**M3.3**/13, **ML3.6**/13,**MLv3.3**/13,**Error ellipse: s-maj=0.0km s-min=0.0km az=121.4,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.20**	**232**	P	Pb	07 59 40.5	-0.5
CMWZ				S	Sb	07 59 44.9	-0.3
BHW	**Baring Head**	**0.40**	**57**	P	Pb	07 59 43.9	+0.5
BHW				S	Sn	07 59 50.8	-1.7
TUWZ	**Tuamarina**	**0.41**	**298**	P	Pb	07 59 44.1	+0.5
TUWZ				S	Sb	07 59 50.3	+1.0
BSWZ	**Blackbirch Sta**	**0.42**	**258**	P	Pb	07 59 44.1	+0.4
WEL	**Wellington**	**0.43**	**37**	P	Pb	07 59 44.6	+0.7
TCW	**Tory Channel**	**0.43**	**345**	P	Pb	07 59 44.4	+0.5
TCW				S	Sb	07 59 50.8	+1.0
PLWZ	**Palliser**	**0.62**	**85**	P	Pn	07 59 48.3	-0.5
MSWZ	**Moikau Station**	**0.65**	**72**	P	Pn	07 59 48.6	-0.5
CAW	**Cannon Point**	**0.71**	**43**	P	Pb	07 59 49.2	+0.5
PAWZ	**Paruwai Farm**	**0.79**	**72**	P	Pn	07 59 51.0	-0.1
NNZ	**Nelson**	**0.89**	**297**	P	Pn	07 59 52.3	0.0
DUWZ	**D'Urville Isla**	**0.91**	**335**	P	Pn	07 59 52.8	+0.2
MTW	**Mount Morrison**	**0.94**	**60**	P	Pn	07 59 53.3	+0.3
TRWZ	**Traveller**	**0.98**	**77**	P	Pn	07 59 53.5	-0.1
OGWZ	**Otaki Gorge**	**0.98**	**35**	P	Pn	07 59 54.0	+0.3
KHZ	**Kahutara**	**1.03**	**220**	P	Pn	07 59 54.3	0.0
HOWZ	**Holdsworth Sta**	**1.10**	**49**	P	Pb	07 59 55.8	+0.4
TMWZ	**Te Maipa**	**1.22**	**65**	P	Pn	07 59 56.9	0.0
MRZ	**Mangatainoka R**	**1.30**	**42**	P	Pb	07 59 58.8	0.0
CPWZ	**Castlepoint**	**1.52**	**62**	P	Pb	08 00 06.3	+3.8
OHWZ	**Ohakea**	**1.57**	**26**	P	Pb	08 00 05.3	+1.8
PRWZ	**Pori Road**	**1.58**	**48**	P	Pn	08 00 02.5	+0.5
POWZ	**Post Office Ro**	**1.60**	**40**	P	Pb	08 00 03.3	-0.6
BFZ	**Birch Farm**	**1.67**	**56**	P	Pn	08 00 02.9	-0.2
GVZ	**Greta Valley S**	**1.69**	**217**	P	Pn	08 00 03.1	-0.3
DVHZ	**Dannevirke**	**1.87**	**45**	P	Pn	08 00 05.9	0.0
TSZ	**Takapari Road**	**1.95**	**37**	P	Pn	08 00 07.7	+0.7
LTZ	**Lake Taylor**	**1.97**	**233**	P	Pn	08 00 07.4	+0.1
PNHZ	**Pukenui**	**2.18**	**39**	P	Pn	08 00 10.6	+0.4
WPHZ	**Waipukurau**	**2.19**	**45**	P	Pn	08 00 12.0	+1.8
OKCZ	**Okains Bay**	**2.33**	**205**	P	Pn	08 00 10.8	-1.3
MQZ	**McQueen's Vall**	**2.46**	**212**	P	Pn	08 00 12.0	-1.9
AKCZ	**Akaroa Harbour**	**2.51**	**206**	P	Pn	08 00 13.4	-1.3

IDC 22 08:04:38.1±29.0**,21°.68S**×**176°.41W,h312**km±232km**,** **mb3.2**/3**,mb1 3.5**/3**,mb1mx3.0**/30**,mbtmp3.9**/3**,Error ellipse: s-maj=243.7km s-min=46.3km az=131.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.71**	**258**	P	P	08 12 29.3	+0.2
	1.5nm,0.8s,baz=86,slow=8.2,SNR=12						
ASAR				PcP	PcP	08 14 02.0	+0.8
	0.7nm,0.6s,baz=100,slow=3.7,SNR=8.1						
WRA	**Warramunga Arr**	**45.92**	**263**	P	P	08 12 29.6	-1.2
	1.5nm,0.8s,baz=94,slow=7.8,SNR=3.1						
ILAR	**Eielson Array**	**89.14**	**12**	P	P	08 16 57.9	-0.1
	0.4nm,0.6s,baz=222,slow=5.3,SNR=5.5						
AKASG	**Malin Array Be**	**144.76**	**332**	PKP	PKPbc	08 23 35.4	-2.0
	1.8nm,0.6s,baz=45,slow=4.3,SNR=8.5						
BRTR	**Keskin Array B**	**148.73**	**312**	PKPbc	PKPbc	08 23 47.8	-1.3
	0.7nm,0.6s,baz=102,slow=4.0,SNR=4.5						
GERES	**GERESS Array B**	**151.72**	**346**	PKPbc	PKPbc	08 23 55.8	0.0
	0.3nm,0.2s,baz=27,slow=2.4,SNR=4.8						
GERES				PKPab	PKPab	08 24 06.8	+0.9
	0.4nm,0.3s,baz=258,slow=39,SNR=2.0						

BJI ***22*** *08:17:37.0±0.0, 37°.45N×74°.69E, h8km, mb3.8/1, ML3.9/4*
NNC ***22*** *08:17:39.9±3.5, 37°.49N×74°.46E, h10km±24km, mb4.2, mpv4.0, Error ellipse: s-maj=27.3km s-min=19.1km az=163.0*
IDC ***22*** *08:17:42.5±3.6, 37°.46N×74°.65E, h65km±30km, mb3.6/12, mb1 3.8/18, mb1mx3.6/39, mbtmp3.9/18, ML3.5/5, Error ellipse: s-maj=24.9km s-min=16.0km az=28.0*
ISC 22 08:17:36.7±0.5**,37°.48N**±0°.05×**74°.81E**±0°.07**,h10**km**,n36,** σ**2s.37**/40**,mb3.9**/12**,7C-5D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.23**	**24**	Pg	Pn	08 18 09.1	-4.8
KSH				Sg	Sn	08 18 31.0	-11
KSH				smax	smax		
	comp=N,510nm,0.7s						
KSH				smax	smax		
	comp=E,400nm,0.7s						
CHCP	**Chirah Chowk**	**4.01**	**199**	P	**Pn**	**08 18 41.7**	**+3.4**
CEP	**Cherat**	**4.34**	**214**	P	**Pn**	**08 18 45.4**	**+2.4**
CEP				S	**Sb**	**08 19 48.0**	**+2.2**
AAK	**Ala-Archa**	**5.16**	**357**	P	**Pn**	**08 18 58.2**	**+4.0**
	0.9nm,0.3s,baz=173,slow=11,SNR=7.4						
AAK				S	**Sb**	**08 20 06.5**	**-2.7**
	1.1nm,0.3s,baz=217,slow=20,SNR=3.5						
AAK	**Ala-Archa**	**5.16**	**357**	⇓Pn	**Pn**	**08 18 58.4**	**+4.3**
	13nm,0.9s						
AAK				⇓Lg	Lg	08 20 21.7	
	19nm,0.7s						
TKM2	**Tokmak 2**	**5.47**	**6**	⇓Pn	**Pn**	**08 19 02.8**	**+4.3**
	14nm,0.4s						
TKM2				⇑Sn	**Sn**	**08 20 06.3**	**+4.7**
	29nm,0.6s						
KK31	**Karatay Array**	**6.51**	**331**	⇑Pn	**Pn**	**08 19 13.7**	**+1.2**
	2.9nm,0.4s,baz=139,slow=12,SNR=53						
KK31				⇑Sn	**Sn**	**08 20 27.3**	**+0.5**
	12nm,0.6s,baz=147,slow=21,SNR=7.8						
PDGK	**Podgornoye**	**6.85**	**30**	⇓Pn	**Pn**	**08 19 20.9**	**+3.5**
	7.6nm,0.7s						
PDGK				⇓Lg	Lg	08 21 23.7	
	57nm,1.3s						
MKAR	**Makanchi Array**	**10.83**	**28**	P	**Pn**	**08 20 15.0**	**+3.1**
	0.3nm,0.3s,baz=216,slow=14,SNR=6.9						
WMQ	**Urumqi**	**11.65**	**53**	*e*P	Pn	08 20 28.6	+5.5
DANN	**Dangsing**	**11.80**	**138**	*e*P	**Pn**	**08 20 24.9**	**-0.5**
	33nm,0.4s						
GKN	**Gorkha**	**12.55**	**136**	*e*P	**Pn**	**08 20 34.3**	**-1.2**
	22nm,0.2s						
KKN	**Kakani**	**13.07**	**135**	*e*P	**Pn**	**08 20 41.2**	**-1.6**
	19nm,0.5s						
DMN	**Daman**	**13.12**	**136**	*e*P	**Pn**	**08 20 41.3**	**-2.1**
	12nm,0.5s						
PKIN	**Phulchoki**	**13.30**	**135**	*e*P	**Pn**	**08 20 43.6**	**-2.3**
	14nm,0.4s						
PKI	**Pulchoki**	**13.31**	**135**	*e*P	**Pn**	**08 20 43.5**	**-2.6**
	11nm,0.4s						
GUN	**Gumba**	**13.33**	**133**	*e*P	**Pn**	**08 20 45.0**	**-1.3**
	19nm,0.4s						
KURBB	**Kurchatov Arra**	**13.41**	**10**	P	**Pn**	**08 20 50.0**	**+3.1**
	baz=197,slow=12,SNR=5.0						
JIRN	**Jiri**	**13.70**	**132**	*e*P	**Pn**	**08 20 49.2**	**-2.2**
	76nm,0.7s						
BVAR	**Borovoye Array**	**15.85**	**350**	P	**Pn**	**08 21 21.8**	**+1.9**
	0.5nm,0.3s,baz=162,slow=11,SNR=16						
AB31	**Akbulak array**	**15.95**	**322**	⇑Pn	**Pn**	**08 21 17.4**	**-3.6**
	2.4nm,0.7s,baz=133,slow=12,SNR=40						
AB31				⇑Sn	**Sn**	**08 24 16.4**	**-1.4**
	0.9nm,0.5s,baz=160,slow=12,SNR=15						
AKTO	**Aktyubinsk**	**17.66**	**322**	P	**Pn**	**08 21 41.8**	**-0.9**
	0.2nm,0.3s,baz=119,slow=12,SNR=5.8						
AKTO	**Aktyubinsk**	**17.66**	**322**	⇑Pn	**P**	**08 21 44.5**	**+0.8**
	3.1nm,0.5s						
AKTO				⇑Sn	**Sn**	**08 25 00.2**	**+0.7**
	1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**17.86**	**20**	P	**Pn**	**08 21 45.0**	**-0.1**
	0.5nm,0.3s,baz=216,slow=11,SNR=7.4						
SONM	**Songino Array**	**25.27**	**56**	P	**P**	**08 23 03.5**	**+0.3**
	2.7nm,1.0s,baz=264,slow=9.9,SNR=9.4						
CMAR	**Chiang Mai Arr**	**28.38**	**125**	P	**P**	**08 23 32.6**	**+1.3**
	1.2nm,0.6s,baz=312,slow=9.5,SNR=5.0						
FINES	**FINESS Array B**	**38.42**	**324**	P	**P**	**08 24 58.4**	**+0.3**
	6.0nm,1.0s,baz=113,slow=9.2,SNR=4.0						
ARCES	**ARCESS Array B**	**41.44**	**336**	P	**P**	**08 25 22.7**	**-0.4**
	1.3nm,0.5s,baz=101,slow=9.3,SNR=8.4						
KLR	**Kul'dur**	**42.10**	**55**	P	**P**	**08 25 29.4**	**+0.7**
	1.1nm,0.5s,baz=316,slow=9.5,SNR=5.3						
NOA	**NORSAR Array B**	**45.45**	**322**	P	**P**	**08 25 54.0**	**-1.7**
	0.4nm,0.6s,baz=90,slow=8.5,SNR=3.1						
PETK	**Petropavlovsk-**	**57.13**	**45**	P	**P**	**08 27 22.9**	**-0.4**
	0.8nm,0.5s,baz=268,slow=4.3,SNR=2.5						
TORD	**Torodi Ar. Bea**	**68.77**	**271**	P	**P**	**08 28 38.7**	**-2.6**
	0.4nm,0.4s,baz=44,slow=6.2,SNR=8.7						
ILAR	**Eielson Array**	**72.97**	**17**	P	**P**	**08 29 04.3**	**-1.7**
	0.6nm,0.8s,baz=324,slow=4.5,SNR=5.6						
WRA	**Warramunga Arr**	**79.97**	**125**	P	**P**	**08 29 45.3**	**-1.1**
	2.1nm,1.1s,baz=303,slow=5.1,SNR=5.2						
YKA	**Yellowknife Ar**	**80.08**	**4**	P	**P**	**08 29 45.1**	**-1.2**
	0.7nm,0.5s,baz=346,slow=5.7,SNR=7.5						
ASAR	**Alice Springs**	**82.37**	**127**	P	**P**	**08 29 57.5**	**-1.6**
	0.4nm,0.7s,baz=318,slow=5.4,SNR=4.6						

BJI 22 08:32:02.5±0.0**,40°.29N**×**100°.20E,h8**km**,ML3.9**/3**,** **Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**9.95**	**295**	*e*P	Pn	08 34 26.3	+0.5
WMQ				smax	smax		
	comp=N,43nm,0.9s						
WMQ				smax	smax		
	comp=E,21nm,0.7s						

KRAR ***22*** *08:39:39.3±0.3, 53°.52N×86°.97E, M2.8, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 22 08:39:55.3±2.7**,53°.46N**×**87°.58E,h0**km**,mb3.8,mpv3.5, 9C-5D,Error ellipse: s-maj=21.8km s-min=10.7km az=66.0,Suspected Mining explosion.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.71**	**288**	⇓Pn	Pn	08 40 24.9	-1.4
	3.0nm,0.8s						
ZAA0				⇑Sn	Sg	08 40 50.5	+0.2
	16nm,0.8s						
KURK	**Kurchatov**	**6.17**	**247**	⇓Pn	Pn	08 41 28.6	+1.1
	3.8nm,0.8s						
KURK				⇓Sn	Sn	08 42 38.7	-0.1
	3.7nm,0.9s						
KURK				⇑Lg	Lg	08 43 11.1	
	14nm,0.9s						
KURBB	**Kurchatov Arra**	**6.27**	**247**	⇑Pn	Pn	08 41 29.7	+0.8
	3.3nm,0.4s						
KURBB				⇑Sn	Sn	08 42 40.7	-0.4
	8.6nm,0.8s						
KURBB				⇑Lg	Lg	08 43 15.2	
	24nm,0.7s						
MK31	**Makanchi Array**	**7.49**	**209**	⇑Pn	Pn	08 41 47.0	+1.3
	3.5nm,1.0s,baz=36,slow=14,SNR=13						
MK31				⇓Sn	Sn	08 43 13.5	+2.3
	2.8nm,0.9s,baz=34,slow=24,SNR=5.2						
MK31				⇓Lg	Lg	08 43 52.2	
	5.9nm,0.9s,baz=36,slow=29,SNR=6.2						
MAKZ	**Makanchi**	**7.57**	**211**	⇑Pn	Pn	08 41 50.3	+3.5
	5.9nm,0.5s						
MAKZ				⇑Sn	Sn	08 43 12.8	-0.4
	2.4nm,0.9s						
MAKZ				⇑Lg	Lg	08 43 52.9	
	7.8nm,1.1s						

IDC ***22*** *09:07:13.8±0.9, 32°.93N×75°.40E, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.8/41, mbtmp3.8/16, ML3.5/3, Error ellipse: s-maj=26.2km s-min=17.6km az=59.0*
ISCJB ***22*** *09:07:16.5±0.4, 33°.12N±0°.04×75°.66E±0°.06, h22km±2km, mb3.7/12, Error ellipse: s-maj=9.4km s-min=5.4km az=151.6*
NDI ***22*** *09:07:17.4±4.5, 33°.07N×75°.32E, h10km, ML3.8*
HYB ***22*** *09:07:17.6±0.3, 33°.13N×75°.69E, h16km±2km, ML3.7*
NNC ***22*** *09:07:20.7±4.0, 32°.94N×73°.09E, h0km, mb4.2, Error ellipse: s-maj=56.9km s-min=31.8km az=93.0*
ISC 22 09:07:17.2±0.8**,33°.10N**±0°.04×**75°.57E**±0°.05**,h17**km±4km**,** **n42,**σ**2s.28**/49**,mb3.8**/12**,4C-7D,Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DODA	**Doda**	**0.05**	**345**	⇑*e*P	**Pg**	**09 07 21.0**	**+0.5**
DODA				*e*S	**Sg**	**09 07 23.7**	**+0.8**
DODA				IAML		09 07 24.8	
	comp=Z,18µm,0.1s						
BDRWA	**Bhadarwah**	**0.18**	**136**	⇑*e*P	**Pg**	**09 07 22.0**	**-0.1**
BDRWA				*e*S	**Sg**	**09 07 24.8**	**-0.4**
BDRWA				IAML		09 07 26.1	
	comp=Z,34µm,0.2s						
THTRI	**Thathri**	**0.19**	**75**	⇓*e*P	**Pg**	**09 07 20.7**	**-1.3**
THTRI				*e*S	**Sg**	**09 07 23.1**	**-2.2**
THTRI				IAML		09 07 23.6	
	comp=Z,15µm,0.2s						
KSHWR	**Kishtwar**	**0.28**	**39**	⇑*e*P	**Pg**	**09 07 22.2**	**-1.3**
KSHWR				IAML		09 07 27.6	
	comp=Z,5µm,0.3s						
GANDO	**Gandoh**	**0.29**	**102**	⇓*e*P	**Pg**	**09 07 22.5**	**-1.2**
GANDO				*e*S	**Sg**	**09 07 25.7**	**-2.4**
GANDO				IAML		09 07 26.7	
	comp=Z,4µm,0.1s						
DHRM	**DHARAMSHALA**	**1.04**	**144**	*e*P	**Pg**	**09 07 39.0**	**+1.5**
DHRM				*e*S	**Sn**	**09 07 54.4**	**+2.9**
BHK	**Bhakra**	**1.82**	**157**	*e*P	**Pb**	**09 07 50.2**	**+0.2**
BHK				*e*x	x	09 08 18.8	
SMLA	**Simla**	**2.38**	**145**	*e*P	**Pb**	**09 08 00.1**	**+0.5**
SMLA				*e*S	**Sb**	**09 08 29.7**	**+1.0**
KKR	**Kurukshetra**	**3.30**	**161**	*e*P	Pn	09 07 55.8	-12
KKR				*e*S	**Sn**	**09 08 39.3**	**-7.6**
JOSI	**Joshimath**	**4.23**	**126**	*e*P	**Pn**	**09 08 24.2**	**+3.1**
JOSI				*e*S	**Sn**	**09 09 13.6**	**+3.4**
KALG	**Kalgarh**	**4.50**	**142**	*e*P	Pn	09 08 10.1	-14
KALG				*e*S	Sn	09 08 56.5	-20
NDI	**New Delhi**	**4.62**	**162**	*e*x	**Pb**	**09 08 37.0**	**-0.8**
NDI				*e*x	**Sb**	**09 09 35.0**	**+1.9**
KUDL	**Kundal**	**5.00**	**171**	*e*P	Pn	09 08 19.7	-12
KUDL				*e*S	Sn	09 09 15.7	-13
KUDL				AML	AML	09 09 39.5	
	comp=E,180nm,0.6s						
KUDL				AML	AML	09 09 40.0	
	comp=N,118nm,0.4s						
SONA	**Sohna**	**5.00**	**165**	*e*P	**Pn**	**09 08 33.3**	**+1.8**
SONA				*e*S	**Sn**	**09 09 27.4**	**-1.5**
SONA				IAML		09 10 01.9	
	comp=E,277nm,0.7s						
SONA				IAML		09 10 03.1	
	comp=N,139nm,0.6s						
KHET	**Khetri**	**5.01**	**178**	*e*P	**Pn**	**09 08 32.6**	**+1.0**
KHET				*e*S	**Sn**	**09 09 25.4**	**-3.6**
KHET				IAML		09 10 06.7	
	comp=N,254nm,0.4s						
KHET				IAML		09 10 06.8	
	comp=E,230nm,0.3s						
GKN	**Gorkha**	**9.32**	**121**	*e*P	**Pn**	**09 09 32.7**	**+1.8**
	comp=E,19nm,0.3s						
AAK	**Ala-Archa**	**9.56**	**355**	Pn	**Pn**	**09 09 37.1**	**+2.9**
	comp=E,0.5nm,0.3s,baz=152,slow=13,SNR=3.8						
AAK	**Ala-Archa**	**9.56**	**355**	⇑Pn	Pn	09 09 42.0	+7.8
	comp=E,6.4nm,1.1s						
AAK				⇓Sn	Sn	09 11 35.2	+14
	comp=E,3.6nm,1.0s						
TKM2	**Tokmak 2**	**9.81**	**0**	⇓Pn	Pn	09 09 47.4	+10
	comp=E,3.1nm,0.7s						
TKM2				⇓Sn	Sn	09 11 43.6	+16
	comp=E,3.7nm,0.8s						
DMN	**Daman**	**9.88**	**121**	*e*P	**Pn**	**09 09 40.2**	**+1.5**
	comp=E,17nm,0.3s						
KKN	**Kakani**	**9.91**	**120**	*e*P	**Pn**	**09 09 40.6**	**+1.6**
	comp=E,28nm,0.6s						
BHPL	**Bhopal**	**9.95**	**170**	*e*P	**Pn**	**09 09 39.1**	**-0.4**
BHPL				*e*S	**Sn**	**09 11 23.8**	**-7.0**
PKIN	**Phulchoki**	**10.11**	**120**	*e*P	**Pn**	**09 09 42.9**	**+1.1**
	comp=E,16nm,0.5s						
PKI	**Pulchoki**	**10.12**	**120**	*e*P	**Pn**	**09 09 43.6**	**+1.5**
	comp=E,24nm,0.6s						
JIRN	**Jiri**	**10.65**	**118**	*e*P	**Pn**	**09 09 48.8**	**-0.5**
	comp=E,14nm,0.3s						
KK31	**Karatay Array**	**10.75**	**340**	⇓Pn	**Pn**	**09 09 51.3**	**+1.0**
	comp=E,3.4nm,0.7s,baz=161,slow=12,SNR=14						
KK31				⇓Sn	**Sn**	**09 11 47.2**	**-3.1**
	comp=E,4.4nm,0.6s,baz=161,slow=21,SNR=10						
MKAR	**Makanchi Array**	**14.61**	**19**	Pn	**Pn**	**09 10 42.2**	**-0.8**
	comp=E,0.2nm,0.3s,baz=195,slow=14,SNR=6.5						
KURBB	**Kurchatov Arra**	**17.65**	**6**	Pn	**Pn**	**09 11 20.6**	**-1.4**
	comp=E,0.1nm,0.3s,baz=192,slow=11,SNR=13						
BVAR	**Borovoye Array**	**20.27**	**351**	P	Pn	09 11 53.3	-0.3
	comp=E,6.2nm,0.5s,baz=160,slow=10,SNR=34						
AKTO	**Aktyubinsk**	**21.62**	**328**	P	**P**	**09 12 07.8**	**+1.5**
	comp=E,5.0nm,0.5s,baz=127,slow=12,SNR=13						
ZALV	**Zalesovo Beam**	**21.86**	**15**	P	**P**	**09 12 08.2**	**-0.5**
	comp=E,1.1nm,0.3s,baz=218,slow=9.0,SNR=5.3						
CMAR	**Chiang Mai Arr**	**25.52**	**119**	P	**P**	**09 12 46.4**	**+1.5**
	comp=E,0.5nm,0.3s,baz=293,slow=10,SNR=3.8						
SONM	**Songino Array**	**27.47**	**48**	P	**P**	**09 13 02.7**	**+0.3**
	comp=E,0.5nm,0.5s,baz=243,slow=9.5,SNR=3.7						
ARCES	**ARCESS Array B**	**45.71**	**338**	P	**P**	**09 15 38.5**	**+1.6**
	comp=E,1.4nm,0.8s,baz=113,slow=8.9,SNR=5.0						
NB2	**NORSAR Subarra**	**49.34**	**325**	P	**P**	**09 16 05.8**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**49.34**	**325**	P	**P**	**09 16 06.0**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=96,slow=7.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**69.52**	**273**	P	**P**	**09 18 22.2**	**-3.1**
	comp=Z,0.6nm,1.0s,baz=54,slow=5.9,SNR=3.4						
INK	**Inuvik**	**76.60**	**11**	P	**P**	**09 19 06.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=297,slow=4.9,SNR=3.2						
ILAR	**Eielson Array**	**76.96**	**17**	P	**P**	**09 19 08.5**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=308,slow=4.4,SNR=3.1						
WRA	**Warramunga Arr**	**76.98**	**124**	P	**P**	**09 19 08.4**	**-0.8**
	comp=Z,3.3nm,1.2s,baz=319,slow=5.0,SNR=4.3						
ASAR	**Alice Springs**	**79.21**	**127**	P	**P**	**09 19 21.8**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=316,slow=5.2,SNR=3.6						
YKA	**Yellowknife Ar**	**84.39**	**5**	P	**P**	**09 19 48.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=341,slow=5.2,SNR=3.3						

WEL 22 09:21:13.1,41°.6S±0°.9×**174°.3E**±0°.8**,h17**km±2km**,M4.0**/16**,** **ML4.3**/16**,MLv4.0**/16**,Error ellipse: s-maj=0.0km s-min=0.0km az=146.0,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.15**	**201**	P	Pb	09 21 17.5	0.0
CMWZ				S	Sb	09 21 21.2	+0.8
TUWZ	**Tuamarina**	**0.31**	**305**	P	Pb	09 21 20.2	-0.1
TUWZ				S	Sb	09 21 25.3	+0.2
BSWZ	**Blackbirch Sta**	**0.33**	**251**	P	Pb	09 21 20.3	-0.2
BSWZ				S	Sb	09 21 25.8	+0.4
TCW	**Tory Channel**	**0.40**	**359**	P	Pb	09 21 21.6	-0.1
BHW	**Baring Head**	**0.48**	**66**	P	Pb	09 21 23.4	+0.3
WEL	**Wellington**	**0.49**	**48**	P	Pb	09 21 23.4	+0.2
PLWZ	**Palliser**	**0.73**	**87**	P	Pn	09 21 28.2	-0.5
MSWZ	**Moikau Station**	**0.75**	**75**	P	Pn	09 21 28.4	-0.6
CAW	**Cannon Point**	**0.77**	**50**	P	Pg	09 21 28.4	+0.2
NNZ	**Nelson**	**0.79**	**300**	P	Pg	09 21 28.5	+0.1
DUWZ	**D'Urville Isla**	**0.85**	**341**	P	Pg	09 21 29.8	+0.1
PAWZ	**Paruwai Farm**	**0.89**	**76**	P	Pn	09 21 31.0	+0.2
KHZ	**Kahutara**	**0.98**	**214**	P	Pg	09 21 32.5	+0.4
MTW	**Mount Morrison**	**1.02**	**64**	P	Pg	09 21 32.9	+0.1
OGWZ	**Otaki Gorge**	**1.04**	**40**	P	Pn	09 21 32.8	-0.1
THZ	**Tophouse**	**1.04**	**261**	P	Pn	09 21 33.2	+0.1
TRWZ	**Traveller**	**1.07**	**79**	P	Pn	09 21 33.5	+0.1
HOWZ	**Holdsworth Sta**	**1.17**	**53**	P	Pg	09 21 35.3	-0.4
TMWZ	**Te Maipa**	**1.31**	**68**	P	Pn	09 21 36.7	+0.1
MRZ	**Mangatainoka R**	**1.36**	**46**	P	Pb	09 21 38.1	-0.1
TIWZ	**Tintock**	**1.47**	**56**	P	Pb	09 21 40.4	+0.4
QRZ	**Quartz Range**	**1.54**	**300**	P	Pb	09 21 41.7	+0.5
CPWZ	**Castlepoint**	**1.60**	**65**	P	Pb	09 21 42.0	-0.2
OHWZ	**Ohakea**	**1.60**	**29**	P	Pg	09 21 43.4	-0.5
GVZ	**Greta Valley S**	**1.64**	**214**	P	Pn	09 21 41.4	+0.1
PRWZ	**Pori Road**	**1.65**	**51**	P	Pn	09 21 42.0	+0.6
POWZ	**Post Office Ro**	**1.66**	**43**	P	Pb	09 21 42.7	-0.5
BFZ	**Birch Farm**	**1.75**	**59**	P	Pn	09 21 42.4	-0.3
DSZ	**Denniston Nort**	**1.86**	**265**	P	Pb	09 21 46.4	-0.3
LTZ	**Lake Taylor**	**1.90**	**231**	P	Pn	09 21 45.4	+0.6
WAZ	**Wanganui**	**1.93**	**16**	P	Pb	09 21 48.3	+0.5
DVHZ	**Dannevirke**	**1.94**	**48**	P	Pn	09 21 45.7	+0.4
AMCZ	**Amberley**	**1.98**	**217**	P	Pn	09 21 45.8	-0.1
TSZ	**Takapari Road**	**2.00**	**40**	P	Pn	09 21 46.8	+0.6
LREZ	**Lake Rotokare**	**2.15**	**2**	P	Pb	09 21 52.4	+0.8
NMEZ	**Namu Road**	**2.22**	**352**	P	Pb	09 21 54.1	+1.4
PRHZ	**Porangahau**	**2.23**	**54**	P	Pn	09 21 49.4	+0.1
PNHZ	**Pukenui**	**2.23**	**41**	P	Pn	09 21 50.1	+0.7
WPHZ	**Waipukurau**	**2.25**	**47**	P	Pn	09 21 50.2	+0.6
PREZ	**Palmer Road**	**2.27**	**358**	P	Pb	09 21 54.4	+0.8
OKCZ	**Okains Bay**	**2.30**	**203**	P	Pn	09 21 49.4	-0.9
CRLZ	**Canterbury Las**	**2.32**	**211**	P	Pn	09 21 49.9	-0.6
KHEZ	**Kahui Hut**	**2.32**	**355**	P	Pb	09 21 54.9	+0.3
NBEZ	**Newall Road No**	**2.36**	**352**	P	Pb	09 21 55.2	0.0
INZ	**Inchbonnie**	**2.39**	**241**	P	Pn	09 21 52.4	+1.0
OXZ	**Oxford**	**2.39**	**223**	P	Pn	09 21 50.8	-0.7
MTVZ	**Mangateitei**	**2.40**	**23**	P	Pb	09 21 55.3	-0.6
MQZ	**McQueen's Vall**	**2.42**	**209**	P	Pn	09 21 50.3	-1.5
DREZ	**Durham Road**	**2.42**	**358**	P	Pb	09 21 56.1	-0.1
PKE	**Pukeiti**	**2.42**	**354**	P	Pb	09 21 55.3	-1.0
PKVZ	**Pokaka**	**2.46**	**20**	P	Pb	09 21 56.5	-0.3
MOVZ	**Moawhango**	**2.47**	**27**	P	Pb	09 21 55.2	-1.9
AKCZ	**Akaroa Harbour**	**2.48**	**204**	P	Pn	09 21 51.8	-1.0
VRZ	**Vera Road**	**2.51**	**8**	P	Pb	09 21 56.8	-0.9
PXZ	**Pawanui**	**2.51**	**52**	P	Pn	09 21 52.6	-0.5
BHHZ	**Black Hill Sta**	**2.51**	**33**	P	Pn	09 21 54.7	+1.4
KRHZ	**Kereru**	**2.52**	**40**	P	Pn	09 21 53.8	+0.4
DRZ	**Dome Shelter**	**2.53**	**23**	P	Pb	09 21 59.4	+1.2
WHVZ	**Whangaehu Hut**	**2.53**	**24**	P	Pb	09 21 56.6	-1.5
MHEZ	**Mangahewa**	**2.53**	**1**	P	Pg	09 22 01.8	+0.2
FWVZ	**Far West T-bar**	**2.54**	**23**	P	Pb	09 21 57.1	-1.3
TUVZ	**Tukino**	**2.56**	**25**	P	Pb	09 21 57.0	-1.7
NGZ	**Ngauruhoe**	**2.63**	**23**	P	Pb	09 21 58.3	-1.5
KAHZ	**Kahuranaki**	**2.68**	**48**	P	Pn	09 21 55.3	-0.2
WTVZ	**West Tongariro**	**2.68**	**22**	P	Pb	09 21 59.2	-1.5
TWVZ	**Taurewa**	**2.68**	**20**	P	Pb	09 21 59.3	-1.5
KRVZ	**Karewarewa**	**2.72**	**23**	P	Pb	09 22 00.1	-1.3
KWHZ	**Kaweka Forest**	**2.72**	**37**	P	Pn	09 21 57.8	+1.7
MCHZ	**McNeill Hill**	**2.84**	**41**	P	Pn	09 21 59.3	+1.6
KATZ	**Kakaramea**	**2.84**	**23**	P	Pb	09 22 02.8	-0.7
RITZ	**Rihia Road**	**2.89**	**25**	P	Pb	09 22 05.0	+0.8
BKZ	**Black Stump Fm**	**2.97**	**35**	P	Pn	09 21 60.0	+0.5
RATZ	**Rangitukua**	**2.97**	**23**	P	Pb	09 22 06.3	+0.7
WVZ	**Waitaha Valley**	**3.01**	**240**	P	Pn	09 22 02.6	+2.6
HATZ	**Hinemaiaia**	**3.05**	**28**	P	Pb	09 22 09.0	+2.1
WATZ	**Wairara**	**3.10**	**21**	P	Pb	09 22 08.5	+0.6
HIZ	**Hauiti**	**3.12**	**8**	P	Pn	09 22 04.8	+3.2
ARHZ	**Aropaoanui**	**3.13**	**42**	P	Pn	09 22 03.0	+1.4
RPZ	**Rata Peaks**	**3.18**	**227**	P	Pn	09 22 02.2	-0.1
MRHZ	**Matea Rd**	**3.22**	**31**	P	Pn	09 22 03.3	+0.4
KUTZ	**Kaahu Road**	**3.33**	**21**	P	Pb	09 22 13.5	+1.7
MTHZ	**Maungataniwha**	**3.38**	**36**	P	Pn	09 22 07.4	+2.2
TLZ	**Tolley Road**	**3.41**	**17**	P	Pb	09 22 09.4	-3.8
ALRZ	**Allen Road**	**3.43**	**28**	P	Pb	09 22 14.5	+1.1
PRRZ	**Plateau Road**	**3.50**	**28**	P	Pb	09 22 15.0	+0.4
MUGZ	**Murupara**	**3.66**	**32**	P	Pn	09 22 11.7	+2.6
SNGZ	**Shannon Statio**	**3.67**	**41**	P	Pb	09 22 14.3	-3.1
TARZ	**Mount Tarawera**	**3.78**	**28**	P	Pb	09 22 19.4	0.0
FOZ	**Fox Glacier**	**3.82**	**238**	P	Pn	09 22 14.1	+3.0
RIGZ	**Rimuhau**	**3.94**	**44**	P	Pn	09 22 13.1	+0.3
TOZ	**Tahuroa Road**	**3.98**	**14**	P	Pn	09 22 18.1	+4.7
URZ	**Urewera**	**3.99**	**34**	P	Pn	09 22 15.8	+2.3
LBZ	**Lake Benmore**	**4.09**	**226**	P	Pn	09 22 16.1	+1.2
MWZ	**Matawai**	**4.11**	**38**	P	Pn	09 22 15.5	+0.3
ODZ	**Otahua Downs**	**4.34**	**217**	P	Pn	09 22 17.0	-1.3
RUGZ	**Raukumara Rang**	**4.48**	**37**	P	Pn	09 22 22.2	+1.8
AWAZ	**Awhitu Peninsu**	**4.55**	**4**	P	Pn	09 22 25.3	+4.2
MKAZ	**Moumakai**	**4.55**	**9**	P	Pn	09 22 24.7	+3.5
ETAZ	**East Tamaki Re**	**4.68**	**6**	P	Pn	09 22 28.5	+5.5
HAZ	**Te Kaha**	**4.70**	**36**	P	Pn	09 22 24.9	+1.7
PKGZ	**Pakihiroa**	**4.73**	**39**	P	Pn	09 22 24.9	+1.3
JCZ	**Jackson Bay**	**4.74**	**237**	P	Pn	09 22 29.1	+5.3
WIAZ	**Waiheke Island**	**4.85**	**8**	P	Pn	09 22 30.0	+4.6
MBAZ	**Motutapu North**	**4.86**	**6**	P	Pn	09 22 29.6	+4.2
KUZ	**Kuaotunu**	**4.98**	**13**	P	Pb	09 22 35.4	-4.5
TUZ	**Tuapeka**	**5.50**	**216**	P	Pn	09 22 35.0	+0.9
WCZ	**Waipu Caves**	**5.66**	**0**	P	Pn	09 22 42.9	+6.4
SYZ	**Scrubby Hill**	**6.16**	**215**	P	Pn	09 22 43.8	+0.5
OUZ	**Omahuta**	**6.40**	**355**	P	Pn	09 22 49.9	+3.3
CTZ	**Chatham Island**	**7.03**	**111**	P	Pn	09 22 54.6	-0.6

ZUR 22 09:32:10.2, 47°.42N×9°.32E, h5^{km}, MLh1.0/3, 3C-1D, Error ellipse: s-maj=1.7km s-min=0.9km az=299.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGT00	**Sennhlsen**	**0.01**	**267**	⇑Pg	Pg	09 32 11.2	+0.1
SGT00				Sg	Sg	09 32 12.0	+0.2
SGT01	**Gaiserwald**	**0.01**	**350**	Pg	Pg	09 32 11.3	+0.1
SGT01				Sg	Sg	09 32 12.3	+0.4
SGT04	**Schlatt-Haslen**	**0.08**	**166**	⇓Pg	Pg	09 32 12.5	+0.6
SGT04				Sg	Sg	09 32 14.5	+1.3
SGT05	**Eggersriet**	**0.09**	**79**	⇑Pg	Pg	09 32 12.7	+0.5
SGT05				Sg	Sg	09 32 14.6	+1.0
SGT03	**Degersheim**	**0.10**	**234**	⇑Pg	Pg	09 32 12.8	+0.5
SGT03				Sg	Sg	09 32 14.7	+0.9

GEN ***22*** *09:33:48.3, 44°.18N×10°.14E, h5^{km}±1^{km}, Ml1.1*
ROM 22 09:33:47.5±0.1**, 44°.173N**±0°.006×**10°.141E**±0°.005**, h9^{km}, ML1.6**/10**, Error ellipse: s-maj=0.6km s-min=0.4km az=183.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.01**	**127**	P	Pg	09 33 49.5	+0.3
EQUI				S	Sg	09 33 50.3	-0.1
EQUI	**Equi**	**0.01**	**127**	P	Pg	09 33 49.5	+0.2
EQUI				S	Sg	09 33 50.3	-0.1
EQUI				AML	AML		
	comp=E,2040µm,0.3s						
EQUI				AML	AML		
	comp=N,1480µm,1.3s						
EQUI				AML	AML		
	comp=E,2040µm,0.3s						
EQUI				AML	AML		
	comp=N,1480µm,1.3s						
T0912	**Minucciano (LU**	**0.05**	**95**	P	Pg	09 33 50.0	+0.4
T0912				S	Sg	09 33 51.1	+0.2
T0912				AML	AML		
	comp=E,5550µm,0.2s						
T0912				AML	AML		
	comp=N,7230µm,0.2s						
T0912				AML	AML		
	comp=E,5285µm,0.2s						
T0912				AML	AML		
	comp=N,7375µm,0.2s						
T0912				AML	AML		
	comp=E,5550µm,0.2s						
T0912				AML	AML		
	comp=N,7230µm,0.2s						
T0912				AML	AML		
	comp=E,5285µm,0.2s						
T0912				AML	AML		
	comp=N,7375µm,0.2s						
T0912				AML	AML		
	comp=E,5550µm,0.2s						
T0912				AML	AML		
	comp=E,5285µm,0.2s						
T0912				AML	AML		
	comp=N,7230µm,0.2s						
T0912				AML	AML		
	comp=N,7375µm,0.2s						
T0911	**Castelpoggio (**	**0.08**	**219**	P	Pg	09 33 50.5	+0.7
T0911				S	Sg	09 33 52.1	+0.7
T0911				AML	AML		
	comp=E,496µm,0.3s						
T0911				AML	AML		
	comp=N,600µm,0.3s						
FOSD	**Fosdinovo**	**0.12**	**238**	*e*P	Pg	09 33 51.2	+0.9
FOSD				S	Sg	09 33 53.4	+1.1
FOSD				AML	AML		
	comp=E,816µm,0.7s						
FOSD				AML	AML		
	comp=N,1155µm,0.2s						
FOSD				AML	AML		
	comp=E,814µm,0.7s						
FOSD				AML	AML		
	comp=N,1155µm,0.2s						
FOSD				AML	AML		
	comp=N,1155µm,0.2s						
FOSD				AML	AML		
	comp=E,814µm,0.7s						
VLC	**Villacollemand**	**0.18**	**94**	*e*P	Pg	09 33 51.8	+0.5
VLC				S	Sg	09 33 55.0	+1.1
VLC				AML	AML		
	comp=E,89µm,0.6s						
VLC				AML	AML		
	comp=N,95µm,0.1s						
VLC				AML	AML		
	comp=E,89µm,0.6s						
VLC				AML	AML		
	comp=N,95µm,0.1s						
VLC				AML	AML		
	comp=E,89µm,0.6s						
VLC				AML	AML		
	comp=N,95µm,0.1s						
SARO	**Sassorosso**	**0.19**	**86**	P	Pg	09 33 52.2	+0.7
SARO				S	Sg	09 33 55.2	+0.9
PLMA	**Palmaria, Port**	**0.24**	**240**	*e*P	Pg	09 33 53.4	+1.0
PLMA				S	Sg	09 33 56.7	+1.0
PLMA				AML	AML		
	comp=E,274µm,0.2s						
PLMA				AML	AML		
	comp=N,236µm,0.3s						
PLMA				AML	AML		
	comp=E,274µm,0.2s						
PLMA				AML	AML		
	comp=N,236µm,0.3s						
PLMA				AML	AML		
	comp=N,236µm,0.3s						
PLMA				AML	AML		
	comp=E,274µm,0.2s						
CARD	**Cardoso**	**0.29**	**121**	P	Pb	09 33 54.2	-0.7
CARD				S	Sg	09 33 58.3	+1.1
CARD	**Cardoso**	**0.29**	**121**	*e*P	Pb	09 33 54.3	-0.6
CARD				S	Sb	09 33 58.5	-1.3
CARD				AML	AML		
	comp=E,112µm,0.9s						
CARD				AML	AML		
	comp=N,121µm,0.3s						
CARD				AML	AML		
	comp=E,112µm,0.9s						
CARD				AML	AML		
	comp=N,122µm,0.3s						
CARD				AML	AML		
	comp=E,112µm,0.9s						
CARD				AML	AML		
	comp=N,122µm,0.3s						
ERBM	**Eremo**	**0.32**	**38**	*e*P	Pb	09 33 54.8	-0.6
ERBM				S	Sb	09 34 00.0	-0.6
ERBM				AML	AML		
	comp=E,136µm,1.1s						
ERBM				AML	AML		
	comp=N,156µm,1.0s						
ERBM				AML	AML		
	comp=N,156µm,1.0s						
ERBM				AML	AML		
	comp=E,136µm,1.1s						
GRAM	**Graiana**	**0.32**	**350**	P	Pg	09 33 54.6	+0.6
GRAM				S	Sg	09 33 59.2	+0.9
GRAM	**Graiana**	**0.32**	**350**	P	Pg	09 33 54.6	+0.6
GRAM				S	Sg	09 33 59.5	+1.1
GRAM				AML	AML		
	comp=E,516µm,0.2s						
GRAM				AML	AML		
	comp=N,606µm,0.2s						
GRAM				AML	AML		
	comp=E,516µm,0.2s						
GRAM				AML	AML		
	comp=N,607µm,0.2s						
GRAM				AML	AML		
	comp=N,607µm,0.2s						
GRAM				AML	AML		
	comp=E,516µm,0.2s						
MAIM	**Mastiano**	**0.36**	**135**	P	Pb	09 33 55.7	-0.4
MAIM				S	Sb	09 34 00.9	-1.0
MAIM	**Mastiano**	**0.36**	**135**	*e*P	Pg	09 33 54.8	+0.1
MAIM				S	Sb	09 34 01.0	-0.9
MAIM				AML	AML		
	comp=E,74µm,1.6s						
MAIM				AML	AML		
	comp=N,48µm,0.7s						
MAIM				AML	AML		
	comp=E,74µm,1.6s						
MAIM				AML	AML		
	comp=N,48µm,0.7s						
POPM	**Popiglio**	**0.46**	**106**	P	Pb	09 33 57.3	-0.6
POPM				S	Sb	09 34 04.1	-0.7
POPM	**Popiglio**	**0.46**	**106**	*e*P	Pb	09 33 57.3	-0.5
POPM				S	Sb	09 34 04.6	-0.2
POPM				AML	AML		
	comp=E,85µm,0.2s						
POPM				AML	AML		
	comp=N,105µm,0.9s						
POPM				AML	AML		
	comp=E,85µm,0.2s						
POPM				AML	AML		
	comp=N,105µm,0.9s						
MSSA	**Maissana**	**0.47**	**288**	*e*P	Pg	09 33 57.3	+0.5
MSSA				S	Sb	09 34 04.3	-0.8
MSSA				AML	AML		
	comp=E,21µm,1.4s						
MSSA				AML	AML		
	comp=N,21µm,0.9s						
MSSA				AML	AML		
	comp=N,21µm,0.9s						
MSSA				AML	AML		
	comp=E,21µm,1.4s						

WEL 22 09:35:28.9, 42°S±3°×**17°4E**±°**, h24^{km}**±4^{km}**, M3.9**/53**, ML4.2**/60**, MLv3.9**/53**, Error ellipse: s-maj=0.0km s-min=0.0km az=107.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.27**	**221**	P	Pb	09 35 36.1	+0.7
BHW	**Baring Head**	**0.35**	**66**	P	Pb	09 35 37.0	+0.4
WEL	**Wellington**	**0.36**	**43**	P	Pb	09 35 37.3	+0.5
TCW	**Tory Channel**	**0.36**	**339**	P	Pb	09 35 37.1	+0.3
TUWZ	**Tuamarina**	**0.40**	**287**	P	Pb	09 35 37.6	+0.2
BSWZ	**Blackbirch Sta**	**0.46**	**249**	P	Pb	09 35 38.9	+0.4
PLWZ	**Palliser**	**0.61**	**92**	P	Pn	09 35 41.8	-0.3
MSWZ	**Moikau Station**	**0.62**	**78**	P	Pn	09 35 41.9	-0.3
CAW	**Cannon Point**	**0.64**	**47**	P	Pn	09 35 42.1	-0.4
PAWZ	**Paruwai Farm**	**0.75**	**78**	P	Pn	09 35 44.3	+0.2
DUWZ	**D'Urville Isla**	**0.84**	**332**	P	Pn	09 35 45.7	+0.3
NNZ	**Nelson**	**0.87**	**292**	P	Pn	09 35 46.0	+0.3
MTW	**Mount Morrison**	**0.88**	**64**	P	Pn	09 35 46.5	+0.7
OGWZ	**Otaki Gorge**	**0.91**	**37**	P	Pn	09 35 46.6	+0.4
TRWZ	**Traveller**	**0.94**	**81**	P	Pn	09 35 47.1	+0.4
HOWZ	**Holdsworth Sta**	**1.03**	**51**	P	Pb	09 35 48.8	+0.6
KHZ	**Kahutara**	**1.10**	**218**	P	Pb	09 35 49.4	+0.1
TMWZ	**Te Maipa**	**1.17**	**68**	P	Pb	09 35 50.2	-0.3
THZ	**Tophouse**	**1.18**	**259**	P	Pb	09 35 51.0	+0.4
MRZ	**Mangatainoka R**	**1.23**	**44**	P	Pb	09 35 51.7	+0.2
TIWZ	**Tintock**	**1.33**	**55**	P	Pb	09 35 52.9	-0.3
CPWZ	**Castlepoint**	**1.47**	**65**	P	Pb	09 35 57.4	+1.8
OHWZ	**Ohakea**	**1.49**	**26**	P	Pb	09 35 57.2	+1.2
PRWZ	**Pori Road**	**1.52**	**50**	P	Pn	09 35 55.4	+0.8
POWZ	**Post Office Ro**	**1.53**	**41**	P	Pb	09 35 55.8	-0.7
BFZ	**Birch Farm**	**1.61**	**58**	P	Pn	09 35 55.8	-0.1
QRZ	**Quartz Range**	**1.62**	**296**	P	Pb	09 35 58.2	+0.1
GVZ	**Greta Valley S**	**1.77**	**216**	P	Pn	09 35 58.2	+0.2
DVHZ	**Dannevirke**	**1.80**	**47**	P	Pn	09 35 58.7	+0.2
WAZ	**Wanganui**	**1.84**	**13**	P	Pb	09 36 03.1	+1.3
TSZ	**Takapari Road**	**1.88**	**38**	P	Pn	09 36 00.4	+0.9
ANWZ	**Angora Road**	**1.88**	**55**	P	Pn	09 35 59.4	-0.1
DSZ	**Denniston Nort**	**1.99**	**263**	P	Pb	09 36 03.1	-1.4
LTZ	**Lake Taylor**	**2.04**	**232**	P	Pn	09 36 02.4	+0.7
LREZ	**Lake Rotokare**	**2.08**	**359**	P	Pb	09 36 07.5	+1.4
PRHZ	**Porangahau**	**2.09**	**53**	P	Pn	09 36 02.4	-0.1
PNHZ	**Pukenui**	**2.11**	**40**	P	Pn	09 36 03.3	+0.6
WPHZ	**Waipukurau**	**2.12**	**46**	P	Pn	09 36 03.2	+0.4
NMEZ	**Namu Road**	**2.18**	**348**	P	Pb	09 36 08.5	+0.9
PREZ	**Palmer Road**	**2.21**	**354**	P	Pb	09 36 09.3	+1.0
KHEZ	**Kahui Hut**	**2.27**	**351**	P	Pb	09 36 09.6	+0.3
MTVZ	**Mangateitei**	**2.30**	**20**	P	Pb	09 36 08.7	-1.0
NBEZ	**Newall Road No**	**2.32**	**349**	P	Pb	09 36 09.5	-0.6
PKVZ	**Pokaka**	**2.36**	**17**	P	Pb	09 36 09.6	-1.1
MOVZ	**Moawhango**	**2.36**	**25**	P	Pn	09 36 08.4	+2.2
DREZ	**Durham Road**	**2.36**	**355**	P	Pb	09 36 10.9	+0.1
PKE	**Pukeiti**	**2.38**	**351**	P	Pb	09 36 10.2	-0.9
PXZ	**Pawanui**	**2.38**	**51**	P	Pn	09 36 05.9	-0.5
BHHZ	**Black Hill Sta**	**2.40**	**31**	P	Pn	09 36 08.3	+1.6
KRHZ	**Kereru**	**2.40**	**38**	P	Pn	09 36 07.1	+0.4
OKCZ	**Okains Bay**	**2.40**	**205**	P	Pn	09 36 06.1	-0.7
DRZ	**Dome Shelter**	**2.42**	**21**	P	Pb	09 36 14.4	+2.4
WHVZ	**Whangaehu Hut**	**2.42**	**21**	P	Pb	09 36 09.8	-2.2
VRZ	**Vera Road**	**2.43**	**6**	P	Pb	09 36 12.1	+0.1
FWVZ	**Far West T-bar**	**2.44**	**21**	P	Pb	09 36 10.3	-2.0
TUVZ	**Tukino**	**2.46**	**22**	P	Pb	09 36 10.2	-2.3
OXZ	**Oxford**	**2.52**	**224**	P	Pb	09 36 14.1	+0.7
INZ	**Inchbonnie**	**2.52**	**241**	P	Pb	09 36 13.1	-0.4
NGZ	**Ngauruhoe**	**2.53**	**21**	P	Pb	09 36 11.3	-2.4
MQZ	**McQueen's Vall**	**2.53**	**211**	P	Pn	09 36 07.2	-1.3
KAHZ	**Kahuranaki**	**2.54**	**47**	P	Pn	09 36 08.4	-0.4
WTVZ	**West Tongariro**	**2.58**	**20**	P	Pb	09 36 13.6	-1.0
AKCZ	**Akaroa Harbour**	**2.58**	**205**	P	Pn	09 36 09.0	-0.3
TWVZ	**Taurewa**	**2.59**	**17**	P	Pb	09 36 14.5	-0.2
KWHZ	**Kaweka Forest**	**2.60**	**36**	P	Pn	09 36 10.5	+0.9
KRVZ	**Karewarewa**	**2.62**	**21**	P	Pb	09 36 14.5	-0.6
MCHZ	**McNeill Hill**	**2.71**	**40**	P	Pn	09 36 11.5	+0.5
KATZ	**Kakaramea**	**2.74**	**21**	P	Pb	09 36 18.1	+0.8
RITZ	**Rihia Road**	**2.79**	**23**	P	Pb	09 36 19.5	+1.5
BKZ	**Black Stump Fm**	**2.85**	**34**	P	Pn	09 36 13.4	+0.6
RATZ	**Rangitukua**	**2.86**	**21**	P	Pb	09 36 21.9	+2.5
ARHZ	**Aropaoanui**	**3.00**	**41**	P	Pn	09 36 15.0	0.0
WATZ	**Wairara**	**3.00**	**20**	P	Pb	09 36 23.6	+1.9
HIZ	**Hauiti**	**3.05**	**6**	P	Pb	09 36 20.0	-2.4
MRHZ	**Matea Rd**	**3.10**	**30**	P	Pn	09 36 17.0	+0.6
WHTZ	**Whakaora**	**3.10**	**22**	P	Pb	09 36 28.8	+5.3
WVZ	**Waitaha Valley**	**3.15**	**240**	P	Pb	09 36 23.0	-1.1
KUTZ	**Kaahu Road**	**3.23**	**20**	P	Pb	09 36 28.5	+2.8
MTHZ	**Maungataniwha**	**3.26**	**35**	P	Pn	09 36 19.5	+1.0
RAHZ	**Arahi**	**3.31**	**38**	P	Pb	09 36 33.7	+6.6
ALRZ	**Allen Road**	**3.32**	**27**	P	Pb	09 36 30.0	+2.9
TLZ	**Tolley Road**	**3.32**	**15**	P	Pb	09 36 24.8	-2.4
PRRZ	**Plateau Road**	**3.39**	**27**	P	Pb	09 36 30.4	+2.1
RTZ	**Ruatahuna**	**3.51**	**34**	P	Pn	09 36 24.6	+2.5
MUGZ	**Murupara**	**3.55**	**31**	P	Pn	09 36 24.9	+2.4
MUGZ	**Murupara**	**3.55**	**31**	P	Pb	09 36 36.9	+5.9
RRRZ	**Republican Roa**	**3.58**	**27**	P	Pb	09 36 35.0	+3.5
TARZ	**Mount Tarawera**	**3.67**	**26**	P	Pb	09 36 38.1	+5.0
NGRZ	**Ngongotaha**	**3.69**	**22**	P	Pb	09 36 37.8	+4.3
OMRZ	**Omania**	**3.74**	**24**	P	Pb	09 36 41.8	+7.5
KARZ	**Kaharoa**	**3.79**	**22**	P	Pb	09 36 39.7	+4.7
RIGZ	**Rimuhau**	**3.81**	**43**	P	Pn	09 36 25.8	-0.3
URZ	**Urewera**	**3.87**	**33**	P	Pb	09 36 37.4	+0.9
TOZ	**Tahuroa Road**	**3.90**	**12**	P	Pb	09 36 32.9	-4.0
FOZ	**Fox Glacier**	**3.96**	**238**	P	Pb	09 36 33.8	-4.1
MWZ	**Matawai**	**3.99**	**37**	P	Pn	09 36 28.3	-0.3
RUGZ	**Raukumara Rang**	**4.36**	**36**	P	Pn	09 36 34.5	+0.7
ODZ	**Otahua Downs**	**4.46**	**217**	P	Pn	09 36 34.7	-0.4
MKAZ	**Moumakai**	**4.47**	**7**	P	Pn	09 36 39.6	+4.5
AWAZ	**Awhitu Peninsu**	**4.48**	**2**	P	Pn	09 36 40.7	+5.4
PKGZ	**Pakihiroa**	**4.60**	**39**	P	Pn	09 36 37.0	0.0
ETAZ	**East Tamaki Re**	**4.60**	**5**	P	Pb	09 36 45.5	-3.5
WTAZ	**Waiatarua**	**4.61**	**1**	P	Pb	09 36 45.6	-3.5
WIAZ	**Waiheke Island**	**4.78**	**7**	P	Pn	09 36 45.2	+5.8
JCZ	**Jackson Bay**	**4.87**	**237**	P	Pn	09 36 46.0	+5.2
CTZ	**Chatham Island**	**6.94**	**111**	P	Pn	09 37 09.2	+0.1

ISCJB ***22*** *09:40:26.5±0.3, 38°.97N±0°.03×110°.42E±0°.05, h10^{km}, mb4.7/39, Error ellipse: s-maj=5.3km s-min=4.1km az=175.7*
IDC ***22*** *09:40:26.2±0.7, 38°.95N×110°.45E, h0^{km}, mb4.2/14, mb1 4.3/17, mb1mx4.1/45, mbtmp4.2/17, ML3.3/3, Error ellipse: s-maj=18.1km s-min=13.7km az=64.0*
NEIC ***22*** *09:40:28.3±1.5, 38°.89N×110°.35E, h10^{km}±2^{km}, mb4.4/24, Error ellipse: s-maj=14.9km s-min=13.5km az=118.0*
ISC 22 09:40:28.2±0.4**, 38°.90N**±0°.03×**110°.32E**±0°.04**, h10^{km}, n70,** σ1§**90**/84**, mb4.4**/39**, 1C, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	**Baotou**	**1.72**	**352**	*e*Pg	**Pb**	**09 41 00.3**	**+0.3**
BTO				Sg	**Sg**	**09 41 26.3**	**+2.8**
BTO				smax	smax		
	comp=N,2198µm,0.9s						
BTO				smax	smax		
	comp=E,2313µm,0.9s						
BJT	**Baijiatuau**	**4.66**	**74**	*e*Pn	**Pn**	**09 41 39.9**	**+1.2**
BJT				*e*Sn	**Sg**	**09 42 52.0**	**-5.9**
BJI	**Beijing**	**4.67**	**74**	Pg	**Pb**	**09 41 49.3**	**-1.0**
BJI				Sg	**Sb**	**09 42 50.4**	**+3.8**
BJI				smax	smax		
	comp=N,2µm,0.8s						
BJI				smax	smax		
	comp=E,860nm,1.8s						
XAN	**Xi'an**	**4.98**	**193**	*e*Pn	**Pn**	**09 41 43.6**	**+0.5**
XAN	**Xi'an**	**4.98**	**193**	Pn	**Pn**	**09 41 43.1**	**0.0**
XAN				Pg	**Pb**	**09 41 56.3**	**+0.8**
XAN				Sn	**Sn**	**09 42 47.0**	**+6.2**
XAN				Sg	**Sg**	**09 43 03.6**	**-4.6**
XAN				smax	smax		
	comp=N,200nm,1.1s						
XAN				smax	smax		
	comp=E,200nm,1.2s						
LZH	**Lanzhou**	**5.86**	**243**	*e*Pn	**Pn**	**09 41 56.3**	**+1.0**
LZH				Pg	**Pb**	**09 42 12.4**	**+1.7**
LZH				Sg	**Sg**	**09 43 29.6**	**-6.9**
LZH				smax	smax		
	comp=N,240nm,1.8s						
LZH				smax	smax		
	comp=E,240nm,1.6s						
LZH				LR	LR		
	comp=N,590nm,4.6s						
LZH				LR	LR		
	comp=E,740nm,5.7s						
LZH				LR	LR		
	comp=Z,410nm,6.5s						
TIA	**Tai'an**	**6.04**	**114**	Pn	**Pn**	**09 41 58.4**	**+0.8**
TIA				Pg	**Pb**	**09 42 16.0**	**+2.5**
TIA				Sg	**Sb**	**09 43 25.3**	**-0.5**
TIA				smax	smax		
	comp=N,55nm,1.0s						
TIA				smax	smax		
	comp=E,64nm,1.6s						
ENH	**Enshi**	**8.64**	**185**	*e*Pn	**Pn**	**09 42 35.0**	**+1.7**
WHN	**Wuhan**	**8.97**	**157**	*e*P	**Pn**	**09 42 40.3**	**+2.4**
WHN				S	**Sn**	**09 44 23.8**	**+4.8**
WHN				LR	LR		
	comp=N,790nm,4.8s						
WHN				LR	LR		
	comp=E,650nm,4.7s						
WHN				LR	LR		
	comp=Z,690nm,14.5s						
SONA0	**Songino Array**	**9.37**	**344**	*e*Pn	**Pn**	**09 42 43.3**	**-0.1**

SONA0				eSn	Sn	09 44 27.2	-1.8
SONA0				eLg	Lg	09 45 20.8	
SONM	Songino Array	9.37	344	Pn	Pn	09 42 43.3	-0.1
	comp=Z,0.4nm,0.3s,baz=164,slow=13,SNR=34						
SONM				Sn	Sn	09 44 27.2	-1.8
	comp=Z,0.3nm,0.3s,baz=146,slow=18,SNR=3.7						
SONM				Lg	Lg	09 45 20.8	
	comp=Z,0.8nm,0.3s,baz=164,slow=27,SNR=9.1						
GYA	Guiyang	12.78	195	⇑iP	Pn	09 43 31.8	+1.6
GYA				S	Sn	09 45 50.3	-2.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				LR	LR		
	comp=N,320nm,16.2s						
GYA				LR	LR		
	comp=E,100nm,6.4s						
GYA				LR	LR		
	comp=Z,380nm,12.8s						
KS15	Wonju Array Si	13.90	91	ePn	Pn	09 43 44.5	-0.8
KSRS	Korea Array	13.93	90	Pn	Pn	09 43 44.5	-1.2
	comp=Z,0.2nm,0.3s,baz=283,slow=11,SNR=5.3						
WMQ	Urumqi	17.66	293	eP	P	09 44 36.1	+0.8
LSA	Lhasa	18.27	246	ePn	P	09 44 42.8	+0.2
	comp=Z,20nm,0.9s						
SLVN	Son La	18.36	199	ePn	P	09 44 43.1	+0.1
	comp=Z,7.4nm,0.8s						
KLR	Kul'dur	18.48	49	P	P	09 44 42.2	-1.9
	comp=Z,0.1nm,0.3s,baz=255,slow=13,SNR=4.3						
KLR				Lg	Lg	09 50 08.9	
	comp=Z,0.1nm,0.3s,baz=346,slow=19,SNR=1.8						
PAYA	Payao	21.47	208	P	P	09 45 18.3	+1.3
	comp=Z,46µm,0.8s						
NONG	Nongkai	21.68	199	P	P	09 45 19.7	+0.5
	comp=Z,0.7nm,1.0s						
MK31	Makanchi Array	21.93	300	eP	P	09 45 22.1	+0.4
	comp=Z,15nm,0.9s						
MK32	Makanchi Array	21.93	300	eP	P	09 45 22.1	+0.4
MKAR	Makanchi Array	21.93	300	P	P	09 45 22.1	+0.4
	comp=Z,13nm,0.8s,baz=98,slow=12,SNR=68						
MAKZ	Makanchi	22.14	300	eP	P	09 45 24.8	+0.8
	comp=Z,24nm,0.9s						
PANO	Nakornpanom	22.24	195	P	P	09 45 27.3	+2.1
	comp=Z,0.3nm,1.1s						
CMMT	Chiang Mai	22.32	209	P	P	09 45 26.3	+0.2
	comp=Z,6.0nm,1.1s						
CHTO	Chiang Mai	22.32	209	eP	P	09 45 26.2	+0.2
	comp=Z,11nm,1.0s						
LAMP	Lampang	22.33	208	P	P	09 45 28.0	+1.8
	comp=Z,49µm,0.8s						
CM31	Chiang Mai Arr	22.64	209	eP	P	09 45 30.2	+0.6
	comp=Z,34nm,1.0s						
CMAR	Chiang Mai Arr	22.64	209	P	P	09 45 29.6	+0.1
	comp=Z,18nm,0.9s,baz=14,slow=9.1,SNR=65						
UTTA	Uttaradit	22.73	205	P	P	09 45 30.9	+0.5
	comp=Z,27µm,0.9s,comp=Z,247µm						
ZALV	Zalesovo Beam	22.96	319	P	P	09 45 32.0	-0.5
	comp=Z,1.2nm,0.3s,baz=116,slow=9.9,SNR=6.1						
JIRN	Jiri	23.01	248	eP	P	09 45 34.6	+0.9
	comp=Z,74nm,0.8s						
GUN	Gumba	23.09	249	eP	P	09 45 35.3	+0.8
	comp=Z,106nm,1.0s						
KKN	Kakani	23.59	250	eP	P	09 45 39.5	0.0
	comp=Z,31nm,0.7s						
PKI	Pulchoki	23.62	249	eP	P	09 45 39.3	-0.6
	comp=Z,40nm,1.0s						
PKIN	Phulchoki	23.63	249	eP	P	09 45 39.8	-0.1
	comp=Z,22nm,0.8s						
CHAI	Chaiyaphum	24.05	200	P	P	09 45 43.2	-0.4
	comp=Z,29µm,0.8s						
DANN	Dangsing	24.41	252	eP	P	09 45 47.7	+0.5
	comp=Z,85nm,0.8s						
KOLN	Koldanda	24.84	251	eP	P	09 45 50.2	-0.9
	comp=Z,23nm,0.5s						
UTHA	Uthaitani	25.14	205	P	P	09 45 55.2	+1.7
	comp=Z,25µm,0.9s						
KURK	Kurchatov	25.20	308	eP	P	09 45 54.1	+0.3
	comp=Z,14nm,0.9s						
KURBB	Kurchatov Arra	25.23	308	P	P	09 45 54.4	+0.3
	comp=Z,3.7nm,0.9s,baz=106,slow=10,SNR=22						
KDJ	Kajisay	25.31	288	eP	P	09 45 56.4	+1.3
	comp=Z,10.0nm,1.0s						
BOOM	Boomskoye usch	26.20	289	eP	P	09 46 06.8	+3.5
	comp=Z,3.6nm,0.8s						
NRN	Naryn	26.25	287	eP	P	09 46 07.8	+3.9
	comp=Z,5.5nm,0.8s						
KK31	Karatay Array	30.13	291	eP	P	09 46 39.1	+1.0
	comp=Z,5.4nm,1.0s						
TIXI	Tiksi	34.15	10	P	P	09 47 12.2	-0.8
	comp=Z,5.2nm,0.9s,baz=226,slow=8.3,SNR=5.4						
TIXI	Tiksi	34.15	10	eP	P	09 47 12.6	-0.5
	comp=Z,8.7nm,1.0s						
GEYT	Alibeck	40.45	286	P	P	09 48 07.5	+0.6
	comp=Z,21nm,1.0s,baz=46,slow=12,SNR=5.9						
AKASG	Malin Array Be	55.98	311	P	P	09 50 06.3	-0.3
	comp=Z,2.0nm,0.8s,baz=58,slow=7.0,SNR=4.8						
AKBB	Malin Array Si	55.98	311	eP	P	09 50 06.3	-0.3
	comp=Z,3.7nm,0.9s						
BR101	Keskin Array S	57.53	297	eP	P	09 50 18.1	0.0
BR131	Keskin Array S	57.53	297	eP	P	09 50 18.8	+0.8
	comp=Z,4.1nm,0.8s						
BRTR	Keskin Array B	57.53	297	P	P	09 50 18.1	0.0
	comp=Z,3.1nm,0.8s,baz=81,slow=6.4,SNR=12						
CAST	Castle Rocks	59.19	31	eP	P	09 50 29.6	+0.5
	comp=Z,3.0nm,0.9s						
BPAW	Bear Paw Mtn.	59.33	30	eP	P	09 50 30.5	+0.4
	comp=Z,5.3nm,1.2s						
KTH	Kantishna Hill	59.60	31	eP	P	09 50 32.7	+0.8
	comp=Z,9.5nm,1.0s						
ILAR	Eielson Array	60.59	29	P	P	09 50 37.4	-1.2
	comp=Z,1.2nm,1.0s,baz=292,slow=6.8,SNR=9.8						
PRP	Porcupine Dome	60.73	28	eP	P	09 50 40.8	+1.1
	comp=Z,3.3nm,1.0s						
NB200	NORSAR Array S	60.90	327	eP	P	09 50 39.6	-1.2
NOA	NORSAR Array B	60.90	327	P	P	09 50 39.6	-1.2
	comp=Z,1.2nm,0.9s,baz=64,slow=6.9,SNR=3.3						
SCRK	Sand Creek	62.09	29	eP	P	09 50 48.2	-0.7
	comp=Z,3.8nm,1.0s						
WR1	Warramunga Arr	62.71	154	eP	P	09 50 52.6	-0.8
WRA	Warramunga Arr	62.71	154	P	P	09 50 52.6	-0.8
	comp=Z,6.5nm,0.9s,baz=339,slow=8.1,SNR=11						
INK	Inuvik	63.08	22	eP	P	09 50 56.0	+0.7
	comp=Z,4.8nm,1.1s						
AS31	Alice Springs	66.04	156	eP	P	09 51 15.0	-0.2
	comp=Z,1.2nm,0.9s						
ASAR	Alice Springs	66.05	156	P	P	09 51 14.8	-0.4
	comp=Z,3.5nm,0.8s,baz=334,slow=5.4,SNR=24						
YKA	Yellowknife Ar	72.70	20	P	P	09 51 54.9	-1.0
	comp=Z,0.8nm,0.7s,baz=323,slow=5.5,SNR=3.2						
ESDC	Sonseca Array	81.37	315	P	P	09 52 45.3	+0.1
	comp=Z,0.5nm,0.5s,baz=44,slow=4.1,SNR=4.7						

NIED ***22*** *09:45:00, 38°.30N×141°.70E, h53^{km}, Mw4.1 Best double couple: $M_0$1.51000×10^{15} NP1:ϕ_s307.00000°, δ24.00000°, λ-145.00000°. NP2:ϕ_s185.00000°, δ77.00000°, λ-70.00000°.*

ISCJB ***22*** *09:45:22.2±0.6, 38°.31N±0°.03×141°.75E±0°.06, h55^{km}±4^{km}, mb3.9/13, Error ellipse: s-maj=8.6km s-min=4.4km az=20.2*

JMA ***22*** *09:45:23.3±0.1, 38°.33N×141°.70E, h52^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s197.00000°, δ87.00000°, λ-78.00000°. NP2: ϕ_s299.00000°, δ13.00000°, λ-168.00000°. Principal axes: T Plg41.0000°, Azm276.0000°; N Plg12.0000°, Azm17.0000°; P Plg46.0000°, Azm120.0000°;*

JMA Felt II J1.

IDC ***22*** *09:45:23.4±2.1, 38°.25N×141°.73E, h51^{km}±19^{km}, mb3.7/13, mb1 3.9/18, mb1mx3.8/42, mbtmp4.0/18, ML3.7/5, MS3.2/4, Ms1 3.2/4, ms1mx2.9/31 Error ellipse: s-maj=18.2km s-min=12.3km az=86.0*

ISC 22 09:45:23.2±1.0**, 38°.31N**±0°.04×**141°.78E**±0°.07**, h47**^{km}±7^{km}**, n41, σ1ˢ.10**/53**, mb3.9**/13**, 3C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.24	271	⇓P	Pn	09 45 31.7	+0.1
JIKH				S	Sn	09 45 37.6	+0.1
JIO	Ouri	0.37	294	⇓P	Pn	09 45 32.7	-0.1
JIO				S	Sn	09 45 39.0	-0.6
JKMT	Kesennumamotoy	0.56	335	⇓P	Pn	09 45 34.8	-0.2
JKMT				iS	Sn	09 45 42.7	-0.8
JOFO	Osakifurukawao	0.74	294	⇓P	Pn	09 45 37.0	-0.4
JOFO				S	Sn	09 45 47.3	-0.3
JMK	Ichinoseki	0.78	326	⇓P	Pn	09 45 37.6	-0.3
JMK				S	Sn	09 45 47.7	-0.8
OFUJ	Ofunato	0.78	354	⇓P	Pn	09 45 37.6	-0.3
OFUJ				S	Sn	09 45 47.7	-0.9
JOU	Okura	0.88	274	⇓P	Pn	09 45 38.7	-0.5
JOU				S	Sn	09 45 49.8	-1.1
JMM	Marumori	0.89	241	⇓P	Pn	09 45 38.7	-0.7
JMM				S	Sn	09 45 49.5	-1.8
JFK	Kawauchi	1.18	217	⇑P	Pn	09 45 43.0	-0.4
JFK				S	Sn	09 45 57.3	-1.0
JOM	Ohasama	1.22	342	⇓P	Pn	09 45 43.7	-0.3
JOM				S	Sn	09 45 58.9	-0.5
JYK	Kaneyama	1.27	299	⇓P	Pn	09 45 43.9	-0.6
JYK				S	Sn	09 45 59.4	-1.0
JYS	Shirataka	1.35	267	⇑P	Pn	09 45 45.3	-0.3
JYS				S	Sn	09 46 01.5	-0.9
JFT	Otama	1.38	236	⇑P	Pn	09 45 46.0	-0.1
JFT				S	Sn	09 46 02.4	-0.9
JRG	Rokugo	1.41	321	P	Pn	09 45 46.3	-0.1
JRG				S	Sn	09 46 04.3	+0.5
MAT	Matsushiro	3.34	239	P	Pn	09 46 14.2	+1.2
MAT				S	Sn	09 46 50.9	-0.5
MJAR	Matsushiro Arr	3.34	239	P	Pn	09 46 14.0	+1.0
	2.1nm,0.3s,baz=38,slow=12,SNR=91						
MJAR				S	Sn	09 46 54.7	+3.3
	0.7nm,0.3s,baz=121,slow=33,SNR=4.1						
MJAR				LR	LR	09 47 49.3	
	comp=Z,247nm,19.8s,baz=120,slow=45						
JHJ	Hachijo jima 2	5.42	198	P	Pn	09 46 41.2	-0.4
	28nm,0.3s,baz=273,slow=22,SNR=17						
JHJ				S	Sn	09 47 40.4	-2.3
	35nm,0.3s,baz=58,slow=23,SNR=8.3						
ASAJ	Asahikawa	5.84	6	P	Pn	09 46 46.5	-0.6
	2.5nm,0.3s,baz=208,slow=12,SNR=16						
ASAJ				S	Sn	09 47 51.1	-1.6
	1.4nm,0.3s,baz=162,slow=20,SNR=2.8						
USRK	Ussuriysk Ar.	9.43	312	P	Pn	09 47 36.9	+0.6
	2.5nm,0.3s,baz=130,slow=13,SNR=19						
USRK				LR	LR	09 50 47.2	
	comp=Z,225nm,19.9s,baz=197,slow=34						
JNU	Nakatsue	10.26	243	P	Pn	09 47 50.7	+2.9
	0.5nm,0.3s,baz=114,slow=3.7,SNR=6.6						
JNU				LR	LR	09 51 33.3	
	comp=Z,181nm,20.6s,baz=10.0,slow=36						
KSRS	Korea Array	10.98	270	P	Pn	09 47 59.6	+1.9
	0.5nm,0.3s,baz=82,slow=13,SNR=4.8						
KSRS				LR	LR	09 51 18.2	
	comp=Z,70nm,21.3s,baz=40,slow=32						
SONM	Songino Array	27.34	302	P	P	09 51 04.9	+1.2
	0.8nm,0.3s,baz=101,slow=7.5,SNR=4.0						
H11N2	WAKE ISLAND Hy	28.58	123	T	T	10 21 28.8	
	baz=316,slow=76,SNR=1164						
H11N1	WAKE ISLAND Hy	28.59	123	T	T	10 21 29.4	
	baz=316,slow=76,SNR=967						
H11N3	WAKE ISLAND Hy	28.60	123	T	T	10 21 30.1	
	baz=316,slow=76,SNR=776						
H11S1	WAKE ISLAND Hy	29.33	125	T	T	10 22 31.6	
	baz=318,slow=76,SNR=341						
H11S3	WAKE ISLAND Hy	29.34	125	T	T	10 22 25.1	
	baz=318,slow=76,SNR=449						
H11S2	WAKE ISLAND Hy	29.35	125	T	T	10 22 26.4	
	baz=318,slow=76,SNR=479						
ZALV	Zalesovo Beam	41.28	311	P	P	09 53 02.5	-1.1
	1.1nm,0.3s,baz=85,slow=8.9,SNR=3.7						
MKAR	Makanchi Array	43.70	301	P	P	09 53 22.0	-1.4
	1.6nm,0.8s,baz=94,slow=9.0,SNR=7.4						
KURBB	Kurchatov Arra	45.45	307	P	P	09 53 36.1	-1.3
	4.3nm,0.7s,baz=82,slow=8.3,SNR=17						
ILAR	Eielson Array	48.27	33	P	P	09 53 58.6	-0.6
	0.7nm,0.7s,baz=261,slow=6.8,SNR=7.6						
BVAR	Borovoye Array	49.94	312	P	P	09 54 10.6	-1.4
	0.5nm,0.4s,baz=91,slow=7.0,SNR=3.2						
WRA	Warramunga Arr	58.36	188	P	P	09 55 12.6	-1.1
	2.8nm,0.6s,baz=359,slow=7.7,SNR=18						
ASAR	Alice Springs	62.09	188	P	P	09 55 38.5	-0.6
	1.5nm,0.7s,baz=6.8,slow=4.8,SNR=21						
NOA	NORSAR Array B	73.12	337	P	P	09 56 49.6	+1.3
	0.3nm,0.6s,baz=56,slow=5.3,SNR=2.4						
AKASG	Malin Array Be	73.47	322	P	P	09 56 50.6	+0.1
	0.3nm,0.3s,baz=47,slow=6.9,SNR=8.0						
NVAR	Mina Array Bea	74.00	54	P	P	09 56 54.6	+0.5
	0.4nm,0.6s,baz=297,slow=6.6,SNR=4.0						
PDAR	Pinedale Array	76.57	46	P	P	09 57 09.1	+0.2
	1.2nm,0.5s,baz=273,slow=0.8,SNR=17						
TXAR	Lajitas Array	89.12	53	P	P	09 58 14.2	+0.3
	0.9nm,0.6s,baz=301,slow=3.8,SNR=16						
LPAZ	La Paz	145.79	58	PKPbc	PKPdf	10 04 57.6	-0.2
	1.9nm,0.7s,baz=350,slow=2.6,SNR=9.3						

MEX 22 10:02:09.3±0.6**, 17°.57N×95°.52W, h68**^{km}±11^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.77	128	eP	Pn	10 02 24.1	-0.9
CMIG				eS	Sn	10 02 34.5	-2.1
VHO	Vista Hermosa	1.26	247	iP	Pn	10 02 29.4	-1.8
VHO				iS	Sn	10 02 46.2	-1.3
HUIG	Huatulco	1.88	197	iP	Pn	10 02 37.5	-1.8
HUIG				iS	Sn	10 03 00.6	-1.4
TGIG		2.43	109	iP	Pn	10 02 46.3	-0.4
TGIG				iS	Sn	10 03 13.8	-1.6
PCIG		2.88	130	iP	Pn	10 02 51.2	-1.7
PCIG				iS	Sn	10 03 24.6	-1.9
CCIG	Comitan	3.48	111	iP	Pn	10 03 00.3	-1.0
CCIG				iS	Sn	10 03 39.9	-1.6

IDC ***22*** *10:03:11.8±1.5, 41°.79S×174°.05E, h0^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.9/21, mbtmp4.0/4, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.7/16, Error ellipse: s-maj=42.2km s-min=17.2km az=132.0*

ISCJB ***22*** *10:03:12.8±0.3, 41°.74S±0°.02×174°.31E±0°.03, h18^{km}±3^{km}, mb4.0/3, Error ellipse: s-maj=4.5km s-min=2.4km az=137.1*

NEIC ***22*** *10:03:12.0±0.0, 41°.67S×174°.25E, h13^{km}, ML4.5(WEL), After WEL.*

WEL ***22*** *10:03:12.5, 42°S±1°×17°4E±°, h13^{km}±2^{km}, M4.5/12, ML4.8/6, MLv4.5/12, Error ellipse: s-maj=0.0km s-min=0.0km az=146.1*

ISC 22 10:03:12.8±0.8**, 41°.70S**±0°.03×**174°.25E**±0°.02**, h16**^{km}±5^{km}**, n153, σ1ˢ.57**/164**, mb4.0**/3**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.06	208	P	Pg	10 03 15.9	+0.1
CMWZ				S	Sg	10 03 18.5	+0.7
BSWZ	Blackbirch Sta	0.28	266	P	Pb	10 03 19.1	-0.4
BSWZ				S	Sb	10 03 23.8	-0.2
TUWZ	Tuamarina	0.35	319	P	Pb	10 03 19.9	-0.8
TUWZ				S	Sb	10 03 25.1	-1.0
TCW	Tory Channel	0.49	2	P	Pb	10 03 21.9	-1.1
TCW				S	Sg	10 03 28.2	-0.8
SNZO	South Karori	0.52	42	ePg	Pb	10 03 22.9	-0.6
BHW	Baring Head	0.55	58	P	Pb	10 03 23.7	-0.3
WEL	Wellington	0.57	43	P	Pb	10 03 23.9	-0.5
WEL				S	Sb	10 03 31.9	-0.3
PLWZ	Palliser	0.76	81	P	Pb	10 03 28.4	+0.7
MSWZ	Moikau Station	0.80	70	P	Pb	10 03 28.6	+0.3
NNZ	Nelson	0.81	306	P	Pb	10 03 28.1	-0.4
CAW	Cannon Point	0.85	46	P	Pb	10 03 28.8	-0.4
KHZ	Kahutara	0.89	216	ePg	Pn	10 03 31.4	+0.7
KHZ				eSg	Sn	10 03 42.9	-0.4
KHZ	Kahutara	0.89	216	P	Pn	10 03 31.6	+0.9
DUWZ	D'Urville Isla	0.93	344	P	Pb	10 03 29.8	-0.8
PAWZ	Paruwai Farm	0.94	71	P	Pb	10 03 31.1	+0.4
THZ	Tophouse	1.01	266	ePg	Pn	10 03 31.7	-0.7
THZ				eSg	Sn	10 03 45.6	-0.7
MTW	Mount Morrison	1.08	61	P	Pn	10 03 33.4	0.0
OGWZ	Otaki Gorge	1.12	39	P	Pg	10 03 33.3	-1.1
TRWZ	Traveller	1.12	75	P	Pg	10 03 33.6	-0.8
HOWZ	Holdsworth Sta	1.24	50	P	Pn	10 03 35.6	0.0
TMWZ	Te Maipa	1.37	65	P	Pn	10 03 36.9	-0.4
MRZ	Mangatainoka R	1.44	45	P	Pn	10 03 38.5	+0.2
TIWZ	Tintock	1.54	54	P	Pn	10 03 39.9	+0.2
GVZ	Greta Valley S	1.56	215	P	Pb	10 03 40.6	-0.8
QRZ	Quartz Range	1.56	303	ePn	Pg	10 03 41.6	-1.2
QRZ				eSn	Sg	10 04 01.8	-1.3
QRZ	Quartz Range	1.56	303	P	Pb	10 03 40.3	-1.1
CPWZ	Castlepoint	1.67	63	P	Pb	10 03 42.6	-0.5
OHWZ	Ohakea	1.69	29	P	Pb	10 03 43.7	+0.1
PRWZ	Pori Road	1.73	49	P	Pn	10 03 42.1	-0.1
POWZ	Post Office Ro	1.74	42	P	Pn	10 03 42.4	+0.1
BFZ	Birch Farm	1.81	57	ePn	Pn	10 03 42.7	-0.7
BFZ	Birch Farm	1.81	57	P	Pn	10 03 42.5	-0.9
LTZ	Lake Taylor	1.83	233	ePn	Pb	10 03 44.6	-1.3
LTZ	Lake Taylor	1.83	233	P	Pb	10 03 44.6	-1.3
AMCZ	Amberley	1.90	218	P	Pb	10 03 45.6	-1.4
DVHZ	Dannevirke	2.01	47	P	Pn	10 03 45.5	-0.7
WAZ	Wanganui	2.02	16	P	Pb	10 03 48.9	-0.2
ANWZ	Angora Road	2.09	54	P	Pn	10 03 46.5	-0.6
TSZ	Takapari Road	2.09	39	P	Pn	10 03 47.1	-0.1
OKCZ	Okains Bay	2.21	203	P	Pn	10 03 48.7	-0.2
CRLZ	Canterbury Las	2.23	212	ePn	Pn	10 03 49.4	+0.3
CRLZ	Canterbury Las	2.23	212	P	Pn	10 03 50.1	+1.0
LREZ	Lake Rotokare	2.24	3	P	Pb	10 03 52.4	-0.4
NMEZ	Namu Road	2.30	353	P	Pb	10 03 53.4	-0.5
PRHZ	Porangahau	2.30	52	P	Pn	10 03 49.1	-1.0
OXZ	Oxford	2.31	224	ePn	Pn	10 03 50.0	-0.3
OXZ	Oxford	2.31	224	P	Pn	10 03 49.9	-0.3
PNHZ	Pukenui	2.31	40	P	Pn	10 03 49.9	-0.4
INZ	Inchbonnie	2.33	243	P	Pn	10 03 51.5	+1.1
WPHZ	Waipukurau	2.33	46	P	Pn	10 03 50.0	-0.5
MQZ	McQueen's Vall	2.33	210	ePn	Pn	10 03 49.4	-1.1
MQZ	McQueen's Vall	2.33	210	P	Pn	10 03 49.5	-1.0
PREZ	Palmer Road	2.35	358	P	Pb	10 03 54.8	0.0
AKCZ	Akaroa Harbour	2.39	204	P	Pn	10 03 51.3	0.0
KHEZ	Kahui Hut	2.41	356	P	Pb	10 03 54.5	-1.3
NBEZ	Newall Road No	2.44	353	P	Pb	10 03 54.2	-2.1
MTVZ	Mangateitei	2.49	22	P	Pb	10 03 56.2	-1.0
DREZ	Durham Road	2.50	359	P	Pb	10 03 56.0	-1.4
PKE	Pukeiti	2.51	355	P	Pb	10 03 55.1	-2.4
PKVZ	Pokaka	2.54	20	P	Pb	10 03 55.9	-2.3
MOVZ	Moawhango	2.56	27	P	Pn	10 03 54.4	+0.7
PXZ	Pawanui	2.59	51	P	Pn	10 03 52.7	-1.4
VRZ	Vera Road	2.60	9	P	Pb	10 03 56.9	-2.1
BHHZ	Black Hill Sta	2.60	33	P	Pn	10 03 54.8	+0.5
KRHZ	Kereru	2.61	39	P	Pn	10 03 53.7	-0.6
DRZ	Dome Shelter	2.62	23	P	Pb	10 03 59.6	+0.1
MHEZ	Mangahewa	2.62	1	P	Pb	10 03 59.5	+0.1
WHVZ	Whangaehu Hut	2.62	23	P	Pn	10 03 56.2	+1.5
FWVZ	Far West T-bar	2.63	23	P	Pn	10 03 56.6	+1.7
TUVZ	Tukino	2.65	24	P	Pn	10 03 56.5	+1.4
NGZ	Ngauruhoe	2.72	23	P	Pn	10 03 57.7	+1.6
KAHZ	Kahuranaki	2.75	47	P	Pn	10 03 55.3	-1.1
WTVZ	West Tongariro	2.77	22	P	Pn	10 03 58.5	+1.8
TWVZ	Taurewa	2.77	19	P	Pn	10 03 58.9	+2.1
KRVZ	Karewarewa	2.81	23	P	Pn	10 03 59.1	+1.9
KWHZ	Kaweka Forest	2.81	37	P	Pn	10 03 57.0	-0.2
MCHZ	McNeill Hill	2.92	40	P	Pn	10 03 58.0	-0.6
KATZ	Kakaramea	2.93	23	P	Pb	10 04 02.6	-2.2
WVZ	Waitaha Valley	2.94	241	P	Pn	10 04 00.4	+1.4
RITZ	Rihia Road	2.98	25	P	Pb	10 04 03.2	-2.4
BKZ	Black Stump Fm	3.05	35	ePn	Pn	10 03 59.7	-0.8
BKZ	Black Stump Fm	3.05	35	P	Pn	10 03 60.0	-0.5
RATZ	Rangitukua	3.06	23	P	Pb	10 04 03.8	-3.0
RPZ	Rata Peaks	3.10	228	Pn	Pn	10 04 00.6	-0.6
	8.7nm,0.3s,baz=81,slow=3.1,SNR=16						
RPZ				Pg	Pg	10 04 09.5	-2.7
	71nm,0.3s,baz=287,slow=3.0,SNR=110						
RPZ				Sn	Sn	10 04 37.0	-1.0
	18nm,0.3s,baz=153,slow=23,SNR=8.1						
RPZ				LR	LR	10 04 43.8	
	comp=Z,164nm,18.4s,baz=344,slow=31						
RPZ				Lg	Lg	10 04 45.3	
	36nm,0.3s,baz=125,slow=22,SNR=3.6						
RPZ	Rata Peaks	3.10	228	ePn	Pn	10 04 01.4	+0.3
RPZ	Rata Peaks	3.10	228	P	Pn	10 04 01.4	+0.3
WATZ	Wairara	3.19	21	P	Pb	10 04 08.6	-0.6
ARHZ	Aropaoanui	3.21	42	P	Pn	10 04 02.8	+0.2
HIZ	Hauiti	3.21	8	ePn	Pn	10 04 05.5	+2.8
HIZ	Hauiti	3.21	8	P	Pn	10 04 04.7	+2.1
MRHZ	Matea Rd	3.31	31	P	Pn	10 04 03.3	-0.7
KUTZ	Kaahu Road	3.42	21	P	Pb	10 04 12.8	-0.3
MTHZ	Maungataniwha	3.46	36	P	Pn	10 04 05.4	-0.8
TLZ	Tolley Road	3.50	17	P	Pn	10 04 09.4	+2.7
ALRZ	Allen Road	3.52	28	P	Pn	10 04 06.6	-0.3
RAHZ	Arahi	3.52	39	P	Pn	10 04 08.1	+1.2
PRRZ	Plateau Road	3.59	28	P	Pb	10 04 14.9	-1.1
RTZ	Ruatahuna	3.72	35	P	Pn	10 04 10.5	+0.8
KNZ	Kokohu	3.74	46	P	Pn	10 04 09.1	-0.7
SNGZ	Shannon Statio	3.75	40	P	Pn	10 04 09.9	-0.2
FOZ	Fox Glacier	3.75	239	ePn	Pn	10 04 11.5	+1.4
FOZ	Fox Glacier	3.75	239	P	Pn	10 04 12.1	+2.1
MHGZ	Mahia Peninsul	3.77	49	P	Pn	10 04 12.3	+1.9
TARZ	Mount Tarawera	3.87	27	P	Pn	10 04 14.0	+2.3
PRGZ	Paritu Road	3.92	46	P	Pn	10 04 11.9	-0.6
LBZ	Lake Benmore	4.01	227	ePn	Pn	10 04 13.8	+0.2
LBZ	Lake Benmore	4.01	227	P	Pn	10 04 15.2	+1.5
RIGZ	Rimuhau	4.02	43	P	Pn	10 04 12.2	-1.5
URZ	Urewera	4.08	34	Pn	Pn	10 04 12.6	-1.9
	2.7nm,0.3s,baz=235,slow=3.7,SNR=15						
URZ				Pg	Pg	10 04 29.1	-1.7
	16nm,0.3s,baz=219,slow=9.6,SNR=19						
URZ				Sn	Sn	10 05 00.2	-1.7
	16nm,0.3s,baz=262,slow=20,SNR=5.5						
URZ				Lg	Lg	10 05 12.0	
	15nm,0.3s,baz=281,slow=17,SNR=3.7						
URZ	Urewera	4.08	34	ePn	Pn	10 04 13.7	-0.8
URZ	Urewera	4.08	34	P	Pn	10 04 14.1	-0.4
TOZ	Tahuroa Road	4.08	14	P	Pn	10 04 17.1	+2.5
ODZ	Otahua Downs	4.25	217	ePn	Pn	10 04 16.1	-0.9
ODZ	Otahua Downs	4.25	217	P	Pn	10 04 16.3	-0.7
TKGZ	Te Karaka	4.27	41	P	Pn	10 04 16.2	-0.9
RUGZ	Raukumara Rang	4.56	36	P	Pn	10 04 20.4	-1.0
KBAZ	Karaka Road Bo	4.62	6	P	Pn	10 04 25.9	+3.9
AWAZ	Awhitu Peninsu	4.64	4	P	Pn	10 04 25.1	+2.9
MKAZ	Moumakai	4.64	9	P	Pn	10 04 24.2	+1.9
JCZ	Jackson Bay	4.67	238	P	Pn	10 04 25.0	+2.3
PUZ	Puketiti	4.75	42	P	Pn	10 04 22.8	-1.0
WTAZ	Waiatarua	4.76	3	P	Pn	10 04 27.2	+3.2
ETAZ	East Tamaki Re	4.76	7	P	Pn	10 04 27.2	+3.2
HAZ	Te Kaha	4.79	36	P	Pn	10 04 23.2	-1.0
PKGZ	Pakihiroa	4.81	39	P	Pn	10 04 24.4	-0.3
RVAZ	Riverhead Bore	4.93	3	P	Pn	10 04 29.1	+2.9
WKZ	Wanaka	4.94	229	ePn	Pn	10 04 29.7	+3.3
WKZ	Wanaka	4.94	229	P	Pn	10 04 30.8	+4.4
WIAZ	Waiheke Island	4.94	8	P	Pn	10 04 29.5	+3.1
MBAZ	Motutapu North	4.95	6	P	Pn	10 04 29.8	+3.3
WMGZ	Waiomatatini S	5.03	41	P	Pn	10 04 30.4	+2.8
KUZ	Kuaotunu	5.07	13	P	Pn	10 04 31.8	+3.6
MXZ	Matakaoa Point	5.18	38	ePn	Pn	10 04 28.2	-1.5
TUZ	Tuapeka	5.41	217	P	Pn	10 04 37.3	+4.4
MSZ	Milford Sound	5.50	235	P	Pb	10 04 41.1	-7.3
WCZ	Waipu Caves	5.75	1	P	Pn	10 04 40.9	+3.4
MLZ	Mavora Lakes	5.77	228	ePn	Pn	10 04 38.5	+0.7
SYZ	Scrubby Hill	6.08	216	P	Pn	10 04 44.2	+2.3
WHZ	Wether Hill Ro	6.20	225	ePn	Pn	10 04 44.1	+0.5
OUZ	Omahuta	6.49	355	ePn	Pn	10 04 49.1	+1.5
OUZ	Omahuta	6.49	355	P	Pn	10 04 50.3	+2.7
APZ	The Paps	6.82	219	P	Pn	10 04 56.8	+4.5
CTZ	Chatham Island	7.03	110	P	Pn	10 04 54.4	-0.6
ASAR	Alice Springs	38.02	285	P	P	10 10 29.9	-0.5
	0.6nm,0.5s,baz=124,slow=7.5,SNR=11						
WB2	Warramunga Arr	40.08	290	eP	P	10 10 47.4	-0.2
WR1	Warramunga Arr	40.09	290	eP	P	10 10 48.0	+0.3
WRA	Warramunga Arr	40.09	290	P	P	10 10 47.9	+0.3
	1.9nm,0.6s,baz=129,slow=7.6,SNR=12						
QSPA	South Pole Qui	48.43	180	eP	P	10 11 55.8	+1.6
KSRS	Korea Array	89.41	325	P	P	10 16 11.3	+2.8
	1.3nm,0.8s,baz=147,slow=5.5,SNR=4.5						
ARA0	ARCESS Array S	147.73	340	ePKPbc	PKiKP	10 22 57.5	-0.1
ARCES	ARCESS Array B	147.73	340	PKPbc	PKiKP	10 22 57.5	-0.1
	1.2nm,0.7s,baz=23,slow=4.0,SNR=4.1						
TORD	Torodi Ar. Bea	150.83	195	PKPbc	PKPbc	10 23 05.0	+0.1
	0.9nm,0.7s,baz=149,slow=2.2,SNR=10						
TOA1	Torodi Ar. Sit	150.83	195	ePKPbc	PKPbc	10 23 05.0	+0.1

ISCJB ***22*** *10:34:02.0±0.4, 39°.70N±0°.02×28°.57E±0°.03, h1^{km}±5^{km}, Error ellipse: s-maj=4.2km s-min=3.2km az=42.4*

ISK ***22*** *10:34:01.1, 39°.70N×28°.54E, h5^{km}, ML2.4/19*

DDA ***22*** *10:34:01.5, 39°.72N×28°.57E, h7^{km}±3^{km}, ML2.7*

ISC 22 10:34:02.0±0.9**, 39°.71N**±0°.02×**28°.56E**±0°.02**, h10**^{km}±8^{km}**, n32, σ0ˢ.38**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DURS	Dursunbey	0.13	211	iP	Pg	10 34 05.3	+0.2
DURS				iS	Sg	10 34 07.3	+0.1
BALB	Balikesir	0.53	263	PG	Pb	10 34 12.9	-0.5
BALB				SG	Sb	10 34 20.9	-0.2
KCTX	Karacabey (Bur	0.58	344	PG	Pg	10 34 13.0	-0.2

ULDT	**Uludag**	**0.62**	**46**	*i*P	**Pg**	**10 34 13.8**	**-0.2**
ULDT				*i*S	**Sg**	**10 34 21.9**	**-0.3**
ULDT				IAML_P			
	comp=Z,1μm,0.1s						
DEMI	**Demirci**	**0.68**	**170**	*i*P	**Pg**	**10 34 15.3**	**+0.2**
DEMI				*i*S	**Sg**	**10 34 23.1**	**-0.9**
DEMI				IAML_P			
	comp=Z,1μm,0.1s						
MDNY	**Mudanya-Bursa**	**0.70**	**21**	PG	**Pb**	**10 34 16.7**	**+0.3**
BALY	**Balya**	**0.73**	**273**	*i*P	**Pb**	**10 34 16.6**	**-0.2**
BALY				*i*S	**Sb**	**10 34 26.4**	**-0.4**
BALY				IAML_P			
	comp=Z,891nm,0.2s						
STEP	**BALIKESIR_Sava**	**0.73**	**243**	*i*P	**Pg**	**10 34 16.3**	**+0.2**
STEP				*i*S	**Sb**	**10 34 27.0**	**+0.1**
STEP				IAML_P			
	comp=Z,1μm,0.2s						
TVSB	**Tavsanli**	**0.74**	**110**	PG	**Pg**	**10 34 15.9**	**-0.5**
GONE	**Gonen-Balikesi**	**0.75**	**297**	PG	**Pg**	**10 34 16.2**	**-0.3**
EDC	**Edincik**	**0.83**	**320**	PG	**Pg**	**10 34 17.7**	**-0.3**
ARMT	**Armutlu**	**0.88**	**15**	PG	**Pg**	**10 34 18.8**	**-0.2**
ARMT				SG	**Sn**	**10 34 33.2**	**-0.3**
GDZ	**Gediz**	**0.95**	**131**	*i*P	**Pb**	**10 34 20.9**	**+0.4**
AKHS	**Akhisar**	**1.01**	**215**	*i*P	**Pn**	**10 34 22.6**	**+0.3**
USAK	**Uak-Merkez**	**1.06**	**160**	*i*P	**Pg**	**10 34 21.8**	**-0.6**
USAK				IAML_P			
	comp=Z,298nm,0.1s						
YLV	**Yalova**	**1.06**	**36**	PG	**Pn**	**10 34 22.9**	**-0.1**
YLV				SG	**Sn**	**10 34 38.5**	**+0.7**
MRMT	**Marmara Adasi**	**1.16**	**321**	PN	**Pn**	**10 34 24.4**	**0.0**
KULA	**Kula-Manisa**	**1.20**	**176**	PN	**Pn**	**10 34 24.9**	**0.0**
MANT	**Manisa**	**1.22**	**180**	*i*P	**Pg**	**10 34 25.9**	**+0.5**
HRT	**Hereke**	**1.40**	**37**	PN	**Pg**	**10 34 28.8**	**0.0**
KAVV	**Kandilli-Istan**	**1.40**	**16**	PN	**Pg**	**10 34 29.6**	**+0.7**
ISK	**Istanbul-Kandi**	**1.41**	**16**	PN	**Pg**	**10 34 29.4**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.44**	**313**	PN	**Pg**	**10 34 29.3**	**-0.3**
BORA	**Eskisehir**	**1.47**	**83**	PN	**Pb**	**10 34 29.6**	**+0.1**
KHAL	**Karahalli**	**1.52**	**151**	*i*P	**Pb**	**10 34 30.3**	**-0.1**
KHAL				IAML_P			
	comp=Z,238nm,0.2s						
CTKS	**Kestanelik-??a**	**1.52**	**358**	PN	**Pg**	**10 34 31.4**	**+0.2**
LPK	**Lapseki**	**1.53**	**296**	PN	**Pb**	**10 34 30.7**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.55**	**272**	*i*P	**Pn**	**10 34 30.1**	**+0.4**
BAYC				IAML_P			
	comp=Z,451nm,0.2s						
SRCK	**Saricakaya, Es**	**1.62**	**78**	PN	**Pb**	**10 34 32.4**	**+0.3**
GULT	**Gulveren**	**1.66**	**64**	PN	**Pg**	**10 34 33.4**	**-0.5**
EZN	**Ezine**	**1.73**	**275**	PN	**Pn**	**10 34 32.8**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.74**	**294**	PN	**Pb**	**10 34 34.0**	**-0.1**

ISCJB ***22*** *10:39:47.4±0.6, 36°.36N±0°.02×27°.02E±0°.03, h6^{km}±6^{km}, Error ellipse: s-maj=4.5km s-min=4.1km az=6.5*

ATH ***22*** *10:39:47.0, 36°.40N×27°.01E, h24^{km}±2^{km}, ML2.8/3, Error ellipse: s-maj=2.3km s-min=1.2km az=75.0*

THE ***22*** *10:39:47.5, 36°.38N×27°.04E, h0^{km}±1^{km}, ML2.8/2, Error ellipse: s-maj=1.2km s-min=0.6km az=135.0*

ISK ***22*** *10:39:47.3, 36°.37N×27°.02E, h9^{km}, ML3.0/13*

ISC 22 10:39:47.5±0.9**, 36°.39N**±0°.02×**27°.06E**±0°.02**, h17**^{km}±7^{km}**, n32, σ0ˢ.84**/44**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NISR	**Nisiros**	**0.23**	**13**	P	**Pg**	**10 39 52.6**	**-0.2**
NISR				S	**Sg**	**10 39 56.8**	**+0.4**
	3μm,0.4s						
NISR	**Nisiros**	**0.23**	**13**	P	**Pg**	**10 39 52.6**	**-0.2**
NISR				S	**Sg**	**10 39 56.8**	**+0.4**
NISR				AML	AML	10 39 60.0	
	comp=E,8432μm,0.2s						
NISR				AML	AML	10 40 00.4	
	comp=N,4547μm,0.2s						
DAT	**Datca**	**0.54**	**50**	PG	**Pb**	**10 39 58.6**	**+0.1**
DAT				SG	**Sn**	**10 40 08.3**	**-0.9**
DATC	**Datca-Mugla**	**0.61**	**52**	PG	**Pg**	**10 39 59.6**	**+0.1**
BODT	**Bodrum**	**0.70**	**16**	PG	**Pb**	**10 40 01.7**	**+0.4**
BODT	**Bodrum**	**0.70**	**16**	P	**Pb**	**10 40 01.5**	**+0.2**
BODT				S	**Sn**	**10 40 13.4**	**+0.2**
YKAV	**Yalikavak-Bodr**	**0.76**	**13**	PG	**Pb**	**10 40 02.6**	**+0.4**
KARP	**Karpathos**	**0.84**	**175**	PG	**Pg**	**10 40 04.1**	**+0.2**
KARP	**Karpathos**	**0.84**	**175**	P	**Pg**	**10 40 04.1**	**+0.2**
KARP				S	**Sn**	**10 40 16.1**	**-0.5**
KARP	**Karpathos**	**0.84**	**175**	P	**Pg**	**10 40 03.7**	**-0.2**
KARP				S	**Sg**	**10 40 15.4**	**+0.4**
ARG	**Arkhangelos**	**0.88**	**101**	PG	**Pn**	**10 40 05.3**	**+0.3**
ARG				SG	**Sn**	**10 40 17.9**	**+0.5**
ARG	**Arkhangelos**	**0.88**	**101**	P	**Pn**	**10 40 05.3**	**+0.3**
ARG				S	**Sn**	**10 40 18.6**	**+1.2**
	comp=N,612nm,0.3s						
ARG	**Arkhangelos**	**0.88**	**101**	P	**Pn**	**10 40 05.0**	**-0.1**
ARG				S	**Sn**	**10 40 18.1**	**+0.7**
ARG				AML	AML	10 40 19.2	
	comp=N,1028μm,0.2s						
ARG				AML	AML	10 40 19.6	
	comp=E,1408μm,0.3s						
MRSB	**Marmaris-Mugla**	**0.97**	**70**	PG	**Pn**	**10 40 07.2**	**+0.8**
AMGA	**Amorgos Island**	**1.04**	**296**	P	**Pg**	**10 40 07.8**	**+0.1**
AMGA				S	**Sn**	**10 40 23.1**	**+1.6**
AMGA	**Amorgos Island**	**1.04**	**296**	P	**Pb**	**10 40 06.8**	**-0.3**
ANAF	**Anafi Island**	**1.04**	**269**	P	**Pb**	**10 40 07.0**	**-0.1**
ANAF				S	**Sn**	**10 40 22.6**	**+1.0**
ANAF	**Anafi Island**	**1.04**	**269**	P	**Pb**	**10 40 06.6**	**-0.5**
YER	**Yerkesik**	**1.23**	**52**	PN	**Pb**	**10 40 10.9**	**+0.6**
YER	**Yerkesik**	**1.23**	**52**	P	**Pb**	**10 40 11.0**	**+0.6**
TURN	**Turunc**	**1.33**	**68**	PG	**Pn**	**10 40 07.3**	**-4.0**
SMG	**Samos**	**1.33**	**352**	P	**Pb**	**10 40 12.2**	**+0.1**
SMG				S	**Sg**	**10 40 30.0**	**-0.6**
SMG				AML	AML	10 40 34.1	
	comp=N,361μm,0.4s						
SMG				AML	AML	10 40 35.9	
	comp=E,498μm,0.3s						
DALY	**Dalyan (Mula)**	**1.35**	**71**	PN	**Pg**	**10 40 13.3**	**-0.2**
THR5	**Thira Island,**	**1.38**	**272**	P	**Pn**	**10 40 11.9**	**-0.2**
APE	**Apeiranthos**	**1.41**	**299**	PN	**Pb**	**10 40 13.7**	**+0.3**
APE	**Apeiranthos**	**1.41**	**299**	P	**Pn**	**10 40 12.6**	**+0.2**
ZKR	**Zakros**	**1.44**	**209**	PN	**Pb**	**10 40 13.3**	**-0.7**
NPS	**Neapolis**	**1.63**	**227**	P	**Pb**	**10 40 16.5**	**-0.6**
FETY	**Fethiye**	**1.65**	**81**	PN	**Pb**	**10 40 18.0**	**+0.6**
LAST	**Lasithi**	**1.78**	**227**	P	**Pn**	**10 40 17.5**	**0.0**
URLA	**Izmir**	**2.00**	**349**	PN	**Pb**	**10 40 22.7**	**-0.8**
IDI	**Anoyia**	**2.08**	**239**	P	**Pn**	**10 40 21.3**	**-0.4**

LVSN ***22*** *10:52:09.5±1.2, 59°.34N×26°.42E, h0^{km}±402^{km}*

EST 22 10:51:58.8±0.1**, 59°.28N×27°.69E, h0**^{km}**, ML1.5**(HEL)**, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.89**	**281**	*e*S	Sg	10 52 26.0	-1.2
VSU	**Vasula**	**0.96**	**211**	*e*P	Pg	10 52 16.1	-1.0
VSU				*e*S	Sg	10 52 28.3	-1.2
VJF	**Virojoki**	**1.26**	**357**	*e*P	Pg	10 52 21.3	-1.7
VJF				MSG		10 52 34.0	
	comp=Z,4.8nm,0.2s						
VJF				*e*S	Sg	10 52 37.6	-1.7
PVF	**Pernaja**	**1.57**	**325**	*e*P	Pn	10 52 26.6	-1.2
MEF	**Metsahovi**	**1.91**	**301**	*e*P	Pn	10 52 32.2	-0.4
MEF	**Metsahovi**	**1.91**	**301**	*e*P	Pn	10 52 32.2	-0.3
MEF				MSG		10 52 57.1	
	comp=Z,3.1nm,0.1s						
MTSE	**Matsula**	**2.08**	**256**	*e*P	Pn	10 52 35.3	+0.4
MTSE	**Matsula**	**2.08**	**256**	*e*PG	Pn	10 52 35.7	+0.8
MTSE				*e*SB	Sn	10 53 01.8	+0.3
FIA0	**FINESS Array S**	**2.31**	**340**	*e*PB	Pn	10 52 38.9	+0.8
FIA0				*e*SG	Sb	10 53 10.1	-0.3
FIA0				MSG		10 53 11.3	
	comp=Z,1.5nm,0.1s						
FIA1	**FINESS Array S**	**2.31**	**341**	*e*PB	Pn	10 52 38.9	+0.8
FIA1				*e*SG	Sb	10 53 10.1	-0.3
FIA1				MSG		10 53 10.6	
	comp=Z,1.3nm,0.1s						
RAF	**Rauma**	**3.44**	**303**	*e*P	Pn	10 52 53.5	0.0
RAF	**Rauma**	**3.44**	**303**	*e*P	Pn	10 52 54.1	+0.6

KRNET ***22*** *10:53:02.2±0.1, 43°.19N×78°.83E, h3^{km}, mb2.2*

NNC ***22*** *10:53:02.8±0.4, 43°.34N×78°.89E, h5^{km}±3^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=3.7km s-min=1.9km az=1.0*

ISCJB ***22*** *10:53:03.2±0.5, 43°.38N±0°.02×78°.87E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.3km az=177.6*

SOME ***22*** *10:53:03.3, 43°.33N×78°.87E, h15^{km}*

ISC 22 10:53:02.4±1.0**, 43°.33N**±0°.02×**78°.87E**±0°.02**, h18**^{km}±9^{km}**, n33, σ1ˢ.01**/63**, 12C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPKS	**Kokpek**	**0.19**	**314**	*e*P	**Pb**	**10 53 07.5**	**+0.3**
	224nm,0.1s						
KPKS				*e*S	**Sb**	**10 53 10.5**	**0.0**
	238nm,0.1s						
UZB	**Uzynbulak**	**0.22**	**149**	P	**Pb**	**10 53 08.7**	**+1.0**
	23nm,0.1s						
UZB				S	**Sb**	**10 53 12.7**	**+1.4**
	92nm,0.1s						
UZB	**Uzynbulak**	**0.22**	**149**	*e*P	**Pb**	**10 53 08.8**	**+1.0**
	23nm,0.1s						
UZB				*e*S	**Sb**	**10 53 12.7**	**+1.4**
	92nm,0.1s						
SATY	**Saty**	**0.44**	**231**	P	**Pb**	**10 53 11.9**	**+0.3**
	8.8nm,0.1s						
SATY				S	**Sg**	**10 53 18.3**	**+0.9**
	138nm,0.1s						
SATY	**Saty**	**0.44**	**231**	*e*P	**Pb**	**10 53 11.9**	**+0.3**
	8.8nm,0.1s						
SATY				*e*S	**Sg**	**10 53 18.3**	**+0.9**
	138nm,0.1s						
PDGK	**Podgornoye**	**0.45**	**90**	P	**Pb**	**10 53 12.2**	**+0.3**
	3.3nm,0.1s						
PDGK				S	**Sb**	**10 53 18.7**	**+0.3**
	11nm,0.1s						
PDGK	**Podgornoye**	**0.45**	**90**	⇑P	**Pb**	**10 53 12.2**	**+0.3**
	0.7nm,0.3s						
PDGK				⇑S	**Sb**	**10 53 18.0**	**-0.4**
	2.6nm,0.4s						
PDGK	**Podgornoye**	**0.45**	**90**	⇑*i*P	**Pb**	**10 53 12.2**	**+0.3**
	baz=73						
PDGK				⇑*i*S	**Sb**	**10 53 18.7**	**+0.3**
	baz=73						
KURS	**Kuram**	**0.53**	**287**	P	**Pb**	**10 53 13.4**	**+0.2**
	1.3nm,0.1s						
KURS				S	**Sb**	**10 53 20.6**	**-0.1**
	4.8nm,0.2s						
KURS	**Kuram**	**0.53**	**287**	*e*P	**Pb**	**10 53 13.4**	**+0.2**
	baz=2.0						
KURS				*e*S	**Sb**	**10 53 20.6**	**-0.1**
	baz=2.0						
KURS	**Kuram**	**0.53**	**287**	*e*P	**Pb**	**10 53 13.4**	**+0.2**
	1.3nm,0.1s						
KURS				*e*S	**Sb**	**10 53 20.6**	**-0.1**
	4.8nm,0.2s						
MNBS	**Baschi**	**0.82**	**336**	P	**Pg**	**10 53 18.2**	**-0.2**
	3.9nm,0.1s						
MNBS				S	**Sg**	**10 53 29.0**	**-0.4**
	35nm,0.2s						
MNBS	**Baschi**	**0.82**	**336**	*e*P	**Pg**	**10 53 18.2**	**-0.2**
	baz=44						
MNBS				*e*S	**Sg**	**10 53 28.9**	**-0.4**
	baz=44						
MNBS	**Baschi**	**0.82**	**336**	*e*P	**Pg**	**10 53 18.2**	**-0.2**
	3.9nm,0.1s						
MNBS				*e*S	**Sg**	**10 53 28.9**	**-0.4**
	35nm,0.2s						
PRZ	**Przheval'sk**	**0.92**	**202**	⇑*i*P	**Pb**	**10 53 16.5**	**-3.4**
	baz=3.0						
PRZ				⇑*i*S	**Sb**	**10 53 27.0**	**-4.8**
	baz=3.0						
KTMS	**Ketmen**	**1.09**	**84**	P	**Pg**	**10 53 23.2**	**-0.3**
	5.8nm,0.2s						
KTMS				S	**Sn**	**10 53 37.5**	**0.0**
	9.8nm,0.1s						
KTMS	**Ketmen**	**1.09**	**84**	*e*P	**Pg**	**10 53 23.2**	**-0.3**
	5.8nm,0.2s						
KTMS				*e*S	**Sn**	**10 53 37.5**	**0.0**
	9.8nm,0.1s						
ARXS	**Arharly**	**1.16**	**320**	*e*P	**Pg**	**10 53 24.0**	**-0.8**
	1.0nm,0.1s						
ARXS				*e*S	**Sn**	**10 53 38.8**	**-0.5**
	13nm,0.2s						
DJR	**Jarkent**	**1.20**	**33**	P	**Pg**	**10 53 25.3**	**-0.2**
	2.6nm,0.2s						
DJR				S	**Sg**	**10 53 41.1**	**-0.2**
	23nm,0.2s						
DJR	**Jarkent**	**1.20**	**33**	*e*P	**Pg**	**10 53 25.4**	**-0.2**
	2.6nm,0.2s						
DJR				*e*S	**Sg**	**10 53 41.1**	**-0.2**
	23nm,0.2s						
KOTS	**Kotyrbulak**	**1.29**	**266**	P	**Pg**	**10 53 27.0**	**-0.3**
	4.2nm,0.3s						
KOTS				S	**Sg**	**10 53 44.1**	**0.0**
	7.8nm,0.2s						
KOTS	**Kotyrbulak**	**1.29**	**266**	*e*P	**Pg**	**10 53 27.0**	**-0.3**
	4.2nm,0.3s						
KOTS				*e*S	**Sg**	**10 53 44.1**	**0.0**
	7.8nm,0.2s						
TNSS	**Tian-Shan**	**1.44**	**259**	P	**Pg**	**10 53 29.9**	**-0.2**
	2.1nm,0.3s						
TNSS				S	**Sg**	**10 53 49.4**	**+0.4**
	4.4nm,0.2s						
TNSS	**Tian-Shan**	**1.44**	**259**	*e*P	**Pg**	**10 53 29.9**	**-0.2**
	2.1nm,0.3s						
TNSS				*e*S	**Sg**	**10 53 49.4**	**+0.4**
	4.4nm,0.2s						
CHKK	**Chushkaly**	**1.46**	**291**	*e*P	**Pb**	**10 53 29.4**	**+0.3**
	0.8nm,0.1s						
CHKK				*e*S	**Sb**	**10 53 48.0**	**+0.6**
	12nm,0.2s						
KDJ	**Kajisay**	**1.73**	**227**	⇑*i*P	**Pn**	**10 53 32.5**	**+0.7**
	baz=29						
KDJ				⇑*i*S	**Sb**	**10 53 55.2**	**0.0**
	baz=29						
KAPS	**Kapalarasan**	**1.98**	**10**	Pg	**Pg**	**10 53 39.5**	**-1.0**
	1.1nm,0.2s						
KAPS				Lg	Lg	10 54 05.3	
	2.7nm,0.1s						
KAPS	**Kapalarasan**	**1.98**	**10**	*e*P	**Pg**	**10 53 39.5**	**-1.0**
	1.1nm,0.2s						
KAPS				*e*S	**Sg**	**10 54 05.3**	**-0.9**
	2.7nm,0.1s						
KST	**Kastek**	**2.15**	**263**	Pg	**Pb**	**10 53 41.7**	**+0.9**
	0.9nm,0.2s						
KST				Lg	Lg	10 54 09.1	
	4.3nm,0.3s						
KST	**Kastek**	**2.15**	**263**	*e*P	**Pb**	**10 53 41.7**	**+0.9**
	0.9nm,0.2s						
KST				*e*S	**Sb**	**10 54 09.1**	**+2.0**
	4.3nm,0.3s						
ULHL	**Ulahol**	**2.22**	**242**	⇓*e*P	**Pb**	**10 53 42.1**	**0.0**
	baz=45						
ULHL				⇓*i*S	**Sb**	**10 54 11.1**	**+1.8**
	baz=45						
BOOM	**Boomskoye usch**	**2.31**	**250**	⇑*i*P	**Pb**	**10 53 44.2**	**+0.6**
	baz=53						
BOOM				⇑*i*S	**Sg**	**10 54 15.5**	**-1.3**
	baz=53						
TKM2	**Tokmak 2**	**2.43**	**261**	⇑Pg	**Pg**	**10 53 48.2**	**-0.8**
	0.9nm,0.6s						
TKM2				⇑Lg	Lg	10 54 19.1	
	0.9nm,0.3s						

ATH ***22*** *11:06:22.0, 38°.23N×22°.08E, h13^{km}±1^{km}, ML2.3/4, Error ellipse: s-maj=1.2km s-min=0.7km az=37.0*

ISCJB ***22*** *11:06:22.1±0.3, 38°.23N±0°.02×22°.07E±0°.04, h11^{km}±2^{km}, Error ellipse: s-maj=4.7km s-min=3.4km az=167.4*

THE ***22*** *11:06:22.2, 38°.24N×22°.10E, h12^{km}, ML2.2/5, Error ellipse: s-maj=0.8km s-min=0.3km az=328.0*

ISC 22 11:06:22.0±0.9**, 38°.23N**±0°.02×**22°.09E**±0°.02**, h13**^{km}±4^{km}**, n50, σ0ˢ.29**/64**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG4	**Aigion**	**0.02**	**332**	P	**Pg**	**11 06 24.2**	**-0.1**
AIG4				S	**Sg**	**11 06 25.9**	**-0.1**
AIG3	**Aigion**	**0.03**	**30**	P	**Pg**	**11 06 24.1**	**-0.2**
AIG3				S	**Sg**	**11 06 26.0**	**0.0**
ALIK	**Aliki, Aigiali**	**0.03**	**34**	P	**Pg**	**11 06 24.2**	**-0.2**
ALIK				S	**Sg**	**11 06 26.1**	**+0.1**
AIG1	**Aigion**	**0.05**	**121**	P	**Pg**	**11 06 24.3**	**-0.1**
AIG1				S	**Sg**	**11 06 25.7**	**-0.5**
LAKA	**Lakka**	**0.09**	**274**	P	**Pg**	**11 06 24.8**	**-0.1**
LAKA				S	**Sg**	**11 06 26.7**	**-0.3**
LAKA	**Lakka**	**0.09**	**274**	P	**Pg**	**11 06 24.7**	**-0.1**
LAKA				S	**Sg**	**11 06 26.7**	**-0.3**
LAKA				AML	AML	11 06 26.9	
	comp=E,1753μm,0.3s						
LAKA				AML	AML	11 06 26.9	
	comp=N,1826μm,0.2s						
TRAZ	**Trapeza**	**0.12**	**124**	P	**Pg**	**11 06 25.3**	**+0.1**
TRAZ	**Trapeza**	**0.12**	**124**	P	**Pg**	**11 06 25.4**	**+0.1**
TRAZ				S	**Sg**	**11 06 27.7**	**+0.1**
TRAZ				AML	AML	11 06 28.0	
	comp=E,6673μm,0.1s						
TRAZ				AML	AML	11 06 28.3	
	comp=N,8497μm,0.2s						
TRIZ	**Trizonia**	**0.13**	**354**	P	**Pg**	**11 06 25.4**	**0.0**
TRIZ				S	**Sg**	**11 06 27.9**	**+0.1**
TRIZ	**Trizonia**	**0.13**	**354**	P	**Pg**	**11 06 25.5**	**0.0**
TRIZ				S	**Sg**	**11 06 27.9**	**+0.1**
KALE	**Kalithea**	**0.16**	**14**	P	**Pg**	**11 06 25.9**	**0.0**
KALE				S	**Sg**	**11 06 28.5**	**-0.2**
	comp=N,2μm,0.2s						
KALE	**Kalithea**	**0.16**	**14**	P	**Pg**	**11 06 26.1**	**+0.2**
KALE				AML	AML	11 06 29.3	
	comp=N,3778μm,0.3s						
KALE				AML	AML	11 06 29.6	
	comp=E,2281μm,0.2s						
SERG	**Sergoula**	**0.18**	**352**	P	**Pg**	**11 06 26.3**	**+0.1**
SERG				S	**Sg**	**11 06 29.1**	**0.0**
	comp=E,1μm,0.2s						
SERG	**Sergoula**	**0.18**	**352**	P	**Pg**	**11 06 26.3**	**+0.1**
SERG				S	**Sg**	**11 06 29.3**	**+0.2**
SERG				AML	AML	11 06 29.6	
	comp=E,2855μm,0.3s						
SERG				AML	AML	11 06 29.7	
	comp=N,2734μm,0.3s						
KLV	**Kalavryta, Ach**	**0.20**	**166**	P	**Pg**	**11 06 26.4**	**0.0**
KLV				S	**Sg**	**11 06 29.9**	**+0.4**
KLV	**Kalavryta, Ach**	**0.20**	**166**	P	**Pg**	**11 06 26.4**	**0.0**
KLV				S	**Sg**	**11 06 29.7**	**+0.2**
UPR	**University Cam**	**0.24**	**282**	P	**Pg**	**11 06 26.8**	**-0.4**
GUR	**Goura**	**0.36**	**146**	P	**Pg**	**11 06 29.1**	**-0.2**
GUR	**Goura**	**0.36**	**146**	P	**Pg**	**11 06 29.2**	**-0.2**
ANX	**Ano Chora**	**0.38**	**340**	P	**Pg**	**11 06 29.6**	**-0.2**
ANX	**Ano Chora**	**0.38**	**340**	P	**Pg**	**11 06 29.5**	**-0.2**
DSF	**Desfina**	**0.39**	**63**	P	**Pg**	**11 06 29.6**	**-0.2**
DSF	**Desfina**	**0.39**	**63**	P	**Pg**	**11 06 29.6**	**-0.2**
DRO	**Drossia**	**0.41**	**227**	P	**Pg**	**11 06 30.4**	**+0.2**
DRO	**Drossia**	**0.41**	**227**	P	**Pg**	**11 06 30.5**	**+0.2**
THAL	**Thalero**	**0.49**	**113**	P	**Pg**	**11 06 31.8**	**+0.1**
RLS	**Riolos of Patr**	**0.52**	**250**	P	**Pg**	**11 06 32.3**	**+0.1**
PVO	**Paravola**	**0.58**	**311**	P	**Pg**	**11 06 33.6**	**+0.2**
PROD	**Prodromos**	**0.64**	**88**	P	**Pb**	**11 06 35.0**	**0.0**
ACOR	**Acrocorinthos**	**0.70**	**119**	P	**Pb**	**11 06 36.5**	**+0.3**
EVR	**Evrytania**	**0.72**	**342**	P	**Pg**	**11 06 35.8**	**-0.1**
EVR	**Evrytania**	**0.72**	**342**	P	**Pg**	**11 06 35.9**	**-0.1**
TRIP	**Tripoli**	**0.72**	**168**	P	**Pg**	**11 06 35.7**	**-0.3**
TRIP	**Tripoli**	**0.72**	**168**	P	**Pg**	**11 06 35.7**	**-0.3**
AMT	**Artemida-Makis**	**0.76**	**203**	P	**Pg**	**11 06 36.8**	**0.0**
AMT	**Artemida-Makis**	**0.76**	**203**	P	**Pg**	**11 06 36.6**	**-0.2**
AGG	**Agios Georgios**	**0.81**	**13**	P	**Pg**	**11 06 37.2**	**-0.5**
AGG	**Agios Georgios**	**0.81**	**13**	P	**Pg**	**11 06 36.8**	**-0.9**
LKR	**Lokris**	**0.83**	**60**	P	**Pg**	**11 06 37.4**	**-0.6**
ATAL	**Atalanti**	**0.86**	**58**	P	**Pg**	**11 06 38.5**	**-0.2**
VLX	**Vlachokerasia**	**0.89**	**165**	P	**Pg**	**11 06 38.5**	**-0.8**
VIL2	**Platees**	**0.93**	**91**	P	**Pn**	**11 06 41.0**	**+0.2**
ITM	**Ithomi**	**1.06**	**187**	P	**Pb**	**11 06 41.6**	**-0.6**
SMIA	**Simia**	**1.09**	**53**	P	**Pn**	**11 06 43.7**	**+0.7**
DID	**Didima**	**1.16**	**128**	P	**Pb**	**11 06 44.0**	**0.0**
LKD2	**Lefkada island**	**1.25**	**297**	P	**Pn**	**11 06 45.3**	**0.0**
THL	**Klokotos Trika**	**1.33**	**358**	P	**Pg**	**11 06 47.6**	**0.0**
PYL	**PYLOS**	**1.36**	**192**	P	**Pn**	**11 06 47.1**	**+0.3**
DYR	**Agios Nikonas**	**1.48**	**172**	P	**Pn**	**11 06 48.8**	**+0.4**
VLI	**Veliai**	**1.66**	**156**	P	**Pb**	**11 06 52.0**	**-0.4**

JMA 22 11:16:47.7±0.1**, 38°.39N×142°.10E, h34**^{km}±1^{km}**, M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.51**	**261**	P	Pb	11 16 57.9	-0.5
JIKH				S	Sb	11 17 04.8	-1.0
JIO	**Ouri**	**0.59**	**276**	P	Pn	11 16 59.5	-0.1
JIO				S	Sn	11 17 07.4	-0.7
JKMT	**Kesennumamotoy**	**0.65**	**311**	P	Pn	11 17 00.4	0.0
JKMT				S	Sn	11 17 09.0	-0.4
OFUJ	**Ofunato**	**0.77**	**334**	P	Pn	11 17 01.9	-0.2
OFUJ				S	Sn	11 17 11.8	-0.7
JMK	**Ichinoseki**	**0.89**	**309**	P	Pn	11 17 03.9	+0.1
JMK				S	Sn	11 17 15.3	-0.1
JOU	**Okura**	**1.13**	**269**	P	Pn	11 17 07.9	+0.8
JOU				S	Sn	11 17 22.0	+0.5
JMM	**Marumori**	**1.16**	**243**	P	Pn	11 17 07.0	-0.4
JMM				S	Sn	11 17 21.2	-0.9
JOM	**Ohasama**	**1.25**	**330**	P	Pn	11 17 09.3	+0.5
JOM				S	Sn	11 17 25.4	+0.9
JFK	**Kawauchi**	**1.41**	**224**	P	Pn	11 17 10.1	-0.9
JFK				S	Sn	11 17 26.7	-1.7
JYK	**Kaneyama**	**1.46**	**292**	P	Pn	11 17 12.5	+0.8
JYK				*e*S	Sb	11 17 31.2	-1.4
JRG	**Rokugo**	**1.52**	**312**	P	Pn	11 17 13.7	+1.2
JRG				*e*S	Sb	11 17 33.7	-0.6

TAP 22 11:17:34.6, 24°.29N×121°.51E, h6^{km}**, ML1.4, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.08**	**197**	P	Pg	11 17 36.5	-0.1
	baz=196						
ETLH				S	Sg	11 17 37.9	-0.1
	baz=196						
NACB	**Ninganchiao**	**0.14**	**145**	*e*P	Pg	11 17 37.8	+0.3
	baz=144						
NACB				*e*S	Sg	11 17 40.1	+0.8
	baz=144						
NNSB	**Datong**	**0.18**	**321**	P	Pg	11 17 38.3	-0.1
	baz=320						
NNSB				S	Sg	11 17 40.8	0.0
	baz=320						
NNS	**Nan Shan**	**0.20**	**321**	P	Pg	11 17 38.5	-0.1
	baz=322						
NNS				S	Sg	11 17 41.4	+0.1
	baz=322						
TWD	**Chiawan**	**0.22**	**159**	*e*P	Pg	11 17 39.4	+0.4
	baz=156						
TWD				*e*S	Sg	11 17 42.4	+0.5
	baz=156						
ENA	**Nanau**	**0.26**	**57**	P	Pg	11 17 39.8	+0.1
	baz=57						
ENA				S	Sg	11 17 43.5	+0.4
	baz=57						
NANB	**Nanao**	**0.26**	**58**	P	Pg	11 17 39.7	0.0
	baz=57						
NANB				S	Sg	11 17 43.2	-0.1
	baz=57						
WHF	**Hehuan Shan**	**0.26**	**238**	P	Pg	11 17 39.6	-0.3
	baz=236						
WHF				S	Sg	11 17 43.3	-0.2
	baz=236						
NDT	**Datong Townshi**	**0.31**	**1**	*e*P	Pg	11 17 41.1	+0.3
NDT				*e*S	Sg	11 17 45.2	+0.2
ENTT	**Nioudou**	**0.35**	**9**	*e*P	Pg	11 17 41.9	+0.4
	baz=9.0						
ENTT				*e*S	Sg	11 17 46.6	+0.3
	baz=9.0						
CHGB	**Renai**	**0.38**	**234**	*e*P	Pg	11 17 42.0	-0.1
	baz=233						
CHGB				*e*S	Sg	11 17 47.2	+0.1
	baz=233						
TWC	**Suao**	**0.45**	**44**	*e*P	Pg	11 17 43.5	+0.2
	baz=45						
TWC				*e*S	Sg	11 17 49.4	+0.3
	baz=45						
ESL	**Shilin**	**0.48**	**188**	*e*P	Pg	11 17 43.6	-0.2
	baz=187						
VWDT	**VWDT**	**0.63**	**212**	*e*P	Pg	11 17 46.3	-0.4
	baz=212						
VWDT				*e*S	Sg	11 17 55.9	+1.0
	baz=212						
SSLB	**Suanglung**	**0.71**	**226**	*e*P	Pg	11 17 47.8	-0.5
	baz=225						
SSLB				*e*S	Sb	11 17 58.6	-0.9
	baz=225						
YULB	**Yu-li**	**0.91**	**192**	*e*P	Pg	11 17 52.0	-0.2
	baz=192						
YULB				*e*S	Sg	11 18 04.6	+0.7
	baz=192						

JMA 22 11:18:18.0±0.1**, 24°.74N×123°.44E, h12**^{km}±4^{km}**, M1.6,**

Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.48	235	P	Pg	11 18 27.4	0.0
YOJ				S	Sg	11 18 33.8	0.0
IRIF	Iriomote-Funau	0.48	147	P	Pg	11 18 27.4	-0.1
IRIF				S	Sg	11 18 33.6	-0.3
JYNG	Yonagunijimaku	0.53	238	P	Pg	11 18 28.5	0.0
JYNG				S	Sg	11 18 36.0	+0.4
JKRS	Kuro-shima	0.72	134	P	Pg	11 18 31.9	-0.1
JKRS				S	Sg	11 18 41.5	+0.1
JIJ	Ishigaki jima	0.74	120	P	Pg	11 18 32.0	-0.4
JIJ				eS	Sg	11 18 41.4	-0.7
HATJ	Hateruma jima	0.76	154	P	Pg	11 18 32.4	-0.3
HATJ				eS	Sg	11 18 42.1	-0.5
JISG	Ishigakijimahi	0.81	101	eS	Sg	11 18 43.9	-0.3
JTJ	Tarama	1.15	95	P	Pb	11 18 39.2	-0.7
JTJ				eS	Sb	11 18 54.3	-0.5

MDD ***22*** *11:49:25.0±2.1, 40°.72N×16°.55W, h70^{km}, mb3.7/14, Error ellipse: s-maj=18.1km s-min=17.6km az=125.0, PRXIMO*

INMG ***22*** *11:49:28.6±1.3, 40°.43N×16°.37W, h10^{km}, ML2.5, Error ellipse: s-maj=18.3km s-min=14.5km az=93.0*

ISC 22 11:49:27.3±3.7**, 40°.69N**±0°.06×**15°.9W**±0°.2**, h10^{km}, n47, σ1^s.21**/73**, 1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	5.37	107	eSn	Sn	11 51 45.0	-4.4
PMAFR				A	A	11 51 46.0	
	12nm,0.5s						
PMAFR	Mafra	5.37	107	Pn	Pn	11 50 49.2	+1.6
	16nm,0.7s,SNR=7.9						
PMAFR				Sn	Sn	11 51 48.8	-0.6
	15nm,0.3s,SNR=7.9						
EZAM	Zamans	5.60	73	Sn	Sn	11 51 55.5	+0.4
	4.7nm,0.6s,SNR=7.9						
EMAZ	Mazaricos	5.64	64	⇓Pn	Pn	11 50 51.6	+0.4
	1.6nm,0.3s,SNR=18						
EMAZ				Sn	Sn	11 51 55.1	-0.8
	3.1nm,0.1s,SNR=7.9						
PCAS	Casmilo, Conde	5.68	94	ePn	Pn	11 50 53.0	+1.2
PCAS				eSn	Sn	11 51 58.3	+1.3
PCAS				A	A	11 52 00.3	
	3.3nm,0.6s						
PCAS	Casmilo, Conde	5.68	94	Pn	Pn	11 50 53.0	+1.2
PCAS				Sn	Sn	11 51 58.3	+1.3
	3.3nm,0.6s						
PTOM	Tomar	5.83	98	eSn	Sn	11 52 00.6	0.0
PTOM				A	A	11 52 04.0	
	5.7nm,0.4s						
PTOM	Tomar	5.83	98	Sn	Sn	11 52 00.6	0.0
	2.8nm,0.4s						
PGAV	Gavieira, Arco	5.88	75	ePn	Pn	11 50 55.5	+1.0
PGAV				eSn	Sn	11 52 01.9	-0.1
PGAV				A	A	11 52 03.6	
	5.3nm,0.3s						
PGAV	Gavieira, Arco	5.88	75	Pn	Pn	11 50 55.5	+1.0
PGAV				Sn	Sn	11 52 01.9	-0.1
	5.3nm,0.3s						
ELOB	Lobios	6.01	76	Pn	Pn	11 50 57.0	+0.6
	1.9nm,0.5s,SNR=11						
ELOB				Sn	Sn	11 52 05.0	-0.3
	3.2nm,0.1s,SNR=11						
PCAB	Cabril	6.02	78	ePn	Pn	11 50 57.6	+1.2
PCAB				eSn	Sn	11 52 05.4	0.0
PCAB				A	A	11 52 07.8	
	6.6nm,0.4s						
PCAB	Cabril	6.02	78	Pn	Pn	11 50 57.6	+1.2
PCAB				Sn	Sn	11 52 05.4	0.0
	3.3nm,0.4s						
PVIS	Viseu	6.08	87	eSn	Sn	11 52 06.1	-0.7
PVIS				A	A	11 52 08.6	
	2.8nm,0.1s						
PVIS	Viseu	6.08	87	Sn	Sn	11 52 06.1	-0.7
	1.4nm,0.1s						
PMTG	Montargil	6.11	103	eSn	Sn	11 52 08.7	+1.1
PMTG				A	A	11 52 17.1	
	1.7nm,0.4s						
PMTG	Montargil	6.11	103	Sn	Sn	11 52 08.7	+1.1
	1.7nm,0.4s						
POLO	Lamas de Olo	6.16	81	eSn	Sn	11 52 08.7	-0.3
POLO				A	A	11 52 12.3	
	0.7nm,0.2s						
POLO	Lamas de Olo	6.16	81	Sn	Sn	11 52 08.7	-0.3
	0.7nm,0.2s						
EAGO	Agolada(Pontev	6.21	68	Pn	Pn	11 50 59.6	+0.7
	1.9nm,0.8s,SNR=7.9						
EAGO				Sn	Sn	11 52 09.2	-0.7
	2.8nm,0.1s,SNR=7.9						
PVRL	Vila Real	6.21	82	eSn	Sn	11 52 10.1	-0.1
PVRL	Vila Real	6.21	82	Sn	Sn	11 52 10.1	-0.1
PNCL	Nicolau / Gran	6.25	112	eSn	Sn	11 52 10.6	-0.5
PNCL				A	A	11 52 18.5	
	1.7nm,0.4s						
PNCL	Nicolau / Gran	6.25	112	Sn	Sn	11 52 10.6	-0.5
	1.7nm,0.4s						
MTE	Manteigas	6.36	90	eSn	Sn	11 52 15.2	+1.3
MTE	Manteigas	6.36	90	Sn	Sn	11 52 15.2	+1.3
PCBR	Castelo Branco	6.49	95	eSn	Sn	11 52 16.9	0.0
PCBR	Castelo Branco	6.49	95	Sn	Sn	11 52 16.9	0.0
MORF	Marmelete	6.57	119	ePn	Pn	11 51 03.7	-0.3
MORF				eSn	Sn	11 52 17.7	-1.3
MORF				A	A	11 52 26.9	
	2.2nm,0.8s						
MORF	Marmelete	6.57	119	Pn	Pn	11 51 03.7	-0.3
MORF				Sn	Sn	11 52 17.7	-1.3
	2.2nm,0.8s						
PMRV	Marv??o	6.64	98	ePn	Pn	11 51 06.1	+1.2
PMRV				eSn	Sn	11 52 20.8	+0.1
PMRV				A	A	11 52 23.7	
	1.6nm,0.5s						
PMRV	Marv??o	6.64	98	Pn	Pn	11 51 06.1	+1.2
PMRV				Sn	Sn	11 52 20.8	+0.1
	1.6nm,0.5s						
MVO	Moncorvo	6.73	83	eSn	Sn	11 52 21.4	-1.5
MVO				A	A	11 52 29.3	
	2.0nm,0.2s						
MVO	Moncorvo	6.73	83	Pn	Pn	11 51 07.1	+0.9
	4.4nm,1.2s,SNR=7.9						
MVO				Sn	Sn	11 52 22.1	-0.8
	1.8nm,0.5s,SNR=5.7						
ECAL	Calabor	7.00	77	Pn	Pn	11 51 10.0	0.0
	3.0nm,0.7s,SNR=7.9						
ECAL				Sn	Sn	11 52 28.6	-1.1
	1.8nm,0.1s,SNR=4.5						
EPON	Pontenova	7.02	65	Pn	Pn	11 51 10.4	+0.2
	2.5nm,0.9s,SNR=7.1						
EPON				Sn	Sn	11 52 28.4	-1.6
	1.4nm,0.2s,SNR=7.9						
PBDV	Barranco-do-Ve	7.09	116	ePn	Pn	11 51 11.8	+0.7
PBDV	Barranco-do-Ve	7.09	116	Pn	Pn	11 51 11.8	+0.7
PVAQ	Vaqueiros	7.15	115	ePn	Pn	11 51 13.9	+1.9
PVAQ				eSn	Sn	11 52 32.8	-0.5
PVAQ				A	A	11 52 39.9	
	1.4nm,1.0s						
PVAQ	Vaqueiros	7.15	115	Pn	Pn	11 51 13.9	+1.9
PVAQ				Sn	Sn	11 52 32.8	-0.5
	1.4nm,1.0s						
EGRO	El Granado	7.25	113	Pn	Pn	11 51 13.7	+0.4
	1.3nm,0.3s,SNR=7.9						
EGRO				Sn	Sn	11 52 33.9	-1.9
	3.3nm,0.6s,SNR=7.9						
EPLA	Plasencia	7.51	92	Pn	Pn	11 51 18.2	+1.2
	1.3nm,0.6s,SNR=7.9						
EPLA				Sn	Sn	11 52 41.2	-1.0
	7.3nm,1.4s,SNR=7.9						
EMIN	Mina Concepcio	7.72	109	Pn	Pn	11 51 20.5	+0.7
	1.6nm,0.5s,SNR=7.9						
EMIN				Sn	Sn	11 52 45.7	-1.6
	2.6nm,0.6s,SNR=7.9						
EARI	Arriondas	8.37	68	Pn	Pn	11 51 29.0	+0.3
	2.5nm,0.7s,SNR=7.2						
EARI				Sn	Sn	11 53 00.1	-3.2
	0.8nm,0.5s,SNR=7.9						
ECAB	El Cabril	8.52	104	Pn	Pn	11 51 31.7	+1.0
	1.9nm,0.8s,SNR=7.9						
ECAB				Sn	Sn	11 53 05.0	-1.9
	1.9nm,0.6s,SNR=7.9						
PAB	San Pablo	8.92	94	Pn	Pn	11 51 36.9	+0.7
	2.5nm,1.1s,SNR=7.9						
PAB				Sn	Sn	11 53 14.7	-2.1
	4.1nm,1.2s,SNR=7.9						
EADA	Adamuz	9.11	102	Pn	Pn	11 51 40.0	+1.2
	1.5nm,0.6s,SNR=7.9						
EADA				Sn	Sn	11 53 19.1	-2.3
	2.1nm,0.6s,SNR=7.9						

ISCJB ***22*** *11:55:36.0±0.7, 13°.7N±0°.1×145°.0E±0°.2, h150^{km}, mb3.6/9, Error ellipse: s-maj=33.5km s-min=15.1km az=7.2*

IDC ***22*** *11:55:35.5±0.8, 13°.72N×145°.05E, h127^{km}±4^{km}, mb3.4/9, mb1 3.6/9, mb1mx3.3/37, mbtmp3.8/9, MS3.2/1, Ms1 3.1/1, ms1mx2.4/18, Error ellipse: s-maj=32.7km s-min=16.2km az=96.0*

ISC 22 11:55:37.0±0.8**, 13°.7N**±0°.1×**145°.0E**±0°.3**, h150^{km}, n16, σ2^s.23**/11**, mb3.6**/9**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.14	235	P	Pn	11 55 55.1	-2.1
GUMO				S	Sn	11 56 07.4	-5.1
	1µm,0.3s,baz=141,slow=20,SNR=23						
H11S3	WAKE ISLAND Hy	21.39	74	T	T	12 22 48.2	
	SNR=9.2						
H11S1	WAKE ISLAND Hy	21.41	74	T	T	12 22 53.3	
	baz=48,slow=74,SNR=5.4						
H11S2	WAKE ISLAND Hy	21.41	74	T	T	12 22 50.4	
	baz=282,slow=74,SNR=4.5						
H11N1	WAKE ISLAND Hy	21.82	71	T	T	12 23 29.8	
	baz=257,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	21.83	71	T	T	12 23 24.9	
	baz=257,slow=75,SNR=9.0						
H11N3	WAKE ISLAND Hy	21.84	71	T	T	12 23 28.8	
	baz=257,slow=75,SNR=15						
WRA	Warramunga Arr	35.00	198	P	P	12 02 16.2	+0.9
	1.8nm,1.0s,baz=21,slow=7.2,SNR=7.5						
ASAR	Alice Springs	38.65	196	P	P	12 02 47.6	+1.5
	0.2nm,0.5s,baz=22,slow=13,SNR=6.9						
STKA	Stephens Creek	45.40	184	P	P	12 03 41.3	+0.6
	1.9nm,0.9s,baz=3.2,slow=18,SNR=2.0						
STKA				LR	LR	12 22 26.8	
	comp=Z,26nm,20.2s,baz=204,slow=36						
MKAR	Makanchi Array	61.51	316	P	P	12 05 39.4	+1.3
	0.2nm,0.3s,baz=93,slow=8.8,SNR=7.4						
ZALV	Zalesovo Beam	61.63	324	P	P	12 05 39.7	+1.1
	0.6nm,0.4s,baz=90,slow=7.2,SNR=2.5						
ILAR	Eielson Array	68.45	25	P	P	12 06 22.2	-0.3
	0.5nm,0.5s,baz=247,slow=6.0,SNR=7.5						
INK	Inuvik	74.25	22	P	P	12 06 58.9	+1.7
	0.5nm,0.5s,baz=314,slow=4.4,SNR=4.5						
NVAR	Mina Array Bea	86.78	51	P	P	12 08 05.2	+0.3
	0.5nm,0.8s,baz=252,slow=3.9,SNR=5.0						
FINES	FINESS Array B	91.14	335	P	P	12 08 24.3	-0.3
	2.8nm,0.9s,baz=64,slow=8.7,SNR=5.2						

WEL 22 12:06:41.5, 42°S±1°×**17°4E**±°**, h17^{km}**±2^{km}**, M3.5**/43**, ML3.6**/24**, MLv3.5**/43**, Error ellipse: s-maj=0.0km s-min=0.0km az=134.5, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	201	P	Pb	12 06 46.0	+0.2
TUWZ	Tuamarina	0.32	306	P	Pb	12 06 48.6	-0.1
BSWZ	Blackbirch Sta	0.32	252	P	Pb	12 06 48.7	-0.1
TCW	Tory Channel	0.41	359	P	Pb	12 06 50.1	-0.1
BHW	Baring Head	0.49	65	P	Pb	12 06 52.0	+0.4
WEL	Wellington	0.49	48	P	Pb	12 06 52.0	+0.3
PLWZ	Palliser	0.73	87	P	Pn	12 06 56.8	-0.3
MSWZ	Moikau Station	0.75	75	P	Pn	12 06 57.0	-0.4
CAW	Cannon Point	0.78	49	P	Pg	12 06 56.9	+0.2
NNZ	Nelson	0.79	300	P	Pg	12 06 56.9	0.0
DUWZ	D’Urville Isla	0.86	341	P	Pn	12 06 58.7	-0.2
PAWZ	Paruwai Farm	0.89	75	P	Pn	12 06 59.5	+0.2
KHZ	Kahutara	0.97	215	P	Pn	12 07 00.9	+0.5
MTW	Mount Morrison	1.02	64	P	Pg	12 07 01.4	+0.1
OGWZ	Otaki Gorge	1.04	40	P	Pn	12 07 01.4	0.0
THZ	Tophouse	1.04	261	P	Pn	12 07 01.5	+0.1
TRWZ	Traveller	1.08	79	P	Pn	12 07 02.0	+0.1
HOWZ	Holdsworth Sta	1.17	53	P	Pb	12 07 03.7	+0.3
TMWZ	Te Maipa	1.31	68	P	Pn	12 07 05.1	0.0
MRZ	Mangatainoka R	1.37	46	P	Pb	12 07 06.5	-0.1
TIWZ	Tintock	1.47	56	P	Pg	12 07 09.7	-0.1
QRZ	Quartz Range	1.54	300	P	Pb	12 07 10.1	+0.5
CPWZ	Castlepoint	1.61	65	P	Pg	12 07 15.8	+3.4
OHWZ	Ohakea	1.61	29	P	Pg	12 07 12.0	-0.4
GVZ	Greta Valley S	1.64	214	P	Pn	12 07 09.7	+0.1
PRWZ	Pori Road	1.66	51	P	Pn	12 07 10.4	+0.6
POWZ	Post Office Ro	1.66	43	P	Pb	12 07 10.9	-0.7
BFZ	Birch Farm	1.75	58	P	Pn	12 07 10.7	-0.4
LTZ	Lake Taylor	1.90	231	P	Pn	12 07 13.8	+0.6
WAZ	Wanganui	1.93	16	P	Pg	12 07 17.6	-1.0
DVHZ	Dannevirke	1.94	48	P	Pn	12 07 13.7	0.0
AMCZ	Amberley	1.97	217	P	Pg	12 07 21.0	+1.7
TSZ	Takapari Road	2.01	40	P	Pn	12 07 15.3	+0.6
NMEZ	Namu Road	2.22	352	P	Pg	12 07 24.2	+0.1
PNHZ	Pukenui	2.24	41	P	Pn	12 07 18.5	+0.7
PREZ	Palmer Road	2.27	358	P	Pg	12 07 25.5	+0.4
KHEZ	Kahui Hut	2.33	355	P	Pb	12 07 24.4	+1.3
NBEZ	Newall Road No	2.37	352	P	Pg	12 07 25.7	-1.2
OXZ	Oxford	2.38	223	P	Pn	12 07 19.3	-0.5
INZ	Inchbonnie	2.38	241	P	Pn	12 07 21.1	+1.4
MTVZ	Mangateitei	2.41	22	P	Pb	12 07 25.8	+1.4
MQZ	McQueen’s Vall	2.41	209	P	Pn	12 07 18.7	-1.5
DREZ	Durham Road	2.42	358	P	Pg	12 07 27.2	-0.8
PKE	Pukeiti	2.43	355	P	Pg	12 07 27.2	-0.9
PKVZ	Pokaka	2.46	20	P	Pb	12 07 26.5	+1.1
MOVZ	Moawhango	2.48	27	P	Pb	12 07 26.0	+0.5
VRZ	Vera Road	2.52	8	P	Pg	12 07 28.4	-1.3
BHHZ	Black Hill Sta	2.52	33	P	Pb	12 07 26.8	+0.5
KRHZ	Kereru	2.53	40	P	Pn	12 07 22.6	+0.8
KRHZ				P	Pg	12 07 28.4	-1.6
WHVZ	Whangaehu Hut	2.54	24	P	Pb	12 07 27.3	+0.6
FWVZ	Far West T-bar	2.55	23	P	Pb	12 07 27.7	+0.8
TUVZ	Tukino	2.57	24	P	Pg	12 07 29.6	-1.1
NGZ	Ngauruhoe	2.64	23	P	Pb	12 07 29.2	+0.8
KAHZ	Kahuranaki	2.68	48	P	Pb	12 07 30.3	+1.3
WTVZ	West Tongariro	2.69	22	P	Pb	12 07 30.2	+1.0
TWVZ	Taurewa	2.69	20	P	Pb	12 07 30.8	+1.5
KRVZ	Karewarewa	2.72	23	P	Pb	12 07 30.8	+1.0
KWHZ	Kaweka Forest	2.73	37	P	Pb	12 07 31.7	+1.8
KATZ	Kakaramea	2.85	23	P	Pb	12 07 33.1	+1.1
BKZ	Black Stump Fm	2.97	35	P	Pb	12 07 35.4	+1.4
RATZ	Rangitukua	2.97	23	P	Pb	12 07 35.7	+1.7
HIZ	Hauiti	3.13	8	P	Pb	12 07 36.4	-0.2
ODZ	Otahua Downs	4.33	217	P	Pn	12 07 46.1	-0.5
JCZ	Jackson Bay	4.73	237	P	Pn	12 07 57.6	+5.5
WCZ	Waipu Caves	5.67	1	P	Pn	12 08 11.6	+6.7

ISCJB ***22*** *12:32:55.9±0.2, 35°.32S±0°.05×54°.10E±0°.06, h10^{km}, mb4.8/69, MS4.1/27, Error ellipse: s-maj=7.7km s-min=6.2km az=153.2*

BJI ***22*** *12:32:56.7±0.0, 35°.30S×54°.10E, h10^{km}, mb4.9/28, mB5.1/24, Ms5.0/12, Ms7 4.7/6*

IDC ***22*** *12:32:56.2±0.5, 35°.27S×54°.16E, h0^{km}, mb4.5/20, mb1 4.6/21, mb1mx4.4/42, mbtmp4.5/21, ML4.6/1, MS4.0/26, Ms1 4.0/26, ms1mx3.9/35, Error ellipse: s-maj=17.4km s-min=13.1km az=39.0*

NEIC ***22*** *12:32:57.5±1.1, 35°.29S×54°.00E, h10^{km}, mb5.0/50, Error ellipse: s-maj=16.3km s-min=14.0km az=37.0*

GCMT ***22*** *12:32:58.5±0.3, 35°.18S±0°.02×54°.18E±0°.02, h26^{km}±1^{km}, MW5.0/83, Moment Tensor Solution. s30,c33; s83,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.21±.18; $M_{\theta\theta}$3.27±.17; $M_{\phi\phi}$-3.06±.15; $M_{r\theta}$-0.32±.27; $M_{\theta\phi}$2.64±.12; $M_{\phi r}$-0.82±.28; Best double couple: $M_0$4.21600×10^{16} NP1:ϕ_s25.00000°, δ88.00000°, λ-168.00000°. NP2: ϕ_s295.00000°, δ78.00000°, λ-2.00000°. Principal axes: T 4.3010, Plg7.0000°, Azm159.0000°; N -0.1690, Plg78.0000°, Azm33.0000°; P -4.1310, Plg10.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 12:32:57.7±0.3**, 35°.30S**±0°.06×**54°.07E**±0°.08**, h10^{km}, n142, σ0^s.77**/120**, mb4.9**/69**, MS4.1**/29**, 1D, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l’E	14.17	6	ePn	Pn	12 36 16.7	-1.9
MRIV	Mauritius Mete	15.25	12	ePn	Pn	12 36 33.4	+0.2
	62nm,1.4s						
ABPO	Ambohimpanom	17.31	338	eP	Pn	12 36 59.8	+0.1
	16nm,0.6s						
OPO	Ambohidratompo	17.75	338	P	P	12 37 06.3	+0.3
	2.1nm,0.3s,baz=167,slow=11,SNR=13						
OPO				LR	LR	12 42 31.5	
	comp=Z,406nm,21.6s,baz=22,slow=32						
BOSA	Boshof	25.28	277	P	P	12 38 24.4	0.0
	9.4nm,1.1s,baz=124,slow=14,SNR=7.5						
BOSA				LR	LR	12 46 54.2	
	comp=Z,291nm,18.9s,baz=104,slow=33						
BOSA	Boshof	25.28	277	eP	P	12 38 23.2	-1.2
	40nm,1.4s						
LBTB	Lobatse	26.58	285	P	P	12 38 35.5	-0.8
	6.8nm,1.0s,baz=135,slow=9.0,SNR=5.9						
LBTB				LR	LR	12 47 23.7	
	comp=Z,490nm,18.9s,baz=118,slow=33						
LBTB	Lobatse	26.58	285	eP	P	12 38 35.0	-1.2
	25nm,1.4s						
MATP	Matopo	26.92	297	P	P	12 38 38.2	-1.1
	3.7nm,1.0s,baz=114,slow=8.4,SNR=4.4						
MATP				LR	LR	12 48 08.3	
	comp=Z,242nm,18.0s,baz=128,slow=34						
SUR	Sutherland	27.70	266	LR	LR	12 47 43.2	
	comp=Z,522nm,19.0s,baz=121,slow=32						
SUR	Sutherland	27.70	266	eP	P	12 38 44.1	-2.2
	84nm,1.8s						
H08S1	Diego Carcia H	32.29	36	T	T	13 13 11.9	
	baz=208,slow=75,SNR=20						
H08S2	Diego Garcia H	32.30	36	T	T	13 13 13.3	
	baz=208,slow=75,SNR=15						
H08S3	Diego Garcia H	32.31	36	T	T	13 13 13.7	
	baz=208,slow=75,SNR=19						
MAW	Mawson	32.74	174	P	P	12 39 31.4	+1.1
	14nm,1.0s,baz=327,slow=9.4,SNR=11						
MAW				LR	LR	12 49 20.8	
	comp=Z,626nm,21.4s,baz=354,slow=30						
MAW	Mawson	32.74	174	eP	P	12 39 29.9	-0.3
	3.5nm,0.9s						
H08N3	Diego Garcia H	32.76	32	T	T	13 13 21.4	
	baz=206,slow=76,SNR=25						
H08N1	Diego Carcia H	32.77	32	T	T	13 13 22.4	
	baz=206,slow=76,SNR=26						
H08N2	Diego Garcia H	32.78	32	T	T	13 13 25.0	
	baz=206,slow=76,SNR=28						
SYO	Syowa Base	34.71	189	⇓eP	P	12 39 46.4	-1.0
TSUM	Tsumeb	35.94	287	P	P	12 39 59.4	+0.7
	4.6nm,0.9s,baz=127,slow=9.4,SNR=5.9						
TSUM	Tsumeb	35.94	287	eP	P	12 39 57.8	-0.9
	8.8nm,1.0s						
CASY	Casey	44.86	151	eP	P	12 41 11.7	0.0
	26nm,0.9s						
COCO	West Island	44.95	70	eP	P	12 41 12.8	-0.2
FURI	Furi	46.30	339	eP	P	12 41 23.6	-0.5
	52nm,1.0s						
SNAA	Sanae	46.60	201	P	P	12 41 26.4	+0.8
SNAA	Sanae	46.60	201	P	P	12 41 26.4	+0.8
	14nm,0.9s,baz=84,slow=6.5,SNR=45						
SNAA	Sanae	46.60	201	eP	P	12 41 25.6	0.0
	17nm,0.9s						
VNA1	Neumayer--Stat	48.01	203	P	P	12 41 37.5	+1.1
H01W2	Cape Leeuwin H	48.46	108	T	T	13 33 15.9	
	baz=250,slow=75,SNR=55						
H01W3	Cape Leeuwin H	48.47	108	T	T	13 33 16.6	
	baz=250,slow=75,SNR=59						
H01W1	Cape Leeuwin H	48.48	108	T	T	13 33 17.2	
	baz=250,slow=75,SNR=49						
VNA3	Neumayer Olymp	48.59	203	P	P	12 41 41.6	+0.7
PALK	Pallekele	49.23	36	eP	P	12 41 46.2	-0.3
	36nm,1.2s						
NWAO	Narrogin (SRO)	51.56	107	P	P	12 42 03.5	-0.5
	18nm,1.1s,baz=283,slow=4.9,SNR=3.8						
MORW	Morawa	52.08	102	eP	P	12 42 08.0	0.0
	52nm,1.6s						
XMIS	Christmas Isla	52.86	75	eP	P	12 42 14.0	+0.2
	228nm,1.6s						
GIRL	Giralia	53.41	93	eP	P	12 42 17.9	+0.1
	60nm,1.1s						
QSPA	South Pole Qui	54.88	180	eP	P	12 42 28.1	-0.1
	36nm,1.3s						
MNSI	Mandailing Nat	55.59	60	P	P	12 42 43.1	+9.4
KCSI	Kotacane, Aceh	56.28	56	P	P	12 42 47.5	+8.8
	26nm,0.9s						
PSI	Prapat	56.55	58	LR	LR	13 03 02.4	
	comp=Z,57nm,18.1s,baz=204,slow=32						
PSI	Prapat	56.55	58	eP	P	12 42 40.0	-0.8
	12nm,1.0s						
LEM	Lembang	56.60	73	LR	LR	13 01 06.9	
	comp=Z,88nm,21.3s,baz=204,slow=30						
PSA00	Pilbara Seismi	58.49	95	eP	P	12 42 53.3	-1.0
	14nm,1.0s						
RAYN	Ar Rayn	59.06	351	eP	P	12 42 57.9	-0.2
	7.6nm,0.9s						
IPM	Ipoh	59.21	58	eP	P	12 42 58.5	-0.8
	26nm,0.9s						
VNDA	Vanda	59.53	166	P	P	12 43 00.7	+0.1
	3.8nm,1.0s,baz=248,slow=7.4,SNR=10						
VNDA				LR	LR	13 06 39.7	
	comp=Z,265nm,18.2s,baz=232,slow=34						
VNDA	Vanda	59.53	166	eP	P	12 43 01.0	+0.4
	9.3nm,1.2s						
UOSS	Minazif	59.95	2	eP	P	12 43 03.5	-0.6
	25nm,1.4s						
SBA	Scott Base	60.30	167	eP	P	12 43 06.0	0.0
	25nm,1.6s						
FORT	Forrest	60.85	109	eP	P	12 43 10.1	-0.4
	102nm,1.8s						
KSM	Kuching	63.92	68	eP	P	12 43 30.9	-0.3
	15nm,1.1s						
BBOO	Buckleboo	66.03	114	eP	P	12 43 44.3	-0.4
	70nm,1.9s						
EIL	Elat	67.09	342	LR	LR	13 10 15.6	
	comp=Z,121nm,20.2s,baz=240,slow=33						
BATI	Baumata	67.55	87	LR	LR	13 10 21.0	
	comp=Z,70nm,19.6s,baz=145,slow=33						
CM31	Chiang Mai Arr	68.34	46	eP	P	12 43 59.1	-0.2
	19nm,0.9s						
CMAR	Chiang Mai Arr	68.34	46	P	P	12 43 58.8	-0.6
	2.9nm,0.8s,baz=232,slow=6.9,SNR=17						
CMAR				LR	LR	13 09 55.9	
	comp=Z,125nm,19.1s,baz=212,slow=32						
TTSI	Tana Toraja	68.54	78	P	P	12 44 14.7	+14
CMMT	Chiang Mai	68.62	46	P	P	12 44 09.3	+8.2
	3.6nm,1.0s						
ASAR	Alice Springs	68.78	105	P	P	12 44 01.7	-0.6
	3.8nm,0.7s,baz=234,slow=6.0,SNR=54						
ASAR				LR	LR	13 09 56.3	
	comp=Z,55nm,20.1s,baz=257,slow=32						
AS31	Alice Springs	68.78	105	eP	P	12 44 01.5	-0.8
	1.3nm,0.6s						
TOA0	Torodi Ar. Sit	69.12	304	eP	P	12 44 04.2	-0.1
	10.0nm,1.0s						
TORD	Torodi Ar. Bea	69.12	304	P	P	12 44 05.8	+1.5
	4.7nm,1.1s,baz=102,slow=2.9,SNR=15						
TORD				LR	LR	13 14 00.3	
	comp=Z,132nm,18.4s,baz=350,slow=36						
DBIC	Dimbokro	69.33	295	LR	LR	13 11 43.2	
	comp=Z,51nm,18.6s,baz=115,slow=34						
STKA	Stephens Creek	70.59	116	P	P	12 44 13.0	-0.3
	4.6nm,1.0s,baz=279,slow=4.7,SNR=4.5						
STKA				LR	LR	13 09 43.7	
	comp=Z,110nm,21.0s,baz=209,slow=31						
STKA	Stephens Creek	70.59	116	eP	P	12 44 13.0	-0.3
	2.7nm,1.3s						
KBL	Kabul	70.88	13	eP	P	12 44 14.7	-0.3
	15nm,1.4s						
WRA	Warramunga Arr	71.03	101	P	P	12 44 15.8	-0.3
	11nm,0.8s,baz=232,slow=8.1,SNR=49						
WB2	Warramunga Arr	71.04	101	eP	P	12 44 15.8	-0.4
	24nm,1.0s						
WRAB	Tennant Creek	71.05	101	eP	P	12 44 15.7	-0.6
	28nm,1.0s						
GEYT	Alibeck	72.96	3	P	P	12 44 27.9	+0.7
	81nm,0.3s,baz=250,slow=6.9,SNR=2.3						
SLVN	Son La	73.52	48	eP	P	12 44 30.6	-0.3
	6.6nm,0.8s						
CHGR	Chuyangaron	74.90	12	eP	P	12 44 38.6	-0.1
	14nm,1.0s						
BTK	Batken	76.56	13	eP	P	12 44 47.6	-0.4
	9.5nm,1.0s						
BRTR	Keskin Array B	77.00	344	P	P	12 44 50.9	+0.2
	1.6nm,0.8s,baz=171,slow=8.8,SNR=5.7						
BRTR				LR	LR	13 16 40.0	
	comp=Z,54nm,19.9s,baz=120,slow=34						
BR131	Keskin Array S	77.00	344	eP	P	12 44 50.8	+0.2
	3.6nm,0.9s						
TBLG	Delisi	77.14	353	eP	P	12 44 51.1	-0.1
	7.6nm,0.7s						
KSH	Kashi	77.15	17	eP	P	12 44 50.6	-0.8
KSH				pP	sP	12 44 55.8	+1.8
KSH				PcP	PcP	12 45 01.8	-0.4

KSH				PP	PP	12 47 46.3	+0.6
KSH				pmax	pmax		
	comp=Z,18nm,0.6s						
KSH				pmax	pmax		
	comp=Z,38nm,3.8s						
KSH				LR	LR		
	comp=N,250nm,11.0s						
KSH				LR	LR		
	comp=E,120nm,6.0s						
KBZ	Khabaz	79.31	352	P	P	12 45 04.5	+1.4
	0.6nm,0.4s,baz=161,slow=6.1,SNR=3.9						
KBZ				LR	LR	13 18 19.4	
	comp=Z,104nm,20.4s,baz=164,slow=34						
KK31	Karatay Array	79.46	12	*e*P	P	12 45 04.5	+0.4
	6.3nm,0.9s						
AAK	Ala-Archa	79.78	15	*e*P	P	12 45 06.0	0.0
	9.3nm,0.9s						
KDJ	Kajisay	79.92	17	*e*P	P	12 45 06.5	-0.3
	18nm,0.8s						
BOOM	Boomskoye usch	79.96	16	*e*P	P	12 45 07.1	+0.1
	8.2nm,1.0s						
CTAO	Charters Tower	80.38	108	*e*P	P	12 45 09.4	-0.3
	25nm,1.3s						
PRZ	Przheval'sk	80.55	18	*e*P	P	12 45 10.4	+0.2
	31nm,1.0s						
CD2	Chengdu	80.75	42	P	P	12 45 11.9	+0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
EIDS	Eidsvold	81.10	115	*e*P	P	12 45 12.9	-0.5
	10nm,1.0s						
KEST	Kesra	82.04	325	LR	LR	13 21 00.1	
	comp=Z,163nm,20.8s,baz=314,slow=35						
ENH	Enshi	83.51	46	*e*P	P	12 45 25.9	+0.1
	24nm,1.2s						
MLR	Muntele Rosu	84.34	341	P	P	12 45 29.8	-0.1
	2.8nm,0.8s,baz=138,slow=9.8,SNR=2.7						
MLR	Muntele Rosu	84.34	341	*e*P	P	12 45 29.7	-0.1
	13nm,1.4s						
ABKAR	Akbulak array	84.35	4	*e*P	P	12 45 29.5	0.0
	4.7nm,1.1s						
WMQ	Urumqi	84.49	24	*e*P	P	12 45 32.4	+1.9
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.8s						
WMQ				LR	LR		
	comp=N,120nm,16.7s						
LZH	Lanzhou	84.81	38	*e*P	P	12 45 33.3	+0.8
LZH				pP	PcP	12 45 36.5	+0.7
LZH				sP	pwP	12 45 38.1	-1.9
LZH				*e*PP	PP	12 48 52.5	+3.3
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,87nm,9.0s						
LZH				LR	LR		
	comp=N,150nm,17.0s						
LZH				LR	LR		
	comp=E,160nm,16.8s						
LZH				LR	LR		
	comp=Z,200nm,19.3s						
GTA	Gaotai	85.50	34	*e*P	P	12 45 35.6	-0.2
GTA				pP	PcP	12 45 40.0	+1.2
GTA				sP	pwP	12 45 42.9	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,32nm,6.8s						
GTA				LR	LR		
	comp=N,68nm,16.8s						
GTA				LR	LR		
	comp=E,59nm,16.5s						
MAKZ	Makanchi	85.50	19	*e*P	P	12 45 35.5	+0.1
	7.7nm,1.0s						
MKAR	Makanchi Array	85.57	19	P	P	12 45 35.1	-0.7
	0.9nm,0.7s,baz=237,slow=4.5,SNR=4.8						
XAN	Xi'an	85.96	43	P	P	12 45 43.8	+5.7
XAN				pP	pwP	12 45 50.8	+5.2
XAN				pmax	pmax		
	comp=Z,13nm,1.2s						
XAN				pmax	pmax		
	comp=Z,86nm,4.0s						
AKASG	Malin Array Be	88.39	344	P	P	12 45 48.9	-0.5
	0.6nm,0.5s,baz=169,slow=4.6,SNR=4.4						
AKBB	Malin Array Si	88.39	344	*e*P	P	12 45 49.1	-0.3
	3.9nm,0.6s						
KOLS	Kolonicke sedl	88.51	340	*e*P	P	12 45 51.3	+1.3
PLCA	Paso Flores	88.81	219	LR	LR	13 19 06.5	
	comp=Z,53nm,18.4s,baz=150,slow=31						
VYHS	Vyhne	89.15	337	*e*P	P	12 45 50.7	-2.3
NJ2	Nanjing	90.46	50	*e*P	P	12 46 00.5	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
BDFB	Brasilia	90.62	250	LR	LR	13 18 39.3	
	comp=Z,101nm,21.2s,baz=129,slow=30						
CPUP	Villa Florida	90.80	237	LR	LR	13 19 49.6	
	comp=Z,29nm,19.0s,baz=180,slow=31						
DAVOX	Davos/Dischmat	90.85	331	P	P	12 46 02.3	+1.1
	2.0nm,0.4s,baz=193,slow=19,SNR=3.6						
ESDC	Sonseca Array	91.81	319	P	P	12 46 05.9	+0.2
	1.4nm,0.9s,baz=136,slow=4.2,SNR=6.9						
ESDC				LR	LR	13 29 50.4	
	comp=Z,94nm,18.5s,baz=75,slow=37						
HHC	Hu-ho-hao-te	92.37	40	P	P	12 46 09.3	+0.9
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,72nm,6.6s						
ZALV	Zalesovo Beam	92.78	18	LR	LR	13 24 11.1	
	comp=Z,38nm,22.0s,baz=249,slow=33						
SONM	Songino Array	95.07	32	LR	LR	13 27 38.2	
	comp=Z,87nm,18.0s,baz=237,slow=34						
KSRS	Korea Array	99.64	51	LR	LR	13 29 11.9	
	comp=Z,40nm,19.5s,baz=228,slow=34						
U54A	Nelsons Funny	144.48	285	*e*PKPdf	PKPab	12 52 33.5	+0.7
BG3	Lake Jocassee	145.04	282	*e*PKPbc	PKPbc	12 52 34.1	-0.6
TTA	Tatalina	146.66	25	*e*PKPdf	PKPdf	12 52 36.8	-0.5
INK	Inuvik	146.67	5	*e*PKPdf	PKPdf	12 52 37.0	+0.1
MLY	Manley	146.73	19	*e*PKPdf	PKPdf	12 52 36.9	-0.4
BPAW	Bear Paw Mtn.	147.38	20	*e*PKPdf	PKPdf	12 52 39.0	+0.7
T49A	Edmonton	147.52	285	*e*PKPdf	PKPdf	12 52 39.5	0.0
PRP	Porcupine Dome	147.57	15	*e*PKPdf	PKPdf	12 52 39.2	+0.3
CAST	Castle Rocks	147.57	22	*e*PKPdf	PKPdf	12 52 38.9	+0.2
CCB	Clear Creek Bu	147.78	18	*e*PKPdf	PKPdf	12 52 39.4	+0.4
WRH	Wood River Hil	147.86	18	*e*PKPdf	PKPdf	12 52 39.6	+0.5
ILAR	Eielson Array	147.90	17	PKPbc	PKPdf	12 52 40.9	+1.7
	5.6nm,0.9s,baz=315,slow=3.6,SNR=39						
ILB	Eielson Array	147.90	17	*e*PKPdf	PKPdf	12 52 39.6	+0.4
CLTN	Cedars of Leba	147.98	283	*e*PKPbc	PKPbc	12 52 42.9	-0.4
WVT	Waverly	149.18	283	*e*PKPdf	PKPdf	12 52 42.5	+0.4
DHY	Denali Highway	149.18	19	*e*PKPdf	PKPdf	12 52 42.6	+1.1
SCRK	Sand Creek	149.24	16	*e*PKPdf	PKPdf	12 52 42.1	+0.6
DAWY	Dawson	150.05	12	*e*PKPdf	PKPdf	12 52 43.4	+0.7
MENT	Mentasta	150.21	16	*e*PKPdf	PKPdf	12 52 43.1	+0.1
COWI	Conover	150.33	303	*e*PKPbc	PKPbc	12 52 48.8	-0.1
PBMO	Poplar Bluff	151.35	283	*e*PKPbc	PKPbc	12 52 51.2	-0.3
YKA	Yellowknife Ar	151.87	349	PKPbc	PKPbc	12 52 51.4	-0.5
	0.4nm,0.6s,baz=223,slow=16,SNR=4.5						
YKB5	Yellowknife Ar	151.87	349	*e*PKPbc	PKPbc	12 52 51.4	-0.5
RAGM	Ragged Mountai	152.13	20	*e*PKPbc	PKiKP	12 52 53.4	+0.4
CCM	Cathedral Cave	152.14	286	*e*PKPbc	PKPbc	12 52 52.8	-0.6
LTX	Lajitas	160.28	259	*e*PKPdf	PKPdf	12 52 57.9	+0.1
LTX				*e*PKPab	PKPab	12 53 38.5	+0.1
TXAR	Lajitas Array	160.28	259	PKP	PKPdf	12 52 57.9	+0.1
	0.4nm,1.0s,baz=48,slow=1.9,SNR=3.8						
TXAR				PKPab	PKPab	12 53 38.5	+0.1
	0.7nm,0.9s,baz=119,slow=7.3,SNR=5.2						
PDAR	Pinedale Array	165.26	305	PKP	PKPdf	12 53 01.9	-0.5
	0.3nm,0.6s,baz=98,slow=1.8,SNR=3.3						
NEW	Newport	165.49	336	*e*PKPab	PKPab	12 54 01.0	+0.6

*ISCJB **22** 12:44:49.7±0.6, 73°.02N±0°.04×5°.8E±0°.2, h11^{km}, mb3.7/1, MS2.8/3, Error ellipse: s-maj=7.9km s-min=5.9km az=173.4*

*IDC **22** 12:44:50.9±1.3, 72°.88N×5°.53E, h0^{km}, mb3.6/1, mb1 3.7/7, mb1mx3.5/40, mbtmp3.7/7, ML3.2/6, MS2.8/6, Ms1 2.8/6, ms1mx2.5/40, Error ellipse: s-maj=24.1km s-min=17.8km az=49.0*

*NAO **22** 12:44:51.8±2.3, 72°.99N×6°.28E, ML3.2*

*BER **22** 12:44:54.3±2.7, 73°.04N×5°.83E, h10^{km}, ML2.4, ML3.2(NAO), Confirmed Earthquake*

ISC 22 12:44:50.3±0.9, 72°.99N±0°.05×5°.98E±0°.06, h11^{km}, n41, σ2^{s}.89/54, MS2.8/3, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.96	61	Pn	Pn	12 45 52.8	+2.0
BJO1				Sn	Sn	12 46 36.7	-0.4
BJO1	Bjornoya	3.96	61	*e*P	Pn	12 45 53.0	+1.5
BJO1				*e*S	Sn	12 46 37.2	-1.1
BJO1				IAML		12 46 38.3	
	comp=Z,16nm,0.4s						
HSPB	Hornsund (broa	4.73	27	Pn	Pn	12 46 02.8	+1.3
HSPB	Hornsund (broa	4.73	27	Pn	Pn	12 46 02.8	+1.4
JMIC	Jan Mayen	4.92	253	Pn	Pn	12 46 03.6	-0.4
	comp=Z,5.5nm,0.3s,baz=118,slow=11,SNR=1.8						
JMIC	Jan Mayen	4.92	253	*e*P	Pn	12 46 03.7	-0.4
TRO	Tromso	5.35	123	*e*P	Pn	12 46 13.1	+3.2
TRO				*e*S	Sn	12 47 10.6	-0.8
TRO				IAML		12 47 14.5	
	comp=Z,8.5nm,0.3s						
BRBA	Barentsburg A	5.49	18	Pn	Pn	12 46 13.6	+1.7
BRBA	Barentsburg A	5.49	18	Pn	Pn	12 46 13.6	+1.7
LOF	Lofoten	5.49	149	*e*P	Pn	12 46 15.3	+3.4
LOF				*e*S	Sn	12 47 12.4	-2.6
LOF				IAML		12 47 14.8	
	comp=Z,14nm,0.3s						
SPA0	Spitsbergen Ar	5.81	22	Pn	Pn	12 46 18.2	+1.9
	baz=212,slow=16						
SPA0	Spitsbergen Ar	5.81	22	Pn	Pn	12 46 18.2	+1.9
	baz=212,slow=16						
SPITS	Spitsbergen Ar	5.81	22	Pn	Pn	12 46 18.0	+1.7
	baz=198,slow=16,SNR=29						
SPITS				Sn	Sb	12 47 35.4	-5.6
	baz=39,slow=24,SNR=14						
STEI	Steigen	5.95	144	*e*P	Pn	12 46 22.8	+4.6
STEI				*e*S	Sn	12 47 24.2	-2.1
STEI				IAML		12 47 30.3	
	comp=Z,9.5nm,0.4s						
HAMF	Hammerfest	6.01	104	*e*P	Pn	12 46 22.1	+3.1
KBS	Kingsbay	6.14	11	Pn	Pn	12 46 21.3	+0.6
KBS	Kingsbay	6.14	11	Pn	Pn	12 46 21.3	+0.6
KBS				*e*P	Pn	12 46 23.0	+2.3
KIF	Kilpisjarvi	6.27	122	*e*P	Pn	12 46 25.5	+3.0
KIF				*e*S	Sn	12 47 32.0	-2.0
KIF				MSN		12 47 35.8	
	comp=Z,2.0nm,0.1s						
KTK1	Kautokeino	6.88	117	*e*P	Pn	12 46 34.2	+3.2
KTK1				*e*S	Sn	12 47 46.3	-3.0
KTK1				IAML		12 47 52.1	
	comp=Z,2.3nm,0.4s						
KONS	Konsvik	6.97	156	*e*P	Pn	12 46 34.8	+2.6
KONS				*e*S	Sn	12 47 47.5	-3.9
KONS				IAML		12 47 52.3	
	comp=Z,7.7nm,0.4s						
SALU	Saltoluokta	7.05	137	*e*P	Pn	12 46 38.0	+4.7
ARA0	ARCESS Array S	7.16	109	Pn	Pn	12 46 37.6	+2.9
	baz=310,slow=12						
ARA0				Sn	Sn	12 47 53.3	-2.7
	baz=306,slow=22						
ARA0	ARCESS Array S	7.16	109	Pn	Pn	12 46 37.6	+2.9
	baz=310,slow=12						
ARA0				Sn	Sn	12 47 53.3	-2.7
	baz=306,slow=22						
ARCES	ARCESS Array B	7.16	109	Pn	Pn	12 46 38.0	+3.3
	comp=Z,0.6nm,0.3s,baz=313,slow=11,SNR=23						
ARCES				Sn	Sn	12 47 53.5	-2.4
	comp=Z,0.9nm,0.3s,baz=307,slow=21,SNR=6.0						
ARE0	ARCESS Array S	7.16	109	*e*P	Pn	12 46 39.1	+4.4
LANU	Lannavaara	7.27	125	*e*P	Pn	12 46 39.1	+2.7
LANU				*e*S	Sn	12 47 52.8	-6.0
DAG	Danmarks Havn	7.42	312	*i* P	Pn	12 46 34.8	-3.5
DAG				*i* S	Sn	12 47 49.5	-13
HEF	Hetta	7.42	120	*e*P	Pn	12 46 41.3	+2.9
HEF				*e*S	Sn	12 47 57.1	-5.3
HEF				MSN		12 48 03.9	
	comp=Z,1.0nm,0.2s						
MOR8	Moi Rana	7.45	153	*e*P	Pn	12 46 41.6	+2.8
MOR8				*e*S	Sn	12 47 58.6	-4.6
MOR8				IAML		12 48 04.2	
	comp=Z,6.1nm,0.2s						
SCO	Scoresbysund	9.06	268	*i* P	Pn	12 46 59.7	-1.1
NOA	NORSAR Array B	12.17	168	Pn	Pn	12 47 44.8	+1.4
	comp=Z,0.0nm,0.3s,baz=348,slow=13,SNR=2.4						
NOA				LR	LR	12 52 09.8	
	comp=Z,27nm,21.4s,baz=350,slow=36						
HFS	Hagfors	13.25	163	Pn	Pn	12 48 00.5	+2.4
	comp=Z,0.6nm,0.3s,baz=354,slow=23,SNR=10.0						
HFS				LR	LR	12 52 43.8	
	comp=Z,36nm,18.2s,baz=356,slow=36						
HFS	Hagfors	13.25	163	Pn	Pn	12 48 00.3	+2.2
	slow=18						
HFS	Hagfors	13.25	163	Pn	Pn	12 48 00.3	+2.2
	slow=18						
FIA0	FINESS Array S	13.84	136	Pn	Pn	12 48 07.6	+1.5
	baz=348,slow=14						
FIA0	FINESS Array S	13.84	136	Pn	Pn	12 48 07.6	+1.5
	baz=348,slow=14						
FINES	FINESS Array B	13.84	136	Pn	Pn	12 48 07.8	+1.7
	comp=Z,0.1nm,0.3s,baz=298,slow=12,SNR=4.5						
FINES				LR	LR	12 52 56.4	
	comp=Z,45nm,19.2s,baz=48,slow=35						
KIRV	Kirov	22.17	107	LR	LR	12 58 18.2	
	comp=Z,42nm,20.2s,baz=116,slow=36						
VRAC	Vranov	24.23	163	LR	LR	12 59 21.3	
	comp=Z,30nm,19.7s,baz=8.5,slow=36						
MLR	Muntele Rosu	29.09	150	LR	LR	13 01 17.7	
	comp=Z,22nm,21.1s,baz=296,slow=34						
PDAR	Pinedale Array	56.42	307	P	P	12 54 34.0	+2.5
	comp=Z,0.6nm,0.8s,baz=38,slow=7.5,SNR=4.5						

WEL 22 12:53:47.1, 42°S±1°×17°4E±°, h19^{km}±2^{km}, M3.7/25, ML4.0/6, MLv3.7/25, Error ellipse: s-maj=0.0km s-min=0.0km az=131.4, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	226	P	Pg	12 53 52.6	+0.4
TUWZ	Tuamarina	0.39	297	P	Pb	12 53 55.6	+0.1
BHW	Baring Head	0.40	60	P	Pb	12 53 56.0	+0.2
BSWZ	Blackbirch Sta	0.41	255	P	Pb	12 53 56.1	+0.2
TCW	Tory Channel	0.41	346	P	Pb	12 53 56.0	+0.1
WEL	Wellington	0.42	40	P	Pb	12 53 56.5	+0.4
PLWZ	Palliser	0.64	87	P	Pn	12 54 00.6	-0.7
MSWZ	Moikau Station	0.66	73	P	Pg	12 54 00.8	+0.6
CAW	Cannon Point	0.71	45	P	Pg	12 54 01.3	+0.2
PAWZ	Paruwai Farm	0.80	74	P	Pn	12 54 03.3	-0.2
NNZ	Nelson	0.87	297	P	Pg	12 54 04.0	0.0
DUWZ	D'Urville Isla	0.89	336	P	Pn	12 54 04.6	-0.1
MTW	Mount Morrison	0.94	62	P	Pg	12 54 05.7	+0.3
OGWZ	Otaki Gorge	0.98	36	P	Pn	12 54 06.0	+0.1
TRWZ	Traveller	0.99	78	P	Pg	12 54 06.4	+0.1
KHZ	Kahutara	1.03	218	P	Pg	12 54 07.3	+0.1
HOWZ	Holdsworth Sta	1.10	50	P	Pg	12 54 08.2	-0.3
THZ	Tophouse	1.13	262	P	Pg	12 54 08.9	-0.3
TMWZ	Te Maipa	1.23	66	P	Pb	12 54 09.7	0.0
MRZ	Mangatainoka R	1.30	43	P	Pb	12 54 11.4	+0.5
TIWZ	Tintock	1.39	54	P	Pb	12 54 12.5	-0.1
CPWZ	Castlepoint	1.52	63	P	Pg	12 54 17.4	+0.9
OHWZ	Ohakea	1.56	26	P	Pg	12 54 16.9	-0.3
PRWZ	Pori Road	1.58	49	P	Pn	12 54 15.0	+0.8
POWZ	Post Office Ro	1.60	41	P	Pb	12 54 15.7	-0.4
QRZ	Quartz Range	1.62	298	P	Pb	12 54 16.9	+0.6
BFZ	Birch Farm	1.67	57	P	Pn	12 54 15.4	0.0
GVZ	Greta Valley S	1.69	216	P	Pn	12 54 16.1	+0.4
DVHZ	Dannevirke	1.87	46	P	Pn	12 54 18.4	+0.3
ANWZ	Angora Road	1.94	54	P	Pn	12 54 19.4	+0.3
TSZ	Takapari Road	1.95	38	P	Pn	12 54 20.2	+0.9
AMCZ	Amberley	2.03	219	P	Pn	12 54 20.5	+0.1
PRHZ	Porangahau	2.16	52	P	Pn	12 54 22.1	0.0
PNHZ	Pukenui	2.17	39	P	Pn	12 54 23.0	+0.7
WPHZ	Waipukurau	2.18	46	P	Pn	12 54 23.5	+1.0
OKCZ	Okains Bay	2.33	205	P	Pn	12 54 23.9	-0.6
RITZ	Rihia Road	2.85	23	P	Pn	12 54 31.5	-0.3

MEX 22 12:58:26.2±0.5, 15°.46N×93°.27W, h91^{km}±5^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.25	10	*e*P	Pn	12 58 37.8	-1.7
PCIG				*e*S	Sn	12 58 47.7	-1.6
THIG		1.11	119	*i* P	Pn	12 58 46.8	-0.4
THIG				*i* S	Sn	12 59 00.6	-2.4
TGIG		1.32	6	*e*P	Pn	12 58 48.8	-1.0
TGIG				*e*S	Sn	12 59 05.5	-2.1
CCIG	Comitan	1.36	53	*i* P	Pn	12 58 49.4	-1.1
CCIG				*e*S	Sn	12 59 07.3	-1.4
CMIG	Matias Romero	2.25	316	*i* P	Pn	12 59 01.1	-0.7
CMIG				*i* S	Sn	12 59 27.1	-1.8

WEL 22 13:13:07.7, 42°S±1°×17°4E±°, h5^{km}±1^{km}, M3.7/13, ML2.9/13, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=130.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.26	217	P	Pn	13 13 19.8	+1.6
TCW	Tory Channel	0.35	342	P	Pg	13 13 15.3	+0.9
BHW	Baring Head	0.37	68	P	Pb	13 13 16.0	-0.6
WEL	Wellington	0.37	46	P	Pb	13 13 16.2	-0.5
TUWZ	Tuamarina	0.37	288	P	Pb	13 13 16.0	-0.8
BSWZ	Blackbirch Sta	0.44	247	P	Pb	13 13 17.4	-0.5
PLWZ	Palliser	0.63	93	P	Pb	13 13 21.0	-0.2
MSWZ	Moikau Station	0.64	79	P	Pb	13 13 21.0	-0.3
CAW	Cannon Point	0.66	48	P	Pb	13 13 21.4	-0.2
DUWZ	D'Urville Isla	0.83	333	P	Pn	13 13 25.9	-0.2
NNZ	Nelson	0.85	292	P	Pb	13 13 24.8	-0.1
MTW	Mount Morrison	0.90	65	P	Pb	13 13 26.1	+0.3
OGWZ	Otaki Gorge	0.92	38	P	Pn	13 13 27.4	+0.2
KHZ	Kahutara	1.09	217	P	Pg	13 13 28.8	+0.2
THZ	Tophouse	1.15	259	P	Pn	13 13 31.0	+0.5
MRZ	Mangatainoka R	1.25	45	P	Pn	13 13 32.2	+0.5
DSZ	Denniston Nort	1.97	263	P	Pb	13 13 43.4	-0.6
LREZ	Lake Rotokare	2.08	360	P	Pn	13 13 44.3	+1.1
MTVZ	Mangateitei	2.30	21	P	Pg	13 13 52.0	+0.2
BKZ	Black Stump Fm	2.86	34	P	Pn	13 13 48.7	-5.3

IDC 22 13:13:58.6±1.9, 41°.65S×174°.23E, h0^{km}, mb3.5/2, mb1 3.6/4, mb1mx3.6/17, mbtmp3.4/4, ML3.0/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/15, Error ellipse: s-maj=48.4km s-min=15.8km az=131.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	3.12	228	Pn	Pn	13 14 49.5	+0.4
	4.0nm,0.3s,baz=96,slow=2.5,SNR=18						
RPZ				Pg	Pb	13 14 56.3	+1.3
	8.8nm,0.3s,baz=301,slow=2.6,SNR=29						
RPZ				Sn	Sn	13 15 26.6	-0.5
	3.8nm,0.3s,baz=329,slow=22,SNR=7.7						
RPZ				Lg	Lg	13 15 37.1	
	2.8nm,0.3s,baz=266,slow=7.5,SNR=1.2						
URZ	Urewera	4.05	34	Pn	Pn	13 15 01.7	0.0
	0.4nm,0.3s,baz=156,slow=7.9,SNR=1.6						
URZ				Pg	Pb	13 15 12.4	+1.7
	3.7nm,0.3s,baz=234,slow=9.0,SNR=13						
URZ				Sn	Sn	13 15 46.1	-3.8
	1.3nm,0.3s,baz=31,slow=12,SNR=1.8						
URZ				Lg	Lg	13 16 01.0	
	0.7nm,0.3s,baz=75,slow=14,SNR=2.0						
ASAR	Alice Springs	37.99	285	P	P	13 21 18.4	0.0
	0.1nm,0.4s,baz=121,slow=6.5,SNR=9.6						
PPT	Papeete	39.14	63	LR	LR	13 35 08.3	
	comp=Z,71nm,18.3s,baz=194,slow=32						
WRA	Warramunga Arr	40.06	290	P	P	13 21 35.4	-0.2
	2.3nm,1.1s,baz=126,slow=8.4,SNR=2.1						
TORD	Torodi Ar. Bea	150.87	195	PKPbc	PKPbc	13 33 53.0	-0.5
	0.2nm,0.4s,baz=199,slow=4.1,SNR=1.6						

CNRM 22 13:25:22.5, 35°.95N×5°.63W, h5^{km}, ml2.5, 1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEU	Ceuta	0.22	103	⇓*i*P	Pg	13 25 28.0	+1.3
CEU				*i* S	Sg	13 25 31.2	+1.6
CEUT	Ceuta	0.26	104	P	Pg	13 25 27.9	+0.4
CEUT				S	Sg	13 25 31.6	+0.7
SMIR	Smir Dam	0.33	142	P	Pg	13 25 27.0	-1.9
SMIR				S	Sg	13 25 32.2	-1.1
CHEFC	Chefchaouen	0.87	164	P	Pb	13 25 40.1	-0.1
CHEFC				S	Sb	13 25 52.8	+0.6

WEL 22 13:29:52.6, 42°S±1°×174°.2E±0°.8, h14^{km}±2^{km}, M4.6/18, ML3.4/18, MLv4.6/18, Error ellipse: s-maj=0.0km s-min=0.0km az=159.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	194	P	Pg	13 29 56.1	+0.3
CMWZ				S	Sg	13 29 59.1	+1.3
BSWZ	Blackbirch Sta	0.28	260	P	Pb	13 29 59.1	-0.3
BSWZ				S	Sb	13 30 03.9	0.0
TUWZ	Tuamarina	0.33	316	P	Pb	13 29 59.9	-0.3
TUWZ				S	Sb	13 30 05.1	-0.1
TCW	Tory Channel	0.46	3	P	Pg	13 30 02.0	+0.3
BHW	Baring Head	0.54	62	P	Pb	13 30 04.1	+0.3
WEL	Wellington	0.55	46	P	Pb	13 30 04.1	+0.1
PLWZ	Palliser	0.77	83	P	Pn	13 30 08.8	-0.3
NNZ	Nelson	0.79	304	P	Pb	13 30 08.0	0.0
MSWZ	Moikau Station	0.80	72	P	Pn	13 30 08.9	-0.5
CAW	Cannon Point	0.83	48	P	Pb	13 30 09.1	+0.2
DUWZ	D'Urville Isla	0.90	344	P	Pn	13 30 10.4	-0.4
KHZ	Kahutara	0.91	215	P	Pn	13 30 11.5	+0.5
PAWZ	Paruwai Farm	0.94	73	P	Pn	13 30 11.6	+0.3
THZ	Tophouse	1.00	264	P	Pn	13 30 12.2	-0.1
MTW	Mount Morrison	1.07	62	P	Pg	13 30 13.5	+0.1
OGWZ	Otaki Gorge	1.10	40	P	Pn	13 30 13.7	+0.1
TRWZ	Traveller	1.12	77	P	Pb	13 30 13.7	0.0
HOWZ	Holdsworth Sta	1.23	52	P	Pg	13 30 16.1	-0.3
TMWZ	Te Maipa	1.36	66	P	Pn	13 30 17.3	+0.1
MRZ	Mangatainoka R	1.42	46	P	Pb	13 30 18.6	-0.3
TIWZ	Tintock	1.53	55	P	Pg	13 30 26.6	+4.6
QRZ	Quartz Range	1.54	302	P	Pb	13 30 21.3	+0.4
GVZ	Greta Valley S	1.58	214	P	Pn	13 30 20.4	+0.2
OHWZ	Ohakea	1.67	30	P	Pg	13 30 25.7	+0.9
PRWZ	Pori Road	1.71	50	P	Pb	13 30 23.6	-0.3
POWZ	Post Office Ro	1.72	43	P	Pb	13 30 24.1	+0.1
BFZ	Birch Farm	1.81	58	P	Pb	13 30 24.9	-0.5
DSZ	Denniston Nort	1.83	267	P	Pg	13 30 27.2	-0.5
LTZ	Lake Taylor	1.84	232	P	Pn	13 30 24.4	+0.6
WAZ	Wanganui	1.99	17	P	Pg	13 30 30.2	-0.7
DVHZ	Dannevirke	2.00	48	P	Pg	13 30 31.2	+0.2
TSZ	Takapari Road	2.07	40	P	Pb	13 30 28.9	-1.0
OKCZ	Okains Bay	2.23	203	P	Pn	13 30 29.2	+0.1
PNHZ	Pukenui	2.30	41	P	Pg	13 30 36.8	+0.1
OXZ	Oxford	2.33	224	P	Pn	13 30 30.0	-0.4
INZ	Inchbonnie	2.33	242	P	Pn	13 30 31.7	+1.2
MQZ	McQueen's Vall	2.35	209	P	Pn	13 30 29.3	-1.4
KHEZ	Kahui Hut	2.38	356	P	Pg	13 30 38.0	-0.2
NBEZ	Newall Road No	2.41	353	P	Pg	13 30 38.7	-0.1
MTVZ	Mangateitei	2.46	23	P	Pg	13 30 38.7	-1.2
PKE	Pukeiti	2.48	355	P	Pg	13 30 39.1	-1.0
PKVZ	Pokaka	2.52	20	P	Pb	13 30 38.8	+1.2
MOVZ	Moawhango	2.53	28	P	Pb	13 30 38.8	+0.9
VRZ	Vera Road	2.57	9	P	Pg	13 30 41.5	-0.3
BHHZ	Black Hill Sta	2.58	33	P	Pb	13 30 39.4	+0.7
KRHZ	Kereru	2.59	39	P	Pg	13 30 41.6	-0.6
WHVZ	Whangaehu Hut	2.59	24	P	Pb	13 30 39.8	+0.8
FWVZ	Far West T-bar	2.61	23	P	Pb	13 30 40.4	+1.2
NGZ	Ngauruhoe	2.69	23	P	Pb	13 30 41.8	+1.1
WTVZ	West Tongariro	2.75	22	P	Pb	13 30 42.7	+1.1
TWVZ	Taurewa	2.75	20	P	Pg	13 30 43.5	-1.8
KRVZ	Karewarewa	2.78	23	P	Pb	13 30 43.5	+1.3
KWHZ	Kaweka Forest	2.79	37	P	Pg	13 30 44.4	-1.7
KATZ	Kakaramea	2.91	23	P	Pb	13 30 45.8	+1.5
WVZ	Waitaha Valley	2.95	240	P	Pb	13 30 45.7	+0.7
RPZ	Rata Peaks	3.12	228	P	Pn	13 30 41.5	+0.2
HIZ	Hauiti	3.18	9	P	Pb	13 30 49.6	+0.7
ODZ	Otahua Downs	4.28	217	P	Pn	13 30 56.5	-0.7

*IDC **22** 13:31:42.4±1.1, 41°.50S×174°.36E, h0^{km}, mb4.3/2, mb1 4.4/4, mb1mx3.9/36, mbtmp4.2/4, ML3.9/2, MS3.4/7, Ms1 3.4/7, ms1mx3.2/18, Error ellipse: s-maj=36.0km s-min=12.9km az=132.0*

*ISCJB **22** 13:31:45.8±0.3, 41°.71S±0°.02×174°.42E±0°.03, h26^{km}±2^{km}, mb4.7/7, MS3.6/7, Error ellipse: s-maj=5.0km s-min=2.3km az=42.9*

*NEIC **22** 13:31:46.0±0.7, 41°.60S×174°.27E, h10^{km}, mb4.6/3, Error ellipse: s-maj=12.7km s-min=3.9km az=138.0*

*WEL **22** 13:31:46.2, 41°.6S±0°.7×174°.4E±0°.7, h17^{km}±2^{km}, M4.9/14,* *ML5.2/14, MLv4.9/14, Error ellipse: s-maj=0.0km s-min=0.0km az=128.5*

ISC 22 13:31:45.6±1.3, **41°.60S**±0°.03×**174°.39E**±0°.02, **h16**km±9km, **n189**, σ1s.38/194, **mb4.7**/7, **MS3.6**/7, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.20	221	P	Pb	13 31 51.7	+0.8
CMWZ				S	Sb	13 31 56.3	+1.9
TUWZ	Tuamarina	0.37	297	P	Pb	13 31 53.7	-0.2
TUWZ				S	Sb	13 31 58.9	-0.5
SNZO	South Karori	0.38	40	ePg	Pb	13 31 54.6	+0.7
SNZO				eSg	Sb	13 32 00.4	+1.0
TCW	Tory Channel	0.40	348	P	Pb	13 31 54.3	+0.1
TCW				S	Sb	13 31 59.9	-0.2
BSWZ	Blackbirch Sta	0.40	253	P	Pb	13 31 54.4	+0.1
BSWZ				S	Sb	13 32 00.4	+0.2
BHW	Baring Head	0.41	63	P	Pb	13 31 55.5	+1.0
BHW				S	Sb	13 32 01.8	+1.3
WEL	Wellington	0.43	42	P	Pb	13 31 55.6	+0.8
WEL				S	Sb	13 32 02.0	+1.1
PLWZ	Palliser	0.65	88	P	Pn	13 32 00.3	0.0
MSWZ	Moikau Station	0.67	75	P	Pn	13 32 00.4	-0.1
CAW	Cannon Point	0.71	46	P	Pn	13 32 00.5	-0.5
PAWZ	Paruwai Farm	0.81	75	P	Pn	13 32 02.9	+0.4
NNZ	Nelson	0.85	296	P	Pg	13 32 02.0	-0.1
DUWZ	D'Urville Isla	0.87	336	P	Pn	13 32 02.6	-0.6
MTW	Mount Morrison	0.95	63	P	Pn	13 32 05.0	+0.7
OGWZ	Otaki Gorge	0.98	37	P	Pn	13 32 04.9	+0.2
TRWZ	Traveller	1.00	79	P	Pn	13 32 05.5	+0.5
KHZ	Kahutara	1.03	217	ePn	Pg	13 32 05.9	+0.3
KHZ	Kahutara	1.03	217	P	Pg	13 32 05.9	+0.3
HOWZ	Holdsworth Sta	1.10	51	P	Pg	13 32 07.2	+0.3
THZ	Tophouse	1.12	261	ePn	Pn	13 32 06.6	-0.1
THZ	Tophouse	1.12	261	P	Pn	13 32 06.7	0.0
TMWZ	Te Maipa	1.23	67	P	Pb	13 32 08.6	0.0
MRZ	Mangatainoka R	1.30	44	P	Pg	13 32 10.2	-0.5
TIWZ	Tintock	1.40	54	P	Pb	13 32 11.0	-0.3
CPWZ	Castlepoint	1.53	64	P	Pb	13 32 13.3	-0.3
OHWZ	Ohakea	1.56	27	P	Pg	13 32 15.5	-0.1
PRWZ	Pori Road	1.59	49	P	Pn	13 32 13.8	+0.7
POWZ	Post Office Ro	1.60	41	P	Pb	13 32 14.1	-0.6
QRZ	Quartz Range	1.60	298	P	Pb	13 32 14.8	+0.1
BFZ	Birch Farm	1.68	57	ePn	Pn	13 32 14.0	-0.3
BFZ	Birch Farm	1.68	57	P	Pn	13 32 14.2	-0.1
GVZ	Greta Valley S	1.70	216	P	Pn	13 32 14.7	+0.1
DVHZ	Dannevirke	1.87	47	P	Pn	13 32 17.1	+0.1
WAZ	Wanganui	1.90	14	P	Pb	13 32 20.5	+0.7
ANWZ	Angora Road	1.95	55	P	Pn	13 32 17.8	-0.2
TSZ	Takapari Road	1.95	38	P	Pn	13 32 18.8	+0.7
LTZ	Lake Taylor	1.97	232	ePn	Pn	13 32 18.5	+0.1
LTZ	Lake Taylor	1.97	232	P	Pn	13 32 18.7	+0.4
AMCZ	Amberley	2.03	219	P	Pn	13 32 19.0	-0.2
LREZ	Lake Rotokare	2.14	0	P	Pb	13 32 24.1	+0.2
PNHZ	Pukenui	2.17	40	P	Pn	13 32 21.6	+0.4
NMEZ	Namu Road	2.22	350	P	Pb	13 32 24.6	-0.7
PREZ	Palmer Road	2.26	356	P	Pb	13 32 25.7	-0.4
KHEZ	Kahui Hut	2.32	353	P	Pb	13 32 26.2	-0.9
OKCZ	Okains Bay	2.34	204	P	Pn	13 32 22.5	-0.9
MTVZ	Mangateitei	2.36	21	P	Pb	13 32 27.0	-0.8
NBEZ	Newall Road No	2.36	350	P	Pb	13 32 26.3	-1.4
CRLZ	Canterbury Las	2.37	213	ePn	Pn	13 32 22.2	-1.5
CRLZ	Canterbury Las	2.37	213	P	Pn	13 32 22.8	-1.0
DREZ	Durham Road	2.41	357	P	Pb	13 32 27.5	-1.2
PKVZ	Pokaka	2.42	18	P	Pb	13 32 27.6	-1.3
PKE	Pukeiti	2.42	353	P	Pb	13 32 27.1	-1.7
MOVZ	Moawhango	2.42	26	P	Pn	13 32 26.2	+1.5
PXZ	Pawanui	2.45	51	P	Pn	13 32 24.2	-0.7
OXZ	Oxford	2.45	224	ePn	Pn	13 32 23.6	-1.4
OXZ	Oxford	2.45	224	P	Pn	13 32 24.0	-0.9
INZ	Inchbonnie	2.46	242	P	Pn	13 32 25.7	+0.6
MQZ	McQueen's Vall	2.46	211	ePn	Pn	13 32 23.3	-1.8
MQZ	McQueen's Vall	2.46	211	P	Pn	13 32 23.6	-1.5
BHHZ	Black Hill Sta	2.46	32	P	Pn	13 32 26.6	+1.4
KRHZ	Kereru	2.47	38	P	Pn	13 32 25.4	+0.2
VRZ	Vera Road	2.49	7	P	Pb	13 32 28.8	-1.2
DRZ	Dome Shelter	2.49	22	P	Pb	13 32 29.3	-0.8
WHVZ	Whangaehu Hut	2.49	22	P	Pb	13 32 28.0	-2.1
FWVZ	Far West T-bar	2.50	21	P	Pb	13 32 28.4	-2.0
MHEZ	Mangahewa	2.52	359	P	Pb	13 32 30.0	-0.4
TUVZ	Tukino	2.52	23	P	Pb	13 32 28.3	-2.3
NGZ	Ngauruhoe	2.59	21	P	Pb	13 32 29.6	-2.2
WTVZ	West Tongariro	2.65	21	P	Pb	13 32 30.4	-2.3
TWVZ	Taurewa	2.65	18	P	Pb	13 32 30.2	-2.6
KWHZ	Kaweka Forest	2.67	36	P	Pn	13 32 28.8	+0.8
KRVZ	Karewarewa	2.68	21	P	Pb	13 32 30.9	-2.3
MCHZ	McNeill Hill	2.78	40	P	Pn	13 32 29.7	+0.2
KATZ	Kakaramea	2.81	21	P	Pb	13 32 33.9	-1.6
RITZ	Rihia Road	2.85	24	P	Pb	13 32 36.4	+0.3
BKZ	Black Stump Fm	2.92	34	ePn	Pn	13 32 31.4	+0.1
BKZ	Black Stump Fm	2.92	34	P	Pn	13 32 31.7	+0.4
RATZ	Rangitukua	2.93	22	P	Pb	13 32 36.7	-0.7
HATZ	Hinemaiaia	3.00	26	P	Pb	13 32 38.6	-0.2
WATZ	Wairara	3.07	20	P	Pb	13 32 38.2	-1.6
WVZ	Waitaha Valley	3.08	240	P	Pn	13 32 34.1	+0.6
HIZ	Hauiti	3.10	7	ePn	Pn	13 32 35.4	+1.5
HIZ	Hauiti	3.10	7	P	Pb	13 32 37.2	-3.2
WHTZ	Whakaora	3.17	23	P	Pb	13 32 40.8	-0.8
MRHZ	Matea Rd	3.17	30	P	Pn	13 32 35.2	+0.3
RPZ	Rata Peaks	3.24	228	Pn	Pn	13 32 35.0	-0.8
	21nm,0.3s,baz=333,slow=1.1,SNR=29						
RPZ				Pg	Pb	13 32 42.9	+0.1
	179nm,0.3s,baz=33,slow=1.2,SNR=48						
RPZ				Sn	Sn	13 33 11.2	-2.9
	65nm,0.3s,baz=323,slow=21,SNR=15						
RPZ				Lg	Lg	13 33 25.7	
	40nm,0.3s,baz=192,slow=22,SNR=1.9						
RPZ				LR	LR	13 33 45.6	
	comp=Z,302nm,21.1s,baz=43,slow=37						
RPZ	Rata Peaks	3.24	228	ePn	Pn	13 32 34.8	-1.1
RPZ	Rata Peaks	3.24	228	P	Pn	13 32 35.4	-0.4
KUTZ	Kaahu Road	3.30	20	P	Pb	13 32 42.3	-1.4
MTHZ	Maungataniwha	3.33	35	P	Pn	13 32 37.6	+0.6
WHHZ	Waihua	3.33	42	P	Pn	13 32 38.2	+1.2
WPRZ	Whakapapatarin	3.36	24	P	Pb	13 32 43.7	-1.1
RAHZ	Arahi	3.38	39	P	Pn	13 32 38.1	+0.3
TLZ	Tolley Road	3.38	16	P	Pn	13 32 40.4	+2.6
ALRZ	Allen Road	3.38	27	P	Pn	13 32 38.4	+0.6
PRRZ	Plateau Road	3.46	27	P	Pn	13 32 39.4	+0.6
GRRZ	Galatos Road	3.50	23	P	Pb	13 32 46.2	-1.1
HRRZ	Handcock Road	3.52	25	P	Pb	13 32 46.4	-1.2
HSRZ	Hossack Road	3.58	24	P	Pb	13 32 47.1	-1.4
RTZ	Ruatahuna	3.58	35	P	Pn	13 32 41.6	+1.0
KNZ	Kokohu	3.60	45	P	Pn	13 32 39.6	-1.0
SNGZ	Shannon Statio	3.61	40	P	Pn	13 32 40.4	-0.5
MUGZ	Murupara	3.62	31	P	Pn	13 32 41.3	+0.4
MHGZ	Mahia Peninsul	3.63	49	P	Pn	13 32 40.1	-1.1
RRRZ	Republican Roa	3.64	27	P	Pn	13 32 42.6	+1.2
RRRZ				P	Pb	13 32 47.3	-2.3
UTU	Utuhina	3.69	23	P	Pb	13 32 50.3	-0.1
TARZ	Mount Tarawera	3.73	27	P	Pn	13 32 43.4	+0.7
NGRZ	Ngongotaha	3.76	22	P	Pb	13 32 49.0	-2.6
PRGZ	Paritu Road	3.78	46	P	Pn	13 32 42.0	-1.3
OMRZ	Omania	3.81	24	P	Pb	13 32 50.0	-2.4
KARZ	Kaharoa	3.85	22	P	Pb	13 32 50.6	-2.6
RAGZ	Rawiri	3.87	38	P	Pn	13 32 45.2	+0.6
RIGZ	Rimuhau	3.88	43	P	Pn	13 32 43.3	-1.3
FOZ	Fox Glacier	3.89	239	ePn	Pn	13 32 44.7	0.0
FOZ	Fox Glacier	3.89	239	P	Pn	13 32 46.0	+1.3
KMRZ	Kaimai	3.94	18	P	Pn	13 32 48.4	+3.1
URZ	Urewera	3.94	33	Pn	Pn	13 32 44.0	-1.3
	6.0nm,0.3s,baz=237,slow=4.9,SNR=23						
URZ				Pg	Pb	13 32 52.4	-2.2
	65nm,0.3s,baz=240,slow=9.5,SNR=32						
URZ				Sn	Sn	13 33 30.3	-0.9
	27nm,0.3s,baz=15,slow=19,SNR=3.4						
URZ				Lg	Lg	13 33 43.5	
	46nm,0.3s,baz=59,slow=16,SNR=5.3						
URZ	Urewera	3.94	33	ePn	Pn	13 32 44.2	-1.2
URZ	Urewera	3.94	33	P	Pn	13 32 45.0	-0.4
TOZ	Tahuroa Road	3.96	13	P	Pn	13 32 48.3	+2.7
MARZ	Manawahe	4.02	27	P	Pn	13 32 47.4	+0.9
OPRZ	Ohinepanea	4.11	25	P	Pn	13 32 49.2	+1.6
TGRZ	Tauranga	4.13	21	P	Pn	13 32 50.4	+2.5
LBZ	Lake Benmore	4.15	226	ePn	Pn	13 32 48.1	-0.2
LBZ	Lake Benmore	4.15	226	P	Pn	13 32 48.8	+0.5
CNGZ	Carnagh Statio	4.28	45	P	Pn	13 32 49.3	-0.7
ODZ	Otahua Downs	4.39	217	ePn	Pn	13 32 50.0	-1.6
ODZ	Otahua Downs	4.39	217	P	Pn	13 32 50.5	-1.1
TWGZ	Tauwhareparae	4.40	40	P	Pn	13 32 50.9	-0.8
RUGZ	Raukumara Rang	4.43	36	P	Pn	13 32 51.3	-1.0
KBAZ	Karaka Road Bo	4.51	5	P	Pn	13 32 56.8	+3.5
MKAZ	Moumakai	4.53	8	P	Pn	13 32 55.5	+2.1
AWAZ	Awhitu Peninsu	4.53	3	P	Pn	13 32 56.4	+2.9
HAZ	Te Kaha	4.65	35	P	Pn	13 32 54.5	-0.6
ETAZ	East Tamaki Re	4.66	5	P	Pn	13 32 58.1	+2.9
WTAZ	Waiatarua	4.66	2	P	Pn	13 32 58.4	+3.0
EPAZ	Eden Park BICE	4.72	3	P	Pn	13 32 59.4	+3.2
HBAZ	Herne Bay Bore	4.75	3	P	Pn	13 33 00.1	+3.6
JCZ	Jackson Bay	4.80	237	P	Pn	13 32 59.4	+2.0
RVAZ	Riverhead Bore	4.83	2	P	Pn	13 33 00.2	+2.6
WIAZ	Waiheke Island	4.83	7	P	Pn	13 33 00.4	+2.7
MBAZ	Motutapu North	4.84	5	P	Pn	13 33 00.8	+3.1
WMGZ	Waiomatatini S	4.89	41	P	Pn	13 32 57.3	-1.2
KUZ	Kuaotunu	4.96	13	P	Pn	13 33 01.9	+2.5
MXZ	Matakaoa Point	5.04	38	ePn	Pn	13 32 59.0	-1.6
MXZ	Matakaoa Point	5.04	38	P	Pn	13 33 01.0	+0.5
WKZ	Wanaka	5.08	229	ePn	Pn	13 33 00.1	-1.0
WKZ	Wanaka	5.08	229	P	Pn	13 33 02.1	+1.0
HHSZ	Highcliff Hill	5.09	211	P	Pn	13 33 00.8	-0.3
EAZ	Earnscleugh	5.18	224	P	Pn	13 33 02.4	-0.1
GRZ	Great Barrier	5.41	9	P	Pn	13 33 10.8	+5.3
TUZ	Tuapeka	5.55	217	P	Pn	13 33 06.8	-0.7
MSZ	Milford Sound	5.64	235	P	Pn	13 33 14.1	+5.4
WCZ	Waipu Caves	5.65	360	P	Pn	13 33 11.6	+2.7
MLZ	Mavora Lakes	5.91	228	ePn	Pn	13 33 11.6	-0.9
MLZ	Mavora Lakes	5.91	228	P	Pn	13 33 13.8	+1.3
SYZ	Scrubby Hill	6.22	216	P	Pn	13 33 16.3	-0.3
WHZ	Wether Hill Ro	6.34	225	ePn	Pn	13 33 16.8	-1.5
WHZ	Wether Hill Ro	6.34	225	P	Pn	13 33 18.6	+0.2
OUZ	Omahuta	6.40	354	ePn	Pn	13 33 20.9	+1.7
OUZ	Omahuta	6.40	354	P	Pn	13 33 21.1	+1.9
DCZ	Deep Cove	6.52	231	ePn	Pn	13 33 21.1	+0.2
APZ	The Paps	6.96	219	P	Pn	13 33 26.7	-0.2
CTZ	Chatham Island	6.97	111	P	Pn	13 33 26.0	-0.9
DZM	Mont Dzumac	20.59	339	LR	LR	13 43 30.5	
	comp=Z,96nm,18.9s,baz=232,slow=35						
STKA	Stephens Creek	27.87	280	LR	LR	13 47 30.0	
	comp=Z,63nm,18.1s,baz=197,slow=34						
AS31	Alice Springs	38.09	285	eP	P	13 39 02.6	-1.1
	2.3nm,1.3s						
ASAR	Alice Springs	38.09	285	P	P	13 39 02.6	-1.1
	2.1nm,0.5s,baz=123,slow=7.0,SNR=34						
ASAR				LR	LR	13 54 44.6	
	comp=Z,83nm,18.8s,baz=124,slow=36						
WB2	Warramunga Arr	40.14	290	eP	P	13 39 19.9	-0.9
	32nm,1.8s						
WR1	Warramunga Arr	40.15	290	eP	P	13 39 20.0	-0.9
WRA	Warramunga Arr	40.15	290	P	P	13 39 20.0	-0.9
	2.2nm,0.3s,baz=129,slow=7.9,SNR=8.0						
QSPA	South Pole Qui	48.53	180	eP	P	13 40 30.1	+2.4
	9.2nm,1.0s						
MAW	Mawson	59.63	204	LR	LR	14 06 39.1	
	comp=Z,65nm,19.0s,baz=146,slow=35						
SNAA	Sanae	67.02	181	P	P	13 42 38.4	+1.1
VNA3	Neumayer Olymp	67.43	179	P	P	13 42 41.0	+1.2
VNA1	Neumayer--Stat	68.05	179	P	P	13 42 44.5	+0.9
NJ2	Nanjing	89.36	316	eP	P	13 44 42.3	+1.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	Chiang Mai Arr	91.67	293	LR	LR	14 29 32.2	
	comp=Z,12nm,18.1s,baz=310,slow=38						
PETK	Petropavlovsk-	95.43	350	LR	LR	14 24 04.7	
	comp=Z,20nm,19.7s,baz=135,slow=33						
CD2	Chengdu	97.14	305	eP	P	13 45 16.8	-0.3
HHC	Hu-ho-hao-te	99.85	317	P	Pdif	13 45 30.4	+1.3
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
LZH	Lanzhou	100.69	309	eP	Pdif	13 45 35.3	+2.3
LZH				pP	sP	13 45 43.1	+2.7
LZH				sP	sPdif	13 45 46.5	+6.2
LZH				ePP	PP	13 49 16.3	-25
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,58nm,9.2s						
LZH				LR	LR		
	comp=N,79nm,17.4s						
LZH				LR	LR		
	comp=E,83nm,17.6s						
LZH				LR	LR		
	comp=Z,98nm,19.8s						
DBIC	Dimbokro	145.21	181	PKPbc	PKPbc	13 51 22.5	+0.1
	comp=Z,2.7nm,0.8s,baz=234,slow=0.4,SNR=4.1						
ARA0	ARCESS Array S	147.67	340	ePKPdf	PKPbc	13 51 26.8	-1.3
ARCES	ARCESS Array B	147.67	340	PKPbc	PKPbc	13 51 26.8	-1.3
	comp=Z,1.9nm,0.8s,baz=354,slow=4.9,SNR=4.0						
TORD	Torodi Ar. Bea	150.95	195	PKPbc	PKPbc	13 51 37.0	-0.9
	comp=Z,1.2nm,0.9s,baz=212,slow=1.9,SNR=9.7						
TOA1	Torodi Ar. Sit	150.95	195	ePKPbc	PKPbc	13 51 37.0	-1.0
FIA0	FINESS Array S	152.46	327	ePKPbc	PKPbc	13 51 38.7	-1.2
FINES	FINESS Array B	152.46	327	PKPbc	PKPbc	13 51 38.7	-1.2
	comp=Z,3.8nm,1.0s,baz=54,slow=7.1,SNR=2.0						

MAN 22 13:39:47.1, 6°.77N×126°.44E, h33km**, mb4.4, ML3.2, MS3.0, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.25	314	eP	Pn	13 39 55.4	+1.2
MATI				eS	Sb	13 40 01.8	+2.7
DDMP	Don Marcelino,	0.98	227	eP	Pn	13 40 04.5	-0.1
DDMP				eS	Sn	13 40 17.6	+0.3
BIPH	Bislig	1.41	357⇑	eP	Pb	13 40 12.4	-0.4
BIPH				eS	Sn	13 40 28.3	+0.4
BUKP	Musuan	1.75	309	eP	Pn	13 40 15.4	+0.1
BUKP				eS	Sn	13 40 36.7	+0.2
SKMP	Bagumbayan, Su	1.90	263	eP	Pn	13 40 15.7	-1.5
CTBH	Cotabato--PC H	2.22	282⇑	iP	Pn	13 40 21.4	-0.2
CGP	Cagayan de Oro	2.40	314⇓	eP	Pn	13 40 25.8	+1.7
CGP				eS	Sn	13 40 54.0	+1.5

*ISCJB **22** 13:54:44.1±0.1, 26°.74S±0°.02×69°.45W±0°.03, h10km, mb4.8/145, Error ellipse: s-maj=3.4km s-min=2.8km az=173.8*

*IDC **22** 13:54:44.5±0.4, 26°.67S×69°.38W, h0km, mb4.8/15, mb1 4.8/20, mb1mx4.8/25, mbtmp4.7/20, ML4.4/5, MS3.7/7, Ms1 3.7/7, ms1mx3.4/18, Error ellipse: s-maj=16.8km s-min=11.0km az=85.0*

*GUC **22** 13:54:45.3±0.7, 26°.80S×69°.62W, h23km±4km, ML5.1*

*NEIC **22** 13:54:45.8±0.1, 26°.73S×69°.41W, h10km, mb4.9/123, ML5.1(GUC), Error ellipse: s-maj=5.4km s-min=3.3km az=82.0*

NEIC Felt [IV] at Copiapo and Tierra Amarilla; [III] at Diego de Almagro, Caldera and Chanaral.

*SJA **22** 13:54:45.6±0.2, 26°.74S×69°.60W, h10km, ML4.0, MW3.2*

*VAO **22** 13:54:46.7±0.3, 26°.81S×69°.36W, h10km, mb4.8*

*BJI **22** 13:54:47.0±0.0, 26°.70S×69°.50W, h5km, mB5.2/12, Ms5.2/4, Ms7 4.9/4*

ISC 22 13:54:45.9±0.3, **26°.77S**±0°.02×**69°.57W**±0°.04, **h10**km, **n557**, σ1s.01/583, **mb4.9**/145, **7C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	1.01	216	ePg	Pg	13 55 03.8	-1.5
GO03				eSg	Sg	13 55 16.9	-1.7
GO03	Copiap	1.01	216⇓	eP	Pg	13 55 03.7	-1.7
GO03				i S	Sg	13 55 17.5	-1.0
CRCH	Chaqaral	1.04	294⇑	eP	Pg	13 55 04.4	-1.4
CRCH				eS	Sg	13 55 17.9	-1.3
GO02	Mina Guanaco	1.60	359	ePn	Pn	13 55 14.8	+0.2
GO02	Mina Guanaco	1.60	359⇓	eP	Pn	13 55 14.6	+0.1
GO02				i S	Sg	13 55 38.2	+0.7
GO02				IAML		13 55 41.2	
	comp=E,21µm,0.5s						
PB14	IPOC Station P	2.27	340	eP	Pn	13 55 25.2	+1.6
PB14				eS	Sb	13 55 54.4	-0.9
PB14	IPOC Station P	2.27	340⇓	eP	Pn	13 55 24.3	+0.6
PB14				eS	Sb	13 55 54.6	-0.7
LCO	Las Campanas	2.45	204	ePn	Pn	13 55 27.8	+1.7
LCO	Las Campanas	2.45	204	eP	Pb	13 55 28.5	-1.6
LCO				eS	Sb	13 56 00.2	-0.2
LCO	Las Campanas	2.45	204⇑	eP	Pn	13 55 26.9	+0.8
LCO				i S	Sb	13 55 59.5	-1.0
LCO				IAML		13 56 04.7	
	comp=E,17µm,0.6s						
LCO	Las Campanas	2.45	204	eP	Pn	13 55 27.5	+1.4
PB10	IPOC Station P	3.37	344	ePn	Pn	13 55 39.2	+0.6
PB10	IPOC Station P	3.37	344	eP	Pn	13 55 40.5	+1.9
PB10	IPOC Station P	3.37	344⇑	eP	Pn	13 55 39.3	+0.8
PB10				i S	Sn	13 56 20.5	+2.0
PB10				IAML		13 56 36.3	
	comp=E,4µm,0.6s						
PB15	IPOC Station P	3.55	1⇑	eP	Pn	13 55 43.0	+1.8
PB15				eS	Sn	13 56 26.4	+3.0
GO04	Tololo Observa	3.56	197	ePn	Pn	13 55 42.6	+1.2
GO04	Tololo Observa	3.56	197⇑	eP	Pn	13 55 42.3	+0.9
GO04				i S	Sn	13 56 24.9	+1.3
PB06	IPOC Station P	4.05	360	eP	Pn	13 55 50.5	+2.4
LVC	Limon Verde	4.19	8	Pn	Pn	13 55 51.3	+1.2
	comp=E,110nm,0.3s,baz=188,slow=10.0,SNR=468						
LVC				Sn	Sb	13 56 46.1	-4.5
	comp=E,146nm,0.3s,baz=34,slow=22,SNR=9.3						
LVC				Lg	Lg	13 56 54.0	
	comp=E,288nm,0.3s,baz=30,slow=22,SNR=9.6						
LVC				LR	LR	13 57 36.8	
	comp=E,842nm,19.0s,baz=196,slow=42						
LVC	Limon Verde	4.19	8	ePn	Pn	13 55 50.3	+0.2
LVC	Limon Verde	4.19	8	eS	Sn	13 56 41.0	+1.7
SLA	San Lorenzo	4.19	62	eP	Pn	13 55 53.4	+3.3
PB04	IPOC Station P	4.45	353	ePn	Pn	13 55 53.9	+0.3
PB04	IPOC Station P	4.45	353	eP	Pn	13 55 56.1	+2.5
PB04				eS	Sn	13 56 48.3	+2.8
CO02	Combarbal	4.59	196⇑	eP	Pn	13 55 55.9	+0.5
CO02				eS	Sn	13 56 52.6	+3.7
AZAP	Zapla	4.79	59	eP	Pn	13 56 02.1	+3.7
AZAP				IAML		13 56 08.6	
	comp=Z,169nm,0.5s						
CFA	Coronel Fontan	4.95	167	Pn	Pn	13 56 03.0	+2.6
	comp=Z,38nm,0.3s,baz=348,slow=14,SNR=100						
CFA				Sn	Sn	13 57 02.2	+4.4
	comp=Z,61nm,0.3s,baz=195,slow=18,SNR=9.3						
CFA				Lg	Lg	13 57 22.2	
	comp=Z,45nm,0.3s,baz=289,slow=13,SNR=2.6						
CFA	Coronel Fontan	4.95	167	eP	Pn	13 56 04.1	+3.8
PB01	IPOC Station P	5.70	1	ePn	Pn	13 56 11.3	+0.5
YJA	Yavi	5.88	40	eP	Pn	13 56 17.3	+3.8
YJA				IAML		13 56 35.5	
	comp=Z,38nm,0.5s						
PEL	Peldehue	6.42	188	ePn	Pn	13 56 21.4	+0.9
PB11	IPOC Station P	6.98	359	ePn	Pn	13 56 24.1	-4.3
GO01	Chusmiza	7.08	3	eP	Pn	13 56 23.6	-6.4
GO05	Huala	8.46	193	ePn	Pn	13 56 45.8	-2.7
LPAZ	La Paz	10.52	8	Pn	Pn	13 57 17.5	+0.2
	comp=Z,2.6nm,0.3s,baz=189,slow=8.1,SNR=50						
LPAZ				Lg	Lg	14 00 16.4	
	baz=147,slow=22,SNR=1.6						
LPAZ	La Paz	10.52	8	eP	Pn	13 57 18.1	+0.8
CPUP	Villa Florida	10.97	90	Pn	Pn	13 57 22.0	-0.9
	comp=Z,0.3nm,0.3s,baz=262,slow=16,SNR=4.3						
CPUP				Lg	Lg	14 00 29.3	
	comp=Z,0.3nm,0.3s,baz=161,slow=11,SNR=1.8						
CPUP				LR	LR	14 01 57.8	
	comp=Z,438nm,19.9s,baz=263,slow=40						
CPUP	Villa Florida	10.97	90	eP	Pn	13 57 22.4	-0.5
TRQA	Tornquist	12.94	152	eP	Pn	13 57 48.7	-1.1
SIV	San Ignacio	13.32	38	Pn	Pn	13 57 52.3	-2.8
	comp=Z,6.2nm,0.3s,baz=234,slow=14,SNR=63						
PLCA	Paso Flores	13.95	183	Pn	Pn	13 58 05.8	+2.2
	comp=Z,0.2nm,0.3s,baz=21,slow=13,SNR=6.0						
PLCA				LR	LR	14 03 14.3	
	comp=Z,195nm,21.6s,baz=23,slow=36						
PLCA	Paso Flores	13.95	183	ePn	Pn	13 58 04.2	+0.5
PLCA	Paso Flores	13.95	183	eP	Pn	13 58 02.7	-0.9
AQDB	Aquidauana	14.17	67	eP	Pn	13 58 05.2	-1.4
PLTB	Pedras Altas	14.79	113	eP	Pn	13 58 13.3	-1.8
OGAUY	Aigu	14.84	124	eP	Pn	13 58 14.9	-0.9
PTGB	Pitanga	15.90	86	eP	Pn	13 58 30.1	+0.2
CNLB	Canela	16.72	103	eP	Pn	13 58 37.7	-2.6
FRTB	Fartura	18.44	84	eP	Pn	13 59 02.4	+0.7
ITRB	Iturama	18.99	72	eP	P	13 59 07.4	-0.3
BB19B	Bebedouro	20.05	78	eP	P	13 59 18.5	-0.8
SPB	Sao Paulo	20.28	86	eP	P	13 59 20.9	-0.8
CLDB	Colider	20.46	42	eP	P	13 59 22.7	-1.1
RCLB	Rio Claro- Sao	20.49	83	eP	P	13 59 23.3	-0.9
ATAH	Atahualpa	21.26	335	P	P	13 59 36.8	+4.0
	comp=Z,4.0nm,0.6s,baz=130,slow=7.9,SNR=2.6						
PARB	Paraibuna	21.95	86	eP	P	13 59 38.1	-1.8
PMNB	Patos De Minas	22.84	74	eP	P	13 59 47.1	-2.3
BDFB	Brasilia	22.91	65	P	P	13 59 47.4	-2.7
	comp=Z,26nm,1.0s,baz=241,slow=6.9,SNR=16						
BDFB				LR	LR	14 08 49.2	
	comp=Z,217nm,19.9s,baz=234,slow=37						
BDFB	Brasilia	22.91	65	eP	P	13 59 48.5	-1.7
BSCB	Bom Sucesso	23.37	81	eP	P	13 59 52.7	-2.1
VAS01	Vassouras-RJ	24.17	85	eP	P	14 00 00.2	-2.3
PEXB	Peixe	24.74	58	eP	P	14 00 06.9	-0.8
CAM01	Campos-RJ	25.88	85	eP	P	14 00 16.9	-1.1
ALF01	Guarapari-ES	27.08	83	eP	P	14 00 28.1	-0.7
SJMB	Sao Joao De Ma	27.34	79	eP	P	14 00 30.7	-0.5
SMTB	Santa Maria do	27.40	53	eP	P	14 00 31.3	-0.5
PTGA	Pitinga	27.49	21	P	P	14 00 31.8	-0.7
	comp=Z,14nm,0.8s,baz=204,slow=9.5,SNR=22						
PTGA	Pitinga	27.49	21	eP	P	14 00 31.9	-0.7
	comp=Z,18nm,1.0s						
PTGA	Pitinga	27.49	21	eP	P	14 00 32.3	-0.2
BSFB	Barra de Sao F	27.58	79	eP	P	14 00 32.7	-0.7
RIB01	Linhares ES	27.81	81	eP	P	14 00 34.5	-0.9
USHA	Ushuaia	28.05	179	P	P	14 00 38.3	+1.2
	comp=Z,4.0nm,0.5s,baz=346,slow=5.5,SNR=4.0						
NBMO	Morrinhos-CE	36.65	56	eP	P	14 01 51.5	-1.3
NBPA	Parau_RN	37.32	62	eP	P	14 01 58.3	-0.2
PMSA	Palmer Station	38.17	176	P	P	14 02 06.5	+1.4
	comp=Z,24nm,1.0s,baz=12,slow=8.6,SNR=9.3						
PMSA	Palmer Station	38.17	176	eP	P	14 02 05.6	+0.5
	comp=Z,24nm,0.9s						
PMSA	Palmer Station	38.17	176	eP	P	14 02 06.7	+1.6
VNA3	Neumayer Olymp	55.32	160	P	P	14 04 19.4	0.0
VNA1	Neumayer--Stat	55.56	159	P	P	14 04 21.7	+0.6
SNAA	Sanae	57.54	160	P	P	14 04 35.0	-0.1
SNAA	Sanae	57.54	160	eP	P	14 04 34.5	-0.7
	comp=Z,23nm,0.6s						
349A	Repton	60.20	343	P	P	14 04 54.4	+0.4
	baz=162						
155A	Kite	60.33	347	P	P	14 04 54.9	0.0
	baz=167						
Z59A	Georgetown, SC	60.39	351	P	P	14 04 55.2	-0.1
	baz=170						
NHSC	New Hope	60.40	350	P	P	14 04 55.6	+0.3
	baz=169						
Z57A	Bowman	60.67	349	P	P	14 04 57.1	-0.1
	baz=168						
152A	Waverly Hall	60.85	345	P	P	14 04 58.0	-0.4
	baz=164						
151A	Opelika	60.85	345	P	P	14 04 58.1	-0.4
	baz=164						
Z54A	Sparta	61.00	347	P	P	14 04 59.0	-0.4
	baz=166						
Y60A	Bolivia	61.00	352	P	P	14 04 58.9	-0.5
	baz=171						
150A	Eclectic	61.09	344	P	P	14 05 00.0	0.0
	baz=163						
Y58A	Scranton	61.10	350	P	P	14 05 00.0	-0.1
	baz=170						
Z53A	Monticello	61.19	347	P	P	14 05 00.2	-0.5
	baz=166						
149A	Jones	61.28	343	P	P	14 05 00.8	-0.5
	baz=162						
Z52A	Williamson	61.28	346	P	P	14 05 01.0	-0.4
	baz=165						
GOGA	Godfrey	61.29	347	P	P	14 05 01.0	-0.4
	baz=166						
Y55A	Saluda	61.49	348	P	P	14 05 02.2	-0.5
	baz=167						
Y54A	Tignall	61.58	348	P	P	14 05 02.9	-0.4
	baz=167						
Z50A	Ashland	61.69	344	eP	P	14 05 03.2	-0.9
	comp=Z,13nm,0.9s						
Z50A	Ashland	61.69	344	P	P	14 05 03.2	-0.9
	baz=163,SNR=7.9						
LRAL	Lakeview Retre	61.74	343	P	P	14 05 03.8	-0.7
	baz=162						
Y53A	Monroe	61.75	347	P	P	14 05 03.2	-1.2
	baz=166						
Z49A	Columbiana	61.78	344	P	P	14 05 03.3	-1.4
	baz=163						
Y52A	Lilburn	61.85	346	P	P	14 05 05.4	+0.2
	baz=165						
X56A	White Oak	61.89	349	P	P	14 05 05.7	+0.3
	baz=168						
X55A	Gracelyn & Ava	61.97	349	P	P	14 05 06.2	+0.3
	baz=168						
Y51A	Rockmart	62.11	345	P	P	14 05 06.8	-0.1

	baz=164						
W58A	Raeford	62.13	351	P	P	14 05 07.5	+0.4
	baz=170						
X54A	Belton	62.18	348	P	P	14 05 07.3	-0.1
	baz=167						
Y50A	Piedmont	62.25	345	P	P	14 05 07.8	-0.1
	baz=164						
X53A	Estanollee	62.32	347	P	P	14 05 08.2	-0.1
	baz=166						
W57A	Gilead	62.38	350	P	P	14 05 08.6	0.0
	baz=169						
Y49A	Blount Mountai	62.38	344	P	P	14 05 08.5	-0.3
	baz=163						
W56A	Indian Trail	62.45	350	P	P	14 05 09.1	-0.1
	baz=169						
X52A	Dahlonega	62.53	347	P	P	14 05 09.6	-0.1
	baz=166						
KMSC	Kings Mountain	62.58	349	P	P	14 05 10.4	+0.4
	baz=168						
W54A	Cherokee Point	62.67	348	P	P	14 05 10.8	+0.1
	baz=167						
X51A	Calhoun	62.70	346	*e*P	P	14 05 10.2	-0.6
	comp=Z,18nm,0.9s						
X51A	Calhoun	62.70	346	P	P	14 05 10.9	0.0
	baz=164						
V59A	Middlesex	62.74	352	P	P	14 05 11.6	+0.6
	baz=171						
X50B	Fort Payne	62.78	345	P	P	14 05 11.3	-0.2
	baz=164						
V58A	Windy Hill, Pi	62.88	351	P	P	14 05 12.2	+0.2
	baz=170						
W53A	Cullowhee	62.94	348	P	P	14 05 12.6	0.0
	baz=166						
V57A	Coltrane Farms	63.06	351	P	P	14 05 13.4	+0.2
	baz=170						
V56A	Mocksville	63.09	350	*e*P	P	14 05 13.0	-0.5
	comp=Z,14nm,1.1s						
V56A	Mocksville	63.09	350	P	P	14 05 13.6	+0.2
	baz=169						
X48A	Hartselle	63.10	344	*e*P	P	14 05 12.6	-1.0
	comp=Z,16nm,0.9s						
X48A	Hartselle	63.10	344	P	P	14 05 13.4	-0.1
	baz=162						
V55A	Taylorsville	63.25	349	P	P	14 05 14.9	+0.4
	baz=168						
W51A	Cleveland	63.25	346	P	P	14 05 14.2	-0.3
	baz=165,SNR=5.9						
V54A	Nebo	63.30	349	P	P	14 05 14.8	-0.1
	baz=168						
X47A	Russelville	63.37	343	P	P	14 05 14.9	-0.5
	baz=162						
U58A	Oxford	63.40	352	P	P	14 05 15.0	-0.5
	baz=171						
W50A	Signal Mountai	63.41	346	*e*P	P	14 05 15.1	-0.5
	comp=Z,13nm,0.8s						
W50A	Signal Mountai	63.41	346	P	P	14 05 15.4	-0.3
	baz=164						
QSPA	South Pole Qui	63.44	180	*e*P	P	14 05 15.6	-0.1
	comp=Z,34nm,0.8s						
CPCT	Cooper Cave	63.48	346	*e*P	P	14 05 15.5	-0.5
	comp=Z,9.6nm,0.9s						
U57A	Blanch	63.54	351	P	P	14 05 16.2	-0.1
	baz=170						
W49A	Belvidere	63.55	345	P	P	14 05 16.2	-0.3
	baz=163						
SWET	Sewanee	63.57	345	*e*P	P	14 05 15.7	-1.0
	comp=Z,20nm,0.8s						
Z41A	Richland Creek	63.66	338	P	P	14 05 16.8	-0.4
	baz=157						
V52A	Sevierville	63.67	347	P	P	14 05 16.6	-0.7
	baz=166						
W48A	Pulaski	63.73	344	P	P	14 05 17.5	-0.2
	baz=163						
OXF	Oxford	63.78	342	P	P	14 05 17.5	-0.6
	baz=160						
V51A	Loudon	63.79	347	P	P	14 05 18.2	+0.1
	baz=165						
V50A	Pikevile	63.82	346	P	P	14 05 17.8	-0.4
	baz=164,SNR=8.4						
T59A	Double "B" Far	63.85	353	P	P	14 05 19.1	+0.7
	baz=172						
JCT	Junction City	63.85	331	*e*P	P	14 05 18.6	0.0
	comp=Z,13nm,0.7s						
U55A	TA2, Sparta	63.86	350	P	P	14 05 18.7	+0.1
	baz=168						
PLAL	Pickwick Lake	63.87	343	*e*P	P	14 05 17.6	-1.0
	comp=Z,11nm,1.1s						
T58A	Grand View Acr	63.94	352	P	P	14 05 18.8	-0.2
	baz=171,SNR=6.4						
U53A	Fall Branch	63.99	348	P	P	14 05 19.1	-0.3
	baz=167						
W47A	Westpoint	64.00	344	P	P	14 05 19.2	-0.2
	baz=162						
U54A	Nelsons Funny	64.00	349	P	P	14 05 19.5	0.0
	baz=168						
V49A	McMinnville	64.09	345	P	P	14 05 19.2	-0.8
	baz=164,SNR=7.1						
U52A	Thorn Hill	64.16	348	P	P	14 05 20.4	-0.2
	baz=166						
WHTX	Lake Whitney,	64.20	334	P	P	14 05 21.1	+0.2
	baz=152						
T56A	Rocky Mt	64.22	351	P	P	14 05 21.1	+0.2
	baz=170						
U51A	La Follette	64.27	347	P	P	14 05 21.4	+0.1
	baz=166						
V48A	Smith Brothers	64.28	344	*e*P	P	14 05 20.4	-0.8
	comp=Z,21nm,1.3s						
V48A	Smith Brothers	64.28	344	P	P	14 05 21.3	0.0
	baz=163						
S61A	Accomac	64.37	355	P	P	14 05 21.9	+0.1
	baz=174						
T55A	Pulaski	64.42	350	P	P	14 05 22.2	-0.1
	baz=169						
U50A	Jamestown	64.48	346	P	P	14 05 22.3	-0.3
	baz=165						
T54A	Tazewell	64.49	349	P	P	14 05 22.7	0.0
	baz=168						
CLTN	Cedars of Leba	64.50	345	*e*P	P	14 05 21.8	-0.9
	comp=Z,6.6nm,1.0s						
S58A	Poland Farm, P	64.54	353	P	P	14 05 23.3	+0.3
	baz=172						
T53A	Wise	64.58	349	P	P	14 05 23.1	-0.3
	baz=167						
LTX	Lajitas	64.66	327	*e*P	P	14 05 25.0	+0.9
TX31	Lajitas Ar. Si	64.66	327	*e*P	P	14 05 24.9	+0.9
	comp=Z,15nm,1.8s						
TXAR	Lajitas Array	64.66	327	P	P	14 05 25.0	+0.9
	comp=Z,0.7nm,0.5s,baz=154,slow=9.5,SNR=14						
U49A	Red Boiling Sp	64.78	346	P	P	14 05 24.3	-0.2
	baz=164						
T52A	Hallie	64.78	348	P	P	14 05 24.8	+0.3
	baz=167						
S56A	Natural Bridge	64.79	351	P	P	14 05 24.9	+0.3
	baz=170						
S57A	Dark Hollow, R	64.79	352	*e*P	P	14 05 24.4	-0.2
	comp=Z,15nm,1.0s						
S57A	Dark Hollow, R	64.79	352	P	P	14 05 24.9	+0.3
	baz=171						
T51A	Gray	64.83	347	P	P	14 05 25.0	+0.2
	baz=166						
R58B	Mineral	64.87	353	*e*P	P	14 05 25.6	+0.6
	comp=Z,15nm,0.9s						
R58B	Mineral	64.87	353	P	P	14 05 25.3	+0.2
	baz=172						
WVT	Waverly	64.89	344	*e*P	P	14 05 24.7	-0.6
	comp=Z,10nm,0.8s						
WVT	Waverly	64.89	344	P	P	14 05 25.0	-0.3
	baz=162						
S55A	Lewisburg	65.02	350	P	P	14 05 26.2	0.0
	baz=169						
U47A	Clarksville	65.06	344	P	P	14 05 25.1	-1.2
	baz=162,SNR=5.8						
T50A	Nancy	65.06	347	P	P	14 05 25.3	-1.1
	baz=165						
MIAR	Mount Ida	65.09	338	*e*P	P	14 05 26.1	-0.5
	comp=Z,77nm,1.8s						
R57A	Stanardsville	65.27	352	P	P	14 05 28.2	+0.6
	baz=171						
T49A	Edmonton	65.29	346	*e*P	P	14 05 26.0	-1.9
	comp=Z,25nm,1.3s						
T49A	Edmonton	65.29	346	P	P	14 05 26.9	-1.0
	baz=164,SNR=6.1						
WHAR	Wooly Hollow	65.36	340	*e*P	P	14 05 26.1	-2.2
	comp=Z,18nm,1.0s						
S51A	Beattyville	65.41	348	P	P	14 05 28.5	-0.2
	baz=166						
R55A	Marlinton	65.47	351	P	P	14 05 29.5	+0.4
	baz=170						
R56A	Bull Pasture M	65.49	352	P	P	14 05 29.9	+0.7
	baz=170						
T47A	Sharon Grove	65.53	345	*e*P	P	14 05 27.6	-1.8
	comp=Z,18nm,0.9s						
T47A	Sharon Grove	65.53	345	P	P	14 05 28.8	-0.7
	baz=163,SNR=5.9						
S50A	Richmond	65.61	347	P	P	14 05 30.2	+0.3
	baz=165						
W39A	Magazine	65.75	338	*e*P	P	14 05 31.1	+0.2
	comp=Z,7.7nm,0.7s						
W39A	Magazine	65.75	338	P	P	14 05 31.1	+0.2
	baz=156						
T46A	Princeton	65.78	344	P	P	14 05 31.1	+0.1
	baz=162,SNR=9.1						
Q58A	Fox Den Farm,	65.81	353	P	P	14 05 31.7	+0.6
	baz=172						
FCAR	Ozark Folk Cen	65.86	340	*e*P	P	14 05 31.3	-0.3
	comp=Z,85nm,1.8s						
Q57A	Strasburg	65.98	352	P	P	14 05 33.2	+0.9
	baz=171						
R51A	Hillsboro	66.05	348	P	P	14 05 33.8	+1.1
	baz=166						
Q56A	Snyder Ridge,	66.09	352	P	P	14 05 33.5	+0.6
	baz=170						
Q55A	Buckhannon	66.16	351	P	P	14 05 34.5	+1.1
	baz=170						
PBMO	Poplar Bluff	66.19	342	*e*P	P	14 05 33.4	-0.2
	comp=Z,13nm,0.6s						
Q53A	Leroy	66.24	350	P	P	14 05 34.5	+0.5
	baz=168						
Q54A	Coxs Mills	66.26	350	P	P	14 05 34.9	+0.9
	baz=169						
P58A	Pank, Wackersv	66.31	353	P	P	14 05 35.4	+1.0
	baz=172						
P59A	Jarrettsville	66.35	354	P	P	14 05 34.9	+0.3
	baz=173						
R49A	Shelbyville	66.36	347	P	P	14 05 35.5	+0.9
	baz=165						
P57A	Homestead Farm	66.38	353	P	P	14 05 35.9	+1.0
	baz=172,SNR=5.8						
Q52A	Bidwell	66.46	349	P	P	14 05 35.9	+0.5
	baz=168						
P60A	Greenville	66.48	355	P	P	14 05 36.4	+0.9
	baz=174						
P56A	Dayton Farm, R	66.50	352	P	P	14 05 36.4	+0.8
	baz=171						
U40A	Yellville	66.52	340	P	P	14 05 35.8	0.0
	baz=157,SNR=8.4						
P55A	Reedsville	66.63	351	P	P	14 05 37.0	+0.5
	baz=170						
S44A	Carbondale	66.74	343	P	P	14 05 37.0	-0.1
	baz=161						
P54A	Burton	66.81	351	P	P	14 05 38.1	+0.5
	baz=169						
P53A	Whipple	66.83	350	P	P	14 05 38.2	+0.4
	baz=168						
O58A	Lewisberry	66.90	354	P	P	14 05 39.0	+0.8
	baz=173						
O60A	Telford	66.97	355	P	P	14 05 39.0	+0.5
	baz=174						
O59A	Robesonia	67.02	355	P	P	14 05 39.5	+0.6
	baz=173						
O57A	Amberson	67.06	353	P	P	14 05 40.0	+0.8
	baz=172						
TUL1	Leonard	67.08	337	*e*P	P	14 05 38.6	-0.7
	comp=Z,34nm,1.3s						
TUL1	Leonard	67.08	337	P	P	14 05 40.0	+0.6
	baz=154						
Q48A	North Vernon	67.08	346	P	P	14 05 39.4	+0.1
	baz=164						
P52A	Corning	67.09	349	P	P	14 05 39.4	0.0
	baz=168						
P51A	Williamsport	67.10	349	P	P	14 05 39.6	+0.2
	baz=167						
WMOK	Wichita Mounta	67.14	334	*e*P	P	14 05 39.4	-0.4
	comp=Z,2.8nm,0.8s						
WMOK	Wichita Mounta	67.14	334	P	P	14 05 40.6	+0.8
	baz=152						
O56A	Blue Knob Stat	67.22	353	*e*P	P	14 05 39.9	-0.4
	comp=Z,15nm,1.0s						
O56A	Blue Knob Stat	67.22	353	P	P	14 05 40.9	+0.6
	baz=171						
O55A	Ligonier	67.25	352	P	P	14 05 41.0	+0.7
	baz=170						
MNTX	Cornudas Mount	67.44	327	*e*P	P	14 05 42.1	+0.3
	comp=Z,3.6nm,0.9s						
MNTX	Cornudas Mount	67.44	327	P	P	14 05 41.7	-0.1
	baz=146,SNR=6.8						
P49A	Miami Univ. Ec	67.46	347	P	P	14 05 41.1	-0.6
	baz=165						
N60A	Cedar Hill Far	67.49	355	P	P	14 05 42.7	+0.8
	baz=174						
SSPA	Standing Stone	67.51	353	P	P	14 05 42.4	+0.5
	baz=172						
O52A	Adamsville	67.52	350	P	P	14 05 41.7	-0.4
	baz=168						
P48A	Milroy	67.53	347	P	P	14 05 41.3	-0.8
	baz=165						
O53A	New Philadelph	67.55	350	P	P	14 05 42.3	0.0
	baz=169						
PAL	Palisades	67.55	356	P	P	14 05 42.5	+0.3
	baz=176						
N59A	State Game Lan	67.59	355	P	P	14 05 43.5	+1.0
	baz=174						
N57A	Milroy	67.59	353	P	P	14 05 43.1	+0.6
	baz=172						
N58A	Sunbury	67.59	354	P	P	14 05 43.2	+0.7
	baz=173						
CCM	Cathedral Cave	67.62	342	*e*P	P	14 05 42.5	-0.2
	comp=Z,21nm,1.1s						
CCM	Cathedral Cave	67.62	342	P	P	14 05 42.9	+0.2
	baz=159						
O51A	Pataskala	67.67	349	P	P	14 05 43.0	0.0
	baz=167						
N55A	Marion Center	67.78	352	*e*P	P	14 05 44.0	+0.3
	comp=Z,21nm,0.8s						
N55A	Marion Center	67.78	352	P	P	14 05 44.4	+0.6
	baz=171,SNR=7.5						
ACSO	Alum Creek Sta	67.82	349	*e*P	P	14 05 43.4	-0.5
	comp=Z,19nm,0.8s						
ACSO	Alum Creek Sta	67.82	349	P	P	14 05 44.3	+0.3
	baz=167						
N56A	West Decatur	67.83	353	P	P	14 05 44.3	+0.2
	baz=171						
O50A	Cable	67.85	348	P	P	14 05 44.2	+0.1
	baz=166						
O49A	Covington	68.02	348	P	P	14 05 45.4	+0.2
	baz=166						
N53A	Lisbon	68.05	351	P	P	14 05 45.6	+0.2
	baz=169						
P46A	Rosedale	68.07	345	P	P	14 05 46.4	+0.9
	baz=163						
N54A	Moraine State	68.08	352	P	P	14 05 46.4	+0.8
	baz=170						
M58A	Price’s Panora	68.10	354	P	P	14 05 46.6	+0.9
	baz=173						
MSTX	Muleshoe	68.13	331	*e*P	P	14 05 46.0	-0.3
	comp=Z,14nm,0.8s						
MSTX	Muleshoe	68.13	331	P	P	14 05 46.8	+0.6
	baz=148						
M59A	Waymart	68.19	355	P	P	14 05 47.2	+0.9
	baz=174,SNR=8.2						
BRYW	Bryant College	68.37	358	*e*P	P	14 05 47.7	+0.3
	comp=Z,26nm,1.0s						
N50A	Nevada	68.37	349	P	P	14 05 48.0	+0.6
	baz=167						
M56A	Emporium	68.38	353	P	P	14 05 48.3	+0.8
	baz=172						
M55A	Ridgway	68.43	353	P	P	14 05 48.0	+0.2
	baz=171,SNR=6.3						
M54A	Oil Creek Stat	68.58	352	*e*P	P	14 05 48.7	0.0
	comp=Z,15nm,0.9s						
M54A	Oil Creek Stat	68.58	352	P	P	14 05 48.9	+0.2
	baz=170						
M53A	WI Miller and	68.64	351	P	P	14 05 49.3	+0.2
	baz=169						
P43A	Skaggs, Pawnee	68.64	344	P	P	14 05 49.1	-0.1
	baz=161						
N49A	Columbus Grove	68.70	348	*e*P	P	14 05 48.9	-0.6
	comp=Z,17nm,0.8s						
N49A	Columbus Grove	68.70	348	P	P	14 05 49.0	-0.5
	baz=166						
L58A	Harry Jones Me	68.72	355	P	P	14 05 50.4	+0.8
	baz=174,SNR=5.9						
HRV	Adam Dziewonsk	68.96	358	P	P	14 05 52.0	+0.9
	baz=178						
M50A	Fremont	68.97	349	P	P	14 05 51.9	+0.8
	baz=167						
L53A	Girard	69.09	351	P	P	14 05 52.6	+0.7
	baz=170						
L55A	Hinsdale	69.10	353	P	P	14 05 52.1	+0.2
	baz=171						
M49A	Liberty Center	69.20	348	P	P	14 05 52.4	-0.1
	baz=166						
ERPA	Erie	69.22	352	P	P	14 05 52.9	+0.2
	baz=170						
PLIO	Pelee Island,	69.24	350	P	P	14 05 52.8	+0.1
	baz=167						
L54A	Sinclairville	69.25	352	P	P	14 05 53.3	+0.4
	baz=171						
TRY	Troy	69.26	357	*e*P	P	14 05 53.3	+0.4
	comp=Z,36nm,1.1s						
M48A	Edgerton	69.35	348	P	P	14 05 54.1	+0.7
	baz=165						
M47A	Cromwell	69.40	347	P	P	14 05 54.8	+1.0
	baz=165						
K54A	Basiliko Farm,	69.55	353	P	P	14 05 55.5	+0.8
	baz=171						
MMNY	Mt. Morris Dam	69.58	353	*e*P	P	14 05 55.0	+0.1
	comp=Z,16nm,0.9s						
K55A	Perry	69.60	353	P	P	14 05 55.4	+0.3
	baz=172						
L48A	N Adams	69.74	348	P	P	14 05 55.4	-0.5
	baz=166						
L47A	Sherwood	69.91	348	P	P	14 05 56.8	-0.1
	baz=165						
N41A	Harden Midland	69.99	343	*e*P	P	14 05 57.1	-0.3
	comp=Z,15nm,0.8s						
N41A	Harden Midland	69.99	343	P	P	14 05 57.4	-0.1
	baz=160						
K50A	Casco	70.24	350	P	P	14 05 58.6	-0.3
	baz=168						
N40A	Mertquake, Sal	70.35	342	P	P	14 05 59.4	-0.2
	baz=159						
J52A	Paris	70.39	352	P	P	14 06 00.1	+0.2
	baz=170						
LIC	Lamto	70.50	72	*e*P	P	14 06 01.0	-0.2
	comp=Z,59nm,0.8s						
K48A	Perry	70.52	349	P	P	14 06 00.9	+0.2
	baz=166						
NCB	Newcomb	70.53	356	*e*P	P	14 06 00.8	+0.1
	comp=Z,29nm,1.8s						
SBA	Scott Base	70.56	191	*e*P	P	14 06 02.3	+1.7
	comp=Z,10nm,1.1s						
TUC	Tucson	70.66	324	*e*P	P	14 06 00.2	-1.6
	comp=Z,9.5nm,1.4s						
PECO	Prince Edward	70.69	354	P	P	14 06 02.1	+0.5
	baz=173						
TIC	Toumodi	70.72	72	*e*P	P	14 06 01.9	-0.7
KIC	Kosan Boka	70.81	72	*e*P	P	14 06 03.2	+0.1
	comp=Z,59nm,0.7s						
DBIC	Dimbokro	70.87	72	P	P	14 06 03.7	+0.2
	comp=Z,36nm,0.7s,baz=216,slow=6.4,SNR=45						
DBIC				LR	LR	14 35 24.7	
	comp=Z,75nm,19.8s,baz=206,slow=34						
DBIC	Dimbokro	70.87	72	*e*P	P	14 06 03.4	0.0
	comp=Z,44nm,0.8s						
L42A	Oliver, Polo	70.91	344	P	P	14 06 02.9	-0.2
	baz=161						
J48A	Bridge Port	70.94	349	P	P	14 06 02.6	-0.5
	baz=166						
I55A	Frankford	71.03	354	P	P	14 06 03.8	0.0
	baz=172						
J47A	Sunmer	71.06	348	P	P	14 06 04.1	+0.1
	baz=166						
LONY	Lake Ozonia	71.19	356	P	P	14 06 04.8	+0.1
	baz=175						
H56A	Elgin	71.28	355	P	P	14 06 05.4	+0.2
	baz=174,SNR=5.5						
H55A	Tweed	71.32	354	P	P	14 06 05.8	+0.4
	baz=173						
FRNY	Flat Rock	71.36	357	*e*P	P	14 06 05.9	+0.2
	comp=Z,6.9nm,0.8s						
L40A	Anamosa	71.36	343	*e*P	P	14 06 05.6	-0.2
	comp=Z,24nm,0.9s						
L40A	Anamosa	71.36	343	P	P	14 06 05.8	0.0
	baz=160						
214A	Organ Pipe Nat	71.48	322	P	P	14 06 07.6	+0.8
	baz=140						
T25A	Trinidad	71.52	331	P	P	14 06 08.3	+1.2
	baz=147						
CLWO	Collingwood	71.55	352	P	P	14 06 07.5	+0.6
	baz=170						
VNDA	Vanda	71.58	190	P	P	14 06 08.8	+2.0
	comp=Z,5.2nm,0.8s,baz=128,slow=6.1,SNR=23						
VNDA	Vanda	71.58	190	*e*P	P	14 06 07.9	+1.2
	comp=Z,6.8nm,0.9s						
PKME	Peaks-Kenny Pk	71.69	0	P	P	14 06 08.2	+0.5
	baz=180						
H52A	Wyevale	71.69	352	P	P	14 06 08.1	+0.4
	baz=170						
PLVO	Plevna	71.79	354	P	P	14 06 09.1	+0.8
	baz=173						
SYO	Syowa Base	71.81	159⇓	*e*P	P	14 06 06.6	-1.6
SYO	Syowa Base	71.81	159⇑	*e*PcP	PcP	14 06 25.0	-2.1
BANO	Bancroft	71.85	354	P	P	14 06 09.2	+0.5
	baz=172						
G55A	Calabogie	71.97	355	P	P	14 06 09.7	+0.3
	baz=173						
G53A	Haliburton	72.02	353	P	P	14 06 10.2	+0.5
	baz=171						
BUKO	Buck Lake	72.42	353	P	P	14 06 12.3	+0.2
	baz=171						
KLBO	Killbear Provi	72.44	352	P	P	14 06 12.3	+0.1
	baz=170,SNR=7.7						
PEMO	Pembroke	72.44	354	P	P	14 06 12.6	+0.4
	baz=173						
SDCO	Great Sand Dun	72.50	331	*e*P	P	14 06 13.5	+0.4
	comp=Z,13nm,1.4s						
SDCO	Great Sand Dun	72.50	331	P	P	14 06 13.9	+0.8
	baz=147,SNR=9.4						
I42A	Draeger Farm,	72.52	345	P	P	14 06 13.1	+0.4
	baz=162						
X16A	Lo Mia Camp, P	72.65	325	*e*P	P	14 06 13.9	-0.1
	comp=Z,4.2nm,0.9s						
F52A	Sundridge	72.76	353	P	P	14 06 13.9	-0.2
	baz=171						
G47A	Hillman	72.78	349	P	P	14 06 14.5	+0.3
	baz=166						
TRQ	Mont Tremblant	72.79	356	*e*P	P	14 06 14.2	-0.1
ALGO	Algonquin Park	72.79	354	P	P	14 06 14.3	0.0
	baz=172,SNR=5.8						
BGNE	Belgrade	72.82	338	*e*P	P	14 06 15.1	+0.5
	comp=Z,72nm,1.1s						
H43A	Windswept, Lux	72.83	346	P	P	14 06 14.5	0.0
	baz=163						
F51A	Arnstein	72.96	352	P	P	14 06 15.6	+0.4
	baz=170						
F49A	Sandfield	73.08	351	P	P	14 06 16.2	+0.2
	baz=168						
S22A	4UR Ranch, Cre	73.09	330	P	P	14 06 16.6	0.0
	baz=146						
E53A	Dumoine, Ponti	73.17	354	P	P	14 06 16.7	+0.1
	baz=172						
E54A	Lac Daplat, Po	73.19	355	P	P	14 06 16.6	0.0
	baz=173,SNR=5.3						
F48A	Evansville	73.22	351	P	P	14 06 16.8	0.0
	baz=168						
Q24A	Divide	73.37	332	P	P	14 06 19.2	+1.0
	baz=147						
MVCO	Mesa Verde	73.42	328	P	P	14 06 19.4	+0.9
	baz=144						
WUAZ	Wupatki	73.47	325	*e*P	P	14 06 20.7	+1.9
	comp=Z,7.6nm,1.0s						
WUAZ	Wupatki	73.47	325	P	P	14 06 19.8	+1.0
	baz=142						
E51A	G1948 Merrick	73.51	353	P	P	14 06 18.9	+0.3
	baz=171,SNR=5.6						
E50A	Wahnapitae	73.55	352	P	P	14 06 19.1	+0.4
	baz=170						
E48A	Lockeyer	73.80	351	P	P	14 06 20.0	-0.2
	baz=168,SNR=5.7						
D52A	ZEK Kipawa Sen	73.84	354	P	P	14 06 20.4	0.0
	baz=172,SNR=5.3						
D54A	Lac Fusel, La	73.86	355	P	P	14 06 20.2	-0.3
	baz=173						
D53A	Lac Vacive, Po	73.87	354	*e*P	P	14 06 20.6	-0.1
	comp=Z,16nm,0.9s						
D53A	Lac Vacive, Po	73.87	354	P	P	14 06 20.5	-0.1
	baz=172,SNR=8.3						
E47A	Iron Bridge	73.93	350	P	P	14 06 20.8	-0.2
	baz=167,SNR=6.2						
E46A	Sault Ste Mari	74.01	349	*e*P	P	14 06 21.0	-0.4
	comp=Z,17nm,0.9s						
E46A	Sault Ste Mari	74.01	349	P	P	14 06 21.4	0.0
	baz=166						

D51A	Lot 18 Range l	74.05	353	P	P	14 06 21.6	-0.1
	baz=171						
G40A	Rib Lake	74.12	345	P	P	14 06 22.2	0.0
	baz=161						
PV01	Paradox Valley	74.20	329	*e*pP	pP	14 06 29.2	+1.8
MONP2	Monument Peak	74.20	320	P	P	14 06 23.2	0.0
	baz=137						
BC3	Big Chuckawall	74.22	322	P	P	14 06 23.1	0.0
	baz=138						
PV13	Radium Mtn., P	74.33	329	*e*P	P	14 06 25.1	+1.2
	comp=Z,4.9nm,0.8s						
G39A	Holcombe	74.37	344	P	P	14 06 23.6	0.0
	baz=160						
PV03	Paradox Valley	74.42	329	*e*pP	pP	14 06 29.2	+0.5
ECSD	EROS Data Cent	74.42	340	*e*P	P	14 06 23.9	0.0
	comp=Z,12nm,0.9s						
ECSD	EROS Data Cent	74.42	340	P	P	14 06 24.0	0.0
	baz=155,SNR=11						
IRM	Iron Mountain	74.42	322	P	P	14 06 23.6	-0.6
	baz=138						
W13A	Hualapai Mount	74.45	324	*e*P	P	14 06 25.3	+0.7
	comp=Z,2.7nm,0.8s						
D49A	Beulah Townshi	74.46	352	P	P	14 06 24.3	+0.2
	baz=169						
D46A	Sault St. Mari	74.48	350	P	P	14 06 24.0	-0.1
	baz=166						
D47A	Chapleau	74.49	350	P	P	14 06 24.0	-0.3
	baz=167						
E43A	Lone Tree Farm	74.50	348	P	P	14 06 24.1	-0.1
	baz=164						
PV22	Blue Mesa, Par	74.62	329	*e*P	P	14 06 26.2	+0.7
	comp=Z,5.4nm,1.1s						
U15A	North Rim	74.65	325	*e*P	P	14 06 25.6	-0.1
	comp=Z,5.5nm,0.9s						
SPMN	Marine on St.	74.72	343	*e*P	P	14 06 25.0	-0.6
	comp=Z,47nm,0.2s						
SPMN	Marine on St.	74.72	343	P	P	14 06 26.3	+0.7
	baz=158						
VLDQ	Val d'Or	74.88	355	*e*P	P	14 06 26.5	+0.1
	comp=Z,17nm,1.3s						
GMRC	Granite Mounta	75.17	322	P	P	14 06 29.6	+0.9
	baz=138						
N23A	Red Feather La	75.32	332	P	P	14 06 29.9	+0.4
	baz=147						
KNB	Kanab	75.37	325	*e*P	P	14 06 31.7	+1.9
	comp=Z,15nm,1.1s						
D41A	Chassel	75.47	347	*e*P	P	14 06 30.3	+0.5
	comp=Z,30nm,0.8s						
D41A	Chassel	75.47	347	P	P	14 06 30.7	+0.9
	baz=162						
HEC	Hector,Ludlow	75.58	322	P	P	14 06 32.0	+1.0
	baz=138						
LCMT	Little Creek M	75.58	325	*e*P	P	14 06 32.0	+1.0
	comp=Z,3.7nm,0.9s						
O20A	White River Ci	75.67	330	*e*P	P	14 06 31.6	+0.1
	comp=Z,9.2nm,0.8s						
O20A	White River Ci	75.67	330	P	P	14 06 32.6	+1.1
	baz=145						
E38A	The Farm, Brul	75.70	345	P	P	14 06 31.1	-0.1
	baz=160						
LSQQ	Lebel-sur-Quev	75.78	355	P	P	14 06 31.6	0.0
	baz=173						
MTPU	Mount Pierson	75.85	327	*e*P	P	14 06 33.6	+0.8
	comp=Z,4.7nm,0.9s						
SRU	San Rafael Swe	75.89	328	*e*P	P	14 06 31.5	-1.2
	comp=Z,5.8nm,0.8s						
SZCU	Shurtz Canyon	75.95	326	*e*P	P	14 06 32.1	-1.1
	comp=Z,7.5nm,1.2s						
CCUT	Cedar City	76.06	325	*e*P	P	14 06 33.9	+0.1
	comp=Z,8.8nm,0.9s						
SHPR	Sheep Range	76.19	324	*e*P	P	14 06 33.1	-1.4
	comp=Z,12nm,1.6s						
P17A	Butcher Ranch,	76.28	328	*e*P	P	14 06 34.5	-0.5
	comp=Z,8.7nm,1.0s						
MATQ	Matagami	76.53	355	P	P	14 06 36.2	+0.3
	baz=172						
EDW2	Edwards Air Fo	76.55	321	P	P	14 06 36.6	+0.2
	baz=136						
LRMC	Laurel Mtn Rad	76.81	321	P	P	14 06 38.9	+0.9
	baz=137						
SCZ2	Santa Cruz Isl	76.86	319	P	P	14 06 38.1	0.0
	baz=135						
PSUT	Pine Spring	77.06	326	*e*P	P	14 06 39.8	+0.4
	comp=Z,8.1nm,1.0s						
FURC	Furnace Creek,	77.08	323	P	P	14 06 40.8	+1.5
	baz=138						
TPNV	Topopah Spring	77.10	323	*e*P	P	14 06 41.2	+1.6
	comp=Z,6.3nm,0.9s						
TPNV	Topopah Spring	77.10	323	P	P	14 06 41.6	+2.0
	baz=138,SNR=12						
MPMC	Manual Prospec	77.12	322	P	P	14 06 40.9	+1.1
	baz=137						
RSSD	Black Hills	77.29	335	*e*P	P	14 06 41.2	+0.6
	comp=Z,4.6nm,0.8s						
RSSD	Black Hills	77.29	335	P	P	14 06 42.0	+1.4
	baz=149						
DAC	Darwin (Calif)	77.34	322	*e*P	P	14 06 40.3	-0.7
	comp=Z,5.0nm,1.0s						
ISA	Isabella, Lake	77.38	321	P	P	14 06 43.0	+1.9
	baz=136						
JLU	Jordanelle	77.51	329	*e*P	P	14 06 41.5	-0.4
	comp=Z,9.3nm,1.1s						
PKM	Mcpherson Peak	77.59	320	P	P	14 06 43.8	+1.4
	baz=135,SNR=9.6						
CWC	Cottonwood Cre	77.72	322	P	P	14 06 44.7	+1.6
	baz=137						
GRAC	Grapevine Rang	77.74	323	P	P	14 06 44.7	+1.6
	baz=137						
R11A	Troy Canyon, C	77.80	325	*e*P	P	14 06 44.1	+0.5
	comp=Z,12nm,1.4s						
R11A	Troy Canyon, C	77.80	325	P	P	14 06 45.2	+1.6
	baz=139,SNR=17						
DUG	Dugway, Tooele	77.83	328	*e*P	P	14 06 44.4	+0.8
	comp=Z,6.6nm,1.0s						
DUG	Dugway, Tooele	77.83	328	P	P	14 06 45.4	+1.8
	baz=141,SNR=7.5						
PMPST	Porto Santo, M	78.12	43	*e*P	P	14 06 45.3	+0.1
	comp=Z,97nm,1.9s						
HWUT	Hardware Ranch	78.35	329	*e*P	P	14 06 47.0	+0.5
	comp=Z,8.0nm,0.8s						
AGMN	Agassiz Nation	78.36	342	*e*P	P	14 06 46.0	-0.2
	comp=Z,11nm,1.0s						
AGMN	Agassiz Nation	78.36	342	P	P	14 06 47.3	+1.1
	baz=156						
BW06	Boulder Array	78.39	331	*e*P	P	14 06 46.5	-0.2
	comp=Z,11nm,1.6s						
BW06	Boulder Array	78.39	331	P	P	14 06 47.4	+0.6
	baz=144						
PD31	Pinedale Array	78.39	331	*e*P	P	14 06 47.6	+0.8
PDAR	Pinedale Array	78.39	331	P	P	14 06 47.6	+0.8
	comp=Z,1.1nm,0.6s,baz=131,slow=4.9,SNR=11						
BGU	Big Grassy Mou	78.50	328	*e*P	P	14 06 47.8	+0.5
	comp=Z,17nm,1.5s						
SPUT	South Promonto	78.53	328	*e*P	P	14 06 48.2	+0.7
	comp=Z,8.8nm,0.9s						
MDND	Maddock	79.04	340	*e*P	P	14 06 49.4	-0.5
	comp=Z,83nm,1.3s						
HVU	Hansel Valley	79.05	329	*e*P	P	14 06 50.9	+0.6
	comp=Z,5.7nm,0.8s						
OMMB	Old Mammoth Mi	79.08	322	*e*P	P	14 06 51.3	+0.5
	comp=Z,9.3nm,1.2s						
TSUM	Tsumeb	79.14	106	*e*P	P	14 06 51.3	-0.2
	comp=Z,11nm,0.9s						
MDPB	Devils Postpil	79.14	322	*e*P	P	14 06 50.9	-0.1
	comp=Z,5.5nm,1.1s						
NV11	Mina Array Sit	79.22	323	*e*P	P	14 06 51.6	+0.3
	comp=Z,0.3nm,1.0s						
NV01	Mina Array Sit	79.30	323	*e*P	P	14 06 52.1	+0.3
NVAR	Mina Array Bea	79.30	323	P	P	14 06 52.1	+0.3
	comp=Z,3.0nm,1.0s,baz=151,slow=6.1,SNR=15						
ELK	Elko	79.44	326	*e*P	P	14 06 52.7	+0.2
	comp=Z,5.2nm,0.9s						
MAW	Mawson	79.47	163	P	P	14 06 52.2	+0.1
	comp=Z,10.0nm,0.6s,baz=208,slow=6.0,SNR=6.9						
LOHW	Long Hollow	79.52	331	*e*P	P	14 06 53.6	+0.6
	comp=Z,6.0nm,0.9s						
RYN	Ryan	79.56	323	*e*P	P	14 06 54.3	+1.1
	comp=Z,8.2nm,1.3s						
TPAW	Teton Pass	79.58	331	*e*P	P	14 06 54.3	+1.0
	comp=Z,8.2nm,0.9s						
KVN	Kaiserville	79.64	324	*e*P	P	14 06 54.5	+0.8
	comp=Z,8.2nm,1.0s						
MOOW	Moose Ponds	79.69	331	*e*P	P	14 06 53.3	-0.6
	comp=Z,4.4nm,1.2s						
TOA0	Torodi Ar. Sit	79.72	70	*e*P	P	14 06 53.3	-1.1
	comp=Z,65nm,0.7s						
TOA1	Torodi Ar. Sit	79.72	70	*e*P	P	14 06 52.7	-1.7
TORD	Torodi Ar. Bea	79.72	70	P	P	14 06 52.7	-1.7
	comp=Z,44nm,0.6s,baz=239,slow=4.2,SNR=152						
TORD				LR	LR	14 41 52.1	
	comp=Z,62nm,18.4s,baz=310,slow=36						
FXWY	Fox Creek	79.73	331	*e*P	P	14 06 54.3	+0.2
	comp=Z,6.3nm,1.1s						
IMW	Indian Meadow	79.90	331	*e*P	P	14 06 55.1	+0.1
	comp=Z,12nm,1.3s						
FLWY	Flagg Ranch	79.94	331	*e*P	P	14 06 55.0	-0.2
	comp=Z,19nm,1.2s						
WAKR	Walker	79.96	322	*e*P	P	14 06 55.1	-0.4
	comp=Z,13nm,1.3s						
ULM	Lac du Bonnet	80.16	343	P	P	14 06 54.9	-1.1
	comp=Z,6.7nm,0.6s,baz=190,slow=2.0,SNR=4.9						
ULM	Lac du Bonnet	80.16	343	*e*P	P	14 06 55.5	-0.4
	comp=Z,40nm,1.5s						
RLMT	Red Lodge	80.18	333	*e*P	P	14 06 56.3	-0.2
	comp=Z,6.8nm,0.8s						
RLMT	Red Lodge	80.18	333	P	P	14 06 57.7	+1.2
	baz=144,SNR=7.4						
YERR	Yerington	80.20	323	*e*P	P	14 06 56.5	-0.2
	comp=Z,8.8nm,1.0s						
LAO	LASA Array	80.28	335	P	P	14 06 57.1	+0.3
	baz=147						
PNTR	Pine Nut	80.47	323	*e*P	P	14 06 58.3	+0.1
	comp=Z,14nm,1.0s						
YHH	Holmes Hill	80.57	332	*e*P	P	14 06 59.3	+0.6
	comp=Z,20nm,1.2s						
YHB	Horse Butte	80.69	331	*e*P	P	14 06 59.5	+0.3
	comp=Z,15nm,1.2s						
PAHR	Pah Rah Range	80.80	323	*e*P	P	14 07 00.8	+1.0
	comp=Z,20nm,1.1s						
QLMT	Earthquake Lak	80.85	331	*e*P	P	14 06 60.0	-0.2
GCMT	Greycliff	80.89	333	*e*P	P	14 07 00.1	-0.1
DGMT	Dagmar	81.07	337	P	P	14 07 02.1	+1.1
	baz=149						
AFDM	Forest Hills D	81.12	322	*e*P	P	14 07 01.5	+0.1
	comp=Z,4.2nm,1.0s						
HLID	Hailey	81.19	329	*e*P	P	14 07 02.9	+0.9
	comp=Z,9.1nm,0.9s						
HLID	Hailey	81.19	329	P	P	14 07 03.4	+1.5
	baz=140,SNR=22						
BEKR	Beckworth	81.44	323	*e*P	P	14 07 03.5	+0.2
	comp=Z,8.8nm,1.1s						
MCMT	McKenzie Canyo	81.47	330	*e*P	P	14 07 03.8	+0.4
BOSA	Boshof	81.53	118	P	P	14 07 03.0	-1.2
	comp=Z,8.3nm,0.8s,baz=236,slow=5.1,SNR=14						
BOSA				LR	LR	14 40 27.8	
	comp=Z,44nm,18.1s,baz=208,slow=34						
BOSA	Boshof	81.53	118	*e*P	P	14 07 03.5	-0.6
	comp=Z,8.8nm,0.8s						
BOZ	Bozeman (W)	81.55	332	*e*P	P	14 07 03.8	+0.1
	comp=Z,4.5nm,1.1s						
BOZ	Bozeman (W)	81.55	332	P	P	14 07 04.7	+1.0
	baz=143						
ORV	Oroville	81.84	322	*e*P	P	14 07 05.8	+0.6
	comp=Z,9.0nm,0.9s						
HRY	Holter Researc	82.52	332	*e*P	P	14 07 09.0	+0.3
EGMT	Eagleton	82.74	334	*e*P	P	14 07 09.3	-0.4
	comp=Z,18nm,1.4s						
EGMT	Eagleton	82.74	334	P	P	14 07 10.7	+0.9
	baz=144						
J08A	Circle Bar Ran	82.99	326	*e*P	P	14 07 11.4	+0.2
	comp=Z,15nm,1.2s						
PLID	Pearl Lake	83.09	329	*e*P	P	14 07 12.3	+0.4
	comp=Z,9.2nm,0.8s						
LBTB	Lobatse	83.37	115	*e*P	P	14 07 13.0	-0.8
	comp=Z,23nm,1.1s						
BMO	Blue Mountains	83.53	328	*e*P	P	14 07 14.2	+0.2
	comp=Z,10nm,1.5s						
M04C	Macdoel	83.58	323	P	P	14 07 15.4	+1.0
	baz=135						
PINE	Pine Mountain	84.54	325	*e*P	P	14 07 20.1	+0.8
	comp=Z,12nm,1.1s						
G08A	Pilot Rock	84.64	327	*e*P	P	14 07 20.1	+0.5
	comp=Z,14nm,1.8s						
J04D	Umpqua Nationa	84.75	324	P	P	14 07 21.5	+1.1
	baz=134						
I05D	Terrebonne, OR	85.13	326	P	P	14 07 23.1	+1.0
	baz=135						
K02D	Willamette Mer	85.19	323	P	P	14 07 23.4	+0.9
	baz=133						
WALA	Waterton Lakes	85.23	333	*e*P	P	14 07 22.9	+0.3
	comp=Z,32nm,1.8s						
J01E	Myrtle Point	85.66	323	P	P	14 07 25.9	+1.3
	baz=133						
I03D	Drain, OR	85.72	324	P	P	14 07 26.3	+1.4
	baz=134						
PTEO	Sao Teotonio	85.74	44	*e*P	P	14 07 26.9	+1.7
	comp=Z,47nm,1.5s						
H04A	Detroit Lake	85.80	325	*e*P	P	14 07 26.0	+0.7
	comp=Z,23nm,1.5s						
NEW	Newport	86.00	330	*e*P	P	14 07 26.0	-0.3
	comp=Z,5.0nm,0.9s						
NEW	Newport	86.00	330	P	P	14 07 27.1	+0.8
	baz=138						
PBDV	Barranco-do-Ve	86.05	45	*e*P	P	14 07 28.1	+1.3
	comp=Z,33nm,1.6s						
C09A	Chrisman Ranch	86.17	329	*e*P	P	14 07 27.4	+0.3
	comp=Z,49nm,1.6s						
PNCL	Nicolau / Gran	86.21	44	*e*P	P	14 07 28.6	+1.1
	comp=Z,15nm,1.1s						
PCVE	Castro Verde	86.22	44	*e*P	P	14 07 28.9	+1.3
	comp=Z,21nm,1.2s						
PVAQ	Vaqueiros	86.28	45	*e*P	P	14 07 29.1	+1.2
	comp=Z,17nm,1.6s						
PBEJ	Beja	86.57	44	*e*P	P	14 07 31.4	+2.1
	comp=Z,13nm,1.1s						
PMTG	Montargil	86.99	43	*e*P	P	14 07 32.3	+1.0
	comp=Z,22nm,1.3s						
MTE	Manteigas	88.22	42	*e*P	P	14 07 37.9	+0.6
	comp=Z,9.5nm,1.4s						
D03D	Eldon	88.24	327	P	P	14 07 38.5	+1.4
	baz=134						
B05A	Bryant	88.28	328	P	P	14 07 38.3	+1.1
	baz=135						
SNZO	South Karori	89.87	223	*e*P	P	14 07 46.0	+0.9
	comp=Z,53nm,0.8s						
ESDC	Sonseca Array	89.99	45	P	P	14 07 44.8	-0.9
	comp=Z,1.3nm,0.8s,baz=247,slow=3.6,SNR=8.3						
YKA	Yellowknife Ar	95.94	341	P	P	14 08 12.5	+0.1
	comp=Z,2.7nm,0.8s,baz=137,slow=4.2,SNR=11						
YKB5	Yellowknife Ar	95.94	341	*e*P	P	14 08 12.6	+0.1
EPYK	Eagle Plains	105.67	337	P	PKiKP	14 13 09.8	+1.0
	baz=121						
VYHS	Vyhne	108.54	45	*e*PDIF	Pdif	14 09 11.0	+2.0
TOLK	Toolik Lake Re	111.10	337	P	PKiKP	14 13 19.6	+0.7
	baz=109						
ASAR	Alice Springs	124.96	206	PKP	PKPdf	14 13 45.9	-1.1
	comp=Z,1.8nm,0.7s,baz=134,slow=1.7,SNR=20						
AS31	Alice Springs	124.96	206	*e*PKPdf	PKPdf	14 13 45.9	-1.1
WR1	Warramunga Arr	128.10	209	*e*PKPdf	PKPdf	14 13 52.5	-0.5
WRA	Warramunga Arr	128.10	209	PKP	PKPdf	14 13 52.5	-0.5
	comp=Z,5.0nm,0.8s,baz=182,slow=1.4,SNR=9.3						
ABKAR	Akbulak array	135.33	46	*e*PKPdf	PKPdf	14 14 05.5	-0.2
PEA1	Petropavlovsk-	136.32	320	*e*PKPdf	PKPdf	14 14 07.8	+0.4
PETK	Petropavlovsk-	136.32	320	PKP	PKPdf	14 14 07.8	+0.4
	comp=Z,1.9nm,0.8s,baz=104,slow=4.7,SNR=5.5						
GAR	Garm	144.44	60	*e*PKPdf	PKPbc	14 14 21.2	0.0
BTK	Batken	144.67	58	*e*PKPdf	PKPab	14 14 21.3	-0.4
CISI	Cisompet, Garu	145.78	175	*e*PKPdf	PKPdf	14 14 25.7	0.0
KURK	Kurchatov	145.98	37	*e*PKPbc	PKPab	14 14 26.1	0.0
ARSB	Arslanbob	146.03	55	*e*PKPbc	PKPab	14 14 26.8	0.0
EKS2	Erkin-Say	146.26	52	P	PKPab	14 14 27.5	-0.1
	SNR=11						
AAK	Ala-Archa	146.77	52	*e*PKPab	PKPab	14 14 29.9	+0.3
AAK	Ala-Archa	146.77	52	P	PKPab	14 14 30.0	+0.4
	SNR=11						
UCH	Uchtor	146.90	53	P	PKPbc	14 14 29.2	0.0
	SNR=39						
ZAA1	Zalesovo Array	146.92	28	*e*PKPbc	PKPdf	14 14 26.9	+0.6
ZAA0	Zalesovo Array	146.92	28	*e*PKPdf	PKPdf	14 14 26.3	0.0
ZAA0				*e*PKPbc	PKPab	14 14 28.8	-0.7
ZALV	Zalesovo Beam	146.92	28	PKPbc	PKPdf	14 14 26.9	+0.6
	comp=Z,54nm,0.8s,baz=283,slow=2.9,SNR=62						
KBK	Karagaybulak	147.09	52	P	PKPab	14 14 30.8	-0.1
	SNR=9.4						
TKM2	Tokmak 2	147.46	51	P	PKPbc	14 14 31.1	+0.8
	SNR=8.9						
KZA	Kyzart	147.47	53	P	PKPab	14 14 32.0	-0.7
	SNR=5.9						
BOOM	Boomskoye usch	147.84	52	*e*PKPbc	PKPbc	14 14 30.1	-1.3
ULHL	Ulahol	148.12	52	P	PKPab	14 14 36.4	+1.3
	SNR=11						
NRN	Naryn	148.19	54	*e*PKPbc	PKPdf	14 14 30.3	+1.1
KSH	Kashi	148.66	57	*e*PKPbc	PKPdf	14 14 31.1	+1.3
KSH				PKS	PKSdf	14 18 04.8	-0.1
KSH				PP	PP	14 18 07.8	+4.1
KSH				SKS	SKSdf	14 21 37.0	-1.4
KSH				SKKS	SKKSac	14 24 57.1	+1.8
KSH				SS	SS	14 37 14.3	+0.5
KSH				AMB	AMB		
	comp=Z,86nm,4.9s						
KSH				LR	LR		
	comp=Z,350nm,16.8s						
KSH				LR	LR		
	comp=Z,350nm,16.0s						
KSH				LR	LR		
	comp=Z,96nm,10.3s						
KDJ	Kajisay	148.82	52	*e*PKPdf	PKPdf	14 14 30.1	0.0
PRZ	Przheval'sk	149.56	51	*e*PKPdf	PKPdf	14 14 30.6	-0.6
MAKZ	Makanchi	149.94	41	*e*PKPbc	PKPbc	14 14 36.2	-0.1
MK32	Makanchi Array	150.13	41	*e*PKPbc	PKPbc	14 14 37.1	+0.3
MKAR	Makanchi Array	150.13	41	PKPbc	PKPbc	14 14 37.1	+0.3
	comp=Z,30nm,0.9s,baz=313,slow=2.2,SNR=72						
MJAR	Matsushiro Arr	154.51	299	PKP	PKPdf	14 14 39.5	+0.9
	comp=Z,2.1nm,1.0s,baz=207,slow=2.2,SNR=4.4						
MJAR				PKPab	PKPab	14 15 00.7	-0.8
	comp=Z,0.3nm,0.3s,baz=81,slow=40,SNR=2.9						
MAJO	Matsushiro	154.51	299	*e*PKPdf	PKPdf	14 14 39.5	+0.9
MAJO				*e*PKPab	PKPab	14 15 00.7	-0.8
WMQ	Urumqi	154.95	41	*e*PKPbc	PKPdf	14 14 38.8	-0.3
WMQ				AMB	AMB		
	comp=Z,64nm,4.1s						
SONA0	Songino Array	158.74	8	*e*PKPdf	PKPdf	14 14 43.8	-0.1
SONA0				*e*PKPab	PKPab	14 15 17.5	-1.8
SONM	Songino Array	158.74	8	PKP	PKPdf	14 14 43.8	-0.1
	comp=Z,2.3nm,0.9s,baz=201,slow=0.5,SNR=6.6						
SONM				PKPab	PKPab	14 15 17.5	-1.8
	comp=Z,2.4nm,0.8s,baz=319,slow=4.4,SNR=6.8						
KSRS	Korea Array	161.78	310	PKP	PKPdf	14 14 48.2	+0.9
	comp=Z,1.2nm,0.9s,baz=234,slow=0.9,SNR=4.8						
KSRS				PKPab	PKPab	14 15 33.5	+0.6
	comp=Z,1.1nm,0.9s,baz=64,slow=4.2,SNR=2.7						
KS15	Wonju Array Si	161.82	310	*e*PKPdf	PKPdf	14 14 48.2	+0.8
KS15				*e*PKPab	PKPab	14 15 33.5	+0.5
GTA	Gaotai	164.59	32	*e*P	PKPab	14 15 45.6	+0.4
GTA				pP	sPKPab	14 15 52.3	+1.1
GTA				sP	pPKPab	14 15 55.4	+5.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA	Gaotai	164.59	32	*e*PKP	PKPdf	14 14 51.3	+1.1
GTA				PKPab	PKPab	14 15 45.6	+0.4
GTA				LR	LR		
	comp=Z,170nm,18.4s						
GTA				LR	LR		
	comp=Z,250nm,17.5s						
GTA				LR	LR		
	comp=Z,210nm,18.1s						
HHC	Hu-ho-hao-te	165.93	356	PKP	PKPdf	14 14 52.6	+1.4
CM31	Chiang Mai Arr	166.55	126	*e*PKPdf	PKPdf	14 14 54.3	+2.1
CM31				*e*PKPab	PKPab	14 15 53.4	-1.0
CMAR	Chiang Mai Arr	166.55	126	PKP	PKPdf	14 14 54.3	+2.0
	comp=Z,0.4nm,0.5s,baz=207,slow=27,SNR=4.8						
CMAR				PKPab	PKPab	14 15 53.3	-1.0
	comp=Z,0.8nm,0.4s,baz=249,slow=4.6,SNR=4.9						
LZH	Lanzhou	169.15	30	*e*PKP	PKPdf	14 14 52.6	-1.2
LZH				pPKP	pPKPdf	14 14 55.8	-2.5
LZH				sPKP		14 14 57.3	
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,200nm,20.0s						
NJ2	Nanjing	170.97	308	*e*PKP	PKPdf	14 14 54.3	-0.4
CD2	Chengdu	172.84	53	PKP	PKPdf	14 14 54.0	-1.7

WEL 22 14:19:11.0, 42°S±1°×17°4E±°, h19km±2km, M3.7/36, ML3.9/37, MLv3.7/36, Error ellipse: s-maj=0.0km s-min=0.0km az=108.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.04	173	P	Pg	14 19 14.7	+0.3
BSWZ	Blackbirch Sta	0.25	269	P	Pg	14 19 17.4	+0.6
TUWZ	Tuamarina	0.34	325	P	Pb	14 19 18.5	0.0
TCW	Tory Channel	0.50	6	P	Pg	14 19 21.0	-0.2
BHW	Baring Head	0.58	59	P	Pg	14 19 23.0	+0.5
WEL	Wellington	0.60	45	P	Pg	14 19 23.2	+0.3
NNZ	Nelson	0.80	308	P	Pg	14 19 26.8	+0.3
PLWZ	Palliser	0.80	80	P	Pn	14 19 27.7	+0.5
MSWZ	Moikau Station	0.83	70	P	Pn	14 19 28.0	+0.2
KHZ	Kahutara	0.86	215	P	Pn	14 19 29.8	+1.7
CAW	Cannon Point	0.88	47	P	Pg	14 19 28.1	-0.1
DUWZ	D'Urville Isla	0.93	347	P	Pn	14 19 28.9	-0.2
PAWZ	Paruwai Farm	0.97	71	P	Pg	14 19 30.4	+0.5
THZ	Tophouse	0.98	267	P	Pg	14 19 30.9	+1.0
MTW	Mount Morrison	1.12	61	P	Pg	14 19 32.3	-0.3
OGWZ	Otaki Gorge	1.15	39	P	Pb	14 19 32.7	+0.5
TRWZ	Traveller	1.15	75	P	Pg	14 19 32.8	-0.5
HOWZ	Holdsworth Sta	1.28	51	P	Pb	14 19 34.7	+0.3
TMWZ	Te Maipa	1.40	65	P	Pn	14 19 36.0	+0.5
MRZ	Mangatainoka R	1.47	45	P	Pb	14 19 37.4	-0.3
GVZ	Greta Valley S	1.53	214	P	Pb	14 19 38.7	0.0
QRZ	Quartz Range	1.54	304	P	Pg	14 19 40.6	-0.1
TIWZ	Tintock	1.57	54	P	Pb	14 19 39.3	-0.1
CPWZ	Castlepoint	1.70	63	P	Pg	14 19 46.3	+2.6
OHWZ	Ohakea	1.72	29	P	Pg	14 19 43.2	-0.9
PRWZ	Pori Road	1.76	50	P	Pn	14 19 41.3	+0.8
POWZ	Post Office Ro	1.77	42	P	Pb	14 19 41.7	-1.1
LTZ	Lake Taylor	1.79	233	P	Pb	14 19 42.7	-0.5
DSZ	Denniston Nort	1.80	268	P	Pg	14 19 45.0	-0.6
BFZ	Birch Farm	1.85	57	P	Pn	14 19 42.7	+1.0
AMCZ	Amberley	1.86	218	P	Pb	14 19 43.3	-1.0
WAZ	Wanganui	2.04	17	P	Pg	14 19 48.9	-1.3
DVHZ	Dannevirke	2.05	47	P	Pn	14 19 44.5	+0.1
TSZ	Takapari Road	2.12	39	P	Pb	14 19 47.9	-0.9
ANWZ	Angora Road	2.12	55	P	Pb	14 19 47.3	-1.5
OKCZ	Okains Bay	2.18	202	P	Pn	14 19 46.6	+0.4
CRLZ	Canterbury Las	2.20	212	P	Pn	14 19 46.8	+0.4
LREZ	Lake Rotokare	2.25	4	P	Pb	14 19 52.3	+1.3
OXZ	Oxford	2.27	224	P	Pn	14 19 48.1	+0.5
INZ	Inchbonnie	2.29	243	P	Pb	14 19 49.8	-1.8
MQZ	McQueen's Vall	2.30	209	P	Pn	14 19 47.6	-0.2
NMEZ	Namu Road	2.31	354	P	Pg	14 19 53.9	-1.4
PNHZ	Pukenui	2.35	41	P	Pn	14 19 49.0	+0.4
PREZ	Palmer Road	2.37	359	P	Pg	14 19 55.9	-0.5
KHEZ	Kahui Hut	2.42	356	P	Pb	14 19 55.0	+1.1
NBEZ	Newall Road No	2.46	354	P	Pb	14 19 56.0	+1.5
MTVZ	Mangateitei	2.52	23	P	Pb	14 19 56.9	+1.4
DREZ	Durham Road	2.52	360	P	Pb	14 19 55.9	+0.3
PKE	Pukeiti	2.52	356	P	Pb	14 19 56.6	+1.0
PKVZ	Pokaka	2.57	20	P	Pb	14 19 57.6	+1.1
MOVZ	Moawhango	2.59	28	P	Pb	14 19 57.0	+0.2
VRZ	Vera Road	2.62	9	P	Pb	14 19 56.5	-0.7
PXZ	Pawanui	2.62	51	P	Pn	14 19 52.1	-0.2
BHHZ	Black Hill Sta	2.63	33	P	Pn	14 19 54.9	+2.4
KRHZ	Kereru	2.64	39	P	Pn	14 19 52.8	+0.2
WHVZ	Whangaehu Hut	2.65	24	P	Pb	14 19 58.0	+0.1
FWVZ	Far West T-bar	2.66	23	P	Pb	14 19 58.5	+0.3
TUVZ	Tukino	2.68	25	P	Pb	14 19 58.1	-0.3
NGZ	Ngauruhoe	2.75	23	P	Pb	14 20 00.6	+1.0
KAHZ	Kahuranaki	2.79	48	P	Pn	14 19 54.6	0.0
TWVZ	Taurewa	2.80	20	P	Pb	14 20 01.8	+1.4
WTVZ	West Tongariro	2.80	23	P	Pb	14 20 01.4	+1.0
KRVZ	Karewarewa	2.83	23	P	Pb	14 20 01.7	+0.7
KWHZ	Kaweka Forest	2.84	37	P	Pg	14 20 03.3	-2.1
WVZ	Waitaha Valley	2.91	241	P	Pb	14 19 59.6	-2.6
MCHZ	McNeill Hill	2.95	41	P	Pn	14 19 58.4	+1.6
KATZ	Kakaramea	2.96	23	P	Pb	14 20 04.2	+1.0
RITZ	Rihia Road	3.01	25	P	Pb	14 20 06.1	+2.2
RPZ	Rata Peaks	3.07	228	P	Pn	14 19 59.4	+0.9
BKZ	Black Stump Fm	3.08	35	P	Pb	14 20 06.8	+1.6
RATZ	Rangitukua	3.08	23	P	Pb	14 20 06.8	+1.6
WATZ	Wairara	3.22	22	P	Pb	14 20 09.4	+1.9
HIZ	Hauiti	3.23	9	P	Pb	14 20 05.5	-2.3
MTHZ	Maungataniwha	3.49	36	P	Pb	14 20 08.9	-3.4
TLZ	Tolley Road	3.53	17	P	Pb	14 20 10.7	-2.2
FOZ	Fox Glacier	3.72	239	P	Pn	14 20 11.2	+3.9
LBZ	Lake Benmore	3.98	226	P	Pn	14 20 13.8	+2.9
ODZ	Otahua Downs	4.22	217	P	Pn	14 20 14.4	+0.1
MWZ	Matawai	4.23	38	P	Pn	14 20 13.9	-0.5
TWGZ	Tauwhareparae	4.57	41	P	Pn	14 20 19.7	+0.6
RUGZ	Raukumara Rang	4.60	37	P	Pn	14 20 20.1	+0.6
JCZ	Jackson Bay	4.63	238	P	Pn	14 20 20.3	+0.3
AWAZ	Awhitu Peninsu	4.65	4	P	Pn	14 20 24.5	+4.3
MKAZ	Moumakai	4.66	9	P	Pn	14 20 25.8	+5.5
ETAZ	East Tamaki Re	4.78	7	P	Pn	14 20 27.6	+5.6

HAZ	Te Kaha	4.82	36	P	Pn	14 20 23.2	+0.8
KUZ	Kuaotunu	5.10	14	P	Pn	14 20 32.3	+6.0
CTZ	Chatham Island	7.05	110	P	Pn	14 20 55.6	+2.5

MEX 22 14:22:49.0±0.7, 17°.44N×94°.65W, h147^{km}±5^{km}, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.41	214	*e*P	Pn	14 23 08.4	-1.3
CMIG				*e*S	Sn	14 23 23.4	-1.9
TUIG	Tuzandepetl	0.63	20	*i* P	Pn	14 23 09.6	-1.2
TUIG				*i* S	Sn	14 23 25.7	-1.8
TGIG		1.60	114	*e*P	Pn	14 23 17.8	-1.7
TGIG				*i* S	Sn	14 23 40.4	-2.4
VHO	Vista Hermosa	2.03	260	*e*P	Pn	14 23 23.6	-0.9
VHO				*e*S	Sn	14 23 50.4	-1.3
HUIG	Huatulco	2.17	220	*e*P	Pn	14 23 23.6	-2.4
HUIG				*i* S	Sn	14 23 52.2	-2.3
PCIG		2.20	141	*e*P	Pn	14 23 25.1	-1.2
PCIG				*i* S	Sn	14 23 52.8	-2.2
CCIG	Comitan	2.66	115	*i* P	Pn	14 23 31.2	-1.0
CCIG				*i* S	Sn	14 24 03.3	-2.1

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*NEIC **22** 14:25:05.1±0.0, 61°.58N×141°.12W, h1^{km}, ML2.5(OTT), ML2.6(AEIC), After AEIC.*

PGC 22 14:25:05.6, 61°.59N×141°.09W, h5^{km}, ML2.5/11, 212km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	31	P	Pg	14 25 09.6	-0.6
YUK2				S	Sg	14 25 13.2	-0.2
YUK3	Moose Creek	0.36	58	P	Pg	14 25 11.8	-0.8
YUK3				S	Sg	14 25 16.8	-0.5
YUK1	Sand Pete Hill	0.63	25	P	Pg	14 25 16.7	-1.1
YUK1				S	Sg	14 25 24.5	-1.4
CTGM	Chitina Glacie	0.63	191	*e*Pg	Pg	14 25 16.5	-1.3
PTPK	Patty Peak	0.77	239	P	Pg	14 25 19.5	-0.9
PTPK				S	Sg	14 25 29.2	-1.3
BVCY	Beaver Creek	0.84	7	P	Pg	14 25 20.7	-1.0
BVCY				S	Sg	14 25 33.3	+0.7
GRNC	Granite Creek	0.92	201	P	Pg	14 25 21.8	-1.4
GRNC				S	Sg	14 25 34.2	-0.8
TABL	Table Mountain	1.15	181	P	Pg	14 25 26.0	-1.7
TABL				S	Sg	14 25 41.3	-1.2
TGL	Tana Glacier	1.19	226	*e*Pg	Pg	14 25 26.4	-1.9
YUK4	Talbot Arm	1.20	101	P	Pg	14 25 27.5	-1.1
YUK4				S	Sb	14 25 44.5	-0.3
CRQM	Cirque	1.29	231	*e*Pg	Pg	14 25 28.3	-2.1
GLB	Gilahina Butte	1.31	265	*e*Pg	Pn	14 25 28.6	-2.1
YUK6	Outpost Mounta	1.47	115	Pn	Pn	14 25 31.4	-1.6
YUK6				Sg	Sb	14 25 51.4	-1.1
SAMH	Samovar Hills	1.47	174	Pn	Pn	14 25 32.2	-0.6
SAMH				Sg	Sb	14 25 52.3	-0.1
MESA	MESA	1.47	197	Pn	Pn	14 25 32.5	-0.5
MESA				Sg	Sb	14 25 51.4	-1.3
BCA3	Beaver Creek A	1.52	348	*e*Pn	Pn	14 25 32.4	-1.1
CHX	Chaix Hills	1.53	180	*e*Pn	Pn	14 25 33.7	+0.1
PCA	Pinnacle	1.55	164	*e*Pn	Pn	14 25 33.5	-0.4
PCA	Pinnacle	1.55	164	Pn	Pn	14 25 33.5	-0.5
PCA				Sg	Sb	14 25 54.8	0.0
YUK5	Granite Creek	1.62	105	Pn	Pn	14 25 34.0	-1.0
YUK5				Sg	Sn	14 25 55.9	-0.5
YUK7	Dusty Glacier	1.78	125	Pn	Pn	14 25 37.8	+0.5
YUK7				Sg	Sb	14 26 01.4	-0.3
BCPM	Bancas Point	1.79	156	*e*Pn	Pn	14 25 37.6	+0.5
MENT	Mentasta	1.83	319	*e*Pn	Pn	14 25 37.8	+0.1
HYT	Haines Junctio	1.90	112	*e*Pn	Pn	14 25 38.4	-0.4
HYT	Haines Junctio	1.90	112	Pn	Pn	14 25 38.3	-0.4
HYT				Sg	Sn	14 26 03.4	+0.3
HMT	Hamilton	1.99	232	*e*Pn	Pb	14 25 41.6	-0.7
PNL	Peninsula	2.10	156	*e*Pn	Pn	14 25 42.1	+0.7
PNL	Peninsula	2.10	156	Pn	Pn	14 25 42.0	+0.6
PNL				Sg	Sb	14 26 11.6	+1.2
RAGM	Ragged Mountai	2.12	237	*e*Pn	Pb	14 25 43.2	-1.3
SGAM	Sherman Glacie	2.28	243	*e*Pn	Pn	14 25 44.5	+0.7
PAX	Paxson	2.47	306	Pg	Pn	14 25 48.6	+1.9
PAX				Sg	Sb	14 26 21.4	+0.1
DOT	Dot Lake	2.48	328	*e*Pn	Pn	14 25 45.9	-0.8
DOT	Dot Lake	2.48	328	Pn	Pn	14 25 46.0	-0.7
DOT				Pg	Pb	14 25 50.8	+0.1
DOT				Sg	Sb	14 26 22.9	+1.3
DAWY	Dawson	2.61	17	*e*Pn	Pn	14 25 47.7	-0.8
DAWY	Dawson	2.61	17	Pn	Pn	14 25 48.0	-0.5
DAWY				Sg	Sb	14 26 26.1	+0.9
FID	Port Fidalgo	2.74	255	*e*Pn	Pn	14 25 52.5	+2.3
SCRK	Sand Creek	2.74	332	*e*Pn	Pn	14 25 49.4	-1.0
RIDG	Independent Ri	2.77	323	*e*Pn	Pn	14 25 50.1	-0.6
SCM	Sheep Creek Mo	2.98	278	*e*Pn	Pn	14 25 55.5	+1.9
GLI	Glacier Island	2.99	259	*e*Pn	Pn	14 25 54.5	+0.9
PLBC	Pleasant Camp	3.17	130	Sg	Sg	14 26 44.2	-3.0
EGAK	Eagle	3.20	359	*e*Pn	Pn	14 25 56.5	-0.1
DHY	Denali Highway	3.29	300	*e*Pn	Pn	14 25 58.4	+0.5
HDA	Harding Lake	3.89	319	*e*Pn	Pn	14 26 04.2	-1.8
ILB	Eielson Array	4.14	323	*e*Pn	Pn	14 26 07.8	-1.6
WRH	Wood River Hil	4.30	315	*e*Pn	Pn	14 26 11.5	-0.2
BESE	Bessie Mountai	4.34	131	Sg	Sg	14 27 20.6	-4.3
SEW	Seward	4.35	254	*e*Pn	Pn	14 26 13.0	+0.7
PRP	Porcupine Dome	4.42	335	*e*Pn	Pn	14 26 12.7	-0.7
JIS	Juneau Island	4.73	132	*e*Pn	Pn	14 26 17.2	-0.3
FYU	Fort Yukon	5.32	342	*e*Pn	Pn	14 26 26.1	+0.6
CNPM	China Poot	5.41	252	*e*Pn	Pn	14 26 27.5	+0.6
TTA	Tatalina	7.09	287	*e*Pn	Pn	14 26 49.8	-0.2

WEL 22 14:37:23.0, 42°S±2°×17°4E±°, h12^{km}±4^{km}, M3.5/49, ML3.7/54, MLv3.5/49, Error ellipse: s-maj=0.0km s-min=0.0km az=104.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.18	257	P	Pb	14 37 29.4	+1.1
BSWZ	Blackbirch Sta	0.43	269	P	Pb	14 37 32.2	-0.4
BHW	Baring Head	0.44	47	P	Pb	14 37 33.3	+0.6
TUWZ	Tuamarina	0.47	306	P	Pg	14 37 31.4	-0.8
WEL	Wellington	0.49	30	P	Pb	14 37 33.4	-0.1
TCW	Tory Channel	0.52	345	P	Pg	14 37 32.1	-1.0
PLWZ	Palliser	0.62	77	P	Pn	14 37 38.1	+0.4
MSWZ	Moikau Station	0.67	64	P	Pn	14 37 38.3	-0.1
CAW	Cannon Point	0.76	38	P	Pb	14 37 38.3	+0.1
PAWZ	Paruwai Farm	0.80	66	P	Pn	14 37 40.7	+0.5
NNZ	Nelson	0.94	301	P	Pg	14 37 39.8	-1.4
MTW	Mount Morrison	0.96	56	P	Pn	14 37 42.8	+0.4
KHZ	Kahutara	0.98	223	P	Pn	14 37 43.7	+1.2
TRWZ	Traveller	0.98	72	P	Pn	14 37 43.6	+0.9
DUWZ	D'Urville Isla	0.99	336	P	Pg	14 37 40.4	-1.7
OGWZ	Otaki Gorge	1.04	32	P	Pb	14 37 42.7	-0.3
HOWZ	Holdsworth Sta	1.14	45	P	Pg	14 37 45.1	+0.1
THZ	Tophouse	1.16	267	P	Pb	14 37 44.6	-0.4
TMWZ	Te Maipa	1.24	61	P	Pb	14 37 46.5	+0.1
MRZ	Mangatainoka R	1.35	40	P	Pn	14 37 47.9	+0.2
TIWZ	Tintock	1.43	50	P	Pn	14 37 49.0	+0.2
CPWZ	Castlepoint	1.54	59	P	Pg	14 37 56.0	+3.3
PRWZ	Pori Road	1.63	45	P	Pn	14 37 51.6	0.0
GVZ	Greta Valley S	1.64	219	P	Pb	14 37 52.5	-0.6
OHWZ	Ohakea	1.64	24	P	Pb	14 37 53.5	+0.3
POWZ	Post Office Ro	1.65	38	P	Pn	14 37 52.0	+0.1
QRZ	Quartz Range	1.69	301	P	Pn	14 37 52.4	0.0
BFZ	Birch Farm	1.70	53	P	Pn	14 37 52.1	-0.5
DVHZ	Dannevirke	1.92	43	P	Pn	14 37 54.9	-0.6
LTZ	Lake Taylor	1.94	236	P	Pn	14 37 56.9	+1.0
ANWZ	Angora Road	1.98	52	P	Pn	14 37 56.1	-0.2
DSZ	Denniston Nort	1.98	268	P	Pb	14 37 58.5	-0.5
WAZ	Wanganui	2.00	12	P	Pb	14 37 58.8	-0.5
TSZ	Takapari Road	2.01	35	P	Pn	14 37 56.6	-0.2
PRHZ	Porangahau	2.19	50	P	Pn	14 37 58.9	-0.4
PNHZ	Pukenui	2.23	37	P	Pn	14 37 59.5	-0.4
LREZ	Lake Rotokare	2.25	359	P	Pb	14 38 02.6	-0.9
OKCZ	Okains Bay	2.26	206	P	Pn	14 38 00.5	+0.3
CRLZ	Canterbury Las	2.30	215	P	Pn	14 38 01.2	+0.5
NMEZ	Namu Road	2.33	349	P	Pb	14 38 04.5	-0.5
MQZ	McQueen's Vall	2.39	213	P	Pn	14 38 01.5	-0.5
OXZ	Oxford	2.41	227	P	Pn	14 38 02.7	+0.4
KHEZ	Kahui Hut	2.44	352	P	Pb	14 38 05.0	-1.8
MTVZ	Mangateitei	2.45	19	P	Pn	14 38 04.6	+1.7
INZ	Inchbonnie	2.45	245	P	Pn	14 38 04.4	+1.5
NBEZ	Newall Road No	2.48	350	P	Pn	14 38 05.2	+2.0
PXZ	Pawanui	2.48	48	P	Pn	14 38 02.2	-1.0
MOVZ	Moawhango	2.50	24	P	Pn	14 38 04.6	+0.9
PKVZ	Pokaka	2.51	16	P	Pb	14 38 08.4	+0.3
DREZ	Durham Road	2.52	356	P	Pb	14 38 06.2	-2.1
KRHZ	Kereru	2.53	36	P	Pn	14 38 03.4	-0.6
BHHZ	Black Hill Sta	2.54	30	P	Pn	14 38 04.4	+0.4
PKE	Pukeiti	2.54	352	P	Pn	14 38 06.1	+2.1
DRZ	Dome Shelter	2.58	20	P	Pb	14 38 09.5	+0.1
WHVZ	Whangaehu Hut	2.58	20	P	Pn	14 38 05.8	+1.0
FWVZ	Far West T-bar	2.59	19	P	Pn	14 38 06.1	+1.1
VRZ	Vera Road	2.59	5	P	Pn	14 38 06.6	+1.9
TUVZ	Tukino	2.61	21	P	Pb	14 38 09.8	+0.1
KAHZ	Kahuranaki	2.66	45	P	Pn	14 38 05.0	-0.7
NGZ	Ngauruhoe	2.68	20	P	Pn	14 38 07.4	+1.3
KWHZ	Kaweka Forest	2.73	34	P	Pb	14 38 13.2	+1.3
WTVZ	West Tongariro	2.73	19	P	Pb	14 38 09.4	-2.5
TWVZ	Taurewa	2.74	16	P	Pn	14 38 09.4	+2.4
KRVZ	Karewarewa	2.77	20	P	Pb	14 38 10.7	-1.8
MCHZ	McNeill Hill	2.84	38	P	Pn	14 38 07.9	-0.3
KATZ	Kakaramea	2.89	20	P	Pb	14 38 12.6	-2.0
RITZ	Rihia Road	2.93	22	P	Pb	14 38 14.9	-0.4
BKZ	Black Stump Fm	2.98	32	P	Pn	14 38 09.5	-0.7
RATZ	Rangitukua	3.01	20	P	Pb	14 38 15.3	-1.3
WVZ	Waitaha Valley	3.07	242	P	Pb	14 38 17.1	-0.5
HIZ	Hauiti	3.21	6	P	Pn	14 38 14.7	+1.5
MRHZ	Matea Rd	3.24	28	P	Pb	14 38 21.1	+0.6
MTHZ	Maungataniwha	3.39	33	P	Pb	14 38 23.4	+0.4
TLZ	Tolley Road	3.48	14	P	Pn	14 38 19.2	+2.2
PRRZ	Plateau Road	3.54	26	P	Pb	14 38 24.3	-1.3
FOZ	Fox Glacier	3.87	240	P	Pb	14 38 28.6	-2.6
RIGZ	Rimuhau	3.93	41	P	Pn	14 38 22.2	-1.0
URZ	Urewera	4.01	32	P	Pb	14 38 31.4	-2.1
TOZ	Tahuroa Road	4.05	12	P	Pb	14 38 29.9	-4.4
ODZ	Otahua Downs	4.33	218	P	Pn	14 38 28.8	0.0
RUGZ	Raukumara Rang	4.49	35	P	Pn	14 38 31.1	+0.1
MKAZ	Moumakai	4.63	7	P	Pn	14 38 35.0	+2.2
AWAZ	Awhitu Peninsu	4.64	2	P	Pn	14 38 34.9	+2.0
ETAZ	East Tamaki Re	4.76	5	P	Pn	14 38 37.8	+3.2
JCZ	Jackson Bay	4.78	239	P	Pn	14 38 39.6	+4.6
RVAZ	Riverhead Bore	4.93	1	P	Pn	14 38 39.0	+2.1
OUZ	Omahuta	6.51	354	P	Pn	14 39 00.1	+1.4

IDC 22 14:43:30.2±4.7, 16°.90S×175°.43W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.7/26, mbtmp4.0/3, Error ellipse: s-maj=193.9km s-min=95.5km az=157.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.60	241	P	P	14 51 20.1	0.0
	1.7nm,0.6s,baz=85,slow=9.7,SNR=4.0						
WRA	Warramunga Arr	47.62	258	P	P	14 52 08.1	-0.3
	0.5nm,0.6s,baz=83,slow=7.8,SNR=5.1						
ASAR	Alice Springs	47.80	253	P	P	14 52 09.8	-0.1
	2.3nm,0.5s,baz=89,slow=8.1,SNR=72						
ASAR				PcP	PcP	14 53 38.8	-0.2
	0.3nm,0.9s,baz=113,slow=3.4,SNR=3.0						

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*ISK **22** 15:00:52.3, 37°.25N×28°.11E, h7^{km}, ML2.5/10*

*DDA **22** 15:00:53.5, 37°.25N×28°.21E, h7^{km}±4^{km}, ML2.3*

ISC 22 15:00:52.8±1.4, 37°.23N±0°.03×28°.13E±0°.03, h5^{km}±12^{km}, n23, σ0^{s}.55/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.16	129	PG	Pg	15 00 56.1	+0.1
AYDN	Tasoluk	0.47	335	*i* P	Pb	15 01 03.5	-0.2
AYDN				*i* S	Sb	15 01 10.2	-0.8
TURN	Turunc	0.52	133	PG	Pg	15 01 02.2	-0.7
TURN	Turunc	0.52	133	*i* P	Pg	15 01 01.9	-1.0
TURN				IAML_P			
	comp=Z,996nm,0.1s						
DALY	Dalyan (Mula)	0.59	135	PG	Pg	15 01 04.2	0.0
DALY				SG	Sb	15 01 14.2	0.0
DALY	Dalyan (Mula)	0.59	135	*i* P	Pg	15 01 04.2	0.0
DALY				*i* S	Sb	15 01 13.4	-0.8
DALY				IAML_P			
	comp=Z,1µm,0.2s						
TAVA	DENIZLI_Tavas	0.67	69	*i* P	Pb	15 01 06.3	-0.6
TAVA				IAML_P			
	comp=Z,716nm,0.1s						
DAT	Datca	0.67	222	PG	Pg	15 01 06.1	+0.4
DAT	Datca	0.67	222	*i* P	Pb	15 01 07.5	+0.5
DAT				*i* S	Sn	15 01 19.2	-0.7
DAT				IAML_P			
	comp=Z,161nm,0.2s						
BODT	Bodrum	0.68	256	PG	Pg	15 01 05.2	-0.7
AYDB	Zeytinkoy-Aydi	0.74	345	PG	Pg	15 01 06.8	-0.2
GCAM	G?zelcaml?	0.85	303	PG	Pg	15 01 08.7	-0.5
GCAM	G?zelcaml?	0.85	303	*i* P	Pn	15 01 11.6	+0.1
GCAM				*i* S	Sn	15 01 24.7	+0.4
FETY	Fethiye	0.97	128	*i* P	Pg	15 01 11.2	-0.2
ARG	Arkhangelos	1.01	180	PG	Pg	15 01 12.5	+0.2
GOLH	Golhisar	1.14	89	*i* P	Pg	15 01 14.7	-0.1
GOLH				IAML_P			
	comp=Z,406nm,0.2s						
DGB	zmir	1.28	310	*i* P	Pg	15 01 18.4	+0.9
DGB				IAML_P			
	comp=Z,642nm,0.3s						
MANT	Manisa	1.30	15	*i* P	Pb	15 01 18.3	+0.4
MANT				IAML_P			
	comp=Z,339nm,0.2s						
AKAS	Kas	1.55	130	PN	Pn	15 01 21.3	+0.1
AKAS	Kas	1.55	130	*i* P	Pg	15 01 23.1	+0.6
AKAS				IAML_P			
	comp=Z,198nm,0.1s						
USAK	Uak-Merkez	1.64	25	*i* P	Pb	15 01 23.8	+0.2
USAK				IAML_P			
	comp=Z,261nm,0.4s						
KORT	Korkueli	1.79	97	PN	Pn	15 01 25.0	+0.5
KORT	Korkueli	1.79	97	*i* P	Pg	15 01 28.0	+0.8
KORT				IAML_P			
	comp=Z,279nm,0.4s						

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*IDC **22** 15:08:48.5±0.4, 51°.47N×132°.11E, h0^{km}, mb4.3/28, mb1 4.4/37, mb1mx4.3/63, mbtmp4.3/37, ML3.4/7, MS3.7/27, Ms1 3.7/27, ms1mx3.6/43, Error ellipse: s-maj=10.5km s-min=8.2km az=103.0*

*ISCJB **22** 15:08:48.3±0.8, 51°.49N±0°.02×132°.04E±0°.03, h7^{km}±5^{km}, mb4.5/130, MS4.1/37, Error ellipse: s-maj=3.4km s-min=3.0km az=15.3*

*MOS **22** 15:08:49.5±1.7, 51°.46N×132°.11E, h12^{km}, mb4.8/48, MS4.1/9, Error ellipse: s-maj=7.1km s-min=4.2km az=99.6*

MOS Felt (III) at Stoyba, Fevral'sk.

*SKHL **22** 15:08:49.8±0.9, 51°.47N×132°.01E, h13^{km}±4^{km}, mb5.5/8, Ms4.6/3*

SKHL Felt (II-III) at Fevral'sk, Stoiba, Tirma. Felt (IV) at Alonka, Etirken; (III) at Novyy Urgal, Chegdomin.

*BJI **22** 15:08:50.6±0.0, 51°.40N×131°.69E, h10^{km}, mb4.6/37, mB4.8/30, ML5.0/3, Ms4.9/41, Ms7 4.6/14*

*NEIC **22** 15:08:50.2±0.1, 51°.50N×131°.94E, h10^{km}, mb4.5/83, Error ellipse: s-maj=3.5km s-min=3.1km az=136.0*

*GCMT **22** 15:08:51.2±0.4, 51°.53N±0°.02×131°.95E±0°.03, h24^{km}±2^{km}, MW4.8/72, Moment Tensor Solution. s16,c20; s72,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.15; $M_{\theta\theta}$2.01±.12; $M_{\phi\phi}$-1.40±.09; $M_{r\theta}$-0.32±.13; $M_{\theta\phi}$0.78±.07; $M_{\phi r}$-0.32±.13; Best double couple: $M_0$1.92900×10^{16} NP1:ϕ_s34.00000°, δ86.00000°, λ-165.00000°. NP2: ϕ_s303.00000°, δ75.00000°, λ-5.00000°. Principal axes: T 2.2300, Plg8.0000°, Azm167.0000°; N -0.6040, Plg74.0000°, Azm49.0000°; P -1.6290, Plg14.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 15:08:50.1±0.6, 51°.49N±0°.03×132°.06E±0°.03, h6^{km}±3^{km}, h7^{km}:pP-P, n336, σ1^{s}.90/364, mb4.6/139, MS4.2/39, 26C-14D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKMR	Ekimchan	1.68	19	*i* Pn	Pn	15 09 19.1	-0.9
	comp=Z,144nm,0.5s,comp=E,88nm,0.5s,comp=N,150nm,0.5s						
EKMR				*e*Pg	Pb	15 09 20.5	-0.9
EKMR				*e*Sg	Sn	15 09 42.0	+0.2
KLR	Kul'dur	2.27	185	Pn	Pn	15 09 27.6	-0.5
	comp=N,567nm,0.3s,baz=352,slow=17,SNR=2008						
KLR				Lg	Lg	15 09 59.8	
	comp=N,1µm,0.3s,baz=36,slow=19,SNR=34						
KLR				LR	LR	15 10 35.4	
	comp=N,1µm,21.6s,baz=68,slow=48						
GRNR	Gornyy	2.84	103	*e*P	Pn	15 09 36.0	+0.1
GRNR				pmax	pmax		
	comp=E,38nm,0.4s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.4s						
GRNR	Gornyy	2.84	103	⇓ *i*Pn	Pn	15 09 35.3	-0.6
GRNR				pPn	pPn	15 09 39.1	+1.5
GRNR				⇑ *i*Pg	Pb	15 09 42.1	+0.9
GRNR				AMB	AMB	15 09 44.8	
	comp=Z,1µm,0.5s						
GRNR				*e*Sg	Sg	15 10 19.5	-1.8
GRNR				A	A	15 10 24.3	
	comp=Z,7µm,0.5s						
KHBR	Khabarovsk	3.58	146	*e*Pn	Pn	15 09 45.9	-0.2
KHBR				pPn	pPn	15 09 49.2	+1.5
KHBR				*e*Pg	Pg	15 09 56.0	-2.7
KHBR				AMB	AMB	15 09 56.5	
	comp=Z,820nm,0.4s						
KHBR				*e*Sg	Sg	15 10 41.6	-3.5
KHBR				A	A	15 10 45.2	
	comp=Z,8µm,1.0s						
KHBR				A	A	15 10 46.0	
	comp=Z,9µm,0.5s						
ZEA	Zeya	3.70	309	*e*P	Pn	15 09 46.4	-1.3
ZEA				*i* S	Sn	15 10 29.2	-2.3
ZEA				pmax	pmax		
	comp=N,180nm,0.4s						
ZEA				pmax	pmax		
	comp=E,160nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,280nm,0.4s						
ZEA				smax	smax		
	comp=N,980nm,0.6s						
ZEA				smax	smax		
	comp=N,2µm,1.0s						
ZEA	Zeya	3.70	309	*e*Pn	Pn	15 09 47.6	-0.1
ZEA				pPn	pPn	15 09 51.6	+2.2
ZEA				*e*Pg	Pb	15 09 56.5	+0.7
ZEA				AMB	AMB	15 09 57.5	
	comp=N,460nm,0.4s						
ZEA				AMB	AMB	15 09 59.0	
	comp=N,800nm,0.5s						
ZEA				*e*Sn	Sn	15 10 29.2	-2.3
ZEA				*e*Sg	Sb	15 10 43.8	+3.0
ZEA				A	A	15 10 45.0	
	comp=N,6µm,1.0s						
ZEA				A	A	15 10 49.0	
	comp=N,6µm,0.5s						
ZEA				A	A	15 10 49.0	
	comp=N,6µm,0.5s						
ZEA				AMS	AMS	15 11 48.0	
	comp=N,6µm,4.0s						
ZEA				AMS	AMS	15 11 48.0	
	comp=N,3µm,4.0s						
ZEA				AMS	AMS	15 11 48.0	
	comp=N,2µm,4.0s						
BMKR	Bomnak	3.77	330	⇑ *i*Pn	Pn	15 09 48.5	-0.2
BMKR				pPn	pPn	15 09 51.5	+1.2
BMKR				*e*Pg	Pb	15 09 58.2	+1.3
KROS	Kirovskiy	4.26	316	⇑ *i*Pn	Pn	15 09 55.2	-0.3
NKL	Nikolayevsk	5.54	69	*e*P	Pn	15 10 12.0	-1.0
NKL				pmax	pmax		
	comp=Z,86nm,1.0s						
NKL	Nikolayevsk	5.54	69	*e*Pn	Pn	15 10 12.4	-0.6
NKL				*e*Pg	Pb	15 10 31.1	+3.9
NKL				AMB	AMB	15 10 33.9	
	comp=Z,368nm,0.5s						
NKL				*e*Sg	Sg	15 11 44.7	-3.3
NKL				A	A	15 11 50.8	
	comp=Z,3µm,0.8s						
UGL	Uglegorsk	6.85	107	P	Pb	15 10 41.6	-7.8
UGL				pmax	pmax		
	comp=Z,61nm,1.0s						
UGL	Uglegorsk	6.85	107	*e*Pg	Pb	15 10 53.2	+3.8
UGL				AMB	AMB	15 10 58.3	
	comp=Z,170nm,0.7s						
UGL				*e*Sg	Sg	15 12 24.6	-5.3
UGL				A	A	15 12 27.1	
	comp=Z,3µm,0.9s						
OKH	Okha	6.95	68	*de*P	Pn	15 10 38.5	+6.2
OKH				*e*S	Sn	15 11 55.5	+3.9
OKH				pmax	pmax		
	comp=Z,100nm,11.4s						
OKH				smax	smax		
	comp=E,200nm,7.3s						
OKH				MLR	MLR		
	comp=Z,1µm,10.0s						
OKH	Okha	6.95	68	*e*Pn	Pn	15 10 34.2	+1.9
OKH				*e*Pg	Pb	15 10 56.4	+5.3
OKH				AMB	AMB	15 11 01.0	
	comp=Z,404nm,0.9s						
OKH				*e*Sg	Sg	15 12 28.5	-4.5
OKH				A	A	15 12 34.8	
	comp=Z,3µm,1.0s						
OKH				AMS	AMS	15 13 15.7	
	comp=Z,1µm,10.0s						
MDJ	Mudanjiang	7.07	194	*e*Pn	Pn	15 10 33.4	-0.7
MDJ	Mudanjiang	7.07	194	Pn	Pn	15 10 33.6	-0.4
MDJ				Sn	Sn	15 12 01.6	+7.0
MDJ				LR	LR		
	comp=Z,3µm,4.8s						
MDJ				LR	LR		
	comp=Z,5µm,3.6s						
TEY	Ternei	7.13	153	⇑ *i*P	Pn	15 10 34.0	-0.8
TEY				*e*S	Sn	15 11 54.7	-1.4
TEY				pmax	pmax		
	comp=Z,240nm,0.5s						
TEY				pmax	pmax		
	comp=E,90nm,0.4s						
TEY				pmax	pmax		
	comp=N,170nm,0.5s						
TEY				MLR	MLR		
	comp=N,180nm,1.0s						
TEY				MLR	MLR		
	comp=E,430nm,1.0s						
TEY	Ternei	7.13	153	*e*Pn	Pn	15 10 34.3	-0.5
TEY				*e*Sn	Sn	15 11 53.6	-2.5
TEY				*e*Sg	Sg	15 12 30.9	-8.0
TEY				A	A	15 12 39.8	
	comp=E,912nm,0.9s						
USA0B	Ussuriysk Arra	7.29	180	*e*Pn	Pn	15 10 36.2	-0.8
USRK	Ussuriysk Ar.	7.29	180	Pn	Pn	15 10 36.3	-0.8
	comp=E,6.9nm,0.3s,baz=6.7,slow=15,SNR=185						
USRK				Sn	Sn	15 12 00.9	+0.9
	comp=E,8.1nm,0.3s,baz=357,slow=25,SNR=5.1						
USRK				Lg	Lg	15 12 39.0	
	comp=E,14nm,0.3s,baz=0.6,slow=29,SNR=7.6						
TUP	Tupik	7.88	297	*e*Pn	Pn	15 10 44.3	-0.8
TUP				*e*Pg	Pb	15 11 10.7	+3.7
TUP				AMB	AMB	15 11 16.9	
	comp=E,81nm,0.6s						
TUP				*e*Sn	Sn	15 12 11.4	-3.2
HIA	Hailar	8.18	259	*e*Pn	Pn	15 10 45.6	-3.7
HIA	Hailar	8.18	259	*e*P	Pn	15 10 45.6	-3.7
YSS	Yuzh-Sakhalins	8.34	119	*e*Pn	Pn	15 10 53.4	+2.0
YSS	Yuzh-Sakhalins	8.34	119	⇑ *e*P	Pn	15 10 51.3	-0.1
YSS				*e*S	Sn	15 12 21.4	-4.4
YSS				MLR	MLR		
	comp=Z,2µm,12.4s						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
YSS	Yuzh-Sakhalins	8.34	119	*e*Pn	Pn	15 10 52.6	+1.2
YSS				*e*Sn	Sn	15 12 24.3	-1.5
YSS				AMS	AMS	15 14 24.3	
	comp=N,1µm,12.0s						
YSS				AMS	AMS	15 14 24.3	
	comp=N,2µm,12.0s						
VLA	Vladivostok	8.37	181	⇑ *e*P	Pn	15 10 54.8	+2.9
CN2	Changchun	8.89	213	*e*P	Pn	15 10 58.8	-0.1
CN2				*e*S	Sn	15 12 36.8	-2.5
CN2				pmax	pmax		
	comp=N,20nm,0.5s						
CN2				LR	LR		
	comp=N,4µm,10.0s						
CN2				LR	LR		
	comp=N,6µm,10.0s						
MSHR	Mys Shultsa	8.93	184	*d i*P	Pn	15 11 00.1	+0.6
ASAJ	Asahikawa	10.22	132	Pn	Pn	15 11 16.8	-0.4
	comp=N,0.1nm,0.3s,baz=342,slow=9.6,SNR=2.5						
ASAJ				Sn	Sn	15 13 12.1	+0.1
	comp=N,0.3nm,0.3s,baz=294,slow=20,SNR=2.1						

ASAJ				Lg	Lg	15 14 10.7	
	comp=N,0.2nm,0.3s,baz=345,slow=14,SNR=4.2						
ASAJ				LR	LR	15 14 57.1	
	comp=N,260nm,18.7s,baz=146,slow=36						
YAK	**Yakutsk**	**10.65**	**354**	*e*Pn	**Pn**	**15 11 22.5**	**-0.5**
YAK	**Yakutsk**	**10.65**	**354**	*e*P	**Pn**	**15 11 22.7**	**-0.3**
YAK				*e*S	**Sn**	**15 13 24.9**	**+2.5**
YAK				pmax	pmax		
	comp=Z,33nm,0.9s						
YAK				pmax	pmax		
	comp=N,46nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				smax	smax		
	comp=E,71nm,1.0s						
YAK				smax	smax		
	comp=N,82nm,0.9s						
YAK				MLR	MLR		
	comp=Z,593nm,5.0s						
YAK				MLR	MLR		
	comp=N,461nm,4.0s						
YUK	**Yuzh-Kuril'sk**	**11.90**	**123**	P	Pn	15 11 45.6	+5.5
YUK				S	**Sn**	**15 14 01.4**	**+8.4**
YUK				MLR	MLR		
	comp=E,608nm,14.0s						
YUK				MLR	MLR		
	comp=Z,556nm,14.0s						
YUK				MLR	MLR		
	comp=N,968nm,13.0s						
YUK	**Yuzh-Kuril'sk**	**11.90**	**123**	*e*P	**Pn**	**15 11 41.9**	**+1.8**
YUK				AMS	AMS	15 14 17.2	
	comp=N,968nm,14.0s						
YUK				AMS	AMS	15 14 17.2	
	comp=N,608nm,14.0s						
YUK				AMS	AMS	15 14 17.2	
	comp=N,556nm,14.0s						
ERM	**Erimo**	**12.14**	**137**	*e*Pn	**Pn**	**15 11 46.6**	**+3.2**
ERM	**Erimo**	**12.14**	**137**	*e*P	**Pn**	**15 11 46.6**	**+3.2**
BOD	**Bodaibo**	**12.21**	**308**	*e*P	**Pn**	**15 11 43.4**	**-0.9**
MA2	**Magadan**	**13.30**	**45**	Pn	**Pn**	**15 11 59.7**	**+0.6**
	comp=N,0.7nm,0.3s,baz=228,slow=14,SNR=10						
MA2				Sn	**Sn**	**15 14 28.0**	**+0.9**
	comp=N,0.3nm,0.3s,baz=227,slow=19,SNR=2.5						
MA2				Lg	Lg	15 15 51.5	
	comp=N,0.3nm,0.3s,baz=288,slow=20,SNR=2.1						
MA2				LR	LR	15 17 02.4	
	comp=N,254nm,18.2s,baz=244,slow=37						
MA2	**Magadan**	**13.30**	**45**	*e*Pn	**Pn**	**15 12 00.2**	**+1.1**
MA2				*e*Sn	**Sn**	**15 14 28.0**	**+0.9**
MA2				Lg	Lg	15 15 51.5	
MA2	**Magadan**	**13.30**	**45**	*e*P	**Pn**	**15 12 00.2**	**+1.1**
KSRS	**Korea Array**	**14.33**	**193**	Pn	**Pn**	**15 12 14.7**	**+1.2**
	comp=N,0.1nm,0.3s,baz=12,slow=12,SNR=2.5						
KSRS				Lg	Lg	15 16 24.0	
	comp=N,0.4nm,0.3s,baz=1.8,slow=28,SNR=6.8						
KSRS				LR	LR	15 18 27.1	
	comp=N,58nm,18.4s,baz=25,slow=40						
KS15	**Wonju Array Si**	**14.35**	**194**	*e*Pn	**Pn**	**15 12 14.7**	**+1.0**
KSAR	**Wonju Array Be**	**14.35**	**194**	Pn	**Pn**	**15 12 14.7**	**+1.0**
KSAR				Lg	Lg	15 16 24.0	
KSAR	**Wonju Array Be**	**14.35**	**194**	P	**Pn**	**15 12 14.7**	**+1.0**
KSAR	**Wonju Array Be**	**14.35**	**194**	*e*P	**Pn**	**15 12 14.6**	**+1.0**
SKR	**Severo-Kuril's**	**15.13**	**84**	⇓*e*P	**Pn**	**15 12 24.2**	**+0.1**
SKR	**Severo-Kuril's**	**15.13**	**84**	*e*P	**Pn**	**15 12 24.5**	**+0.4**
SKR				AMS	AMS	15 20 11.4	
	comp=N,500nm,13.0s						
TJN	**Taejon**	**15.47**	**194**	⇓*e*P	**Pn**	**15 12 27.9**	**-0.8**
MJB9	**Matsu-Tunnel**	**15.57**	**161**	*e*Pn	**Pn**	**15 12 30.1**	**0.0**
	comp=N,36nm,1.3s						
MAJO	**Matsushiro**	**15.57**	**161**	*e*Pn	**Pn**	**15 12 30.0**	**0.0**
	comp=N,35nm,1.3s						
MAJO	**Matsushiro**	**15.57**	**161**	*d i*P	**Pn**	**15 12 31.6**	**+1.5**
MAT	**Matsushiro**	**15.57**	**161**	P	**Pn**	**15 12 31.0**	**+0.9**
MAT				S	**Sn**	**15 15 21.8**	**-1.0**
MJAR	**Matsushiro Arr**	**15.57**	**161**	Pn	**Pn**	**15 12 30.5**	**+0.4**
	comp=N,0.1nm,0.3s,baz=350,slow=12,SNR=17						
MJAR				LR	LR	15 18 12.9	
	comp=N,141nm,18.7s,baz=325,slow=36						
PEA0B	**Petropavlovsk-**	**15.74**	**74**	*e*Pn	**P**	**15 12 34.8**	**-1.4**
	comp=N,17nm,0.9s						
PEA1	**Petropavlovsk-**	**15.74**	**74**	*e*Pn	**Pn**	**15 12 32.2**	**0.0**
PETK	**Petropavlovsk-**	**15.74**	**74**	Pn	**Pn**	**15 12 32.2**	**0.0**
	comp=N,1.2nm,0.3s,baz=283,slow=9.7,SNR=27						
PETK				LR	LR	15 18 42.7	
	comp=N,174nm,18.9s,baz=275,slow=38						
SEY	**Seymchan**	**15.80**	**36**	Pn	**P**	**15 12 35.2**	**-1.6**
	comp=N,0.7nm,0.3s,baz=222,slow=5.7,SNR=10						
SEY				Lg	Lg	15 17 12.5	
	comp=N,0.2nm,0.3s,baz=202,slow=19,SNR=13						
SEY	**Seymchan**	**15.80**	**36**	⇑*e*P	**P**	**15 12 35.9**	**-0.9**
BJT	**Baijiatuau**	**15.91**	**230**	*e*Pn	**Pn**	**15 12 33.9**	**-0.5**
	comp=N,15nm,1.0s						
BJT	**Baijiatuau**	**15.91**	**230**	*e*P	**Pn**	**15 12 33.9**	**-0.5**
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
PET	**Petropavlovsk**	**16.32**	**74**	*e*Pn	**P**	**15 12 42.4**	**-0.3**
PET	**Petropavlovsk**	**16.32**	**74**	*e*P	**P**	**15 12 44.4**	**+1.8**
PET				*e*S	**Sn**	**15 15 46.2**	**+5.4**
PET				pmax	pmax		
	comp=Z,30nm,1.2s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
INU	**Inuyama**	**16.52**	**166**	*e*Pn	**Pn**	**15 12 42.3**	**0.0**
	comp=Z,43nm,1.1s						
ULN	**Ulaanbaatar**	**16.56**	**267**	*e*Pn	**Pn**	**15 12 43.4**	**+0.6**
	comp=Z,22nm,1.1s						
ULN	**Ulaanbaatar**	**16.56**	**267**	*e*P	**Pn**	**15 12 43.4**	**+0.6**
ULN				pmax	pmax		
	comp=Z,22nm,1.1s						
ULN	**Ulaanbaatar**	**16.56**	**267**	*e*P	**Pn**	**15 12 43.4**	**+0.6**
SONA0	**Songino Array**	**16.98**	**268**	*e*Pn	**Pn**	**15 12 46.9**	**-1.3**
SONM	**Songino Array**	**16.98**	**268**	P	**Pn**	**15 12 46.9**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=72,slow=12,SNR=9.7						
SONM				Lg	Lg	15 17 49.0	
	comp=Z,1.6nm,0.3s,baz=69,slow=30,SNR=13						
SONM				LR	LR	15 18 37.5	
	comp=Z,208nm,21.9s,baz=69,slow=35						
TLY	**Talaya**	**17.62**	**282**	*e*P	**P**	**15 12 57.0**	**0.0**
TLY				*e*S	**S**	**15 16 20.9**	**+0.8**
TLY				pmax	pmax		
	comp=Z,35nm,1.2s						
TLY				MLR	MLR		
	comp=Z,1µm,9.0s						
HHC	**Hu-ho-hao-te**	**17.68**	**241**	P	**P**	**15 12 59.8**	**+2.0**
HHC				pmax	pmax		
	comp=Z,39nm,1.5s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
ZAK	**Zakamensk**	**18.13**	**278**	*e*P	**Pn**	**15 13 02.2**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JNU	**Nakatsue**	**18.37**	**183**	P	**P**	**15 13 05.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=40,slow=6.1,SNR=5.5						
JNU				LR	LR	15 19 24.3	
	comp=Z,220nm,19.1s,baz=18,slow=35						
TIA	**Tai'an**	**18.63**	**221**	P	**Pn**	**15 13 09.4**	**+0.9**
TIA				pmax	pmax		
	comp=Z,14nm,1.1s						
TIA				LR	LR		
	comp=Z,910nm,14.7s						
TIA				LR	LR		
	comp=Z,1µm,11.8s						
JHJ	**Hachijo jima 2**	**19.20**	**160**	LR	LR	15 19 53.8	
	comp=Z,138nm,20.8s,baz=50,slow=35						
MOY	**Mondy**	**19.24**	**283**	*e*P	**Pn**	**15 13 17.0**	**+1.1**
MOY				pmax	pmax		
	comp=Z,31nm,1.7s						
TIXI	**Tiksi**	**20.29**	**357**	P	**P**	**15 13 26.2**	**+0.1**
	comp=Z,39nm,0.6s,baz=173,slow=9.0,SNR=24						
TIXI				Lg	Lg	15 19 32.1	
	comp=Z,38nm,1.2s,baz=191,slow=2.3,SNR=6.4						
TIXI				LR	LR	15 21 52.5	
	comp=Z,378nm,19.1s,baz=176,slow=39						
TIXI	**Tiksi**	**20.29**	**357**	*e*P	**P**	**15 13 26.3**	**+0.3**
	comp=Z,52nm,0.7s						
TIXI				Lg	Lg	15 19 32.1	
TIXI	**Tiksi**	**20.29**	**357**	*d i*P	**P**	**15 13 26.3**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,71nm,1.0s						
TIXI	**Tiksi**	**20.29**	**357**	*e*P	**P**	**15 13 26.3**	**+0.3**
NJ2	**Nanjing**	**21.71**	**212**	*e*P	**P**	**15 13 40.8**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				LR	LR		
	comp=Z,980nm,17.1s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s						
BILL	**Bilibino**	**23.42**	**32**	*i* P	**P**	**15 13 57.3**	**-2.2**
BILL				*i*		15 14 40.2	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,297nm,16.0s						
BILL	**Bilibino**	**23.42**	**32**	*e*P	**P**	**15 14 01.5**	**+2.0**
XAN	**Xi'an**	**24.18**	**233**	P	**P**	**15 14 09.8**	**+2.7**
XAN				pP	sP	15 14 14.3	+4.2
XAN				sP	pP	15 14 16.6	+7.4
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,89nm,4.6s						
XAN				LR	LR		
	comp=Z,1µm,10.6s						
XAN				LR	LR		
	comp=Z,1µm,10.8s						
WHN	**Wuhan**	**24.70**	**219**	*e*P	**P**	**15 14 15.6**	**+3.8**
WHN				S	**S**	**15 18 35.9**	**+2.1**
WHN				LR	LR		
	comp=Z,1µm,6.3s						
WHN				LR	LR		
	comp=Z,1µm,10.0s						
WHN				LR	LR		
	comp=Z,1µm,18.1s						
LZH	**Lanzhou**	**25.32**	**244**	*e*P	**P**	**15 14 18.5**	**+0.9**
LZH				pP	sP	15 14 22.6	+2.0
LZH				sP	pP	15 14 25.8	+6.1
LZH				*e*S	**S**	**15 18 44.0**	**0.0**
LZH				sS	sS	15 18 54.0	+6.5
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,5.2s						
LZH				LR	LR		
	comp=Z,2µm,11.4s						
LZH				LR	LR		
	comp=Z,2µm,11.2s						
LZH				LR	LR		
	comp=Z,2µm,13.6s						
GTA	**Gaotai**	**25.42**	**254**	⇓P	**P**	**15 14 18.9**	**+0.5**
GTA				pP	sP	15 14 23.6	+2.1
GTA				sP	pP	15 14 26.3	+5.7
GTA				S	**S**	**15 18 46.3**	**+0.7**
GTA				sS	sS	15 18 55.4	+6.3
GTA				pmax	pmax		
	comp=Z,23nm,0.9s						
GTA				pmax	pmax		
	comp=Z,92nm,5.1s						
GTA				LR	LR		
	comp=Z,650nm,13.7s						
GTA				LR	LR		
	comp=Z,520nm,13.3s						
GTA				LR	LR		
	comp=Z,810nm,11.1s						
ZAA1	**Zalesovo Array**	**28.31**	**294**	*e*P	**P**	**15 14 43.4**	**-0.7**
ZALV	**Zalesovo Beam**	**28.31**	**294**	P	**P**	**15 14 43.4**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=105,slow=7.8,SNR=9.7						
ZALV				LR	LR	15 25 38.5	
	comp=Z,140nm,18.4s,baz=70,slow=36						
CD2	**Chengdu**	**29.30**	**236**	*e*P	**P**	**15 14 50.8**	**-2.4**
WMQ	**Urumqi**	**30.45**	**273**	*e*P	**P**	**15 15 04.8**	**+1.5**
WMQ				LR	LR		
	comp=Z,990nm,15.7s						
WMQ				LR	LR		
	comp=Z,260nm,10.1s						
MK32	**Makanchi Array**	**32.38**	**282**	*e*P	**P**	**15 15 19.9**	**-0.4**
MKAR	**Makanchi Array**	**32.38**	**282**	P	**P**	**15 15 19.9**	**-0.4**
	comp=Z,9.0nm,0.8s,baz=70,slow=8.0,SNR=39						
MKAR	**Makanchi Array**	**32.38**	**282**	*i* P	**P**	**15 15 22.3**	**+2.1**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MKAR	**Makanchi Array**	**32.38**	**282**	*e*P	**P**	**15 15 22.3**	**+2.1**
MAKZ	**Makanchi**	**32.57**	**282**	*e*P	**P**	**15 15 21.2**	**-0.6**
	comp=Z,9.1nm,0.7s						
MAKZ	**Makanchi**	**32.57**	**282**	*e*P	**P**	**15 15 21.2**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURK	**Kurchatov**	**32.95**	**290**	*e*P	**P**	**15 15 24.0**	**-1.0**
	comp=Z,4.0nm,0.9s						
KURK	**Kurchatov**	**32.95**	**290**	⇑*e*P	**P**	**15 15 28.3**	**+3.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURBB	**Kurchatov Arra**	**33.03**	**290**	P	**P**	**15 15 25.3**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=67,slow=8.7,SNR=19						
PDGK	**Podgornoye**	**35.81**	**278**	P	**P**	**15 15 52.8**	**+2.6**
PDGK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BVAR	**Borovoye Array**	**36.76**	**297**	P	**P**	**15 15 58.1**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=64,slow=6.8,SNR=13						
BRVK	**Borovoye**	**36.80**	**297**	*e*P	**P**	**15 15 57.5**	**-0.9**
	comp=Z,4.1nm,0.9s						
BRVK	**Borovoye**	**36.80**	**297**	⇓*e*P	**P**	**15 16 01.6**	**+3.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	**Borovoye**	**36.80**	**297**	*e*P	**P**	**15 16 01.6**	**+3.3**
QIZ	**Qiongzhong**	**36.82**	**217**	P	**P**	**15 15 57.1**	**-1.7**
QIZ				S	**S**	**15 21 41.8**	**-1.5**
QIZ				pmax	pmax		
	comp=Z,140nm,2.9s						
QIZ				LR	LR		
	comp=Z,420nm,15.2s						
QIZ				LR	LR		
	comp=Z,510nm,12.3s						
SLVN	**Son La**	**37.23**	**227**	*e*P	**P**	**15 16 01.5**	**-0.8**
	comp=Z,5.3nm,0.8s						
OTUK	**Ortayu**	**37.70**	**289**	P	**P**	**15 16 10.0**	**+3.9**
OTUK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOOM	**Boomskoye usch**	**38.46**	**279**	*e*P	**P**	**15 16 12.6**	**-0.1**
	comp=Z,7.1nm,0.8s						
BOOM	**Boomskoye usch**	**38.46**	**279**	*e*P	**P**	**15 16 12.6**	**-0.1**
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TTA	**Tatalina**	**38.49**	**44**	*e*P	**P**	**15 16 15.0**	**+2.4**
	comp=Z,23nm,1.9s						
TTA	**Tatalina**	**38.49**	**44**	*e*P	**P**	**15 16 15.0**	**+2.4**
TTA				pmax	pmax		
	comp=Z,23nm,1.9s						
AAK	**Ala-Archa**	**39.27**	**280**	⇓*e*P	**P**	**15 16 23.1**	**+3.6**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
COLD	**Coldfoot**	**39.60**	**37**	*e*P	**P**	**15 16 22.3**	**+0.6**
	comp=Z,4.9nm,0.9s						
SHL	**Shillong**	**39.96**	**245**	P	**P**	**15 16 28.9**	**+3.5**
SHL				pmax	pmax		
	comp=Z,14nm,1.0s						
CAST	**Castle Rocks**	**40.03**	**43**	*e*P	**P**	**15 16 24.6**	**-0.8**
	comp=Z,4.7nm,0.8s						
MLY	**Manley**	**40.05**	**40**	*e*P	**P**	**15 16 24.8**	**-0.8**
	comp=Z,14nm,1.6s						
BPAW	**Bear Paw Mtn.**	**40.26**	**41**	*e*P	**P**	**15 16 26.7**	**-0.6**
	comp=Z,7.3nm,1.3s						
SVE	**Sverdlovsk**	**40.41**	**307**	*e*P	**P**	**15 16 32.1**	**+3.5**
KTH	**Kantishna Hill**	**40.47**	**42**	*e*P	**P**	**15 16 29.2**	**+0.1**
	comp=Z,19nm,1.6s						
MCK	**McKinley**	**41.24**	**41**	*e*P	**P**	**15 16 35.0**	**-0.3**
	comp=Z,12nm,1.0s						
MCK	**McKinley**	**41.24**	**41**	*e*P	**P**	**15 16 35.0**	**-0.3**
MCK				pmax	pmax		
	comp=Z,12nm,1.0s						
COLA	**College**	**41.27**	**40**	⇑*e*P	**P**	**15 16 38.8**	**+3.3**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRH	**Wood River Hil**	**41.31**	**40**	*e*P	**P**	**15 16 35.0**	**-0.9**
	comp=Z,23nm,1.3s						
CCB	**Clear Creek Bu**	**41.37**	**40**	*e*P	**P**	**15 16 35.6**	**-0.7**
	comp=Z,11nm,1.0s						
KK31	**Karatay Array**	**41.45**	**283**	*e*P	**P**	**15 16 36.6**	**-0.8**
	comp=Z,3.8nm,0.9s						
KK31	**Karatay Array**	**41.45**	**283**	*e*P	**P**	**15 16 36.6**	**-0.8**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	**Karatay Array**	**41.45**	**283**	*e*P	**P**	**15 16 36.6**	**-0.8**
	comp=Z,3.8nm,0.9s						
KKAR	**Karatay Array**	**41.45**	**283**	*e*P	**P**	**15 16 36.6**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	**Arti**	**41.62**	**307**	P	**P**	**15 16 38.0**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=29,slow=12,SNR=6.7						
ARU	**Arti**	**41.62**	**307**	*e*P	**P**	**15 16 37.7**	**-0.8**
	comp=Z,8.6nm,1.1s						
ARU	**Arti**	**41.62**	**307**	*c i*P	**P**	**15 16 41.7**	**+3.2**
ARU						15 18 14.7	
ARU				S	**S**	**15 23 00.2**	**+5.4**
ARU				SS	**SS**	**15 25 54.2**	**-5.1**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARU				MLR	MLR		
	comp=Z,234nm,13.0s						
ARU	**Arti**	**41.62**	**307**	*e*P	**P**	**15 16 41.7**	**+3.2**
FYU	**Fort Yukon**	**41.67**	**37**	*e*P	**P**	**15 16 38.6**	**-0.1**
	comp=Z,11nm,0.9s						
ILAR	**Eielson Array**	**41.69**	**40**	P	**P**	**15 16 38.0**	**-1.0**
	comp=Z,6.0nm,0.8s,baz=288,slow=8.1,SNR=62						
ILB	**Eielson Array**	**41.69**	**40**	*e*P	**P**	**15 16 37.9**	**-1.1**
	comp=Z,14nm,1.0s						
JIRN	**Jiri**	**41.71**	**253**	*e*P	**P**	**15 16 38.8**	**-1.2**
GUN	**Gumba**	**41.71**	**254**	*e*P	**P**	**15 16 39.8**	**-0.2**
	comp=Z,34nm,0.6s						
CHTO	**Chiang Mai**	**41.74**	**231**	*e*P	**P**	**15 16 37.8**	**-2.1**
	comp=Z,7.3nm,0.9s						
CHTO	**Chiang Mai**	**41.74**	**231**	*e*P	**P**	**15 16 37.8**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HDA	**Harding Lake**	**41.80**	**40**	*e*P	**P**	**15 16 38.2**	**-1.7**
	comp=Z,27nm,1.3s						
PRP	**Porcupine Dome**	**41.94**	**38**	*e*P	**P**	**15 16 40.8**	**-0.5**
	comp=Z,9.1nm,1.1s						
CM31	**Chiang Mai Arr**	**42.04**	**231**	*e*P	**P**	**15 16 42.0**	**-0.4**
	comp=Z,13nm,1.4s						
CMAR	**Chiang Mai Arr**	**42.04**	**231**	P	**P**	**15 16 42.0**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=20,slow=7.7,SNR=14						
CMAR	**Chiang Mai Arr**	**42.04**	**231**	*i* P	**P**	**15 16 44.0**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DHY	**Denali Highway**	**42.14**	**42**	*e*P	**P**	**15 16 41.4**	**-1.5**
	comp=Z,29nm,1.7s						
KKN	**Kakani**	**42.16**	**254**	*e*P	**P**	**15 16 43.8**	**+0.3**
	comp=Z,35nm,0.7s						
SML	**Sawmill**	**42.24**	**44**	*e*P	**P**	**15 16 42.3**	**-1.3**
	comp=Z,16nm,0.8s						
SML	**Sawmill**	**42.24**	**44**	*e*P	**P**	**15 16 42.3**	**-1.3**
SML				pmax	pmax		
	comp=Z,16nm,0.8s						
PKI	**Pulchoki**	**42.24**	**254**	*e*P	**P**	**15 16 42.9**	**-1.4**
	comp=Z,10nm,0.8s						
PKIN	**Phulchoki**	**42.24**	**254**	*e*P	**P**	**15 16 42.8**	**-1.5**
GKN	**Gorkha**	**42.39**	**255**	*e*P	**P**	**15 16 46.3**	**+1.0**
DMN	**Daman**	**42.40**	**254**	*e*P	**P**	**15 16 44.7**	**-0.8**
DANN	**Dangsing**	**42.67**	**256**	*e*P	**P**	**15 16 49.4**	**+1.6**
	comp=Z,90nm,0.8s						
RIDG	**Independent Ri**	**42.91**	**40**	*e*P	**P**	**15 16 47.0**	**-2.0**
	comp=Z,10nm,0.8s						
SCRK	**Sand Creek**	**43.16**	**40**	*e*P	**P**	**15 16 49.0**	**-2.1**
	comp=Z,4.3nm,1.1s						
DOT	**Dot Lake**	**43.27**	**40**	*e*P	**P**	**15 16 50.0**	**-1.9**
	comp=Z,6.9nm,0.9s						
MENT	**Mentasta**	**43.71**	**41**	*e*P	**P**	**15 16 53.9**	**-1.6**
	comp=Z,8.8nm,1.0s						
EYAK	**Cordova Ski Ar**	**43.91**	**45**	*e*P	**P**	**15 16 56.0**	**-1.0**
	comp=Z,8.6nm,0.9s						
EGAK	**Eagle**	**43.93**	**38**	*e*P	**P**	**15 16 55.9**	**-1.2**
	comp=Z,14nm,1.1s						
GAR	**Garm**	**43.96**	**279**	*e*P	**P**	**15 16 54.9**	**-3.0**
	comp=Z,13nm,0.8s						
GAR	**Garm**	**43.96**	**279**	*e*P	**P**	**15 16 54.9**	**-3.0**
GAR				pmax	pmax		
	comp=Z,13nm,0.8s						
ABKAR	**Akbulak array**	**44.33**	**297**	*e*P	**P**	**15 16 59.0**	**-1.5**
	comp=Z,3.7nm,0.8s						
DAV	**Davao City (W)**	**44.60**	**189**	LR	LR	15 36 02.5	
	comp=Z,88nm,21.2s,baz=320,slow=37						
AKTO	**Aktyubinsk**	**44.77**	**299**	P	**P**	**15 17 04.6**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=60,slow=16,SNR=2.6						
EPYK	**Eagle Plains**	**44.86**	**35**	*e*P	**P**	**15 17 04.5**	**-0.2**
	comp=Z,26nm,0.2s						
DAWY	**Dawson**	**44.94**	**38**	*e*P	**P**	**15 17 03.9**	**-1.4**
	comp=Z,6.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**44.95**	**345**	LR	LR	15 37 06.5	
	comp=Z,123nm,21.4s,baz=60,slow=38						
INK	**Inuvik**	**45.04**	**32**	P	**P**	**15 17 04.8**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=320,slow=3.0,SNR=3.0						
INK	**Inuvik**	**45.04**	**32**	*e*P	**P**	**15 17 05.1**	**-0.9**
	comp=Z,4.4nm,0.8s						
INK	**Inuvik**	**45.04**	**32**	*e*P	**P**	**15 17 05.1**	**-0.9**
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HYT	**Haines Junctio**	**47.31**	**42**	*e*P	**P**	**15 17 22.6**	**-1.6**
	comp=Z,7.1nm,0.9s						
ARA0	**ARCESS Array S**	**48.09**	**333**	*e*P	**P**	**15 17 29.4**	**-0.5**
ARCES	**ARCESS Array B**	**48.09**	**333**	P	**P**	**15 17 29.4**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=38,slow=8.3,SNR=4.5						
ARCES				LR	LR	15 40 19.5	
	comp=Z,195nm,19.3s,baz=351,slow=39						
SKAG	**Skagway**	**48.97**	**43**	*e*P	**P**	**15 17 37.2**	**+0.4**
	comp=Z,6.6nm,0.8s						
RES	**Resolute Bay**	**50.29**	**15**	P	**P**	**15 17 46.0**	**-0.6**
	comp=Z,6.8nm,0.6s,baz=310,slow=8.6,SNR=7.9						
RES				LR	LR	15 39 53.7	
	comp=Z,229nm,21.6s,baz=322,slow=37						
RES	**Resolute Bay**	**50.29**	**15**	*e*P	**P**	**15 17 46.0**	**-0.6**
	comp=Z,8.1nm,0.8s						
GEYT	**Alibeck**	**52.09**	**286**	LR	LR	15 40 29.6	
	comp=Z,133nm,19.1s,baz=10.0,slow=36						
SIJI	**Sorong**	**52.17**	**181**	LR	LR	15 39 07.0	
	comp=Z,49nm,19.5s,baz=338,slow=35						
OBN	**Obninsk**	**52.81**	**314**	*i* P	**P**	**15 18 07.7**	**+2.0**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,237nm,15.0s						
OBN	**Obninsk**	**52.81**	**314**	*e*P	**P**	**15 18 07.7**	**+2.0**
FIA0	**FINESS Array S**	**53.01**	**325**	*e*P	**P**	**15 18 06.2**	**-0.8**
FIA0	**FINESS Array S**	**53.01**	**325**	*e*P	**P**	**15 18 06.3**	**-0.8**
FINES	**FINESS Array B**	**53.01**	**325**	P	**P**	**15 18 06.2**	**-0.8**
	comp=Z,5.6nm,0.5s,baz=53,slow=7.3,SNR=25						
FINES				LR	LR	15 42 49.2	
	comp=Z,115nm,20.4s,baz=58,slow=38						
LPSR	**Galich'ya Gora**	**53.30**	**311**	*e*P	**P**	**15 18 11.3**	**+1.9**
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VSR	**Storozhevoye**	**54.06**	**309**	*e*P	**P**	**15 18 17.6**	**+2.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YKA	**Yellowknife Ar**	**54.81**	**31**	P	**P**	**15 18 19.8**	**-0.5**
	comp=Z,5.9nm,1.0s,baz=313,slow=7.1,SNR=11						
YKA				LR	LR	15 42 28.0	
	comp=Z,14nm,18.9s,baz=304,slow=37						
YKB5	**Yellowknife Ar**	**54.81**	**31**	*e*P	**P**	**15 18 19.8**	**-0.5**
MAK	**Makhachkala**	**55.01**	**297**	*e*P	**P**	**15 18 18.5**	**-3.4**
MAK				*e*S	**S**	**15 25 57.7**	**-6.5**
MAK				MLR	MLR		
	comp=Z,92nm,12.0s						
SUMG	**Summit**	**56.06**	**357**	*e*P	**P**	**15 18 28.5**	**-1.1**
	comp=Z,34nm,1.9s						
SUMG	**Summit**	**56.06**	**357**	*e*P	**P**	**15 18 28.5**	**-1.1**
SUMG				pmax	pmax		
	comp=Z,34nm,1.9s						
KIV	**Kislovodsk**	**56.99**	**301**	*e*P	P	15 18 42.1	+5.8
KIV				pmax	pmax		
	comp=Z,36nm,1.1s						
KIV				MLR	MLR		
	comp=Z,552nm,17.0s						
GSI	**Gunungsitoli**	**57.80**	**222**	*e*P	**P**	**15 18 40.5**	**-1.7**
	comp=Z,13nm,0.6s						
HFS	**Hagfors**	**58.20**	**329**	P	**P**	**15 18 43.8**	**-0.6**
	comp=Z,4.0nm,0.8s,baz=64,slow=10,SNR=6.1						
NB2	**NORSAR Subarra**	**58.28**	**331**	P	**P**	**15 18 43.8**	**-1.3**
	comp=Z,3.1nm,0.7s,baz=37,slow=6.9						
NB200	**NORSAR Array S**	**58.28**	**331**	*e*P	**P**	**15 18 44.0**	**-1.0**
NOA	**NORSAR Array B**	**58.28**	**331**	P	**P**	**15 18 44.0**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=37,slow=6.8,SNR=14						
AKASG	**Malin Array Be**	**59.07**	**314**	P	**P**	**15 18 49.9**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=41,slow=8.2,SNR=9.3						
AKASG	**Malin Array Be**	**59.07**	**314**	*i* P	**P**	**15 18 52.5**	**+1.9**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKBB	**Malin Array Si**	**59.07**	**314**	*e*P	**P**	**15 18 49.3**	**-1.3**
	comp=Z,5.6nm,0.6s						
AKBB	**Malin Array Si**	**59.07**	**314**	*e*P	**P**	**15 18 49.3**	**-1.3**
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BUR08	**Bucovina Ar. S**	**63.11**	**313**	*e*P	**P**	**15 19 16.9**	**-1.3**
	comp=Z,7.1nm,0.9s						
BURAR	**Bucovina Array**	**63.12**	**313**	⇑*i*P	**P**	**15 19 18.5**	**+0.2**
BURAR	**Bucovina Array**	**63.12**	**313**	⇑P	**P**	**15 19 18.5**	**+0.2**
KOLS	**Kolonicke sedl**	**63.44**	**316**	*e*P	**P**	**15 19 23.9**	**+3.6**
KOLS				pmax	pmax		

	comp=Z,4.0nm,0.9s						
KOLS	**Kolonicke sedl**	**63.44**	**316**	*e*P	**P**	**15 19 23.9**	**+3.6**
OJC	**Ojcow**	**63.52**	**318**	*e*P	**P**	**15 19 24.7**	**+3.9**
OJC	**Ojcow**	**63.52**	**318**	*e*P	**P**	**15 19 20.0**	**-0.8**
	comp=Z,11nm,0.8s						
OJC	**Ojcow**	**63.52**	**318**	*e*P	**P**	**15 19 20.0**	**-0.8**
OJC				pmax	pmax		
	comp=Z,11nm,0.8s						
VRI	**Vrincioaia**	**63.72**	**311**	⇑*i*P	**P**	**15 19 22.1**	**-0.1**
VRI	**Vrincioaia**	**63.72**	**311**	⇑P	**P**	**15 19 22.1**	**-0.1**
PLOR	**Plostina**	**63.77**	**311**	⇓*i*P	**P**	**15 19 25.6**	**+3.1**
PLOR	**Plostina**	**63.77**	**311**	⇓P	**P**	**15 19 25.6**	**+3.1**
NIE	**Niedzica**	**63.92**	**318**	*e*P	**P**	**15 19 27.5**	**+4.0**
NIE	**Niedzica**	**63.92**	**318**	*e*P	**P**	**15 19 27.5**	**+4.0**
TRPA	**Tarpa**	**63.93**	**315**	⇑*i*P	**P**	**15 19 26.3**	**+2.8**
BISRR	**Bisoca**	**63.96**	**311**	⇑*i*P	**P**	**15 19 22.0**	**-1.9**
NEW	**Newport**	**64.40**	**44**	LR	LR	15 48 41.4	
	comp=Z,77nm,19.1s,baz=328,slow=37						
LANS	**Liptovska Anna**	**64.47**	**318**	*e*P	**P**	**15 19 28.3**	**+1.2**
LANS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LANS	**Liptovska Anna**	**64.47**	**318**	*e*P	**P**	**15 19 28.3**	**+1.2**
OSTC	**Ostas**	**64.71**	**321**	AMS	AMS	15 49 20.0	
	comp=Z,200nm,17.9s						
CHVC	**Chvalec**	**64.75**	**321**	AMS	AMS	15 48 00.0	
	comp=Z,200nm,6.9s						
BR101	**Keskin Array S**	**64.78**	**303**	*e*P	**P**	**15 19 28.0**	**-1.4**
BRTR	**Keskin Array B**	**64.78**	**303**	P	**P**	**15 19 28.0**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=54,slow=4.5,SNR=3.8						
BRTR				LR	LR	15 50 04.5	
	comp=Z,62nm,18.0s,baz=54,slow=38						
BRTR	**Keskin Array B**	**64.78**	**303**	*i* P	**P**	**15 19 30.8**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MORC	**Moravsky Berou**	**64.79**	**319**	*e*P	**P**	**15 19 27.8**	**-1.4**
	comp=Z,9.9nm,0.8s						
MORC	**Moravsky Berou**	**64.79**	**319**	⇑*i*P	**P**	**15 19 28.8**	**-0.4**
MORC	**Moravsky Berou**	**64.79**	**319**	*e*P	**P**	**15 19 27.8**	**-1.4**
MORC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MORC	**Moravsky Berou**	**64.79**	**319**	*e*P	**P**	**15 19 29.1**	**-0.1**
VOIR		**64.82**	**312**	⇑*i*P	**P**	**15 19 32.8**	**+3.3**
VOIR		**64.82**	**312**	⇑P	**P**	**15 19 32.8**	**+3.3**
DPC	**Dobruska-Polom**	**64.83**	**320**	*e*P	**P**	**15 19 29.6**	**+0.2**
DPC				*e*		15 19 32.9	
DPC				MLR	MLR		
	comp=Z,200nm,13.3s						
DPC	**Dobruska-Polom**	**64.83**	**320**	*e*P	**P**	**15 19 29.6**	**+0.2**
DPC				*e*pP	**sP**	**15 19 32.9**	**+0.3**
DPC				*e*x	x	15 19 52.9	
DPC				AMS	AMS	15 49 20.0	
	comp=Z,200nm,13.3s						
UPC	**Upice**	**64.83**	**321**	AMS	AMS	15 49 20.0	
	comp=Z,200nm,13.0s						
FFC	**Flin Flon**	**65.00**	**31**	*i* P	**P**	**15 19 33.8**	**+3.4**
VYHS	**Vyhne**	**65.25**	**318**	*e*P	**P**	**15 19 34.5**	**+2.4**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	**Vyhne**	**65.25**	**318**	*e*P	**P**	**15 19 34.5**	**+2.4**
HNR	**Honiara**	**65.28**	**149**	LR	LR	15 46 20.6	
	comp=Z,33nm,18.3s,baz=58,slow=34						
BRG	**Berggiesshubel**	**65.35**	**322**	*e*P	**P**	**15 19 32.9**	**+0.2**
	comp=Z,3.7nm,1.0s						
BRG				*e*		15 19 36.8	
	comp=Z,6.5nm,1.1s						
	comp=N,179nm,12.7s						
	comp=E,231nm,12.0s						
	comp=Z,172nm,14.2s						
CLL	**Collm**	**65.36**	**323**	*e*P	**P**	**15 19 31.8**	**-1.0**
	comp=Z,7.4nm,0.8s						
CLL	**Collm**	**65.36**	**323**	⇓*i*P	**P**	**15 19 32.0**	**-0.8**
CLL				*i*		15 19 34.8	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	**Collm**	**65.36**	**323**	⇓*i*P	**P**	**15 19 32.0**	**-0.8**
	comp=Z,4.0nm,0.9s						
CLL				*i* pP	**pP**	**15 19 34.8**	**-0.2**
	comp=Z,10.0nm,1.0s						
PVCC	**Panska Ves**	**65.38**	**321**	AMS	AMS	15 49 50.0	
	comp=Z,200nm,14.0s						
VRAC	**Vranov**	**65.54**	**320**	*e*P	**P**	**15 19 35.2**	**+1.2**
VRAC				*e*		15 19 38.7	
SIRR	**Siria**	**65.74**	**315**	⇑*i*P	**P**	**15 19 38.3**	**+3.0**
GOPC	**GO Pecny, Ondr**	**65.78**	**321**	AMS	AMS	15 49 10.0	
	comp=Z,200nm,13.9s						
KRUC	**Moravsky**	**65.81**	**319**	*e*P	**P**	**15 19 35.6**	**-0.2**
KRUC				*e*		15 19 39.8	
PRU	**Pruhonice**	**65.82**	**321**	AMS	AMS	15 51 50.0	
	comp=Z,100nm,11.9s						
GZR	**Gura Zlata**	**65.90**	**313**	⇑*i*P	**P**	**15 19 36.8**	**+0.3**
GZR	**Gura Zlata**	**65.90**	**313**	⇑P	**P**	**15 19 36.8**	**+0.3**
TREC	**Trest**	**66.00**	**320**	AMS	AMS	15 50 00.0	
	comp=Z,200nm,15.3s						
F10A	**Beach Ranch, E**	**66.10**	**46**	*e*P	**P**	**15 19 38.0**	**+0.2**
	comp=Z,5.2nm,1.1s						
ZST	**Bratislava**	**66.20**	**318**	*e*P	**P**	**15 19 39.9**	**+1.6**
ZST	**Bratislava**	**66.20**	**318**	*e*P	**P**	**15 19 39.9**	**+1.6**
NKC	**Novy Kostel**	**66.43**	**322**	AMS	AMS	15 52 50.0	
	comp=Z,200nm,11.6s						
KHC	**Kasperske Hory**	**66.88**	**321**	*e*P	**P**	**15 19 42.3**	**-0.4**
	comp=Z,2.3nm,1.0s						
KHC	**Kasperske Hory**	**66.88**	**321**	*ce*P	**P**	**15 19 45.5**	**+2.8**
KHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KHC	**Kasperske Hory**	**66.88**	**321**	*e*P	**P**	**15 19 42.6**	**-0.1**
KHC				*e*pP	**pP**	**15 19 45.7**	**+0.8**
KHC				*e*x	x	15 20 05.0	
KHC				AMS	AMS	15 49 10.0	
	comp=Z,100nm,15.1s						
CONA	**Conrad Observa**	**66.93**	**319**	*i* pP	**P**	**15 19 43.2**	**+0.2**
	comp=Z,5.8nm,0.8s						
BMO	**Blue Mountains**	**66.93**	**46**	*e*P	**P**	**15 19 43.2**	**+0.1**
	comp=Z,2.8nm,0.8s						
GERES	**GERESS Array B**	**67.06**	**321**	P	**P**	**15 19 43.2**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=38,slow=6.7,SNR=4.3						
GERES				LR	LR	15 52 36.6	
	comp=Z,61nm,21.9s,baz=39,slow=39						
EKA	**Eskdalemuir Ar**	**67.24**	**334**	P	**P**	**15 19 44.5**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=34,slow=5.5,SNR=9.6						
PLID	**Pearl Lake**	**67.33**	**45**	*e*P	**P**	**15 19 46.5**	**+0.6**
	comp=Z,3.3nm,0.8s						
ARSA	**Arzberg**	**67.60**	**319**	*i* P	**P**	**15 19 46.1**	**-1.2**
	comp=Z,1.9nm,0.5s						
MOA	**Molln**	**67.64**	**320**	*i* P	**P**	**15 19 43.2**	**-4.3**
	comp=Z,2.6nm,0.7s						
VTS	**Vitosha**	**67.82**	**311**	⇑*i*P	**P**	**15 19 47.3**	**-1.5**
VTS	**Vitosha**	**67.82**	**311**	⇑P	**P**	**15 19 47.3**	**-1.5**
HRY	**Holter Researc**	**67.86**	**42**	*e*P	**P**	**15 19 48.8**	**-0.2**
SOKA	**Soboth**	**68.26**	**319**	*i* P	**P**	**15 19 53.7**	**+2.2**
	comp=Z,4.8nm,0.9s						
OBKA	**Obir**	**68.60**	**319**	*i* P	**P**	**15 19 55.5**	**+1.9**
	comp=Z,5.1nm,0.9s						
KBA	**Koelnbreinsper**	**68.63**	**320**	*i* pP	**P**	**15 19 54.0**	**+0.1**
	comp=Z,11nm,0.7s						
BOZ	**Bozeman (W)**	**68.83**	**42**	*e*P	**P**	**15 19 55.3**	**+0.2**
	comp=Z,2.5nm,0.9s						
BOZ	**Bozeman (W)**	**68.83**	**42**	*e*P	**P**	**15 19 55.3**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MYKA	**Terra Mystica**	**68.87**	**319**	*i* pP	**P**	**15 19 55.0**	**-0.2**
	comp=Z,6.0nm,0.6s						
MCMT	**McKenzie Canyo**	**68.92**	**44**	*e*P	**P**	**15 19 54.9**	**-1.0**
WATA	**Walderalm**	**69.12**	**321**	*i* pP	**P**	**15 19 58.0**	**+1.1**
	comp=Z,7.7nm,0.7s						
WTTA	**Wattenberg**	**69.16**	**321**	*i* pP	**P**	**15 19 57.3**	**+0.1**
	comp=Z,11nm,0.7s						
ABTA	**Abfaltersbach**	**69.23**	**320**	*i* pP	**P**	**15 19 57.1**	**-0.4**
	comp=Z,3.3nm,0.8s						
HLID	**Hailey**	**69.24**	**45**	*e*P	**P**	**15 19 58.5**	**+0.8**
	comp=Z,3.5nm,1.1s						
MOTA	**Moosalm**	**69.30**	**321**	*i* pP	**P**	**15 19 57.5**	**-0.5**
	comp=Z,2.3nm,0.5s						
RETA	**Reutte**	**69.32**	**322**	*i* P	**P**	**15 19 55.2**	**-2.9**
	comp=Z,3.8nm,0.6s						
SQTA	**Sankt Quirin**	**69.36**	**321**	*i* pP	**P**	**15 19 58.4**	**0.0**
	comp=Z,14nm,0.9s						
BFO	**Black Forest**	**69.54**	**324**	*e*P	**P**	**15 19 58.6**	**-0.7**
	comp=Z,8.9nm,0.9s						
BFO	**Black Forest**	**69.54**	**324**	*e*P	**P**	**15 19 58.6**	**-0.7**
BFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FETA	**Feichten**	**69.71**	**321**	*i* pP	**P**	**15 20 00.8**	**+0.2**
	comp=Z,8.8nm,0.9s						
DAVA	**Damuels**	**69.82**	**322**	*i* P	**P**	**15 19 58.8**	**-2.5**
	comp=Z,2.6nm,0.3s						
ECH	**Echery**	**70.07**	**324**	*e*P	**P**	**15 20 01.5**	**-1.1**
	comp=Z,3.3nm,0.7s						
ECH	**Echery**	**70.07**	**324**	*e*P	**P**	**15 20 01.5**	**-1.1**
ECH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**70.22**	**321**	*e*P	**P**	**15 20 03.3**	**-0.5**
	comp=Z,16nm,0.8s						
MOOW	**Moose Ponds**	**70.69**	**43**	*e*P	**P**	**15 20 08.8**	**+2.1**
	comp=Z,4.1nm,0.9s						
TUE	**Stuetta**	**70.70**	**322**	*e*P	**P**	**15 20 06.8**	**+0.1**
	comp=Z,11nm,0.8s						
ULM	**Lac du Bonnet**	**70.77**	**30**	P	**P**	**15 20 06.8**	**+0.1**
	comp=Z,7.3nm,0.9s,baz=305,slow=4.7,SNR=4.7						
ULM				LR	LR	15 53 12.0	
	comp=Z,117nm,18.7s,baz=55,slow=38						
KVN	**Kaiserville**	**71.07**	**51**	*e*P	**P**	**15 20 11.3**	**+2.2**
	comp=Z,4.3nm,0.8s						
WRAB	**Tennant Creek**	**71.14**	**178**	⇑*e*P	**P**	**15 20 07.9**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
WR1	**Warramunga Arr**	**71.15**	**178**	*e*P	**P**	**15 20 07.3**	**-2.0**
WRA	**Warramunga Arr**	**71.15**	**178**	P	**P**	**15 20 07.3**	**-2.0**
	comp=Z,3.4nm,0.9s,baz=346,slow=5.3,SNR=4.8						
RYN	**Ryan**	**71.19**	**51**	*e*P	**P**	**15 20 10.8**	**+1.0**
	comp=Z,2.3nm,0.8s						
NV01	**Mina Array Sit**	**71.45**	**51**	*e*P	**P**	**15 20 11.2**	**-0.3**
NVAR	**Mina Array Bea**	**71.45**	**51**	P	**P**	**15 20 11.2**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=300,slow=5.4,SNR=16						
NVAR				LR	LR	15 51 20.4	
	comp=Z,50nm,18.7s,baz=319,slow=36						
SENIN	**Lac Senin/Sane**	**71.57**	**323**	*e*P	**P**	**15 20 11.0**	**-1.0**
	comp=Z,5.2nm,0.7s						
PD31	**Pinedale Array**	**71.99**	**43**	*e*P	**P**	**15 20 13.6**	**-1.0**
PDAR	**Pinedale Array**	**71.99**	**43**	P	**P**	**15 20 13.6**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=356,slow=2.2,SNR=9.4						
HWUT	**Hardware Ranch**	**72.06**	**45**	*e*P	**P**	**15 20 15.0**	**0.0**
	comp=Z,6.5nm,0.9s						
SSF	**Saint Saulge**	**72.35**	**326**	*e*P	**P**	**15 20 19.2**	**+2.8**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPG	**La Plagne**	**72.51**	**323**	*e*P	**P**	**15 20 20.7**	**+3.0**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DUG	**Dugway, Tooele**	**72.64**	**47**	*e*P	**P**	**15 20 19.1**	**+0.7**
	comp=Z,2.6nm,0.9s						
DUG	**Dugway, Tooele**	**72.64**	**47**	*e*P	**P**	**15 20 19.2**	**+0.7**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SCHQ	**Schefferville**	**72.89**	**11**	LR	LR	15 53 43.8	
	comp=Z,68nm,19.3s,baz=282,slow=37						
BNI	**Bardonecchia**	**72.91**	**323**	*e*P	**P**	**15 20 19.6**	**-0.3**
	comp=Z,4.0nm,0.7s						
BNI	**Bardonecchia**	**72.91**	**323**	*e*P	**P**	**15 20 19.6**	**-0.3**
BNI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PSUT	**Pine Spring**	**73.50**	**48**	*e*P	**P**	**15 20 23.7**	**+0.1**
	comp=Z,3.3nm,0.8s						
SSB	**Saint Sauveur**	**73.51**	**324**	*e*P	**P**	**15 20 22.4**	**-0.9**
	comp=Z,7.9nm,0.8s						
SSB	**Saint Sauveur**	**73.51**	**324**	*e*P	**P**	**15 20 22.4**	**-0.9**
SSB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TPNV	**Topopah Spring**	**73.62**	**51**	*e*P	**P**	**15 20 24.2**	**0.0**
	comp=Z,4.0nm,1.0s						
TPNV	**Topopah Spring**	**73.62**	**51**	*e*P	**P**	**15 20 24.3**	**0.0**
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MFF	**Saint Martin d**	**74.00**	**328**	*e*P	**P**	**15 20 28.9**	**+2.8**
MFF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MTPU	**Mount Pierson**	**74.67**	**48**	*e*P	**P**	**15 20 30.4**	**-0.3**
	comp=Z,2.7nm,0.9s						
CAF	**Calviac**	**74.70**	**326**	*e*P	**P**	**15 20 33.6**	**+3.3**
CAF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
O20A	**White River Ci**	**74.72**	**44**	*e*P	**P**	**15 20 30.5**	**-0.2**
	comp=Z,8.6nm,1.0s						
AS31	**Alice Springs**	**74.84**	**178**	*e*P	**P**	**15 20 30.0**	**-1.1**
	comp=Z,1.4nm,1.2s						
ASAR	**Alice Springs**	**74.84**	**178**	P	**P**	**15 20 30.0**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=0.4,slow=5.3,SNR=13						
KNB	**Kanab**	**75.20**	**49**	*e*P	**P**	**15 20 33.7**	**+0.2**
	comp=Z,4.3nm,1.0s						
KNB	**Kanab**	**75.20**	**49**	*e*P	**P**	**15 20 33.7**	**+0.2**
KNB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PV22	**Blue Mesa, Par**	**75.80**	**45**	*e*P	**P**	**15 20 37.5**	**+0.6**
	comp=Z,6.1nm,1.1s						
PV14	**Lion Creek, Pa**	**75.83**	**45**	*e*P	**P**	**15 20 36.5**	**-0.7**
	comp=Z,7.1nm,1.0s						
U15A	**North Rim**	**75.93**	**49**	*e*P	**P**	**15 20 37.4**	**-0.4**
	comp=Z,3.7nm,1.0s						
SMCO	**Snowmass**	**76.06**	**43**	*e*P	**P**	**15 20 37.3**	**-1.4**
	comp=Z,6.5nm,1.1s						
ECSD	**EROS Data Cent**	**76.21**	**34**	*e*P	**P**	**15 20 38.7**	**-0.3**
	comp=Z,6.1nm,0.8s						
PV01	**Paradox Valley**	**76.23**	**45**	*e*P	**P**	**15 20 37.5**	**-1.9**
	comp=Z,2.9nm,0.7s						
ESDC	**Sonseca Array**	**81.43**	**327**	P	**P**	**15 21 07.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=358,slow=6.2,SNR=7.0						
WMOK	**Wichita Mounta**	**83.25**	**40**	*e*P	**P**	**15 21 18.4**	**+1.1**
	comp=Z,4.6nm,0.9s						
WMOK	**Wichita Mounta**	**83.25**	**40**	*e*P	**P**	**15 21 18.4**	**+1.1**
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**83.43**	**172**	P	**P**	**15 21 17.2**	**-0.7**
	comp=Z,3.2nm,1.0s,baz=315,slow=10.0,SNR=3.1						
STKA				LR	LR	15 58 40.2	
	comp=Z,21nm,18.8s,baz=23,slow=36						
LTX	**Lajitas**	**85.82**	**46**	*e*P	**P**	**15 21 31.2**	**+0.7**
LTX	**Lajitas**	**85.82**	**46**	*e*P	**P**	**15 21 31.2**	**+0.7**
TXAR	**Lajitas Array**	**85.82**	**46**	P	**P**	**15 21 31.2**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=293,slow=6.5,SNR=9.9						

ATH 22 15:18:04.2, 40°.52N×21°.91E, h17^{km}±6^{km}, ML1.7/4, Error ellipse: s-maj=6.9km s-min=2.4km az=172.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.23**	**208**	P	Pg	15 18 09.7	0.0
KZN				S	Sg	15 18 12.8	-0.6
KZN				AML	AML	15 18 15.0	
	comp=N,926μm,0.9s						
KZN				AML	AML	15 18 16.7	
	comp=E,1248μm,0.4s						
NEST	**Nestorio**	**0.67**	**262**	P	Pg	15 18 17.0	-0.3
NEST				S	Sb	15 18 26.6	+0.2
NEST				AML	AML	15 18 27.8	
	comp=N,82μm,0.5s						
NEST				AML	AML	15 18 29.3	
	comp=E,107μm,0.5s						
PENT	**Pentalofos**	**0.67**	**242**	P	Pg	15 18 16.9	-0.5
PENT				S	Sg	15 18 26.5	+0.1
PENT				AML	AML	15 18 31.6	
	comp=E,82μm,0.6s						
PENT				AML	AML	15 18 33.2	
	comp=N,143μm,0.5s						
KPRO	**Kipourio**	**0.70**	**217**	P	Pg	15 18 17.9	-0.1
KPRO				S	Sb	15 18 27.6	+0.2
KPRO				AML	AML	15 18 31.7	
	comp=N,138μm,0.4s						
KPRO				AML	AML	15 18 31.8	
	comp=E,173μm,0.4s						

IDC 22 15:19:08.9±65.0, 19°.68S×174°.52W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.5/29, mbtmp3.8/3, Error ellipse: s-maj=1226.0km s-min=178.5km az=83.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.08**	**244**	P	P	15 26 53.9	-0.7
	1.1nm,0.8s,baz=36,slow=14,SNR=3.6						
ASAR	**Alice Springs**	**47.89**	**256**	P	P	15 27 49.5	+0.3
	0.4nm,0.4s,baz=92,slow=7.2,SNR=14						
WRA	**Warramunga Arr**	**47.96**	**261**	P	P	15 27 49.7	0.0
	2.1nm,0.8s,baz=95,slow=7.2,SNR=3.7						

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*CNRM **22** 15:23:24.0, 36°.28N×7°.70W, h56^{km}, ml2.8*

*MDD **22** 15:23:25.9±0.9, 36°.48N×7°.66W, h24^{km}±10^{km}, mbLg2.6/41, Error ellipse: s-maj=10.0km s-min=3.7km az=25.0, PRXIMO*

*SFS **22** 15:23:25.0, 36°.51N×7°.65W, ML2.8, GOLFO DE CADIZ*

*IGIL **22** 15:23:25.7, 36°.41N×7°.67W, h31^{km}, ML2.5*

*INMG **22** 15:23:26.6±1.3, 36°.44N×7°.68W, h31^{km}, MD2.6, ML2.5, Error ellipse: s-maj=3.2km s-min=2.1km az=39.0*

ISC 22 15:23:24.6±5.4, 36°.39N±0°.03×7°.64W±0°.03, h35^{km}±6^{km}, n87, σ1^{s}95/167, 6C-8D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.88**	**345**	⇓*i*P	**Pn**	**15 23 40.6**	**0.0**
PBDV				*e*S	**Sn**	**15 23 51.4**	**-0.8**
PBDV				A	A	15 23 51.7	
	42nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.88**	**345**	P	**Pn**	**15 23 40.6**	**0.0**
PBDV				S	**Sn**	**15 23 51.4**	**-0.8**
	42nm,0.3s						
PVAQ	**Vaqueiros**	**1.01**	**357**	⇓*e*P	**Pn**	**15 23 42.4**	**+0.1**
PVAQ				*e*S	**Sn**	**15 23 54.5**	**-0.9**
PVAQ				A	A	15 23 55.4	
	91nm,0.1s						
PVAQ	**Vaqueiros**	**1.01**	**357**	P	**Pn**	**15 23 42.4**	**+0.1**
PVAQ				S	**Sn**	**15 23 54.5**	**-0.9**
	91nm,0.1s						
PVAQ	**Vaqueiros**	**1.01**	**357**	P	**Pn**	**15 23 42.5**	**+0.1**
PVAQ				S	**Sn**	**15 23 56.3**	**+0.9**
EGRO	**El Granado**	**1.15**	**6**	⇓P	**Pn**	**15 23 44.5**	**+0.3**
	14nm,0.1s,SNR=18						
EGRO				S	**Sn**	**15 23 58.3**	**-0.5**
	65nm,0.1s,SNR=33						
PFVI	**Vila Bisbo**	**1.21**	**308**	⇓*e*P	**Pn**	**15 23 44.9**	**-0.1**
PFVI				*e*S	**Sn**	**15 23 59.0**	**-1.2**
PFVI				A	A	15 24 02.6	
	39nm,0.2s						
PFVI	**Vila Bisbo**	**1.21**	**308**	P	**Pn**	**15 23 44.9**	**-0.1**
	4.6nm,0.1s,SNR=8.7						
PFVI				S	**Sn**	**15 23 58.9**	**-1.2**
	61nm,0.1s,SNR=5.6						
PFVI	**Vila Bisbo**	**1.21**	**308**	P	**Pn**	**15 23 44.9**	**-0.1**
PFVI				S	**Sn**	**15 24 01.8**	**+1.7**
MORF	**Marmelete**	**1.22**	**319**	*e*P	**Pn**	**15 23 45.0**	**-0.3**
MORF				*e*S	**Sn**	**15 23 59.0**	**-1.6**
MORF				AML	AML	15 24 00.8	
	comp=N,74nm,0.1s						
MORF	**Marmelete**	**1.22**	**319**	⇓*e*P	**Pn**	**15 23 45.0**	**-0.3**
MORF				*e*S	**Sn**	**15 23 59.6**	**-1.0**
MORF				A	A	15 23 59.7	
	comp=N,68nm,0.1s						
MORF	**Marmelete**	**1.22**	**319**	P	**Pn**	**15 23 45.0**	**-0.3**
MORF				S	**Sn**	**15 23 59.6**	**-1.0**
	comp=N,68nm,0.1s						
PCVE	**Castro Verde**	**1.28**	**346**	*e*P	**Pn**	**15 23 46.2**	**+0.2**
PCVE				*e*S	**Sn**	**15 24 01.1**	**-0.9**
PCVE				A	A	15 24 01.6	
	comp=N,50nm,0.2s						
PCVE	**Castro Verde**	**1.28**	**346**	P	**Pn**	**15 23 46.2**	**+0.2**
PCVE				S	**Sn**	**15 24 01.1**	**-0.9**
	comp=N,50nm,0.2s						
PTEO	**Sao Teotonio**	**1.44**	**323**	⇓*i*P	**Pn**	**15 23 48.4**	**+0.2**
PTEO				*e*S	**Sn**	**15 24 04.8**	**-1.2**
PTEO				A	A	15 24 07.3	
	comp=N,18nm,0.6s						
PTEO	**Sao Teotonio**	**1.44**	**323**	P	**Pn**	**15 23 48.4**	**+0.2**
PTEO				S	**Sn**	**15 24 04.8**	**-1.2**
	comp=N,9.1nm,0.6s						
ESPR	**Espera**	**1.52**	**71**	⇑P	**Pn**	**15 23 49.9**	**+0.7**
	comp=N,16nm,0.2s,SNR=18						
ESPR				S	**Sn**	**15 24 07.8**	**+0.1**
	comp=N,71nm,0.3s,SNR=6.6						
EMIN	**Mina Concepcio**	**1.58**	**29**	⇑P	**Pn**	**15 23 50.1**	**0.0**
	comp=N,0.7nm,0.1s,SNR=18						
EMIN				S	**Sn**	**15 24 08.3**	**-1.0**
	comp=N,12nm,0.1s,SNR=18						
PBEJ	**Beja**	**1.65**	**354**	*e*P	**Pn**	**15 23 52.1**	**+1.1**
PBEJ				*e*S	**Sn**	**15 24 09.9**	**-1.0**
PBEJ				A	A	15 24 11.3	
	comp=N,16nm,0.2s						
PBEJ	**Beja**	**1.65**	**354**	P	**Pn**	**15 23 52.1**	**+1.1**
PBEJ				S	**Sn**	**15 24 09.9**	**-1.0**
	comp=N,8.1nm,0.2s						
PBAR	**Barrancos**	**1.85**	**15**	*e*Pn	**Pn**	**15 23 54.0**	**+0.2**
PBAR				*e*Sn	**Sn**	**15 24 14.5**	**-1.4**
PBAR				A	A	15 24 23.6	
	comp=N,27nm,0.4s						
PBAR	**Barrancos**	**1.85**	**15**	P	**Pn**	**15 23 54.0**	**+0.2**
PBAR				S	**Sn**	**15 24 14.5**	**-1.4**
	comp=N,27nm,0.4s						
PNCL	**Nicolau / Gran**	**1.86**	**338**	⇓*i*Pn	**Pn**	**15 23 54.0**	**0.0**
PNCL				*e*Sn	**Sn**	**15 24 14.7**	**-1.5**
PNCL				A	A	15 24 17.9	
	comp=N,14nm,0.2s						
PNCL	**Nicolau / Gran**	**1.86**	**338**	P	**Pn**	**15 23 54.0**	**0.0**
PNCL				S	**Sn**	**15 24 14.7**	**-1.5**
	comp=N,14nm,0.2s						
CEU	**Ceuta**	**1.90**	**104**	*e*S	**Sn**	**15 24 13.6**	**-3.6**
CEU	**Ceuta**	**1.90**	**104**	*e*P	**Sn**	**15 24 13.6**	**-3.6**
CEUT	**Ceuta**	**1.94**	**104**	P	**Pn**	**15 23 55.1**	**+0.1**
CEUT				S	**Sn**	**15 24 16.6**	**-1.7**
SMIR	**Smir Dam**	**1.96**	**110**	P	**Pn**	**15 23 55.1**	**-0.2**
SMIR				S	**Sn**	**15 24 19.0**	**+0.2**
CHEFC	**Chefchaouen**	**2.27**	**124**	P	**Pn**	**15 23 59.4**	**-0.3**
CHEFC				S	**Sn**	**15 24 28.7**	**+2.2**
EMIJ	**Mijas**	**2.32**	**85**	P	**Pn**	**15 24 00.9**	**+0.6**
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**15 24 27.8**	**+0.2**
	comp=N,5.5nm,0.3s,SNR=7.9						
HORN	**Hornachuelos**	**2.40**	**52**	P	**Pn**	**15 24 02.1**	**+0.7**
HORN				S	**Sn**	**15 24 33.2**	**+3.7**
ECAB	**El Cabril**	**2.45**	**46**	⇑P	**Pn**	**15 24 02.1**	**0.0**
	comp=N,0.6nm,0.1s,SNR=18						
ECAB				S	**Sn**	**15 24 29.4**	**-1.4**
	comp=N,3.0nm,0.1s,SNR=6.5						
PESTR	**Estremoz**	**2.48**	**1**	*e*Sn	**Sn**	**15 24 29.9**	**-1.5**
PMTG	**Montargil**	**2.72**	**350**	*e*Pn	**Pn**	**15 24 05.8**	**+0.1**
PMTG				*e*Sn	**Sn**	**15 24 35.5**	**-1.8**
PMTG				A	A	15 24 38.9	
	comp=N,7.9nm,0.1s						
PMTG	**Montargil**	**2.72**	**350**	P	**Pn**	**15 24 05.8**	**+0.1**
PMTG				S	**Sn**	**15 24 35.5**	**-1.8**
	comp=N,7.9nm,0.1s						
PMAFR	**Mafra**	**2.87**	**334**	*e*Pn	**Pn**	**15 24 08.3**	**+0.4**
PMAFR				*e*Sn	**Sn**	**15 24 39.0**	**-2.3**
PMAFR				A	A	15 24 40.5	
	comp=N,23nm,0.7s						
PMAFR	**Mafra**	**2.87**	**334**	⇑P	**Pn**	**15 24 08.4**	**+0.4**
	comp=N,10nm,0.2s,SNR=18						
PMAFR				S	**Sn**	**15 24 38.9**	**-2.3**
	comp=N,29nm,0.2s,SNR=7.0						
EGOR	**Sierra Gorda,**	**2.93**	**75**	P	**Pn**	**15 24 10.1**	**+1.3**
	comp=N,0.2nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**15 24 42.6**	**-0.1**
	comp=N,3.9nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**3.02**	**53**	⇑P	**Pn**	**15 24 10.4**	**+0.5**
	comp=N,3.1nm,0.1s,SNR=18						
EADA				S	**Sn**	**15 24 43.9**	**-1.1**
	comp=N,15nm,0.1s,SNR=6.1						
PMRV	**Marv??o**	**3.04**	**4**	⇓*e*Pn	**Pn**	**15 24 10.3**	**+0.1**
PMRV				*e*Sn	**Sn**	**15 24 43.1**	**-2.3**
PMRV				A	A	15 24 44.8	
	comp=N,12nm,0.4s						
PMRV	**Marv??o**	**3.04**	**4**	P	**Pn**	**15 24 10.3**	**+0.1**
PMRV				S	**Sn**	**15 24 43.1**	**-2.3**
	comp=N,12nm,0.4s						
ZHG	**ZHG**	**3.05**	**164**	P	**Pn**	**15 24 12.0**	**+1.7**
ZHG				S	**Sn**	**15 24 47.4**	**+1.7**
PTOM	**Tomar**	**3.28**	**350**	*e*Pn	**Pn**	**15 24 13.9**	**+0.4**
PTOM				*e*Sn	**Sn**	**15 24 48.6**	**-2.7**
PTOM				A	A	15 24 51.2	
	comp=N,11nm,0.1s						
PTOM	**Tomar**	**3.28**	**350**	P	**Pn**	**15 24 13.9**	**+0.4**
PTOM				S	**Sn**	**15 24 48.6**	**-2.7**
	comp=N,5.6nm,0.1s						
PCBR	**Castelo Branco**	**3.45**	**2**	*e*Pn	**Pn**	**15 24 16.1**	**+0.3**
PCBR				*e*Sn	**Sn**	**15 24 53.3**	**-2.1**
PCBR				A	A	15 24 54.6	
	comp=N,9.8nm,0.5s						
PCBR	**Castelo Branco**	**3.45**	**2**	P	**Pn**	**15 24 16.1**	**+0.3**
PCBR				S	**Sn**	**15 24 53.3**	**-2.1**
	comp=N,4.9nm,0.5s						
EQUE	**Quentar**	**3.47**	**75**	P	**Pn**	**15 24 17.7**	**+1.5**
	comp=N,1.1nm,0.1s,SNR=5.1						
EQUE				S	**Sn**	**15 24 55.0**	**-1.1**
	comp=N,2.0nm,0.2s						
LCRM	**LCR**	**3.53**	**139**	P	**Pn**	**15 24 18.7**	**+1.5**
LCRM				S	**Sn**	**15 24 57.0**	**-0.7**
AKLM	**AKL**	**3.61**	**120**	P	**Pn**	**15 24 16.0**	**-2.1**
AKLM				S	**Sn**	**15 24 54.6**	**-4.9**
PCAS	**Casmilo, Conde**	**3.72**	**350**	*e*Pn	**Pn**	**15 24 20.1**	**+0.5**

PCAS				*e*Sn	Sn	15 25 00.0	-2.1
PCAS				A	A	15 25 02.0	
	comp=N,4.6nm,0.6s						
PCAS	**Casmilo, Conde**	**3.72**	**350**	P	**Pn**	**15 24 20.1**	**+0.5**
PCAS				S	**Sn**	**15 25 00.0**	**-2.1**
	comp=N,4.6nm,0.6s						
GORA	**Gorafe**	**3.84**	**72**	P	**Pn**	**15 24 22.9**	**+1.6**
	comp=N,4.2nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**15 25 03.8**	**-1.5**
	comp=N,7.8nm,0.1s,SNR=7.9						
EBER	**Berja**	**3.86**	**81**	P	**Pn**	**15 24 22.9**	**+1.3**
	comp=N,0.9nm,0.1s,SNR=6.3						
EBER				S	**Sn**	**15 25 04.6**	**-1.2**
	comp=N,2.2nm,0.2s						
EPLA	**Plasencia**	**3.87**	**18**	P	**Pn**	**15 24 22.2**	**+0.5**
	comp=N,0.4nm,0.0s,SNR=7.9						
EPLA				S	**Sn**	**15 25 03.0**	**-2.9**
	comp=N,9.9nm,0.2s,SNR=8.3						
EQES	**Quesada**	**3.92**	**68**	P	**Pn**	**15 24 22.6**	**+0.3**
	comp=N,1.4nm,0.1s,SNR=21						
EQES				S	**Sn**	**15 25 05.5**	**-1.6**
	comp=N,2.1nm,0.1s						
CZD	**Col de Zad**	**3.98**	**147**	P	**Pn**	**15 24 25.3**	**+2.0**
CZD				S	**Sn**	**15 25 07.6**	**-1.2**
MTE	**Manteigas**	**4.01**	**1**	⇑*e*Pn	**Pn**	**15 24 23.9**	**+0.4**
MTE				*e*Sn	**Sn**	**15 25 06.3**	**-3.0**
MTE				A	A	15 25 08.6	
	comp=N,8.1nm,0.4s						
MTE	**Manteigas**	**4.01**	**1**	P	**Pn**	**15 24 23.9**	**+0.4**
MTE				S	**Sn**	**15 25 06.3**	**-3.0**
	comp=N,4.1nm,0.4s						
PAB	**San Pablo**	**4.09**	**39**	P	**Pn**	**15 24 24.8**	**+0.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**15 25 08.7**	**-2.6**
	comp=N,1.1nm,0.1s,SNR=7.9						
MD31	**MD31**	**4.24**	**145**	P	**Pn**	**15 24 27.1**	**+0.3**
MD31				S	**Sn**	**15 25 12.1**	**-3.0**
MDT	**Midelt**	**4.36**	**144**	P	**Pn**	**15 24 29.0**	**+0.5**
MDT				S	**Sn**	**15 25 14.2**	**-3.8**
ESDC	**Sonseca Array**	**4.38**	**40**	P	**Pn**	**15 24 28.9**	**+0.2**
	comp=N,0.5nm,0.3s,baz=226,slow=13,SNR=4.5						
ESDC				S	**Sn**	**15 25 15.4**	**-3.1**
	comp=N,1.1nm,0.3s,baz=225,slow=23,SNR=5.1						
SESP	**Santiago Espad**	**4.42**	**65**	P	**Pn**	**15 24 30.1**	**+0.8**
	SNR=7.9						
SESP				S	**Sn**	**15 25 17.5**	**-2.1**
	comp=N,3.8nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**4.42**	**65**	P	**Pn**	**15 24 29.9**	**+0.6**
SESP				S	**Sn**	**15 25 19.1**	**-0.5**
JBK	**JBK**	**4.63**	**115**	P	**Pn**	**15 24 31.1**	**-1.1**
JBK				S	**Sn**	**15 25 22.4**	**-2.4**
MVO	**Moncorvo**	**4.79**	**6**	*e*Pn	**Pn**	**15 24 34.4**	**0.0**
MVO				*e*Sn	**Sn**	**15 25 24.8**	**-3.9**
MVO				A	A	15 25 27.0	
	comp=N,15nm,0.7s						
MVO	**Moncorvo**	**4.79**	**6**	P	**Pn**	**15 24 34.4**	**0.0**
	comp=N,0.6nm,0.0s,SNR=5.8						
MVO				S	**Sn**	**15 25 25.1**	**-3.6**
	comp=N,18nm,0.1s,SNR=11						
POLO	**Lamas de Olo**	**4.98**	**359**	*e*Pn	**Pn**	**15 24 36.9**	**0.0**
POLO				*e*Sn	**Sn**	**15 25 30.1**	**-3.2**
POLO				A	A	15 25 32.0	
	comp=N,3.9nm,0.4s						
POLO	**Lamas de Olo**	**4.98**	**359**	P	**Pn**	**15 24 36.9**	**0.0**
POLO				S	**Sn**	**15 25 30.1**	**-3.2**
	comp=N,3.9nm,0.4s						
GUD	**Guadarrama**	**5.05**	**32**	P	**Pn**	**15 24 38.6**	**+0.6**
	comp=N,0.5nm,0.1s,SNR=9.1						
GUD				S	**Sn**	**15 25 31.8**	**-3.4**
	comp=N,1.2nm,0.1s,SNR=5.8						
OUK	**Oukaimeden**	**5.17**	**182**	P	**Pn**	**15 24 40.1**	**+0.3**
OUK				S	**Sn**	**15 25 35.1**	**-3.4**
PCAB	**Cabril**	**5.32**	**357**	*e*Pn	**Pn**	**15 24 41.5**	**-0.1**
PCAB				*e*Sn	**Sn**	**15 25 37.5**	**-4.2**
PCAB				A	A	15 25 40.7	
	comp=N,4.3nm,0.6s						
PCAB	**Cabril**	**5.32**	**357**	P	**Pn**	**15 24 41.5**	**-0.1**
PCAB				S	**Sn**	**15 25 37.5**	**-4.2**
	comp=N,2.2nm,0.6s						
ETOB	**Tobarra**	**5.34**	**63**	P	**Pn**	**15 24 41.6**	**-0.3**
	comp=N,1.8nm,0.1s,SNR=16						
ETOB				S	**Sn**	**15 25 39.2**	**-3.1**
	comp=N,1.4nm,0.1s						
ELOB	**Lobios**	**5.48**	**357**	P	**Pn**	**15 24 43.9**	**0.0**
	comp=N,0.5nm,0.1s,SNR=7.6						
ELOB				S	**Sn**	**15 25 41.0**	**-4.6**
	comp=N,3.6nm,0.1s,SNR=8.2						
OUZM	**OUZ**	**5.51**	**172**	P	**Pn**	**15 24 45.3**	**+0.9**
OUZM				S	**Sn**	**15 25 44.4**	**-2.2**
ECAL	**Calabor**	**5.59**	**7**	P	**Pn**	**15 24 45.5**	**+0.2**
	comp=N,0.9nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**15 25 43.7**	**-4.6**
	comp=N,8.8nm,0.2s,SNR=8.7						
PGAV	**Gavieira, Arco**	**5.59**	**355**	*e*Pn	**Pn**	**15 24 45.4**	**+0.1**
PGAV				*e*Sn	**Sn**	**15 25 45.7**	**-2.7**
PGAV				A	A	15 25 47.6	
	comp=N,2.1nm,0.4s						
PGAV	**Gavieira, Arco**	**5.59**	**355**	P	**Pn**	**15 24 45.4**	**+0.1**
PGAV				S	**Sn**	**15 25 45.7**	**-2.7**
	comp=N,2.1nm,0.4s						
TTIG	**Tnine Tigouga,**	**5.86**	**187**	P	**Pn**	**15 24 46.2**	**-3.0**
TTIG				S	**Sn**	**15 25 48.4**	**-6.8**
ETOR	**Torete**	**6.22**	**43**	P	**Pn**	**15 24 54.9**	**+0.9**
	comp=N,2.3nm,0.2s,SNR=12						
ETOR				S	**Sn**	**15 25 59.4**	**-4.5**
	comp=N,0.9nm,0.1s						
EAGO	**Agolada(Pontev**	**6.42**	**357**	P	**Pn**	**15 24 56.4**	**-0.2**
	comp=N,0.8nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**6.89**	**53**	P	**Pn**	**15 25 04.4**	**+1.2**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**15 26 15.6**	**-4.9**
	comp=N,0.7nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**7.56**	**24**	P	**Pn**	**15 25 13.1**	**+0.8**
	comp=N,0.7nm,9.0s,SNR=7.9						
ELAN				S	**Sn**	**15 26 30.0**	**-6.8**
	comp=N,13nm,3.0s,SNR=7.9						
EORO	**Oroz-Betelu**	**8.13**	**35**	P	**Pn**	**15 25 21.3**	**+1.2**
	comp=N,6.0nm,2.7s,SNR=7.9						
EALK	**Alkurruntz**	**8.29**	**33**	P	**Pn**	**15 25 23.6**	**+1.2**
	comp=N,1.7nm,2.1s,SNR=7.9						
ATE	**Arette**	**8.56**	**37**	P	**Pn**	**15 25 26.5**	**+0.5**
	comp=N,2.0nm,3.1s,SNR=7.9						

MAN 22 15:23:55.9, 17.°66N×120.°30E, h1^{km}, mb3.9, ML2.6, MS2.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.40**	**92**	*e*P	Pg	15 24 04.2	+0.7
ABRA				*e*S	Sb	15 24 16.3	+4.0
APYP	**Conner**	**0.93**	**77**	*e*P	Pg	15 24 13.1	-0.5
APYP				*e*S	Sb	15 24 28.0	+0.5
CVP	**Callao Caves**	**1.46**	**88**	⇓*i*P	Pn	15 24 22.6	-0.8
CVP				*i* S	Sg	15 24 42.5	-0.2
SMPP	**San Manuel, Pa**	**1.55**	**166**	*e*P	Pn	15 24 24.4	-0.2
CAUP	**Cauayan**	**1.62**	**116**	*e*P	Pn	15 24 25.6	-0.1

MAN 22 15:27:25.7, 12.°31N×125.°00E, h24^{km}, mb4.0, ML2.7, MS2.3, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.38**	**302**	*e*P	Pb	15 27 34.4	+0.5
CNP				*e*S	Sb	15 27 40.9	+1.4
BESP	**Borongan**	**0.82**	**148**	*e*P	Pb	15 27 41.5	+0.1
BESP				*e*S	Sn	15 27 53.4	+0.2
PLP	**Palo**	**1.14**	**181**	⇑*e*P	Pn	15 27 46.3	+0.2
PLP				*e*S	Sb	15 28 01.2	+0.2
PVCP	**Virac**	**1.52**	**327**	*e*P	Pn	15 27 51.5	+0.2

ISCJB ***22*** *15:29:18.6±0.3, 41.°70S±0.°03×174.°48E±0.°04, h18^{km}, mb3.5/2, Error ellipse: s-maj=5.3km s-min=2.6km az=141.7*

WEL ***22*** *15:29:18.2, 41.°6S±0.°8×174.°4E±0.°8, h12^{km}±2^{km}, M3.6/17, ML3.9/16, MLv3.6/17, Error ellipse: s-maj=0.0km s-min=0.0km az=135.3*

IDC ***22*** *15:29:18.0±1.5, 41.°32S×174.°07E, h0^{km}, mb3.6/2, mb1 3.6/4, mb1mx3.5/30, mbtmp3.4/4, ML2.8/2, Error ellipse: s-maj=44.0km s-min=19.9km az=133.0*

ISC 22 15:29:18.7±0.7, 41.°54S±0.°02×174.°33E±0.°02, h18^{km}, n96, σ1^{s}49/100, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.23**	**202**	P	**Pg**	**15 29 23.6**	**-0.5**
CMWZ				S	**Sg**	**15 29 28.2**	**+0.3**
TUWZ	**Tuamarina**	**0.31**	**290**	P	**Pb**	**15 29 25.9**	**+0.2**
TUWZ				S	**Sg**	**15 29 31.9**	**+1.9**
TCW	**Tory Channel**	**0.33**	**353**	P	**Pb**	**15 29 26.0**	**-0.1**
BSWZ	**Blackbirch Sta**	**0.38**	**242**	P	**Pg**	**15 29 23.3**	**-3.4**
BSWZ				P	**Pb**	**15 29 26.8**	**-0.3**
WEL	**Wellington**	**0.42**	**53**	P	**Pg**	**15 29 27.0**	**-0.3**
BHW	**Baring Head**	**0.43**	**73**	P	**Pg**	**15 29 26.7**	**-0.7**
BHW				S	**Sg**	**15 29 32.9**	**-0.4**
PLWZ	**Palliser**	**0.70**	**93**	P	**Pb**	**15 29 31.4**	**-0.9**
CAW	**Cannon Point**	**0.70**	**53**	P	**Pb**	**15 29 31.9**	**-0.5**
MSWZ	**Moikau Station**	**0.70**	**80**	P	**Pb**	**15 29 31.6**	**-0.8**
NNZ	**Nelson**	**0.78**	**294**	P	**Pn**	**15 29 34.5**	**-0.4**
DUWZ	**D’Urville Isla**	**0.80**	**337**	P	**Pn**	**15 29 34.7**	**-0.4**
PAWZ	**Paruwai Farm**	**0.84**	**80**	P	**Pb**	**15 29 34.1**	**-0.7**
OGWZ	**Otaki Gorge**	**0.96**	**42**	P	**Pb**	**15 29 36.5**	**-0.3**
MTW	**Mount Morrison**	**0.96**	**67**	P	**Pb**	**15 29 36.5**	**-0.3**
TRWZ	**Traveller**	**1.03**	**83**	P	**Pb**	**15 29 37.8**	**-0.2**
KHZ	**Kahutara**	**1.06**	**214**	P	**Pn**	**15 29 38.7**	**+0.1**
THZ	**Tophouse**	**1.09**	**258**	P	**Pg**	**15 29 39.7**	**-0.2**
HOWZ	**Holdsworth Sta**	**1.10**	**55**	P	**Pb**	**15 29 39.2**	**-0.1**
TMWZ	**Te Maipa**	**1.25**	**70**	P	**Pn**	**15 29 40.8**	**-0.6**
MRZ	**Mangatainoka R**	**1.29**	**48**	P	**Pn**	**15 29 42.1**	**+0.3**
TIWZ	**Tintock**	**1.40**	**58**	P	**Pn**	**15 29 43.7**	**+0.3**
OHWZ	**Ohakea**	**1.52**	**30**	P	**Pg**	**15 29 47.3**	**-0.8**
QRZ	**Quartz Range**	**1.53**	**297**	P	**Pg**	**15 29 47.8**	**-0.4**
CPWZ	**Castlepoint**	**1.54**	**67**	P	**Pg**	**15 29 50.1**	**+1.6**
POWZ	**Post Office Ro**	**1.58**	**44**	P	**Pn**	**15 29 46.7**	**+0.9**
PRWZ	**Pori Road**	**1.58**	**52**	P	**Pn**	**15 29 46.4**	**+0.5**
BFZ	**Birch Farm**	**1.68**	**60**	P	**Pn**	**15 29 46.7**	**-0.5**
GVZ	**Greta Valley S**	**1.72**	**213**	P	**Pn**	**15 29 47.7**	**-0.1**
WAZ	**Wanganui**	**1.85**	**16**	P	**Pg**	**15 29 52.6**	**-1.6**
DVHZ	**Dannevirke**	**1.86**	**49**	P	**Pn**	**15 29 49.6**	**-0.2**
DSZ	**Denniston Nort**	**1.90**	**263**	P	**Pb**	**15 29 53.1**	**+0.1**
TSZ	**Takapari Road**	**1.93**	**41**	P	**Pn**	**15 29 51.1**	**+0.5**
ANWZ	**Angora Road**	**1.95**	**57**	P	**Pn**	**15 29 51.2**	**+0.4**
LTZ	**Lake Taylor**	**1.97**	**230**	P	**Pn**	**15 29 51.8**	**+0.6**
AMCZ	**Amberley**	**2.06**	**217**	P	**Pg**	**15 30 00.2**	**+1.9**
LREZ	**Lake Rotokare**	**2.07**	**2**	P	**Pg**	**15 29 57.2**	**-1.4**
NMEZ	**Namu Road**	**2.15**	**351**	P	**Pg**	**15 29 58.1**	**-1.9**
PNHZ	**Pukenui**	**2.16**	**42**	P	**Pn**	**15 29 54.1**	**+0.3**
WPHZ	**Waipukurau**	**2.17**	**48**	P	**Pn**	**15 29 54.9**	**+0.9**
KHEZ	**Kahui Hut**	**2.25**	**354**	P	**Pg**	**15 29 59.7**	**-2.2**
NBEZ	**Newall Road No**	**2.29**	**351**	P	**Pb**	**15 29 59.1**	**-0.4**
MTVZ	**Mangateitei**	**2.32**	**22**	P	**Pb**	**15 29 59.1**	**-0.9**
DREZ	**Durham Road**	**2.35**	**358**	P	**Pb**	**15 30 00.8**	**+0.3**
PKE	**Pukeiti**	**2.35**	**354**	P	**Pb**	**15 30 00.1**	**-0.5**
PKVZ	**Pokaka**	**2.38**	**19**	P	**Pg**	**15 30 02.2**	**-2.1**
OKCZ	**Okains Bay**	**2.38**	**203**	P	**Pn**	**15 29 55.5**	**-1.3**
MOVZ	**Moawhango**	**2.39**	**28**	P	**Pb**	**15 29 59.0**	**-2.2**
CRLZ	**Canterbury Las**	**2.40**	**211**	P	**Pn**	**15 29 59.5**	**+2.5**
VRZ	**Vera Road**	**2.43**	**8**	P	**Pb**	**15 30 01.4**	**-0.5**
BHHZ	**Black Hill Sta**	**2.44**	**33**	P	**Pn**	**15 29 58.9**	**+1.3**
PXZ	**Pawanui**	**2.44**	**53**	P	**Pn**	**15 29 57.3**	**-0.4**
DRZ	**Dome Shelter**	**2.45**	**23**	P	**Pg**	**15 30 03.9**	**-1.8**
KRHZ	**Kereru**	**2.45**	**40**	P	**Pn**	**15 29 57.8**	**0.0**
WHVZ	**Whangaehu Hut**	**2.45**	**24**	P	**Pb**	**15 30 00.4**	**-1.9**
INZ	**Inchbonnie**	**2.45**	**240**	P	**Pn**	**15 30 00.2**	**+2.4**
FWVZ	**Far West T-bar**	**2.46**	**23**	P	**Pb**	**15 30 00.8**	**-1.8**
OXZ	**Oxford**	**2.46**	**223**	P	**Pn**	**15 29 57.7**	**-0.3**
TUVZ	**Tukino**	**2.48**	**25**	P	**Pb**	**15 30 03.5**	**+0.7**
MQZ	**McQueen’s Vall**	**2.50**	**209**	P	**Pn**	**15 29 56.6**	**-1.8**
NGZ	**Ngauruhoe**	**2.55**	**23**	P	**Pb**	**15 30 02.0**	**-2.1**
WTVZ	**West Tongariro**	**2.60**	**22**	P	**Pb**	**15 30 02.8**	**-2.1**
TWVZ	**Taurewa**	**2.60**	**19**	P	**Pb**	**15 30 03.8**	**-1.1**
KAHZ	**Kahuranaki**	**2.60**	**49**	P	**Pn**	**15 30 00.4**	**+0.4**
KRVZ	**Karewarewa**	**2.64**	**23**	P	**Pb**	**15 30 03.7**	**-1.8**
KWHZ	**Kaweka Forest**	**2.65**	**38**	P	**Pn**	**15 30 01.4**	**+0.8**
KATZ	**Kakaramea**	**2.76**	**23**	P	**Pb**	**15 30 07.9**	**+0.3**
CKHZ	**Cape Kidnapper**	**2.81**	**49**	P	**Pn**	**15 30 03.1**	**+0.4**
RITZ	**Rihia Road**	**2.81**	**25**	P	**Pb**	**15 30 10.0**	**+1.6**
RATZ	**Rangitukua**	**2.89**	**23**	P	**Pb**	**15 30 11.0**	**+1.3**
BKZ	**Black Stump Fm**	**2.89**	**36**	P	**Pn**	**15 30 04.1**	**+0.2**
WATZ	**Wairara**	**3.02**	**21**	P	**Pb**	**15 30 12.7**	**+0.7**
HIZ	**Hauiti**	**3.05**	**8**	P	**Pb**	**15 30 09.7**	**-2.7**
WVZ	**Waitaha Valley**	**3.08**	**239**	P	**Pb**	**15 30 12.3**	**-0.6**
MRHZ	**Matea Rd**	**3.14**	**31**	P	**Pn**	**15 30 08.0**	**+0.7**
MRHZ				P	**Pb**	**15 30 15.2**	**+1.2**
RPZ	**Rata Peaks**	**3.25**	**227**	Pn	**Pn**	**15 30 08.5**	**-0.3**
	1.4nm,0.3s,baz=58,slow=2.6,SNR=5.2						
RPZ				Pg	**Pb**	**15 30 16.9**	**+1.0**
	5.1nm,0.3s,baz=40,slow=3.3,SNR=19						
RPZ				Sn	**Sn**	**15 30 45.8**	**-1.3**
	2.6nm,0.3s,baz=57,slow=16,SNR=12						
RPZ				Lg	Lg	15 30 57.2	
	1.4nm,0.3s,baz=31,slow=22,SNR=0.8						
MTHZ	**Maungataniwha**	**3.30**	**36**	P	**Pb**	**15 30 15.4**	**-1.4**
TLZ	**Tolley Road**	**3.33**	**17**	P	**Pn**	**15 30 13.1**	**+3.1**
FOZ	**Fox Glacier**	**3.89**	**238**	P	**Pb**	**15 30 23.2**	**-3.5**
TOZ	**Tahuroa Road**	**3.91**	**14**	P	**Pb**	**15 30 23.0**	**-4.1**
URZ	**Urewera**	**3.91**	**34**	Pn	**Pn**	**15 30 16.9**	**-1.0**
	0.5nm,0.3s,baz=221,slow=9.3,SNR=7.5						
URZ				Pg	**Pb**	**15 30 27.6**	**+0.5**
	3.5nm,0.3s,baz=221,slow=9.3,SNR=14						
URZ				Sn	**Sn**	**15 31 02.8**	**-0.5**
	2.9nm,0.3s,baz=288,slow=20,SNR=3.3						
URZ				Lg	Lg	15 31 17.0	
	0.5nm,0.3s,baz=109,slow=17,SNR=1.1						
URZ	**Urewera**	**3.91**	**34**	P	**Pn**	**15 30 19.2**	**+1.3**
MWZ	**Matawai**	**4.03**	**39**	P	**Pn**	**15 30 19.1**	**-0.5**
TWGZ	**Tauwhareparae**	**4.38**	**41**	P	**Pn**	**15 30 27.3**	**+3.0**
RUGZ	**Raukumara Rang**	**4.40**	**37**	P	**Pn**	**15 30 26.2**	**+1.4**
ODZ	**Otahua Downs**	**4.42**	**216**	P	**Pn**	**15 30 24.0**	**-0.9**
AWAZ	**Awhitu Peninsu**	**4.47**	**3**	P	**Pn**	**15 30 29.5**	**+4.0**
MKAZ	**Moumakai**	**4.47**	**9**	P	**Pn**	**15 30 29.4**	**+3.8**
ETAZ	**East Tamaki Re**	**4.60**	**6**	P	Pn	15 30 32.1	+4.8
HAZ	**Te Kaha**	**4.62**	**36**	P	**Pn**	**15 30 29.3**	**+1.6**
WIAZ	**Waiheke Island**	**4.78**	**8**	P	Pb	15 30 36.5	-5.3
MBAZ	**Motutapu North**	**4.78**	**5**	P	Pb	15 30 35.9	-6.1
JCZ	**Jackson Bay**	**4.80**	**236**	P	Pn	15 30 35.4	+5.2
OUZ	**Omahuta**	**6.33**	**355**	P	Pn	15 30 56.7	+5.6
ASAR	**Alice Springs**	**38.03**	**285**	P	**P**	**15 36 37.3**	**+1.3**
	0.8nm,1.1s,baz=127,slow=7.0,SNR=4.3						
WRA	**Warramunga Arr**	**40.08**	**290**	P	**P**	**15 36 51.9**	**-1.3**
	1.1nm,0.8s,baz=122,slow=8.6,SNR=3.0						
TORD	**Torodi Ar. Bea**	**151.00**	**195**	PKPbc	**PKiKP**	**15 49 14.4**	**+3.0**
	0.3nm,0.8s,baz=219,slow=1.2,SNR=3.0						

MEX 22 15:34:05.9±0.5, 15.°80N×93.°45W, h102^{km}±5^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.24**	**112**	*e*P	Pn	15 34 19.1	-1.4
PCIG				*e*S	Sn	15 34 29.5	-1.8
TGIG		**1.03**	**18**	*e*P	Pn	15 34 26.2	-0.6
TGIG				*e*S	Sn	15 34 40.5	-2.1
CCIG	**Comitan**	**1.35**	**69**	*i* P	Pn	15 34 29.4	-1.2
CCIG				*i* S	Sn	15 34 48.1	-1.2
CMIG	**Matias Romero**	**1.89**	**313**	*i* P	Pn	15 34 35.9	-1.2
CMIG				*i* S	Sn	15 34 59.0	-1.8

IDC 22 15:46:37.3±2.1, 14.°80N×96.°53E, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.3/33, mbtmp3.7/2, ML3.1/1, Error ellipse: s-maj=37.0km s-min=22.5km az=96.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.31**	**32**	Pn	Pn	15 47 46.0	+1.8
	0.3nm,0.3s,baz=210,slow=28,SNR=5.7						
CMAR				Lg	Lg	15 48 52.0	
	0.4nm,0.3s,baz=217,slow=34,SNR=10						
WRA	**Warramunga Arr**	**50.74**	**132**	P	P	15 55 39.8	+0.4
	0.8nm,0.6s,baz=306,slow=8.9,SNR=3.7						
ASAR	**Alice Springs**	**52.89**	**136**	P	P	15 55 54.7	-0.7
	0.4nm,0.5s,baz=309,slow=6.9,SNR=17						

GUC 22 16:12:07.9±0.6, 22.°45S×70.°50W, h28^{km}±3^{km}, ML3.5, 6C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**IPOC Station P**	**0.35**	**70**	⇓*e*P	Pb	16 12 15.9	-0.1
PB04				*i* S	Sb	16 12 21.2	-0.3
PB04				IAML		16 12 22.8	
	comp=E,6µm,0.3s						
PB05	**IPOC Station P**	**0.48**	**145**	⇓*e*P	Pb	16 12 17.6	-0.5
PB05				*i* S	Sb	16 12 24.6	-0.5
PB05				IAML		16 12 25.0	
	comp=N,5µm,0.2s						
PB03	**IPOC Station P**	**0.80**	**60**	⇓*e*P	Pb	16 12 22.8	-0.6
PB03				*i* S	Sb	16 12 34.0	0.0
PB03				IAML		16 12 37.8	
	comp=N,1µm,0.4s						
PB06	**IPOC Station P**	**0.90**	**106**	⇓*e*P	Pn	16 12 24.3	-0.5
PB06				*i* S	Sb	16 12 36.3	-0.3
PB06				IAML		16 12 36.9	
	comp=N,3µm,0.3s						
PB07	**IPOC Station P**	**0.92**	**38**	⇓*e*P	Pn	16 12 24.6	-0.5
PB07				*i* S	Sb	16 12 37.0	-0.3
PB07				IAML		16 12 39.0	
	comp=E,2µm,0.5s						
PB10	**IPOC Station P**	**1.06**	**183**	⇑*e*P	Pn	16 12 26.0	-0.9
PB10				*e*S	Sn	16 12 40.1	-0.6
PB10				IAML		16 12 46.1	
	comp=E,1µm,0.3s						
PB15	**IPOC Station P**	**1.21**	**129**	⇓*e*P	Pn	16 12 29.1	-0.1
PB15				*i* S	Sb	16 12 45.4	-0.4
PB15				IAML		16 12 53.7	
	comp=N,5µm,0.2s						
PB02	**IPOC Station P**	**1.26**	**27**	⇑*e*P	Pn	16 12 29.9	+0.2
PB02				*i* S	Sn	16 12 46.2	+0.4
PB02				IAML		16 12 52.0	
	comp=E,2µm,0.3s						
PB09	**IPOC Station P**	**1.34**	**61**	⇑*e*P	Pn	16 12 31.2	+0.3
PB09				*i* S	Sb	16 12 49.1	-0.1
PB09				IAML		16 12 56.1	
	comp=E,1µm,0.7s						
LVC	**Limon Verde**	**1.48**	**96**	⇓*e*P	Pb	16 12 34.2	-0.8
LVC				*e*S	Sb	16 12 53.2	-0.3
PB01	**IPOC Station P**	**1.69**	**34**	⇑*e*P	Pn	16 12 36.2	+0.6
PB01				*e*S	Sb	16 12 58.6	-0.7
PB01				IAML		16 13 02.2	
	comp=E,565nm,0.6s						
PB08	**IPOC Station P**	**2.62**	**29**	*e*P	Pn	16 12 50.9	+2.1
PB08				*i* S	Sb	16 13 24.2	-2.2
PB08				IAML		16 13 31.7	
	comp=N,236nm,0.3s						
PB11	**IPOC Station P**	**2.79**	**17**	⇑*i*P	Pn	16 12 51.2	+0.3
PB11				*i* S	Sb	16 13 31.7	+0.6
PB11				IAML		16 13 40.6	
	comp=N,386nm,0.6s						
GO02	**Mina Guanaco**	**2.82**	**163**	⇑*i*P	Pn	16 12 52.1	+0.6
GO02				*e*S	Sn	16 13 27.0	+2.2
GO02				IAML		16 13 36.0	
	comp=E,392nm,0.4s						

WEL 22 16:29:43.5, 42°S±40°×17°3E±4°3, h5^{km}±179^{km}, M3.5/7, ML3.6/7, MLv3.5/7, Error ellipse: s-maj=0.1km s-min=0.0km az=48.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.90**	**41**	P	Pg	16 30 01.2	+0.3
CMWZ	**Cape Campbell**	**1.06**	**53**	P	Pg	16 30 01.7	-2.2
DSZ	**Denniston Nort**	**1.16**	**304**	P	Pn	16 30 07.3	+0.9
TUWZ	**Tuamarina**	**1.16**	**34**	P	Pg	16 30 02.1	-3.7
NNZ	**Nelson**	**1.20**	**11**	P	Pn	16 30 10.3	+3.3
CRLZ	**Canterbury Las**	**1.22**	**196**	P	Pn	16 30 07.5	+0.3
OKCZ	**Okains Bay**	**1.32**	**181**	P	Pn	16 30 08.5	-0.2
MQZ	**McQueen’s Vall**	**1.34**	**194**	P	Pn	16 30 06.8	-2.1
TCW	**Tory Channel**	**1.48**	**37**	P	Pb	16 30 11.7	+0.1
BHW	**Baring Head**	**1.66**	**54**	P	Pg	16 30 15.4	+0.1
DUWZ	**D’Urville Isla**	**1.72**	**22**	P	Pn	16 30 14.0	0.0
CAW	**Cannon Point**	**1.96**	**50**	P	Pn	16 30 15.1	-2.4

WEL 22 16:31:09.6, 42°S±2°×17°4E±°, h12^{km}±2^{km}, M3.9/59, ML3.8/7, MLv3.9/59, Error ellipse: s-maj=0.0km s-min=0.0km az=152.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.07**	**182**	P	Pg	16 31 12.8	+0.6
BSWZ	**Blackbirch Sta**	**0.26**	**261**	P	Pb	16 31 15.7	-0.5
BSWZ				S	Sb	16 31 20.4	-0.3
TUWZ	**Tuamarina**	**0.32**	**320**	P	Pg	16 31 16.6	+0.5
TUWZ				S	Sb	16 31 21.8	-0.5
TCW	**Tory Channel**	**0.47**	**6**	P	Pg	16 31 19.2	+0.4
BHW	**Baring Head**	**0.56**	**62**	P	Pb	16 31 21.3	0.0
WEL	**Wellington**	**0.57**	**47**	P	Pb	16 31 21.4	-0.1
NNZ	**Nelson**	**0.78**	**306**	P	Pg	16 31 24.8	+0.1
PLWZ	**Palliser**	**0.79**	**83**	P	Pn	16 31 26.1	-0.5
MSWZ	**Moikau Station**	**0.82**	**72**	P	Pb	16 31 26.3	+0.5
CAW	**Cannon Point**	**0.85**	**49**	P	Pb	16 31 26.4	0.0
KHZ	**Kahutara**	**0.90**	**214**	P	Pn	16 31 28.7	+0.7
DUWZ	**D’Urville Isla**	**0.90**	**346**	P	Pb	16 31 27.2	0.0
PAWZ	**Paruwai Farm**	**0.95**	**73**	P	Pn	16 31 29.2	+0.3
THZ	**Tophouse**	**0.99**	**264**	P	Pn	16 31 29.4	+0.1
MTW	**Mount Morrison**	**1.09**	**62**	P	Pn	16 31 31.1	+0.3
OGWZ	**Otaki Gorge**	**1.12**	**40**	P	Pb	16 31 30.8	-0.1
TRWZ	**Traveller**	**1.14**	**76**	P	Pn	16 31 31.5	+0.1
HOWZ	**Holdsworth Sta**	**1.25**	**52**	P	Pg	16 31 33.6	0.0
TMWZ	**Te Maipa**	**1.38**	**66**	P	Pn	16 31 35.0	+0.2
MRZ	**Mangatainoka R**	**1.44**	**46**	P	Pb	16 31 36.3	-0.2
QRZ	**Quartz Range**	**1.53**	**303**	P	Pg	16 31 38.6	-0.4
TIWZ	**Tintock**	**1.55**	**55**	P	Pb	16 31 38.4	+0.2
GVZ	**Greta Valley S**	**1.56**	**214**	P	Pb	16 31 38.0	-0.5
CPWZ	**Castlepoint**	**1.68**	**64**	P	Pg	16 31 45.3	+3.4
OHWZ	**Ohakea**	**1.69**	**30**	P	Pg	16 31 41.7	-0.3
PRWZ	**Pori Road**	**1.73**	**50**	P	Pn	16 31 40.4	+0.9
POWZ	**Post Office Ro**	**1.74**	**43**	P	Pb	16 31 41.9	+0.5
DSZ	**Denniston Nort**	**1.81**	**267**	P	Pg	16 31 43.9	-0.4
LTZ	**Lake Taylor**	**1.82**	**232**	P	Pb	16 31 41.9	-1.0
BFZ	**Birch Farm**	**1.82**	**58**	P	Pb	16 31 42.7	-0.3
AMCZ	**Amberley**	**1.90**	**217**	P	Pn	16 31 42.7	+0.9
WAZ	**Wanganui**	**2.00**	**17**	P	Pg	16 31 47.3	-0.7
DVHZ	**Dannevirke**	**2.02**	**48**	P	Pn	16 31 44.8	+1.3
TSZ	**Takapari Road**	**2.09**	**40**	P	Pb	16 31 47.2	-0.2
ANWZ	**Angora Road**	**2.09**	**55**	P	Pb	16 31 48.1	+0.6
LREZ	**Lake Rotokare**	**2.22**	**4**	P	Pb	16 31 50.2	+0.6
OKCZ	**Okains Bay**	**2.22**	**202**	P	Pn	16 31 46.5	+0.2
CRLZ	**Canterbury Las**	**2.23**	**211**	P	Pn	16 31 47.5	+1.1
NMEZ	**Namu Road**	**2.27**	**353**	P	Pg	16 31 52.2	-1.0
OXZ	**Oxford**	**2.31**	**224**	P	Pn	16 31 47.4	0.0
PRHZ	**Porangahau**	**2.31**	**53**	P	Pb	16 31 49.5	-1.7
INZ	**Inchbonnie**	**2.31**	**242**	P	Pb	16 31 50.2	-1.1
PNHZ	**Pukenui**	**2.31**	**41**	P	Pb	16 31 49.5	-1.8
WPHZ	**Waipukurau**	**2.33**	**47**	P	Pg	16 31 54.5	+0.2
MQZ	**McQueen’s Vall**	**2.33**	**209**	P	Pn	16 31 47.0	-0.8
KHEZ	**Kahui Hut**	**2.38**	**356**	P	Pb	16 31 53.7	+1.2
NBEZ	**Newall Road No**	**2.42**	**354**	P	Pg	16 31 54.7	-1.3
MTVZ	**Mangateitei**	**2.48**	**23**	P	Pg	16 31 55.9	-1.3
DREZ	**Durham Road**	**2.48**	**360**	P	Pb	16 31 53.9	-0.3
PKE	**Pukeiti**	**2.48**	**356**	P	Pb	16 31 54.8	+0.6
PKVZ	**Pokaka**	**2.53**	**20**	P	Pg	16 31 56.8	-1.4
MOVZ	**Moawhango**	**2.55**	**28**	P	Pb	16 31 55.5	+0.2
VRZ	**Vera Road**	**2.58**	**9**	P	Pb	16 31 54.9	-0.9
PXZ	**Pawanui**	**2.59**	**52**	P	Pb	16 31 55.2	-0.8
BHHZ	**Black Hill Sta**	**2.60**	**33**	P	Pb	16 31 56.4	+0.2
KRHZ	**Kereru**	**2.61**	**40**	P	Pb	16 31 57.7	+1.4
WHVZ	**Whangaehu Hut**	**2.61**	**24**	P	Pb	16 31 57.4	+1.0
FWVZ	**Far West T-bar**	**2.62**	**23**	P	Pb	16 31 57.3	+0.6
TUVZ	**Tukino**	**2.64**	**25**	P	Pb	16 31 57.9	+0.9
NGZ	**Ngauruhoe**	**2.71**	**23**	P	Pb	16 31 59.6	+1.5
KAHZ	**Kahuranaki**	**2.76**	**48**	P	Pn	16 31 55.0	+1.3
TWVZ	**Taurewa**	**2.76**	**20**	P	Pb	16 32 00.5	+1.5
WTVZ	**West Tongariro**	**2.76**	**23**	P	Pb	16 32 00.2	+1.2
KRVZ	**Karewarewa**	**2.80**	**23**	P	Pb	16 32 00.6	+1.0
KWHZ	**Kaweka Forest**	**2.81**	**38**	P	Pb	16 32 01.2	+1.5
KATZ	**Kakaramea**	**2.92**	**23**	P	Pb	16 32 03.0	+1.3
WVZ	**Waitaha Valley**	**2.93**	**240**	P	Pb	16 32 02.0	+0.2
RITZ	**Rihia Road**	**2.97**	**26**	P	Pb	16 32 04.4	+1.9
RATZ	**Rangitukua**	**3.05**	**24**	P	Pb	16 32 05.2	+1.4
BKZ	**Black Stump Fm**	**3.05**	**35**	P	Pb	16 32 04.9	+1.0
RPZ	**Rata Peaks**	**3.10**	**228**	P	Pn	16 31 59.0	+0.6
WATZ	**Wairara**	**3.18**	**22**	P	Pb	16 32 07.6	+1.5
HIZ	**Hauiti**	**3.19**	**9**	P	Pb	16 32 04.0	-2.4
MRHZ	**Matea Rd**	**3.30**	**31**	P	Pb	16 32 10.2	+2.0
TLZ	**Tolley Road**	**3.49**	**17**	P	Pb	16 32 12.5	+1.1
PRRZ	**Plateau Road**	**3.58**	**28**	P	Pb	16 32 13.1	+0.2
FOZ	**Fox Glacier**	**3.74**	**239**	P	Pb	16 32 11.9	-3.7
TOZ	**Tahuroa Road**	**4.06**	**15**	P	Pn	16 32 15.0	+3.4
ODZ	**Otahua Downs**	**4.26**	**217**	P	Pn	16 32 14.1	-0.1
AWAZ	**Awhitu Peninsu**	**4.62**	**4**	P	Pn	16 32 22.5	+3.4

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MKAZ	Moumakai	4.62	9	P	Pn	16 32 22.2	+3.0
JCZ	Jackson Bay	4.66	237	P	Pn	16 32 24.7	+4.8
ETAZ	East Tamaki Re	4.75	7	P	Pn	16 32 26.7	+5.7
RVAZ	Riverhead Bore	4.91	3	P	Pn	16 32 27.0	+3.9
WIAZ	Waiheke Island	4.93	9	P	Pn	16 32 29.1	+5.7
MBAZ	Motutapu North	4.93	6	P	Pn	16 32 28.6	+5.1

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*IDC **22** 16:37:21.0±1.1, 5°.87S×103°.83E, h0^{km}, mb4.2/10, mb1 4.2/11, mb1mx4.0/36, mbtmp4.2/11, ML3.7/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/30, Error ellipse: s-maj=46.8km s-min=14.2km az=45.0*

*DJA **22** 16:37:23.0±0.3, 6°S±2°×10°4E±°, h10^{km}, M4.7/16, mb5.0/2, mB5.2/1, MLv4.6/16, Mw(mB)4.6/1*

*NEIC **22** 16:37:25.1±2.0, 5°.83S×103°.93E, h27^{km}±14^{km}, mb4.3/7, Error ellipse: s-maj=13.8km s-min=5.0km az=48.0*

ISC 22 16:37:21.5±1.8, **6°.03S**±0°.05×**103°.76E**±0°.05, **h7**^{km}±11^{km}, **n59**, σ**1^{s}32**/60, **mb4.0**/13, **MS2.9**/3, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	1.05	16	P	Pn	16 37 43.6	+0.9
LWLI				S	Sn	16 37 58.7	+1.0
MDSI	Maura Dua	1.59	15	P	Pg	16 37 52.3	+0.2
MDSI				S	Sg	16 38 13.2	+0.5
KLI	Kotabumi	1.59	43	P	Pg	16 37 52.1	0.0
KLI				S	Sg	16 38 13.4	+0.6
BLSI	Bandar Lampung	1.62	66	P	Pb	16 37 51.6	-0.1
BLSI				S	Sb	16 38 11.8	-0.5
KLSI		1.65	36	P	Pg	16 37 52.7	-0.4
KLSI				S	Sg	16 38 14.5	0.0
MNAI	Manna	1.85	334	*e*Pn	Pb	16 37 55.5	-0.1
MNAI	Manna	1.85	334	P	Pb	16 37 55.7	+0.1
CGJI	Cibinong	2.00	107	P	Pn	16 37 55.7	0.0
LHSI	Lahat	2.21	354	P	Pb	16 38 02.1	+0.4
SBJI	Serang	2.36	92	P	Pn	16 38 01.8	+1.2
TNG	Tangerang	2.87	93	P	Pn	16 38 07.8	+0.1
PMBI	Palembang	3.25	18	P	Pb	16 38 16.4	-3.1
LEM	Lembang	3.91	102	Pn	Pn	16 38 23.7	+1.5
	4.7nm,0.3s,baz=319,slow=19,SNR=2.4						
LEM				Pg	Pb	16 38 32.0	+1.1
	12nm,0.3s,baz=311,slow=19,SNR=5.1						
LEM				LR	LR	16 40 18.6	
	comp=Z,129nm,20.8s,baz=6.0,slow=46						
CISI	Cisompet, Garu	4.30	111	*e*Pn	Pn	16 38 28.3	+0.9
CISI	Cisompet, Garu	4.30	111	P	Pn	16 38 28.5	+1.1
KRJI	Kerinci	4.54	330	P	Pn	16 38 34.6	+3.9
XMIS	Christmas Isla	4.80	157	*e*Pn	Pn	16 38 30.8	-3.5
PPSI	Pulau Pagai	4.96	311	P	Pn	16 38 38.6	+2.2
CMJI	Cimerak	4.97	111	P	Pn	16 38 38.1	+1.6
PDSI	Padang	6.06	327	P	Pn	16 38 53.6	+2.0
SISI	Saibi	6.60	315	P	Pn	16 39 00.5	+1.5
UGM	Wanagama	6.97	106	*e*Pn	Pn	16 39 07.0	+3.0
MYKOM	Kota Tinggi	7.77	1	*e*Pn	Pn	16 39 12.5	-2.6
GSI	Gunungsitoli	9.55	320	*e*Pn	Pn	16 39 39.5	-0.1
KSM	Kuching	9.91	41	*e*Pn	Pn	16 39 42.5	-2.0
MMRI	Maumere	18.50	99	*e*P	P	16 41 38.3	-0.2
	20nm,0.7s						
GIRL	Giralia	19.36	150	*e*P	Pn	16 41 49.6	+0.7
	225nm,1.8s						
BATI	Baumata	20.13	103	P	P	16 41 56.7	+0.4
	23nm,0.4s,baz=320,slow=2.4,SNR=7.5						
CM31	Chiang Mai Arr	24.80	349	*e*P	P	16 42 43.8	-0.5
	4.1nm,0.7s						
CMAR	Chiang Mai Arr	24.80	349	P	P	16 42 43.6	-0.7
	2.1nm,0.9s,baz=182,slow=9.0,SNR=15						
CMAR				LR	LR	16 53 59.3	
	comp=Z,48nm,19.4s,baz=164,slow=40						
DAV	Davao City (W)	25.36	59	LR	LR	16 53 18.3	
	comp=Z,33nm,18.8s,baz=220,slow=38						
H01W3	Cape Leeuwin H	30.27	163	T	T	17 15 36.9	
	baz=342,slow=76,SNR=40						
H01W2	Cape Leeuwin H	30.28	163	T	T	17 15 39.4	
	baz=342,slow=76,SNR=40						
H01W1	Cape Leeuwin H	30.28	163	T	T	17 15 39.0	
	baz=342,slow=76,SNR=36						
H08S2	Diego Garcia H	31.09	265	T	T	17 17 26.6	
	baz=89,slow=75,SNR=14						
H08S3	Diego Garcia H	31.09	265	T	T	17 17 21.4	
	baz=89,slow=75,SNR=17						
H08S1	Diego Carcia H	31.10	265	T	T	17 17 26.7	
	baz=89,slow=75,SNR=14						
WR1	Warramunga Arr	32.76	118	*e*P	P	16 43 54.6	-0.9
WR1				*e*PcP	PcP	16 46 41.7	+0.8
WRA	Warramunga Arr	32.76	118	P	P	16 43 54.6	-0.9
	0.6nm,0.3s,baz=290,slow=11,SNR=4.2						
WRA				PcP	PcP	16 46 41.7	+0.8
	0.6nm,0.5s,baz=272,slow=2.4,SNR=2.9						
ASAR	Alice Springs	33.88	124	P	P	16 44 05.5	+0.4
	1.0nm,0.8s,baz=304,slow=8.1,SNR=14						
ASAR				LR	LR	16 58 49.7	
	comp=Z,21nm,20.0s,baz=298,slow=38						
AS31	Alice Springs	33.88	124	*e*P	P	16 44 05.6	+0.5
	0.9nm,0.9s						
STKA	Stephens Creek	43.69	131	P	P	16 45 29.0	+1.7
	1.5nm,0.6s,baz=296,slow=8.4,SNR=5.7						
STKA	Stephens Creek	43.69	131	*e*P	P	16 45 28.4	+1.2
	1.7nm,1.1s						
SONA0	Songino Array	53.69	2	*e*P	P	16 46 43.6	-0.4
SONM	Songino Array	53.69	2	P	P	16 46 43.6	-0.4
	0.6nm,0.5s,baz=180,slow=10,SNR=3.7						
MK32	Makanchi Array	55.94	342	*e*P	P	16 46 59.7	-0.6
MKAR	Makanchi Array	55.94	342	P	P	16 46 59.7	-0.6
	1.8nm,0.5s,baz=151,slow=9.0,SNR=36						
ZAA0	Zalesovo Array	61.85	347	*e*P	P	16 47 40.3	-0.8
	3.0nm,0.6s						
ZALV	Zalesovo Beam	61.85	347	P	P	16 47 40.1	-1.1
	3.0nm,0.5s,baz=168,slow=5.6,SNR=13						
ZAA1	Zalesovo Array	61.85	347	*e*P	P	16 47 40.0	-1.1
ABKAR	Akbulak array	66.97	330	*e*P	P	16 48 14.2	-0.5
	6.8nm,1.2s						
BR101	Keskin Array S	78.80	312	*e*P	P	16 49 25.9	+0.5
BRTR	Keskin Array B	78.80	312	P	P	16 49 25.9	+0.5
	1.2nm,0.8s,baz=120,slow=7.3,SNR=5.5						
FIA0	FINESS Array S	89.41	332	*e*P	P	16 50 19.5	+0.7
FINES	FINESS Array B	89.41	332	P	P	16 50 19.5	+0.8
	3.1nm,0.8s,baz=100,slow=3.1,SNR=7.7						
PV07	Paradox Valley	136.39	38	*e*PKPdf	PKPdf	16 56 43.6	-1.3
TX31	Lajitas Ar. Si	145.25	45	*e*PKPbc	PKPbc	16 56 59.2	-1.3
LTX	Lajitas	145.25	45	*e*PKPbc	PKPdf	16 57 01.2	+0.3
TXAR	Lajitas Array	145.25	45	PKPbc	PKPdf	16 57 01.2	+0.3
	0.8nm,0.5s,baz=269,slow=0.9,SNR=12						

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*SOME **22** 16:46:30.2, 40°.75N×78°.22E, h15^{km}*

*NNC **22** 16:46:32.4±1.5, 40°.92N×78°.24E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=10.1km s-min=6.6km az=167.0*

*KRNET **22** 16:46:33.2±0.1, 41°.07N×78°.24E, h20^{km}, mb2.7*

ISC 22 16:46:33.4±2.3, **40°.96N**±0°.08×**78°.31E**±0°.04, **h5**^{km}±12^{km}, **n38**, σ**1^{s}28**/60, **17C-7D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.45	324	⇑*i*P	Pn	16 46 58.3	-2.2
	baz=24						
KDJ				⇑*i*S	Sn	16 47 16.0	-3.9
	baz=24						
PRZ	Przheval'sk	1.52	2	⇑*i*P	Pn	16 46 59.6	-1.9
	baz=5.0						
PRZ				⇑*i*S	Sn	16 47 18.8	-3.1
	baz=5.0						
NRN	Naryn	1.81	286	⇑*i*P	Pn	16 47 05.4	-0.1
	baz=82						
NRN				⇑*i*S	Sn	16 47 28.9	-0.1
	baz=82						
ULHL	Ulahol	2.02	310	⇑*i*P	Pn	16 47 08.2	-0.1
	baz=9.0						
ULHL				⇑*i*S	Sn	16 47 33.6	-0.4
	baz=9.0						
SATY	Saty	2.10	2	Pg	Pg	16 47 12.8	-0.8
	19nm,0.4s						
SATY				Lg	Lg	16 47 42.0	
	16nm,0.2s						
SATY	Saty	2.10	2	*e*P	Pg	16 47 12.9	-0.8
	19nm,0.4s						
SATY				*e*S	Sg	16 47 43.8	+2.9
	16nm,0.2s						
UZB	Uzynbulak	2.25	13	Pg	Pb	16 47 14.5	-0.1
	0.9nm,0.2s						
UZB				Lg	Lg	16 47 45.2	
	4.2nm,0.3s						
UZB	Uzynbulak	2.25	13	*e*P	Pb	16 47 14.5	-0.1
	0.9nm,0.2s						
UZB				*e*S	Sg	16 47 46.7	+1.0
	4.2nm,0.3s						
TNSS	Tian-Shan	2.31	334	Pg	Pb	16 47 15.3	-0.6
	6.9nm,0.4s						
TNSS				Lg	Lg	16 47 46.3	
	11nm,0.3s						
TNSS	Tian-Shan	2.31	334	*e*P	Pb	16 47 15.1	-0.8
	6.9nm,0.4s						
TNSS				*e*S	Sg	16 47 47.6	-0.1
	13nm,0.2s						
BOOM	Boomskoye usch	2.34	312	⇑*i*P	Pn	16 47 12.9	+0.1
	baz=10.0						
BOOM				⇑*i*S	Sn	16 47 41.6	-0.4
	baz=10.0						
MDOK	Medeo	2.40	337	Pg	Pb	16 47 16.4	-0.7
	9.2nm,0.3s						
MDOK				Lg	Lg	16 47 48.8	
	7.2nm,0.4s						
MDOK	Medeo	2.40	337	*e*P	Pb	16 47 16.5	-0.7
	9.2nm,0.3s						
MDOK				*e*S	Sg	16 47 50.4	0.0
	7.2nm,0.4s						
IZV	Izvestkoviy	2.43	329	Pg	Pb	16 47 17.5	-0.2
	4.7nm,0.3s						
IZV				Lg	Lg	16 47 50.8	
	11nm,0.3s						
IZV	Izvestkoviy	2.43	329	*e*P	Pb	16 47 16.8	-0.9
	4.7nm,0.3s						
IZV				*e*S	Sg	16 47 51.3	-0.3
	11nm,0.3s						
KOTS	Kotyrbulak	2.44	339	Pg	Pb	16 47 17.5	-0.4
	5.3nm,0.1s						
KOTS				Lg	Lg	16 47 50.3	
	9.0nm,0.4s						
KOTS	Kotyrbulak	2.44	339	*e*P	Pb	16 47 17.6	-0.4
	5.3nm,0.1s						
KOTS				*e*S	Sg	16 47 52.2	+0.3
	9.0nm,0.4s						
KPKS	Kokpek	2.52	6	*e*P	Pb	16 47 19.5	+0.3
	6.7nm,0.2s						
KPKS				*e*S	Sg	16 47 55.1	+0.7
	28nm,0.4s						
PDGK	Podgornoye	2.52	20	Pg	Pb	16 47 19.1	-0.2
	2.3nm,0.5s						
PDGK				Lg	Lg	16 47 53.3	
	4.3nm,0.7s						
PDGK	Podgornoye	2.52	20	⇑Pg	Pb	16 47 17.6	-1.8
	8.3nm,0.5s						
PDGK				⇓Lg	Lg	16 47 53.9	
	12nm,0.8s						
PDGK	Podgornoye	2.52	20	⇓*i*P	Pn	16 47 15.6	+0.4
	baz=22						
PDGK				⇓*i*S	Sn	16 47 46.9	+0.4
	baz=22						
KURS	Kuram	2.53	358	Pg	Pg	16 47 21.1	-0.8
	13nm,0.6s						
KURS				Lg	Lg	16 47 56.2	
	6.3nm,0.6s						
KURS	Kuram	2.53	358	*e*P	Pb	16 47 19.4	+0.1
	13nm,0.6s						
KURS				*e*S	Sg	16 47 55.0	+0.4
	6.3nm,0.6s						
KZA	Kyzart	2.56	297	⇓*i*P	Pn	16 47 16.1	+0.2
	baz=95						
KZA				⇓*i*S	Sn	16 47 47.5	-0.1
	baz=95						
KST	Kastek	2.72	321	Pg	Pb	16 47 22.1	-0.6
	4.0nm,0.4s						
KST				Lg	Lg	16 47 58.3	
	7.9nm,0.6s						
KST	Kastek	2.72	321	*e*P	Pb	16 47 21.5	-1.1
	4.0nm,0.4s						
KST				*e*S	Sb	16 47 58.4	+2.1
	7.9nm,0.6s						
TKM2	Tokmak 2	2.82	315	⇓Pg	Pb	16 47 22.2	-2.1
	1.6nm,0.5s						
TKM2				⇑Lg	Lg	16 47 60.0	
	4.3nm,0.7s						
KTMS	Ketmen	2.91	31	Pg	Pb	16 47 26.4	+0.5
	1.5nm,0.4s						
KTMS				Lg	Lg	16 48 05.7	
	5.0nm,0.4s						
KTMS	Ketmen	2.91	31	*e*P	Pb	16 47 26.0	+0.1
	1.5nm,0.4s						
KTMS				*e*S	Sg	16 48 06.2	-0.7
	5.0nm,0.4s						
KTBS	Karatobe	3.00	337	Pg	Pb	16 47 27.0	-0.5
	3.4nm,0.4s						
KTBS				Lg	Lg	16 48 06.8	
	29nm,0.3s						
KTBS	Karatobe	3.00	337	*e*P	Pb	16 47 27.0	-0.5
	3.4nm,0.4s						
KTBS				*e*S	Sb	16 48 07.8	+3.3
	29nm,0.3s						
CHKK	Chushkaly	3.05	342	Pg	Pb	16 47 28.0	-0.3
	2.9nm,0.3s						
CHKK				Lg	Lg	16 48 08.6	
	11nm,0.3s						
CHKK	Chushkaly	3.05	342	*e*P	Pb	16 47 27.7	-0.6
	2.9nm,0.3s						
CHKK				*e*S	Sb	16 48 09.0	+3.1
	11nm,0.3s						
UCH	Uchtor	3.12	295	⇑*e*P	Pn	16 47 23.8	+0.1
	baz=94						
UCH				⇑*i*S	Sn	16 48 00.9	-0.6
	baz=94						
MNBS	Baschi	3.12	1	Pg	Pb	16 47 30.8	+1.3
	2.3nm,0.3s						
MNBS				Lg	Lg	16 48 13.1	
	12nm,0.3s						
MNBS	Baschi	3.12	1	*e*P	Pb	16 47 30.8	+1.3
	2.3nm,0.3s						
MNBS				*e*S	Sg	16 48 14.4	+0.8
	12nm,0.3s						
ARLS	Aral	3.13	288	⇑*i*P	Pn	16 47 23.9	+0.3
	baz=87						
ARLS				⇑*i*S	Sn	16 48 01.2	-0.3
	baz=87						
AAK	Ala-Archa	3.31	302	⇓Pg	Pb	16 47 33.5	+0.8
	1.8nm,0.6s						
AAK				⇑Lg	Lg	16 48 16.2	
	3.4nm,0.6s						

WEL 22 16:49:48.3, 42°S±2°×**17°4E**±°, **h13**^{km}±3^{km}, **M3.6**/15, **ML3.9**/15, **MLv3.6**/15, **Error ellipse: s-maj=0.0km s-min=0.0km az=129.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.26	271	P	Pb	16 49 54.3	-0.5
BSWZ				S	Sb	16 49 59.1	-0.1
WEL	Wellington	0.60	43	P	Pb	16 50 01.2	+0.7
NNZ	Nelson	0.81	308	P	Pg	16 50 04.0	0.0
MSWZ	Moikau Station	0.83	69	P	Pn	16 50 05.9	+0.3
KHZ	Kahutara	0.86	216	P	Pn	16 50 07.1	+1.1
DUWZ	D’Urville Isla	0.94	346	P	Pb	16 50 06.2	-0.3
PAWZ	Paruwai Farm	0.96	70	P	Pn	16 50 07.9	+0.4
THZ	Tophouse	0.99	267	P	Pn	16 50 07.9	0.0
TRWZ	Traveller	1.14	74	P	Pn	16 50 10.0	+0.1
OGWZ	Otaki Gorge	1.15	39	P	Pn	16 50 10.2	+0.2
HOWZ	Holdsworth Sta	1.27	50	P	Pg	16 50 12.5	-0.3
TMWZ	Te Maipa	1.40	65	P	Pn	16 50 13.5	+0.1
MRZ	Mangatainoka R	1.47	44	P	Pb	16 50 15.3	-0.2
GVZ	Greta Valley S	1.53	215	P	Pb	16 50 16.2	-0.2
QRZ	Quartz Range	1.56	304	P	Pb	16 50 17.4	+0.4
TIWZ	Tintock	1.57	54	P	Pg	16 50 17.9	-0.5
CPWZ	Castlepoint	1.69	62	P	Pg	16 50 21.7	+0.9
OHWZ	Ohakea	1.72	29	P	Pb	16 50 20.5	+0.8
PRWZ	Pori Road	1.76	49	P	Pb	16 50 20.9	+0.5
POWZ	Post Office Ro	1.77	42	P	Pb	16 50 19.9	-0.6
LTZ	Lake Taylor	1.80	233	P	Pb	16 50 20.3	-0.7
DSZ	Denniston Nort	1.81	268	P	Pb	16 50 21.5	+0.3
BFZ	Birch Farm	1.84	56	P	Pn	16 50 20.0	+0.4
AMCZ	Amberley	1.86	218	P	Pn	16 50 20.7	+0.9
DVHZ	Dannevirke	2.04	47	P	Pb	16 50 24.4	-0.8
WAZ	Wanganui	2.04	17	P	Pg	16 50 26.6	-0.9
ANWZ	Angora Road	2.12	54	P	Pb	16 50 25.5	-1.0
TSZ	Takapari Road	2.12	39	P	Pb	16 50 26.4	-0.1
OKCZ	Okains Bay	2.18	203	P	Pn	16 50 24.2	0.0
CRLZ	Canterbury Las	2.20	212	P	Pn	16 50 25.1	+0.6
LREZ	Lake Rotokare	2.26	4	P	Pg	16 50 30.5	-1.1
OXZ	Oxford	2.28	224	P	Pn	16 50 25.9	+0.4
MQZ	McQueen’s Vall	2.30	210	P	Pn	16 50 25.2	-0.6
NMEZ	Namu Road	2.32	353	P	Pg	16 50 31.9	-0.8
PRHZ	Porangahau	2.33	52	P	Pb	16 50 28.4	-1.7
PNHZ	Pukenui	2.34	40	P	Pb	16 50 29.9	-0.5
PREZ	Palmer Road	2.37	359	P	Pg	16 50 33.7	-0.1
KHEZ	Kahui Hut	2.43	356	P	Pb	16 50 33.1	+1.4
NBEZ	Newall Road No	2.46	354	P	Pb	16 50 33.2	+0.8
MTVZ	Mangateitei	2.52	23	P	Pg	16 50 35.5	-1.0
DREZ	Durham Road	2.53	360	P	Pb	16 50 33.6	+0.2
PKE	Pukeiti	2.53	356	P	Pb	16 50 34.9	+1.4
PKVZ	Pokaka	2.57	20	P	Pg	16 50 37.5	-0.1
MOVZ	Moawhango	2.59	27	P	Pb	16 50 35.1	+0.6
PXZ	Pawanui	2.62	51	P	Pg	16 50 38.3	-0.1
VRZ	Vera Road	2.62	9	P	Pb	16 50 35.0	-0.1
BHHZ	Black Hill Sta	2.63	33	P	Pb	16 50 35.9	+0.7
KRHZ	Kereru	2.64	39	P	Pn	16 50 32.9	+2.4
DRZ	Dome Shelter	2.65	23	P	Pg	16 50 38.8	-0.2
WHVZ	Whangaehu Hut	2.65	24	P	Pb	16 50 36.7	+1.1
FWVZ	Far West T-bar	2.66	23	P	Pb	16 50 36.7	+0.8
TUVZ	Tukino	2.68	24	P	Pg	16 50 38.0	-1.7
NGZ	Ngauruhoe	2.75	23	P	Pb	16 50 38.4	+1.1
WTVZ	West Tongariro	2.80	22	P	Pb	16 50 39.3	+1.1
TWVZ	Taurewa	2.80	20	P	Pb	16 50 38.6	+0.4
KRVZ	Karewarewa	2.84	23	P	Pb	16 50 39.9	+1.2
KWHZ	Kaweka Forest	2.84	37	P	Pg	16 50 41.3	-1.4
WVZ	Waitaha Valley	2.92	241	P	Pb	16 50 39.9	-0.2
KATZ	Kakaramea	2.96	23	P	Pb	16 50 42.4	+1.4
RITZ	Rihia Road	3.01	25	P	Pb	16 50 43.5	+1.8
RPZ	Rata Peaks	3.07	228	P	Pn	16 50 37.6	+1.2
BKZ	Black Stump Fm	3.08	35	P	Pb	16 50 45.1	+2.1
RATZ	Rangitukua	3.08	23	P	Pb	16 50 45.1	+2.1
WATZ	Wairara	3.22	22	P	Pg	16 50 47.9	-2.0
HIZ	Hauiti	3.24	9	P	Pb	16 50 43.4	-2.2
TLZ	Tolley Road	3.53	17	P	Pb	16 50 51.7	+1.1
FOZ	Fox Glacier	3.72	239	P	Pb	16 50 50.9	-2.9
LBZ	Lake Benmore	3.98	227	P	Pb	16 50 54.0	-4.2
ODZ	Otahua Downs	4.22	217	P	Pn	16 50 52.7	+0.4
MWZ	Matawai	4.23	38	P	Pn	16 50 52.9	+0.6
JCZ	Jackson Bay	4.64	238	P	Pn	16 51 02.8	+4.7
AWAZ	Awhitu Peninsu	4.66	4	P	Pn	16 51 02.9	+4.7
MKAZ	Moumakai	4.67	9	P	Pn	16 51 02.5	+4.2
ETAZ	East Tamaki Re	4.79	7	P	Pb	16 51 07.2	-4.8

WEL 22 16:57:30.3, 42°S±2°×**17°4E**±°, **h7**^{km}±2^{km}, **M3.5**/48, **ML3.6**/25, **MLv3.5**/48, **Error ellipse: s-maj=0.0km s-min=0.0km az=135.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	177	P	Pg	16 57 33.5	+0.8
BSWZ	Blackbirch Sta	0.26	254	P	Pg	16 57 35.9	+0.5
TUWZ	Tuamarina	0.29	317	P	Pg	16 57 36.9	+0.9
TCW	Tory Channel	0.43	7	P	Pg	16 57 39.2	+0.5
BHW	Baring Head	0.55	65	P	Pb	16 57 42.0	-0.3
WEL	Wellington	0.55	50	P	Pg	16 57 41.6	+0.6
NNZ	Nelson	0.75	304	P	Pg	16 57 45.0	+0.2
PLWZ	Palliser	0.79	85	P	Pb	16 57 47.0	+0.6
MSWZ	Moikau Station	0.81	74	P	Pb	16 57 47.0	+0.2
CAW	Cannon Point	0.84	51	P	Pb	16 57 47.5	+0.2
DUWZ	D’Urville Isla	0.87	346	P	Pb	16 57 48.3	+0.6
KHZ	Kahutara	0.92	213	P	Pb	16 57 48.4	-0.2
PAWZ	Paruwai Farm	0.95	74	P	Pb	16 57 49.5	+0.3
THZ	Tophouse	0.98	263	P	Pg	16 57 49.3	+0.1
OGWZ	Otaki Gorge	1.10	42	P	Pg	16 57 51.2	-0.2
TRWZ	Traveller	1.14	78	P	Pg	16 57 51.5	-0.7
HOWZ	Holdsworth Sta	1.24	53	P	Pn	16 57 54.9	+0.9
TMWZ	Te Maipa	1.38	68	P	Pn	16 57 55.1	-0.9
MRZ	Mangatainoka R	1.43	47	P	Pn	16 57 56.6	-0.1
GVZ	Greta Valley S	1.58	213	P	Pn	16 57 57.8	-1.0
OHWZ	Ohakea	1.66	31	P	Pg	16 58 02.5	+0.3
POWZ	Post Office Ro	1.72	44	P	Pg	16 58 07.8	+4.5
PRWZ	Pori Road	1.72	51	P	Pg	16 58 07.4	+4.1
DSZ	Denniston Nort	1.80	266	P	Pb	16 58 03.3	-0.4
BFZ	Birch Farm	1.81	59	P	Pg	16 58 08.4	+3.3
LTZ	Lake Taylor	1.83	231	P	Pn	16 58 01.6	-0.7
AMCZ	Amberley	1.92	216	P	Pg	16 58 08.0	+0.9
WAZ	Wanganui	1.98	18	P	Pb	16 58 07.1	+0.5
DVHZ	Dannevirke	2.00	48	P	Pg	16 58 08.9	+0.2
TSZ	Takapari Road	2.07	41	P	Pg	16 58 09.4	-0.6
LREZ	Lake Rotokare	2.19	4	P	Pg	16 58 13.4	+1.2
NMEZ	Namu Road	2.24	353	P	Pg	16 58 13.3	+0.1
OKCZ	Okains Bay	2.25	202	P	Pn	16 58 05.3	-2.6
PNHZ	Pukenui	2.30	42	P	Pg	16 58 14.2	-0.2
OXZ	Oxford	2.32	223	P	Pb	16 58 12.4	-0.1
KHEZ	Kahui Hut	2.35	356	P	Pb	16 58 13.3	+0.2
NBEZ	Newall Road No	2.39	354	P	Pb	16 58 14.3	+0.7
DREZ	Durham Road	2.45	360	P	Pg	16 58 16.6	-0.7
PKE	Pukeiti	2.45	356	P	Pb	16 58 16.0	+1.3
MTVZ	Mangateitei	2.45	24	P	Pb	16 58 15.8	+1.0
MOVZ	Moawhango	2.52	28	P	Pb	16 58 15.6	-0.4
VRZ	Vera Road	2.55	10	P	Pb	16 58 15.4	-1.0
BHHZ	Black Hill Sta	2.57	34	P	Pb	16 58 16.5	-0.4
DRZ	Dome Shelter	2.58	24	P	Pg	16 58 20.7	+0.8
WHVZ	Whangaehu Hut	2.58	25	P	Pb	16 58 17.2	+0.1
KRHZ	Kereru	2.59	40	P	Pb	16 58 18.5	+1.4
FWVZ	Far West T-bar	2.60	24	P	Pb	16 58 17.8	+0.4
TUVZ	Tukino	2.62	25	P	Pb	16 58 18.5	+0.9
NGZ	Ngauruhoe	2.69	24	P	Pb	16 58 19.0	+0.2
TWVZ	Taurewa	2.74	20	P	Pb	16 58 20.6	+0.9
WTVZ	West Tongariro	2.74	23	P	Pb	16 58 19.8	+0.1
KRVZ	Karewarewa	2.77	24	P	Pb	16 58 20.3	0.0
KWHZ	Kaweka Forest	2.79	38	P	Pb	16 58 21.8	+1.3
KATZ	Kakaramea	2.90	24	P	Pb	16 58 22.9	+0.5
WVZ	Waitaha Valley	2.94	240	P	Pb	16 58 21.6	-1.5
RITZ	Rihia Road	2.95	26	P	Pb	16 58 24.6	+1.4
RATZ	Rangitukua	3.02	24	P	Pb	16 58 25.6	+1.2
BKZ	Black Stump Fm	3.03	36	P	Pb	16 58 25.3	+0.7
RPZ	Rata Peaks	3.11	227	P	Pb	16 58 26.6	+0.6
WATZ	Wairara	3.16	22	P	Pb	16 58 27.5	+0.8
HIZ	Hauiti	3.17	9	P	Pb	16 58 24.1	-2.8
TLZ	Tolley Road	3.46	18	P	Pb	16 58 31.8	-0.2
PRRZ	Plateau Road	3.56	29	P	Pb	16 58 34.3	+0.6
FOZ	Fox Glacier	3.75	238	P	Pb	16 58 35.6	-1.3
ODZ	Otahua Downs	4.28	216	P	Pn	16 58 34.3	-1.6
AWAZ	Awhitu Peninsu	4.59	4	P	Pn	16 58 43.0	+2.9
MKAZ	Moumakai	4.59	10	P	Pn	16 58 44.3	+4.2
JCZ	Jackson Bay	4.67	237	P	Pn	16 58 44.2	+2.9

WEL 22 17:08:22.6, 42°S±3°×**17°4E**±°, **h13**^{km}±2^{km}, **M3.7**/25, **ML3.9**/19, **MLv3.7**/25, **Error ellipse: s-maj=0.0km s-min=0.0km az=143.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.03	278	P	Pg	17 08 25.3	+0.4
BSWZ	Blackbirch Sta	0.29	278	P	Pb	17 08 29.7	0.0
TUWZ	Tuamarina	0.40	324	P	Pg	17 08 31.0	+0.5
TCW	Tory Channel	0.54	1	P	Pg	17 08 33.0	-0.2
BHW	Baring Head	0.57	53	P	Pb	17 08 34.4	-0.1
WEL	Wellington	0.60	39	P	Pb	17 08 34.9	-0.1
PLWZ	Palliser	0.77	76	P	Pn	17 08 38.9	-0.2
MSWZ	Moikau Station	0.82	66	P	Pn	17 08 39.2	-0.6
NNZ	Nelson	0.85	309	P	Pb	17 08 39.2	0.0
KHZ	Kahutara	0.85	219	P	Pn	17 08 41.8	+1.5
CAW	Cannon Point	0.89	43	P	Pb	17 08 40.0	+0.2
PAWZ	Paruwai Farm	0.95	67	P	Pn	17 08 42.1	+0.4
DUWZ	D’Urville Isla	0.98	345	P	Pg	17 08 41.8	+0.2
THZ	Tophouse	1.01	269	P	Pn	17 08 43.2	+0.7
MTW	Mount Morrison	1.11	58	P	Pg	17 08 43.9	0.0
TRWZ	Traveller	1.13	72	P	Pg	17 08 45.3	+1.0
OGWZ	Otaki Gorge	1.16	37	P	Pg	17 08 44.7	-0.2
HOWZ	Holdsworth Sta	1.28	48	P	Pb	17 08 46.6	+0.1
TMWZ	Te Maipa	1.39	63	P	Pn	17 08 47.7	0.0
MRZ	Mangatainoka R	1.48	43	P	Pn	17 08 49.3	+0.4
GVZ	Greta Valley S	1.52	216	P	Pb	17 08 50.8	+0.3
QRZ	Quartz Range	1.60	305	P	Pg	17 08 52.7	-0.6
OHWZ	Ohakea	1.74	28	P	Pg	17 08 57.8	+1.9
PRWZ	Pori Road	1.76	48	P	Pb	17 08 55.1	+0.4
POWZ	Post Office Ro	1.78	40	P	Pg	17 08 56.3	-0.3
LTZ	Lake Taylor	1.80	234	P	Pb	17 08 55.0	-0.4
DSZ	Denniston Nort	1.84	269	P	Pg	17 08 58.9	+1.1
BFZ	Birch Farm	1.84	55	P	Pn	17 08 54.7	+0.8
DVHZ	Dannevirke	2.05	45	P	Pb	17 08 59.7	0.0
WAZ	Wanganui	2.07	16	P	Pg	17 09 01.9	-0.4
TSZ	Takapari Road	2.13	38	P	Pn	17 08 58.9	+1.0
OKCZ	Okains Bay	2.16	204	P	Pn	17 08 58.8	+0.5
OXZ	Oxford	2.27	226	P	Pn	17 09 00.5	+0.7
MQZ	McQueen’s Vall	2.28	211	P	Pn	17 08 59.8	-0.1
PNHZ	Pukenui	2.36	39	P	Pb	17 09 03.3	-1.6
KHEZ	Kahui Hut	2.46	356	P	Pg	17 09 09.0	-0.8
MTVZ	Mangateitei	2.54	22	P	Pb	17 09 09.5	+1.5

PKE	Pukeiti	2.57	355	P	Pg	17 09 10.5	-1.2
MOVZ	Moawhango	2.61	26	P	Pb	17 09 10.1	+0.9
BHHZ	Black Hill Sta	2.65	32	P	Pb	17 09 11.2	+1.3
VRZ	Vera Road	2.65	8	P	Pb	17 09 10.9	+0.9
WHVZ	Whangaehu Hut	2.67	23	P	Pg	17 09 12.2	-1.5
FWVZ	Far West T-bar	2.68	22	P	Pg	17 09 12.9	-1.1
NGZ	Ngauruhoe	2.77	22	P	Pb	17 09 13.6	+1.5
WTVZ	West Tongariro	2.83	22	P	Pb	17 09 14.2	+1.2
KRVZ	Karewarewa	2.86	22	P	Pg	17 09 15.6	-1.8
WVZ	Waitaha Valley	2.92	242	P	Pb	17 09 16.5	+2.0
RPZ	Rata Peaks	3.07	229	P	Pn	17 09 12.1	+1.3
HIZ	Hauiti	3.27	8	P	Pb	17 09 20.6	+0.1
ODZ	Otahua Downs	4.21	217	P	Pn	17 09 27.7	+1.2

WEL 22 17:08:48.6, 41°S±35°×17°5E±°, h9km±32km, M3.3/14, ML3.7/12, MLv3.3/14, Error ellipse: s-maj=0.1km s-min=0.0km az=172.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIWZ	Tintock	0.71	108	P	Pb	17 09 03.3	+0.1
CPWZ	Castlepoint	0.98	111	P	Pn	17 09 09.1	+0.7
ANWZ	Angora Road	1.14	85	P	Pb	17 09 10.0	-0.3
LREZ	Lake Rotokare	1.19	337	P	Pb	17 09 09.1	-2.2
WPHZ	Waipukurau	1.22	66	P	Pb	17 09 11.2	-0.4
PRHZ	Porangahau	1.29	77	P	Pn	17 09 12.8	+0.1
TUVZ	Tukino	1.39	22	P	Pn	17 09 14.0	-0.2
KRHZ	Kereru	1.40	49	P	Pn	17 09 13.9	-0.4
NMEZ	Namu Road	1.43	323	P	Pn	17 09 14.5	-0.1
DREZ	Durham Road	1.50	336	P	Pn	17 09 13.2	-2.4
PXZ	Pawanui	1.53	70	P	Pn	17 09 14.3	-1.7
TWVZ	Taurewa	1.53	13	P	Pn	17 09 16.4	+0.3
NBEZ	Newall Road No	1.56	326	P	Pn	17 09 11.5	-4.8
MHEZ	Mangahewa	1.57	341	P	Pg	17 09 24.9	+6.2
KWHZ	Kaweka Forest	1.58	44	P	Pb	17 09 17.4	-0.5
KATZ	Kakaramea	1.68	19	P	Pn	17 09 18.1	0.0
RITZ	Rihia Road	1.72	23	P	Pg	17 09 24.3	+2.8
MCHZ	McNeill Hill	1.72	50	P	Pg	17 09 23.1	+1.5
RATZ	Rangitukua	1.80	20	P	Pb	17 09 21.3	-0.4
BKZ	Black Stump Fm	1.81	40	P	Pn	17 09 19.3	-0.6
TLZ	Tolley Road	2.27	11	P	Pn	17 09 26.1	-0.1
RAHZ	Arahi	2.31	45	P	Pg	17 09 33.6	+0.9
DSZ	Denniston Nort	2.68	243	P	Pn	17 09 33.1	+1.2
TOZ	Tahuroa Road	2.85	8	P	Pb	17 09 39.3	-0.3
MWZ	Matawai	2.97	42	P	Pn	17 09 38.5	+2.7
MKAZ	Moumakai	3.46	2	P	Pn	17 09 45.7	+3.2

IDC 22 17:09:03.2±1.8, 10°.22S×158°.96E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=72.8km s-min=17.7km az=145.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.25	51	Pn	Pn	17 09 28.9	+1.0
	14nm,0.3s,baz=208,slow=11,SNR=68						
HNR				Sn	Sb	17 09 44.9	+0.5
	80nm,0.3s,baz=112,slow=19,SNR=10						
HNR	Honiara	1.25	51	*e*P	Pg	17 09 27.0	-0.2
HNR				*e*S	Sn	17 09 45.0	-0.5
WRA	Warramunga Arr	25.62	245	P	P	17 14 35.1	+0.5
	1.6nm,0.6s,baz=78,slow=9.5,SNR=2.7						
ASAR	Alice Springs	27.38	238	P	P	17 14 50.7	+0.2
	0.4nm,1.0s,baz=61,slow=11,SNR=5.2						
SONM	Songino Array	74.16	326	P	P	17 20 41.7	-0.1
	0.6nm,0.6s,baz=133,slow=4.9,SNR=2.8						
MKAR	Makanchi Array	88.40	318	P	P	17 21 56.2	-1.1
	0.4nm,0.8s,baz=108,slow=4.7,SNR=2.5						

*NEIC **22** 17:10:19.2±0.0, 61°.58N×141°.15W, h1km, ML2.3(OTT), ML2.6(AEIC), After AEIC.*

PGC 22 17:10:19.9±0.0, 61°.59N×141°.08W, h5km, ML2.3/11, 212km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	White River	0.23	30	P	Pg	17 10 23.9	-0.6
YUK2				S	Sg	17 10 27.4	-0.1
YUK3	Moose Creek	0.35	57	P	Pg	17 10 26.0	-0.7
YUK1	Sand Pete Hill	0.63	25	P	Pg	17 10 30.9	-1.0
PTPK	Patty Peak	0.78	240	P	Pg	17 10 33.6	-1.1
PTPK				S	Sg	17 10 44.0	-0.8
BVCY	Beaver Creek	0.84	7	P	Pg	17 10 34.9	-1.1
BVCY				S	Sg	17 10 46.6	-0.2
GRNC	Granite Creek	0.92	201	P	Pg	17 10 35.9	-1.5
GRNC				S	Sg	17 10 48.1	-1.2
TABL	Table Mountain	1.15	181	P	Pg	17 10 40.1	-1.8
TABL				S	Sg	17 10 55.7	-1.0
TGL	Tana Glacier	1.19	226	*e*Pg	Pg	17 10 40.6	-2.0
YUK4	Talbot Arm	1.20	101	P	Pg	17 10 41.7	-1.0
YUK4				S	Sg	17 10 58.0	-0.3
CRQM	Cirque	1.30	231	*e*Pg	Pg	17 10 42.2	-2.5
YUK6	Outpost Mounta	1.46	115	Pn	Pn	17 10 45.2	-2.0
YUK6				Sg	Sb	17 11 06.2	-0.5
SAMH	Samovar Hills	1.47	174	Pn	Pn	17 10 46.6	-0.5
SAMH				Sg	Sb	17 11 06.6	-0.1
MESA	MESA	1.48	197	Pn	Pn	17 10 46.7	-0.6
MESA				Sg	Sb	17 11 06.6	-0.3
BCA3	Beaver Creek A	1.52	348	*e*Pn	Pn	17 10 46.8	-1.0
PCA	Pinnacle	1.55	164	*e*Pn	Pn	17 10 47.4	-0.7
PCA	Pinnacle	1.55	164	Pn	Pn	17 10 47.9	-0.3
PCA				Sg	Sn	17 11 08.4	-0.3
YUK5	Granite Creek	1.62	105	Pn	Pn	17 10 48.3	-0.9
YUK5				Sg	Sn	17 11 09.1	-1.4
SNH	Sunshine Point	1.65	212	*e*Pn	Pn	17 10 50.0	+0.5
YUK7	Dusty Glacier	1.78	125	Pn	Pn	17 10 51.3	-0.2
MENT	Mentasta	1.83	319	*e*Pn	Pn	17 10 51.9	-0.2
HYT	Haines Junctio	1.89	112	*e*Pn	Pn	17 10 53.2	+0.3
HMT	Hamilton	1.99	232	*e*Pn	Pb	17 10 56.0	-0.6
PNL	Peninsula	2.10	156	*e*Pn	Pn	17 10 56.1	+0.5
PNL	Peninsula	2.10	156	Pn	Pn	17 10 56.1	+0.5
PNL				Sg	Sb	17 11 25.1	+0.4
RAGM	Ragged Mountai	2.12	237	*e*Pn	Pb	17 10 57.6	-1.2
PAX	Paxson	2.48	306	*e*Pn	Pn	17 11 02.5	+1.6
PAX	Paxson	2.48	306	Pg	Pn	17 11 02.8	+1.8
PAX				Sg	Sb	17 11 35.6	0.0
DOT	Dot Lake	2.49	328	*e*Pn	Pn	17 11 00.2	-0.8
DOT	Dot Lake	2.49	328	Pn	Pn	17 11 00.2	-0.8
DOT				Pg	Pb	17 11 05.0	0.0
DOT				Sg	Sb	17 11 37.0	+1.2
EYAK	Cordova Ski Ar	2.50	247	*e*Pn	Pn	17 10 59.0	-2.1
DAWY	Dawson	2.61	17	*e*Pn	Pn	17 11 02.8	+0.2
DAWY	Dawson	2.61	17	Pn	Pn	17 11 02.4	-0.3
DAWY				Sg	Sb	17 11 40.0	+0.6
FID	Port Fidalgo	2.75	255	*e*Pn	Pn	17 11 06.9	+2.4
FID				*e*Pn	Pb	17 11 07.0	-2.4
SCRK	Sand Creek	2.75	332	*e*Pn	Pn	17 11 03.9	-0.8
RIDG	Independent Ri	2.77	323	*e*Pn	Pn	17 11 04.5	-0.4
SCM	Sheep Creek Mo	2.98	278	*e*Pn	Pn	17 11 07.2	-0.7
PLBC	Pleasant Camp	3.16	130	Pg	Pb	17 11 16.2	-0.2
PLBC				Sg	Sg	17 11 58.7	-2.7
EGAK	Eagle	3.20	359	*e*Pn	Pn	17 11 10.5	-0.3
DHY	Denali Highway	3.29	300	*e*Pn	Pn	17 11 13.5	+1.3
RND	Reindeer	4.04	300	*e*Pn	Pn	17 11 25.4	+3.0
ILB	Eielson Array	4.14	323	*e*Pn	Pn	17 11 22.1	-1.6
WRH	Wood River Hil	4.31	315	*e*Pn	Pn	17 11 22.2	-3.7
BESE	Bessie Mountai	4.34	131	Sg	Sb	17 12 33.7	+4.6

*NEIC **22** 17:24:00.4±0.0, 18°.44N×62°.87W, h22km, MD3.8(TRN), After TRN.*

NEIC Felt at The Valley. Also felt at Cole Bay, Sint Maarten.

TRN 22 17:24:00.4, 18°.44N×62°.87W, h22km, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT	St. Maarten	0.43	207	*e*Pg	Pn	17 24 11.4	0.0
SMRT				*e*Sg	Sn	17 24 18.3	-0.4
SMRT	St. Maarten	0.43	207	*e*P	Pn	17 24 11.7	+0.3
SMRT				*e*S	Sn	17 24 18.8	+0.1
SABA	Saba	0.89	204	*e*Pn	Pn	17 24 19.1	+1.4
SABA				*e*Sn	Sn	17 24 31.0	+1.0
SABA	Saba	0.89	204	*e*P	Pn	17 24 19.4	+1.7
SABA				*e*S	Sn	17 24 32.6	+2.6
SEUS	St. Eustatius	0.95	186	*e*Pn	Pn	17 24 20.0	+1.5
SEUS	St. Eustatius	0.95	186	*e*P	Pn	17 24 20.2	+1.7
SEUS				*e*S	Sn	17 24 33.8	+2.4
SKDB	Saint Kitts 2	1.04	177	*e*Pn	Pb	17 24 21.7	+2.0
SKDB				*e*Sn	Sn	17 24 37.4	+3.8
SKDB	Saint Kitts 2	1.04	177	*e*P	Pb	17 24 21.7	+2.0
SKDB				*e*S	Sn	17 24 37.4	+3.8
BSK	Brimstone Hill	1.09	179	*e*Pn	Pb	17 24 22.8	+2.3
BSK				*e*Sn	Sn	17 24 38.6	+3.7
BSK	Brimstone Hill	1.09	179	*e*P	Pb	17 24 22.8	+2.3
BSK				*e*S	Sn	17 24 38.6	+3.7
SKI	Saint Kitts	1.11	174	*e*Pn	Pb	17 24 22.1	+1.1
SKI	Saint Kitts	1.11	174	*e*P	Pb	17 24 22.2	+1.3
SKI				*e*S	Sn	17 24 37.8	+2.5
SKTB	Turtle Beach	1.25	169	*e*P	Pb	17 24 23.1	-0.2
SKTB				*e*S	Sb	17 24 41.0	+2.1
NVRH	Round Hill, Ne	1.28	168	*e*S	Sb	17 24 42.4	+2.6
ANWB	Willy Bob	1.29	127	*e*Pn	Pb	17 24 23.8	-0.1
ANWB	Willy Bob	1.29	127	*e*P	Pb	17 24 24.0	0.0
ANWB				*e*S	Sb	17 24 43.5	+3.4
NEV	Hard Times	1.33	168	*e*Pn	Pb	17 24 26.4	+1.7
NEV				*e*Sn	Sb	17 24 44.0	+2.7
NEV	Hard Times	1.33	168	*e*P	Pb	17 24 26.4	+1.7
NEV				*e*S	Sb	17 24 44.0	+2.7
NVBH	Bath Hotel, Ne	1.34	170	*e*S	Sb	17 24 43.9	+2.4
ABVI	Anegada Island	1.42	282	*e*Pn	Pb	17 24 25.6	-0.6
BPA	Boggy Peak	1.69	145	*e*Pn	Pb	17 24 29.8	-1.0
BPA				*e*Sg	Sb	17 24 52.4	+0.7
BPA	Boggy Peak	1.69	145	*e*P	Pb	17 24 29.8	-1.0
BPA				*e*S	Sb	17 24 52.4	+0.7
MLYT	Lee's Yard	1.83	159	*e*P	Pb	17 24 32.4	-0.8
MLYT				*e*S	Sb	17 24 55.3	-0.4
STVI	Saint Thomas	1.98	268	*e*Pn	Pn	17 24 33.5	+0.8
CUPR	Culebra, Puert	2.30	267	*e*Pn	Pn	17 24 36.3	-0.7
MTP	Monte Pirata	2.57	263	*e*Pn	Pn	17 24 40.7	-0.1
CBYP	Canovanas	2.84	267	*e*Pn	Pn	17 24 45.3	+0.7
MDVC	Dominica, Viel	3.14	153	*e*P	Pn	17 24 50.2	+1.5
MDVC				*e*S	Sn	17 25 28.0	+2.5
MDPO	Dominica; Chan	3.16	154	*e*P	Pn	17 24 50.6	+1.8
MDPO				*e*S	Sn	17 25 28.4	+2.6
DWS	Wesley	3.22	152	*e*Pn	Pn	17 24 51.9	+2.1
DWS				*e*Sn	Sn	17 25 29.2	+1.7
DWS	Wesley	3.22	152	*e*P	Pn	17 24 51.9	+2.1
DWS				*e*S	Sn	17 25 29.2	+1.7
DLPL	La Plaine	3.46	153	*e*P	Pn	17 24 55.6	+2.6
DLPL				*e*S	Sn	17 25 35.0	+1.6

MEX 22 17:40:25.4±0.9, 16°.23N×98°.01W, h6km±9km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.43	338	*i* P	Pn	17 40 49.0	-3.1
TLIG				*e*S	Sb	17 41 05.7	-5.4
VHO	Vista Hermosa	1.48	55	*e*P	Pn	17 40 49.5	-3.4
VHO				*i* S	Sn	17 41 08.6	-4.1
HUIG	Huatulco	1.89	104	*e*P	Pn	17 40 55.5	-2.7
HUIG				*e*S	Sn	17 41 18.4	-3.9
CAIG	El Cayaco	2.31	291	*i* P	Pn	17 41 01.4	-2.7
CAIG				*i* S	Sn	17 41 28.0	-4.8
CMIG	Matias Romero	3.12	74	*i* P	Pn	17 41 11.7	-3.5
CMIG				*e*S	Sn	17 41 48.2	-4.5

WEL 22 17:50:38.0, 42°S±3°×17°4E±°, h22km±5km, M3.7/48, ML3.9/7, MLv3.7/48, Error ellipse: s-maj=0.0km s-min=0.0km az=116.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	226	P	Pb	17 50 44.7	+0.9
BSWZ	Blackbirch Sta	0.36	260	P	Pn	17 50 47.0	-1.0
TUWZ	Tuamarina	0.38	306	P	Pb	17 50 46.2	+0.3
TCW	Tory Channel	0.45	353	P	Pb	17 50 46.9	-0.2
BHW	Baring Head	0.46	58	P	Pb	17 50 48.3	+0.9
WEL	Wellington	0.48	41	P	Pb	17 50 48.4	+0.5
PLWZ	Palliser	0.69	83	P	Pn	17 50 53.1	+0.6
MSWZ	Moikau Station	0.72	71	P	Pn	17 50 53.3	+0.4
CAW	Cannon Point	0.77	45	P	Pn	17 50 53.3	-0.3
NNZ	Nelson	0.85	301	P	Pn	17 50 54.5	-0.2
PAWZ	Paruwai Farm	0.85	72	P	Pn	17 50 55.7	+0.9
DUWZ	D'Urville Isla	0.91	339	P	Pb	17 50 55.2	+0.1
KHZ	Kahutara	0.97	218	P	Pn	17 50 58.3	+2.0
MTW	Mount Morrison	1.00	61	P	Pn	17 50 57.6	+0.8
TRWZ	Traveller	1.04	76	P	Pn	17 50 58.3	+1.0
OGWZ	Otaki Gorge	1.04	37	P	Pb	17 50 57.7	+0.4
THZ	Tophouse	1.09	264	P	Pb	17 50 59.2	+1.0
HOWZ	Holdsworth Sta	1.16	50	P	Pb	17 50 59.8	+0.5
TMWZ	Te Maipa	1.28	65	P	Pb	17 51 01.3	-0.2
MRZ	Mangatainoka R	1.36	44	P	Pb	17 51 02.7	-0.1
TIWZ	Tintock	1.45	53	P	Pb	17 51 04.0	-0.4
CPWZ	Castlepoint	1.58	63	P	Pb	17 51 10.8	+4.2
QRZ	Quartz Range	1.60	300	P	Pb	17 51 07.0	+0.1
OHWZ	Ohakea	1.62	27	P	Pb	17 51 09.0	+1.8
GVZ	Greta Valley S	1.64	216	P	Pb	17 51 07.1	-0.4
PRWZ	Pori Road	1.65	49	P	Pn	17 51 06.5	+0.9
POWZ	Post Office Ro	1.66	41	P	Pb	17 51 07.0	-0.9
BFZ	Birch Farm	1.73	57	P	Pn	17 51 06.9	+0.1
DSZ	Denniston Nort	1.91	266	P	Pb	17 51 12.3	+0.2
LTZ	Lake Taylor	1.91	233	P	Pb	17 51 11.1	-1.1
DVHZ	Dannevirke	1.93	46	P	Pn	17 51 09.8	+0.2
WAZ	Wanganui	1.96	15	P	Pb	17 51 13.8	+0.9
AMCZ	Amberley	1.97	219	P	Pn	17 51 11.6	+1.4
ANWZ	Angora Road	2.00	54	P	Pn	17 51 11.4	+0.9
TSZ	Takapari Road	2.01	38	P	Pn	17 51 11.6	+0.9
LREZ	Lake Rotokare	2.19	1	P	Pb	17 51 17.9	+1.0
PNHZ	Pukenui	2.23	40	P	Pn	17 51 14.6	+0.8
WPHZ	Waipukurau	2.24	46	P	Pn	17 51 14.9	+1.0
NMEZ	Namu Road	2.27	351	P	Pb	17 51 19.4	+1.2
OKCZ	Okains Bay	2.28	204	P	Pn	17 51 15.1	+0.7
CRLZ	Canterbury Las	2.31	213	P	Pn	17 51 15.7	+1.0
KHEZ	Kahui Hut	2.37	354	P	Pb	17 51 20.5	+0.4
OXZ	Oxford	2.39	225	P	Pn	17 51 16.5	+0.6
MQZ	McQueen's Vall	2.40	211	P	Pn	17 51 16.1	0.0
INZ	Inchbonnie	2.41	243	P	Pb	17 51 18.9	-1.7
NBEZ	Newall Road No	2.41	351	P	Pb	17 51 20.6	-0.1
MTVZ	Mangateitei	2.42	21	P	Pb	17 51 19.9	-1.1
DREZ	Durham Road	2.46	357	P	Pb	17 51 23.0	+1.4
PKE	Pukeiti	2.47	353	P	Pb	17 51 23.2	+1.5
PKVZ	Pokaka	2.48	18	P	Pb	17 51 23.0	+1.1
MOVZ	Moawhango	2.49	26	P	Pb	17 51 21.4	-0.6
PXZ	Pawanui	2.50	50	P	Pn	17 51 17.4	0.0
BHHZ	Black Hill Sta	2.52	32	P	Pn	17 51 19.9	+2.1
KRHZ	Kereru	2.53	38	P	Pn	17 51 18.4	+0.5
VRZ	Vera Road	2.54	7	P	Pb	17 51 21.2	-1.8
DRZ	Dome Shelter	2.55	22	P	Pb	17 51 26.8	+3.6
WHVZ	Whangaehu Hut	2.55	22	P	Pb	17 51 21.3	-1.9
FWVZ	Far West T-bar	2.56	21	P	Pb	17 51 21.0	-2.4
TUVZ	Tukino	2.58	23	P	Pb	17 51 21.4	-2.3
NGZ	Ngauruhoe	2.65	22	P	Pb	17 51 22.8	-2.2
KAHZ	Kahuranaki	2.67	47	P	Pb	17 51 26.3	+1.1
WTVZ	West Tongariro	2.71	21	P	Pb	17 51 25.6	-0.2
TWVZ	Taurewa	2.71	18	P	Pb	17 51 25.2	-0.6
KWHZ	Kaweka Forest	2.73	36	P	Pb	17 51 28.2	+2.0
KRVZ	Karewarewa	2.74	22	P	Pb	17 51 27.1	+0.8
MCHZ	McNeill Hill	2.84	40	P	Pb	17 51 29.0	+1.0
KATZ	Kakaramea	2.87	21	P	Pb	17 51 29.5	+0.9
RITZ	Rihia Road	2.91	24	P	Pb	17 51 31.2	+2.0
BKZ	Black Stump Fm	2.98	34	P	Pn	17 51 27.0	+3.0
RATZ	Rangitukua	2.99	22	P	Pb	17 51 32.6	+2.0
WVZ	Waitaha Valley	3.03	241	P	Pb	17 51 29.3	-1.9
HIZ	Hauiti	3.16	7	P	Pb	17 51 30.0	-3.4
RPZ	Rata Peaks	3.19	229	P	Pn	17 51 28.5	+1.7
MTHZ	Maungataniwha	3.39	35	P	Pb	17 51 36.5	-0.9
TLZ	Tolley Road	3.44	16	P	Pn	17 51 33.7	+3.3
PRRZ	Plateau Road	3.52	27	P	Pb	17 51 39.5	-0.1
FOZ	Fox Glacier	3.84	239	P	Pb	17 51 40.8	-4.2
TOZ	Tahuroa Road	4.02	13	P	Pb	17 51 47.0	-1.1
LBZ	Lake Benmore	4.10	227	P	Pn	17 51 43.5	+4.1
MWZ	Matawai	4.12	37	P	Pn	17 51 39.4	-0.2
ODZ	Otahua Downs	4.33	217	P	Pn	17 51 43.1	+0.5
RUGZ	Raukumara Rang	4.49	36	P	Pn	17 51 47.0	+2.1
MKAZ	Moumakai	4.59	8	P	Pn	17 51 51.4	+5.3
AWAZ	Awhitu Peninsu	4.59	3	P	Pn	17 51 51.9	+5.8
JCZ	Jackson Bay	4.75	238	P	Pn	17 51 53.9	+5.5
WIAZ	Waiheke Island	4.89	7	P	Pb	17 51 59.5	-3.5
SYZ	Scrubby Hill	6.16	216	P	Pn	17 52 09.9	+2.3
CTZ	Chatham Island	6.97	110	P	Pn	17 52 20.4	+1.6

*ATH **22** 18:01:48.1, 36°.37N×27°.11E, h20km±2km, ML3.1/2, Error ellipse: s-maj=3.0km s-min=1.2km az=59.0*

*ISK **22** 18:01:48.4, 36°.37N×27°.12E, h6km, ML2.8/13*

*THE **22** 18:01:49.2, 36°.43N×27°.16E, h0km±1km, ML2.7/2, Error ellipse: s-maj=1.6km s-min=0.9km az=208.0*

*DDA **22** 18:01:50.5, 36°.42N×27°.23E, h8km±3km, ML2.5*

ISC 22 18:01:48.6±1.0, 36°.38N±0°.02×27°.13E±0°.02, h9km±8km, n40, σ1s.28/54, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	Nisiros	0.23	359	P	Pg	18 01 53.1	-0.2
NISR				S	Sg	18 01 56.6	+0.1
NISR	Nisiros	0.23	359	P	Pg	18 01 53.2	-0.1
NISR				S	Sg	18 01 57.3	+0.8
NISR				AML	AML	18 01 57.8	
	comp=E,28521µm,0.2s						
NISR				AML	AML	18 01 58.3	
	comp=N,15406µm,0.2s						
DAT	Datca	0.50	46	PG	Pb	18 01 58.8	-0.8
DAT				SG	Sb	18 02 06.9	-0.1
DAT	Datca	0.50	46	*i* P	Pb	18 01 58.9	-0.8
DAT				*i* S	Sb	18 02 07.2	+0.2
DAT				IAML_P			
	comp=Z,721nm,0.2s						
DATC	Datca-Mugla	0.57	48	PG	Pb	18 02 00.1	-0.6
BODT	Bodrum	0.69	12	PG	Pg	18 02 02.0	-0.1
BODT	Bodrum	0.69	12	P	Pg	18 02 01.9	-0.1
BODT				S	Sb	18 02 12.6	+0.1
ARG	Arkhangelos	0.82	101	PG	Pg	18 02 04.5	+0.1
ARG	Arkhangelos	0.82	101	P	Pg	18 02 05.0	+0.5
ARG				S	Sn	18 02 18.0	-0.5
	comp=Z,932nm,0.3s						
ARG	Arkhangelos	0.82	101	P	Pg	18 02 04.9	+0.5
ARG				S	Sb	18 02 16.1	0.0
ARG				AML	AML	18 02 19.7	
	comp=N,1172µm,0.3s						
ARG				AML	AML	18 02 19.9	
	comp=E,2543µm,0.3s						
KARP	Karpathos	0.83	178	PG	Pg	18 02 04.8	+0.1
KARP	Karpathos	0.83	178	P	Pg	18 02 04.5	-0.2
KARP				S	Sg	18 02 15.7	+0.2
MRSB	Marmaris-Mugla	0.92	68	PG	Pn	18 02 07.4	-0.3
AMGA	Amorgos Island	1.09	295	P	Pg	18 02 09.5	-0.1
AMGA				S	Sn	18 02 26.9	+1.6
	comp=E,298nm,0.4s						
AMGA	Amorgos Island	1.09	295	P	Pg	18 02 09.2	-0.5
AMGA				S	Sg	18 02 24.2	+0.4
YER	Yerkesik	1.19	51	PN	Pn	18 02 11.9	+0.4
TURN	Turunc	1.28	67	PG	Pn	18 02 07.7	-4.9
TURN	Turunc	1.28	67	*i* P	Pn	18 02 07.6	-5.1
TURN				*i* S	Sb	18 02 23.0	-6.4
TURN				IAML_P			
	comp=Z,2µm,0.2s						
DALY	Dalyan (Mula)	1.30	70	PN	Pg	18 02 13.8	+0.2
DALY	Dalyan (Mula)	1.30	70	*i* P	Pg	18 02 14.5	+1.0
DALY				IAML_P			
	comp=Z,386nm,0.4s						
GCAM	G?zelcaml?	1.32	4	PN	Pg	18 02 14.1	+0.2
GCAM	G?zelcaml?	1.32	4	*i* P	Pg	18 02 16.2	+2.3
GCAM				IAML_P			
	comp=Z,970nm,0.2s						
SMG	Samos	1.34	350	P	Pn	18 02 13.2	-0.4
SMG				S	Sn	18 02 33.0	+1.5
AYDN	Tasoluk	1.41	25	*i* P	Pg	18 02 16.1	+0.5
AYDN				*i* S	Sg	18 02 35.2	+1.2
AYDN				IAML_P			
	comp=Z,1µm,0.3s						
APE	Apeiranthos	1.46	298	PN	Pb	18 02 16.3	+0.4
APE	Apeiranthos	1.46	298	P	Pn	18 02 14.6	-0.5
APE				S	Sg	18 02 35.9	+0.3
ZKR	Zakros	1.47	211	PN	Pn	18 02 15.7	+0.5
ZKR	Zakros	1.47	211	P	Pn	18 02 15.7	+0.5
ZKR				S	Sn	18 02 35.0	+0.4
IOSP	Ios island	1.52	283	P	Pn	18 02 16.3	+0.4
FETY	Fethiye	1.59	80	PN	Pb	18 02 18.0	-0.2
FETY	Fethiye	1.59	80	*i* P	Pg	18 02 18.9	-0.3
FETY				IAML_P			
	comp=Z,455nm,0.3s						
NPS	Neapolis	1.67	228	P	Pn	18 02 17.1	-0.9
NPS				S	Sn	18 02 41.1	+1.7
AYDB	Zeytinkoy-Aydi	1.67	21	PN	Pb	18 02 19.3	-0.4
DGB	zmir	1.68	353	*i* P	Pn	18 02 14.7	-3.5
TAVA	DENIZLI_Tavas	1.79	52	*i* P	Pg	18 02 24.8	+1.8
TAVA				IAML_P			
	comp=Z,207nm,0.1s						
LAST	Lasithi	1.81	228	P	Pn	18 02 19.5	-0.6
AKAS	Kas	2.00	94	PN	Pn	18 02 24.1	+1.4
AKAS	Kas	2.00	94	*i* P	Pg	18 02 27.1	+0.1
AKAS				IAML_P			
	comp=Z,633nm,0.3s						
IDI	Anoyia	2.12	240	P	Pn	18 02 23.3	-1.0
GOLH	Golhisar	2.13	66	*i* P	Pb	18 02 28.1	+0.8
GOLH				IAML_P			
	comp=Z,197nm,0.2s						

*NEIC **22** 18:04:31.2±0.4, 41°.11N×112°.86W, h0km, ML2.0, Error ellipse: s-maj=5.2km s-min=4.1km az=108.0, Suspected Mining explosion.*

NEIC 75 km [47 miles] W of Ogden.

*IDC **22** 18:04:35.1±1.1, 41°.33N×112°.98W, h0km, mb1 2.9/2, mb1mx2.8/38, mbtmp2.4/2, ML3.3/2, Error ellipse: s-maj=59.9km s-min=7.4km az=148.0*

ISC 22 18:04:27.5±0.9, 41°.18N±0°.03×113°.26W±0°.04, h0km, n27, σ1s.15/25, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGU	Big Grassy Mou	0.31	146	*e*Pg	Pb	18 04 36.0	0.0
SPUT	South Promonto	0.62	78	*e*Pg	Pg	18 04 38.9	-0.5
HVU	Hansel Valley	0.70	31	*e*Pg	Pb	18 04 43.9	+1.3
DUG	Dugway, Tooele	1.04	161	*e*Pg	Pb	18 04 48.9	+0.4
CTU	Camp Tracy	1.24	113	*e*Pg	Pg	18 04 50.4	-0.9
HWUT	Hardware Ranch	1.34	71	*e*Pg	Pg	18 04 52.6	-0.6
JLU	Jordanelle	1.49	112	*e*Pg	Pn	18 04 53.8	-1.9
NLU	North Lily Min	1.52	143	*e*Pn	Pn	18 04 56.0	-0.1
ELK	Elko	1.56	254	*e*Pn	Pg	18 05 04.3	+6.9
MPU	Maple Canyon	1.70	133	*e*Pn	Pn	18 04 57.8	-0.8
AHID	Auburn Hatcher	2.26	45	*e*Pn	Pb	18 05 08.0	-1.2
TMUT	Trail Mountain	2.45	140	*e*Pn	Pn	18 05 09.5	+0.5
HLID	Hailey	2.53	341	*e*Pn	Pg	18 05 15.8	-0.1
PSUT	Pine Spring	2.69	190	*e*Pn	Pb	18 05 15.8	-0.8
MFID	Camas Ranch	2.94	320	*e*Pn	Pg	18 05 22.8	-0.9
SRU	San Rafael Swe	2.94	134	*e*Pn	Pn	18 05 16.4	+0.7
BW06	Boulder Array	3.18	59	*e*Pn	Pn	18 05 20.1	+1.1
PD31	Pinedale Array	3.18	59	*e*Pg	Pb	18 05 25.5	+0.5
PD31				*e*Lg	Lg	18 06 05.5	
PDAR	Pinedale Array	3.18	59	Pn	Pb	18 05 25.5	+0.5
	1.2nm,0.3s,baz=229,slow=14,SNR=8.9						
PDAR				Lg	Lg	18 06 05.5	
	1.0nm,0.3s,baz=234,slow=25,SNR=5.6						
MTPU	Mount Pierson	3.24	165	*e*Pn	Pn	18 05 21.5	+1.5
R11A	Troy Canyon, C	3.35	213	*e*Pn	Pb	18 05 25.6	-2.3
MCMT	McKenzie Canyo	3.66	5	*e*Pn	Pb	18 05 31.3	-1.9
PV01	Paradox Valley	4.73	129	*e*Pn	Pn	18 05 35.4	-4.9
NV01	Mina Array Sit	4.76	236	*e*Pn	Pb	18 05 52.1	+0.2
NV01				*e*Sn	Sb	18 06 51.4	+1.6
NV01				*e*Lg	Lg	18 07 09.8	
NVAR	Mina Array Bea	4.76	236	Pn	Pb	18 05 52.1	+0.2
	0.1nm,0.3s,baz=49,slow=11,SNR=3.0						
NVAR				Sn	Sb	18 06 51.4	+1.6
	0.3nm,0.3s,baz=52,slow=23,SNR=4.7						
NVAR				Lg	Lg	18 07 09.8	
	0.2nm,0.3s,baz=40,slow=32,SNR=3.0						
I56US	NEWPORT INFRAS	7.60	340	*i*		18 48 50.0	
	baz=161,slow=312,SNR=2.3						
I57US	PINON FLAT INF	7.98	200	*i*		18 55 10.0	
	baz=16,slow=270,SNR=0.5						

*ISCJB **22** 18:12:31.4±0.7, 9°.75S±0°.05×105°.97E±0°.06, h10km, mb3.6/7, MS3.1/2, Error ellipse: s-maj=9.5km s-min=5.8km az=142.0*

*IDC **22** 18:12:32.6±1.5, 9°.74S×105°.95E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/26, mbtmp3.8/8, ML4.8/1, MS3.1/3, Ms1 3.2/3, ms1mx2.7/27, Error ellipse: s-maj=44.0km s-min=22.0km az=61.0*

*DJA **22** 18:12:34.1±1.0, 10°S±7°×10°6E±°, h32km±29km, M4.8/13, mB5.5/4, mb4.9/9, MLv4.7/13, Mw(mB)4.9/4*

ISC 22 18:12:33.8±1.0, 9°.72S±0°.09×105°.93E±0°.09, h10km, n35,

σ1^{s}12/32, mb3.8/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	2.77	13	P	Pn	18 13 16.9	-1.3
SKJI				S	Sn	18 13 51.8	+0.2
CISI	Cisompet, Garu	2.84	41	P	Pn	18 13 16.7	-2.6
CGJI	Cibinong	3.09	356	P	Pn	18 13 22.1	-0.6
CMJI	Cimerak	3.14	52	P	Pn	18 13 21.4	-1.9
LEM	Lembang	3.32	30	Pn	Pn	18 13 26.7	+0.8
	102nm,0.3s,baz=325,slow=1.3,SNR=38						
LEM				Sn	Sn	18 14 06.5	+0.9
	28nm,0.3s,baz=340,slow=22,SNR=4.1						
LEM				LR	LR	18 15 03.7	
	comp=Z,196nm,20.9s,baz=217,slow=45						
LEM	Lembang	3.32	30	P	Pn	18 13 26.8	+0.8
LEM				S	Sn	18 14 06.3	+0.7
SBJI	Serang	3.58	3	P	Pn	18 13 28.6	-0.8
SBJI				S	Sn	18 14 11.7	-0.1
BLSI	Bandar Lampung	4.38	351	P	Pn	18 13 39.7	-0.6
BLSI				S	Sn	18 14 29.5	-1.9
UGM	Wanagama	4.88	69	P	Pn	18 13 45.9	-1.4
KLI	Kotabumi	4.94	347	P	Sn	18 14 43.5	-1.9
LWLI	Liwa	5.03	338	P	Pn	18 13 49.8	+0.4
	36nm,0.4s,10μm0.7nm						
KLSI		5.14	346	P	Pn	18 13 50.0	-0.8
	26nm,0.6s,0.3nm						
MDSI	Maura Dua	5.48	341	P	Pn	18 13 54.8	-0.7
PWJI	Pagerwojo	6.04	74	P	Pn	18 14 02.5	-0.7
	71nm,0.6s						
MNAI	Manna	6.09	331	P	Pn	18 14 02.8	-1.1
LHSI	Lahat	6.32	338	P	Sn	18 15 04.9	-15
GMJI	Gumukmas	7.56	80	P	Pn	18 14 23.5	-0.6
JAGI	Jajag, Banyuwa	8.21	82	P	Pn	18 14 32.4	-0.7
IGBI	Denpasar	9.14	85	P	Pn	18 14 45.6	-0.2
SRBI	Singaraja	9.31	81	P	Pn	18 14 47.7	-0.4
PLAI	Plampang	11.72	87	P	Pn	18 15 19.1	-2.1
NWAO	Narrogin (SRO)	25.34	157	LR	LR	18 25 47.1	
	comp=Z,116nm,21.7s,baz=289,slow=31						
H01W3	Cape Leeuwin H	26.15	165	T	T	18 44 48.9	
	baz=342,slow=76,SNR=9.3						
H01W1	Cape Leeuwin H	26.16	165	T	T	18 44 50.0	
	baz=342,slow=76,SNR=8.6						
H01W2	Cape Leeuwin H	26.16	165	T	T	18 44 50.7	
	baz=342,slow=76,SNR=8.8						
CMAR	Chiang Mai Arr	28.83	346	P	P	18 18 33.6	+1.1
	0.6nm,0.7s,baz=180,slow=8.5,SNR=6.6						
CMAR				LR	LR	18 30 09.0	
	comp=Z,22nm,18.4s,baz=190,slow=37						
ASAR	Alice Springs	30.09	121	P	P	18 18 43.9	+0.2
	0.5nm,0.9s,baz=297,slow=8.5,SNR=4.1						
H08S2	Diego Garcia H	33.11	271	T	T	18 53 48.3	
	baz=98,slow=75,SNR=13						
H08S3	Diego Garcia H	33.12	271	T	T	18 53 47.3	
	baz=98,slow=75,SNR=15						
H08S1	Diego Carcia H	33.13	271	T	T	18 53 49.0	
	baz=98,slow=75,SNR=8.5						
STKA	Stephens Creek	39.68	129	P	P	18 20 06.4	+0.1
	1.1nm,0.5s,baz=315,slow=7.1,SNR=2.9						
SONM	Songino Array	57.30	0	P	P	18 22 22.9	+1.0
	0.5nm,0.8s,baz=180,slow=8.2,SNR=3.6						
MKAR	Makanchi Array	60.09	341	P	P	18 22 41.6	+0.4
	0.4nm,0.5s,baz=133,slow=8.8,SNR=6.5						
ZALV	Zalesovo Beam	65.90	347	P	P	18 23 19.9	+0.3
	0.6nm,0.4s,baz=163,slow=5.3,SNR=2.5						
PETK	Petropavlovsk-	76.47	29	P	P	18 24 23.8	+0.1
	0.4nm,0.5s,baz=228,slow=1.7,SNR=1.8						

ISCJB ***22*** *18:12:54.9±0.3, 36°.72N±0°.02×1°.58E±0°.03, h10^{km}, Error ellipse: s-maj=3.7km s-min=2.2km az=24.9*

CRAAG ***22*** *18:12:55.3, 36°.51N×1°.67E, Ml3.3*

MDD ***22*** *18:12:56.8±0.8, 36°.55N×1°.68E, h15^{km}±9^{km}, mb4.2/31, Error ellipse: s-maj=8.4km s-min=5.0km az=152.0, PRXIMO*

LDG ***22*** *18:12:57.4±0.3, 36°.78N×1°.38E, h10^{km}, Ml3.1/7, Error ellipse: s-maj=6.2km s-min=3.2km az=139.0*

ISC 22 18:12:55.2±0.9**, 36°.72N**±0°.04×**1°.63E**±0°.04**, h10**^{km}**, n77, σ2^{s}58**/129**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	Beni Rached	0.43	190	P	Pg	18 13 02.0	-1.7
ECHA	Ech Chlef	0.60	200	P	Pg	18 13 05.0	-1.9
ECHF	Ech Chlef	0.61	202	P	Pg	18 13 05.0	-1.9
EANR	'Ain N'Sour	0.88	209	P	Pn	18 13 14.5	+0.9
OKGL	Djebel Kef Gue	1.04	230	P	Pn	18 13 17.0	+1.1
OKGL	Djebel Kef Gue	1.04	230	P	Pg	18 13 14.8	-0.5
	140nm,0.1s,SNR=7.9						
OKGL				S	Sg	18 13 27.5	-1.3
	581nm,0.3s,SNR=7.9						
ABA	Alger-Bouzarea	1.14	85	P	Pg	18 13 17.5	+0.5
ABA	Alger-Bouzarea	1.14	85	P	Pg	18 13 17.5	+0.5
ETRT	Tiaret	1.35	191	P	Pn	18 13 18.5	-1.7
ETRT	Tiaret	1.35	191	P	Pn	18 13 18.5	-1.7
OJBR	Djebel Berber	1.53	223	P	Pn	18 13 16.0	-6.7
EIBI	Ibiza	2.32	355	P	Pn	18 13 35.7	+2.3
	19nm,0.1s,SNR=68						
EIBI				S	Sn	18 14 03.1	+1.2
	60nm,0.1s,SNR=11						
EBEN2	Beniarda presa	2.43	324	P	Pn	18 13 37.0	+2.1
	37nm,0.1s,SNR=7.9						
EBEN2				S	Sn	18 14 06.4	+1.7
	27nm,0.2s,SNR=7.9						
EMUR	La Murta	2.55	297	P	Pn	18 13 37.1	+0.5
	8.1nm,0.2s,SNR=14						
EMUR				S	Sn	18 14 08.6	+0.9
	4.3nm,0.3s						
ENIJ	Nijar	3.08	276	P	Pn	18 13 44.6	+0.6
	1.9nm,0.1s,SNR=7.9						
ENIJ				S	Sn	18 14 19.2	-1.7
	6.9nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.17	308	P	Pn	18 13 47.1	+2.0
	3.9nm,0.2s,SNR=19						
ETOB				S	Sn	18 14 24.6	+1.5
	4.6nm,0.3s,SNR=35						
ETOS	Mallorca	3.19	17	P	Pn	18 13 46.8	+1.5
	3.8nm,0.2s,SNR=6.5						
ETOS				S	Sn	18 14 23.0	-0.5
	13nm,0.1s,SNR=4.5						
ECHE	Chera	3.52	325	S	Sn	18 14 33.4	+1.6
	1.5nm,0.1s,SNR=4.0						
SESP	Santiago Espad	3.60	294	P	Pn	18 13 53.4	+2.2
	10nm,0.2s,SNR=7.9						
SESP				S	Sn	18 14 34.2	+0.3
	5.7nm,0.1s,SNR=7.9						
SESP	Santiago Espad	3.60	294	P	Pn	18 13 53.4	+2.2
SESP				S	Sn	18 14 35.3	+1.4
EBER	Berja	3.63	274	P	Pn	18 13 52.1	+0.5
	2.6nm,0.1s,SNR=14						
EBER				S	Sn	18 14 33.0	-1.6
	8.2nm,0.4s						
MAHO	Mahon	3.79	32	P	Pn	18 13 53.9	+0.2
MAHO	Mahon	3.79	32	*e*P	Pn	18 13 53.9	+0.2
MAHO				*e*S	Sn	18 14 35.5	-2.8
TAF	Taforalt	3.79	241	P	Pn	18 13 54.5	+0.7
TAF				S	Sn	18 14 38.3	-0.2
EQES	Quesada	3.90	288	P	Pn	18 13 57.2	+1.9
	4.2nm,0.2s,SNR=18						
EQES				S	Sn	18 14 40.8	-0.4
	3.6nm,0.1s						
EMOS	Mosqueruela	4.00	336	P	Pn	18 13 59.4	+2.8
	18nm,0.1s,SNR=13						
EMOS				S	Sn	18 14 44.9	+1.3
	9.0nm,0.2s						
EQUE	Quentar	4.09	278	P	Pn	18 13 58.6	+0.8
	2.0nm,0.3s,SNR=7.9						
EQUE				S	Sn	18 14 44.5	-1.2
	1.2nm,0.3s,SNR=7.9						
JBK	JBK	4.16	236	P	Pn	18 14 00.1	+1.1
JBK				S	Sn	18 14 54.6	+6.8
ERTA	Horta de San J	4.35	347	P	Pn	18 14 04.4	+3.0
	1.2nm,0.1s,SNR=8.9						
ERTA				S	Sn	18 14 52.7	+0.5
	3.2nm,0.2s						
EGOR	Sierra Gorda,	4.61	277	P	Pn	18 14 06.3	+1.2
	4.9nm,2.0s,SNR=7.9						
EGOR				S	Sn	18 14 56.3	-2.5
	7.3nm,6.4s,SNR=7.9						
EPOB	Poblet	4.65	355	P	Pn	18 14 08.1	+2.6
	1.1nm,0.1s,SNR=10						
EPOB				S	Sn	18 14 59.6	+0.1
	2.0nm,0.3s						
TDRA	Tendrara	4.74	220	P	Pn	18 14 07.1	+0.2
TDRA				S	Sn	18 15 02.0	0.0
PALE	Palemas	4.75	253	P	Pn	18 14 07.9	+0.9
PALE				S	Sn	18 15 03.1	+1.0
AKLM	AKL	4.98	245	P	Pn	18 14 10.8	+0.7
AKLM				S	Sn	18 15 08.3	+0.5
ETOR	Torete	5.00	326	P	Pn	18 14 13.5	+3.1
	1.2nm,0.1s,SNR=7.3						
ETOR				S	Sn	18 15 08.8	+0.5
	1.0nm,0.4s						
CFON	Fontmartina	5.08	7	P	Pn	18 14 14.1	+2.7
	2.2nm,0.2s,SNR=7.9						
CFON				S	Sn	18 15 09.7	-0.4
	6.8nm,0.2s,SNR=7.9						
EADA	Adamuz	5.14	288	P	Pn	18 14 13.4	+1.1
	0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	18 15 09.9	-1.8
	0.5nm,0.2s,SNR=7.9						
EMIJ	Mijas	5.15	270	P	Pn	18 14 12.8	+0.5
	0.6nm,0.1s,SNR=7.9						
EMIJ				S	Sn	18 15 07.8	-4.0
	0.9nm,0.2s,SNR=7.9						
FIGM	Figuig	5.16	208	P	Pn	18 14 13.1	+0.5
FIGM				S	Sn	18 15 16.5	+4.3
EMIR	Miracle	5.19	359	P	Pn	18 14 15.7	+2.8
	2.2nm,0.1s,SNR=7.2						
EMIR				S	Sn	18 15 13.2	+0.3
	4.6nm,0.2s						
ESAC	San Caprasio	5.25	343	P	Pn	18 14 16.6	+2.7
	9.8nm,0.3s,SNR=7.9						
ESAC				S	Sn	18 15 15.2	+0.7
	7.9nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	5.30	306	P	Pn	18 14 16.3	+1.8
	SNR=7.9						
ESDC				S	Sn	18 15 14.9	-0.7
	SNR=7.9						
PAB	San Pablo	5.49	303	P	Pn	18 14 18.7	+1.6
	2.2nm,0.2s,SNR=7.9						
PAB				S	Sn	18 15 19.2	-1.2
	0.2nm,0.1s,SNR=7.9						
HORN	Hornachuelos	5.60	284	P	Pn	18 14 20.5	+1.9
HORN				S	Sn	18 15 23.9	+0.9
CSOR	Sort	5.66	356	P	Pn	18 14 22.2	+2.7
	1.5nm,0.2s,SNR=7.9						
CSOR				S	Sn	18 15 23.9	-0.7
	0.9nm,0.1s,SNR=7.9						
CLLI	Llivia	5.76	3	P	Pn	18 14 23.6	+2.7
	0.3nm,0.1s,SNR=7.9						
CLLI				S	Sn	18 15 26.7	-0.4
	1.1nm,0.3s,SNR=7.9						
ECAB	El Cabril	5.77	286	P	Pn	18 14 22.7	+1.8
	0.5nm,0.2s,SNR=6.9						
ECAB				S	Sn	18 15 24.5	-2.6
	1.0nm,0.3s,SNR=7.9						
EJON	La Jonquera	5.81	9	P	Pn	18 14 24.1	+2.8
	1.6nm,1.0s,SNR=7.9						
EJON				S	Sn	18 15 26.8	-1.2
	2.3nm,0.3s,SNR=7.9						
GUD	Guadarrama	5.98	313	P	Pn	18 14 26.6	+2.7
	1.0nm,0.2s,SNR=6.6						
EPF	Esparros	6.38	351	*e*P	Pn	18 14 32.9	+3.6
EPF				*e*Sn	Sn	18 15 36.0	-6.3
	1.4nm,0.2s						
EPF	Esparros	6.38	351	P	Pn	18 14 32.9	+3.6
ETSF	Etsaut	6.40	345	*e*P	Pn	18 14 32.0	+2.4
ETSF				*e*Sn	Sn	18 15 36.0	-6.7
	1.1nm,0.3s						
ETSF	Etsaut	6.40	345	P	Pn	18 14 32.0	+2.4
MDT	Midelt	6.44	235	P	Pn	18 14 32.7	+2.6
MDT				S	Sn	18 15 47.3	+3.5
IUNC	Unciti	6.49	339	P	Pn	18 14 33.6	+2.8
	9.4nm,1.6s,SNR=7.9						
MD31	MD31	6.51	236	P	Pn	18 14 30.9	-0.2
MD31				S	Sn	18 15 47.7	+2.3
EORO	Oroz-Betelu	6.57	341	P	Pn	18 14 34.3	+2.5
	0.5nm,0.1s,SNR=7.0						
IZUN	Zunzarren	6.58	340	P	Pn	18 14 35.3	+3.3
	1.7nm,0.2s,SNR=7.9						
ATE	Arette	6.61	345	P	Pn	18 14 35.3	+2.9
	0.5nm,0.1s,SNR=7.9						
ATE				S	Sn	18 15 47.2	-0.5
	1.0nm,0.4s,SNR=7.9						
MTLF	Montolieu	6.63	4	*e*Pn	Pn	18 14 31.8	-0.9
MTLF				*e*Sn	Sn	18 15 43.0	-5.3
	0.8nm,0.2s						
EMIN	Mina Concepcio	6.70	281	P	Pn	18 14 35.0	+1.3
	0.4nm,0.2s,SNR=7.9						
SJPF	Ste Jean	6.75	342	*e*P	Pn	18 14 38.0	+3.6
SJPF				*e*Sn	Sn	18 15 44.2	-7.1
SJPF	Ste Jean	6.75	342	P	Pn	18 14 38.0	+3.6
EALK	Alkurruntz	6.92	341	P	Pn	18 14 39.8	+3.0
	1.2nm,0.2s,SNR=7.9						
ELAN	Lanestosa	7.58	331	P	Pn	18 14 48.5	+2.8
	4.8nm,0.1s,SNR=7.9						
LMR	La Mourre	7.59	28	*e*Pn	Pn	18 14 46.1	+0.2
LMR				*e*Sn	Sn	18 16 07.7	-4.3
	2.6nm,0.2s						
LMR	La Mourre	7.59	28	P	Pn	18 14 46.1	+0.2
LMR				S	Sn	18 16 07.7	-4.3
	1.3nm,0.2s						
FRF	La Foret Royal	7.84	28	*e*Pn	Pn	18 14 49.7	+0.4
FRF				*e*Sn	Sn	18 16 13.8	-4.3
	3.4nm,0.3s						
FRF	La Foret Royal	7.84	28	P	Pn	18 14 49.7	+0.4
FRF				S	Sn	18 16 13.8	-4.3
	1.7nm,0.3s						
MVO	Moncorvo	8.07	306	P	Pn	18 14 53.9	+1.3
	3.3nm,2.7s,SNR=7.9						
MVO				S	Sn	18 16 20.3	-3.6
	1.1nm,5.7s,SNR=7.9						
CAF	Calviac	8.21	2	*e*P	Pn	18 14 58.8	+4.5
CAF				*e*Sn	Sn	18 16 20.4	-6.7
	0.9nm,0.3s						
ECAL	Calabor	8.32	311	P	Pn	18 14 57.9	+2.1
	3.2nm,0.2s,SNR=7.9						
ECAL				S	Sn	18 16 26.6	-3.3
	4.3nm,3.1s,SNR=7.9						
SBF	Sospel	8.40	30	*e*Pn	Pn	18 14 56.9	-0.2
SBF				*e*Sn	Sn	18 16 27.1	-4.9
	3.4nm,0.3s						
SBF	Sospel	8.40	30	P	Pn	18 14 56.9	-0.2
SBF				S	Sn	18 16 27.1	-4.9
	1.7nm,0.3s						
EARI	Arriondas	8.41	324	P	Pn	18 15 00.1	+3.0
	1.9nm,0.2s,SNR=7.9						
EARI				S	Sn	18 16 28.7	-3.4
	4.5nm,7.4s,SNR=7.9						
ELOB	Lobios	9.10	307	P	Pn	18 15 09.0	+2.4
	1.9nm,2.2s,SNR=7.9						
EPON	Pontenova	9.42	317	P	Pn	18 15 13.3	+2.3
	5.0nm,0.7s,SNR=7.9						

ISCJB ***22*** *18:18:57.8±0.3, 43°.77N±0°.02×105°.24W±0°.04, h0^{km}, mb3.7/1, MS3.2/2, Error ellipse: s-maj=4.1km s-min=3.1km az=2.0*

ANF ***22*** *18:18:59.1±0.6, 43°.78N×105°.34W, ML3.7/13, Error ellipse: s-maj=7.8km s-min=5.9km az=127.0*

NEIC ***22*** *18:18:59.7±0.2, 43°.78N×105°.28W, h0^{km}, ML3.3, Error ellipse: s-maj=3.4km s-min=2.8km az=100.0, Suspected Mining explosion.*

NEIC 59 km [36 miles] SSE of Gillette.

IDC ***22*** *18:19:00.5±1.0, 44°.03N×105°.73W, h0^{km}, mb3.9/1, mb1 3.7/6, mb1mx3.5/39, mbtmp3.4/6, ML3.3/5, MS3.0/3, Ms1 3.0/3, ms1mx2.4/40, Error ellipse: s-maj=24.1km s-min=8.2km az=148.0*

ISC 22 18:18:59.8±0.7**, 43°.77N**±0°.04×**105°.30W**±0°.04**, h0**^{km}**, n97, σ0^{s}97**/103**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	68	*e*Pg	Pg	18 19 18.3	-0.2
RSSD	Black Hills	0.98	68	P	Pg	18 19 18.1	-0.4
	baz=249						
K22A	Casper	1.43	219	*e*Pn	Pn	18 19 24.8	-2.4
K22A	Casper	1.43	219	P	Pn	18 19 24.8	-2.4
	baz=38						
K22A				S	Sn	18 19 46.7	-0.2
	baz=38						
PHWY	Pilot Hill	2.47	183	*e*Pn	Pn	18 19 41.9	+0.3
RWWY	Rawlins	2.51	215	*e*Pn	Pn	18 19 42.4	+0.3
N23A	Red Feather La	2.91	190	P	Pn	18 19 47.5	-0.1
	baz=9.5						
N23A				S	Sn	18 20 23.6	+0.1
	baz=9.5						
LAO	LASA Array	2.99	348	*e*Pn	Pn	18 19 48.4	-0.1
LAO	LASA Array	2.99	348	P	Pn	18 19 48.0	-0.6
	baz=167						
LAO				S	Sn	18 20 24.7	-0.4
	baz=167						
RLMT	Red Lodge	3.15	297	*e*Pn	Pn	18 19 50.4	-0.4
RLMT	Red Lodge	3.15	297	P	Pn	18 19 50.0	-0.8
	baz=114						
RLMT				Sb	Sb	18 20 36.4	+0.7
	baz=114						
PD31	Pinedale Array	3.27	254	*e*Pn	Pn	18 19 52.1	-0.3
PD31				*e*Pg	Pb	18 20 00.5	+1.7
PD31				*e*Lg	Lg	18 20 36.2	
PDAR	Pinedale Array	3.27	254	Pn	Pn	18 19 52.1	-0.3
	3.0nm,0.3s,baz=63,slow=17,SNR=38						
PDAR				Pg	Pb	18 20 00.5	+1.7
	7.8nm,0.3s,baz=70,slow=21,SNR=24						
PDAR				Lg	Lg	18 20 36.2	
	5.3nm,0.3s,baz=72,slow=33,SNR=8.6						
BW06	Boulder Array	3.27	254	*e*Pn	Pn	18 19 51.9	-0.6
BW06	Boulder Array	3.27	254	P	Pn	18 19 52.2	-0.3
	baz=71						
GCMT	Greycliff	3.71	305	*e*Pn	Pn	18 19 58.4	-0.1
OGNE	Ogallala	3.72	138	*e*Pn	Pn	18 19 59.6	+1.1
OGNE	Ogallala	3.72	138	P	Pn	18 19 59.6	+1.1
	baz=321						
OGNE				Sb	Sb	18 20 54.8	+2.8
	baz=321						
LOHW	Long Hollow	3.85	269	*e*Pn	Pn	18 20 01.2	+0.7
H17A	Grant Village	3.85	281	*e*Pn	Pn	18 20 00.6	+0.1
FLWY	Flagg Ranch	3.91	276	*e*Pn	Pn	18 20 01.6	+0.2
MOOW	Moose Ponds	3.95	272	*e*Pn	Pn	18 20 01.2	-0.6
SNOW	Snow King Moun	3.97	267	*e*Pn	Pn	18 20 01.6	-0.6
YNR	Norris Junctio	3.98	286	*e*Pn	Pn	18 20 02.5	+0.2
YPP	Pitchstone Pla	4.00	279	*e*Pn	Pn	18 20 01.7	-1.0
YFT	Old Faithful	4.05	282	*e*Pn	Pn	18 20 02.9	-0.3
IMW	Indian Meadow	4.08	274	*e*Pn	Pn	18 20 05.5	+1.7
TPAW	Teton Pass	4.11	268	*e*Pn	Pn	18 20 04.5	+0.4
YHH	Holmes Hill	4.12	286	*e*Pn	Pn	18 20 04.2	0.0
FXWY	Fox Creek	4.16	270	*e*Pn	Pn	18 20 05.3	+0.6
O20A	White River Ci	4.24	212	*e*Pn	Pn	18 20 06.1	+0.2
O20A	White River Ci	4.24	212	P	Pn	18 20 05.7	-0.1
	baz=30						
SMCO	Snowmass	4.76	196	*e*Pn	Pn	18 20 13.7	+0.5
DGMT	Dagmar	4.76	9	*e*Pn	Pn	18 20 13.6	+0.7
DGMT	Dagmar	4.76	9	P	Pn	18 20 13.4	+0.6
	baz=190						
DGMT				Sb	Sb	18 21 25.6	+3.6
	baz=190						
Q24A	Divide	4.80	179	P	Pn	18 20 13.5	-0.1
	baz=359						
BOZ	Bozeman (W)	4.87	294	*e*Pn	Pn	18 20 13.9	-0.5
BOZ	Bozeman (W)	4.87	294	P	Pn	18 20 13.3	-1.2
	baz=110						
BOZ				Sb	Sb	18 21 27.7	+2.5
	baz=110						
HWUT	Hardware Ranch	5.10	247	*e*Pn	Pn	18 20 17.7	+0.1
KSCO	Kaye Shedlock'	5.16	156	*e*Pn	Pn	18 20 17.5	-0.9
KSCO	Kaye Shedlock'	5.16	156	P	Pn	18 20 17.6	-0.8
	baz=338						
EGMT	Eagleton	5.27	325	*e*Pn	Pn	18 20 19.1	-0.7
EGMT	Eagleton	5.27	325	P	Pn	18 20 18.6	-1.3
	baz=142						
HRY	Holter Researc	5.47	305	*e*Pn	Pn	18 20 22.7	+0.1
LRM	Limekiln Ridge	5.49	294	*e*Pn	Pn	18 20 24.2	+1.2
MCMT	McKenzie Canyo	5.52	284	*e*Pn	Pn	18 20 25.0	+1.6
JLU	Jordanelle	5.56	237	*e*Pn	Pn	18 20 24.8	+0.8
MDND	Maddock	5.70	42	*e*Pn	Pn	18 20 24.6	-1.0
MDND	Maddock	5.70	42	P	Pn	18 20 24.9	-0.8
	baz=226						
SPUT	South Promonto	5.83	247	*e*Pn	Pn	18 20 27.3	-0.3
HVU	Hansel Valley	5.85	253	*e*Pn	Pn	18 20 27.7	-0.2
PV22	Blue Mesa, Par	5.85	208	*e*Pn	Pn	18 20 28.0	0.0
PV07	Paradox Valley	5.90	207	*e*Pn	Pn	18 20 28.7	+0.1
PV21	Cone Mtn., Par	5.90	209	*e*Pn	Pn	18 20 28.8	+0.2
P17A	Butcher Ranch,	5.92	225	*e*Pn	Pn	18 20 28.7	-0.1
PV23	Carpenter Ridg	6.01	209	*e*Pn	Pn	18 20 30.0	-0.2
PV09	Paradox Valley	6.01	210	*e*Pn	Pn	18 20 29.2	-1.0
SDCO	Great Sand Dun	6.02	182	*e*Pn	Pn	18 20 30.4	0.0
PV04	Paradox Valley	6.02	208	*e*Pn	Pn	18 20 30.6	+0.4
PV12	Saucer Basin,	6.06	207	*e*Pn	Pn	18 20 31.6	+0.8
PV14	Lion Creek, Pa	6.08	209	*e*Pn	Pn	18 20 31.2	0.0
PV10	Paradox Valley	6.08	209	*e*Pn	Pn	18 20 32.0	+0.8
SRU	San Rafael Swe	6.09	222	*e*Pn	Pn	18 20 30.4	-0.8
PV20	West Nyswonger	6.09	208	*e*Pn	Pn	18 20 30.9	-0.4
PV11	David Mesa, Pa	6.10	208	*e*Pn	Pn	18 20 31.6	+0.3
PV16	Nyswonger Mesa	6.10	208	*e*Pn	Pn	18 20 31.4	0.0
PV19	Morning Glory	6.12	208	*e*Pn	Pn	18 20 31.2	-0.5
PV03	Paradox Valley	6.13	207	*e*Pn	Pn	18 20 32.0	+0.2
PV02	Paradox Valley	6.13	206	*e*Pn	Pn	18 20 32.5	+0.6
PV17	East Wray Mesa	6.14	208	*e*Pn	Pn	18 20 31.8	-0.2
PV01	Paradox Valley	6.15	205	*e*Pn	Pn	18 20 32.2	+0.2
PV18	Skein Mesa, Pa	6.16	208	*e*Pn	Pn	18 20 31.6	-0.5
PV13	Radium Mtn., P	6.21	207	*e*Pn	Pn	18 20 32.8	-0.1
ECSD	EROS Data Cent	6.29	87	*e*Pn	Pn	18 20 33.8	0.0
TMUT	Trail Mountain	6.29	227	*e*Pn	Pn	18 20 34.6	+0.4
NLU	North Lily Min	6.33	235	*e*Pn	Pn	18 20 34.2	-0.3
PV05	Paradox Valley	6.37	208	*e*Pn	Pn	18 20 33.7	-1.4
BGU	Big Grassy Mou	6.39	246	*e*Pn	Pn	18 20 36.1	+0.7
DUG	Dugway, Tooele	6.64	240	*e*Pn	Pn	18 20 38.0	-0.7
MVCO	Mesa Verde	6.99	201	*e*Pn	Pn	18 20 45.0	+1.3
MTPU	Mount Pierson	7.74	225	*e*Pn	Pn	18 20 53.7	-0.4
ELK	Elko	7.97	251	Pn	Pn	18 20 57.5	+0.4
	0.3nm,0.3s,baz=79,slow=16,SNR=3.1						
AGMN	Agassiz Nation	7.97	52	*e*Pn	Pn	18 20 56.5	-0.4
CCUT	Cedar City	8.72	227	*e*Pn	Pn	18 21 06.6	-0.8
ULM	Lac du Bonnet	9.13	41	Pn	Pn	18 21 11.9	-0.8
	1.4nm,0.3s,baz=234,slow=11,SNR=6.1						
ULM				Lg	Lg	18 23 43.3	
	0.4nm,0.3s,baz=121,slow=19,SNR=1.3						
NV01	Mina Array Sit	11.16	246	*e*Pn	Pn	18 21 41.7	+0.9
NVAR	Mina Array Bea	11.16	246	Pn	Pn	18 21 41.7	+0.9
	0.1nm,0.3s,baz=52,slow=12,SNR=6.9						
FFC	Flin Flon	11.18	10	*e*Pn	Pn	18 21 37.9	-2.8
YBH	Yreka Blue Hor	12.96	267	LR	LR	18 26 55.4	
	comp=Z,26nm,21.8s,baz=17,slow=38						
LTX	Lajitas	14.47	174	*e*P	P	18 22 32.4	-0.5
TXAR	Lajitas Array	14.47	174	Pn	P	18 22 32.4	-0.5
	0.0nm,0.3s,baz=350,slow=10,SNR=3.9						
TXAR				Lg	Lg	18 26 44.1	
	0.0nm,0.3s,baz=7.8,slow=27,SNR=3.6						
YKA	Yellowknife Ar	19.53	347	P	Pn	18 23 29.6	-0.1
	0.1nm,0.3s,baz=158,slow=11,SNR=4.3						
YKB5	Yellowknife Ar	19.53	347	*e*P	Pn	18 23 29.6	-0.1
RES	Resolute Bay	31.36	5	LR	LR	18 38 11.4	
	comp=Z,21nm,20.1s,baz=152,slow=37						
KSRS	Korea Array	85.86	320	LR	LR	19 13 04.5	
	comp=Z,26nm,18.2s,baz=232,slow=38						
MK32	Makanchi Array	89.57	355	*e*P	P	18 31 57.4	-1.6
MKAR	Makanchi Array	89.57	355	P	P	18 31 57.4	-1.6
	0.3nm,0.6s,baz=352,slow=3.7,SNR=4.9						

MAN 22 18:38:29.3, 7°.56N×127°.67E, h156^{km}, mb3.8, ML2.6, MS2.1, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.44	295⇓	*e*P	Pn	18 39 00.5	+1.8
BIPH				*e*S	Sn	18 39 06.6	-15
MATI	Mati	1.53	246	*e*P	Pn	18 39 00.3	+0.6
BUTP	Butuan	2.46	305	*e*P	Pn	18 39 08.0	-2.2
BUTP				*e*S	Sn	18 39 21.5	-20
BUKP	Musuan	2.61	277	*e*P	Pn	18 39 12.7	+0.6
BUKP				*e*S	Sn	18 39 28.8	-16

ISCJB ***22*** *18:40:22.3±0.5, 13°.30N±0°.09×144°.22E±0°.10, h129^{km}, mb3.8/16, Error ellipse: s-maj=13.2km s-min=12.1km az=164.1*

IDC ***22*** *18:40:23.9±0.5, 13°.39N×144°.48E, h135^{km}±4^{km}, mb3.6/16, mb1 3.8/16, mb1mx3.7/42, mbtmp4.0/16, MS2.5/1, Ms1 2.5/1, ms1mx2.2/21, Error ellipse: s-maj=17.5km s-min=12.7km az=86.0*

ISC 22 18:40:23.5±0.7**, 13°.4N**±0°.1×**144°.4E**±0°.1**, h129**^{km}**, n25, σ1^{s}13**/20**, mb3.9**/16**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.54	65	P	Pn	18 40 44.6	+2.0
	baz=190,slow=6.8						
GUMO				S	Sn	18 40 59.0	+1.9
	baz=342,slow=19						
JOW	Kunigami	20.17	314	P	P	18 44 49.2	+1.3

	0.8nm,0.6s,baz=154,slow=11,SNR=5.1						
H11S3	**WAKE ISLAND Hy**	22.05	74	T	T	19 08 06.0	
	baz=260,slow=75,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	22.07	74	T	T	19 08 06.0	
	baz=260,slow=75,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	22.07	74	T	T	19 08 03.5	
	baz=260,slow=75,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	22.48	71	T	T	19 08 22.9	
	baz=257,slow=75,SNR=15						
H11N2	**WAKE ISLAND Hy**	22.49	71	T	T	19 08 22.1	
	baz=257,slow=75,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	22.50	71	T	T	19 08 22.4	
	baz=257,slow=75,SNR=14						
JNU	**Nakatsue**	23.20	330	P	P	18 45 19.4	+0.3
	3.4nm,0.6s,baz=0.0,slow=2.0,SNR=3.9						
MJAR	**Matsushiro Arr**	23.73	348	P	P	18 45 23.8	-0.1
	4.5nm,0.6s,baz=166,slow=8.1,SNR=19						
MJAR				LR	LR	18 54 29.6	
	comp=Z,12nm,18.9s,baz=10.0,slow=36						
KSRS	**Korea Array**	28.13	331	P	P	18 46 03.0	-0.3
	1.4nm,0.5s,baz=141,slow=9.6,SNR=7.0						
WRA	**Warramunga Arr**	34.54	197	P	P	18 46 59.6	-0.2
	1.7nm,0.7s						
ASAR	**Alice Springs**	38.20	196	P	P	18 47 30.8	-0.1
	0.6nm,0.5s,baz=20,slow=13,SNR=12						
CMAR	**Chiang Mai Arr**	43.89	283	P	P	18 48 18.6	+1.0
	2.3nm,0.6s,baz=82,slow=6.3,SNR=17						
STKA	**Stephens Creek**	45.06	183	P	P	18 48 25.9	-0.6
	1.3nm,0.5s,baz=23,slow=4.3,SNR=4.8						
SONM	**Songino Array**	46.64	325	P	P	18 48 39.2	+0.2
	0.7nm,0.6s,baz=133,slow=7.8,SNR=4.8						
MKAR	**Makanchi Array**	61.31	316	P	P	18 50 25.5	0.0
	0.8nm,0.5s,baz=95,slow=8.7,SNR=12						
ZALV	**Zalesovo Beam**	61.52	325	P	P	18 50 25.6	-1.1
	0.5nm,0.4s,baz=59,slow=22,SNR=2.8						
ILAR	**Eielson Array**	68.98	25	P	P	18 51 12.0	-2.6
	0.5nm,0.4s,baz=252,slow=5.7,SNR=7.9						
YKA	**Yellowknife Ar**	83.28	27	P	P	18 52 34.5	-1.0
	0.4nm,0.5s,baz=283,slow=5.0,SNR=3.1						
YBH	**Yreka Blue Hor**	83.39	49	P	P	18 52 37.4	+0.8
	1.7nm,0.7s,baz=265,slow=5.6,SNR=3.9						
NEW	**Newport**	85.72	42	P	P	18 52 47.1	-1.1
	2.0nm,0.7s,baz=180,slow=7.1,SNR=3.0						
NVAR	**Mina Array Bea**	87.44	51	P	P	18 52 57.2	+0.2
	0.5nm,0.5s,baz=273,slow=6.8,SNR=7.2						
ELK	**Elko**	89.09	48	P	P	18 53 04.8	+0.1
	1.7nm,0.6s,baz=340,slow=5.7,SNR=7.1						
TORD	**Torodi Ar. Bea**	134.59	304	PKP	PKPdf	18 59 28.1	+0.5
	0.8nm,1.0s,baz=45,slow=2.2,SNR=3.6						

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*SOME **22** 18:52:08.7, 43°.15N×77°.93E, h10^{km}*
*KRNET **22** 18:52:08.2±0.1, 43°.18N×77°.96E, h16^{km}, mb1.9*
*NNC **22** 18:52:09.5±0.9, 42°.88N×78°.13E, h0^{km}±5^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=8.8km s-min=3.4km az=174.0*
*ISCJB **22** 18:52:10.1±0.5, 42°.97N±0°.04×78°.10E±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=3.3km az=152.6*
ISC 22 18:52:09.9±1.1**, 42°.97N**±0°.04×**78°.12E**±0°.03**, h14**^{km}±9^{km}**, n17, σ0^{s}.89**/34**, 10C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	0.23	67	P	Pb	18 52 15.4	-0.5
	5.6nm,0.1s						
SATY				S	Sb	18 52 19.2	-0.8
	48nm,0.1s						
SATY	**Saty**	0.23	67	*e*P	Pb	18 52 15.5	-0.5
	5.6nm,0.1s						
SATY				*e*S	Sb	18 52 19.2	-0.8
	48nm,0.1s						
ANVS	**Anan'yevo**	0.38	241	⇑*i*P	Pg	18 52 17.1	-0.6
	baz=9.0						
ANVS				⇑*i*S	Sg	18 52 23.2	+0.3
	baz=9.0						
PRZ	**Przheval'sk**	0.53	157	⇓*i*P	Pn	18 52 22.9	-0.3
	baz=54						
PRZ				⇓*i*S	Sn	18 52 34.0	+1.9
	baz=54						
KPKS	**Kokpek**	0.65	40	*e*P	Pb	18 52 22.4	-0.7
	8.1nm,0.1s						
KPKS				*e*S	Sb	18 52 30.7	-1.2
	4.2nm,0.2s						
UZB	**Uzynbulak**	0.69	75	P	Pb	18 52 23.6	-0.2
	0.9nm,0.1s						
UZB				S	Sb	18 52 32.8	-0.4
	4.0nm,0.1s						
UZB	**Uzynbulak**	0.69	75	*e*P	Pb	18 52 23.6	-0.2
	0.9nm,0.1s						
UZB				*e*S	Sb	18 52 32.8	-0.4
	4.0nm,0.1s						
TNSS	**Tian-Shan**	0.86	275	P	Pb	18 52 27.0	+0.1
	0.6nm,0.1s						
TNSS				S	Sb	18 52 38.9	+0.4
	1.7nm,0.1s						
PDGK	**Podgornoye**	1.06	70	P	Pb	18 52 30.0	-0.2
	0.2nm,0.1s						
PDGK				S	Sb	18 52 44.1	+0.1
	0.8nm,0.3s						
PDGK	**Podgornoye**	1.06	70	⇑*i*P	Pb	18 52 29.5	-0.7
	baz=82						
PDGK				⇑*i*S	Sb	18 52 44.3	+0.2
	baz=82						
KDJ	**Kajisay**	1.09	220	⇑*i*P	Pb	18 52 30.3	-0.3
	baz=8.0						
KDJ				⇑*i*S	Sg	18 52 46.6	+1.5
	baz=8.0						
MNBS	**Baschi**	1.13	10	P	Pb	18 52 32.5	+1.2
	0.6nm,0.1s						
MNBS				S	Sn	18 52 48.0	+1.2
	2.4nm,0.1s						
KTBS	**Karatobe**	1.28	306	P	Pb	18 52 34.6	+0.7
	0.9nm,0.2s						
KTBS				S	Sg	18 52 52.3	+0.9
	1.4nm,0.4s						
ULHL	**Ulahol**	1.56	243	⇑*i*P	Pn	18 52 37.4	-0.1
	baz=34						
ULHL				⇑*i*S	Sb	18 52 58.2	-0.3
	baz=34						
BOOM	**Boomskoye usch**	1.68	254	⇑*i*P	Pn	18 52 38.3	-0.7
	baz=46						
BOOM				⇑*i*S	Sn	18 53 00.2	-0.2
	baz=46						
KTMS	**Ketmen**	1.70	73	P	Pb	18 52 41.8	+0.8
	1.3nm,0.3s						
KTMS				S	Sb	18 53 04.4	+2.1
	1.4nm,0.1s						
TKM2	**Tokmak 2**	1.85	269	⇓*i*P	Pn	18 52 40.2	-1.3
	baz=62						
TKM2				⇓*i*S	Sn	18 53 03.9	-0.9
	baz=62						

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*MAN **22** 18:52:10.8, 5°.01N×125°.31E, h46^{km}, mb4.9, ML3.8, MS3.7*
*ISCJB **22** 18:52:15.5±0.4, 5°.36N±0°.03×125°.29E±0°.07, h77^{km}±5^{km}, mb3.7/9, Error ellipse: s-maj=11.0km s-min=4.5km az=177.4*
*DJA **22** 18:52:17.0±1.2, 5°N±2°×12°5E±°, h23^{km}±11^{km}, M4.7/7, mb4.9/5, mB5.1/4, MLv4.7/7, Mw(mB)4.5/4*
*IDC **22** 18:52:18.1±1.5, 5°.38N×125°.31E, h86^{km}±13^{km}, mb3.5/9, mb1 3.6/11, mb1mx3.4/32, mbtmp3.9/11, MS3.0/1, Ms1 3.1/1, ms1mx2.4/22, Error ellipse: s-maj=33.7km s-min=10.6km az=85.0*
ISC 22 18:52:16.6±0.8**, 5°.32N**±0°.04×**125°.24E**±0°.06**, h72**^{km}±10^{km}**, n32, σ2^{s}.39**/40**, mb3.9**/9**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	0.91	31	*e*P	Pn	18 52 32.0	-2.2
DDMP				*e*S	Sn	18 52 44.3	-3.0
SKMP	**Bagumbayan, Su**	1.38	330	*e*P	Pn	18 52 38.4	-1.7
SKMP				*e*S	Sn	18 52 54.7	-3.0
SGSI	**Sangihe**	1.65	170	P	Pn	18 52 42.9	-0.8
SGSI				S	Sn	18 53 05.0	+0.8
KCP	**Kidapawan**	1.68	355	⇑*i*P	Pn	18 52 43.5	-0.8
KCP				*i* S	Sn	18 53 04.8	-0.3
DAV	**Davao City (W)**	1.77	11	P	Pn	18 52 45.6	+0.3
	352nm,0.3s,baz=243,slow=6.0,SNR=29						
DAV				LR	LR	18 53 07.6	
	comp=Z,75nm,20.9s,baz=242,slow=29						
DAV				S	Sn	18 53 07.9	+0.8
	224nm,0.3s,baz=306,slow=20,SNR=6.7						
DMPH	**Davao City--Mi**	1.77	9	⇑*i*P	Pn	18 52 48.9	+3.6
DMPH				*i* S	Sn	18 53 11.9	+4.8
MATI	**Mati**	1.91	32	*e*P	Pn	18 52 43.9	-3.2
MATI				*e*S	Sn	18 53 04.5	-5.8
CTBH	**Cotabato--PC H**	2.13	333	⇑*e*P	Pn	18 52 48.7	-1.4
BUKP	**Musuan**	2.55	356	*e*P	Pn	18 52 55.4	-0.4
BUKP				*e*S	Sn	18 53 27.5	+1.7
CGP	**Cagayan de Oro**	3.16	350	⇓*e*P	Pn	18 53 05.1	+1.0
CGP				*e*S	Sn	18 53 45.5	+4.8
ZCP	**Zamboanga City**	3.53	297	⇓*i*P	Pn	18 53 07.5	-1.6
ZCP				*i* S	Sn	18 53 44.9	-4.7
BUTP	**Butuan**	3.65	6	*e*P	Pn	18 53 10.8	+0.1
TNTI	**Ternate**	5.00	155	P	Pn	18 53 29.8	+0.7
OCLP	**Ormoc**	5.73	354	*e*P	Pn	18 53 40.0	+0.8
LBMI	**Labuha**	6.34	159	P	Pn	18 53 48.2	+0.7
LUWI	**Luwuk**	6.78	201	P	Pn	18 53 56.3	+2.7
LUWI				S	Sn	18 55 12.4	+3.0
SIJI	**Sorong**	8.61	135	P	Pn	18 54 19.4	+0.9
	1.0nm,0.3s,baz=334,slow=23,SNR=4.8						
SIJI				S	Sn	18 55 50.9	-3.2
	0.3nm,0.3s,baz=165,slow=20,SNR=3.1						
NLAI	**Namlea**	8.70	168	P	Pn	18 54 20.0	+0.1
	68nm,0.7s,1µm						
KAPI	**Kappang**	11.63	208	P	Pn	18 55 02.6	+2.7
	0.9nm,0.3s,baz=157,slow=13,SNR=3.5						
JOW	**Kunigami**	21.59	7	P	P	18 57 00.6	0.0
	1.5nm,0.7s,baz=175,slow=12,SNR=9.7						
WRA	**Warramunga Arr**	26.65	161	P	P	18 57 49.6	+0.7
	1.6nm,0.6s,baz=338,slow=11,SNR=6.4						
ASAR	**Alice Springs**	30.03	164	P	P	18 58 19.9	+0.9
	0.2nm,0.3s,baz=340,slow=7.2,SNR=13						
KSRS	**Korea Array**	32.08	4	P	P	18 58 36.2	-0.6
	1.2nm,0.7s,baz=182,slow=10,SNR=4.5						
USRK	**Ussuriysk Ar.**	39.18	8	P	P	18 59 37.3	-0.1
	1.2nm,0.7s,baz=182,slow=9.8,SNR=3.4						
STKA	**Stephens Creek**	40.14	158	P	P	18 59 45.4	-0.3
	1.1nm,0.7s,baz=328,slow=17,SNR=2.9						
H11S3	**WAKE ISLAND Hy**	42.50	68	T	T	19 45 12.3	
	baz=257,slow=75,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	42.51	68	T	T	19 45 15.6	
	baz=257,slow=75,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	42.52	68	T	T	19 45 13.4	
	baz=257,slow=75,SNR=7.8						
PETK	**Petropavlovsk-**	54.55	23	P	P	19 01 37.3	+0.1
	1.7nm,0.6s,baz=204,slow=0.7,SNR=7.0						
MKAR	**Makanchi Array**	55.41	325	P	P	19 01 43.3	-0.3
	0.6nm,0.4s,baz=125,slow=7.6,SNR=17						
ILAR	**Eielson Array**	84.32	25	P	P	19 04 38.5	-2.0
	0.7nm,0.6s,baz=221,slow=4.6,SNR=6.2						
NOA	**NORSAR Array B**	96.71	333	LR	LR	19 55 10.4	
	comp=Z,5.8nm,18.3s,baz=85,slow=39						

NNC 22 19:11:05.9±8.2**, 36°.74N**×**70°.62E, h0**^{km}**, mb3.7, mpv3.3, 2C-4D, Error ellipse: s-maj=64.2km s-min=57.0km az=158.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.35	359	⇓Pn	Pn	19 12 43.4	+2.6
	0.7nm,0.4s,baz=186,slow=14,SNR=6.9						
KK31				⇓Sn	Sn	19 13 55.0	+1.0
	1.4nm,0.3s,baz=180,slow=24						
AAK	**Ala-Archa**	6.60	26	⇑Pn	Pn	19 12 42.2	-2.1
	1.2nm,0.5s						
AAK				⇓Sn	Sn	19 14 00.5	+0.1
	1.1nm,0.5s						
TKM2	**Tokmak 2**	7.26	30	⇓Pn	Pn	19 12 53.1	-0.3
	2.4nm,0.6s						
TKM2				⇑Sn	Sn	19 14 19.2	+2.5
	0.2nm,0.4s						

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*ISCJB **22** 19:12:11.4±0.3, 39°.61N±0°.04×15°.51E±0°.08, h259^{km}±3^{km}, mb3.4/6, Error ellipse: s-maj=10.7km s-min=6.2km az=18.0*
*ROM **22** 19:12:11.1±0.3, 39°.53N±0°.01×15°.66E±0°.04, h264^{km}±2^{km}, ML3.3/24, Error ellipse: s-maj=3.5km s-min=0.5km az=101.0*
*IDC **22** 19:12:13.7±2.6, 39°.75N×15°.33E, h275^{km}±31^{km}, mb3.1/7, mb1 3.0/14, mb1mx2.8/45, mbtmp3.6/14, Error ellipse: s-maj=17.3km s-min=14.8km az=124.0*
ISC 22 19:12:11.9±0.6**, 39°.59N**±0°.06×**15°.54E**±0°.07**, h255**^{km}±6^{km}**, n47, σ1^{s}.01**/61**, mb3.5**/6**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CET2	**Cetraro**	0.33	101	P	Pn	19 12 45.5	+0.5
CET2				S	S	19 13 10.7	-0.3
CET2				AML	AML		
	comp=E,640µm,0.8s						
CET2				AML	AML		
	comp=N,380µm,0.5s						
CET2				AML	AML		
	comp=E,640µm,0.8s						
CET2				AML	AML		
	comp=N,380µm,0.5s						
CET2				AML	AML		
	comp=E,640µm,0.8s						
CET2				AML	AML		
	comp=N,380µm,0.5s						
CET2				AML	AML		
	comp=E,640µm,0.8s						
CET2				AML	AML		
	comp=N,380µm,0.5s						
CET2				AML	AML		
	comp=E,640µm,0.8s						
CET2				AML	AML		
	comp=N,380µm,0.5s						
T0702	**Acquaformosa (**	0.44	73	P	Pn	19 12 45.8	+0.5
T0702				S	S	19 13 11.5	0.0
CUC	**Castrocucco**	0.46	28	P	Pn	19 12 46.0	+0.8
CUC				S	S	19 13 11.5	-0.1
MMN	**Mormanno**	0.46	49	P	Pn	19 12 45.9	+0.7
CAR1	**CAROLEI**	0.62	123	P	Pn	19 12 46.0	+0.1
CAR1				S	S	19 13 11.2	-1.3
CAR1				AML	AML		
	comp=E,755µm,0.7s						
CAR1				AML	AML		
	comp=N,448µm,0.8s						
CAR1				AML	AML		
	comp=E,792µm,0.7s						
CAR1				AML	AML		
	comp=N,448µm,0.8s						
CAR1				AML	AML		
	comp=E,792µm,0.7s						
CAR1				AML	AML		
	comp=N,448µm,0.8s						
CAR1				AML	AML		
	comp=N,448µm,0.8s						
CAR1				AML	AML		
	comp=E,792µm,0.7s						
CAR1				AML	AML		
	comp=N,448µm,0.8s						
CAR1				AML	AML		
	comp=E,792µm,0.7s						
SALB	**San Lorenzo Be**	0.69	65	P	Pn	19 12 46.9	+0.8
SALB				S	S	19 13 13.7	+0.6
SALB				AML	AML		
	comp=E,140µm,0.3s						
SALB				AML	AML		
	comp=N,121µm,0.6s						
SALB				AML	AML		
	comp=E,140µm,0.3s						
SALB				AML	AML		
	comp=N,121µm,0.6s						
SALB				AML	AML		
	comp=N,121µm,0.6s						
SALB				AML	AML		
	comp=E,140µm,0.3s						
SALB				AML	AML		
	comp=N,121µm,0.6s						
SALB				AML	AML		
	comp=E,140µm,0.3s						
CMPR	**Campora**	0.75	346	P	Pn	19 12 47.5	+1.2
CMPR				S	S	19 13 14.6	+1.2
MCEL	**Monticello**	0.76	16	P	Pn	19 12 48.0	+1.6
MCEL				AML	AML		
	comp=E,73µm,0.6s						
MCEL				AML	AML		
	comp=N,63µm,0.2s						
MCEL				AML	AML		
	comp=E,97µm,0.5s						
MCEL				AML	AML		
	comp=N,250µm,0.8s						
MCEL				AML	AML		
	comp=E,97µm,0.5s						
MCEL				AML	AML		
	comp=N,250µm,0.8s						
MCEL				AML	AML		
	comp=E,97µm,0.5s						
MCEL				AML	AML		
	comp=N,250µm,0.8s						
MCEL				AML	AML		
	comp=E,97µm,0.5s						
MCEL				AML	AML		
	comp=N,250µm,0.8s						
SLCN	**Sala Consilina**	0.80	5	P	Pn	19 12 47.8	+1.2
SLCN				AML	AML		
	comp=E,116µm,0.4s						
SLCN				AML	AML		
	comp=N,84µm,0.3s						
SLCN				AML	AML		
	comp=E,116µm,0.4s						
SLCN				AML	AML		
	comp=N,84µm,0.3s						
SLCN				AML	AML		
	comp=N,84µm,0.3s						
SLCN				AML	AML		
	comp=E,116µm,0.4s						
SLCN				AML	AML		
	comp=N,84µm,0.3s						
SLCN				AML	AML		
	comp=E,116µm,0.4s						
ORI	**Oriolo Calabro**	0.85	56	P	Pn	19 12 47.6	+0.9
ORI				AML	AML		
	comp=E,282µm,0.4s						
ORI				AML	AML		
	comp=N,330µm,1.6s						
ORI				AML	AML		
	comp=E,282µm,0.4s						
ORI				AML	AML		
	comp=N,330µm,1.6s						
ORI				AML	AML		
	comp=E,282µm,0.4s						
ORI				AML	AML		
	comp=N,330µm,1.6s						
ORI				AML	AML		
	comp=E,282µm,0.4s						
ORI				AML	AML		
	comp=N,330µm,1.6s						
PIPA	**Pietrapaola**	1.00	96	*i* P	Pn	19 12 48.4	+0.9
PIPA				AML	AML		
	comp=E,347µm,1.3s						
PIPA				AML	AML		
	comp=N,256µm,1.2s						
PIPA				AML	AML		
	comp=E,308µm,1.3s						
PIPA				AML	AML		
	comp=N,184µm,1.3s						
PIPA				AML	AML		
	comp=E,347µm,1.3s						
PIPA				AML	AML		
	comp=N,256µm,1.2s						
PIPA				AML	AML		
	comp=E,309µm,1.3s						
PIPA				AML	AML		
	comp=N,183µm,1.3s						
PIPA				AML	AML		
	comp=E,346µm,1.3s						
PIPA				AML	AML		
	comp=N,256µm,1.2s						
PIPA				AML	AML		
	comp=E,309µm,1.3s						
PIPA				AML	AML		
	comp=N,184µm,1.3s						
PIPA				AML	AML		
	comp=E,309µm,1.3s						
PIPA				AML	AML		
	comp=N,256µm,1.2s						
PIPA				AML	AML		
	comp=E,346µm,1.3s						
PIPA				AML	AML		
	comp=N,184µm,1.3s						
PIPA				AML	AML		
	comp=E,309µm,1.3s						
PIPA				AML	AML		
	comp=N,256µm,1.2s						
PIPA				AML	AML		
	comp=E,346µm,1.3s						
PIPA				AML	AML		
	comp=N,184µm,1.3s						
JOPP	**Joppolo**	1.02	164	P	Pn	19 12 47.8	+0.1
JOPP				S	S	19 13 14.4	-1.4
JOPP				AML	AML		
	comp=E,180µm,1.0s						
JOPP				AML	AML		
	comp=N,177µm,0.2s						
JOPP				AML	AML		
	comp=E,355µm,0.8s						
JOPP				AML	AML		
	comp=N,363µm,0.4s						
JOPP				AML	AML		
	comp=E,355µm,0.8s						
JOPP				AML	AML		
	comp=N,363µm,0.4s						
JOPP				AML	AML		
	comp=N,363µm,0.4s						
JOPP				AML	AML		
	comp=E,355µm,0.8s						
JOPP				AML	AML		
	comp=N,363µm,0.4s						
JOPP				AML	AML		
	comp=E,355µm,0.8s						
GRI	**Girifalco**	1.03	138	P	Pn	19 12 48.5	+0.8
GRI				AML	AML		
	comp=E,263µm,0.3s						
GRI				AML	AML		
	comp=N,260µm,1.4s						
GRI				AML	AML		
	comp=N,260µm,1.4s						
GRI				AML	AML		
	comp=E,263µm,0.3s						
GRI				AML	AML		
	comp=N,260µm,1.4s						
GRI				AML	AML		
	comp=E,263µm,0.3s						
TIP	**Timpagrande**	1.03	113	P	Pn	19 12 48.6	+0.8
TIP				S	S	19 13 15.8	-0.1
TIP				AML	AML		
	comp=E,182µm,1.0s						
TIP				AML	AML		
	comp=N,160µm,0.2s						
TIP				AML	AML		
	comp=E,222µm,1.0s						
TIP				AML	AML		
	comp=N,205µm,0.2s						
TIP				AML	AML		
	comp=E,182µm,1.0s						
TIP				AML	AML		
	comp=N,160µm,0.2s						
TIP				AML	AML		
	comp=E,222µm,1.0s						
TIP				AML	AML		
	comp=N,205µm,0.2s						
TIP				AML	AML		
	comp=E,222µm,1.0s						
TIP				AML	AML		
	comp=E,182µm,1.0s						
TIP				AML	AML		
	comp=N,205µm,0.2s						
TIP				AML	AML		
	comp=N,160µm,0.2s						
TIP				AML	AML		
	comp=E,222µm,1.0s						
TIP				AML	AML		
	comp=E,182µm,1.0s						
TIP				AML	AML		
	comp=N,205µm,0.2s						
TIP				AML	AML		
	comp=N,160µm,0.2s						
SERS	**Sersale**	1.05	121	*i* P	Pn	19 12 48.7	+0.7
SERS				S	S	19 13 15.6	-0.7
MIGL	**Miglionico**	1.23	34	P	Pn	19 12 48.9	+0.1
IFIL	**Filicudi I Eol**	1.27	217	P	Pn	19 12 50.9	+1.7
VPL	**Vulcano Piano**	1.28	200	P	Pn	19 12 50.7	+1.4
MSRU	**Castanea**	1.33	181	P	Pn	19 12 49.4	-0.2
MSRU				S	S	19 13 18.1	-1.1
MSRU				AML	AML		
	comp=E,358µm,0.3s						
MSRU				AML	AML		
	comp=N,269µm,0.3s						
MSRU				AML	AML		
	comp=E,358µm,0.3s						
MSRU				AML	AML		
	comp=N,269µm,0.3s						
MSRU				AML	AML		

	comp=E,358µm,0.3s						
MSRU				AML	AML		
	comp=N,269µm,0.3s						
MSRU				AML	AML		
	comp=E,358µm,0.3s						
MSRU				AML	AML		
	comp=N,269µm,0.3s						
MILZ	**Milazzo**	1.34	190	P	Pn	19 12 50.1	+0.5
MILZ				S	S	19 13 18.8	-0.4
MILZ				AML	AML		
	comp=E,568µm,0.5s						
MILZ				AML	AML		
	comp=N,478µm,0.4s						
MILZ				AML	AML		
	comp=E,568µm,0.5s						
MILZ				AML	AML		
	comp=N,478µm,0.4s						
MILZ				AML	AML		
	comp=N,478µm,0.4s						
MILZ				AML	AML		
	comp=E,568µm,0.5s						
MILZ				AML	AML		
	comp=N,478µm,0.4s						
MILZ				AML	AML		
	comp=E,568µm,0.5s						
PLAC	**Placanica**	1.34	148	P	Pn	19 12 49.8	+0.1
PLAC				S	S	19 13 18.0	-1.4
PLAC				AML	AML		
	comp=E,310µm,0.6s						
PLAC				AML	AML		
	comp=N,447µm,1.2s						
PLAC				AML	AML		
	comp=E,493µm,1.2s						
PLAC				AML	AML		
	comp=N,305µm,0.6s						
PLAC				AML	AML		
	comp=E,493µm,1.2s						
PLAC				AML	AML		
	comp=N,305µm,0.6s						
PLAC				AML	AML		
	comp=N,305µm,0.6s						
PLAC				AML	AML		
	comp=E,493µm,1.2s						
PLAC				AML	AML		
	comp=N,305µm,0.6s						
PLAC				AML	AML		
	comp=E,493µm,1.2s						
MSCL	**Scilla**	1.37	172	P	Pn	19 12 49.8	-0.2
MSCL				AML	AML		
	comp=E,356µm,0.7s						
MSCL				AML	AML		
	comp=N,307µm,0.5s						
MSCL				AML	AML		
	comp=E,490µm,0.9s						
MSCL				AML	AML		
	comp=N,308µm,0.5s						
MSCL				AML	AML		
	comp=N,308µm,0.5s						
MSCL				AML	AML		
	comp=E,490µm,0.9s						
MSCL				AML	AML		
	comp=N,308µm,0.5s						
MSCL				AML	AML		
	comp=E,490µm,0.9s						
MATE	**Matera**	1.39	40	P	Pn	19 12 49.8	0.0
MATE				S	S	19 13 18.3	-1.4
MATE				AML	AML		
	comp=E,144µm,1.1s						
MATE				AML	AML		
	comp=N,161µm,0.6s						
MATE				AML	AML		
	comp=E,144µm,1.1s						
MATE				AML	AML		
	comp=N,161µm,0.6s						
MATE				AML	AML		
	comp=N,161µm,0.6s						
MATE				AML	AML		
	comp=E,144µm,1.1s						
MATE				AML	AML		
	comp=N,161µm,0.6s						
MATE				AML	AML		
	comp=E,144µm,1.1s						
ATN	**Antennamare**	1.43	182	P	Pn	19 12 50.3	-0.1
ATN				AML	AML		
	comp=E,308µm,0.3s						
ATN				AML	AML		
	comp=N,241µm,0.2s						
ATN				AML	AML		
	comp=E,308µm,0.3s						
ATN				AML	AML		
	comp=N,240µm,0.2s						
ATN				AML	AML		
	comp=N,240µm,0.2s						
ATN				AML	AML		
	comp=E,308µm,0.3s						
ATN				AML	AML		
	comp=N,240µm,0.2s						
ATN				AML	AML		
	comp=E,308µm,0.3s						
GMB	**Gambarie**	1.44	171	P	Pn	19 12 50.7	+0.1
GMB				AML	AML		
	comp=E,1075µm,0.2s						
GMB				AML	AML		
	comp=N,602µm,0.7s						
GMB				AML	AML		
	comp=E,1080µm,0.2s						
GMB				AML	AML		
	comp=N,602µm,0.7s						
GMB				AML	AML		
	comp=E,1080µm,0.2s						
GMB				AML	AML		
	comp=N,602µm,0.7s						
GMB				AML	AML		
	comp=E,1080µm,0.2s						
GMB				AML	AML		
	comp=N,602µm,0.7s						
MPNC	**Port Mandanici**	1.45	186	P	Pn	19 12 50.5	0.0
MPNC				S	S	19 13 19.7	-1.1
MPNC				AML	AML		
	comp=E,409µm,0.7s						
MPNC				AML	AML		
	comp=N,291µm,1.0s						
MPNC				AML	AML		
	comp=E,409µm,0.7s						
MPNC				AML	AML		
	comp=N,291µm,1.0s						
MPNC				AML	AML		
	comp=E,409µm,0.7s						
MPNC				AML	AML		
	comp=N,291µm,1.0s						
MPNC				AML	AML		
	comp=E,409µm,0.7s						
MPNC				AML	AML		
	comp=N,291µm,1.0s						
AMUR	**Altamura**	1.55	32	P	Pn	19 12 51.1	+0.1
AMUR				AML	AML		
	comp=E,50µm,1.0s						
AMUR				AML	AML		
	comp=N,51µm,0.6s						
AMUR				AML	AML		
	comp=E,50µm,1.0s						
AMUR				AML	AML		
	comp=N,51µm,0.6s						
AMUR				AML	AML		
	comp=N,51µm,0.6s						
AMUR				AML	AML		
	comp=E,50µm,1.0s						
AMUR				AML	AML		
	comp=N,51µm,0.6s						
AMUR				AML	AML		
	comp=E,50µm,1.0s						
SOI	**Samo**	1.57	165	P	Pn	19 12 51.5	+0.2
SOI				AML	AML		
	comp=E,148µm,0.4s						
SOI				AML	AML		
	comp=N,99µm,0.3s						
SOI				AML	AML		
	comp=E,153µm,0.4s						
SOI				AML	AML		
	comp=N,99µm,0.3s						
SOI				AML	AML		
	comp=N,99µm,0.3s						
SOI				AML	AML		
	comp=E,153µm,0.4s						
SOI				AML	AML		
	comp=N,99µm,0.3s						
SOI				AML	AML		
	comp=E,153µm,0.4s						
MTTG	**Motta San Giov**	1.59	175	P	Pn	19 12 52.2	+0.7
MTTG				AML	AML		
	comp=E,194µm,0.5s						
MTTG				AML	AML		
	comp=N,234µm,0.7s						
MTTG				AML	AML		
	comp=E,230µm,0.5s						
MTTG				AML	AML		
	comp=N,234µm,0.7s						
MTTG				AML	AML		
	comp=N,234µm,0.7s						
MTTG				AML	AML		
	comp=E,230µm,0.5s						
MTTG				AML	AML		
	comp=N,234µm,0.7s						
MTTG				AML	AML		
	comp=E,230µm,0.5s						
NOCI	**Noci**	1.67	44	P	Pn	19 12 52.0	0.0
NOCI				AML	AML		
	comp=E,160µm,0.6s						
NOCI				AML	AML		
	comp=N,89µm,0.4s						
NOCI				AML	AML		
	comp=E,160µm,0.6s						
NOCI				AML	AML		
	comp=N,89µm,0.4s						
NOCI				AML	AML		
	comp=N,89µm,0.4s						
NOCI				AML	AML		
	comp=E,160µm,0.6s						
NOCI				AML	AML		
	comp=N,89µm,0.4s						
NOCI				AML	AML		
	comp=E,160µm,0.6s						
ALJA	**Alia**	2.31	218	P	Pn	19 13 00.0	+2.2
ALJA				AML	AML		
	comp=E,55µm,1.3s						
ALJA				AML	AML		
	comp=N,45µm,1.3s						
ALJA				AML	AML		
	comp=N,45µm,1.3s						
ALJA				AML	AML		
	comp=E,55µm,1.3s						
ALJA				AML	AML		
	comp=N,45µm,1.3s						
ALJA				AML	AML		
	comp=E,55µm,1.3s						
HCRL	**Carlentini**	2.34	190	P	Pn	19 12 59.0	+1.0
HCRL				AML	AML		
	comp=E,90µm,0.7s						
HCRL				AML	AML		
	comp=N,80µm,1.4s						
HCRL				AML	AML		
	comp=E,90µm,0.7s						
HCRL				AML	AML		
	comp=N,80µm,1.4s						
HCRL				AML	AML		
	comp=E,90µm,0.7s						
HCRL				AML	AML		
	comp=N,80µm,1.4s						
MEU	**Monte Lauro**	2.53	191	P	Pn	19 13 00.9	+0.9
GERES	**GERESS Array B**	9.35	353	P	Pn	19 14 22.6	+0.5
	comp=N,0.1nm,0.3s,baz=164,slow=11,SNR=2.7						
MLR	**Muntele Rosu**	9.68	49	P	Pn	19 14 28.0	+1.6
	comp=N,0.3nm,0.3s,baz=317,slow=19,SNR=3.0						
BRTR	**Keskin Array B**	13.95	84	P	P	19 15 22.4	+2.4
	comp=N,0.1nm,0.3s,baz=282,slow=7.2,SNR=4.2						
AKASG	**Malin Array Be**	14.69	36	P	Pn	19 15 28.1	+0.1
	comp=N,0.7nm,0.3s,baz=229,slow=11,SNR=4.3						
ESDC	**Sonseca Array**	15.03	277	P	P	19 15 30.0	-1.8
	comp=N,0.2nm,0.3s,baz=70,slow=11,SNR=6.4						
MMAI	**Mount Meron Ar**	17.29	106	P	Pn	19 15 58.8	-0.3
	comp=N,0.4nm,0.3s,baz=313,slow=9.6,SNR=2.7						
EKA	**Eskdalemuir Ar**	20.09	328	P	P	19 16 24.3	-2.0
	baz=146,slow=12,SNR=6.2						
HFS	**Hagfors**	20.60	357	P	P	19 16 30.0	-1.6
	comp=N,1.1nm,0.5s,baz=172,slow=12,SNR=6.4						
FINES	**FINESS Array B**	22.82	13	P	P	19 16 51.5	-1.2
	comp=N,2.9nm,0.8s,baz=198,slow=13,SNR=2.4						
TORD	**Torodi Ar. Bea**	29.04	209	P	P	19 17 49.5	+0.8
	comp=N,0.3nm,0.8s,baz=12,slow=9.6,SNR=4.1						
ARCES	**ARCESS Array B**	30.47	7	P	P	19 18 00.0	-0.8
	comp=N,1.9nm,0.9s,baz=190,slow=9.2,SNR=3.7						
DBIC	**Dimbokro**	37.56	215	P	P	19 19 02.6	+0.4
	comp=N,3.5nm,1.0s,baz=14,slow=4.2,SNR=2.8						
ZALV	**Zalesovo Beam**	47.66	48	P	P	19 20 22.7	+0.2
	comp=N,0.4nm,0.3s,baz=285,slow=5.5,SNR=2.9						
MKAR	**Makanchi Array**	47.88	58	P	P	19 20 24.6	+0.1
	comp=N,0.5nm,0.3s,baz=282,slow=7.3,SNR=14						

ISCJB ***22*** *19:26:13.9±0.5, 7°.73N±0°.08×124°.0E±0°.2, h550^{km}, mb3.8/15, Error ellipse: s-maj=20.7km s-min=9.0km az=165.8*

IDC ***22*** *19:26:16.7±1.3, 7°.65N×124°.07E, h574^{km}±16^{km}, mb3.2/15, mb1 3.3/17, mb1mx3.2/34, mbtmp4.2/17, Error ellipse: s-maj=22.2km s-min=7.3km az=74.0*

ISC 22 19:26:14.7±0.6, **7°.66N**±0°.08×**124°.0E**±0°.2, **h550**^{km}**, n18,** σ**1^{s}.13**/24, **mb3.8**/15, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	11.15	139	P	P	19 28 46.0	+1.4
	1.0nm,0.3s,baz=261,slow=23,SNR=5.6						
BATI	**Baumata**	17.75	181	P	P	19 29 50.7	+0.3
	2.6nm,0.3s,baz=148,slow=1.2,SNR=6.0						
CMAR	**Chiang Mai Arr**	26.62	296	P	P	19 31 11.1	+1.3
	0.3nm,0.5s,baz=95,slow=6.4,SNR=3.5						
WRA	**Warramunga Arr**	29.26	160	P	P	19 31 33.1	+0.3
	6.8nm,0.5s,baz=344,slow=11,SNR=65						
WRA				S	S	19 35 45.1	-2.4
KSRS	**Korea Array**	29.88	6	P	P	19 31 38.7	+0.8
	1.8nm,0.7s,baz=182,slow=9.0,SNR=7.7						
MJAR	**Matsushiro Arr**	31.54	22	P	P	19 31 51.4	-0.9
	1.3nm,0.6s,baz=192,slow=9.4,SNR=5.6						
ASAR	**Alice Springs**	32.60	163	P	P	19 32 02.4	+0.8
	3.1nm,0.4s,baz=340,slow=7.1,SNR=217						
ASAR				PcP	PcP	19 34 31.5	+0.2
	0.4nm,0.4s,baz=350,slow=2.6,SNR=5.0						
ASAR				S	S	19 36 37.2	-1.6
	0.9nm,0.7s,baz=346,slow=21,SNR=7.2						
ASAR				ScP	ScP	19 37 21.4	-2.0
	0.3nm,0.5s,baz=340,slow=3.5,SNR=7.7						
USRK	**Ussuriysk Ar.**	37.07	10	P	P	19 32 38.9	+0.6
	2.3nm,0.6s,baz=203,slow=7.0,SNR=8.0						
SONM	**Songino Array**	42.75	343	P	P	19 33 24.6	+0.7
	2.1nm,0.7s,baz=156,slow=8.7,SNR=12						
STKA	**Stephens Creek**	42.76	158	P	P	19 33 25.2	+1.1
	3.7nm,0.6s,baz=332,slow=9.1,SNR=10						
MKAR	**Makanchi Array**	52.80	325	P	P	19 34 39.5	+0.6
	5.1nm,0.5s,baz=120,slow=7.8,SNR=89						
MKAR				PcP	PcP	19 35 38.1	-1.2
	0.4nm,0.5s,baz=119,slow=4.1,SNR=2.1						
MKAR				ScP	ScP	19 38 43.2	-1.1
	0.4nm,0.7s,baz=131,slow=4.0,SNR=3.2						
PETK	**Petropavlovsk-**	52.94	25	P	P	19 34 40.3	+0.5
	1.4nm,0.6s,baz=214,slow=3.4,SNR=4.1						
ZALV	**Zalesovo Beam**	55.88	333	P	P	19 34 59.8	-0.6
	1.5nm,0.5s,baz=134,slow=6.6,SNR=6.6						
ILAR	**Eielson Array**	82.76	26	P	P	19 37 39.9	-1.0
	0.3nm,0.6s,baz=272,slow=5.3,SNR=3.1						
ARCES	**ARCESS Array B**	85.84	340	P	P	19 37 55.2	-0.8
	1.3nm,0.8s,baz=122,slow=3.3,SNR=3.3						
FINES	**FINESS Array B**	87.11	332	P	P	19 38 01.5	-0.5
	2.3nm,0.9s,baz=56,slow=3.4,SNR=9.0						
VNDA	**Vanda**	87.65	172	P	P	19 38 04.6	+0.4
	0.7nm,0.5s,baz=341,slow=7.4,SNR=9.3						
TORD	**Torodi Ar. Bea**	119.07	290	PKP	PKPdf	19 44 01.2	-1.1
	0.5nm,1.1s,baz=114,slow=3.1,SNR=2.6						

NIED ***22*** *19:37:00, 36°.20N×139°.20E, h119^{km}, Mw3.6 Best double couple: M$_0$2.37000×10^{14} NP1:φ$_s$43.00000°, δ22.00000°, λ132.00000°. NP2:φ$_s$178.00000°, δ74.00000°, λ75.00000°.*

IDC ***22*** *19:37:58.5±0.8, 36°.22N×139°.19E, h127^{km}±6^{km}, mb3.4/7, mb1 3.5/10, mb1mx3.2/33, mbtmp3.8/10, Error ellipse: s-maj=22.3km s-min=9.0km az=71.0*

JMA ***22*** *19:37:59.0±0.1, 36°.21N×139°.22E, h127^{km}±1^{km}, M3.5*

JMA Felt I J1.

ISC 22 19:37:58.8±0.8, **36°.24N**±0°.05×**139°.19E**±0°.08, **h128**^{km}±6^{km}, **n21,** σ**0^{s}.90**/31, **mb3.6**/7, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	**Ashikaga**	0.28	48	P	Pn	19 38 16.9	+0.2
JAG				S	Sn	19 38 30.1	-0.1
JRY	**Ryogami san**	0.32	227	P	Pn	19 38 17.2	+0.3
JRY				S	Sn	19 38 30.8	+0.4
JKT	**Katashina**	0.53	5	P	Pn	19 38 18.4	+0.4
JKT				S	Sn	19 38 33.1	+0.6
MJAR	**Matsushiro Arr**	0.85	291	P	Pn	19 38 19.8	-0.4
	16nm,0.3s,baz=120,slow=4.8,SNR=711						
MJAR				S	Sn	19 38 36.5	+0.1
	2.5nm,0.3s,baz=93,slow=16,SNR=6.1						
MAT	**Matsushiro**	0.85	291	P	Pn	19 38 20.2	0.0
MAT				S	Sn	19 38 36.1	-0.3
MAT	**Matsushiro**	0.85	291	P	Pn	19 38 20.2	0.0
MAT				S	Sn	19 38 35.9	-0.5
JYN	**Shimob**	0.91	216	P	Pn	19 38 20.6	-0.2
JYN				S	Sn	19 38 37.3	-0.1
JOD2	**Odawara 2**	0.98	185	P	Pn	19 38 20.9	-0.5
JOD2				S	Sn	19 38 37.7	-0.7
JFNN	**Fujinakano**	1.12	202	P	Pn	19 38 23.3	+0.6
JFNN				S	Sn	19 38 41.8	+1.0
JFT	**Otama**	1.57	35	P	Pn	19 38 28.8	+1.2
JHJ	**Hachijo jima 2**	3.15	171	P	Pn	19 38 48.1	+0.7
	28nm,0.3s,baz=336,slow=23,SNR=13						
JHJ				S	Sn	19 39 23.6	-1.1
	8.9nm,0.3s,baz=204,slow=20,SNR=3.5						
JNU	**Nakatsue**	7.52	248	P	Pn	19 39 46.2	+0.4
	0.5nm,0.3s,baz=234,slow=6.6,SNR=5.3						
ASAJ	**Asahikawa**	8.29	17	P	Pn	19 39 54.8	-1.2
	0.4nm,0.3s,baz=198,slow=9.6,SNR=5.0						
KSRS	**Korea Array**	9.12	281	P	Pn	19 40 10.2	+3.0
	0.2nm,0.3s,baz=236,slow=37,SNR=7.3						
ZALV	**Zalesovo Beam**	41.14	313	P	P	19 45 29.5	-0.7
	1.3nm,0.5s,baz=92,slow=3.5,SNR=4.1						
MKAR	**Makanchi Array**	43.03	302	P	P	19 45 44.5	-1.1
	0.5nm,0.5s,baz=84,slow=10,SNR=9.4						
ILAR	**Eielson Array**	51.12	32	P	P	19 46 48.0	0.0
	0.5nm,0.6s,baz=282,slow=4.4,SNR=5.3						
WRA	**Warramunga Arr**	56.06	186	P	P	19 47 23.6	-0.9
	1.2nm,0.9s,baz=356,slow=8.2,SNR=3.1						
ASAR	**Alice Springs**	59.79	186	P	P	19 47 51.7	+1.2
	0.4nm,0.9s,baz=355,slow=5.2,SNR=6.0						
FINES	**FINESS Array B**	68.67	332	P	P	19 48 47.4	-0.6
	2.6nm,1.1s,baz=46,slow=6.0,SNR=2.6						
TXAR	**Lajitas Array**	92.02	51	P	P	19 50 54.2	+0.6
	0.2nm,0.5s,baz=249,slow=2.1,SNR=3.6						

ISCJB ***22*** *20:04:35.6±0.3, 43°.79N±0°.02×105°.25W±0°.04, h0^{km}, mb3.9/3, Error ellipse: s-maj=3.8km s-min=3.3km az=15.5*

IDC ***22*** *20:04:35.9±1.8, 43°.61N×105°.31W, h0^{km}, mb3.8/3, mb1 3.8/8, mb1mx3.5/50, mbtmp3.7/8, ML2.8/4, MS2.9/2, Ms1 2.9/2, ms1mx2.3/40, Error ellipse: s-maj=51.7km s-min=8.4km az=150.0*

NEIC ***22*** *20:04:37.3±0.2, 43°.81N×105°.26W, h0^{km}, ML3.5, Error ellipse: s-maj=2.7km s-min=2.4km az=127.0, Suspected Mining explosion.*

NEIC 57 km [36 miles] SSE of Gillette.

ANF ***22*** *20:04:37.1±0.9, 43°.77N×105°.33W, ML3.8/11, Error ellipse: s-maj=12.8km s-min=8.9km az=113.0*

ISC 22 20:04:37.0±0.6, **43°.84N**±0°.03×**105°.19W**±0°.05, **h0**^{km}**, n103,** σ**1^{s}.10**/108, **mb3.8**/3, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	0.88	71	*e*Pg	Pb	20 04 56.0	+0.7
RSSD	**Black Hills**	0.88	71	P	Pb	20 04 56.2	+0.9
	baz=251						
K22A	**Casper**	1.54	220	*e*Pn	Pn	20 05 03.0	-2.8
K22A	**Casper**	1.54	220	P	Pn	20 05 03.3	-2.6
	baz=38						
K22A				S	Sg	20 05 25.4	-1.0
	baz=38						
PHWY	**Pilot Hill**	2.55	184	*e*Pn	Pn	20 05 19.2	-0.7
RWWY	**Rawlins**	2.62	215	*e*Pn	Pn	20 05 20.6	-0.2
LAO	**LASA Array**	2.94	346	*e*Pn	Pn	20 05 26.4	+1.4
LAO	**LASA Array**	2.94	346	P	Pn	20 05 26.3	+1.3
	baz=166						
LAO				Sb	Sg	20 06 09.9	-1.4
	baz=166						
N23A	**Red Feather La**	3.00	191	P	Pn	20 05 26.1	+0.1
	baz=9.7						
N23A				S	Sn	20 06 02.0	-0.8
	baz=9.7						
RLMT	**Red Lodge**	3.18	295	*e*Pn	Pn	20 05 28.5	0.0
RLMT	**Red Lodge**	3.18	295	P	Pn	20 05 28.6	0.0
	baz=113						
BW06	**Boulder Array**	3.36	253	*e*Pn	Pn	20 05 30.5	-0.6
BW06	**Boulder Array**	3.36	253	P	Pn	20 05 30.4	-0.6
	baz=70						
PD31	**Pinedale Array**	3.36	253	*e*Pn	Pn	20 05 30.4	-0.6
PD31				*e*Lg	Lg	20 06 16.6	
PDAR	**Pinedale Array**	3.36	253	Pn	Pn	20 05 30.4	-0.6
	5.3nm,0.3s,baz=77,slow=16,SNR=45						
PDAR				Lg	Lg	20 06 16.6	
	15nm,0.3s,baz=66,slow=26,SNR=7.5						
OGNE	**Ogallala**	3.72	140	*e*Pn	Pn	20 05 36.7	+0.9
OGNE	**Ogallala**	3.72	140	P	Pn	20 05 36.9	+1.0
	baz=321						
OGNE				Sb	Sg	20 06 33.3	-3.3
	baz=321						
GCMT	**Greycliff**	3.73	303	*e*Pn	Pn	20 05 36.0	0.0
H17A	**Grant Village**	3.92	280	*e*Pn	Pn	20 05 37.4	-1.2
H17A	**Grant Village**	3.92	280	P	Pn	20 05 39.4	+0.8
	baz=97						
H17A				Sb	Sb	20 06 36.6	+1.5
	baz=97						
LOHW	**Long Hollow**	3.93	269	*e*Pn	Pn	20 05 39.0	+0.3
FLWY	**Flagg Ranch**	3.98	275	*e*Pn	Pn	20 05 39.6	+0.1
MOOW	**Moose Ponds**	4.02	271	*e*Pn	Pn	20 05 39.9	-0.1
SNOW	**Snow King Moun**	4.05	267	*e*Pn	Pn	20 05 40.0	-0.6
YPP	**Pitchstone Pla**	4.07	278	*e*Pn	Pn	20 05 40.5	-0.3
IMW	**Indian Meadow**	4.15	273	*e*Pn	Pn	20 05 41.7	-0.2
YHH	**Holmes Hill**	4.17	285	*e*Pn	Pn	20 05 42.2	+0.1
TPAW	**Teton Pass**	4.19	267	*e*Pn	Pn	20 05 42.2	-0.2
FXWY	**Fox Creek**	4.23	269	*e*Pn	Pn	20 05 42.9	0.0
O20A	**White River Ci**	4.35	213	*e*Pn	Pn	20 05 43.9	-0.6
O20A	**White River Ci**	4.35	213	P	Pn	20 05 44.3	-0.2
	baz=30						
AHID	**Auburn Hatcher**	4.44	258	*e*Pn	Pn	20 05 45.1	-0.7
QLMT	**Earthquake Lak**	4.58	285	*e*Pn	Pn	20 05 47.2	-0.5
DGMT	**Dagmar**	4.68	8	*e*Pn	Pn	20 05 51.8	+2.9
DGMT	**Dagmar**	4.68	8	P	Pn	20 05 51.6	+2.7
	baz=189						
DGMT				Sb	Sg	20 07 03.6	-3.7
	baz=189						
SMCO	**Snowmass**	4.85	197	*e*Pn	Pn	20 05 51.4	-0.2
Q24A	**Divide**	4.88	180	P	Pn	20 05 51.7	-0.2
	baz=359						
Q24A				Sb	Sb	20 07 06.0	+3.3
	baz=359						
BOZ	**Bozeman (W)**	4.91	293	*e*Pn	Pn	20 05 52.7	+0.5
HWUT	**Hardware Ranch**	5.20	247	*e*Pn	Pn	20 05 55.4	-0.7
KSCO	**Kaye Shedlock'**	5.20	157	*e*Pn	Pn	20 05 56.1	0.0
EGMT	**Eagleton**	5.25	324	*e*Pn	Pn	20 05 57.1	+0.3
HRY	**Holter Researc**	5.49	304	*e*Pn	Pn	20 06 00.9	+0.7
MCMT	**McKenzie Canyo**	5.58	283	*e*Pn	Pn	20 06 00.8	-0.6
MDND	**Maddock**	5.59	42	*e*Pn	Pn	20 06 01.9	+0.4
JLU	**Jordanelle**	5.66	237	*e*Pn	Pn	20 06 02.6	0.0
BGNE	**Belgrade**	5.74	113	*e*Pn	Pn	20 06 04.0	+0.5
SPUT	**South Promonto**	5.92	247	*e*Pn	Pn	20 06 04.9	-1.3
HVU	**Hansel Valley**	5.95	252	*e*Pn	Pn	20 06 06.1	-0.3
PV22	**Blue Mesa, Par**	5.95	208	*e*Pn	Pn	20 06 06.1	-0.5
PV07	**Paradox Valley**	6.00	207	*e*Pn	Pn	20 06 07.3	+0.1
PV21	**Cone Mtn., Par**	6.00	210	*e*Pn	Pn	20 06 06.8	-0.4
P17A	**Butcher Ranch,**	6.03	225	*e*Pn	Pn	20 06 07.1	-0.4
SDCO	**Great Sand Dun**	6.09	182	*e*Pn	Pn	20 06 07.9	-0.7
PV23	**Carpenter Ridg**	6.11	209	*e*Pn	Pn	20 06 08.9	+0.1
PV09	**Paradox Valley**	6.11	210	*e*Pn	Pn	20 06 08.3	-0.5
PV04	**Paradox Valley**	6.12	208	*e*Pn	Pn	20 06 08.4	-0.4
PV12	**Saucer Basin,**	6.16	207	*e*Pn	Pn	20 06 09.6	+0.3
PV14	**Lion Creek, Pa**	6.18	209	*e*Pn	Pn	20 06 09.2	-0.5
PV10	**Paradox Valley**	6.18	209	*e*Pn	Pn	20 06 10.3	+0.5
PV20	**West Nyswonger**	6.19	209	*e*Pn	Pn	20 06 09.3	-0.5
SRU	**San Rafael Swe**	6.19	222	*e*Pn	Pn	20 06 08.5	-1.4
PV11	**David Mesa, Pa**	6.20	208	*e*Pn	Pn	20 06 09.6	-0.3
PV16	**Nyswonger Mesa**	6.20	208	*e*Pn	Pn	20 06 09.4	-0.5
ECSD	**EROS Data Cent**	6.21	88	*e*Pn	Pn	20 06 11.9	+2.0
PV19	**Morning Glory**	6.22	209	*e*Pn	Pn	20 06 09.8	-0.5
PV03	**Paradox Valley**	6.23	208	*e*Pn	Pn	20 06 09.8	-0.6
PV02	**Paradox Valley**	6.23	207	*e*Pn	Pn	20 06 10.6	+0.2
PV17	**East Wray Mesa**	6.24	208	*e*Pn	Pn	20 06 10.7	+0.2
PV01	**Paradox Valley**	6.25	205	*e*Pn	Pn	20 06 10.9	+0.3
PV18	**Skein Mesa, Pa**	6.26	208	*e*Pn	Pn	20 06 09.6	-1.1

PV13	Radium Mtn., P	6.30	207	*e*Pn	Pn	20 06 11.2	-0.2
TMUT	Trail Mountain	6.40	227	*e*Pn	Pn	20 06 12.6	-0.2
PV05	Paradox Valley	6.47	208	*e*Pn	Pn	20 06 12.1	-1.6
BGU	Big Grassy Mou	6.49	246	*e*Pn	Pn	20 06 13.5	-0.4
Q16A	Castle Valley	6.66	224	*e*Pn	Pn	20 06 15.8	-0.5
DUG	Dugway, Tooele	6.74	240	*e*Pn	Pn	20 06 15.8	-1.6
MSO	Missoula	6.85	299	*e*Pn	Pn	20 06 16.9	-1.8
MTPU	Mount Pierson	7.84	225	*e*Pn	Pn	20 06 31.7	-1.0
WALA	Waterton Lakes	7.96	314	*e*Pn	Pn	20 06 33.3	-0.8
ELK	Elko	8.06	251	Pn	Pn	20 06 35.9	+0.3
	0.3nm,0.3s,baz=70,slow=10,SNR=5.1						
ELK	Elko	8.06	251	*e*Pn	Pn	20 06 33.5	-2.1
PSUT	Pine Spring	8.41	234	*e*Pn	Pn	20 06 40.1	-0.1
CCUT	Cedar City	8.83	227	*e*Pn	Pn	20 06 46.4	+0.3
KNB	Kanab	8.96	223	*e*Pn	Pn	20 06 46.7	-1.1
ULM	Lac du Bonnet	9.03	42	Pn	Pn	20 06 48.4	-0.1
	0.8nm,0.3s,baz=225,slow=13,SNR=5.5						
ULM				Lg	Lg	20 09 20.2	
	0.7nm,0.3s,baz=310,slow=19,SNR=2.9						
U15A	North Rim	9.18	219	*e*Pn	Pn	20 06 50.9	-0.1
NEW	Newport	9.40	302	Lg	Lg	20 09 22.6	
	0.2nm,0.3s,baz=75,slow=20,SNR=1.9						
NEW				LR	LR	20 10 53.4	
	comp=Z,46nm,18.8s,baz=106,slow=40						
R11A	Troy Canyon, C	9.57	239	*e*Pn	Pn	20 06 56.0	-0.2
WUAZ	Wupatki	9.58	212	*e*Pn	Pn	20 06 55.3	-1.0
KVN	Kaiserville	10.80	248	*e*Pn	Pn	20 07 12.6	-0.4
FFC	Flin Flon	11.09	10	*e*Pn	Pn	20 07 16.7	0.0
NV01	Mina Array Sit	11.26	246	*e*Pn	Pn	20 07 17.9	-1.5
NVAR	Mina Array Bea	11.26	246	Pn	Pn	20 07 17.9	-1.5
	0.1nm,0.3s,baz=67,slow=12,SNR=5.2						
YBH	Yreka Blue Hor	13.04	267	Pn	Pn	20 07 45.3	+1.8
	0.1nm,0.3s,baz=80,slow=10.0,SNR=3.7						
Q51A	Peebles	17.06	99	*e*Pn	Pn	20 08 35.7	-1.2
P51A	Williamsport	17.09	97	*e*Pn	Pn	20 08 37.9	+0.7
BBB	Bella Bella	17.40	307	LR	LR	20 15 46.5	
	comp=Z,49nm,19.2s,baz=200,slow=38						
V53A	Saluda	19.01	108	*e*P	P	20 09 00.3	+0.1
BVAR	Borovoye Array	83.44	3	P	P	20 17 06.0	0.0
	0.4nm,0.7s,baz=38,slow=7.3,SNR=3.8						
SONA0	Songino Array	84.56	339	*e*P	P	20 17 12.5	+0.5
SONM	Songino Array	84.56	339	P	P	20 17 12.5	+0.5
	0.4nm,0.7s,baz=46,slow=4.2,SNR=3.2						
MK32	Makanchi Array	89.50	355	*e*P	P	20 17 35.8	-0.2
MKAR	Makanchi Array	89.50	355	P	P	20 17 35.8	-0.2
	0.8nm,0.7s,baz=1.4,slow=4.9,SNR=5.0						

MAN 22 20:19:38.2, 12°.40N×121°.99E, h31^{km}, mb3.8, ML2.5, MS2.0, Mindoro

TRN 22 20:38:09.2, 10°.67N×61°.98W, h1^{km}, MD3.6, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.57	93	*e*P	Pg	20 38 20.4	+0.3
TRN				*e*S	Sg	20 38 28.6	+1.1
TPP	Pointe-a-Pierr	0.63	124	*e*P	Pg	20 38 20.9	-0.3
TPP				*e*S	Sg	20 38 30.6	+1.1
TBH	Brigand Hill	0.92	102	*e*P	Pg	20 38 26.4	-0.4
GRGR	Grenville	1.48	12	*e*P	Pn	20 38 36.7	-0.4
GRGR				*e*S	Sn	20 38 57.9	+0.7
TOSP	Speyside	1.55	66	*e*P	Pg	20 38 38.9	0.0
TOSP				*e*S	Sg	20 38 59.6	+0.6
GRHS	Sauteurs	1.58	12	*e*P	Pn	20 38 38.6	+0.2
GRHS				*e*S	Sg	20 39 00.2	+0.4
GRSS	Sisters	1.65	13	*e*P	Pb	20 38 40.3	-0.2
GRSS				*e*S	Sn	20 39 01.4	+0.1
FCV	Fort Charlotte	2.57	16	*e*P	Pn	20 38 52.1	+0.1
FCV				*e*S	Sn	20 39 24.3	+0.3
SVB	Belmont	2.68	15	*e*P	Pn	20 38 54.8	+1.3
SVB				*e*S	Sn	20 39 28.1	+1.4
SVCV	St. Vincent, C	2.71	17	*e*P	Pn	20 38 54.3	+0.4
SVCV				*e*S	Sn	20 39 27.1	-0.3
SVV	Soufriere Volc	2.73	16	*e*P	Pn	20 38 55.1	+0.9
SVV				*e*S	Sn	20 39 28.8	+0.8
SSV	Crater Summit	2.75	16	*e*P	Pn	20 38 55.9	+1.4
SSV				*e*S	Sn	20 39 28.8	+0.4
MCLT	Moule a Chique	3.18	19	*e*P	Pn	20 39 01.4	+0.9
MCLT				*e*S	Sn	20 39 39.0	-0.2
SLDE	Delcer	3.24	16	*e*P	Pn	20 39 02.3	+1.1
SLPA	Patience	3.33	18	*e*P	Pn	20 39 03.5	+1.0
SLBI	Saint Lucia, B	3.47	16	*e*P	Pn	20 39 04.7	+0.3
SLBI				*e*S	Sn	20 39 46.2	0.0
SLW	Petit Monier	3.48	17	*e*P	Pn	20 39 04.4	-0.2

KRSC 22 21:17:15.5±2.6, 50°.47N×157°.90E, h53^{km}±33^{km}, ML4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.15	281	*e*P	Pn	21 17 34.8	-0.5
SKR				*e*S	Sn	21 17 46.9	-3.2
KDTR	Khodutka, Kamc	1.34	5	*e*P	Pn	21 17 40.0	+2.1
KDTR				*e*S	Sn	21 17 56.1	+1.5
ASAK	Asacha	1.91	0	*e*P	Pn	21 17 48.2	+2.4
RUS	Russkaya	2.00	11	*e*P	Pn	21 17 49.3	+2.4
RUS				*e*S	Sn	21 18 12.3	+1.6
MTVR	Mutnovka	2.02	5	*e*P	Pn	21 17 50.0	+2.7
MTVR				*e*S	Sn	21 18 13.2	+1.8
KRMR	Karymshinskiy	2.37	3	*e*P	Pn	21 17 55.3	+3.5
KRMR				*e*S	Sn	21 18 24.6	+5.0
APC	Apacha	2.50	350	*e*P	Pn	21 17 56.5	+2.8
APC				*e*S	Sn	21 18 27.6	+4.7
PET	Petropavlovsk	2.60	10	*e*P	Pn	21 17 58.4	+3.4
PET				*e*S	Sn	21 18 28.0	+2.7
DALK	Dalny	2.62	11	*e*P	Pn	21 17 58.7	+3.4
DALK				*e*S	Sn	21 18 28.9	+3.1
UGLR	Uglovaya	2.80	12	*e*P	Pn	21 18 02.0	+4.1
AVH	Avacha	2.84	10	*e*P	Pn	21 18 03.0	+4.5
NLC	Nalytchevo	2.85	18	*e*P	Pn	21 18 00.7	+2.3
NLC				*e*S	Sn	21 18 32.4	+1.0
SMAR	Somma	2.85	11	*e*P	Pn	21 18 03.2	+4.5
SMAR				*e*S	Sn	21 18 35.2	+3.3
KOK	Koryaka	2.86	9	*e*P	Pn	21 18 03.5	+4.8
KOK				*e*S	Sn	21 18 36.1	+4.2
SDLR	Sedlovina	2.88	12	*e*P	Pn	21 18 02.4	+3.5
KRX	Arik	2.93	9	*e*P	Pn	21 18 04.1	+4.4
SPN	Mys Shipunski	2.94	26	*e*P	Pn	21 18 04.0	+4.3
SPN				*e*S	Sn	21 18 37.8	+4.0
GNL	Ganaly	3.23	0	*e*P	Pn	21 18 07.6	+3.8
MKZ	Mys Kozlova	4.71	28	*e*P	Pn	21 18 27.7	+3.8
MKZ				*e*S	Sn	21 19 20.4	+3.2
KBTR	Krutoberegovo	6.46	25	*e*P	Pn	21 18 52.7	+4.8
BKI	Bering	6.81	43	*e*P	Pn	21 18 57.4	+4.7
BKI				*e*S	Sn	21 20 06.9	-1.8

IDC ***22*** *21:24:23.2±0.7, 42°.00S×173°.97E, h0^{km}, mb4.0/3, mb1 4.3/3, mb1mx3.9/13, mbtmp4.0/3, MS3.6/2, Ms1 3.5/2, ms1mx3.1/12, Error ellipse: s-maj=41.2km s-min=5.9km az=32.0*

WEL ***22*** *21:24:24.9, 42°S±1°×17°4E±°, h14^{km}±2^{km}, M4.7/68, ML4.9/7, MLv4.7/68, Error ellipse: s-maj=0.0km s-min=0.0km az=125.2*

NEIC ***22*** *21:24:24.9±0.0, 41°.67S×174°.20E, h14^{km}, mb4.2/7, After WEL.*

ISCJB ***22*** *21:24:25.1±0.4, 41°.80S±0°.02×174°.23E±0°.03, h15^{km}±4^{km}, mb4.1/10, MS3.5/2, Error ellipse: s-maj=5.1km s-min=2.6km az=135.0*

ISC 22 21:24:24.6±0.9, 41°.68S±0°.03×174°.22E±0°.02, h16^{km}±6^{km}, n157, σ1°.67/158, mb3.9/10, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.07	181	P	Pg	21 24 28.4	+0.5
BSWZ	Blackbirch Sta	0.26	261	P	Pb	21 24 30.8	-0.1
BSWZ				S	Sb	21 24 35.2	+0.1
TUWZ	Tuamarina	0.32	320	P	Pb	21 24 31.7	-0.2
TUWZ				S	Sb	21 24 36.5	-0.4
TCW	Tory Channel	0.47	6	P	Pg	21 24 34.2	+0.2
TCW				S	Sb	21 24 41.5	+0.3
SNZO	South Karori	0.52	45	*e*Pg	Pb	21 24 35.7	+0.4
SNZO				*e*Sg	Sg	21 24 39.8	-2.1
BHW	Baring Head	0.56	62	P	Pb	21 24 36.8	+0.7
WEL	Wellington	0.57	47	P	Pb	21 24 36.8	+0.6
WEL				S	Sb	21 24 45.3	+1.2
NNZ	Nelson	0.78	306	P	Pb	21 24 39.8	+0.1
PLWZ	Palliser	0.79	83	P	Pn	21 24 41.7	+0.6
MSWZ	Moikau Station	0.82	72	P	Pn	21 24 41.9	+0.3
CAW	Cannon Point	0.86	49	P	Pb	21 24 41.9	+0.8
KHZ	Kahutara	0.89	214	*e*Pg	Pn	21 24 43.4	+0.8
KHZ	Kahutara	0.89	214	P	Pn	21 24 43.6	+1.1
DUWZ	D'Urville Isla	0.90	346	P	Pg	21 24 42.0	-0.2
PAWZ	Paruwai Farm	0.96	72	P	Pn	21 24 44.5	+1.1
THZ	Tophouse	0.98	265	*e*Pn	Pg	21 24 44.0	+0.2
THZ	Tophouse	0.98	265	P	Pg	21 24 43.9	+0.2
MTW	Mount Morrison	1.10	62	P	Pg	21 24 46.4	+0.5
OGWZ	Otaki Gorge	1.12	40	P	Pn	21 24 46.2	+0.5
TRWZ	Traveller	1.14	76	P	Pn	21 24 46.8	+0.9
HOWZ	Holdsworth Sta	1.25	52	P	Pg	21 24 48.7	0.0
TMWZ	Te Maipa	1.38	66	P	Pb	21 24 50.3	+0.2
MRZ	Mangatainoka R	1.45	46	P	Pb	21 24 51.4	+0.2
QRZ	Quartz Range	1.53	303	*e*Pn	Pb	21 24 53.0	+0.4
QRZ	Quartz Range	1.53	303	P	Pb	21 24 53.0	+0.4
TIWZ	Tintock	1.55	55	P	Pb	21 24 53.2	+0.3
GVZ	Greta Valley S	1.56	214	P	Pn	21 24 52.8	+1.1
CPWZ	Castlepoint	1.68	64	P	Pg	21 24 57.0	+0.1
OHWZ	Ohakea	1.69	30	P	Pg	21 24 56.9	-0.2
PRWZ	Pori Road	1.74	50	P	Pn	21 24 55.3	+1.2
POWZ	Post Office Ro	1.74	43	P	Pn	21 24 55.7	+1.5
DSZ	Denniston Nort	1.81	267	P	Pg	21 24 58.9	-0.4
LTZ	Lake Taylor	1.82	232	*e*Pn	Pn	21 24 56.7	+1.5
LTZ	Lake Taylor	1.82	232	P	Pn	21 24 56.8	+1.5
BFZ	Birch Farm	1.83	58	*e*Pn	Pn	21 24 55.7	+0.3
BFZ	Birch Farm	1.83	58	P	Pn	21 24 55.9	+0.5
AMCZ	Amberley	1.89	217	P	Pn	21 24 57.5	+1.2
WAZ	Wanganui	2.01	17	P	Pb	21 25 02.0	+1.2
DVHZ	Dannevirke	2.02	48	P	Pn	21 24 58.6	+0.6
TSZ	Takapari Road	2.09	40	P	Pn	21 25 00.0	+1.0
ANWZ	Angora Road	2.10	55	P	Pb	21 25 02.9	+0.7
OKCZ	Okains Bay	2.22	202	P	Pn	21 25 00.9	+0.2
LREZ	Lake Rotokare	2.22	4	P	Pb	21 25 05.2	+0.8
CRLZ	Canterbury Las	2.23	211	*e*Pn	Pn	21 25 01.1	+0.2
CRLZ	Canterbury Las	2.23	211	P	Pn	21 25 01.5	+0.6
NMEZ	Namu Road	2.28	353	P	Pg	21 25 07.8	-0.4
OXZ	Oxford	2.30	224	*e*Pn	Pn	21 25 01.8	-0.1
OXZ	Oxford	2.30	224	P	Pn	21 25 02.4	+0.5
INZ	Inchbonnie	2.31	242	P	Pn	21 25 04.1	+2.1
PNHZ	Pukenui	2.32	41	P	Pn	21 25 03.2	+1.0
MQZ	McQueen's Vall	2.33	209	*e*Pn	Pn	21 25 01.6	-0.6
MQZ	McQueen's Vall	2.33	209	P	Pn	21 25 01.8	-0.5
PREZ	Palmer Road	2.33	359	P	Pg	21 25 08.2	-1.1
KHEZ	Kahui Hut	2.38	356	P	Pb	21 25 07.7	+0.5
NBEZ	Newall Road No	2.42	354	P	Pb	21 25 08.8	+1.0
MTVZ	Mangateitei	2.48	23	P	Pb	21 25 08.4	-0.4
DREZ	Durham Road	2.48	360	P	Pb	21 25 09.7	+0.8
PKE	Pukeiti	2.49	356	P	Pb	21 25 08.9	0.0
PKVZ	Pokaka	2.54	20	P	Pb	21 25 09.7	-0.1
MOVZ	Moawhango	2.55	28	P	Pn	21 25 08.0	+2.6
VRZ	Vera Road	2.58	9	P	Pb	21 25 10.0	-0.5
PXZ	Pawanui	2.59	52	P	Pn	21 25 06.3	+0.4
BHHZ	Black Hill Sta	2.60	33	P	Pn	21 25 07.8	+1.8
DRZ	Dome Shelter	2.61	24	P	Pb	21 25 10.9	-0.3
KRHZ	Kereru	2.61	40	P	Pn	21 25 06.9	+0.8
WHVZ	Whangaehu Hut	2.61	24	P	Pb	21 25 09.5	-1.6
FWVZ	Far West T-bar	2.62	23	P	Pb	21 25 09.9	-1.5
TUVZ	Tukino	2.65	25	P	Pb	21 25 11.5	-0.2
NGZ	Ngauruhoe	2.71	23	P	Pb	21 25 10.9	-2.0
TWVZ	Taurewa	2.77	20	P	Pb	21 25 11.6	-2.1
WTVZ	West Tongariro	2.77	23	P	Pb	21 25 11.7	-2.0
KRVZ	Karewarewa	2.80	23	P	Pb	21 25 12.3	-2.0
KWHZ	Kaweka Forest	2.81	38	P	Pn	21 25 10.2	+1.2
MCHZ	McNeill Hill	2.92	41	P	Pn	21 25 11.4	+1.0
KATZ	Kakaramea	2.93	23	P	Pb	21 25 16.0	-0.4
WVZ	Waitaha Valley	2.93	240	P	Pn	21 25 13.8	+3.3
RITZ	Rihia Road	2.98	26	P	Pb	21 25 17.9	+0.6
RATZ	Rangitukua	3.05	24	P	Pb	21 25 20.7	+2.2
BKZ	Black Stump Fm	3.05	35	*e*Pn	Pn	21 25 12.8	+0.5
BKZ	Black Stump Fm	3.05	35	P	Pn	21 25 13.5	+1.2
RPZ	Rata Peaks	3.10	228	*e*Pn	Pn	21 25 13.3	+0.5
RPZ	Rata Peaks	3.10	228	P	Pn	21 25 13.5	+0.7
HATZ	Hinemaiaia	3.13	28	P	Pb	21 25 21.6	+1.7
WATZ	Wairara	3.19	22	P	Pb	21 25 22.6	+1.7
HIZ	Hauiti	3.20	9	*e*Pn	Pn	21 25 17.6	+3.4
HIZ				*e*Sn	Sn	21 25 49.4	-2.6
HIZ	Hauiti	3.20	9	P	Pn	21 25 18.0	+3.8
MRHZ	Matea Rd	3.30	31	P	Pb	21 25 24.8	+2.0
MTHZ	Maungataniwha	3.46	36	P	Pn	21 25 19.2	+1.3
TLZ	Tolley Road	3.49	17	P	Pn	21 25 22.5	+4.2
ALRZ	Allen Road	3.51	28	P	Pn	21 25 22.7	+4.1
RTZ	Ruatahuna	3.72	36	P	Pn	21 25 24.1	+2.6
FOZ	Fox Glacier	3.74	239	*e*Pn	Pn	21 25 23.1	+1.4
FOZ	Fox Glacier	3.74	239	P	Pn	21 25 24.9	+3.2
KNZ	Kokohu	3.74	46	P	Pn	21 25 24.1	+2.4
MUGZ	Murupara	3.75	32	P	Pb	21 25 27.9	-2.5
LBZ	Lake Benmore	4.01	226	*e*Pn	Pn	21 25 25.4	0.0
LBZ	Lake Benmore	4.01	226	P	Pn	21 25 26.4	+1.0
EDRZ	Edgecumbe	4.06	29	P	Pn	21 25 29.0	+2.9
TOZ	Tahuroa Road	4.06	15	P	Pb	21 25 32.4	-3.4
URZ	Urewera	4.07	34	*e*Pn	Pn	21 25 26.8	+0.6
URZ	Urewera	4.07	34	P	Pn	21 25 28.5	+2.3
MWZ	Matawai	4.20	38	P	Pn	21 25 28.2	+0.2
ODZ	Otahua Downs	4.25	217	*e*Pn	Pn	21 25 28.7	-0.1
ODZ	Otahua Downs	4.25	217	P	Pn	21 25 28.6	-0.1
TWGZ	Tauwhareparae	4.54	41	P	Pb	21 25 39.4	-4.5
RUGZ	Raukumara Rang	4.56	37	P	Pn	21 25 36.0	+2.8
AWAZ	Awhitu Peninsu	4.62	4	P	Pn	21 25 38.3	+4.6
MKAZ	Moumakai	4.62	9	P	Pn	21 25 37.0	+3.2
JCZ	Jackson Bay	4.65	237	P	Pn	21 25 36.8	+2.5
WTAZ	Waiatarua	4.75	3	P	Pb	21 25 42.1	-5.3
ETAZ	East Tamaki Re	4.75	7	P	Pb	21 25 43.1	-4.4
PUZ	Puketiti	4.76	42	P	Pn	21 25 41.2	+5.5
HAZ	Te Kaha	4.79	36	P	Pn	21 25 38.6	+2.6
PKGZ	Pakihiroa	4.81	39	P	Pn	21 25 40.7	+4.2
WIAZ	Waiheke Island	4.93	9	P	Pn	21 25 41.9	+3.9
MBAZ	Motutapu North	4.93	6	P	Pn	21 25 44.3	+6.3
WKZ	Wanaka	4.93	229	*e*Pn	Pn	21 25 39.0	+0.9
WKZ	Wanaka	4.93	229	P	Pn	21 25 39.5	+1.4
HHSZ	Highcliff Hill	4.95	211	P	Pn	21 25 40.0	+1.7
KUZ	Kuaotunu	5.06	14	P	Pb	21 25 48.6	-4.2
MXZ	Matakaoa Point	5.18	39	*e*Pn	Pn	21 25 40.3	-1.2
TUZ	Tuapeka	5.41	216	P	Pn	21 25 45.2	+0.6
WCZ	Waipu Caves	5.73	1	P	Pn	21 25 54.3	+5.3
MLZ	Mavora Lakes	5.76	228	*e*Pn	Pn	21 25 49.3	-0.2
MLZ				*e*Sn	Sn	21 26 51.9	-3.4
MLZ	Mavora Lakes	5.76	228	P	Pn	21 25 51.1	+1.6
SYZ	Scrubby Hill	6.08	215	P	Pn	21 25 54.5	+0.8
WHZ	Wether Hill Ro	6.19	225	*e*Pn	Pn	21 25 58.3	+3.0
DCZ	Deep Cove	6.37	231	*e*Pn	Pn	21 25 59.7	+1.9
OUZ	Omahuta	6.46	355	*e*Pn	Pn	21 26 03.1	+4.0
OUZ	Omahuta	6.46	355	P	Pn	21 26 04.0	+4.9
APZ	The Paps	6.82	219	P	Pn	21 26 04.7	+0.7
CTZ	Chatham Island	7.06	110	P	Pn	21 26 08.5	+1.3
RIZ	Raoul Island	13.95	30	P	P	21 27 50.5	+0.9
MCQ	Macquarie Isla	16.34	213	*e*Pn	Pn	21 28 12.5	-0.6
	96nm,1.1s						
DZM	Mont Dzumac	20.61	339	*e*P	P	21 29 03.1	-0.2
	9.1nm,1.0s						
STKA	Stephens Creek	27.76	280	LR	LR	21 39 35.5	
	comp=Z,109nm,20.0s,baz=189,slow=33						
STKA	Stephens Creek	27.76	280	*e*P	P	21 30 11.7	-0.8
	0.1nm,0.8s						
FUNA	Funafuti	33.31	9	*e*P	P	21 30 59.9	-1.8
	94nm,1.1s						
VNDA	Vanda	36.32	185	P	P	21 31 29.6	+2.6
	0.6nm,0.8s,baz=2.6,slow=8.4,SNR=3.9						
SBA	Scott Base	36.41	183	*e*P	P	21 31 27.3	-0.5
	1.6nm,1.0s						
AS31	Alice Springs	37.98	285	*e*P	P	21 31 42.1	+0.2
	0.8nm,0.8s						
AS31				*e*PcP	PcP	21 33 56.6	-0.8
ASAR	Alice Springs	37.98	285	P	P	21 31 42.1	+0.2
	0.6nm,0.5s,baz=125,slow=7.0,SNR=17						
ASAR				PcP	PcP	21 33 56.6	-0.8
	0.5nm,0.9s,baz=131,slow=3.8,SNR=2.9						
ASAR				LR	LR	21 46 42.8	
	comp=Z,92nm,19.4s,baz=116,slow=35						
WR1	Warramunga Arr	40.05	290	*e*P	P	21 31 59.2	0.0
WRA	Warramunga Arr	40.05	290	P	P	21 31 59.2	0.0
	2.7nm,0.6s,baz=130,slow=7.8,SNR=2.0						
CM31	Chiang Mai Arr	91.59	293	*e*P	P	21 37 31.2	+0.4
	3.9nm,1.1s						
CMAR	Chiang Mai Arr	91.59	293	P	P	21 37 31.2	+0.4
	0.2nm,0.3s,baz=155,slow=4.5,SNR=2.3						
CD2	Chengdu	97.08	305	*e*P	Pdif	21 37 57.3	+1.4
HHC	Hu-ho-hao-te	99.82	317	P	Pdif	21 38 10.5	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,55nm,6.6s						
DBIC	Dimbokro	145.13	182	PKP	PKPdf	21 44 02.4	+0.6
	comp=Z,3.5nm,1.0s,baz=148,slow=8.1,SNR=1.4						
ARA0	ARCESS Array S	147.70	340	*e*PKPbc	PKiKP	21 44 09.1	-0.1
ARCES	ARCESS Array B	147.70	340	PKPbc	PKiKP	21 44 09.1	-0.1
	comp=Z,1.4nm,0.8s,baz=20,slow=2.9,SNR=3.8						
BR101	Keskin Array S	150.22	280	*e*PKPbc	PKPbc	21 44 15.3	+0.6
BRTR	Keskin Array B	150.22	280	PKPbc	PKPbc	21 44 15.3	+0.6
	comp=Z,0.2nm,0.5s,baz=90,slow=1.4,SNR=1.7						
TORD	Torodi Ar. Bea	150.84	195	PKPbc	PKPbc	21 44 16.8	+0.1
	comp=Z,0.8nm,0.4s,baz=146,slow=2.0,SNR=16						
TOA1	Torodi Ar. Sit	150.84	195	*e*PKPbc	PKPbc	21 44 16.8	+0.1
FIA0	FINESS Array S	152.46	327	*e*PKPbc	PKiKP	21 44 20.6	+1.4
FINES	FINESS Array B	152.46	327	PKPbc	PKiKP	21 44 20.6	+1.4
	comp=Z,1.5nm,0.8s,baz=38,slow=5.3,SNR=1.5						

IGQ 22 21:37:11.1±0.5, 2°S±3°×8°1W±°, h10^{km}, MLv4.0, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	Salinas	0.55	188	P	Pg	21 37 21.7	-0.2
SALI				S	Sb	21 37 31.7	+0.8
MORR	Playas El Morr	1.15	150	P	Pb	21 37 33.1	0.0
MILO	Milagro-Astudi	1.50	115	P	Pn	21 37 35.7	-2.4
MILO				S	Sn	21 37 57.0	-0.8
COHC	Cochancay	1.85	117	P	Pn	21 37 41.1	-1.9
MAG1	Magdalena	1.92	36	P	Pn	21 37 42.9	-1.1
JSCH	Cashca Tororas	1.93	92	P	Pn	21 37 43.0	-1.5
ILLI	Illinizas Sur	2.37	67	P	Pn	21 37 49.3	-1.2
PISA	Pisayambo	2.59	77	P	Pn	21 37 54.2	+0.6
BNAS	Cotopaxi Volca	2.61	69	P	Pn	21 37 54.6	+0.7
BREF	Cotopaxi Volca	2.65	69	P	Pn	21 37 56.1	+1.6
BVC2	Cotopaxi Volca	2.68	69	P	Pn	21 37 55.6	+0.7
BTAM	Cotopaxi Volca	2.69	69	P	Pn	21 37 55.6	+0.6
VC1	Cotopaxi 1	2.69	69	P	Pn	21 37 56.7	+1.7
PITA	Cotopaxi Volc	2.70	67	P	Pn	21 37 55.3	+0.2
TERV	Terraza Guagua	2.72	58	P	Pn	21 37 54.7	-0.8
GGPC	Guagua Pichinc	2.73	58	P	Pn	21 37 54.7	-0.9
PINO	Pino	2.73	58	P	Pn	21 37 53.1	-2.5
COV1	Cotopaxi Volc	2.74	69	P	Pn	21 37 55.4	-0.4
YANA	Yana	2.78	57	P	Pn	21 37 55.2	-1.0
PAC1	Pacto, Paraso	2.84	48	P	Pn	21 37 54.5	-2.2
CUSE	Cuicocha Este	3.17	53	P	Pn	21 38 00.5	-0.9
CUIC	Cuicocha-Domo	3.19	53	P	Pn	21 38 01.4	-0.4
URCU	Urcuqui	3.36	52	P	Pn	21 38 03.1	-1.0

MAN 22 21:40:36.2, 18°.20N×120°.56E, h27^{km}, mb3.7, ML2.4, MS1.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	Callao Caves	1.30	112	⇑*i*P	Pn	21 40 58.6	0.0
CVP				*i* S	Sb	21 41 15.9	-0.4

ROM 22 21:53:42.5±0.3, 38°.52N±0°.02×14°.16E±0°.01, h8^{km}±1^{km}, Md1.8/3, Error ellipse: s-maj=1.9km s-min=1.0km az=345.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IACL	Alicudi	0.16	84	P	Pg	21 53 46.1	+0.3
IACL				S	Sg	21 53 49.6	+1.5
IACL				AML	AML		
	comp=E,6400µm,0.4s						
IACL				AML	AML		
	comp=N,5825µm,0.3s						
IACL				AML	AML		
	comp=E,6400µm,0.4s						
IACL				AML	AML		
	comp=N,5825µm,0.3s						
IACL				END			
IACL				END			
IFIL	Filicudi I Eol	0.33	82	P	Pg	21 53 49.4	+0.5
IFIL				S	Sb	21 53 56.1	+0.2
IFIL				AML	AML		
	comp=E,5120µm,0.4s						
IFIL				AML	AML		
	comp=N,2115µm,0.6s						
IFIL				AML	AML		
	comp=E,5120µm,0.4s						
IFIL				AML	AML		
	comp=N,2115µm,0.6s						
IFIL				END			
IFIL				END			
GIB	Gibilmanna	0.54	191	P	Pg	21 53 53.1	+0.2
MSFR	San Fratello	0.59	145	P	Pg	21 53 53.8	-0.1
MSFR				S	Sb	21 54 03.1	-0.6
MCPD	Capo d'Orlando	0.60	131	P	Pg	21 53 54.1	0.0
MCPD				S	Sg	21 54 02.8	+0.8
MCPD				AML	AML		
	comp=E,344µm,1.0s						
MCPD				AML	AML		
	comp=N,547µm,0.4s						
MCPD				AML	AML		
	comp=E,344µm,1.0s						
MCPD				AML	AML		
	comp=N,547µm,0.4s						
MCPD				END			
MCPD				END			
LLI	Lipari	0.63	96	P	Pb	21 53 56.0	+0.3
VPL	Vulcano Piano	0.67	102	P	Pg	21 53 55.1	-0.2
PETRA	Petralia Sopra	0.68	183	P	Pg	21 53 56.0	+0.3
PETRA				AML	AML		
	comp=E,691µm,0.7s						
PETRA				AML	AML		
	comp=N,978µm,0.5s						
PETRA				AML	AML		
	comp=E,691µm,0.7s						
PETRA				AML	AML		
	comp=N,978µm,0.5s						
MNO	Monte Soro	0.72	144	P	Pb	21 53 56.9	-0.5
MNO				AML	AML		
	comp=E,672µm,1.0s						
MNO				AML	AML		
	comp=N,736µm,1.1s						
MNO				AML	AML		
	comp=E,672µm,1.0s						
MNO				AML	AML		
	comp=N,736µm,1.1s						
MUCR	Ucria	0.74	130	P	Pg	21 53 56.6	-0.1
MUCR				S	Sb	21 54 07.8	-0.1
MUCR				AML	AML		
	comp=E,688µm,1.0s						
MUCR				AML	AML		
	comp=N,1205µm,0.5s						
MUCR				AML	AML		
	comp=E,688µm,1.0s						
MUCR				AML	AML		
	comp=N,1205µm,0.5s						
USI	Ustica	0.79	284	P	Pg	21 53 57.4	-0.3
ALJA	Alia	0.83	203	P	Pb	21 53 59.1	-0.1
GALF	Gagliano Caste	0.87	158	P	Pb	21 53 59.8	-0.1
NOV	Novara	0.91	122	P	Pg	21 54 00.3	+0.2
NOV				S	Sg	21 54 12.1	+0.1
ECNV	Catenanuova	1.02	154	P	Pg	21 54 01.9	-0.2
CET2	Cetraro	1.73	54	AML	AML		
	comp=E,97µm,0.8s						
CET2				AML	AML		
	comp=E,97µm,0.8s						
CET2				AML	AML		
	comp=N,138µm,0.3s						
CET2				AML	AML		
	comp=N,138µm,0.3s						

ROM 22 21:54:14.8±0.2, 38°.62N±0°.01×14°.15E±0°.01, h22^{km}±1^{km}, ML2.6/18, Error ellipse: s-maj=1.0km s-min=0.7km az=329.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IACL	Alicudi	0.18	117	P	Pb	21 54 19.8	-0.4
IACL				S	Sb	21 54 23.5	-0.5
IACL				AML	AML		
	comp=E,6400µm,0.4s						
IACL				AML	AML		
	comp=N,5825µm,0.3s						
IACL				AML	AML		
	comp=E,6400µm,0.4s						
IACL				AML	AML		

	comp=N,5825µm,0.3s						
IACL				AML	AML		
	comp=E,6400µm,0.4s						
IACL				AML	AML		
	comp=N,5825µm,0.3s						
IACL				AML	AML		
	comp=N,5825µm,0.3s						
IACL				AML	AML		
	comp=E,6400µm,0.4s						
IFIL	**Filicudi I Eol**	**0.33**	**99**	P	Pb	21 54 22.8	+0.8
IFIL				S	Sb	21 54 27.4	+0.5
IFIL				AML	AML		
	comp=E,5120µm,0.4s						
IFIL				AML	AML		
	comp=N,2115µm,0.6s						
IFIL				AML	AML		
	comp=E,5120µm,0.4s						
IFIL				AML	AML		
	comp=N,2115µm,0.6s						
IFIL				AML	AML		
	comp=E,5120µm,0.4s						
IFIL				AML	AML		
	comp=N,2115µm,0.6s						
IFIL				AML	AML		
	comp=E,5120µm,0.4s						
IFIL				AML	AML		
	comp=N,2115µm,0.6s						
GIB	**Gibilmanna**	**0.63**	**189**	P	Pb	21 54 26.7	-0.6
GIB				AML	AML		
	comp=E,1160µm,0.7s						
GIB				AML	AML		
	comp=N,920µm,0.4s						
GIB				AML	AML		
	comp=E,1160µm,0.7s						
GIB				AML	AML		
	comp=N,920µm,0.4s						
GIB				AML	AML		
	comp=E,1160µm,0.7s						
GIB				AML	AML		
	comp=N,920µm,0.4s						
GIB				AML	AML		
	comp=E,1160µm,0.7s						
GIB				AML	AML		
	comp=N,920µm,0.4s						
LLI	**Lipari**	**0.65**	**105**	P	Pn	21 54 28.2	-0.4
LLI				AML	AML		
	comp=E,1765µm,0.7s						
LLI				AML	AML		
	comp=N,3425µm,0.6s						
LLI				AML	AML		
	comp=E,1765µm,0.7s						
LLI				AML	AML		
	comp=N,3425µm,0.6s						
LLI				AML	AML		
	comp=N,3425µm,0.6s						
LLI				AML	AML		
	comp=E,1765µm,0.7s						
LLI				AML	AML		
	comp=N,3425µm,0.6s						
LLI				AML	AML		
	comp=E,1765µm,0.7s						
MCPD	**Capo d'Orlando**	**0.67**	**137**	P	Pb	21 54 27.8	0.0
MCPD				S	Sb	21 54 37.0	+0.3
MCPD				AML	AML		
	comp=E,344µm,1.0s						
MCPD				AML	AML		
	comp=N,547µm,0.4s						
MCPD				AML	AML		
	comp=E,344µm,1.0s						
MCPD				AML	AML		
	comp=N,547µm,0.4s						
MCPD				AML	AML		
	comp=E,344µm,1.0s						
MCPD				AML	AML		
	comp=N,547µm,0.4s						
MSFR	**San Fratello**	**0.68**	**149**	P	Pb	21 54 27.5	-0.5
MSFR				AML	AML		
	comp=E,266µm,0.8s						
MSFR				AML	AML		
	comp=N,390µm,1.1s						
MSFR				AML	AML		
	comp=E,266µm,0.8s						
MSFR				AML	AML		
	comp=N,391µm,1.1s						
MSFR				AML	AML		
	comp=N,391µm,1.1s						
MSFR				AML	AML		
	comp=E,266µm,0.8s						
MSFR				AML	AML		
	comp=N,391µm,1.1s						
MSFR				AML	AML		
	comp=E,266µm,0.8s						
VPL	**Vulcano Piano**	**0.69**	**110**	P	Pb	21 54 28.4	+0.1
VPL				AML	AML		
	comp=E,2090µm,0.4s						
VPL				AML	AML		
	comp=N,2630µm,0.5s						
VPL				AML	AML		
	comp=E,2090µm,0.4s						
VPL				AML	AML		
	comp=N,2630µm,0.5s						
VPL				AML	AML		
	comp=E,2090µm,0.4s						
VPL				AML	AML		
	comp=N,2630µm,0.5s						
SOLUN	**Solunto**	**0.71**	**223**	P	Pb	21 54 28.6	0.0
USI	**Ustica**	**0.77**	**277**	P	Pb	21 54 29.4	-0.1
MPG	**Monte Pellegri**	**0.77**	**234**	P	Pb	21 54 29.0	-0.5
MPG				AML	AML		
	comp=E,132µm,0.7s						
MPG				AML	AML		
	comp=N,136µm,0.6s						
MPG				AML	AML		
	comp=E,132µm,0.7s						
MPG				AML	AML		
	comp=N,136µm,0.6s						
MPG				AML	AML		
	comp=E,132µm,0.7s						
MPG				AML	AML		
	comp=N,136µm,0.6s						
PETRA	**Petralia Sopra**	**0.78**	**182**	P	Pb	21 54 29.6	-0.2
PETRA				AML	AML		
	comp=E,691µm,0.7s						
PETRA				AML	AML		
	comp=N,978µm,0.5s						
PETRA				AML	AML		
	comp=E,691µm,0.7s						
PETRA				AML	AML		
	comp=N,978µm,0.5s						
PETRA				AML	AML		
	comp=E,691µm,0.7s						
PETRA				AML	AML		
	comp=N,978µm,0.5s						
PETRA				AML	AML		
	comp=E,691µm,0.7s						
PETRA				AML	AML		
	comp=N,978µm,0.5s						
MNO	**Monte Soro**	**0.80**	**148**	P	Pb	21 54 30.5	+0.3
MNO				AML	AML		
	comp=E,672µm,1.0s						
MNO				AML	AML		
	comp=N,735µm,1.1s						
MNO				AML	AML		
	comp=E,672µm,1.0s						
MNO				AML	AML		
	comp=N,735µm,1.1s						
MNO				AML	AML		
	comp=E,672µm,1.0s						
MNO				AML	AML		
	comp=N,735µm,1.1s						
MUCR	**Ucria**	**0.81**	**135**	P	Pb	21 54 30.0	-0.2
MUCR				S	Sn	21 54 41.6	-0.6
MUCR				AML	AML		
	comp=E,688µm,1.0s						
MUCR				AML	AML		
	comp=N,1205µm,0.5s						
MUCR				AML	AML		
	comp=E,688µm,1.0s						
MUCR				AML	AML		
	comp=N,1205µm,0.5s						
MUCR				AML	AML		
	comp=E,688µm,1.0s						
MUCR				AML	AML		
	comp=N,1205µm,0.5s						
MUCR				AML	AML		
	comp=E,688µm,1.0s						
MUCR				AML	AML		
	comp=N,1205µm,0.5s						
IST3	**Stromboli F**	**0.86**	**77**	P	Pn	21 54 31.8	+0.2
MILZ	**Milazzo**	**0.91**	**112**	P	Pn	21 54 32.4	+0.1
ALJA	**Alia**	**0.92**	**200**	P	Pn	21 54 32.3	-0.1
ALJA				AML	AML		
	comp=E,700µm,0.9s						
ALJA				AML	AML		
	comp=N,948µm,0.7s						
ALJA				AML	AML		
	comp=E,700µm,0.9s						
ALJA				AML	AML		
	comp=N,948µm,0.7s						
ALJA				AML	AML		
	comp=N,948µm,0.7s						
ALJA				AML	AML		
	comp=E,700µm,0.9s						
ALJA				AML	AML		
	comp=N,948µm,0.7s						
ALJA				AML	AML		
	comp=E,700µm,0.9s						
GALF	**Gagliano Caste**	**0.96**	**160**	P	Pn	21 54 33.4	+0.4
GALF				AML	AML		
	comp=E,218µm,0.5s						
GALF				AML	AML		
	comp=N,190µm,0.8s						
GALF				AML	AML		
	comp=N,190µm,0.8s						
GALF				AML	AML		
	comp=E,218µm,0.5s						
GALF				AML	AML		
	comp=N,190µm,0.8s						
GALF				AML	AML		
	comp=E,218µm,0.5s						
NOV	**Novara**	**0.97**	**127**	P	Pb	21 54 32.8	-0.1
MSRU	**Castanea**	**1.12**	**108**	P	Pn	21 54 34.5	-0.7
MSRU				AML	AML		
	comp=E,227µm,0.4s						
MSRU				AML	AML		
	comp=N,186µm,0.9s						
MSRU				AML	AML		
	comp=E,227µm,0.4s						
MSRU				AML	AML		
	comp=N,186µm,0.9s						
MSRU				AML	AML		
	comp=E,227µm,0.4s						
MSRU				AML	AML		
	comp=N,186µm,0.9s						
JOPP	**Joppolo**	**1.36**	**90**	P	Pn	21 54 38.2	-0.2
JOPP				AML	AML		
	comp=E,32µm,1.0s						
JOPP				AML	AML		
	comp=N,37µm,0.3s						
JOPP				AML	AML		
	comp=N,37µm,0.3s						
JOPP				AML	AML		
	comp=E,32µm,1.0s						
JOPP				AML	AML		
	comp=N,37µm,0.3s						
JOPP				AML	AML		
	comp=E,32µm,1.0s						
CLTA	**Licata**	**1.46**	**186**	P	Pb	21 54 41.6	+0.3
CET2	**Cetraro**	**1.67**	**56**	P	Pn	21 54 43.3	+0.5
CET2				AML	AML		
	comp=E,97µm,0.8s						
CET2				AML	AML		
	comp=N,138µm,0.3s						
CET2				AML	AML		
	comp=E,97µm,0.8s						
CET2				AML	AML		
	comp=N,138µm,0.3s						
CET2				AML	AML		
	comp=E,97µm,0.8s						
CET2				AML	AML		
	comp=N,138µm,0.3s						
CAR1	**CAROLEI**	**1.73**	**68**	P	Pn	21 54 43.9	+0.4
CAR1				AML	AML		
	comp=E,63µm,0.5s						
CAR1				AML	AML		
	comp=N,68µm,0.4s						
CAR1				AML	AML		
	comp=N,68µm,0.4s						
CAR1				AML	AML		
	comp=E,63µm,0.5s						
CAR1				AML	AML		
	comp=N,68µm,0.4s						
CAR1				AML	AML		
	comp=E,63µm,0.5s						
PLAC	**Placanica**	**1.80**	**95**	P	Pn	21 54 45.2	+0.6
PLAC				AML	AML		
	comp=E,55µm,1.2s						
PLAC				AML	AML		
	comp=N,39µm,1.6s						
PLAC				AML	AML		
	comp=E,55µm,1.2s						
PLAC				AML	AML		
	comp=N,39µm,1.6s						
PLAC				AML	AML		
	comp=E,55µm,1.2s						
PLAC				AML	AML		
	comp=N,39µm,1.6s						
T0702	**Acquaformosa (**	**1.86**	**53**	P	Pn	21 54 46.5	+1.1
CELI	**Celico**	**2.00**	**66**	P	Pn	21 54 48.0	+0.7

ROM 22 21:54:26.6±0.2**, 38°.68N**±0°.01×**14°.06E**±0°.02**, h10**^{km}**, ML2.5**/6**, Error ellipse: s-maj=1.6km s-min=1.4km az=340.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IACL	**Alicudi**	**0.27**	**122**	P	Pb	21 54 33.2	-0.3
IACL				S	Sb	21 54 37.0	-1.2
IACL				AML	AML		
	comp=E,6400µm,0.4s						
IACL				AML	AML		
	comp=N,5825µm,0.3s						
IFIL	**Filicudi I Eol**	**0.41**	**106**	P	Pb	21 54 36.1	+0.2
IFIL				S	Sb	21 54 42.4	+0.2
GIB	**Gibilmanna**	**0.69**	**182**	P	Pg	21 54 39.1	-0.8
USI	**Ustica**	**0.69**	**273**	P	Pg	21 54 39.5	-0.5
LLI	**Lipari**	**0.73**	**108**	P	Pg	21 54 40.4	-0.2
MCPD	**Capo d'Orlando**	**0.76**	**136**	P	Pg	21 54 41.4	+0.2
MSFR	**San Fratello**	**0.76**	**147**	P	Pg	21 54 41.5	+0.2
VPL	**Vulcano Piano**	**0.78**	**112**	P	Pg	21 54 41.8	+0.2
PETRA	**Petralia Sopra**	**0.84**	**177**	P	Pg	21 54 42.8	0.0
MNO	**Monte Soro**	**0.89**	**146**	P	Pg	21 54 42.7	-1.0
MUCR	**Ucria**	**0.90**	**135**	P	Pg	21 54 43.7	-0.1
MUCR				S	Sg	21 54 55.1	-0.4
CORL	**Corleone**	**0.98**	**218**	P	Pg	21 54 45.4	0.0
MILZ	**Milazzo**	**1.00**	**113**	P	Pg	21 54 44.7	-1.1
MSCL	**Scilla**	**1.43**	**108**	P	Pn	21 54 51.2	-1.4
MSCL				AML	AML		
	comp=E,240µm,0.7s						
MSCL				AML	AML		
	comp=N,252µm,0.6s						
MSCL				AML	AML		
	comp=N,252µm,0.6s						
MSCL				AML	AML		
	comp=E,240µm,0.7s						
JOPP	**Joppolo**	**1.43**	**92**	P	Pn	21 54 51.8	-0.8
JOPP				AML	AML		
	comp=E,32µm,1.0s						
JOPP				AML	AML		
	comp=N,37µm,0.3s						
JOPP				AML	AML		
	comp=N,37µm,0.3s						
JOPP				AML	AML		
	comp=E,32µm,1.0s						
CLTA	**Licata**	**1.52**	**183**	P	Pg	21 54 55.7	0.0
HVZN	**Vizzini**	**1.58**	**161**	P	Pb	21 54 55.4	-0.6
HVZN				AML	AML		
	comp=E,477µm,0.5s						
HVZN				AML	AML		
	comp=N,508µm,0.6s						
HVZN				AML	AML		
	comp=E,477µm,0.5s						
HVZN				AML	AML		
	comp=N,508µm,0.6s						
CET2	**Cetraro**	**1.70**	**59**	P	Pn	21 54 57.0	+0.6
CET2				AML	AML		
	comp=E,97µm,0.8s						
CET2				AML	AML		
	comp=N,138µm,0.3s						
CET2				AML	AML		
	comp=E,97µm,0.8s						
CET2				AML	AML		
	comp=N,138µm,0.3s						
CAR1	**CAROLEI**	**1.77**	**70**	P	Pn	21 54 57.5	+0.1
CAR1				AML	AML		
	comp=E,63µm,0.5s						
CAR1				AML	AML		
	comp=N,68µm,0.4s						
CAR1				AML	AML		
	comp=N,68µm,0.4s						
CAR1				AML	AML		
	comp=E,63µm,0.5s						
PLAC	**Placanica**	**1.88**	**96**	P	Pn	21 54 58.5	-0.2
PLAC				AML	AML		
	comp=E,55µm,1.2s						
PLAC				AML	AML		
	comp=N,39µm,1.6s						
PLAC				AML	AML		
	comp=E,55µm,1.2s						
PLAC				AML	AML		
	comp=N,39µm,1.6s						
T0702	**Acquaformosa (**	**1.89**	**56**	P	Pn	21 54 59.6	+0.7
CELI	**Celico**	**2.04**	**68**	P	Pn	21 55 01.6	+0.5
SALB	**San Lorenzo Be**	**2.14**	**55**	P	Pn	21 55 04.0	+1.5

ISCJB ***22*** *21:57:13.3±0.4, 2°.28S±0°.07×68°.09E±0°.06, h11*^{km}*, mb4.1/26, MS3.8/10, Error ellipse: s-maj=11.1km s-min=7.9km az=157.7*

IDC ***22*** *21:57:13.9±0.7, 2°.34S×68°.06E, h0*^{km}*, mb3.9/12, mb1 4.1/13, mb1mx3.8/40, mbtmp4.0/13, ML3.7/1, MS3.8/11, Ms1 3.8/11, ms1mx3.4/43, Error ellipse: s-maj=23.4km s-min=16.4km az=151.0*

NEIC ***22*** *21:57:15.0±2.8, 2°.30S×68°.12E, h10*^{km}*±1*^{km}*, mb4.2/16, Error ellipse: s-maj=17.2km s-min=12.3km az=154.0*

ISC 22 21:57:15.0±0.6**, 2°.3S**±0°.1×**68°.15E**±0°.07**, h11**^{km}**, n51,** σ**1**^{s}**11**/39**, mb4.0**/26**, MS3.7**/10**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**4.91**	**145**	T	T	22 03 22.7	
	baz=322,slow=75,SNR=1101						
H08N3	**Diego Garcia H**	**4.92**	**145**	T	T	22 03 26.0	
	baz=322,slow=75,SNR=967						
H08N1	**Diego Carcia H**	**4.93**	**145**	T	T	22 03 24.4	
	baz=322,slow=75,SNR=938						
KAAM	**Kaadhehdhoo**	**5.58**	**60**	*e*Pn	**Pn**	**21 58 38.6**	**+0.6**
KAAM				*e*Sn	**Sn**	**21 59 39.4**	**-2.7**
H08S3	**Diego Garcia H**	**6.83**	**141**	T	T	22 05 52.2	
	baz=307,slow=75						
H08S1	**Diego Carcia H**	**6.84**	**141**	T	T	22 05 51.4	
	baz=307,slow=75						
H08S2	**Diego Garcia H**	**6.85**	**141**	T	T	22 05 58.9	
	baz=307,slow=75						
MNCI	**Minicoy**	**11.59**	**25**	*e*Pn	**Pn**	**22 00 01.5**	**+1.0**
PALK	**Pallekele**	**15.72**	**53**	Pn	**P**	**22 00 59.4**	**-1.2**
	0.3nm,0.3s,baz=294,slow=8.4,SNR=3.4						
PALK				LR	LR	22 05 47.4	
	comp=Z,408nm,21.2s,baz=297,slow=32						
PALK	**Pallekele**	**15.72**	**53**	*e*P	**P**	**22 00 59.4**	**-1.2**
	22nm,1.1s						
OPO	**Ambohidratompo**	**26.15**	**230**	LR	LR	22 11 05.4	
	comp=Z,187nm,19.1s,baz=170,slow=32						
ABPO	**Ambohimpanom**	**26.38**	**230**	*e*P	**P**	**22 02 51.7**	**-0.1**
	4.4nm,1.1s						
WSAR	**Wadi Sarin**	**27.02**	**340**	LR	LR	22 11 56.8	
	comp=Z,167nm,18.7s,baz=163,slow=33						
KMBO	**Kilima Mbogo**	**30.91**	**272**	*e*P	**P**	**22 03 30.9**	**-1.5**
	2.0nm,0.9s						
PSI	**Prapat**	**31.18**	**81**	*e*P	**P**	**22 03 33.1**	**-1.4**
	3.7nm,1.0s						
KULM	**Kulim**	**33.33**	**77**	*e*P	**P**	**22 03 53.9**	**+0.6**
	6.7nm,1.0s						
RAYN	**Ar Rayn**	**33.84**	**321**	*e*P	**P**	**22 03 56.8**	**-0.8**
	2.0nm,1.0s						
KBL	**Kabul**	**36.65**	**1**	*e*P	**P**	**22 04 21.1**	**-0.8**
	1.7nm,0.5s						
CM31	**Chiang Mai Arr**	**36.66**	**54**	*e*P	**P**	**22 04 22.2**	**+0.2**
	4.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**36.66**	**54**	P	**P**	**22 04 23.6**	**+1.6**
	0.6nm,0.4s,baz=255,slow=9.3,SNR=6.3						
CMAR				LR	LR	22 17 37.0	
	comp=Z,90nm,19.4s,baz=216,slow=33						
CHTO	**Chiang Mai**	**36.84**	**54**	*e*P	**P**	**22 04 23.4**	**-0.2**
	2.7nm,0.9s						
CHGR	**Chuyangaron**	**40.76**	**1**	*e*P	**P**	**22 04 54.9**	**-1.4**
	9.3nm,1.1s						
GEYT	**Alibeck**	**41.09**	**348**	LR	LR	22 21 13.6	
	comp=Z,119nm,19.9s,baz=180,slow=35						
GYA0B	**ALIBECK ARRAY**	**41.09**	**348**	*e*P	**P**	**22 04 58.3**	**-0.7**
	3.7nm,1.1s						
LSZ	**Lusaka**	**41.45**	**249**	P	**P**	**22 05 02.4**	**+0.1**
	4.2nm,0.7s,baz=48,slow=6.1,SNR=6.6						
LSZ	**Lusaka**	**41.45**	**249**	*e*P	**P**	**22 05 00.7**	**-1.6**
	4.1nm,0.8s						
KSM	**Kuching**	**42.31**	**85**	*e*P	**P**	**22 05 08.1**	**-1.2**
	5.5nm,1.1s						
MATP	**Matopo**	**42.66**	**242**	P	**P**	**22 05 11.8**	**-0.4**
	3.0nm,1.1s,baz=54,slow=10,SNR=2.3						
BOSA	**Boshof**	**48.51**	**233**	P	**P**	**22 05 57.3**	**-1.1**
	4.1nm,0.9s,baz=60,slow=8.1,SNR=4.5						
KKM	**Kota Kinabalu**	**48.70**	**80**	*e*P	**P**	**22 05 59.8**	**-0.3**
	20nm,1.1s						
MK32	**Makanchi Array**	**50.45**	**13**	*e*P	**P**	**22 06 13.2**	**+0.5**
MKAR	**Makanchi Array**	**50.45**	**13**	P	**P**	**22 06 13.2**	**+0.5**
	0.9nm,0.8s,baz=201,slow=12,SNR=2.5						
TSUM	**Tsumeb**	**52.21**	**247**	LR	LR	22 25 40.7	
	comp=Z,114nm,19.9s,baz=106,slow=33						
BR101	**Keskin Array S**	**52.44**	**327**	*e*P	**P**	**22 06 28.7**	**+0.8**
BRTR	**Keskin Array B**	**52.44**	**327**	P	**P**	**22 06 28.7**	**+0.8**
	0.6nm,0.9s,baz=145,slow=5.3,SNR=3.2						
SUR	**Sutherland**	**53.55**	**231**	LR	LR	22 26 07.6	
	comp=Z,190nm,18.4s,baz=62,slow=32						
ZALV	**Zalesovo Beam**	**57.74**	**12**	P	**P**	**22 07 06.7**	**+0.9**
	0.8nm,0.7s,baz=190,slow=7.3,SNR=4.2						
ZAA1	**Zalesovo Array**	**57.75**	**12**	*e*P	**P**	**22 07 06.7**	**+0.9**
SONA0	**Songino Array**	**60.04**	**29**	*e*P	**P**	**22 07 23.1**	**+1.0**
SONM	**Songino Array**	**60.04**	**29**	P	**P**	**22 07 23.1**	**+1.0**
	1.4nm,0.7s,baz=230,slow=6.7,SNR=9.9						
SONM				LR	LR	22 33 46.8	
	comp=Z,56nm,20.1s,baz=200,slow=36						
WRA	**Warramunga Arr**	**66.86**	**111**	P	**P**	**22 08 09.0**	**+1.4**
	2.4nm,0.9s,baz=280,slow=7.4,SNR=5.1						
WR1	**Warramunga Arr**	**66.86**	**111**	*e*P	**P**	**22 08 09.1**	**+1.4**
ASAR	**Alice Springs**	**66.91**	**115**	P	**P**	**22 08 09.2**	**+1.2**
	0.5nm,0.8s,baz=282,slow=6.3,SNR=3.5						
ASAR				LR	LR	22 36 17.3	
	comp=Z,28nm,18.9s,baz=280,slow=35						
AS31	**Alice Springs**	**66.91**	**115**	*e*P	**P**	**22 08 09.2**	**+1.2**
	1.2nm,1.1s						
KS15	**Wonju Array Si**	**67.87**	**48**	*e*P	**P**	**22 08 14.8**	**+1.1**
	4.7nm,0.9s						
KSRS	**Korea Array**	**67.90**	**48**	P	**P**	**22 08 14.8**	**+0.9**
	0.3nm,0.3s,baz=235,slow=5.8,SNR=3.1						
MJAR	**Matsushiro Arr**	**75.47**	**51**	LR	LR	22 43 43.1	
	comp=Z,32nm,19.1s,baz=250,slow=37						
ESDC	**Sonseca Array**	**77.79**	**311**	P	**P**	**22 09 13.5**	**+0.9**
	0.2nm,0.3s,baz=239,slow=8.7,SNR=4.6						
TIXI	**Tiksi**	**83.28**	**16**	LR	LR	22 48 34.2	
	comp=Z,54nm,18.3s,baz=234,slow=37						
LTX	**Lajitas**	**152.01**	**345**	*e*PKPbc	**PKiKP**	**22 17 12.4**	**+0.8**
TXAR	**Lajitas Array**	**152.01**	**345**	PKPbc	**PKiKP**	**22 17 12.4**	**+0.8**
	0.3nm,0.8s,baz=34,slow=2.3,SNR=3.4						

MOS ***22*** *22:15:08.5±0.9, 1°.31S×15°.99W, h10*^{km}*, mb5.2/43, MS4.7/30, Error ellipse: s-maj=12.4km s-min=5.8km az=56.1*

ISCJB ***22*** *22:15:09.1±0.2, 1°.32S±0°.04×15°.88W±0°.02, h10*^{km}*, mb4.7/125, MS5.0/447, Error ellipse: s-maj=5.6km s-min=3.2km az=163.5*

IDC ***22*** *22:15:09.1±0.4, 1°.25S×15°.91W, h0*^{km}*, mb4.3/38, mb1 4.4/39, mb1mx4.4/47, mbtmp4.3/39, ML3.9/1, MS4.8/1, Ms1 4.8/1, ms1mx3.4/37, Error ellipse: s-maj=13.0km s-min=10.0km az=133.0*

NEIC ***22*** *22:15:10.2±1.5, 1°.30S×15°.99W, h10*^{km}*±2*^{km}*, mb5.2/130, MS5.0/457, Error ellipse: s-maj=13.8km s-min=10.9km az=129.0*

GCMT ***22*** *22:15:13.2±0.2, 1°.14S±0°.02×15°.95W±0°.01, h12*^{km}*, MW5.2/118, Moment Tensor Solution. s77,c106; s118,c203; Duration: 0 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*-6.88±.15;* $M_{\theta\theta}$*0.12±.16;* $M_{\phi\phi}$*6.76±.14;* $M_{r\theta}$*1.89±.40;* $M_{\theta\phi}$*-0.96±.13;* $M_{\phi r}$*-1.44±.36; Best double couple:* M_0*7.28000×*10^{16} *NP1:*ϕ_s*339.00000°, δ53.00000°, λ-105.00000°. NP2:*ϕ_s*184.00000°, δ39.00000°,* *λ-70.00000°. Principal axes: T 7.1050, Plg7.0000°, Azm80.0000°; N 0.3510, Plg12.0000°, Azm349.0000°; P -7.4540, Plg76.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 22:15:10.6±0.3,**1°.32S**±0°.05×**15°.97W**±0°.05,**h10**$^{\mathrm{km}}$**,n1037,** σ**1**$^{\mathrm{s}}$**.32**/651**,mb4.9**/129**,MS5.0**/447**,28C-10D,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.63**	**167**	T	T	22 23 44.5	
	baz=348,slow=74,SNR=675						
H10N3	**ASCENSION HYDR**	**6.64**	**167**	T	T	22 23 40.1	
	baz=348,slow=74,SNR=783						
H10N1	**ASCENSION HYDR**	**6.65**	**167**	T	T	22 23 28.4	
	baz=348,slow=74,SNR=837						
ASCN	**Ascension**	**6.76**	**166**	*e*Pn	**Pn**	**22 16 50.0**	**+0.1**
H10S1	**ASCENSION HYDR**	**7.68**	**170**	T	T	22 25 00.9	
	baz=351,slow=74,SNR=40						
H10S3	**ASCENSION HYDR**	**7.69**	**170**	T	T	22 24 51.4	
	baz=351,slow=74,SNR=601						
H10S2	**ASCENSION HYDR**	**7.70**	**170**	T	T	22 24 52.2	
	baz=351,slow=74,SNR=480						
LIC	**Lamto**	**13.25**	**55**	*e*P	**Pn**	**22 18 18.0**	**-1.0**
	793nm,1.5s						
TIC	**Toumodi**	**13.49**	**54**	*e*P	**Pn**	**22 18 21.3**	**-1.0**
KIC	**Kosan Boka**	**13.56**	**56**	*e*P	**Pn**	**22 18 20.2**	**-3.0**
	1µm,1.5s						
DBIC	**Dimbokro**	**13.64**	**54**	Pn	**Pn**	**22 18 20.8**	**-3.5**
	0.6nm,0.3s,baz=225,slow=20,SNR=10.0						
DBIC				Sn	Sn	22 20 46.4	-10
	0.9nm,0.3s,baz=232,slow=22,SNR=0.7						
DBIC	**Dimbokro**	**13.64**	**54**	*e*Pn	**Pn**	**22 18 21.5**	**-2.8**
DBIC				*e*Sn	Sn	22 20 46.4	-10
DBIC	**Dimbokro**	**13.64**	**54**	P	**Pn**	**22 18 24.4**	**+0.1**
DBIC				pmax	pmax		
	comp=Z,154nm,1.6s						
RCBR	**Riachuelo**	**20.39**	**257**	*e*P	**P**	**22 19 47.5**	**-0.4**
	comp=Z,138nm,1.6s						
RCBR				LR	LR		
	comp=Z,2µm,20.0s						
RCBR	**Riachuelo**	**20.39**	**257**	*e*P	**P**	**22 19 47.5**	**-0.4**
RCBR				pmax	pmax		
	comp=Z,138nm,1.6s						
RCBR				MLR	MLR		
	comp=Z,2µm,20.0s						
TOC5	**Torodi Ar. Sit**	**22.64**	**50**	PFAKE		22 20 20.0	+7.9
TOC5				LR	LR		
	comp=Z,3µm,20.0s						
TOB4	**Torodi Ar. Sit**	**22.65**	**50**	PFAKE		22 20 20.0	+7.8
TOB4				LR	LR		
	comp=Z,3µm,20.0s						
TOC4	**Torodi Ar. Sit**	**22.65**	**50**	PFAKE		22 20 20.0	+7.8
TOC4				LR	LR		
	comp=Z,3µm,20.0s						
TOB5	**Torodi Ar. Sit**	**22.66**	**50**	PFAKE		22 20 20.0	+7.7
TOB5				LR	LR		
	comp=Z,3µm,20.0s						
TOA3	**Torodi Ar. Sit**	**22.66**	**50**	PFAKE		22 20 20.0	+7.7
TOA3				LR	LR		
	comp=Z,3µm,19.0s						
TOC7	**Torodi Ar. Sit**	**22.66**	**50**	PFAKE		22 20 20.0	+7.7
TOC7				LR	LR		
	comp=Z,3µm,20.0s						
TOA0	**Torodi Ar. Sit**	**22.67**	**50**	*e*P	**P**	**22 20 12.0**	**-0.4**
	comp=Z,152nm,1.4s						
TOA0				LR	LR		
	comp=Z,3µm,20.0s						
TORD	**Torodi Ar. Bea**	**22.67**	**50**	P	**P**	**22 20 10.8**	**-1.6**
	comp=Z,52nm,1.2s,baz=189,slow=6.9,SNR=30						
TOA1	**Torodi Ar. Sit**	**22.67**	**50**	*e*P	**P**	**22 20 10.8**	**-1.6**
TOA1				LR	LR		
	comp=Z,3µm,20.0s						
TOB3	**Torodi Ar. Sit**	**22.67**	**50**	PFAKE		22 20 20.0	+7.6
TOB3				LR	LR		
	comp=Z,3µm,20.0s						
TOA2	**Torodi Ar. Sit**	**22.67**	**50**	PFAKE		22 20 20.0	+7.6
TOA2				LR	LR		
	comp=Z,3µm,20.0s						
TOC3	**Torodi Ar. Sit**	**22.68**	**50**	PFAKE		22 20 20.0	+7.5
TOC3				LR	LR		
	comp=Z,3µm,20.0s						
TOC1	**Torodi Ar. Sit**	**22.69**	**50**	PFAKE		22 20 20.0	+7.4
TOC1				LR	LR		
	comp=Z,3µm,19.0s						
TOC2	**Torodi Ar. Sit**	**22.69**	**50**	PFAKE		22 20 20.0	+7.4
TOC2				LR	LR		
	comp=Z,3µm,20.0s						
MACI	**Morro de la Ar**	**29.41**	**359**	*e*P	**P**	**22 21 14.7**	**+0.1**
	comp=Z,183nm,1.4s						
TAM	**Tamanrasset**	**31.83**	**40**	*e*P	**P**	**22 21 38.0**	**+2.0**
	comp=Z,27nm,1.5s						
TAM				LR	LR		
	comp=Z,1µm,19.0s						
TAM	**Tamanrasset**	**31.83**	**40**	*e*P	**P**	**22 21 38.0**	**+2.0**
TAM				pmax	pmax		
	comp=Z,27nm,1.5s						
TAM				MLR	MLR		
	comp=Z,1µm,19.0s						
PMAR	**Madeira**	**33.88**	**359**	*e*P	P	22 22 00.6	+6.8
	comp=Z,71nm,2.1s						
PMOZ	**Porto Moniz, M**	**33.98**	**358**	*e*PP	PP	22 23 13.4	+1.7
PMOZ				*e*S	S	22 27 09.9	-10
PMOZ				*e*LR	LR	22 31 31.9	
	comp=Z,378nm,20.0s						
PMOZ	**Porto Moniz, M**	**33.98**	**358**	*e*P	**P**	**22 21 54.7**	**+0.1**
BDFB	**Brasilia**	**34.66**	**244**	P	**P**	**22 22 01.6**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=19,slow=3.1,SNR=4.0						
BDFB	**Brasilia**	**34.66**	**244**	*e*P	**P**	**22 22 01.6**	**+0.9**
BDFB				LR	LR		
	comp=Z,2µm,22.0s						
BDFB	**Brasilia**	**34.66**	**244**	*e*P	**P**	**22 22 01.6**	**+0.9**
BDFB				MLR	MLR		
	comp=Z,2µm,22.0s						
MDT	**Midelt**	**35.61**	**17**	P	**P**	**22 22 07.5**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=221,slow=7.6,SNR=4.5						
MDT				PP	**PnPn**	**22 23 28.4**	**+0.3**
	comp=Z,14nm,1.2s,baz=219,slow=12,SNR=4.9						
RTC	**Rabat Centre**	**36.16**	**13**	PFAKE		22 22 20.0	+6.7
RTC				LR	LR		
	comp=Z,6µm,20.0s						
MDP	**Montagnes des**	**37.19**	**280**	P	**P**	**22 22 23.2**	**+0.9**
	comp=Z,3.7nm,0.9s,baz=110,slow=12,SNR=2.2						
MDP				LR	LR	22 34 09.6	
	comp=Z,1µm,21.9s,baz=99,slow=31						
TSUM	**Tsumeb**	**37.36**	**121**	P	**P**	**22 22 24.5**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=307,slow=14,SNR=4.2						
TSUM	**Tsumeb**	**37.36**	**121**	*e*P	**P**	**22 22 24.7**	**+0.8**
	comp=Z,13nm,1.3s						
TSUM				LR	LR		
	comp=Z,1µm,22.0s						
SPB	**Sao Paulo**	**37.68**	**232**	PFAKE		22 22 40.0	+14
SPB				LR	LR		
	comp=Z,3µm,22.0s						
WIN	**Windhoek**	**38.45**	**126**	PFAKE		22 22 40.0	+6.8
WIN				LR	LR		
	comp=Z,1µm,18.0s						
SFS	**San Fernando**	**38.68**	**13**	PFAKE		22 22 50.0	+15
SFS				LR	LR		
	comp=Z,600nm,21.0s						
PFVI	**Vila Bisbo**	**38.83**	**9**	*e*P	**P**	**22 22 33.6**	**-2.3**
	comp=Z,87nm,1.7s						
PFVI	**Vila Bisbo**	**38.83**	**9**	PFAKE		22 22 50.0	+14
PFVI				LR	LR		
	comp=Z,300nm,20.0s						
MORF	**Marmelete**	**39.03**	**9**	*e*P	**P**	**22 22 39.0**	**+1.4**
	comp=Z,44nm,1.7s						
PBDV	**Barranco-do-Ve**	**39.09**	**10**	*e*P	**P**	**22 22 39.8**	**+1.7**
	comp=Z,48nm,1.6s						
PBDV	**Barranco-do-Ve**	**39.09**	**10**	*e*PP	PP	22 24 09.4	+1.6
PTEO	**Sao Teotonio**	**39.25**	**9**	*e*P	**P**	**22 22 40.9**	**+1.5**
	comp=Z,77nm,1.7s						
PVAQ	**Vaqueiros**	**39.29**	**10**	*e*P	**P**	**22 22 40.7**	**+1.0**
	comp=Z,45nm,1.6s						
PVAQ				*e*S	**S**	**22 28 44.0**	**+3.4**
PVAQ				*e*LR	LR	22 35 12.2	
	comp=Z,455nm,20.0s						
PVAQ	**Vaqueiros**	**39.29**	**10**	*e*P	P	22 22 35.2	-4.5
	comp=Z,81nm,1.9s						
PVAQ				LR	LR		
	comp=Z,700nm,20.0s						
PCVE	**Castro Verde**	**39.45**	**10**	*e*P	P	22 22 49.1	+8.0
	comp=Z,34nm,1.7s						
PNCL	**Nicolau / Gran**	**39.84**	**9**	*e*P	**P**	**22 22 46.0**	**+1.7**
	comp=Z,34nm,1.9s						
PNCL	**Nicolau / Gran**	**39.84**	**9**	*e*PP	PP	22 24 17.2	+1.3
PBEJ	**Beja**	**39.87**	**10**	*e*P	**P**	**22 22 48.2**	**+3.7**
	comp=Z,31nm,2.1s						
PMTG	**Montargil**	**40.82**	**9**	*e*P	**P**	**22 22 54.1**	**+1.7**
	comp=Z,22nm,1.9s						
PMTG	**Montargil**	**40.82**	**9**	*e*PP	PP	22 24 37.8	+11
ALMR	**Almeirim**	**40.85**	**9**	*e*P	**P**	**22 22 55.0**	**+2.3**
	comp=Z,54nm,1.2s						
PMRV	**Marv??o**	**41.31**	**10**	*e*P	**P**	**22 22 57.7**	**+1.2**
	comp=Z,24nm,1.9s						
PMRV	**Marv??o**	**41.31**	**10**	*e*LR	LR	22 36 17.3	
	comp=Z,606nm,20.0s						
PTOM	**Tomar**	**41.33**	**9**	*e*P	**P**	**22 23 00.7**	**+4.1**
	comp=Z,50nm,1.7s						
PTOM	**Tomar**	**41.33**	**9**	*e*PP	PP	22 24 33.5	+1.3
PCAS	**Casmilo, Conde**	**41.74**	**9**	*e*P	**P**	**22 23 00.5**	**+0.5**
	comp=Z,57nm,1.6s						
PCAS	**Casmilo, Conde**	**41.74**	**9**	*e*PP	PP	22 24 37.6	+1.0
COI	**Coimbra**	**41.91**	**9**	*e*P	**P**	**22 23 02.1**	**+0.8**
	comp=Z,71nm,1.8s						
COI				LR	LR		
	comp=Z,800nm,21.0s						
COI	**Coimbra**	**41.91**	**9**	*e*P	**P**	**22 23 02.1**	**+0.8**
COI				pmax	pmax		
	comp=Z,71nm,1.8s						
COI				MLR	MLR		
	comp=Z,800nm,21.0s						
PAB	**San Pablo**	**42.05**	**13**	*e*P	**P**	**22 23 03.6**	**+1.0**
	comp=Z,25nm,1.4s						
PAB				LR	LR		
	comp=Z,700nm,19.0s						
PAB	**San Pablo**	**42.05**	**13**	*e*P	**P**	**22 23 03.6**	**+1.0**
PAB				pmax	pmax		
	comp=Z,25nm,1.4s						
PAB				MLR	MLR		
	comp=Z,700nm,19.0s						
MTE	**Manteigas**	**42.23**	**10**	*e*P	**P**	**22 23 05.0**	**+0.9**
	comp=Z,29nm,2.1s						
MTE				*e*S	**S**	**22 29 30.9**	**+6.3**
MTE				*e*LR	LR	22 37 39.4	
	comp=Z,652nm,20.0s						
MTE	**Manteigas**	**42.23**	**10**	*e*P	**P**	**22 23 02.7**	**-1.4**
	comp=Z,25nm,1.3s						
MTE				LR	LR		
	comp=Z,800nm,20.0s						
ESDC	**Sonseca Array**	**42.26**	**14**	P	**P**	**22 23 03.3**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=191,slow=9.2,SNR=8.0						
ESDC				PP	**PP**	**22 24 41.4**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=193,slow=11,SNR=5.9						
ESDC				PcP	**PcP**	**22 24 59.7**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=207,slow=3.7,SNR=8.4						
ESLA	**Sonseca Array**	**42.26**	**14**	*e*P	**P**	**22 23 00.9**	**-3.4**
	comp=Z,45nm,1.9s						
ESLA				LR	LR		
	comp=Z,600nm,21.0s						
PVIS	**Viseu**	**42.48**	**9**	*e*P	**P**	**22 23 06.8**	**+0.7**
	comp=Z,18nm,1.6s						
MVO	**Moncorvo**	**43.06**	**10**	*e*P	**P**	**22 23 11.5**	**+0.7**
	comp=Z,33nm,1.7s						
MVO				*e*S	**S**	**22 29 42.4**	**+5.6**
MVO				*e*LR	LR	22 37 00.2	
	comp=Z,478nm,22.0s						
POLO	**Lamas de Olo**	**43.14**	**9**	*e*P	**P**	**22 23 12.0**	**+0.5**
	comp=Z,9.5nm,1.6s						
PCAB	**Cabril**	**43.44**	**9**	*e*P	**P**	**22 23 15.8**	**+2.0**
	comp=Z,25nm,1.7s						
PGAV	**Gavieira, Arco**	**43.65**	**8**	*e*S	**S**	**22 29 46.8**	**+1.4**
PGAV				*e*LR	LR	22 35 52.4	
	comp=Z,668nm,20.0s						
PBRG	**Braganca**	**43.74**	**10**	*e*P	**P**	**22 23 17.6**	**+1.4**
	comp=Z,20nm,1.8s						
KEST	**Kesra**	**43.78**	**30**	P	**P**	**22 23 16.1**	**-0.6**
	comp=Z,6.8nm,0.9s,baz=188,slow=7.8,SNR=4.0						
KEST				PP	**PP**	**22 24 58.5**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=185,slow=5.8,SNR=4.3						
KEST	**Kesra**	**43.78**	**30**	*e*P	**P**	**22 23 16.2**	**-0.6**
	comp=Z,51nm,1.7s						
KEST				LR	LR		
	comp=Z,2µm,22.0s						
PTGA	**Pitinga**	**43.99**	**270**	P	**P**	**22 23 19.4**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=109,slow=11,SNR=4.8						
PTGA				PP	**PcP**	**22 25 05.1**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=129,slow=12,SNR=5.7						
PTGA	**Pitinga**	**43.99**	**270**	*e*P	**P**	**22 23 17.0**	**-1.7**
	comp=Z,8.8nm,1.4s						
PTGA				LR	LR		
	comp=Z,900nm,21.0s						
LSZ	**Lusaka**	**45.72**	**110**	P	**P**	**22 23 32.6**	**0.0**
	comp=Z,2.1nm,0.7s,baz=109,slow=14,SNR=2.6						
LSZ	**Lusaka**	**45.72**	**110**	*e*P	**P**	**22 23 32.3**	**-0.2**
	comp=Z,30nm,1.7s						
LSZ				LR	LR		
	comp=Z,2µm,22.0s						
LSZ	**Lusaka**	**45.72**	**110**	*e*P	**P**	**22 23 32.3**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,30nm,1.7s						
LSZ				MLR	MLR		
	comp=Z,2µm,22.0s						
SUR	**Sutherland**	**46.39**	**136**	P	**P**	**22 23 38.2**	**+0.5**
	comp=Z,6.7nm,0.8s,baz=315,slow=4.3,SNR=3.9						
SUR	**Sutherland**	**46.39**	**136**	*e*P	**P**	**22 23 38.2**	**+0.5**
	comp=Z,123nm,1.6s						
LBTB	**Lobatse**	**46.51**	**124**	P	**P**	**22 23 38.1**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=297,slow=8.2,SNR=2.6						
LBTB	**Lobatse**	**46.51**	**124**	*e*P	**P**	**22 23 38.1**	**-0.5**
	comp=Z,19nm,1.3s						
LBTB	**Lobatse**	**46.51**	**124**	*e*P	**P**	**22 23 38.1**	**-0.5**
LBTB				pmax	pmax		
	comp=Z,19nm,1.3s						
WDD	**Wied Dalam**	**46.64**	**35**	PFAKE		22 23 50.0	+11
WDD				LR	LR		
	comp=Z,1µm,21.0s						
MBAR	**Mbarara**	**46.71**	**90**	*e*P	**P**	**22 23 41.7**	**+1.3**
	comp=Z,59nm,1.4s						
MBAR				LR	LR		
	comp=Z,3µm,20.0s						
MBAR	**Mbarara**	**46.71**	**90**	*ce*P	**P**	**22 23 43.6**	**+3.1**
MBAR				pmax	pmax		
	comp=Z,17nm,1.1s						
SIV	**San Ignacio**	**46.77**	**249**	P	**P**	**22 23 42.1**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=97,slow=12,SNR=2.0						
CPUP	**Villa Florida**	**46.88**	**234**	*e*P	**P**	**22 23 40.5**	**-0.9**
	comp=Z,47nm,1.9s						
CPUP	**Villa Florida**	**46.88**	**234**	*e*P	**P**	**22 23 40.5**	**-0.9**
CPUP				pmax	pmax		
	comp=Z,47nm,1.9s						
CLTB	**Caltabellotta**	**47.20**	**32**	*e*P	**P**	**22 23 41.2**	**-2.6**
	comp=Z,109nm,2.0s						
CLTB				LR	LR		
	comp=Z,2µm,21.0s						
FDF	**Fort de France**	**47.47**	**291**	PFAKE		22 24 00.0	+14
FDF				LR	LR		
	comp=Z,600nm,20.0s						
BOSA	**Boshof**	**47.77**	**129**	P	**P**	**22 23 48.4**	**-0.1**
	comp=Z,6.1nm,0.7s,baz=303,slow=8.2,SNR=16						
BOSA	**Boshof**	**47.77**	**129**	*e*P	**P**	**22 23 48.8**	**+0.3**
	comp=Z,13nm,1.0s						
BOSA	**Boshof**	**47.77**	**129**	*e*P	**P**	**22 23 48.8**	**+0.3**
BOSA				pmax	pmax		
	comp=Z,13nm,1.0s						
ANWB	**Willy Bob**	**48.90**	**295**	PFAKE		22 24 10.0	+13
ANWB				LR	LR		
	comp=Z,1µm,21.0s						
SKI	**Saint Kitts**	**49.67**	**294**	PFAKE		22 24 10.0	+6.9
SKI				LR	LR		
	comp=Z,1µm,20.0s						
SSB	**Saint Sauveur**	**49.85**	**19**	*e*P	**P**	**22 24 05.0**	**+1.1**
	comp=Z,44nm,2.0s						
SSB				LR	LR		
	comp=Z,600nm,21.0s						
SSB	**Saint Sauveur**	**49.85**	**19**	*e*P	**P**	**22 24 05.1**	**+1.1**
SSB				pmax	pmax		
	comp=Z,44nm,2.0s						
SSB				MLR	MLR		
	comp=Z,600nm,21.0s						
SEUS	**St. Eustatius**	**49.93**	**294**	PFAKE		22 24 20.0	+15
SEUS				LR	LR		
	comp=Z,1µm,20.0s						
SMRT	**St. Maarten**	**50.18**	**295**	PFAKE		22 24 20.0	+13
SMRT				LR	LR		
	comp=Z,1µm,22.0s						
SABA	**Saba**	**50.21**	**294**	PFAKE		22 24 20.0	+13
SABA				LR	LR		
	comp=Z,1µm,21.0s						
TIP	**Timpagrande**	**50.26**	**33**	*e*P	**P**	**22 24 07.7**	**+0.3**
	comp=Z,13nm,1.0s						
TIP				LR	LR		
	comp=Z,1µm,20.0s						
TIP	**Timpagrande**	**50.26**	**33**	⇑*i*P	**P**	**22 24 04.0**	**-3.3**
BNI	**Bardonecchia**	**50.37**	**21**	*e*P	**P**	**22 24 07.4**	**-0.7**
	comp=Z,25nm,1.6s						
BNI				LR	LR		
	comp=Z,800nm,21.0s						
BNI	**Bardonecchia**	**50.37**	**21**	*e*P	**P**	**22 24 07.4**	**-0.7**
BNI				pmax	pmax		
	comp=Z,25nm,1.6s						
BNI				MLR	MLR		
	comp=Z,800nm,21.0s						
AQU	**L'Aquila**	**50.92**	**28**	*e*P	**P**	**22 24 11.6**	**-0.7**
	comp=Z,38nm,1.4s						
AQU				LR	LR		
	comp=Z,2µm,20.0s						
AQU	**L'Aquila**	**50.92**	**28**	*e*P	**P**	**22 24 11.6**	**-0.7**
AQU				pmax	pmax		
	comp=Z,38nm,1.4s						
AQU				MLR	MLR		
	comp=Z,2µm,20.0s						
VLC	**Villacollemand**	**51.04**	**24**	PFAKE		22 24 20.0	+7.0
VLC				LR	LR		
	comp=Z,600nm,21.0s						
CLF	**Chambon-Foret**	**51.66**	**16**	*e*P	**P**	**22 24 17.5**	**0.0**
	comp=Z,34nm,1.3s						
CLF				LR	LR		
	comp=Z,700nm,22.0s						
SENIN	**Lac Senin/Sane**	**51.72**	**20**	*e*P	**P**	**22 24 16.6**	**-1.7**
	comp=Z,27nm,1.7s						
SENIN				LR	LR		
	comp=Z,900nm,20.0s						
ITM	**Ithomi**	**51.95**	**39**	PFAKE		22 24 30.0	+10
ITM				LR	LR		
	comp=Z,1µm,21.0s						
TUE	**Stuetta**	**52.55**	**22**	PFAKE		22 24 40.0	+15
TUE				LR	LR		
	comp=Z,800nm,18.0s						
IDI	**Anoyia**	**52.74**	**42**	P	**P**	**22 24 25.7**	**-0.3**
	comp=Z,24nm,1.1s,baz=251,slow=18,SNR=2.1						
SJG	**San Juan**	**53.00**	**294**	PFAKE		22 24 40.0	+12
SJG				LR	LR		
	comp=Z,1µm,21.0s						
DAVOX	**Davos/Dischmat**	**53.01**	**22**	P	**P**	**22 24 27.5**	**-0.4**
	comp=Z,5.4nm,0.9s,baz=101,slow=3.2,SNR=9.1						
FUORN	**Ofenpass-Fuorn**	**53.02**	**22**	PFAKE		22 24 40.0	+12
FUORN				LR	LR		
	comp=Z,900nm,19.0s						
KMBO	**Kilima Mbogo**	**53.21**	**90**	PFAKE		22 24 40.0	+10
KMBO				LR	LR		
	comp=Z,3µm,19.0s						
ECH	**Echery**	**53.28**	**19**	*e*P	**P**	**22 24 29.1**	**-0.6**
	comp=Z,50nm,2.0s						
ECH				LR	LR		
	comp=Z,800nm,18.0s						
ECH	**Echery**	**53.28**	**19**	*e*P	**P**	**22 24 29.1**	**-0.6**
ECH				pmax	pmax		
	comp=Z,50nm,2.0s						
ECH				MLR	MLR		
	comp=Z,800nm,18.0s						
AGG	**Agios Georgios**	**53.36**	**37**	PFAKE		22 24 40.0	+10
AGG				LR	LR		
	comp=Z,1µm,20.0s						
DAVA	**Damuels**	**53.44**	**22**	*e*P	**P**	**22 24 30.8**	**-0.2**
	comp=Z,9.0nm,0.9s						
LPAZ	**La Paz**	**53.46**	**251**	P	**P**	**22 24 32.2**	**0.0**
	comp=Z,1.2nm,0.7s,baz=58,slow=5.8,SNR=5.2						
LPAZ				PcP	**PcP**	**22 25 39.3**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=102,slow=5.7,SNR=5.3						
LPAZ	**La Paz**	**53.46**	**251**	*e*P	**P**	**22 24 29.6**	**-2.6**
LPAZ				*e*pP	**pP**	**22 24 30.8**	**-3.4**
LPAZ				*e*sP	**sP**	**22 24 31.0**	**-3.9**
LPAZ				*e*PcP	**PcP**	**22 25 39.3**	**-0.1**
LPAZ	**La Paz**	**53.46**	**251**	*e*P	**P**	**22 24 29.6**	**-2.6**
LPAZ				*e**PP	**pP**	**22 24 30.8**	**-3.4**
LPAZ				*e**SP	**sP**	**22 24 31.0**	**-3.9**
LPAZ				*e*		22 25 39.3	
TIR	**Tirane**	**53.48**	**33**	PFAKE		22 24 40.0	+8.8
TIR				LR	LR		
	comp=Z,900nm,19.0s						
FETA	**Feichten**	**53.53**	**22**	P	**P**	**22 24 31.8**	**0.0**
	comp=Z,4.8nm,1.1s						
BFO	**Black Forest**	**53.77**	**20**	*e*P	**P**	**22 24 33.0**	**-0.3**
	comp=Z,48nm,1.8s						
BFO				LR	LR		
	comp=Z,600nm,19.0s						
BFO	**Black Forest**	**53.77**	**20**	*e*P	**P**	**22 24 33.0**	**-0.3**
BFO				pmax	pmax		
	comp=Z,48nm,1.8s						
BFO				MLR	MLR		
	comp=Z,600nm,19.0s						
SQTA	**Sankt Quirin**	**53.88**	**23**	*e*P	**P**	**22 24 33.9**	**-0.3**
	comp=Z,4.6nm,0.8s						
TTG	**Podgorica**	**53.90**	**32**	PFAKE		22 24 50.0	+16
TTG				LR	LR		
	comp=Z,1µm,21.0s						
RETA	**Reutte**	**53.94**	**22**	*e*pP	**P**	**22 24 36.7**	**+2.1**
	comp=Z,15nm,1.8s						
MOTA	**Moosalm**	**53.95**	**23**	*e*P	**P**	**22 24 34.6**	**-0.1**
	comp=Z,1.4nm,0.7s						
ABTA	**Abfaltersbach**	**54.01**	**24**	*e*pP	**P**	**22 24 38.8**	**+3.7**
	comp=Z,22nm,2.1s						
WTTA	**Wattenberg**	**54.09**	**23**	*e*P	**P**	**22 24 35.8**	**0.0**
	comp=Z,28nm,2.1s						
LIT	**Litokhoron**	**54.15**	**36**	PFAKE		22 24 50.0	+14
LIT				LR	LR		
	comp=Z,900nm,21.0s						
DOU	**Dourbes**	**54.18**	**16**	⇓P	**P**	**22 24 36.1**	**0.0**
DOU				⇑sP	**pwP**	**22 24 43.2**	**-0.1**
APE	**Apeiranthos**	**54.19**	**41**	⇑*e*P	**P**	**22 24 36.1**	**-0.5**
WLF	**Walferdange**	**54.24**	**18**	PFAKE		22 24 50.0	+13
WLF				LR	LR		
	comp=Z,2µm,22.0s						
WLF	**Walferdange**	**54.24**	**18**	⇑P	P	22 24 44.5	+7.8
	comp=Z,19nm,2.5s						
MYKA	**Terra Mystica**	**54.38**	**25**	*e*P	**P**	**22 24 39.0**	**+1.2**
	comp=Z,5.6nm,1.1s						
KARP	**Karpathos**	**54.43**	**43**	PFAKE		22 24 50.0	+12
KARP				LR	LR		
	comp=Z,1µm,22.0s						
STU	**Stuttgart**	**54.45**	**20**	PFAKE		22 24 50.0	+12
STU				LR	LR		
	comp=Z,800nm,19.0s						
BLY	**Banja Luka**	**54.53**	**29**	PFAKE		22 24 50.0	+11
BLY				LR	LR		
	comp=Z,2µm,22.0s						
KBA	**Koelnbreinsper**	**54.62**	**24**	*e*P	**P**	**22 24 41.3**	**+1.6**
	comp=Z,13nm,1.9s						
OBKA	**Obir**	**54.67**	**25**	pP	**P**	**22 24 43.0**	**+3.1**
	comp=Z,7.8nm,1.3s						
UCC	**Uccle**	**54.75**	**16**	PFAKE		22 24 50.0	+10
UCC				LR	LR		
	comp=Z,600nm,20.0s						
SKO	**Skopje**	**54.77**	**34**	*i* P	**P**	**22 24 44.0**	**+3.4**
DSB	**Dublin**	**54.97**	**7**	PFAKE		22 24 50.0	+8.2
DSB				LR	LR		
	comp=Z,400nm,20.0s						
VAY	**Valandovo**	**54.98**	**35**	*i* P	**P**	**22 24 45.0**	**+2.9**
SOKA	**Soboth**	**55.01**	**26**	*e*pP	**P**	**22 24 44.4**	**+2.0**
	comp=Z,5.3nm,1.2s						
MNMC	**Minye Minye**	**55.39**	**248**	PFAKE		22 25 00.0	+14
MNMC				LR	LR		
	comp=Z,2µm,18.0s						
SDV	**Santo Domingo**	**55.40**	**282**	PFAKE		22 25 00.0	+14
SDV				LR	LR		
	comp=Z,900nm,22.0s						
MOA	**Molln**	**55.61**	**24**	*e*P	**P**	**22 24 47.4**	**+0.8**
	comp=Z,0.9nm,0.6s						
ARSA	**Arzberg**	**55.67**	**26**	*e*P	**P**	**22 24 47.5**	**+0.4**
	comp=Z,2.7nm,0.8s						
MMB	**Musomiste**	**55.82**	**35**	*e*P	**P**	**22 24 49.5**	**+1.3**
GRA1	**Grafenberg Arr**	**55.94**	**21**	PFAKE		22 25 00.0	+11
GRA1				LR	LR		
	comp=Z,500nm,19.0s						
GERES	**GERESS Array B**	**56.18**	**23**	P	**P**	**22 24 49.5**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=187,slow=9.4,SNR=8.8						
VTS	**Vitosha**	**56.20**	**34**	*e*P	**P**	**22 24 54.0**	**+2.9**
CONA	**Conrad Observa**	**56.34**	**25**	*e*P	**P**	**22 24 52.4**	**+0.5**
	comp=Z,5.5nm,1.2s						
KHC	**Kasperske Hory**	**56.36**	**23**	*e*P	**P**	**22 24 50.8**	**-1.2**
	comp=Z,8.3nm,1.7s						
KHC				LR	LR		
	comp=Z,200nm,21.0s						
KHC	**Kasperske Hory**	**56.36**	**23**	*e*P	**P**	**22 24 52.2**	**+0.2**
KHC				*e*		22 24 59.8	
KHC				*e*S	**S**	**22 32 35.9**	**-6.6**
KHC				MLR	MLR		

	comp=Z,600nm,20.2s						
KHC	**Kasperske Hory**	**56.36**	**23**	*e*P	**P**	**22 24 52.2**	**+0.2**
KHC				*e*x	x	22 24 59.8	
KHC				*e*S	**S**	**22 32 35.9**	**-6.6**
KHC				AMS	AMS	22 53 50.0	
	comp=Z,600nm,20.2s						
RZN	**Rozhen**	**56.45**	**36**	*e*P	**P**	**22 24 55.7**	**+2.7**
SDD	**Santo Domingo**	**56.54**	**293**	PFAKE		22 25 10.0	+16
SDD				LR	LR		
	comp=Z,2µm,22.0s						
PLD	**Plovdiv**	**56.71**	**35**	*e*P	**P**	**22 24 58.1**	**+3.6**
ALN	**Alexandroupoli**	**56.76**	**37**	PFAKE		22 25 10.0	+15
ALN				LR	LR		
	comp=Z,400nm,20.0s						
MDVR	**Moldovita**	**56.81**	**31**	⇓*i*P	**P**	**22 24 56.0**	**+0.7**
NKC	**Novy Kostel**	**56.83**	**21**	*e*P	**P**	**22 24 59.6**	**+4.3**
NKC				*e*S	**S**	**22 32 51.9**	**+3.2**
NKC				MLR	MLR		
	comp=Z,500nm,19.1s						
NKC	**Novy Kostel**	**56.83**	**21**	*e*P	**P**	**22 24 59.6**	**+4.3**
NKC				*e*S	**S**	**22 32 51.9**	**+3.2**
NKC				AMS	AMS	22 52 40.0	
	comp=Z,500nm,19.1s						
GO02	**Mina Guanaco**	**56.84**	**241**	PFAKE		22 25 10.0	+14
GO02				LR	LR		
	comp=Z,2µm,19.0s						
KDZ	**Kurdzhali**	**56.84**	**36**	*e*P	**P**	**22 24 56.4**	**+0.9**
MANT	**Manisa**	**56.97**	**41**	PFAKE		22 25 10.0	+13
MANT				LR	LR		
	comp=Z,2µm,20.0s						
ZST	**Bratislava**	**57.08**	**26**	*e*P	**P**	**22 24 56.3**	**-0.8**
ZST	**Bratislava**	**57.08**	**26**	*e*P	**P**	**22 24 56.3**	**-0.8**
BALB	**Balikesir**	**57.17**	**40**	PFAKE		22 25 10.0	+12
BALB				LR	LR		
	comp=Z,1µm,22.0s						
TREC	**Trest**	**57.25**	**24**	AMS	AMS	22 52 20.0	
	comp=Z,700nm,15.6s						
MODS	**Modra-Piesok**	**57.29**	**26**	*e*P	**P**	**22 24 58.3**	**-0.3**
MODS				pmax	pmax		
	comp=Z,28nm,1.5s						
MODS	**Modra-Piesok**	**57.29**	**26**	*e*P	**P**	**22 24 58.3**	**-0.3**
ESK	**Eskdalemuir**	**57.42**	**9**	PFAKE		22 25 10.0	+11
ESK				LR	LR		
	comp=Z,500nm,22.0s						
PRU	**Pruhonice**	**57.42**	**23**	*e*P	**P**	**22 24 59.5**	**0.0**
PRU				*e*		22 25 06.7	
PRU				*e*S	**S**	**22 32 51.3**	**-5.1**
PRU				MLR	MLR		
	comp=Z,600nm,21.3s						
PRU	**Pruhonice**	**57.42**	**23**	*e*P	**P**	**22 24 59.5**	**0.0**
PRU				*e*x	x	22 25 06.7	
PRU				*e*S	**S**	**22 32 51.3**	**-5.1**
PRU				AMS	AMS	22 54 30.0	
	comp=Z,600nm,21.3s						
EKA	**Eskdalemuir Ar**	**57.44**	**9**	P	**P**	**22 24 59.1**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=193,slow=7.4,SNR=12						
KRUC	**Moravsky**	**57.44**	**25**	*e*P	**P**	**22 24 59.2**	**-0.4**
GOPC	**GO Pecny, Ondr**	**57.46**	**23**	*e*S	**S**	**22 32 59.1**	**+2.1**
GOPC				AMS	AMS	22 52 30.0	
	comp=Z,500nm,15.0s						
VRAC	**Vranov**	**57.72**	**25**	P	**P**	**22 25 01.0**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=228,slow=10.0,SNR=5.3						
VRAC	**Vranov**	**57.72**	**25**	*e*P	**P**	**22 25 01.1**	**-0.5**
CFA	**Coronel Fontan**	**57.72**	**233**	P	**P**	**22 25 02.6**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=74,slow=10.0,SNR=4.4						
GZR	**Gura Zlata**	**57.78**	**31**	⇓*i*P	**P**	**22 25 02.4**	**+0.2**
GZR	**Gura Zlata**	**57.78**	**31**	⇓P	**P**	**22 25 02.4**	**+0.2**
SIRR	**Siria**	**57.81**	**30**	⇓*i*P	**P**	**22 25 03.2**	**+0.9**
JAVC	**Velka Javorina**	**57.83**	**26**	*e*P	**P**	**22 25 02.2**	**-0.2**
PVCC	**Panska Ves**	**57.87**	**23**	AMS	AMS	22 54 30.0	
	comp=Z,700nm,15.4s						
BRG	**Berggiesshubel**	**57.91**	**22**	*e*P	**P**	**22 25 05.4**	**+2.6**
	comp=Z,14nm,1.8s						
BRG				*e*		22 27 16.3	
	comp=Z,10.0nm,1.6s						
CLL	**Collm**	**57.92**	**21**	PFAKE		22 25 10.0	+7.1
CLL				LR	LR		
	comp=Z,600nm,19.0s						
CLL	**Collm**	**57.92**	**21**	*e*P	**P**	**22 25 03.0**	**+0.1**
CLL				*i*		22 25 09.1	
CLL				*e*S	**S**	**22 33 05.0**	**+2.2**
CLL				pmax	pmax		
	comp=Z,47nm,1.9s						
CLL				MLR	MLR		
	comp=Z,500nm,20.1s						
CLL	**Collm**	**57.92**	**21**	*e*P	**P**	**22 25 03.0**	**+0.1**
	comp=Z,17nm,1.8s						
CLL				*i*		22 25 09.1	
	comp=Z,47nm,1.9s						
CLL				*i*		22 25 15.4	
CLL				*e*PP	**PP**	**22 27 08.0**	**-3.4**
CLL				*e*PPP	PPP	22 28 24.0	
CLL				*e*S	**S**	**22 33 05.0**	**+2.2**
CLL				*e*SSS	SSS	22 39 36.0	
CLL				LmH		22 51 00.0	
	comp=N,400nm,18.3s						
CLL				LmH		22 51 00.0	
	comp=E,400nm,20.7s						
CLL				LmH		22 51 00.0	
	comp=Z,500nm,20.1s						
ISP	**Isparta**	**57.92**	**43**	PFAKE		22 25 20.0	+17
ISP				LR	LR		
	comp=Z,200nm,19.0s						
ISP	**Isparta**	**57.92**	**43**	*e*P	**P**	**22 25 03.5**	**+0.1**
ISP				pmax	pmax		
	comp=Z,16nm,0.8s						
SDDR	**Presa de Saban**	**57.94**	**293**	PFAKE		22 25 20.0	+16
SDDR				LR	LR		
	comp=Z,900nm,22.0s						
VYHS	**Vyhne**	**58.07**	**27**	*e*P	**P**	**22 25 04.3**	**+0.3**
VYHS				pmax	pmax		
	comp=Z,48nm,2.2s						
VYHS	**Vyhne**	**58.07**	**27**	*e*P	**P**	**22 25 04.3**	**+0.3**
PSZ	**Piszkesteto**	**58.13**	**28**	PFAKE		22 25 20.0	+15
PSZ				LR	LR		
	comp=Z,900nm,18.0s						
UPC	**Upice**	**58.41**	**23**	AMS	AMS	22 56 40.0	
	comp=Z,600nm,15.5s						
DPC	**Dobruska-Polom**	**58.41**	**24**	*e*P	**P**	**22 25 06.2**	**-0.3**
DPC				*e*		22 25 13.0	
DPC				MLR	MLR		
	comp=Z,500nm,15.5s						
DPC	**Dobruska-Polom**	**58.41**	**24**	*e*P	**P**	**22 25 06.2**	**-0.3**
DPC				*e*x	x	22 25 13.0	
DPC				AMS	AMS	22 53 00.0	
	comp=Z,500nm,15.5s						
GRTK	**Grand Turk**	**58.44**	**296**	PFAKE		22 25 20.0	+13
GRTK				LR	LR		
	comp=Z,400nm,22.0s						
MORC	**Moravsky Berou**	**58.47**	**25**	*e*P	**P**	**22 25 06.8**	**-0.1**
	comp=Z,49nm,1.9s						
MORC				LR	LR		
	comp=Z,400nm,21.0s						
MORC	**Moravsky Berou**	**58.47**	**25**	*e*P	**P**	**22 25 06.8**	**-0.1**
MORC				pmax	pmax		
	comp=Z,49nm,1.9s						
MORC				MLR	MLR		
	comp=Z,400nm,21.0s						
MORC	**Moravsky Berou**	**58.47**	**25**	*e*P	**P**	**22 25 07.2**	**+0.3**
CHVC	**Chvalec**	**58.49**	**23**	AMS	AMS	22 56 30.0	
	comp=Z,500nm,16.6s						
OSTC	**Ostas**	**58.53**	**23**	*e*P	**P**	**22 25 08.5**	**+1.2**
OSTC				AMS	AMS	22 56 40.0	
	comp=Z,500nm,16.7s						
ROSC	**El Rosal**	**58.61**	**276**	P	**P**	**22 25 08.9**	**0.0**
	comp=Z,7.4nm,0.3s,baz=139,slow=13,SNR=5.4						
ROSC	**El Rosal**	**58.61**	**276**	*e*P	**P**	**22 25 08.9**	**0.0**
	comp=Z,54nm,1.8s						
ARR	**Arges**	**58.75**	**32**	⇓*i*P	**P**	**22 25 09.6**	**+0.7**
OKC	**Ostrava-Krasne**	**58.77**	**25**	AMS	AMS	22 56 30.0	
	comp=Z,400nm,17.9s						
KSP	**Ksiaz**	**58.79**	**23**	*e*P	**P**	**22 25 09.9**	**+0.9**
KSP	**Ksiaz**	**58.79**	**23**	*e*P	**P**	**22 25 09.9**	**+0.9**
VOIR		**59.02**	**33**	⇑*i*P	**P**	**22 25 11.3**	**+0.5**
VOIR		**59.02**	**33**	⇑P	**P**	**22 25 11.3**	**+0.5**
NIE	**Niedzica**	**59.40**	**27**	*e*P	**P**	**22 25 14.2**	**+0.9**
NIE	**Niedzica**	**59.40**	**27**	*e*P	**P**	**22 25 14.2**	**+0.9**
TRPA	**Tarpa**	**59.53**	**29**	⇑*i*P	**P**	**22 25 14.3**	**+0.1**
MLR	**Muntele Rosu**	**59.54**	**33**	P	**P**	**22 25 14.0**	**-0.4**
	comp=Z,10nm,1.1s,baz=304,slow=3.9,SNR=10						
MLR	**Muntele Rosu**	**59.54**	**33**	PFAKE		22 25 30.0	+16
MLR				LR	LR		
	comp=Z,1µm,21.0s						
MLR	**Muntele Rosu**	**59.54**	**33**	⇑*i*P	**P**	**22 25 14.8**	**+0.3**
MLR	**Muntele Rosu**	**59.54**	**33**	⇑P	**P**	**22 25 14.8**	**+0.3**
DOPR	**Dopca**	**59.54**	**32**	⇑*i*P	**P**	**22 25 13.9**	**-0.4**
UZH	**Uzhgorod**	**59.76**	**28**	*e*P	**P**	**22 25 17.6**	**+1.8**
UZH				*i*		22 25 22.0	
OJC	**Ojcow**	**59.77**	**26**	*e*P	P	22 25 23.7	+7.9
OJC	**Ojcow**	**59.77**	**26**	*e*P	P	22 25 23.7	+7.9
ATD	**Arta Tunnel**	**59.82**	**76**	PFAKE		22 25 30.0	+13
ATD				LR	LR		
	comp=Z,600nm,19.0s						
OZUR		**59.84**	**32**	⇑*i*P	**P**	**22 25 17.1**	**+0.7**
KOLS	**Kolonicke sedl**	**59.97**	**28**	*e*P	**P**	**22 25 18.0**	**+0.8**
KOLS				pmax	pmax		
	comp=Z,49nm,2.1s						
KOLS	**Kolonicke sedl**	**59.97**	**28**	*e*P	**P**	**22 25 18.0**	**+0.8**
PLOR	**Plostina**	**60.15**	**33**	⇑*i*P	**P**	**22 25 17.8**	**-0.8**
PLOR	**Plostina**	**60.15**	**33**	⇑P	**P**	**22 25 17.8**	**-0.8**
VRI	**Vrincioaia**	**60.20**	**33**	⇑*i*P	**P**	**22 25 18.6**	**-0.3**
VRI	**Vrincioaia**	**60.20**	**33**	⇑P	**P**	**22 25 18.6**	**-0.3**
TIRR	**Tirgusor**	**60.29**	**35**	PFAKE		22 25 30.0	+11
TIRR				LR	LR		
	comp=Z,1µm,20.0s						
ANTO	**Ankara**	**60.49**	**42**	PFAKE		22 25 30.0	+8.9
ANTO				LR	LR		
	comp=Z,300nm,21.0s						
BURAR	**Bucovina Array**	**60.52**	**31**	⇑*i*P	**P**	**22 25 21.5**	**+0.4**
BURAR	**Bucovina Array**	**60.52**	**31**	⇑P	**P**	**22 25 21.6**	**+0.4**
BIZ	**Bicaz**	**60.54**	**32**	⇑*i*P	**P**	**22 25 22.2**	**+1.0**
KWP	**Kalwaria Pacla**	**60.66**	**28**	*e*P	**P**	**22 25 25.3**	**+3.4**
KWP	**Kalwaria Pacla**	**60.66**	**28**	PFAKE		22 25 30.0	+8.1
KWP				LR	LR		
	comp=Z,6µm,20.0s						
KWP	**Kalwaria Pacla**	**60.66**	**28**	*e*P	**P**	**22 25 25.3**	**+3.4**
RGN	**Rugen**	**60.70**	**19**	PFAKE		22 25 30.0	+7.9
RGN				LR	LR		
	comp=Z,500nm,19.0s						
BRTR	**Keskin Array B**	**60.99**	**42**	P	**P**	**22 25 24.7**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=239,slow=7.3,SNR=15						
BRTR	**Keskin Array B**	**60.99**	**42**	*i* P	**P**	**22 25 25.3**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BR131	**Keskin Array S**	**60.99**	**42**	*e*P	**P**	**22 25 23.9**	**-0.6**
	comp=Z,52nm,1.8s						
LVV	**L'vov**	**61.41**	**28**	*e*P	**P**	**22 25 26.9**	**-0.1**
ILGA	**Ilgaz**	**61.70**	**41**	PFAKE		22 25 40.0	+11
ILGA				LR	LR		
	comp=Z,400nm,18.0s						
GO05	**Huala**	**61.80**	**231**	PFAKE		22 25 40.0	+10
GO05				LR	LR		
	comp=Z,700nm,20.0s						
KIS	**Kishinev**	**62.04**	**33**	*e*P	**P**	**22 25 30.0**	**-1.3**
KIS				*e*L	L	22 47 08.0	
KIS				LRM	MLR	22 57 18.0	
	comp=Z,600nm,20.0s						
KIS	**Kishinev**	**62.04**	**33**	*e*P	**P**	**22 25 30.0**	**-1.3**
KIS				*e*		22 25 37.0	
KIS				MLR	MLR		
	comp=Z,600nm,20.0s						
HAL	**Halifax**	**62.29**	**323**	PFAKE		22 25 40.0	+7.0
HAL				LR	LR		
	comp=Z,900nm,20.0s						
PLCA	**Paso Flores**	**62.92**	**224**	P	**P**	**22 25 37.5**	**0.0**
	comp=Z,1.4nm,0.8s,baz=104,slow=4.3,SNR=2.8						
PLCA	**Paso Flores**	**62.92**	**224**	*e*P	**P**	**22 25 37.5**	**0.0**
	comp=Z,30nm,1.7s						
PLCA	**Paso Flores**	**62.92**	**224**	*e*P	**P**	**22 25 37.5**	**0.0**
PLCA				pmax	pmax		
	comp=Z,30nm,1.7s						
LMN	**Caledonia Moun**	**63.67**	**324**	*e*P	**P**	**22 25 41.9**	**-0.4**
	comp=Z,58nm,1.5s						
LMN				LR	LR		
	comp=Z,900nm,22.0s						
SUW	**Suwalki**	**63.96**	**25**	*e*P	**P**	**22 25 44.5**	**+0.6**
SUW	**Suwalki**	**63.96**	**25**	*e*P	**P**	**22 25 44.5**	**+0.6**
KONO	**Kongsberg**	**64.01**	**14**	PFAKE		22 26 00.0	+16
KONO				LR	LR		
	comp=Z,500nm,19.0s						
KONO	**Kongsberg**	**64.01**	**14**	⇑*e*P	**P**	**22 25 43.8**	**-0.3**
KONO				pmax	pmax		
	comp=Z,23nm,1.9s						
BCIP	**Isla Barro Col**	**64.46**	**281**	PFAKE		22 26 00.0	+12
BCIP				LR	LR		
	comp=Z,600nm,18.0s						
GGN	**Saint George**	**64.50**	**323**	PFAKE		22 26 00.0	+12
GGN				LR	LR		
	comp=Z,1µm,20.0s						
AKASG	**Malin Array Be**	**64.51**	**30**	P	**P**	**22 25 46.4**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=231,slow=6.7,SNR=12						
AKASG	**Malin Array Be**	**64.51**	**30**	*i* P	**P**	**22 25 47.2**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RAYN	**Ar Rayn**	**64.59**	**63**	*e*P	**P**	**22 25 48.8**	**+0.1**
	comp=Z,23nm,1.4s						
RAYN				LR	LR		
	comp=Z,600nm,21.0s						
RAYN	**Ar Rayn**	**64.59**	**63**	*e*P	**P**	**22 25 48.8**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,23nm,1.4s						
RAYN				MLR	MLR		
	comp=Z,600nm,21.0s						
EMMW	**East Machias**	**64.67**	**322**	PFAKE		22 26 00.0	+11
EMMW				LR	LR		
	comp=Z,800nm,21.0s						
BATG	**Bathurst New B**	**65.17**	**325**	*e*P	**P**	**22 25 52.9**	**+0.8**
	comp=Z,54nm,1.5s						
BATG				LR	LR		
	comp=Z,800nm,19.0s						
HFS	**Hagfors**	**65.49**	**16**	P	**P**	**22 25 53.4**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=147,slow=8.3,SNR=5.3						
NB2	**NORSAR Subarra**	**65.62**	**14**	P	**P**	**22 25 54.7**	**0.0**
	comp=Z,25nm,1.4s,baz=212,slow=6.9						
NOA	**NORSAR Array B**	**65.62**	**14**	P	**P**	**22 25 54.2**	**-0.5**
	comp=Z,2.2nm,1.0s,baz=208,slow=6.8,SNR=5.6						
ANN	**Anapa**	**65.91**	**39**	*e*P	**P**	**22 25 55.4**	**-1.4**
ANN				*e*S	**S**	**22 34 43.3**	**-0.8**
ANN				pmax	pmax		
	comp=Z,61nm,1.0s						
ANN				MLR	MLR		
	comp=Z,765nm,23.0s						
WVL	**Waterville**	**65.98**	**321**	PFAKE		22 26 10.0	+13
WVL				LR	LR		
	comp=Z,600nm,22.0s						
PQI	**Presque Isle**	**66.00**	**324**	PFAKE		22 26 10.0	+13
PQI				LR	LR		
	comp=Z,1µm,20.0s						
BRYW	**Bryant College**	**66.01**	**318**	PFAKE		22 26 10.0	+12
BRYW				LR	LR		
	comp=Z,800nm,20.0s						
WES	**Weston**	**66.07**	**318**	PFAKE		22 26 10.0	+12
WES				LR	LR		
	comp=Z,700nm,20.0s						
PKME	**Peaks-Kenny Pk**	**66.08**	**322**	PFAKE		22 26 10.0	+12
PKME				LR	LR		
	comp=Z,900nm,22.0s						
PKME	**Peaks-Kenny Pk**	**66.08**	**322**	P	**P**	**22 25 58.6**	**+0.7**
	baz=119						
HRV	**Adam Dziewonsk**	**66.28**	**318**	PFAKE		22 26 10.0	+11
HRV				LR	LR		
	comp=Z,800nm,21.0s						
HRV	**Adam Dziewonsk**	**66.28**	**318**	P	**P**	**22 25 59.9**	**+0.7**
	baz=116						
MICGM	**Minsk**	**66.31**	**26**	*e*	**P**	**22 26 00.0**	**+0.8**
MNK	**Minsk**	**66.31**	**26**	*e*P	**P**	**22 26 00.0**	**+0.8**
YLE	**Yale**	**66.71**	**317**	PFAKE		22 26 10.0	+8.0
YLE				LR	LR		
	comp=Z,800nm,19.0s						
QUA2	**Belchertown**	**66.71**	**318**	PFAKE		22 26 10.0	+8.0
QUA2				LR	LR		
	comp=Z,1µm,20.0s						
FFD	**Franklin Falls**	**66.76**	**319**	PFAKE		22 26 10.0	+7.7
FFD				LR	LR		
	comp=Z,1µm,20.0s						
V62A	**Hyde County Ai**	**66.77**	**310**	PFAKE		22 26 10.0	+7.5
V62A				LR	LR		
	comp=Z,1µm,20.0s						
SOC	**Sochi**	**66.81**	**41**	*e*P	**P**	**22 26 00.2**	**-2.4**
SOC				*e*		22 28 26.0	
SOC				*e*PPP	PPP	22 30 01.4	
SOC				*e*S	**S**	**22 34 55.1**	**-0.1**
SOC				MLR	MLR		
	comp=Z,222nm,21.0s						
KSCT	**Kent School, K**	**67.25**	**317**	PFAKE		22 26 20.0	+15
KSCT				LR	LR		
	comp=Z,700nm,21.0s						
PAL	**Palisades**	**67.25**	**316**	PFAKE		22 26 20.0	+15
PAL				LR	LR		
	comp=Z,600nm,20.0s						
PAL	**Palisades**	**67.25**	**316**	P	**P**	**22 26 06.4**	**+0.9**
	baz=113						
LBNH	**Lisbon**	**67.28**	**320**	PFAKE		22 26 20.0	+14
LBNH				LR	LR		
	comp=Z,900nm,21.0s						
LBNH	**Lisbon**	**67.28**	**320**	P	**P**	**22 26 06.7**	**+1.1**
	baz=116						
HNH	**Hanover**	**67.28**	**319**	*e*P	**P**	**22 26 04.6**	**-1.0**
	comp=Z,34nm,1.4s						
HNH				LR	LR		
	comp=Z,1µm,20.0s						
M61A	**Granite Spring**	**67.28**	**316**	P	**P**	**22 26 06.0**	**+0.3**
	baz=114						
S61A	**Accomac**	**67.28**	**312**	PFAKE		22 26 20.0	+14
S61A				LR	LR		
	comp=Z,1µm,19.0s						
V61A	**Roper**	**67.32**	**310**	PFAKE		22 26 20.0	+14
V61A				LR	LR		
	comp=Z,900nm,19.0s						
O61A	**Allentown**	**67.35**	**315**	P	**P**	**22 26 07.1**	**+0.9**
	baz=112						
U61A	**Possum Corner**	**67.40**	**310**	PFAKE		22 26 20.0	+13
U61A				LR	LR		
	comp=Z,1µm,20.0s						
W61A	**Ground Anchor**	**67.44**	**309**	P	**P**	**22 26 07.4**	**+0.6**
	baz=109						
Q61A	**Milford**	**67.46**	**313**	P	**P**	**22 26 07.3**	**+0.5**
	baz=111						
BRNJ	**Basking Ridge**	**67.59**	**315**	PFAKE		22 26 20.0	+12
BRNJ				LR	LR		
	comp=Z,500nm,20.0s						
ODNJ	**Ogdensburg**	**67.77**	**316**	PFAKE		22 26 20.0	+11
ODNJ				LR	LR		
	comp=Z,600nm,21.0s						
TRY	**Troy**	**67.78**	**318**	PFAKE		22 26 20.0	+11
TRY				LR	LR		
	comp=Z,900nm,19.0s						
V60A	**Jim Taylor Roa**	**67.84**	**310**	PFAKE		22 26 20.0	+11
V60A				LR	LR		
	comp=Z,900nm,20.0s						
V60A	**Jim Taylor Roa**	**67.84**	**310**	P	**P**	**22 26 09.9**	**+0.6**
	baz=109						
VT1	**Waterbury**	**67.85**	**320**	PFAKE		22 26 20.0	+11
VT1				LR	LR		
	comp=Z,1µm,22.0s						
T60A	**Surry**	**67.89**	**311**	PFAKE		22 26 20.0	+10
T60A				LR	LR		
	comp=Z,800nm,21.0s						
PSUB	**Penn St. - Bra**	**67.93**	**314**	PFAKE		22 26 20.0	+10
PSUB				LR	LR		
	comp=Z,700nm,21.0s						
060A	**Indiantown**	**67.97**	**300**	PFAKE		22 26 20.0	+10
060A				LR	LR		
	comp=Z,1µm,19.0s						
060Z	**West Palm Beac**	**68.00**	**299**	P	**P**	**22 26 10.2**	**-0.3**
	baz=103						
P60A	**Greenville**	**68.02**	**314**	P	**P**	**22 26 11.0**	**+0.7**
	baz=112						
S60A	**Water View**	**68.02**	**312**	P	**P**	**22 26 09.2**	**-1.3**
	baz=110						
N60A	**Cedar Hill Far**	**68.04**	**315**	P	**P**	**22 26 11.1**	**+0.6**
	baz=112						
Y60A	**Bolivia**	**68.04**	**308**	PFAKE		22 26 20.0	+9.4
Y60A				LR	LR		
	comp=Z,700nm,20.0s						
LUPA	**Lehigh Univers**	**68.12**	**315**	PFAKE		22 26 20.0	+9.0
LUPA				LR	LR		
	comp=Z,100nm,21.0s						
CNNC	**Cliffs of the**	**68.16**	**309**	PFAKE		22 26 20.0	+8.7
CNNC				LR	LR		
	comp=Z,900nm,20.0s						
061Z	**Ochoppi**	**68.19**	**298**	PFAKE		22 26 20.0	+8.3
061Z				LR	LR		
	comp=Z,800nm,22.0s						
Q59A	**Harwood**	**68.42**	**313**	P	**P**	**22 26 13.5**	**+0.6**
	baz=110						
U59A	**Littleton**	**68.44**	**310**	PFAKE		22 26 20.0	+7.0
U59A				LR	LR		
	comp=Z,1µm,20.0s						
U59A	**Littleton**	**68.44**	**310**	P	**P**	**22 26 14.0**	**+0.9**
	baz=109						
T59A	**Double "B" Far**	**68.45**	**311**	PFAKE		22 26 20.0	+6.9
T59A				LR	LR		
	comp=Z,900nm,20.0s						
T59A	**Double "B" Far**	**68.45**	**311**	P	**P**	**22 26 13.6**	**+0.5**
	baz=109						
AKH	**Akhalkalaki**	**68.47**	**44**	PFAKE		22 26 30.0	+17
AKH				LR	LR		
	comp=Z,400nm,21.0s						
M59A	**Waymart**	**68.52**	**316**	P	**P**	**22 26 14.3**	**+0.7**
	baz=112						
P59A	**Jarrettsville**	**68.52**	**314**	P	**P**	**22 26 14.3**	**+0.8**
	baz=111						
N59A	**State Game Lan**	**68.52**	**315**	PFAKE		22 26 30.0	+16
N59A				LR	LR		
	comp=Z,700nm,20.0s						
N59A	**State Game Lan**	**68.52**	**315**	P	**P**	**22 26 14.6**	**+1.1**
	baz=112						
959A	**Okeechobee**	**68.53**	**300**	P	**P**	**22 26 14.9**	**+1.0**
	baz=103						
V59A	**Middlesex**	**68.59**	**309**	P	**P**	**22 26 14.7**	**+0.7**
	baz=108						
O59A	**Robesonia**	**68.60**	**315**	P	**P**	**22 26 15.2**	**+1.2**
	baz=111						
MVL	**Millersville**	**68.60**	**314**	PFAKE		22 26 30.0	+16
MVL				LR	LR		
	comp=Z,500nm,20.0s						
FRNY	**Flat Rock**	**68.60**	**320**	PFAKE		22 26 30.0	+16
FRNY				LR	LR		
	comp=Z,900nm,21.0s						
059A	**Moore Haven**	**68.64**	**300**	PFAKE		22 26 30.0	+16
059A				LR	LR		
	comp=Z,900nm,20.0s						
059A	**Moore Haven**	**68.64**	**300**	P	**P**	**22 26 15.3**	**+0.8**
	baz=103						
NEY	**Neytrino**	**68.66**	**42**	⇑*e*P	**P**	**22 26 14.7**	**+0.1**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NCB	**Newcomb**	**68.66**	**319**	PFAKE		22 26 30.0	+16
NCB				LR	LR		
	comp=Z,700nm,20.0s						
Z59A	**Georgetown, SC**	**68.67**	**307**	P	**P**	**22 26 15.3**	**+0.8**
	baz=106						
859A	**Kempfer Cattle**	**68.68**	**301**	P	**P**	**22 26 15.7**	**+1.0**
	baz=104						
CBN	**Corbin Frederi**	**68.73**	**312**	PFAKE		22 26 30.0	+15
CBN				LR	LR		
	comp=Z,900nm,21.0s						
HDC	**Heredia**	**68.74**	**281**	PFAKE		22 26 30.0	+14
HDC				LR	LR		
	comp=Z,600nm,21.0s						
SDMD	**Soldier's Deli**	**68.75**	**313**	PFAKE		22 26 30.0	+15
SDMD				LR	LR		
	comp=Z,300nm,21.0s						
GNI	**Garni**	**68.89**	**46**	*de*P	**P**	**22 26 16.4**	**+0.4**
GNI				pmax	pmax		
	comp=Z,49nm,1.1s						
KIV	**Kislovodsk**	**68.92**	**41**	*e*P	**P**	**22 26 16.7**	**+0.7**
KIV				pmax	pmax		
	comp=Z,36nm,1.1s						
KIV				MLR	MLR		
	comp=Z,292nm,17.0s						
KBZ	**Khabaz**	**68.97**	**42**	P	**P**	**22 26 16.2**	**+0.1**
	comp=Z,5.2nm,0.9s,baz=219,slow=4.5,SNR=7.5						
L58A	**Harry Jones Me**	**69.00**	**316**	P	**P**	**22 26 17.8**	**+1.3**
	baz=112						
R58B	**Mineral**	**69.02**	**312**	PFAKE		22 26 30.0	+13
R58B				LR	LR		
	comp=Z,800nm,21.0s						
R58B	**Mineral**	**69.02**	**312**	P	**P**	**22 26 17.5**	**+0.8**
	baz=109						
U58A	**Oxford**	**69.03**	**310**	P	**P**	**22 26 17.3**	**+0.5**
	baz=108						
S58A	**Poland Farm, P**	**69.04**	**311**	PFAKE		22 26 30.0	+13
S58A				LR	LR		
	comp=Z,900nm,21.0s						
S58A	**Poland Farm, P**	**69.04**	**311**	P	**P**	**22 26 17.5**	**+0.7**
	baz=109						
O58A	**Lewisberry**	**69.06**	**314**	P	**P**	**22 26 17.9**	**+1.0**
	baz=111						
X58A	**Rowland**	**69.09**	**308**	PFAKE		22 26 30.0	+13
X58A				LR	LR		
	comp=Z,700nm,20.0s						
P58A	**Pank, Wackersv**	**69.11**	**313**	P	**P**	**22 26 18.1**	**+1.0**
	baz=110						
ESPN	**Las Esperanzas**	**69.14**	**283**	PFAKE		22 26 30.0	+12

ESPN				LR	LR		
	comp=Z,200nm,21.0s						
W58A	Raeford	69.14	308	P	P	22 26 18.3	+0.9
	baz=107						
DWPF	Disney Wildern	69.15	301	PFAKE		22 26 30.0	+12
DWPF				LR	LR		
	comp=Z,800nm,20.0s						
BINY	Binghamton	69.15	316	P	P	22 26 18.7	+1.3
	baz=112						
LONY	Lake Ozonia	69.16	319	PFAKE		22 26 30.0	+13
LONY				LR	LR		
	comp=Z,900nm,22.0s						
LONY	Lake Ozonia	69.16	319	P	P	22 26 18.2	+0.7
	baz=114						
N58A	Sunbury	69.16	315	P	P	22 26 18.5	+1.0
	baz=111						
Y58A	Scranton	69.17	307	PFAKE		22 26 30.0	+12
Y58A				LR	LR		
	comp=Z,400nm,20.0s						
M58A	Price's Panora	69.18	316	P	P	22 26 18.8	+1.1
	baz=112						
T58A	Grand View Acr	69.19	310	P	P	22 26 18.6	+0.9
	baz=108						
Q58A	Fox Den Farm,	69.20	313	P	P	22 26 18.5	+0.7
	baz=110						
LATQ	La Tuque	69.20	323	P	P	22 26 18.4	+0.8
	baz=117						
R58A	Rapidan	69.22	312	P	P	22 26 18.8	+0.9
	baz=109						
058A	Arcadia	69.23	300	P	P	22 26 19.0	+0.8
	baz=103						
158A	Hollywood	69.27	306	P	P	22 26 19.1	+0.9
	baz=106						
V58A	Windy Hill, Pi	69.28	309	P	P	22 26 19.6	+1.2
	baz=108						
658A	Bunnell	69.31	302	PFAKE		22 26 30.0	+11
658A				LR	LR		
	comp=Z,1µm,20.0s						
658A	Bunnell	69.31	302	P	P	22 26 19.7	+1.1
	baz=104						
NCK	Nalchik	69.34	42⇓	eP	P	22 26 18.4	-0.2
NCK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NHSC	New Hope	69.35	306	PFAKE		22 26 30.0	+11
NHSC				LR	LR		
	comp=Z,1µm,22.0s						
NHSC	New Hope	69.35	306	P	P	22 26 20.4	+1.6
	baz=106						
VNA1	Neumayer--Stat	69.40	177	P	P	22 26 19.7	+1.3
TBLG	Delisi	69.46	44	eP	P	22 26 18.0	-1.3
	comp=Z,60nm,1.9s						
TBLG	Delisi	69.46	44	eP	P	22 26 18.0	-1.3
TBLG				pmax	pmax		
	comp=Z,60nm,1.9s						
JTS	Las Juntas de	69.59	281	PFAKE		22 26 30.0	+9.3
JTS				LR	LR		
	comp=Z,400nm,21.0s						
O57A	Amberson	69.60	314	P	P	22 26 21.4	+1.2
	baz=110						
R57A	Stanardsville	69.61	312	P	P	22 26 21.6	+1.3
	baz=109						
P57A	Homestead Farm	69.62	313	P	P	22 26 21.5	+1.1
	baz=110						
U57A	Blanch	69.64	310	P	P	22 26 21.7	+1.1
	baz=108						
N57A	Milroy	69.73	315	P	P	22 26 21.9	+0.9
	baz=110						
SCHQ	Schefferville	69.74	331	PFAKE		22 26 30.0	+9.2
SCHQ				LR	LR		
	comp=Z,700nm,18.0s						
957A	Wimauma	69.74	300	PFAKE		22 26 30.0	+8.7
957A				LR	LR		
	comp=Z,1µm,20.0s						
257A	Skidaway Islan	69.74	305	PFAKE		22 26 30.0	+8.7
257A				LR	LR		
	comp=Z,700nm,20.0s						
T57A	Hurt	69.75	310	PFAKE		22 26 30.0	+8.8
T57A				LR	LR		
	comp=Z,1µm,19.0s						
T57A	Hurt	69.75	310	P	P	22 26 21.7	+0.4
	baz=108						
S57A	Dark Hollow, R	69.76	311	PFAKE		22 26 30.0	+8.7
S57A				LR	LR		
	comp=Z,1µm,21.0s						
S57A	Dark Hollow, R	69.76	311	P	P	22 26 22.3	+1.0
	baz=108						
Q57A	Strasburg	69.77	313	P	P	22 26 22.4	+1.1
	baz=109						
Y57A	Sumter	69.77	307	PFAKE		22 26 30.0	+8.6
Y57A				LR	LR		
	comp=Z,700nm,22.0s						
W57A	Gilead	69.78	308	PFAKE		22 26 30.0	+8.6
W57A				LR	LR		
	comp=Z,700nm,21.0s						
W57A	Gilead	69.78	308	P	P	22 26 22.0	+0.6
	baz=107						
TRQ	Mont Tremblant	69.80	321	eP	P	22 26 21.9	+0.5
V57A	Coltrane Farms	69.82	309	P	P	22 26 22.1	+0.5
	baz=107						
657A	Interlachen	69.86	302	P	P	22 26 23.0	+1.0
	baz=104						
157A	Early Branch	69.90	306	P	P	22 26 22.9	+0.7
	baz=105						
SSPA	Standing Stone	69.92	314	P	P	22 26 23.5	+1.3
	baz=110						
VNA3	Neumayer Olymp	69.93	178	P	P	22 26 22.4	+0.7
BIRD	Birdtown, Kers	70.00	308	PFAKE		22 26 30.0	+7.2
BIRD				LR	LR		
	comp=Z,1µm,22.0s						
VSR	Storozhevoye	70.03	33	eP	P	22 26 21.2	-1.4
VSR				pmax	pmax		
	comp=Z,50nm,2.0s						
ORIO	Orleans, Innes	70.10	320	P	P	22 26 23.8	+0.7
	baz=114						
S56A	Natural Bridge	70.20	311	P	P	22 26 25.3	+1.3
	baz=108						
P56A	Dayton Farm, R	70.23	313	P	P	22 26 25.4	+1.2
	baz=109						
W56A	Indian Trail	70.24	308	P	P	22 26 25.1	+0.9
	baz=106						
H56A	Elgin	70.25	319	P	P	22 26 24.7	+0.6
	baz=113						
456A	Hilliard	70.26	303	PFAKE		22 26 40.0	+16
456A				LR	LR		
	comp=Z,500nm,20.0s						
O56A	Blue Knob Stat	70.29	314	P	P	22 26 25.6	+1.1
	baz=110						
R56A	Bull Pasture M	70.30	312	P	P	22 26 26.0	+1.3
	baz=108						
N56A	West Decatur	70.31	315	P	P	22 26 25.9	+1.2
	baz=110						
FINES	FINESS Array B	70.33	20	P	P	22 26 24.4	+0.2
	comp=Z,2.5nm,0.6s,baz=207,slow=3.8,SNR=9.7						
Q56A	Snyder Ridge,	70.34	312	P	P	22 26 26.1	+1.3
	baz=109						
T56A	Rocky Mt	70.36	310	P	P	22 26 26.2	+1.2
	baz=107						
V56A	Mocksville	70.36	309	PFAKE		22 26 40.0	+15
V56A				LR	LR		
	comp=Z,800nm,21.0s						
V56A	Mocksville	70.36	309	P	P	22 26 26.0	+1.0
	baz=107						
Z56A	Williston	70.37	306	PFAKE		22 26 40.0	+15
Z56A				LR	LR		
	comp=Z,1µm,22.0s						
656A	Willston	70.38	302	PFAKE		22 26 40.0	+15
656A				LR	LR		
	comp=Z,700nm,22.0s						
556A	Lake Butler	70.41	302	P	P	22 26 26.8	+1.4
	baz=104						
X56A	White Oak	70.41	307	P	P	22 26 26.4	+1.1
	baz=106						
M56A	Emporium	70.43	315	P	P	22 26 26.5	+1.2
	baz=110						
U56A	King	70.43	309	P	P	22 26 26.6	+1.2
	baz=107						
PECO	Prince Edward	70.49	318	P	P	22 26 26.4	+0.8
	baz=112						
JSC	Jenkinsville	70.54	307	PFAKE		22 26 40.0	+14
JSC				LR	LR		
	comp=Z,500nm,19.0s						
LPSR	Galich'ya Gora	70.58	32	eP	P	22 26 24.8	-1.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.4s						
OBN	Obninsk	70.70	29	PFAKE		22 26 40.0	+13
OBN				LR	LR		
	comp=Z,900nm,21.0s						
OBN	Obninsk	70.70	29c	iP	P	22 26 25.7	-0.9
OBN				i		22 29 03.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BLA	Blacksburg	70.71	310	PFAKE		22 26 40.0	+13
BLA				LR	LR		
	comp=Z,1µm,20.0s						
BLA	Blacksburg	70.71	310	P	P	22 26 28.4	+1.3
	baz=107						
GROC	Groznyy	70.72	43	eP	P	22 26 29.6	+2.6
GROC				e		22 26 49.1	
GROC				e		22 29 07.8	
GROC				pmax	pmax		
	comp=Z,14nm,0.8s						
SNAA	Sanae	70.74	176	P	P	22 26 27.7	+1.0
SNAA	Sanae	70.74	176	P	P	22 26 27.2	+0.5
	comp=Z,8.6nm,0.9s,baz=325,slow=5.2,SNR=22						
SNAA	Sanae	70.74	176	eP	P	22 26 26.3	-0.4
	comp=Z,19nm,1.1s						
SNAA	Sanae	70.74	176	eP	P	22 26 26.3	-0.4
SNAA				pmax	pmax		
	comp=Z,19nm,1.1s						
N55A	Marion Center	70.76	314	P	P	22 26 28.2	+0.8
	baz=109						
K55A	Perry	70.78	316	P	P	22 26 28.3	+0.8
	baz=111						
R55A	Marlinton	70.80	311	PFAKE		22 26 40.0	+12
R55A				LR	LR		
	comp=Z,1µm,22.0s						
R55A	Marlinton	70.80	311	P	P	22 26 28.4	+0.7
	baz=108						
O55A	Ligonier	70.80	314	P	P	22 26 28.8	+1.1
	baz=109						
G55A	Calabogie	70.80	319	P	P	22 26 28.1	+0.6
	baz=113						
KMSC	Kings Mountain	70.83	308	PFAKE		22 26 40.0	+12
KMSC				LR	LR		
	comp=Z,700nm,19.0s						
KMSC	Kings Mountain	70.83	308	P	P	22 26 29.1	+1.2
	baz=106						
M55A	Ridgway	70.83	315	P	P	22 26 28.5	+0.7
	baz=110						
H55A	Tweed	70.84	318	P	P	22 26 28.4	+0.6
	baz=112						
L55A	Hinsdale	70.85	316	P	P	22 26 28.8	+0.9
	baz=110						
X55A	Gracelyn & Ava	70.89	307	P	P	22 26 29.6	+1.3
	baz=106						
255A	Hazlehurst	70.92	304	PFAKE		22 26 40.0	+12
255A				LR	LR		
	comp=Z,800nm,21.0s						
255A	Hazlehurst	70.92	304	P	P	22 26 29.8	+1.3
	baz=104						
Y55A	Saluda	70.93	307	P	P	22 26 29.9	+1.4
	baz=105						
V55A	Taylorsville	70.93	309	P	P	22 26 29.9	+1.5
	baz=106						
S55A	Lewisburg	70.93	311	P	P	22 26 29.9	+1.4
	baz=107						
PLVO	Plevna	70.96	319	PFAKE		22 26 40.0	+12
PLVO				LR	LR		
	comp=Z,800nm,20.0s						
PLVO	Plevna	70.96	319	P	P	22 26 28.9	+0.4
	baz=112						
T55A	Pulaski	70.96	310	P	P	22 26 30.1	+1.4
	baz=107						
P55A	Reedsville	70.96	313	P	P	22 26 29.5	+0.9
	baz=108						
U55A	TA2, Sparta	70.98	309	P	P	22 26 29.9	+1.0
	baz=106						
Q55A	Buckhannon	70.99	312	P	P	22 26 30.3	+1.4
	baz=108						
MCWV	Mont Chateau	71.02	313	PFAKE		22 26 40.0	+11
MCWV				LR	LR		
	comp=Z,600nm,22.0s						
I55A	Frankford	71.05	318	P	P	22 26 29.8	+0.8
	baz=112						
155A	Kite	71.09	305	P	P	22 26 31.1	+1.6
	baz=104						
355A	Pearson	71.10	304	P	P	22 26 31.0	+1.4
	baz=104						
455A	Stateville	71.10	303	P	P	22 26 31.1	+1.5
	baz=103						
DELO	Deloro Mine	71.12	318	PFAKE		22 26 40.0	+11
DELO				LR	LR		
	comp=Z,900nm,20.0s						
DELO	Deloro Mine	71.12	318	P	P	22 26 29.7	+0.3
	baz=112						
PAULI	Pauline	71.12	307	PFAKE		22 26 40.0	+10
PAULI				LR	LR		
	comp=Z,1µm,22.0s						
K54A	Basiliko Farm,	71.17	316	P	P	22 26 30.7	+0.9
	baz=110						
MEDO	Medina	71.20	317	PFAKE		22 26 40.0	+10
MEDO				LR	LR		
	comp=Z,600nm,20.0s						
MEDO	Medina	71.20	317	P	P	22 26 30.7	+0.8
	baz=111						
CHGQ	Chibougamau	71.27	324	P	P	22 26 31.0	+0.8
	baz=116						
PEMO	Pembroke	71.31	320	P	P	22 26 31.1	+0.6
	baz=112,SNR=5.6						
HODGE	Hodges	71.32	307	PFAKE		22 26 40.0	+9.1
HODGE				LR	LR		
	comp=Z,800nm,21.0s						
R54A	Victor	71.42	311	P	P	22 26 32.7	+1.3
	baz=107						
WLVO	Wesleyville	71.43	317	P	P	22 26 32.1	+0.8
	baz=111						
P54A	Burton	71.47	313	P	P	22 26 32.0	+0.3
	baz=108						
L54A	Sinclairville	71.48	316	P	P	22 26 32.4	+0.7
	baz=110						
M54A	Oil Creek Stat	71.48	315	P	P	22 26 32.5	+0.7
	baz=109						
V54A	Nebo	71.48	308	P	P	22 26 33.0	+1.2
	baz=106						
W54A	Cherokee Point	71.49	308	P	P	22 26 33.1	+1.3
	baz=105						
X54A	Belton	71.50	307	P	P	22 26 32.2	+0.3
	baz=105						
D54A	Lac Fusel, La	71.50	321	P	P	22 26 32.1	+0.4
	baz=113						
554A	Perry	71.51	302	P	P	22 26 33.3	+1.3
	baz=103						
BANO	Bancroft	71.51	319	P	P	22 26 32.5	+0.8
	baz=112						
N54A	Moraine State	71.54	314	P	P	22 26 32.9	+0.8
	baz=109						
MOS	Moscow	71.54	29	eP	P	22 26 29.8	-1.9
MOS				e		22 29 10.0	
MOS				pmax	pmax		
	comp=Z,77nm,1.6s						
MOS				pmax	pmax		
	comp=Z,200nm,2.0s						
MOS				MLR	MLR		
	comp=Z,500nm,17.0s						
Q54A	Coxs Mills	71.54	312	P	P	22 26 33.4	+1.3
	baz=108						
Z54A	Sparta	71.54	306	P	P	22 26 33.5	+1.3
	baz=104						
T54A	Tazewell	71.55	310	P	P	22 26 33.4	+1.1
	baz=106						
S54A	Dingess, Beckl	71.56	311	P	P	22 26 33.4	+1.1
	baz=107						
E54A	Lac Daplat, Po	71.56	320	P	P	22 26 32.3	+0.3
	baz=113						
O54A	Avella	71.57	313	P	P	22 26 33.2	+0.9
	baz=108						
Y54A	Tignall	71.58	306	P	P	22 26 33.7	+1.3
	baz=105						
U54A	Nelsons Funny	71.59	309	PFAKE		22 26 40.0	+7.5
U54A				LR	LR		
	comp=Z,800nm,20.0s						
U54A	Nelsons Funny	71.59	309	P	P	22 26 33.6	+1.1
	baz=106						
454A	Quitman	71.60	303	P	P	22 26 33.3	+0.7
	baz=103						
154A	Montrose	71.61	305	PFAKE		22 26 40.0	+7.4
154A				LR	LR		
	comp=Z,900nm,22.0s						
154A	Montrose	71.61	305	P	P	22 26 33.7	+1.1
	baz=104						
DRWO	Darlington Wes	71.64	317	P	P	22 26 33.6	+1.0
	baz=111						
TIGA	Tifton	71.73	304	PFAKE		22 26 40.0	+6.6
TIGA				LR	LR		
	comp=Z,600nm,21.0s						
E53A	Dumoine, Ponti	71.84	320	P	P	22 26 34.1	+0.3
	baz=112						
ALLY	Alegheny Colle	71.87	315	PFAKE		22 26 50.0	+16
ALLY				LR	LR		
	comp=Z,600nm,18.0s						
ERPA	Erie	71.91	315	PFAKE		22 26 50.0	+16
ERPA				LR	LR		
	comp=Z,500nm,20.0s						
ERPA	Erie	71.91	315	P	P	22 26 35.1	+0.8
	baz=109						
ALGO	Algonquin Park	71.93	320	P	P	22 26 34.7	+0.4
	baz=112						
G53A	Haliburton	72.01	319	P	P	22 26 35.3	+0.5
	baz=111,SNR=7.3						
Q53A	Leroy	72.02	312	P	P	22 26 35.9	+0.9
	baz=107						
L53A	Girard	72.05	315	P	P	22 26 35.7	+0.6
	baz=109						
BG3	Lake Jocassee	72.06	307	PFAKE		22 26 50.0	+15
BG3				LR	LR		
	comp=Z,400nm,22.0s						
GOGA	Godfrey	72.09	306	PFAKE		22 26 50.0	+14
GOGA				LR	LR		
	comp=Z,700nm,20.0s						
GOGA	Godfrey	72.09	306	P	P	22 26 36.5	+1.0
	baz=104						
N53A	Lisbon	72.10	314	PFAKE		22 26 50.0	+15
N53A				LR	LR		
	comp=Z,700nm,22.0s						
N53A	Lisbon	72.10	314	P	P	22 26 35.9	+0.5
	baz=108						
P53A	Whipple	72.11	312	PFAKE		22 26 50.0	+15
P53A				LR	LR		
	comp=Z,800nm,22.0s						
P53A	Whipple	72.11	312	P	P	22 26 36.2	+0.8
	baz=107						
D53A	Lac Vacive, Po	72.13	321	PFAKE		22 26 50.0	+15
D53A				LR	LR		
	comp=Z,900nm,20.0s						
D53A	Lac Vacive, Po	72.13	321	P	P	22 26 35.8	+0.3
	baz=112						
U53A	Fall Branch	72.13	309	P	P	22 26 36.6	+0.8
	baz=106						
V53A	Saluda	72.13	308	PFAKE		22 26 50.0	+14
V53A				LR	LR		
	comp=Z,800nm,22.0s						
V53A	Saluda	72.13	308	P	P	22 26 37.0	+1.2
	baz=105						
S53A	Williamson	72.14	310	P	P	22 26 36.8	+1.0
	baz=106						
Z53A	Monticello	72.15	306	P	P	22 26 37.2	+1.3
	baz=104						
TYNO	Tyneside	72.15	316	P	P	22 26 36.5	+0.8
	baz=110						
553A	Crawfordville	72.17	302	P	P	22 26 36.5	+0.5
	baz=102						
M53A	WI Miller and	72.18	314	P	P	22 26 36.4	+0.5
	baz=108						
R53A	Hurricane	72.19	311	PFAKE		22 26 50.0	+14
R53A				LR	LR		
	comp=Z,900nm,20.0s						
R53A	Hurricane	72.19	311	P	P	22 26 37.1	+1.1
	baz=106						
O53A	New Philadelph	72.20	313	P	P	22 26 37.2	+1.2
	baz=108						
153A	Fort Valley	72.21	305	P	P	22 26 37.2	+0.9
	baz=104						
453A	Whigham	72.21	303	P	P	22 26 37.0	+0.7
	baz=103						
TGUH	Tegucigalpa,Un	72.22	285	PFAKE		22 26 50.0	+13
TGUH				LR	LR		
	comp=Z,500nm,21.0s						
X53A	Estanollee	72.23	307	P	P	22 26 37.7	+1.4
	baz=104						
353A	Camilla	72.24	303	P	P	22 26 37.9	+1.5
	baz=103						
T53A	Wise	72.27	310	P	P	22 26 37.7	+1.2
	baz=106						
W53A	Cullowhee	72.28	308	P	P	22 26 38.1	+1.3
	baz=105,SNR=5.3						
Y53A	Monroe	72.30	306	P	P	22 26 38.3	+1.5
	baz=104						
253A	Americus	72.32	304	PFAKE		22 26 50.0	+13
253A				LR	LR		
	comp=Z,700nm,20.0s						
E52A	Mattawa	72.45	320	P	P	22 26 37.6	+0.2
	baz=111						
ACTO	Acton	72.45	317	P	P	22 26 38.2	+0.7
	baz=110						
LSQQ	Lebel-sur-Quev	72.46	323	P	P	22 26 38.2	+0.8
	baz=114						
D52A	ZEK Kipawa Sen	72.54	320	P	P	22 26 38.3	+0.3
	baz=112,SNR=7.5						
Q52A	Bidwell	72.61	312	P	P	22 26 39.5	+1.0
	baz=106						
J52A	Paris	72.62	316	P	P	22 26 39.1	+0.7
	baz=109						
O52A	Adamsville	72.62	313	PFAKE		22 26 50.0	+11
O52A				LR	LR		
	comp=Z,800nm,22.0s						
O52A	Adamsville	72.62	313	P	P	22 26 39.6	+1.1
	baz=107						
BUKO	Buck Lake	72.63	319	P	P	22 26 39.1	+0.6
	baz=110,SNR=6.5						
T52A	Hallie	72.64	310	PFAKE		22 26 50.0	+11
T52A				LR	LR		
	comp=Z,1µm,20.0s						
Y52A	Lilburn	72.69	306	PFAKE		22 26 50.0	+11
Y52A				LR	LR		
	comp=Z,800nm,20.0s						
Y52A	Lilburn	72.69	306	P	P	22 26 40.4	+1.3
	baz=104						
P52A	Corning	72.70	312	P	P	22 26 40.0	+1.0
	baz=107						
M52A	Chesterland	72.70	314	PFAKE		22 26 50.0	+11
M52A				LR	LR		
	comp=Z,700nm,20.0s						
M52A	Chesterland	72.70	314	P	P	22 26 38.6	-0.5
	baz=108						
F52A	Sundridge	72.70	319	P	P	22 26 39.3	+0.4
	baz=111,SNR=5.3						
R52A	Catlettsburg	72.72	311	P	P	22 26 40.2	+1.0
	baz=106						
N52A	McGinn's Farm,	72.72	314	P	P	22 26 40.2	+1.1
	baz=107						
X52A	Dahlonega	72.72	307	P	P	22 26 40.1	+0.8
	baz=104						
U52A	Thorn Hill	72.75	309	P	P	22 26 40.5	+1.0
	baz=105						
V52A	Sevierville	72.79	308	PFAKE		22 26 50.0	+10
V52A				LR	LR		
	comp=Z,700nm,20.0s						
V52A	Sevierville	72.79	308	P	P	22 26 40.6	+0.9
	baz=105						
252A	Lumpkin	72.81	304	P	P	22 26 41.1	+1.3
	baz=103						
Z52A	Williamson	72.82	305	P	P	22 26 41.2	+1.3
	baz=103						
352A	Blakely	72.86	303	PFAKE		22 26 50.0	+10
352A				LR	LR		
	comp=Z,400nm,21.0s						
352A	Blakely	72.86	303	P	P	22 26 41.8	+1.6
	baz=102						
W52A	Murphy	72.87	307	PFAKE		22 26 50.0	+10
W52A				LR	LR		
	comp=Z,600nm,21.0s						
W52A	Murphy	72.87	307	P	P	22 26 41.4	+1.2
	baz=104						
CLWO	Collingwood	72.89	318	P	P	22 26 41.0	+0.8
	baz=110						
TZTN	Tazewell	72.94	309	PFAKE		22 26 50.0	+9.5
TZTN				LR	LR		
	comp=Z,700nm,20.0s						
TZTN	Tazewell	72.94	309	P	P	22 26 41.8	+1.3
	baz=105						
452A	Marianna	72.94	303	P	P	22 26 42.7	+2.1
	baz=102						
152A	Waverly Hall	72.94	305	PFAKE		22 26 50.0	+9.4
152A				LR	LR		
	comp=Z,900nm,20.0s						
152A	Waverly Hall	72.94	305	P	P	22 26 41.7	+1.1
	baz=103						
E51A	G1948 Merrick	73.08	320	P	P	22 26 42.0	+0.9
	baz=111						
MATQ	Matagami	73.13	323	P	P	22 26 42.2	+0.8
	baz=113						

F51A	Arnstein	73.14	319	P	P	22 26 41.9	+0.4
	baz=110						
KLBO	Killbear Provi	73.14	318	P	P	22 26 42.2	+0.7
	baz=110						
I51A	Listowel	73.17	317	P	P	22 26 42.5	+0.7
	baz=109						
O51A	Pataskala	73.19	313	P	P	22 26 43.0	+1.0
	baz=107						
D51A	Lot 18 Range I	73.20	320	P	P	22 26 42.0	+0.2
	baz=111						
M51A	Elyria	73.23	314	P	P	22 26 42.6	+0.5
	baz=107						
N51A	Ashland	73.25	314	P	P	22 26 43.4	+1.2
	baz=107						
S51A	Beattyville	73.25	310	PFAKE		22 26 50.0	+7.6
S51A				LR	LR		
	comp=Z,900nm,20.0s						
S51A	Beattyville	73.25	310	P	P	22 26 43.5	+1.1
	baz=105						
U51A	La Follette	73.26	309	P	P	22 26 43.8	+1.3
	baz=104						
P51A	Williamsport	73.34	312	PFAKE		22 26 50.0	+7.2
P51A				LR	LR		
	comp=Z,1µm,22.0s						
P51A	Williamsport	73.34	312	P	P	22 26 43.9	+1.0
	baz=106						
T51A	Gray	73.35	309	P	P	22 26 44.2	+1.2
	baz=105						
451A	Vernon	73.36	302	PFAKE		22 26 50.0	+6.9
451A				LR	LR		
	comp=Z,900nm,21.0s						
V51A	Loudon	73.38	308	PFAKE		22 26 50.0	+6.9
V51A				LR	LR		
	comp=Z,900nm,22.0s						
V51A	Loudon	73.38	308	P	P	22 26 44.5	+1.4
	baz=104						
251A	Midway	73.39	304	P	P	22 26 44.6	+1.4
	baz=102						
151A	Opelika	73.41	304	P	P	22 26 44.4	+1.0
	baz=103						
R51A	Hillsboro	73.42	311	P	P	22 26 44.6	+1.3
	baz=105						
CPCT	Cooper Cave	73.43	308	PFAKE		22 26 50.0	+6.5
CPCT				LR	LR		
	comp=Z,800nm,22.0s						
Q51A	Peebles	73.43	311	PFAKE		22 26 50.0	+6.6
Q51A				LR	LR		
	comp=Z,1µm,22.0s						
Q51A	Peebles	73.43	311	P	P	22 26 44.1	+0.7
	baz=106						
Z51A	Franklin	73.46	305	P	P	22 26 45.0	+1.3
	baz=103						
X51A	Calhoun	73.49	307	PFAKE		22 27 00.0	+16
X51A				LR	LR		
	comp=Z,1µm,22.0s						
X51A	Calhoun	73.49	307	P	P	22 26 45.2	+1.4
	baz=104,SNR=6.5						
ACSO	Alum Creek Sta	73.49	313	P	P	22 26 44.7	+1.0
	baz=106						
Y51A	Rockmart	73.50	306	P	P	22 26 45.0	+1.0
	baz=103						
D50A	G1974 Best Tow	73.52	320	P	P	22 26 44.2	+0.4
	baz=111						
W51A	Cleveland	73.55	307	P	P	22 26 45.2	+1.0
	baz=104,SNR=6.2						
BMRO	Meriville Lake	73.56	317	P	P	22 26 44.9	+0.9
	baz=109						
BASO	Ashfield	73.68	317	P	P	22 26 45.5	+0.7
	baz=108						
N50A	Nevada	73.77	313	P	P	22 26 45.9	+0.6
	baz=106						
E50A	Wahnapitae	73.85	319	P	P	22 26 46.0	+0.3
	baz=110						
Q50A	Georgetown	73.86	311	P	P	22 26 47.0	+1.0
	baz=105						
M50A	Fremont	73.87	314	PFAKE		22 27 00.0	+14
M50A				LR	LR		
	comp=Z,800nm,22.0s						
M50A	Fremont	73.87	314	P	P	22 26 46.3	+0.4
	baz=107						
S50A	Richmond	73.88	310	P	P	22 26 47.1	+1.1
	baz=105						
L50A	Kingsville	73.89	315	P	P	22 26 47.0	+1.0
	baz=107						
TEIG	Tepich	73.89	291	PFAKE		22 27 00.0	+14
TEIG				LR	LR		
	comp=Z,300nm,21.0s						
U50A	Jamestown	73.91	308	P	P	22 26 47.3	+1.0
	baz=104,SNR=9.9						
P50A	Jamestown	73.93	312	P	P	22 26 47.3	+1.0
	baz=106						
O50A	Cable	73.94	312	P	P	22 26 47.2	+0.9
	baz=106						
V50A	Pikevile	73.94	308	P	P	22 26 47.5	+1.1
	baz=104,SNR=12						
K50A	Casco	73.97	315	PFAKE		22 27 00.0	+14
K50A				LR	LR		
	comp=Z,500nm,19.0s						
K50A	Casco	73.97	315	P	P	22 26 47.3	+0.8
	baz=107						
TOBO	Tobermory, Bru	73.97	318	P	P	22 26 47.2	+0.8
	baz=109						
R50A	Paris	73.98	310	PFAKE		22 27 00.0	+13
R50A				LR	LR		
	comp=Z,900nm,22.0s						
R50A	Paris	73.98	310	P	P	22 26 47.8	+1.2
	baz=105						
W50A	Signal Mountai	74.00	307	PFAKE		22 27 00.0	+13
W50A				LR	LR		
	comp=Z,900nm,22.0s						
W50A	Signal Mountai	74.00	307	P	P	22 26 47.5	+0.7
	baz=103						
150A	Eclectic	74.00	304	P	P	22 26 47.8	+0.9
	baz=102						
350A	Dozier	74.02	303	P	P	22 26 48.2	+1.3
	baz=102						
Y50A	Piedmont	74.05	306	P	P	22 26 48.0	+0.9
	baz=103						
T50A	Nancy	74.06	309	P	P	22 26 48.3	+1.2
	baz=104,SNR=12						
Z50A	Ashland	74.06	305	PFAKE		22 27 00.0	+13
Z50A				LR	LR		
	comp=Z,900nm,21.0s						
Z50A	Ashland	74.06	305	P	P	22 26 47.9	+0.7
	baz=102						
250A	Grady	74.08	304	PFAKE		22 27 00.0	+13
250A				LR	LR		
	comp=Z,400nm,18.0s						
250A	Grady	74.08	304	P	P	22 26 48.3	+1.0
	baz=102						
X50B	Fort Payne	74.10	306	P	P	22 26 48.1	+0.7
	baz=103						
UOSS	Minazif	74.44	64	PFAKE		22 27 00.0	+10
UOSS				LR	LR		
	comp=Z,700nm,21.0s						
I49A	Point Hope	74.45	316	P	P	22 26 49.6	+0.3
	baz=108						
O49A	Covington	74.48	312	PFAKE		22 27 00.0	+11
O49A				LR	LR		
	comp=Z,900nm,22.0s						
O49A	Covington	74.48	312	P	P	22 26 49.8	+0.3
	baz=105,SNR=5.5						
F49A	Sandfield	74.49	318	P	P	22 26 49.8	+0.4
	baz=108						
SWET	Sewanee	74.50	307	PFAKE		22 27 00.0	+10
SWET				LR	LR		
	comp=Z,700nm,20.0s						
J49A	Marlette	74.50	316	P	P	22 26 50.0	+0.5
	baz=107						
D49A	Beulah Townshi	74.53	320	P	P	22 26 50.2	+0.5
	baz=110,SNR=5.3						
Z49A	Columbiana	74.55	305	P	P	22 26 50.8	+0.8
	baz=102						
K49A	Clarkson	74.56	315	P	P	22 26 50.0	+0.1
	baz=107						
M49A	Liberty Center	74.56	314	P	P	22 26 50.9	+0.9
	baz=106						
N49A	Columbus Grove	74.56	313	PFAKE		22 27 00.0	+10
N49A				LR	LR		
	comp=Z,800nm,22.0s						
N49A	Columbus Grove	74.56	313	P	P	22 26 50.5	+0.5
	baz=106						
AAM	Ann Arbor	74.56	315	P	P	22 26 50.8	+0.9
	baz=106						
L49A	Milan	74.59	314	P	P	22 26 51.1	+1.0
	baz=106						
Y49A	Blount Mountai	74.59	306	PFAKE		22 27 00.0	+10
Y49A				LR	LR		
	comp=Z,1µm,22.0s						
Y49A	Blount Mountai	74.59	306	P	P	22 26 50.8	+0.6
	baz=102						
S49A	Springfield	74.59	310	P	P	22 26 51.0	+0.8
	baz=104,SNR=5.5						
P49A	Miami Univ. Ec	74.59	312	P	P	22 26 50.7	+0.5
	baz=105						
Q49A	Aurora	74.59	311	P	P	22 26 51.0	+0.8
	baz=105						
V49A	McMinnville	74.60	308	P	P	22 26 50.6	+0.4
	baz=103						
T49A	Edmonton	74.62	309	PFAKE		22 27 00.0	+10
T49A				LR	LR		
	comp=Z,900nm,21.0s						
T49A	Edmonton	74.62	309	P	P	22 26 51.2	+0.8
	baz=104,SNR=8.2						
R49A	Shelbyville	74.62	310	PFAKE		22 27 00.0	+10
R49A				LR	LR		
	comp=Z,900nm,20.0s						
R49A	Shelbyville	74.62	310	P	P	22 26 51.3	+0.9
	baz=104						
149A	Jones	74.64	304	P	P	22 26 51.1	+0.5
	baz=102						
X49A	Woodville	74.66	306	P	P	22 26 51.3	+0.6
	baz=102,SNR=7.5						
U49A	Red Boiling Sp	74.67	308	P	P	22 26 51.6	+0.9
	baz=103,SNR=13						
W49A	Belvidere	74.74	307	P	P	22 26 51.7	+0.6
	baz=103						
249A	Camden	74.79	304	P	P	22 26 52.4	+1.0
	baz=101						
E48A	Lockeyer	74.80	319	P	P	22 26 51.8	+0.6
	baz=109						
F48A	Evansville	74.89	318	P	P	22 26 52.2	+0.4
	baz=108						
LRAL	Lakeview Retre	74.90	305	PFAKE		22 27 00.0	+7.9
LRAL				LR	LR		
	comp=Z,600nm,18.0s						
LRAL	Lakeview Retre	74.90	305	P	P	22 26 52.7	+0.6
	baz=102						
J48A	Bridge Port	74.94	316	P	P	22 26 48.7	-3.4
	baz=107,SNR=5.6						
CLTN	Cedars of Leba	75.01	308	PFAKE		22 27 00.0	+7.3
CLTN				LR	LR		
	comp=Z,300nm,19.0s						
L48A	N Adams	75.02	314	P	P	22 26 53.0	+0.3
	baz=106						
H48A	Harrisville	75.03	317	P	P	22 26 52.7	+0.2
	baz=107						
K48A	Perry	75.03	315	P	P	22 26 53.1	+0.5
	baz=106						
M48A	Edgerton	75.10	314	PFAKE		22 27 00.0	+6.9
M48A				LR	LR		
	comp=Z,700nm,21.0s						
M48A	Edgerton	75.10	314	P	P	22 26 53.2	+0.1
	baz=105						
O48A	Farmland	75.10	312	P	P	22 26 53.4	+0.3
	baz=105						
P48A	Milroy	75.10	311	PFAKE		22 27 00.0	+6.9
P48A				LR	LR		
	comp=Z,900nm,20.0s						
P48A	Milroy	75.10	311	P	P	22 26 53.1	0.0
	baz=104						
I48A	Sherman Twp	75.13	316	P	P	22 26 53.7	+0.5
	baz=107						
N48A	Decatur	75.16	313	P	P	22 26 54.0	+0.5
	baz=105,SNR=5.4						
Q48A	North Vernon	75.20	311	P	P	22 26 54.2	+0.5
	baz=104,SNR=12						
Y48A	Jasper	75.22	305	P	P	22 26 54.1	+0.2
	baz=102						
X48A	Hartselle	75.23	306	PFAKE		22 27 10.0	+16
X48A				LR	LR		
	comp=Z,600nm,21.0s						
X48A	Hartselle	75.23	306	P	P	22 26 54.0	0.0
	baz=102,SNR=6.4						
148A	Greensboro	75.29	304	P	P	22 26 54.9	+0.6
	baz=101						
V48A	Smith Brothers	75.32	307	PFAKE		22 27 10.0	+16
V48A				LR	LR		
	comp=Z,800nm,22.0s						
V48A	Smith Brothers	75.32	307	P	P	22 26 55.0	+0.5
	baz=102,SNR=8.1						
MYIG	Mrida	75.35	292	PFAKE		22 27 10.0	+15
MYIG				LR	LR		
	comp=Z,400nm,20.0s						
WCI	Wyandotte Cave	75.47	310	*e*P	P	22 26 54.6	-0.7
	comp=Z,13nm,0.8s						
WCI				LR	LR		
	comp=Z,1µm,21.0s						
WCI	Wyandotte Cave	75.47	310	*e*P	P	22 26 54.6	-0.7
WCI				pmax	pmax		
	comp=Z,13nm,0.8s						
WCI				MLR	MLR		
	comp=Z,1µm,21.0s						
WCI	Wyandotte Cave	75.47	310	P	P	22 26 55.7	+0.5
	baz=104						
E47A	Iron Bridge	75.52	319	P	P	22 26 55.3	-0.1
	baz=108						
G47A	Hillman	75.52	317	P	P	22 26 55.5	+0.1
	baz=107						
L47A	Sherwood	75.58	314	P	P	22 26 55.8	0.0
	baz=105						
D47A	Chapleau	75.59	319	P	P	22 26 56.1	+0.3
	baz=108						
H47A	Mio	75.60	317	P	P	22 26 56.4	+0.5
	baz=107						
K47A	Vermontville	75.62	315	P	P	22 26 56.5	+0.4
	baz=106						
I47A	Gladwin	75.64	316	P	P	22 26 56.3	+0.2
	baz=106						
N47A	Urbana	75.66	313	P	P	22 26 56.5	+0.2
	baz=105,SNR=6.8						
M47A	Cromwell	75.72	313	P	P	22 26 57.2	+0.6
	baz=105						
T47A	Sharon Grove	75.81	309	PFAKE		22 27 10.0	+13
T47A				LR	LR		
	comp=Z,500nm,20.0s						
T47A	Sharon Grove	75.81	309	P	P	22 26 57.6	+0.3
	baz=103,SNR=6.4						
U47A	Clarksville	75.84	308	P	P	22 26 57.6	+0.2
	baz=102,SNR=6.5						
BLO	Bloomington	75.86	311	PFAKE		22 27 10.0	+13
BLO				LR	LR		
	comp=Z,1µm,20.0s						
V47A	Nunnelly	75.89	307	P	P	22 26 57.7	-0.1
	baz=102,SNR=9.9						
X47A	Russelville	75.90	306	P	P	22 26 57.9	+0.1
	baz=102,SNR=6.3						
ARCES	ARCESS Array B	76.00	14	P	P	22 26 58.0	+0.3
	comp=Z,1.3nm,0.6s,baz=245,slow=2.6,SNR=9.9						
D46A	Sault St. Mari	76.15	319	P	P	22 26 58.7	-0.2
	baz=107						
PLAL	Pickwick Lake	76.17	306	PFAKE		22 27 10.0	+11
PLAL				LR	LR		
	comp=Z,900nm,22.0s						
E46A	Sault Ste Mari	76.17	318	PFAKE		22 27 10.0	+11
E46A				LR	LR		
	comp=Z,900nm,19.0s						
E46A	Sault Ste Mari	76.17	318	P	P	22 26 59.1	0.0
	baz=107						
K46A	Dorr	76.18	315	P	P	22 26 59.3	+0.1
	baz=105						
WVT	Waverly	76.20	308	*e*P	P	22 26 58.8	-0.7
	comp=Z,12nm,0.8s						
WVT				LR	LR		
	comp=Z,800nm,22.0s						
WVT	Waverly	76.20	308	*e*P	P	22 26 58.8	-0.7
WVT				pmax	pmax		
	comp=Z,12nm,0.8s						
WVT				MLR	MLR		
	comp=Z,800nm,22.0s						
WVT	Waverly	76.20	308	P	P	22 26 59.9	+0.4
	baz=102						
G46A	Petoskey	76.25	317	P	P	22 26 59.7	+0.1
	baz=106						
H46A	Fife Lake	76.27	317	P	P	22 26 59.9	+0.2
	baz=106						
V46A	Holladay	76.36	307	P	P	22 27 00.3	-0.1
	baz=102,SNR=16						
L46A	Eue Claire	76.38	314	PFAKE		22 27 10.0	+10
L46A				LR	LR		
	comp=Z,600nm,21.0s						
W46A	Michie	76.44	307	P	P	22 27 00.9	0.0
	baz=101						
T46A	Princeton	76.44	309	P	P	22 27 00.8	0.0
	baz=102,SNR=8.8						
USIN	University of	76.46	309	PFAKE		22 27 10.0	+9.1
USIN				LR	LR		
	comp=Z,1µm,20.0s						
P46A	Rosedale	76.48	311	P	P	22 27 01.0	0.0
	baz=103,SNR=7.3						
X46A	Booneville	76.49	306	P	P	22 27 01.0	-0.2
	baz=101						
U46A	Springville	76.52	308	P	P	22 27 01.4	+0.1
	baz=102						
SFIN	Lafayette	76.57	312	PFAKE		22 27 10.0	+8.5
SFIN				LR	LR		
	comp=Z,900nm,20.0s						
SFIN	Lafayette	76.57	312	P	P	22 27 01.1	-0.4
	baz=104						
G45A	Suttons Bay	76.71	317	P	P	22 27 02.1	-0.1
	baz=106						
APA	Apatity	76.78	17⇑	*i*P	P	22 26 57.8	-4.3
APA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,900nm,15.0s						
F45A	CMU Biological	76.79	318	P	P	22 27 02.2	-0.4
	baz=106						
I45A	Fountain	76.85	316	P	P	22 27 02.5	-0.4
	baz=105						
OLIL	Olney	76.96	310	PFAKE		22 27 10.0	+6.3
OLIL				LR	LR		
	comp=Z,900nm,20.0s						
SYO	Syowa Base	76.99	162⇓	*e*P	P	22 27 02.6	-0.6
SYO	Syowa Base	76.99	162⇑	*i*pP	P	22 27 05.0	+1.8
SYO	Syowa Base	76.99	162⇑	*e*PcP	PcP	22 27 14.6	+0.4
T45A	Paducah	77.03	308	PFAKE		22 27 20.0	+16
T45A				LR	LR		
	comp=Z,700nm,22.0s						
CCIG	Comitan	77.11	287	PFAKE		22 27 20.0	+15
CCIG				LR	LR		
	comp=Z,500nm,20.0s						
OXF	Oxford	77.15	306	PFAKE		22 27 20.0	+15
OXF				LR	LR		
	comp=Z,800nm,19.0s						
HALT	Halls	77.36	307	PFAKE		22 27 20.0	+14
HALT				LR	LR		
	comp=Z,900nm,22.0s						
LVZ	Lovozero	77.36	17	PFAKE		22 27 20.0	+15
LVZ				LR	LR		
	comp=Z,500nm,20.0s						
GLAT	Glass	77.39	308	PFAKE		22 27 20.0	+14
GLAT				LR	LR		
	comp=Z,900nm,22.0s						
M44A	Midewin, Midew	77.50	313	PFAKE		22 27 20.0	+13
M44A				LR	LR		
	comp=Z,900nm,21.0s						
M44A	Midewin, Midew	77.50	313	P	P	22 27 06.5	-0.2
	baz=103						
O44A	Mansfield	77.54	312	P	P	22 27 06.7	-0.3
	baz=102						
L44A	Lake County Fo	77.59	314	P	P	22 27 06.9	-0.2
	baz=103						
S44A	Carbondale	77.64	309	P	P	22 27 07.4	-0.1
	baz=102						
VBMS	Vicksburg	77.67	303	PFAKE		22 27 20.0	+12
VBMS				LR	LR		
	comp=Z,500nm,19.0s						
VBMS	Vicksburg	77.67	303	P	P	22 27 08.0	+0.2
	baz=100						
MET	Memphis--Engin	77.69	306	PFAKE		22 27 20.0	+12
MET				LR	LR		
	comp=Z,700nm,20.0s						
GNAR	Gosnell	77.91	307	PFAKE		22 27 20.0	+11
GNAR				LR	LR		
	comp=Z,900nm,22.0s						
E43A	Lone Tree Farm	77.97	318	PFAKE		22 27 20.0	+11
E43A				LR	LR		
	comp=Z,700nm,21.0s						
E43A	Lone Tree Farm	77.97	318	P	P	22 27 09.1	-0.1
	baz=105						
K43A	Burlington	78.01	314	P	P	22 27 09.4	-0.1
	baz=103						
H43A	Windswept, Lux	78.02	316	P	P	22 27 09.7	+0.2
	baz=104						
PRGR	Permogore	78.06	25	*e*P	P	22 27 07.5	-1.8
PRGR				pmax	pmax		
	comp=Z,24nm,1.4s						
P43A	Skaggs, Pawnee	78.23	311	P	P	22 27 10.3	-0.5
	baz=102						
HDIL	Hopedale	78.25	312	PFAKE		22 27 20.0	+9.1
HDIL				LR	LR		
	comp=Z,1µm,22.0s						
HDIL	Hopedale	78.25	312	P	P	22 27 10.3	-0.5
	baz=102						
GEYT	Alibeck	78.31	51	P	P	22 27 09.7	-1.6
	comp=Z,1.4nm,0.7s,baz=245,slow=9.4,SNR=3.7						
GYA0B	ALIBECK ARRAY	78.31	51	PFAKE		22 27 20.0	+8.7
GYA0B				LR	LR		
	comp=Z,1µm,20.0s						
HBAR	Harrisburg	78.35	307	PFAKE		22 27 20.0	+8.5
HBAR				LR	LR		
	comp=Z,900nm,22.0s						
X43A	Marvell	78.35	306	P	P	22 27 12.0	+0.5
	baz=100						
I42A	Draeger Farm,	78.69	315	P	P	22 27 13.5	+0.3
	baz=103						
L42A	Oliver, Polo	78.82	313	PFAKE		22 27 20.0	+6.0
L42A				LR	LR		
	comp=Z,900nm,22.0s						
L42A	Oliver, Polo	78.82	313	P	P	22 27 14.0	0.0
	baz=102						
D41A	Chassel	79.18	318	P	P	22 27 16.0	+0.1
	baz=104						
CCM	Cathedral Cave	79.25	309	*e*P	P	22 27 16.3	-0.2
	comp=Z,23nm,0.6s						
CCM				LR	LR		
	comp=Z,900nm,22.0s						
CCM	Cathedral Cave	79.25	309	*e*P	P	22 27 16.3	-0.2
CCM				pmax	pmax		
	comp=Z,23nm,0.6s						
CCM				MLR	MLR		
	comp=Z,900nm,22.0s						
CCM	Cathedral Cave	79.25	309	P	P	22 27 16.0	-0.5
	baz=100						
M41A	Milan	79.34	312	P	P	22 27 16.0	-0.8
	baz=101						
COWI	Conover	79.34	317	PFAKE		22 27 30.0	+13
COWI				LR	LR		
	comp=Z,600nm,21.0s						
I41A	Arkdale	79.40	315	P	P	22 27 17.1	0.0
	baz=102						
JFWS	Jewell Farm	79.43	314	P	P	22 27 17.1	-0.2
	baz=102						
N41A	Harden Midland	79.44	312	PFAKE		22 27 30.0	+13
N41A				LR	LR		
	comp=Z,800nm,20.0s						
N41A	Harden Midland	79.44	312	P	P	22 27 16.7	-0.7
	baz=101						
W41B	Gary Mavity, V	79.57	306	P	P	22 27 17.9	-0.4
	baz=99						
FCAR	Ozark Folk Cen	79.58	307	PFAKE		22 27 30.0	+12
FCAR				LR	LR		
	comp=Z,700nm,20.0s						
WHAR	Wooly Hollow	79.62	306	*e*PcP	PcP	22 27 25.6	-0.8
	comp=Z,28nm,1.5s						
WHAR				LR	LR		
	comp=Z,800nm,22.0s						
C40A	Isle Royale Na	79.77	319	PFAKE		22 27 30.0	+11
C40A				LR	LR		
	comp=Z,1µm,22.0s						
C40A	Isle Royale Na	79.77	319	P	P	22 27 18.6	-0.5
	baz=104						
G40A	Rib Lake	79.89	316	P	P	22 27 19.5	-0.3
	baz=102						
X40A	Basin Creek Fa	79.94	305	PFAKE		22 27 30.0	+10
X40A				LR	LR		
	comp=Z,800nm,20.0s						
X40A	Basin Creek Fa	79.94	305	P	P	22 27 20.2	-0.1
	baz=99						
L40A	Anamosa	79.97	313	P	P	22 27 19.9	-0.4
	baz=101						
N40A	Mertquake, Sal	80.02	312	P	P	22 27 20.3	-0.3
	baz=100						
WLAR	White Oak Lake	80.05	304	PFAKE		22 27 30.0	+9.1
WLAR				LR	LR		
	comp=Z,600nm,19.0s						
U40A	Yellville	80.24	307	P	P	22 27 21.4	-0.5
	baz=99						
MIAR	Mount Ida	80.55	305	PFAKE		22 27 30.0	+6.4
MIAR				LR	LR		
	comp=Z,800nm,22.0s						

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MIAR  Mount Ida          80.55 305  P       P        22 27 23.6  0.0
      baz=98
G39A  Holcombe           80.56 316  P       P        22 27 22.4 -1.0
      baz=102
W39A  Magazine           80.81 306  PFAKE            22 27 40.0 +15
W39A                                LR      LR
      comp=Z,1μm,20.0s
W39A  Magazine           80.81 306  P       P        22 27 24.9 -0.1
      baz=98
ETX06 Route 59 and C     80.92 302  PFAKE            22 27 40.0 +14
ETX06                               LR      LR
      comp=Z,300nm,19.0s
NATX  Nacogdoches        81.08 302  P       P        22 27 26.7 +0.2
      baz=97
EYMN  Ely                81.31 319  PFAKE            22 27 40.0 +13
EYMN                                LR      LR
      comp=Z,800nm,21.0s
SCIA  State Center       81.40 313  PFAKE            22 27 40.0 +12
SCIA                                LR      LR
      comp=Z,1μm,22.0s
SCIA  State Center       81.40 313  P       P        22 27 27.4 -0.6
      baz=100
SPMN  Marine on St.      81.68 316  PFAKE            22 27 40.0 +11
SPMN                                LR      LR
      comp=Z,500nm,22.0s
ABKAR Akbulak array      81.83  40 eP       P        22 27 29.8 -0.2
      comp=Z,37nm,1.8s
HKT   Hockley            81.88 300  PFAKE            22 27 40.0 +9.4
HKT                                 LR      LR
      comp=Z,500nm,20.0s
HKT   Hockley            81.88 300 eP       P        22 27 30.5 -0.1
HKT                                 pmax    pmax
      comp=Z,4.0nm,1.0s
TUL1  Leonard            82.53 306  PFAKE            22 27 40.0 +6.0
TUL1                                LR      LR
      comp=Z,700nm,22.0s
TUL1  Leonard            82.53 306  P       P        22 27 33.9 -0.2
      baz=97
ARU   Arti               82.58  33 eP       P        22 27 34.0 +0.1
      comp=Z,27nm,1.4s
ARU                                 LR      LR
      comp=Z,500nm,21.0s
ARU   Arti               82.58  33c iP      P        22 27 33.6 -0.3
ARU                                                  22 30 41.0
ARU                                 S       S        22 37 53.0 +2.0
ARU                                 SS      SS       22 43 09.2 -3.4
ARU                                 pmax    pmax
      comp=Z,27nm,2.2s
435B  Jarrell            83.47 301  P       P        22 27 39.7 +0.6
      baz=95
WHTX  Lake Whitney,      83.47 302  P       P        22 27 38.8 -0.2
      baz=96
KSU1  Kansas State U     83.56 309  PFAKE            22 27 50.0 +11
KSU1                                LR      LR
      comp=Z,800nm,22.0s
KSU1  Kansas State U     83.56 309  P       P        22 27 38.5 -0.8
      baz=97
SVE   Sverdlovsk         83.79  33 eP       P        22 27 40.4 +0.3
SVE                                 pmax    pmax
      comp=Z,18nm,1.5s
ECSD  EROS Data Cent     84.15 314  PFAKE            22 27 50.0 +7.8
ECSD                                LR      LR
      comp=Z,700nm,22.0s
ECSD  EROS Data Cent     84.15 314  P       P        22 27 42.1 -0.1
      baz=98
AGMN  Agassiz Nation     84.26 319  PFAKE            22 27 50.0 +7.3
AGMN                                LR      LR
      comp=Z,800nm,20.0s
AGMN  Agassiz Nation     84.26 319  P       P        22 27 42.8 +0.2
      baz=98
MAW   Mawson             84.53 158  P       P        22 27 44.0 +0.4
      comp=Z,7.7nm,0.7s,baz=282,slow=8.5,SNR=4.5
MAW   Mawson             84.53 158 eP       P        22 27 43.3 -0.3
      comp=Z,3.8nm,1.1s
MAW   Mawson             84.53 158 eP       P        22 27 43.3 -0.3
MAW                                 pmax    pmax
      comp=Z,4.0nm,1.1s
ULM   Lac du Bonnet      84.56 321  P       P        22 27 43.6 -0.5
      comp=Z,6.3nm,0.8s,baz=350,slow=1.1,SNR=5.4
833A  Chaparral WMA,     84.83 298  P       P        22 27 46.6 +0.6
      baz=94
WMOK  Wichita Mounta     84.84 305  PFAKE            22 28 00.0 +14
WMOK                                LR      LR
      comp=Z,800nm,22.0s
WMOK  Wichita Mounta     84.84 305  P       P        22 27 45.9  0.0
      baz=95
BGNE  Belgrade           85.00 312  PFAKE            22 28 00.0 +13
BGNE                                LR      LR
      comp=Z,1μm,20.0s
BGNE  Belgrade           85.00 312  P       P        22 27 46.2 -0.5
      baz=96
JCT   Junction City      85.35 301  P       P        22 27 49.3 +0.7
      baz=94
ABTX  Abilene, Hawle     85.38 303  PFAKE            22 28 00.0 +11
ABTX                                LR      LR
      comp=Z,600nm,22.0s
ABTX  Abilene, Hawle     85.38 303  P       P        22 27 49.4 +0.7
      baz=94
CBKS  Cedar Bluff        85.96 309  PFAKE            22 28 00.0 +8.5
CBKS                                LR      LR
      comp=Z,700nm,22.0s
CBKS  Cedar Bluff        85.96 309  P       P        22 27 51.2 -0.3
      baz=95
KBL   Kabul              86.63  55  PFAKE            22 28 10.0 +15
KBL                                 LR      LR
      comp=Z,800nm,20.0s
MDND  Maddock            86.69 318  PFAKE            22 28 10.0 +15
MDND                                LR      LR
      comp=Z,600nm,20.0s
CHGR  Chuyangaron        87.01  51  PFAKE            22 28 10.0 +13
CHGR                                LR      LR
      comp=Z,3μm,19.0s
AMTX  Amarillo           87.23 305  PFAKE            22 28 10.0 +12
AMTX                                LR      LR
      comp=Z,700nm,20.0s
AMTX  Amarillo           87.23 305  P       P        22 27 58.6 +0.8
      baz=94
OGNE  Ogallala           87.88 311  PFAKE            22 28 10.0 +9.1
OGNE                                LR      LR
      comp=Z,1μm,20.0s
OGNE  Ogallala           87.88 311  P       P        22 28 01.7 +0.9
      baz=94
GAR   Garm               87.93  51  PFAKE            22 28 10.0 +8.8
GAR                                 LR      LR
      comp=Z,2μm,19.0s
MSTX  Muleshoe           88.08 304  PFAKE            22 28 10.0 +8.0
MSTX                                LR      LR
      comp=Z,600nm,21.0s
MSTX  Muleshoe           88.08 304  P       P        22 28 03.0 +1.0
      baz=93
KSCO  Kaye Shedlock'     88.22 309  PFAKE            22 28 10.0 +7.4
KSCO                                LR      LR
      comp=Z,800nm,21.0s
KSCO  Kaye Shedlock'     88.22 309  P       P        22 28 03.7 +1.1
      baz=93
BTK   Batken             88.38  50  PFAKE            22 28 10.0 +6.8
BTK                                 LR      LR
      comp=Z,800nm,18.0s
TXAR  Lajitas Array      88.63 299  P       P        22 28 05.1 +0.4
      comp=Z,2.9nm,1.0s,baz=104,slow=5.3,SNR=19
QSPA  South Pole Qui     88.75 180 eP       P        22 28 05.9 +1.4
      comp=Z,21nm,0.9s
BRVK  Borovoye           88.79  37 eP       P        22 28 04.3 -0.5
      comp=Z,8.2nm,1.1s
BRVK                                LR      LR
      comp=Z,300nm,20.0s
BRVK  Borovoye           88.79  37 eP       P        22 28 04.3 -0.5
BRVK                                pmax    pmax
      comp=Z,8.0nm,1.1s
BRVK                                MLR     MLR
      comp=Z,300nm,20.0s
RSSD  Black Hills        89.52 314 eP       P        22 28 09.3 +0.6
      comp=Z,6.4nm,0.8s
RSSD                                LR      LR
      comp=Z,600nm,18.0s
RSSD  Black Hills        89.52 314 eP       P        22 28 09.3 +0.6
RSSD                                pmax    pmax
      comp=Z,6.0nm,0.8s
RSSD                                MLR     MLR
      comp=Z,600nm,18.0s
RSSD  Black Hills        89.52 314  P       P        22 28 09.1 +0.4
      baz=92
T25A  Trinidad           89.55 307  P       P        22 28 10.1 +1.1
      baz=92
DGMT  Dagmar             89.80 318  PFAKE            22 28 20.0 +10
DGMT                                LR      LR
      comp=Z,800nm,19.0s
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DGMT  Dagmar             89.80 318  P       P        22 28 10.5 +0.8
      baz=92
Q24A  Divide             90.19 309  P       P        22 28 13.2 +1.1
      baz=92
SDCO  Great Sand Dun     90.43 308  PFAKE            22 28 20.0 +6.8
SDCO                                LR      LR
      comp=Z,700nm,22.0s
SDCO  Great Sand Dun     90.43 308  P       P        22 28 14.2 +1.0
      baz=91
PHWY  Pilot Hill         90.48 311  PFAKE            22 28 20.0 +6.7
PHWY                                LR      LR
      comp=Z,800nm,20.0s
N23A  Red Feather La     90.84 311  P       P        22 28 15.7 +0.7
      baz=91
ANMO  Albuquerque        91.15 305 eP       P        22 28 15.6 -0.9
      comp=Z,6.1nm,1.3s
ANMO                                LR      LR
      comp=Z,900nm,20.0s
ANMO  Albuquerque        91.15 305 eP       P        22 28 15.6 -0.9
ANMO                                pmax    pmax
      comp=Z,6.0nm,1.3s
ANMO                                MLR     MLR
      comp=Z,900nm,20.0s
ANMO  Albuquerque        91.15 305  P       P        22 28 17.1 +0.6
      baz=91
AAK   Ala-Archa          91.23  48  PFAKE            22 28 30.0 +13
AAK                                 LR      LR
      comp=Z,300nm,20.0s
AAK   Ala-Archa          91.23  48⇑eP       P        22 28 17.5 +0.9
AAK                                 pmax    pmax
      comp=Z,11nm,1.8s
K22A  Casper             91.30 312  PFAKE            22 28 30.0 +13
K22A                                LR      LR
      comp=Z,1μm,22.0s
FRU1  Bishkek            91.33  47  PFAKE            22 28 30.0 +13
FRU1                                LR      LR
      comp=Z,300nm,22.0s
S22A  4UR Ranch, Cre     91.48 308  P       P        22 28 18.5 +0.4
      baz=90
Y22D  IRIS PASSCAL I     91.52 304  PFAKE            22 28 30.0 +12
Y22D                                LR      LR
      comp=Z,500nm,20.0s
RWWY  Rawlins            91.80 311  PFAKE            22 28 30.0 +11
RWWY                                LR      LR
      comp=Z,1μm,19.0s
KSH   Kashi              92.34  51  P       P        22 28 21.4 -0.4
KSH                                 sP      pwP      22 28 28.3 -0.6
KSH                                 PP      PP       22 32 04.1 +1.7
KSH                                 SKS     SKSac    22 38 50.8 -4.9
KSH                                 S       SKKSac   22 39 19.4 +6.4
KSH                                 SS      SS       22 45 31.4 -4.8
KSH                                 pmax    pmax
      comp=Z,26nm,1.4s
KSH                                 pmax    pmax
      comp=Z,100nm,5.3s
KSH                                 LR      LR
      comp=Z,110nm,5.2s
KSH                                 LR      LR
      comp=Z,130nm,4.9s
KSH                                 LR      LR
      comp=Z,210nm,8.4s
NRN   Naryn              92.35  49  PFAKE            22 28 30.0 +8.0
NRN                                 LR      LR
      comp=Z,500nm,21.0s
O20A  White River Ci     92.59 310  PFAKE            22 28 30.0 +7.0
O20A                                LR      LR
      comp=Z,1μm,22.0s
MVCO  Mesa Verde         92.81 307  P       P        22 28 24.2  0.0
      baz=90
PV01  Paradox Valley     92.86 308  PFAKE            22 28 30.0 +5.6
PV01                                LR      LR
      comp=Z,100nm,18.0s
PV19  Morning Glory      93.18 308  PFAKE            22 28 40.0 +14
PV19                                LR      LR
      comp=Z,400nm,20.0s
KDJ   Kajisay            93.22  48  PFAKE            22 28 40.0 +14
KDJ                                 LR      LR
      comp=Z,200nm,21.0s
RLMT  Red Lodge          93.26 315  P       P        22 28 25.7 -0.4
      baz=89
EGMT  Eagleton           93.52 318  PFAKE            22 28 40.0 +13
EGMT                                LR      LR
      comp=Z,600nm,21.0s
BW06  Boulder Array      93.53 313  PFAKE            22 28 40.0 +13
BW06                                LR      LR
      comp=Z,700nm,21.0s
PDAR  Pinedale Array     93.53 313  P       P        22 28 26.1 -1.2
      comp=Z,0.7nm,0.7s,baz=110,slow=5.1,SNR=4.0
W18A  Petrified Fore     93.84 305  PFAKE            22 28 40.0 +11
W18A                                LR      LR
      comp=Z,800nm,20.0s
KURK  Kurchatov          93.93  39  PFAKE            22 28 40.0 +11
KURK                                LR      LR
      comp=Z,300nm,19.0s
KURK  Kurchatov          93.93  39⇑eP       P        22 28 29.2 +0.5
KURK                                pmax    pmax
      comp=Z,1.0nm,1.1s
X18A  Snowflake          94.03 304  PFAKE            22 28 40.0 +10
X18A                                LR      LR
      comp=Z,600nm,20.0s
LKWY  Lake               94.09 314  PFAKE            22 28 40.0 +10
LKWY                                LR      LR
      comp=Z,900nm,22.0s
PRZ   Przheval'sk        94.12  48  PFAKE            22 28 40.0 +10
PRZ                                 LR      LR
      comp=Z,300nm,21.0s
H17A  Grant Village      94.22 314  PFAKE            22 28 40.0 +9.5
H17A                                LR      LR
      comp=Z,800nm,21.0s
MOOW  Moose Ponds        94.37 314  PFAKE            22 28 40.0 +8.8
MOOW                                LR      LR
      comp=Z,1μm,22.0s
SNOW  Snow King Moun     94.39 313  PFAKE            22 28 40.0 +8.7
SNOW                                LR      LR
      comp=Z,700nm,21.0s
IMW   Indian Meadow      94.50 314  PFAKE            22 28 40.0 +8.1
IMW                                 LR      LR
      comp=Z,400nm,21.0s
TPAW  Teton Pass         94.53 313  PFAKE            22 28 40.0 +8.0
TPAW                                LR      LR
      comp=Z,500nm,19.0s
AHID  Auburn Hatcher     94.67 313  PFAKE            22 28 40.0 +7.5
AHID                                LR      LR
      comp=Z,1μm,22.0s
BOZ   Bozeman (W)        94.91 315  P       P        22 28 33.8 +0.3
      baz=87
HWUT  Hardware Ranch     95.07 311  PFAKE            22 28 40.0 +5.6
HWUT                                LR      LR
      comp=Z,1μm,20.0s
YKA   Yellowknife Ar     95.17 333  P       P        22 28 34.6 +0.5
      comp=Z,1.0nm,0.7s,baz=88,slow=5.2,SNR=6.3
WUAZ  Wupatki            95.17 305  PFAKE            22 28 50.0 +15
WUAZ                                LR      LR
      comp=Z,500nm,20.0s
X16A  Lo Mia Camp, P     95.26 304  PFAKE            22 28 50.0 +15
X16A                                LR      LR
      comp=Z,600nm,20.0s
U15A  North Rim          95.88 306  PFAKE            22 28 50.0 +12
U15A                                LR      LR
      comp=Z,700nm,21.0s
DUG   Dugway, Tooele     96.09 310  PFAKE            22 28 50.0 +11
DUG                                 LR      LR
      comp=Z,800nm,22.0s
WALA  Waterton Lakes     96.21 319  PFAKE            22 28 50.0 +11
WALA                                LR      LR
      comp=Z,800nm,20.0s
MAKZ  Makanchi           96.41  43  PFAKE            22 28 50.0 +10
MAKZ                                LR      LR
      comp=Z,300nm,20.0s
MSO   Missoula           96.42 317  PFAKE            22 28 50.0 +10
MSO                                 LR      LR
      comp=Z,600nm,20.0s
MSO   Missoula           96.42 317  P       P        22 28 39.8 -0.5
      baz=85
Y14A  Wickenburg         96.58 304  PFAKE            22 28 50.0 +8.7
Y14A                                LR      LR
      comp=Z,700nm,21.0s
MKAR  Makanchi Array     96.62  43  P       P        22 28 40.9 -0.2
      comp=Z,1.0nm,0.7s,baz=284,slow=4.9,SNR=3.8
HLID  Hailey             97.04 314  PFAKE            22 28 50.0 +6.6
HLID                                LR      LR
      comp=Z,700nm,22.0s
HLID  Hailey             97.04 314  P       P        22 28 43.1 -0.1
      baz=85
W13A  Hualapai Mount     97.24 305  PFAKE            22 29 00.0 +15
W13A                                LR      LR
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      comp=Z,700nm,19.0s
ZAA0  Zalesovo Array     97.42  36  PFAKE            22 29 00.0 +15
ZAA0                                LR      LR
      comp=Z,300nm,20.0s
ELK   Elko               97.89 311  PFAKE            22 29 00.0 +13
ELK                                 LR      LR
      comp=Z,800nm,21.0s
SHPR  Sheep Range        98.18 307  PFAKE            22 29 00.0 +11
SHPR                                LR      LR
      comp=Z,700nm,21.0s
LDFC  Landfair           98.24 305  PFAKE            22 29 00.0 +11
LDFC                                LR      LR
      comp=Z,600nm,21.0s
R11A  Troy Canyon, C     98.37 308  PFAKE            22 29 00.0 +11
R11A                                LR      LR
      comp=Z,500nm,21.0s
NEW   Newport            98.41 318  PFAKE            22 29 00.0 +11
NEW                                 LR      LR
      comp=Z,600nm,20.0s
BMO   Blue Mountains     98.97 315  PFAKE            22 29 00.0 +8.1
BMO                                 LR      LR
      comp=Z,400nm,18.0s
TPNV  Topopah Spring     99.01 307  PFAKE            22 29 00.0 +7.7
TPNV                                LR      LR
      comp=Z,500nm,22.0s
C09A  Chrisman Ranch     99.24 318  PFAKE            22 29 00.0 +7.1
C09A                                LR      LR
      comp=Z,800nm,20.0s
BMN   Battle Mountai     99.42 311  PFAKE            22 29 00.0 +5.9
BMN                                 LR      LR
      comp=Z,700nm,20.0s
D08A  Wollman Farm,      99.78 317  PFAKE            22 29 10.0 +15
D08A                                LR      LR
      comp=Z,800nm,21.0s
B08A  Colville Reser     99.86 319  PFAKE            22 29 10.0 +14
B08A                                LR      LR
      comp=Z,700nm,18.0s
E08A  Dider Farm, El     99.96 317  PFAKE            22 29 10.0 +14
E08A                                LR      LR
      comp=Z,500nm,18.0s
DAC   Darwin (Calif)    100.16 306  PFAKE            22 29 10.0 +13
DAC                                 LR      LR
      comp=Z,300nm,21.0s
WVOR  Wild Horse Val    100.24 313  PFAKE            22 29 10.0 +12
WVOR                                LR      LR
      comp=Z,700nm,20.0s
KVN   Kaiserville       100.25 309  PFAKE            22 29 10.0 +12
KVN                                 LR      LR
      comp=Z,600nm,21.0s
HAWA  Hanford           100.30 317  PFAKE            22 29 10.0 +12
HAWA                                LR      LR
      comp=Z,600nm,19.0s
RYN   Ryan              100.63 309  PFAKE            22 29 10.0 +11
RYN                                 LR      LR
      comp=Z,500nm,21.0s
I07A  Izee              100.63 315  PFAKE            22 29 10.0 +11
I07A                                LR      LR
      comp=Z,400nm,21.0s
WMQ   Urumqi            100.77  46  PFAKE            22 29 10.0 +10
WMQ                                 LR      LR
      comp=Z,300nm,19.0s
WMQ   Urumqi            100.77  46 eP       Pdif     22 29 01.4 +1.6
WMQ                                 LR      LR
      comp=Z,200nm,17.1s
WMQ                                 LR      LR
      comp=Z,170nm,17.5s
ISA   Isabella, Lake    100.93 306  PFAKE            22 29 10.0 +9.3
ISA                                 LR      LR
      comp=Z,900nm,20.0s
LTY   Liberty           100.93 318  PFAKE            22 29 10.0 +10
LTY                                 LR      LR
      comp=Z,700nm,20.0s
YERR  Yerington         101.14 309  PFAKE            22 29 10.0 +8.2
YERR                                LR      LR
      comp=Z,500nm,19.0s
PAHR  Pah Rah Range     101.16 310  PFAKE            22 29 10.0 +8.2
PAHR                                LR      LR
      comp=Z,800nm,21.0s
WAKR  Walker            101.36 309  PFAKE            22 29 10.0 +7.2
WAKR                                LR      LR
      comp=Z,600nm,22.0s
PNTR  Pine Nut          101.41 310  PFAKE            22 29 10.0 +7.0
PNTR                                LR      LR
      comp=Z,800nm,21.0s
VCNR  Virginia City     101.42 310  PFAKE            22 29 10.0 +7.0
VCNR                                LR      LR
      comp=Z,900nm,22.0s
MOD   Modoc Plateau     101.54 312  PFAKE            22 29 10.0 +6.6
MOD                                 LR      LR
      comp=Z,800nm,20.0s
PINE  Pine Mountain     101.70 314  PFAKE            22 29 10.0 +5.8
PINE                                LR      LR
      comp=Z,500nm,20.0s
LON   Longmire          101.79 317  PFAKE            22 29 20.0 +16
LON                                 LR      LR
      comp=Z,700nm,20.0s
D05A  Enumclaw          101.83 318  PFAKE            22 29 20.0 +16
D05A                                LR      LR
      comp=Z,600nm,19.0s
RUBR  Rubicon Trail     101.84 310  PFAKE            22 29 20.0 +15
RUBR                                LR      LR
      comp=Z,900nm,22.0s
BEKR  Beckworth         101.88 310  PFAKE            22 29 20.0 +15
BEKR                                LR      LR
      comp=Z,700nm,21.0s
CMB   Columbia Colle    102.16 309  PFAKE            22 29 20.0 +14
CMB                                 LR      LR
      comp=Z,300nm,20.0s
H04A  Detroit Lake      102.43 315  PFAKE            22 29 20.0 +13
H04A                                LR      LR
      comp=Z,400nm,20.0s
AFDM  Forest Hills D    102.48 310  PFAKE            22 29 20.0 +12
AFDM                                LR      LR
      comp=Z,700nm,22.0s
PGC   Sidney            102.50 320  PFAKE            22 29 20.0 +13
PGC                                 LR      LR
      comp=Z,800nm,21.0s
ORV   Oroville          102.80 310  PFAKE            22 29 20.0 +11
ORV                                 LR      LR
      comp=Z,700nm,21.0s
NLWA  Neilton Lookou    103.04 318  PFAKE            22 29 20.0 +10
NLWA                                LR      LR
      comp=Z,800nm,20.0s
YBH   Yreka Blue Hor    103.34 313  PFAKE            22 29 20.0 +8.6
YBH                                 LR      LR
      comp=Z,700nm,20.0s
HUMO  Hull Mountain     103.36 313  PFAKE            22 29 20.0 +8.7
HUMO                                LR      LR
      comp=Z,600nm,20.0s
WDC   Whiskeytown Da    103.42 311  PFAKE            22 29 20.0 +8.4
WDC                                 LR      LR
      comp=Z,500nm,19.0s
GDXM  Geysers           103.91 310  PFAKE            22 29 20.0 +6.1
GDXM                                LR      LR
      comp=Z,700nm,20.0s
MCCM  Marconi Confer    104.09 309  PFAKE            22 29 30.0 +15
MCCM                                LR      LR
      comp=Z,700nm,20.0s
WRAK  Wrangell Islan    105.42 329  PFAKE            22 33 40.0 +6.3
WRAK                                LR      LR
      comp=Z,800nm,20.0s
LSA   Lhasa             105.51  60  PFAKE            22 33 50.0 +15
LSA                                 LR      LR
      comp=Z,300nm,22.0s
EGAK  Eagle             105.52 339  PFAKE            22 33 40.0 +6.3
EGAK                                LR      LR
      comp=Z,300nm,21.0s
JIS   Juneau Island     105.72 331  PFAKE            22 33 50.0 +16
JIS                                 LR      LR
      comp=Z,600nm,19.0s
BESE  Bessie Mountai    105.82 332  PFAKE            22 33 50.0 +15
BESE                                LR      LR
      comp=Z,600nm,19.0s
TIXI  Tiksi             106.30  11  PFAKE            22 33 50.0 +15
TIXI                                LR      LR
      comp=Z,200nm,21.0s
PRP   Porcupine Dome    106.63 340  PFAKE            22 33 50.0 +14
PRP                                 LR      LR
      comp=Z,300nm,20.0s
DIB   Dawson Inlet,     106.66 326  PFAKE            22 33 50.0 +14
DIB                                 LR      LR
      comp=Z,700nm,19.0s
SCRK  Sand Creek        106.99 339  PFAKE            22 33 50.0 +13
SCRK                                LR      LR
      comp=Z,400nm,22.0s
```

BCPM	**Bancas Point**	**107.38**	**334**	PFAKE		22 33 50.0	+13
BCPM				LR	LR		
	comp=Z,400nm,18.0s						
PCA	**Pinnacle**	**107.58**	**334**	PFAKE		22 33 50.0	+12
PCA				LR	LR		
	comp=Z,500nm,19.0s						
MDM	**Murphy Dome**	**107.87**	**341**	PFAKE		22 33 50.0	+12
MDM				LR	LR		
	comp=Z,700nm,18.0s						
PAX	**Paxson**	**108.12**	**338**	PFAKE		22 33 50.0	+11
PAX				LR	LR		
	comp=Z,200nm,21.0s						
TGL	**Tana Glacier**	**108.33**	**336**	PFAKE		22 33 50.0	+11
TGL				LR	LR		
	comp=Z,400nm,20.0s						
CRQM	**Cirque**	**108.46**	**336**	PFAKE		22 33 50.0	+10
CRQM				LR	LR		
	comp=Z,500nm,19.0s						
MLY	**Manley**	**108.64**	**341**	PFAKE		22 33 50.0	+10
MLY				LR	LR		
	comp=Z,300nm,18.0s						
DHY	**Denali Highway**	**108.75**	**339**	PFAKE		22 33 50.0	+10
DHY				LR	LR		
	comp=Z,300nm,22.0s						
TLY	**Talaya**	**109.00**	**35**	PFAKE		22 33 50.0	+9.4
TLY				LR	LR		
	comp=Z,400nm,22.0s						
HMT	**Hamilton**	**109.15**	**336**	PFAKE		22 33 50.0	+9.3
HMT				LR	LR		
	comp=Z,500nm,18.0s						
BPAW	**Bear Paw Mtn.**	**109.34**	**341**	PFAKE		22 33 50.0	+9.1
BPAW				LR	LR		
	comp=Z,300nm,20.0s						
KAIM	**Kayak Island**	**109.45**	**335**	PFAKE		22 33 50.0	+8.8
KAIM				LR	LR		
	comp=Z,500nm,18.0s						
SCM	**Sheep Creek Mo**	**109.49**	**338**	PFAKE		22 33 50.0	+8.7
SCM				LR	LR		
	comp=Z,400nm,19.0s						
KTH	**Kantishna Hill**	**109.68**	**340**	PFAKE		22 33 50.0	+8.4
KTH				LR	LR		
	comp=Z,400nm,19.0s						
FID	**Port Fidalgo**	**109.81**	**337**	PFAKE		22 33 50.0	+8.1
FID				LR	LR		
	comp=Z,500nm,20.0s						
CAST	**Castle Rocks**	**110.16**	**341**	PFAKE		22 33 50.0	+7.5
CAST				LR	LR		
	comp=Z,400nm,20.0s						
KNK	**Knik Glacier**	**110.18**	**338**	PFAKE		22 33 50.0	+7.4
KNK				LR	LR		
	comp=Z,400nm,19.0s						
PMR	**Palmer**	**110.32**	**338**	PFAKE		22 33 50.0	+7.3
PMR				LR	LR		
	comp=Z,300nm,20.0s						
PPLA	**Purkeypile**	**110.55**	**340**	PFAKE		22 33 50.0	+6.6
PPLA				LR	LR		
	comp=Z,300nm,20.0s						
BRLK	**Bradley Lake**	**112.15**	**337**	PFAKE		22 34 00.0	+14
BRLK				LR	LR		
	comp=Z,500nm,20.0s						
HOM	**Homer**	**112.51**	**337**	PFAKE		22 34 00.0	+13
HOM				LR	LR		
	comp=Z,500nm,18.0s						
CHTO	**Chiang Mai**	**113.97**	**70**	PFAKE		22 34 00.0	+9.0
CHTO				LR	LR		
	comp=Z,300nm,22.0s						
YAK	**Yakutsk**	**114.17**	**17**	PFAKE		22 34 00.0	+10
YAK				LR	LR		
	comp=Z,400nm,22.0s						
LZH	**Lanzhou**	**114.59**	**51**	*e*PKP	**PKiKP**	**22 33 54.3**	**+2.4**
LZH				sPKP		22 33 58.8	
LZH				LR	LR		
	comp=Z,220nm,17.9s						
LZH				LR	LR		
	comp=Z,410nm,18.0s						
LZH				LR	LR		
	comp=Z,470nm,20.1s						
CD2	**Chengdu**	**115.97**	**56**	PKP	**PKPdf**	**22 33 53.8**	**-0.8**
KMI	**Kunming**	**116.42**	**63**	PFAKE		22 34 10.0	+14
KMI				LR	LR		
	comp=Z,300nm,21.0s						
KULM	**Kulim**	**116.63**	**85**	PFAKE		22 34 10.0	+14
KULM				LR	LR		
	comp=Z,400nm,22.0s						
IPM	**Ipoh**	**117.01**	**86**	PFAKE		22 34 10.0	+13
IPM				LR	LR		
	comp=Z,400nm,20.0s						
SLVN	**Son La**	**118.20**	**67**	PFAKE		22 34 10.0	+11
SLVN				LR	LR		
	comp=Z,200nm,22.0s						
HHC	**Hu-ho-hao-te**	**118.49**	**43**	PKP	**PKPdf**	**22 34 00.6**	**+1.4**
HIA	**Hailar**	**119.09**	**32**	PFAKE		22 34 10.0	+10
HIA				LR	LR		
	comp=Z,400nm,20.0s						
XAN	**Xi'an**	**119.19**	**51**	PFAKE		22 34 10.0	+9.3
XAN				LR	LR		
	comp=Z,300nm,21.0s						
MYKOM	**Kota Tinggi**	**119.84**	**89**	PFAKE		22 34 10.0	+7.5
MYKOM				LR	LR		
	comp=Z,400nm,21.0s						
ENH	**Enshi**	**120.88**	**55**	PFAKE		22 34 20.0	+16
ENH				LR	LR		
	comp=Z,300nm,21.0s						
MA2	**Magadan**	**121.00**	**8**	PFAKE		22 34 10.0	+6.6
MA2				LR	LR		
	comp=Z,200nm,22.0s						
BJT	**Baijiatuau**	**121.99**	**42**	PFAKE		22 34 20.0	+14
BJT				LR	LR		
	comp=Z,300nm,19.0s						
TAOE	**Nuku Hiva Isla**	**123.47**	**259**	*e*LR	LR	23 12 24.9	
	comp=Z,530nm,27.8s						
DLV	**T Lat**	**123.94**	**77**	PFAKE		22 34 20.0	+9.3
DLV				LR	LR		
	comp=Z,400nm,19.0s						
QIZ	**Qiongzhong**	**124.11**	**68**	PFAKE		22 34 20.0	+9.3
QIZ				LR	LR		
	comp=Z,300nm,19.0s						
KLR	**Kul'dur**	**124.85**	**25**	⇓*i*PKIKP	**PKPdf**	**22 34 09.9**	**-1.1**
KSM	**Kuching**	**126.29**	**89**	PFAKE		22 34 30.0	+15
KSM				LR	LR		
	comp=Z,300nm,21.0s						
MDJ	**Mudanjiang**	**127.22**	**30**	PFAKE		22 34 30.0	+14
MDJ				LR	LR		
	comp=Z,600nm,19.0s						
NJ2	**Nanjing**	**127.63**	**50**	*e*PKP	**PKPdf**	**22 34 17.5**	**+0.7**
PEA0B	**Petropavlovsk-**	**128.12**	**5**	PFAKE		22 34 30.0	+12
PEA0B				LR	LR		
	comp=Z,200nm,19.0s						
SBUM	**Sibu**	**128.21**	**88**	PFAKE		22 34 30.0	+11
SBUM				LR	LR		
	comp=Z,100nm,19.0s						
TBI	**Tubuai**	**128.56**	**239**	*e*LR	LR	23 14 51.7	
	comp=Z,325nm,29.2s						
USA0B	**Ussuriysk Arra**	**128.72**	**29**	PFAKE		22 34 30.0	+11
USA0B				LR	LR		
	comp=Z,500nm,19.0s						
SSE	**Sheshan**	**129.84**	**49**	PFAKE		22 34 30.0	+8.2
SSE				LR	LR		
	comp=Z,400nm,20.0s						
KNMB	**Chin-men Tao**	**130.27**	**59**	PFAKE		22 34 30.0	+7.1
KNMB				LR	LR		
	comp=Z,300nm,20.0s						
PPT2	**Papeete2**	**130.60**	**245**	*e*LR	LR	23 15 44.3	
	comp=Z,553nm,27.2s						
YSS	**Yuzh-Sakhalins**	**130.91**	**19**	PFAKE		22 34 30.0	+6.5
YSS				LR	LR		
	comp=Z,400nm,20.0s						
PSAD2	**Pilbara Seismi**	**131.30**	**121**	PFAKE		22 34 40.0	+15
PSAD2				LR	LR		
	comp=Z,1µm,21.0s						
KKM	**Kota Kinabalu**	**132.07**	**83**	PFAKE		22 34 40.0	+13
KKM				LR	LR		
	comp=Z,300nm,21.0s						
SSLB	**Suanglung**	**132.70**	**58**	PFAKE		22 34 40.0	+12
SSLB				LR	LR		
	comp=Z,200nm,20.0s						
TWG	**Pinlang**	**133.15**	**60**	PFAKE		22 34 40.0	+11
TWG				LR	LR		
	comp=Z,1µm,20.0s						
TAU	**Tasmania Unive**	**133.47**	**163**	PFAKE		22 34 40.0	+11
TAU				LR	LR		
	comp=Z,1µm,19.0s						
WKZ	**Wanaka**	**133.84**	**185**	*e*PKPdf	**PKPdf**	**22 34 27.6**	**-0.7**
ERM	**Erimo**	**135.35**	**22**	PFAKE		22 34 40.0	+7.3
ERM				LR	LR		
	comp=Z,1µm,19.0s						
JOW	**Kunigami**	**137.33**	**50**	PFAKE		22 34 50.0	+13
JOW				LR	LR		
	comp=Z,700nm,22.0s						
MJB9	**Matsu-Tunnel**	**137.58**	**31**	PFAKE		22 34 50.0	+13
MJB9				LR	LR		
	comp=Z,300nm,19.0s						
MAJO	**Matsushiro**	**137.59**	**31**	PFAKE		22 34 50.0	+13
MAJO				LR	LR		
	comp=Z,300nm,20.0s						
INU	**Inuyama**	**137.84**	**34**	PFAKE		22 34 50.0	+12
INU				LR	LR		
	comp=Z,300nm,21.0s						
STKA	**Stephens Creek**	**140.72**	**149**	PKP	**PKPdf**	**22 34 40.7**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=194,slow=8.3,SNR=2.2						
ASAR	**Alice Springs**	**141.60**	**132**	PKhKP	PKPpre	22 34 36.3	
	comp=Z,2.5nm,0.8s,baz=222,slow=2.6,SNR=22						
WRA	**Warramunga Arr**	**144.02**	**128**	PKP	**PKPab**	**22 34 44.9**	**0.0**
	comp=Z,2.6nm,0.7s,baz=225,slow=3.1,SNR=9.4						
WR1	**Warramunga Arr**	**144.02**	**128**	*e*PKPdf	**PKPab**	**22 34 44.9**	**0.0**
WB2	**Warramunga Arr**	**144.03**	**128**	PFAKE		22 35 00.0	+8.9
WB2				LR	LR		
	comp=Z,600nm,18.0s						
DZM	**Mont Dzumac**	**156.63**	**186**	*e*LR	LR	23 27 47.0	
	comp=Z,282nm,22.4s						

BJI 22 22:19:00.8±0.0**, 44.°86N×114.°45E, h7^{km}, Ms3.7**/1**, Ms7 3.5**/1**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HHC	**Hu-ho-hao-te**	**4.54**	**209**	Pn	Pn	22 20 11.5	+1.6
WMQ	**Urumqi**	**19.14**	**276**	*e*P	P	22 23 24.4	-0.1
WMQ				pP	sP	22 23 29.1	+1.1
WMQ				sP	pP	22 23 31.9	+5.0
WMQ				PP	PnPn	22 23 39.6	+1.8
WMQ				LR	LR		
	comp=N,47nm,5.5s						
WMQ				LR	LR		
	comp=E,45nm,4.3s						
WMQ				LR	LR		
	comp=Z,68nm,6.7s						

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*MOS **22** 22:19:03.6±1.0, 1.°28S×16.°02W, h10^{km}, mb5.3/48, MS4.7/15, Error ellipse: s-maj=11.8km s-min=5.8km az=57.8*

*ISCJB **22** 22:19:04.8±0.2, 1.°29S±0.°04×15.°87W±0.°02, h12^{km}, mb4.8/111, MS5.0/240, Error ellipse: s-maj=5.9km s-min=3.4km az=166.1*

*NEIC **22** 22:19:05.3±2.5, 1.°25S×15.°98W, h10^{km}±2^{km}, mb5.3/110, MS5.0/226, Error ellipse: s-maj=14.0km s-min=11.4km az=128.0*

*BJI **22** 22:19:05.0±0.0, 1.°99S×15.°34W, h11^{km}, mb5.4/7, mB5.6/13, Ms5.3/12, Ms7 5.1/11*

*IDC **22** 22:19:05.1±0.4, 1.°27S×15.°82W, h0^{km}, mb4.4/33, mb1 4.5/34, mb1mx4.4/46, mbtmp4.4/34, ML4.0/1, MS4.6/25, Ms1 4.6/25, ms1mx4.4/37, Error ellipse: s-maj=13.1km s-min=10.6km az=136.0*

*GCMT **22** 22:19:08.3±0.1, 1.°17S±0.°01×15.°98W±0.°01, h12^{km}, MW5.3/132, Moment Tensor Solution. s87,c122; s132,c255; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.12±.02; M$_{\theta\theta}$0.00±.02; M$_{\phi\phi}$1.11±.01; M$_{r\theta}$0.04±.05; M$_{\theta\phi}$-0.26±.01; M$_{\phi r}$-0.13±.04; Best double couple: M$_0$1.15100×10^{17} NP1:φ$_s$347.00000°, δ48.00000°, λ-91.00000°. NP2:φ$_s$168.00000°, δ42.00000°, λ-89.00000°. Principal axes: T 1.1740, Plg3.0000°, Azm78.0000°; N -0.0540, Plg1.0000°, Azm348.0000°; P -1.1280, Plg87.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 22:19:06.5±0.3**, 1.°30S**±0.°06×**15.°89W**±0.°06**, h12^{km}, n706,** σ**1^{s}04**/499**, mb5.0**/118**, MS5.0**/240**, 16C-9D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**6.63**	**168**	T	T	22 27 27.2	
	baz=348,slow=74,SNR=324						
H10N3	**ASCENSION HYDR**	**6.64**	**168**	T	T	22 27 24.7	
	baz=348,slow=74,SNR=299						
H10N1	**ASCENSION HYDR**	**6.65**	**168**	T	T	22 27 28.2	
	baz=348,slow=74,SNR=358						
ASCN	**Ascension**	**6.76**	**167**	*e*Pn	**Pn**	**22 20 44.7**	**-0.9**
H10S1	**ASCENSION HYDR**	**7.69**	**171**	T	T	22 28 43.2	
	baz=351,slow=74,SNR=78						
H10S3	**ASCENSION HYDR**	**7.70**	**171**	T	T	22 28 45.1	
	baz=351,slow=74,SNR=370						
H10S2	**ASCENSION HYDR**	**7.71**	**171**	T	T	22 28 47.5	
	baz=351,slow=74,SNR=341						
LIC	**Lamto**	**13.17**	**55**	*e*P	**Pn**	**22 22 15.3**	**+1.7**
	784nm,1.5s						
TIC	**Toumodi**	**13.42**	**54**	*e*P	**Pn**	**22 22 17.9**	**+0.9**
KIC	**Kosan Boka**	**13.48**	**56**	*e*P	**Pn**	**22 22 19.5**	**+1.6**
	1µm,1.5s						
DBIC	**Dimbokro**	**13.56**	**54**	Pn	**Pn**	**22 22 17.0**	**-1.9**
	0.8nm,0.3s,baz=222,slow=15,SNR=22						
DBIC				Sn	Sn	22 24 39.0	-11
	0.4nm,0.3s,baz=131,slow=21,SNR=1.3						
DBIC				LR	LR	22 26 31.8	
	comp=Z,7µm,21.4s,baz=212,slow=33						
DBIC	**Dimbokro**	**13.56**	**54**	*e*Pn	**Pn**	**22 22 17.0**	**-1.9**
DBIC				*e*Sn	**Sn**	**22 24 45.7**	**-4.1**
DBIC	**Dimbokro**	**13.56**	**54**	P	**Pn**	**22 22 19.7**	**+0.8**
DBIC				pmax	pmax		
	comp=Z,141nm,1.6s						
RCBR	**Riachuelo**	**20.47**	**257**	*e*P	**P**	**22 23 42.8**	**-1.6**
	comp=Z,79nm,1.5s						
RCBR				LR	LR		
	comp=Z,3µm,19.0s						
RCBR	**Riachuelo**	**20.47**	**257**	*e*P	**P**	**22 23 42.8**	**-1.6**
RCBR				pmax	pmax		
	comp=Z,79nm,1.5s						
RCBR				MLR	MLR		
	comp=Z,3µm,19.0s						
TOA0	**Torodi Ar. Sit**	**22.59**	**50**	*e*P	**P**	**22 24 06.4**	**-0.8**
	comp=Z,202nm,1.5s						
TORD	**Torodi Ar. Bea**	**22.59**	**50**	P	**P**	**22 24 06.5**	**-0.7**
	comp=Z,27nm,1.1s,baz=206,slow=12,SNR=17						
TORD				LR	LR	22 32 04.7	
	comp=Z,5µm,19.4s,baz=290,slow=35						
TOA1	**Torodi Ar. Sit**	**22.59**	**50**	*e*P	**P**	**22 24 06.5**	**-0.7**
TAM	**Tamanrasset**	**31.76**	**40**	*e*P	**P**	**22 25 29.9**	**-1.2**
	comp=Z,34nm,1.5s						
TAM	**Tamanrasset**	**31.76**	**40**	*e*P	**P**	**22 25 29.9**	**-1.2**
TAM				pmax	pmax		
	comp=Z,35nm,1.5s						
BDFB	**Brasilia**	**34.74**	**244**	P	**P**	**22 25 58.2**	**+1.2**
	comp=Z,1.6nm,0.4s,baz=59,slow=8.2,SNR=3.6						
BDFB				LR	LR	22 38 01.4	
	comp=Z,1µm,20.9s,baz=82,slow=33						
BDFB	**Brasilia**	**34.74**	**244**	*e*P	**P**	**22 25 54.3**	**-2.8**
	comp=Z,33nm,1.6s						
BDFB				*e*P	**P**	**22 25 58.2**	**+1.2**
BDFB	**Brasilia**	**34.74**	**244**	*e*P	**P**	**22 25 54.3**	**-2.8**
BDFB				*e*		22 25 58.2	
BDFB				pmax	pmax		
	comp=Z,33nm,1.6s						
MDT	**Midelt**	**35.57**	**16**	P	**P**	**22 26 04.3**	**+0.4**
	comp=Z,11nm,1.2s,baz=213,slow=5.5,SNR=5.8						
MDT				PP	**PP**	**22 27 25.8**	**+1.0**
	comp=Z,18nm,1.2s,baz=235,slow=9.6,SNR=6.3						
RTC	**Rabat Centre**	**36.12**	**13**	PFAKE		22 26 20.0	+11
RTC				LR	LR		
	comp=Z,6µm,20.0s						
MDP	**Montagnes des**	**37.26**	**280**	P	**P**	**22 26 19.4**	**+0.8**
	comp=Z,5.5nm,0.9s,baz=122,slow=10,SNR=3.2						
TSUM	**Tsumeb**	**37.30**	**121**	P	**P**	**22 26 19.7**	**+0.7**
	comp=Z,3.4nm,0.9s,baz=260,slow=4.8,SNR=5.6						
SFS	**San Fernando**	**38.64**	**13**	PFAKE		22 26 40.0	+10
SFS				LR	LR		
	comp=Z,900nm,19.0s						
MORF	**Marmelete**	**39.00**	**9**	*e*P	**P**	**22 26 31.1**	**-1.9**
PBDV	**Barranco-do-Ve**	**39.06**	**10**	*e*P	**P**	**22 26 34.9**	**+1.5**
	comp=Z,48nm,1.8s						
PVAQ	**Vaqueiros**	**39.25**	**10**	*e*P	**P**	**22 26 36.5**	**+1.5**
	comp=Z,40nm,1.7s						
PVAQ	**Vaqueiros**	**39.25**	**10**	*e*PP	PP	22 28 05.7	+0.5
PCVE	**Castro Verde**	**39.42**	**10**	*e*P	P	22 26 41.4	+5.0
	comp=Z,31nm,2.0s						
PMTG	**Montargil**	**40.79**	**9**	*e*P	**P**	**22 26 48.9**	**+1.2**
	comp=Z,24nm,2.2s						
ALMR	**Almeirim**	**40.82**	**9**	*e*P	P	22 26 53.2	+5.2
	comp=Z,105nm,1.4s						
ALMR	**Almeirim**	**40.82**	**9**	*e*PP	PP	22 28 18.9	-3.3
PMRV	**Marv??o**	**41.28**	**10**	*e*P	**P**	**22 26 53.8**	**+2.0**
	comp=Z,33nm,1.7s						
PCAS	**Casmilo, Conde**	**41.71**	**9**	*e*P	**P**	**22 26 57.0**	**+1.7**
	comp=Z,53nm,1.7s						
PAB	**San Pablo**	**42.01**	**13**	*e*P	**P**	**22 26 56.0**	**-1.9**
	comp=Z,17nm,1.2s						
PAB	**San Pablo**	**42.01**	**13**	*e*P	**P**	**22 26 56.0**	**-1.9**
PAB				pmax	pmax		
	comp=Z,17nm,1.2s						
MTE	**Manteigas**	**42.20**	**10**	*e*P	**P**	**22 27 00.8**	**+1.4**
	comp=Z,26nm,1.2s						
MTE	**Manteigas**	**42.20**	**10**	*e*PP	PP	22 28 38.9	+1.7
MTE	**Manteigas**	**42.20**	**10**	*e*P	**P**	**22 26 58.0**	**-1.3**
	comp=Z,13nm,0.9s						
MTE				LR	LR		
	comp=Z,800nm,20.0s						
ESDC	**Sonseca Array**	**42.22**	**14**	P	**P**	**22 26 59.6**	**0.0**
	comp=Z,0.2nm,0.5s,baz=195,slow=8.4,SNR=4.1						
ESDC				PP	**PP**	**22 28 35.1**	**-2.4**
	comp=Z,0.3nm,0.5s,baz=202,slow=12,SNR=5.3						
ESDC				PcP	**PcP**	**22 28 57.0**	**+3.4**
	comp=Z,1.1nm,0.8s,baz=199,slow=5.2,SNR=5.0						
ESDC				LR	LR	22 44 55.6	
	comp=Z,810nm,19.6s,baz=165,slow=37						
MVO	**Moncorvo**	**43.03**	**10**	*e*P	**P**	**22 27 07.8**	**+1.6**
	comp=Z,34nm,1.5s						
MVO	**Moncorvo**	**43.03**	**10**	*e*PP	PP	22 28 51.4	+5.2
POLO	**Lamas de Olo**	**43.11**	**9**	*e*P	**P**	**22 27 07.7**	**+0.9**
	comp=Z,13nm,1.5s						
KEST	**Kesra**	**43.73**	**30**	P	**P**	**22 27 12.2**	**+0.3**
	comp=Z,11nm,1.1s,baz=310,slow=5.9,SNR=4.4						
KEST				LR	LR	22 46 13.6	
	comp=Z,2µm,20.6s,baz=162,slow=37						
KEST	**Kesra**	**43.73**	**30**	*e*P	**P**	**22 27 11.5**	**-0.4**
	comp=Z,21nm,1.0s						
KEST				LR	LR		
	comp=Z,3µm,19.0s						
PTGA	**Pitinga**	**44.07**	**270**	P	**P**	**22 27 16.8**	**+1.9**
	comp=Z,1.1nm,0.5s,baz=88,slow=10,SNR=3.3						
PTGA				PcP	**PcP**	**22 29 00.4**	**0.0**
	comp=Z,1.1nm,0.3s,baz=119,slow=3.7,SNR=4.0						
LSZ	**Lusaka**	**45.65**	**110**	P	**P**	**22 27 28.1**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=284,slow=8.4,SNR=5.5						
LSZ	**Lusaka**	**45.65**	**110**	*e*P	**P**	**22 27 28.4**	**+0.8**
	comp=Z,26nm,1.6s						
LSZ	**Lusaka**	**45.65**	**110**	*e*P	**P**	**22 27 28.4**	**+0.8**
LSZ				pmax	pmax		
	comp=Z,26nm,1.6s						
SUR	**Sutherland**	**46.35**	**136**	P	**P**	**22 27 32.9**	**-0.1**
	comp=Z,19nm,1.0s,baz=292,slow=10,SNR=7.8						
SUR	**Sutherland**	**46.35**	**136**	*e*P	**P**	**22 27 32.4**	**-0.6**
	comp=Z,108nm,1.8s						
LBTB	**Lobatse**	**46.45**	**124**	P	**P**	**22 27 34.0**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=288,slow=9.2,SNR=6.7						
LBTB	**Lobatse**	**46.45**	**124**	*e*P	**P**	**22 27 33.1**	**-0.7**
	comp=Z,53nm,1.7s						
LBTB	**Lobatse**	**46.45**	**124**	*e*P	**P**	**22 27 33.1**	**-0.7**
LBTB				pmax	pmax		
	comp=Z,53nm,1.7s						
WDD	**Wied Dalam**	**46.58**	**34**	PFAKE		22 27 50.0	+16
WDD				LR	LR		
	comp=Z,1µm,21.0s						
MBAR	**Mbarara**	**46.63**	**90**	*e*P	**P**	**22 27 35.1**	**-0.3**
	comp=Z,59nm,1.3s						
MBAR				LR	LR		
	comp=Z,3µm,20.0s						
MBAR	**Mbarara**	**46.63**	**90**	*e*P	**P**	**22 27 35.1**	**-0.3**
MBAR				pmax	pmax		
	comp=Z,59nm,1.3s						
MBAR				MLR	MLR		
	comp=Z,3µm,20.0s						
SIV	**San Ignacio**	**46.85**	**249**	P	**P**	**22 27 38.6**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=78,slow=12,SNR=2.9						
CPUP	**Villa Florida**	**46.96**	**234**	LR	LR	22 44 46.5	
	comp=Z,2µm,21.8s,baz=66,slow=33						
MCLT	**Moule a Chique**	**47.07**	**290**	PFAKE		22 27 50.0	+11
MCLT				LR	LR		
	comp=Z,700nm,20.0s						
CLTB	**Caltabellotta**	**47.13**	**32**	*e*P	**P**	**22 27 38.9**	**0.0**
	comp=Z,50nm,1.4s						
CLTB				LR	LR		
	comp=Z,2µm,18.0s						
H05S1	**Guadeloupe/Mar**	**47.16**	**291**	T	T	23 18 07.6	
	SNR=17						
BOSA	**Boshof**	**47.73**	**129**	P	**P**	**22 27 44.0**	**+0.2**
	comp=Z,7.0nm,0.5s,baz=305,slow=8.0,SNR=39						
BOSA				LR	LR	22 44 18.6	
	comp=Z,510nm,21.1s,baz=288,slow=32						
BOSA	**Boshof**	**47.73**	**129**	*e*P	**P**	**22 27 44.1**	**+0.4**
	comp=Z,105nm,1.9s						
BOSA	**Boshof**	**47.73**	**129**	*e*P	**P**	**22 27 44.1**	**+0.4**
BOSA				pmax	pmax		
	comp=Z,105nm,1.9s						
LFF	**La Frestale**	**48.36**	**16**	*e*P	P	22 27 53.2	+5.0
LFF				pmax	pmax		
	comp=Z,18nm,1.1s						
MFF	**Saint Martin d**	**49.68**	**14**	*e*P	**P**	**22 27 59.1**	**+0.9**
MFF				pmax	pmax		
	comp=Z,39nm,1.7s						
SSB	**Saint Sauveur**	**49.80**	**19**	PFAKE		22 28 10.0	+11
SSB				LR	LR		
	comp=Z,700nm,20.0s						
TIP	**Timpagrande**	**50.20**	**33**	*e*P	**P**	**22 28 03.1**	**+0.7**
	comp=Z,48nm,1.6s						
TIP				LR	LR		
	comp=Z,1µm,19.0s						
TIP	**Timpagrande**	**50.20**	**33**	⇑*i*P	**P**	**22 28 03.3**	**+0.8**
SMRT	**St. Maarten**	**50.25**	**295**	PFAKE		22 28 10.0	+6.9
SMRT				LR	LR		
	comp=Z,1µm,22.0s						
BNI	**Bardonecchia**	**50.32**	**21**	*e*P	**P**	**22 28 02.1**	**-1.3**
	comp=Z,74nm,2.0s						
BNI				LR	LR		
	comp=Z,900nm,18.0s						
BNI	**Bardonecchia**	**50.32**	**21**	*e*P	**P**	**22 28 02.1**	**-1.3**
BNI				pmax	pmax		
	comp=Z,75nm,2.0s						
BNI				MLR	MLR		
	comp=Z,900nm,18.0s						
LPL	**La Plagne**	**50.74**	**20**	*e*P	**P**	**22 28 08.7**	**+2.1**
LPL				pmax	pmax		
	comp=Z,17nm,1.4s						
AQU	**L'Aquila**	**50.87**	**28**	PFAKE		22 28 20.0	+13
AQU				LR	LR		
	comp=Z,2µm,20.0s						
CLF	**Chambon-Foret**	**51.61**	**15**	*e*P	**P**	**22 28 11.6**	**-1.2**
	comp=Z,26nm,1.1s						
CLF				LR	LR		
	comp=Z,700nm,22.0s						
SENIN	**Lac Senin/Sane**	**51.68**	**20**	PFAKE		22 28 20.0	+6.4
SENIN				LR	LR		
	comp=Z,900nm,20.0s						
TUE	**Stuetta**	**52.51**	**22**	PFAKE		22 28 30.0	+10
TUE				LR	LR		
	comp=Z,800nm,18.0s						
DAVOX	**Davos/Dischmat**	**52.96**	**22**	P	**P**	**22 28 23.6**	**+0.4**
	baz=263,slow=8.1						
FUORN	**Ofenpass-Fuorn**	**52.97**	**22**	PFAKE		22 28 30.0	+6.7
FUORN				LR	LR		
	comp=Z,900nm,19.0s						
KMBO	**Kilima Mbogo**	**53.13**	**90**	*e*P	**P**	**22 28 23.7**	**-1.3**
	comp=Z,47nm,1.6s						
KMBO				LR	LR		
	comp=Z,3µm,19.0s						
KMBO	**Kilima Mbogo**	**53.13**	**90**	*e*P	**P**	**22 28 23.7**	**-1.3**
KMBO				pmax	pmax		
	comp=Z,47nm,1.6s						
KMBO				MLR	MLR		
	comp=Z,3µm,19.0s						
ECH	**Echery**	**53.24**	**19**	*e*P	**P**	**22 28 24.4**	**-0.5**
	comp=Z,53nm,2.0s						
ECH				LR	LR		
	comp=Z,800nm,18.0s						
ECH	**Echery**	**53.24**	**19**	*e*P	**P**	**22 28 24.4**	**-0.5**
ECH				pmax	pmax		
	comp=Z,53nm,2.0s						
ECH				MLR	MLR		
	comp=Z,800nm,18.0s						
AGG	**Agios Georgios**	**53.30**	**37**	PFAKE		22 28 40.0	+14
AGG				LR	LR		
	comp=Z,1µm,20.0s						
DAVA	**Damuels**	**53.39**	**22**	*i* P	**P**	**22 28 26.1**	**-0.2**
	comp=Z,20nm,1.3s						

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TIR   Tirane            53.42  33   PFAKE            22 28 40.0  +14
TIR                                 LR       LR
      comp=Z,900nm,20.0s
FETA  Feichten          53.48  22 i P        P       22 28 27.3 +0.3
      comp=Z,22nm,2.0s
LPAZ  La Paz            53.54 251   P        P       22 28 29.0 +0.6
      comp=Z,0.9nm,0.8s,baz=67,slow=8.3,SNR=3.7
LPAZ                                LR       LR      22 50 38.4
      comp=Z,2µm,18.9s,baz=90,slow=35
LPAZ  La Paz            53.54 251  eP        P       22 28 25.9 -2.5
      comp=Z,17nm,1.6s
LPAZ  La Paz            53.54 251  eP        P       22 28 25.9 -2.5
LPAZ                                pmax     pmax
      comp=Z,17nm,1.6s
TRI   Trieste           53.65  25   PFAKE            22 28 40.0  +12
TRI                                 LR       LR
      comp=Z,800nm,19.0s
BFO   Black Forest      53.73  20  eP        P       22 28 27.3 -1.2
      comp=Z,37nm,1.5s
BFO                                 LR       LR
      comp=Z,600nm,19.0s
BFO   Black Forest      53.73  20  eP        P       22 28 27.3 -1.2
BFO                                 pmax     pmax
      comp=Z,37nm,1.5s
BFO                                 MLR      MLR
      comp=Z,600nm,19.0s
SQTA  Sankt Quirin      53.83  23 i P        P       22 28 30.1 +0.6
      comp=Z,21nm,1.4s
TTG   Podgorica         53.84  32   PFAKE            22 28 40.0  +11
TTG                                 LR       LR
      comp=Z,1µm,21.0s
RETA  Reutte            53.88  22 i P        P       22 28 29.4 -0.4
      comp=Z,24nm,1.9s
MOTA  Moosalm           53.90  22 i pP       P       22 28 32.5 +2.5
      comp=Z,3.3nm,0.8s
ABTA  Abfaltersbach     53.96  24 i pP       P       22 28 32.1 +1.8
      comp=Z,21nm,1.6s
WTTA  Wattenberg        54.03  23 i P        P       22 28 30.9 -0.1
      comp=Z,20nm,1.5s
WATA  Walderalm         54.07  23 i P        P       22 28 32.0 +0.8
      comp=Z,12nm,1.4s
LIT   Litokhoron        54.08  36   PFAKE            22 28 40.0 +8.7
LIT                                 LR       LR
      comp=Z,900nm,21.0s
DOU   Dourbes           54.13  16 ⇑P         P       22 28 31.9 +0.5
WLF   Walferdange       54.20  17 ⇑P         P       22 28 33.3 +1.4
MYKA  Terra Mystica     54.33  25 i pP       P       22 28 34.9 +1.9
      comp=Z,22nm,1.7s
KARP  Karpathos         54.36  43   PFAKE            22 28 40.0 +6.6
KARP                                LR       LR
      comp=Z,1µm,22.0s
STU   Stuttgart         54.40  20   PFAKE            22 28 40.0 +6.6
STU                                 LR       LR
      comp=Z,800nm,19.0s
SNF   Seneffe           54.42  16 ⇑P         P       22 28 33.2 -0.3
BLY   Banja Luka        54.47  29   PFAKE            22 28 50.0  +16
BLY                                 LR       LR
      comp=Z,2µm,19.0s
KBA   Koelnbreinsper    54.57  24 i pP       P       22 28 36.3 +1.5
      comp=Z,15nm,1.4s
OBKA  Obir              54.62  25 i P        P       22 28 36.2 +1.0
      comp=Z,14nm,1.8s
BCLA  Clavier           54.62  16 ⇑P         P       22 28 41.5 +6.5
UCC   Uccle             54.71  16   PFAKE            22 28 50.0  +14
UCC                                 LR       LR
      comp=Z,600nm,20.0s
SOKA  Soboth            54.96  26 i pP       P       22 28 39.1 +1.5
      comp=Z,18nm,1.8s
MOA   Molln             55.56  24 i P        P       22 28 40.9 -0.9
      comp=Z,4.4nm,1.3s
ARSA  Arzberg           55.62  25 i P        P       22 28 43.4 +1.1
      comp=Z,4.4nm,1.1s
GRA1  Grafenberg Arr    55.89  21   PFAKE            22 29 00.0  +16
GRA1                                LR       LR
      comp=Z,500nm,19.0s
GEC2  GERESS Array S    56.13  23  eP        P       22 28 45.8 -0.2
      comp=Z,79nm,1.9s
GEC2                                LR       LR
      comp=Z,700nm,18.0s
GEC2  GERESS Array S    56.13  23  eP        P       22 28 45.8 -0.2
GEC2                                pmax     pmax
      comp=Z,79nm,1.9s
GEC2                                MLR      MLR
      comp=Z,700nm,18.0s
GERES GERESS Array B    56.13  23   P        P       22 28 46.0  0.0
      comp=Z,1.0nm,0.7s,baz=193,slow=5.5,SNR=7.5
GERES                               PP       PP      22 30 50.0 -1.2
      comp=Z,0.8nm,0.7s,baz=202,slow=7.1,SNR=3.9
GERES                               LR       LR      22 55 06.1
      comp=Z,654nm,18.4s,baz=232,slow=38
CONA  Conrad Observa    56.29  25 i P        P       22 28 47.6 +0.5
      comp=Z,19nm,1.6s
KHC   Kasperske Hory    56.31  23  eP        P       22 28 46.5 -0.7
      comp=Z,8.8nm,1.5s
KHC                                 LR       LR
      comp=Z,300nm,20.0s
KHC   Kasperske Hory    56.31  23  eP        P       22 28 46.5 -0.7
KHC                                 pmax     pmax
      comp=Z,9.0nm,1.5s
KHC                                 MLR      MLR
      comp=Z,300nm,20.0s
KHC   Kasperske Hory    56.31  23  eP        P       22 28 47.5 +0.3
KHC                                ex        x       22 28 53.4
ALN   Alexandroupoli    56.70  37   PFAKE            22 29 00.0  +10
ALN                                 LR       LR
      comp=Z,400nm,20.0s
MDVR  Moldovita         56.76  31⇑iP         P       22 28 51.8 +1.3
GO02  Mina Guanaco      56.91 241   PFAKE            22 29 00.0 +7.7
GO02                                LR       LR
      comp=Z,2µm,19.0s
ZST   Bratislava        57.03  26  eP        P       22 28 52.7 +0.4
ZST   Bratislava        57.03  26  eP        P       22 28 52.7 +0.4
TREC  Trest             57.20  24  eP        P       22 28 59.6 +6.1
TREC  Trest             57.20  24  eP        P       22 28 59.6 +6.1
MODS  Modra-Piesok      57.24  26  eP        P       22 28 53.5 -0.3
MODS                                pmax     pmax
      comp=Z,94nm,2.3s
MODS  Modra-Piesok      57.24  26  eP        P       22 28 53.5 -0.3
PRU   Pruhonice         57.37  23  eP        P       22 28 54.8 +0.1
PRU   Pruhonice         57.37  23  eP        P       22 28 54.8 +0.1
ESK   Eskdalemuir       57.38   9  eP        P       22 28 53.4 -1.3
      comp=Z,32nm,1.4s
ESK                                 LR       LR
      comp=Z,500nm,22.0s
ESK   Eskdalemuir       57.38   9  eP        P       22 28 53.4 -1.3
ESK                                 pmax     pmax
      comp=Z,32nm,1.4s
ESK                                 MLR      MLR
      comp=Z,500nm,22.0s
KRUC  Moravsky          57.39  25  eP        P       22 28 54.5 -0.3
EKA   Eskdalemuir Ar    57.41   9   P        P       22 28 54.9  0.0
      comp=Z,1.5nm,0.6s,baz=193,slow=7.0,SNR=9.8
VRAC  Vranov            57.66  25   P        P       22 28 56.6 -0.2
      comp=Z,1.2nm,0.3s,baz=216,slow=7.9,SNR=4.2
VRAC  Vranov            57.66  25   P        P       22 28 57.0 +0.2
VRAC                                pmax     pmax
      comp=Z,7.0nm,1.2s
VRAC  Vranov            57.66  25  eP        P       22 28 57.8 +1.0
GZR   Gura Zlata        57.72  31⇑iP         P       22 28 57.6 +0.3
SIRR  Siria             57.75  30⇑iP         P       22 28 57.5  0.0
CFA   Coronel Fontan    57.80 233   P        P       22 28 58.5 +0.4
      comp=Z,2.5nm,0.6s,baz=40,slow=8.2,SNR=4.5
ISP   Isparta           57.85  43   PFAKE            22 29 10.0  +12
ISP                                 LR       LR
      comp=Z,400nm,20.0s
BRG   Berggiesshubel    57.86  22  eP        P       22 28 58.3 +0.2
      comp=Z,13nm,1.8s
BRG                                ePP       PP      22 31 11.3 +4.9
      comp=Z,13nm,1.6s
      comp=N,502nm,16.7s
      comp=E,404nm,13.1s
      comp=Z,502nm,16.7s
CLL   Collm             57.87  21   PFAKE            22 29 10.0  +12
CLL                                 LR       LR
      comp=Z,600nm,19.0s
CLL   Collm             57.87  21 i P        P       22 28 58.3 +0.2
CLL                               i                  22 29 03.1
CLL                                eS        S       22 36 57.0 -0.6
CLL                                 pmax     pmax
      comp=Z,48nm,2.1s
VYHS  Vyhne             58.01  27  eP        P       22 28 59.8 +0.5
VYHS                                pmax     pmax
      comp=Z,33nm,1.8s
VYHS  Vyhne             58.01  27  eP        P       22 28 59.8 +0.5
PSZ   Piszkesteto       58.07  28  eP        P       22 29 00.1 +0.4
      comp=Z,43nm,1.5s
PSZ                                 LR       LR
      comp=Z,900nm,18.0s
PSZ   Piszkesteto       58.07  28  eP        P       22 29 00.2 +0.4
PSZ                                 pmax     pmax
      comp=Z,43nm,1.5s
PSZ                                 MLR      MLR
      comp=Z,900nm,18.0s
DPC   Dobruska-Polom    58.36  24  eP        P       22 29 01.7  0.0
DPC                                e                 22 29 08.1
DPC   Dobruska-Polom    58.36  24  eP        P       22 29 01.7  0.0
DPC                                ex        x       22 29 08.1
UPC   Upice             58.36  23  eP        P       22 29 06.6 +5.0
UPC   Upice             58.36  23  eP        P       22 29 06.6 +5.0
MORC  Moravsky Berou    58.42  25  eP        P       22 29 01.6 -0.5
      comp=Z,45nm,1.7s
MORC  Moravsky Berou    58.42  25  eP        P       22 29 01.6 -0.5
MORC                                pmax     pmax
      comp=Z,45nm,1.7s
MORC  Moravsky Berou    58.42  25  eP        P       22 29 01.3 -0.8
CSS   Mathiatis         58.44  47   PFAKE            22 29 10.0 +7.5
CSS                                 LR       LR
      comp=Z,500nm,22.0s
OSTC  Ostas             58.48  23  eP        P       22 29 02.8 +0.3
OSTC                               ex        x       22 29 09.5
DRGR                    58.64  30   P        P       22 29 04.1 +0.4
DRGR                                pmax     pmax
      comp=Z,23nm,1.3s
ARR   Arges             58.69  32⇑iP         P       22 29 04.3 +0.2
ROSC  El Rosal          58.69 276   P        P       22 29 06.3 +1.2
      comp=Z,6.2nm,0.3s,baz=137,slow=14,SNR=5.6
ROSC                                LR       LR      22 51 18.6
      comp=Z,2µm,21.0s,baz=100,slow=33
ROSC  El Rosal          58.69 276  eP        P       22 29 02.8 -2.2
      comp=Z,68nm,1.8s
ROSC                                LR       LR
      comp=Z,700nm,22.0s
KSP   Ksiaz             58.74  23  eP        P       22 29 04.6 +0.4
KSP   Ksiaz             58.74  23  eP        P       22 29 04.6 +0.4
LANS  Liptovska Anna    58.78  26  eP        P       22 29 05.8 +1.2
LANS                                pmax     pmax
      comp=Z,12nm,1.8s
LANS  Liptovska Anna    58.78  26  eP        P       22 29 05.8 +1.2
VOIR                    58.96  33⇑iP         P       22 29 06.9 +0.9
NIE   Niedzica          59.35  27  eP        P       22 29 09.9 +1.3
NIE   Niedzica          59.35  27  eP        P       22 29 09.9 +1.3
MLR   Muntele Rosu      59.48  33   P        P       22 29 10.1 +0.5
      comp=Z,21nm,1.2s,baz=263,slow=5.0,SNR=9.0
MLR   Muntele Rosu      59.48  33   PFAKE            22 29 20.0  +10
MLR                                 LR       LR
      comp=Z,1µm,20.0s
MLR   Muntele Rosu      59.48  33⇓iP         P       22 29 11.2 +1.6
TRPA  Tarpa             59.48  29⇓iP         P       22 29 09.8 +0.4
DOPR  Dopca             59.48  32⇑iP         P       22 29 09.5  0.0
UZH   Uzhgorod          59.71  28  eP        P       22 29 18.3 +7.3
UZH                                i                 22 29 21.4
UZH                                eS        S       22 37 30.7 +9.1
UZH                                 MLR      MLR
      comp=N,90nm,17.0s
UZH                                 MLR      MLR
      comp=E,130nm,17.0s
UZH                                 MLR      MLR
      comp=Z,80nm,17.0s
OJC   Ojcow             59.72  26  eP        P       22 29 11.6 +0.6
OJC   Ojcow             59.72  26  eP        P       22 29 11.6 +0.6
ATD   Arta Tunnel       59.73  76   PFAKE            22 29 20.0 +8.1
ATD                                 LR       LR
      comp=Z,600nm,19.0s
OZUR                    59.77  32⇑iP         P       22 29 12.3 +0.7
KOLS  Kolonicke sedl    59.91  28  eP        P       22 29 13.2 +0.8
KOLS                                pmax     pmax
      comp=Z,41nm,1.7s
KOLS  Kolonicke sedl    59.91  28  eP        P       22 29 13.2 +0.8
PLOR  Plostina          60.09  33⇓iP         P       22 29 14.6 +0.9
PLOR  Plostina          60.09  33   P        P       22 29 14.6 +0.9
VRI   Vrincioaia        60.14  33⇓iP         P       22 29 13.7 -0.3
VRI   Vrincioaia        60.14  33   P        P       22 29 14.2 +0.2
VRI                                 pmax     pmax
      comp=Z,30nm,1.9s
TIRR  Tirgusor          60.23  35   PFAKE            22 29 30.0  +15
TIRR                                LR       LR
      comp=Z,1µm,20.0s
ANTO  Ankara            60.42  42  eP        P       22 29 15.6 -0.6
      comp=Z,36nm,1.4s
ANTO  Ankara            60.42  42  eP        P       22 29 15.6 -0.6
ANTO                                pmax     pmax
      comp=Z,36nm,1.4s
BURAR Bucovina Array    60.46  31⇑iP         P       22 29 17.0 +0.7
BUR08 Bucovina Ar. S    60.47  31  eP        P       22 29 17.0 +0.6
      comp=Z,39nm,1.6s
BIZ   Bicaz             60.48  32⇓iP         P       22 29 17.0 +0.6
KWP   Kalwaria Pacla    60.60  28   PFAKE            22 29 30.0  +13
KWP                                 LR       LR
      comp=Z,6µm,20.0s
RGN   Rugen             60.66  19   PFAKE            22 29 30.0  +13
RGN                                 LR       LR
      comp=Z,600nm,18.0s
BR131 Keskin Array S    60.92  42  eP        P       22 29 20.1 +0.4
      comp=Z,26nm,1.2s
BRTR  Keskin Array B    60.92  42   P        P       22 29 20.4 +0.7
      comp=Z,11nm,1.1s,baz=227,slow=6.6,SNR=19
BRTR  Keskin Array B    60.92  42 i P        P       22 29 20.3 +0.6
BRTR                                pmax     pmax
      comp=Z,11nm,1.1s
GKP   Gorka Klasztor    61.00  22  eP        P       22 29 20.8 +1.1
GKP   Gorka Klasztor    61.00  22  eP        P       22 29 20.8 +1.1
LVV   L'vov             61.35  28  eP        P       22 29 21.8 -0.4
ILGA  Ilgaz             61.63  41  eP        P       22 29 25.1 +0.6
      comp=Z,56nm,1.4s
KIS   Kishinev          61.97  33  eP        P       22 29 25.0 -1.4
KIS   Kishinev          61.97  33  eP        P       22 29 25.0 -1.4
KIS                                e                 22 29 32.0
KIS                                e                 22 30 11.0
HAL   Halifax           62.32 323  eP        P       22 29 27.3 -1.5
      comp=Z,59nm,1.7s
HAL   Halifax           62.32 323  eP        P       22 29 27.3 -1.5
HAL                                 pmax     pmax
      comp=Z,59nm,1.7s
PLCA  Paso Flores       62.99 224   LR       LR      22 52 42.8
      comp=Z,496nm,21.8s,baz=90,slow=32
LMN   Caledonia Moun    63.70 324  eP        P       22 29 36.9 -1.2
      comp=Z,63nm,1.6s
SUW   Suwalki           63.91  24  eP        P       22 29 39.1  0.0
SUW   Suwalki           63.91  24  eP        P       22 29 38.5 -0.6
      comp=Z,68nm,1.2s
SUW                                 LR       LR
      comp=Z,500nm,18.0s
SUW   Suwalki           63.91  24  eP        P       22 29 38.5 -0.6
SUW                                 pmax     pmax
      comp=Z,68nm,1.2s
SUW                                 MLR      MLR
      comp=Z,500nm,18.0s
KONO  Kongsberg         63.97  14   PFAKE            22 29 50.0  +11
KONO                                LR       LR
      comp=Z,500nm,19.0s
AKASG Malin Array Be    64.45  30   P        P       22 29 42.4 -0.4
      comp=Z,5.2nm,1.0s,baz=231,slow=6.5,SNR=14
AKASG                               LR       LR      22 59 14.4
      comp=Z,614nm,20.8s,baz=250,slow=37
RAYN  Ar Rayn           64.51  63  eP        P       22 29 44.0 +0.2
      comp=Z,34nm,1.5s
RAYN                                LR       LR
      comp=Z,600nm,21.0s
RAYN  Ar Rayn           64.51  63  eP        P       22 29 44.0 +0.2
RAYN                                pmax     pmax
      comp=Z,34nm,1.5s
RAYN                                MLR      MLR
      comp=Z,600nm,21.0s
HFS   Hagfors           65.44  16   P        P       22 29 49.2 +0.1
      comp=Z,2.7nm,0.9s,baz=182,slow=7.3,SNR=5.6
HFS                                 LR       LR      23 01 01.1
      comp=Z,288nm,18.2s,baz=218,slow=38
NB2   NORSAR Subarra    65.58  14   P        P       22 29 49.9 -0.1
      comp=Z,30nm,1.7s,baz=212,slow=6.9
NB2   NORSAR Subarra    65.58  14   P        P       22 29 49.9 -0.1
      baz=212,slow=6.9
NOA   NORSAR Array B    65.58  14   P        P       22 29 50.0  0.0
      comp=Z,1.3nm,0.8s,baz=208,slow=6.8,SNR=3.4
NOA                                 LR       LR      22 58 50.7
      comp=Z,353nm,21.3s,baz=210,slow=36
IIGN  Ignalina          66.11  25  eP        P       22 29 53.7 +0.3
IIGN                                IAmb     IAmb    22 30 02.6
      comp=Z,15nm,1.3s
ISAL  Salakas           66.22  25  eP        P       22 29 54.6 +0.5
ISAL                                IAmb     IAmb    22 30 03.0
      comp=Z,14nm,1.2s
MICGM Minsk             66.25  26  e         P       22 29 53.0 -1.4
MICGM                              eLR       LR      22 53 40.0
MNK   Minsk             66.25  26  eP        P       22 29 53.0 -1.4
IZAR  Zarasai           66.39  24  eP        P       22 29 55.5 +0.2
SOC   Sochi             66.74  41  eP        P       22 29 56.6 -1.2
SOC                                e                 22 32 22.4
SOC                                eS        S       22 38 51.1 +1.4
SOC                                eSS       SS      22 43 12.3 +4.6
SOC                                 MLR      MLR
      comp=Z,171nm,17.0s
LBNH  Lisbon            67.31 320   P        P       22 30 01.9 +0.5
      baz=116
M61A  Granite Spring    67.32 316   P        P       22 30 00.9 -0.6
      baz=114
AKH   Akhalkalaki       68.40  44   PFAKE            22 30 20.0  +11
AKH                                 LR       LR
      comp=Z,400nm,20.0s
M59A  Waymart           68.56 316   P        P       22 30 08.8 -0.5
      baz=112
N59A  State Game Lan    68.56 315   P        P       22 30 10.1 +0.7
      baz=112
P59A  Jarrettsville     68.56 314   P        P       22 30 09.9 +0.6
      baz=111
GNI   Garni             68.82  46⇓eP         P       22 30 13.7 +2.5
GNI                                 pmax     pmax
      comp=Z,27nm,1.1s
KIV   Kislovodsk        68.85  41  eP        P       22 30 10.9 -0.3
      comp=Z,41nm,1.4s
KIV                                ePP       PP      22 32 44.6 +1.2
KIV   Kislovodsk        68.85  41  eP        P       22 30 10.1 -1.1
KIV                                 pmax     pmax
      comp=Z,68nm,1.1s
KBZ   Khabaz            68.90  42   P        P       22 30 11.8 +0.5
      comp=Z,8.1nm,0.9s,baz=198,slow=0.8,SNR=8.6
KBZ                                 LR       LR      23 04 54.4
      comp=Z,213nm,18.6s,baz=253,slow=40
L58A  Harry Jones Me    69.04 316   P        P       22 30 12.2 -0.1
      baz=112
BINY  Binghamton        69.19 316   P        P       22 30 12.2 -1.0
      baz=112
LONY  Lake Ozonia       69.19 319   P        P       22 30 12.7 -0.6
      baz=114
N58A  Sunbury           69.20 315   P        P       22 30 13.8 +0.5
      baz=111
ESPN  Las Esperanzas    69.21 283   PFAKE            22 30 20.0 +6.2
ESPN                                LR       LR
      comp=Z,200nm,18.0s
M58A  Price’s Panora    69.22 315   P        P       22 30 14.1 +0.7
      baz=112
LATQ  La Tuque          69.23 323   P        P       22 30 13.8 +0.4
      baz=116
R58A  Rapidan           69.27 312   P        P       22 30 13.5 -0.3
      baz=109
NCK   Nalchik           69.27  42⇑eP         P       22 30 14.6 +0.9
NCK                                 pmax     pmax
      comp=Z,13nm,1.0s
V58A  Windy Hill, Pi    69.33 309   P        P       22 30 13.6 -0.6
      baz=108
658A  Bunnell           69.36 302   PFAKE            22 30 20.0 +5.5
658A                                LR       LR
      comp=Z,700nm,21.0s
NHSC  New Hope          69.40 306   P        P       22 30 14.3 -0.5
      baz=106
VNA1  Neumayer--Stat    69.42 177   P        P       22 30 14.9 +0.9
R57A  Stanardsville     69.66 312   P        P       22 30 16.2  0.0
      baz=109
U57A  Blanch            69.69 310   P        P       22 30 16.7 +0.3
      baz=108
SCHQ  Schefferville     69.75 331   LR       LR      22 56 32.1
      comp=Z,342nm,19.4s,baz=132,slow=32
N57A  Milroy            69.77 315   P        P       22 30 17.0 +0.2
      baz=110
T57A  Hurt              69.80 310   P        P       22 30 15.9 -1.2
      baz=108
S57A  Dark Hollow, R    69.81 311   P        P       22 30 17.7 +0.6
      baz=108
Q57A  Strasburg         69.81 313   P        P       22 30 17.9 +0.8
      baz=109
V57A  Coltrane Farms    69.87 309   P        P       22 30 17.7 +0.1
      baz=107
457A  Yulee             69.90 303   P        P       22 30 17.0 -0.8
      baz=104
VNA3  Neumayer Olymp    69.95 178   P        P       22 30 17.5 +0.1
VSR   Storozhevoye      69.97  33  eP        P       22 30 16.8 -1.0
VSR                                 pmax     pmax
      comp=Z,70nm,1.9s
VSR                                 MLR      MLR
      comp=Z,380nm,14.0s
SSPA  Standing Stone    69.97 314   P        P       22 30 18.9 +0.8
      baz=110
ORIO  Orleans, Innes    70.13 320   P        P       22 30 19.6 +0.7
      baz=114
P56A  Dayton Farm, R    70.28 313   P        P       22 30 20.8 +0.8
      baz=109
FINES FINESS Array B    70.28  20   P        P       22 30 19.7 +0.2
      comp=Z,1.9nm,0.5s,baz=215,slow=4.2,SNR=18
FINES                               LR       LR      23 03 18.3
      comp=Z,208nm,18.3s,baz=232,slow=38
H56A  Elgin             70.28 319   P        P       22 30 20.5 +0.6
      baz=113
W56A  Indian Trail      70.28 308   P        P       22 30 21.1 +1.0
      baz=106
O56A  Blue Knob Stat    70.33 314   P        P       22 30 21.1 +0.7
      baz=110
R56A  Bull Pasture M    70.35 312   P        P       22 30 21.5 +1.0
      baz=108
N56A  West Decatur      70.35 315   P        P       22 30 20.6 +0.1
      baz=110
Q56A  Snyder Ridge,     70.39 312   P        P       22 30 21.9 +1.2
      baz=109
T56A  Rocky Mt          70.40 310   P        P       22 30 21.9 +1.0
      baz=107
V56A  Mocksville        70.41 309   P        P       22 30 21.2 +0.4
      baz=107
X56A  White Oak         70.46 307   P        P       22 30 21.9 +0.7
      baz=106
M56A  Emporium          70.47 315   P        P       22 30 20.0 -1.1
      baz=110
U56A  King              70.47 309   P        P       22 30 22.0 +0.8
      baz=107
LPSR  Galich'ya Gora    70.52  32  eP        P       22 30 19.8 -1.4
LPSR                                pmax     pmax
      comp=Z,20nm,1.0s
LPSR                                MLR      MLR
      comp=Z,360nm,18.0s
OBN   Obninsk           70.64  29   LR       LR      23 03 57.4
      comp=Z,135nm,18.3s,baz=199,slow=38
OBN   Obninsk           70.64  29   PFAKE            22 30 30.0 +8.2
OBN                                 LR       LR
      comp=Z,900nm,21.0s
OBN   Obninsk           70.64  29⇑iP         P       22 30 21.1 -0.7
OBN                                i                 22 30 28.1
OBN                                i                 22 33 04.6
OBN                                 pmax     pmax
      comp=Z,10.0nm,1.1s
OBN                                 MLR      MLR
      comp=Z,603nm,17.0s
GROC  Groznyy           70.65  43  eP        P       22 30 19.0 -3.2
GROC                               e                 22 30 40.8
GROC                               eS        S       22 39 36.6 +0.4
GROC                                pmax     pmax
      comp=Z,24nm,1.0s
SNAA  Sanae             70.76 176   P        P       22 30 22.6 +0.2
SNAA  Sanae             70.76 176   P        P       22 30 22.7 +0.3
      comp=Z,6.5nm,1.1s,baz=346,slow=4.8,SNR=7.5
SNAA  Sanae             70.76 176  eP        P       22 30 21.9 -0.5
      comp=Z,25nm,1.2s
SNAA  Sanae             70.76 176  eP        P       22 30 21.9 -0.5
SNAA                                pmax     pmax
      comp=Z,25nm,1.2s
N55A  Marion Center     70.80 314   P        P       22 30 23.2  0.0
      baz=109
G55A  Calabogie         70.84 319   P        P       22 30 22.9 -0.4
      baz=113
O55A  Ligonier          70.84 314   P        P       22 30 24.0 +0.5
      baz=109
R55A  Marlinton         70.84 311   P        P       22 30 23.3 -0.3
      baz=108
M55A  Ridgway           70.87 315   P        P       22 30 22.0 -1.6
      baz=110
KMSC  Kings Mountain    70.88 308   P        P       22 30 24.3 +0.6
      baz=106
H55A  Tweed             70.88 318   P        P       22 30 23.6 +0.1
      baz=112
L55A  Hinsdale          70.89 316   P        P       22 30 23.7  0.0
      baz=110
X55A  Gracelyn & Ava    70.94 307   P        P       22 30 24.9 +0.8
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	baz=105						
Y55A	Saluda	70.98	307	P	P	22 30 24.9	+0.6
	baz=105						
S55A	Lewisburg	70.98	311	P	P	22 30 25.0	+0.6
	baz=107						
V55A	Taylorsville	70.98	309	P	P	22 30 25.0	+0.6
	baz=106						
T55A	Pulaski	71.00	310	P	P	22 30 24.9	+0.3
	baz=107						
U55A	TA2, Sparta	71.03	309	P	P	22 30 25.6	+0.8
	baz=106						
Q55A	Buckhannon	71.03	312	P	P	22 30 25.7	+1.1
	baz=108						
655A	Horseshoe Beac	71.08	302	P	P	22 30 25.8	+0.8
	baz=103						
I55A	Frankford	71.09	318	P	P	22 30 25.5	+0.7
	baz=112						
155A	Kite	71.14	305	P	P	22 30 26.1	+0.8
	baz=104						
DELO	Deloro Mine	71.16	318	PFAKE		22 30 40.0	+15
DELO				LR	LR		
	comp=Z,1μm,19.0s						
DELO	Deloro Mine	71.16	318	P	P	22 30 25.6	+0.3
	baz=112						
K54A	Basiliko Farm,	71.21	316	P	P	22 30 26.2	+0.6
	baz=110						
SUF	Sumiainen	71.21	19	P	P	22 30 25.7	+0.5
SUF				pmax	pmax		
	comp=Z,34nm,1.7s						
CHGQ	Chibougamau	71.30	324	P	P	22 30 26.1	+0.1
	baz=116						
PEMO	Pembroke	71.34	320	P	P	22 30 26.2	-0.1
	baz=112						
R54A	Victor	71.47	311	P	P	22 30 27.5	+0.2
	baz=107						
MOS	Moscow	71.48	29	*e*P	P	22 30 26.0	-0.9
MOS				*e*		22 33 07.1	
MOS				pmax	pmax		
	comp=Z,35nm,1.3s						
MOS				pmax	pmax		
	comp=Z,100nm,2.0s						
P54A	Burton	71.51	313	P	P	22 30 27.7	+0.2
	baz=108						
L54A	Sinclairville	71.52	316	P	P	22 30 27.9	+0.5
	baz=110						
V54A	Nebo	71.53	308	P	P	22 30 28.3	+0.6
	baz=106						
D54A	Lac Fusel, La	71.53	321	P	P	22 30 27.1	-0.4
	baz=113						
W54A	Cherokee Point	71.54	308	P	P	22 30 28.2	+0.5
	baz=105						
BANO	Bancroft	71.55	319	P	P	22 30 27.3	-0.3
	baz=112						
N54A	Moraine State	71.58	314	P	P	22 30 27.5	-0.4
	baz=109						
Q54A	Coxs Mills	71.59	312	P	P	22 30 28.3	+0.3
	baz=107						
E54A	Lac Daplat, Po	71.59	320	P	P	22 30 27.7	-0.1
	baz=113						
T54A	Tazewell	71.59	310	P	P	22 30 28.6	+0.4
	baz=106						
Z54A	Sparta	71.59	306	P	P	22 30 28.7	+0.5
	baz=104						
S54A	Dingess, Beckl	71.60	311	P	P	22 30 28.6	+0.5
	baz=107						
Y54A	Tignall	71.62	306	P	P	22 30 29.0	+0.7
	baz=104						
U54A	Nelsons Funny	71.63	309	P	P	22 30 29.2	+0.8
	baz=106						
DRCO	St. Marys Ceme	71.65	317	P	P	22 30 28.0	-0.2
	baz=111						
E53A	Dumoine, Ponti	71.88	320	P	P	22 30 28.9	-0.7
	baz=112						
ERPA	Erie	71.95	315	P	P	22 30 30.3	+0.2
	baz=109						
ALGO	Algonquin Park	71.97	320	P	P	22 30 30.2	+0.1
	baz=112						
G53A	Haliburton	72.04	319	P	P	22 30 30.8	+0.2
	baz=111						
Q53A	Leroy	72.07	312	P	P	22 30 30.8	-0.1
	baz=107						
L53A	Girard	72.09	315	P	P	22 30 30.6	-0.3
	baz=109						
GOGA	Godfrey	72.14	306	P	P	22 30 30.3	-1.1
	baz=104						
P53A	Whipple	72.15	312	P	P	22 30 31.4	+0.1
	baz=107						
D53A	Lac Vacive, Po	72.16	321	*e*P	P	22 30 30.1	-1.1
	comp=Z,33nm,1.5s						
D53A	Lac Vacive, Po	72.16	321	P	P	22 30 31.4	+0.1
	baz=112						
U53A	Fall Branch	72.18	309	P	P	22 30 31.7	+0.1
	baz=105						
V53A	Saluda	72.18	308	P	P	22 30 31.6	-0.1
	baz=105						
TYNO	Tyneside	72.19	316	P	P	22 30 31.2	-0.3
	baz=109						
Z53A	Monticello	72.20	306	P	P	22 30 32.0	+0.3
	baz=104						
M53A	WI Miller and	72.22	314	P	P	22 30 32.3	+0.5
	baz=108						
R53A	Hurricane	72.24	311	P	P	22 30 32.3	+0.4
	baz=106						
O53A	New Philadelph	72.25	313	P	P	22 30 32.3	+0.4
	baz=108						
X53A	Estanollee	72.28	307	P	P	22 30 33.3	+1.1
	baz=104						
T53A	Wise	72.31	310	P	P	22 30 31.8	-0.6
	baz=106						
W53A	Cullowhee	72.33	308	P	P	22 30 33.5	+0.8
	baz=105						
Y53A	Monroe	72.35	306	P	P	22 30 33.2	+0.5
	baz=104						
VLDQ	Val d'Or	72.41	322	*e*P	P	22 30 32.0	-0.6
	comp=Z,19nm,1.3s						
E52A	Mattawa	72.48	320	P	P	22 30 32.8	-0.4
	baz=111						
LSQQ	Lebel-sur-Quev	72.49	323	P	P	22 30 33.1	0.0
	baz=114						
D52A	ZEK Kipawa Sen	72.58	320	P	P	22 30 33.7	0.0
	baz=112						
Q52A	Bidwell	72.65	312	P	P	22 30 34.8	+0.5
	baz=106						
O52A	Adamsville	72.66	313	P	P	22 30 34.8	+0.4
	baz=107						
BUKO	Buck Lake	72.67	319	P	P	22 30 34.6	+0.3
	baz=110						
H52A	Wyevale	72.72	318	P	P	22 30 35.0	+0.4
	baz=110						
Y52A	Lilburn	72.73	306	P	P	22 30 36.1	+1.2
	baz=104						
F52A	Sundridge	72.74	319	P	P	22 30 34.8	+0.1
	baz=111						
P52A	Corning	72.74	312	P	P	22 30 35.3	+0.5
	baz=107						
N52A	McGinn’s Farm,	72.76	314	P	P	22 30 35.9	+0.9
	baz=107						
R52A	Catlettsburg	72.76	311	P	P	22 30 35.4	+0.4
	baz=106						
X52A	Dahlonega	72.78	307	P	P	22 30 36.0	+0.8
	baz=104						
U52A	Thorn Hill	72.80	309	P	P	22 30 35.5	+0.2
	baz=105						
V52A	Sevierville	72.84	308	P	P	22 30 36.1	+0.6
	baz=105						
252A	Lumpkin	72.86	304	P	P	22 30 36.1	+0.3
	baz=103						
Z52A	Williamson	72.87	305	P	P	22 30 35.7	0.0
	baz=103						
352A	Blakely	72.91	303	P	P	22 30 37.1	+1.1
	baz=102						
W52A	Murphy	72.92	307	P	P	22 30 35.8	-0.2
	baz=104						
CLWO	Collingwood	72.93	317	P	P	22 30 36.4	+0.5
	baz=110						
TZTN	Tazewell	72.98	309	P	P	22 30 36.7	+0.3
	baz=105						
152A	Waverly Hall	73.00	305	P	P	22 30 35.2	-1.3
	baz=103						
E51A	G1948 Merrick	73.11	320	P	P	22 30 36.1	-0.8
	baz=111						
MATQ	Matagami	73.16	323	P	P	22 30 36.2	-0.9
	baz=113						
F51A	Arnstein	73.17	319	P	P	22 30 37.2	0.0
	baz=110						
KLBO	Killbear Provi	73.18	318	P	P	22 30 36.5	-0.8
	baz=110						
I51A	Listowel	73.21	317	P	P	22 30 37.6	0.0
	baz=109						
D51A	Lot 18 Range I	73.23	320	P	P	22 30 37.2	-0.4
	baz=111						
O51A	Pataskala	73.24	313	P	P	22 30 38.0	+0.2
	baz=106						
N51A	Ashland	73.29	313	P	P	22 30 38.3	+0.3
	baz=107						
S51A	Beattyville	73.30	310	P	P	22 30 39.1	+0.9
	baz=105						
U51A	La Follette	73.31	309	P	P	22 30 37.4	-1.0
	baz=104						
P51A	Williamsport	73.39	312	P	P	22 30 39.2	+0.5
	baz=106						
T51A	Gray	73.40	309	P	P	22 30 39.4	+0.6
	baz=105						
V51A	Loudon	73.43	308	P	P	22 30 38.4	-0.6
	baz=104						
251A	Midway	73.44	304	P	P	22 30 38.2	-0.9
	baz=102						
R51A	Hillsboro	73.46	311	P	P	22 30 39.6	+0.4
	baz=105						
151A	Opelika	73.47	304	P	P	22 30 39.9	+0.6
	baz=102						
Q51A	Peebles	73.48	311	P	P	22 30 39.7	+0.4
	baz=106						
Z51A	Franklin	73.51	305	P	P	22 30 40.1	+0.5
	baz=103						
ACSO	Alum Creek Sta	73.54	313	P	P	22 30 39.7	+0.1
	baz=106						
X51A	Calhoun	73.54	307	P	P	22 30 40.9	+1.2
	baz=103						
Y51A	Rockmart	73.55	306	P	P	22 30 40.4	+0.6
	baz=103						
D50A	G1974 Best Tow	73.56	320	P	P	22 30 40.3	+0.8
	baz=111						
BMRO	Meriville Lake	73.60	317	P	P	22 30 40.4	+0.5
	baz=109						
W51A	Cleveland	73.60	307	P	P	22 30 40.6	+0.6
	baz=104						
BASO	Ashfield	73.72	317	P	P	22 30 39.9	-0.6
	baz=108						
N50A	Nevada	73.81	313	P	P	22 30 40.2	-0.9
	baz=106						
E50A	Wahnapitae	73.88	319	P	P	22 30 41.8	+0.3
	baz=110						
Q50A	Georgetown	73.90	311	P	P	22 30 42.1	+0.3
	baz=105						
M50A	Fremont	73.91	314	P	P	22 30 42.3	+0.5
	baz=107						
L50A	Kingsville	73.93	315	P	P	22 30 42.6	+0.8
	baz=107						
S50A	Richmond	73.93	310	P	P	22 30 42.4	+0.5
	baz=105						
U50A	Jamestown	73.96	308	P	P	22 30 42.9	+0.7
	baz=104						
P50A	Jamestown	73.97	312	P	P	22 30 42.8	+0.7
	baz=106						
V50A	Pikevile	73.99	308	P	P	22 30 43.0	+0.7
	baz=104						
TOBO	Tobermory, Bru	74.01	318	P	P	22 30 42.6	+0.4
	baz=109						
R50A	Paris	74.02	310	P	P	22 30 43.3	+0.8
	baz=105						
W50A	Signal Mountai	74.05	307	P	P	22 30 43.2	+0.5
	baz=103						
150A	Eclectic	74.06	304	P	P	22 30 43.5	+0.7
	baz=102						
Y50A	Piedmont	74.10	306	P	P	22 30 42.7	-0.3
	baz=103						
T50A	Nancy	74.10	309	P	P	22 30 44.0	+1.0
	baz=104						
Z50A	Ashland	74.11	305	P	P	22 30 43.6	+0.5
	baz=102						
UOSS	Minazif	74.36	64	*e*P	P	22 30 43.2	-1.5
	comp=Z,50nm,1.4s						
UOSS				LR	LR		
	comp=Z,700nm,21.0s						
O49A	Covington	74.52	312	P	P	22 30 45.7	+0.3
	baz=105						
F49A	Sandfield	74.52	318	P	P	22 30 45.1	-0.1
	baz=108						
J49A	Marlette	74.54	316	P	P	22 30 45.8	+0.5
	baz=107						
D49A	Beulah Townshi	74.56	320	P	P	22 30 46.0	+0.6
	baz=109						
Z49A	Columbiana	74.60	305	P	P	22 30 46.1	+0.2
	baz=102						
M49A	Liberty Center	74.60	314	P	P	22 30 46.4	+0.7
	baz=106						
N49A	Columbus Grove	74.60	313	P	P	22 30 46.3	+0.5
	baz=106						
S49A	Springfield	74.64	310	P	P	22 30 46.3	+0.3
	baz=104						
P49A	Miami Univ. Ec	74.64	312	P	P	22 30 45.8	-0.2
	baz=105						
V49A	McMinnville	74.65	308	P	P	22 30 46.1	-0.1
	baz=103						
T49A	Edmonton	74.66	309	P	P	22 30 46.4	+0.2
	baz=104						
R49A	Shelbyville	74.67	310	P	P	22 30 46.4	+0.1
	baz=104						
X49A	Woodville	74.71	306	P	P	22 30 46.9	+0.4
	baz=102						
U49A	Red Boiling Sp	74.72	308	P	P	22 30 46.6	+0.1
	baz=103						
W49A	Belvidere	74.79	307	P	P	22 30 47.4	+0.4
	baz=103						
E48A	Lockeyer	74.83	319	P	P	22 30 46.7	-0.3
	baz=109						
LRAL	Lakeview Retre	74.95	305	P	P	22 30 47.7	-0.3
	baz=102						
J48A	Bridge Port	74.97	316	*e*P	P	22 30 41.4	-6.5
	comp=Z,22nm,0.9s						
J48A	Bridge Port	74.97	316	P	P	22 30 46.7	-1.2
	baz=106						
L48A	N Adams	75.06	314	P	P	22 30 48.3	-0.1
	baz=106						
K48A	Perry	75.07	315	P	P	22 30 48.5	0.0
	baz=106						
M48A	Edgerton	75.14	314	P	P	22 30 48.6	-0.3
	baz=105						
O48A	Farmland	75.15	312	P	P	22 30 48.9	-0.1
	baz=105						
P48A	Milroy	75.15	311	P	P	22 30 48.8	-0.2
	baz=104						
N48A	Decatur	75.21	313	P	P	22 30 49.4	+0.1
	baz=105						
Q48A	North Vernon	75.25	311	P	P	22 30 49.9	+0.3
	baz=104						
Y48A	Jasper	75.27	305	P	P	22 30 49.8	0.0
	baz=102						
X48A	Hartselle	75.28	306	P	P	22 30 50.0	+0.1
	baz=102						
W48A	Pulaski	75.33	307	P	P	22 30 50.3	+0.2
	baz=102						
148A	Greensboro	75.35	304	P	P	22 30 50.3	+0.1
	baz=101						
V48A	Smith Brothers	75.37	307	P	P	22 30 50.4	0.0
	baz=102						
E47A	Iron Bridge	75.56	319	P	P	22 30 49.9	-1.2
	baz=108						
L47A	Sherwood	75.62	314	P	P	22 30 51.5	-0.1
	baz=105						
D47A	Chapleau	75.62	319	P	P	22 30 51.5	-0.1
	baz=108						
K47A	Vermontville	75.66	315	P	P	22 30 50.8	-1.0
	baz=106						
N47A	Urbana	75.70	313	P	P	22 30 51.7	-0.4
	baz=104						
T47A	Sharon Grove	75.86	309	P	P	22 30 53.2	+0.1
	baz=103						
U47A	Clarksville	75.89	308	P	P	22 30 53.4	+0.1
	baz=102						
V47A	Nunnelly	75.94	307	P	P	22 30 52.9	-0.7
	baz=102						
X47A	Russelville	75.95	306	P	P	22 30 53.1	-0.5
	baz=102						
ARCES	ARCESS Array B	75.96	14	P	P	22 30 53.3	+0.3
	comp=Z,0.8nm,0.5s,baz=221,slow=4.8,SNR=9.6						
ARCES				LR	LR	23 05 24.1	
	comp=Z,334nm,19.5s,baz=224,slow=37						
D46A	Sault St. Mari	76.18	319	P	P	22 30 54.0	-0.7
	baz=107						
E46A	Sault Ste Mari	76.21	318	P	P	22 30 53.6	-1.2
	baz=107						
WVT	Waverly	76.25	308	*e*P	P	22 30 52.2	-3.1
	comp=Z,14nm,1.0s						
WVT	Waverly	76.25	308	*e*P	P	22 30 52.2	-3.1
WVT				pmax	pmax		
	comp=Z,14nm,1.0s						
WVT	Waverly	76.25	308	P	P	22 30 54.8	-0.6
	baz=102						
V46A	Holladay	76.41	307	P	P	22 30 55.7	-0.6
	baz=102						
W46A	Michie	76.49	306	P	P	22 30 56.2	-0.5
	baz=101						
T46A	Princeton	76.49	308	P	P	22 30 55.8	-0.9
	baz=102						
P46A	Rosedale	76.52	311	P	P	22 30 56.4	-0.5
	baz=103						
SYO	Syowa Base	76.99	162‖	*e*P	P	22 30 58.0	-0.8
SYO	Syowa Base	76.99	162‖	*e*pP	pP	22 31 01.0	-0.6
OXF	Oxford	77.20	306	PFAKE		22 31 10.0	+9.2
OXF				LR	LR		
	comp=Z,800nm,19.0s						
S44A	Carbondale	77.68	309	P	P	22 31 03.0	-0.4
	baz=101						
PRGR	Permogore	78.00	25	*e*P	P	22 31 03.0	-1.6
PRGR				pmax	pmax		
	comp=Z,37nm,1.8s						
K43A	Burlington	78.05	314	P	P	22 31 05.1	-0.3
	baz=103						
GEYT	Alibeck	78.23	51	P	P	22 31 06.2	-0.3
	comp=Z,1.1nm,0.5s,baz=249,slow=12,SNR=5.2						
GEYT				LR	LR	23 08 52.4	
	comp=Z,1μm,18.3s,baz=240,slow=38						
GYA0B	ALIBECK ARRAY	78.23	51	PFAKE		22 31 20.0	+14
GYA0B				LR	LR		
	comp=Z,1μm,20.0s						
HDIL	Hopedale	78.29	312	P	P	22 31 05.8	-0.9
	baz=102						
I42A	Draeger Farm,	78.73	315	P	P	22 31 08.6	-0.5
	baz=103						
L42A	Oliver, Polo	78.86	313	P	P	22 31 09.3	-0.6
	baz=102						
D41A	Chassel	79.22	318	P	P	22 31 11.5	-0.1
	baz=104						
CCM	Cathedral Cave	79.30	309	*e*P	P	22 31 10.0	-2.3
	comp=Z,24nm,1.0s						
CCM	Cathedral Cave	79.30	309	*e*P	P	22 31 10.0	-2.3
CCM				pmax	pmax		
	comp=Z,24nm,1.0s						
CCM	Cathedral Cave	79.30	309	P	P	22 31 11.7	-0.6
	baz=100						
M41A	Milan	79.38	312	P	P	22 31 12.0	-0.7
	baz=101						
I41A	Arkdale	79.44	315	P	P	22 31 12.3	-0.6
	baz=102						
JFWS	Jewell Farm	79.47	314	P	P	22 31 12.6	-0.6
	baz=102						
N41A	Harden Midland	79.48	312	P	P	22 31 12.4	-0.9
	baz=101						
W41B	Gary Mavity, V	79.62	306	P	P	22 31 13.7	-0.4
	baz=99						
FCAR	Ozark Folk Cen	79.63	307	*e*P	P	22 31 11.5	-2.6
	comp=Z,23nm,1.7s						
X40A	Basin Creek Fa	79.99	305	P	P	22 31 15.7	-0.4
	baz=99						
L40A	Anamosa	80.01	313	P	P	22 31 15.1	-1.0
	baz=101						
N40A	Mertquake, Sal	80.06	312	P	P	22 31 15.4	-1.0
	baz=100						
WLAR	White Oak Lake	80.10	304	*e*P	P	22 31 14.1	-2.6
	comp=Z,46nm,1.2s						
U40A	Yellville	80.29	307	P	P	22 31 16.5	-1.2
	baz=99						
MIAR	Mount Ida	80.60	305	P	P	22 31 19.0	-0.4
	baz=98						
W39A	Magazine	80.86	306	P	P	22 31 20.8	0.0
	baz=98						
NATX	Nacogdoches	81.14	302	P	P	22 31 21.8	-0.5
	baz=97						
ARU	Arti	82.53	33	*e*P	P	22 31 29.6	+0.5
	comp=Z,35nm,1.4s						
ARU				LR	LR		
	comp=Z,500nm,21.0s						
ARU	Arti	82.53	33	*d i*P	P	22 31 29.1	0.0
ARU				S	S	22 41 48.0	+2.3
ARU				pmax	pmax		
	comp=Z,19nm,1.4s						
TUL1	Leonard	82.58	306	P	P	22 31 28.8	-1.1
	baz=97						
WHTX	Lake Whitney,	83.53	302	P	P	22 31 34.4	-0.4
	baz=96						
SVE	Sverdlovsk	83.73	33	*e*P	P	22 31 36.1	+0.8
SVE				pmax	pmax		
	comp=Z,25nm,2.2s						
ECSD	EROS Data Cent	84.19	314	P	P	22 31 37.6	-0.4
	baz=97						
AGMN	Agassiz Nation	84.29	319	PFAKE		22 31 50.0	+12
AGMN				LR	LR		
	comp=Z,800nm,20.0s						
AGMN	Agassiz Nation	84.29	319	P	P	22 31 38.2	-0.3
	baz=98						
MAW	Mawson	84.52	158	P	P	22 31 39.7	+0.6
	comp=Z,6.2nm,0.9s,baz=276,slow=7.6,SNR=7.7						
MAW				LR	LR	23 00 58.2	
	comp=Z,105nm,21.2s,baz=280,slow=30						
MAW	Mawson	84.52	158	*e*P	P	22 31 39.7	+0.6
	comp=Z,4.4nm,1.1s						
MAW	Mawson	84.52	158	*e*P	P	22 31 39.7	+0.6
MAW				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULM	Lac du Bonnet	84.59	321	LR	LR	23 04 14.3	
	comp=Z,562nm,19.9s,baz=90,slow=32						
WMOK	Wichita Mounta	84.89	305	PFAKE		22 31 50.0	+8.2
WMOK				LR	LR		
	comp=Z,800nm,22.0s						
WMOK	Wichita Mounta	84.89	305	P	P	22 31 41.1	-0.7
	baz=95						
BGNE	Belgrade	85.04	312	PFAKE		22 31 50.0	+7.6
BGNE				LR	LR		
	comp=Z,1μm,20.0s						
JCT	Junction City	85.40	301	P	P	22 31 43.9	-0.6
	baz=94						
ABTX	Abilene, Hawle	85.43	303	PFAKE		22 31 50.0	+5.5
ABTX				LR	LR		
	comp=Z,600nm,22.0s						
ABTX	Abilene, Hawle	85.43	303	P	P	22 31 44.4	-0.1
	baz=94						
CBKS	Cedar Bluff	86.01	309	PFAKE		22 32 00.0	+13
CBKS				LR	LR		
	comp=Z,700nm,22.0s						
CBKS	Cedar Bluff	86.01	309	P	P	22 31 47.4	+0.1
	baz=95						
KBL	Kabul	86.55	55	PFAKE		22 32 00.0	+10
KBL				LR	LR		
	comp=Z,800nm,20.0s						
CHGR	Chuyangaron	86.93	51	PFAKE		22 32 00.0	+8.1
CHGR				LR	LR		
	comp=Z,3μm,19.0s						
AMTX	Amarillo	87.28	305	PFAKE		22 32 00.0	+6.3
AMTX				LR	LR		
	comp=Z,700nm,20.0s						
AMTX	Amarillo	87.28	305	P	P	22 31 52.7	-1.0
	baz=94						
GAR	Garm	87.86	51	PFAKE		22 32 10.0	+14
GAR				LR	LR		
	comp=Z,2μm,19.0s						
OGNE	Ogallala	87.92	311	PFAKE		22 32 10.0	+13
OGNE				LR	LR		
	comp=Z,1μm,20.0s						
OGNE	Ogallala	87.92	311	P	P	22 31 57.2	+0.6
	baz=94						
MSTX	Muleshoe	88.13	304	PFAKE		22 32 10.0	+12
MSTX				LR	LR		
	comp=Z,600nm,21.0s						
MSTX	Muleshoe	88.13	304	P	P	22 31 57.8	0.0
	baz=93						
KSCO	Kaye Shedlock’	88.27	309	PFAKE		22 32 10.0	+12
KSCO				LR	LR		
	comp=Z,800nm,21.0s						
KSCO	Kaye Shedlock’	88.27	309	P	P	22 31 58.7	+0.3
	baz=93						
TXAR	Lajitas Array	88.69	299	P	P	22 32 00.2	-0.4
	comp=Z,2.7nm,1.1s,baz=112,slow=5.6,SNR=13						
TXAR				LR	LR	23 08 42.7	
	comp=Z,174nm,21.3s,baz=0.0,slow=34						
BRVK	Borovoye	88.72	37	*e*P	P	22 32 00.0	0.0
	comp=Z,13nm,1.3s						
BRVK				LR	LR		
	comp=Z,300nm,20.0s						
BRVK	Borovoye	88.72	37	*e*P	P	22 32 00.0	0.0
BRVK				pmax	pmax		
	comp=Z,13nm,1.3s						

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BRVK                               MLR     MLR
      comp=Z,300nm,20.0s
QSPA  South Pole Qui   88.78 180 eP      P         22 32 01.1 +0.9
      comp=Z,40nm,1.3s
FFC   Flin Flon        88.79 325 i P     P         22 32 00.7 +0.4
MNCI  Minicoy          89.15  82  PFAKE            22 32 10.0 +7.2
MNCI                              LR     LR
      comp=Z,3µm,21.0s
RSSD  Black Hills      89.56 314  PFAKE            22 32 10.0 +5.5
RSSD                              LR     LR
      comp=Z,600nm,18.0s
RSSD  Black Hills      89.56 314  P      P         22 32 05.3 +0.9
      baz=92
T25A  Trinidad         89.59 307  P      P         22 32 04.7 -0.1
      baz=92
OTUK  Ortayu           89.78  42  P      P         22 32 05.7 +0.6
OTUK                              pmax   pmax
      comp=Z,7.0nm,1.6s
DGMT  Dagmar           89.84 318  PFAKE            22 32 20.0  +15
DGMT                              LR     LR
      comp=Z,800nm,19.0s
NIL   Nilore           90.00  57  PFAKE            22 32 20.0  +14
NIL                               LR     LR
      comp=Z,300nm,20.0s
Q24A  Divide           90.23 309  P      P         22 32 05.9 -2.0
      baz=92
SDCO  Great Sand Dun   90.48 308  PFAKE            22 32 20.0  +11
SDCO                              LR     LR
      comp=Z,700nm,22.0s
SDCO  Great Sand Dun   90.48 308  P      P         22 32 09.1 +0.1
      baz=91
PHWY  Pilot Hill       90.52 311  PFAKE            22 32 20.0  +11
PHWY                              LR     LR
      comp=Z,800nm,20.0s
N23A  Red Feather La   90.88 311  P      P         22 32 11.2 +0.4
      baz=91
AAK   Ala-Archa        91.16  48  PFAKE            22 32 20.0 +8.1
AAK                               LR     LR
      comp=Z,400nm,19.0s
AAK   Ala-Archa        91.16  48 i P     P         22 32 12.9 +1.0
ANMO  Albuquerque      91.20 305 eP      P         22 32 10.8 -1.5
      comp=Z,8.9nm,1.4s
ANMO                              LR     LR
      comp=Z,900nm,20.0s
ANMO  Albuquerque      91.20 305⇓eP      P         22 32 12.1 -0.2
ANMO                              pmax   pmax
      comp=Z,4.0nm,1.2s
ANMO  Albuquerque      91.20 305  P      P         22 32 12.0 -0.2
      baz=91
FRU1  Bishkek          91.26  47  PFAKE            22 32 20.0 +7.8
FRU1                              LR     LR
      comp=Z,300nm,22.0s
K22A  Casper           91.34 312  PFAKE            22 32 20.0 +7.3
K22A                              LR     LR
      comp=Z,900nm,19.0s
S22A  4UR Ranch, Cre   91.53 308  P      P         22 32 14.3 +0.4
      baz=90
Y22D  IRIS PASSCAL I   91.58 304  PFAKE            22 32 20.0 +6.0
Y22D                              LR     LR
      comp=Z,500nm,20.0s
RWWY  Rawlins          91.84 311  PFAKE            22 32 30.0  +15
RWWY                              LR     LR
      comp=Z,1µm,19.0s
KSH   Kashi            92.26  51  P      P         22 32 16.5 -0.5
KSH                               pP     sP        22 32 20.4 -0.5
KSH                               sP     pwP       22 32 23.5 -1.1
KSH                               PP     PP        22 35 58.1 +0.6
KSH                               S      S         22 43 15.1 -5.2
KSH                               pmax   pmax
      comp=Z,19nm,1.3s
KSH                               pmax   pmax
      comp=Z,89nm,7.8s
KSH                               LR     LR
      comp=Z,110nm,13.4s
KSH                               LR     LR
      comp=Z,310nm,12.2s
KSH                               LR     LR
      comp=Z,560nm,15.0s
NRN   Naryn            92.27  49  PFAKE            22 32 30.0  +13
NRN                               LR     LR
      comp=Z,500nm,21.0s
O20A  White River Ci   92.63 310  PFAKE            22 32 30.0  +11
O20A                              LR     LR
      comp=Z,1µm,22.0s
MVCO  Mesa Verde       92.86 307  P      P         22 32 19.9 -0.1
      baz=90
PV11  David Mesa, Pa   93.14 308  PFAKE            22 32 30.0 +8.8
PV11                              LR     LR
      comp=Z,700nm,22.0s
KDJ   Kajisay          93.15  48  PFAKE            22 32 30.0 +8.9
KDJ                               LR     LR
      comp=Z,200nm,21.0s
PV19  Morning Glory    93.23 308  PFAKE            22 32 30.0 +8.4
PV19                              LR     LR
      comp=Z,400nm,20.0s
PV14  Lion Creek, Pa   93.26 308  PFAKE            22 32 30.0 +8.2
PV14                              LR     LR
      comp=Z,200nm,18.0s
PDAR  Pinedale Array   93.58 313  P      P         22 32 25.1 +2.0
      comp=Z,0.3nm,0.4s,baz=104,slow=7.5,SNR=2.8
BW06  Boulder Array    93.58 313  PFAKE            22 32 30.0 +6.9
BW06                              LR     LR
      comp=Z,700nm,21.0s
KURK  Kurchatov        93.86  39  PFAKE            22 32 30.0 +6.1
KURK                              LR     LR
      comp=Z,300nm,20.0s
KURK  Kurchatov        93.86  39 i P     P         22 32 23.0 -0.9
W18A  Petrified Fore   93.89 305  PFAKE            22 32 30.0 +5.3
W18A                              LR     LR
      comp=Z,800nm,20.0s
PRZ   Przheval'sk      94.04  48  PFAKE            22 32 40.0  +15
PRZ                               LR     LR
      comp=Z,300nm,21.0s
X18A  Snowflake        94.08 304  PFAKE            22 32 40.0  +14
X18A                              LR     LR
      comp=Z,600nm,20.0s
H17A  Grant Village    94.26 314  PFAKE            22 32 40.0  +14
H17A                              LR     LR
      comp=Z,800nm,21.0s
LOHW  Long Hollow      94.31 313  PFAKE            22 32 40.0  +14
LOHW                              LR     LR
      comp=Z,800nm,18.0s
MOOW  Moose Ponds      94.41 314  PFAKE            22 32 40.0  +13
MOOW                              LR     LR
      comp=Z,500nm,20.0s
SNOW  Snow King Moun   94.43 313  PFAKE            22 32 40.0  +13
SNOW                              LR     LR
      comp=Z,700nm,21.0s
IMW   Indian Meadow    94.54 314  PFAKE            22 32 40.0  +12
IMW                               LR     LR
      comp=Z,400nm,21.0s
TPAW  Teton Pass       94.57 313  PFAKE            22 32 40.0  +12
TPAW                              LR     LR
      comp=Z,500nm,19.0s
AHID  Auburn Hatcher   94.71 313  PFAKE            22 32 40.0  +12
AHID                              LR     LR
      comp=Z,1µm,22.0s
HWUT  Hardware Ranch   95.11 311  PFAKE            22 32 40.0  +10
HWUT                              LR     LR
      comp=Z,1µm,20.0s
YKA   Yellowknife Ar   95.18 333  P      P         22 32 30.2 +0.5
      comp=Z,1.1nm,0.8s,baz=84,slow=3.7,SNR=3.6
YKA                               LR     LR        23 10 45.5
      comp=Z,37nm,20.3s,baz=90,slow=33
YKA   Yellowknife Ar   95.18 333 eP      P         22 32 29.9 +0.2
YKA                               pmax   pmax
      comp=Z,1.0nm,0.8s
WUAZ  Wupatki          95.22 305  PFAKE            22 32 40.0 +9.2
WUAZ                              LR     LR
      comp=Z,500nm,20.0s
X16A  Lo Mia Camp, P   95.31 304  PFAKE            22 32 40.0 +8.7
X16A                              LR     LR
      comp=Z,600nm,20.0s
U15A  North Rim        95.92 306  PFAKE            22 32 40.0 +5.9
U15A                              LR     LR
      comp=Z,700nm,21.0s
DUG   Dugway, Tooele   96.13 310  PFAKE            22 32 40.0 +5.2
DUG                               LR     LR
      comp=Z,800nm,22.0s
WALA  Waterton Lakes   96.24 319  PFAKE            22 32 40.0 +4.9
WALA                              LR     LR
      comp=Z,800nm,20.0s
MAKZ  Makanchi         96.34  43  PFAKE            22 32 50.0  +15
MAKZ                              LR     LR
      comp=Z,300nm,20.0s
MSO   Missoula         96.46 317  PFAKE            22 32 50.0  +14
MSO                               LR     LR
      comp=Z,600nm,20.0s
MKAR  Makanchi Array   96.56  43  P      P         22 32 36.6 +0.2
      comp=Z,1.7nm,0.9s,baz=292,slow=2.2,SNR=3.6
Y14A  Wickenburg       96.63 304  PFAKE            22 32 50.0  +13
Y14A                              LR     LR
      comp=Z,700nm,21.0s
HLID  Hailey           97.08 314  PFAKE            22 32 50.0  +11
HLID                              LR     LR
      comp=Z,700nm,22.0s
W13A  Hualapai Mount   97.29 305  PFAKE            22 32 50.0  +10
W13A                              LR     LR
      comp=Z,700nm,19.0s
ZAA0  Zalesovo Array   97.36  36  PFAKE            22 32 50.0  +10
ZAA0                              LR     LR
      comp=Z,300nm,20.0s
ZALV  Zalesovo Beam    97.36  36  LR     LR        23 19 33.6
      comp=Z,286nm,20.6s,baz=250,slow=37
Y12C  Blythe           97.90 304  PFAKE            22 32 50.0 +7.2
Y12C                              LR     LR
      comp=Z,600nm,21.0s
ELK   Elko             97.94 311  PFAKE            22 32 50.0 +6.9
ELK                               LR     LR
      comp=Z,800nm,21.0s
PLID  Pearl Lake       98.06 315  PFAKE            22 32 50.0 +6.4
PLID                              LR     LR
      comp=Z,600nm,19.0s
NEW   Newport          98.45 319  PFAKE            22 32 50.0 +5.0
NEW                               LR     LR
      comp=Z,600nm,20.0s
C09A  Chrisman Ranch   99.28 318  PFAKE            22 33 00.0  +11
C09A                              LR     LR
      comp=Z,800nm,20.0s
D08A  Wollman Farm,    99.82 317  PFAKE            22 33 00.0 +9.0
D08A                              LR     LR
      comp=Z,800nm,21.0s
B08A  Colville Reser   99.89 319  PFAKE            22 33 00.0 +8.6
B08A                              LR     LR
      comp=Z,700nm,18.0s
J08A  Circle Bar Ran  100.04 314  PFAKE            22 33 00.0 +7.8
J08A                              LR     LR
      comp=Z,400nm,21.0s
WVOR  Wild Horse Val  100.28 313  PFAKE            22 33 00.0 +6.7
WVOR                              LR     LR
      comp=Z,700nm,20.0s
KVN   Kaiserville     100.30 309  PFAKE            22 33 00.0 +6.4
KVN                               LR     LR
      comp=Z,600nm,21.0s
NV01  Mina Array Sit  100.53 309 ePdif   Pdif      22 32 55.2 +0.5
NVAR  Mina Array Bea  100.53 309  P      Pdif      22 32 55.2 +0.5
      comp=Z,0.1nm,0.3s,baz=102,slow=4.2,SNR=2.2
RYN   Ryan            100.68 309  PFAKE            22 33 10.0  +15
RYN                               LR     LR
      comp=Z,500nm,21.0s
WMQ   Urumqi          100.69  46  PFAKE            22 33 10.0  +15
WMQ                               LR     LR
      comp=Z,300nm,19.0s
WMQ   Urumqi          100.69  46 eP      Pdif      22 32 57.0 +1.9
WMQ                               pmax   pmax
      comp=Z,9.0nm,0.9s
WMQ                               pmax   pmax
      comp=Z,70nm,4.5s
WMQ                               LR     LR
      comp=Z,200nm,18.1s
WMQ                               LR     LR
      comp=Z,170nm,16.9s
WMQ                               LR     LR
      comp=Z,250nm,22.1s
PASC  Pasadena Art C  100.90 304  PFAKE            22 33 10.0  +14
PASC                              LR     LR
      comp=Z,600nm,18.0s
LTY   Liberty         100.97 318  PFAKE            22 33 10.0  +14
LTY                               LR     LR
      comp=Z,700nm,20.0s
LLLB  Lillooet        101.12 321  PFAKE            22 33 10.0  +13
LLLB                              LR     LR
      comp=Z,900nm,20.0s
PAHR  Pah Rah Range   101.20 310  PFAKE            22 33 10.0  +12
PAHR                              LR     LR
      comp=Z,800nm,21.0s
MDPB  Devils Postpil  101.23 308  PFAKE            22 33 10.0  +12
MDPB                              LR     LR
      comp=Z,300nm,19.0s
WAKR  Walker          101.40 309  PFAKE            22 33 10.0  +11
WAKR                              LR     LR
      comp=Z,600nm,22.0s
PNTR  Pine Nut        101.45 310  PFAKE            22 33 10.0  +11
PNTR                              LR     LR
      comp=Z,800nm,21.0s
VCNR  Virginia City   101.46 310  PFAKE            22 33 10.0  +11
VCNR                              LR     LR
      comp=Z,900nm,22.0s
MOD   Modoc Plateau   101.58 312  PFAKE            22 33 10.0  +11
MOD                               LR     LR
      comp=Z,800nm,20.0s
PINE  Pine Mountain   101.75 314  PFAKE            22 33 10.0  +10
PINE                              LR     LR
      comp=Z,500nm,20.0s
LON   Longmire        101.83 318  PFAKE            22 33 10.0  +10
LON                               LR     LR
      comp=Z,700nm,20.0s
D05A  Enumclaw        101.86 318  PFAKE            22 33 10.0  +10
D05A                              LR     LR
      comp=Z,600nm,19.0s
RUBR  Rubicon Trail   101.89 310  PFAKE            22 33 10.0 +9.3
RUBR                              LR     LR
      comp=Z,900nm,22.0s
BEKR  Beckworth       101.93 310  PFAKE            22 33 10.0 +9.2
BEKR                              LR     LR
      comp=Z,700nm,21.0s
CMB   Columbia Colle  102.21 309  PFAKE            22 33 10.0 +8.1
CMB                               LR     LR
      comp=Z,300nm,20.0s
PGC   Sidney          102.53 320  PFAKE            22 33 10.0 +7.0
PGC                               LR     LR
      comp=Z,800nm,21.0s
AFDM  Forest Hills D  102.53 310  PFAKE            22 33 10.0 +6.7
AFDM                              LR     LR
      comp=Z,700nm,22.0s
ORV   Oroville        102.84 310  PFAKE            22 33 10.0 +5.3
ORV                               LR     LR
      comp=Z,700nm,21.0s
NLWA  Neilton Lookou  103.08 318  PFAKE            22 33 20.0  +14
NLWA                              LR     LR
      comp=Z,800nm,20.0s
YBH   Yreka Blue Hor  103.39 313  PFAKE            22 33 20.0  +13
YBH                               LR     LR
      comp=Z,700nm,20.0s
HUMO  Hull Mountain   103.41 313  PFAKE            22 33 20.0  +13
HUMO                              LR     LR
      comp=Z,600nm,20.0s
WDC   Whiskeytown Da  103.46 311  PFAKE            22 33 20.0  +13
WDC                               LR     LR
      comp=Z,500nm,20.0s
DLBC  Dease Lake      103.55 330  PFAKE            22 33 20.0  +13
DLBC                              LR     LR
      comp=Z,600nm,18.0s
GDXM  Geysers         103.96 310  PFAKE            22 33 20.0  +10
GDXM                              LR     LR
      comp=Z,700nm,20.0s
MCCM  Marconi Confer  104.14 309  PFAKE            22 33 20.0  +10
MCCM                              LR     LR
      comp=Z,700nm,20.0s
HOPS  Hopland Field   104.14 310  PFAKE            22 33 20.0  +10
HOPS                              LR     LR
      comp=Z,1µm,21.0s
KHMM  Horse Mountain  104.30 312  PFAKE            22 33 20.0 +8.7
KHMM                              LR     LR
      comp=Z,700nm,20.0s
LSA   Lhasa           105.43  60  PFAKE            22 37 40.0 +9.2
LSA                               LR     LR
      comp=Z,300nm,22.0s
WRAK  Wrangell Islan  105.44 329  PFAKE            22 37 40.0  +11
WRAK                              LR     LR
      comp=Z,800nm,20.0s
SKAG  Skagway         105.68 332  PFAKE            22 37 40.0  +10
SKAG                              LR     LR
      comp=Z,400nm,19.0s
JIS   Juneau Island   105.73 331  PFAKE            22 37 40.0  +10
JIS                               LR     LR
      comp=Z,600nm,19.0s
BESE  Bessie Mountai  105.83 332  PFAKE            22 37 40.0  +10
BESE                              LR     LR
      comp=Z,600nm,19.0s
TIXI  Tiksi           106.26  11  PFAKE            22 37 40.0  +10
TIXI                              LR     LR
      comp=Z,300nm,19.0s
SHL   Shillong        106.58  64  PFAKE            22 37 40.0 +7.3
SHL                               LR     LR
      comp=Z,400nm,20.0s
BCPM  Bancas Point    107.40 334  PFAKE            22 37 40.0 +7.1
BCPM                              LR     LR
      comp=Z,400nm,18.0s
PCA   Pinnacle        107.60 334  PFAKE            22 37 40.0 +6.6
PCA                               LR     LR
      comp=Z,500nm,19.0s
MDM   Murphy Dome     107.88 341  PFAKE            22 37 40.0 +6.3
MDM                               LR     LR
      comp=Z,700nm,18.0s
PAX   Paxson          108.13 338  PFAKE            22 37 40.0 +5.7
PAX                               LR     LR
      comp=Z,200nm,20.0s
TGL   Tana Glacier    108.34 336  PFAKE            22 37 50.0  +15
TGL                               LR     LR
      comp=Z,400nm,20.0s
CRQM  Cirque          108.47 336  PFAKE            22 37 50.0  +15
CRQM                              LR     LR
      comp=Z,500nm,19.0s
MCK   McKinley        108.90 340  PFAKE            22 37 50.0  +14
MCK                               LR     LR
      comp=Z,300nm,20.0s
TLY   Talaya          108.94  35  PFAKE            22 37 50.0  +14
TLY                               LR     LR
      comp=Z,400nm,22.0s
RND   Reindeer        109.08 340  PFAKE            22 37 50.0  +14
RND                               LR     LR
      comp=Z,300nm,19.0s
HMT   Hamilton        109.16 336  PFAKE            22 37 50.0  +14
HMT                               LR     LR
      comp=Z,500nm,18.0s
RAGM  Ragged Mountai  109.31 336  PFAKE            22 37 50.0  +13
RAGM                              LR     LR
      comp=Z,400nm,20.0s
KAIM  Kayak Island    109.46 335  PFAKE            22 37 50.0  +13
KAIM                              LR     LR
      comp=Z,500nm,18.0s
SCM   Sheep Creek Mo  109.50 338  PFAKE            22 37 50.0  +13
SCM                               LR     LR
      comp=Z,400nm,19.0s
EYAK  Cordova Ski Ar  109.65 336  PFAKE            22 37 50.0  +13
EYAK                              LR     LR
      comp=Z,700nm,19.0s
KTH   Kantishna Hill  109.69 340  PFAKE            22 37 50.0  +13
KTH                               LR     LR
      comp=Z,400nm,19.0s
CAST  Castle Rocks    110.17 341  PFAKE            22 37 50.0  +12
CAST                              LR     LR
      comp=Z,400nm,20.0s
KNK   Knik Glacier    110.19 338  PFAKE            22 37 50.0  +12
KNK                               LR     LR
      comp=Z,400nm,19.0s
PMR   Palmer          110.33 338  PFAKE            22 37 50.0  +12
PMR                               LR     LR
      comp=Z,300nm,20.0s
PPLA  Purkeypile      110.56 340  PFAKE            22 37 50.0  +11
PPLA                              LR     LR
      comp=Z,300nm,20.0s
BRLK  Bradley Lake    112.16 337  PFAKE            22 37 50.0 +8.1
BRLK                              LR     LR
      comp=Z,500nm,20.0s
CNPM  China Poot      112.45 337  PFAKE            22 37 50.0 +7.5
CNPM                              LR     LR
      comp=Z,600nm,20.0s
HOM   Homer           112.52 337  PFAKE            22 37 50.0 +7.4
HOM                               LR     LR
      comp=Z,500nm,18.0s
CHTO  Chiang Mai      113.89  70  PFAKE            22 38 00.0  +14
CHTO                              LR     LR
      comp=Z,300nm,22.0s
YAK   Yakutsk         114.12  17  PFAKE            22 38 00.0  +14
YAK                               LR     LR
      comp=Z,400nm,22.0s
LZH   Lanzhou         114.51  51 ePKP    PKPdf     22 37 47.3  0.0
LZH                               sPKP             22 37 51.8
LZH                               LR     LR
      comp=Z,220nm,18.2s
LZH                               LR     LR
      comp=Z,380nm,18.0s
LZH                               LR     LR
      comp=Z,470nm,20.3s
CD2   Chengdu         115.89  56  PKP    PKPdf     22 37 48.8 -1.2
KMI   Kunming         116.34  63  PFAKE            22 38 00.0 +8.8
KMI                               LR     LR
      comp=Z,300nm,21.0s
KULM  Kulim           116.55  85  PFAKE            22 38 00.0 +8.4
KULM                              LR     LR
      comp=Z,400nm,22.0s
CHIA  Chirikof Islan  116.66 336  PFAKE            22 38 00.0 +9.4
CHIA                              LR     LR
      comp=Z,1µm,22.0s
IPM   Ipoh            116.93  86  PFAKE            22 38 00.0 +7.6
IPM                               LR     LR
      comp=Z,500nm,22.0s
SLVN  Son La          118.12  67  PFAKE            22 38 10.0  +15
SLVN                              LR     LR
      comp=Z,200nm,22.0s
HHC   Hu-ho-hao-te    118.42  43  PKP    PKiKP     22 37 55.6 +0.9
HIA   Hailar          119.03  32  PFAKE            22 38 10.0  +14
HIA                               LR     LR
      comp=Z,400nm,20.0s
XAN   Xi'an           119.11  51  PFAKE            22 38 10.0  +14
XAN                               LR     LR
      comp=Z,300nm,21.0s
GYA   Guiyang         119.49  60 ePKP    PKiKP     22 37 58.0 +0.8
GYA                               PP     PP        22 39 25.3 +6.5
GYA                               AMB    AMB
      comp=Z,120nm,7.9s
MYKOM Kota Tinggi     119.76  89  PFAKE            22 38 10.0  +12
MYKOM                             LR     LR
      comp=Z,400nm,21.0s
ENH   Enshi           120.80  55  PFAKE            22 38 10.0  +10
ENH                               LR     LR
      comp=Z,300nm,21.0s
MA2   Magadan         120.97   8  PFAKE            22 38 10.0  +11
MA2                               LR     LR
      comp=Z,200nm,19.0s
BJT   Baijiatuau      121.92  42  PFAKE            22 38 10.0 +8.6
BJT                               LR     LR
      comp=Z,300nm,19.0s
DLV   T  Lat          123.85  77  PFAKE            22 38 20.0  +14
DLV                               LR     LR
      comp=Z,400nm,19.0s
QIZ   Qiongzhong      124.03  68  PFAKE            22 38 20.0  +14
QIZ                               LR     LR
      comp=Z,300nm,19.0s
QIZ   Qiongzhong      124.03  68  PKP    PKPdf     22 38 05.6 -0.3
QIZ                               LR     LR
      comp=Z,210nm,26.5s
QIZ                               LR     LR
      comp=Z,260nm,25.5s
QIZ                               LR     LR
      comp=Z,270nm,19.6s
KSM   Kuching         126.22  89  PFAKE            22 38 20.0 +9.4
KSM                               LR     LR
      comp=Z,300nm,21.0s
MDJ   Mudanjiang      127.16  31  PFAKE            22 38 20.0 +8.3
MDJ                               LR     LR
      comp=Z,600nm,19.0s
NJ2   Nanjing         127.56  50 ePKP    PKiKP     22 38 12.8  0.0
SBUM  Sibu            128.13  88  PFAKE            22 38 20.0 +5.5
SBUM                              LR     LR
      comp=Z,100nm,19.0s
USA0B Ussuriysk Arra  128.66  29  PFAKE            22 38 20.0 +5.3
USA0B                             LR     LR
      comp=Z,500nm,19.0s
SSE   Sheshan         129.76  49  PFAKE            22 38 30.0  +13
SSE                               LR     LR
      comp=Z,400nm,20.0s
KNMB  Chin-men Tao    130.19  59  PFAKE            22 38 30.0  +12
KNMB                              LR     LR
      comp=Z,300nm,20.0s
YSS   Yuzh-Sakhalins  130.87  19  PFAKE            22 38 30.0  +11
YSS                               LR     LR
      comp=Z,400nm,20.0s
KSRS  Korea Array     130.98  38  PKP    PKPdf     22 38 18.3 -0.3
      comp=Z,0.8nm,0.8s,baz=92,slow=11,SNR=2.0
KKM   Kota Kinabalu   131.99  83  PFAKE            22 38 30.0 +7.7
KKM                               LR     LR
      comp=Z,300nm,21.0s
SSLB  Suanglung       132.62  58  PFAKE            22 38 30.0 +6.7
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SSLB				LR	LR		
	comp=Z,200nm,20.0s						
YULB	Yu-li	133.06	59	PFAKE		22 38 30.0	+5.9
YULB				LR	LR		
	comp=Z,300nm,21.0s						
OXZ	Oxford	135.00	188	PFAKE		22 38 40.0	+12
OXZ				LR	LR		
	comp=Z,1µm,20.0s						
KAPI	Kappang	135.25	98	PFAKE		22 38 40.0	+11
KAPI				LR	LR		
	comp=Z,300nm,21.0s						
ERM	Erimo	135.30	22	PFAKE		22 38 40.0	+12
ERM				LR	LR		
	comp=Z,1µm,19.0s						
MJB9	Matsu-Tunnel	137.53	31	PFAKE		22 38 40.0	+7.1
MJB9				LR	LR		
	comp=Z,300nm,19.0s						
MAJO	Matsushiro	137.53	31	PFAKE		22 38 40.0	+7.1
MAJO				LR	LR		
	comp=Z,300nm,20.0s						
INU	Inuyama	137.78	34	PFAKE		22 38 40.0	+6.6
INU				LR	LR		
	comp=Z,300nm,21.0s						
LUWI	Luwuk	138.60	93	PFAKE		22 38 40.0	+4.3
LUWI				LR	LR		
	comp=Z,400nm,21.0s						
ASAR	Alice Springs	141.55	132	PKhKP	PKPpre	22 38 31.8	
	comp=Z,1.5nm,0.6s,baz=230,slow=2.1,SNR=7.0						
WRA	Warramunga Arr	143.97	127	PKhKP	PKPbc	22 38 40.4	-0.4
	comp=Z,2.8nm,0.6s,baz=239,slow=2.9,SNR=11						
WR1	Warramunga Arr	143.97	127	*e*PKPdf	PKPab	22 38 40.4	+0.1
CTA	Charters Tower	152.46	141	PKPbc	PKPbc	22 39 03.7	-0.1
	comp=Z,3.4nm,0.8s,baz=213,slow=7.5,SNR=3.4						
SARN	Sarigan	156.34	49	PFAKE		22 39 10.0	+7.6
SARN				LR	LR		
	comp=Z,1µm,18.0s						

DJA 22 22:22:52.3±1.0**, 7°S**±8°×**10°5E**±°**, h10^{km}, M3.5**/6**, MLv3.5**/6**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.77	55	P	Pg	22 23 07.4	+0.2
CGJI				S	Sg	22 23 17.5	+0.3
SBJI	Serang	1.42	49	P	Pn	22 23 18.4	+0.3
SBJI				S	Sb	22 23 37.0	+0.1
KASI	Kota Agung	1.63	340	P	Pn	22 23 18.7	-2.3
KASI				S	Sn	22 23 36.8	-5.2
KLI	Kotabumi	2.19	355	P	Pn	22 23 30.4	+1.6
LWLI	Liwa	2.26	334	P	Pn	22 23 30.0	+0.1
KLSI		2.38	352	P	Pn	22 23 31.9	+0.5
KLSI				S	Sn	22 24 01.8	+1.2
MDSI	Maura Dua	2.70	341	P	Pn	22 23 35.5	-0.4

IDC 22 22:31:41.2±3.2**, 6°.86S**×**146°.46E, h0^{km}, mb4.2**/1**, mb1 4.8**/2**, mb1mx3.7**/30**, mbtmp4.5**/2**, ML1.2**/1**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.7**/20**, Error ellipse: s-maj=58.9km s-min=24.2km az=65.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.62	165	Pn	Pn	22 32 25.9	+1.0
	4.1nm,0.3s,baz=338,slow=5.4,SNR=3.5						
PMG				Lg	Lg	22 33 04.0	
	26nm,0.3s,baz=188,slow=19,SNR=6.6						
WRA	Warramunga Arr	17.53	221	P	Pn	22 35 47.2	-0.1
	1.4nm,0.3s,baz=45,slow=11,SNR=14						
ASAR	Alice Springs	20.61	214	P	P	22 36 20.8	-1.5
	5.7nm,0.5s,baz=47,slow=9.2,SNR=40						
STKA	Stephens Creek	25.30	190	LR	LR	22 48 50.0	
	comp=Z,29nm,18.4s,baz=206,slow=41						
VNDA	Vanda	71.09	176	LR	LR	23 12 12.4	
	comp=Z,81nm,19.2s,baz=178,slow=34						
TORD	Torodi Ar. Bea	144.77	283	PKP	PKPdf	22 51 21.9	+0.6
	0.2nm,0.6s,baz=92,slow=6.1,SNR=2.5						

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*IDC **22** 22:32:51.1±0.9, 41°.64S×174°.44E, h0^{km}, mb3.7/2, mb1 3.9/3, mb1mx3.7/21, mbtmp3.7/3, Error ellipse: s-maj=24.8km s-min=9.0km az=134.0*

*WEL **22** 22:32:53.5, 42°S±1°×17°4E±°, h18^{km}±2^{km}, M3.8/30, ML3.9/6, MLv3.8/30, Error ellipse: s-maj=0.0km s-min=0.0km az=132.8*

ISC 22 22:32:53.9±1.1**, 41°.66S**±0°.03×**174°.31E**±0°.02**, h17^{km}**±8^{km}**, n85,** σ**1§18**/88**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	217	P	Pg	22 32 57.6	0.0
CMWZ				S	Sb	22 33 01.6	+1.3
BSWZ	Blackbirch Sta	0.33	260	P	Pb	22 33 01.6	+0.3
BSWZ				S	Sb	22 33 07.7	+1.4
TUWZ	Tuamarina	0.35	309	P	Pb	22 33 01.9	+0.1
TUWZ				S	Sb	22 33 08.3	+1.2
TCW	Tory Channel	0.45	357	P	Pb	22 33 03.0	-0.3
BHW	Baring Head	0.49	60	P	Pg	22 33 03.3	-0.4
WEL	Wellington	0.51	43	P	Pg	22 33 03.9	-0.2
PLWZ	Palliser	0.71	83	P	Pg	22 33 07.8	-0.1
MSWZ	Moikau Station	0.75	72	P	Pb	22 33 08.1	-0.4
CAW	Cannon Point	0.79	46	P	Pb	22 33 08.7	-0.6
NNZ	Nelson	0.82	302	P	Pn	22 33 10.3	-0.5
PAWZ	Paruwai Farm	0.88	72	P	Pb	22 33 10.6	-0.3
DUWZ	D’Urville Isla	0.90	341	P	Pn	22 33 11.5	-0.4
KHZ	Kahutara	0.95	217	P	Pn	22 33 13.1	+0.6
MTW	Mount Morrison	1.03	61	P	Pb	22 33 13.1	-0.2
THZ	Tophouse	1.05	264	P	Pg	22 33 14.8	+0.4
OGWZ	Otaki Gorge	1.06	38	P	Pb	22 33 13.4	-0.5
TRWZ	Traveller	1.07	76	P	Pb	22 33 13.6	-0.3
HOWZ	Holdsworth Sta	1.18	51	P	Pn	22 33 15.6	-0.2
TMWZ	Te Maipa	1.31	66	P	Pn	22 33 17.0	-0.5
MRZ	Mangatainoka R	1.38	44	P	Pn	22 33 18.7	+0.2
TIWZ	Tintock	1.48	54	P	Pn	22 33 20.3	+0.5
QRZ	Quartz Range	1.58	301	P	Pg	22 33 23.9	-0.3
CPWZ	Castlepoint	1.61	63	P	Pg	22 33 26.5	+1.6
GVZ	Greta Valley S	1.61	215	P	Pn	22 33 22.1	+0.4
OHWZ	Ohakea	1.64	28	P	Pg	22 33 25.1	-0.3
PRWZ	Pori Road	1.67	49	P	Pn	22 33 22.6	+0.2
POWZ	Post Office Ro	1.68	42	P	Pn	22 33 23.3	+0.8
BFZ	Birch Farm	1.76	57	P	Pn	22 33 23.2	-0.5
DSZ	Denniston Nort	1.88	266	P	Pb	22 33 27.9	+0.2
LTZ	Lake Taylor	1.89	233	P	Pn	22 33 26.2	+0.8
AMCZ	Amberley	1.95	218	P	Pn	22 33 26.6	+0.3
DVHZ	Dannevirke	1.95	47	P	Pn	22 33 25.8	-0.5
WAZ	Wanganui	1.97	15	P	Pg	22 33 30.3	-1.4
TSZ	Takapari Road	2.03	39	P	Pn	22 33 27.6	+0.2
LREZ	Lake Rotokare	2.19	2	P	Pg	22 33 36.1	0.0
PRHZ	Porangahau	2.24	53	P	Pn	22 33 30.4	+0.1
PNHZ	Pukenui	2.26	40	P	Pn	22 33 30.3	-0.2
OKCZ	Okains Bay	2.26	204	P	Pn	22 33 29.7	-0.8
NMEZ	Namu Road	2.26	352	P	Pg	22 33 38.1	+0.7
WPHZ	Waipukurau	2.27	46	P	Pn	22 33 31.4	+0.7
PREZ	Palmer Road	2.31	357	P	Pg	22 33 38.9	+0.6
OXZ	Oxford	2.37	224	P	Pn	22 33 32.5	+0.5
KHEZ	Kahui Hut	2.37	354	P	Pg	22 33 37.4	-2.0
INZ	Inchbonnie	2.38	242	P	Pn	22 33 33.7	+1.5
MQZ	McQueen’s Vall	2.38	210	P	Pn	22 33 30.9	-1.3
NBEZ	Newall Road No	2.41	352	P	Pg	22 33 39.3	-0.8
MTVZ	Mangateitei	2.44	22	P	Pg	22 33 39.4	-1.3
PKE	Pukeiti	2.47	354	P	Pg	22 33 39.8	-1.5
MOVZ	Moawhango	2.50	27	P	Pb	22 33 38.3	-0.2
BHHZ	Black Hill Sta	2.54	32	P	Pn	22 33 35.4	+0.9
KRHZ	Kereru	2.55	39	P	Pn	22 33 34.2	-0.4
VRZ	Vera Road	2.55	8	P	Pg	22 33 41.7	-1.2
DRZ	Dome Shelter	2.56	22	P	Pg	22 33 41.5	-1.6
WHVZ	Whangaehu Hut	2.56	23	P	Pn	22 33 36.9	+2.0
FWVZ	Far West T-bar	2.58	22	P	Pg	22 33 43.2	-0.2
TUVZ	Tukino	2.60	24	P	Pn	22 33 37.3	+2.0
NGZ	Ngauruhoe	2.67	22	P	Pn	22 33 38.5	+2.2
KAHZ	Kahuranaki	2.70	47	P	Pn	22 33 36.3	-0.3
WTVZ	West Tongariro	2.72	22	P	Pb	22 33 40.3	-1.9
TWVZ	Taurewa	2.72	19	P	Pb	22 33 43.5	+1.2
KWHZ	Kaweka Forest	2.75	37	P	Pb	22 33 44.1	+1.4
KRVZ	Karewarewa	2.75	22	P	Pb	22 33 42.4	-0.4
MCHZ	McNeill Hill	2.86	40	P	Pn	22 33 39.7	+0.8
KATZ	Kakaramea	2.88	22	P	Pb	22 33 44.0	-0.9
RITZ	Rihia Road	2.93	24	P	Pb	22 33 46.5	+0.8
BKZ	Black Stump Fm	3.00	35	P	Pb	22 33 48.0	+1.1
WVZ	Waitaha Valley	3.00	241	P	Pb	22 33 44.0	-2.9
RATZ	Rangitukua	3.00	22	P	Pb	22 33 48.1	+1.1
WATZ	Wairara	3.14	21	P	Pb	22 33 50.7	+1.4
RPZ	Rata Peaks	3.16	228	Pn	Pn	22 33 42.8	-0.2
	baz=49,slow=11,SNR=0.6						
RPZ				Pg	Pg	22 33 53.9	-0.5
	24nm,0.3s,baz=288,slow=2.7,SNR=5.7						
RPZ				Sn	Sn	22 34 19.1	-1.1
	baz=349,slow=15,SNR=0.9						
RPZ				Lg	Lg	22 34 34.3	
	7.7nm,0.3s,baz=181,slow=20,SNR=1.2						
HIZ	Hauiti	3.17	8	P	Pb	22 33 47.3	-2.4
MRHZ	Matea Rd	3.25	30	P	Pb	22 33 51.9	+0.7
LBZ	Lake Benmore	4.07	227	P	Pn	22 33 56.7	+1.3
MWZ	Matawai	4.14	38	P	Pn	22 33 58.5	+2.1
ODZ	Otahua Downs	4.31	217	P	Pn	22 33 58.4	-0.4
AWAZ	Awhitu Peninsu	4.59	3	P	Pb	22 34 10.5	-3.5
MKAZ	Moumakai	4.59	9	P	Pb	22 34 09.1	-4.9
JCZ	Jackson Bay	4.72	237	P	Pn	22 34 08.6	+4.1
SYZ	Scrubby Hill	6.14	216	P	Pn	22 34 24.7	+0.9
OUZ	Omahuta	6.45	355	P	Pn	22 34 34.1	+6.0
CTZ	Chatham Island	7.00	110	P	Pn	22 34 36.6	+1.0
ASAR	Alice Springs	38.05	285	P	P	22 40 12.1	+0.5
	0.3nm,0.4s,baz=123,slow=7.2,SNR=4.9						
WRA	Warramunga Arr	40.11	290	P	P	22 40 29.3	+0.5
	1.0nm,0.5s,baz=123,slow=8.4,SNR=1.4						
ARCES	ARCESS Array B	147.70	340	PKPbc	PKPbc	22 52 35.5	-0.9
	1.2nm,0.8s,baz=20,slow=2.9,SNR=1.6						
TORD	Torodi Ar. Bea	150.88	195	PKPbc	PKPbc	22 52 46.0	+0.1
	0.4nm,0.5s,baz=142,slow=3.2,SNR=6.6						

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*NEIC **22** 22:37:25.2±0.0, 14°.94N×59°.62W, h13^{km}, MD4.0(TRN), After TRN.*

TRN 22 22:37:24.8, 14°.94N×59°.62W, h8^{km}, MD4.0, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAM	Ilet Lapin Mar	1.23	263	*e*P	Pg	22 37 49.4	+1.0
MVM	Montagne Vaucl	1.30	253	*e*P	Pg	22 37 50.5	+0.7
MPOM	Morne Pois Mar	1.30	248⇑	*e*P	Pg	22 37 50.4	+0.6
LPMF	Morne Lapointe	1.36	255	*e*P	Pb	22 37 50.6	+0.1
ZAM	Aeronautique	1.41	255	*e*P	Pb	22 37 51.6	+0.1
TRMF	Trois Ilets	1.45	254	*e*P	Pb	22 37 52.3	+0.2
BIM	Bigot	1.47	254	*e*P	Pg	22 37 53.2	+0.2
BAMF	Morne Balai	1.49	265	*e*P	Pg	22 37 53.8	+0.4
FDF	Fort de France	1.50	262	*e*Pn	Pb	22 37 52.6	-0.4
FDF				*e*Sn	Sn	22 38 05.5	-6.4
FDF	Fort de France	1.50	262	*e*P	Pb	22 37 52.9	-0.1
FDF				*e*S	Sg	22 38 14.2	+1.2
GBMF	Grand Be	1.50	265	*e*P	Pg	22 37 54.1	+0.4
CXM	Morne La Croix	1.51	265	*e*P	Pg	22 37 54.2	+0.5
PML	Morne Lenard	1.52	264	*e*P	Pg	22 37 54.1	0.0
PCM	Pelee Case Pet	1.55	266	*e*P	Pg	22 37 54.2	-0.3
SLW	Petit Monier	1.57	235	*e*P	Pb	22 37 54.3	+0.1
SLW				*e*S	Sg	22 38 15.7	+0.2
SLBI	Saint Lucia, B	1.60	235	*e*P	Pb	22 37 54.8	+0.1
SLBI				*e*S	Sg	22 38 16.8	+0.5
DLPL	La Plaine	1.62	284	*e*P	Pg	22 37 55.5	-0.4
DLPL				*e*S	Sg	22 38 17.6	+0.5
SLPA	Patience	1.66	230	*e*Pn	Pb	22 37 55.2	-0.6
SLPA				*e*Sg	Sg	22 38 18.1	-0.1
SLPA	Patience	1.66	230	*e*P	Pb	22 37 55.2	-0.6
SLPA				*e*S	Sg	22 38 18.1	-0.1
DBCT	Belle View Cho	1.70	281	*e*Pn	Pg	22 37 57.4	-0.1
DBCT				*e*Sg	Sg	22 38 19.6	-0.1
DBCT	Belle View Cho	1.70	281	*e*P	Pg	22 37 57.4	-0.1
DBCT				*e*S	Sg	22 38 19.6	-0.1
DWS	Wesley	1.75	291	*e*Pn	Pb	22 37 56.9	-0.4
DWS				*e*Sg	Sg	22 38 21.4	+0.2
DWS	Wesley	1.75	291	*e*P	Pb	22 37 56.9	-0.4
DWS				*e*S	Sg	22 38 21.4	+0.2
MDN	Morne-Daniel	1.76	283	*e*Pn	Pb	22 37 57.8	+0.5
MDN				*e*Sg	Sg	22 38 21.4	+0.1
MDN	Morne-Daniel	1.76	283	*e*P	Pb	22 37 57.8	+0.5
MDN				*e*S	Sg	22 38 21.4	+0.1
SLB	Belfond	1.77	232	*e*P	Pb	22 37 57.6	0.0
SLB				*e*S	Sg	22 38 23.4	+1.7
MCLT	Moule a Chique	1.77	227	*e*P	Pb	22 37 58.1	+0.5
MCLT				*e*S	Sb	22 38 20.6	+0.5
BBGH	Gun Hill	1.79	178	*e*Pn	Pn	22 37 55.4	-0.7
BBGH				*e*Sn	Sn	22 38 15.2	-3.8
BBGH	Gun Hill	1.79	178	*e*P	Pb	22 37 58.3	+0.5
BBGH				*e*S	Sg	22 38 21.7	-0.6
SLDE	Delcer	1.80	231	*e*Pn	Pb	22 37 57.7	-0.4
SLDE				*e*Sg	Sg	22 38 22.2	-0.4
SLDE	Delcer	1.80	231	*e*P	Pb	22 37 57.7	-0.4
SLDE				*e*S	Sg	22 38 22.2	-0.4
BBSP	Saint Philip	1.83	175	*e*Pn	Pb	22 37 58.3	-0.3
BBSP				*e*Sg	Sb	22 38 22.4	+0.7
BBSP	Saint Philip	1.83	175	*e*P	Pb	22 37 58.3	-0.3
BBSP				*e*S	Sb	22 38 22.4	+0.7
MDPO	Dominica; Chan	1.88	290	*e*P	Pn	22 37 58.4	+1.0
MDPO				*e*S	Sb	22 38 23.6	+0.5
MAGL	Barre de l’ile	1.90	302	*e*P	Pb	22 37 59.0	-0.7
TDBA	Terre de Bas,	2.15	295	*e*P	Pb	22 38 03.2	-0.8
SSV	Crater Summit	2.21	224	*e*Pn	Pb	22 38 04.1	-1.2
SSV				*e*Sg	Sb	22 38 31.8	-1.1
SSV	Crater Summit	2.21	224	*e*P	Pb	22 38 04.1	-1.2
SSV				*e*S	Sb	22 38 31.8	-1.1
CBE	Ff, Capester	2.22	301	*e*P	Pb	22 38 04.1	-1.2
SVCV	St. Vincent, C	2.22	222	*e*P	Pb	22 38 03.9	-1.5
SVCV				*e*S	Sb	22 38 32.5	-0.6
SVV	Soufriere Volc	2.24	224	*e*Pn	Pn	22 38 03.7	+1.4
SVV				*e*Sg	Sb	22 38 32.4	-1.1
SVV	Soufriere Volc	2.24	224	*e*P	Pn	22 38 03.7	+1.4
SVV				*e*S	Sb	22 38 32.4	-1.1
SVB	Belmont	2.29	224	*e*P	Pn	22 38 04.1	+1.0
SVB				*e*S	Sb	22 38 33.7	-1.4
ABD	La Joyeuse, An	2.36	310	*e*P	Pb	22 38 07.0	-0.7
FCV	Fort Charlotte	2.37	222	*e*Pn	Pn	22 38 05.6	+1.4
FCV				*e*Sg	Sb	22 38 35.8	-1.7
FCV	Fort Charlotte	2.37	222	*e*P	Pn	22 38 05.6	+1.4
FCV				*e*S	Sb	22 38 35.8	-1.7
BPA	Boggy Peak	3.01	314	*e*Pn	Pn	22 38 15.5	+2.6
BPA				*e*Sn	Sn	22 38 50.0	+0.8
BPA	Boggy Peak	3.01	314	*e*P	Pn	22 38 15.5	+2.6
BPA				*e*S	Sn	22 38 50.0	+0.8
MLYT	Lee's Yard	3.05	306	*e*P	Pn	22 38 15.7	+2.2
MLYT				*e*S	Sn	22 38 51.6	+1.5
GRSS	Sisters	3.26	217	*e*Pn	Pn	22 38 17.9	+1.5
GRSS				*e*Sn	Sn	22 38 58.0	+2.5
GRSS	Sisters	3.26	217	*e*P	Pn	22 38 17.9	+1.5
GRSS				*e*S	Sn	22 38 58.0	+2.5
GRHS	Sauteurs	3.34	216	*e*Pn	Pn	22 38 19.1	+1.7
GRHS				*e*Sn	Sn	22 39 00.0	+2.7
GRHS	Sauteurs	3.34	216	*e*P	Pn	22 38 19.1	+1.7
GRHS				*e*S	Sn	22 39 00.0	+2.7
ANWB	Willy Bob	3.42	323	*e*Pn	Pn	22 38 17.4	-1.2
ANWB				*e*Sn	Sn	22 38 52.6	-6.7
ANWB	Willy Bob	3.42	323	*e*P	Pn	22 38 19.7	+1.1
ANWB				*e*S	Sn	22 38 58.3	-1.1
GRGR	Grenville	3.42	216	*e*Pn	Pn	22 38 19.3	+0.7
GRGR				*e*Sn	Sn	22 39 01.9	+2.5
GRGR	Grenville	3.42	216	*e*P	Pn	22 38 20.9	+2.3
GRGR				*e*S	Sn	22 39 01.9	+2.5
TOSP	Speyside	3.73	194	*e*P	Pn	22 38 25.6	+2.9
TOSP				*e*S	Sn	22 39 08.3	+1.3
SKI	Saint Kitts	3.83	309	*e*P	Pn	22 38 26.7	+2.5
SKI				*e*S	Sn	22 39 11.2	+1.7
SKDB	Saint Kitts 2	3.92	309	*e*Pn	Pn	22 38 27.4	+2.0
SKDB				*e*Sn	Sn	22 39 13.3	+1.6
SKDB	Saint Kitts 2	3.92	309	*e*P	Pn	22 38 27.4	+2.0
SKDB	Saint Kitts 2	3.92	309	*e*S	Sn	22 39 13.3	+1.6
SABA	Saba	4.39	308	*e*P	Pn	22 38 33.5	+1.6
SABA	Saba	4.39	308	*e*S	Sn	22 39 23.4	+0.2
SMRT	St. Maarten	4.54	313	*e*P	Pn	22 38 37.0	+3.1
SMRT	St. Maarten	4.54	313	*e*S	Sn	22 39 27.6	+0.7
TRN	Trinidad (W)	4.61	202	*e*Pn	Pn	22 38 37.2	+2.3
TRN				*e*Sn	Sn	22 39 29.6	+1.0
TRN	Trinidad (W)	4.61	202	*e*P	Pn	22 38 37.2	+2.3
TRN	Trinidad (W)	4.61	202	*e*S	Sn	22 39 29.6	+1.0
CUPR	Culebra, Puert	6.38	302	*e*Pn	Pn	22 38 53.9	-5.3
MTP	Monte Pirata	6.50	300	*e*Pn	Pn	22 39 00.6	-0.4
CBYP	Canovanas	6.84	300	*e*Pn	Pn	22 39 06.6	+0.9
AOPR	Arecibo Observ	7.63	297	*e*Pn	Pn	22 39 17.2	+0.7
SDDR	Presa de Saban	11.87	291	*e*Pn	Pn	22 40 14.6	0.0
PTGA	Pitinga	15.57	181	*e*Pn	Pn	22 41 02.9	-2.0

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*ISCJB **22** 22:51:01.9±0.2, 1°.35S±0°.05×15°.78W±0°.03, h10^{km}, mb4.5/94, MS4.4/40, Error ellipse: s-maj=7.0km s-min=4.0km az=165.1*

*MOS **22** 22:51:01.8±1.4, 1°.33S×15°.72W, h10^{km}, mb5.0/37, Error ellipse: s-maj=14.5km s-min=7.2km az=59.7*

*IDC **22** 22:51:02.3±0.5, 1°.30S×15°.76W, h0^{km}, mb4.1/33, mb1 4.2/34, mb1mx4.2/53, mbtmp4.1/34, ML3.5/1, MS4.3/26, Ms1 4.3/26, ms1mx4.3/28, Error ellipse: s-maj=14.9km s-min=12.7km az=132.0*

*NEIC **22** 22:51:03.1±1.9, 1°.25S×15°.78W, h10^{km}±1^{km}, mb5.1/79, Error ellipse: s-maj=13.9km s-min=9.6km az=110.0*

*BJI **22** 22:51:03.1±0.0, 1°.64S×15°.42W, h8^{km}, mb5.2/8, mB5.5/11, Ms5.0/7, Ms7 4.7/5*

*GCMT **22** 22:51:06.1±0.2, 1°.16S±0°.02×16°.02W±0°.01, h12^{km}, MW5.0/113, Moment Tensor Solution. s46,c53; s113,c184; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.26±.09; $M_{\theta\theta}$-0.18±.09; $M_{\phi\phi}$4.44±.08; $M_{r\theta}$-0.90±.35; $M_{\theta\phi}$-0.67±.07; $M_{\phi r}$0.15±.26; Best double couple: $M_0$4.49700×10^{16} NP1:ϕ_s160.00000°, δ48.00000°, λ-106.00000°. NP2:ϕ_s3.00000°, δ44.00000°, λ-73.00000°. Principal axes: T 4.5450, Plg2.0000°, Azm262.0000°; N -0.0920, Plg12.0000°, Azm171.0000°; P -4.4490, Plg78.0000°, Azm0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 22:51:03.6±0.4**, 1°.26S**±0°.07×**15°.71W**±0°.06**, h10^{km}, n421,** σ**1§46**/406**, mb4.6**/98**, MS4.3**/41**, 19C-7D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.64	169	T	T	22 59 25.5	
	baz=348,slow=74,SNR=970						
H10N3	ASCENSION HYDR	6.65	170	T	T	22 59 26.2	
	baz=348,slow=74,SNR=1086						
H10N1	ASCENSION HYDR	6.66	169	T	T	22 59 26.9	
	baz=348,slow=74,SNR=1175						
ASCN	Ascension	6.77	169	*e*Pn	Pn	22 52 41.8	-1.3
H10S1	ASCENSION HYDR	7.71	172	T	T	23 00 50.9	
	baz=351,slow=74,SNR=35						
H10S3	ASCENSION HYDR	7.71	172	T	T	23 00 59.3	
	baz=351,slow=74,SNR=231						
H10S2	ASCENSION HYDR	7.72	172	T	T	23 00 52.0	
	baz=351,slow=74,SNR=233						
DBIC	Dimbokro	13.39	54	Pn	Pn	22 54 14.5	+0.6
	0.2nm,0.3s,baz=214,slow=16,SNR=6.5						
DBIC				Sn	Sn	22 56 36.0	-6.9
	0.2nm,0.3s,baz=172,slow=21,SNR=1.4						
DBIC				LR	LR	22 58 27.6	
	comp=Z,3µm,21.1s,baz=208,slow=33						
DBIC	Dimbokro	13.39	54	*e*Pn	Pn	22 54 11.3	-2.5
DBIC				*e*Sn	Sn	22 56 36.0	-6.9
DBIC	Dimbokro	13.39	54	*e*P	Pn	22 54 11.3	-2.5
RCBR	Riachuelo	20.66	257	*e*P	P	22 55 39.4	-4.4
	103nm,1.6s						
RCBR	Riachuelo	20.66	257	*e*P	P	22 55 39.4	-4.4
RCBR				pmax	pmax		
	comp=Z,103nm,1.6s						
TOA0	Torodi Ar. Sit	22.42	50	*e*P	P	22 56 01.0	-1.8
	comp=Z,44nm,1.1s						
TORD	Torodi Ar. Bea	22.42	50	P	P	22 56 02.8	+0.1
	comp=Z,3.0nm,0.7s,baz=228,slow=10,SNR=17						
TORD				PcP	PcP	22 59 56.5	-1.2
	comp=Z,0.6nm,0.7s,baz=241,slow=0.9,SNR=4.1						
TORD				LR	LR	23 04 00.5	
	comp=Z,2µm,19.1s,baz=290,slow=35						
TOA1	Torodi Ar. Sit	22.42	50	*e*P	P	22 56 02.8	+0.1
TOA1				*e*PcP	PcP	22 59 56.5	-1.2
MACI	Morro de la Ar	29.35	359	*e*P	P	22 57 05.6	-1.4
	comp=Z,67nm,1.0s						
TAM	Tamanrasset	31.61	40	*e*P	P	22 57 28.0	+0.9
	comp=Z,12nm,1.1s						
TAM	Tamanrasset	31.61	40	*e*P	P	22 57 28.0	+0.9
TAM				pmax	pmax		
	comp=Z,12nm,1.1s						
BDFB	Brasilia	34.92	244	P	P	22 57 55.4	-0.6
	comp=Z,2.7nm,0.7s,baz=80,slow=16,SNR=3.2						
BDFB				LR	LR	23 09 48.0	
	comp=Z,464nm,21.3s,baz=78,slow=32						
BDFB	Brasilia	34.92	244	*e*P	P	22 57 54.5	-1.5
	comp=Z,76nm,1.9s						
BDFB				*e*P	P	22 57 55.4	-0.6
BDFB	Brasilia	34.92	244	*e*P	P	22 57 54.5	-1.5
BDFB				*e*		22 57 55.4	
BDFB				pmax	pmax		
	comp=Z,76nm,1.9s						
MDT	Midelt	35.47	16	P	P	22 58 02.0	+1.5
	comp=Z,1.7nm,0.9s,baz=206,slow=12,SNR=4.4						
MDT				LR	LR	23 12 11.8	
	comp=Z,482nm,20.8s,baz=206,slow=36						
TSUM	Tsumeb	37.17	121	LR	LR	23 10 36.9	
	comp=Z,479nm,19.3s,baz=286,slow=32						
PVAQ	Vaqueiros	39.17	10	*e*P	P	22 58 33.8	+2.1
	comp=Z,38nm,1.6s						
PCVE	Castro Verde	39.34	10	*e*P	P	22 58 35.5	+2.4
	comp=Z,33nm,1.7s						
PNCL	Nicolau / Gran	39.73	9	*e*P	P	22 58 38.8	+2.5
PMAFR	Mafra	40.45	8	*e*P	P	22 58 44.7	+2.4
	comp=Z,74nm,1.7s						
PMTG	Montargil	40.72	9	*e*P	P	22 58 47.0	+2.5
	comp=Z,19nm,2.2s						
PMRV	Marv??o	41.20	10	*e*P	P	22 58 50.0	+1.5
	comp=Z,19nm,1.5s						
PCAS	Casmilo, Conde	41.64	8	*e*P	P	22 58 54.5	+2.4
	comp=Z,30nm,1.6s						
PAB	San Pablo	41.92	13	*e*P	P	22 58 55.0	+0.5
	comp=Z,16nm,1.2s						
PAB	San Pablo	41.92	13	*e*P	P	22 58 55.0	+0.5
PAB				pmax	pmax		
	comp=Z,16nm,1.2s						
MTE	Manteigas	42.12	9	*e*P	P	22 58 58.2	+2.1
	comp=Z,20nm,1.3s						
MTE	Manteigas	42.12	9	*e*PP	PP	23 00 34.4	+0.6
MTE	Manteigas	42.12	9	*e*P	P	22 58 55.6	-0.6
	comp=Z,15nm,1.1s						
MTE				*e*PP	PP	23 00 26.7	-7.1
ESDC	Sonseca Array	42.13	14	P	P	22 58 57.4	+1.2
	comp=Z,0.5nm,0.6s,baz=190,slow=7.9,SNR=6.0						
ESDC				PP	PP	23 00 30.8	-3.1
	comp=Z,0.6nm,0.8s,baz=194,slow=11,SNR=3.7						
ESDC				LR	LR	23 16 50.7	
	comp=Z,357nm,19.4s,baz=230,slow=37						
MVO	Moncorvo	42.95	10	*e*P	P	22 59 05.0	+2.1
	comp=Z,22nm,1.5s						
MVO	Moncorvo	42.95	10	*e*PP	PP	23 00 47.9	+5.2
POLO	Lamas de Olo	43.04	9	*e*P	P	22 59 05.7	+2.1
	comp=Z,8.8nm,1.5s						
H07N1	FLORES T-PHASE	43.13	343	T	T	23 45 29.9	
	SNR=24						
KEST	Kesra	43.60	30	LR	LR	23 18 28.6	
	comp=Z,881nm,18.6s,baz=166,slow=38						
PTGA	Pitinga	44.26	270	P	P	22 59 13.9	+0.1
	comp=Z,2.7nm,0.8s,baz=56,slow=15,SNR=3.9						
PTGA	Pitinga	44.26	270	*e*P	P	22 59 12.3	-1.5
	comp=Z,6.3nm,1.1s						
LSZ	Lusaka	45.49	110	P	P	22 59 23.9	+0.2
	comp=Z,0.8nm,0.6s,baz=248,slow=6.6,SNR=3.5						
LSZ	Lusaka	45.49	110	*e*P	P	22 59 23.9	+0.2
	comp=Z,20nm,1.8s						
LSZ	Lusaka	45.49	110	*e*P	P	22 59 23.9	+0.2
LSZ				pmax	pmax		
	comp=Z,21nm,1.8s						
SUR	Sutherland	46.25	136	P	P	22 59 30.2	+0.6
	comp=Z,10nm,0.9s,baz=306,slow=8.7,SNR=3.3						
SUR	Sutherland	46.25	136	*e*P	P	22 59 30.2	+0.6
	comp=Z,117nm,1.9s						
LBTB	Lobatse	46.33	124	P	P	22 59 30.7	+0.5
	comp=Z,2.2nm,0.6s,baz=292,slow=9.4,SNR=6.5						
LBTB	Lobatse	46.33	124	*e*P	P	22 59 28.3	-1.9
	comp=Z,16nm,1.4s						
LBTB	Lobatse	46.33	124	*e*P	P	22 59 28.3	-1.9
LBTB				pmax	pmax		
	comp=Z,16nm,1.4s						
SIV	San Ignacio	47.03	249	P	P	22 59 36.8	+1.0
	comp=Z,0.9nm,0.9s,baz=74,slow=17,SNR=3.4						
CPUP	Villa Florida	47.13	234	LR	LR	23 17 14.3	
	comp=Z,585nm,20.1s,baz=54,slow=33						
MATP	Matopo	47.18	117	P	P	22 59 37.1	+0.1
	comp=Z,2.1nm,0.8s,baz=278,slow=8.5,SNR=5.0						
H05S1	Guadeloupe/Mar	47.31	291	T	T	23 49 56.6	
	SNR=17						
BOSA	Boshof	47.61	129	P	P	22 59 40.7	+0.5
	comp=Z,4.4nm,0.6s,baz=302,slow=8.2,SNR=19						
BOSA				LR	LR	23 16 15.8	
	comp=Z,192nm,20.9s,baz=299,slow=32						
TIP	Timpagrande	50.07	33	*e*P	P	22 59 59.0	+0.2

	comp=Z,13nm,1.2s						
TIP	Timpagrande	50.07	33	⇑*i*P	P	23 00 00.3	+1.5
BNI	Bardonecchia	50.22	21	*e*P	P	23 00 00.8	+0.9
	comp=Z,10nm,1.3s						
BNI	Bardonecchia	50.22	21	*e*P	P	23 00 00.8	+0.9
BNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
DAVOX	Davos/Dischmat	52.85	22	P	P	23 00 20.8	+1.1
	comp=Z,2.6nm,0.8s,baz=25,slow=5.2,SNR=5.6						
DAVA	Damuels	53.28	22	*i* P	P	23 00 23.9	+1.1
	comp=Z,7.8nm,0.9s						
FETA	Feichten	53.37	22	*i* P	P	23 00 24.2	+0.7
	comp=Z,4.5nm,1.0s						
BFO	Black Forest	53.62	20	*e*P	P	23 00 25.4	+0.3
	comp=Z,17nm,1.5s						
BFO				*e*PcP	PcP	23 01 31.2	-0.4
BFO	Black Forest	53.62	20	*e*P	P	23 00 25.5	+0.3
BFO				*e*		23 01 31.2	
BFO				pmax	pmax		
	comp=Z,17nm,1.5s						
SQTA	Sankt Quirin	53.72	23	*i* P	P	23 00 27.1	+1.1
	comp=Z,10nm,1.0s						
LPAZ	La Paz	53.73	251	P	P	23 00 26.7	-0.5
	comp=Z,1.0nm,0.8s,baz=90,slow=4.0,SNR=3.4						
LPAZ				LR	LR	23 22 26.5	
	comp=Z,834nm,19.3s,baz=84,slow=35						
RETA	Reutte	53.77	22	*i* P	P	23 00 27.0	+0.7
	comp=Z,6.5nm,1.2s						
MOTA	Moosalm	53.78	22	*i* P	P	23 00 27.6	+1.1
	comp=Z,2.1nm,1.0s						
ABTA	Abfaltersbach	53.85	24	*i* P	P	23 00 28.2	+1.3
	comp=Z,16nm,2.3s						
WTTA	Wattenberg	53.92	23	*i* P	P	23 00 28.8	+1.3
	comp=Z,4.5nm,0.8s						
WATA	Walderalm	53.96	23	*i* P	P	23 00 29.7	+1.9
	comp=Z,3.7nm,1.0s						
DOU	Dourbes	54.04	16	⇓P	P	23 00 30.3	+2.2
MYKA	Terra Mystica	54.21	25	*i* pP	P	23 00 32.1	+2.6
	comp=Z,7.5nm,1.6s						
KBA	Koelnbreinsper	54.45	24	*i* P	P	23 00 33.2	+1.8
	comp=Z,5.0nm,1.0s						
OBKA	Obir	54.50	25	*i* pP	P	23 00 34.0	+2.3
	comp=Z,7.8nm,1.6s						
SOKA	Soboth	54.84	25	*i* pP	P	23 00 36.2	+2.1
	comp=Z,5.1nm,1.1s						
MOA	Molln	55.44	24	*i* P	P	23 00 39.4	+1.0
	comp=Z,5.9nm,1.5s						
ARSA	Arzberg	55.50	25	*i* pP	P	23 00 42.0	+3.3
	comp=Z,2.7nm,0.9s						
GEC2	GERESS Array S	56.02	23	*e*P	P	23 00 43.5	+1.0
	comp=Z,27nm,1.8s						
GEC2	GERESS Array S	56.02	23	*e*P	P	23 00 43.5	+1.0
GEC2				pmax	pmax		
	comp=Z,27nm,1.8s						
GERES	GERESS Array B	56.02	23	P	P	23 00 43.0	+0.5
	comp=Z,0.7nm,0.8s,baz=197,slow=2.8,SNR=7.5						
GERES				LR	LR	23 27 01.4	
	comp=Z,255nm,18.5s,baz=234,slow=38						
CONA	Conrad Observa	56.17	25	*i* P	P	23 00 45.2	+1.6
	comp=Z,10nm,1.7s						
KHC	Kasperske Hory	56.20	23	⇓*e*P	P	23 00 45.5	+1.7
KHC				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KHC	Kasperske Hory	56.20	23	*e*P	P	23 00 45.3	+1.5
KHC				*e*x	x	23 00 50.5	
KHC				AMS	AMS	23 29 20.0	
	comp=Z,300nm,13.0s						
MDVR	Moldovita	56.62	31	⇑*i*P	P	23 00 50.1	+3.2
NKC	Novy Kostel	56.68	21	AMS	AMS	23 25 50.0	
	comp=Z,200nm,17.3s						
ZST	Bratislava	56.91	26	*e*P	P	23 00 50.1	+1.3
ZST	Bratislava	56.91	26	*e*P	P	23 00 50.1	+1.3
TREC	Trest	57.08	24	AMS	AMS	23 28 10.0	
	comp=Z,200nm,17.3s						
MODS	Modra-Piesok	57.12	26	*e*P	P	23 00 50.4	+0.1
MODS				pmax	pmax		
	comp=Z,51nm,2.3s						
MODS	Modra-Piesok	57.12	26	*e*P	P	23 00 50.4	+0.1
BZS	Buzias	57.15	30	⇑*i*P	P	23 00 52.7	+2.2
PRU	Pruhonice	57.26	23	AMS	AMS	23 26 30.0	
	comp=Z,200nm,15.4s						
PLVB	Pleven	57.27	34	⇑*i*P	P	23 00 54.7	+3.3
KRUC	Moravsky	57.27	25	*e*P	P	23 00 51.6	+0.2
GOPC	GO Pecny, Ondr	57.30	23	AMS	AMS	23 26 30.0	
	comp=Z,200nm,18.3s						
ESK	Eskdalemuir	57.31	8	*i* P	P	23 00 54.3	+2.8
EKA	Eskdalemuir Ar	57.34	8	P	P	23 00 52.3	+0.6
	comp=Z,1.3nm,0.6s,baz=191,slow=7.4,SNR=8.6						
VRAC	Vranov	57.55	24	P	P	23 00 53.5	+0.2
	comp=Z,1.8nm,0.5s,baz=248,slow=8.0,SNR=5.0						
VRAC	Vranov	57.55	24	*e*P	P	23 00 53.7	+0.4
GZR	Gura Zlata	57.59	31	⇑*i*P	P	23 00 55.5	+1.7
SIRR	Siria	57.62	30	⇓*i*P	P	23 00 56.4	+2.5
JAVC	Velka Javorina	57.66	25	*e*P	P	23 00 55.7	+1.5
PVCC	Panska Ves	57.70	22	AMS	AMS	23 26 40.0	
	comp=Z,300nm,19.0s						
BRG	Berggiesshubel	57.75	22	*e*P	P	23 01 01.6	+6.9
	comp=Z,3.1nm,0.8s						
CLL	Collm	57.76	21	*e*P	P	23 00 55.0	+0.2
CLL				*e*		23 01 02.0	
CLL				*e*S	S	23 08 54.0	+0.2
CLL				pmax	pmax		
	comp=Z,44nm,2.5s						
CLL	Collm	57.76	21	*e*P	P	23 00 55.0	+0.2
	comp=Z,44nm,2.5s						
CLL				*e*		23 01 02.0	
CLL				*e*PP	PP	23 03 02.0	-0.9
CLL				*i*		23 03 25.2	
CLL				*e*S	S	23 08 54.0	+0.2
CLL				*e*ScS	ScS	23 10 49.0	+4.6
CLL				*e*SSS	SSS	23 15 06.0	
CLL				Lm	MLR	23 26 00.0	
	comp=N,100nm,19.0s						
CLL				Lm	MLR	23 26 00.0	
	comp=E,100nm,20.0s						
VYHS	Vyhne	57.89	26	*e*P	P	23 00 56.9	+1.1
VYHS				pmax	pmax		
	comp=Z,23nm,2.0s						
VYHS	Vyhne	57.89	26	*e*P	P	23 00 56.9	+1.1
LOT	Lotru	58.15	32	⇑*i*P	P	23 01 00.3	+2.6
DPC	Dobruska-Polom	58.25	24	*e*P	P	23 00 58.6	+0.3
DPC				MLR	MLR		
	comp=Z,200nm,19.3s						
DPC	Dobruska-Polom	58.25	24	*e*P	P	23 00 58.6	+0.3
DPC				AMS	AMS	23 31 10.0	
	comp=Z,200nm,19.3s						
UPC	Upice	58.25	23	AMS	AMS	23 28 20.0	
	comp=Z,300nm,15.5s						
MORC	Moravsky Berou	58.30	25	*e*P	P	23 00 58.5	-0.1
	comp=Z,30nm,1.8s						
MORC	Moravsky Berou	58.30	25	*e*P	P	23 00 58.5	-0.1
MORC				pmax	pmax		
	comp=Z,30nm,1.8s						
MORC	Moravsky Berou	58.30	25	*e*P	P	23 00 57.9	-0.8
CHVC	Chvalec	58.33	23	AMS	AMS	23 28 20.0	
	comp=Z,200nm,15.5s						
OSTC	Ostas	58.37	23	*e*P	P	23 01 00.9	+1.8
OSTC				AMS	AMS	23 28 30.0	
	comp=Z,200nm,14.4s						
ARR	Arges	58.55	32	⇑*i*P	P	23 01 03.1	+2.6
OKC	Ostrava-Krasne	58.60	25	AMS	AMS	23 27 10.0	
	comp=Z,200nm,13.9s						
KSP	Ksiaz	58.62	23	*e*P	P	23 01 02.8	+2.0
KSP	Ksiaz	58.62	23	*e*P	P	23 01 02.8	+2.0
VOIR		58.82	32	⇑*i*P	P	23 01 06.1	+3.7
ROSC	El Rosal	58.87	276	P	P	23 01 03.2	-0.5
	comp=Z,4.9nm,0.4s,baz=129,slow=15,SNR=4.9						
ROSC				LR	LR	23 23 15.1	
	comp=Z,622nm,21.9s,baz=86,slow=33						
ROSC	El Rosal	58.87	276	*e*P	P	23 01 02.2	-1.4
	comp=Z,77nm,1.9s						
NIE	Niedzica	59.23	27	*e*P	P	23 01 06.9	+1.8
NIE	Niedzica	59.23	27	*e*P	P	23 01 06.9	+1.8
MLR	Muntele Rosu	59.34	33	P	P	23 01 06.7	+0.6
	comp=Z,1.9nm,0.8s,baz=230,slow=7.3,SNR=6.3						
MLR	Muntele Rosu	59.34	33	⇑*i*P	P	23 01 08.2	+2.1
MLR	Muntele Rosu	59.34	33	P	P	23 01 08.9	+2.8
MLR				pmax	pmax		
	comp=Z,13nm,1.4s						
UZH	Uzhgorod	59.58	28	*e*P	P	23 01 08.0	+0.5
UZH				*i*		23 01 11.2	
UZH				*e*		23 01 15.5	
OJC	Ojcow	59.59	26	*e*P	P	23 01 08.4	+0.9
OJC	Ojcow	59.59	26	*e*P	P	23 01 08.5	+0.9
OZUR		59.64	32	⇑*i*P	P	23 01 10.6	+2.6
ASF	Jabal al Asfar	59.78	51	P	P	23 01 09.0	-0.3
	comp=Z,0.9nm,0.6s,baz=259,slow=12,SNR=2.3						
ASF	Jabal al Asfar	59.78	51	*e*P	P	23 01 09.0	-0.3
KOLS	Kolonicke sedl	59.78	28	*e*P	P	23 01 10.9	+2.0
KOLS				pmax	pmax		
	comp=Z,35nm,2.3s						
KOLS	Kolonicke sedl	59.78	28	*e*P	P	23 01 10.9	+2.0
PLOR	Plostina	59.95	33	⇑*i*P	P	23 01 13.9	+3.8
VRI	Vrincioaia	60.00	33	⇓*i*P	P	23 01 13.7	+3.2
BURAR	Bucovina Array	60.33	31	⇑*i*P	P	23 01 15.6	+2.8
BIZ	Bicaz	60.35	32	⇑*i*P	P	23 01 15.6	+2.8
BR131	Keskin Array S	60.76	42	*e*P	P	23 01 15.9	-0.1
	comp=Z,21nm,1.4s						
BRTR	Keskin Array B	60.76	42	P	P	23 01 18.1	+2.1
	comp=Z,1.9nm,1.0s,baz=258,slow=6.1,SNR=9.5						
BRTR				LR	LR	23 30 58.4	
	comp=Z,144nm,18.6s,baz=224,slow=39						
KIS	Kishinev	61.84	33	*e*P	P	23 01 20.0	-2.9
KIS				*e*L	L	23 23 14.0	
KIS				LRM	MLR	23 29 14.0	
	comp=Z,300nm,20.0s						
KIS	Kishinev	61.84	33	*e*P	P	23 01 20.0	-2.9
KIS				MLR	MLR		
	comp=Z,300nm,20.0s						
PLCA	Paso Flores	63.15	224	LR	LR	23 24 40.3	
	comp=Z,211nm,21.8s,baz=92,slow=32						
RAYN	Ar Rayn	64.32	63	*e*P	P	23 01 41.8	+1.8
	comp=Z,14nm,1.3s						
RAYN	Ar Rayn	64.32	63	*e*P	P	23 01 41.8	+1.8
RAYN				pmax	pmax		
	comp=Z,14nm,1.3s						
AKASG	Malin Array Be	64.33	30	P	P	23 01 39.6	+0.3
	comp=Z,0.4nm,0.4s,baz=228,slow=5.6,SNR=11						
AKASG				LR	LR	23 30 15.0	
	comp=Z,277nm,21.6s,baz=235,slow=36						
AKBB	Malin Array Si	64.33	30	*e*P	P	23 01 38.8	-0.5
	comp=Z,40nm,1.6s						
AKBB	Malin Array Si	64.33	30	*e*P	P	23 01 38.8	-0.5
AKBB				pmax	pmax		
	comp=Z,40nm,1.6s						
BATG	Bathurst New B	65.27	325	*e*P	P	23 01 45.8	+0.2
	comp=Z,52nm,1.4s						
HFS	Hagfors	65.35	16	P	P	23 01 46.4	+0.5
	comp=Z,2.1nm,0.8s,baz=181,slow=12,SNR=2.1						
NOA	NORSAR Array B	65.49	14	P	P	23 01 47.6	+0.8
	comp=Z,0.7nm,0.8s,baz=208,slow=6.7,SNR=3.9						
NOA				LR	LR	23 31 08.3	
	comp=Z,136nm,21.4s,baz=215,slow=37						
LBNH	Lisbon	67.39	320	P	P	23 01 59.1	-0.3
	baz=116						
M61A	Granite Spring	67.41	316	P	P	23 01 57.3	-2.2
	baz=113						
V61A	Roper	67.48	310	P	P	23 02 00.1	+0.1
	baz=109						
NEY	Neytrino	68.43	42	⇑*e*P	P	23 02 08.6	+2.5
NEY				pmax	pmax		
	comp=Z,3.0nm,1.4s						
N59A	State Game Lan	68.66	315	P	P	23 02 07.2	-0.1
	baz=112						
P59A	Jarrettsville	68.67	314	P	P	23 02 06.9	-0.5
	baz=111						
KIV	Kislovodsk	68.69	41	*e*P	P	23 02 08.1	+0.4
	comp=Z,9.4nm,1.1s						
KIV	Kislovodsk	68.69	41	*e*P	P	23 02 08.6	+1.0
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KVAR	Kislovodsk Arr	68.70	41	P	P	23 02 09.6	+2.0
	comp=Z,2.6nm,0.9s,baz=263,slow=19,SNR=3.1						
KBZ	Khabaz	68.74	42	P	P	23 02 08.5	+0.8
	comp=Z,2.8nm,0.9s,baz=191,slow=2.7,SNR=4.3						
KBZ				LR	LR	23 37 08.8	
	comp=Z,93nm,18.5s,baz=244,slow=40						
NCK	Nalchik	69.12	42	⇑*e*P	P	23 02 12.1	+1.9
NCK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
L58A	Harry Jones Me	69.13	316	P	P	23 02 10.9	+0.6
	baz=112						
R58B	Mineral	69.17	312	P	P	23 02 11.3	+0.8
	baz=109						
U58A	Oxford	69.19	310	P	P	23 02 11.2	+0.5
	baz=108						
S58A	Poland Farm, P	69.19	311	P	P	23 02 11.4	+0.8
	baz=109						
LONY	Lake Ozonia	69.28	319	P	P	23 02 10.5	-0.6
	baz=114						
BINY	Binghamton	69.28	316	P	P	23 02 10.8	-0.4
	baz=112						
N58A	Sunbury	69.30	315	P	P	23 02 11.9	+0.5
	baz=111						
LATQ	La Tuque	69.31	322	P	P	23 02 11.6	+0.4
	baz=116						
M58A	Price's Panora	69.31	315	P	P	23 02 12.6	+1.2
	baz=111						
GOF	Gofitskoye	69.38	40	⇑*e*P	P	23 02 12.0	+0.3
GOF				pmax	pmax		
	comp=Z,21nm,0.9s						
VNA1	Neumayer--Stat	69.45	177	P	P	23 02 19.6	+8.0
P57A	Homestead Farm	69.77	313	P	P	23 02 14.1	-0.2
	baz=110						
VORD	Divnogorie	69.77	34	*e*P	P	23 02 13.2	-0.8
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SCHQ	Schefferville	69.80	331	LR	LR	23 28 18.1	
	comp=Z,156nm,19.1s,baz=80,slow=32						
U57A	Blanch	69.80	310	P	P	23 02 12.9	-1.6
	baz=108						
VSR	Storozhevoye	69.83	33	*e*P	P	23 02 13.7	-0.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
V57A	Coltrane Farms	69.98	309	P	P	23 02 16.6	+1.0
	baz=107						
VNA3	Neumayer Olymp	69.99	178	P	P	23 02 22.2	+7.2
SSPA	Standing Stone	70.07	314	*e*P	P	23 02 15.5	-0.5
	comp=Z,17nm,1.2s						
SSPA	Standing Stone	70.07	314	P	P	23 02 14.9	-1.1
	baz=110						
FINES	FINESS Array B	70.18	20	P	P	23 02 16.8	+0.6
	comp=Z,2.2nm,0.7s,baz=206,slow=3.5,SNR=12						
FINES				LR	LR	23 35 22.2	
	comp=Z,103nm,18.1s,baz=223,slow=38						
ORIO	Orleans, Innes	70.22	320	P	P	23 02 16.9	+0.1
	baz=114						
H56A	Elgin	70.37	319	P	P	23 02 18.8	+1.0
	baz=113						
P56A	Dayton Farm, R	70.38	313	P	P	23 02 18.6	+0.6
	baz=109						
W56A	Indian Trail	70.40	308	P	P	23 02 19.5	+1.3
	baz=106						
O56A	Blue Knob Stat	70.43	314	P	P	23 02 17.7	-0.7
	baz=109						
456A	Hilliard	70.44	303	P	P	23 02 18.6	+0.1
	baz=104						
N56A	West Decatur	70.45	314	P	P	23 02 18.6	+0.1
	baz=110						
R56A	Bull Pasture M	70.45	312	P	P	23 02 18.2	-0.3
	baz=108						
Q56A	Snyder Ridge,	70.49	312	P	P	23 02 18.5	-0.2
	baz=108						
GROC	Groznyy	70.49	43	*e*P	P	23 02 17.6	-1.0
GROC				*e*		23 02 39.4	
GROC				*e*		23 04 52.9	
GROC				*e*S	S	23 11 34.5	+2.6
GROC				pmax	pmax		
	comp=Z,38nm,2.0s						
OBN	Obninsk	70.51	29	⇓*e*P	P	23 02 18.9	+0.5
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
T56A	Rocky Mt	70.51	310	P	P	23 02 18.6	-0.3
	baz=107						
V56A	Mocksville	70.52	309	P	P	23 02 20.1	+1.1
	baz=106						
M56A	Emporium	70.56	315	P	P	23 02 19.4	+0.3
	baz=110						
SNAA	Sanae	70.79	176	P	P	23 02 27.1	+7.2
SNAA	Sanae	70.79	176	P	P	23 02 20.4	+0.4
	comp=Z,2.6nm,0.9s,baz=310,slow=2.8,SNR=5.1						
SNAA	Sanae	70.79	176	*e*P	P	23 02 20.1	+0.1
	comp=Z,8.2nm,1.0s						
SNAA	Sanae	70.79	176	*e*P	P	23 02 20.1	+0.1
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BLA	Blacksburg	70.86	310	P	P	23 02 22.0	+0.9
	baz=107						
O55A	Ligonier	70.95	313	P	P	23 02 22.2	+0.8
	baz=109						
H55A	Tweed	70.97	318	P	P	23 02 22.5	+1.0
	baz=112						
M55A	Ridgway	70.97	315	P	P	23 02 22.2	+0.6
	baz=110						
L55A	Hinsdale	70.98	316	P	P	23 02 22.5	+0.8
	baz=110						
KMSC	Kings Mountain	71.00	308	P	P	23 02 22.9	+1.1
	baz=106						
X55A	Gracelyn & Ava	71.06	307	P	P	23 02 23.4	+1.2
	baz=105						
PLVO	Plevna	71.08	319	P	P	23 02 22.6	+0.5
	baz=112						
V55A	Taylorsville	71.09	309	P	P	23 02 23.4	+0.9
	baz=106						
555A	McAlpin	71.10	302	P	P	23 02 22.5	-0.1
	baz=103						
Y55A	Saluda	71.10	307	P	P	23 02 23.3	+0.9
	baz=105						
T55A	Pulaski	71.11	310	P	P	23 02 23.7	+1.1
	baz=107						
655A	Horseshoe Beac	71.21	302	P	P	23 02 23.4	+0.2
	baz=103						
DELO	Deloro Mine	71.25	318	P	P	23 02 23.5	+0.3
	baz=112						
155A	Kite	71.26	305	P	P	23 02 23.7	+0.2
	baz=104						
K54A	Basiliko Farm,	71.30	316	P	P	23 02 24.4	+0.9
	baz=110						
MOS	Moscow	71.36	29	*e*P	P	23 02 21.6	-1.9
MOS				*e*		23 02 40.7	
MOS				pmax	pmax		
	comp=Z,34nm,1.4s						
CHGQ	Chibougamau	71.37	324	P	P	23 02 23.2	-0.6
	baz=116						
PEMO	Pembroke	71.43	319	P	P	23 02 23.5	-0.8
	baz=112						
R54A	Victor	71.58	311	P	P	23 02 26.7	+1.3
	baz=107						
L54A	Sinclairville	71.61	315	P	P	23 02 26.8	+1.3
	baz=109						
P54A	Burton	71.62	313	P	P	23 02 25.8	+0.2
	baz=108						
BANO	Bancroft	71.63	319	P	P	23 02 25.0	-0.5
	baz=111						
E54A	Lac Daplat, Po	71.67	320	P	P	23 02 25.0	-0.8
	baz=112						
Q54A	Coxs Mills	71.69	312	P	P	23 02 27.2	+1.2
	baz=107						
T54A	Tazewell	71.71	310	P	P	23 02 26.3	+0.1
	baz=106						
Z54A	Sparta	71.72	306	P	P	23 02 25.9	-0.3
	baz=104						
E53A	Dumoine, Ponti	71.96	320	P	P	23 02 27.5	0.0
	baz=112						
ERPA	Erie	72.05	315	P	P	23 02 27.3	-0.8
	baz=109						
G53A	Haliburton	72.13	319	P	P	23 02 28.6	+0.2
	baz=111						
Q53A	Leroy	72.17	312	P	P	23 02 29.7	+0.9
	baz=107						
L53A	Girard	72.19	315	P	P	23 02 28.6	-0.3
	baz=109						
N53A	Lisbon	72.24	314	P	P	23 02 30.2	+0.9
	baz=108						
D53A	Lac Vacive, Po	72.25	321	P	P	23 02 28.9	-0.3
	baz=112						
P53A	Whipple	72.25	312	P	P	23 02 28.8	-0.6
	baz=107						
TYNO	Tyneside	72.28	316	P	P	23 02 30.3	+0.9
	baz=109						
U53A	Fall Branch	72.29	309	P	P	23 02 30.3	+0.6
	baz=105						
V53A	Saluda	72.30	308	P	P	23 02 30.3	+0.5
	baz=105						
R53A	Hurricane	72.34	311	P	P	23 02 29.9	0.0
	baz=106						
O53A	New Philadelph	72.35	313	P	P	23 02 30.5	+0.6
	baz=107						
X53A	Estanollee	72.40	307	P	P	23 02 30.8	+0.5
	baz=104						
T53A	Wise	72.42	309	P	P	23 02 31.0	+0.5
	baz=106						
Y53A	Monroe	72.47	306	P	P	23 02 31.9	+1.2
	baz=104						
VLDQ	Val d'Or	72.48	322	*e*P	P	23 02 30.8	+0.3
	comp=Z,23nm,1.3s						
LSQQ	Lebel-sur-Quev	72.56	323	P	P	23 02 31.3	+0.3
	baz=113						
E52A	Mattawa	72.57	320	P	P	23 02 30.4	-0.6
	baz=111						
D52A	ZEK Kipawa Sen	72.66	320	P	P	23 02 31.2	-0.4
	baz=112						
J52A	Paris	72.75	316	P	P	23 02 32.4	+0.2
	baz=109						
BUKO	Buck Lake	72.75	319	P	P	23 02 32.7	+0.5
	baz=110						
O52A	Adamsville	72.77	313	P	P	23 02 34.0	+1.6
	baz=107						
F52A	Sundridge	72.83	319	P	P	23 02 32.8	+0.2
	baz=110						
P52A	Corning	72.85	312	P	P	23 02 34.3	+1.4
	baz=107						
Y52A	Lilburn	72.86	306	P	P	23 02 33.4	+0.3
	baz=104						
R52A	Catlettsburg	72.87	311	P	P	23 02 34.4	+1.3
	baz=106						
X52A	Dahlonega	72.89	307	P	P	23 02 34.3	+1.0
	baz=104						
V52A	Sevierville	72.96	308	P	P	23 02 34.2	+0.6
	baz=104						
252A	Lumpkin	72.99	304	P	P	23 02 34.1	+0.3
	baz=103						
Z52A	Williamson	72.99	305	P	P	23 02 33.9	0.0
	baz=103						
CLWO	Collingwood	73.02	317	P	P	23 02 34.7	+0.9
	baz=109						
152A	Waverly Hall	73.12	305	P	P	23 02 34.9	+0.3
	baz=103						
E51A	G1948 Merrick	73.19	320	P	P	23 02 35.5	+0.7
	baz=111						
MATQ	Matagami	73.23	323	P	P	23 02 35.1	+0.2
	baz=113						
F51A	Arnstein	73.26	319	P	P	23 02 36.5	+1.3
	baz=110						
KLBO	Killbear Provi	73.27	318	P	P	23 02 35.8	+0.7
	baz=110						
I51A	Listowel	73.31	317	P	P	23 02 36.1	+0.6
	baz=109						
D51A	Lot 18 Range I	73.31	320	P	P	23 02 35.7	+0.2
	baz=111						
O51A	Pataskala	73.34	313	P	P	23 02 36.4	+0.6
	baz=106						
N51A	Ashland	73.39	313	P	P	23 02 36.5	+0.4
	baz=107						
S51A	Beattyville	73.41	310	P	P	23 02 36.6	+0.3
	baz=105						
U51A	La Follette	73.42	309	P	P	23 02 36.8	+0.4
	baz=104						
P51A	Williamsport	73.49	312	P	P	23 02 37.9	+1.2
	baz=106						
T51A	Gray	73.51	309	P	P	23 02 37.3	+0.4
	baz=105						
V51A	Loudon	73.55	308	P	P	23 02 38.1	+1.1
	baz=104						
251A	Midway	73.57	304	P	P	23 02 36.7	-0.5
	baz=102						
Q51A	Peebles	73.58	311	P	P	23 02 37.1	-0.1
	baz=106						
151A	Opelika	73.59	304	P	P	23 02 37.2	-0.2
	baz=102						
D50A	G1974 Best Tow	73.64	320	P	P	23 02 38.6	+1.2
	baz=110						
ACSO	Alum Creek Sta	73.64	313	P	P	23 02 37.5	-0.1
	baz=106						
X51A	Calhoun	73.66	307	P	P	23 02 38.0	+0.2
	baz=103						
Y51A	Rockmart	73.68	306	P	P	23 02 38.4	+0.5
	baz=103						
BMRO	Meriville Lake	73.69	317	P	P	23 02 38.5	+0.8
	baz=109						
W51A	Cleveland	73.72	307	P	P	23 02 38.5	+0.4
	baz=104						
E50A	Wahnapitae	73.97	319	P	P	23 02 39.8	+0.5
	baz=110						
L50A	Kingsville	74.03	314	P	P	23 02 39.6	-0.2
	baz=107						
P50A	Jamestown	74.08	312	P	P	23 02 41.0	+0.9
	baz=105						
U50A	Jamestown	74.08	308	P	P	23 02 39.8	-0.4
	baz=104						

V50A	Pikevile	74.11	308	P	P	23 02 40.6	+0.2
	baz=104						
R50A	Paris	74.13	310	P	P	23 02 40.2	-0.3
	baz=105						
W50A	Signal Mountai	74.17	307	P	P	23 02 40.6	-0.2
	baz=103						
150A	Eclectic	74.18	304	P	P	23 02 40.8	0.0
	baz=102						
T50A	Nancy	74.22	309	P	P	23 02 41.4	+0.4
	baz=104						
Y50A	Piedmont	74.22	306	P	P	23 02 41.6	+0.5
	baz=103						
Z50A	Ashland	74.24	305	P	P	23 02 41.3	+0.1
	baz=102						
X50B	Fort Payne	74.27	306	P	P	23 02 41.9	+0.5
	baz=103						
F49A	Sandfield	74.61	318	P	P	23 02 43.5	+0.5
	baz=108						
O49A	Covington	74.63	312	P	P	23 02 43.0	-0.3
	baz=105						
J49A	Marlette	74.64	316	P	P	23 02 43.8	+0.5
	baz=107						
D49A	Beulah Townshi	74.65	320	P	P	23 02 43.5	+0.2
	baz=109						
M49A	Liberty Center	74.70	314	P	P	23 02 43.7	0.0
	baz=106						
N49A	Columbus Grove	74.71	313	P	P	23 02 44.5	+0.8
	baz=106						
Z49A	Columbiana	74.72	305	P	P	23 02 44.0	0.0
	baz=102						
L49A	Milan	74.73	314	P	P	23 02 41.4	-2.5
	baz=106						
P49A	Miami Univ. Ec	74.74	312	P	P	23 02 45.0	+1.0
	baz=105						
Q49A	Aurora	74.75	311	P	P	23 02 44.9	+0.8
	baz=104						
S49A	Springfield	74.75	310	P	P	23 02 44.5	+0.5
	baz=104						
V49A	McMinnville	74.76	308	P	P	23 02 44.3	0.0
	baz=103						
T49A	Edmonton	74.78	309	P	P	23 02 44.2	-0.1
	baz=104						
R49A	Shelbyville	74.78	310	P	P	23 02 44.4	+0.2
	baz=104						
149A	Jones	74.82	304	P	P	23 02 45.2	+0.6
	baz=102						
X49A	Woodville	74.83	306	P	P	23 02 44.3	-0.3
	baz=102						
U49A	Red Boiling Sp	74.83	308	P	P	23 02 43.7	-0.9
	baz=103						
W49A	Belvidere	74.91	307	P	P	23 02 44.8	-0.3
	baz=103						
E48A	Lockeyer	74.92	319	P	P	23 02 45.7	+0.8
	baz=108						
249A	Camden	74.97	303	P	P	23 02 45.6	+0.1
	baz=101						
F48A	Evansville	75.02	318	P	P	23 02 46.2	+0.8
	baz=108						
J48A	Bridge Port	75.07	315	P	P	23 02 45.8	0.0
	baz=106						
LRAL	Lakeview Retre	75.08	305	P	P	23 02 46.0	0.0
	baz=102						
L48A	N Adams	75.16	314	P	P	23 02 46.0	-0.4
	baz=106						
K48A	Perry	75.17	315	P	P	23 02 47.2	+0.8
	baz=106						
O48A	Farmland	75.25	312	P	P	23 02 47.0	+0.1
	baz=105						
P48A	Milroy	75.26	311	P	P	23 02 47.6	+0.7
	baz=104						
N48A	Decatur	75.31	313	P	P	23 02 47.3	+0.1
	baz=105						
Q48A	North Vernon	75.36	311	P	P	23 02 47.2	-0.3
	baz=104						
Y48A	Jasper	75.39	305	P	P	23 02 47.7	-0.2
	baz=102						
X48A	Hartselle	75.40	306	P	P	23 02 46.7	-1.1
	baz=102						
W48A	Pulaski	75.45	307	P	P	23 02 47.4	-0.8
	baz=102						
V48A	Smith Brothers	75.49	307	P	P	23 02 48.3	-0.1
	baz=102						
WCI	Wyandotte Cave	75.62	310	*e*P	P	23 02 48.7	-0.4
	comp=Z,16nm,1.0s						
WCI	Wyandotte Cave	75.62	310	*e*P	P	23 02 48.7	-0.4
WCI				pmax	pmax		
	comp=Z,16nm,1.0s						
WCI	Wyandotte Cave	75.62	310	P	P	23 02 48.8	-0.4
	baz=103						
E47A	Iron Bridge	75.64	319	P	P	23 02 49.3	+0.3
	baz=108						
L47A	Sherwood	75.72	314	P	P	23 02 49.9	+0.3
	baz=105						
K47A	Vermontville	75.76	315	P	P	23 02 49.3	-0.5
	baz=105						
N47A	Urbana	75.80	313	P	P	23 02 49.7	-0.4
	baz=104						
ARCES	ARCESS Array B	75.87	14	P	P	23 02 49.9	0.0
	comp=Z,2.4nm,1.0s,baz=290,slow=3.5,SNR=3.8						
ARCES				LR	LR	23 37 19.3	
	comp=Z,124nm,20.1s,baz=192,slow=37						
T47A	Sharon Grove	75.98	309	P	P	23 02 50.8	-0.4
	baz=102						
W47A	Westpoint	76.00	307	P	P	23 02 51.4	0.0
	baz=102						
U47A	Clarksville	76.01	308	P	P	23 02 50.9	-0.4
	baz=102						
V47A	Nunnelly	76.06	307	P	P	23 02 51.4	-0.3
	baz=102						
X47A	Russelville	76.07	306	P	P	23 02 50.9	-0.8
	baz=101						
WVT	Waverly	76.37	308	*e*P	P	23 02 52.2	-1.2
	comp=Z,14nm,1.0s						
WVT	Waverly	76.37	308	*e*P	P	23 02 52.2	-1.2
WVT				pmax	pmax		
	comp=Z,14nm,1.0s						
WVT	Waverly	76.37	308	P	P	23 02 53.0	-0.4
	baz=102						
V46A	Holladay	76.53	307	P	P	23 02 53.4	-0.9
	baz=102						
T46A	Princeton	76.61	308	P	P	23 02 53.8	-0.9
	baz=102						
W46A	Michie	76.61	306	P	P	23 02 53.6	-1.1
	baz=101						
P46A	Rosedale	76.63	311	P	P	23 02 54.0	-0.8
	baz=103						
APA	Apatity	76.64	17	⇑*i*P	P	23 02 49.0	-5.3
APA				MLR	MLR		
	comp=Z,200nm,15.0s						
S44A	Carbondale	77.80	309	P	P	23 03 01.7	+0.3
	baz=101						
PRGR	Permogore	77.89	25	*e*P	P	23 02 59.1	-2.2
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GEYT	Alibeck	78.06	51	P	P	23 03 03.7	+0.7
	comp=Z,0.6nm,0.5s,baz=226,slow=5.4,SNR=2.8						
GEYT				LR	LR	23 40 29.8	
	comp=Z,513nm,18.9s,baz=240,slow=38						
E43A	Lone Tree Farm	78.09	318	P	P	23 03 01.6	-1.3
	baz=105						
K43A	Burlington	78.15	314	P	P	23 03 01.2	-2.0
	baz=103						
L42A	Oliver, Polo	78.97	313	P	P	23 03 07.3	-0.4
	baz=102						
CCM	Cathedral Cave	79.41	309	*e*P	P	23 03 08.7	-1.6
	comp=Z,22nm,1.0s						
CCM	Cathedral Cave	79.41	309	*e*P	P	23 03 08.7	-1.6
CCM				pmax	pmax		
	comp=Z,22nm,1.0s						
CCM	Cathedral Cave	79.41	309	P	P	23 03 09.1	-1.3
	baz=100						
M41A	Milan	79.48	312	P	P	23 03 09.7	-1.0
	baz=101						
JFWS	Jewell Farm	79.57	314	P	P	23 03 10.3	-0.8
	baz=102						
W41B	Gary Mavity, V	79.74	306	P	P	23 03 11.3	-0.8
	baz=99						
G40A	Rib Lake	80.02	316	P	P	23 03 12.1	-1.4
	baz=102						
X40A	Basin Creek Fa	80.11	305	P	P	23 03 12.5	-1.7
	baz=98						
U40A	Yellville	80.41	307	P	P	23 03 15.2	-0.5
	baz=99						
MIAR	Mount Ida	80.73	305	P	P	23 03 17.2	-0.3
	baz=98						
W39A	Magazine	80.99	306	P	P	23 03 18.6	-0.2
	baz=98						
ABKAR	Akbulak array	81.61	40	*e*P	P	23 03 21.1	-0.8
	comp=Z,7.4nm,1.2s						
HKT	Hockley	82.07	300	*e*P	P	23 03 25.4	+0.8
HKT				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARU	Arti	82.39	33	*e*P	P	23 03 25.9	+0.1
	comp=Z,16nm,1.3s						
ARU	Arti	82.39	33*c*	*i*P	P	23 03 27.1	+1.3
ARU				S	S	23 13 46.1	+4.2
ARU				pmax	pmax		
	comp=Z,10.0nm,1.5s						
TUL1	Leonard	82.70	306	P	P	23 03 27.0	-0.9
	baz=97						
WHTX	Lake Whitney,	83.66	302	P	P	23 03 33.0	+0.1
	baz=96						
KSU1	Kansas State U	83.72	309	P	P	23 03 31.8	-1.3
	baz=97						
ECSD	EROS Data Cent	84.29	314	P	P	23 03 34.7	-1.2
	baz=97						
AGMN	Agassiz Nation	84.38	319	P	P	23 03 35.4	-0.9
	baz=98						
MAW	Mawson	84.49	158	LR	LR	23 32 09.0	
	comp=Z,71nm,20.4s,baz=264,slow=29						
ULM	Lac du Bonnet	84.67	321	LR	LR	23 36 19.7	
	comp=Z,199nm,20.5s,baz=98,slow=32						
WMOK	Wichita Mounta	85.01	305	P	P	23 03 38.7	-1.0
	baz=95						
JCT	Junction City	85.54	301	P	P	23 03 42.3	-0.2
	baz=94						
ABTX	Abilene, Hawle	85.56	303	P	P	23 03 43.1	+0.5
	baz=94						
CBKS	Cedar Bluff	86.12	309	P	P	23 03 45.6	+0.3
	baz=95						
OGNE	Ogallala	88.03	311	P	P	23 03 55.2	+0.6
	baz=93						
MSTX	Muleshoe	88.26	304	P	P	23 03 55.5	-0.3
	baz=93						
BRVK	Borovoye	88.58	37	⇓*e*P	P	23 03 58.6	+1.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
QSPA	South Pole Qui	88.82	180	*e*P	P	23 03 57.8	0.0
	comp=Z,20nm,1.2s						
TXAR	Lajitas Array	88.83	299	P	P	23 03 58.0	-0.5
	comp=Z,1.9nm,0.9s,baz=101,slow=6.5,SNR=14						
TXAR				LR	LR	23 40 48.5	
	comp=Z,76nm,20.4s,baz=0.0,slow=34						
FFC	Flin Flon	88.86	325	*i* P	P	23 03 59.9	+1.9
RSSD	Black Hills	89.66	314	*e*P	P	23 04 00.9	-1.4
	comp=Z,7.5nm,1.0s						
RSSD	Black Hills	89.66	314	*e*P	P	23 04 00.9	-1.4
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RSSD	Black Hills	89.66	314	P	P	23 04 02.8	+0.5
	baz=92						
T25A	Trinidad	89.72	307	P	P	23 04 03.4	+0.6
	baz=92						
Q24A	Divide	90.35	309	P	P	23 04 06.6	+0.9
	baz=91						
SDCO	Great Sand Dun	90.60	308	P	P	23 04 07.3	+0.4
	baz=91						
AAK	Ala-Archa	90.99	48	⇓*e*P	P	23 04 10.9	+2.4
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
N23A	Red Feather La	90.99	311	P	P	23 04 08.8	+0.1
	baz=91						
ANMO	Albuquerque	91.33	305	*e*P	P	23 04 08.4	-1.8
	comp=Z,4.3nm,1.1s						
ANMO	Albuquerque	91.33	305	⇑*e*P	P	23 04 11.3	+1.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	91.33	305	P	P	23 04 09.8	-0.4
	baz=91						
S22A	4UR Ranch, Cre	91.65	308	P	P	23 04 12.5	+0.7
	baz=90						
KSH	Kashi	92.09	51	P	P	23 04 14.4	+0.8
KSH				pP	pwP	23 04 18.3	-1.9
KSH				sP	sP	23 04 21.1	+4.4
KSH				PP	PP	23 07 56.8	+3.3
KSH				SKS	SKSac	23 14 45.1	-2.2
KSH				S	S	23 15 13.1	-3.3
KSH				pmax	pmax		
	comp=Z,18nm,1.3s						
KSH				pmax	pmax		
	comp=Z,86nm,5.3s						
KSH				LR	LR		
	comp=Z,97nm,6.2s						
KSH				LR	LR		
	comp=Z,85nm,5.8s						
RLMT	Red Lodge	93.40	315	P	P	23 04 19.1	-0.6
	baz=88						
PDAR	Pinedale Array	93.68	313	P	P	23 04 21.2	+0.2
	comp=Z,0.6nm,0.8s,baz=108,slow=5.8,SNR=3.0						
YKA	Yellowknife Ar	95.23	333	P	P	23 04 27.8	+0.5
	comp=Z,1.1nm,0.9s,baz=74,slow=5.4,SNR=4.0						
YKA				LR	LR	23 42 30.4	
	comp=Z,16nm,21.3s,baz=84,slow=32						
YKA	Yellowknife Ar	95.23	333	*e*P	P	23 04 29.9	+2.6
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	96.40	43	P	P	23 04 33.8	+0.7
	comp=Z,0.9nm,0.8s,baz=270,slow=2.7,SNR=3.3						
ZALV	Zalesovo Beam	97.21	36	LR	LR	23 51 05.3	
	comp=Z,178nm,20.1s,baz=250,slow=37						
WMQ	Urumqi	100.53	46	*e*P	Pdif	23 04 54.9	+3.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,55nm,3.7s						
WMQ				LR	LR		
	comp=Z,140nm,19.7s						
WMQ				LR	LR		
	comp=Z,150nm,20.5s						
WMQ				LR	LR		
	comp=Z,250nm,21.9s						
RIDG	Independent Ri	107.47	339	*e*Pdif	Pdif	23 05 18.2	-3.9
LZH	Lanzhou	114.34	51	*e*PKP	PKiKP	23 09 43.5	-0.9
LZH				sPKP		23 09 47.6	
LZH				LR	LR		
	comp=Z,220nm,18.0s						
LZH				LR	LR		
	comp=Z,310nm,17.8s						
LZH				LR	LR		
	comp=Z,410nm,20.1s						
CD2	Chengdu	115.71	56	PKP	PKiKP	23 09 47.6	+0.6
HHC	Hu-ho-hao-te	118.26	43	PKP	PKiKP	23 09 54.4	+2.6
GYA	Guiyang	119.31	60	*e*PKP	PKiKP	23 09 57.8	+3.6
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
NJ2	Nanjing	127.39	50	*e*PKP	PKiKP	23 10 09.8	-0.1
ASAR	Alice Springs	141.45	132	PKhKP	PKPpre	23 10 28.7	
	comp=Z,0.8nm,0.7s,baz=212,slow=3.4,SNR=4.8						
WR1	Warramunga Arr	143.85	127	*e*PKPdf	PKPdf	23 10 38.0	-2.2
WRA	Warramunga Arr	143.85	127	PKP	PKPdf	23 10 38.0	-2.3
	comp=Z,2.1nm,0.5s,baz=242,slow=3.0,SNR=8.2						

WEL 22 22:53:46.9, 42°S±1°×17°4E±°, h5km±1km, M3.2/16, ML3.6/7, MLv3.2/16, Error ellipse: s-maj=0.0km s-min=0.0km az=137.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.13	190	P	Pg	22 53 50.4	+0.8
BSWZ	Blackbirch Sta	0.29	251	P	Pg	22 53 52.6	+0.1
TUWZ	Tuamarina	0.30	310	P	Pg	22 53 53.6	+1.0
TCW	Tory Channel	0.41	3	P	Pb	22 53 55.8	-0.8
BHW	Baring Head	0.52	66	P	Pb	22 53 58.2	-0.2
WEL	Wellington	0.52	50	P	Pb	22 53 58.2	-0.2
PLWZ	Palliser	0.76	86	P	Pb	22 54 03.1	+0.5
NNZ	Nelson	0.77	302	P	Pb	22 54 02.7	+0.1
MSWZ	Moikau Station	0.78	75	P	Pb	22 54 03.6	+0.7
CAW	Cannon Point	0.81	51	P	Pb	22 54 03.7	+0.3
PAWZ	Paruwai Farm	0.92	75	P	Pn	22 54 06.0	-0.5
KHZ	Kahutara	0.95	213	P	Pg	22 54 05.1	-0.1
THZ	Tophouse	1.01	262	P	Pb	22 54 06.8	-0.1
MTW	Mount Morrison	1.05	64	P	Pb	22 54 07.9	+0.3
OGWZ	Otaki Gorge	1.06	41	P	Pb	22 54 07.7	-0.1
TRWZ	Traveller	1.11	79	P	Pg	22 54 08.1	0.0
HOWZ	Holdsworth Sta	1.20	53	P	Pn	22 54 11.0	+0.7
TMWZ	Te Maipa	1.34	68	P	Pn	22 54 11.6	-0.7
MRZ	Mangatainoka R	1.39	47	P	Pb	22 54 13.2	-0.1
TIWZ	Tintock	1.50	56	P	Pg	22 54 16.9	+1.3
QRZ	Quartz Range	1.52	301	P	Pb	22 54 15.4	-0.1
GVZ	Greta Valley S	1.62	213	P	Pg	22 54 21.4	+3.6
PRWZ	Pori Road	1.69	51	P	Pg	22 54 20.1	+0.9
BFZ	Birch Farm	1.78	59	P	Pg	22 54 23.2	+2.2
DSZ	Denniston Nort	1.83	265	P	Pg	22 54 22.5	+0.6
LTZ	Lake Taylor	1.87	231	P	Pb	22 54 21.9	+0.4
WAZ	Wanganui	1.95	17	P	Pg	22 54 24.2	+0.1
TSZ	Takapari Road	2.03	40	P	Pg	22 54 26.0	+0.2
PNHZ	Pukenui	2.26	42	P	Pg	22 54 30.9	+0.7
OKCZ	Okains Bay	2.27	202	P	Pn	22 54 22.3	-2.9
KHEZ	Kahui Hut	2.33	356	P	Pg	22 54 31.6	+0.1
NBEZ	Newall Road No	2.37	353	P	Pg	22 54 32.8	+0.6
PKE	Pukeiti	2.43	355	P	Pg	22 54 33.2	-0.2
MOVZ	Moawhango	2.49	28	P	Pb	22 54 32.1	0.0
BHHZ	Black Hill Sta	2.54	34	P	Pb	22 54 33.9	+0.9
WHVZ	Whangaehu Hut	2.55	24	P	Pb	22 54 33.6	+0.4
TUVZ	Tukino	2.59	25	P	Pg	22 54 35.1	-1.3
NGZ	Ngauruhoe	2.65	23	P	Pb	22 54 35.7	+0.8
KRVZ	Karewarewa	2.74	23	P	Pb	22 54 37.1	+0.7

NNC 22 23:04:28.3±6.0, 37°.57N×67°.96E, h14km±32km, mb3.6, mpv3.2, 5C-4D, Error ellipse: s-maj=40.5km s-min=33.5km az=10.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.86	19	⇑Pn	Pn	23 05 53.1	-1.7
	0.3nm,0.3s,baz=202,slow=13,SNR=7.2						
KK31				⇓Sn	Sn	23 07 04.5	+2.8
	2.5nm,0.6s,baz=203,slow=21						
KK31				⇓Lg	Lg	23 07 34.9	
	4.1nm,0.5s,baz=201,slow=27,SNR=5.7						
AAK	Ala-Archa	7.12	43	⇑Pn	Pn	23 06 13.1	+1.0
	1.5nm,0.5s						
AAK				⇓Sn	Sn	23 07 33.6	+0.7
	1.7nm,0.6s						
AAK				⇑Lg	Lg	23 08 13.4	
	2.3nm,0.8s						
TKM2	Tokmak 2	7.92	45	⇑Pn	Pn	23 06 24.5	+1.4
	1.7nm,0.7s						
TKM2				⇓Sn	Sn	23 07 50.4	-2.1
	1.1nm,0.5s						
TKM2				⇑Lg	Lg	23 08 39.2	
	2.8nm,1.1s						

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*BJI **22** 23:07:37.7±0.0, 2°.08N×129°.03E, h221km, mb4.7/43, mB4.6/33*

*ISCJB **22** 23:07:40.6±0.3, 2°.63N±0°.03×128°.68E±0°.04, h200km, mb4.7/65, Error ellipse: s-maj=6.0km s-min=3.8km az=178.3*

*NEIC **22** 23:07:43.4±1.8, 2°.60N×128°.57E, h215km±6km, mb4.7/45, Error ellipse: s-maj=13.4km s-min=6.4km az=82.0*

*IDC **22** 23:07:45.2±1.3, 2°.58N×128°.59E, h231km±12km, mb4.1/19, mb1 4.2/21, mb1mx4.1/29, mbtmp4.6/21, Error ellipse: s-maj=17.6km s-min=7.5km az=75.0*

*DJA **22** 23:07:45.2±0.6, 3°N±4°×12°8E±°, h208km±4km, M4.4/9, mB4.9/4, mb4.3/6, MLv4.5/9, Mw(mB)4.2/4*

ISC 22 23:07:42.4±0.3, 2°.61N±0°.04×128°.57E±0°.06, h200km, n113, σ1s.65/128, mb4.6/65, 1C-5D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.18	213	*e*Pn	Pn	23 08 25.9	+3.0
TNTI				*e*S	Sn	23 08 55.0	+0.6
TNTI	Ternate	2.18	213	P	Pn	23 08 25.8	+2.9
TNTI				S	Sn	23 08 57.8	+3.4
SGSI	Sangihe	3.22	290	P	Pn	23 08 36.5	+1.8
SGSI				S	Sn	23 09 16.0	+0.5
LBMI	Labuha	3.40	198	P	Pn	23 08 39.2	+2.4
LBMI				S	Sn	23 09 22.0	+2.5
SWI	Sorong	4.37	142	P	Pn	23 08 53.0	+4.1
SIJI	Sorong	4.38	142	P	Pn	23 08 53.2	+4.2
	9.8nm,0.3s,baz=331,slow=14,SNR=19						
SANI	Sanana	5.30	209	P	Pn	23 09 00.0	-0.7
	214nm,0.8s,6μm						
SANI				S	Sn	23 09 56.8	-5.6
	214nm,0.8s,6μm						
DAV	Davao City (W)	5.34	326	*e*Pn	Pn	23 09 01.5	+0.2
KCP	Kidapawan	5.58	322	⇓*i*P	Pn	23 09 07.3	+2.9
KCP				*i* S	Sn	23 10 11.8	+2.7
MSAI	Masohi	5.92	177	P	Pn	23 09 13.9	+5.2
	21nm,1.1s,691nm						
FAKI	Fak Fak	6.61	146	*e*Pn	Pn	23 09 19.3	+1.7
LUWI	Luwuk	6.84	238	*e*Pn	Pn	23 09 21.6	+1.0
LUWI				*e*S	Sn	23 10 36.2	-2.2
LUWI	Luwuk	6.84	238	P	Pn	23 09 21.0	+0.4
TTSI	Tana Toraja	10.39	237	P	Pn	23 10 07.3	+0.5
BKSI	Bulukumba	11.54	227	P	P	23 10 29.4	+2.4
GENI	Genyem	12.69	114	P	P	23 10 43.4	+3.6
SOEI	Soe	13.01	199	*e*Pn	Pn	23 10 40.8	+0.6
SOEI	Soe	13.01	199	P	Pn	23 10 42.6	+2.4
EDFI	Ende, Flores	13.20	211	P	P	23 10 48.0	+2.4
BATI	Baumata	13.63	201	P	Pn	23 10 49.2	+1.3
	16nm,0.3s,baz=61,slow=1.9,SNR=8.2						
BATI	Baumata	13.63	201	*e*P	Pn	23 10 49.2	+1.3
BATI				*e*P	Pn	23 10 49.2	+1.3
MTN	Manton Dam	15.56	171	*e*P	Pn	23 11 10.6	-0.9
	45nm,0.9s						
SBUM	Sibu	16.34	270	*e*Pn	Pn	23 11 21.9	+1.0
	5.7nm,0.9s						
JAGI	Jajag, Banyuwa	18.10	232	*e*P	P	23 11 41.3	+1.8
	22nm,0.8s						
KSM	Kuching	18.28	267	*e*P	P	23 11 42.4	+0.9
	7.5nm,0.8s						
GMJI	Gumukmas	18.56	234	P	Pn	23 11 47.8	+0.7
TWG	Pinlang	21.37	341	*e*P	P	23 12 12.5	-1.9
	190nm,0.7s						
YULB	Yu-li	21.83	342	*e*P	P	23 12 16.8	-2.2
	11nm,0.7s						
COEN	Coen	21.92	139	*e*P	P	23 12 19.4	-0.7
	11nm,1.1s						
TPUB	Ta-pu	21.96	340	*e*P	P	23 12 18.9	-1.4
	51nm,0.7s						
SSLB	Suanglung	22.31	341	*e*P	P	23 12 22.6	-1.0
	16nm,0.6s						
YOJ	Yonaguni jima	22.38	347	*e*P	P	23 12 25.1	+0.9
	75nm,0.9s						
NACB	Ninganchiao	22.48	343	*e*P	P	23 12 24.3	-0.8
	17nm,0.9s						
YHNB	Yeheng	23.01	343	*e*P	P	23 12 30.0	0.0
	39nm,0.8s						
WRAB	Tennant Creek	23.11	166	*e*P	P	23 12 29.6	-1.3
	34nm,0.6s						
WRA	Warramunga Arr	23.11	166	P	P	23 12 30.2	-0.7
	18nm,0.4s,baz=340,slow=12,SNR=59						
WRA				ScP	ScP	23 19 27.7	-5.0
	1.6nm,0.6s,baz=335,slow=3.8,SNR=4.8						
WB2	Warramunga Arr	23.12	166	*e*P	P	23 12 30.4	-0.6
	32nm,0.8s						
WC3	Warramunga Arr	23.14	166	*e*P	P	23 12 30.1	-1.1
	34nm,0.7s						
KNMB	Chin-men Tao	23.85	337	*e*P	P	23 12 38.8	+1.3
	52nm,0.9s						
JOW	Kunigami	24.09	359	P	P	23 12 40.1	+0.4
	1.6nm,0.7s,baz=174,slow=14,SNR=7.6						
PSAD1	Pilbara Seismi	25.40	199	*e*P	P	23 12 50.4	-1.2
	13nm,0.8s						
PSA00	Pilbara Seismi	25.50	199	*e*P	P	23 12 51.1	-1.5
	14nm,0.8s						
ASAR	Alice Springs	26.63	169	P	P	23 13 02.0	-0.7
	11nm,0.6s,baz=354,slow=7.9,SNR=184						
ASAR				PcP	PcP	23 16 20.9	-0.6
	0.8nm,0.5s,baz=1.4,slow=2.0,SNR=4.7						
ASAR				ScP	ScP	23 19 38.8	-3.9
	2.9nm,0.8s,baz=344,slow=2.6,SNR=17						
PANO	Nakornpanom	27.61	303	P	P	23 13 12.9	+1.4
	0.4nm,1.6s,288nm						
CTA	Charters Tower	28.46	143	P	P	23 13 18.1	-0.9
	3.5nm,0.7s,baz=317,slow=9.1,SNR=2.4						
GIRL	Giralia	28.73	208	*e*P	P	23 13 21.4	0.0
	74nm,1.1s						
NONG	Nongkai	29.28	303	P	P	23 13 27.2	+1.0
	0.5nm,0.9s						
CHAI	Chaiyaphum	29.32	298	P	P	23 13 27.4	+0.8
	31μm,0.8s						
SLVN	Son La	30.38	310	*e*P	P	23 13 36.7	+0.7
	5.0nm,0.7s						
JNU	Nakatsue	30.43	4	*e*P	P	23 13 35.6	-0.6
	21nm,1.0s						
NJ2	Nanjing	30.68	344	*e*P	P	23 13 39.9	+1.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
UTTA	Uttaradit	31.33	301	P	P	23 13 45.6	+1.3
	18μm,1.4s						
UTHA	Uthaitani	31.45	296	P	P	23 13 46.6	+1.3
	32μm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAYA	Payao	32.63	303	P	P	23 13 56.6	+1.0
PAYA	Payao	32.63	303	P	P	23 13 56.6	+1.0
	43µm,0.7s						
CM31	Chiang Mai Arr	33.02	301	eP	P	23 13 59.1	0.0
	12nm,0.7s						
CMAR	Chiang Mai Arr	33.02	301	P	P	23 14 00.3	+1.2
	8.2nm,0.7s,baz=117,slow=7.3,SNR=41						
CMAR				ScP	ScP	23 19 59.6	-3.9
	1.5nm,0.8s,baz=161,slow=2.8,SNR=7.4						
CMMT	Chiang Mai	33.17	301	P	P	23 14 01.2	+0.9
CMMT	Chiang Mai	33.17	301	P	P	23 14 01.2	+0.9
	13nm,0.8s						
CHTO	Chiang Mai	33.17	301	eP	P	23 14 00.4	0.0
	15nm,0.8s						
INU	Inuyama	33.51	13	eP	P	23 14 03.2	+0.2
	9.7nm,0.7s						
KSRS	Korea Array	34.68	359	P	P	23 14 13.8	+0.7
	8.4nm,0.5s,baz=176,slow=9.6,SNR=28						
MAJO	Matsushiro	34.92	14	eP	P	23 14 14.5	-0.7
	17nm,0.7s						
MAT	Matsushiro	34.92	14	P	P	23 14 14.1	-1.1
MJAR	Matsushiro Arr	34.92	14	P	P	23 14 14.2	-1.0
	11nm,0.7s,baz=190,slow=9.9,SNR=36						
XAN	Xi'an	36.25	332	P	P	23 14 26.8	+0.2
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
XAN				pmax	pmax		
	comp=Z,67nm,6.0s						
STKA	Stephens Creek	36.46	161	P	P	23 14 28.2	-0.1
	8.0nm,0.4s,baz=340,slow=8.2,SNR=35						
STKA				ScP	ScP	23 20 11.5	-4.1
	2.4nm,0.8s,baz=309,slow=6.5,SNR=2.8						
STKA	Stephens Creek	36.46	161	eP	P	23 14 28.0	-0.3
	3.0nm,1.1s						
LZH	Lanzhou	40.40	328	⇓P	P	23 15 02.8	+1.5
LZH				pP	pP	23 15 47.5	+4.0
LZH				sP	sP	23 16 12.6	+6.6
LZH				PP	PnPn	23 16 43.3	-1.3
LZH				pmax	pmax		
	comp=Z,35nm,1.3s						
LZH				pmax	pmax		
	comp=Z,67nm,5.4s						
HHC	Hu-ho-hao-te	41.05	340	P	P	23 15 08.3	+1.9
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,40nm,5.7s						
USA0B	Ussuriysk Arra	41.53	4	eP	P	23 15 11.1	+0.9
	11nm,0.9s						
USRK	Ussuriysk Ar.	41.53	4	P	P	23 15 10.8	+0.6
	12nm,0.9s,baz=190,slow=6.5,SNR=20						
SHL	Shillong	42.02	306	eP	P	23 15 15.2	+0.5
	60nm,0.6s						
SHL	Shillong	42.02	306	⇓iP	P	23 15 15.0	+0.4
GTA	Gaotai	45.01	328	⇓P	P	23 15 38.9	+0.7
GTA				pP	pP	23 16 27.1	+6.0
GTA				sP	sP	23 16 51.8	+8.4
GTA				pmax	pmax		
	comp=Z,15nm,0.8s						
JIRN	Jiri	47.51	306	eP	P	23 15 58.6	+0.4
	62nm,0.4s						
PKI	Pulchoki	48.11	305	eP	P	23 16 02.4	-0.4
	12nm,0.3s						
PKIN	Phulchoki	48.12	305	eP	P	23 16 02.4	-0.4
	9.6nm,0.4s						
KKN	Kakani	48.30	306	eP	P	23 16 04.0	-0.1
	21nm,0.5s						
DMN	Daman	48.38	305	eP	P	23 16 04.7	0.0
	27nm,0.6s						
GKN	Gorkha	48.91	306	eP	P	23 16 08.3	-0.4
	7.0nm,0.3s						
SONA0	Songino Array	48.95	340	eP	P	23 16 08.8	+0.2
SONA0				ePcP	PcP	23 17 28.9	-0.7
SONM	Songino Array	48.95	340	P	P	23 16 08.8	+0.2
	3.7nm,0.7s,baz=153,slow=8.4,SNR=20						
SONM				PcP	PcP	23 17 28.9	-0.7
	0.7nm,0.7s,baz=158,slow=4.2,SNR=2.6						
DANN	Dangsing	49.76	306	eP	P	23 16 15.3	+0.1
	91nm,0.6s						
WMQ	Urumqi	54.70	325	eP	P	23 16 52.3	+1.3
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.7s						
PETK	Petropavlovsk-	55.80	21	P	P	23 16 59.3	+0.7
	5.1nm,0.6s,baz=195,slow=3.6,SNR=8.6						
PEA1	Petropavlovsk-	55.80	21	eP	P	23 16 59.3	+0.7
YAK	Yakutsk	59.29	1	eP	P	23 17 22.7	-0.1
	41nm,0.7s						
MK32	Makanchi Array	59.52	325	eP	P	23 17 24.5	-0.2
MKAR	Makanchi Array	59.52	325	P	P	23 17 24.5	-0.2
	7.8nm,0.4s,baz=115,slow=8.0,SNR=159						
KSH	Kashi	60.13	315	P	P	23 17 29.8	+0.6
KSH				sP	sP	23 18 45.5	+10
KSH				PP	PP	23 19 47.4	+3.1
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,200nm,7.2s						
ZALV	Zalesovo Beam	62.42	333	P	P	23 17 42.7	-1.3
	2.6nm,0.3s,baz=127,slow=6.8,SNR=15						
KURK	Kurchatov	63.67	327	eP	P	23 17 51.7	-0.6
	23nm,0.8s						
GAR	Garm	64.03	313	eP	P	23 17 54.8	-0.3
	14nm,0.5s						
KK31	Karatay Array	65.30	317	eP	P	23 18 02.5	-0.6
	4.9nm,0.8s						
KKAR	Karatay Array	65.30	317	eP	P	23 18 02.5	-0.6
	4.9nm,0.8s						
TIXI	Tiksi	68.94	0	eP	P	23 18 24.1	-1.3
	7.1nm,0.9s						
BRVK	Borovoye	69.33	327	eP	P	23 18 27.5	-0.6
	13nm,1.0s						
GEYT	Alibeck	73.02	309	P	P	23 18 50.3	-0.4
	3.3nm,0.7s,baz=141,slow=5.0,SNR=12						
ARU	Arti	76.86	328	eP	P	23 19 10.6	-1.6
	4.8nm,0.7s						
VNDA	Vanda	82.09	173	P	P	23 19 39.5	-0.5
	3.0nm,0.8s,baz=319,slow=6.1,SNR=18						
MAW	Mawson	83.35	201	P	P	23 19 45.8	-0.8
	2.1nm,0.6s,baz=56,slow=3.4,SNR=3.7						
KBZ	Khabaz	85.08	313	P	P	23 19 54.9	-0.9
	1.3nm,0.6s,baz=162,slow=3.2,SNR=2.4						
ILAR	Eielson Array	85.32	25	P	P	23 19 55.4	-1.2
	0.5nm,0.5s,baz=251,slow=4.5,SNR=6.8						
SYO	Syowa Base	92.05	201	⇑eP	P	23 20 26.7	-1.6
SYO	Syowa Base	92.05	201	⇓eP	P	23 20 36.0	+7.7
ARCES	ARCESS Array B	92.13	340	P	P	23 20 27.2	-1.5
	1.4nm,0.4s,baz=84,slow=6.0,SNR=19						
FINES	FINESS Array B	93.68	332	P	P	23 20 34.3	-1.7
	1.9nm,0.7s,baz=52,slow=4.5,SNR=8.6						
KOLS	Kolonicke sedl	98.68	320	ePDIF	P	23 20 58.8	-0.1
VYHS	Vyhne	100.99	320	ePDIF	Pdif	23 21 10.3	+1.0
TORD	Torodi Ar. Bea	125.01	288	PKP	PKPdf	23 26 18.8	-1.0
	0.3nm,0.4s,baz=77,slow=1.8,SNR=8.6						
TOA1	Torodi Ar. Sit	125.01	288	ePKPdf	PKPdf	23 26 18.8	-1.0
LPAZ	La Paz	158.67	131	PKPab	PKPab	23 27 54.3	+0.1
	0.8nm,0.5s,baz=215,slow=5.9,SNR=3.8						

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*NIED **22** 23:24:00, 36°.30N×141°.90E, h14km, Mw4.3 Best double couple: M$_0$3.71000×10^{15} NP1:φ$_s$177.00000°, δ23.00000°, λ61.00000°. NP2:φ$_s$28.00000°, δ70.00000°, λ102.00000°.*

*IDC **22** 23:24:41.7±0.5, 36°.19N×141°.86E, h0km, mb4.4/26, mb1 4.5/33, mb1mx4.5/41, mbtmp4.4/33, ML3.9/6, MS3.6/13, Ms1 3.6/13, ms1mx3.3/48, Error ellipse: s-maj=14.1km s-min=12.0km az=130.0*

*ISCJB **22** 23:24:42.6±0.8, 36°.24N±0°.03×141°.96E±0°.04, h19km±5km, mb4.5/76, MS3.9/15, Error ellipse: s-maj=5.4km s-min=4.2km az=44.0*

*MOS **22** 23:24:44.6±1.1, 36°.29N×141°.88E, h30km, mb4.9/29, MS4.1/5, Error ellipse: s-maj=9.0km s-min=5.2km az=105.2*

*JMA **22** 23:24:44.6±0.2, 36°.28N×141°.89E, h44km, M4.5*

JMA Felt II J1.

*NEIC **22** 23:24:45.6±2.1, 36°.25N×141°.96E, h31km±4km, mb4.6/60, Error ellipse: s-maj=10.3km s-min=7.3km az=121.0*

NEIC Recorded [2 JMA] in Ibaraki.

*BJI **22** 23:24:48.7±0.0, 36°.54N×141°.35E, h36km, mb4.8/44, mB4.9/31, Ms4.3/21, Ms7 4.0/19*

ISC 22 23:24:45.5±0.8, **36°.22N**±0°.04×**141°.84E**±0°.05, **h25**km±5km, **n218,** σ1^{s}**52**/231, **mb4.5**/87, **MS3.9**/15, **23C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.95	237	P	Pb	23 25 02.7	-0.5
CHOJ				eS	Sn	23 25 16.2	+0.2
JHYU	Hitachinakayam	1.02	277	P	Pn	23 25 03.2	-1.0
JHYU				eS	Sb	23 25 17.5	+0.1
JIHU	Itakohorinouch	1.09	257	P	Pn	23 25 05.2	0.0
JIHU				eS	Sn	23 25 20.2	+0.7
JHO	Hitachi	1.09	291	P	Pn	23 25 03.8	-1.4
ONAJ	Iwakimizuishiy	1.21	317	P	Pn	23 25 05.3	-1.6
JFK	Kawauchi	1.38	326	P	Pn	23 25 08.4	-0.8
BSO1	Boso 1	1.72	204	P	Pn	23 25 13.4	+0.1
BSO1				eS	Sn	23 25 34.8	+0.7
JFT	Otama	1.77	317	P	Pn	23 25 14.3	-0.2
BSO3	Boso 3	1.78	218	P	Pn	23 25 14.8	+0.3
JMM	Marumori	1.84	333	P	Pn	23 25 14.5	-1.0
JAG	Ashikaga	1.94	277	P	Pn	23 25 15.9	-0.9
JAG				eS	Sn	23 25 39.3	-1.1
JFY	Yanaizu	2.08	305	P	Pn	23 25 18.9	+0.1
MJAR	Matsushiro Arr	2.95	277	Pn	Pn	23 25 31.0	+0.3
	11nm,0.3s,baz=119,slow=8.2,SNR=325						
MJAR				Sn	Sn	23 26 08.9	+3.5
	7.2nm,0.3s,baz=113,slow=6.5,SNR=7.8						
MJAR				LR	LR	23 26 45.1	
	comp=Z,620nm,19.8s,baz=125,slow=42						
MAJO	Matsushiro	2.95	277	ePn	Pn	23 25 31.6	+0.9
MAJO				eSn	Sn	23 26 08.9	+3.5
MAJO	Matsushiro	2.95	277	eP	Pn	23 25 31.6	+0.9
MAJO				e		23 26 08.9	
MAT	Matsushiro	2.95	277	P	Pn	23 25 31.8	+1.1
MAT				S	Sn	23 26 06.5	+1.1
MJB9	Matsu-Tunnel	2.95	277	ePn	Pn	23 25 31.8	+1.0
JHJ2	Mitsune	3.52	209	ePn	Pn	23 25 39.2	+0.6
JHJ2				eSn	Sn	23 26 16.0	-3.5
JHJ	Hachijo jima 2	3.53	209	Pn	Pn	23 25 38.1	-0.6
	51nm,0.3s,baz=342,slow=13,SNR=39						
JHJ				Sn	Sn	23 26 17.5	-2.1
	148nm,0.3s,baz=95,slow=24,SNR=14						
JHJ				LR	LR	23 26 51.5	
	comp=Z,344nm,18.6s,baz=284,slow=37						
INU	Inuyama	4.02	259	ePn	Pn	23 25 46.6	+1.2
ERM	Erimo	5.87	10	ePn	Pn	23 26 08.6	-2.3
ERM				eSn	Sn	23 27 12.9	-4.5
ERM	Erimo	5.87	10	eP	Pn	23 26 08.6	-2.3
ERM				e		23 27 12.9	
ASAJ	Asahikawa	7.91	4	Pn	Pn	23 26 37.9	-0.9
	3.7nm,0.3s,baz=220,slow=19,SNR=6.8						
ASAJ				Sn	Sn	23 28 03.8	-3.6
	1.9nm,0.3s,baz=45,slow=32,SNR=1.9						
YUK	Yuzh-Kuril'sk	8.39	20	⇓eP	Pn	23 26 43.2	-2.2
JNU	Nakatsue	9.54	254	Pn	Pn	23 27 00.7	-0.6
	0.7nm,0.3s,baz=8.4,slow=18,SNR=3.7						
JNU	Nakatsue	9.54	254	ePn	Pn	23 27 01.3	-0.1
TEY	Ternei	9.66	337	eP	Pn	23 27 05.0	+2.2
YSS	Yuzh-Sakhalins	10.74	3	ePn	Pn	23 27 16.2	-1.5
YSS	Yuzh-Sakhalins	10.74	3	eP	Pn	23 27 16.2	-1.5
YSS				pmax	pmax		
	comp=N,10.0nm,0.8s						
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=E,200nm,17.0s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
YSS				MLR	MLR		
	comp=N,300nm,15.2s						
USRK	Ussuriysk Ar.	10.96	320	Pn	Pn	23 27 21.1	+0.5
	comp=N,0.5nm,0.3s,baz=135,slow=14,SNR=9.5						
USA0B	Ussuriysk Arra	10.96	320	ePn	Pn	23 27 21.7	+1.1
KSRS	Korea Array	11.22	280	Pn	Pn	23 27 24.9	+0.6
	comp=N,0.5nm,0.3s,baz=94,slow=14,SNR=19						
KSRS				LR	LR	23 31 38.6	
	comp=N,244nm,19.7s,baz=80,slow=37						
KS15	Wonju Array Si	11.25	280	ePn	Pn	23 27 26.4	+1.7
MDJ	Mudanjiang	12.53	316	ePn	Pn	23 27 41.0	-1.2
TYV	Tymovskoe	14.65	2	eP	P	23 28 17.7	+0.7
TYV				pmax	pmax		
	comp=Z,17nm,0.7s						
CN2	Changchun	14.65	306	eP	P	23 28 21.4	+4.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	Kul'dur	14.95	334	Pn	Pn	23 28 12.9	-2.0
	comp=Z,0.6nm,0.3s,baz=154,slow=8.0,SNR=9.5						
KLR	Kul'dur	14.95	334	P	Pn	23 28 13.0	-2.0
DL2	Dalian	16.25	286	P	Pn	23 28 27.3	-4.7
DL2				S	Sn	23 31 24.3	-7.1
DL2				pmax	pmax		
	comp=Z,16nm,0.8s						
DL2				pmax	pmax		
	comp=Z,110nm,7.1s						
DL2				LR	LR		
	comp=Z,430nm,14.4s						
DL2				LR	LR		
	comp=Z,460nm,12.7s						
DL2				LR	LR		
	comp=Z,640nm,14.1s						
NJ2	Nanjing	19.46	264	eP	P	23 29 10.9	+0.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
YOJ	Yonaguni jima	20.00	239	eP	P	23 29 14.3	-1.9
	comp=Z,67nm,1.1s						
YOJ	Yonaguni jima	20.00	239	eP	P	23 29 14.3	-1.9
YOJ				pmax	pmax		
	comp=Z,67nm,1.1s						
PEA0B	Petropavlovsk-	20.23	28	eP	P	23 29 19.1	+0.6
	comp=Z,7.7nm,0.9s						
PETK	Petropavlovsk-	20.23	28	P	P	23 29 18.9	+0.3
	comp=Z,3.7nm,0.7s,baz=204,slow=8.3,SNR=7.7						
PEA1	Petropavlovsk-	20.23	28	ePn	P	23 29 18.9	+0.3
ZEA	Zeya	20.26	334	eP	Pn	23 29 20.2	-0.7
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
ZEA				MLR	MLR		
	comp=N,300nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
PET	Petropavlovsk	20.54	30	eP	P	23 29 20.8	-1.1
	comp=Z,10nm,1.0s						
PET	Petropavlovsk	20.54	30	eP	P	23 29 20.8	-1.1
PET				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NACB	Ninganchiao	21.17	241	eP	P	23 29 23.3	-5.6
	comp=Z,13nm,0.7s						
SSLB	Suanglung	21.87	241	eP	P	23 29 33.1	-3.4
	comp=Z,5.7nm,0.8s						
YULB	Yu-li	21.88	240	eP	P	23 29 32.8	-3.8
	comp=Z,6.6nm,1.0s						
TPUB	Ta-pu	22.41	241	eP	P	23 29 38.9	-3.4
	comp=Z,14nm,0.9s						
WHN	Wuhan	23.60	264	P	P	23 29 57.3	+2.9
HHC	Hu-ho-hao-te	24.06	290	P	P	23 29 58.6	-0.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
MA2	Magadan	24.08	11	P	P	23 29 58.7	+0.1
	comp=Z,5.5nm,0.6s,baz=197,slow=10,SNR=3.8						
YAK	Yakutsk	26.93	347	eP	P	23 30 24.2	-0.3
	comp=Z,42nm,0.6s						
YAK	Yakutsk	26.93	347	eP	P	23 30 24.0	-0.5
YAK				eS	S	23 34 57.3	-2.5
YAK				pmax	pmax		
	comp=Z,45nm,1.0s						
YAK				pmax	pmax		
	comp=N,22nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				smax	smax		
	comp=N,49nm,3.2s						
YAK				smax	smax		
	comp=E,33nm,3.2s						
XAN	Xi'an	26.94	275	P	P	23 30 24.3	-0.6
XAN				pmax	pmax		
	comp=E,16nm,0.5s						
XAN				pmax	pmax		
	comp=E,88nm,6.0s						
H11N2	WAKE ISLAND Hy	27.44	120	T	T	23 59 50.5	
	baz=312,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	27.45	120	T	T	23 59 56.3	
	baz=312,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	27.46	120	T	T	23 59 59.0	
	baz=312,slow=75,SNR=38						
SEY	Seymchan	27.52	10	P	P	23 30 30.9	+1.2
	comp=E,1.6nm,0.3s,baz=201,slow=11,SNR=6.6						
SEY	Seymchan	27.52	10	⇓eP	P	23 30 30.6	+0.8
ENH	Enshi	27.62	267	eP	P	23 30 29.6	-1.4
	comp=E,40nm,0.6s						
H11S1	WAKE ISLAND Hy	28.14	122	T	T	00 00 51.3	
	baz=313,slow=75,SNR=58						
H11S3	WAKE ISLAND Hy	28.14	122	T	T	00 00 48.0	
	baz=313,slow=75,SNR=32						
H11S2	WAKE ISLAND Hy	28.15	122	T	T	00 00 53.3	
	baz=313,slow=75,SNR=39						
BOD	Bodaibo	28.40	328	eP	P	23 30 36.9	-0.7
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SONA0	Songino Array	28.53	305	eP	P	23 30 39.4	+0.4
SONA0				ePcP	PcP	23 33 50.8	+0.6
SONM	Songino Array	28.53	305	P	P	23 30 39.4	+0.4
	comp=Z,11nm,0.8s,baz=101,slow=8.7,SNR=47						
SONM				PcP	PcP	23 33 50.8	+0.6
	comp=Z,0.4nm,0.5s,baz=111,slow=3.2,SNR=2.8						
LZH	Lanzhou	30.55	281	eP	P	23 30 57.5	+0.3
LZH				pP	sP	23 31 08.1	+1.4
LZH				sP	pwP	23 31 12.3	+5.8
LZH				ePP	PnPn	23 31 57.8	+1.3
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,72nm,5.0s						
LZH				LR	LR		
	comp=Z,230nm,12.7s						
LZH				LR	LR		
	comp=Z,240nm,12.9s						
LZH				LR	LR		
	comp=Z,380nm,16.4s						
ZAK	Zakamensk	31.04	309	eP	P	23 31 00.9	-0.4
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TLY	Talaya	31.12	312	eP	P	23 31 02.2	+0.3
	comp=Z,12nm,1.1s						
TLY	Talaya	31.12	312	eP	P	23 31 02.5	+0.6
TLY				pmax	pmax		
	comp=Z,23nm,0.9s						
TLY				MLR	MLR		
	comp=Z,508nm,14.0s						
GTA	Gaotai	33.14	288	⇑P	P	23 31 20.0	+0.2
GTA				pP	pwP	23 31 28.3	-0.8
GTA				sP	sP	23 31 32.5	+3.0
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,140nm,7.3s						
GTA				LR	LR		
	comp=Z,80nm,18.7s						
GTA				LR	LR		
	comp=Z,140nm,18.1s						
GTA				LR	LR		
	comp=Z,250nm,18.4s						
TIXI	Tiksi	36.13	353	P	P	23 31 45.1	-0.1
	comp=Z,3.6nm,0.8s,baz=231,slow=3.7,SNR=4.7						
TIXI				PcP	PcP	23 34 10.6	+0.2
	comp=Z,1.1nm,0.6s,baz=271,slow=11,SNR=0.9						
TIXI	Tiksi	36.13	353	deP	P	23 31 44.8	-0.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NONG	Nongkai	38.58	252	P	P	23 32 08.4	+1.9
	comp=Z,0.3nm,0.8s						
UTTA	Uttaradit	40.77	254	P	P	23 32 25.7	+0.9
	comp=Z,13µm,0.8s						
PBKT	Sadao Pong	41.13	253	P	P	23 32 28.7	+1.0
	comp=Z,6.9nm,1.0s,comp=Z,456nm						
WMQ	Urumqi	41.52	298	eP	P	23 32 32.5	+1.8
WMQ				pP	sP	23 32 42.5	+2.1
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,86nm,3.9s						
CM31	Chiang Mai Arr	41.63	257	eP	P	23 32 32.1	+0.3
	comp=Z,3.4nm,0.8s						
CMAR	Chiang Mai Arr	41.63	257	P	P	23 32 32.1	+0.3
	comp=Z,2.1nm,0.8s,baz=48,slow=5.6,SNR=12						
CMAR				LR	LR	23 52 15.5	
	comp=Z,29nm,18.9s,baz=275,slow=40						
LSA	Lhasa	42.63	276	P	P	23 32 41.1	+0.7
LSA				pmax	pmax		
	comp=Z,59nm,0.9s						
ZALV	Zalesovo Beam	42.72	313	P	P	23 32 40.5	+0.3
	comp=Z,9.9nm,0.8s,baz=94,slow=6.4,SNR=23						
ZALV				PcP	PcP	23 34 31.2	-0.4
	comp=Z,2.4nm,0.5s,baz=106,slow=2.6,SNR=4.8						
MKAR	Makanchi Array	44.84	303	P	P	23 32 57.7	+0.2
	comp=Z,9.4nm,0.7s,baz=89,slow=10.0,SNR=28						
MKAR				PcP	PcP	23 34 39.3	+0.3
	comp=Z,1.3nm,0.7s,baz=84,slow=5.9,SNR=2.7						
TARA	Tarawa	45.08	133	eP	P	23 32 59.7	0.0
	comp=Z,568nm,1.1s						
KAPI	Kappang	45.94	211	eP	P	23 33 06.2	-0.2
	comp=Z,22nm,1.0s						
KAPI	Kappang	45.94	211	eP	P	23 33 06.3	-0.2
KAPI				pmax	pmax		
	comp=Z,22nm,1.0s						
KURK	Kurchatov	46.70	309	eP	P	23 33 12.0	-0.1
	comp=Z,18nm,0.8s						
KURK	Kurchatov	46.70	309	c iP	P	23 33 11.8	-0.3
KURK				pmax	pmax		
	comp=Z,15nm,0.6s						
JIRN	Jiri	47.44	276	eP	P	23 33 19.4	+0.8
PDGK	Podgornoye	47.46	299	P	P	23 33 18.7	+0.4
PDGK				pmax	pmax		
	comp=Z,23nm,0.8s						
KDAK	Kodiak Island	47.48	41	P	P	23 33 17.2	-0.8
	comp=Z,6.1nm,0.6s,baz=253,slow=6.5,SNR=7.5						
KDAK	Kodiak Island	47.48	41	eP	P	23 33 17.6	-0.4
	comp=Z,13nm,1.1s						
KDAK	Kodiak Island	47.48	41	eP	P	23 33 17.6	-0.4
KDAK				pmax	pmax		
	comp=Z,13nm,1.1s						
PKI	Pulchoki	48.10	276	eP	P	23 33 23.2	-0.5
	comp=Z,7.7nm,0.5s						
PKIN	Phulchoki	48.11	276	eP	P	23 33 23.1	-0.6
KKN	Kakani	48.11	277	eP	P	23 33 23.8	+0.1
	comp=Z,8.9nm,0.4s						
MLY	Manley	48.36	32	eP	P	23 33 22.3	-2.6
	comp=Z,3.8nm,0.7s						
GKN	Gorkha	48.54	277	eP	P	23 33 27.1	+0.2
	comp=Z,19nm,0.5s						
DANN	Dangsing	49.10	278	eP	P	23 33 31.9	+0.6
	comp=Z,56nm,0.7s						
COLA	College	49.58	32	⇑eP	P	23 33 36.0	+1.9
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ILAR	Eielson Array	50.00	32	P	P	23 33 37.7	+0.4
	comp=Z,3.6nm,0.7s,baz=264,slow=6.4,SNR=37						
ILB	Eielson Array	50.00	32	eP	P	23 33 36.6	-0.7
	comp=Z,4.4nm,0.7s						
KSH	Kashi	51.05	295	P	P	23 33 50.3	+4.5
KSH				pP	sP	23 34 00.8	+5.2
KSH				sP	pwP	23 34 04.1	+8.9
KSH				PcP	PcP	23 35 06.4	+4.9
KSH				PP	PP	23 35 48.8	+6.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,120nm,5.3s						
KSH				LR	LR		
	comp=Z,140nm,5.7s						
KSH				LR	LR		
	comp=Z,90nm,7.4s						
AAK	Ala-Archa	51.18	299	⇓eP	P	23 33 46.7	0.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OTUK	Ortayu	51.18	307	P	P	23 33 46.8	+0.3
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DOT	Dot Lake	51.29	33	eP	P	23 33 45.8	-1.3
	comp=Z,2.5nm,0.7s						
SCRK	Sand Creek	51.30	33	eP	P	23 33 45.2	-2.1
	comp=Z,2.6nm,0.7s						
BRVK	Borovoye	51.43	313	eP	P	23 33 46.4	-1.9
	comp=Z,5.6nm,0.7s						
BRVK	Borovoye	51.43	313	eP	P	23 33 46.4	-1.9
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GSI	Gunungsitoli	53.68	240	eP	P	23 34 04.8	-0.7
	comp=Z,14nm,0.9s						
KK31	Karatay Array	53.83	301	eP	P	23 34 05.7	-0.5
	comp=Z,7.2nm,1.0s						
KK31	Karatay Array	53.83	301	eP	P	23 34 05.7	-0.5
KK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KKAR	Karatay Array	53.83	301	eP	P	23 34 05.7	-0.5

	comp=Z,7.2nm,1.0s						
KKAR	Karatay Array	53.83	301	eP	P	23 34 05.7	-0.5
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HYT	Haines Junctio	54.75	36	eP	P	23 34 12.3	-0.5
	comp=Z,5.8nm,0.9s						
INK	Inuvik	54.95	27	P	P	23 34 14.9	+1.1
	comp=Z,5.4nm,0.6s,baz=318,slow=7.9,SNR=9.4						
INK	Inuvik	54.95	27	P	P	23 34 15.0	+1.1
SVE	Sverdlovsk	55.98	319	eP	P	23 34 22.3	+0.8
SVE				pmax	pmax		
	comp=Z,11nm,0.9s						
SVE				MLR	MLR		
	comp=Z,302nm,18.0s						
WR1	Warramunga Arr	56.31	188	eP	P	23 34 23.5	-0.7
WRA	Warramunga Arr	56.31	188	P	P	23 34 23.5	-0.7
	comp=Z,2.5nm,0.7s,baz=2.1,slow=7.3,SNR=5.1						
ARU	Arti	57.20	319	LR	LR	00 01 12.3	
	comp=Z,100nm,18.4s,baz=60,slow=38						
ARU	Arti	57.20	319	eP	P	23 34 29.1	-1.0
	comp=Z,7.7nm,0.7s						
ARU	Arti	57.20	319	c iP	P	23 34 30.0	-0.1
ARU						23 35 20.4	
ARU				S	S	23 42 25.4	+1.4
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,120nm,16.0s						
AKTO	Aktyubinsk	59.47	312	LR	LR	00 01 40.4	
	comp=Z,100nm,18.2s,baz=73,slow=37						
AS31	Alice Springs	60.03	188	eP	P	23 34 49.9	-0.3
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	60.03	188	P	P	23 34 49.9	-0.3
	comp=Z,1.1nm,0.7s,baz=7.3,slow=7.2,SNR=11						
KIRV	Kirov	61.10	323	LR	LR	00 03 59.4	
	comp=Z,77nm,18.6s,baz=143,slow=39						
YKA	Yellowknife Ar	64.34	30	P	P	23 35 18.8	+0.2
	comp=Z,1.9nm,0.8s,baz=294,slow=6.7,SNR=6.5						
YKB5	Yellowknife Ar	64.34	30	eP	P	23 35 18.8	+0.2
GEYT	Alibeck	64.53	299	P	P	23 35 20.2	-0.1
	comp=Z,2.0nm,0.8s,baz=21,slow=2.1,SNR=7.0						
ARCES	ARCESS Array B	64.88	340	P	P	23 35 22.5	+0.4
	comp=Z,5.0nm,0.8s,baz=51,slow=7.9,SNR=12						
ARCES				LR	LR	00 07 43.9	
	comp=Z,61nm,18.9s,baz=115,slow=40						
MSF	Maaselka	65.93	336	P	P	23 35 29.3	+0.4
MSF				pmax	pmax		
	comp=Z,17nm,1.8s						
STKA	Stephens Creek	67.74	180	P	P	23 35 41.3	+0.5
	comp=Z,1.0nm,0.4s,baz=353,slow=16,SNR=3.0						
STKA	Stephens Creek	67.74	180	eP	P	23 35 39.6	-1.2
	comp=Z,0.3nm,1.0s						
STKA	Stephens Creek	67.74	180	eP	P	23 35 39.6	-1.2
OBN	Obninsk	68.95	324	LR	LR	00 07 57.8	
	comp=Z,18nm,19.0s,baz=67,slow=38						
OBN	Obninsk	68.95	324	i P	P	23 35 48.1	-0.1
OBN				i		23 36 01.3	
OBN				i		23 38 19.6	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,114nm,16.0s						
FINES	FINESS Array B	69.69	333	P	P	23 35 52.3	-0.3
	comp=Z,5.3nm,0.7s,baz=43,slow=6.9,SNR=16						
FINES				LR	LR	00 08 47.5	
	comp=Z,61nm,18.8s,baz=131,slow=38						
FINES	FINESS Array B	69.69	333	i P	P	23 35 52.7	0.0
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PINE	Pine Mountain	70.60	50	eP	P	23 35 56.8	-2.0
	comp=Z,9.2nm,1.1s						
KBZ	Khabaz	71.69	311	P	P	23 36 05.8	+0.6
	comp=Z,2.8nm,0.8s,baz=76,slow=8.7,SNR=5.3						
KIV	Kislovodsk	71.70	311	eP	P	23 36 06.6	+1.3
KIV				pmax	pmax		
	comp=Z,36nm,1.7s						
FFC	Flin Flon	74.20	33	i P	P	23 36 21.2	+1.3
KVN	Kaiserville	74.98	53	eP	P	23 36 23.6	-1.3
	comp=Z,3.3nm,1.0s						
KVN	Kaiserville	74.98	53	eP	P	23 36 23.6	-1.3
KVN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NC204	NORSAR Array S	75.02	338	eP	P	23 36 23.2	-1.4
	comp=Z,27nm,1.0s						
NB2	NORSAR Subarra	75.06	338	P	P	23 36 24.7	-0.1
	comp=Z,2.6nm,0.7s,baz=40,slow=5.9						
NB200	NORSAR Array S	75.06	338	eP	P	23 36 25.1	+0.2
NOA	NORSAR Array B	75.06	338	P	P	23 36 25.1	+0.2
	comp=Z,5.2nm,0.8s,baz=39,slow=5.7,SNR=23						
NOA				LR	LR	00 12 52.3	
	comp=Z,62nm,18.6s,baz=50,slow=38						
AKASG	Malin Array Be	75.15	323	P	P	23 36 25.3	-0.1
	comp=Z,8.9nm,0.6s,baz=47,slow=6.1,SNR=33						
NVAR	Mina Array Bea	75.20	53	P	P	23 36 27.1	+0.9
	comp=Z,1.5nm,0.7s,baz=288,slow=6.1,SNR=11						
SFJD	Kangerlussuaq	76.66	5	LR	LR	00 14 34.5	
	comp=Z,23nm,18.1s,baz=291,slow=39						
DUG	Dugway, Tooele	77.63	49	eP	P	23 36 38.7	-1.2
	comp=Z,4.2nm,0.9s						
DUG	Dugway, Tooele	77.63	49	eP	P	23 36 38.7	-1.2
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PDAR	Pinedale Array	77.99	46	P	P	23 36 41.9	0.0
	comp=Z,0.6nm,0.4s,baz=254,slow=2.2,SNR=6.3						
KWP	Kalwaria Pacla	78.99	325	eP	P	23 36 48.1	+1.1
KWP	Kalwaria Pacla	78.99	325	eP	P	23 36 48.2	+1.1
BURAR	Bucovina Array	79.16	322	⇑iP	P	23 36 48.6	+0.5
BURAR	Bucovina Array	79.16	322	⇑P	P	23 36 48.6	+0.5
TESR	Tescani	79.18	320	⇑iP	P	23 36 48.4	+0.3
VRI	Vrincioaia	79.57	320	⇑iP	P	23 36 50.0	-0.3
VRI	Vrincioaia	79.57	320	⇑P	P	23 36 50.0	-0.3
BR101	Keskin Array S	79.64	312	eP	P	23 36 51.3	+0.3
BR131	Keskin Array S	79.64	312	eP	P	23 36 49.9	-1.1
	comp=Z,3.1nm,0.9s						
BRTR	Keskin Array B	79.64	312	P	P	23 36 51.3	+0.3
	comp=Z,1.9nm,0.6s,baz=89,slow=4.2,SNR=13						
BRTR	Keskin Array B	79.64	312	ceP	P	23 36 51.9	+0.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KOLS	Kolonicke sedl	79.68	324	eP	P	23 36 51.0	+0.2
KOLS	Kolonicke sedl	79.68	324	eP	P	23 36 51.0	+0.2
OJC	Ojcow	79.90	326	eP	P	23 36 53.0	+1.0
OJC	Ojcow	79.90	326	eP	P	23 36 53.0	+1.0
TRPA	Tarpa	80.11	324	⇑iP	P	23 36 54.0	+0.9
NIE	Niedzica	80.25	326	eP	P	23 36 54.4	+0.5
NIE	Niedzica	80.25	326	eP	P	23 36 54.4	+0.5
ARR	Arges	80.98	321	⇑iP	P	23 36 58.6	+0.6
PV18	Skein Mesa, Pa	81.21	49	eP	P	23 36 57.4	-2.2
	comp=Z,5.7nm,0.9s						
MORC	Moravsky Berou	81.22	327	⇑iP	P	23 36 56.5	-2.7
MORC	Moravsky Berou	81.22	327	⇑P	P	23 36 56.5	-2.7
DPC	Dobruska-Polom	81.33	328	eP	P	23 37 00.3	+0.6
DPC	Dobruska-Polom	81.33	328	eP	P	23 37 00.3	+0.6
VYHS	Vyhne	81.59	326	eP	P	23 37 00.8	-0.3
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VYHS	Vyhne	81.59	326	eP	P	23 37 00.8	-0.3
BRG	Berggiesshubel	81.92	330	eP	P	23 37 02.9	+0.1
	comp=Z,2.0nm,0.6s						
CLL	Collm	81.97	330	⇑iP	P	23 37 02.9	-0.1
CLL				i		23 37 13.5	
CLL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CLL	Collm	81.97	330	⇑iP	P	23 37 02.9	-0.1
	comp=Z,5.0nm,0.7s						
CLL				i pP	sP	23 37 13.5	+0.5
BZS	Buzias	82.33	322	⇑iP	P	23 37 04.8	-0.2
BZS	Buzias	82.33	322	⇑P	P	23 37 04.8	-0.2
PRU	Pruhonice	82.35	329	eP	P	23 37 05.5	+0.5
PRU	Pruhonice	82.35	329	eP	P	23 37 05.5	+0.5
MDVR	Moldovita	82.88	322	⇑iP	P	23 37 06.8	-1.1
CONA	Conrad Observa	83.34	327	i PcP	P	23 37 11.2	+0.8
	comp=Z,3.3nm,1.1s						
KHC	Kasperske Hory	83.41	329	ceP	P	23 37 10.7	+0.1
KHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KHC	Kasperske Hory	83.41	329	eP	P	23 37 10.6	0.0
KHC				epP	sP	23 37 21.0	+0.4
GERES	GERESS Array B	83.58	328	P	P	23 37 11.5	-0.1
	comp=Z,1.4nm,0.5s,baz=39,slow=5.9,SNR=21						
GERES				LR	LR	00 19 58.5	
	comp=Z,34nm,18.4s,baz=56,slow=40						
EZN	Ezine	83.85	316	⇑iP	P	23 37 13.7	+0.7
EZN	Ezine	83.85	316	⇑P	P	23 37 13.7	+0.7
ARSA	Arzberg	84.00	326	i PcP	P	23 37 15.4	+1.8
	comp=Z,3.5nm,0.8s						
SOKA	Soboth	84.66	326	i PcP	P	23 37 17.2	+0.1
	comp=Z,2.3nm,0.6s						
ANMO	Albuquerque	84.85	50	⇑eP	P	23 37 20.2	+1.8
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KBA	Koelnbreinsper	85.09	328	i PcP	P	23 37 19.8	+0.4
	comp=Z,1.8nm,0.9s						
MYKA	Terra Mystica	85.31	327	i PcP	P	23 37 19.3	-1.1
	comp=Z,1.2nm,0.5s						
WATA	Walderalm	85.65	329	i PcP	P	23 37 23.4	+1.3
	comp=Z,1.3nm,0.5s						
ABTA	Abfaltersbach	85.71	328	i PcP	P	23 37 22.4	+0.1
	comp=Z,3.7nm,1.5s						
RETA	Reutte	85.87	329	i PcP	P	23 37 23.3	+0.2
	comp=Z,3.0nm,1.1s						
SQTA	Sankt Quirin	85.90	329	i PcP	P	23 37 23.6	+0.4
	comp=Z,2.5nm,1.0s						
BFO	Black Forest	86.18	331	eP	P	23 37 24.6	0.0
	comp=Z,3.9nm,0.7s						
BFO	Black Forest	86.18	331	eP	P	23 37 24.6	0.0
BFO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FETA	Feichten	86.25	329	i PcP	P	23 37 23.9	-1.2
	comp=Z,1.9nm,0.7s						
DAVA	Damuels	86.39	330	i PcP	P	23 37 25.3	-0.5
	comp=Z,2.5nm,0.9s						
TXAR	Lajitas Array	90.34	53	P	P	23 37 45.2	+0.4
	comp=Z,1.1nm,0.8s,baz=296,slow=3.4,SNR=12						
TOA1	Torodi Ar. Sit	118.14	315	ePKPdf	PKPdf	23 43 29.8	-1.1
TORD	Torodi Ar. Bea	118.14	315	PKP	PKPdf	23 43 29.7	-1.2
	comp=Z,0.4nm,0.9s,baz=9.8,slow=3.8,SNR=2.8						
LPAZ	La Paz	146.80	61	PKPbc	PKPbc	23 44 26.7	+0.1
	comp=Z,3.9nm,0.6s,baz=327,slow=2.8,SNR=23						
LPAZ	La Paz	146.80	61	ePKPbc	PKPbc	23 44 27.1	+0.4
LPAZ	La Paz	146.80	61	ePKP2	PKPbc	23 44 27.1	+0.4
PLCA	Paso Flores	154.33	110	PKPbc	PKPbc	23 44 43.2	-0.3
	comp=Z,2.4nm,1.1s,baz=284,slow=17,SNR=2.6						

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*IDC **22** 23:24:47.4±3.7, 39°.89S×175°.87E, h0^{km}, mb3.6/3,*
mb1 3.9/3, mb1mx3.6/24, mbtmp3.6/3, Error ellipse:
s-maj=114.8km s-min=33.7km az=51.0
*ISCJB **22** 23:24:54.7±0.5, 41°.80S±0°.03×174°.51E±0°.05, h22^{km}±5^{km},*
mb3.5/3, Error ellipse: s-maj=7.4km s-min=3.3km
az=136.4
*WEL **22** 23:24:55.0, 42°S±2°×17°4E±°, h22^{km}±2^{km}, M3.8/43,*
ML4.0/6, MLv3.8/43, Error ellipse: s-maj=0.0km
s-min=0.0km az=123.9
ISC 22 23:24:54.9±1.0**, 41°.68S**±0°.04×**174°.44E**±0°.03**, h21**^{km}±3^{km}**,**
n82, σ1^{s}38/78**, mb3.5**/3**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.18	247	P	Pb	23 25 00.6	0.0
BSWZ	Blackbirch Sta	0.42	265	P	Pb	23 25 04.2	+0.7
BHW	Baring Head	0.42	51	P	Pb	23 25 03.9	+0.4
TUWZ	Tuamarina	0.45	304	P	Pb	23 25 04.2	+0.2
WEL	Wellington	0.47	32	P	Pb	23 25 04.6	+0.3
TCW	Tory Channel	0.48	345	P	Pb	23 25 04.4	-0.2
PLWZ	Palliser	0.62	80	P	Pn	23 25 08.4	-0.2
MSWZ	Moikau Station	0.66	67	P	Pn	23 25 08.7	-0.5
CAW	Cannon Point	0.74	40	P	Pn	23 25 09.4	-0.8
PAWZ	Paruwai Farm	0.80	69	P	Pn	23 25 11.1	+0.1
NNZ	Nelson	0.92	300	P	Pn	23 25 12.5	-0.1
MTW	Mount Morrison	0.95	57	P	Pn	23 25 13.4	+0.3
DUWZ	D'Urville Isla	0.96	336	P	Pn	23 25 13.0	-0.2
TRWZ	Traveller	0.98	74	P	Pn	23 25 13.6	+0.2
KHZ	Kahutara	1.00	222	P	Pb	23 25 14.4	+1.0
OGWZ	Otaki Gorge	1.02	33	P	Pn	23 25 14.0	0.0
HOWZ	Holdsworth Sta	1.13	47	P	Pb	23 25 15.9	+0.2
THZ	Tophouse	1.15	265	P	Pb	23 25 17.0	+0.9
TMWZ	Te Maipa	1.23	63	P	Pn	23 25 17.0	0.0
MRZ	Mangatainoka R	1.33	41	P	Pb	23 25 18.9	-0.3
TIWZ	Tintock	1.42	51	P	Pb	23 25 19.8	-0.8
CPWZ	Castlepoint	1.54	61	P	Pb	23 25 26.5	+3.9
PRWZ	Pori Road	1.61	46	P	Pn	23 25 22.4	+0.3
OHWZ	Ohakea	1.61	25	P	Pb	23 25 25.7	+1.7
POWZ	Post Office Ro	1.63	39	P	Pb	23 25 23.2	-1.1
GVZ	Greta Valley S	1.66	218	P	Pn	23 25 23.2	+0.4
QRZ	Quartz Range	1.67	300	P	Pb	23 25 25.0	0.0
BFZ	Birch Farm	1.69	55	P	Pn	23 25 22.8	-0.4
DVHZ	Dannevirke	1.90	44	P	Pn	23 25 25.9	-0.3
LTZ	Lake Taylor	1.95	235	P	Pn	23 25 27.5	+0.6
ANWZ	Angora Road	1.96	52	P	Pb	23 25 34.5	+4.6
WAZ	Wanganui	1.97	12	P	Pb	23 25 30.5	+0.5
DSZ	Denniston Nort	1.97	267	P	Pb	23 25 30.6	+0.5
TSZ	Takapari Road	1.99	36	P	Pn	23 25 27.7	+0.4
AMCZ	Amberley	2.00	221	P	Pn	23 25 27.6	+0.2
PRHZ	Porangahau	2.18	50	P	Pn	23 25 30.9	+0.9
PNHZ	Pukenui	2.21	38	P	Pn	23 25 30.6	+0.1
LREZ	Lake Rotokare	2.21	359	P	Pb	23 25 36.9	+2.6
WPHZ	Waipukurau	2.21	44	P	Pn	23 25 31.4	+0.9
OKCZ	Okains Bay	2.28	206	P	Pn	23 25 31.0	-0.4
NMEZ	Namu Road	2.30	349	P	Pb	23 25 38.3	+2.6
CRLZ	Canterbury Las	2.32	215	P	Pn	23 25 32.6	+0.7
KHEZ	Kahui Hut	2.40	352	P	Pb	23 25 38.3	+0.9
MQZ	McQueen's Vall	2.42	212	P	Pn	23 25 32.2	-1.0
OXZ	Oxford	2.42	226	P	Pn	23 25 33.0	-0.2
MTVZ	Mangateitei	2.42	19	P	Pb	23 25 39.1	+1.3
NBEZ	Newall Road No	2.45	350	P	Pb	23 25 38.3	+0.2
NBEZ				P	Pn	23 25 40.9	+7.3
INZ	Inchbonnie	2.46	244	P	Pn	23 25 35.2	+1.4
PXZ	Pawanui	2.47	49	P	Pb	23 25 41.0	+2.5
MOVZ	Moawhango	2.48	24	P	Pn	23 25 35.8	+1.6
PKVZ	Pokaka	2.48	17	P	Pb	23 25 40.7	+1.9
DREZ	Durham Road	2.49	356	P	Pb	23 25 42.0	+3.1
PKE	Pukeiti	2.50	352	P	Pb	23 25 39.9	+0.8
KRHZ	Kereru	2.51	37	P	Pn	23 25 34.4	-0.1
BHHZ	Black Hill Sta	2.51	30	P	Pn	23 25 35.5	+0.9
WHVZ	Whangaehu Hut	2.55	21	P	Pn	23 25 37.3	+2.0
TUVZ	Tukino	2.58	21	P	Pb	23 25 37.9	-2.6
KAHZ	Kahuranaki	2.64	45	P	Pn	23 25 36.0	-0.3
NGZ	Ngauruhoe	2.65	20	P	Pn	23 25 38.6	+2.0
WTVZ	West Tongariro	2.71	19	P	Pn	23 25 39.6	+2.2
KWHZ	Kaweka Forest	2.71	35	P	Pn	23 25 39.5	+2.2
KRVZ	Karewarewa	2.74	20	P	Pb	23 25 40.5	-2.7
MCHZ	McNeill Hill	2.82	38	P	Pn	23 25 39.0	+0.3
KATZ	Kakaramea	2.87	20	P	Pb	23 25 43.9	-1.5
BKZ	Black Stump Fm	2.96	33	P	Pn	23 25 41.0	+0.2
HIZ	Hauiti	3.18	6	P	Pb	23 25 47.7	-2.9
RPZ	Rata Peaks	3.22	230	P	Pn	23 25 44.3	0.0
TLZ	Tolley Road	3.45	15	P	Pb	23 25 53.4	-1.9
FOZ	Fox Glacier	3.88	240	P	Pb	23 25 59.9	-2.7
MWZ	Matawai	4.10	36	P	Pn	23 25 55.1	-1.2
LBZ	Lake Benmore	4.13	228	P	Pn	23 25 57.9	+1.2
ODZ	Otahua Downs	4.36	218	P	Pn	23 25 59.0	-0.8
MKAZ	Moumakai	4.60	7	P	Pb	23 26 11.3	-3.6
AWAZ	Awhitu Peninsu	4.61	2	P	Pn	23 26 08.0	+4.7
JCZ	Jackson Bay	4.79	238	P	Pn	23 26 12.0	+6.0
TUZ	Tuapeka	5.51	217	P	Pn	23 26 15.5	-0.2
SYZ	Scrubby Hill	6.17	216	P	Pn	23 26 25.1	+0.3
APZ	The Paps	6.92	220	P	Pn	23 26 35.6	+0.4
VNDA	Vanda	36.33	185	P	P	23 32 08.1	+11
	0.3nm,0.4s,baz=27,slow=8.5,SNR=7.9						
ASAR	Alice Springs	38.15	285	P	P	23 32 13.1	+0.3
	0.2nm,0.4s,baz=117,slow=6.4,SNR=1.4						
WRA	Warramunga Arr	40.21	290	P	P	23 32 30.0	0.0
	1.1nm,0.5s,baz=129,slow=9.0,SNR=1.5						
TORD	Torodi Ar. Bea	150.88	195	PKPbc	PKiKP	23 44 46.7	-0.2
	0.3nm,0.5s,baz=157,slow=2.8,SNR=4.5						

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*ISCJB **22** 23:28:58.2±0.6, 15°.26S±0°.07×75°.7W±0°.1, h10^{km}, mb4.1/7,*
MS3.6/5, Error ellipse: s-maj=16.4km s-min=5.3km
az=147.2
*IDC **22** 23:28:58.8±0.9, 15°.17S×75°.74W, h0^{km}, mb3.8/4,*
mb1 4.1/9, mb1mx3.9/35, mbtmp4.0/9, ML3.9/5, MS3.5/7,
Ms1 3.5/7, ms1mx3.2/33, Error ellipse: s-maj=31.2km
s-min=15.6km az=66.0
*NEIC **22** 23:29:03.9±2.3, 15°.29S×75°.72W, h38^{km}±7^{km}, mb4.3/5,*
Error ellipse: s-maj=19.2km s-min=2.0km az=66.0
ISC 22 23:28:58.6±0.6**, 15°.28S**±0°.07×**75°.8W**±0°.1**, h10**^{km}**, n44,**
σ2^{s}32/44**, mb4.4**/7**, MS3.8**/5**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	3.42	343	Pn	Pn	23 29 53.1	+1.0
	6.5nm,0.3s,baz=139,slow=15,SNR=9.9						
NNA				Pg	Pb	23 29 58.6	-0.8
	15nm,0.3s,baz=152,slow=8.8,SNR=25						
NNA				Sn	Sn	23 30 34.2	+1.4
	16nm,0.3s,baz=290,slow=11,SNR=4.7						
NNA				Lg	Lg	23 30 40.6	
	40nm,0.3s,baz=269,slow=6.1,SNR=7.7						
NNA	Nana	3.42	343	ePn	Pb	23 29 55.0	-4.4
NNA				eSn	Sn	23 30 28.8	-4.0
MNMC	Minye Minye	7.08	124	ePn	Pn	23 30 44.4	+1.8
PB11	IPOC Station P	7.38	128	ePn	Pn	23 30 48.1	+1.4
PB11				eSn	Sn	23 32 10.4	-0.2
LPAZ	La Paz	7.48	99	Pn	Pn	23 30 50.3	+1.9
	2.9nm,0.3s,baz=270,slow=9.6,SNR=61						
LPAZ				Sn	Sn	23 32 22.4	+8.8
	baz=242,slow=23,SNR=1.1						
LPAZ				Lg	Lg	23 33 07.0	
	0.1nm,0.3s,baz=75,slow=24,SNR=1.1						
LPAZ	La Paz	7.48	99	ePn	Pn	23 30 52.3	+3.9
GO01	Chusmiza	7.69	126	ePn	Pn	23 30 53.0	+1.8
PB01	IPOC Station P	8.31	134	ePn	Pn	23 31 01.2	+1.7
PB01				eSn	Sn	23 32 28.5	-5.0
ATAH	Atahualpa	8.48	342	Pn	Pn	23 31 03.0	+1.1
	0.8nm,0.3s,baz=204,slow=20,SNR=3.0						
ATAH				Sn	Sn	23 32 47.5	+10
	0.5nm,0.3s,baz=290,slow=23,SNR=2.7						
PB04	IPOC Station P	8.84	143	ePn	Pn	23 31 07.5	+0.9
PB04				eSn	Sn	23 32 44.0	-2.5
LVC	Limon Verde	9.79	139	Pn	Pn	23 31 22.4	+2.4
	2.4nm,0.3s,baz=326,slow=8.8,SNR=15						
LVC				Sn	Sn	23 33 09.0	-1.3
	1.4nm,0.3s,baz=82,slow=19,SNR=2.7						
LVC				Lg	Lg	23 34 07.4	
	baz=330,slow=20,SNR=1.9						
LVC				LR	LR	23 35 01.2	
	comp=Z,139nm,19.2s,baz=314,slow=37						
LVC	Limon Verde	9.79	139	ePn	Pn	23 31 22.7	+2.7
GO02	Mina Guanaco	11.44	150	ePn	Pn	23 31 43.3	+0.9
GO02				eSn	Sn	23 33 43.0	-7.6
SIV	San Ignacio	14.23	95	Pn	Pn	23 32 17.2	-3.2
	0.4nm,0.3s,baz=274,slow=14,SNR=7.2						
SIV				LR	LR	23 37 29.9	
	comp=Z,90nm,19.9s,baz=284,slow=36						
CFA	Coronel Fontan	17.67	158	P	P	23 33 07.0	+1.1
	0.3nm,0.3s,baz=336,slow=11,SNR=3.8						
CPUP	Villa Florida	20.46	125	LR	LR	23 42 39.4	
	comp=Z,69nm,20.9s,baz=338,slow=40						
PTGA	Pitinga	21.32	49	P	P	23 33 45.3	-0.6
	1.8nm,0.7s,baz=244,slow=12,SNR=5.0						
PTGA				LR	LR	23 42 28.8	
	comp=Z,155nm,21.9s,baz=242,slow=38						
PTGA	Pitinga	21.32	49	eP	P	23 33 45.8	-0.1
	3.6nm,1.0s						
PLCA	Paso Flores	25.77	171	P	P	23 34 32.2	+2.5
	0.9nm,0.7s,baz=17,slow=17,SNR=2.3						
PLCA	Paso Flores	25.77	171	eP	P	23 34 30.5	+0.7
	5.2nm,1.1s						
MDP	Montagnes des	30.62	50	LR	LR	23 47 54.8	
	comp=Z,190nm,19.4s,baz=229,slow=37						
LTX	Lajitas	51.87	329	eP	P	23 38 09.2	+1.7
TXAR	Lajitas Array	51.87	329	P	P	23 38 09.2	+1.7
	0.6nm,0.7s,baz=159,slow=8.7,SNR=4.2						
DUG	Dugway, Tooele	65.03	329	eP	P	23 39 39.4	+0.1
	2.6nm,0.7s						
SNAA	Sanae	70.26	161	eP	P	23 40 13.5	+1.7
	2.9nm,0.9s						
DBIC	Dimbokro	73.60	78	LR	LR	00 10 45.8	
	comp=Z,68nm,21.1s,baz=220,slow=34						
TOA1	Torodi Ar. Sit	81.72	74	eP	P	23 41 18.9	+0.7
TOA0	Torodi Ar. Sit	81.73	74	eP	P	23 41 19.2	+1.1
	5.0nm,0.8s						
TORD	Torodi Ar. Bea	81.73	74	P	P	23 41 18.9	+0.7
	3.8nm,0.7s,baz=262,slow=3.0,SNR=21						
TORD				LR	LR	00 15 52.1	
	comp=Z,57nm,19.1s,baz=325,slow=34						
H11N3	WAKE ISLAND Hy	120.29	284	T	T	01 59 28.5	
	baz=97,slow=74,SNR=34						
H11N2	WAKE ISLAND Hy	120.30	284	T	T	01 59 32.0	
	baz=97,slow=74,SNR=65						
H11N1	WAKE ISLAND Hy	120.30	284	T	T	01 59 31.8	
	baz=97,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	120.33	283	T	T	01 59 36.8	
	baz=97,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	120.34	283	T	T	01 59 32.7	
	baz=97,slow=75,SNR=17						
H11S3	WAKE ISLAND Hy	120.35	283	T	T	01 59 37.0	
	baz=97,slow=75,SNR=20						
ASAR	Alice Springs	131.59	217	PKP	PKiKP	23 48 14.0	+0.4
	0.5nm,0.8s,baz=156,slow=2.8,SNR=2.9						
WR1	Warramunga Arr	134.12	221	ePKPdf	PKPdf	23 48 15.1	-2.4
WRA	Warramunga Arr	134.12	221	PKhKP	PKPdf	23 48 15.1	-2.4
	1.3nm,0.7s,baz=119,slow=2.9,SNR=2.4						
WRA				PKP	PKiKP	23 48 18.5	-0.3
	1.6nm,0.8s,baz=117,slow=2.9,SNR=2.4						
ZAA1	Zalesovo Array	138.54	17	ePKPdf	PKiKP	23 48 26.1	-0.5
ZALV	Zalesovo Beam	138.55	17	PKP	PKiKP	23 48 26.1	-0.5
	0.6nm,0.5s,baz=326,slow=2.1,SNR=3.5						
MK32	Makanchi Array	143.67	26	ePKPdf	PKPdf	23 48 35.2	+1.1
MKAR	Makanchi Array	143.67	26	PKP	PKPdf	23 48 35.2	+1.1
	0.9nm,0.8s,baz=294,slow=1.4,SNR=3.2						
SONA0	Songino Array	147.49	357	ePKPbc	PKPab	23 48 44.5	-0.7
SONM	Songino Array	147.49	357	PKPbc	PKPab	23 48 44.5	-0.7
	1.6nm,0.6s,baz=327,slow=1.9,SNR=7.9						

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*HEL **22** 23:30:19.5, 67°.70N×19°.99E, h0^{km}, ML1.6, Explosion*
UPP 22 23:30:19.3±0.0**, 67°.82N**×**20°.19E, h0**^{km}**, ML1.8,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.23	271	P	Pg	23 30 23.9	+0.2
RATU	Laukkuluspa	0.23	271	i P	Pg	23 30 23.9	+0.2
KOVU	Salmi	0.40	358	P	Pg	23 30 27.0	0.0
KOVU				S	Sg	23 30 32.5	+0.2
KOVU	Salmi	0.40	358	i P	Pg	23 30 27.0	0.0
KOVU				i S	Sg	23 30 32.5	+0.2
NIKU	Nikkaluokta	0.44	277	P	Pg	23 30 27.8	+0.1
NIKU				S	Sg	23 30 33.9	+0.5
NIKU	Nikkaluokta	0.44	277	i P	Pg	23 30 27.8	+0.1
NIKU				i S	Sg	23 30 33.9	+0.5
LANU	Lannavaara	0.72	70	P	Pg	23 30 33.0	0.0
LANU	Lannavaara	0.72	70	P	Pb	23 30 35.0	+0.3
LANU	Lannavaara	0.72	70	ePB	Pb	23 30 34.8	+0.2
DUNU	Dundret	0.72	168	P	Pg	23 30 32.7	-0.3
DUNU	Dundret	0.72	168	i P	Pg	23 30 32.7	-0.3
MASU	Masugnsbyn	0.78	117	P	Pg	23 30 34.0	-0.3
MASU	Masugnsbyn	0.78	117	i P	Pg	23 30 34.0	-0.3
SALU	Saltoluokta	0.78	236	P	Pg	23 30 34.2	-0.1
SALU	Saltoluokta	0.78	236	i P	Pg	23 30 34.2	-0.1
KIF	Kilpisjarvi	1.21	10	ePN	Pn	23 30 44.6	+1.2
	baz=199						
KIF				MSG		23 31 01.0	
	comp=Z,7.1nm,0.2s						
KIF				eSN	Sn	23 31 01.2	+0.8
KIF	Kilpisjarvi	1.21	10	eP	Pn	23 30 44.2	+0.8
PAJU	Pajala	1.38	124	P	Pg	23 30 44.4	-1.3
PAJU	Pajala	1.38	124	eP	Pg	23 30 44.4	-1.3
HEF	Hetta	1.43	64	eP	Pn	23 30 45.8	-0.7
HEF				MSG		23 31 05.9	
	comp=Z,2.7nm,0.2s						
HEF				eSN	Sn	23 31 06.8	+0.9
HEF	Hetta	1.43	64	eP	Pb	23 30 47.7	+1.0
ERTU	Ertsjaerv	1.49	148	P	Pn	23 30 46.6	-0.7
ERTU	Ertsjaerv	1.49	148	eP	Pn	23 30 46.8	-0.5
ERTU				eSN	Sn	23 31 09.3	+1.9
HARU	Harads	1.69	169	P	Pn	23 30 49.9	-0.2
HARU	Harads	1.69	169	eP	Pn	23 30 49.9	-0.2
KALU	Kalix	2.33	146	P	Pn	23 30 59.8	+1.0
KALU	Kalix	2.33	146	ePG	Pb	23 31 02.5	+0.4
	baz=327						
TOF	Tornio	2.39	135	eP	Pn	23 31 00.9	+1.3
	baz=309						
TOF				MSG		23 31 29.5	
	comp=Z,2.5nm,0.2s						
TOF				eSG	Sb	23 31 34.4	+1.3
SGF	Sodankyl	2.45	96	ePB	Pb	23 31 03.3	-0.8
RNF	Rovaniemi	2.57	116	ePB	Pn	23 31 04.0	+1.9
RNF				eSG	Sb	23 31 38.8	+0.5
ARE0	ARCESS Array S	2.59	46	ePB	Pb	23 31 05.8	-0.8
	baz=226						
ARE0				eS	Sb	23 31 37.2	-1.8

UPP 22 23:30:21.6±0.0**, 67°.82N**×**20°.20E, h0**^{km}**, ML1.9,**
Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.23	270	P	Pg	23 30 26.2	+0.2
RATU				S	Sg	23 30 29.5	+0.6
KOVU	Salmi	0.40	358	P	Pg	23 30 29.2	-0.1
NIKU	Nikkaluokta	0.44	276	P	Pg	23 30 30.1	0.0
DUNU	Dundret	0.72	168	P	Pg	23 30 35.0	-0.4
MASU	Masugnsbyn	0.78	117	P	Pg	23 30 36.4	-0.1
PAJU	Pajala	1.38	124	P	Pg	23 30 46.8	-1.2

MEX 22 23:30:35.7±0.4, 30°.95N×110°.11W, h20km±10km, MD3.5, Sonora

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGIG		1.93	107	eP	Pn	23 31 04.9	-2.6
CGIG				eS	Sn	23 31 27.2	-4.1
HSIG		2.06	201	eP	Pn	23 31 06.4	-2.7
HSIG				i S	Sn	23 31 30.6	-3.5

ISC 22 23:32:06.8±1.9, 51°.52N±0°.08×16°.11E±0°.06, h0km, n15, σ0.51/27, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	170	ePg	Pg	23 32 20.8	+0.9
KSP				eSg	Sb	23 32 30.5	-1.2
CHVC	Chvalec	0.93	182	ePG	Pb	23 32 25.6	-0.2
CHVC				eSG	Sb	23 32 38.4	-0.3
	comp=Z,8.7nm,0.2s						
OSTC	Ostas	0.96	176	ePG	Pb	23 32 26.4	0.0
OSTC				eSG	Sb	23 32 39.5	-0.2
	comp=Z,12nm,0.2s						
UPC	Upice	1.01	183	ePG	Pb	23 32 27.4	+0.2
UPC				eSG	Sb	23 32 40.9	-0.2
	comp=Z,19nm,0.2s						
DPC	Dobruska-Polom	1.18	173	ePG	Pg	23 32 29.4	+0.1
DPC				eSG	Sb	23 32 45.3	-0.5
	comp=Z,6.3nm,0.3s						
PVCC	Panska Ves	1.39	225	ePG	Pn	23 32 33.5	+0.1
PVCC				eSG	Sn	23 32 52.1	-0.3
	comp=Z,32nm,0.3s						
BRG	Berggiesshubel	1.50	246	PN	Pn	23 32 34.5	-0.5
BRG				PG	Pb	23 32 35.8	+0.2
BRG				SG	Sn	23 32 55.4	0.0
	11nm,0.5s						
GOPC	GO Pecny, Ondr	1.81	208	eSG	Sg	23 33 04.9	0.0
	comp=Z,3.7nm,0.2s						
PRU	Pruhonice	1.82	214	eSG	Sg	23 33 05.0	-0.4
	comp=Z,7.1nm,0.3s						
CLL	Collm	1.95	265	ePg	Pb	23 32 43.0	-0.3
CLL				eSg	Sb	23 33 08.0	-0.2
	comp=Z,4.0nm,0.6s						
MORC	Moravsky Berou	1.97	152	ePN	Pn	23 32 41.4	-0.1
MORC				eSG	Sn	23 33 07.9	+1.0
VRAC	Vranov	2.23	172	ePN	Pn	23 32 44.4	-0.7
VRAC				eSG	Sg	23 33 18.0	-0.5
TREC	Trest	2.26	190	eSG	Sg	23 33 19.2	-0.2
	comp=Z,6.2nm,0.2s						
NKC	Novy Kostel	2.65	242	eSG	Sg	23 33 32.2	+0.3
	comp=Z,6.8nm,0.3s						
KHC	Kasperske Hory	2.88	215	ePG	Pb	23 33 00.0	+0.8
KHC				eSG	Sg	23 33 39.9	+0.4
	comp=Z,2.5nm,0.4s						

WEL 22 23:33:19.1, 42°S±2°×17°4E±°, h5km±2km, M3.5/39, ML3.5/25, MLv3.5/39, Error ellipse: s-maj=0.0km s-min=0.0km az=97.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.08	256	P	Pg	23 33 21.5	+0.7
BSWZ	Blackbirch Sta	0.33	272	P	Pg	23 33 25.3	-0.2
TUWZ	Tuamarina	0.41	317	P	Pg	23 33 25.0	-2.0
TCW	Tory Channel	0.52	357	P	Pg	23 33 27.3	-1.8
BHW	Baring Head	0.53	53	P	Pb	23 33 31.1	+0.3
WEL	Wellington	0.56	37	P	Pb	23 33 31.2	-0.1
PLWZ	Palliser	0.72	77	P	Pg	23 33 31.6	-1.3
MSWZ	Moikau Station	0.77	66	P	Pn	23 33 36.1	-0.5
CAW	Cannon Point	0.84	42	P	Pg	23 33 31.7	-3.5
NNZ	Nelson	0.87	306	P	Pg	23 33 36.2	+0.4
KHZ	Kahutara	0.90	220	P	Pb	23 33 36.9	-0.2
KHZ				P	Pn	23 33 40.1	+1.7
PAWZ	Paruwai Farm	0.90	68	P	Pn	23 33 39.0	+0.6
DUWZ	D’Urville Isla	0.97	342	P	Pg	23 33 36.0	-1.7
THZ	Tophouse	1.06	268	P	Pn	23 33 40.8	+0.2
MTW	Mount Morrison	1.06	58	P	Pg	23 33 36.8	-2.6
TRWZ	Traveller	1.08	73	P	Pn	23 33 41.6	+0.7
OGWZ	Otaki Gorge	1.12	35	P	Pg	23 33 37.7	-2.7
HOWZ	Holdsworth Sta	1.23	48	P	Pn	23 33 43.1	+0.2
TMWZ	Te Maipa	1.34	63	P	Pg	23 33 44.7	0.0
TIWZ	Tintock	1.52	52	P	Pn	23 33 47.3	+0.3
GVZ	Greta Valley S	1.56	217	P	Pg	23 33 49.2	+0.2
QRZ	Quartz Range	1.62	303	P	Pb	23 33 49.3	-0.2
OHWZ	Ohakea	1.70	27	P	Pg	23 33 51.7	+0.1
PRWZ	Pori Road	1.71	47	P	Pn	23 33 49.7	+0.1
POWZ	Post Office Ro	1.73	40	P	Pn	23 33 50.3	+0.6
BFZ	Birch Farm	1.79	55	P	Pn	23 33 50.7	+0.1
LTZ	Lake Taylor	1.85	235	P	Pb	23 33 53.0	-0.3
DSZ	Denniston Nort	1.88	269	P	Pg	23 33 55.1	0.0
DVHZ	Dannevirke	2.00	45	P	Pn	23 33 53.8	+0.3
WAZ	Wanganui	2.04	15	P	Pb	23 33 57.1	+0.5
TSZ	Takapari Road	2.08	37	P	Pn	23 33 54.5	-0.2
OKCZ	Okains Bay	2.20	205	P	Pn	23 33 57.0	+0.7
PRHZ	Porangahau	2.28	51	P	Pg	23 34 06.1	+3.2
PNHZ	Pukenui	2.31	39	P	Pn	23 33 58.6	+0.8
OXZ	Oxford	2.32	226	P	Pg	23 34 06.2	+2.6
MQZ	McQueen’s Vall	2.32	211	P	Pn	23 33 58.0	+0.1
NMEZ	Namu Road	2.34	352	P	Pg	23 34 03.3	-0.6
INZ	Inchbonnie	2.35	244	P	Pg	23 34 04.2	0.0
KHEZ	Kahui Hut	2.44	354	P	Pb	23 34 03.5	0.0
NBEZ	Newall Road No	2.48	352	P	Pb	23 34 05.2	+1.0
MTVZ	Mangateitei	2.50	21	P	Pb	23 34 05.0	+0.4
DREZ	Durham Road	2.54	358	P	Pg	23 34 06.6	-1.1
PKE	Pukeiti	2.54	354	P	Pg	23 34 06.9	-0.9
PKVZ	Pokaka	2.56	18	P	Pb	23 34 06.0	+0.5
MOVZ	Moawhango	2.56	26	P	Pb	23 34 04.9	-0.7
PXZ	Pawanui	2.57	50	P	Pg	23 34 11.2	+2.9
BHHZ	Black Hill Sta	2.60	31	P	Pn	23 34 03.1	+1.3
KRHZ	Kereru	2.60	38	P	Pb	23 34 07.5	+1.3
DRZ	Dome Shelter	2.63	22	P	Pg	23 34 08.6	-0.9
WHVZ	Whangaehu Hut	2.63	22	P	Pb	23 34 05.8	-1.0
TUVZ	Tukino	2.66	23	P	Pb	23 34 06.9	-0.4
NGZ	Ngauruhoe	2.73	21	P	Pb	23 34 08.1	-0.4
KAHZ	Kahuranaki	2.74	46	P	Pg	23 34 13.9	+2.3
WTVZ	West Tongariro	2.79	21	P	Pb	23 34 08.4	-1.0
TWVZ	Taurewa	2.79	18	P	Pb	23 34 10.0	+0.5
KWHZ	Kaweka Forest	2.81	36	P	Pb	23 34 10.9	+1.2
KRVZ	Karewarewa	2.82	21	P	Pb	23 34 09.8	-0.1
MCHZ	McNeill Hill	2.92	39	P	Pg	23 34 16.2	+1.3
KATZ	Kakaramea	2.95	21	P	Pb	23 34 12.3	+0.2
RITZ	Rihia Road	2.99	24	P	Pb	23 34 13.5	+0.7
BKZ	Black Stump Fm	3.05	34	P	Pb	23 34 14.8	+0.9
RATZ	Rangitukua	3.07	22	P	Pb	23 34 15.3	+1.2
ARHZ	Aropaoanui	3.20	41	P	Pg	23 34 24.5	+4.1
WATZ	Wairara	3.21	20	P	Pb	23 34 17.7	+1.2
HIZ	Hauiti	3.24	8	P	Pb	23 34 14.5	-2.5
MRHZ	Matea Rd	3.31	30	P	Pb	23 34 18.9	+0.6
KUTZ	Kaahu Road	3.44	20	P	Pb	23 34 22.0	+1.6
MTHZ	Maungataniwha	3.46	35	P	Pg	23 34 24.3	-1.1
TLZ	Tolley Road	3.52	16	P	Pb	23 34 21.5	-0.4
FOZ	Fox Glacier	3.78	240	P	Pb	23 34 24.3	-1.9
RIGZ	Rimuhau	4.01	42	P	Pb	23 34 30.0	-0.2
TOZ	Tahuroa Road	4.10	13	P	Pb	23 34 32.2	+0.6
ODZ	Otahua Downs	4.26	218	P	Pn	23 34 27.1	+2.5
JCZ	Jackson Bay	4.69	238	P	Pb	23 34 36.6	-5.2

MAN 22 23:33:59.5, 13°.37N×121°.17E, h11km, mb3.8, ML2.5, MS2.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.25	301	eP	Pb	23 34 07.0	+0.9

PRU 22 23:35:14.4±0.0, 49°.83N×18°.53E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	272	ePG	Pg	23 35 19.5	+0.4
OKC				eSG	Sg	23 35 22.9	+0.6
	comp=Z,15nm,0.3s						
MORC	Moravsky Berou	0.64	266	ePG	Pg	23 35 27.2	+0.5
MORC				eSG	Sg	23 35 34.8	-0.2
DPC	Dobruska-Polom	1.51	291	ePG	Pn	23 35 42.5	-0.3
DPC				eSG	Sg	23 36 02.5	-0.5
OSTC	Ostas	1.66	297	ePG	Pn	23 35 45.0	+0.3
OSTC				eSG	Sb	23 36 07.1	-0.1
CHVC	Chvalec	1.76	296	eSG	Sb	23 36 09.9	-0.4

IDC 22 23:41:37.9±3.8, 17°.42S×178°.34W, h515km±32km, mb3.6/7, mb1 3.7/8, mb1mx3.3/27, mbtmp4.4/8, Error ellipse: s-maj=53.0km s-min=20.1km az=127.0
ISCJB 22 23:41:39.7±2.6, 17°.4S±0°.4×178°.5W±0°.5, h547km, mb4.0/7, Error ellipse: s-maj=74.7km s-min=18.0km az=40.1
ISC 22 23:41:40.8±1.7, 17°.4S±0°.3×178°.5W±0°.3, h547km, n32, σ0.79/34, mb3.9/7, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.92	249	P	P	23 44 48.7	-0.9
	0.2nm,0.3s,baz=96,slow=18,SNR=2.8						
STKA	Stephens Creek	38.80	241	P	P	23 48 19.3	+0.3
	4.1nm,0.5s,baz=96,slow=12,SNR=7.4						
WRA	Warramunga Arr	44.65	259	P	P	23 49 04.9	-0.4
	4.1nm,0.5s,baz=95,slow=7.5,SNR=13						
WRA				ScP	ScP	23 53 39.6	+3.1
	0.8nm,0.5s,baz=74,slow=3.0,SNR=3.1						
ASAR	Alice Springs	44.85	254	P	P	23 49 07.2	+0.4
	30nm,0.6s,baz=88,slow=8.2,SNR=162						
ASAR				PcP	PcP	23 50 36.5	-0.4
	1.2nm,0.6s,baz=103,slow=3.7,SNR=4.9						
MJAR	Matsushiro Arr	67.45	323	P	P	23 51 42.2	-0.2
	1.4nm,0.5s,baz=171,slow=7.6,SNR=4.3						
PETK	Petropavlovsk-	73.17	345	P	P	23 52 15.8	0.0
	3.5nm,0.8s,baz=141,slow=9.6,SNR=5.5						
KSRS	Korea Array	74.27	318	P	P	23 52 23.7	+1.3
	1.1nm,0.8s,baz=113,slow=8.1,SNR=3.9						
ILAR	Eielson Array	85.42	13	P	P	23 53 19.7	-0.5
	0.5nm,0.4s,baz=226,slow=5.4,SNR=5.7						
BRTR	Keskin Array B	144.37	315	PKP	PKPab	00 00 15.4	-0.2
	1.4nm,0.6s,baz=126,slow=3.1,SNR=9.0						
CHVC	Chvalec	144.90	344	ePKP	PKPab	00 00 17.4	+0.3
CLL	Collm	144.96	347	⇓iPKPbc	PKPbc	00 00 16.5	+0.1
	comp=Z,6.0nm,0.7s						
UPC	Upice	144.98	344	ePKP	PKPab	00 00 17.0	-0.4
DPC	Dobruska-Polom	145.04	343	ePKP	PKPab	00 00 17.4	-0.3
MLR	Muntele Rosu	145.36	329	PKPbc	PKPbc	00 00 17.3	-0.7
	comp=Z,1.1nm,0.5s,baz=26,slow=8.9,SNR=4.6						
PRU	Pruhonice	145.84	345	ePKP	PKPbc	00 00 19.3	+0.3
GOPC	GO Pecny, Ondr	145.84	345	ePKP	PKPbc	00 00 19.0	-0.1
NKC	Novy Kostel	146.09	347	ePKP	PKPbc	00 00 20.1	+0.4
KHC	Kasperske Hory	146.87	345	ePKP	PKPbc	00 00 22.2	+0.3
GERES	GERESS Array B	147.10	345	PKPbc	PKPbc	00 00 22.7	+0.1
	comp=Z,1.1nm,0.5s,baz=22,slow=3.2,SNR=16						
CONA	Conrad Observa	147.36	342	i PKPbc	PKPbc	00 00 23.8	+0.4
	comp=Z,2.2nm,0.6s						
MOA	Molln	147.88	344	i PKPbc	PKiKP	00 00 26.8	+0.8
	comp=Z,3.9nm,1.9s						
ARSA	Arzberg	148.07	342	i PKPbc	PKiKP	00 00 26.2	-0.2
	comp=Z,1.2nm,0.9s						
SOKA	Soboth	148.73	342	i PKPab	PKPab	00 00 32.9	+0.2
	comp=Z,2.1nm,1.3s						
KBA	Koelnbreinsper	148.83	344	i PKPbc	PKPbc	00 00 26.3	-0.9
	comp=Z,1.9nm,0.5s						
OBKA	Obir	149.03	342	i PKPbc	PKPbc	00 00 26.9	-0.7
	comp=Z,4.0nm,1.1s						
RETA	Reutte	149.04	348	i PKPbc	PKPbc	00 00 27.1	-0.4
	comp=Z,0.9nm,0.5s						
WTTA	Wattenberg	149.07	347	i PKPbc	PKPbc	00 00 27.7	-0.1
	comp=Z,1.1nm,0.4s						
MOTA	Moosalm	149.11	347	i PKPbc	PKPbc	00 00 27.6	-0.2
	comp=Z,1.4nm,0.6s						
MYKA	Terra Mystica	149.17	344	i PKPbc	PKPbc	00 00 27.1	-0.8
	comp=Z,2.1nm,0.5s						
SQTA	Sankt Quirin	149.21	347	i PKPbc	PKPbc	00 00 27.6	-0.4
	comp=Z,2.9nm,0.7s						
ABTA	Abfaltersbach	149.35	345	i PKPbc	PKPbc	00 00 27.1	-1.3
	comp=Z,2.3nm,0.6s						
DAVOX	Davos/Dischmat	149.90	348	PKPbc	PKiKP	00 00 29.9	-0.5
	comp=Z,5.1nm,0.7s,baz=323,slow=1.3,SNR=9.1						

WEL 22 23:46:31.9, 42°S±1°×17°4E±°, h14km±2km, M3.6/47, ML3.8/47, MLv3.6/47, Error ellipse: s-maj=0.0km s-min=0.0km az=143.8, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.10	189	P	Pg	23 46 35.5	+0.5
BSWZ	Blackbirch Sta	0.28	257	P	Pb	23 46 38.2	-0.4
TUWZ	Tuamarina	0.31	315	P	Pb	23 46 38.9	-0.3
TCW	Tory Channel	0.44	4	P	Pg	23 46 41.0	+0.3
BHW	Baring Head	0.54	63	P	Pb	23 46 43.3	+0.2
WEL	Wellington	0.54	48	P	Pb	23 46 43.3	+0.1
PLWZ	Palliser	0.77	84	P	Pn	23 46 48.0	-0.3
NNZ	Nelson	0.78	304	P	Pb	23 46 47.1	0.0
MSWZ	Moikau Station	0.80	73	P	Pn	23 46 48.2	-0.5
CAW	Cannon Point	0.83	49	P	Pb	23 46 48.2	+0.2
DUWZ	D’Urville Isla	0.88	344	P	Pb	23 46 48.9	0.0
KHZ	Kahutara	0.92	214	P	Pn	23 46 50.6	+0.2
PAWZ	Paruwai Farm	0.94	74	P	Pn	23 46 50.6	0.0
THZ	Tophouse	1.00	263	P	Pg	23 46 51.2	0.0
MTW	Mount Morrison	1.07	63	P	Pn	23 46 52.5	0.0
OGWZ	Otaki Gorge	1.09	41	P	Pn	23 46 52.7	-0.1
TRWZ	Traveller	1.12	77	P	Pn	23 46 53.2	0.0
HOWZ	Holdsworth Sta	1.23	52	P	Pb	23 46 54.9	0.0
TMWZ	Te Maipa	1.36	67	P	Pn	23 46 56.7	+0.2
MRZ	Mangatainoka R	1.42	46	P	Pn	23 46 57.6	+0.4
TIWZ	Tintock	1.52	55	P	Pb	23 46 59.5	-0.4
QRZ	Quartz Range	1.53	302	P	Pb	23 47 00.2	+0.2
GVZ	Greta Valley S	1.59	214	P	Pn	23 46 59.5	-0.1
CPWZ	Castlepoint	1.66	64	P	Pg	23 47 06.8	+3.1
OHWZ	Ohakea	1.66	30	P	Pg	23 47 03.6	-0.2
PRWZ	Pori Road	1.71	51	P	Pn	23 47 01.8	+0.6
POWZ	Post Office Ro	1.71	43	P	Pb	23 47 02.3	-0.8
BFZ	Birch Farm	1.80	58	P	Pn	23 47 02.3	-0.2
DSZ	Denniston Nort	1.82	266	P	Pb	23 47 04.8	-0.2
LTZ	Lake Taylor	1.84	232	P	Pn	23 47 03.6	+0.4
AMCZ	Amberley	1.92	217	P	Pg	23 47 10.8	+2.0
WAZ	Wanganui	1.98	17	P	Pb	23 47 08.7	+1.0
DVHZ	Dannevirke	1.99	48	P	Pn	23 47 05.0	-0.1
TSZ	Takapari Road	2.06	40	P	Pn	23 47 06.5	+0.4
ANWZ	Angora Road	2.07	56	P	Pg	23 47 13.5	+1.9
LREZ	Lake Rotokare	2.19	3	P	Pg	23 47 15.3	+1.4
OKCZ	Okains Bay	2.24	202	P	Pn	23 47 07.5	-1.1
PRHZ	Porangahau	2.29	53	P	Pn	23 47 10.7	+1.5
PNHZ	Pukenui	2.29	41	P	Pn	23 47 10.0	+0.7
INZ	Inchbonnie	2.33	242	P	Pb	23 47 14.7	+1.0
MQZ	McQueen’s Vall	2.36	209	P	Pn	23 47 08.5	-1.7
KHEZ	Kahui Hut	2.36	356	P	Pb	23 47 15.2	+1.0
NBEZ	Newall Road No	2.40	353	P	Pg	23 47 16.4	-1.4
MTVZ	Mangateitei	2.45	23	P	Pb	23 47 16.8	+1.0
DREZ	Durham Road	2.46	359	P	Pg	23 47 18.7	-0.3
PKE	Pukeiti	2.46	356	P	Pg	23 47 18.4	-0.7
MOVZ	Moawhango	2.52	28	P	Pb	23 47 17.1	+0.1
VRZ	Vera Road	2.56	9	P	Pg	23 47 20.2	-0.7
BHHZ	Black Hill Sta	2.57	33	P	Pn	23 47 15.2	+2.0
DRZ	Dome Shelter	2.58	24	P	Pb	23 47 19.7	+1.6
KRHZ	Kereru	2.58	40	P	Pg	23 47 19.7	-1.7
WHVZ	Whangaehu Hut	2.58	24	P	Pb	23 47 18.1	0.0
TUVZ	Tukino	2.62	25	P	Pb	23 47 19.2	+0.6
NGZ	Ngauruhoe	2.69	23	P	Pb	23 47 19.8	0.0
WTVZ	West Tongariro	2.74	23	P	Pb	23 47 20.3	-0.4
TWVZ	Taurewa	2.74	20	P	Pb	23 47 21.5	+0.9
KRVZ	Karewarewa	2.77	23	P	Pb	23 47 22.0	+0.7
KWHZ	Kaweka Forest	2.78	38	P	Pb	23 47 22.6	+1.2
KATZ	Kakaramea	2.90	23	P	Pb	23 47 24.0	+0.6
RITZ	Rihia Road	2.95	25	P	Pb	23 47 25.7	+1.5
WVZ	Waitaha Valley	2.96	240	P	Pb	23 47 23.6	-0.7
BKZ	Black Stump Fm	3.02	35	P	Pb	23 47 26.8	+1.3
RPZ	Rata Peaks	3.12	228	P	Pn	23 47 21.9	+1.2
HIZ	Hauiti	3.17	9	P	Pb	23 47 25.6	-2.4
TLZ	Tolley Road	3.47	17	P	Pb	23 47 32.5	-0.5
FOZ	Fox Glacier	3.77	239	P	Pb	23 47 35.2	-2.8
ODZ	Otahua Downs	4.28	216	P	Pn	23 47 35.9	-0.7
TWGZ	Tauwhareparae	4.51	41	P	Pn	23 47 40.0	+0.2
AWAZ	Awhitu Peninsu	4.59	4	P	Pn	23 47 44.9	+4.0
JCZ	Jackson Bay	4.68	237	P	Pn	23 47 46.5	+4.4

NIC 22 23:46:38.8±0.2, 35°.00N×34°.09E, h50km, ML2.5
ISCJB 22 23:46:42.8±0.6, 35°.16N±0°.05×33°.77E±0°.04, h1km±7km, Error ellipse: s-maj=7.9km s-min=6.0km az=167.3
ISK 22 23:46:43.8, 35°.19N×33°.71E, h6km, ML2.2/10
DDA 22 23:46:44.3, 35°.31N×33°.67E, h15km±2km, ML2.2
ISC 22 23:46:43.1±1.1, 35°.14N±0°.04×33°.78E±0°.04, h7km±12km, n21, σ1.22/30, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHNC	Paralimni	0.24	124	P	Pg	23 46 46.3	-1.6
	baz=94						
PHNC				S	Sg	23 46 52.4	+1.2
CSS	Mathiatis	0.41	245	PG	Pg	23 46 51.7	+0.6
CSS	Mathiatis	0.41	245	P	Pg	23 46 51.9	+0.8
	baz=86						
CSS				S	Sb	23 47 01.3	+2.2
EREN	Erenkoy	0.50	39	PG	Pg	23 46 54.2	+1.4
EREN	Erenkoy	0.50	39	i P	Pg	23 46 54.1	+1.4
EREN				IAML_P			
	comp=Z,1µm,0.4s						
LEF	Lefka	0.73	269	PG	Pb	23 46 58.0	-0.1
LEF	Lefka	0.73	269	i P	Pb	23 46 58.9	+0.8
LEF				i S	Sn	23 47 12.6	+1.4
LEF				IAML_P			
	comp=Z,2µm,0.2s						
SZAC	Souni	0.83	243	P	Pg	23 46 57.3	-1.8
	baz=75						
SZAC				S	Sb	23 47 10.9	-0.4
AKKU	Akkuyu-Mersin	1.03	350	PG	Pb	23 47 03.2	-0.1
GULN	MERSIN_Gulnar	1.06	349	i P	Pg	23 47 02.9	-0.6
GULN				i S	Sn	23 47 20.8	+1.4
GULN				IAML_P			
	comp=Z,64nm,0.2s						
IKL	Isikli	1.10	356	PG	Pg	23 47 04.1	-0.1
TEKE	Tekeli-Mersin	1.14	332	PG	Pb	23 47 04.9	-0.2
BERE	Bereket-Mersin	1.29	339	PN	Pn	23 47 07.6	0.0
KEBE	Keben-Mersin	1.31	358	PN	Pn	23 47 08.6	+0.8
TEVE	Tevekalti-Mers	1.32	348	PN	Pg	23 47 07.6	-0.9
TEVE				SN	Sn	23 47 26.1	+0.2
KIZK	Mersin	1.37	12	PN	Pg	23 47 09.6	+0.2
KIZK				SN	Sn	23 47 28.5	+1.5
KIZK	Mersin	1.37	12	i P	Pn	23 47 07.5	-1.1
KIZK				i S	Sb	23 47 24.7	-2.0
KIZK				IAML_P			
	comp=Z,98nm,0.1s						
GAZI	Gazipasa	1.62	313	PN	Pb	23 47 12.8	-0.5
GAZI	Gazipasa	1.62	313	i P	Pn	23 47 09.9	-2.2
ERMK	Ermenek	1.66	335	i P	Pg	23 47 14.7	-0.2
KERG	Konya-Eregli	2.29	7	i P	Pn	23 47 21.0	-0.4
KERG				i S	Sb	23 47 51.8	-1.5
KERG				IAML_P			
	comp=Z,48nm,0.2s						

WEL 23 00:08:52.0, 42°S±1°×174°.3E±0°.7, h15km±2km, M3.3/23, ML3.6/17, MLv3.3/23, Error ellipse: s-maj=0.0km s-min=0.0km az=162.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	203	P	Pb	00 08 56.2	-0.1
CMWZ				S	Sb	00 08 59.4	+0.3
BSWZ	Blackbirch Sta	0.32	253	P	Pb	00 08 59.3	-0.2
BSWZ				S	Sb	00 09 04.4	0.0
TUWZ	Tuamarina	0.32	307	P	Pb	00 08 59.3	-0.1
TUWZ				S	Sb	00 09 04.3	-0.1
TCW	Tory Channel	0.41	359	P	Pb	00 09 00.7	-0.3
BHW	Baring Head	0.49	64	P	Pb	00 09 02.5	+0.2
PLWZ	Palliser	0.73	86	P	Pn	00 09 07.2	-0.6
MSWZ	Moikau Station	0.75	74	P	Pb	00 09 07.4	+0.6
CAW	Cannon Point	0.78	49	P	Pb	00 09 07.4	+0.1
NNZ	Nelson	0.79	301	P	Pb	00 09 07.6	+0.1
DUWZ	D’Urville Isla	0.86	341	P	Pg	00 09 08.9	0.0
PAWZ	Paruwai Farm	0.89	75	P	Pn	00 09 10.1	+0.1
KHZ	Kahutara	0.97	215	P	Pn	00 09 11.5	+0.4
MTW	Mount Morrison	1.03	63	P	Pg	00 09 12.3	+0.4
THZ	Tophouse	1.04	262	P	Pn	00 09 12.1	0.0
OGWZ	Otaki Gorge	1.05	40	P	Pb	00 09 11.8	0.0
TRWZ	Traveller	1.08	78	P	Pn	00 09 12.7	+0.1
HOWZ	Holdsworth Sta	1.18	52	P	Pg	00 09 14.4	-0.3
TMWZ	Te Maipa	1.31	67	P	Pn	00 09 15.9	0.0
MRZ	Mangatainoka R	1.37	46	P	Pb	00 09 17.2	-0.1
TIWZ	Tintock	1.48	56	P	Pn	00 09 18.4	+0.4
QRZ	Quartz Range	1.54	300	P	Pb	00 09 20.7	+0.4
OHWZ	Ohakea	1.62	29	P	Pg	00 09 22.5	-0.6
GVZ	Greta Valley S	1.63	214	P	Pn	00 09 20.2	0.0
PRWZ	Pori Road	1.66	51	P	Pn	00 09 20.9	+0.3
POWZ	Post Office Ro	1.67	43	P	Pb	00 09 21.6	-0.8
BFZ	Birch Farm	1.75	58	P	Pn	00 09 21.6	-0.3
LTZ	Lake Taylor	1.89	232	P	Pn	00 09 24.4	+0.6
WAZ	Wanganui	1.94	16	P	Pb	00 09 27.8	+0.7
DVHZ	Dannevirke	1.94	48	P	Pn	00 09 25.1	+0.6
PRHZ	Porangahau	2.24	53	P	Pn	00 09 27.9	-0.7
OKCZ	Okains Bay	2.29	203	P	Pn	00 09 28.1	-1.1
OXZ	Oxford	2.38	224	P	Pn	00 09 29.8	-0.6
INZ	Inchbonnie	2.38	242	P	Pn	00 09 31.5	+1.0
MOVZ	Moawhango	2.48	27	P	Pb	00 09 36.3	0.0
VRZ	Vera Road	2.52	8	P	Pb	00 09 35.0	-2.0
BHHZ	Black Hill Sta	2.53	33	P	Pn	00 09 34.6	+2.1
KRHZ	Kereru	2.54	39	P	Pb	00 09 38.9	+1.7
DRZ	Dome Shelter	2.54	23	P	Pg	00 09 39.9	-0.9
WHVZ	Whangaehu Hut	2.54	23	P	Pb	00 09 37.2	-0.2
TUVZ	Tukino	2.58	24	P	Pb	00 09 38.4	+0.4
NGZ	Ngauruhoe	2.64	23	P	Pb	00 09 39.4	+0.3
KAHZ	Kahuranaki	2.69	48	P	Pb	00 09 40.7	+0.8
WTVZ	West Tongariro	2.70	22	P	Pb	00 09 39.8	-0.3
TWVZ	Taurewa	2.70	19	P	Pb	00 09 41.4	+1.3
KRVZ	Karewarewa	2.73	23	P	Pb	00 09 41.1	+0.5
KWHZ	Kaweka Forest	2.73	37	P	Pb	00 09 42.3	+1.6
KATZ	Kakaramea	2.86	23	P	Pb	00 09 43.7	+0.9
RITZ	Rihia Road	2.90	25	P	Pb	00 09 45.5	+2.0
BKZ	Black Stump Fm	2.98	35	P	Pb	00 09 46.0	+1.2
RATZ	Rangitukua	2.98	23	P	Pb	00 09 46.8	+2.0
WATZ	Wairara	3.12	21	P	Pg	00 09 49.6	-2.2
HIZ	Hauiti	3.14	8	P	Pb	00 09 45.4	-2.0
RPZ	Rata Peaks	3.17	228	P	Pb	00 09 49.4	+1.4
MRHZ	Matea Rd	3.23	31	P	Pb	00 09 50.1	+1.0
TLZ	Tolley Road	3.43	17	P	Pb	00 09 53.1	+0.7
FOZ	Fox Glacier	3.81	238	P	Pb	00 09 55.5	-3.4
ODZ	Otahua Downs	4.33	217	P	Pn	00 09 57.0	-0.3
JCZ	Jackson Bay	4.73	237	P	Pn	00 10 07.3	+4.5

KRSC 23 00:15:21.5±0.7, 49°.19N×156°.40E, h15km±14km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.51	353	eP	Pn	00 15 47.9	0.0
SKR				eS	Sn	00 16 07.3	+0.1
KDTR	Khodutka, Kamc	2.83	22	eP	Pn	00 16 08.8	+2.7
KDTR				eS	Sb	00 16 43.9	-2.3
RUS	Russkaya	3.51	22	eS	Sn	00 17 00.6	+3.9
KOK	Koryaka	4.34	18	eP	Pn	00 16 31.2	+4.3
SPN	Mys Shipunski	4.53	29	P	Pn	00 16 33.8	+4.4
SPN				S	Sn	00 17 26.7	+4.9

WEL 23 00:16:41.9, 41°.6S±0°.9×174°.3E±0°.6, h12km±2km, M3.2/24, ML3.5/18, MLv3.2/24, Error ellipse: s-maj=0.0km s-min=0.0km az=160.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.13	192	P	Pb	00 16 45.9	-0.5
CMWZ				S	Sg	00 16 48.8	+1.1
BSWZ	Blackbirch Sta	0.30	251	P	Pb	00 16 48.8	-0.4
BSWZ				S	Sb	00 16 53.6	-0.4
TUWZ	Tuamarina	0.30	309	P	Pb	00 16 48.7	-0.5
TUWZ				S	Sb	00 16 53.5	-0.5
TCW	Tory Channel	0.41	3	P	Pb	00 16 50.6	-0.5
BHW	Baring Head	0.51	66	P	Pb	00 16 52.9	+0.1
BHW				S	Sb	00 17 00.8	+0.6
PLWZ	Palliser	0.76	86	P	Pn	00 16 57.8	-0.6
NNZ	Nelson	0.77	301	P	Pb	00 16 57.0	-0.2
MSWZ	Moikau Station	0.78	75	P	Pb	00 16 57.9	+0.6
CAW	Cannon Point	0.80	50	P	Pb	00 16 57.9	+0.1
DUWZ	D’Urville Isla	0.85	343	P	Pb	00 16 58.8	+0.1
DUWZ				S	Sb	00 17 10.7	+0.6
PAWZ	Paruwai Farm	0.92	75	P	Pn	00 17 00.5	-0.1

KHZ	**Kahutara**	**0.96**	**213**	P	Pn	00 17 01.8	+0.6
THZ	**Tophouse**	**1.02**	**262**	P	Pn	00 17 02.0	-0.1
MTW	**Mount Morrison**	**1.05**	**64**	P	Pn	00 17 02.8	+0.3
OGWZ	**Otaki Gorge**	**1.06**	**41**	P	Pb	00 17 02.2	+0.1
TRWZ	**Traveller**	**1.10**	**79**	P	Pb	00 17 03.0	+0.1
HOWZ	**Holdsworth Sta**	**1.20**	**53**	P	Pg	00 17 05.0	+0.1
TMWZ	**Te Maipa**	**1.34**	**68**	P	Pn	00 17 06.3	-0.1
MRZ	**Mangatainoka R**	**1.39**	**47**	P	Pb	00 17 07.8	+0.1
TIWZ	**Tintock**	**1.49**	**56**	P	Pn	00 17 09.0	+0.4
QRZ	**Quartz Range**	**1.52**	**301**	P	Pb	00 17 10.2	+0.2
GVZ	**Greta Valley S**	**1.62**	**213**	P	Pn	00 17 10.6	+0.3
OHWZ	**Ohakea**	**1.63**	**30**	P	Pg	00 17 12.5	-0.7
PRWZ	**Pori Road**	**1.68**	**51**	P	Pn	00 17 11.2	+0.1
POWZ	**Post Office Ro**	**1.68**	**44**	P	Pn	00 17 11.7	+0.6
BFZ	**Birch Farm**	**1.77**	**59**	P	Pn	00 17 11.9	-0.5
DSZ	**Denniston Nort**	**1.84**	**265**	P	Pb	00 17 15.1	-0.3
LTZ	**Lake Taylor**	**1.87**	**231**	P	Pn	00 17 14.4	+0.6
WAZ	**Wanganui**	**1.95**	**17**	P	Pg	00 17 18.3	-0.9
DVHZ	**Dannevirke**	**1.96**	**48**	P	Pn	00 17 14.8	-0.2
TSZ	**Takapari Road**	**2.03**	**40**	P	Pn	00 17 16.3	+0.4
PNHZ	**Pukenui**	**2.26**	**42**	P	Pn	00 17 19.3	+0.2
WPHZ	**Waipukurau**	**2.27**	**48**	P	Pg	00 17 27.1	+1.6
OKCZ	**Okains Bay**	**2.28**	**202**	P	Pn	00 17 19.0	-0.3
KHEZ	**Kahui Hut**	**2.33**	**355**	P	Pb	00 17 24.7	+0.8
MQZ	**McQueen's Vall**	**2.39**	**209**	P	Pn	00 17 19.5	-1.4
VRZ	**Vera Road**	**2.52**	**9**	P	Pb	00 17 26.0	-1.1
KRHZ	**Kereru**	**2.55**	**40**	P	Pn	00 17 22.9	-0.2
TUVZ	**Tukino**	**2.58**	**25**	P	Pb	00 17 28.3	+0.1

ISCJB ***23*** *00:23:13.3±1.4, 63°.2S±0°.1×63°.5W±0°.6, h10^{km}, mb4.0/5, Error ellipse: s-maj=43.0km s-min=11.1km az=18.4*

IDC ***23*** *00:23:13.1±1.2, 63°.19S×63°.12W, h0^{km}, mb4.1/4, mb1 4.1/4, mb1mx3.8/18, mbtmp4.1/4, Error ellipse: s-maj=40.2km s-min=26.7km az=105.0*

NEIC ***23*** *00:23:14.2±0.9, 63°.20S×63°.62W, h10^{km}±3^{km}, mb4.4/2, Error ellipse: s-maj=63.4km s-min=7.0km az=92.0*

ISC 23 00:23:14.4±0.9**, 63°.2S**±0°.1×**63°.3W**±0°.2**, h10**^{km}**, n22, σ0^{s}64**/21**, mb4.0**/5**, South Shetland Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**1.61**	**191**	Pn	**Pn**	**00 23 43.2**	**+0.5**
	184nm,0.3s,baz=49,slow=10.0,SNR=266						
PMSA				Sn	**Sn**	**00 24 03.4**	**-0.1**
	530nm,0.3s,baz=301,slow=19,SNR=34						
SNAA	**Sanae**	**23.61**	**137**	P	**P**	**00 28 25.9**	**+0.9**
	7.7nm,0.7s,baz=264,slow=9.9,SNR=33						
SNAA	**Sanae**	**23.61**	**137**	*e*P	**P**	**00 28 25.8**	**+0.8**
	8.6nm,0.8s						
QSPA	**South Pole Qui**	**27.01**	**180**	*e*P	**P**	**00 28 55.6**	**-0.7**
	2.8nm,0.8s						
BOSA	**Boshof**	**64.24**	**103**	P	**P**	**00 33 47.9**	**-1.6**
	1.5nm,0.5s,baz=214,slow=5.9,SNR=6.7						
H10N3	**ASCENSION HYDR**	**65.39**	**55**	T	T	01 44 46.0	
	baz=203						
H10N1	**ASCENSION HYDR**	**65.39**	**55**	T	T	01 44 45.0	
	baz=203						
H10N2	**ASCENSION HYDR**	**65.40**	**55**	T	T	01 44 46.2	
	baz=203						
TORD	**Torodi Ar. Bea**	**90.86**	**62**	P	**P**	**00 36 18.8**	**+1.0**
	0.6nm,1.0s,baz=188,slow=5.0,SNR=2.3						
TOA1	**Torodi Ar. Sit**	**90.86**	**62**	*e*P	**P**	**00 36 18.8**	**+1.0**
ASAR	**Alice Springs**	**92.36**	**196**	P	**P**	**00 36 24.6**	**-0.3**
	0.4nm,0.8s,baz=167,slow=3.7,SNR=5.0						
X16A	**Lo Mia Camp, P**	**104.56**	**321**	*e*Pdif	**Pdif**	**00 37 19.2**	**-0.4**
GEC2	**GERESS Array S**	**127.01**	**54**	*e*PKPdf	**PKPdf**	**00 42 17.1**	**-0.3**
GERES	**GERESS Array B**	**127.01**	**54**	PKP	**PKPdf**	**00 42 17.1**	**-0.3**
	0.2nm,0.5s,baz=174,slow=0.9,SNR=4.1						
YKA	**Yellowknife Ar**	**131.14**	**331**	PKP	**PKiKP**	**00 42 25.5**	**-0.1**
	0.5nm,0.5s,baz=168,slow=1.8,SNR=7.6						
YKB5	**Yellowknife Ar**	**131.14**	**331**	*e*PKPdf	**PKiKP**	**00 42 25.6**	**-0.1**
ILAR	**Eielson Array**	**141.60**	**317**	PKhKP	PKPpre	00 42 40.5	
	0.3nm,0.5s,baz=140,slow=1.4,SNR=3.5						
ARA0	**ARCESS Array S**	**146.22**	**39**	*e*PKPdf	**PKPdf**	**00 42 52.4**	**+0.4**
ARCES	**ARCESS Array B**	**146.22**	**39**	PKPbc	**PKPdf**	**00 42 52.4**	**+0.4**
	0.9nm,0.5s,baz=243,slow=3.5,SNR=14						
ABKAR	**Akbulak array**	**146.75**	**88**	*e*PKPdf	**PKPdf**	**00 42 53.1**	**-0.3**
KK31	**Karatay Array**	**146.80**	**105**	*e*PKPdf	**PKPdf**	**00 42 54.1**	**+0.3**
KK31				*e*PKPbc	**PKPbc**	**00 42 55.7**	**0.0**
KKAR	**Karatay Array**	**146.80**	**105**	*e*PKPdf	**PKPdf**	**00 42 54.1**	**+0.2**
KKAR				*e*PKPbc	**PKPbc**	**00 42 55.7**	**+0.1**

MEX 23 00:41:06.7±1.0**, 14°.41N**×**93°.90W, h13**^{km}±25^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.45**	**27**	*e*P	Pn	00 41 28.4	-4.2
PCIG				*i* S	Sn	00 41 45.9	-5.6
TGIG		**2.48**	**17**	*e*P	Pn	00 41 44.2	-2.6
TGIG				*e*S	Sn	00 42 13.6	-3.4
CCIG	**Comitan**	**2.52**	**42**	*e*P	Pn	00 41 45.2	-2.4
CCIG				*i* S	Sn	00 42 13.5	-4.8
CMIG	**Matias Romero**	**2.83**	**341**	*i* P	Pn	00 41 48.0	-3.7
CMIG				*i* S	Sn	00 42 22.1	-3.7

SJA ***23*** *00:48:04.2±0.6, 26°.69S×70°.36W, h50^{km}±15^{km}, ML4.5, MW3.7*

GUC ***23*** *00:48:07.4±0.6, 26°.78S×69°.64W, h13^{km}±3^{km}, ML3.1*

ISCJB ***23*** *00:48:11.9±0.5, 26°.77S±0°.03×69°.82W±0°.06, h33^{km}, Error ellipse: s-maj=7.9km s-min=4.3km az=0.8*

ISC 23 00:48:13.9±1.2**, 26°.74S**±0°.03×**69°.93W**±0°.05**, h35**^{km}**, n14, σ2^{s}71**/22**, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRCH	**Chaqaral**	**0.73**	**302**	*e*P	**Pn**	**00 48 26.8**	**-0.9**
CRCH				IAML		00 48 48.1	
	comp=E,734nm,0.1s						
GO03	**Copiap**	**0.89**	**197**	⇑*i*P	**Pn**	**00 48 26.0**	**-4.0**
GO03				*i* S	**Sn**	**00 48 39.9**	**-1.9**
GO03				IAML		00 48 53.8	
	comp=E,427nm,0.1s						
GO02	**Mina Guanaco**	**1.60**	**11**	⇓*i*P	**Pn**	**00 48 36.9**	**-3.0**
GO02				*i* S	**Sn**	**00 48 59.9**	**+0.3**
GO02				IAML		00 49 04.0	
	comp=N,2μm,0.2s						
LCO	**Las Campanas**	**2.36**	**197**	*e*P	**Pn**	**00 48 50.1**	**-0.3**
LCO				*i* S	**Sn**	**00 49 22.1**	**+3.8**
LCO				IAML		00 49 26.9	
	comp=E,460nm,0.5s						
VCA	**Vinchina**	**2.51**	**143**	*e*P	**Pn**	**00 48 50.9**	**-1.4**
VCA				*e*S	**Sn**	**00 49 26.0**	**+4.2**
VCA				IAML		00 49 31.8	
	comp=Z,54nm,1.3s						
PB10	**IPOC Station P**	**3.26**	**350**	*e*P	**Pn**	**00 49 02.1**	**-0.5**
GO04	**Tololo Observa**	**3.50**	**192**	*e*P	**Pn**	**00 49 05.2**	**-0.9**
GO04				*i* S	**Sn**	**00 49 49.4**	**+2.9**
PB15	**IPOC Station P**	**3.54**	**7**	*e*P	**Pn**	**00 49 05.7**	**-0.9**
PB15				*i* S	**Sn**	**00 49 49.8**	**+2.4**
ACLC	**CERRO LA CRUZ**	**3.75**	**136**	*e*P	**Pn**	**00 49 09.5**	**0.0**
ACLC				*e*S	**Sn**	**00 49 58.3**	**+5.8**
ACLC				IAML		00 50 00.2	
	comp=Z,44nm,0.5s						
PB06	**IPOC Station P**	**4.03**	**5**	*e*P	**Pn**	**00 49 12.5**	**-0.8**
CYA	**Choya**	**4.04**	**116**	*e*P	**Pn**	**00 49 11.6**	**-1.7**
CYA				IAML		00 50 17.2	
	comp=Z,9.7nm,1.7s						
AHML	**Horco Molle**	**4.11**	**92**	*e*P	**Pn**	**00 49 12.2**	**-2.0**
AHML				IAML		00 50 21.3	
	comp=Z,6.6nm,2.9s						
APLL	**PUNTA DE LOS L**	**4.71**	**141**	*e*P	**Pn**	**00 49 19.1**	**-3.4**
APLL				*e*S	**Sn**	**00 50 14.0**	**-2.0**
APLL				IAML		00 50 32.5	
	comp=Z,9.5nm,2.0s						
AZAP	**Zapla**	**5.06**	**61**	*e*P	**Pn**	**00 49 26.0**	**-1.5**
AZAP				IAML		00 50 33.4	
	comp=Z,8.2nm,2.3s						

IDC ***23*** *01:29:18.7±1.8, 54°.68N×167°.34E, h0^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.5/46, mbtmp3.6/8, ML2.6/1, Error ellipse: s-maj=46.5km s-min=22.3km az=10.0*

ISCJB ***23*** *01:29:20.6±0.6, 54°.18N±0°.05×167°.14E±0°.05, h33^{km}, mb3.7/8, Error ellipse: s-maj=7.0km s-min=4.1km az=162.0*

KRSC ***23*** *01:29:21.1±1.7, 54°.19N×166°.74E, h16^{km}±27^{km}, ML4.0*

ISC 23 01:29:21.7±0.8**, 54°.26N**±0°.07×**167°.27E**±0°.07**, h35**^{km}**, n37, σ1^{s}62**/47**, mb3.6**/8**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**1.21**	**322**	*e*P	**Pn**	**01 29 39.7**	**-2.3**
BKI				*e*S	**Sn**	**01 29 54.8**	**-2.3**
KBTR	**Krutoberegovo**	**3.21**	**309**	*e*P	**Pn**	**01 30 10.5**	**+1.0**
KBTR				*e*S	**Sn**	**01 30 49.1**	**+2.6**
KBG	**Krutoberegovo**	**3.29**	**309**	S	**Sn**	**01 30 50.6**	**+2.2**
TUMD	**Tumrok D**	**4.09**	**286**	*e*P	**Pn**	**01 30 22.7**	**+1.0**
TUMD				*e*S	**Sn**	**01 31 08.8**	**+0.5**
KZV	**Kizimen**	**4.14**	**285**	*e*P	**Pn**	**01 30 23.3**	**+0.9**
KZV				S	**Sn**	**01 31 09.5**	**-0.1**
KRSR	**Krestovskiy**	**4.31**	**300**	*e*S	**Sn**	**01 31 15.5**	**+1.7**
SPN	**Mys Shipunski**	**4.46**	**258**	P	**Pn**	**01 30 28.3**	**+1.5**
SPN				*e*S	**Sn**	**01 31 15.3**	**-2.1**
NLC	**Nalytchevo**	**4.83**	**260**	S	**Sn**	**01 31 24.7**	**-1.8**
SDLR	**Sedlovina**	**5.07**	**262**	*e*P	**Pn**	**01 30 36.7**	**+1.4**
SDLR				*e*S	**Sn**	**01 31 31.6**	**-1.0**
SMAR	**Somma**	**5.12**	**262**	*e*P	**Pn**	**01 30 37.5**	**+1.4**
SMAR				*e*S	**Sn**	**01 31 33.2**	**-0.8**
UGLR	**Uglovaya**	**5.12**	**262**	*e*P	**Pn**	**01 30 37.3**	**+1.3**
UGLR				*e*S	**Sn**	**01 31 33.1**	**-0.8**
KRER	**Koryakskii**	**5.14**	**263**	*e*P	**Pn**	**01 30 38.3**	**+2.0**
KRER				*e*S	**Sn**	**01 31 33.7**	**-0.8**
AVH	**Avacha**	**5.16**	**262**	*e*P	**Pn**	**01 30 37.4**	**+1.0**
AVH				*e*S	**Sn**	**01 31 33.4**	**-1.3**
KRX	**Arik**	**5.19**	**263**	*e*P	**Pn**	**01 30 38.1**	**+1.2**
KRX				*e*S	**Sn**	**01 31 34.5**	**-1.0**
KOK	**Koryaka**	**5.21**	**263**	*e*P	**Pn**	**01 30 37.7**	**+0.5**
KOK				*e*S	**Sn**	**01 31 34.8**	**-1.2**
PET	**Petropavlovsk**	**5.27**	**260**	*e*S	**Sn**	**01 31 36.4**	**-1.0**
GNL	**Ganaly**	**5.53**	**268**	*e*P	**Pn**	**01 30 43.3**	**+1.7**
GNL				*e*S	**Sn**	**01 31 44.4**	**+0.4**
RUS	**Russkaya**	**5.56**	**254**	*e*S	**Sn**	**01 31 41.5**	**-2.8**
KRMR	**Karymshinskiy**	**5.63**	**259**	S	**Sn**	**01 31 44.5**	**-1.8**
MTVR	**Mutnovka**	**5.72**	**256**	*e*P	**Pn**	**01 30 46.3**	**+2.1**
MTVR				*e*S	**Sn**	**01 31 47.1**	**-1.6**
PETK	**Petropavlovsk-**	**5.80**	**262**	Pn	**Pn**	**01 30 48.2**	**+3.0**
	0.7nm,0.3s,baz=88,slow=19,SNR=5.7						
PETK				Sn	**Sn**	**01 31 50.3**	**-0.2**
	0.8nm,0.3s,baz=95,slow=26,SNR=7.0						
ASAK	**Asacha**	**5.92**	**255**	*e*P	**Pn**	**01 30 49.0**	**+2.1**
KDTR	**Khodutka, Kamc**	**6.07**	**250**	*e*P	**Pn**	**01 30 50.0**	**+1.2**
KDTR				*e*S	**Sn**	**01 31 53.7**	**-3.2**
TIXI	**Tiksi**	**23.97**	**331**	P	**P**	**01 34 31.9**	**-0.4**
	1.2nm,0.3s,baz=113,slow=7.0,SNR=4.4						
ILAR	**Eielson Array**	**24.93**	**47**	P	**P**	**01 34 39.5**	**-1.6**
	1.1nm,0.7s,baz=253,slow=8.1,SNR=9.0						
H11N2	**WAKE ISLAND Hy**	**34.47**	**181**	T	T	02 13 01.4	
	baz=0.9,slow=76,SNR=108						
H11N3	**WAKE ISLAND Hy**	**34.48**	**181**	T	T	02 13 04.2	
	baz=0.9,slow=76,SNR=112						
H11N1	**WAKE ISLAND Hy**	**34.49**	**181**	T	T	02 13 04.4	
	baz=0.9,slow=76,SNR=103						
H11S1	**WAKE ISLAND Hy**	**35.69**	**181**	T	T	02 14 35.9	
	baz=0.7,slow=76,SNR=39						
H11S3	**WAKE ISLAND Hy**	**35.70**	**181**	T	T	02 14 36.1	
	baz=0.7,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**35.71**	**181**	T	T	02 14 38.4	
	baz=0.7,slow=76,SNR=43						
YKA	**Yellowknife Ar**	**39.35**	**46**	P	**P**	**01 36 48.0**	**+0.9**
	0.3nm,0.4s,baz=294,slow=8.1,SNR=3.6						
NVAR	**Mina Array Bea**	**51.32**	**76**	P	**P**	**01 38 24.2**	**+1.7**
	0.2nm,0.3s,baz=311,slow=8.2,SNR=2.9						
PDAR	**Pinedale Array**	**53.18**	**66**	P	**P**	**01 38 36.6**	**+0.3**
	0.2nm,0.5s,baz=328,slow=3.2,SNR=3.0						
ARCES	**ARCESS Array B**	**53.41**	**344**	P	**P**	**01 38 35.8**	**-1.6**
	0.9nm,0.7s,baz=31,slow=9.5,SNR=3.0						
NOA	**NORSAR Array B**	**63.48**	**347**	P	**P**	**01 39 46.9**	**-0.7**
	0.4nm,0.7s,baz=18,slow=6.7,SNR=3.8						
TXAR	**Lajitas Array**	**66.23**	**73**	P	**P**	**01 40 06.7**	**+0.7**
	4.7nm,0.3s,baz=302,slow=4.1,SNR=7.5						

MEX 23 01:32:13.6±0.6**, 17°.16N**×**95°.02W, h48**^{km}±4^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.15**	**116**	*e*P	Pn	01 32 19.9	-1.5
CMIG				*e*S	Sn	01 32 25.3	-1.8
TUIG	**Tuzandepetl**	**1.04**	**33**	*i* P	Pn	01 32 31.1	-0.8
TUIG				*i* S	Sn	01 32 43.1	-2.3
VHO	**Vista Hermosa**	**1.64**	**267**	*i* P	Pn	01 32 39.3	-0.8
VHO				*e*S	Sn	01 32 58.3	-1.9
HUIG	**Huatulco**	**1.73**	**217**	*i* P	Pn	01 32 39.8	-1.4
HUIG				*i* S	Sn	01 32 59.2	-2.9
TGIG		**1.86**	**101**	*i* P	Pn	01 32 42.3	-0.8
TGIG				*i* S	Sn	01 33 02.6	-2.8
PCIG		**2.25**	**130**	*i* P	Pn	01 32 46.3	-2.1
PCIG				*e*S	Sn	01 33 13.5	-1.5

IDC ***23*** *01:45:46.6±3.4, 59°.88S×18°.70W, h0^{km}, mb3.6/2, mb1 3.7/2, mb1mx3.6/16, mbtmp3.6/2, Error ellipse: s-maj=264.1km s-min=34.9km az=100.0*

ISC 23 01:45:48.7±1.9**, 60°.1S**±0°.1×**17°.6W**±0°.6**, h10**^{km}**, n6, σ0^{s}92**/6**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.32**	**164**	P	**Pn**	**01 48 30.5**	**+0.3**
VNA3	**Neumayer Olymp**	**11.70**	**167**	P	**Pn**	**01 48 34.0**	**-1.4**
SNAA	**Sanae**	**13.08**	**159**	P	**Pn**	**01 48 54.4**	**0.0**
VNDA	**Vanda**	**42.69**	**180**	P	**P**	**01 53 45.6**	**+0.7**
	0.8nm,0.8s,baz=197,slow=7.8,SNR=6.4						
TORD	**Torodi Ar. Bea**	**74.58**	**20**	P	**P**	**01 57 27.4**	**-0.2**
	0.4nm,0.8s,baz=192,slow=6.8,SNR=4.5						
SONM	**Songino Array**	**145.93**	**85**	PKPbc	**PKPab**	**02 05 27.8**	**-0.1**
	1.9nm,0.9s,baz=225,slow=1.8,SNR=4.4						

MAN ***23*** *01:46:28.7, 4°.26N×126°.75E, h43^{km}, mb5.5, ML4.5, MS4.8*

BJI ***23*** *01:46:30.6±0.0, 4°.57N×126°.60E, h62^{km}, mb5.0/50, mB4.9/30, Ms4.2/22, Ms7 4.0/23*

MOS ***23*** *01:46:30.5±0.9, 4°.78N×126°.53E, h47^{km}, mb5.1/44, Error ellipse: s-maj=9.9km s-min=5.0km az=116.1*

ISCJB ***23*** *01:46:33.7±0.4, 4°.72N±0°.02×126°.65E±0°.03, h80^{km}±3^{km}, mb4.8/145, Error ellipse: s-maj=5.0km s-min=2.9km az=158.8*

NEIC ***23*** *01:46:34.6±2.1, 4°.72N×126°.60E, h74^{km}±5^{km}, mb4.9/94, Error ellipse: s-maj=11.1km s-min=7.1km az=71.0*

GCMT ***23*** *01:46:34.6±0.3, 4°.69N±0°.02×126°.75E±0°.03, h55^{km}±3^{km}, MW4.8/62, Moment Tensor Solution. s24,c29; s62,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.95±.15; M$_{\theta\theta}$-0.19±.10; M$_{\phi\phi}$-0.76±.11; M$_{r\theta}$0.22±.06; M$_{\theta\phi}$-1.06±.08; M$_{\phi r}$1.71±.10; Best double couple: M$_{0}$2.19300×10^{16} NP1:ϕ_s11.00000°, δ75.00000°, λ66.00000°. NP2: ϕ_s250.00000°, δ28.00000°, λ146.00000°. Principal axes: T 2.0750, Plg54.0000°, Azm252.0000°; N 0.2370, Plg23.0000°, Azm17.0000°; P -2.3120, Plg26.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***23*** *01:46:34.3±1.5, 4°.70N×126°.45E, h68^{km}±12^{km}, mb4.4/30, mb1 4.5/33, mb1mx4.4/45, mbtmp4.7/33, MS3.6/10, Ms1 3.6/10, ms1mx3.3/27 Error ellipse: s-maj=17.8km s-min=9.9km az=75.0*

DJA ***23*** *01:46:36.2±0.3, 5°N±2°×12°7E±°, h81^{km}±3^{km}, M4.9/37, mB5.2/12, mb5.0/37, MLv5.3/12, Mw(mB)4.6/12*

ISC 23 01:46:35.0±0.5**, 4°.70N**±0°.03×**126°.63E**±0°.04**, h77**^{km}±4^{km}**, n369, σ1^{s}46**/404**, mb4.9**/144**, 17C-19D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.49**	**227**	P	**Pn**	**01 47 01.2**	**+1.0**
SGSI				S	**Sn**	**01 47 22.5**	**+3.4**
GSPH	**General Santos**	**2.17**	**309**	*e*P	**Pn**	**01 47 09.0**	**-0.2**
DAV	**Davao City (W)**	**2.58**	**336**	P	**Pn**	**01 47 13.5**	**-1.1**
	33nm,0.3s,baz=138,slow=15,SNR=6.2						
DAV				S	**Sn**	**01 47 45.4**	**+0.4**
	230nm,0.3s,baz=105,slow=20,SNR=5.6						
DAV				LR	LR	01 48 22.6	
	comp=Z,1μm,21.2s,baz=198,slow=43						
DAV	**Davao City (W)**	**2.58**	**336**	*e*Pn	**Pn**	**01 47 14.0**	**-0.6**
DAV				*e*Sn	**Sn**	**01 47 45.4**	**+0.4**
DMPH	**Davao City--Mi**	**2.62**	**335**	⇓*i*P	Pn	01 47 21.1	+5.9
DMPH				*i* S	Sn	01 48 12.0	+26
KCP	**Kidapawan**	**2.76**	**326**	⇑*e*P	**Pn**	**01 47 17.6**	**+0.5**
KCP				*e*S	Sn	01 48 00.6	+11
CTBH	**Cotabato--PC H**	**3.45**	**317**	⇓*i*P	**Pn**	**01 47 27.1**	**+0.7**
BIPH	**Bislig**	**3.47**	**356**	⇓*i*P	**Pn**	**01 47 24.7**	**-2.1**
BIPH				*i* S	**Sn**	**01 48 13.9**	**+7.1**
TNTI	**Ternate**	**3.97**	**169**	*e*Pn	**Pn**	**01 47 34.0**	**+0.4**
TNTI				*e*Sn	**Sn**	**01 48 18.1**	**-1.0**
TNTI	**Ternate**	**3.97**	**169**	P	**Pn**	**01 47 34.3**	**+0.7**
LBMI	**Labuha**	**5.38**	**171**	P	**Pn**	**01 47 54.5**	**+1.7**
	522nm,0.7s,4μm1.9nm						
LLP	**Lapu-Lapu**	**6.17**	**335**	*e*P	**Pn**	**01 48 06.0**	**+2.4**
LLP				*e*S	**Sn**	**01 49 20.1**	**+7.2**
SANI	**Sanana**	**6.74**	**185**	P	**Pn**	**01 48 08.0**	**-3.4**
LUWI	**Luwuk**	**6.89**	**214**	*e*Pn	**Pn**	**01 48 13.7**	**+0.3**
LUWI				*e*Sn	**Sn**	**01 49 29.4**	**-0.9**
LUWI	**Luwuk**	**6.89**	**214**	P	**Pn**	**01 48 16.9**	**+3.5**
SWI	**Sorong**	**7.21**	**140**	P	**Pn**	**01 48 20.4**	**+2.6**
	95nm,0.6s,2μm0.5nm						
SIJI	**Sorong**	**7.22**	**140**	P	**Pn**	**01 48 17.3**	**-0.6**
	25nm,0.3s,baz=329,slow=14,SNR=27						
SIJI				S	**Sn**	**01 49 36.4**	**-2.1**
	3.2nm,0.3s,baz=240,slow=20,SNR=2.7						
RCP	**Roxas**	**7.82**	**331**	⇓*e*P	**Pn**	**01 48 28.9**	**+2.7**
NLAI	**Namlea**	**7.90**	**177**	P	**Pn**	**01 48 26.3**	**-1.0**
MSAI	**Masohi**	**8.32**	**164**	P	Pn	01 48 25.9	-7.1
AAI	**Ambon**	**8.48**	**169**	P	**Pn**	**01 48 34.2**	**-1.0**
FAKI	**Fak Fak**	**9.42**	**143**	*e*Pn	**Pn**	**01 48 47.1**	**-1.0**
FAKI				*e*Sn	**Sn**	**01 50 31.9**	**-0.5**
FAKI	**Fak Fak**	**9.42**	**143**	P	**Pn**	**01 48 47.7**	**-0.4**
KDI	**Kendari**	**9.49**	**205**	P	**Pn**	**01 48 47.1**	**-1.9**
TTSI	**Tana Toraja**	**10.27**	**222**	P	**Pn**	**01 49 02.3**	**+2.6**
KKM	**Kota Kinabalu**	**10.46**	**278**	*e*Pn	**Pn**	**01 49 01.4**	**-0.9**
BAKI	**Biak**	**11.13**	**122**	P	**Pn**	**01 49 13.5**	**+2.1**
BNSI	**Bone**	**11.15**	**216**	P	**Pn**	**01 49 15.2**	**+3.6**
KAPI	**Kappang**	**11.85**	**216**	P	**Pn**	**01 49 20.3**	**-0.8**
	1.2nm,0.3s,baz=52,slow=11,SNR=6.7						
KAPI	**Kappang**	**11.85**	**216**	*e*Pn	**Pn**	**01 49 22.4**	**+1.3**
KBKI	**Kotabaru**	**13.13**	**233**	P	**Pn**	**01 49 40.4**	**+1.9**
EDFI	**Ende, Flores**	**14.24**	**200**	P	**Pn**	**01 49 50.4**	**-2.8**
SOEI	**Soe**	**14.55**	**189**	*e*Pn	**Pn**	**01 49 57.5**	**+0.2**
SBUM	**Sibu**	**14.55**	**262**	*e*P	**P**	**01 50 01.3**	**-0.3**
PLAI	**Plampang**	**16.08**	**213**	P	**P**	**01 50 20.9**	**+2.4**
KSM	**Kuching**	**16.61**	**259**	*e*Pn	**Pn**	**01 50 21.1**	**-2.1**
	52nm,0.7s						
PBKI	**Pangkalan Bun**	**16.66**	**244**	P	**P**	**01 50 28.8**	**+3.8**
	452nm,1.1s						
MTN	**Manton Dam**	**18.00**	**166**	*e*P	**P**	**01 50 38.4**	**-1.3**
	51nm,0.8s						
MTN	**Manton Dam**	**18.00**	**166**	P	**P**	**01 50 38.1**	**-1.6**
	baz=18,SNR=6.2						
JAGI	**Jajag, Banyuwa**	**18.06**	**224**	*e*P	**Pn**	**01 50 42.8**	**+1.8**
	51nm,0.4s						
KDU	**Kakadu**	**18.23**	**161**	P	**P**	**01 50 41.1**	**-1.1**
	baz=18,SNR=6.7						
TWG	**Pinlang**	**18.80**	**344**	*e*P	**P**	**01 50 44.3**	**-4.2**
	132nm,0.7s						
YULB	**Yu-li**	**19.28**	**345**	*e*P	**P**	**01 50 51.7**	**-2.1**
	19nm,0.4s						
DLV	**T Lat**	**19.33**	**293**	*e*P	**P**	**01 50 53.7**	**-0.9**
	73nm,0.8s						
TPUB	**Ta-pu**	**19.38**	**343**	*e*P	**P**	**01 50 53.6**	**-1.2**
	86nm,0.8s						
SSLB	**Suanglung**	**19.75**	**344**	*e*P	**P**	**01 50 57.1**	**-1.8**
	29nm,0.7s						
YOJ	**Yonaguni jima**	**19.95**	**350**	*e*P	**P**	**01 51 02.0**	**+1.0**
	74nm,1.1s						
YOJ	**Yonaguni jima**	**19.95**	**350**	*e*P	**P**	**01 51 02.0**	**+1.0**
YOJ				pmax	pmax		
	comp=Z,74nm,1.1s						
GUMO	**Guam**	**20.04**	**63**	*e*P	**P**	**01 51 02.1**	**0.0**
	comp=Z,36nm,0.9s						
GUMO	**Guam**	**20.04**	**63**	*e*P	**P**	**01 51 02.1**	**0.0**
GUMO				pmax	pmax		
	comp=Z,36nm,0.9s						
KNRA	**Kununurra**	**20.36**	**174**	P	Pn	01 51 06.7	-1.5
	baz=20,SNR=12						
TPI	**Tanjungpandan**	**20.36**	**249**	P	Pn	01 51 08.4	+0.2
	comp=Z,42nm,1.1s						
UGM	**Wanagama**	**20.38**	**232**	*e*P	**P**	**01 51 06.3**	**+0.6**
	comp=Z,16nm,0.9s						
YHNB	**Yeheng**	**20.49**	**346**	*e*P	**P**	**01 51 06.5**	**-0.4**
	comp=Z,31nm,0.7s						
KNMB	**Chin-men Tao**	**21.19**	**339**	*e*P	**P**	**01 51 14.5**	**+0.2**
	comp=Z,30nm,0.5s						
QIZ	**Qiongzhong**	**21.71**	**312**	P	**P**	**01 51 19.3**	**-0.6**
QIZ				S	**S**	**01 55 15.3**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,180nm,3.2s						
QIZ				LR	LR		
	comp=Z,290nm,15.3s						
QIZ				LR	LR		
	comp=Z,190nm,17.2s						
QIZ				LR	LR		
	comp=Z,310nm,23.5s						
ANA2	**Anatahan**	**22.01**	**57**	*e*P	**P**	**01 51 20.9**	**-2.3**
	comp=Z,56nm,0.9s						
JOW	**Kunigami**	**22.06**	**4**	P	**P**	**01 51 24.7**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=193,slow=15,SNR=6.6						
JOW	**Kunigami**	**22.06**	**4**	*e*P	**P**	**01 51 22.5**	**-1.2**
	comp=Z,9.7nm,0.6s						
CISI	**Cisompet, Garu**	**22.38**	**237**	*e*P	**P**	**01 51 26.0**	**-1.3**
	comp=Z,52nm,1.0s						
MYKOM	**Kota Tinggi**	**22.93**	**263**	*e*P	**P**	**01 51 33.7**	**+0.8**
	comp=Z,57nm,1.1s						
CGJI	**Cibinong**	**23.73**	**242**	P	**P**	**01 51 40.5**	**+0.1**
	comp=Z,86nm,0.8s						
KLSI		**23.78**	**247**	P	**P**	**01 51 41.5**	**+0.6**
	comp=Z,60nm,0.7s						
MDSI	**Maura Dua**	**24.21**	**248**	P	**P**	**01 51 45.8**	**+1.0**
	comp=Z,17nm,0.7s						
LHSI	**Lahat**	**24.59**	**250**	P	**P**	**01 51 52.5**	**+4.3**
	comp=Z,31nm,0.8s						
COEN	**Coen**	**24.76**	**139**	*e*P	**P**	**01 51 50.6**	**+0.8**
	comp=Z,21nm,0.8s						
COEN	**Coen**	**24.76**	**139**	P	**P**	**01 51 49.9**	**+0.2**
	baz=25,SNR=11						
IPM	**Ipoh**	**25.52**	**271**	*e*P	**P**	**01 51 56.0**	**-0.7**
	comp=Z,42nm,1.1s						
WRAB	**Tennant Creek**	**25.63**	**163**	*e*P	**P**	**01 51 58.2**	**+0.6**
	comp=Z,31nm,0.7s						
WRAB	**Tennant Creek**	**25.63**	**163**	⇓*e*P	**P**	**01 51 59.1**	**+1.5**
WRAB				pmax	pmax		
	comp=Z,55nm,1.7s						
WR1	**Warramunga Arr**	**25.64**	**163**	*e*P	**P**	**01 51 57.4**	**-0.2**
WRA	**Warramunga Arr**	**25.64**	**163**	P	**P**	**01 51 57.4**	**-0.2**
	comp=Z,20nm,0.7s,baz=339,slow=12,SNR=57						
WB2	**Warramunga Arr**	**25.64**	**163**	*e*P	**P**	**01 51 58.0**	**+0.3**
	comp=Z,40nm,0.7s						
WC3	**Warramunga Arr**	**25.66**	**163**	*e*P	**P**	**01 51 58.7**	**+0.8**
	comp=Z,41nm,0.6s						
NONG	**Nongkai**	**26.53**	**302**	P	**P**	**01 52 08.0**	**+2.3**
	comp=Z,0.3nm,1.6s,comp=Z,64nm						
CHAI	**Chaiyaphum**	**26.64**	**297**	P	**P**	**01 52 07.4**	**+0.6**
	comp=Z,34μm,0.6s						
PDSI	**Padang**	**26.73**	**259**	P	**P**	**01 52 07.3**	**-0.4**
PSAD1	**Pilbara Seismi**	**26.84**	**194**	*e*P	**P**	**01 52 09.2**	**+0.8**
	comp=Z,24nm,1.0s						
PSAC1	**Pilbara Seismi**	**26.92**	**194**	*e*P	**P**	**01 52 08.6**	**-0.5**
	comp=Z,29nm,0.8s						
PSA00	**Pilbara Seismi**	**26.95**	**194**	*e*P	**P**	**01 52 10.7**	**+1.3**
	comp=Z,19nm,0.7s						
PSAA3	**Pilbara Seismi**	**26.95**	**194**	*e*P	**P**	**01 52 10.2**	**+0.7**
	comp=Z,18nm,0.7s						
PSI	**Prapat**	**27.71**	**267**	P	**P**	**01 52 15.4**	**-1.2**
	comp=Z,2.4nm,0.3s,baz=63,slow=9.0,SNR=2.4						
PSI	**Prapat**	**27.71**	**267**	*e*P	**P**	**01 52 15.4**	**-1.2**
	comp=Z,9.3nm,0.8s						
PSI	**Prapat**	**27.71**	**267**	*e*P	**P**	**01 52 15.4**	**-1.2**
PSI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PBKT	**Sadao Pong**	**27.80**	**297**	P	**P**	**01 52 17.9**	**+0.8**
	comp=Z,13nm,0.9s,comp=Z,404nm						
QIS	**Mount Isa**	**28.15**	**154**	P	**P**	**01 52 20.8**	**+0.5**
	baz=28,SNR=15						
NJ2	**Nanjing**	**28.17**	**346**	*e*P	**P**	**01 52 20.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
WHN	**Wuhan**	**28.19**	**337**	⇓P	**P**	**01 52 16.9**	**-3.6**
WHN				LR	LR		
	comp=Z,980nm,34.5s						
MTSU	**Mount Surprise**	**28.62**	**143**	P	**P**	**01 52 24.9**	**+0.5**
	baz=29,SNR=6.0						
KCSI	**Kotacane, Aceh**	**28.81**	**269**	P	**P**	**01 52 26.0**	**-0.2**
	comp=Z,18nm,1.5s						
UTHA	**Uthaitani**	**28.81**	**294**	P	**P**	**01 52 28.0**	**+1.8**
	comp=Z,21μm,0.8s,comp=Z,472μm						
AS31	**Alice Springs**	**29.07**	**166**	*e*P	**P**	**01 52 31.1**	**+2.7**
	comp=Z,3.7nm,0.5s						

AS31				*e*PcP	**PcP**	**01 55 35.4**	**+0.4**
AS31				*e*ScP	**ScP**	**01 59 11.1**	**+1.1**
ASAR	**Alice Springs**	**29.07**	**166**	P	**P**	**01 52 28.6**	**+0.1**
	comp=Z,6.9nm,0.5s,baz=355,slow=7.8,SNR=36						
ASAR				PcP	**PcP**	**01 55 35.4**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=352,slow=2.8,SNR=3.5						
ASAR				ScP	**ScP**	**01 59 11.1**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=350,slow=2.8,SNR=9.8						
GSI	**Gunungsitoli**	**29.21**	**264**	*e*P	**P**	**01 52 29.7**	**0.0**
	comp=Z,22nm,1.0s						
GSI	**Gunungsitoli**	**29.21**	**264**	P	**P**	**01 52 29.7**	**0.0**
	comp=Z,21nm,0.8s						
WRKA	**Warakurna**	**29.61**	**177**	P	**P**	**01 52 34.1**	**+1.0**
	baz=30,SNR=27						
GIRL	**Giralia**	**29.76**	**204**	*e*P	**P**	**01 52 34.4**	**-0.1**
	comp=Z,116nm,1.1s						
GIRL	**Giralia**	**29.76**	**204**	P	**P**	**01 52 36.4**	**+2.0**
	baz=30,SNR=7.1						
PAYA	**Payao**	**29.88**	**301**	P	**P**	**01 52 38.3**	**+2.6**
	comp=Z,17µm,0.5s						
CM31	**Chiang Mai Arr**	**30.31**	**299**	*e*P	**P**	**01 52 38.8**	**-0.6**
	comp=Z,9.1nm,0.9s						
CM31				*e*PcP	**PcP**	**01 55 40.3**	**+2.0**
CM31				*e*ScP	**ScP**	**01 59 15.6**	**+1.6**
CMAR	**Chiang Mai Arr**	**30.31**	**299**	P	**P**	**01 52 38.8**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=100,slow=6.9,SNR=9.2						
CMAR				PcP	**PcP**	**01 55 40.3**	**+2.0**
	comp=Z,1.1nm,0.3s,baz=183,slow=1.6,SNR=5.7						
CMAR				ScP	**ScP**	**01 59 15.6**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=116,slow=2.1,SNR=3.8						
CMAR				LR	LR	02 04 43.6	
	comp=Z,89nm,21.0s,baz=116,slow=36						
CMMT	**Chiang Mai**	**30.44**	**300**	P	**P**	**01 52 43.4**	**+2.8**
	comp=Z,5.5nm,0.6s						
CHTO	**Chiang Mai**	**30.45**	**300**	*e*P	**P**	**01 52 41.3**	**+0.6**
	comp=Z,5.8nm,0.6s						
CHTO	**Chiang Mai**	**30.45**	**300**	*e*P	**P**	**01 52 41.3**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI	**Kunming**	**30.63**	**314**	P	**P**	**01 52 43.6**	**+1.1**
KMI				pP	pP	01 52 58.5	-0.9
KMI				sP	sP	01 53 07.8	-0.2
KMI				PP	**PnPn**	**01 53 48.0**	**+3.0**
KMI				S	**S**	**01 57 38.0**	**-1.6**
KMI				SS	**ScP**	**01 59 24.1**	**+8.8**
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
KMI				pmax	pmax		
	comp=Z,130nm,4.6s						
KMI				LR	LR		
	comp=Z,170nm,13.2s						
KMI				LR	LR		
	comp=Z,170nm,17.0s						
KMI				LR	LR		
	comp=Z,230nm,17.9s						
CTAO	**Charters Tower**	**31.29**	**143**	*e*P	**P**	**01 52 48.4**	**+0.4**
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	**31.29**	**143**	*e*P	**P**	**01 52 48.4**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,12nm,0.9s						
MEEK	**Meekatharra**	**32.11**	**194**	P	**P**	**01 52 55.8**	**+0.7**
	baz=32,SNR=17						
TIA	**Tai'an**	**32.56**	**346**	P	**P**	**01 53 00.3**	**+1.4**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KS15	**Wonju Array Si**	**32.61**	**2**	*e*P	**P**	**01 52 59.7**	**+0.4**
	comp=Z,10nm,1.0s						
KSRS	**Korea Array**	**32.62**	**2**	P	**P**	**01 52 59.7**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=178,slow=10,SNR=5.8						
MJAR	**Matsushiro Arr**	**33.43**	**17**	P	**P**	**01 53 07.2**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=195,slow=9.5,SNR=4.0						
MAJO	**Matsushiro**	**33.43**	**17**	*e*P	**P**	**01 53 07.2**	**+0.7**
XAN	**Xi'an**	**33.51**	**333**	*e*P	**P**	**01 53 05.7**	**-1.6**
	comp=Z,35nm,1.2s						
XAN	**Xi'an**	**33.51**	**333**	P	**P**	**01 53 06.0**	**-1.4**
XAN				pP	pP	01 53 20.8	-3.6
XAN				S	**S**	**01 58 22.3**	**-1.5**
XAN				pmax	pmax		
	comp=Z,26nm,1.3s						
XAN				LR	LR		
	comp=Z,150nm,23.0s						
XAN				LR	LR		
	comp=Z,95nm,23.9s						
XAN				LR	LR		
	comp=Z,220nm,24.6s						
XAN	**Xi'an**	**33.51**	**333**	*e*P	**P**	**01 53 05.7**	**-1.6**
XAN				pmax	pmax		
	comp=Z,35nm,1.2s						
CD2	**Chengdu**	**33.81**	**323**	P	**P**	**01 53 09.3**	**-0.7**
CD2				pP	pP	01 53 27.5	+0.4
CD2				S	**S**	**01 58 30.5**	**+2.0**
CD2				pmax	pmax		
	comp=Z,50nm,1.0s						
CD2				pmax	pmax		
	comp=Z,70nm,3.6s						
CD2				LR	LR		
	comp=Z,220nm,18.5s						
CD2				LR	LR		
	comp=Z,140nm,13.5s						
CD2				LR	LR		
	comp=Z,200nm,14.9s						
DL2	**Dalian**	**34.35**	**353**	P	**P**	**01 53 16.0**	**+1.5**
DL2				pP	**pP**	**01 53 31.9**	**+0.3**
DL2				*e*S	**S**	**01 58 39.3**	**+2.8**
DL2				pmax	pmax		
	comp=Z,47nm,0.7s						
DL2				LR	LR		
	comp=Z,120nm,17.0s						
DL2				LR	LR		
	comp=Z,130nm,16.3s						
DL2				LR	LR		
	comp=Z,100nm,16.7s						
MORW	**Morawa**	**35.09**	**196**	*e*P	**P**	**01 53 21.2**	**+0.2**
	comp=Z,13nm,1.0s						
MORW	**Morawa**	**35.09**	**196**	P	**P**	**01 53 21.8**	**+0.8**
	baz=35,SNR=3.0						
FORT	**Forrest**	**35.31**	**178**	*e*P	**P**	**01 53 22.6**	**-0.2**
	comp=Z,20nm,0.8s						
KMBL	**Kambalda**	**36.15**	**187**	P	**P**	**01 53 30.8**	**+0.8**
	baz=36,SNR=8.3						
BLDU	**Ballidu**	**36.38**	**195**	P	**P**	**01 53 32.4**	**+0.4**
	baz=37,SNR=13						
BJI	**Beijing**	**36.42**	**346**	P	**P**	**01 53 32.8**	**+0.6**
BJI				pmax	pmax		
	comp=Z,15nm,0.7s						
LZH	**Lanzhou**	**37.62**	**329**	*e*P	**P**	**01 53 43.0**	**+0.3**
LZH				pP	pP	01 53 59.1	-0.9
LZH				sP	sP	01 54 08.0	-0.5
LZH				*e*PP	**PnPn**	**01 55 13.3**	**+1.5**
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=Z,310nm,13.0s						
LZH				LR	LR		
	comp=Z,320nm,13.2s						
LZH				LR	LR		
	comp=Z,400nm,16.5s						
RMQ	**Roma**	**37.69**	**146**	P	**P**	**01 53 43.1**	**-0.1**
	baz=38,SNR=8.1						
EIDS	**Eidsvold**	**38.18**	**143**	*e*P	**P**	**01 53 48.1**	**+0.8**
	comp=Z,40nm,0.8s						
EIDS	**Eidsvold**	**38.18**	**143**	P	**P**	**01 53 47.8**	**+0.5**
	baz=38,SNR=12						
BBOO	**Buckleboo**	**38.37**	**167**	*e*P	**P**	**01 53 49.3**	**+0.5**
	comp=Z,11nm,0.6s						
BBOO	**Buckleboo**	**38.37**	**167**	P	**P**	**01 53 49.7**	**+0.9**
	baz=38,SNR=17						
HHC	**Hu-ho-hao-te**	**38.45**	**342**	*e*P	**P**	**01 53 52.0**	**+2.5**
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,65nm,5.3s						
NWAO	**Narrogin (SRO)**	**38.47**	**193**	P	**P**	**01 53 51.0**	**+1.4**
	baz=39,SNR=6.1						
STKA	**Stephens Creek**	**39.07**	**160**	P	**P**	**01 53 55.6**	**+1.0**
	comp=Z,44nm,0.8s,baz=334,slow=8.5,SNR=47						
STKA				LR	LR	02 12 26.5	
	comp=Z,63nm,18.5s,baz=15,slow=40						
STKA	**Stephens Creek**	**39.07**	**160**	*e*P	**P**	**01 53 55.7**	**+1.0**
	comp=Z,7.9nm,0.8s						
STKA	**Stephens Creek**	**39.07**	**160**	P	**P**	**01 53 55.7**	**+1.0**
	baz=39,SNR=21						
STKA	**Stephens Creek**	**39.07**	**160**	*e*P	**P**	**01 53 55.7**	**+1.0**
STKA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SHL	**Shillong**	**39.23**	**306**	*e*P	**P**	**01 53 55.8**	**-0.6**
	comp=Z,31nm,0.9s						
SHL	**Shillong**	**39.23**	**306**	*e*P	**P**	**01 53 55.8**	**-0.6**
SHL				pmax	pmax		
	comp=Z,31nm,0.9s						
SHL	**Shillong**	**39.23**	**306**	*e*P	**P**	**01 53 53.5**	**-2.9**
USA0B	**Ussuriysk Arra**	**39.62**	**6**	*e*P	**P**	**01 53 56.3**	**-2.8**
	comp=Z,3.5nm,0.7s						
USA0B	**Ussuriysk Arra**	**39.62**	**6**	*e*P	**P**	**01 53 56.3**	**-2.8**
USA0B				pmax	pmax		
	comp=Z,4.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**39.62**	**6**	P	**P**	**01 53 59.9**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=179,slow=5.8,SNR=8.9						
HTT	**Hallett**	**39.67**	**164**	P	**P**	**01 54 01.2**	**+1.5**
	baz=40,SNR=8.4						
RKGY	**Rocky Gully**	**40.15**	**192**	P	**P**	**01 54 05.7**	**+2.2**
	baz=40,SNR=7.5						
CMSA	**Cobar Meteorol**	**40.36**	**154**	P	**P**	**01 54 06.7**	**+1.3**
	baz=40,SNR=8.4						
ASAJ	**Asahikawa**	**41.70**	**17**	P	**P**	**01 54 17.8**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=223,slow=19,SNR=3.7						
GTA	**Gaotai**	**42.22**	**329**	*e*P	**P**	**01 54 20.5**	**-0.2**
GTA				pP	pP	01 54 34.3	-4.0
GTA				sP	pwP	01 54 39.8	-3.3
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,53nm,5.6s						
GTA				LR	LR		
	comp=Z,78nm,19.4s						
GTA				LR	LR		
	comp=Z,120nm,20.9s						
GTA				LR	LR		
	comp=Z,150nm,19.7s						
ARMA	**Armidale**	**42.33**	**147**	*e*P	**P**	**01 54 23.5**	**+1.7**
	comp=Z,54nm,0.8s						
ARMA	**Armidale**	**42.33**	**147**	P	**P**	**01 54 23.4**	**+1.7**
	baz=42,SNR=22						
ARPS	**Mount Arapiles**	**43.63**	**162**	P	**P**	**01 54 33.7**	**+1.7**
	baz=44,SNR=5.7						
KLR	**Kul'dur**	**44.58**	**5⇓**	*e*P	**P**	**01 54 38.9**	**-0.5**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JIRN	**Jiri**	**44.73**	**305**	*e*P	**P**	**01 54 41.2**	**-0.2**
	comp=Z,43nm,0.5s						
GUN	**Gumba**	**45.08**	**305**	*e*P	**P**	**01 54 43.8**	**-0.4**
	comp=Z,8µm,0.5s						
PKI	**Pulchoki**	**45.33**	**305**	*e*P	**P**	**01 54 45.2**	**-0.9**
	comp=Z,6.9nm,0.4s						
PKIN	**Phulchoki**	**45.35**	**305**	*e*P	**P**	**01 54 45.3**	**-0.9**
	comp=Z,8.0nm,0.3s						
KKN	**Kakani**	**45.52**	**305**	*e*P	**P**	**01 54 46.8**	**-0.7**
	comp=Z,8.4nm,0.3s						
DMN	**Daman**	**45.60**	**305**	*e*P	**P**	**01 54 48.1**	**0.0**
	comp=Z,12nm,0.5s						
GKN	**Gorkha**	**46.13**	**305**	*e*P	**P**	**01 54 51.5**	**-0.7**
SONA0	**Songino Array**	**46.35**	**341**	*e*P	**P**	**01 54 54.6**	**+1.1**
SONA0				*e*PcP	**PcP**	**01 56 28.0**	**+0.5**
SONM	**Songino Array**	**46.35**	**341**	P	**P**	**01 54 54.6**	**+1.1**
	comp=Z,3.5nm,0.8s,baz=158,slow=8.8,SNR=13						
SONM				PcP	**PcP**	**01 56 28.0**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=121,slow=3.7,SNR=2.8						
SONM				LR	LR	02 15 18.5	
	comp=Z,90nm,19.5s,baz=119,slow=37						
DANN	**Dangsing**	**46.98**	**305**	*e*P	**P**	**01 54 58.5**	**-0.5**
	comp=Z,73nm,0.5s						
DZM	**Mont Dzumac**	**47.18**	**126**	LR	LR	02 14 57.5	
	comp=Z,72nm,18.4s,baz=245,slow=36						
DZM	**Mont Dzumac**	**47.18**	**126**	*e*P	**P**	**01 55 01.0**	**+0.7**
	comp=Z,14nm,0.9s						
TLY	**Talaya**	**50.58**	**342**	*e*P	**P**	**01 55 27.8**	**+1.9**
TLY				pmax	pmax		
	comp=Z,12nm,0.6s						
MOY	**Mondy**	**51.44**	**340**	*e*P	**P**	**01 55 33.4**	**+1.0**
MOY				pmax	pmax		
	comp=Z,13nm,1.6s						
WMQ	**Urumqi**	**51.88**	**325**	*e*P	**P**	**01 55 37.1**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,29nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,75nm,4.1s						
WMQ				LR	LR		
	comp=Z,290nm,21.1s						
WMQ				LR	LR		
	comp=Z,280nm,18.9s						
WMQ				LR	LR		
	comp=Z,210nm,27.3s						
BOD	**Bodaibo**	**53.90**	**352**	*e*P	**P**	**01 55 51.0**	**+0.7**
BOD				pmax	pmax		
	comp=Z,16nm,1.3s						
PETK	**Petropavlovsk-**	**54.57**	**22**	P	**P**	**01 55 56.7**	**+1.4**
	comp=Z,2.1nm,0.5s,baz=198,slow=4.8,SNR=5.4						
PEA1	**Petropavlovsk-**	**54.58**	**22**	*e*P	**P**	**01 55 56.7**	**+1.4**
PDGK	**Podgornoye**	**56.61**	**320**	P	**P**	**01 56 09.6**	**-0.7**
PDGK				pmax	pmax		
	comp=Z,18nm,1.3s						
MK32	**Makanchi Array**	**56.71**	**325**	*e*P	**P**	**01 56 10.4**	**-0.4**
MK32				*e*PcP	**PcP**	**01 57 06.5**	**+0.5**
MK32				*e*ScP	**ScP**	**02 00 59.0**	**+0.1**
MKAR	**Makanchi Array**	**56.71**	**325**	P	**P**	**01 56 10.4**	**-0.4**
	comp=Z,8.0nm,0.5s,baz=122,slow=8.2,SNR=44						
MKAR				PcP	**PcP**	**01 57 06.5**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=129,slow=3.6,SNR=3.7						
MKAR				ScP	**ScP**	**02 00 59.0**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=125,slow=4.5,SNR=2.7						
MAKZ	**Makanchi**	**56.89**	**325**	*e*P	**P**	**01 56 11.6**	**-0.5**
	comp=Z,14nm,1.0s						
MAKZ				*e*PcP	**PcP**	**01 57 06.0**	**-0.8**
MAKZ	**Makanchi**	**56.89**	**325**	*e*P	**P**	**01 56 11.6**	**-0.5**
MAKZ				*e*		01 57 06.0	
MAKZ				pmax	pmax		
	comp=Z,14nm,1.0s						
YAK	**Yakutsk**	**57.25**	**2**	*e*P	**P**	**01 56 13.6**	**-0.6**
YAK				*e*		01 56 34.7	
YAK				*e*S	**S**	**02 04 03.5**	**-0.6**
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				smax	smax		
	comp=N,12nm,1.6s						
YAK				smax	smax		
	comp=E,12nm,1.6s						
NIL	**Nilore**	**57.26**	**307**	*e*P	**P**	**01 56 13.6**	**-1.3**
	comp=E,16nm,1.1s						
NIL	**Nilore**	**57.26**	**307**	*e*P	**P**	**01 56 13.6**	**-1.3**
NIL				pmax	pmax		
	comp=Z,16nm,1.1s						
KSH	**Kashi**	**57.29**	**315**	P	**P**	**01 56 15.9**	**+0.7**
KSH				pP	pP	01 56 31.9	-1.7
KSH				sP	pwP	01 56 39.6	+1.2
KSH				PcP	**PcP**	**01 57 09.1**	**+0.5**
KSH				PP	**PP**	**01 58 25.0**	**+1.9**
KSH				S	**S**	**02 04 02.8**	**-3.0**
KSH				ScS	**ScS**	**02 05 53.1**	**-4.7**
KSH				SS	**SS**	**02 07 55.1**	**-1.1**
KSH				pmax	pmax		
	comp=Z,19nm,1.2s						
KSH				pmax	pmax		
	comp=Z,43nm,5.8s						
KSH				LR	LR		
	comp=Z,73nm,5.9s						
KSH				LR	LR		
	comp=Z,89nm,6.7s						
KDJ	**Kajisay**	**57.56**	**318**	*e*P	**P**	**01 56 15.8**	**-1.3**
	comp=Z,8.3nm,0.5s						
KDJ	**Kajisay**	**57.56**	**318**	*e*P	**P**	**01 56 15.8**	**-1.3**
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NRN	**Naryn**	**58.06**	**317**	*e*P	**P**	**01 56 20.4**	**-0.3**
	comp=Z,6.3nm,0.6s						
NRN	**Naryn**	**58.06**	**317**	*e*P	**P**	**01 56 20.4**	**-0.3**
NRN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BOOM	**Boomskoye usch**	**58.55**	**318**	*e*P	**P**	**01 56 23.4**	**-0.5**
	comp=Z,3.6nm,1.0s						
BOOM				*e*PcP	**PcP**	**01 57 15.0**	**+1.4**
BOOM	**Boomskoye usch**	**58.55**	**318**	*e*P	**P**	**01 56 23.5**	**-0.5**
BOOM				*e*		01 57 15.0	
BOOM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TKM2	**Tokmak 2**	**58.96**	**318**	P	**P**	**01 56 26.3**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AAK	**Ala-Archa**	**59.58**	**318⇑**	*e*P	**P**	**01 56 30.6**	**-0.5**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAA0	**Zalesovo Array**	**59.68**	**333**	*e*P	**P**	**01 56 30.6**	**-0.7**
	comp=Z,5.4nm,1.0s						
ZALV	**Zalesovo Beam**	**59.68**	**333**	P	**P**	**01 56 30.1**	**-1.2**
	comp=Z,2.6nm,0.4s,baz=133,slow=7.5,SNR=9.4						
ZAA1	**Zalesovo Array**	**59.69**	**333**	*e*P	**P**	**01 56 30.1**	**-1.3**
KBL	**Kabul**	**60.86**	**307**	*e*P	**P**	**01 56 39.5**	**-0.5**
	comp=Z,14nm,0.8s						
KURBB	**Kurchatov Arra**	**60.87**	**327**	P	**P**	**01 56 38.6**	**-0.9**
	comp=Z,13nm,0.6s,baz=127,slow=6.5,SNR=5.1						
KURK	**Kurchatov**	**60.87**	**327**	*e*P	**P**	**01 56 39.1**	**-0.4**
	comp=Z,22nm,0.7s						
KURK	**Kurchatov**	**60.87**	**327**	*e*P	**P**	**01 56 39.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,22nm,0.7s						
SEY	**Seymchan**	**61.11**	**13⇓**	*e*P	**P**	**01 56 41.0**	**+0.1**
BTK	**Batken**	**61.18**	**314**	*e*P	**P**	**01 56 41.7**	**-0.3**
	comp=Z,22nm,1.1s						
BTK	**Batken**	**61.18**	**314**	*e*P	**P**	**01 56 41.7**	**-0.3**
BTK				pmax	pmax		
	comp=Z,22nm,1.1s						
GAR	**Garm**	**61.20**	**312**	*e*P	**P**	**01 56 41.7**	**-0.4**
	comp=Z,75nm,1.1s						
GAR	**Garm**	**61.20**	**312**	*e*P	**P**	**01 56 41.7**	**-0.4**
GAR				pmax	pmax		
	comp=Z,75nm,1.1s						
WKZ	**Wanaka**	**62.18**	**147**	*e*P	**P**	**01 56 49.5**	**+1.1**
	comp=Z,27nm,1.2s						
KK31	**Karatay Array**	**62.46**	**317**	*e*P	**P**	**01 56 49.7**	**-0.7**
	comp=Z,10.0nm,0.8s						
KK31	**Karatay Array**	**62.46**	**317**	*e*P	**P**	**01 56 49.7**	**-0.7**
KK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKAR	**Karatay Array**	**62.46**	**317**	*e*P	**P**	**01 56 49.7**	**-0.7**
	comp=Z,10.0nm,0.8s						
KKAR	**Karatay Array**	**62.46**	**317**	*e*P	**P**	**01 56 49.7**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LBZ	**Lake Benmore**	**62.54**	**146**	*e*P	**P**	**01 56 48.2**	**-2.6**
	comp=Z,29nm,1.0s						
RPZ	**Rata Peaks**	**62.61**	**145**	*e*P	**P**	**01 56 53.1**	**+1.8**
	comp=Z,31nm,1.2s						
OXZ	**Oxford**	**62.94**	**144**	*e*P	**P**	**01 56 54.1**	**+0.6**
	comp=Z,10.0nm,0.6s						
RAO	**Raoul Island**	**62.98**	**126**	*e*P	**P**	**01 56 52.5**	**-1.5**
	comp=Z,640nm,0.5s						
RAO	**Raoul Island**	**62.98**	**126**	*e*P	**P**	**01 56 52.5**	**-1.5**
OTUK	**Ortayu**	**63.30**	**323**	P	**P**	**01 56 55.2**	**-0.6**
OTUK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BKZ	**Black Stump Fm**	**63.37**	**138**	*e*P	**P**	**01 56 58.5**	**+2.0**
	comp=Z,17nm,0.9s						
BVAR	**Borovoye Array**	**66.46**	**327**	P	**P**	**01 57 15.7**	**-0.5**
	comp=Z,9.0nm,0.6s,baz=134,slow=8.6,SNR=63						
BRVK	**Borovoye**	**66.53**	**327**	*e*P	**P**	**01 57 16.2**	**-0.5**
	comp=Z,20nm,0.9s						
BRVK	**Borovoye**	**66.53**	**327**	P	**P**	**01 57 16.1**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,30nm,1.1s						
TIXI	**Tiksi**	**66.88**	**1**	*e*P	**P**	**01 57 18.5**	**0.0**
	comp=Z,8.6nm,1.0s						
TIXI	**Tiksi**	**66.88**	**1*d***	*i*P	**P**	**01 57 18.6**	**0.0**
TIXI				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL	**Bilibino**	**68.65**	**15**	*e*P	**P**	**01 57 29.6**	**-0.1**
	comp=Z,5.8nm,0.4s						
BILL	**Bilibino**	**68.65**	**15**	*e*P	**P**	**01 57 29.6**	**-0.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
GEYT	**Alibeck**	**70.21**	**309**	P	**P**	**01 57 39.6**	**-0.5**
	comp=Z,91nm,0.6s,baz=130,slow=6.2,SNR=11						
GEYT				LR	LR	02 30 59.9	
	comp=Z,39nm,21.7s,baz=150,slow=38						
GYA0B	**ALIBECK ARRAY**	**70.21**	**309**	*e*P	**P**	**01 57 41.0**	**+0.9**
	comp=Z,7.9nm,0.9s						
UOSS	**Minazif**	**70.29**	**295**	*e*P	**P**	**01 57 39.2**	**-1.5**
	comp=Z,2.7nm,0.8s						
AB31	**Akbulak array**	**71.34**	**321**	*i* P	**P**	**01 57 45.8**	**-0.8**
AB31				pmax	pmax		
	comp=Z,12nm,0.9s						
ABKAR	**Akbulak array**	**71.34**	**321**	*e*P	**P**	**01 57 46.1**	**-0.5**
	comp=Z,7.7nm,0.6s						
AKTO	**Aktyubinsk**	**72.84**	**321**	P	**P**	**01 57 54.8**	**-0.8**
	comp=Z,9.9nm,0.5s,baz=99,slow=8.3,SNR=32						
AKTO	**Aktyubinsk**	**72.84**	**321**	P	**P**	**01 57 55.0**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SVE	**Sverdlovsk**	**73.09**	**328**	*e*P	**P**	**01 57 56.9**	**0.0**
SVE				pmax	pmax		
	comp=Z,27nm,0.9s						
ARU	**Arti**	**74.07**	**328**	P	**P**	**01 58 01.8**	**-0.9**
	comp=Z,6.2nm,0.6s,baz=107,slow=3.4,SNR=26						
ARU	**Arti**	**74.07**	**328**	*e*P	**P**	**01 58 01.9**	**-0.9**
	comp=Z,20nm,0.7s						
ARU	**Arti**	**74.07**	**328*c***	*i*P	**P**	**01 58 01.7**	**-0.9**
ARU				*PP	**pP**	**01 58 20.1**	**-1.7**
ARU				S	**S**	**02 07 28.6**	**-0.7**
ARU				pmax	pmax		
	comp=Z,19nm,0.7s						
KHLU	**Kahalu`u**	**76.65**	**71**	*e*P	**P**	**01 58 16.1**	**-2.2**
	comp=Z,65nm,1.2s						
BYL	**Byron's Ledge**	**77.25**	**71**	*e*P	**P**	**01 58 18.7**	**-3.0**
	comp=Z,64nm,0.9s						
AKT	**Akhty**	**78.59**	**311**	*e*P	**P**	**01 58 28.3**	**-0.4**
AKT				*e*		01 58 34.4	
AKT				*e**PP	**pP**	**01 58 45.9**	**-2.2**
AKT				*e*		02 01 30.2	
AKT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KIRV	**Kirov**	**79.34**	**329**	P	**P**	**01 58 31.8**	**-0.5**
	comp=Z,37nm,0.6s,baz=153,slow=0.9,SNR=28						
SVW2	**Sparrevohn**	**80.00**	**29**	*e*P	**P**	**01 58 34.8**	**-1.1**
	comp=Z,3.0nm,0.7s						
RAYN	**Ar Rayn**	**80.01**	**293**	*e*P	**P**	**01 58 35.8**	**-1.0**
	comp=Z,3.9nm,0.6s						
RAYN	**Ar Rayn**	**80.01**	**293**	P	**P**	**01 58 35.8**	**-1.0**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TTA	**Tatalina**	**80.08**	**27**	*e*P	**P**	**01 58 35.8**	**-0.5**
	comp=Z,2.6nm,0.8s						
TTA	**Tatalina**	**80.08**	**27**	*e*P	**P**	**01 58 35.8**	**-0.5**
TTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TBLG	**Delisi**	**80.84**	**311**	*e*P	**P**	**01 58 42.8**	**+2.0**
	comp=Z,8.0nm,0.7s						
TBLG	**Delisi**	**80.84**	**311**	*e*P	**P**	**01 58 42.8**	**+2.0**
TBLG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KDAK	**Kodiak Island**	**81.13**	**32**	*i* P	**P**	**01 58 42.4**	**+0.5**
ZEI	**Tsey**	**81.49**	**312**	*e*P	**P**	**01 58 43.2**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PRGR	**Permogore**	**81.61**	**332**	*e*P	**P**	**01 58 43.4**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,28nm,0.8s						
CUKT	**Cukurca**	**81.62**	**307**	*i* P	**P**	**01 58 45.4**	**+0.2**
CUKT				IAML_P			
	comp=Z,256nm,0.4s						
NCK	**Nalchik**	**81.73**	**313⇑**	*e*P	**P**	**01 58 45.5**	**0.0**
NCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKH	**Akhalkalaki**	**81.77**	**311**	*e*P	**P**	**01 58 47.2**	**+1.4**
	comp=Z,6.5nm,0.8s						
AKH	**Akhalkalaki**	**81.77**	**311⇓**	*i*P	**P**	**01 58 46.6**	**+0.7**
AKH	**Akhalkalaki**	**81.77**	**311**	*e*P	**P**	**01 58 47.3**	**+1.4**
AKH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBZ	**Khabaz**	**82.24**	**313**	P	**P**	**01 58 47.6**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=150,slow=3.5,SNR=4.1						
KBZ				LR	LR	02 41 26.4	
	comp=Z,24nm,18.1s,baz=70,slow=40						
KIV	**Kislovodsk**	**82.40**	**314**	*e*P	**P**	**01 58 46.9**	**-2.2**
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
KIV				MLR	MLR		
	comp=Z,59nm,19.0s						
BPAW	**Bear Paw Mtn.**	**82.46**	**26**	*e*P	**P**	**01 58 50.1**	**+1.3**
	comp=Z,6.5nm,0.9s						
MLY	**Manley**	**82.65**	**25**	*e*P	**P**	**01 58 51.2**	**+1.3**
	comp=Z,4.3nm,0.9s						
SRTM	**Siirt_Merkez**	**82.96**	**308**	*i* P	**P**	**01 58 51.6**	**-0.6**
SRTM				IAML_P			
	comp=Z,415nm,0.3s						
MUSM	**Mu-Merkez**	**83.28**	**308**	*i* P	**P**	**01 58 53.0**	**-0.8**

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MUSM                                    IAML_P
        comp=Z,31nm,0.2s
MCK    McKinley           83.34  26     eP        P          01 58 56.2 +2.8
        comp=Z,8.9nm,0.9s
MCK    McKinley           83.34  26     eP        P          01 58 56.2 +2.8
MCK                                     pmax      pmax
        comp=Z,9.0nm,0.9s
WRH    Wood River Hil     83.75  26     eP        P          01 58 56.9 +1.5
        comp=Z,4.7nm,0.9s
COLA   College            83.86  25⇑    eP        P          01 58 56.3 +0.3
COLA                                    pmax      pmax
        comp=Z,2.0nm,0.9s
CCB    Clear Creek Bu     83.88  26     eP        P          01 58 56.9 +0.8
        comp=Z,6.0nm,1.2s
SCM    Sheep Creek Mo     84.01  28     eP        P          01 58 56.7 -0.2
        comp=Z,14nm,1.1s
SCM    Sheep Creek Mo     84.01  28     eP        P          01 58 56.7 -0.2
SCM                                     pmax      pmax
        comp=Z,14nm,1.1s
HDA    Harding Lake       84.24  26     eP        P          01 58 58.8 +0.9
        comp=Z,3.8nm,0.8s
ILAR   Eielson Array      84.27  25     P         P          01 58 57.2 -1.0
        comp=Z,0.5nm,0.6s,baz=278,slow=5.6,SNR=6.2
ILB    Eielson Array      84.27  25     eP        P          01 58 59.8 +1.6
        comp=Z,3.7nm,1.0s
VNDA   Vanda              84.40 173     P         P          01 59 00.3 +1.9
        comp=Z,0.8nm,0.6s,baz=327,slow=6.5,SNR=6.0
VSR    Storozhevoye       84.78 321     eP        P          01 58 59.8 -1.1
TNCL   Tunceli-Merkez     84.81 309     i P       P          01 58 59.2 -2.3
TNCL                                    IAML_P
        comp=Z,68nm,0.2s
LPSR   Galich'ya Gora     84.90 322     eP        P          01 59 00.9 -0.6
KELT   Kelkit             84.99 310     i P       P          01 59 03.8 +1.2
KELT                                    IAML_P
        comp=Z,252nm,0.6s
REFA   Refahiye_ERZN      85.40 309     i P       P          01 59 06.8 +2.3
REFA                                    IAML_P
        comp=Z,416nm,0.3s
MOS    Moscow             85.59 325     eP        P          01 59 03.8 -1.0
MOS                                     pmax      pmax
        comp=Z,62nm,1.1s
KEMA   Kemaliye           85.61 309     i P       P          01 59 07.3 +1.8
KEMA                                    IAML_P
        comp=Z,453nm,0.6s
HEKM   Malatya_Hekimh     86.05 309     i P       P          01 59 09.5 +1.7
HEKM                                    IAML_P
        comp=Z,1μm,0.4s
CUZAR  Zara_SIVAS         86.14 310     i P       P          01 59 09.6 +1.5
OBN    Obninsk            86.21 325     P         P          01 59 07.7 -0.2
        comp=Z,7.3nm,0.5s,baz=46,slow=1.6,SNR=20
OBN    Obninsk            86.21 325     eP        P          01 59 07.9  0.0
        comp=Z,31nm,0.6s
OBN    Obninsk            86.21 325⇑    iP        P          01 59 08.0  0.0
OBN    Obninsk            86.21 325c    iP        P          01 59 07.8 -0.1
OBN                                     e*PP      pP         01 59 25.4 -2.2
OBN                                     PPS       PPS        02 11 01.0
OBN                                     pmax      pmax
        comp=Z,85nm,1.3s
OBN                                     MLR       MLR
        comp=Z,32nm,18.0s
CUKAN  kangal_SIVAS       86.41 309     i P       P          01 59 07.4 -2.1
SAIM   ADANA              87.57 308     i P       P          01 59 10.8 -4.3
SAIM                                    IAML_P
        comp=Z,372nm,0.2s
SIRC   Yozgat             88.20 309     i P       P          01 59 18.4 +0.3
SIRC                                    IAML_P
        comp=Z,163nm,0.3s
SIM    Simferopol'        88.49 315d    eP        P          01 59 19.5 +0.3
SIM                                     pmax      pmax
        comp=Z,11nm,0.9s
BR131  Keskin Array S     89.33 310     eP        P          01 59 22.4 -0.9
        comp=Z,2.5nm,1.0s
BR131  Keskin Array S     89.33 310     eP        P          01 59 22.5 -0.9
BR131                                   pmax      pmax
        comp=Z,3.0nm,1.0s
BRTR   Keskin Array B     89.33 310     LR        LR         02 45 38.5
        comp=Z,16nm,18.7s,baz=92,slow=40
ARA0   ARCESS Array S     89.51 340     eP        P          01 59 22.9 -0.5
ARCES  ARCESS Array B     89.51 340     P         P          01 59 22.9 -0.5
        comp=Z,6.2nm,0.7s,baz=79,slow=6.3,SNR=11
SPA0   Spitsbergen Ar     89.51 349     eP        P          01 59 23.1 -0.3
        comp=Z,14nm,1.0s
SPITS  Spitsbergen Ar     89.51 349     P         P          01 59 23.1 -0.3
        comp=Z,1.1nm,0.3s,baz=90,slow=9.2,SNR=6.6
FIA0   FINESS Array S     90.93 332     eP        P          01 59 29.6 -0.6
FIA0   FINESS Array S     90.93 332     eP        P          01 59 29.6 -0.6
FINES  FINESS Array B     90.93 332     P         P          01 59 29.6 -0.6
        comp=Z,5.4nm,0.6s,baz=49,slow=5.1,SNR=36
FINES                                   LR        LR         02 43 04.7
        comp=Z,48nm,20.9s,baz=51,slow=37
FINES  FINESS Array B     90.93 332     i P       P          01 59 30.0 -0.2
FINES                                   pmax      pmax
        comp=Z,5.0nm,0.5s
AKASG  Malin Array Be     91.08 321     P         P          01 59 29.8 -1.3
        comp=Z,3.7nm,0.8s,baz=70,slow=4.6,SNR=15
AKASG  Malin Array Be     91.08 321c    eP        P          01 59 30.3 -0.8
AKASG                                   pmax      pmax
        comp=Z,2.0nm,0.6s
AKBB   Malin Array Si     91.08 321     eP        P          01 59 30.5 -0.6
        comp=Z,8.3nm,1.0s
AKBB   Malin Array Si     91.08 321     eP        P          01 59 30.5 -0.6
AKBB                                    pmax      pmax
        comp=Z,8.0nm,1.0s
CFR    Carcaliu           92.67 316⇓    iP        P          01 59 37.7 -0.9
ODBI   Odobesti           93.32 316⇑    iP        P          01 59 40.4 -1.2
VRI    Vrincioaia         93.53 316⇑    iP        P          01 59 42.7 +0.1
VRI    Vrincioaia         93.53 316     P         P          01 59 42.6  0.0
PLOR   Plostina           93.58 316⇑    iP        P          01 59 43.3 +0.4
PLOR   Plostina           93.58 316     P         P          01 59 43.2 +0.4
BIZ    Bicaz              93.75 318⇓    iP        P          01 59 43.0 -0.6
SUW    Suwalki            94.08 325     eP        P          01 59 43.6 -1.3
SUW    Suwalki            94.08 325     eP        P          01 59 43.9 -1.0
        comp=Z,46nm,0.9s
SUW    Suwalki            94.08 325     eP        P          01 59 43.9 -1.0
SUW                                     pmax      pmax
        comp=Z,46nm,0.9s
MLR    Muntele Rosu       94.14 316     P         P          01 59 44.8 -0.7
        comp=Z,4.7nm,0.7s,baz=39,slow=4.1,SNR=17
MLR    Muntele Rosu       94.14 316     eP        P          01 59 45.5  0.0
        comp=Z,6.4nm,0.8s
MLR    Muntele Rosu       94.14 316⇓    iP        P          01 59 45.4 -0.1
MLR    Muntele Rosu       94.14 316     eP        P          01 59 45.5  0.0
MLR                                     pmax      pmax
        comp=Z,6.0nm,0.8s
BURAR  Bucovina Array     94.21 318⇓    iP        P          01 59 45.9 +0.1
BUR08  Bucovina Ar. S     94.22 318     eP        P          01 59 46.1 +0.2
        comp=Z,5.6nm,0.8s
VOIR                      94.76 316⇑    iP        P          01 59 47.9 -0.5
ARR    Arges              95.06 316⇑    iP        P          01 59 50.2 +0.5
KWP    Kalwaria Pacla     95.40 321     eP        P          01 59 51.0 -0.1
KWP    Kalwaria Pacla     95.40 321     eP        P          01 59 51.0 -0.1
LOT    Lotru              95.64 316⇑    iP        P          01 59 52.3 -0.1
KOLS   Kolonicke sedl     95.84 320     eP        P          01 59 53.0 -0.1
KOLS   Kolonicke sedl     95.84 320     eP        P          01 59 53.0 -0.1
TRPA   Tarpa              95.86 319⇑    iP        P          01 59 52.8 -0.4
GZR    Gura Zlata         96.34 317⇑    iP        P          01 59 55.7 +0.2
SIRR   Siria              96.89 318⇑    iP        P          01 59 57.6 -0.3
NIE    Niedzica           96.97 321     eP        P          01 59 58.5 +0.2
NIE    Niedzica           96.97 321     eP        P          01 59 58.5 +0.3
OJC    Ojcow              97.06 322     eP        P          01 59 58.5 -0.1
OJC    Ojcow              97.06 322     eP        P          01 59 58.5 -0.1
HFS    Hagfors            97.12 332     P         P          01 59 57.4 -1.2
        comp=Z,1.5nm,0.6s,baz=108,slow=4.8,SNR=14
MDVR   Moldovita          97.21 316⇓    iP        P          01 59 58.6 -0.9
NB2    NORSAR Subarra     97.88 334     P         P          02 00 00.6 -1.5
        comp=Z,1.1nm,0.7s,baz=66,slow=4.8
NB200  NORSAR Array S     97.88 334     eP        P          02 00 00.6 -1.5
NOA    NORSAR Array B     97.88 334     P         P          02 00 00.6 -1.5
        comp=Z,1.6nm,0.7s,baz=66,slow=4.5,SNR=8.9
NOA                                     LR        LR         02 50 26.5
        comp=Z,31nm,20.2s,baz=60,slow=39
VYHS   Vyhne              98.15 320     eP        P          02 00 02.6 -1.0
VYHS   Vyhne              98.15 320     eP        P          02 00 02.6 -1.0
OKC    Ostrava-Krasne     98.19 322     eP        Pdif       02 00 04.1 +0.4
OKC    Ostrava-Krasne     98.19 322     ePDIFF    Pdif       02 00 04.1 +0.4
TULEG  Thule              98.39   4     eP        P          02 00 00.8 -3.2
        comp=Z,18nm,1.1s
MORC   Moravsky Berou     98.59 322⇓    iP        P          02 00 04.8 -0.7
MORC   Moravsky Berou     98.59 322     ePDIFF    P          02 00 04.1 -1.4
JAVC   Velka Javorina     98.78 321     ePDIFF    Pdif       02 00 07.3 +0.8
KSP    Ksiaz              99.01 323     eP        Pdif       02 00 07.8 +0.5
KSP    Ksiaz              99.01 323     eP        Pdif       02 00 07.8 +0.5
OSTC   Ostas              99.15 323     ePDIFF    Pdif       02 00 08.7 +0.7
DPC    Dobruska-Polom     99.15 323     eP        Pdif       02 00 08.6 +0.6
DPC    Dobruska-Polom     99.15 323     ePDIFF    Pdif       02 00 08.6 +0.6
CHVC   Chvalec            99.24 323     ePDIFF    Pdif       02 00 08.9 +0.5
VRAC   Vranov             99.32 321     P         Pdif       02 00 08.9 +0.1
        comp=Z,2.1nm,0.6s,baz=117,slow=4.5,SNR=4.0
VRAC   Vranov             99.32 321     ePDIFF    Pdif       02 00 09.2 +0.4
KRUC   Moravsky           99.52 321     ePDIFF    Pdif       02 00 09.7 +0.1
TREC   Trest             100.01 322     eP        Pdif       02 00 12.2 +0.4
TREC   Trest             100.01 322     ePDIFF    Pdif       02 00 12.2 +0.4
GOPC   GO Pecny, Ondr    100.23 322     eP        Pdif       02 00 12.9 +0.1
GOPC   GO Pecny, Ondr    100.23 322     ePDIFF    Pdif       02 00 12.9 +0.1
PRU    Pruhonice         100.35 323     eP        Pdif       02 00 13.5 +0.2
PRU    Pruhonice         100.35 323     ePDIFF    Pdif       02 00 13.5 +0.2
BRG    Berggiesshubel    100.40 324     ePKP      Pdif       02 00 13.1 -0.4
        comp=Z,6.2nm,0.8s
BRG    Berggiesshubel    100.40 324     P         Pdif       02 00 15.0 +1.5
BRG                                     pmax      pmax
        comp=Z,10.0nm,1.4s
CLL    Collm             100.80 324⇓    iP        Pdif       02 00 15.6 +0.3
CLL                                     pmax      pmax
        comp=Z,5.0nm,0.9s
CLL    Collm             100.80 324⇓    iPdif     Pdif       02 00 15.6 +0.3
        comp=Z,5.0nm,0.9s
KHC    Kasperske Hory    101.24 322     eP        Pdif       02 00 17.3 -0.1
KHC    Kasperske Hory    101.24 322     ePDIFF    Pdif       02 00 17.3 -0.1
GEC2   GERESS Array S    101.27 322     ePdif     Pdif       02 00 18.5 +1.0
GEC2   GERESS Array S    101.27 322     eP        Pdif       02 00 18.5 +1.0
GERES  GERESS Array B    101.27 322     P         Pdif       02 00 17.4 -0.1
        comp=Z,1.5nm,0.9s,baz=75,slow=5.2,SNR=14
LTX    Lajitas           121.08  52     ePKPdf    PKiKP      02 05 20.5 +0.6
LTX    Lajitas           121.08  52     ePKIKP    PKiKP      02 05 20.5 +0.6
TXAR   Lajitas Array     121.08  52     PKP       PKiKP      02 05 20.5 +0.6
        comp=Z,0.1nm,0.6s,baz=302,slow=1.7,SNR=2.3
TORD   Torodi Ar. Bea    122.52 289     PKP       PKPdf      02 05 22.1 -0.6
        comp=Z,1.0nm,0.5s,baz=75,slow=1.8,SNR=24
TOA1   Torodi Ar. Sit    122.52 289     ePKPdf    PKPdf      02 05 22.1 -0.6
DBIC   Dimbokro          130.27 283     PKP       PKPdf      02 05 37.7 +0.1
        comp=Z,6.8nm,1.2s,baz=137,slow=2.4,SNR=4.8
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ROM 23 01:57:46.9±0.1**, 43°.444N**±0°.004×**13°.125E**±0°.007**, h10^{km}, ML1.0**/6**, Error ellipse: s-maj=0.7km s-min=0.2km az=64.0, Central Italy**

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Code   Station Name        Δ°    AZ°    Phase ID             Time       Res
                                        Op        ISC        h  m  s    ISC
CING   Cingoli            0.09  143     P         Pg         01 57 49.5 +0.2
CING                                    S         Sg         01 57 51.3 +0.3
CING                                    AML       AML
        comp=E,229μm,0.5s
CING                                    AML       AML
        comp=N,227μm,0.1s
CING                                    AML       AML
        comp=N,227μm,0.1s
CING                                    AML       AML
        comp=E,229μm,0.5s
EL6    Elcito             0.12  188     P         Pg         01 57 50.2 +0.5
EL6                                     S         Sg         01 57 52.8 +1.0
ARVD   Arcevia            0.14  292     P         Pg         01 57 50.5 +0.4
ARVD                                    S         Sg         01 57 53.2 +0.8
ARVD                                    AML       AML
        comp=E,67μm,0.6s
ARVD                                    AML       AML
        comp=N,104μm,0.1s
ARVD                                    AML       AML
        comp=E,67μm,0.6s
ARVD                                    AML       AML
        comp=N,104μm,0.1s
ARVD                                    AML       AML
        comp=N,104μm,0.1s
ARVD                                    AML       AML
        comp=E,67μm,0.6s
COR1   Corinaldo          0.21  334     P         Pg         01 57 52.3 +1.1
COR1                                    S         Sg         01 57 55.9 +1.7
SNTG   Esanatoglia        0.23  215     P         Pg         01 57 52.3 +0.7
SNTG                                    S         Sg         01 57 56.4 +1.5
SNTG                                    AML       AML
        comp=E,24μm,0.9s
SNTG                                    AML       AML
        comp=N,42μm,0.4s
SNTG                                    AML       AML
        comp=E,24μm,0.9s
SNTG                                    AML       AML
        comp=N,42μm,0.4s
SNTG                                    AML       AML
        comp=E,24μm,0.9s
SNTG                                    AML       AML
        comp=N,42μm,0.4s
FRON   Frontone           0.30  284     P         Pg         01 57 53.4 +0.5
FRON                                    S         Sb         01 57 58.7 -0.8
MPAG   Monte Paganucc     0.32  305     P         Pg         01 57 53.8 +0.4
MPAG                                    S         Sb         01 57 59.1 -1.1
FSSB   Fossombrone        0.35  315     P         Pg         01 57 54.5 +0.6
FSSB                                    S         Sb         01 58 00.5 -0.6
FSSB                                    AML       AML
        comp=E,50μm,0.6s
FSSB                                    AML       AML
        comp=N,82μm,0.3s
FSSB                                    AML       AML
        comp=E,50μm,0.6s
FSSB                                    AML       AML
        comp=N,82μm,0.3s
FSSB                                    AML       AML
        comp=E,50μm,0.6s
FSSB                                    AML       AML
        comp=N,82μm,0.3s
CSP1   Cessapalombo       0.36  171     P         Pg         01 57 54.5 +0.5
CSP1                                    S         Sb         01 58 00.7 -0.5
FDMO   Fiordimonte        0.41  184     P         Pg         01 57 55.3 +0.4
FDMO                                    S         Sb         01 58 02.1 -0.5
FDMO                                    AML       AML
        comp=E,20μm,0.2s
FDMO                                    AML       AML
        comp=N,17μm,0.1s
FDMO                                    AML       AML
        comp=E,20μm,0.2s
FDMO                                    AML       AML
        comp=N,17μm,0.1s
PIEI   Pieia              0.44  282     P         Pg         01 57 55.8 +0.3
PIEI                                    S         Sb         01 58 02.8 -0.6
PIEI                                    AML       AML
        comp=E,22μm,1.1s
PIEI                                    AML       AML
        comp=N,13μm,1.1s
PIEI                                    AML       AML
        comp=E,22μm,1.1s
PIEI                                    AML       AML
        comp=N,13μm,1.1s
PIEI                                    AML       AML
        comp=N,13μm,1.1s
PIEI                                    AML       AML
        comp=E,22μm,1.1s
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*IDC **23** 02:03:05.2±1.6, 41°.55S×174°.23E, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.6/22, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=42.6km s-min=20.0km az=133.0*

*ISCJB **23** 02:03:07.6±0.3, 41°.72S±0°.02×174°.23E±0°.03, h17^{km}±3^{km}, mb3.6/2, Error ellipse: s-maj=4.6km s-min=2.4km az=137.3*

*NEIC **23** 02:03:07.0±0.0, 41°.65S×174°.22E, h8^{km}, ML4.0(WEL), After WEL.*

NEIC Felt at Lower Hutt.

*WEL **23** 02:03:07.2, 42°S±1°×174°.2E±0°.5, h12^{km}±1^{km}, M3.9/25, ML4.2/19, MLv3.9/25, Error ellipse: s-maj=0.0km s-min=0.0km az=175.4*

ISC 23 02:03:07.1±0.8**, 41°.66S**±0°.03×**174°.22E**±0°.02**, h16**^{km}±5^{km}**, n98, σ1^{s}36**/118**, Cook Strait**

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Code   Station Name        Δ°    AZ°    Phase ID             Time       Res
                                        Op        ISC        h  m  s    ISC
CMWZ   Cape Campbell      0.09  183     P         Pg         02 03 10.5 +0.1
CMWZ                                    S         Sg         02 03 13.0 +0.4
BSWZ   Blackbirch Sta     0.26  258     P         Pb         02 03 13.4 -0.2
BSWZ                                    S         Sb         02 03 17.9 +0.1
TUWZ   Tuamarina          0.31  318     P         Pb         02 03 14.1 -0.2
TUWZ                                    S         Sb         02 03 19.0 -0.1
TCW    Tory Channel       0.45    5     P         Pb         02 03 16.4 -0.3
TCW                                     S         Sb         02 03 22.7 -0.5
SNZO   South Karori       0.50   46     ePg       Pb         02 03 17.5 -0.1
SNZO                                    eSg       Sg         02 03 22.8 -1.1
BHW    Baring Head        0.55   63     P         Pb         02 03 18.8 +0.4
NNZ    Nelson             0.77  305     P         Pb         02 03 22.4 +0.2
PLWZ   Palliser           0.78   84     P         Pb         02 03 23.4 +1.0
MSWZ   Moikau Station     0.81   73     P         Pb         02 03 23.6 +0.8
CAW    Cannon Point       0.84   49     P         Pb         02 03 23.7 +0.3
DUWZ   D'Urville Isla     0.89  345     P         Pb         02 03 24.5 +0.4
KHZ    Kahutara           0.91  214     ePn       Pn         02 03 26.2 +0.9
KHZ                                     eSn       Sn         02 03 39.0 +0.9
KHZ    Kahutara           0.91  214     P         Pn         02 03 26.4 +1.1
THZ    Tophouse           0.99  264     ePn       Pb         02 03 26.8 +0.9
THZ                                     eSg       Sg         02 03 37.4 -1.9
THZ    Tophouse           0.99  264     P         Pb         02 03 26.8 +0.9
MTW    Mount Morrison     1.09   63     P         Pn         02 03 28.3 +0.6
OGWZ   Otaki Gorge        1.11   41     P         Pn         02 03 28.4 +0.4
TRWZ   Traveller          1.13   77     P         Pb         02 03 28.7 +0.4
HOWZ   Holdsworth Sta     1.24   52     P         Pg         02 03 30.7 -0.3
TMWZ   Te Maipa           1.37   67     P         Pn         02 03 32.5 +0.8
MRZ    Mangatainoka R     1.43   46     P         Pb         02 03 33.4  0.0
QRZ    Quartz Range       1.52  303     ePn       Pg         02 03 35.8 -0.6
QRZ                                     eSn       Sn         02 03 53.8 +0.5
QRZ    Quartz Range       1.52  303     P         Pg         02 03 35.8 -0.6
TIWZ   Tintock            1.54   55     P         Pn         02 03 34.8 +0.9
GVZ    Greta Valley S     1.57  214     P         Pn         02 03 35.5 +1.0
OHWZ   Ohakea             1.67   30     P         Pg         02 03 38.6 -0.7
PRWZ   Pori Road          1.72   51     P         Pn         02 03 37.4 +1.0
POWZ   Post Office Ro     1.73   43     P         Pb         02 03 38.0 -0.4
DSZ    Denniston Nort     1.81  267     P         Pb         02 03 40.2 +0.2
BFZ    Birch Farm         1.81   58     ePn       Pn         02 03 36.9 -0.8
BFZ                                     eSn       Sn         02 04 01.2 +0.8
BFZ    Birch Farm         1.81   58     P         Pn         02 03 38.5 +0.7
LTZ    Lake Taylor        1.83  232     ePn       Pn         02 03 39.2 +1.3
LTZ                                     eSn       Sn         02 04 00.3 -0.6
LTZ    Lake Taylor        1.83  232     P         Pn         02 03 39.3 +1.3
AMCZ   Amberley           1.91  217     P         Pn         02 03 39.6 +0.5
WAZ    Wanganui           1.99   17     P         Pg         02 03 44.1 -1.3
DVHZ   Dannevirke         2.00   48     P         Pn         02 03 41.6 +1.2
TSZ    Takapari Road      2.07   40     P         Pn         02 03 42.0 +0.6
LREZ   Lake Rotokare      2.20    4     P         Pb         02 03 47.2 +0.7
OKCZ   Okains Bay         2.23  202     P         Pn         02 03 43.3 -0.2
CRLZ   Canterbury Las     2.25  211     ePn       Pn         02 03 44.8 +1.1
NMEZ   Namu Road          2.26  353     P         Pb         02 03 47.3 -0.3
PRHZ   Porangahau         2.30   54     P         Pn         02 03 44.5 +0.1
PNHZ   Pukenui            2.30   41     P         Pn         02 03 45.0 +0.5
PREZ   Palmer Road        2.31  359     P         Pb         02 03 48.3 -0.2
OXZ    Oxford             2.32  223     ePn       Pn         02 03 44.6 -0.1
OXZ    Oxford             2.32  223     P         Pn         02 03 44.6 -0.1
INZ    Inchbonnie         2.32  242     P         Pn         02 03 46.1 +1.4
MQZ    McQueen's Vall     2.35  209     ePn       Pn         02 03 44.4 -0.7
MQZ    McQueen's Vall     2.35  209     P         Pn         02 03 44.2 -0.8
KHEZ   Kahui Hut          2.37  356     P         Pb         02 03 50.5 +1.1
NBEZ   Newall Road No     2.40  353     P         Pb         02 03 49.1 -0.9
DREZ   Durham Road        2.47  360     P         Pb         02 03 50.5 -0.7
PKE    Pukeiti            2.47  356     P         Pb         02 03 50.1 -1.1
VRZ    Vera Road          2.57    9     P         Pb         02 03 51.8 -0.9
PXZ    Pawanui            2.58   52     P         Pn         02 03 48.3  0.0
KRHZ   Kereru             2.59   40     P         Pn         02 03 49.0 +0.5
WHVZ   Whangaehu Hut      2.59   24     P         Pb         02 03 53.2 -0.2
KAHZ   Kahuranaki         2.75   48     P         Pn         02 03 51.0 +0.4
KWHZ   Kaweka Forest      2.79   38     P         Pb         02 03 58.4 +1.7
KATZ   Kakaramea          2.91   23     P         Pb         02 03 59.2 +0.5
WVZ    Waitaha Valley     2.94  240     P         Pb         02 03 57.7 -1.5
RATZ   Rangitukua         3.03   24     P         Pg         02 04 03.9 -1.4
BKZ    Black Stump Fm     3.04   36     ePn       Pn         02 03 55.4 +0.8
BKZ                                     eSn       Sn         02 04 31.0 +0.3
BKZ    Black Stump Fm     3.04   36     P         Pb         02 04 02.4 +1.6
RPZ    Rata Peaks         3.11  228     Pn        Pn         02 03 55.4 -0.2
        5.6nm,0.3s,baz=100,slow=1.7,SNR=12
RPZ                                     Pg        Pb         02 04 03.7 +1.6
        64nm,0.3s,baz=320,slow=3.4,SNR=82
RPZ                                     Sn        Sn         02 04 31.6 -0.8
        12nm,0.3s,baz=151,slow=21,SNR=10
RPZ    Rata Peaks         3.11  228     ePn       Pn         02 03 56.1 +0.5
RPZ                                     eSn       Sn         02 04 34.6 +2.2
RPZ    Rata Peaks         3.11  228     P         Pn         02 03 56.0 +0.5
WATZ   Wairara            3.17   22     P         Pb         02 04 05.0 +1.9
HIZ    Hauiti             3.18    9     ePn       Pn         02 03 58.8 +2.3
HIZ                                     eSn       Sn         02 04 33.6 -0.5
HIZ    Hauiti             3.18    9     P         Pn         02 04 00.2 +3.7
MRHZ   Matea Rd           3.29   31     P         Pb         02 04 06.6 +1.6
TLZ    Tolley Road        3.48   17     P         Pb         02 04 05.8 -2.5
FOZ    Fox Glacier        3.75  239     ePn       Pn         02 04 05.2 +0.9
FOZ                                     eSn       Sn         02 04 49.0 +0.8
FOZ    Fox Glacier        3.75  239     P         Pn         02 04 07.3 +2.9
LBZ    Lake Benmore       4.02  226     ePn       Pn         02 04 08.4 +0.3
LBZ                                     eSn       Sn         02 04 53.9 -1.0
LBZ    Lake Benmore       4.02  226     P         Pn         02 04 10.3 +2.2
TOZ    Tahuroa Road       4.05   15     P         Pn         02 04 12.3 +3.9
URZ    Urewera            4.06   34     Pn        Pn         02 04 06.8 -1.7
        0.9nm,0.3s,baz=235,slow=7.6,SNR=3.2
URZ                                     Pg        Pb         02 04 17.4 -0.8
        5.3nm,0.3s,baz=246,slow=6.2,SNR=8.0
URZ                                     Sn        Sn         02 04 53.2 -2.5
        3.9nm,0.3s,baz=194,slow=17,SNR=2.3
URZ    Urewera            4.06   34     ePn       Pn         02 04 07.4 -1.2
URZ                                     eSn       Sn         02 04 55.2 -0.5
ODZ    Otahua Downs       4.27  216     ePn       Pn         02 04 10.3 -1.2
ODZ                                     ePg       Pb         02 04 19.9 -1.9
ODZ    Otahua Downs       4.27  216     P         Pn         02 04 11.1 -0.4
TWGZ   Tauwhareparae      4.52   41     P         Pn         02 04 20.9 +5.9
AWAZ   Awhitu Peninsu     4.60    4     P         Pn         02 04 20.0 +3.9
MKAZ   Moumakai           4.61    9     P         Pn         02 04 18.7 +2.6
JCZ    Jackson Bay        4.67  237     P         Pn         02 04 21.2 +4.2
WIAZ   Waiheke Island     4.91    9     P         Pn         02 04 23.8 +3.5
WKZ    Wanaka             4.95  228     ePn       Pn         02 04 20.7 -0.1
WKZ                                     eSn       Sn         02 05 17.7  0.0
TUZ    Tuapeka            5.43  216     P         Pn         02 04 28.2 +0.9
WCZ    Waipu Caves        5.71    1     P         Pn         02 04 36.5 +5.2
MLZ    Mavora Lakes       5.78  228     ePg       Pg         02 04 55.6 -2.1
SYZ    Scrubby Hill       6.09  215     P         Pn         02 04 37.3 +0.8
WHZ    Wether Hill Ro     6.21  225     ePn       Pn         02 04 39.3 +1.2
DCZ    Deep Cove          6.39  231     ePn       Pn         02 04 42.4 +1.9
OUZ    Omahuta            6.45  355     ePn       Pn         02 04 43.4 +2.0
CTZ    Chatham Island     7.06  110     P         Pn         02 04 52.2 +2.4
ASAR   Alice Springs     37.98  285     P         P          02 10 24.1 -0.3
        0.3nm,0.4s,baz=130,slow=7.1,SNR=7.8
WRA    Warramunga Arr    40.05  290     P         P          02 10 42.5 +0.8
        1.6nm,0.7s,baz=126,slow=7.6,SNR=3.8
TORD   Torodi Ar. Bea   150.86  195     PKPbc     PKPbc      02 23 00.3 +1.1
        0.4nm,0.5s,baz=159,slow=3.6,SNR=8.5
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*NIED **23** 02:03:00, 37°.60N×141°.80E, h47^{km}, Mw4.4 Best double couple: M$_0$4.59000×10^{15} NP1:ϕ_s41.00000°, δ22.00000°, λ97.00000°. NP2:ϕ_s213.00000°, δ69.00000°, λ87.00000°.*

*MOS **23** 02:03:45.2±1.4, 37°.50N×141°.82E, h52^{km}, mb4.7/27, Error ellipse: s-maj=8.8km s-min=5.5km az=101.7*

*BJI **23** 02:03:45.3±0.0, 37°.54N×141°.73E, h51^{km}, mb4.6/34, mB4.7/24, Ms3.8/12, Ms7 3.7/13*

*ISCJB **23** 02:03:45.3±0.5, 37°.52N±0°.02×141°.81E±0°.04, h50^{km}±3^{km}, mb4.5/98, MS3.4/10, Error ellipse: s-maj=5.2km s-min=3.5km az=30.5*

*JMA **23** 02:03:46.3±0.1, 37°.57N×141°.76E, h48^{km}±2^{km}, M4.6*

JMA Felt III J1.

*IDC **23** 02:03:47.1±0.5, 37°.51N×141°.67E, h54^{km}±4^{km}, mb4.0/21, mb1 4.2/26, mb1mx4.1/40, mbtmp4.3/26, MS3.3/12, Ms1 3.3/12, ms1mx3.1/38, Error ellipse: s-maj=13.3km s-min=11.3km az=113.0*

*NEIC **23** 02:03:47.5±2.2, 37°.53N×141°.70E, h56^{km}±6^{km}, mb4.5/75, Error ellipse: s-maj=10.5km s-min=7.0km az=104.0*

NEIC Recorded [3 JMA] in Fukushima.

ISC 23 02:03:46.6±0.4**, 37°.50N**±0°.04×**141°.81E**±0°.05**, h52**^{km}±3^{km}**, h52^{km}:pP-P, n255, σ1^{s}54**/262**, mb4.4**/111**, MS3.3**/10**, 14C-22D, Near east coast of eastern Honshu**

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Code   Station Name        Δ°    AZ°    Phase ID             Time       Res
                                        Op        ISC        h  m  s    ISC
JFK    Kawauchi           0.76  260    ⇓P         Pn         02 04 00.5 -0.8
JFK                                     S         Sn         02 04 10.8 -1.1
JMST   Minamisoumatoc     0.77  287    ⇓P         Pn         02 04 00.1 -1.2
JMST                                    S         Sn         02 04 10.0 -2.1
JIKH   Ishinomakikobu     0.85  341    ⇓P         Pn         02 04 01.0 -1.5
JIKH                                    S         Sn         02 04 11.4 -2.7
JMM    Marumori           0.89  295    ⇓P         Pn         02 04 01.8 -1.1
JMM                                     S         Sn         02 04 12.7 -2.2
ONAJ   Iwakimizuishiy     0.90  244    ⇓P         Pn         02 04 02.6 -0.6
ONAJ                                    S         Sn         02 04 14.1 -1.2
JIO    Ouri               1.02  339    ⇓P         Pn         02 04 03.3 -1.4
JIO                                     S         Sn         02 04 15.3 -2.7
JFT    Otama              1.17  271    ⇓P         Pn         02 04 06.7 -0.1
JFT                                     S         Sn         02 04 21.4 -0.3
JOU    Okura              1.25  314    ⇓P         Pn         02 04 06.8 -1.0
JOU                                     S         Sn         02 04 22.2 -1.5
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JMK	**Ichinoseki**	1.52	342	⇓P	Pn	02 04 10.7	-0.8
JMK				*e*S	Sn	02 04 28.9	-1.2
JYS	**Shirataka**	1.56	298	⇓P	Pn	02 04 11.3	-0.7
JYS				S	Sn	02 04 31.1	0.0
JFY	**Yanaizu**	1.68	267	⇓P	Pn	02 04 13.6	-0.1
JFY				S	Sn	02 04 33.9	-0.2
JYK	**Kaneyama**	1.82	321	⇓P	Pn	02 04 14.9	-0.6
JYK				S	Sn	02 04 36.4	-1.0
JYA	**Atsumi**	1.98	304	⇓P	Pn	02 04 17.3	-0.5
JYA				*e*S	Sn	02 04 41.0	-0.4
JNS	**Sasagawa**	2.01	280	⇓P	Pn	02 04 17.9	-0.2
JOM	**Ohasama**	2.01	348	⇓P	Pn	02 04 17.4	-0.7
JOM				*e*S	Sn	02 04 40.6	-1.5
MJAR	**Matsushiro Arr**	3.04	253	P	Pn	02 04 32.4	+0.2
	3.1nm,0.3s,baz=40,slow=12,SNR=83						
MJAR				S	Sn	02 05 08.0	+0.6
	2.0nm,0.3s,baz=78,slow=17,SNR=4.2						
MJAR				LR	LR	02 06 03.9	
	comp=Z,680nm,20.1s,baz=90,slow=47						
MAJO	**Matsushiro**	3.04	253	*e*Pn	Pn	02 04 33.5	+1.2
MAJO				*e*Sn	Sn	02 05 07.2	-0.2
MAJO	**Matsushiro**	3.04	253	*e*P	Pn	02 04 33.5	+1.2
MAJO				*e*		02 05 07.2	
MAT	**Matsushiro**	3.04	253	P	Pn	02 04 33.3	+1.0
MAT				S	Sn	02 05 11.0	+3.6
MJB9	**Matsu-Tunnel**	3.04	253	*e*Pn	Pn	02 04 33.7	+1.4
MJB9				*e*Sn	Sn	02 05 07.2	-0.3
INU	**Inuyama**	4.42	242	*e*Pn	Pn	02 04 50.2	-1.0
INU				*e*Sn	Sn	02 05 37.7	-3.7
ERM	**Erimo**	4.62	13	*e*Pn	Pn	02 04 52.7	-1.2
ERM				*e*Sn	Sn	02 05 45.3	-1.0
ERM	**Erimo**	4.62	13	*e*P	Pn	02 04 52.7	-1.2
ERM				*e*		02 05 45.3	
JHJ2	**Mitsune**	4.67	201	*e*Pn	Pn	02 04 55.1	+0.5
JHJ2				*e*Sn	Sn	02 05 43.7	-3.9
JHJ	**Hachijo jima 2**	4.68	201	P	Pn	02 04 54.2	-0.4
	22nm,0.3s,baz=72,slow=20,SNR=6.5						
JHJ				S	Sn	02 05 45.5	-2.2
	104nm,0.3s,baz=68,slow=24,SNR=8.8						
ASAJ	**Asahikawa**	6.63	5	P	Pn	02 05 19.9	-1.6
	2.1nm,0.3s,baz=207,slow=8.6,SNR=5.8						
ASAJ				S	Sn	02 06 32.2	-3.5
	2.6nm,0.3s,baz=163,slow=19,SNR=2.8						
YUK	**Yuzh-Kuril'sk**	7.21	24	*e*P	Pn	02 05 24.0	-5.4
YUK				*e*S	Sn	02 06 44.3	-5.5
YUK				pmax	pmax		
	comp=N,59nm,0.3s						
YUK				pmax	pmax		
	comp=E,103nm,0.3s						
YUK				pmax	pmax		
	comp=Z,89nm,0.3s						
TEY	**Ternei**	8.49	334	⇓*e*P	Pn	02 05 51.4	+4.6
TEY				pmax	pmax		
	comp=Z,40nm,0.9s						
TEY				pmax	pmax		
	comp=N,50nm,0.8s						
TEY				pmax	pmax		
	comp=E,30nm,0.8s						
KUR	**Kuril'sk**	8.96	29	P	Pn	02 05 47.3	-6.0
KUR				pmax	pmax		
	comp=N,9.0nm,0.3s						
KUR				pmax	pmax		
	comp=Z,18nm,0.3s						
KUR				pmax	pmax		
	comp=E,12nm,0.1s						
VLA	**Vladivostok**	9.43	310	*e*P	Pn	02 06 03.3	+3.6
VLA				pmax	pmax		
	comp=Z,61nm,1.3s						
YSS	**Yuzh-Sakhalins**	9.47	4	*e*P	Pn	02 06 00.3	0.0
YSS				*e*S	Sn	02 07 43.2	-2.0
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
JNU	**Nakatsue**	9.95	247	P	Pn	02 06 06.3	-0.5
	comp=Z,0.5nm,0.3s,baz=59,slow=16,SNR=2.9						
JNU				LR	LR	02 10 26.4	
	comp=Z,234nm,19.6s,baz=32,slow=41						
USA0B	**Ussuriysk Arra**	10.00	315	*e*Pn	Pn	02 06 08.5	+0.9
USRK	**Ussuriysk Ar.**	10.00	315	P	Pn	02 06 07.8	+0.2
	comp=Z,0.9nm,0.3s,baz=127,slow=12,SNR=22						
USRK				LR	LR	02 09 47.5	
	comp=Z,255nm,18.7s,baz=139,slow=36						
KSRS	**Korea Array**	11.04	274	P	Pn	02 06 24.9	+3.1
	comp=Z,0.4nm,0.3s,baz=87,slow=14,SNR=20						
KSRS				LR	LR	02 10 31.9	
	comp=Z,201nm,18.7s,baz=84,slow=37						
MDJ	**Mudanjiang**	11.64	311	*e*Pn	Pn	02 06 30.3	+0.4
KLR	**Kul'dur**	13.80	331	P	Pn	02 07 00.6	+1.2
	comp=Z,0.2nm,0.3s,baz=118,slow=12,SNR=8.0						
KLR				LR	LR	02 12 20.6	
	comp=Z,152nm,18.6s,baz=158,slow=37						
KLR	**Kul'dur**	13.80	331	*i* P	Pn	02 07 01.2	+1.8
KLR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PETK	**Petropavlovsk-**	19.12	30	pP	pP	02 08 19.5	+2.8
	comp=Z,0.2nm,0.3s,baz=207,slow=6.1,SNR=4.1						
PETK				LR	LR	02 16 30.6	
	comp=Z,52nm,19.0s,baz=224,slow=40						
NJ2	**Nanjing**	19.61	261	*e*P	P	02 08 11.1	+0.5
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
TIA	**Tai'an**	19.79	274	P	P	02 08 12.6	0.0
TIA				pmax	pmax		
	comp=Z,14nm,0.9s						
BJT	**Baijiatuau**	20.14	285	*e*P	P	02 08 13.1	-3.2
	comp=Z,6.6nm,0.8s						
BJT	**Baijiatuau**	20.14	285	*e*P	P	02 08 13.1	-3.2
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YHNB	**Yeheng**	21.62	240	*e*P	P	02 08 31.3	-1.2
	comp=Z,17nm,1.2s						
MA2	**Magadan**	22.83	12	pP	pP	02 08 58.1	+1.2
	comp=Z,18nm,0.7s,baz=190,slow=8.4,SNR=5.4						
MA2				LR	LR	02 18 54.5	
	comp=Z,18nm,18.8s,baz=192,slow=40						
HHC	**Hu-ho-hao-te**	23.63	288	*e*P	P	02 08 52.1	-1.0
HHC				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC				pmax	pmax		
	comp=Z,91nm,5.3s						
WHN	**Wuhan**	23.75	261	⇓P	P	02 09 06.5	+12
GUMO	**Guam**	23.97	173	LR	LR	02 18 51.1	
	comp=Z,25nm,21.4s,baz=38,slow=38						
YAK	**Yakutsk**	25.69	347	*e*P	P	02 09 09.0	-2.4
YAK				*e*S	S	02 13 33.8	-2.3
YAK				*e**SS	sS	02 13 59.4	+1.1
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				smax	smax		
	comp=N,57nm,1.5s						
YAK				smax	smax		
	comp=E,25nm,1.5s						
YAK				MLR	MLR		
	comp=Z,90nm,20.0s						
YAK				MLR	MLR		
	comp=N,70nm,19.0s						
YAK				MLR	MLR		
	comp=E,61nm,21.0s						
SEY	**Seymchan**	26.27	11	P	P	02 09 18.6	+1.9
	comp=E,1.9nm,0.6s,baz=204,slow=8.1,SNR=5.9						
SEY				pP	pP	02 09 31.1	+1.2
	comp=E,11nm,0.8s,baz=225,slow=7.1,SNR=14						
XAN	**Xi'an**	26.83	273	P	P	02 09 23.9	+1.7
XAN				pP	pP	02 09 32.3	-3.1
XAN				pmax	pmax		
	comp=E,11nm,0.8s						
BOD	**Bodaibo**	27.31	327	*e*P	P	02 09 32.2	+6.1
SONA0	**Songino Array**	27.79	303	*e*P	P	02 09 29.5	-1.3
SONM	**Songino Array**	27.79	303	P	P	02 09 29.5	-1.3
	comp=E,1.1nm,0.6s,baz=107,slow=9.6,SNR=8.3						
H11N2	**WAKE ISLAND Hy**	28.12	122	T	T	02 39 08.3	
	baz=315,slow=75,SNR=56						
H11N1	**WAKE ISLAND Hy**	28.13	122	T	T	02 39 09.0	
	baz=315,slow=75,SNR=999						
H11N3	**WAKE ISLAND Hy**	28.14	122	T	T	02 39 09.4	
	baz=315,slow=75,SNR=60						
H11S1	**WAKE ISLAND Hy**	28.85	124	T	T	02 40 01.9	
	baz=316,slow=76,SNR=812						
H11S3	**WAKE ISLAND Hy**	28.85	124	T	T	02 40 04.2	
	baz=316,slow=76,SNR=766						
H11S2	**WAKE ISLAND Hy**	28.87	124	T	T	02 40 03.1	
	baz=316,slow=76,SNR=624						
ZAK	**Zakamensk**	30.23	308	*e*P	P	02 09 51.3	-1.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LZH	**Lanzhou**	30.31	279	*e*P	P	02 09 55.0	+1.8
LZH				pP	pP	02 10 08.9	+2.4
LZH				sP	sP	02 10 15.6	+2.9
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,63nm,4.8s						
LZH				LR	LR		
	comp=Z,220nm,12.9s						
LZH				LR	LR		
	comp=Z,220nm,13.1s						
LZH				LR	LR		
	comp=Z,380nm,16.3s						
CD2	**Chengdu**	31.99	270	*e*P	P	02 10 07.3	-0.7
GTA	**Gaotai**	32.73	287	*e*P	P	02 10 15.0	+0.5
GTA				pP	pP	02 10 27.8	0.0
GTA				sP	sP	02 10 32.3	-1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,55nm,5.9s						
GTA				LR	LR		
	comp=Z,61nm,19.4s						
GTA				LR	LR		
	comp=Z,78nm,20.6s						
GTA				LR	LR		
	comp=Z,130nm,20.6s						
BILL	**Bilibino**	33.49	16	*i* P	P	02 10 21.1	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	**Tiksi**	34.87	353	*e*P	P	02 10 33.3	+0.9
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KWAJ	**Kwajalein Atol**	36.88	134	*e*P	P	02 10 49.3	-1.0
	comp=Z,603nm,1.5s						
KWAJ	**Kwajalein Atol**	36.88	134	*e*P	P	02 10 49.3	-1.0
SIJI	**Sorong**	39.41	197	LR	LR	02 23 57.1	
	comp=Z,114nm,21.8s,baz=82,slow=31						
WMQ	**Urumqi**	40.92	296	*e*P	P	02 11 26.4	+2.6
WMQ				pP	sP	02 11 40.8	-2.8
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.3s						
ZAA0	**Zalesovo Array**	41.84	312	*e*P	P	02 11 30.4	-0.8
	comp=Z,3.7nm,0.8s						
ZAA1	**Zalesovo Array**	41.84	312	*e*P	P	02 11 30.7	-0.4
ZAA1				*e*PcP	PcP	02 13 26.0	-0.1
ZALV	**Zalesovo Beam**	41.84	312	P	P	02 11 30.7	-0.4
	comp=Z,2.3nm,0.5s,baz=100,slow=6.6,SNR=10						
ZALV				PcP	PcP	02 13 26.0	-0.1
	comp=Z,1.1nm,0.5s,baz=124,slow=3.9,SNR=3.7						
ZALV				pPcP		02 13 41.5	
	comp=Z,3.9nm,0.8s,baz=122,slow=3.7,SNR=5.9						
CMAR	**Chiang Mai Arr**	41.92	255	LR	LR	02 30 10.7	
	comp=Z,39nm,18.2s,baz=132,slow=38						
MK32	**Makanchi Array**	44.14	302	*e*P	P	02 11 50.0	0.0
MKAR	**Makanchi Array**	44.14	302	P	P	02 11 50.0	0.0
	comp=Z,6.2nm,0.8s,baz=89,slow=9.7,SNR=21						
MKAR				pPcP		02 13 46.8	
	comp=Z,1.8nm,0.8s,baz=70,slow=4.7,SNR=4.1						
MKAR	**Makanchi Array**	44.14	302	*ce*P	P	02 11 50.5	+0.6
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAKZ	**Makanchi**	44.35	302	*e*P	P	02 11 51.6	+0.1
	comp=Z,8.4nm,0.9s						
MAKZ	**Makanchi**	44.35	302	*e*P	P	02 11 51.7	+0.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	**Kurchatov**	45.90	308	*e*P	P	02 12 03.3	-0.4
	comp=Z,13nm,0.7s						
KURK	**Kurchatov**	45.90	308	*e*P	P	02 12 03.8	+0.1
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURBB	**Kurchatov Arra**	45.97	308	P	P	02 12 03.4	-1.0
	comp=Z,6.9nm,0.8s,baz=83,slow=8.1,SNR=48						
KURBB				PcP	PcP	02 13 39.8	-0.5
	comp=Z,0.7nm,0.8s,baz=95,slow=3.0,SNR=2.6						
KURBB				pPcP		02 13 55.2	
	comp=Z,1.7nm,0.8s,baz=79,slow=4.0,SNR=5.4						
KDAK	**Kodiak Island**	46.54	42	P	P	02 12 08.5	-0.1
	comp=Z,7.6nm,0.6s,baz=302,slow=4.3,SNR=8.7						
KDAK	**Kodiak Island**	46.54	42	*e*P	P	02 12 08.5	-0.1
	comp=Z,9.0nm,0.8s						
KDAK	**Kodiak Island**	46.54	42	*i* P	P	02 12 09.2	+0.5
PMG	**Port Moresby**	46.93	173	*e*P	P	02 12 11.3	-0.8
	comp=Z,24nm,1.0s						
PMG	**Port Moresby**	46.93	173	*e*P	P	02 12 11.3	-0.8
PMG				pmax	pmax		
	comp=Z,24nm,1.0s						
MLY	**Manley**	47.28	32	*e*P	P	02 12 14.6	+0.1
	comp=Z,5.0nm,1.2s						
PMR	**Palmer**	48.06	37	*e*P	P	02 12 19.6	-0.9
	comp=Z,4.4nm,0.7s						
PMR	**Palmer**	48.06	37	*e*P	P	02 12 19.6	-0.9
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RND	**Reindeer**	48.11	34	*e*P	P	02 12 21.4	+0.4
	comp=Z,3.0nm,0.6s						
RND	**Reindeer**	48.11	34	*e*P	P	02 12 21.4	+0.4
RND				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GHO	**Glory Hole Cre**	48.15	37	*e*P	P	02 12 22.2	+1.0
WRH	**Wood River Hil**	48.42	33	*e*P	P	02 12 24.0	+0.8
	comp=Z,1.8nm,0.8s						
SML	**Sawmill**	48.43	37	*e*P	P	02 12 23.0	-0.4
	comp=Z,5.5nm,0.8s						
SML	**Sawmill**	48.43	37	*e*P	P	02 12 23.0	-0.4
SML				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SCM	**Sheep Creek Mo**	48.90	37	*e*P	P	02 12 27.7	+0.7
	comp=Z,3.5nm,0.8s						
SCM	**Sheep Creek Mo**	48.90	37	*e*P	P	02 12 27.7	+0.7
SCM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HDA	**Harding Lake**	48.92	33	*e*P	P	02 12 28.0	+0.9
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	48.93	33	P	P	02 12 27.5	+0.4
	comp=Z,3.1nm,0.7s,baz=269,slow=6.4,SNR=30						
ILB	**Eielson Array**	48.93	33	*e*P	P	02 12 27.7	+0.6
	comp=Z,3.6nm,0.8s						
BOOM	**Boomskoye usch**	49.58	298	*e*P	P	02 12 31.4	-1.2
	comp=Z,4.2nm,0.8s						
BOOM	**Boomskoye usch**	49.58	298	*e*P	P	02 12 31.4	-1.2
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HNR	**Honiara**	49.68	156	*e*P	P	02 12 32.7	-0.7
	comp=Z,84nm,0.4s						
HNR	**Honiara**	49.68	156	*e*P	P	02 12 32.7	-0.7
RIDG	**Independent Ri**	49.88	34	*e*P	P	02 12 33.8	-0.7
	comp=Z,4.1nm,1.2s						
DOT	**Dot Lake**	50.24	34	*e*P	P	02 12 36.4	-0.8
	comp=Z,1.9nm,0.8s						
SCRK	**Sand Creek**	50.24	34	*e*P	P	02 12 36.9	-0.4
	comp=Z,3.7nm,0.8s						
RAGM	**Ragged Mountai**	50.34	38	*e*P	P	02 12 38.8	+0.8
	comp=Z,4.9nm,0.9s						
BVAR	**Borovoye Array**	50.49	312	P	P	02 12 38.6	-0.5
	comp=Z,0.5nm,0.4s,baz=71,slow=11,SNR=5.7						
BRVK	**Borovoye**	50.55	312	*e*P	P	02 12 41.5	+1.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
DAWY	**Dawson**	52.24	33	*e*P	P	02 12 51.0	-1.1
	comp=Z,2.3nm,1.2s						
EPYK	**Eagle Plains**	52.96	30	*e*P	P	02 12 58.9	+1.5
	comp=Z,12nm,0.8s						
HYT	**Haines Junctio**	53.73	37	*e*P	P	02 13 06.4	+3.1
	comp=Z,6.8nm,1.2s						
UGM	**Wanagama**	53.82	220	*e*P	P	02 13 02.2	-2.1
	comp=Z,218nm,1.4s						
INK	**Inuvik**	53.82	27	P	P	02 13 03.8	+0.2
	comp=Z,2.6nm,0.8s,baz=287,slow=8.1,SNR=8.7						
INK	**Inuvik**	53.82	27	*e*P	P	02 13 04.9	+1.3
	comp=Z,4.4nm,0.9s						
HON	**Honolulu**	54.00	90	*e*P	P	02 13 03.7	-1.9
	comp=Z,115nm,0.9s						
HON	**Honolulu**	54.00	90	*e*P	P	02 13 03.7	-1.9
SVE	**Sverdlovsk**	55.01	318	*e*P	P	02 13 12.6	+0.2
CHGR	**Chuyangaron**	55.75	295	*e*P	P	02 13 16.1	-2.1
	comp=Z,16nm,0.9s						
ARU	**Arti**	56.22	318	*e*P	P	02 13 20.8	-0.3
	comp=Z,8.2nm,1.0s						
ARU	**Arti**	56.22	318	*d i*P	P	02 13 20.8	-0.3
ARU				*PP	pP	02 13 34.1	-1.2
ARU				S	S	02 21 08.3	+1.6
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
KBL	**Kabul**	57.55	291	*e*P	P	02 13 27.8	-3.3
	comp=Z,9.7nm,1.3s						
KBL	**Kabul**	57.55	291	*e*P	P	02 13 27.8	-3.3
KBL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WRAB	**Tennant Creek**	57.56	188	*e*P	P	02 13 31.4	+0.5
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s						
WB2	**Warramunga Arr**	57.57	188	*e*P	P	02 13 29.2	-1.7
	comp=Z,11nm,0.9s						
WR1	**Warramunga Arr**	57.57	188	*e*P	P	02 13 31.0	0.0
WRA	**Warramunga Arr**	57.57	188	P	P	02 13 31.0	0.0
	comp=Z,8.0nm,0.9s,baz=360,slow=7.5,SNR=13						
ABKAR	**Akbulak array**	57.88	310	*e*P	P	02 13 32.7	-0.3
	comp=Z,2.8nm,0.8s						
DLBC	**Dease Lake**	58.06	38	P	P	02 13 36.5	+2.3
	comp=Z,1.0nm,0.4s,baz=333,slow=17,SNR=3.8						
DLBC	**Dease Lake**	58.06	38	*e*P	P	02 13 36.5	+2.3
	comp=Z,4.4nm,0.9s						
PRGR	**Permogore**	60.55	327	*e*P	P	02 13 50.1	-1.1
PRGR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AS31	**Alice Springs**	61.29	188	*e*P	P	02 13 57.4	+0.7
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	61.30	188	P	P	02 13 57.4	+0.7
	comp=Z,5.9nm,0.8s,baz=11,slow=6.1,SNR=40						
ASAR				pP	pP	02 14 11.5	+0.6
	comp=Z,1.7nm,0.8s,baz=5.6,slow=5.7,SNR=4.2						
YKA	**Yellowknife Ar**	63.24	30	P	P	02 14 09.1	-0.2
	comp=Z,1.1nm,0.7s,baz=302,slow=6.8,SNR=5.4						
YKA				pP	pP	02 14 24.8	+1.2
	comp=Z,2.0nm,0.7s,baz=298,slow=6.8,SNR=8.6						
YKB5	**Yellowknife Ar**	63.24	30	*e*P	P	02 14 09.1	-0.2
ARA0	**ARCESS Array S**	63.67	339	*e*P	P	02 14 12.5	+0.5
ARCES	**ARCESS Array B**	63.67	339	P	P	02 14 12.5	+0.5
	comp=Z,4.3nm,1.1s,baz=67,slow=9.2,SNR=3.4						
OBN	**Obninsk**	67.91	323	⇓*e*P	P	02 14 42.0	+2.5
OBN				*PP	pP	02 14 54.0	0.0
OBN				*SP	sP	02 15 00.0	+0.1
OBN				S	S	02 23 37.0	+3.0
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,34nm,17.0s						
FIA0	**FINESS Array S**	68.55	332	*e*P	P	02 14 42.7	-0.7
FIA0	**FINESS Array S**	68.55	332	*e*P	P	02 14 42.7	-0.7
FINES	**FINESS Array B**	68.55	332	P	P	02 14 42.7	-0.7
	comp=Z,3.6nm,0.8s,baz=39,slow=12,SNR=7.7						
STKA	**Stephens Creek**	69.02	180	P	P	02 14 46.5	-0.1
	comp=Z,2.7nm,0.8s,baz=329,slow=10,SNR=4.0						
STKA	**Stephens Creek**	69.02	180	*e*P	P	02 14 46.5	-0.1
	comp=Z,0.8nm,1.0s						
PINE	**Pine Mountain**	69.79	50	*e*P	P	02 14 53.9	+2.3
	comp=Z,12nm,0.8s						
KBZ	**Khabaz**	70.84	311	pP	pP	02 15 13.0	+0.6
	comp=Z,4.7nm,0.9s,baz=39,slow=7.8,SNR=5.8						
KIV	**Kislovodsk**	70.84	311	*e*P	P	02 15 00.9	+3.0
	comp=Z,13nm,1.1s						
KIV	**Kislovodsk**	70.84	311	*e*P	P	02 14 56.8	-1.1
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
BMO	**Blue Mountains**	71.38	47	*e*P	P	02 15 02.8	+1.6
	comp=Z,4.6nm,0.9s						
BMO	**Blue Mountains**	71.38	47	*e*P	P	02 15 02.8	+1.6
BMO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FFC	**Flin Flon**	73.14	33	*e*P	P	02 15 12.5	+1.2
	comp=Z,87nm,1.0s						
FFC	**Flin Flon**	73.14	33	*e*P	P	02 15 12.5	+1.2
CMB	**Columbia Colle**	73.34	55	*e*P	P	02 15 14.6	+1.7
	comp=Z,4.4nm,0.9s						
CMB	**Columbia Colle**	73.34	55	*e*P	P	02 15 14.6	+1.7
CMB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HLID	**Hailey**	73.82	47	*e*P	P	02 15 17.5	+1.7
	comp=Z,2.8nm,1.1s						
NB2	**NORSAR Subarra**	73.88	337	P	P	02 15 15.1	-0.6
	comp=Z,1.5nm,0.7s,baz=40,slow=5.9						
NB200	**NORSAR Array S**	73.88	337	*e*P	P	02 15 15.1	-0.6
NOA	**NORSAR Array B**	73.88	337	P	P	02 15 15.1	-0.6
	comp=Z,2.3nm,0.8s,baz=39,slow=5.8,SNR=11						
AKASG	**Malin Array Be**	74.12	322	P	P	02 15 16.6	-0.6
	comp=Z,1.7nm,0.6s,baz=46,slow=6.2,SNR=7.4						
AKASG				pP	pP	02 15 30.9	-0.9
	comp=Z,3.8nm,0.6s,baz=46,slow=6.1,SNR=7.3						
AKBB	**Malin Array Si**	74.12	322	*e*P	P	02 15 16.6	-0.6
	comp=Z,6.3nm,0.8s						
AKBB	**Malin Array Si**	74.12	322	*e*P	P	02 15 16.6	-0.6
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BOZ	**Bozeman (W)**	74.18	44	*e*P	P	02 15 19.3	+1.4
	comp=Z,4.1nm,0.9s						
BOZ	**Bozeman (W)**	74.18	44	*e*P	P	02 15 19.3	+1.4
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
IMW	**Indian Meadow**	75.62	45	*e*P	P	02 15 28.2	+1.8
	comp=Z,3.9nm,0.8s						
FXWY	**Fox Creek**	75.73	46	*e*P	P	02 15 28.6	+1.7
	comp=Z,3.2nm,1.0s						
DAC	**Darwin (Calif)**	76.17	55	*e*P	P	02 15 31.5	+2.0
DAC	**Darwin (Calif)**	76.17	55	*e*P	P	02 15 31.5	+2.0
FRB	**Frobisher Bay**	76.25	13	LR	LR	02 50 06.3	
	comp=Z,14nm,18.3s,baz=344,slow=36						
TPNV	**Topopah Spring**	76.64	54	*e*P	P	02 15 33.7	+1.6
	comp=Z,4.6nm,0.9s						
TPNV	**Topopah Spring**	76.64	54	*e*P	P	02 15 33.7	+1.6
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HWUT	**Hardware Ranch**	76.68	48	*e*P	P	02 15 33.9	+1.6
	comp=Z,6.6nm,1.1s						
DUG	**Dugway, Tooele**	76.81	49	*e*P	P	02 15 33.9	+0.9
	comp=Z,3.0nm,0.9s						
DUG	**Dugway, Tooele**	76.81	49	*e*P	P	02 15 33.9	+0.9
DUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PD31	**Pinedale Array**	77.11	46	*e*P	P	02 15 35.6	+0.9
PDAR	**Pinedale Array**	77.11	46	P	P	02 15 35.6	+0.9
	comp=Z,1.4nm,0.7s,baz=276,slow=3.3,SNR=10						
BORG	**Borgarnes**	77.23	353	LR	LR	02 50 01.0	
	comp=Z,18nm,21.6s,baz=17,slow=36						
SHPR	**Sheep Range**	77.61	53	*e*P	P	02 15 38.7	+1.1
	comp=Z,3.4nm,1.0s						
CCUT	**Cedar City**	78.10	52	*e*P	P	02 15 42.8	+2.4
	comp=Z,2.7nm,1.0s						
BUR08	**Bucovina Ar. S**	78.13	322	*e*P	P	02 15 40.1	-0.1
	comp=Z,3.6nm,0.8s						
BURAR	**Bucovina Array**	78.14	322	⇓*i*P	pP	02 15 55.1	+0.1
BIZ	**Bicaz**	78.16	321	⇑*i*P	pP	02 15 55.1	+0.1
TESR	**Tescani**	78.18	320	⇓*i*P	pP	02 15 54.3	-0.8
CFR	**Carcaliu**	78.31	319	⇑*i*P	pP	02 15 54.0	-1.8
MTPU	**Mount Pierson**	78.53	51	*e*P	P	02 15 44.6	+1.8
	comp=Z,4.1nm,0.9s						
VRI	**Vrincioaia**	78.58	320	⇑*i*P	pP	02 15 59.3	+2.0
KOLS	**Kolonicke sedl**	78.63	324	*e*P	P	02 15 47.3	+4.5
KOLS				*e*		02 15 58.3	
KOLS	**Kolonicke sedl**	78.63	324	*e*P	P	02 15 47.2	+4.5
KOLS				*e*pP	pP	02 15 58.3	+0.7
KNB	**Kanab**	78.77	52	*e*P	P	02 15 45.7	+1.7
	comp=Z,4.5nm,1.1s						
KNB	**Kanab**	78.77	52	*e*P	P	02 15 45.7	+1.7
KNB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BR101	**Keskin Array S**	78.78	312	*e*P	P	02 15 46.0	+2.0
BRTR	**Keskin Array B**	78.78	312	P	P	02 15 46.0	+2.0
	comp=Z,0.4nm,0.6s,baz=65,slow=6.7,SNR=2.8						
BRTR	**Keskin Array B**	78.78	312	P	P	02 15 46.0	+2.0
OJC	**Ojcow**	78.83	326	*e*P	P	02 15 50.0	+6.1
	comp=Z,9.7nm,1.0s						
OZUR		78.90	320	⇑*i*P	pP	02 16 00.1	+0.9
TRPA	**Tarpa**	79.07	323	⇑*i*P	pP	02 16 00.9	+0.9
DOPR	**Dopca**	79.19	321	⇑*i*P	P	02 15 47.5	+1.6
VOIR		79.73	320	⇓*i*P	pP	02 16 04.4	+0.7
ARR	**Arges**	79.99	320	⇑*i*P	pP	02 16 07.2	+2.1
MORC	**Moravsky Berou**	80.14	327	⇑*i*P	P	02 15 51.6	+0.6
MORC	**Moravsky Berou**	80.14	327	⇑P	P	02 15 51.6	+0.6
MORC	**Moravsky Berou**	80.14	327	*e*P	P	02 15 51.3	+0.3
MORC				*e*pP	pP	02 16 05.9	0.0
PV21	**Cone Mtn., Par**	80.14	49	*e*P	P	02 15 52.9	+1.3
	comp=Z,6.9nm,1.1s						
DPC	**Dobruska-Polom**	80.23	328	*e*P	P	02 15 52.4	+0.9
DPC				*e*		02 16 07.0	
DPC	**Dobruska-Polom**	80.23	328	*e*P	P	02 15 52.4	+0.9
DPC				*e*pP	pP	02 16 07.0	+0.7

PV22	Blue Mesa, Par	80.27	49	eP	P	02 15 52.8	+0.6
	comp=Z,6.8nm,1.1s						
PV03	Paradox Valley	80.42	49	eP	P	02 15 54.0	+1.1
	comp=Z,3.8nm,1.0s						
PV13	Radium Mtn., P	80.50	49	eP	P	02 15 52.3	-1.2
	comp=Z,6.2nm,1.0s						
VYHS	Vyhne	80.52	326	eP	P	02 15 53.8	+0.7
VYHS				e		02 16 08.1	
VYHS	Vyhne	80.52	326	eP	P	02 15 53.8	+0.7
VYHS				epP	pP	02 16 08.1	+0.2
Y14A	Wickenburg	80.58	54	eP	P	02 15 53.9	+0.2
	comp=Z,3.3nm,1.0s						
WUAZ	Wupatki	80.62	52	eP	P	02 15 54.8	+0.8
	comp=Z,5.5nm,1.0s						
JAVC	Velka Javorina	80.77	326	epP	pP	02 16 11.0	+1.7
CLL	Collm	80.85	330	eP	P	02 15 55.0	+0.3
CLL				e*PP	pP	02 16 10.0	+0.4
CLL	Collm	80.85	330	eP	P	02 15 55.0	+0.3
CLL				epP	pP	02 16 10.0	+0.4
GZR	Gura Zlata	80.90	321	⇑iP	pP	02 16 09.0	-1.1
GZR	Gura Zlata	80.90	321	⇑P	pP	02 16 09.0	-1.1
PRU	Pruhonice	81.25	329	eP	P	02 16 00.0	+3.1
PRU				e		02 16 12.4	
PRU	Pruhonice	81.25	329	eP	P	02 16 00.0	+3.1
PRU				epP	pP	02 16 12.4	+0.7
X16A	Lo Mia Camp, P	81.28	53	eP	P	02 15 58.9	+1.3
	comp=Z,3.6nm,0.9s						
MVCO	Mesa Verde	81.31	50	eP	P	02 15 59.4	+1.6
	comp=Z,3.3nm,1.0s						
BZS	Buzias	81.31	322	⇑iP	pP	02 16 11.1	-1.1
MDVR	Moldovita	81.86	322	⇑iP	pP	02 16 12.2	-3.0
CONA	Conrad Observa	82.26	327	i pP	pP	02 16 16.0	-1.3
	comp=Z,4.2nm,1.0s						
KHC	Kasperske Hory	82.31	329	eP	P	02 16 04.2	+1.6
	comp=Z,2.3nm,1.0s						
KHC	Kasperske Hory	82.31	329	eP	P	02 16 02.5	-0.1
KHC				e		02 16 17.3	
KHC	Kasperske Hory	82.31	329	eP	P	02 16 02.5	-0.1
KHC				epP	pP	02 16 17.3	-0.1
GEC2	GERESS Array S	82.48	328	eP	P	02 16 03.6	+0.1
	comp=Z,2.7nm,1.0s						
GEC2	GERESS Array S	82.48	328	eP	P	02 16 03.6	+0.1
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GERES	GERESS Array B	82.48	328	P	P	02 16 03.6	+0.1
	comp=Z,0.6nm,0.7s,baz=66,slow=4.5,SNR=6.1						
MOA	Molln	83.02	327	i pP	pP	02 16 20.6	-0.5
	comp=Z,1.4nm,0.6s						
SOKA	Soboth	83.58	326	i pP	pP	02 16 24.3	+0.2
	comp=Z,9.1nm,1.3s						
OBKA	Obir	83.93	326	i pP	pP	02 16 24.3	-1.7
	comp=Z,2.6nm,0.8s						
KBA	Koelnbreinsper	84.01	327	i pP	pP	02 16 26.8	+0.4
	comp=Z,2.2nm,0.6s						
ANMO	Albuquerque	84.04	50	eP	P	02 16 13.9	+1.9
	comp=Z,3.3nm,1.0s						
ANMO	Albuquerque	84.04	50	eP	P	02 16 13.9	+1.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MYKA	Terra Mystica	84.23	327	i pP	pP	02 16 26.5	-1.0
	comp=Z,3.3nm,0.7s						
ABTA	Abfaltersbach	84.62	328	i pP	pP	02 16 27.8	-1.7
	comp=Z,2.5nm,0.9s						
RETA	Reutte	84.77	329	i pP	pP	02 16 29.4	-0.7
	comp=Z,9.0nm,1.0s						
SQTA	Sankt Quirin	84.79	329	i pP	pP	02 16 29.3	-1.1
	comp=Z,1.2nm,0.5s						
LIT	Litokhoron	84.83	318	eP	P	02 16 15.2	-0.4
	comp=Z,6.6nm,0.8s						
LIT	Litokhoron	84.83	318	eP	P	02 16 15.2	-0.4
LIT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BFO	Black Forest	85.05	331	eP	P	02 16 16.2	-0.4
	comp=Z,4.9nm,1.0s						
BFO	Black Forest	85.05	331	eP	P	02 16 16.2	-0.4
BFO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FETA	Feichten	85.15	329	i pP	pP	02 16 30.8	-1.4
	comp=Z,4.4nm,1.1s						
DAVA	Damuels	85.28	329	i pP	pP	02 16 33.6	+0.7
	comp=Z,6.3nm,0.9s						
FUORN	Ofenpass-Fuorn	85.66	329	eP	P	02 16 19.6	-0.3
	comp=Z,7.6nm,0.8s						
TX31	Lajitas Ar. Si	89.58	53	eP	P	02 16 39.6	+0.7
	comp=Z,2.3nm,0.8s						
LTX	Lajitas	89.58	53	eP	P	02 16 39.4	+0.5
LTX	Lajitas	89.58	53	eP	P	02 16 39.4	+0.5
TXAR	Lajitas Array	89.58	53	P	P	02 16 39.4	+0.5
	comp=Z,1.3nm,0.6s,baz=304,slow=3.0,SNR=20						
TXAR				pP	pP	02 16 56.0	+2.1
	comp=Z,1.6nm,0.7s,baz=300,slow=3.5,SNR=10						
TOA1	Torodi Ar. Sit	117.22	315	ePKPdf	PKPdf	02 22 25.2	-1.4
TORD	Torodi Ar. Bea	117.22	315	PKP	PKPdf	02 22 25.2	-1.4
	comp=Z,0.2nm,0.6s,baz=68,slow=1.2,SNR=3.3						
LPAZ	La Paz	146.18	59	PKPbc	PKPbc	02 23 22.6	+0.3
	comp=Z,6.7nm,0.9s,baz=346,slow=4.3,SNR=18						
LPAZ				pPKPbc	pPKPbc	02 23 37.7	0.0
	comp=Z,4.9nm,0.8s,baz=310,slow=4.5,SNR=5.4						
LPAZ	La Paz	146.18	59	ePKPbc	PKPab	02 23 22.9	-0.1

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*NEIC **23** 02:19:46.5±2.0, 2˚.69N×125˚.44E, h124^{km}±6^{km}, mb4.8/55, Error ellipse: s-maj=9.0km s-min=6.0km az=149.0*

*BJI **23** 02:19:47.9±0.0, 2˚.66N×125˚.65E, h148^{km}, mb4.7/30, mB4.8/22*

*ISCJB **23** 02:19:48.4±0.2, 2˚.75N±0˚.02×125˚.67E±0˚.03, h150^{km}, mb4.7/79, Error ellipse: s-maj=4.6km s-min=3.0km az=174.0*

*GCMT **23** 02:19:50.5±0.4, 2˚.64N±0˚.02×125˚.74E±0˚.03, h150^{km}±4^{km}, MW4.9/70, Moment Tensor Solution. s11,c14; s70,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.23±.12; $M_{\theta\theta}$2.59±.11; $M_{\phi\phi}$-2.36±.13; $M_{r\theta}$-0.94±.09; $M_{\theta\phi}$-0.38±.13; $M_{\phi r}$0.94±.11; Best double couple: $M_0$2.83300×10^{16} NP1:ϕ_s139.00000°, δ88.00000°, λ-28.00000°. NP2: ϕ_s229.00000°, δ62.00000°, λ-178.00000°. Principal axes: T 2.9510, Plg18.0000°, Azm187.0000°; N -0.2340, Plg62.0000°, Azm316.0000°; P -2.7150, Plg21.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **23** 02:19:51.7±0.2, 3˚N±2˚×12˚6E±˚, h151^{km}±2^{km}, M5.0/35, mb5.0/35, mB5.4/19, MLv5.3/16, Mw(mB)4.8/19*

*IDC **23** 02:19:51.2±0.8, 2˚.69N×125˚.48E, h166^{km}±6^{km}, mb4.0/23, mb1 4.1/26, mb1mx4.0/38, mbtmp4.5/26, Error ellipse: s-maj=14.5km s-min=8.1km az=80.0*

*MAN **23** 02:19:52.8, 2˚.73N×125˚.26E, h42^{km}, mb5.5, ML4.4, MS4.7*

ISC 23 02:19:50.0±0.3**, 2˚.59N**±0˚.03×**125˚.61E**±0˚.05**, h150**^{km}**, n168, σ1.**^{s}**90**/178**, mb4.7**/79**, 2C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.09	356	P	Pn	02 20 17.4	+1.8
SGSI				S	Sn	02 20 36.5	+1.3
TNTI	Ternate	2.52	136	ePn	Pn	02 20 29.2	-2.1
TNTI				eSn	Sn	02 21 00.8	-2.4
TNTI	Ternate	2.52	136	P	Pn	02 20 33.9	+2.6
GSPH	General Santos	3.54	349	eP	Pn	02 20 45.9	+1.5
LBMI	Labuha	3.72	149	P	Pn	02 20 49.1	+2.5
KCP	Kidapawan	4.42	353	⇑eP	Pn	02 20 57.8	+1.9
KCP				eS	Sn	02 21 53.2	+6.0
DAV	Davao City (W)	4.45	360	P	Pn	02 20 56.4	+0.2
	133nm,0.3s,baz=130,slow=3.2,SNR=7.8						
DAV				S	Sn	02 21 47.3	-0.5
	98nm,0.3s,baz=90,slow=20,SNR=2.7						
DAV	Davao City (W)	4.45	360	ePn	Pn	02 20 51.2	-5.0
DAV				eSn	Sn	02 21 36.1	-12
DMPH	Davao City--Mi	4.46	359	⇑iP	Pn	02 20 59.9	+3.5
DMPH				i S	Sn	02 21 33.0	-15
LUWI	Luwuk	4.59	218	ePn	Pn	02 20 53.7	-4.3
LUWI				eSn	Sn	02 21 46.1	-5.0
LUWI	Luwuk	4.59	218	P	Pn	02 21 00.7	+2.6
SANI	Sanana	4.62	175	P	Pn	02 20 58.9	+0.4
CTBH	Cotabato--PC H	4.80	344	⇓iP	Pn	02 20 56.3	-4.4
NLAI	Namlea	5.98	166	P	Pn	02 21 18.1	+1.7
	515nm,0.7s,15µm16nm						
SIJI	Sorong	6.61	121	P	Pn	02 21 27.2	+2.2
	5.5nm,0.3s,baz=297,slow=8.9,SNR=12						
SIJI				S	Sn	02 22 38.8	-0.6
	2.1nm,0.3s,baz=342,slow=20,SNR=2.1						
AAI	Ambon	6.75	158	P	Pn	02 21 26.6	-0.1
	344nm,0.7s,4µm						
MSAI	Masohi	6.76	151	P	Pn	02 21 29.4	+2.5
KDI	Kendari	7.16	205	P	Pn	02 21 33.7	+1.5
	297nm,0.6s,37µm						
TTSI	Tana Toraja	8.05	226	P	Pn	02 21 47.1	+2.9
	142nm,0.9s,2µm0.5nm						
FAKI	Fak Fak	8.60	129	P	Pn	02 21 53.4	+1.9
	60nm,1.1s						
SPSI	Sidrap Palu	8.75	222	P	Pn	02 21 56.1	+2.7
	64nm,0.8s,0.2nm						
BNSI	Bone	8.86	218	P	Pn	02 21 57.2	+2.3
KAPI	Kappang	9.56	218	P	Pn	02 22 06.4	+2.2
	2.3nm,0.3s,baz=18,slow=10,SNR=11						
KAPI				S	Sn	02 23 47.8	-2.4
	2.6nm,0.3s,baz=107,slow=17,SNR=2.1						
KAPI	Kappang	9.56	218	ePn	Pn	02 22 01.8	-2.4
BKSI	Bulukumba	9.58	215	P	Pn	02 22 05.4	+0.8
	16nm,0.6s						
KBKI	Kotabaru	11.11	238	P	Pn	02 22 27.8	+3.1
BAKI	Biak	11.14	110	P	P	02 22 33.7	+0.2
MMRI	Maumere	11.65	197	ePn	Pn	02 22 29.5	-2.2
EDFI	Ende, Flores	11.92	199	P	Pn	02 22 38.2	+2.7
	163nm,0.8s,1µm						
SAUI	Saumlaki	11.94	152	ePn	Pn	02 22 31.7	-3.8
SOEI	Soe	12.34	186	ePn	Pn	02 22 38.3	-2.6
SOEI	Soe	12.34	186	P	Pn	02 22 44.5	+3.7
	220nm,0.8s,2µm						
BATI	Baumata	12.86	189	P	Pn	02 22 50.5	+2.9
	33nm,0.3s,baz=186,slow=1.0,SNR=13						
BATI	Baumata	12.86	189	P	Pn	02 22 51.2	+3.7
SBUM	Sibu	13.38	270	ePn	Pn	02 22 49.5	-4.6
WBSI	Waikabubak, Su	13.64	207	P	Pn	02 23 00.3	+2.8
	359nm,1.2s,4µm						
PLAI	Plampang	13.77	214	P	Pn	02 23 00.8	+1.7
SRBI	Singaraja	14.83	224	P	P	02 23 18.0	+3.5
KSM	Kuching	15.34	266	ePn	Pn	02 23 13.4	-5.3
	25nm,0.8s						
JAGI	Jajag, Banyuwa	15.85	226	eP	Pn	02 23 22.9	-2.2
	77nm,0.6s						
GMJI	Gumukmas	16.24	228	P	P	02 23 33.1	+3.1
	104nm,1.2s						
MTN	Manton Dam	16.28	160	eP	Pn	02 23 29.7	-0.6
	51nm,0.7s						
MTN	Manton Dam	16.28	160	P	Pn	02 23 29.7	-0.6
	baz=16,SNR=14						
KDU	Kakadu	16.64	156	P	P	02 23 34.0	-0.4
	baz=17,SNR=20						
NGJI	Ngawi	17.24	235	P	Pn	02 23 44.9	+3.0
	62nm,1.0s						
PWJI	Pagerwojo	17.34	232	P	Pn	02 23 45.8	+2.7
	31nm,1.2s						
KNRA	Kununurra	18.41	170	P	Pn	02 23 55.7	-0.1
	baz=18,SNR=34						
TPI	Tanjungpandan	18.72	254	P	Pn	02 24 01.6	+2.1
	55nm,1.2s						
CGJI	Cibinong	21.89	245	P	P	02 24 32.4	+1.1
	81nm,0.9s						
GUMO	Guam	21.95	59	P	P	02 24 32.0	+0.2
	26nm,0.5s,baz=222,slow=16,SNR=4.8						
GUMO	Guam	21.95	59	eP	P	02 24 30.8	-1.1
	70nm,1.0s						
KLI	Kotabumi	22.02	250	P	P	02 24 36.5	+3.9
	153nm,1.1s,5µm						
KLSI		22.08	251	P	P	02 24 35.1	+1.8
	157nm,1.2s,1µm						
MDSI	Maura Dua	22.54	252	P	P	02 24 39.5	+1.8
	49nm,1.3s						
KASI	Kota Agung	22.58	249	P	P	02 24 39.6	+1.6
	134nm,0.9s,1µm						
LWLI	Liwa	22.82	251	P	P	02 24 43.3	+2.8
	98nm,0.6s,15µm						
COEN	Coen	23.95	134	eP	P	02 24 52.2	+1.5
	16nm,1.0s						
COEN	Coen	23.95	134	P	P	02 24 52.1	+1.5
	baz=24,SNR=3.7						
WRAB	Tennant Creek	23.97	159	eP	P	02 24 50.4	-0.3
	170nm,0.8s						
WR1	Warramunga Arr	23.98	159	eP	P	02 24 51.3	+0.5
WRA	Warramunga Arr	23.98	159	P	P	02 24 51.3	+0.5
	132nm,0.5s,baz=332,slow=10,SNR=212						
WRA				S	S	02 28 51.8	-5.0
	11nm,0.9s,baz=336,slow=18,SNR=5.6						
WRA				ScP	ScP	02 31 51.5	-2.3
	6.1nm,0.8s,baz=330,slow=3.3,SNR=6.0						
WB2	Warramunga Arr	23.98	159	eP	P	02 24 51.4	+0.5
	195nm,0.7s						
JOW	Kunigami	24.24	6	P	P	02 24 53.0	-0.1
	4.4nm,0.7s,baz=178,slow=14,SNR=25						
JOW	Kunigami	24.24	6	eP	P	02 24 52.1	-1.0
	24nm,0.8s						
PMG	Port Moresby	24.55	119	P	P	02 24 57.4	+1.3
	16nm,0.8s,baz=307,slow=10,SNR=3.8						
PSA00	Pilbara Seismi	24.67	193	eP	P	02 24 58.1	+1.1
	61nm,0.6s						
PSI	Prapat	26.66	271	P	P	02 25 14.7	-0.7
	5.4nm,0.8s,baz=160,slow=4.2,SNR=3.8						
QIS	Mount Isa	26.79	150	P	P	02 25 16.1	-0.1
	baz=27,SNR=6.8						
AS31	Alice Springs	27.32	163	eP	P	02 25 21.7	+0.8
	7.6nm,0.6s						
ASAR	Alice Springs	27.32	163	P	P	02 25 21.5	+0.6
	7.9nm,0.7s,baz=344,slow=7.4,SNR=83						
ASAR				S	S	02 29 48.4	-1.3
	4.0nm,0.8s,baz=346,slow=16,SNR=7.1						
ASAR				ScP	ScP	02 32 00.2	-3.2
	0.8nm,0.7s,baz=351,slow=2.3,SNR=4.5						
RABL	Rabaul	27.37	104	eP	P	02 25 24.2	+2.6
	122nm,0.6s						
GIRL	Giralia	27.43	203	eP	P	02 25 21.6	-0.3
	120nm,1.2s						
GIRL	Giralia	27.43	203	P	P	02 25 23.7	+1.9
	baz=28,SNR=3.2						
WRKA	Warakurna	27.59	175	P	P	02 25 24.3	+1.0
	baz=28,SNR=22						
GSI	Gunungsitoli	28.05	268	eP	P	02 25 26.7	-0.9
	14nm,0.7s						
GSI	Gunungsitoli	28.05	268	P	P	02 25 27.9	+0.3
	20nm,1.1s						
MEEK	Meekatharra	29.83	193	P	P	02 25 43.6	+0.4
	baz=30,SNR=37						
NJ2	Nanjing	29.99	348	eP	P	02 25 44.0	-0.4
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
JNU	Nakatsue	30.77	9	P	P	02 25 49.6	-1.8
	11nm,0.7s,baz=129,slow=12,SNR=6.2						
JNU	Nakatsue	30.77	9	eP	P	02 25 47.8	-3.6
	40nm,1.5s						
KMI	Kunming	31.43	317	P	P	02 25 57.9	+0.4
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,96nm,4.8s						
MORW	Morawa	32.79	196	eP	P	02 26 09.8	+0.7
	53nm,1.2s						
MORW	Morawa	32.79	196	P	P	02 26 09.8	+0.7
	baz=33,SNR=7.7						
FORT	Forrest	33.26	176	eP	P	02 26 13.8	+0.7
	121nm,0.6s						
FORT	Forrest	33.26	176	P	P	02 26 13.9	+0.8
	baz=33,SNR=74						
KMBL	Kambalda	33.95	186	P	P	02 26 19.7	+0.6
	baz=34,SNR=35						
BLDU	Ballidu	34.09	194	P	P	02 26 20.7	+0.4
	baz=34,SNR=13						
INU	Inuyama	34.27	17	eP	P	02 26 20.9	-0.9
	19nm,0.8s						
KS15	Wonju Array Si	34.75	3	eP	P	02 26 26.3	+0.4
	24nm,1.4s						
KSRS	Korea Array	34.76	3	P	P	02 26 26.3	+0.3
	2.0nm,0.7s,baz=183,slow=9.8,SNR=5.5						
CD2	Chengdu	34.93	326	eP	P	02 26 25.6	-2.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	34.95	335	P	P	02 26 26.3	-1.5
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				LR	LR		
	comp=N,90nm,15.2s						
XAN				LR	LR		
	comp=E,100nm,20.6s						
XAN				LR	LR		
	comp=Z,83nm,19.5s						
MAJO	Matsushiro	35.73	17	eP	P	02 26 32.3	-2.1
	17nm,0.9s						
MAT	Matsushiro	35.73	17	P	P	02 26 32.4	-2.0
MAT				S	S	02 31 58.2	-2.0
MJAR	Matsushiro Arr	35.73	18	P	P	02 26 32.4	-2.0
	13nm,0.8s,baz=198,slow=9.5,SNR=28						
MJAR				ScP	ScP	02 32 28.3	-3.1
	1.0nm,0.5s,baz=191,slow=3.7,SNR=5.0						
MJB9	Matsu-Tunnel	35.73	17	eP	P	02 26 32.5	-1.9
	18nm,0.9s						
NWAO	Narrogin (SRO)	36.20	192	P	P	02 26 38.9	+0.6
	baz=36,SNR=8.0						
BBOO	Buckleboo	36.57	165	eP	P	02 26 41.5	0.0
	50nm,1.3s						
BBOO	Buckleboo	36.57	165	P	P	02 26 42.3	+0.8
	baz=37,SNR=43						
EIDS	Eidsvold	37.17	140	eP	P	02 26 47.8	+1.1
	9.1nm,1.1s						
STKA	Stephens Creek	37.49	157	P	P	02 26 50.4	+1.2
	24nm,0.8s,baz=331,slow=8.1,SNR=34						
STKA	Stephens Creek	37.49	157	eP	P	02 26 50.2	+0.9
	5.8nm,0.9s						
STKA	Stephens Creek	37.49	157	P	P	02 26 50.7	+1.4
	baz=38,SNR=12						
RKGY	Rocky Gully	37.88	192	P	P	02 26 53.7	+1.2
	baz=38,SNR=4.9						
HTT	Hallett	37.97	162	P	P	02 26 54.9	+1.6
	baz=38,SNR=12						
CMSA	Cobar Meteorol	38.94	152	P	P	02 27 03.0	+1.5
	baz=39,SNR=11						
LZH	Lanzhou	38.94	331	⇓P	P	02 27 00.9	-0.7
LZH				pP	pP	02 27 33.8	+0.8
LZH				sP	sP	02 27 50.8	+1.3
LZH				PP	PnPn	02 28 37.6	-0.4
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,96nm,5.3s						
HHC	Hu-ho-hao-te	40.15	343	eP	P	02 27 12.3	+0.9
HHC				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC				pmax	pmax		
	comp=Z,90nm,5.3s						
USA0B	Ussuriysk Arra	41.82	7	eP	P	02 27 24.4	-0.5
	6.3nm,0.8s						
USRK	Ussuriysk Ar.	41.82	7	P	P	02 27 24.2	-0.7
	4.4nm,0.6s,baz=192,slow=6.6,SNR=19						
USRK				pP	pP	02 27 59.5	+1.4
	3.6nm,0.9s,baz=189,slow=9.6,SNR=3.3						
ARPS	Mount Arapiles	41.97	160	P	P	02 27 28.1	+1.8
	baz=42,SNR=6.7						
H11S3	WAKE ISLAND Hy	43.21	66	T	T	03 14 59.2	
	baz=253,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	43.23	66	T	T	03 14 56.1	
	baz=253,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	43.23	66	T	T	03 14 57.9	
	baz=253,slow=75,SNR=18						
GTA	Gaotai	43.52	331	eP	P	02 27 38.9	0.0
GTA				pP	pP	02 28 13.5	+2.7
GTA				sP	sP	02 28 26.3	-0.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CAN	Canberra	43.62	152	eP	P	02 27 40.3	+0.7
	17nm,1.1s						
ASAJ	Asahikawa	44.00	18	P	P	02 27 42.7	+0.2
	15nm,0.6s,baz=239,slow=12,SNR=14						
KLR	Kul'dur	46.76	6	P	P	02 28 03.2	-0.9
	1.3nm,0.4s,baz=222,slow=4.5,SNR=9.1						
DZM	Mont Dzumac	46.81	124	eP	P	02 28 06.4	+1.3
	11nm,1.0s						
PINNC	Pines Island,	47.88	124	eP	P	02 28 14.7	+1.5
	65nm,1.1s						
SONA0	Songino Array	48.03	343	eP	P	02 28 12.6	-1.5
SONM	Songino Array	48.03	343	P	P	02 28 12.6	-1.5
	0.6nm,0.5s,baz=164,slow=5.9,SNR=4.8						
SONM				pP	pP	02 28 50.8	+3.2
	0.5nm,0.5s,baz=167,slow=7.0,SNR=1.9						
WMQ	Urumqi	53.03	326	eP	P	02 28 52.1	+0.5
WMQ				pP	pP	02 29 26.8	+2.0
WMQ				pmax	pmax		
	comp=Z,23nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.9s						
PEA0B	Petropavlovsk-	56.90	22	eP	P	02 29 19.2	0.0
	16nm,0.8s						
PETK	Petropavlovsk-	56.90	22	P	P	02 29 19.3	+0.1
	12nm,0.6s,baz=192,slow=4.5,SNR=26						
PEA1	Petropavlovsk-	56.91	22	eP	P	02 29 19.3	+0.1
MK32	Makanchi Array	57.86	326	eP	P	02 29 24.6	-1.5
MKAR	Makanchi Array	57.86	326	P	P	02 29 24.6	-1.5
	3.7nm,0.4s,baz=122,slow=8.5,SNR=28						
MAKZ	Makanchi	58.05	326	eP	P	02 29 25.4	-1.9
	3.6nm,0.5s						
KSH	Kashi	58.07	316	P	P	02 29 29.1	+1.3
KSH				PP	PP	02 31 40.0	+1.8
KSH				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,60nm,3.9s						
KDJ	Kajisay	58.46	319	eP	P	02 29 28.2	-2.4
	9.3nm,1.3s						
MA2	Magadan	60.08	14	eP	P	02 29 41.6	+0.6
	21nm,0.7s						
ZALV	Zalesovo Beam	61.10	334	P	P	02 29 45.5	-2.6
	1.3nm,0.6s,baz=129,slow=5.7,SNR=5.0						
ZAA1	Zalesovo Array	61.10	334	eP	P	02 29 45.5	-2.6
LBZ	Lake Benmore	61.38	145	eP	P	02 29 50.4	+0.3
	17nm,1.2s						
GAR	Garm	61.88	313	eP	P	02 29 51.1	-2.7
	4.9nm,0.5s						
KURBB	Kurchatov Arra	62.10	328	P	P	02 29 53.0	-1.8
	3.1nm,0.5s,baz=127,slow=6.2,SNR=38						
KURBB				pP	pP	02 30 31.4	+2.2
	1.4nm,0.7s,baz=126,slow=6.0,SNR=2.4						
KURK	Kurchatov	62.11	328	eP	P	02 29 53.5	-1.4
	7.7nm,0.7s						
BVAR	Borovoye Array	67.67	328	P	P	02 30 28.9	-2.0
	1.1nm,0.5s,baz=101,slow=7.7,SNR=8.4						
TIXI	Tiksi	68.99	1	eP	P	02 30 37.0	-1.7
	5.5nm,0.6s						
AKUT	Akutan	75.48	34	eP	P	02 31 16.9	-0.7
	39nm,0.8s						
SDPT	Sand Point	78.76	34	eP	P	02 31 33.4	-2.4
	36nm,0.7s						
STCH	Steam Cracks	79.02	71	eP	P	02 31 36.3	-1.8
	208nm,0.6s						
SVW2	Sparrevohn	82.33	29	eP	P	02 31 56.0	+1.2
	15nm,1.0s						
TTA	Tatalina	82.42	27	eP	P	02 31 55.8	+0.5
	20nm,1.1s						
VNDA	Vanda	82.44	173	P	P	02 31 55.4	+0.4
	1.3nm,0.5s,baz=316,slow=7.0,SNR=12						
CNPM	China Poot	84.30	31	eP	P	02 32 04.8	-0.1
	22nm,0.9s						
BRLK	Bradley Lake	84.50	30	eP	P	02 32 05.7	-0.2
	35nm,1.2s						
MLY	Manley	84.98	25	eP	P	02 32 08.8	+0.6
	2.9nm,0.8s						
WRH	Wood River Hil	86.08	26	eP	P	02 32 12.5	-1.1
	2.9nm,0.8s						
CCB	Clear Creek Bu	86.21	26	eP	P	02 32 13.5	-0.8
	8.7nm,1.4s						
ILAR	Eielson Array	86.61	25	P	P	02 32 14.0	-2.2
	0.9nm,0.8s,baz=238,slow=4.6,SNR=5.8						
ILB	Eielson Array	86.61	25	eP	P	02 32 14.0	-2.2
	1.2nm,0.9s						
ARA0	ARCESS Array S	91.13	340	eP	P	02 32 35.1	-2.3
ARCES	ARCESS Array B	91.13	340	P	P	02 32 35.1	-2.3
	2.6nm,0.9s,baz=81,slow=8.0,SNR=4.1						
AKASG	Malin Array Be	92.07	321	P	P	02 32 39.5	-2.6
	0.3nm,0.5s,baz=67,slow=4.0,SNR=4.4						
AKBB	Malin Array Si	92.07	321	eP	P	02 32 39.5	-2.6
	4.7nm,1.3s						
FIA0	FINESS Array S	92.30	332	eP	P	02 32 40.5	-2.4
FINES	FINESS Array B	92.30	332	P	P	02 32 40.5	-2.4
	3.4nm,1.0s,baz=64,slow=4.4,SNR=5.3						
BUR08	Bucovina Ar. S	95.11	318	eP	P	02 32 55.1	-1.2
	4.0nm,1.1s						
YKA	Yellowknife Ar	100.99	24	P	Pdif	02 33 21.5	-0.7
	0.9nm,0.8s,baz=327,slow=4.4,SNR=4.8						
YKB5	Yellowknife Ar	100.99	24	ePdif	Pdif	02 33 21.5	-0.7
R11A	Troy Canyon, C	110.53	47	ePdif	Pdif	02 34 06.4	+0.9
TORD	Torodi Ar. Bea	122.20	287	PKP	PKPdf	02 38 27.1	-1.0
	0.3nm,0.6s,baz=87,slow=2.7,SNR=3.5						
TOA1	Torodi Ar. Sit	122.20	287	ePKPdf	PKPdf	02 38 27.1	-1.0
LTX	Lajitas	123.17	52	ePKPdf	PKPdf	02 38 28.8	-0.9
TXAR	Lajitas Array	123.17	52	PKP	PKPdf	02 38 28.8	-0.9
	0.3nm,0.8s,baz=304,slow=2.9,SNR=3.7						
PTGA	Pitinga	174.12	72	ePKPab	PKPab	02 41 16.1	+0.8

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*JMA **23** 02:24:01.7±0.1, 22˚.97N×121˚.44E, h35^{km}±4^{km}, M3.3*

*ISCJB **23** 02:24:02.1±0.3, 22°.94N±0°.02×121°.48E±0°.02, h27^{km}±2^{km},*
Error ellipse: s-maj=3.1km s-min=2.4km az=28.1
*TAP **23** 02:24:03.1, 22°.99N×121°.37E, h35^{km}, ML3.4, C*
ISC 23 02:24:02.8±0.9**, 22°.96N**±0°.02×**121°.43E**±0°.02**, h30**^{km}±6^{km}**,**
n95, σ1^{s}.03/139**, 8C-12D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung baz=359	0.16	336	⇑iP	Pb	02 24 09.5	+0.9
CHKT	baz=359			i S	Sb	02 24 13.9	+1.3
TTN	Taitung baz=229	0.33	233	P	Pb	02 24 11.7	+1.0
TTN	baz=229			S	Sn	02 24 18.3	+1.1
TWGBT	Beinan baz=238	0.35	247	⇓P	Pb	02 24 10.9	-0.1
TWGBT	baz=238			S	Sb	02 24 16.4	-0.2
TWG	Pinlang 5μm,0.3s	0.36	248	eP	Pb	02 24 10.7	-0.4
TWG	Pinlang baz=238	0.36	248	⇓iP	Pb	02 24 11.0	-0.1
TWG	baz=238			i S	Sb	02 24 16.3	-0.4
TWF1	Yuli baz=338	0.41	342	⇑iP	Pb	02 24 11.6	-0.4
TWF1	baz=338			S	Sb	02 24 17.2	-1.0
ELDTW	Lidau baz=298	0.45	301	⇓iP	Pb	02 24 11.9	-0.6
ELDTW	baz=298			S	Sb	02 24 17.7	-1.4
YULB	Yu-li baz=339	0.45	344	⇑P	Pb	02 24 11.9	-0.6
YULB	baz=339			eS	Sb	02 24 17.9	-1.3
HGSD	Ruisui baz=15	0.54	359	⇑P	Pb	02 24 13.6	-0.2
EHY	Hungye baz=347	0.56	349	P	Pb	02 24 13.1	-1.1
ECL	Taimali baz=224	0.57	231	⇓P	Pb	02 24 13.4	-0.9
ECL	baz=224			S	Sb	02 24 20.7	-1.5
STYT	Tauyuan baz=287	0.66	289	⇓iP	Pb	02 24 15.5	-0.3
STYT	baz=287			S	Sb	02 24 24.1	-0.6
YUS	Yu-Shan baz=322	0.69	320	⇑P	Pb	02 24 16.1	-0.6
EGFH	Guangfu baz=3.0	0.71	360	eP	Pn	02 24 17.1	+0.3
SLGT	Liugui baz=270	0.73	273	P	Pn	02 24 16.8	-0.1
SSD	Sandimen baz=250	0.77	254	⇓iP	Pn	02 24 16.8	-0.7
SSD	baz=250			eS	Sb	02 24 25.7	-2.1
TAW	Tawu baz=214	0.78	220	eP	Pn	02 24 16.8	-0.8
EAST	Anshuo baz=212	0.79	224	eP	Pb	02 24 18.8	+0.8
WTP	Ta-pu baz=290	0.81	291	⇓iP	Pn	02 24 18.5	+0.4
WTP	baz=290			S	Sn	02 24 29.5	+0.4
MASBT	Mashibuluo baz=241	0.81	245	⇓P	Pn	02 24 17.7	-0.4
MASBT	baz=241			eS	Sn	02 24 26.8	-2.4
TPUB	Ta-pu 657nm,0.5s	0.82	295	eP	Pn	02 24 18.7	+0.5
TPUB	Ta-pu baz=300	0.82	295	⇓P	Pn	02 24 18.5	+0.3
TPUB	baz=300			S	Sn	02 24 29.7	+0.4
VWDT	VWDT baz=352	0.84	341	⇑P	Pn	02 24 18.0	-0.5
VWDT	baz=352			S	Sn	02 24 28.1	-1.7
ESL	Shilin baz=4.0	0.85	360	P	Pn	02 24 17.2	-1.5
ESL	baz=4.0			S	Sn	02 24 26.9	-3.4
WHYT	Xinyi Township baz=329	0.91	324	eP	Pn	02 24 19.7	+0.1
WHYT	baz=329			eS	Sn	02 24 31.7	0.0
LAY	Lan-yu baz=171	0.92	173	eP	Pn	02 24 19.0	-0.6
LAY	baz=171			eS	Sn	02 24 31.0	-0.8
TWK	Hsinying baz=289	0.92	290	⇓iP	Pn	02 24 20.4	+0.7
TWK	baz=289			S	Sb	02 24 33.5	+1.2
SSLB	Suanglung 183nm,0.7s	0.94	332	eP	Pn	02 24 20.1	+0.1
SSLB	Suanglung baz=338	0.94	332	⇑P	Pn	02 24 19.6	-0.3
CHN5	Tsauling baz=313	0.94	313	eP	Pn	02 24 20.9	+0.8
CHN5	baz=313			S	Sn	02 24 33.3	+0.7
SCZT	Fangliau baz=228	0.95	232	eP	Pn	02 24 20.3	+0.3
CHN3	Shinhua baz=275	0.99	277	eP	Pb	02 24 22.7	+1.3
HWA	Hwalien baz=1.0	1.03	9	eP	Pn	02 24 20.5	-0.6
SNJT	Kaohsiung City baz=256	1.03	259	eP	Pb	02 24 23.3	+1.2
SMLT	Sun Moon Lake baz=337	1.05	332	P	Pn	02 24 21.8	+0.4
SMLT	baz=337			S	Sn	02 24 35.3	+0.2
CHY	Chiayi baz=300	1.07	300	eP	Pn	02 24 22.8	+1.1
CHY	baz=300			eS	Sb	02 24 37.1	+0.7
WJS	Zhushan baz=324	1.08	323	eP	Pn	02 24 22.7	+0.9
TYC	Yuchr baz=341	1.08	331	P	Pn	02 24 22.9	+1.1
TYC	baz=341			S	Sn	02 24 36.3	+0.5
WGK	Gukeng baz=313	1.08	312	eP	Pb	02 24 23.7	+0.8
WDLH	Douliu baz=312	1.10	312	eP	Pn	02 24 23.4	+1.3
CHGB	Renai baz=360	1.13	348	⇑P	Pn	02 24 22.4	-0.3
CHGB	baz=360			eS	Sn	02 24 35.0	-2.2
TWD	Chiawan	1.13	8	eP	Pn	02 24 21.0	-1.5
HEN	Hengchun baz=198	1.14	214	eP	Pn	02 24 22.7	0.0
WLCH	Liuqiu baz=234	1.15	239	eP	Pb	02 24 26.4	+2.5
WNT	Mingjian baz=324	1.15	323	eP	Pn	02 24 24.2	+1.4
WNT	baz=324			S	Sb	02 24 39.5	+0.9
TSEB	Hengchuen, Pin baz=194	1.16	205	eP	Pn	02 24 23.0	+0.1
TSEB	baz=194			S	Sn	02 24 38.2	+0.5
TWKBT	Hengchun baz=196	1.16	210	eP	Pn	02 24 22.8	-0.2
TWKBT	baz=196			S	Sn	02 24 37.1	-0.6
TWK1	Hengchun baz=196	1.16	210	eP	Pn	02 24 22.4	-0.6
TWK1	baz=196			eS	Sn	02 24 36.7	-1.1
DPDB	Guoxing baz=347	1.17	337	P	Pn	02 24 23.9	+0.8
CHN8	Yiju baz=288	1.19	289	eP	Pn	02 24 24.1	+0.8
WHF	Hehuan Shan baz=3.0	1.20	353	⇓P	Pn	02 24 22.9	-0.9
WHF	baz=3.0			S	Sn	02 24 37.4	-1.8
NACB	Ninganchiao 71nm,0.6s	1.22	7	eP	Pn	02 24 22.6	-1.2
NACB	Ninganchiao baz=360	1.22	7	eP	Pn	02 24 22.3	-1.5
ETLH	Xiulin Townshi baz=3.0	1.25	2	eP	Pn	02 24 22.8	-1.4
TWT	Tachien baz=350	1.31	350	eP	Pn	02 24 25.4	+0.2
WCHH	Zhanghua baz=325	1.38	325	eP	Pb	02 24 28.2	+0.3
NNSB	Datong baz=9.0	1.47	358	eP	Pn	02 24 26.5	-0.8
NNS	Nan Shan baz=9.0	1.48	358	eP	Pn	02 24 27.2	-0.2
NANB	Nanao baz=2.0	1.49	11	eP	Pn	02 24 26.2	-1.3
TWQ1	Liyutan baz=337	1.51	337	⇓P	Pn	02 24 29.8	+1.9
TWQ1	baz=337			S	Sn	02 24 48.7	+2.2
WDJ	Dajia District baz=333	1.57	332	eP	Pn	02 24 30.6	+2.1
WDJ	baz=333			eS	Sb	02 24 51.1	+0.6
NSY	Sanyi baz=338	1.58	337	P	Pn	02 24 30.9	+2.1
NSY	baz=338			eS	Sb	02 24 50.9	-0.1
PTSB	Yuanli baz=336	1.63	336	eP	Pn	02 24 31.4	+2.0
NDT	Datong Townshi baz=12	1.64	3	eP	Pn	02 24 29.3	-0.3
WDGT	Dungji baz=280	1.66	281	eP	Pn	02 24 30.0	+0.2
ENTT	Nioudou baz=4.0	1.68	4	eP	Pn	02 24 29.6	-0.6
NMLH	Miaoli baz=339	1.68	340	eP	Pn	02 24 31.8	+1.7
TWC	Suao baz=3.0	1.69	13	eP	Pn	02 24 29.6	-0.6
YHNB	Yeheng 32nm,0.6s	1.71	358	eP	Pn	02 24 31.1	+0.6
YHNB	Yeheng baz=10.0	1.71	358	P	Pn	02 24 31.0	+0.5
YHNB	baz=10.0			eS	Sn	02 24 51.0	-0.4
EOS1	EOS1 baz=34	1.71	22	eP	Pn	02 24 31.1	+0.7
NSK	Sanguang baz=9.0	1.71	358	P	Pn	02 24 31.0	+0.4
NSTT	Nanjuang baz=346	1.71	347	eP	Pn	02 24 31.8	+1.2
LIOB	Emei baz=348	1.73	347	eP	Pn	02 24 32.1	+1.3
LIOB	baz=348			eS	Sn	02 24 53.0	+1.3
TWE	Neicheng baz=7.0	1.77	7	eP	Pn	02 24 32.4	+1.0
PHUB	P'eng-hu baz=288	1.80	288	eP	Pn	02 24 31.8	+0.1
PNG	Penghu baz=289	1.83	290	eP	Pn	02 24 32.4	+0.2
VCHM	Qimei baz=277	1.86	278	eP	Pn	02 24 32.9	+0.4
JYNG	Yonagunijimaku	2.03	43	P	Pn	02 24 35.5	+0.6
JYNG				eS	Sn	02 24 59.0	-0.3
YOJ	Yonaguni jima baz=55	2.08	44	eP	Pn	02 24 35.8	+0.2
YOJ	baz=55			eS	Sn	02 25 01.1	+0.5
YOJ	Yonaguni jima	2.08	44	P	Pn	02 24 36.8	+1.2
YOJ				eS	Sn	02 25 01.0	+0.5
NWF	Wu-fen Shan baz=7.0	2.13	9	eP	Pn	02 24 36.3	0.0
WFSB	Wu-fen Shan baz=7.0	2.13	9	eP	Pn	02 24 35.3	-1.0
YM05	YM05 baz=15	2.20	3	eP	Pn	02 24 36.6	-0.7
HATJ	Hateruma jima	2.44	63	P	Pn	02 24 41.1	+0.6
HATJ				S	Sn	02 25 09.4	+0.1
IRIF	Iriomote-Funau	2.51	56	P	Pn	02 24 42.8	+1.3
IRIF				eS	Sn	02 25 11.4	+0.2
JKRS	Kuro-shima	2.69	61	P	Pn	02 24 44.9	+1.0
JKRS				S	Sn	02 25 16.3	+0.9
JIJ	Ishigaki jima	2.85	60	P	Pn	02 24 46.7	+0.5
JIJ				S	Sn	02 25 19.7	+0.2
PTMZ	Houxiangcun baz=317	2.96	315	eP	Pn	02 24 47.9	+0.1
PTMZ	baz=317			eS	Sn	02 25 20.4	-1.8
JISG	Ishigakijimahi	3.10	58	P	Pn	02 24 49.8	+0.3
JISG				S	Sn	02 25 24.7	-0.8
KNMB	Chin-men Tao baz=299	3.17	299	eP	Pn	02 24 50.3	-0.3
JTJ	Tarama	3.43	60	P	Pn	02 24 54.8	+0.6
JTJ				S	Sn	02 25 34.0	+0.2
ZPLA	Ao Xicun baz=286	3.52	287	eP	Pn	02 24 55.6	+0.3
ZPLA	baz=286			eS	Sn	02 25 33.6	-2.4
AXDP	Jialang baz=303	3.71	302	eP	Pn	02 24 57.7	-0.3
LYJJ	Jianjiangzhen baz=340	3.89	337	eP	Pn	02 25 01.3	+0.9

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*SJA **23** 02:37:41.8±0.6, 20°.60S×68°.99W, h107^{km}±4^{km}, ML3.2,*
MW4.5
*ISCJB **23** 02:37:42.6±1.0, 20°.58S±0°.03×69°.08W±0°.08, h111^{km}±9^{km},*
Error ellipse: s-maj=13.2km s-min=4.8km az=177.0
*GUC **23** 02:37:43.6±0.6, 20°.55S×69°.10W, h96^{km}±3^{km}, ML3.0*
ISC 23 02:37:43.0±1.7**, 20°.57S**±0°.03×**69°.05W**±0°.08**,**
h106^{km}±11^{km}**, n17, σ0^{s}.61**/33**, 3C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.44	347	i P	Pn	02 37 59.5	-0.1
PB08				i S	Sn	02 38 12.4	+0.6
PB08	IPOC Station P	0.44	347	⇓iP	Pn	02 37 59.4	-0.1
PB08				i S	Sn	02 38 11.1	-0.7
PB01	IPOC Station P	0.62	221	⇑iP	Pn	02 38 00.3	-0.2
PB01				i S	Sn	02 38 13.1	-0.5
PB01	comp=N,1μm,0.3s			IAML		02 38 13.9	
GO01	Chusmiza	0.91	351	⇑iP	Pn	02 38 03.5	0.0
GO01				eS	Sn	02 38 18.5	-0.3
PB11	IPOC Station P	0.99	325	i P	Pn	02 38 03.7	-0.2
PB11				i S	Sn	02 38 20.5	+0.8
PB11	IPOC Station P	0.99	325	⇓iP	Pn	02 38 03.7	-0.2
PB11				i S	Sn	02 38 18.8	-0.8
PB11	comp=E,908nm,0.1s			IAML		02 38 20.1	
PB02	IPOC Station P	1.09	227	i P	Pn	02 38 05.2	+0.2
PB02				i S	Sn	02 38 21.9	+0.4
PB02	IPOC Station P	1.09	227	eP	Pn	02 38 05.1	+0.2
PB02				i S	Sn	02 38 21.4	-0.1
PB09	IPOC Station P	1.23	188	⇓iP	Pn	02 38 07.2	+0.5
PB09				eS	Sn	02 38 25.2	+0.8
PB09	comp=E,170nm,0.3s			IAML		02 38 27.7	
PB07	IPOC Station P	1.39	214	eP	Pn	02 38 08.6	+0.1
PB07				eS	Sn	02 38 27.2	-0.5
PSGC	Pisagua	1.40	314	⇓iP	Pn	02 38 08.3	-0.2
PSGC				eS	Sn	02 38 27.0	-0.8
PSGCX	Pisagua	1.40	314	i P	Pn	02 38 08.9	+0.4
PSGCX				i S	Sn	02 38 29.1	+1.3
MNMC	Minye Minye	1.52	340	i P	Pn	02 38 10.5	+0.4
MNMC				eS	Sn	02 38 30.9	+0.2
MNMC	comp=N,404nm,0.2s			IAML		02 38 33.5	
MNMCX	Minye Minye	1.52	340	i P	Pn	02 38 10.8	+0.7
MNMCX				i S	Sn	02 38 32.1	+1.4
PB03	IPOC Station P	1.61	204	eP	Pn	02 38 11.2	+0.1
PB03				eS	Sn	02 38 32.0	-0.4
PB12	IPOC Station P	2.29	328	⇑iP	Pn	02 38 19.0	-0.6
PB12				eS	Sn	02 38 46.8	-1.0
PB12	comp=E,62nm,0.3s			IAML		02 38 55.6	
HJA	Humahuaca	4.28	129	i P	Pn	02 38 46.1	-0.3
HJA	comp=Z,26nm,0.5s			IAML		02 40 18.4	

MEX 23 02:51:01.7±0.5**, 16°.13N×96°.50W, h43**^{km}±11^{km}**, MD3.6,**
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.52	134	eP	Pn	02 51 11.2	-1.6
HUIG				eS	Sn	02 51 18.8	-1.9
VHO	Vista Hermosa	0.96	346	i P	Pn	02 51 17.3	-1.7
VHO				i S	Sn	02 51 29.1	-2.6
CMIG	Matias Romero	1.82	58	eP	Pn	02 51 28.5	-2.0
CMIG				i S	Sn	02 51 51.0	-1.4
PCIG		3.18	97	i P	Pn	02 51 48.2	-1.1

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*KRNET **23** 02:57:14.5±0.1, 40°.52N×77°.32E, h15^{km}, mb2.7*
*SOME **23** 02:57:14.7, 40°.45N×77°.38E, h10^{km}*
*NNC **23** 02:57:15.9±0.9, 40°.55N×77°.33E, h0^{km}, mb3.6, mpv3.3,*
Error ellipse: s-maj=5.9km s-min=3.7km az=171.0
ISC 23 02:57:07.3±2.3**, 40°.26N**±0°.09×**77°.41E**±0°.04**, h3**^{km}±17^{km}**,**
n44, σ1^{s}.20/66**, 16C-4D, Kyrgyzstan-Xinjiang border**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn baz=12	1.58	318	⇑iP	Pb	02 57 40.2	+2.7
NRN	baz=12			⇑iS	Sb	02 57 59.0	+1.0
KDJ	Kajisay baz=57	1.87	355	⇑iP	Pg	02 57 44.6	+1.4
KDJ	baz=57			⇑iS	Sb	02 58 07.0	+0.8
ULHL	Ulahol baz=35	2.17	336	⇓iP	Pg	02 57 50.1	+1.2
ULHL	baz=35			⇓iS	Sb	02 58 15.8	+1.1
KZA	Kyzart baz=16	2.44	319	⇑iP	Pg	02 57 55.0	+0.9
KZA	baz=16			⇑iS	Sg	02 58 24.3	-1.4
ARLS	Aral baz=2.0	2.83	305	⇑iP	Pg	02 58 00.9	-0.6
ARLS	baz=2.0			⇑iS	Sb	02 58 33.5	-0.1
IZV	Izvestkoviy 7.4nm,0.1s	2.83	348	Pg	Pg	02 58 03.0	+1.3
IZV	20nm,0.4s			Lg	Lg	02 58 37.7	
IZV	Izvestkoviy 7.4nm,0.1s	2.83	348	eP	Pg	02 58 03.0	+1.3
IZV	20nm,0.4s			eS	Sg	02 58 37.8	-0.6
SATY	Saty 17nm,0.5s	2.89	15	Pg	Pg	02 58 04.0	+1.3
SATY	12nm,0.5s			Lg	Lg	02 58 39.4	
SATY	Saty 17nm,0.5s	2.89	15	eP	Pg	02 58 04.0	+1.3
SATY	12nm,0.5s			eS	Sg	02 58 39.4	-0.8
MDOK	Medeo 9.8nm,0.2s	2.91	355	Pg	Pg	02 58 04.1	+1.0
MDOK	21nm,0.5s			Lg	Lg	02 58 39.6	
MDOK	Medeo 9.8nm,0.2s	2.91	355	eP	Pg	02 58 04.1	+1.0
MDOK	21nm,0.5s			eS	Sg	02 58 39.6	-1.2
MTBS	Maitube 8.1nm,0.2s	2.96	346	Pg	Pg	02 58 04.8	+0.8
MTBS	15nm,0.5s			Lg	Lg	02 58 40.9	
MTBS	Maitube 8.1nm,0.2s	2.96	346	eP	Pg	02 58 04.8	+0.8
MTBS	15nm,0.5s			eS	Sg	02 58 40.9	-1.4
KOTS	Kotyrbulak 9.8nm,0.4s	2.98	356	Pg	Pg	02 58 05.4	+1.0
KOTS	8.8nm,0.4s			Lg	Lg	02 58 41.9	
KOTS	Kotyrbulak 9.8nm,0.4s	2.98	356	eP	Pg	02 58 05.4	+1.0
KOTS	8.8nm,0.4s			eS	Sg	02 58 42.0	-1.0
KST	Kastek 8.2nm,0.3s	2.98	339	Pg	Pg	02 58 05.2	+0.7
KST	14nm,0.6s			Lg	Lg	02 58 41.3	
KST	Kastek 8.2nm,0.3s	2.98	339	eP	Pg	02 58 05.2	+0.7
KST	14nm,0.6s			eS	Sg	02 58 41.3	-1.8
TKM2	Tokmak 2 4.4nm,0.7s	2.98	333	⇑Pg	Pg	02 58 04.9	+0.4
TKM2	7.0nm,0.6s			⇑Lg	Lg	02 58 41.5	
UZB	Uzynbulak 3.8nm,0.9s	3.13	22	Pg	Pg	02 58 08.3	+1.1
UZB	8.8nm,1.2s			Lg	Lg	02 58 47.1	
UZB	Uzynbulak 3.8nm,0.9s	3.13	22	eP	Pg	02 58 08.3	+1.1
UZB	8.8nm,1.2s			eS	Sg	02 58 47.1	-0.6
AAK	Ala-Archa 4.4nm,0.7s	3.23	318	⇑Pg	Pg	02 58 10.1	+0.9
AAK	19nm,1.0s			⇑Lg	Lg	02 58 49.9	
KURS	Kuram 6.4nm,0.5s	3.27	10	Pg	Pg	02 58 11.0	+1.0
KURS	8.7nm,1.1s			Lg	Lg	02 58 51.4	
KURS	Kuram 6.4nm,0.5s	3.27	10	eP	Pg	02 58 11.0	+1.0
KURS	8.7nm,1.1s			eS	Sg	02 58 51.4	-1.1
KPKS	Kokpek 3.9nm,0.2s	3.34	16	eP	Pg	02 58 11.9	+0.6
KPKS	12nm,0.5s			eS	Sg	02 58 52.9	-1.7
PDGK	Podgornoye 2.1nm,0.7s	3.44	26	Pg	Pg	02 58 14.1	+0.9
PDGK	9.3nm,0.9s			Lg	Lg	02 58 56.9	
PDGK	Podgornoye 4.2nm,0.7s	3.44	26	⇑Pg	Pg	02 58 13.6	+0.5
PDGK	25nm,0.7s			⇑Lg	Lg	02 58 56.3	
PDGK	Podgornoye baz=29	3.44	26	⇑iP	Pb	02 58 08.8	-0.1
PDGK	baz=29			⇑iS	Sb	02 58 48.2	-2.9
KTBS	Karatobe 6.7nm,0.5s	3.49	351	Pg	Pg	02 58 14.5	+0.3
KTBS				Lg	Lg	02 58 57.4	
KTBS	Karatobe 6.7nm,0.5s	3.49	351	eP	Pg	02 58 14.5	+0.3
KTBS	4.5nm,0.6s			eS	Sg	02 58 57.4	-2.0
ARSB	Arslanbob baz=85	3.52	289	⇓iP	Pb	02 58 10.4	0.0
ARSB	baz=85			⇓iS	Sb	02 58 51.7	-2.0
CHKK	Chushkaly 8.2nm,0.4s	3.60	355	Pg	Pg	02 58 16.1	-0.3
CHKK	6.9nm,0.5s			Lg	Lg	02 59 00.4	
CHKK	Chushkaly 8.2nm,0.4s	3.60	355	eP	Pg	02 58 16.1	-0.3
CHKK	6.9nm,0.5s			eS	Sg	02 59 00.4	-2.6
SGDS	Sogindy 5.7nm,0.5s	3.80	328	Pg	Pg	02 58 20.8	+0.6
SGDS	2.7nm,0.8s			Lg	Lg	02 59 08.4	
KTMS	Ketmen 1.4nm,0.1s	3.87	34	Pg	Pg	02 58 22.8	+1.4
KTMS	7.2nm,0.4s			Lg	Lg	02 59 11.7	
KTMS	Ketmen 1.4nm,0.1s	3.87	34	eP	Pg	02 58 22.9	+1.4
KTMS	7.2nm,0.4s			eS	Sg	02 59 11.7	+0.2
MNBS	Baschi 2.4nm,0.6s	3.88	11	Pg	Pg	02 58 23.0	+1.2
MNBS	3.6nm,0.1s			Lg	Lg	02 59 12.3	
MNBS	Baschi 2.4nm,0.6s	3.88	11	eP	Pg	02 58 23.0	+1.2
MNBS	3.6nm,0.1s			eS	Sg	02 59 12.3	+0.2
MRKS	Merke	4.00	310	Pg	Pg	02 58 24.5	+0.5

	2.8nm,0.4s						
MRKS				Lg	Lg	02 59 14.9	
	3.0nm,0.6s						
MRKS	**Merke**	**4.00**	**310**	*e*P	**Pg**	**02 58 24.5**	**+0.5**
	2.8nm,0.4s						
MRKS				*e*S	**Sg**	**02 59 14.9**	**-0.9**
	3.0nm,0.6s						
DJR	**Jarkent**	**4.43**	**23**	Pg	**Pg**	**02 58 31.9**	**-0.4**
	1.2nm,0.2s						
DJR				Lg	Lg	02 59 27.3	
	2.4nm,0.3s						
DJR	**Jarkent**	**4.43**	**23**	*e*P	**Pg**	**02 58 31.8**	**-0.5**
	0.9nm,0.2s						
DJR				*e*S	**Sg**	**02 59 27.3**	**-2.4**
	2.9nm,0.5s						
KAPS	**Kapalarasan**	**5.22**	**15**	Pg	**Pg**	**02 58 47.6**	**+0.3**
	1.1nm,0.5s						
KAPS				Lg	Lg	02 59 54.4	
	2.6nm,0.6s						
KAPS	**Kapalarasan**	**5.22**	**15**	*e*P	**Pg**	**02 58 47.6**	**+0.3**
	1.1nm,0.5s						
KAPS				*e*S	**Sg**	**02 59 54.4**	**-0.5**
	2.6nm,0.6s						
KK31	**Karatay Array**	**5.89**	**301**	Lg	Lg	03 00 13.9	
	1.1nm,0.7s,baz=105,slow=30,SNR=4.9						

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*NIED **23** 03:02:00, 37°.10N×140°.70E, h5*^{km}*, Mw4.8 Best double couple:* $M_0 2.08000\times10^{16}$ *NP1:*ϕ_s*22.00000°,*δ*40.00000°,* λ*-95.00000°. NP2:*ϕ_s*209.00000°,*δ*51.00000°,* λ*-86.00000°.*

*BJI **23** 03:02:06.0±0.0, 36°.91N×141°.07E, h6*^{km}*, mb4.9/71, mB5.0/56, Ms4.6/72, Ms7 4.4/66*

*IDC **23** 03:02:10.6±0.4, 37°.16N×140°.53E, h0*^{km}*, mb5.2/33, mb1 5.3/36, mb1mx5.3/41, mbtmp5.1/36, ML4.7/2, MS4.1/35, Ms1 4.1/35, ms1mx4.0/41, Error ellipse: s-maj=12.6km s-min=9.4km az=101.0*

*JMA **23** 03:02:11.9, 37°.10N×140°.68E, h8*^{km}*±1*^{km}*, M5.2 Broadband fault plane solution: P waves. NP1:* ϕ_s*18.00000°,*δ*52.00000°,*λ*-97.00000°. NP2:*ϕ_s*210.00000°,* δ*38.00000°,*λ*-81.00000°. Principal axes: T Plg7.0000°, Azm113.0000°; N Plg6.0000°, Azm22.0000°; P Plg81.0000°, Azm252.0000°;*

JMA Felt IV J1.

*ISCJB **23** 03:02:12.2±0.3, 37°.13N±0°.02×140°.62E±0°.02, h17*^{km}*±2*^{km}*, mb5.2/436, MS4.3/67 Error ellipse: s-maj=2.8km s-min=1.9km az=143.8*

*GCMT **23** 03:02:13.8±0.3, 37°.19N±0°.02×140°.66E±0°.02, h12*^{km}*, MW4.9/103, Moment Tensor Solution. s41,c47; s103,c149; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-2.74±.06;* $M_{\theta\theta}$*0.91±.07;* $M_{\phi\phi}$*1.82±.06;* $M_{r\theta}$*0.38±.28;* $M_{\theta\phi}$*1.01±.05;* $M_{\phi r}$*0.22±.25; Best double couple:* $M_0 2.64200\times10^{16}$ *NP1:*ϕ_s*217.00000°,*δ*49.00000°,* λ*-85.00000°. NP2:*ϕ_s*29.00000°,*δ*41.00000°,*λ*-96.00000°. Principal axes: T 2.5030, Plg4.0000°, Azm303.0000°; N 0.2710, Plg4.0000°, Azm34.0000°; P -2.7820, Plg84.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 03:02:13.8±1.9, 37°.14N×140°.65E, h16*^{km}*±3*^{km}*, mb5.3/357 Error ellipse: s-maj=8.9km s-min=6.5km az=132.0*

NEIC Felt at Furukawa, Hitachi, Iwaki, Kashiwa, Koriyama, Mito, Moka, Nasu, Niigata, Sendai, Shirakawa, Tsukuba and Utsunomiya. Recorded [4 JMA] in Fukushima.

*MOS **23** 03:02:14.0±0.9, 37°.42N×140°.50E, h22*^{km}*, mb5.4/108, Error ellipse: s-maj=5.9km s-min=3.9km az=91.8*

ISC 23 03:02:12.7±0.4,**37°.13N**±0°.02×**140°.69E**±0°.02,**h15**^{km}±2^{km}, **n1191**,σ1".**46**/1268,**mb5.3**/441,**MS4.4**/67,**47C-48D**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.09**	**106**	⇑P	**Pg**	**03 02 14.2**	**-1.8**
ONAJ				S	**Sg**	**03 02 15.8**	**-2.3**
JFFD	**Fukushimafurud**	**0.11**	**251**	⇑P	**Pg**	**03 02 14.4**	**-1.7**
JFFD				S	**Sg**	**03 02 16.1**	**-2.3**
JFK	**Kawauchi**	**0.28**	**31**	⇑P	**Pg**	**03 02 18.0**	**-0.7**
JFK				S	**Sg**	**03 02 22.3**	**-0.6**
JFT	**Otama**	**0.48**	**324**	⇑P	**Pg**	**03 02 21.8**	**-0.5**
JFT				S	**Sg**	**03 02 28.6**	**-0.2**
JHO	**Hitachi**	**0.52**	**191**	⇑P	**Pg**	**03 02 21.4**	**-1.7**
JHO				S	**Sg**	**03 02 28.6**	**-1.5**
JSB	**Shiboa**	**0.64**	**256**	⇑P	**Pg**	**03 02 24.8**	**-0.4**
JSB				S	**Sg**	**03 02 33.8**	**+0.1**
JMM	**Marumori**	**0.74**	**6**	⇑P	**Pg**	**03 02 26.2**	**-1.0**
JMM				S	**Sg**	**03 02 37.0**	**0.0**
JFY	**Yanaizu**	**0.83**	**290**	⇑P	**Pb**	**03 02 28.1**	**-0.8**
JFY				S	**Sg**	**03 02 39.1**	**-0.8**
JIO	**Ouri**	**1.43**	**21**	⇓P	**Pn**	**03 02 37.3**	**-0.7**
JIZZ	**Izumozaki**	**1.63**	**285**	⇑P	**Pb**	**03 02 42.2**	**-0.2**
JGK	**Kuni**	**1.74**	**252**	⇓P	**Pn**	**03 02 43.3**	**+0.9**
JAW	**Awa shima**	**1.75**	**320**	P	**Pn**	**03 02 43.0**	**+0.5**
JKMT	**Kesennumamotoy**	**1.79**	**20**	⇓P	**Pn**	**03 02 43.0**	**-0.1**
JYK	**Kaneyama**	**1.81**	**352**	⇓P	**Pn**	**03 02 44.1**	**+0.8**
JRY	**Ryogami san**	**1.82**	**233**	⇓P	**Pn**	**03 02 43.0**	**-0.4**
MJAR	**Matsushiro Arr**	**2.08**	**254**	Pn	**Pn**	**03 02 47.8**	**+0.8**
	51nm,0.3s,baz=79,slow=16,SNR=503						
MJAR				Sn	**Sb**	**03 03 16.1**	**+0.4**
	46nm,0.3s,baz=82,slow=28,SNR=23						
MJAR				LR	LR	03 03 51.1	
	comp=Z,5µm,19.5s,baz=60,slow=52						
MAJO	**Matsushiro**	**2.08**	**254**	*e*Pn	**Pn**	**03 02 48.0**	**+1.0**
MAJO				*e*Sn	**Sn**	**03 03 12.3**	**-0.3**
MAJO				*e*Sg	**Sb**	**03 03 16.1**	**+0.4**
MAJO	**Matsushiro**	**2.08**	**254**	*e*P	**Pn**	**03 02 48.0**	**+1.0**
MAJO				*e*		03 03 12.3	
MAT	**Matsushiro**	**2.08**	**254**	P	**Pn**	**03 02 48.1**	**+1.1**
MAT				S	**Sb**	**03 03 16.2**	**+0.5**
MAT	**Matsushiro**	**2.08**	**254**	P	**Pn**	**03 02 48.0**	**+1.1**
MJB9	**Matsu-Tunnel**	**2.08**	**255**	*e*Pn	**Pn**	**03 02 48.1**	**+1.1**
MJB9				*e*Sn	**Sn**	**03 03 11.7**	**-0.9**
OFUJ	**Ofunato**	**2.10**	**21**	⇓P	**Pn**	**03 02 47.3**	**0.0**
JNG	**Nsakai**	**2.20**	**252**	⇓P	**Pn**	**03 02 49.8**	**+1.0**
JTB	**Tobi-shima**	**2.25**	**337**	⇓P	**Pn**	**03 02 50.3**	**+0.9**
JOD2	**Odawara 2**	**2.27**	**215**	⇓P	**Pn**	**03 02 49.2**	**-0.4**
JRG	**Rokugo**	**2.27**	**359**	⇓P	**Pn**	**03 02 51.0**	**+1.4**
JYN	**Shimob**	**2.38**	**227**	P	**Pn**	**03 02 51.6**	**+0.4**
JOM	**Ohasama**	**2.39**	**11**	⇓P	**Pn**	**03 02 52.0**	**+0.7**
JNT	**Takato**	**2.41**	**239**	⇓P	**Pn**	**03 02 53.0**	**+1.4**
JYW	**Yuwa**	**2.44**	**351**	⇓P	**Pn**	**03 02 53.8**	**+1.8**
MIYJ	**Miyakonagasawa**	**2.60**	**20**	⇓P	**Pn**	**03 02 54.3**	**+0.1**
JIM2	**Oshima 3**	**2.61**	**203**	P	**Pn**	**03 02 53.4**	**-1.0**
JIZS	**Izushimoda**	**2.82**	**212**	⇓P	**Pn**	**03 02 56.8**	**-0.4**
JTHY	**Toshimahigashi**	**2.84**	**204**	P	**Pn**	**03 02 56.8**	**-0.6**
JNY	**Yasuok**	**2.89**	**233**	⇓P	**Pn**	**03 03 00.1**	**+1.9**
JKZ	**Kuzumaki**	**2.90**	**10**	⇓P	**Pn**	**03 02 59.5**	**+1.2**
JTH	**Tanohata**	**2.96**	**18**	⇓P	**Pn**	**03 02 59.5**	**+0.4**
JAH	**Hinai**	**3.06**	**359**	⇓P	**Pn**	**03 03 02.5**	**+2.0**
JGF	**Kuroka**	**3.09**	**241**	⇓P	**Pn**	**03 03 02.7**	**+1.7**
JKEN	**Kujiedanarisaw**	**3.18**	**14**	⇓P	**Pn**	**03 03 03.0**	**+0.9**
JYZW	**Yoshizawa**	**3.20**	**229**	P	**Pn**	**03 03 03.7**	**+1.2**
HMMJ	**Hamamatsu 2**	**3.31**	**228**	P	**Pn**	**03 03 05.2**	**+1.3**
JANG	**Nango**	**3.31**	**11**	⇓P	**Pn**	**03 03 04.8**	**+0.9**
JAO	**Obara**	**3.34**	**237**	⇓P	**Pn**	**03 03 06.3**	**+1.9**
INU	**Inuyama**	**3.46**	**240**	*e*Pn	**Pn**	**03 03 07.6**	**+1.6**
INU				*e*Sn	**Sn**	**03 03 47.5**	**+0.8**
JHJ	**Hachijo jima 2**	**4.07**	**191**	Pn	**Pn**	**03 03 15.3**	**+1.0**
	102nm,0.3s,baz=7.8,slow=1.9,SNR=23						
JHJ				Sn	**Sn**	**03 04 04.1**	**+2.4**
	94nm,0.3s,baz=15,slow=19,SNR=3.9						
JHJ				LR	LR	03 04 36.0	
	comp=Z,677nm,21.5s,baz=109,slow=36						
JHJ2	**Mitsune**	**4.07**	**190**	*e*Pn	**Pn**	**03 03 15.2**	**+0.8**
JHJ2				*e*Sn	**Sn**	**03 03 58.7**	**-3.1**
JFM	**Mihama**	**4.12**	**249**	⇓P	**Pn**	**03 03 17.5**	**+2.4**
ERM	**Erimo**	**5.24**	**21**	*e*Pn	**Pn**	**03 03 30.5**	**+0.1**
ERM				*e*Sn	**Sn**	**03 04 26.5**	**-4.1**
ERM	**Erimo**	**5.24**	**21**	*e*P	**Pn**	**03 03 30.5**	**+0.1**
ERM				*e*		03 04 26.5	
ASAJ	**Asahikawa**	**7.13**	**11**	Pn	**Pn**	**03 03 56.5**	**+0.1**
	12nm,0.3s,baz=220,slow=13,SNR=88						
ASAJ				Sn	**Sn**	**03 05 20.2**	**+3.1**
	6.8nm,0.3s,baz=85,slow=29,SNR=3.7						
ASAJ				LR	LR	03 06 43.2	
	comp=Z,842nm,20.0s,baz=308,slow=38						
GRPR	**Tuman**	**7.87**	**28**	*e*P	**Pn**	**03 04 06.8**	**+0.2**
GRPR				*e*S	**Sn**	**03 05 30.0**	**-5.4**
GRPR				pmax	pmax		
	comp=Z,211nm,0.5s						
GRPR				pmax	pmax		
	comp=E,346nm,0.4s						
GRPR				pmax	pmax		
	comp=N,157nm,0.3s						
LAGR	**Lagunnoye**	**7.93**	**28**	*e*P	**Pn**	**03 04 07.1**	**-0.3**
LAGR				*e*S	**Sn**	**03 05 32.3**	**-4.5**
LAGR				pmax	pmax		
	comp=Z,638nm,0.5s						
LAGR				pmax	pmax		
	comp=E,710nm,0.6s						
LAGR				pmax	pmax		
	comp=N,174nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**7.94**	**28**	*e*P	**Pn**	**03 04 06.8**	**-0.7**
YUK				*e*S	**Sn**	**03 05 33.5**	**-3.5**
YUK				pmax	pmax		
	comp=N,104nm,0.6s						
YUK				pmax	pmax		
	comp=E,131nm,0.6s						
YUK				pmax	pmax		
	comp=Z,341nm,0.6s						
TEY	**Ternei**	**8.48**	**340**	⇓*e*P	**Pn**	**03 04 18.8**	**+3.9**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
JNU	**Nakatsue**	**8.97**	**246**	Pn	**Pn**	**03 04 23.1**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=62,slow=9.6,SNR=22						
JNU				LR	LR	03 08 17.0	
	comp=Z,1µm,18.5s,baz=60,slow=41						
JNU	**Nakatsue**	**8.97**	**246**	*e*Pn	**Pn**	**03 04 23.5**	**+1.7**
MSHR	**Mys Shultsa**	**9.13**	**310**	*i* P	**Pn**	**03 04 27.3**	**+3.5**
USRK	**Ussuriysk Ar.**	**9.67**	**320**	Pn	**Pn**	**03 04 35.6**	**+4.4**
	comp=Z,2.1nm,0.3s,baz=132,slow=12,SNR=135						
USRK				LR	LR	03 07 58.5	
	comp=Z,2µm,19.6s,baz=133,slow=36						
KUR	**Kuril'sk**	**9.73**	**31**	*e*P	**Pn**	**03 04 32.0**	**-0.1**
KUR				*e*S	**Sn**	**03 06 16.1**	**-5.0**
KUR				pmax	pmax		
	comp=E,73nm,0.5s						
KUR				pmax	pmax		
	comp=Z,161nm,0.5s						
KUR				pmax	pmax		
	comp=N,32nm,0.2s						
KUR				MLR	MLR		
	comp=N,622nm,13.0s						
KUR				MLR	MLR		
	comp=Z,439nm,13.0s						
KUR				MLR	MLR		
	comp=E,1µm,16.0s						
YSS	**Yuzh-Sakhalins**	**9.94**	**8**	*e*Pn	**Pn**	**03 04 35.6**	**+0.6**
YSS	**Yuzh-Sakhalins**	**9.94**	**8**	⇑*i*P	**Pn**	**03 04 35.5**	**+0.6**
YSS				*e*S	**Sn**	**03 06 25.5**	**-0.6**
YSS				pmax	pmax		
	comp=N,180nm,0.9s						
YSS				pmax	pmax		
	comp=Z,230nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1µm,13.0s						
YSS				MLR	MLR		
	comp=N,1µm,11.0s						
YSS				MLR	MLR		
	comp=E,1µm,14.0s						
KSRS	**Korea Array**	**10.18**	**276**	Pn	Pn	03 04 44.0	+5.8
	comp=E,1.8nm,0.3s,baz=94,slow=14,SNR=84						
KSRS				LR	LR	03 08 16.5	
	comp=E,2µm,19.4s,baz=90,slow=36						
TJN	**Taejon**	**10.72**	**270**	*e*P	**Pn**	**03 04 47.4**	**+1.8**
MDJ	**Mudanjiang**	**11.24**	**315**	P	Pn	03 04 58.3	+5.5
MDJ				sP		03 05 03.9	
MDJ				S	Sn	03 07 11.3	+13
MDJ				sS		03 07 17.0	
MDJ				pmax	pmax		
	comp=E,47nm,1.1s						
MDJ				pmax	pmax		
	comp=E,1µm,4.6s						
MDJ				LR	LR		
	comp=E,970nm,18.5s						
MDJ				LR	LR		
	comp=E,1µm,15.9s						
MDJ				LR	LR		
	comp=E,2µm,16.4s						
UGL	**Uglegorsk**	**11.99**	**4**	*e*P	**Pn**	**03 05 04.5**	**+1.6**
UGL				S	**Sn**	**03 07 11.8**	**-4.5**
UGL				pmax	pmax		
	comp=Z,54nm,0.6s						
UGL				MLR	MLR		
	comp=Z,2µm,16.0s						
UGL				MLR	MLR		
	comp=N,2µm,15.0s						
CN2	**Changchun**	**13.38**	**305**	*e*P	**Pn**	**03 05 25.3**	**+3.4**
CN2				*e*S	S	03 08 03.5	-11
CN2				pmax	pmax		
	comp=N,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=N,660nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=N,1µm,16.0s						
KLR	**Kul'dur**	**13.73**	**335**	Pn	**Pn**	**03 05 28.4**	**+1.8**
	comp=N,0.7nm,0.3s,baz=137,slow=13,SNR=33						
KLR				LR	LR	03 10 17.6	
	comp=N,1µm,21.4s,baz=150,slow=36						
KLR	**Kul'dur**	**13.73**	**335**	P	**Pn**	**03 05 28.5**	**+1.8**
KLR				MLR	MLR		
	comp=Z,1µm,21.4s						
TYV	**Tymovskoe**	**13.80**	**5**	*e*P	**Pn**	**03 05 26.9**	**-0.8**
TYV				*e*S	**Sn**	**03 08 01.8**	**+1.2**
TYV				pmax	pmax		
	comp=Z,200nm,1.4s						
TYV				pmax	pmax		
	comp=Z,69nm,0.7s						
TYV				smax	smax		
	comp=N,500nm,5.6s						
TYV				MLR	MLR		
	comp=Z,800nm,17.0s						
GRNR	**Gornyy**	**13.98**	**349**	*e*P	Pn	03 05 24.0	-6.1
GRNR				pmax	pmax		
	comp=Z,11nm,1.0s						
SNY	**Shenyang**	**14.02**	**295**	⇓P	**Pn**	**03 05 33.3**	**+2.6**
SNY				S	**S**	**03 08 19.1**	**-8.4**
SNY				pmax	pmax		
	comp=Z,39nm,1.8s						
SNY				pmax	pmax		
	comp=Z,770nm,4.2s						
SNY				LR	LR		
	comp=Z,2µm,13.2s						
SNY				LR	LR		
	comp=Z,2µm,17.4s						
SNY				LR	LR		
	comp=Z,3µm,18.0s						
JOW	**Kunigami**	**14.69**	**229**	Pn	**Pn**	**03 05 42.5**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=92,slow=14,SNR=6.5						
JOW	**Kunigami**	**14.69**	**229**	*e*Pn	**Pn**	**03 05 41.9**	**+1.8**
DL2	**Dalian**	**15.13**	**283**	⇑P	**P**	**03 05 48.6**	**-2.3**
DL2				S	**Sn**	**03 08 40.1**	**+7.0**
DL2				sS	**S**	**03 08 44.9**	**-5.3**
DL2				pmax	pmax		
	comp=Z,130nm,0.9s						
DL2				pmax	pmax		
	comp=Z,720nm,5.1s						
DL2				LR	LR		
	comp=Z,730nm,14.8s						
DL2				LR	LR		
	comp=Z,1µm,17.6s						
DL2				LR	LR		
	comp=Z,1µm,18.1s						
NKL	**Nikolayevsk**	**16.02**	**360**	*e*P	**P**	**03 06 00.5**	**-0.2**
NKL				pmax	pmax		
	comp=Z,35nm,1.0s						
OKH	**Okha**	**16.50**	**5**	*de*P	P	03 06 13.4	+7.4
OKH				pmax	pmax		
	comp=Z,100nm,8.1s						
OKH				MLR	MLR		
	comp=Z,500nm,13.0s						
SSE	**Sheshan**	**17.22**	**255**	P	**Pn**	**03 06 12.0**	**-0.7**
SSE				S	**Sn**	**03 09 23.8**	**-0.2**
SSE				pmax	pmax		
	comp=Z,39nm,0.7s						
SSE				pmax	pmax		
	comp=Z,290nm,6.0s						
SSE				LR	LR		
	comp=Z,750nm,19.1s						
SSE				LR	LR		
	comp=Z,620nm,18.5s						
SKR	**Severo-Kuril's**	**17.48**	**34**	*e*P	**Pn**	**03 06 15.4**	**-0.3**
SKR				*e*S	**Sn**	**03 09 32.5**	**+2.6**
SKR				pmax	pmax		
	comp=Z,158nm,1.0s						
SKR				pmax	pmax		
	comp=Z,400nm,3.2s						
SKR				MLR	MLR		
	comp=Z,500nm,17.0s						
SKR				MLR	MLR		
	comp=Z,500nm,16.0s						
NJ2	**Nanjing**	**18.67**	**261**	*e*P	**P**	**03 06 29.5**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,31nm,0.8s						
NJ2				LR	LR		
	comp=Z,1µm,19.4s						
NJ2				LR	LR		
	comp=Z,1µm,15.6s						
NJ2				LR	LR		
	comp=Z,1µm,17.5s						
TIA	**Tai'an**	**18.92**	**274**	P	**P**	**03 06 31.4**	**-1.5**
TIA				S	**S**	**03 10 08.6**	**+1.1**
TIA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TIA				pmax	pmax		
	comp=Z,270nm,6.2s						
TIA				LR	LR		
	comp=Z,710nm,13.2s						
TIA				LR	LR		
	comp=Z,1µm,15.3s						
TIA				LR	LR		
	comp=Z,2µm,14.7s						
ZEA	**Zeya**	**19.05**	**335**	*e*P	**P**	**03 06 31.4**	**-2.7**
ZEA				pmax	pmax		
	comp=Z,46nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,1µm,18.0s						
ZEA				MLR	MLR		
	comp=E,700nm,13.0s						
ZEA				MLR	MLR		
	comp=N,900nm,15.0s						
BJI	**Beijing**	**19.37**	**286**	P	**P**	**03 06 37.5**	**-0.3**
BJI				S	**Sn**	**03 10 14.4**	**-1.4**
BJI				pmax	pmax		
	comp=N,8.0nm,1.1s						
BJI				LR	LR		
	comp=N,250nm,10.9s						
BJI				LR	LR		
	comp=N,260nm,13.3s						
PEA0B	**Petropavlovsk-**	**19.90**	**31**	*e*P	**Pn**	**03 06 44.9**	**-0.3**
	comp=N,42nm,0.9s						
PETK	**Petropavlovsk-**	**19.90**	**31**	P	**Pn**	**03 06 44.6**	**-0.5**
	comp=N,0.5nm,0.3s,baz=201,slow=7.9,SNR=22						
PETK				PcP	**PcP**	**03 11 01.2**	**+1.1**
	comp=N,0.5nm,0.3s,baz=204,slow=3.2,SNR=4.1						
PETK				LR	LR	03 14 13.5	
	comp=N,189nm,19.9s,baz=217,slow=36						
PEA1	**Petropavlovsk-**	**19.91**	**31**	*e*P	**Pn**	**03 06 44.6**	**-0.5**
PEA1				*e*PcP	**PcP**	**03 11 01.2**	**+1.1**
PET	**Petropavlovsk**	**20.25**	**33**	*e*P	**P**	**03 06 46.2**	**-1.0**
	comp=N,29nm,0.7s						
PET	**Petropavlovsk**	**20.25**	**33**	*e*P	**P**	**03 06 48.0**	**+0.8**
PET				*e*S	**S**	**03 10 28.6**	**-5.1**
PET				pmax	pmax		
	comp=Z,500nm,4.9s						
PET				pmax	pmax		
	comp=Z,200nm,9.9s						
PET				pmax	pmax		
	comp=Z,46nm,0.8s						
PET				MLR	MLR		
	comp=Z,300nm,14.0s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
TATO	**Taipei**	**20.38**	**239**	*e*P	**P**	**03 06 46.2**	**-2.8**
	comp=Z,73nm,1.1s						
YHNB	**Yeheng**	**20.66**	**239**	*e*P	**P**	**03 06 50.1**	**-1.9**
	comp=Z,24nm,1.1s						
SARN	**Sarigan**	**20.84**	**166**	*e*P	Pn	03 06 55.4	-1.0
	comp=Z,35nm,1.1s						
NACB	**Ninganchiao**	**20.84**	**237**	*e*P	**P**	**03 06 52.2**	**-1.7**
	comp=Z,17nm,0.9s						
SSLB	**Suanglung**	**21.54**	**237**	*e*P	**P**	**03 07 00.8**	**-0.6**
	comp=Z,19nm,1.0s						
YULB	**Yu-li**	**21.58**	**236**	*e*P	**P**	**03 07 00.9**	**-0.9**
	comp=Z,9.8nm,0.7s						
TPUB	**Ta-pu**	**22.08**	**237**	*e*P	**P**	**03 07 06.5**	**-0.8**
	comp=Z,24nm,0.8s						
TWG	**Pinlang**	**22.12**	**235**	*e*P	**P**	**03 07 04.8**	**-2.9**
	comp=Z,106nm,0.8s						
QZH	**Quanzhou**	**22.43**	**243**	*e*P	**P**	**03 07 07.6**	**-3.4**
QZH				S	**S**	**03 11 07.6**	**-9.3**
QZH				LR	LR		
	comp=Z,560nm,18.5s						
QZH				LR	LR		
	comp=Z,580nm,16.6s						
QZH				LR	LR		
	comp=Z,430nm,15.6s						
WHN	**Wuhan**	**22.80**	**261**	⇓P	**P**	**03 07 15.6**	**+0.7**
WHN				S	**S**	**03 11 27.3**	**+3.8**
WHN				pmax	pmax		
	comp=Z,64nm,0.7s						
WHN				LR	LR		
	comp=Z,2µm,11.6s						
WHN				LR	LR		
	comp=Z,1µm,13.4s						
WHN				LR	LR		
	comp=Z,2µm,13.6s						
HHC	**Hu-ho-hao-te**	**22.89**	**288**	*e*P	**P**	**03 07 16.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,39nm,1.1s						
HHC				pmax	pmax		
	comp=Z,79nm,5.4s						
MA2	**Magadan**	**23.39**	**13**	P	**P**	**03 07 21.1**	**+0.5**
	comp=Z,96nm,0.8s,baz=198,slow=8.2,SNR=33						
MA2				LR	LR	03 17 20.7	
	comp=Z,325nm,19.0s,baz=203,slow=39						
MA2	**Magadan**	**23.39**	**13**	*e*P	**P**	**03 07 20.3**	**-0.3**
	comp=Z,89nm,0.8s						
MA2	**Magadan**	**23.39**	**13**	*e*P	**P**	**03 07 20.3**	**-0.3**
MA2				pmax	pmax		
	comp=Z,89nm,0.8s						
BTO	**Baotou**	**24.07**	**288**	*e*P	**P**	**03 07 22.3**	**-5.2**
YAK	**Yakutsk**	**25.86**	**348**	*e*P	**P**	**03 07 42.6**	**-0.7**
	comp=Z,52nm,0.8s						
YAK	**Yakutsk**	**25.86**	**348**	*e*P	**P**	**03 07 41.5**	**-1.8**
YAK				*e**PP	**sP**	**03 07 50.5**	**+0.4**
YAK				*e*S	**S**	**03 12 09.2**	**-3.1**
YAK				*e*SS		03 13 05.5	
YAK				pmax	pmax		
	comp=Z,26nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
YAK				smax	smax		
	comp=N,103nm,2.4s						
YAK				smax	smax		
	comp=E,94nm,2.3s						
YAK				MLR	MLR		
	comp=Z,189nm,18.0s						
YAK				MLR	MLR		
	comp=N,240nm,19.0s						
YAK				MLR	MLR		
	comp=E,122nm,18.0s						
XAN	**Xi'an**	**25.96**	**273**	P	**P**	**03 07 45.5**	**+0.9**
XAN				S	**S**	**03 12 08.4**	**-6.2**
XAN				pmax	pmax		
	comp=E,25nm,0.7s						
XAN				pmax	pmax		
	comp=E,92nm,5.9s						
XAN				LR	LR		
	comp=E,860nm,17.6s						
XAN				LR	LR		
	comp=E,530nm,18.6s						
XAN				LR	LR		
	comp=E,630nm,18.1s						
SEY	**Seymchan**	**26.82**	**12**	P	**P**	**03 07 53.0**	**+1.0**
	comp=E,44nm,0.9s,baz=202,slow=7.9,SNR=26						
SEY	**Seymchan**	**26.82**	**12**	P	**P**	**03 07 53.0**	**+1.0**
BOD	**Bodaibo**	**27.14**	**328**	*e*P	**P**	**03 07 53.6**	**-1.4**
BOD				pmax	pmax		
	comp=Z,18nm,1.6s						
SONA0	**Songino Array**	**27.25**	**304**	*e*P	**P**	**03 07 55.2**	**-1.2**
SONA0				*e*PcP	**PcP**	**03 11 15.8**	**0.0**
SONM	**Songino Array**	**27.25**	**304**	P	**P**	**03 07 55.2**	**-1.2**
	comp=Z,30nm,0.8s,baz=107,slow=8.9,SNR=37						
SONM				PcP	**PcP**	**03 11 15.8**	**0.0**
	comp=Z,3.1nm,0.6s,baz=142,slow=2.2,SNR=6.4						

SONM				LR	LR	03 18 55.8	
	comp=Z,560nm,18.0s,baz=108,slow=37						
HKPS	**Hong Kong Po S**	**27.28**	**245**	*e*P	**P**	**03 07 57.0**	**+0.3**
	comp=Z,134nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**28.69**	**120**	T	T	03 37 58.2	
	baz=313,slow=75,SNR=2588						
H11N1	**WAKE ISLAND Hy**	**28.70**	**120**	T	T	03 37 58.8	
	baz=313,slow=75,SNR=1864						
H11N3	**WAKE ISLAND Hy**	**28.71**	**120**	T	T	03 37 59.6	
	baz=313,slow=75,SNR=1946						
WAKE	**Wake Island**	**28.83**	**121**	*e*P	**P**	**03 08 10.7**	**+0.3**
	comp=Z,226nm,1.5s						
H11S1	**WAKE ISLAND Hy**	**29.40**	**122**	T	T	03 38 51.2	
	baz=314,slow=75,SNR=1536						
H11S3	**WAKE ISLAND Hy**	**29.40**	**122**	T	T	03 38 54.9	
	baz=314,slow=75,SNR=1235						
H11S2	**WAKE ISLAND Hy**	**29.41**	**122**	T	T	03 38 50.9	
	baz=314,slow=75,SNR=662						
LZH	**Lanzhou**	**29.48**	**279**	*e*P	**P**	**03 08 18.3**	**+2.0**
LZH				pP	pP	03 08 20.3	-0.8
LZH				sP	sP	03 08 21.3	-1.8
LZH				*e*S	**S**	**03 13 07.6**	**-2.7**
LZH				SS	ScP	03 14 42.1	-21
LZH				pmax	pmax		
	comp=Z,73nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,4.6s						
LZH				LR	LR		
	comp=Z,660nm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,13.3s						
LZH				LR	LR		
	comp=Z,2µm,16.5s						
ZAK	**Zakamensk**	**29.76**	**308**	*e*P	**P**	**03 08 19.1**	**+0.5**
ZAK				*e*		03 11 21.5	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TLY	**Talaya**	**29.83**	**311**	*e*P	**P**	**03 08 17.5**	**-1.6**
TLY				*e*		03 09 18.6	
TLY				*e*S	**S**	**03 13 20.7**	**+5.5**
TLY				pmax	pmax		
	comp=Z,26nm,0.8s						
TLY				MLR	MLR		
	comp=Z,1µm,13.0s						
GYA	**Guiyang**	**30.67**	**260**⇓	*i*P	**P**	**03 08 24.4**	**-2.4**
GYA				PP	**PnPn**	**03 09 23.8**	**-2.6**
GYA				S	**S**	**03 13 24.8**	**-4.2**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,6.1s						
GYA				LR	LR		
	comp=Z,820nm,16.5s						
GYA				LR	LR		
	comp=Z,520nm,15.5s						
GYA				LR	LR		
	comp=Z,680nm,17.5s						
CD2	**Chengdu**	**31.09**	**270**⇑	*i*P	**P**	**03 08 30.8**	**+0.3**
CD2				S	**S**	**03 13 35.1**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,100nm,5.5s						
CD2				LR	LR		
	comp=Z,1µm,15.5s						
CD2				LR	LR		
	comp=Z,1µm,16.5s						
CD2				LR	LR		
	comp=Z,2µm,17.7s						
MOY	**Mondy**	**31.44**	**310**	*e*P	**P**	**03 08 36.3**	**+2.9**
GTA	**Gaotai**	**31.98**	**287**	⇑P	**P**	**03 08 36.8**	**-1.5**
GTA				pP	pP	03 08 42.0	-1.1
GTA				sP	sP	03 08 45.3	+0.2
GTA				PcP	**PcP**	**03 11 29.5**	**+1.4**
GTA				S	**S**	**03 13 49.8**	**+0.4**
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA				pmax	pmax		
	comp=Z,120nm,6.3s						
GTA				LR	LR		
	comp=Z,390nm,16.2s						
GTA				LR	LR		
	comp=Z,270nm,17.5s						
GTA				LR	LR		
	comp=Z,380nm,18.7s						
QIZ	**Qiongzhong**	**32.44**	**245**	P	**P**	**03 08 41.8**	**-0.6**
QIZ				S	**S**	**03 13 59.3**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,220nm,2.5s						
QIZ				LR	LR		
	comp=Z,420nm,17.7s						
QIZ				LR	LR		
	comp=Z,370nm,23.0s						
QIZ				LR	LR		
	comp=Z,300nm,18.6s						
KIWB	**Kanaga Island**	**32.98**	**50**	*e*P	**P**	**03 08 48.0**	**+1.3**
ADK	**Adak**	**33.27**	**50**	*e*P	**P**	**03 08 48.8**	**-0.4**
	comp=Z,33nm,0.9s						
ADK	**Adak**	**33.27**	**50**	*e*P	**P**	**03 08 48.8**	**-0.4**
ADK				pmax	pmax		
	comp=Z,33nm,0.9s						
BILL	**Bilibino**	**34.10**	**17**	*e*P	**P**	**03 08 56.0**	**-0.3**
	comp=Z,26nm,1.2s						
BILL				*e*PcP	**PcP**	**03 11 33.0**	**-0.3**
BILL	**Bilibino**	**34.10**	**17**	*de*P	**P**	**03 08 56.0**	**-0.3**
BILL				*e**PP	**pP**	**03 08 59.9**	**-1.3**
BILL				*e**SP	**sP**	**03 09 04.3**	**+1.2**
BILL				*e*		03 11 34.9	
BILL				pmax	pmax		
	comp=Z,19nm,1.0s						
BILL				MLR	MLR		
	comp=Z,226nm,17.0s						
KMI	**Kunming**	**34.40**	**261**	P	**P**	**03 08 58.3**	**-1.4**
KMI				pP	pP	03 09 02.8	-1.7
KMI				PP	**PnPn**	**03 10 15.0**	**+0.6**
KMI				S	**S**	**03 14 23.8**	**-3.6**
KMI				SS	**SnSn**	**03 16 35.5**	**-2.1**
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,120nm,4.2s						
KMI				LR	LR		
	comp=Z,640nm,20.6s						
KMI				LR	LR		
	comp=Z,510nm,18.8s						
KMI				LR	LR		
	comp=Z,640nm,19.4s						
TIXI	**Tiksi**	**35.13**	**354**	P	**P**	**03 09 03.7**	**-1.5**
	comp=Z,25nm,0.8s,baz=139,slow=7.4,SNR=19						
TIXI	**Tiksi**	**35.13**	**354**	*e*P	**P**	**03 09 03.6**	**-1.5**
	comp=Z,22nm,0.7s						
TIXI	**Tiksi**	**35.13**	**354**	*e*P	**P**	**03 09 04.2**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,20nm,0.9s						
SLVN	**Son La**	**35.50**	**254**	*e*P	**P**	**03 09 07.9**	**-1.1**
	comp=Z,12nm,1.1s						
PANO	**Nakornpanom**	**37.47**	**248**	P	P	03 09 31.1	+5.4
	comp=Z,0.4nm,1.1s						
SPIA	**Saint Paul Isl**	**37.88**	**42**	*e*P	**P**	**03 09 29.3**	**+0.5**
	comp=Z,82nm,1.2s						
NONG	**Nongkai**	**37.99**	**250**	P	**P**	**03 09 30.2**	**0.0**
	comp=Z,0.7nm,1.1s						
SWI	**Sorong**	**38.80**	**195**	P	**P**	**03 09 37.4**	**+0.5**
	comp=Z,55nm,0.8s						
SIJI	**Sorong**	**38.80**	**195**	P	**P**	**03 09 37.0**	**+0.1**
	comp=Z,66nm,0.9s,baz=33,slow=7.7,SNR=19						
GENI	**Genyem**	**39.52**	**181**	P	**P**	**03 09 43.8**	**+0.9**
CHAI	**Chaiyaphum**	**40.20**	**249**	P	**P**	**03 09 48.3**	**-0.4**
	comp=Z,26µm,0.9s,comp=Z,540µm						
WMQ	**Urumqi**	**40.28**	**297**	*e*P	**P**	**03 09 50.8**	**+1.6**
WMQ				sP	sP	03 09 56.6	+0.6
WMQ				pmax	pmax		
	comp=Z,62nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.1s						
WMQ				LR	LR		
	comp=Z,220nm,15.9s						
WMQ				LR	LR		
	comp=Z,280nm,18.9s						
WMQ				LR	LR		
	comp=Z,310nm,20.5s						
PBKT	**Sadao Pong**	**40.55**	**251**	P	**P**	**03 09 51.7**	**+0.2**
	comp=Z,7.1nm,1.4s						
FAKI	**Fak Fak**	**40.61**	**193**	*e*P	**P**	**03 09 52.8**	**+0.8**
	comp=Z,46nm,0.9s						
FAKI	**Fak Fak**	**40.61**	**193**	P	**P**	**03 09 55.0**	**+3.0**
	comp=Z,62nm,1.5s						
CMMT	**Chiang Mai**	**40.75**	**255**	P	**P**	**03 09 55.1**	**+1.9**
	comp=Z,3.5nm,0.7s						
CHTO	**Chiang Mai**	**40.76**	**255**	*e*P	**P**	**03 09 52.0**	**-1.2**
	comp=Z,7.6nm,0.9s						
CHTO	**Chiang Mai**	**40.76**	**255**	*e*P	**P**	**03 09 52.1**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CM31	**Chiang Mai Arr**	**40.96**	**255**	*e*P	**P**	**03 09 55.6**	**+0.6**
	comp=Z,8.3nm,0.4s						
CM31				*e*PcP	**PcP**	**03 11 55.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**40.96**	**255**	P	**P**	**03 09 55.6**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=48,slow=5.9,SNR=7.5						
CMAR				PcP	**PcP**	**03 11 55.6**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=1.1,slow=1.6,SNR=11						
CMAR				LR	LR	03 27 49.0	
	comp=Z,236nm,18.2s,baz=52,slow=38						
CMAR	**Chiang Mai Arr**	**40.96**	**255**	*ce*P	**P**	**03 09 55.5**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SANI	**Sanana**	**41.30**	**203**	P	**P**	**03 09 59.4**	**+1.7**
	comp=Z,123nm,0.8s,comp=Z,1µm						
ZAA0	**Zalesovo Array**	**41.42**	**312**	*e*P	**P**	**03 09 57.7**	**-0.7**
	comp=Z,26nm,0.6s						
ZAA0				*e*PcP	**PcP**	**03 11 57.9**	**+1.9**
ZAA1	**Zalesovo Array**	**41.42**	**312**	*e*P	**P**	**03 09 57.6**	**-0.8**
ZAA1				*e*PcP	**PcP**	**03 11 55.5**	**-0.5**
ZALV	**Zalesovo Beam**	**41.42**	**312**	P	**P**	**03 09 57.6**	**-0.8**
	comp=Z,30nm,0.7s,baz=94,slow=6.3,SNR=40						
ZALV				PcP	**PcP**	**03 11 55.5**	**-0.5**
	comp=Z,6.8nm,0.5s,baz=107,slow=3.1,SNR=7.8						
ZALV				LR	LR	03 27 36.7	
	comp=Z,369nm,19.2s,baz=70,slow=37						
MSAI	**Masohi**	**41.73**	**198**	P	P	03 10 06.5	+5.3
NLAI	**Namlea**	**42.10**	**200**	P	**P**	**03 10 04.4**	**+0.1**
AAI	**Ambon**	**42.24**	**199**	P	P	03 10 10.5	+5.1
MK32	**Makanchi Array**	**43.58**	**302**	*e*P	**P**	**03 10 15.5**	**-0.5**
MK32				*e*PcP	**PcP**	**03 12 02.6**	**-0.8**
MKAR	**Makanchi Array**	**43.58**	**302**	P	**P**	**03 10 15.5**	**-0.5**
	comp=Z,17nm,0.7s,baz=88,slow=9.7,SNR=68						
MKAR				PcP	**PcP**	**03 12 02.6**	**-0.8**
	comp=Z,5.5nm,0.8s,baz=66,slow=6.0,SNR=4.2						
MKAR				LR	LR	03 28 43.7	
	comp=Z,447nm,18.9s,baz=86,slow=37						
RDOG	**Red Dog Mine**	**43.68**	**27**	*e*P	**P**	**03 10 18.2**	**+1.7**
	comp=Z,64nm,1.0s						
MAKZ	**Makanchi**	**43.79**	**302**	*e*P	**P**	**03 10 17.4**	**-0.3**
	comp=Z,23nm,0.8s						
MAKZ	**Makanchi**	**43.79**	**302**	*e*P	**P**	**03 10 17.4**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,23nm,0.8s						
PHET	**Kaeng Krachan**	**43.86**	**248**	P	**P**	**03 10 20.7**	**+2.1**
	comp=Z,77µm,0.7s						
KSM	**Kuching**	**45.20**	**225**	*e*P	**P**	**03 10 29.9**	**+0.6**
	comp=Z,28nm,0.9s						
KURK	**Kurchatov**	**45.42**	**308**	*e*P	**P**	**03 10 29.9**	**-0.7**
	comp=Z,54nm,0.8s						
KURK	**Kurchatov**	**45.42**	**308**	*e*P	**P**	**03 10 29.9**	**-0.7**
KURK				pmax	pmax		
	comp=Z,54nm,0.8s						
KURBB	**Kurchatov Arra**	**45.49**	**308**	P	**P**	**03 10 30.2**	**-1.0**
	comp=Z,46nm,0.8s,baz=84,slow=8.8,SNR=17						
KURBB				PcP	**PcP**	**03 12 10.3**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=87,slow=3.5,SNR=2.5						
BNSI	**Bone**	**45.55**	**209**	P	**P**	**03 10 33.6**	**+1.6**
	comp=Z,48nm,1.8s,comp=Z,833nm						
TTA	**Tatalina**	**45.67**	**35**	*e*P	**P**	**03 10 34.2**	**+1.6**
	comp=Z,24nm,1.0s						
TTA	**Tatalina**	**45.67**	**35**	*e*P	**P**	**03 10 34.2**	**+1.6**
TTA				pmax	pmax		
	comp=Z,24nm,1.0s						
SVW2	**Sparrevohn**	**45.80**	**37**	*e*P	**P**	**03 10 35.5**	**+2.0**
	comp=Z,65nm,0.9s						
PDGK	**Podgornoye**	**46.22**	**298**	P	**P**	**03 10 35.9**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,54nm,1.0s						
KAPI	**Kappang**	**46.25**	**210**	*e*P	**P**	**03 10 37.5**	**0.0**
	comp=Z,70nm,1.1s						
KAPI	**Kappang**	**46.25**	**210**	*e*P	**P**	**03 10 37.5**	**0.0**
KAPI				pmax	pmax		
	comp=Z,70nm,1.1s						
JIRN	**Jiri**	**46.43**	**275**	*e*P	**P**	**03 10 39.4**	**0.0**
	comp=Z,156nm,1.0s						
GUN	**Gumba**	**46.57**	**275**	*e*P	**P**	**03 10 40.2**	**-0.2**
	comp=Z,127nm,0.9s						
PMG	**Port Moresby**	**46.68**	**171**	LR	LR	03 27 49.0	
	comp=Z,90nm,21.5s,baz=32,slow=33						
OHAK	**Old Harbor**	**47.08**	**43**	*e*P	**P**	**03 10 44.8**	**+1.2**
	comp=Z,42nm,1.0s						
PKI	**Pulchoki**	**47.09**	**275**	*e*P	**P**	**03 10 43.9**	**-0.6**
	comp=Z,40nm,0.9s						
KKN	**Kakani**	**47.10**	**275**	*e*P	**P**	**03 10 44.1**	**-0.3**
	comp=Z,70nm,0.8s						
PKIN	**Phulchoki**	**47.10**	**275**	*e*P	**P**	**03 10 43.8**	**-0.7**
	comp=Z,17nm,0.5s						
RSO	**Redoubt South**	**47.19**	**38**	*e*P	**P**	**03 10 46.1**	**+1.5**
DMN	**Daman**	**47.32**	**275**	*e*P	**P**	**03 10 45.8**	**-0.4**
	comp=Z,116nm,1.4s						
KDAK	**Kodiak Island**	**47.42**	**42**	*e*P	**P**	**03 10 47.0**	**+0.8**
	comp=Z,75nm,0.8s						
KDAK	**Kodiak Island**	**47.42**	**42**	*e*P	**P**	**03 10 47.0**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,75nm,0.8s						
PPLA	**Purkeypile**	**47.42**	**35**	*e*P	**P**	**03 10 48.7**	**+2.3**
	comp=Z,46nm,1.0s						
GKN	**Gorkha**	**47.52**	**276**	*e*P	**P**	**03 10 47.3**	**-0.3**
	comp=Z,163nm,0.8s						
BPAW	**Bear Paw Mtn.**	**47.96**	**33**	*e*P	**P**	**03 10 51.8**	**+1.4**
	comp=Z,22nm,0.9s						
CNPM	**China Poot**	**47.99**	**40**	*e*P	**P**	**03 10 52.7**	**+2.0**
	comp=Z,42nm,1.0s						
KTH	**Kantishna Hill**	**47.99**	**34**	*e*P	**P**	**03 10 52.3**	**+1.6**
	comp=Z,76nm,1.0s						
DANN	**Dangsing**	**48.06**	**277**	*e*P	**P**	**03 10 52.0**	**0.0**
	comp=Z,238nm,0.8s						
MLY	**Manley**	**48.08**	**32**	*e*P	**P**	**03 10 52.9**	**+1.6**
	comp=Z,54nm,0.8s						
BRLK	**Bradley Lake**	**48.16**	**39**	*e*P	**P**	**03 10 53.6**	**+1.7**
	comp=Z,36nm,0.9s						
KDJ	**Kajisay**	**48.18**	**297**	*e*P	**P**	**03 10 53.2**	**+0.6**
	comp=Z,23nm,1.0s						
KDJ	**Kajisay**	**48.18**	**297**	*e*P	**P**	**03 10 53.2**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,23nm,1.0s						
COLD	**Coldfoot**	**48.35**	**29**	*e*P	**P**	**03 10 56.5**	**+3.2**
	comp=Z,15nm,0.9s						
KOLN	**Koldanda**	**48.45**	**276**	*e*P	**P**	**03 10 54.6**	**-0.2**
	comp=Z,96nm,1.0s						
BWN	**Browne**	**48.63**	**33**	*e*P	**P**	**03 10 58.0**	**+2.5**
	comp=Z,122nm,0.9s						
RC01	**Rabbit Creek A**	**48.64**	**37**	*e*P	**P**	**03 10 56.5**	**+0.9**
	comp=Z,65nm,1.0s						
TOLK	**Toolik Lake Re**	**48.65**	**27**	*e*P	**P**	**03 10 57.5**	**+1.8**
	comp=Z,41nm,0.8s						
TOLK	**Toolik Lake Re**	**48.65**	**27**	P	**P**	**03 10 57.1**	**+1.4**
	baz=267						
IPM	**Ipoh**	**48.70**	**238**	*e*P	**P**	**03 10 55.6**	**-1.1**
	comp=Z,18nm,0.8s						
SEW	**Seward**	**48.85**	**39**	*e*P	**P**	**03 10 58.6**	**+1.4**
	comp=Z,46nm,1.0s						
MCK	**McKinley**	**48.88**	**34**	*e*P	**P**	**03 10 58.6**	**+1.2**
	comp=Z,32nm,0.8s						
PMR	**Palmer**	**48.90**	**37**	*e*P	**P**	**03 10 58.3**	**+0.8**
	comp=Z,54nm,1.0s						
PMR	**Palmer**	**48.90**	**37**	*e*P	**P**	**03 10 58.3**	**+0.8**
PMR				pmax	pmax		
	comp=Z,54nm,1.0s						
RND	**Reindeer**	**48.93**	**34**	*e*P	**P**	**03 10 58.8**	**+0.9**
	comp=Z,56nm,0.9s						
RND	**Reindeer**	**48.93**	**34**	*e*P	**P**	**03 10 58.8**	**+0.9**
RND				pmax	pmax		
	comp=Z,56nm,0.9s						
BOOM	**Boomskoye usch**	**48.96**	**298**	*e*P	**P**	**03 10 59.2**	**+0.6**
	comp=Z,38nm,1.0s						
GHO	**Glory Hole Cre**	**48.98**	**36**	*e*P	**P**	**03 10 59.2**	**+0.8**
	comp=Z,70nm,0.9s						
EDFI	**Ende, Flores**	**48.99**	**205**	P	**P**	**03 10 59.4**	**+0.5**
	comp=Z,24nm,0.9s						
TKM2	**Tokmak 2**	**49.08**	**298**	P	**P**	**03 10 59.9**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,48nm,0.9s						
TKM2	**Tokmak 2**	**49.08**	**298**	P	**P**	**03 11 00.1**	**+0.6**
	SNR=34						
SOEI	**Soe**	**49.12**	**202**	*e*P	**P**	**03 10 59.5**	**-0.4**
	comp=Z,192nm,1.1s						
SOEI	**Soe**	**49.12**	**202**	P	**P**	**03 11 01.8**	**+1.9**
	comp=Z,168nm,1.1s						
MDM	**Murphy Dome**	**49.15**	**32**	*e*P	**P**	**03 11 01.9**	**+2.4**
	comp=Z,34nm,0.8s						
WRH	**Wood River Hil**	**49.22**	**33**	*e*P	**P**	**03 11 01.1**	**+1.0**
	comp=Z,37nm,1.0s						
NRN	**Naryn**	**49.22**	**296**	*e*P	**P**	**03 11 01.3**	**+0.5**
	comp=Z,19nm,0.9s						
NRN	**Naryn**	**49.22**	**296**	*e*P	**P**	**03 11 01.3**	**+0.5**
NRN				pmax	pmax		
	comp=Z,19nm,0.9s						
KNK	**Knik Glacier**	**49.23**	**37**	*e*P	**P**	**03 11 01.4**	**+1.2**
	comp=Z,34nm,0.9s						
SML	**Sawmill**	**49.26**	**36**	*e*P	**P**	**03 11 01.7**	**+1.3**
	comp=Z,49nm,0.8s						
SML	**Sawmill**	**49.26**	**36**	*e*P	**P**	**03 11 01.7**	**+1.3**
SML				pmax	pmax		
	comp=Z,49nm,0.8s						
TCOL	**CIGO, UAF Yank**	**49.30**	**32**	P	**P**	**03 11 01.6**	**+1.0**
	baz=272,SNR=8.7						
COLA	**College**	**49.31**	**32**	*e*P	**P**	**03 11 02.0**	**+1.3**
	comp=Z,40nm,0.8s						
COLA	**College**	**49.31**	**32**	*e*P	**P**	**03 11 02.0**	**+1.3**
COLA				pmax	pmax		
	comp=Z,40nm,0.8s						
CCB	**Clear Creek Bu**	**49.34**	**33**	*e*P	**P**	**03 11 01.9**	**+1.0**
	comp=Z,15nm,0.7s						
POKR	**Poker Plat Res**	**49.48**	**32**	P	**P**	**03 11 03.5**	**+1.5**
	baz=272,SNR=140						
KZA	**Kyzart**	**49.57**	**297**	P	**P**	**03 11 05.0**	**+1.4**
	SNR=13						
KBK	**Karagaybulak**	**49.61**	**298**	P	**P**	**03 11 03.8**	**+0.3**
	SNR=31						
DHY	**Denali Highway**	**49.61**	**35**	*e*P	**P**	**03 11 04.3**	**+1.0**
	comp=Z,26nm,1.0s						
HNR	**Honiara**	**49.71**	**155**	LR	LR	03 29 12.6	
	comp=Z,125nm,19.9s,baz=335,slow=33						
HDA	**Harding Lake**	**49.72**	**33**	*e*P	**P**	**03 11 04.6**	**+0.7**
	comp=Z,55nm,0.9s						
HDA	**Harding Lake**	**49.72**	**33**	P	**P**	**03 11 04.2**	**+0.4**
	baz=273						
BATI	**Baumata**	**49.72**	**202**	P	**P**	**03 11 05.2**	**+0.8**
	comp=Z,57nm,0.6s,baz=324,slow=2.0,SNR=5.9						
BATI	**Baumata**	**49.72**	**202**	*e*P	**P**	**03 11 05.2**	**+0.8**
BATI				*e*P	**P**	**03 11 05.2**	**+0.8**
BATI	**Baumata**	**49.72**	**202**	P	**P**	**03 11 07.9**	**+3.5**
ILAR	**Eielson Array**	**49.73**	**32**	P	**P**	**03 11 04.2**	**+0.4**
	comp=Z,36nm,0.7s,baz=272,slow=6.5,SNR=86						
ILAR				LR	LR	03 33 52.7	
	comp=Z,88nm,18.6s,baz=300,slow=38						
ILB	**Eielson Array**	**49.73**	**32**	*e*P	**P**	**03 11 04.6**	**+0.7**
	comp=Z,43nm,0.8s						
SCM	**Sheep Creek Mo**	**49.73**	**36**	*e*P	**P**	**03 11 05.5**	**+1.4**
	comp=Z,52nm,0.9s						
SCM	**Sheep Creek Mo**	**49.73**	**36**	*e*P	**P**	**03 11 05.5**	**+1.4**
SCM				pmax	pmax		
	comp=Z,52nm,0.9s						
USP	**Ospenovka**	**49.75**	**299**	P	**P**	**03 11 04.8**	**+0.4**
	SNR=13						
KSH	**Kashi**	**49.84**	**294**	P	**P**	**03 11 09.3**	**+4.0**
KSH				PcP	**PcP**	**03 12 28.9**	**+3.1**
KSH				PP	**PP**	**03 13 04.4**	**+4.5**
KSH				S	**S**	**03 18 20.4**	**+5.8**
KSH				ScS	**ScS**	**03 20 59.5**	**+3.1**
KSH				SS	**SS**	**03 21 49.8**	**+2.9**
KSH				pmax	pmax		
	comp=Z,16nm,1.1s						
KSH				pmax	pmax		
	comp=Z,170nm,5.7s						
KSH				LR	LR		
	comp=Z,450nm,14.3s						
KSH				LR	LR		
	comp=Z,510nm,14.6s						
KSH				LR	LR		
	comp=Z,740nm,16.5s						
OTUK	**Ortayu**	**49.90**	**306**	P	**P**	**03 11 04.5**	**-1.0**
OTUK				pmax	pmax		
	comp=Z,46nm,0.8s						
AAK	**Ala-Archa**	**49.94**	**298**	P	**P**	**03 11 05.5**	**-0.5**
	comp=Z,11nm,0.8s,baz=119,slow=4.0,SNR=11						
AAK				LR	LR	03 33 15.3	
	comp=Z,955nm,20.1s,baz=56,slow=37						
AAK	**Ala-Archa**	**49.94**	**298**	*i* P	**P**	**03 11 07.2**	**+1.2**
	SNR=6.3						
AAK	**Ala-Archa**	**49.94**	**298**	P	**P**	**03 11 05.8**	**-0.2**
AAK				pmax	pmax		
	comp=Z,12nm,1.0s						
AAK	**Ala-Archa**	**49.94**	**298**	P	**P**	**03 11 07.8**	**+1.8**
	SNR=6.2						
GLI	**Glacier Island**	**49.94**	**37**	*e*P	**P**	**03 11 08.8**	**+3.3**
	comp=Z,43nm,1.1s						
UCH	**Uchtor**	**50.04**	**298**	P	**P**	**03 11 07.7**	**+0.5**
	SNR=7.4						
BVAR	**Borovoye Array**	**50.08**	**312**	P	**P**	**03 11 06.3**	**-0.4**
	comp=Z,39nm,0.9s,baz=77,slow=7.8,SNR=41						
BVAR				PcP	**PcP**	**03 12 26.3**	**+0.1**
	comp=Z,13nm,0.8s,baz=101,slow=3.8,SNR=5.6						
BRVK	**Borovoye**	**50.14**	**312**	*e*P	**P**	**03 11 06.9**	**-0.3**
	comp=Z,55nm,0.9s						
BRVK	**Borovoye**	**50.14**	**312**	*e*P	**P**	**03 11 06.9**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,55nm,0.9s						
FID	**Port Fidalgo**	**50.25**	**38**	*e*P	**P**	**03 11 10.3**	**+2.4**
	comp=Z,50nm,1.1s						
PRP	**Porcupine Dome**	**50.26**	**31**	*e*P	**P**	**03 11 09.9**	**+1.8**
	comp=Z,40nm,0.8s						
FYU	**Fort Yukon**	**50.32**	**30**	*e*P	**P**	**03 11 10.8**	**+2.5**
	comp=Z,32nm,0.8s						
EKS2	**Erkin-Say**	**50.43**	**298**	P	**P**	**03 11 09.6**	**-0.2**
	SNR=12						
PAX	**Paxson**	**50.49**	**35**	*e*P	**P**	**03 11 11.1**	**+1.3**
	comp=Z,20nm,0.8s						
PAX	**Paxson**	**50.49**	**35**	*e*P	**P**	**03 11 11.1**	**+1.3**
PAX				pmax	pmax		
	comp=Z,20nm,0.8s						
PPBI	**Pangkal Pinang**	**50.56**	**227**	P	**P**	**03 11 14.6**	**+3.8**
EYAK	**Cordova Ski Ar**	**50.63**	**38**	*e*P	**P**	**03 11 13.3**	**+2.5**
	comp=Z,39nm,1.0s						
RIDG	**Independent Ri**	**50.69**	**34**	*e*P	**P**	**03 11 12.0**	**+0.7**
	comp=Z,20nm,0.8s						
COEN	**Coen**	**50.86**	**177**	*e*P	**P**	**03 11 11.7**	**-1.3**
	comp=Z,80nm,1.4s						
SCRK	**Sand Creek**	**51.05**	**33**	*e*P	**P**	**03 11 14.6**	**+0.5**
	comp=Z,51nm,0.9s						
DOT	**Dot Lake**	**51.05**	**34**	*e*P	**P**	**03 11 14.3**	**+0.4**
	comp=Z,25nm,0.8s						
RAGM	**Ragged Mountai**	**51.18**	**38**	*e*P	**P**	**03 11 16.9**	**+1.8**
	comp=Z,36nm,0.9s						
MENT	**Mentasta**	**51.29**	**35**	*e*P	**P**	**03 11 17.9**	**+2.1**
	comp=Z,44nm,1.0s						
PSI	**Prapat**	**51.35**	**238**	P	**P**	**03 11 16.0**	**-0.9**
	comp=Z,15nm,0.8s,baz=51,slow=6.2,SNR=7.7						
PSI				PcP	**PcP**	**03 12 31.4**	**-0.2**
	comp=Z,8.3nm,0.7s,baz=237,slow=3.9,SNR=3.8						
PSI				LR	LR	03 34 42.2	
	comp=Z,128nm,18.1s,baz=36,slow=38						
PSI	**Prapat**	**51.35**	**238**	*e*P	**P**	**03 11 16.1**	**-0.9**
	comp=Z,16nm,0.8s						
PSI	**Prapat**	**51.35**	**238**	*e*P	**P**	**03 11 16.1**	**-0.8**
PSI				pmax	pmax		
	comp=Z,16nm,0.8s						
HMT	**Hamilton**	**51.40**	**38**	*e*P	**P**	**03 11 16.5**	**-0.1**
	comp=Z,46nm,1.2s						
CRQM	**Cirque**	**51.88**	**37**	*e*P	**P**	**03 11 22.3**	**+1.9**
	comp=Z,52nm,1.0s						
EGAK	**Eagle**	**52.17**	**32**	*e*P	**P**	**03 11 22.7**	**+0.5**
	comp=Z,15nm,0.8s						
PWJI	**Pagerwojo**	**52.43**	**217**	P	**P**	**03 11 25.2**	**+0.5**
	comp=Z,78nm,1.7s						
KK31	**Karatay Array**	**52.58**	**300**	*e*P	**P**	**03 11 25.6**	**-0.1**
	comp=Z,26nm,0.9s						
KK31	**Karatay Array**	**52.58**	**300**	*i* P	**P**	**03 11 25.4**	**-0.2**
KK31				pmax	pmax		
	comp=Z,30nm,1.1s						
KKAR	**Karatay Array**	**52.58**	**300**	*e*P	**P**	**03 11 25.6**	**-0.1**
	comp=Z,26nm,0.9s						
KKAR	**Karatay Array**	**52.58**	**300**	*e*P	**P**	**03 11 25.6**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,26nm,0.9s						
DAWY	**Dawson**	**53.04**	**33**	*e*P	**P**	**03 11 30.1**	**+1.3**
	comp=Z,8.3nm,0.7s						
GSI	**Gunungsitoli**	**53.35**	**238**	*e*P	**P**	**03 11 31.1**	**-0.5**
	comp=Z,92nm,0.9s						
GSI	**Gunungsitoli**	**53.35**	**238**	P	**P**	**03 11 31.3**	**-0.3**
	comp=Z,128nm,1.1s						
BTK	**Batken**	**53.39**	**296**	*e*P	**P**	**03 11 31.8**	**0.0**
	comp=Z,29nm,1.3s						
BTK	**Batken**	**53.39**	**296**	*e*P	**P**	**03 11 31.8**	**0.0**
BTK				pmax	pmax		

	comp=Z,29nm,1.3s						
LHSI	Lahat	53.44	229	P	P	03 11 33.0	+0.8
	comp=Z,55nm,0.9s						
LEM	Lembang	53.55	222	LR	LR	03 35 55.8	
	comp=Z,48nm,19.8s,baz=216,slow=38						
MDSI	Maura Dua	53.58	227	P	P	03 11 32.6	-0.6
	comp=Z,21nm,0.9s						
EPYK	Eagle Plains	53.73	30	eP	P	03 11 35.5	+1.7
	comp=Z,70nm,0.8s						
EPYK	Eagle Plains	53.73	30	P	P	03 11 35.3	+1.5
	baz=281						
GAR	Garm	54.14	295	eP	P	03 11 37.4	+0.1
	comp=Z,94nm,1.3s						
GAR	Garm	54.14	295	eP	P	03 11 37.4	+0.1
GAR				pmax	pmax		
	comp=Z,94nm,1.3s						
INK	Inuvik	54.57	27	eP	P	03 11 40.8	+1.0
	comp=Z,31nm,0.8s						
INK	Inuvik	54.57	27	eP	P	03 11 40.8	+1.0
INK				pmax	pmax		
	comp=Z,31nm,0.8s						
SVE	Sverdlovsk	54.70	318	⇓eP	P	03 11 41.1	+0.2
SVE				pmax	pmax		
	comp=Z,73nm,0.9s						
ARU	Arti	55.91	318	eP	P	03 11 49.3	-0.4
	comp=Z,58nm,0.8s						
ARU	Arti	55.91	318	d iP	P	03 11 49.2	-0.4
ARU				S	S	03 19 37.3	+0.7
ARU				SS	SS	03 23 18.1	-3.7
ARU				pmax	pmax		
	comp=Z,58nm,0.8s						
ARU				MLR	MLR		
	comp=Z,312nm,19.0s						
SKAG	Skagway	55.98	38	eP	P	03 11 52.4	+2.3
	comp=Z,26nm,1.0s						
BESE	Bessie Mountai	56.47	39	eP	P	03 11 55.8	+2.0
	comp=Z,35nm,1.0s						
SIT	Sitka	56.69	41	eP	P	03 11 55.3	+0.1
	comp=Z,28nm,1.1s						
SIT	Sitka	56.69	41	eP	P	03 11 55.3	+0.1
SIT				pmax	pmax		
	comp=Z,28nm,1.1s						
JIS	Juneau Island	56.80	39	eP	P	03 11 58.1	+2.2
	comp=Z,42nm,1.0s						
KBL	Kabul	56.84	291	eP	P	03 11 55.8	-1.1
	comp=Z,27nm,0.9s						
KBL	Kabul	56.84	291	eP	P	03 11 55.8	-1.1
KBL				pmax	pmax		
	comp=Z,27nm,0.9s						
WRAB	Tennant Creek	57.07	187	eP	P	03 11 57.7	-0.5
	comp=Z,61nm,0.7s						
WRAB	Tennant Creek	57.07	187	eP	P	03 11 57.7	-0.5
WRAB				pmax	pmax		
	comp=Z,61nm,0.7s						
WB2	Warramunga Arr	57.08	187	eP	P	03 11 57.6	-0.7
	comp=Z,62nm,0.8s						
WR1	Warramunga Arr	57.08	187	eP	P	03 11 57.5	-0.8
WR1				ePcP	PcP	03 12 53.5	+0.4
WRA	Warramunga Arr	57.08	187	P	P	03 11 57.5	-0.8
	comp=Z,53nm,0.7s,baz=6.3,slow=8.4,SNR=86						
WRA				PcP	PcP	03 12 53.5	+0.4
	comp=Z,18nm,0.8s,baz=5.3,slow=4.5,SNR=3.6						
AB31	Akbulak array	57.44	310	iP	P	03 12 00.0	-0.6
AB31				pmax	pmax		
	comp=Z,53nm,0.9s						
ABKAR	Akbulak array	57.44	310	eP	P	03 12 00.0	-0.6
	comp=Z,46nm,0.8s						
HYB	Hyderabad	57.63	268	iP	P	03 12 02.0	-0.5
AKTO	Aktyubinsk	58.18	312	P	P	03 12 06.0	+0.1
	comp=Z,20nm,0.8s,baz=69,slow=12,SNR=36						
AKTO	Aktyubinsk	58.18	312	P	P	03 12 06.0	+0.1
DLBC	Dease Lake	58.91	38	eP	P	03 12 13.5	+2.6
	comp=Z,28nm,1.1s						
DIB	Dawson Inlet,	59.56	44	eP	P	03 12 18.8	+3.4
	comp=Z,39nm,1.2s						
HOPEN	Hopen	59.81	346	eP	P	03 12 17.9	+1.1
SPA0	Spitsbergen Ar	60.32	349	eP	P	03 12 21.1	+0.8
PRGR	Permogore	60.37	327	eP	P	03 12 17.9	-2.9
PRGR				pmax	pmax		
	comp=Z,29nm,1.2s						
KBS	Kingsbay	60.47	350	eP	P	03 12 22.5	+1.3
AS31	Alice Springs	60.80	187	eP	P	03 12 24.1	-0.1
	comp=Z,7.4nm,0.6s						
AS31				ePcP	PcP	03 13 10.3	+2.4
ASAR	Alice Springs	60.80	187	P	P	03 12 23.8	-0.4
	comp=Z,24nm,0.8s,baz=7.3,slow=5.6,SNR=97						
ASAR				PcP	PcP	03 13 10.3	+2.4
	comp=Z,6.4nm,0.8s,baz=8.2,slow=4.6,SNR=5.1						
APA	Apatity	62.37	336	⇑iP	P	03 12 31.4	-2.8
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
APA				MLR	MLR		
	comp=Z,200nm,18.0s						
BBB	Bella Bella	62.40	44	eP	P	03 12 36.3	+1.7
	comp=Z,30nm,1.1s						
RES	Resolute Bay	62.65	14	LR	LR	03 41 00.2	
	comp=Z,63nm,20.3s,baz=276,slow=37						
RES	Resolute Bay	62.65	14	eP	P	03 12 36.0	0.0
	comp=Z,65nm,1.1s						
RES	Resolute Bay	62.65	14	eP	P	03 12 36.0	0.0
RES				pmax	pmax		
	comp=Z,65nm,1.1s						
GEYT	Alibeck	63.28	299	P	P	03 12 40.9	0.0
	comp=Z,1µm,0.3s,baz=29,slow=3.4,SNR=35						
GEYT				LR	LR	03 41 35.2	
	comp=Z,174nm,19.0s,baz=70,slow=37						
GYA0B	ALIBECK ARRAY	63.28	299	eP	P	03 12 41.2	+0.3
	comp=Z,31nm,0.8s						
HAMF	Hammerfest	63.54	341	eP	P	03 12 43.1	+1.1
DZM	Mont Dzumac	63.69	153	eP	P	03 12 46.3	+2.7
	comp=Z,46nm,1.0s						
DZM	Mont Dzumac	63.69	153	eLR	LR	03 31 41.8	
	comp=Z,343nm,26.1s						
ARA0	ARCESS Array S	63.70	339	eP	P	03 12 42.8	-0.3
ARCES	ARCESS Array B	63.71	339	P	P	03 12 42.8	-0.3
	comp=Z,17nm,0.8s,baz=61,slow=7.7,SNR=52						
ARCES				LR	LR	03 45 32.1	
	comp=Z,148nm,18.1s,baz=38,slow=41						
ARE0	ARCESS Array S	63.71	339	eP	P	03 12 43.4	+0.2
	comp=Z,1.0nm,1.0s						
ARE0	ARCESS Array S	63.71	339	eP	P	03 12 42.2	-0.9
YKW3	Yellowknife Ar	63.98	30	eP	P	03 12 45.0	+0.1
	comp=Z,14nm,0.9s						
YKA	Yellowknife Ar	64.02	30	P	P	03 12 45.7	+0.5
	comp=Z,11nm,0.8s,baz=300,slow=6.7,SNR=38						
YKA				PcP	PcP	03 13 21.0	+0.6
	comp=Z,2.9nm,0.6s,baz=301,slow=4.1,SNR=10						
YKB5	Yellowknife Ar	64.02	30	eP	P	03 12 45.7	+0.5
YKB5				ePcP	PcP	03 13 21.1	+0.6
KTK1	Kautokeino	64.67	339	eP	P	03 12 49.3	-0.1
TULEG	Thule	65.08	7	eP	P	03 12 52.0	0.0
	comp=Z,48nm,1.0s						
TRO	Tromso	65.44	341	eP	P	03 12 56.0	+1.7
DAG	Danmarks Havn	65.63	355	⇓iP	P	03 12 55.3	-0.2
DAG				pmax	pmax		
	comp=Z,15nm,0.8s						
DAG	Danmarks Havn	65.63	355	⇓iP	P	03 12 55.3	-0.2
	comp=Z,20nm,0.8s						
LLLB	Lillooet	66.59	44	eP	P	03 13 03.6	+1.5
	comp=Z,21nm,1.0s						
MOS	Moscow	66.83	323	eP	P	03 13 02.0	-1.5
MOS				i		03 13 29.8	
NLWA	Neilton Lookou	67.08	47	eP	P	03 13 05.6	+0.2
	comp=Z,44nm,1.2s						
A04D	Lummi Island	67.08	46	P	P	03 13 06.5	+1.2
	baz=301						
D03D	Eldon	67.46	47	P	P	03 13 09.7	+2.0
	baz=301,SNR=14						
STEI	Steigen	67.59	341	eP	P	03 13 07.6	-0.5
SUF	Sumiainen	67.64	333	P	P	03 13 09.4	+0.8
SUF				pmax	pmax		
	comp=Z,63nm,0.8s						
B05A	Bryant	67.66	46	P	P	03 13 11.2	+2.2
	baz=301,SNR=6.9						
OBN	Obninsk	67.67	323	d eP	P	03 13 08.0	-0.9
OBN				e*PP	pP	03 13 12.7	-1.3
OBN				e*SP	sP	03 13 16.7	+0.8
OBN				e		03 13 34.8	
OBN				eS	S	03 22 03.2	-2.2
OBN				e		03 22 44.4	
OBN				e		03 22 59.8	
OBN				eSS	SS	03 26 20.6	-5.0
OBN				pmax	pmax		
	comp=Z,25nm,0.9s						
OBN				MLR	MLR		
	comp=Z,191nm,17.0s						
D04E	Lakebay	67.83	47	P	P	03 13 11.9	+1.9
	baz=301						
LPSR	Galich'ya Gora	67.86	320	eP	P	03 13 08.8	-1.3
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,490nm,15.0s						
KULLO	Kullorsuaq	67.94	5	iP	P	03 13 12.4	+2.2
KULLO	Kullorsuaq	67.94	5	iP	P	03 13 12.4	+2.2
MAK	Makhachkala	67.94	308	eP	P	03 13 09.0	-1.8
MAK				eS	S	03 22 06.3	-2.8
MAK				pmax	pmax		
	comp=Z,39nm,0.9s						
MAK				MLR	MLR		
	comp=Z,190nm,16.0s						
ARMA	Armidale	67.97	170	eP	P	03 13 10.4	-0.7
	comp=Z,33nm,1.3s						
E04D	Cinebar	68.27	48	P	P	03 13 14.9	+2.1
	baz=301,SNR=11						
D05A	Enumclaw	68.28	47	eP	P	03 13 14.3	+1.5
	comp=Z,18nm,0.8s						
D05A				ePcP	PcP	03 13 34.3	-4.2
FIA1	FINESS Array S	68.46	332	eP	P	03 13 13.6	-0.1
	comp=Z,56nm,0.8s						
FIA0	FINESS Array S	68.46	332	eP	P	03 13 13.5	-0.2
FIA0	FINESS Array S	68.46	332	eP	P	03 13 13.5	-0.2
FINES	FINESS Array B	68.46	332	P	P	03 13 13.5	-0.2
	comp=Z,48nm,0.7s,baz=67,slow=6.4,SNR=46						
FINES				LR	LR	03 45 21.5	
	comp=Z,249nm,18.0s,baz=56,slow=38						
VSR	Storozhevoye	68.48	319	eP	P	03 13 13.2	-0.8
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
VSR				MLR	MLR		
	comp=Z,300nm,14.0s						
VORD	Divnogorie	68.55	318	eP	P	03 13 13.7	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKT	Akhty	68.56	306	eP	P	03 13 14.0	-0.9
AKT				e		03 13 37.7	
AKT				e		03 15 44.6	
AKT				pmax	pmax		
	comp=Z,29nm,0.8s						
FORT	Forrest	68.58	192	eP	P	03 13 15.2	+0.5
	comp=Z,70nm,0.8s						
LON	Longmire	68.61	47	eP	P	03 13 16.6	+1.5
	comp=Z,6.7nm,0.8s						
STKA	Stephens Creek	68.65	179	P	P	03 13 15.3	+0.2
	comp=Z,12nm,0.7s,baz=342,slow=7.8,SNR=7.5						
STKA				LR	LR	03 42 25.9	
	comp=Z,80nm,21.5s,baz=11,slow=35						
STKA	Stephens Creek	68.65	179	eP	P	03 13 15.3	+0.2
	comp=Z,2.7nm,0.8s						
COR	Corvallis	68.86	50	eP	P	03 13 17.4	+0.9
	comp=Z,45nm,0.9s						
COR	Corvallis	68.86	50	eP	P	03 13 17.4	+0.9
COR				pmax	pmax		
	comp=Z,45nm,0.9s						
LTY	Liberty	69.01	46	eP	P	03 13 18.3	+0.8
	comp=Z,9.4nm,0.8s						
SEKA	Sheki	69.04	306	P	P	03 13 19.6	+1.8
MOR8	Moi Rana	69.07	339	eP	P	03 13 15.7	-1.8
J01E	Myrtle Point	69.22	51	P	P	03 13 20.7	+1.9
	baz=302						
H04D	Lebanon	69.23	49	P	P	03 13 20.8	+1.9
	baz=302						
I03D	Drain, OR	69.30	50	P	P	03 13 22.7	+3.4
	baz=302,SNR=9.5						
LKRN	Lenkeran, Azer	69.30	303	P	P	03 13 21.3	+1.9
MNGR	Mingechevir, A	69.34	306	P	P	03 13 21.9	+2.3
H04A	Detroit Lake	69.48	49	eP	P	03 13 22.2	+1.7
	comp=Z,35nm,0.8s						
GOF	Gofitskoye	69.60	311	⇑eP	P	03 13 21.0	-0.1
GOF				pmax	pmax		
	comp=Z,73nm,1.1s						
K02D	Willamette Mer	69.63	52	P	P	03 13 22.8	+1.3
	baz=302,SNR=5.6						
G05D	Wamic, OR	69.71	48	P	P	03 13 23.4	+1.6
	baz=303						
BBOO	Buckleboo	69.71	184	eP	P	03 13 22.1	+0.4
	comp=Z,29nm,0.8s						
MORW	Morawa	69.79	203	eP	P	03 13 22.4	+0.1
	comp=Z,175nm,2.0s						
I04A	Tendick Farm,	69.82	50	P	P	03 13 23.9	+1.4
	baz=302,SNR=10						
GANJ	Ganja	69.90	306	P	P	03 13 25.2	+2.1
JMIC	Jan Mayen	69.95	350	LR	LR	03 45 42.8	
	comp=Z,51nm,19.5s,baz=54,slow=37						
L02E	Cave Junction	69.95	52	P	P	03 13 25.4	+2.0
	baz=302						
C09A	Chrisman Ranch	70.08	45	eP	P	03 13 25.2	+1.1
	comp=Z,19nm,0.8s						
VSU	Vasula	70.08	329	eP	P	03 13 23.6	-0.2
VSU				IAmb	IAmb	03 13 26.8	
	comp=Z,108nm,0.8s						
D08A	Wollman Farm,	70.12	46	eP	P	03 13 25.4	+1.1
	comp=Z,15nm,0.8s						
HAWA	Hanford	70.13	46	eP	P	03 13 26.0	+1.7
	comp=Z,16nm,0.9s						
ZEI	Tsey	70.29	309	eP	P	03 13 19.7	-6.0
ZEI				pmax	pmax		
	comp=Z,22nm,1.1s						
J04D	Umpqua Nationa	70.30	50	P	P	03 13 26.2	+0.5
	baz=303						
TBLG	Delisi	70.34	308	eP	P	03 13 25.9	+0.2
	comp=Z,22nm,1.2s						
E08A	Dider Farm, El	70.35	46	eP	P	03 13 27.3	+1.6
	comp=Z,16nm,0.8s						
KBZ	Khabaz	70.40	310	P	P	03 13 25.7	-0.3
	comp=Z,17nm,0.8s,baz=61,slow=4.6,SNR=23						
KBZ				LR	LR	03 48 47.6	
	comp=Z,252nm,18.1s,baz=64,slow=40						
KIV	Kislovodsk	70.41	311	eP	P	03 13 26.1	-0.1
	comp=Z,41nm,0.9s						
KIV	Kislovodsk	70.41	311	⇑iP	P	03 13 26.5	+0.2
KIV	Kislovodsk	70.41	311	iP	P	03 13 26.4	+0.2
	SNR=8.4						
KIV	Kislovodsk	70.41	311	eP	P	03 13 26.0	-0.2
KIV				pmax	pmax		
	comp=Z,155nm,1.1s						
KIV				MLR	MLR		
	comp=Z,368nm,17.0s						
NEW	Newport	70.46	44	eP	P	03 13 27.4	+1.0
	comp=Z,17nm,0.8s						
NEW	Newport	70.46	44	eP	P	03 13 27.4	+1.0
NEW				pmax	pmax		
	comp=Z,17nm,0.8s						
NEW	Newport	70.46	44	P	P	03 13 26.9	+0.4
	baz=304,SNR=24						
SHA1	Shidzhatmaz	70.54	310	iP	P	03 13 26.9	-0.3
KHMM	Horse Mountain	70.56	53	eP	P	03 13 31.7	+4.4
	comp=Z,23nm,0.8s						
SUMG	Summit	70.59	360	eP	P	03 13 28.0	+0.8
	comp=Z,54nm,0.9s						
SUMG	Summit	70.59	360	⇓iP	P	03 13 28.0	+0.8
SUMG				pmax	pmax		
	comp=Z,160nm,1.0s						
SUMG	Summit	70.59	360	⇓iP	P	03 13 28.0	+0.8
	comp=Z,161nm,1.0s						
SHME	Shamm	70.68	288	iP	P	03 13 28.1	0.0
	SNR=26						
PINE	Pine Mountain	70.72	49	eP	P	03 13 30.3	+2.0
	comp=Z,73nm,0.8s						
L04D	Klamath Falls	70.73	51	P	P	03 13 28.6	+0.2
	baz=303,SNR=13						
YBH	Yreka Blue Hor	70.74	52	eP	P	03 13 32.4	+4.1
	comp=Z,17nm,1.0s						
YBH	Yreka Blue Hor	70.74	52	eP	P	03 13 32.4	+4.1
YBH				pmax	pmax		
	comp=Z,17nm,1.0s						
NEY	Neytrino	70.77	310	eP	P	03 13 27.9	-0.7
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
J05D	Fort Rock, OR	70.82	50	P	P	03 13 30.4	+1.6
	baz=303,SNR=10						
M02C	Callahan	70.84	52	P	P	03 13 30.1	+1.2
	baz=303						
E09A	Wood Farm, Sta	70.86	46	eP	P	03 13 30.2	+1.3
	comp=Z,27nm,1.0s						
NSS	Namsos	70.99	339	eP	P	03 13 28.6	-0.7
MSFE	Esma-Masafi	71.04	288	iP	P	03 13 30.3	0.0
	SNR=8.7						
G08A	Pilot Rock	71.08	47	eP	P	03 13 31.8	+1.5
	comp=Z,14nm,1.0s						
N02D	Trinity Center	71.16	53	P	P	03 13 31.7	+0.9
	baz=303,SNR=5.4						
NAX	Nakhchivan	71.22	305	P	P	03 13 33.1	+1.8
UOSS	Minazif	71.23	287	eP	P	03 13 31.3	-0.1
	comp=Z,50nm,1.0s						
UOSS	Minazif	71.23	287	P	P	03 13 31.2	-0.2
M04C	Macdoel	71.26	52	P	P	03 13 32.2	+0.7
	baz=303,SNR=8.2						
KCPM	Cahto Peak	71.29	54	eP	P	03 13 35.7	+4.0
	comp=Z,23nm,0.8s						
AKH	Akhalkalaki	71.30	308	⇑iP	P	03 13 32.5	+0.7
AKH	Akhalkalaki	71.30	308	P	P	03 13 32.5	+0.7
HATD	Hatta, Dubai	71.35	287	iP	P	03 13 32.4	+0.3
	SNR=14						
I07A	Izee	71.42	49	eP	P	03 13 34.7	+2.3
	comp=Z,14nm,1.0s						
WDC	Whiskeytown Da	71.48	53	eP	P	03 13 34.5	+1.8
	comp=Z,14nm,0.9s						
WDC	Whiskeytown Da	71.48	53	eP	P	03 13 34.5	+1.8
WDC				pmax	pmax		
	comp=Z,15nm,0.9s						
ASHO	Ashiyiah	71.48	287	iP	P	03 13 32.4	-0.6
	SNR=6.8						
O02D	Mt. Diablo Mer	71.54	53	P	P	03 13 34.9	+1.7
	baz=303						
NAZ	Nazwa, Dubai	71.62	288	P	P	03 13 33.8	+0.1
F10A	Beach Ranch, E	71.70	46	eP	P	03 13 35.3	+1.3
	comp=Z,7.4nm,0.8s						
WALA	Waterton Lakes	71.75	42	eP	P	03 13 35.5	+1.1
	comp=Z,27nm,0.9s						
SCO	Scoresbysund	71.96	354	eP	P	03 13 35.2	+0.2
SCO	Scoresbysund	71.96	354	iP	P	03 13 35.2	+0.2
IZAR	Zarasai	72.02	327	eP	P	03 13 35.1	-0.5
IZAR				IAmb	IAmb	03 13 38.6	
	comp=Z,11nm,0.8s						
ASUD	Al Ashush, Dub	72.07	288	iP	P	03 13 36.9	+0.5
	SNR=5.7						
O03E	Paynes Creek	72.10	53	P	P	03 13 36.1	-0.5
	baz=304,SNR=13						
MOD	Modoc Plateau	72.15	51	eP	P	03 13 38.0	+1.1
	comp=Z,11nm,0.8s						
ISAL	Salakas	72.19	327	eP	P	03 13 36.6	0.0
ISAL				IAmb	IAmb	03 13 39.9	
	comp=Z,27nm,0.8s						
GDXM	Geysers	72.29	55	eP	P	03 13 39.9	+2.2
	comp=Z,13nm,1.0s						
IIGN	Ignalina	72.29	327	eP	P	03 13 37.1	-0.1
IIGN				IAmb	IAmb	03 13 40.4	
	comp=Z,22nm,0.9s						
BMO	Blue Mountains	72.29	47	eP	P	03 13 38.9	+1.3
	comp=Z,20nm,0.8s						
BMO	Blue Mountains	72.29	47	eP	P	03 13 38.9	+1.3
BMO				pmax	pmax		
	comp=Z,20nm,0.8s						
SOC	Sochi	72.40	312	d iP	P	03 13 36.4	-1.8
SOC				ePPP	PPP	03 18 02.1	
SOC				eS	S	03 22 58.8	-2.5
SOC				eSS	SS	03 27 39.1	+0.2
SOC				pmax	pmax		
	comp=Z,44nm,0.9s						
SOC				MLR	MLR		
	comp=Z,214nm,15.0s						
J08A	Circle Bar Ran	72.45	49	eP	P	03 13 40.3	+1.7
	comp=Z,35nm,1.0s						
TBLU	Trondheim	72.46	339	eP	P	03 13 37.0	-1.1
DAGI	Agillar	72.47	308	iP	P	03 13 39.9	+1.1
DAGI				IAML_P			
	comp=Z,77nm,0.5s						
DBOC	Borcka	72.47	309	iP	P	03 13 39.5	+0.8
DBOC				IAML_P			
	comp=Z,257nm,0.7s						
DBAD	Bademkaya	72.64	308	iP	P	03 13 40.1	+0.4
DBAD				IAML_P			
	comp=Z,284nm,0.8s						
EATA	Eleskirt	72.78	307	iP	P	03 13 42.8	+1.9
EATA				IAML_P			
	comp=Z,14nm,0.1s						
WVOR	Wild Horse Val	72.88	50	eP	P	03 13 42.9	+1.7
	comp=Z,18nm,1.1s						
WVOR	Wild Horse Val	72.88	50	eP	P	03 13 42.9	+1.7
WVOR				pmax	pmax		
	comp=Z,18nm,1.1s						
MSO	Missoula	73.05	44	eP	P	03 13 43.1	+1.0
	comp=Z,16nm,1.0s						
MSO	Missoula	73.05	44	P	P	03 13 42.8	+0.7
	baz=306,SNR=16						
HOMI	Horasan	73.06	308	iP	P	03 13 43.0	+0.6
HOMI				IAML_P			
	comp=Z,450nm,0.4s						
BEKR	Beckworth	73.26	53	eP	P	03 13 45.0	+1.4
	comp=Z,20nm,0.9s						
HAKT	HAKKARI	73.29	305	iP	P	03 13 46.8	+2.9
HAKT				IAML_P			
	comp=Z,30nm,0.1s						
AFDM	Forest Hills D	73.39	54	eP	P	03 13 45.5	+1.4
	comp=Z,5.8nm,1.0s						
NC405	NORSAR Array S	73.66	337	eP	P	03 13 45.5	+0.1
	comp=Z,46nm,0.8s						
NC303	NORSAR Array S	73.69	337	eP	P	03 13 45.6	+0.1
	comp=Z,31nm,1.1s						
DOMB	Dombas	73.75	338	eP	P	03 13 47.5	+1.7
NC204	NORSAR Array S	73.83	337	eP	P	03 13 46.2	-0.1
	comp=Z,59nm,0.8s						
NB201	NORSAR Array S	73.84	337	eP	P	03 13 46.5	+0.1
	comp=Z,50nm,0.8s						
AKASG	Malin Array Be	73.87	322	P	P	03 13 46.0	-0.7
	comp=Z,24nm,0.7s,baz=46,slow=6.2,SNR=49						
AKASG				LR	LR	03 49 08.3	
	comp=Z,312nm,18.5s,baz=35,slow=38						
AKASG	Malin Array Be	73.87	322	P	P	03 13 46.0	-0.7
AKBB	Malin Array Si	73.87	322	eP	P	03 13 46.1	-0.6
	comp=Z,31nm,0.8s						
AKBB	Malin Array Si	73.87	322	eP	P	03 13 46.1	-0.6
AKBB				pmax	pmax		
	comp=Z,31nm,0.8s						
NB2	NORSAR Subarra	73.88	337	P	P	03 13 45.9	-0.7
	comp=Z,19nm,0.8s,baz=40,slow=5.9						
NB2	NORSAR Subarra	73.88	337	P	P	03 13 45.9	-0.7
	baz=40,slow=5.9						
NB200	NORSAR Array S	73.88	337	eP	P	03 13 46.2	-0.4
NOA	NORSAR Array B	73.88	337	P	P	03 13 46.2	-0.4
	comp=Z,18nm,0.8s,baz=39,slow=5.9,SNR=48						
NOA				LR	LR	03 49 27.4	
	comp=Z,244nm,18.3s,baz=40,slow=38						
FFC	Flin Flon	73.94	32	eP	P	03 13 47.4	+0.4
	comp=Z,285nm,0.8s						
FFC	Flin Flon	73.94	32	eP	P	03 13 47.4	+0.4
PAHR	Pah Rah Range	73.97	52	eP	P	03 13 49.3	+1.6
	comp=Z,21nm,0.9s						
MFID	Camas Ranch	73.99	47	eP	P	03 13 48.9	+1.2
	comp=Z,34nm,1.3s						
NC602	NORSAR Array S	74.01	337	eP	P	03 13 47.6	+0.3
	comp=Z,51nm,1.3s						
NC602	NORSAR Array S	74.01	337	eP	P	03 13 47.9	+0.6
NBO00	NORSAR Array S	74.02	337	eP	P	03 13 47.5	+0.1
	comp=Z,47nm,0.8s						
VCNR	Virginia City	74.04	53	eP	P	03 13 50.4	+2.2
	comp=Z,12nm,0.9s						
NAO01	NORSAR Array S	74.13	337	eP	P	03 13 49.0	+1.0
	comp=Z,30nm,0.9s						
FCC	Fort Churchill	74.17	26	eP	P	03 13 48.5	+0.2
	comp=Z,56nm,1.0s						
FCC	Fort Churchill	74.17	26	eP	P	03 13 48.5	+0.2
FCC				pmax	pmax		
	comp=Z,56nm,1.0s						
PNTR	Pine Nut	74.19	53	eP	P	03 13 50.2	+1.2
	comp=Z,12nm,0.7s						
SRTM	Siirt_Merkez	74.21	306	iP	P	03 13 49.4	+0.4
SRTM				IAML_P			
	comp=Z,527nm,0.8s						
AKN	Aaknes	74.23	339	eP	P	03 13 50.4	+1.8
HRY	Holter Researc	74.28	43	eP	P	03 13 50.8	+1.4
CMB	Columbia Colle	74.28	54	eP	P	03 13 50.6	+1.2
	comp=Z,22nm,0.9s						
CMB	Columbia Colle	74.28	54	eP	P	03 13 50.6	+1.2
CMB				pmax	pmax		
	comp=Z,23nm,0.9s						
SAO	San Andreas Ge	74.31	56	eP	P	03 13 51.5	+1.9
	comp=Z,8.0nm,0.9s						
SAO	San Andreas Ge	74.31	56	eP	P	03 13 51.5	+1.9
SAO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
EGMT	Eagleton	74.58	41	eP	P	03 13 51.8	+0.7
	comp=Z,53nm,0.8s						
EGMT	Eagleton	74.58	41	P	P	03 13 52.0	+1.0
	baz=309,SNR=28						
WAKR	Walker	74.63	53	eP	P	03 13 53.2	+1.6
	comp=Z,17nm,0.9s						
HLID	Hailey	74.73	47	eP	P	03 13 53.4	+1.3

	comp=Z,17nm,1.0s						
HLID	Hailey	74.73	47	P	P	03 13 53.3	+1.2
	baz=307,SNR=28						
SIM	Simferopol'	74.86	315	*e*P	P	03 13 52.7	+0.2
SIM				*e*S	S	03 23 23.3	-5.6
SIM				pmax	pmax		
	comp=Z,26nm,0.8s						
SIM				MLR	MLR		
	comp=Z,64nm,15.7s						
MCMT	McKenzie Canyo	74.86	45	*e*P	P	03 13 54.6	+1.6
OSL	Oslo	74.88	336	*e*P	P	03 13 53.8	+1.5
BMN	Battle Mountai	74.90	51	*e*P	P	03 13 54.8	+1.7
	comp=Z,26nm,1.0s						
BMN	Battle Mountai	74.90	51	*e*P	P	03 13 54.8	+1.7
BMN				pmax	pmax		
	comp=Z,26nm,1.0s						
SKAR	Skarslia	75.05	338	*e*P	P	03 13 54.2	+0.7
BOZ	Bozeman (W)	75.08	44	*e*P	P	03 13 54.9	+0.9
	comp=Z,30nm,0.8s						
BOZ	Bozeman (W)	75.08	44	*e*P	P	03 13 54.9	+0.9
BOZ				pmax	pmax		
	comp=Z,30nm,0.8s						
BOZ	Bozeman (W)	75.08	44	P	P	03 13 54.6	+0.5
	baz=308,SNR=69						
RYN	Ryan	75.14	53	*e*P	P	03 13 56.1	+1.6
	comp=Z,18nm,0.9s						
KVN	Kaiserville	75.16	52	*e*P	P	03 13 56.0	+1.4
	comp=Z,35nm,0.9s						
HYA	Hoyanger	75.28	339	*e*P	P	03 13 56.5	+1.8
MARD	Mardin	75.34	306	*i* P	P	03 13 57.8	+2.1
MARD				IAML_P			
	comp=Z,664nm,0.7s						
MDPB	Devils Postpil	75.36	54	*e*P	P	03 13 57.6	+1.6
	comp=Z,13nm,0.8s						
NV01	Mina Array Sit	75.39	53	*e*P	P	03 13 57.5	+1.5
NVAR	Mina Array Bea	75.39	53	P	P	03 13 57.5	+1.5
	comp=Z,18nm,0.7s,baz=289,slow=5.7,SNR=54						
OMMB	Old Mammoth Mi	75.42	54	*e*P	P	03 13 58.0	+1.7
	comp=Z,14nm,1.1s						
KONO	Kongsberg	75.47	337	*e*P	P	03 13 55.7	-0.1
	comp=Z,9.3nm,0.8s						
KONO	Kongsberg	75.47	337	*e*P	P	03 13 55.7	-0.1
KONO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KONO	Kongsberg	75.47	337	*e*P	P	03 13 56.9	+1.2
NV11	Mina Array Sit	75.49	53	*e*P	P	03 13 57.8	+1.3
	comp=Z,1.0nm,0.9s						
MLAC	Mammoth, Mammo	75.52	54	P	P	03 13 58.2	+1.4
	baz=306						
KEMA	Kemaliye	75.65	308	*i* P	P	03 13 58.3	+0.9
KEMA				IAML_P			
	comp=Z,2.9nm,0.3s						
QLMT	Earthquake Lak	75.66	44	*e*P	P	03 13 59.1	+1.7
PAGB	Antelope Grade	75.70	56	*e*P	P	03 13 59.6	+2.0
	comp=Z,34nm,1.0s						
SAMS	Samsun-Alacam	75.82	311	*i* P	P	03 14 00.8	+2.7
SAMS				IAML_P			
	comp=Z,196nm,0.6s						
SFJD	Kangerlussuaq	75.84	5	*e*P	P	03 13 57.7	0.0
	comp=Z,49nm,0.9s						
SFJD	Kangerlussuaq	75.84	5	*i* P	P	03 13 59.2	+1.4
SFJD				pmax	pmax		
	comp=Z,43nm,0.9s						
SFJD	Kangerlussuaq	75.84	5	*i* P	P	03 13 59.2	+1.4
	comp=Z,43nm,0.9s						
YHB	Horse Butte	75.84	44	*e*P	P	03 14 00.3	+1.8
	comp=Z,31nm,0.8s						
ERBA	Erbaa	75.89	310	*i* P	P	03 14 00.5	+1.9
ERBA				IAML_P			
	comp=Z,196nm,0.3s						
ELK	Elko	75.93	49	*e*P	P	03 14 00.7	+1.6
	comp=Z,8.8nm,0.8s						
ELK	Elko	75.93	49	*e*P	P	03 14 00.7	+1.6
ELK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YHH	Holmes Hill	76.01	44	*e*P	P	03 14 01.2	+1.7
	comp=Z,14nm,0.9s						
YMR	Madison River	76.02	44	*e*P	P	03 14 01.3	+1.7
	comp=Z,22nm,0.7s						
GCMT	Greycliff	76.03	43	*e*P	P	03 14 01.1	+1.7
YNR	Norris Junctio	76.15	44	*e*P	P	03 14 04.1	+3.8
	comp=Z,14nm,0.9s						
ODD1	Odda	76.17	338	*e*P	P	03 14 00.1	+0.3
YFT	Old Faithful	76.23	44	*e*P	P	03 14 04.4	+3.7
	comp=Z,23nm,0.8s						
TIN	Tinemaha, Big	76.25	54	P	P	03 14 02.6	+1.8
	baz=306						
CUKAN	kangal_SIVAS	76.27	309	*i* P	P	03 14 01.7	+0.8
HAVZ	Havza	76.28	311	*i* P	P	03 14 01.9	+1.1
HAVZ				IAML_P			
	comp=Z,36nm,0.1s						
YPP	Pitchstone Pla	76.36	45	*e*P	P	03 14 04.1	+2.5
	comp=Z,11nm,0.8s						
LKWY	Lake	76.40	44	*e*P	P	03 14 04.7	+2.9
	comp=Z,18nm,0.9s						
LKWY	Lake	76.40	44	*e*P	P	03 14 04.7	+2.9
LKWY				pmax	pmax		
	comp=Z,19nm,0.9s						
VES	Vestal, Richgr	76.40	55	P	P	03 14 02.2	+0.6
	baz=306,SNR=16						
H17A	Grant Village	76.41	44	*e*P	P	03 14 04.8	+3.0
	comp=Z,37nm,0.8s						
H17A	Grant Village	76.41	44	P	P	03 14 04.3	+2.5
	baz=309,SNR=24						
PKM	Mcpherson Peak	76.48	57	P	P	03 14 03.3	+1.0
	baz=306,SNR=15						
SANL	SANLIURFA_Merk	76.58	306	*i* P	P	03 14 02.8	+0.2
SANL				IAML_P			
	comp=Z,920nm,0.2s						
BLS5	Blasjo	76.61	338	*e*P	P	03 14 04.2	+1.8
RLMT	Red Lodge	76.67	43	*e*P	P	03 14 04.6	+1.3
	comp=Z,48nm,1.5s						
RLMT	Red Lodge	76.67	43	P	P	03 14 04.4	+1.2
	baz=310,SNR=19						
CWC	Cottonwood Cre	76.71	54	P	P	03 14 04.3	+0.8
	baz=306						
CUALT	Altinyayla-SIV	76.73	309	*i* P	P	03 14 07.6	+4.0
TPAW	Teton Pass	76.77	45	*e*P	P	03 14 05.4	+1.6
	comp=Z,19nm,0.8s						
HVU	Hansel Valley	76.77	47	*e*P	P	03 14 05.5	+1.7
	comp=Z,22nm,0.8s						
ISA	Isabella, Lake	76.91	55	*e*P	P	03 14 04.9	+0.3
	comp=Z,13nm,0.8s						
ISA	Isabella, Lake	76.91	55	*e*P	P	03 14 04.9	+0.3
ISA				pmax	pmax		
	comp=Z,13nm,0.8s						
ISA	Isabella, Lake	76.91	55	P	P	03 14 04.5	-0.1
	baz=306,SNR=7.8						
CUSAR	Sarkisla-SIVAS	76.96	310	*i* P	P	03 14 02.8	-2.1
LVV	L'vov	76.96	324	*e*P	P	03 14 04.2	-0.3
LVV				*e*S	S	03 23 46.6	-5.4
LVV				MLR	MLR		
	comp=E,200nm,16.0s						
LVV				MLR	MLR		
	comp=Z,100nm,16.0s						
LVV				MLR	MLR		
	comp=N,100nm,13.0s						
KAGI	orum-Kargı	76.98	312	*i* P	P	03 14 07.5	+2.7
KAGI				IAML_P			
	comp=Z,66nm,0.1s						
BEL	Belsk	77.05	327	*e*P	P	03 14 07.2	+2.3
BEL	Belsk	77.05	327	*e*P	P	03 14 07.2	+2.3
DGMT	Dagmar	77.12	38	*e*P	P	03 14 06.5	+1.0
	comp=Z,49nm,0.9s						
DGMT	Dagmar	77.12	38	P	P	03 14 05.6	+0.1
	baz=312,SNR=14						
BGU	Big Grassy Mou	77.15	48	*e*P	P	03 14 07.7	+1.8
	comp=Z,8.5nm,0.8s						
R11A	Troy Canyon, C	77.16	52	*e*P	P	03 14 07.4	+1.3
	comp=Z,30nm,1.0s						
R11A				*e*S	S	03 23 55.2	+0.3
R11A	Troy Canyon, C	77.16	52	P	P	03 14 06.7	+0.6
	baz=307,SNR=44						
COAL	Corum-Alaca	77.22	311	*i* P	P	03 14 09.4	+3.1
COAL				IAML_P			
	comp=Z,251nm,0.8s						
SPUT	South Promonto	77.26	48	*e*P	P	03 14 08.3	+1.8
	comp=Z,13nm,1.1s						
SNART	Snartemo	77.26	337	*e*P	P	03 14 07.6	+1.7
LAO	LASA Array	77.28	40	*e*P	P	03 14 08.3	+1.9
	comp=Z,45nm,1.0s						
LAO	LASA Array	77.28	40	P	P	03 14 07.5	+1.0
	baz=311,SNR=5.3						
MPMC	Manual Prospec	77.32	54	P	P	03 14 07.7	+0.7
	baz=307,SNR=32						
GZT	Gaziantep	77.38	307	*i* P	P	03 14 10.8	+3.6
GZT				IAML_P			
	comp=Z,851nm,0.7s						
BORG	Borgarnes	77.48	352	LR	LR	03 47 19.0	
	comp=Z,35nm,21.6s,baz=7.6,slow=35						
BORG	Borgarnes	77.48	352	*e*P	P	03 14 08.8	+1.7
	comp=Z,58nm,1.4s						
BORG	Borgarnes	77.48	352	*e*P	P	03 14 08.8	+1.7
BORG				pmax	pmax		
	comp=Z,58nm,1.4s						
FURC	Furnace Creek,	77.48	54	P	P	03 14 08.4	+0.8
	baz=307,SNR=33						
ILGA	Ilgaz	77.48	312	*e*P	P	03 14 08.8	+1.0
	comp=Z,24nm,0.8s						
ILGA	Ilgaz	77.48	312	*i* P	P	03 14 11.4	+3.6
ILGA				IAML_P			
	comp=Z,57nm,0.1s						
LRMC	Laurel Mtn Rad	77.54	55	P	P	03 14 09.0	+0.9
	baz=307,SNR=8.2						
ANGG	Ammassalik, Gr	77.58	359	*e*P	P	03 14 09.5	+1.9
	comp=Z,18nm,0.8s						
TPNV	Topopah Spring	77.58	53	*e*P	P	03 14 09.6	+1.2
	comp=Z,28nm,0.9s						
TPNV	Topopah Spring	77.58	53	*e*P	P	03 14 09.6	+1.2
TPNV				pmax	pmax		
	comp=Z,28nm,0.9s						
TPNV	Topopah Spring	77.58	53	P	P	03 14 09.3	+0.9
	baz=307,SNR=48						
HWUT	Hardware Ranch	77.59	47	*e*P	P	03 14 09.9	+1.5
	comp=Z,31nm,1.1s						
SIRC	Yozgat	77.68	310	*i* P	P	03 14 10.7	+1.8
SIRC				IAML_P			
	comp=Z,314nm,0.8s						
EDW2	Edwards Air Fo	77.69	56	P	P	03 14 10.0	+1.1
	baz=307,SNR=19						
KWP	Kalwaria Pacla	77.72	324	*e*P	P	03 14 09.1	+0.4
KWP	Kalwaria Pacla	77.72	324	*e*P	P	03 14 09.1	+0.4
DUG	Dugway, Tooele	77.73	49	*e*P	P	03 14 10.7	+1.5
	comp=Z,25nm,0.8s						
DUG	Dugway, Tooele	77.73	49	*e*P	P	03 14 10.7	+1.5
DUG				pmax	pmax		
	comp=Z,25nm,0.8s						
DUG	Dugway, Tooele	77.73	49	P	P	03 14 10.4	+1.2
	baz=308,SNR=34						
HCB	Kahramanmara	77.80	308	*i* P	P	03 14 12.5	+3.0
HCB				IAML_P			
	comp=Z,17nm,0.1s						
BUR08	Bucovina Ar. S	77.87	321	*e*P	P	03 14 10.0	+0.3
	comp=Z,17nm,0.8s						
BURAR	Bucovina Array	77.88	321	⇑*i*P	P	03 14 10.0	+0.2
BIZ	Bicaz	77.89	320	⇑*i*P	P	03 14 10.1	+0.4
TESR	Tescani	77.89	320	⇑*i*P	P	03 14 09.8	0.0
SAIM	ADANA	77.94	309	*i* P	P	03 14 13.8	+3.5
SAIM				IAML_P			
	comp=Z,354nm,0.5s						
CDAG	Cicekdag	77.98	311	*i* P	P	03 14 11.6	+1.1
CDAG				IAML_P			
	comp=Z,533nm,0.8s						
CFR	Carcaliu	77.99	318	⇑*i*P	P	03 14 11.0	+0.7
ELDT	Eldivan	78.00	312	*i* P	P	03 14 14.0	+3.3
ELDT				IAML_P			
	comp=Z,7.7nm,0.1s						
BW06	Boulder Array	78.01	45	*e*P	P	03 14 11.5	+0.7
	comp=Z,14nm,0.8s						
BW06	Boulder Array	78.01	45	P	P	03 14 11.3	+0.5
	baz=310,SNR=24						
PD31	Pinedale Array	78.01	45	*e*P	P	03 14 11.4	+0.6
PDAR	Pinedale Array	78.01	45	P	P	03 14 11.4	+0.6
	comp=Z,12nm,0.7s,baz=271,slow=2.7,SNR=66						
ANDN	Andirin	78.02	308	*i* P	P	03 14 12.0	+1.2
ANDN				IAML_P			
	comp=Z,858nm,0.7s						
DELI	KIRIKKALE	78.02	311	*i* P	P	03 14 11.3	+0.6
DELI				IAML_P			
	comp=Z,263nm,0.6s						
KAMA	Osmaniye	78.05	308	*i* P	P	03 14 11.7	+0.8
KAMA				IAML_P			
	comp=Z,19nm,0.1s						
CTU	Camp Tracy	78.05	48	*e*P	P	03 14 12.8	+1.7
	comp=Z,13nm,0.8s						
PSUT	Pine Spring	78.12	51	*e*P	P	03 14 13.1	+1.6
	comp=Z,22nm,0.9s						
MUD	Monsted U'grnd	78.13	335	*i* P	P	03 14 13.2	+2.4
MUD	Monsted U'grnd	78.13	335	*i* P	P	03 14 13.2	+2.4
SHOC	Shoshone, Teco	78.20	54	P	P	03 14 12.1	+0.4
	baz=307,SNR=6.4						
GSC	Goldstone, Bar	78.22	55	*e*P	P	03 14 13.3	+1.4
	comp=Z,14nm,1.0s						
GSC	Goldstone, Bar	78.22	55	P	P	03 14 12.7	+0.8
	baz=307,SNR=12						
VRI	Vrincioaia	78.28	319	⇓*i*P	P	03 14 12.7	+0.8
VRI	Vrincioaia	78.28	319	P	P	03 14 12.7	+0.8
JLU	Jordanelle	78.29	48	*e*P	P	03 14 14.1	+1.7
	comp=Z,20nm,1.1s						
CIS	Catalina Islan	78.29	57	P	P	03 14 13.2	+0.9
	baz=307						
BFSC	Mount Baldy Ra	78.30	56	P	P	03 14 13.3	+0.9
	baz=307						
TIRR	Tirgusor	78.32	317	*e*P	P	03 14 12.0	-0.1
	comp=Z,29nm,0.9s						
TIRR	Tirgusor	78.32	317	*e*P	P	03 14 12.0	-0.1
TIRR				pmax	pmax		
	comp=Z,29nm,0.9s						
NLU	North Lily Min	78.32	49	*e*P	P	03 14 14.3	+1.7
	comp=Z,16nm,0.8s						
PLOR	Plostina	78.33	319	⇑*i*P	P	03 14 12.7	+0.4
PLOR	Plostina	78.33	319	P	P	03 14 12.6	+0.3
BR101	Keskin Array S	78.36	311	*e*P	P	03 14 12.6	0.0
BR131	Keskin Array S	78.36	311	*e*P	P	03 14 12.7	+0.1
	comp=Z,8.8nm,0.8s						
BRTR	Keskin Array B	78.36	311	P	P	03 14 12.6	0.0
	comp=Z,8.4nm,0.8s,baz=86,slow=3.7,SNR=24						
BRTR				LR	LR	03 52 57.1	
	comp=Z,83nm,19.3s,baz=72,slow=39						
KOLS	Kolonicke sedl	78.41	324	*e*P	P	03 14 12.8	+0.2
KOLS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KOLS	Kolonicke sedl	78.41	324	*e*P	P	03 14 12.8	+0.2
TLB	Topalu	78.43	318	⇑*i*P	P	03 14 13.4	+0.7
SHPR	Sheep Range	78.55	53	*e*P	P	03 14 15.7	+1.9
	comp=Z,22nm,0.9s						
MPU	Maple Canyon	78.55	48	*e*P	P	03 14 15.6	+1.8
	comp=Z,25nm,0.8s						
UZH	Uzhgorod	78.61	323	*e*P	P	03 14 15.2	+1.6
UZH				*e*		03 14 22.1	
UZH				*e*		03 14 27.3	
OZUR		78.61	320	⇑*i*P	P	03 14 14.9	+1.1
OJC	Ojcow	78.64	326	*e*P	P	03 14 13.8	0.0
OJC	Ojcow	78.64	326	*e*P	P	03 14 13.6	-0.2
	comp=Z,34nm,0.9s						
OJC	Ojcow	78.64	326	*e*P	P	03 14 13.6	-0.2
OJC				pmax	pmax		
	comp=Z,34nm,0.9s						
ARCR	ARCALIA	78.67	321	⇑*i*P	P	03 14 15.3	+1.2
TUQ	Turquoise Moun	78.71	54	P	P	03 14 15.6	+1.0
	baz=308,SNR=31						
ANTO	Ankara	78.77	312	*e*P	P	03 14 14.2	-0.7
	comp=Z,17nm,0.8s						
ANTO	Ankara	78.77	312	*e*P	P	03 14 14.2	-0.7
ANTO				pmax	pmax		
	comp=Z,17nm,0.8s						
HEC	Hector,Ludlow	78.81	55	P	P	03 14 15.8	+0.7
	baz=308,SNR=6.0						
TRPA	Tarpa	78.84	323	⇓*i*P	P	03 14 15.5	+0.6
TRPA	Tarpa	78.84	323	⇓*e*P	P	03 14 17.0	+2.1
ICOR	Ion Corvin	78.87	317	⇑*i*P	P	03 14 15.2	0.0
ISR	Istrita	78.88	319	⇑*i*P	P	03 14 16.1	+0.8
DOPR	Dopca	78.91	320	⇑*i*P	P	03 14 16.3	+0.9
MLR	Muntele Rosu	78.94	319	*e*P	P	03 14 15.8	+0.1
	comp=Z,7.7nm,0.9s						
MLR	Muntele Rosu	78.94	319	⇑*i*P	P	03 14 16.9	+1.2
MLR	Muntele Rosu	78.94	319	*e*P	P	03 14 15.8	+0.1
MLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIE	Niedzica	78.98	325	*e*P	P	03 14 15.8	0.0
NIE	Niedzica	78.98	325	*e*P	P	03 14 15.8	0.0
MURC	Murrieta	78.99	56	P	P	03 14 17.1	+1.0
	baz=307						
CCUT	Cedar City	79.03	51	*e*P	P	03 14 18.1	+1.6
	comp=Z,15nm,0.8s						
SZCU	Shurtz Canyon	79.18	51	*e*P	P	03 14 19.0	+1.7
	comp=Z,12nm,0.9s						
GULE	Gulek	79.18	309	*i* P	P	03 14 20.8	+3.5
GULE				IAML_P			
	comp=Z,56nm,0.3s						
GMRC	Granite Mounta	79.28	54	P	P	03 14 18.7	+1.0
	baz=308,SNR=28						
MDUB	Mudurnu	79.33	313	*e*P	P	03 14 18.7	+0.8
	comp=Z,77nm,0.9s						
P17A	Butcher Ranch,	79.42	48	*e*P	P	03 14 20.4	+1.8
	comp=Z,36nm,0.8s						
VOIR		79.44	320	⇑*i*P	P	03 14 18.4	0.0
LDFC	Landfair	79.45	54	*e*P	P	03 14 20.1	+1.4
	comp=Z,24nm,0.9s						
MTPU	Mount Pierson	79.46	50	*e*P	P	03 14 21.0	+2.0
	comp=Z,29nm,0.8s						
PFO	Pinyon Flats O	79.47	56	*e*P	P	03 14 20.1	+1.3
	comp=Z,16nm,1.0s						
PFO	Pinyon Flats O	79.47	56	*e*P	P	03 14 20.1	+1.3
PFO				pmax	pmax		
	comp=Z,16nm,1.0s						
PFO	Pinyon Flats O	79.47	56	P	P	03 14 19.7	+0.9
	baz=308,SNR=11						
109C	Camp Elliot, M	79.48	57	P	P	03 14 19.2	+0.5
	baz=308						
CPE	Camp Elliot	79.48	57	*e*P	P	03 14 22.0	+3.3
	comp=Z,13nm,0.8s						
Q16A	Castle Valley	79.52	49	*e*P	P	03 14 21.1	+2.0
	comp=Z,14nm,0.9s						
BELC	Belle Mtn. Jos	79.53	55	P	P	03 14 19.6	+0.4
	baz=308,SNR=13						
LANS	Liptovska Anna	79.56	325	*e*P	P	03 14 20.1	+1.2
LANS				pmax	pmax		
	comp=Z,12nm,1.0s						
LANS	Liptovska Anna	79.56	325	*e*P	P	03 14 20.1	+1.2
OKC	Ostrava-Krasne	79.65	326	*e*P	P	03 14 20.0	+0.6
OKC				MLR	MLR		
	comp=Z,200nm,13.8s						
OKC	Ostrava-Krasne	79.65	326	*e*P	P	03 14 20.0	+0.6
OKC				AMS	AMS	03 54 30.0	
	comp=Z,200nm,13.8s						
ARR	Arges	79.70	320	⇓*i*P	P	03 14 20.9	+1.1
KNB	Kanab	79.70	51	*e*P	P	03 14 22.3	+2.1
	comp=Z,25nm,0.9s						
KSP	Ksiaz	79.72	328	*e*P	P	03 14 19.2	-0.5
KSP	Ksiaz	79.72	328	*e*P	P	03 14 19.2	-0.5
ULM	Lac du Bonnet	79.74	33	P	P	03 14 19.9	+0.1
	comp=Z,22nm,0.9s,baz=307,slow=6.3,SNR=16						
ULM				LR	LR	03 53 21.5	
	comp=Z,35nm,18.2s,baz=300,slow=38						
ULM	Lac du Bonnet	79.74	33	*e*P	P	03 14 20.1	+0.3
	comp=Z,32nm,1.0s						
ULM	Lac du Bonnet	79.74	33	*e*P	P	03 14 20.1	+0.3
ULM				pmax	pmax		
	comp=Z,32nm,1.0s						
PKCU	Pink Cliffs	79.75	51	*e*P	P	03 14 22.5	+1.9
	comp=Z,24nm,1.1s						
MDND	Maddock	79.78	36	*e*P	P	03 14 21.2	+1.0
	comp=Z,68nm,0.9s						
MDND	Maddock	79.78	36	P	P	03 14 19.8	-0.3
	baz=315,SNR=12						
K22A	Casper	79.78	44	*e*P	P	03 14 21.6	+1.2
	comp=Z,14nm,0.8s						
K22A	Casper	79.78	44	P	P	03 14 20.4	0.0
	baz=312,SNR=8.4						
SRU	San Rafael Swe	79.78	48	*e*P	P	03 14 21.8	+1.2
	comp=Z,45nm,0.7s						
BAR	Barrett	79.89	57	*e*P	P	03 14 22.1	+1.0
	comp=Z,16nm,1.0s						
MONP2	Monument Peak	79.93	56	P	P	03 14 23.6	+2.1
	baz=308,SNR=7.5						
OSTC	Ostas	79.96	328	*e*P	P	03 14 21.3	+0.2
OSTC				AMS	AMS	03 52 30.0	
	comp=Z,200nm,17.0s						
MORC	Moravsky Berou	79.96	327	*e*P	P	03 14 21.1	0.0
	comp=Z,14nm,0.8s						
MORC	Moravsky Berou	79.96	327	⇑*i*P	P	03 14 21.6	+0.5
MORC	Moravsky Berou	79.96	327	*e*P	P	03 14 21.1	0.0
MORC				pmax	pmax		
	comp=Z,14nm,0.8s						
MORC	Moravsky Berou	79.96	327	*e*P	P	03 14 21.0	-0.1
IRM	Iron Mountain	80.00	55	P	P	03 14 22.4	+0.9
	baz=308,SNR=22						
CHVC	Chvalec	80.01	328	*e*P	P	03 14 21.8	+0.5
CHVC				AMS	AMS	03 52 30.0	
	comp=Z,200nm,15.4s						
DPC	Dobruska-Polom	80.07	328	*e*P	P	03 14 22.2	+0.5
DPC				*e*		03 14 32.4	
DPC				MLR	MLR		
	comp=Z,200nm,16.1s						
DPC	Dobruska-Polom	80.07	328	*e*P	P	03 14 22.2	+0.5
DPC				*e*x	x	03 14 32.4	
DPC				AMS	AMS	03 52 50.0	
	comp=Z,200nm,16.1s						
RAYN	Ar Rayn	80.08	292	*e*P	P	03 14 21.8	-0.4
	comp=Z,16nm,0.8s						
RAYN	Ar Rayn	80.08	292	*i* P	P	03 14 21.8	-0.4
	SNR=20						
RAYN	Ar Rayn	80.08	292	*e*P	P	03 14 21.8	-0.4
RAYN				pmax	pmax		
	comp=Z,16nm,0.8s						
UPC	Upice	80.09	328	*e*P	P	03 14 22.2	+0.5
UPC				MLR	MLR		
	comp=Z,200nm,17.2s						
UPC	Upice	80.09	328	*e*P	P	03 14 22.2	+0.5
UPC				AMS	AMS	03 52 40.0	
	comp=Z,200nm,17.2s						
LOT	Lotru	80.09	320	⇓*i*P	P	03 14 22.5	+0.5
HUMR	Humele	80.09	319	⇑*i*P	P	03 14 22.7	+0.8
BC3	Big Chuckawall	80.10	55	P	P	03 14 23.1	+0.9
	baz=308,SNR=13						
RSSD	Black Hills	80.14	41	*e*P	P	03 14 22.1	-0.3
	comp=Z,17nm,1.0s						
RSSD	Black Hills	80.14	41	*e*P	P	03 14 22.1	-0.3
RSSD				pmax	pmax		
	comp=Z,17nm,1.0s						
RSSD	Black Hills	80.14	41	P	P	03 14 23.1	+0.7
	baz=313						
W13A	Hualapai Mount	80.23	53	*e*P	P	03 14 24.4	+1.4
	comp=Z,13nm,1.0s						
PSZ	Piszkesteto	80.24	324	*e*P	P	03 14 23.4	+0.7
	comp=Z,19nm,0.9s						
PSZ	Piszkesteto	80.24	324	⇑*i*P	P	03 14 23.4	+0.7
PSZ	Piszkesteto	80.24	324	*e*P	P	03 14 23.4	+0.7
PSZ				pmax	pmax		
	comp=Z,19nm,0.9s						
PSZ	Piszkesteto	80.24	324	*e*P	P	03 14 22.1	-0.6
IKP	In-Ko-Pah, Jac	80.29	56	P	P	03 14 24.8	+1.6
	baz=308,SNR=10.0						
SWSC	Sam W. Stewart	80.31	56	P	P	03 14 23.7	+0.5
	baz=308,SNR=6.1						
VYHS	Vyhne	80.32	325	*e*P	P	03 14 23.6	+0.6
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VYHS	Vyhne	80.32	325	*e*P	P	03 14 23.6	+0.6
U15A	North Rim	80.41	51	*e*P	P	03 14 25.6	+1.6
	comp=Z,25nm,0.8s						
O20A	White River Ci	80.47	47	*e*P	P	03 14 25.0	+0.8
	comp=Z,19nm,0.9s						
O20A	White River Ci	80.47	47	P	P	03 14 25.0	+0.8
	baz=311,SNR=8.3						
PDMCI	Parker Dam,Lak	80.56	54	P	P	03 14 25.8	+1.3
	baz=309,SNR=15						
SIRR	Siria	80.57	322	⇑*i*P	P	03 14 24.8	+0.4
JAVC	Velka Javorina	80.58	326	*e*P	P	03 14 25.2	+0.7
GZR	Gura Zlata	80.63	321	⇑*i*P	P	03 14 24.9	+0.1
Y12C	Blythe	80.65	55	*e*P	P	03 14 26.7	+1.6
	comp=Z,26nm,0.8s						
Y12C	Blythe	80.65	55	P	P	03 14 26.0	+0.9
	baz=309,SNR=17						
PHSR	Pinarhisar	80.67	316	⇑*i*P	P	03 14 25.5	+0.5
BRG	Berggiesshubel	80.68	329	*e*P	P	03 14 25.1	+0.2
	comp=Z,18nm,0.9s						
BRG				*e*PP	PP	03 17 26.7	-1.3
	comp=Z,3.5nm,0.9s						
	comp=N,167nm,15.1s						
	comp=E,297nm,20.3s						
	comp=Z,131nm,16.3s						
PVCC	Panska Ves	80.68	329	*e*P	P	03 14 25.3	+0.4
PVCC				*e*		03 14 35.2	
PVCC				MLR	MLR		
	comp=Z,200nm,14.9s						
PVCC	Panska Ves	80.68	329	*e*P	P	03 14 25.3	+0.4
PVCC				*e*x	x	03 14 35.2	
PVCC				AMS	AMS	03 52 50.0	
	comp=Z,200nm,14.9s						
ELND	Elena	80.71	318	⇑*i*P	P	03 14 25.3	+0.1
CLL	Collm	80.73	330	*e*P	P	03 14 24.4	-0.6
	comp=Z,32nm,0.9s						
CLL	Collm	80.73	330	*i* P	P	03 14 24.5	-0.6
CLL				*e*S	S	03 24 31.0	-1.1
CLL				pmax	pmax		
	comp=Z,32nm,0.9s						

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CLL   Collm            80.73 330 i P   P     03 14 24.5 -0.6
      comp=Z,32nm,0.9s
CLL                              ePP   PP    03 17 28.0 -0.4
CLL                              eS    S     03 24 31.0 -1.1
CLL                              eSS   SS    03 29 48.0 +4.0
CLL                              eSSS  SSS   03 33 12.0
CLL                               LmV        03 55 00.0
      comp=Z,200nm,18.2s
VRAC  Vranov           80.73 327⇑iP    P     03 14 25.8 +0.6
VRAC  Vranov           80.73 327 eP    P     03 14 25.4 +0.2
GLA   Glamis           80.89  55 eP    P     03 14 27.9 +1.5
      comp=Z,24nm,0.8s
GLA   Glamis           80.89  55 eP    P     03 14 27.9 +1.5
GLA                               pmax pmax
      comp=Z,24nm,0.8s
GLA   Glamis           80.89  55  P    P     03 14 27.5 +1.1
      baz=309,SNR=8.0
SMOL  Smolenice        80.94 326 eP    P     03 14 27.2 +0.8
SMOL                              pmax pmax
      comp=Z,19nm,0.9s
SMOL  Smolenice        80.94 326 eP    P     03 14 27.2 +0.8
KRUC  Moravsky         81.00 327 eP    P     03 14 26.7 +0.1
PV09  Paradox Valley   81.01  48 eP    P     03 14 29.1 +1.8
GOPC  GO Pecny, Ondr   81.05 328 eP    P     03 14 26.9  0.0
GOPC                              MLR  MLR
      comp=Z,200nm,14.2s
GOPC  GO Pecny, Ondr   81.05 328 eP    P     03 14 26.9  0.0
GOPC                              AMS  AMS   03 55 10.0
      comp=Z,200nm,14.2s
BZS   Buzias           81.05 322⇑iP    P     03 14 26.9 -0.1
SRO   Srobarova        81.06 325 eP    P     03 14 27.7 +0.8
SRO                               pmax pmax
      comp=Z,9.0nm,0.8s
SRO   Srobarova        81.06 325 eP    P     03 14 27.7 +0.8
PV21  Cone Mtn., Par   81.06  48 eP    P     03 14 29.2 +1.7
      comp=Z,49nm,0.7s
PLVB  Pleven           81.06 318⇓iP    P     03 14 26.9 -0.2
PRU   Pruhonice        81.10 328 eP    P     03 14 27.6 +0.5
PRU                              e           03 17 32.1
PRU                               MLR  MLR
      comp=Z,200nm,18.2s
PRU   Pruhonice        81.10 328 eP    P     03 14 27.6 +0.5
PRU                              ePP   PP    03 17 32.1 +0.6
PRU                               AMS  AMS   03 53 10.0
      comp=Z,200nm,18.2s
PV23  Carpenter Ridg   81.11  48 eP    P     03 14 29.1 +1.3
      comp=Z,50nm,0.7s
MODS  Modra-Piesok     81.11 326 eP    P     03 14 27.1 -0.2
MODS                              pmax pmax
      comp=Z,13nm,1.0s
MODS  Modra-Piesok     81.11 326 eP    P     03 14 27.1 -0.2
PV10  Paradox Valley   81.14  48 eP    P     03 14 30.0 +2.0
      comp=Z,120nm,0.8s
PV14  Lion Creek, Pa   81.16  48 eP    P     03 14 29.4 +1.4
      comp=Z,71nm,0.8s
HERR  Herculane        81.17 321⇑iP    P     03 14 27.2 -0.4
AGMN  Agassiz Nation   81.19  34 eP    P     03 14 27.6  0.0
      comp=Z,21nm,0.7s
AGMN  Agassiz Nation   81.19  34  P    P     03 14 27.0 -0.7
      baz=318,SNR=11
PV22  Blue Mesa, Par   81.19  48 eP    P     03 14 29.7 +1.6
      comp=Z,31nm,0.8s
PV20  West Nyswonger   81.21  48 eP    P     03 14 29.9 +1.7
      comp=Z,53nm,0.8s
PV04  Paradox Valley   81.21  48 eP    P     03 14 29.9 +1.7
      comp=Z,32nm,0.8s
TREC  Trest            81.22 327 eP    P     03 14 27.9 +0.1
TREC                              MLR  MLR
      comp=Z,200nm,18.9s
TREC  Trest            81.22 327 eP    P     03 14 27.9 +0.1
TREC                              AMS  AMS   03 53 30.0
      comp=Z,200nm,18.9s
PV19  Morning Glory    81.22  48 eP    P     03 14 30.1 +1.7
      comp=Z,70nm,0.7s
PV17  East Wray Mesa   81.25  48 eP    P     03 14 30.2 +1.7
      comp=Z,78nm,0.8s
PV16  Nyswonger Mesa   81.26  48 eP    P     03 14 29.9 +1.4
N23A  Red Feather La   81.28  45  P    P     03 14 28.4 -0.3
      baz=312,SNR=22
PV11  David Mesa, Pa   81.30  48 eP    P     03 14 30.4 +1.7
      comp=Z,38nm,0.7s
PV05  Paradox Valley   81.30  49 eP    P     03 14 30.6 +1.8
      comp=Z,82nm,0.7s
PV18  Skein Mesa, Pa   81.31  48 eP    P     03 14 30.4 +1.6
      comp=Z,46nm,0.8s
PV12  Saucer Basin,    81.32  48 eP    P     03 14 30.5 +1.6
      comp=Z,22nm,0.8s
ZST   Bratislava       81.33 326 eP    P     03 14 27.9 -0.5
ZST   Bratislava       81.33 326 eP    P     03 14 27.9 -0.5
PV03  Paradox Valley   81.34  48 eP    P     03 14 30.5 +1.6
      comp=Z,30nm,0.9s
PV07  Paradox Valley   81.34  48 eP    P     03 14 30.5 +1.6
      comp=Z,27nm,1.2s
PV13  Radium Mtn., P   81.42  48 eP    P     03 14 30.5 +1.1
      comp=Z,55nm,0.9s
PV02  Paradox Valley   81.44  48 eP    P     03 14 31.1 +1.7
      comp=Z,24nm,0.8s
Y14A  Wickenburg       81.52  54 eP    P     03 14 31.3 +1.5
      comp=Z,24nm,0.8s
CSS   Mathiatis        81.55 308 eP    P     03 14 31.1 +1.3
      comp=Z,14nm,0.9s
WUAZ  Wupatki          81.56  52 eP    P     03 14 31.4 +1.3
      comp=Z,34nm,0.9s
WUAZ  Wupatki          81.56  52  P    P     03 14 29.9 -0.2
      baz=310,SNR=38
PV01  Paradox Valley   81.58  48 eP    P     03 14 31.8 +1.6
      comp=Z,29nm,0.8s
MDVR  Moldovita        81.60 321⇑iP    P     03 14 29.6 -0.4
113A  Mohawk Valley,   81.76  55 eP    P     03 14 32.2 +1.3
      comp=Z,15nm,1.0s
NKC   Novy Kostel      81.78 329 eP    P     03 14 31.1 +0.3
NKC   Novy Kostel      81.78 329 eP    P     03 14 31.1 +0.3
MORH  Mrgy, Hungar     82.07 324 eP    P     03 14 31.1 -1.2
MORH  Mrgy, Hungar     82.07 324 eP    P     03 14 32.1 -0.2
CONA  Conrad Observa   82.08 326 i P   P     03 14 33.1 +0.6
      comp=Z,11nm,0.8s,SNR=10
KHC   Kasperske Hory   82.16 328 eP    P     03 14 32.8  0.0
      comp=Z,12nm,1.2s
KHC   Kasperske Hory   82.16 328 eP    P     03 14 32.8  0.0
KHC                               pmax pmax
      comp=Z,12nm,1.2s
KHC   Kasperske Hory   82.16 328 eP    P     03 14 32.7 -0.1
KHC                              ex    x     03 14 50.0
KHC                               AMS  AMS   03 54 10.0
      comp=Z,200nm,14.9s
X16A  Lo Mia Camp, P   82.22  53 eP    P     03 14 35.0 +1.4
      comp=Z,23nm,0.9s
MVCO  Mesa Verde       82.23  49 eP    P     03 14 34.9 +1.2
      comp=Z,28nm,0.8s
MVCO  Mesa Verde       82.23  49  P    P     03 14 32.8 -0.9
      baz=311,SNR=25
FRGS  Fruska Gora      82.27 322 eP    P     03 14 33.1 -0.4
GEC2  GERESS Array S   82.33 328 eP    P     03 14 33.8  0.0
      comp=Z,8.8nm,0.8s
GEC2  GERESS Array S   82.33 328 eP    P     03 14 33.8  0.0
GEC2                              pmax pmax
      comp=Z,9.0nm,0.8s
GERES GERESS Array B   82.33 328  P    P     03 14 33.3 -0.5
      comp=Z,4.6nm,0.5s,baz=38,slow=5.8,SNR=35
GERES                             PP   PP    03 17 39.3 -2.4
      comp=Z,0.9nm,0.7s,baz=46,slow=8.4,SNR=4.8
GERES                             LR   LR    03 54 47.6
      comp=Z,185nm,18.1s,baz=54,slow=38
SUSD  Miller           82.53  39  P    P     03 14 35.2 +0.3
      baz=316
GRA1  Grafenberg Arr   82.70 330 eP    P     03 14 35.9 +0.3
      comp=Z,43nm,1.0s
GRF   Grafenberg Arr   82.70 330 eP    P     03 14 35.9 +0.3
GRF                               pmax pmax
      comp=Z,43nm,1.0s
ARSA  Arzberg          82.74 326 i P   P     03 14 36.0 +0.1
      comp=Z,7.3nm,1.0s
MOA   Molln            82.84 327 i P   P     03 14 37.4 +1.0
      comp=Z,10nm,1.1s,SNR=9.3
S22A  4UR Ranch, Cre   82.87  48  P    P     03 14 37.8 +0.8
      baz=312,SNR=34
ESK   Eskdalemuir      82.88 340 i P   P     03 14 39.1 +2.7
214A  Organ Pipe Nat   82.90  55  P    P     03 14 37.6 +0.6
      baz=310
DIVS  Divibare         82.95 321 eP    P     03 14 36.1 -1.0
Q24A  Divide           83.03  46  P    P     03 14 37.9  0.0
      baz=313
X18A  Snowflake        83.09  52 eP    P     03 14 39.5 +1.4
      comp=Z,29nm,1.4s
EYMN  Ely              83.37  32 eP    P     03 14 39.4 +0.3
      comp=Z,32nm,0.8s
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EYMN  Ely              83.37  32  P    P     03 14 38.9 -0.2
      baz=321,SNR=8.5
PERS  Pernice          83.39 326 i P   P     03 14 39.0 -0.2
SOKA  Soboth           83.39 326 i P   P     03 14 39.1 -0.3
      comp=Z,29nm,1.0s,SNR=26
OGNE  Ogallala         83.40  43  P    P     03 14 39.7 +0.2
      baz=314
BBLS  Lazi&#263;i      83.41 322 eP    P     03 14 39.4  0.0
HAPS  Han Pijesak,Bl   83.47 322 eP    P     03 14 40.0 +0.2
VAY   Valandovo        83.59 318 i P   P     03 14 42.1 +1.7
RUDO  Rudo             83.60 321 eP    P     03 14 41.8 +1.4
SDCO  Great Sand Dun   83.65  47 eP    P     03 14 42.3 +1.2
      comp=Z,9.9nm,0.8s
SDCO  Great Sand Dun   83.65  47  P    P     03 14 41.7 +0.6
      baz=313,SNR=25
SKO   Skopje           83.73 319 eP    P     03 14 42.3 +1.2
OBKA  Obir             83.74 326 i P   P     03 14 40.6 -0.5
      comp=Z,3.4nm,0.7s
KBA   Koelnbreinsper   83.84 327 i PcP P     03 14 42.4 +0.7
      comp=Z,15nm,1.2s
BLY   Banja Luka       83.84 323 eP    P     03 14 39.3 -2.3
CRES  Cresnjev         83.84 325 eP    P     03 14 39.7 -1.9
MEM   Membach          83.97 333 ⇓P    P     03 14 41.6 -0.5
MEM                              ⇓pP   PcP   03 14 43.6 -2.4
      comp=Z,9.6nm,0.9s
TUC   Tucson           83.99  54 eP    P     03 14 43.8 +1.1
      comp=Z,15nm,0.9s
TUC   Tucson           83.99  54 eP    P     03 14 43.8 +1.1
TUC                               pmax pmax
      comp=Z,15nm,0.9s
TUC   Tucson           83.99  54  P    P     03 14 43.7 +1.0
      baz=310
MYKA  Terra Mystica    84.05 326 i P   P     03 14 41.9 -0.8
      comp=Z,6.9nm,0.8s
LJU   Ljubljana        84.10 326 eP    P     03 14 43.9 +1.0
ECSD  EROS Data Cent   84.20  38 eP    P     03 14 43.6 +0.1
      comp=Z,23nm,0.8s
ECSD  EROS Data Cent   84.20  38  P    P     03 14 43.2 -0.2
      baz=318,SNR=29
BCLA  Clavier          84.38 333 ⇑P    P     03 14 43.2 -1.0
E38A  The Farm, Brul   84.38  33 eP    P     03 14 44.5 +0.2
      comp=Z,46nm,0.8s
E38A  The Farm, Brul   84.38  33  P    P     03 14 44.0 -0.3
      baz=321,SNR=8.6
CEY   Cerknica         84.38 325 eP    P     03 14 43.1 -1.2
WATA  Walderalm        84.40 328 i P   P     03 14 44.2 -0.4
      comp=Z,6.4nm,0.6s
KSCO  Kaye Shedlock’   84.42  44  P    P     03 14 44.8  0.0
      baz=314
JAVS  Javornik         84.43 326 i P   P     03 14 43.3 -1.3
WTTA  Wattenberg       84.43 328 i P   P     03 14 44.5 -0.2
      comp=Z,12nm,1.6s
ABTA  Abfaltersbach    84.45 327 i P   P     03 14 43.9 -0.8
      comp=Z,9.6nm,1.2s
PDG   Podgorica        84.53 321⇑iP    P     03 14 45.0  0.0
PDG   Podgorica        84.53 321 eP    P     03 14 44.8 -0.3
TTG   Podgorica        84.53 321 eP    P     03 14 45.0  0.0
      comp=Z,30nm,0.9s
TTG   Podgorica        84.53 321 eP    P     03 14 45.0  0.0
TTG                               pmax pmax
      comp=Z,30nm,0.9s
BRY   Bratogost        84.54 321 eP    P     03 14 44.5 -0.8
MOTA  Moosalm          84.59 328 i P   P     03 14 45.2 -0.3
      comp=Z,6.1nm,0.8s
RETA  Reutte           84.62 329 i P   P     03 14 45.5 -0.1
      comp=Z,20nm,0.8s,SNR=16
SQTA  Sankt Quirin     84.64 328 i P   P     03 14 45.1 -0.6
      comp=Z,4.5nm,0.6s
SNF   Seneffe          84.67 334 ⇑P    P     03 14 44.5 -1.1
WLF   Walferdange      84.69 332 ⇓P    P     03 14 44.9 -0.8
T25A  Trinidad         84.70  47  P    P     03 14 47.3 +0.9
      baz=313,SNR=33
DRME  Dracevica, Mon   84.74 320 eP    P     03 14 45.8 -0.4
PMOR  Pomariorio Ree   84.75 113 eT    T     04 46 52.3
      comp=Z,16nm,0.2s
TREB  Trebinje         84.77 321 eP    P     03 14 45.1 -1.2
SPMN  Marine on St.    84.88  35  P    P     03 14 46.9 +0.1
      baz=320,SNR=6.4
DOU   Dourbes          84.90 333 ⇓P    P     03 14 45.9 -0.9
LAZ   Ladron           84.92  50 eP    P     03 14 49.2 +1.8
BFO   Black Forest     84.94 330 eP    P     03 14 46.4 -0.7
      comp=Z,29nm,1.0s
BFO   Black Forest     84.94 330 eP    P     03 14 46.4 -0.7
BFO                               pmax pmax
      comp=Z,29nm,1.0s
ANMO  Albuquerque      84.97  49 eP    P     03 14 49.3 +1.6
      comp=Z,22nm,1.0s
ANMO  Albuquerque      84.97  49 i P   P     03 14 49.0 +1.3
ANMO                              pmax pmax
      comp=Z,20nm,1.0s
ANMO  Albuquerque      84.97  49  P    P     03 14 48.7 +1.0
      baz=312
STON  Ston             84.98 322 eP    P     03 14 45.9 -1.4
TIR   Tirane           85.00 320 eP    P     03 14 48.8 +1.3
      comp=Z,17nm,0.8s
TIR   Tirane           85.00 320⇑iP    P     03 14 47.3 -0.2
FETA  Feichten         85.00 328 i P   P     03 14 47.4 -0.3
      comp=Z,9.0nm,0.8s,SNR=6.6
BGNE  Belgrade         85.13  40 eP    P     03 14 48.7 +0.5
      comp=Z,57nm,0.9s
BGNE  Belgrade         85.13  40  P    P     03 14 48.3 +0.1
      baz=317
DAVA  Damuels          85.15 329 i P   P     03 14 48.1 -0.3
      comp=Z,22nm,0.9s,SNR=16
LENM  Lemitar          85.17  50 eP    P     03 14 50.2 +1.5
PPT   Papeete          85.19 116  LR   LR    03 43 54.6
      comp=Z,119nm,21.6s,baz=333,slow=29
PPT2  Papeete2         85.21 116 eLR   LR    03 41 26.4
      comp=Z,471nm,29.5s,baz=312
Y22D  IRIS PASSCAL I   85.27  50  P    P     03 14 49.9 +0.7
      baz=312
D41A  Chassel          85.30  31  P    P     03 14 49.2 +0.3
      baz=323
BNM   Barren Site      85.40  50 eP    P     03 14 51.1 +1.2
SCHQ  Schefferville    85.41  16  P    P     03 14 49.6 +0.3
      comp=Z,12nm,0.8s,baz=358,slow=5.4,SNR=5.3
SCHQ  Schefferville    85.41  16 eP    P     03 14 50.5 +1.3
      comp=Z,40nm,1.8s
ECH   Echery           85.49 331 eP    P     03 14 48.6 -1.2
      comp=Z,16nm,0.8s
ECH   Echery           85.49 331 eP    P     03 14 48.6 -1.2
ECH                               pmax pmax
      comp=Z,16nm,0.8s
FUORN Ofenpass-Fuorn   85.52 328 eP    P     03 14 50.1 -0.2
      comp=Z,22nm,0.9s
DSB   Dublin           85.57 341 eP    P     03 14 50.5 +0.4
      comp=Z,13nm,0.8s
G39A  Holcombe         85.57  34  P    P     03 14 50.3  0.0
      baz=321,SNR=5.8
121A  Cookes Peak, D   85.76  52  P    P     03 14 52.5 +0.8
      baz=312,SNR=22
COWI  Conover          85.82  32 eP    P     03 14 53.3 +1.7
      comp=Z,14nm,0.8s
HSIG                   86.01  56 eP    P     03 14 53.5 +0.8
      comp=Z,14nm,1.0s
G40A  Rib Lake         86.01  33 eP    P     03 14 53.0 +0.5
      comp=Z,30nm,0.8s
G40A  Rib Lake         86.01  33  P    P     03 14 52.4 -0.1
      baz=322,SNR=13
TUE   Stuetta          86.02 329 eP    P     03 14 52.0 -0.7
      comp=Z,9.5nm,1.0s
CBKS  Cedar Bluff      86.16  43  P    P     03 14 53.0 -0.4
      baz=316
E43A  Lone Tree Farm   86.50  31  P    P     03 14 54.2 -0.6
      baz=324
E44A  Grand Marais A   86.73  30  P    P     03 14 55.1 -0.9
      baz=324
TAOE  Nuku Hiva Isla   86.75 104 eLR   LR    03 42 19.2
      comp=Z,463nm,27.3s
ITM   Ithomi           86.88 315 eP    P     03 14 55.9 -1.0
      comp=Z,24nm,0.8s
SENIN Lac Senin/Sane   86.94 330 eP    P     03 14 57.0 -0.3
      comp=Z,8.9nm,1.3s
MATQ  Matagami         87.08  24  P    P     03 14 56.7 -0.9
      baz=330
I41A  Arkdale          87.11  34 eP    P     03 14 58.5 +0.7
      comp=Z,25nm,0.8s
I41A  Arkdale          87.11  34  P    P     03 14 58.4 +0.5
      baz=322,SNR=6.3
SCIA  State Center     87.22  37 eP    P     03 15 00.1 +1.6
      comp=Z,50nm,1.0s
SCIA  State Center     87.22  37  P    P     03 14 58.5  0.0
      baz=320
D46A  Sault St. Mari   87.25  29  P    P     03 14 58.1 -0.4
      baz=326,SNR=6.2
AQU   L'Aquila         87.45 324 eP    P     03 15 01.3 +1.7
      comp=Z,11nm,0.9s
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AQU   L'Aquila         87.45 324 eP    P     03 15 01.3 +1.7
AQU                               pmax pmax
      comp=Z,11nm,0.9s
D47A  Chapleau         87.47  28  P    P     03 14 59.0 -0.6
      baz=326
CLF   Chambon-Foret    87.47 334 eP    P     03 14 59.6 +0.1
      comp=Z,17nm,1.0s
E46A  Sault Ste Mari   87.58  29 eP    P     03 15 01.4 +1.3
      comp=Z,18nm,0.9s
E46A  Sault Ste Mari   87.58  29  P    P     03 14 59.0 -1.1
      baz=326
KSU1  Kansas State U   87.62  41  P    P     03 14 59.4 -1.0
      baz=318,SNR=9.7
I42A  Draeger Farm,    87.67  33 eP    P     03 15 01.2 +0.6
      comp=Z,31nm,0.8s
I42A  Draeger Farm,    87.67  33  P    P     03 15 00.9 +0.3
      baz=323,SNR=6.6
H43A  Windswept, Lux   87.70  32  P    P     03 15 00.8 +0.1
      baz=323
MNTX  Cornudas Mount   87.83  51 eP    P     03 15 02.5 +0.9
      comp=Z,3.9nm,0.9s
MNTX  Cornudas Mount   87.83  51  P    P     03 15 00.9 -0.7
      baz=313,SNR=8.8
SSF   Saint Saulge     87.83 332 eP    P     03 15 00.2 -1.1
SSF                               pmax pmax
      comp=Z,10.0nm,1.0s
JFWS  Jewell Farm      87.84  35 eP    P     03 15 01.6 +0.2
      comp=Z,17nm,0.9s
JFWS  Jewell Farm      87.84  35 eP    P     03 15 01.6 +0.2
JFWS                              pmax pmax
      comp=Z,17nm,0.9s
JFWS  Jewell Farm      87.84  35  P    P     03 15 01.0 -0.4
      baz=322
MSTX  Muleshoe         87.85  48 eP    P     03 15 03.2 +1.4
      comp=Z,12nm,1.1s
MSTX  Muleshoe         87.85  48  P    P     03 15 02.0 +0.2
      baz=314,SNR=5.8
AMTX  Amarillo         87.85  47 eP    P     03 15 03.1 +1.4
      comp=Z,21nm,0.8s
AMTX  Amarillo         87.85  47  P    P     03 15 02.2 +0.4
      baz=315
LPL   La Plagne        87.86 330 eP    P     03 15 01.8  0.0
LPL                               pmax pmax
      comp=Z,6.0nm,1.0s
E47A  Iron Bridge      87.91  29  P    P     03 15 01.4 -0.3
      baz=326
LSQQ  Lebel-sur-Quev   87.91  24  P    P     03 15 01.5 -0.1
      baz=331
D49A  Beulah Townshi   87.94  27  P    P     03 15 01.7 -0.1
      baz=328
CHGQ  Chibougamau      87.96  22  P    P     03 15 00.8 -1.0
      baz=333,SNR=15
L40A  Anamosa          88.05  36 eP    P     03 15 02.8 +0.4
      comp=Z,33nm,0.9s
L40A  Anamosa          88.05  36  P    P     03 15 02.1 -0.4
      baz=321,SNR=9.1
G45A  Suttons Bay      88.13  31  P    P     03 15 02.8 +0.1
      baz=325
TIP   Timpagrande      88.20 320 eP    P     03 15 02.5 -0.8
      comp=Z,6.0nm,0.9s
G46A  Petoskey         88.22  30  P    P     03 15 03.1 -0.1
      baz=325
BNI   Bardonecchia     88.26 329 eP    P     03 15 03.0 -0.6
      comp=Z,3.7nm,0.8s
BNI   Bardonecchia     88.26 329 eP    P     03 15 03.0 -0.6
BNI                               pmax pmax
      comp=Z,4.0nm,0.8s
H45A  Beulah           88.31  31  P    P     03 15 03.8 +0.2
      baz=324
VLDQ  Val d'Or         88.58  24 eP    P     03 15 04.5 -0.3
      comp=Z,38nm,0.8s
F48A  Evansville       88.68  29  P    P     03 15 04.8 -0.5
      baz=327
I45A  Fountain         88.70  32  P    P     03 15 05.6 +0.2
      baz=324
H46A  Fife Lake        88.72  31  P    P     03 15 05.8 +0.3
      baz=325,SNR=6.5
GLMI  Grayling         88.73  30 eP    P     03 15 08.2 +2.6
      comp=Z,61nm,0.8s
GLMI  Grayling         88.73  30  P    P     03 15 06.1 +0.5
      baz=326
G47A  Hillman          88.75  30  P    P     03 15 06.1 +0.5
      baz=326
N40A  Mertquake, Sal   88.79  37  P    P     03 15 05.7 -0.2
      baz=321,SNR=7.0
D51A  Lot 18 Range I   88.81  26  P    P     03 15 05.7 -0.2
      baz=329
L42A  Oliver, Polo     88.82  35 eP    P     03 15 08.2 +2.1
      comp=Z,20nm,0.8s
L42A  Oliver, Polo     88.82  35  P    P     03 15 05.9 -0.2
      baz=322
K43A  Burlington       88.87  34  P    P     03 15 06.6 +0.3
      baz=323
E50A  Wahnapitae       88.89  27  P    P     03 15 05.8 -0.4
      baz=328
M41A  Milan            88.91  36  P    P     03 15 06.8 +0.3
      baz=322
F49A  Sandfield        88.96  28  P    P     03 15 07.5 +0.8
      baz=327
TCF   Toulx Ste Croi   88.97 333  P    P     03 15 05.9 -0.8
TCF                               pmax pmax
      comp=Z,6.0nm,1.2s
TBI   Tubuai           89.07 120 eLR   LR    03 42 42.4
      comp=Z,395nm,25.2s,baz=309
TBI   Tubuai           89.07 120 eT    T     04 52 12.7
      comp=Z,36nm,0.4s
H47A  Mio              89.08  30  P    P     03 15 07.7 +0.5
      baz=326,SNR=8.5
I46A  Reed City        89.11  31  P    P     03 15 08.1 +0.7
      baz=325
D52A  ZEK Kipawa Sen   89.24  26  P    P     03 15 07.8 -0.1
      baz=330,SNR=8.1
E51A  G1948 Merrick    89.24  26  P    P     03 15 07.6 -0.3
      baz=329,SNR=7.9
H48A  Harrisville      89.35  30  P    P     03 15 08.1 -0.4
      baz=326
D53A  Lac Vacive, Po   89.39  25 eP    P     03 15 09.1 +0.4
      comp=Z,26nm,0.8s
D53A  Lac Vacive, Po   89.39  25  P    P     03 15 08.8 +0.1
      baz=330,SNR=9.6
I47A  Gladwin          89.43  31 eP    P     03 15 10.8 +1.9
      comp=Z,51nm,1.3s
I47A  Gladwin          89.43  31  P    P     03 15 09.3 +0.4
      baz=326,SNR=6.1
L44A  Lake County Fo   89.47  34  P    P     03 15 09.1  0.0
      baz=323
J46A  Howard City      89.51  32  P    P     03 15 09.5 +0.3
      baz=325
F51A  Arnstein         89.61  27  P    P     03 15 09.7  0.0
      baz=329,SNR=6.7
TOBO  Tobermory, Bru   89.61  28  P    P     03 15 10.2 +0.5
      baz=328
I48A  Sherman Twp      89.62  30  P    P     03 15 10.5 +0.7
      baz=326
WMOK  Wichita Mounta   89.62  45 eP    P     03 15 10.8 +0.8
      comp=Z,7.4nm,0.9s
WMOK  Wichita Mounta   89.62  45 eP    P     03 15 10.8 +0.8
WMOK                              pmax pmax
      comp=Z,7.0nm,0.9s
WMOK  Wichita Mounta   89.62  45  P    P     03 15 10.3 +0.2
      baz=317,SNR=12
D54A  Lac Fusel, La    89.68  24  P    P     03 15 10.1 +0.1
      baz=331,SNR=8.6
E52A  Mattawa          89.75  26  P    P     03 15 09.8 -0.6
      baz=330,SNR=5.0
F52A  Sundridge        89.93  27  P    P     03 15 11.2  0.0
      baz=329,SNR=6.1
J47A  Sunmer           89.95  31 eP    P     03 15 12.7 +1.3
      comp=Z,33nm,0.8s
J47A  Sunmer           89.95  31  P    P     03 15 12.1 +0.8
      baz=325,SNR=7.7
KLBO  Killbear Provi   89.98  27  P    P     03 15 11.9 +0.5
      baz=329,SNR=5.2
K46A  Dorr             89.99  32  P    P     03 15 12.0 +0.5
      baz=325
E53A  Dumoine, Ponti   90.01  25  P    P     03 15 11.8 +0.2
      baz=330
M44A  Midewin, Midew   90.05  34 eP    P     03 15 13.9 +2.1
      comp=Z,25nm,0.9s
M44A  Midewin, Midew   90.05  34  P    P     03 15 12.2 +0.4
      baz=323
E54A  Lac Daplat, Po   90.13  25  P    P     03 15 12.0 -0.1
      baz=331,SNR=7.8
HDIL  Hopedale         90.13  36 eP    P     03 15 14.8 +2.6
      comp=Z,24nm,0.9s
HDIL  Hopedale         90.13  36  P    P     03 15 13.0 +0.7
      baz=322
CAF   Calviac          90.18 332 eP    P     03 15 13.5 +1.1
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CAF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BUKO	Buck Lake	90.21	27	P	P	03 15 12.6	+0.1
	baz=329						
ALGO	Algonquin Park	90.25	26	P	P	03 15 12.5	-0.1
	baz=330,SNR=6.7						
BMRO	Meriville Lake	90.25	29	P	P	03 15 13.3	+0.6
	baz=328						
L46A	Eue Claire	90.32	33	P	P	03 15 13.7	+0.6
	baz=324						
J48A	Bridge Port	90.33	31	*e*P	P	03 15 14.8	+1.7
	comp=Z,30nm,0.8s						
J48A	Bridge Port	90.33	31	P	P	03 15 13.8	+0.8
	baz=326						
K47A	Vermontville	90.34	32	P	P	03 15 13.5	+0.4
	baz=325						
TUL1	Leonard	90.42	43	*e*P	P	03 15 14.5	+0.8
	comp=Z,19nm,0.6s						
TUL1	Leonard	90.42	43	P	P	03 15 13.9	+0.2
	baz=318,SNR=6.3						
TX31	Lajitas Ar. Si	90.52	52	*e*P	P	03 15 15.1	+0.7
	comp=Z,14nm,0.8s						
LTX	Lajitas	90.52	52	*e*P	P	03 15 15.1	+0.7
LTX	Lajitas	90.52	52	*e*P	P	03 15 15.1	+0.7
TXAR	Lajitas Array	90.52	52	P	P	03 15 15.1	+0.7
	comp=Z,12nm,0.7s,baz=301,slow=3.2,SNR=76						
TXAR				LR	LR	03 49 35.3	
	comp=Z,40nm,22.0s,baz=0.0,slow=31						
J49A	Marlette	90.54	30	P	P	03 15 14.3	+0.2
	baz=326						
BASO	Ashfield	90.57	29	P	P	03 15 15.0	+0.8
	baz=328						
K48A	Perry	90.60	31	P	P	03 15 15.3	+0.9
	baz=326						
ABTX	Abilene, Hawle	90.65	47	*e*P	P	03 15 15.9	+1.1
	comp=Z,32nm,1.1s						
ABTX	Abilene, Hawle	90.65	47	P	P	03 15 15.0	+0.1
	baz=316,SNR=16						
LFF	La Frestale	90.66	333	*e*P	P	03 15 16.3	+1.7
LFF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LATQ	La Tuque	90.70	22	P	P	03 15 14.7	0.0
	baz=334						
H52A	Wyevale	90.72	28	P	P	03 15 15.2	+0.3
	baz=329,SNR=5.8						
CLWO	Collingwood	90.72	28	P	P	03 15 15.5	+0.5
	baz=328,SNR=5.5						
G53A	Haliburton	90.76	27	P	P	03 15 14.8	-0.3
	baz=330,SNR=5.2						
PEMO	Pembroke	90.77	26	P	P	03 15 14.9	-0.1
	baz=331,SNR=6.8						
L47A	Sherwood	90.82	32	P	P	03 15 15.6	+0.1
	baz=325,SNR=6.0						
O44A	Mansfield	90.84	35	P	P	03 15 15.7	+0.2
	baz=323						
F55A	Otter Lake	90.94	25	P	P	03 15 15.6	-0.3
	baz=331						
BANO	Bancroft	91.10	26	P	P	03 15 17.2	+0.5
	baz=330,SNR=8.7						
HHAR	Hobbs	91.13	41	*e*P	P	03 15 17.2	+0.2
	comp=Z,11nm,0.9s						
M47A	Cromwell	91.14	33	P	P	03 15 17.3	+0.4
	baz=325						
CCM	Cathedral Cave	91.15	38	*e*P	P	03 15 17.7	+0.7
	comp=Z,17nm,1.1s						
CCM	Cathedral Cave	91.15	38	*e*P	P	03 15 17.7	+0.7
CCM				pmax	pmax		
	comp=Z,17nm,1.1s						
CCM	Cathedral Cave	91.15	38	P	P	03 15 16.5	-0.5
	baz=321						
L48A	N Adams	91.17	32	P	P	03 15 17.5	+0.4
	baz=326,SNR=5.2						
TRQ	Mont Tremblant	91.18	24	*e*P	P	03 15 17.5	+0.4
SFIN	Lafayette	91.28	34	*e*P	P	03 15 19.1	+1.5
	comp=Z,14nm,0.8s						
SFIN	Lafayette	91.28	34	P	P	03 15 18.1	+0.5
	baz=324						
L49A	Milan	91.32	31	P	P	03 15 17.8	+0.1
	baz=326						
G55A	Calabogie	91.32	25	P	P	03 15 17.4	-0.3
	baz=331,SNR=8.2						
PLVO	Plevna	91.38	26	*e*P	P	03 15 18.8	+0.9
	comp=Z,14nm,0.8s						
PLVO	Plevna	91.38	26	P	P	03 15 18.5	+0.5
	baz=331,SNR=5.2						
M48A	Edgerton	91.43	32	*e*P	P	03 15 20.9	+2.7
	comp=Z,16nm,0.9s						
M48A	Edgerton	91.43	32	P	P	03 15 18.5	+0.2
	baz=325						
N47A	Urbana	91.50	33	P	P	03 15 18.8	+0.2
	baz=325,SNR=5.7						
ORIO	Orleans, Innes	91.55	25	P	P	03 15 18.3	-0.4
	baz=332,SNR=7.4						
PKRO	Pickering	91.60	28	P	P	03 15 19.1	+0.1
	baz=329						
U40A	Yellville	91.64	41	P	P	03 15 19.2	-0.2
	baz=320,SNR=20						
DELO	Deloro Mine	91.65	26	*e*P	P	03 15 19.8	+0.6
	comp=Z,17nm,0.9s						
DELO	Deloro Mine	91.65	26	P	P	03 15 17.7	-1.5
	baz=330,SNR=6.1						
M49A	Liberty Center	91.75	32	P	P	03 15 19.8	0.0
	baz=326						
H55A	Tweed	91.77	26	P	P	03 15 20.2	+0.4
	baz=331,SNR=5.5						
DRWO	Darlington Wes	91.80	27	P	P	03 15 21.0	+1.1
	baz=330						
N48A	Decatur	91.81	33	P	P	03 15 20.6	+0.6
	baz=325						
WLVO	Wesleyville	91.88	27	P	P	03 15 20.8	+0.6
	baz=330						
I55A	Frankford	91.89	27	P	P	03 15 20.7	+0.4
	baz=330						
W39A	Magazine	92.03	42	P	P	03 15 21.8	+0.7
	baz=320						
TYNO	Tyneside	92.04	28	P	P	03 15 20.1	-0.9
	baz=329						
H56A	Elgin	92.05	25	P	P	03 15 21.5	+0.4
	baz=331						
JCT	Junction City	92.09	49	*e*P	P	03 15 22.4	+0.8
	comp=Z,10nm,0.7s						
JCT	Junction City	92.09	49	*e*P	P	03 15 22.4	+0.8
JCT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JCT	Junction City	92.09	49	P	P	03 15 22.3	+0.8
	baz=316						
N49A	Columbus Grove	92.12	32	*e*P	P	03 15 24.1	+2.7
	comp=Z,17nm,1.0s						
N49A	Columbus Grove	92.12	32	P	P	03 15 22.0	+0.6
	baz=326						
O48A	Farmland	92.25	33	P	P	03 15 22.7	+0.7
	baz=325						
PECO	Prince Edward	92.38	26	P	P	03 15 23.2	+0.7
	baz=331						
FCAR	Ozark Folk Cen	92.38	40	*e*P	P	03 15 23.0	+0.3
	comp=Z,12nm,1.0s						
WHTX	Lake Whitney,	92.38	46	*e*P	P	03 15 24.1	+1.2
	comp=Z,29nm,0.8s						
WHTX	Lake Whitney,	92.38	46	P	P	03 15 23.2	+0.4
	baz=317,SNR=12						
S44A	Carbondale	92.41	37	P	P	03 15 22.9	+0.1
	baz=322						
PBMO	Poplar Bluff	92.55	39	*e*P	P	03 15 25.9	+2.4
	comp=Z,11nm,0.9s						
LONY	Lake Ozonia	92.59	24	P	P	03 15 23.6	0.0
	baz=333						
BATG	Bathurst New B	92.63	18	*e*P	P	03 15 26.0	+2.3
	comp=Z,11nm,0.7s						
MIAR	Mount Ida	92.64	42	*e*P	P	03 15 24.8	+0.8
	comp=Z,17nm,0.8s						
MIAR	Mount Ida	92.64	42	*e*P	P	03 15 24.8	+0.8
MIAR				pmax	pmax		
	comp=Z,17nm,0.8s						
MIAR	Mount Ida	92.64	42	P	P	03 15 24.2	+0.2
	baz=320,SNR=14						
O49A	Covington	92.66	33	*e*P	P	03 15 26.1	+2.2
	comp=Z,18nm,1.2s						
O49A	Covington	92.66	33	P	P	03 15 24.3	+0.3
	baz=326						
N50A	Nevada	92.69	32	P	P	03 15 24.9	+0.8
	baz=326						
PQI	Presque Isle	92.69	19	*e*P	P	03 15 24.9	+0.9
	comp=Z,9.3nm,0.8s						
MOQ	Mont Orford	92.72	23	*e*P	P	03 15 25.3	+1.0
WHAR	Wooly Hollow	92.75	41	*e*P	P	03 15 25.2	+0.7
	comp=Z,14nm,0.9s						
P48A	Milroy	92.78	34	P	P	03 15 25.2	+0.7
	baz=325						
W41B	Gary Mavity, V	92.86	41	P	P	03 15 25.6	+0.7
	baz=320						
L53A	Girard	92.86	29	P	P	03 15 25.5	+0.6
	baz=328						
K54A	Basiliko Farm,	92.91	28	P	P	03 15 24.9	-0.2
	baz=330						
O50A	Cable	93.00	32	P	P	03 15 26.2	+0.6
	baz=326						
P49A	Miami Univ. Ec	93.03	33	P	P	03 15 26.3	+0.5
	baz=325						
K55A	Perry	93.03	28	P	P	03 15 26.3	+0.6
	baz=330						
Q48A	North Vernon	93.07	34	P	P	03 15 26.3	+0.5
	baz=325						
X40A	Basin Creek Fa	93.08	42	*e*P	P	03 15 28.5	+2.5
	comp=Z,9.2nm,1.0s						
X40A	Basin Creek Fa	93.08	42	P	P	03 15 26.7	+0.6
	baz=320						
ACSO	Alum Creek Sta	93.21	32	*e*P	P	03 15 28.4	+1.9
	comp=Z,15nm,0.8s						
ACSO	Alum Creek Sta	93.21	32	P	P	03 15 26.7	+0.2
	baz=327						
NCB	Newcomb	93.29	24	*e*P	P	03 15 28.5	+1.7
	comp=Z,7.9nm,0.8s						
P50A	Jamestown	93.37	33	P	P	03 15 27.1	-0.2
	baz=326						
WCI	Wyandotte Cave	93.39	35	P	P	03 15 27.1	-0.2
	baz=324						
Q49A	Aurora	93.39	34	P	P	03 15 26.9	-0.5
	baz=325						
O51A	Pataskala	93.44	32	P	P	03 15 26.8	-0.7
	baz=327						
M54A	Oil Creek Stat	93.48	29	P	P	03 15 27.0	-0.8
	baz=329						
T46A	Princeton	93.59	37	P	P	03 15 28.8	+0.5
	baz=323						
PKME	Peaks-Kenny Pk	93.64	21	*e*P	P	03 15 30.9	+2.6
	comp=Z,12nm,0.9s						
PKME	Peaks-Kenny Pk	93.64	21	P	P	03 15 27.9	-0.4
	baz=336						
O52A	Adamsville	93.78	31	P	P	03 15 29.1	-0.1
	baz=327						
P51A	Williamsport	93.80	32	P	P	03 15 29.4	+0.2
	baz=326						
N54A	Moraine State	93.82	30	*e*P	P	03 15 31.9	+2.6
	comp=Z,7.4nm,0.6s						
N54A	Moraine State	93.82	30	P	P	03 15 29.4	+0.1
	baz=329						
M55A	Ridgway	93.86	29	P	P	03 15 29.8	+0.3
	baz=330						
833A	Chaparral WMA,	93.89	50	P	P	03 15 30.4	+0.6
	baz=316						
Q50A	Georgetown	93.93	33	P	P	03 15 30.2	+0.4
	baz=326						
O53A	New Philadelph	93.93	31	P	P	03 15 30.2	+0.4
	baz=328						
T47A	Sharon Grove	94.01	36	*e*P	P	03 15 32.1	+1.9
	comp=Z,9.3nm,0.6s						
T47A	Sharon Grove	94.01	36	P	P	03 15 31.4	+1.1
	baz=324						
Q51A	Peebles	94.05	33	*e*P	P	03 15 31.6	+1.2
	comp=Z,21nm,0.8s						
Q51A	Peebles	94.05	33	P	P	03 15 31.0	+0.6
	baz=326						
P52A	Corning	94.06	32	P	P	03 15 30.8	+0.4
	baz=327						
M56A	Emporium	94.07	28	P	P	03 15 30.0	-0.5
	baz=330						
S49A	Springfield	94.21	35	P	P	03 15 31.7	+0.5
	baz=325						
R50A	Paris	94.23	34	*e*P	P	03 15 32.1	+0.9
	comp=Z,10nm,0.9s						
R50A	Paris	94.23	34	P	P	03 15 32.0	+0.7
	baz=326						
O54A	Avella	94.32	30	P	P	03 15 32.6	+0.9
	baz=328						
WVT	Waverly	94.34	37	*e*P	P	03 15 32.3	+0.5
	comp=Z,5.4nm,0.9s						
WVT	Waverly	94.34	37	*e*P	P	03 15 32.3	+0.5
WVT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WVT	Waverly	94.34	37	P	P	03 15 32.1	+0.3
	baz=323						
U47A	Clarksville	94.36	37	P	P	03 15 32.2	+0.3
	baz=324						
N55A	Marion Center	94.36	29	P	P	03 15 32.4	+0.5
	baz=329						
L58A	Harry Jones Me	94.43	26	P	P	03 15 32.5	+0.4
	baz=332						
GGN	Saint George	94.44	19	*e*P	P	03 15 33.6	+1.6
	comp=Z,6.5nm,0.9s						
V46A	Holladay	94.47	38	P	P	03 15 32.1	-0.2
	baz=323						
N56A	West Decatur	94.51	29	P	P	03 15 32.1	-0.4
	baz=330						
KEST	Kesra	94.60	322	P	P	03 15 32.8	-0.3
	comp=Z,3.8nm,0.9s,baz=303,slow=7.3,SNR=4.4						
KEST				LR	LR	04 02 12.5	
	comp=Z,125nm,18.0s,baz=330,slow=38						
KEST	Kesra	94.60	322	*e*P	P	03 15 32.8	-0.3
	comp=Z,30nm,1.9s						
T49A	Edmonton	94.65	35	*e*P	P	03 15 35.2	+2.0
	comp=Z,28nm,1.8s						
T49A	Edmonton	94.65	35	P	P	03 15 33.4	+0.2
	baz=325						
S50A	Richmond	94.70	34	P	P	03 15 33.6	+0.2
	baz=326						
V47A	Nunnelly	94.74	37	P	P	03 15 34.3	+0.7
	baz=323						
P54A	Burton	94.78	31	P	P	03 15 34.3	+0.5
	baz=328						
SSPA	Standing Stone	94.91	28	P	P	03 15 34.6	+0.3
	baz=330						
N57A	Milroy	94.94	28	P	P	03 15 34.4	0.0
	baz=330						
O56A	Blue Knob Stat	94.97	29	P	P	03 15 35.0	+0.4
	baz=330						
Q53A	Leroy	94.97	32	P	P	03 15 34.8	+0.1
	baz=328						
U49A	Red Boiling Sp	95.02	36	P	P	03 15 35.0	+0.2
	baz=325						
T50A	Nancy	95.04	35	P	P	03 15 35.1	+0.2
	baz=325						
S51A	Beattyville	95.09	34	P	P	03 15 35.8	+0.6
	baz=326						
P55A	Reedsville	95.12	30	P	P	03 15 35.7	+0.4
	baz=329						
V48A	Smith Brothers	95.14	37	*e*P	P	03 15 38.0	+2.6
	comp=Z,5.8nm,0.8s						
V48A	Smith Brothers	95.14	37	P	P	03 15 35.5	+0.1
	baz=324						
Q54A	Coxs Mills	95.15	31	P	P	03 15 35.9	+0.5
	baz=328						
W47A	Westpoint	95.16	38	P	P	03 15 35.1	-0.5
	baz=323						
N58A	Sunbury	95.17	28	P	P	03 15 36.1	+0.6
	baz=331						
N59A	State Game Lan	95.45	27	P	P	03 15 35.8	-1.0
	baz=332						
P56A	Dayton Farm, R	95.52	30	P	P	03 15 35.6	-1.5
	baz=329						
U50A	Jamestown	95.53	35	P	P	03 15 37.0	-0.2
	baz=325						
V49A	McMinnville	95.56	36	P	P	03 15 36.2	-1.2
	baz=324						
W48A	Pulaski	95.58	37	P	P	03 15 36.9	-0.5
	baz=324						
ZAIG	Zacatecas	95.78	56	*e*P	P	03 15 39.7	+0.8
	comp=Z,11nm,1.0s						
W49A	Belvidere	95.91	37	P	P	03 15 38.7	-0.3
	baz=324						
SWET	Sewanee	96.00	37	*e*P	P	03 15 41.1	+1.7
	comp=Z,8.8nm,1.0s						
U52A	Thorn Hill	96.22	34	P	P	03 15 40.2	-0.3
	baz=326						
X49A	Woodville	96.37	37	P	P	03 15 39.9	-1.2
	baz=324						
V52A	Sevierville	96.58	35	P	P	03 15 42.1	+0.1
	baz=326						
ESDC	Sonseca Array	96.95	333	P	P	03 15 42.0	-1.7
	comp=Z,1.6nm,0.8s,baz=9.6,slow=4.6,SNR=5.0						
ESDC				PP	PP	03 19 36.3	-1.9
	comp=Z,0.8nm,0.8s,baz=30,slow=7.9,SNR=3.2						
ESDC				LR	LR	04 03 51.8	
	comp=Z,164nm,19.3s,baz=10.0,slow=38						
VNDA	Vanda	115.12	175	PKP	PKiKP	03 20 51.5	-0.4
	comp=Z,0.9nm,0.7s,baz=308,slow=3.8,SNR=7.1						
TOA1	Torodi Ar. Sit	116.85	314	*e*PKPdf	PKPdf	03 20 56.4	-0.8
TOA1				*e*PP	PP	03 22 02.9	-2.1
TOA1				*e*PKKPbc	PKKPbc	03 31 23.7	+1.7
TORD	Torodi Ar. Bea	116.85	314	PKP	PKPdf	03 20 56.4	-0.8
	comp=Z,2.2nm,1.1s,baz=15,slow=1.8,SNR=8.0						
TORD				PP	PP	03 22 02.9	-2.1
	comp=Z,4.5nm,1.0s,baz=12,slow=6.9,SNR=8.7						
TORD				PKKPbc	PKKPbc	03 31 23.7	+1.7
	comp=Z,0.9nm,0.8s,baz=205,slow=2.9,SNR=7.9						
MAW	Mawson	119.37	205	PKP	PKiKP	03 21 01.0	+0.6
	comp=Z,3.9nm,0.7s,baz=281,slow=1.6,SNR=7.1						
MAW	Mawson	119.37	205	PKIKP	PKiKP	03 21 01.0	+0.6
LBTB	Lobatse	124.07	263	*e*PKPdf	PKiKP	03 21 11.2	+0.1
LBTB	Lobatse	124.07	263	*e*PKIKP	PKiKP	03 21 11.2	+0.1
DBIC	Dimbokro	125.82	316	PKP	PKPdf	03 21 13.9	-0.5
	comp=Z,1.6nm,0.6s,baz=12,slow=3.9,SNR=5.0						
BOSA	Boshof	126.02	259	PKP	PKPdf	03 21 14.5	0.0
	comp=Z,7.7nm,0.9s,baz=344,slow=1.5,SNR=6.9						
QSPA	South Pole Qui	126.87	180	*e*PKPdf	PKPdf	03 21 14.6	-0.2
ROSC	El Rosal	127.01	46	PKP	PKiKP	03 21 18.3	+0.6
	comp=Z,9.5nm,0.4s,baz=340,slow=6.3,SNR=9.2						
ROSC	El Rosal	127.01	46	*e*PKPdf	PKiKP	03 21 20.1	+2.4
SYO	Syowa Base	128.03	207	⇑*e*X	PKPdf	03 21 15.5	-1.4
PTGA	Pitinga	139.06	33	*e*PKPdf	PKPdf	03 21 40.2	+0.8
SNAA	Sanae	140.67	197	PKPdf	PKPdf	03 21 32.2	-8.3
VNA3	Neumayer Olymp	142.50	195	PKPdf	PKPdf	03 21 39.9	-4.0
VNA1	Neumayer--Stat	142.64	196	PKPdf	PKPdf	03 21 39.8	-4.2
LPAZ	La Paz	147.14	59	PKPbc	PKPbc	03 21 56.9	+0.5
	comp=Z,38nm,0.8s,baz=350,slow=2.2,SNR=70						
LPAZ	La Paz	147.14	59	*e*PKPdf	PKPbc	03 21 55.6	-0.8
LPAZ	La Paz	147.14	59	*e*PKP2	PKPbc	03 21 55.6	-0.8
MNMC	Minye Minye	148.03	64	*e*PKPbc	PKiKP	03 22 00.3	+0.2
PB11	IPOC Station P	148.39	65	*e*PKPbc	PKPbc	03 21 58.7	-0.4
GO01	Chusmiza	148.66	65	*e*PKPdf	PKPbc	03 21 59.9	-0.3
GO01				*e*PKPbc	PKPbc	03 22 03.1	+2.9
LVC	Limon Verde	150.68	69	*e*PKPbc	PKiKP	03 22 05.6	0.0
LVC	Limon Verde	150.68	69	*e*PKIKP	PKiKP	03 22 05.6	0.0
GO02	Mina Guanaco	151.59	74	*e*PKPbc	PKiKP	03 22 08.2	+0.8
GO03	Copiap	152.30	79	*e*PKPbc	PKiKP	03 22 11.2	+2.7
LCO	Las Campanas	152.57	82	*e*PKPbc	PKiKP	03 22 10.1	+0.8
LCO	Las Campanas	152.57	82	*e*PKIKP	PKiKP	03 22 10.1	+0.8
BDFB	Brasilia	157.25	22	PKPab	PKPab	03 22 40.2	+0.9
	comp=Z,7.6nm,0.9s,baz=13,slow=1.5,SNR=7.2						
BDFB	Brasilia	157.25	22	*e*PKPab	PKPab	03 22 40.2	+0.9
BDFB				*e*PKPab	PKPab	03 22 42.7	+3.3
CPUP	Villa Florida	161.30	60	PKPab	PKPab	03 22 58.1	+1.3
	comp=Z,8.8nm,1.0s,baz=331,slow=4.6,SNR=6.8						

SOME ***23*** *03:12:09.8, 40°57N×77°50E, h0*^{km}
KRNET ***23*** *03:12:09.1±0.1, 40°51N×77°37E, mb2.6*
NNC ***23*** *03:12:10.2±1.2, 40°53N×77°47E, h0*^{km}*, mb3.6, mpv3.3, Error ellipse: s-maj=8.1km s-min=6.0km az=12.0*
ISC 23 03:12:02.1±2.5, **40°25N**±0°10×**77°51E**±0°05, **h7**^{km}±17^{km}, **n23,** σ**1**^{s}**14**/37, **9C-11D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.89	353	⇑*i*P	Pg	03 12 39.6	+1.2
	baz=55						
KDJ				⇑*i*S	Sg	03 13 02.4	-0.5
	baz=55						
ULHL	Ulahol	2.21	335	⇓*e*P	Pg	03 12 45.2	+0.8
	baz=34						
ULHL				⇓*i*S	Sb	03 13 10.8	+0.7
	baz=34						
KZA	Kyzart	2.50	318	⇓*i*P	Pg	03 12 50.2	+0.2
	baz=15						
KZA				⇓*i*S	Sb	03 13 20.1	+1.5
	baz=15						
BOOM	Boomskoye usch	2.53	333	⇑*i*P	Pb	03 12 49.7	+1.8
	baz=32						
BOOM				⇑*i*S	Sb	03 13 19.1	-0.1
	baz=32						
TNSS	Tian-Shan	2.81	352	Pg	Pg	03 12 57.1	+1.1
	17nm,0.6s						
TNSS				Lg	Lg	03 13 31.6	
	7.3nm,0.3s						
TNSS	Tian-Shan	2.81	352	*e*P	Pg	03 12 57.1	+1.1
	17nm,0.6s						
TNSS				*e*S	Sg	03 13 31.6	-0.9
	7.3nm,0.3s						
IZV	Izvestkoviy	2.86	347	Pg	Pg	03 12 57.7	+0.8
	8.8nm,0.2s						
IZV				Lg	Lg	03 13 32.6	
	9.6nm,0.3s						
IZV	Izvestkoviy	2.86	347	*e*P	Pg	03 12 57.7	+0.8
	8.8nm,0.2s						
IZV				*e*S	Sg	03 13 32.6	-1.4
	9.6nm,0.3s						
ARLS	Aral	2.90	305	⇑*i*P	Pb	03 12 55.4	+1.3
	baz=2.0						
ARLS				⇑*i*S	Sb	03 13 29.0	-0.8
	baz=2.0						
MDOK	Medeo	2.93	353	Pg	Pg	03 12 58.9	+0.7
	8.5nm,0.5s						
MDOK				Lg	Lg	03 13 34.7	
	13nm,0.6s						
MDOK	Medeo	2.93	353	*e*P	Pg	03 12 58.9	+0.7
	8.9nm,0.4s						
MDOK				*e*S	Sg	03 13 34.7	-1.5
	13nm,0.6s						
KOTS	Kotyrbulak	2.99	354	Pg	Pg	03 13 00.4	+0.9
	9.7nm,0.4s						
KOTS				Lg	Lg	03 13 37.1	
	14nm,0.4s						
KOTS	Kotyrbulak	2.99	354	*e*P	Pg	03 13 00.4	+0.9
	9.7nm,0.4s						
KOTS				*e*S	Sg	03 13 37.1	-1.2
	14nm,0.4s						
UCH	Uchtor	3.00	312	⇓*e*P	Pb	03 12 57.0	+0.9
	baz=9.0						
UCH				⇓*i*S	Sb	03 13 32.6	-0.5
	baz=9.0						
TKM2	Tokmak 2	3.03	332	⇓Pg	Pg	03 13 00.3	+0.2
	5.5nm,0.8s						
TKM2				⇓Lg	Lg	03 13 36.6	
	3.5nm,0.5s						
PDGK	Podgornoye	3.41	25	Pg	Pg	03 13 08.2	+0.8
	1.7nm,0.5s						
PDGK				Lg	Lg	03 13 50.8	
	5.6nm,0.8s						
PDGK	Podgornoye	3.41	25	⇑Pg	Pg	03 13 07.0	-0.5
	3.5nm,0.6s						
PDGK				⇓Lg	Lg	03 13 51.7	
	14nm,0.7s						
PDGK	Podgornoye	3.41	25	⇓*i*P	Pb	03 13 03.3	+0.4
	baz=29						
PDGK				⇓*i*S	Sb	03 13 43.0	-1.6
	baz=29						
ARSB	Arslanbob	3.60	289	⇑*i*P	Pb	03 13 06.3	+0.2
	baz=85						
ARSB				⇑*i*S	Sb	03 13 47.5	-2.5
	baz=85						
CHKK	Chushkaly	3.62	354	Pg	Pg	03 13 11.1	-0.3
	6.5nm,0.5s						
CHKK				Lg	Lg	03 13 55.8	
	3.5nm,0.3s						
CHKK	Chushkaly	3.62	354	*e*P	Pg	03 13 11.1	-0.3
	6.5nm,0.5s						
CHKK				*e*S	Sg	03 13 55.8	-2.5
	3.5nm,0.3s						
KTMS	Ketmen	3.83	33	Pg	Pg	03 13 16.3	+0.8
	1.4nm,0.2s						
KTMS				Lg	Lg	03 14 04.6	
	4.2nm,0.4s						
KTMS	Ketmen	3.83	33	*e*P	Pg	03 13 16.3	+0.8
	0.9nm,0.3s						
KTMS				*e*S	Sg	03 14 04.6	-0.6
	4.2nm,0.4s						

ISCJB ***23*** *03:20:59.9±0.2, 24°38S±0°04×179°87E±0°05, h517*^{km}*, mb4.4/39, Error ellipse: s-maj=7.2km s-min=4.7km az=40.6*
IDC ***23*** *03:21:00.5±1.3, 24°33S×179°88E, h520*^{km}*±13*^{km}*, mb3.7/16, mb1 3.9/18, mb1mx3.9/29, mbtmp4.6/18, Error ellipse: s-maj=13.0km s-min=10.7km az=159.0*
NEIC ***23*** *03:21:01.5±1.8, 24°44S×179°89E, h530*^{km}*±7*^{km}*, mb4.5/72, Error ellipse: s-maj=19.5km s-min=16.5km az=64.0*
ISC 23 03:21:00.0±0.3, **24°40S**±0°06×**179°98E**±0°08, **h517**^{km}, **n208,** σ**1**^{s}**27**/217, **mb4.5**/38, **30C-7D, South of Fiji Islands**

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

MARNC	Mare, Loyalty	11.39	282	eP	P	03 23 32.7	+0.5
PINNC	Pines Island,	11.64	276	eP	P	03 23 36.7	+1.9
ONTNC	Ouen Toro	12.60	277	eP	P	03 23 46.7	+1.8
DZM	Mont Dzumac	12.66	278	P	P	03 23 46.8	+1.2
	3.5nm,0.3s,baz=86,slow=16,SNR=42						
DZM	Mont Dzumac	12.66	278	eP	P	03 23 47.2	+1.6
URZ	Urewera	14.03	189	P	P	03 23 59.7	+0.1
	2.4nm,0.3s,baz=283,slow=0.6,SNR=7.0						
URZ				S	S	03 26 26.5	-1.2
	1.8nm,0.3s,baz=193,slow=21,SNR=11						
URZ	Urewera	14.03	189	eP	P	03 24 00.0	+0.4
URZ				eS	S	03 26 29.3	+1.6
BKZ	Black Stump Fm	15.01	191	eS	S	03 26 43.8	-2.9
BFZ	Birch Farm	16.53	190	eP	P	03 24 25.2	-0.3
	58nm,1.4s						
BFZ				eS	S	03 27 12.9	-1.1
KHZ	Kahutara	18.74	195	eP	P	03 24 44.2	-1.9
	155nm,2.0s						
KHZ				ePcP	PcP	03 28 50.1	+2.9
CTAO	Charters Tower	31.46	271	eP	P	03 26 39.2	+0.1
	35nm,0.5s						
STKA	Stephens Creek	34.52	249	P	P	03 27 05.1	+0.1
	5.1nm,0.5s,baz=95,slow=11,SNR=29						
STKA				PcP	PcP	03 29 25.6	+0.3
	1.9nm,0.7s,baz=333,slow=4.5,SNR=4.0						
STKA	Stephens Creek	34.52	249	eP	P	03 27 04.9	0.0
	1.6nm,0.6s						
PMG	Port Moresby	34.64	290	P	P	03 27 06.0	-0.1
	35nm,0.7s,baz=114,slow=7.3,SNR=8.5						
PMG	Port Moresby	34.64	290	eP	P	03 27 06.1	-0.1
	36nm,0.8s						
AS31	Alice Springs	41.94	261	eP	P	03 28 05.2	-0.2
	2.1nm,0.6s						
ASAR	Alice Springs	41.94	261	P	P	03 28 05.2	-0.3
	4.5nm,0.5s,baz=97,slow=7.3,SNR=62						
ASAR				PcP	PcP	03 29 48.4	-0.6
	1.7nm,0.7s,baz=98,slow=6.0,SNR=5.1						
ASAR				ScP	ScP	03 32 50.4	+0.3
	2.4nm,0.9s,baz=104,slow=4.0,SNR=8.5						
ASAR				S	S	03 33 44.7	-1.8
	0.8nm,0.6s,baz=101,slow=13,SNR=7.0						
WB2	Warramunga Arr	42.35	267	eP	P	03 28 08.0	-0.7
	32nm,1.2s						
WRA	Warramunga Arr	42.36	267	P	P	03 28 07.9	-0.9
	14nm,0.4s,baz=92,slow=9.0,SNR=92						
WRA				ScP	ScP	03 32 54.1	+2.3
	6.4nm,0.8s,baz=76,slow=3.5,SNR=8.3						
WRA				S	S	03 33 50.2	-2.4
	4.2nm,1.0s,baz=107,slow=14,SNR=3.5						
FORT	Forrest	46.12	250	eP	P	03 28 37.0	-0.7
	24nm,0.8s						
SBA	Scott Base	53.88	183	eP	P	03 29 37.0	+3.2
	14nm,0.9s						
VNDA	Vanda	53.88	185	P	P	03 29 35.0	+1.1
	1.6nm,0.5s,baz=11,slow=7.8,SNR=23						
VNDA	Vanda	53.88	185	eP	P	03 29 35.5	+1.7
	2.6nm,0.7s						
CASY	Casey	59.66	206	eP	P	03 30 13.9	+0.2
	17nm,1.1s						
QSPA	South Pole Qui	65.68	180	eP	P	03 30 54.2	+1.3
	25nm,1.0s						
MJAR	Matsushiro Arr	72.30	326	P	P	03 31 32.1	-0.8
	1.4nm,0.7s,baz=162,slow=7.0,SNR=4.3						
MAW	Mawson	77.28	200	P	P	03 32 00.9	+0.5
	4.7nm,0.5s,baz=148,slow=5.6,SNR=15						
MAW	Mawson	77.28	200	eP	P	03 32 01.2	+0.8
	3.4nm,1.3s						
KSRS	Korea Array	78.62	320	P	P	03 32 07.8	-0.3
	1.1nm,0.6s,baz=124,slow=6.1,SNR=5.3						
PETK	Petropavlovsk-	79.58	347	P	P	03 32 12.5	-0.4
	2.2nm,0.5s,baz=126,slow=6.4,SNR=5.5						
NJ2	Nanjing	80.97	311	eP	P	03 32 21.1	+0.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
USRK	Ussuriysk Ar.	81.17	327	P	P	03 32 22.3	+1.0
	comp=Z,1.8nm,0.5s,baz=140,slow=3.6,SNR=7.4						
SYO	Syowa Base	82.52	193⇑	eP	P	03 32 26.4	-1.5
SYO	Syowa Base	82.52	193⇑	ePcP	PcP	03 32 31.8	+0.3
MURC	Murrieta	83.03	48	P	P	03 32 31.6	+0.5
	baz=235						
VES	Vestal, Richgr	83.08	46	P	P	03 32 32.0	+0.7
	baz=233						
BFSC	Mount Baldy Ra	83.09	48	P	P	03 32 32.0	+0.5
	baz=234						
MONP2	Monument Peak	83.16	49	P	P	03 32 33.0	+1.0
	baz=235,SNR=7.1						
EDW2	Edwards Air Fo	83.24	47	P	P	03 32 32.8	+0.6
	baz=234,SNR=5.4						
IKP	In-Ko-Pah, Jac	83.24	50	P	P	03 32 32.8	+0.6
	baz=235						
ISA	Isabella, Lake	83.38	46	P	P	03 32 33.7	+0.8
	baz=234,SNR=8.3						
O02D	Mt. Diablo Mer	83.45	40	P	P	03 32 34.7	+1.6
	baz=230						
PFO	Pinyon Flats O	83.55	49	P	P	03 32 34.4	+0.6
	baz=235						
SWSC	Sam W. Stewart	83.62	50	P	P	03 32 34.9	+0.9
	baz=236						
LRMC	Laurel Mtn Rad	83.80	47	P	P	03 32 35.6	+0.6
	baz=234,SNR=5.4						
N02D	Trinity Center	84.00	40	P	P	03 32 37.1	+1.2
	baz=230						
BELC	Belle Mtn. Jos	84.08	49	P	P	03 32 37.2	+0.8
	baz=235,SNR=8.1						
CWC	Cottonwood Cre	84.09	46	P	P	03 32 36.9	+0.4
	baz=234						
O03E	Paynes Creek	84.11	41	P	P	03 32 36.7	+0.3
	baz=231,SNR=5.9						
MDPB	Devils Postpil	84.16	44	eP	P	03 32 38.1	+1.1
	comp=Z,19nm,1.7s						
SNAA	Sanae	84.17	179	P	P	03 32 35.6	-0.6
SNAA	Sanae	84.17	179	eP	P	03 32 35.8	-0.4
	comp=Z,7.7nm,1.3s						
M02C	Callahan	84.18	39	P	P	03 32 38.3	+1.6
	baz=230						
MPMC	Manual Prospec	84.26	46	P	P	03 32 38.1	+0.7
	baz=234						
BC3	Big Chuckawall	84.26	49	P	P	03 32 38.6	+1.3
	baz=236						
GSC	Goldstone, Bar	84.28	47	P	P	03 32 38.1	+0.8
	baz=235,SNR=6.8						
MLAC	Mammoth, Mammo	84.31	44	P	P	03 32 38.2	+0.6
	baz=233						
HEC	Hector,Ludlow	84.32	48	P	P	03 32 38.1	+0.5
	baz=235						
GLA	Glamis	84.36	50	eP	P	03 32 39.7	+2.0
	comp=Z,32nm,1.4s						
GLA	Glamis	84.36	50	P	P	03 32 39.2	+1.5
	baz=236						
VNA3	Neumayer Olymp	84.38	177	P	P	03 32 36.9	-0.3
J01E	Myrtle Point	84.71	38	P	P	03 32 40.8	+1.7
	baz=229						
BEKR	Beckworth	84.71	42	eP	P	03 32 39.5	0.0
	comp=Z,24nm,1.8s						
GMRC	Granite Mounta	84.75	48	P	P	03 32 40.5	+0.7
	baz=236						
IRM	Iron Mountain	84.75	49	P	P	03 32 40.6	+0.9
	baz=236,SNR=9.4						
HUMO	Hull Mountain	84.90	38	eP	P	03 32 41.6	+1.5
	comp=Z,22nm,1.5s						
FURC	Furnace Creek,	84.91	46	P	P	03 32 41.2	+0.9
	baz=235						
TUQ	Turquoise Moun	84.94	48	P	P	03 32 41.4	+0.7
	baz=235						
Y12C	Blythe	84.96	50	P	P	03 32 41.5	+1.0
	baz=236						
SHOC	Shoshone, Teco	84.97	47	P	P	03 32 41.3	+0.6
	baz=235						
M04C	Macdoel	85.02	40	P	P	03 32 41.6	+0.7
	baz=231						
VNA1	Neumayer--Stat	85.03	177	P	P	03 32 39.8	-0.5
NVAR	Mina Array Bea	85.12	44	P	P	03 32 41.8	+0.3
	comp=Z,1.9nm,0.8s,baz=223,slow=7.9,SNR=7.4						
214A	Organ Pipe Nat	85.19	52	P	P	03 32 43.0	+1.2
	baz=237						
I02D	Swisshome	85.37	37	P	P	03 32 43.1	+0.9
	baz=229						
I03D	Drain, OR	85.38	37	P	P	03 32 43.4	+1.0
	baz=230						
PDMCI	Parker Dam,Lak	85.53	49	P	P	03 32 44.0	+0.7
	baz=236						
TPNV	Topopah Spring	85.59	46	P	P	03 32 44.3	+0.5
	baz=235,SNR=6.0						
J04D	Umpqua Nationa	85.78	38	P	P	03 32 45.5	+0.9
	baz=231						
W13A	Hualapai Mount	86.14	49	eP	P	03 32 46.9	+0.3
	comp=Z,15nm,1.7s						
H04D	Lebanon	86.25	37	P	P	03 32 47.6	+1.1
	baz=230						
J05D	Fort Rock, OR	86.31	39	P	P	03 32 48.0	+1.0
	baz=231,SNR=6.0						
PINE	Pine Mountain	86.79	38	eP	P	03 32 50.6	+1.2
	comp=Z,49nm,1.5s						
TUC	Tucson	86.84	52	eP	P	03 32 51.4	+1.7
	comp=Z,10nm,1.0s						
TUC	Tucson	86.84	52	P	P	03 32 51.4	+1.7
	baz=238						
E04D	Cinebar	87.64	36	P	P	03 32 54.0	+1.0
	baz=230						
PLCA	Paso Flores	87.93	134	P	P	03 32 55.1	+0.2
	comp=Z,2.3nm,0.8s,baz=270,slow=4.6,SNR=4.8						
D03D	Eldon	88.00	35	P	P	03 32 55.7	+1.1
	baz=230						
WUAZ	Wupatki	88.09	49	P	P	03 32 56.7	+1.0
	baz=238						
G08A	Pilot Rock	88.83	38	eP	P	03 32 59.5	+0.8
	comp=Z,25nm,1.5s						
MTPU	Mount Pierson	88.88	47	eP	P	03 33 00.6	+1.0
	comp=Z,36nm,1.9s						
A04D	Lummi Island	88.95	34	P	P	03 33 00.1	+1.1
	baz=230						
B05A	Bryant	88.98	34	P	P	03 32 59.9	+0.7
	baz=231						
W18A	Petrified Fore	89.03	51	P	P	03 33 00.9	+0.8
	baz=239						
121A	Cookes Peak, D	89.13	54	P	P	03 33 02.1	+1.5
	baz=240						
DUG	Dugway, Tooele	89.63	45	P	P	03 33 03.0	+0.3
	baz=237						
Q16A	Castle Valley	90.02	47	eP	P	03 33 05.8	+1.2
	comp=Z,5.4nm,0.9s						
TMUT	Trail Mountain	90.20	46	eP	P	03 33 06.6	+1.1
	comp=Z,24nm,0.7s						
HLID	Hailey	90.48	41	P	P	03 33 07.3	+0.7
	baz=236						
MNTX	Cornudas Mount	90.51	55	P	P	03 33 07.7	+0.9
	baz=241						
TXAR	Lajitas Array	90.71	58	P	P	03 33 08.8	+1.0
	comp=Z,3.4nm,0.7s,baz=214,slow=6.6,SNR=64						
HHC	Hu-ho-hao-te	90.76	315	eP	P	03 33 07.9	+0.1
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
PV13	Radium Mtn., P	91.21	48	epP	pP	03 35 05.7	+1.3
ANMO	Albuquerque	91.28	52	eP	P	03 33 10.9	+0.5
	comp=Z,14nm,1.8s						
ANMO	Albuquerque	91.28	52	P	P	03 33 11.0	+0.5
	baz=241						
CD2	Chengdu	91.34	303	eP	P	03 33 10.5	-0.2
S22A	4UR Ranch, Cre	92.37	49	P	P	03 33 16.4	+0.9
	baz=241						
ILAR	Eielson Array	92.52	14	P	P	03 33 13.8	-1.4
	comp=Z,0.7nm,0.7s,baz=223,slow=5.7,SNR=7.0						
PDAR	Pinedale Array	93.06	44	P	P	03 33 18.6	0.0
	comp=Z,1.1nm,0.7s,baz=213,slow=3.0,SNR=8.6						
BOZ	Bozeman (W)	93.25	41	P	P	03 33 20.0	+0.7
	baz=238						
SDCO	Great Sand Dun	93.30	50	P	P	03 33 19.8	0.0
	baz=242						
LZH	Lanzhou	93.67	308	⇓P	P	03 33 23.5	+2.1
LZH				pP	pwP	03 35 21.8	+1.7
LZH				sP	sP	03 36 14.1	+7.5
LZH				PP	PP	03 37 20.6	+5.0
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,52nm,9.3s						
INK	Inuvik	98.51	16	P	Pdif	03 33 41.2	-0.9
	comp=Z,1.4nm,1.0s,baz=303,slow=3.7,SNR=3.5						
MKAR	Makanchi Array	112.48	313	PKiKP	PKiKP	03 38 36.0	-1.1
	comp=Z,0.8nm,0.7s,baz=197,slow=0.8,SNR=5.9						
KURK	Kurchatov	115.55	316	ePKPdf	PKPdf	03 38 42.0	-0.8
KURBB	Kurchatov Arra	115.59	316	PKiKP	PKPdf	03 38 41.8	-1.2
	comp=Z,1.3nm,0.6s,baz=97,slow=1.9,SNR=15						
BDFB	Brasilia	118.54	125	PKP	PKPdf	03 38 48.5	-1.3
	comp=Z,2.2nm,0.7s,baz=197,slow=8.6,SNR=3.5						
KK31	Karatay Array	120.15	307	ePKPdf	PKPdf	03 38 51.8	-0.2
KKAR	Karatay Array	120.15	307	ePKPdf	PKPdf	03 38 51.8	-0.2
BVAR	Borovoye Array	120.80	319	PKP	PKPdf	03 38 52.3	-0.6
	comp=Z,1.7nm,0.4s,baz=80,slow=2.0,SNR=13						
FRB	Frobisher Bay	121.09	29	PKP	PKPdf	03 38 52.4	-0.7
	comp=Z,6.6nm,0.7s,baz=264,slow=3.9,SNR=3.8						
BOSA	Boshof	121.95	206	PKP	PKPdf	03 38 56.0	-0.2
	comp=Z,1.7nm,0.8s,baz=11,slow=9.4,SNR=3.0						
ARCES	ARCESS Array B	132.37	348	PKP	PKPdf	03 39 14.0	-0.5
	comp=Z,3.1nm,0.8s,baz=73,slow=1.8,SNR=14						
ARE0	ARCESS Array S	132.37	348	ePKPdf	PKiKP	03 39 15.7	0.0
KTK1	Kautokeino	133.24	349	ePKPdf	PKPdf	03 39 15.3	-0.8
MOR8	Moi Rana	137.23	351	eSKPdf	SKPbc	03 42 08.1	-0.1
FINES	FINESS Array B	138.91	341	PKhKP	PKPpre	03 39 16.9	
	comp=Z,4.1nm,1.0s,baz=35,slow=5.3,SNR=6.7						
FINES				PKP	PKPdf	03 39 27.6	+0.8
	comp=Z,1.5nm,0.5s,baz=108,slow=2.1,SNR=7.6						
FINES				SKPbc	SKPbc	03 42 13.3	+0.3
	comp=Z,2.6nm,0.6s,baz=48,slow=5.7,SNR=7.1						
DOMB	Dombas	141.87	353	ePKPdf	PKPdf	03 39 28.0	-4.3
AKN	Aaknes	141.94	355	ePdif	Pdif	03 36 54.1	-1.4
NB2	NORSAR Subarra	142.57	351	PKP	PKPdf	03 39 29.8	-3.7
	comp=Z,0.6nm,0.5s,baz=21,slow=3.5						
NB2	NORSAR Subarra	142.57	351	PKP	PKPdf	03 39 29.8	-3.7
	baz=21,slow=3.5						
NOA	NORSAR Array B	142.57	351	PKhKP	PKPdf	03 39 29.6	-3.8
	comp=Z,0.8nm,0.6s,baz=16,slow=4.6,SNR=7.7						
NC602	NORSAR Array S	142.82	351	ePKPdf	PKPdf	03 39 27.6	-6.2
SUE	Sulen	143.22	356	ePKPbc	PKPbc	03 39 32.5	-0.2
SKAR	Skarslia	143.28	353	ePKPbc	PKPab	03 39 31.8	-0.9
ASK	Askoy	143.76	356	ePKPbc	PKPab	03 39 33.8	-0.6
BER	Bergen	143.85	355	ePKPbc	PKPbc	03 39 34.5	-0.2
KONO	Kongsberg	144.13	352	ePKPbc	PKPbc	03 39 35.3	-0.4
KONO	Kongsberg	144.13	352	ePKPbc	PKPbc	03 39 35.0	-0.7
ODD1	Odda	144.21	354	ePKPbc	PKPbc	03 39 35.8	-0.1
BLS5	Blasjo	144.71	354	ePKPdf	PKPdf	03 39 37.0	-0.3
KMY	Karmoy	145.02	355	ePKPbc	PKPbc	03 39 38.3	-0.1
AKASG	Malin Array Be	145.38	327	PKPbc	PKPdf	03 39 38.6	+0.1
	comp=Z,3.0nm,0.5s,baz=47,slow=4.2,SNR=24						
AKASG				SKPbc	SKiKP	03 42 29.9	+0.1
	comp=Z,1.0nm,0.7s,baz=42,slow=3.1,SNR=4.9						
BR131	Keskin Array S	147.86	307	ePKPbc	PKPbc	03 39 46.5	-0.6
BRTR	Keskin Array B	147.86	307	PKPbc	PKPbc	03 39 46.8	-0.3
	comp=Z,2.5nm,0.6s,baz=143,slow=4.7,SNR=19						
BEL	Belsk	148.32	335	ePKP	PKPbc	03 39 47.9	+0.3
ANTO	Ankara	148.43	307	ePKPbc	PKPbc	03 39 48.8	+0.4
ANTO	Ankara	148.43	307⇑	iP	PKPbc	03 39 48.6	+0.2
KWP	Kalwaria Pacla	149.19	331	ePKP	PKPbc	03 39 49.8	-0.1
CFR	Carcaliu	149.20	319⇑	iP	PKPbc	03 39 49.9	-0.1
TESR	Tescani	149.29	323⇑	iP	PKPbc	03 39 49.2	-1.0
BIZ	Bicaz	149.33	324⇑	iP	PKiKP	03 39 50.7	-0.4
MDUB	Mudurnu	149.37	309	ePKPbc	PKPbc	03 39 50.8	+0.1
BURAR	Bucovina Array	149.37	326⇓	iP	PKiKP	03 39 51.8	+0.5
TIRR	Tirgusor	149.42	318⇓	iP	PKPdf	03 39 47.1	+1.7
TLB	Topalu	149.57	318⇑	iP	PKiKP	03 39 51.5	-0.1
HARR	Harsova	149.59	319⇑	iP	PKiKP	03 39 51.3	-0.4
LEF	Lefka	149.63	298⇑	iP	PKPbc	03 39 50.8	-0.5
VRI	Vrincioaia	149.63	322⇑	iP	PKPbc	03 39 49.5	-1.5
SHAB	Shabla	149.77	316⇑	iP	PKiKP	03 39 51.9	-0.2
KOLS	Kolonicke sedl	149.90	330	ePKP	PKiKP	03 39 51.9	-0.3
OJC	Ojcow	149.98	334	ePKP	PKPbc	03 39 51.5	-0.2
OZUR		150.02	323⇓	iP	PKPbc	03 39 50.7	-1.3
MLR	Muntele Rosu	150.30	322	ePKPbc	PKPbc	03 39 52.4	-0.3
MLR	Muntele Rosu	150.30	322⇓	iP	PKPbc	03 39 51.6	-1.2
DOPR	Dopca	150.32	323⇓	iP	PKiKP	03 39 53.0	-0.2
TRPA	Tarpa	150.35	329⇑	iP	PKPbc	03 39 50.8	-1.8
NIE	Niedzica	150.40	333	ePKP	PKiKP	03 39 53.1	-0.2
SECR		150.49	321⇑	iP	PKPbc	03 39 52.5	-0.6
KSP	Ksiaz	150.75	339	ePKP	PKPbc	03 39 53.6	+0.2
VOIR		150.83	322⇑	iP	PKPbc	03 39 53.9	0.0
LANS	Liptovska Anna	150.95	333	ePKP	PKiKP	03 39 55.2	+0.8
OSTC	Ostas	151.02	338⇑	ePKP	PKiKP	03 39 54.6	+0.1
CHVC	Chvalec	151.04	339⇑	ePKP	PKiKP	03 39 54.5	-0.1
ARR	Arges	151.11	323⇑	iP	PKiKP	03 39 54.8	-0.1
UPC	Upice	151.13	339⇑	ePKP	PKPbc	03 39 54.3	0.0
DPC	Dobruska-Polom	151.16	338⇑	ePKP	PKiKP	03 39 54.8	0.0
MORC	Moravsky Berou	151.20	336⇑	iP	PKPbc	03 39 54.2	-0.4
MORC	Moravsky Berou	151.20	336	ePKP	PKPbc	03 39 54.6	0.0
MORC				e		03 40 05.5	
MORC				e		03 42 00.4	
CLL	Collm	151.33	343	ePKPbc	PKPbc	03 39 54.3	-0.5
CLL	Collm	151.33	343⇑	iPKPbc	PKPbc	03 39 54.5	-0.2
	comp=Z,16nm,0.7s						
CLL				ePKPab	PKPab	03 40 05.0	-0.2
CLL				epPKPbc	pPKPbc	03 41 55.0	-0.2
LOT	Lotru	151.53	323⇑	iP	PKPbc	03 39 53.3	-2.3
VYHS	Vyhne	151.72	333	ePKP	PKPbc	03 39 55.6	-0.2
ELND	Elena	151.79	317⇑	iP	PKPbc	03 39 56.0	-0.1
JAVC	Velka Javorina	151.90	335	ePKP	PKiKP	03 39 57.2	+0.8
VRAC	Vranov	151.94	337	ePKP	PKiKP	03 39 57.6	+1.2
PRU	Pruhonice	152.05	340⇑	ePKP	PKPbc	03 39 56.4	0.0
SIRR	Siria	152.08	327⇑	iP	PKPbc	03 39 55.7	-0.9
GZR	Gura Zlata	152.10	324⇓	iP	PKPbc	03 39 56.3	-0.5
KRUC	Moravsky	152.21	337	ePKP	PKPbc	03 39 56.7	-0.1
KRUC				e		03 40 08.9	
KRUC				e		03 42 02.3	
MODS	Modra-Piesok	152.45	335	ePKP	PKPbc	03 39 57.3	-0.1
BZS	Buzias	152.56	326⇑	iP	PKPbc	03 39 54.4	-3.3
HERR	Herculane	152.63	324⇑	iP	PKPbc	03 39 57.0	-0.8
MDVR	Moldovita	153.07	324⇑	iP	PKPbc	03 39 55.8	-3.1
KHC	Kasperske Hory	153.11	340⇑	ePKP	PKPbc	03 39 58.6	-0.2
KHC				ePKPAB	PKPab	03 40 13.0	+0.1
GERES	GERESS Array B	153.32	340	PKPbc	PKPbc	03 39 57.8	-1.5
	comp=Z,0.7nm,0.7s,baz=29,slow=3.0,SNR=7.6						
GERES				PKPab	PKPab	03 40 13.2	-0.7
	comp=Z,0.6nm,0.6s,baz=41,slow=4.3,SNR=4.0						
ARSA	Arzberg	154.04	335	PKPdf	PKPdf	03 39 51.2	-1.0
	comp=Z,1.5nm,0.8s						
SOKA	Soboth	154.71	335	ePKPdf	PKPdf	03 39 51.3	-2.0
	comp=Z,3.8nm,1.6s						
MYKA	Terra Mystica	155.26	337	ePKPab	PKPab	03 40 20.6	-1.7
	comp=Z,2.8nm,0.8s						
WATA	Walderalm	155.31	341	PKPdf	PKPdf	03 39 52.1	-2.1
	comp=Z,2.1nm,0.5s						
WTTA	Wattenberg	155.36	341	i PKPab	PKPab	03 40 22.7	-0.1
	comp=Z,2.1nm,0.5s						
RETA	Reutte	155.41	342	i PKPab	PKPab	03 40 22.8	-0.1
	comp=Z,0.8nm,0.6s						
ABTA	Abfaltersbach	155.54	339	i PKPdf	PKPdf	03 39 53.1	-1.4
	comp=Z,5.0nm,1.6s						
DAVA	Damuels	155.83	343	i PKPab	PKPab	03 40 23.5	-1.3
	comp=Z,4.3nm,1.1s						
FETA	Feichten	155.85	342	i PKPdf	PKPdf	03 39 55.4	+0.5
	comp=Z,2.3nm,1.0s						
PDG	Podgorica	155.97	323⇑	iP	PKPab	03 40 24.3	-1.1
ESDC	Sonseca Array	164.41	11	PKPab	PKPab	03 41 01.5	-0.8
	comp=Z,0.7nm,0.6s,baz=344,slow=4.5,SNR=7.8						
TORD	Torodi Ar. Bea	168.69	189	PKP	PKPdf	03 40 07.4	-0.8
	comp=Z,1.2nm,0.8s,baz=336,slow=2.4,SNR=6.9						
TORD				PKPab	PKPab	03 41 21.2	-0.4
	comp=Z,3.2nm,0.8s,baz=295,slow=1.7,SNR=15						

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*IDC **23** 03:26:58.5±1.6, 12.°04N×92.°90E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.6/41, mbtmp3.8/7, ML4.5/1, Error ellipse: s-maj=55.0km s-min=20.9km az=64.0*

ISC 23 03:27:06.4±1.2**, 13.°2N**±0.°1×**95.°3E**±0.°1**, h10^{km}, n15,** σ**1.^{s}60**/14**, mb3.8**/6**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.28	34	Pn	Pg	03 29 06.8	+0.2
	1.5nm,0.3s,baz=232,slow=15,SNR=16						
JIRN	Jiri	16.67	331	eP	P	03 31 03.2	+0.2
	46nm,0.3s						
PKI	Pulchoki	16.98	329	eP	Pn	03 31 06.2	+1.8
	31nm,0.2s						
PKIN	Phulchoki	16.99	329	eP	Pn	03 31 06.4	+1.9
	57nm,0.4s						
DMN	Daman	17.16	328	eP	P	03 31 08.8	+0.4
	33nm,0.4s						
KKN	Kakani	17.22	329	eP	P	03 31 10.1	+1.1
	10nm,0.2s						
GKN	Gorkha	17.73	328	eP	P	03 31 15.7	+1.2
	81nm,0.3s						
KOLN	Koldanda	18.11	325	eP	Pn	03 31 19.5	+1.2
	28nm,0.3s						
DANN	Dangsing	18.47	326	eP	Pn	03 31 24.0	+1.1
	19nm,0.3s						
MKAR	Makanchi Array	35.19	344	P	P	03 33 59.9	-0.7
	0.2nm,0.4s,baz=144,slow=7.5,SNR=2.9						
SONM	Songino Array	35.72	13	P	P	03 34 12.4	+7.1
	0.4nm,0.4s,baz=200,slow=8.1,SNR=3.6						
ZALV	Zalesovo Beam	41.45	351	P	P	03 34 53.0	-0.2
	1.5nm,0.4s,baz=183,slow=8.4,SNR=5.5						
WRA	Warramunga Arr	50.65	130	P	P	03 36 07.1	+1.0
	0.7nm,0.7s,baz=297,slow=9.5,SNR=3.6						
ASAR	Alice Springs	52.66	134	P	P	03 36 22.1	+0.9
	0.8nm,0.7s,baz=313,slow=6.1,SNR=6.4						
ARCES	ARCESS Array B	70.64	340	P	P	03 38 18.1	-3.7
	1.7nm,0.8s,baz=106,slow=5.7,SNR=3.6						

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*IDC **23** 03:54:21.6±1.2, 18.°38S×168.°39E, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx4.1/27, mbtmp4.2/10, ML3.6/1, MS3.4/8, Ms1 3.4/8, ms1mx3.2/18, Error ellipse: s-maj=38.2km s-min=22.6km az=127.0*

*ISCJB **23** 03:54:25.1±0.5, 18.°46S±0.°04×168.°24E±0.°09, h37^{km}, mb4.4/17, MS3.5/7, Error ellipse: s-maj=12.9km s-min=5.2km az=6.0*

*NEIC **23** 03:54:25.9±2.3, 18.°43S×168.°19E, h32^{km}±6^{km}, mb4.5/14, Error ellipse: s-maj=18.5km s-min=11.5km az=83.0*

ISC 23 03:54:26.9±0.6**, 18.°44S**±0.°06×**168.°3E**±0.°1**, h37^{km}, n49,** σ**1.^{s}29**/51**, mb4.3**/17**, MS3.4**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.03	184	ePn	Pn	03 55 12.5	+0.2
MARNC				eSn	Sn	03 55 46.6	-0.8
DZM	Mont Dzumac	4.00	205	ePn	Pn	03 55 26.3	+0.6
	30nm,0.2s						
DZM				eSn	Sn	03 56 12.6	+1.3
	65nm,0.3s						
DZM				eLR	LR	03 56 22.3	
	comp=Z,590nm,24.1s						
DZM	Mont Dzumac	4.00	205	Pn	Pn	03 55 26.5	+0.9
	3.9nm,0.3s,baz=135,slow=13,SNR=31						
DZM				Sn	Sn	03 56 09.7	-1.6
	13nm,0.3s,baz=322,slow=23,SNR=8.6						
DZM				LR	LR	03 56 19.9	
	comp=Z,132nm,20.3s,baz=24,slow=29						
DZM	Mont Dzumac	4.00	205	ePn	Pn	03 55 25.8	+0.2
DZM				eSn	Sn	03 56 09.7	-1.6
ONTNC	Ouen Toro	4.21	203	ePn	Pn	03 55 28.4	-0.1
ONTNC				eSn	Sn	03 56 17.1	+0.8
PINNC	Pines Island,	4.22	190	ePn	Pn	03 55 28.0	-0.6
PINNC				eSn	Sn	03 56 15.1	-1.6
HNR	Honiara	12.05	317	LR	LR	04 00 53.9	
	comp=Z,136nm,21.2s,baz=134,slow=32						
OUZ	Omahuta	17.37	165	eP	Pn	03 58 23.7	-2.7
	47nm,1.5s						
CTA	Charters Tower	20.84	262	P	P	03 59 07.4	+1.8
	9.8nm,1.0s,baz=60,slow=8.1,SNR=2.9						
URZ	Urewera	21.21	160	P	P	03 59 13.7	+4.4
	4.8nm,0.4s,baz=71,slow=16,SNR=8.0						
URZ				LR	LR	04 06 25.4	
	comp=Z,159nm,20.3s,baz=358,slow=34						
URZ	Urewera	21.21	160	eP	P	03 59 09.8	+0.6
	12nm,1.0s						
RPZ	Rata Peaks	25.31	175	LR	LR	04 08 26.9	
	comp=Z,129nm,20.4s,baz=332,slow=33						
KWAJ	Kwajalein Atol	27.07	359	eP	P	04 00 04.5	-1.7
	240nm,0.9s						
STKA	Stephens Creek	27.51	236	P	P	04 00 11.8	+1.8
	2.8nm,0.8s,baz=87,slow=12,SNR=5.0						
STKA	Stephens Creek	27.51	236	eP	P	04 00 08.0	-1.9
	1.9nm,0.9s						
WB2	Warramunga Arr	32.03	262	eP	P	04 00 47.7	-2.5
	11nm,1.3s						
WR1	Warramunga Arr	32.04	262	eP	P	04 00 50.1	-0.1
WRA	Warramunga Arr	32.04	262	P	P	04 00 50.1	-0.1
	1.2nm,0.7s,baz=81,slow=6.9,SNR=3.2						
AS31	Alice Springs	32.43	255	eP	P	04 00 53.9	+0.2
	1.6nm,0.8s						
ASAR	Alice Springs	32.43	255	P	P	04 00 53.9	+0.2
	1.7nm,0.6s,baz=83,slow=8.8,SNR=14						
ASAR				LR	LR	04 13 44.4	
	comp=Z,151nm,18.6s,baz=119,slow=36						
PPT2	Papeete2	40.04	96	eLR	LR	04 13 48.2	
	comp=Z,66nm,22.8s						
SMRI	Semarang	57.31	273	eP	P	04 04 09.4	-2.1
	43nm,0.9s						
QSPA	South Pole Qui	71.61	180	eP	P	04 05 45.1	+0.8
	7.1nm,0.9s						
PETK	Petropavlovsk-	71.83	353	P	P	04 05 46.0	+0.5
	3.1nm,0.9s,baz=104,slow=6.3,SNR=3.7						
PETK				LR	LR	04 33 40.9	
	comp=Z,29nm,20.1s,baz=87,slow=33						
PEA1	Petropavlovsk-	71.84	353	eP	P	04 05 46.0	+0.5
SLVN	Son La	74.38	299	eP	P	04 06 00.6	-0.8
	5.2nm,1.4s						

BJT	**Baijiatuau**	**75.73**	**321**	*e*P	**P**	**04 06 07.5**	**-1.1**
	3.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**77.33**	**294**	P	**P**	**04 06 20.1**	**+1.8**
	1.3nm,0.3s,baz=134,slow=5.0,SNR=7.9						
SONA0	**Songino Array**	**86.03**	**323**	*e*P	**P**	**04 07 04.5**	**+0.9**
SONM	**Songino Array**	**86.03**	**323**	P	**P**	**04 07 04.5**	**+0.9**
	1.8nm,0.8s,baz=142,slow=6.2,SNR=7.3						
RYN	**Ryan**	**88.90**	**49**	*e*P	**P**	**04 07 17.9**	**+0.2**
	6.0nm,1.0s						
ILAR	**Eielson Array**	**89.75**	**18**	P	**P**	**04 07 20.1**	**-0.8**
	0.4nm,0.7s,baz=243,slow=5.4,SNR=5.3						
ILAR				LR	LR	04 43 42.2	
	comp=Z,11nm,18.9s,baz=309,slow=33						
ILB	**Eielson Array**	**89.75**	**18**	*e*P	**P**	**04 07 20.1**	**-0.8**
	1.9nm,1.1s						
SNAA	**Sanae**	**89.91**	**183**	P	**P**	**04 07 22.6**	**+0.8**
	0.7nm,0.5s,baz=204,slow=10.0,SNR=7.2						
SNAA	**Sanae**	**89.91**	**183**	*e*P	**P**	**04 07 21.7**	**-0.2**
	3.0nm,1.2s						
TXAR	**Lajitas Array**	**97.20**	**62**	LR	LR	04 43 25.1	
	comp=Z,13nm,20.4s,baz=0.0,slow=30						
ARA0	**ARCESS Array S**	**124.06**	**345**	*e*PKPdf	**PKPdf**	**04 13 21.2**	**+0.5**
ARCES	**ARCESS Array B**	**124.06**	**345**	PKP	**PKPdf**	**04 13 21.2**	**+0.5**
	0.7nm,0.3s,baz=75,slow=2.3,SNR=15						
MOA	**Molln**	**143.81**	**330**	*e*PKPdf	**PKPdf**	**04 13 57.6**	**-0.5**
	2.8nm,1.0s						
OBKA	**Obir**	**144.61**	**328**	*i* PKPdf	**PKPab**	**04 13 57.0**	**-1.2**
	2.8nm,0.5s						
KBA	**Koelnbreinsper**	**144.80**	**330**	*i* PKPdf	**PKPab**	**04 13 58.3**	**-0.8**
	4.9nm,1.1s						
MYKA	**Terra Mystica**	**144.97**	**329**	*i* PKPdf	**PKPbc**	**04 14 00.0**	**+0.5**
	1.4nm,0.6s						
ABTA	**Abfaltersbach**	**145.43**	**330**	*i* PKiKP	**PKPdf**	**04 14 01.5**	**+0.4**
	7.6nm,0.8s						
WTTA	**Wattenberg**	**145.45**	**332**	*i* PKiKP	**PKPab**	**04 14 02.3**	**+0.9**
	3.2nm,0.6s						
MOTA	**Moosalm**	**145.63**	**332**	*i* PKiKP	**PKPab**	**04 14 02.7**	**+0.7**
	10nm,1.0s						
RETA	**Reutte**	**145.67**	**333**	*i* PKiKP	**PKPbc**	**04 14 02.3**	**+0.5**
	3.4nm,0.6s						
SQTA	**Sankt Quirin**	**145.68**	**332**	*i* PKiKP	**PKPbc**	**04 14 02.3**	**+0.5**
	9.8nm,0.9s						
FETA	**Feichten**	**146.04**	**332**	*i* PKiKP	**PKPbc**	**04 14 03.9**	**+0.9**
	8.5nm,1.0s						
DAVA	**Damuels**	**146.21**	**333**	*i* PKiKP	**PKPbc**	**04 14 04.6**	**+1.0**
	4.2nm,0.8s						

ISCJB ***23*** *04:00:09.7±1.5, 34°.9S±0°.4×54°.0E±0°.3, h10^{km}, mb3.9/7, MS3.4/5, Error ellipse: s-maj=59.2km s-min=24.1km az=29.9*

IDC ***23*** *04:00:10.0±1.7, 34°.86S×53°.99E, h0^{km}, mb4.0/7, mb1 4.2/7, mb1mx3.9/33, mbtmp4.0/7, MS3.3/5, Ms1 3.3/5, ms1mx3.0/28, Error ellipse: s-maj=66.3km s-min=25.9km az=32.0*

ISC 23 04:00:11.6±1.9**, 34°.9S**±0°.4×**54°.0E**±0°.3**, h10**^{km}**, n17, σ0^{s}.17**/7**, mb4.0**/7**, MS3.5**/5**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**31.98**	**36**	T	T	04 39 40.1	
	baz=208,slow=76,SNR=14						
H08S2	**Diego Garcia H**	**31.99**	**36**	T	T	04 39 34.2	
	baz=208,slow=76,SNR=7.8						
H08S3	**Diego Garcia H**	**32.00**	**36**	T	T	04 39 40.4	
	baz=208,slow=76,SNR=17						
H08N3	**Diego Garcia H**	**32.42**	**33**	T	T	04 40 14.4	
	baz=206,slow=76,SNR=8.0						
H08N1	**Diego Carcia H**	**32.44**	**33**	T	T	04 39 55.5	
	baz=206,slow=76,SNR=9.3						
H08N2	**Diego Garcia H**	**32.45**	**33**	T	T	04 40 22.1	
	baz=206,slow=76,SNR=8.4						
MAW	**Mawson**	**33.19**	**174**	LR	LR	04 16 35.0	
	comp=Z,71nm,21.2s,baz=56,slow=30						
VNDA	**Vanda**	**59.97**	**166**	LR	LR	04 34 27.8	
	comp=Z,34nm,19.2s,baz=250,slow=34						
CMAR	**Chiang Mai Arr**	**68.08**	**46**	P	**P**	**04 11 11.7**	**0.0**
	1.4nm,0.5s,baz=228,slow=7.1,SNR=5.9						
TORD	**Torodi Ar. Bea**	**68.82**	**304**	P	**P**	**04 11 16.5**	**+0.1**
	0.7nm,0.8s,baz=128,slow=7.1,SNR=4.5						
ASAR	**Alice Springs**	**68.95**	**105**	P	**P**	**04 11 17.2**	**-0.1**
	0.8nm,0.6s,baz=239,slow=5.7,SNR=7.6						
WRA	**Warramunga Arr**	**71.18**	**102**	P	**P**	**04 11 31.0**	**0.0**
	4.1nm,0.9s,baz=225,slow=8.1,SNR=6.7						
BRTR	**Keskin Array B**	**76.56**	**344**	P	**P**	**04 12 01.9**	**-0.2**
	0.5nm,0.7s,baz=180,slow=7.2,SNR=3.6						
BRTR				LR	LR	04 44 43.0	
	comp=Z,6.4nm,18.8s,baz=107,slow=35						
KBZ	**Khabaz**	**78.87**	**352**	LR	LR	04 45 02.0	
	comp=Z,25nm,20.9s,baz=174,slow=34						
MKAR	**Makanchi Array**	**85.18**	**19**	P	**P**	**04 12 48.0**	**+0.2**
	0.7nm,0.7s,baz=214,slow=5.9,SNR=6.0						
AKASG	**Malin Array Be**	**87.95**	**345**	P	**P**	**04 13 01.1**	**-0.1**
	0.4nm,0.5s,baz=170,slow=4.1,SNR=3.7						
ARU	**Arti**	**91.02**	**3**	LR	LR	04 51 43.7	
	comp=Z,19nm,18.6s,baz=138,slow=34						

ISK ***23*** *04:44:04.0, 38°.67N×39°.64E, h9^{km}, ML2.3/7*

DDA ***23*** *04:44:04.7, 38°.61N×39°.67E, h7^{km}±5^{km}, ML2.5*

ISCJB ***23*** *04:44:05.3±0.6, 38°.63N±0°.03×39°.66E±0°.05, h13^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=5.2km az=158.9*

ISC 23 04:44:04.7±1.4**, 38°.63N**±0°.03×**39°.67E**±0°.04**, h14**^{km}±13^{km}**, n13, σ0^{s}.98**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.38**	**228**	PG	**Pg**	**04 44 12.1**	**-0.3**
SVRC				SG	**Sb**	**04 44 18.1**	**-1.0**
TNCL	**Tunceli-Merkez**	**0.49**	**349**	*i* P	**Pb**	**04 44 15.8**	**+0.5**
TNCL				*i* S	**Sb**	**04 44 23.5**	**+1.1**
TNCL				IAML_P			
	comp=Z,249nm,0.2s						
ELZG	**Elazig**	**0.55**	**256**	*i* P	**Pg**	**04 44 15.4**	**-0.1**
ELZG				*i* S	**Sb**	**04 44 25.1**	**+1.1**
ELZG				IAML_P			
	comp=Z,2µm,0.1s						
HANI	**Diyarbakir_Han**	**0.61**	**110**	*i* P	**Pb**	**04 44 17.3**	**0.0**
HANI				*i* S	**Sb**	**04 44 25.8**	**0.0**
HANI				IAML_P			
	comp=Z,781nm,0.2s						
DYBB	**Diyarbakir**	**0.77**	**151**	PG	**Pb**	**04 44 20.1**	**+0.2**
DYBB				SG	**Sb**	**04 44 31.9**	**+1.6**
DIYA	**Diyarbakir**	**0.79**	**153**	*i* P	**Pn**	**04 44 21.6**	**+0.1**
DIYA				*i* S	**Sb**	**04 44 31.5**	**+0.7**
ERZN	**Erzincan**	**0.96**	**3**	PG	**Pg**	**04 44 22.1**	**-1.1**
KEMA	**Kemaliye**	**1.11**	**305**	*i* P	**Pg**	**04 44 25.4**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.30**	**111**	PN	**Pg**	**04 44 29.4**	**-0.2**
MAZI	**Mazidag**	**1.32**	**152**	PN	**Pb**	**04 44 29.7**	**+0.4**
URFA	**Urfa**	**1.36**	**210**	PN	**Pg**	**04 44 30.6**	**-0.3**
MARD	**Mardin**	**1.58**	**146**	*i* P	**Pn**	**04 44 33.1**	**+0.7**
MARD				*i* S	**Sn**	**04 44 50.4**	**-2.3**
GURO	**Guroymak-BITLI**	**1.86**	**92**	PN	**Pn**	**04 44 37.2**	**+1.0**

ARO 23 04:49:03.5, 14°N±48°×**4°2E**±6°9**, h16**^{km}±99^{km}**, Ml3.6, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAOD	**Malaho**	**1.66**	**156**	*e*P	Pn	04 49 29.5	-2.5
LDLD	**Lac de Lave**	**2.23**	**155**	*e*P	Pn	04 49 38.8	-1.0
TDD	**Tadjoura Ara**	**2.25**	**143**	*e*P	Pn	04 49 39.2	-0.8
KSDD	**Koussour**	**2.25**	**157**	*e*P	Pn	04 49 39.3	-1.0
OBO	**Obock**	**2.36**	**133**	*e*P	Pn	04 49 40.4	-1.3
SGH	**Sud-Ghoubbet**	**2.42**	**154**	*e*P	Pn	04 49 41.8	-0.7
ATD	**Arta Tunnel**	**2.44**	**148**	*e*P	Pn	04 49 42.3	-0.5
ATD				*e*S	Sn	04 50 13.0	+0.6
ATD	**Arta Tunnel**	**2.44**	**148**	*e*P	Pn	04 49 42.3	-0.5
ATA	**Atar**	**2.70**	**143**	*e*P	Pn	04 49 46.0	-0.3

ISCJB ***23*** *05:11:18.9±0.3, 19°.73S±0°.02×69°.22W±0°.05, h110^{km}±2^{km}, mb4.3/13, Error ellipse: s-maj=7.6km s-min=3.9km az=174.0*

SJA ***23*** *05:11:18.3±0.7, 19°.81S×69°.33W, h113^{km}±4^{km}, ML3.2, MW3.6*

GUC ***23*** *05:11:20.1±0.8, 19°.75S×69°.30W, h97^{km}±3^{km}, ML4.2*

NEIC ***23*** *05:11:20.0±0.0, 19°.75S×69°.30W, h97^{km}, mb4.5/19, ML4.2(GUC), After GUC.*

NEIC Felt [III] at Alto Hospicio, Cuya, Iquique and Mamina; [II] at Huara, La Tirana and Pisagua.

IDC ***23*** *05:11:21.3±1.7, 19°.69S×68°.99W, h114^{km}±15^{km}, mb3.9/11, mb1 4.0/15, mb1mx3.9/30, mbtmp4.3/15, MS3.2/1, Ms1 3.2/1, ms1mx2.6/17, Error ellipse: s-maj=17.8km s-min=15.4km az=74.0*

ISC 23 05:11:19.7±0.6**, 19°.75S**±0°.03×**69°.24W**±0°.06**, h102**^{km}±5^{km}**, n67, σ1^{s}.38**/89**, mb4.4**/13**, 1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.09**	**29**	*e*Pn	**Pn**	**05 11 34.6**	**0.0**
GO01				*e*Sn	**Sn**	**05 11 45.4**	**-0.1**
GO01	**Chusmiza**	**0.09**	**29**	*e*P	**Pn**	**05 11 34.5**	**0.0**
GO01				*i* S	**Sn**	**05 11 45.8**	**+0.2**
GO01				IAML		05 11 46.5	
	comp=E,27µm,0.2s						
PB11	**IPOC Station P**	**0.39**	**268**	*e*Pn	**Pn**	**05 11 34.8**	**-0.3**
PB11				*e*Sn	**Sn**	**05 11 46.1**	**-0.7**
PB11	**IPOC Station P**	**0.39**	**268**	*i* P	**Pn**	**05 11 34.9**	**-0.3**
PB11				*i* S	**Sn**	**05 11 47.7**	**+0.9**
PB11	**IPOC Station P**	**0.39**	**268**	*e*P	**Pn**	**05 11 34.9**	**-0.3**
PB11				*i* S	**Sn**	**05 11 46.2**	**-0.5**
PB11				IAML		05 11 47.6	
	comp=E,26µm,0.3s						
PB08	**IPOC Station P**	**0.40**	**168**	*i* P	**Pn**	**05 11 36.0**	**+0.5**
PB08	**IPOC Station P**	**0.40**	**168**	*e*P	**Pn**	**05 11 36.0**	**+0.5**
PB08				*i* S	**Sn**	**05 11 48.1**	**+0.7**
PB08				IAML		05 11 49.2	
	comp=N,10µm,0.5s						
MNMC	**Minye Minye**	**0.70**	**331**	*e*Pn	**Pn**	**05 11 38.0**	**+0.3**
MNMC				*e*Sn	**Sn**	**05 11 50.0**	**-1.0**
MNMC	**Minye Minye**	**0.70**	**331**	*e*P	**Pn**	**05 11 37.9**	**+0.3**
MNMC				*i* S	**Sn**	**05 11 51.2**	**+0.2**
MNMCX	**Minye Minye**	**0.70**	**331**	*i* P	**Pn**	**05 11 38.0**	**+0.4**
MNMCX				*i* S	**Sn**	**05 11 52.8**	**+1.7**
PSGC	**Pisagua**	**0.84**	**280**	*e*P	**Pn**	**05 11 38.4**	**-0.4**
PSGC				*i* S	**Sn**	**05 11 52.2**	**-0.9**
PSGCX	**Pisagua**	**0.84**	**280**	*i* P	**Pn**	**05 11 38.4**	**-0.4**
PSGCX				*i* S	**Sn**	**05 11 53.1**	**0.0**
PB01	**IPOC Station P**	**1.31**	**190**	*e*Pn	**Pn**	**05 11 44.5**	**+0.6**
PB01				*e*Sn	**Sn**	**05 12 03.1**	**+1.0**
PB01	**IPOC Station P**	**1.31**	**190**	*e*P	**Pn**	**05 11 44.5**	**+0.6**
PB01				*i* S	**Sn**	**05 12 03.3**	**+1.2**
PB01				IAML		05 12 04.6	
	comp=E,8µm,0.5s						
PB16	**IPOC Station P**	**1.43**	**350**	*i* P	**Pn**	**05 11 46.6**	**+0.8**
PB16				*i* S	**Sn**	**05 12 07.6**	**+2.2**
PB16	**IPOC Station P**	**1.43**	**350**	*e*P	**Pn**	**05 11 46.8**	**+1.0**
PB16				*i* S	**Sn**	**05 12 07.0**	**+1.5**
PB16				IAML		05 12 09.8	
	comp=E,2µm,0.2s						
PB12	**IPOC Station P**	**1.53**	**318**	*i* P	**Pn**	**05 11 46.0**	**-0.5**
PB12				*i* S	**Sn**	**05 12 07.8**	**+1.0**
PB02	**IPOC Station P**	**1.68**	**201**	*i* P	**Pn**	**05 11 47.8**	**-0.5**
PB02	**IPOC Station P**	**1.68**	**201**	*i* S	**Sn**	**05 12 10.9**	**+0.8**
PB07	**IPOC Station P**	**2.06**	**197**	*e*P	**Pn**	**05 11 54.0**	**+0.8**
PB04	**IPOC Station P**	**2.71**	**198**	*e*Pn	**Pn**	**05 12 03.7**	**+1.9**
PB04				*e*Sn	**Sn**	**05 12 27.1**	**-7.0**
LVC	**Limon Verde**	**2.86**	**174**	P	**Pn**	**05 12 06.1**	**+2.1**
	comp=E,17nm,0.3s,baz=333,slow=10,SNR=118						
LVC				S	**Sn**	**05 12 39.8**	**+1.7**
	comp=E,74nm,0.3s,baz=315,slow=11,SNR=10						
LVC	**Limon Verde**	**2.86**	**174**	*e*Pn	**Pn**	**05 12 06.3**	**+2.3**
LPAZ	**La Paz**	**3.60**	**17**	P	**Pn**	**05 12 16.4**	**+2.2**
	comp=E,4.4nm,0.3s,baz=208,slow=5.8,SNR=261						
LPAZ				S	**Sn**	**05 12 53.8**	**-2.3**
	comp=E,3.5nm,0.3s,baz=224,slow=16,SNR=3.9						
LPAZ	**La Paz**	**3.60**	**17**	*e*Pn	**Pn**	**05 12 16.5**	**+2.3**
LPAZ				*e*		05 12 16.7	
PB10	**IPOC Station P**	**3.94**	**198**	*e*Pn	**Pn**	**05 12 17.2**	**-0.9**
PB10				*e*Sn	**Sn**	**05 13 04.4**	**+1.0**
YJA	**Yavi**	**4.24**	**125**⇓	*i*P	**Pn**	**05 12 23.4**	**+0.9**
YJA				IAML		05 12 30.5	
	comp=Z,27nm,0.5s						
HJA	**Humahuaca**	**4.96**	**135**	*i* P	**Pn**	**05 12 33.1**	**+0.9**
GO02	**Mina Guanaco**	**5.40**	**183**	*e*Pn	**Pn**	**05 12 37.8**	**-0.3**
GO02				*e*Sn	**Sn**	**05 13 38.8**	**-0.3**
GO03	**Copiap**	**7.86**	**186**	*e*Pn	**Pn**	**05 13 13.4**	**+2.1**
SIV	**San Ignacio**	**8.63**	**66**	P	**Pn**	**05 13 19.7**	**-2.1**
	comp=Z,2.7nm,0.3s,baz=263,slow=11,SNR=108						
LCO	**Las Campanas**	**9.32**	**188**	*e*Pn	**Pn**	**05 13 32.6**	**+1.3**
CPUP	**Villa Florida**	**12.77**	**123**	P	**Pn**	**05 14 16.5**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=296,slow=12,SNR=10						
BDFB	**Brasilia**	**20.63**	**82**	P	**P**	**05 15 50.9**	**-0.3**
	comp=Z,8.1nm,0.5s,baz=266,slow=7.1,SNR=20						
BDFB				LR	LR	05 24 30.4	
	comp=Z,71nm,18.9s,baz=117,slow=39						
BDFB	**Brasilia**	**20.63**	**82**	*e*P	**P**	**05 15 50.7**	**-0.5**
	comp=Z,8.7nm,0.5s						
BDFB				*e*P	Pn	05 15 50.9	-3.5
PLCA	**Paso Flores**	**20.95**	**183**	P	**P**	**05 15 55.3**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=26,slow=7.4,SNR=6.2						
PLCA	**Paso Flores**	**20.95**	**183**	*e*P	**P**	**05 15 55.3**	**+0.9**
	comp=Z,5.5nm,1.0s						
PTGA	**Pitinga**	**20.97**	**27**	P	**P**	**05 15 51.9**	**-2.9**
	comp=Z,3.6nm,0.3s,baz=199,slow=12,SNR=20						
PTGA	**Pitinga**	**20.97**	**27**	*e*P	**P**	**05 15 52.4**	**-2.4**
	comp=Z,3.9nm,0.8s						
APG	**El Apazote**	**40.35**	**327**	P	**P**	**05 18 48.8**	**+1.0**
	comp=Z,7.2nm,0.8s,baz=290,slow=23,SNR=4.8						
WVT	**Waverly**	**58.29**	**342**	*e*P	**P**	**05 21 02.8**	**-1.0**
	comp=Z,7.6nm,0.8s						
TXAR	**Lajitas Array**	**59.02**	**325**	P	**P**	**05 21 09.3**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=149,slow=8.0,SNR=4.0						
LTX	**Lajitas**	**59.02**	**325**	*e*P	**P**	**05 21 09.3**	**+0.2**
BGNE	**Belgrade**	**66.49**	**337**	*e*P	**P**	**05 21 58.6**	**+0.3**
	comp=Z,24nm,0.6s						
DBIC	**Dimbokro**	**68.55**	**74**	P	**P**	**05 22 10.5**	**-1.3**
	comp=Z,3.9nm,0.7s,baz=216,slow=5.8,SNR=7.6						
DBIC	**Dimbokro**	**68.55**	**74**	*e*P	**P**	**05 22 10.5**	**-1.3**
	comp=Z,5.7nm,0.9s						
TPNV	**Topopah Spring**	**71.73**	**322**	*e*P	**P**	**05 22 31.6**	**+0.6**
	comp=Z,2.8nm,0.6s						
ISA	**Isabella, Lake**	**72.19**	**320**	*e*P	**P**	**05 22 35.4**	**+1.7**
	comp=Z,4.3nm,0.7s						
PDAR	**Pinedale Array**	**72.45**	**330**	P	**P**	**05 22 35.6**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=122,slow=9.0,SNR=6.0						
ULM	**Lac du Bonnet**	**73.56**	**343**	P	**P**	**05 22 40.7**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=145,slow=7.1,SNR=4.6						
NVAR	**Mina Array Bea**	**73.93**	**322**	P	**P**	**05 22 45.5**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=157,slow=6.7,SNR=6.7						
FLWY	**Flagg Ranch**	**73.99**	**330**	*e*P	**P**	**05 22 45.8**	**+1.6**
	comp=Z,4.1nm,0.7s						
TOA1	**Torodi Ar. Sit**	**77.07**	**71**	*e*P	**P**	**05 23 00.7**	**-1.6**
TORD	**Torodi Ar. Bea**	**77.07**	**71**	P	**P**	**05 23 00.7**	**-1.6**
	comp=Z,1.4nm,0.5s,baz=254,slow=5.4,SNR=25						
YKA	**Yellowknife Ar**	**89.44**	**341**	P	**P**	**05 24 05.0**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=130,slow=4.7,SNR=47						
ASAR	**Alice Springs**	**131.30**	**209**	PKP	**PKPdf**	**05 30 21.0**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=129,slow=1.7,SNR=9.7						
WR1	**Warramunga Arr**	**134.28**	**212**	*e*PKPdf	**PKPdf**	**05 30 26.9**	**+0.5**
WRA	**Warramunga Arr**	**134.28**	**212**	PKP	**PKPdf**	**05 30 26.9**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=166,slow=1.7,SNR=8.7						
MK32	**Makanchi Array**	**144.39**	**34**	*e*PKPdf	**PKPdf**	**05 30 43.7**	**-0.2**
MKAR	**Makanchi Array**	**144.39**	**34**	PKP	**PKPdf**	**05 30 43.7**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=311,slow=4.2,SNR=2.9						
USRK	**Ussuriysk Ar.**	**149.87**	**329**	PKPbc	**PKiKP**	**05 30 58.8**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=57,slow=1.8,SNR=5.3						
MJAR	**Matsushiro Arr**	**150.72**	**311**	PKPbc	**PKPbc**	**05 31 00.5**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=128,slow=1.3,SNR=5.8						
MAJO	**Matsushiro**	**150.72**	**311**	*e*PKPbc	**PKPbc**	**05 31 00.5**	**+0.2**
SONA0	**Songino Array**	**151.76**	**6**	*e*PKPbc	**PKiKP**	**05 31 03.2**	**+0.3**
SONM	**Songino Array**	**151.76**	**6**	PKPbc	**PKiKP**	**05 31 03.2**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=334,slow=1.8,SNR=8.9						
LZH	**Lanzhou**	**162.63**	**19**	*e*PKP	**PKPdf**	**05 31 10.0**	**-0.1**
LZH				pPKP	pPKPdf	05 31 35.6	-3.9
LZH				sPKP		05 31 45.9	
LZH				PKP	**PKPab**	**05 32 01.3**	**+2.5**
CD2	**Chengdu**	**167.22**	**28**	PKP	**PKPdf**	**05 31 14.6**	**+0.5**

MAN 23 05:19:21.6, 9°.23N×126°.35E, h21^{km}**, mb4.3, ML3.2, MS2.9, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.01**	**303**⇑	*e*P	Pn	05 19 47.8	+7.3
SCPH				*e*S	Sn	05 19 59.2	+5.1
BIPH	**Bislig**	**1.04**	**179**⇑	*e*P	Pb	05 19 40.1	-0.8
BIPH				*e*S	Sb	05 19 53.3	-0.8
CGP	**Cagayan de Oro**	**1.81**	**245**⇓	*e*P	Pn	05 19 50.6	-0.9
CGP				*e*S	Sn	05 20 12.4	-1.4
PLP	**Palo**	**2.35**	**325**⇑	*e*P	Pn	05 19 59.5	+0.6
PLP				*e*S	Sn	05 20 28.1	+0.9
TBP	**Tagbilaran**	**2.50**	**281**	*e*P	Pn	05 20 01.0	0.0
KCP	**Kidapawan**	**2.54**	**210**⇑	*e*P	Pn	05 20 03.3	+1.7
KCP				*e*S	Sn	05 20 30.6	-1.3
LLP	**Lapu-Lapu**	**2.58**	**295**	*e*P	Pn	05 20 04.3	+2.1
LLP				*e*S	Sn	05 20 33.7	+0.6
RCP	**Roxas**	**4.23**	**303**⇓	*e*P	Pn	05 20 26.4	+1.5

IDC ***23*** *05:25:49.4±1.2, 4°.46S×102°.43E, h0^{km}, mb4.2/11, mb1 4.3/11, mb1mx4.0/38, mbtmp4.3/11, Error ellipse: s-maj=50.6km s-min=16.1km az=54.0*

NEIC ***23*** *05:25:56.7±0.9, 4°.51S×102°.40E, h56^{km}±6^{km}, mb4.6/8, Error ellipse: s-maj=15.4km s-min=9.9km az=219.0*

ISCJB ***23*** *05:25:57.5±0.7, 4°.47S±0°.07×102°.59E±0°.06, h78^{km}±5^{km}, mb4.3/18, Error ellipse: s-maj=14.1km s-min=5.2km az=42.6*

DJA ***23*** *05:25:58.3±0.4, 5°S±3°×10°3E±°, h29^{km}±4^{km}, M4.3/10, MLv4.3/10*

ISC 23 05:25:58.2±0.9**, 4°.46S**±0°.07×**102°.65E**±0°.07**, h67**^{km}±7^{km}**, n47, σ1^{s}.45**/48**, mb4.3**/18**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.32**	**73**	*e*Pn	**Pn**	**05 26 09.1**	**0.0**
MNAI				*e*Sn	**Sn**	**05 26 16.0**	**-1.2**
MNAI	**Manna**	**0.32**	**73**	P	**Pn**	**05 26 08.9**	**-0.2**
MNAI				S	**Sn**	**05 26 16.0**	**-1.2**
LHSI	**Lahat**	**1.07**	**54**	P	**Pn**	**05 26 18.7**	**+1.3**
LHSI				S	**Sn**	**05 26 34.8**	**+3.1**
LWLI	**Liwa**	**1.51**	**112**	P	**Pn**	**05 26 24.1**	**+0.8**
LWLI				S	**Sn**	**05 26 43.2**	**+1.0**
MDSI	**Maura Dua**	**1.52**	**91**	P	**Pn**	**05 26 24.4**	**+1.1**
MDSI				S	**Sn**	**05 26 44.8**	**+2.5**
KASI	**Kota Agung**	**2.12**	**120**	P	**Pn**	**05 26 32.2**	**+0.8**
KASI				S	**Sn**	**05 26 56.6**	**-0.2**
KLI	**Kotabumi**	**2.24**	**101**	P	Pn	05 26 49.0	+16
PMBI	**Palembang**	**2.60**	**54**	P	**Pn**	**05 26 33.8**	**-4.2**
KRJI	**Kerinci**	**2.63**	**333**	P	**Pn**	**05 26 39.8**	**+1.4**
KRJI				S	**Sn**	**05 27 10.8**	**+1.5**
PPSI	**Pulau Pagai**	**3.13**	**302**	P	**Pn**	**05 26 45.5**	**+0.4**
PDSI	**Padang**	**4.14**	**328**	P	**Pn**	**05 27 00.0**	**+1.0**
SISI	**Saibi**	**4.72**	**311**	P	**Pn**	**05 27 06.7**	**-0.2**
CISI	**Cisompet, Garu**	**5.99**	**121**	*e*Pn	**Pn**	**05 27 25.6**	**+1.3**
CISI				*e*Sn	**Sn**	**05 28 27.3**	**-4.3**
MNSI	**Mandailing Nat**	**6.05**	**329**	P	Pn	05 27 37.7	+13
MYKOM	**Kota Tinggi**	**6.32**	**11**	*e*Pn	**Pn**	**05 27 28.5**	**-0.3**
GSI	**Gunungsitoli**	**7.64**	**318**	*e*Pn	**Pn**	**05 27 43.2**	**-3.7**
CMAR	**Chiang Mai Arr**	**23.06**	**351**	P	**P**	**05 30 57.3**	**-0.8**
	1.9nm,0.3s,baz=183,slow=8.7,SNR=11						
H01W3	**Cape Leeuwin H**	**32.09**	**162**	T	T	06 06 03.0	
	baz=339,slow=76,SNR=11						
H01W2	**Cape Leeuwin H**	**32.11**	**162**	T	T	06 06 03.0	
	baz=339,slow=76,SNR=14						
H01W1	**Cape Leeuwin H**	**32.11**	**162**	T	T	06 06 03.0	
	baz=339,slow=76,SNR=12						
WRA	**Warramunga Arr**	**34.48**	**119**	P	**P**	**05 32 40.9**	**+0.8**
	1.2nm,0.3s,baz=293,slow=11,SNR=12						
WR1	**Warramunga Arr**	**34.48**	**119**	*e*P	**P**	**05 32 40.9**	**+0.8**
WB2	**Warramunga Arr**	**34.49**	**119**	*e*P	**P**	**05 32 41.0**	**+0.9**
	42nm,1.7s						
AS31	**Alice Springs**	**35.68**	**125**	*e*P	**P**	**05 32 50.9**	**+0.6**
	1.4nm,0.3s						
ASAR	**Alice Springs**	**35.68**	**125**	P	**P**	**05 32 51.3**	**+1.0**
	0.7nm,0.3s,baz=299,slow=8.1,SNR=10						
BBOO	**Buckleboo**	**42.05**	**136**	*e*P	**P**	**05 33 44.5**	**+1.1**
	86nm,1.9s						
STKA	**Stephens Creek**	**45.55**	**131**	P	**P**	**05 34 12.8**	**+1.2**
	2.3nm,0.5s,baz=308,slow=7.4,SNR=11						
STKA	**Stephens Creek**	**45.55**	**131**	*e*P	**P**	**05 34 12.8**	**+1.2**
	3.2nm,1.5s						
SONA0	**Songino Array**	**52.17**	**3**	*e*P	**P**	**05 35 02.6**	**+0.5**
SONM	**Songino Array**	**52.17**	**3**	P	**P**	**05 35 02.6**	**+0.5**
	3.2nm,0.7s,baz=184,slow=9.1,SNR=11						
MK31	**Makanchi Array**	**54.12**	**343**	*e*P	**P**	**05 35 16.0**	**-0.3**
	1.6nm,0.5s						
MK32	**Makanchi Array**	**54.12**	**343**	*e*P	**P**	**05 35 15.8**	**-0.5**
MKAR	**Makanchi Array**	**54.12**	**343**	P	**P**	**05 35 15.8**	**-0.5**
	2.0nm,0.4s,baz=154,slow=9.0,SNR=31						
USRK	**Ussuriysk Ar.**	**55.14**	**25**	P	**P**	**05 35 23.3**	**-0.4**
	2.7nm,0.6s,baz=210,slow=3.4,SNR=6.6						
KURK	**Kurchatov**	**58.71**	**342**	*e*P	**P**	**05 35 48.6**	**-0.2**
	3.3nm,0.8s						
ZAA0	**Zalesovo Array**	**60.08**	**348**	*e*P	**P**	**05 35 57.7**	**-0.5**
	5.8nm,0.5s						
ZALV	**Zalesovo Beam**	**60.08**	**348**	P	**P**	**05 35 57.6**	**-0.6**
	5.6nm,0.4s,baz=167,slow=5.8,SNR=18						
ZAA1	**Zalesovo Array**	**60.08**	**348**	*e*P	**P**	**05 35 57.6**	**-0.6**
ABKAR	**Akbulak array**	**65.06**	**331**	*e*P	**P**	**05 36 31.0**	**-0.5**
	3.0nm,0.8s						
BR101	**Keskin Array S**	**76.92**	**312**	*e*P	**P**	**05 37 42.9**	**-0.9**
BRTR	**Keskin Array B**	**76.92**	**312**	P	**P**	**05 37 42.9**	**-0.9**
	0.6nm,0.6s,baz=167,slow=6.1,SNR=3.6						
FIA0	**FINESS Array S**	**87.50**	**332**	*e*P	**P**	**05 38 38.2**	**-0.1**
FINES	**FINESS Array B**	**87.50**	**332**	P	**P**	**05 38 38.2**	**-0.1**
	0.8nm,0.4s,baz=99,slow=6.0,SNR=6.2						
ARA0	**ARCESS Array S**	**89.67**	**340**	*e*P	**P**	**05 38 48.7**	**+0.2**
ARCES	**ARCESS Array B**	**89.67**	**340**	P	**P**	**05 38 48.7**	**+0.3**
	0.5nm,0.5s,baz=102,slow=5.6,SNR=6.4						
LTX	**Lajitas**	**144.88**	**42**	*e*PKPbc	PKPbc	05 45 28.2	+0.5
TXAR	**Lajitas Array**	**144.88**	**42**	PKPbc	PKPbc	05 45 28.2	+0.5
	0.8nm,0.4s,baz=242,slow=0.5,SNR=25						

ISCJB ***23*** *05:37:44.3±0.8, 16°.0S±0°.2×177°.8W±0°.2, h432^{km}, mb3.5/7, Error ellipse: s-maj=35.5km s-min=18.1km az=136.5*

IDC ***23*** *05:37:45.0±12.0, 15°.97S×177°.77W, h429^{km}±145^{km}, mb3.2/7, mb1 3.5/7, mb1mx3.2/25, mbtmp3.9/7, Error ellipse: s-maj=55.0km s-min=24.9km az=180.0*

ISC 23 05:37:45.3±0.9**, 15°.9S**±0°.2×**177°.8W**±0°.2**, h432**^{km}**, n8, σ0^{s}.98**/8**, mb3.5**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**22.67**	**190**	P	**P**	**05 42 11.3**	**-0.6**
	5.6nm,0.8s,baz=34,slow=7.3,SNR=3.6						
WRA	**Warramunga Arr**	**45.56**	**258**	P	**P**	**05 45 25.9**	**+0.8**
	0.2nm,0.3s,baz=90,slow=8.5,SNR=3.3						
ASAR	**Alice Springs**	**45.88**	**252**	P	**P**	**05 45 27.9**	**+0.4**
	1.5nm,0.6s,baz=85,slow=8.2,SNR=13						
NVAR	**Mina Array Bea**	**77.63**	**44**	P	**P**	**05 48 56.1**	**+0.1**
	0.6nm,0.6s,baz=228,slow=9.4,SNR=5.6						
ILAR	**Eielson Array**	**83.86**	**13**	P	**P**	**05 49 26.6**	**-1.0**
	0.8nm,0.5s,baz=221,slow=6.4,SNR=12						
TXAR	**Lajitas Array**	**84.48**	**58**	P	**P**	**05 49 33.1**	**+1.3**
	0.9nm,0.9s,baz=224,slow=6.5,SNR=7.1						
PDAR	**Pinedale Array**	**85.55**	**43**	P	**P**	**05 49 36.7**	**-0.2**
	0.7nm,0.7s,baz=199,slow=2.3,SNR=8.1						
BRTR	**Keskin Array B**	**143.76**	**317**	PKP	**PKPdf**	**05 56 29.6**	**-0.9**
	0.8nm,0.6s,baz=64,slow=1.5,SNR=5.6						

MEX 23 05:40:43.1±0.5**, 15°.39N×93°.56W, h72**^{km}±7^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.45**	**46**	*e*P	Pn	05 40 54.3	-1.4
PCIG				*e*S	Sn	05 41 03.2	-1.6
THIG		**1.34**	**111**	*i* P	Pn	05 41 04.5	-1.6
THIG				*i* S	Sn	05 41 21.3	-2.0
TGIG		**1.44**	**17**	*i* P	Pn	05 41 06.4	-1.1
TGIG				*e*S	Sn	05 41 23.4	-2.4
CCIG	**Comitan**	**1.63**	**57**	*i* P	Pn	05 41 08.1	-1.9
CCIG				*i* S	Sn	05 41 29.3	-1.1
CMIG	**Matias Romero**	**2.12**	**323**	*i* P	Pn	05 41 15.0	-1.4
CMIG				*i* S	Sn	05 41 39.9	-1.9

MAN 23 05:44:28.0, 10°.22N×125°.63E, h95^{km}**, mb4.3, ML3.1, MS2.9, 2C, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.46**	**197**⇑	*e*P	Pn	05 44 47.4	+4.4
SCPH				*e*S	Sn	05 44 55.6	+1.5
PLP	**Palo**	**1.13**	**326**⇑	*e*P	Pn	05 44 49.4	-0.2
PLP				*i* S	Sn	05 45 06.8	+1.1

UCR 23 05:53:24.4±1.6**, 11°.05N×86°.45W, h20**^{km}±20^{km}**, MW3.5, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	**Buena Vista**	**1.06**	**104**	*e*P	Pb	05 53 42.3	-1.8
BUEV				*e*S	Sb	05 53 56.8	-0.7

GB1A	**Borinquen Arri**	**1.06**	**102**	*e*P	Pb	05 53 43.6	-0.5
GB1A				*e*S	Sn	05 53 58.4	0.0
ACON	**Acoyapa**	**1.55**	**54**	*e*P	Pn	05 53 50.9	0.0
JTS	**Las Juntas de**	**1.66**	**117**	*e*P	Pn	05 53 52.3	-0.1
CEDE	**Laguna Cedeo**	**1.81**	**108**	*e*P	Pn	05 53 55.3	+0.8
EDLM	**Las Mercedes**	**3.32**	**122**	*e*P	Pn	05 54 15.7	+0.3

KRNET ***23*** *06:00:18.6±0.1, 39°.56N×73°.93E, mb3.5*
NNC ***23*** *06:00:18.1±1.0, 39°.60N×74°.06E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=7.4km s-min=3.9km az=172.0*
ISC 23 06:00:19.9±1.3**, 39°.62N**±0°.06×**73°.95E**±0°.04**, h10^{km}, n38, σ1^{s}.97**/52**, 16C-16D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk** baz=68	**1.67**	**266**	⇓*i*P	**Pb**	**06 00 49.7**	**-1.1**
DRK	baz=68			⇓*i*S	**Sg**	**06 01 12.3**	**-1.2**
ARSB	**Arslanbob** baz=38	**1.85**	**337**	⇑*i*P	**Pb**	**06 00 53.7**	**-0.3**
ARSB	baz=38			⇑*i*S	**Sg**	**06 01 20.3**	**+0.8**
ARLS	**Aral** baz=7.0	**2.26**	**7**	⇑*i*P	**Pb**	**06 01 00.3**	**-0.5**
ARLS	baz=7.0			⇑*i*S	**Sg**	**06 01 30.5**	**-1.9**
NRN	**Naryn** baz=39	**2.39**	**40**	⇓*i*P	**Pb**	**06 01 01.4**	**-1.8**
NRN	baz=39			⇓*i*S	**Sb**	**06 01 34.7**	**+1.7**
UCH	**Uchtor** baz=9.0	**2.64**	**9**	⇑*e*P	**Pb**	**06 01 04.9**	**-2.7**
UCH	baz=9.0			⇑*i*S	**Sb**	**06 01 40.8**	**+0.6**
UCH	**Uchtor** SNR=102	**2.64**	**9**	P	**Pb**	**06 01 04.8**	**-2.7**
ARK	**Arkit** baz=27	**2.65**	**326**	⇑*i*P	**Pn**	**06 01 04.3**	**+1.6**
ARK	baz=27			⇑*i*S	**Sb**	**06 01 38.6**	**-1.5**
KZA	**Kyzart** SNR=34	**2.65**	**21**	P	**Pn**	**06 01 04.7**	**+1.7**
EKS2	**Erkin-Say** SNR=13	**3.04**	**358**	P	**Pb**	**06 01 12.7**	**-1.4**
AAK	**Ala-Archa** 13nm,0.6s	**3.04**	**8**	⇓Pn	**Pn**	**06 01 08.4**	**+0.2**
AAK	32nm,0.7s			⇓Lg	Lg	06 01 55.0	
AAK	**Ala-Archa** baz=8.0	**3.04**	**8**	⇑*i*P	**Pn**	**06 01 10.6**	**+2.4**
AAK	baz=8.0			⇑*i*S	**Sb**	**06 01 50.3**	**-1.2**
AAK	**Ala-Archa** SNR=7.9	**3.04**	**8**	P	**Pb**	**06 01 11.5**	**-2.7**
KBK	**Karagaybulak** baz=14	**3.13**	**14**	⇓*i*P	**Pn**	**06 01 11.8**	**+2.4**
KBK	baz=14			⇓*i*S	**Sb**	**06 01 52.9**	**-1.0**
KBK	**Karagaybulak** SNR=11	**3.13**	**14**	P	**Pb**	**06 01 12.8**	**-2.8**
ULHL	**Ulahol** baz=32	**3.15**	**33**	⇓*i*P	**Pn**	**06 01 12.1**	**+2.4**
ULHL	baz=32			⇓*i*S	**Sb**	**06 01 53.6**	**-0.9**
MRKS	**Merke** 17nm,0.4s	**3.17**	**350**	Pg	**Pb**	**06 01 15.3**	**-1.0**
MRKS	35nm,0.7s			Lg	Lg	06 01 59.5	
BOOM	**Boomskoye usch** baz=27	**3.24**	**27**	⇑*i*P	**Pn**	**06 01 13.0**	**+2.1**
BOOM	baz=27			⇑*i*S	**Sb**	**06 01 54.3**	**-2.8**
KDJ	**Kajisay** baz=43	**3.51**	**43**	⇓*i*P	**Pn**	**06 01 17.2**	**+2.6**
KDJ	baz=43			⇓*i*S	**Sb**	**06 02 00.5**	**-4.3**
TKM2	**Tokmak 2**	**3.52**	**20**	⇑Pn	**Pn**	**06 01 14.8**	**-0.1**
TKM2	13nm,0.7s			⇓Lg	Lg	06 02 09.9	
TKM2	**Tokmak 2** baz=20	**3.52**	**20**	⇑*i*P	**Pn**	**06 01 17.4**	**+2.5**
TKM2	baz=20			⇑*i*S	**Sb**	**06 02 02.3**	**-3.1**
USP	**Ospenovka** SNR=7.0	**3.67**	**6**	P	**Pb**	**06 01 25.6**	**+0.8**
KST	**Kastek** 11nm,0.4s	**3.74**	**23**	Pg	**Pb**	**06 01 25.6**	**-0.5**
KST	29nm,0.4s			Lg	Lg	06 02 16.8	
SGDS	**Sogindy** 18nm,0.6s	**3.86**	**7**	Pg	**Pb**	**06 01 28.6**	**+0.5**
SGDS	12nm,0.6s			Lg	Lg	06 02 22.3	
IUG	**Iuzhnay** 9.4nm,0.6s	**3.90**	**312**	Pg	**Pb**	**06 01 29.7**	**+1.0**
IUG	60nm,0.5s			Lg	Lg	06 02 24.2	
IZV	**Izvestkoviy** 8.2nm,0.5s	**3.96**	**30**	Pg	**Pb**	**06 01 29.2**	**-0.6**
IZV	23nm,0.3s			Lg	Lg	06 02 22.9	
MTBS	**Maitube** 8.4nm,0.2s	**3.97**	**27**	Pg	**Pb**	**06 01 29.1**	**-0.9**
MTBS	14nm,0.3s			Lg	Lg	06 02 22.7	
KOTS	**Kotyrbulak** 7.8nm,0.5s	**4.32**	**32**	Pg	**Pb**	**06 01 34.7**	**-1.4**
KOTS	66nm,0.3s			Lg	Lg	06 02 32.6	
KK31	**Karatay Array** 0.8nm,0.3s,baz=136,slow=14,SNR=36	**4.33**	**325**	Pn	**Pn**	**06 01 27.0**	**+1.2**
KK31	2.6nm,0.3s,baz=140,slow=15,SNR=13			Pg	**Pb**	**06 01 37.8**	**+1.7**
KK31	6.5nm,0.6s,baz=146,slow=26,SNR=4.0			⇓Sn	**Sn**	**06 02 19.7**	**+3.3**
KK31	6.5nm,0.5s,baz=169,slow=28,SNR=4.1			⇓Lg	Lg	06 02 37.7	
KTBS	**Karatobe** 5.8nm,0.6s	**4.57**	**26**	Pg	**Pb**	**06 01 41.1**	**+0.9**
KTBS	15nm,0.9s			Lg	Lg	06 02 44.1	
BRLS	**Borolday** 1.6nm,0.6s	**4.60**	**319**	Pg	**Pb**	**06 01 41.4**	**+0.7**
BRLS	15nm,0.7s			Lg	Lg	06 02 44.2	
KUU	**Kurty** 4.3nm,0.5s	**4.63**	**22**	Pg	**Pb**	**06 01 41.4**	**+0.3**
KUU	14nm,0.6s			Lg	Lg	06 02 44.5	
CHKK	**Chushkaly** 4.0nm,0.6s	**4.80**	**27**	Pg	**Pb**	**06 01 45.1**	**+0.9**
CHKK	10nm,0.6s			Lg	Lg	06 02 50.7	
SATY	**Saty** 12nm,1.0s	**4.80**	**43**	Pg	**Pb**	**06 01 43.8**	**-0.4**
SATY	14nm,0.5s			Lg	Lg	06 02 48.5	
BTLS	**Baital** 2.2nm,0.4s	**5.42**	**1**	Pg	**Pb**	**06 01 57.3**	**+2.7**
BTLS	4.4nm,0.6s			Lg	Lg	06 03 11.4	
ARXS	**Arharly** 3.3nm,0.6s	**5.42**	**31**	Pg	**Pb**	**06 01 57.6**	**+2.8**
ARXS	10nm,0.8s			Lg	Lg	06 03 11.9	
PDGK	**Podgornoye** 2.1nm,1.0s	**5.57**	**47**	Pg	**Pb**	**06 01 58.3**	**+1.0**
PDGK	4.6nm,0.9s			Lg	Lg	06 03 13.1	
DJR	**Jarkent** 1.9nm,0.3s	**6.41**	**41**	Pg	**Pb**	**06 02 15.6**	**+4.0**
DJR	3.7nm,0.6s			Lg	Lg	06 03 42.6	
AB31	**Akbulak array** 0.6nm,0.6s,baz=345,slow=14,SNR=6.5	**13.87**	**319**	⇑Pg	**P**	**06 03 42.1**	**-2.6**
AB31	1.0nm,0.6s,baz=340,slow=28,SNR=3.5			⇓Lg	Lg	06 04 20.0	

DDA ***23*** *06:07:18.8, 38°.68N×43°.21E, h7^{km}±4^{km}, ML2.9*
ISK ***23*** *06:07:18.0, 38°.67N×43°.22E, h13^{km}, ML2.2/4*
ISCJB ***23*** *06:07:19.0±0.8, 38°.63N±0°.04×43°.28E±0°.05, h25^{km}±9^{km}, Error ellipse: s-maj=7.5km s-min=4.6km az=135.8*
ISC 23 06:07:19.0±0.9**, 38°.67N**±0°.03×**43°.23E**±0°.03**, h15**^{km}±9^{km}**, n11, σ0^{s}.54**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.14**	**123**	PG	**Pg**	**06 07 23.2**	**+0.2**
VANB				SG	**Sb**	**06 07 27.0**	**+0.5**
TVAN	**Van**	**0.20**	**137**	*i* P	**Pg**	**06 07 23.8**	**0.0**
TVAN				*i* S	**Sg**	**06 07 27.0**	**0.0**
GEVA	**Gevas**	**0.39**	**201**	*i* P	**Pg**	**06 07 26.8**	**-0.1**
GEVA				*i* S	**Sb**	**06 07 34.3**	**+0.8**
GEVA	comp=Z,4μm,0.1s			IAML_P			
AKDM	**Akdamar-Van**	**0.40**	**210**	PG	**Pg**	**06 07 26.3**	**-0.8**
AKDM				SG	**Sg**	**06 07 32.3**	**-0.4**
VMUR	**Van-Muradiye**	**0.41**	**40**	*i* P	**Pg**	**06 07 27.1**	**-0.3**
VMUR				*i* S	**Sb**	**06 07 34.9**	**+0.6**
VMUR	comp=Z,3μm,0.1s			IAML_P			
ADCV	**BITLIS_Adilcev**	**0.42**	**289**	*i* P	**Pb**	**06 07 28.2**	**0.0**
ADCV				*i* S	**Sb**	**06 07 35.7**	**+1.2**
ADCV	comp=Z,1μm,0.1s			IAML_P			
CLDR	**Caldiran**	**0.71**	**48**	PG	**Pg**	**06 07 32.5**	**-0.4**
CLDR				SG	**Sb**	**06 07 42.9**	**0.0**
CLDR	**Caldiran**	**0.71**	**48**	*i* P	**Pg**	**06 07 32.5**	**-0.4**
CLDR				*i* S	**Sb**	**06 07 43.4**	**+0.5**
CLDR	comp=Z,2μm,0.1s			IAML_P			
TUTA	**Tutak**	**0.80**	**336**	*i* P	**Pg**	**06 07 34.5**	**-0.1**
TUTA				*i* S	**Sb**	**06 07 45.3**	**-0.1**
GURO	**Guroymak-BITLI**	**0.95**	**263**	PG	**Pb**	**06 07 36.4**	**-0.8**
GURO				SG	**Sg**	**06 07 49.9**	**0.0**
MUSM	**Mu-Merkez**	**1.35**	**273**	*i* P	**Pn**	**06 07 43.5**	**+0.1**
MUSM				*i* S	**Sg**	**06 08 03.2**	**+0.6**
MUSM	comp=Z,370nm,0.1s			IAML_P			

JMA 23 06:26:20.2±0.2**, 25°.31N**×**142°.90E, h4**^{km}**, M4.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.47**	**334**	P	Pn	06 26 47.4	-0.1
JHH2				S	Sb	06 27 07.1	-0.1
CBIJ	**Chichi jima**	**1.89**	**340**	P	Pn	06 26 53.9	+0.6
CBIJ				S	Sn	06 27 18.4	+0.8

WEL 23 06:29:34.8, 41°.7S±0°.9×**174°.2E**±0°.7**, h11**^{km}±1^{km}**, M3.4**/24**, ML3.6**/18**, MLv3.4**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=168.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.09**	**192**	P	Pg	06 29 37.9	+0.5
CMWZ				S	Sg	06 29 40.2	+1.0
BSWZ	**Blackbirch Sta**	**0.28**	**260**	P	Pg	06 29 41.1	+0.7
BSWZ				S	Sb	06 29 45.5	-0.9
TUWZ	**Tuamarina**	**0.32**	**317**	P	Pb	06 29 42.0	-0.6
TUWZ				S	Sb	06 29 47.0	-0.7
TCW	**Tory Channel**	**0.46**	**4**	P	Pb	06 29 44.3	-0.5
BHW	**Baring Head**	**0.54**	**62**	P	Pb	06 29 46.6	+0.3
PLWZ	**Palliser**	**0.77**	**83**	P	Pn	06 29 51.3	-0.3
NNZ	**Nelson**	**0.79**	**305**	P	Pg	06 29 50.2	+0.2
MSWZ	**Moikau Station**	**0.80**	**72**	P	Pn	06 29 51.5	-0.5
CAW	**Cannon Point**	**0.84**	**48**	P	Pb	06 29 51.5	+0.2
DUWZ	**D'Urville Isla**	**0.90**	**344**	P	Pg	06 29 52.2	+0.1
KHZ	**Kahutara**	**0.91**	**215**	P	Pn	06 29 53.8	+0.3
PAWZ	**Paruwai Farm**	**0.94**	**73**	P	Pn	06 29 54.2	+0.3
THZ	**Tophouse**	**1.00**	**264**	P	Pb	06 29 54.3	+0.1
MTW	**Mount Morrison**	**1.08**	**62**	P	Pn	06 29 56.1	+0.3
OGWZ	**Otaki Gorge**	**1.10**	**40**	P	Pg	06 29 55.9	0.0
TRWZ	**Traveller**	**1.12**	**77**	P	Pn	06 29 56.5	0.0
HOWZ	**Holdsworth Sta**	**1.23**	**52**	P	Pg	06 29 58.6	+0.2
TMWZ	**Te Maipa**	**1.36**	**66**	P	Pb	06 30 00.1	-0.2
MRZ	**Mangatainoka R**	**1.43**	**46**	P	Pb	06 30 01.3	-0.1
TIWZ	**Tintock**	**1.53**	**55**	P	Pn	06 30 02.5	+0.5
QRZ	**Quartz Range**	**1.54**	**303**	P	Pb	06 30 03.4	+0.1
GVZ	**Greta Valley S**	**1.58**	**214**	P	Pn	06 30 02.9	+0.2
OHWZ	**Ohakea**	**1.67**	**30**	P	Pg	06 30 06.5	-0.3
PRWZ	**Pori Road**	**1.72**	**50**	P	Pn	06 30 05.2	+0.6
POWZ	**Post Office Ro**	**1.72**	**43**	P	Pn	06 30 05.3	+0.7
BFZ	**Birch Farm**	**1.81**	**58**	P	Pn	06 30 06.1	+0.2
DSZ	**Denniston Nort**	**1.82**	**267**	P	Pb	06 30 07.8	-0.4
LTZ	**Lake Taylor**	**1.84**	**232**	P	Pn	06 30 06.9	+0.6
AMCZ	**Amberley**	**1.91**	**217**	P	Pn	06 30 07.0	-0.3
WAZ	**Wanganui**	**1.99**	**17**	P	Pb	06 30 12.0	+1.0
TSZ	**Takapari Road**	**2.07**	**40**	P	Pn	06 30 09.9	+0.4
OKCZ	**Okains Bay**	**2.23**	**202**	P	Pn	06 30 10.8	-0.9
OXZ	**Oxford**	**2.32**	**224**	P	Pn	06 30 12.0	-0.9
INZ	**Inchbonnie**	**2.33**	**242**	P	Pn	06 30 14.6	+1.6
MQZ	**McQueen's Vall**	**2.35**	**209**	P	Pn	06 30 11.8	-1.4
MOVZ	**Moawhango**	**2.54**	**28**	P	Pb	06 30 20.2	-0.1
VRZ	**Vera Road**	**2.57**	**9**	P	Pb	06 30 19.8	-1.1
BHHZ	**Black Hill Sta**	**2.58**	**33**	P	Pb	06 30 20.3	-0.8
KRHZ	**Kereru**	**2.59**	**39**	P	Pb	06 30 19.0	-2.2
WHVZ	**Whangaehu Hut**	**2.59**	**24**	P	Pb	06 30 22.1	+0.7
FWVZ	**Far West T-bar**	**2.61**	**23**	P	Pb	06 30 22.4	+0.7
TUVZ	**Tukino**	**2.63**	**25**	P	Pb	06 30 22.6	+0.6
NGZ	**Ngauruhoe**	**2.70**	**23**	P	Pb	06 30 24.0	+0.9
KAHZ	**Kahuranaki**	**2.74**	**48**	P	Pb	06 30 25.2	+1.3
WTVZ	**West Tongariro**	**2.75**	**23**	P	Pb	06 30 24.9	+0.9
TWVZ	**Taurewa**	**2.75**	**20**	P	Pb	06 30 25.4	+1.4
KRVZ	**Karewarewa**	**2.78**	**23**	P	Pb	06 30 25.7	+1.1
KWHZ	**Kaweka Forest**	**2.79**	**37**	P	Pb	06 30 26.3	+1.6
KATZ	**Kakaramea**	**2.91**	**23**	P	Pb	06 30 28.2	+1.5
WVZ	**Waitaha Valley**	**2.95**	**240**	P	Pb	06 30 26.8	-0.5
RATZ	**Rangitukua**	**3.03**	**23**	P	Pg	06 30 31.1	-1.8
BKZ	**Black Stump Fm**	**3.03**	**35**	P	Pb	06 30 30.0	+1.2
RPZ	**Rata Peaks**	**3.11**	**228**	P	Pn	06 30 23.7	-0.1
WATZ	**Wairara**	**3.17**	**22**	P	Pb	06 30 33.1	+2.0
HIZ	**Hauiti**	**3.19**	**9**	P	Pb	06 30 28.6	-2.7
TLZ	**Tolley Road**	**3.48**	**17**	P	Pb	06 30 35.0	-1.4
ODZ	**Otahua Downs**	**4.27**	**217**	P	Pn	06 30 39.1	-0.6
JCZ	**Jackson Bay**	**4.67**	**237**	P	Pn	06 30 49.7	+4.4
WIZ	**White Island**	**4.72**	**30**	P	Pb	06 30 53.2	-4.3

IDC 23 06:36:44.5±3.9**, 30°.51N**×**140°.97E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.4**/30**, mbtmp3.6**/4**, ML3.1**/1**, MS2.3**/1**, Ms1 2.3**/1**, ms1mx1.9**/24**, Error ellipse: s-maj=158.6km s-min=25.4km az=73.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr** 0.4nm,0.3s,baz=161,slow=12,SNR=9.6	**6.44**	**340**	Pn	Pn	06 38 19.5	-1.2
KSRS	**Korea Array** comp=Z,11nm,18.6s,baz=220,slow=39	**12.85**	**306**	LR	LR	06 45 10.1	
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=84,slow=9.0,SNR=5.7	**47.52**	**307**	P	P	06 45 21.9	+0.4
WRA	**Warramunga Arr** 1.2nm,0.7s,baz=358,slow=6.9,SNR=4.3	**50.56**	**188**	P	P	06 45 44.7	-0.2
ASAR	**Alice Springs** 0.2nm,0.4s,baz=357,slow=4.9,SNR=2.9	**54.29**	**188**	P	P	06 46 12.4	-0.2

NSSC ***23*** *06:49:32.1±0.8, 34°.01N×36°.12E, h16^{km}±4^{km}, ML1.8*
GRAL ***23*** *06:49:36.1±0.3, 33°.86N×35°.82E, h0^{km}±43^{km}, MD2.7*
ISC 23 06:49:32.4±1.6**, 33°.95N**±0°.07×**35°.96E**±0°.05**, h7**^{km}±15^{km}**, n7, σ0^{s}.45**/12**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.26**	**259**	*e*P	**Pb**	**06 49 38.8**	**-0.6**
BHL				*e*S	**Sg**	**06 49 40.7**	**-0.2**
HWQ	**Hawqa**	**0.32**	**359**	*e*P	**Pn**	**06 49 44.0**	**+0.3**
DQRL	**Deir Qamar**	**0.41**	**232**	*e*P	**Pg**	**06 49 40.8**	**+0.5**
RCY	**Rachaya**	**0.47**	**192**	*e*P	**Pb**	**06 49 42.5**	**-0.5**
RCY				*e*S	**Sg**	**06 49 47.3**	**-0.3**
QASN	**Qassioun**	**0.50**	**147**	*e*P	**Pg**	**06 49 42.0**	**0.0**
QASN				*e*S	**Sg**	**06 49 49.1**	**+0.6**
QASN	comp=N,155nm,0.2s			AML	AML	06 49 51.4	
QASN	comp=E,215nm,0.3s			AML	AML	06 49 52.0	
BRBR	**Barbar**	**0.54**	**180**	*e*P	**Pb**	**06 49 44.4**	**+0.1**
BRBR				*e*S	**Sb**	**06 49 52.6**	**+0.2**
BRBR	comp=E,34nm,0.3s			AML	AML	06 49 55.1	
BRBR	comp=N,90nm,0.3s			AML	AML	06 49 55.2	
TOTH	**TOTAH**	**0.71**	**146**	*e*P	**Pg**	**06 49 45.6**	**-0.4**
TOTH				*e*S	**Sg**	**06 49 55.2**	**-0.1**
TOTH	comp=N,10nm,0.5s			AML	AML	06 49 57.3	
TOTH	comp=E,17nm,0.4s			AML	AML	06 50 04.5	

IDC 23 06:56:38.1±7.3**, 17°.37S**×**177°.21W, h0**^{km}**, mb4.2**/2**, mb1 4.5**/2**, mb1mx3.6**/36**, mbtmp4.2**/2**, Error ellipse: s-maj=318.6km s-min=114.3km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=92,slow=7.3,SNR=15	**45.86**	**259**	P	P	07 05 03.1	+0.5
ASAR	**Alice Springs** 2.4nm,0.5s,baz=94,slow=7.6,SNR=47	**46.04**	**254**	P	P	07 05 03.2	-0.7
ASAR	0.2nm,0.5s,baz=101,slow=3.9,SNR=3.2			PcP	PcP	07 06 35.8	-4.8
AKASG	**Malin Array Be** 0.7nm,0.4s,baz=32,slow=3.5,SNR=5.0	**140.60**	**334**	PKP	PKPdf	07 16 09.2	-0.3

NIED 23 06:57:00, 26°.60N×**141°.90E, h65**^{km}**, Mw4.0 Best double couple:** $M_0$1.22000×10^{15} **NP1:**ϕ_s177.00000°, δ52.00000°, λ40.00000°. **NP2:**ϕ_s60.00000°, δ59.00000°, λ134.00000°.**, Bonin Islands region**

IDC ***23*** *06:58:50.4±1.7, 36°.61N×142°.50E, h0^{km}, mb3.4/2, mb1 3.7/4, mb1mx3.4/36, mbtmp3.6/4, ML3.4/2, MS2.5/1, Ms1 2.5/1, ms1mx1.9/24, Error ellipse: s-maj=35.8km s-min=24.4km az=128.0*
JMA ***23*** *06:58:51.7±0.4, 36°.80N×142°.33E, h21^{km}, M3.4*
ISC 23 06:58:49.9±2.1**, 36°.86N**±0°.06×**142°.33E**±0°.07**, h5**^{km}±13^{km}**, n28, σ1^{s}.50**/30**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.25**	**282**	P	**Pg**	**06 59 14.5**	**+0.6**
JFK	**Kawauchi**	**1.27**	**294**	P	**Pg**	**06 59 15.3**	**+1.0**
JHO	**Hitachi**	**1.44**	**261**	P	**Pb**	**06 59 16.8**	**-0.4**
JHO				*e*S	**Sb**	**06 59 34.7**	**-1.0**
JHYU	**Hitachinakayam**	**1.50**	**250**	P	**Pb**	**06 59 17.7**	**-0.4**
JHYU				*e*S	**Sb**	**06 59 37.0**	**-0.4**
JMM	**Marumori**	**1.58**	**310**	P	**Pg**	**06 59 20.2**	**-0.1**
JMM				*e*S	**Sg**	**06 59 40.8**	**0.0**
JFT	**Otama**	**1.72**	**293**	P	**Pb**	**06 59 21.2**	**-0.8**
JIO	**Ouri**	**1.77**	**334**	P	**Pb**	**06 59 22.5**	**-0.4**
JMK	**Ichinoseki**	**2.27**	**338**	P	**Pb**	**06 59 29.5**	**-1.8**
JAG	**Ashikaga**	**2.35**	**260**	P	**Pn**	**06 59 30.1**	**+0.9**
JAG				*e*S	**Sn**	**06 59 57.9**	**-0.6**
BSO1	**Boso 1**	**2.46**	**207**	P	**Pn**	**06 59 30.5**	**+0.3**
JYK	**Kaneyama**	**2.58**	**323**	P	**Pb**	**06 59 35.2**	**-1.4**
JOM	**Ohasama**	**2.73**	**343**	P	**Pb**	**06 59 37.2**	**-2.1**
JRY	**Ryogami san**	**2.89**	**254**	P	**Pn**	**06 59 37.4**	**+0.8**
JRY				*e*S	**Sn**	**07 00 09.9**	**-1.8**
JOD2	**Odawara 2**	**3.07**	**240**	P	**Pn**	**06 59 38.9**	**-0.2**
MJAR	**Matsushiro Arr** 0.9nm,0.3s,baz=92,slow=13,SNR=14	**3.33**	**266**	Pn	**Pn**	**06 59 44.5**	**+1.9**
MJAR	0.5nm,0.3s,baz=90,slow=31,SNR=6.2			Sn	**Sb**	**07 00 27.8**	**-2.4**
MAT	**Matsushiro**	**3.33**	**266**	P	**Pn**	**06 59 45.2**	**+2.6**
MAT				S	**Sb**	**07 00 27.8**	**-2.4**
MAT	**Matsushiro**	**3.33**	**266**	P	**Pn**	**06 59 44.8**	**+2.2**
JYN	**Shimob**	**3.35**	**247**	P	**Pn**	**06 59 45.0**	**+2.0**
JYN				*e*S	**Sn**	**07 00 24.9**	**+1.7**
JHJ	**Hachijo jima 2** 20nm,0.3s,baz=68,slow=23,SNR=5.0	**4.28**	**210**	Pn	**Pn**	**06 59 55.5**	**-0.2**
JHJ	13nm,0.3s,baz=100,slow=22,SNR=3.0			Sn	**Sn**	**07 00 44.3**	**-1.6**
KSRS	**Korea Array** comp=Z,20nm,19.2s,baz=118,slow=39	**11.51**	**277**	LR	LR	07 06 30.8	
H11N2	**WAKE ISLAND Hy** baz=314,slow=75,SNR=14	**27.43**	**122**	T	T	07 33 23.0	
H11N1	**WAKE ISLAND Hy** baz=314,slow=75,SNR=14	**27.44**	**122**	T	T	07 33 34.3	
H11N3	**WAKE ISLAND Hy** baz=314,slow=75,SNR=11	**27.45**	**122**	T	T	07 33 23.3	
H11S1	**WAKE ISLAND Hy** baz=316,slow=76,SNR=7.9	**28.15**	**124**	T	T	07 34 13.0	
H11S3	**WAKE ISLAND Hy** baz=316,slow=76,SNR=8.3	**28.15**	**124**	T	T	07 34 13.3	
H11S2	**WAKE ISLAND Hy** baz=316,slow=76,SNR=6.7	**28.17**	**124**	T	T	07 34 13.7	
ILAR	**Eielson Array** 0.2nm,0.6s,baz=286,slow=6.5,SNR=3.0	**49.25**	**32**	P	**P**	**07 07 40.9**	**+1.9**
ASAR	**Alice Springs** 0.6nm,0.8s,baz=350,slow=6.4,SNR=4.2	**60.72**	**189**	P	**P**	**07 09 02.4**	**0.0**

NNC 23 07:03:52.2±1.7**, 41°.73N**×**78°.24E, h0**^{km}**, mb3.6, mpv3.2, 3C-1D, Error ellipse: s-maj=12.3km s-min=5.9km az=166.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZV	**Izvestkoviy** 2.9nm,0.1s	**1.78**	**318**	P	Pn	07 04 23.6	-0.7
IZV	7.7nm,0.3s			S	Sb	07 04 48.5	-0.2
PDGK	**Podgornoye** 1.0nm,0.3s	**1.85**	**30**	⇑P	Pn	07 04 25.8	+0.5
PDGK	6.8nm,0.9s			⇑S	Sb	07 04 50.2	-0.4
KST	**Kastek** 7.1nm,0.5s	**2.14**	**309**	Pg	Pn	07 04 30.1	+0.8
KST	7.2nm,0.9s			Lg	Lg	07 04 59.8	
KTBS	**Karatobe** 6.5nm,0.2s	**2.29**	**330**	Pg	Pb	07 04 33.6	-0.8
KTBS	9.7nm,0.9s			Lg	Lg	07 05 05.8	
TKM2	**Tokmak 2** 1.6nm,0.3s	**2.29**	**302**	⇑Pn	Pb	07 04 33.5	-1.1
TKM2	6.0nm,0.6s			⇓Lg	Lg	07 05 03.4	
CHKK	**Chushkaly** 16nm,0.4s	**2.31**	**337**	Pg	Pb	07 04 33.5	-1.3
CHKK	10nm,0.3s			Lg	Lg	07 05 05.4	
KTMS	**Ketmen** 4.6nm,0.3s	**2.32**	**42**	Pg	Pb	07 04 33.7	-1.2
KTMS	4.5nm,0.2s			Lg	Lg	07 05 05.9	
MNBS	**Baschi** 4.6nm,0.3s	**2.35**	**3**	Pg	Pb	07 04 35.4	-0.1
MNBS	5.9nm,0.2s			Lg	Lg	07 05 08.8	
ARXS	**Arharly** 8.5nm,0.3s	**2.50**	**353**	Pg	Pb	07 04 37.1	-0.9
ARXS	7.4nm,0.8s			Lg	Lg	07 05 12.1	
KUU	**Kurty** 5.9nm,0.5s	**2.58**	**328**	Pg	Pb	07 04 38.5	-0.8
KUU	6.5nm,0.3s			Lg	Lg	07 05 14.2	
DJR	**Jarkent** 5.5nm,0.2s	**2.84**	**23**	Pg	Pb	07 04 42.1	-1.7
DJR	4.9nm,0.6s			Lg	Lg	07 05 20.4	

SJA ***23*** *07:10:42.5±0.5, 24°.50S×68°.02W, h205^{km}±11^{km}, ML3.1, MW4.8*
ISCJB ***23*** *07:10:45.6±0.4, 24°.52S±0°.03×67°.99W±0°.05, h157^{km}±7^{km}, Error ellipse: s-maj=7.2km s-min=4.5km az=1.0*
IDC ***23*** *07:10:45.4±1.2, 24°.55S×67°.81W, h127^{km}±16^{km}, mb3.7/3, mb1 3.6/7, mb1mx3.4/27, mbtmp4.0/7, Error ellipse: s-maj=27.1km s-min=12.6km az=81.0*
NEIC ***23*** *07:10:45.9±1.4, 24°.52S×67°.95W, h164^{km}±16^{km}, mb4.3/3, MD4.8(SJA), Error ellipse: s-maj=22.8km s-min=6.3km az=92.0*
GUC ***23*** *07:10:47.8±0.6, 24°.41S×68°.26W, h159^{km}±8^{km}, ML3.5*
ISC 23 07:10:46.0±0.8**, 24°.51S**±0°.04×**67°.95W**±0°.05**, h151**^{km}±9^{km}**, n35, σ1^{s}.37**/53**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.63**	**246**	*e*Pn	**Pn**	**07 11 18.3**	**+1.0**

GO02				*e*Sn	**Sn**	**07 11 42.5**	**+1.3**
GO02	**Mina Guanaco**	**1.63**	**246**	*e*P	**Pn**	**07 11 18.2**	**+1.0**
GO02				*i* S	**Sn**	**07 11 42.0**	**+0.8**
PB15	**IPOC Station P**	**1.91**	**313**	*i* P	**Pn**	**07 11 20.4**	**0.0**
PB15				*i* S	**Sn**	**07 11 49.0**	**+2.4**
PB15	**IPOC Station P**	**1.91**	**313**	*e*P	**Pn**	**07 11 20.8**	**+0.5**
PB15				*i* S	**Sn**	**07 11 46.0**	**-0.6**
LVC	**Limon Verde**	**2.09**	**335**	P	**Pn**	**07 11 22.3**	**-0.3**
	5.7nm,0.3s,baz=143,slow=16,SNR=116						
LVC				S	**Sn**	**07 11 49.8**	**-0.9**
	26nm,0.3s,baz=270,slow=20,SNR=35						
LVC	**Limon Verde**	**2.09**	**335**	*e*Pn	**Pn**	**07 11 23.3**	**+0.7**
LVC				*e*Sn	**Sn**	**07 11 51.5**	**+0.8**
PB14	**IPOC Station P**	**2.24**	**267**	*e*P	**Pn**	**07 11 25.0**	**+0.7**
PB14				*i* S	**Sn**	**07 11 52.9**	**-0.8**
PB14				IAML		07 11 55.1	
	comp=E,318nm,0.1s						
PB06	**IPOC Station P**	**2.34**	**320**	*e*P	**Pn**	**07 11 25.8**	**+0.5**
PB06				*i* S	**Sn**	**07 11 54.6**	**-1.0**
PB06				IAML		07 12 01.1	
	comp=N,329nm,0.4s						
FSA	**Cafayete**	**2.39**	**132**	*i* P	**Pn**	**07 11 27.1**	**+1.1**
PB10	**IPOC Station P**	**2.58**	**292**	*e*Pn	**Pn**	**07 11 28.9**	**+0.7**
PB10				*e*Sn	**Sn**	**07 12 02.4**	**+1.7**
AZAP	**Zapla**	**2.64**	**84**	*i* P	**Pn**	**07 11 30.0**	**+0.9**
AZAP				IAML		07 11 32.3	
	comp=Z,19nm,0.5s						
PB05	**IPOC Station P**	**2.65**	**308**	*e*P	**Pn**	**07 11 29.5**	**+0.4**
PB05				*i* S	**Sn**	**07 12 00.2**	**-2.1**
PB05				IAML		07 12 03.0	
	comp=N,177nm,0.3s						
HJA	**Humahuaca**	**2.66**	**61**	*i* P	**Pn**	**07 11 30.7**	**+1.2**
HJA				IAML		07 11 32.4	
	comp=Z,145nm,0.6s						
PB09	**IPOC Station P**	**2.96**	**336**	*e*P	**Pn**	**07 11 34.1**	**+1.1**
PB09				*i* S	**Sn**	**07 12 09.3**	**0.0**
PB04	**IPOC Station P**	**2.97**	**317**	*e*Pn	**Pn**	**07 11 33.4**	**+0.2**
PB04				*e*Sn	**Sn**	**07 12 07.9**	**-1.7**
PB04	**IPOC Station P**	**2.97**	**317**	*e*P	**Pn**	**07 11 33.3**	**+0.2**
PB04				*i* S	**Sn**	**07 12 07.7**	**-1.9**
YJA	**Yavi**	**3.23**	**44**	*i* P	**Pn**	**07 11 37.5**	**+0.8**
YJA				IAML		07 11 38.9	
	comp=Z,21nm,0.6s						
AHML	**Horco Molle**	**3.27**	**134**	*i* P	**Pn**	**07 11 37.0**	**+0.2**
GO03	**Copiap**	**3.69**	**213**	*e*Pn	**Pn**	**07 11 43.0**	**+0.7**
GO03				*e*Sn	**Sn**	**07 12 27.0**	**+0.9**
PB01	**IPOC Station P**	**3.73**	**337**	*e*Pn	**Pn**	**07 11 43.5**	**+0.5**
VCA	**Vinchina**	**4.21**	**183**	*i* P	**Pn**	**07 11 48.2**	**-0.9**
GO01	**Chusmiza**	**4.96**	**346**	*e*Pn	**Pn**	**07 11 59.7**	**+0.3**
GO01				*e*Sn	**Sn**	**07 12 55.6**	**-0.8**
LCO	**Las Campanas**	**5.11**	**208**	*e*Pn	**Pn**	**07 12 01.1**	**0.0**
LCO				*e*Sn	**Sn**	**07 12 59.1**	**-0.6**
MNMC	**Minye Minye**	**5.57**	**344**	*e*Pn	**Pn**	**07 12 08.1**	**+0.8**
GO04	**Tololo Observa**	**6.18**	**204**	*e*Pn	**Pn**	**07 12 14.9**	**-0.4**
CFA	**Coronel Fontan**	**7.07**	**182**	P	**Pn**	**07 12 27.3**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=10,slow=17,SNR=28						
CFA				S	**Sn**	**07 13 43.2**	**-3.0**
	comp=Z,1.1nm,0.3s,baz=70,slow=22,SNR=8.5						
LPAZ	**La Paz**	**8.19**	**359**	P	**Pn**	**07 12 44.1**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=185,slow=11,SNR=19						
LPAZ				S	**Sn**	**07 14 09.8**	**-4.2**
	baz=84,slow=18,SNR=1.7						
LPAZ	**La Paz**	**8.19**	**359**	*e*Pn	**Pn**	**07 12 43.0**	**+0.5**
SIV	**San Ignacio**	**10.65**	**39**	P	**Pn**	**07 13 12.2**	**-2.4**
	comp=Z,1.0nm,0.3s,baz=244,slow=11,SNR=48						
PLCA	**Paso Flores**	**16.32**	**187**	*e*P	**Pn**	**07 14 24.8**	**-1.8**
	comp=Z,2.1nm,0.9s						
BDFB	**Brasilia**	**20.68**	**68**	P	**P**	**07 15 14.5**	**+0.1**
	comp=Z,9.9nm,0.8s,baz=242,slow=11,SNR=15						
BDFB	**Brasilia**	**20.68**	**68**	*e*P	**P**	**07 15 15.0**	**+0.6**
	comp=Z,15nm,1.0s						
GO09	**Cerro Castillo**	**26.93**	**186**	*e*P	**P**	**07 16 10.7**	**-2.3**
	comp=Z,18nm,1.1s						
PDAR	**Pinedale Array**	**77.15**	**330**	P	**P**	**07 22 25.1**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=123,slow=6.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**77.56**	**69**	P	**P**	**07 22 27.5**	**+1.8**
	comp=Z,2.8nm,0.7s,baz=240,slow=4.6,SNR=17						

IDC ***23*** *07:18:48.6±1.4, 3°.33S×127°.82E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.6/31, mbtmp3.8/5, ML3.2/1, Error ellipse: s-maj=122.7km s-min=22.6km az=69.0*

ISCJB ***23*** *07:18:53.2±0.8, 3°.75S±0°.07×127°.06E±0°.10, h42^{km}, mb3.8/3, Error ellipse: s-maj=14.8km s-min=7.8km az=154.6*

DJA ***23*** *07:18:54.5±1.0, 4°S±7°×12°7E±°, h17^{km}±5^{km}, M3.9/7, mb4.3/3, mB4.9/2, MLv3.7/7, Mw(mB)4.2/2*

ISC 23 07:18:54.7±1.0, 3°.66S±0°.10×127°.11E±0°.09, h42^{km}, n9, σ1^{s}.40/11, mb3.7/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.41**	**359**	P	**Pn**	**07 19 04.2**	**-0.3**
NLAI				S	**Sn**	**07 19 10.4**	**-1.0**
AAI	**Ambon**	**1.08**	**92**	P	**Pn**	**07 19 14.8**	**+1.3**
SANI	**Sanana**	**1.95**	**325**	P	**Pn**	**07 19 26.4**	**+1.0**
SANI				S	**Sn**	**07 19 50.3**	**+1.6**
LUWI	**Luwuk**	**5.05**	**301**	P	**Pn**	**07 20 08.3**	**+0.3**
WRA	**Warramunga Arr**	**17.66**	**157**	P	**Pn**	**07 22 55.5**	**-2.2**
	0.1nm,0.3s,baz=337,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**20.95**	**162**	P	**P**	**07 23 35.2**	**+1.0**
	4.6nm,0.7s,baz=344,slow=11,SNR=59						
SONM	**Songino Array**	**54.40**	**343**	P	**P**	**07 28 16.4**	**-1.2**
	0.4nm,0.5s,baz=161,slow=6.1,SNR=2.3						
MKAR	**Makanchi Array**	**63.88**	**327**	P	**P**	**07 29 24.5**	**+1.3**
	0.9nm,0.6s,baz=125,slow=7.8,SNR=9.6						
KURBB	**Kurchatov Arra**	**68.18**	**329**	P	**P**	**07 29 50.7**	**0.0**
	0.5nm,0.6s,baz=130,slow=4.8,SNR=4.5						

MEX 23 07:27:03.8±0.4, 15°.10N×93°.02W, h82^{km}±5^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.63**	**342**	*i* P	Pn	07 27 17.2	-1.7
PCIG				*e*S	Sn	07 27 28.4	-1.8
THIG		**0.75**	**105**	*e*P	Pn	07 27 18.7	-1.5
THIG				*e*S	Sn	07 27 31.2	-1.1
CCIG	**Comitan**	**1.45**	**36**	*i* P	Pn	07 27 27.1	-1.6
CCIG				*i* S	Sn	07 27 45.8	-1.7
TGIG		**1.67**	**357**	*i* P	Pn	07 27 30.6	-0.9
TGIG				*e*S	Sn	07 27 51.5	-0.9
CMIG	**Matias Romero**	**2.67**	**318**	*i* P	Pn	07 27 43.9	-0.9
CMIG				*i* S	Sn	07 28 15.0	-1.2

MEX 23 07:27:56.0±0.7, 27°.32N×111°.25W, h16^{km}±13^{km}, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUYB	**Guaymas**	**0.67**	**30**	*e*P	Pg	07 28 06.6	-2.6
GUYB				*e*S	Sg	07 28 14.7	-3.4
SRIG	**Santa Rosalia**	**0.88**	**270**	*e*P	Pb	07 28 09.6	-3.2
SRIG				*e*S	Sb	07 28 20.2	-4.2
HSIG		**1.72**	**9**	*e*P	Pn	07 28 22.5	-2.8
HSIG				*e*S	Sn	07 28 41.7	-5.1

UCR 23 07:29:05.1±0.7, 9°.16N×85°.92W, h23^{km}±4^{km}, MW3.6, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**1.47**	**40**	*e*P	Pn	07 29 30.3	+0.1
BUEV	**Buena Vista**	**1.70**	**17**	*e*P	Pn	07 29 33.2	-0.2
BUEV				*e*S	Sn	07 29 53.8	-0.7
GB1A	**Borinquen Arri**	**1.72**	**17**	*e*P	Pn	07 29 33.4	-0.4
GB1A				*e*S	Sn	07 29 55.3	+0.2
ARE1	**Arenal 1**	**1.75**	**42**	*e*P	Pn	07 29 34.1	+0.1
DRK0	**Durika**	**2.64**	**88**	*e*P	Pn	07 29 46.8	+0.4
DRK0				*e*S	Sn	07 30 17.2	-0.7

MEX 23 07:30:58.2±0.8, 27°.22N×111°.21W, h16^{km}±25^{km}, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUYB	**Guaymas**	**0.74**	**24**	*e*P	Pg	07 31 09.8	-2.9
GUYB				*i* S	Sg	07 31 18.6	-3.9
SRIG	**Santa Rosalia**	**0.92**	**277**	*e*P	Pb	07 31 12.6	-3.2
SRIG				*i* S	Sb	07 31 23.4	-4.4
HSIG		**1.81**	**7**	*e*P	Pn	07 31 25.9	-2.8
HSIG				*i* S	Sn	07 31 47.1	-4.2

MAN 23 07:31:12.2, 7°.35N×124°.78E, h7^{km}, mb4.1, ML2.9, MS2.5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.46**	**138**	⇑*e*P	Pg	07 31 21.6	+0.5
KCP				*e*S	Sb	07 31 41.0	+11
CTBH	**Cotabato--PC H**	**0.55**	**256**	⇓*i*P	Pb	07 31 23.8	-0.3
CTBH				*i* S	Sb	07 31 31.1	-1.0
CGP	**Cagayan de Oro**	**1.10**	**356**	⇑*e*P	Pg	07 31 33.4	0.0
CGP				*e*S	Sg	07 31 47.8	+0.2

MAN 23 07:34:15.7, 9°.23N×126°.07E, h52^{km}, mb3.8, ML2.5, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**1.56**	**240**	⇑*e*P	Pn	07 34 41.9	+0.7
CGP				*e*S	Sn	07 35 01.6	+1.4

SOME ***23*** *07:43:21.6, 43°.57N×82°.10E, h10^{km}*

NNC ***23*** *07:43:23.9±1.2, 43°.40N×81°.94E, h0^{km}, mb3.6, mpv3.6, Error ellipse: s-maj=10.8km s-min=4.3km az=143.0*

ISC 23 07:43:22.0±1.6, 43°.51N±0°.06×82°.05E±0°.06, h10^{km}, n36, σ1^{s}.81/57, 8C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.24**	**268**	P	**Pg**	**07 43 45.8**	**0.0**
	55nm,0.2s						
KTMS				S	**Sn**	**07 44 03.4**	**+1.1**
	194nm,0.2s						
KTMS	**Ketmen**	**1.24**	**268**	*e*P	**Pg**	**07 43 45.8**	**0.0**
	55nm,0.2s						
KTMS				*e*S	**Sn**	**07 44 03.4**	**+1.1**
	194nm,0.2s						
DJR	**Jarkent**	**1.83**	**298**	Pg	**Pg**	**07 43 56.7**	**-0.3**
	56nm,0.5s						
DJR				Lg	Lg	07 44 23.1	
	75nm,0.5s						
DJR	**Jarkent**	**1.83**	**298**	*e*P	**Pg**	**07 43 56.8**	**-0.3**
	57nm,0.1s						
DJR				*e*S	**Sg**	**07 44 22.3**	**+1.5**
	82nm,0.3s						
PDGK	**Podgornoye**	**1.87**	**265**	P	**Pb**	**07 43 56.4**	**+0.1**
	28nm,0.2s						
PDGK				S	**Sg**	**07 44 21.3**	**-0.9**
	182nm,0.2s						
PDGK	**Podgornoye**	**1.87**	**265**	⇑Pg	**Pb**	**07 43 56.1**	**-0.3**
	14nm,0.3s						
PDGK				⇓Lg	Lg	07 44 21.8	
	139nm,0.3s						
UZB	**Uzynbulak**	**2.24**	**262**	Pg	**Pb**	**07 44 02.7**	**+0.1**
	16nm,0.2s						
UZB				Lg	Lg	07 44 32.1	
	134nm,0.3s						
UZB	**Uzynbulak**	**2.24**	**262**	*e*P	**Pb**	**07 44 02.7**	**+0.1**
	16nm,0.2s						
UZB				*e*S	**Sg**	**07 44 32.1**	**-1.7**
	134nm,0.3s						
KPKS	**Kokpek**	**2.45**	**270**	*e*P	**Pb**	**07 44 06.4**	**+0.3**
	20nm,0.1s						
KPKS				*e*S	**Sg**	**07 44 38.6**	**-2.1**
	204nm,0.4s						
KAPS	**Kapalarasan**	**2.62**	**314**	Pg	**Pb**	**07 44 09.5**	**+0.4**
	8.6nm,0.2s						
KAPS				Lg	Lg	07 44 44.3	
	21nm,0.2s						
KAPS	**Kapalarasan**	**2.62**	**314**	*e*P	**Pb**	**07 44 08.8**	**-0.3**
	8.6nm,0.2s						
KAPS				*e*S	**Sb**	**07 44 43.2**	**+1.8**
	21nm,0.2s						
SATY	**Saty**	**2.70**	**262**	Pg	**Pb**	**07 44 10.8**	**+0.4**
	22nm,0.1s						
SATY				Lg	Lg	07 44 46.4	
	152nm,0.1s						
SATY	**Saty**	**2.70**	**262**	⇑*i*P	**Pb**	**07 44 10.8**	**+0.4**
	12nm,0.1s						
SATY				⇑*i*S	**Sg**	**07 44 46.4**	**-2.2**
	105nm,0.3s						
MNBS	**Baschi**	**2.70**	**283**	Pg	**Pb**	**07 44 10.8**	**+0.3**
	5.2nm,0.1s						
MNBS				Lg	Lg	07 44 46.1	
	64nm,0.2s						
MNBS	**Baschi**	**2.70**	**283**	*e*P	**Pb**	**07 44 10.8**	**+0.3**
	5.2nm,0.1s						
MNBS				*e*S	**Sb**	**07 44 46.1**	**+2.4**
	64nm,0.2s						
ARXS	**Arharly**	**3.13**	**284**	Pg	**Pb**	**07 44 19.2**	**+1.4**
	5.7nm,0.4s						
ARXS				Lg	Lg	07 45 00.3	
	39nm,0.3s						
ARXS	**Arharly**	**3.13**	**284**	*e*P	**Pb**	**07 44 19.2**	**+1.4**
	5.7nm,0.4s						
ARXS				*e*S	**Sg**	**07 45 00.3**	**-2.3**
	39nm,0.3s						
MK31	**Makanchi Array**	**3.29**	**3**	Pn	**Pb**	**07 44 18.1**	**-2.4**
	0.1nm,0.2s,baz=222,slow=7.4,SNR=26						
MK31				Pg	**Pg**	**07 44 28.3**	**+3.3**
	0.9nm,0.3s,baz=182,slow=14,SNR=14						
MK31				⇓Sn	**Sb**	**07 44 59.8**	**-0.8**
	3.9nm,0.5s,baz=186,slow=27,SNR=5.7						
MK31				⇑Lg	Lg	07 45 16.0	
	13nm,0.7s,baz=184,slow=28,SNR=9.5						
MAKZ	**Makanchi**	**3.30**	**359**	⇑Pn	**Pb**	**07 44 18.4**	**-2.2**
	0.9nm,0.3s						
MAKZ				⇓Pg	**Pg**	**07 44 27.7**	**+2.5**
	1.9nm,0.5s						
MAKZ				⇓Sn	**Sb**	**07 44 59.4**	**-1.5**
	3.6nm,0.3s						
MAKZ				⇓Lg	Lg	07 45 14.6	
	14nm,0.8s						
KOTS	**Kotyrbulak**	**3.61**	**267**	Pg	**Pb**	**07 44 27.8**	**+1.8**
	7.6nm,0.2s						
KOTS				Lg	Lg	07 45 15.4	
	46nm,0.2s						
KOTS	**Kotyrbulak**	**3.61**	**267**	*e*P	**Pb**	**07 44 27.8**	**+1.8**
	7.6nm,0.2s						
KOTS				*e*S	**Sg**	**07 45 15.4**	**-2.5**
	46nm,0.2s						
MDOK	**Medeo**	**3.66**	**266**	Pg	**Pb**	**07 44 29.3**	**+2.4**
	4.4nm,0.2s						
MDOK				Lg	Lg	07 45 18.1	
	26nm,0.5s						
MDOK	**Medeo**	**3.66**	**266**	*e*P	**Pb**	**07 44 29.3**	**+2.4**
	4.4nm,0.2s						
MDOK				*e*S	**Sg**	**07 45 18.1**	**-1.5**
	26nm,0.5s						
CHKK	**Chushkaly**	**3.69**	**277**	Pg	**Pg**	**07 44 30.0**	**-2.6**
	3.0nm,0.4s						
CHKK				Lg	Lg	07 45 19.1	
	46nm,0.2s						
CHKK	**Chushkaly**	**3.69**	**277**	*e*P	**Pg**	**07 44 30.0**	**-2.6**
	3.0nm,0.4s						
CHKK				*e*S	**Sg**	**07 45 19.1**	**-1.3**
	46nm,0.2s						
TNSS	**Tian-Shan**	**3.75**	**265**	Pg	**Pb**	**07 44 30.8**	**+2.2**
	4.6nm,0.2s						
TNSS				Lg	Lg	07 45 20.5	
	13nm,0.2s						
TNSS	**Tian-Shan**	**3.75**	**265**	*e*P	**Pb**	**07 44 30.8**	**+2.2**
	4.6nm,0.2s						
TNSS				*e*S	**Sg**	**07 45 20.5**	**-2.1**
	13nm,0.2s						
KTBS	**Karatobe**	**3.90**	**275**	Pg	**Pb**	**07 44 33.5**	**+2.6**
	2.7nm,0.6s						
KTBS				Lg	Lg	07 45 25.3	
	30nm,0.5s						
KTBS	**Karatobe**	**3.90**	**275**	*e*P	**Pb**	**07 44 33.5**	**+2.6**
	2.7nm,0.6s						
KTBS				*e*S	**Sg**	**07 45 25.3**	**-2.0**
	30nm,0.5s						
KUU	**Kurty**	**4.16**	**277**	Pg	**Pg**	**07 44 39.1**	**-2.5**
	4.2nm,0.4s						
KUU				Lg	Lg	07 45 35.0	
	17nm,0.4s						
KUU	**Kurty**	**4.16**	**277**	*e*P	**Pg**	**07 44 39.1**	**-2.5**
	1.6nm,0.1s						
KUU				*e*S	**Sg**	**07 45 35.0**	**-0.4**
	17nm,0.4s						
ZSN	**Zaisan**	**4.41**	**26**	Pg	**Pb**	**07 44 38.5**	**-1.1**
	2.4nm,0.2s						
ZSN				Lg	Lg	07 45 33.9	
	2.6nm,0.4s						
ZSN	**Zaisan**	**4.41**	**26**	*e*P	**Pb**	**07 44 38.5**	**-1.1**
	2.4nm,0.2s						
ZSN				*e*S	**Sb**	**07 45 34.0**	**+1.1**
	2.6nm,0.4s						
TKM2	**Tokmak 2**	**4.75**	**265**	⇑Pg	**Pg**	**07 44 53.8**	**+0.9**
	1.4nm,0.5s						
TKM2				⇑Lg	Lg	07 45 51.9	
	11nm,0.6s						
AAK	**Ala-Archa**	**5.60**	**264**	⇑Lg	Lg	07 46 17.5	
	5.1nm,0.6s						
SEM	**Semipalatinsk**	**7.01**	**351**	P	**Sn**	**07 46 27.7**	**+3.0**
	16nm,0.2s						
SEM				S	**Sb**	**07 46 44.6**	**-3.2**
	109nm,0.3s						

NNC 23 07:46:07.6±0.4, 49°.98N×78°.38E, h0^{km}, mb3.5, mpv3.3, 17C-7D, Error ellipse: s-maj=7.9km s-min=2.1km az=90.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.61**	**8**	⇑P	Pg	07 46 19.7	+0.4
KUR07				⇑S	Sg	07 46 28.4	+1.2
KUR06	**Kurchatov Arra**	**0.63**	**9**	⇑P	Pg	07 46 20.1	+0.4
KUR06				⇑S	Sg	07 46 28.9	+1.0
KUR14	**Kurchatov Arra**	**0.65**	**12**	⇑P	Pg	07 46 20.1	0.0
KUR14				⇑S	Sg	07 46 28.6	+0.1
KUR15	**Kurchatov Arra**	**0.65**	**10**	⇑P	Pg	07 46 20.2	+0.2
KUR15				⇑S	Sg	07 46 28.9	+0.4
KURBB	**Kurchatov Arra**	**0.65**	**9**	⇑P	Pg	07 46 20.4	+0.3
	25nm,0.5s						
KURBB				⇓S	Sg	07 46 29.8	+1.2
	159nm,0.5s						
KUR16	**Kurchatov Arra**	**0.65**	**7**	⇑P	Pg	07 46 20.4	+0.3
KUR16				⇑S	Sg	07 46 29.6	+1.0
KUR17	**Kurchatov Arra**	**0.66**	**5**	⇑P	Pg	07 46 20.7	+0.5
KUR17				⇓S	Sg	07 46 29.6	+1.0
KUR05	**Kurchatov Arra**	**0.67**	**9**	⇓P	Pg	07 46 20.6	+0.1
KUR05				⇑S	Sg	07 46 29.6	+0.4
KUR04	**Kurchatov Arra**	**0.69**	**9**	⇑P	Pg	07 46 21.0	+0.2
KUR04				⇑S	Sg	07 46 30.1	+0.3
MAKZ	**Makanchi**	**3.98**	**142**	⇓Pg	Pb	07 47 19.3	+0.8
	3.4nm,0.9s						
MAKZ				⇓Lg	Lg	07 48 11.0	
	11nm,0.6s						
MK31	**Makanchi Array**	**4.12**	**139**	⇓Pn	Pn	07 47 12.6	+0.8
	0.4nm,0.3s,baz=321,slow=9.8,SNR=4.7						
MK31				⇑Pg	Pb	07 47 20.8	-0.1
	1.4nm,0.4s,baz=329,slow=14,SNR=8.9						
MK31				⇓Lg	Lg	07 48 16.0	
	6.0nm,0.5s,baz=329,slow=28,SNR=11						
KAPS	**Kapalarasan**	**4.74**	**172**	Pg	Pb	07 47 33.8	+2.2
	2.0nm,0.5s						
KAPS				Lg	Lg	07 48 38.3	
	9.5nm,0.7s						
ZSN	**Zaisan**	**4.99**	**118**	Pg	Pb	07 47 35.1	-0.6
	2.8nm,0.3s						
ZSN				Lg	Lg	07 48 40.5	
	2.6nm,0.5s						
BTLS	**Baital**	**5.75**	**212**	Pg	Pg	07 47 53.3	-4.3
	1.6nm,0.3s						
BTLS				Lg	Lg	07 49 11.8	
	4.0nm,0.5s						
CHKK	**Chushkaly**	**6.20**	**189**	Pg	Pb	07 48 01.3	+5.0
	1.2nm,0.2s						
CHKK				Lg	Lg	07 49 25.3	
	5.6nm,0.5s						
KUU	**Kurty**	**6.25**	**194**	Pg	Pg	07 48 03.2	-4.0
	1.1nm,0.2s						
KUU				Lg	Lg	07 49 29.4	
	24nm,0.7s						
PDGK	**Podgornoye**	**6.70**	**173**	⇑Lg	Lg	07 49 38.7	
	4.6nm,0.7s						

ISCJB ***23*** *07:50:22.6±0.3, 38°.42N±0°.03×17°.53E±0°.02, h35^{km}, Error ellipse: s-maj=4.5km s-min=2.7km az=173.2*

ROM ***23*** *07:50:22.0±0.2, 38°.37N±0°.01×17°.61E±0°.02, h38^{km}, ML2.9/42, Error ellipse: s-maj=2.0km s-min=1.2km az=302.0*

ISC 23 07:50:22.7±1.2, 38°.50N±0°.04×17°.52E±0°.03, h35^{km}, n71, σ1^{s}.74/74, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.84**	**310**	P	**Pn**	**07 50 39.0**	**+0.9**
SERS				S	**Sn**	**07 50 52.5**	**+3.1**
SERS				AML	AML		
	comp=E,79µm,0.9s						
SERS				AML	AML		
	comp=N,93µm,0.6s						
SERS				AML	AML		
	comp=E,79µm,0.9s						
SERS				AML	AML		
	comp=N,93µm,0.6s						
SERS				AML	AML		
	comp=E,79µm,0.9s						
SERS				AML	AML		
	comp=N,93µm,0.6s						
SERS				AML	AML		
	comp=E,79µm,0.9s						
SERS				AML	AML		
	comp=N,93µm,0.6s						
PLAC	**Placanica**	**0.85**	**267**	P	**Pn**	**07 50 39.1**	**+0.9**
PLAC				S	**Sn**	**07 50 50.9**	**+1.5**
PLAC				AML	AML		
	comp=E,235µm,1.3s						
PLAC				AML	AML		
	comp=N,133µm,0.9s						
PLAC				AML	AML		
	comp=E,235µm,1.3s						
PLAC				AML	AML		
	comp=N,133µm,0.9s						
PLAC				AML	AML		
	comp=E,235µm,1.3s						
PLAC				AML	AML		
	comp=N,133µm,0.9s						
PLAC				AML	AML		
	comp=E,235µm,1.3s						
PLAC				AML	AML		
	comp=N,133µm,0.9s						
TIP	**Timpagrande**	**0.90**	**319**	P	**Pn**	**07 50 40.1**	**+1.2**
TIP				AML	AML		
	comp=E,53µm,1.4s						
TIP				AML	AML		
	comp=N,67µm,0.5s						
TIP				AML	AML		
	comp=E,53µm,1.4s						
TIP				AML	AML		
	comp=N,66µm,0.5s						
TIP				AML	AML		
	comp=N,66µm,0.5s						
TIP				AML	AML		
	comp=E,53µm,1.4s						
TIP				AML	AML		
	comp=N,66µm,0.5s						
TIP				AML	AML		
	comp=E,53µm,1.4s						
GRI	**Girifalco**	**0.92**	**291**	P	**Pn**	**07 50 40.4**	**+1.3**
GRI				AML	AML		
	comp=E,133µm,0.6s						
GRI				AML	AML		
	comp=N,107µm,0.7s						
GRI				AML	AML		
	comp=E,133µm,0.6s						
GRI				AML	AML		
	comp=N,107µm,1.5s						
GRI				AML	AML		
	comp=N,107µm,1.5s						
GRI				AML	AML		
	comp=E,133µm,0.6s						
GRI				AML	AML		
	comp=N,107µm,1.5s						
GRI				AML	AML		
	comp=E,133µm,0.6s						
PIPA	**Pietrapaola**	**1.12**	**331**	P	**Pn**	**07 50 43.2**	**+1.2**
CELI	**Celico**	**1.20**	**319**	P	**Pn**	**07 50 44.5**	**+1.5**
CELI				AML	AML		
	comp=E,129µm,1.1s						
CELI				AML	AML		
	comp=N,138µm,1.5s						
CELI				AML	AML		

	comp=E,128µm,1.1s				
CELI			AML	AML	
	comp=N,138µm,1.5s				
CELI			AML	AML	
	comp=E,128µm,1.1s				
CELI			AML	AML	
	comp=N,138µm,1.5s				
CELI			AML	AML	
	comp=E,128µm,1.1s				
CELI			AML	AML	
	comp=N,138µm,1.5s				
SOI	**Samo**	**1.23 250**	P	**Pn**	**07 50 43.9 +0.5**
CAR1	**CAROLEI**	**1.27 307**	P	**Pn**	**07 50 46.0 +2.1**
CAR1			AML	AML	
	comp=E,155µm,0.6s				
CAR1			AML	AML	
	comp=N,114µm,1.5s				
CAR1			AML	AML	
	comp=E,155µm,0.6s				
CAR1			AML	AML	
	comp=N,114µm,1.5s				
CAR1			AML	AML	
	comp=N,114µm,1.5s				
CAR1			AML	AML	
	comp=E,155µm,0.6s				
CAR1			AML	AML	
	comp=N,114µm,1.5s				
CAR1			AML	AML	
	comp=E,155µm,0.6s				
JOPP	**Joppolo**	**1.28 275**	P	**Pn**	**07 50 45.4 +1.2**
JOPP			S	**Sn**	**07 51 02.3 +2.2**
JOPP			AML	AML	
	comp=E,208µm,0.6s				
JOPP			AML	AML	
	comp=N,150µm,1.2s				
JOPP			AML	AML	
	comp=E,207µm,0.6s				
JOPP			AML	AML	
	comp=N,150µm,1.2s				
JOPP			AML	AML	
	comp=N,150µm,1.2s				
JOPP			AML	AML	
	comp=E,207µm,0.6s				
JOPP			AML	AML	
	comp=N,150µm,1.2s				
JOPP			AML	AML	
	comp=E,207µm,0.6s				
GMB	**Gambarie**	**1.37 257**	P	**Pn**	**07 50 46.0 +0.6**
GMB			AML	AML	
	comp=E,950µm,1.2s				
GMB			AML	AML	
	comp=N,870µm,1.0s				
GMB			AML	AML	
	comp=E,951µm,1.2s				
GMB			AML	AML	
	comp=N,870µm,1.0s				
GMB			AML	AML	
	comp=E,951µm,1.2s				
GMB			AML	AML	
	comp=N,870µm,1.0s				
GMB			AML	AML	
	comp=E,951µm,1.2s				
GMB			AML	AML	
	comp=N,870µm,1.0s				
MTTG	**Motta San Giov**	**1.52 251**	P	**Pn**	**07 50 48.2 +0.8**
MTTG			S	**Sn**	**07 51 06.3 +0.3**
MTTG			AML	AML	
	comp=E,206µm,0.5s				
MTTG			AML	AML	
	comp=N,270µm,0.5s				
MTTG			AML	AML	
	comp=E,206µm,0.5s				
MTTG			AML	AML	
	comp=N,270µm,0.5s				
MTTG			AML	AML	
	comp=N,270µm,0.5s				
MTTG			AML	AML	
	comp=E,206µm,0.5s				
MTTG			AML	AML	
	comp=N,270µm,0.5s				
MTTG			AML	AML	
	comp=E,206µm,0.5s				
CET2	**Cetraro**	**1.59 311**	P	**Pn**	**07 50 50.4 +2.0**
CET2			AML	AML	
	comp=E,134µm,0.8s				
CET2			AML	AML	
	comp=N,186µm,0.5s				
CET2			AML	AML	
	comp=E,134µm,0.8s				
CET2			AML	AML	
	comp=N,186µm,0.5s				
CET2			AML	AML	
	comp=E,134µm,0.8s				
CET2			AML	AML	
	comp=N,186µm,0.5s				
CET2			AML	AML	
	comp=E,134µm,0.8s				
CET2			AML	AML	
	comp=N,186µm,0.5s				
MSRU	**Castanea**	**1.60 262**	P	**Pn**	**07 50 49.1 +0.7**
MSRU			AML	AML	
	comp=E,204µm,0.3s				
MSRU			AML	AML	
	comp=N,215µm,0.3s				
MSRU			AML	AML	
	comp=E,205µm,0.3s				
MSRU			AML	AML	
	comp=N,215µm,0.3s				
MSRU			AML	AML	
	comp=N,215µm,0.3s				
MSRU			AML	AML	
	comp=E,205µm,0.3s				
MSRU			AML	AML	
	comp=N,215µm,0.3s				
MSRU			AML	AML	
	comp=E,205µm,0.3s				
SALB	**San Lorenzo Be**	**1.65 327**	P	**Pn**	**07 50 51.2 +2.0**
SALB			AML	AML	
	comp=E,81µm,0.2s				
SALB			AML	AML	
	comp=N,78µm,0.2s				
SALB			AML	AML	
	comp=E,81µm,0.2s				
SALB			AML	AML	
	comp=N,78µm,0.2s				
SALB			AML	AML	
	comp=E,81µm,0.2s				
SALB			AML	AML	
	comp=N,78µm,0.2s				
ATN	**Antennamare**	**1.65 259**	P	**Pn**	**07 50 49.9 +0.7**
ATN			S	**Sn**	**07 51 09.5 +0.2**
ATN			AML	AML	
	comp=E,258µm,0.2s				
ATN			AML	AML	
	comp=N,276µm,0.4s				
ATN			AML	AML	
	comp=E,258µm,0.2s				
ATN			AML	AML	
	comp=N,276µm,0.4s				
ATN			AML	AML	
	comp=N,276µm,0.4s				
ATN			AML	AML	
	comp=E,258µm,0.2s				
ATN			AML	AML	
	comp=N,276µm,0.4s				
ATN			AML	AML	
	comp=E,258µm,0.2s				
T0702	**Acquaformosa (**	**1.65 318**	P	**Pn**	**07 50 52.0 +2.7**
SCTE	**Santa Cesarea**	**1.73 25**	P	**Pn**	**07 50 51.3 +1.0**
SCTE			AML	AML	
	comp=E,234µm,0.2s				
SCTE			AML	AML	
	comp=N,154µm,0.2s				
SCTE			AML	AML	
	comp=N,154µm,0.2s				
SCTE			AML	AML	
	comp=E,234µm,0.2s				
SCTE			AML	AML	
	comp=N,154µm,0.2s				
SCTE			AML	AML	
	comp=E,234µm,0.2s				
MPNC	**Port Mandanici**	**1.74 259**	P	**Pn**	**07 50 51.2 +0.9**
MPNC			AML	AML	
	comp=E,366µm,0.6s				
MPNC			AML	AML	
	comp=N,314µm,0.5s				
MPNC			AML	AML	
	comp=N,314µm,0.5s				
MPNC			AML	AML	
	comp=E,366µm,0.6s				
MPNC			AML	AML	
	comp=N,314µm,0.5s				
MPNC			AML	AML	
	comp=E,366µm,0.6s				
IST3	**Stromboli F**	**1.82 280**	P	**Pn**	**07 50 51.9 +0.4**
IST3			AML	AML	
	comp=E,392µm,0.1s				
IST3			AML	AML	
	comp=N,472µm,0.2s				
IST3			AML	AML	
	comp=E,392µm,0.1s				
IST3			AML	AML	
	comp=N,472µm,0.2s				
IST3			AML	AML	
	comp=E,392µm,0.1s				
IST3			AML	AML	
	comp=N,472µm,0.2s				
STR4	**STROMBOLI 4**	**1.83 279**	P	**Pn**	**07 50 52.5 +1.0**
STR4			AML	AML	
	comp=E,195µm,1.0s				
STR4			AML	AML	
	comp=N,194µm,0.8s				
STR4			AML	AML	
	comp=N,194µm,0.8s				
STR4			AML	AML	
	comp=E,195µm,1.0s				
STR4			AML	AML	
	comp=N,194µm,0.8s				
STR4			AML	AML	
	comp=E,195µm,1.0s				
NOV	**Novara**	**1.93 257**	P	**Pn**	**07 50 54.5 +1.4**
NOV			AML	AML	
	comp=E,160µm,0.4s				
NOV			AML	AML	
	comp=N,154µm,0.9s				
NOV			AML	AML	
	comp=N,154µm,0.9s				
NOV			AML	AML	
	comp=E,160µm,0.4s				
NOV			AML	AML	
	comp=N,154µm,0.9s				
NOV			AML	AML	
	comp=E,160µm,0.4s				
CUC	**Castrocucco**	**1.99 319**	P	**Pn**	**07 50 55.5 +1.6**
CUC			AML	AML	
	comp=E,58µm,1.6s				
CUC			AML	AML	
	comp=N,44µm,1.1s				
CUC			AML	AML	
	comp=E,47µm,0.6s				
CUC			AML	AML	
	comp=N,36µm,0.9s				
CUC			AML	AML	
	comp=N,36µm,0.9s				
CUC			AML	AML	
	comp=E,47µm,0.6s				
CUC			AML	AML	
	comp=N,44µm,1.1s				
CUC			AML	AML	
	comp=E,58µm,1.6s				
CUC			AML	AML	
	comp=N,36µm,0.9s				
CUC			AML	AML	
	comp=E,47µm,0.6s				
CUC			AML	AML	
	comp=N,44µm,1.1s				
CUC			AML	AML	
	comp=E,58µm,1.6s				
VPL	**Vulcano Piano**	**1.99 267**	P	**Pn**	**07 50 54.3 +0.4**
VPL			AML	AML	
	comp=E,554µm,0.5s				
VPL			AML	AML	
	comp=N,514µm,1.6s				
VPL			AML	AML	
	comp=E,554µm,0.5s				
VPL			AML	AML	
	comp=N,514µm,1.6s				
VPL			AML	AML	
	comp=E,554µm,0.5s				
VPL			AML	AML	
	comp=N,514µm,1.6s				
SIRI	**Monte Sirino -**	**2.11 323**	P	**Pn**	**07 50 57.8 +2.2**
SIRI			AML	AML	
	comp=E,60µm,0.4s				
SIRI			AML	AML	
	comp=N,58µm,0.6s				
SIRI			AML	AML	
	comp=N,58µm,0.6s				
SIRI			AML	AML	
	comp=E,60µm,0.4s				
SIRI			AML	AML	
	comp=N,58µm,0.6s				
SIRI			AML	AML	
	comp=E,60µm,0.4s				
MUCR	**Ucria**	**2.13 258**	P	**Pn**	**07 50 57.0 +1.1**
MUCR			AML	AML	
	comp=E,96µm,0.3s				
MUCR			AML	AML	
	comp=N,103µm,0.5s				
MUCR			AML	AML	
	comp=N,103µm,0.5s				
MUCR			AML	AML	
	comp=E,96µm,0.3s				
MUCR			AML	AML	
	comp=N,103µm,0.5s				
MUCR			AML	AML	
	comp=E,96µm,0.3s				
KEK	**Kerkira**	**2.15 55**	P	**Pn**	**07 50 56.9 +0.9**
AGST	**Augusta-Monte**	**2.20 236**	P	**Pn**	**07 50 55.5 -1.2**
AGST			AML	AML	
	comp=E,204µm,0.4s				
AGST			AML	AML	
	comp=N,254µm,0.3s				
AGST			AML	AML	
	comp=N,254µm,0.3s				
AGST			AML	AML	
	comp=E,204µm,0.4s				
AGST			AML	AML	
	comp=N,254µm,0.3s				
AGST			AML	AML	
	comp=E,204µm,0.4s				
HAGA	**Augusta**	**2.23 238**	P	**Pn**	**07 50 55.8 -1.2**
HAGA			AML	AML	
	comp=E,176µm,0.9s				
HAGA			AML	AML	
	comp=N,148µm,1.5s				
HAGA			AML	AML	
	comp=N,148µm,1.5s				
HAGA			AML	AML	
	comp=E,176µm,0.9s				
HAGA			AML	AML	
	comp=N,148µm,1.5s				
HAGA			AML	AML	
	comp=E,176µm,0.9s				
MTSN	**Montesano sull**	**2.23 323**	P	**Pn**	**07 50 59.5 +2.2**
MTSN			AML	AML	
	comp=E,41µm,0.8s				
MTSN			AML	AML	
	comp=N,37µm,0.9s				
MTSN			AML	AML	
	comp=N,37µm,0.9s				
MTSN			AML	AML	
	comp=E,41µm,0.8s				
MTSN			AML	AML	
	comp=N,37µm,0.9s				
MTSN			AML	AML	
	comp=E,41µm,0.8s				
MNO	**Monte Soro**	**2.29 257**	P	**Pn**	**07 50 59.5 +1.3**
MNO			AML	AML	
	comp=E,125µm,1.2s				
MNO			AML	AML	
	comp=N,155µm,0.5s				
MNO			AML	AML	
	comp=N,155µm,0.5s				
MNO			AML	AML	
	comp=E,125µm,1.2s				
MNO			AML	AML	
	comp=N,155µm,0.5s				
MNO			AML	AML	
	comp=E,125µm,1.2s				
HCRL	**Carlentini**	**2.31 239**	P	**Pn**	**07 50 57.4 -0.9**
NOCI	**Noci**	**2.31 351**	P	**Pn**	**07 50 59.2 +0.9**
NOCI			AML	AML	
	comp=E,274µm,0.7s				
NOCI			AML	AML	
	comp=N,320µm,0.1s				
NOCI			AML	AML	
	comp=N,320µm,0.1s				
NOCI			AML	AML	
	comp=E,274µm,0.7s				
NOCI			AML	AML	
	comp=N,320µm,0.1s				
NOCI			AML	AML	
	comp=E,274µm,0.7s				
MSFR	**San Fratello**	**2.35 259**	AML	AML	
	comp=E,59µm,1.5s				
MSFR			AML	AML	
	comp=E,59µm,1.5s				
MSFR			AML	AML	
	comp=N,39µm,0.2s				
MSFR			AML	AML	
	comp=E,59µm,1.5s				
MSFR			AML	AML	
	comp=N,39µm,0.2s				
MSFR			AML	AML	
	comp=N,39µm,0.2s				
SSY	**Sortino**	**2.36 236**	P	**Pn**	**07 50 57.7 -1.2**
SSY			AML	AML	
	comp=E,286µm,0.1s				
SSY			AML	AML	
	comp=N,680µm,1.3s				
SSY			AML	AML	
	comp=N,680µm,1.3s				
SSY			AML	AML	
	comp=E,286µm,0.1s				
SSY			AML	AML	
	comp=N,680µm,1.3s				
SSY			AML	AML	
	comp=E,286µm,0.1s				
FSK	**Fiskardo**	**2.39 90**	P	**Pn**	**07 51 00.3 +1.0**
VLS	**Valsamata**	**2.44 97**	P	**Pn**	**07 51 00.3 +0.3**
VLS	**Valsamata**	**2.44 97**	P	**Pn**	**07 51 00.2 +0.3**
VLS			AML	AML	
	comp=E,33µm,1.5s				
VLS			AML	AML	
	comp=N,28µm,1.2s				
VLS			AML	AML	
	comp=N,28µm,1.2s				
VLS			AML	AML	
	comp=E,33µm,1.5s				
VLS			AML	AML	
	comp=N,28µm,1.2s				
VLS			AML	AML	
	comp=E,33µm,1.5s				
HAVL	**Avola**	**2.44 232**	P	**Pn**	**07 50 58.8 -1.3**
HAVL			AML	AML	
	comp=E,312µm,0.7s				
HAVL			AML	AML	
	comp=N,375µm,0.3s				
HAVL			AML	AML	
	comp=N,375µm,0.3s				
HAVL			AML	AML	
	comp=E,312µm,0.7s				
HAVL			AML	AML	
	comp=N,375µm,0.3s				
HAVL			AML	AML	
	comp=E,312µm,0.7s				
GALF	**Gagliano Caste**	**2.46 252**	P	**Pn**	**07 51 01.4 +1.1**
GALF			AML	AML	
	comp=E,59µm,0.8s				
GALF			AML	AML	
	comp=N,58µm,0.4s				
GALF			AML	AML	
	comp=E,59µm,0.8s				
GALF			AML	AML	
	comp=N,58µm,0.4s				
GALF			AML	AML	
	comp=E,59µm,0.8s				
GALF			AML	AML	
	comp=N,58µm,0.4s				
EVGI	**Lefkada island**	**2.46 86**	P	**Pn**	**07 51 01.7 +1.4**
LKD2	**Lefkada island**	**2.48 82**	P	**Pn**	**07 51 01.7 +1.2**
TSLK	**Tsoukalades, L**	**2.48 82**	P	**Pn**	**07 51 01.9 +1.4**
MEU	**Monte Lauro**	**2.48 237**	P	**Pn**	**07 51 00.3 -0.4**
MEU			AML	AML	
	comp=E,906µm,0.4s				
MEU			AML	AML	
	comp=N,802µm,0.2s				
MEU			AML	AML	
	comp=N,802µm,0.2s				
MEU			AML	AML	
	comp=E,906µm,0.4s				
MEU			AML	AML	
	comp=N,802µm,0.2s				
MEU			AML	AML	
	comp=E,906µm,0.4s				
AMUR	**Altamura**	**2.50 344**	P	**Pn**	**07 51 01.6 +0.7**
AMUR			AML	AML	
	comp=E,168µm,0.6s				
AMUR			AML	AML	
	comp=N,110µm,1.3s				
AMUR			AML	AML	
	comp=N,110µm,1.3s				
AMUR			AML	AML	
	comp=E,168µm,0.6s				
AMUR			AML	AML	
	comp=N,110µm,1.3s				
AMUR			AML	AML	
	comp=E,168µm,0.6s				
HVZN	**Vizzini**	**2.58 240**	P	**Pn**	**07 51 01.4 -0.6**
HVZN			AML	AML	
	comp=E,1775µm,0.3s				
HVZN			AML	AML	
	comp=N,1190µm,0.3s				
HVZN			AML	AML	
	comp=N,1190µm,0.3s				
HVZN			AML	AML	
	comp=E,1775µm,0.3s				
HVZN			AML	AML	
	comp=N,1190µm,0.3s				
HVZN			AML	AML	
	comp=E,1775µm,0.3s				
KFL	**Anninata**	**2.60 98**	P	**Pn**	**07 51 02.5 +0.3**
HMDC	**Modica**	**2.66 235**	P	**Pn**	**07 51 02.0 -1.1**
HMDC			AML	AML	
	comp=E,289µm,0.3s				
HMDC			AML	AML	
	comp=N,463µm,0.7s				
HMDC			AML	AML	
	comp=N,463µm,0.7s				
HMDC			AML	AML	
	comp=E,289µm,0.3s				
HMDC			AML	AML	
	comp=N,463µm,0.7s				
HMDC			AML	AML	
	comp=E,289µm,0.3s				
MRVN	**Minervino Murg**	**2.75 339**	P	**Pn**	**07 51 06.0 +1.6**
MRVN			AML	AML	
	comp=E,136µm,0.3s				
MRVN			AML	AML	
	comp=N,160µm,0.5s				
MRVN			AML	AML	
	comp=N,160µm,0.5s				
MRVN			AML	AML	
	comp=E,136µm,0.3s				
MRVN			AML	AML	
	comp=N,160µm,0.5s				
MRVN			AML	AML	
	comp=E,136µm,0.3s				
HBSP	**Bosco Santo Pi**	**2.76 241**	AML	AML	
	comp=E,411µm,0.4s				
HBSP			AML	AML	
	comp=N,266µm,0.2s				
HBSP			AML	AML	
	comp=N,266µm,0.2s				
HBSP			AML	AML	
	comp=E,411µm,0.4s				
HBSP			AML	AML	
	comp=N,266µm,0.2s				
HBSP			AML	AML	
	comp=E,411µm,0.4s				
RAFF	**Raffo Rosso**	**2.80 244**	P	**Pn**	**07 51 05.2 +0.2**
RAFF			AML	AML	
	comp=E,186µm,0.7s				
RAFF			AML	AML	
	comp=N,198µm,0.2s				
RAFF			AML	AML	
	comp=N,198µm,0.2s				
RAFF			AML	AML	
	comp=E,186µm,0.7s				
RAFF			AML	AML	
	comp=N,198µm,0.2s				
RAFF			AML	AML	
	comp=E,186µm,0.7s				

CLTA	Licata	3.12	246	AML	AML		
	comp=N,393µm,0.5s						
CLTA				AML	AML		
	comp=E,193µm,0.3s						
CLTA				AML	AML		
	comp=N,393µm,0.5s						
CLTA				AML	AML		
	comp=E,193µm,0.3s						
CLTA				AML	AML		
	comp=N,393µm,0.5s						
CLTA				AML	AML		
	comp=E,193µm,0.3s						
KPRO	Kipourio	3.32	63	P	Pn	07 51 14.6	+2.4
EVR	Evrytania	3.38	82	P	Pn	07 51 16.1	+3.0
MSAG	Monte S. Angel	3.44	339	AML	AML		
	comp=E,105µm,0.8s						
MSAG				AML	AML		
	comp=E,105µm,0.8s						
MSAG				AML	AML		
	comp=N,240µm,0.2s						
MSAG				AML	AML		
	comp=N,240µm,0.2s						
MSAG				AML	AML		
	comp=E,105µm,0.8s						
MSAG				AML	AML		
	comp=N,240µm,0.2s						
ANX	Ano Chora	3.45	87	P	Pn	07 51 16.4	+2.4
SGRT	San Giovanni R	3.52	338	AML	AML		
	comp=E,64µm,0.1s						
SGRT				AML	AML		
	comp=N,81µm,0.1s						
SGRT				AML	AML		
	comp=N,81µm,0.1s						
SGRT				AML	AML		
	comp=E,64µm,0.1s						
SGRT				AML	AML		
	comp=N,81µm,0.1s						
SGRT				AML	AML		
	comp=E,64µm,0.1s						
TRIZ	Trizonia	3.58	91	P	Pn	07 51 17.4	+1.7
KALE	Kalithea	3.63	90	P	Pn	07 51 18.7	+2.3
THL	Klokotos Trika	3.66	72	P	Pn	07 51 20.1	+3.3
ITM	Ithomi	3.73	109	P	Pn	07 51 18.4	+0.6
AGG	Agios Georgios	3.80	81	P	Pn	07 51 21.7	+3.0
DSF	Desfina	3.93	90	P	Pn	07 51 22.4	+1.8
DBRK	Dubrovnik	4.19	6	*e*Pn	Pn	07 51 24.5	+0.4
DYR	Agios Nikonas	4.20	113	P	Pn	07 51 24.7	+0.5
STON	Ston	4.37	2	*e*Pn	Pn	07 51 26.9	+0.4
HVAR	Hvar	4.74	351	Sn	Sn	07 52 21.1	-4.3
MAKA	Makarska	4.80	356	Sn	Sn	07 52 23.3	-3.4
ZIRJ	Zirje	5.34	345	*e*Pn	Pn	07 51 40.1	+0.3
ZIRJ				Sn	Sn	07 52 35.9	-4.2
MORI	Morici	5.53	346	*e*Pn	Pn	07 51 42.6	+0.1
DUGI	Dugi Otok	5.79	342	*e*Pn	Pn	07 51 46.5	+0.4
DUGI				Sn	Sn	07 52 47.4	-3.8
NVLJ	Novalja	6.38	343	*e*Pn	Pn	07 51 55.5	+1.5
NVLJ				Sn	Sn	07 53 02.5	-3.0

MEX 23 07:53:13.3±0.6**, 15°.77N**×**93°.59W, h90**^{km}±5^{km}**, MD3.7,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.36	100	*e*P	Pn	07 53 25.3	-1.7
PCIG				*e*S	Sn	07 53 35.7	-1.6
TGIG		1.10	24	*e*P	Pn	07 53 33.3	-0.9
TGIG				*e*S	Sn	07 53 48.3	-1.6
CCIG	Comitan	1.48	70	*e*P	Pn	07 53 38.0	-1.0
CCIG				*i* S	Sn	07 53 56.3	-2.1
THIG		1.54	124	*i* P	Pn	07 53 38.2	-1.3
THIG				*e*S	Sn	07 53 58.0	-1.3
CMIG	Matias Romero	1.81	317	*e*P	Pn	07 53 41.8	-1.3
CMIG				*i* S	Sn	07 54 04.0	-1.6

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*NIED **23** 08:09:00, 30°.80N×142°.10E, h5^{km}, Mw3.9 Best double couple: M$_0$7.53000×10^{14} NP1:φ$_s$185.00000°, δ24.00000°, λ128.00000°. NP2:φ$_s$325.00000°, δ71.00000°, λ74.00000°.*

*ISCJB **23** 08:09:56.9±0.8, 30°.85N±0°.06×142°.0E±0°.2, h24^{km}, mb3.8/5, MS3.5/2, Error ellipse: s-maj=21.0km s-min=5.3km az=163.2*

*JMA **23** 08:09:56.3±0.1, 30°.83N×142°.07E, h23^{km}, M4.0*

*IDC **23** 08:09:57.2±3.0, 30°.78N×141°.71E, h0^{km}, mb3.7/5, mb1 3.7/8, mb1mx3.5/46, mbtmp3.7/8, ML3.2/3, MS2.8/5, Ms1 2.8/5, ms1mx2.5/40, Error ellipse: s-maj=111.0km s-min=21.7km az=72.0*

ISC 23 08:09:59.3±1.1**, 30°.82N**±0°.08×**142°.0E**±0°.2**, h24**^{km}**, n22,**
σ**1**^{s}**01**/24**, mb3.8**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.95	321	P	Pn	08 10 43.5	-1.2
JHJ2				*e*S	Sn	08 11 18.8	-0.5
JHJ	Hachijo jima 2	2.97	321	Pn	Pn	08 10 43.6	-1.4
	3.4nm,0.3s,baz=100,slow=24,SNR=6.2						
JHJ				Sn	Sn	08 11 18.1	-1.8
	9.3nm,0.3s,baz=90,slow=1.0,SNR=3.8						
CBIJ	Chichi jima	3.72	178	*e*S	Sn	08 11 37.0	-1.3
BSO1	Boso 1	3.92	347	P	Pn	08 10 57.2	-0.3
BSO4	Boso 4	4.39	342	*e*S	Sn	08 11 55.5	+0.8
JOD2	Odawara 2	5.06	332	P	Pn	08 11 13.8	0.0
JHU	Hanno	5.51	336	P	Pn	08 11 20.0	+0.1
JRY	Ryogami san	5.80	334	P	Pn	08 11 23.9	+0.1
JRY				*e*S	Sn	08 12 29.8	+0.2
JHO	Hitachi	5.90	349	P	Pn	08 11 23.3	-1.9
JAG	Ashikaga	5.98	340	P	Pn	08 11 25.4	-1.0
JAG				*e*S	Sn	08 12 31.7	-2.4
MJAR	Matsushiro Arr	6.53	332	Pn	Pn	08 11 34.3	+0.4
	0.6nm,0.3s,baz=158,slow=11,SNR=17						
MJAR				Sn	Sn	08 12 47.9	+0.3
	0.2nm,0.3s,baz=85,slow=34,SNR=3.0						
MJAR				LR	LR	08 14 16.8	
	comp=Z,32nm,18.4s,baz=130,slow=40						
MAT	Matsushiro	6.53	332	P	Pn	08 11 33.9	0.0
MAT				S	Sn	08 12 47.6	0.0
JNU	Nakatsue	9.73	287	LR	LR	08 15 37.1	
	comp=Z,30nm,20.4s,baz=53,slow=36						
KSRS	Korea Array	13.41	303	LR	LR	08 18 22.3	
	comp=Z,21nm,20.1s,baz=95,slow=38						
KLR	Kul'dur	19.96	340	P	P	08 14 29.7	0.0
	0.2nm,0.3s,baz=157,slow=7.7,SNR=3.6						
SONM	Songino Array	32.01	312	P	P	08 16 24.3	+0.4
	0.6nm,0.5s,baz=110,slow=8.1,SNR=4.5						
MKAR	Makanchi Array	48.05	307	P	P	08 18 37.2	+0.5
	1.0nm,0.7s,baz=88,slow=9.9,SNR=8.0						
KURBB	Kurchatov Arra	50.38	312	P	P	08 18 54.4	0.0
	0.9nm,0.7s,baz=89,slow=7.6,SNR=7.9						
ASAR	Alice Springs	54.73	189	P	P	08 19 27.6	+0.7
	0.4nm,0.6s,baz=3.1,slow=7.0,SNR=4.7						
BVAR	Borovoye Array	55.24	316	P	P	08 19 31.0	+0.7
	0.5nm,0.7s,baz=73,slow=11,SNR=3.1						
EIL	Elat	88.20	304	LR	LR	09 06 47.7	
	comp=Z,27nm,18.0s,baz=65,slow=39						
DAVOX	Davos/Dischmat	91.50	329	LR	LR	09 08 16.0	
	comp=Z,9.2nm,18.8s,baz=260,slow=38						

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*MOS **23** 08:12:36.7±1.1, 17°.56S×178°.81W, h541^{km}, mb4.8/22, Error ellipse: s-maj=9.9km s-min=8.9km az=81.6*

*BJI **23** 08:12:37.9±0.0, 17°.19S×178°.82W, h544^{km}, mb4.6/22, mB4.7/14*

*IDC **23** 08:12:37.1±1.7, 17°.74S×178°.71W, h545^{km}±20^{km}, mb4.1/30, mb1 4.3/31, mb1mx4.1/43, mbtmp5.0/31, Error ellipse: s-maj=11.4km s-min=9.9km az=145.0*

*NEIC **23** 08:12:37.8±1.4, 17°.71S×178°.74W, h556^{km}±6^{km}, mb4.7/200, Error ellipse: s-maj=16.1km s-min=7.7km az=133.0*

*ISCJB **23** 08:12:38.7±0.1, 17°.80S±0°.03×178°.79W±0°.03, h579^{km}, mb4.8/83, Error ellipse: s-maj=4.9km s-min=2.8km az=36.1*

ISC 23 08:12:39.5±0.3**, 17°.80S**±0°.05×**178°.68W**±0°.06**, h579**^{km}**,**
n512, σ**1**^{s}**08**/498**, mb4.8**/83**, 57C-11D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.69	61	*e*P	P	08 14 31.3	-3.9
AFI	Afiamalu	7.69	61	*e*P	P	08 14 31.3	-3.9
NIUE	Niue	8.40	100	*e*P	P	08 14 40.6	-1.4
NIUE	Niue	8.40	100	P	P	08 14 41.1	-0.9
	baz=8.2,SNR=5.0						
FUNA	Funafuti	9.45	347	*e*P	P	08 14 50.2	-2.3
GLKZ	Green Lake	11.43	177	P	P	08 15 10.2	-2.0
MARNC	Mare, Loyalty	13.04	252	*e*P	P	08 15 26.2	-2.6
PINNC	Pines Island,	13.87	248	*e*P	P	08 15 35.0	-2.3
DZM	Mont Dzumac	14.62	251	P	P	08 15 42.9	-1.9
	6.2nm,0.3s,baz=76,slow=19,SNR=84						
DZM	Mont Dzumac	14.62	251	*e*P	P	08 15 42.6	-2.1
KNTN	Kanton	16.42	25	*e*P	P	08 15 58.6	-3.1
	131nm,0.9s						
NFK	Norfolk Island	16.60	225	P	P	08 16 04.5	+1.3
	baz=17,SNR=3.8						
OUZ	Omahuta	18.66	200	*e*P	P	08 16 23.5	+1.6
	34nm,0.7s						
OUZ	Omahuta	18.66	200	P	P	08 16 23.9	+2.0
WCZ	Waipu Caves	19.10	198	P	P	08 16 29.0	+3.2
KUZ	Kuaotunu	19.51	194	P	P	08 16 31.0	+1.5
WIAZ	Waiheke Island	19.69	195	P	P	08 16 32.8	+1.6
ETAZ	East Tamaki Re	19.90	195	P	P	08 16 34.9	+1.8
WTAZ	Waiatarua	19.97	196	P	P	08 16 35.6	+1.9
MKAZ	Moumakai	19.98	195	P	P	08 16 35.4	+1.6
HAZ	Te Kaha	20.12	188	P	P	08 16 35.3	+0.3
HAZ				S	S	08 19 39.4	-6.3
PKGZ	Pakihiroa	20.21	187	P	P	08 16 35.5	-0.5
WHRZ	Whale Island	20.34	190	P	P	08 16 34.7	-2.4
RUGZ	Raukumara Rang	20.34	188	P	P	08 16 36.8	-0.4
TGRZ	Tauranga	20.34	192	P	P	08 16 38.5	+1.4
PUZ	Puketiti	20.37	187	P	P	08 16 37.4	0.0
TOZ	Tahuroa Road	20.50	193	P	P	08 16 40.7	+2.2
TWGZ	Tauwhareparae	20.51	188	P	P	08 16 37.7	-0.9
TWGZ				S	S	08 19 51.3	-0.6
URZ	Urewera	20.71	189	P	P	08 16 38.4	-2.0
	11nm,0.3s,baz=352,slow=0.9,SNR=30						
URZ				S	S	08 19 49.9	-5.1
	4.7nm,0.8s,baz=11,slow=19,SNR=3.7						
URZ	Urewera	20.71	189	*e*P	P	08 16 39.3	-1.1
	25nm,0.9s						
URZ	Urewera	20.71	189	P	P	08 16 38.4	-2.0
MWZ	Matawai	20.73	188	P	P	08 16 38.8	-1.8
MWZ				S	S	08 19 53.0	-2.3
CNGZ	Carnagh Statio	20.79	187	P	P	08 16 41.5	+0.4
TKGZ	Te Karaka	20.79	188	P	P	08 16 41.1	+0.1
MUGZ	Murupara	20.98	190	P	P	08 16 42.2	-0.6
RIGZ	Rimuhau	21.06	188	P	P	08 16 43.6	0.0
RAHZ	Arahi	21.36	189	P	P	08 16 45.3	-1.0
BKZ	Black Stump Fm	21.70	190	*e*P	P	08 16 47.5	-1.9
	33nm,1.7s						
OTVZ	Oturere	21.85	192	P	P	08 16 50.2	-0.6
VRZ	Vera Road	22.00	194	P	P	08 16 54.0	+2.0
BFZ	Birch Farm	23.22	190	*e*P	P	08 17 02.0	-0.8
	31nm,1.1s						
LTZ	Lake Taylor	26.06	195	*e*P	P	08 17 27.3	-0.7
	26nm,0.7s						
OXZ	Oxford	26.63	195	*e*P	P	08 17 32.0	-0.8
	43nm,0.7s						
RPZ	Rata Peaks	27.25	196	P	P	08 17 37.7	-0.6
	9.2nm,0.4s,baz=28,slow=5.7,SNR=15						
FOZ	Fox Glacier	27.44	198	*e*P	P	08 17 39.5	-0.4
	48nm,0.6s						
PPT	Papeete	27.72	94	P	P	08 17 43.2	+0.4
	28nm,0.8s,baz=53,slow=20,SNR=2.7						
WKZ	Wanaka	28.85	198	*e*P	P	08 17 51.2	-1.0
	121nm,1.5s						
EIDS	Eidsvold	29.06	250	*e*P	P	08 17 53.8	-0.5
	39nm,0.8s						
EIDS	Eidsvold	29.06	250	P	P	08 17 53.8	-0.5
	baz=29,SNR=14						
MLZ	Mavora Lakes	29.61	199	*e*P	P	08 17 59.2	+0.4
	62nm,0.7s						
KWAJ	Kwajalein Atol	29.70	332	P	P	08 17 59.0	-0.9
ARMA	Armidale	29.77	240	*e*P	P	08 18 01.0	+0.5
	47nm,0.8s						
ARMA	Armidale	29.77	240	P	P	08 18 01.2	+0.6
	baz=30,SNR=51						
WHZ	Wether Hill Ro	30.14	199	*e*P	P	08 18 03.4	+0.1
	47nm,1.0s						
MGCD	Mangrove Creek	31.14	235	P	P	08 18 13.1	+1.0
	baz=31,SNR=13						
RMQ	Roma	31.30	248	P	P	08 18 14.1	+0.5
	baz=32,SNR=35						
CTAO	Charters Tower	33.21	260	*e*P	P	08 18 29.1	-0.7
	29nm,0.8s						
CTAO	Charters Tower	33.21	260	*e*P	P	08 18 29.1	-0.7
CTAO				pmax	pmax		
	comp=Z,29nm,0.8s						
CNB	Canberra Magne	33.29	232	P	P	08 18 31.2	+0.9
	baz=34,SNR=67						
CAN	Canberra	33.56	232	*e*P	P	08 18 33.0	+0.4
	comp=Z,41nm,1.0s						
CAN	Canberra	33.56	232	*e*P	P	08 18 33.0	+0.4
CAN				pmax	pmax		
	comp=Z,41nm,1.0s						
MILA	Mila	34.16	229	P	P	08 18 38.2	+0.7
	baz=34,SNR=5.0						
PMG	Port Moresby	34.19	280	*e*P	P	08 18 38.3	+0.3
	comp=Z,92nm,0.9s						
PMG	Port Moresby	34.19	280	*e*P	P	08 18 38.3	+0.3
PMG				pmax	pmax		
	comp=Z,92nm,0.9s						
CMSA	Cobar Meteorol	34.98	240	P	P	08 18 44.7	+0.3
	baz=35,SNR=67						
MTSU	Mount Surprise	35.16	264	P	P	08 18 45.8	-0.4
	baz=35,SNR=11						
MANU	Manus Island	36.82	291	*e*P	P	08 18 59.9	+0.1
	comp=Z,36nm,0.8s						
COEN	Coen	36.85	270	*e*P	P	08 18 59.9	-0.1
	comp=Z,38nm,0.6s						
COEN	Coen	36.85	270	P	P	08 19 00.1	+0.1
	baz=37,SNR=39						
TOO	Toolangi	37.04	231	*e*P	P	08 19 01.9	+0.6
	comp=Z,88nm,0.8s						
TOO	Toolangi	37.04	231	P	P	08 19 02.1	+0.7
	baz=37,SNR=27						
TOO	Toolangi	37.04	231	*e*P	P	08 19 01.9	+0.6
TOO				pmax	pmax		
	comp=Z,88nm,0.8s						
MOO	Moorlands	38.00	222	P	P	08 19 10.1	+1.1
	baz=38,SNR=4.9						
TAU	Tasmania Unive	38.15	222	*e*P	P	08 19 10.6	+0.4
	comp=Z,34nm,0.8s						
TAU	Tasmania Unive	38.15	222	*e*P	P	08 19 10.6	+0.4
TAU				pmax	pmax		
	comp=Z,34nm,0.8s						
STKA	Stephens Creek	38.46	241	P	P	08 19 13.6	+0.7
	comp=Z,31nm,0.5s,baz=92,slow=10,SNR=140						
STKA	Stephens Creek	38.46	241	*e*P	P	08 19 13.6	+0.7
	comp=Z,16nm,1.0s						
STKA	Stephens Creek	38.46	241	P	P	08 19 13.6	+0.7
	baz=39,SNR=80						
STKA	Stephens Creek	38.46	241	*e*P	P	08 19 13.6	+0.7
STKA				pmax	pmax		
	comp=Z,16nm,1.0s						
QIS	Mount Isa	39.42	259	P	P	08 19 19.9	-0.9
	baz=40,SNR=6.3						
ARPS	Mount Arapiles	39.51	233	P	P	08 19 21.8	+0.5
	baz=40,SNR=12						
HTT	Hallett	40.98	239	P	P	08 19 33.7	+0.6
	baz=41,SNR=83						
BBOO	Buckleboo	43.23	241	*e*P	P	08 19 50.9	+0.2
	comp=Z,102nm,0.9s						
BBOO	Buckleboo	43.23	241	P	P	08 19 50.9	+0.2
	baz=43,SNR=193						
KHLU	Kahalu`u	43.38	32	*e*P	P	08 19 51.6	-0.4
	comp=Z,81nm,0.8s						
HUH	Hualalai	43.48	32	*e*P	P	08 19 52.9	-0.2
	comp=Z,145nm,1.4s						
HMH	Humuʻula Sheep	43.59	33	*e*P	P	08 19 53.8	-0.2
	comp=Z,183nm,1.1s						
HPAH	Hawaii Prepara	43.84	32	*e*P	P	08 19 55.4	-0.2
	comp=Z,159nm,1.3s						
WB2	Warramunga Arr	44.39	259	*e*P	P	08 19 58.7	-1.1
	comp=Z,30nm,0.7s						
WRAB	Tennant Creek	44.39	259	*e*P	P	08 19 59.0	-0.9
	comp=Z,25nm,0.8s						
WRAB	Tennant Creek	44.39	259	*e*P	P	08 19 59.0	-0.9
WRAB				pmax	pmax		
	comp=Z,25nm,0.8s						
WRA	Warramunga Arr	44.40	259	P	P	08 19 59.1	-0.8
	comp=Z,24nm,0.6s,baz=88,slow=8.3,SNR=106						
WRA				S	S	08 25 48.9	-4.5
	comp=Z,2.7nm,0.9s,baz=106,slow=8.8,SNR=3.7						
AS31	Alice Springs	44.57	254	*e*P	P	08 20 00.9	-0.3
	comp=Z,53nm,0.6s						
ASAR	Alice Springs	44.57	254	P	P	08 20 00.9	-0.3
	comp=Z,190nm,0.6s,baz=88,slow=8.2,SNR=2296						
ASAR				ScP	ScP	08 24 33.3	+4.2
	comp=Z,2.6nm,0.8s,baz=98,slow=3.4,SNR=7.0						
ASAR				S	S	08 25 53.9	-1.9
	comp=Z,2.7nm,0.9s,baz=86,slow=15,SNR=9.9						
ASAR	Alice Springs	44.57	254	P	P	08 20 01.0	-0.3
KDU	Kakadu	47.30	269	P	P	08 20 21.4	-0.6
	baz=48,SNR=17						
GUMO	Guam	47.61	309	P	P	08 20 23.9	-0.3
	comp=Z,45nm,0.7s,baz=209,slow=8.7,SNR=5.8						
WRKA	Warakurna	49.63	252	P	P	08 20 39.1	-0.1
	baz=50,SNR=67						
FORT	Forrest	49.82	245	*e*P	P	08 20 40.1	-0.4
	comp=Z,71nm,0.6s						
FORT	Forrest	49.82	245	P	P	08 20 40.0	-0.4
	baz=50,SNR=24						
KNRA	Kununurra	50.24	264	P	P	08 20 43.2	-0.5
	baz=50,SNR=9.1						
KMBL	Kambalda	55.13	244	P	P	08 21 17.5	-0.7
	baz=55,SNR=7.4						
SOEI	Soe	55.81	270	*e*P	P	08 21 24.1	+0.7
	comp=Z,61nm,0.9s						
MEEK	Meekatharra	58.23	249	P	P	08 21 38.9	-0.7
	baz=58,SNR=7.3						
NWAO	Narrogin (SRO)	59.03	242	P	P	08 21 45.2	+0.4
	baz=59,SNR=3.5						
MUN	Mundaring	59.94	243	P	P	08 21 51.1	+0.2
	baz=60,SNR=3.6						
SBA	Scott Base	60.51	184	*e*P	P	08 21 55.9	+2.1
	comp=Z,14nm,1.1s						
SBA	Scott Base	60.51	184	*e*P	P	08 21 55.9	+2.1
SBA				pmax	pmax		
	comp=Z,14nm,1.1s						
VNDA	Vanda	60.53	185	P	P	08 21 55.7	+1.7
	comp=Z,2.0nm,0.8s,baz=359,slow=6.6,SNR=8.9						
VNDA	Vanda	60.53	185	*e*P	P	08 21 55.9	+2.0
	comp=Z,3.3nm,1.0s						
VNDA	Vanda	60.53	185	*e*P	P	08 21 55.9	+2.0
GIRL	Giralia	62.68	253	P	P	08 22 09.8	+1.0
	baz=63,SNR=8.5						
JHJ	Hachijo jima 2	64.33	322	P	P	08 22 18.8	-0.3
	comp=Z,165nm,1.0s,baz=109,slow=15,SNR=3.7						
MJAR	Matsushiro Arr	67.67	323	P	P	08 22 39.2	-0.6
	comp=Z,19nm,0.7s,baz=164,slow=6.2,SNR=35						
MAJO	Matsushiro	67.67	323	*e*P	P	08 22 39.0	-0.8
	comp=Z,18nm,0.9s						
MAJO	Matsushiro	67.67	323	*e*P	P	08 22 39.0	-0.8
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s						
MAT	Matsushiro	67.67	323	P	P	08 22 39.2	-0.6
MAT				S	S	08 30 52.2	0.0
ASAJ	Asahikawa	71.06	332	P	P	08 23 00.9	+1.1
	comp=Z,10nm,0.5s,baz=210,slow=6.2,SNR=18						
SKR	Severo-Kuril’s	71.70	343	*i* P	P	08 23 02.7	-0.7
UNV	Unalaska Valle	72.12	8	*e*P	P	08 23 04.2	-1.5
	comp=Z,25nm,0.8s						
QSPA	South Pole Qui	72.25	180	*e*P	P	08 23 08.0	+1.4
	comp=Z,16nm,1.0s						
YSS	Yuzh-Sakhalins	73.20	334	*e*P	P	08 23 13.0	+0.9
YSS				pmax	pmax		
	comp=Z,14nm,0.9s						
PET	Petropavlovsk	73.21	346	*e*P	P	08 23 11.4	-0.6
	comp=Z,14nm,0.7s						
PET	Petropavlovsk	73.21	346	⇑*i*P	P	08 23 10.9	-1.1
PET				pmax	pmax		
	comp=Z,22nm,0.7s						
PEA0B	Petropavlovsk-	73.51	345	*e*P	P	08 23 13.4	-0.3
	comp=Z,28nm,0.8s						
PEA0B	Petropavlovsk-	73.51	345	*e*P	P	08 23 13.5	-0.3
PEA0B				pmax	pmax		
	comp=Z,28nm,0.8s						
PETK	Petropavlovsk-	73.51	345	P	P	08 23 13.3	-0.4
	comp=Z,36nm,0.9s,baz=121,slow=8.2,SNR=66						
TJN	Taejon	74.16	317	*i* P	P	08 23 16.4	-1.4
KSRS	Korea Array	74.45	318	P	P	08 23 20.4	+1.0
	comp=Z,3.2nm,0.7s,baz=129,slow=6.2,SNR=6.1						
SPIA	Saint Paul Isl	75.02	5	*e*P	P	08 23 21.4	-0.7
	comp=Z,57nm,0.8s						
MSHR	Mys Shultsa	75.76	324	*e*P	P	08 23 27.0	+0.4
SCZ2	Santa Cruz Isl	76.23	47	P	P	08 23 30.5	+1.1
	baz=237						
TYV	Tymovskoe	76.33	336	*e*P	P	08 23 29.7	+0.2
TYV				pmax	pmax		
	comp=Z,100nm,3.3s						
TYV				pmax	pmax		
	comp=Z,31nm,1.0s						
USRK	Ussuriysk Ar.	76.38	326	P	P	08 23 30.5	+0.5
	comp=Z,3.6nm,0.7s,baz=122,slow=4.9,SNR=8.8						
SCI2	San Clemente I	76.46	49	P	P	08 23 31.8	+1.2
	baz=238						
PKM	Mcpherson Peak	76.59	46	P	P	08 23 32.6	+1.0
	baz=237						
BLG	Laguna Peak, P	76.69	47	P	P	08 23 32.6	+0.7
	baz=238						
SMMC	Simmler	76.69	46	P	P	08 23 33.1	+1.1
	baz=237						
CIS	Catalina Islan	76.77	48	P	P	08 23 33.1	+0.7
	baz=238						
ARVC	Arvin	77.40	47	P	P	08 23 36.6	+0.9
	baz=238						
109C	Camp Elliot, M	77.44	49	P	P	08 23 36.8	+0.8
	baz=239						
VES	Vestal, Richgr	77.60	46	P	P	08 23 37.4	+0.6
	baz=237,SNR=15						
O02D	Mt. Diablo Mer	77.64	40	P	P	08 23 38.2	+1.2
	baz=234						
NJ2	Nanjing	77.67	310	*e*P	P	08 23 37.0	-0.2
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
MURC	Murrieta	77.75	49	P	P	08 23 38.5	+0.8
	baz=239						
BFSC	Mount Baldy Ra	77.75	48	P	P	08 23 38.4	+0.6
	baz=238,SNR=8.1						
EDW2	Edwards Air Fo	77.85	47	P	P	08 23 39.2	+1.0
	baz=238,SNR=29						
ISA	Isabella, Lake	77.93	46	*e*P	P	08 23 39.2	+0.5
	comp=Z,29nm,0.9s						
ISA	Isabella, Lake	77.93	46	*e*P	P	08 23 39.2	+0.5
ISA				pmax	pmax		
	comp=Z,29nm,0.9s						
ISA	Isabella, Lake	77.93	46	P	P	08 23 39.6	+0.9
	baz=238,SNR=18						
MONP2	Monument Peak	77.94	50	P	P	08 23 40.0	+1.1
	baz=240,SNR=17						
WDC	Whiskeytown Da	78.03	40	*e*P	P	08 23 39.5	+0.5
	comp=Z,8.8nm,1.1s						
WDC	Whiskeytown Da	78.03	40	*e*P	P	08 23 39.5	+0.5
WDC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
IKP	In-Ko-Pah, Jac	78.05	50	P	P	08 23 40.5	+1.1
	baz=240,SNR=13						
N02D	Trinity Center	78.16	40	P	P	08 23 40.9	+1.1
	baz=234						
PFO	Pinyon Flats O	78.28	49	P	P	08 23 41.6	+1.0
	comp=Z,4.1nm,0.9s,baz=235,slow=4.8,SNR=6.1						
PFO	Pinyon Flats O	78.28	49	*e*P	P	08 23 41.0	+0.3
	comp=Z,4.4nm,0.8s						
PFO	Pinyon Flats O	78.28	49	P	P	08 23 41.5	+0.9
	baz=239,SNR=5.3						
BBRC	Big Bear Solar	78.28	48	P	P	08 23 40.9	+0.1
	baz=239						
M02C	Callahan	78.32	39	P	P	08 23 41.8	+1.2
	baz=234						
O03E	Paynes Creek	78.32	41	P	P	08 23 41.1	+0.4
	baz=235,SNR=5.5						
L02E	Cave Junction	78.33	38	P	P	08 23 41.5	+0.9
	baz=233						
KDAK	Kodiak Island	78.36	14	*e*P	P	08 23 40.2	-0.1
	comp=Z,29nm,0.9s						
KDAK	Kodiak Island	78.36	14	*e*P	P	08 23 40.2	-0.1
KDAK				pmax	pmax		
	comp=Z,29nm,0.9s						
LRMC	Laurel Mtn Rad	78.38	47	P	P	08 23 42.0	+0.8
	baz=238,SNR=9.9						
SWSC	Sam W. Stewart	78.42	50	P	P	08 23 42.3	+1.0
	baz=240,SNR=6.8						
RRX	Edison Barstow	78.54	48	P	P	08 23 42.7	+0.8
	baz=239						
YBH	Yreka Blue Hor	78.60	39	P	P	08 23 42.8	+0.6
	comp=Z,12nm,0.8s,baz=143,slow=1.5,SNR=12						
YBH	Yreka Blue Hor	78.60	39	*e*P	P	08 23 42.5	+0.3
	comp=Z,17nm,0.9s						
YBH	Yreka Blue Hor	78.60	39	*e*P	P	08 23 42.5	+0.3
YBH				pmax	pmax		
	comp=Z,17nm,0.9s						
CWC	Cottonwood Cre	78.61	46	P	P	08 23 43.3	+0.8
	baz=238						
K02D	Willamette Mer	78.61	38	P	P	08 23 43.1	+1.0
	baz=233						
OMMB	Old Mammoth Mi	78.62	44	*e*P	P	08 23 43.1	+0.5
	comp=Z,23nm,1.3s						

MLAC	**Mammoth, Mammo**	**78.74**	**44**	P	**P**	**08 23 44.1**	**+1.0**
	baz=237						
J01E	**Myrtle Point**	**78.74**	**38**	P	**P**	**08 23 43.7**	**+1.0**
	baz=232						
BELC	**Belle Mtn. Jos**	**78.81**	**49**	P	**P**	**08 23 44.4**	**+0.9**
	baz=240,SNR=13						
MPMC	**Manual Prospec**	**78.81**	**46**	P	**P**	**08 23 44.5**	**+0.9**
	baz=238,SNR=14						
GSC	**Goldstone, Bar**	**78.90**	**47**	P	**P**	**08 23 44.5**	**+0.6**
	baz=239,SNR=7.0						
HEC	**Hector,Ludlow**	**78.99**	**48**	P	**P**	**08 23 45.0**	**+0.7**
	baz=239						
BC3	**Big Chuckawall**	**79.03**	**49**	P	**P**	**08 23 45.8**	**+1.2**
	baz=240,SNR=6.3						
L04D	**Klamath Falls**	**79.14**	**39**	P	**P**	**08 23 45.8**	**+0.8**
	baz=234,SNR=5.0						
M04C	**Macdoel**	**79.16**	**40**	P	**P**	**08 23 46.0**	**+0.8**
	baz=234						
GLA	**Glamis**	**79.18**	**50**	P	**P**	**08 23 46.8**	**+1.4**
	baz=240,SNR=6.2						
GRAC	**Grapevine Rang**	**79.39**	**46**	P	**P**	**08 23 47.6**	**+1.3**
	baz=238,SNR=7.4						
I03D	**Drain, OR**	**79.40**	**37**	P	**P**	**08 23 47.0**	**+0.9**
	baz=233						
GMRC	**Granite Mounta**	**79.44**	**48**	P	**P**	**08 23 47.5**	**+0.7**
	baz=240,SNR=6.5						
FURC	**Furnace Creek,**	**79.46**	**46**	P	**P**	**08 23 47.4**	**+0.8**
	baz=239,SNR=5.6						
IRM	**Iron Mountain**	**79.50**	**49**	P	**P**	**08 23 48.2**	**+1.2**
	baz=240,SNR=7.4						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**08 23 48.2**	**+0.9**
	comp=Z,13nm,0.8s,baz=226,slow=8.9,SNR=75						
TUQ	**Turquoise Moun**	**79.58**	**48**	P	**P**	**08 23 48.5**	**+0.9**
	baz=239,SNR=12						
NV11	**Mina Array Sit**	**79.62**	**44**	*e*P	**P**	**08 23 48.4**	**+0.7**
	comp=Z,1.6nm,1.1s						
K04D	**Chiloquin, OR**	**79.70**	**39**	P	**P**	**08 23 48.7**	**+0.7**
	baz=234						
Y12C	**Blythe**	**79.75**	**50**	P	**P**	**08 23 49.5**	**+1.3**
	baz=241,SNR=6.1						
J04D	**Umpqua Nationa**	**79.85**	**38**	P	**P**	**08 23 49.8**	**+1.0**
	baz=234,SNR=10						
KLR	**Kul'dur**	**79.89**	**330**	P	**P**	**08 23 49.3**	**+0.7**
	comp=Z,4.3nm,0.9s,baz=81,slow=2.6,SNR=9.4						
KLR	**Kul'dur**	**79.89**	**330**	*i* P	**P**	**08 23 49.7**	**+1.1**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
I04A	**Tendick Farm,**	**80.00**	**38**	P	**P**	**08 23 49.7**	**+0.2**
	baz=234						
TPNV	**Topopah Spring**	**80.13**	**46**	P	**P**	**08 23 51.4**	**+0.9**
	baz=239,SNR=15						
214A	**Organ Pipe Nat**	**80.15**	**52**	P	**P**	**08 23 51.9**	**+1.4**
	baz=242						
H04D	**Lebanon**	**80.25**	**37**	P	**P**	**08 23 51.6**	**+0.9**
	baz=233						
PDMCI	**Parker Dam,Lak**	**80.29**	**49**	P	**P**	**08 23 52.1**	**+1.1**
	baz=241						
J05D	**Fort Rock, OR**	**80.40**	**39**	P	**P**	**08 23 52.8**	**+1.2**
	baz=234,SNR=30						
I05D	**Terrebonne, OR**	**80.95**	**38**	P	**P**	**08 23 55.1**	**+0.8**
	baz=234						
MA2	**Magadan**	**81.03**	**345**	P	**P**	**08 23 53.5**	**-0.8**
	comp=Z,11nm,0.6s,baz=139,slow=7.9,SNR=7.4						
MA2	**Magadan**	**81.03**	**345**	*e*P	**P**	**08 23 53.2**	**-1.0**
	comp=Z,20nm,1.0s						
MA2	**Magadan**	**81.03**	**345**	*e*P	**P**	**08 23 53.3**	**-1.0**
MA2				pmax	pmax		
	comp=Z,20nm,1.0s						
R11A	**Troy Canyon, C**	**81.30**	**45**	P	**P**	**08 23 57.1**	**+0.6**
	baz=239,SNR=14						
G05D	**Wamic, OR**	**81.49**	**37**	P	**P**	**08 23 57.7**	**+0.7**
	baz=234						
E04D	**Cinebar**	**81.57**	**35**	P	**P**	**08 23 58.3**	**+1.0**
	baz=233						
F05D	**White Salmon**	**81.78**	**36**	P	**P**	**08 23 59.3**	**+0.8**
	baz=234						
D04E	**Lakebay**	**81.83**	**35**	P	**P**	**08 23 60.0**	**+1.4**
	baz=233						
TUC	**Tucson**	**81.84**	**52**	*e*P	**P**	**08 24 00.8**	**+1.6**
	comp=Z,16nm,1.0s						
TUC	**Tucson**	**81.84**	**52**	*e*P	**P**	**08 24 00.8**	**+1.6**
TUC				pmax	pmax		
	comp=Z,16nm,1.0s						
TUC	**Tucson**	**81.84**	**52**	P	**P**	**08 24 01.0**	**+1.8**
	baz=243						
D03D	**Eldon**	**81.87**	**34**	P	**P**	**08 23 59.7**	**+0.8**
	baz=233,SNR=7.3						
BBB	**Bella Bella**	**82.35**	**29**	P	**P**	**08 24 01.5**	**+0.4**
	comp=Z,8.5nm,0.7s,baz=255,slow=3.7,SNR=12						
ELK	**Elko**	**82.75**	**43**	P	**P**	**08 24 04.5**	**+0.7**
	comp=Z,11nm,0.9s,baz=258,slow=4.6,SNR=51						
A04D	**Lummi Island**	**82.80**	**34**	P	**P**	**08 24 04.4**	**+0.9**
	baz=233						
B05A	**Bryant**	**82.85**	**34**	P	**P**	**08 24 04.3**	**+0.6**
	baz=233,SNR=11						
WUAZ	**Wupatki**	**82.87**	**49**	P	**P**	**08 24 05.8**	**+1.4**
	baz=242						
SEY	**Seymchan**	**83.61**	**347**	P	**P**	**08 24 06.9**	**-0.3**
	comp=Z,30nm,0.6s,baz=152,slow=5.6,SNR=83						
SEY	**Seymchan**	**83.61**	**347**	*i* P	**P**	**08 24 07.2**	**0.0**
MAW	**Mawson**	**83.87**	**200**	P	P	08 24 03.3	-5.3
	baz=84,SNR=4.3						
W18A	**Petrified Fore**	**83.88**	**50**	P	**P**	**08 24 10.6**	**+1.1**
	baz=243						
DUG	**Dugway, Tooele**	**84.08**	**45**	P	**P**	**08 24 11.0**	**+0.7**
	baz=241						
121A	**Cookes Peak, D**	**84.21**	**53**	P	**P**	**08 24 12.7**	**+1.5**
	baz=245,SNR=6.0						
HLID	**Hailey**	**84.72**	**41**	P	**P**	**08 24 14.4**	**+1.0**
	baz=240						
ZEA	**Zeya**	**84.97**	**331**	*e*P	**P**	**08 24 14.6**	**+0.5**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
HDA	**Harding Lake**	**85.51**	**13**	P	**P**	**08 24 15.7**	**-0.7**
	baz=210						
NEW	**Newport**	**85.58**	**36**	P	**P**	**08 24 17.4**	**+0.2**
	comp=Z,7.4nm,0.7s,baz=229,slow=5.1,SNR=25						
NEW	**Newport**	**85.58**	**36**	P	**P**	**08 24 17.3**	**+0.1**
	baz=237,SNR=11						
TCOL	**CIGO, UAF Yank**	**85.72**	**13**	P	**P**	**08 24 16.3**	**-1.1**
	baz=209						
COLA	**College**	**85.72**	**13**	*e*P	**P**	**08 24 16.4**	**-1.0**
	comp=Z,69nm,1.5s						
COLA	**College**	**85.72**	**13**	*e*P	**P**	**08 24 16.4**	**-1.0**
COLA				pmax	pmax		
	comp=Z,69nm,1.5s						
MNTX	**Cornudas Mount**	**85.73**	**55**	P	**P**	**08 24 19.6**	**+1.3**
	baz=246,SNR=15						
ILAR	**Eielson Array**	**85.84**	**13**	P	**P**	**08 24 16.9**	**-1.2**
	comp=Z,5.3nm,0.4s,baz=222,slow=5.1,SNR=82						
XAN	**Xi'an**	**85.99**	**307**	P	**P**	**08 24 20.5**	**+1.0**
XAN				pmax	pmax		
	comp=Z,20nm,1.0s						
POKR	**Poker Plat Res**	**86.03**	**13**	P	**P**	**08 24 17.6**	**-1.3**
	baz=210						
TX31	**Lajitas Ar. Si**	**86.16**	**58**	*e*P	**P**	**08 24 22.2**	**+1.7**
	comp=Z,17nm,1.0s						
TXAR	**Lajitas Array**	**86.16**	**58**	P	**P**	**08 24 22.4**	**+1.9**
	comp=Z,10nm,0.8s,baz=220,slow=6.0,SNR=123						
ANMO	**Albuquerque**	**86.23**	**52**	P	**P**	**08 24 21.7**	**+0.8**
	comp=Z,7.1nm,1.0s,baz=219,slow=6.3,SNR=18						
ANMO	**Albuquerque**	**86.23**	**52**	*e*P	**P**	**08 24 20.8**	**0.0**
	comp=Z,6.8nm,1.0s						
ANMO	**Albuquerque**	**86.23**	**52**	⇓*i*P	**P**	**08 24 22.1**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANMO	**Albuquerque**	**86.23**	**52**	P	**P**	**08 24 21.5**	**+0.7**
	baz=245						
BILL	**Bilibino**	**86.30**	**354**	*e*P	**P**	**08 24 20.2**	**+0.1**
	comp=Z,22nm,1.0s						
BILL	**Bilibino**	**86.30**	**354**	*c* *e*P	**P**	**08 24 19.6**	**-0.5**
BILL				*e*SS	SS	08 40 08.2	+3.1
BILL				pmax	pmax		
	comp=Z,16nm,0.9s						
MSO	**Missoula**	**86.66**	**38**	P	**P**	**08 24 22.4**	**-0.1**
	baz=240						
HHC	**Hu-ho-hao-te**	**87.01**	**315**	*e*P	**P**	**08 24 26.3**	**+2.0**
S22A	**4UR Ranch, Cre**	**87.13**	**49**	P	**P**	**08 24 26.2**	**+1.0**
	baz=245,SNR=10.0						
O20A	**White River Ci**	**87.16**	**46**	P	**P**	**08 24 25.8**	**+0.7**
	baz=244,SNR=5.4						
BOZ	**Bozeman (W)**	**87.45**	**40**	P	**P**	**08 24 27.1**	**+0.8**
	baz=241,SNR=8.6						
BW06	**Boulder Array**	**87.45**	**44**	P	**P**	**08 24 26.8**	**+0.4**
	baz=243,SNR=19						
PDAR	**Pinedale Array**	**87.45**	**44**	P	**P**	**08 24 27.0**	**+0.6**
	comp=Z,7.1nm,0.6s,baz=211,slow=3.3,SNR=84						
PDAR				PP	**PP**	**08 27 59.4**	**-3.0**
	comp=Z,1.1nm,1.0s,baz=243,slow=6.5,SNR=5.9						
H17A	**Grant Village**	**87.54**	**42**	P	**P**	**08 24 28.9**	**+2.0**
	baz=242,SNR=12						
SDCO	**Great Sand Dun**	**88.09**	**49**	P	**P**	**08 24 30.2**	**+0.6**
	baz=246						
CM31	**Chiang Mai Arr**	**88.61**	**290**	*e*P	**P**	**08 24 33.9**	**+1.9**
	comp=Z,11nm,0.3s						
CMAR	**Chiang Mai Arr**	**88.61**	**290**	P	**P**	**08 24 33.9**	**+1.9**
	comp=Z,2.3nm,0.3s,baz=117,slow=3.9,SNR=9.4						
CMAR	**Chiang Mai Arr**	**88.61**	**290**	*i* P	**P**	**08 24 32.5**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MSTX	**Muleshoe**	**88.64**	**54**	P	**P**	**08 24 32.5**	**+0.5**
	baz=248						
T25A	**Trinidad**	**88.64**	**50**	P	**P**	**08 24 32.1**	**0.0**
	baz=247						
RLMT	**Red Lodge**	**88.70**	**42**	P	**P**	**08 24 33.4**	**+1.2**
	baz=243,SNR=9.2						
TOLK	**Toolik Lake Re**	**88.73**	**10**	P	**P**	**08 24 30.9**	**-0.6**
	baz=208						
CD2	**Chengdu**	**88.79**	**303**	*e*P	**P**	**08 24 32.0**	**-0.7**
Q24A	**Divide**	**88.84**	**48**	P	**P**	**08 24 34.1**	**+1.0**
	baz=246						
N23A	**Red Feather La**	**89.07**	**46**	P	**P**	**08 24 35.1**	**+1.0**
	baz=246,SNR=10						
SYO	**Syowa Base**	**89.20**	**193**	⇑*e*P	**P**	**08 24 31.0**	**-2.8**
SYO	**Syowa Base**	**89.20**	**193**	⇓*e*PcP	**P**	**08 24 35.4**	**+1.6**
K22A	**Casper**	**89.41**	**45**	P	**P**	**08 24 36.0**	**+0.5**
	baz=245						
EPYK	**Eagle Plains**	**89.57**	**16**	P	**P**	**08 24 35.2**	**-0.3**
	baz=220						
JCT	**Junction City**	**89.69**	**58**	P	**P**	**08 24 37.0**	**+0.1**
	baz=249						
EGMT	**Eagleton**	**89.73**	**39**	P	**P**	**08 24 37.1**	**+0.4**
	baz=243						
AMTX	**Amarillo**	**89.81**	**53**	P	**P**	**08 24 37.6**	**+0.2**
	baz=248						
ABTX	**Abilene, Hawle**	**90.58**	**56**	P	**P**	**08 24 41.6**	**+0.7**
	baz=249						
LZH	**Lanzhou**	**90.62**	**308**	⇑P	**P**	**08 24 42.6**	**+1.4**
LZH				PP	**PP**	**08 28 31.8**	**+4.5**
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,73nm,9.0s						
SNAA	**Sanae**	**90.71**	**179**	P	**P**	**08 24 41.1**	**+0.2**
VNA3	**Neumayer Olymp**	**90.86**	**176**	P	**P**	**08 24 42.2**	**+0.7**
LAO	**LASA Array**	**91.30**	**41**	P	**P**	**08 24 45.1**	**+1.1**
	baz=245						
VNA1	**Neumayer--Stat**	**91.53**	**177**	P	**P**	**08 24 45.7**	**+1.2**
RSSD	**Black Hills**	**91.67**	**44**	*e*P	**P**	**08 24 45.7**	**-0.2**
	comp=Z,9.9nm,0.9s						
RSSD	**Black Hills**	**91.67**	**44**	*e*P	**P**	**08 24 45.7**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RSSD	**Black Hills**	**91.67**	**44**	P	**P**	**08 24 46.0**	**0.0**
	baz=247						
INK	**Inuvik**	**91.85**	**15**	P	**P**	**08 24 45.5**	**-0.4**
	comp=Z,12nm,1.0s,baz=210,slow=5.8,SNR=29						
WMOK	**Wichita Mounta**	**91.99**	**54**	P	**P**	**08 24 46.9**	**-0.5**
	baz=250						
CBKS	**Cedar Bluff**	**92.69**	**50**	P	**P**	**08 24 50.9**	**+0.3**
	baz=249						
DGMT	**Dagmar**	**93.28**	**40**	P	**P**	**08 24 53.7**	**+0.7**
	baz=247						
SONA0	**Songino Array**	**93.30**	**319**	*e*P	**P**	**08 24 52.7**	**-0.5**
SONM	**Songino Array**	**93.30**	**319**	P	**P**	**08 24 52.7**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=126,slow=4.2,SNR=3.8						
YKA	**Yellowknife Ar**	**94.34**	**25**	P	**P**	**08 24 57.0**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=244,slow=4.4,SNR=19						
BGNE	**Belgrade**	**94.72**	**48**	P	**P**	**08 25 00.5**	**+0.8**
	baz=251						
KSU1	**Kansas State U**	**95.08**	**51**	P	**P**	**08 25 02.2**	**+0.9**
	baz=251						
TIXI	**Tiksi**	**95.99**	**345**	*e*P	**P**	**08 25 03.9**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ECSD	**EROS Data Cent**	**96.54**	**46**	*e*P	**P**	**08 25 08.0**	**+0.2**
	comp=Z,2.6nm,0.6s						
ECSD	**EROS Data Cent**	**96.54**	**46**	P	**P**	**08 25 07.6**	**-0.3**
	baz=252						
WMQ	**Urumqi**	**104.67**	**312**	*e*P	**Pdif**	**08 25 45.0**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,140nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,70nm,3.6s						
KSH	**Kashi**	**112.81**	**306**	*e*PKP	**PKiKP**	**08 30 14.5**	**+3.0**
KSH				PKS	**PKSdf**	**08 33 48.4**	**+0.1**
BVAR	**Borovoye Array**	**116.60**	**321**	PKP	**PKPdf**	**08 30 17.9**	**-0.3**
	comp=Z,2.6nm,0.4s,baz=108,slow=3.3,SNR=13						
BRVK	**Borovoye**	**116.66**	**321**	*i* PKIKP	**PKPdf**	**08 30 17.9**	**-0.4**
CHGR	**Chuyangaron**	**118.06**	**305**	*e*PKPdf	**PKiKP**	**08 30 23.7**	**+2.1**
GBN	**Guysborough**	**121.47**	**47**	*e*PKPdf	**PKPdf**	**08 30 28.0**	**+0.3**
ARU	**Arti**	**122.62**	**326**	PKP	**PKPdf**	**08 30 29.7**	**+0.1**
	comp=Z,2.7nm,0.2s,baz=210,slow=1.1,SNR=7.9						
ARU	**Arti**	**122.62**	**326**	*e*PKPdf	**PKPdf**	**08 30 29.2**	**-0.4**
ARU	**Arti**	**122.62**	**326**	*i* PKIKP	**PKPdf**	**08 30 29.6**	**0.0**
ARU						08 32 13.2	
ARU						08 36 48.0	
AKTO	**Aktyubinsk**	**124.62**	**319**	PKP	**PKPdf**	**08 30 33.6**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=80,slow=2.3,SNR=7.1						
ARA0	**ARCESS Array S**	**126.16**	**350**	*e*PKPdf	**PKPdf**	**08 30 36.5**	**+0.4**
ARCES	**ARCESS Array B**	**126.16**	**350**	PKP	**PKPdf**	**08 30 36.5**	**+0.4**
	comp=Z,3.9nm,0.8s,baz=41,slow=1.9,SNR=10						
KIRV	**Kirov**	**126.31**	**331**	PKP	**PKPdf**	**08 30 37.2**	**+0.6**
	comp=Z,9.2nm,0.4s,baz=171,slow=22,SNR=8.1						
GEYT	**Alibeck**	**126.77**	**304**	PKP	**PKPdf**	**08 30 38.9**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=297,slow=4.8,SNR=4.2						
BOSA	**Boshof**	**128.38**	**207**	PKP	**PKPdf**	**08 30 42.7**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=167,slow=18,SNR=2.6						
FIA0	**FINESS Array S**	**133.01**	**344**	*e*PKPpre	PKPpre	08 30 43.3	
FIA0	**FINESS Array S**	**133.01**	**344**	*e*PKIKP	PKPpre	08 30 43.3	
FINES	**FINESS Array B**	**133.01**	**344**	PKhKP	PKPpre	08 30 43.3	
	comp=Z,8.6nm,1.2s,baz=48,slow=2.8,SNR=4.0						
FINES				PKP	**PKPdf**	**08 30 48.8**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=116,slow=3.2,SNR=9.3						
FINES				PP	**PP**	**08 33 26.6**	**+3.0**
	comp=Z,6.4nm,1.0s,baz=38,slow=3.4,SNR=7.1						
OBN	**Obninsk**	**134.08**	**333**	⇑*i*PKIKP	**PKPdf**	**08 30 52.2**	**+0.8**
OBN						08 33 30.0	
OBN				SS	SS	08 50 31.0	-3.0
OBN				pmax	pmax		
	comp=Z,11nm,0.6s						
NB2	**NORSAR Subarra**	**136.24**	**353**	PKP	PKPpre	08 30 45.1	
	comp=Z,0.3nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**136.24**	**353**	PKhKP	PKPpre	08 30 45.8	
	comp=Z,0.2nm,0.5s,baz=30,slow=1.9,SNR=3.4						
NOA				PKP	**PKPdf**	**08 30 55.1**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=14,slow=4.0,SNR=4.5						
ANN	**Anapa**	**139.58**	**320**	*i* PKHKP	PKPpre	08 30 39.2	
ANN				pmax	pmax		
	comp=Z,40nm,0.9s						
AKASG	**Malin Array Be**	**140.34**	**332**	PKhKP	PKPpre	08 30 56.1	
	comp=Z,1.2nm,0.3s,baz=43,slow=4.1,SNR=6.0						
AKASG				PKP	**PKPdf**	**08 31 02.7**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=43,slow=2.9,SNR=5.2						
AKASG	**Malin Array Be**	**140.34**	**332**	*c* *i*PKIKP	**PKiKP**	**08 31 05.4**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GMM	**Mts of Mourne**	**143.20**	**7**	*e*P	PKPab	08 31 05.6	-0.5
LVV	**L'vov**	**143.20**	**335**	*e*PKHKP	PKPab	08 31 06.0	-0.3
IOMK	**Kirk Michael**	**143.33**	**6**	*e*P	PKPab	08 31 06.0	-0.6
ILGA	**Ilgaz**	**143.82**	**317**	*e*PKPbc	PKPbc	08 31 09.6	+0.5
HPK	**Haverah Park**	**143.84**	**3**	*e*P	PKPbc	08 31 08.0	-0.5
KWP	**Kalwaria Pacla**	**143.87**	**336**	*e*PKP	PKPbc	08 31 09.0	+0.2
KWP	**Kalwaria Pacla**	**143.87**	**336**	*e*PKPbc	PKPbc	08 31 09.1	+0.4
KWP	**Kalwaria Pacla**	**143.87**	**336**	*e*PKIKP	PKPbc	08 31 09.1	+0.4
DSB	**Dublin**	**144.12**	**8**	*e*PKPbc	PKPbc	08 31 09.1	-0.2
WPS	**Cemaes, Angles**	**144.18**	**6**	*e*P	PKPbc	08 31 08.5	-1.0
WME	**Myndd Eilian**	**144.21**	**6**	*e*P	PKPbc	08 31 08.7	-0.9
WLF1	**Llynfaes**	**144.30**	**6**	*e*P	PKPbc	08 31 09.3	-0.6
YRC	**Rhoscolyn**	**144.32**	**6**	*e*P	PKPbc	08 31 09.5	-0.5
TLCR		**144.34**	**326**	⇑*i*P	**PKPdf**	**08 31 11.0**	**+0.7**
TLCR		**144.34**	**326**	⇑PKIKP	**PKPdf**	**08 31 11.0**	**+0.7**
LBWR	**Ladybower, Pea**	**144.39**	**3**	*e*P	PKPbc	08 31 09.4	-0.8
BURAR	**Bucovina Array**	**144.40**	**332**	⇓*i*P	**PKPab**	**08 31 12.0**	**+0.9**
BURAR	**Bucovina Array**	**144.40**	**332**	⇓PKIKP	**PKPab**	**08 31 12.0**	**+0.9**
OJC	**Ojcow**	**144.42**	**340**	*e*PKP	**PKPdf**	**08 31 10.5**	**+0.1**
OJC	**Ojcow**	**144.42**	**340**	*e*PKIKP	**PKPdf**	**08 31 10.5**	**+0.1**
YLL	**Llanberis**	**144.47**	**6**	*e*P	**PKPdf**	**08 31 09.8**	**-0.5**
BIZ	**Bicaz**	**144.49**	**330**	⇑*i*P	**PKPdf**	**08 31 11.0**	**+0.4**
BR131	**Keskin Array S**	**144.52**	**315**	*e*PKPdf	**PKPdf**	**08 31 11.5**	**+0.5**
BR131	**Keskin Array S**	**144.52**	**315**	*e*PKIKP	**PKPdf**	**08 31 11.5**	**+0.5**
BRTR	**Keskin Array B**	**144.52**	**315**	PKP	**PKPdf**	**08 31 11.3**	**+0.3**
	comp=Z,14nm,0.9s,baz=119,slow=2.6,SNR=46						
TESR	**Tescani**	**144.53**	**329**	⇑*i*P	**PKPdf**	**08 31 11.3**	**+0.6**
KOLS	**Kolonicke sedl**	**144.60**	**336**	*e*PKIKP	PKPbc	08 31 11.6	+0.6
KOLS	**Kolonicke sedl**	**144.60**	**336**	*e*PKP	PKPbc	08 31 11.6	+0.6
CFR	**Carcaliu**	**144.70**	**326**	⇑*i*P	**PKPdf**	**08 31 10.8**	**-0.1**
CFR	**Carcaliu**	**144.70**	**326**	⇑PKIKP	**PKPdf**	**08 31 10.8**	**-0.1**
FOEL	**Foel Wylfa**	**144.81**	**5**	*e*P	**PKPdf**	**08 31 11.0**	**+0.1**
LLW	**Llanuwychllyn**	**144.81**	**5**	*e*P	**PKPdf**	**08 31 11.1**	**+0.2**
UZH	**Uzhgorod**	**144.84**	**336**	⇓*i*PKIKP	PKPbc	08 31 12.2	+0.5
IWEX	**Carrickbyrne,**	**144.92**	**9**	*e*P	**PKPdf**	**08 31 11.2**	**+0.1**
NIE	**Niedzica**	**144.93**	**338**	*e*PKP	PKPbc	08 31 12.8	+0.8
NIE	**Niedzica**	**144.93**	**338**	*e*PKIKP	PKPbc	08 31 12.8	+0.8
KSP	**Ksiaz**	**144.93**	**343**	*e*PKP	PKPbc	08 31 12.5	+0.6
KSP	**Ksiaz**	**144.93**	**343**	*e*PKIKP	PKPbc	08 31 12.5	+0.6
VRI	**Vrincioaia**	**144.95**	**329**	⇑*i*P	PKPbc	08 31 12.6	+0.4
VRI	**Vrincioaia**	**144.95**	**329**	⇑PKIKP	PKPbc	08 31 12.6	+0.4
PLOR	**Plostina**	**145.00**	**329**	⇑*i*P	PKPbc	08 31 12.8	+0.4
PLOR	**Plostina**	**145.00**	**329**	⇑PKIKP	PKPbc	08 31 12.8	+0.4
ANTO	**Ankara**	**145.02**	**315**	*e*PKPdf	PKPbc	08 31 13.3	+0.6
ANTO	**Ankara**	**145.02**	**315**	⇑*i*P	PKPbc	08 31 13.2	+0.5
ANTO	**Ankara**	**145.02**	**315**	*e*PKIKP	PKPbc	08 31 13.3	+0.6
CWF	**Charnwood Fore**	**145.07**	**3**	*e*P	**PKPdf**	**08 31 11.9**	**+0.5**
HARR	**Harsova**	**145.14**	**326**	⇑*i*P	**PKPbc**	**08 31 13.4**	**+0.7**
HARR	**Harsova**	**145.14**	**326**	⇑PKIKP	**PKPbc**	**08 31 13.4**	**+0.7**
TLB	**Topalu**	**145.15**	**326**	⇑*i*P	**PKPbc**	**08 31 13.1**	**+0.4**
TLB	**Topalu**	**145.15**	**326**	⇑PKIKP	**PKPbc**	**08 31 13.1**	**+0.4**
ARCR	**ARCALIA**	**145.18**	**332**	⇓*i*P	**PKPbc**	**08 31 13.3**	**+0.5**
HLM1	**Long Mynd**	**145.20**	**4**	*e*P	**PKPdf**	**08 31 12.2**	**+0.5**
OSTC	**Ostas**	**145.21**	**343**	*e*PKP	**PKPbc**	**08 31 13.5**	**+0.7**
CHVC	**Chvalec**	**145.23**	**343**	*e*PKP	**PKPbc**	**08 31 13.7**	**+0.8**
OKC	**Ostrava-Krasne**	**145.29**	**341**	*e*PKIKP	**PKPbc**	**08 31 13.4**	**+0.4**
OKC	**Ostrava-Krasne**	**145.29**	**341**	*e*PKP	**PKPbc**	**08 31 13.4**	**+0.4**
CLL	**Collm**	**145.30**	**347**	⇑*i*PKIKP	**PKPbc**	**08 31 13.3**	**+0.3**
CLL				pmax	pmax		
	comp=Z,41nm,0.6s						
CLL	**Collm**	**145.30**	**347**	⇑*i*PKPbc	**PKPbc**	**08 31 13.3**	**+0.3**
	comp=Z,41nm,0.6s						
UPC	**Upice**	**145.31**	**343**	*e*PKP2	**PKPbc**	**08 31 13.8**	**+0.7**
UPC	**Upice**	**145.31**	**343**	*e*PKP	**PKPbc**	**08 31 13.8**	**+0.7**
MANR	**Mangalia**	**145.35**	**324**	⇑*i*P	**PKPbc**	**08 31 14.3**	**+0.9**
DPC	**Dobruska-Polom**	**145.37**	**343**	*e*PKP2	**PKPbc**	**08 31 14.1**	**+0.8**
DPC	**Dobruska-Polom**	**145.37**	**343**	*e*PKP	**PKPbc**	**08 31 14.1**	**+0.8**
LANS	**Liptovska Anna**	**145.45**	**339**	*e*PKP2	**PKPab**	**08 31 14.8**	**-0.2**
LANS	**Liptovska Anna**	**145.45**	**339**	*e*PKP	**PKPab**	**08 31 14.8**	**-0.2**
BRG	**Berggiesshubel**	**145.50**	**346**	*e*PKP	**PKPdf**	**08 31 13.0**	**+0.9**
	comp=Z,5.5nm,1.2s						
BRG	**Berggiesshubel**	**145.50**	**346**	*i* PKP	**PKPbc**	**08 31 14.1**	**+0.5**
	comp=Z,24nm,0.7s						
BRG				*e*pPKP	pPKPab	08 33 25.1	+0.8
	comp=Z,2.5nm,0.7s						
BRG				*e*SKP		08 34 01.3	
	comp=Z,2.2nm,0.8s						
MORC	**Moravsky Berou**	**145.53**	**341**	⇑*i*P	**PKPdf**	**08 31 13.4**	**+1.1**
MORC	**Moravsky Berou**	**145.53**	**341**	⇑PKIKP	**PKPdf**	**08 31 13.4**	**+1.1**
MORC	**Moravsky Berou**	**145.53**	**341**	*e*PKP	**PKPbc**	**08 31 14.1**	**+0.3**
DOPR	**Dopca**	**145.53**	**330**	⇓*i*P	**PKPbc**	**08 31 14.8**	**+0.9**
MLR	**Muntele Rosu**	**145.61**	**329**	⇑*i*P	**PKPbc**	**08 31 14.1**	**-0.2**
MLR	**Muntele Rosu**	**145.61**	**329**	⇑PKIKP	**PKPbc**	**08 31 14.2**	**-0.1**
PVCC	**Panska Ves**	**145.67**	**345**	*e*PKP2	**PKPbc**	**08 31 14.9**	**+0.8**
PVCC	**Panska Ves**	**145.67**	**345**	*e*PKP	**PKPbc**	**08 31 14.9**	**+0.8**
MCH1	**Michaelchurch**	**145.71**	**5**	*e*P	**PKPdf**	**08 31 13.4**	**+1.0**
CJR	**Cluj-Napoca**	**145.80**	**332**	⇑*i*P	**PKPbc**	**08 31 15.1**	**+0.4**
CJR	**Cluj-Napoca**	**145.80**	**332**	⇑PKIKP	**PKPbc**	**08 31 15.1**	**+0.4**
SECR		**145.87**	**328**	⇓*i*P	**PKPbc**	**08 31 15.1**	**+0.3**
VOIR		**146.08**	**329**	⇑*i*P	**PKPbc**	**08 31 15.4**	**-0.1**
VOIR		**146.08**	**329**	⇑PKIKP	**PKPbc**	**08 31 15.4**	**-0.1**
DRGR		**146.13**	**333**	⇑*i*P	**PKPbc**	**08 31 16.0**	**+0.4**
DRGR		**146.13**	**333**	⇑PKIKP	**PKPbc**	**08 31 16.0**	**+0.4**
PRU	**Pruhonice**	**146.17**	**345**	*e*PKIKP	**PKPbc**	**08 31 16.0**	**+0.5**
PRU	**Pruhonice**	**146.17**	**345**	*e*PKP	**PKPbc**	**08 31 16.0**	**+0.5**
VYHS	**Vyhne**	**146.22**	**339**	*e*PKP2	**PKPbc**	**08 31 16.3**	**+0.6**
VYHS	**Vyhne**	**146.22**	**339**	*e*PKP	**PKPbc**	**08 31 16.3**	**+0.6**
VRAC	**Vranov**	**146.23**	**342**	⇑*i*P	**PKPbc**	**08 31 16.3**	**+0.6**
VRAC	**Vranov**	**146.23**	**342**	⇑PKP2	**PKPbc**	**08 31 16.3**	**+0.6**
VRAC	**Vranov**	**146.23**	**342**	*e*PKP	**PKPbc**	**08 31 16.1**	**+0.4**
JAVC	**Velka Javorina**	**146.29**	**340**	*e*PKP	**PKPbc**	**08 31 17.1**	**+1.1**
ARR	**Arges**	**146.33**	**330**	⇑*i*P	**PKPbc**	**08 31 17.3**	**+1.1**
PSZ	**Piszkesteto**	**146.34**	**337**	⇑*i*P	**PKPdf**	**08 31 15.4**	**+1.6**
PSZ	**Piszkesteto**	**146.34**	**337**	⇑PKIKP	**PKPdf**	**08 31 15.4**	**+1.6**
SILT	**Sile**	**146.36**	**320**	⇓*i*P	**PKPbc**	**08 31 16.5**	**+0.2**
NKC	**Novy Kostel**	**146.43**	**347**	*e*PKP2	**PKPbc**	**08 31 16.8**	**+0.5**
NKC	**Novy Kostel**	**146.43**	**347**	*e*PKP	**PKPbc**	**08 31 16.8**	**+0.5**
WOL	**Wolverton**	**146.50**	**3**	*e*P	**PKPbc**	**08 31 15.9**	**-0.4**
KRUC	**Moravsky**	**146.51**	**342**	*e*PKP	**PKPbc**	**08 31 16.9**	**+0.4**
TREC	**Trest**	**146.56**	**343**	*e*PKIKP	**PKPbc**	**08 31 16.8**	**+0.2**
TREC	**Trest**	**146.56**	**343**	*e*PKP	**PKPbc**	**08 31 16.8**	**+0.2**
ELSH	**Elham, Standar**	**146.73**	**0**	*e*P	**PKPbc**	**08 31 16.9**	**0.0**
CSS	**Mathiatis**	**146.81**	**307**	*e*PKPbc	**PKPbc**	**08 31 17.9**	**+0.1**
MODS	**Modra-Piesok**	**146.85**	**340**	*e*PKIKP	**PKPbc**	**08 31 17.4**	**0.0**
MODS	**Modra-Piesok**	**146.85**	**340**	*e*PKP	**PKPbc**	**08 31 17.4**	**0.0**
BEBN	**Eben Emael**	**146.90**	**355**	⇑PKPbc	**PKPbc**	**08 31 17.4**	**0.0**
SIRR	**Siria**	**146.99**	**334**	⇑*i*P	**PKPbc**	**08 31 18.4**	**+0.5**
UCC	**Uccle**	**146.99**	**356**	⇑PKPbc	**PKPbc**	**08 31 17.8**	**+0.2**
UCC				⇑PKPab	**PKiKP**	**08 31 20.1**	**+0.6**
MEM	**Membach**	**147.05**	**355**	⇑PKPbc	**PKPbc**	**08 31 18.0**	**+0.1**
MEM				⇑PKPab	**PKPab**	**08 31 21.8**	**+0.6**
ZST	**Bratislava**	**147.06**	**340**	*e*PKIKP	**PKPbc**	**08 31 18.1**	**+0.2**
ZST	**Bratislava**	**147.06**	**340**	*e*PKP	**PKPbc**	**08 31 18.1**	**+0.2**
GZR	**Gura Zlata**	**147.18**	**332**	⇑*i*P	**PKPbc**	**08 31 18.5**	**0.0**
KHC	**Kasperske Hory**	**147.21**	**345**	*e*PKIKP	**PKPdf**	**08 31 15.0**	**-0.1**
KHC				*e*		08 31 22.4	
KHC	**Kasperske Hory**	**147.21**	**345**	*e*PKP	**PKPdf**	**08 31 15.0**	**-0.1**
KHC				*e*x	x	08 31 19.0	
KHC				*e*x	x	08 31 22.4	
SNF	**Seneffe**	**147.28**	**356**	⇑PKPbc	**PKPbc**	**08 31 18.7**	**+0.3**
SNF				⇑PKPab	**PKPab**	**08 31 21.8**	**-0.4**
BCLA	**Clavier**	**147.30**	**355**	⇑PKPbc	**PKPbc**	**08 31 18.5**	**0.0**
BCLA				⇑PKPab	**PKiKP**	**08 31 21.4**	**+1.3**
GEC2	**GERESS Array S**	**147.44**	**345**	*e*PKPbc	**PKPbc**	**08 31 19.4**	**+0.3**
GEC2	**GERESS Array S**	**147.44**	**345**	*e*PKP2	**PKPbc**	**08 31 19.4**	**+0.3**
GERES	**GERESS Array B**	**147.44**	**345**	PKPbc	**PKPbc**	**08 31 19.4**	**+0.3**
	comp=Z,12nm,0.6s,baz=29,slow=3.0,SNR=70						
BZS	**Buzias**	**147.52**	**333**	⇑*i*P	**PKPbc**	**08 31 19.4**	**+0.2**
BZS	**Buzias**	**147.52**	**333**	⇑PKIKP	**PKPbc**	**08 31 19.4**	**+0.2**
DOU	**Dourbes**	**147.67**	**356**	⇑PKPbc	**PKPbc**	**08 31 19.8**	**+0.3**
CONA	**Conrad Observa**	**147.68**	**342**	*i* PKiKP	**PKPbc**	**08 31 20.4**	**+0.7**
	comp=Z,21nm,0.8s,SNR=15						
HERR	**Herculane**	**147.74**	**331**	⇓*i*P	**PKPbc**	**08 31 19.8**	**0.0**
WLF	**Walferdange**	**147.97**	**354**	⇑PKPbc	**PKPbc**	**08 31 20.9**	**+0.6**
MDVR	**Moldovita**	**148.13**	**332**	⇑*i*P	**PKPbc**	**08 31 20.9**	**0.0**
MOA	**Molln**	**148.21**	**343**	*i* PKiKP	**PKPbc**	**08 31 21.3**	**+0.3**
	comp=Z,6.2nm,0.6s,SNR=6.7						
ARSA	**Arzberg**	**148.39**	**341**	*i* PKPbc	**PKPbc**	**08 31 20.5**	**-0.9**
	comp=Z,5.0nm,0.8s						
JLP	**Les Platons**	**148.51**	**4**	*e*P	**PKPbc**	**08 31 20.7**	**-0.9**
JVM	**Valle D.L. Mar**	**148.53**	**4**	*e*P	**PKPbc**	**08 31 21.7**	**+0.1**
JSA	**Saint Aubin**	**148.56**	**4**	*e*P	**PKPbc**	**08 31 21.7**	**0.0**
FRGS	**Fruska Gora**	**148.65**	**334**	*i* P	**PKPbc**	**08 31 22.2**	**+0.1**
BFO	**Black Forest**	**149.02**	**351**	*e*PKPbc	**PKPbc**	**08 31 23.1**	**+0.1**
BFO				*e*PKPab	**PKPab**	**08 31 29.4**	**0.0**
SOKA	**Soboth**	**149.05**	**341**	*i* PKiKP	**PKPbc**	**08 31 23.1**	**0.0**
	comp=Z,20nm,1.2s						
PERS	**Pernice**	**149.06**	**341**	*i* PKPbc	**PKPbc**	**08 31 22.9**	**-0.3**
KALN	**Kalnik**	**149.08**	**339**	P	**PKPbc**	**08 31 22.8**	**-0.4**
KBA	**Koelnbreinsper**	**149.17**	**344**	*i* PKiKP	**PKPbc**	**08 31 23.1**	**-0.4**
	comp=Z,11nm,0.5s,SNR=14						
EZN	**Ezine**	**149.18**	**321**	⇑*i*P	**PKPbc**	**08 31 23.5**	**0.0**
OBKA	**Obir**	**149.35**	**342**	*i* PKiKP	**PKPbc**	**08 31 23.6**	**-0.2**
	comp=Z,8.4nm,1.3s						
WATA	**Walderalm**	**149.36**	**346**	*i* PKiKP	**PKPbc**	**08 31 24.1**	**+0.1**
	comp=Z,7.0nm,0.4s						
RETA	**Reutte**	**149.39**	**347**	*i* PKiKP	**PKPbc**	**08 31 24.3**	**+0.3**
	comp=Z,6.5nm,0.4s						
WTTA	**Wattenberg**	**149.41**	**346**	*i* PKiKP	**PKPbc**	**08 31 24.2**	**+0.1**
	comp=Z,20nm,0.4s,SNR=14						
DIVS	**Divibare**	**149.43**	**333**	*i* P	**PKPbc**	**08 31 24.2**	**+0.1**
MOTA	**Moosalm**	**149.46**	**347**	*i* PKiKP	**PKPbc**	**08 31 24.3**	**+0.2**
	comp=Z,5.9nm,0.4s,SNR=8.2						
MYKA	**Terra Mystica**	**149.50**	**343**	*i* PKPbc	**PKPbc**	**08 31 23.6**	**-0.6**
	comp=Z,12nm,0.5s,SNR=9.1						
SQTA	**Sankt Quirin**	**149.55**	**347**	*i* PKiKP	**PKPbc**	**08 31 24.5**	**+0.2**
	comp=Z,16nm,0.5s,SNR=7.8						
CRES	**Cresnjev**	**149.68**	**340**	*i* P	**PKPbc**	**08 31 24.2**	**-0.4**
DOB	**Doboj**	**149.69**	**336**	*e*P	**PKiKP**	**08 31 28.5**	**+3.3**
ABTA	**Abfaltersbach**	**149.69**	**345**	*i* PKiKP	**PKPbc**	**08 31 24.2**	**-0.4**
	comp=Z,46nm,1.2s,SNR=10						
DAVA	**Damuels**	**149.76**	**348**	*i* PKiKP	**PKPbc**	**08 31 25.5**	**+0.6**
	comp=Z,24nm,1.1s,SNR=6.9						
LJU	**Ljubljana**	**149.78**	**342**	*i* PKPbc	**PKPbc**	**08 31 24.9**	**+0.1**
LJU	**Ljubljana**	**149.78**	**342**	*i* P	**PKPbc**	**08 31 24.8**	**+0.1**
FETA	**Feichten**	**149.84**	**347**	*i* PKiKP	**PKPbc**	**08 31 25.3**	**+0.1**
	comp=Z,21nm,1.1s,SNR=8.3						
BBLS	**Lazići**	**149.87**	**333**	*i* P	**PKPbc**	**08 31 25.0**	**-0.1**

```
HAPS  Han Pijesak,Bl  149.88 334  eP      PKPbc  08 31 24.6 -0.6
BLY   Banja Luka      150.02 337⇑iP      PKPbc  08 31 25.9 +0.5
BLY   Banja Luka      150.02 337 i P     PKPbc  08 31 25.7 +0.3
BOJS  Bojanci         150.03 340 i PKPbc PKPbc  08 31 25.8 +0.5
CEY   Cerknica        150.08 341 i P     PKPbc  08 31 25.5  0.0
RUDO  Rudo            150.08 333 eP      PKPbc  08 31 25.2 -0.4
RIY   Rijeka          150.44 341 eP      PKPbc  08 31 24.3 -2.0
UPM   Unac-Piva       150.62 333 i P     PKPbc  08 31 26.4 -0.7
UDBI  Udbina          150.72 339   P     PKPbc  08 31 27.1  0.0
NVLJ  Novalja         150.99 340   P     PKPbc  08 31 27.1 -0.4
BRY   Bratogost       151.02 333 i P     PKPbc  08 31 27.4 -0.5
PDG   Podgorica       151.08 332⇓iP      PKPbc  08 31 27.8 -0.1
PDG   Podgorica       151.08 332 i P     PKPbc  08 31 27.6 -0.3
TREB  Trebinje        151.25 333 eP      PKPbc  08 31 27.6 -0.7
MORI  Morici          151.32 338   P     PKPbc  08 31 27.8 -0.6
MAKA  Makarska        151.32 336   P     PKPbc  08 31 27.5 -0.9
DBRK  Dubrovnik       151.38 334   P     PKPbc  08 31 27.7 -0.9
STON  Ston            151.40 334   P     PKPbc  08 31 27.8 -0.8
STON  Ston            151.40 334 eP      PKPbc  08 31 27.2 -1.3
HCY   Herceg Novi     151.41 333 eP      PKPbc  08 31 27.9 -0.7
DUGI  Dugi Otok       151.44 339   P     PKPbc  08 31 28.3 -0.3
ZIRJ  Zirje           151.53 338   P     PKPbc  08 31 27.9 -0.9
HVAR  Hvar            151.64 336   P     PKPbc  08 31 27.6 -1.5
BNI   Bardonecchia    152.46 352 ePKPdf  PKPdf  08 31 24.4 +0.8
BNI                              ePKPbc  PKPbc  08 31 31.4 +0.3
BNI                              ePKPab  PKPab  08 31 44.3 +0.2
BNI   Bardonecchia    152.46 352 ePKIKP  PKPdf  08 31 24.4 +0.8
BNI                              e              08 31 31.4
BNI                              e              08 31 44.3
PCAB  Cabril          154.86  17 ePKPab  PKPab  08 31 54.4  0.0
POLO  Lamas de Olo    155.24  17 ePKPab  PKPab  08 31 56.3 +0.2
PVRL  Vila Real       155.35  16 ePKPab  PKPab  08 31 57.0 +0.5
MVO   Moncorvo        155.63  15 ePKPab  PKPab  08 31 57.6 -0.2
PVIS  Viseu           155.82  17 ePKPab  PKPab  08 31 58.8 +0.2
MTE   Manteigas       156.21  17 ePKPab  PKPab  08 32 00.4 +0.1
MTE   Manteigas       156.21  17 ePKPab  PKPab  08 31 60.0 -0.3
PCAS  Casmilo, Conde  156.25  19 ePKPab  PKPab  08 32 00.0 -0.4
PMRV  Marv??o         157.16  18 ePKPab  PKPab  08 32 04.4  0.0
PMTG  Montargil       157.24  19 ePKPab  PKPab  08 32 04.6 -0.1
ESDC  Sonseca Array   157.73  11   PKPab PKPab  08 32 05.6 -1.3
      comp=Z,2.6nm,0.8s,baz=343,slow=3.7,SNR=11
PNCL  Nicolau / Gran  158.00  21 ePKPab  PKPab  08 32 08.1 +0.1
PCVE  Castro Verde    158.60  21 ePKPab  PKPab  08 32 10.7  0.0
PVAQ  Vaqueiros       158.91  20 ePKPab  PKPab  08 32 11.9 -0.1
TORD  Torodi Ar. Bea  175.36 185   PKP   PKPdf  08 31 43.8 -0.7
      comp=Z,1.5nm,0.8s,baz=323,slow=3.1,SNR=7.4
TOA1  Torodi Ar. Sit  175.37 184 ePKPdf  PKPdf  08 31 43.8 -0.7
```

MEX 23 08:13:51.5±0.8, 27°.24N×111°.21W, h21km±33km, MD3.8,
Gulf of California

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
GUYB  Guaymas           0.72  24  eP      Pb       08 14 03.0 -2.4
GUYB                              eS      Sb       08 14 11.5 -3.3
SRIG  Santa Rosalia     0.92 275  eP      Pb       08 14 06.0 -2.8
SRIG                              i S     Sb       08 14 17.1 -3.5
HSIG                    1.79   7  eP      Pn       08 14 19.2 -1.9
HSIG                              i S     Sn       08 14 40.1 -3.2
```

NSSC ***23*** *08:23:13.7±0.4, 33°.93N×35°.74E, h11km±2km, ML2.2*
ISCJB ***23*** *08:23:14.9±1.2, 33°.88N±0°.05×35°.75E±0°.07, h17km±13km,*
Error ellipse: s-maj=10.3km s-min=8.1km az=169.9
GRAL ***23*** *08:23:15.8±0.3, 33°.87N×35°.83E, h0km±22km, MD2.9*
ISC 23 08:23:14.6±1.2**, 33°.89N**±0°.05×**35°.78E**±0°.05**, h15**km±9km**,**
n8, σ0s.35/15**, Jordan-Syria region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
BHL   Bhannes           0.11 279  eP      Pb       08 23 18.4  0.0
BHL                               eS      Sg       08 23 20.4 +0.2
BEYL  Beirut            0.24 266  eP      Pb       08 23 20.8 +0.2
DQRL  Deir Qamar        0.25 224  eP      Pb       08 23 20.6 -0.3
DQRL                              eS      Sg       08 23 24.2 +0.4
RCY   Rachaya           0.39 173  eP      Pg       08 23 22.4 -0.1
RCY                               eS      Sg       08 23 27.4 -0.6
HWQ   Hawqa             0.41  20  eP      Pb       08 23 23.4 -0.3
BRBR  Barbar            0.50 163  eP      Pg       08 23 24.1 -0.3
BRBR                              i Sg    Sb       08 23 32.2  0.0
BRBR                              eS      Sb       08 23 32.2  0.0
BRBR                               AML    AML      08 23 34.1
      comp=E,96nm,0.4s
BRBR                               AML    AML      08 23 34.8
      comp=N,175nm,0.3s
QASN  Qassioun          0.55 130  eP      Pg       08 23 25.4 +0.1
QASN                              eS      Sb       08 23 33.6 +0.1
QASN                               AML    AML      08 23 37.2
      comp=E,521nm,0.6s
QASN                               AML    AML      08 23 38.9
      comp=N,275nm,0.7s
TOTH  TOTAH             0.75 134  eP      Pb       08 23 29.7 +0.3
TOTH                              eS      Sb       08 23 40.2 +0.7
TOTH                               AML    AML      08 23 47.2
      comp=N,49nm,0.4s
TOTH                               AML    AML      08 23 48.5
      comp=E,61nm,0.7s
```

MEX 23 08:24:21.4±0.8, 27°.17N×111°.14W, h16km±27km, MD3.6,
Gulf of California

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
GUYB  Guaymas           0.77  18  i P     Pb       08 24 33.6 -2.8
GUYB                              eS      Sg       08 24 42.0 -4.5
SRIG  Santa Rosalia     0.99 279  eP      Pb       08 24 36.8 -3.4
SRIG                              eS      Sb       08 24 48.3 -4.7
HSIG                    1.85   5  eP      Pn       08 24 49.5 -3.0
HSIG                              i S     Sn       08 25 11.4 -4.3
```

IDC ***23*** *08:24:32.5±1.2, 44°.01N×84°.81E, h0km, mb3.7/5,*
mb1 3.8/10, mb1mx3.6/38, mbtmp3.8/10, ML3.5/5, MS2.5/3,
Ms1 2.5/3, ms1mx2.3/36, Error ellipse: s-maj=25.1km
s-min=14.0km az=62.0
SOME ***23*** *08:24:36.3, 44°.15N×84°.52E, h10km*
BJI ***23*** *08:24:37.7±0.0, 44°.17N×84°.67E, h8km, mb4.0/2, ML3.6/8,*
Ms3.5/1, Ms7 3.2/1
NNC ***23*** *08:24:38.2±1.3, 44°.17N×84°.48E, h3km±6km, mb4.3,*
mpv4.1, Error ellipse: s-maj=10.1km s-min=4.1km
az=125.0
ISC 23 08:24:37.7±0.6**, 44°.22N**±0°.04×**84°.73E**±0°.03**, h10**km**, n64,**
σ3s.23/84**, mb3.6**/5**, 10C-6D, Northern Xinjiang**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
WMQ   Urumqi            2.17  99   Pg     Pn       08 25 15.1 +1.1
WMQ                                Sg     Sn       08 25 37.3 -3.7
WMQ                                smax   smax
      comp=N,6µm,0.2s
WMQ                                smax   smax
      comp=E,6µm,0.3s
WMQ   Urumqi            2.17  99   Pg     Pg       08 25 20.4 +1.0
WMQ                                Sg     Sb       08 25 45.8 +1.6
MK31  Makanchi Array    3.10 327   Pn     Pn       08 25 26.9 +0.2
      comp=E,0.8nm,0.2s,baz=143,slow=14,SNR=1223
MK31                               Pg     Pb       08 25 34.7 +1.8
      comp=E,19nm,0.4s,baz=151,slow=18,SNR=113
MK31                              ⇓Lg     Lg       08 26 15.6
      comp=E,49nm,0.3s,baz=144,slow=29,SNR=11
MKAR  Makanchi Array    3.10 327   Pn     Pn       08 25 27.1 +0.4
      comp=E,2.7nm,0.3s,baz=152,slow=14,SNR=184
MKAR                               Pg     Pb       08 25 35.1 +2.2
      comp=E,17nm,0.3s,baz=144,slow=18,SNR=70
MKAR                               Lg     Lg       08 26 15.8
      comp=E,90nm,0.3s,baz=145,slow=29,SNR=22
MAKZ  Makanchi          3.23 324  ⇓Pn     Pn       08 25 28.8 +0.2
      comp=E,1.1nm,0.2s
MAKZ                              ⇑Pg     Pb       08 25 37.2 +2.0
      comp=E,28nm,0.6s
MAKZ                              ⇑Lg     Lg       08 26 20.2
      comp=E,114nm,0.5s
ZSN   Zaisan            3.23   2   Pg     Pb       08 25 37.2 +1.9
      comp=E,18nm,0.4s
ZSN                                Lg     Lg       08 26 21.4
      comp=E,49nm,0.7s
ZSN   Zaisan            3.23   2  eP      Pb       08 25 37.7 +2.4
      comp=E,19nm,0.2s
ZSN                               eS      Sg       08 26 21.9 +0.3
      comp=E,127nm,0.6s
KTMS  Ketmen            3.26 258   Pg     Pn       08 25 33.5 +4.5
      comp=E,52nm,0.4s
KTMS                               Lg     Lg       08 26 15.1
      comp=E,155nm,0.4s
KTMS  Ketmen            3.26 258  eP      Pn       08 25 33.5 +4.5
      comp=E,35nm,0.2s
KTMS                              eS      Sb       08 26 14.4 -1.2
      comp=E,155nm,0.4s
DJR   Jarkent           3.55 274   Pg     Pb       08 25 40.2 -0.4
      comp=E,60nm,0.4s
DJR                                Lg     Lg       08 26 26.0
      comp=E,166nm,0.5s
DJR   Jarkent           3.55 274⇓iP       Pb       08 25 40.2 -0.4
      comp=E,18nm,0.3s
DJR                               eS      Sb       08 26 26.6 +2.8
      comp=E,162nm,0.4s
PDGK  Podgornoye        3.90 259  ⇑Pn     Pn       08 25 36.8 -1.0
      comp=E,6.7nm,0.4s
PDGK                              ⇑Lg     Lg       08 26 36.7
      comp=E,86nm,0.7s
KAPS  Kapalarasan       3.98 287   Pg     Pb       08 25 48.9 +1.0
      comp=E,24nm,0.2s
KAPS                               Lg     Lg       08 26 41.8
      comp=E,122nm,0.8s
KAPS  Kapalarasan       3.98 287  eP      Pb       08 25 48.6 +0.8
      comp=E,5.8nm,0.2s
KAPS                              eS      Sb       08 26 41.0 +4.9
      comp=E,124nm,0.5s
UZB   Uzynbulak         4.28 258  eP      Pb       08 25 53.7 +0.6
      comp=E,19nm,0.5s
UZB                               eS      Sb       08 26 48.9 +4.1
      comp=E,65nm,0.5s
KPKS  Kokpek            4.44 262  eP      Pb       08 25 56.1 +0.3
      comp=E,62nm,0.3s
KPKS                              eS      Sb       08 26 53.7 +4.3
      comp=E,198nm,0.3s
MNBS  Baschi            4.56 270   Pg     Pb       08 25 57.2 -0.6
      comp=E,22nm,0.4s
MNBS                               Lg     Lg       08 26 55.5
      comp=E,146nm,0.3s
MNBS  Baschi            4.56 270  eP      Pb       08 25 57.2 -0.6
      comp=E,16nm,0.3s
MNBS                              eS      Sb       08 26 55.5 +2.7
      comp=E,120nm,0.5s
TDK   Taldyqorghan      4.58 282   Pg     Pb       08 25 57.9 -0.3
      comp=E,119nm,0.7s
TDK                                Lg     Lg       08 26 57.0
      comp=E,394nm,0.9s
TDK   Taldyqorghan      4.58 282  eP      Pb       08 26 00.2 +1.9
      comp=E,119nm,0.3s
TDK                               eS      Sb       08 26 60.0 +6.5
      comp=E,409nm,0.9s
SATY  Saty              4.74 258   Pg     Pb       08 26 00.1 -0.7
      comp=E,38nm,0.5s
SATY                               Lg     Lg       08 27 00.5
      comp=E,64nm,0.4s
SATY  Saty              4.74 258  eP      Pb       08 26 00.1 -0.7
      comp=E,38nm,0.5s
SATY                              eS      Sb       08 27 00.5 +2.5
      comp=E,64nm,0.4s
KURS  Kuram             4.80 264   Pg     Pb       08 26 03.1 +1.2
      comp=E,9.3nm,0.3s
KURS                               Lg     Lg       08 27 05.9
      comp=E,41nm,0.8s
KURS  Kuram             4.80 264  eP      Pb       08 26 03.1 +1.2
      comp=E,9.3nm,0.3s
KURS                             ⇑iS      Sb       08 27 05.9 +6.2
      comp=E,49nm,0.5s
ARXS  Arharly           4.96 272   Pg     Pb       08 26 03.9 -0.8
      comp=E,14nm,0.5s
ARXS                               Lg     Lg       08 27 07.1
      comp=E,91nm,0.2s
ARXS  Arharly           4.96 272  eP      Pb       08 26 03.9 -0.8
      comp=E,12nm,0.5s
ARXS                              eS      Sb       08 27 07.1 +2.7
      comp=E,64nm,0.6s
CHKK  Chushkaly         5.59 269   Pg     Pb       08 26 16.6 +1.1
      comp=E,9.9nm,0.5s
CHKK                               Lg     Lg       08 27 29.5
      comp=E,68nm,0.2s
CHKK  Chushkaly         5.59 269  eP      Pb       08 26 16.8 +1.4
      comp=E,7.9nm,0.2s
CHKK                              eS      Sb       08 27 29.5 +7.0
      comp=E,43nm,0.2s
KOTS  Kotyrbulak        5.61 263   Pg     Pb       08 26 18.2 +2.5
      comp=E,12nm,0.2s
KOTS                               Lg     Lg       08 27 31.6
      comp=E,156nm,0.5s
KOTS  Kotyrbulak        5.61 263  eP      Pb       08 26 18.2 +2.5
      comp=E,12nm,0.2s
KOTS                              eS      Sg       08 27 31.6 -6.1
      comp=E,156nm,0.5s
MDOK  Medeo             5.67 262   Pg     Pb       08 26 18.1 +1.3
      comp=E,10nm,0.6s
MDOK                               Lg     Lg       08 27 31.4
      comp=E,31nm,0.6s
MDOK  Medeo             5.67 262  eP      Pb       08 26 18.1 +1.3
      comp=E,10nm,0.6s
MDOK                              eS      Sb       08 27 31.4 +6.5
      comp=E,31nm,0.6s
TNSS  Tian-Shan         5.77 261   Pg     Pb       08 26 20.1 +1.4
      comp=E,21nm,0.5s
TNSS                               Lg     Lg       08 27 35.4
      comp=E,35nm,0.5s
TNSS  Tian-Shan         5.77 261  eP      Pb       08 26 20.1 +1.4
      comp=E,12nm,0.4s
TNSS                              eS      Sb       08 27 35.2 +7.2
      comp=E,35nm,0.5s
KTBS  Karatobe          5.83 268   Pg     Pb       08 26 22.3 +2.8
      comp=E,6.0nm,0.6s
KTBS                               Lg     Lg       08 27 38.7
      comp=E,96nm,0.3s
KTBS  Karatobe          5.83 268  eP      Pb       08 26 22.3 +2.8
      comp=E,6.0nm,0.6s
KTBS                              eS      Sg       08 27 38.7 -6.2
      comp=E,96nm,0.3s
IZV   Izvestkoviy       6.01 261   Pg     Pb       08 26 24.4 +1.8
      comp=E,9.4nm,0.6s
IZV                                Lg     Lg       08 27 42.4
      comp=E,27nm,0.6s
IZV   Izvestkoviy       6.01 261  eP      Pb       08 26 23.3 +0.7
      comp=E,9.4nm,0.6s
IZV                               eS      Sb       08 27 40.5 +5.9
      comp=E,27nm,0.6s
KUU   Kurty             6.06 270   Pg     Pb       08 26 24.6 +1.3
      comp=E,3.8nm,0.1s
KUU                                Lg     Lg       08 27 42.3
      comp=E,34nm,0.4s
KUU   Kurty             6.06 270  eP      Pb       08 26 24.6 +1.3
      comp=E,3.8nm,0.1s
KUU                               eS      Sb       08 27 42.4 +6.5
      comp=E,44nm,0.4s
MTBS  Maitube           6.12 263   Pg     Pb       08 26 26.5 +2.1
      comp=E,8.0nm,0.3s
MTBS                               Lg     Lg       08 27 45.9
      comp=E,36nm,0.3s
MTBS  Maitube           6.12 263  eP      Pb       08 26 26.4 +2.1
      comp=E,8.1nm,0.4s
MTBS                              eS      Sb       08 27 45.9 +8.2
      comp=E,36nm,0.3s
KST   Kastek            6.47 263   Pg     Pb       08 26 33.9 +3.5
      comp=E,18nm,0.6s
KST                                Lg     Lg       08 27 58.6
      comp=E,22nm,0.4s
KST   Kastek            6.47 263  eP      Pb       08 26 33.9 +3.5
      comp=E,18nm,0.6s
KST                               eS      Sg       08 27 58.6 -6.7
      comp=E,22nm,0.4s
TKM2  Tokmak 2          6.76 262  ⇓Pn     Pn       08 26 17.6 +0.4
      comp=E,5.9nm,0.6s
TKM2                              ⇑Lg     Lg       08 28 05.7
      comp=E,22nm,1.0s
SEM   Semipalatinsk     6.90 335   Pg     Pb       08 26 41.8 +4.0
      comp=E,6.5nm,0.1s
SEM                                Lg     Lg       08 28 12.0
      comp=E,59nm,0.1s
SEM   Semipalatinsk     6.90 335  eP      Pb       08 26 43.2 +5.4
      comp=E,7.8nm,0.2s
SEM                               eS      Sg       08 28 14.1 -5.0
      comp=E,59nm,0.1s
AAK   Ala-Archa         7.62 262   Pn     Pn       08 26 28.2 -0.7
      comp=E,2.1nm,0.3s,baz=118,slow=6.0,SNR=5.5
AAK                                Lg     Lg       08 28 34.8
      comp=E,0.8nm,0.3s,baz=302,slow=18,SNR=3.7
AAK                                LR     LR       08 29 52.2
      comp=E,36nm,21.9s,baz=300,slow=42
AAK   Ala-Archa         7.62 262  ⇑Pn     Pn       08 26 29.7 +0.8
      comp=E,2.2nm,0.5s
AAK                               ⇓Lg     Lg       08 28 34.9
      comp=E,14nm,0.8s
KURBB Kurchatov Arra    7.66 329   Pn     Pn       08 26 28.6 -0.6
      comp=E,0.6nm,0.3s,baz=140,slow=13,SNR=18
KURBB                              Lg     Lg       08 28 41.5
      comp=E,1.0nm,0.3s,baz=151,slow=38,SNR=9.4
KURBB Kurchatov Arra    7.66 329  ⇑Lg     Lg       08 28 40.5
      comp=E,101nm,0.6s
MRKS  Merke             8.50 264   Pg     Pb       08 27 10.4 +5.6
      comp=E,3.6nm,0.4s
MRKS                               Lg     Lg       08 29 00.7
      comp=E,6.8nm,0.3s
OTUK  Ortayu            9.49 299  ⇑Pn     Pn       08 26 50.8 -3.5
      comp=E,1.4nm,0.5s
OTUK                              ⇓Lg     Lg       08 29 35.8
      comp=E,26nm,0.8s
ZALV  Zalesovo Beam     9.74   0   Pn     Pn       08 26 56.3 -1.5
      comp=E,0.9nm,0.3s,baz=190,slow=12,SNR=7.8
ZALV                               Sn     Sn       08 28 43.0 -4.1
      comp=E,4.2nm,0.3s,baz=173,slow=26,SNR=14
ZALV                               Lg     Lg       08 29 46.3
      baz=193,slow=25,SNR=2.4
ZALV                               LR     LR       08 30 58.2
      comp=E,21nm,19.9s,baz=248,slow=39
KK31  Karatay Array    10.37 269  ⇑Pn     Pn       08 27 05.3 -1.1
      comp=E,0.4nm,0.4s,baz=0.0,slow=0.1,SNR=4.0
KK31                               Lg     Lg       08 30 04.6
      comp=E,2.8nm,0.6s,baz=74,slow=28,SNR=4.2
GTA   Gaotai           12.23 108  eP      Pn       08 27 35.8 +3.8
GTA                                pP              08 27 39.4
GTA                                sP              08 27 42.1
GTA                                pmax   pmax
      comp=E,3.0nm,1.0s
BVAR  Borovoye Array   12.93 318   Pn     Pn       08 27 39.7 -1.6
      comp=E,0.4nm,0.3s,baz=104,slow=12,SNR=9.2
BVAR                               Lg     Lg       08 31 24.7
      comp=E,0.2nm,0.3s,baz=107,slow=20,SNR=4.3
SONM  Songino Array    15.47  69   Pn     P        08 28 21.4 +0.9
      baz=261,slow=16,SNR=4.8
SONM                               Lg     Lg       08 32 49.6
      comp=E,0.2nm,0.3s,baz=267,slow=30,SNR=2.4
AKTO  Aktyubinsk       19.09 298   LR     LR       08 36 49.8
      comp=E,25nm,18.6s,baz=200,slow=38
FINES FINESS Array B   37.89 318   P      P        08 31 52.4 -2.1
      comp=E,2.2nm,0.9s,baz=81,slow=8.6,SNR=2.9
ARCES ARCESS Array B   38.74 331   P      P        08 32 00.0 -1.6
      comp=E,1.5nm,0.9s,baz=96,slow=8.3,SNR=3.3
NOA   NORSAR Array B   45.06 319   P      P        08 32 51.0 -2.4
      comp=E,0.3nm,0.4s,baz=77,slow=7.8,SNR=3.6
TORD  Torodi Ar. Bea   76.00 275   P      P        08 36 21.9 -3.4
      comp=E,0.3nm,0.5s,baz=69,slow=5.2,SNR=3.0
ASAR  Alice Springs    81.16 135   P      P        08 36 49.1 -4.4
      comp=E,0.3nm,0.7s,baz=340,slow=6.6,SNR=3.1
```

MAN 23 08:26:13.4, 4°.72N×125°.84E, h196km, mb4.3, ML3.1,
MS2.9, 1D, Talaud Islands

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
GSPH  General Santos    1.63 327  eP      Pn       08 26 48.6 +0.5
GSPH                              eS      Sn       08 27 14.2 -0.9
KCP   Kidapawan         2.40 342⇓iP       Pn       08 26 57.8 +1.7
KCP                               eS      Sn       08 27 30.6 +1.2
```

TAP ***23*** *08:38:58.9, 24°.36N×121°.97E, h28km, ML2.9, C*
JMA ***23*** *08:38:58.9±0.2, 24°.26N×121°.97E, h39km±4km, M2.3*
ISCJB ***23*** *08:38:59.3±0.2, 24°.35N±0°.02×122°.01E±0°.02, h28km±2km,*
Error ellipse: s-maj=2.8km s-min=2.2km az=142.1
ISC 23 08:38:58.8±0.9**, 24°.34N**±0°.02×**122°.03E**±0°.02**, h29**km±5km**,**
n69, σ0s.89/124**, 1D, Taiwan region**

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Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
EOS1  EOS1              0.23  24  eP      Pn       08 39 05.8 -0.4
      baz=42
EOS1                              eS      Sn       08 39 11.2 +1.6
      baz=42
NANB  Nanao             0.27 289⇓iP       Pb       08 39 05.2 -0.5
      baz=295
NANB                              i S     Sb       08 39 09.7 -0.8
      baz=295
ENA   Nanau             0.27 289  eP      Pb       08 39 05.3 -0.6
      baz=294
ENA                               eS      Sb       08 39 10.0 -0.7
      baz=294
TWC   Suao              0.31 329   P      Pb       08 39 05.9 -0.4
      baz=343
TWC                                S      Sb       08 39 10.5 -1.0
      baz=343
NACB  Ninganchiao       0.43 247  eP      Pb       08 39 07.3 -0.7
      baz=249
NACB                              eS      Sb       08 39 14.8 +0.5
      baz=249
TWD   Chiawan           0.47 237   P      Pb       08 39 08.2 -0.6
      baz=230
TWD                                S      Sb       08 39 16.2 +0.7
      baz=230
TWE   Neicheng          0.50 319   P      Pb       08 39 08.9 -0.3
      baz=324
TWE                               eS      Sb       08 39 15.5 -0.8
      baz=324
ENTT  Nioudou           0.51 305   P      Pb       08 39 09.3 -0.2
      baz=308
ENTT                               S      Sb       08 39 16.7  0.0
      baz=308
ETLH  Xiulin Townshi    0.51 255  eP      Pb       08 39 08.9 -0.6
      baz=251
ETLH                              eS      Sb       08 39 17.5 +0.7
      baz=251
HWA   Hwalien           0.53 227  eP      Pn       08 39 11.5 +1.1
      baz=230
NDT   Datong Townshi    0.54 299  i P     Pb       08 39 09.7 -0.1
      baz=306
NDT                               i S     Sb       08 39 17.1 -0.2
      baz=306
NTC   Toucheng          0.54 341  eP      Pb       08 39 09.5 -0.4
      baz=346
NTC                               eS      Sb       08 39 17.5 +0.1
      baz=346
NNSB  Datong            0.59 279  eP      Pb       08 39 10.3 -0.5
      baz=283
NNSB                              eS      Sb       08 39 18.7 -0.3
      baz=283
TIPB  Shuangxi          0.65 344  eP      Pb       08 39 11.7 -0.1
      baz=348
TIPB                              eS      Sb       08 39 20.8 +0.2
      baz=348
YHNB  Yeheng            0.68 299  eP      Pb       08 39 11.9 -0.3
      baz=300
YHNB                              eS      Sb       08 39 21.2 -0.1
      baz=300
NSK   Sanguang          0.69 299   P      Pb       08 39 12.1 -0.4
      baz=300
NSK                               eS      Sb       08 39 21.4 -0.4
      baz=300
WHF   Hehuan Shan       0.72 254   P      Pb       08 39 12.5 -0.7
      baz=251
WHF                                S      Sb       08 39 23.1 +0.2
      baz=251
TWA   Mucha             0.75 328  eP      Pb       08 39 14.3 +0.9
      baz=323
TWA                               eS      Sn       08 39 24.1 +0.2
      baz=323
ESL   Shilin            0.75 226   P      Pn       08 39 12.4 -1.1
      baz=221
ESL                               eS      Sn       08 39 24.3 +0.3
      baz=221
NWF   Wu-fen Shan       0.76 343  eP      Pb       08 39 13.8 +0.2
      baz=341
NWF                               eS      Sn       08 39 24.1 -0.1
      baz=341
WFSB  Wu-fen Shan       0.76 343  eP      Pb       08 39 13.7 +0.2
      baz=341
WFSB                              eS      Sb       08 39 23.3 -0.2
      baz=341
NHDH  Xindian Distri    0.77 324  eP      Pb       08 39 14.0 +0.4
      baz=320
NHDH                              eS      Sb       08 39 23.6 -0.3
      baz=320
TWT   Tachien           0.78 264  eS      Sb       08 39 24.5 +0.2
      baz=261
TATO  Taipei            0.80 322  eP      Pb       08 39 14.3 +0.1
      baz=319
TATO                              eS      Sb       08 39 24.1 -0.6
      baz=319
CHGB  Renai             0.83 250  eP      Pn       08 39 14.4 -0.3
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	baz=237						
CHGB				eS	Sb	08 39 25.6	-0.1
	baz=237						
JYNG	Yonagunijimaku	0.84	82	P	Pb	08 39 15.5	+0.5
JYNG				eS	Sb	08 39 27.8	+1.8
EGFH	Guangfu	0.86	219	eP	Pn	08 39 15.0	-0.1
	baz=215						
EGFH				eS	Sb	08 39 27.5	+1.0
	baz=215						
WLTB	Daxi	0.87	306	eP	Pn	08 39 13.9	-1.2
	baz=307						
WLTB				eS	Sb	08 39 27.8	+1.2
	baz=307						
YM01	YM01	0.90	333	eP	Pb	08 39 15.9	-0.1
	baz=347						
YM01				eS	Sb	08 39 28.1	+0.4
	baz=347						
YOJ	Yonaguni jima	0.91	82	eP	Pb	08 39 16.2	+0.2
	baz=77						
YOJ				eS	Sb	08 39 28.9	+1.2
	baz=77						
YOJ	Yonaguni jima	0.91	82	P	Pb	08 39 16.4	+0.4
YOJ				eS	Sb	08 39 29.2	+1.5
YM10	YM10	0.92	333	eP	Pb	08 39 16.4	+0.2
	baz=320						
YM05	YM05	0.92	333	eP	Pb	08 39 16.1	-0.2
	baz=347						
YM05				eS	Sb	08 39 28.5	+0.3
	baz=347						
YM04	YM04	0.92	331	eP	Pb	08 39 16.1	-0.2
	baz=345						
YM04				eS	Sb	08 39 30.1	+1.8
	baz=345						
YM08	YM08	0.93	335	eP	Pn	08 39 15.7	-0.3
	baz=338						
TWS1	Kuangyinshan	0.94	324	eP	Pb	08 39 16.5	0.0
	baz=327						
YM03	YM03	0.94	332	eP	Pn	08 39 15.8	-0.4
	baz=346						
YM03				eS	Sb	08 39 29.1	+0.2
	baz=346						
LIOB	Emei	0.97	288	eP	Pb	08 39 17.2	+0.1
	baz=288						
LIOB				eS	Sn	08 39 28.7	-0.6
	baz=288						
NTST	Danshui	0.97	328	eP	Pn	08 39 15.4	-1.1
	baz=330						
NSTT	Nanjuang	0.98	287	eP	Pb	08 39 17.3	+0.1
	baz=287						
NSTT				eS	Sb	08 39 30.2	+0.5
	baz=287						
VWDT	VWDT	1.00	234	eP	Pn	08 39 16.6	-0.2
	baz=231						
VWDT				eS	Sb	08 39 30.8	+0.5
	baz=231						
TWY	Chenhua	1.01	337	eP	Pb	08 39 18.3	+0.6
	baz=341						
HGSD	Ruisui	1.01	213	eP	Pb	08 39 17.3	-0.4
	baz=209						
HGSD				eS	Sb	08 39 34.1	+3.5
	baz=209						
DPDB	Guoxing	1.05	253	eP	Pb	08 39 18.5	0.0
	baz=251						
DPDB				eS	Sn	08 39 31.4	0.0
	baz=251						
EHY	Hungye	1.05	218	eP	Pn	08 39 16.9	-0.7
	baz=214						
EHY				eS	Sb	08 39 32.6	+0.7
	baz=214						
SSLB	Suanglung	1.12	241	eP	Pn	08 39 18.5	-0.1
	baz=230						
SSLB				eS	Sn	08 39 33.6	+0.5
	baz=230						
NMLH	Miaoli	1.14	280	eS	Sb	08 39 35.9	+1.5
	baz=278						
TWQ1	Liyutan	1.14	271	eP	Pn	08 39 19.0	+0.1
	baz=268						
TWQ1				eS	Sb	08 39 36.5	+2.1
	baz=268						
TYC	Yuchr	1.15	248	eP	Pb	08 39 19.9	-0.2
	baz=234						
TYC				eS	Sb	08 39 35.2	+0.5
	baz=234						
NSY	Sanyi	1.16	274	eS	Sb	08 39 37.0	+2.1
	baz=272						
YULB	Yu-li	1.16	215	eP	Pn	08 39 18.7	-0.4
	baz=224						
YULB				eS	Sb	08 39 34.9	0.0
	baz=224						
TWF1	Yuli	1.19	214	eP	Pn	08 39 18.6	-0.9
	baz=224						
TWF1				eS	Sn	08 39 35.0	+0.2
	baz=224						
PTSB	Yuanli	1.21	275	eP	Pb	08 39 21.5	+0.4
	baz=274						
PTSB				eS	Sn	08 39 35.8	+0.6
	baz=274						
WJS	Zhushan	1.29	247	eS	Sb	08 39 40.9	+2.2
	baz=230						
YUS	Yu-Shan	1.30	229	P	Pn	08 39 21.8	+0.4
	baz=214						
YUS				S	Sn	08 39 38.6	+0.6
	baz=214						
IRIF	Iriomote-Funau	1.56	90	P	Pb	08 39 25.5	-1.4
IRIF				eS	Sb	08 39 46.4	+0.2
CHN4	Tsaushan	1.64	233	eP	Pb	08 39 27.4	-1.1
	baz=216						
CHN4				eS	Sb	08 39 49.5	+0.8
	baz=216						
TPUB	Ta-pu	1.65	231	eP	Pn	08 39 25.5	-0.3
	baz=217						
TPUB				eS	Sn	08 39 46.9	+0.9
	baz=217						
WTP	Ta-pu	1.69	230	eP	Pb	08 39 27.8	-1.5
	baz=218						
WTP				eS	Sb	08 39 50.2	0.0
	baz=218						
TWK	Hsinying	1.77	233	eP	Pn	08 39 27.8	+0.3
	baz=228						
JKRS	Kuro-shima	1.81	93	P	Pb	08 39 29.6	-1.7
JKRS				eS	Sb	08 39 51.9	-1.7
SLGT	Liugui	1.84	224	eP	Pb	08 39 30.7	-1.2
	baz=220						
SLGT				eS	Sb	08 39 53.5	-1.0
	baz=220						
JIJ	Ishigaki jima	1.93	89	P	Pb	08 39 31.2	-2.2
JIJ				eS	Sb	08 39 55.1	-1.9
JISG	Ishigakijimahi	2.10	83	P	Pn	08 39 33.2	+1.2
JISG				S	Sn	08 39 58.6	+1.5
PHUB	P'eng-hu	2.39	250	eP	Pn	08 39 35.5	-0.5
	baz=246						
PHUB				eS	Sn	08 40 03.8	-0.6
	baz=246						
WDGT	Dungji	2.42	244	eP	Pn	08 39 37.1	+0.7
	baz=239						
WDGT				eS	Sn	08 40 05.4	+0.4
	baz=239						
VCHM	Qimei	2.63	245	eP	Pn	08 39 38.3	-1.0
	baz=242						
LYJJ	Jianjiangzhen	3.01	318	eP	Pn	08 39 44.5	0.0
	baz=317						
XPSS	Dashiqiu	3.06	328	eP	Pn	08 39 44.8	-0.5
	baz=329						

BJI 23 08:46:47.1±0.0, 34°.55N×104°.21E, h7^{km}, mb3.8/1, ML3.4/15, Ms3.3/3, Ms7 3.1/2, Gansu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	Lanzhou	1.56	349	Pg	Pn	08 47 15.0	-0.5
LZH				Pn	Pg	08 47 19.8	+2.7
LZH				Sg	Sn	08 47 35.1	-1.0
LZH				smax	smax		
	comp=N,540nm,1.0s						
LZH				smax	smax		
	comp=E,560nm,0.9s						
XAN	Xi'an	3.93	96	Pn	Pn	08 47 47.3	-0.7
XAN				Pg	Pb	08 47 59.3	+2.5
XAN				Sn	Sn	08 48 34.8	+0.4
XAN				Sg	Sb	08 48 48.5	+3.9
XAN				smax	smax		
	comp=N,170nm,0.5s						
XAN				smax	smax		
	comp=E,160nm,0.5s						
XAN				LR	LR		
	comp=N,120nm,8.1s						
XAN				LR	LR		
	comp=E,190nm,7.0s						
GTA	Gaotai	5.99	325	Pn	Pn	08 48 18.8	+2.5
GTA				Sn	Sn	08 49 22.8	-2.4
GTA				Sg	Sg	08 49 55.8	-3.7
GTA				smax	smax		
	comp=N,9.0nm,1.1s						
GTA				smax	smax		
	comp=E,7.0nm,1.0s						
BTO	Baotou	7.60	36	eP	Pn	08 48 28.8	-10
BTO				S	Sn	08 50 07.8	+3.0
BTO				LR	LR		
	comp=N,22μm,0.5s						
BTO				LR	LR		
	comp=E,20μm,0.5s						
WMQ	Urumqi	15.78	311	eP	Pn	08 50 30.0	+0.2

RSNC 23 08:51:28.4±1.2, 6°.86N×76°.30W, h0^{km}±6^{km}, ML3.1, Mw3.7, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBBC	Dabeiba	0.18	29⇑	iP	Pg	08 51 32.5	+0.6
DBBC				eS	Sg	08 51 36.2	+2.0
DBBC				i		08 51 36.9	
	comp=Z,10μm,0.4s						
HELC	Santa Helena	1.01	131	eP	Pg	08 51 46.1	-1.7
HELC				eS	Sg	08 52 01.2	+0.2
HELC				i		08 52 09.5	
	comp=Z,190nm,0.6s						
SOLC	Bahia Solano	1.27	240	eP	Pg	08 51 52.4	-0.4
SOLC				eS	Sg	08 52 07.7	-1.6
SOLC	Bahia Solano	1.27	240	eP	Pg	08 51 51.1	-1.7
SOLC				eS	Sg	08 52 09.2	-0.1
ZARC	Zaragoza, Cauc	1.56	66	eP	Pn	08 51 55.2	-2.2
PTBC	PUERTO BERRIO,	1.86	100	eP	Pn	08 51 60.0	-1.6
PTBC				eS	Sn	08 52 24.6	-1.1
PTBC				i		08 52 25.4	
	comp=Z,444nm,0.7s						
NORC	Norcasia	1.92	132	eP	Pn	08 52 01.2	-1.2
NORC				eS	Sn	08 52 27.4	+0.1
NORC				i		08 52 29.4	
	comp=Z,176nm,0.4s						
PLMC	San Jos del P	1.94	180	eP	Pn	08 52 01.7	-1.1
RREF	El Recreo	2.16	154	eP	Pn	08 52 06.4	+0.1
SPBC	San Pablo de B	2.52	118	eP	Pn	08 52 10.8	+0.1
SPBC				eS	Sn	08 52 43.0	+0.9
SPBC				i		08 52 46.5	
	comp=Z,73nm,0.5s						
BRRC	Barranca, Sant	2.58	84	eP	Pn	08 52 10.9	-0.5
BRRC				eS	Sn	08 52 43.9	+0.4
BRRC				i		08 52 55.3	
	comp=Z,100nm,0.5s						
ROSC	El Rosal	2.81	135	eP	Pn	08 52 17.3	+2.3
ROSC				eS	Sb	08 52 54.9	0.0
YOTC	Yotoco, Valle	2.86	181	eP	Pn	08 52 13.6	-1.8
SMLC	San Martn de	2.93	49	eP	Pn	08 52 14.8	-1.5
SMLC				i		08 53 03.6	
	comp=Z,55nm,0.6s						
GIRC	Giron, Santand	3.09	86	eP	Pn	08 52 17.7	-0.9
GIRC				i		08 53 03.9	
	comp=Z,65nm,0.4s						
BARC	Barichara	3.10	95	eP	Pn	08 52 19.4	+0.5
BARC				eS	Sn	08 52 56.0	-0.9
ORTC	Ortega, Tolima	3.11	160	eP	Pn	08 52 20.9	+2.0
ORTC				eS	Sb	08 53 01.8	-1.5
SJCC	San Jacinto, C	3.21	20	eP	Pn	08 52 17.4	-2.9
OCAC	Ocana	3.25	65	eP	Pn	08 52 19.1	-1.8
CHIC	Chingaza	3.38	131	eP	Pn	08 52 25.2	+2.4
CHIC				i		08 53 31.3	
	comp=Z,27nm,0.5s						
PRAC	Prado	3.43	156	eP	Pn	08 52 24.5	+1.3
CODC	Agustn Codazz	4.16	43	eP	Pn	08 52 33.3	+0.1
CODC				eS	Sn	08 53 17.5	-5.0
CODC				i		08 53 25.2	
	comp=Z,9.1nm,0.4s						
BCIP	Isla Barro Col	4.19	303	eP	Pn	08 52 31.3	-2.3
TAMC	Tame, Arauca	4.50	95	eP	Pn	08 52 38.1	+0.3
TAMC				eS	Sn	08 53 30.9	-0.1

ISK ***23*** *08:52:37.6, 39°.71N×30°.67E, h11^{km}, ML1.9/8, Suspected Mining explosion.*

ISCJB ***23*** *08:52:38.5±0.5, 39°.71N±0°.03×30°.69E±0°.05, h0^{km}, Error ellipse: s-maj=5.6km s-min=3.4km az=149.6*

DDA ***23*** *08:52:38.2, 39°.73N×30°.60E, h6^{km}±3^{km}, ML2.7*

ISC 23 08:52:38.9±0.9, 39°.71N±0°.03×30°.69E±0°.03, h0^{km}, n15, σ0^{s}.80/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESKT	Eskisehir	0.23	147	PG	Pg	08 52 42.8	-0.4
ESKT				SG	Sg	08 52 47.2	+1.1
BORA	Eskisehir	0.25	313	PG	Pg	08 52 42.8	-0.9
BORA	Eskisehir	0.25	313	i P	Pg	08 52 43.3	-0.4
BORA				i S	Sg	08 52 46.6	-0.4
BORA				IAML_P			
	comp=Z,15μm,0.1s						
SRCK	Saricakaya, Es	0.34	351	PG	Pg	08 52 44.6	-0.8
SRCK				SG	Sg	08 52 50.4	+0.7
SRCK	Saricakaya, Es	0.34	351	i P	Pg	08 52 44.9	-0.5
SRCK				i S	Sg	08 52 50.3	+0.7
SRCK				IAML_P			
	comp=Z,4μm,0.1s						
AUKIR	Kırka- Seyitga	0.45	196	i P	Pg	08 52 46.6	-0.9
AUMIH	MIHALICIK	0.63	75	PG	Pg	08 52 49.7	-1.3
SVRH	Sivrihisar-ESK	0.69	112	PG	Pg	08 52 51.3	-0.9
AUSIV	SIVRIHISAR	0.71	112	PG	Pg	08 52 51.4	-1.1
GULT	Gulveren	0.73	349	PG	Pg	08 52 52.5	-0.5
TVSB	Tavsanli	0.99	255	PG	Pg	08 52 56.5	-1.3
BOLV	Bolvadin	1.01	168	i P	Pb	08 52 59.3	-0.1
BOLV				i S	Sb	08 53 14.0	+0.8
KIBS	BOLU	1.14	51	i P	Pb	08 53 01.6	0.0
KIBS				i S	Sn	08 53 18.6	0.0
KIBS				IAML_P			
	comp=Z,550nm,0.2s						
KIZT	Kizilcal	1.24	132	PN	Pg	08 53 02.1	-0.6
ULDT	Uludag	1.27	290	i P	Pb	08 53 03.9	0.0
ULDT				i S	Sn	08 53 22.9	+0.9
ULDT				IAML_P			
	comp=Z,733nm,0.2s						

MAN 23 09:16:36.5, 8°.02N×126°.66E, h31^{km}, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.34	299⇓	eP	Pn	09 16 47.6	+2.3
BIPH				eS	Sn	09 16 55.6	+4.4

NIED ***23*** *09:18:00, 42°.00N×133°.50E, h520^{km}, Mw4.3 Best double couple: $M_0$3.18000×10^{15} NP1:ϕ_s6.00000°, δ21.00000°, λ99.00000°. NP2:ϕ_s176.00000°, δ69.00000°, λ86.00000°.*

BJI ***23*** *09:18:06.9±0.0, 41°.93N×133°.07E, h479^{km}, mb4.6/21, mB4.5/22*

JMA ***23*** *09:18:06.8±0.3, 41°.98N×133°.51E, h543^{km}±5^{km}, M4.4*

MOS ***23*** *09:18:07.4±0.9, 42°.00N×133°.09E, h484^{km}, mb4.2/54, Error ellipse: s-maj=6.6km s-min=5.7km az=85.1*

SKHL ***23*** *09:18:07.7±0.5, 42°.06N×133°.23E, h481^{km}±7^{km}, mb4.7/3, msh4.8/1*

NEIC ***23*** *09:18:08.5±1.4, 41°.99N×133°.10E, h482^{km}±4^{km}, mb4.2/162, Error ellipse: s-maj=13.8km s-min=13.0km az=130.0*

IDC ***23*** *09:18:08.7±0.5, 42°.06N×133°.04E, h486^{km}±5^{km}, mb3.6/28, mb1 3.7/36, mb1mx3.6/47, mbtmp4.4/36, Error ellipse: s-maj=8.3km s-min=7.3km az=130.0*

ISCJB ***23*** *09:18:08.4±0.1, 41°.89N±0°.02×133°.13E±0°.02, h500^{km}, mb4.1/183, Error ellipse: s-maj=3.2km s-min=2.4km az=11.5*

ISC 23 09:18:09.3±0.3, 42°.00N±0°.04×133°.18E±0°.04, h500^{km}, n441, σ1^{s}.66/488, mb4.1/183, 8C-8D, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLA	Vladivostok	1.47	320c	iP	P	09 19 09.8	-2.1
VLA	Vladivostok	1.47	320	P	P	09 19 09.8	-2.1
VLA				AMB	AMB	09 19 11.6	
	233nm,0.7s						
VLA				eS	S	09 20 01.0	-2.1
MSHR	Mys Shultsa	1.61	292c	iP	P	09 19 11.0	-1.5
GRTR	Gornotajezhnoj	1.87	337⇑	iP	P	09 19 11.9	-1.7
GRTR				i S	S	09 20 01.9	-4.3
USA0B	Ussuriysk Arra	2.37	339	eP	P	09 19 14.6	-1.5
USRK	Ussuriysk Ar.	2.37	339	P	P	09 19 14.6	-1.5
	23nm,0.3s,baz=182,slow=5.6,SNR=631						
USRK				S	S	09 20 07.1	-3.8
	baz=124,slow=28,SNR=2.9						
MDJ	Mudanjiang	3.70	316	P	P	09 19 23.9	-1.3
MDJ				S	S	09 20 24.3	-2.9
MDJ				pmax	pmax		
	comp=Z,120nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,310nm,1.7s						
TEY	Ternei	3.93	38⇓	iP	P	09 19 25.6	-1.3
TEY				eS	S	09 20 27.1	-3.3
TEY				pmax	pmax		
	comp=Z,200nm,0.6s						
TEY				pmax	pmax		
	comp=E,30nm,0.5s						
TEY				pmax	pmax		
	comp=N,60nm,0.7s						
TEY				pmax	pmax		
	comp=Z,150nm,0.6s						
TEY				smax	smax		
	comp=N,70nm,0.9s						
TEY				smax	smax		
	comp=E,160nm,1.0s						
TEY	Ternei	3.93	38⇓	iP	P	09 19 25.6	-1.3
TEY				AMB	AMB	09 19 26.2	
	comp=E,60nm,0.6s						
TEY				AMB	AMB	09 19 26.2	
	comp=E,30nm,0.6s						
TEY				AMB	AMB	09 19 26.2	
	comp=E,150nm,0.6s						
TEY				eS	S	09 20 27.1	-3.3
TEY				A	A	09 20 28.0	
	comp=E,70nm,0.9s						
TEY				A	A	09 20 28.0	
	comp=E,160nm,0.9s						
JOSM	Okushiri--Mats	4.69	87	P	P	09 19 31.7	-1.7
JOSM				eS	S	09 20 38.9	-3.2
JOG3	Oga3	4.93	113	P	P	09 19 38.7	+3.1
JHST	Hiyamasetana	4.99	83	P	P	09 19 34.6	-1.5
JHST				eS	S	09 20 45.2	-1.8
JHG	Hegura jima	5.04	144	P	P	09 19 36.3	-0.4
JOMM	Oshimamatsumae	5.13	93	P	P	09 19 35.7	-1.6
JSH	Shimam	5.13	80	P	P	09 19 35.7	-1.6
JIW	Iwasaki	5.33	103	P	P	09 19 37.6	-1.7
JYM2	Yakumo 2	5.36	86	P	P	09 19 37.9	-1.5
JYM2				S	S	09 20 50.6	-2.5
JSR	Shiriuchi	5.43	93	P	P	09 19 38.4	-1.8
JSI2	Shiura 2	5.51	97	P	P	09 19 39.1	-1.8
JSI2				S	S	09 20 52.9	-2.8
JSK	Shakotan	5.55	73	P	P	09 19 39.1	-2.0
JSK				S	S	09 20 52.3	-4.0
JSD	Sado	5.55	134	P	P	09 19 39.9	-1.5
JHHS	Hirosakihyakuz	5.57	102	P	P	09 19 40.2	-1.3
JTB	Tobi-shima	5.60	118	P	P	09 19 40.0	-1.8
JAW	Awa shima	5.84	125	P	P	09 19 42.4	-1.7
JKB	Kayabe	5.86	88	P	P	09 19 41.8	-2.3
JKB				eS	S	09 20 57.6	-4.2
JOT	Ohata	5.92	93	P	P	09 19 43.4	-1.4
CN2	Changchun	5.96	290	eP	P	09 19 43.8	-1.3
CN2				eS	S	09 21 01.1	-2.4
CN2				pmax	pmax		
	comp=E,80nm,4.0s						
KSRS	Korea Array	6.08	223	P	P	09 19 46.6	+0.2
	comp=E,1.6nm,0.3s,baz=40,slow=9.7,SNR=27						
KSRS				S	S	09 21 06.8	+1.1
	comp=E,0.1nm,0.3s,baz=45,slow=18,SNR=8.9						
KS15	Wonju Array Si	6.11	224	eP	P	09 19 44.2	-2.5
JRG	Rokugo	6.23	112	P	P	09 19 45.7	-2.2
JRG				eS	S	09 21 04.4	-4.1
JHR	Hokuryu	6.52	72	P	P	09 19 48.9	-1.6
JHK	Hiroka	6.54	135	P	P	09 19 49.3	-1.6
JHK				eS	S	09 21 11.0	-3.1
MAJO	Matsushiro	6.70	143	eP	P	09 19 50.8	-1.8
MAJO	Matsushiro	6.70	143	eP	P	09 19 51.0	-1.6
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MAT	Matsushiro	6.70	143	P	P	09 19 50.8	-1.8
MAT				S	S	09 21 16.2	-0.8
MJAR	Matsushiro Arr	6.70	143	P	P	09 19 51.4	-1.1
	comp=Z,0.2nm,0.3s,baz=330,slow=10,SNR=17						
MJA0	Matsu Arr-Jizo	6.72	143	eP	P	09 19 51.4	-1.4
JMK	Ichinoseki	6.84	114	P	P	09 19 51.0	-2.9
JMK				eS	S	09 21 14.0	-5.5
JFT	Otama	7.10	127	P	P	09 19 54.4	-2.1
JFT				eS	S	09 21 20.7	-3.6
JWK2	Keihoku	7.14	59	P	P	09 19 56.1	-0.6
JMM	Marumori	7.16	123	P	P	09 19 54.7	-2.4
JMM				S	S	09 21 19.6	-5.8
ASAJ	Asahikawa	7.22	70	P	P	09 19 55.4	-2.1
	comp=Z,35nm,0.3s,baz=251,slow=6.8,SNR=63						
INU	Inuyama	7.28	154	eP	P	09 19 57.0	-1.4
KLR	Kul'dur	7.30	353	P	P	09 19 57.1	-1.2
	comp=Z,2.1nm,0.3s,baz=168,slow=7.8,SNR=36						
KLR	Kul'dur	7.30	353	P	P	09 19 56.7	-1.6
ERM	Erimo	7.43	87	eP	P	09 19 57.4	-2.3
ERM				eS	S	09 21 23.4	-6.9
ERM	Erimo	7.43	87	eP	P	09 19 57.4	-2.3
ERM				eS	S	09 21 23.4	-6.9
JRY	Ryogami san	7.45	141	P	P	09 19 58.6	-1.5
JFK	Kawauchi	7.52	125	P	P	09 19 58.1	-2.7
JFK				S	S	09 21 24.9	-7.4
JCH	Churui	7.58	82	P	P	09 19 58.5	-2.7
JCH				S	S	09 21 27.3	-5.7
JTKR	Abashiri--Toko	8.11	72	P	P	09 20 04.7	-2.0
JOD2	Odawara 2	8.16	144	eS	S	09 21 37.7	-6.6
YSS	Yuzh-Sakhalins	8.45	51	eP	P	09 20 08.7	-1.4
YSS				eS	S	09 21 49.5	0.0
YSS	Yuzh-Sakhalins	8.45	51	eP	P	09 20 08.7	-1.4
YSS				eS	S	09 21 49.5	0.0
YSS	Yuzh-Sakhalins	8.45	51	eP	P	09 20 09.0	-1.1
YSS				AMB	AMB	09 20 10.6	
	comp=Z,30nm,0.6s						
NEM2	Nemuro 2	9.36	77	P	P	09 20 17.4	-2.3
NEM2				eS	S	09 22 00.3	-6.7
GRPR	Tuman	9.44	74⇑	iP	P	09 20 20.2	-0.4
GRPR				S	S	09 22 07.8	-0.8
GRPR				pmax	pmax		
	comp=Z,136nm,0.4s						
GRPR				pmax	pmax		
	comp=N,54nm,0.2s						
GRPR				pmax	pmax		
	comp=E,90nm,0.3s						
LAGR	Lagunnoye	9.46	73	eP	P	09 20 20.2	-0.6
LAGR				S	S	09 22 08.6	-0.4
LAGR				pmax	pmax		
	comp=Z,288nm,0.3s						
LAGR				pmax	pmax		
	comp=N,148nm,0.1s						
LAGR				pmax	pmax		
	comp=E,218nm,0.4s						
YUK	Yuzh-Kuril'sk	9.51	73	P	P	09 20 22.0	+0.7
YUK				S	S	09 22 11.3	+1.3
YUK				pmax	pmax		
	comp=Z,393nm,0.4s						
YUK				pmax	pmax		
	comp=N,219nm,0.3s						
YUK				pmax	pmax		
	comp=E,324nm,0.3s						
BSO1	Boso 1	9.55	138	P	P	09 20 20.5	-0.9
BSO1				eS	S	09 22 04.1	-5.9
JHJ	Hachijo jima 2	10.29	147	P	P	09 20 30.4	+0.6
	comp=E,4.5nm,0.3s,baz=229,slow=19,SNR=3.1						
JHJ				S	S	09 22 22.0	-3.4
	comp=E,3.1nm,0.3s,baz=68,slow=19,SNR=2.1						
JHJ2	Mitsune	10.31	147	eP	P	09 20 25.9	-4.1
TYV	Tymovskoe	11.01	33	eP	P	09 20 37.6	+0.5
TYV				eS	S	09 22 38.5	-0.3
TYV				pmax	pmax		
	comp=Z,15nm,0.4s						
TYV				smax	smax		
	comp=E,7.0nm,0.9s						
EKMR	Ekimchan	11.08	359⇓	eP	P	09 20 37.0	-0.8
EKMR				AMB	AMB	09 20 38.0	
	comp=E,8.0nm,0.6s						
KUR	Kuril'sk	11.13	68⇓	iP	P	09 20 37.9	-0.5
KUR				S	S	09 22 38.8	-2.5
KUR				pmax	pmax		

	comp=Z,39nm,0.4s						
KUR				pmax	pmax		
	comp=N,12nm,0.3s						
KUR				pmax	pmax		
	comp=E,18nm,0.3s						
KUR				pmax	pmax		
	comp=Z,130nm,2.0s						
KUR	**Kuril'sk**	**11.13**	**68**	*e*P	**P**	**09 20 37.5**	**-0.9**
HIA	**Hailar**	**11.88**	**312**	*e*P	**P**	**09 20 46.1**	**-0.2**
HIA	**Hailar**	**11.88**	**312**	*e*P	**P**	**09 20 46.1**	**-0.2**
BJT	**Baijiatuau**	**13.00**	**267**	*e*P	**P**	**09 20 57.1**	**-1.3**
BJT	**Baijiatuau**	**13.00**	**267**	*e*P	**P**	**09 20 57.1**	**-1.3**
BMKR	**Bomnak**	**13.04**	**349**	*e*P	**P**	**09 20 56.3**	**-2.2**
BMKR				AMB	AMB	09 20 57.0	
	comp=Z,5.0nm,0.6s						
KROS	**Kirovskiy**	**13.11**	**344**	*e*P	**P**	**09 20 56.8**	**-2.5**
KROS				AMB	AMB	09 20 58.0	
	comp=Z,2.0nm,0.4s						
HHC	**Hu-ho-hao-te**	**16.25**	**273**	*e*P	**P**	**09 21 30.3**	**-2.3**
HHC				pmax	pmax		
	comp=Z,37nm,1.1s						
HHC				pmax	pmax		
	comp=Z,65nm,5.7s						
SONM	**Songino Array**	**19.79**	**296**	P	**P**	**09 22 05.7**	**-0.2**
	comp=Z,2.7nm,0.3s,baz=107,slow=9.1,SNR=48						
PETK	**Petropavlovsk-**	**19.83**	**48**	P	**P**	**09 22 05.2**	**-0.9**
	baz=203,slow=5.6,SNR=4.2						
BOD	**Bodaibo**	**19.97**	**329**	*e*P	**P**	**09 22 04.5**	**-2.7**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK	**Yakutsk**	**20.18**	**355**	*e*P	**P**	**09 22 08.2**	**-0.8**
YAK				pmax	pmax		
	comp=Z,12nm,0.7s						
YAK	**Yakutsk**	**20.18**	**355**	*e*P	**P**	**09 22 08.1**	**-0.9**
PET	**Petropavlovsk**	**20.32**	**48**	*e*P	**P**	**09 22 12.3**	**+1.8**
	comp=Z,12nm,1.2s						
PET	**Petropavlovsk**	**20.32**	**48**	*e*P	**P**	**09 22 12.3**	**+1.8**
PET				pmax	pmax		
	comp=Z,12nm,1.2s						
PET	**Petropavlovsk**	**20.32**	**48**	*e*P	**P**	**09 22 11.9**	**+1.4**
XAN	**Xi'an**	**20.65**	**255**	*e*P	**P**	**09 22 12.4**	**-1.5**
	comp=Z,28nm,0.7s						
XAN	**Xi'an**	**20.65**	**255**	P	**P**	**09 22 12.8**	**-1.1**
XAN				sP	sP	09 24 23.3	-1.2
XAN	**Xi'an**	**20.65**	**255**	*e*P	**P**	**09 22 12.4**	**-1.5**
XAN				pmax	pmax		
	comp=Z,28nm,0.7s						
MA2	**Magadan**	**20.70**	**26**	P	**P**	**09 22 13.7**	**-0.2**
	comp=Z,13nm,0.7s,baz=214,slow=10,SNR=13						
MA2	**Magadan**	**20.70**	**26**	*e*P	**P**	**09 22 13.9**	**0.0**
	comp=Z,14nm,0.7s						
MA2	**Magadan**	**20.70**	**26**	*e*P	**P**	**09 22 13.6**	**-0.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MA2	**Magadan**	**20.70**	**26**	*e*P	**P**	**09 22 13.9**	**0.0**
ZAK	**Zakamensk**	**22.21**	**302**	*e*P	**P**	**09 22 27.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TLY	**Talaya**	**22.27**	**306**	*e*P	**P**	**09 22 27.5**	**-0.7**
	comp=Z,7.4nm,1.1s						
TLY	**Talaya**	**22.27**	**306**	*e*P	**P**	**09 22 27.5**	**-0.7**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	**Talaya**	**22.27**	**306**	*e*P	**P**	**09 22 27.5**	**-0.7**
LZH	**Lanzhou**	**23.47**	**265**	⇓P	**P**	**09 22 38.6**	**-0.7**
LZH				sP	sP	09 24 51.8	-3.7
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,62nm,4.6s						
SEY	**Seymchan**	**23.82**	**22**	P	**P**	**09 22 42.5**	**+0.6**
	comp=Z,2.4nm,0.4s,baz=212,slow=7.5,SNR=11						
SEY	**Seymchan**	**23.82**	**22**	*e*P	**P**	**09 22 43.3**	**+1.4**
GTA	**Gaotai**	**25.34**	**275**	⇓P	**P**	**09 22 55.8**	**0.0**
GTA				pP	P	09 23 00.0	+4.2
GTA				pmax	pmax		
	comp=Z,22nm,0.8s						
GTA				pmax	pmax		
	comp=Z,51nm,5.7s						
CD2	**Chengdu**	**26.00**	**254**	*e*P	**P**	**09 23 00.5**	**-1.2**
TIXI	**Tiksi**	**29.80**	**357**	*e*P	**P**	**09 23 32.8**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL	**Bilibino**	**31.51**	**23**	⇓*i*P	**P**	**09 23 49.8**	**+0.7**
BILL				*PP	**pP**	**09 25 17.0**	**+2.1**
BILL						09 26 33.0	
BILL				*e*S	**S**	**09 28 14.2**	**-7.0**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DGZ	**Jazzator, Alta**	**32.36**	**300**	*d* *i*P	**P**	**09 23 57.0**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMQ	**Urumqi**	**33.05**	**289**	*e*P	**P**	**09 24 03.6**	**+1.0**
ZAA0	**Zalesovo Array**	**33.85**	**308**	*e*P	**P**	**09 24 08.2**	**-1.0**
	comp=Z,3.5nm,0.5s						
ZALV	**Zalesovo Beam**	**33.85**	**308**	P	**P**	**09 24 08.3**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=108,slow=9.5,SNR=8.2						
ZALV				PcP	**sP**	**09 26 33.5**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=54,slow=2.7,SNR=3.2						
ADK	**Adak**	**34.99**	**56**	*e*P	**P**	**09 24 19.3**	**+0.6**
	comp=Z,33nm,1.1s						
ADK	**Adak**	**34.99**	**56**	*e*P	**P**	**09 24 19.3**	**+0.6**
ADK				pmax	pmax		
	comp=Z,33nm,1.1s						
MK31	**Makanchi Array**	**36.15**	**295**	*e*P	**P**	**09 24 27.4**	**-1.2**
	comp=Z,6.3nm,0.7s						
MK31	**Makanchi Array**	**36.15**	**295**	*e*P	**P**	**09 24 27.4**	**-1.2**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	**Makanchi Array**	**36.15**	**295**	P	**P**	**09 24 27.9**	**-0.7**
	comp=Z,7.5nm,0.7s,baz=86,slow=10.0,SNR=62						
MKAR				PcP	**PcP**	**09 26 40.8**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=53,slow=2.9,SNR=3.4						
MKAR				ScP	**ScP**	**09 29 39.4**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=75,slow=4.4,SNR=4.0						
MAKZ	**Makanchi**	**36.36**	**295**	*e*P	**P**	**09 24 29.4**	**-0.8**
	comp=Z,8.3nm,0.6s						
MAKZ	**Makanchi**	**36.36**	**295**	*e*P	**P**	**09 24 29.5**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHTO	**Chiang Mai**	**37.12**	**242**	*e*P	**P**	**09 24 36.8**	**0.0**
	comp=Z,7.8nm,0.6s						
CHTO	**Chiang Mai**	**37.12**	**242**	*e*P	**P**	**09 24 36.8**	**0.0**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CM31	**Chiang Mai Arr**	**37.37**	**242**	*e*P	**P**	**09 24 40.0**	**+1.0**
	comp=Z,6.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**37.37**	**242**	P	**P**	**09 24 39.0**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=35,slow=6.6,SNR=8.0						
KURK	**Kurchatov**	**37.88**	**302**	*e*P	**P**	**09 24 41.8**	**-0.8**
	comp=Z,20nm,0.6s						
KURK	**Kurchatov**	**37.88**	**302**	*e*P	**P**	**09 24 41.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,20nm,0.7s						
KURBB	**Kurchatov Arra**	**37.95**	**302**	P	**P**	**09 24 42.5**	**-0.7**
	comp=Z,16nm,0.7s,baz=83,slow=8.5,SNR=21						
KURBB				PcP	**PcP**	**09 26 45.6**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=87,slow=2.6,SNR=5.1						
KURBB				ScP	**ScP**	**09 29 45.7**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=78,slow=3.9,SNR=4.9						
PDGK	**Podgornoye**	**38.93**	**291**	P	**P**	**09 24 50.7**	**-0.8**
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PRZ	**Przheval'sk**	**39.95**	**290**	*e*P	**P**	**09 25 00.3**	**+0.5**
	comp=Z,15nm,1.1s						
PRZ	**Przheval'sk**	**39.95**	**290**	*e*P	**P**	**09 25 00.3**	**+0.5**
PRZ				pmax	pmax		
	comp=Z,15nm,1.1s						
KDJ	**Kajisay**	**40.92**	**290**	*e*P	**P**	**09 25 07.0**	**-0.6**
	comp=Z,4.6nm,0.6s						
KDJ	**Kajisay**	**40.92**	**290**	*e*P	**P**	**09 25 07.0**	**-0.6**
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BOOM	**Boomskoye usch**	**41.67**	**291**	*e*P	**P**	**09 25 12.1**	**-1.4**
	comp=Z,4.5nm,0.6s						
BOOM	**Boomskoye usch**	**41.67**	**291**	*e*P	**P**	**09 25 12.1**	**-1.4**
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NRN	**Naryn**	**41.99**	**289**	*e*P	**P**	**09 25 15.4**	**-0.8**
	comp=Z,2.4nm,0.8s						
NRN	**Naryn**	**41.99**	**289**	*e*P	**P**	**09 25 15.4**	**-0.8**
NRN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OTUK	**Ortayu**	**42.39**	**300**	P	**P**	**09 25 18.6**	**-0.3**
OTUK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	**Borovoye Array**	**42.51**	**307**	P	**P**	**09 25 19.1**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=88,slow=7.4,SNR=8.5						
BVAR				PcP	**PcP**	**09 27 01.3**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=113,slow=1.9,SNR=5.6						
BRVK	**Borovoye**	**42.57**	**307**	*i* P	**P**	**09 25 20.9**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**42.57**	**307**	*e*P	**P**	**09 25 20.9**	**+0.7**
AAK	**Ala-Archa**	**42.63**	**291**	P	**P**	**09 25 20.2**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=99,slow=6.0,SNR=3.9						
AAK	**Ala-Archa**	**42.63**	**291**	*e*P	**P**	**09 25 20.2**	**-0.8**
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**42.63**	**291**	⇑*i*P	**P**	**09 25 20.8**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AAK	**Ala-Archa**	**42.63**	**291**	*e*P	**P**	**09 25 20.8**	**-0.3**
KK31	**Karatay Array**	**45.21**	**294**	*e*P	**P**	**09 25 40.2**	**-0.7**
	comp=Z,3.4nm,0.8s						
KK31	**Karatay Array**	**45.21**	**294**	*e*P	**P**	**09 25 40.2**	**-0.7**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CAST	**Castle Rocks**	**46.87**	**36**	*e*P	**P**	**09 25 54.9**	**+1.6**
	comp=Z,9.9nm,0.7s						
PPLA	**Purkeypile**	**46.92**	**37**	*e*P	**P**	**09 25 55.4**	**+1.6**
	comp=Z,5.5nm,0.6s						
TOLK	**Toolik Lake Re**	**47.12**	**29**	P	**P**	**09 25 55.9**	**+0.8**
	baz=277						
MLY	**Manley**	**47.18**	**34**	*e*P	**P**	**09 25 56.2**	**+0.6**
	comp=Z,5.1nm,0.9s						
NIL	**Nilore**	**47.22**	**280**	*e*P	**P**	**09 25 56.0**	**-0.4**
	comp=Z,11nm,0.8s						
NIL	**Nilore**	**47.22**	**280**	*e*P	**P**	**09 25 56.0**	**-0.4**
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
BPAW	**Bear Paw Mtn.**	**47.23**	**35**	*e*P	**P**	**09 25 56.8**	**+0.8**
	comp=Z,5.5nm,0.8s						
SPU	**Mount Spurr**	**47.31**	**39**	*e*P	**P**	**09 25 58.2**	**+1.5**
KTH	**Kantishna Hill**	**47.36**	**36**	*e*P	**P**	**09 25 58.2**	**+1.2**
	comp=Z,16nm,1.0s						
KDAK	**Kodiak Island**	**47.83**	**44**	P	**P**	**09 26 00.7**	**+0.2**
	comp=Z,4.8nm,0.4s,baz=343,slow=2.7,SNR=28						
KDAK				PcP	**PcP**	**09 27 21.0**	**+1.4**
	comp=Z,5.6nm,0.8s,baz=75,slow=2.3,SNR=6.3						
KDAK	**Kodiak Island**	**47.83**	**44**	*e*P	**P**	**09 26 00.8**	**+0.3**
	comp=Z,5.7nm,0.5s						
CHGR	**Chuyangaron**	**47.91**	**288**	*e*P	**P**	**09 26 00.5**	**-1.1**
	comp=Z,24nm,1.1s						
CNPM	**China Poot**	**48.08**	**42**	*e*P	**P**	**09 26 02.4**	**0.0**
	comp=Z,14nm,1.2s						
BRLK	**Bradley Lake**	**48.19**	**41**	*e*P	**P**	**09 26 04.2**	**+1.0**
	comp=Z,7.4nm,0.8s						
MCK	**McKinley**	**48.20**	**36**	*e*P	**P**	**09 26 04.5**	**+1.2**
	comp=Z,6.6nm,0.7s						
MCK	**McKinley**	**48.20**	**36**	*e*P	**P**	**09 26 04.5**	**+1.2**
MCK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RND	**Reindeer**	**48.30**	**36**	*e*P	**P**	**09 26 04.5**	**+0.4**
	comp=Z,5.6nm,0.8s						
RND	**Reindeer**	**48.30**	**36**	*e*P	**P**	**09 26 04.5**	**+0.4**
RND				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARU	**Arti**	**48.38**	**314**	P	**P**	**09 26 03.6**	**-1.1**
	comp=Z,1.4nm,0.3s,baz=299,slow=19,SNR=4.4						
ARU	**Arti**	**48.38**	**314**	*e*P	**P**	**09 26 04.8**	**+0.1**
	comp=Z,4.6nm,0.9s						
ARU	**Arti**	**48.38**	**314**	*c* *i*P	**P**	**09 26 04.2**	**-0.5**
ARU				S	**S**	**09 32 27.8**	**+0.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	**Arti**	**48.38**	**314**	*e*P	**P**	**09 26 04.8**	**+0.1**
WRH	**Wood River Hil**	**48.40**	**35**	*e*P	**P**	**09 26 05.6**	**+0.9**
	comp=Z,4.1nm,0.6s						
TCOL	**CIGO, UAF Yank**	**48.41**	**34**	P	**P**	**09 26 06.0**	**+1.2**
	baz=282						
COLA	**College**	**48.42**	**34**	*e*P	**P**	**09 26 06.3**	**+1.5**
	comp=Z,20nm,0.8s						
COLA	**College**	**48.42**	**34**	*e*P	**P**	**09 26 06.3**	**+1.5**
COLA				pmax	pmax		
	comp=Z,20nm,0.8s						
RC01	**Rabbit Creek A**	**48.43**	**39**	*e*P	**P**	**09 26 05.3**	**+0.3**
	comp=Z,9.3nm,0.6s						
CCB	**Clear Creek Bu**	**48.49**	**34**	*e*P	**P**	**09 26 05.9**	**+0.6**
	comp=Z,5.7nm,0.8s						
POKR	**Poker Plat Res**	**48.54**	**34**	P	**P**	**09 26 07.1**	**+1.4**
	baz=282						
PMR	**Palmer**	**48.59**	**39**	*e*P	**P**	**09 26 06.5**	**+0.4**
	comp=Z,5.8nm,0.8s						
PMR	**Palmer**	**48.59**	**39**	*e*P	**P**	**09 26 06.5**	**+0.4**
PMR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GHO	**Glory Hole Cre**	**48.64**	**38**	*e*P	**P**	**09 26 07.5**	**+0.8**
SEW	**Seward**	**48.81**	**41**	*e*P	**P**	**09 26 08.1**	**+0.4**
	comp=Z,19nm,1.3s						
ILAR	**Eielson Array**	**48.84**	**34**	P	**P**	**09 26 08.2**	**+0.2**
	comp=Z,4.0nm,0.6s,baz=288,slow=7.8,SNR=30						
ILAR	**Eielson Array**	**48.84**	**34**	*e*P	**P**	**09 26 08.2**	**+0.2**
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ILB	**Eielson Array**	**48.84**	**34**	*e*P	**P**	**09 26 08.6**	**+0.6**
	comp=Z,5.4nm,0.7s						
HDA	**Harding Lake**	**48.90**	**35**	*e*P	**P**	**09 26 09.3**	**+0.9**
	comp=Z,17nm,0.6s						
HDA	**Harding Lake**	**48.90**	**35**	P	**P**	**09 26 08.6**	**+0.2**
	baz=283						
SML	**Sawmill**	**48.91**	**38**	*e*P	**P**	**09 26 09.9**	**+1.3**
	comp=Z,14nm,1.1s						
SML	**Sawmill**	**48.91**	**38**	*e*P	**P**	**09 26 09.9**	**+1.3**
SML				pmax	pmax		
	comp=Z,14nm,1.1s						
KNK	**Knik Glacier**	**48.95**	**39**	*e*P	**P**	**09 26 10.1**	**+1.2**
	comp=Z,11nm,0.6s						
DHY	**Denali Highway**	**49.03**	**36**	*e*P	**P**	**09 26 10.5**	**+0.9**
	comp=Z,6.6nm,0.8s						
FYU	**Fort Yukon**	**49.11**	**32**	*e*P	**P**	**09 26 11.7**	**+1.7**
	comp=Z,8.9nm,0.9s						
SCM	**Sheep Creek Mo**	**49.36**	**38**	*e*P	**P**	**09 26 13.3**	**+1.3**
	comp=Z,21nm,0.6s						
SCM	**Sheep Creek Mo**	**49.36**	**38**	*e*P	**P**	**09 26 13.3**	**+1.3**
SCM				pmax	pmax		
	comp=Z,21nm,0.6s						
KBL	**Kabul**	**49.86**	**284**	*e*P	**P**	**09 26 16.1**	**-0.2**
	comp=Z,2.7nm,0.6s						
KBL	**Kabul**	**49.86**	**284**	*e*P	**P**	**09 26 16.1**	**-0.2**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ABKAR	**Akbulak array**	**49.88**	**305**	*e*P	**P**	**09 26 15.1**	**-0.7**
	comp=Z,4.2nm,0.8s						
RIDG	**Independent Ri**	**49.96**	**35**	*e*P	**P**	**09 26 16.6**	**+0.3**
	comp=Z,7.6nm,0.5s						
SCRK	**Sand Creek**	**50.26**	**35**	*e*P	**P**	**09 26 18.8**	**+0.2**
	comp=Z,11nm,0.8s						
DOT	**Dot Lake**	**50.32**	**35**	*e*P	**P**	**09 26 19.3**	**+0.4**
	comp=Z,7.7nm,0.7s						
MENT	**Mentasta**	**50.67**	**36**	*e*P	**P**	**09 26 23.0**	**+1.5**
	comp=Z,7.4nm,0.8s						
RAGM	**Ragged Mountai**	**51.01**	**39**	*e*P	**P**	**09 26 25.8**	**+1.7**
	comp=Z,24nm,1.4s						
GLB	**Gilahina Butte**	**51.08**	**38**	*e*P	**P**	**09 26 26.3**	**+1.7**
	comp=Z,4.9nm,0.7s						
EGAK	**Eagle**	**51.21**	**33**	*e*P	**P**	**09 26 26.0**	**+0.6**
	comp=Z,6.1nm,0.6s						
HMT	**Hamilton**	**51.22**	**39**	*e*P	**P**	**09 26 27.2**	**+1.6**
	comp=Z,18nm,1.0s						
CRQM	**Cirque**	**51.61**	**39**	*e*P	**P**	**09 26 29.8**	**+1.2**
	comp=Z,12nm,0.6s						
TGL	**Tana Glacier**	**51.76**	**38**	*e*P	**P**	**09 26 30.6**	**+1.0**
	comp=Z,14nm,0.9s						
WAX	**Waxell Ridge**	**51.85**	**39**	*e*P	**P**	**09 26 31.0**	**+0.9**
	comp=Z,8.5nm,0.5s						
DAWY	**Dawson**	**52.16**	**34**	*e*P	**P**	**09 26 33.0**	**+0.7**
	comp=Z,2.7nm,0.8s						
CTGM	**Chitina Glacie**	**52.37**	**38**	*e*P	**P**	**09 26 35.5**	**+1.4**
	comp=Z,14nm,0.6s						
EPYK	**Eagle Plains**	**52.45**	**31**	*e*P	**P**	**09 26 35.3**	**+1.0**
	comp=Z,14nm,0.8s						
EPYK	**Eagle Plains**	**52.45**	**31**	P	**P**	**09 26 35.3**	**+1.0**
	baz=290,SNR=13						
INK	**Inuvik**	**52.92**	**28**	P	**P**	**09 26 38.5**	**+0.8**
	comp=Z,6.7nm,0.4s,baz=293,slow=9.2,SNR=68						
INK				PcP	**PcP**	**09 27 39.5**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=340,slow=4.5,SNR=6.0						
INK	**Inuvik**	**52.92**	**28**	*e*P	**P**	**09 26 38.3**	**+0.7**
	comp=Z,7.8nm,0.5s						
INK	**Inuvik**	**52.92**	**28**	*e*P	**P**	**09 26 38.3**	**+0.7**
INK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HYT	**Haines Junctio**	**54.16**	**37**	*e*P	**P**	**09 26 49.0**	**+2.2**
	comp=Z,12nm,0.9s						
KBS	**Kingsbay**	**54.60**	**348**	*ce*P	**P**	**09 26 52.1**	**+2.7**
KBS				pmax	pmax		
	comp=Z,90nm,1.7s						
SKAG	**Skagway**	**55.72**	**38**	*e*P	**P**	**09 26 59.8**	**+2.3**
	comp=Z,4.9nm,0.8s						
GEYT	**Alibeck**	**55.95**	**293**	P	**P**	**09 26 58.0**	**-1.5**
	comp=Z,1.8nm,0.5s,baz=228,slow=5.8,SNR=4.0						
JIS	**Juneau Island**	**56.69**	**39**	*e*P	**P**	**09 27 06.1**	**+2.0**
	comp=Z,5.3nm,0.8s						
SIT	**Sitka**	**56.79**	**41**	*e*P	**P**	**09 27 07.6**	**+2.7**
	comp=Z,12nm,1.1s						
SIT	**Sitka**	**56.79**	**41**	*e*P	**P**	**09 27 07.6**	**+2.7**
SIT				pmax	pmax		
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**57.01**	**336**	P	**P**	**09 27 06.3**	**0.0**
	comp=Z,1.2nm,0.3s,baz=61,slow=8.0,SNR=21						
ARE0	**ARCESS Array S**	**57.01**	**336**	*e*P	**P**	**09 27 06.6**	**+0.3**
	comp=Z,0.7nm,1.4s						
CRAG	**Craig**	**58.63**	**42**	*e*P	**P**	**09 27 19.8**	**+2.3**
DLBC	**Dease Lake**	**58.63**	**38**	P	**P**	**09 27 19.7**	**+2.2**
	comp=Z,2.7nm,0.5s,baz=302,slow=5.8,SNR=9.0						
RES	**Resolute Bay**	**59.32**	**13**	P	**P**	**09 27 21.9**	**+0.1**
	comp=Z,6.8nm,0.5s,baz=321,slow=5.4,SNR=40						
RES	**Resolute Bay**	**59.32**	**13**	*e*P	**P**	**09 27 22.2**	**+0.4**
	comp=Z,7.7nm,0.7s						
RES	**Resolute Bay**	**59.32**	**13**	*e*P	**P**	**09 27 22.2**	**+0.4**
RES				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DIB	**Dawson Inlet,**	**60.10**	**44**	*e*P	**P**	**09 27 28.7**	**+1.3**
	comp=Z,6.5nm,0.9s						
OBN	**Obninsk**	**60.24**	**319**	*e*P	**P**	**09 27 29.1**	**+0.8**
TULEG	**Thule**	**60.91**	**6**	*e*P	**P**	**09 27 32.4**	**0.0**
	comp=Z,28nm,1.1s						
FIA1	**FINESS Array S**	**61.36**	**328**	*e*P	**P**	**09 27 35.5**	**0.0**
	comp=Z,20nm,1.4s						
FINES	**FINESS Array B**	**61.36**	**328**	P	**P**	**09 27 35.2**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=63,slow=5.7,SNR=10						
WRAB	**Tennant Creek**	**61.62**	**179**	*e*P	**P**	**09 27 37.7**	**-0.1**
	comp=Z,2.1nm,0.8s						
WRAB	**Tennant Creek**	**61.62**	**179**	*e*P	**P**	**09 27 37.7**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**61.63**	**179**	P	**P**	**09 27 38.1**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=0.6,slow=7.5,SNR=25						
WRA				PcP	**PcP**	**09 28 14.5**	**+0.9**
	comp=Z,2.4nm,0.9s,baz=9.8,slow=5.6,SNR=3.3						
WB2	**Warramunga Arr**	**61.63**	**179**	*e*P	**P**	**09 27 38.1**	**+0.3**
	comp=Z,12nm,1.4s						
WC3	**Warramunga Arr**	**61.65**	**179**	*e*P	**P**	**09 27 38.2**	**+0.2**
	comp=Z,14nm,1.3s						
YKW3	**Yellowknife Ar**	**62.60**	**29**	*e*P	**P**	**09 27 44.1**	**+0.5**
	comp=Z,7.6nm,1.1s						
YKA	**Yellowknife Ar**	**62.64**	**29**	P	**P**	**09 27 44.2**	**+0.4**
	comp=Z,4.2nm,0.7s,baz=312,slow=6.3,SNR=37						
YKA				PcP	**PcP**	**09 28 18.2**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=318,slow=3.7,SNR=5.5						
CTAO	**Charters Tower**	**62.95**	**166**	*e*P	**P**	**09 27 47.5**	**+1.1**
	comp=Z,16nm,1.3s						
CTAO	**Charters Tower**	**62.95**	**166**	*e*P	**P**	**09 27 47.5**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,16nm,1.3s						
PSAD1	**Pilbara Seismi**	**64.33**	**194**	*e*P	**P**	**09 27 56.1**	**+0.9**
	comp=Z,22nm,1.4s						
PSAC1	**Pilbara Seismi**	**64.41**	**194**	*e*P	**P**	**09 27 56.4**	**+0.7**
	comp=Z,20nm,1.3s						
PSAB2	**Pilbara Seismi**	**64.42**	**194**	*e*P	**P**	**09 27 56.6**	**+0.8**
	comp=Z,10nm,0.9s						
AS31	**Alice Springs**	**65.33**	**179**	*e*P	**P**	**09 28 02.1**	**+0.5**
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**65.33**	**179**	P	**P**	**09 28 02.2**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=355,slow=6.7,SNR=47						
SUMG	**Summit**	**65.58**	**357**	*e*P	**P**	**09 28 03.7**	**+0.8**
	comp=Z,9.3nm,0.7s						
SUMG	**Summit**	**65.58**	**357**	*e*P	**P**	**09 28 03.7**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AKASG	**Malin Array Be**	**66.41**	**318**	P	**P**	**09 28 07.0**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=51,slow=6.4,SNR=5.1						
AKASG	**Malin Array Be**	**66.41**	**318**	P	**P**	**09 28 07.0**	**-1.0**
NC405	**NORSAR Array S**	**66.81**	**333**	*e*P	**P**	**09 28 10.1**	**-0.2**
	comp=Z,13nm,1.3s						
NB201	**NORSAR Array S**	**67.00**	**333**	*e*P	**P**	**09 28 11.7**	**+0.2**
	comp=Z,11nm,1.1s						
NC204	**NORSAR Array S**	**67.01**	**334**	*e*P	**P**	**09 28 11.7**	**+0.2**
NB2	**NORSAR Subarra**	**67.03**	**333**	P	**P**	**09 28 11.2**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=40,slow=6.5						
NOA	**NORSAR Array B**	**67.03**	**333**	P	**P**	**09 28 11.3**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=41,slow=6.1,SNR=7.9						
NLWA	**Neilton Lookou**	**67.94**	**46**	*e*P	**P**	**09 28 19.6**	**+2.1**
	comp=Z,7.3nm,0.9s						
B05A	**Bryant**	**68.33**	**44**	P	**P**	**09 28 21.0**	**+1.2**
	baz=309						
EIDS	**Eidsvold**	**69.04**	**163**	*e*P	**P**	**09 28 26.2**	**+1.9**
	comp=Z,16nm,1.5s						
LON	**Longmire**	**69.44**	**45**	*e*P	**P**	**09 28 26.6**	**-0.1**
	comp=Z,4.6nm,1.2s						
LON	**Longmire**	**69.44**	**45**	*e*P	**P**	**09 28 26.6**	**-0.1**
LON				pmax	pmax		
	comp=Z,5.0nm,1.2s						
B08A	**Colville Reser**	**69.68**	**43**	*e*P	**P**	**09 28 27.0**	**-1.0**
	comp=Z,2.7nm,0.8s						
LTY	**Liberty**	**69.71**	**44**	*e*P	**P**	**09 28 28.9**	**+0.6**
	comp=Z,2.2nm,0.6s						
BUR08	**Bucovina Ar. S**	**70.40**	**317**	*e*P	**P**	**09 28 32.5**	**+0.1**
	comp=Z,1.8nm,0.6s						
BURAR	**Bucovina Array**	**70.41**	**317**	⇑*i*P	**P**	**09 28 31.9**	**-0.6**
C09A	**Chrisman Ranch**	**70.58**	**43**	*e*P	**P**	**09 28 34.2**	**+0.8**
	comp=Z,8.3nm,0.8s						
D08A	**Wollman Farm,**	**70.74**	**44**	*e*P	**P**	**09 28 35.8**	**+1.5**
	comp=Z,8.7nm,1.2s						
BRTR	**Keskin Array B**	**70.79**	**306**	P	**P**	**09 28 34.5**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=90,slow=4.9,SNR=2.5						
NEW	**Newport**	**70.85**	**42**	P	**P**	**09 28 34.7**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=312,slow=4.9,SNR=4.0						
NEW	**Newport**	**70.85**	**42**	*e*P	**P**	**09 28 35.0**	**0.0**
	comp=Z,3.5nm,0.9s						
NEW	**Newport**	**70.85**	**42**	*e*P	**P**	**09 28 35.0**	**0.0**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NEW	**Newport**	**70.85**	**42**	P	**P**	**09 28 36.3**	**+1.3**
	baz=312						
HAWA	**Hanford**	**70.86**	**44**	*e*P	**P**	**09 28 36.8**	**+1.7**
	comp=Z,4.5nm,1.0s						
MARNC	**Mare, Loyalty**	**70.91**	**146**	*e*P	**P**	**09 28 34.5**	**-1.0**
	comp=Z,136nm,1.4s						
I04A	**Tendick Farm,**	**71.01**	**48**	P	**P**	**09 28 37.3**	**+1.3**
	baz=310						
HUMO	**Hull Mountain**	**71.47**	**49**	*e*P	**P**	**09 28 40.4**	**+1.6**
	comp=Z,3.4nm,1.2s						
J04D	**Umpqua Nationa**	**71.54**	**48**	P	**P**	**09 28 40.7**	**+1.3**
	baz=311						
PINE	**Pine Mountain**	**71.82**	**47**	*e*P	**P**	**09 28 42.7**	**+1.7**
	comp=Z,5.2nm,0.7s						
WALA	**Waterton Lakes**	**71.87**	**40**	*e*P	**P**	**09 28 42.3**	**+1.2**
	comp=Z,3.5nm,0.6s						
J05D	**Fort Rock, OR**	**71.99**	**48**	P	**P**	**09 28 43.3**	**+1.4**
	baz=311						
JCC	**Jacoby Creek,**	**72.01**	**51**	*e*P	**P**	**09 28 44.0**	**+2.2**
	comp=Z,68nm,1.4s						
L04D	**Klamath Falls**	**72.09**	**49**	P	**P**	**09 28 43.9**	**+1.4**
	baz=311						
KHMM	**Horse Mountain**	**72.15**	**51**	*e*P	**P**	**09 28 45.2**	**+2.4**
	comp=Z,29nm,1.3s						
YBH	**Yreka Blue Hor**	**72.18**	**50**	*e*P	**P**	**09 28 43.2**	**+0.2**
	comp=Z,6.2nm,1.0s						
YBH	**Yreka Blue Hor**	**72.18**	**50**	*e*P	**P**	**09 28 43.2**	**+0.2**
YBH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FCC	**Fort Churchill**	**72.22**	**24**	*e*P	**P**	**09 28 43.6**	**+0.9**
	comp=Z,9.8nm,0.9s						
FCC	**Fort Churchill**	**72.22**	**24**	*e*P	**P**	**09 28 43.6**	**+0.9**
FCC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
M02C	**Callahan**	**72.32**	**50**	P	**P**	**09 28 45.6**	**+1.8**
	baz=311						
KMRM	**Mail Ridge**	**72.58**	**51**	*e*P	**P**	**09 28 47.5**	**+2.2**
	comp=Z,11nm,1.2s						
M04C	**Macdoel**	**72.64**	**49**	P	**P**	**09 28 47.3**	**+1.6**
	baz=311						
N02D	**Trinity Center**	**72.68**	**50**	P	**P**	**09 28 47.7**	**+1.8**
	baz=311						
FFC	**Flin Flon**	**72.79**	**30**	*e*P	**P**	**09 28 46.8**	**+0.7**
	comp=Z,54nm,0.7s						
FFC	**Flin Flon**	**72.79**	**30**	*e*P	**P**	**09 28 46.8**	**+0.7**
RAYN	**Ar Rayn**	**73.00**	**286**	*e*P	**P**	**09 28 48.0**	**0.0**
	comp=Z,2.2nm,1.1s						
RAYN	**Ar Rayn**	**73.00**	**286**	*e*P	**P**	**09 28 48.0**	**0.0**

RAYN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BMO	Blue Mountains	73.06	44	*e*P	P	09 28 48.7	+0.7
	comp=Z,3.8nm,0.6s						
BMO	Blue Mountains	73.06	44	*e*P	P	09 28 48.7	+0.7
BMO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
O02D	Mt. Diablo Mer	73.15	51	P	P	09 28 50.3	+1.7
	baz=311						
O03E	Paynes Creek	73.64	50	P	P	09 28 51.8	+0.4
	baz=312						
STKA	Stephens Creek	73.92	173	P	P	09 28 54.4	+1.7
	comp=Z,7.1nm,0.4s,baz=351,slow=6.6,SNR=48						
STKA	Stephens Creek	73.92	173	*e*P	P	09 28 54.5	+1.7
	comp=Z,1.6nm,0.5s						
STKA	Stephens Creek	73.92	173	*e*P	P	09 28 54.5	+1.7
STKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WVOR	Wild Horse Val	73.98	47	*e*P	P	09 28 54.7	+1.3
	comp=Z,2.5nm,0.8s						
WVOR	Wild Horse Val	73.98	47	*e*P	P	09 28 54.7	+1.3
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BBOO	Buckleboo	74.49	177	*e*P	P	09 28 57.0	+1.0
	comp=Z,12nm,1.5s						
HRY	Holter Researc	74.51	40	*e*P	P	09 28 58.0	+1.7
EGMT	Eagleton	74.55	38	*e*P	P	09 28 57.6	+1.2
	comp=Z,6.7nm,0.6s						
EGMT	Eagleton	74.55	38	P	P	09 28 57.3	+0.9
	baz=317,SNR=6.1						
BEKR	Beckworth	74.75	50	*e*P	P	09 28 59.0	+1.1
	comp=Z,4.2nm,0.9s						
DLMT	Dillon	75.10	42	*e*P	P	09 29 01.4	+1.8
	comp=Z,12nm,0.6s						
MCMT	McKenzie Canyo	75.36	42	*e*P	P	09 29 02.4	+1.2
BOZ	Bozeman (W)	75.41	41	*e*P	P	09 29 02.6	+1.2
	comp=Z,5.3nm,0.8s						
BOZ	Bozeman (W)	75.41	41	*e*P	P	09 29 02.6	+1.2
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOZ	Bozeman (W)	75.41	41	P	P	09 29 02.4	+1.1
	baz=316,SNR=12						
PAHR	Pah Rah Range	75.41	50	*e*P	P	09 29 03.0	+1.5
	comp=Z,12nm,1.4s						
HLID	Hailey	75.45	44	P	P	09 29 03.1	+1.5
	baz=315						
VCNR	Virginia City	75.54	50	*e*P	P	09 29 03.0	+0.8
	comp=Z,2.6nm,0.8s						
PNTR	Pine Nut	75.71	50	*e*P	P	09 29 04.8	+1.5
	comp=Z,4.0nm,0.7s						
CMB	Columbia Colle	75.97	51	*e*P	P	09 29 06.0	+1.5
	comp=Z,4.3nm,0.6s						
CMB	Columbia Colle	75.97	51	*e*P	P	09 29 06.0	+1.5
CMB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YERR	Yerington	75.98	50	*e*P	P	09 29 06.3	+1.6
	comp=Z,7.6nm,1.1s						
BMN	Battle Mountai	76.13	48	*e*P	P	09 29 06.5	+1.0
	comp=Z,7.7nm,1.3s						
BMN	Battle Mountai	76.13	48	*e*P	P	09 29 06.5	+1.0
BMN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WAKR	Walker	76.20	50	*e*P	P	09 29 07.5	+1.6
	comp=Z,2.2nm,0.6s						
YHB	Horse Butte	76.23	41	*e*P	P	09 29 07.2	+1.2
	comp=Z,12nm,0.9s						
KVN	Kaiserville	76.59	49	*e*P	P	09 29 09.4	+1.4
	comp=Z,5.3nm,0.6s						
KVN	Kaiserville	76.59	49	*e*P	P	09 29 09.5	+1.4
KVN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RYN	Ryan	76.64	50	*e*P	P	09 29 10.0	+1.7
	comp=Z,4.4nm,0.9s						
DGMT	Dagmar	76.70	35	*e*P	P	09 29 09.9	+1.6
	comp=Z,4.1nm,1.0s						
DGMT	Dagmar	76.70	35	P	P	09 29 09.2	+0.9
	baz=320						
YPP	Pitchstone Pla	76.77	42	*e*P	P	09 29 12.2	+3.1
	comp=Z,1.4nm,0.6s						
H17A	Grant Village	76.79	41	P	P	09 29 12.1	+2.9
	baz=317						
NVAR	Mina Array Bea	76.90	50	P	P	09 29 11.3	+1.5
	comp=Z,3.6nm,0.6s,baz=296,slow=5.5,SNR=44						
RLMT	Red Lodge	76.90	40	P	P	09 29 10.9	+1.2
	baz=317						
IMW	Indian Meadow	76.98	42	*e*P	P	09 29 12.4	+2.2
	comp=Z,4.3nm,0.8s						
ELK	Elko	76.99	46	*e*P	P	09 29 12.4	+2.1
	comp=Z,4.7nm,1.3s						
ELK	Elko	76.99	46	*e*P	P	09 29 12.4	+2.1
ELK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
FXWY	Fox Creek	77.12	42	*e*P	P	09 29 11.9	+0.9
	comp=Z,2.6nm,0.7s						
LAO	LASA Array	77.16	37	P	P	09 29 11.9	+1.0
	baz=319						
MOOW	Moose Ponds	77.18	42	*e*P	P	09 29 12.9	+1.6
	comp=Z,3.0nm,0.8s						
TPAW	Teton Pass	77.27	42	*e*P	P	09 29 13.5	+1.7
	comp=Z,6.9nm,1.4s						
VES	Vestal, Richgr	78.22	52	P	P	09 29 17.5	+0.7
	baz=314						
HWUT	Hardware Ranch	78.32	44	*e*P	P	09 29 17.6	+0.2
	comp=Z,7.6nm,1.0s						
CWC	Cottonwood Cre	78.40	51	P	P	09 29 18.7	+0.8
	baz=314						
PKM	Mcpherson Peak	78.44	53	P	P	09 29 19.4	+1.2
	baz=314						
R11A	Troy Canyon, C	78.49	48	*e*P	P	09 29 19.9	+1.5
	comp=Z,3.5nm,1.3s						
R11A	Troy Canyon, C	78.49	48	P	P	09 29 19.6	+1.3
	baz=315						
BW06	Boulder Array	78.49	42	*e*P	P	09 29 19.2	+0.9
	comp=Z,5.1nm,0.9s						
BW06	Boulder Array	78.49	42	P	P	09 29 19.1	+0.7
	baz=318,SNR=9.9						
PDAR	Pinedale Array	78.49	42	P	P	09 29 19.0	+0.6
	comp=Z,3.2nm,0.7s,baz=61,slow=0.6,SNR=40						
DUG	Dugway, Tooele	78.68	46	*e*P	P	09 29 20.2	+0.9
	comp=Z,5.8nm,1.1s						
DUG	Dugway, Tooele	78.68	46	*e*P	P	09 29 20.2	+0.9
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DUG	Dugway, Tooele	78.68	46	P	P	09 29 20.8	+1.5
	baz=316,SNR=5.7						
ISA	Isabella, Lake	78.71	52	P	P	09 29 19.8	+0.3
	baz=314						
DSB	Dublin	78.94	337	*e*P	P	09 29 20.6	+0.4
	comp=Z,6.2nm,0.9s						
MPMC	Manual Prospec	79.01	51	P	P	09 29 22.4	+1.2
	baz=314						
FURC	Furnace Creek,	79.08	51	P	P	09 29 22.8	+1.5
	baz=315						
TPNV	Topopah Spring	79.10	50	*e*P	P	09 29 22.9	+1.3
	comp=Z,3.7nm,0.6s						
TPNV	Topopah Spring	79.10	50	*e*P	P	09 29 22.9	+1.3
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TPNV	Topopah Spring	79.10	50	P	P	09 29 23.0	+1.3
	baz=315,SNR=7.7						
MDND	Maddock	79.11	33	P	P	09 29 22.0	+0.8
	baz=323						
PSUT	Pine Spring	79.31	47	*e*P	P	09 29 24.5	+1.7
	comp=Z,3.5nm,1.0s						
EDW2	Edwards Air Fo	79.53	52	P	P	09 29 25.0	+1.1
	baz=314						
SHOC	Shoshone, Teco	79.82	51	P	P	09 29 26.4	+1.2
	baz=315						
GSC	Goldstone, Bar	79.93	51	*e*P	P	09 29 27.4	+1.4
	comp=Z,2.5nm,0.8s						
GSC	Goldstone, Bar	79.93	51	*e*P	P	09 29 27.4	+1.4
GSC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GSC	Goldstone, Bar	79.93	51	P	P	09 29 27.0	+1.0
	baz=315						
SHPR	Sheep Range	80.03	49	*e*P	P	09 29 28.0	+1.5
	comp=Z,3.2nm,0.8s						
RSSD	Black Hills	80.11	38	*e*P	P	09 29 27.8	+0.9
	comp=Z,3.6nm,0.7s						
RSSD	Black Hills	80.11	38	*e*P	P	09 29 27.8	+0.9
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RSSD	Black Hills	80.11	38	P	P	09 29 27.0	+0.1
	baz=321						
BFSC	Mount Baldy Ra	80.18	53	P	P	09 29 28.3	+1.0
	baz=315						
TMUT	Trail Mountain	80.19	45	*e*P	P	09 29 29.4	+1.9
AGMN	Agassiz Nation	80.22	31	*e*P	P	09 29 27.0	0.0
	comp=Z,3.2nm,0.6s						
AGMN	Agassiz Nation	80.22	31	P	P	09 29 27.2	+0.1
	baz=325						
CCUT	Cedar City	80.29	48	*e*P	P	09 29 29.7	+1.8
	comp=Z,1.6nm,0.8s						
TUQ	Turquoise Moun	80.35	51	P	P	09 29 29.6	+1.4
	baz=315,SNR=5.3						
HEC	Hector,Ludlow	80.54	51	P	P	09 29 30.5	+1.4
	baz=315						
MTPU	Mount Pierson	80.58	47	*e*P	P	09 29 32.1	+2.5
	comp=Z,3.4nm,0.7s						
BBRC	Big Bear Solar	80.59	52	P	P	09 29 30.7	+1.1
	baz=315						
SRU	San Rafael Swe	80.68	45	*e*P	P	09 29 31.4	+1.4
	comp=Z,5.8nm,1.2s						
SRU	San Rafael Swe	80.68	45	*e*P	P	09 29 31.4	+1.4
SRU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MURC	Murrieta	80.90	53	P	P	09 29 31.7	+0.8
	baz=315						
GMRC	Granite Mounta	80.96	51	P	P	09 29 32.5	+1.1
	baz=315						
O20A	White River Ci	81.11	43	*e*P	P	09 29 31.8	-0.3
	comp=Z,3.4nm,0.8s						
O20A	White River Ci	81.11	43	P	P	09 29 32.9	+0.8
	baz=319						
BELC	Belle Mtn. Jos	81.32	52	P	P	09 29 34.0	+0.8
	baz=315,SNR=6.2						
PFO	Pinyon Flats O	81.32	52	*e*P	P	09 29 34.4	+1.1
	comp=Z,5.1nm,0.9s						
PFO	Pinyon Flats O	81.32	52	*e*P	P	09 29 34.4	+1.1
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PFO	Pinyon Flats O	81.32	52	P	P	09 29 34.1	+0.8
	baz=315,SNR=5.3						
N23A	Red Feather La	81.68	41	P	P	09 29 36.0	+0.9
	baz=320						
U15A	North Rim	81.69	48	*e*P	P	09 29 37.4	+2.1
	comp=Z,9.9nm,0.8s						
IRM	Iron Mountain	81.71	51	P	P	09 29 36.4	+1.3
	baz=316,SNR=6.7						
MONP2	Monument Peak	81.85	53	P	P	09 29 37.2	+1.1
	baz=315						
BAR	Barrett	81.86	53	*e*P	P	09 29 37.4	+1.5
	comp=Z,4.5nm,0.8s						
BC3	Big Chuckawall	81.88	52	P	P	09 29 37.4	+1.2
	baz=316						
PV21	Cone Mtn., Par	81.90	44	*e*P	P	09 29 37.8	+1.5
	comp=Z,10.0nm,1.4s						
PV22	Blue Mesa, Par	82.02	44	*e*P	P	09 29 38.2	+1.4
	comp=Z,3.0nm,0.7s						
SUSD	Miller	82.10	35	P	P	09 29 37.7	+0.8
	baz=324						
EYMN	Ely	82.12	29	*e*P	P	09 29 36.5	-0.5
	comp=Z,18nm,1.4s						
PDMCI	Parker Dam,Lak	82.18	50	P	P	09 29 38.7	+1.2
	baz=316						
IKP	In-Ko-Pah, Jac	82.21	53	P	P	09 29 38.9	+1.1
	baz=315						
Y12C	Blythe	82.36	51	*e*P	P	09 29 40.3	+1.9
	comp=Z,7.1nm,0.8s						
Y12C	Blythe	82.36	51	P	P	09 29 39.9	+1.5
	baz=316,SNR=5.7						
SMCO	Snowmass	82.47	43	*e*P	P	09 29 40.5	+1.1
	comp=Z,3.3nm,0.8s						
GLA	Glamis	82.68	52	P	P	09 29 41.3	+1.2
	baz=316						
MVCO	Mesa Verde	83.16	45	*e*P	P	09 29 43.7	+1.0
	comp=Z,4.1nm,1.0s						
MVCO	Mesa Verde	83.16	45	P	P	09 29 43.8	+1.1
	baz=319						
E38A	The Farm, Brul	83.24	29	P	P	09 29 42.9	+0.4
	baz=328						
OGNE	Ogallala	83.51	39	*e*P	P	09 29 45.8	+1.6
	comp=Z,26nm,1.4s						
OGNE	Ogallala	83.51	39	P	P	09 29 45.1	+1.0
	baz=322						
S22A	4UR Ranch, Cre	83.63	44	P	P	09 29 46.5	+1.4
	baz=320						
X16A	Lo Mia Camp, P	83.63	49	*e*P	P	09 29 47.1	+2.0
	comp=Z,5.2nm,0.8s						
ECSD	EROS Data Cent	83.66	34	*e*P	P	09 29 45.7	+0.9
	comp=Z,5.1nm,0.6s						
ECSD	EROS Data Cent	83.66	34	P	P	09 29 45.3	+0.5
	baz=325						
SDCO	Great Sand Dun	84.31	43	*e*P	P	09 29 50.0	+1.6
	comp=Z,1.8nm,0.8s						
SDCO	Great Sand Dun	84.31	43	P	P	09 29 49.6	+1.1
	baz=320						
214A	Organ Pipe Nat	84.65	51	P	P	09 29 51.3	+1.4
	baz=317						
G40A	Rib Lake	84.87	29	*e*P	P	09 29 51.8	+1.0
	comp=Z,8.2nm,0.8s						
G40A	Rib Lake	84.87	29	P	P	09 29 51.3	+0.6
	baz=329						
E44A	Grand Marais A	85.17	26	P	P	09 29 52.3	+0.2
	baz=332						
T25A	Trinidad	85.33	43	P	P	09 29 54.2	+0.8
	baz=321						
D46A	Sault St. Mari	85.53	25	P	P	09 29 53.7	-0.1
	baz=333						
ANMO	Albuquerque	85.95	45	*e*P	P	09 29 58.8	+2.4
	comp=Z,1.7nm,0.9s						
ANMO	Albuquerque	85.95	45	*e*P	P	09 29 58.8	+2.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	Albuquerque	85.95	45	P	P	09 29 58.1	+1.7
	baz=320						
D53A	Lac Vacive, Po	87.17	21	P	P	09 30 01.5	-0.1
	baz=338						
E53A	Dumoine, Ponti	87.83	21	P	P	09 30 05.2	+0.5
	baz=338						
E54A	Lac Daplat, Po	87.90	20	P	P	09 30 05.8	+0.8
	baz=338						
K48A	Perry	89.15	26	P	P	09 30 12.3	+1.4
	baz=333						
L47A	Sherwood	89.52	28	P	P	09 30 13.2	+0.6
	baz=333						
WMOK	Wichita Mounta	90.01	40	P	P	09 30 16.2	+1.1
	baz=324						
CCM	Cathedral Cave	90.63	34	P	P	09 30 19.0	+1.1
	baz=329						
N49A	Columbus Grove	90.80	27	P	P	09 30 19.8	+1.2
	baz=333						
U40A	Yellville	91.39	36	P	P	09 30 22.1	+0.6
	baz=328						
S44A	Carbondale	91.75	32	P	P	09 30 24.2	+1.1
	baz=330						
TXAR	Lajitas Array	91.78	47	P	P	09 30 25.1	+1.7
	comp=Z,2.0nm,0.7s,baz=290,slow=2.8,SNR=25						
ACSO	Alum Creek Sta	91.83	27	P	P	09 30 23.9	+0.5
	baz=334						
Q48A	North Vernon	92.02	29	P	P	09 30 25.2	+0.9
	baz=332						
MIAR	Mount Ida	92.59	37	P	P	09 30 28.0	+1.0
	baz=327						
M59A	Waymart	92.91	21	P	P	09 30 28.7	+0.4
	baz=339						
HRV	Adam Dziewonsk	92.97	18	P	P	09 30 29.0	+0.5
	baz=342						
P53A	Whipple	93.03	26	P	P	09 30 29.0	+0.1
	baz=335						
S50A	Richmond	93.61	29	P	P	09 30 32.3	+0.7
	baz=333						
T49A	Edmonton	93.70	30	P	P	09 30 33.0	+0.9
	baz=332						
T50A	Nancy	94.04	30	P	P	09 30 34.4	+0.8
	baz=333						
Y54A	Tignall	97.64	29	P	P	09 30 50.3	+0.4
	baz=334						
Z53A	Monticello	97.83	30	P	P	09 30 51.0	+0.2
	baz=333						
VNDA	Vanda	120.56	173	PKP	PKiKP	09 36 02.7	+0.4
	comp=Z,0.2nm,0.6s,baz=312,slow=6.1,SNR=5.4						
MAW	Mawson	121.30	205	PKP	PKiKP	09 36 04.2	+0.2
	comp=Z,1.4nm,0.6s,baz=135,slow=1.4,SNR=3.9						
SNAA	Sanae	143.33	202	*e*PKPdf	PKPdf	09 36 43.8	-1.3
SNAA	Sanae	143.33	202	*e*PKIKP	PKPdf	09 36 43.8	-1.3
LPAZ	La Paz	148.51	42	PKPbc	PKiKP	09 37 01.1	-0.5
	comp=Z,1.9nm,0.6s,baz=350,slow=4.6,SNR=8.8						

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*KRSC **23** 09:24:23.5±1.4, 52°.57N×156°.66E, h282^{km}±9^{km}, ML4.0*

*ISCJB **23** 09:24:24.9±0.6, 52°.47N±0°.08×156°.8E±0°.2, h279^{km}±3^{km}, mb3.2/8, Error ellipse: s-maj=18.7km s-min=8.5km az=34.9*

*IDC **23** 09:24:24.3±0.8, 52°.77N×156°.06E, h268^{km}±5^{km}, mb3.0/8, mb1 3.3/8, mb1mx2.9/46, mbtmp3.6/8, Error ellipse: s-maj=25.9km s-min=14.7km az=136.0*

ISC 23 09:24:25.2±0.8, **52°.58N**±0°.08×**156°.7E**±0°.1, **h276**^{km}±6^{km}, **n34, σ1^s.35**/53, **mb3.2**/8, **Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APC	Apacha	0.46	41	*e*P	Pn	09 25 00.4	-0.4
APC				*e*S	S	09 25 27.9	-1.2
ASAK	Asacha	0.78	104	*e*P	Pn	09 25 02.5	+0.4
PETK	Petropavlovsk-	0.82	50	P	Pn	09 25 01.8	-0.3
	33nm,0.3s,baz=46,slow=3.3,SNR=636						
PETK				S	S	09 25 31.0	-0.3
	baz=236,slow=16,SNR=2.7						
KRMR	Karymshinskiy	0.93	74	*e*P	Pn	09 25 02.5	0.0
KRMR				*e*S	S	09 25 32.8	+0.7
MTVR	Mutnovka	0.93	96	*e*P	Pn	09 25 03.0	+0.2
MTVR				*e*S	S	09 25 32.7	+0.1
PAU	Pauzhetka	1.12	175	*e*P	Pn	09 25 03.5	-0.1
RUS	Russkaya	1.14	97	*e*P	Pn	09 25 03.2	-0.5
RUS				*e*S	S	09 25 32.9	-1.2
KDTR	Khodutka, Kamc	1.17	131	*e*P	Pn	09 25 03.0	-0.8
KDTR				*e*S	S	09 25 31.9	-2.6
PET	Petropavlovsk	1.28	69	*e*P	Pn	09 25 04.8	+0.3
PET				*e*S	S	09 25 35.5	-0.1
DALK	Dalny	1.34	70	*e*P	Pn	09 25 05.1	+0.3
DALK				*e*S	S	09 25 36.2	-0.1
GNL	Ganaly	1.35	34	*e*P	Pn	09 25 04.5	-0.5
GNL				*e*S	S	09 25 36.3	-0.4
KOK	Koryaka	1.39	59	*e*P	Pn	09 25 05.7	+0.4
KOK				*e*S	S	09 25 38.2	+1.1
AVH	Avacha	1.43	61	*e*P	Pn	09 25 05.9	+0.4
AVH				*e*S	S	09 25 38.5	+1.0
KRX	Arik	1.43	56	*e*P	Pn	09 25 05.8	+0.2
KRX				*e*S	S	09 25 38.8	+1.2
UGLR	Uglovaya	1.45	64	*e*P	Pn	09 25 06.5	+0.8
UGLR				*e*S	S	09 25 38.3	+0.5
KRER	Koryakskii	1.45	59	*e*P	Pn	09 25 06.1	+0.3
KRER				*e*S	S	09 25 38.0	0.0
SMAR	Somma	1.46	61	*e*P	Pn	09 25 06.4	+0.5
SMAR				*e*S	S	09 25 38.1	-0.1
SDLR	Sedlovina	1.51	62	*e*P	Pn	09 25 06.6	+0.5
SDLR				*e*S	S	09 25 38.9	+0.3
NLC	Nalytchevo	1.73	69	*e*S	S	09 25 40.7	-0.4
SPN	Mys Shipunski	2.10	74	*e*P	Pn	09 25 10.5	-0.1
SPN				*e*S	S	09 25 43.7	-3.0
KZV	Kizimen	3.32	39	*e*S	S	09 26 09.4	+0.8
TUMD	Tumrok D	3.43	39	*e*S	S	09 26 11.3	+0.8
MKZ	Mys Kozlova	3.61	55	*e*P	Pn	09 25 25.1	-0.5
MKZ				*e*S	S	09 26 09.5	-4.4
KBG	Krutoberegovo	5.09	41	*e*P	Pn	09 25 43.2	+0.5
KBG				*e*S	S	09 26 41.1	-3.8
KBTR	Krutoberegovo	5.11	42	*e*P	Pn	09 25 43.1	+0.2
BKI	Bering	6.10	61	*e*S	S	09 27 04.3	-2.6
ILAR	Eielson Array	30.64	44	P	P	09 30 14.2	+0.4
	0.3nm,0.6s,baz=272,slow=6.0,SNR=4.7						
INK	Inuvik	35.53	37	P	P	09 30 56.5	+0.8
	0.3nm,0.3s,baz=286,slow=8.1,SNR=5.0						
BVAR	Borovoye Array	49.05	307	P	P	09 32 41.0	-3.3
	0.5nm,0.4s,baz=76,slow=7.7,SNR=2.8						
NVAR	Mina Array Bea	57.87	68	P	P	09 33 50.4	+1.9
	0.1nm,0.3s,baz=332,slow=5.1,SNR=2.6						
PDAR	Pinedale Array	59.58	58	P	P	09 34 01.6	+1.5
	0.2nm,0.4s,baz=298,slow=1.9,SNR=3.4						
TXAR	Lajitas Array	72.74	64	P	P	09 35 24.9	+1.4
	0.3nm,0.5s,baz=296,slow=5.4,SNR=8.0						
WRA	Warramunga Arr	74.79	202	P	P	09 35 34.8	-0.3
	0.6nm,0.5s,baz=15,slow=5.4,SNR=4.3						
ASAR	Alice Springs	78.48	201	P	P	09 35 56.4	+0.7
	0.6nm,0.4s,baz=16,slow=5.1,SNR=16						

MEX 23 09:38:34.7±1.0, **15°.84N×96°.55W, h23**^{km}±16^{km}, **MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PANG	Puerto Angel	0.19	156	*i* P	Pb	09 38 39.2	-0.8
PANG				*i* S	Sb	09 38 42.9	-0.7
HUIG	Huatulco	0.43	99	*e*P	Pb	09 38 41.8	-2.0
HUIG				*e*S	Sb	09 38 48.3	-1.6
VHO	Vista Hermosa	1.24	352	*e*P	Pn	09 38 53.3	-3.5
VHO				*i* S	Sn	09 39 08.7	-4.2
CMIG	Matias Romero	2.03	52	*e*P	Pn	09 39 03.5	-4.1
CMIG				*i* S	Sn	09 39 29.3	-2.9
TLIG	Tlapa	2.58	312	*i* P	Pn	09 39 13.8	-1.5
TLIG				*i* S	Sn	09 39 43.8	-2.2

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*IDC **23** 09:39:12.7±2.9, 53°.54N×87°.81E, h0^{km}, mb1 3.5/3, mb1mx3.2/35, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=29.5km s-min=14.9km az=66.0*

*NNC **23** 09:39:13.6±1.9, 53°.47N×87°.62E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=16.2km s-min=8.5km az=61.0, Suspected Mining explosion.*

ISC 23 09:39:12.9±3.9, **53°.6N**±0°.1×**87°.6E**±0°.2, **h0**^{km}, **n9, σ1^s.00**/12, **5C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.70	284	*i*		09 50 20.0	
	baz=99,slow=303,SNR=2.0						
ZAA0	Zalesovo Array	1.70	283	⇓Pn	Pb	09 39 44.1	-0.9
	0.8nm,0.3s						
ZAA0				⇑Lg	Lg	09 40 09.2	
	3.0nm,0.3s						
ZALV	Zalesovo Beam	1.70	283	Pn	Pn	09 39 43.5	-0.3
	10nm,0.3s,baz=101,slow=13,SNR=46						
ZALV				Lg	Lg	09 40 09.2	
	9.8nm,0.3s,baz=102,slow=25,SNR=3.9						
KURBB	Kurchatov Arra	6.34	246	Pn	Pn	09 40 48.2	+0.8
	0.2nm,0.3s,baz=61,slow=14,SNR=10						
KURBB				Lg	Lg	09 42 32.2	
	0.1nm,0.3s,baz=62,slow=33,SNR=11						
KURBB	Kurchatov Arra	6.34	246	⇑Pn	Pn	09 40 48.0	+0.6
	3.3nm,0.7s						
KURBB				⇑Sn	Sn	09 42 00.4	0.0
	8.3nm,0.8s						
KURBB				⇓Lg	Lg	09 42 31.8	
	12nm,0.7s						
MK31	Makanchi Array	7.61	209	⇑Pn	Pn	09 41 05.3	+0.3
	1.5nm,0.6s,baz=28,slow=13,SNR=12						
MK31				⇓Sn	Sn	09 42 31.0	-0.9
	1.0nm,0.5s						
MKAR	Makanchi Array	7.61	209	Pn	Pn	09 41 05.9	+1.0
	0.8nm,0.3s,baz=28,slow=13,SNR=14						
MKAR				Sn	Sn	09 42 32.4	+0.6
	0.4nm,0.3s,baz=31,slow=28,SNR=4.2						
MKAR				Lg	Lg	09 43 12.7	
	0.6nm,0.3s,baz=30,slow=29,SNR=6.1						
MAKZ	Makanchi	7.69	210	⇑Pn	Pn	09 41 06.2	+0.2
	1.1nm,0.6s						
MAKZ				⇓Sn	Sn	09 42 32.9	-0.9
	2.3nm,0.7s						
BVAR	Borovoye Array	10.33	274	Pn	Pn	09 41 44.3	+2.0
	0.5nm,0.3s,baz=74,slow=15,SNR=6.4						

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*ISCJB **23** 09:46:13.4±0.8, 15°.73S±0°.07×71°.8W±0°.1, h100^{km}, Error ellipse: s-maj=15.0km s-min=8.9km az=152.9*

*IDC **23** 09:46:15.2±2.3, 15°.47S×71°.68W, h72^{km}±22^{km}, mb3.3/3, mb1 3.6/7, mb1mx3.4/33, mbtmp3.6/7, MS3.3/1, Ms1 3.3/1, ms1mx2.6/14, Error ellipse: s-maj=27.0km s-min=20.2km az=38.0*

ISC 23 09:46:15.7±0.8, **15°.64S**±0°.10×**71°.7W**±0°.1, **h100**^{km}, **n11, σ1^s.99**/11, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.47	101	P	Pn	09 47 09.2	+0.9
	0.6nm,0.3s,baz=273,slow=11,SNR=26						
NNA	Nana	6.19	305	P	Pn	09 47 43.1	-1.6
	1.0nm,0.3s,baz=252,slow=20,SNR=2.1						
NNA				LR	LR	09 50 09.4	
	comp=Z,248nm,18.4s,baz=68,slow=38						
LVC	Limon Verde	7.41	160	P	Pn	09 47 57.0	-4.5
	5.0nm,0.3s,baz=344,slow=9.5,SNR=35						
LVC				S	Sn	09 49 21.6	-2.6
	1.1nm,0.3s,baz=150,slow=20,SNR=4.6						
SIV	San Ignacio	10.21	93	P	Pn	09 48 37.8	-1.6
	0.6nm,0.3s,baz=288,slow=9.6,SNR=20						
CFA	Coronel Fontan	16.20	169	P	Pn	09 49 56.7	-0.8
	0.2nm,0.3s,baz=1.5,slow=10,SNR=4.6						
PTGA	Pitinga	18.79	39	P	Pn	09 50 27.6	-1.4

	0.1nm,0.3s,baz=90,slow=20,SNR=3.3						
PLCA	Paso Flores	25.02	178	P	P	09 51 33.8	+3.4
	5.0nm,0.8s,baz=22,slow=13,SNR=9.4						
TXAR	Lajitas Array	54.34	325	P	P	09 55 32.9	+0.7
	0.1nm,0.7s,baz=144,slow=7.8,SNR=2.3						
TORD	Torodi Ar. Bea	77.99	73	P	P	09 58 05.8	+2.1
	0.4nm,0.7s,baz=259,slow=6.0,SNR=3.2						
MJAR	Matsushiro Arr	146.26	314	PKPbc	PKiKP	10 05 47.5	-0.6
	1.9nm,1.1s,baz=343,slow=3.8,SNR=5.1						
SONM	Songino Array	147.86	2	PKPbc	PKPab	10 05 52.2	+0.2
	1.7nm,0.8s,baz=353,slow=1.2,SNR=8.1						

ISCJB ***23*** *09:48:48.6±1.3, 8°.92S±0°.05×78°.70W±0°.07, h69^{km}±12^{km}, mb4.5/85, Error ellipse: s-maj=12.8km s-min=6.7km az=146.2*

ARE ***23*** *09:48:50.0±0.0, 9°.08S×78°.90W, h69^{km}*

NEIC ***23*** *09:48:50.8±1.7, 9°.05S×78°.66W, h79^{km}±5^{km}, mb4.6/88, ML4.7(ARE), Error ellipse: s-maj=16.1km s-min=7.5km az=76.0*

NEIC Felt [IV] at Chimbote, [III] at Trujillo and [II] at Huaraz.

IDC ***23*** *09:48:51.5±0.6, 9°.05S×78°.78W, h82^{km}±5^{km}, mb4.0/14, mb1 4.1/17, mb1mx4.0/33, mbtmp4.2/17, MS3.1/3, Ms1 3.2/3, ms1mx2.7/31, Error ellipse: s-maj=14.1km s-min=6.9km az=77.0*

ISC 23 09:48:50.8±0.4**, 9°.04S**±0°.05×**78°.70W**±0°.08**, h79^{km}**±3^{km}**, h79^{km}:pP-P, n131, σ1^{s}07**/159**, mb4.5**/85**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	1.92	9	P	Pn	09 49 24.4	+2.4
	131nm,0.3s,baz=195,slow=3.7,SNR=197						
ATAH				S	Sn	09 49 47.7	+2.0
	187nm,0.3s,baz=338,slow=16,SNR=11						
ATAH				LR	LR	09 50 30.0	
	comp=Z,188nm,19.3s,baz=180,slow=51						
NNA	Nana	3.45	148	P	Pn	09 49 44.3	+1.9
	68nm,0.3s,baz=297,slow=9.7,SNR=67						
NNA				S	Sn	09 50 23.6	+1.4
	84nm,0.3s,baz=166,slow=18,SNR=7.3						
NNA	Nana	3.45	148	*e*Pn	Pn	09 49 44.1	+1.7
NNA				*e*Sn	Sn	09 50 18.1	-4.1
LPAZ	La Paz	12.58	126	P	Pn	09 51 48.0	+0.7
	0.1nm,0.3s,baz=321,slow=10,SNR=5.2						
LPAZ				LR	LR	09 56 59.0	
	comp=Z,55nm,21.4s,baz=300,slow=39						
LPAZ	La Paz	12.58	126	*e*Pn	Pn	09 51 45.6	-1.7
LPAZ				*e*		09 51 47.2	
GO01	Chusmiza	14.01	140	*e*Pn	Pn	09 52 05.8	-0.4
PAYG	Puerto Ayora	14.21	305	*e*P	P	09 52 12.7	-0.8
ROSC	El Rosal	14.47	18	LR	LR	09 59 08.4	
	comp=Z,215nm,19.0s,baz=156,slow=43						
PB01	IPOC Station P	14.88	144	*e*Pn	Pn	09 52 15.9	-1.1
LVC	Limon Verde	16.44	146	LR	LR	09 57 56.5	
	comp=Z,54nm,21.0s,baz=268,slow=33						
SIV	San Ignacio	18.54	114	P	P	09 53 02.3	+1.0
	0.2nm,0.3s,baz=296,slow=15,SNR=5.0						
JTS	Las Juntas de	20.19	342	*e*P	P	09 53 19.2	0.0
	13nm,1.1s						
PTGA	Pitinga	20.40	67	P	P	09 53 22.7	+1.1
	16nm,0.5s,baz=251,slow=13,SNR=43						
PTGA	Pitinga	20.40	67	*e*P	P	09 53 22.5	+0.9
	19nm,0.8s						
PTGA				*e*S	S	09 57 03.1	-2.8
PCRV	Puerto La Cruz	23.68	37	P	P	09 53 56.4	+0.9
	6.6nm,0.6s,baz=0.0,slow=3.0,SNR=3.6						
CFA	Coronel Fontan	24.47	158	P	P	09 54 04.5	+2.0
	2.9nm,0.5s,baz=345,slow=8.7,SNR=5.0						
FSCY	Frank Sound, G	28.28	355	*e*P	P	09 54 37.3	+0.4
	201nm,1.2s						
CCIG	Comitan	28.46	332	*e*P	P	09 54 38.6	-0.1
	31nm,1.6s						
SDD	Santo Domingo	28.67	18	*e*P	P	09 54 38.7	-1.6
	131nm,0.7s						
PLCA	Paso Flores	32.38	168	P	P	09 55 14.5	+1.5
	3.9nm,0.8s,baz=5.5,slow=11,SNR=9.7						
PLCA	Paso Flores	32.38	168	*e*P	P	09 55 13.0	0.0
	9.5nm,1.0s						
152A	Waverly Hall	41.87	352	*e*P	P	09 56 32.1	-1.2
	8.7nm,1.1s						
RCBR	Riachuelo	42.54	89	*e*P	P	09 56 37.5	-1.6
	34nm,1.2s						
VBMS	Vicksburg	42.55	345	*e*P	P	09 56 38.1	-0.7
	24nm,0.5s						
LRAL	Lakeview Retre	42.58	350	*e*P	P	09 56 38.9	-0.1
	10nm,1.4s						
Z50A	Ashland	42.62	351	*e*P	P	09 56 39.1	-0.3
	12nm,1.4s						
Y49A	Blount Mountai	43.29	351	*e*P	P	09 56 43.9	-0.8
	27nm,1.6s						
NATX	Nacogdoches	43.35	340	*e*P	P	09 56 46.6	+1.3
	13nm,0.8s						
CNNC	Cliffs of the	44.05	1	*e*P	P	09 56 49.8	-1.0
	21nm,0.6s						
LTX	Lajitas	45.11	329	*e*P	P	09 56 59.9	+0.3
LTX				*e*pP	pP	09 57 18.9	+0.1
LTX				*e*PcP	PcP	09 58 39.4	+0.4
TXAR	Lajitas Array	45.11	329	P	P	09 56 59.9	+0.3
	1.1nm,0.9s,baz=150,slow=9.2,SNR=13						
TXAR				pP	pP	09 57 19.0	+0.1
	0.8nm,0.9s,baz=159,slow=7.9,SNR=5.0						
TXAR				PcP	PcP	09 58 39.4	+0.4
	0.5nm,0.7s,baz=158,slow=6.5,SNR=5.1						
UALR	University of	45.45	344	*e*P	P	09 57 02.0	0.0
	10.0nm,0.8s						
MIAR	Mount Ida	45.58	343	*e*P	P	09 57 03.5	+0.4
	4.6nm,0.6s						
HBAR	Harrisburg	45.77	346	*e*P	P	09 57 03.2	-1.3
	85nm,0.5s						
WHAR	Wooly Hollow	45.92	344	*e*P	P	09 57 06.5	+0.8
	9.6nm,0.9s						
ABTX	Abilene, Hawle	46.00	335	*e*P	P	09 57 06.2	-0.3
	11nm,1.2s						
UTMT	University of	46.14	349	*e*P	P	09 57 06.3	-1.2
	37nm,0.7s						
T49A	Edmonton	46.35	352	*e*P	P	09 57 07.3	-1.7
	16nm,1.6s						
FCAR	Ozark Folk Cen	46.45	345	*e*P	P	09 57 09.2	-0.7
	4.7nm,0.7s						
S57A	Dark Hollow, R	46.56	360	*e*P	P	09 57 09.9	-0.7
	43nm,1.9s						
PBMO	Poplar Bluff	46.89	347	*e*P	P	09 57 12.6	-0.7
	5.5nm,0.8s						
PBMO				*e*pP	pP	09 57 31.0	-1.8
PBMO				*e*sP	sP	09 57 40.9	-0.8
HHAR	Hobbs	47.31	343	*e*P	P	09 57 16.3	-0.3
HHAR				*e*pP	pP	09 57 35.3	-0.8
HHAR				*e*sP	sP	09 57 45.2	+0.1
WMOK	Wichita Mounta	47.51	337	*e*P	P	09 57 18.4	+0.2
	2.9nm,0.9s						
TUL1	Leonard	47.52	341	*e*P	P	09 57 18.2	0.0
	10nm,0.7s						
MNTX	Cornudas Mount	47.88	329	*e*P	P	09 57 21.1	0.0
	2.2nm,1.0s						
HDIL	Hopedale	50.31	350	*e*P	P	09 57 37.5	-2.0
	13nm,0.7s						
ANMO	Albuquerque	51.02	331	*e*P	P	09 57 45.8	+0.7
	1.8nm,0.8s						
ANMO				*e*pP	pP	09 58 05.1	+0.2
ANMO				*e*sP	sP	09 58 14.0	+0.2
W18A	Petrified Fore	52.81	328	*e*P	P	09 57 59.1	+0.7
W18A				*e*pP	pP	09 58 16.7	-1.6
SDCO	Great Sand Dun	52.86	333	*e*P	P	09 57 59.2	+0.3
	5.5nm,1.2s						
BGNE	Belgrade	53.29	342	*e*P	P	09 57 59.1	-2.6
BGNE				*e*pP	pP	09 58 21.8	+0.2
BGNE				*e*sP	sP	09 58 30.2	-0.3
WUAZ	Wupatki	53.98	327	*e*P	P	09 58 05.0	-2.0
WUAZ				*e*pP	pP	09 58 25.7	-1.2
PV01	Paradox Valley	54.59	331	*e*P	P	09 58 12.8	+1.3
	14nm,1.7s						
PV13	Radium Mtn., P	54.73	331	*e*P	P	09 58 13.5	+1.1
	5.4nm,0.8s						
PV03	Paradox Valley	54.82	331	*e*P	P	09 58 13.9	+0.8
	16nm,1.8s						
PV18	Skein Mesa, Pa	54.84	331	*e*P	P	09 58 13.5	+0.3
	5.2nm,0.9s						
PV12	Saucer Basin,	54.84	331	*e*P	P	09 58 14.0	+0.7
	6.6nm,1.2s						
ECSD	EROS Data Cent	54.99	344	*e*P	P	09 58 13.3	-0.6
	3.3nm,0.7s						
TRQ	Mont Tremblant	55.14	4	*e*P	P	09 58 14.6	-0.4
TRQ				*e*pP	pP	09 58 33.4	-1.6
SPMN	Marine on St.	55.49	348	*e*P	P	09 58 16.4	-1.1
	7.1nm,0.8s						
KNB	Kanab	55.88	327	*e*P	P	09 58 22.1	+1.4
	6.7nm,1.3s						
PKCU	Pink Cliffs	55.93	328	*e*P	P	09 58 21.8	+0.5
	5.6nm,0.9s						
O20A	White River Ci	56.04	333	*e*P	P	09 58 20.9	-0.9
	3.3nm,0.8s						
LCMT	Little Creek M	56.10	327	*e*P	P	09 58 20.3	-2.0
	4.4nm,1.3s						
SRU	San Rafael Swe	56.30	330	*e*P	P	09 58 23.7	0.0
	5.8nm,1.5s						
SZCU	Shurtz Canyon	56.45	327	*e*P	P	09 58 24.8	0.0
	3.7nm,1.1s						
P17A	Butcher Ranch,	56.69	331	*e*P	P	09 58 27.4	+1.0
	5.1nm,1.0s						
K22A	Casper	57.38	336	*e*P	P	09 58 31.5	+0.3
	8.0nm,1.4s						
DUG	Dugway, Tooele	58.26	330	*e*P	P	09 58 37.9	+0.5
	4.6nm,0.8s						
HWUT	Hardware Ranch	58.74	332	*e*P	P	09 58 41.0	+0.2
	8.6nm,0.8s						
HWUT				*e*pP	pP	09 59 00.8	-0.1
PD31	Pinedale Array	58.75	334	*e*pP	pP	09 59 01.1	+0.1
PD31				*e*PcP	PcP	09 59 28.5	-1.3
PDAR	Pinedale Array	58.75	334	P	P	09 58 40.4	-0.5
	1.1nm,0.7s,baz=123,slow=8.0,SNR=12						
PDAR				pP	pP	09 59 01.1	+0.1
	0.5nm,0.6s,baz=111,slow=8.1,SNR=4.5						
PDAR				PcP	PcP	09 59 28.5	-1.3
	0.5nm,0.5s,baz=140,slow=6.1,SNR=4.2						
AGMN	Agassiz Nation	59.07	347	*e*P	P	09 58 42.6	-0.1
	8.7nm,0.7s						
MDND	Maddock	59.59	344	*e*P	P	09 58 46.6	+0.3
	12nm,0.8s						
OMMB	Old Mammoth Mi	59.78	324	*e*P	P	09 58 49.0	+0.8
	3.0nm,0.9s						
ELK	Elko	59.90	328	*e*P	P	09 58 49.5	+0.7
	3.3nm,1.0s						
NV01	Mina Array Sit	59.93	325	*e*P	P	09 58 50.0	+0.9
NV01				*e*pP	pP	09 59 10.6	+1.3
NVAR	Mina Array Bea	59.93	325	P	P	09 58 50.0	+0.9
	1.7nm,0.8s,baz=135,slow=6.6,SNR=15						
NVAR				pP	pP	09 59 10.6	+1.3
	1.1nm,0.7s,baz=131,slow=6.7,SNR=5.5						
WAKR	Walker	60.63	324	*e*P	P	09 58 55.2	+1.4
	3.6nm,1.0s						
ULM	Lac du Bonnet	60.91	347	P	P	09 58 54.5	-0.8
	6.1nm,0.4s,baz=153,slow=6.6,SNR=10						
ULM	Lac du Bonnet	60.91	347	*e*P	P	09 58 54.3	-0.9
	8.8nm,0.6s						
GCMT	Greycliff	61.24	336	*e*P	P	09 58 57.0	-0.8
GCMT				*e*pP	pP	09 59 18.7	+0.6
PAHR	Pah Rah Range	61.41	325	*e*P	P	09 58 59.8	+0.8
	5.0nm,0.9s						
HLID	Hailey	61.59	331	*e*P	P	09 59 00.2	0.0
	1.6nm,0.6s						
MCMT	McKenzie Canyo	61.84	333	*e*P	P	09 59 02.8	+0.9
BOZ	Bozeman (W)	61.91	334	*e*P	P	09 59 02.5	+0.2
	5.4nm,1.1s						
BEKR	Beckworth	62.08	325	*e*P	P	09 59 04.7	+1.1
	2.5nm,0.9s						
DLMT	Dillon	62.14	334	*e*P	P	09 59 03.5	-0.4
	3.4nm,1.1s						
MFID	Camas Ranch	62.16	330	*e*P	P	09 59 04.4	+0.5
	9.6nm,1.1s						
HRY	Holter Researc	62.88	335	*e*P	P	09 59 07.5	-1.1
WVOR	Wild Horse Val	62.89	328	*e*P	P	09 59 09.2	+0.4
	12nm,1.8s						
MOD	Modoc Plateau	63.42	326	*e*P	P	09 59 12.3	0.0
	4.9nm,0.7s						
J08A	Circle Bar Ran	63.45	329	*e*P	P	09 59 13.1	+0.6
	5.5nm,1.4s						
MSO	Missoula	63.87	334	*e*P	P	09 59 16.0	+0.8
	6.0nm,1.0s						
I07A	Izee	64.49	329	*e*P	P	09 59 18.6	-0.8
	8.1nm,1.4s						
F10A	Beach Ranch, E	64.72	331	*e*P	P	09 59 21.3	+0.5
	19nm,1.8s						
PINE	Pine Mountain	65.05	328	*e*P	P	09 59 23.5	+0.5
	4.3nm,0.8s						
WALA	Waterton Lakes	65.59	335	*e*P	P	09 59 26.7	+0.3
	4.4nm,0.8s						
NEW	Newport	66.36	333	*e*P	P	09 59 31.3	0.0
	2.7nm,0.7s						
FCC	Fort Churchill	68.71	351	*e*P	P	09 59 45.8	+0.1
	49nm,2.0s						
VNA3	Neumayer Olymp	74.81	162	P	P	10 00 23.5	+1.3
VNA1	Neumayer--Stat	75.08	161	P	P	10 00 24.6	+0.9
DBIC	Dimbokro	75.23	81	P	P	10 00 26.4	+0.7
	4.7nm,0.8s,baz=251,slow=9.0,SNR=4.1						
YKA	Yellowknife Ar	76.52	344	P	P	10 00 31.6	-0.4
	0.7nm,0.5s,baz=141,slow=6.0,SNR=10						
YKB5	Yellowknife Ar	76.52	344	*e*P	P	10 00 31.6	-0.4
SNAA	Sanae	77.03	162	P	P	10 00 36.1	+1.2
SNAA	Sanae	77.03	162	*e*P	P	10 00 36.2	+1.2
	5.2nm,1.0s						
QSPA	South Pole Qui	81.07	180	*e*P	P	10 00 57.3	+0.1
	7.8nm,1.1s						
TOA1	Torodi Ar. Sit	82.81	75	*e*P	P	10 01 07.7	+0.6
TOA1				*e*pP	pP	10 01 28.7	+0.3
TOA0	Torodi Ar. Sit	82.81	75	*e*P	P	10 01 08.0	+0.9
	4.9nm,0.9s						
TORD	Torodi Ar. Bea	82.81	75	P	P	10 01 07.7	+0.6
	3.8nm,0.8s,baz=284,slow=5.2,SNR=18						
TORD				pP	pP	10 01 28.7	+0.3
	1.4nm,0.8s,baz=280,slow=5.6,SNR=2.6						
PAB	San Pablo	83.86	48	*e*P	P	10 01 13.0	+0.9
	5.2nm,0.8s						
ESDC	Sonseca Array	84.18	48	P	P	10 01 14.9	+1.2
	1.6nm,0.6s,baz=256,slow=5.6,SNR=9.6						
INK	Inuvik	86.18	342	*e*P	P	10 01 23.0	+0.1
	4.7nm,1.0s						
EGAK	Eagle	86.87	338	*e*P	P	10 01 26.4	0.0
	5.3nm,0.8s						
VNDA	Vanda	87.32	191	P	P	10 01 30.3	+1.8
	1.0nm,0.8s,baz=14,slow=4.4,SNR=5.0						
ILAR	Eielson Array	89.07	337	P	P	10 01 36.2	-0.7
	1.2nm,0.9s,baz=130,slow=2.7,SNR=6.4						
ILB	Eielson Array	89.07	337	*e*P	P	10 01 35.2	-1.7
	2.9nm,1.1s						
BPAW	Bear Paw Mtn.	90.47	335	*e*P	P	10 01 41.9	-1.6
	3.3nm,0.6s						
H11N3	WAKE ISLAND Hy	115.89	288	T	T	12 12 57.9	
	baz=92,slow=74,SNR=4.8						
H11N2	WAKE ISLAND Hy	115.90	288	T	T	12 12 58.6	
	baz=92,slow=74,SNR=4.9						
H11N1	WAKE ISLAND Hy	115.90	287	T	T	12 12 59.0	
	baz=92,slow=74,SNR=4.0						
ZAA1	Zalesovo Array	133.29	13	*e*PKPdf	PKPdf	10 07 57.4	-0.2
ZALV	Zalesovo Beam	133.30	13	PKP	PKPdf	10 07 57.3	-0.2
	0.5nm,0.3s,baz=290,slow=5.5,SNR=5.0						
ASAR	Alice Springs	134.47	224	PKP	PKPdf	10 08 00.1	-0.8
	0.4nm,0.6s,baz=109,slow=1.9,SNR=5.1						
ASAR				pPKP	pPKPdf	10 08 23.4	+0.1
	0.3nm,0.7s,baz=102,slow=1.8,SNR=2.1						
WR1	Warramunga Arr	136.55	228	*e*PKPdf	PKPdf	10 08 04.9	+0.2
WR1				*e*pPKPdf	pPKPdf	10 08 27.2	0.0
WRA	Warramunga Arr	136.55	228	PKP	PKPdf	10 08 04.9	+0.2
	1.2nm,0.5s,baz=159,slow=2.1,SNR=9.3						
WRA				pPKP	pPKPdf	10 08 27.2	0.0
	1.3nm,0.9s,baz=136,slow=1.9,SNR=1.9						
MK32	Makanchi Array	139.03	20	*e*PKPdf	PKPdf	10 08 08.7	+0.1
MKAR	Makanchi Array	139.03	20	PKP	PKPdf	10 08 08.7	+0.1
	0.5nm,0.5s,baz=312,slow=3.2,SNR=5.3						
KSH	Kashi	142.15	33	*e*PKP	PKPdf	10 08 14.4	-0.1
KSH				PKS	PKSdf	10 11 47.1	-3.4
LZH	Lanzhou	152.98	355	*e*PKPbc	PKPdf	10 08 32.3	-0.2
LZH				PKPbc	PKPab	10 08 53.0	+1.9
LZH				pPKP	pPKPdf	10 08 54.8	-0.2
LZH				sPKP		10 09 03.1	
LZH				LR	LR		
	comp=N,75nm,18.0s						
LZH				LR	LR		
	comp=E,83nm,18.1s						
LZH				LR	LR		
	comp=Z,97nm,20.2s						
CD2	Chengdu	158.12	354	PKP	PKPdf	10 08 37.9	-1.5

MAN 23 09:49:21.5, 9°.21N×126°.57E, h5^{km}, mb4.4, ML3.2, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	1.04	191	*e*P	Pg	09 49 41.3	-0.2
BIPH				*e*S	Sg	09 49 52.2	-2.8
KCP	Kidapawan	2.63	214	⇑*e*P	Sn	09 50 36.1	-1.0

MAN 23 09:59:21.8, 13°.29N×120°.87E, h42^{km}, mb3.6, ML2.4, MS1.8, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.23	20	⇓*e*P	Pn	09 59 31.7	+2.1
PGP				*i* S	Sn	09 59 37.2	+2.2

ISCJB ***23*** *10:12:11.0±0.4, 19°.71S±0°.03×69°.24W±0°.06, h111^{km}±3^{km}, mb3.6/5, Error ellipse: s-maj=9.0km s-min=5.0km az=171.6*

SJA ***23*** *10:12:11.0±0.5, 19°.78S×69°.34W, h106^{km}±3^{km}, ML3.3, MW4.1*

IDC ***23*** *10:12:12.9±1.4, 19°.73S×68°.99W, h112^{km}±14^{km}, mb3.4/8, mb1 3.6/12, mb1mx3.5/31, mbtmp3.8/12, Error ellipse: s-maj=19.5km s-min=12.0km az=104.0*

GUC ***23*** *10:12:12.2±0.7, 19°.75S×69°.30W, h97^{km}±3^{km}, ML3.9*

ISC 23 10:12:11.4±0.7**, 19°.72S**±0°.04×**69°.24W**±0°.06**, h102^{km}**±5^{km}**, n35, σ1^{s}22**/45**, mb3.5**/5**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO01	Chusmiza	0.07	39	*e*P	Pn	10 12 26.7	+0.5
GO01				*i* S	Sn	10 12 37.8	+0.7
PB11	IPOC Station P	0.40	264	*i* P	Pn	10 12 27.2	+0.2
PB11	IPOC Station P	0.40	264	*e*P	Pn	10 12 27.0	+0.1
PB11				*i* S	Sn	10 12 38.4	-0.2
PB11				IAML		10 12 39.7	
	comp=E,14µm,0.4s						
PB08	IPOC Station P	0.43	169	*i* P	Pn	10 12 28.2	+0.8
PB08				*i* S	Sn	10 12 40.5	+1.2
PB08	IPOC Station P	0.43	169	*e*P	Pn	10 12 28.2	+0.8
PB08				*i* S	Sn	10 12 40.0	+0.7
PB08				IAML		10 12 40.8	
	comp=E,7µm,0.2s						
MNMC	Minye Minye	0.68	330	*e*P	Pn	10 12 30.1	+0.9
MNMC				*i* S	Sn	10 12 43.4	+1.0
MNMCX	Minye Minye	0.68	330	*i* P	Pn	10 12 30.1	+1.0
MNMCX				*i* S	Sn	10 12 43.8	+1.4
PSGC	Pisagua	0.84	278	*e*P	Pn	10 12 30.5	0.0
PSGC				*i* S	Sn	10 12 44.5	-0.3
PSGC				IAML		10 12 45.2	
	comp=E,4µm,0.2s						
PSGCX	Pisagua	0.84	278	*i* P	Pn	10 12 30.4	0.0
PSGCX				*i* S	Sn	10 12 45.0	+0.2
PB01	IPOC Station P	1.34	190	*e*P	Pn	10 12 36.8	+0.8
PB01				*i* S	Sn	10 12 55.2	+0.7
PB01				IAML		10 12 56.6	
	comp=N,2µm,0.2s						
PB16	IPOC Station P	1.40	349	*i* P	Pn	10 12 38.9	+1.7
PB16	IPOC Station P	1.40	349	*e*P	Pn	10 12 38.8	+1.7
PB16				*i* S	Sn	10 12 59.1	+2.6
PB12	IPOC Station P	1.51	317	*i* P	Pn	10 12 38.2	+0.3
PB12	IPOC Station P	1.51	317	*e*P	Pn	10 12 38.0	+0.1
PB12				*i* S	Sn	10 12 58.1	0.0
PB02	IPOC Station P	1.71	201	*i* P	Pn	10 12 40.2	-0.3
PB02	IPOC Station P	1.71	201	*e*P	Pn	10 12 40.9	+0.4
PB02				*i* S	Sn	10 13 02.8	+0.2
LVC	Limon Verde	2.89	174	P	Pn	10 12 57.9	+1.8
	comp=N,13nm,0.3s,baz=25,slow=12,SNR=68						
LVC				S	Sn	10 13 31.9	+1.4
	comp=N,35nm,0.3s,baz=98,slow=16,SNR=15						
LPAZ	La Paz	3.57	17	P	Pn	10 13 08.1	+2.6
	comp=N,1.3nm,0.3s,baz=192,slow=8.7,SNR=40						
LPAZ				S	Sn	10 13 45.5	-1.7
	comp=N,2.1nm,0.3s,baz=204,slow=8.3,SNR=4.9						
HJA	Humahuaca	4.98	135	*i* P	Pn	10 13 26.0	+1.8
HJA				IAML		10 13 29.5	
	comp=Z,19nm,0.5s						
SIV	San Ignacio	8.61	66	P	Pn	10 14 11.9	-1.4
	comp=Z,1.0nm,0.3s,baz=270,slow=11,SNR=36						
CPUP	Villa Florida	12.78	123	P	Pn	10 15 08.7	-0.7
	comp=Z,0.3nm,0.3s,baz=290,slow=11,SNR=4.2						
BDFB	Brasilia	20.62	82	P	P	10 16 41.0	-2.0
	comp=Z,2.3nm,0.4s,baz=82,slow=7.1,SNR=2.1						
PTGA	Pitinga	20.94	27	P	P	10 16 44.1	-2.2
	comp=Z,1.0nm,0.3s,baz=315,slow=20,SNR=3.3						
PLCA	Paso Flores	20.98	183	P	Pn	10 16 49.2	-0.9
	comp=Z,3.2nm,1.1s,baz=344,slow=7.4,SNR=4.3						
TXAR	Lajitas Array	59.00	325	P	P	10 22 01.2	+0.5
	comp=Z,0.2nm,0.8s,baz=146,slow=9.8,SNR=2.9						
DBIC	Dimbokro	68.54	74	P	P	10 23 02.4	-1.2
	comp=Z,4.3nm,1.1s,baz=127,slow=10,SNR=3.4						
NVAR	Mina Array Bea	73.91	322	P	P	10 23 37.5	+1.7
	comp=Z,0.3nm,0.6s,baz=148,slow=5.3,SNR=3.0						
TORD	Torodi Ar. Bea	77.06	71	P	P	10 23 53.4	-0.6
	comp=Z,0.4nm,0.5s,baz=252,slow=5.4,SNR=11						
YKA	Yellowknife Ar	89.41	341	P	P	10 24 57.3	+1.0
	comp=Z,1.0nm,0.7s,baz=137,slow=5.1,SNR=9.3						
STKA	Stephens Creek	120.79	211	PKP	PKPdf	10 30 50.6	-1.6
	comp=Z,0.8nm,0.4s,baz=319,slow=12,SNR=3.4						
H11N3	WAKE ISLAND Hy	127.36	280	T	T	12 50 49.3	
	baz=101,slow=75,SNR=30						
H11N2	WAKE ISLAND Hy	127.38	280	T	T	12 50 44.9	
	baz=101,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	127.38	280	T	T	12 50 42.2	
	baz=101,slow=75,SNR=20						
ASAR	Alice Springs	131.33	209	PKP	PKPdf	10 31 13.0	+0.4
	comp=Z,0.2nm,0.5s,baz=115,slow=1.7,SNR=6.2						
WRA	Warramunga Arr	134.31	212	PKP	PKPdf	10 31 18.8	+0.6
	comp=Z,1.1nm,0.7s,baz=184,slow=1.6,SNR=5.5						

WEL 23 10:17:52.3, 41°S±323°×**17°4E**±7°8**, h20^{km}**±152^{km}**, M3.4**/12**, ML3.6**/11**, MLv3.4**/12**, Error ellipse: s-maj=0.5km s-min=0.1km az=177.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NGZ	Ngauruhoe	2.30	29	P	Pn	10 18 28.2	-0.9
TWVZ	Taurewa	2.34	25	P	Pn	10 18 30.6	+1.0
PXZ	Pawanui	2.35	61	P	Pn	10 18 31.2	+1.4
KWHZ	Kaweka Forest	2.47	45	P	Pn	10 18 29.5	-1.9
KAHZ	Kahuranaki	2.49	57	P	Pn	10 18 33.6	+1.9
RITZ	Rihia Road	2.57	31	P	Pn	10 18 34.0	+1.2
MCHZ	McNeill Hill	2.61	49	P	Pn	10 18 34.3	+1.1
RATZ	Rangitukua	2.63	28	P	Pn	10 18 34.6	+0.9
BKZ	Black Stump Fm	2.70	42	P	Pn	10 18 33.2	-1.3
WATZ	Wairara	2.76	26	P	Pb	10 18 38.6	-2.3
KUTZ	Kaahu Road	2.99	26	P	Pb	10 18 42.0	-2.8
TLZ	Tolley Road	3.05	21	P	Pn	10 18 39.4	0.0
MTHZ	Maungataniwha	3.11	42	P	Pb	10 18 43.7	-3.3
SNGZ	Shannon Statio	3.43	46	P	Pn	10 18 43.8	-0.8

WEL 23 10:29:57.5, 41°S±4°×**17°4E**±°**, h12^{km}, M3.7**/31**, ML4.0**/23**, MLv3.7**/31**, Error ellipse: s-maj=0.0km s-min=0.0km az=0.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCW	Tory Channel	0.27	333	P	Pb	10 30 04.7	+0.5
TCW				S	Sb	10 30 09.8	+1.2
BHW	Baring Head	0.33	83	P	Pb	10 30 04.8	-0.5
BHW				S	Sb	10 30 10.1	-0.5
CMWZ	Cape Campbell	0.34	209	P	Pg	10 30 04.4	0.0
CMWZ				S	Sg	10 30 09.1	0.0
TUWZ	Tuamarina	0.37	273	P	Pb	10 30 05.5	-0.5
TUWZ				S	Sb	10 30 11.3	-0.3
BSWZ	Blackbirch Sta	0.50	237	P	Pg	10 30 07.1	-0.1
CAW	Cannon Point	0.59	55	P	Pb	10 30 09.9	+0.3
MSWZ	Moikau Station	0.61	87	P	Pb	10 30 09.9	-0.2
PLWZ	Palliser	0.63	101	P	Pg	10 30 09.8	0.0
PAWZ	Paruwai Farm	0.75	85	P	Pb	10 30 12.3	-0.2
DUWZ	D'Urville Isla	0.75	329	P	Pn	10 30 13.7	-0.2
NNZ	Nelson	0.83	286	P	Pb	10 30 14.2	+0.5
OGWZ	Otaki Gorge	0.84	42	P	Pb	10 30 14.5	+0.5
MTW	Mount Morrison	0.85	71	P	Pb	10 30 14.7	+0.5
TRWZ	Traveller	0.94	87	P	Pb	10 30 15.8	0.0
HOWZ	Holdsworth Sta	0.98	56	P	Pn	10 30 17.1	0.0
TMWZ	Te Maipa	1.15	73	P	Pb	10 30 18.9	-0.4
MRZ	Mangatainoka R	1.17	48	P	Pg	10 30 20.1	+0.2
KHZ	Kahutara	1.18	214	P	Pb	10 30 18.5	-1.2
THZ	Tophouse	1.19	254	P	Pn	10 30 19.6	-0.3
TIWZ	Tintock	1.29	59	P	Pb	10 30 21.8	+0.2
OHWZ	Ohakea	1.41	29	P	Pg	10 30 25.2	+0.7
CPWZ	Castlepoint	1.44	69	P	Pb	10 30 24.0	-0.2
POWZ	Post Office Ro	1.46	44	P	Pb	10 30 24.6	+0.1
PRWZ	Pori Road	1.47	53	P	Pb	10 30 24.2	-0.4
QRZ	Quartz Range	1.57	293	P	Pg	10 30 27.3	-0.2
BFZ	Birch Farm	1.57	61	P	Pn	10 30 24.5	-0.6

WAZ	Wanganui	1.74	14	P	Pg	10 30 31.3	+0.4
DVHZ	Dannevirke	1.75	49	P	Pn	10 30 27.4	-0.2
TSZ	Takapari Road	1.81	40	P	Pn	10 30 29.4	+0.9
ANWZ	Angora Road	1.83	58	P	Pn	10 30 28.6	-0.1
GVZ	Greta Valley S	1.84	214	P	Pn	10 30 27.3	-1.5
LREZ	Lake Rotokare	1.98	359	P	Pg	10 30 36.5	+1.0
DSZ	Denniston Nort	1.99	261	P	Pn	10 30 32.0	+1.0
PNHZ	Pukenui	2.04	42	P	Pn	10 30 32.3	+0.7
LTZ	Lake Taylor	2.09	230	P	Pn	10 30 31.3	-1.0
PREZ	Palmer Road	2.11	354	P	Pg	10 30 37.3	-0.7
MTVZ	Mangateitei	2.21	21	P	Pg	10 30 38.8	-1.0
NBEZ	Newall Road No	2.22	349	P	Pg	10 30 39.0	-1.0
DREZ	Durham Road	2.26	355	P	Pb	10 30 39.1	+0.8
MOVZ	Moawhango	2.27	27	P	Pb	10 30 37.5	-0.9
PKE	Pukeiti	2.28	351	P	Pb	10 30 39.5	+1.0
BHHZ	Black Hill Sta	2.32	33	P	Pb	10 30 37.7	-1.5
VRZ	Vera Road	2.33	6	P	Pb	10 30 39.8	+0.4
DRZ	Dome Shelter	2.33	22	P	Pg	10 30 41.0	-1.2
WHVZ	Whangaehu Hut	2.34	23	P	Pb	10 30 39.1	-0.5
FWVZ	Far West T-bar	2.35	22	P	Pb	10 30 39.8	-0.1
TUVZ	Tukino	2.37	24	P	Pb	10 30 39.2	-0.9
NGZ	Ngauruhoe	2.44	22	P	Pb	10 30 41.5	+0.1
KAHZ	Kahuranaki	2.49	49	P	Pn	10 30 37.1	-0.7
OKCZ	Okains Bay	2.49	204	P	Pn	10 30 35.0	-2.8
WTVZ	West Tongariro	2.49	21	P	Pb	10 30 43.1	+0.9
CRLZ	Canterbury Las	2.51	212	P	Pn	10 30 35.6	-2.4
KRVZ	Karewarewa	2.52	22	P	Pb	10 30 42.4	-0.4
KWHZ	Kaweka Forest	2.53	38	P	Pn	10 30 39.5	+1.2
MQZ	McQueen's Vall	2.61	210	P	Pn	10 30 36.1	-3.4
KATZ	Kakaramea	2.65	22	P	Pg	10 30 46.8	-1.5
RITZ	Rihia Road	2.70	24	P	Pb	10 30 47.2	+1.6
BKZ	Black Stump Fm	2.77	35	P	Pb	10 30 47.3	+0.4
RATZ	Rangitukua	2.77	22	P	Pg	10 30 49.0	-1.6
HIZ	Hauiti	2.95	6	P	Pb	10 30 48.9	-1.0
KUTZ	Kaahu Road	3.14	20	P	Pg	10 30 55.6	-2.0
MTHZ	Maungataniwha	3.18	36	P	Pb	10 30 53.7	-0.2
WVZ	Waitaha Valley	3.19	238	P	Pb	10 30 52.2	-1.8
TLZ	Tolley Road	3.23	16	P	Pb	10 30 53.0	-1.7
ALRZ	Allen Road	3.23	28	P	Pb	10 30 53.6	-1.2
PRRZ	Plateau Road	3.31	28	P	Pb	10 30 58.3	+2.3
RPZ	Rata Peaks	3.37	227	P	Pn	10 30 49.5	-0.4
URZ	Urewera	3.79	34	P	Pb	10 31 02.4	-1.9
TOZ	Tahuroa Road	3.80	13	P	Pb	10 31 01.1	-3.4
MWZ	Matawai	3.92	38	P	Pn	10 30 59.9	+2.5
RUGZ	Raukumara Rang	4.28	37	P	Pn	10 31 06.9	+4.3
MKAZ	Moumakai	4.37	8	P	Pn	10 31 07.5	+3.8
AWAZ	Awhitu Peninsu	4.38	2	P	Pn	10 31 08.5	+4.7
ETAZ	East Tamaki Re	4.50	5	P	Pb	10 31 14.3	-2.2
ODZ	Otahua Downs	4.54	216	P	Pn	10 31 03.5	-2.3
WIAZ	Waiheke Island	4.68	7	P	Pn	10 31 13.1	+5.3
JCZ	Jackson Bay	4.92	236	P	Pn	10 31 14.8	+3.6
WCZ	Waipu Caves	5.50	359	P	Pb	10 31 26.4	-7.0
OUZ	Omahuta	6.25	354	P	Pn	10 31 37.4	+8.0

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*SJA **23** 10:32:03.7±0.5, 21.°29S×68.°48W, h167^{km}±12^{km}, ML2.8, MW4.1*

*ISCJB **23** 10:32:07.3±1.1, 21.°57S±0.°05×68.°6W±0.°1, h145^{km}±13^{km}, Error ellipse: s-maj=15.6km s-min=8.1km az=177.5*

*GUC **23** 10:32:07.6±0.7, 21.°55S×68.°62W, h141^{km}±6^{km}, ML3.0*

ISC 23 10:32:07.9±2.0, **21.°52S**±0.°05×**68.°56W**±0.°09, **h143**^{km}±18^{km}, **n14**, σ1^{s}**10**/26, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.69	247	*i* P	Pn	10 32 29.5	-0.3
PB09	IPOC Station P	0.69	247	*e*P	Pn	10 32 29.4	-0.4
PB09				*i* S	Sn	10 32 45.7	-0.8
PB09				IAML		10 32 46.4	
	comp=N,162nm,0.3s						
PB01	IPOC Station P	0.99	299	*e*P	Pn	10 32 31.8	-0.2
PB01				*i* S	Sn	10 32 50.2	-0.1
PB01				IAML		10 32 51.8	
	comp=E,371nm,0.2s						
PB03	IPOC Station P	1.23	245	*e*P	Pn	10 32 33.9	-0.4
PB03				*i* S	Sn	10 32 53.4	-1.0
PB07	IPOC Station P	1.25	260	*i* P	Pn	10 32 34.3	-0.2
PB07				*i* S	Sn	10 32 56.5	+1.7
PB07	IPOC Station P	1.25	260	*e*P	Pn	10 32 34.5	0.0
PB07				*i* S	Sn	10 32 54.5	-0.4
PB07				IAML		10 32 54.9	
	comp=E,467nm,0.1s						
PB02	IPOC Station P	1.27	279	*i* P	Pn	10 32 33.6	-1.0
PB02				*i* S	Sn	10 32 55.7	+0.8
PB02	IPOC Station P	1.27	279	*e*P	Pn	10 32 34.6	0.0
PB02				*i* S	Sn	10 32 54.5	-0.4
PB08	IPOC Station P	1.48	338	*e*P	Pn	10 32 38.0	+0.8
PB08				*i* S	Sn	10 33 01.0	+1.5
PB04	IPOC Station P	1.69	241	*e*P	Pn	10 32 38.6	-0.5
PB04				*i* S	Sn	10 33 01.6	-1.4
PB15	IPOC Station P	1.88	207	*i* P	Pn	10 32 41.8	+0.4
PB15				*i* S	Sn	10 33 10.7	+3.6
PB11	IPOC Station P	2.03	329	*e*P	Pn	10 32 43.1	0.0
PB11				*i* S	Sn	10 33 10.7	+0.5
PSGC	Pisagua	2.41	322	*e*P	Pn	10 32 47.2	-0.5
PSGC				*i* S	Sn	10 33 17.9	-0.5
HJA	Humahuaca	3.36	121	*i* P	Pn	10 32 58.9	-1.1
HJA				IAML		10 33 01.0	
	comp=Z,15nm,0.4s						

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*IDC **23** 10:32:26.9±1.3, 16.°41S×174.°02W, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx3.8/43, mbtmp4.0/6, Error ellipse: s-maj=37.8km s-min=29.1km az=110.0*

*ISCJB **23** 10:32:30.7±0.5, 16.°33S±0.°08×174.°22W±0.°08, h35^{km}, mb4.4/15, Error ellipse: s-maj=13.4km s-min=8.1km az=136.9*

*NEIC **23** 10:32:35.5±1.6, 16.°47S×174.°14W, h63^{km}±8^{km}, mb4.4/12, Error ellipse: s-maj=17.0km s-min=10.7km az=84.0*

ISC 23 10:32:33.0±0.7, **16.°50S**±0.°07×**174.°13W**±0.°09, **h35**^{km}, **n23**, σ1^{s}**37**/24, **mb4.3**/15, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.43	42	*e*Pn	Pn	10 33 26.9	+2.8
AFI				*e*Sn	Sn	10 34 01.6	-2.0
NIUE	Niue	4.75	123	*e*Pn	Pn	10 33 45.2	+3.1
NIUE				*e*Sn	Sn	10 34 32.8	-3.1
URZ	Urewera	23.00	198	P	P	10 37 34.7	0.0
	3.3nm,0.6s,baz=109,slow=17,SNR=4.6						
URZ	Urewera	23.00	198	*e*P	P	10 37 35.1	+0.4
	28nm,1.3s						
BKZ	Black Stump Fm	24.02	198	*e*P	P	10 37 43.9	-0.8
	20nm,1.4s						
STKA	Stephens Creek	42.89	241	P	P	10 40 29.0	+0.7
	1.3nm,0.7s,baz=96,slow=9.2,SNR=2.3						
BBOO	Buckleboo	47.66	241	*e*P	P	10 41 06.0	-0.1
	8.6nm,1.2s						
WB2	Warramunga Arr	48.91	258	*e*P	P	10 41 15.8	-0.2
	8.1nm,1.1s						
WR1	Warramunga Arr	48.92	258	*e*P	P	10 41 15.7	-0.4
WRA	Warramunga Arr	48.92	258	P	P	10 41 15.7	-0.4
	2.0nm,0.9s,baz=92,slow=7.1,SNR=9.0						
AS31	Alice Springs	49.11	253	*e*P	P	10 41 16.5	-1.0
	1.6nm,1.3s						
ASAR	Alice Springs	49.11	253	P	P	10 41 17.1	-0.4
	1.7nm,0.7s,baz=86,slow=8.2,SNR=26						
SBA	Scott Base	62.10	185	*e*P	P	10 42 50.0	+0.2
	3.3nm,0.9s						
VNDA	Vanda	62.22	186	*e*P	P	10 42 50.8	+0.2
	2.3nm,0.9s						
PEA0B	Petropavlovsk-	73.47	343	*e*P	P	10 43 58.7	-3.0
	16nm,1.4s						
QSPA	South Pole Qui	73.55	180	P	P	10 44 02.0	-0.3
	2.1nm,0.7s,baz=319,slow=0.5,SNR=14						
QSPA	South Pole Qui	73.55	180	*e*P	P	10 44 02.1	-0.1
	2.5nm,0.8s						
CCB	Clear Creek Bu	83.37	11	*e*P	P	10 44 54.5	-1.5
	1.9nm,0.8s						
ILAR	Eielson Array	83.66	11	P	P	10 44 56.5	-1.0
	0.4nm,0.5s,baz=221,slow=5.3,SNR=4.8						
ILB	Eielson Array	83.66	11	*e*P	P	10 44 56.2	-1.3
	5.2nm,1.3s						
GO09	Cerro Castillo	84.46	142	*e*P	P	10 45 02.2	+0.1
	57nm,1.4s						
BR101	Keskin Array S	146.55	319	*e*PKPbc	PKPdf	10 52 10.1	+0.4
BRTR	Keskin Array B	146.55	319	PKPbc	PKPdf	10 52 10.1	+0.4
	0.9nm,0.7s,baz=141,slow=4.5,SNR=3.7						

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*MOS **23** 10:35:25.3±1.0, 54.°06N×165.°29W, h50^{km}, mb4.6/35, Error ellipse: s-maj=10.8km s-min=5.5km az=79.6*

*ISCJB **23** 10:35:29.2±0.2, 54.°20N±0.°02×165.°20W±0.°03, h80^{km}±1^{km}, mb4.4/144, Error ellipse: s-maj=4.1km s-min=2.1km az=158.3*

*AEIC **23** 10:35:29.4, 53.°97N×165.°15W, h66^{km}, ML4.6, MB4.5(NEIC)*

*IDC **23** 10:35:29.2±1.7, 54.°19N×165.°39W, h68^{km}±13^{km}, mb4.0/26, mb1 4.2/29, mb1mx4.1/50, mbtmp4.3/29, MS3.2/19, Ms1 3.2/19, ms1mx3.1/35, Error ellipse: s-maj=16.1km s-min=10.1km az=173.0*

*NEIC **23** 10:35:29.4±0.0, 53.°97N×165.°15W, h66^{km}, mb4.5/111, ML4.6(AEIC), After AEIC.*

NEIC Felt at Akutan and Unalaska.

ISC 23 10:35:29.6±0.7, **54.°10N**±0.°06×**165.°25W**±0.°04, **h73**^{km}±5^{km}, **n493**, σ1^{s}**15**/524, **mb4.5**/144, **1C**, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	Akutan Strait	0.27	278	*e*Sn	Sn	10 35 50.3	+1.0
AKUT	Akutan	0.31	277	*e*Pn	Pn	10 35 41.6	+0.4
AKUT				*e*Sn	Sn	10 35 50.7	+1.0
AKRB	Akutan Reef Bi	0.48	274	*e*Pn	Pn	10 35 43.0	+0.4
AKRB				*e*Sn	Sn	10 35 53.6	+1.5
WESP	Westdahl Peak	0.50	38	*e*Pn	Pn	10 35 43.4	+0.5
WEBT	Westdahl Beart	0.57	30	*e*Pn	Pn	10 35 44.4	+0.9
UNV	Unalaska Valle	0.78	251	*e*Pn	Pn	10 35 45.9	+0.2
UNV				*e*Sn	Sn	10 35 57.3	-0.3
MSW	Makushin Switc	0.92	259	*e*Pn	Pn	10 35 47.5	+0.2
MSW				*e*Sn	Sn	10 36 01.7	+1.1
MREP	Makushin Rep't	0.93	252	*e*Pn	Pn	10 35 47.9	+0.4
SSBA	Shishaldin	0.94	44	*e*Pn	Pn	10 35 48.0	+0.4
SSBA				*e*Sn	Sn	10 36 03.0	+2.0
MCIR	Makushin Cirqu	0.98	262	*e*Pn	Pn	10 35 48.9	+0.8
BRPK	Brown Peak	1.04	58	*e*Pn	Pn	10 35 48.9	+0.2
FALS	False Pass	1.31	54	*e*Pn	Pn	10 35 52.7	+0.5
FALS				*e*Sn	Sn	10 36 10.4	+1.2
OKER	Okmok East Rim	1.78	250	*e*Pn	Pn	10 35 59.2	+0.7
OKTU	Okmok Mt. Tuli	1.81	248	*e*Pn	Pn	10 35 59.5	+0.8
OKWE	Okmok W'ng Wal	1.88	252	*e*Pn	Pn	10 36 00.4	+0.6
OKAK	Okmok	1.91	255	*e*Pn	Pn	10 36 01.3	+1.2
DOL	Dolgoi Island	2.23	61	*e*Pn	Pn	10 36 04.8	+0.4
PS4A	Pavlof South-4	2.33	56	*e*Pn	Pn	10 36 06.5	+0.7
PVV	Pavlof Volcano	2.38	56	*e*Pn	Pn	10 36 07.2	+0.8
SDPT	Sand Point	3.04	64	*e*Pn	Pn	10 36 16.6	+1.2
SDPT				*e*Sn	Sn	10 36 51.7	+1.2
SPIA	Saint Paul Isl	4.19	319	*e*Pn	Pn	10 36 32.9	+2.0
SPIA				*e*Sn	Sn	10 37 17.4	-1.1
CHGN	Chignik	4.50	58	*e*Pn	Pn	10 36 36.8	+1.7
CHGN				*e*Sn	Sn	10 37 24.9	-1.1
AZAC	Aniakchak	4.88	52	*e*Pn	Pn	10 36 42.3	+1.8
KOSE	Korovin Southe	5.57	255	*e*Pn	Pn	10 36 52.6	+2.7
KOFP	Korovin Flat P	5.62	255	*e*Pn	Pn	10 36 53.1	+2.5
KOKL	Mount Kliuchef	5.67	255	*e*Pn	Pn	10 36 54.3	+3.1
CHIR	Chirikof Islan	5.81	69	*e*Pn	Pn	10 36 52.3	-0.8
CHIR				*e*Pn	Pn	10 36 52.5	-0.6
CHIR				*e*Sn	Sn	10 37 57.8	-0.4
SII	Sitkinak Islan	6.78	64	*e*Pn	Pn	10 37 06.4	+0.1
SII				*e*Sn	Sn	10 38 23.9	+1.9
GSTR	Great Sitkin T	6.81	257	*e*Pn	Pn	10 37 10.1	+3.3
GSTR				*e*Sn	Sn	10 38 20.9	-2.0
GSMY	Great Sitkin M	6.83	257	*e*Pn	Pn	10 37 09.6	+2.6
KELA	Mount Kelaz	6.85	47	*e*Pn	Pn	10 37 09.7	+2.3
GSTD	Great Sitkin T	6.88	257	*e*Pn	Pn	10 37 10.1	+2.3
ETKA	Kagalaska Isla	7.10	256	*e*Pn	Pn	10 37 12.9	+2.2
ADAG	Mount Adagdak	7.17	257	*e*Pn	Pn	10 37 14.7	+3.0
ADK	Adak	7.25	257	*e*Pn	Pn	10 37 15.5	+2.7
ADK				*e*Sn	Sn	10 38 32.1	-1.4
ADK	Adak	7.25	257	*e*P	Pn	10 37 15.5	+2.7
ADK				*e*		10 38 32.1	
KAHC	Katmai Hardscr	7.29	47	*e*Pn	Pn	10 37 15.8	+2.4
OHAK	Old Harbor	7.45	60	*e*Pn	Pn	10 37 14.9	-0.6
OHAK				*e*Sn	Sn	10 38 38.5	+0.1
KIWB	Kanaga Island	7.53	257	*e*Pn	Pn	10 37 16.9	+0.3
KIWB				*e*Sn	Sn	10 38 42.2	+1.9
KIKV	Kanaga Island	7.53	258	*e*Pn	Pn	10 37 18.9	+2.2
KIMD	Kanaga Island	7.61	257	*e*Pn	Pn	10 37 20.1	+2.4
FONW	Fourpeaked Sta	7.86	48	*e*Pn	Pn	10 37 23.0	+1.8
KDAK	Kodiak Island	8.01	57	P	Pn	10 37 21.8	-1.3
	8.2nm,0.3s,baz=247,slow=6.7,SNR=116						
KDAK				S	Sn	10 38 48.6	-3.4
	1.3nm,0.3s,baz=294,slow=20,SNR=2.2						
KDAK				LR	LR	10 41 09.5	
	comp=Z,177nm,20.2s,baz=246,slow=42						
KDAK	Kodiak Island	8.01	57	*e*Pn	Pn	10 37 22.4	-0.7
KDAK				*e*Sn	Sn	10 38 52.9	+0.9
KDAK	Kodiak Island	8.01	57	*e*P	Pn	10 37 22.4	-0.7
KDAK				*e*		10 38 52.9	
SVW2	Sparrevohn	8.72	33	*e*Pn	Pn	10 37 33.0	+0.2
ILS	Iliamna Low So	8.86	44	*e*Pn	Pn	10 37 38.1	+3.3
RSO	Redoubt South	9.29	42	*e*Pn	Pn	10 37 40.5	-0.2
HOM	Homer	9.29	48	*e*Pn	Pn	10 37 41.5	+0.9
HOM				*e*Sn	Sn	10 39 21.9	-1.4
RDJH	Redoubt Jeurge	9.35	41	*e*Pn	Pn	10 37 44.8	+3.3
CNPM	China Poot	9.40	49	*e*Pn	Pn	10 37 42.0	-0.2
CNPM				*e*Sn	Sn	10 39 25.1	-1.0
BRLK	Bradley Lake	9.68	48	*e*Pn	Pn	10 37 45.0	-0.9
BRLK				*e*Sn	Sn	10 39 33.7	+0.9
SPWE	Spurr West	9.88	38	*e*Pn	Pn	10 37 52.2	+3.5
SPU	Mount Spurr	10.01	40	*e*Pn	Pn	10 37 48.4	-2.0
TTA	Tatalina	10.07	25	*e*Pn	Pn	10 37 52.1	+0.8
TTA				*e*Sn	Sn	10 39 43.4	+0.9
TTA	Tatalina	10.07	25	*e*P	Pn	10 37 52.1	+0.8
TTA				*e*		10 39 43.4	
GAMB	Gambell	10.25	344	*e*Pn	Pn	10 37 51.0	-2.7
SEW	Seward	10.47	49	*e*Pn	Pn	10 37 55.6	-1.1
SEW				*e*Sn	Sn	10 39 50.2	-1.9
ANM	Nome	10.50	360	*e*Pn	Pn	10 37 54.9	-2.1
ANM	Nome	10.50	360	*e*P	Pn	10 37 54.9	-2.1
RC01	Rabbit Creek A	10.86	44	*e*Pn	Pn	10 38 01.6	-0.4
PPLA	Purkeypile	11.13	32	*e*Pn	Pn	10 38 06.9	+1.1
PMR	Palmer	11.38	42	*e*Pn	Pn	10 38 08.7	-0.3
PMR	Palmer	11.38	42	*e*P	Pn	10 38 08.7	-0.3
CAST	Castle Rocks	11.55	31	*e*Pn	Pn	10 38 11.6	+0.2
KNK	Knik Glacier	11.55	44	*e*Pn	Pn	10 38 09.9	-1.5
GHO	Glory Hole Cre	11.56	42	*e*Pn	Pn	10 38 09.6	-2.0
SML	Sawmill	11.82	42	*e*Pn	Pn	10 38 13.3	-1.7
SML	Sawmill	11.82	42	*e*P	Pn	10 38 13.3	-1.7
GLI	Glacier Island	11.87	48	*e*Pn	Pn	10 38 13.0	-2.7
KTH	Kantishna Hill	12.00	32	*e*Pn	Pn	10 38 19.4	+1.8
FID	Port Fidalgo	12.08	49	*e*Pn	Pn	10 38 15.6	-3.0
FID				*e*Sn	Sn	10 40 29.0	-2.3
SCM	Sheep Creek Mo	12.23	44	*e*Pn	Pn	10 38 19.5	-1.3
SCM	Sheep Creek Mo	12.23	44	*e*P	Pn	10 38 19.5	-1.3
EYAK	Cordova Ski Ar	12.33	51	*e*Pn	Pn	10 38 20.4	-1.5
BPAW	Bear Paw Mtn.	12.38	30	*e*Pn	Pn	10 38 24.5	+1.8
KAIM	Kayak Island	12.73	54	*e*Pn	Pn	10 38 26.0	-1.4
RAGM	Ragged Mountai	12.76	52	*e*Pn	Pn	10 38 26.1	-1.8
MCK	McKinley	12.77	34	*e*Pn	Pn	10 38 27.8	-0.2
MCK	McKinley	12.77	34	*e*P	Pn	10 38 27.8	-0.2
BWN	Browne	12.90	32	*e*Pn	Pn	10 38 28.1	-1.6
DHY	Denali Highway	12.91	39	*e*Pn	Pn	10 38 27.8	-2.1
HMT	Hamilton	12.94	53	*e*Pn	Pn	10 38 28.9	-1.4
MLY	Manley	13.15	28	*e*Pn	Pn	10 38 34.0	+0.8
WRH	Wood River Hil	13.54	33	*e*Pn	Pn	10 38 33.0	-5.2
GLB	Gilahina Butte	13.55	49	*e*Pn	Pn	10 38 36.6	-1.8
PAX	Paxson	13.57	41	*e*Pn	Pn	10 38 36.1	-2.5
PAX	Paxson	13.57	41	*e*P	Pn	10 38 36.2	-2.5
CRQM	Cirque	13.60	52	*e*Pn	Pn	10 38 37.9	-1.3
WAX	Waxell Ridge	13.64	53	*e*Pn	Pn	10 38 38.4	-1.2
TGL	Tana Glacier	13.74	52	*e*Pn	Pn	10 38 39.9	-1.2
TGL				*e*Sn	Sn	10 41 10.8	-1.1
CCB	Clear Creek Bu	13.75	33	*e*Pn	Pn	10 38 39.7	-1.3
HDA	Harding Lake	13.88	35	*e*Pn	Pn	10 38 39.9	-2.8
HDA	Harding Lake	13.88	35	P	Pn	10 38 41.0	-1.6
	baz=230,SNR=14						
TCOL	CIGO, UAF Yank	13.89	32	P	Pn	10 38 42.7	-0.1
	baz=227						
COLA	College	13.89	32	*e*Pn	Pn	10 38 42.8	0.0
COLA	College	13.89	32	*e*P	Pn	10 38 42.8	0.0
ILAR	Eielson Array	14.13	34	P	Pn	10 38 44.6	-1.3
	0.4nm,0.3s,baz=228,slow=12,SNR=20						
ILAR				S	Sn	10 41 19.4	-1.7
	0.1nm,0.3s,baz=196,slow=7.5,SNR=2.8						
ILAR				LR	LR	10 44 47.0	
	comp=Z,101nm,20.9s,baz=224,slow=40						
ILAR				ScP	ScP	10 47 25.9	-0.5
	0.0nm,0.3s,baz=293,slow=3.5,SNR=6.3						
ILB	Eielson Array	14.13	34	*e*Pn	Pn	10 38 45.2	-0.7
POKR	Poker Plat Res	14.19	32	P	Pn	10 38 46.1	-0.5
	baz=227						
RIDG	Independent Ri	14.22	39	*e*Pn	Pn	10 38 46.4	-0.9
MENT	Mentasta	14.24	43	*e*Pn	Pn	10 38 45.7	-1.8
DOT	Dot Lake	14.47	40	*e*Pn	Pn	10 38 50.1	-0.3
CTGM	Chitina Glacie	14.51	52	*e*Pn	Pn	10 38 50.4	-0.6
SCRK	Sand Creek	14.67	39	*e*Pn	Pn	10 38 51.1	-1.9
PCA	Pinnacle	14.79	56	*e*Pn	Pn	10 38 54.2	-0.5
PCA				*e*Sn	Sn	10 41 33.7	-3.5
COLD	Coldfoot	15.02	23	*e*Pn	P	10 38 59.8	-1.4
	24nm,1.1s						
PRP	Porcupine Dome	15.06	33	*e*Pn	Pn	10 38 55.8	-2.2
	8.9nm,0.7s						
BCPM	Bancas Point	15.07	57	*e*Pn	Pn	10 38 57.3	-0.8
	53nm,0.7s						
FYU	Fort Yukon	15.84	30	*e*Pn	Pn	10 39 06.3	-1.5
	19nm,1.0s						
EGAK	Eagle	16.14	39	*e*Pn	Pn	10 39 09.7	-1.9
	21nm,0.8s						
HYT	Haines Junctio	16.28	54	*e*Pn	Pn	10 39 11.3	-2.2
	94nm,1.2s						
TOLK	Toolik Lake Re	16.32	21	*e*Pn	Pn	10 39 14.6	+0.7
	28nm,0.9s						
TOLK	Toolik Lake Re	16.32	21	P	Pn	10 39 15.1	+1.2
	baz=214,SNR=19						
DAWY	Dawson	16.49	43	*e*Pn	Pn	10 39 15.0	-1.0
	71nm,1.0s						
SKAG	Skagway	17.15	60	*e*P	P	10 39 24.6	-0.2
	26nm,0.8s						
BESE	Bessie Mountai	17.35	63	*e*P	P	10 39 27.2	+0.2
	17nm,0.8s						
JIS	Juneau Island	17.59	64	*e*P	P	10 39 30.9	+1.4
	15nm,0.8s						
CRAG	Craig	18.49	73	*e*P	Pn	10 39 42.7	+2.2
	11nm,0.8s						
EPYK	Eagle Plains	18.53	37	*e*P	P	10 39 39.3	-0.7
	58nm,0.8s						
EPYK	Eagle Plains	18.53	37	P	P	10 39 39.0	-0.9
	baz=242,SNR=48						
WRAK	Wrangell Islan	18.80	70	*e*P	Pn	10 39 45.4	+1.3
	10nm,0.8s						
BILL	Bilibino	19.34	327⇑	*e*P	Pn	10 39 50.7	+0.2
BILL				S	S	10 43 26.0	+2.5
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,128nm,18.0s						
DLBC	Dease Lake	19.88	63	P	Pn	10 39 56.4	-0.6
	comp=Z,0.2nm,0.3s,baz=283,slow=10,SNR=30						
DLBC				LR	LR	10 46 55.4	
	comp=Z,47nm,18.2s,baz=265,slow=34						
DLBC	Dease Lake	19.88	63	*e*P	Pn	10 39 56.2	-0.8
	comp=Z,19nm,0.9s						
INK	Inuvik	20.53	34	P	P	10 39 59.5	-2.1
	comp=Z,22nm,0.8s,baz=225,slow=12,SNR=70						
INK				PcP	PcP	10 44 10.1	+0.4
	comp=Z,1.1nm,0.5s,baz=319,slow=11,SNR=3.5						
INK				LR	LR	10 49 06.4	
	comp=Z,107nm,18.7s,baz=180,slow=40						
INK	Inuvik	20.53	34	*e*P	P	10 39 59.0	-2.6
	comp=Z,39nm,0.9s						
INK	Inuvik	20.53	34	*e*P	P	10 39 59.0	-2.6
INK				pmax	pmax		
	comp=Z,39nm,0.9s						
PET	Petropavlovsk	21.33	282	*e*P	P	10 40 22.7	+12
PET				*e*S	Sn	10 44 10.6	-3.8
PET				pmax	pmax		
	comp=Z,14nm,1.5s						
PET				pmax	pmax		
	comp=Z,100nm,17.4s						
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
PEA1	Petropavlovsk-	21.85	283	*e*P	P	10 40 15.7	-0.1
PEA1				*e*S	S	10 43 58.2	-15
PEA0B	Petropavlovsk-	21.85	283	*e*P	P	10 40 17.1	+1.2
	comp=Z,8.2nm,1.0s						
PEA0B	Petropavlovsk-	21.85	283	*e*P	P	10 40 17.1	+1.2
PEA0B				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PETK	Petropavlovsk-	21.85	283	P	P	10 40 15.7	-0.1
	comp=Z,3.7nm,0.6s,baz=81,slow=13,SNR=20						
PETK				S	S	10 43 58.2	-15
	comp=Z,1.4nm,0.5s,baz=62,slow=16,SNR=6.8						
PETK				LR	LR	10 48 06.1	
	comp=Z,50nm,21.5s,baz=93,slow=35						
SEY	Seymchan	23.41	309	*i* P	P	10 40 45.4	+14
MA2	Magadan	24.31	301	P	P	10 40 39.5	-0.4
	comp=Z,5.0nm,0.6s,baz=82,slow=19,SNR=2.5						
MA2				LR	LR	10 50 27.8	
	comp=Z,21nm,20.7s,baz=90,slow=37						
MA2	Magadan	24.31	301	*i* P	P	10 40 38.0	-1.9
MA2				pmax	pmax		
	comp=Z,15nm,1.2s						
YKW3	Yellowknife Ar	27.22	52	*e*P	P	10 41 06.6	+0.4
	comp=Z,20nm,1.1s						
YKA	Yellowknife Ar	27.23	52	P	P	10 41 06.7	+0.5
	comp=Z,12nm,0.9s,baz=274,slow=10,SNR=43						
YKA				ScP	ScP	10 47 57.7	0.0
	comp=Z,1.1nm,0.9s,baz=290,slow=4.5,SNR=6.4						
YKA				LR	LR	10 52 55.0	
	comp=Z,10nm,18.6s,baz=276,slow=38						
YKB5	Yellowknife Ar	27.23	52	*e*P	P	10 41 06.7	+0.5
YKB5				*e*ScP	ScP	10 47 57.7	0.0
NEW	Newport	30.24	81	*e*P	P	10 41 33.6	+0.4
	comp=Z,5.6nm,0.8s						
NEW	Newport	30.24	81	*e*P	P	10 41 33.6	+0.4
NEW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NEW	Newport	30.24	81	P	P	10 41 34.1	+0.9
	baz=299,SNR=6.9						
RES	Resolute Bay	33.72	27	*e*P	P	10 42 02.9	-0.4
	comp=Z,6.0nm,0.7s						
RES	Resolute Bay	33.72	27	*e*P	P	10 42 02.9	-0.4
RES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PAHR	Pah Rah Range	33.84	96	*e*P	P	10 42 04.3	-0.6
	comp=Z,1.7nm,0.9s						
VCNR	Virginia City	33.95	97	*e*P	P	10 42 06.0	0.0
	comp=Z,2.2nm,0.9s						
HRY	Holter Researc	34.11	80	*e*P	P	10 42 06.8	-0.4
PNTR	Pine Nut	34.12	97	*e*P	P	10 42 08.6	+1.2
	comp=Z,5.8nm,0.7s						
LRM	Limekiln Ridge	34.24	82	*e*P	P	10 42 05.3	-3.1
YERR	Yerington	34.40	97	*e*P	P	10 42 09.3	-0.5
	comp=Z,2.1nm,0.8s						
MCMT	McKenzie Canyo	34.56	84	*e*P	P	10 42 10.3	-0.9
WAKR	Walker	34.60	98	*e*P	P	10 42 12.9	+1.4
	comp=Z,2.0nm,0.7s						
EGMT	Eagleton	34.62	77	*e*P	P	10 42 11.5	0.0
	comp=Z,5.3nm,0.9s						
EGMT	Eagleton	34.62	77	P	P	10 42 11.6	+0.1
	baz=301						
BMN	Battle Mountai	34.64	93	*e*P	P	10 42 11.5	-0.4
	comp=Z,1.0nm,0.7s						
BMN	Battle Mountai	34.64	93	*e*P	P	10 42 11.5	-0.4
BMN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAJ	Asahikawa	34.83	275	P	P	10 42 11.2	-1.9
	comp=Z,2.4nm,0.9s,baz=112,slow=9.9,SNR=3.0						
BOZ	Bozeman (W)	34.84	82	*e*P	P	10 42 12.2	-1.2
	comp=Z,2.6nm,0.8s						
BOZ	Bozeman (W)	34.84	82	*e*P	P	10 42 12.3	-1.2
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	Bozeman (W)	34.84	82	P	P	10 42 13.8	+0.3
	baz=304						
NV01	Mina Array Sit	35.31	97	*e*P	P	10 42 19.0	+1.3
NV01				*e*PcP	PcP	10 44 47.2	+0.7
NV01				*e*ScP	ScP	10 48 25.5	0.0
NVAR	Mina Array Bea	35.31	97	P	P	10 42 19.0	+1.3
	comp=Z,1.6nm,0.7s,baz=301,slow=8.2,SNR=16						
NVAR				PcP	PcP	10 44 47.2	+0.7
	comp=Z,0.8nm,0.5s,baz=292,slow=3.1,SNR=6.1						
NVAR				ScP	ScP	10 48 25.5	0.0
	comp=Z,1.6nm,1.1s,baz=283,slow=3.6,SNR=6.7						
MWH	Moku'aweowe	35.34	164	*e*P	P	10 42 17.2	-1.2
	comp=Z,106nm,1.3s						
MDPB	Devils Postpil	35.40	99	*e*P	P	10 42 19.8	+1.3
	comp=Z,1.7nm,0.7s						
OMMB	Old Mammoth Mi	35.45	99	*e*P	P	10 42 17.7	-1.3
	comp=Z,1.4nm,0.8s						
YHB	Horse Butte	35.57	83	*e*P	P	10 42 20.1	+0.2
	comp=Z,5.5nm,0.8s						
FFC	Flin Flon	35.71	63	*e*P	P	10 42 23.7	+3.0
	comp=Z,2.9nm,0.7s						
FFC	Flin Flon	35.71	63	*e*P	P	10 42 23.7	+3.0
FFC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YHH	Holmes Hill	35.75	82	*e*P	P	10 42 22.0	+0.5

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       comp=Z,11nm,0.8s
YMR    Madison River   35.76  83 eP     P      10 42 20.1 -1.4
       comp=Z,12nm,0.9s
GCMT   Greycliff       35.87  80 eP     P      10 42 22.9 +0.5
YNR    Norris Junctio  35.90  82 eP     P      10 42 21.9 -0.7
       comp=Z,9.3nm,0.8s
YFT    Old Faithful    35.95  83 eP     P      10 42 21.6 -1.6
       comp=Z,7.6nm,1.1s
PAGB   Antelope Grade  36.03 102 eP     P      10 42 22.6 -1.1
       comp=Z,6.3nm,1.1s
H17A   Grant Village   36.14  83 eP     P      10 42 24.3 -0.5
       comp=Z,4.3nm,0.8s
H17A   Grant Village   36.14  83  P     P      10 42 26.2 +1.5
       baz=305
IMW    Indian Meadow   36.22  84 eP     P      10 42 24.7 -0.8
       comp=Z,2.0nm,0.9s
RLMT   Red Lodge       36.48  81 eP     P      10 42 28.6 +1.0
       comp=Z,7.7nm,0.8s
RLMT   Red Lodge       36.48  81  P     P      10 42 28.2 +0.5
       baz=305,SNR=7.0
VES    Vestal, Richgr  36.63 101  P     P      10 42 30.2 +1.6
       baz=314
CWC    Cottonwood Cre  36.79  99  P     P      10 42 31.8 +1.5
       baz=314
GRAC   Grapevine Rang  36.83  98  P     P      10 42 31.9 +1.5
       baz=313
PKM    Mcpherson Peak  36.88 103  P     P      10 42 33.4 +2.3
       baz=316
R11A   Troy Canyon, C  36.96  95 eP     P      10 42 33.1 +1.4
       comp=Z,1.6nm,1.0s
R11A   Troy Canyon, C  36.96  95  P     P      10 42 32.7 +1.0
       baz=312
ISA    Isabella, Lake  37.10 100 eP     P      10 42 32.4 -0.4
       comp=Z,2.9nm,1.1s
ISA    Isabella, Lake  37.10 100 eP     P      10 42 32.4 -0.4
ISA                               pmax  pmax
       comp=Z,3.0nm,1.1s
ISA    Isabella, Lake  37.10 100  P     P      10 42 34.6 +1.8
       baz=315
DAC    Darwin (Calif)  37.19  99 eP     P      10 42 33.6 -0.1
       comp=Z,2.1nm,0.6s
DAC    Darwin (Calif)  37.19  99 eP     P      10 42 33.6 -0.1
DAC                               pmax  pmax
       comp=Z,2.0nm,0.6s
LAO    LASA Array      37.36  77 eP     P      10 42 34.9  0.0
       comp=Z,4.4nm,0.6s
LAO    LASA Array      37.36  77  P     P      10 42 35.8 +0.9
       baz=304
FURC   Furnace Creek,  37.48  98  P     P      10 42 37.5 +1.6
       baz=314
TPNV   Topopah Spring  37.51  97 eP     P      10 42 37.0 +0.6
       comp=Z,2.7nm,0.8s
TPNV   Topopah Spring  37.51  97 eP     P      10 42 37.0 +0.6
TPNV                              pmax  pmax
       comp=Z,3.0nm,0.8s
TPNV   Topopah Spring  37.51  97  P     P      10 42 37.6 +1.2
       baz=313,SNR=5.8
BW06   Boulder Array   37.70  84  P     P      10 42 38.7 +0.7
       baz=307
PDAR   Pinedale Array  37.70  84  P     P      10 42 38.4 +0.4
       comp=Z,0.9nm,0.7s,baz=304,slow=3.8,SNR=8.9
PDAR                              ScP   ScP    10 48 34.0 -0.4
       comp=Z,1.5nm,1.1s,baz=329,slow=2.6,SNR=7.0
FCC    Fort Churchill  37.92  53 eP     P      10 42 39.9 +0.6
       comp=Z,14nm,0.9s
FCC    Fort Churchill  37.92  53 eP     P      10 42 39.9 +0.6
FCC                               pmax  pmax
       comp=Z,14nm,0.9s
KLR    Kul'dur         38.23 289 i P    P      10 42 39.4 -2.7
KLR                               pmax  pmax
       comp=Z,6.0nm,1.9s
GSC    Goldstone, Bar  38.33  99  P     P      10 42 44.9 +1.7
       baz=315
BFSC   Mount Baldy Ra  38.59 101  P     P      10 42 47.0 +1.6
       baz=316
SRU    San Rafael Swe  39.44  89 eP     P      10 42 53.2 +0.7
       comp=Z,2.9nm,0.8s
SRU    San Rafael Swe  39.44  89 eP     P      10 42 53.2 +0.7
SRU                               pmax  pmax
       comp=Z,3.0nm,0.8s
K22A   Casper          39.55  82 eP     P      10 42 52.9 -0.5
       comp=Z,3.7nm,0.9s
K22A   Casper          39.55  82  P     P      10 42 53.6 +0.3
       baz=308
BELC   Belle Mtn. Jos  39.72 100  P     P      10 42 56.3 +1.5
       baz=316
PFO    Pinyon Flats O  39.73 101  P     P      10 42 56.4 +1.5
       baz=316
CPE    Camp Elliot     39.88 102 esP    sP     10 43 17.4 -4.8
RSSD   Black Hills     40.10  79 eP     P      10 42 57.3 -0.7
       comp=Z,3.4nm,0.6s
RSSD   Black Hills     40.10  79 eP     P      10 42 57.3 -0.7
RSSD                              pmax  pmax
       comp=Z,3.0nm,0.6s
RSSD   Black Hills     40.10  79  P     P      10 42 57.8 -0.2
       baz=307
IRM    Iron Mountain   40.10  99  P     P      10 42 59.6 +1.7
       baz=315
O20A   White River Ci  40.12  86 eP     P      10 42 58.3 +0.2
       comp=Z,12nm,0.8s
O20A   White River Ci  40.12  86  P     P      10 42 58.4 +0.2
       baz=310,SNR=9.0
MONP2  Monument Peak   40.27 102  P     P      10 43 01.2 +1.7
       baz=317
BAR    Barrett         40.28 102 eP     P      10 42 60.0 +0.6
       comp=Z,3.6nm,1.0s
H11N2  WAKE ISLAND Hy  40.38 223  T     T      11 25 55.0
       baz=25,slow=76,SNR=694
H11N3  WAKE ISLAND Hy  40.39 223  T     T      11 25 55.5
       baz=25,slow=76,SNR=606
H11N1  WAKE ISLAND Hy  40.40 223  T     T      11 25 56.3
       baz=25,slow=76,SNR=386
IKP    In-Ko-Pah, Jac  40.63 101  P     P      10 43 04.0 +1.7
       baz=317
PV09   Paradox Valley  40.66  89 eP     P      10 43 02.6 -0.1
Y12C   Blythe          40.75  99 eP     P      10 43 03.4 +0.1
       comp=Z,4.4nm,1.2s
PV16   Nyswonger Mesa  40.91  89 eP     P      10 43 02.9 -1.8
       comp=Z,2.3nm,0.7s
USRK   Ussuriysk Ar.   40.94 283  P     P      10 43 02.6 -2.1
       comp=Z,0.8nm,0.7s,baz=55,slow=13,SNR=2.8
USRK                              LR    LR     10 59 18.3
       comp=Z,29nm,21.7s,baz=104,slow=35
PV03   Paradox Valley  40.98  89 eP     P      10 43 05.3  0.0
       comp=Z,3.6nm,0.7s
ULM    Lac du Bonnet   41.16  66  P     P      10 43 05.0 -1.4
       comp=Z,1.6nm,0.5s,baz=346,slow=4.4,SNR=3.0
H11S1  WAKE ISLAND Hy  41.56 222  T     T      11 27 32.0
       baz=25,slow=76,SNR=40
H11S2  WAKE ISLAND Hy  41.58 222  T     T      11 27 24.5
       baz=25,slow=76,SNR=32
H11S3  WAKE ISLAND Hy  41.58 222  T     T      11 27 50.2
       baz=25,slow=76,SNR=29
MVCO   Mesa Verde      41.89  90  P     P      10 43 13.3 +0.5
       baz=312
AGMN   Agassiz Nation  42.27  68  P     P      10 43 16.0 +0.6
       baz=305
S22A   4UR Ranch, Cre  42.51  88  P     P      10 43 18.8 +0.9
       baz=312
214A   Organ Pipe Nat  43.04  99  P     P      10 43 22.7 +0.8
       baz=317
SDCO   Great Sand Dun  43.29  87 eP     P      10 43 24.1 -0.1
       comp=Z,1.5nm,0.8s
SDCO   Great Sand Dun  43.29  87  P     P      10 43 24.6 +0.4
       baz=312
TUC    Tucson          43.97  97  P     P      10 43 30.6 +1.2
       baz=316
KSCO   Kaye Shedlock'  44.14  83 eP     P      10 43 30.9 +0.1
       comp=Z,10nm,0.8s
KSCO   Kaye Shedlock'  44.14  83  P     P      10 43 31.3 +0.5
       baz=311
T25A   Trinidad        44.34  87  P     P      10 43 33.2 +0.6
       baz=313
ECSD   EROS Data Cent  44.58  74  P     P      10 43 34.5 +0.4
       baz=308
ANMO   Albuquerque     44.64  91  PcP   PcP    10 45 17.2 +0.8
       comp=Z,0.8nm,0.6s,baz=301,slow=12,SNR=3.7
ANMO   Albuquerque     44.64  91 i P    P      10 43 35.2 +0.3
ANMO                              pmax  pmax
       comp=Z,1.0nm,0.9s
LENM   Lemitar         44.88  92 eP     P      10 43 35.7 -1.2
Y22D   IRIS PASSCAL I  44.98  92  P     P      10 43 38.8 +1.3
       baz=315
BNM    Barren Site     45.10  92 eP     P      10 43 39.0 +0.4
BGNE   Belgrade        45.18  78  P     P      10 43 39.5 +0.6
       baz=310
121A   Cookes Peak, D  45.56  94  P     P      10 43 43.4 +1.1
       baz=316
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MNTX   Cornudas Mount  47.58  93 eP     P      10 43 57.6 -0.2
       comp=Z,2.3nm,1.0s
MNTX   Cornudas Mount  47.58  93  P     P      10 43 59.2 +1.4
       baz=316
DAG    Danmarks Havn   47.68  10 i P    P      10 43 58.4 +0.4
DAG                               pmax  pmax
       comp=Z,19nm,0.8s
DAG    Danmarks Havn   47.68  10 i P    P      10 43 58.4 +0.4
       comp=Z,26nm,0.8s
SPA0   Spitsbergen Ar  47.98 360 eP     P      10 43 59.9 -0.5
       comp=Z,17nm,1.1s
SPA0   Spitsbergen Ar  47.98 360 eP     P      10 44 00.7 +0.4
SPITS  Spitsbergen Ar  47.98 360  P     P      10 43 59.8 -0.5
       comp=Z,1.0nm,0.3s,baz=53,slow=7.7,SNR=9.1
SUMG   Summit          48.37  19 eP     P      10 44 03.8 -0.1
       comp=Z,26nm,0.9s
SUMG   Summit          48.37  19 i P    P      10 44 05.1 +1.3
SUMG   Summit          48.37  19 i P    P      10 44 05.1 +1.3
       comp=Z,61nm,0.9s
WMOK   Wichita Mounta  49.30  85 eP     P      10 44 09.7 -1.3
       comp=Z,4.6nm,0.9s
WMOK   Wichita Mounta  49.30  85 eP     P      10 44 09.7 -1.3
WMOK                              pmax  pmax
       comp=Z,5.0nm,0.9s
WMOK   Wichita Mounta  49.30  85  P     P      10 44 11.5 +0.5
       baz=314
M41A   Milan           49.53  73  P     P      10 44 13.8 +1.2
       baz=312
D47A   Chapleau        49.85  62  P     P      10 44 15.5 +0.5
       baz=310
K43A   Burlington      49.88  70  P     P      10 44 16.6 +1.3
       baz=311
TX31   Lajitas Ar. Si  50.31  94 eP     P      10 44 19.2 +0.4
       comp=Z,4.1nm,1.1s
LTX    Lajitas         50.31  94 eP     P      10 44 19.2 +0.5
LTX                              ePcP   PcP    10 45 37.0 +0.5
LTX                              eScP   ScP    10 49 25.9 +0.2
LTX    Lajitas         50.31  94 eP     P      10 44 19.3 +0.5
LTX                              e             10 45 37.1
TXAR   Lajitas Array   50.31  94  P     P      10 44 19.2 +0.4
       comp=Z,1.3nm,0.7s,baz=294,slow=5.4,SNR=42
TXAR                              PcP   PcP    10 45 37.0 +0.5
       comp=Z,0.6nm,0.6s,baz=201,slow=0.8,SNR=4.2
TXAR                              ScP   ScP    10 49 25.9 +0.2
       comp=Z,1.3nm,1.0s,baz=357,slow=5.4,SNR=5.9
TXAR                              LR    LR     11 02 25.0
       comp=Z,24nm,21.1s,baz=0.0,slow=32
L44A   Lake County Fo  50.46  70  P     P      10 44 20.1 +0.5
       baz=312
D49A   Beulah Townshi  50.62  61  P     P      10 44 21.4 +0.6
       baz=311
MATQ   Matagami        50.87  57  P     P      10 44 22.5 -0.1
       baz=311
CCM    Cathedral Cave  51.38  76  P     P      10 44 27.0 +0.5
       baz=314
LSQQ   Lebel-sur-Quev  51.66  57  P     P      10 44 28.2 -0.3
       baz=311
WHTX   Lake Whitney,   52.03  86  P     P      10 44 32.3 +0.8
       baz=316
VLDQ   Val d'Or        52.05  58 eP     P      10 44 30.0 -1.4
       comp=Z,9.2nm,0.8s
E51A   G1948 Merrick   52.07  61  P     P      10 44 31.4 -0.2
       baz=312
SFIN   Lafayette       52.13  71  P     P      10 44 32.9 +0.7
       baz=313
CHGQ   Chibougamau     52.36  55  P     P      10 44 33.1 -0.6
       baz=312
SCHQ   Schefferville   52.46  46  P     P      10 44 34.4 -0.1
       comp=Z,12nm,0.8s,baz=312,slow=6.3,SNR=12
SCHQ                              LR    LR     11 07 16.3
       comp=Z,39nm,20.8s,baz=326,slow=36
SCHQ   Schefferville   52.46  46 eP     P      10 44 34.6 +0.1
       comp=Z,16nm,0.9s
SONA0  Songino Array   52.51 302 ePcP   PcP    10 45 44.5 -0.1
SONM   Songino Array   52.51 302  PcP   PcP    10 45 44.5 -0.1
       comp=Z,2.8nm,0.6s,baz=66,slow=2.3,SNR=6.0
L48A   N Adams         52.53  68  P     P      10 44 35.4 +0.3
       baz=313
N47A   Urbana          52.57  70  P     P      10 44 35.4  0.0
       baz=313
P46A   Rosedale        52.59  72  P     P      10 44 35.8 +0.2
       baz=313
D53A   Lac Vacive, Po  52.62  59 eP     P      10 44 36.1 +0.4
       comp=Z,5.0nm,0.8s
D53A   Lac Vacive, Po  52.62  59  P     P      10 44 35.4 -0.2
       baz=312
F52A   Sundridge       52.65  61  P     P      10 44 35.8 -0.2
       baz=312
E52A   Mattawa         52.66  61  P     P      10 44 35.7 -0.3
       baz=312
S44A   Carbondale      52.76  75  P     P      10 44 37.3 +0.4
       baz=314
BUKO   Buck Lake       52.85  62  P     P      10 44 37.4  0.0
       baz=312
N48A   Decatur         52.95  69  P     P      10 44 38.1 -0.1
       baz=313
D54A   Lac Fusel, La   53.09  59  P     P      10 44 38.5 -0.7
       baz=312
E53A   Dumoine, Ponti  53.11  60  P     P      10 44 39.3  0.0
       baz=312
ALGO   Algonquin Park  53.20  60  P     P      10 44 39.4 -0.5
       baz=313
O48A   Farmland        53.29  70  P     P      10 44 40.3 -0.4
       baz=314
E54A   Lac Daplat, Po  53.31  60  P     P      10 44 40.0 -0.8
       baz=313,SNR=6.7
L50A   Kingsville      53.35  67  P     P      10 44 41.2  0.0
       baz=313
N49A   Columbus Grove  53.37  69  P     P      10 44 40.9 -0.4
       baz=314
G53A   Haliburton      53.47  62  P     P      10 44 41.1 -0.8
       baz=313
PEMO   Pembroke        53.80  60  P     P      10 44 43.5 -0.9
       baz=313
BANO   Bancroft        53.90  61  P     P      10 44 45.3 +0.2
       baz=313
PLVO   Plevna          54.32  61 eP     P      10 44 50.5 +2.4
       comp=Z,16nm,1.4s
PLVO   Plevna          54.32  61  P     P      10 44 48.4 +0.2
       baz=314
G55A   Calabogie       54.36  60  P     P      10 44 48.1 -0.3
       baz=314,SNR=6.6
DELO   Deloro Mine     54.40  62 eP     P      10 44 49.9 +1.2
       comp=Z,16nm,1.3s
DELO   Deloro Mine     54.40  62  P     P      10 44 48.6 -0.1
       baz=314
T47A   Sharon Grove    54.48  74  P     P      10 44 49.7 +0.3
       baz=315
I55A   Frankford       54.58  62  P     P      10 44 49.9 -0.1
       baz=314
HHC    Hu-ho-hao-te    54.58 292 eP     P      10 44 51.4 +1.2
HHC                               pmax  pmax
       comp=Z,28nm,1.0s
HHC                               pmax  pmax
       comp=Z,100nm,5.3s
H55A   Tweed           54.60  61  P     P      10 44 50.2  0.0
       baz=314
WVT    Waverly         54.67  76 eP     P      10 44 50.6 -0.2
       comp=Z,4.9nm,1.0s
WVT    Waverly         54.67  76 eP     P      10 44 50.6 -0.2
WVT                               pmax  pmax
       comp=Z,5.0nm,1.0s
WVT    Waverly         54.67  76  P     P      10 44 50.7 -0.1
       baz=315
TRQ    Mont Tremblant  54.78  58 eP     P      10 44 50.9 -0.7
LATQ   La Tuque        54.85  56  P     P      10 44 51.9  0.0
       baz=314
OXF    Oxford          54.92  78 eP     P      10 44 51.9 -0.7
       comp=Z,27nm,1.0s
OXF    Oxford          54.92  78 eP     P      10 44 51.9 -0.7
OXF                               pmax  pmax
       comp=Z,27nm,1.0s
Q50A   Georgetown      54.93  71  P     P      10 44 52.7 +0.1
       baz=315
H56A   Elgin           55.05  61  P     P      10 44 53.1 -0.4
       baz=314
R51A   Hillsboro       55.53  71  P     P      10 44 56.3 -0.7
       baz=315,SNR=5.9
T50A   Nancy           55.73  73  P     P      10 44 58.4 -0.1
       baz=315
Q52A   Bidwell         55.79  69  P     P      10 44 59.1 +0.3
       baz=315
LONY   Lake Ozonia     55.89  60 eP     P      10 44 59.5  0.0
LONY   Lake Ozonia     55.89  60  P     P      10 44 59.3 -0.2
       baz=315
W48A   Pulaski         55.89  76  P     P      10 44 59.7 +0.1
       baz=316
O54A   Avella          55.96  67  P     P      10 45 00.0 -0.1
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       baz=315
N55A   Marion Center   56.29  66 eP     P      10 45 01.9 -0.6
       comp=Z,6.0nm,0.6s
N55A   Marion Center   56.29  66  P     P      10 45 02.2 -0.2
       baz=315
ARA0   ARCESS Array S  56.42 355 eP     P      10 45 02.1 -0.8
ARA0                             ePcP   PcP    10 45 59.0 -0.1
ARCES  ARCESS Array B  56.42 355  P     P      10 45 02.1 -0.8
       comp=Z,3.1nm,0.7s,baz=10,slow=7.5,SNR=13
ARCES                             PcP   PcP    10 45 59.0 -0.1
       comp=Z,1.4nm,0.7s,baz=18,slow=4.3,SNR=3.7
ARCES                             LR    LR     11 10 18.2
       comp=Z,32nm,19.1s,baz=333,slow=37
ARE0   ARCESS Array S  56.42 355 eP     P      10 45 02.7 -0.3
       comp=Z,1.2nm,1.4s
ARE0   ARCESS Array S  56.42 355 eP     P      10 45 01.7 -1.3
NCB    Newcomb         56.53  60 eP     P      10 45 04.2 +0.1
       comp=Z,6.0nm,0.6s
TRO    Tromso          56.54 358 eP     P      10 45 05.2 +1.5
MOQ    Mont Orford     56.57  58 eP     P      10 45 02.9 -1.5
BINY   Binghamton      56.88  63 eP     P      10 45 05.9 -0.6
       comp=Z,6.9nm,0.9s
O56A   Blue Knob Stat  56.88  66 eP     P      10 45 04.8 -1.8
       comp=Z,12nm,1.2s
SSPA   Standing Stone  56.98  65 eP     P      10 45 06.8 -0.5
       comp=Z,4.2nm,0.8s
U52A   Thorn Hill      57.01  72  P     P      10 45 07.8 +0.2
       baz=316
KTK1   Kautokeino      57.04 356 eP     P      10 45 09.4 +2.1
R54A   Victor          57.05  69  P     P      10 45 08.1 +0.2
       baz=316
L58A   Harry Jones Me  57.06  63  P     P      10 45 07.2 -0.7
       baz=315
N57A   Milroy          57.08  65  P     P      10 45 07.8 -0.1
       baz=315
LVZ    Lovozero        57.42 351 eP     P      10 45 10.4 +0.4
       comp=Z,47nm,1.4s
LVZ    Lovozero        57.42 351 eP     P      10 45 10.4 +0.4
LVZ                               pmax  pmax
       comp=Z,47nm,1.4s
O57A   Amberson        57.42  65  P     P      10 45 09.8 -0.6
       baz=316
LBNH   Lisbon          57.50  58  P     P      10 45 10.2 -0.7
       baz=316
S55A   Lewisburg       57.61  69  P     P      10 45 11.5 -0.3
       baz=316
ZAA1   Zalesovo Array  57.77 319 ePcP   PcP    10 46 04.3 -0.2
ZALV   Zalesovo Beam   57.78 319  PcP   PcP    10 46 04.3 -0.2
       comp=Z,1.9nm,0.5s,baz=26,slow=5.0,SNR=6.3
ZALV                              LR    LR     11 10 18.9
       comp=Z,35nm,21.8s,baz=70,slow=36
Q57A   Strasburg       57.85  67  P     P      10 45 12.9 -0.5
       baz=316
O58A   Lewisberry      57.86  65  P     P      10 45 13.0 -0.5
       baz=316
PAGS   Pennsylvania G  57.90  65 eP     P      10 45 15.1 +1.4
       comp=Z,12nm,1.2s
N59A   State Game Lan  57.90  63  P     P      10 45 14.1 +0.3
       baz=316
T55A   Pulaski         57.93  70  P     P      10 45 14.1  0.0
       baz=316
W53A   Cullowhee       58.01  73  P     P      10 45 14.6 -0.2
       baz=316
PKME   Peaks-Kenny Pk  58.06  56 eP     P      10 45 15.6 +0.9
       comp=Z,5.4nm,0.9s
O59A   Robesonia       58.12  64  P     P      10 45 14.5 -0.8
       baz=316
BATG   Bathurst New B  58.14  52 eP     P      10 45 15.6 +0.3
       comp=Z,7.8nm,0.9s
U55A   TA2, Sparta     58.23  71  P     P      10 45 16.0 -0.2
       baz=316
STEI   Steigen         58.29 360 eP     P      10 45 15.7 -0.3
N60A   Cedar Hill Far  58.29  63  P     P      10 45 16.6 +0.1
       baz=316
R57A   Stanardsville   58.32  67  P     P      10 45 16.0 -0.7
       baz=316
KSCT   Kent School, K  58.51  61 eP     P      10 45 18.8 +0.9
       comp=Z,5.8nm,0.6s
M61A   Granite Spring  58.67  62  P     P      10 45 19.3 +0.2
       baz=316
NSS    Namsos          61.68   1 eP     P      10 45 38.9 -0.4
LZH    Lanzhou         62.20 294 eP     P      10 45 42.0 -1.4
LZH                               pP    pP     10 45 56.5 -5.9
LZH                               sP    sP     10 46 00.8  -10
LZH                              ePP    PP     10 48 01.3 +0.7
LZH                               pmax  pmax
       comp=Z,18nm,1.3s
LZH                               pmax  pmax
       comp=Z,52nm,7.8s
MOL    Molde           63.53   4 eP     P      10 45 52.3 +0.7
AKN    Aaknes          63.90   4 eP     P      10 45 54.4 +0.3
DOMB   Dombas          64.11   3 eP     P      10 45 55.3 -0.2
MK32   Makanchi Array  64.37 315 eP     P      10 45 56.5 -0.9
MKAR   Makanchi Array  64.37 315  P     P      10 45 56.5 -0.9
       comp=Z,0.5nm,0.6s,baz=60,slow=9.4,SNR=2.6
MKAR                              LR    LR     11 15 20.1
       comp=Z,35nm,18.6s,baz=24,slow=37
WMQ    Urumqi          64.37 310 eP     P      10 46 00.6 +3.1
WMQ                               pmax  pmax
       comp=Z,20nm,0.9s
WMQ                               pmax  pmax
       comp=Z,76nm,4.7s
FIA0   FINESS Array S  64.45 354 eP     P      10 45 57.2 -0.5
FIA0   FINESS Array S  64.45 354 eP     P      10 45 57.2 -0.5
FINES  FINESS Array B  64.45 354  P     P      10 45 57.2 -0.5
       comp=Z,4.2nm,0.6s,baz=21,slow=6.5,SNR=22
FINES                             LR    LR     11 16 50.9
       comp=Z,19nm,18.6s,baz=50,slow=39
SUE    Sulen           64.92   5 eP     P      10 46 02.4 +1.8
NC405  NORSAR Array S  65.11   2 eP     P      10 46 02.1 +0.1
       comp=Z,10.0nm,0.5s
NB201  NORSAR Array S  65.16   2 eP     P      10 46 02.3  0.0
       comp=Z,15nm,1.0s
NB2    NORSAR Subarra  65.17   2  P     P      10 46 01.7 -0.7
       comp=Z,6.0nm,1.0s,baz=359,slow=6.9
NB2    NORSAR Subarra  65.17   2  P     P      10 46 01.7 -0.7
       baz=359,slow=6.9
NB200  NORSAR Array S  65.17   2 eP     P      10 46 02.2 -0.2
NBO00  NORSAR Array S  65.17   2 eP     P      10 46 02.7 +0.3
       comp=Z,16nm,1.1s
NOA    NORSAR Array B  65.17   2  P     P      10 46 02.2 -0.2
       comp=Z,2.8nm,0.8s,baz=360,slow=6.2,SNR=10
SKAR   Skarslia        65.45   3 eP     P      10 46 04.6 +0.4
NC602  NORSAR Array S  65.48   2 eP     P      10 46 03.8 -0.6
ASK    Askoy           65.51   5 eP     P      10 46 04.9 +0.4
BER    Bergen          65.62   5 eP     P      10 46 05.9 +0.7
CD2    Chengdu         66.15 290 eP     P      10 46 09.1 -0.1
ODD1   Odda            66.15   4 eP     P      10 46 09.6 +0.8
KONO   Kongsberg       66.53   3 eP     P      10 46 10.1 -1.0
BLS5   Blasjo          66.63   5 eP     P      10 46 12.2 +0.4
SNART  Snartemo        67.75   4 eP     P      10 46 19.3 +0.5
ESK    Eskdalemuir     69.95  11 eP     P      10 46 32.9 +0.4
       comp=Z,20nm,1.4s
ESK    Eskdalemuir     69.95  11 eP     P      10 46 32.9 +0.4
ESK                               pmax  pmax
       comp=Z,20nm,1.4s
ABKAR  Akbulak array   70.21 330 eP     P      10 46 34.2  0.0
       comp=Z,2.3nm,0.8s
BOOM   Boomskoye usch  70.49 317 eP     P      10 46 36.7 +0.4
       comp=Z,2.2nm,0.9s
BOOM   Boomskoye usch  70.49 317 eP     P      10 46 36.7 +0.4
BOOM                              pmax  pmax
       comp=Z,2.0nm,0.9s
KKAR   Karatay Array   72.09 320 eP     P      10 46 45.6 -0.1
       comp=Z,1.4nm,0.8s
KKAR   Karatay Array   72.09 320 eP     P      10 46 45.6 -0.1
KKAR                              pmax  pmax
       comp=Z,1.0nm,0.8s
PPT    Papeete         72.63 164  LR    LR     11 12 18.2
       comp=Z,43nm,19.9s,baz=336,slow=30
AKASG  Malin Array Be  74.87 351  P     P      10 47 01.1 -0.8
       comp=Z,2.1nm,0.4s,baz=14,slow=5.9,SNR=11
AKBB   Malin Array Si  74.87 351 eP     P      10 47 00.6 -1.2
       comp=Z,6.1nm,0.8s
AKBB   Malin Array Si  74.87 351 eP     P      10 47 00.6 -1.2
AKBB                              pmax  pmax
       comp=Z,6.0nm,0.8s
CLL    Collm           74.95   1 eP     P      10 47 01.4 -1.0
       comp=Z,4.5nm,0.7s
CLL    Collm           74.95   1 eP     P      10 47 02.0 -0.3
CLL                               pmax  pmax
       comp=Z,5.0nm,0.7s
CLL    Collm           74.95   1 eP     P      10 47 02.0 -0.3
       comp=Z,5.0nm,0.7s
BRG    Berggiesshubel  75.40   1 eP     P      10 47 04.5 -0.3
       comp=Z,5.4nm,0.8s
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SIJI	Sorong	75.48	248	P	P	10 47 06.3	+0.5
	comp=Z,8.9nm,0.7s,baz=357,slow=7.0,SNR=4.6						
GAR	Garm	75.70	318	eP	P	10 47 06.8	-0.2
	comp=Z,6.8nm,0.9s						
GAR	Garm	75.70	318	eP	P	10 47 06.8	-0.2
GAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DPC	Dobruska-Polom	75.91	359	eP	P	10 47 08.6	+0.7
DPC	Dobruska-Polom	75.91	359	eP	P	10 47 08.6	+0.7
OJC	Ojcow	75.97	357	eP	P	10 47 07.8	-0.3
OJC	Ojcow	75.97	357	eP	P	10 47 07.9	-0.3
PRU	Pruhonice	76.28	0	eP	P	10 47 11.6	+1.6
PRU	Pruhonice	76.28	0	eP	P	10 47 11.6	+1.6
WLF	Walferdange	76.36	6	eP	P	10 47 10.1	-0.3
	comp=Z,20nm,0.8s						
WLF	Walferdange	76.36	6	eP	P	10 47 10.1	-0.3
WLF				pmax	pmax		
	comp=Z,20nm,0.8s						
GOPC	GO Pecny, Ondr	76.36	360	eP	P	10 47 12.0	+1.6
GOPC	GO Pecny, Ondr	76.36	360	eP	P	10 47 12.0	+1.6
CHGR	Chuyangaron	76.44	319	eP	P	10 47 10.4	-0.8
	comp=Z,12nm,1.0s						
MORC	Moravsky Berou	76.47	358	eP	P	10 47 11.5	+0.4
	comp=Z,2.4nm,0.8s						
MORC	Moravsky Berou	76.47	358	eP	P	10 47 11.5	+0.4
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LDF	La Druitiere	76.91	10	eP	P	10 47 12.8	-0.7
LDF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LANS	Liptovska Anna	77.05	357	eP	P	10 47 15.6	+1.3
LANS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LANS	Liptovska Anna	77.05	357	eP	P	10 47 15.6	+1.3
KHC	Kasperske Hory	77.14	1	eP	P	10 47 15.4	+0.5
	comp=Z,1.6nm,0.8s						
KHC	Kasperske Hory	77.14	1	eP	P	10 47 15.4	+0.5
KHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	77.14	1	eP	P	10 47 15.4	+0.5
KOLS	Kolonicke sedl	77.14	355	eP	P	10 47 15.4	+0.6
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KOLS	Kolonicke sedl	77.14	355	eP	P	10 47 15.4	+0.6
GEC2	GERESS Array S	77.42	1	eP	P	10 47 17.0	+0.5
	comp=Z,2.9nm,0.8s						
GEC2	GERESS Array S	77.42	1	eP	P	10 47 17.0	+0.5
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	77.42	1	P	P	10 47 16.6	+0.1
	comp=Z,1.9nm,0.6s,baz=18,slow=4.8,SNR=9.7						
CLF	Chambon-Foret	77.70	9	eP	P	10 47 18.6	+0.7
	comp=Z,15nm,0.6s						
VYHS	Vyhne	77.72	357	eP	P	10 47 18.7	+0.6
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VYHS	Vyhne	77.72	357	eP	P	10 47 18.7	+0.6
ECH	Echery	77.86	5	eP	P	10 47 19.1	+0.2
	comp=Z,4.3nm,0.8s						
ECH	Echery	77.86	5	eP	P	10 47 19.1	+0.2
ECH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MODS	Modra-Piesok	77.88	358	eP	P	10 47 19.0	0.0
MODS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MODS	Modra-Piesok	77.88	358	eP	P	10 47 19.0	0.0
ZST	Bratislava	78.06	358	eP	P	10 47 19.8	-0.1
ZST	Bratislava	78.06	358	eP	P	10 47 19.8	-0.1
BUR08	Bucovina Ar. S	78.24	353	eP	P	10 47 21.4	+0.2
	comp=Z,3.0nm,0.7s						
PSZ	Piszkesteto	78.26	356	eP	P	10 47 22.2	+1.0
	comp=Z,5.1nm,0.8s						
PSZ	Piszkesteto	78.26	356	eP	P	10 47 22.2	+1.0
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CONA	Conrad Observa	78.34	359	i P	P	10 47 22.3	+0.7
	comp=Z,4.7nm,0.7s						
MOA	Molln	78.42	0	i P	P	10 47 22.2	+0.2
	comp=Z,0.7nm,0.5s						
CMAR	Chiang Mai Arr	78.59	286	P	P	10 47 23.3	-0.1
	comp=Z,0.8nm,0.4s,baz=12,slow=5.1,SNR=5.1						
CMAR				LR	LR	11 24 40.0	
	comp=Z,5.2nm,19.4s,baz=10.0,slow=38						
CMAR	Chiang Mai Arr	78.59	286	i P	P	10 47 24.7	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
RETA	Reutte	78.73	3	i P	P	10 47 24.6	+0.9
	comp=Z,2.7nm,0.4s						
SSF	Saint Saulge	78.76	8	eP	P	10 47 23.5	-0.3
SSF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MFF	Saint Martin d	78.88	10	eP	P	10 47 24.2	-0.3
MFF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MOTA	Moosalm	78.88	3	i P	P	10 47 24.0	-0.7
	comp=Z,3.4nm,0.6s						
WATA	Walderalm	78.90	2	i P	P	10 47 25.2	+0.4
	comp=Z,4.6nm,0.5s						
DAVA	Damuels	78.90	3	i P	P	10 47 23.2	-1.6
	comp=Z,3.7nm,0.8s						
WTTA	Wattenberg	78.98	2	i P	P	10 47 26.0	+0.7
	comp=Z,6.6nm,0.5s,SNR=5.1						
SQTA	Sankt Quirin	79.01	2	i P	P	10 47 26.1	+0.8
	comp=Z,6.8nm,0.6s						
ARSA	Arzberg	79.02	359	i P	P	10 47 24.4	-0.9
	comp=Z,3.6nm,0.7s						
KBA	Koelnbreinsper	79.19	1	i P	P	10 47 27.3	+0.9
	comp=Z,7.2nm,0.7s,SNR=8.3						
FETA	Feichten	79.20	3	i P	P	10 47 27.2	+0.8
	comp=Z,5.5nm,0.7s,SNR=4.5						
KIV	Kislovodsk	79.44	340	eP	P	10 47 26.0	-1.7
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KIV				MLR	MLR		
	comp=Z,80nm,19.0s						
ABTA	Abfaltersbach	79.51	2	i P	P	10 47 29.1	+1.0
	comp=Z,5.3nm,1.0s						
FUORN	Ofenpass-Fuorn	79.58	3	eP	P	10 47 29.4	+0.7
	comp=Z,5.9nm,0.7s						
SOKA	Soboth	79.60	360	i P	P	10 47 29.8	+1.3
	comp=Z,6.9nm,0.8s						
KBZ	Khabaz	79.62	340	P	P	10 47 28.9	+0.4
	comp=Z,4.3nm,0.9s,baz=4.9,slow=2.1,SNR=7.2						
KBZ				LR	LR	11 25 40.1	
	comp=Z,26nm,20.7s,baz=13,slow=38						
MYKA	Terra Mystica	79.64	1	i P	P	10 47 29.7	+1.0
	comp=Z,5.6nm,0.8s						
TUE	Stuetta	79.70	4	eP	P	10 47 29.7	+0.5
	comp=Z,3.7nm,0.8s						
OBKA	Obir	79.77	0	i P	P	10 47 30.0	+0.6
	comp=Z,16nm,0.5s						
LPL	La Plagne	80.52	6	eP	P	10 47 35.7	+2.0
LPL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CAF	Calviac	80.76	9	eP	P	10 47 34.5	-0.2
CAF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BNI	Bardonecchia	80.98	6	eP	P	10 47 37.8	+1.8
	comp=Z,9.4nm,1.3s						
GEYT	Alibeck	81.02	327	LR	LR	11 26 43.9	
	comp=Z,36nm,18.0s,baz=125,slow=38						
TBLG	Delisi	81.14	338	eP	P	10 47 37.5	+0.7
	comp=Z,8.9nm,0.5s						
TBLG	Delisi	81.14	338	eP	P	10 47 37.5	+0.7
TBLG				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TTG	Podgorica	83.77	357	eP	P	10 47 49.0	-1.4
	comp=Z,7.1nm,0.6s						
TTG	Podgorica	83.77	357	eP	P	10 47 49.0	-1.4
TTG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CTA	Charters Tower	84.78	225	P	P	10 47 55.9	+0.2
	comp=Z,3.6nm,0.8s,baz=350,slow=11,SNR=2.6						
TIR	Tirane	84.82	356	eP	P	10 47 57.0	+1.2
	comp=Z,61nm,0.6s						
TIR	Tirane	84.82	356	eP	P	10 47 57.0	+1.2
BR101	Keskin Array S	85.14	345	eP	P	10 47 58.0	+0.4
BRTR	Keskin Array B	85.14	345	P	P	10 47 58.0	+0.4
	comp=Z,2.8nm,0.7s,baz=16,slow=1.9,SNR=11						
BRTR				LR	LR	11 31 25.1	
	comp=Z,8.0nm,19.2s,baz=3.0,slow=40						
BRTR	Keskin Array B	85.14	345	P	P	10 47 58.0	+0.4
ESDC	Sonseca Array	85.22	14	P	P	10 47 58.5	+0.7
	comp=Z,1.4nm,0.6s,baz=346,slow=5.0,SNR=9.1						
TIP	Timpagrande	87.08	358	eP	P	10 48 07.1	+0.1
	comp=Z,22nm,1.5s						
WR1	Warramunga Arr	90.02	235	eP	P	10 48 20.4	-0.5
WRA	Warramunga Arr	90.02	235	P	P	10 48 20.4	-0.5
	comp=Z,3.1nm,1.0s,baz=34,slow=6.2,SNR=4.9						
ASAR	Alice Springs	93.41	233	P	P	10 48 36.5	-0.1
	comp=Z,0.6nm,0.5s,baz=26,slow=4.5,SNR=19						
BOSA	Boshof	153.40	339	PKPbc	PKPbc	10 55 19.0	-0.2
	comp=Z,1.3nm,0.5s,baz=315,slow=2.9,SNR=2.4						
BOSA	Boshof	153.40	339	PKIKP	PKPbc	10 55 19.0	-0.2

WEL 23 10:42:41.6, 42°S±1°×174°.2E±0°.8, h17^{km}±1^{km}, M3.4/24, ML3.6/19, MLv3.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=160.8, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.08	181	P	Pg	10 42 45.4	+0.5
CMWZ				S	Sg	10 42 48.0	+0.8
BSWZ	Blackbirch Sta	0.26	260	P	Pb	10 42 47.8	0.0
BSWZ				S	Sb	10 42 52.1	+0.1
TUWZ	Tuamarina	0.32	320	P	Pb	10 42 48.8	0.0
TUWZ				S	Sb	10 42 53.7	0.0
TCW	Tory Channel	0.46	6	P	Pg	10 42 51.0	+0.2
BHW	Baring Head	0.56	62	P	Pb	10 42 53.4	+0.5
NNZ	Nelson	0.77	306	P	Pg	10 42 56.8	+0.1
PLWZ	Palliser	0.79	83	P	Pn	10 42 58.1	+0.1
MSWZ	Moikau Station	0.82	72	P	Pn	10 42 58.3	-0.1
CAW	Cannon Point	0.85	49	P	Pg	10 42 58.3	+0.2
DUWZ	D'Urville Isla	0.90	346	P	Pg	10 42 58.9	-0.1
KHZ	Kahutara	0.90	214	P	Pn	10 43 00.3	+0.8
PAWZ	Paruwai Farm	0.95	73	P	Pn	10 43 00.7	+0.4
THZ	Tophouse	0.98	264	P	Pn	10 43 00.9	+0.2
MTW	Mount Morrison	1.09	63	P	Pg	10 43 02.6	-0.2
OGWZ	Otaki Gorge	1.12	41	P	Pn	10 43 02.8	+0.3
TRWZ	Traveller	1.14	77	P	Pn	10 43 02.7	-0.1
HOWZ	Holdsworth Sta	1.25	52	P	Pb	10 43 04.8	+0.1
TMWZ	Te Maipa	1.38	66	P	Pn	10 43 06.2	0.0
MRZ	Mangatainoka R	1.44	46	P	Pb	10 43 07.6	-0.4
QRZ	Quartz Range	1.53	303	P	Pb	10 43 10.0	+0.6
TIWZ	Tintock	1.54	55	P	Pn	10 43 09.0	+0.5
GVZ	Greta Valley S	1.56	214	P	Pn	10 43 09.1	+0.4
OHWZ	Ohakea	1.68	30	P	Pg	10 43 13.3	-0.7
PRWZ	Pori Road	1.73	51	P	Pn	10 43 11.4	+0.5
POWZ	Post Office Ro	1.73	43	P	Pn	10 43 12.0	+1.0
DSZ	Denniston Nort	1.81	267	P	Pb	10 43 14.2	0.0
LTZ	Lake Taylor	1.82	232	P	Pn	10 43 13.2	+1.0
BFZ	Birch Farm	1.82	58	P	Pn	10 43 11.9	-0.3
WAZ	Wanganui	2.00	17	P	Pb	10 43 18.1	+0.6
DVHZ	Dannevirke	2.02	48	P	Pn	10 43 14.5	-0.3
TSZ	Takapari Road	2.08	40	P	Pn	10 43 16.2	+0.4
OKCZ	Okains Bay	2.22	202	P	Pn	10 43 17.0	-0.7
OXZ	Oxford	2.31	223	P	Pn	10 43 18.5	-0.4
INZ	Inchbonnie	2.31	242	P	Pn	10 43 20.7	+1.7
PNHZ	Pukenui	2.31	41	P	Pn	10 43 19.4	+0.4
MQZ	McQueen's Vall	2.34	209	P	Pn	10 43 18.0	-1.3
DREZ	Durham Road	2.48	360	P	Pb	10 43 25.0	-0.7
PKE	Pukeiti	2.48	356	P	Pb	10 43 25.1	-0.6
PKVZ	Pokaka	2.53	20	P	Pb	10 43 25.7	-0.9
MOVZ	Moawhango	2.55	28	P	Pb	10 43 26.6	-0.3
VRZ	Vera Road	2.58	9	P	Pb	10 43 25.8	-1.6
BHHZ	Black Hill Sta	2.59	33	P	Pn	10 43 24.1	+1.3
KRHZ	Kereru	2.60	40	P	Pn	10 43 22.8	-0.2
WHVZ	Whangaehu Hut	2.60	24	P	Pb	10 43 27.6	-0.4
FWVZ	Far West T-bar	2.62	23	P	Pb	10 43 27.7	-0.5
TUVZ	Tukino	2.64	25	P	Pb	10 43 28.6	+0.1
NGZ	Ngauruhoe	2.71	23	P	Pb	10 43 29.0	-0.7
TWVZ	Taurewa	2.76	20	P	Pb	10 43 30.2	-0.4
WTVZ	West Tongariro	2.76	23	P	Pb	10 43 29.8	-0.8
KRVZ	Karewarewa	2.79	23	P	Pb	10 43 30.5	-0.7
KWHZ	Kaweka Forest	2.80	38	P	Pb	10 43 32.7	+1.4
KATZ	Kakaramea	2.92	23	P	Pb	10 43 34.5	+1.2
WVZ	Waitaha Valley	2.93	240	P	Pb	10 43 33.5	0.0
RITZ	Rihia Road	2.97	26	P	Pb	10 43 35.4	+1.3
RATZ	Rangitukua	3.04	24	P	Pb	10 43 36.2	+0.9
BKZ	Black Stump Fm	3.05	36	P	Pb	10 43 36.3	+0.8
WATZ	Wairara	3.18	22	P	Pb	10 43 39.1	+1.5
HIZ	Hauiti	3.19	9	P	Pb	10 43 34.7	-3.1
MRHZ	Matea Rd	3.30	31	P	Pb	10 43 41.5	+1.8
KUTZ	Kaahu Road	3.41	22	P	Pb	10 43 43.4	+1.8
TLZ	Tolley Road	3.49	17	P	Pb	10 43 40.5	-2.5
FOZ	Fox Glacier	3.74	239	P	Pb	10 43 45.0	-2.2
TOZ	Tahuroa Road	4.06	15	P	Pb	10 43 50.3	-2.3
URZ	Urewera	4.07	34	P	Pb	10 43 51.9	-0.9
ODZ	Otahua Downs	4.26	216	P	Pn	10 43 45.4	-0.3
AWAZ	Awhitu Peninsu	4.61	4	P	Pn	10 43 54.7	+4.2
MKAZ	Moumakai	4.62	9	P	Pn	10 43 54.3	+3.7
JCZ	Jackson Bay	4.66	237	P	Pn	10 43 56.3	+5.0
ETAZ	East Tamaki Re	4.74	7	P	Pb	10 44 01.0	-3.3
WIAZ	Waiheke Island	4.92	9	P	Pb	10 44 02.3	-5.1

NIED ***23*** *10:48:00, 37°.10N×140°.70E, h5^{km}, Mw3.3 Best double couple: M$_0$1.14000×10^{14} NP1:φ$_s$324.00000°, δ47.00000°, λ-125.00000°. NP2:φ$_s$190.00000°, δ53.00000°, λ-58.00000°.*

ISCJB ***23*** *10:48:04.6±0.6, 37°.10N±0°.03×140°.75E±0°.04, h10^{km}±4^{km}, mb3.8/3, Error ellipse: s-maj=5.3km s-min=4.5km az=143.3*

IDC ***23*** *10:48:04.4±1.2, 36°.98N×140°.86E, h0^{km}, mb3.7/3, mb1 3.8/7, mb1mx3.5/32, mbtmp3.6/7, ML2.9/4, MS1.7/1, Ms1 1.7/1, ms1mx1.6/27, Error ellipse: s-maj=27.6km s-min=18.9km az=107.0*

JMA ***23*** *10:48:05.5, 37°.13N×140°.68E, h8^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: φ$_s$337.00000°, δ49.00000°, λ-106.00000°. NP2: φ$_s$180.00000°, δ43.00000°, λ-73.00000°. Principal axes: T Plg3.0000°, Azm78.0000°; N Plg12.0000°, Azm347.0000°; P Plg78.0000°, Azm181.0000°;*

JMA Felt II J1.

ISC 23 10:48:05.5±0.8**, 37°.08N**±0°.04×**140°.74E**±0°.03**, h8**^{km}±5^{km}**, n16, σ1^{s}.31**/26**, mb3.8**/3**, 7C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.05	68	⇑P	Pg	10 48 07.7	+0.3
ONAJ				S	Sg	10 48 09.5	+0.7
JFFD	Fukushimafurud	0.14	274	⇑P	Pg	10 48 08.0	-0.6
JFFD				S	Sg	10 48 09.7	-1.0
JFK	Kawauchi	0.30	21	⇑P	Pg	10 48 11.1	-0.5
JFK				S	Sg	10 48 15.1	-0.6
JHO	Hitachi	0.49	196	⇓P	Pb	10 48 15.4	-0.9
JHO				S	Sb	10 48 22.4	-1.2
JFT	Otama	0.54	324	⇑P	Pg	10 48 15.0	-1.0
JFT				S	Sg	10 48 21.7	-1.4
JSB	Shiboa	0.66	260	⇑P	Pg	10 48 18.4	+0.1
JSB				S	Sg	10 48 27.2	+0.2
JMM	Marumori	0.79	3	⇑P	Pg	10 48 19.3	-1.4
JFY	Yanaizu	0.89	292	⇑P	Pg	10 48 21.5	-1.1
JFY				S	Sg	10 48 32.2	-1.9
MJAR	Matsushiro Arr	2.10	256	Pn	Pn	10 48 41.5	+0.6
	2.2nm,0.3s,baz=75,slow=15,SNR=50						
MJAR				LR	LR	10 49 07.2	
	comp=Z,17nm,18.0s,baz=90,slow=29						
MJAR				Sn	Sn	10 49 09.0	+1.7
	4.6nm,0.3s,baz=93,slow=37,SNR=16						
MAT	Matsushiro	2.10	256	P	Pn	10 48 42.4	+1.4
MAT				S	Sb	10 49 09.5	-0.6
JHJ	Hachijo jima 2	4.03	191	Pn	Pn	10 49 06.0	-1.4
	5.6nm,0.3s,baz=270,slow=20,SNR=3.8						
JHJ				Sn	Sn	10 49 55.4	+0.6
	2.7nm,0.3s,baz=107,slow=19,SNR=2.8						
ASAJ	Asahikawa	7.17	11	Pn	Pn	10 49 51.1	+0.5
	0.4nm,0.3s,baz=101,slow=17,SNR=4.8						
USRK	Ussuriysk Ar.	9.73	320	Pn	Pn	10 50 29.5	+3.8
	0.1nm,0.3s,baz=106,slow=14,SNR=4.6						
ILAR	Eielson Array	49.74	32	P	P	10 56 57.9	0.0
	0.5nm,0.8s,baz=276,slow=6.4,SNR=5.3						
WRA	Warramunga Arr	57.04	187	P	P	10 57 51.4	-0.5
	1.4nm,0.7s,baz=358,slow=8.1,SNR=9.1						
ASAR	Alice Springs	60.76	187	P	P	10 58 17.7	-0.1
	0.6nm,0.7s,baz=20,slow=13,SNR=6.6						

MAN 23 10:52:52.7, 6°.16N×127°.01E, h28^{km}, mb4.6, ML3.4, MS3.3, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.09	294	⇓eP	Pb	10 53 28.2	-1.8
KCP				i S	Sn	10 53 52.1	+1.1

MEX 23 11:08:11.7±0.6**, 18°.58N×103°.06W, h68**^{km}±9^{km}**, MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.40	224	eP	Pn	11 08 22.0	-1.4
MMIG				i S	Sn	11 08 30.3	-1.7
EZ5V		1.04	330	eP	Pn	11 08 29.5	-1.4
EZ5V				i S	Sn	11 08 42.9	-2.2
ZIIG	Zihuatanejo	1.79	122	i P	Pn	11 08 39.4	-1.2
ZIIG				i S	Sn	11 08 59.6	-2.8
CJM	Chamela	2.09	296	eP	Pn	11 08 43.0	-1.6
CJM				i S	Sn	11 09 07.0	-2.7
ARIG	Puente Sto Nin	2.59	96	eP	Pn	11 08 50.8	-0.5
ARIG				i S	Sn	11 09 20.4	-1.3

IDC 23 11:15:49.2±6.3**, 18°.24S×68°.29W, h168**^{km}±39^{km}**, mb3.2**/2**, mb1 3.4**/2**, mb1mx3.1**/18**, mbtmp3.6**/2**, Error ellipse: s-maj=85.1km s-min=55.8km az=31.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	1.95	4	P	Pn	11 16 25.6	0.0
	8.8nm,0.3s,baz=186,slow=5.8,SNR=231						
LPAZ				S	Sn	11 16 54.0	+0.3
	1.6nm,0.3s,baz=90,slow=19,SNR=23						
TORD	Torodi Ar. Bea	75.72	71	P	P	11 27 16.8	0.0
	0.2nm,0.5s,baz=242,slow=5.4,SNR=4.0						
YKA	Yellowknife Ar	88.33	340	P	P	11 28 21.2	0.0
	0.3nm,0.6s,baz=135,slow=4.8,SNR=4.6						

IDC ***23*** *11:21:22.6±2.5, 17°.62N×145°.63E, h118^{km}±25^{km}, mb3.3/8, mb1 3.5/9, mb1mx3.3/35, mbtmp3.7/9, Error ellipse: s-maj=36.5km s-min=16.3km az=100.0*

ISCJB ***23*** *11:21:23.9±0.6, 17°.52N±0°.08×145°.6E±0°.3, h150^{km}, mb3.4/8, Error ellipse: s-maj=37.6km s-min=8.7km az=11.5*

ISC 23 11:21:25.2±0.8**, 17°.49N**±0°.10×**145°.7E**±0°.3**, h150**^{km}**, n16, σ1^{s}.15**/11**, mb3.5**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.95	191	P	Pn	11 22 24.5	-0.4
	6.6nm,0.3s,baz=24,slow=20,SNR=7.7						
GUMO				S	Sn	11 23 10.1	-1.1
	7.1nm,0.3s,baz=9.0,slow=19,SNR=2.2						
H11S3	WAKE ISLAND Hy	20.04	84	T	T	11 46 30.4	
	baz=272,slow=74,SNR=5.1						
H11S1	WAKE ISLAND Hy	20.05	84	T	T	11 46 31.3	
	baz=272,slow=74,SNR=5.9						
H11S2	WAKE ISLAND Hy	20.05	84	T	T	11 46 31.6	
	baz=272,slow=74,SNR=7.6						
H11N1	WAKE ISLAND Hy	20.25	80	T	T	11 46 45.2	
	baz=266,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	20.26	80	T	T	11 46 45.8	
	baz=266,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	20.27	80	T	T	11 46 45.2	
	baz=266,slow=74,SNR=13						
PETK	Petropavlovsk-	36.78	12	P	P	11 28 17.9	-0.3
	0.6nm,0.6s,baz=214,slow=7.0,SNR=3.6						
WRA	Warramunga Arr	38.82	197	P	P	11 28 36.9	+1.1
	0.4nm,0.4s,baz=3.5,slow=7.1,SNR=9.0						
ASAR	Alice Springs	42.48	196	P	P	11 29 07.2	+1.5
	0.3nm,0.8s,baz=15,slow=6.6,SNR=3.4						
SONM	Songino Array	44.06	322	P	P	11 29 17.9	-0.4
	0.3nm,0.4s,baz=134,slow=10,SNR=2.4						
ILAR	Eielson Array	64.75	26	P	P	11 31 45.9	-1.3
	0.4nm,0.5s,baz=259,slow=6.4,SNR=4.9						
INK	Inuvik	70.50	23	P	P	11 32 23.4	+0.2
	1.1nm,0.7s,baz=286,slow=8.9,SNR=4.7						
YKA	Yellowknife Ar	79.08	28	P	P	11 33 13.1	+0.4
	0.3nm,0.5s,baz=308,slow=9.3,SNR=4.2						
NVAR	Mina Array Bea	83.92	52	P	P	11 33 40.1	+1.1
	0.4nm,0.5s,baz=266,slow=6.1,SNR=7.4						
LPAZ	La Paz	147.68	93	PKPbc	PKPab	11 40 55.0	-1.4
	0.6nm,0.4s,baz=270,slow=3.0,SNR=4.6						

JSO ***23*** *11:27:12.8±2.1, 29°N±16°×3°6E±°, h10^{km}, M3.2/10, Mjma3.2/10, ML3.2/5, MLv3.3/10*

ISCJB ***23*** *11:27:16.9±1.5, 29°.93N±0°.08×36°.1E±0°.1, h5^{km}, Error ellipse: s-maj=19.2km s-min=8.7km az=24.2*

HLW ***23*** *11:27:21.6, 29°.68N×35°.92E, h11^{km}±17^{km}, Md2.5*

ISC 23 11:27:14.1±1.9**, 29°.94N**±0°.09×**36°.4E**±0°.1**, h5**^{km}**, n14, σ0^{s}.48**/13**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSNJ	Maan	0.68	297	P	Pg	11 27 27.7	+0.5
JDRJ	Daraweish	1.00	322	P	Pb	11 27 33.6	-0.4
HRFI	Mount Harif	1.18	275	P	Pg	11 27 36.1	-0.6
EIL	Elat	1.28	258	P	Pn	11 27 27.7	-11
LISJ	El Lisan	1.51	329	P	Pg	11 27 43.3	+0.2
HBST	Basata	1.61	244	P	Pn	11 27 43.5	+0.3
	baz=247						
WALJ	Wala	1.69	343	P	Pg	11 27 46.6	+0.1
NUB		1.77	239	P	Pn	11 27 46.1	+0.7
	baz=239						
HDHB	Dhahab	1.97	232	P	Pn	11 27 47.8	-0.3
	baz=231						
KZIT	Kziot	1.97	300	P	Pn	11 27 47.7	-0.4
ASF	Jabal al Asfar	2.27	11	P	Pg	11 27 57.4	-0.1
RSH		2.51	294	P	Pb	11 27 59.6	-0.1
	baz=305						
SHMJ	Saham	2.83	349	P	Pg	11 28 08.7	+0.4
SUZ	Suez	3.09	269	P	Pn	11 28 04.2	+0.6
	baz=275						

ISK ***23*** *11:49:41.8, 39°.47N×33°.48E, h5^{km}, ML1.9/4*

ISCJB ***23*** *11:49:42.2±0.5, 39°.48N±0°.03×33°.49E±0°.05, h12^{km}, Error ellipse: s-maj=5.7km s-min=4.3km az=144.6*

DDA ***23*** *11:49:42.2, 39°.47N×33°.51E, h7^{km}±1^{km}, ML2.9*

ISC 23 11:49:42.4±1.1**, 39°.48N**±0°.04×**33°.49E**±0°.04**, h12**^{km}**, n11, σ0^{s}.35**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIRS	Kırehir-Merke	0.48	136	i P	Pg	11 49 51.9	+0.1
SERE	Sereflikochisa	0.53	174	PG	Pg	11 49 52.5	-0.4
SERE				SG	Sg	11 50 00.3	+0.3
KKUL	Konya-Kulu	0.54	236	i P	Pg	11 49 53.2	+0.2
KKUL				i S	Sb	11 50 01.5	-0.2
YAYX	Yaylak	0.59	155	PG	Pg	11 49 53.6	-0.4
YAYX				SG	Sg	11 50 02.3	+0.4
DELI	KIRIKKALE	0.61	32	i P	Pg	11 49 54.3	-0.2
DELI				IAML_P			
	comp=Z,2μm,0.2s						
ANTO	Ankara	0.67	306	PG	Pg	11 49 55.1	-0.3
ANTO				SG	Sg	11 50 04.7	+0.5
CDAG	Cicekdag	0.69	78	i P	Pb	11 49 56.5	-0.1
LOD	Lodumlu	0.70	306	PG	Pg	11 49 55.6	-0.4
AKSY	AKSARAY - Alti	0.85	166	i P	Pg	11 49 58.5	-0.4
AKSY				IAML_P			
	comp=Z,415nm,0.1s						
CORM	Corum	1.12	51	PN	Pb	11 50 03.9	0.0
SIRC	Yozgat	1.29	96	i P	Pb	11 50 07.0	+0.3

WEL 23 12:18:45.9, 37°S±8°×17°8E±°, h228^{km}±8^{km}, M3.4/55, ML3.8/2, MLv3.4/55, Error ellipse: s-maj=0.0km s-min=0.0km az=175.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	1.09	169	P	Pn	12 19 18.5	-0.6
HAZ				S	S	12 19 42.5	-2.7
PKGZ	Pakihiroa	1.29	160	P	Pn	12 19 20.7	+0.2
PKGZ				S	S	12 19 44.7	-2.9
RUGZ	Raukumara Rang	1.29	174	P	Pn	12 19 19.7	-0.9
KUZ	Kuaotunu	1.44	267	P	Pn	12 19 21.0	-0.6
MARZ	Manawahe	1.46	207	P	Pn	12 19 21.9	+0.1
PUZ	Puketiti	1.51	157	P	Pn	12 19 22.1	0.0
PUZ				S	S	12 19 48.5	-2.1
TWGZ	Tauwhareparae	1.54	166	P	Pn	12 19 23.1	+0.7
TWGZ				S	S	12 19 50.5	-0.6
URZ	Urewera	1.61	191	P	Pn	12 19 22.9	0.0
MWZ	Matawai	1.65	180	P	Pn	12 19 23.6	+0.2
MWZ				S	S	12 19 51.6	-1.1
GRZ	Great Barrier	1.71	284	P	Pn	12 19 22.8	-1.1

TARZ	**Mount Tarawera**	**1.75**	**207**	P	Pn	12 19 25.4	+1.2
TKGZ	**Te Karaka**	**1.77**	**171**	P	Pn	12 19 24.7	+0.3
RAGZ	**Rawiri**	**1.81**	**182**	P	Pn	12 19 25.8	+0.9
RRRZ	**Republican Roa**	**1.83**	**205**	P	Pn	12 19 25.7	+0.8
CNGZ	**Carnagh Statio**	**1.88**	**163**	P	Pn	12 19 26.0	+0.7
MUGZ	**Murupara**	**1.89**	**198**	P	Pn	12 19 25.6	+0.2
WIAZ	**Waiheke Island**	**1.91**	**266**	P	Pn	12 19 25.6	-0.1
TOZ	**Tahuroa Road**	**1.92**	**236**	P	Pn	12 19 27.0	+1.3
MKAZ	**Moumakai**	**1.93**	**257**	P	Pn	12 19 26.4	+0.5
HRRZ	**Handcock Road**	**1.96**	**209**	P	Pn	12 19 27.5	+1.3
RTZ	**Ruatahuna**	**1.98**	**192**	P	Pn	12 19 26.3	0.0
GRRZ	**Galatos Road**	**2.00**	**213**	P	Pn	12 19 28.3	+1.7
PRRZ	**Plateau Road**	**2.02**	**206**	P	Pn	12 19 27.4	+0.7
RIGZ	**Rimuhau**	**2.03**	**174**	P	Pn	12 19 27.2	+0.4
ETAZ	**East Tamaki Re**	**2.09**	**262**	P	Pn	12 19 28.2	+0.9
ALRZ	**Allen Road**	**2.09**	**206**	P	Pn	12 19 28.4	+1.0
SNGZ	**Shannon Statio**	**2.10**	**184**	P	Pn	12 19 27.8	+0.3
MTHZ	**Maungataniwha**	**2.23**	**194**	P	Pn	12 19 29.1	+0.3
KUTZ	**Kaahu Road**	**2.25**	**216**	P	Pn	12 19 30.6	+1.6
PRGZ	**Paritu Road**	**2.26**	**173**	P	Pn	12 19 29.6	+0.5
RAHZ	**Arahi**	**2.26**	**188**	P	Pn	12 19 29.7	+0.7
TLZ	**Tolley Road**	**2.27**	**223**	P	Pn	12 19 30.7	+1.4
MRHZ	**Matea Rd**	**2.32**	**202**	P	Pn	12 19 30.3	+0.6
KNZ	**Kokohu**	**2.34**	**177**	P	Pn	12 19 30.1	+0.3
WATZ	**Wairara**	**2.47**	**214**	P	Pn	12 19 32.5	+1.3
MHGZ	**Mahia Peninsul**	**2.49**	**173**	P	Pn	12 19 32.0	+0.6
RATZ	**Rangitukua**	**2.58**	**212**	P	Pn	12 19 33.3	+0.9
BKZ	**Black Stump Fm**	**2.61**	**198**	P	Pn	12 19 32.8	+0.1
ARHZ	**Aropaoanui**	**2.61**	**189**	P	Pn	12 19 33.4	+0.7
RITZ	**Rihia Road**	**2.64**	**209**	P	Pn	12 19 34.1	+1.1
WCZ	**Waipu Caves**	**2.66**	**285**	P	Pn	12 19 32.6	-0.7
HIZ	**Hauiti**	**2.79**	**228**	P	Pn	12 19 36.4	+1.7
KRVZ	**Karewarewa**	**2.83**	**211**	P	Pn	12 19 36.0	+0.9
MCHZ	**McNeill Hill**	**2.83**	**193**	P	Pn	12 19 35.8	+0.7
WTVZ	**West Tongariro**	**2.87**	**211**	P	Pn	12 19 36.3	+0.7
KWHZ	**Kaweka Forest**	**2.87**	**197**	P	Pn	12 19 35.9	+0.3
TWVZ	**Taurewa**	**2.90**	**214**	P	Pn	12 19 36.9	+1.0
NGZ	**Ngauruhoe**	**2.91**	**211**	P	Pn	12 19 36.5	+0.3
TUVZ	**Tukino**	**2.97**	**209**	P	Pn	12 19 37.4	+0.6
CKHZ	**Cape Kidnapper**	**2.99**	**186**	P	Pn	12 19 36.7	-0.1
FWVZ	**Far West T-bar**	**3.00**	**210**	P	Pn	12 19 37.9	+0.7
WHVZ	**Whangaehu Hut**	**3.01**	**210**	P	Pn	12 19 37.8	+0.5
BHHZ	**Black Hill Sta**	**3.03**	**202**	P	Pn	12 19 37.2	-0.1
MOVZ	**Moawhango**	**3.06**	**207**	P	Pn	12 19 37.1	-0.5
PKVZ	**Pokaka**	**3.12**	**213**	P	Pn	12 19 39.0	+0.7
MTVZ	**Mangateitei**	**3.14**	**210**	P	Pn	12 19 39.2	+0.6
KAHZ	**Kahuranaki**	**3.15**	**189**	P	Pn	12 19 39.1	+0.4
VRZ	**Vera Road**	**3.27**	**221**	P	Pn	12 19 41.4	+1.4
PXZ	**Pawanui**	**3.38**	**188**	P	Pn	12 19 41.1	-0.2
PNHZ	**Pukenui**	**3.39**	**197**	P	Pn	12 19 41.1	-0.3
WPHZ	**Waipukurau**	**3.48**	**194**	P	Pn	12 19 42.4	0.0
TSZ	**Takapari Road**	**3.58**	**199**	P	Pn	12 19 43.2	-0.6
DREZ	**Durham Road**	**3.62**	**225**	P	Pn	12 19 47.0	+2.8
PRHZ	**Porangahau**	**3.65**	**191**	P	Pn	12 19 44.3	-0.1
WAZ	**Wanganui**	**3.66**	**212**	P	Pn	12 19 45.0	+0.4
LREZ	**Lake Rotokare**	**3.70**	**221**	P	Pn	12 19 47.2	+2.1
PKE	**Pukeiti**	**3.75**	**227**	P	Pn	12 19 48.1	+2.4
DVHZ	**Dannevirke**	**3.76**	**196**	P	Pn	12 19 45.0	-0.8
KHEZ	**Kahui Hut**	**3.80**	**226**	P	Pn	12 19 48.8	+2.5
ANWZ	**Angora Road**	**3.86**	**192**	P	Pn	12 19 46.8	-0.1
POWZ	**Post Office Ro**	**3.95**	**200**	P	Pn	12 19 47.6	-0.4
PRWZ	**Pori Road**	**4.05**	**197**	P	Pn	12 19 48.9	-0.4
BFZ	**Birch Farm**	**4.12**	**194**	P	Pn	12 19 49.3	-0.7
MRZ	**Mangatainoka R**	**4.25**	**200**	P	Pn	12 19 50.6	-1.1
TIWZ	**Tintock**	**4.28**	**197**	P	Pn	12 19 51.4	-0.7
CPWZ	**Castlepoint**	**4.34**	**193**	P	Pn	12 19 53.0	+0.2
HOWZ	**Holdsworth Sta**	**4.49**	**200**	P	Pn	12 19 53.2	-1.4
OGWZ	**Otaki Gorge**	**4.52**	**203**	P	Pn	12 19 53.8	-1.1
TMWZ	**Te Maipa**	**4.60**	**195**	P	Pn	12 19 55.4	-0.6
MTW	**Mount Morrison**	**4.74**	**199**	P	Pn	12 19 56.2	-1.5
CAW	**Cannon Point**	**4.81**	**203**	P	Pn	12 19 57.1	-1.5
TRWZ	**Traveller**	**4.92**	**196**	P	Pn	12 19 58.8	-1.2
PAWZ	**Paruwai Farm**	**4.97**	**198**	P	Pn	12 19 58.9	-1.6
DUWZ	**D’Urville Isla**	**4.98**	**213**	P	Pn	12 19 60.0	-0.7
MSWZ	**Moikau Station**	**5.04**	**200**	P	Pn	12 19 59.9	-1.6
BHW	**Baring Head**	**5.15**	**203**	P	Pn	12 20 01.0	-1.7
TCW	**Tory Channel**	**5.18**	**208**	P	Pn	12 20 01.8	-1.3
PLWZ	**Palliser**	**5.19**	**199**	P	Pn	12 20 01.6	-1.7
TUWZ	**Tuamarina**	**5.49**	**209**	P	Pn	12 20 05.4	-1.7
NNZ	**Nelson**	**5.56**	**214**	P	Pn	12 20 09.1	+1.2
KHZ	**Kahutara**	**6.50**	**207**	P	Pn	12 20 17.9	-1.9
DSZ	**Denniston Nort**	**6.72**	**219**	P	Pn	12 20 22.3	-0.4
GVZ	**Greta Valley S**	**7.16**	**207**	P	Pn	12 20 26.3	-2.0
LTZ	**Lake Taylor**	**7.31**	**212**	P	Pn	12 20 28.4	-1.8
INZ	**Inchbonnie**	**7.63**	**216**	P	Pn	12 20 32.8	-1.5
OKCZ	**Okains Bay**	**7.81**	**204**	P	Pn	12 20 34.8	-1.9
OXZ	**Oxford**	**7.85**	**211**	P	Pn	12 20 34.4	-2.7
MQZ	**McQueen’s Vall**	**7.94**	**206**	P	Pn	12 20 35.1	-3.1
RPZ	**Rata Peaks**	**8.59**	**213**	P	Pn	12 20 45.1	-1.5
LBZ	**Lake Benmore**	**9.50**	**214**	P	Pn	12 20 57.4	-0.8
ODZ	**Otahua Downs**	**9.84**	**210**	P	Pn	12 21 01.4	-1.1
JCZ	**Jackson Bay**	**9.94**	**219**	P	Pn	12 21 03.0	-0.9
WHZ	**Wether Hill Ro**	**11.67**	**215**	P	Pn	12 21 24.7	-1.1

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*ISCJB **23** 12:21:29.7±0.5,22°.6S±0°.1×69°.4E±0°.1,h10^{km},mb4.1/16, MS3.9/19,Error ellipse: s-maj=16.0km s-min=13.5km az=136.6*

*IDC **23** 12:21:30.1±0.7,22°.66S×69°.39E,h0^{km},mb3.9/11, mb1 4.1/11,mb1mx3.9/45,mbtmp3.9/11,MS3.9/19, Ms1 3.9/19,ms1mx3.7/29,Error ellipse: s-maj=22.2km s-min=20.7km az=33.0*

*NEIC **23** 12:21:31.6±1.4,22°.59S×69°.36E,h10^{km},mb4.4/8,Error ellipse: s-maj=27.7km s-min=24.0km az=271.0*

*GCMT **23** 12:21:35.6±0.3,22°.44S±0°.03×69°.35E±0°.02,h12^{km}, MW4.8/73,Moment Tensor Solution. s20,c22; s73,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.91±.06; M$_{\theta\theta}$0.75±.07; M$_{\phi\phi}$1.16±.06; M$_{r\theta}$0.07±.26; M$_{\theta\phi}$-1.09±.06; M$_{\phi r}$0.33±.24; Best double couple: M$_0$2.01700×10^{16} NP1:φ$_s$148.00000°,δ49.00000°,λ-79.00000°. NP2: φ$_s$312.00000°,δ43.00000°,λ-102.00000°. Principal axes: T 2.0750, Plg3.0000°, Azm231.0000°; N -0.1170, Plg8.0000°, Azm321.0000°; P -1.9580, Plg81.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 12:21:31.7±0.6,**22°.6S**±0°.1×**69°.4E**±0°.1,**h10**^{km},**n42**, σ**0^{s}.61**/24,**mb4.1**/16,**MS3.9**/19,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**15.17**	**12**	T	T	12 40 43.7	
	baz=191,slow=76,SNR=262						
H08S2	**Diego Garcia H**	**15.18**	**12**	T	T	12 40 46.0	
	baz=191,slow=76,SNR=155						
H08S3	**Diego Garcia H**	**15.19**	**12**	T	T	12 40 46.0	
	baz=191,slow=76,SNR=253						
BOSA	**Boshof**	**40.09**	**252**	P	**P**	**12 29 08.3**	**+0.6**
	1.8nm,0.8s,baz=100,slow=12,SNR=2.3						
BOSA				LR	LR	12 42 41.7	
	comp=Z,318nm,18.7s,baz=43,slow=32						
BOSA	**Boshof**	**40.09**	**252**	*e*P	**P**	**12 29 08.3**	**+0.6**
	11nm,1.0s						
H01W2	**Cape Leeuwin H**	**40.77**	**118**	T	T	13 12 33.3	
	baz=272						
H01W3	**Cape Leeuwin H**	**40.77**	**118**	T	T	13 12 31.6	
	baz=272						
H01W1	**Cape Leeuwin H**	**40.78**	**118**	T	T	13 12 31.6	
	baz=272						
MAW	**Mawson**	**45.18**	**184**	LR	LR	12 44 38.1	
	comp=Z,70nm,18.6s,baz=312,slow=31						
CMAR	**Chiang Mai Arr**	**50.00**	**38**	P	**P**	**12 30 26.4**	**0.0**
	1.4nm,0.9s,baz=223,slow=7.0,SNR=7.4						
CMAR				LR	LR	12 50 57.2	
	comp=Z,120nm,18.1s,baz=228,slow=35						
ASAR	**Alice Springs**	**58.84**	**105**	P	**P**	**12 31 31.0**	**+0.1**
	1.0nm,0.8s,baz=260,slow=6.6,SNR=10						
ASAR				LR	LR	12 53 37.9	
	comp=Z,215nm,20.6s,baz=270,slow=33						
WR1	**Warramunga Arr**	**60.13**	**101**	*e*P	**P**	**12 31 40.0**	**+0.1**
WRA	**Warramunga Arr**	**60.13**	**101**	P	**P**	**12 31 40.0**	**+0.1**
	1.3nm,0.8s,baz=252,slow=13,SNR=4.6						
WB2	**Warramunga Arr**	**60.15**	**101**	*e*P	**P**	**12 31 38.9**	**-1.0**
	2.7nm,0.8s						
GEYT	**Alibeck**	**61.15**	**350**	LR	LR	12 55 31.4	
	comp=Z,65nm,19.4s,baz=165,slow=33						
STKA	**Stephens Creek**	**63.81**	**115**	LR	LR	12 57 10.2	
	comp=Z,93nm,18.4s,baz=209,slow=34						
KK31	**Karatay Array**	**65.40**	**1**	*e*P	**P**	**12 32 13.4**	**-1.0**
	1.1nm,0.9s						
QSPA	**South Pole Qui**	**67.50**	**180**	P	**P**	**12 32 27.5**	**-0.3**
	2.6nm,1.1s,baz=318,slow=5.5,SNR=3.3						
QSPA	**South Pole Qui**	**67.50**	**180**	*e*P	**P**	**12 32 27.5**	**-0.3**
	8.8nm,1.1s						
VNDA	**Vanda**	**68.62**	**167**	P	**P**	**12 32 34.0**	**-0.4**
	1.4nm,1.0s,baz=254,slow=9.2,SNR=3.3						
VNDA	**Vanda**	**68.62**	**167**	*e*P	**P**	**12 32 35.2**	**+0.7**
	2.6nm,1.0s						
MK32	**Makanchi Array**	**70.06**	**9**	*e*P	**P**	**12 32 44.7**	**+1.0**
MKAR	**Makanchi Array**	**70.06**	**9**	P	**P**	**12 32 44.7**	**+1.0**
	0.6nm,0.4s,baz=197,slow=4.5,SNR=2.6						
MKAR				LR	LR	13 02 08.7	
	comp=Z,114nm,19.2s,baz=188,slow=35						
KBZ	**Khabaz**	**70.36**	**340**	LR	LR	13 02 44.5	
	comp=Z,41nm,18.8s,baz=154,slow=35						
BR101	**Keskin Array S**	**70.44**	**331**	*e*P	**P**	**12 32 46.5**	**+0.2**
BRTR	**Keskin Array B**	**70.44**	**331**	P	**P**	**12 32 46.5**	**+0.2**
	1.3nm,1.0s,baz=152,slow=8.0,SNR=7.5						
BRTR				LR	LR	13 01 42.5	
	comp=Z,25nm,19.1s,baz=90,slow=34						
ABKAR	**Akbulak array**	**72.04**	**353**	*e*P	**P**	**12 32 55.4**	**-0.2**
	4.6nm,1.1s						
AKTO	**Aktyubinsk**	**73.42**	**352**	LR	LR	13 03 00.6	
	comp=Z,31nm,20.1s,baz=156,slow=34						
KURK	**Kurchatov**	**73.46**	**6**	*e*P	**P**	**12 33 03.5**	**-0.5**
	5.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**75.23**	**291**	P	**P**	**12 33 14.4**	**-0.8**
	2.0nm,1.0s,baz=59,slow=1.8,SNR=6.7						
TORD				LR	LR	13 05 42.2	
	comp=Z,100nm,18.1s,baz=30,slow=35						
TOA1	**Torodi Ar. Sit**	**75.23**	**291**	*e*P	**P**	**12 33 14.4**	**-0.8**
BRVK	**Borovoye**	**75.35**	**1**	*e*P	**P**	**12 33 15.1**	**+0.1**
	1.9nm,1.0s						
ZALV	**Zalesovo Beam**	**77.40**	**9**	LR	LR	13 07 03.1	
	comp=Z,45nm,18.2s,baz=252,slow=35						
SONA0	**Songino Array**	**77.60**	**25**	*e*P	**P**	**12 33 28.6**	**+0.5**
SONM	**Songino Array**	**77.60**	**25**	P	**P**	**12 33 28.6**	**+0.5**
	2.5nm,1.0s,baz=224,slow=4.1,SNR=7.9						
SONM				LR	LR	13 06 29.5	
	comp=Z,112nm,21.8s,baz=211,slow=35						
DBIC	**Dimbokro**	**78.18**	**282**	LR	LR	13 05 45.9	
	comp=Z,136nm,20.3s,baz=116,slow=34						
AKASG	**Malin Array Be**	**81.15**	**335**	P	**P**	**12 33 46.9**	**-0.2**
	0.3nm,0.4s,baz=138,slow=4.2,SNR=5.0						
KEST	**Kesra**	**81.20**	**314**	LR	LR	13 09 43.2	
	comp=Z,35nm,18.8s,baz=262,slow=36						
KSRS	**Korea Array**	**81.23**	**43**	LR	LR	13 08 57.3	
	comp=Z,54nm,19.9s,baz=231,slow=35						
MJAR	**Matsushiro Arr**	**87.57**	**49**	LR	LR	13 13 13.7	
	comp=Z,59nm,19.7s,baz=225,slow=35						
USRK	**Ussuriysk Ar.**	**87.68**	**40**	LR	LR	13 12 56.4	
	comp=Z,89nm,20.3s,baz=193,slow=35						
ARCES	**ARCESS Array B**	**97.11**	**346**	LR	LR	13 18 21.5	
	comp=Z,36nm,21.9s,baz=100,slow=35						

NNC 23 12:22:39.7±9.6,**40°.41N×62°.87E,h0**^{km}**,mb3.6,mpv3.3, 11C-4D,Error ellipse: s-maj=175.8km s-min=62.4km az=137.0,Northwestern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYA0B	**ALIBECK ARRAY**	**4.44**	**238**	⇓Pn	Pn	12 23 49.6	+1.2
GYA0B				⇑Pg	Pb	12 23 59.8	+1.2
GYA0B				⇑Sn	Sn	12 24 41.8	+1.0
GYA0B				⇓Lg	Lg	12 25 03.2	
KK31	**Karatay Array**	**6.32**	**62**	⇓Pn	Pn	12 24 12.1	-2.0
	0.3nm,0.2s,baz=241,slow=16,SNR=11						
KK31				⇑Pg	Pb	12 24 34.5	+4.0
	2.9nm,0.5s,baz=247,slow=18,SNR=4.9						
KK31				⇑Lg	Lg	12 25 57.8	
	7.9nm,0.5s,baz=239,slow=28,SNR=4.6						
AB31	**Akbulak array**	**9.08**	**348**	⇑Pn	Pn	12 24 54.0	+2.0
	0.2nm,0.3s,baz=339,slow=35,SNR=13						
AB31				⇓Pg		12 25 25.3	
	0.6nm,0.5s						
AB31				⇑Lg	Lg	12 27 29.8	
	2.2nm,0.5s,baz=173,slow=25,SNR=3.7						
AKTO	**Aktyubinsk**	**10.58**	**343**	⇑Pn	Pn	12 25 13.0	+0.4
	1.4nm,0.6s						
AKTO				⇑Lg	Lg	12 28 16.5	
	7.2nm,0.9s						
BRVK	**Borovoye**	**13.62**	**19**	⇑Pn	Pn	12 25 53.2	-0.8
	1.2nm,0.5s						
BRVK				⇑Sn	Sn	12 28 25.6	-0.4
	1.6nm,0.6s						
BRVK				⇑Lg	Lg	12 29 52.1	
	2.6nm,0.7s						

WEL 23 12:25:41.2,42°S±1°×**174°.3E**±1°.0,**h12**^{km}±2^{km},**M3.4**/23, **ML3.6**/19,**MLv3.4**/23,**Error ellipse: s-maj=0.0km s-min=0.0km az=139.4,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.18**	**211**	P	Pb	12 25 45.9	-0.6
TUWZ	**Tuamarina**	**0.34**	**299**	P	Pb	12 25 48.7	-0.5
BSWZ	**Blackbirch Sta**	**0.37**	**251**	P	Pg	12 25 49.0	+0.4
TCW	**Tory Channel**	**0.39**	**353**	P	Pb	12 25 49.7	-0.3
TCW				S	Sb	12 25 55.5	-0.3
BHW	**Baring Head**	**0.44**	**65**	P	Pb	12 25 50.8	-0.1
BHW				S	Sb	12 25 58.1	+0.7
PLWZ	**Palliser**	**0.69**	**88**	P	Pb	12 25 55.6	+0.4
MSWZ	**Moikau Station**	**0.71**	**76**	P	Pb	12 25 55.8	+0.3
CAW	**Cannon Point**	**0.73**	**49**	P	Pb	12 25 56.0	+0.1
NNZ	**Nelson**	**0.81**	**297**	P	Pb	12 25 57.1	-0.1
PAWZ	**Paruwai Farm**	**0.85**	**76**	P	Pb	12 25 58.2	+0.4
DUWZ	**D’Urville Isla**	**0.85**	**338**	P	Pb	12 25 58.3	+0.4
MTW	**Mount Morrison**	**0.98**	**64**	P	Pn	12 26 00.6	-0.1
OGWZ	**Otaki Gorge**	**1.00**	**39**	P	Pg	12 26 00.5	0.0
KHZ	**Kahutara**	**1.01**	**216**	P	Pn	12 26 01.2	0.0
TRWZ	**Traveller**	**1.03**	**79**	P	Pg	12 26 01.2	+0.1
THZ	**Tophouse**	**1.09**	**261**	P	Pb	12 26 01.8	-0.2
HOWZ	**Holdsworth Sta**	**1.13**	**52**	P	Pg	12 26 03.0	+0.1
TMWZ	**Te Maipa**	**1.27**	**68**	P	Pn	12 26 04.7	0.0
MRZ	**Mangatainoka R**	**1.32**	**46**	P	Pb	12 26 06.0	0.0
TIWZ	**Tintock**	**1.43**	**55**	P	Pn	12 26 07.1	+0.2
QRZ	**Quartz Range**	**1.57**	**299**	P	Pb	12 26 10.3	+0.2
OHWZ	**Ohakea**	**1.57**	**28**	P	Pg	12 26 11.1	-0.3
PRWZ	**Pori Road**	**1.61**	**50**	P	Pn	12 26 09.7	+0.2
POWZ	**Post Office Ro**	**1.62**	**42**	P	Pn	12 26 10.0	+0.5
GVZ	**Greta Valley S**	**1.68**	**215**	P	Pn	12 26 10.0	-0.4
BFZ	**Birch Farm**	**1.71**	**58**	P	Pn	12 26 10.1	-0.7
DVHZ	**Dannevirke**	**1.90**	**48**	P	Pn	12 26 12.9	-0.5
DSZ	**Denniston Nort**	**1.90**	**265**	P	Pb	12 26 14.8	-1.1
WAZ	**Wanganui**	**1.90**	**15**	P	Pb	12 26 16.6	+0.8
LTZ	**Lake Taylor**	**1.94**	**232**	P	Pn	12 26 14.1	0.0
TSZ	**Takapari Road**	**1.97**	**39**	P	Pn	12 26 14.7	+0.3
ANWZ	**Angora Road**	**1.98**	**56**	P	Pn	12 26 14.0	-0.4
PNHZ	**Pukenui**	**2.20**	**41**	P	Pn	12 26 17.5	0.0
KHEZ	**Kahui Hut**	**2.31**	**354**	P	Pb	12 26 22.8	0.0
OKCZ	**Okains Bay**	**2.33**	**203**	P	Pn	12 26 17.6	-1.7
DREZ	**Durham Road**	**2.41**	**357**	P	Pb	12 26 23.9	-0.5
PKE	**Pukeiti**	**2.41**	**354**	P	Pb	12 26 23.3	-1.3
OXZ	**Oxford**	**2.43**	**224**	P	Pn	12 26 19.3	-1.4
INZ	**Inchbonnie**	**2.43**	**241**	P	Pn	12 26 21.2	+0.5
MQZ	**McQueen’s Vall**	**2.45**	**210**	P	Pn	12 26 18.8	-2.1
BHHZ	**Black Hill Sta**	**2.48**	**33**	P	Pb	12 26 23.8	-1.9
KRHZ	**Kereru**	**2.49**	**39**	P	Pn	12 26 21.2	-0.3
VRZ	**Vera Road**	**2.49**	**8**	P	Pb	12 26 25.2	-0.6
WHVZ	**Whangaehu Hut**	**2.50**	**23**	P	Pn	12 26 23.3	+1.5
TUVZ	**Tukino**	**2.53**	**24**	P	Pn	12 26 24.1	+1.8
NGZ	**Ngauruhoe**	**2.60**	**22**	P	Pb	12 26 27.2	-0.7
KAHZ	**Kahuranaki**	**2.64**	**48**	P	Pn	12 26 22.6	-1.0
TWVZ	**Taurewa**	**2.66**	**19**	P	Pb	12 26 27.7	-1.1
KRVZ	**Karewarewa**	**2.69**	**22**	P	Pb	12 26 29.9	+0.6
KWHZ	**Kaweka Forest**	**2.69**	**37**	P	Pn	12 26 25.0	+0.6
MCHZ	**McNeill Hill**	**2.80**	**41**	P	Pn	12 26 26.2	+0.4
RITZ	**Rihia Road**	**2.86**	**24**	P	Pb	12 26 33.9	+1.6
BKZ	**Black Stump Fm**	**2.93**	**35**	P	Pn	12 26 28.9	+1.2
RATZ	**Rangitukua**	**2.94**	**22**	P	Pb	12 26 35.4	+1.8
WVZ	**Waitaha Valley**	**3.05**	**240**	P	Pb	12 26 35.5	+0.1
HIZ	**Hauiti**	**3.10**	**8**	P	Pb	12 26 34.3	-2.0
RPZ	**Rata Peaks**	**3.22**	**228**	P	Pn	12 26 32.0	+0.5
TLZ	**Tolley Road**	**3.39**	**16**	P	Pb	12 26 39.7	-1.6
MWZ	**Matawai**	**4.08**	**38**	P	Pn	12 26 43.4	+0.1
LBZ	**Lake Benmore**	**4.13**	**226**	P	Pn	12 26 44.9	+0.8
ODZ	**Otahua Downs**	**4.38**	**217**	P	Pn	12 26 46.2	-1.3
RVAZ	**Riverhead Bore**	**4.82**	**2**	P	Pb	12 26 59.8	-5.8

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*SOME **23** 12:30:51.3,44°.72N×82°.15E,h15^{km}*

*ISCJB **23** 12:30:53.0±1.2,44°.66N±0°.06×82°.4E±0°.1,h10^{km},Error ellipse: s-maj=12.5km s-min=6.7km az=38.1*

*NNC **23** 12:30:52.7±1.3,44°.71N×82°.00E,h0^{km},mb3.5,mpv3.2, Error ellipse: s-maj=14.6km s-min=6.1km az=125.0*

ISC 23 12:30:48.5±1.9,**44°.65N**±0°.05×**82°.36E**±0°.09,**h10**^{km},**n24**, σ**0^{s}.80**/37,**2C-4D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.86**	**261**	P	**Pg**	**12 31 23.7**	**-0.5**
	8.5nm,0.2s						
DJR				S	**Sg**	**12 31 47.3**	**-1.1**
	6.5nm,0.2s						
DJR	**Jarkent**	**1.86**	**261**	*e*P	**Pg**	**12 31 23.7**	**-0.5**
	8.5nm,0.2s						
DJR				*e*S	**Sg**	**12 31 47.4**	**-1.1**
	6.5nm,0.2s						
KTMS	**Ketmen**	**1.88**	**231**	P	**Pg**	**12 31 24.2**	**-0.4**
	3.9nm,0.3s						
KTMS				S	**Sg**	**12 31 48.2**	**-0.8**
	23nm,0.6s						
KTMS	**Ketmen**	**1.88**	**231**	*e*P	**Pg**	**12 31 24.2**	**-0.4**
	3.9nm,0.3s						
KTMS				*e*S	**Sg**	**12 31 48.2**	**-0.8**
	23nm,0.6s						
MK31	**Makanchi Array**	**2.15**	**359**	Pn	**Pg**	**12 31 29.4**	**-0.2**
	6.9nm,0.3s,baz=183,slow=14,SNR=123						
MK31				Lg	Lg	12 31 56.9	
	1.3nm,0.2s,baz=187,slow=28,SNR=5.0						
MAKZ	**Makanchi**	**2.18**	**353**	⇓Pn	**Pg**	**12 31 29.6**	**-0.6**
	6.3nm,0.5s						
MAKZ				⇑Lg	Lg	12 31 57.5	
	5.2nm,0.4s						
KAPS	**Kapalarasan**	**2.22**	**288**	Pg	**Pb**	**12 31 29.3**	**+0.5**
	3.0nm,0.2s						
KAPS				Lg	Lg	12 31 57.0	
	10.0nm,0.6s						
KAPS	**Kapalarasan**	**2.22**	**288**	⇓*i*P	**Pb**	**12 31 29.3**	**+0.5**
	2.8nm,0.5s						
KAPS				⇓*i*S	**Sb**	**12 31 57.0**	**+0.6**
	11nm,0.3s						
PDGK	**Podgornoye**	**2.45**	**238**	⇓Pn	**Pb**	**12 31 32.4**	**-0.4**
	3.0nm,0.5s						
PDGK				⇑Lg	Lg	12 32 03.1	
	15nm,0.7s						
UZB	**Uzynbulak**	**2.84**	**239**	Pg	**Pb**	**12 31 39.8**	**+0.4**
	4.0nm,0.4s						
UZB				Lg	Lg	12 32 14.7	
	4.5nm,0.4s						
UZB	**Uzynbulak**	**2.84**	**239**	*e*P	**Pb**	**12 31 39.8**	**+0.4**
	4.0nm,0.4s						
UZB				*e*S	**Sb**	**12 32 14.7**	**+0.4**
	4.5nm,0.4s						
MNBS	**Baschi**	**2.89**	**260**	Pg	**Pb**	**12 31 40.3**	**0.0**
	4.7nm,0.4s						
MNBS				Lg	Lg	12 32 15.5	
	14nm,0.3s						
MNBS	**Baschi**	**2.89**	**260**	*e*P	**Pb**	**12 31 40.3**	**0.0**
	4.7nm,0.4s						
MNBS				*e*S	**Sb**	**12 32 15.5**	**-0.3**
	14nm,0.3s						
KPKS	**Kokpek**	**2.90**	**247**	*e*P	**Pb**	**12 31 40.3**	**-0.1**
	9.5nm,0.2s						
KPKS				*e*S	**Sb**	**12 32 15.3**	**-0.7**
	30nm,0.4s						
SATY	**Saty**	**3.27**	**242**	Pg	**Pb**	**12 31 47.2**	**+0.5**
	3.5nm,0.2s						
SATY				Lg	Lg	12 32 27.9	
	15nm,0.3s						
SATY	**Saty**	**3.27**	**242**	*e*P	**Pb**	**12 31 47.2**	**+0.5**
	3.5nm,0.2s						
SATY				*e*S	**Sb**	**12 32 27.8**	**+1.2**
	15nm,0.3s						
ARXS	**Arharly**	**3.27**	**264**	Pg	**Pb**	**12 31 47.1**	**+0.3**
	5.0nm,0.8s						
ARXS				Lg	Lg	12 32 27.4	
	9.3nm,0.4s						
ARXS	**Arharly**	**3.27**	**264**	*e*P	**Pb**	**12 31 47.1**	**+0.3**
	2.1nm,0.4s						
ARXS				*e*S	**Sb**	**12 32 27.4**	**+0.8**
	9.3nm,0.4s						
CHKK	**Chushkaly**	**3.94**	**260**	Pg	**Pb**	**12 31 58.3**	**+0.3**
	3.0nm,0.3s						
CHKK				Lg	Lg	12 32 47.1	
	4.9nm,0.2s						
CHKK	**Chushkaly**	**3.94**	**260**	*e*P	**Pb**	**12 31 58.4**	**+0.3**
	1.8nm,0.4s						
CHKK				*e*S	**Sb**	**12 32 46.5**	**+0.7**
	4.9nm,0.2s						
KOTS	**Kotyrbulak**	**4.04**	**251**	Pg	**Pb**	**12 32 01.1**	**+1.2**
	3.0nm,0.4s						
KOTS				Lg	Lg	12 32 51.5	
	16nm,0.4s						
KOTS	**Kotyrbulak**	**4.04**	**251**	*e*P	**Pb**	**12 32 01.1**	**+1.2**
	3.0nm,0.4s						
KOTS				*e*S	**Sb**	**12 32 51.5**	**+2.6**
	16nm,0.4s						
KTBS	**Karatobe**	**4.19**	**259**	Pg	**Pb**	**12 32 02.9**	**+0.6**
	1.1nm,0.3s						
KTBS				Lg	Lg	12 32 54.2	
	5.7nm,0.6s						
KTBS	**Karatobe**	**4.19**	**259**	*e*P	**Pb**	**12 32 02.9**	**+0.6**
	1.1nm,0.3s						
KTBS				*e*S	**Sb**	**12 32 54.2**	**+1.2**
	5.7nm,0.6s						

SJA 23 12:38:29.8±0.3,**32°.12S×68°.71W,h15**^{km}±14^{km},**ML2.5, MW3.5,Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APLL	**PUNTA DE LOS L**	**2.54**	**48**	*i* P	Pb	12 39 13.0	-2.1
APLL				IAML		12 39 50.4	
	comp=Z,16nm,0.2s						
MRA	**San Martin**	**2.55**	**98**	*i* P	Pb	12 39 13.2	-2.2
MRA				IAML		12 39 50.9	
	comp=Z,36nm,0.5s						
ACLC	**CERRO LA CRUZ**	**3.08**	**30**	*i* P	Pn	12 39 20.7	+2.7
ACLC				*i* S	Sb	12 39 58.6	-3.2
VCA	**Vinchina**	**3.40**	**8**	*i* P	Pn	12 39 25.4	+2.9

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*IDC **23** 13:12:13.9±2.2,4°.35S×153°.09E,h0^{km},mb4.1/3, mb1 4.2/4,mb1mx3.7/32,mbtmp4.1/4,ML1.1/1,MS3.0/1, Ms1 3.0/1,ms1mx2.5/19,Error ellipse: s-maj=76.9km s-min=35.2km az=125.0*

*NEIC **23** 13:12:18.6±1.9,4°.44S×153°.22E,h35^{km},mb4.0/3,Error ellipse: s-maj=31.1km s-min=17.4km az=61.0*

ISC 23 13:12:18.9±1.7,**4°.4S**±0°.1×**153°.2E**±0°.1,**h35**^{km},**n19**, σ**1^{s}.07**/14,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.02**	**282**	*e*Pn	**Pn**	**13 12 35.9**	**-0.9**
RABL				*e*Sn	**Sn**	**13 12 48.5**	**-1.4**
MANU	**Manus Island**	**6.25**	**292**	*e*Pn	**Pn**	**13 13 50.9**	**+2.2**
PMG	**Port Moresby**	**7.76**	**230**	Pn	**Pn**	**13 14 09.0**	**-0.5**
	0.2nm,0.3s,baz=85,slow=19,SNR=1.8						
PMG				Sn	**Sn**	**13 15 37.4**	**+1.3**
	0.5nm,0.3s,baz=29,slow=19,SNR=2.6						
HNR	**Honiara**	**8.38**	**127**	LR	LR	13 17 59.3	
	comp=Z,98nm,18.1s,baz=346,slow=41						
WB2	**Warramunga Arr**	**23.97**	**228**	*e*P	**P**	**13 17 29.9**	**-0.3**
	70nm,2.0s						
WR1	**Warramunga Arr**	**23.98**	**228**	*e*P	**P**	**13 17 30.9**	**+0.5**
WRA	**Warramunga Arr**	**23.98**	**228**	P	**P**	**13 17 30.9**	**+0.5**
	8.3nm,0.5s,baz=56,slow=11,SNR=76						
H11S3	**WAKE ISLAND Hy**	**26.37**	**30**	T	T	13 45 23.3	
	baz=210,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**26.38**	**30**	T	T	13 45 21.1	
	baz=210,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**26.39**	**30**	T	T	13 45 22.8	
	baz=210,slow=76,SNR=20						
AS31	**Alice Springs**	**26.68**	**222**	*e*P	**P**	**13 17 54.6**	**-0.4**
	1.1nm,1.0s						
ASAR	**Alice Springs**	**26.68**	**222**	P	**P**	**13 17 55.1**	**+0.1**
	0.8nm,0.7s,baz=54,slow=9.2,SNR=17						
H11N1	**WAKE ISLAND Hy**	**27.51**	**29**	T	T	13 46 52.8	
	baz=207						
H11N3	**WAKE ISLAND Hy**	**27.52**	**29**	T	T	13 46 52.8	
	baz=207,slow=74,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**27.53**	**29**	T	T	13 46 53.9	
	baz=207,slow=74,SNR=8.3						
STKA	**Stephens Creek**	**29.41**	**200**	P	**P**	**13 18 19.6**	**+0.5**
	1.6nm,0.9s,baz=44,slow=13,SNR=3.9						
STKA	**Stephens Creek**	**29.41**	**200**	*e*P	**P**	**13 18 19.3**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	4.6nm,1.8s						
TORD	Torodi Ar. Bea	150.53	289	PKPbc	PKPbc	13 32 07.2	-0.9
	0.5nm,0.7s,baz=54,slow=4.0,SNR=3.4						
TOA1	Torodi Ar. Sit	150.53	289	*e*PKPbc	PKPbc	13 32 07.2	-0.9

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*ISCJB **23** 13:38:16.9±0.4, 64°.95N±0°.02×20°.66E±0°.07, h0^{km}, Error ellipse: s-maj=4.3km s-min=3.5km az=178.6*

*UPP **23** 13:38:18.1±0.1, 64°.93N×20°.59E, h0^{km}, ML2.3, Explosion*

*IDC **23** 13:38:19.0±0.9, 64°.91N×20°.56E, h0^{km}, mb1 2.6/3, mb1mx2.6/30, mbtmp2.5/3, ML1.9/3, Error ellipse: s-maj=11.3km s-min=8.4km az=85.0*

*BER **23** 13:38:21.1±2.3, 64°.91N×20°.79E, h0^{km}, ML1.5, Suspected explosion*

ISC 23 13:38:18.0±0.8**, 64°.93N**±0°.03×**20°.65E**±0°.03**, h0^{km}, n25, σ1^{s}.59**/44**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BURU	Burvik	0.47	138	P	Pg	13 38 27.4	+0.5
LILU	Lilltraesk	0.49	317	P	Pg	13 38 27.1	-0.2
LILU				S	Sg	13 38 33.6	-0.1
ODEU	Stanfors	0.53	177	P	Pg	13 38 28.1	+0.1
SVAU	Svanoeiden	0.64	227	P	Pg	13 38 29.8	-0.3
SJUU	Sjulsmark	0.71	34	P	Pg	13 38 31.6	+0.2
UMAU	Umeaa	1.05	179	P	Pg	13 38 37.8	-0.3
HARU	Harads	1.25	6	P	Pg	13 38 41.2	-0.6
KALU	Kalix	1.47	49	P	Pn	13 38 45.4	-0.2
MOR8	Moi Rana	2.87	299	*e*P	Pn	13 39 06.0	+1.2
MOR8				*e*S	Sn	13 39 40.4	+0.4
MOR8				IAML		13 39 46.1	
	comp=Z,6.6nm,0.1s						
KONS	Konsvik	3.49	300	*e*P	Pn	13 39 13.7	+0.4
KONS				*e*S	Sn	13 39 55.2	0.0
KONS				IAML		13 40 08.4	
	comp=Z,3.5nm,0.2s						
HEF	Hetta	3.69	18	*e*P	Pn	13 39 16.9	+0.7
HEF				*e*S	Sn	13 39 59.3	-1.1
STEI	Steigen	3.71	327	*e*P	Pn	13 39 17.2	+0.7
STEI				*e*S	Sn	13 40 01.9	+1.1
STEI				IAML		13 40 19.0	
	comp=Z,1.7nm,0.2s						
NSS	Namsos	3.74	268	*e*P	Pn	13 39 17.1	+0.3
NSS				*e*S	Sn	13 40 02.6	+1.0
NSS				IAML		13 40 20.2	
	comp=Z,3.0nm,0.2s						
KIF	Kilpisjarvi	4.09	1	*e*P	Pn	13 39 23.2	+1.5
KIF				*e*S	Sn	13 40 10.4	+0.3
KTK1	Kautokeino	4.22	13	*e*P	Pn	13 39 24.4	+0.9
KTK1				*e*S	Sn	13 40 13.0	-0.5
KTK1				IAML		13 40 17.6	
	comp=Z,1.5nm,0.2s						
FINES	FINESS Array B	4.28	142	Pn	Pn	13 39 25.4	+1.2
	comp=Z,0.1nm,0.3s,baz=326,slow=12,SNR=13						
FINES				Pg	Pb	13 39 35.0	+1.1
	comp=Z,0.2nm,0.3s,baz=333,slow=14,SNR=11						
FINES				Sn	Sn	13 40 13.6	-1.2
	comp=Z,0.5nm,0.3s,baz=330,slow=22,SNR=7.9						
FINES				Lg	Lg	13 40 33.0	
	comp=Z,0.7nm,0.3s,baz=331,slow=25,SNR=7.7						
LOF	Lofoten	4.29	322	*e*P	Pn	13 39 27.4	+3.0
LOF				*e*S	Sn	13 40 13.8	-1.2
LOF				IAML		13 40 34.7	
	comp=Z,2.7nm,0.3s						
ARCES	ARCESS Array B	4.99	20	Pn	Pn	13 39 33.8	-0.2
	comp=Z,0.2nm,0.3s,baz=204,slow=14,SNR=14						
ARCES				Sn	Sn	13 40 29.7	-2.7
	comp=Z,0.4nm,0.3s,baz=201,slow=23,SNR=8.5						
ARE0	ARCESS Array S	4.99	20	*e*P	Pn	13 39 34.2	+0.1
ARE0				*e*S	Sn	13 40 29.4	-3.1
ARE0				IAML		13 40 34.4	
	comp=Z,0.1nm,0.1s						
NC303	NORSAR Array S	5.62	233	*e*P	Pn	13 39 44.7	+2.0
NC303				*e*S	Sn	13 40 44.5	-3.3
NC303				IAML		13 40 49.5	
	comp=Z,0.5nm,0.1s						
NB201	NORSAR Array S	5.77	232	*e*P	Pn	13 39 47.5	+2.8
NB201				*e*S	Sn	13 40 48.4	-3.2
NB201				IAML		13 40 57.6	
	comp=Z,1.7nm,0.5s						
NC204	NORSAR Array S	5.79	235	*e*P	Pn	13 39 46.8	+1.7
NC204				*e*S	Sn	13 40 50.8	-1.4
NOA	NORSAR Array B	5.80	232	Pn	Pn	13 39 44.1	-1.1
	comp=Z,0.0nm,0.3s,baz=40,slow=11,SNR=5.2						
NOA				Sn	Sn	13 40 48.5	-3.9
	comp=Z,0.0nm,0.3s,baz=44,slow=26,SNR=3.0						
HAMF	Hammerfest	5.85	10	*e*P	Pn	13 39 46.8	+0.9
HAMF				*e*S	Sn	13 40 51.6	-1.9
HAMF				IAML		13 40 52.5	
	comp=Z,1.7nm,0.2s						
NC602	NORSAR Array S	5.92	229	*e*P	Pn	13 39 46.8	0.0
NC602				*e*S	Sn	13 40 53.6	-1.7
NC602				IAML		13 40 56.0	
	comp=Z,12nm,0.2s						

WEL 23 13:41:46.4, 41°.5S±0°.6×**174°.4E**±0°.8**, h15^{km}**±1^{km}**, M3.8**/28**, ML3.9**/19**, MLv3.8**/28**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.9, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.28	212	P	Pb	13 41 53.1	-0.1
TCW	Tory Channel	0.31	341	P	Pb	13 41 53.7	0.0
BHW	Baring Head	0.36	74	P	Pb	13 41 54.4	-0.1
BHW				S	Sb	13 41 60.0	+0.1
TUWZ	Tuamarina	0.36	282	P	Pb	13 41 54.2	-0.3
TUWZ				S	Sb	13 41 59.6	-0.4
BSWZ	Blackbirch Sta	0.45	243	P	Pb	13 41 55.9	-0.2
BSWZ				S	Sb	13 42 02.6	-0.1
CAW	Cannon Point	0.63	51	P	Pb	13 41 59.3	+0.1
PLWZ	Palliser	0.64	96	P	Pb	13 41 59.4	+0.2
MSWZ	Moikau Station	0.64	82	P	Pb	13 41 59.6	+0.4
PAWZ	Paruwai Farm	0.77	81	P	Pb	13 42 02.0	+0.4
DUWZ	D'Urville Isla	0.80	332	P	Pb	13 42 02.3	+0.4
NNZ	Nelson	0.83	290	P	Pg	13 42 02.7	+0.2
MTW	Mount Morrison	0.89	67	P	Pn	13 42 04.2	-0.1
TRWZ	Traveller	0.96	84	P	Pg	13 42 05.2	+0.1
HOWZ	Holdsworth Sta	1.03	54	P	Pg	13 42 06.3	0.0
KHZ	Kahutara	1.12	215	P	Pn	13 42 07.5	0.0
THZ	Tophouse	1.16	257	P	Pg	13 42 08.6	-0.2
TMWZ	Te Maipa	1.18	71	P	Pn	13 42 08.2	-0.2
MRZ	Mangatainoka R	1.22	47	P	Pb	13 42 09.5	+0.3
TIWZ	Tintock	1.33	57	P	Pn	13 42 10.6	+0.1
OHWZ	Ohakea	1.47	28	P	Pg	13 42 14.6	-0.1
CPWZ	Castlepoint	1.48	67	P	Pn	13 42 12.5	+0.1
POWZ	Post Office Ro	1.52	43	P	Pb	13 42 13.7	-0.5
PRWZ	Pori Road	1.52	52	P	Pn	13 42 13.3	+0.4
QRZ	Quartz Range	1.58	295	P	Pb	13 42 15.6	+0.4
BFZ	Birch Farm	1.61	60	P	Pn	13 42 13.8	-0.5
GVZ	Greta Valley S	1.78	215	P	Pn	13 42 16.2	-0.5
DVHZ	Dannevirke	1.80	48	P	Pn	13 42 16.7	-0.2
WAZ	Wanganui	1.80	14	P	Pb	13 42 20.0	+0.9
TSZ	Takapari Road	1.86	40	P	Pn	13 42 18.3	+0.5
ANWZ	Angora Road	1.88	57	P	Pn	13 42 17.5	-0.5
DSZ	Denniston Nort	1.97	262	P	Pb	13 42 20.8	-1.2
LTZ	Lake Taylor	2.04	231	P	Pn	13 42 20.1	-0.1
LREZ	Lake Rotokare	2.04	360	P	Pb	13 42 23.7	+0.4
PRHZ	Porangahau	2.09	54	P	Pn	13 42 20.1	-0.8
PNHZ	Pukenui	2.09	41	P	Pn	13 42 21.2	+0.2
WPHZ	Waipukurau	2.11	48	P	Pn	13 42 21.1	-0.1
AMCZ	Amberley	2.12	217	P	Pn	13 42 20.2	-1.0
NMEZ	Namu Road	2.13	349	P	Pg	13 42 26.2	-1.0
PREZ	Palmer Road	2.17	355	P	Pb	13 42 25.6	+0.2
KHEZ	Kahui Hut	2.23	352	P	Pb	13 42 26.9	+0.4
MTVZ	Mangateitei	2.27	21	P	Pb	13 42 25.5	-1.6
NBEZ	Newall Road No	2.27	349	P	Pb	13 42 26.9	-0.2
DREZ	Durham Road	2.32	356	P	Pb	13 42 27.4	-0.5
PKVZ	Pokaka	2.33	18	P	Pb	13 42 27.0	-1.1
PKE	Pukeiti	2.33	352	P	Pb	13 42 27.0	-1.1
MOVZ	Moawhango	2.33	26	P	Pn	13 42 25.6	+1.3
PXZ	Pawanui	2.37	52	P	Pn	13 42 23.7	-1.1
BHHZ	Black Hill Sta	2.38	33	P	Pn	13 42 25.9	+1.0
KRHZ	Kereru	2.38	39	P	Pn	13 42 25.0	0.0
VRZ	Vera Road	2.40	6	P	Pb	13 42 28.4	-0.8
DRZ	Dome Shelter	2.40	22	P	Pb	13 42 27.7	-1.7
WHVZ	Whangaehu Hut	2.40	22	P	Pb	13 42 27.5	-1.9
FWVZ	Far West T-bar	2.41	22	P	Pb	13 42 27.8	-1.9
MHEZ	Mangahewa	2.43	358	P	Pb	13 42 29.5	-0.3
OKCZ	Okains Bay	2.43	204	P	Pn	13 42 24.1	-1.5
TUVZ	Tukino	2.43	23	P	Pn	13 42 27.7	+2.0
CRLZ	Canterbury Las	2.45	212	P	Pn	13 42 24.0	-1.8
NGZ	Ngauruhoe	2.50	22	P	Pb	13 42 28.9	-2.2
INZ	Inchbonnie	2.52	240	P	Pn	13 42 27.3	+0.5
OXZ	Oxford	2.53	223	P	Pn	13 42 25.4	-1.5
KAHZ	Kahuranaki	2.54	48	P	Pn	13 42 26.3	-0.7
MQZ	McQueen's Vall	2.55	210	P	Pn	13 42 25.2	-2.0
WTVZ	West Tongariro	2.55	21	P	Pb	13 42 29.8	-2.2
TWVZ	Taurewa	2.56	18	P	Pb	13 42 30.0	-2.0
KWHZ	Kaweka Forest	2.58	37	P	Pn	13 42 28.1	+0.3
KRVZ	Karewarewa	2.59	22	P	Pb	13 42 30.4	-2.1
MCHZ	McNeill Hill	2.70	41	P	Pn	13 42 29.2	-0.1
KATZ	Kakaramea	2.71	22	P	Pb	13 42 36.2	+1.5
RITZ	Rihia Road	2.76	24	P	Pb	13 42 33.5	-1.9
BKZ	Black Stump Fm	2.83	35	P	Pn	13 42 30.9	-0.2
RATZ	Rangitukua	2.84	22	P	Pb	13 42 34.1	-2.7
WATZ	Wairara	2.97	20	P	Pb	13 42 39.4	+0.3
ARHZ	Aropaoanui	2.99	42	P	Pn	13 42 33.6	+0.4
HIZ	Hauiti	3.01	7	P	Pb	13 42 36.9	-2.8
MRHZ	Matea Rd	3.08	31	P	Pn	13 42 34.6	0.0
WVZ	Waitaha Valley	3.15	239	P	Pn	13 42 37.7	+2.4
KUTZ	Kaahu Road	3.20	20	P	Pb	13 42 44.5	+1.5
MTHZ	Maungataniwha	3.24	36	P	Pn	13 42 36.5	-0.2
TLZ	Tolley Road	3.29	16	P	Pn	13 42 40.0	+2.6
ALRZ	Allen Road	3.29	27	P	Pn	13 42 38.0	+0.6
RAHZ	Arahi	3.30	39	P	Pn	13 42 37.2	-0.4
RPZ	Rata Peaks	3.32	227	P	Pn	13 42 37.5	-0.2
PRRZ	Plateau Road	3.37	27	P	Pn	13 42 39.1	+0.7
SNGZ	Shannon Statio	3.53	40	P	Pn	13 42 39.7	-1.0
TARZ	Mount Tarawera	3.64	27	P	Pn	13 42 42.9	+0.6
RAGZ	Rawiri	3.79	38	P	Pn	13 42 43.5	-0.8
RIGZ	Rimuhau	3.80	44	P	Pn	13 42 43.0	-1.4
URZ	Urewera	3.85	33	P	Pn	13 42 44.3	-0.7
TOZ	Tahuroa Road	3.86	13	P	Pn	13 42 48.5	+3.2
FOZ	Fox Glacier	3.96	238	P	Pn	13 42 47.9	+1.4
TKGZ	Te Karaka	4.04	42	P	Pn	13 42 46.1	-1.6
LBZ	Lake Benmore	4.23	226	P	Pn	13 42 50.7	+0.4
TWGZ	Tauwhareparae	4.31	41	P	Pn	13 42 50.6	-0.9
RUGZ	Raukumara Rang	4.34	36	P	Pn	13 42 50.7	-1.3
KBAZ	Karaka Road Bo	4.42	5	P	Pn	13 42 56.7	+3.8
MKAZ	Moumakai	4.43	8	P	Pn	13 42 56.0	+2.9
AWAZ	Awhitu Peninsu	4.44	2	P	Pn	13 42 56.7	+3.5
ODZ	Otahua Downs	4.48	217	P	Pn	13 42 52.0	-1.7
HAZ	Te Kaha	4.56	36	P	Pn	13 42 54.9	0.0
ETAZ	East Tamaki Re	4.56	5	P	Pn	13 42 58.3	+3.5
PKGZ	Pakihiroa	4.59	39	P	Pn	13 42 55.0	-0.3
RVAZ	Riverhead Bore	4.73	2	P	Pn	13 43 01.6	+4.4
WIAZ	Waiheke Island	4.74	7	P	Pn	13 43 00.8	+3.5
MBAZ	Motutapu North	4.75	5	P	Pn	13 43 03.2	+5.8
JCZ	Jackson Bay	4.87	236	P	Pn	13 43 00.6	+1.4
TUZ	Tuapeka	5.63	216	P	Pn	13 43 09.5	-0.1
SYZ	Scrubby Hill	6.30	215	P	Pn	13 43 18.4	-0.3
OUZ	Omahuta	6.31	354	P	Pn	13 43 23.9	+5.1

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*NIED **23** 13:57:00, 39°.10N×142°.40E, h35^{km}, Mw3.7 Best double couple: $M_0$4.67000×10^{14} NP1:ϕ_s173.00000°, δ41.00000°, λ-25.00000°. NP2:ϕ_s283.00000°, δ74.00000°, λ-128.00000°.*

*IDC **23** 13:57:27.6±1.3, 39°.09N×142°.71E, h0^{km}, mb3.9/5, mb1 3.9/9, mb1mx3.6/32, mbtmp3.8/9, ML3.2/4, MS2.6/5, Ms1 2.6/5, ms1mx2.4/34, Error ellipse: s-maj=32.0km s-min=17.3km az=96.0*

*ISCJB **23** 13:57:29.5±1.1, 39°.10N±0°.03×142°.60E±0°.07, h19^{km}±7^{km}, mb3.8/5, MS2.7/1, Error ellipse: s-maj=8.7km s-min=4.6km az=15.5*

*JMA **23** 13:57:32.1±0.1, 39°.11N×142°.44E, h31^{km}±1^{km}, M3.9*

JMA Felt I J1.

*NEIC **23** 13:57:34.0±0.8, 39°.11N×142°.58E, h47^{km}±7^{km}, mb4.0/1, Error ellipse: s-maj=13.9km s-min=5.0km az=107.0*

ISC 23 13:57:29.7±1.9**, 39°.03N**±0°.04×**142°.53E**±0°.07**, h15^{km}**±11^{km}**, n38, σ2^{s}.22**/46**, mb3.9**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.67	275	P	Pb	13 57 44.1	+0.9
OFUJ				S	Sg	13 57 52.2	+0.4
MIYJ	Miyakonagasawa	0.78	315	P	Pg	13 57 44.9	+0.1
MIYJ				S	Sg	13 57 53.7	-1.4
JKMT	Kesennumamotoy	0.85	256	P	Pb	13 57 47.0	+0.8
JKMT				S	Sg	13 57 57.4	-0.1
JMK	Ichinoseki	1.03	266	P	Pb	13 57 49.6	+0.4
JMK				S	Sb	13 58 01.9	-0.6
JTH	Tanohata	1.05	331	P	Pb	13 57 49.1	-0.4
JTH				S	Sb	13 58 01.4	-1.7
JOM	Ohasama	1.06	295	P	Pb	13 57 49.8	0.0
JOM				S	Sb	13 58 02.4	-1.1
JIO	Ouri	1.09	239	P	Pb	13 57 50.5	+0.2
JIO				S	Sb	13 58 03.5	-0.8
JKZ	Kuzumaki	1.33	316	P	Pn	13 57 53.8	-0.1
JKZ				S	Sb	13 58 09.3	-2.1
JRG	Rokugo	1.52	285	P	Pn	13 57 57.3	+0.9
JRG				S	Sn	13 58 16.6	+0.7
JANG	Nango	1.56	330	P	Pn	13 57 56.8	-0.1
JOU	Okura	1.60	246	P	Pb	13 57 58.7	-0.4
ERM	Erimo	3.02	9	*e*Pn	Pn	13 58 17.8	+0.8
MJAR	Matsushiro Arr	4.23	235	Pn	Pn	13 58 36.6	+3.0
	0.3nm,0.3s,baz=40,slow=11,SNR=23						
MJAR				Sn	Sb	13 59 29.4	-5.4
	0.1nm,0.3s,baz=36,slow=23,SNR=2.7						
MJAR				LR	LR	14 00 31.0	
	comp=Z,93nm,18.3s,baz=35,slow=42						
MAJO	Matsushiro	4.23	235	*e*Pn	Pn	13 58 37.9	+4.2
MAJO				*e*Sn	Sb	13 59 29.4	-5.4
MAT	Matsushiro	4.23	235	P	Pn	13 58 38.2	+4.5
MAT				S	Sb	13 59 29.4	-5.4
MJB9	Matsu-Tunnel	4.23	235	*e*Pn	Pn	13 58 37.9	+4.2
ASAJ	Asahikawa	5.08	1	Pn	Pn	13 58 46.5	+1.1
	1.0nm,0.3s,baz=207,slow=10.0,SNR=10						
ASAJ				Sn	Sn	13 59 43.6	-0.2
	0.9nm,0.3s,baz=270,slow=13,SNR=2.9						
ASAJ				LR	LR	14 00 34.0	
	comp=Z,20nm,21.5s,baz=170,slow=37						
INU	Inuyama	5.73	232	*e*Pn	Pn	13 58 58.0	+3.7
JHJ2	Mitsune	6.30	201	*e*Pn	Pn	13 59 05.5	+3.4
JHJ	Hachijo jima 2	6.30	202	Pn	Pn	13 59 04.2	+2.1
	2.6nm,0.3s,baz=336,slow=20,SNR=5.1						
JHJ				Sn	Sn	14 00 12.0	-1.9
	3.7nm,0.3s,baz=5.5,slow=16,SNR=3.3						
JHJ				LR	LR	14 01 49.3	
	comp=Z,65nm,19.1s,baz=258,slow=41						
YSS	Yuzh-Sakhalins	7.92	1	*e*Pn	Pn	13 59 25.1	+0.7
KSRS	Korea Array	11.60	267	Pn	Pn	14 00 16.0	+1.4
	0.1nm,0.3s,baz=95,slow=10,SNR=3.2						
KSRS				LR	LR	14 04 03.3	
	comp=Z,18nm,18.8s,baz=70,slow=34						
KSAR	Wonju Array Be	11.63	267	Pn	Pn	14 00 16.0	+0.9
JOW	Kunigami	17.04	229	*e*Pn	P	14 01 29.4	+0.2
	9.1nm,0.8s						
MA2	Magadan	21.22	12	P	P	14 02 14.1	-0.7
	6.2nm,0.8s,baz=198,slow=9.1,SNR=6.3						
MA2				LR	LR	14 11 02.7	
	comp=Z,32nm,18.4s,baz=144,slow=39						
H11N2	WAKE ISLAND Hy	28.50	125	T	T	14 33 49.3	
	baz=318,slow=75,SNR=122						
H11N1	WAKE ISLAND Hy	28.50	125	T	T	14 33 48.4	
	baz=318,slow=75,SNR=147						
H11N3	WAKE ISLAND Hy	28.51	125	T	T	14 33 50.7	
	baz=318,slow=75,SNR=138						
H11S1	WAKE ISLAND Hy	29.28	127	T	T	14 34 49.2	
	baz=319,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.29	127	T	T	14 34 46.4	
	baz=319,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	29.30	127	T	T	14 34 47.0	
	baz=319,slow=76,SNR=17						
ZAA1	Zalesovo Array	41.25	311	*e*P	P	14 05 14.1	+0.1
ZALV	Zalesovo Beam	41.26	311	P	P	14 05 14.1	+0.1
	0.7nm,0.6s,baz=105,slow=8.2,SNR=3.6						
MK32	Makanchi Array	43.84	301	*e*P	P	14 05 35.6	+0.4
MKAR	Makanchi Array	43.84	301	P	P	14 05 35.6	+0.4
	0.6nm,0.8s,baz=83,slow=10.0,SNR=4.8						
WR1	Warramunga Arr	59.16	189	*e*P	P	14 07 30.0	+0.1
WRA	Warramunga Arr	59.16	189	P	P	14 07 30.0	+0.1
	4.8nm,1.2s,baz=357,slow=7.1,SNR=4.1						
ASAR	Alice Springs	62.89	189	P	P	14 07 56.2	+1.0
	0.6nm,0.7s,baz=10,slow=5.5,SNR=5.9						

JMA 23 14:08:15.5±0.2**, 24°.86N**×**123°.16E, h25^{km}**±4^{km}**, M1.4, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.42	199	P	Pb	14 08 24.2	-0.2
YOJ				*e*S	Sb	14 08 30.3	-0.1
JYNG	Yonagunijimaku	0.45	206	P	Pb	14 08 24.8	-0.1
JYNG				*e*S	Sb	14 08 31.0	-0.3
IRIF	Iriomote-Funau	0.74	135	P	Pb	14 08 29.4	-0.3
IRIF				S	Sb	14 08 39.6	+0.2
JKRS	Kuro-shima	0.99	129	P	Pn	14 08 33.6	-0.2
JKRS				*e*S	Sn	14 08 46.9	-0.1
HATJ	Hateruma jima	0.99	144	P	Pn	14 08 33.9	+0.1
JIJ	Ishigaki jima	1.02	119	P	Pn	14 08 33.5	-0.7
JISG	Ishigakijimahi	1.08	104	P	Pn	14 08 34.9	-0.1
JISG				*e*S	Sn	14 08 48.8	-0.4

TAP 23 14:08:18.9, 24°.27N×121°.46E, h6^{km}, ML0.7, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi	0.07	166	⇓P	Pg	14 08 21.4	+0.7
	baz=166						
ETLH				S	Sg	14 08 22.6	+0.7
	baz=166						
NACB	Ninganchiao	0.15	129	*e*S	Sg	14 08 24.9	+0.7
	baz=129						
NNSB	Datong	0.17	335	*e*S	Sg	14 08 25.6	+0.7
	baz=327						
NNS	Nan Shan	0.19	334	*e*S	Sg	14 08 26.2	+0.8
	baz=328						
WHF	Hehuan Shan	0.22	236	*e*P	Pg	14 08 24.3	+0.9
	baz=234						
WHF				S	Sg	14 08 27.5	+1.0
	baz=234						
NDT	Datong Townshi	0.33	8	P	Pg	14 08 25.9	+0.5
	baz=7.0						
NDT				*e*S	Sg	14 08 29.8	-0.1
	baz=7.0						
ENTT	Nioudou	0.38	14	*e*P	Pg	14 08 26.8	+0.5
	baz=7.0						
ENTT				*e*S	Sg	14 08 31.4	0.0
	baz=7.0						

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*IDC **23** 14:12:35.9±2.4, 35°.71N×71°.45E, h0^{km}, mb3.6/5, mb1 3.7/10, mb1mx3.5/40, mbtmp3.6/10, ML3.4/5, Error ellipse: s-maj=48.6km s-min=21.7km az=139.0*

*ISCJB **23** 14:12:47.7±0.4, 36°.32N±0°.04×70°.96E±0°.05, h100^{km}, mb3.4/4, Error ellipse: s-maj=6.0km s-min=4.8km az=31.3*

*NNC **23** 14:12:54.9±2.0, 36°.78N×70°.76E, h145^{km}±37^{km}, mb3.3, mpv4.1, Error ellipse: s-maj=20.0km s-min=11.1km az=152.0*

ISC 23 14:12:50.1±0.8**, 36°.50N**±0°.07×**70°.96E**±0°.06**, h100^{km}, n35, σ2^{s}.93**/41**, mb3.5**/4**, 8C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	Uchtor	6.35	25	P	Pn	14 14 23.7	+2.2
	SNR=14						
KZA	Kyzart	6.49	30	P	Pn	14 14 25.3	+2.0
	SNR=32						
EKS2	Erkin-Say	6.53	19	P	Pn	14 14 26.1	+2.6
	SNR=17						
KK31	Karatay Array	6.60	357	P	Pn	14 14 26.9	+2.4
	5.6nm,0.4s,baz=187,slow=14,SNR=49						
KK31				S	Sn	14 15 37.1	-1.2
	15nm,0.3s,baz=188,slow=25,SNR=12						
AAK	Ala-Archa	6.71	23	Pn	Pn	14 14 27.6	+1.5
	13nm,0.3s,baz=156,slow=7.2,SNR=26						
AAK				Sn	Sn	14 15 38.6	-2.5
	0.9nm,0.3s,baz=180,slow=5.1,SNR=2.6						
AAK	Ala-Archa	6.71	23	⇑P	Pn	14 14 28.5	+2.4
	7.6nm,0.3s						
AAK				⇑S	Sn	14 15 42.5	+1.4
	16nm,0.6s						
AAK	Ala-Archa	6.71	23	P	Pn	14 14 28.8	+2.7
	SNR=15						
KBK	Karagaybulak	6.87	25	P	Pn	14 14 31.4	+3.0
	SNR=7.1						
ULHL	Ulahol	7.04	34	P	Pn	14 14 32.9	+2.1
	SNR=5.4						
CHMS	Chumysh	7.12	23	P	Pn	14 14 34.0	+2.4
	SNR=7.0						
USP	Ospenovka	7.28	21	P	Pn	14 14 36.3	+2.5
	SNR=19						
TKM2	Tokmak 2	7.34	28	⇑P	Pn	14 14 36.3	+1.6
	2.9nm,0.3s						
TKM2				⇑S	Sn	14 15 58.0	+1.5
	1μm,0.1s						
TKM2	Tokmak 2	7.34	28	P	Pn	14 14 36.9	+2.1
	SNR=14						
GEYT	Alibeck	10.34	282	Pn	Pn	14 15 15.1	-0.3
	1.4nm,0.3s,baz=103,slow=9.6,SNR=15						
GEYT				Sn	Sn	14 17 08.4	-1.0
	0.8nm,0.3s,baz=95,slow=18,SNR=4.7						
GYA0B	ALIBECK ARRAY	10.34	282	⇑P	Pn	14 15 16.3	+0.9
GYA0B				⇑S	Sn	14 17 09.2	-0.1
MKAR	Makanchi Array	13.31	36	Pn	Pn	14 15 53.2	-1.7
	0.0nm,0.3s,baz=211,slow=8.1,SNR=2.5						
DANN	Dangsing	13.52	123	*e*P	Pn	14 15 55.0	-3.0
	28nm,0.4s						
KOLN	Koldanda	13.79	126	*e*P	Pn	14 15 59.0	-2.5
	7.9nm,0.3s						
GKN	Gorkha	14.33	122	*e*P	Pn	14 16 05.4	-3.1
	16nm,0.2s						
DMN	Daman	14.90	123	*e*P	Pn	14 16 12.9	-2.9
	9.2nm,0.3s						
KKN	Kakani	14.91	122	*e*P	Pn	14 16 12.6	-3.3
	8.0nm,0.3s						
AB31	Akbulak array	15.07	331	P	Pn	14 16 18.1	+0.7
	0.5nm,0.3s,baz=148,slow=11,SNR=38						
AB31				⇑S	Sn	14 18 58.3	-5.4
	1.5nm,0.4s,baz=156,slow=24,SNR=9.1						
PKIN	Phulchoki	15.12	122	*e*P	Pn	14 16 15.1	-3.5
	9.1nm,0.5s						
KURBB	Kurchatov Arra	15.13	19	Pn	Pn	14 16 16.6	-1.6
	0.0nm,0.3s,baz=204,slow=10,SNR=2.3						
PKI	Pulchoki	15.13	122	*e*P	Pn	14 16 15.3	-3.5
	5.2nm,0.2s						
JIRN	Jiri	15.62	120	*e*P	Pn	14 16 21.1	-3.9
	30nm,0.3s						
BVAR	Borovoye Array	16.53	359	Pn	P	14 16 36.8	+0.2
	0.2nm,0.3s,baz=174,slow=13,SNR=3.1						
AKTO	Aktyubinsk	16.76	330	Pn	P	14 16 40.4	+1.2
	0.4nm,0.3s,baz=130,slow=17,SNR=7.4						
AKTO				Sn	Sn	14 19 35.6	-8.9
	0.2nm,0.3s,baz=49,slow=20,SNR=4.0						
AKTO	Aktyubinsk	16.76	330	⇑P	Pn	14 16 36.0	-2.5
	3.5nm,0.9s						
AKTO				⇓S	Sn	14 19 40.9	-3.6
	3.0nm,0.8s						
ZALV	Zalesovo Beam	19.93	25	P	Pn	14 17 14.8	-1.5
	1.1nm,0.3s,baz=213,slow=12,SNR=5.4						
ARCES	ARCESS Array B	41.13	338	P	P	14 20 28.4	+4.5
	0.9nm,0.7s,baz=38,slow=6.1,SNR=4.5						
NB2	NORSAR Subarra	44.36	323	P	P	14 20 54.9	+4.8
	comp=Z,0.4nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.36	323	P	P	14 20 53.6	+3.5
	comp=Z,0.9nm,0.7s,baz=98,slow=7.7,SNR=5.3						
TORD	Torodi Ar. Bea	65.68	269	P	P	14 23 25.0	+0.9
	comp=Z,0.2nm,0.3s,baz=60,slow=6.8,SNR=2.5						
YKA	Yellowknife Ar	81.24	3	P	P	14 24 57.8	+3.2
	comp=Z,0.1nm,0.3s,baz=351,slow=5.0,SNR=3.3						

MAN 23 14:33:08.5, 7°.42N×124°.79E, h4^{km}, mb4.1, ML2.9, MS2.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.50	144	⇑*e*P	Pg	14 33 18.1	0.0
KCP				*i* S	Sn	14 33 33.9	+2.2
CTBH	Cotabato--PC H	0.57	250	⇓*i*P	Pb	14 33 20.6	-0.4
CTBH				*i* S	Sb	14 33 29.1	-0.4

MEX 23 14:33:57.6±0.9**, 16°.34N**×**96°.18W, h59^{km}**±12^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.57	173	*e*P	Pn	14 34 09.2	-1.2
HUIG				*e*S	Sn	14 34 18.1	-1.5
OXBJ	Oaxaca	0.89	324	*e*P	Pn	14 34 12.4	-2.0
OXBJ				*e*S	Sn	14 34 24.9	-1.9

VHO	Vista Hermosa	0.90	324	eP	Pn	14 34 13.1	-1.5
VHO				eS	Sn	14 34 25.1	-1.9
CMIG	Matias Romero	1.45	59	eP	Pn	14 34 19.6	-2.0
CMIG				i S	Sn	14 34 37.4	-2.3

WEL 23 14:41:14.0, 38°.8S±0°.5×176°.0E±0°.6, h9km±1km, M3.4/40, ML3.6/30, MLv3.4/40, Error ellipse: s-maj=0.0km s-min=0.0km az=100.4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATZ	Hinemaiaia	0.12	116	P	Pg	14 41 17.5	+0.6
HATZ				S	Sg	14 41 20.1	+1.2
RATZ	Rangitukua	0.14	258	P	Pg	14 41 18.0	+0.8
RATZ				S	Sg	14 41 21.6	+2.2
RITZ	Rihia Road	0.16	207	P	Pg	14 41 18.8	+1.3
RITZ				S	Sg	14 41 22.2	+2.4
WHTZ	Whakaora	0.17	2	P	Pg	14 41 18.7	+1.0
WATZ	Wairara	0.21	307	P	Pg	14 41 19.2	+0.8
KATZ	Kakaramea	0.24	235	P	Pg	14 41 20.1	+1.1
KRVZ	Karewarewa	0.35	223	P	Pb	14 41 22.0	-0.5
WPRZ	Whakapapatarin	0.36	28	P	Pg	14 41 21.8	+0.7
KUTZ	Kaahu Road	0.36	344	P	Pg	14 41 21.9	+0.7
MRHZ	Matea Rd	0.36	90	P	Pb	14 41 22.0	-0.7
WTVZ	West Tongariro	0.40	225	P	Pb	14 41 22.8	-0.5
ALRZ	Allen Road	0.41	48	P	Pg	14 41 22.7	+0.7
NGZ	Ngauruhoe	0.43	219	P	Pb	14 41 23.6	-0.4
PRRZ	Plateau Road	0.48	46	P	Pb	14 41 24.2	-0.5
FWVZ	Far West T-bar	0.52	216	P	Pb	14 41 25.1	-0.4
BKZ	Black Stump Fm	0.54	128	P	Pb	14 41 25.8	+0.1
HSRZ	Hossack Road	0.57	24	P	Pb	14 41 26.4	+0.1
PKVZ	Pokaka	0.65	226	P	Pb	14 41 27.4	-0.2
BHHZ	Black Hill Sta	0.66	172	P	Pb	14 41 27.7	-0.1
HLRZ	Highlands Stat	0.66	28	P	Pb	14 41 28.3	+0.5
MTVZ	Mangateitei	0.66	214	P	Pb	14 41 27.6	-0.3
RRRZ	Republican Roa	0.67	42	P	Pb	14 41 27.8	0.0
UTU	Utuhina	0.69	16	P	Pb	14 41 28.8	+0.6
KWHZ	Kaweka Forest	0.69	148	P	Pb	14 41 29.0	+0.7
KWHZ				S	Sb	14 41 39.5	+1.5
MTHZ	Maungataniwha	0.69	92	P	Pb	14 41 28.4	+0.1
TARZ	Mount Tarawera	0.74	36	P	Pb	14 41 29.9	+0.8
NGRZ	Ngongotaha	0.76	14	P	Pb	14 41 29.8	+0.4
OMRZ	Omania	0.80	25	P	Pn	14 41 30.9	-0.6
MKRZ	Makatiti	0.81	30	P	Pn	14 41 31.3	-0.3
RTZ	Ruatahuna	0.83	75	P	Pb	14 41 30.8	+0.1
MCHZ	McNeill Hill	0.84	137	P	Pn	14 41 32.9	+0.9
KARZ	Kaharoa	0.85	16	P	Pb	14 41 31.4	+0.5
KRHZ	Kereru	0.87	158	P	Pn	14 41 32.1	-0.4
KRHZ				S	Sn	14 41 44.3	-1.1
RAHZ	Arahi	0.89	96	P	Pn	14 41 32.8	0.0
RAHZ				S	Sn	14 41 46.0	+0.2
LIRZ	Lichensteins R	0.90	22	P	Pn	14 41 32.8	0.0
HIZ	Hauiti	0.92	290	P	Pb	14 41 32.1	0.0
ARHZ	Aropaoanui	0.92	118	P	Pn	14 41 34.4	+1.3
EDRZ	Edgecumbe	0.96	41	P	Pn	14 41 34.8	+1.1
VRZ	Vera Road	0.97	252	P	Pb	14 41 33.3	+0.2
KMRZ	Kaimai	0.99	360	P	Pn	14 41 34.1	-0.1
MARZ	Manawahe	1.02	34	P	Pn	14 41 34.3	-0.3
WHHZ	Waihua	1.03	104	P	Pn	14 41 36.0	+1.3
URZ	Urewera	1.08	58	P	Pb	14 41 34.9	+0.1
SNGZ	Shannon Statio	1.09	88	P	Pn	14 41 36.4	+0.9
PNHZ	Pukenui	1.09	170	P	Pn	14 41 36.2	+0.6
OPRZ	Ohinepanea	1.10	26	P	Pb	14 41 35.3	+0.1
TGRZ	Tauranga	1.13	13	P	Pg	14 41 35.6	-0.1
TOZ	Tahuroa Road	1.16	342	P	Pb	14 41 35.8	-0.4
WAZ	Wanganui	1.18	219	P	Pn	14 41 37.5	+0.7
KAHZ	Kahuranaki	1.20	143	P	Pg	14 41 40.0	+3.0
RAGZ	Rawiri	1.20	74	P	Pn	14 41 37.6	+0.6
CKHZ	Cape Kidnapper	1.20	134	P	Pg	14 41 40.2	+3.2
TSZ	Takapari Road	1.22	180	P	Pg	14 41 38.2	+0.8
WPHZ	Waipukurau	1.28	163	P	Pg	14 41 40.5	+1.8
MHEZ	Mangahewa	1.29	259	P	Pg	14 41 39.6	+0.8
MWZ	Matawai	1.33	68	P	Pb	14 41 39.1	-0.2
KNZ	Kokohu	1.36	98	P	Pg	14 41 42.1	+2.0
PXZ	Pawanui	1.39	150	P	Pg	14 41 42.3	+1.7
DREZ	Durham Road	1.41	255	P	Pg	14 41 41.1	0.0
RIGZ	Rimuhau	1.42	85	P	Pg	14 41 42.3	+1.0
OHWZ	Ohakea	1.45	200	P	Pg	14 41 42.0	+0.1
DVHZ	Dannevirke	1.47	174	P	Pg	14 41 43.5	+1.2
PREZ	Palmer Road	1.48	250	P	Pg	14 41 43.2	+0.7
PRGZ	Paritu Road	1.51	94	P	Pg	14 41 43.1	+0.1
PRHZ	Porangahau	1.52	160	P	Pg	14 41 45.0	+1.7
TKGZ	Te Karaka	1.54	76	P	Pg	14 41 43.7	+0.2
MHGZ	Mahia Peninsul	1.56	102	P	Pg	14 41 45.5	+1.6
POWZ	Post Office Ro	1.56	185	P	Pg	14 41 44.0	0.0
PKE	Pukeiti	1.57	256	P	Pg	14 41 44.3	+0.2
KHEZ	Kahui Hut	1.57	253	P	Pg	14 41 44.4	+0.2
RUGZ	Raukumara Rang	1.61	58	P	Pn	14 41 43.1	+0.4
ANWZ	Angora Road	1.67	166	P	Pg	14 41 46.6	+0.5
NBEZ	Newall Road No	1.68	254	P	Pg	14 41 45.9	-0.3
NMEZ	Namu Road	1.71	250	P	Pg	14 41 46.5	-0.4
TWGZ	Tauwhareparae	1.72	68	P	Pb	14 41 46.3	+0.4
HAZ	Te Kaha	1.80	54	P	Pn	14 41 45.5	+0.3
CNGZ	Carnagh Statio	1.80	79	P	Pg	14 41 48.6	0.0
MKAZ	Moumakai	1.84	340	P	Pb	14 41 46.9	-0.9
PKGZ	Pakihiroa	1.92	61	P	Pb	14 41 48.7	-0.5
PUZ	Puketiti	1.96	68	P	Pb	14 41 49.9	-0.1
ETAZ	East Tamaki Re	2.05	336	P	Pb	14 41 50.1	-1.3
AWAZ	Awhitu Peninsu	2.05	329	P	Pb	14 41 50.1	-1.3
KUZ	Kuaotunu	2.10	355	P	Pg	14 41 53.9	-0.3
WIAZ	Waiheke Island	2.14	342	P	Pb	14 41 52.4	-0.6
WMGZ	Waiomatatini S	2.19	63	P	Pb	14 41 53.6	-0.2
WTAZ	Waiatarua	2.19	330	P	Pb	14 41 52.3	-1.6
MBAZ	Motutapu North	2.23	338	P	Pn	14 41 52.6	+1.6
RVAZ	Riverhead Bore	2.33	332	P	Pb	14 41 54.8	-1.5

GUC 23 14:52:59.6±0.6, 18°.61S×69°.87W, h96km±3km, ML3.5
SJA 23 14:53:42.1±0.4, 21°.18S×68°.60W, h59km±16km, ML2.6, MW2.9
ISC 23 14:52:58.7±2.0, 18°.5S±0°.1×69°.9W±0°.1, h100km, n15, σ1s.46/19, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	0.47	254	⇑iP	Pn	14 53 14.6	+0.2
PB12				i S	Sn	14 53 26.6	+0.5
PB12	comp=N,2µm,0.1s			IAML		14 53 27.3	
MNMC	Minye Minye	0.68	159	⇑eP	Pn	14 53 16.1	-0.2
MNMC				i S	Sn	14 53 28.3	-1.2
MNMC	comp=N,3µm,0.2s			IAML		14 53 30.4	
PSGC	Pisagua	1.13	193	⇓iP	Pn	14 53 20.3	-0.5
PSGC				i S	Sn	14 53 36.0	-1.3
PSGC	comp=E,548nm,0.4s			IAML		14 53 36.8	
PB11	IPOC Station P	1.28	172	⇓eP	Pn	14 53 22.3	-0.2
PB11				i S	Sn	14 53 39.6	-0.8
PB11	comp=E,863nm,0.2s			IAML		14 53 40.4	
GO01	Chusmiza	1.33	152	⇑eP	Pn	14 53 24.0	+0.6
GO01				i S	Sn	14 53 42.2	+0.2
GO01	comp=N,1µm,0.1s			IAML		14 53 45.2	
PB08	IPOC Station P	1.77	158	⇓eP	Pn	14 53 29.4	+0.6
PB08				i S	Sn	14 53 51.9	+0.3
PB01	IPOC Station P	2.56	172	eP	Pn	14 53 59.7	+21
PB01	IPOC Station P	2.56	172	⇑eP	Pn	14 53 38.3	-0.5
PB01				eS	Sn	14 54 08.3	-1.2
PB01	comp=N,311nm,0.3s			IAML		14 54 17.4	
PB02	IPOC Station P	2.82	181	eP	Pn	14 54 04.5	+22
PB02				eS	Sn	14 54 20.6	+5.1
PB02	IPOC Station P	2.82	181	eP	Pn	14 53 41.9	-0.3
PB02				i S	Sn	14 54 14.8	-0.8
PB02	comp=E,348nm,0.5s			IAML		14 54 26.5	
PB07	IPOC Station P	3.22	181	eP	Pn	14 54 06.0	+18
PB03	IPOC Station P	3.54	178	eP	Pn	14 53 51.9	0.0
PB03				i S	Sn	14 54 33.1	+0.1
PB03	comp=E,88nm,0.5s			IAML		14 54 44.2	
PB15	IPOC Station P	4.71	176	eP	Pn	14 54 18.1	+10
HJA	Humahuaca	6.27	139	eP	Pn	14 54 38.6	+9.5
HJA	comp=Z,1.7nm,0.5s			IAML		14 54 41.0	
VCA	Vinchina	10.31	172	eP	Pn	14 55 31.7	+7.9
VCA	comp=Z,5.6nm,0.6s			IAML		14 55 44.3	

ISCJB 23 14:55:44.9±0.2, 24°.01N±0°.01×121°.67E±0°.02, h39km±4km, Error ellipse: s-maj=2.9km s-min=1.9km az=40.1
JMA 23 14:55:44.6±0.2, 24°.02N×121°.67E, h38km±2km, M2.4
TAP 23 14:55:44.3, 23°.99N×121°.61E, h43km, ML2.8, C
ISC 23 14:55:45.3±1.0, 24°.02N±0°.02×121°.64E±0°.02, h34km±1km, n77, σ0s.88/135, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien baz=181	0.05	219	eP	Pb	14 55 51.9	+1.0
HWA	baz=181			eS	Sb	14 55 58.7	+3.9
TWD	Chiawan baz=345	0.08	329	⇑iP	Pb	14 55 51.4	+0.3
TWD	baz=345			S	Sb	14 55 56.2	+1.2
NACB	Ninganchiao baz=348	0.16	346	P	Pb	14 55 51.6	0.0
NACB	baz=348			eS	Sb	14 55 56.8	+0.9
ETLH	Xiulin Townshi baz=330	0.24	323	eP	Pn	14 55 52.3	+0.4
ETLH	baz=330			eS	Sb	14 55 57.8	+0.4
ESL	Shilin baz=226	0.28	223	P	Pn	14 55 52.1	-0.6
ESL	baz=226			S	Sn	14 55 57.5	+0.8
WHF	Hehuan Shan baz=291	0.36	291	P	Pb	14 55 53.9	-0.4
WHF	baz=291			S	Sn	14 56 00.6	+0.5
EGFH	Guangfu baz=215	0.40	209	eP	Pb	14 55 52.9	-1.5
EGFH	baz=215			S	Sb	14 55 59.4	-1.1
ENA	Nanau baz=7.0	0.42	13	eP	Pb	14 55 54.4	-0.4
ENA	baz=7.0			eS	Sb	14 56 02.0	+0.8
NANB	Nanao baz=8.0	0.42	14	P	Pb	14 55 54.3	-0.4
NANB	baz=8.0			eS	Sb	14 56 01.6	+0.3
CHGB	Renai baz=279	0.43	276	eP	Pb	14 55 54.7	-0.3
CHGB	baz=279			eS	Sb	14 56 01.6	0.0
NNSB	Datong baz=337	0.47	330	eP	Pb	14 55 55.1	-0.5
NNSB	baz=337			eS	Sb	14 56 02.7	0.0
NNS	Nan Shan baz=338	0.49	330	P	Pb	14 55 55.3	-0.5
NNS	baz=338			eS	Sb	14 56 03.5	+0.4
VWDT	VWDT baz=238	0.52	240	eP	Pn	14 55 55.8	-0.6
VWDT	baz=238			eS	Sb	14 56 03.4	-0.5
HGSD	Ruisui baz=208	0.56	201	eP	Pn	14 55 56.5	-0.3
HGSD	baz=208			eS	Sn	14 56 05.6	+0.8
NDT	Datong Townshi baz=351	0.60	349	eP	Pn	14 55 56.6	-0.7
NDT	baz=351			eS	Sn	14 56 05.2	-0.6
TWC	Suao baz=12	0.62	18	eP	Pn	14 55 57.3	-0.3
TWC	baz=12			eS	Sn	14 56 07.0	+0.6
ENTT	Nioudou baz=3.0	0.63	354	eP	Pn	14 55 57.0	-0.7
ENTT	baz=3.0			eS	Sn	14 56 06.1	-0.5
DPDB	Guoxing baz=273	0.65	272	eP	Pn	14 55 57.6	-0.5
DPDB	baz=273			eS	Sn	14 56 07.6	+0.3
SSLB	Suanglung baz=253	0.67	250	eP	Pn	14 55 57.3	-1.0
SSLB	baz=253			eS	Sn	14 56 06.1	-1.5
SMLT	Sun Moon Lake baz=258	0.69	259	eP	Pn	14 55 58.1	-0.6
SMLT	baz=258			eS	Sn	14 56 08.6	+0.3
YULB	Yu-li baz=206	0.69	207	eP	Pn	14 55 56.3	-2.4
EOS1	EOS1 baz=53	0.69	40	eP	Pn	14 55 59.5	+0.9
EOS1	baz=53			eS	Sb	14 56 11.0	+2.6
YHNB	Yeheng baz=347	0.69	340	P	Pn	14 55 58.3	-0.5
YHNB	baz=347			eS	Sn	14 56 07.5	-0.9
TWE	Neicheng baz=4.0	0.70	2	eP	Pn	14 55 58.0	-0.8
TWE	baz=4.0			eS	Sn	14 56 08.0	-0.5
TYC	Yuchr baz=260	0.72	261	eP	Pn	14 55 59.0	-0.1
TYC	baz=260			eS	Sn	14 56 09.2	+0.2
SLBB	Yuanshan baz=1.0	0.74	360	eP	Pn	14 55 58.7	-0.6
SLBB	baz=1.0			eS	Sn	14 56 09.2	-0.2
WHYT	Xinyi Township baz=247	0.79	246	eP	Pn	14 55 59.7	-0.3
WHYT	baz=247			eS	Sn	14 56 10.2	-0.4
YUS	Yu-Shan baz=224	0.82	230	eP	Pn	14 56 00.0	-0.8
YUS	baz=224			eS	Sn	14 56 11.7	-0.3
NSTT	Nanjuang baz=305	0.84	317	P	Pn	14 56 01.0	+0.2
NSTT	baz=305			eS	Sn	14 56 12.3	+0.3
LIOB	Emei baz=306	0.85	318	P	Pn	14 56 01.4	+0.6
LIOB	baz=306			eS	Sn	14 56 12.4	+0.3
NTC	Toucheng baz=4.0	0.85	12	eS	Sb	14 56 13.8	+1.0
WJS	Zhushan baz=258	0.85	257	P	Pn	14 56 01.1	+0.2
WJS	baz=258			eS	Sn	14 56 12.5	+0.3
TWQ1	Liyutan baz=294	0.86	293	P	Pn	14 56 00.9	0.0
TWQ1	baz=294			eS	Sn	14 56 13.3	+1.0
WNT	Mingjian baz=262	0.88	261	eP	Pn	14 56 01.7	+0.4
WNT	baz=262			eS	Sn	14 56 14.1	+1.2
TCU	Taichung baz=280	0.89	279	P	Pn	14 56 01.7	+0.3
TCU	baz=280			S	Sb	14 56 14.4	+0.5
NMLH	Miaoli baz=305	0.93	304	eP	Pn	14 56 01.6	-0.3
NMLH	baz=305			eS	Sn	14 56 15.0	+0.9
CHKT	Chengkung baz=200	0.94	195	eS	Sn	14 56 13.8	-0.6
NHDH	Xindian Distri baz=355	0.95	354	eP	Pn	14 56 01.6	-0.6
NHDH	baz=355			S	Sn	14 56 14.4	-0.2
TWA	Mucha baz=358	0.96	357	eP	Pn	14 56 02.2	-0.2
TWA	baz=358			eS	Sn	14 56 15.0	+0.1
TIPB	Shuangxi baz=3.0	0.97	10	eP	Pn	14 56 02.3	-0.2
TIPB	baz=3.0			eS	Sn	14 56 15.1	0.0
WCHH	Zhanghua baz=274	0.99	274	eP	Pn	14 56 02.7	-0.1
WCHH	baz=274			eS	Sn	14 56 16.8	+1.2
ELDTW	Lidau baz=208	1.00	215	eP	Pn	14 56 02.8	-0.2
WGK	Gukeng baz=252	1.04	252	eS	Sn	14 56 18.1	+1.3
WDLH	Douliu baz=252	1.06	252	P	Pn	14 56 03.8	+0.1
WDLH	baz=252			eS	Sn	14 56 18.2	+0.9
TWS1	Kuangyinshan baz=4.0	1.10	349	eS	Sn	14 56 18.7	+0.4
YM01	YM01 baz=357	1.13	357	eS	Sn	14 56 18.5	-0.6
YM04	YM04 baz=355	1.14	355	eP	Pn	14 56 04.5	-0.4
YM04	baz=355			eS	Sn	14 56 19.5	+0.2
YM10	YM10 baz=357	1.14	356	eP	Pn	14 56 04.4	-0.5
YM10	baz=357			eS	Sn	14 56 19.2	-0.1
YM05	YM05 baz=357	1.15	357	eP	Pn	14 56 04.3	-0.7
YM05	baz=357			eS	Sn	14 56 19.6	0.0
YM03	YM03 baz=356	1.16	356	eS	Sn	14 56 19.0	-1.0
CHN4	Tsaushan baz=225	1.16	236	eP	Pn	14 56 05.9	+0.7
CHN4	baz=225			eS	Sn	14 56 21.4	+1.5
YM08	YM08 baz=358	1.17	358	eP	Pn	14 56 04.2	-1.1
STYT	Tauyuan baz=223	1.17	224	eP	Pn	14 56 06.3	+1.0
STYT	baz=223			eS	Sb	14 56 22.2	+0.2
RLNB	Erlin baz=275	1.18	264	eP	Pn	14 56 05.7	+0.3
RLNB	baz=275			eS	Sn	14 56 21.2	+1.0
WTP	Ta-pu baz=230	1.21	231	eP	Pn	14 56 06.0	+0.1
WTP	baz=230			eS	Sn	14 56 22.7	+1.6
CHY	Chiayi baz=245	1.23	245	eP	Pn	14 56 06.4	+0.4
WTCT	Ta-ch'eng baz=276	1.25	263	eP	Pn	14 56 06.0	-0.4
WTCT	baz=276			eS	Sn	14 56 23.4	+1.3
JYNG	Yonagunijimaku	1.27	70	P	Pn	14 56 06.3	-0.3
JYNG				eS	Sn	14 56 22.2	-0.3
TWG	Pinlang baz=193	1.30	204	eP	Pn	14 56 07.1	+0.1
TWGBT	Beinan baz=194	1.30	203	eP	Pn	14 56 06.9	-0.2
TWGBT	baz=194			eS	Sn	14 56 20.6	-2.6
YOJ	Yonaguni jima baz=69	1.33	70	eP	Pn	14 56 07.2	-0.2
YOJ	baz=69			eS	Sn	14 56 24.2	+0.2
YOJ	Yonaguni jima	1.33	70	P	Pn	14 56 07.1	-0.3
YOJ				S	Sn	14 56 24.1	+0.1
WSF	Szhu baz=266	1.35	254	eP	Pn	14 56 07.9	+0.2
WSF	baz=266			eS	Sn	14 56 24.9	+0.4
SLGT	Liugui baz=221	1.36	222	eP	Pn	14 56 08.4	+0.5
SLGT	baz=221			eS	Sn	14 56 25.6	+0.7
CHN8	Yiju baz=242	1.47	243	eS	Sn	14 56 28.8	+1.4
SSD	Sandimen baz=204	1.57	216	eP	Pn	14 56 11.5	+0.8
MASBT	Mashibuluo baz=212	1.68	214	eP	Pn	14 56 13.3	+1.1
MASBT	baz=212			eS	Sn	14 56 33.4	+0.8
EAST	Anshuo baz=193	1.78	204	eP	Pn	14 56 13.8	+0.1
IRIF	Iriomote-Funau	1.94	80	P	Pn	14 56 15.5	-0.3
IRIF				eS	Sn	14 56 38.4	-0.6
HATJ	Hateruma jima	1.98	88	P	Pn	14 56 16.4	0.0
HATJ				S	Sn	14 56 42.0	+1.9
JKRS	Kuro-shima	2.18	84	P	Pn	14 56 19.4	+0.3
JKRS				eS	Sn	14 56 45.1	+0.2
JIJ	Ishigaki jima	2.31	81	P	Pn	14 56 20.3	-0.7
JIJ				eS	Sn	14 56 46.9	-1.4
JISG	Ishigakijimahi	2.50	76	P	Pn	14 56 23.0	-0.6
PTMZ	Houxiangcun baz=295	2.51	294	eP	Pn	14 56 22.1	-1.6
JTJ	Tarama	2.86	77	P	Pn	14 56 27.7	-0.8
KNMB	Chin-men Tao baz=279	3.00	279	eP	Pn	14 56 28.8	-1.7
ZPLA	Ao Xicun baz=269	3.56	269	eP	Pn	14 56 36.5	-1.6

ISCJB 23 14:58:36.2±0.5, 24°.02N±0°.01×122°.42E±0°.01, h10km±4km, Error ellipse: s-maj=2.5km s-min=2.2km az=157.4
JMA 23 14:58:36.8±0.2, 24°.00N×122°.42E, h18km±4km, M2.2
TAP 23 14:58:37.7, 24°.09N×122°.38E, h24km, ML3.0, D
ISC 23 14:58:37.2±1.3, 24°.04N±0°.02×122°.40E±0°.02, h21km±4km, n79, σ0s.61/138, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1 baz=331	0.57	334	P	Pb	14 58 48.2	-0.4
EOS1	baz=331			S	Sb	14 58 56.2	0.0
JYNG	Yonagunijimaku	0.64	50	P	Pb	14 58 49.5	-0.3
JYNG				S	Sb	14 58 57.7	-0.7
YOJ	Yonaguni jima baz=63	0.70	53	P	Pb	14 58 50.5	-0.2
YOJ	baz=63			eS	Sn	14 59 01.0	-1.0
YOJ	Yonaguni jima	0.70	53	P	Pb	14 58 50.4	-0.2
YOJ				eS	Sb	14 58 59.1	-0.8
NANB	Nanao baz=300	0.71	303	P	Pb	14 58 50.6	-0.4
NANB	baz=300			S	Sb	14 58 60.0	-0.3
ENA	Nanau baz=300	0.72	303	P	Pb	14 58 50.6	-0.5
ENA	baz=300			eS	Sb	14 59 00.2	-0.3
TWD	Chiawan baz=269	0.74	273	eP	Pb	14 58 51.6	+0.2
TWD	baz=269			eS	Sb	14 59 01.9	+0.9
NACB	Ninganchiao baz=261	0.75	281	P	Pb	14 58 51.6	+0.1
NACB	baz=261			eS	Sb	14 59 02.3	+0.9
TWC	Suao baz=310	0.76	318	P	Pb	14 58 51.0	-0.7
TWC	baz=310			S	Sb	14 59 00.4	-1.2
ETLH	Xiulin Townshi baz=265	0.86	281	i P	Pb	14 58 53.2	-0.2
ETLH	baz=265			S	Sb	14 59 05.2	+0.6
ESL	Shilin baz=243	0.92	256	eP	Pb	14 58 53.4	-1.0
ESL	baz=243			S	Sb	14 59 06.6	+0.5
ILA	Ilan baz=318	0.94	321	eS	Sn	14 59 07.6	-0.4
TWE	Neicheng baz=313	0.96	316	P	Pb	14 58 54.9	-0.2
TWE	baz=313			eS	Sb	14 59 06.6	-0.7
EGFH	Guangfu baz=245	0.97	248	eP	Pb	14 58 55.0	-0.2
EGFH	baz=245			eS	Sn	14 59 08.2	-0.4
NTC	Toucheng baz=324	0.97	327	P	Pb	14 58 55.3	+0.1
NTC	baz=324			eS	Sn	14 59 08.0	-0.6
ENTT	Nioudou baz=305	0.97	308	P	Pb	14 58 55.4	+0.1
ENTT	baz=305			eS	Sn	14 59 08.7	-0.1

NDT	**Datong Townshi**	0.99	305	*i* P	Pn	14 58 55.8	0.0
	baz=301						
NDT				*e*S	Sn	14 59 08.9	-0.3
	baz=301						
SLBB	**Yuanshan**	1.00	316	P	Pn	14 58 56.0	-0.1
	baz=313						
SLBB				*e*S	Sb	14 59 08.7	+0.1
	baz=313						
NNSB	**Datong**	1.01	293	P	Pb	14 58 55.7	-0.4
	baz=289						
NNSB				*e*S	Sn	14 59 09.4	-0.4
	baz=289						
NNS	**Nan Shan**	1.02	293	P	Pn	14 58 56.5	+0.1
	baz=289						
NNS				*e*S	Sb	14 59 09.5	+0.2
	baz=289						
WHF	**Hehuan Shan**	1.05	276	P	Pb	14 58 56.4	-0.4
	baz=262						
WHF				*e*S	Sn	14 59 10.8	-0.4
	baz=262						
HGSD	**Ruisui**	1.05	239	*e*P	Pb	14 58 56.0	-0.7
	baz=237						
HGSD				*e*S	Sn	14 59 10.8	+0.1
	baz=237						
TIPB	**Shuangxi**	1.07	331	P	Pb	14 58 56.6	-0.4
	baz=327						
TIPB				S	Sb	14 59 10.3	-0.2
	baz=327						
EHY	**Hungye**	1.12	242	P	Pn	14 58 57.3	-0.4
	baz=240						
EHY				S	Sb	14 59 12.1	0.0
	baz=240						
CHGB	**Renai**	1.12	271	*e*P	Pn	14 58 57.7	-0.2
	baz=257						
CHGB				*e*S	Sb	14 59 12.1	-0.2
	baz=257						
YHNB	**Yeheng**	1.13	304	P	Pn	14 58 57.9	0.0
	baz=288						
YHNB				*e*S	Sb	14 59 11.9	-0.4
	baz=288						
TWT	**Tachien**	1.14	281	*e*S	Sn	14 59 13.7	+0.5
	baz=266						
NSK	**Sanguang**	1.15	304	*e*P	Pn	14 58 58.1	0.0
	baz=288						
NSK				*e*S	Sn	14 59 13.1	-0.1
	baz=288						
NWF	**Wu-fen Shan**	1.18	331	*e*P	Pn	14 58 58.4	-0.1
	baz=328						
NWF				*e*S	Sn	14 59 14.5	+0.6
	baz=328						
WFSB	**Wu-fen Shan**	1.18	331	*e*P	Pn	14 58 58.2	-0.2
	baz=328						
WFSB				*e*S	Sn	14 59 13.7	-0.1
	baz=328						
VWDT	**VWDT**	1.19	256	P	Pn	14 58 58.6	0.0
	baz=242						
VWDT				*e*S	Sb	14 59 13.2	-0.8
	baz=242						
TWA	**Mucha**	1.20	322	P	Pb	14 58 59.4	+0.2
	baz=328						
TWA				*e*S	Sn	14 59 14.3	-0.1
	baz=328						
YULB	**Yu-li**	1.20	238	P	Pn	14 58 58.0	-0.8
	baz=226						
YULB				*e*S	Sb	14 59 13.9	-0.5
	baz=226						
NHDH	**Xindian Distri**	1.22	319	*e*P	Pb	14 59 00.2	+0.6
	baz=306						
NHDH				*e*S	Sn	14 59 15.5	+0.6
	baz=306						
TWF1	**Yuli**	1.22	236	*e*P	Pn	14 58 58.2	-0.8
	baz=234						
TWF1				*e*S	Sb	14 59 14.7	-0.3
	baz=234						
IRIF	**Iriomote-Funau**	1.25	76	P	Pb	14 58 59.8	-0.2
IRIF				*e*S	Sb	14 59 16.4	+0.8
TATO	**Taipei**	1.25	318	P	Pb	14 59 00.3	+0.2
	baz=314						
TATO				*e*S	Sb	14 59 16.3	+0.5
	baz=314						
HATJ	**Hateruma jima**	1.28	89	*e*S	Sn	14 59 15.8	-0.6
WLTB	**Daxi**	1.33	308	*e*S	Sb	14 59 19.2	+1.3
	baz=292						
CHKT	**Chengkung**	1.33	226	*e*S	Sn	14 59 15.8	-1.9
	baz=225						
YM01	**YM01**	1.34	326	P	Pb	14 59 01.4	-0.2
	baz=322						
YM01				*e*S	Sb	14 59 18.7	+0.3
	baz=322						
SSLB	**Suanglung**	1.35	260	*e*P	Pn	14 59 00.6	-0.2
	baz=257						
SSLB				*e*S	Sn	14 59 18.2	+0.1
	baz=257						
DPDB	**Guoxing**	1.35	270	*e*P	Pn	14 59 01.1	+0.3
	baz=259						
DPDB				*e*S	Sn	14 59 18.1	-0.1
	baz=259						
YM10	**YM10**	1.35	326	*e*P	Pn	14 59 00.6	-0.3
	baz=322						
YM10				*e*S	Sb	14 59 18.7	0.0
	baz=322						
YM05	**YM05**	1.36	326	*e*P	Pn	14 59 01.1	+0.2
	baz=322						
YM05				*e*S	Sb	14 59 18.9	0.0
	baz=322						
YM04	**YM04**	1.36	325	*e*P	Pn	14 59 01.3	+0.3
	baz=335						
YM04				*e*S	Sn	14 59 18.1	-0.4
	baz=335						
YM08	**YM08**	1.36	327	*e*P	Pn	14 59 01.4	+0.4
	baz=323						
YM03	**YM03**	1.38	325	*e*S	Sn	14 59 19.0	0.0
	baz=321						
SMLT	**Sun Moon Lake**	1.38	264	*e*P	Pb	14 59 02.2	-0.2
	baz=251						
SMLT				*e*S	Sn	14 59 18.4	-0.7
	baz=251						
ANP	**Anpu**	1.40	325	*e*P	Pn	14 59 01.6	+0.1
	baz=321						
LIOB	**Emei**	1.40	296	*e*P	Pn	14 59 01.8	+0.2
	baz=292						
LIOB				*e*S	Sb	14 59 20.8	+0.6
	baz=292						
NSTT	**Nanjuang**	1.41	295	*e*P	Pb	14 59 02.7	-0.1
	baz=292						
NSTT				*e*S	Sb	14 59 20.2	-0.2
	baz=292						
TYC	**Yuchr**	1.42	265	*e*P	Pn	14 59 02.2	+0.5
	baz=262						
TYC				*e*S	Sb	14 59 20.3	-0.3
	baz=262						
TWY	**Chenhua**	1.43	329	*e*P	Pn	14 59 01.8	-0.2
	baz=325						
TWY				*e*S	Sb	14 59 21.6	+0.6
	baz=325						
YUS	**Yu-Shan**	1.44	248	*e*P	Pn	14 59 02.9	+0.4
	baz=246						
YUS				*e*S	Sn	14 59 20.3	-0.6
	baz=246						
WHYT	**Xinyi Township**	1.46	257	*e*P	Pb	14 59 03.2	-0.5
	baz=254						
JKRS	**Kuro-shima**	1.48	82	P	Pb	14 59 04.6	+0.6
JKRS				*e*S	Sb	14 59 23.9	+1.6
TWQ1	**Liyutan**	1.52	282	*e*P	Pb	14 59 04.7	0.0
	baz=279						
TWQ1				*e*S	Sb	14 59 25.0	+1.4
	baz=279						
ELDTW	**Lidau**	1.53	237	*e*P	Pn	14 59 03.1	-0.3
	baz=234						
WJS	**Zhushan**	1.55	262	*e*P	Pb	14 59 05.2	0.0
	baz=260						
WJS				*e*S	Sb	14 59 26.3	+2.0
	baz=260						
WNT	**Mingjian**	1.58	265	*e*S	Sb	14 59 25.5	+0.2
	baz=262						
TCU	**Taichung**	1.58	274	*e*S	Sb	14 59 26.8	+1.5
	baz=272						
JIJ	**Ishigaki jima**	1.62	78	P	Pn	14 59 04.6	+0.1
JIJ				*e*S	Sb	14 59 25.8	-0.6
TWGBT	**Beinan**	1.72	225	*e*P	Pn	14 59 05.5	-0.4
	baz=236						
TWG	**Pinlang**	1.72	226	*e*P	Pn	14 59 05.8	-0.1
	baz=236						
WDLH	**Douliu**	1.74	259	*e*P	Pb	14 59 08.2	-0.3
	baz=257						
WDLH				*e*S	Sb	14 59 31.4	+1.5
	baz=257						
STYT	**Tauyuan**	1.74	240	*e*P	Pn	14 59 06.8	+0.5
	baz=229						
STYT				*e*S	Sn	14 59 28.4	+0.5
	baz=229						
WTP	**Ta-pu**	1.82	245	*e*P	Pn	14 59 08.2	+0.9
	baz=244						
WTP				*e*S	Sb	14 59 32.2	0.0
	baz=244						
JISG	**Ishigakijimahi**	1.82	72	P	Pn	14 59 07.7	+0.4
JISG				*e*S	Sn	14 59 29.6	-0.2
RLNB	**Erlin**	1.88	266	*e*S	Sb	14 59 33.9	+0.1
	baz=264						
TWK	**Hsinying**	1.92	247	*e*P	Pn	14 59 09.8	+1.2
	baz=246						
TWK				*e*S	Sb	14 59 34.4	-0.7
	baz=246						
SLGT	**Liugui**	1.92	238	*e*P	Pn	14 59 10.0	+1.4
	baz=228						
SLGT				*e*S	Sb	14 59 34.5	-0.5
	baz=228						
WTCT	**Ta-ch'eng**	1.95	265	*e*S	Sb	14 59 35.8	-0.1
	baz=263						
ECL	**Taimali**	1.96	223	*e*S	Sn	14 59 33.1	0.0
	baz=234						
WSF	**Szhu**	2.04	259	*e*S	Sb	14 59 38.2	-0.2
	baz=258						
SSD	**Sandimen**	2.08	232	*e*P	Pn	14 59 10.8	0.0
	baz=226						
SSD				*e*S	Sn	14 59 37.1	+1.1
	baz=226						
MASBT	**Mashibuluo**	2.16	229	*e*P	Pn	14 59 12.4	+0.5
	baz=223						
MASBT				*e*S	Sn	14 59 39.7	+1.6
	baz=223						
JTJ	**Tarama**	2.18	74	*e*S	Sn	14 59 39.6	+1.0
EAST	**Anshuo**	2.18	221	*e*P	Pn	14 59 12.2	0.0
	baz=221						

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*ISK **23** 15:00:36.9, 41°.73N×32°.49E, h2^{km}, ML2.5/10*
*ISCJB **23** 15:00:38.0±0.6, 41°.71N±0°.06×32°.48E±0°.04, h8^{km}±5^{km}, Error ellipse: s-maj=10.7km s-min=3.9km az=157.7*
*DDA **23** 15:00:38.1, 41°.59N×32°.46E, h7^{km}±4^{km}, ML2.7*
ISC 23 15:00:37.9±0.9, **41°.68N**±0°.05×**32°.48E**±0°.03, **h11**^{km}±8^{km}, **n21**, σ**0.^{s}78**/28, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTIN	**Bartın**	0.18	255	*i* P	Pg	15 00 42.4	+0.6
BTIN				*i* S	Sg	15 00 45.3	+0.7
KURC	**Kurucasile-Bar**	0.26	50	PG	Pg	15 00 42.4	-0.8
KURC				SG	Sg	15 00 46.3	-0.5
KDZE	**Karadeniz Ereo**	0.86	245	PG	Pb	15 00 54.8	-0.1
BCAM	**Yenicaga**	0.92	200	*i* P	Pn	15 00 56.5	-0.4
BCAM				*i* S	Sg	15 01 07.0	-0.7
YIGI	**Dzce**	1.06	228	*i* P	Pb	15 00 57.9	-0.3
YIGI				*i* S	Sb	15 01 11.7	-0.3
YIGI				IAML_P			
	comp=Z,1μm,0.2s						
ILGA	**Ilgaz**	1.12	124	*i* P	Pb	15 00 59.3	-0.2
ILGA				*i* S	Sb	15 01 14.8	+0.5
BZK	**Bozkurt**	1.17	76	PN	Pg	15 00 59.4	-1.1
BZK				SN	Sn	15 01 16.7	+0.5
KIBS	**BOLU**	1.35	201	*i* P	Pb	15 01 03.6	+0.4
KIBS				IAML_P			
	comp=Z,594nm,0.3s						
CANT	**Cankiri**	1.38	141	PN	Pg	15 01 04.4	0.0
SAHE	**Sakarya_HENDEK**	1.48	236	*i* P	Pn	15 01 04.2	-0.3
SAHE				*i* S	Sg	15 01 25.4	-0.1
SAHE				IAML_P			
	comp=Z,185nm,0.2s						
MDUB	**Mudurnu**	1.55	219	PN	Pg	15 01 07.1	-0.6
BTAS	**Taskesti**	1.57	226	*i* P	Pg	15 01 07.6	-0.6
KAND	**Kocaeli-Kandir**	1.82	252	*i* P	Pn	15 01 09.2	+0.1
ANTO	**Ankara**	1.83	172	PN	Pb	15 01 11.0	-0.4
SAUV	**Serdivan-Sakar**	1.88	241	PN	Pb	15 01 11.8	-0.4
GULT	**Gulveren**	1.94	231	PN	Pb	15 01 12.5	-0.8
AUMIH	**MIHALICIK**	1.96	203	PN	Pb	15 01 12.9	-0.9
DIKM	**Dikmen**	2.08	90	PN	Pn	15 01 13.9	+1.1
SRCK	**Saricakaya, Es**	2.16	221	PN	Pb	15 01 15.9	-1.1
SILT	**Sile**	2.20	257	PN	Pn	15 01 15.9	+1.6
CORM	**Corum**	2.22	132	PN	Pn	15 01 16.3	+1.6

MAN 23 15:01:40.1, 18°.12N×120°.67E, h57^{km}, mb4.4, ML3.2, MS3.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	**Callao Caves**	1.17	111	⇑*i*P	Pn	15 02 01.8	+1.4
CVP				*i* S	Sn	15 02 16.7	+1.3

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*NIED **23** 15:13:00, 37°.70N×142°.10E, h32^{km}, Mw3.4 Best double couple: $M_0$1.29000×10^{14} NP1:ϕ_s197.00000°, δ33.00000°, λ-61.00000°. NP2:ϕ_s343.00000°, δ62.00000°, λ-107.00000°.*
JMA 23 15:13:06.3±0.1, **37°.74N**×**142°.08E**, **h34**^{km}±3^{km}, **M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.75	320	P	Pn	15 13 20.6	+0.1
JIKH				S	Sn	15 13 30.1	-0.5
JIO	**Ouri**	0.92	321	P	Pn	15 13 23.2	+0.4
JIO				S	Sn	15 13 34.7	-0.1
JMST	**Minamisoumatoc**	0.95	269	P	Pn	15 13 23.3	+0.2
JMST				S	Sn	15 13 35.4	0.0
JMM	**Marumori**	1.03	277	P	Pn	15 13 24.7	+0.4
JMM				S	Sn	15 13 37.8	+0.3
JFK	**Kawauchi**	1.03	249	P	Pn	15 13 24.4	+0.1
JFK				S	Sn	15 13 37.4	-0.2
JOU	**Okura**	1.28	300	P	Pb	15 13 29.0	-0.9
JOU				*e*S	Sb	15 13 45.1	-1.0
JMK	**Ichinoseki**	1.39	331	P	Pn	15 13 29.9	+0.7
JMK				S	Sn	15 13 46.6	+0.2
JFT	**Otama**	1.40	261	P	Pb	15 13 30.9	-1.0
JFT				S	Sb	15 13 48.8	-0.7
JYS	**Shirataka**	1.66	287	P	Pb	15 13 35.1	-1.2
JYS				*e*S	Sn	15 13 54.8	+1.6
JYK	**Kaneyama**	1.79	312	P	Pn	15 13 36.3	+1.5
JYK				*e*S	Sb	15 13 59.2	-1.5
JOM	**Ohasama**	1.84	341	P	Pn	15 13 36.4	+1.0
JOM				*e*S	Sn	15 13 59.2	+1.7
JFY	**Yanaizu**	1.92	261	P	Pn	15 13 37.5	+1.0
JFY				*e*S	Sn	15 14 01.4	+1.9
JRG	**Rokugo**	2.00	326	P	Pn	15 13 39.6	+1.9
JRG				*e*S	Sb	15 14 05.1	-1.6
JYA	**Atsumi**	2.05	295	P	Pn	15 13 40.0	+1.6
MAT	**Matsushiro**	3.32	250	P	Pn	15 13 59.8	+4.0
MAT				S	Sb	15 14 40.0	-4.4

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*MIRAS **23** 15:28:04.1±0.0, 60°.50N×59°.57E, h1^{km}, ML3.3/3*
*NNC **23** 15:28:10.4±1.4, 59°.61N×60°.84E, h0^{km}, mb3.7, mpv3.7, Error ellipse: s-maj=12.0km s-min=7.7km az=156.0*
ISC 23 15:28:02.5±2.1, **60°.2N**±0°.1×**60°.36E**±0°.08, **h10**^{km}, **n6**, σ**2.^{s}18**/12, **5C-3D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PR1R	**Pomanovo**	2.09	243	*e*P	Pn	15 28 37.7	+0.2
	baz=228						
PR1R				*e*S	Sn	15 29 03.7	+0.2
	405nm,0.5s,baz=228						
KAUR	**Kamensk Uralsk**	3.81	170	*e*P	Pb	15 29 09.2	-0.5
	baz=165						
KAUR				*e*S	Sb	15 29 59.4	+3.6
	260nm,0.6s,baz=165						
ARU	**Arti**	3.88	195	*e*P	Pb	15 29 09.7	-1.2
	baz=188						
ARU				*e*S	Sb	15 29 57.9	0.0
	66nm,0.6s,baz=188						
BRVK	**Borovoye**	8.98	138	⇓Pn	Pn	15 30 13.7	+1.5
	2.8nm,0.8s						
BRVK				⇑Sn	Sn	15 31 49.7	-3.6
	3.8nm,0.8s						
AKTO	**Aktyubinsk**	9.86	189	⇑Pn	Pn	15 30 25.8	+1.6
	1.3nm,0.8s						
AKTO				⇓Sn	Sn	15 32 13.1	-1.6
	2.3nm,0.7s						
AKTO				⇓Lg	Lg	15 33 07.4	
	9.8nm,1.0s						
AB31	**Akbulak array**	10.95	181	⇑Pn	Pn	15 30 40.5	+1.4
	0.7nm,0.6s,baz=49,slow=38,SNR=16						
AB31				⇑Sn	Sn	15 32 39.3	-2.2
	0.5nm,0.5s,baz=346,slow=25,SNR=5.8						
AB31				⇑Lg	Lg	15 33 40.6	
	3.7nm,0.7s,baz=6.9,slow=24,SNR=5.5						

MEX 23 15:44:50.9±0.9, **14°.13N**×**91°.93W**, **h21**^{km}±33^{km}, **MD3.8, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.84	337	*e*P	Pb	15 45 04.7	-2.0
THIG				*i* S	Sb	15 45 15.1	-2.5
PCIG		2.00	322	*e*P	Pn	15 45 20.9	-2.6
PCIG				*i* S	Sn	15 45 43.1	-4.7
CCIG	**Comitan**	2.15	355	*e*P	Pn	15 45 23.8	-1.9
CCIG				*i* S	Sn	15 45 48.6	-3.2
TGIG		2.87	337	*e*P	Pn	15 45 33.8	-1.8
TGIG				*i* S	Sn	15 46 06.4	-3.1
CMIG	**Matias Romero**	4.09	316	*i* P	Pn	15 45 50.6	-1.7
CMIG				*e*S	Sn	15 46 36.0	-3.6

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*IDC **23** 15:45:09.1±0.8, 4°.72S×102°.52E, h0^{km}, mb4.3/15, mb1 4.4/15, mb1mx4.1/45, mbtmp4.3/15, MS3.0/2, Ms1 3.1/2, ms1mx2.6/29, Error ellipse: s-maj=37.4km s-min=13.8km az=50.0*
*ISCJB **23** 15:45:14.9±0.7, 4°.79S±0°.06×102°.54E±0°.04, h62^{km}±5^{km}, mb4.4/23, Error ellipse: s-maj=11.2km s-min=3.9km az=35.0*
*NEIC **23** 15:45:15.6±0.9, 4°.72S×102°.52E, h47^{km}±7^{km}, mb4.5/9, Error ellipse: s-maj=14.0km s-min=5.0km az=47.0*
*DJA **23** 15:45:16.1±0.3, 5°S±2°×10°3E±°, h30^{km}±3^{km}, M4.4/18, mb4.5/6, MLv4.4/18*
ISC 23 15:45:15.9±1.1, **4°.76S**±0°.06×**102°.59E**±0°.05, **h51**^{km}±9^{km}, **n76**, σ**1.^{s}17**/84, **mb4.4**/23, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	**Manna**	0.54	42	*e*Pn	Pn	15 45 27.9	+0.3
MNAI	**Manna**	0.54	42	P	Pn	15 45 28.0	+0.4
MNAI				S	Sn	15 45 35.5	-0.6
LHSI	**Lahat**	1.31	45	P	Pn	15 45 39.3	+1.5
LHSI				S	Sn	15 45 56.9	+2.7
LWLI	**Liwa**	1.48	100	P	Pn	15 45 40.8	+0.5
LWLI				S	Sn	15 45 58.1	-0.5
MDSI	**Maura Dua**	1.60	80	P	Pn	15 45 42.6	+0.8
MDSI				S	Sn	15 46 02.6	+1.2
KLSI		2.13	88	P	Pn	15 45 50.6	+1.6
KLSI				S	Sn	15 46 16.0	+1.7
KLI	**Kotabumi**	2.26	93	P	Pn	15 45 54.1	+3.3
BLSI	**Bandar Lampung**	2.71	103	P	Pn	15 45 58.6	+1.6
BLSI				S	Sn	15 46 30.3	+1.7
PMBI	**Palembang**	2.84	50	P	Pn	15 46 10.7	+12
KRJI	**Kerinci**	2.88	337	P	Pn	15 46 01.9	+2.5
KRJI				S	Sn	15 46 35.8	+2.9
PPSI	**Pulau Pagai**	3.25	307	P	Pn	15 46 05.8	+1.4
PPSI				S	Sn	15 46 43.3	+1.4
JMBI	**JAMBI**	3.28	19	P	Pn	15 46 06.5	+1.7
CGJI	**Cibinong**	3.59	121	P	Pn	15 46 09.7	+0.6
CGJI				S	Sn	15 46 47.4	-2.9
SDSI	**Sungai Dareh**	3.98	343	P	Pn	15 46 14.5	+0.2
PDSI	**Padang**	4.37	331	P	Pn	15 46 21.0	+1.1
PDSI				S	Sn	15 47 09.6	0.0
PPBI	**Pangkal Pinang**	4.38	54	P	Pn	15 46 17.5	-2.4
RGRI	**Rengat**	4.39	357	P	Pn	15 46 21.4	+1.4
DSRI	**Dabo**	4.69	25	P	Pn	15 46 26.4	+2.2
SISI	**Saibi**	4.88	314	P	Pn	15 46 27.8	+1.0
SISI				S	Sn	15 47 21.0	-1.1
TPI	**Tanjungpandan**	5.43	69	P	Pn	15 46 35.2	+0.9
CISI	**Cisompet, Garu**	5.89	118	*e*Pn	Pn	15 46 41.1	+0.4
CISI	**Cisompet, Garu**	5.89	118	P	Pn	15 46 40.6	-0.1
CMJI	**Cimerak**	6.55	118	P	Pn	15 46 49.8	+0.1
MYKOM	**Kota Tinggi**	6.63	11	*e*Pn	Pn	15 46 48.5	-2.2
GSI	**Gunungsitoli**	7.83	320	*e*Pn	Pn	15 47 06.7	-0.6
GSI	**Gunungsitoli**	7.83	320	P	Pn	15 47 07.0	-0.3
PSI	**Prapat**	8.36	334	LR	LR	15 50 49.0	
	comp=Z,91nm,19.3s,baz=142,slow=42						
UGM	**Wanagama**	8.48	112	*e*Pn	Pn	15 47 17.2	+0.9
KCSI	**Kotacane, Aceh**	9.53	330	P	Pn	15 47 28.2	-2.4
MLSI	**Meulaboh, Aceh**	10.89	325	P	Pn	15 47 47.9	-1.3
JAGI	**Jajag, Banyuwa**	12.06	108	P	Pn	15 47 54.1	-11
BATI	**Baumata**	21.57	106	P	P	15 50 01.0	-0.5
	24nm,0.6s,baz=297,slow=11,SNR=2.9						
CMAR	**Chiang Mai Arr**	23.35	351	P	P	15 50 19.1	-0.8
	3.2nm,0.6s,baz=181,slow=8.9,SNR=16						
CMAR				LR	LR	16 00 14.4	
	comp=Z,34nm,19.9s,baz=188,slow=39						
H08S2	**Diego Garcia H**	30.05	263	T	T	16 22 46.4	
	baz=86,slow=75,SNR=3.7						
H08S3	**Diego Garcia H**	30.06	263	T	T	16 22 45.1	
	baz=86,slow=75,SNR=5.1						
H08S1	**Diego Carcia H**	30.07	263	T	T	16 22 45.6	
	baz=86,slow=75,SNR=4.9						
H01W3	**Cape Leeuwin H**	31.82	162	T	T	16 25 25.6	
	baz=339,slow=76,SNR=6.6						
H01W2	**Cape Leeuwin H**	31.84	162	T	T	16 25 26.0	
	baz=339,slow=76,SNR=6.4						
H01W1	**Cape Leeuwin H**	31.84	162	T	T	16 25 25.3	
	baz=339,slow=76,SNR=5.9						
WR1	**Warramunga Arr**	34.39	119	*e*P	P	15 51 58.5	0.0
WR1				*e*PcP	PcP	15 54 34.0	+0.4
WRA	**Warramunga Arr**	34.39	119	P	P	15 51 58.5	0.0
	2.1nm,0.7s,baz=292,slow=11,SNR=12						
WRA				PcP	PcP	15 54 34.0	+0.4
	1.2nm,0.8s,baz=309,slow=2.8,SNR=3.1						
ASAR	**Alice Springs**	35.55	125	P	P	15 52 09.2	+0.6
	0.8nm,0.5s,baz=292,slow=7.6,SNR=13						
ASAR				PcP	PcP	15 54 37.8	+0.9
	0.4nm,0.5s,baz=289,slow=2.3,SNR=4.8						
AS31	**Alice Springs**	35.55	125	*e*P	P	15 52 08.9	+0.3
	2.0nm,1.2s						
STKA	**Stephens Creek**	45.40	131	P	P	15 53 30.7	+1.0
	2.3nm,0.7s,baz=302,slow=7.5,SNR=6.3						
STKA	**Stephens Creek**	45.40	131	*e*P	P	15 53 30.4	+0.8
	3.7nm,1.6s						
NIL	**Nilore**	47.22	326	*e*P	P	15 53 43.6	-0.4
	8.1nm,0.7s						
SONA0	**Songino Array**	52.48	3	*e*P	P	15 54 24.2	+0.4
SONA0				*e*PcP	PcP	15 55 33.8	0.0
SONM	**Songino Array**	52.48	3	P	P	15 54 24.2	+0.4
	3.6nm,0.9s,baz=182,slow=9.0,SNR=15						
SONM				PcP	PcP	15 55 33.8	0.0
	1.1nm,0.5s,baz=186,slow=4.3,SNR=2.9						
MK31	**Makanchi Array**	54.39	343	*e*P	P	15 54 37.2	-0.4
	3.1nm,0.6s						
MK32	**Makanchi Array**	54.39	343	*e*P	P	15 54 37.5	-0.2
MKAR	**Makanchi Array**	54.39	343	P	P	15 54 37.5	-0.2
	4.9nm,0.6s,baz=154,slow=8.7,SNR=49						
USRK	**Ussuriysk Ar.**	55.44	25	P	P	15 54 45.0	-0.2
	2.0nm,0.6s,baz=216,slow=4.9,SNR=12						
KURBB	**Kurchatov Arra**	58.93	342	P	P	15 55 09.6	-0.2
	2.4nm,0.8s,baz=159,slow=6.6,SNR=14						
KURBB				PcP	PcP	15 55 59.2	+0.7
	0.3nm,0.4s,baz=157,slow=3.3,SNR=4.2						
KURK	**Kurchatov**	58.98	342	*e*P	P	15 55 09.2	-0.9
	4.1nm,0.8s						
ZAA0	**Zalesovo Array**	60.36	348	*e*P	P	15 55 18.5	-1.1
	7.5nm,0.7s						
ZALV	**Zalesovo Beam**	60.36	348	P	P	15 55 19.0	-0.6
	8.1nm,0.5s,baz=166,slow=5.5,SNR=40						
BRVK	**Borovoye**	63.72	339	*e*P	P	15 55 41.0	-1.2
	1.9nm,0.8s						
ABKAR	**Akbulak array**	65.29	331	*e*P	P	15 55 51.7	-0.8
	5.5nm,0.8s						
KBZ	**Khabaz**	72.07	319	P	P	15 56 35.1	+0.2
	1.3nm,0.6s,baz=102,slow=8.9,SNR=3.9						
BR101	**Keskin Array S**	77.08	312	*e*P	P	15 57 04.2	0.0
BRTR	**Keskin Array B**	77.08	312	P	P	15 57 04.2	0.0
	1.2nm,0.7s,baz=128,slow=7.4,SNR=8.7						
AKASG	**Malin Array Be**	83.23	322	P	P	15 57 36.6	-0.3
	0.5nm,0.4s,baz=90,slow=4.9,SNR=3.3						
AKBB	**Malin Array Si**	83.23	322	*e*P	P	15 57 37.2	+0.3
	9.4nm,1.4s						
FIA0	**FINESS Array S**	87.74	332	*e*P	P	15 57 59.4	+0.3
FINES	**FINESS Array B**	87.74	332	P	P	15 57 59.4	+0.3
	1.5nm,0.5s,baz=98,slow=7.9,SNR=13						
ARA0	**ARCESS Array S**	89.93	340	*e*P	P	15 58 09.7	+0.4
ARCES	**ARCESS Array B**	89.93	340	P	P	15 58 09.7	+0.4
	3.2nm,1.0s,baz=86,slow=3.7,SNR=3.3						
NV01	**Mina Array Sit**	129.99	42	*e*PKPdf	PKiKP	16 04 22.3	+0.7
NVAR	**Mina Array Bea**	129.99	42	PKP	PKiKP	16 04 22.3	+0.7
	0.3nm,0.5s,baz=296,slow=2.7,SNR=2.2						

N53A	Lisbon	143.98	4	*e*PKPpre	PKPab	16 04 40.2	-3.3
N53A				*e*PKPdf	PKPdf	16 04 45.3	-0.9
TX31	Lajitas Ar. Si	145.14	43	*e*PKPbc	PKPab	16 04 48.5	+0.2
LTX	Lajitas	145.14	43	*e*PKPbc	PKPdf	16 04 48.9	+0.2
TXAR	Lajitas Array	145.14	43	PKPbc	PKPdf	16 04 48.9	+0.2
	2.0nm,0.6s,baz=279,slow=1.1,SNR=33						
Q51A	Peebles	145.47	8	*e*PKPbc	PKPdf	16 04 48.3	-0.5
WVT	Waverly	147.34	16	*e*PKPbc	PKPbc	16 04 54.1	-0.4
Y49A	Blount Mountai	149.86	15	*e*PKPbc	PKPbc	16 05 00.2	-0.9

MAN 23 15:47:00.3, 7°.31N×124°.84E, h23^{km}, mb4.2, ML3.0, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	0.60	261	⇑*i*P	Pb	15 47 12.5	+0.4
CTBH				*i* S	Sb	15 47 20.6	+0.4

MAN 23 15:49:24.7, 6°.72N×123°.78E, h36^{km}, mb4.5, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	0.68	43	⇓*i*P	Pn	15 49 34.5	-3.4
CTBH				*i* S	Sn	15 49 40.0	-7.2

ISCJB ***23*** *15:56:49.1±1.1, 15°.3S±0°.1×167°.8E±0°.2, h250^{km}, mb3.9/6, Error ellipse: s-maj=25.6km s-min=15.3km az=0.9*

IDC ***23*** *15:56:52.3±3.3, 15°.49S×167°.77E, h261^{km}±33^{km}, mb3.6/6, mb1 3.6/7, mb1mx3.4/34, mbtmp4.1/7, Error ellipse: s-maj=23.3km s-min=22.3km az=153.0*

ISC 23 15:56:50.9±1.1**, 15°.4S**±0°.1×**167°.8E**±0°.2**, h250^{km}, n8, σ1^{s}.50**/9**, mb3.9**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.76	191	P	Pn	15 58 27.5	-1.1
	0.6nm,0.3s,baz=18,slow=19,SNR=9.6						
DZM				S	S	15 59 49.1	+2.0
	baz=104,slow=19,SNR=2.6						
URZ	Urewera	24.20	162	P	P	16 01 44.6	-0.1
	2.4nm,0.4s,baz=318,slow=2.7,SNR=3.9						
STKA	Stephens Creek	28.98	231	P	P	16 02 27.9	+0.3
	3.0nm,0.6s,baz=43,slow=7.7,SNR=14						
WRA	Warramunga Arr	32.19	257	P	P	16 02 54.9	-1.0
	0.4nm,0.3s,baz=79,slow=8.2,SNR=4.9						
ASAR	Alice Springs	32.94	250	P	P	16 03 01.4	-1.0
	1.0nm,0.5s,baz=78,slow=8.7,SNR=33						
ASAJ	Asahikawa	63.55	340	P	P	16 06 57.0	+2.2
	5.5nm,0.5s,baz=239,slow=4.6,SNR=12						
ILAR	Eielson Array	87.00	18	P	P	16 09 06.4	-1.1
	0.5nm,0.6s,baz=237,slow=4.9,SNR=5.2						
ARCES	ARCESS Array B	121.03	345	PKP	PKPdf	16 15 13.2	+0.2
	3.5nm,1.1s,baz=58,slow=3.4,SNR=7.1						

IDC ***23*** *15:59:25.4±0.5, 54°.41N×167°.48E, h0^{km}, mb4.4/30, mb1 4.6/32, mb1mx4.6/39, mbtmp4.4/32, ML4.1/2, MS3.6/23, Ms1 3.7/23, ms1mx3.5/37, Error ellipse: s-maj=15.6km s-min=10.0km az=155.0*

KRSC ***23*** *15:59:26.8±1.8, 54°.21N×167°.42E, h63^{km}±39^{km}, ML5.1*

BJI ***23*** *15:59:26.4±0.0, 54°.59N×167°.45E, h17^{km}, mb4.6/36, mB4.8/30, Ms4.4/21, Ms7 4.2/17*

ISCJB ***23*** *15:59:28.5±0.4, 54°.34N±0°.02×167°.46E±0°.02, h33^{km}±3^{km}, mb4.8/280, MS3.8/29, Error ellipse: s-maj=4.0km s-min=2.2km az=177.0*

NEIC ***23*** *15:59:29.0±0.8, 54°.44N×167°.43E, h22^{km}±5^{km}, mb4.9/232, Error ellipse: s-maj=3.7km s-min=1.8km az=171.0*

MOS ***23*** *15:59:29.0±0.9, 54°.33N×167°.46E, h37^{km}, mb5.0/58, MS3.5/8, Error ellipse: s-maj=4.9km s-min=4.5km az=117.3*

ISC 23 15:59:29.6±0.6**, 54°.29N**±0°.04×**167°.46E**±0°.03**, h30^{km}**±4^{km}**, n790, σ1^{s}.16**/837**, mb4.8**/282**, MS3.8**/29**, 3C-6D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.26	318	*e*P	Pn	15 59 47.6	-3.6
BKI				*e*S	Sb	16 00 05.3	-3.3
BKI	Bering	1.26	318	PN	Pn	15 59 47.6	-3.6
BKI				S	Sb	16 00 05.3	-3.3
KBTR	Krutoberegovo	3.28	308	*e*P	Pn	16 00 18.2	-0.8
KBTR				*e*S	Sn	16 00 56.6	-0.3
KBTR	Krutoberegovo	3.28	308	PN	Pn	16 00 18.2	-0.8
KBTR				S	Sn	16 00 56.6	-0.3
MKZ	Mys Kozlova	3.36	277	*e*P	Pn	16 00 19.6	-0.4
MKZ				*e*S	Sn	16 00 56.4	-2.4
MKZ	Mys Kozlova	3.36	277	PN	Pn	16 00 19.6	-0.4
KBG	Krutoberegovo	3.36	308	*e*P	Pn	16 00 20.2	+0.2
KBG				S	Sn	16 00 57.4	-1.5
KBG	Krutoberegovo	3.36	308	PN	Pn	16 00 20.2	+0.2
KBG				S	Sn	16 00 57.4	-1.5
SMKR	Semkarok	4.12	306	*e*S	Sn	16 01 20.1	+2.5
TUMD	Tumrok D	4.19	286	*e*P	Pn	16 00 31.7	+0.2
TUMD				*e*S	Sn	16 01 18.9	-0.6
BDR	Baidarnaya	4.23	305	*e*P	Pn	16 00 34.8	+2.7
BDR				*e*S	Sn	16 01 22.1	+1.6
BDR	Baidarnaya	4.23	305	PN	Pn	16 00 34.8	+2.7
BDR				S	Sn	16 01 22.1	+1.6
KZV	Kizimen	4.24	284	*e*P	Pn	16 00 32.4	+0.1
KZV				*e*S	Sn	16 01 19.1	-1.7
KZV	Kizimen	4.24	284	PN	Pn	16 00 32.4	+0.1
SMY	Shemya	4.26	109	*e*Pn	Pn	16 00 32.1	-0.3
SMY	Shemya	4.26	109	*e*P	Pn	16 00 33.0	+0.6
SMY	Shemya	4.26	109	PN	Pn	16 00 33.0	+0.6
LGNR	Loginova	4.28	298	*e*P	Pn	16 00 33.7	+0.8
LGNR				*e*S	Sn	16 01 24.1	+2.2
LGNR	Loginova	4.28	298	PN	Pn	16 00 33.7	+0.8
LGNR				S	Sn	16 01 24.1	+2.2
SRKR	Sorokina	4.29	306	*e*P	Pn	16 00 34.8	+1.8
SRKR				*e*S	Sn	16 01 21.9	-0.1
SRKR	Sorokina	4.29	306	PN	Pn	16 00 34.8	+1.8
SRKR				S	Sn	16 01 21.9	-0.1
BZWR	Bezymyannyi-We	4.34	296	*e*P	Pn	16 00 35.2	+1.6
BZWR				*e*S	Sn	16 01 24.8	+1.6
BZWR	Bezymyannyi-We	4.34	296	PN	Pn	16 00 35.2	+1.6
BZWR				S	Sn	16 01 24.8	+1.6
TUMR	Tumrok	4.35	286	*e*P	Pn	16 00 35.4	+1.6
TUMR				*e*S	Sn	16 01 24.4	+0.9
TUMR	Tumrok	4.35	286	PN	Pn	16 00 31.7	-2.1
KLY	Klyuchi	4.39	300	*e*P	Pn	16 00 34.6	+0.4
KLY				*e*S	Sn	16 01 22.1	-2.1
KLY	Klyuchi	4.39	300	PN	Pn	16 00 34.6	+0.4
KLY				S	Sn	16 01 22.1	-2.1
KRSR	Krestovskiy	4.39	299	*e*P	Pn	16 00 35.8	+1.4
KRSR				*e*S	Sn	16 01 25.1	+0.6
KRSR	Krestovskiy	4.39	299	PN	Pn	16 00 35.8	+1.4
KRSR				S	Sn	16 01 25.1	+0.6
KIRR	Kirishev	4.41	295	*e*P	Pn	16 00 35.9	+1.2
KIRR				*e*S	Sn	16 01 26.4	+1.3
KIRR	Kirishev	4.41	295	PN	Pn	16 00 35.9	+1.2
KIRR				S	Sn	16 01 26.4	+1.3
KPT	Kopyto	4.48	295	*e*P	Pn	16 00 37.7	+2.1
KPT	Kopyto	4.48	295	PN	Pn	16 00 37.7	+2.1
SPN	Mys Shipunski	4.58	258	*e*P	Pn	16 00 36.4	-0.4
SPN				*e*S	Sn	16 01 25.0	-3.9
SPN	Mys Shipunski	4.58	258	PN	Pn	16 00 36.4	-0.4
KOZ	Kozyrevsk	4.70	295	*e*S	Sn	16 01 33.0	+1.1
SRDR	Sredinnyy	4.87	298	*e*P	Pn	16 00 43.1	+2.3
SRDR				*e*S	Sn	16 01 37.1	+0.9
SRDR	Sredinnyy	4.87	298	PN	Pn	16 00 43.1	+2.3
SRDR				S	Sn	16 01 37.1	+0.9
NLC	Nalytchevo	4.95	260	*e*P	Pn	16 00 41.2	-0.6
NLC				*e*S	Sn	16 01 33.1	-4.8
NLC	Nalytchevo	4.95	260	PN	Pn	16 00 41.2	-0.6
SDLR	Sedlovina	5.18	262	*e*P	Pn	16 00 45.3	+0.1
SDLR				*e*S	Sn	16 01 41.5	-2.5
SDLR	Sedlovina	5.18	262	PN	Pn	16 00 45.3	+0.1
SMAR	Somma	5.24	262	*e*P	Pn	16 00 46.2	+0.2
SMAR				*e*S	Sn	16 01 41.8	-3.6
SMAR	Somma	5.24	262	PN	Pn	16 00 46.2	+0.2
UGLR	Uglovaya	5.24	262	*e*P	Pn	16 00 46.5	+0.6
UGLR				*e*S	Sn	16 01 44.1	-1.2
UGLR	Uglovaya	5.24	262	PN	Pn	16 00 46.5	+0.6
KRER	Koryakskii	5.26	263	*e*P	Pn	16 00 47.0	+0.7
KRER				*e*S	Sn	16 01 41.6	-4.3
KRER	Koryakskii	5.26	263	PN	Pn	16 00 47.0	+0.7
AVH	Avacha	5.27	262	*e*P	Pn	16 00 47.1	+0.7
AVH				*e*S	Sn	16 01 45.0	-1.1
AVH	Avacha	5.27	262	PN	Pn	16 00 47.1	+0.7
ESO	Esso	5.29	292	*e*P	Pn	16 00 47.2	+0.6
ESO	Esso	5.29	292	PN	Pn	16 00 47.2	+0.6
KRX	Arik	5.30	263	*e*P	Pn	16 00 47.1	+0.2
KRX				*e*S	Sn	16 01 45.1	-1.8
KRX	Arik	5.30	263	PN	Pn	16 00 47.1	+0.2
KOK	Koryaka	5.32	263	*e*P	Pn	16 00 47.6	+0.5
KOK				*e*S	Sn	16 01 44.9	-2.6
KOK	Koryaka	5.32	263	PN	Pn	16 00 47.6	+0.5
DALK	Dalny	5.33	260	*e*P	Pn	16 00 46.8	-0.3
DALK				*e*S	Sn	16 01 43.6	-3.7
DALK	Dalny	5.33	260	PN	Pn	16 00 46.8	-0.3
PET	Petropavlovsk	5.39	260	*e*Pn	Pn	16 00 47.5	-0.4
PET	Petropavlovsk	5.39	260	PN	Pn	16 00 47.9	0.0
OSSR	Ossora	5.53	336	*e*P	Pn	16 00 49.4	-0.5
OSSR				*e*S	Sn	16 01 53.3	+0.9
OSSR	Ossora	5.53	336	PN	Pn	16 00 49.4	-0.5
GNL	Ganaly	5.65	268	*e*P	Pn	16 00 52.7	+1.1
GNL				*e*S	Sn	16 01 55.7	+0.3
GNL	Ganaly	5.65	268	PN	Pn	16 00 52.7	+1.1
KRMR	Karymshinskiy	5.75	259	*e*P	Pn	16 00 53.7	+0.9
KRMR				*e*S	Sn	16 01 55.2	-2.5
KRMR	Karymshinskiy	5.75	259	PN	Pn	16 00 53.7	+0.9
MTVR	Mutnovka	5.84	256	*e*P	Pn	16 00 55.4	+1.2
MTVR				*e*S	Sn	16 01 57.0	-3.1
MTVR	Mutnovka	5.84	256	PN	Pn	16 00 55.4	+1.2
PEA1	Petropavlovsk-	5.92	263	*e*Pn	Pn	16 00 55.9	+0.7
PEA1				*e*Sn	Sn	16 02 00.7	-1.2
PEA0B	Petropavlovsk-	5.92	262	*e*Pn	Pn	16 00 54.7	-0.5
PETK	Petropavlovsk-	5.92	262	Pn	Pn	16 00 55.9	+0.7
	41nm,0.3s,baz=82,slow=19,SNR=314						
PETK				Sn	Sn	16 02 00.7	-1.2
	34nm,0.3s,baz=83,slow=28,SNR=7.0						
ASAK	Asacha	6.04	255	*e*P	Pn	16 00 57.9	+1.0
ASAK				*e*S	Sn	16 02 01.3	-3.6
ASAK	Asacha	6.04	255	PN	Pn	16 00 57.9	+1.0
KDTR	Khodutka, Kamc	6.18	250	*e*P	Pn	16 00 58.6	-0.1
KDTR				*e*S	Sn	16 02 04.4	-3.9
KDTR	Khodutka, Kamc	6.18	250	PN	Pn	16 00 58.6	-0.1
TILK	Tilichiki	6.22	354	*e*P	Pn	16 01 00.0	+0.7
TILK	Tilichiki	6.22	354	PN	Pn	16 01 00.0	+0.7
APC	Apacha	6.28	262	*e*P	Pn	16 01 01.6	+1.4
APC				*e*S	Sn	16 02 09.9	-0.9
APC	Apacha	6.28	262	PN	Pn	16 01 01.6	+1.4
PALN	Palana	6.34	322	*e*P	Pn	16 01 03.4	+2.5
PALN				*e*S	Sn	16 02 14.9	+2.7
PALN	Palana	6.34	322	PN	Pn	16 01 03.4	+2.5
PALN				S	Sn	16 02 14.9	+2.7
PAU	Pauzhetka	7.04	251	*e*S	Sn	16 02 28.5	-0.9
SKR	Severo-Kuril's	7.81	247	*e*PN	Pn	16 01 21.8	+0.7
SKR				pmax	pmax		
	comp=Z,355nm,0.5s						
SKR				MLR	MLR		
	comp=Z,400nm,11.0s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
KMSK	Kamenskaya	8.23	356	*e*P	Pn	16 01 26.8	-0.1
KMSK				*e*S	Sn	16 02 56.6	-2.1
KMSK	Kamenskaya	8.23	356	PN	Pn	16 01 26.8	-0.1
KIWB	Kanaga Island	9.58	98	*e*Pn	Pn	16 01 46.4	+1.0
ADK	Adak	9.84	98	*e*Pn	Pn	16 01 47.9	-1.1
ADK	Adak	9.84	98	*e*PN	Pn	16 01 47.9	-1.1
GSTR	Great Sitkin T	10.13	96	*e*Pn	Pn	16 01 53.6	+0.7
MA2	Magadan	10.53	307	LR	LR	16 06 15.9	
	comp=Z,306nm,18.6s,baz=103,slow=39						
MA2	Magadan	10.53	307	*i* PN	Pn	16 01 59.3	+0.9
SEY	Seymchan	11.67	324	*i* PN	Pn	16 02 14.9	+1.0
SPIA	Saint Paul Isl	12.88	68	*e*Pn	Pn	16 02 30.4	0.0
BILL	Bilibino	13.81	358	*e*Pn	Pn	16 02 42.8	-0.4
BILL	Bilibino	13.81	358	*ce*P	Pn	16 02 44.4	+1.3
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,375nm,15.0s						
GAMB	Gambell	14.26	40	*e*Pn	Pn	16 02 48.5	-0.8
OKH	Okha	14.45	277	*de*P	P	16 02 58.6	+0.3
OKH				*e*S	Sn	16 05 26.8	-4.1
OKH				smax	smax		
	comp=N,100nm,13.9s						
UNV	Unalaska Valle	15.27	81	*e*Pn	Pn	16 03 03.1	+0.3
	comp=N,49nm,0.7s						
TYV	Tymovskoe	15.43	267	*e*P	Pn	16 03 02.0	-3.0
TYV				*e*S	Sn	16 05 53.6	-1.2
TYV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TYV				smax	smax		
	comp=E,6.0nm,1.3s						
KUR	Kuril'sk	15.52	242	P	P	16 03 10.2	0.0
KUR				S	Sn	16 05 55.0	-2.0
KUR				MLR	MLR		
	comp=Z,200nm,16.0s						
KUR				MLR	MLR		
	comp=N,300nm,13.0s						
KUR				MLR	MLR		
	comp=E,200nm,14.0s						
AKUT	Akutan	15.63	80	*e*Pn	Pn	16 03 07.8	+0.2
	comp=E,63nm,0.9s						
UGL	Uglegorsk	16.54	262	*e*P	P	16 03 25.1	+3.6
UGL				S	Sn	16 06 21.8	+0.1
UGL				pmax	pmax		
	comp=Z,41nm,1.0s						
ANM	Nome	17.08	42	*e*Pn	Pn	16 03 24.8	-1.0
	comp=Z,105nm,1.6s						
ANM	Nome	17.08	42	*e*P	Pn	16 03 24.8	-1.0
ANM				pmax	pmax		
	comp=Z,105nm,1.6s						
YSS	Yuzh-Sakhalins	17.25	255	*e*Pn	Pn	16 03 28.4	+0.4
	comp=Z,9.3nm,0.7s						
YSS	Yuzh-Sakhalins	17.25	255	*e*P	P	16 03 29.8	+0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
SDPT	Sand Point	18.43	74	*e*P	P	16 03 41.3	-0.9
	comp=Z,53nm,0.6s						
ASAJ	Asahikawa	19.07	248	P	P	16 03 50.6	+1.1
	comp=Z,1.0nm,0.3s,baz=62,slow=13,SNR=12						
ASAJ				LR	LR	16 12 22.6	
	comp=Z,103nm,18.1s,baz=17,slow=41						
GRNR	Gornyy	19.12	272	*e*P	Pn	16 03 52.3	+1.3
GRNR				pmax	pmax		
	comp=Z,13nm,1.0s						
CHGN	Chignik	19.42	70	*e*P	P	16 03 52.4	-0.8
	comp=Z,40nm,0.8s						
RDOG	Red Dog Mine	19.57	34	*e*P	Pn	16 03 55.0	-1.2
	comp=Z,18nm,0.8s						
ERM	Erimo	20.21	243	*i* P	P	16 04 04.0	+2.1
ERM				pmax	pmax		
	comp=Z,16nm,0.6s						
TTA	Tatalina	20.63	51	*e*P	P	16 04 06.6	+0.2
	comp=Z,48nm,1.0s						
TTA	Tatalina	20.63	51	*e*P	P	16 04 06.6	+0.2
TTA				pmax	pmax		
	comp=Z,48nm,1.0s						
SVW2	Sparrevohn	20.66	56	*e*P	P	16 04 06.7	-0.1
	comp=Z,13nm,0.7s						
YAK	Yakutsk	21.11	307	*e*P	P	16 04 11.4	0.0
	comp=Z,23nm,0.8s						
YAK	Yakutsk	21.11	307	*e*P	P	16 04 11.8	+0.3
YAK				*e**PP	sP	16 04 27.8	+5.2
YAK				*e*S	S	16 07 57.3	-7.2
YAK				*e**SS	pS	16 08 30.7	+14
YAK				pmax	pmax		
	comp=Z,30nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.3s						
YAK				smax	smax		
	comp=N,41nm,2.7s						
YAK				smax	smax		
	comp=E,45nm,2.4s						
YAK				MLR	MLR		
	comp=Z,149nm,23.0s						
YAK				MLR	MLR		
	comp=N,88nm,20.0s						
YAK				MLR	MLR		
	comp=E,80nm,24.0s						
TEY	Ternei	21.85	258	⇓*e*P	P	16 04 22.3	+2.7
TEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RSO	Redoubt South	22.05	58	*e*P	P	16 04 21.0	-0.8
OHAK	Old Harbor	22.07	66	*e*P	P	16 04 19.8	-2.0
	comp=Z,56nm,1.0s						
KDAK	Kodiak Island	22.36	65	P	P	16 04 22.7	-2.2
	comp=Z,16nm,0.3s,baz=310,slow=2.7,SNR=57						
KDAK				LR	LR	16 13 53.2	
	comp=Z,326nm,18.1s,baz=271,slow=39						
KDAK	Kodiak Island	22.36	65	*e*P	P	16 04 22.9	-2.0
	comp=Z,32nm,0.9s						
KDAK	Kodiak Island	22.36	65	*i* P	P	16 04 22.9	-2.0
PPLA	Purkeypile	22.37	51	*e*P	P	16 04 24.8	-0.3
	comp=Z,104nm,1.2s						
CAST	Castle Rocks	22.46	50	*e*P	P	16 04 25.0	-0.9
	comp=Z,29nm,1.1s						
KLR	Kul'dur	22.51	272	*i* P	P	16 04 27.1	+0.5
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CNPM	China Poot	22.86	60	*e*P	P	16 04 29.0	-1.3
	comp=Z,18nm,0.6s						
KTH	Kantishna Hill	22.99	50	*e*P	P	16 04 31.2	-0.4
	comp=Z,60nm,1.2s						
BPAW	Bear Paw Mtn.	23.01	48	*e*P	P	16 04 31.0	-0.7
	comp=Z,17nm,0.8s						
BRLK	Bradley Lake	23.02	59	*e*P	P	16 04 30.0	-1.9
	comp=Z,14nm,0.8s						
MLY	Manley	23.22	46	*e*P	P	16 04 33.6	-0.3
	comp=Z,41nm,1.3s						
ZEA	Zeya	23.41	285	*e*P	P	16 04 41.9	+6.1
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
RC01	Rabbit Creek A	23.50	56	*e*P	P	16 04 36.7	0.0
	comp=Z,10nm,0.8s						
BWN	Browne	23.68	48	*e*P	P	16 04 38.5	+0.2
	comp=Z,87nm,0.9s						
SEW	Seward	23.71	58	*e*P	P	16 04 36.7	-1.9
	comp=Z,25nm,0.8s						
PMR	Palmer	23.78	55	*e*P	P	16 04 38.7	-0.5
	comp=Z,17nm,1.0s						
PMR	Palmer	23.78	55	*e*P	P	16 04 38.7	-0.5
PMR				pmax	pmax		
	comp=Z,17nm,1.0s						
COLD	Coldfoot	23.81	41	*e*P	P	16 04 39.8	+0.3
	comp=Z,9.2nm,0.7s						
MCK	McKinley	23.88	49	*e*P	P	16 04 39.3	-1.0
	comp=Z,18nm,0.9s						
RND	Reindeer	23.91	50	*e*P	P	16 04 39.1	-1.5
	comp=Z,21nm,0.8s						
RND	Reindeer	23.91	50	*e*P	P	16 04 39.1	-1.5
RND				pmax	pmax		
	comp=Z,21nm,0.8s						
TIXI	Tiksi	24.00	331	P	P	16 04 39.9	-1.3
	comp=Z,17nm,0.6s,baz=112,slow=11,SNR=30						
TIXI				LR	LR	16 14 57.9	
	comp=Z,90nm,19.3s,baz=191,slow=39						
TIXI	Tiksi	24.00	331	*e*P	P	16 04 40.8	-0.4
	comp=Z,19nm,0.7s						
TIXI	Tiksi	24.00	331	*i* P	P	16 04 40.9	-0.4
TIXI				pmax	pmax		
	comp=Z,20nm,1.0s						
KNK	Knik Glacier	24.11	55	*e*P	P	16 04 41.0	-1.4
	comp=Z,29nm,1.0s						
MDM	Murphy Dome	24.27	46	*e*P	P	16 04 43.2	-0.7
	comp=Z,16nm,0.6s						
WRH	Wood River Hil	24.30	48	*e*P	P	16 04 43.2	-0.8
	comp=Z,44nm,1.0s						
TOLK	Toolik Lake Re	24.37	37	*e*P	P	16 04 44.1	-0.6
	comp=Z,102nm,0.8s						
TOLK	Toolik Lake Re	24.37	37	P	P	16 04 44.4	-0.3
	baz=256						
TCOL	CIGO, UAF Yank	24.42	47	P	P	16 04 44.8	-0.4
	baz=266						
COLA	College	24.43	47	*e*P	P	16 04 44.8	-0.5
	comp=Z,61nm,0.6s						
COLA	College	24.43	47	*d i*P	P	16 04 44.7	-0.5
COLA				pmax	pmax		
	comp=Z,40nm,0.8s						
CCB	Clear Creek Bu	24.43	47	*e*P	P	16 04 44.4	-0.9
	comp=Z,38nm,0.8s						
DHY	Denali Highway	24.57	51	*e*P	P	16 04 45.3	-1.4
	comp=Z,34nm,1.2s						
POKR	Poker Plat Res	24.62	46	P	P	16 04 46.7	-0.3
	baz=266						
HDA	Harding Lake	24.79	48	*e*P	P	16 04 46.9	-1.6
	comp=Z,21nm,0.8s						
GLI	Glacier Island	24.80	56	*e*P	P	16 04 47.6	-1.0
	comp=Z,23nm,0.8s						
ILAR	Eielson Array	24.83	47	P	P	16 04 47.8	-1.1
	comp=Z,27nm,0.6s,baz=256,slow=8.3,SNR=210						
ILAR				LR	LR	16 15 00.8	
	comp=Z,174nm,18.3s,baz=268,slow=38						
ILB	Eielson Array	24.83	47	*e*P	P	16 04 47.4	-1.5
	comp=Z,34nm,0.7s						
USRK	Ussuriysk Ar.	25.01	261	P	P	16 04 51.9	+1.3
	comp=Z,4.4nm,0.9s,baz=52,slow=11,SNR=6.1						
USRK				LR	LR	16 15 34.7	
	comp=Z,265nm,19.1s,baz=45,slow=39						
PAX	Paxson	25.44	51	*e*P	P	16 04 53.4	-1.1
	comp=Z,28nm,1.2s						
PAX	Paxson	25.44	51	*e*P	P	16 04 53.4	-1.1
PAX				pmax	pmax		
	comp=Z,28nm,1.2s						
PRP	Porcupine Dome	25.45	45	*e*P	P	16 04 54.1	-0.6
	comp=Z,56nm,0.8s						
EYAK	Cordova Ski Ar	25.50	57	*e*P	P	16 04 53.6	-1.3
	comp=Z,18nm,0.9s						
RIDG	Independent Ri	25.70	49	*e*P	P	16 04 55.0	-1.8
	comp=Z,22nm,0.8s						
RAGM	Ragged Mountai	26.04	57	*e*P	P	16 04 59.6	-0.3
	comp=Z,28nm,0.7s						
DOT	Dot Lake	26.05	50	*e*P	P	16 04 58.2	-1.8
	comp=Z,36nm,0.8s						
SCRK	Sand Creek	26.08	49	*e*P	P	16 04 58.8	-1.6
	comp=Z,36nm,1.0s						
MENT	Mentasta	26.24	51	*e*P	P	16 05 01.1	-0.6
	comp=Z,20nm,0.8s						
HMT	Hamilton	26.25	57	*e*P	P	16 05 01.4	-0.4
	comp=Z,59nm,1.2s						
CRQM	Cirque	26.74	56	*e*P	P	16 05 06.1	-0.3
	comp=Z,56nm,1.1s						
MJAR	Matsushiro Arr	26.85	241	P	P	16 05 09.1	+1.7
	comp=Z,5.6nm,0.7s,baz=27,slow=7.7,SNR=20						
MJB9	Matsu-Tunnel	26.85	241	*e*P	P	16 05 09.0	+1.6
	comp=Z,22nm,0.7s						
MAJO	Matsushiro	26.85	241	*e*P	P	16 05 08.8	+1.4
	comp=Z,21nm,0.7s						
MAJO	Matsushiro	26.85	241	*c i*P	P	16 05 08.7	+1.3
MAJO				pmax	pmax		
	comp=Z,20nm,0.9s						
MAT	Matsushiro	26.85	241	P	P	16 05 09.1	+1.7
MAT				S	S	16 09 40.6	-1.2
TGL	Tana Glacier	26.89	56	*e*P	P	16 05 07.2	-0.5
	comp=Z,21nm,1.1s						
EGAK	Eagle	27.29	47	*e*P	P	16 05 09.5	-1.5
	comp=Z,31nm,0.8s						
CTGM	Chitina Glacie	27.58	55	*e*P	P	16 05 13.5	-0.4
	comp=Z,9.6nm,0.9s						
DAWY	Dawson	28.09	48	*e*P	P	16 05 17.8	-0.6
	comp=Z,18nm,0.8s						
PCA	Pinnacle	28.27	57	*e*P	P	16 05 19.3	-0.7
	comp=Z,17nm,1.1s						
CN2	Changchun	29.05	266	*e*P	P	16 05 34.1	+7.1
CN2				*e*S	S	16 10 00.8	-16
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,130nm,4.0s						
CN2				LR	LR		
	comp=N,330nm,17.0s						
CN2				LR	LR		
	comp=E,190nm,17.0s						
CN2				LR	LR		
	comp=Z,240nm,18.0s						
EPYK	Eagle Plains	29.06	43	*e*P	P	16 05 26.6	-0.2
	comp=Z,38nm,0.8s						
EPYK	Eagle Plains	29.06	43	P	P	16 05 26.7	-0.2
	baz=273						
INK	Inuvik	30.21	39	P	P	16 05 36.6	-0.3
	comp=Z,6.2nm,0.4s,baz=279,slow=7.0,SNR=14						
INK	Inuvik	30.21	39	*e*P	P	16 05 36.9	0.0
	comp=Z,16nm,1.1s						
INK	Inuvik	30.21	39	*e*P	P	16 05 36.9	0.0
INK				pmax	pmax		
	comp=Z,16nm,1.1s						
JIS	Juneau Island	31.66	59	*e*P	P	16 05 50.4	+0.6
	comp=Z,26nm,0.8s						
KSRS	Korea Array	31.74	254	P	P	16 05 53.2	+2.4
	comp=Z,3.2nm,0.8s,baz=42,slow=8.4,SNR=4.7						

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KSRS                              LR     LR       16 18 15.8
      comp=Z,136nm,21.0s,baz=56,slow=36
KSAR  Wonju Array Be   31.77 254  P      P        16 05 53.2 +2.1
KSAR  Wonju Array Be   31.77 254  P      P        16 05 53.2 +2.1
WRAK  Wrangell Islan   33.34  61  eP     P        16 06 05.2 +0.7
      comp=Z,24nm,1.0s
DLBC  Dease Lake       33.77  57  eP     P        16 06 09.7 +1.3
      comp=Z,23nm,1.1s
H11N2 WAKE ISLAND Hy   34.50 181  T      T        16 43 05.6
      baz=0.9,slow=76,SNR=1845
H11N3 WAKE ISLAND Hy   34.51 181  T      T        16 43 06.1
      baz=0.9,slow=76,SNR=4283
H11N1 WAKE ISLAND Hy   34.51 181  T      T        16 43 06.5
      baz=0.9,slow=76,SNR=3833
H11S1 WAKE ISLAND Hy   35.72 181  T      T        16 44 40.3
      baz=0.5,slow=76,SNR=1614
H11S3 WAKE ISLAND Hy   35.73 181  T      T        16 44 39.2
      baz=0.5,slow=76,SNR=398
H11S2 WAKE ISLAND Hy   35.73 181  T      T        16 44 42.0
      baz=0.5,slow=76,SNR=1380
SONA0 Songino Array    37.84 286  eP     P        16 06 43.9 +0.5
SONA0                             ePcP   PcP      16 08 57.7  -1.6
SONM  Songino Array    37.84 286  P      P        16 06 43.9 +0.5
      comp=Z,1.9nm,0.7s,baz=59,slow=8.2,SNR=10
SONM                              PcP    PcP      16 08 57.7  -1.6
      comp=Z,0.6nm,0.7s,baz=73,slow=3.1,SNR=2.3
SONM                              LR     LR       16 23 34.2
      comp=Z,151nm,19.4s,baz=70,slow=38
ZAK   Zakamensk        38.20 291  eP     P        16 06 48.8 +2.3
ZAK                               pmax   pmax
      comp=Z,4.0nm,1.3s
MOY   Mondy            38.78 294  eP     P        16 06 45.4  -5.9
HHC   Hu-ho-hao-te     38.99 273  eP     P        16 06 54.3 +1.1
HHC                               pmax   pmax
      comp=Z,29nm,1.1s
HHC                               pmax   pmax
      comp=Z,100nm,5.4s
YKW3  Yellowknife Ar   39.22  46  eP     P        16 06 54.5  -0.1
      comp=Z,9.4nm,0.7s
YKA   Yellowknife Ar   39.25  46  P      P        16 06 55.0   0.0
      comp=Z,6.4nm,0.6s,baz=296,slow=8.3,SNR=40
YKA                               PcP    PcP      16 09 01.2  -2.1
      comp=Z,0.5nm,0.6s,baz=287,slow=3.4,SNR=3.3
YKB5  Yellowknife Ar   39.25  46  eP     P        16 06 55.0   0.0
YKB5                              ePcP   PcP      16 09 01.2  -2.1
NJ2   Nanjing          40.80 257  eP     P        16 07 09.3 +1.2
NJ2                               pmax   pmax
      comp=Z,14nm,0.6s
SARN  Sarigan          41.10 213  eP     P        16 07 11.3 +0.5
      comp=Z,35nm,1.0s
LLLB  Lillooet         41.58  65  eP     P        16 07 14.9 +0.5
      comp=Z,14nm,1.0s
A04D  Lummi Island     42.20  68  P      P        16 07 20.2 +0.8
      baz=305
NLWA  Neilton Lookou   42.33  70  eP     P        16 07 21.6 +1.1
      comp=Z,24nm,1.1s
D03D  Eldon            42.68  69  P      P        16 07 24.0 +0.6
      baz=306
B05A  Bryant           42.79  68  P      P        16 07 24.9 +0.7
      baz=306
D04E  Lakebay          43.06  70  P      P        16 07 27.6 +1.2
      baz=307
E04D  Cinebar          43.55  70  P      P        16 07 31.4 +1.1
      baz=307
LON   Longmire         43.85  70  eP     P        16 07 33.2 +0.4
      comp=Z,6.2nm,1.0s
LON   Longmire         43.85  70  eP     P        16 07 33.2 +0.4
LON                               pmax   pmax
      comp=Z,6.0nm,1.0s
B08A  Colville Reser   44.23  66  eP     P        16 07 35.9 +0.1
      comp=Z,14nm,0.8s
GUMO  Guam             44.31 212  LR     LR       16 25 49.0
      comp=Z,60nm,18.1s,baz=32,slow=36
I02D  Swisshome        44.33  74  P      P        16 07 37.4 +0.8
      baz=309
H04D  Lebanon          44.69  73  P      P        16 07 40.4 +0.8
      baz=309
I03D  Drain, OR        44.87  74  P      P        16 07 41.7 +0.8
      baz=309
H04A  Detroit Lake     44.90  72  eP     P        16 07 41.7 +0.4
      comp=Z,14nm,1.1s
G05D  Wamic, OR        45.04  71  P      P        16 07 42.8 +0.4
      baz=309
XAN   Xi'an            45.13 268  P      P        16 07 51.5 +8.3
XAN                               pP     sP       16 08 03.0 +8.1
XAN                               pmax   pmax
      comp=Z,4.0nm,1.3s
C09A  Chrisman Ranch   45.13  66  eP     P        16 07 43.0  -0.1
      comp=Z,19nm,1.1s
D08A  Wollman Farm,    45.24  68  eP     P        16 07 43.8   0.0
      comp=Z,8.8nm,1.1s
HAWA  Hanford          45.31  69  eP     P        16 07 44.6 +0.1
      comp=Z,9.5nm,0.8s
K02D  Willamette Mer   45.32  75  P      P        16 07 45.4 +0.6
      baz=310
I04A  Tendick Farm,    45.34  73  P      P        16 07 44.9 +0.2
      baz=310
NEW   Newport          45.47  65  eP     P        16 07 45.5  -0.3
      comp=Z,10nm,0.9s
NEW   Newport          45.47  65  eP     P        16 07 45.5  -0.3
NEW                               pmax   pmax
      comp=Z,10.0nm,0.9s
NEW   Newport          45.47  65  P      P        16 07 45.4  -0.3
      baz=308
I05D  Terrebonne, OR   45.59  72  P      P        16 07 47.0 +0.2
      baz=309
L02E  Cave Junction    45.70  76  P      P        16 07 48.5 +0.8
      baz=310
ZAA1  Zalesovo Array   45.75 305  eP     P        16 07 46.0  -1.8
ZALV  Zalesovo Beam    45.75 305  P      P        16 07 46.0  -1.8
      comp=Z,0.9nm,0.6s,baz=41,slow=4.7,SNR=4.0
ZALV                              LR     LR       16 27 37.9
      comp=Z,68nm,21.1s,baz=68,slow=37
J04D  Umpqua Nationa   45.86  74  P      P        16 07 50.1 +1.0
      baz=310
E09A  Wood Farm, Sta   45.99  68  eP     P        16 07 49.8   0.0
      comp=Z,16nm,0.9s
PINE  Pine Mountain    46.16  72  eP     P        16 07 52.0 +0.5
      comp=Z,11nm,1.1s
G08A  Pilot Rock       46.31  69  eP     P        16 07 52.2  -0.3
      comp=Z,6.8nm,1.1s
J05D  Fort Rock, OR    46.32  73  P      P        16 07 53.1 +0.4
      baz=310
L04D  Klamath Falls    46.40  75  P      P        16 07 54.1 +0.8
      baz=311
YBH   Yreka Blue Hor   46.49  76  eP     P        16 07 54.6 +0.7
      comp=Z,11nm,1.0s
YBH   Yreka Blue Hor   46.49  76  eP     P        16 07 54.6 +0.7
YBH                               pmax   pmax
      comp=Z,11nm,1.0s
SPA0  Spitsbergen Ar   46.62 352  eP     P        16 07 54.0  -0.4
      comp=Z,19nm,0.8s
SPA0  Spitsbergen Ar   46.62 352  eP     P        16 07 52.9  -1.6
M02C  Callahan         46.63  76  P      P        16 07 56.2 +1.2
      baz=311
WALA  Waterton Lakes   46.67  62  eP     P        16 07 55.3   0.0
      comp=Z,23nm,0.7s
LZH   Lanzhou          46.68 274  eP     P        16 07 56.3 +0.7
LZH                               pP     sP       16 08 06.5  -0.6
LZH                               sP     pwP      16 08 08.6 +2.2
LZH                               ePP    PP       16 09 45.4   0.0
LZH                               pmax   pmax
      comp=Z,23nm,1.3s
LZH                               pmax   pmax
      comp=Z,92nm,5.6s
LZH                               LR     LR
      comp=Z,370nm,13.5s
LZH                               LR     LR
      comp=Z,370nm,14.0s
LZH                               LR     LR
      comp=Z,510nm,17.2s
GTA   Gaotai           46.76 280  P      P        16 07 58.6 +2.4
GTA                               pP     pwP      16 08 05.6  -1.5
GTA                               sP     sP       16 08 09.4 +1.7
GTA                               pmax   pmax
      comp=Z,2.0nm,0.9s
GTA                               pmax   pmax
      comp=Z,48nm,6.2s
GTA                               LR     LR
      comp=Z,300nm,17.8s
GTA                               LR     LR
      comp=Z,340nm,19.0s
GTA                               LR     LR
      comp=Z,190nm,17.1s
F10A  Beach Ranch, E   46.83  68  eP     P        16 07 56.4  -0.1
      comp=Z,8.2nm,1.1s
M04C  Macdoel          46.95  75  P      P        16 07 58.2 +0.6
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      baz=311
N02D  Trinity Center   46.99  76  P      P        16 07 59.2 +1.4
      baz=312
DGZ   Jazzator, Alta   47.00 299  i P    P        16 07 59.0 +1.1
DGZ                               pmax   pmax
      comp=Z,1.0nm,0.8s
WDC   Whiskeytown Da   47.34  77  eP     P        16 08 00.7 +0.2
      comp=Z,8.9nm,1.0s
WDC   Whiskeytown Da   47.34  77  eP     P        16 08 00.7 +0.2
WDC                               pmax   pmax
      comp=Z,9.0nm,1.0s
O02D  Mt. Diablo Mer   47.47  77  P      P        16 08 02.5 +0.9
      baz=312
BMO   Blue Mountains   47.49  69  eP     P        16 08 01.7   0.0
      comp=Z,6.1nm,0.9s
BMO   Blue Mountains   47.49  69  eP     P        16 08 01.7   0.0
BMO                               pmax   pmax
      comp=Z,6.0nm,0.9s
MOD   Modoc Plateau    47.74  74  eP     P        16 08 04.2 +0.5
      comp=Z,17nm,1.1s
J08A  Circle Bar Ran   47.81  71  eP     P        16 08 04.2   0.0
      comp=Z,9.4nm,1.1s
O03E  Paynes Creek     47.95  77  P      P        16 08 05.4   0.0
      baz=312
MSO   Missoula         48.05  65  eP     P        16 08 05.2  -0.8
      comp=Z,21nm,1.5s
MSO   Missoula         48.05  65  P      P        16 08 05.9  -0.1
      baz=310
PLID  Pearl Lake       48.05  68  eP     P        16 08 06.7 +0.5
      comp=Z,4.2nm,0.8s
WVOR  Wild Horse Val   48.32  72  eP     P        16 08 08.4 +0.2
      comp=Z,8.2nm,1.0s
WVOR  Wild Horse Val   48.32  72  eP     P        16 08 08.4 +0.2
WVOR                              pmax   pmax
      comp=Z,8.0nm,1.0s
FFC   Flin Flon        48.97  50  eP     P        16 08 12.3  -0.5
      comp=Z,72nm,1.0s
FFC   Flin Flon        48.97  50  eP     P        16 08 12.3  -0.5
FFC                               pmax   pmax
      comp=Z,72nm,1.0s
BEKR  Beckworth        49.06  76  eP     P        16 08 14.4 +0.4
      comp=Z,12nm,1.1s
DAG   Danmarks Havn    49.15   2⇓iP      P        16 08 13.4  -0.6
DAG                               pmax   pmax
      comp=Z,4.0nm,0.6s
DAG   Danmarks Havn    49.15   2⇓iP      P        16 08 13.4  -0.6
      comp=Z,6.6nm,0.6s
MFID  Camas Ranch      49.23  69  eP     P        16 08 15.2  -0.1
      comp=Z,7.7nm,0.8s
HRY   Holter Researc   49.24  64  eP     P        16 08 15.5 +0.3
AFDM  Forest Hills D   49.33  77  eP     P        16 08 15.9   0.0
      comp=Z,7.6nm,1.1s
EGMT  Eagleton         49.47  61  eP     P        16 08 16.2  -0.7
      comp=Z,10nm,0.9s
EGMT  Eagleton         49.47  61  P      P        16 08 16.5  -0.4
      baz=310
DLMT  Dillon           49.71  66  eP     P        16 08 18.4  -0.5
      comp=Z,12nm,1.5s
PAHR  Pah Rah Range    49.72  75  eP     P        16 08 19.3 +0.3
      comp=Z,13nm,1.1s
FCC   Fort Churchill   49.73  43  eP     P        16 08 18.1  -0.5
      comp=Z,45nm,1.5s
FCC   Fort Churchill   49.73  43  eP     P        16 08 18.1  -0.5
FCC                               pmax   pmax
      comp=Z,45nm,1.5s
VCNR  Virginia City    49.85  76  eP     P        16 08 20.9 +0.8
      comp=Z,10nm,0.8s
HLID  Hailey           49.91  68  eP     P        16 08 20.4  -0.1
      comp=Z,11nm,1.4s
HLID  Hailey           49.91  68  P      P        16 08 20.3  -0.1
      baz=312
MCMT  McKenzie Canyo   49.92  66  eP     P        16 08 20.1  -0.5
PNTR  Pine Nut         50.02  76  eP     P        16 08 22.1 +0.7
      comp=Z,25nm,0.9s
BOZ   Bozeman (W)      50.07  65  eP     P        16 08 21.4  -0.2
      comp=Z,8.9nm,0.9s
BOZ   Bozeman (W)      50.07  65  eP     P        16 08 21.4  -0.2
BOZ                               pmax   pmax
      comp=Z,9.0nm,0.9s
BOZ   Bozeman (W)      50.07  65  P      P        16 08 21.6   0.0
      baz=311,SNR=14
CMB   Columbia Colle   50.29  78  eP     P        16 08 23.6 +0.4
      comp=Z,10nm,1.4s
CMB   Columbia Colle   50.29  78  eP     P        16 08 23.6 +0.4
CMB                               pmax   pmax
      comp=Z,10.0nm,1.4s
YERR  Yerington        50.29  76  eP     P        16 08 24.1 +0.7
      comp=Z,16nm,1.0s
CD2   Chengdu          50.41 269  eP     P        16 08 22.9  -1.3
CD2                               pmax   pmax
      comp=Z,20nm,0.5s
BMN   Battle Mountai   50.45  73  eP     P        16 08 25.0 +0.5
      comp=Z,9.5nm,0.8s
BMN   Battle Mountai   50.45  73  eP     P        16 08 25.0 +0.5
BMN                               pmax   pmax
      comp=Z,10.0nm,0.8s
WAKR  Walker           50.51  77  eP     P        16 08 26.0 +0.9
      comp=Z,15nm,0.8s
WMQ   Urumqi           50.63 293  eP     P        16 08 28.5 +2.8
WMQ                               LR     LR
      comp=Z,220nm,19.5s
WMQ                               LR     LR
      comp=Z,170nm,19.5s
WMQ                               LR     LR
      comp=Z,200nm,20.7s
QLMT  Earthquake Lak   50.68  65  eP     P        16 08 26.5 +0.2
KURK  Kurchatov        50.74 305  eP     P        16 08 25.8  -0.5
      comp=Z,14nm,1.0s
KURK  Kurchatov        50.74 305  eP     P        16 08 25.8  -0.5
KURK                              pmax   pmax
      comp=Z,14nm,1.0s
KURBB Kurchatov Arra   50.84 305  P      P        16 08 26.9  -0.2
      comp=Z,2.2nm,0.6s,baz=58,slow=7.9,SNR=5.8
YHB   Horse Butte      50.86  65  eP     P        16 08 27.9 +0.2
      comp=Z,28nm,1.1s
KVN   Kaiserville      50.90  75  eP     P        16 08 28.4 +0.5
      comp=Z,12nm,0.9s
KVN   Kaiserville      50.90  75  eP     P        16 08 28.5 +0.5
KVN                               pmax   pmax
      comp=Z,12nm,0.9s
RYN   Ryan             50.95  76  eP     P        16 08 28.9 +0.6
      comp=Z,11nm,1.0s
GCMT  Greycliff        50.98  63  eP     P        16 08 28.7 +0.3
YHH   Holmes Hill      51.02  65  eP     P        16 08 29.2 +0.3
      comp=Z,13nm,1.1s
NV01  Mina Array Sit   51.21  76  eP     P        16 08 31.2 +0.9
NVAR  Mina Array Bea   51.21  76  P      P        16 08 31.2 +0.9
      comp=Z,6.0nm,0.7s,baz=297,slow=7.7,SNR=56
NVAR                              LR     LR       16 28 09.7
      comp=Z,61nm,20.6s,baz=274,slow=34
NV11  Mina Array Sit   51.29  76  eP     P        16 08 31.6 +0.7
      comp=Z,0.6nm,0.9s
MDPB  Devils Postpil   51.31  77  eP     P        16 08 32.0 +0.8
      comp=Z,11nm,0.8s
ELK   Elko             51.35  72  eP     P        16 08 31.8 +0.4
      comp=Z,5.4nm,0.6s
OMMB  Old Mammoth Mi   51.37  77  eP     P        16 08 32.4 +0.7
      comp=Z,5.4nm,1.0s
YPP   Pitchstone Pla   51.39  65  eP     P        16 08 32.7 +1.0
      comp=Z,14nm,1.3s
H17A  Grant Village    51.43  65  eP     P        16 08 33.1 +1.2
      comp=Z,32nm,1.4s
H17A  Grant Village    51.43  65  P      P        16 08 33.7 +1.7
      baz=312
MK32  Makanchi Array   51.50 299  eP     P        16 08 31.4  -0.8
MKAR  Makanchi Array   51.50 299  P      P        16 08 31.4  -0.8
      comp=Z,0.9nm,0.6s,baz=44,slow=6.0,SNR=7.7
MKAR                              LR     LR       16 31 08.1
      comp=Z,115nm,19.8s,baz=32,slow=37
IMW   Indian Meadow    51.57  66  eP     P        16 08 33.6 +0.6
      comp=Z,9.7nm,0.8s
FLWY  Flagg Ranch      51.57  66  eP     P        16 08 33.9 +0.9
      comp=Z,17nm,0.8s
RLMT  Red Lodge        51.63  64  eP     P        16 08 33.9 +0.5
      comp=Z,21nm,1.0s
RLMT  Red Lodge        51.63  64  P      P        16 08 34.2 +0.7
      baz=312,SNR=11
FXWY  Fox Creek        51.69  66  eP     P        16 08 34.5 +0.5
      comp=Z,5.4nm,0.9s
MOOW  Moose Ponds      51.77  66  eP     P        16 08 34.9 +0.4
      comp=Z,4.2nm,0.8s
TPAW  Teton Pass       51.83  66  eP     P        16 08 35.6 +0.6
      comp=Z,5.2nm,1.0s
HVU   Hansel Valley    52.00  69  eP     P        16 08 36.8 +0.6
      comp=Z,9.3nm,0.8s
HVU   Hansel Valley    52.00  69  eP     P        16 08 36.8 +0.6
HVU                               pmax   pmax
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      comp=Z,9.0nm,0.8s
LAO   LASA Array       52.16  60  eP     P        16 08 37.7 +0.6
      comp=Z,24nm,1.1s
LAO   LASA Array       52.16  60  P      P        16 08 37.7 +0.6
      baz=312,SNR=9.8
TIN   Tinemaha, Big    52.20  77  P      P        16 08 38.7 +1.1
      baz=315
AHID  Auburn Hatcher   52.24  67  eP     P        16 08 38.4 +0.4
      comp=Z,6.8nm,0.9s
CWC   Cottonwood Cre   52.72  78  P      P        16 08 42.1 +0.6
      baz=315
GRAC  Grapevine Rang   52.74  77  P      P        16 08 42.7 +1.2
      baz=315,SNR=9.6
HWUT  Hardware Ranch   52.78  68  eP     P        16 08 42.5 +0.5
      comp=Z,8.4nm,1.0s
R11A  Troy Canyon, C   52.80  74  eP     P        16 08 42.8 +0.6
      comp=Z,5.2nm,0.8s
R11A  Troy Canyon, C   52.80  74  P      P        16 08 42.5 +0.4
      baz=314,SNR=14
PKM   Mcpherson Peak   52.82  80  P      P        16 08 43.3 +1.0
      baz=316,SNR=5.3
BRVK  Borovoye         53.01 311  eP     P        16 08 43.0  -0.2
      comp=Z,9.4nm,0.6s
BRVK  Borovoye         53.01 311  eP     P        16 08 43.1  -0.2
BRVK                              pmax   pmax
      comp=Z,9.0nm,0.6s
ISA   Isabella, Lake   53.04  79  eP     P        16 08 43.7  -0.1
      comp=Z,5.5nm,0.7s
ISA   Isabella, Lake   53.04  79  eP     P        16 08 43.7  -0.1
ISA                               pmax   pmax
      comp=Z,6.0nm,0.7s
ISA   Isabella, Lake   53.04  79  P      P        16 08 43.9 +0.1
      baz=315,SNR=5.9
DUG   Dugway, Tooele   53.07  71  eP     P        16 08 44.7 +0.6
      comp=Z,10nm,1.1s
DUG   Dugway, Tooele   53.07  71  eP     P        16 08 44.7 +0.6
DUG                               pmax   pmax
      comp=Z,10.0nm,1.1s
DUG   Dugway, Tooele   53.07  71  P      P        16 08 44.5 +0.5
      baz=314,SNR=5.5
BW06  Boulder Array    53.07  66  P      P        16 08 44.2   0.0
      baz=314
PD31  Pinedale Array   53.07  66  eP     P        16 08 44.1  -0.1
      comp=Z,5.4nm,0.8s
PDAR  Pinedale Array   53.07  66  P      P        16 08 44.5 +0.3
      comp=Z,4.9nm,0.6s,baz=318,slow=4.2,SNR=39
MPMC  Manual Prospec   53.33  77  P      P        16 08 46.9 +0.8
      baz=315
FURC  Furnace Creek,   53.40  77  P      P        16 08 47.1 +0.9
      baz=315,SNR=9.4
TPNV  Topopah Spring   53.41  76  eP     P        16 08 47.4 +0.8
      comp=Z,19nm,1.0s
TPNV  Topopah Spring   53.41  76  eP     P        16 08 47.4 +0.8
TPNV                              pmax   pmax
      comp=Z,19nm,1.0s
TPNV  Topopah Spring   53.41  76  P      P        16 08 47.6 +1.0
      baz=315,SNR=27
ARA0  ARCESS Array S   53.42 344  eP     P        16 08 45.0  -1.1
ARCES ARCESS Array B   53.42 344  P      P        16 08 45.0  -1.1
      comp=Z,3.8nm,0.7s,baz=22,slow=8.3,SNR=9.7
ARCES                             LR     LR       16 32 11.0
      comp=Z,57nm,22.0s,baz=30,slow=37
ARCES ARCESS Array B   53.42 344  P      P        16 08 45.0  -1.1
SCZ2  Santa Cruz Isl   53.56  81  P      P        16 08 48.7 +1.2
      baz=316
LRMC  Laurel Mtn Rad   53.62  78  P      P        16 08 48.6 +0.4
      baz=316,SNR=7.2
PSUT  Pine Spring      53.65  73  eP     P        16 08 49.1 +0.7
      comp=Z,17nm,1.2s
EDW2  Edwards Air Fo   53.87  79  P      P        16 08 50.5 +0.6
      baz=316,SNR=6.7
SHOC  Shoshone, Teco   54.13  77  P      P        16 08 52.4 +0.7
      baz=316
KTK1  Kautokeino       54.25 345  eP     P        16 08 51.4  -0.7
GSC   Goldstone, Bar   54.25  78  P      P        16 08 53.6 +0.8
      baz=316,SNR=5.8
MWC   Mount Wilson     54.30  79  eP     P        16 08 54.0 +0.8
      comp=Z,13nm,0.8s
MWC   Mount Wilson     54.30  79  eP     P        16 08 54.0 +0.8
MWC                               pmax   pmax
      comp=Z,13nm,0.8s
SVE   Sverdlovsk       54.31 320  eP     P        16 08 52.7   0.0
SHPR  Sheep Range      54.34  75  eP     P        16 08 54.0 +0.6
      comp=Z,15nm,1.7s
BFSC  Mount Baldy Ra   54.52  79  P      P        16 08 55.6 +0.9
      baz=316
TMUT  Trail Mountain   54.58  70  eP     P        16 08 56.0 +0.7
      comp=Z,22nm,0.7s
CCUT  Cedar City       54.61  73  eP     P        16 08 56.5 +1.0
      comp=Z,12nm,0.9s
MDND  Maddock          54.66  56  eP     P        16 08 56.0 +0.6
      comp=Z,51nm,0.4s
MDND  Maddock          54.66  56  P      P        16 08 55.9 +0.5
      baz=314
TUQ   Turquoise Moun   54.66  77  P      P        16 08 56.6 +0.9
      baz=316,SNR=9.7
CIS   Catalina Islan   54.69  80  P      P        16 08 56.9 +1.1
      baz=317
P17A  Butcher Ranch,   54.72  70  eP     P        16 08 56.4 +0.2
      comp=Z,6.8nm,0.7s
ULM   Lac du Bonnet    54.73  51  P      P        16 08 55.8  -0.1
      comp=Z,4.9nm,0.5s,baz=308,slow=8.6,SNR=6.5
ULM                               LR     LR       16 33 25.8
      comp=Z,66nm,20.1s,baz=352,slow=37
ULM   Lac du Bonnet    54.73  51  eP     P        16 08 55.6  -0.2
      comp=Z,9.8nm,1.0s
ULM   Lac du Bonnet    54.73  51  eP     P        16 08 55.6  -0.2
ULM                               pmax   pmax
      comp=Z,10.0nm,1.0s
SZCU  Shurtz Canyon    54.73  73  eP     P        16 08 57.1 +0.8
      comp=Z,18nm,1.3s
K22A  Casper           54.77  64  eP     P        16 08 56.5   0.0
      comp=Z,14nm,0.3s
K22A  Casper           54.77  64  P      P        16 08 56.8 +0.4
      baz=315
HEC   Hector,Ludlow    54.86  78  P      P        16 08 57.9 +0.8
      baz=316
MTPU  Mount Pierson    54.92  72  eP     P        16 08 59.1 +1.3
      comp=Z,7.9nm,0.8s
RSSD  Black Hills      55.04  61  eP     P        16 08 58.5 +0.1
      comp=Z,12nm,0.6s
RSSD  Black Hills      55.04  61  eP     P        16 08 58.5 +0.1
RSSD                              pmax   pmax
      comp=Z,12nm,0.6s
RSSD  Black Hills      55.04  61  P      P        16 08 58.6 +0.1
      baz=315
LCMT  Little Creek M   55.06  74  eP     P        16 08 59.5 +0.9
      comp=Z,16nm,0.9s
RWWY  Rawlins          55.08  66  eP     P        16 08 58.2  -0.6
      comp=Z,16nm,1.1s
SRU   San Rafael Swe   55.09  70  eP     P        16 08 59.6 +0.7
      comp=Z,39nm,0.7s
SRU   San Rafael Swe   55.09  70  eP     P        16 08 59.6 +0.7
SRU                               pmax   pmax
      comp=Z,39nm,0.7s
MURC  Murrieta         55.25  79  P      P        16 09 00.4 +0.5
      baz=317
PKCU  Pink Cliffs      55.28  73  eP     P        16 09 01.5 +1.1
      comp=Z,17nm,0.9s
GMRC  Granite Mounta   55.28  77  P      P        16 09 00.9 +0.7
      baz=316
KNB   Kanab            55.29  73  eP     P        16 09 01.4 +1.1
      comp=Z,21nm,1.0s
KNB   Kanab            55.29  73  eP     P        16 09 01.4 +1.1
KNB                               pmax   pmax
      comp=Z,21nm,1.0s
KMI   Kunming          55.32 265  P      P        16 09 02.5 +1.8
KMI                               pmax   pmax
      comp=Z,7.0nm,0.7s
KMI                               pmax   pmax
      comp=Z,90nm,4.1s
LDFC  Landfair         55.38  77  eP     P        16 09 01.4 +0.5
      comp=Z,27nm,0.8s
ARU   Arti             55.38 320  eP     P        16 09 00.0  -0.4
      comp=Z,10nm,0.5s
ARU   Arti             55.38 320c iP     P        16 08 59.8  -0.7
ARU                               S      S        16 16 46.7 +4.1
ARU                               SS     SS       16 20 30.9 +4.4
ARU                               pmax   pmax
      comp=Z,8.0nm,0.6s
OTUK  Ortayu           55.42 306  P      P        16 09 02.1 +1.2
OTUK                              pmax   pmax
      comp=Z,5.0nm,0.9s
O20A  White River Ci   55.62  68  P      P        16 09 03.1 +0.4
      baz=315,SNR=5.6
BELC  Belle Mtn. Jos   55.65  78  P      P        16 09 03.2 +0.3
      baz=317,SNR=11
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PRGR	Permogore	55.66	331	eP	P	16 09 01.2	-1.2
PRGR				pmax	pmax		
	comp=Z,13nm,0.7s						
PFO	Pinyon Flats O	55.67	79	eP	P	16 09 03.2	+0.2
	comp=Z,4.5nm,0.8s						
PFO	Pinyon Flats O	55.67	79	eP	P	16 09 03.2	+0.2
PFO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PFO	Pinyon Flats O	55.67	79	P	P	16 09 03.3	+0.3
	baz=317						
U15A	North Rim	56.01	73	eP	P	16 09 06.5	+0.8
	comp=Z,12nm,1.0s						
IRM	Iron Mountain	56.02	77	P	P	16 09 06.4	+1.0
	baz=317,SNR=13						
W13A	Hualapai Mount	56.06	76	eP	P	16 09 06.6	+0.7
	comp=Z,9.5nm,0.9s						
AGMN	Agassiz Nation	56.12	53	eP	P	16 09 05.6	-0.2
	comp=Z,13nm,0.8s						
AGMN	Agassiz Nation	56.12	53	P	P	16 09 05.9	0.0
	baz=316						
MONP2	Monument Peak	56.21	79	P	P	16 09 07.7	+0.7
	baz=317						
BC3	Big Chuckawall	56.21	78	P	P	16 09 07.3	+0.4
	baz=317,SNR=7.0						
BAR	Barrett	56.22	80	eP	P	16 09 07.4	+0.6
	comp=Z,6.1nm,0.8s						
PV09	Paradox Valley	56.29	70	eP	P	16 09 08.3	+0.7
N23A	Red Feather La	56.31	65	P	P	16 09 08.4	+0.7
	baz=316,SNR=10						
PV21	Cone Mtn., Par	56.33	69	eP	P	16 09 08.2	+0.4
	comp=Z,11nm,0.6s						
PV23	Carpenter Ridg	56.39	70	eP	P	16 09 09.0	+0.7
	comp=Z,16nm,0.7s						
PV10	Paradox Valley	56.43	70	eP	P	16 09 09.6	+1.1
	comp=Z,20nm,0.8s						
PV14	Lion Creek, Pa	56.44	70	eP	P	16 09 09.1	+0.5
	comp=Z,13nm,0.7s						
PV22	Blue Mesa, Par	56.45	69	eP	P	16 09 09.3	+0.7
	comp=Z,16nm,0.6s						
PV04	Paradox Valley	56.49	69	eP	P	16 09 09.6	+0.7
	comp=Z,22nm,0.9s						
PDMCI	Parker Dam,Lak	56.49	77	P	P	16 09 09.6	+0.9
	baz=317,SNR=6.7						
PV20	West Nyswonger	56.49	70	eP	P	16 09 09.7	+0.8
	comp=Z,15nm,0.5s						
PV19	Morning Glory	56.51	70	eP	P	16 09 09.7	+0.6
	comp=Z,16nm,0.7s						
PV17	East Wray Mesa	56.54	70	eP	P	16 09 10.1	+0.8
	comp=Z,29nm,0.6s						
PV16	Nyswonger Mesa	56.54	70	eP	P	16 09 10.1	+0.8
	comp=Z,39nm,1.4s						
PV11	David Mesa, Pa	56.58	70	eP	P	16 09 10.4	+0.9
	comp=Z,27nm,0.7s						
PV18	Skein Mesa, Pa	56.59	70	eP	P	16 09 10.3	+0.7
	comp=Z,20nm,0.7s						
PV07	Paradox Valley	56.60	69	eP	P	16 09 10.4	+0.7
	comp=Z,12nm,0.6s						
PV12	Saucer Basin,	56.60	69	eP	P	16 09 10.7	+0.9
	comp=Z,17nm,0.8s						
PV05	Paradox Valley	56.61	70	eP	P	16 09 10.8	+1.0
	comp=Z,30nm,0.7s						
PV03	Paradox Valley	56.62	70	eP	P	16 09 10.7	+0.8
	comp=Z,17nm,0.8s						
Y12C	Blythe	56.67	77	eP	P	16 09 11.0	+1.0
	comp=Z,11nm,0.8s						
Y12C	Blythe	56.67	77	P	P	16 09 11.0	+1.0
	baz=317						
PV13	Radium Mtn., P	56.70	70	eP	P	16 09 11.2	+0.7
	comp=Z,37nm,0.7s						
PV02	Paradox Valley	56.72	70	eP	P	16 09 11.3	+0.7
	comp=Z,36nm,1.3s						
PV01	Paradox Valley	56.86	69	eP	P	16 09 11.9	+0.3
	comp=Z,6.6nm,0.8s						
SMCO	Snowmass	56.98	68	eP	P	16 09 13.2	+0.5
	comp=Z,19nm,1.3s						
GLA	Glamis	57.01	78	eP	P	16 09 13.4	+1.0
	comp=Z,18nm,0.8s						
GLA	Glamis	57.01	78	eP	P	16 09 13.4	+1.0
GLA				pmax	pmax		
	comp=Z,18nm,0.8s						
GLA	Glamis	57.01	78	P	P	16 09 13.5	+1.0
	baz=317,SNR=5.4						
WUAZ	Wupatki	57.18	74	eP	P	16 09 15.0	+1.1
	comp=Z,32nm,1.5s						
WUAZ	Wupatki	57.18	74	P	P	16 09 15.1	+1.3
	baz=317,SNR=7.6						
Y14A	Wickenburg	57.41	76	eP	P	16 09 16.3	+1.0
	comp=Z,11nm,1.1s						
MVCO	Mesa Verde	57.56	70	eP	P	16 09 17.3	+0.7
	comp=Z,6.6nm,0.6s						
MVCO	Mesa Verde	57.56	70	P	P	16 09 17.3	+0.7
	baz=317						
DAV	Davao City (W)	57.84	232	LR	LR	16 30 55.3	
	comp=Z,21nm,21.5s,baz=62,slow=33						
X16A	Lo Mia Camp, P	57.94	75	eP	P	16 09 20.6	+1.4
	comp=Z,8.2nm,0.9s						
S22A	4UR Ranch, Cre	58.09	69	P	P	16 09 21.8	+1.5
	baz=317,SNR=19						
Q24A	Divide	58.12	67	P	P	16 09 21.6	+1.1
	baz=317						
MOR8	Moi Rana	58.13	347	eP	P	16 09 16.6	-3.3
AAK	Ala-Archa	58.38	300	eP	P	16 09 23.5	+1.4
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
EYMN	Ely	58.39	51	eP	P	16 09 21.8	-0.1
	comp=Z,22nm,0.8s						
EYMN	Ely	58.39	51	P	P	16 09 22.0	0.0
	baz=318						
W18A	Petrified Fore	58.39	73	eP	P	16 09 23.5	+1.2
	comp=Z,6.9nm,0.8s						
W18A	Petrified Fore	58.39	73	P	P	16 09 23.8	+1.5
	baz=317						
SDCO	Great Sand Dun	58.81	68	eP	P	16 09 26.4	+1.1
	comp=Z,18nm,1.5s						
SDCO	Great Sand Dun	58.81	68	P	P	16 09 26.3	+0.9
	baz=317,SNR=11						
214A	Organ Pipe Nat	58.97	77	P	P	16 09 27.2	+1.0
	baz=318,SNR=6.8						
ECSD	EROS Data Cent	59.06	57	eP	P	16 09 26.3	-0.3
	comp=Z,9.7nm,0.9s						
ECSD	EROS Data Cent	59.06	57	P	P	16 09 26.0	-0.7
	baz=317						
E38A	The Farm, Brul	59.35	52	eP	P	16 09 28.3	-0.3
	comp=Z,30nm,0.6s						
E38A	The Farm, Brul	59.35	52	P	P	16 09 28.3	-0.3
	baz=318						
KSCO	Kaye Shedlock’	59.43	65	P	P	16 09 29.8	+0.4
	baz=317						
SUF	Sumiainen	59.47	340	P	P	16 09 30.6	+1.5
SUF				pmax	pmax		
	comp=Z,21nm,0.9s						
SPMN	Marine on St.	59.80	54	eP	P	16 09 31.9	+0.2
	comp=Z,15nm,0.8s						
SPMN	Marine on St.	59.80	54	P	P	16 09 31.9	+0.2
	baz=318						
T25A	Trinidad	59.85	67	P	P	16 09 33.3	+0.8
	baz=318,SNR=7.4						
TUC	Tucson	59.86	76	eP	P	16 09 33.2	+0.8
	comp=Z,7.1nm,1.1s						
TUC	Tucson	59.86	76	eP	P	16 09 33.2	+0.8
TUC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TUC	Tucson	59.86	76	P	P	16 09 33.3	+0.8
	baz=318						
KSH	Kashi	59.89	297	eP	P	16 09 35.8	+3.2
KSH				pP	sP	16 09 44.1	-0.2
KSH				PcP	PcP	16 10 21.3	+2.5
KSH				pmax	pmax		
	comp=Z,21nm,1.4s						
KSH				pmax	pmax		
	comp=Z,150nm,4.4s						
KSH				LR	LR		
	comp=Z,41nm,6.4s						
KSH				LR	LR		
	comp=Z,120nm,7.5s						
BGNE	Belgrade	60.00	60	eP	P	16 09 33.2	0.0
	comp=Z,33nm,0.6s						
BGNE	Belgrade	60.00	60	P	P	16 09 33.2	0.0
	baz=318						
KK31	Karatay Array	60.03	303	eP	P	16 09 33.3	0.0
	comp=Z,18nm,1.6s						
KK31	Karatay Array	60.03	303	eP	P	16 09 33.3	0.0
KK31				pmax	pmax		
	comp=Z,18nm,1.6s						
KKAR	Karatay Array	60.03	303	eP	P	16 09 33.4	+0.1
	comp=Z,18nm,1.6s						
KKAR	Karatay Array	60.03	303	eP	P	16 09 33.4	+0.1
KKAR				pmax	pmax		
	comp=Z,18nm,1.6s						
ABKAR	Akbulak array	60.24	314	eP	P	16 09 34.2	-0.4
	comp=Z,6.8nm,1.1s						
ANMO	Albuquerque	60.34	71	eP	P	16 09 35.9	+0.1
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	60.34	71	eP	P	16 09 35.9	+0.1
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	60.34	71	P	P	16 09 36.7	+0.9
	baz=318						
LAZ	Ladron	60.37	71	eP	P	16 09 37.1	+1.1
D41A	Chassel	60.37	50	P	P	16 09 35.5	0.0
	baz=319						
G39A	Holcombe	60.52	53	P	P	16 09 36.3	-0.3
	baz=319						
LENM	Lemitar	60.63	72	eP	P	16 09 38.9	+1.1
FIA0	FINESS Array S	60.64	340	eP	P	16 09 36.7	-0.5
FIA0	FINESS Array S	60.64	340	eP	P	16 09 36.7	-0.5
FINES	FINESS Array B	60.64	340	P	P	16 09 36.7	-0.5
	comp=Z,4.1nm,0.6s,baz=26,slow=7.3,SNR=16						
BNM	Barren Site	60.84	71	eP	P	16 09 40.1	+0.8
G40A	Rib Lake	60.98	52	P	P	16 09 39.5	-0.3
	baz=319						
121A	Cookes Peak, D	61.39	73	P	P	16 09 43.8	+0.9
	baz=319						
E43A	Lone Tree Farm	61.59	49	P	P	16 09 43.3	-0.6
	baz=320						
I41A	Arkdale	62.05	53	P	P	16 09 47.0	0.0
	baz=320						
SCIA	State Center	62.09	56	eP	P	16 09 47.2	-0.1
	comp=Z,42nm,0.6s						
SCIA	State Center	62.09	56	P	P	16 09 47.4	+0.1
	baz=319						
SCHQ	Schefferville	62.44	32	P	P	16 09 48.7	-0.8
	comp=Z,2.9nm,0.4s,baz=283,slow=8.9,SNR=6.3						
SCHQ				LR	LR	16 38 37.5	
	comp=Z,42nm,20.9s,baz=337,slow=38						
SCHQ	Schefferville	62.44	32	eP	P	16 09 48.7	-0.8
	comp=Z,58nm,1.9s						
D46A	Sault St. Mari	62.49	47	P	P	16 09 49.2	-0.7
	baz=321						
I42A	Draeger Farm,	62.63	52	P	P	16 09 50.4	-0.4
	baz=320						
CM31	Chiang Mai Arr	62.69	264	eP	P	16 09 52.5	+0.8
	comp=Z,6.6nm,0.8s						
CMAR	Chiang Mai Arr	62.69	264	P	P	16 09 52.5	+0.8
	comp=Z,1.0nm,0.6s,baz=25,slow=6.3,SNR=8.0						
CMAR				LR	LR	16 38 43.9	
	comp=Z,65nm,20.0s,baz=68,slow=38						
CMAR	Chiang Mai Arr	62.69	264	i P	P	16 09 53.0	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
H43A	Windswept, Lux	62.71	51	P	P	16 09 50.6	-0.8
	baz=321						
DOMB	Dombas	62.77	349	eP	P	16 09 50.3	-1.3
E46A	Sault Ste Mari	62.78	48	P	P	16 09 51.3	-0.6
	baz=322						
AKN	Aaknes	62.86	350	eP	P	16 09 49.4	-2.8
L40A	Anamosa	62.94	55	eP	P	16 09 52.2	-0.7
	comp=Z,13nm,0.7s						
L40A	Anamosa	62.94	55	P	P	16 09 52.4	-0.6
	baz=320						
MSTX	Muleshoe	63.10	69	eP	P	16 09 54.4	+0.2
	comp=Z,13nm,0.9s						
MSTX	Muleshoe	63.10	69	P	P	16 09 54.5	+0.2
	baz=319						
E47A	Iron Bridge	63.16	47	P	P	16 09 53.6	-0.8
	baz=322						
GAR	Garm	63.20	300	eP	P	16 09 54.2	-0.7
	comp=Z,19nm,1.2s						
GAR	Garm	63.20	300	eP	P	16 09 54.2	-0.7
GAR				pmax	pmax		
	comp=Z,19nm,1.2s						
G45A	Suttons Bay	63.22	49	P	P	16 09 54.4	-0.4
	baz=321						
NC204	NORSAR Array S	63.31	348	eP	P	16 09 54.7	-0.5
	comp=Z,15nm,0.8s						
NC405	NORSAR Array S	63.35	347	eP	P	16 09 55.0	-0.4
	comp=Z,51nm,1.4s						
MNTX	Cornudas Mount	63.36	72	eP	P	16 09 57.0	+1.1
	comp=Z,12nm,0.8s						
MNTX	Cornudas Mount	63.36	72	P	P	16 09 56.9	+0.9
	baz=319						
NB201	NORSAR Array S	63.46	347	eP	P	16 09 55.6	-0.5
	comp=Z,22nm,0.7s						
NB2	NORSAR Subarra	63.48	347	P	P	16 09 55.7	-0.6
	comp=Z,3.3nm,0.5s,baz=16,slow=6.9						
NB2	NORSAR Subarra	63.48	347	P	P	16 09 55.7	-0.6
	baz=16,slow=6.9						
NB200	NORSAR Array S	63.48	347	eP	P	16 09 56.0	-0.4
NOA	NORSAR Array B	63.48	347	P	P	16 09 56.0	-0.4
	comp=Z,3.6nm,0.5s,baz=18,slow=6.7,SNR=32						
NOA				LR	LR	16 38 07.0	
	comp=Z,22nm,19.9s,baz=355,slow=37						
NOA	NORSAR Array B	63.48	347	P	P	16 09 56.0	-0.4
LSQQ	Lebel-sur-Quev	63.66	41	P	P	16 09 56.5	-1.1
	baz=324						
N40A	Mertquake, Sal	63.66	56	P	P	16 09 57.3	-0.4
	baz=320						
L42A	Oliver, Polo	63.72	54	P	P	16 09 57.4	-0.8
	baz=321						
NC602	NORSAR Array S	63.73	347	eP	P	16 09 56.8	-1.1
OBN	Obninsk	63.74	331⇓	eP	P	16 09 58.9	+0.9
OBN				e*SP	sP	16 10 07.3	-2.5
OBN				S	S	16 18 25.0	-5.2
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,45nm,18.0s						
I45A	Fountain	63.74	51	P	P	16 09 57.5	-0.7
	baz=321						
HNR	Honiara	63.79	188	LR	LR	16 32 07.7	
	comp=Z,63nm,22.0s,baz=18,slow=31						
M41A	Milan	63.79	55	P	P	16 09 57.8	-0.7
	baz=320						
HYA	Hoyanger	63.94	350	eP	P	16 09 56.3	-2.9
CHGQ	Chibougamau	63.96	39	P	P	16 09 58.6	-1.0
	baz=325						
N41A	Harden Midland	64.15	56	eP	P	16 10 00.2	-0.8
	comp=Z,54nm,1.1s						
N41A	Harden Midland	64.15	56	P	P	16 10 00.7	-0.2
	baz=321						
I46A	Reed City	64.17	50	P	P	16 10 00.5	-0.6
	baz=322						
SKAR	Skarslia	64.19	349	eP	P	16 10 00.2	-0.8
VLDQ	Val d'Or	64.24	42	eP	P	16 09 59.0	-2.4
	comp=Z,15nm,1.1s						
WMOK	Wichita Mounta	64.67	65	eP	P	16 10 04.6	+0.1
	comp=Z,12nm,0.9s						
WMOK	Wichita Mounta	64.67	65	eP	P	16 10 04.6	+0.1
WMOK				pmax	pmax		
	comp=Z,12nm,0.9s						
WMOK	Wichita Mounta	64.67	65	P	P	16 10 04.6	+0.1
	baz=320						
D52A	ZEK Kipawa Sen	64.77	44	P	P	16 10 04.6	-0.3
	baz=324						
M44A	Midewin, Midew	64.97	54	P	P	16 10 05.6	-0.7
	baz=322						
D53A	Lac Vacive, Po	64.97	43	P	P	16 10 05.8	-0.5
	baz=324						
HDIL	Hopedale	65.02	55	eP	P	16 10 06.3	-0.3
	comp=Z,87nm,0.5s						
HDIL	Hopedale	65.02	55	P	P	16 10 06.3	-0.3
	baz=321						
KONO	Kongsberg	65.04	348	i P	P	16 10 07.0	+0.6
KONO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KONO	Kongsberg	65.04	348	eP	P	16 10 06.1	-0.4
D54A	Lac Fusel, La	65.33	43	P	P	16 10 08.1	-0.5
	baz=325						
J48A	Bridge Port	65.42	49	P	P	16 10 11.3	+2.1
	baz=323						
E53A	Dumoine, Ponti	65.56	44	P	P	16 10 08.5	-1.6
	baz=324						
P43A	Skaggs, Pawnee	65.62	56	P	P	16 10 09.8	-0.8
	baz=321						
K48A	Perry	65.67	50	P	P	16 10 10.0	-0.8
	baz=323						
NIL	Nilore	65.74	294	eP	P	16 10 11.4	-0.1
	comp=Z,19nm,1.1s						
NIL	Nilore	65.74	294	eP	P	16 10 11.4	-0.1
NIL				pmax	pmax		
	comp=Z,19nm,1.1s						
ABTX	Abilene, Hawle	65.82	67	P	P	16 10 12.3	+0.3
	baz=320						
L47A	Sherwood	65.83	51	P	P	16 10 11.3	-0.6
	baz=322						
K49A	Clarkson	65.98	50	P	P	16 10 12.7	-0.2
	baz=323						
CCM	Cathedral Cave	66.01	58	eP	P	16 10 12.1	-1.0
	comp=Z,8.7nm,0.9s						
CCM	Cathedral Cave	66.01	58	eP	P	16 10 12.1	-1.0
CCM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CCM	Cathedral Cave	66.01	58	P	P	16 10 12.5	-0.6
	baz=321						
HHAR	Hobbs	66.02	61	eP	P	16 10 12.1	-1.1
	comp=Z,9.2nm,1.0s						
TX31	Lajitas Ar. Si	66.12	73	eP	P	16 10 14.2	+0.2
	comp=Z,11nm,0.7s						
LTX	Lajitas	66.12	73	eP	P	16 10 14.7	+0.7
LTX	Lajitas	66.12	73	eP	P	16 10 14.7	+0.7
TXAR	Lajitas Array	66.12	73	P	P	16 10 14.7	+0.7
	comp=Z,5.9nm,0.5s,baz=302,slow=4.6,SNR=102						
TXAR				LR	LR	16 36 39.1	
	comp=Z,44nm,21.3s,baz=0.0,slow=34						
G53A	Haliburton	66.18	45	P	P	16 10 12.9	-1.2
	baz=324						
L48A	N Adams	66.20	51	P	P	16 10 13.6	-0.7
	baz=323						
SFIN	Lafayette	66.20	54	P	P	16 10 13.5	-0.8
	baz=322						
U40A	Yellville	66.52	60	P	P	16 10 15.4	-1.0
	baz=321						
P46A	Rosedale	66.75	54	P	P	16 10 16.9	-0.9
	baz=322						
N48A	Decatur	66.79	52	P	P	16 10 17.1	-1.0
	baz=323						
W39A	Magazine	66.94	62	eP	P	16 10 18.6	-0.5
	comp=Z,34nm,1.7s						
W39A	Magazine	66.94	62	P	P	16 10 18.2	-0.8
	baz=321						
N49A	Columbus Grove	67.13	51	P	P	16 10 19.4	-0.8
	baz=323						
O48A	Farmland	67.21	52	P	P	16 10 19.8	-0.9
	baz=323						
FCAR	Ozark Folk Cen	67.25	60	eP	P	16 10 20.1	-0.9
	comp=Z,21nm,0.7s						
S44A	Carbondale	67.27	57	P	P	16 10 20.7	-0.5
	baz=322						
JCT	Junction City	67.38	69	eP	P	16 10 21.8	-0.2
	comp=Z,8.6nm,0.9s						
JCT	Junction City	67.38	69	eP	P	16 10 21.8	-0.2
JCT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
JCT	Junction City	67.38	69	P	P	16 10 21.7	-0.2
	baz=321						
PBMO	Poplar Bluff	67.41	58	eP	P	16 10 21.4	-0.6
	comp=Z,18nm,0.8s						
WHTX	Lake Whitney,	67.48	66	P	P	16 10 22.1	-0.5
	baz=321						
MIAR	Mount Ida	67.55	62	eP	P	16 10 22.7	-0.3
	comp=Z,8.8nm,0.8s						
MIAR	Mount Ida	67.55	62	eP	P	16 10 22.7	-0.3
MIAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MIAR	Mount Ida	67.55	62	P	P	16 10 22.6	-0.3
	baz=322						
WHAR	Wooly Hollow	67.63	61	eP	P	16 10 22.7	-0.8
	comp=Z,12nm,1.0s						
O49A	Covington	67.64	52	P	P	16 10 22.6	-0.8
	baz=323						
P48A	Milroy	67.72	53	eP	P	16 10 22.9	-1.1
	comp=Z,13nm,0.9s						
P48A	Milroy	67.72	53	P	P	16 10 22.9	-1.1
	baz=323						
N50A	Nevada	67.72	51	P	P	16 10 23.3	-0.7
	baz=324						
W41B	Gary Mavity, V	67.75	61	P	P	16 10 23.3	-0.8
	baz=322						
N51A	Ashland	67.95	50	P	P	16 10 24.4	-1.0
	baz=324						
X40A	Basin Creek Fa	67.98	61	P	P	16 10 25.0	-0.7
	baz=322						
P49A	Miami Univ. Ec	67.99	53	P	P	16 10 24.7	-0.9
	baz=323						
O50A	Cable	68.01	51	P	P	16 10 25.1	-0.7
	baz=324						
ERPA	Erie	68.04	48	P	P	16 10 25.2	-0.8
	baz=324						
L53A	Girard	68.06	48	P	P	16 10 25.0	-1.1
	baz=324						
K54A	Basiliko Farm,	68.20	47	P	P	16 10 25.9	-1.0
	baz=325						
ACSO	Alum Creek Sta	68.23	51	P	P	16 10 26.1	-1.1
	baz=324						
WCI	Wyandotte Cave	68.28	54	P	P	16 10 26.6	-1.0
	baz=323						
M53A	WI Miller and	68.29	49	P	P	16 10 27.0	-0.5
	baz=324						
N52A	McGinn’s Farm,	68.35	50	P	P	16 10 26.7	-1.1
	baz=324						
P50A	Jamestown	68.36	52	P	P	16 10 27.1	-0.9
	baz=324						
K55A	Perry	68.37	46	P	P	16 10 27.1	-0.9
	baz=325						
O51A	Pataskala	68.47	51	P	P	16 10 27.9	-0.7
	baz=324						
L55A	Hinsdale	68.66	47	P	P	16 10 29.0	-0.8
	baz=325						
M54A	Oil Creek Stat	68.68	48	eP	P	16 10 29.2	-0.7
	comp=Z,54nm,1.6s						
M54A	Oil Creek Stat	68.68	48	P	P	16 10 28.9	-1.0
	baz=325						
N53A	Lisbon	68.73	49	P	P	16 10 29.5	-0.8
	baz=324						
R49A	Shelbyville	68.77	54	P	P	16 10 30.1	-0.4
	baz=323						
O52A	Adamsville	68.84	50	eP	P	16 10 30.2	-0.8
	comp=Z,24nm,0.8s						
O52A	Adamsville	68.84	50	P	P	16 10 30.2	-0.8
	baz=324						
T47A	Sharon Grove	68.88	56	P	P	16 10 31.3	0.0
	baz=323						
Q50A	Georgetown	68.89	53	P	P	16 10 30.7	-0.6
	baz=324						
O53A	New Philadelph	69.02	50	P	P	16 10 31.9	-0.2
	baz=324						
Q51A	Peebles	69.03	52	P	P	16 10 31.9	-0.3
	baz=324						
M55A	Ridgway	69.10	47	P	P	16 10 32.1	-0.5
	baz=325						
P52A	Corning	69.10	51	P	P	16 10 32.1	-0.5
	baz=324						
S49A	Springfield	69.12	54	P	P	16 10 32.3	-0.4
	baz=323						
WVT	Waverly	69.21	57	P	P	16 10 33.2	-0.1
	baz=323						
U47A	Clarksville	69.22	56	P	P	16 10 33.3	-0.1
	baz=323						
V46A	Holladay	69.33	57	P	P	16 10 33.8	-0.3
	baz=323						
M56A	Emporium	69.34	47	P	P	16 10 33.8	-0.3
	baz=325						
R51A	Hillsboro	69.51	53	P	P	16 10 34.9	-0.3
	baz=324						
T49A	Edmonton	69.54	55	eP	P	16 10 34.8	-0.6
	comp=Z,13nm,0.9s						
T49A	Edmonton	69.54	55	P	P	16 10 35.1	-0.2
	baz=324						
P53A	Whipple	69.55	50	P	P	16 10 35.4	0.0
	baz=324						
N55A	Marion Center	69.57	48	P	P	16 10 34.4	-1.1
	baz=325						
V47A	Nunnelly	69.60	57	P	P	16 10 35.3	-0.5
	baz=323						
AKASG	Malin Array Be	69.69	333	P	P	16 10 35.4	-0.6
	comp=Z,2.0nm,0.4s,baz=27,slow=6.4,SNR=6.8						
AKBB	Malin Array Si	69.69	333	eP	P	16 10 35.4	-0.6
	comp=Z,15nm,1.6s						
AKBB	Malin Array Si	69.69	333	eP	P	16 10 35.4	-0.6
AKBB				pmax	pmax		
	comp=Z,15nm,1.6s						
OXF	Oxford	69.70	59	P	P	16 10 35.9	-0.5
	baz=323						
W46A	Michie	69.73	58	P	P	16 10 35.8	-0.7
	baz=323						
O55A	Ligonier	69.90	49	P	P	16 10 36.6	-0.9
	baz=325						
U49A	Red Boiling Sp	69.90	55	P	P	16 10 37.2	-0.4
	baz=324						
T50A	Nancy	69.94	54	P	P	16 10 37.3	-0.5
	baz=324						
CLTN	Cedars of Leba	69.97	56	eP	P	16 10 37.9	-0.1
	comp=Z,14nm,0.9s						

GEYT	**Alibeck** comp=Z,57nm,18.4s,baz=155,slow=39	69.98	307	LR	LR	16 44 43.1	
V48A	**Smith Brothers** baz=323	70.01	56	P	P	16 10 37.9	-0.3
W47A	**Westpoint** baz=323	70.02	57	P	P	16 10 37.8	-0.5
X46A	**Booneville** baz=323	70.08	58	P	P	16 10 38.2	-0.5
SSPA	**Standing Stone** baz=326	70.16	47	P	P	16 10 38.4	-0.7
M58A	**Price's Panora** baz=326	70.16	46	P	P	16 10 37.9	-1.2
Q54A	**Coxs Mills** baz=325	70.21	50	P	P	16 10 38.6	-0.9
R53A	**Hurricane** comp=Z,29nm,1.1s	70.24	51	*e*P	P	16 10 39.2	-0.4
R53A	**Hurricane** baz=325	70.24	51	P	P	16 10 39.2	-0.4
P55A	**Reedsville** baz=325	70.24	49	P	P	16 10 39.2	-0.4
T51A	**Gray** baz=324	70.41	54	P	P	16 10 40.3	-0.4
U50A	**Jamestown** baz=324	70.43	55	P	P	16 10 40.4	-0.4
W48A	**Pulaski** baz=323	70.44	57	P	P	16 10 40.5	-0.4
V49A	**McMinnville** baz=324	70.44	56	P	P	16 10 40.4	-0.5
X47A	**Russelville** baz=323	70.48	58	P	P	16 10 40.4	-0.8
Q55A	**Buckhannon** baz=325	70.54	50	P	P	16 10 40.9	-0.6
P56A	**Dayton Farm, R** baz=326	70.68	49	P	P	16 10 41.6	-0.7
S53A	**Williamson** baz=325	70.68	52	P	P	16 10 41.9	-0.5
T52A	**Hallie** baz=324	70.75	53	P	P	16 10 42.7	0.0
W49A	**Belvidere** baz=324	70.78	56	P	P	16 10 42.4	-0.6
R54A	**Victor** baz=325	70.80	51	P	P	16 10 42.6	-0.5
SWET	**Sewanee** comp=Z,16nm,0.9s	70.86	56	*e*P	P	16 10 42.8	-0.8
V50A	**Pikevile** baz=324	70.90	55	P	P	16 10 43.2	-0.5
Q56A	**Snyder Ridge,** baz=326	70.90	49	P	P	16 10 43.1	-0.6
X48A	**Hartselle** baz=324	70.93	57	P	P	16 10 43.0	-0.8
T53A	**Wise** baz=325	71.06	53	P	P	16 10 44.3	-0.4
U52A	**Thorn Hill** baz=324	71.15	54	P	P	16 10 44.7	-0.5
V51A	**Loudon** comp=Z,16nm,0.9s	71.16	55	*e*P	P	16 10 44.9	-0.3
V51A	**Loudon** baz=324	71.16	55	P	P	16 10 44.8	-0.5
W50A	**Signal Mountai** comp=Z,16nm,0.9s	71.18	56	*e*P	P	16 10 45.0	-0.5
W50A	**Signal Mountai** baz=324	71.18	56	P	P	16 10 45.1	-0.4
X49A	**Woodville** baz=324	71.24	57	P	P	16 10 45.3	-0.5
CPCT	**Cooper Cave** comp=Z,36nm,0.4s	71.36	55	*e*P	P	16 10 46.0	-0.5
KIV	**Kislovodsk**	71.41	321	*e*P	P	16 10 45.2	-1.6
KIV	comp=Z,19nm,1.1s			pmax	pmax		
KIV	comp=Z,105nm,18.0s			MLR	MLR		
W51A	**Cleveland** baz=324	71.48	55	P	P	16 10 46.8	-0.4
V52A	**Sevierville** baz=324	71.48	54	P	P	16 10 46.8	-0.5
KBZ	**Khabaz** comp=Z,3.3nm,0.9s,baz=78,slow=2.5,SNR=4.9	71.53	321	P	P	16 10 47.1	-0.2
KBZ	comp=Z,65nm,18.2s,baz=30,slow=40			LR	LR	16 46 27.0	
AKT	**Akhty**	71.58	317	*e*P	P	16 10 54.8	+7.0
AKT				*e*		16 11 12.3	
AKT	comp=Z,9.0nm,0.8s			pmax	pmax		
SHA1	**Shidzhatmaz**	71.61	321	*e*P	P	16 10 48.6	+0.5
X50B	**Fort Payne** baz=324	71.61	56	P	P	16 10 47.5	-0.5
Q58A	**Fox Den Farm,** baz=326	71.65	48	P	P	16 10 48.5	+0.4
Y49A	**Blount Mountai** baz=324	71.72	57	P	P	16 10 48.1	-0.6
U54A	**Nelsons Funny** baz=325	71.77	52	P	P	16 10 48.7	-0.3
R57A	**Stanardsville** baz=326	71.81	49	P	P	16 10 49.0	-0.2
S56A	**Natural Bridge** baz=326	71.85	50	P	P	16 10 49.2	-0.2
X51A	**Calhoun** baz=324	71.91	56	P	P	16 10 49.3	-0.5
W52A	**Murphy** comp=Z,14nm,1.0s	71.93	55	*e*P	P	16 10 50.3	+0.3
W52A	**Murphy** baz=324	71.93	55	P	P	16 10 49.9	-0.1
V53A	**Saluda** baz=325	72.00	54	P	P	16 10 50.0	-0.3
Y50A	**Piedmont** baz=324	72.03	57	P	P	16 10 50.2	-0.4
S57A	**Dark Hollow, R** baz=326	72.06	50	P	P	16 10 50.2	-0.5
LRAL	**Lakeview Retre** baz=324	72.09	58	P	P	16 10 49.9	-0.9
U55A	**TA2, Sparta** baz=325	72.14	52	P	P	16 10 50.6	-0.6
Z49A	**Columbiana** baz=324	72.19	58	P	P	16 10 50.8	-0.7
W53A	**Cullowhee** baz=325	72.23	54	P	P	16 10 51.5	-0.4
KWP	**Kalwaria Pacla**	72.30	337	*e*P	P	16 10 42.9	-9.0
KWP	**Kalwaria Pacla**	72.30	337	*e*P	P	16 10 42.9	-9.0
V54A	**Nebo** baz=325	72.31	53	P	P	16 10 51.8	-0.5
X52A	**Dahlonega** baz=325	72.34	55	P	P	16 10 51.9	-0.5
Y51A	**Rockmart** baz=324	72.35	56	P	P	16 10 51.5	-0.9
OJC	**Ojcow**	72.39	339	*e*P	P	16 10 53.0	+0.6
OJC	**Ojcow**	72.39	339	*e*P	P	16 10 53.0	+0.6
Z50A	**Ashland** comp=Z,17nm,1.0s	72.45	57	*e*P	P	16 10 52.0	-1.1
Z50A	**Ashland** baz=324	72.45	57	P	P	16 10 52.2	-0.9
R59A	**King George, V** baz=326	72.51	48	P	P	16 10 52.9	-0.4
149A	**Jones** baz=324	72.54	58	P	P	16 10 53.0	-0.6
T57A	**Hurt** baz=326	72.55	50	P	P	16 10 52.9	-0.7
CLL	**Collm**	72.63	344	*e*P	P	16 10 54.0	+0.2
CLL				*e*		16 11 00.0	
CLL	comp=Z,5.0nm,1.0s			pmax	pmax		
CLL	**Collm** comp=Z,5.0nm,1.0s	72.63	344	*e*P	P	16 10 54.0	+0.2
CLL				*e*pP	pP	16 11 00.0	-2.4
X53A	**Estanollee** baz=325	72.71	55	P	P	16 10 54.3	-0.2
Z51A	**Franklin** baz=324	72.76	57	P	P	16 10 54.8	-0.1
W54A	**Cherokee Point** baz=325	72.77	54	P	P	16 10 54.8	-0.1
Y52A	**Lilburn** comp=Z,13nm,0.9s	72.86	56	*e*P	P	16 10 55.1	-0.4
Y52A	**Lilburn** baz=325	72.86	56	P	P	16 10 55.1	-0.4
249A	**Camden** baz=324	72.88	59	P	P	16 10 55.5	-0.1
150A	**Eclectic** baz=324	72.92	58	P	P	16 10 55.5	-0.4
DPC	**Dobruska-Polom**	72.96	341	*e*P	P	16 10 56.1	+0.2
DPC	**Dobruska-Polom**	72.96	341	*e*P	P	16 10 56.1	+0.2
U57A	**Blanch** baz=326	72.98	51	P	P	16 10 55.9	-0.3
Y53A	**Monroe** baz=325	73.10	55	P	P	16 10 56.6	-0.3
X54A	**Belton** baz=325	73.12	54	P	P	16 10 56.7	-0.2
KMSC	**Kings Mountain** baz=325	73.12	53	P	P	16 10 56.1	-0.9
Z52A	**Williamson** baz=325	73.24	56	P	P	16 10 57.3	-0.4
MORC	**Moravsky Berou**	73.27	340	*e*P	P	16 10 58.2	+0.5
U58A	**Oxford** baz=326	73.37	50	P	P	16 10 58.1	-0.4
HODGE	**Hodges** comp=Z,13nm,0.9s	73.43	54	*e*P	P	16 10 58.4	-0.4
LANS	**Liptovska Anna**	73.47	339	*e*P	P	16 11 00.6	+1.7
LANS	comp=Z,4.0nm,0.6s			pmax	pmax		
LANS	**Liptovska Anna**	73.47	339	*e*P	P	16 11 00.6	+1.7
W56A	**Indian Trail** baz=326	73.48	52	P	P	16 10 59.2	+0.1
152A	**Waverly Hall** baz=325	73.51	57	P	P	16 10 58.9	-0.5
Y54A	**Tignall** baz=325	73.53	55	P	P	16 10 59.2	-0.3
X55A	**Gracelyn & Ava** baz=325	73.53	54	P	P	16 10 59.3	-0.1
BUR08	**Bucovina Ar. S** comp=Z,4.5nm,0.9s	73.55	334	*e*P	P	16 10 59.5	+0.1
Z53A	**Monticello** baz=325	73.58	56	P	P	16 10 59.1	-0.6
PRU	**Pruhonice**	73.64	342	*e*P	P	16 10 59.7	-0.1
PRU	**Pruhonice**	73.64	342	*e*P	P	16 10 59.7	-0.1
W57A	**Gilead** baz=326	73.74	52	P	P	16 10 59.8	-0.8
U59A	**Littleton** baz=327	73.75	50	P	P	16 11 00.3	-0.3
X56A	**White Oak** baz=326	73.80	53	P	P	16 11 00.4	-0.6
Y55A	**Saluda** baz=325	73.86	54	P	P	16 11 01.0	-0.3
VRAC	**Vranov**	73.90	341	*e*P	P	16 11 02.0	+0.6
Z54A	**Sparta** baz=325	73.96	55	P	P	16 11 01.6	-0.4
V59A	**Middlesex** baz=326	74.03	50	P	P	16 11 02.3	-0.1
JAVC	**Velka Javorina**	74.12	340	*e*P	P	16 11 04.6	+1.9
KRUC	**Moravsky**	74.18	341	*e*P	P	16 11 01.4	-1.6
VYHS	**Vyhne**	74.22	339	*e*P	P	16 11 05.2	+1.9
VYHS	**Vyhne**	74.22	339	*e*P	P	16 11 05.2	+1.9
253A	**Americus** baz=325	74.30	57	P	P	16 11 04.1	+0.1
U61A	**Possum Corner** baz=327	74.36	49	P	P	16 11 04.8	+0.6
KHC	**Kasperske Hory** comp=Z,2.3nm,1.1s	74.63	343	*e*P	P	16 11 05.9	+0.2
KHC	**Kasperske Hory**	74.63	343	*i* P	P	16 11 06.6	+0.9
KHC	comp=Z,12nm,1.1s			pmax	pmax		
KHC	**Kasperske Hory**	74.63	343	*e*P	P	16 11 06.2	+0.5
155A	**Kite** baz=325	74.65	55	P	P	16 11 05.8	-0.1
452A	**Marianna** baz=325	74.76	58	P	P	16 11 06.4	-0.2
GEC2	**GERESS Array S** comp=Z,12nm,1.6s	74.89	342	*e*P	P	16 11 06.9	-0.3
GEC2	**GERESS Array S**	74.89	342	*e*P	P	16 11 06.9	-0.3
GEC2	comp=Z,12nm,1.6s			pmax	pmax		
GERES	**GERESS Array B** comp=Z,1.2nm,0.5s,baz=35,slow=4.9,SNR=12	74.89	342	P	P	16 11 07.4	+0.1
552A	**Lynn Haven** baz=325	75.29	59	P	P	16 11 09.1	-0.5
CONA	**Conrad Observa** comp=Z,2.3nm,0.7s	75.37	341	*e*P	P	16 11 11.4	+1.4
MOA	**Molln** comp=Z,1.4nm,0.7s	75.74	342	*e*pP	P	16 11 13.8	+1.7
DZM	**Mont Dzumac** comp=Z,61nm,18.9s,baz=238,slow=32	76.05	181	LR	LR	16 40 21.0	
ARSA	**Arzberg** comp=Z,1.4nm,0.5s	76.08	341	*e*P	P	16 11 15.3	+1.2
CTA	**Charters Tower** comp=Z,1.5nm,0.6s,baz=340,slow=2.5,SNR=2.3	76.28	200	P	P	16 11 15.3	0.0
KBA	**Koelnbreinsper** comp=Z,4.8nm,0.5s	76.65	342	*e*pP	P	16 11 19.0	+1.5
WATA	**Walderalm** comp=Z,3.4nm,0.6s	76.71	343	*e*P	P	16 11 18.4	+0.6
SOKA	**Soboth** comp=Z,2.6nm,0.5s	76.73	341	*e*P	P	16 11 18.9	+1.1
WTTA	**Wattenberg** comp=Z,2.9nm,0.6s	76.77	343	*e*P	P	16 11 19.1	+0.9
MOTA	**Moosalm** comp=Z,1.5nm,0.5s	76.78	344	*e*P	P	16 11 18.8	+0.6
SQTA	**Sankt Quirin** comp=Z,4.4nm,0.6s	76.89	344	*e*P	P	16 11 19.5	+0.8
OBKA	**Obir** comp=Z,6.1nm,0.6s	76.98	341	*e*P	P	16 11 20.6	+1.4
ABTA	**Abfaltersbach** comp=Z,2.3nm,0.7s	77.12	343	*e*P	P	16 11 20.4	+0.5
FETA	**Feichten** comp=Z,4.3nm,0.9s	77.16	344	*e*P	P	16 11 21.1	+0.9
BR101	**Keskin Array S**	78.31	325	*e*P	P	16 11 26.6	-0.2
BR131	**Keskin Array S** comp=Z,2.4nm,0.9s	78.31	325	*e*P	P	16 11 26.8	0.0
BRTR	**Keskin Array B** comp=Z,1.5nm,0.6s,baz=71,slow=2.4,SNR=8.2	78.31	325	P	P	16 11 26.6	-0.2
BRTR	**Keskin Array B**	78.31	325	*i* P	P	16 11 27.2	+0.4
BRTR	comp=Z,2.0nm,0.6s			pmax	pmax		
WR1	**Warramunga Arr**	79.20	212	*e*P	P	16 11 31.4	-0.2
WRA	**Warramunga Arr** comp=Z,2.4nm,0.9s,baz=27,slow=7.6,SNR=5.5	79.20	212	P	P	16 11 31.4	-0.2
AS31	**Alice Springs** comp=Z,1.1nm,0.8s	82.84	211	*e*P	P	16 11 52.2	+1.3
ASAR	**Alice Springs** comp=Z,2.4nm,0.8s,baz=21,slow=5.0,SNR=24	82.84	211	P	P	16 11 52.2	+1.3
ESDC	**Sonseca Array** comp=Z,0.7nm,0.6s,baz=1.0,slow=5.7,SNR=9.3	86.12	353	P	P	16 12 07.6	0.0
STKA	**Stephens Creek** comp=Z,1.2nm,0.7s,baz=19,slow=13,SNR=3.0	88.67	202	P	P	16 12 20.1	+0.6
STKA	**Stephens Creek** comp=Z,8.8nm,2.0s	88.67	202	*e*P	P	16 12 20.1	+0.6
PLCA	**Paso Flores** comp=Z,1.3nm,0.8s,baz=328,slow=6.0,SNR=3.3	139.69	95	PKP	PKPdf	16 18 53.3	-0.5
MAW	**Mawson** comp=Z,1.0nm,0.5s,baz=96,slow=9.2,SNR=3.3	143.59	219	PKP	PKPbc	16 18 58.4	+1.1
QSPA	**South Pole Qui**	144.03	180	*e*PKPdf	PKPab	16 18 58.6	+0.4

ISCJB ***23*** *16:20:51.7±0.8, 4°.9S±0°.1×144°.3E±0°.1, h100^{km}, mb3.7/5, Error ellipse: s-maj=22.3km s-min=10.0km az=149.0*

IDC ***23*** *16:20:54.0±6.0, 4°.90S×144°.37E, h110^{km}±67^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/25, mbtmp3.8/7, MS2.9/1, Ms1 2.9/1, ms1mx2.5/19, Error ellipse: s-maj=45.4km s-min=30.2km az=147.0*

ISC 23 16:20:53.3±1.0**, 4°.9S**±0°.1×**144°.3E**±0°.2**, h100^{km}, n8, σ0^s.78**/8**, mb3.8**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby** 0.4nm,0.3s,baz=296,slow=17,SNR=2.2	5.33	148	P	Pn	16 22 11.4	+0.8
PMG	1.0nm,0.3s,baz=317,slow=19,SNR=2.6			S	Sn	16 23 09.7	-0.9
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=30,slow=12,SNR=5.0	17.82	212	P	Pn	16 24 54.2	-0.8
ASAR	**Alice Springs** 1.4nm,0.8s,baz=33,slow=11,SNR=11	21.18	207	P	P	16 25 31.6	+0.7
KAPI	**Kappang** comp=Z,30nm,21.1s,baz=300,slow=39	24.43	269	LR	LR	16 36 55.5	
CMAR	**Chiang Mai Arr** 1.0nm,0.9s,baz=115,slow=6.1,SNR=4.5	50.33	299	P	P	16 29 40.4	0.0
MKAR	**Makanchi Array** 0.5nm,0.4s,baz=101,slow=7.6,SNR=9.0	74.92	321	P	P	16 32 23.6	+0.2
ZALV	**Zalesovo Beam** 0.9nm,0.4s,baz=129,slow=7.5,SNR=6.3	76.63	328	P	P	16 32 32.6	-0.4
ILAR	**Eielson Array** 0.5nm,0.5s,baz=258,slow=4.7,SNR=5.9	85.54	24	P	P	16 33 19.8	-0.2

WEL 23 16:31:20.3, 41°.5S±0°.7×**174°.4E**±0°.9**, h16^{km}**±2^{km}**, M3.4**/24**, ML3.7**/18**, MLv3.4**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=123.2, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.25	210	P	Pb	16 31 26.5	0.0
CMWZ				S	Sb	16 31 30.0	-0.5
TCW	**Tory Channel**	0.33	347	P	Pb	16 31 28.0	+0.1
TCW				S	Sb	16 31 33.0	0.0
TUWZ	**Tuamarina**	0.34	288	P	Pb	16 31 27.9	-0.1
TUWZ				S	Sb	16 31 32.9	-0.4
BHW	**Baring Head**	0.39	71	P	Pb	16 31 28.9	+0.1
BHW				S	Sb	16 31 34.7	0.0
BSWZ	**Blackbirch Sta**	0.42	244	P	Pb	16 31 29.3	-0.1
BSWZ				S	Sb	16 31 35.5	+0.1
PLWZ	**Palliser**	0.66	93	P	Pb	16 31 33.8	+0.4
MSWZ	**Moikau Station**	0.67	80	P	Pb	16 31 34.0	+0.4
CAW	**Cannon Point**	0.67	51	P	Pb	16 31 33.8	+0.2
PAWZ	**Paruwai Farm**	0.80	79	P	Pn	16 31 36.6	-0.5
DUWZ	**D'Urville Isla**	0.81	335	P	Pg	16 31 36.6	+0.5
NNZ	**Nelson**	0.82	293	P	Pg	16 31 36.3	+0.2
MTW	**Mount Morrison**	0.93	66	P	Pn	16 31 38.6	-0.1
TRWZ	**Traveller**	0.99	83	P	Pg	16 31 39.5	-0.1
HOWZ	**Holdsworth Sta**	1.07	54	P	Pn	16 31 40.7	+0.1
KHZ	**Kahutara**	1.08	215	P	Pb	16 31 40.5	-0.1
THZ	**Tophouse**	1.13	258	P	Pb	16 31 41.3	-0.1
TMWZ	**Te Maipa**	1.22	70	P	Pn	16 31 42.6	-0.1
MRZ	**Mangatainoka R**	1.26	46	P	Pb	16 31 43.7	0.0
TIWZ	**Tintock**	1.37	57	P	Pn	16 31 44.6	-0.2
OHWZ	**Ohakea**	1.51	28	P	Pg	16 31 48.6	-0.6
PRWZ	**Pori Road**	1.55	51	P	Pn	16 31 47.2	-0.1
POWZ	**Post Office Ro**	1.55	43	P	Pn	16 31 47.7	+0.4
QRZ	**Quartz Range**	1.56	296	P	Pb	16 31 48.6	-0.3
BFZ	**Birch Farm**	1.65	59	P	Pn	16 31 48.2	-0.5
GVZ	**Greta Valley S**	1.75	214	P	Pn	16 31 49.2	-0.8
DVHZ	**Dannevirke**	1.83	48	P	Pn	16 31 50.8	-0.4
WAZ	**Wanganui**	1.84	15	P	Pb	16 31 54.2	+0.7
TSZ	**Takapari Road**	1.90	40	P	Pn	16 31 52.5	+0.4
ANWZ	**Angora Road**	1.92	57	P	Pn	16 31 51.8	-0.5
DSZ	**Denniston Nort**	1.94	263	P	Pn	16 31 53.8	+1.2
LTZ	**Lake Taylor**	2.00	231	P	Pn	16 31 53.5	0.0
LREZ	**Lake Rotokare**	2.07	1	P	Pb	16 31 58.3	+0.8
PRHZ	**Porangahau**	2.13	54	P	Pn	16 31 54.2	-1.0
PNHZ	**Pukenui**	2.13	41	P	Pn	16 31 55.4	+0.1
PKE	**Pukeiti**	2.36	353	P	Pb	16 32 01.9	-0.5
PKVZ	**Pokaka**	2.36	19	P	Pb	16 32 01.0	-1.5
MOVZ	**Moawhango**	2.37	27	P	Pn	16 31 59.9	+1.3
OKCZ	**Okains Bay**	2.39	204	P	Pn	16 31 57.0	-1.9
BHHZ	**Black Hill Sta**	2.41	33	P	Pn	16 32 00.5	+1.3
KRHZ	**Kereru**	2.42	39	P	Pn	16 31 59.0	-0.3
VRZ	**Vera Road**	2.42	7	P	Pb	16 32 02.7	-0.9
WHVZ	**Whangaehu Hut**	2.43	23	P	Pn	16 32 01.4	+1.8
TUVZ	**Tukino**	2.46	24	P	Pb	16 32 02.5	-1.8
INZ	**Inchbonnie**	2.48	240	P	Pn	16 32 00.8	+0.7
NGZ	**Ngauruhoe**	2.54	22	P	Pb	16 32 05.3	-0.2
KAHZ	**Kahuranaki**	2.58	48	P	Pn	16 32 00.2	-1.2
WTVZ	**West Tongariro**	2.59	21	P	Pb	16 32 07.5	+1.1
TWVZ	**Taurewa**	2.59	19	P	Pb	16 32 07.6	+1.1
KRVZ	**Karewarewa**	2.62	22	P	Pb	16 32 07.8	+0.8
KWHZ	**Kaweka Forest**	2.62	37	P	Pb	16 32 08.7	+1.7
KATZ	**Kakaramea**	2.75	22	P	Pb	16 32 10.7	+1.6
RITZ	**Rihia Road**	2.79	24	P	Pb	16 32 10.5	+0.6
BKZ	**Black Stump Fm**	2.87	35	P	Pb	16 32 12.2	+1.1
RATZ	**Rangitukua**	2.87	22	P	Pb	16 32 12.5	+1.3
WATZ	**Wairara**	3.01	21	P	Pb	16 32 15.0	+1.4
HIZ	**Hauiti**	3.04	7	P	Pb	16 32 13.6	-0.4
WVZ	**Waitaha Valley**	3.11	239	P	Pb	16 32 15.6	+0.4
KUTZ	**Kaahu Road**	3.24	21	P	Pb	16 32 19.4	+2.0
MTHZ	**Maungataniwha**	3.28	36	P	Pb	16 32 19.8	+1.7
WPRZ	**Whakapapatarin**	3.31	25	P	Pb	16 32 18.5	-0.1
TLZ	**Tolley Road**	3.32	16	P	Pb	16 32 17.2	-1.7
URZ	**Urewera**	3.89	34	P	Pb	16 32 27.2	-1.3
TOZ	**Tahuroa Road**	3.90	13	P	Pb	16 32 24.7	-3.9
TWGZ	**Tauwhareparae**	4.35	41	P	Pn	16 32 28.5	+2.7
ODZ	**Otahua Downs**	4.44	217	P	Pn	16 32 26.0	-1.0
MKAZ	**Moumakai**	4.47	8	P	Pn	16 32 31.6	+4.3
AWAZ	**Awhitu Peninsu**	4.47	3	P	Pn	16 32 31.6	+4.2
ETAZ	**East Tamaki Re**	4.59	6	P	Pn	16 32 32.7	+3.6
RVAZ	**Riverhead Bore**	4.76	2	P	Pn	16 32 35.4	+4.0
WIAZ	**Waiheke Island**	4.77	7	P	Pn	16 32 35.1	+3.5
JCZ	**Jackson Bay**	4.83	236	P	Pn	16 32 36.4	+3.9

WEL 23 16:31:30.2±0.6**, 33°S**±6°×**18°0W**±1°2**, h33^{km}, M4.8**/30**, mB5.4**/13**, ML5.0**/24**, MLv4.8**/30**, Mw(mB)4.8**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=109.5, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	3.90	26	S	Sn	16 33 13.4	+1.0
MXZ	**Matakaoa Point**	4.99	197	P	Pn	16 32 43.1	+0.4
WMGZ	**Waiomatatini S**	5.21	195	P	Pn	16 32 47.1	+1.3
WMGZ				S	Sn	16 33 46.2	+1.5
HAZ	**Te Kaha**	5.31	201	P	Pn	16 32 48.2	+1.0
HAZ				S	Sn	16 33 48.6	+1.4
PKGZ	**Pakihiroa**	5.35	198	P	Pn	16 32 48.2	+0.3
KUZ	**Kuaotunu**	5.36	221	P	Pn	16 32 49.4	+1.5
PUZ	**Puketiti**	5.49	196	P	Pn	16 32 50.6	+1.0
PUZ				S	Sn	16 33 51.0	-0.6
RUGZ	**Raukumara Rang**	5.54	201	P	Pn	16 32 51.3	+0.8
TWGZ	**Tauwhareparae**	5.65	198	P	Pn	16 32 53.6	+1.6
TWGZ				S	Sn	16 33 57.4	+1.6
WCZ	**Waipu Caves**	5.73	235	P	Pn	16 32 53.2	+0.3
OPRZ	**Ohinepanea**	5.83	209	P	Pn	16 32 55.2	+0.9
CNGZ	**Carnagh Statio**	5.89	195	P	Pn	16 32 55.3	+0.1
MARZ	**Manawahe**	5.90	208	P	Pn	16 32 56.0	+0.7
MWZ	**Matawai**	5.92	200	P	Pn	16 32 56.2	+0.5
TKGZ	**Te Karaka**	5.93	198	P	Pn	16 32 55.7	-0.1
OUZ	**Omahuta**	5.95	244	P	Pn	16 32 55.1	-0.9
URZ	**Urewera**	5.99	203	P	Pn	16 32 56.6	+0.1
RAGZ	**Rawiri**	6.11	201	P	Pn	16 32 57.9	-0.3
KARZ	**Kaharoa**	6.11	210	P	Pn	16 32 59.8	+1.6
RIGZ	**Rimuhau**	6.21	197	P	Pn	16 32 59.8	+0.2
MUGZ	**Murupara**	6.30	205	P	Pn	16 33 00.3	-0.5
RTZ	**Ruatahuna**	6.35	203	P	Pn	16 33 00.4	-1.2
PRGZ	**Paritu Road**	6.38	196	P	Pn	16 33 01.6	-0.4
SNGZ	**Shannon Statio**	6.39	200	P	Pn	16 33 01.0	-1.1
PRRZ	**Plateau Road**	6.46	207	P	Pn	16 33 02.3	-0.7
KNZ	**Kokohu**	6.53	197	P	Pn	16 33 03.3	-0.6
ALRZ	**Allen Road**	6.53	207	P	Pn	16 33 03.2	-0.8
RAHZ	**Arahi**	6.59	201	P	Pn	16 33 03.7	-1.2
MHGZ	**Mahia Peninsul**	6.60	195	P	Pn	16 33 03.8	-1.1
WHHZ	**Waihua**	6.70	200	P	Pn	16 33 04.5	-1.7
ARHZ	**Aropaoanui**	6.94	201	P	Pn	16 33 08.1	-1.5
PXZ	**Pawanui**	7.69	199	P	Pn	16 33 16.0	-3.8

NNC 23 16:40:53.5±2.9**, 43°.31N**×**89°.22E, h24^{km}**±16^{km}**, mb3.8, mpv3.4, 6C-5D, Error ellipse: s-maj=19.7km s-min=17.4km az=79.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array** 1.5nm,0.6s,baz=112,slow=13,SNR=40	6.02	308	Pn	Pn	16 42 21.4	+0.4
MK31	6.7nm,0.6s,baz=113,slow=22,SNR=11			⇓Sn	Sn	16 43 30.2	+1.1
MK31	4.5nm,0.5s,baz=111,slow=30,SNR=3.9			⇑Lg	Lg	16 44 04.4	
MAKZ	**Makanchi** 2.1nm,0.5s	6.21	307	⇓Pn	Pn	16 42 24.2	+0.6
MAKZ	8.8nm,0.6s			⇑Sn	Sn	16 43 34.5	+0.8
MAKZ	9.6nm,0.9s			⇑Lg	Lg	16 44 11.0	
PDGK	**Podgornoye** 1.6nm,0.4s	7.10	273	⇓Pn	Pn	16 42 35.7	-0.3
PDGK	8.9nm,0.8s			⇑Sn	Sn	16 43 56.3	+0.4
PDGK	8.6nm,0.7s			⇓Lg	Lg	16 44 38.8	
KURBB	**Kurchatov Arra** 2.7nm,1.1s	10.33	319	⇑Pn	Pn	16 43 18.6	-1.5
KURBB	5.8nm,0.8s			⇓Sn	Sn	16 45 15.5	+0.6
KURBB	7.9nm,0.7s			⇑Lg	Lg	16 46 21.3	

SJA ***23*** *16:44:41.9±0.5, 23°.56S×66°.67W, h235^{km}±9^{km}, ML2.5, MW2.4*

ISCJB ***23*** *16:44:44.1±1.4, 23°.6S±0°.1×66°.79W±0°.06, h215^{km}±15^{km}, Error ellipse: s-maj=18.5km s-min=7.1km az=14.1*

GUC ***23*** *16:44:44.9±0.5, 23°.39S×67°.19W, h249^{km}±7^{km}, ML3.9*

ISC 23 16:44:43.0±2.9**, 23°.6S**±0°.1×**66°.74W**±0°.06**, h225^{km}**±26^{km}**, n15, σ1^s.00**/26**, 4C-3D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	**Humahuaca**	1.27	74	*e*P	Pn	16 45 17.8	+0.1
HJA	comp=Z,40nm,0.4s			IAML		16 45 18.5	
SLA	**San Lorenzo**	1.61	136	*e*P	Pn	16 45 20.3	+0.2
AZAP	**Zapla**	1.66	114	*e*P	Pn	16 45 20.3	-0.3

AZAP				IAML		16 45 20.7	
	comp=Z,55nm,0.6s						
YJA	Yavi	1.79	39	IAML	P	16 45 22.5	+0.5
	comp=Z,3.1nm,0.2s						
YJA				eP	P	16 45 22.5	+0.5
YJA				eS	S	16 45 52.1	-0.2
LVC	Limon Verde	2.22	295	eP	Pn	16 45 27.2	+1.2
LVC				iS	S	16 45 59.0	-0.4
PB15	IPOC Station P	2.54	278	eP	Pn	16 45 29.9	+0.7
PB15				eS	S	16 46 05.3	+0.1
PB15	IPOC Station P	2.54	278	⇓iP	Pn	16 45 30.2	+1.1
PB15				iS	S	16 46 05.1	0.0
PB06	IPOC Station P	2.75	288	eP	Pn	16 45 31.8	+0.4
PB06	IPOC Station P	2.75	288	⇑iP	Pn	16 45 32.3	+0.9
PB06				iS	S	16 46 08.3	-0.8
PB09	IPOC Station P	2.91	307	⇓iP	Pn	16 45 34.3	+1.0
PB09				iS	S	16 46 11.8	-0.6
PB03	IPOC Station P	3.17	298	⇑iP	Pn	16 45 36.6	+0.4
PB03				iS	S	16 46 15.8	-1.9
PB03				IAML		16 46 16.9	
	comp=E,154nm,0.7s						
PB05	IPOC Station P	3.27	282	⇑iP	Pn	16 45 37.7	+0.5
PB05				eS	S	16 46 17.8	-1.8
PB04	IPOC Station P	3.38	291	⇑iP	Pn	16 45 39.2	+0.7
PB04				iS	S	16 46 20.2	-1.8
PB04				IAML		16 46 25.4	
	comp=N,85nm,0.1s						
PB07	IPOC Station P	3.44	302	⇓iP	Pn	16 45 39.6	+0.3
PB07				iS	S	16 46 21.4	-1.9
PB07				IAML		16 46 21.7	
	comp=E,156nm,0.3s						
PB02	IPOC Station P	3.68	307	eP	Pn	16 45 42.2	+0.2

SNET 23 16:50:31.3±1.2, 12°.25N×87°.14W, h13^{km}±17^{km}, ML3.5, 4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGN	Cerro Negro	0.50	60	⇓eP	Pb	16 50 42.0	0.0
ESTN	Estel	1.13	42	eP	Pb	16 50 51.0	-1.8
ESTN				eS	Sb	16 51 07.1	-0.4
CNCH	Conchagua	1.22	327	⇓iP	Pn	16 50 52.9	-1.4
CNCH				eS	Sg	16 51 10.9	0.0
CNCH				IAML		16 51 17.1	
	comp=Z,1μm,0.3s						
LCND	La Caada	1.28	325	⇓eP	Pn	16 50 53.5	-1.4
LCND				eS	Sb	16 51 11.4	-0.3
LCND				IAML		16 51 15.4	
	comp=Z,636nm,0.4s						
TGUH	Tegucigalpa,Un	1.80	356	⇓iP	Pn	16 51 01.6	-0.6

IDC 23 16:53:33.6±2.1, 38°.06N×26°.18E, h0^{km}, mb3.7/2, mb1 3.5/3, mb1mx3.3/27, mbtmp3.5/3, ML2.5/1, Error ellipse: s-maj=130.6km s-min=21.0km az=152.0

DDA 23 16:53:34.1, 37°.88N×26°.28E, h26^{km}±1^{km}, ML3.6

ISCJB 23 16:53:35.3±0.4, 37°.87N±0°.02×26°.34E±0°.02, h10^{km}±3^{km}, mb3.6/2, Error ellipse: s-maj=3.2km s-min=2.6km az=1.1

ISK 23 16:53:35.0, 37°.87N×26°.35E, h12^{km}, ML3.7/24

ATH 23 16:53:35.2, 37°.90N×26°.40E, h30^{km}±1^{km}, ML3.7/9, Error ellipse: s-maj=2.5km s-min=1.1km az=80.0

THE 23 16:53:36.2, 37°.88N×26°.37E, h6^{km}±1^{km}, ML3.5/7, Error ellipse: s-maj=1.7km s-min=0.6km az=121.0

ISC 23 16:53:35.6±1.0, 37°.87N±0°.02×26°.39E±0°.02, h13^{km}±8^{km}, n96, σ0^{s}.73/121, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEY	zmir	0.38	14	iP	Pb	16 53 43.9	-0.3
ZEY				iS	Sb	16 53 49.6	-0.3
SMG	Samos	0.39	114	P	Pb	16 53 44.8	+0.4
SMG				S	Sb	16 53 50.2	-0.1
	14μm,0.3s						
SMG	Samos	0.39	114	P	Pb	16 53 44.7	+0.4
SMG				S	Sb	16 53 50.1	-0.1
SMG				AML	AML	16 53 50.7	
	comp=N,33205μm,0.3s						
SMG				AML	AML	16 53 53.1	
	comp=E,23914μm,0.2s						
CESE	eme	0.46	351	PG	Pg	16 53 44.5	-0.3
GMLD	Gumuldur	0.47	64	PG	Pb	16 53 45.6	0.0
URLA	Izmir	0.52	18	PG	Pg	16 53 45.9	+0.2
URLA				SG	Sg	16 53 53.2	+0.6
URLA	Izmir	0.52	18	iP	Pb	16 53 46.8	+0.3
URLA				iS	Sb	16 53 53.7	-0.2
URLA				IAML_P			
	comp=Z,120μm,0.4s						
CHOS	Chios island	0.58	333	PG	Pg	16 53 47.1	+0.2
CHOS				SG	Sg	16 53 55.0	+0.4
CHOS	Chios island	0.58	333	P	Pg	16 53 47.2	+0.3
CHOS				S	Sb	16 53 55.7	-0.1
	comp=Z,4μm,0.3s						
CHOS	Chios island	0.58	333	P	Pb	16 53 47.4	-0.2
CHOS				S	Sb	16 53 55.6	-0.2
CHOS				AML	AML	16 53 56.5	
	comp=E,7987μm,0.3s						
CHOS				AML	AML	16 53 56.5	
	comp=N,7605μm,0.3s						
GCAM	G?zelcaml?	0.69	104	PG	Pb	16 53 49.5	0.0
GCAM	G?zelcaml?	0.69	104	iP	Pn	16 53 50.7	-0.3
BLCB	Balcova	0.73	45	PG	Pg	16 53 49.6	-0.1
BLCB				SG	Sb	16 54 00.7	+0.7
KRBN	Karaburun	0.73	10	PG	Pg	16 53 49.7	-0.1
DIDI	Didim-Aydin	0.84	126	PG	Pn	16 53 52.3	-0.7
FOCM	Foa	0.88	18	PG	Pg	16 53 52.6	-0.1
YKAV	Yalikavak-Bodr	1.03	136	PG	Pn	16 53 55.6	-0.1
APE	Apeiranthos	1.05	221	PG	Pb	16 53 55.3	-0.3
APE	Apeiranthos	1.05	221	P	Pg	16 53 55.7	-0.1
APE				S	Sn	16 54 11.6	+1.1
	comp=N,2μm,0.2s						
APE	Apeiranthos	1.05	221	P	Pg	16 53 55.7	-0.1
APE				S	Sn	16 54 11.6	+1.1
APE				AML	AML	16 54 15.7	
	comp=E,4100μm,0.1s						
APE				AML	AML	16 54 17.8	
	comp=N,6658μm,0.1s						
BODT	Bodrum	1.09	137	PN	Pg	16 53 56.7	+0.1
BODT	Bodrum	1.09	137	P	Pg	16 53 56.5	-0.1
BODT				S	Sn	16 54 13.5	+2.0
AMGA	Amorgos Island	1.11	201	P	Pb	16 53 56.3	-0.3
AMGA				S	Sn	16 54 13.3	+1.4
	comp=N,4μm,0.2s						
AMGA	Amorgos Island	1.11	201	P	Pb	16 53 56.3	-0.3
AMGA				S	Sn	16 54 12.8	+0.9
AMGA				AML	AML	16 54 17.3	
	comp=N,9561μm,0.1s						
AMGA				AML	AML	16 54 17.8	
	comp=E,7407μm,0.2s						
AYDB	Zeytinkoy-Aydi	1.19	86	PN	Pg	16 53 58.9	+0.4
AYDN	Tasoluk	1.20	100	iP	Pb	16 53 58.1	-0.1
ZEDA	zmir-Bergama	1.22	26	iP	Pn	16 53 57.7	-0.6
ZEDA				iS	Sg	16 54 16.8	+1.8
ZEDA				IAML_P			
	comp=Z,7μm,0.2s						
DKL	Dikili	1.27	19	PN	Pb	16 53 59.5	+0.2
PRK	Paraskevi	1.38	356	P	Pn	16 54 00.1	-0.4
PRK				S	Sg	16 54 21.1	+1.2
	comp=Z,4μm,0.7s						
PRK	Paraskevi	1.38	356	P	Pn	16 53 60.0	-0.5
PRK				S	Sg	16 54 19.6	-0.3
PRK				AML	AML	16 54 24.8	
	comp=N,8105μm,0.6s						
PRK				AML	AML	16 54 26.0	
	comp=E,8018μm,0.9s						
NISR	Nisiros	1.39	155	P	Pg	16 54 01.8	-0.4
SIGR	SIGRI	1.40	343	PN	Pn	16 53 59.9	-0.9
SIGR	SIGRI	1.40	343	P	Pn	16 54 00.1	-0.7
SIGR				S	Sb	16 54 20.1	+0.7
	comp=E,980nm,0.6s						
SIGR	SIGRI	1.40	343	P	Pn	16 54 00.1	-0.7
SIGR				S	Sn	16 54 18.6	-0.5
SIGR				AML	AML	16 54 23.8	
	comp=E,2113μm,0.7s						
SIGR				AML	AML	16 54 25.4	
	comp=N,1865μm,0.4s						
IOSP	Ios island	1.44	218	P	Pn	16 54 00.7	-0.7
IOSP				S	Sg	16 54 22.1	+0.1
IOSP				AML	AML	16 54 28.6	
	comp=N,6243μm,0.2s						
IOSP				AML	AML	16 54 28.9	
	comp=E,6582μm,0.2s						
AYVA	Ayvalik	1.46	9	iP	Pg	16 54 03.9	+0.4
AYVA				iS	Sg	16 54 22.8	+0.4
GOMA	Golmarmara-Man	1.47	55	PN	Pb	16 54 02.7	0.0
DAT	Datca	1.48	140	PN	Pn	16 54 01.6	-0.4
DAT	Datca	1.48	140	iP	Pn	16 54 02.1	+0.1
DAT				IAML_P			
	comp=Z,865nm,0.1s						
DATC	Datca-Mugla	1.50	137	PN	Pn	16 54 02.0	-0.2
AKHS	Akhisar	1.51	48	iP	Pg	16 54 05.5	+1.0
AKHS				iS	Sg	16 54 24.1	0.0
AKS	Akhisar	1.51	48	PN	Pb	16 54 03.1	-0.3
KARY	Karystos	1.55	277	P	Pn	16 54 02.8	-0.1
ANAF	Anafi Island	1.59	198	P	Pn	16 54 03.1	-0.3
ANAF	Anafi Island	1.59	198	P	Pn	16 54 03.1	-0.3
ANAF				S	Sb	16 54 25.4	+0.7
ANAF				AML	AML	16 54 35.0	
	comp=N,12333μm,0.2s						
ANAF				AML	AML	16 54 36.2	
	comp=E,12253μm,0.2s						
CMBO	Columbo, Santo	1.60	210	P	Pn	16 54 03.6	0.0
THR3	Thira Island,	1.66	209	P	Pn	16 54 04.1	-0.2
SERI	Serifos	1.67	245	P	Pn	16 54 04.4	-0.1
THR5	Thira Island,	1.67	210	P	Pn	16 54 04.2	-0.3
YER	Yerkesik	1.68	115	PN	Pb	16 54 05.8	-0.5
YER	Yerkesik	1.68	115	P	Pn	16 54 05.0	+0.4
THR9	Santorini-Faro	1.72	209	P	Pn	16 54 05.2	0.0
SKY	Skiros Island	1.76	305	P	Pn	16 54 05.1	-0.6
MANT	Manisa	1.82	69	iP	Pb	16 54 08.5	-0.3
MRSB	Marmaris-Mugla	1.85	128	PN	Pn	16 54 07.7	+0.8
BAYC	CANAKKALE_Bayr	1.87	4	iP	Pn	16 54 06.3	-1.0
BAYC				IAML_P			
	comp=Z,2μm,0.2s						
KULA	Kula-Manisa	1.90	70	PN	Pb	16 54 09.1	-1.1
KULA	Kula-Manisa	1.90	70	P	Pn	16 54 07.5	-0.3
EZN	Ezine	1.95	359	PN	Pn	16 54 08.9	+0.5
MHLO	Agia Marina, M	1.98	234	P	Pn	16 54 08.7	0.0
BOZC	Bozcaada	1.99	353	PN	Pn	16 54 09.3	+0.5
BOZC	Bozcaada	1.99	353	iP	Pn	16 54 08.9	0.0
PTL	Penteli	2.00	276	P	Pn	16 54 09.4	+0.3
EREA	Eretria	2.01	287	P	Pn	16 54 09.8	+0.6
TURN	Turunc	2.03	119	PN	Pn	16 54 07.9	-1.5
TURN	Turunc	2.03	119	iP	Pn	16 54 07.8	-1.5
TURN				IAML_P			
	comp=Z,917nm,0.1s						
ATHU	Athens Univers	2.06	273	P	Pn	16 54 10.3	+0.4
DALY	Dalyan (Mula)	2.09	120	PN	Pn	16 54 10.9	+0.7
DALY	Dalyan (Mula)	2.09	120	iP	Pb	16 54 12.5	-0.8
DENT	Denizli	2.10	92	PN	Pn	16 54 11.3	+0.9
BALB	Balikesir	2.12	33	PN	Pn	16 54 11.4	+0.8
ARG	Arkhangelos	2.16	139	P	Pn	16 54 11.6	+0.4
DEMI	Demirci	2.17	57	iP	Pg	16 54 17.0	-0.2
LIA	Limnos Island	2.23	335	P	Pn	16 54 12.1	-0.1
LIA	Limnos Island	2.23	335	P	Pn	16 54 12.1	-0.1
LIA				S	Sn	16 54 39.3	-0.3
LIA				AML	AML	16 54 51.1	
	comp=N,552μm,0.6s						
LIA				AML	AML	16 54 54.4	
	comp=E,553μm,1.0s						
USAK	Uak-Merkez	2.23	67	iP	Pn	16 54 12.8	+0.4
GOKC	Gokceada-Canak	2.35	351	PN	Pn	16 54 14.4	+0.5
GONE	Gonen-Balikesi	2.40	25	PN	Pn	16 54 15.4	+0.9
FETY	Fethiye	2.48	119	P	Pb	16 54 17.9	-2.1
LPK	Lapseki	2.52	6	PN	Pn	16 54 16.8	+0.7
GELI	Tayfur-Gelibol	2.52	1	PN	Pn	16 54 16.3	+0.1
DID	Didima	2.53	263	P	Pn	16 54 16.6	+0.3
SMTH	Samothraki Isl	2.68	346	P	Pn	16 54 17.8	-0.6
SMTH	Samothraki Isl	2.68	346	P	Pn	16 54 18.0	-0.4
LOUT	Loutraki	2.70	274	P	Pn	16 54 19.6	+0.9
EDC	Edincik	2.73	24	PN	Pn	16 54 20.2	+1.2
ALN	Alexandroupoli	3.03	355	P	Pn	16 54 22.7	-0.5
ALN	Alexandroupoli	3.03	355	P	Pn	16 54 22.0	-1.3
DSF	Desfina	3.09	281	P	Pn	16 54 24.9	+0.8
GUR	Goura	3.20	272	P	Pn	16 54 26.2	+0.6
KLV	Kalavryta, Ach	3.35	274	P	Pn	16 54 29.1	+1.4
KAVA	Kavala	3.44	336	P	Pn	16 54 28.6	-0.3
BRTR	Keskin Array B	5.96	70	Pn	Pn	16 55 05.3	+1.8
	comp=E,0.1nm,0.3s,baz=253,slow=14,SNR=6.3						
BRTR				Pg	Pg	16 55 28.0	-1.7
	comp=E,0.2nm,0.3s,baz=255,slow=14,SNR=6.7						
BRTR				Lg	Lg	16 56 47.8	
	comp=E,0.1nm,0.3s,baz=243,slow=38,SNR=2.1						
VYHS	Vyhne	11.96	335	ePN	Pn	16 56 22.8	-2.8
TORD	Torodi Ar. Bea	33.01	228	P	P	17 00 10.7	+0.2
	comp=E,0.7nm,0.5s,baz=38,slow=9.5,SNR=6.5						
MKAR	Makanchi Array	41.50	59	P	P	17 01 22.6	+0.3
	comp=E,0.5nm,0.6s,baz=278,slow=8.5,SNR=3.8						

MEX 23 17:01:57.9±0.8, 17°.30N×94°.60W, h163^{km}±6^{km}, MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.34	233	eP	Pn	17 02 18.8	-1.4
CMIG				eS	Sn	17 02 35.0	-2.2
TGIG		1.50	110	iP	Pn	17 02 26.6	-2.0
TGIG				iS	Sn	17 02 49.3	-2.9
VHO	Vista Hermosa	2.05	264	eP	Pn	17 02 33.2	-1.4
VHO				iS	Sn	17 03 00.8	-2.1
PCIG		2.06	140	eP	Pn	17 02 33.8	-0.8
PCIG				eS	Sn	17 03 01.1	-1.9
HUIG	Huatulco	2.10	224	eP	Pn	17 02 33.0	-2.0
HUIG				eS	Sn	17 03 01.5	-2.1

ISCJB 23 17:09:15.1±0.5, 4°.55S±0°.03×35°.92E±0°.06, h10^{km}, mb4.0/10, MS3.1/1, Error ellipse: s-maj=8.6km s-min=5.0km az=2.3

IDC 23 17:09:15.5±0.9, 4°.61S×35°.90E, h0^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.7/43, mbtmp3.9/10, ML4.2/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/31, Error ellipse: s-maj=36.4km s-min=15.8km az=95.0

NEIC 23 17:09:16.3±2.9, 4°.60S×35°.98E, h8^{km}±6^{km}, mb4.3/4, Error ellipse: s-maj=22.3km s-min=10.0km az=137.0

ISC 23 17:09:16.3±0.6, 4°.62S±0°.04×35°.82E±0°.05, h10^{km}, n24, σ2^{s}.19/31, mb4.1/10, 2C, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOND	Kondoa	0.29	185	iP	Pb	17 09 24.1	+0.4
KOND				iS	Sb	17 09 29.3	+0.6
KIBA	Kibaya	1.02	132	iP	Pg	17 09 34.3	-1.7
KIBA				iS	Sg	17 09 46.7	-2.6
KMBO	Kilima Mbogo	3.75	23	ePn	Pn	17 10 12.9	-1.6
MBAR	Mbarara	6.45	308	Pn	Pn	17 10 51.9	+0.3
	41nm,0.3s,baz=317,slow=21,SNR=27						
MBAR				Sn	Sn	17 12 00.3	-5.1
	70nm,0.3s,baz=193,slow=24,SNR=6.8						
MBAR				Lg	Lg	17 12 30.9	
	38nm,0.3s,baz=190,slow=19,SNR=5.0						
MBAR	Mbarara	6.45	308	ePn	Pn	17 10 52.5	+0.9
MBAR				eSn	Sn	17 12 01.5	-3.9
MBAR				eLg	Lg	17 12 36.7	
MBAR	Mbarara	6.45	308	⇑eP	Pn	17 10 52.9	+1.3
MBAR				⇑eS	Sg	17 12 41.6	-2.0
LSZ	Lusaka	12.98	215	Pn	Pn	17 12 21.3	+0.2
	0.3nm,0.3s,baz=20,slow=14,SNR=5.1						
LSZ				Sn	Sn	17 14 40.9	-4.9
	0.2nm,0.3s,baz=38,slow=17,SNR=2.8						
LSZ				Lg	Lg	17 15 59.0	
	1.4nm,0.3s,baz=95,slow=9.5,SNR=4.1						
LSZ	Lusaka	12.98	215	ePn	Pn	17 12 21.5	+0.4
LSZ				eSn	Sn	17 14 41.6	-4.2
MATP	Matopo	17.25	204	P	Pn	17 13 17.6	-0.1
	0.1nm,0.3s,baz=34,slow=15,SNR=2.5						
MATP				Sn	Sn	17 16 29.2	-0.6
	0.1nm,0.3s,baz=0.0,slow=18,SNR=1.6						
MATP				Lg	Lg	17 18 14.9	
	0.2nm,0.3s,baz=294,slow=19,SNR=2.6						
LBTB	Lobatse	22.53	205	P	P	17 14 17.5	+0.9
	6.6nm,1.0s,baz=8.3,slow=9.7,SNR=5.0						
LBTB				Lg	Lg	17 21 07.5	
	2.5nm,0.8s,baz=227,slow=19,SNR=1.9						
TSUM	Tsumeb	22.95	229	LR	LR	17 24 20.3	
	comp=Z,69nm,18.1s,baz=68,slow=39						
TSUM	Tsumeb	22.95	229	eP	P	17 14 24.2	+3.1
	13nm,1.6s						
BOSA	Boshof	25.89	202	P	P	17 14 50.2	+1.5
	3.6nm,0.9s,baz=31,slow=9.2,SNR=3.7						
BOSA	Boshof	25.89	202	eP	P	17 14 51.7	+3.0
	13nm,1.4s						
BRTR	Keskin Array B	44.17	358	P	P	17 17 26.8	+1.3
	0.5nm,0.7s,baz=205,slow=6.2,SNR=3.1						
BR101	Keskin Array S	44.17	358	eP	P	17 17 26.8	+1.3
AKASG	Malin Array Be	55.39	355	P	P	17 18 51.0	+0.5
	2.6nm,0.8s,baz=177,slow=6.3,SNR=12						
AKBB	Malin Array Si	55.39	355	eP	P	17 18 50.9	+0.3
	3.4nm,0.8s						
GEC2	GERESS Array S	56.63	343	eP	P	17 19 00.2	+0.5
	2.2nm,0.9s						
GERES	GERESS Array B	56.63	343	P	P	17 19 00.4	+0.7
	1.3nm,0.9s,baz=150,slow=6.2,SNR=9.0						
ESDC	Sonseca Array	57.29	324	P	P	17 19 06.3	+1.9
	0.3nm,0.4s,baz=134,slow=6.9,SNR=5.6						
MAW	Mawson	65.54	169	P	P	17 20 00.9	+1.2
	0.9nm,0.7s,baz=346,slow=8.6,SNR=3.3						
MK32	Makanchi Array	65.57	33	eP	P	17 19 59.9	-0.4
MKAR	Makanchi Array	65.57	33	P	P	17 19 59.9	-0.4
	0.8nm,0.8s,baz=225,slow=5.4,SNR=4.1						

MEX 23 17:11:42.3±0.6, 14°.76N×93°.28W, h27^{km}±22^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.95	4	eP	Pn	17 11 57.0	-2.9
PCIG				eS	Sb	17 12 08.8	-3.4
THIG		0.99	81	iP	Pn	17 11 57.9	-2.6
THIG				eS	Sb	17 12 09.7	-3.8
CCIG	Comitan	1.88	36	eP	Pn	17 12 11.2	-1.6
CCIG				eS	Sn	17 12 32.4	-3.3
TGIG		2.02	4	eP	Pn	17 12 12.4	-2.2
TGIG				eS	Sn	17 12 36.1	-3.0
CMIG	Matias Romero	2.79	327	eP	Pn	17 12 22.7	-2.6
CMIG				iS	Sn	17 12 54.8	-3.3

MAN 23 17:20:27.3, 13°.64N×120°.51E, h88^{km}, mb3.6, ML2.4, MS1.8, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.45	108	⇑eP	Pn	17 20 42.7	+1.2
PGP				eS	Sn	17 20 54.7	+2.6

ISCJB 23 17:27:11.6±1.1, 20°.24S±0°.02×70°.92W±0°.02, h0^{km}±6^{km}, mb4.7/83, MS4.4/20, Error ellipse: s-maj=3.5km s-min=2.8km az=148.3

SJA 23 17:27:12.4±0.6, 20°.42S×70°.73W, h10^{km}±6^{km}, ML4.1, MW2.8

IDC 23 17:27:12.9±0.5, 20°.04S×70°.56W, h0^{km}, mb4.4/17, mb1 4.5/22, mb1mx4.4/44, mbtmp4.4/22, ML3.9/5, MS4.3/20, Ms1 4.3/20, ms1mx4.2/25, Error ellipse: s-maj=18.2km s-min=11.1km az=62.0

GUC 23 17:27:13.9±0.6, 20°.22S×70°.93W, h38^{km}±1^{km}, ML4.9

NEIC 23 17:27:16.0±2.4, 20°.20S×70°.67W, h18^{km}±3^{km}, mb4.7/84, ML4.9(GUC), Error ellipse: s-maj=11.0km s-min=7.1km az=108.0

NEIC Felt [III] at La Tirana; [II] at Alto Hospicio, Camina, Huara, Iquique and Pozo Almonte.

VAO 23 17:27:16.4±0.4, 20°.16S×70°.75W, h10^{km}, mb4.6

BJI 23 17:27:17.7±0.0, 20°.10S×70°.50W, h20^{km}, mB5.3/6, Ms5.1/7, Ms7 4.8/5

GCMT 23 17:27:19.0±0.2, 20°.19S±0°.02×71°.12W±0°.02, h24^{km}, MW5.1/79, Moment Tensor Solution. s46,c58; s79,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.61±.20; M$_{θθ}$0.02±.11; M$_{φφ}$-4.62±.14; M$_{rθ}$0.02±.16; M$_{θφ}$1.01±.07; M$_{φr}$-2.43±.16; Best double couple: M$_0$5.31000×10^{16} NP1:φ$_s$174.00000°,δ59.00000°,λ96.00000°. NP2: φ$_s$343.00000°,δ32.00000°,λ81.00000°. Principal axes: T 5.2210, Plg76.0000°, Azm100.0000°; N 0.1850, Plg5.0000°, Azm351.0000°; P -5.4000, Plg13.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 23 17:27:14.4±1.0, 20°.17S±0°.03×70°.86W±0°.04, h12^{km}±5^{km}, n223, σ1^{s}.47/224, mb4.7/83, MS4.5/21, 13C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.90	51	⇓iP	Pg	17 27 31.7	-0.1
PSGC				iS	Sb	17 27 44.7	+0.7
PSGCX	Pisagua	0.90	51	eP	Pg	17 27 31.7	-0.1
PSGCX				eS	Sn	17 27 45.6	-0.4
PB11	IPOC Station P	1.20	70	ePn	Pn	17 27 36.5	-0.8
PB11	IPOC Station P	1.20	70	eP	Pn	17 27 35.5	-1.8
PB11	IPOC Station P	1.20	70	⇓iP	Pn	17 27 36.4	-0.8
PB11				iS	Sn	17 27 53.5	-0.1
PB02	IPOC Station P	1.46	142	⇑iP	Pn	17 27 39.5	-1.2
PB02				iS	Sn	17 27 58.2	-1.5
PB01	IPOC Station P	1.55	124	ePn	Pn	17 27 41.6	-0.4
PB01				eSn	Sn	17 28 01.6	-0.5
PB01	IPOC Station P	1.55	124	eP	Pn	17 27 41.4	-0.6
PB01				eS	Sn	17 28 02.3	+0.3
PB01	IPOC Station P	1.55	124	⇑iP	Pn	17 27 41.3	-0.7
PB01				iS	Sn	17 28 02.0	0.0
PB01				IAML		17 28 07.9	
	comp=E,31μm,0.3s						
MNMC	Minye Minye	1.58	49	ePn	Pn	17 27 43.0	+0.5
MNMC				eSn	Sg	17 28 05.8	+0.5
MNMC	Minye Minye	1.58	49	⇑iP	Pn	17 27 42.7	+0.2
MNMC				iS	Sb	17 28 04.4	+0.6
MNMCX	Minye Minye	1.58	49	eP	Pb	17 27 43.7	0.0
PB08	IPOC Station P	1.60	89	eP	Pn	17 27 41.2	-1.8
PB08				eS	Sn	17 28 02.3	-1.4
PB08	IPOC Station P	1.60	89	⇑iP	Pn	17 27 42.7	-0.3
PB08				iS	Sb	17 28 04.8	+0.2
PB12	IPOC Station P	1.63	18	⇑iP	Pn	17 27 42.9	-0.2
PB12				iS	Sb	17 28 04.5	-0.5
GO01	Chusmiza	1.65	73	ePn	Pn	17 27 43.5	-0.1
GO01				eSn	Sb	17 28 05.5	-0.3
GO01	Chusmiza	1.65	73	⇑iP	Pn	17 27 43.5	-0.1
GO01				iS	Sb	17 28 06.5	+0.6
GO01				IAML		17 28 07.7	
	comp=E,23μm,0.1s						
PB07	IPOC Station P	1.80	150	⇑iP	Pn	17 27 44.0	-1.4
PB07				iS	Sn	17 28 07.3	-0.9
PB03	IPOC Station P	2.13	151	⇑iP	Pn	17 27 48.8	-1.2
PB03				eS	Sn	17 28 15.9	-0.7
PB09	IPOC Station P	2.21	137	⇑iP	Pn	17 27 51.4	+0.2
PB09				iS	Sn	17 28 18.9	+0.3
PB09				IAML		17 28 32.5	
	comp=E,7μm,0.6s						
PB16	IPOC Station P	2.23	35	⇑iP	Pn	17 27 52.1	+0.4
PB16				iS	Sb	17 28 21.9	-0.9
PB04	IPOC Station P	2.25	163	ePn	Pn	17 27 50.1	-1.6
PB04	IPOC Station P	2.25	163	eP	Pn	17 27 49.9	-1.8
PB06	IPOC Station P	2.79	155	⇑iP	Pn	17 27 57.5	-1.6
PB06				iS	Sn	17 28 30.9	-2.0
PB06				IAML		17 28 52.2	
	comp=E,3μm,0.4s						
LVC	Limon Verde	3.03	144	Pn	Pn	17 28 02.5	-0.1
	comp=E,27nm,0.3s,baz=356,slow=7.3,SNR=181						
LVC				Sn	Sn	17 28 39.2	+0.2
	comp=E,139nm,0.3s,baz=274,slow=5.6,SNR=3.8						
LVC				Lg	Lg	17 28 49.1	
	comp=E,447nm,0.3s,baz=41,slow=17,SNR=13						
LVC	Limon Verde	3.03	144	ePn	Pn	17 28 02.4	-0.2
LVC	Limon Verde	3.03	144	eP	Pn	17 28 03.1	+0.6
LVC				eS	Sn	17 28 40.7	+1.7
PB10	IPOC Station P	3.34	175	ePn	Pn	17 28 04.3	-2.2
LPAZ	La Paz	4.65	34	Pn	Pn	17 28 21.4	-3.6
	comp=E,0.0nm,0.3s,baz=227,slow=7.3,SNR=1.5						
LPAZ				Lg	Lg	17 29 37.0	
	comp=E,8.9nm,0.3s,baz=145,slow=11,SNR=1.8						
LPAZ	La Paz	4.65	34	ePn	Pn	17 28 26.0	+0.9
GO02	Mina Guanaco	5.11	167	ePn	Pn	17 28 29.6	-1.5
YJA	Yavi	5.37	113	eP	Pn	17 28 35.0	+0.2
YJA				IAML		17 28 47.9	
	comp=Z,122nm,0.7s						
HJA	Humahuaca	5.90	122	eP	Pn	17 28 41.5	-0.6
HJA				IAML		17 28 54.3	
	comp=Z,66nm,0.6s						
AZAP	Zapla	6.71	128	eP	Pn	17 28 51.5	-1.6
GO03	Copiap	7.41	176	ePn	Pn	17 29 00.9	-1.6
FSA	Cafayete	7.42	144	eP	Pn	17 29 00.3	-2.5
LCO	Las Campanas	8.80	179	ePn	Pn	17 29 20.4	-1.4
LCO	Las Campanas	8.80	179	eP	Pn	17 29 23.0	+1.2

GO04	Tololo Observa	9.96	180	ePn	Pn	17 29 39.5	+1.9
NNA	Nana	9.96	324	Pn	Pn	17 29 39.8	+2.3
	comp=Z,1.3nm,0.3s,baz=148,slow=13,SNR=1.8						
NNA				Sn	Sn	17 31 23.9	-5.5
	comp=Z,2.3nm,0.3s,baz=243,slow=9.0,SNR=3.1						
NNA				LR	LR	17 33 08.3	
	comp=Z,803nm,21.2s,baz=150,slow=35						
SIV	San Ignacio	10.19	68	Pn	Pn	17 29 35.3	-5.4
	comp=Z,1.6nm,0.3s,baz=264,slow=14,SNR=28						
SIV				Sn	Sn	17 31 37.7	+2.7
	baz=332,slow=17,SNR=1.9						
SIV				Lg	Lg	17 32 40.9	
	comp=Z,0.5nm,0.3s,baz=335,slow=19,SNR=2.7						
CFA	Coronel Fontan	11.63	169	Pn	Pn	17 29 58.6	-1.7
	comp=Z,0.5nm,0.3s,baz=355,slow=14,SNR=3.2						
CFA				Sn	Sn	17 31 58.6	-11
	comp=Z,0.4nm,0.3s,baz=353,slow=17,SNR=1.8						
CFA				LR	LR	17 34 49.7	
	comp=Z,2µm,18.3s,baz=333,slow=39						
CPUP	Villa Florida	13.86	119	Pn	Pn	17 30 29.1	-1.7
	comp=Z,0.2nm,0.3s,baz=294,slow=18,SNR=2.6						
CPUP				LR	LR	17 37 01.9	
	comp=Z,1µm,20.2s,baz=296,slow=43						
CPUP	Villa Florida	13.86	119	ePn	Pn	17 30 28.9	-1.9
CPUP	Villa Florida	13.86	119	eP	Pn	17 30 32.4	+1.6
AQDB	Aquidauana	14.23	94	eP	Pn	17 30 36.7	+0.8
ATAH	Atahualpa	14.88	330	Pn	Pn	17 30 46.0	+0.9
	comp=Z,0.2nm,0.3s,baz=153,slow=11,SNR=2.4						
C2SB	Chapadao do Su	17.05	88	eP	Pn	17 31 13.0	+0.2
CLDB	Colider	17.20	60	eP	Pn	17 31 14.1	-0.6
PTGB	Pitanga	17.95	108	eP	P	17 31 25.3	+0.7
ITAB	Concordia	18.52	116	eP	P	17 31 30.6	-0.2
CPSB	Cacapava Do Su	18.74	126	eP	Pn	17 31 34.5	+0.9
ITRB	Iturama	19.28	92	eP	Pn	17 31 40.4	+0.2
PLTB	Pedras Altas	19.31	130	eP	Pn	17 31 40.9	+0.4
TRQA	Tornquist	19.42	158	eP	Pn	17 31 44.1	+2.4
FRTB	Fartura	20.03	103	eP	Pn	17 31 49.1	-0.1
CNLB	Canela	20.30	121	eP	Pn	17 31 51.7	-0.6
PLCA	Paso Flores	20.50	179	P	Pn	17 31 53.7	-0.9
	comp=Z,7.8nm,0.8s,baz=23,slow=12,SNR=7.8						
PLCA				LR	LR	17 39 00.7	
	comp=Z,573nm,19.4s,baz=16,slow=34						
PLCA	Paso Flores	20.50	179	eP	Pn	17 31 53.6	-1.0
	comp=Z,11nm,0.9s						
PLCA	Paso Flores	20.50	179	eP	Pn	17 31 54.0	-0.6
BB19B	Bebedouro	20.92	96	eP	Pn	17 31 58.7	-0.9
RCLB	Rio Claro- Sao	21.85	100	eP	P	17 32 09.0	+1.9
PTGA	Pitinga	22.07	30	P	P	17 32 07.9	-1.5
	comp=Z,17nm,0.7s,baz=214,slow=13,SNR=19						
PTGA				LR	LR	17 41 06.0	
	comp=Z,1µm,18.5s,baz=208,slow=38						
PTGA	Pitinga	22.07	30	eP	P	17 32 07.2	-2.2
	comp=Z,30nm,1.1s						
FLOC	Florencia	22.12	347	eP	P	17 32 09.6	-0.4
BDFB	Brasilia	22.19	82	P	P	17 32 09.4	-1.5
	comp=Z,9.8nm,0.8s,baz=237,slow=10,SNR=8.4						
BDFB				LR	LR	17 42 15.4	
	comp=Z,2µm,21.2s,baz=278,slow=41						
BDFB	Brasilia	22.19	82	eP	P	17 32 08.3	-2.6
	comp=Z,20nm,0.8s						
SOTA	Rioblanco	22.87	345	eP	P	17 32 20.2	+1.7
BBAC	Balboa, Cauca	22.93	343	eP	P	17 32 21.5	+2.8
PRAC	Prado	24.06	350⇑	eP	P	17 32 32.2	+2.4
ORTC	Ortega, Tolima	24.31	349	eP	P	17 32 32.8	+0.7
BSCB	Bom Sucesso	24.43	97	eP	P	17 32 34.2	+1.0
YOTC	Yotoco, Valle	24.60	347	eP	P	17 32 32.8	-2.0
ESAR	Angra dos Reis	24.72	101	eP	P	17 32 38.0	+2.2
ROSC	El Rosal	25.09	352	LR	LR	17 43 59.3	
	comp=Z,2µm,18.1s,baz=199,slow=40						
SMTB	Santa Maria do	25.14	67	eP	P	17 32 41.2	+1.6
GUY2C	Guyana, Caldas	25.62	350	eP	P	17 32 45.5	+1.0
VAS01	Vassouras-RJ	25.63	100	eP	P	17 32 45.5	+1.5
NORC	Norcasia	25.88	351	eP	P	17 32 46.8	+0.5
RUSC	La Rusia	25.99	355	eP	P	17 32 46.8	-1.0
PTBC	PUERTO BERRIO,	26.78	352	eP	P	17 32 51.4	-3.0
JTS	Las Juntas de	33.30	334	LR	LR	17 46 09.8	
	comp=Z,242nm,21.5s,baz=218,slow=34						
RCBR	Riachuelo	36.82	72	eP	P	17 34 19.9	-2.8
	comp=Z,23nm,1.0s						
RCBR	Riachuelo	36.82	72	eP	P	17 34 24.2	+1.6
SJG	San Juan	38.33	7	P	P	17 34 33.6	-1.6
	comp=Z,13nm,0.5s,baz=232,slow=3.5,SNR=5.6						
SJG	San Juan	38.33	7	eP	P	17 34 33.5	-1.6
	comp=Z,37nm,1.1s						
MTP	Monte Pirata	38.38	8	eP	P	17 34 33.2	-2.5
	comp=Z,25nm,0.9s						
CBYP	Canovanas	38.52	8	eP	P	17 34 35.3	-1.6
	comp=Z,29nm,0.9s						
CUPR	Culebra, Puert	38.63	9	eP	P	17 34 36.3	-1.4
	comp=Z,24nm,0.9s						
STVI	Saint Thomas	38.72	9	eP	P	17 34 37.9	-0.6
	comp=Z,16nm,0.9s						
CBCY	The Bluff, Cay	40.61	347	eP	P	17 34 56.8	+2.6
	comp=Z,84nm,0.9s						
TEIG	Tepich	43.62	336	eP	P	17 35 20.7	+1.9
	comp=Z,43nm,1.5s						
CMIG	Matias Romero	43.91	326	LR	LR	17 52 14.2	
	comp=Z,76nm,19.5s,baz=158,slow=34						
Z50A	Ashland	55.04	345	eP	P	17 36 45.4	-0.6
	comp=Z,11nm,1.2s						
TKL	Tuckaleechee C	56.86	347	P	P	17 36 57.7	-1.3
	comp=Z,12nm,0.8s,baz=149,slow=3.8,SNR=8.7						
PLAL	Pickwick Lake	57.24	343	eP	P	17 37 00.8	-0.8
	comp=Z,6.9nm,1.0s						
V48A	Smith Brothers	57.63	345	eP	P	17 37 04.0	-0.4
	comp=Z,8.4nm,1.0s						
WVT	Waverly	58.25	344	eP	P	17 37 08.1	-0.7
	comp=Z,14nm,1.3s						
TXAR	Lajitas Array	58.51	326	P	P	17 37 11.8	+1.0
	comp=Z,1.4nm,0.9s,baz=150,slow=7.9,SNR=11						
TXAR				LR	LR	18 01 19.1	
	comp=Z,111nm,20.0s,baz=0.0,slow=35						
TX31	Lajitas Ar. Si	58.51	326	eP	P	17 37 12.0	+1.1
	comp=Z,2.5nm,1.2s						
MIAR	Mount Ida	58.55	338	eP	P	17 37 10.8	-0.1
	comp=Z,7.9nm,0.8s						
T49A	Edmonton	58.62	346	eP	P	17 37 11.3	-0.1
	comp=Z,12nm,0.9s						
T47A	Sharon Grove	58.88	345	eP	P	17 37 12.2	-0.9
	comp=Z,14nm,1.0s						
W39A	Magazine	59.21	338	eP	P	17 37 16.1	+0.7
	comp=Z,5.5nm,0.8s						
HHAR	Hobbs	60.24	339	eP	P	17 37 22.5	0.0
	comp=Z,19nm,1.4s						
O56A	Blue Knob Stat	60.55	353	eP	P	17 37 25.6	+0.9
	comp=Z,24nm,1.3s						
WMOK	Wichita Mounta	60.72	334	eP	P	17 37 28.0	+2.1
	comp=Z,3.7nm,1.4s						
CCM	Cathedral Cave	61.01	342	eP	P	17 37 27.1	-0.7
	comp=Z,6.1nm,0.9s						
N55A	Marion Center	61.11	353	eP	P	17 37 28.7	+0.3
	comp=Z,21nm,0.8s						
MNTX	Cornudas Mount	61.28	327	eP	P	17 37 30.1	+0.3
	comp=Z,3.6nm,0.9s						
VNA3	Neumayer Olymp	61.91	161	P	P	17 37 34.2	+0.7
VNA1	Neumayer--Stat	62.14	160	P	P	17 37 36.0	+1.0
HDIL	Hopedale	62.80	344	ePcP	PcP	17 38 18.3	+0.1
SNAA	Sanae	64.12	161	P	P	17 37 49.1	+0.8
SNAA	Sanae	64.12	161	eP	P	17 37 48.0	-0.3
	comp=Z,5.8nm,0.9s						
ANMO	Albuquerque	64.40	328	P	P	17 37 50.8	+0.1
	comp=Z,0.5nm,0.3s,baz=122,slow=9.1,SNR=3.4						
ANMO	Albuquerque	64.40	328	eP	P	17 37 50.6	-0.2
	comp=Z,3.2nm,1.1s						
SDCO	Great Sand Dun	66.19	330	eP	P	17 38 03.3	+0.9
	comp=Z,5.2nm,1.1s						
X16A	Lo Mia Camp, P	66.61	324	eP	P	17 38 06.3	+1.3
	comp=Z,3.4nm,1.0s						
WUAZ	Wupatki	67.39	325	eP	P	17 38 11.9	+1.9
	comp=Z,6.1nm,0.9s						
W13A	Hualapai Mount	68.47	323	eP	P	17 38 17.7	+0.8
	comp=Z,2.1nm,0.7s						
U15A	North Rim	68.57	325	eP	P	17 38 19.2	+1.8
	comp=Z,4.7nm,0.8s						
KNB	Kanab	69.29	325	eP	P	17 38 23.9	+2.0
	comp=Z,8.7nm,1.0s						
LCMT	Little Creek M	69.52	325	eP	P	17 38 25.3	+2.1
	comp=Z,2.3nm,0.9s						
SRU	San Rafael Swe	69.68	328	eP	P	17 38 25.6	+1.4
	comp=Z,5.0nm,0.8s						
MTPU	Mount Pierson	69.72	326	eP	P	17 38 26.8	+2.1
	comp=Z,9.3nm,1.6s						
CCUT	Cedar City	69.97	325	eP	P	17 38 28.4	+2.3
	comp=Z,6.9nm,0.9s						
QSPA	South Pole Qui	70.01	180	P	P	17 38 26.7	+0.8
	comp=Z,5.8nm,0.9s,baz=163,slow=1.6,SNR=16						
QSPA	South Pole Qui	70.01	180	eP	P	17 38 27.2	+1.3
	comp=Z,22nm,1.5s						
P17A	Butcher Ranch,	70.06	328	eP	P	17 38 28.1	+1.6
	comp=Z,6.9nm,0.9s						
DBIC	Dimbokro	70.13	75	P	P	17 38 24.9	-2.3
	comp=Z,8.6nm,0.9s,baz=232,slow=6.4,SNR=5.5						
DBIC				LR	LR	18 07 57.8	
	comp=Z,544nm,19.3s,baz=229,slow=35						
DBIC	Dimbokro	70.13	75	eP	P	17 38 25.3	-1.9
	comp=Z,20nm,1.3s						
SHPR	Sheep Range	70.20	323	eP	P	17 38 29.7	+2.2
	comp=Z,3.7nm,0.8s						
PSUT	Pine Spring	70.96	326	eP	P	17 38 34.3	+2.2
	comp=Z,3.9nm,0.8s						
TPNV	Topopah Spring	71.13	323	eP	P	17 38 35.5	+2.3
	comp=Z,5.0nm,0.8s						
JLU	Jordanelle	71.28	328	eP	P	17 38 35.7	+1.6
	comp=Z,6.5nm,0.8s						
DAC	Darwin (Calif)	71.44	322	eP	P	17 38 38.9	+3.9
	comp=Z,4.3nm,0.8s						
ISA	Isabella, Lake	71.53	321	eP	P	17 38 37.7	+2.2
	comp=Z,8.2nm,0.9s						
DUG	Dugway, Tooele	71.65	327	eP	P	17 38 37.9	+1.7
	comp=Z,12nm,1.4s						
R11A	Troy Canyon, C	71.76	324	eP	P	17 38 38.9	+2.0
	comp=Z,2.6nm,0.8s						
PDAR	Pinedale Array	72.06	331	P	P	17 38 38.2	-0.5
	comp=Z,0.7nm,0.7s,baz=152,slow=7.8,SNR=5.2						
HWUT	Hardware Ranch	72.10	329	eP	P	17 38 40.2	+1.3
	comp=Z,4.5nm,0.8s						
TBI	Tubuai	72.20	251	eLR	LR	18 00 48.9	
	comp=Z,408nm,26.0s						
HVU	Hansel Valley	72.82	328	eP	P	17 38 44.3	+1.2
	comp=Z,3.6nm,0.9s						
OMMB	Old Mammoth Mi	73.17	322	eP	P	17 38 47.3	+1.8
	comp=Z,6.1nm,0.9s						
MDPB	Devils Postpil	73.23	322	eP	P	17 38 47.5	+1.7
	comp=Z,3.3nm,0.7s						
NV11	Mina Array Sit	73.25	323	eP	P	17 38 47.9	+2.1
	comp=Z,0.3nm,1.4s						
ELK	Elko	73.31	326	P	P	17 38 46.5	+0.4
	comp=Z,1.5nm,0.8s,baz=124,slow=4.2,SNR=5.3						
ELK	Elko	73.31	326	eP	P	17 38 47.4	+1.2
	comp=Z,7.7nm,1.5s						
NVAR	Mina Array Bea	73.33	323	P	P	17 38 48.2	+1.9
	comp=Z,2.2nm,0.8s,baz=150,slow=6.1,SNR=14						
FXWY	Fox Creek	73.41	331	eP	P	17 38 48.1	+1.4
	comp=Z,4.3nm,1.1s						
ULM	Lac du Bonnet	73.52	344	LR	LR	18 13 11.1	
	comp=Z,192nm,21.5s,baz=148,slow=38						
IMW	Indian Meadow	73.57	331	eP	P	17 38 49.3	+1.6
	comp=Z,3.3nm,0.6s						
FLWY	Flagg Ranch	73.61	331	eP	P	17 38 49.6	+1.8
	comp=Z,7.4nm,0.9s						
KVN	Kaiserville	73.65	323	eP	P	17 38 49.5	+1.4
	comp=Z,4.3nm,0.8s						
PPT2	Papeete2	73.84	257	eS	SKiKP	17 48 20.2	+1.1
	comp=Z,624nm,26.5s						
PPT2	Papeete2	73.84	257	eLR	LR	18 01 31.4	
	comp=Z,366nm,23.8s,baz=107						
PPT	Papeete	73.85	257	LR	LR	18 03 01.0	
	comp=Z,229nm,19.0s,baz=122,slow=29						
YHH	Holmes Hill	74.23	332	eP	P	17 38 53.4	+1.9
	comp=Z,9.3nm,1.2s						
QLMT	Earthquake Lak	74.52	331	eP	P	17 38 55.6	+2.5
PNTR	Pine Nut	74.52	323	eP	P	17 38 55.3	+2.0
	comp=Z,5.1nm,0.8s						
SCHQ	Schefferville	74.78	2	LR	LR	18 13 58.2	
	comp=Z,80nm,19.1s,baz=212,slow=38						
PAHR	Pah Rah Range	74.82	323	eP	P	17 38 57.4	+2.5
	comp=Z,7.4nm,0.8s						
HLID	Hailey	74.96	329	eP	P	17 38 57.5	+1.8
	comp=Z,4.6nm,1.0s						
MCMT	McKenzie Canyo	75.17	330	eP	P	17 38 58.1	+1.2
BOZ	Bozeman (W)	75.20	332	eP	P	17 38 58.3	+1.4
	comp=Z,6.4nm,1.4s						
DLMT	Dillon	75.46	331	eP	P	17 38 59.6	+1.2
	comp=Z,5.8nm,1.2s						
EGMT	Eagleton	76.31	334	eP	P	17 39 04.1	+1.0
	comp=Z,10nm,1.1s						
PLID	Pearl Lake	76.85	329	eP	P	17 39 07.7	+1.2
	comp=Z,3.7nm,0.9s						
BMO	Blue Mountains	77.32	328	eP	P	17 39 09.9	+1.0
	comp=Z,2.6nm,0.8s						
SYO	Syowa Base	78.38	160⇑	eP	P	17 39 13.4	-1.0
SYO	Syowa Base	78.38	160⇓	ePcP	PcP	17 39 21.6	-2.1
TOA0	Torodi Ar. Sit	78.65	71	eP	P	17 39 15.3	-1.5
	comp=Z,26nm,0.9s						
TORD	Torodi Ar. Bea	78.65	71	P	P	17 39 14.3	-2.6
	comp=Z,20nm,0.9s,baz=280,slow=3.9,SNR=54						
TORD				LR	LR	18 12 53.6	
	comp=Z,558nm,18.8s,baz=285,slow=35						
WALA	Waterton Lakes	78.85	333	eP	P	17 39 18.5	+1.1
	comp=Z,5.9nm,0.9s						
TSUM	Tsumeb	82.17	108	eP	P	17 39 36.0	0.0
	comp=Z,8.2nm,0.9s						
MTE	Manteigas	84.21	43	eP	P	17 39 45.5	-0.4
	comp=Z,9.4nm,1.0s						
BOSA	Boshof	85.68	119	LR	LR	18 14 54.7	
	comp=Z,254nm,19.4s,baz=245,slow=34						
PAB	San Pablo	85.86	45	eP	P	17 39 53.5	-0.7
	comp=Z,6.8nm,1.1s						
TAM	Tamanrasset	85.87	64	eP	P	17 39 55.0	+0.3
	comp=Z,10nm,1.0s						
MAW	Mawson	86.11	164	P	P	17 39 55.5	+0.5
	comp=Z,3.1nm,0.9s,baz=268,slow=6.3,SNR=5.4						
MAW				LR	LR	18 20 41.4	
	comp=Z,158nm,18.2s,baz=232,slow=37						
MAW	Mawson	86.11	164	eP	P	17 39 55.7	+0.8
	comp=Z,0.8nm,1.0s						
ESDC	Sonseca Array	86.19	45	P	P	17 39 55.0	-0.8
	comp=Z,0.2nm,0.3s,baz=246,slow=5.4,SNR=12						
ESDC				LR	LR	18 14 32.1	
	comp=Z,105nm,21.3s,baz=230,slow=33						
YKA	Yellowknife Ar	89.34	341	P	P	17 40 11.1	+0.8
	comp=Z,7.8nm,0.9s,baz=137,slow=4.9,SNR=38						
YKA				LR	LR	18 24 02.3	
	comp=Z,22nm,19.1s,baz=126,slow=38						
YKW3	Yellowknife Ar	89.40	341	eP	P	17 40 10.7	+0.2
	comp=Z,8.9nm,0.9s						
DLBC	Dease Lake	92.19	333	P	P	17 40 25.1	+1.3
	comp=Z,3.5nm,0.9s,baz=160,slow=6.3,SNR=4.7						
DLBC	Dease Lake	92.19	333	eP	P	17 40 25.3	+1.5
	comp=Z,3.3nm,0.8s						
KEST	Kesra	93.97	53	LR	LR	18 23 32.2	
	comp=Z,385nm,19.8s,baz=214,slow=36						
DZM	Mont Dzumac	110.04	236	eLR	LR	18 18 28.2	
	comp=Z,223nm,23.2s						
KBZ	Khabaz	120.70	50	PKP	PKPdf	17 46 06.4	+0.1
	comp=Z,4.5nm,0.9s,baz=155,slow=3.8,SNR=6.1						
H11S2	WAKE ISLAND Hy	125.89	279	T	T	20 05 39.2	
	baz=101,slow=74,SNR=668						
H11S1	WAKE ISLAND Hy	125.90	279	T	T	20 05 37.7	
	baz=101,slow=74,SNR=307						
H11S3	WAKE ISLAND Hy	125.91	279	T	T	20 05 45.7	
	baz=101,slow=74,SNR=328						
H11N3	WAKE ISLAND Hy	125.94	280	T	T	20 05 46.9	
	baz=102,slow=74,SNR=240						
H11N2	WAKE ISLAND Hy	125.96	280	T	T	20 05 48.0	
	baz=102,slow=74,SNR=225						
H11N1	WAKE ISLAND Hy	125.96	280	T	T	20 05 48.1	
	baz=102,slow=74,SNR=150						
ASAR	Alice Springs	130.19	210	PKP	PKPdf	17 46 24.9	-0.4
	comp=Z,1.3nm,0.8s,baz=169,slow=4.1,SNR=8.3						
AS31	Alice Springs	130.19	210	ePKPdf	PKPdf	17 46 24.4	-0.9
PEA1	Petropavlovsk-	130.41	324	ePKPdf	PKPdf	17 46 24.4	-0.3
PETK	Petropavlovsk-	130.41	324	PKP	PKPdf	17 46 24.4	-0.3
	comp=Z,1.7nm,0.9s,baz=53,slow=5.6,SNR=3.4						
ABKAR	Akbulak array	131.39	41	ePKPdf	PKPdf	17 46 26.8	+0.1
BVAR	Borovoye Array	135.70	33	PKP	PKiKP	17 46 35.7	-0.5
	comp=Z,1.7nm,1.0s,baz=256,slow=2.4,SNR=5.9						
KURBB	Kurchatov Arra	141.19	31	PKhKP	PKPpre	17 46 39.8	
	comp=Z,0.9nm,0.9s,baz=300,slow=2.6,SNR=5.9						
ZAA0	Zalesovo Array	141.49	23	ePKPdf	PKPdf	17 46 45.7	+0.5
ZALV	Zalesovo Beam	141.49	23	PKhKP	PKPpre	17 46 39.8	
	comp=Z,2.9nm,0.8s,baz=319,slow=5.9,SNR=4.1						
ZALV				PKP	PKPdf	17 46 45.9	+0.7
	comp=Z,2.4nm,0.7s,baz=276,slow=2.7,SNR=10						
NRN	Naryn	144.83	46	ePKPdf	PKPdf	17 46 51.7	-0.2
MAKZ	Makanchi	145.41	34	ePKPbc	PKPbc	17 46 51.6	-0.7
NIL	Nilore	145.48	60	ePKPbc	PKPdf	17 46 52.5	-0.4
MKAR	Makanchi Array	145.58	33	PKPbc	PKPdf	17 46 52.7	0.0
	comp=Z,19nm,0.9s,baz=323,slow=3.0,SNR=60						
KSH	Kashi	145.64	49	ePKPbc	PKPab	17 46 54.0	+0.3
KSH				pPKP	sPKPab	17 47 04.0	+6.0
KSH				sPKP		17 47 08.3	
KSH				PP	PP	17 50 18.0	+4.0
KSH				PKS	PKSdf	17 50 25.0	-3.7
KSH				SKKS		17 57 02.1	
KSH				AMB	AMB		
	comp=Z,83nm,8.9s						
KSH				LR	LR		
	comp=Z,340nm,15.7s						
KSH				LR	LR		
	comp=Z,190nm,9.8s						
PRZ	Przheval'sk	145.89	42	ePKPdf	PKPab	17 46 56.0	+1.4
USRK	Ussuriysk Ar.	149.41	327	PKPbc	PKiKP	17 47 04.2	-0.4
	comp=Z,5.9nm,0.8s,baz=29,slow=1.8,SNR=10						
MJAR	Matsushiro Arr	149.82	309	PKPbc	PKiKP	17 47 05.7	0.0
	comp=Z,4.4nm,0.8s,baz=101,slow=1.4,SNR=13						
MAJO	Matsushiro	149.82	309	ePKPbc	PKiKP	17 47 05.3	-0.4
MAT	Matsushiro	149.82	309	PKP	PKPbc	17 47 04.9	+0.1
MJB9	Matsu-Tunnel	149.82	309	ePKPbc	PKiKP	17 47 05.3	-0.4
WMQ	Urumqi	150.39	32	ePKPbc	PKPdf	17 47 00.8	+0.1
SONM	Songino Array	152.31	4	PKPbc	PKiKP	17 47 10.9	+0.2
	comp=Z,2.6nm,0.8s,baz=343,slow=1.7,SNR=11						
ULN	Ulaanbaatar	152.32	3	ePKPbc	PKPbc	17 47 09.8	-0.7
HHC	Hu-ho-hao-te	159.28	355	ePKP	PKPdf	17 47 10.5	-2.6
LZH	Lanzhou	163.48	15	ePKP	PKPdf	17 47 19.0	+1.3
LZH				pPKP	sPKPdf	17 47 25.3	+3.3
LZH				sPKP		17 47 27.5	
LZH				PKPab	sPKPab	17 48 12.6	-0.4
LZH				LR	LR		
	comp=Z,92nm,18.1s						
LZH				LR	LR		
	comp=Z,100nm,18.0s						
LZH				LR	LR		
	comp=Z,130nm,20.2s						
NJ2	Nanjing	165.31	326	ePKP	PKPdf	17 47 20.4	+1.2
CD2	Chengdu	168.26	23	PKP	PKPdf	17 47 20.8	-0.8

IDC 23 18:01:04.3±15.0, 35°.67N×73°.46E, h344km±164km, mb2.8/2, mb1 2.8/6, mb1mx2.6/34, mbtmp3.5/6, Error ellipse: s-maj=91.7km s-min=26.2km az=1.0, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	12.94	28	P	P	18 03 55.5	-0.8
	baz=219,slow=11,SNR=2.4						
BVAR	Borovoye Array	17.48	354	P	P	18 04 45.5	-0.3
	0.6nm,0.3s,baz=176,slow=9.4,SNR=3.5						
AKTO	Aktyubinsk	18.52	328	P	P	18 04 57.4	+0.6
	0.1nm,0.3s,baz=135,slow=9.1,SNR=5.1						
ZALV	Zalesovo Beam	19.93	20	P	P	18 05 11.3	-0.2
	0.5nm,0.3s,baz=215,slow=10,SNR=7.9						
TORD	Torodi Ar. Bea	67.70	270	P	P	18 11 25.5	-0.2
	0.2nm,0.5s,baz=42,slow=4.8,SNR=3.1						
ASAR	Alice Springs	82.16	126	P	P	18 12 47.6	+0.1
	0.6nm,1.0s,baz=316,slow=5.8,SNR=4.5						

WEL 23 18:01:08.6, 42°S±1°×174°.3E±0°.8, h18km±2km, M3.2/22, ML3.5/18, MLv3.2/22, Error ellipse: s-maj=0.0km s-min=0.0km az=150.4, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.15	202	P	Pb	18 01 13.2	+0.4
CMWZ				S	Sb	18 01 16.5	+0.8
TUWZ	Tuamarina	0.32	305	P	Pb	18 01 15.8	+0.1
TUWZ				S	Sb	18 01 20.8	+0.2
BSWZ	Blackbirch Sta	0.33	251	P	Pb	18 01 15.9	0.0
BSWZ				S	Sb	18 01 21.1	+0.3
TCW	Tory Channel	0.40	359	P	Pb	18 01 17.2	+0.1
TCW				S	Sb	18 01 23.0	0.0
BHW	Baring Head	0.48	65	P	Pb	18 01 18.9	+0.4
PLWZ	Palliser	0.73	87	P	Pn	18 01 23.8	-0.3
MSWZ	Moikau Station	0.75	75	P	Pn	18 01 23.9	-0.5
CAW	Cannon Point	0.77	50	P	Pg	18 01 24.0	+0.3
NNZ	Nelson	0.79	300	P	Pg	18 01 24.1	+0.1
DUWZ	D’Urville Isla	0.85	341	P	Pg	18 01 25.4	+0.2
PAWZ	Paruwai Farm	0.89	75	P	Pn	18 01 26.3	+0.1
KHZ	Kahutara	0.98	215	P	Pg	18 01 27.9	+0.3
MTW	Mount Morrison	1.02	64	P	Pg	18 01 28.3	0.0
THZ	Tophouse	1.05	261	P	Pn	18 01 28.6	+0.1
TRWZ	Traveller	1.07	79	P	Pb	18 01 28.7	0.0
HOWZ	Holdsworth Sta	1.17	53	P	Pb	18 01 30.5	+0.2
TMWZ	Te Maipa	1.31	68	P	Pn	18 01 31.9	-0.1
MRZ	Mangatainoka R	1.36	46	P	Pb	18 01 33.5	-0.1
TIWZ	Tintock	1.47	56	P	Pn	18 01 34.4	+0.2
QRZ	Quartz Range	1.54	300	P	Pb	18 01 36.9	+0.3
OHWZ	Ohakea	1.61	29	P	Pb	18 01 38.5	+0.8
GVZ	Greta Valley S	1.64	214	P	Pn	18 01 36.6	-0.1
PRWZ	Pori Road	1.65	51	P	Pn	18 01 37.0	+0.2
POWZ	Post Office Ro	1.66	43	P	Pn	18 01 37.2	+0.4
BFZ	Birch Farm	1.75	59	P	Pn	18 01 37.5	-0.5
DSZ	Denniston Nort	1.86	265	P	Pb	18 01 41.5	-0.7
LTZ	Lake Taylor	1.90	231	P	Pn	18 01 40.5	+0.3
DVHZ	Dannevirke	1.94	48	P	Pn	18 01 40.3	-0.4
TSZ	Takapari Road	2.00	40	P	Pn	18 01 42.2	+0.6
LREZ	Lake Rotokare	2.15	2	P	Pb	18 01 47.2	+0.2
NMEZ	Namu Road	2.22	352	P	Pb	18 01 49.2	+1.0
PNHZ	Pukenui	2.23	41	P	Pn	18 01 45.1	+0.3
OKCZ	Okains Bay	2.30	203	P	Pn	18 01 44.7	-0.9
KHEZ	Kahui Hut	2.32	355	P	Pb	18 01 49.4	-0.6
NBEZ	Newall Road No	2.36	352	P	Pb	18 01 50.5	-0.1
INZ	Inchbonnie	2.39	241	P	Pn	18 01 47.6	+0.7
OXZ	Oxford	2.39	223	P	Pn	18 01 45.5	-1.3
MTVZ	Mangateitei	2.40	22	P	Pg	18 01 53.2	-1.5
MQZ	McQueen’s Vall	2.42	209	P	Pn	18 01 45.6	-1.6
DREZ	Durham Road	2.42	358	P	Pg	18 01 54.3	-0.7
PKE	Pukeiti	2.43	354	P	Pb	18 01 52.0	+0.3
PKVZ	Pokaka	2.46	20	P	Pb	18 01 53.5	+1.2
MOVZ	Moawhango	2.47	27	P	Pb	18 01 53.0	+0.5
VRZ	Vera Road	2.51	8	P	Pb	18 01 52.4	-0.7
BHHZ	Black Hill Sta	2.51	33	P	Pb	18 01 51.0	-2.3
KRHZ	Kereru	2.52	40	P	Pn	18 01 49.0	+0.2
FWVZ	Far West T-bar	2.54	23	P	Pb	18 01 55.1	+1.3
TUVZ	Tukino	2.56	24	P	Pb	18 01 54.6	+0.4
NGZ	Ngauruhoe	2.63	23	P	Pb	18 01 56.6	+1.3
KAHZ	Kahuranaki	2.68	48	P	Pn	18 01 50.6	-0.3
WTVZ	West Tongariro	2.68	22	P	Pb	18 01 57.4	+1.2
TWVZ	Taurewa	2.69	19	P	Pb	18 01 57.5	+1.4
KRVZ	Karewarewa	2.72	23	P	Pb	18 01 58.0	+1.2
KWHZ	Kaweka Forest	2.72	37	P	Pg	18 01 59.3	-1.5
KATZ	Kakaramea	2.84	23	P	Pb	18 02 00.3	+1.4
RITZ	Rihia Road	2.89	25	P	Pg	18 02 01.9	-2.1
BKZ	Black Stump Fm	2.97	35	P	Pb	18 02 02.5	+1.6
RATZ	Rangitukua	2.97	23	P	Pb	18 02 02.8	+1.9
WVZ	Waitaha Valley	3.01	240	P	Pb	18 02 01.5	-0.2
HIZ	Hauiti	3.12	8	P	Pb	18 02 01.5	-2.2
TLZ	Tolley Road	3.42	17	P	Pb	18 02 08.4	-0.2
MWZ	Matawai	4.11	38	P	Pn	18 02 11.7	+1.1
ODZ	Otahua Downs	4.34	217	P	Pn	18 02 12.4	-1.2
WIZ	White Island	4.66	30	P	Pn	18 02 20.8	+2.8
JCZ	Jackson Bay	4.74	237	P	Pn	18 02 24.5	+5.3

WEL 23 18:25:52.5, 41°.7S±1°.0×174°.2E±0°.7, h13km±1km, M4.1/35, ML4.3/26, MLv4.1/35, Error ellipse: s-maj=0.0km s-min=0.0km az=165.4, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.07	190	P	Pg	18 25 55.6	+0.4
CMWZ				S	Sg	18 25 57.9	+0.8
BSWZ	Blackbirch Sta	0.27	263	P	Pb	18 25 58.8	-0.3
BSWZ				S	Sb	18 26 03.4	-0.3
TUWZ	Tuamarina	0.33	320	P	Pb	18 25 59.9	-0.4
TUWZ				S	Sb	18 26 05.0	-0.5
TCW	Tory Channel	0.47	4	P	Pb	18 26 02.2	-0.4
BHW	Baring Head	0.55	60	P	Pb	18 26 04.4	+0.4
PLWZ	Palliser	0.78	82	P	Pn	18 26 09.1	-0.1
NNZ	Nelson	0.79	306	P	Pb	18 26 08.0	-0.1
MSWZ	Moikau Station	0.81	71	P	Pn	18 26 09.3	-0.3
CAW	Cannon Point	0.85	48	P	Pb	18 26 09.4	+0.3
KHZ	Kahutara	0.90	215	P	Pn	18 26 11.4	+0.7
DUWZ	D’Urville Isla	0.91	345	P	Pg	18 26 10.0	-0.1
PAWZ	Paruwai Farm	0.95	72	P	Pn	18 26 11.8	+0.3
THZ	Tophouse	0.99	265	P	Pn	18 26 12.0	-0.1
MTW	Mount Morrison	1.09	62	P	Pg	18 26 13.9	+0.5
TRWZ	Traveller	1.13	76	P	Pg	18 26 14.2	0.0
HOWZ	Holdsworth Sta	1.25	51	P	Pg	18 26 16.2	-0.2
TMWZ	Te Maipa	1.38	66	P	Pn	18 26 17.6	+0.2
MRZ	Mangatainoka R	1.44	45	P	Pb	18 26 19.1	0.0
QRZ	Quartz Range	1.54	303	P	Pb	18 26 21.2	+0.3
TIWZ	Tintock	1.54	55	P	Pn	18 26 20.2	+0.5
GVZ	Greta Valley S	1.56	214	P	Pb	18 26 20.6	-0.6

CPWZ	**Castlepoint**	**1.68**	**63**	P	Pg	18 26 24.9	+0.3
OHWZ	**Ohakea**	**1.69**	**29**	P	Pg	18 26 24.2	-0.7
PRWZ	**Pori Road**	**1.73**	**50**	P	Pn	18 26 22.9	+0.6
POWZ	**Post Office Ro**	**1.74**	**43**	P	Pn	18 26 23.0	+0.7
DSZ	**Denniston Nort**	**1.82**	**267**	P	Pb	18 26 25.8	+0.2
BFZ	**Birch Farm**	**1.82**	**57**	P	Pn	18 26 23.4	-0.1
LTZ	**Lake Taylor**	**1.82**	**232**	P	Pn	18 26 24.6	+1.0
AMCZ	**Amberley**	**1.90**	**218**	P	Pn	18 26 25.1	+0.6
WAZ	**Wanganui**	**2.01**	**17**	P	Pb	18 26 29.5	+0.7
DVHZ	**Dannevirke**	**2.02**	**47**	P	Pn	18 26 26.1	-0.1
TSZ	**Takapari Road**	**2.09**	**40**	P	Pn	18 26 27.8	+0.7
ANWZ	**Angora Road**	**2.09**	**55**	P	Pn	18 26 27.1	0.0
OKCZ	**Okains Bay**	**2.21**	**203**	P	Pn	18 26 28.5	-0.4
LREZ	**Lake Rotokare**	**2.23**	**3**	P	Pb	18 26 32.3	-0.2
CRLZ	**Canterbury Las**	**2.23**	**212**	P	Pn	18 26 29.1	0.0
NMEZ	**Namu Road**	**2.28**	**353**	P	Pb	18 26 33.4	-0.1
OXZ	**Oxford**	**2.31**	**224**	P	Pn	18 26 29.9	-0.2
PRHZ	**Porangahau**	**2.31**	**53**	P	Pn	18 26 30.2	0.0
INZ	**Inchbonnie**	**2.32**	**242**	P	Pn	18 26 31.6	+1.4
PNHZ	**Pukenui**	**2.32**	**41**	P	Pn	18 26 30.7	+0.4
WPHZ	**Waipukurau**	**2.33**	**47**	P	Pn	18 26 32.0	+1.6
MQZ	**McQueen's Vall**	**2.33**	**209**	P	Pn	18 26 29.6	-0.9
PREZ	**Palmer Road**	**2.34**	**359**	P	Pb	18 26 34.0	-0.5
KHEZ	**Kahui Hut**	**2.39**	**356**	P	Pb	18 26 35.5	+0.1
NBEZ	**Newall Road No**	**2.43**	**353**	P	Pb	18 26 35.4	-0.6
MTVZ	**Mangateitei**	**2.48**	**23**	P	Pb	18 26 36.2	-0.8
DREZ	**Durham Road**	**2.49**	**359**	P	Pb	18 26 35.6	-1.5
PKE	**Pukeiti**	**2.49**	**356**	P	Pb	18 26 36.3	-0.8
PKVZ	**Pokaka**	**2.54**	**20**	P	Pb	18 26 36.4	-1.5
MOVZ	**Moawhango**	**2.55**	**28**	P	Pn	18 26 35.5	+1.9
VRZ	**Vera Road**	**2.59**	**9**	P	Pb	18 26 37.3	-1.4
PXZ	**Pawanui**	**2.59**	**51**	P	Pn	18 26 33.2	-0.8
BHHZ	**Black Hill Sta**	**2.60**	**33**	P	Pn	18 26 35.8	+1.6
MHEZ	**Mangahewa**	**2.61**	**2**	P	Pb	18 26 38.5	-0.5
KRHZ	**Kereru**	**2.61**	**39**	P	Pn	18 26 34.2	-0.1
DRZ	**Dome Shelter**	**2.61**	**23**	P	Pb	18 26 40.2	+1.0
WHVZ	**Whangaehu Hut**	**2.61**	**24**	P	Pb	18 26 37.0	-2.2
FWVZ	**Far West T-bar**	**2.63**	**23**	P	Pb	18 26 37.3	-2.2
TUVZ	**Tukino**	**2.65**	**25**	P	Pb	18 26 37.4	-2.4
NGZ	**Ngauruhoe**	**2.71**	**23**	P	Pb	18 26 38.5	-2.5
KAHZ	**Kahuranaki**	**2.76**	**48**	P	Pn	18 26 35.9	-0.5
TWVZ	**Taurewa**	**2.77**	**20**	P	Pn	18 26 38.9	+2.3
WTVZ	**West Tongariro**	**2.77**	**22**	P	Pb	18 26 39.3	-2.6
KRVZ	**Karewarewa**	**2.80**	**23**	P	Pb	18 26 41.5	-1.0
KWHZ	**Kaweka Forest**	**2.81**	**37**	P	Pn	18 26 38.7	+1.6
MCHZ	**McNeill Hill**	**2.92**	**41**	P	Pn	18 26 40.7	+2.1
KATZ	**Kakaramea**	**2.93**	**23**	P	Pb	18 26 45.2	+0.6
WVZ	**Waitaha Valley**	**2.94**	**241**	P	Pn	18 26 40.4	+1.6
RITZ	**Rihia Road**	**2.98**	**25**	P	Pb	18 26 43.7	-1.6
BKZ	**Black Stump Fm**	**3.05**	**35**	P	Pn	18 26 41.4	+1.0
RATZ	**Rangitukua**	**3.05**	**23**	P	Pb	18 26 47.4	+0.7
RPZ	**Rata Peaks**	**3.10**	**228**	P	Pn	18 26 41.3	+0.2
WATZ	**Wairara**	**3.19**	**22**	P	Pb	18 26 48.7	-0.2
HIZ	**Hauiti**	**3.20**	**9**	P	Pb	18 26 45.9	-3.3
MRHZ	**Matea Rd**	**3.30**	**31**	P	Pn	18 26 44.1	+0.2
MTHZ	**Maungataniwha**	**3.46**	**36**	P	Pn	18 26 49.6	+3.5
TLZ	**Tolley Road**	**3.50**	**17**	P	Pn	18 26 50.3	+3.8
PRRZ	**Plateau Road**	**3.59**	**28**	P	Pb	18 26 56.5	+0.8
RTZ	**Ruatahuna**	**3.72**	**35**	P	Pn	18 26 51.5	+1.9
FOZ	**Fox Glacier**	**3.75**	**239**	P	Pn	18 26 52.1	+2.2
SNGZ	**Shannon Statio**	**3.75**	**40**	P	Pn	18 26 51.0	+0.9
LBZ	**Lake Benmore**	**4.01**	**226**	P	Pn	18 26 55.8	+2.2
TOZ	**Tahuroa Road**	**4.07**	**14**	P	Pn	18 26 56.1	+1.8
URZ	**Urewera**	**4.07**	**34**	P	Pn	18 26 54.7	+0.3
ODZ	**Otahua Downs**	**4.26**	**217**	P	Pn	18 26 56.5	-0.5
TWGZ	**Tauwhareparae**	**4.54**	**41**	P	Pn	18 27 01.6	+0.8
RUGZ	**Raukumara Rang**	**4.56**	**37**	P	Pn	18 27 01.2	-0.1
AWAZ	**Awhitu Peninsu**	**4.62**	**4**	P	Pn	18 27 04.8	+2.8
MKAZ	**Moumakai**	**4.63**	**9**	P	Pn	18 27 04.2	+2.1
JCZ	**Jackson Bay**	**4.66**	**237**	P	Pn	18 27 03.3	+0.7
ETAZ	**East Tamaki Re**	**4.75**	**7**	P	Pn	18 27 06.1	+2.3
HAZ	**Te Kaha**	**4.78**	**36**	P	Pn	18 27 03.6	-0.6
WIAZ	**Waiheke Island**	**4.93**	**8**	P	Pn	18 27 08.8	+2.5
MBAZ	**Motutapu North**	**4.94**	**6**	P	Pn	18 27 09.8	+3.5
TUZ	**Tuapeka**	**5.41**	**216**	P	Pn	18 27 13.5	+0.7
MSZ	**Milford Sound**	**5.49**	**235**	P	Pn	18 27 18.4	+4.5
SYZ	**Scrubby Hill**	**6.08**	**215**	P	Pn	18 27 22.4	+0.4
OUZ	**Omahuta**	**6.47**	**355**	P	Pn	18 27 30.1	+2.7

WEL 23 18:26:30.2,40°S±336°×17°6E±6°9,h9^{km}±95^{km},M3.5/13, ML3.6/7,MLv3.5/13,Error ellipse: s-maj=0.5km s-min=0.1km az=176.5,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARHZ	**Aropaoanui**	**1.35**	**56**	P	Pb	18 26 55.6	-0.1
WHTZ	**Whakaora**	**1.40**	**13**	P	Pn	18 26 53.9	-2.1
KUTZ	**Kaahu Road**	**1.55**	**8**	P	Pn	18 26 54.5	-3.5
ALRZ	**Allen Road**	**1.59**	**23**	P	Pn	18 26 55.9	-2.7
WHHZ	**Waihua**	**1.61**	**54**	P	Pg	18 27 01.0	-0.1
RAHZ	**Arahi**	**1.62**	**47**	P	Pn	18 26 57.9	-1.2
GRRZ	**Galatos Road**	**1.73**	**15**	P	Pn	18 27 00.9	+0.4
HRRZ	**Handcock Road**	**1.73**	**19**	P	Pb	18 27 02.2	-0.1
HSRZ	**Hossack Road**	**1.80**	**18**	P	Pn	18 27 00.8	-0.6
MUGZ	**Murupara**	**1.81**	**32**	P	Pn	18 27 01.9	+0.3
RRRZ	**Republican Roa**	**1.84**	**24**	P	Pn	18 27 01.7	-0.4
UTU	**Utuhina**	**1.91**	**15**	P	Pg	18 27 07.0	+0.1
TARZ	**Mount Tarawera**	**1.94**	**23**	P	Pn	18 27 04.2	+0.7
NGRZ	**Ngongotaha**	**1.98**	**15**	P	Pn	18 27 04.1	+0.1
OMRZ	**Omania**	**2.02**	**19**	P	Pn	18 27 05.8	+1.3
KARZ	**Kaharoa**	**2.08**	**15**	P	Pn	18 27 05.8	+0.5
RAGZ	**Rawiri**	**2.10**	**44**	P	Pn	18 27 05.8	+0.1
RIGZ	**Rimuhau**	**2.16**	**53**	P	Pg	18 27 15.6	+3.9
OPRZ	**Ohinepanea**	**2.31**	**20**	P	Pg	18 27 16.8	+2.2
TGRZ	**Tauranga**	**2.36**	**14**	P	Pn	18 27 09.8	+0.7
PUZ	**Puketiti**	**2.87**	**48**	P	Pb	18 27 22.0	+0.4

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*ISCJB **23** 18:31:17.9±0.9, 12°.8S±0°.1×168°.9E±0°.2, h625^{km}, mb3.6/9, Error ellipse: s-maj=25.9km s-min=15.8km az=1.4*

*IDC **23** 18:31:19.2±3.6, 12°.85S×168°.90E, h624^{km}±52^{km}, mb3.0/9, mb1 3.2/10, mb1mx3.0/24, mbtmp4.0/10, Error ellipse: s-maj=30.9km s-min=23.8km az=11.0*

ISC 23 18:31:19.2±1.1,12°.8S±0°.1×168°.9E±0°.2,h625^{km},n10, σ0^s.60/10,mb3.7/9,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.48**	**194**	P	**P**	**18 33 33.8**	**+0.2**
	0.6nm,0.3s,baz=279,slow=14,SNR=7.7						
URZ	**Urewera**	**26.34**	**165**	P	**P**	**18 36 08.1**	**+0.3**
	6.3nm,0.6s,baz=219,slow=14,SNR=4.4						
STKA	**Stephens Creek**	**31.44**	**228**	P	**P**	**18 36 51.5**	**-0.4**
	0.8nm,0.3s,baz=55,slow=8.6,SNR=5.4						
WRA	**Warramunga Arr**	**33.88**	**253**	P	**P**	**18 37 11.9**	**-0.7**
	1.0nm,0.4s,baz=85,slow=7.9,SNR=9.9						
ASAR	**Alice Springs**	**34.87**	**247**	P	**P**	**18 37 20.6**	**-0.2**
	1.1nm,0.5s,baz=74,slow=9.9,SNR=30						
MJAR	**Matsushiro Arr**	**57.02**	**331**	P	**P**	**18 40 07.5**	**+0.1**
	0.8nm,0.9s,baz=170,slow=7.8,SNR=5.0						
CMAR	**Chiang Mai Arr**	**75.68**	**293**	P	**P**	**18 42 03.1**	**+0.5**
	1.7nm,1.0s,baz=129,slow=4.3,SNR=6.2						
SONM	**Songino Array**	**81.96**	**323**	P	**P**	**18 42 35.7**	**+0.4**
	0.3nm,0.4s,baz=134,slow=4.2,SNR=2.0						
ILAR	**Eielson Array**	**84.25**	**17**	P	**P**	**18 42 45.1**	**-1.0**
	0.5nm,0.8s,baz=237,slow=4.8,SNR=4.5						
MKAR	**Makanchi Array**	**96.96**	**316**	P	**P**	**18 43 45.8**	**+0.5**
	0.3nm,0.5s,baz=91,slow=4.3,SNR=5.1						

MAN 23 18:33:53.6,7°.38N×124°.85E,h11^{km},mb3.9,ML2.7,MS2.2, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.62**	**255**	⇑*i*P	Pg	18 34 05.1	-0.6
CTBH				*i* S	Sg	18 34 13.1	-0.8

UCR 23 18:42:23.9±1.6,9°.55N×83°.94W,h23^{km}±4^{km},MW3.5, 4C-3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.20**	**341**	⇑*i*P	Pb	18 42 29.6	0.0
LCR2				*e*S	Sb	18 42 34.4	+0.8
EDDO	**Dominical**	**0.30**	**166**	⇑*e*P	Pb	18 42 30.8	-0.1
EDDO				*e*S	Sb	18 42 36.2	+0.6
SJS	**Escuela Geolog**	**0.40**	**344**	*e*P	Pb	18 42 33.3	+0.8
SJS				*e*S	Sn	18 42 40.0	-1.4
EDLM	**Las Mercedes**	**0.44**	**128**	*e*P	Pb	18 42 32.8	-0.3
EDLM				*e*S	Sb	18 42 39.9	+0.6
HDC	**Heredia**	**0.48**	**339**	⇑*i*P	Pb	18 42 33.6	-0.3
HDC				*e*S	Sb	18 42 41.5	+0.8
CVTR	**Volcan Turrial**	**0.50**	**21**	⇓*e*P	Pb	18 42 34.2	-0.2
CVTR				*e*S	Sb	18 42 42.1	+0.7
EDPN	**Palmar Norte**	**0.75**	**141**	*e*P	Pb	18 42 37.5	-0.8
EDPN				*e*S	Sb	18 42 48.4	+0.2
SRA1	**San Ramn**	**0.75**	**315**	*e*P	Pb	18 42 37.5	-1.0
SRA1				*e*S	Sb	18 42 48.0	-0.4
EDBA	**Buenos Aires**	**0.76**	**120**	*e*P	Pb	18 42 38.1	-0.4
EDBA				*e*S	Sb	18 42 47.0	-1.4
ARE1	**Arenal 1**	**1.19**	**320**	⇑*e*P	Pn	18 42 44.6	-0.5
ARE1				*e*S	Sb	18 43 01.9	+1.2
CEDE	**Laguna Cedeo**	**1.20**	**321**	*e*P	Pn	18 42 45.0	-0.3
JTS	**Las Juntas de**	**1.24**	**306**	⇓*e*P	Pn	18 42 45.2	-0.7
JTS				*e*S	Sn	18 43 01.2	-0.7
BRU2	**Volcan**	**1.44**	**121**	⇓*i*P	Pn	18 42 48.3	-0.4
BRU2				*e*S	Sb	18 43 08.2	-0.1
PLVR	**Palo Verde**	**1.60**	**300**	*e*P	Pn	18 42 51.1	+0.1

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*ISCJB **23** 18:44:54.3±1.4, 34°.10N±0°.04×25°.10E±0°.05, h5^{km}±10^{km}, mb3.7/3, Error ellipse: s-maj=7.9km s-min=5.9km az=35.5*

*IDC **23** 18:44:54.7±1.4, 34°.22N×25°.09E, h0^{km}, mb3.7/3, mb1 3.8/6, mb1mx3.5/35, mbtmp3.7/6, ML4.0/3, Error ellipse: s-maj=27.7km s-min=13.6km az=77.0*

*ATH **23** 18:44:56.9, 34°.23N×25°.05E, h13^{km}±5^{km}, ML3.1/4, Error ellipse: s-maj=5.8km s-min=1.8km az=351.0*

*THE **23** 18:44:58.0, 34°.30N×25°.05E, h0^{km}±1^{km}, ML3.1/4, Error ellipse: s-maj=2.6km s-min=0.9km az=172.0*

ISC 23 18:44:55.8±1.8,34°.18N±0°.07×25°.05E±0°.04,h7^{km}±11^{km}, n29,σ0^s.59/42,mb3.6/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.86**	**347**	P	**Pg**	**18 45 12.4**	**0.0**
SIVA				S	**Sg**	**18 45 23.9**	**+0.4**
	4µm,0.6s						
SIVA	**Sivas**	**0.86**	**347**	P	**Pg**	**18 45 12.4**	**0.0**
SIVA				S	**Sg**	**18 45 24.1**	**+0.6**
SIVA				AML	AML	18 45 30.1	
	comp=E,8675µm,0.4s						
SIVA				AML	AML	18 45 32.4	
	comp=N,5627µm,0.7s						
TMBK	**Timbaki Herakl**	**0.92**	**345**	P	**Pg**	**18 45 13.7**	**+0.2**
TMBK				S	**Sg**	**18 45 26.2**	**+0.7**
GVD	**Gavdhos**	**1.03**	**310**	P	**Pb**	**18 45 16.1**	**+0.1**
GVD				S	**Sn**	**18 45 31.5**	**+0.1**
	comp=N,1µm,0.5s						
GVD	**Gavdhos**	**1.03**	**310**	P	**Pb**	**18 45 16.1**	**+0.1**
GVD				S	**Sb**	**18 45 29.8**	**+0.1**
GVD				AML	AML	18 45 37.9	
	comp=E,2316µm,0.5s						
GVD				AML	AML	18 45 43.2	
	comp=N,2355µm,0.4s						
GVDS	**Gavdos**	**1.03**	**310**	P	**Pn**	**18 45 16.6**	**-0.1**
GVDS				S	**Sn**	**18 45 32.2**	**+0.8**
LAST	**Lasithi**	**1.04**	**20**	P	**Pg**	**18 45 15.5**	**-0.3**
LAST	**Lasithi**	**1.04**	**20**	P	**Pg**	**18 45 15.5**	**-0.3**
IDI	**Anoyia**	**1.11**	**353**	Pg	**Pg**	**18 45 16.5**	**-0.8**
	comp=N,19nm,0.3s,baz=180,slow=18,SNR=59						
IDI				Lg	Lg	18 45 29.3	
	comp=N,59nm,0.3s,baz=127,slow=15,SNR=19						
IDI				LR	LR	18 46 02.6	
	comp=N,57nm,20.6s,baz=154,slow=63						
IDI	**Anoyia**	**1.11**	**353**	P	**Pg**	**18 45 16.5**	**-0.8**
IDI				S	**Sg**	**18 45 31.1**	**-0.6**
IDI				AML	AML	18 45 34.0	
	comp=N,697µm,0.4s						
IDI				AML	AML	18 45 41.9	
	comp=E,835µm,0.6s						
KSTL	**Kastelli Herak**	**1.12**	**1**	P	**Pg**	**18 45 16.1**	**-1.3**
NPS	**Neapolis**	**1.18**	**23**	P	**Pg**	**18 45 18.1**	**-0.3**
NPS	**Neapolis**	**1.18**	**23**	P	**Pg**	**18 45 18.1**	**-0.3**
NPS				S	**Sb**	**18 45 34.4**	**+0.4**
PRNS	**Prines Rethymn**	**1.27**	**339**	P	**Pg**	**18 45 20.0**	**-0.1**
PRNS				S	**Sn**	**18 45 37.4**	**+0.2**
ZKR	**Zakros**	**1.34**	**46**	P	**Pg**	**18 45 22.1**	**+0.5**
ZKR				S	**Sn**	**18 45 40.4**	**+1.3**
	comp=E,205nm,0.9s						
ZKR	**Zakros**	**1.34**	**46**	P	**Pg**	**18 45 22.2**	**+0.6**
VAM	**Vamos**	**1.41**	**331**	P	**Pb**	**18 45 22.3**	**-0.2**
VAM				S	**Sg**	**18 45 41.4**	**+0.2**
	comp=E,458nm,0.5s						
VAM	**Vamos**	**1.41**	**331**	P	**Pb**	**18 45 22.4**	**-0.1**
VAM				S	**Sg**	**18 45 41.7**	**+0.5**
VAM				AML	AML	18 45 52.5	
	comp=E,1040µm,0.6s						
VAM				AML	AML	18 45 54.8	
	comp=N,870µm,0.4s						
IMMV	**Iera Moni Meta**	**1.55**	**326**	P	**Pb**	**18 45 24.4**	**-0.5**
IMMV				S	**Sb**	**18 45 45.2**	**+0.5**
IMMV	**Iera Moni Meta**	**1.55**	**326**	P	**Pb**	**18 45 24.8**	**-0.1**
KARP	**Karpathos**	**2.21**	**51**	P	**Pb**	**18 45 35.5**	**-0.6**
ANKY	**Antikythira Is**	**2.21**	**320**	P	**Pb**	**18 45 36.0**	**-0.1**
KTHA	**Kythira Island**	**2.63**	**322**	P	**Pn**	**18 45 40.1**	**+1.4**
EIL	**Elat**	**9.54**	**115**	Pn	**Pn**	**18 47 13.6**	**0.0**
	comp=N,0.7nm,0.3s,baz=301,slow=19,SNR=7.4						
AKASG	**Malin Array Be**	**16.79**	**9**	Pn	**Pn**	**18 48 50.8**	**-0.5**
	comp=N,0.8nm,0.3s,baz=198,slow=10,SNR=4.2						
GERES	**GERESS Array B**	**16.91**	**333**	Pn	**P**	**18 48 54.4**	**-0.6**
	comp=N,0.2nm,0.3s,baz=146,slow=13,SNR=14						
TORD	**Torodi Ar. Bea**	**29.79**	**231**	P	**P**	**18 51 03.5**	**+0.2**
	comp=N,0.4nm,0.5s,baz=43,slow=7.8,SNR=4.4						
MKAR	**Makanchi Array**	**44.40**	**56**	P	**P**	**18 53 06.7**	**-0.3**
	comp=N,0.5nm,0.6s,baz=270,slow=8.9,SNR=5.9						
ZALV	**Zalesovo Beam**	**45.75**	**45**	P	**P**	**18 53 16.3**	**-1.3**
	comp=N,1.0nm,0.4s,baz=259,slow=9.8,SNR=5.4						

MEX 23 18:56:14.0±0.3,16°.35N×98°.22W,h4^{km}±3^{km},MD3.8,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**1.25**	**345**	*e*P	Pg	18 56 34.4	-3.6
TLIG				*i* S	Sg	18 56 50.6	-3.7
VHO	**Vista Hermosa**	**1.60**	**63**	*e*P	Pn	18 56 39.4	-3.9
VHO				*i* S	Sn	18 56 59.2	-5.3
CAIG	**El Cayaco**	**2.08**	**290**	*i* P	Pn	18 56 45.6	-4.0
CAIG				*i* S	Sn	18 57 11.6	-4.4
HUIG	**Huatulco**	**2.12**	**106**	*e*P	Pn	18 56 46.7	-3.5
HUIG				*i* S	Sn	18 57 12.8	-4.2
CMIG	**Matias Romero**	**3.28**	**77**	*e*P	Pn	18 57 03.1	-3.2
CMIG				*i* S	Sn	18 57 42.1	-3.7

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*ISCJB **23** 19:13:25.8±0.8, 17°.9S±0°.2×178°.8W±0°.2, h550^{km}, mb3.9/7, Error ellipse: s-maj=26.8km s-min=17.2km az=147.3*

*IDC **23** 19:13:26.1±2.7, 17°.84S×178°.73W, h543^{km}±28^{km}, mb3.3/7, mb1 3.5/8, mb1mx3.2/26, mbtmp4.2/8, Error ellipse: s-maj=26.4km s-min=20.2km az=156.0*

ISC 23 19:13:26.6±0.9,17°.9S±0°.2×178°.8W±0°.2,h550^{km},n11, σ0^s.84/13,mb3.8/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.51**	**251**	P	**P**	**19 16 30.9**	**-0.3**
	1.5nm,0.3s,baz=117,slow=16,SNR=17						
URZ	**Urewera**	**20.65**	**189**	P	**P**	**19 17 27.7**	**-0.7**
	5.0nm,0.5s,baz=8.7,slow=13,SNR=3.5						
STKA	**Stephens Creek**	**38.35**	**241**	P	**P**	**19 20 02.3**	**+1.3**
	7.2nm,0.5s,baz=87,slow=10,SNR=30						
WRA	**Warramunga Arr**	**44.30**	**260**	P	**P**	**19 20 47.2**	**-1.1**
	5.3nm,0.6s,baz=90,slow=8.0,SNR=29						
ASAR	**Alice Springs**	**44.47**	**254**	P	**P**	**19 20 49.5**	**0.0**
	45nm,0.6s,baz=88,slow=7.9,SNR=913						
ASAR				PcP	**PcP**	**19 22 20.9**	**-0.2**
	1.0nm,0.4s,baz=109,slow=4.0,SNR=4.4						
ASAR				ScP	**ScP**	**19 25 21.2**	**+0.1**
	0.4nm,0.8s,baz=90,slow=4.2,SNR=3.1						
NVAR	**Mina Array Bea**	**79.63**	**44**	P	**P**	**19 24 37.8**	**+0.2**
	0.2nm,0.5s,baz=230,slow=7.0,SNR=3.7						
PDAR	**Pinedale Array**	**87.56**	**44**	P	**P**	**19 25 16.4**	**-0.3**
	0.2nm,0.4s,baz=210,slow=7.1,SNR=2.5						
CMAR	**Chiang Mai Arr**	**88.53**	**290**	P	**P**	**19 25 21.6**	**0.0**
	1.3nm,1.0s,baz=135,slow=0.5,SNR=5.8						
SNAA	**Sanae**	**90.66**	**179**	P	**P**	**19 25 30.6**	**+0.1**
	0.3nm,0.4s,baz=180,slow=4.0,SNR=9.1						
BRTR	**Keskin Array B**	**144.50**	**315**	PKP	**PKPdf**	**19 31 60.0**	**-1.1**
	1.1nm,0.8s,baz=97,slow=4.0,SNR=6.2						
MMAI	**Mount Meron Ar**	**145.82**	**303**	PKPbc	**PKPdf**	**19 32 04.9**	**+1.5**
	2.7nm,0.7s,baz=85,slow=4.9,SNR=5.9						

GEN 23 19:24:17.2,44°.19N×10°.23E,h6^{km}±2^{km},Ml0.2,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EQUI	**Equi**	**0.06**	**247**	P	Pg	19 24 19.0	+0.2
EQUI				S	Sg	19 24 20.3	+0.3
EQUI	**Equi**	**0.06**	**247**	P	Pg	19 24 19.2	+0.3
EQUI				S	Sg	19 24 20.3	+0.3
SARO	**Sassorosso**	**0.12**	**92**	P	Pg	19 24 20.1	+0.2
SARO				S	Sg	19 24 22.4	+0.7
SARO	**Sassorosso**	**0.12**	**92**	P	Pg	19 24 20.2	+0.2
SARO				S	Sg	19 24 22.3	+0.6

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*ISCJB **23** 19:25:07.3±0.3, 48°.05N±0°.03×7°.40E±0°.03, h20^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=3.6km az=6.7*

*ZUR **23** 19:25:07.4, 48°.06N×7°.40E, h2^{km}±3^{km}, MLh1.0/6, Error ellipse: s-maj=7.3km s-min=2.9km az=297.0*

*STR **23** 19:25:07.9±0.3, 48°N±2°×°±°, h0^{km}, MLv1.3/6*

*LDG **23** 19:25:07.7±0.0, 48°.05N×7°.37E, h10^{km}, Md2.0/3, Ml2.0/7, Error ellipse: s-maj=0.8km s-min=0.6km az=6.0*

ISC 23 19:25:07.7±0.9,48°.04N±0°.02×7°.39E±0°.02,h12^{km}±8^{km}, n33,σ1^s.26/50,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECH	**Echery**	**0.23**	**318**	Pg	**Pg**	**19 25 12.2**	**-0.4**
ECH	**Echery**	**0.23**	**318**	Pn	**Pg**	**19 25 12.2**	**-0.4**
ECH				Sg	**Sg**	**19 25 15.4**	**-0.6**
MOF	**Molkenrain**	**0.26**	**222**	Pg	**Pg**	**19 25 13.1**	**0.0**
KIZ	**Kirchzarten**	**0.37**	**103**	Pg	**Pg**	**19 25 15.0**	**-0.1**
KIZ	**Kirchzarten**	**0.37**	**103**	Pg	**Pg**	**19 25 15.0**	**-0.1**
KIZ				Sg	**Sg**	**19 25 19.7**	**-0.2**
WLS	**Welschbruch**	**0.37**	**356**	Pg	**Pg**	**19 25 15.0**	**-0.2**
WLS				Sg	**Sg**	**19 25 20.0**	**-0.2**
CDF	**Champ du Feu**	**0.38**	**349**	*e*Pg	**Pg**	**19 25 14.9**	**-0.4**
CDF				*e*Sg	**Sg**	**19 25 20.1**	**-0.3**
	4.7nm,0.3s						
HINF	**Hinteralfeld**	**0.42**	**238**	*e*Pg	**Pg**	**19 25 15.9**	**-0.2**
HINF				*e*Sg	**Sg**	**19 25 21.4**	**-0.4**
	12nm,0.3s						
OTER2	**Otterbach 2 (B**	**0.49**	**162**	Pg	**Pg**	**19 25 17.1**	**-0.1**
METMA	**Mettma DE**	**0.67**	**119**	Pn	**Pg**	**19 25 20.5**	**-0.2**
ROTHE	**Rothenfluh**	**0.67**	**147**	Pn	**Pg**	**19 25 20.9**	**+0.2**
BFO	**Black Forest**	**0.69**	**65**	Pn	**Pg**	**19 25 20.8**	**-0.3**
HAU	**Haudompre**	**0.70**	**267**	*e*Pg	**Pg**	**19 25 20.9**	**-0.4**
HAU	**Haudompre**	**0.70**	**267**	*e*Pn	**Pb**	**19 25 22.0**	**+0.1**
HAU				*e*Sg	**Sg**	**19 25 30.2**	**-0.2**
	6.8nm,0.3s						
OPP	**Oppenau**	**0.70**	**49**	Pg	**Pg**	**19 25 21.4**	**+0.1**
OPP				Sg	**Sb**	**19 25 31.4**	**-0.2**
SULZ	**Cheisacher**	**0.71**	**136**	Pn	**Pg**	**19 25 21.5**	**0.0**
BALST	**Balsthal**	**0.74**	**164**	Pn	**Pg**	**19 25 22.2**	**+0.2**
SLE	**Schleitheim**	**0.79**	**110**	Pn	**Pg**	**19 25 23.0**	**-0.1**
SLE				Sg	**Sg**	**19 25 33.7**	**+0.2**
CHMF	**Charmoille**	**0.94**	**212**	Pg	**Pg**	**19 25 25.7**	**-0.1**
CHMF				Sg	**Sb**	**19 25 39.1**	**+0.7**
GUT	**Gutenstein**	**1.16**	**88**	Pn	**Pg**	**19 25 29.9**	**-0.1**
PAGF	**Fort de Pagny**	**1.22**	**295**	*e*Pg	**Pg**	**19 25 30.2**	**-1.0**
	baz=113						
PAGF				*e*Sg	**Sg**	**19 25 46.4**	**-0.7**
	2.8nm,0.3s,baz=104						
SFTF	**Sexfontaines**	**1.58**	**277**	*e*Pn	**Pn**	**19 25 34.0**	**-1.6**
SFTF	**Sexfontaines**	**1.58**	**277**	*e*Pg	**Pn**	**19 25 37.1**	**+1.5**
SFTF				*e*Sn	**Sn**	**19 25 53.2**	**-2.8**
SFTF				*e*Sg	**Sb**	**19 25 57.5**	**+0.6**
	2.4nm,0.2s						
MEZF	**Maizieres J'vi**	**1.63**	**287**	*e*Pn	**Pn**	**19 25 34.4**	**-1.8**
MEZF	**Maizieres J'vi**	**1.63**	**287**	*e*Pg	**Pn**	**19 25 37.8**	**+1.6**
	baz=103						
MEZF				*e*Sg	**Sn**	**19 25 58.7**	**+1.6**
	1.9nm,0.3s,baz=118						
CABF	**La Chapelle**	**1.68**	**212**	*e*Pn	**Pn**	**19 25 35.7**	**-1.4**
CABF	**La Chapelle**	**1.68**	**212**	*e*Pg	**Pb**	**19 25 39.1**	**+0.4**
CABF				*e*Sn	**Sn**	**19 25 56.0**	**-2.6**
CABF				*e*Sg	**Sb**	**19 26 01.0**	**+1.1**
	1.1nm,0.2s						
LOR	**Lormes**	**2.51**	**253**	*e*Pn	**Pn**	**19 25 46.6**	**-1.7**
LOR	**Lormes**	**2.51**	**253**	*e*Pg	**Pb**	**19 25 54.2**	**+1.5**
	baz=70						
LOR				*e*Sg	**Sb**	**19 26 26.4**	**+2.9**
	1.3nm,0.2s,baz=74						
SSF	**Saint Saulge**	**2.81**	**251**	*e*Pn	**Pn**	**19 25 50.6**	**-1.8**
SSF	**Saint Saulge**	**2.81**	**251**	*e*Pg	**Pb**	**19 25 59.3**	**+1.5**
SSF				*e*Sg	**Sb**	**19 26 35.5**	**+3.4**
	1.1nm,0.3s						
BAIF	**Baives**	**2.91**	**315**	*e*Pg	**Pb**	**19 26 01.4**	**+1.9**
AVF	**Avril sur Loir**	**3.01**	**247**	*e*Pn	**Pn**	**19 25 53.5**	**-1.7**

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*IDC **23** 19:25:49.1±1.0, 56°.25S×26°.78W, h0^{km}, mb4.4/6, mb1 4.4/7, mb1mx4.2/22, mbtmp4.4/7, ML4.0/1, Error ellipse: s-maj=27.6km s-min=21.8km az=77.0*

*ISCJB **23** 19:25:59.4±0.4, 56°.28S±0°.08×26°.9W±0°.1, h101^{km}, mb4.7/16, Error ellipse: s-maj=11.6km s-min=8.6km az=35.2*

*NEIC **23** 19:25:60.0±1.4, 56°.37S×26°.86W, h94^{km}±7^{km}, mb4.8/17, Error ellipse: s-maj=13.9km s-min=9.6km az=83.0*

ISC 23 19:26:00.6±0.6,56°.38S±0°.09×27°.04W±0°.08,h101^{km},n35, σ2^s.19/30,mb4.7/16,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.79**	**287**	*e*Pn	**Pn**	**19 27 24.3**	**+0.5**
HOPE				*e*Sn	**Sn**	**19 28 24.9**	**-3.9**
VNA1	**Neumayer--Stat**	**16.46**	**158**	P	**P**	**19 29 47.4**	**+1.5**
VNA3	**Neumayer Olymp**	**16.65**	**160**	P	**P**	**19 29 49.4**	**+1.4**
SNAA	**Sanae**	**18.40**	**156**	P	**Pn**	**19 30 13.3**	**+4.6**
SNAA				S	S	19 33 20.0	-12
SNAA	**Sanae**	**18.40**	**156**	P	**P**	**19 30 05.9**	**-1.5**
	0.5nm,0.3s,baz=307,slow=9.8,SNR=51						
SNAA				S	S	19 33 18.7	-13
	0.0nm,0.3s,baz=100,slow=6.1,SNR=2.3						
SNAA	**Sanae**	**18.40**	**156**	*e*P	**P**	**19 30 07.1**	**-0.3**
	37nm,0.7s						
SNAA				*e*S	**S**	**19 33 23.7**	**-8.4**
EFI	**East Falkland**	**18.73**	**271**	*e*P	**Pn**	**19 30 13.3**	**+0.8**
	121nm,1.4s						
QSPA	**South Pole Qui**	**33.87**	**180**	P	**P**	**19 32 34.2**	**+1.0**
	6.8nm,0.7s,baz=227,slow=1.7,SNR=54						
QSPA	**South Pole Qui**	**33.87**	**180**	*e*P	**P**	**19 32 33.2**	**+0.1**
	7.7nm,0.6s						
MAW	**Mawson**	**39.83**	**143**	P	**P**	**19 33 23.3**	**0.0**
	1.3nm,0.5s,baz=231,slow=6.1,SNR=6.3						
MAW	**Mawson**	**39.83**	**143**	*e*P	**P**	**19 33 23.1**	**-0.2**
	2.1nm,1.4s						
SUR	**Sutherland**	**40.65**	**74**	P	**P**	**19 33 30.5**	**-0.3**
	7.3nm,0.9s,baz=243,slow=6.8,SNR=3.7						
SUR	**Sutherland**	**40.65**	**74**	*e*P	**P**	**19 33 30.4**	**-0.3**
	99nm,1.6s						
SHEL	**Horse Pasture**	**43.48**	**31**	*e*P	**P**	**19 33 54.0**	**+0.3**
	291nm,1.4s						
GO02	**Mina Guanaco**	**43.72**	**298**	*e*P	**P**	**19 33 56.1**	**+0.2**
	38nm,1.5s						
BOSA	**Boshof**	**45.97**	**75**	P	**P**	**19 34 11.9**	**-1.6**
	5.2nm,0.9s,baz=207,slow=5.8,SNR=4.9						
BOSA	**Boshof**	**45.97**	**75**	*e*P	**P**	**19 34 12.2**	**-1.2**
	15nm,1.3s						
PB01	**IPOC Station P**	**47.15**	**301**	*e*P	**P**	**19 34 23.8**	**+1.0**
	14nm,1.3s						
GO01	**Chusmiza**	**48.19**	**302**	*e*P	P	19 34 26.1	-5.1
	23nm,1.4s						
H10S2	**ASCENSION HYDR**	**48.29**	**16**	T	T	20 27 23.7	
	baz=188,slow=74						
H10S3	**ASCENSION HYDR**	**48.30**	**16**	T	T	20 27 27.5	
	baz=188,slow=74						
H10S1	**ASCENSION HYDR**	**48.31**	**16**	T	T	20 27 21.1	
	baz=188						
PB11	**IPOC Station P**	**48.33**	**301**	*e*P	**P**	**19 34 32.7**	**+0.7**
	14nm,1.0s						
MNMC	**Minye Minye**	**48.85**	**302**	*e*P	**P**	**19 34 37.4**	**+1.4**
	14nm,1.1s						
LBTB	**Lobatse**	**49.02**	**73**	*e*P	**P**	**19 34 36.1**	**-1.1**
	14nm,1.0s						
H10N1	**ASCENSION HYDR**	**49.41**	**16**	T	T	20 28 44.4	
	baz=197,slow=74						
H10N3	**ASCENSION HYDR**	**49.41**	**16**	T	T	20 28 45.0	
	baz=197,SNR=63						
H10N2	**ASCENSION HYDR**	**49.43**	**16**	T	T	20 28 45.5	
	baz=197,slow=74						
LPAZ	**La Paz**	**50.64**	**305**	P	**P**	**19 34 51.1**	**+1.2**

```
      3.5nm,0.5s,baz=150,slow=5.2,SNR=12
LPAZ  La Paz          50.64 305 eP    P     19 34 51.2 +1.2
      6.0nm,1.1s
CASY  Casey           53.57 160 eP    P     19 35 11.5 +1.2
      9.8nm,1.4s
LSZ   Lusaka          58.41  69 eP    P     19 35 44.6 -1.0
      13nm,0.8s
TOA0  Torodi Ar. Sit  73.30  29 eP    P     19 37 20.7 -0.2
      5.6nm,0.8s
TORD  Torodi Ar. Bea  73.30  29  P    P     19 37 20.6 -0.2
      4.3nm,0.8s,baz=199,slow=6.2,SNR=16
TOA1  Torodi Ar. Sit  73.31  29 eP    P     19 37 20.6 -0.2
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*ROM **23** 19:30:13.6±0.2, 43°.53N±0°.01×13°.73E±0°.02, h9^{km}, ML3.0/49, Error ellipse: s-maj=1.8km s-min=0.5km az=51.0*

*ISCJB **23** 19:30:14.2±0.3, 43°.52N±0°.01×13°.71E±0°.02, h14^{km}±2^{km}, Error ellipse: s-maj=2.4km s-min=2.0km az=169.8*

*BEO **23** 19:30:14.4±0.8, 43°.60N×13°.68E, h5^{km}, ML3.1/6*

*LDG **23** 19:30:14.5±0.2, 43°.49N×13°.77E, h2^{km}, Ml3.0/9, Error ellipse: s-maj=5.6km s-min=3.2km az=11.0*

*PRU **23** 19:30:16.3±0.0, 43°.66N×13°.90E, h0^{km}*

ISC 23 19:30:14.4±0.8, **43°.52N**±0°.02×**13°.70E**±0°.02, **h12**^{km}±5^{km}, **n128,** σ**1^{s}.32**/159, **Central Italy**

```
Code  Station Name      Δ°  AZ°    Phase ID          Time     Res
                                Op    ISC       h  m  s     ISC
AOI   Ancona           0.08 294  P    Pg    19 30 16.0 -1.0
AOI                              S    Sg    19 30 18.1 -0.9
PCRO  Pietralacroce    0.15 306  P    Pg    19 30 17.6 -0.4
PCRO                             S    Sg    19 30 20.8 +0.3
PCRO                             AML  AML
      comp=E,22650µm,0.4s
PCRO                             AML  AML
      comp=N,14200µm,0.8s
PCRO                             AML  AML
      comp=E,22700µm,0.4s
PCRO                             AML  AML
      comp=N,14250µm,0.8s
PCRO                             AML  AML
      comp=N,14250µm,0.8s
PCRO                             AML  AML
      comp=E,22700µm,0.4s
PCRO                             AML  AML
      comp=N,14250µm,0.8s
PCRO                             AML  AML
      comp=E,22700µm,0.4s
CIMA  Civitanova Mar   0.21 186 iP    Pg    19 30 19.3 +0.3
CIMA                             S    Sg    19 30 24.5 +2.4
CIMA                             AML  AML
      comp=E,67050µm,0.2s
CIMA                             AML  AML
      comp=N,32350µm,0.5s
CIMA                             AML  AML
      comp=E,67050µm,0.2s
CIMA                             AML  AML
      comp=N,32300µm,0.5s
CIMA                             AML  AML
      comp=N,32300µm,0.5s
CIMA                             AML  AML
      comp=E,67050µm,0.2s
CIMA                             AML  AML
      comp=N,32300µm,0.5s
CIMA                             AML  AML
      comp=E,67050µm,0.2s
CADA  Capodarco di F   0.33 172  P    Pg    19 30 21.0  0.0
CADA                             S    Sb    19 30 27.6 +0.2
SENI  Senigallia       0.39 299  P    Pb    19 30 22.7 -0.5
SENI                             S    Sb    19 30 29.7 +0.6
SENI                             AML  AML
      comp=E,1466µm,1.0s
SENI                             AML  AML
      comp=N,1170µm,1.0s
SENI                             AML  AML
      comp=E,1464µm,1.0s
SENI                             AML  AML
      comp=N,1190µm,1.0s
CING  Cingoli          0.39 249  P    Pg    19 30 22.0 -0.3
CING                             S    Sg    19 30 28.7 +1.2
CING                             AML  AML
      comp=E,1815µm,0.4s
CING                             AML  AML
      comp=N,1145µm,0.6s
CING                             AML  AML
      comp=E,1815µm,0.4s
CING                             AML  AML
      comp=N,1145µm,0.6s
CING                             AML  AML
      comp=E,1815µm,0.4s
CING                             AML  AML
      comp=N,1145µm,0.6s
CING                             AML  AML
      comp=E,1815µm,0.4s
CING                             AML  AML
      comp=N,1145µm,0.6s
MNTP  Montappone       0.42 204  P    Pg    19 30 22.7 +0.1
EL6   Elcito           0.47 247  P    Pg    19 30 23.5 -0.3
EL6                              S    Sb    19 30 31.8  0.0
EL6                              AML  AML
      comp=E,2495µm,0.4s
EL6                              AML  AML
      comp=N,2195µm,0.4s
EL6                              AML  AML
      comp=E,2490µm,0.4s
EL6                              AML  AML
      comp=N,2195µm,0.4s
EL6                              AML  AML
      comp=E,2490µm,0.4s
EL6                              AML  AML
      comp=N,2195µm,0.4s
EL6                              AML  AML
      comp=E,2490µm,0.4s
EL6                              AML  AML
      comp=N,2195µm,0.4s
ARVD  Arcevia          0.55 268  P    Pg    19 30 24.6 -0.6
ARVD                             S    Sb    19 30 34.0 +0.1
ARVD                             AML  AML
      comp=E,422µm,0.6s
ARVD                             AML  AML
      comp=N,448µm,0.5s
ARVD                             AML  AML
      comp=E,422µm,0.6s
ARVD                             AML  AML
      comp=N,448µm,0.5s
ARVD                             AML  AML
      comp=E,422µm,0.6s
ARVD                             AML  AML
      comp=N,448µm,0.5s
ARVD                             AML  AML
      comp=N,448µm,0.5s
ARVD                             AML  AML
      comp=E,422µm,0.6s
ARVD                             AML  AML
      comp=N,448µm,0.5s
ARVD                             AML  AML
      comp=E,422µm,0.6s
CSP1  Cessapalombo     0.56 220 eP    Pg    19 30 24.9 -0.5
CSP1                             AML  AML
      comp=E,1675µm,0.7s
CSP1                             AML  AML
      comp=N,2535µm,0.8s
CSP1                             AML  AML
      comp=E,1675µm,0.7s
CSP1                             AML  AML
      comp=N,2545µm,0.8s
SNTG  Esanatoglia      0.61 245 eP    Pg    19 30 25.8 -0.6
SNTG                             S    Sb    19 30 36.0 +0.3
SNTG                             AML  AML
      comp=E,601µm,0.3s
SNTG                             AML  AML
      comp=N,1157µm,1.2s
SNTG                             AML  AML
      comp=E,602µm,0.3s
SNTG                             AML  AML
      comp=N,1157µm,1.2s
SNTG                             AML  AML
      comp=N,1157µm,1.2s
SNTG                             AML  AML
      comp=E,602µm,0.3s
SNTG                             AML  AML
      comp=N,1157µm,1.2s
SNTG                             AML  AML
      comp=E,602µm,0.3s
FDMO  Fiordimonte      0.66 223 eP    Pg    19 30 26.4 -0.7
FDMO                             AML  AML
      comp=E,2250µm,0.2s
FDMO                             AML  AML
      comp=N,1965µm,0.2s
FDMO                             AML  AML
      comp=E,2250µm,0.2s
FDMO                             AML  AML
      comp=N,1965µm,0.2s
FDMO                             AML  AML
      comp=E,2250µm,0.2s
FDMO                             AML  AML
      comp=N,1965µm,0.2s
FDMO                             AML  AML
      comp=N,1965µm,0.2s
FDMO                             AML  AML
      comp=E,2250µm,0.2s
FDMO                             AML  AML
      comp=N,1965µm,0.2s
FDMO                             AML  AML
      comp=E,2250µm,0.2s
FSSB  Fossombrone      0.69 285  P    Pg    19 30 27.5 -0.4
FSSB                             AML  AML
      comp=E,1170µm,0.3s
FSSB                             AML  AML
      comp=N,1350µm,0.3s
FSSB                             AML  AML
      comp=E,1170µm,0.3s
FSSB                             AML  AML
      comp=N,1355µm,0.3s
FSSB                             AML  AML
      comp=E,1170µm,0.3s
FSSB                             AML  AML
      comp=N,1355µm,0.3s
FSSB                             AML  AML
      comp=N,1355µm,0.3s
FSSB                             AML  AML
      comp=E,1170µm,0.3s
FSSB                             AML  AML
      comp=N,1355µm,0.3s
FSSB                             AML  AML
      comp=E,1170µm,0.3s
MPAG  Monte Paganucc   0.69 280  P    Pg    19 30 27.0 -0.8
MPAG                             AML  AML
      comp=E,526µm,0.9s
MPAG                             AML  AML
      comp=N,718µm,0.2s
MPAG                             AML  AML
      comp=E,526µm,0.9s
MPAG                             AML  AML
      comp=N,718µm,0.2s
MPAG                             AML  AML
      comp=E,525µm,0.9s
MPAG                             AML  AML
      comp=N,718µm,0.2s
MPAG                             AML  AML
      comp=E,525µm,0.9s
MPAG                             AML  AML
      comp=N,718µm,0.2s
MPAG                             AML  AML
      comp=E,525µm,0.9s
MPAG                             AML  AML
      comp=N,718µm,0.2s
FOSV  Fossato di Vic   0.72 252  P    Pg    19 30 27.6 -0.8
FOSV                             S    Sb    19 30 39.3 +0.6
FOSV                             AML  AML
      comp=E,720µm,0.4s
FOSV                             AML  AML
      comp=N,836µm,0.7s
FOSV                             AML  AML
      comp=E,720µm,0.4s
FOSV                             AML  AML
      comp=N,836µm,0.7s
FOSV                             AML  AML
      comp=E,720µm,0.4s
FOSV                             AML  AML
      comp=N,836µm,0.7s
FOSV                             AML  AML
      comp=N,836µm,0.7s
FOSV                             AML  AML
      comp=E,720µm,0.4s
FOSV                             AML  AML
      comp=N,836µm,0.7s
FOSV                             AML  AML
      comp=E,720µm,0.4s
TRTR  Tortoreto Alta   0.73 168  P    Pg    19 30 28.9 +0.4
TRTR                             AML  AML
      comp=E,3295µm,0.4s
TRTR                             AML  AML
      comp=N,3945µm,0.6s
TRTR                             AML  AML
      comp=E,3295µm,0.4s
TRTR                             AML  AML
      comp=N,3945µm,0.6s
TRTR                             AML  AML
      comp=E,3295µm,0.4s
TRTR                             AML  AML
      comp=N,3945µm,0.6s
TRTR                             AML  AML
      comp=E,3295µm,0.4s
TRTR                             AML  AML
      comp=N,3945µm,0.6s
PESA  Pesaro           0.75 304  P    Pg    19 30 29.0  0.0
CESI  CESI - Serrava   0.78 229 eP    Pg    19 30 28.6 -0.8
CESI                             AML  AML
      comp=E,358µm,0.3s
CESI                             AML  AML
      comp=N,1105µm,0.3s
CESI                             AML  AML
      comp=N,1105µm,0.3s
CESI                             AML  AML
      comp=E,358µm,0.3s
CESI                             AML  AML
      comp=N,1105µm,0.3s
CESI                             AML  AML
      comp=E,358µm,0.3s
NRCA  Norcia           0.81 212 eP    Pg    19 30 29.0 -1.0
NRCA                             AML  AML
      comp=E,3085µm,0.9s
NRCA                             AML  AML
      comp=N,1970µm,0.6s
NRCA                             AML  AML
      comp=N,1970µm,0.6s
NRCA                             AML  AML
      comp=E,3085µm,0.9s
NRCA                             AML  AML
      comp=N,1970µm,0.6s
NRCA                             AML  AML
      comp=E,3085µm,0.9s
NARO  Abbazia di Nar   0.82 277  P    Pg    19 30 29.8 -0.4
NARO                             AML  AML
      comp=E,336µm,0.9s
NARO                             AML  AML
      comp=N,296µm,0.9s
NARO                             AML  AML
      comp=E,336µm,0.9s
NARO                             AML  AML
      comp=N,296µm,0.9s
NARO                             AML  AML
      comp=E,336µm,0.9s
NARO                             AML  AML
      comp=N,296µm,0.9s
NARO                             AML  AML
      comp=E,336µm,0.9s
NARO                             AML  AML
      comp=N,296µm,0.9s
ATFO  Monte Foce - G   0.84 260  P    Pg    19 30 29.8 -0.8
ATFO                             AML  AML
      comp=E,605µm,0.7s
ATFO                             AML  AML
      comp=N,1028µm,0.7s
ATFO                             AML  AML
      comp=E,606µm,0.7s
ATFO                             AML  AML
      comp=N,1028µm,0.7s
ATFO                             AML  AML
      comp=N,1028µm,0.7s
ATFO                             AML  AML
      comp=E,606µm,0.7s
ATFO                             AML  AML
      comp=N,1028µm,0.7s
ATFO                             AML  AML
      comp=E,606µm,0.7s
ATCC  AVT- Casa Cast   0.84 247  P    Pg    19 30 29.9 -0.8
ATCC                             AML  AML
      comp=E,1280µm,0.6s
ATCC                             AML  AML
      comp=N,1415µm,0.4s
ATCC                             AML  AML
      comp=E,1280µm,0.6s
ATCC                             AML  AML
      comp=N,1410µm,0.4s
ATCC                             AML  AML
      comp=E,1280µm,0.6s
ATCC                             AML  AML
      comp=N,1410µm,0.4s
ATCC                             AML  AML
      comp=E,1280µm,0.6s
ATCC                             AML  AML
      comp=N,1410µm,0.4s
PIEI  Pieia            0.85 272  P    Pg    19 30 29.7 -1.1
PIEI                             AML  AML
      comp=E,442µm,1.0s
PIEI                             AML  AML
      comp=N,448µm,0.3s
PIEI                             AML  AML
      comp=E,442µm,1.0s
PIEI                             AML  AML
      comp=N,448µm,0.3s
PIEI                             AML  AML
      comp=E,442µm,1.0s
PIEI                             AML  AML
      comp=N,448µm,0.3s
PIEI                             AML  AML
      comp=E,442µm,1.0s
PIEI                             AML  AML
      comp=N,448µm,0.3s
PIEI                             AML  AML
      comp=E,442µm,1.0s
PIEI                             AML  AML
      comp=N,448µm,0.3s
PE3   Peglio           0.89 282  AML  AML
      comp=E,1595µm,0.4s
PE3                              AML  AML
      comp=E,1595µm,0.4s
PE3                              AML  AML
      comp=N,1705µm,0.3s
PE3                              AML  AML
      comp=E,1595µm,0.4s
PE3                              AML  AML
      comp=N,1700µm,0.3s
PE3                              AML  AML
      comp=N,1700µm,0.3s
PE3                              AML  AML
      comp=E,1595µm,0.4s
PE3                              AML  AML
      comp=N,1700µm,0.3s
ASSB  Assisi San Ben   0.90 238  P    Pg    19 30 30.7 -1.1
ASSB                             AML  AML
      comp=E,1505µm,0.4s
ASSB                             AML  AML
      comp=N,1360µm,0.3s
ASSB                             AML  AML
      comp=E,1505µm,0.4s
ASSB                             AML  AML
      comp=N,1360µm,0.3s
ASSB                             AML  AML
      comp=E,1505µm,0.4s
ASSB                             AML  AML
      comp=N,1360µm,0.3s
ASSB                             AML  AML
      comp=E,1505µm,0.4s
ASSB                             AML  AML
      comp=N,1360µm,0.3s
TERO  Teramo           0.90 185  P    Pg    19 30 30.4 -1.4
TERO                             AML  AML
      comp=E,602µm,0.5s
TERO                             AML  AML
      comp=N,476µm,0.4s
TERO                             AML  AML
      comp=E,602µm,0.5s
TERO                             AML  AML
      comp=N,476µm,0.4s
TERO                             AML  AML
      comp=E,602µm,0.5s
TERO                             AML  AML
      comp=N,476µm,0.4s
TERO                             AML  AML
      comp=E,602µm,0.5s
TERO                             AML  AML
      comp=N,476µm,0.4s
SMA1  SAN MARTINO      0.93 197  P    Pg    19 30 30.9 -1.4
SMA1                             AML  AML
      comp=E,1730µm,0.8s
SMA1                             AML  AML
      comp=N,2830µm,0.5s
SMA1                             AML  AML
      comp=E,1730µm,0.8s
SMA1                             AML  AML
      comp=N,2830µm,0.5s
SMA1                             AML  AML
      comp=E,1730µm,0.8s
SMA1                             AML  AML
      comp=N,2830µm,0.5s
ATPI  Pietralunga -    0.95 266  P    Pg    19 30 31.9 -0.7
ATPI                             AML  AML
      comp=E,478µm,0.4s
ATPI                             AML  AML
      comp=N,630µm,0.4s
ATPI                             AML  AML
      comp=E,478µm,0.4s
ATPI                             AML  AML
      comp=N,630µm,0.4s
ATPI                             AML  AML
      comp=N,630µm,0.4s
ATPI                             AML  AML
      comp=E,478µm,0.4s
ATPI                             AML  AML
      comp=N,630µm,0.4s
ATPI                             AML  AML
      comp=E,478µm,0.4s
ATVO  AVT- Monte Val   0.95 262  P    Pg    19 30 31.9 -0.8
ATVO                             AML  AML
      comp=E,456µm,0.5s
ATVO                             AML  AML
      comp=N,524µm,0.9s
ATVO                             AML  AML
      comp=E,456µm,0.5s
ATVO                             AML  AML
      comp=N,524µm,0.9s
ATVO                             AML  AML
      comp=N,524µm,0.9s
ATVO                             AML  AML
      comp=E,456µm,0.5s
ATVO                             AML  AML
      comp=N,524µm,0.9s
ATVO                             AML  AML
      comp=E,456µm,0.5s
LNSS  Leonessa         1.03 208  P    Pg    19 30 32.9 -1.4
LNSS                             AML  AML
      comp=E,1885µm,0.4s
LNSS                             AML  AML
      comp=N,2105µm,0.4s
LNSS                             AML  AML
      comp=N,2105µm,0.4s
LNSS                             AML  AML
      comp=E,1885µm,0.4s
LNSS                             AML  AML
      comp=N,2105µm,0.4s
LNSS                             AML  AML
      comp=E,1885µm,0.4s
CPGN  Carpegna, Ital   1.04 286  P    Pb    19 30 34.6 +0.2
CPGN                             AML  AML
      comp=E,538µm,0.4s
CPGN                             AML  AML
      comp=N,492µm,0.5s
CPGN                             AML  AML
      comp=E,528µm,1.4s
CPGN                             AML  AML
      comp=N,488µm,0.5s
PARC  Parchiule        1.07 277  P    Pg    19 30 34.5 -0.5
PARC                             AML  AML
      comp=E,306µm,0.6s
PARC                             AML  AML
      comp=N,409µm,0.9s
PARC                             AML  AML
      comp=E,306µm,0.6s
PARC                             AML  AML
      comp=N,409µm,0.9s
PARC                             AML  AML
      comp=E,306µm,0.6s
PARC                             AML  AML
      comp=N,409µm,0.9s
DUGI  Dugi Otok        1.09  64 iPg   Pg    19 30 35.0 -0.4
DUGI                             Sg   Sb    19 30 50.1 +0.7
MOMA  Monte Martano    1.09 230  P    Pg    19 30 34.0 -1.4
MOMA                             AML  AML
      comp=E,729µm,0.3s
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MOMA				AML	AML		
	comp=N,974µm,0.4s						
MOMA				AML	AML		
	comp=E,730µm,0.3s						
MOMA				AML	AML		
	comp=N,974µm,0.4s						
MOMA				AML	AML		
	comp=N,974µm,0.4s						
MOMA				AML	AML		
	comp=E,730µm,0.3s						
MOMA				AML	AML		
	comp=N,974µm,0.4s						
MOMA				AML	AML		
	comp=E,730µm,0.3s						
VCEL	**Villa Celiera**	**1.13**	**175**	P	**Pg**	**19 30 35.6**	**-0.5**
VCEL				AML	AML		
	comp=E,1043µm,1.0s						
VCEL				AML	AML		
	comp=N,983µm,0.4s						
VCEL				AML	AML		
	comp=E,1038µm,1.0s						
VCEL				AML	AML		
	comp=N,982µm,0.4s						
VCEL				AML	AML		
	comp=E,1038µm,1.0s						
VCEL				AML	AML		
	comp=N,982µm,0.4s						
VCEL				AML	AML		
	comp=E,1038µm,1.0s						
VCEL				AML	AML		
	comp=N,982µm,0.4s						
ARRO	**Arrone**	**1.16**	**216**	P	**Pg**	**19 30 36.0**	**-0.7**
ARRO				AML	AML		
	comp=E,464µm,1.1s						
ARRO				AML	AML		
	comp=N,492µm,0.3s						
ARRO				AML	AML		
	comp=E,464µm,1.1s						
ARRO				AML	AML		
	comp=N,492µm,0.3s						
ARRO				AML	AML		
	comp=N,492µm,0.3s						
ARRO				AML	AML		
	comp=E,464µm,1.1s						
ARRO				AML	AML		
	comp=N,492µm,0.3s						
ARRO				AML	AML		
	comp=E,464µm,1.1s						
AQU	**L'Aquila**	**1.18**	**191**	*e*Pn	**Pg**	**19 30 35.2**	**-2.0**
T0104	**Madonna delle**	**1.19**	**193**	P	**Pg**	**19 30 35.3**	**-1.9**
T0104				AML	AML		
	comp=E,1885µm,0.5s						
T0104				AML	AML		
	comp=N,1684µm,1.4s						
T0104				AML	AML		
	comp=E,1935µm,0.6s						
T0104				AML	AML		
	comp=N,1610µm,1.4s						
T0104				AML	AML		
	comp=E,1935µm,0.6s						
T0104				AML	AML		
	comp=N,1610µm,1.4s						
T0104				AML	AML		
	comp=E,1935µm,0.6s						
T0104				AML	AML		
	comp=N,1610µm,1.4s						
T0104				AML	AML		
	comp=E,1935µm,0.6s						
T0104				AML	AML		
	comp=N,1610µm,1.4s						
CESX	**Cesi**	**1.22**	**222**	P	**Pg**	**19 30 36.0**	**-1.9**
CESX				AML	AML		
	comp=E,862µm,1.6s						
CESX				AML	AML		
	comp=N,1086µm,0.4s						
CESX				AML	AML		
	comp=E,862µm,1.6s						
CESX				AML	AML		
	comp=N,1086µm,0.4s						
CESX				AML	AML		
	comp=E,862µm,1.6s						
CESX				AML	AML		
	comp=N,1086µm,0.4s						
CESX				AML	AML		
	comp=E,862µm,1.6s						
CESX				AML	AML		
	comp=N,1086µm,0.4s						
CAFI	**Castiglion Fio**	**1.28**	**262**	P	**Pg**	**19 30 39.0**	**+0.1**
CAFI				AML	AML		
	comp=E,316µm,0.5s						
CAFI				AML	AML		
	comp=N,226µm,0.7s						
CAFI				AML	AML		
	comp=E,316µm,0.5s						
CAFI				AML	AML		
	comp=N,226µm,0.7s						
CAFI				AML	AML		
	comp=E,316µm,0.5s						
CAFI				AML	AML		
	comp=N,226µm,0.7s						
CAFI				AML	AML		
	comp=E,316µm,0.5s						
CAFI				AML	AML		
	comp=N,226µm,0.7s						
MGAB	**Montegabbione**	**1.31**	**243**	P	**Pn**	**19 30 39.1**	**+0.5**
MGAB				AML	AML		
	comp=E,662µm,0.9s						
MGAB				AML	AML		
	comp=N,564µm,0.4s						
MGAB				AML	AML		
	comp=E,734µm,0.9s						
MGAB				AML	AML		
	comp=N,556µm,0.6s						
MGAB				AML	AML		
	comp=N,556µm,0.6s						
MGAB				AML	AML		
	comp=E,734µm,0.9s						
MGAB				AML	AML		
	comp=N,564µm,0.4s						
MGAB				AML	AML		
	comp=E,662µm,0.9s						
MGAB				AML	AML		
	comp=N,556µm,0.6s						
MGAB				AML	AML		
	comp=E,734µm,0.9s						
MGAB				AML	AML		
	comp=N,564µm,0.4s						
MGAB				AML	AML		
	comp=E,662µm,0.9s						
FIAM	**Fiamignano**	**1.32**	**199**	P	**Pn**	**19 30 37.6**	**-1.2**
FIAM				AML	AML		
	comp=E,1064µm,0.5s						
FIAM				AML	AML		
	comp=N,690µm,1.0s						
FIAM				AML	AML		
	comp=N,690µm,1.0s						
FIAM				AML	AML		
	comp=E,1064µm,0.5s						
FIAM				AML	AML		
	comp=N,690µm,1.0s						
FIAM				AML	AML		
	comp=E,1064µm,0.5s						
NVLJ	**Novalja**	**1.34**	**39**	*e*Pn	**Pn**	**19 30 38.7**	**-0.3**
NVLJ				Sn	**Sb**	**19 30 56.6**	**0.0**
CAFR	**Castel Frentan**	**1.38**	**160**	P	**Pn**	**19 30 40.1**	**+0.7**
CAFR				AML	AML		
	comp=E,1295µm,0.4s						
CAFR				AML	AML		
	comp=N,1172µm,0.4s						
CAFR				AML	AML		
	comp=N,1172µm,0.4s						
CAFR				AML	AML		
	comp=E,1295µm,0.4s						
CAFR				AML	AML		
	comp=N,1172µm,0.4s						
CAFR				AML	AML		
	comp=E,1295µm,0.4s						
SFI	**Santa Sofia**	**1.40**	**287**	P	**Pn**	**19 30 40.3**	**+0.5**
SFI				AML	AML		
	comp=E,122µm,0.6s						
SFI				AML	AML		
	comp=N,122µm,0.4s						
SFI				AML	AML		
	comp=E,122µm,0.6s						
SFI				AML	AML		
	comp=N,122µm,0.4s						
SFI				AML	AML		
	comp=E,122µm,0.6s						
SFI				AML	AML		
	comp=N,122µm,0.4s						
ZIRJ	**Zirje**	**1.42**	**84**	*e*Pn	**Pn**	**19 30 39.7**	**-0.3**
ZIRJ				Sn	**Sg**	**19 31 00.3**	**+0.2**
MORI	**Morici**	**1.50**	**76**	*e*Pn	**Pn**	**19 30 41.0**	**0.0**
MORI				Sn	**Sb**	**19 31 01.5**	**+0.4**
PTQR	**Pietraquaria**	**1.51**	**188**	P	**Pn**	**19 30 42.4**	**+1.1**
PTQR				AML	AML		
	comp=E,162µm,1.3s						
PTQR				AML	AML		
	comp=N,163µm,0.9s						
PTQR				AML	AML		
	comp=E,162µm,1.3s						
PTQR				AML	AML		
	comp=N,163µm,0.9s						
PTQR				AML	AML		
	comp=E,162µm,1.3s						
PTQR				AML	AML		
	comp=N,163µm,0.9s						
INTR	**Introdacqua**	**1.51**	**174**	P	**Pn**	**19 30 41.5**	**+0.1**
INTR				AML	AML		
	comp=E,582µm,0.7s						
INTR				AML	AML		
	comp=N,914µm,0.8s						
INTR				AML	AML		
	comp=E,582µm,0.7s						
INTR				AML	AML		
	comp=N,914µm,0.8s						
INTR				AML	AML		
	comp=E,582µm,0.7s						
INTR				AML	AML		
	comp=N,914µm,0.8s						
VVLD	**Villa Vallelon**	**1.65**	**182**	P	**Pn**	**19 30 44.3**	**+1.0**
VVLD				AML	AML		
	comp=E,206µm,0.5s						
VVLD				AML	AML		
	comp=N,256µm,0.5s						
VVLD				AML	AML		
	comp=N,256µm,0.5s						
VVLD				AML	AML		
	comp=E,206µm,0.5s						
VVLD				AML	AML		
	comp=N,256µm,0.5s						
VVLD				AML	AML		
	comp=E,206µm,0.5s						
CERT	**Cerreto**	**1.66**	**199**	AML	AML		
	comp=N,276µm,0.5s						
CERT				AML	AML		
	comp=E,344µm,0.4s						
CERT				AML	AML		
	comp=N,276µm,0.5s						
CERT				AML	AML		
	comp=E,344µm,0.4s						
CERT				AML	AML		
	comp=N,276µm,0.5s						
CERT				AML	AML		
	comp=E,344µm,0.4s						
UDBI	**Udbina**	**1.80**	**55**	*e*Pn	**Pn**	**19 30 46.3**	**+1.0**
UDBI				Sn	**Sb**	**19 31 09.9**	**+0.1**
POFI	**Posta Fibreno**	**1.80**	**180**	AML	AML		
	comp=N,180µm,0.6s						
POFI				AML	AML		
	comp=E,152µm,0.5s						
POFI				AML	AML		
	comp=N,180µm,0.6s						
POFI				AML	AML		
	comp=E,152µm,0.5s						
POFI				AML	AML		
	comp=E,152µm,0.5s						
POFI				AML	AML		
	comp=N,180µm,0.6s						
RIY	**Rijeka**	**1.89**	**17**	*e*Pg	**Pn**	**19 30 46.7**	**+0.2**
RIY				*e*Sg	**Sb**	**19 31 12.1**	**-0.3**
RIY	**Rijeka**	**1.89**	**17**	ePn		19 30 46.7	
RIY				Sn	**Sb**	**19 31 11.8**	**-0.6**
RIY	**Rijeka**	**1.89**	**17**	*e*Pn	**Pn**	**19 30 46.8**	**+0.2**
TOLF	**Tolfa**	**1.92**	**221**	AML	AML		
	comp=E,91µm,0.5s						
TOLF				AML	AML		
	comp=E,91µm,0.5s						
TOLF				AML	AML		
	comp=N,88µm,0.8s						
TOLF				AML	AML		
	comp=E,91µm,0.5s						
TOLF				AML	AML		
	comp=N,88µm,0.8s						
TOLF				AML	AML		
	comp=N,88µm,0.8s						
HVAR	**Hvar**	**2.03**	**99**	*i* Pn	**Pn**	**19 30 47.9**	**-0.6**
TRI	**Trieste**	**2.19**	**1**	AML	AML		
	comp=E,94µm,0.9s						
TRI				AML	AML		
	comp=E,94µm,0.9s						
TRI				AML	AML		
	comp=N,80µm,0.9s						
TRI				AML	AML		
	comp=N,80µm,0.9s						
TRI				AML	AML		
	comp=E,94µm,0.9s						
TRI				AML	AML		
	comp=N,80µm,0.9s						
CEY	**Cerknica**	**2.28**	**13**	*e*Pn	**Pn**	**19 30 51.3**	**-0.6**
MAKA	**Makarska**	**2.43**	**94**	*e*Pn	**Pn**	**19 30 53.8**	**-0.1**
MSAG	**Monte S. Angel**	**2.43**	**137**	AML	AML		
	comp=N,419µm,0.3s						
MSAG				AML	AML		
	comp=E,214µm,1.0s						
MSAG				AML	AML		
	comp=N,419µm,0.3s						
MSAG				AML	AML		
	comp=E,214µm,1.0s						
MSAG				AML	AML		
	comp=N,419µm,0.3s						
MSAG				AML	AML		
	comp=E,214µm,1.0s						
OZLJ	**Ozalj**	**2.45**	**30**	*e*Pn	**Pn**	**19 30 55.0**	**+0.8**
LJU	**Ljubljana**	**2.59**	**13**	*e*Pn	**Pn**	**19 30 57.0**	**+0.8**
LJU	**Ljubljana**	**2.59**	**13**	*e*Pn	**Pn**	**19 30 57.0**	**+0.8**
LJU	**Ljubljana**	**2.59**	**13**	AML	AML		
	comp=E,198µm,0.8s						
LJU				AML	AML		
	comp=N,244µm,0.6s						
LJU				AML	AML		
	comp=N,244µm,0.6s						
LJU				AML	AML		
	comp=E,198µm,0.8s						
LJU				AML	AML		
	comp=N,244µm,0.6s						
LJU				AML	AML		
	comp=E,198µm,0.8s						
CRES	**Cresnjev**	**2.63**	**28**	*e*Pn	**Pb**	**19 30 59.6**	**-1.8**
BLY	**Banja Luka**	**2.79**	**63**	*e*Pn	**Pg**	**19 31 07.0**	**-0.9**
STON	**Ston**	**3.00**	**101**	*e*Pn	**Pn**	**19 31 02.2**	**+0.5**
STON				*e*Sn	**Sn**	**19 31 40.2**	**+2.7**
STON	**Ston**	**3.00**	**101**	*e*Pn	**Pn**	**19 31 01.2**	**-0.4**
STON	**Ston**	**3.00**	**101**	*e*Pn	**Pn**	**19 31 01.0**	**-0.7**
ACOM	**Acomizza, Ital**	**3.03**	**358**	AML	AML		
	comp=E,130µm,1.3s						
ACOM				AML	AML		
	comp=N,120µm,0.7s						
ACOM				AML	AML		
	comp=E,130µm,1.3s						
ACOM				AML	AML		
	comp=N,120µm,0.7s						
ACOM				AML	AML		
	comp=E,130µm,1.3s						
ACOM				AML	AML		
	comp=N,120µm,0.7s						
OBKA	**Obir**	**3.05**	**11**	*e*Pn	**Pn**	**19 31 03.6**	**+1.0**
	comp=N,1.9nm,0.2s						
OBKA				*e*Sn	**Sg**	**19 31 52.8**	**+0.4**
	comp=N,44nm,0.6s						
MYKA	**Terra Mystica**	**3.11**	**359**	*e*Pn	**Pn**	**19 31 04.3**	**+0.9**
	comp=N,1.7nm,0.3s						
MYKA				*e*Sn	**Sn**	**19 31 42.8**	**+2.3**
	comp=N,5.6nm,0.3s						
MYKA				Sg	**Sg**	**19 31 58.9**	**+4.6**
	comp=N,9.4nm,0.4s						
MAGA	**Magasa**	**3.15**	**317**	AML	AML		
	comp=E,260µm,0.6s						
MAGA				AML	AML		
	comp=N,162µm,0.4s						
MAGA				AML	AML		
	comp=E,260µm,0.6s						
MAGA				AML	AML		
	comp=N,162µm,0.4s						
MAGA				AML	AML		
	comp=E,260µm,0.6s						
MAGA				AML	AML		
	comp=N,162µm,0.4s						
SOKA	**Soboth**	**3.30**	**16**	*e*Sn	**Sg**	**19 31 59.5**	**-0.8**
	comp=N,5.8nm,0.4s						
ABTA	**Abfaltersbach**	**3.34**	**346**	*e*Pn	**Pn**	**19 31 07.3**	**+0.8**
	comp=N,2.2nm,0.3s						
ABTA				*e*Sn	**Sn**	**19 31 46.0**	**-0.1**
	comp=N,8.6nm,0.4s						
DBRK	**Dubrovnik**	**3.37**	**103**	*e*Pn	**Pn**	**19 31 06.9**	**+0.2**
KOSI	**Kohlern**	**3.37**	**332**	AML	AML		
	comp=N,72µm,1.0s						
KOSI				AML	AML		
	comp=E,93µm,0.9s						
KOSI				AML	AML		
	comp=N,72µm,1.0s						
KOSI				AML	AML		
	comp=E,93µm,0.9s						
KOSI				AML	AML		
	comp=E,93µm,0.9s						
KOSI				AML	AML		
	comp=N,72µm,1.0s						
MABI	**Malga Bissina**	**3.40**	**319**	AML	AML		
	comp=E,19µm,0.8s						
MABI				AML	AML		
	comp=N,31µm,0.4s						
MABI				AML	AML		
	comp=N,31µm,0.4s						
MABI				AML	AML		
	comp=E,19µm,0.8s						
MABI				AML	AML		
	comp=N,31µm,0.4s						
MABI				AML	AML		
	comp=E,19µm,0.8s						
TREB	**Trebinje**	**3.50**	**102**	*e*Pn	**Pn**	**19 31 08.9**	**+0.3**
TREB				*e*Sn	**Sn**	**19 31 51.5**	**+1.6**
TREB	**Trebinje**	**3.50**	**102**	*e*Pn	**Pn**	**19 31 08.4**	**-0.2**
KBA	**Koelnbreinsper**	**3.57**	**356**	*e*Pn	**Pn**	**19 31 10.6**	**+0.9**
	comp=E,0.8nm,0.2s						
KBA				*e*Sn	**Sn**	**19 31 52.9**	**+1.0**
	comp=E,5.5nm,0.3s						
BRY	**Bratogost**	**3.59**	**98**	*e*Pn	**Pn**	**19 31 10.6**	**+0.6**
MDI	**Monti di Nese**	**3.63**	**310**	AML	AML		
	comp=N,24µm,0.6s						
MDI				AML	AML		
	comp=E,25µm,1.3s						
MDI				AML	AML		
	comp=N,24µm,0.6s						
MDI				AML	AML		
	comp=N,24µm,0.6s						
MDI				AML	AML		
	comp=E,25µm,1.3s						
MDI				AML	AML		
	comp=E,25µm,1.3s						
HCY	**Herceg Novi**	**3.68**	**105**	*e*Pn	**Pn**	**19 31 10.4**	**-0.7**
UPM	**Unac-Piva**	**3.81**	**93**	*e*Pn	**Pn**	**19 31 15.1**	**+2.1**
HAPS	**Han Pijesak,BI**	**3.84**	**80**	*e*Pn	**Pn**	**19 31 13.5**	**+0.1**
ARSA	**Arzberg**	**3.95**	**18**	*e*Pn	**Pn**	**19 31 16.0**	**+1.2**
	comp=E,0.9nm,0.3s						
ARSA				Sn	**Sn**	**19 32 00.7**	**-0.3**
	comp=E,2.1nm,0.5s						
WTTA	**Wattenberg**	**4.02**	**340**	*e*Pn	**Pn**	**19 31 17.8**	**+1.9**
	comp=E,1.4nm,0.2s						
WTTA				Sn	**Sn**	**19 32 04.6**	**+1.6**
	comp=E,9.4nm,0.4s						
FETA	**Feichten**	**4.08**	**330**	*e*Pn	**Pn**	**19 31 18.6**	**+1.8**
	comp=E,1.1nm,0.3s						
FETA				Sn	**Sn**	**19 32 04.9**	**+0.4**
	comp=E,2.3nm,0.4s						
SQTA	**Sankt Quirin**	**4.10**	**335**	*e*Pn	**Pn**	**19 31 18.6**	**+1.7**
	comp=E,4.6nm,0.3s						
SQTA				*e*Sn	**Sn**	**19 32 05.6**	**+0.8**
	comp=E,8.5nm,0.4s						
WATA	**Walderalm**	**4.10**	**339**	*e*Pn	**Pn**	**19 31 18.5**	**+1.5**
	comp=E,4.2nm,0.3s						
RUDO	**Rudo**	**4.12**	**87**	*e*Pn	**Pn**	**19 31 18.0**	**+0.8**
BBLS	**Lazići**	**4.15**	**83**	*e*Pn	**Pn**	**19 31 19.1**	**+1.4**
BBLS				*e*Sn	**Sn**	**19 32 06.1**	**0.0**
BBLS	**Lazići**	**4.15**	**83**	*e*Pn	**Pn**	**19 31 17.8**	**+0.1**
PDG	**Podgorica**	**4.22**	**103**	*e*Pn	**Pn**	**19 31 19.0**	**+0.5**
MOTA	**Moosalm**	**4.24**	**335**	*e*Pn	**Pn**	**19 31 20.8**	**+1.8**
	comp=E,1.5nm,0.2s						
DRME	**Dracevica, Mon**	**4.25**	**106**	*e*Pn	**Pn**	**19 31 18.8**	**-0.1**
MOA	**Molln**	**4.35**	**5**	*e*Pn	**Pn**	**19 31 21.5**	**+1.2**
	comp=E,3.2nm,0.3s						
MOA				*e*Sn	**Sn**	**19 32 11.9**	**+0.9**
	comp=E,10nm,0.6s						
MORH	**Mrgy, Hungar**	**4.43**	**51**	*e*Pn	**Pb**	**19 31 31.6**	**-0.5**
RETA	**Reutte**	**4.47**	**334**	*e*Pn	**Pn**	**19 31 24.4**	**+2.3**
	comp=E,1.2nm,0.2s						
RETA				*e*Sn	**Sn**	**19 32 16.4**	**+2.3**
	comp=E,3.4nm,0.4s						
SBF	**Sospel**	**4.56**	**276**	*e*Pn	**Pn**	**19 31 24.7**	**+1.5**
SJES	**Sjenica**	**4.58**	**91**	*e*Pn	**Pn**	**19 31 24.9**	**+1.3**
DIVS	**Divibare**	**4.59**	**81**	*e*Pn	**Pn**	**19 31 23.5**	**-0.2**
DIVS				*e*Sn	**Sn**	**19 32 16.1**	**-0.9**
DAVA	**Damuels**	**4.63**	**326**	*e*Pn	**Pn**	**19 31 28.0**	**+3.7**
	comp=E,1.8nm,0.2s						
DAVA				*e*Sn	**Sn**	**19 32 19.4**	**+1.4**
	comp=E,6.3nm,0.3s						
CONA	**Conrad Observa**	**4.66**	**18**	*e*Pn	**Pn**	**19 31 25.6**	**+0.9**
	comp=E,1.3nm,0.3s						
CONA				*e*Sn	**Sn**	**19 32 20.0**	**+1.2**
	comp=E,2.3nm,0.4s						
FRGS	**Fruska Gora**	**4.68**	**67**	*e*Pn	Pn	19 31 19.1	-5.8
IVAS	**Ivanjica**	**4.69**	**87**	*e*Pn	**Pn**	**19 31 25.5**	**+0.5**
IVAS				*e*Sn	**Sn**	**19 32 19.8**	**+0.4**
FRF	**La Foret Royal**	**5.13**	**273**	*e*Pn	**Pn**	**19 31 32.7**	**+1.7**
MBDF	**Montbardon**	**5.13**	**286**	*e*Pn	**Pn**	**19 31 31.8**	**+0.6**
LMR	**La Mourre**	**5.24**	**270**	*e*Pn	**Pn**	**19 31 34.8**	**+2.3**
LPG	**La Plagne**	**5.35**	**294**	*e*Pn	**Pn**	**19 31 34.4**	**+0.1**
LPG				*e*Sn	**Sn**	**19 32 33.9**	**-2.0**
	comp=E,4.8nm,0.6s						
LPL	**La Plagne**	**5.37**	**294**	*e*Pn	**Pn**	**19 31 35.3**	**+0.8**
LPL				*e*Sn	**Sn**	**19 32 33.5**	**-2.8**
	comp=E,2.3nm,0.3s						
SELS	**Selova**	**5.42**	**91**	*e*Pn	**Pn**	**19 31 35.1**	**+0.1**
SELS				*e*Sn	**Sn**	**19 32 35.7**	**-1.6**
MODS	**Modra-Piesok**	**5.46**	**26**	*e*PN	**Pn**	**19 31 35.5**	**0.0**
KHC	**Kasperske Hory**	**5.62**	**359**	*e*PN	**Pn**	**19 31 37.6**	**-0.1**
KHC				*e*x	x	19 31 46.5	
KHC				*e*SN	**Sn**	**19 32 40.3**	**-1.8**
KHC				*e*x	x	19 33 25.0	
ORIF	**Oris-en-Rattie**	**5.79**	**287**	*e*Pn	**Pn**	**19 31 41.4**	**+1.2**
ORIF				*e*Sn	**Sn**	**19 32 44.4**	**-2.2**
	comp=E,3.0nm,0.5s						
VYHS	**Vyhne**	**6.13**	**34**	*e*PN	**Pn**	**19 31 48.0**	**+3.3**
HINF	**Hinteralfeld**	**6.44**	**314**	*e*Pn	**Pn**	**19 31 48.5**	**-0.5**
HINF				*e*Sn	**Sn**	**19 32 59.3**	**-3.2**
	comp=E,2.3nm,0.2s						
CDF	**Champ du Feu**	**6.63**	**320**	*e*Pn	**Pn**	**19 31 51.8**	**+0.1**
CDF				*e*Sn	**Sn**	**19 33 03.1**	**-4.1**
	comp=E,3.3nm,0.6s						
HAU	**Haudompre**	**6.82**	**314**	*e*Pn	**Pn**	**19 31 54.1**	**-0.2**
HAU				*e*Sn	**Sn**	**19 33 07.7**	**-4.2**
	comp=E,7.9nm,0.4s						
SMF	**Signal de Mont**	**7.65**	**298**	*e*Pn	**Pn**	**19 32 05.2**	**-0.4**
CLL	**Collm**	**7.81**	**357**	*e*Pn	**Pn**	**19 32 08.0**	**+0.3**
CLL				*e*Sg	**Sg**	**19 34 25.0**	**+0.2**
	comp=Z,4.0nm,1.0s						
MEZF	**Maizieres J’vi**	**7.81**	**313**	*e*Pn	**Pn**	**19 32 08.3**	**+0.5**
LOR	**Lormes**	**7.88**	**302**	*e*Pn	**Pn**	**19 32 08.5**	**-0.2**
	baz=124						
LOR				*e*Sn	**Sn**	**19 33 33.7**	**-4.0**
	comp=Z,4.0nm,0.5s						
AVF	**Avril sur Loir**	**8.01**	**298**	*e*Pn	**Pn**	**19 32 09.8**	**-0.7**
BGF	**Bois d'Agland**	**8.27**	**295**	*e*Pn	**Pn**	**19 32 14.0**	**0.0**

IDC ***23*** *19:35:18.6±0.5, 7°.84S×129°.53E, h0*^{km}*, mb4.3/15,*
mb1 4.4/17, mb1mx4.3/27, mbtmp4.4/17, ML3.5/2, MS3.8/12,
Ms1 3.8/12, ms1mx3.6/22, Error ellipse: s-maj=18.7km
s-min=12.5km az=67.0
ISCJB ***23*** *19:35:21.5±0.2, 7°.96S±0°.03×129°.61E±0°.03, h33*^{km}*,*
mb4.6/58, MS3.9/11, Error ellipse: s-maj=4.5km
s-min=3.8km az=27.5
NEIC ***23*** *19:35:22.2±2.5, 7°.90S×129°.57E, h26*^{km}*±4*^{km}*, mb4.7/53,*
Error ellipse: s-maj=9.5km s-min=8.8km az=73.0
DJA ***23*** *19:35:25.1±0.2, 8°S±2°×13°0E±°, h78*^{km}*±5*^{km}*, M4.7/24,*
mB5.2/9, mb4.7/24, MLv5.0/14, Mw(mB)4.5/9
ISC 23 19:35:23.6±0.3**, 7°.97S**±0°.04×**129°.54E**±0°.04**, h35**^{km}**, n129,**
σ**1^{s}.72**/127**, mb4.6**/58**, MS3.8**/11**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.74	91	ePg	Pn	19 35 53.6	+2.2
SAUI	Saumlaki	1.74	91	P	Pn	19 35 53.4	+2.0
SAUI				S	Sn	19 36 18.2	+5.7
BNDI	Bandanaira	3.44	6	P	Pn	19 36 16.0	+1.2
AAI	Ambon	4.46	342	P	Pn	19 36 30.4	+1.6
AAI				S	Sn	19 37 21.0	+1.5
MSAI	Masohi	4.63	352	P	Pn	19 36 48.7	+17
MTN	Manton Dam	5.09	162	ePn	Pn	19 36 37.2	-0.3
NLAI	Namlea	5.29	333	P	Pn	19 36 43.5	+3.3
SOEI	Soe	5.50	251	ePn	Pn	19 36 45.7	+2.3
SOEI	Soe	5.50	251	P	Pn	19 36 45.6	+2.3
FAKI	Fak Fak	5.70	28	ePn	Pn	19 36 45.7	-0.2
FAKI	Fak Fak	5.70	28	P	Pn	19 36 46.0	+0.2
BATI	Baumata	6.21	249	Pn	Pn	19 36 54.2	+1.3
	7.4nm,0.3s,baz=135,slow=3.2,SNR=9.7						
BATI				Sn	Sn	19 38 04.0	+1.2
	11nm,0.3s,baz=204,slow=20,SNR=2.4						
BATI	Baumata	6.21	249	ePn	Pn	19 36 54.2	+1.3
BATI				ePn	Pn	19 36 54.2	+1.3
BATI				eSn	Sn	19 38 04.0	+1.2
BATI				eSn	Sn	19 38 04.0	+1.2
BATI	Baumata	6.21	249	P	Pn	19 36 54.7	+1.7
SANI	Sanana	6.86	329	P	Pn	19 37 06.9	+5.1
SIJI	Sorong	7.26	14	Pn	Pn	19 37 08.6	+1.2
	5.6nm,0.3s,baz=185,slow=10,SNR=32						
SIJI				Sn	Sn	19 38 29.0	+0.4
	2.3nm,0.3s,baz=53,slow=20,SNR=4.7						
SIJI				LR	LR	19 40 38.0	
	comp=Z,2µm,19.8s,baz=237,slow=45						
LBMI	Labuha	7.56	344	P	Pn	19 37 16.7	+5.2
EDFI	Ende, Flores	7.81	264	P	Pn	19 37 19.3	+4.4
TNTI	Ternate	8.95	346	ePn	Pn	19 37 27.4	-3.1
TNTI	Ternate	8.95	346	P	Pn	19 37 34.4	+3.9
WSI	Waingapu	9.29	259	P	Pn	19 37 39.7	+4.5
BAKI	Biak	9.39	45	P	Pn	19 37 36.0	-0.5
BNSI	Bone	10.03	290	P	Pn	19 37 52.5	+7.2
KAPI	Kappang	10.16	286	Pn	Pn	19 37 49.7	+2.6
	baz=122,slow=11,SNR=2.2						
KAPI				LR	LR	19 42 09.6	
	comp=Z,498nm,19.8s,baz=297,slow=41						
KAPI	Kappang	10.16	286	ePn	Pn	19 37 50.2	+3.1
WBSI	Waikabubak, Su	10.17	260	P	Pn	19 37 49.6	+2.3
SPSI	Sidrap Palu	10.50	292	P	Pn	19 37 58.8	+7.0
PLAI	Plampang	11.67	265	P	Pn	19 38 10.9	+3.1
GENI	Genyem	11.85	64	P	Pn	19 38 09.9	-0.4
WRAB	Tennant Creek	12.78	159	ePn	Pn	19 38 18.1	-4.8
WRAB				e		19 40 33.0	
WRA	Warramunga Arr	12.78	159	Pn	Pn	19 38 18.4	-4.5
	9.8nm,0.3s,baz=330,slow=14,SNR=143						
WRA				Sn	Sn	19 40 27.9	-16
	1.7nm,0.3s,baz=335,slow=23,SNR=2.8						
WR1	Warramunga Arr	12.78	159	ePn	Pn	19 38 18.4	-4.5
WR1				e		19 40 27.9	
WB2	Warramunga Arr	12.78	159	ePn	Pn	19 38 18.2	-4.8
COEN	Coen	14.65	115	ePn	Pn	19 38 45.1	-3.3
COEN				eSn	Sn	19 41 15.7	-14
JAGI	Jajag, Banyuwa	15.24	267	ePn	Pn	19 38 55.8	-0.6
	74nm,1.5s						
AS31	Alice Springs	16.16	165	ePn	Pn	19 39 03.8	-4.4
	11nm,0.5s						
ASAR	Alice Springs	16.16	165	Pn	Pn	19 39 03.6	-4.6
	1.8nm,0.3s,baz=337,slow=11,SNR=63						
ASAR				Sn	Sn	19 41 50.6	-16
	1.0nm,0.3s,baz=322,slow=16,SNR=3.8						
ASAR				LR	LR	19 45 55.6	
	comp=Z,620nm,20.9s,baz=346,slow=39						
PSA00	Pilbara Seismi	16.44	214	ePn	Pn	19 39 09.8	-2.0
	29nm,0.8s						
PSA00				eSn	Sn	19 42 00.4	-13
PMG	Port Moresby	17.48	96	P	Pn	19 39 25.6	+0.8
	1.4nm,0.3s,baz=318,slow=14,SNR=4.0						
PMG	Port Moresby	17.48	96	eP	Pn	19 39 25.4	+0.6
	113nm,1.5s						
MANU	Manus Island	18.70	73	eP	Pn	19 39 40.4	+0.6
	33nm,1.0s						
UGM	Wanagama	18.84	269	eP	P	19 39 40.6	-0.1
	269nm,1.6s						
KKM	Kota Kinabalu	19.25	316	eP	Pn	19 39 46.3	-0.2
	35nm,1.2s						
SBUM	Sibu	20.14	300	eP	P	19 39 55.9	+0.9
	18nm,1.2s						
CTA	Charters Tower	20.18	128	P	P	19 39 57.1	+1.8
	24nm,0.9s,baz=303,slow=13,SNR=14						
CTAO	Charters Tower	20.18	128	eP	P	19 39 57.0	+1.7
	26nm,0.8s						
GIRL	Giralia	20.72	224	eP	P	19 40 02.6	+1.3
	155nm,1.3s						
KSM	Kuching	21.35	295	eP	P	19 40 08.5	+0.5
	18nm,0.8s						
CISI	Cisompet, Garu	21.53	270	eP	P	19 40 09.0	-1.0
	32nm,0.6s						
FORT	Forrest	22.74	183	eP	P	19 40 22.0	-0.8
	34nm,0.7s						
TGY	Tagaytay City	23.53	339	P	P	19 40 30.4	-0.5
	61nm,0.3s,baz=90,slow=13,SNR=2.0						
MORW	Morawa	24.54	209	eP	P	19 40 40.5	+0.3
	41nm,1.3s						
BBOO	Buckleboo	25.45	167	eP	P	19 40 48.5	+0.1
	17nm,0.8s						
STKA	Stephens Creek	26.30	156	P	P	19 40 56.7	+0.6
	4.0nm,0.6s,baz=339,slow=7.9,SNR=11						
STKA				LR	LR	19 52 36.7	
	comp=Z,664nm,18.4s,baz=328,slow=39						
STKA	Stephens Creek	26.30	156	eP	P	19 40 56.5	+0.4
	3.8nm,1.0s						
NWAO	Narrogin (SRO)	27.33	203	P	P	19 41 05.5	+0.1
	10nm,1.1s,baz=37,slow=14,SNR=2.8						
NWAO	Narrogin (SRO)	27.33	203	eP	P	19 41 05.6	+0.3
	45nm,1.3s						
ARMA	Armidale	30.44	140	eP	P	19 41 29.5	-3.7
	9.0nm,1.1s						
KULM	Kulim	31.68	294	eP	P	19 41 42.7	-1.5
	36nm,1.6s						
CAN	Canberra	32.55	150	eP	P	19 41 52.5	+0.9
	22nm,1.1s						
SSLB	Suanglung	32.66	345	eP	P	19 41 53.9	+1.3
	6.8nm,1.0s						
TOO	Toolangi	32.83	156	eP	P	19 41 56.6	+2.6
	16nm,1.2s						
DZM	Mont Dzumac	38.17	116	P	P	19 42 40.9	+0.7
	3.1nm,0.6s,baz=150,slow=20,SNR=4.6						
DZM	Mont Dzumac	38.17	116	eP	P	19 42 41.1	+0.9
	32nm,1.6s						
CMAR	Chiang Mai Arr	40.01	311	P	P	19 42 54.0	-1.4
	1.3nm,0.7s,baz=146,slow=7.6,SNR=5.8						
CMAR				PcP	PcP	19 45 01.4	+1.2
	2.0nm,0.9s,baz=174,slow=1.6,SNR=5.8						
CMAR				LR	LR	20 00 37.4	
	comp=Z,104nm,21.3s,baz=142,slow=38						
NJ2	Nanjing	41.08	346	eP	P	19 43 05.9	+1.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
INU	Inuyama	43.66	9	eP	P	19 43 23.2	-1.8
	16nm,1.5s						
MAJO	Matsushiro	45.02	10	eP	P	19 43 33.8	-2.1
	7.8nm,0.9s						
MJAR	Matsushiro Arr	45.02	10	P	P	19 43 33.7	-2.2
	1.6nm,0.7s,baz=195,slow=9.7,SNR=5.5						
MJAR				LR	LR	20 02 34.8	
	comp=Z,53nm,19.6s,baz=205,slow=36						
MJB9	Matsu-Tunnel	45.02	10	eP	P	19 43 33.5	-2.4
	8.0nm,0.9s						
KSRS	Korea Array	45.21	358	LR	LR	20 01 26.3	
	comp=Z,156nm,22.0s,baz=159,slow=35						
CD2	Chengdu	45.88	329	eP	P	19 43 42.4	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	Xi'an	46.13	336	P	P	19 43 50.3	+5.5
XAN				pP	sP	19 43 56.8	-1.7
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LZH	Lanzhou	50.05	333	eP	P	19 44 16.5	+1.3
LZH				pP	pP	19 44 25.6	+0.2
LZH				sP	sP	19 44 29.1	-0.3
LZH				ePP	PP	19 46 12.8	+2.2
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,6.9s						
LZH				LR	LR		
	comp=N,310nm,14.2s						
LZH				LR	LR		
	comp=E,320nm,14.0s						
LZH				LR	LR		
	comp=Z,470nm,17.5s						
RPZ	Rata Peaks	50.76	142	P	P	19 44 21.0	+0.7
	15nm,0.8s,baz=355,slow=12,SNR=5.2						
RPZ	Rata Peaks	50.76	142	eP	P	19 44 21.9	+1.6
	58nm,1.5s						
HHC	Hu-ho-hao-te	51.32	343	eP	P	19 44 26.5	+1.9
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,61nm,5.6s						
USRK	Ussuriysk Ar.	51.97	2	P	P	19 44 28.2	-1.1
	2.3nm,0.9s,baz=195,slow=16,SNR=3.9						
USRK				LR	LR	20 06 04.9	
	comp=Z,63nm,20.8s,baz=171,slow=36						
BKZ	Black Stump Fm	52.25	134	eP	P	19 44 31.7	+0.1
	6.5nm,0.8s						
LSA	Lhasa	52.59	317	eP	P	19 44 34.4	-0.3
	8.5nm,0.8s						
GTA	Gaotai	54.60	332	eP	P	19 44 50.3	+1.4
GTA				pP	pP	19 44 55.5	-3.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,82nm,5.1s						
GTA				LR	LR		
	comp=N,92nm,21.6s						
GTA				LR	LR		
	comp=E,210nm,21.0s						
ULN	Ulaanbaatar	59.04	343	eP	P	19 45 19.9	-0.4
	3.3nm,1.0s						
SONA0	Songino Array	59.21	342	eP	P	19 45 21.7	+0.2
SONM	Songino Array	59.21	342	P	P	19 45 21.7	+0.2
	2.1nm,0.9s,baz=151,slow=7.7,SNR=5.0						
CASY	Casey	59.68	189	eP	P	19 45 25.6	+1.4
	4.3nm,0.9s						
WMQ	Urumqi	63.96	327	eP	P	19 45 55.1	+1.6
PETK	Petropavlovsk-	65.38	18	P	P	19 46 02.4	0.0
	0.7nm,0.5s,baz=175,slow=2.7,SNR=5.4						
PETK				LR	LR	20 12 04.9	
	comp=Z,41nm,21.8s,baz=175,slow=34						
KSH	Kashi	68.42	318	eP	P	19 46 23.8	+1.5
KSH				pP	pP	19 46 33.1	+0.2
KSH				PcP	PcP	19 46 50.0	+2.5
MK31	Makanchi Array	68.78	327	eP	P	19 46 23.4	-0.8
	3.4nm,1.0s						
MKAR	Makanchi Array	68.78	327	P	P	19 46 23.8	-0.4
	2.8nm,0.6s,baz=124,slow=7.4,SNR=18						
MAKZ	Makanchi	68.96	327	eP	P	19 46 25.5	+0.1
	3.7nm,1.0s						
YAK	Yakutsk	69.79	0	eP	P	19 46 29.1	-1.0
	14nm,1.0s						
GAR	Garm	72.03	315	eP	P	19 46 43.3	-1.1
	7.7nm,1.0s						
ZAA0	Zalesovo Array	72.25	334	eP	P	19 46 45.3	+0.1
	5.2nm,1.0s						
ZALV	Zalesovo Beam	72.25	334	P	P	19 46 44.4	-0.8
	2.7nm,0.7s,baz=117,slow=3.9,SNR=12						
KURK	Kurchatov	73.10	329	eP	P	19 46 49.9	-0.4
	7.0nm,1.0s						
KK31	Karatay Array	73.77	319	eP	P	19 46 55.1	+0.6
	11nm,1.6s						
KKAR	Karatay Array	73.77	319	eP	P	19 46 54.8	+0.3
	11nm,1.6s						
MAW	Mawson	73.89	201	P	P	19 46 56.0	+1.3
	2.6nm,0.6s,baz=86,slow=4.4,SNR=16						
MAW				LR	LR	20 17 16.1	
	comp=Z,181nm,19.2s,baz=359,slow=34						
MAW	Mawson	73.89	201	eP	P	19 46 56.2	+1.5
	3.1nm,1.4s						
TIXI	Tiksi	79.45	360	eP	P	19 47 24.6	-1.3
	2.4nm,0.8s						
GEYT	Alibeck	80.49	311	P	P	19 47 33.0	+0.6
	1.0nm,0.6s,baz=98,slow=10,SNR=2.2						
GEYT				LR	LR	20 28 02.3	
	comp=Z,43nm,20.8s,baz=60,slow=39						
QSPA	South Pole Qui	82.01	180	eP	P	19 47 40.6	+0.5
	21nm,1.6s						
SYO	Syowa Base	82.60	201	⇓eX	P	19 47 41.6	-1.3
ABKAR	Akbulak array	82.98	322	eP	P	19 47 44.2	-0.9
	2.5nm,0.8s						
RAYN	Ar Rayn	87.72	294	eP	P	19 48 08.8	-0.7
	5.8nm,1.1s						
RND	Reindeer	93.32	26	eP	P	19 48 33.5	-1.3
	8.2nm,0.8s						
WRH	Wood River Hil	93.85	25	eP	P	19 48 35.7	-1.4
	8.3nm,1.0s						
CCB	Clear Creek Bu	94.00	25	eP	P	19 48 36.2	-1.5
	7.7nm,0.9s						
HDA	Harding Lake	94.33	26	eP	P	19 48 37.9	-1.4
	4.4nm,0.8s						
ILAR	Eielson Array	94.41	25	P	P	19 48 38.1	-1.5
	3.5nm,1.1s,baz=272,slow=4.6,SNR=11						
ILB	Eielson Array	94.41	25	eP	P	19 48 38.0	-1.7
	7.7nm,1.4s						
RIDG	Independent Ri	95.14	26	eP	P	19 48 42.3	-0.8
	8.2nm,1.2s						
DOT	Dot Lake	95.48	27	eP	P	19 48 44.1	-0.5
	3.8nm,0.9s						
EGAK	Eagle	96.85	26	eP	P	19 48 50.5	-0.3
	4.9nm,1.0s						
DAWY	Dawson	97.58	26	eP	P	19 48 53.7	-0.4
	5.2nm,1.0s						
BRTR	Keskin Array B	99.57	309	LR	LR	20 41 30.6	
	comp=Z,20nm,20.5s,baz=106,slow=40						
VYHS	Vyhne	109.62	319	ePDIF	Pdif	19 49 45.6	-2.5
LOHW	Long Hollow	116.92	45	ePKPdf	PKPdf	19 54 04.5	-0.7
MNTX	Cornudas Mount	123.86	57	ePKPdf	PKiKP	19 54 19.1	+0.2
LTX	Lajitas	125.81	60	ePKPdf	PKPdf	19 54 22.7	+0.1
TXAR	Lajitas Array	125.81	60	PKP	PKPdf	19 54 22.7	+0.1
	0.8nm,1.0s,baz=29,slow=2.9,SNR=4.9						
TORD	Torodi Ar. Bea	128.54	280	PKP	PKPdf	19 54 27.9	-0.1
	0.9nm,0.6s,baz=30,slow=2.3,SNR=5.9						
TOA1	Torodi Ar. Sit	128.54	280	ePKPdf	PKPdf	19 54 27.9	-0.1
CPUP	Villa Florida	145.26	169	PKPbc	PKPbc	19 54 58.5	+0.3
	1.4nm,0.4s,baz=225,slow=3.1,SNR=5.3						
CPUP	Villa Florida	145.26	169	ePKPbc	PKPbc	19 54 58.3	+0.1
LPAZ	La Paz	150.22	144	PKPbc	PKPbc	19 55 13.1	+0.3
	6.0nm,1.0s,baz=164,slow=2.7,SNR=12						
LPAZ	La Paz	150.22	144	ePKPbc	PKiKP	19 55 14.3	+0.7
SIV	San Ignacio	153.98	156	PKPbc	PKiKP	19 55 21.2	+0.5
	0.6nm,0.5s,baz=120,slow=5.9,SNR=4.1						

MEX 23 19:46:11.1±0.6**, 17°.97N**×**100°.68W, h30**^{km}±7^{km}**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.44	46	eP	Pb	19 46 18.8	-1.9
ARIG				i S	Sb	19 46 25.4	-1.9
ZIIG	Zihuatanejo	0.83	244	i P	Pn	19 46 24.5	-2.2
ZIIG				i S	Sb	19 46 35.4	-2.4
CAIG	El Cayaco	1.00	157	eP	Pn	19 46 26.5	-2.6
CAIG				i S	Sn	19 46 39.5	-2.7
MEIG	Mezcala	1.01	92	eP	Pn	19 46 26.7	-2.6
MEIG				eS	Sn	19 46 40.4	-2.2
PLIG	Platanillo	1.20	69	eP	Pn	19 46 29.4	-2.5
PLIG				eS	Sn	19 46 45.2	-2.0
TLIG	Tlapa	2.06	101	eP	Pn	19 46 42.4	-1.4
TLIG				eS	Sn	19 47 05.4	-3.1
MMIG	Aquila	2.55	278	eP	Pn	19 46 48.1	-2.3
MMIG				i S	Sn	19 47 18.1	-2.4
CJM	Chamela	4.40	291	i P	Pn	19 47 14.5	-1.4
CJM				i S	Sn	19 48 04.7	-1.5

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*ISCJB **23** 20:10:18.0±1.5, 20°.22S±0°.03×70°.92W±0°.06, h3^{km}±11^{km}, Error ellipse: s-maj=10.0km s-min=4.2km az=13.0*

*GUC **23** 20:10:20.9±0.6, 20°.22S×70°.85W, h22^{km}±4^{km}, ML3.5*

ISC 23 20:10:18.5±3.5**, 20°.20S**±0°.04×**70°.92W**±0°.08**, h8**^{km}±25^{km}**, n20,** σ**0^{s}.84**/35**, 6C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.96	51	⇓iP	Pb	20 10 37.3	-0.3
PSGC				i S	Sb	20 10 49.5	-1.0
PSGC				IAML		20 10 51.9	
	comp=N,866nm,0.7s						
PSGCX	Pisagua	0.96	51	eP	Pb	20 10 37.8	+0.3
PSGCX				eS	Sb	20 10 50.5	0.0
PB11	IPOC Station P	1.26	70	eP	Pn	20 10 42.2	-0.5
PB11	IPOC Station P	1.26	70	⇓eP	Pn	20 10 42.2	-0.5
PB11				i S	Sb	20 10 58.2	-1.1
PB11				IAML		20 11 03.6	
	comp=N,842nm,0.4s						
PB02	IPOC Station P	1.46	140	⇑eP	Pn	20 10 45.4	0.0
PB02				i S	Sn	20 11 03.9	-1.0
PB02				IAML		20 11 09.5	
	comp=N,3µm,0.5s						
PB01	IPOC Station P	1.58	122	⇑eP	Pn	20 10 47.2	+0.2
PB01				i S	Sn	20 11 06.4	-1.3
PB01				IAML		20 11 12.0	
	comp=N,2µm,0.6s						
MNMC	Minye Minye	1.64	50	eP	Pn	20 10 48.3	+0.3
MNMC				i S	Sn	20 11 09.4	0.0
MNMC				IAML		20 11 13.6	
	comp=N,2µm,0.5s						
MNMCX	Minye Minye	1.64	50	eP	Pn	20 10 48.7	+0.7
PB08	IPOC Station P	1.66	88	eP	Pn	20 10 48.5	+0.3
PB08				eS	Sn	20 11 09.5	-0.5
PB08	IPOC Station P	1.66	88	⇑eP	Pn	20 10 48.6	+0.3
PB08				i S	Sn	20 11 09.7	-0.3
PB08				IAML		20 11 16.1	
	comp=N,486nm,0.7s						
PB12	IPOC Station P	1.68	19	⇑eP	Pn	20 10 48.3	0.0
PB12				i S	Sn	20 11 10.8	+0.7
PB12				IAML		20 11 18.1	
	comp=E,546nm,0.4s						
PB07	IPOC Station P	1.79	148	eP	Pn	20 10 49.6	-0.5
PB07	IPOC Station P	1.79	148	⇑eP	Pn	20 10 50.0	-0.1
PB07				eS	Sn	20 11 13.2	0.0
PB03	IPOC Station P	2.13	150	eP	Pn	20 10 54.7	0.0
PB03				i S	Sn	20 11 22.3	+0.8
PB03				IAML		20 11 35.0	
	comp=N,333nm,0.4s						
PB09	IPOC Station P	2.23	136	⇑eP	Pn	20 10 57.3	+1.3
PB09				i S	Sb	20 11 26.5	-0.5
PB09				IAML		20 11 33.8	
	comp=E,895nm,0.5s						
PB04	IPOC Station P	2.24	162	eP	Pn	20 10 55.7	-0.4
PB04				i S	Sn	20 11 23.9	-0.2
PB04				IAML		20 11 36.6	
	comp=E,474nm,0.6s						
PB05	IPOC Station P	2.72	166	eP	Pn	20 11 02.2	-0.5
PB05				i S	Sn	20 11 35.5	-0.4
PB05				IAML		20 11 57.3	
	comp=E,430nm,0.9s						
PB06	IPOC Station P	2.79	154	eP	Pn	20 11 03.2	-0.5
PB06				i S	Sn	20 11 40.0	+2.4
PB06				IAML		20 11 56.7	
	comp=N,419nm,0.8s						
YJA	Yavi	5.41	112	eP	Pn	20 11 41.5	+1.5
YJA				IAML		20 11 50.7	
	comp=Z,6.4nm,0.6s						
HJA	Humahuaca	5.93	121	eP	Pn	20 11 48.8	+1.7
HJA				IAML		20 11 59.1	
	comp=Z,10nm,0.5s						

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*NEIC **23** 20:11:14.9±0.0, 41°.68S×174°.23E, h11^{km}, ML4.4(WEL), After WEL.*

WEL 23 20:11:14.8, 42°S±1°×**174°.2E**±0°.9**, h12**^{km}±2^{km}**, M4.3**/35**, ML4.5**/25**, MLv4.3**/35**, Error ellipse: s-maj=0.0km s-min=0.0km az=1.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.07	191	P	Pg	20 11 17.7	+0.4
CMWZ				S	Sg	20 11 20.0	+0.8
BSWZ	Blackbirch Sta	0.27	263	P	Pb	20 11 21.1	-0.5
BSWZ				S	Sb	20 11 25.6	-0.5
TUWZ	Tuamarina	0.33	319	P	Pb	20 11 22.2	-0.4
TUWZ				S	Sb	20 11 27.2	-0.7
TCW	Tory Channel	0.47	4	P	Pg	20 11 24.5	+0.5
TCW				S	Sb	20 11 31.2	-0.7
SNZO	South Karori	0.51	44	ePg	Pb	20 11 25.9	+0.2
BHW	Baring Head	0.55	61	P	Pb	20 11 26.6	+0.3
PLWZ	Palliser	0.78	82	P	Pn	20 11 31.3	-0.2
NNZ	Nelson	0.79	306	P	Pb	20 11 30.3	-0.1
MSWZ	Moikau Station	0.81	71	P	Pn	20 11 31.6	-0.4
KHZ	Kahutara	0.90	215	ePg	Pn	20 11 33.6	+0.4
KHZ	Kahutara	0.90	215	P	Pn	20 11 33.5	+0.3
DUWZ	D’Urville Isla	0.91	345	P	Pg	20 11 32.3	0.0
PAWZ	Paruwai Farm	0.95	72	P	Pn	20 11 34.0	+0.1
THZ	Tophouse	1.00	265	ePg	Pn	20 11 34.5	-0.2
THZ	Tophouse	1.00	265	P	Pn	20 11 34.4	-0.2
MTW	Mount Morrison	1.09	62	P	Pn	20 11 36.2	+0.4
TRWZ	Traveller	1.13	76	P	Pg	20 11 36.5	0.0
HOWZ	Holdsworth Sta	1.24	51	P	Pg	20 11 38.6	-0.1
TMWZ	Te Maipa	1.37	66	P	Pn	20 11 39.9	+0.2
MRZ	Mangatainoka R	1.44	45	P	Pb	20 11 41.4	-0.1
TIWZ	Tintock	1.54	55	P	Pb	20 11 42.7	-0.6
QRZ	Quartz Range	1.54	303	ePn	Pb	20 11 43.4	+0.1
QRZ	Quartz Range	1.54	303	P	Pb	20 11 43.5	+0.2
GVZ	Greta Valley S	1.56	214	P	Pn	20 11 42.9	+0.5
CPWZ	Castlepoint	1.67	63	P	Pb	20 11 45.6	+0.1
OHWZ	Ohakea	1.69	29	P	Pg	20 11 46.6	-0.5
PRWZ	Pori Road	1.73	50	P	Pn	20 11 45.2	+0.6
POWZ	Post Office Ro	1.73	43	P	Pn	20 11 45.6	+0.9
DSZ	Denniston Nort	1.82	267	P	Pb	20 11 48.2	+0.3
BFZ	Birch Farm	1.82	57	ePn	Pn	20 11 45.6	-0.2
BFZ	Birch Farm	1.82	57	P	Pn	20 11 45.6	-0.3
LTZ	Lake Taylor	1.82	232	ePn	Pn	20 11 46.8	+0.7
LTZ	Lake Taylor	1.82	232	P	Pn	20 11 46.9	+0.9
AMCZ	Amberley	1.90	218	P	Pn	20 11 47.2	+0.3
WAZ	Wanganui	2.01	17	P	Pb	20 11 52.0	+0.8
DVHZ	Dannevirke	2.01	47	P	Pn	20 11 48.6	0.0
TSZ	Takapari Road	2.08	40	P	Pn	20 11 50.1	+0.6
ANWZ	Angora Road	2.09	55	P	Pn	20 11 50.5	+0.9
OKCZ	Okains Bay	2.22	203	P	Pn	20 11 50.9	-0.5
LREZ	Lake Rotokare	2.22	3	P	Pb	20 11 55.4	+0.6
CRLZ	Canterbury Las	2.23	212	ePn	Pn	20 11 51.3	-0.3
CRLZ	Canterbury Las	2.23	212	P	Pn	20 11 51.8	+0.2
NMEZ	Namu Road	2.28	353	P	Pg	20 11 57.8	-0.7
PRHZ	Porangahau	2.30	53	P	Pn	20 11 53.1	+0.6
OXZ	Oxford	2.31	224	ePn	Pn	20 11 52.1	-0.5
OXZ	Oxford	2.31	224	P	Pn	20 11 52.2	-0.4
PNHZ	Pukenui	2.31	41	P	Pn	20 11 52.8	+0.1
INZ	Inchbonnie	2.32	242	P	Pn	20 11 53.9	+1.2
MQZ	McQueen’s Vall	2.33	209	ePn	Pn	20 11 51.7	-1.2
MQZ	McQueen’s Vall	2.33	209	P	Pn	20 11 51.9	-1.1
PREZ	Palmer Road	2.34	359	P	Pb	20 11 56.7	-0.1
KHEZ	Kahui Hut	2.39	356	P	Pb	20 11 58.0	+0.3
NBEZ	Newall Road No	2.43	353	P	Pb	20 11 58.0	-0.3
MTVZ	Mangateitei	2.48	23	P	Pb	20 12 00.1	+0.8
DREZ	Durham Road	2.49	359	P	Pb	20 11 59.2	-0.2
PKE	Pukeiti	2.49	356	P	Pb	20 11 58.8	-0.6
PKVZ	Pokaka	2.54	20	P	Pb	20 11 58.6	-1.6
MOVZ	Moawhango	2.55	28	P	Pb	20 11 58.4	-2.1
VRZ	Vera Road	2.58	9	P	Pb	20 11 59.9	-1.1
PXZ	Pawanui	2.59	51	P	Pb	20 11 58.9	-2.1
BHHZ	Black Hill Sta	2.59	33	P	Pn	20 11 58.0	+1.4
MHEZ	Mangahewa	2.60	2	P	Pg	20 12 05.3	+0.6
DRZ	Dome Shelter	2.61	23	P	Pb	20 12 02.5	+0.9
WHVZ	Whangaehu Hut	2.61	24	P	Pb	20 11 59.6	-2.0
FWVZ	Far West T-bar	2.62	23	P	Pb	20 11 59.9	-2.0
TUVZ	Tukino	2.64	25	P	Pb	20 12 02.6	+0.4
NGZ	Ngauruhoe	2.71	23	P	Pb	20 12 01.3	-2.0
KAHZ	Kahuranaki	2.75	48	P	Pn	20 11 58.8	0.0
WTVZ	West Tongariro	2.76	22	P	Pb	20 12 02.1	-2.0
TWVZ	Taurewa	2.77	20	P	Pb	20 12 03.8	-0.4
KRVZ	Karewarewa	2.80	23	P	Pb	20 12 03.5	-1.3
KWHZ	Kaweka Forest	2.81	37	P	Pb	20 12 06.2	+1.4
MCHZ	McNeill Hill	2.92	41	P	Pn	20 12 02.5	+1.5
KATZ	Kakaramea	2.92	23	P	Pb	20 12 06.8	-0.1
WVZ	Waitaha Valley	2.94	241	P	Pn	20 12 02.5	+1.3
RITZ	Rihia Road	2.97	25	P	Pb	20 12 08.4	+0.8
BKZ	Black Stump Fm	3.05	35	ePn	Pn	20 12 02.8	-0.1
BKZ	Black Stump Fm	3.05	35	P	Pb	20 12 09.3	+0.4
RATZ	Rangitukua	3.05	23	P	Pb	20 12 09.6	+0.6
RPZ	Rata Peaks	3.10	228	ePn	Pn	20 12 03.3	-0.3
RPZ	Rata Peaks	3.10	228	P	Pn	20 12 03.5	0.0
HATZ	Hinemaiaia	3.13	28	P	Pb	20 12 11.2	+0.9
WATZ	Wairara	3.18	22	P	Pb	20 12 11.6	+0.4
HIZ	Hauiti	3.20	9	ePn	Pn	20 12 05.2	+0.4
HIZ	Hauiti	3.20	9	P	Pb	20 12 08.2	-3.3
MRHZ	Matea Rd	3.30	31	P	Pb	20 12 14.3	+1.1
MTHZ	Maungataniwha	3.46	36	P	Pn	20 12 11.0	+2.5
TLZ	Tolley Road	3.49	17	P	Pb	20 12 13.0	-3.6
FOZ	Fox Glacier	3.75	239	ePn	Pn	20 12 13.3	+1.0
FOZ	Fox Glacier	3.75	239	P	Pn	20 12 15.3	+2.9
RAGZ	Rawiri	4.01	39	P	Pn	20 12 17.3	+1.3
LBZ	Lake Benmore	4.01	226	ePn	Pn	20 12 16.1	0.0
LBZ	Lake Benmore	4.01	226	P	Pn	20 12 16.8	+0.8
TOZ	Tahuroa Road	4.06	14	P	Pb	20 12 24.7	-1.5
URZ	Urewera	4.07	34	ePn	Pn	20 12 16.4	-0.4
URZ	Urewera	4.07	34	P	Pn	20 12 18.7	+1.9

ODZ	**Otahua Downs**	**4.26**	**217**	ePn	Pn	20 12 18.4	-1.0
ODZ	**Otahua Downs**	**4.26**	**217**	P	Pn	20 12 18.7	-0.7
RUGZ	**Raukumara Rang**	**4.56**	**37**	P	Pn	20 12 27.2	+3.5
AWAZ	**Awhitu Peninsu**	**4.62**	**4**	P	Pn	20 12 28.3	+4.0
MKAZ	**Moumakai**	**4.63**	**9**	P	Pn	20 12 27.9	+3.4
JCZ	**Jackson Bay**	**4.66**	**237**	P	Pn	20 12 26.4	+1.4
WIZ	**White Island**	**4.74**	**30**	P	Pb	20 12 32.4	-5.3
RVAZ	**Riverhead Bore**	**4.91**	**3**	P	Pn	20 12 32.2	+3.9
WIAZ	**Waiheke Island**	**4.93**	**8**	P	Pn	20 12 32.1	+3.5
MBAZ	**Motutapu North**	**4.93**	**6**	P	Pb	20 12 35.7	-5.3
WKZ	**Wanaka**	**4.94**	**229**	ePn	Pn	20 12 27.9	-0.8
WKZ	**Wanaka**	**4.94**	**229**	P	Pb	20 12 35.8	-5.3
HHSZ	**Highcliff Hill**	**4.96**	**211**	P	Pn	20 12 31.7	+2.7
MXZ	**Matakaoa Point**	**5.18**	**39**	ePn	Pn	20 12 33.6	+1.6
TUZ	**Tuapeka**	**5.42**	**216**	P	Pn	20 12 36.2	+0.9
MSZ	**Milford Sound**	**5.50**	**235**	P	Pn	20 12 42.6	+6.2
MLZ	**Mavora Lakes**	**5.77**	**228**	ePn	Pn	20 12 40.9	+0.7
MLZ	**Mavora Lakes**	**5.77**	**228**	P	Pn	20 12 46.5	+6.3
SYZ	**Scrubby Hill**	**6.08**	**215**	P	Pn	20 12 45.2	+0.7
WHZ	**Wether Hill Ro**	**6.20**	**225**	ePn	Pn	20 12 43.8	-2.3
DCZ	**Deep Cove**	**6.38**	**231**	ePn	Pn	20 12 46.9	-1.6
OUZ	**Omahuta**	**6.47**	**355**	ePn	Pn	20 12 50.8	+1.0
OUZ	**Omahuta**	**6.47**	**355**	P	Pn	20 12 57.2	+7.4
CTZ	**Chatham Island**	**7.05**	**110**	P	Pn	20 12 58.1	+0.4

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*SOME **23** 20:15:20.7, 41°.32N×77°.55E, h10km*
*KRNET **23** 20:15:21.7±0.1, 41°.39N×77°.52E, h13km, mb2.8*
*NNC **23** 20:15:21.3±0.9, 41°.35N×77°.57E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=6.4km s-min=4.1km az=1.0*
*ISCJB **23** 20:15:23.4±0.8, 41°.28N±0°.04×77°.54E±0°.04, h10km, Error ellipse: s-maj=6.7km s-min=3.4km az=155.6*
ISC 23 20:15:19.0±1.3**, 41°.27N**±0°.06×**77°.58E**±0°.03**, h10**km**, n52,** σ**1s.38**/84**, 19C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.91**	**341**	⇑iP	**Pg**	**20 15 36.5**	**-0.2**
	baz=42						
KDJ				⇑iS	**Sg**	**20 15 47.4**	**-1.2**
	baz=42						
NRN	**Naryn**	**1.20**	**279**	⇑iP	**Pn**	**20 15 43.5**	**+1.3**
	baz=72						
NRN				⇑iS	**Sn**	**20 15 59.9**	**+1.2**
	baz=72						
PRZ	**Przheval'sk**	**1.36**	**26**	⇑iP	**Pg**	**20 15 45.8**	**+0.6**
	baz=31						
PRZ				⇑iS	**Sn**	**20 16 03.5**	**+0.9**
	baz=31						
ULHL	**Ulahol**	**1.40**	**315**	⇓iP	**Pg**	**20 15 46.2**	**+0.3**
	baz=12						
ULHL				⇓iS	**Sn**	**20 16 03.1**	**-0.4**
	baz=12						
ANVS	**Anan'yevo**	**1.52**	**2**	⇑iP	**Pb**	**20 15 47.6**	**+0.2**
	baz=4.0						
ANVS				⇑iS	**Sg**	**20 16 06.8**	**-1.1**
	baz=4.0						
BOOM	**Boomskoye usch**	**1.73**	**316**	⇑iP	**Pb**	**20 15 51.8**	**+0.8**
	baz=14						
BOOM				⇑iS	**Sg**	**20 16 13.8**	**-0.9**
	baz=14						
TNSS	**Tian-Shan**	**1.83**	**345**	P	**Pg**	**20 15 53.8**	**-0.4**
	7.5nm,0.1s						
TNSS				S	**Sg**	**20 16 17.7**	**-0.3**
	16nm,0.3s						
TNSS	**Tian-Shan**	**1.83**	**345**	eP	**Pg**	**20 15 53.8**	**-0.4**
	7.5nm,0.1s						
TNSS				eS	**Sg**	**20 16 17.7**	**-0.3**
	16nm,0.3s						
SATY	**Saty**	**1.90**	**19**	P	**Pg**	**20 15 55.0**	**-0.4**
	14nm,0.1s						
SATY				S	**Sg**	**20 16 19.7**	**-0.3**
	18nm,0.1s						
SATY	**Saty**	**1.90**	**19**	eP	**Pg**	**20 15 55.0**	**-0.4**
	14nm,0.1s						
SATY				eS	**Sg**	**20 16 19.7**	**-0.3**
	18nm,0.1s						
IZV	**Izvestkoviy**	**1.91**	**338**	P	**Pg**	**20 15 54.9**	**-0.7**
	5.1nm,0.3s						
IZV				S	**Sg**	**20 16 19.7**	**-0.8**
	30nm,0.3s						
IZV	**Izvestkoviy**	**1.91**	**338**	eP	**Pg**	**20 15 54.9**	**-0.7**
	5.1nm,0.3s						
IZV				eS	**Sg**	**20 16 19.7**	**-0.8**
	30nm,0.3s						
KZA	**Kyzart**	**1.92**	**296**	⇑eP	**Pg**	**20 15 56.2**	**+0.2**
	baz=93						
KZA				⇑iS	**Sg**	**20 16 20.8**	**-0.1**
	baz=93						
MDOK	**Medeo**	**1.94**	**348**	Pg	**Pb**	**20 15 55.3**	**+0.8**
	10nm,0.2s						
MDOK				Lg	Lg	20 16 20.5	
	16nm,0.5s						
MDOK	**Medeo**	**1.94**	**348**	eP	**Pb**	**20 15 55.3**	**+0.8**
	10nm,0.2s						
MDOK				eS	**Sg**	**20 16 20.5**	**-0.8**
	16nm,0.5s						
KOTS	**Kotyrbulak**	**2.00**	**350**	Pg	**Pg**	**20 15 56.6**	**-0.8**
	11nm,0.1s						
KOTS				Lg	Lg	20 16 22.4	
	17nm,0.3s						
KOTS	**Kotyrbulak**	**2.00**	**350**	eP	**Pg**	**20 15 56.6**	**-0.8**
	11nm,0.1s						
KOTS				eS	**Sg**	**20 16 22.4**	**-0.9**
	17nm,0.3s						
KNDC	**Almaty**	**2.00**	**347**	⇓Pg	**Pb**	**20 15 54.7**	**-0.9**
KNDC				⇑Lg	Lg	20 16 22.5	
	24nm,0.4s						
MTBS	**Maitube**	**2.05**	**336**	Pg	**Pb**	**20 15 57.3**	**+0.9**
	4.6nm,0.2s						
MTBS				Lg	Lg	20 16 23.6	
	17nm,0.3s						
MTBS	**Maitube**	**2.05**	**336**	eP	**Pb**	**20 15 57.3**	**+0.9**
	4.6nm,0.2s						
MTBS				eS	**Sg**	**20 16 23.6**	**-1.3**
	17nm,0.3s						
KST	**Kastek**	**2.14**	**326**	Pg	**Pg**	**20 15 59.4**	**-0.7**
	4.8nm,0.3s						
KST				Lg	Lg	20 16 27.1	
	13nm,0.3s						
KST	**Kastek**	**2.14**	**326**	eP	**Pg**	**20 15 59.4**	**-0.7**
	4.8nm,0.3s						
KST				eS	**Sg**	**20 16 27.1**	**-0.8**
	13nm,0.3s						
UZB	**Uzynbulak**	**2.17**	**29**	Pg	**Pg**	**20 15 59.9**	**-0.6**
	6.8nm,0.3s						
UZB				Lg	Lg	20 16 28.2	
	14nm,0.6s						
UZB	**Uzynbulak**	**2.17**	**29**	eP	**Pg**	**20 15 59.9**	**-0.6**
	6.8nm,0.3s						
UZB				eS	**Sg**	**20 16 28.2**	**-0.4**
	14nm,0.6s						
TKM2	**Tokmak 2**	**2.22**	**319**	⇓Pg	**Pb**	**20 16 00.6**	**+1.2**
	6.1nm,0.6s						
TKM2				⇓Lg	Lg	20 16 29.4	
	16nm,0.9s						
TKM2	**Tokmak 2**	**2.22**	**319**	⇓iP	**Pb**	**20 16 00.2**	**+0.9**
	baz=18						
TKM2				⇓iS	**Sb**	**20 16 27.6**	**+0.7**
	baz=18						
KURS	**Kuram**	**2.26**	**11**	Pg	**Pb**	**20 16 01.2**	**+1.2**
	6.3nm,0.4s						
KURS				Lg	Lg	20 16 30.8	
	4.9nm,0.4s						
KURS	**Kuram**	**2.26**	**11**	eP	**Pb**	**20 16 01.2**	**+1.2**
	6.3nm,0.4s						
KURS				eS	**Sg**	**20 16 30.8**	**-1.0**
	4.9nm,0.4s						
KPKS	**Kokpek**	**2.35**	**20**	eP	**Pb**	**20 16 02.5**	**+1.0**
	5.6nm,0.3s						
KPKS				eS	**Sg**	**20 16 32.6**	**-1.8**
	24nm,0.6s						
UCH	**Uchtor**	**2.49**	**294**	⇑iP	**Pb**	**20 16 04.5**	**+0.4**
	baz=91						
UCH				⇑iS	**Sb**	**20 16 35.8**	**+0.9**
	baz=91						
PDGK	**Podgornoye**	**2.50**	**34**	⇑Pg	**Pb**	**20 16 05.3**	**+1.1**
	4.5nm,0.7s						
PDGK				⇑Lg	Lg	20 16 37.9	
	21nm,0.9s						
PDGK	**Podgornoye**	**2.50**	**34**	⇑iP	**Pb**	**20 16 04.8**	**+0.6**
	baz=36						
PDGK				⇑iS	**Sb**	**20 16 36.3**	**+1.2**
	baz=36						
ARLS	**Aral**	**2.51**	**285**	⇓iP	**Pb**	**20 16 05.0**	**+0.6**
	baz=82						
ARLS				⇓iS	**Sb**	**20 16 36.8**	**+1.4**
	baz=82						
KTBS	**Karatobe**	**2.53**	**345**	Pg	**Pb**	**20 16 05.8**	**+1.2**
	4.5nm,0.2s						
KTBS				Lg	Lg	20 16 38.1	
	38nm,0.3s						
KTBS	**Karatobe**	**2.53**	**345**	eP	**Pb**	**20 16 05.8**	**+1.2**
	4.5nm,0.2s						
KTBS				eS	**Sg**	**20 16 38.1**	**-2.3**
	38nm,0.3s						
CHKK	**Chushkaly**	**2.62**	**351**	Pg	**Pb**	**20 16 07.3**	**+1.2**
	10nm,0.2s						
CHKK				Lg	Lg	20 16 40.7	
	27nm,0.2s						
CHKK	**Chushkaly**	**2.62**	**351**	eP	**Pb**	**20 16 07.3**	**+1.2**
	10nm,0.2s						
CHKK				eS	**Sg**	**20 16 40.7**	**-2.6**
	27nm,0.2s						
AAK	**Ala-Archa**	**2.68**	**302**	⇓Lg	Lg	20 16 44.8	
	6.9nm,0.6s						
KUU	**Kurty**	**2.78**	**341**	Pg	**Pb**	**20 16 09.8**	**+1.0**
	1.7nm,0.3s						
KUU				Lg	Lg	20 16 45.3	
	19nm,0.4s						
KUU	**Kurty**	**2.78**	**341**	eP	**Pb**	**20 16 09.8**	**+1.0**
	1.7nm,0.3s						
KUU				eS	**Sg**	**20 16 45.3**	**-3.1**
	19nm,0.4s						
MNBS	**Baschi**	**2.88**	**12**	Pg	**Pb**	**20 16 11.9**	**+1.4**
	2.2nm,0.2s						
MNBS				Lg	Lg	20 16 48.9	
	11nm,0.2s						
MNBS	**Baschi**	**2.88**	**12**	eP	**Pb**	**20 16 11.9**	**+1.4**
	2.2nm,0.2s						
MNBS				eS	**Sg**	**20 16 48.9**	**-2.5**
	11nm,0.2s						
ARXS	**Arharly**	**2.95**	**3**	Pg	**Pb**	**20 16 13.1**	**+1.3**
	3.4nm,0.4s						
ARXS				Lg	Lg	20 16 50.7	
	9.1nm,0.5s						
ARXS	**Arharly**	**2.95**	**3**	eP	**Pb**	**20 16 13.1**	**+1.3**
	3.4nm,0.4s						
ARXS				eS	**Sg**	**20 16 50.7**	**-3.1**
	9.1nm,0.5s						
KTMS	**Ketmen**	**3.00**	**42**	Pg	**Pb**	**20 16 14.1**	**+1.5**
	4.5nm,0.2s						
KTMS				Lg	Lg	20 16 52.6	
	11nm,0.5s						
KTMS	**Ketmen**	**3.00**	**42**	eP	**Pb**	**20 16 14.1**	**+1.5**
	4.5nm,0.2s						
KTMS				eS	**Sg**	**20 16 52.6**	**-2.7**
	11nm,0.5s						
SGDS	**Sogindy**	**3.09**	**316**	Pg	**Pb**	**20 16 15.7**	**+1.6**
	1.4nm,0.2s						
SGDS				Lg	Lg	20 16 55.5	
	5.7nm,0.3s						
ARSB	**Arslanbob**	**3.46**	**272**	⇓iP	**Pb**	**20 16 18.3**	**-2.2**
	baz=70						
ARSB				⇓eS	**Sb**	**20 17 00.0**	**-2.7**
	baz=70						
DJR	**Jarkent**	**3.47**	**27**	Pg	**Pb**	**20 16 22.2**	**+1.6**
	1.6nm,0.1s						
DJR				Lg	Lg	20 17 06.3	
	2.5nm,0.4s						
DJR	**Jarkent**	**3.47**	**27**	eP	**Pb**	**20 16 22.2**	**+1.6**
	1.6nm,0.1s						
DJR				eS	**Sg**	**20 17 06.3**	**-4.2**
	2.5nm,0.4s						
KAPS	**Kapalarasan**	**4.22**	**17**	Pg	**Pg**	**20 16 37.7**	**-2.2**
	0.5nm,0.3s						
KAPS				Lg	Lg	20 17 33.0	
	1.2nm,0.5s						
KAPS	**Kapalarasan**	**4.22**	**17**	eP	**Pg**	**20 16 37.7**	**-2.2**
	0.5nm,0.3s						
KAPS				eS	**Sg**	**20 17 33.0**	**-1.5**
	1.2nm,0.5s						

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*ISCJB **23** 20:16:18.9±1.0, 20°.25S±0°.02×70°.94W±0°.03, h0km±6km, mb4.5/24, MS3.9/4, Error ellipse: s-maj=4.7km s-min=3.4km az=174.3*
*IDC **23** 20:16:19.9±0.7, 20°.13S×70°.67W, h0km, mb4.2/9, mb1 4.3/13, mb1mx4.2/35, mbtmp4.2/13, ML3.9/4, MS3.8/6, Ms1 3.8/6, ms1mx3.4/21, Error ellipse: s-maj=20.6km s-min=13.5km az=63.0*
*SJA **23** 20:16:21.3±0.6, 20°.19S×70°.87W, h33km±3km, ML3.8, MW3.6*
*GUC **23** 20:16:22.3±0.6, 20°.26S×70°.85W, h11km±5km, ML4.3*
*NEIC **23** 20:16:23.8±2.7, 20°.29S×70°.72W, h26km±5km, mb4.5/19, ML4.3(GUC), Error ellipse: s-maj=10.4km s-min=6.8km az=107.0*
NEIC Felt [II] at Alto Hospicio, Huara, Iquique and Pozo Almonte.
ISC 23 20:16:20.3±1.0**, 20°.25S**±0°.02×**70°.83W**±0°.04**, h6**km±6km**, n95,** σ**1s.43**/109**, mb4.5**/24**, MS3.8**/4**, 12C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.93**	**46**	⇓iP	**Pb**	**20 16 39.3**	**+0.4**
PSGC				i S	**Sb**	**20 16 51.6**	**0.0**
PSGCX	**Pisagua**	**0.93**	**46**	eP	**Pb**	**20 16 39.3**	**+0.3**
PSGCX				eS	**Sn**	**20 16 53.3**	**-0.4**
PB11	**IPOC Station P**	**1.21**	**67**	ePn	**Pn**	**20 16 44.0**	**+0.1**
PB11	**IPOC Station P**	**1.21**	**67**	eP	**Pn**	**20 16 44.2**	**+0.3**
PB11	**IPOC Station P**	**1.21**	**67**	⇓iP	**Pn**	**20 16 44.0**	**+0.1**
PB11				i S	**Sb**	**20 17 00.1**	**+0.4**
PB11				IAML		20 17 05.5	
	comp=N,10μm,0.3s						
PB02	**IPOC Station P**	**1.38**	**141**	eP	**Pb**	**20 16 47.0**	**+0.4**
PB02				eS	**Sn**	**20 17 06.6**	**+1.7**
PB02	**IPOC Station P**	**1.38**	**141**	⇑eP	**Pn**	**20 16 45.9**	**-0.4**
PB02				i S	**Sg**	**20 17 04.0**	**-0.8**
PB02				IAML		20 17 12.7	
	comp=E,16μm,0.3s						
PB01	**IPOC Station P**	**1.49**	**122**	ePn	**Pg**	**20 16 48.9**	**0.0**
PB01	**IPOC Station P**	**1.49**	**122**	eP	**Pn**	**20 16 47.9**	**+0.1**
PB01				i S	**Sb**	**20 17 07.0**	**-0.7**
PB01				IAML		20 17 13.4	
	comp=N,18μm,0.6s						
PB08	**IPOC Station P**	**1.58**	**86**	eP	**Pb**	**20 16 50.1**	**-0.1**
PB08				eS	**Sg**	**20 17 11.0**	**-0.3**
PB08	**IPOC Station P**	**1.58**	**86**	⇑eP	**Pg**	**20 16 50.4**	**-0.3**
PB08				i S	**Sg**	**20 17 11.5**	**+0.2**
PB08				IAML		20 17 16.1	
	comp=N,4μm,0.2s						
MNMC	**Minye Minye**	**1.61**	**47**	ePn	**Pb**	**20 16 50.1**	**-0.5**
MNMC	**Minye Minye**	**1.61**	**47**	⇑eP	**Pb**	**20 16 50.2**	**-0.5**
MNMC				i S	**Sg**	**20 17 11.9**	**-0.3**
MNMCX	**Minye Minye**	**1.61**	**47**	eP	**Pn**	**20 16 49.7**	**+0.1**
GO01	**Chusmiza**	**1.65**	**70**	ePn	**Pg**	**20 16 51.5**	**-0.5**
GO01	**Chusmiza**	**1.65**	**70**	⇑eP	**Pb**	**20 16 51.1**	**-0.2**
GO01				eS	**Sg**	**20 17 13.6**	**+0.3**
GO01				IAML		20 17 15.0	
	comp=E,7μm,0.4s						
PB12	**IPOC Station P**	**1.69**	**16**	⇑iP	**Pn**	**20 16 50.3**	**-0.2**
PB12				i S	**Sb**	**20 17 13.7**	**+0.1**
PB12				IAML		20 17 20.4	
	comp=E,5μm,0.5s						
PB07	**IPOC Station P**	**1.72**	**149**	⇑iP	**Pb**	**20 16 51.6**	**-0.8**
PB07				i S	**Sb**	**20 17 14.4**	**0.0**
PB07				IAML		20 17 25.3	
	comp=E,5μm,0.4s						
PB03	**IPOC Station P**	**2.06**	**151**	⇑eP	**Pn**	**20 16 56.2**	**+0.6**
PB03				eS	**Sb**	**20 17 23.9**	**-0.2**
PB03				IAML		20 17 36.5	
	comp=N,2μm,0.6s						
PB09	**IPOC Station P**	**2.14**	**136**	⇑eP	**Pb**	**20 16 58.9**	**-0.7**
PB09				i S	**Sb**	**20 17 27.0**	**+0.4**
PB09				IAML		20 17 38.3	
	comp=E,5μm,0.5s						
PB04	**IPOC Station P**	**2.17**	**163**	ePn	**Pn**	**20 16 57.4**	**+0.2**
PB04	**IPOC Station P**	**2.17**	**163**	⇑iP	**Pn**	**20 16 57.3**	**+0.2**
PB04				eS	**Sb**	**20 17 27.4**	**-0.1**
PB04				IAML		20 17 39.4	
	comp=N,3μm,0.5s						
PB05	**IPOC Station P**	**2.66**	**167**	⇑eP	**Pn**	**20 17 03.5**	**-0.3**
PB05				i S	**Sg**	**20 17 44.3**	**-1.5**
PB05				IAML		20 17 58.9	
	comp=E,1μm,0.6s						
PB06	**IPOC Station P**	**2.71**	**155**	⇑eP	**Pn**	**20 17 04.9**	**+0.3**
PB06				eS	**Sb**	**20 17 42.4**	**-0.7**
PB06				IAML		20 18 01.0	
	comp=N,2μm,0.4s						
LVC	**Limon Verde**	**2.96**	**143**	Pn	**Pn**	**20 17 10.0**	**+1.8**
	comp=N,27nm,0.3s,baz=358,slow=7.8,SNR=105						
LVC				Sn	**Sn**	**20 17 46.1**	**+2.0**
	comp=N,79nm,0.3s,baz=333,slow=4.7,SNR=5.6						
LVC				Lg	Lg	20 17 55.2	
	comp=N,268nm,0.3s,baz=52,slow=19,SNR=18						
LVC	**Limon Verde**	**2.96**	**143**	ePn	**Pn**	**20 17 10.3**	**+2.2**
PB15	**IPOC Station P**	**3.21**	**157**	⇑eP	**Pn**	**20 17 11.6**	**+0.1**
PB15				eS	**Sn**	**20 17 51.4**	**+1.2**
PB10	**IPOC Station P**	**3.26**	**175**	ePn	**Pn**	**20 17 11.6**	**-0.4**
LPAZ	**La Paz**	**4.70**	**34**	Pn	**Pn**	**20 17 35.6**	**+3.2**
	comp=N,3.4nm,0.3s,baz=312,slow=4.2,SNR=73						
LPAZ				Lg	Lg	20 18 49.2	
	baz=123,slow=17,SNR=1.7						
LPAZ	**La Paz**	**4.70**	**34**	ePn	**Pn**	**20 17 36.9**	**+4.5**
GO02	**Mina Guanaco**	**5.03**	**167**	ePn	**Pn**	**20 17 36.8**	**+0.2**
YJA	**Yavi**	**5.32**	**112**	eP	**Pn**	**20 17 44.4**	**+3.6**
YJA				IAML		20 17 54.4	
	comp=Z,45nm,0.7s						
HJA	**Humahuaca**	**5.84**	**121**	eP	**Pn**	**20 17 50.6**	**+2.8**
HJA				IAML		20 18 00.8	
	comp=Z,52nm,0.5s						
AZAP	**Zapla**	**6.65**	**128**	eP	**Pn**	**20 18 01.4**	**+2.6**
AZAP				IAML		20 18 26.9	
	comp=Z,14nm,0.6s						
GO03	**Copiap**	**7.33**	**176**	ePn	**Pn**	**20 18 06.8**	**-1.3**
LCO	**Las Campanas**	**8.73**	**179**	ePn	**Pn**	**20 18 27.7**	**+0.3**
GO04	**Tololo Observa**	**9.88**	**180**	ePn	**Pn**	**20 18 45.5**	**+2.2**
NNA	**Nana**	**10.04**	**324**	LR	LR	20 22 55.9	
	comp=Z,130nm,18.5s,baz=156,slow=39						
SIV	**San Ignacio**	**10.20**	**67**	Pn	**Pn**	**20 18 46.2**	**-1.2**
	comp=Z,3.1nm,0.3s,baz=274,slow=11,SNR=24						
SIV				Sn	**Sn**	**20 20 38.5**	**-3.7**
	baz=251,slow=19,SNR=3.2						
SIV				LR	LR	20 23 27.4	
	comp=Z,537nm,18.3s,baz=264,slow=43						
CFA	**Coronel Fontan**	**11.55**	**169**	Pn	**Pn**	**20 19 05.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=0.0,slow=14,SNR=3.1						
CPUP	**Villa Florida**	**13.80**	**119**	Pn	**Pn**	**20 19 36.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=282,slow=20,SNR=2.3						
PLCA	**Paso Flores**	**20.42**	**179**	P	**P**	**20 20 59.3**	**+1.0**
	comp=Z,4.9nm,0.8s,baz=13,slow=10,SNR=8.5						
PLCA	**Paso Flores**	**20.42**	**179**	eP	**P**	**20 20 58.9**	**+0.5**
	comp=Z,12nm,1.1s						
PTGA	**Pitinga**	**22.12**	**30**	P	**P**	**20 21 14.4**	**-2.3**
	comp=Z,8.4nm,0.5s,baz=201,slow=12,SNR=15						
PTGA	**Pitinga**	**22.12**	**30**	eP	**P**	**20 21 15.6**	**-1.2**
	comp=Z,14nm,1.0s						
BDFB	**Brasilia**	**22.18**	**82**	P	**P**	**20 21 16.2**	**-1.4**
	comp=Z,2.8nm,0.4s,baz=250,slow=14,SNR=4.5						
BDFB				LR	LR	20 31 12.4	
	comp=Z,350nm,18.9s,baz=202,slow=41						
BDFB	**Brasilia**	**22.18**	**82**	eP	**P**	**20 21 16.2**	**-1.4**
BDFB				eP	**P**	**20 21 16.6**	**-0.9**
ROSC	**El Rosal**	**25.16**	**352**	LR	LR	20 33 06.9	
	comp=Z,223nm,18.6s,baz=154,slow=40						
MDP	**Montagnes des**	**30.89**	**37**	P	**P**	**20 22 37.0**	**-0.9**
	comp=Z,6.0nm,0.7s,baz=211,slow=7.7,SNR=8.8						
CBYP	**Canovanas**	**38.59**	**8**	eP	**P**	**20 23 42.9**	**-1.4**
	comp=Z,17nm,1.0s						
TEIG	**Tepich**	**43.70**	**336**	eP	**P**	**20 24 27.8**	**+1.4**
	comp=Z,36nm,1.5s						
PTCN	**Pitcairn Islan**	**54.53**	**253**	eP	**P**	**20 25 47.0**	**-2.5**
	comp=Z,583nm,0.5s						
VNA3	**Neumayer Olymp**	**61.83**	**161**	P	**P**	**20 26 41.2**	**+1.3**
SNAA	**Sanae**	**64.05**	**161**	P	**P**	**20 26 55.7**	**+1.0**
U15A	**North Rim**	**68.65**	**325**	eP	**P**	**20 27 26.8**	**+1.9**
	comp=Z,2.2nm,0.8s						
KNB	**Kanab**	**69.37**	**325**	eP	**P**	**20 27 31.7**	**+2.5**
	comp=Z,12nm,1.7s						
SRU	**San Rafael Swe**	**69.76**	**328**	eP	**P**	**20 27 33.1**	**+1.5**
	comp=Z,2.7nm,0.7s						
CCUT	**Cedar City**	**70.05**	**325**	eP	**P**	**20 27 36.0**	**+2.5**
	comp=Z,3.8nm,0.9s						
PDAR	**Pinedale Array**	**72.14**	**331**	P	**P**	**20 27 47.6**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=128,slow=6.9,SNR=2.2						
HWUT	**Hardware Ranch**	**72.18**	**329**	eP	**P**	**20 27 47.3**	**+1.1**
	comp=Z,2.8nm,0.8s						
HVU	**Hansel Valley**	**72.90**	**328**	eP	**P**	**20 27 51.4**	**+0.9**
	comp=Z,2.6nm,0.9s						
OMMB	**Old Mammoth Mi**	**73.25**	**322**	eP	**P**	**20 27 54.4**	**+1.5**
	comp=Z,8.8nm,1.5s						
NVAR	**Mina Array Bea**	**73.41**	**323**	P	**P**	**20 27 55.2**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=138,slow=5.5,SNR=6.4						
KVN	**Kaiserville**	**73.72**	**323**	eP	**P**	**20 27 56.6**	**+1.1**
	comp=Z,2.2nm,0.7s						
YHH	**Holmes Hill**	**74.31**	**332**	eP	**P**	**20 28 00.4**	**+1.5**
	comp=Z,5.6nm,1.2s						
PAHR	**Pah Rah Range**	**74.90**	**323**	eP	**P**	**20 28 04.0**	**+1.7**
	comp=Z,3.8nm,0.9s						
HLID	**Hailey**	**75.04**	**329**	eP	**P**	**20 28 04.8**	**+1.8**
	comp=Z,2.0nm,0.9s						
TOA0	**Torodi Ar. Sit**	**78.65**	**71**	eP	**P**	**20 28 22.4**	**-1.3**
	comp=Z,14nm,0.9s						
TOA1	**Torodi Ar. Sit**	**78.65**	**71**	eP	**P**	**20 28 22.4**	**-1.3**
TORD	**Torodi Ar. Bea**	**78.65**	**71**	P	**P**	**20 28 22.4**	**-1.3**
	comp=Z,13nm,1.0s,baz=254,slow=4.4,SNR=37						
TAM	**Tamanrasset**	**85.88**	**64**	eP	**P**	**20 29 02.0**	**+0.3**
	comp=Z,9.2nm,1.2s						
ESDC	**Sonseca Array**	**86.22**	**45**	P	**P**	**20 29 03.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=249,slow=6.2,SNR=6.1						
YKA	**Yellowknife Ar**	**89.42**	**341**	P	**P**	**20 29 17.1**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=137,slow=5.1,SNR=11						
KEST	**Kesra**	**94.00**	**53**	LR	LR	21 12 37.9	
	comp=Z,78nm,19.6s,baz=264,slow=36						
INK	**Inuvik**	**99.16**	**340**	LR	LR	21 18 16.6	
	comp=Z,35nm,18.8s,baz=106,slow=38						
VYHS	**Vyhne**	**104.67**	**43**	ePDIF	**Pdif**	**20 30 31.9**	**+4.8**
H11S2	**WAKE ISLAND Hy**	**125.92**	**279**	T	T	22 54 52.6	
	baz=102,slow=74						
H11S1	**WAKE ISLAND Hy**	**125.93**	**279**	T	T	22 54 51.7	
	baz=102,slow=74						
H11S3	**WAKE ISLAND Hy**	**125.94**	**279**	T	T	22 54 52.9	
	baz=102,slow=74						
H11N3	**WAKE ISLAND Hy**	**125.98**	**280**	T	T	22 54 44.2	
	baz=102,slow=75						
H11N2	**WAKE ISLAND Hy**	**125.99**	**280**	T	T	22 54 47.7	
	baz=102,slow=75						
H11N1	**WAKE ISLAND Hy**	**126.00**	**280**	T	T	22 54 52.3	
	baz=102,slow=75						
ASAR	**Alice Springs**	**130.13**	**210**	PKP	**PKPdf**	**20 35 32.3**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=149,slow=2.0,SNR=3.2						
KURBB	**Kurchatov Arra**	**141.24**	**31**	PKP	**PKPdf**	**20 35 52.7**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=314,slow=2.9,SNR=4.3						
ZALV	**Zalesovo Beam**	**141.55**	**23**	PKhKP	PKPpre	20 35 45.3	
	comp=Z,0.6nm,0.6s,baz=300,slow=3.7,SNR=2.8						
ZALV				PKP	sPKPdf	20 35 52.8	-1.3
	comp=Z,1.1nm,0.6s,baz=289,slow=1.5,SNR=6.7						
MAKZ	**Makanchi**	**145.46**	**34**	ePKPdf	**PKPbc**	**20 35 59.5**	**+0.1**
MK31	**Makanchi Array**	**145.63**	**33**	ePKPdf	**PKPdf**	**20 35 59.9**	**+0.2**
MKAR	**Makanchi Array**	**145.63**	**33**	PKPbc	**PKPab**	**20 36 00.2**	**0.0**
	comp=Z,6.1nm,0.8s,baz=325,slow=3.5,SNR=44						
KSH	**Kashi**	**145.67**	**49**	ePKPbc	**PKPab**	**20 36 01.3**	**+0.5**
KSH				pPKP	PKiKP	20 36 10.1	+5.9
KSH				sPKP		20 36 14.0	
KSH				PP	**PP**	**20 39 24.9**	**+3.9**
KSH				PKS	**PKSdf**	**20 39 35.3**	**-0.4**
MJAR	**Matsushiro Arr**	**149.89**	**309**	PKPbc	**PKPbc**	**20 36 11.5**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=110,slow=1.9,SNR=6.1						
MAJO	**Matsushiro**	**149.89**	**309**	ePKPbc	**PKPbc**	**20 36 11.5**	**-0.4**
SONA0	**Songino Array**	**152.39**	**4**	ePKPab	**PKPab**	**20 36 26.8**	**-0.7**
SONM	**Songino Array**	**152.39**	**4**	PKPbc	**PKPbc**	**20 36 17.1**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=347,slow=3.1,SNR=6.1						
SONM				PKPab	**PKPab**	**20 36 26.8**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=323,slow=2.1,SNR=3.6						
LZH	**Lanzhou**	**163.54**	**15**	ePKP	**PKPdf**	**20 36 24.3**	**-0.4**
LZH				pPKP	sPKPdf	20 36 34.9	+8.8
LZH				sPKP		20 36 38.5	
LZH				PKP	**sPKPab**	**20 37 18.3**	**+0.6**
LZH				LR	LR		
	comp=N,45nm,18.1s						
LZH				LR	LR		
	comp=E,52nm,17.8s						
LZH				LR	LR		
	comp=Z,73nm,20.0s						
CD2	**Chengdu**	**168.32**	**24**	PKP	**PKPdf**	**20 36 27.0**	**-1.6**

IDC 23 20:17:43.6±2.9**, 22°.07N**×**144°.50E, h0**km**, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.5**/43**, mbtmp3.8**/5**, Error ellipse: s-maj=135.0km s-min=24.1km az=81.0, Volcano Islands region**

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

WRA	**Warramunga Arr**	**42.92**	**194**	P	P	20 25 44.7	+0.4
	0.9nm,0.3s,baz=12,slow=8.9,SNR=9.7						
ASAR	**Alice Springs**	**46.62**	**193**	P	P	20 26 13.3	-0.4
	0.4nm,0.5s,baz=21,slow=13,SNR=5.2						
ZALV	**Zalesovo Beam**	**54.68**	**321**	P	P	20 27 14.7	+0.4
	0.5nm,0.4s,baz=116,slow=6.6,SNR=3.7						
MKAR	**Makanchi Array**	**55.35**	**312**	P	P	20 27 19.7	+0.4
	0.4nm,0.5s,baz=91,slow=8.9,SNR=4.9						
MKAR				PcP	PcP	20 28 18.0	-1.9
	0.2nm,0.4s,baz=74,slow=5.3,SNR=3.9						
FINES	**FINESS Array B**	**83.37**	**335**	P	P	20 30 12.7	+0.3
	0.6nm,0.3s,baz=66,slow=3.4,SNR=8.6						

MEX 23 20:28:28.6±0.5, 18°.39N×101°.20W, h61^{km}±9^{km}, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.81**	**97**	*e*P	Pn	20 28 42.9	-1.4
ARIG				*e*S	Sn	20 28 53.8	-2.1
ZIIG	**Zihuatanejo**	**0.82**	**198**	*e*P	Pn	20 28 42.6	-1.7
ZIIG				*e*S	Sn	20 28 54.2	-1.7
CAIG	**El Cayaco**	**1.60**	**146**	*e*P	Pn	20 28 53.6	-1.0
CAIG				*i* S	Sn	20 29 11.9	-2.3
PLIG	**Platanillo**	**1.61**	**89**	*i* P	Pn	20 28 53.3	-1.6
PLIG				*i* S	Sn	20 29 13.2	-1.4

WEL 23 21:02:06.7, 39°.2S±0°.8×174°.8E±0°.8, h27^{km}±2^{km}, M3.4/51, ML3.6/38, MLv3.4/51, Error ellipse: s-maj=0.0km s-min=0.0km az=134.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.10**	**327**	P	Pb	21 02 12.2	+0.6
VRZ				S	Sb	21 02 16.8	+1.8
PKVZ	**Pokaka**	**0.41**	**102**	P	Pb	21 02 15.7	0.0
PKVZ				S	Sb	21 02 22.5	+0.8
MHEZ	**Mangahewa**	**0.41**	**288**	P	Pb	21 02 15.9	+0.3
MHEZ				S	Sn	21 02 23.3	-0.3
LREZ	**Lake Rotokare**	**0.41**	**232**	P	Pb	21 02 15.4	-0.3
LREZ				S	Sn	21 02 22.9	-0.8
DREZ	**Durham Road**	**0.49**	**272**	P	Pb	21 02 17.0	+0.2
DREZ				S	Sn	21 02 25.4	-0.1
TWVZ	**Taurewa**	**0.49**	**74**	P	Pb	21 02 16.8	-0.2
MTVZ	**Mangateitei**	**0.53**	**110**	P	Pb	21 02 17.6	+0.1
PREZ	**Palmer Road**	**0.54**	**255**	P	Pb	21 02 17.6	0.0
WAZ	**Wanganui**	**0.56**	**167**	P	Pb	21 02 17.6	-0.4
FWVZ	**Far West T-bar**	**0.57**	**95**	P	Pb	21 02 18.1	-0.2
DRZ	**Dome Shelter**	**0.58**	**97**	P	Pb	21 02 18.7	+0.2
WHVZ	**Whangaehu Hut**	**0.60**	**98**	P	Pb	21 02 18.6	-0.1
WTVZ	**West Tongariro**	**0.60**	**81**	P	Pb	21 02 18.6	-0.1
NGZ	**Ngauruhoe**	**0.60**	**87**	P	Pb	21 02 18.7	-0.1
KHEZ	**Kahui Hut**	**0.64**	**262**	P	Pb	21 02 19.4	+0.1
KRVZ	**Karewarewa**	**0.64**	**80**	P	Pb	21 02 19.3	-0.1
TUVZ	**Tukino**	**0.65**	**96**	P	Pb	21 02 19.6	+0.1
PKE	**Pukeiti**	**0.65**	**271**	P	Pb	21 02 19.5	-0.1
HIZ	**Hauiti**	**0.69**	**2**	P	Pb	21 02 20.2	-0.1
KATZ	**Kakaramea**	**0.71**	**71**	P	Pb	21 02 20.6	-0.1
MOVZ	**Moawhango**	**0.75**	**106**	P	Pb	21 02 20.7	-0.4
NBEZ	**Newall Road No**	**0.75**	**265**	P	Pb	21 02 21.1	-0.1
NMEZ	**Namu Road**	**0.76**	**254**	P	Pb	21 02 20.9	-0.5
RATZ	**Rangitukua**	**0.81**	**66**	P	Pb	21 02 22.2	-0.1
RITZ	**Rihia Road**	**0.83**	**74**	P	Pb	21 02 22.6	0.0
WATZ	**Wairara**	**0.86**	**55**	P	Pn	21 02 22.9	-0.2
BHHZ	**Black Hill Sta**	**1.00**	**107**	P	Pn	21 02 24.5	-0.5
HATZ	**Hinemaiaia**	**1.03**	**73**	P	Pn	21 02 25.2	-0.2
TLZ	**Tolley Road**	**1.04**	**33**	P	Pn	21 02 25.0	-0.5
KUTZ	**Kaahu Road**	**1.06**	**48**	P	Pn	21 02 25.8	+0.1
OHWZ	**Ohakea**	**1.07**	**159**	P	Pn	21 02 25.6	-0.2
TSZ	**Takapari Road**	**1.22**	**135**	P	Pn	21 02 27.9	-0.1
KWHZ	**Kaweka Forest**	**1.26**	**100**	P	Pn	21 02 28.6	+0.1
KRHZ	**Kereru**	**1.27**	**111**	P	Pb	21 02 29.5	-0.5
PNHZ	**Pukenui**	**1.27**	**124**	P	Pn	21 02 29.3	+0.5
MRHZ	**Matea Rd**	**1.29**	**74**	P	Pn	21 02 28.9	-0.1
BKZ	**Black Stump Fm**	**1.29**	**89**	P	Pn	21 02 29.5	+0.4
GRRZ	**Galatos Road**	**1.32**	**50**	P	Pn	21 02 29.1	-0.2
POWZ	**Post Office Ro**	**1.39**	**149**	P	Pn	21 02 30.6	+0.3
MCHZ	**McNeill Hill**	**1.47**	**100**	P	Pb	21 02 33.1	-0.3
DVHZ	**Dannevirke**	**1.50**	**137**	P	Pb	21 02 33.0	-1.0
WPHZ	**Waipukurau**	**1.51**	**125**	P	Pb	21 02 33.5	-0.6
MRZ	**Mangatainoka R**	**1.56**	**159**	P	Pn	21 02 33.0	+0.3
TOZ	**Tahuroa Road**	**1.57**	**20**	P	Pn	21 02 32.5	-0.2
MTHZ	**Maungataniwha**	**1.61**	**78**	P	Pn	21 02 33.7	+0.3
PRWZ	**Pori Road**	**1.61**	**147**	P	Pb	21 02 34.5	-1.2
OGWZ	**Otaki Gorge**	**1.63**	**171**	P	Pn	21 02 34.0	+0.4
MUGZ	**Murupara**	**1.68**	**65**	P	Pn	21 02 35.2	+0.8
ARHZ	**Aropaoanui**	**1.69**	**93**	P	Pb	21 02 36.2	-0.9
DUWZ	**D'Urville Isla**	**1.74**	**203**	P	Pn	21 02 35.2	+0.1
PRHZ	**Porangahau**	**1.75**	**128**	P	Pb	21 02 37.3	-0.9
TIWZ	**Tintock**	**1.77**	**153**	P	Pn	21 02 36.7	+1.2
HOWZ	**Holdsworth Sta**	**1.77**	**163**	P	Pn	21 02 36.3	+0.8
BFZ	**Birch Farm**	**1.83**	**144**	P	Pn	21 02 37.0	+0.6
CAW	**Cannon Point**	**1.91**	**175**	P	Pn	21 02 37.9	+0.5
SNGZ	**Shannon Statio**	**2.00**	**79**	P	Pb	21 02 41.1	-1.4
MTW	**Mount Morrison**	**2.02**	**165**	P	Pn	21 02 39.9	+1.0
URZ	**Urewera**	**2.02**	**63**	P	Pn	21 02 40.6	+1.6
TCW	**Tory Channel**	**2.04**	**192**	P	Pn	21 02 39.0	-0.3
TMWZ	**Te Maipa**	**2.06**	**157**	P	Pb	21 02 41.8	-1.8
MKAZ	**Moumakai**	**2.12**	**7**	P	Pn	21 02 40.5	+0.3
RAGZ	**Rawiri**	**2.14**	**71**	P	Pb	21 02 43.1	-1.7
AWAZ	**Awhitu Peninsu**	**2.15**	**356**	P	Pn	21 02 41.6	+1.0
BHW	**Baring Head**	**2.20**	**179**	P	Pn	21 02 43.3	+1.9
MSWZ	**Moikau Station**	**2.23**	**172**	P	Pn	21 02 43.7	+1.8
ETAZ	**East Tamaki Re**	**2.25**	**2**	P	Pb	21 02 46.0	-0.7
WTAZ	**Waiatarua**	**2.28**	**355**	P	Pb	21 02 45.5	-1.7
MWZ	**Matawai**	**2.28**	**68**	P	Pb	21 02 45.0	-2.3
NNZ	**Nelson**	**2.29**	**208**	P	Pn	21 02 43.6	+0.9
TUWZ	**Tuamarina**	**2.32**	**197**	P	Pn	21 02 43.7	+0.7
RIGZ	**Rimuhau**	**2.34**	**79**	P	Pb	21 02 46.3	-1.9
PLWZ	**Palliser**	**2.38**	**172**	P	Pb	21 02 46.8	-2.1
QRZ	**Quartz Range**	**2.39**	**227**	P	Pn	21 02 43.7	-0.4
WIAZ	**Waiheke Island**	**2.42**	**6**	P	Pn	21 02 45.3	+0.8
TKGZ	**Te Karaka**	**2.48**	**73**	P	Pb	21 02 48.6	-2.0
RUGZ	**Raukumara Rang**	**2.56**	**62**	P	Pn	21 02 48.8	+2.4
KUZ	**Kuaotunu**	**2.56**	**16**	P	Pn	21 02 46.7	+0.3
HAZ	**Te Kaha**	**2.73**	**59**	P	Pb	21 02 52.9	-2.0
PKGZ	**Pakihiroa**	**2.87**	**64**	P	Pb	21 02 54.1	-3.1
PUZ	**Puketiti**	**2.92**	**68**	P	Pn	21 02 53.5	+2.2
THZ	**Tophouse**	**2.94**	**209**	P	Pn	21 02 52.3	+0.5
WCZ	**Waipu Caves**	**3.29**	**353**	P	Pn	21 02 56.6	+0.3
KHZ	**Kahutara**	**3.35**	**197**	P	Pn	21 02 58.2	+0.9
DSZ	**Denniston Nort**	**3.43**	**221**	P	Pn	21 03 00.5	+2.2
GVZ	**Greta Valley S**	**3.99**	**199**	P	Pn	21 03 08.7	+2.6
LTZ	**Lake Taylor**	**4.06**	**208**	P	Pn	21 03 07.6	+0.5
OUZ	**Omahuta**	**4.10**	**346**	P	Pn	21 03 08.7	+1.1
INZ	**Inchbonnie**	**4.35**	**215**	P	Pn	21 03 11.6	+0.7
OKCZ	**Okains Bay**	**4.70**	**196**	P	Pn	21 03 16.3	+0.5

IDC ***23*** *21:12:17.7±0.7, 20°.06S×70°.62W, h0^{km}, mb4.3/11, mb1 4.4/14, mb1mx4.3/29, mbtmp4.3/14, ML3.8/3, MS4.1/22, Ms1 4.1/22, ms1mx4.0/31, Error ellipse: s-maj=21.3km s-min=13.6km az=56.0*

SJA ***23*** *21:12:18.6±0.4, 20°.40S×70°.73W, h10^{km}±4^{km}, ML3.7, MW3.4*

ISCJB ***23*** *21:12:18.8±1.3, 20°.22S±0°.03×71°.11W±0°.03, h33^{km}±10^{km}, mb4.4/26, MS4.2/18, Error ellipse: s-maj=5.0km s-min=4.2km az=162.6*

GUC ***23*** *21:12:19.5±0.6, 20°.23S×70°.91W, h37^{km}±2^{km}, ML4.5*

NEIC ***23*** *21:12:19.0±0.0, 20°.23S×70°.91W, h37^{km}, mb4.6/23, ML4.5(GUC), After GUC.*

NEIC Felt [III] at Huara; [II] at Alto Hospicio, Camina, Iquique and La Tirana.

GCMT ***23*** *21:12:25.0±0.4, 20°.16S±0°.02×71°.13W±0°.03, h25^{km}±1^{km}, MW5.0/72, Moment Tensor Solution. s21,c23; s72,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.76±.18; M$_{\theta\theta}$-0.15±.10; M$_{\phi\phi}$-2.62±.12; M$_{r\theta}$0.14±.19; M$_{\theta\phi}$0.73±.06; M$_{\phi r}$-2.21±.22; Best double couple: M$_0$3.56300×10^{16} NP1:ϕ_s172.00000°, δ64.00000°, λ96.00000°. NP2: ϕ_s337.00000°, δ26.00000°, λ77.00000°. Principal axes: T 3.5550, Plg70.0000°, Azm95.0000°; N 0.0080, Plg6.0000°, Azm349.0000°; P -3.5710, Plg19.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 21:12:17.3±0.8, 20°.17S±0°.03×70°.92W±0°.04, h11^{km}±4^{km}, n118, σ2^{s}.27/122, mb4.5/26, MS4.3/18, 9C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.94**	**53**⇓	*e*P	**Pn**	**21 12 37.2**	**+0.7**
PSGC				*i* S	**Sn**	**21 12 50.5**	**+0.4**
PSGCX	**Pisagua**	**0.94**	**53**	*e*P	**Pn**	**21 12 37.5**	**+0.9**
PSGCX				*e*S	**Sn**	**21 12 51.3**	**+1.2**
PB11	**IPOC Station P**	**1.26**	**71**	*e*Pn	**Pg**	**21 12 41.8**	**+0.3**
PB11				*e*Sn	**Sb**	**21 12 52.6**	**-4.8**
PB11	**IPOC Station P**	**1.26**	**71**	*e*P	**Pg**	**21 12 41.2**	**-0.3**
PB11	**IPOC Station P**	**1.26**	**71**⇓	*e*P	**Pg**	**21 12 42.1**	**+0.6**
PB11				*i* S	**Sn**	**21 12 58.8**	**+0.9**
PB11				IAML		21 13 07.7	
	comp=N,11µm,0.6s						
PB02	**IPOC Station P**	**1.49**	**140**⇑	*e*P	**Pb**	**21 12 44.9**	**-0.2**
PB02				*e*S	**Sn**	**21 13 03.5**	**-0.1**
PB02				IAML		21 13 10.8	
	comp=E,19µm,0.3s						
PB01	**IPOC Station P**	**1.60**	**123**	*e*Pn	**Pb**	**21 12 47.0**	**+0.1**
PB01	**IPOC Station P**	**1.60**	**123**	*e*P	**Pg**	**21 12 47.8**	**-0.3**
PB01				*e*S	**Sg**	**21 13 09.2**	**+0.4**
PB01	**IPOC Station P**	**1.60**	**123**⇑	*e*P	**Pb**	**21 12 47.0**	**+0.1**
PB01				*i* S	**Sb**	**21 13 07.6**	**+0.5**
PB01				IAML		21 13 11.9	
	comp=N,13µm,0.4s						
MNMC	**Minye Minye**	**1.62**	**51**	*e*Pn	**Pg**	**21 12 48.2**	**-0.2**
MNMC	**Minye Minye**	**1.62**	**51**⇑	*i*P	**Pg**	**21 12 48.0**	**-0.4**
MNMC				*i* S	**Sg**	**21 13 09.6**	**0.0**
PB12	**IPOC Station P**	**1.65**	**20**⇑	*e*P	**Pg**	**21 12 48.3**	**-0.7**
PB12				*e*S	**Sg**	**21 13 10.6**	**+0.2**
PB12				IAML		21 13 20.4	
	comp=E,7µm,0.4s						
PB08	**IPOC Station P**	**1.66**	**89**	*e*P	**Pn**	**21 12 47.0**	**+0.3**
PB08				*e*S	**Sn**	**21 13 08.3**	**+0.1**
PB08	**IPOC Station P**	**1.66**	**89**⇑	*e*P	**Pb**	**21 12 48.2**	**+0.1**
PB08				*i* S	**Sg**	**21 13 10.2**	**-0.6**
PB08				IAML		21 13 19.9	
	comp=N,4µm,0.6s						
GO01	**Chusmiza**	**1.70**	**73**	*e*Pn	**Pg**	**21 12 49.3**	**-0.7**
GO01	**Chusmiza**	**1.70**	**73**⇑	*i*P	**Pg**	**21 12 49.3**	**-0.7**
GO01				*i* S	**Sg**	**21 13 12.3**	**+0.2**
GO01				IAML		21 13 14.0	
	comp=N,19µm,0.2s						
PB07	**IPOC Station P**	**1.82**	**148**⇑	*e*P	**Pn**	**21 12 49.5**	**+0.7**
PB07				*e*S	**Sn**	**21 13 11.0**	**-0.9**
PB03	**IPOC Station P**	**2.16**	**150**⇑	*e*P	**Pn**	**21 12 54.2**	**+0.8**
PB03				*i* S	**Sg**	**21 13 27.9**	**+1.0**
PB03				IAML		21 13 35.6	
	comp=E,2µm,0.3s						
PB09	**IPOC Station P**	**2.25**	**136**⇑	*i*P	**Pb**	**21 12 56.9**	**-1.2**
PB09				*i* S	**Sb**	**21 13 26.3**	**+0.3**
PB09				IAML		21 13 36.9	
	comp=E,5µm,0.3s						
PB04	**IPOC Station P**	**2.27**	**162**	*e*Pn	**Pn**	**21 12 55.4**	**+0.5**
PB04				*e*Sn	**Sn**	**21 13 14.7**	**-8.2**
LVC	**Limon Verde**	**3.06**	**143**	Pn	**Pn**	**21 13 07.8**	**+1.8**
	comp=E,13nm,0.3s,baz=356,slow=5.1,SNR=98						
LVC				LR	LR	21 13 41.0	
	comp=E,781nm,20.9s,baz=314,slow=28						
LVC				Sn	**Sn**	**21 13 44.9**	**+2.0**
	comp=E,76nm,0.3s,baz=64,slow=20,SNR=7.0						
LVC				Lg	Lg	21 13 54.7	
	comp=E,119nm,0.3s,baz=110,slow=2.7,SNR=6.3						
LVC	**Limon Verde**	**3.06**	**143**	*e*Pn	**Pn**	**21 13 08.5**	**+2.4**
PB10	**IPOC Station P**	**3.34**	**174**	*e*Pn	**Pn**	**21 13 09.1**	**-0.4**
LPAZ	**La Paz**	**4.68**	**35**	Pn	Pb	21 13 34.1	-5.7
	comp=E,6.2nm,0.3s,baz=129,slow=2.6,SNR=87						
LPAZ				Lg	Lg	21 14 46.5	
	comp=E,0.6nm,0.3s,baz=152,slow=19,SNR=2.1						
LPAZ	**La Paz**	**4.68**	**35**	*e*P	**Pb**	**21 13 35.4**	**-4.4**
GO02	**Mina Guanaco**	**5.12**	**166**	*e*Pn	**Pn**	**21 13 34.8**	**+0.6**
YJA	**Yavi**	**5.42**	**113**	*e*P	**Pn**	**21 13 40.9**	**+2.4**
YJA				IAML		21 13 52.4	
	comp=Z,37nm,0.7s						
HJA	**Humahuaca**	**5.95**	**122**	*e*P	**Pn**	**21 13 47.4**	**+1.7**
HJA				IAML		21 13 58.5	
	comp=Z,44nm,0.5s						
AZAP	**Zapla**	**6.76**	**128**	*e*P	**Pn**	**21 13 58.4**	**+1.7**
AZAP				IAML		21 14 09.1	
	comp=Z,16nm,0.4s						
GO03	**Copiap**	**7.42**	**175**	*e*Pn	**Pn**	**21 14 06.3**	**+0.8**
AHML	**Horco Molle**	**8.34**	**143**	*e*P	**Pn**	**21 14 18.8**	**+0.5**
LCO	**Las Campanas**	**8.80**	**179**	*e*Pn	**Pn**	**21 14 22.5**	**-2.3**
VCA	**Vinchina**	**8.88**	**164**	*e*P	**Pn**	**21 14 26.9**	**+1.2**
NNA	**Nana**	**9.93**	**324**	Sn	**Sn**	**21 16 33.2**	**+1.6**
	comp=Z,1.9nm,0.3s,baz=238,slow=19,SNR=3.4						
NNA				LR	LR	21 18 22.2	
	comp=Z,507nm,18.1s,baz=152,slow=36						
NNA	**Nana**	**9.93**	**324**	*e*Pn	**Pn**	**21 14 41.0**	**+0.9**
GO04	**Tololo Observa**	**9.96**	**179**	*e*Pn	**Pn**	**21 14 40.1**	**-0.5**
SIV	**San Ignacio**	**10.24**	**68**	Pn	**Pn**	**21 14 44.1**	**-0.2**
	comp=Z,2.2nm,0.3s,baz=262,slow=12,SNR=19						
SIV				LR	LR	21 19 17.4	
	comp=Z,3µm,18.4s,baz=274,slow=42						
CFA	**Coronel Fontan**	**11.64**	**169**	Pn	Pn	21 15 10.2	+6.8
	comp=Z,1.0nm,0.3s,baz=342,slow=12,SNR=2.4						
CFA				Sn	Sn	21 17 30.0	+17
	comp=Z,0.6nm,0.3s,baz=107,slow=17,SNR=2.2						
CFA				LR	LR	21 19 45.6	
	comp=Z,1µm,20.1s,baz=328,slow=38						
CPUP	**Villa Florida**	**13.91**	**119**	Pn	**Pn**	**21 15 34.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=270,slow=11,SNR=1.4						
CPUP				LR	LR	21 21 36.2	
	comp=Z,687nm,21.0s,baz=297,slow=41						
PLCA	**Paso Flores**	**20.50**	**179**	P	Pn	21 16 57.9	+0.3
	comp=Z,6.7nm,1.0s,baz=18,slow=14,SNR=8.1						
PLCA	**Paso Flores**	**20.50**	**179**	*e*P	**P**	**21 16 54.0**	**-1.4**
	comp=Z,8.7nm,0.9s						
PTGA	**Pitinga**	**22.09**	**30**	P	**P**	**21 17 12.3**	**-0.4**
	comp=Z,4.8nm,0.4s,baz=204,slow=15,SNR=13						
PTGA	**Pitinga**	**22.09**	**30**	*e*P	**P**	**21 17 11.9**	**-0.8**
	comp=Z,14nm,0.8s						
FLOC	**Florencia**	**22.11**	**347**	*e*P	**P**	**21 17 12.3**	**-0.6**
BDFB	**Brasilia**	**22.25**	**82**	P	**P**	**21 17 13.8**	**-0.7**
	comp=Z,9.5nm,0.9s,baz=251,slow=16,SNR=5.6						
BDFB				LR	LR	21 27 21.8	
	comp=Z,1µm,21.6s,baz=270,slow=41						
BDFB	**Brasilia**	**22.25**	**82**	*e*P	**P**	**21 17 09.8**	**-4.7**
	comp=Z,15nm,1.0s						
BDFB				*e*P	**P**	**21 17 13.8**	**-0.7**
SOTA	**Rioblanco**	**22.86**	**345**	*e*P	**P**	**21 17 28.2**	**+6.9**
BBAC	**Balboa, Cauca**	**22.91**	**344**	*e*P	**P**	**21 17 26.3**	**+4.6**
POPC	**Popayan, Colom**	**23.27**	**345**	*e*P	**P**	**21 17 29.6**	**+4.3**
PRAC	**Prado**	**24.05**	**350**	*e*P	**P**	**21 17 36.2**	**+3.5**
ROSC	**El Rosal**	**25.08**	**352**	LR	LR	21 28 55.9	
	comp=Z,907nm,19.7s,baz=213,slow=40						
RREF	**El Recreo**	**25.29**	**350**	*e*P	**P**	**21 17 50.9**	**+6.2**
NORC	**Norcasia**	**25.87**	**351**	*e*P	**P**	**21 17 51.5**	**+2.3**
RUSC	**La Rusia**	**25.99**	**355**	*e*P	**P**	**21 17 53.5**	**+2.7**
ZARC	**Zaragoza, Cauc**	**27.76**	**352**	*e*P	**P**	**21 18 06.2**	**-0.1**
SMLC	**San Martn de**	**28.96**	**354**	*e*P	**P**	**21 18 14.8**	**-2.1**
MDP	**Montagnes des**	**30.88**	**37**	P	**P**	**21 18 34.7**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=230,slow=9.2,SNR=5.4						
CMIG	**Matias Romero**	**43.88**	**326**	LR	LR	21 38 25.8	
	comp=Z,114nm,19.3s,baz=157,slow=36						
PMSA	**Palmer Station**	**44.81**	**176**	LR	LR	21 38 01.3	
	comp=Z,450nm,18.2s,baz=208,slow=34						
TXAR	**Lajitas Array**	**58.48**	**326**	P	**P**	**21 22 15.8**	**+2.2**
	comp=Z,1.2nm,0.9s,baz=139,slow=6.3,SNR=10						
TXAR				LR	LR	21 46 23.8	
	comp=Z,91nm,19.6s,baz=0.0,slow=35						
MIAR	**Mount Ida**	**58.53**	**338**	*e*P	**P**	**21 22 13.2**	**-0.6**
	comp=Z,5.9nm,0.9s						
T49A	**Edmonton**	**58.61**	**346**	*e*P	**P**	**21 22 13.4**	**-0.9**
	comp=Z,8.2nm,1.0s						
T47A	**Sharon Grove**	**58.87**	**345**	*e*P	**P**	**21 22 17.5**	**+1.4**
	comp=Z,11nm,1.1s						
W39A	**Magazine**	**59.19**	**338**	*e*P	**P**	**21 22 16.4**	**-1.9**
	comp=Z,6.8nm,1.0s						
VNA3	**Neumayer Olymp**	**61.93**	**161**	P	**P**	**21 22 35.6**	**-1.0**
VNA1	**Neumayer--Stat**	**62.16**	**160**	P	**P**	**21 22 41.3**	**+3.1**
SNAA	**Sanae**	**64.14**	**161**	P	**P**	**21 22 53.7**	**+2.3**
SNAA	**Sanae**	**64.14**	**161**	*e*P	**P**	**21 22 49.7**	**-1.8**
	comp=Z,4.2nm,1.1s						
X16A	**Lo Mia Camp, P**	**66.58**	**324**	*e*P	**P**	**21 23 05.0**	**-2.9**
	comp=Z,4.1nm,1.1s						
U15A	**North Rim**	**68.54**	**325**	*e*P	**P**	**21 23 18.8**	**-1.5**
	comp=Z,4.9nm,1.1s						
SHPR	**Sheep Range**	**70.17**	**323**	*e*P	**P**	**21 23 29.0**	**-1.3**
	comp=Z,2.9nm,0.9s						
DBIC	**Dimbokro**	**70.18**	**75**	P	**P**	**21 23 29.8**	**-0.9**
	comp=Z,11nm,1.1s,baz=229,slow=2.9,SNR=4.0						
DBIC				LR	LR	21 52 54.5	
	comp=Z,310nm,19.6s,baz=223,slow=35						
ISA	**Isabella, Lake**	**71.50**	**321**	*e*pP	**P**	**21 23 42.9**	**+4.6**
DUG	**Dugway, Tooele**	**71.62**	**327**	*e*P	**P**	**21 23 37.4**	**-1.6**
	comp=Z,4.0nm,1.0s						
PDAR	**Pinedale Array**	**72.04**	**331**	P	**P**	**21 23 44.7**	**+3.1**
	comp=Z,0.3nm,0.4s,baz=134,slow=7.7,SNR=2.5						
HWUT	**Hardware Ranch**	**72.08**	**329**	*e*P	**P**	**21 23 38.7**	**-3.1**
	comp=Z,4.9nm,0.7s						
ELK	**Elko**	**73.28**	**326**	*e*P	**P**	**21 23 47.0**	**-2.0**
	comp=Z,2.3nm,0.9s						
NVAR	**Mina Array Bea**	**73.30**	**323**	P	**P**	**21 23 52.9**	**+3.8**
	comp=Z,2.0nm,0.9s,baz=149,slow=6.0,SNR=9.2						
ULM	**Lac du Bonnet**	**73.50**	**344**	LR	LR	21 57 43.6	
	comp=Z,86nm,21.9s,baz=170,slow=37						
FLWY	**Flagg Ranch**	**73.58**	**331**	*e*P	**P**	**21 23 50.5**	**-0.2**
	comp=Z,6.3nm,0.9s						
PPT2	**Papeete2**	**73.79**	**257**	*e*S	**S**	**21 33 23.3**	**-0.7**
	comp=Z,116nm,24.8s						
PPT2				*e*LR	LR	21 46 38.4	
	comp=Z,231nm,24.5s						
YHH	**Holmes Hill**	**74.20**	**332**	*e*P	**P**	**21 23 53.4**	**-1.1**
	comp=Z,5.2nm,1.0s						
PLID	**Pearl Lake**	**76.82**	**329**	*e*P	**P**	**21 24 06.5**	**-2.9**
	comp=Z,2.3nm,0.9s						
TOA0	**Torodi Ar. Sit**	**78.70**	**71**	*e*P	**P**	**21 24 18.3**	**-1.8**
	comp=Z,20nm,1.0s						
TOA1	**Torodi Ar. Sit**	**78.70**	**71**	*e*P	**P**	**21 24 19.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**78.70**	**71**	P	**P**	**21 24 19.0**	**-1.2**
	comp=Z,12nm,1.0s,baz=266,slow=4.4,SNR=33						
TORD				LR	LR	21 58 09.2	
	comp=Z,312nm,18.7s,baz=280,slow=35						
RAR	**Rarotonga**	**81.90**	**250**	LR	LR	21 52 42.9	
	comp=Z,214nm,19.1s,baz=58,slow=30						
FRB	**Frobisher Bay**	**83.66**	**1**	LR	LR	22 01 10.0	
	comp=Z,120nm,20.7s,baz=209,slow=35						
BOSA	**Boshof**	**85.73**	**119**	LR	LR	22 00 10.0	
	comp=Z,175nm,18.3s,baz=235,slow=34						
TAM	**Tamanrasset**	**85.92**	**64**	*e*P	**P**	**21 24 56.8**	**-1.2**
	comp=Z,9.4nm,1.1s						
MAW	**Mawson**	**86.13**	**164**	LR	LR	22 04 30.5	
	comp=Z,116nm,18.4s,baz=222,slow=36						
ESDC	**Sonseca Array**	**86.22**	**45**	P	**P**	**21 25 00.4**	**+1.4**
	comp=Z,1.4nm,0.9s,baz=250,slow=5.1,SNR=9.3						
ESDC				LR	LR	22 03 27.4	
	comp=Z,56nm,18.0s,baz=280,slow=36						
YKA	**Yellowknife Ar**	**89.32**	**341**	P	**P**	**21 25 14.2**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=140,slow=4.8,SNR=14						
YKA				LR	LR	22 09 07.3	
	comp=Z,10nm,19.2s,baz=124,slow=38						
BORG	**Borgarnes**	**92.78**	**19**	LR	LR	22 05 00.5	
	comp=Z,30nm,19.1s,baz=234,slow=34						
KEST	**Kesra**	**94.02**	**54**	LR	LR	22 08 38.5	
	comp=Z,224nm,20.0s,baz=244,slow=36						
RES	**Resolute Bay**	**95.88**	**354**	LR	LR	22 11 06.9	
	comp=Z,109nm,20.3s,baz=192,slow=37						
VYHS	**Vyhne**	**104.67**	**43**	*e*PDIF	**Pdif**	**21 26 30.2**	**+7.0**
H11S2	**WAKE ISLAND Hy**	**125.83**	**279**	T	T	23 50 53.6	
	baz=101,slow=74,SNR=240						
H11S1	**WAKE ISLAND Hy**	**125.84**	**279**	T	T	23 50 51.9	
	baz=101,slow=74,SNR=124						
H11S3	**WAKE ISLAND Hy**	**125.85**	**279**	T	T	23 50 54.9	
	baz=101,slow=74,SNR=148						
H11N3	**WAKE ISLAND Hy**	**125.89**	**280**	T	T	23 50 51.5	
	baz=102,slow=74,SNR=123						
H11N2	**WAKE ISLAND Hy**	**125.90**	**280**	T	T	23 50 52.5	
	baz=102,slow=74,SNR=80						
H11N1	**WAKE ISLAND Hy**	**125.90**	**280**	T	T	23 51 00.2	
	baz=102,slow=74,SNR=55						
ASAR	**Alice Springs**	**130.16**	**210**	PKP	**PKiKP**	**21 31 30.1**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=184,slow=2.8,SNR=4.5						
ABKAR	**Akbulak array**	**131.43**	**41**	*e*PKPdf	**PKPdf**	**21 31 29.2**	**-0.6**
ZALV	**Zalesovo Beam**	**141.51**	**23**	PKP	**PKiKP**	**21 31 50.1**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=293,slow=3.1,SNR=6.8						
NRN	**Naryn**	**144.87**	**46**	*e*PKPdf	**PKPdf**	**21 31 55.3**	**+0.2**
MAKZ	**Makanchi**	**145.44**	**33**	*e*PKPdf	**PKPbc**	**21 31 53.0**	**-2.4**
NIL	**Nilore**	**145.53**	**60**	*e*PKPdf	**PKPdf**	**21 31 52.4**	**-3.7**
MKAR	**Makanchi Array**	**145.61**	**33**	PKPbc	**PKPab**	**21 31 57.6**	**+1.3**
	comp=Z,10nm,0.9s,baz=316,slow=2.9,SNR=52						
KSH	**Kashi**	**145.68**	**49**	*e*PKPbc	**PKiKP**	**21 31 58.9**	**-1.4**
KSH				pPKP	sPKPab	21 32 08.0	+7.1
KSH				sPKP		21 32 11.8	
KSH				PP	**PP**	**21 35 22.8**	**+5.6**
KSH				PKS	**PKSdf**	**21 35 32.4**	**+0.6**
KSH				SKS	**SKSdf**	**21 39 02.6**	**-2.9**
KSH				AMB	AMB		
	comp=Z,100nm,5.4s						
USRK	**Ussuriysk Ar.**	**149.38**	**327**	PKPbc	**PKiKP**	**21 32 08.9**	**+1.3**
	comp=Z,6.0nm,1.0s,baz=22,slow=1.6,SNR=9.8						
MJAR	**Matsushiro Arr**	**149.78**	**309**	PKPbc	**PKiKP**	**21 32 10.1**	**+1.4**
	comp=Z,3.1nm,0.9s,baz=136,slow=1.0,SNR=6.6						
MAJO	**Matsushiro**	**149.78**	**309**	*e*PKPab	**PKiKP**	**21 32 10.1**	**+1.4**
SONM	**Songino Array**	**152.32**	**4**	PKP	**PKPdf**	**21 32 08.9**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=108,slow=3.2,SNR=4.4						
SONM				PKPbc	**pPKPbc**	**21 32 15.8**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=332,slow=3.1,SNR=7.9						
ULN	**Ulaanbaatar**	**152.32**	**3**	*e*PKPdf	**PKPdf**	**21 32 02.5**	**-4.2**
ULN				*e*PKPbc	**pPKPdf**	**21 32 09.2**	**-0.2**
LZH	**Lanzhou**	**163.49**	**15**	*e*PKP	**PKPdf**	**21 32 22.1**	**+1.3**
LZH				pPKP	sPKPdf	21 32 33.0	+8.8
LZH				sPKP		21 32 36.5	
LZH				PKP	**sPKPab**	**21 33 15.8**	**0.0**
LZH				LR	LR		
	comp=N,47nm,18.0s						
LZH				LR	LR		
	comp=E,55nm,18.2s						
LZH				LR	LR		
	comp=Z,76nm,19.9s						
CD2	**Chengdu**	**168.28**	**23**	PKP	**PKPdf**	**21 32 25.6**	**+1.0**

WEL 23 21:27:50.0, 42°S±1°×174°.3E±0°.9, h9^{km}±2^{km}, M4.2/25, ML4.5/19, MLv4.2/25, Error ellipse: s-maj=0.0km s-min=0.0km az=149.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.04**	**222**	P	Pg	21 27 51.9	+0.1
CMWZ				S	Sg	21 27 54.1	+1.0
BSWZ	**Blackbirch Sta**	**0.28**	**270**	P	Pg	21 27 56.4	+0.7
BSWZ				S	Sb	21 28 01.1	-1.1
TUWZ	**Tuamarina**	**0.37**	**321**	P	Pb	21 27 58.1	-0.7
TUWZ				S	Sb	21 28 03.7	-0.9
TCW	**Tory Channel**	**0.51**	**2**	P	Pb	21 28 00.5	-0.6
BHW	**Baring Head**	**0.56**	**57**	P	Pb	21 28 02.3	+0.3
PLWZ	**Palliser**	**0.76**	**79**	P	Pn	21 28 06.8	-0.3
MSWZ	**Moikau Station**	**0.81**	**69**	P	Pn	21 28 07.1	-0.5
NNZ	**Nelson**	**0.82**	**307**	P	Pg	21 28 06.2	+0.3
CAW	**Cannon Point**	**0.86**	**45**	P	Pb	21 28 07.5	+0.3
KHZ	**Kahutara**	**0.88**	**217**	P	Pn	21 28 08.7	0.0
PAWZ	**Paruwai Farm**	**0.94**	**70**	P	Pn	21 28 09.6	0.0
DUWZ	**D'Urville Isla**	**0.95**	**345**	P	Pb	21 28 08.6	-0.1
THZ	**Tophouse**	**1.01**	**267**	P	Pb	21 28 09.9	+0.1
MTW	**Mount Morrison**	**1.09**	**60**	P	Pn	21 28 11.7	+0.1
TRWZ	**Traveller**	**1.12**	**74**	P	Pb	21 28 11.8	+0.1
HOWZ	**Holdsworth Sta**	**1.25**	**50**	P	Pg	21 28 14.1	0.0
TMWZ	**Te Maipa**	**1.37**	**64**	P	Pn	21 28 15.3	-0.2
MRZ	**Mangatainoka R**	**1.45**	**44**	P	Pb	21 28 17.0	-0.3
GVZ	**Greta Valley S**	**1.54**	**215**	P	Pn	21 28 17.9	+0.1
TIWZ	**Tintock**	**1.55**	**53**	P	Pn	21 28 18.2	+0.3
QRZ	**Quartz Range**	**1.57**	**304**	P	Pb	21 28 19.5	+0.2
CPWZ	**Castlepoint**	**1.67**	**62**	P	Pn	21 28 19.6	0.0
OHWZ	**Ohakea**	**1.71**	**28**	P	Pg	21 28 22.4	-0.4
PRWZ	**Pori Road**	**1.74**	**49**	P	Pn	21 28 20.7	+0.2
POWZ	**Post Office Ro**	**1.75**	**41**	P	Pb	21 28 21.6	-0.7
LTZ	**Lake Taylor**	**1.82**	**233**	P	Pn	21 28 22.2	+0.6
BFZ	**Birch Farm**	**1.82**	**56**	P	Pn	21 28 21.0	-0.6
DSZ	**Denniston Nort**	**1.83**	**268**	P	Pb	21 28 23.8	0.0
AMCZ	**Amberley**	**1.88**	**219**	P	Pn	21 28 22.3	-0.1
DVHZ	**Dannevirke**	**2.02**	**46**	P	Pn	21 28 24.1	-0.3
WAZ	**Wanganui**	**2.04**	**16**	P	Pb	21 28 28.1	+0.8
ANWZ	**Angora Road**	**2.10**	**54**	P	Pn	21 28 25.1	-0.2
TSZ	**Takapari Road**	**2.10**	**39**	P	Pn	21 28 26.0	+0.5
OKCZ	**Okains Bay**	**2.19**	**203**	P	Pn	21 28 26.0	-0.8
CRLZ	**Canterbury Las**	**2.21**	**212**	P	Pn	21 28 26.6	-0.3
LREZ	**Lake Rotokare**	**2.26**	**3**	P	Pb	21 28 31.1	+0.1
OXZ	**Oxford**	**2.30**	**225**	P	Pn	21 28 27.4	-0.7
PRHZ	**Porangahau**	**2.31**	**52**	P	Pn	21 28 27.2	-1.1
MQZ	**McQueen's Vall**	**2.31**	**210**	P	Pn	21 28 26.9	-1.4
NMEZ	**Namu Road**	**2.32**	**353**	P	Pb	21 28 32.1	+0.1
INZ	**Inchbonnie**	**2.32**	**243**	P	Pn	21 28 29.2	+0.8
PNHZ	**Pukenui**	**2.33**	**40**	P	Pn	21 28 28.5	-0.2
WPHZ	**Waipukurau**	**2.34**	**46**	P	Pn	21 28 28.9	+0.1
PREZ	**Palmer Road**	**2.37**	**358**	P	Pb	21 28 33.4	+0.4
KHEZ	**Kahui Hut**	**2.42**	**356**	P	Pb	21 28 33.6	-0.3

NBEZ	Newall Road No	2.46	353	P	Pb	21 28 34.0	-0.5
MTVZ	Mangateitei	2.51	22	P	Pb	21 28 34.5	-0.8
DREZ	Durham Road	2.52	359	P	Pb	21 28 34.8	-0.8
PKE	Pukeiti	2.53	355	P	Pb	21 28 34.6	-1.0
PKVZ	Pokaka	2.56	19	P	Pb	21 28 35.3	-1.0
MOVZ	Moawhango	2.57	27	P	Pb	21 28 35.0	-1.4
PXZ	Pawanui	2.60	50	P	Pn	21 28 31.5	-0.7
BHHZ	Black Hill Sta	2.62	32	P	Pn	21 28 34.2	+1.6
VRZ	Vera Road	2.62	9	P	Pb	21 28 36.0	-1.2
KRHZ	Kereru	2.62	39	P	Pn	21 28 32.7	+0.1
DRZ	Dome Shelter	2.63	23	P	Pb	21 28 38.3	+0.6
WHVZ	Whangaehu Hut	2.63	23	P	Pb	21 28 35.4	-2.2
FWVZ	Far West T-bar	2.65	22	P	Pb	21 28 35.7	-2.2
TUVZ	Tukino	2.67	24	P	Pb	21 28 39.1	+1.0
NGZ	Ngauruhoe	2.74	23	P	Pb	21 28 38.4	-0.9
KAHZ	Kahuranaki	2.77	47	P	Pn	21 28 34.1	-0.6
WTVZ	West Tongariro	2.79	22	P	Pb	21 28 39.1	-1.0
TWVZ	Taurewa	2.79	19	P	Pb	21 28 38.7	-1.5
KWHZ	Kaweka Forest	2.82	37	P	Pn	21 28 37.9	+2.5
KRVZ	Karewarewa	2.82	22	P	Pb	21 28 39.7	-1.1
MCHZ	McNeill Hill	2.93	40	P	Pn	21 28 38.9	+2.0
WVZ	Waitaha Valley	2.94	241	P	Pn	21 28 38.7	+1.8
KATZ	Kakaramea	2.95	22	P	Pb	21 28 43.9	+1.0
RITZ	Rihia Road	3.00	25	P	Pb	21 28 43.6	0.0
BKZ	Black Stump Fm	3.07	35	P	Pb	21 28 42.5	-2.3
RATZ	Rangitukua	3.07	23	P	Pb	21 28 45.6	+0.7
RPZ	Rata Peaks	3.09	229	P	Pn	21 28 38.7	-0.4
WATZ	Wairara	3.21	21	P	Pb	21 28 49.1	+1.8
ARHZ	Aropaoanui	3.22	41	P	Pn	21 28 43.5	+2.7
HIZ	Hauiti	3.23	8	P	Pb	21 28 44.8	-2.8
MRHZ	Matea Rd	3.32	31	P	Pn	21 28 44.4	+2.1
MTHZ	Maungataniwha	3.48	36	P	Pn	21 28 47.3	+2.9
TLZ	Tolley Road	3.52	17	P	Pb	21 28 51.4	-1.2
FOZ	Fox Glacier	3.75	240	P	Pn	21 28 50.4	+2.4
LBZ	Lake Benmore	4.00	227	P	Pn	21 28 51.7	+0.2
URZ	Urewera	4.09	33	P	Pn	21 28 55.5	+2.7
MWZ	Matawai	4.21	38	P	Pn	21 28 54.4	-0.1
ODZ	Otahua Downs	4.24	217	P	Pn	21 28 53.9	-0.9
RUGZ	Raukumara Rang	4.58	36	P	Pn	21 29 03.0	+3.4
AWAZ	Awhitu Peninsu	4.66	4	P	Pn	21 29 04.6	+4.1
JCZ	Jackson Bay	4.66	238	P	Pn	21 29 03.6	+2.9
MKAZ	Moumakai	4.66	9	P	Pn	21 29 04.4	+3.8
HAZ	Te Kaha	4.80	36	P	Pn	21 29 05.3	+2.8
WKZ	Wanaka	4.93	229	P	Pn	21 29 07.6	+3.3
HHSZ	Highcliff Hill	4.94	211	P	Pn	21 29 04.0	-0.4
WIAZ	Waiheke Island	4.96	8	P	Pn	21 29 09.4	+4.6
MBAZ	Motutapu North	4.96	6	P	Pb	21 29 13.3	-3.9
TUZ	Tuapeka	5.40	217	P	Pn	21 29 10.9	+0.2
MLZ	Mavora Lakes	5.76	229	P	Pn	21 29 16.3	+0.5
SYZ	Scrubby Hill	6.06	216	P	Pn	21 29 20.0	+0.1
OUZ	Omahuta	6.51	355	P	Pn	21 29 31.9	+5.9

MAN 23 21:28:42.3, 11°.21N×121°.59E, h62^{km}, mb4.2, ML3.1, MS2.8, 2C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	San Jose, Anti	0.58	143	⇑eP	Pn	21 28 56.2	+1.0
JAP				eS	Sn	21 29 11.9	+7.2
RCP	Roxas	1.18	73	⇑eP	Pn	21 29 04.1	+1.3
RCP				eS	Sn	21 29 19.9	+1.8

WEL 23 21:29:25.2, 42°S±2°×17°4E±°, h7^{km}±1^{km}, M3.9/17, ML4.2/12, MLv3.9/17, Error ellipse: s-maj=0.0km s-min=0.0km az=136.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.06	214	P	Pg	21 29 27.8	+0.9
CMWZ				S	Sg	21 29 29.2	+1.1
BSWZ	Blackbirch Sta	0.29	267	P	Pg	21 29 31.6	+0.8
BSWZ				S	Sb	21 29 36.5	-1.2
TUWZ	Tuamarina	0.36	319	P	Pb	21 29 33.2	-0.7
TCW	Tory Channel	0.49	2	P	Pb	21 29 35.4	-0.7
BHW	Baring Head	0.55	58	P	Pb	21 29 37.4	+0.4
PLWZ	Palliser	0.76	80	P	Pn	21 29 41.9	-0.4
MSWZ	Moikau Station	0.80	69	P	Pn	21 29 42.5	-0.3
CAW	Cannon Point	0.85	46	P	Pb	21 29 42.6	+0.4
KHZ	Kahutara	0.89	217	P	Pn	21 29 44.1	0.0
DUWZ	D'Urville Isla	0.93	344	P	Pn	21 29 44.9	+0.2
PAWZ	Paruwai Farm	0.93	70	P	Pn	21 29 44.7	-0.1
THZ	Tophouse	1.01	266	P	Pn	21 29 46.2	+0.3
MTW	Mount Morrison	1.08	60	P	Pn	21 29 46.6	-0.1
TRWZ	Traveller	1.11	75	P	Pb	21 29 46.7	-0.1
OGWZ	Otaki Gorge	1.12	38	P	Pn	21 29 47.5	+0.2
HOWZ	Holdsworth Sta	1.24	50	P	Pn	21 29 49.2	+0.3
TMWZ	Te Maipa	1.36	65	P	Pn	21 29 50.4	-0.3
MRZ	Mangatainoka R	1.44	44	P	Pb	21 29 52.1	-0.2
GVZ	Greta Valley S	1.56	215	P	Pn	21 29 53.6	+0.2
QRZ	Quartz Range	1.57	303	P	Pg	21 29 55.0	-0.2
DSZ	Denniston Nort	1.84	268	P	Pb	21 29 59.3	+0.2

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*IDC **23** 21:30:15.9±0.6, 20°.05S×70°.67W, h0^{km}, mb4.2/12, mb1 4.4/16, mb1mx4.3/31, mbtmp4.2/16, ML3.9/4, MS3.8/4, Ms1 3.8/4, ms1mx3.4/17, Error ellipse: s-maj=21.4km s-min=12.9km az=57.0*

*SJA **23** 21:30:15.9±0.6, 20°.44S×70°.78W, h15^{km}±4^{km}, ML3.6, MW3.5*

*ISCJB **23** 21:30:17.5±0.6, 20°.22S±0°.03×71°.05W±0°.05, h53^{km}±6^{km}, mb4.3/32, MS4.0/2, Error ellipse: s-maj=7.7km s-min=4.4km az=4.3*

*GUC **23** 21:30:18.3±0.7, 20°.23S×70°.88W, h39^{km}±2^{km}, ML4.6*

*NEIC **23** 21:30:18.0±0.0, 20°.23S×70°.88W, h39^{km}, mb4.4/28, ML4.6(GUC), After GUC.*

NEIC Felt [II] at Alto Hospicio, Camina, Iquique and Pozo Almonte.

ISC 23 21:30:18.8±0.5, 20°.26S±0°.04×70°.93W±0°.06, h38^{km}±2^{km}, n94, σ2^{s}.23/115, mb4.4/32, 11C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	1.00	49	⇓iP	Pn	21 30 35.5	-0.9
PSGC				i S	Sn	21 30 48.8	-0.6
PSGCX	Pisagua	1.00	49	eP	Pn	21 30 35.6	-0.8
PSGCX				eS	Sn	21 30 50.5	+1.1
PB11	IPOC Station P	1.29	68	ePn	Pn	21 30 40.3	-0.1
PB11				eSn	Sn	21 30 50.1	-6.6
PB11	IPOC Station P	1.29	68	eP	Pn	21 30 40.1	-0.4
PB11	IPOC Station P	1.29	68	⇓iP	Pn	21 30 40.4	-0.1
PB11				i S	Sn	21 30 56.9	+0.2
PB02	IPOC Station P	1.43	138	⇑iP	Pn	21 30 43.6	+1.3
PB02				i S	Sn	21 31 01.9	+1.9
PB01	IPOC Station P	1.56	120	ePn	Pn	21 30 45.4	+1.4
PB01				eSn	Sn	21 30 57.5	-5.5
PB01	IPOC Station P	1.56	120	eP	Pn	21 30 45.1	+1.1
PB01				eS	Sn	21 31 06.6	+3.5
PB01	IPOC Station P	1.56	120	⇓iP	Pn	21 30 45.3	+1.2
PB01				i S	Sn	21 31 05.0	+2.0
PB01				IAML		21 31 10.2	
	comp=N,13μm,0.5s						
PB08	IPOC Station P	1.67	86	eP	Pn	21 30 45.7	-0.2
PB08				eS	Sn	21 31 07.1	+0.9
PB08	IPOC Station P	1.67	86	⇑iP	Pn	21 30 46.7	+0.9
PB08				i S	Sn	21 31 07.8	+1.6
MNMC	Minye Minye	1.68	48	ePn	Pn	21 30 46.6	+0.6
MNMC	Minye Minye	1.68	48	⇑iP	Pn	21 30 46.5	+0.5
MNMC				i S	Sn	21 31 07.7	+1.3
MNMCX	Minye Minye	1.68	48	eP	Pn	21 30 47.8	+1.8
PB12	IPOC Station P	1.73	19	⇑iP	Pn	21 30 46.7	+0.2
PB12				i S	Sn	21 31 09.2	+1.8
GO01	Chusmiza	1.73	70	ePn	Pn	21 30 47.4	+0.6
GO01	Chusmiza	1.73	70	⇑iP	Pn	21 30 47.5	+0.6
GO01				i S	Sn	21 31 09.9	+2.0
PB07	IPOC Station P	1.75	146	⇑iP	Pn	21 30 48.0	+1.2
PB03	IPOC Station P	2.09	149	⇑iP	Pn	21 30 52.7	+1.3
PB04	IPOC Station P	2.19	161	ePn	Pn	21 30 54.0	+1.1
PB04	IPOC Station P	2.19	161	⇑iP	Pn	21 30 53.9	+1.1
PB04				IAML		21 31 39.7	
	comp=N,4μm,0.5s						
PB09	IPOC Station P	2.19	134	⇑iP	Pn	21 30 54.6	+1.7
PB09				IAML		21 31 35.1	
	comp=E,7μm,0.6s						
PB05	IPOC Station P	2.67	165	⇑iP	Pn	21 31 00.0	+0.6
PB06	IPOC Station P	2.74	153	⇑iP	Pn	21 31 01.5	+1.1
PB06				IAML		21 31 49.3	
	comp=E,2μm,0.3s						
LVC	Limon Verde	3.00	142	Pn	Pn	21 31 07.0	+2.8
	comp=E,32nm,0.3s,baz=306,slow=9.5,SNR=147						
LVC				Sn	Sn	21 31 42.6	+3.6
	comp=E,101nm,0.3s,baz=25,slow=13,SNR=3.8						
LVC				Lg	Lg	21 31 52.1	
	comp=E,195nm,0.3s,baz=313,slow=9.4,SNR=7.5						
LVC	Limon Verde	3.00	142	ePn	Pn	21 31 06.9	+2.8
LVC				eSn	Sn	21 31 30.9	-8.2
PB10	IPOC Station P	3.26	174	ePn	Pn	21 31 08.0	+0.6
LPAZ	La Paz	4.76	34	Pn	Pn	21 31 32.9	+4.3
	comp=E,4.9nm,0.3s,baz=229,slow=8.0,SNR=68						
LPAZ				Lg	Lg	21 32 41.6	
	baz=112,slow=19,SNR=1.5						
LPAZ	La Paz	4.76	34	ePn	Pn	21 31 32.0	+3.4
GO02	Mina Guanaco	5.03	166	ePn	Pn	21 31 33.4	+1.4
YJA	Yavi	5.40	112	eP	Pn	21 31 37.9	+0.7
YJA				IAML		21 31 50.8	
	comp=Z,60nm,0.7s						
AZAP	Zapla	6.71	127	eP	Pn	21 31 54.8	-0.2
AZAP				IAML		21 32 33.2	
	comp=Z,16nm,0.6s						
GO03	Copiap	7.33	175	ePn	Pn	21 32 03.9	+0.6
FSA	Cafayete	7.39	143	eP	Pn	21 32 04.0	-0.3
FSA				IAML		21 32 42.6	
	comp=Z,4.7nm,0.7s						
LCO	Las Campanas	8.71	179	ePn	Pn	21 32 23.5	+0.9
GO04	Tololo Observa	9.87	179	ePn	Pn	21 32 36.6	-1.7
NNA	Nana	9.99	324	Sn	Sn	21 34 30.5	-0.4
	comp=Z,1.4nm,0.3s,baz=234,slow=14,SNR=2.8						
SIV	San Ignacio	10.29	67	Pn	Pn	21 32 42.7	-1.2
	comp=Z,4.6nm,0.3s,baz=269,slow=9.9,SNR=36						
SIV				LR	LR	21 37 23.9	
	comp=Z,688nm,19.4s,baz=258,slow=43						
CFA	Coronel Fontan	11.55	168	Pn	Pn	21 33 05.5	+4.3
	comp=Z,0.4nm,0.3s,baz=4.8,slow=12,SNR=2.8						
CPUP	Villa Florida	13.87	118	Pn	Pn	21 33 33.3	+0.4
	comp=Z,0.1nm,0.3s,baz=339,slow=17,SNR=1.4						
CPUP				LR	LR	21 39 09.1	
	comp=Z,152nm,20.5s,baz=291,slow=39						
CPUP	Villa Florida	13.87	118	ePn	Pn	21 33 31.6	-1.3
PLCA	Paso Flores	20.41	179	P	Pn	21 34 56.8	+1.9
	comp=Z,4.1nm,0.7s,baz=2.0,slow=11,SNR=7.3						
PLCA	Paso Flores	20.41	179	eP	P	21 34 53.1	+0.5
	comp=Z,6.3nm,0.8s						
PTGA	Pitinga	22.17	30	P	P	21 35 10.7	-1.0
	comp=Z,9.6nm,0.5s,baz=210,slow=14,SNR=19						
PTGA	Pitinga	22.17	30	eP	P	21 35 09.8	-1.9
	comp=Z,20nm,1.0s						
BDFB	Brasilia	22.27	82	P	P	21 35 12.1	-0.8
	comp=Z,4.0nm,0.5s,baz=253,slow=9.7,SNR=7.0						
BDFB				LR	LR	21 45 19.8	
	comp=Z,302nm,21.8s,baz=276,slow=41						
BDFB	Brasilia	22.27	82	eP	P	21 35 08.6	-4.2
	comp=Z,11nm,0.9s						
BDFB				eP	P	21 35 12.1	-0.8
ROSC	El Rosal	25.16	352	eP	P	21 35 37.7	-3.4
	comp=Z,8.8nm,0.8s						
SDV	Santo Domingo	28.96	1	eP	P	21 36 11.0	-4.0
	comp=Z,20nm,0.4s						
TXAR	Lajitas Array	58.55	326	P	P	21 40 14.2	+2.5
	comp=Z,0.7nm,0.7s,baz=148,slow=9.0,SNR=8.0						
N55A	Marion Center	61.19	353	eP	P	21 40 27.9	-1.7
	comp=Z,17nm,0.8s						
SDCO	Great Sand Dun	66.23	331	eP	P	21 41 03.4	+0.2
	comp=Z,1.8nm,0.9s						
X16A	Lo Mia Camp, P	66.65	324	eP	P	21 41 04.7	-1.1
	comp=Z,3.2nm,1.1s						
WUAZ	Wupatki	67.43	325	eP	P	21 41 08.2	-2.6
	comp=Z,3.2nm,0.8s						
LDFC	Landfair	69.19	322	eP	P	21 41 19.3	-2.4
	comp=Z,6.9nm,1.0s						
KNB	Kanab	69.33	325	eP	P	21 41 20.8	-1.8
	comp=Z,6.0nm,1.1s						
QSPA	South Pole Qui	69.92	180	eP	P	21 41 24.4	-1.5
	comp=Z,3.6nm,0.7s						
CCUT	Cedar City	70.01	325	eP	P	21 41 24.2	-2.7
	comp=Z,3.9nm,0.8s						
P17A	Butcher Ranch,	70.11	328	eP	P	21 41 24.8	-2.6
	comp=Z,5.2nm,1.0s						
DBIC	Dimbokro	70.21	75	P	P	21 41 28.9	+0.6
	comp=Z,8.4nm,1.0s,baz=179,slow=8.1,SNR=4.1						
DBIC	Dimbokro	70.21	75	eP	P	21 41 28.9	+0.6
	comp=Z,11nm,1.1s						
SHPR	Sheep Range	70.24	323	eP	P	21 41 26.2	-2.0
	comp=Z,1.9nm,0.8s						
DAC	Darwin (Calif)	71.47	322	eP	P	21 41 32.9	-2.9
DUG	Dugway, Tooele	71.69	327	eP	P	21 41 34.7	-2.3
	comp=Z,3.6nm,1.0s						
PDAR	Pinedale Array	72.11	331	P	P	21 41 41.6	+2.2
	comp=Z,0.5nm,0.6s,baz=142,slow=6.8,SNR=3.9						
HWUT	Hardware Ranch	72.15	329	eP	P	21 41 38.1	-1.6
	comp=Z,2.6nm,0.8s						
HVU	Hansel Valley	72.87	329	eP	P	21 41 42.6	-1.3
	comp=Z,1.9nm,0.8s						
OMMB	Old Mammoth Mi	73.20	322	eP	P	21 41 44.6	-1.6
	comp=Z,3.4nm,1.0s						
NVAR	Mina Array Bea	73.36	323	P	P	21 41 50.3	+3.3
	comp=Z,0.8nm,0.6s,baz=140,slow=5.7,SNR=6.4						
IMW	Indian Meadow	73.62	331	eP	P	21 41 47.0	-1.5
	comp=Z,1.8nm,0.7s						
KVN	Kaiserville	73.68	323	eP	P	21 41 47.4	-1.4
	comp=Z,3.0nm,0.9s						
TOA1	Torodi Ar. Sit	78.73	71	eP	P	21 42 18.4	+0.6
TOA0	Torodi Ar. Sit	78.73	71	eP	P	21 42 14.9	-3.0
	comp=Z,13nm,0.9s						
TORD	Torodi Ar. Bea	78.73	71	P	P	21 42 18.4	+0.6
	comp=Z,9.8nm,0.8s,baz=246,slow=5.1,SNR=45						
TORD				LR	LR	22 15 48.5	
	comp=Z,117nm,20.0s,baz=280,slow=35						
WALA	Waterton Lakes	78.90	333	eP	P	21 42 16.8	-1.4
	comp=Z,3.5nm,0.8s						
TSUM	Tsumeb	82.21	108	P	P	21 42 38.2	+1.6
	comp=Z,3.7nm,0.8s,baz=18,slow=3.2						
TSUM	Tsumeb	82.21	108	eP	P	21 42 34.7	-2.0
	comp=Z,5.7nm,1.0s						
MDT	Midelt	82.42	51	P	P	21 42 38.3	+0.9
	comp=Z,1.5nm,0.7s,baz=295,slow=6.3,SNR=3.2						
ESDC	Sonseca Array	86.29	45	P	P	21 42 58.8	+2.0
	comp=Z,0.3nm,0.6s,baz=248,slow=4.5,SNR=6.7						
YKA	Yellowknife Ar	89.41	341	P	P	21 43 13.3	+2.3
	comp=Z,4.4nm,1.0s,baz=136,slow=5.0,SNR=15						
YKW3	Yellowknife Ar	89.46	341	eP	P	21 43 09.8	-1.4
	comp=Z,5.0nm,0.9s						
ASAR	Alice Springs	130.08	210	PKP	PKiKP	21 49 28.5	+2.3
	comp=Z,0.6nm,0.9s,baz=204,slow=2.0,SNR=4.1						
ZALV	Zalesovo Beam	141.60	23	PKhKP	PKPdf	21 49 43.2	-2.5
	comp=Z,0.4nm,0.4s,baz=320,slow=6.6,SNR=2.9						
ZALV				PKP	PKiKP	21 49 49.0	+0.5
	comp=Z,1.4nm,0.6s,baz=296,slow=2.2,SNR=6.8						
NRN	Naryn	144.94	46	ePKPdf	PKPdf	21 49 52.0	-0.4
MAKZ	Makanchi	145.52	34	ePKPdf	PKPdf	21 49 50.9	-1.9
NIL	Nilore	145.58	60	ePKPdf	PKPdf	21 49 51.2	-2.2
MKAR	Makanchi Array	145.69	33	PKPbc	PKiKP	21 49 56.5	-0.7
	comp=Z,7.7nm,0.8s,baz=321,slow=3.4,SNR=58						
KSH	Kashi	145.75	49	ePKPbc	PKiKP	21 49 57.5	-0.2
KSH				pPKP	pPKPab	21 50 06.9	+1.3
KSH				sPKP		21 50 11.4	
KSH				PP	PP	21 53 21.4	+6.3
KSH				PKS	PKSdf	21 53 30.8	+1.7
USRK	Ussuriysk Ar.	149.45	327	PKPbc	PKPab	21 50 07.2	-1.5
	comp=Z,2.4nm,0.8s,baz=22,slow=1.2,SNR=7.5						
MJAR	Matsushiro Arr	149.83	309	PKPbc	PKiKP	21 50 07.6	+1.6
	comp=Z,2.4nm,0.7s,baz=245,slow=2.0,SNR=6.5						
SONM	Songino Array	152.41	4	PKPbc	PKiKP	21 50 13.2	+2.0
	comp=Z,1.1nm,0.7s,baz=6.6,slow=2.7,SNR=6.3						
SONM				PKPab	PKPab	21 50 22.3	+1.3
	comp=Z,1.5nm,0.7s,baz=320,slow=1.3,SNR=7.4						
ULN	Ulaanbaatar	152.41	3	ePKPdf	PKPdf	21 50 03.4	-0.7
ULN				ePKPab	PKPab	21 50 19.6	-1.5
LZH	Lanzhou	163.58	15	ePKP	PKPdf	21 50 19.5	+1.4
LZH				pPKP	pPKPdf	21 50 26.9	-2.1
LZH				sPKP		21 50 29.3	
LZH				PKP	PKPab	21 51 13.6	+4.0
CD2	Chengdu	168.36	23	PKP	PKPdf	21 50 24.3	+2.4

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*IDC **23** 21:45:14.3±1.9, 5°.45S×152°.79E, h0^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.8/28, mbtmp3.9/6, ML2.1/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/22, Error ellipse: s-maj=72.1km s-min=23.1km az=120.0*

*ISCJB **23** 21:45:20.1±1.6, 5°.4S±0°.2×152°.4E±0°.3, h40^{km}, mb3.8/5, MS3.0/2, Error ellipse: s-maj=54.3km s-min=11.6km az=39.5*

ISC 23 21:45:20.9±1.9, 5°.4S±0°.3×152°.6E±0°.4, h40^{km}, n9, σ1^{s}.04/9, mb3.8/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.65	233	Pn	Pn	21 46 57.6	+1.5
	2.1nm,0.3s,baz=44,slow=4.7,SNR=4.7						
PMG				Sn	Sn	21 48 09.1	-1.6
	3.4nm,0.3s,baz=262,slow=6.7,SNR=3.8						
GUMO	Guam	20.37	338	LR	LR	21 56 38.4	
	comp=Z,28nm,20.2s,baz=179,slow=33						
DZM	Mont Dzumac	21.32	142	LR	LR	21 57 07.9	
	comp=Z,125nm,20.2s,baz=242,slow=34						
WRA	Warramunga Arr	22.85	229	P	P	21 50 21.0	+0.1
	3.8nm,0.7s,baz=55,slow=10,SNR=5.0						
ASAR	Alice Springs	25.52	223	P	P	21 50 45.8	-0.1
	1.4nm,0.6s,baz=54,slow=9.0,SNR=8.2						
SONM	Songino Array	66.72	328	P	P	21 56 08.9	+0.8
	0.4nm,0.5s,baz=146,slow=4.6,SNR=4.0						
MKAR	Makanchi Array	80.63	319	P	P	21 57 29.2	-0.4
	0.6nm,0.8s,baz=97,slow=6.7,SNR=4.6						
ILAR	Eielson Array	82.83	22	P	P	21 57 40.2	-0.5
	1.3nm,0.8s,baz=243,slow=5.8,SNR=8.1						
TORD	Torodi Ar. Bea	150.26	287	PKPbc	PKPbc	22 05 08.9	+0.1
	0.6nm,0.7s,baz=58,slow=2.9,SNR=3.3						
TORD				PKPab	PKPab	22 05 14.2	-0.8
	1.8nm,0.9s,baz=68,slow=3.7,SNR=6.1						

MEX 23 22:25:28.5±0.6, 17°.89N×102°.26W, h19^{km}±4^{km}, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.81	110	eP	Pb	22 25 41.5	-2.4
ZIIG				eS	Sb	22 25 51.2	-3.2
MMIG	Aquila	1.11	291	eP	Pn	22 25 45.6	-3.4
MMIG				eS	Sb	22 25 58.3	-4.8
ARIG	Puente Sto Nin	1.86	78	eP	Pn	22 25 56.6	-2.7
ARIG				i S	Sn	22 26 18.1	-4.3
EZ5V		2.03	321	eP	Pn	22 25 59.8	-2.2
EZ5V				i S	Sn	22 26 22.7	-4.2
MEIG	Mezcala	2.51	89	i P	Pn	22 26 05.2	-3.2
MEIG				i S	Sn	22 26 35.6	-3.0

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*SJA **23** 22:36:44.9±0.5, 20°.03S×71°.26W, h24^{km}±6^{km}, ML3.7, MW3.7*

*GUC **23** 22:36:50.8±0.7, 20°.24S×70°.89W, h38^{km}±2^{km}, ML4.0*

*NEIC **23** 22:36:50.0±0.0, 20°.24S×70°.89W, h38^{km}, mb4.4/7, ML4.0(GUC), After GUC.*

NEIC Felt [II] at Alto Hospicio and Iquique.

*IDC **23** 22:36:50.1±0.9, 19°.97S×70°.60W, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx4.0/29, mbtmp4.0/10, ML3.9/2, MS3.3/4, Ms1 3.3/4, ms1mx3.1/19, Error ellipse: s-maj=24.3km s-min=21.0km az=52.0*

ISC 23 22:36:48.6±1.1, 20°.34S±0°.03×70°.86W±0°.05, h16^{km}±6^{km}, n73, σ2^{s}.08/79, mb4.3/13, 9C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	1.01	43	⇓iP	Pg	22 37 08.6	+0.4
PSGC				i S	Sn	22 37 21.8	-0.4
PSGCX	Pisagua	1.01	43	eP	Pb	22 37 07.1	-0.6
PSGCX				eS	Sn	22 37 23.4	+1.2
PB11	IPOC Station P	1.27	63	ePn	Pg	22 37 13.2	+0.2
PB11				eSn	Sb	22 37 25.7	-2.6
PB11	IPOC Station P	1.27	63	eP	Pg	22 37 13.1	+0.2
PB11	IPOC Station P	1.27	63	⇓iP	Pg	22 37 13.4	+0.4
PB11				i S	Sg	22 37 30.1	+0.5
PB01	IPOC Station P	1.46	119	ePn	Pg	22 37 18.2	+1.5
PB01				eSn	Sn	22 37 30.8	-2.6
PB01	IPOC Station P	1.46	119	⇓iP	Pg	22 37 18.2	+1.5
PB01				i S	Sg	22 37 37.8	+2.0
PB01				IAML		22 37 44.7	
	comp=N,5μm,0.6s						
PB08	IPOC Station P	1.61	83	eP	Pg	22 37 19.5	0.0
PB08	IPOC Station P	1.61	83	⇑iP	Pg	22 37 19.6	0.0
PB08				i S	Sg	22 37 41.0	+0.3
PB08				IAML		22 37 44.7	
	comp=E,2μm,0.6s						
PB07	IPOC Station P	1.65	147	⇑iP	Pg	22 37 20.8	+0.4
PB07				i S	Sg	22 37 43.3	+1.4
PB07				IAML		22 38 01.6	
	comp=E,2μm,0.7s						
MNMC	Minye Minye	1.69	45	ePn	Pb	22 37 19.5	+0.1
GO01	Chusmiza	1.70	67	ePn	Pb	22 37 20.5	+0.7
PB12	IPOC Station P	1.79	16	⇑iP	Pn	22 37 19.6	+0.7
PB12				i S	Sb	22 37 42.2	-1.0
PB03	IPOC Station P	1.99	149	⇑iP	Pb	22 37 25.4	+0.9
PB03				IAML		22 38 05.1	
	comp=E,899nm,0.6s						
PB04	IPOC Station P	2.09	162	ePn	Pb	22 37 26.7	+0.3
PB04	IPOC Station P	2.09	162	⇑iP	Pb	22 37 26.6	+0.3
PB04				IAML		22 38 13.5	
	comp=N,2μm,0.7s						
PB09	IPOC Station P	2.09	134	⇑iP	Pb	22 37 27.6	+1.3
PB09				i S	Sg	22 37 55.1	-0.9
PB16	IPOC Station P	2.36	33	⇑iP	Pn	22 37 28.9	+1.6
PB05	IPOC Station P	2.58	166	⇑iP	Pb	22 37 32.8	-1.8
PB05				IAML		22 38 26.1	
	comp=N,669nm,0.5s						
PB06	IPOC Station P	2.64	153	⇑iP	Pb	22 37 34.2	-1.5
PB06				IAML		22 38 27.7	
	comp=E,772nm,0.4s						
LVC	Limon Verde	2.90	142	Pn	Pb	22 37 39.5	-0.7
	comp=E,13nm,0.3s,baz=303,slow=9.7,SNR=88						
LVC				Sn	Sb	22 38 15.5	0.0
	comp=E,44nm,0.3s,baz=49,slow=18,SNR=4.8						
LVC				Lg	Lg	22 38 25.1	
	comp=E,56nm,0.3s,baz=72,slow=20,SNR=18						
LVC	Limon Verde	2.90	142	ePn	Pb	22 37 39.8	-0.4
LVC	Limon Verde	2.90	142	eP	Pb	22 37 39.6	-0.5
LVC				eS	Sg	22 38 20.0	-1.9
PB10	IPOC Station P	3.17	175	ePn	Pn	22 37 39.9	+2.0
LPAZ	La Paz	4.79	33	Pn	Pn	22 38 05.8	+5.1
	comp=E,3.3nm,0.3s,baz=251,slow=3.9,SNR=51						
LPAZ				LR	LR	22 39 27.7	
	comp=E,77nm,20.2s,baz=246,slow=36						
LPAZ	La Paz	4.79	33	eP	Pn	22 38 06.2	+5.5
GO02	Mina Guanaco	4.94	167	ePn	Pn	22 38 05.7	+3.2
YJA	Yavi	5.31	111	eP	Pn	22 38 14.1	+6.4
YJA				IAML		22 38 23.8	
	comp=Z,26nm,0.6s						
HJA	Humahuaca	5.81	120	eP	Pn	22 38 20.2	+5.7
HJA				IAML		22 38 31.1	
	comp=Z,28nm,0.5s						
AZAP	Zapla	6.61	127	eP	Pn	22 38 30.7	+5.3
GO03	Copiap	7.25	176	ePn	Pn	22 38 36.1	+2.2
LCO	Las Campanas	8.64	179	ePn	Pn	22 38 53.8	+0.5
GO04	Tololo Observa	9.79	180	ePn	Pn	22 39 09.7	+0.6
NNA	Nana	10.10	324	ePn	Pn	22 39 11.2	-1.9
SIV	San Ignacio	10.25	67	Pn	Pn	22 39 15.4	+0.1
	comp=Z,1.2nm,0.3s,baz=276,slow=10.0,SNR=16						
SIV				Sn	Sn	22 41 08.6	-1.4
	comp=Z,0.2nm,0.3s,baz=183,slow=19,SNR=1.7						
SIV				LR	LR	22 43 49.1	
	comp=Z,378nm,19.6s,baz=249,slow=42						
CPUP	Villa Florida	13.78	118	ePn	Pn	22 40 00.7	-2.6
TRQA	Tornquist	19.26	158	eP	P	22 41 10.0	-2.5
PLCA	Paso Flores	20.33	179	P	Pn	22 41 33.5	+7.2
	comp=Z,2.5nm,0.8s,baz=30,slow=12,SNR=2.9						
PLCA	Paso Flores	20.33	179	eP	P	22 41 21.7	-2.5
PTGA	Pitinga	22.21	30	P	P	22 41 44.0	-0.5
	comp=Z,4.7nm,0.4s,baz=203,slow=13,SNR=16						
PTGA	Pitinga	22.21	30	eP	P	22 41 42.1	-2.4
	comp=Z,8.0nm,0.9s						
BDFB	Brasilia	22.21	82	P	P	22 41 45.6	+0.8
	comp=Z,2.4nm,0.4s,baz=236,slow=7.3,SNR=3.8						
BDFB				LR	LR	22 52 02.8	
	comp=Z,179nm,21.7s,baz=223,slow=42						
ROSC	El Rosal	25.25	352	LR	LR	22 52 09.4	
	comp=Z,88nm,18.3s,baz=228,slow=37						
ROSC	El Rosal	25.25	352	eP	P	22 42 09.8	-4.7
	comp=Z,6.1nm,0.7s						
PAYG	Puerto Ayora	27.26	313	eP	P	22 42 28.3	-4.1
	comp=Z,27nm,0.9s						
SDV	Santo Domingo	29.04	0	eP	P	22 42 46.3	-2.1
	comp=Z,14nm,0.8s						
MDP	Montagnes des	30.97	37	P	P	22 43 06.1	+0.7
	comp=Z,2.6nm,0.5s,baz=237,slow=5.3,SNR=6.6						
LTX	Lajitas	58.65	326	eP	P	22 46 48.0	+2.6
TXAR	Lajitas Array	58.65	326	P	P	22 46 48.0	+2.6
	comp=Z,0.1nm,0.5s,baz=150,slow=9.3,SNR=3.0						

SDCO	Great Sand Dun	66.33	331	eP	P	22 47 34.8	-2.1
	comp=Z,1.7nm,0.9s						
NVAR	Mina Array Bea	73.47	323	P	P	22 48 24.9	+4.3
	comp=Z,0.1nm,0.3s,baz=139,slow=8.4,SNR=3.0						
YHH	Holmes Hill	74.37	332	eP	P	22 48 21.2	-4.8
	comp=Z,0.7nm,0.6s						
TOA1	Torodi Ar. Sit	78.69	71	eP	P	22 48 52.0	+1.3
TOA0	Torodi Ar. Sit	78.70	71	eP	P	22 48 47.8	-2.9
	comp=Z,9.1nm,1.0s						
TORD	Torodi Ar. Bea	78.70	71	P	P	22 48 52.0	+1.3
	comp=Z,4.4nm,0.7s,baz=250,slow=5.2,SNR=29						
YKA	Yellowknife Ar	89.50	341	P	P	22 49 46.8	+2.3
	comp=Z,1.6nm,0.9s,baz=132,slow=4.9,SNR=6.4						
YKB5	Yellowknife Ar	89.50	341	eP	P	22 49 46.9	+2.3
VYHS	Vyhne	104.75	43	ePDIF	Pdif	22 50 58.2	+4.1
H11S2	WAKE ISLAND Hy	125.92	279	T	T	01 15 21.1	
	baz=102,slow=75,SNR=54						
H11S1	WAKE ISLAND Hy	125.92	279	T	T	01 15 21.1	
	baz=102,slow=75,SNR=26						
H11S3	WAKE ISLAND Hy	125.93	279	T	T	01 15 22.3	
	baz=102,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	125.97	280	T	T	01 15 25.2	
	baz=102,slow=75,SNR=36						
H11N2	WAKE ISLAND Hy	125.99	280	T	T	01 15 24.2	
	baz=102,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	125.99	280	T	T	01 15 28.2	
	baz=102,slow=75,SNR=15						
ZAA1	Zalesovo Array	141.64	23	ePKPdf	PKiKP	22 56 22.3	+0.5
ZALV	Zalesovo Beam	141.64	23	PKP	PKiKP	22 56 22.3	+0.5
	comp=Z,0.3nm,0.4s,baz=268,slow=1.8,SNR=2.7						
MK31	Makanchi Array	145.72	33	ePKPdf	PKPdf	22 56 23.1	-3.4
MKAR	Makanchi Array	145.72	33	PKPbc	PKiKP	22 56 29.5	-1.0
	comp=Z,3.2nm,0.8s,baz=328,slow=3.3,SNR=19						
KSH	Kashi	145.75	49	ePKPbc	PKiKP	22 56 30.4	-0.5
KSH				pPKP	sPKPab	22 56 41.9	+8.5
KSH				sPKP		22 56 44.8	
KSH				PP	PP	22 59 55.4	+7.2
KSH				PKS	PKSdf	23 00 04.3	+1.9
KSH				SKS	SKSdf	23 03 33.3	-2.3
SONA0	Songino Array	152.48	4	ePKPbc	PKiKP	22 56 46.6	+2.0
SONA0				ePKPab	PKPab	22 56 55.9	+1.5
SONM	Songino Array	152.48	4	PKPbc	PKiKP	22 56 46.6	+2.0
	comp=Z,0.3nm,0.5s,baz=343,slow=2.3,SNR=3.0						
SONM				PKPab	PKPab	22 56 55.9	+1.5
	comp=Z,0.7nm,0.6s,baz=335,slow=3.1,SNR=4.1						
LZH	Lanzhou	163.63	15	ePKP	PKPdf	22 56 52.1	+0.7
LZH				pPKP	sPKPdf	22 57 03.3	+6.0
LZH				sPKP		22 57 06.8	
LZH				PKP	pPKPab	22 57 46.3	-0.9
CD2	Chengdu	168.41	24	PKP	PKPdf	22 56 55.5	+0.3

MEX 23 23:56:27.3±0.5, 15°.92N×98°.47W, h5^{km}, MD3.6, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.63	357	eP	Pn	23 56 53.7	-3.2
TLIG				i S	Sn	23 57 13.3	-5.1
VHO	Vista Hermosa	2.02	55	i P	Pn	23 56 59.6	-2.7
VHO				i S	Sn	23 57 23.5	-4.5
CAIG	El Cayaco	2.06	303	i P	Pn	23 56 59.7	-2.9
CAIG				i S	Sn	23 57 24.8	-3.7
HUIG	Huatulco	2.28	94	i P	Pn	23 57 02.4	-3.2
HUIG				i S	Sn	23 57 30.5	-3.6
CMIG	Matias Romero	3.63	71	i P	Pn	23 57 21.3	-3.0
CMIG				i S	Sn	23 58 03.9	-3.6

MEX 24 00:16:29.1±0.8, 16°.61N×98°.19W, h9^{km}±8^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.01	339	eP	Pg	00 16 45.7	-2.9
TLIG				eS	Sg	00 16 58.4	-3.5
VHO	Vista Hermosa	1.47	72	i P	Pn	00 16 52.5	-3.5
VHO				i S	Sn	00 17 11.3	-4.1
CAIG	El Cayaco	2.04	283	i P	Pn	00 17 00.9	-2.7
CAIG				i S	Sn	00 17 24.1	-5.1

WEL 24 00:18:35.3, 42°S±1°×174°.2E±0°.7, h11^{km}±1^{km}, M3.4/16, ML3.6/16, MLv3.4/16, Error ellipse: s-maj=0.0km s-min=0.0km az=158.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.04	180	P	Pg	00 18 37.9	+0.5
CMWZ				S	Sg	00 18 39.6	+0.8
BSWZ	Blackbirch Sta	0.25	269	P	Pb	00 18 41.3	-0.7
BSWZ				S	Sb	00 18 45.4	-1.0
TUWZ	Tuamarina	0.35	324	P	Pb	00 18 42.9	-0.6
TUWZ				S	Sb	00 18 48.2	-0.8
TCW	Tory Channel	0.50	5	P	Pg	00 18 45.5	+0.4
BHW	Baring Head	0.58	59	P	Pb	00 18 47.4	0.0
PLWZ	Palliser	0.79	80	P	Pn	00 18 52.3	-0.2
NNZ	Nelson	0.80	308	P	Pg	00 18 50.9	+0.2
MSWZ	Moikau Station	0.83	70	P	Pn	00 18 52.6	-0.4
KHZ	Kahutara	0.87	215	P	Pn	00 18 53.8	+0.3
CAW	Cannon Point	0.88	47	P	Pb	00 18 52.8	+0.1
DUWZ	D'Urville Isla	0.93	346	P	Pg	00 18 53.2	-0.1
PAWZ	Paruwai Farm	0.97	71	P	Pn	00 18 55.0	+0.1
THZ	Tophouse	0.98	267	P	Pn	00 18 54.8	-0.3
MTW	Mount Morrison	1.11	61	P	Pn	00 18 57.1	+0.2
TRWZ	Traveller	1.15	75	P	Pb	00 18 57.2	0.0
HOWZ	Holdsworth Sta	1.27	51	P	Pg	00 18 59.6	-0.2
TMWZ	Te Maipa	1.40	65	P	Pn	00 19 00.7	-0.1
MRZ	Mangatainoka R	1.47	45	P	Pb	00 19 02.3	-0.4
GVZ	Greta Valley S	1.53	214	P	Pb	00 19 03.5	-0.2
QRZ	Quartz Range	1.55	304	P	Pg	00 19 04.5	-0.5
OHWZ	Ohakea	1.72	29	P	Pb	00 19 07.6	+0.6
PRWZ	Pori Road	1.76	50	P	Pn	00 19 06.1	+0.4
POWZ	Post Office Ro	1.77	42	P	Pn	00 19 06.6	+0.8
LTZ	Lake Taylor	1.80	233	P	Pn	00 19 07.2	+0.8
BFZ	Birch Farm	1.85	57	P	Pn	00 19 06.2	-0.8
WAZ	Wanganui	2.04	17	P	Pb	00 19 12.9	+0.5
DVHZ	Dannevirke	2.04	47	P	Pn	00 19 09.6	-0.1
TSZ	Takapari Road	2.12	39	P	Pn	00 19 10.9	+0.2
OKCZ	Okains Bay	2.18	203	P	Pn	00 19 11.5	-0.2
LREZ	Lake Rotokare	2.25	4	P	Pg	00 19 18.7	+0.2
OXZ	Oxford	2.28	224	P	Pn	00 19 13.8	+0.9
INZ	Inchbonnie	2.29	243	P	Pb	00 19 16.6	-0.2
MQZ	McQueen's Vall	2.30	209	P	Pn	00 19 12.2	-1.1
PNHZ	Pukenui	2.34	41	P	Pb	00 19 16.8	-0.9
KHEZ	Kahui Hut	2.42	356	P	Pb	00 19 20.1	+1.2
NBEZ	Newall Road No	2.45	354	P	Pg	00 19 22.0	-0.3
PKE	Pukeiti	2.52	356	P	Pb	00 19 21.5	+0.9
MOVZ	Moawhango	2.58	28	P	Pb	00 19 21.9	+0.2
VRZ	Vera Road	2.62	9	P	Pb	00 19 21.5	-0.8
BHHZ	Black Hill Sta	2.63	33	P	Pn	00 19 19.9	+2.1
KRHZ	Kereru	2.64	39	P	Pn	00 19 18.3	+0.4
WHVZ	Whangaehu Hut	2.64	24	P	Pb	00 19 23.3	+0.5
FWVZ	Far West T-bar	2.66	23	P	Pb	00 19 23.4	+0.3
NGZ	Ngauruhoe	2.74	23	P	Pb	00 19 25.5	+0.9
KAHZ	Kahuranaki	2.79	47	P	Pb	00 19 22.6	-2.6
TWVZ	Taurewa	2.80	20	P	Pb	00 19 26.5	+1.1
WTVZ	West Tongariro	2.80	23	P	Pb	00 19 26.1	+0.7
KRVZ	Karewarewa	2.83	23	P	Pb	00 19 26.7	+0.8
KWHZ	Kaweka Forest	2.84	37	P	Pb	00 19 27.6	+1.6
WVZ	Waitaha Valley	2.91	241	P	Pb	00 19 27.4	+0.1
RITZ	Rihia Road	3.00	25	P	Pb	00 19 30.8	+1.9
BKZ	Black Stump Fm	3.08	35	P	Pb	00 19 31.3	+1.2
HIZ	Hauiti	3.23	9	P	Pb	00 19 30.4	-2.4
TLZ	Tolley Road	3.53	17	P	Pb	00 19 38.2	+0.4
ODZ	Otahua Downs	4.23	217	P	Pn	00 19 40.1	+0.4
JCZ	Jackson Bay	4.63	238	P	Pn	00 19 50.0	+4.6
MSZ	Milford Sound	5.47	235	P	Pn	00 19 56.2	-0.6

WEL 24 00:18:50.4, 42°S±2°×17°4E±°, h9^{km}±5^{km}, M3.4/14, ML3.7/6, MLv3.4/14, Error ellipse: s-maj=0.0km s-min=0.0km az=137.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.05	189	S	Sg	00 18 54.4	+0.9
BSWZ	Blackbirch Sta	0.26	267	P	Pg	00 18 56.3	+0.8
BSWZ				S	Sb	00 19 00.6	-1.3
TUWZ	Tuamarina	0.34	322	P	Pb	00 18 58.0	-0.7
TUWZ				S	Sb	00 19 03.2	-1.0
TCW	Tory Channel	0.49	5	S	Sb	00 19 07.7	-0.8
PLWZ	Palliser	0.78	81	P	Pn	00 19 07.2	-0.5
MSWZ	Moikau Station	0.82	70	P	Pb	00 19 07.1	+0.3
CAW	Cannon Point	0.87	47	P	Pn	00 19 10.0	+1.2
KHZ	Kahutara	0.88	215	P	Pn	00 19 09.0	+0.1
PAWZ	Paruwai Farm	0.96	71	P	Pn	00 19 09.9	-0.1
THZ	Tophouse	0.99	266	P	Pn	00 19 10.2	-0.3
MTW	Mount Morrison	1.10	61	P	Pn	00 19 12.1	0.0
TRWZ	Traveller	1.14	75	P	Pg	00 19 12.2	0.0
TMWZ	Te Maipa	1.39	65	P	Pn	00 19 15.8	-0.1
MRZ	Mangatainoka R	1.46	45	P	Pb	00 19 17.3	-0.4

IDC 24 00:30:35.5±0.7, 17°.32S×167°.61E, h0^{km}, mb4.6/18, mb1 4.7/20, mb1mx4.5/44, mbtmp4.6/20, ML4.6/2, MS4.1/15, Ms1 4.1/15, ms1mx4.0/20, Error ellipse: s-maj=21.9km s-min=16.1km az=114.0

NEIC 24 00:30:36.8±1.4, 17°.34S×167°.60E, h10^{km}±2^{km}, mb4.8/49, Error ellipse: s-maj=17.9km s-min=11.4km az=71.0

ISCJB 24 00:30:36.7±0.3, 17°.34S±0°.04×167°.53E±0°.06, h19^{km}, mb4.7/51, MS4.3/24, Error ellipse: s-maj=8.0km s-min=6.3km az=179.9

GCMT 24 00:30:39.8±0.2, 17°.36S±0°.02×167°.32E±0°.02, h18^{km}, MW5.1/94, Moment Tensor Solution. s58,c69; s94,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.42±.15; $M_{\theta\theta}$-0.29±.09; $M_{\phi\phi}$-3.13±.11; $M_{r\theta}$1.23±.24; $M_{\theta\phi}$0.32±.07; $M_{\phi r}$-3.48±.26; Best double couple: $M_0$4.94300×10^{16} NP1:ϕ_s164.00000°,δ69.00000°,λ84.00000°. NP2: ϕ_s1.00000°,δ22.00000°,λ106.00000°. Principal axes: T 5.1110, Plg65.0000°, Azm64.0000°; N -0.3350, Plg6.0000°, Azm166.0000°; P -4.7740, Plg24.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

MOS 24 00:30:39.7±1.4, 17°.15S×167°.29E, h30^{km}, mb5.0/28 Error ellipse: s-maj=11.8km s-min=9.3km az=131.6

BJI 24 00:30:40.5±0.0, 17°.40S×167°.50E, h30^{km}, mb4.8/33, mB5.1/29, Ms4.9/20, Ms7 4.6/17

ISC 24 00:30:38.4±0.3, 17°.40S±0°.05×167°.60E±0°.07, h19^{km}, n182, σ1^s.61/182, mb4.8/50, MS4.4/24, 8C-4D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.08	174	ePn	Pn	00 31 39.2	-0.6
DZM	Mont Dzumac	4.77	193	ePn	Pn	00 31 48.9	-0.6
	40nm,0.3s						
DZM				eSn	Sn	00 32 39.9	-4.4
	44nm,0.3s						
DZM				eLR	LR	00 32 52.0	
	comp=Z,2μm,24.8s						
DZM	Mont Dzumac	4.77	193	Pn	Pn	00 31 49.3	-0.2
	6.4nm,0.3s,baz=342,slow=7.1,SNR=41						
DZM				Sn	Sn	00 32 41.2	-3.1
	9.5nm,0.3s,baz=120,slow=20,SNR=3.0						
DZM				LR	LR	00 32 50.2	
	comp=Z,354nm,18.9s,baz=30,slow=28						
DZM	Mont Dzumac	4.77	193	ePn	Pn	00 31 48.8	-0.6
DZM				eSn	Sn	00 32 41.2	-3.1
HNR	Honiara	10.87	316	Pn	Pn	00 33 10.0	-3.1
	21nm,0.3s,baz=198,slow=5.8,SNR=4.1						
HNR				LR	LR	00 36 49.6	
	comp=Z,1μm,18.4s,baz=142,slow=35						
HNR	Honiara	10.87	316	ePn	Pn	00 33 10.7	-2.4
HNR	Honiara	10.87	316	P	Pn	00 33 10.0	-3.1
EIDS	Eidsvold	17.30	240	eP	P	00 34 40.3	0.0
	42nm,1.1s						
ARMA	Armidale	19.49	225	eP	Pn	00 35 05.1	-0.7
	45nm,1.1s						
CTA	Charters Tower	20.39	259	P	P	00 35 14.9	+0.6
	65nm,1.1s,baz=87,slow=12,SNR=8.5						
CTAO	Charters Tower	20.39	259	eP	P	00 35 14.5	+0.1
	67nm,1.1s						
CTAO	Charters Tower	20.39	259	eP	P	00 35 14.5	+0.1
CTAO				pmax	pmax		
	comp=Z,67nm,1.1s						
PMG	Port Moresby	21.40	289	LR	LR	00 42 42.3	
	comp=Z,1μm,18.4s,baz=101,slow=34						
PMG	Port Moresby	21.40	289	i P	P	00 35 22.0	-3.3
PMG				pmax	pmax		
	comp=Z,140nm,1.2s						
URZ	Urewera	22.39	160	P	P	00 35 35.6	0.0
	comp=Z,24nm,1.0s,baz=13,slow=4.2,SNR=9.2						
URZ	Urewera	22.39	160	eP	P	00 35 36.3	+0.6
	comp=Z,77nm,1.1s						
BKZ	Black Stump Fm	23.03	162	eP	P	00 35 43.3	+0.8
	comp=Z,53nm,1.1s						
STKA	Stephens Creek	27.59	234	P	P	00 36 25.9	+1.2
	comp=Z,17nm,0.9s,baz=64,slow=7.7,SNR=24						
STKA				LR	LR	00 45 56.2	
	comp=Z,451nm,21.7s,baz=53,slow=33						
STKA	Stephens Creek	27.59	234	eP	P	00 36 24.7	+0.1
	comp=Z,6.2nm,1.1s						
STKA	Stephens Creek	27.59	234	eP	P	00 36 24.7	+0.1
STKA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WRAB	Tennant Creek	31.57	260	i P	P	00 36 57.8	-2.3
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WR1	Warramunga Arr	31.58	260	eP	P	00 37 00.3	+0.1
WRA	Warramunga Arr	31.59	260	P	P	00 37 00.3	+0.1
	comp=Z,9.8nm,1.1s,baz=76,slow=15,SNR=5.6						
AS31	Alice Springs	32.11	253	eP	P	00 37 03.8	-1.1
	comp=Z,3.0nm,0.6s						
ASAR	Alice Springs	32.11	253	P	P	00 37 03.9	-1.0
	comp=Z,6.1nm,0.7s,baz=84,slow=8.5,SNR=35						
ASAR				LR	LR	00 49 25.2	
	comp=Z,917nm,19.8s,baz=100,slow=35						
BBOO	Buckleboo	32.27	236	eP	P	00 37 05.9	-0.1
	comp=Z,24nm,1.0s						
TBI	Tubuai	40.57	106	eS	S	00 44 25.2	-0.5
	comp=Z,294nm,28.0s						
TBI				eLQ	LQ	00 47 47.0	
	comp=Z,922nm,27.0s						
TBI				eLR	LR	00 49 27.0	
	comp=Z,374nm,29.5s,baz=286						
PPT2	Papeete2	40.78	97	eS	S	00 44 29.2	+0.2
	comp=Z,208nm,23.2s						
PPT2				eLQ	LQ	00 47 49.9	
	comp=Z,508nm,25.2s						
PPT2				eLR	LR	00 49 36.8	
	comp=Z,574nm,26.0s,baz=256						
PPT	Papeete	40.78	97	LR	LR	00 50 52.7	
	comp=Z,331nm,22.0s,baz=244,slow=30						
TAOE	Nuku Hiva Isla	51.45	88	eLR	LR	00 54 32.0	
	comp=Z,674nm,29.2s						
INU	Inuyama	59.95	331	eP	P	00 40 42.8	-0.7
	comp=Z,9.2nm,1.0s						
MJAR	Matsushiro Arr	60.41	333	P	P	00 40 45.5	-1.2
	comp=Z,6.0nm,0.8s,baz=165,slow=7.6,SNR=12						
MJAR				LR	LR	01 03 47.4	
	comp=Z,56nm,21.8s,baz=200,slow=33						
MAJO	Matsushiro	60.42	333	eP	P	00 40 46.6	-0.1
	comp=Z,14nm,0.8s						
MAJO	Matsushiro	60.42	333	eP	P	00 40 46.7	-0.1
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
MAT	Matsushiro	60.42	333	P	P	00 40 45.6	-1.1
MAT				S	S	00 48 56.6	-4.3
MJB9	Matsu-Tunnel	60.42	333	eP	P	00 40 47.3	+0.5
	comp=Z,15nm,0.8s						
SBA	Scott Base	60.48	180	eP	P	00 40 47.9	+1.3
	comp=Z,8.8nm,1.0s						
SBA	Scott Base	60.48	180	eP	P	00 40 47.9	+1.3
SBA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CASY	Casey	61.19	203	eP	P	00 40 51.7	+0.1
	comp=Z,5.8nm,1.0s						
ERM	Erimo	63.29	340	i P	P	00 41 04.5	-1.4
ERM				pmax	pmax		
	comp=Z,28nm,1.1s						
QZH	Quanzhou	63.65	310	eP	P	00 41 13.1	+4.5
QZH				S	S	00 49 44.0	+1.9
QZH				LR	LR		
	comp=Z,190nm,15.6s						
ASAJ	Asahikawa	65.35	340	P	P	00 41 19.4	+0.1
	comp=Z,14nm,1.0s,baz=214,slow=11,SNR=4.8						
NJ2	Nanjing	67.81	316	eP	P	00 41 36.9	+1.5
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
YSS	Yuzh-Sakhalins	67.85	342	eP	P	00 41 35.6	+0.3
	comp=Z,33nm,1.0s						
YSS	Yuzh-Sakhalins	67.85	342	⇑eP	P	00 41 34.3	-1.0
YSS				e*SP	pwP	00 41 47.6	+1.1
YSS				e		00 42 00.0	
YSS				e		00 44 00.8	
YSS				eS	S	00 50 29.1	-3.5
YSS				pmax	pmax		
	comp=Z,200nm,4.0s						
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				smax	smax		
	comp=N,200nm,15.0s						
YSS				smax	smax		
	comp=E,200nm,15.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
USRK	Ussuriysk Ar.	69.40	333	P	P	00 41 44.6	-0.4
	comp=Z,3.2nm,0.9s,baz=180,slow=0.4,SNR=7.1						
WHN	Wuhan	69.97	313	⇓P	PcP	00 42 12.5	+1.4
PSI	Prapat	70.59	279	P	P	00 41 51.5	-1.7
	comp=Z,2.9nm,0.4s,baz=159,slow=6.1,SNR=5.4						
PSI	Prapat	70.59	279	eP	P	00 41 51.9	-1.3
	comp=Z,17nm,1.1s						
PSI	Prapat	70.59	279	eP	P	00 41 51.9	-1.3
PSI				pmax	pmax		
	comp=Z,17nm,1.1s						
PETK	Petropavlovsk-	70.74	354	P	P	00 41 52.4	-0.7
	comp=Z,7.5nm,1.0s,baz=136,slow=7.2,SNR=8.4						
PETK				LR	LR	01 09 37.6	
	comp=Z,198nm,19.4s,baz=154,slow=33						
GSI	Gunungsitoli	71.38	277	eP	P	00 41 57.3	-0.5
	comp=Z,12nm,0.9s						
TYV	Tymovskoe	71.42	344	eP	P	00 41 56.9	-0.3
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
QSPA	South Pole Qui	72.64	180	eP	P	00 42 05.3	+0.6
	comp=Z,27nm,1.0s						
KLR	Kul'dur	73.57	336	P	P	00 42 10.1	0.0
	comp=Z,7.9nm,1.1s,baz=138,slow=4.4,SNR=12						
KLR	Kul'dur	73.57	336	d iP	P	00 42 08.6	-1.5
KLR				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN	Xi'an	75.73	313	P	P	00 42 25.4	+2.3
XAN				pP	pwP	00 42 33.9	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,1.8s						
XAN				pmax	pmax		
	comp=Z,110nm,3.6s						
XAN				LR	LR		
	comp=Z,130nm,11.8s						
XAN				LR	LR		
	comp=Z,130nm,16.7s						
KMI	Kunming	75.99	302	P	P	00 42 28.5	+3.6
KMI				pP	PcP	00 42 37.5	+0.2
KMI				sP	pwP	00 42 42.8	+6.9
KMI				S	S	00 52 10.6	+3.0
KMI				SS	SS	00 57 02.5	+1.6
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				pmax	pmax		
	comp=Z,200nm,5.0s						
KMI				LR	LR		
	comp=Z,160nm,18.7s						
KMI				LR	LR		
	comp=Z,170nm,19.3s						
KMI				LR	LR		
	comp=Z,150nm,16.6s						
CM31	Chiang Mai Arr	76.33	295	eP	P	00 42 28.2	+1.4
	comp=Z,8.7nm,1.0s						
CMAR	Chiang Mai Arr	76.33	295	P	P	00 42 28.2	+1.4
	comp=Z,4.5nm,1.0s,baz=134,slow=5.2,SNR=12						
CMAR				LR	LR	01 17 51.0	
	comp=Z,40nm,18.1s,baz=147,slow=37						
CHTO	Chiang Mai	76.47	295	eP	P	00 42 27.9	+0.3
	comp=Z,4.1nm,0.9s						
CHTO	Chiang Mai	76.47	295	eP	P	00 42 27.9	+0.3
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CD2	Chengdu	77.89	308	eP	P	00 42 35.8	+0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
ZEA	Zeya	78.86	337	eP	P	00 42 40.0	-0.1
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
MAW	Mawson	79.54	202	P	P	00 42 47.0	+3.3
	comp=Z,3.4nm,1.0s,baz=96,slow=8.5,SNR=5.3						
MAW				LR	LR	01 16 46.2	
	comp=Z,167nm,18.2s,baz=131,slow=35						
MAW	Mawson	79.54	202	eP	P	00 42 49.7	+6.0
	comp=Z,2.2nm,1.1s						
LZH	Lanzhou	80.35	313	eP	P	00 42 52.6	+3.8
LZH				pP	pwP	00 43 02.6	+2.7
LZH				sP	PcP	00 43 07.3	+11
LZH				eS	S	00 52 58.0	+4.0
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.6s						
LZH				LR	LR		
	comp=Z,1μm,15.2s						
LZH				LR	LR		
	comp=Z,1μm,14.4s						
LZH				LR	LR		
	comp=Z,1μm,16.5s						
SEY	Seymchan	80.96	353	P	P	00 42 50.4	-0.8
	comp=Z,1.9nm,0.4s,baz=154,slow=5.7,SNR=11						
SEY	Seymchan	80.96	353	i P	P	00 42 48.7	-2.5
YAK	Yakutsk	84.67	343	i P	P	00 43 09.4	-1.1
GTA	Gaotai	84.74	314	eP	P	00 43 13.4	+1.8
GTA				pP	pwP	00 43 22.5	-0.2
GTA				sP	sP	00 43 27.1	+8.7
GTA				SKS	SKSac	00 53 33.8	-1.3
GTA				S	S	00 53 38.0	-0.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,88nm,5.2s						
GTA				LR	LR		
	comp=Z,150nm,17.5s						
GTA				LR	LR		
	comp=Z,98nm,19.7s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
SONM	Songino Array	84.83	324	P	P	00 43 12.4	+0.6
	comp=Z,2.6nm,1.0s,baz=137,slow=3.3,SNR=16						
BILL	Bilibino	85.20	359	eP	P	00 43 11.1	-2.0
BILL				e		00 43 21.1	
BILL				e		00 46 25.6	
BILL				ePPP	PPP	00 48 27.9	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SYO	Syowa Base	86.25	197	⇑eP	P	00 43 18.2	-0.3
SYO	Syowa Base	86.25	197	⇓ePcP	PcP	00 43 21.9	+0.9
SYO	Syowa Base	86.25	197	⇓epP	pP	00 43 30.9	+7.3
SYO	Syowa Base	86.25	197	⇑isP	sP	00 43 34.0	+8.6
WDC	Whiskeytown Da	86.69	46	eP	P	00 43 20.6	-0.5
	comp=Z,6.0nm,1.0s						
WDC	Whiskeytown Da	86.69	46	eP	P	00 43 20.6	-0.5
WDC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOD	Bodaibo	87.01	334	eP	P	00 43 23.7	+1.5
BOD				pmax	pmax		
	comp=Z,16nm,1.6s						
ZAK	Zakamensk	87.91	325	eP	P	00 43 27.1	+0.2
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
PNTR	Pine Nut	88.11	48	eP	P	00 43 27.9	-0.3
	comp=Z,7.5nm,1.0s						
TLY	Talaya	88.37	326	eP	P	00 43 32.1	+3.1
	comp=Z,4.9nm,1.1s						
TLY	Talaya	88.37	326	eP	P	00 43 32.1	+3.1
TLY				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NVAR	Mina Array Bea	88.77	49	P	P	00 43 31.0	-0.4
	comp=Z,3.6nm,1.0s,baz=230,slow=7.8,SNR=16						
NVAR				LR	LR	01 18 16.4	
	comp=Z,232nm,18.8s,baz=259,slow=32						
ILAR	Eielson Array	88.96	18	P	P	00 43 30.3	-1.1
	comp=Z,0.8nm,0.7s,baz=224,slow=5.0,SNR=5.3						
ILAR				LR	LR	01 19 23.5	
	comp=Z,195nm,19.4s,baz=248,slow=33						
ILB	Eielson Array	88.96	18	eP	P	00 43 30.3	-1.1
	comp=Z,2.2nm,0.9s						
TPNV	Topopah Spring	89.70	51	eP	P	00 43 35.4	-0.3
	comp=Z,3.8nm,1.0s						
TPNV	Topopah Spring	89.70	51	eP	P	00 43 35.4	-0.3
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s						

SNAA	Sanae	90.91	183	P	P	00 43 41.2	+0.5
SNAA	Sanae	90.91	183	*e*P	P	00 43 40.8	+0.1
	comp=Z,14nm,1.1s						
SNAA	Sanae	90.91	183	*e*P	P	00 43 40.8	+0.1
SNAA				pmax	pmax		
	comp=Z,14nm,1.1s						
VNA3	Neumayer Olymp	91.56	181	P	P	00 43 44.1	+0.5
B08A	Colville Reser	92.06	40	*e*P	P	00 43 45.3	-1.0
	comp=Z,4.1nm,1.0s						
VNA1	Neumayer--Stat	92.13	181	P	P	00 43 47.3	+1.1
TIXI	Tiksi	92.64	349	P	P	00 43 47.9	-0.5
	comp=Z,1.5nm,0.3s,baz=106,slow=9.9,SNR=3.6						
TIXI	Tiksi	92.64	349	*i* P	P	00 43 46.9	-1.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	Urumqi	94.82	314	*e*P	P	00 44 00.3	+1.2
WMQ				pP	pwP	00 44 11.1	+0.8
WMQ				sP	sP	00 44 15.1	+9.1
WMQ				LR	LR		
	comp=Z,160nm,28.9s						
WMQ				LR	LR		
	comp=Z,420nm,29.2s						
WMQ				LR	LR		
	comp=Z,180nm,26.1s						
DGZ	Jazzator, Alta	96.91	320	*i* P	P	00 44 07.2	-1.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	97.26	62	LR	LR	01 22 53.1	
	comp=Z,84nm,18.0s,baz=0.0,slow=32						
MKAR	Makanchi Array	99.34	316	LR	LR	01 27 02.5	
	comp=Z,54nm,21.9s,baz=105,slow=34						
ZALV	Zalesovo Beam	99.72	323	P	Pdif	00 44 21.1	+0.1
	comp=Z,0.4nm,0.4s,baz=124,slow=2.6,SNR=3.2						
ZALV				LR	LR	01 29 59.7	
	comp=Z,34nm,19.0s,baz=70,slow=36						
YKA	Yellowknife Ar	99.76	27	LR	LR	01 23 21.1	
	comp=Z,7.3nm,20.6s,baz=240,slow=32						
PRGR	Permogore	120.17	332	*e*PKIKP	PKiKP	00 49 35.1	+7.3
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARCES	ARCESS Array B	122.90	345	PKP	PKPdf	00 49 32.7	-0.1
	comp=Z,2.2nm,0.7s,baz=45,slow=1.9,SNR=11						
PQI	Presque Isle	125.93	45	*e*PKPdf	PKPdf	00 49 38.0	-1.2
MOS	Moscow	126.31	327	*e*PKIKP	PKPdf	00 49 38.4	-1.2
LPSR	Galich'ya Gora	126.83	323	*e*PKIKP	PKPdf	00 49 39.8	-0.9
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	126.89	312	*i* PKIKP	PKPdf	00 49 39.3	-2.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN	Obninsk	127.12	327	*e*PKIKP	PKPdf	00 49 40.4	-0.8
OBN				*e*		00 51 37.8	
OBN				*e*PPP	PPP	00 54 20.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VSR	Storozhevoye	127.19	322	*e*PKIKP	PKiKP	00 49 41.7	-0.3
VSR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FIA1	FINESS Array S	128.31	338	*e*PKPdf	PKPdf	00 49 42.8	-0.5
FIA0	FINESS Array S	128.31	338	*e*PKPdf	PKiKP	00 49 44.5	+0.6
FIA0	FINESS Array S	128.31	338	*e*PKIKP	PKiKP	00 49 44.5	+0.6
FINES	FINESS Array B	128.31	338	PKP	PKiKP	00 49 44.5	+0.6
	comp=Z,2.3nm,0.9s,baz=156,slow=10.0,SNR=4.6						
HUMP	Col San Antoni	129.25	81	*e*PKPdf	PKPdf	00 49 45.8	-0.5
AKASG	Malin Array Be	133.10	325	PKP	PKiKP	00 49 53.2	-0.6
	comp=Z,0.7nm,0.6s,baz=50,slow=1.4,SNR=4.2						
AKBB	Malin Array Si	133.10	325	*e*PKPdf	PKiKP	00 49 53.2	-0.6
AKBB	Malin Array Si	133.10	325	*e*PKIKP	PKiKP	00 49 53.3	-0.6
NB2	NORSAR Subarra	133.27	344	PKPdf	PKiKP	00 49 54.7	+0.7
	comp=Z,14nm,2.0s,baz=31,slow=1.9						
NB2	NORSAR Subarra	133.27	344	PKPdf	PKiKP	00 49 54.7	+0.7
	baz=31,slow=1.9						
NOA	NORSAR Array B	133.27	344	PKP	PKiKP	00 49 53.9	-0.1
	comp=Z,0.7nm,1.0s,baz=32,slow=2.6,SNR=2.7						
BR101	Keskin Array S	134.46	309	*e*PKPdf	PKPdf	00 49 56.0	+0.2
BRTR	Keskin Array B	134.46	309	PKP	PKPdf	00 49 56.0	+0.2
	comp=Z,0.6nm,0.9s,baz=158,slow=4.5,SNR=3.0						
KOLS	Kolonicke sedl	137.84	326	*e*PKIKP	PKiKP	00 50 03.0	-0.6
KOLS	Kolonicke sedl	137.84	326	*e*PKP	PKiKP	00 50 03.0	-0.6
MORC	Moravsky Berou	139.70	330	*e*PKIKP	PKiKP	00 50 08.6	+1.1
DPC	Dobruska-Polom	139.88	331	*e*PKIKP	PKiKP	00 50 08.5	+0.7
DPC	Dobruska-Polom	139.88	331	*e*PKP	PKiKP	00 50 08.5	+0.7
VYHS	Vyhne	139.91	328	*e*PKIKP	PKiKP	00 50 07.0	-0.9
VYHS	Vyhne	139.91	328	*e*PKP	PKiKP	00 50 07.0	-0.9
JAVC	Velka Javorina	140.26	329	*e*PKIKP	PKiKP	00 50 08.9	+0.3
VRAC	Vranov	140.47	330	*e*PKIKP	PKiKP	00 50 09.1	+0.1
BRG	Berggiesshubel	140.54	334	*e*PKP	PKPdf	00 50 07.5	+1.0
	comp=Z,5.5nm,1.2s						
CLL	Collm	140.60	335	*i* PKIKP	PKPdf	00 50 02.5	-4.1
CLL				*i*		00 50 08.6	
CLL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CLL	Collm	140.60	335	*i* (PKPdf)	PKPdf	00 50 02.5	-4.1
	comp=Z,5.0nm,1.3s						
CLL				*i* PKiKP	PKiKP	00 50 08.6	-0.6
	comp=Z,5.0nm,1.0s						
KRUC	Moravsky	140.74	330	*e*PKIKP	PKiKP	00 50 09.9	+0.4
CONA	Conrad Observa	141.78	329	*e*PKPdf	PKPdf	00 50 06.9	-2.1
	comp=Z,3.9nm,1.1s						
KHC	Kasperske Hory	141.99	332	*e*PKIKP	PKPdf	00 50 07.7	-1.5
KHC				*e*		00 50 19.5	
KHC	Kasperske Hory	141.99	332	*e*PKP	PKPdf	00 50 07.7	-1.5
KHC				*e*x	x	00 50 19.5	
GEC2	GERESS Array S	142.15	332	*e*PKPdf	PKPdf	00 50 08.2	-1.4
GEC2	GERESS Array S	142.15	332	*e*PKIKP	PKPdf	00 50 08.2	-1.4
GERES	GERESS Array B	142.15	332	PKhKP	PKPdf	00 50 06.0	-3.6
	comp=Z,0.3nm,0.5s,baz=17,slow=1.0,SNR=5.5						
MOA	Molln	142.60	330	*e*PKPdf	PKPdf	00 50 09.0	-1.3
	comp=Z,10nm,1.6s						
SOKA	Soboth	143.04	328	*e*PKPdf	PKPbc	00 50 08.9	+0.9
	comp=Z,2.0nm,0.6s						
OBKA	Obir	143.40	328	*e*PKPdf	PKPdf	00 50 11.2	-0.7
	comp=Z,4.3nm,1.5s						
KBA	Koelnbreinsper	143.59	330	*e*PKPdf	PKPdf	00 50 11.6	-0.7
	comp=Z,9.9nm,1.4s						
MEM	Membach	143.74	340	⇑PKiKP	PKiKP	00 50 13.9	-1.7
MYKA	Terra Mystica	143.76	329	*e*PKPdf	PKPbc	00 50 10.4	+0.4
	comp=Z,7.6nm,0.9s						
BCLA	Clavier	144.13	341	⇑PKiKP	PKPdf	00 50 13.4	+0.6
WATA	Walderalm	144.22	332	*e*PKPdf	PKPdf	00 50 12.6	-0.8
	comp=Z,1.9nm,0.4s						
ABTA	Abfaltersbach	144.22	330	*e*PKPdf	PKPab	00 50 11.1	0.0
	comp=Z,25nm,1.7s,SNR=8.1						
WTTA	Wattenberg	144.25	332	*e*PKPdf	PKPbc	00 50 12.2	+0.6
	comp=Z,19nm,1.3s,SNR=5.8						
MOTA	Moosalm	144.43	332	*e*PKPdf	PKPdf	00 50 12.8	-0.9
	comp=Z,12nm,1.2s						
RETA	Reutte	144.47	333	*e*PKPdf	PKPbc	00 50 12.4	+0.2
	comp=Z,17nm,1.4s,SNR=6.3						
SQTA	Sankt Quirin	144.47	332	*e*PKPdf	PKPdf	00 50 13.1	-0.6
	comp=Z,18nm,1.4s,SNR=7.7						
WLF	Walferdange	144.50	339	⇑PKPdf	PKPdf	00 50 12.8	-0.7
WLF				⇑PKiKP	PKiKP	00 50 16.2	-1.0
DOU	Dourbes	144.63	341	⇑PKPdf	PKPdf	00 50 13.2	-0.5
BFO	Black Forest	144.82	336	*e*PKPdf	PKPbc	00 50 13.4	+0.1
BFO	Black Forest	144.82	336	*e*PKIKP	PKPbc	00 50 13.4	+0.2
FETA	Feichten	144.84	332	*e*pPKPbc	PKPdf	00 50 13.9	-0.6
	comp=Z,26nm,1.3s,SNR=16						
DAVA	Damuels	145.01	333	*e*PKPdf	PKPab	00 50 13.6	-0.5
	comp=Z,46nm,1.4s,SNR=22						
FUORN	Ofenpass-Fuorn	145.35	332	*e*PKPbc	PKPdf	00 50 15.6	+0.1
ECH	Echery	145.36	337	*e*PKPbc	PKPbc	00 50 14.4	-0.6
ECH	Echery	145.36	337	*e*PKIKP	PKPbc	00 50 14.4	-0.6
TIP	Timpagrande	146.63	316	*e*PKPbc	PKPab	00 50 19.6	-0.7
BNI	Bardonecchia	148.14	334	*e*PKPbc	PKPbc	00 50 23.2	-0.1
BNI	Bardonecchia	148.14	334	*e*PKP2	PKPbc	00 50 23.2	-0.1
KEST	Kesra	153.43	318	PKPbc	PKiKP	00 50 37.0	+0.8
	comp=Z,1.6nm,0.7s,baz=36,slow=3.5,SNR=2.6						
POLO	Lamas de Olo	155.78	352	*e*PKPab	PKPab	00 50 58.4	+0.4
PVRL	Vila Real	155.87	351	*e*PKPab	PKPab	00 50 58.2	-0.1
PVIS	Viseu	156.44	351	*e*PKPab	PKPab	00 51 00.9	+0.1
ESDC	Sonseca Array	156.63	343	PKPab	PKPab	00 51 01.7	+0.1
	comp=Z,0.9nm,0.7s,baz=19,slow=2.1,SNR=9.5						
MTE	Manteigas	156.70	351	*e*PKPab	PKPab	00 51 02.1	+0.2
MTE	Manteigas	156.70	351	*e*PKPab	PKPab	00 51 01.7	-0.2
PCBR	Castelo Branco	157.24	350	*e*PKPab	PKPab	00 51 04.5	+0.4
PTOM	Tomar	157.59	352	*e*PKPab	PKPab	00 51 05.7	0.0
PMTG	Montargil	158.11	351	*e*PKPab	PKPab	00 51 08.5	+0.6
PBEJ	Beja	159.07	350	*e*PKPab	PKPab	00 51 12.2	+0.1
PNCL	Nicolau / Gran	159.09	351	*e*PKPab	PKPab	00 51 13.1	+0.9
TORD	Torodi Ar. Bea	165.76	255	PKP	PKPdf	00 50 42.4	-0.6
	comp=Z,1.9nm,0.9s,baz=315,slow=1.8,SNR=7.3						
TORD				PKPab	PKPab	00 51 47.0	+4.7
	comp=Z,0.8nm,1.1s,baz=132,slow=4.3,SNR=3.4						
TOA1	Torodi Ar. Sit	165.77	255	*e*PKPdf	PKPdf	00 50 42.4	-0.6

ISCJB ***24*** *00:31:33.4±0.3, 35°.94N±0°.02×6°.49W±0°.02, h82^{km}±5^{km},*
Error ellipse: s-maj=3.7km s-min=2.3km az=42.1

CNRM ***24*** *00:31:33.8, 35°.76N×6°.62W, h69^{km}, ml2.4*

IGIL ***24*** *00:31:34.9, 35°.85N×6°.55W, h24^{km}, ML2.9*

MDD ***24*** *00:31:36.3±0.8, 35°.96N×6°.53W, h28^{km}±7^{km}, mbLg2.6/43,*
Error ellipse: s-maj=7.0km s-min=3.4km az=18.0, PRXIMO

SFS ***24*** *00:31:36.0, 35°.92N×6°.51W, h48^{km}, ML3.9, GOLFO DE CADIZ*

INMG ***24*** *00:31:37.0±1.3, 35°.93N×6°.49W, h31^{km}, ML2.6, Error ellipse: s-maj=3.7km s-min=2.1km az=27.0*

ISC 24 00:31:34.0±1.2**, 35°.92N**±0°.03×**6°.54W**±0°.03**, h66**^{km}±11^{km}**,**
n103, σ**1^{s}95**/193**, 2C-9D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFS	San Fernando	0.61	26	S	Sn	00 31 55.3	-2.3
SFS	San Fernando	0.61	26	*e*S	Sn	00 31 55.3	-2.3
ECEU	Ceuta	0.94	91	P	Pn	00 31 52.5	+1.0
	3.9nm,0.1s,SNR=11						
ECEU				S	Sn	00 32 05.4	+0.8
	6.5nm,0.1s,SNR=5.4						
CEU	Ceuta	0.94	91	⇓P	Pn	00 31 53.9	+2.3
CEU	Ceuta	0.94	91	⇓*i*P	Pn	00 31 53.9	+2.3
CEU				*e*S	Sn	00 32 07.3	+2.7
SMIR	Smir Dam	0.97	104	P	Pn	00 31 52.0	+0.1
SMIR				S	Sn	00 32 04.4	-0.7
CEUT	Ceuta	0.98	92	P	Pn	00 31 52.7	+0.6
CEUT				S	Sn	00 32 07.0	+1.5
ESPR	Espera	1.10	30	P	Pn	00 31 54.5	+1.0
	2.6nm,0.2s,SNR=8.1						
ESPR				S	Sn	00 32 07.4	-0.8
	7.1nm,0.2s,SNR=11						
RSA	Sarsar	1.18	150	P	Pn	00 31 56.0	+1.2
RSA				S	Sn	00 32 10.1	-0.1
CHEFC	Chefchaouen	1.27	129	P	Pn	00 31 56.6	+0.7
CHEFC				S	Sn	00 32 11.9	-0.3
EMIJ	Mijas	1.56	65	P	Pn	00 32 00.4	+0.6
	1.2nm,0.2s,SNR=5.5						
EMIJ				S	Sn	00 32 18.9	-0.3
	6.3nm,0.4s,SNR=4.8						
PBDV	Barranco-do-Ve	1.74	320	⇓*e*Pn	Pn	00 32 02.9	+0.8
PBDV				*e*Sn	Sn	00 32 23.2	-0.1
PBDV				A	A	00 32 25.7	
	34nm,0.2s						
PBDV	Barranco-do-Ve	1.74	320	P	Pn	00 32 02.9	+0.8
PBDV				S	Sn	00 32 23.2	-0.1
	34nm,0.2s						
PVAQ	Vaqueiros	1.76	328	⇓*e*Pn	Pn	00 32 03.5	+1.1
PVAQ				*e*Sn	Sn	00 32 23.9	0.0
PVAQ				A	A	00 32 25.2	
	62nm,0.3s						
PVAQ	Vaqueiros	1.76	328	P	Pn	00 32 03.5	+1.1
PVAQ				S	Sn	00 32 23.9	0.0
	62nm,0.3s						
PVAQ	Vaqueiros	1.76	328	P	Pn	00 32 03.1	+0.7
PVAQ				S	Sn	00 32 25.9	+2.0
EGRO	El Granado	1.79	335	⇓P	Pn	00 32 03.9	+1.2
	9.7nm,0.1s,SNR=18						
EGRO				S	Sn	00 32 24.7	+0.2
	20nm,0.1s,SNR=14						
EMIN	Mina Concepcio	1.85	357	⇓P	Pn	00 32 04.6	+1.0
	8.0nm,0.1s,SNR=18						
EMIN				S	Sn	00 32 25.9	-0.2
	9.9nm,0.1s,SNR=12						
EMAL	Malaga-Limoner	1.90	63	S	Sn	00 32 35.2	+8.1
EMAL	Malaga-Limoner	1.90	63	*e*S	Sn	00 32 35.2	+8.1
PCVE	Castro Verde	2.10	325	*e*Pn	Pn	00 32 08.2	+1.3
PCVE				*e*Sn	Sn	00 32 32.4	+0.5
PCVE				A	A	00 32 32.9	
	24nm,0.5s						
PCVE	Castro Verde	2.10	325	P	Pn	00 32 08.2	+1.3
PCVE				S	Sn	00 32 32.4	+0.5
	24nm,0.5s						
HORN	Hornachuelos	2.18	28	P	Pn	00 32 09.0	+0.9
HORN				S	Sn	00 32 36.5	+2.5
MORF	Marmelete	2.20	310	*e*P	Pn	00 32 08.8	+0.5
MORF				*e*S	Sn	00 32 34.0	-0.5
MORF				AML	AML	00 32 35.0	
	comp=N,66nm,0.3s						
MORF	Marmelete	2.20	310	*e*Pn	Pn	00 32 08.8	+0.5
MORF				*e*Sn	Sn	00 32 34.0	-0.5
MORF				A	A	00 32 38.7	
	comp=N,41nm,0.1s						
MORF	Marmelete	2.20	310	P	Pn	00 32 08.8	+0.5
MORF				S	Sn	00 32 34.0	-0.5
	comp=N,41nm,0.1s						
PFVI	Vila Bisbo	2.21	304	⇑*e*Pn	Pn	00 32 09.1	+0.7
PFVI				*e*Sn	Sn	00 32 34.1	-0.6
PFVI				A	A	00 32 41.8	
	comp=N,19nm,0.1s						
PFVI	Vila Bisbo	2.21	304	P	Pn	00 32 09.4	+1.0
	comp=N,3.3nm,0.0s,SNR=7.9						
PFVI				S	Sn	00 32 34.3	-0.4
	comp=N,28nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	2.21	304	P	Pn	00 32 10.1	+1.7
PFVI				S	Sn	00 32 37.0	+2.3
PALE	Palemas	2.23	107	P	Pn	00 32 09.6	+0.9
PALE				S	Sn	00 32 34.4	-0.8
EGOR	Sierra Gorda,	2.29	58	P	Pn	00 32 11.5	+1.8
	comp=N,0.7nm,0.3s,SNR=7.9						
EGOR				S	Sn	00 32 36.0	-0.8
	comp=N,0.5nm,0.1s,SNR=7.9						
PBAR	Barrancos	2.29	350	*e*Pn	Pn	00 32 10.9	+1.4
PBAR				*e*Sn	Sn	00 32 36.7	0.0
PBAR				A	A	00 32 38.1	
	comp=N,25nm,0.4s						
PBAR	Barrancos	2.29	350	P	Pn	00 32 10.9	+1.4
PBAR				S	Sn	00 32 36.7	0.0
	comp=N,25nm,0.4s						
ECAB	El Cabril	2.33	22	P	Pn	00 32 10.9	+0.8
	comp=N,0.3nm,0.1s,SNR=9.3						
ECAB				S	Sn	00 32 36.8	-1.0
	comp=N,3.7nm,0.2s,SNR=12						
PBEJ	Beja	2.36	334	*e*Pn	Pn	00 32 12.7	+2.2
PBEJ				*e*Sn	Sn	00 32 38.9	+0.5
PBEJ				A	A	00 32 44.3	
	comp=N,13nm,0.2s						
PBEJ	Beja	2.36	334	P	Pn	00 32 12.7	+2.2
PBEJ				S	Sn	00 32 38.9	+0.5
	comp=N,6.4nm,0.2s						
PTEO	Sao Teotonio	2.40	313	⇓*e*Pn	Pn	00 32 12.1	+1.2
PTEO				*e*Sn	Sn	00 32 39.0	-0.2
PTEO				A	A	00 32 43.4	
	comp=N,20nm,0.3s						
PTEO	Sao Teotonio	2.40	313	P	Pn	00 32 12.1	+1.2
PTEO				S	Sn	00 32 39.0	-0.2
	comp=N,9.9nm,0.3s						
ZHG	ZHG	2.47	182	P	Pn	00 32 10.9	-1.1
ZHG				S	Sn	00 32 37.9	-3.1
AKLM	AKL	2.60	122	P	Pn	00 32 14.3	+0.5
AKLM				S	Sn	00 32 42.7	-1.6
PNCL	Nicolau / Gran	2.71	325	⇓*e*Pn	Pn	00 32 16.5	+1.3
PNCL				*e*Sn	Sn	00 32 46.7	-0.2
PNCL				A	A	00 32 50.0	
	comp=N,17nm,0.4s						
PNCL	Nicolau / Gran	2.71	325	P	Pn	00 32 16.5	+1.3
PNCL				S	Sn	00 32 46.7	-0.2
	comp=N,17nm,0.4s						
EADA	Adamuz	2.74	34	P	Pn	00 32 16.9	+1.2
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S	Sn	00 32 46.7	-1.0
	comp=N,7.2nm,0.1s,SNR=7.9						
EQUE	Quentar	2.80	62	P	Pn	00 32 17.7	+1.1
	comp=N,0.6nm,0.1s,SNR=7.9						
EQUE				S	Sn	00 32 49.4	+0.1
	comp=N,0.8nm,0.2s,SNR=7.9						
EALB	Alboran	2.84	88	P	Pn	00 32 18.5	+1.5
	comp=N,1.2nm,0.1s,SNR=7.9						
EALB				S	Sn	00 32 48.9	-1.2
	comp=N,2.3nm,0.2s,SNR=7.9						
EBER	Berja	3.10	70	P	Pn	00 32 21.8	+1.0
	comp=N,0.3nm,0.2s,SNR=7.9						
EBER				S	Sn	00 32 56.5	-0.1
	comp=N,2.0nm,0.2s,SNR=7.9						
CZD	Col de Zad	3.13	156	P	Pn	00 32 20.7	-0.5
CZD				S	Sn	00 32 54.6	-3.0
GORA	Gorafe	3.21	60	S	Sn	00 32 58.8	-0.4
	comp=N,4.3nm,0.2s,SNR=7.9						
EQES	Quesada	3.36	55	P	Pn	00 32 25.6	+1.4
	comp=N,0.4nm,0.1s,SNR=10.0						
EQES				S	Sn	00 33 01.7	-1.2
	comp=N,1.5nm,0.1s,SNR=8.3						
MD31	MD31	3.38	154	P	Pn	00 32 24.0	-0.5
MD31				S	Sn	00 33 03.7	+0.4
PMTG	Montargil	3.42	337	⇑*e*Pn	Pn	00 32 26.3	+1.4
PMTG				*e*Sn	Sn	00 33 04.2	-0.1
PMTG				A	A	00 33 05.7	
	comp=N,12nm,0.2s						
PMTG	Montargil	3.42	337	P	Pn	00 32 26.3	+1.4
PMTG				S	Sn	00 33 04.2	-0.1
	comp=N,12nm,0.2s						
MDT	Midelt	3.48	152	P	Pn	00 32 25.2	-0.7
MDT				S	Sn	00 33 01.8	-4.2
TAF	Taforalt	3.54	107	S	Sn	00 33 07.6	+0.3
PMRV	Marv??o	3.57	349	⇓*e*Pn	Pn	00 32 28.5	+1.5
PMRV				*e*Sn	Sn	00 33 06.9	-1.1
PMRV				A	A	00 33 09.0	
	comp=N,8.5nm,0.2s						
PMRV	Marv??o	3.57	349	P	Pn	00 32 28.5	+1.5
PMRV				S	Sn	00 33 06.9	-1.1
	comp=N,8.5nm,0.2s						
JBK	JBK	3.61	115	P	Pn	00 32 27.2	-0.5
JBK				S	Sn	00 33 07.0	-2.3
ALMR	Almeirim	3.62	334	*e*Pn	Pn	00 32 30.2	+2.6
ALMR				*e*Sn	Sn	00 33 09.8	+0.7
ALMR				A	A	00 33 12.4	
	comp=N,12nm,0.2s						
ALMR	Almeirim	3.62	334	P	Pn	00 32 30.2	+2.6
PMAFR	Mafra	3.74	325	*e*Pn	Pn	00 32 31.0	+1.7
PMAFR				*e*Sn	Sn	00 33 11.6	-0.5
PMAFR				A	A	00 33 15.2	
	comp=N,14nm,0.2s						
PMAFR	Mafra	3.74	325	P	Pn	00 32 31.2	+1.9
	comp=N,8.2nm,0.2s,SNR=18						
PMAFR				S	Sn	00 33 11.2	-0.9
	comp=N,28nm,0.2s,SNR=8.1						
SESP	Santiago Espad	3.88	54	P	Pn	00 32 33.1	+1.8
	comp=N,1.1nm,0.1s,SNR=7.9						
SESP				S	Sn	00 33 14.0	-1.7
	comp=N,2.4nm,0.1s,SNR=7.9						
PTOM	Tomar	3.98	339	*e*Pn	Pn	00 32 34.2	+1.6
PTOM				*e*Sn	Sn	00 33 17.2	-0.8
PTOM				A	A	00 33 18.9	
	comp=N,13nm,0.5s						
PTOM	Tomar	3.98	339	P	Pn	00 32 34.2	+1.6
PTOM				S	Sn	00 33 17.2	-0.8
	comp=N,6.4nm,0.5s						
PCBR	Castelo Branco	3.99	350	*e*Pn	Pn	00 32 34.3	+1.6
PCBR				*e*Sn	Sn	00 33 16.6	-1.5
PCBR				A	A	00 33 19.1	
	comp=N,13nm,0.5s						
PCBR	Castelo Branco	3.99	350	P	Pn	00 32 34.3	+1.6
PCBR				S	Sn	00 33 16.6	-1.5
	comp=N,6.5nm,0.5s						
PAB	San Pablo	4.02	25	P	Pn	00 32 34.8	+1.7
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	00 33 17.1	-1.9
	comp=N,0.6nm,0.1s,SNR=7.9						
EPLA	Plasencia	4.16	5	P	Pn	00 32 37.1	+2.1
	comp=N,14nm,0.1s,SNR=131						
EPLA				S	Sn	00 33 20.7	-1.6
	comp=N,6.6nm,0.2s,SNR=6.4						
ESDC	Sonseca Array	4.27	28	S	Sn	00 33 23.6	-1.5
	comp=N,3.9nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	4.41	340	*e*Pn	Pn	00 32 40.2	+1.7
PCAS				*e*Sn	Sn	00 33 28.2	-0.3
PCAS				A	A	00 33 29.8	
	comp=N,5.0nm,0.5s						
PCAS	Casmilo, Conde	4.41	340	P	Pn	00 32 40.2	+1.7
PCAS				S	Sn	00 33 28.2	-0.3
	comp=N,5.0nm,0.5s						
MTE	Manteigas	4.55	350	*e*Pn	Pn	00 32 41.9	+1.5
MTE				*e*Sn	Sn	00 33 30.3	-1.6
MTE				A	A	00 33 32.4	
	comp=N,13nm,0.3s						
MTE	Manteigas	4.55	350	P	Pn	00 32 41.9	+1.5
MTE				S	Sn	00 33 30.3	-1.6
	comp=N,6.4nm,0.3s						
EMUR	La Murta	4.66	64	S	Sn	00 33 33.5	-1.2
	comp=N,24nm,3.1s,SNR=7.9						
ETOB	Tobarra	4.82	54	P	Pn	00 32 44.9	+0.8
	comp=N,1.5nm,0.1s,SNR=31						
ETOB				S	Sn	00 33 36.8	-1.9
	comp=N,3.6nm,0.1s,SNR=6.8						
PVIS	Viseu	4.91	348	*e*Pn	Pn	00 32 46.8	+1.5
PVIS				*e*Sn	Sn	00 33 39.3	-1.5
PVIS				A	A	00 33 42.1	
	comp=N,4.5nm,0.2s						
PVIS	Viseu	4.91	348	P	Pn	00 32 46.8	+1.5
PVIS				S	Sn	00 33 39.3	-1.5
	comp=N,2.2nm,0.2s						
OUZM	OUZ	5.00	182	P	Pn	00 32 46.5	-0.2
OUZM				S	Sn	00 33 41.6	-1.5
GUD	Guadarrama	5.08	21	P	Pn	00 32 49.6	+1.9
	comp=N,0.3nm,0.0s,SNR=12						
GUD				S	Sn	00 33 42.3	-2.7
	comp=N,0.3nm,0.1s,SNR=7.6						
MVO	Moncorvo	5.25	356	*e*Pn	Pn	00 32 51.7	+1.7
MVO				*e*Sn	Sn	00 33 47.6	-1.7
MVO				A	A	00 33 51.2	
	comp=N,7.5nm,0.4s						
MVO	Moncorvo	5.25	356	P	Pn	00 32 51.7	+1.7
	comp=N,4.9nm,0.1s,SNR=49						
MVO				S	Sn	00 33 46.4	-2.9
	comp=N,4.0nm,0.1s,SNR=7.8						
PVRL	Vila Real	5.43	351	*e*Pn	Pn	00 32 53.9	+1.5
PVRL				*e*Sn	Sn	00 33 50.9	-2.7
PVRL				A	A	00 33 53.6	
	comp=N,9.9nm,0.2s						
PVRL	Vila Real	5.43	351	P	Pn	00 32 53.9	+1.5
PVRL				S	Sn	00 33 50.9	-2.7
	comp=N,4.9nm,0.2s						
POLO	Lamas de Olo	5.54	350	*e*Pn	Pn	00 32 55.4	+1.4
POLO				*e*Sn	Sn	00 33 53.8	-2.5
POLO				A	A	00 33 56.9	
	comp=N,4.1nm,0.3s						
POLO	Lamas de Olo	5.54	350	P	Pn	00 32 55.4	+1.4
POLO				S	Sn	00 33 53.8	-2.5
	comp=N,4.1nm,0.3s						
TTIG	Tnine Tigouga,	5.59	197	P	Pn	00 32 51.6	-3.1
TTIG				S	Sn	00 33 53.2	-4.4
ECHE	Chera	5.74	49	P	Pn	00 32 58.2	+1.6
	comp=N,0.2nm,0.1s,SNR=7.9						
ECHE				S	Sn	00 33 58.2	-2.9
	comp=N,0.7nm,0.2s,SNR=7.9						
PCAB	Cabril	5.90	349	*e*Pn	Pn	00 33 00.3	+1.4
PCAB				*e*Sn	Sn	00 34 02.5	-2.6
PCAB				A	A	00 34 06.5	
	comp=N,2.8nm,0.1s						
PCAB	Cabril	5.90	349	P	Pn	00 33 00.3	+1.4
PCAB				S	Sn	00 34 02.5	-2.6
	comp=N,1.4nm,0.1s						
ECAL	Calabor	6.02	359	P	Pn	00 33 02.6	+2.1
	comp=N,1.5nm,0.1s,SNR=12						
ECAL				S	Sn	00 34 04.5	-3.5
	comp=N,1.4nm,0.3s,SNR=5.1						
ETOR	Torete	6.03	34	P	Pn	00 33 02.0	+1.4
	comp=N,0.5nm,0.3s,SNR=7.9						
ETOR				S	Sn	00 34 05.0	-3.3
	comp=N,0.2nm,0.1s,SNR=7.9						
ELOB	Lobios	6.06	349	P	Pn	00 33 02.5	+1.4
	comp=N,1.3nm,0.1s,SNR=12						
ELOB				S	Sn	00 34 05.9	-3.2
	comp=N,0.9nm,0.1s,SNR=30						
PGAV	Gavieira, Arco	6.19	348	*e*Pn	Pn	00 33 04.1	+1.2
PGAV				*e*Sn	Sn	00 34 09.4	-2.9
PGAV				A	A	00 34 13.4	
	comp=N,2.9nm,0.6s						
PGAV	Gavieira, Arco	6.19	348	P	Pn	00 33 04.1	+1.2
PGAV				S	Sn	00 34 09.4	-2.9
	comp=N,2.9nm,0.6s						
EZAM	Zamans	6.45	346	P	Pn	00 33 08.0	+1.7
	comp=N,0.5nm,0.0s,SNR=7.9						
EMOS	Mosqueruela	6.52	45	S	Sn	00 34 17.5	-3.0
	comp=N,0.4nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	6.98	351	P	Pn	00 33 15.6	+2.0
	comp=N,1.2nm,0.1s,SNR=7.9						
EAGO				S	Sn	00 34 27.4	-4.2
	comp=N,0.7nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	7.27	346	P	Pn	00 33 19.3	+1.7
	comp=N,2.8nm,1.6s,SNR=7.9						
EPON	Pontenova	7.42	357	P	Pn	00 33 21.3	+1.7
	comp=N,1.6nm,3.1s,SNR=7.9						
EPON				S	Sn	00 34 38.1	-4.1
	comp=N,32nm,2.6s,SNR=7.9						
EARI	Arriondas	7.45	7	P	Pn	00 33 21.5	+1.5
	comp=N,0.3nm,0.2s,SNR=7.9						
EARI				S	Sn	00 34 38.7	-4.3
	comp=N,0.3nm,0.2s,SNR=7.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ELAN	**Lanestosa**	**7.69**	**17**	P	**Pn**	**00 33 24.5**	**+1.2**
	comp=N,0.6nm,0.3s,SNR=7.9						
ELAN				S	**Sn**	**00 34 44.4**	**-4.4**
	comp=N,2.6nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	**8.26**	**26**	P	**Pn**	**00 33 33.0**	**+1.8**
	comp=N,0.5nm,0.2s,SNR=7.9						
EALK				S	**Sn**	**00 34 58.4**	**-4.6**
	comp=N,3.1nm,0.4s,SNR=7.9						
ATE	**Arette**	**8.46**	**30**	P	**Pn**	**00 33 35.7**	**+1.9**
	comp=N,0.2nm,0.2s,SNR=7.9						
ATE				S	**Sn**	**00 35 03.0**	**-4.7**
	comp=N,0.2nm,0.1s,SNR=7.9						

MAN 24 00:33:24.3, 17°.17N×120°.00E, h26^{km}, mb4.9, ML3.8,
MS3.8, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.78**	**186**	*e*P	Pb	00 33 39.0	-0.4
BOLP				*e*S	Sn	00 33 51.5	+0.9
ABRA	**Dolores**	**0.84**	**55**	*e*P	Pb	00 33 40.1	-0.1
ABRA				*e*S	Sn	00 33 52.5	+0.6
SMPP	**San Manuel, Pa**	**1.20**	**147**	*e*P	Pn	00 33 45.3	-0.2
SMPP				*e*S	Sn	00 34 01.2	+0.2
APYP	**Conner**	**1.38**	**60**	*e*P	Pn	00 33 47.9	+0.1
APYP				*e*S	Sn	00 34 04.8	-0.5
SCZP	**Santa Cruz**	**1.38**	**183**	*e*P	Pn	00 33 48.0	+0.1
SCZP				*e*S	Sn	00 34 05.9	+0.5
CVP	**Callao Caves**	**1.82**	**73**	⇑*i*P	Pb	00 33 55.8	-1.2
CVP				*i* S	Sb	00 34 22.7	+3.3
BALP	**Baler**	**2.08**	**133**	*e*P	Pb	00 34 00.4	-0.9
BALP				*e*S	Sb	00 34 32.3	+5.6
PALP	**Palanan**	**2.33**	**92**	*e*P	Pb	00 34 05.1	-0.4
PALP				*e*S	Sb	00 34 34.1	+0.2
POLP	**Polilio Island**	**3.06**	**142**	*e*P	Pb	00 34 18.8	+0.7

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*KRNET **24** 00:41:05.3±0.1, 40°.45N×77°.50E, mb3.7*
*SOME **24** 00:41:06.2, 40°.38N×77°.50E, h15^{km}*
*NNC **24** 00:41:07.3±0.9, 40°.50N×77°.50E, h0^{km}, mb4.2, mpv3.9,*
Error ellipse: s-maj=6.2km s-min=4.3km az=163.0
ISC 24 00:41:05.8±1.4, **40°.46N**±0°.07×**77°.54E**±0°.03, **h10^{km}, n68,**
σ**2^{s}.04**/103, **27C-19D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.52**	**310**	⇑*i*P	**Pb**	**00 41 33.5**	**-0.8**
	baz=11						
NRN				⇑*i*S	**Sg**	**00 41 54.6**	**-0.2**
	baz=11						
KDJ	**Kajisay**	**1.69**	**351**	⇓*i*P	**Pb**	**00 41 37.0**	**-0.2**
	baz=52						
KDJ				⇓*i*S	**Sg**	**00 42 00.3**	**0.0**
	baz=52						
ULHL	**Ulahol**	**2.04**	**332**	⇑*i*P	**Pb**	**00 41 42.7**	**-0.3**
	baz=33						
ULHL				⇑*i*S	**Sg**	**00 42 10.1**	**-1.2**
	baz=33						
ULHL	**Ulahol**	**2.04**	**332**	P	**Pg**	**00 41 44.1**	**-0.8**
	SNR=10						
PRZ	**Przheval'sk**	**2.12**	**17**	⇑*i*P	**Pb**	**00 41 44.3**	**-0.2**
	baz=18						
PRZ				⇑*i*S	**Sg**	**00 42 12.9**	**-1.2**
	baz=18						
ANVS	**Anan'yevo**	**2.32**	**2**	⇓*e*P	**Pb**	**00 41 47.3**	**-0.7**
	baz=3.0						
ANVS				⇓*i*S	**Sb**	**00 42 17.7**	**+0.9**
	baz=3.0						
BOOM	**Boomskoye usch**	**2.36**	**330**	⇑*e*P	**Pb**	**00 41 47.5**	**-1.0**
	baz=31						
BOOM				⇑*i*S	**Sb**	**00 42 18.0**	**+0.2**
	baz=31						
KZA	**Kyzart**	**2.37**	**314**	⇓*i*P	**Pb**	**00 41 47.7**	**-1.1**
	baz=15						
KZA				⇓*i*S	**Sb**	**00 42 18.4**	**+0.2**
	baz=15						
KZA	**Kyzart**	**2.37**	**314**	P	**Pb**	**00 41 49.2**	**+0.4**
	SNR=191						
TNSS	**Tian-Shan**	**2.61**	**350**	*e*P	**Pg**	**00 41 54.6**	**-1.4**
	63nm,0.5s						
TNSS				*e*S	**Sg**	**00 42 29.8**	**0.0**
	137nm,0.4s						
IZV	**Izvestkoviy**	**2.67**	**345**	Pg	**Pg**	**00 41 55.3**	**-1.7**
	29nm,0.6s						
IZV				Lg	Lg	00 42 30.8	
	228nm,0.5s						
IZV	**Izvestkoviy**	**2.67**	**345**	*e*P	**Pg**	**00 41 55.3**	**-1.7**
	32nm,0.4s						
IZV				*e*S	**Sg**	**00 42 30.5**	**-1.0**
	234nm,0.5s						
SATY	**Saty**	**2.68**	**14**	Pg	**Pg**	**00 41 55.4**	**-1.8**
	66nm,0.5s						
SATY				Lg	Lg	00 42 31.1	
	280nm,0.5s						
SATY	**Saty**	**2.68**	**14**	*e*P	**Pg**	**00 41 55.4**	**-1.8**
	69nm,0.4s						
SATY				*e*S	**Sg**	**00 42 30.9**	**-0.9**
	286nm,0.6s						
MDOK	**Medeo**	**2.73**	**352**	Pg	**Pb**	**00 41 56.0**	**+1.2**
	36nm,0.4s						
MDOK				Lg	Lg	00 42 32.7	
	345nm,0.6s						
MDOK	**Medeo**	**2.73**	**352**	*e*P	**Pb**	**00 41 56.0**	**+1.2**
	36nm,0.4s						
MDOK				*e*S	**Sg**	**00 42 32.0**	**-1.4**
	345nm,0.6s						
AAA	**Alma-Ata**	**2.79**	**351**	Pg	**Pg**	**00 41 58.0**	**-1.2**
	52nm,0.4s						
AAA				Lg	Lg	00 42 35.4	
	214nm,0.3s						
AAA	**Alma-Ata**	**2.79**	**351**	*e*P	**Pg**	**00 41 58.0**	**-1.2**
	54nm,0.2s						
AAA				*e*S	**Sg**	**00 42 35.4**	**0.0**
	235nm,0.2s						
KNDC	**Almaty**	**2.79**	**351**	⇑Pg	**Pg**	**00 41 57.8**	**-1.5**
	54nm,0.6s						
KNDC				⇓Lg	Lg	00 42 34.3	
	194nm,0.5s						
KOTS	**Kotyrbulak**	**2.79**	**354**	Pg	**Pg**	**00 41 57.7**	**-1.7**
	36nm,0.5s						
KOTS				Lg	Lg	00 42 35.0	
	574nm,0.6s						
KOTS	**Kotyrbulak**	**2.79**	**354**	*e*P	**Pg**	**00 41 57.6**	**-1.7**
	36nm,0.5s						
KOTS				*e*S	**Sg**	**00 42 34.4**	**-1.1**
	574nm,0.6s						
MTBS	**Maitube**	**2.79**	**343**	*e*P	**Pg**	**00 41 57.8**	**-1.6**
	25nm,0.3s						
MTBS				*e*S	**Sg**	**00 42 34.8**	**-0.9**
	262nm,0.3s						
ARLS	**Aral**	**2.80**	**301**	⇑*i*P	**Pb**	**00 41 53.2**	**-2.9**
	baz=2.0						
ARLS				⇑*i*S	**Sb**	**00 42 28.3**	**-2.3**
	baz=2.0						
KST	**Kastek**	**2.84**	**336**	Pg	**Pb**	**00 41 58.1**	**+1.4**
	40nm,0.9s						
KST				Lg	Lg	00 42 35.8	
	248nm,0.4s						
KST	**Kastek**	**2.84**	**336**	*e*P	**Pb**	**00 41 58.1**	**+1.4**
	39nm,0.5s						
KST				*e*S	**Sg**	**00 42 35.2**	**-1.8**
	248nm,0.4s						
TKM2	**Tokmak 2**	**2.86**	**330**	⇑Pg	**Pg**	**00 41 58.6**	**-2.0**
	30nm,0.6s						
TKM2				⇓Lg	Lg	00 42 37.4	
	147nm,0.8s						
TKM2	**Tokmak 2**	**2.86**	**330**	P	**Pb**	**00 41 55.9**	**-1.2**
	SNR=31						
UCH	**Uchtor**	**2.88**	**309**	⇑*e*P	**Pb**	**00 41 54.9**	**-2.7**
	baz=9.0						
UCH				⇑*e*S	**Sb**	**00 42 30.6**	**-2.5**
	baz=9.0						
UCH	**Uchtor**	**2.88**	**309**	P	**Pb**	**00 41 56.0**	**-1.6**
	SNR=31						
UZB	**Uzynbulak**	**2.91**	**22**	Pg	**Pg**	**00 41 59.7**	**-1.9**
	30nm,0.6s						
UZB				Lg	Lg	00 42 38.5	
	86nm,0.7s						
UZB	**Uzynbulak**	**2.91**	**22**	*e*P	**Pg**	**00 41 59.7**	**-1.9**
	30nm,0.6s						
UZB				*e*S	**Sg**	**00 42 38.5**	**-0.7**
	86nm,0.7s						
KBK	**Karagaybulak**	**2.93**	**319**	⇑*i*P	**Pb**	**00 41 55.5**	**-2.8**
	baz=20						
KBK				⇑*i*S	**Sb**	**00 42 31.6**	**-2.7**
	baz=20						
KBK	**Karagaybulak**	**2.93**	**319**	P	**Pg**	**00 42 00.1**	**-2.0**
	SNR=32						
KURS	**Kuram**	**3.06**	**9**	Pg	**Pg**	**00 42 02.6**	**-2.0**
	24nm,0.5s						
KURS				Lg	Lg	00 42 43.0	
	74nm,0.8s						
KURS	**Kuram**	**3.06**	**9**	*e*P	**Pg**	**00 42 02.6**	**-2.0**
	24nm,0.5s						
KURS				*e*S	**Sg**	**00 42 43.0**	**-1.2**
	74nm,0.8s						
KPKS	**Kokpek**	**3.12**	**15**	*e*P	**Pb**	**00 42 02.9**	**+1.3**
	27nm,0.3s						
KPKS				*e*S	**Sg**	**00 42 43.9**	**-2.3**
	292nm,0.5s						
AAK	**Ala-Archa**	**3.16**	**315**	⇑Pg	**Pb**	**00 42 03.2**	**+1.1**
	57nm,0.9s						
AAK				⇓Lg	Lg	00 42 46.0	
	116nm,0.8s						
AAK	**Ala-Archa**	**3.16**	**315**	⇑*e*P	**Pn**	**00 41 58.0**	**+2.3**
	baz=15						
AAK				⇑*i*S	**Sb**	**00 42 37.1**	**-3.6**
	baz=15						
AAK	**Ala-Archa**	**3.16**	**315**	P	**Pb**	**00 42 03.8**	**+1.6**
	SNR=20						
FRU1	**Bishkek**	**3.21**	**318**	⇓*i*P	**Pn**	**00 41 58.5**	**+2.2**
	baz=19						
FRU1				⇓*i*S	**Sn**	**00 42 37.9**	**+3.3**
	baz=19						
PDGK	**Podgornoye**	**3.22**	**26**	⇓Pg	**Pb**	**00 42 04.4**	**+1.2**
	15nm,0.5s						
PDGK				⇓Lg	Lg	00 42 48.5	
	81nm,0.7s						
PDGK	**Podgornoye**	**3.22**	**26**	⇓*i*P	**Pb**	**00 41 59.5**	**-3.6**
	baz=27						
PDGK				⇓*i*S	**Sb**	**00 42 39.2**	**-3.2**
	baz=27						
CHMS	**Chumysh**	**3.29**	**321**	⇑*i*P	**Pn**	**00 41 59.9**	**+2.5**
	baz=22						
CHMS				⇑*i*S	**Sn**	**00 42 39.6**	**+3.0**
	baz=22						
CHMS	**Chumysh**	**3.29**	**321**	P	**Pg**	**00 42 06.2**	**-2.6**
	SNR=6.5						
KTBS	**Karatobe**	**3.31**	**349**	*e*P	**Pb**	**00 42 06.3**	**+1.5**
	28nm,0.7s						
KTBS				*e*S	**Sg**	**00 42 49.5**	**-2.7**
	278nm,0.4s						
CHKK	**Chushkaly**	**3.42**	**353**	*e*P	**Pg**	**00 42 08.9**	**-2.4**
	17nm,0.3s						
CHKK				*e*S	**Sg**	**00 42 53.8**	**-1.8**
	98nm,0.6s						
KUU	**Kurty**	**3.55**	**346**	Pg	**Pb**	**00 42 10.0**	**+1.4**
	11nm,0.8s						
KUU				Lg	Lg	00 42 55.8	
	104nm,0.8s						
KUU	**Kurty**	**3.55**	**346**	*e*P	**Pb**	**00 42 10.1**	**+1.4**
	11nm,0.8s						
KUU				*e*S	**Sg**	**00 42 55.8**	**-3.9**
	104nm,0.8s						
ARSB	**Arslanbob**	**3.56**	**286**	⇓*i*P	**Pn**	**00 42 03.6**	**+2.3**
	baz=86						
ARSB				⇓*i*S	**Sn**	**00 42 46.0**	**+2.5**
	baz=86						
EKS2	**Erkin-Say**	**3.58**	**309**	⇑*e*P	**Pn**	**00 42 04.2**	**+2.7**
	baz=10.0						
EKS2				⇑*i*S	**Sn**	**00 42 46.9**	**+3.0**
	baz=10.0						
EKS2	**Erkin-Say**	**3.58**	**309**	P	**Pb**	**00 42 06.9**	**-2.4**
	SNR=12						
USP	**Ospenovka**	**3.61**	**322**	⇑*i*P	**Pn**	**00 42 04.7**	**+2.8**
	baz=23						
USP				⇑*i*S	**Sn**	**00 42 47.5**	**+3.0**
	baz=23						
USP	**Ospenovka**	**3.61**	**322**	P	**Pb**	**00 42 11.7**	**+2.0**
	SNR=37						
KTMS	**Ketmen**	**3.65**	**34**	*e*P	**Pb**	**00 42 12.6**	**+2.1**
	6.0nm,0.2s						
KTMS				*e*S	**Sg**	**00 43 00.1**	**-2.9**
	32nm,0.6s						
MNBS	**Baschi**	**3.67**	**10**	Pg	**Pg**	**00 42 13.9**	**-2.3**
MNBS				Lg	Lg	00 43 02.5	
	59nm,0.4s						
MNBS	**Baschi**	**3.67**	**10**	*e*P	**Pg**	**00 42 13.9**	**-2.3**
	9.9nm,0.4s						
MNBS				*e*S	**Sg**	**00 43 02.5**	**-1.3**
	59nm,0.4s						
ARXS	**Arharly**	**3.76**	**3**	Pg	**Pg**	**00 42 15.5**	**-2.3**
	14nm,0.5s						
ARXS				Lg	Lg	00 43 05.2	
	78nm,0.5s						
ARXS	**Arharly**	**3.76**	**3**	*e*P	**Pg**	**00 42 15.5**	**-2.3**
	19nm,0.4s						
ARXS				*e*S	**Sg**	**00 43 05.2**	**-1.3**
	72nm,0.5s						
MRKS	**Merke**	**3.96**	**307**	Pg	**Pb**	**00 42 18.0**	**+2.3**
	12nm,0.3s						
MRKS				Lg	Lg	00 43 10.3	
	44nm,0.4s						
MRKS	**Merke**	**3.96**	**307**	*e*P	**Pb**	**00 42 18.2**	**+2.4**
	12nm,0.3s						
MRKS				*e*S	**Sg**	**00 43 10.3**	**-2.6**
	44nm,0.4s						
DJR	**Jarkent**	**4.21**	**23**	Pg	**Pg**	**00 42 23.2**	**-3.4**
	9.8nm,0.4s						
DJR				Lg	Lg	00 43 18.6	
	37nm,0.4s						
DJR	**Jarkent**	**4.21**	**23**	*e*P	**Pg**	**00 42 23.2**	**-3.4**
	9.8nm,0.4s						
DJR				*e*S	**Sg**	**00 43 18.6**	**-2.6**
	37nm,0.4s						
KAPS	**Kapalarasan**	**5.00**	**15**	Pg	**Pg**	**00 42 39.0**	**-2.7**
	5.0nm,0.5s						
KAPS				Lg	Lg	00 43 45.8	
	23nm,0.6s						
KAPS	**Kapalarasan**	**5.00**	**15**	*e*P	**Pg**	**00 42 39.0**	**-2.7**
	5.0nm,0.5s						
KAPS				*e*S	**Sg**	**00 43 45.8**	**-0.7**
	23nm,0.6s						
KK31	**Karatay Array**	**5.88**	**299**	⇑Pg	**Pg**	**00 42 55.7**	**-2.7**
	2.6nm,0.8s,baz=122,slow=16,SNR=9.7						
KK31				⇓Lg	Lg	00 44 11.8	
	3.3nm,0.4s,baz=114,slow=29,SNR=7.4						
MK31	**Makanchi Array**	**7.21**	**27**	⇑Lg	Lg	00 45 00.0	
	4.0nm,0.7s,baz=211,slow=28,SNR=4.6						
WMQ	**Urumqi**	**8.26**	**63**	*e*P	**Pn**	**00 43 06.8**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OTUK	**Ortayu**	**8.63**	**336**	⇓Lg	Lg	00 45 34.1	
	comp=Z,13nm,1.1s						

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*ISCJB **24** 01:25:49.0±0.2, 37°.43N±0°.02×72°.16E±0°.04, h130^{km},*
mb4.2/38, Error ellipse: s-maj=4.0km s-min=3.2km
az=12.1
*IDC **24** 01:25:48.1±3.9, 37°.26N×72°.05E, h115^{km}±27^{km}, mb3.6/10,*
mb1 3.7/16, mb1mx3.5/46, mbtmp4.0/16, Error ellipse:
s-maj=42.1km s-min=20.4km az=145.0
*MOS **24** 01:25:50.4±1.1, 37°.49N×72°.21E, h146^{km}, mb4.3/12, Error*
ellipse: s-maj=8.7km s-min=5.1km az=96.1
*NEIC **24** 01:25:50.9±1.7, 37°.46N×72°.18E, h137^{km}±8^{km}, mb4.4/29,*
Error ellipse: s-maj=10.7km s-min=7.3km az=95.0
*NNC **24** 01:25:52.6±5.3, 37°.67N×71°.78E, h128^{km}±106^{km}, mb3.6,*
mpv4.1, Error ellipse: s-maj=47.2km s-min=30.7km
az=10.0
ISC 24 01:25:49.5±0.4, **37°.51N**±0°.04×**72°.06E**±0°.04, **h130^{km}, n129,**
σ**2^{s}.37**/150, **mb4.4**/37, **4C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**2.03**	**318**	*e*Pn	**Pn**	**01 26 25.9**	**+2.0**
GAR				*e*Sn	**Sn**	**01 26 51.3**	**+1.0**
GAR	**Garm**	**2.03**	**318**	*e*PN	**Pn**	**01 26 25.9**	**+2.0**
BTK	**Batken**	**2.73**	**340**	*e*Pn	**Pn**	**01 26 36.1**	**+3.4**
BTK	**Batken**	**2.73**	**340**	*e*PN	**Pn**	**01 26 36.1**	**+3.4**
KBL	**Kabul**	**3.84**	**220**	*e*Pn	**Pn**	**01 26 49.3**	**+1.9**
KBL				*e*Sn	**Sn**	**01 27 32.8**	**+0.7**
KBL	**Kabul**	**3.84**	**220**	*e*PN	**Pn**	**01 26 49.3**	**+1.9**
ARSB	**Arslanbob**	**3.88**	**10**	*e*Pn	**Pn**	**01 26 50.0**	**+2.2**
ARSB				*e*Sn	**Sn**	**01 27 31.2**	**-1.8**
CHCP	**Chirah Chowk**	**3.96**	**165**	P	**Pn**	**01 26 50.8**	**+1.9**
NIL	**Nilore**	**3.97**	**165**	*e*Pn	**Pn**	**01 26 50.4**	**+1.5**
NIL				*e*Sn	**Sn**	**01 27 33.9**	**-1.1**
NIL	**Nilore**	**3.97**	**165**	*e*PN	**Pn**	**01 26 50.4**	**+1.5**
THW	**Thamme Wali**	**4.71**	**183**	P	**Pn**	**01 26 58.9**	**+0.1**
NRN	**Naryn**	**4.97**	**37**	*e*Pn	**Pn**	**01 27 04.0**	**+1.5**
NRN				*e*Sn	**Sn**	**01 27 58.5**	**-0.7**
NRN	**Naryn**	**4.97**	**37**	*e*PN	**Pn**	**01 27 04.0**	**+1.5**
NRN				*e*		01 27 58.5	
UCH	**Uchtor**	**5.08**	**21**	P	**Pn**	**01 27 06.7**	**+2.6**
	SNR=38						
KZA	**Kyzart**	**5.18**	**27**	P	**Pn**	**01 27 07.5**	**+2.1**
	SNR=43						
EKS2	**Erkin-Say**	**5.32**	**14**	P	**Pn**	**01 27 09.6**	**+2.7**
	SNR=35						
AAK	**Ala-Archa**	**5.46**	**19**	P	**Pn**	**01 27 11.9**	**+3.1**
	16nm,0.3s,baz=177,slow=5.8,SNR=48						
AAK				S	**Sn**	**01 28 11.6**	**+1.0**
	6.7nm,0.3s,baz=323,slow=21,SNR=28						
AAK	**Ala-Archa**	**5.46**	**19**	*e*Pn	**Pn**	**01 27 11.9**	**+3.1**
AAK				*e*Sn	**Sn**	**01 28 10.9**	**+0.3**
AAK	**Ala-Archa**	**5.46**	**19**	⇑P	**Pn**	**01 27 11.5**	**+2.8**
	37nm,0.5s						
AAK				⇓S	**Sn**	**01 28 11.9**	**+1.3**
	78nm,0.6s						
AAK	**Ala-Archa**	**5.46**	**19**	PN	**Pn**	**01 27 11.6**	**+2.8**
AAK				S	**Sn**	**01 28 11.9**	**+1.3**
AAK	**Ala-Archa**	**5.46**	**19**	P	**Pn**	**01 27 11.7**	**+2.9**
	SNR=40						
KBK	**Karagaybulak**	**5.60**	**22**	P	**Pn**	**01 27 13.8**	**+3.1**
	SNR=13						
FRU1	**Bishkek**	**5.65**	**20**	*e*Pn	**Pn**	**01 27 14.9**	**+3.6**
FRU1				*e*Sn	**Sn**	**01 28 15.4**	**+0.2**
KK31	**Karatay Array**	**5.71**	**349**	*e*Pn	**Pn**	**01 27 14.2**	**+2.0**
KK31				*e*Sn	**Sn**	**01 28 14.8**	**-1.8**
KK31	**Karatay Array**	**5.71**	**349**	⇓P	**Pn**	**01 27 14.1**	**+2.0**
	6.6nm,0.2s,baz=176,slow=13,SNR=181						
KK31				⇓S	**Sn**	**01 28 15.1**	**-1.5**
	37nm,0.3s,baz=174,slow=23,SNR=18						
KK31	**Karatay Array**	**5.71**	**349**	*e*PN	**Pn**	**01 27 14.2**	**+2.0**
KKAR	**Karatay Array**	**5.71**	**349**	*e*Pn	**Pn**	**01 27 14.2**	**+2.0**
KKAR				*e*Sn	**Sn**	**01 28 14.7**	**-1.9**
KKAR	**Karatay Array**	**5.71**	**349**	*e*PN	**Pn**	**01 27 14.2**	**+2.0**
ULHL	**Ulahol**	**5.72**	**33**	P	**Pn**	**01 27 14.7**	**+2.2**
	SNR=8.2						
BOOM	**Boomskoye usch**	**5.80**	**30**	*e*Pn	**Pn**	**01 27 16.1**	**+2.7**
BOOM				*e*Sn	**Sn**	**01 28 16.8**	**-2.2**
BOOM	**Boomskoye usch**	**5.80**	**30**	*e*PN	**Pn**	**01 27 16.2**	**+2.7**
CHMS	**Chumysh**	**5.86**	**20**	P	**Pn**	**01 27 16.8**	**+2.7**
	SNR=18						
TKM2	**Tokmak 2**	**6.05**	**25**	⇓P	**Pn**	**01 27 19.1**	**+2.2**
	11nm,0.7s						
TKM2				⇑S	**Sn**	**01 28 27.0**	**+2.0**
	13nm,0.7s						
TKM2	**Tokmak 2**	**6.05**	**25**	PN	**Pn**	**01 27 19.0**	**+2.2**
TKM2				S	**Sn**	**01 28 26.0**	**+1.1**
TKM2	**Tokmak 2**	**6.05**	**25**	P	**Pn**	**01 27 19.6**	**+2.8**
	SNR=23						
USP	**Ospenovka**	**6.05**	**17**	P	**Pn**	**01 27 18.8**	**+2.1**
	SNR=17						
KDJ	**Kajisay**	**6.07**	**39**	*e*Pn	**Pn**	**01 27 17.8**	**+0.7**
KDJ	**Kajisay**	**6.07**	**39**	*e*PN	**Pn**	**01 27 17.8**	**+0.7**
PDGK	**Podgornoye**	**8.12**	**42**	⇑P	**Pn**	**01 27 45.3**	**+0.7**
	2.0nm,0.5s						
PDGK	**Podgornoye**	**8.12**	**42**	PN	**Pn**	**01 27 45.3**	**+0.7**
NDI	**New Delhi**	**9.80**	**152**	*e*P	Sn	01 29 46.0	-10
GEYT	**Alibeck**	**11.05**	**276**	P	**Pn**	**01 28 21.5**	**-2.4**
	2.8nm,0.3s,baz=120,slow=8.9,SNR=31						
GEYT				S	**Sn**	**01 30 17.9**	**-7.9**
	3.0nm,0.3s,baz=126,slow=17,SNR=10.0						
GYA0B	**ALIBECK ARRAY**	**11.05**	**276**	*e*Pn	**Pn**	**01 28 22.5**	**-1.4**
MAKZ	**Makanchi**	**11.85**	**35**	*e*Pn	**Pn**	**01 28 35.7**	**+1.4**
MAKZ	**Makanchi**	**11.85**	**35**	*e*P	**Pn**	**01 28 35.7**	**+1.4**
MKAR	**Makanchi Array**	**11.98**	**36**	P	**Pn**	**01 28 38.0**	**+1.9**
	0.1nm,0.3s,baz=218,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**11.98**	**36**	P	**Pn**	**01 28 38.0**	**+1.9**
DANN	**Dangsing**	**13.40**	**130**	*e*S	Sn	01 31 10.7	-12
KURBB	**Kurchatov Arra**	**13.90**	**17**	P	**Pn**	**01 28 59.9**	**-1.0**
	0.0nm,0.3s,baz=209,slow=9.7,SNR=4.6						
KURBB				S	**Sn**	**01 31 29.8**	**-4.5**
	0.1nm,0.3s,baz=270,slow=12,SNR=4.7						
KURK	**Kurchatov**	**14.01**	**17**	*e*Pn	**Pn**	**01 29 03.4**	**+1.2**
KURK	**Kurchatov**	**14.01**	**17**	*e*P	**Pn**	**01 29 03.4**	**+1.2**
GKN	**Gorkha**	**14.19**	**128**	*e*P	**Pn**	**01 29 02.6**	**-2.3**
	31nm,0.2s						
GKN				*e*S	Sn	01 31 28.8	-13
AB31	**Akbulak array**	**14.66**	**327**	⇑P	**Pn**	**01 29 10.1**	**-0.3**
	2.9nm,0.5s,baz=141,slow=12,SNR=113						
AB31	**Akbulak array**	**14.66**	**327**	P	**Pn**	**01 29 10.0**	**-0.3**
ABKAR	**Akbulak array**	**14.66**	**327**	*e*Pn	**Pn**	**01 29 11.8**	**+1.4**
KKN	**Kakani**	**14.75**	**127**	*e*P	**Pn**	**01 29 09.1**	**-2.8**
	25nm,0.5s						
KKN				*e*S	Sn	01 31 41.8	-13
DMN	**Daman**	**14.77**	**128**	*e*P	**Pn**	**01 29 10.4**	**-1.8**
	19nm,0.4s						
DMN				*e*S	Sn	01 31 43.7	-12
PKIN	**Phulchoki**	**14.97**	**128**	*e*P	**Pn**	**01 29 12.7**	**-2.1**
	11nm,0.3s						
PKIN				*e*S	Sn	01 31 48.0	-13
PKI	**Pulchoki**	**14.98**	**128**	*e*P	**Pn**	**01 29 12.9**	**-2.1**
	16nm,0.4s						
PKI				*e*S	Sn	01 31 47.6	-13
JIRN	**Jiri**	**15.42**	**125**	*e*P	**Pn**	**01 29 18.4**	**-2.1**
	55nm,0.3s						
JIRN				*e*S	Sn	01 31 59.2	-12
BVAR	**Borovoye Array**	**15.56**	**356**	P	**Pn**	**01 29 22.1**	**+0.4**
	0.3nm,0.3s,baz=159,slow=12,SNR=11						
BVAR				S	**Sn**	**01 32 08.1**	**-6.1**
	0.3nm,0.3s,baz=165,slow=19,SNR=9.5						
BRVK	**Borovoye**	**15.60**	**356**	*e*P	**P**	**01 29 23.9**	**+0.3**
	5.1nm,0.7s						
BRVK	**Borovoye**	**15.60**	**356**	*e*P	**P**	**01 29 23.9**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKTO	**Aktyubinsk**	**16.37**	**327**	P	**P**	**01 29 32.5**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=120,slow=11,SNR=24						
AKTO				S	**Sn**	**01 32 24.6**	**-9.0**
	comp=Z,0.4nm,0.3s,baz=4.7,slow=23,SNR=5.0						
AKTO	**Aktyubinsk**	**16.37**	**327**	⇓P	**P**	**01 29 32.8**	**+0.7**
	comp=Z,13nm,0.8s						
AKTO	**Aktyubinsk**	**16.37**	**327**	P	**Pn**	**01 29 32.0**	**+0.4**
AKTO				S	**Sn**	**01 32 26.0**	**-7.6**
DGZ	**Jazzator, Alta**	**16.47**	**37**	*i* P	**P**	**01 29 33.2**	**-0.2**
LSA	**Lhasa**	**17.69**	**111**	*e*P	**P**	**01 29 46.9**	**-0.4**
	comp=Z,7.1nm,0.4s						
LSA	**Lhasa**	**17.69**	**111**	*e*P	**P**	**01 29 46.9**	**-0.4**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.4s						
UOSS	**Minazif**	**18.42**	**232**	*e*P	**Pn**	**01 29 56.5**	**0.0**
	comp=Z,5.1nm,0.9s						
ZAA0	**Zalesovo Array**	**18.65**	**24**	*e*P	**Pn**	**01 29 58.2**	**-0.7**
	comp=Z,5.4nm,1.4s						
ZALV	**Zalesovo Beam**	**18.65**	**24**	P	**Pn**	**01 29 59.1**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=226,slow=11,SNR=7.6						
GNBR	**Gunib**	**19.82**	**292**	*i* P	**Pn**	**01 30 13.9**	**+1.1**
SVE	**Sverdlovsk**	**20.78**	**342**	*e*P	**P**	**01 30 21.9**	**+1.9**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	**Arti**	**20.98**	**339**	P	**P**	**01 30 23.5**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=153,slow=10.0,SNR=12						
ARU	**Arti**	**20.98**	**339**	*e*P	**P**	**01 30 23.7**	**+1.6**
	comp=Z,8.0nm,0.8s						
ARU	**Arti**	**20.98**	**339**	*d i*P	**P**	**01 30 23.1**	**+0.9**
ARU						01 30 58.1	
ARU				S	**S**	**01 34 05.5**	**-2.9**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKH	**Akhalkalaki**	**22.35**	**289**	*e*P	**P**	**01 30 41.4**	**+4.5**
	comp=Z,11nm,1.1s						
AKH	**Akhalkalaki**	**22.35**	**289**	*e*P	**P**	**01 30 41.4**	**+4.5**
AKH				pmax	pmax		
	comp=Z,11nm,1.1s						
NCK	**Nalchik**	**22.39**	**294**	*e*P	**P**	**01 30 39.6**	**+2.5**
NCK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PYA1	**Pyatigorsk**	**22.81**	**296**	*i* P	**P**	**01 30 42.9**	**+1.7**
NEY	**Neytrino**	**23.00**	**294**	*i* P	**P**	**01 30 46.3**	**+3.1**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	**Kislovodsk**	**23.09**	**295**	*e*P	**P**	**01 30 47.3**	**+3.4**
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIRV	**Kirov**	**25.72**	**332**	P	**P**	**01 31 08.8**	**+1.3**
	comp=Z,7.3nm,0.7s,baz=107,slow=9.6,SNR=3.9						
TLY	**Talaya**	**26.34**	**47**	*e*P	**P**	**01 31 11.0**	**-2.1**
	comp=Z,2.7nm,1.0s						
TLY	**Talaya**	**26.34**	**47**	*e*P	**P**	**01 31 11.0**	**-2.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANN	**Anapa**	**26.92**	**297**	*e*P	**P**	**01 31 19.6**	**+1.2**
ANN				*e*S	**S**	**01 35 43.3**	**-2.3**
ANN				pmax	pmax		

	comp=Z,31nm,0.8s						
OBN	**Obninsk**	**29.75**	**318**	*e*P	**P**	**01 31 44.3**	**+1.0**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BR131	**Keskin Array S**	**29.95**	**286**	*e*P	**P**	**01 31 47.6**	**+2.1**
	comp=Z,3.5nm,1.4s						
BRTR	**Keskin Array B**	**29.95**	**286**	P	**P**	**01 31 48.0**	**+2.4**
	comp=Z,0.7nm,0.6s,baz=106,slow=8.8,SNR=7.3						
BRTR	**Keskin Array B**	**29.95**	**286**	P	**P**	**01 31 48.0**	**+2.4**
AKASG	**Malin Array Be**	**32.99**	**307**	P	**P**	**01 32 13.5**	**+1.7**
	comp=Z,2.3nm,0.4s,baz=106,slow=8.9,SNR=9.9						
BJT	**Baijiatuau**	**34.23**	**72**	*e*P	**P**	**01 32 22.3**	**-0.4**
	comp=Z,5.4nm,0.5s						
BJT	**Baijiatuau**	**34.23**	**72**	*e*P	**P**	**01 32 22.3**	**-0.4**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MLR	**Muntele Rosu**	**35.04**	**298**	*e*P	**P**	**01 32 32.9**	**+3.1**
	comp=Z,4.9nm,0.8s						
MLR	**Muntele Rosu**	**35.04**	**298**	*e*P	**P**	**01 32 32.9**	**+3.1**
MLR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BUR08	**Bucovina Ar. S**	**35.47**	**302**	*e*P	**P**	**01 32 35.6**	**+2.1**
	comp=Z,2.2nm,1.1s						
VSU	**Vasula**	**35.94**	**320**	*i* P	**P**	**01 32 37.3**	**+0.2**
KAAM	**Kaadhehdhoo**	**36.84**	**178**	*e*P	**P**	**01 32 46.3**	**+1.1**
	comp=Z,162nm,1.4s						
KWP	**Kalwaria Pacla**	**37.11**	**305**	*e*P	**P**	**01 32 49.9**	**+2.7**
	comp=Z,25nm,0.6s						
KWP	**Kalwaria Pacla**	**37.11**	**305**	*e*P	**P**	**01 32 49.9**	**+2.7**
KWP				pmax	pmax		
	comp=Z,25nm,0.6s						
FIA1	**FINESS Array S**	**37.13**	**325**	*e*P	**P**	**01 32 49.1**	**+1.9**
	comp=Z,10nm,1.3s						
FINES	**FINESS Array B**	**37.13**	**325**	P	**P**	**01 32 49.1**	**+1.9**
	comp=Z,1.6nm,0.4s,baz=113,slow=8.8,SNR=15						
VTS	**Vitosha**	**37.30**	**294**	*e*P	**P**	**01 32 51.8**	**+2.7**
	comp=Z,1.4nm,1.0s						
VTS	**Vitosha**	**37.30**	**294**	*e*P	**P**	**01 32 51.8**	**+2.7**
VTS				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VYHS	**Vyhne**	**39.70**	**303**	*e*P	**P**	**01 33 13.4**	**+4.5**
VYHS	**Vyhne**	**39.70**	**303**	*e*P	**P**	**01 33 13.4**	**+4.5**
ARCES	**ARCESS Array B**	**40.55**	**337**	P	**P**	**01 33 17.7**	**+2.1**
	comp=Z,1.7nm,0.5s,baz=114,slow=8.3,SNR=16						
ARE0	**ARCESS Array S**	**40.55**	**337**	*e*P	**P**	**01 33 17.9**	**+2.4**
	comp=Z,0.9nm,1.5s						
NC405	**NORSAR Array S**	**43.86**	**322**	*e*P	**P**	**01 33 43.8**	**+1.3**
	comp=Z,16nm,1.4s						
NC303	**NORSAR Array S**	**44.03**	**323**	*e*P	**P**	**01 33 45.9**	**+2.0**
	comp=Z,15nm,1.3s						
NB201	**NORSAR Array S**	**44.06**	**322**	*e*P	**P**	**01 33 45.4**	**+1.3**
	comp=Z,28nm,1.4s						
NB2	**NORSAR Subarra**	**44.09**	**322**	P	**P**	**01 33 45.3**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.09**	**322**	P	**P**	**01 33 45.6**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=94,slow=7.6,SNR=12						
NBO00	**NORSAR Array S**	**44.31**	**322**	*e*P	**P**	**01 33 48.0**	**+1.9**
	comp=Z,26nm,1.4s						
NC204	**NORSAR Array S**	**44.33**	**323**	*e*P	**P**	**01 33 47.4**	**+1.1**
	comp=Z,14nm,1.4s						
KONO	**Kongsberg**	**44.85**	**320**	*e*P	**P**	**01 33 51.7**	**+1.4**
	comp=Z,11nm,1.4s						
KONO	**Kongsberg**	**44.85**	**320**	*e*P	**P**	**01 33 51.7**	**+1.4**
KONO				pmax	pmax		
	comp=Z,11nm,1.4s						
USA0B	**Ussuriysk Arra**	**44.94**	**62**	*e*P	**P**	**01 33 49.5**	**-1.9**
	comp=Z,10nm,1.2s						
ESK	**Eskdalemuir**	**52.19**	**316**	*e*P	**P**	**01 34 47.8**	**+1.2**
	comp=Z,14nm,1.3s						
ESK	**Eskdalemuir**	**52.19**	**316**	*e*P	**P**	**01 34 47.8**	**+1.2**
ESK				pmax	pmax		
	comp=Z,14nm,1.3s						
UGM	**Wanagama**	**57.73**	**133**	*e*P	**P**	**01 35 25.0**	**-1.9**
	comp=Z,187nm,1.5s						
ESDC	**Sonseca Array**	**57.74**	**298**	P	**P**	**01 35 27.7**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=55,slow=8.1,SNR=6.8						
ESLA	**Sonseca Array**	**57.74**	**298**	*e*P	**P**	**01 35 28.0**	**+1.1**
	comp=Z,5.2nm,1.4s						
PVAQ	**Vaqueiros**	**61.37**	**297**	*e*P	**P**	**01 35 51.4**	**-0.3**
	comp=Z,17nm,1.1s						
TULEG	**Thule**	**63.59**	**350**	*e*P	**P**	**01 36 07.9**	**+2.2**
	comp=Z,58nm,1.3s						
TOA0	**Torodi Ar. Sit**	**66.59**	**269**	*e*P	**P**	**01 36 26.0**	**-0.1**
	comp=Z,7.4nm,1.5s						
TORD	**Torodi Ar. Bea**	**66.59**	**269**	P	**P**	**01 36 25.6**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=45,slow=6.3,SNR=15						
YKA	**Yellowknife Ar**	**80.20**	**3**	P	**P**	**01 37 46.2**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=349,slow=5.7,SNR=3.5						

WEL 24 01:28:05.5±0.9, **41°.7S**±0°.9×**174°.2E**±0°.6**, h17**^{km}±1^{km}**, M3.7**/24**,**
ML4.0/18**, MLv3.7**/24**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=176.8, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.08**	**183**	P	Pg	01 28 09.3	+0.4
CMWZ				S	Sg	01 28 12.0	+0.8
BSWZ	**Blackbirch Sta**	**0.26**	**259**	P	Pb	01 28 11.8	0.0
BSWZ				S	Sb	01 28 16.2	+0.2
TUWZ	**Tuamarina**	**0.32**	**319**	P	Pb	01 28 12.7	+0.1
TUWZ				S	Sb	01 28 17.7	+0.2
TCW	**Tory Channel**	**0.46**	**5**	P	Pb	01 28 15.0	-0.1
BHW	**Baring Head**	**0.55**	**62**	P	Pb	01 28 17.3	+0.6
NNZ	**Nelson**	**0.78**	**305**	P	Pg	01 28 20.8	+0.1
PLWZ	**Palliser**	**0.78**	**83**	P	Pn	01 28 21.9	+0.1
MSWZ	**Moikau Station**	**0.81**	**72**	P	Pn	01 28 22.2	0.0
CAW	**Cannon Point**	**0.85**	**49**	P	Pg	01 28 22.2	+0.3
DUWZ	**D'Urville Isla**	**0.89**	**345**	P	Pg	01 28 22.7	-0.1
KHZ	**Kahutara**	**0.91**	**214**	P	Pn	01 28 24.1	+0.7
PAWZ	**Paruwai Farm**	**0.95**	**73**	P	Pn	01 28 24.4	+0.3
THZ	**Tophouse**	**0.99**	**264**	P	Pg	01 28 24.7	0.0
MTW	**Mount Morrison**	**1.09**	**63**	P	Pg	01 28 26.3	-0.2
OGWZ	**Otaki Gorge**	**1.11**	**40**	P	Pn	01 28 26.6	+0.3
TRWZ	**Traveller**	**1.13**	**77**	P	Pn	01 28 26.6	0.0
HOWZ	**Holdsworth Sta**	**1.24**	**52**	P	Pb	01 28 28.7	+0.2
TMWZ	**Te Maipa**	**1.38**	**67**	P	Pn	01 28 30.0	0.0
MRZ	**Mangatainoka R**	**1.44**	**46**	P	Pb	01 28 31.6	-0.2
QRZ	**Quartz Range**	**1.53**	**303**	P	Pb	01 28 33.8	+0.5
TIWZ	**Tintock**	**1.54**	**55**	P	Pn	01 28 32.7	+0.5
GVZ	**Greta Valley S**	**1.57**	**214**	P	Pn	01 28 32.9	+0.3
OHWZ	**Ohakea**	**1.68**	**30**	P	Pg	01 28 36.9	-0.8
PRWZ	**Pori Road**	**1.73**	**51**	P	Pn	01 28 35.2	+0.5
POWZ	**Post Office Ro**	**1.73**	**43**	P	Pb	01 28 35.8	-1.0
DSZ	**Denniston Nort**	**1.81**	**267**	P	Pb	01 28 38.2	0.0
BFZ	**Birch Farm**	**1.82**	**58**	P	Pn	01 28 35.8	-0.2
LTZ	**Lake Taylor**	**1.83**	**232**	P	Pn	01 28 37.0	+0.8
AMCZ	**Amberley**	**1.90**	**217**	P	Pn	01 28 37.1	-0.1
WAZ	**Wanganui**	**2.00**	**17**	P	Pb	01 28 42.1	+0.7
DVHZ	**Dannevirke**	**2.01**	**48**	P	Pn	01 28 38.6	0.0
TSZ	**Takapari Road**	**2.08**	**40**	P	Pn	01 28 40.5	+0.9
OKCZ	**Okains Bay**	**2.23**	**202**	P	Pn	01 28 40.9	-0.7
PRHZ	**Porangahau**	**2.30**	**53**	P	Pn	01 28 42.4	-0.3
PNHZ	**Pukenui**	**2.31**	**41**	P	Pn	01 28 43.0	+0.2
OXZ	**Oxford**	**2.31**	**223**	P	Pn	01 28 42.1	-0.7
INZ	**Inchbonnie**	**2.32**	**242**	P	Pn	01 28 44.4	+1.5
PREZ	**Palmer Road**	**2.32**	**359**	P	Pb	01 28 47.5	+0.6
MQZ	**McQueen's Vall**	**2.34**	**209**	P	Pn	01 28 41.9	-1.3
KHEZ	**Kahui Hut**	**2.38**	**356**	P	Pb	01 28 47.8	-0.1
NBEZ	**Newall Road No**	**2.41**	**353**	P	Pb	01 28 48.1	-0.3
DREZ	**Durham Road**	**2.48**	**360**	P	Pb	01 28 48.7	-0.8
PKVZ	**Pokaka**	**2.52**	**20**	P	Pb	01 28 48.6	-1.8
MOVZ	**Moawhango**	**2.54**	**28**	P	Pb	01 28 49.5	-1.2
VRZ	**Vera Road**	**2.57**	**9**	P	Pn	01 28 48.4	+2.0
BHHZ	**Black Hill Sta**	**2.59**	**33**	P	Pb	01 28 49.1	-2.4
KRHZ	**Kereru**	**2.60**	**40**	P	Pn	01 28 46.8	0.0
WHVZ	**Whangaehu Hut**	**2.60**	**24**	P	Pn	01 28 49.4	+2.4
FWVZ	**Far West T-bar**	**2.62**	**23**	P	Pb	01 28 50.4	-1.6
TUVZ	**Tukino**	**2.63**	**25**	P	Pb	01 28 52.2	-0.1
NGZ	**Ngauruhoe**	**2.70**	**23**	P	Pn	01 28 50.6	+2.3
KAHZ	**Kahuranaki**	**2.75**	**48**	P	Pn	01 28 48.6	-0.3
TWVZ	**Taurewa**	**2.75**	**20**	P	Pb	01 28 51.8	-2.5
WTVZ	**West Tongariro**	**2.75**	**23**	P	Pb	01 28 53.5	-0.9
KRVZ	**Karewarewa**	**2.79**	**23**	P	Pb	01 28 53.4	-1.5
KWHZ	**Kaweka Forest**	**2.80**	**38**	P	Pn	01 28 51.2	+1.7
RATZ	**Rangitukua**	**3.04**	**24**	P	Pb	01 28 59.4	+0.2
BKZ	**Black Stump Fm**	**3.04**	**36**	P	Pb	01 29 00.0	+0.8
RPZ	**Rata Peaks**	**3.10**	**228**	P	Pn	01 28 53.5	-0.2
HIZ	**Hauiti**	**3.19**	**9**	P	Pb	01 28 58.6	-3.1
TLZ	**Tolley Road**	**3.48**	**17**	P	Pb	01 29 03.8	-3.0
FOZ	**Fox Glacier**	**3.75**	**239**	P	Pb	01 29 07.7	-3.5
ODZ	**Otahua Downs**	**4.26**	**216**	P	Pn	01 29 10.1	+0.4
AWAZ	**Awhitu Peninsu**	**4.61**	**4**	P	Pn	01 29 18.8	+4.5
MKAZ	**Moumakai**	**4.61**	**9**	P	Pn	01 29 18.0	+3.6
JCZ	**Jackson Bay**	**4.66**	**237**	P	Pn	01 29 19.3	+4.2
WIZ	**White Island**	**4.73**	**30**	P	Pn	01 29 20.5	+4.5
WIAZ	**Waiheke Island**	**4.92**	**9**	P	Pn	01 29 23.3	+4.7
HHSZ	**Highcliff Hill**	**4.96**	**211**	P	Pn	01 29 24.1	+4.9
TUZ	**Tuapeka**	**5.42**	**216**	P	Pn	01 29 25.9	+0.4
SYZ	**Scrubby Hill**	**6.09**	**215**	P	Pn	01 29 35.4	+0.8

ROM 24 01:31:22.0±0.2**, 43°.574N**±0°.008×**12°.605E**±0°.009**,**
h9^{km}±1^{km}**, ML0.6**/3**, Error ellipse: s-maj=1.0km**
s-min=0.3km az=322.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIEI	**Pieia**	**0.06**	**234**	P	Pg	01 31 24.0	0.0
PIEI				S	Sg	01 31 25.9	+0.5
PIEI				AML	AML		
	comp=E,35µm,0.2s						
PIEI				AML	AML		
	comp=N,30µm,0.1s						
PIEI				AML	AML		
	comp=E,35µm,0.2s						
PIEI				AML	AML		
	comp=N,30µm,0.1s						
PIEI				AML	AML		
	comp=N,30µm,0.1s						
PIEI				AML	AML		
	comp=E,35µm,0.2s						
FRON	**Frontone**	**0.10**	**123**	P	Pg	01 31 24.6	+0.1
FRON				S	Sg	01 31 27.1	+0.8
MPAG	**Monte Paganucc**	**0.12**	**64**	P	Pg	01 31 25.0	+0.1
MPAG				S	Sg	01 31 27.8	+0.9
MPAG				AML	AML		
	comp=E,15µm,0.1s						
MPAG				AML	AML		
	comp=N,10µm,0.9s						
FSSB	**Fossombrone**	**0.17**	**47**	P	Pg	01 31 26.5	+0.8
FSSB				S	Sg	01 31 29.2	+1.1
ATFO	**Monte Foce - G**	**0.21**	**187**	AML	AML		
	comp=E,56µm,1.2s						
ATFO				AML	AML		
	comp=E,56µm,1.2s						
ATFO				AML	AML		
	comp=N,56µm,0.3s						
ATFO				AML	AML		
	comp=E,56µm,1.2s						
ATFO				AML	AML		
	comp=N,56µm,0.3s						
ATFO				AML	AML		
	comp=N,56µm,0.3s						
ATVO	**AVT- Monte Val**	**0.24**	**217**	P	Pg	01 31 27.8	+1.0
ATVO				AML	AML		
	comp=E,67µm,0.4s						
ATVO				AML	AML		
	comp=N,35µm,1.5s						
ATVO				AML	AML		
	comp=E,67µm,0.4s						
ATVO				AML	AML		
	comp=N,35µm,1.5s						
ATVO				AML	AML		
	comp=E,67µm,0.4s						
ATVO				AML	AML		
	comp=N,35µm,1.5s						
LNSS	**Leonessa**	**1.02**	**162**	AML	AML		
	comp=N,38µm,1.4s						
LNSS				AML	AML		
	comp=E,33µm,0.2s						

MEX 24 01:34:33.4±0.8**, 15°.99N**×**94°.20W, h70**^{km}±15^{km}**, MD3.6,**
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.98**	**106**	*i* P	Pn	01 34 49.9	-1.8
PCIG				*e*S	Sn	01 35 04.0	-1.3
CMIG	**Matias Romero**	**1.28**	**329**	*i* P	Pn	01 34 54.0	-1.5
CMIG				*e*S	Sn	01 35 09.9	-2.1
TGIG		**1.30**	**53**	*i* P	Pn	01 34 54.8	-1.0
TGIG				*e*S	Sn	01 35 10.3	-2.2
CCIG	**Comitan**	**2.00**	**81**	*e*P	Pn	01 35 04.4	-0.8
CCIG				*i* S	Sn	01 35 27.1	-2.4

*NIED **24** 01:47:00, 27°.80N×130°.20E, h20^{km}, Mw4.7   Best double couple: M$_0$1.27000×10^{16} NP1:φ$_s$142.00000°, δ31.00000°, λ8.00000°.   NP2:φ$_s$45.00000°, δ86.00000°, λ121.00000°.*
*IDC **24** 01:47:22.8±0.7, 28°.11N×130°.16E, h0^{km}, mb4.1/18, mb1 4.3/18, mb1mx4.2/31, mbtmp4.1/18, ML3.3/1, MS4.0/14, Ms1 4.0/14, ms1mx3.8/29, Error ellipse: s-maj=21.9km s-min=14.7km az=85.0*
*JMA **24** 01:47:24.7±0.2, 27°.98N×130°.24E, h41^{km}±3^{km}, M4.4*
JMA Felt II J1.
*BJI **24** 01:47:24.3±0.0, 27°.99N×130°.07E, h20^{km}, mb4.5/33, mB4.5/26, Ms4.5/32, Ms7 4.3/31*
*MOS **24** 01:47:24.4±1.4, 28°.00N×130°.13E, h19^{km}, mb4.9/38, Error ellipse: s-maj=11.5km s-min=6.1km az=114.1*
*ISCJB **24** 01:47:25.6±0.6, 27°.97N±0°.02×130°.15E±0°.02, h29^{km}±3^{km}, mb4.5/90, MS4.4/33, Error ellipse: s-maj=3.9km s-min=2.9km az=32.5*
*NEIC **24** 01:47:28.4±2.5, 28°.09N×129°.98E, h35^{km}±3^{km}, mb4.6/63, Error ellipse: s-maj=13.9km s-min=8.4km az=121.0*
NEIC Recorded [2 JMA] on Kikaiga-shima.

ISC 24 01:47:26.7±0.6**, 28°.01N**±0°.03×**130°.07E**±0°.03**, h27**^{km}±4^{km}**,**
n243, **σ1^{s}.89**/260**, mb4.7**/102**, MS4.4**/33**, 4C, Ryukyu**
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.32**	**344**	P	**Pb**	**01 47 34.2**	**+0.1**
JZK				S	**Sn**	**01 47 41.6**	**+0.4**
JAM	**Amami Oshima**	**0.57**	**314**	P	**Pb**	**01 47 38.3**	**+0.1**
JAM				S	**Sn**	**01 47 47.8**	**+0.3**
JAMN	**Amaminishikomi**	**0.82**	**287**	P	**Pb**	**01 47 42.2**	**-0.2**
JAMN				S	**Sn**	**01 47 54.8**	**+1.1**
JTK	**Tokunoshima**	**1.02**	**258**	P	**Pb**	**01 47 45.6**	**0.0**
JTK				*e*S	**Sn**	**01 47 59.6**	**+1.1**
JTAJ	**Takarajima**	**1.37**	**326**	P	**Pn**	**01 47 49.8**	**-0.2**
JTAJ				S	**Sn**	**01 48 07.0**	**-0.2**
JOKE	**Okinoerabujima**	**1.48**	**244**	P	**Pn**	**01 47 51.9**	**+0.4**
JOKE				S	**Sb**	**01 48 11.2**	**-0.7**
JYRO	**Yoronjima**	**1.74**	**236**	P	**Pn**	**01 47 55.1**	**0.0**
JYRO				S	**Sn**	**01 48 16.6**	**+0.2**
JNN	**Nakanoshima**	**1.83**	**355**	P	**Pn**	**01 47 56.5**	**+0.1**
JNN				*e*S	**Sb**	**01 48 21.0**	**-1.1**
JOW	**Kunigami**	**1.98**	**234**	Pn	**Pn**	**01 47 58.5**	**+0.1**
	15nm,0.3s,baz=95,slow=18,SNR=85						
JOW				Sn	**Sn**	**01 48 22.0**	**-0.3**
	37nm,0.3s,baz=87,slow=20,SNR=11						
JOW	**Kunigami**	**1.98**	**234**	*e*Pn	**Pn**	**01 47 59.1**	**+0.8**
JOW				*e*Sn	**Sn**	**01 48 23.2**	**+0.8**
JOW	**Kunigami**	**1.98**	**234**	P	**Pn**	**01 47 58.5**	**+0.1**
JOW				S	**Sn**	**01 48 23.3**	**+1.0**
JIH	**Iheya**	**2.11**	**243**	P	**Pn**	**01 48 00.3**	**+0.2**
JIH				S	**Sn**	**01 48 25.1**	**-0.3**
JYAK	**Yakushimahirau**	**2.25**	**10**	P	**Pn**	**01 48 02.6**	**+0.5**
JYAK				*e*S	**Sn**	**01 48 28.9**	**-0.1**
JKDJ	**Kitadaitoujima**	**2.33**	**152**	P	**Pn**	**01 48 02.1**	**-1.0**
JKDJ				*e*S	**Sn**	**01 48 28.6**	**-2.2**
JNTH	**Nagotoyohara**	**2.35**	**231**	P	**Pn**	**01 48 03.8**	**+0.3**
JNTH				S	**Sn**	**01 48 31.3**	**-0.1**
JMZ	**Minamidaito 2**	**2.41**	**155**	P	**Pn**	**01 48 02.3**	**-2.0**
JMZ				*e*S	**Sn**	**01 48 30.7**	**-2.2**
JKC	**Kuchinoerabu**	**2.45**	**3**	P	**Pn**	**01 48 05.2**	**+0.4**
JKC				S	**Sn**	**01 48 34.5**	**+0.7**
JMTN	**Minamitane**	**2.49**	**17**	P	**Pn**	**01 48 05.4**	**0.0**
JMTN				*e*S	**Sn**	**01 48 35.3**	**+0.5**
JTN	**Tanegashima 3**	**2.75**	**17**	P	**Pn**	**01 48 09.1**	**+0.1**
JTN				*e*S	**Sn**	**01 48 42.7**	**+1.3**
JAGN	**Aguni-jima**	**2.89**	**241**	P	**Pn**	**01 48 11.0**	**+0.2**
JAGN				*e*S	**Sn**	**01 48 45.1**	**+0.4**
JKE	**Kume jima 2**	**3.37**	**241**	P	**Pn**	**01 48 17.7**	**+0.2**
JKE				*e*S	**Sn**	**01 48 57.5**	**+0.9**
JNU	**Nakatsue**	**5.14**	**8**	Pn	**Pn**	**01 48 43.0**	**+1.1**
	7.6nm,0.3s,baz=159,slow=5.1,SNR=23						
JNU				Sn	**Sn**	**01 49 40.4**	**0.0**
	9.5nm,0.3s,baz=112,slow=22,SNR=11						
JNU	**Nakatsue**	**5.14**	**8**	*e*Pn	**Pn**	**01 48 42.2**	**+0.3**
JNU				*e*Sn	**Sn**	**01 49 36.8**	**-3.6**
YHNB	**Yeheng**	**8.48**	**249**	*e*Pn	**Pn**	**01 49 26.0**	**-1.8**
YULB	**Yu-li**	**9.15**	**242**	*e*Pn	**Pn**	**01 49 35.4**	**-1.5**
SSLB	**Suanglung**	**9.22**	**245**	*e*Pn	**Pn**	**01 49 35.3**	**-2.6**
SSLB				*e*Sn	**Sn**	**01 51 18.7**	**-2.1**
KS15	**Wonju Array Si**	**9.58**	**349**	*e*Pn	**Pn**	**01 49 42.6**	**-0.1**
KSRS	**Korea Array**	**9.59**	**350**	Pn	**Pn**	**01 49 44.9**	**+2.0**
	0.2nm,0.3s,baz=165,slow=15,SNR=4.5						
KSRS				LR	LR	01 53 47.4	
	comp=Z,686nm,18.9s,baz=162,slow=40						
JHJ	**Hachijo jima 2**	**9.80**	**56**	LR	LR	01 53 01.2	
	comp=Z,470nm,21.0s,baz=260,slow=35						
NJ2	**Nanjing**	**10.52**	**295**	*e*P	**Pn**	**01 49 56.3**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
NJ2				LR	LR		
	comp=N,2µm,13.7s						
NJ2				LR	LR		
	comp=E,2µm,11.8s						
NJ2				LR	LR		
	comp=Z,2µm,13.3s						
QZH	**Quanzhou**	**10.73**	**256**	*e*P	Pn	01 50 07.1	+8.6
QZH				S	**Sn**	**01 52 06.4**	**+8.7**
QZH				sS		01 52 16.5	
QZH				LR	LR		
	comp=N,970nm,13.1s						
QZH				LR	LR		
	comp=E,910nm,14.3s						
QZH				LR	LR		
	comp=Z,1µm,13.3s						
MJAR	**Matsushiro Arr**	**10.94**	**37**	Pn	Pn	01 50 09.4	+8.0
	comp=Z,0.1nm,0.3s,baz=235,slow=13,SNR=3.8						
DL2	**Dalian**	**12.94**	**329**	P	**P**	**01 50 36.3**	**-2.8**
DL2				*e*S	Sn	01 53 02.9	+11
DL2				pmax	pmax		
	comp=Z,130nm,5.1s						
DL2				LR	LR		
	comp=N,2µm,15.3s						
DL2				LR	LR		
	comp=E,1µm,13.2s						
DL2				LR	LR		
	comp=Z,2µm,12.7s						
WHN	**Wuhan**	**13.95**	**284**	P	P	01 50 55.3	+5.0
WHN				S	**S**	**01 53 31.1**	**-6.6**
WHN				LR	LR		
	comp=N,710nm,10.4s						
WHN				LR	LR		
	comp=E,4µm,14.6s						
WHN				LR	LR		
	comp=Z,4µm,13.7s						
CN2	**Changchun**	**16.19**	**348**	*e*P	**Pn**	**01 51 11.0**	**-1.2**
CN2				*e*PP	**sP**	**01 51 24.3**	**-1.5**
CN2				*e*S	**Sn**	**01 54 07.8**	**-3.1**
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,660nm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
USRK	**Ussuriysk Ar.**	**16.23**	**5**	Pn	**P**	**01 51 18.0**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=175,slow=9.2,SNR=6.8						
USRK				LR	LR	01 57 37.0	
	comp=Z,314nm,18.6s,baz=170,slow=38						
BJT	**Baijiatuau**	**16.60**	**320**	*e*P	**Pn**	**01 51 17.8**	**+0.4**
	comp=Z,14nm,1.0s						
BJT	**Baijiatuau**	**16.60**	**320**	*e*P	**Pn**	**01 51 17.8**	**+0.4**
BJT				pmax	pmax		
	comp=Z,14nm,1.0s						
SARN	**Sarigan**	**18.36**	**125**	*e*P	**Pn**	**01 51 40.1**	**+0.7**
	comp=Z,17nm,1.0s						
ANA2	**Anatahan**	**18.54**	**126**	*e*P	**P**	**01 51 38.2**	**-3.1**
	comp=Z,80nm,1.3s						
XAN	**Xi'an**	**19.08**	**294**	*e*P	**P**	**01 51 43.9**	**-3.3**
	comp=Z,17nm,0.6s						
XAN	**Xi'an**	**19.08**	**294**	P	**P**	**01 51 47.4**	**+0.2**
XAN				S	**Sn**	**01 55 19.0**	**-2.1**
XAN				pmax	pmax		
	comp=Z,22nm,0.8s						
XAN				pmax	pmax		
	comp=Z,120nm,5.3s						
XAN				LR	LR		
	comp=Z,430nm,12.2s						
XAN				LR	LR		
	comp=Z,620nm,11.8s						
XAN				LR	LR		
	comp=Z,680nm,13.5s						
XAN	**Xi'an**	**19.08**	**294**	*e*P	**P**	**01 51 43.9**	**-3.3**
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC	**Hu-ho-hao-te**	**19.88**	**315**	P	**Pn**	**01 51 58.0**	**+0.4**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,76nm,4.2s						
HHC				LR	LR		
	comp=Z,1µm,17.7s						
GUMO	**Guam**	**19.90**	**133**	*e*P	**P**	**01 51 56.4**	**+0.3**
	comp=Z,167nm,1.3s						
GUMO	**Guam**	**19.90**	**133**	*e*P	**P**	**01 51 56.4**	**+0.3**
GUMO				pmax	pmax		
	comp=Z,167nm,1.3s						
QIZ	**Qiongzhong**	**20.57**	**249**	P	Pn	01 52 04.8	-0.9
QIZ				S	**S**	**01 55 52.9**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,180nm,2.7s						
QIZ				LR	LR		
	comp=Z,570nm,18.6s						
QIZ				LR	LR		
	comp=Z,400nm,18.6s						
QIZ				LR	LR		
	comp=Z,500nm,17.7s						
BTO	**Baotou**	**20.73**	**312**	*e*P	Pn	01 52 07.3	-0.3
GYA	**Guiyang**	**20.87**	**271**	P	Pn	01 52 08.3	-1.0
GYA				pP	sP	01 52 16.0	-1.4
GYA				PP	**PnPn**	**01 52 30.8**	**+5.3**
GYA				S	**S**	**01 55 54.3**	**-3.9**
GYA				sS	Sn	01 56 04.8	+0.5
GYA				SS	**SnSn**	**01 56 25.5**	**+6.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=Z,530nm,14.0s						
GYA				LR	LR		
	comp=Z,600nm,14.6s						
GYA				LR	LR		
	comp=Z,630nm,14.3s						
KLR	**Kul'dur**	**21.23**	**3**	P	**P**	**01 52 07.8**	**-2.4**
	comp=Z,1.0nm,0.3s,baz=160,slow=5.8,SNR=3.7						
KLR	**Kul'dur**	**21.23**	**3**	*e*P	**P**	**01 52 08.6**	**-1.7**
YSS	**Yuzh-Sakhalins**	**21.37**	**24**	*e*P	**P**	**01 52 11.5**	**-0.3**
	comp=Z,28nm,1.0s						
YSS	**Yuzh-Sakhalins**	**21.37**	**24**⇑	*e*P	**P**	**01 52 14.3**	**+2.5**
YSS				*e*		01 52 22.4	
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
KUR	**Kuril'sk**	**22.27**	**35**	P	**P**	**01 52 22.8**	**+1.4**
KUR				MLR	MLR		
	comp=Z,300nm,17.0s						
CD2	**Chengdu**	**23.08**	**284**⇑	*i*P	**P**	**01 52 30.9**	**+0.7**
CD2				S	**S**	**01 56 35.5**	**-4.1**
CD2				sS	pS	01 56 46.4	-1.5
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				pmax	pmax		
	comp=Z,110nm,3.7s						
CD2				LR	LR		
	comp=Z,2µm,17.6s						
CD2				LR	LR		
	comp=Z,1µm,13.3s						
CD2				LR	LR		
	comp=Z,3µm,14.5s						
GRNR	**Gornyy**	**23.24**	**10**	*e*P	P	01 52 23.7	-7.9
LZH	**Lanzhou**	**23.59**	**297**	*e*P	**P**	**01 52 40.4**	**+5.0**
LZH				pP	sP	01 52 44.8	-1.5
LZH				sP	pP	01 52 47.9	+5.0
LZH				*e*S	**S**	**01 56 46.0**	**-2.2**
LZH				pmax	pmax		
	comp=Z,27nm,0.9s						
LZH				pmax	pmax		
	comp=Z,93nm,4.9s						
LZH				LR	LR		
	comp=Z,610nm,11.7s						
LZH				LR	LR		
	comp=Z,630nm,13.6s						
LZH				LR	LR		

	comp=Z,640nm,14.1s						
KMI	Kunming	24.59	270	*e*P	P	01 52 43.4	-1.5
	comp=Z,48nm,1.2s						
KMI	Kunming	24.59	270	P	P	01 52 46.1	+1.2
KMI				pP	pP	01 52 53.3	+0.7
KMI				sP	sP	01 52 58.0	+2.0
KMI				S	S	01 57 07.6	+3.0
KMI				pmax	pmax		
	comp=Z,27nm,1.3s						
KMI				pmax	pmax		
	comp=Z,83nm,3.1s						
KMI				LR	LR		
	comp=Z,380nm,15.6s						
KMI				LR	LR		
	comp=Z,480nm,15.4s						
KMI				LR	LR		
	comp=Z,490nm,16.7s						
KMI	Kunming	24.59	270	*e*P	P	01 52 43.4	-1.5
KMI				pmax	pmax		
	comp=Z,48nm,1.2s						
ZEA	Zeya	25.79	356	*e*P	P	01 52 55.0	-0.1
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,400nm,13.0s						
ZEA				MLR	MLR		
	comp=N,300nm,12.0s						
SONA0	Songino Array	27.03	323	*e*P	P	01 53 08.7	+2.1
SONM	Songino Array	27.03	323	P	P	01 53 08.7	+2.1
	comp=N,0.6nm,0.4s,baz=128,slow=9.6,SNR=3.7						
SONM				LR	LR	02 05 10.9	
	comp=N,408nm,19.0s,baz=116,slow=40						
GTA	Gaotai	27.49	302	*e*P	P	01 53 10.3	-0.6
GTA				pP	pP	01 53 17.9	-0.6
GTA				sP	sP	01 53 20.6	-1.3
GTA				pmax	pmax		
	comp=N,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=N,67nm,5.7s						
GTA				LR	LR		
	comp=N,470nm,15.6s						
GTA				LR	LR		
	comp=N,940nm,14.3s						
GTA				LR	LR		
	comp=N,1µm,14.3s						
CMAR	Chiang Mai Arr	30.07	258	P	P	01 53 35.7	+1.9
	comp=N,0.9nm,0.3s,baz=68,slow=5.8,SNR=4.4						
CMAR				LR	LR	02 06 18.3	
	comp=N,165nm,20.6s,baz=73,slow=38						
PETK	Petropavlovsk-	32.33	32	LR	LR	02 07 13.7	
	comp=N,132nm,21.3s,baz=229,slow=37						
H11N2	WAKE ISLAND Hy	34.56	96	T	T	02 30 45.2	
	baz=290,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	34.57	96	T	T	02 30 46.1	
	baz=290,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	34.58	96	T	T	02 30 52.1	
	baz=290,slow=75,SNR=19						
WMQ	Urumqi	37.33	306	*e*P	P	01 54 38.9	+2.2
WMQ				pP	pP	01 54 45.4	+0.6
WMQ				pmax	pmax		
	comp=N,36nm,0.9s						
WMQ				pmax	pmax		
	comp=N,89nm,3.6s						
WMQ				LR	LR		
	comp=N,300nm,12.5s						
WMQ				LR	LR		
	comp=N,450nm,16.7s						
WMQ				LR	LR		
	comp=N,540nm,19.5s						
MK31	Makanchi Array	41.61	310	*e*P	P	01 55 09.4	-2.9
	comp=N,1.5nm,1.1s						
MK31	Makanchi Array	41.61	310	*e*P	P	01 55 09.4	-2.9
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK32	Makanchi Array	41.61	310	*e*P	P	01 55 11.3	-1.0
MKAR	Makanchi Array	41.61	310	P	P	01 55 11.3	-1.0
	comp=Z,0.4nm,0.4s,baz=88,slow=11,SNR=6.5						
MKAR				LR	LR	02 14 31.5	
	comp=Z,364nm,18.2s,baz=94,slow=39						
ZAA0	Zalesovo Array	41.86	321	*e*P	P	01 55 10.6	-3.6
	comp=Z,2.7nm,1.1s						
ZALV	Zalesovo Beam	41.86	321	P	P	01 55 15.6	+1.4
	comp=Z,1.1nm,0.4s,baz=102,slow=7.3,SNR=3.0						
ZALV				PcP	PcP	01 57 10.3	+0.7
	comp=Z,0.7nm,0.4s,baz=90,slow=4.4,SNR=3.8						
ZAA1	Zalesovo Array	41.87	321	*e*P	P	01 55 15.6	+1.3
ZAA1				*e*PcP	PcP	01 57 10.3	+0.7
TIXI	Tiksi	43.69	359	*e*P	P	01 55 25.5	-3.2
	comp=Z,4.6nm,0.8s						
TIXI	Tiksi	43.69	359	*e*P	P	01 55 25.5	-3.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	44.69	315	P	P	01 55 36.9	-0.2
KURBB	Kurchatov Arra	44.73	315	P	P	01 55 36.9	-0.6
	comp=Z,1.0nm,0.4s,baz=97,slow=9.1,SNR=13						
BILL	Bilibino	45.48	18	*e*P	P	01 55 39.8	-3.3
	comp=Z,8.8nm,0.4s						
BILL	Bilibino	45.48	18	*e*P	P	01 55 44.7	+1.6
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRN	Naryn	45.73	302	*e*P	P	01 55 45.0	-0.9
	comp=Z,2.3nm,0.9s						
NRN	Naryn	45.73	302	*e*P	P	01 55 45.0	-0.9
NRN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH	Kashi	45.80	299	*e*P	P	01 55 49.9	+3.6
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
ADK	Adak	46.01	44	*e*P	P	01 55 48.3	+0.8
	comp=Z,38nm,1.5s						
ADK	Adak	46.01	44	*e*P	P	01 55 48.3	+0.8
ADK				pmax	pmax		
	comp=Z,38nm,1.5s						
AAK	Ala-Archa	46.83	303	*e*P	P	01 55 54.0	-0.4
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
WR1	Warramunga Arr	47.85	175	*e*P	P	01 56 02.4	+0.2
WRA	Warramunga Arr	47.85	175	P	P	01 56 02.4	+0.2
	comp=Z,1.6nm,0.6s,baz=358,slow=9.5,SNR=3.1						
KK31	Karatay Array	49.75	304	*e*P	P	01 56 14.7	-1.9
	comp=Z,6.1nm,1.3s						
KK31	Karatay Array	49.75	304	*e*P	P	01 56 14.7	-1.9
KK31				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KKAR	Karatay Array	49.75	304	*e*P	P	01 56 14.3	-2.4
	comp=Z,6.1nm,1.3s						
KKAR	Karatay Array	49.75	304	*e*P	P	01 56 14.3	-2.4
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BRVK	Borovoye	50.13	317	*e*P	P	01 56 19.6	+0.2
	comp=Z,8.0nm,1.4s						
BRVK	Borovoye	50.13	317	*e*P	P	01 56 19.6	+0.2
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GAR	Garm	50.22	299	*e*P	P	01 56 20.6	+0.1
	comp=Z,15nm,1.2s						
GAR	Garm	50.22	299	*e*P	P	01 56 20.6	+0.1
GAR				pmax	pmax		
	comp=Z,15nm,1.2s						
CHGR	Chuyangaron	51.16	299	*e*P	P	01 56 28.7	+1.2
	comp=Z,20nm,0.9s						
AS31	Alice Springs	51.51	176	*e*P	P	01 56 31.6	+1.6
	comp=Z,2.6nm,1.4s						
ASAR	Alice Springs	51.51	176	P	P	01 56 31.6	+1.6
	comp=Z,1.4nm,0.8s,baz=10,slow=14,SNR=8.0						
KBL	Kabul	51.89	293	*e*P	P	01 56 34.6	+1.5
	comp=Z,17nm,1.3s						
KBL	Kabul	51.89	293	*e*P	P	01 56 34.6	+1.5
KBL				pmax	pmax		
	comp=Z,17nm,1.3s						
RDOG	Red Dog Mine	55.76	25	*e*P	P	01 57 02.4	+1.7
	comp=Z,12nm,1.0s						
ABKAR	Akbulak array	56.64	312	*e*P	P	01 57 07.9	+0.7
	comp=Z,2.2nm,1.1s						
ARU	Arti	57.03	321	*e*P	P	01 57 06.0	-3.9
	comp=Z,6.6nm,1.1s						
ARU	Arti	57.03	321*c*	*i*P	P	01 57 10.3	+0.4
ARU						01 58 05.5	
ARU						01 59 14.0	
ARU				S	S	02 05 03.6	+1.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARU				MLR	MLR		
	comp=Z,601nm,15.0s						
CHGN	Chignik	57.04	39	*e*P	P	01 57 07.7	-2.2
	comp=Z,19nm,0.9s						
SVW2	Sparrevohn	58.38	33	*e*P	P	01 57 20.6	+1.2
	comp=Z,4.7nm,1.2s						
GEYT	Alibeck	59.83	300	LR	LR	02 27 22.0	
	comp=Z,150nm,18.8s,baz=60,slow=40						
GYA0B	ALIBECK ARRAY	59.83	300	*e*P	P	01 57 27.9	-1.9
	comp=Z,2.3nm,0.6s						
PPLA	Purkeypile	59.92	31	*e*P	P	01 57 32.5	+2.4
	comp=Z,8.1nm,1.1s						
CAST	Castle Rocks	59.94	31	*e*P	P	01 57 29.8	-0.3
	comp=Z,6.1nm,1.1s						
BPAW	Bear Paw Mtn.	60.38	30	*e*P	P	01 57 32.3	-0.9
	comp=Z,3.8nm,1.1s						
MLY	Manley	60.44	29	*e*P	P	01 57 35.1	+1.6
	comp=Z,7.1nm,1.2s						
KTH	Kantishna Hill	60.45	30	*e*P	P	01 57 33.8	+0.2
	comp=Z,6.1nm,0.6s						
STKA	Stephens Creek	60.56	169	P	P	01 57 34.9	+0.3
	comp=Z,0.8nm,0.3s,baz=337,slow=7.7,SNR=2.6						
SUA	Susitna One	60.70	33	*e*P	P	01 57 37.2	+1.8
	comp=Z,4.0nm,0.8s						
RND	Reindeer	61.39	30	*e*P	P	01 57 41.1	+1.1
	comp=Z,9.5nm,1.0s						
PMR	Palmer	61.45	33	*e*P	P	01 57 40.5	+0.1
	comp=Z,5.3nm,1.0s						
PMR	Palmer	61.45	33	*e*P	P	01 57 40.5	+0.1
PMR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	62.10	29	P	P	01 57 44.6	-0.1
	comp=Z,0.6nm,0.7s,baz=266,slow=4.1,SNR=5.8						
ILB	Eielson Array	62.10	29	*e*P	P	01 57 44.6	-0.1
	comp=Z,2.2nm,1.0s						
HDA	Harding Lake	62.11	29	*e*P	P	01 57 45.7	+0.8
	comp=Z,6.1nm,1.0s						
SCM	Sheep Creek Mo	62.27	32	*e*P	P	01 57 48.2	+2.2
	comp=Z,15nm,1.2s						
SCM	Sheep Creek Mo	62.27	32	*e*P	P	01 57 48.2	+2.2
SCM				pmax	pmax		
	comp=Z,15nm,1.2s						
PAX	Paxson	62.96	31	*e*P	P	01 57 48.8	-1.8
	comp=Z,3.0nm,1.2s						
PAX	Paxson	62.96	31	*e*P	P	01 57 48.8	-1.8
PAX				pmax	pmax		
	comp=Z,3.0nm,1.2s						
PRGR	Permogore	63.17	328	*e*P	P	01 57 46.5	-5.4
PRGR				pmax	pmax		
	comp=Z,16nm,1.3s						
SCRK	Sand Creek	63.46	29	*e*P	P	01 57 55.3	+1.4
	comp=Z,2.8nm,1.0s						
DOT	Dot Lake	63.48	30	*e*P	P	01 57 55.2	+1.3
	comp=Z,3.8nm,1.0s						
MENT	Mentasta	63.76	31	*e*P	P	01 57 54.9	-1.0
	comp=Z,22nm,0.2s						
GLB	Gilahina Butte	63.99	32	*e*P	P	01 57 55.5	-1.9
	comp=Z,5.1nm,1.1s						
DAWY	Dawson	65.42	29	*e*P	P	01 58 05.7	-1.0
	comp=Z,2.6nm,1.1s						
EPYK	Eagle Plains	65.95	26	*e*P	P	01 58 10.4	+0.4
	comp=Z,4.9nm,0.9s						
INK	Inuvik	66.61	24	P	P	01 58 13.3	-0.8
	comp=Z,2.6nm,0.9s,baz=276,slow=2.4,SNR=3.7						
INK	Inuvik	66.61	24	*e*P	P	01 58 13.3	-0.8
	comp=Z,5.8nm,1.4s						
MOS	Moscow	68.66	323	*e*P	P	01 58 26.8	-0.5
ARCES	ARCESS Array B	68.95	339	P	P	01 58 28.6	-0.4
	comp=Z,1.3nm,0.8s,baz=77,slow=8.7,SNR=7.9						
ARCES				LR	LR	02 34 06.8	
	comp=Z,148nm,18.9s,baz=26,slow=41						
VSR	Storozhevoye	69.24	318	*e*P	P	01 58 30.8	-0.2
VSR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ	Khabaz	69.31	309	P	P	01 58 33.3	+1.8
	comp=Z,2.0nm,0.7s,baz=53,slow=6.3,SNR=4.0						
KBZ				LR	LR	02 34 13.5	
	comp=Z,143nm,18.5s,baz=74,slow=41						
KIV	Kislovodsk	69.37	310	*e*P	P	01 58 34.1	+2.0
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
OBN	Obninsk	69.43	322	*e*P	P	01 58 32.6	+0.5
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SHA1	Shidzhatmaz	69.47	309	*e*P	P	01 58 33.5	+0.7
FIA0	FINESS Array S	72.12	331	*e*P	P	01 58 47.5	-0.8
FIA0	FINESS Array S	72.12	331	*e*P	P	01 58 47.5	-0.8
FINES	FINESS Array B	72.12	331	P	P	01 58 47.5	-0.8
	comp=Z,2.9nm,0.3s,baz=57,slow=5.5,SNR=54						
FINES				LR	LR	02 33 58.2	
	comp=Z,218nm,18.8s,baz=40,slow=39						
FINES	FINESS Array B	72.12	331	*i*P	P	01 58 48.7	+0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
VSU	Vasula	73.13	328*c*	*e*P	P	01 58 57.2	+2.8
VSU				pmax	pmax		
	comp=Z,21nm,0.8s						
IZAR	Zarasai	74.58	325	*e*P	P	01 59 05.2	+2.2
ISAL	Salakas	74.72	325	*e*P	P	01 59 05.8	+2.0
IIGN	Ignalina	74.78	325	*e*P	P	01 59 06.0	+1.9
RAYN	Ar Rayn	74.80	289	*e*P	P	01 59 06.2	+1.3
	comp=Z,6.5nm,1.1s						
RAYN	Ar Rayn	74.80	289	*e*P	P	01 59 06.2	+1.3
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKASG	Malin Array Be	75.24	320	P	P	01 59 07.2	+0.4
	comp=Z,1.0nm,0.4s,baz=48,slow=5.6,SNR=12						
AKASG				LR	LR	02 35 23.9	
	comp=Z,214nm,19.2s,baz=65,slow=38						
AKASG	Malin Array Be	75.24	320	*i*P	P	01 59 07.1	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	75.24	320	*e*P	P	01 59 08.1	+1.2
	comp=Z,10nm,1.3s						
AKBB	Malin Array Si	75.24	320	*e*P	P	01 59 08.1	+1.2
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YKA	Yellowknife Ar	76.22	26	P	P	01 59 13.0	+0.8
	comp=Z,1.7nm,0.9s,baz=299,slow=5.6,SNR=5.3						
YKB5	Yellowknife Ar	76.22	26	*e*P	P	01 59 13.0	+0.8
SUW	Suwalki	76.97	325	*e*P	P	01 59 18.8	+2.2
SUW	Suwalki	76.97	325	*e*P	P	01 59 18.9	+2.3
	comp=Z,21nm,0.9s						
SUW	Suwalki	76.97	325	*e*P	P	01 59 18.9	+2.3
SUW				pmax	pmax		
	comp=Z,21nm,0.9s						
BR101	Keskin Array S	77.23	308	*e*P	P	01 59 19.5	+0.9
BR131	Keskin Array S	77.23	308	*e*P	P	01 59 19.9	+1.4
	comp=Z,5.6nm,1.0s						
BRTR	Keskin Array B	77.23	308	P	P	01 59 19.5	+0.9
	comp=Z,2.7nm,0.9s,baz=108,slow=4.0,SNR=16						
NC405	NORSAR Array S	78.20	334	*e*P	P	01 59 23.9	+0.5
	comp=Z,29nm,1.3s						
NB2	NORSAR Subarra	78.44	334	P	P	01 59 23.9	-0.9
	comp=Z,1.1nm,0.7s,baz=51,slow=5.3						
NB200	NORSAR Array S	78.44	334	*e*P	P	01 59 24.4	-0.4
NOA	NORSAR Array B	78.44	334	P	P	01 59 24.4	-0.4
	comp=Z,2.8nm,0.8s,baz=50,slow=5.4,SNR=14						
NOA				LR	LR	02 39 19.0	
	comp=Z,78nm,20.3s,baz=75,slow=40						
KWP	Kalwaria Pacla	79.44	321	*e*P	P	01 59 31.8	+1.4
KWP	Kalwaria Pacla	79.44	321	*e*P	P	01 59 31.8	+1.4
SCO	Scoresbysund	79.77	351	*e*P	P	01 59 33.8	+2.0
	comp=Z,9.4nm,1.2s						
SCO	Scoresbysund	79.77	351	*e*P	P	01 59 33.8	+2.0
SCO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KOLS	Kolonicke sedl	80.04	320	*e*P	P	01 59 35.9	+2.2
KOLS	Kolonicke sedl	80.04	320	*e*P	P	01 59 35.9	+2.2
OJC	Ojcow	80.72	322	*e*P	P	01 59 37.3	-0.1
	comp=Z,7.7nm,0.9s						
OJC	Ojcow	80.72	322	*e*P	P	01 59 37.3	-0.1
OJC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIE	Niedzica	80.88	322	*e*P	P	01 59 40.5	+2.3
NIE	Niedzica	80.88	322	*e*P	P	01 59 40.5	+2.3
DRGR		80.90	318	P	P	01 59 41.1	+2.6
DRGR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
OKC	Ostrava-Krasne	81.82	323	AMS	AMS	02 43 30.0	
	comp=Z,400nm,31.0s						
MORC	Moravsky Berou	82.18	323	*e*P	P	01 59 45.9	+0.8
VYHS	Vyhne	82.19	321	*e*P	P	01 59 46.9	+1.7
VYHS				pmax	pmax		
	comp=Z,13nm,1.2s						
VYHS	Vyhne	82.19	321	*e*P	P	01 59 46.9	+1.7
KSP	Ksiaz	82.23	324	*e*P	P	01 59 49.4	+4.1
KSP	Ksiaz	82.23	324	*e*P	P	01 59 49.4	+4.1
OSTC	Ostas	82.43	324	AMS	AMS	02 39 50.0	
	comp=Z,400nm,15.0s						
DPC	Dobruska-Polom	82.50	324	AMS	AMS	02 39 50.0	
	comp=Z,400nm,15.3s						
CHVC	Chvalec	82.50	324	AMS	AMS	02 39 50.0	
	comp=Z,400nm,14.5s						
UPC	Upice	82.57	324	AMS	AMS	02 40 00.0	
	comp=Z,500nm,16.1s						
JAVC	Velka Javorina	82.63	322	*e*P	P	01 59 50.6	+3.1
VTS	Vitosha	82.75	315	*e*P	P	01 59 48.6	+0.2
	comp=Z,5.2nm,1.2s						
VTS	Vitosha	82.75	315	*e*P	P	01 59 48.6	+0.2
VTS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SRO	Srobarova	82.87	321	*e*P	P	01 59 50.9	+2.3
SRO				pmax	pmax		
	comp=Z,12nm,1.5s						
SRO	Srobarova	82.87	321	*e*P	P	01 59 50.9	+2.3
VRAC	Vranov	82.95	323	P	P	01 59 52.0	+2.9
VRAC				pmax	pmax		
	comp=Z,5.0nm,1.5s						
VRAC	Vranov	82.95	323	*e*P	P	01 59 50.2	+1.1
SMOL	Smolenice	82.96	322	*e*P	P	01 59 51.4	+2.2
SMOL				pmax	pmax		
	comp=Z,14nm,1.2s						
SMOL	Smolenice	82.96	322	*e*P	P	01 59 51.4	+2.2
MODS	Modra-Piesok	83.12	322	*e*P	P	01 59 52.4	+2.4
MODS				pmax	pmax		
	comp=Z,17nm,1.4s						
MODS	Modra-Piesok	83.12	322	*e*P	P	01 59 52.4	+2.4
KRUC	Moravsky	83.20	323	*e*P	P	01 59 51.2	+0.8
PVCC	Panska Ves	83.30	325	AMS	AMS	02 40 30.0	
	comp=Z,400nm,14.4s						
BRG	Berggiesshubel	83.41	325	*e*P	P	01 59 52.5	+1.0
	comp=Z,6.4nm,1.4s						
	comp=N,198nm,14.5s						
	comp=E,192nm,14.0s						
	comp=Z,335nm,16.4s						
TREC	Trest	83.55	323	AMS	AMS	02 40 30.0	
	comp=Z,300nm,16.6s						
GOPC	GO Pecny, Ondr	83.55	324	AMS	AMS	02 40 30.0	
	comp=Z,400nm,15.7s						
CLL	Collm	83.62	326	*e*P	P	01 59 53.1	+0.6
	comp=Z,8.8nm,1.0s						
CLL	Collm	83.62	326	*i*P	P	01 59 53.3	+0.8
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	Collm	83.62	326	*i*P	P	01 59 53.3	+0.8
	comp=Z,10.0nm,1.0s						
CLL				*e*pP	pP	02 00 02.0	+1.1
PRU	Pruhonice	83.64	324	AMS	AMS	02 40 20.0	
	comp=Z,400nm,14.2s						
CONA	Conrad Observa	84.15	322	*e*PcP	P	01 59 57.8	+2.4
	comp=Z,8.5nm,1.2s						
NKC	Novy Kostel	84.56	325	*e*P	P	01 59 59.3	+2.0
NKC				MLR	MLR		
	comp=Z,500nm,14.6s						
NKC	Novy Kostel	84.56	325	*e*P	P	01 59 59.3	+2.0
NKC				AMS	AMS	02 42 00.0	
	comp=Z,500nm,14.6s						
KHC	Kasperske Hory	84.65	324	*e*P	P	01 59 58.9	+1.0
	comp=Z,2.7nm,1.2s						
KHC	Kasperske Hory	84.65	324	*e*P	P	01 59 58.9	+1.0
KHC				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KHC	Kasperske Hory	84.65	324	*e*P	P	01 59 58.6	+0.7
KHC				*e*pP	sP	02 00 10.0	+0.6
KHC				AMS	AMS	02 41 10.0	
	comp=Z,400nm,16.5s						
MOX	Moxa	84.72	326	P	P	02 00 01.6	+3.5
MOX				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ARSA	Arzberg	84.74	322	*e*PcP	P	02 00 00.5	+2.3
	comp=Z,4.0nm,1.1s						
GEC2	GERESS Array S	84.76	324	*e*P	P	02 00 00.2	+1.7
	comp=Z,6.8nm,1.2s						
GEC2	GERESS Array S	84.76	324	*e*P	P	02 00 00.2	+1.7
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GERES	GERESS Array B	84.76	324	P	P	01 59 59.7	+1.2
	comp=Z,1.6nm,0.3s,baz=46,slow=3.9,SNR=13						
MOA	Molln	85.06	323	*e*PcP	P	02 00 01.8	+1.8
	comp=Z,5.9nm,1.1s						
TTG	Podgorica	85.33	316	*e*P	P	02 00 01.5	+0.2
	comp=Z,11nm,1.1s						
TTG	Podgorica	85.33	316	*e*P	P	02 00 01.5	+0.2
TTG				pmax	pmax		
	comp=Z,11nm,1.1s						
SOKA	Soboth	85.35	321	*e*PcP	P	02 00 03.3	+1.9
	comp=Z,7.9nm,1.1s						
GRA1	Grafenberg Arr	85.52	325	*e*P	P	02 00 04.3	+2.2
	comp=Z,15nm,1.2s						
GRF	Grafenberg Arr	85.52	325	*e*P	P	02 00 04.3	+2.2
GRF				pmax	pmax		
	comp=Z,15nm,1.2s						
OBKA	Obir	85.72	321	*e*PcP	P	02 00 04.1	+0.8
	comp=Z,5.9nm,1.1s						
KBA	Koelnbreinsper	86.03	322	*e*PcP	P	02 00 06.7	+1.8
	comp=Z,9.3nm,1.4s						
FFC	Flin Flon	86.27	27	*i*P	P	02 00 07.8	+2.1
ABTA	Abfaltersbach	86.68	322	*e*PcP	P	02 00 08.7	+0.6
	comp=Z,8.6nm,1.3s						
WTTA	Wattenberg	86.83	323	*e*PcP	P	02 00 10.2	+1.3
	comp=Z,7.8nm,1.1s						
SQTA	Sankt Quirin	87.08	323	*e*PcP	P	02 00 13.2	+3.2
	comp=Z,2.9nm,0.9s						
RETA	Reutte	87.15	324	*e*PcP	P	02 00 14.5	+4.2
	comp=Z,5.1nm,1.3s						
FETA	Feichten	87.46	323	*e*PcP	P	02 00 13.7	+1.7
	comp=Z,2.8nm,1.1s						
DAVA	Damuels	87.74	324	*e*PcP	P	02 00 16.1	+2.8
	comp=Z,4.7nm,0.8s						
FUORN	Ofenpass-Fuorn	87.96	323	*e*P	P	02 00 14.9	+0.5
	comp=Z,16nm,1.3s						
TUE	Stuetta	88.54	324	*e*P	P	02 00 15.6	-1.6
	comp=Z,5.8nm,1.0s						
AQU	L'Aquila	88.89	319	*e*P	P	02 00 18.3	-0.3
	comp=Z,11nm,1.0s						
AQU	L'Aquila	88.89	319	*e*P	P	02 00 18.3	-0.3
AQU				pmax	pmax		
	comp=Z,11nm,1.0s						
SCHQ	Schefferville	96.22	10	LR	LR	02 49 20.7	
	comp=Z,63nm,18.1s,baz=320,slow=39						

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*RSNC **24** 01:50:13.3±1.2, 4.°17N×76.°90W, h4^{km}±7^{km}, ML3.5, Mw4.0*

*IDC **24** 01:50:18.4±2.4, 4.°18N×76.°73W, h80^{km}±22^{km}, mb3.4/9, mb1 3.8/13, mb1mx3.6/31, mbtmp3.9/13, MS3.0/1, Ms1 3.0/1, ms1mx2.4/24, Error ellipse: s-maj=25.1km s-min=16.9km az=47.0*

ISC 24 01:50:12.7±1.3**, 4.°15N**±0.°03×**76.°90W**±0.°04**, h27**^{km}±10^{km}**, n46, σ2.^{s}00**/59**, mb3.6**/9**, 7C-5D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALC	Bahia Malaga	0.46	253⇓	*e*P	Pn	01 50 26.1	+2.5
MALC				*e*S	Sn	01 50 35.0	+4.1
MALC				*i*		01 50 41.3	
	comp=Z,4µm,0.3s						
YOTC	Yotoco, Valle	0.57	106⇓	*i*P	Pb	01 50 24.3	-0.1
YOTC				*e*S	Sb	01 50 31.7	-0.5
YOTC				*i*		01 50 32.4	
	comp=Z,5µm,0.4s						
PLMC	San Jos del P	0.97	39⇑	*e*P	Pb	01 50 29.6	-1.3
PLMC				*i*		01 50 44.6	
	comp=Z,10µm,0.1s						
POPC	Popayan, Colom	1.61	172⇑	*i*P	Pn	01 50 40.2	+0.5
POPC				*i*		01 50 41.5	
	comp=Z,440nm,0.8s						
POPC				*e*S	Sn	01 50 59.6	-0.1
ORTC	Ortega, Tolima	1.66	98⇓	*e*P	Pn	01 50 41.4	+1.2
ORTC				*i*		01 51 04.7	
	comp=Z,398nm,0.5s						
GRGC	Isla de Gorgon	1.70	228	*e*P	Pn	01 50 41.1	+0.4
RREF	El Recreo	1.72	64⇓	*e*P	Pn	01 50 42.2	+0.7
RREF				*e*S	Sn	01 51 03.7	+0.9
GUY2C	Guyana, Caldas	1.86	55⇑	*i*P	Pn	01 50 44.3	+1.0
GUY2C				*i*		01 51 11.0	
	comp=Z,366nm,0.4s						
PCON	Cinco Dias	1.87	165	*e*P	Pn	01 50 45.8	+2.2
SOTA	Rioblanco	2.02	172	*e*P	Pn	01 50 47.4	+1.9
PRAC	Prado	2.05	102	*e*P	Pn	01 50 47.4	+1.8
PRAC				*e*S	Sn	01 51 12.8	+2.5
PRAC				*i*		01 51 15.3	
	comp=Z,668nm,0.5s						
BETC	Betania	2.06	135⇓	*e*P	Pb	01 50 48.5	-0.9
BETC				*e*S	Sb	01 51 14.3	-0.3
SOLC	Bahia Solano	2.13	346	*e*P	Pn	01 50 48.5	+1.9

BBAC	Balboa, Cauca	2.14	189	eP	Pn	01 50 47.8	+0.9
BBAC				i		01 51 20.1	
	comp=Z,222nm,0.4s						
HELC	Santa Helena	2.44	34	⇑iP	Pn	01 50 52.3	+1.1
	comp=Z,200nm,0.5s						
HELC				i		01 51 30.3	
	comp=Z,200nm,0.5s						
NORC	Norcasia	2.46	55	eP	Pn	01 50 53.7	+2.4
NORC				eS	Sb	01 51 24.5	-1.8
NORC				i		01 51 25.4	
	comp=Z,281nm,0.5s						
CRUC	La Cruz	2.56	181	eP	Pn	01 50 53.6	+0.8
CRUC				i		01 51 33.2	
	comp=Z,262nm,0.5s						
ROSC	El Rosal	2.66	75	P	Pb	01 50 57.9	-2.0
	comp=Z,43nm,0.3s,baz=22,slow=4.3,SNR=30						
ROSC				S	Sb	01 51 36.3	+4.0
	comp=Z,37nm,0.3s,baz=238,slow=23,SNR=6.9						
ROSC	El Rosal	2.66	75	eP	Pb	01 50 57.9	-2.0
FLOC	Florencia	2.83	154	⇑eP	Pn	01 50 58.9	+2.5
DBBC	Dabeiba	2.93	13	eP	Pn	01 50 58.9	+1.1
SPBC	San Pablo de B	3.19	62	eP	Pn	01 51 03.6	+2.4
SPBC				i		01 51 20.3	
	comp=Z,66nm,0.5s						
CHIC	Chingaza	3.19	81	eP	Pn	01 51 04.2	+2.6
CHIC				i		01 52 04.5	
	comp=Z,63nm,0.5s						
VILC	Villavicencio,	3.19	90	eP	Pn	01 51 03.7	+2.3
VILC				eS	Sn	01 51 42.7	+4.0
PTBC	PUERTO BERRIO,	3.40	46	⇑eP	Pn	01 51 06.1	+2.1
PTBC				eS	Sn	01 51 45.2	+1.7
PTBC				i		01 51 57.9	
	comp=Z,116nm,0.6s						
ZARC	Zaragoza, Cauc	3.89	31	⇑eP	Pn	01 51 13.2	+2.3
ZARC				eS	Sn	01 51 59.6	+3.8
RUSC	La Rusia	4.17	65	eP	Pn	01 51 18.1	+3.0
BRRC	Barranca, Sant	4.32	47	eP	Pn	01 51 18.7	+1.9
BRRC				eS	Sn	01 52 08.1	+1.7
BRRC				i		01 52 18.0	
	comp=Z,36nm,0.6s						
BARC	Barichara	4.42	57	eP	Pn	01 51 21.3	+2.9
BARC				eS	Sn	01 52 12.0	+2.8
PTLC	Puerto Leguiza	4.47	152	eP	Pn	01 51 25.0	+6.2
GIRC	Giron, Santand	4.70	52	eP	Pn	01 51 24.4	+2.4
OCAC	Ocana	5.40	41	eP	Pn	01 51 33.7	+2.0
OCAC				eS	Sn	01 52 34.4	+1.2
SDV	Santo Domingo	7.80	53	P	Pn	01 52 07.4	+2.6
	comp=Z,5.1nm,0.3s,baz=281,slow=2.3,SNR=3.1						
SDV				S	Sn	01 53 30.9	-1.5
	comp=Z,2.1nm,0.3s,baz=44,slow=17,SNR=3.3						
JTS	Las Juntas de	10.05	308	LR	LR	01 56 23.3	
	comp=Z,83nm,19.0s,baz=168,slow=36						
ATAH	Atahualpa	11.31	188	P	Pn	01 52 58.0	+5.0
	comp=Z,0.3nm,0.3s,baz=339,slow=6.8,SNR=4.9						
PTGA	Pitinga	17.60	106	P	Pn	01 54 15.1	-1.2
	comp=Z,0.1nm,0.3s,baz=319,slow=19,SNR=2.1						
SIV	San Ignacio	25.41	142	P	P	01 55 38.1	-0.2
	comp=Z,1.1nm,0.9s,baz=303,slow=18,SNR=3.1						
TXAR	Lajitas Array	35.65	318	P	P	01 57 09.5	+0.7
	comp=Z,0.5nm,0.9s,baz=129,slow=9.8,SNR=4.8						
TXAR				PcP	PcP	01 59 37.2	0.0
	comp=Z,0.1nm,0.7s,baz=150,slow=5.3,SNR=3.6						
PDAR	Pinedale Array	48.17	328	P	P	01 58 51.0	-0.1
	comp=Z,0.2nm,0.4s,baz=132,slow=14,SNR=3.1						
ULM	Lac du Bonnet	48.66	344	P	P	01 58 53.2	-1.2
	comp=Z,1.4nm,0.4s,baz=132,slow=6.1,SNR=3.5						
NVAR	Mina Array Bea	50.80	318	P	P	01 59 12.6	+1.3
	comp=Z,1.1nm,0.8s,baz=123,slow=7.9,SNR=5.9						
YKA	Yellowknife Ar	64.53	342	P	P	02 00 46.1	-1.0
	comp=Z,1.5nm,0.6s,baz=135,slow=6.1,SNR=12						
ESDC	Sonseca Array	74.24	50	P	P	02 01 47.2	-0.6
	comp=Z,0.2nm,0.5s,baz=256,slow=6.8,SNR=5.1						
ILAR	Eielson Array	77.81	336	P	P	02 02 07.2	-0.3
	comp=Z,0.7nm,0.6s,baz=105,slow=4.2,SNR=7.0						
TORD	Torodi Ar. Bea	77.97	78	P	P	02 02 07.5	-1.9
	comp=Z,0.3nm,0.5s,baz=288,slow=5.1,SNR=8.2						
ASAR	Alice Springs	144.51	234	PKP	PKPab	02 09 44.8	-1.3
	comp=Z,1.2nm,0.5s,baz=119,slow=3.9,SNR=6.2						

UCR 24 01:58:11.9±1.0, 11°.65N×86°.82W, h32km±129km, MD3.7, 1C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GB1A	Borinquen Arri	1.62	121	⇓eP	Pn	01 58 39.0	+0.6
GB1A				eS	Sn	01 58 58.2	-0.1
BUEV	Buena Vista	1.63	121	⇑iP	Pn	01 58 38.7	+0.3
BUEV				eS	Sn	01 58 57.9	-0.5
ACON	Acoyapa	1.65	79	⇓iP	Pn	01 58 38.4	-0.1

SJA 24 01:59:51.0±0.7, 30°.57S×72°.02W, h16km±10km, ML3.8, MW4.6
GUC 24 01:59:53.7±0.6, 30°.73S×71°.66W, h46km±8km, ML3.4
ISC 24 01:59:50.4±3.1, 30°.70S±0°.07×71°.9W±0°.1, h6km±15km, n13, σ1s.52/17, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.96	122	⇑iP	Pb	02 00 09.2	-0.3
CO02				eS	Sg	02 00 20.5	-0.7
LSCH	La Serena	0.99	38	eP	Pn	02 00 10.8	0.0
LSCH				eS	Sb	02 00 23.6	+0.4
LSCH				IAML		02 00 25.1	
	comp=N,2µm,0.2s						
GO04	Tololo Observa	1.12	63	i P	Pg	02 00 12.8	+1.0
GO04				i S	Sn	02 00 28.5	-0.1
GO04	Tololo Observa	1.12	63	⇓iP	Pg	02 00 12.4	+0.6
GO04				eS	Sb	02 00 26.1	-1.1
LCO	Las Campanas	2.00	33	i P	Pb	02 00 25.4	-1.8
LCO	Las Campanas	2.00	33	⇓iP	Pb	02 00 26.1	-1.2
LCO				eS	Sb	02 00 51.4	-1.0
LCO				IAML		02 00 55.0	
	comp=N,570nm,0.3s						
AROD	Rodeo	2.20	77	i P	Pb	02 00 30.8	+0.1
RTLS	Leoncito	2.52	117	i P	Pb	02 00 35.8	-0.5
RTLS				IAML		02 01 13.7	
	comp=Z,291nm,0.7s						
PEL	Peldehue	2.67	157	IAML		02 01 15.7	
	comp=E,256nm,0.4s						
ZON	Zonda	2.93	108	i P	Pb	02 00 41.1	-1.9
RTLL	Cerro Villicun	3.04	103	i P	Pb	02 00 42.9	-2.1
RTCV	Cerro Valdivia	3.14	113	i P	Pb	02 00 44.5	-2.0
VCA	Vinchina	3.79	60	i P	Pn	02 00 52.5	+2.9
VCA				IAML		02 01 05.1	
	comp=Z,220nm,0.4s						

ISCJB 24 02:08:22.6±0.4, 61°.31S±0°.06×153°.9E±0°.2, h10km, mb4.7/14, MS4.4/18, Error ellipse: s-maj=11.9km s-min=7.2km az=23.6
NEIC 24 02:08:24.0±2.0, 61°.38S×153°.88E, h10km±3km, mb4.8/21, Error ellipse: s-maj=20.5km s-min=7.6km az=87.0
IDC 24 02:08:24.9±1.2, 61°.36S×153°.45E, h0km, mb4.2/6, mb1 4.3/6, mb1mx4.2/25, mbtmp4.2/6, MS4.5/15, Ms1 4.5/15, ms1mx4.5/15, Error ellipse: s-maj=56.2km s-min=18.3km az=85.0
GCMT 24 02:08:29.0±0.2, 61°.15S±0°.01×153°.99E±0°.03, h12km, MW5.1/91, Moment Tensor Solution. s45,c57; s91,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.13±.14; $M_{\theta\theta}$4.21±.12; $M_{\phi\phi}$-4.09±.13; $M_{r\theta}$-0.86±.34; $M_{\theta\phi}$-3.43±.12; $M_{\phi r}$1.61±.37; Best double couple: $M_0$5.68400×10^{16} NP1:ϕ_s335.00000°, δ90.00000°, λ19.00000°. NP2: ϕ_s245.00000°, δ71.00000°, λ180.00000°. Principal axes: T 5.7610, Plg13.0000°, Azm201.0000°; N -0.1610, Plg71.0000°, Azm335.0000°; P -5.6060, Plg13.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 24 02:08:24.5±0.5, 61°.31S±0°.08×153°.8E±0°.1, h10km, n68, σ1s.55/41, mb4.7/14, MS4.4/18, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	Scott Base	17.14	171	ePn	Pn	02 12 21.8	-1.8
	56nm,1.5s						
WHZ	Wether Hill Ro	17.50	35	ePn	Pn	02 12 27.9	-0.4
	76nm,1.5s						
DCZ	Deep Cove	17.69	32	ePn	Pn	02 12 28.7	-1.9
	79nm,1.4s						
MLZ	Mavora Lakes	18.03	34	eP	P	02 12 35.6	+0.2
	119nm,1.5s						
ODZ	Otahua Downs	19.05	39	eP	Pn	02 12 47.5	+0.1
	78nm,1.6s						
CASY	Casey	19.43	237	eP	P	02 12 50.0	-0.5
	102nm,2.0s						
FOZ	Fox Glacier	20.19	35	eP	P	02 12 59.4	+0.4
	143nm,1.5s						
RPZ	Rata Peaks	20.38	38	LR	LR	02 19 13.3	
	comp=Z,2µm,21.4s,baz=184,slow=32						
MQZ	McQueen's Vall	20.88	41	eP	P	02 13 05.0	-1.4
	38nm,1.4s						
CRLZ	Canterbury Las	20.99	41	eP	P	02 13 07.2	-0.5
	176nm,1.7s						
URZ	Urewera	27.24	43	LR	LR	02 23 03.6	
	comp=Z,802nm,20.3s,baz=212,slow=32						
QSPA	South Pole Qui	28.78	180	P	P	02 14 23.4	+1.2
	2.8nm,1.0s,baz=349,slow=3.8,SNR=3.9						
QSPA	South Pole Qui	28.78	180	eP	P	02 14 22.4	+0.2
	11nm,1.3s						
OUZ	Omahuta	28.99	35	eP	P	02 14 23.3	-0.7
	76nm,1.9s						
STKA	Stephens Creek	30.51	339	P	P	02 14 39.8	+2.3
	5.1nm,1.0s,baz=169,slow=16,SNR=4.0						
STKA				LR	LR	02 25 40.4	
	comp=Z,530nm,18.9s,baz=157,slow=34						
BBOO	Buckleboo	30.76	330	eP	P	02 14 38.1	-1.6
	34nm,1.4s						
EIDS	Eidsvold	35.97	356	eP	P	02 15 24.7	-0.5
	28nm,1.4s						
MAW	Mawson	36.30	220	P	P	02 15 26.9	-0.7
	1.3nm,1.0s,baz=180,slow=5.1,SNR=2.1						
MAW				LR	LR	02 30 36.6	
	comp=Z,1µm,18.2s,baz=112,slow=37						
H01W1	Cape Leeuwin H	36.48	298	T	T	02 54 31.5	
	baz=148,slow=75,SNR=320						
H01W2	Cape Leeuwin H	36.48	298	T	T	02 54 27.3	
	baz=148,slow=75,SNR=266						
H01W3	Cape Leeuwin H	36.49	298	T	T	02 54 32.6	
	baz=148,slow=75,SNR=278						
ONTNC	Ouen Toro	39.95	18	eP	P	02 15 59.7	+1.0
	42nm,1.5s						
ASAR	Alice Springs	40.04	331	P	P	02 16 00.6	+1.0
	3.5nm,0.9s,baz=164,slow=8.6,SNR=13						
ASAR				LR	LR	02 30 38.6	
	comp=Z,425nm,19.3s,baz=157,slow=33						
AS31	Alice Springs	40.04	331	eP	P	02 16 00.6	+1.0
	1.9nm,1.0s						
DZM	Mont Dzumac	40.18	18	eLR	LR	02 26 23.3	
	comp=Z,2µm,25.6s						
DZM	Mont Dzumac	40.18	18	LR	LR	02 29 08.1	
	comp=Z,843nm,19.3s,baz=193,slow=31						
MORW	Morawa	40.78	305	eP	P	02 16 04.0	-1.6
	62nm,1.6s						
WR1	Warramunga Arr	43.53	333	eP	P	02 16 29.3	+1.2
WRA	Warramunga Arr	43.53	333	P	P	02 16 29.3	+1.2
	8.7nm,1.1s,baz=165,slow=6.7,SNR=4.4						
SNAA	Sanae	46.32	190	P	P	02 16 52.4	+2.6
SNAA	Sanae	46.32	190	P	P	02 16 51.4	+1.6
	3.2nm,1.1s,baz=165,slow=9.2,SNR=8.4						
SNAA				LR	LR	02 36 52.2	
	comp=Z,2µm,19.4s,baz=133,slow=37						
SNAA	Sanae	46.32	190	eP	P	02 16 48.1	-1.8
	7.7nm,1.2s						
VNA3	Neumayer Olymp	47.23	187	P	P	02 16 59.3	+2.4
VNA1	Neumayer--Stat	47.73	188	P	P	02 17 02.1	+1.4
MTN	Manton Dam	51.12	331	eP	P	02 17 27.1	-0.1
HNR	Honiara	51.97	8	LR	LR	02 34 24.4	
	comp=Z,853nm,21.8s,baz=177,slow=30						
TBI	Tubuai	53.94	72	eLR	LR	02 32 53.0	
	comp=Z,364nm,27.5s						
TBI	Tubuai	53.94	72	eT	T	03 15 24.4	
	180nm,0.4s						
TVO	Taravao	58.88	69	eT	T	03 21 32.2	
	3.7nm,0.3s						
PPT2	Papeete2	58.90	68	eLR	LR	02 35 15.2	
	comp=Z,323nm,24.8s,baz=204						
PPT2	Papeete2	58.90	68	eT	T	03 21 34.1	
	4.8nm,0.4s						
PPT	Papeete	58.92	68	LR	LR	02 41 10.9	
	comp=Z,157nm,18.6s,baz=186,slow=33						
RKT	Rikitea	60.98	85	eT	T	03 24 15.5	
	30nm,0.3s						
VAH	Vaihoa	61.85	69	eT	T	03 25 13.8	
	80nm,0.3s						
SMRI	Semarang	62.94	310	eP	P	02 18 50.1	-0.9
	65nm,1.0s						
CISI	Cisompet, Garu	63.47	307	eP	P	02 18 55.3	+0.8
	68nm,1.3s						
TAOE	Nuku Hiva Isla	70.87	73	eLR	LR	02 40 45.9	
	comp=Z,159nm,24.7s						
PLCA	Paso Flores	72.11	146	LR	LR	02 47 23.2	
	comp=Z,287nm,18.1s,baz=216,slow=32						
H08S2	Diego Garcia H	79.17	274	T	T	03 48 00.9	
	baz=150,slow=76,SNR=20						
H08S1	Diego Carcia H	79.18	274	T	T	03 48 01.3	
	baz=150,slow=76,SNR=9.3						
H08S3	Diego Garcia H	79.19	274	T	T	03 48 03.1	
	baz=150,slow=76,SNR=34						
BOSA	Boshof	81.22	224	LR	LR	02 53 43.2	
	comp=Z,137nm,19.8s,baz=143,slow=34						
CPUP	Villa Florida	89.10	152	LR	LR	02 57 55.8	
	comp=Z,221nm,18.7s,baz=199,slow=33						
CMAR	Chiang Mai Arr	90.69	309	LR	LR	03 01 10.8	
	comp=Z,125nm,18.4s,baz=161,slow=35						
LPAZ	La Paz	95.77	140	LR	LR	02 55 56.4	
	comp=Z,177nm,21.4s,baz=166,slow=30						
MJAR	Matsushiro Arr	98.33	347	LR	LR	03 03 24.4	
	comp=Z,52nm,21.3s,baz=185,slow=34						
NV01	Mina Array Sit	121.87	68	ePKPdf	PKiKP	02 27 19.7	+1.3
NVAR	Mina Array Bea	121.87	68	PKP	PKiKP	02 27 19.7	+1.3
	0.2nm,0.3s,baz=189,slow=5.1,SNR=3.5						
PSUT	Pine Spring	123.96	71	ePdif	Pdif	02 23 52.6	-3.3
GLI	Glacier Island	129.99	33	ePKPpre	PKPpre	02 27 23.8	
SCM	Sheep Creek Mo	130.73	32	ePKPpre	PKPpre	02 27 26.1	
BR101	Keskin Array S	138.13	267	ePKPdf	PKiKP	02 27 50.0	-0.9
BRTR	Keskin Array B	138.13	267	PKP	PKiKP	02 27 50.0	-0.9
	0.4nm,0.7s,baz=110,slow=7.8,SNR=3.1						
KEST	Kesra	145.98	238	PKPbc	PKiKP	02 28 06.4	-0.6
	3.1nm,0.9s,baz=106,slow=2.0,SNR=2.9						
KEST	Kesra	145.98	238	ePKPdf	PKPdf	02 27 58.9	-4.1
AKASG	Malin Array Be	148.24	276	PKPbc	PKPbc	02 28 09.9	+0.5
	0.5nm,0.5s,baz=141,slow=1.4,SNR=3.5						
ESDC	Sonseca Array	154.39	222	PKPbc	PKiKP	02 28 25.5	+1.2
	0.2nm,0.6s,baz=48,slow=1.9,SNR=3.5						
ESDC				PKPab	PKPab	02 28 40.0	+1.5
	0.2nm,0.5s,baz=165,slow=3.0,SNR=5.2						
ARCES	ARCESS Array B	157.69	313	PKPab	PKPab	02 28 53.9	+2.1
	2.0nm,0.8s,baz=26,slow=14,SNR=3.9						

ISCJB 24 02:09:24.9±0.5, 21°.34S±0°.03×68°.15W±0°.09, h206km±5km, Error ellipse: s-maj=13.8km s-min=4.1km az=2.5
IDC 24 02:09:25.5±0.8, 21°.34S×67°.48W, h148km±14km, mb3.9/1, mb1 3.5/6, mb1mx3.3/28, mbtmp4.0/6, Error ellipse: s-maj=27.1km s-min=10.4km az=113.0
NEIC 24 02:09:25.2±2.3, 21°.35S×68°.02W, h195km±6km, mb4.3/11, Error ellipse: s-maj=13.7km s-min=6.8km az=75.0
GUC 24 02:09:26.7±0.7, 21°.23S×68°.18W, h186km±6km, ML3.8
ISC 24 02:09:24.8±0.7, 21°.35S±0°.04×67°.94W±0°.09, h188km±8km, n42, σ1s.34/65, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.29	250	eP	Pn	02 09 57.0	+1.2
PB09				i S	Sn	02 10 20.2	+0.5
PB09				IAML		02 10 21.7	
	comp=N,734nm,0.3s						
PB01	IPOC Station P	1.47	282	ePn	Pn	02 09 56.6	-0.7
PB01				eSn	Sn	02 10 22.3	-0.1
PB01	IPOC Station P	1.47	282	eP	Pn	02 09 57.6	+0.3
PB01				i S	Sn	02 10 21.7	-0.8
PB01				IAML		02 10 23.4	
	comp=N,599nm,0.3s						
LVC	Limon Verde	1.54	215	P	Pn	02 09 60.0	+1.7
	comp=N,5.2nm,0.3s,baz=349,slow=7.9,SNR=122						
LVC				S	Sn	02 10 24.6	+0.4
	comp=N,48nm,0.3s,baz=187,slow=18,SNR=50						
PB08	IPOC Station P	1.65	317	eP	Pn	02 10 00.0	+0.6
PB08				i S	Sn	02 10 25.2	-0.9
PB08				IAML		02 10 26.6	
	comp=E,833nm,0.4s						
PB02	IPOC Station P	1.82	271	eP	Pn	02 10 01.6	+0.8
PB02				i S	Sn	02 10 27.9	-0.6
PB03	IPOC Station P	1.82	247	eP	Pn	02 10 02.0	+1.3
PB03				i S	Sn	02 10 28.5	-0.1
PB07	IPOC Station P	1.85	258	eP	Pn	02 10 02.2	+1.1
PB07				i S	Sn	02 10 28.8	-0.3
PB07				IAML		02 10 29.6	
	comp=E,2µm,0.2s						
PB06	IPOC Station P	2.02	228	eP	Pn	02 10 04.6	+1.7
PB06				i S	Sn	02 10 33.4	+0.9
GO01	Chusmiza	2.04	325	ePn	Pn	02 10 03.9	+0.4
GO01				eSn	Sn	02 10 32.5	-0.9
PB11	IPOC Station P	2.25	314	ePn	Pn	02 10 05.5	+0.1
PB11				eSn	Sn	02 10 35.3	-1.7
PB11	IPOC Station P	2.25	314	eP	Pn	02 10 05.5	+0.1
PB11				i S	Sn	02 10 34.9	-2.0
PB04	IPOC Station P	2.27	244	ePn	Pn	02 10 07.2	+1.6
PB04				eSn	Sn	02 10 37.7	+0.5
PB04	IPOC Station P	2.27	244	eP	Pn	02 10 06.9	+1.3
PB04				i S	Sn	02 10 37.8	+0.5
PSGC	Pisagua	2.69	310	i S	Sn	02 10 43.6	-2.1
MNMC	Minye Minye	2.70	325	ePn	Pn	02 10 11.0	+0.4
MNMC				eSn	Sn	02 10 45.1	-1.2
PB10	IPOC Station P	3.23	228	ePn	Pn	02 10 18.3	+1.7
PB10				eSn	Sn	02 10 57.4	+0.1
GO02	Mina Guanaco	4.08	201	ePn	Pn	02 10 29.0	+1.4
GO02				eSn	Sn	02 11 16.4	-0.4
LPAZ	La Paz	5.04	358	P	Pn	02 10 41.0	+0.8
	comp=E,5.3nm,0.3s,baz=159,slow=6.7,SNR=79						
LPAZ				S	Sn	02 11 38.6	-0.6
	baz=324,slow=18,SNR=0.9						
LPAZ	La Paz	5.04	358	ePn	Pn	02 10 41.1	+1.0
LPAZ				eSn	Sn	02 11 40.2	+0.9
GO03	Copiap	6.56	198	ePn	Pn	02 10 59.1	-0.1
GO03				eSn	Sn	02 12 11.8	-2.1
LCO	Las Campanas	8.03	198	ePn	Pn	02 11 16.4	-2.3
LCO				eSn	Sn	02 12 47.5	-1.5
SIV	San Ignacio	8.41	52	P	Pn	02 11 20.4	-3.3
	comp=E,1.4nm,0.3s,baz=256,slow=12,SNR=38						
SIV				S	Sn	02 12 48.1	-10
	comp=E,0.2nm,0.3s,baz=300,slow=20,SNR=2.1						
GO04	Tololo Observa	9.15	196	ePn	Pn	02 11 31.7	-1.7
GO04				eSn	Sn	02 13 11.8	-4.1
CFA	Coronel Fontan	10.21	181	P	Pn	02 11 47.5	+0.4
	comp=E,0.9nm,0.3s,baz=1.3,slow=15,SNR=12						
PLCA	Paso Flores	19.45	186	P	Pn	02 13 41.6	+1.0
	comp=E,0.1nm,0.3s,baz=34,slow=11,SNR=2.1						
PLCA	Paso Flores	19.45	186	eP	P	02 13 38.7	+1.5
	comp=E,2.7nm,1.1s						
BDFB	Brasilia	19.73	77	P	P	02 13 41.0	+0.6
	comp=E,0.2nm,0.3s,baz=257,slow=11,SNR=3.1						
BDFB	Brasilia	19.73	77	eP	P	02 13 41.0	+0.6
BDFB				eP	P	02 13 41.3	+0.9
JTS	Las Juntas de	35.61	330	eP	P	02 16 03.8	-1.0
	comp=E,3.7nm,0.9s						
OBIP	Obispado Ponce	39.17	2	eP	P	02 16 35.8	+1.2
	comp=E,13nm,1.1s						
BANI	BANI	39.57	356	eP	P	02 16 36.9	-1.2
MTDJ	Mount Denham	40.44	346	eP	P	02 16 43.7	-1.5
	comp=E,38nm,1.1s						
HOPE	Hope Point	40.58	152	eP	P	02 16 45.0	-0.8
	comp=E,48nm,1.0s						
Y58A	Scranton	56.07	348	eP	P	02 18 44.2	-0.2
	comp=E,24nm,1.0s						
T57A	Hurt	59.01	349	eP	P	02 19 04.7	-0.2
	comp=E,8.7nm,1.1s						
U54A	Nelsons Funny	59.03	347	eP	P	02 19 06.2	+1.1
	comp=E,8.2nm,1.0s						
PLAL	Pickwick Lake	59.20	341	eP	P	02 19 05.6	-0.5
	comp=E,1.2nm,0.8s						
TOA1	Torodi Ar. Sit	76.46	70	eP	P	02 20 56.8	+2.5
TORD	Torodi Ar. Bea	76.46	70	P	P	02 20 56.8	+2.4
	comp=E,2.1nm,0.7s,baz=253,slow=5.7,SNR=23						
MK32	Makanchi Array	144.98	36	ePKPbc	PKiKP	02 28 43.7	+0.2
MKAR	Makanchi Array	144.98	36	PKP	PKiKP	02 28 43.7	+0.2
	comp=E,1.6nm,0.7s,baz=295,slow=2.7,SNR=9.8						

IDC 24 02:15:47.7±4.5, 28°.49S×179°.74E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/19, mbtmp4.2/3, Error ellipse: s-maj=196.9km s-min=48.2km az=153.0
WEL 24 02:16:47.8±1.5, 32°S±17°×17°9E±2°1, h545km±24km, M4.0/16, mB4.6/16, MLv4.5/14, Mw(mB)3.8/16, Error ellipse: s-maj=0.0km s-min=0.0km az=55.5
ISC 24 02:16:46.0±1.7, 32°.1S±0°.1×179°.1E±0°.2, h550km, n48, σ1s.21/49, mb3.9/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUZ	Kuaotunu	5.42	210	P	P	02 18 21.4	+2.2
WCZ	Waipu Caves	5.50	225	P	P	02 18 20.5	+0.5
OUZ	Omahuta	5.55	234	P	P	02 18 20.4	-0.1
WIAZ	Waiheke Island	5.72	214	P	P	02 18 23.4	+1.5
WMGZ	Waiomatatini S	5.74	185	P	P	02 18 22.0	-0.1
HAZ	Te Kaha	5.75	190	P	P	02 18 22.6	+0.4
HAZ				S	S	02 19 39.8	-1.2
PKGZ	Pakihiroa	5.84	188	P	P	02 18 23.6	+0.5
ETAZ	East Tamaki Re	5.95	214	P	P	02 18 25.6	+1.7
MKAZ	Moumakai	5.96	212	P	P	02 18 25.9	+1.8
RUGZ	Raukumara Rang	5.97	191	P	P	02 18 24.4	+0.1
PUZ	Puketiti	6.00	186	P	P	02 18 25.8	+1.3
WTAZ	Waiatarua	6.10	217	P	P	02 18 26.9	+1.4
TWGZ	Tauwhareparae	6.14	188	P	P	02 18 27.2	+1.5
TWGZ				S	S	02 19 48.6	+1.1
MWZ	Matawai	6.36	191	P	P	02 18 28.0	+0.2
MWZ				S	S	02 19 50.4	-0.8
URZ	Urewera	6.36	194	P	P	02 18 26.7	-1.0
TKGZ	Te Karaka	6.41	189	P	P	02 18 29.8	+1.6
CNGZ	Carnagh Statio	6.42	186	P	P	02 18 29.1	+0.8
RAGZ	Rawiri	6.53	192	P	P	02 18 28.7	-0.8
MUGZ	Murupara	6.65	196	P	P	02 18 29.5	-1.0
RIGZ	Rimuhau	6.69	189	P	P	02 18 32.1	+1.2
SNGZ	Shannon Statio	6.83	192	P	P	02 18 32.3	+0.2
TLZ	Tolley Road	6.87	204	P	P	02 18 34.5	+1.8
MTHZ	Maungataniwha	6.99	195	P	P	02 18 33.7	-0.1
MRHZ	Matea Rd	7.07	197	P	P	02 18 34.3	-0.2
WATZ	Wairara	7.15	202	P	P	02 18 36.0	+0.7
RATZ	Rangitukua	7.28	201	P	P	02 18 38.4	+1.8
HIZ	Hauiti	7.28	207	P	P	02 18 38.9	+2.4
BKZ	Black Stump Fm	7.37	196	P	P	02 18 36.6	-0.8
WTVZ	West Tongariro	7.57	201	P	P	02 18 40.9	+1.5
TWVZ	Taurewa	7.57	202	P	P	02 18 40.5	+1.0
MCHZ	McNeill Hill	7.59	194	P	P	02 18 40.1	+0.6
KWHZ	Kaweka Forest	7.63	196	P	P	02 18 41.2	+1.2
FWVZ	Far West T-bar	7.71	201	P	P	02 18 41.5	+0.6
WHVZ	Whangaehu Hut	7.72	201	P	P	02 18 41.5	+0.4
BHHZ	Black Hill Sta	7.78	198	P	P	02 18 40.5	-1.0
KRHZ	Kereru	7.85	196	P	P	02 18 41.8	-0.3
KAHZ	Kahuranaki	7.89	193	P	P	02 18 43.4	+0.8
PNHZ	Pukenui	8.15	196	P	P	02 18 45.0	-0.1
TSZ	Takapari Road	8.34	197	P	P	02 18 47.3	+0.4
PRHZ	Porangahau	8.39	193	P	P	02 18 48.0	+0.6
DVHZ	Dannevirke	8.52	195	P	P	02 18 49.8	+1.0
BFZ	Birch Farm	8.87	194	P	P	02 18 52.5	+0.2
STKA	Stephens Creek	31.71	260	P	P	02 22 23.6	-1.5
	1.0nm,0.3s,baz=80,slow=12,SNR=4.2						
ASAR	Alice Springs	40.59	270	P	P	02 23 34.6	-3.8
	0.6nm,0.3s,baz=107,slow=7.5,SNR=8.1						
WRA	Warramunga Arr	41.73	276	P	P	02 23 42.9	-4.6
	2.3nm,0.4s,baz=104,slow=8.3,SNR=3.2						
FINES	FINESS Array B	145.81	337	PKP	PKPdf	02 35 19.3	-2.1
	1.7nm,0.4s,baz=51,slow=5.2,SNR=20						
NB2	NORSAR Subarra	149.97	348	PKP	PKPdf	02 35 30.2	+1.9
	comp=Z,0.2nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.97	348	PKPbc	PKPdf	02 35 30.3	+1.9
	comp=Z,0.3nm,0.5s,baz=18,slow=4.2,SNR=3.7						

WEL 24 02:18:25.7, 42°S±1°×174°.3E±0°.7, h14km±2km, M3.9/25, ML4.2/17, MLv3.9/25, Error ellipse: s-maj=0.0km s-min=0.0km az=170.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.10	197	P	Pg	02 18 29.1	+0.3
CMWZ				S	Sg	02 18 31.9	+1.0
BSWZ	Blackbirch Sta	0.29	258	P	Pb	02 18 32.2	-0.5
BSWZ				S	Sb	02 18 37.0	-0.3
TUWZ	Tuamarina	0.32	314	P	Pb	02 18 32.9	-0.3
TUWZ				S	Sb	02 18 38.0	-0.4
TCW	Tory Channel	0.45	2	P	Pb	02 18 35.0	-0.4
TCW				S	Sg	02 18 41.2	+0.6
BHW	Baring Head	0.53	62	P	Pb	02 18 36.9	+0.2
PLWZ	Palliser	0.76	84	P	Pn	02 18 41.6	-0.5
MSWZ	Moikau Station	0.79	73	P	Pb	02 18 41.8	+0.6
MSWZ				S	Sn	02 18 54.6	+0.5
NNZ	Nelson	0.79	304	P	Pb	02 18 41.1	-0.1

CAW	Cannon Point	0.82	48	P	Pb	02 18 42.0	+0.2
DUWZ	D'Urville Isla	0.89	344	P	Pb	02 18 43.1	+0.1
KHZ	Kahutara	0.93	215	P	Pn	02 18 44.7	+0.4
PAWZ	Paruwai Farm	0.93	73	P	Pn	02 18 44.3	-0.1
THZ	Tophouse	1.01	264	P	Pg	02 18 45.2	0.0
MTW	Mount Morrison	1.06	62	P	Pn	02 18 46.5	+0.2
OGWZ	Otaki Gorge	1.09	40	P	Pn	02 18 46.6	+0.1
TRWZ	Traveller	1.11	77	P	Pb	02 18 46.7	0.0
HOWZ	Holdsworth Sta	1.22	52	P	Pb	02 18 48.7	+0.1
TMWZ	Te Maipa	1.35	67	P	Pn	02 18 50.1	-0.1
MRZ	Mangatainoka R	1.41	46	P	Pb	02 18 51.6	-0.3
TIWZ	Tintock	1.52	55	P	Pn	02 18 52.7	+0.3
QRZ	Quartz Range	1.54	302	P	Pb	02 18 54.3	+0.3
GVZ	Greta Valley S	1.59	214	P	Pn	02 18 53.5	+0.1
OHWZ	Ohakea	1.66	29	P	Pb	02 18 56.6	+0.6
PRWZ	Pori Road	1.70	50	P	Pn	02 18 55.2	+0.2
POWZ	Post Office Ro	1.71	43	P	Pn	02 18 55.4	+0.3
LTZ	Lake Taylor	1.85	232	P	Pn	02 18 57.6	+0.5
AMCZ	Amberley	1.93	217	P	Pn	02 18 57.7	-0.4
WAZ	Wanganui	1.98	17	P	Pb	02 19 02.5	+1.0
DVHZ	Dannevirke	1.99	48	P	Pn	02 18 58.4	-0.5
OKCZ	Okains Bay	2.24	203	P	Pn	02 19 01.3	-1.2
NMEZ	Namu Road	2.26	353	P	Pb	02 19 06.5	+0.2
PREZ	Palmer Road	2.31	358	P	Pb	02 19 07.7	+0.5
OXZ	Oxford	2.34	224	P	Pn	02 19 02.8	-1.0
INZ	Inchbonnie	2.34	242	P	Pn	02 19 04.8	+1.0
MQZ	McQueen's Vall	2.36	209	P	Pn	02 19 02.5	-1.6
KHEZ	Kahui Hut	2.37	356	P	Pb	02 19 08.2	0.0
NBEZ	Newall Road No	2.40	353	P	Pn	02 19 05.7	+1.0
DREZ	Durham Road	2.47	359	P	Pb	02 19 09.4	-0.4
PKE	Pukeiti	2.47	355	P	Pb	02 19 08.7	-1.2
VRZ	Vera Road	2.56	9	P	Pb	02 19 10.0	-1.4
DRZ	Dome Shelter	2.58	23	P	Pb	02 19 11.7	-0.2
WHVZ	Whangaehu Hut	2.58	24	P	Pn	02 19 09.3	+1.9
FWVZ	Far West T-bar	2.60	23	P	Pb	02 19 10.0	-2.2
WTVZ	West Tongariro	2.74	22	P	Pb	02 19 12.4	-2.1
KRVZ	Karewarewa	2.77	23	P	Pn	02 19 11.8	+2.0
KATZ	Kakaramea	2.90	23	P	Pb	02 19 16.1	-1.2
WVZ	Waitaha Valley	2.96	240	P	Pn	02 19 12.8	+0.5
RPZ	Rata Peaks	3.13	228	P	Pn	02 19 13.9	-0.7
HIZ	Hauiti	3.17	9	P	Pb	02 19 18.8	-3.1
TLZ	Tolley Road	3.47	17	P	Pn	02 19 22.0	+2.7
FOZ	Fox Glacier	3.77	239	P	Pn	02 19 24.2	+0.8
ODZ	Otahua Downs	4.29	217	P	Pn	02 19 29.0	-1.5
MKAZ	Moumakai	4.60	9	P	Pn	02 19 36.4	+1.5

GUC 24 02:21:05.9±0.7**, 20°.25S**×**70°.78W, h39**^{km}±1^{km}**, ML2.8, 3C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.90	44	⇓*i*P	Pn	02 21 22.1	0.0
PSGC				*e*S	Sn	02 21 35.1	+1.1
PB11	IPOC Station P	1.16	66	⇓*i*P	Pn	02 21 26.9	+1.1
PB11				*e*S	Sn	02 21 42.3	+1.7
PB11				IAML		02 21 47.4	
	comp=N,257nm,0.2s						
PB02	IPOC Station P	1.35	142	⇑*i*P	Pn	02 21 30.0	+1.6
PB02				*e*S	Sn	02 21 47.4	+2.2
PB02				IAML		02 21 55.4	
	comp=E,299nm,0.3s						
PB01	IPOC Station P	1.45	123	⇓*i*P	Pn	02 21 31.4	+1.7
PB01				*e*S	Sn	02 21 50.8	+3.3
PB01				IAML		02 21 58.2	
	comp=E,269nm,0.3s						
PB08	IPOC Station P	1.53	86	⇓*i*P	Pn	02 21 33.0	+1.9
PB08				*e*S	Sn	02 21 53.5	+3.5
MNMC	Minye Minye	1.57	45	*e*P	Pn	02 21 33.3	+1.7
	comp=E,109nm,0.3s						
MNMC	Minye Minye	1.57	45	⇑*i*P	Pn	02 21 33.6	+2.0
MNMC				*e*S	Sn	02 21 54.0	+3.1
MNMC				IAML		02 22 02.3	
	comp=E,491nm,0.6s						
GO01	Chusmiza	1.60	69	⇓*i*P	Pn	02 21 34.2	+2.1
GO01				*e*S	Sn	02 21 55.5	+3.7
GO01				IAML		02 21 57.3	
	comp=N,538nm,0.2s						
PB12	IPOC Station P	1.68	15	⇑*i*P	Pn	02 21 34.3	+1.4
PB12				*e*S	Sn	02 21 55.9	+2.6
PB12				IAML		02 22 05.1	
	comp=N,111nm,0.4s						
PB07	IPOC Station P	1.69	151	⇓*i*P	Pn	02 21 34.8	+1.6
PB07				*e*S	Sn	02 21 56.5	+2.8
PB07				IAML		02 22 14.2	
	comp=E,91nm,0.4s						
PB16	IPOC Station P	2.25	32	⇓*i*P	Pn	02 21 43.8	+2.6
PB16				*e*S	Sn	02 22 12.0	+4.0
PB16				IAML		02 22 19.1	
	comp=N,48nm,0.4s						

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*ISCJB **24** 02:37:52.9±0.5, 41°.53N±0°.03×20°.22E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=4.3km az=171.2*

*BEO **24** 02:37:52.4±0.6, 41°.46N×20°.36E, h5^{km}±4^{km}, ML1.9/4*

*TIR **24** 02:37:52.9, 41°.53N×20°.21E, h15^{km}, Md2.7/4*

*SKO **24** 02:37:54.2, 41°.54N×20°.19E, h0^{km}, M0.7*

ISC 24 02:37:52.3±1.2**, 41°.56N**±0°.03×**20°.19E**±0°.03**, h4**^{km}±10^{km}**, n26,** σ1^{s}.**60**/42**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	Peshkopia	0.23	57	*i* PG	Pg	02 37 58.3	+1.5
PHP				*i* SG	Sg	02 38 02.4	+2.6
TIR	Tirane	0.32	229	*e*Pg	Pb	02 37 59.8	-0.8
TIR				*e*Sg	Sb	02 38 05.4	-0.7
TIR	Tirane	0.32	229	*i* Pg	Pb	02 37 60.0	-0.6
TIR	Tirane	0.32	229	*i* PG	Pb	02 37 60.0	-0.6
TIR				*i* SG	Sb	02 38 05.0	-1.2
PUK	Puka	0.53	336	*i* PG	Pb	02 38 03.8	-0.4
PUK				*i* SG	Sg	02 38 08.0	-1.4
BCI	Bajram Curri	0.81	354	*i* PG	Pn	02 38 09.4	-1.1
BCI				*i* SG	Sg	02 38 12.0	-6.4
ULC	Ulcinj	0.81	300	*i* Pg	Pb	02 38 08.5	-0.4
SKO	Skopje	1.02	66	*i* Pg	Pn	02 38 12.6	-0.8
SKO				*i* Sg	Sb	02 38 26.3	-0.1
SKO				*e*Lg	Lg	02 38 26.4	
SKO				*e*Lg	Lg	02 38 26.8	
	comp=E,2.3nm,0.3s						
PDG	Podgorica	1.11	322	*e*Pg	Pn	02 38 14.2	-0.4
PDG				*e*Sg	Sn	02 38 33.3	+2.9
PDG	Podgorica	1.11	322	*i* Pg	Pb	02 38 13.7	-0.4
PDG				*i* Pg	Pg	02 38 13.9	+0.3
FNA	Florina	1.19	130	*i* Pg	Pg	02 38 15.7	+0.7
FNA				*i* Sg	Sn	02 38 31.3	-1.1
BEY	Berane	1.33	351	*i* Pg	Pg	02 38 19.9	+2.1
SJES	Sjenica	1.71	355	*e*Pn	Pg	02 38 24.7	-0.3
SJES				*e*Sn	Sg	02 38 47.4	+0.3
TREB	Trebinje	1.79	311	*e*Pn	Pb	02 38 26.0	+0.4
TREB				*e*Sn	Sg	02 38 50.3	+0.6
SELS	Selova	1.80	22	*e*Pn	Pn	02 38 24.2	+0.1
DBRK	Dubrovnik	1.88	307	*e*Pn	Pg	02 38 28.1	-0.2
DBRK				Sn	Sg	02 38 53.3	+0.7
IVAS	Ivanjica	2.02	359	*e*Pn	Pb	02 38 28.1	-1.4
IVAS				*e*Sn	Sb	02 38 55.5	+0.5
STON	Ston	2.26	306	*e*Pn	Pb	02 38 33.5	-0.2
STON	Ston	2.26	306	*e*Pn	Pb	02 38 34.6	+0.9
STON				Sn	Sb	02 39 00.8	-1.3
BOVS	Bovan	2.36	28	*e*Pn	Pn	02 38 32.1	+0.3
BBLS	Lazići	2.38	346	*e*Pn	Pb	02 38 33.9	-1.8
ZAPS	Zavoj	2.49	46	*e*Pn	Pn	02 38 33.4	-0.3
MAKA	Makarska	2.91	307	*e*Pn	Pb	02 38 42.1	-2.7
MAKA				Sn	Sn	02 39 16.1	+1.3
HVAR	Hvar	3.21	302	*e*Pn	Pn	02 38 44.6	+1.2
ZIRJ	Zirje	3.95	303	*e*Pn	Pn	02 38 53.9	+0.2
ZIRJ				Sn	Sn	02 39 42.0	+1.6
DUGI	Dugi Otok	4.49	304	*e*Pn	Pn	02 39 02.8	+1.7

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*ISCJB **24** 02:50:58.9±0.6, 38°.22N±0°.03×22°.09E±0°.05, h12^{km}±4^{km}, Error ellipse: s-maj=7.6km s-min=4.2km az=156.5*

*ATH **24** 02:50:59.1, 38°.22N×22°.08E, h11^{km}, ML2.9/4, Error ellipse: s-maj=0.7km s-min=0.3km az=241.0*

*THE **24** 02:50:59.3, 38°.23N×22°.08E, h11^{km}, ML2.7/5, Error ellipse: s-maj=0.9km s-min=0.4km az=85.0*

ISC 24 02:50:59.3±1.6**, 38°.23N**±0°.03×**22°.09E**±0°.04**, h10**^{km}±7^{km}**, n19,** σ0^{s}.**22**/32**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG4	Aigion	0.03	341	P	Pg	02 51 01.1	-0.1
AIG4				S	Sg	02 51 02.6	+0.1
ALIK	Aliki, Aigiali	0.04	30	P	Pg	02 51 01.1	-0.1
ALIK				S	Sg	02 51 03.0	+0.3
AIG1	Aigion	0.05	112	P	Pg	02 51 01.2	-0.1
AIG1				S	Sg	02 51 02.6	-0.2
LAKA	Lakka	0.09	279	P	Pg	02 51 01.7	-0.1
LAKA				S	Sg	02 51 03.4	-0.2
	5µm,0.4s						
LAKA	Lakka	0.09	279	P	Pg	02 51 01.8	-0.1
LAKA				S	Sg	02 51 03.4	-0.2
LAKA				AML	AML	02 51 03.7	
	comp=E,26430µm,0.4s						
LAKA				AML	AML	02 51 03.8	
	comp=N,16440µm,0.3s						
TRAZ	Trapeza	0.12	121	P	Pg	02 51 02.2	0.0
TRAZ				S	Sg	02 51 04.4	+0.2
	comp=N,14µm,0.2s						
TRAZ	Trapeza	0.12	121	P	Pg	02 51 02.2	0.0
TRAZ				S	Sg	02 51 04.4	+0.2
TRAZ				AML	AML	02 51 04.8	
	comp=E,21157µm,0.2s						
TRAZ				AML	AML	02 51 05.7	
	comp=N,29893µm,0.2s						
TRIZ	Trizonia	0.14	355	P	Pg	02 51 02.3	-0.2
TRIZ	Trizonia	0.14	355	P	Pg	02 51 02.4	-0.2
KALE	Kalithea	0.17	14	P	Pg	02 51 02.9	-0.1
KALE				S	Sg	02 51 06.2	+0.6
	comp=N,4µm,0.3s						
KALE	Kalithea	0.17	14	P	Pg	02 51 02.9	-0.1
KALE				S	Sg	02 51 05.5	-0.1
KALE				AML	AML	02 51 06.6	
	comp=N,9701µm,0.3s						
KALE				AML	AML	02 51 07.3	
	comp=E,5403µm,0.3s						
SERG	Sergoula	0.19	353	P	Pg	02 51 03.1	-0.2
SERG	Sergoula	0.19	353	P	Pg	02 51 03.2	-0.2
SERG				S	Sg	02 51 06.3	+0.2
KLV	Kalavryta, Ach	0.19	165	P	Pg	02 51 03.2	-0.2
KLV				S	Sg	02 51 06.6	+0.4
	comp=E,2µm,0.1s						
KLV	Kalavryta, Ach	0.19	165	P	Pg	02 51 03.2	-0.2
KLV				S	Sg	02 51 06.2	0.0
KLV				AML	AML	02 51 10.2	
	comp=E,4129µm,0.3s						
KLV				AML	AML	02 51 11.0	
	comp=N,4980µm,0.5s						
GUR	Goura	0.35	145	P	Pg	02 51 05.9	-0.4
ANX	Ano Chora	0.39	340	P	Pg	02 51 07.0	0.0
ANX				S	Sg	02 51 12.4	+0.2
	comp=N,2µm,0.3s						
ANX	Ano Chora	0.39	340	P	Pg	02 51 06.8	-0.2
DRO	Drossia	0.40	227	P	Pg	02 51 07.4	+0.2

MEX 24 02:51:44.3±0.7**, 18°.24N**×**101°.04W, h66**^{km}±8^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.66	86	*e*P	Pn	02 51 56.8	-1.6
ARIG				*i* S	Sn	02 52 07.3	-1.6
ZIIG	Zihuatanejo	0.75	213	*e*P	Pn	02 51 57.7	-1.8
ZIIG				*i* S	Sn	02 52 09.1	-1.5
MEIG	Mezcala	1.39	103	*e*P	Pn	02 52 06.2	-1.5
MEIG				*i* S	Sn	02 52 22.9	-2.4
CAIG	El Cayaco	1.40	148	*e*P	Pn	02 52 07.2	-0.5
CAIG				*e*S	Sn	02 52 23.1	-2.3
PLIG	Platanillo	1.47	84	*i* P	Pn	02 52 08.0	-0.8
PLIG				*e*S	Sn	02 52 25.8	-1.4
TLIG	Tlapa	2.45	106	*e*P	Pn	02 52 21.6	-0.5
TLIG				*i* S	Sn	02 52 49.2	-1.9

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*ISCJB **24** 02:55:50.0±0.2, 38°.23N±0°.01×22°.10E±0°.02, h13^{km}±1^{km}, mb3.7/10, MS3.8/2, Error ellipse: s-maj=2.5km s-min=2.1km az=147.2*

*IDC **24** 02:55:49.1±0.8, 38°.22N×22°.18E, h0^{km}, mb3.7/11, mb1 3.7/15, mb1mx3.6/45, mbtmp3.7/15, ML3.3/4, MS3.3/4, Ms1 3.3/4, ms1mx2.6/67, Error ellipse: s-maj=16.5km s-min=15.1km az=130.0*

*THE **24** 02:55:50.4, 38°.23N×22°.11E, h9^{km}, ML3.5/10, Error ellipse: s-maj=0.6km s-min=0.4km az=300.0*

*ATH **24** 02:55:50.0, 38°.23N×22°.11E, h13^{km}±1^{km}, ML3.5/14, Error ellipse: s-maj=1.2km s-min=0.5km az=245.0*

*BEO **24** 02:55:53.5±0.9, 38°.41N×22°.24E, h5^{km}, ML3.5/3*

ISC 24 02:55:50.6±0.7**, 38°.23N**±0°.02×**22°.11E**±0°.02**, h10**^{km}±4^{km}**, n153,** σ1^{s}.**38**/190**, mb3.7**/10**, 7C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIK	Aliki, Aigiali	0.03	9	P	Pg	02 55 52.4	-0.1
ALIK				S	Sg	02 55 54.0	+0.2
LAKA	Lakka	0.10	276	P	Pg	02 55 52.8	-0.5
LAKA				S	Sg	02 55 54.6	-0.5
LAKA	Lakka	0.10	276	P	Pg	02 55 52.8	-0.5
LAKA				S	Sg	02 55 54.6	-0.5
LAKA				AML	AML	02 55 54.8	
LAKA				AML	AML	02 55 54.9	
TRAZ	Trapeza	0.10	126	P	Pg	02 55 53.3	0.0
TRAZ				S	Sg	02 55 55.5	+0.3
	29µm,0.3s						
TRAZ	Trapeza	0.10	126	P	Pg	02 55 53.1	-0.2
TRAZ				S	Sg	02 55 55.5	+0.3
TRAZ				AML	AML	02 55 57.4	
	comp=E,42450µm,0.3s						
TRAZ				AML	AML	02 55 58.1	
	comp=N,64754µm,0.3s						
TRIZ	Trizonia	0.14	349	P	Pg	02 55 53.4	-0.4
TRIZ				S	Sg	02 55 56.0	0.0
	comp=N,34µm,0.6s						
TRIZ	Trizonia	0.14	349	P	Pg	02 55 53.4	-0.4
TRIZ				S	Sg	02 55 55.8	-0.2
KALE	Kalithea	0.16	10	P	Pg	02 55 53.9	-0.3
KALE				S	Sg	02 55 57.1	+0.3
	comp=N,55µm,0.4s						
KALE	Kalithea	0.16	10	P	Pg	02 55 54.0	-0.3
KALE				S	Sg	02 55 57.0	+0.3
KALE				AML	AML	02 55 58.0	
KALE				AML	AML	02 55 59.1	
	comp=E,46369µm,0.5s						
SERG	Sergoula	0.19	348	P	Pg	02 55 54.2	-0.4
SERG				S	Sg	02 55 57.5	+0.1
	comp=E,25µm,0.3s						
SERG	Sergoula	0.19	348	P	Pg	02 55 54.2	-0.4
SERG				S	Sg	02 55 57.5	+0.1
SERG				AML	AML	02 55 58.1	
	comp=E,50056µm,0.2s						
SERG				AML	AML	02 55 58.4	
	comp=N,49562µm,0.3s						
KLV	Kalavryta, Ach	0.19	169	P	Pg	02 55 54.1	-0.5
KLV				S	Sg	02 55 57.5	+0.1
	comp=N,8µm,0.3s						
KLV	Kalavryta, Ach	0.19	169	P	Pg	02 55 54.2	-0.5
KLV				S	Sg	02 55 57.2	-0.2
KLV				AML	AML	02 55 59.6	
	comp=E,16662µm,0.2s						
KLV				AML	AML	02 56 02.2	
	comp=N,22387µm,0.9s						
UPR	University Cam	0.26	282	P	Pg	02 55 55.7	-0.2
UPR				S	Sg	02 56 00.0	+0.7
UPR	University Cam	0.26	282	P	Pg	02 55 55.6	-0.2
UPR				S	Sg	02 55 59.7	+0.4
GUR	Goura	0.35	147	P	Pg	02 55 56.8	-0.8
GUR				S	Sg	02 56 02.2	0.0
GUR	Goura	0.35	147	P	Pg	02 55 56.8	-0.8
GUR				S	Sg	02 56 02.2	0.0
GUR				AML	AML	02 56 03.1	
	comp=E,19342µm,0.4s						
GUR				AML	AML	02 56 04.2	
	comp=N,27006µm,0.3s						
DSF	Desfina	0.38	61	P	Pg	02 55 57.4	-0.7
DSF				S	Sg	02 56 03.3	+0.2
	comp=N,5µm,0.1s						
DSF	Desfina	0.38	61	P	Pg	02 55 57.3	-0.7
DSF				S	Sg	02 56 03.0	-0.1
DSF				AML	AML	02 56 05.2	
	comp=N,10401µm,0.2s						
DSF				AML	AML	02 56 05.2	
	comp=E,7169µm,0.1s						
ANX	Ano Chora	0.39	338	P	Pg	02 55 57.6	-0.8
ANX				S	Sg	02 56 03.5	-0.1
	comp=E,13µm,0.3s						
ANX	Ano Chora	0.39	338	P	Pg	02 55 57.6	-0.8
ANX				S	Sg	02 56 03.7	+0.1
ANX				AML	AML	02 56 05.2	
	comp=N,25294µm,0.5s						
ANX				AML	AML	02 56 07.3	
	comp=E,25666µm,0.2s						
DRO	Drossia	0.42	228	P	Pg	02 55 58.2	-0.6
DRO				S	Sg	02 56 05.1	+0.8
	comp=E,23µm,0.3s						
DRO	Drossia	0.42	228	P	Pg	02 55 58.3	-0.6
DRO				S	Sg	02 56 04.6	+0.3
DRO				AML	AML	02 56 07.2	
	comp=E,51812µm,0.4s						
DRO				AML	AML	02 56 07.3	
	comp=N,39574µm,0.2s						
PVO	Paravola	0.60	311	P	Pg	02 56 01.3	-0.9
PVO	Paravola	0.60	311	P	Pg	02 56 01.5	-0.7
PVO				S	Sb	02 56 11.3	-0.4
PVO				AML	AML	02 56 14.1	
	comp=N,13828µm,0.4s						
PVO				AML	AML	02 56 14.5	
	comp=E,11400µm,0.5s						
PROD	Prodromos	0.63	87	P	Pg	02 56 03.0	+0.2
PROD				S	Sb	02 56 11.9	-0.6
PROD				AML	AML	02 56 18.4	
	comp=E,3423µm,0.3s						
PROD				AML	AML	02 56 18.7	
	comp=N,3447µm,0.3s						
AXAR	Agios Charalam	0.69	39	P	Pg	02 56 02.9	-1.1
AXAR				S	Sg	02 56 12.8	-0.2
AXAR				AML	AML	02 56 19.2	
	comp=N,19702µm,0.5s						
AXAR				AML	AML	02 56 21.7	
	comp=E,14856µm,0.4s						
TRIP	Tripoli	0.71	169	P	Pg	02 56 03.3	-1.1
EVR	Evrytania	0.72	341	P	Pg	02 56 03.5	-1.1
EVR				S	Sg	02 56 14.7	+0.6
	comp=E,4µm,0.7s						
EVR	Evrytania	0.72	341	P	Pg	02 56 03.5	-1.1
EVR				S	Sb	02 56 15.9	+0.5
EVR				AML	AML	02 56 19.2	
	comp=E,6147µm,0.5s						
EVR				AML	AML	02 56 20.4	
	comp=N,10336µm,0.7s						
LOUT	Loutraki	0.73	109	P	Pg	02 56 04.0	-0.6
AMT	Artemida-Makis	0.76	204	P	Pg	02 56 04.4	-0.9
AMT	Artemida-Makis	0.76	204	P	Pg	02 56 04.4	-0.9
VTN	Vitineika	0.79	247	P	Pg	02 56 05.4	-0.4
AGG	Agios Georgios	0.81	12	P	Pg	02 56 04.7	-1.6
AGG	Agios Georgios	0.81	12	P	Pg	02 56 04.6	-1.6
AGG				S	Sb	02 56 17.6	-0.3
AGG				AML	AML	02 56 21.3	
	comp=N,3802µm,0.6s						
AGG				AML	AML	02 56 21.9	
	comp=E,3537µm,0.4s						
LKR	Lokris	0.82	59	P	Pg	02 56 04.8	-1.6
ATAL	Atalanti	0.85	57	P	Pg	02 56 05.4	-1.7
VLX	Vlachokerasia	0.89	166	P	Pg	02 56 06.2	-1.5
VLX				S	Sb	02 56 19.8	-0.2
	comp=E,7µm,0.8s						
VILL	Villia	0.95	94	P	Pg	02 56 08.0	-1.0
KFL	Anninata	1.04	264	P	Pg	02 56 10.1	-0.6
ITM	Ithomi	1.06	188	P	Pg	02 56 09.2	-1.7
SMIA	Simia	1.08	53	P	Pg	02 56 10.4	-1.0
DID	Didima	1.15	129	P	Pb	02 56 11.4	-1.2
KRND	KRANIDI	1.18	135	P	Pb	02 56 11.9	-1.2
VLS	Valsamata	1.20	268	P	Pb	02 56 11.8	-1.6
EVGI	Lefkada island	1.20	289	P	Pn	02 56 11.8	-1.7
FSK	Fiskardo	1.23	281	P	Pn	02 56 12.7	-1.2
MRKA	Markates	1.26	67	P	Pn	02 56 14.0	-0.3
LKD2	Lefkada island	1.27	297	P	Pn	02 56 13.2	-1.2
TSLK	Tsoukalades, L	1.28	298	P	Pn	02 56 13.9	-0.7
THL	Klokotos Trika	1.33	357	P	Pn	02 56 15.5	+0.2
PYL	PYLOS	1.36	192	P	Pn	02 56 15.1	-0.6
NEO	Neokhori	1.39	39	P	Pn	02 56 15.4	-0.6
VLY	Voula,Athens	1.39	105	P	Pn	02 56 15.6	-0.4
PTL	Penteli	1.40	97	P	Pn	02 56 15.3	-0.9
SKIA	Skiathos	1.42	48	P	Pn	02 56 16.2	-0.3
XOR	Xorichti	1.42	36	P	Pn	02 56 15.6	-0.9
DYR	Agios Nikonas	1.48	173	P	Pn	02 56 16.2	-1.1
VLI	Veliai	1.65	156	P	Pn	02 56 19.6	0.0
KPRO	Kipourio	1.82	342	P	Pn	02 56 21.9	-0.1
LIT	Litokhoron	1.89	9	P	Pn	02 56 22.2	-0.8
IGT	Igoumenitsa	1.90	314	*e*Pg	Pg	02 56 26.5	-0.5
IGT				*e*Sg	Sg	02 56 52.4	+0.7
KZN	Kozani	2.09	353	P	Pn	02 56 26.4	+0.6
KTHA	Kythira Island	2.11	159	P	Pn	02 56 26.4	+0.4
KEK	Kerkira	2.33	310	P	Pn	02 56 29.0	0.0
PLG	Polygyros	2.38	25	P	Pn	02 56 28.6	-1.1
ANKY	Antikythira Is	2.54	158	P	Pn	02 56 32.5	+0.6
OUR	Ouranopolis	2.56	34	P	Pn	02 56 31.7	-0.4
FNA	Florina	2.61	348	*e*Pn	Pn	02 56 34.7	+1.8
FNA				*e*Sn	Sn	02 57 05.0	+0.3
APE	Apeiranthos	2.96	112	⇓*i*P	Pn	02 56 37.7	+0.1
APE	Apeiranthos	2.96	112	S	Sg	02 57 30.2	+4.7
KNT	Kendrikon	2.99	12	P	Pn	02 56 38.1	0.0
SRS	Serrai	3.10	21	*e*Pn	Pn	02 56 39.9	+0.3
SRS				*e*Sn	Sn	02 57 14.9	-1.9
SRS	Serrai	3.10	21	P	Pn	02 56 39.3	-0.3
VAY	Valandovo	3.11	6	*e*Pn	Pn	02 56 41.0	+1.3
VAY	Valandovo	3.11	6	*i* Pn	Pn	02 56 41.2	+1.5
NVR	Nevrokopi	3.40	23	P	Pn	02 56 44.1	+0.4
TIR	Tirane	3.56	332	*e*Pn	Pn	02 56 48.0	+2.1
TIR	Tirane	3.56	332	⇑*i*P	Pn	02 56 48.4	+2.5
IDI	Anoyia	3.69	142	Pn	Pn	02 56 46.9	-0.9
	comp=E,1.3nm,0.3s,baz=205,slow=7.2,SNR=12						
IDI				Sn	Sn	02 57 30.5	-0.8
	comp=E,3.1nm,0.3s,baz=16,slow=13,SNR=6.7						
SKO	Skopje	3.77	352	*e*Pn	Pn	02 56 49.2	+0.4
SKO	Skopje	3.77	352	*i* Pn	Pn	02 56 49.8	+1.0
TIP	Timpagrande	4.29	284	⇑*i*P	Pn	02 56 57.4	+1.4
TIP	Timpagrande	4.29	284	S	Sn	02 57 48.2	+2.1
VTS	Vitosha	4.47	11	*e*Pn	Pn	02 56 57.8	-0.7
FASA	Fasano	4.49	307	*e*Pn	Pn	02 57 02.2	+3.5
MASS	Massafra	4.53	304	*e*Pn	Pn	02 57 00.2	+1.0
PDG	Podgorica	4.73	333	*e*Pn	Pn	02 57 03.9	+2.0
PDG	Podgorica	4.73	333	⇓*i*P	Pn	02 57 04.9	+3.0
PDG	Podgorica	4.73	333	S	Sn	02 58 01.8	+5.0
MATE	Matera	4.83	302	⇑*i*P	Pn	02 57 04.8	+1.5
MATE	Matera	4.83	302	S	Sn	02 57 58.8	-0.5
SG1	Sgolgore (BA)	4.94	304	*e*Pn	Pn	02 57 06.2	+1.3
SG1				Sn	Sn	02 58 02.4	+0.3
SELS	Selova	5.04	352	*e*Pn	Pn	02 57 06.6	+0.3
ZAPS	Zavoj	5.05	4	*e*Pn	Pn	02 57 07.6	+1.1
SJES	Sjenica	5.28	343	*e*Pn	Pn	02 57 11.1	+1.5
TREB	Trebinje	5.32	329	*e*Pn	Pn	02 57 11.0	+0.9
DBRK	Dubrovnik	5.36	327	*e*Pn	Pn	02 57 10.6	-0.1
BLKB	Belogradchik	5.41	4	S	Sn	02 58 13.5	-0.1
BOVS	Bovan	5.41	357	*e*Pn	Pn	02 57 11.3	0.0
PLVB	Pleven	5.49	20	⇑*i*P	Pg	02 57 38.4	+2.6
PLVB	Pleven	5.49	20	S	Sb	02 58 30.5	-2.0
ELND	Elena	5.50	30	⇓*i*P	Pn	02 57 14.8	+2.2
ELND	Elena	5.50	30	S	Sn	02 58 17.1	+1.2
IVAS	Ivanjica	5.54	345	*e*Pn	Pn	02 57 14.2	+1.0
ZAGS	Zajecar	5.58	1	*e*Pn	Pn	02 57 13.5	-0.1
STON	Ston	5.72	326	*e*Pn	Pn	02 57 15.6	0.0
STON				Sn	Sn	02 58 16.9	-4.3
GRUS	Gruza	5.75	350	*e*Pn	Pn	02 57 16.7	+0.7
BBLS	Lazići	5.99	341	*e*Pn	Pn	02 57 20.7	+1.4
DIVS	Divibare	6.08	345	*e*Pn	Pn	02 57 21.1	+0.6
TRUS	Trudelj	6.12	348	*e*Pn	Pn	02 57 22.7	+1.6
VAE	Valguarnera	6.13	265	Pn	Pn	02 57 26.1	+4.8
	comp=E,0.4nm,0.3s,baz=332,slow=2.9,SNR=7.5						
VAE				Sn	Sn	02 58 34.6	+3.0
	comp=E,1.4nm,0.3s,baz=209,slow=19,SNR=2.6						
MAKA	Makarska	6.36	324	*e*Pn	Pn	02 57 25.9	+1.6
MAKA				Sn	Sn	02 58 36.1	-0.8
HVAR	Hvar	6.55	321	*e*Pn	Pn	02 57 28.1	+1.2
MDVR	Moldovita	6.55	358	⇑*i*P	Pn	02 57 30.3	+3.2
ZIRJ	Zirje	7.30	320	*e*Pn	Pn	02 57 37.4	+0.2
ARR	Arges	7.38	14	⇑*i*P	Pn	02 57 40.9	+2.5
MORI	Morici	7.42	321	*e*Pn	Pn	02 57 39.5	+0.6
BLY	Banja Luka	7.49	332	⇓*i*P	Pn	02 57 41.3	+1.5
BLY	Banja Luka	7.49	332	S	Sn	02 59 03.6	-1.1
VOIR		7.53	16	⇓*i*P	Pn	02 57 44.0	+3.5
MLR	Muntele Rosu	7.80	20	Pn	Pn	02 57 45.4	+1.2
	comp=E,0.1nm,0.3s,baz=194,slow=16,SNR=3.0						
MLR	Muntele Rosu	7.80	20	⇑*i*P	Pn	02 57 47.3	+3.1
DUGI	Dugi Otok	7.84	319	*e*Pn	Pn	02 57 46.0	+1.4
NVLJ	Novalja	8.34	322	*e*Pn	Pn	02 57 53.4	+1.9
VRI	Vrincioaia	8.37	23	⇓*i*P	Pn	02 57 54.7	+2.8
BRTR	Keskin Array B	9.11	77	Pn	Pn	02 58 04.3	+2.1

	comp=E,0.2nm,0.3s,baz=262,slow=12,SNR=9.9						
OBKA	Obir	9.98	328	Pn	Pn	02 58 17.5	+3.4
	comp=E,1.3nm,0.5s						
OBKA				Sn	Sn	03 00 03.3	-2.8
	comp=E,2.6nm,0.6s						
MYKA	Terra Mystica	10.46	326	*e*Pn	Pn	02 58 22.1	+1.4
	comp=E,1.0nm,0.3s						
VYHS	Vyhne	10.53	348	*e*PN	Pn	02 58 22.7	+1.2
MODS	Modra-Piesok	10.73	342	*e*PN	Pn	02 58 24.0	-0.3
ABTA	Abfaltersbach	11.06	323	*e*Pn	Pn	02 58 29.4	+0.5
	comp=E,0.9nm,0.4s						
ABTA				Sn	Sn	03 00 31.2	-1.5
	comp=E,1.0nm,0.4s						
MOA	Molln	11.19	332	*e*Pn	Pn	02 58 34.4	+3.8
	comp=E,0.9nm,0.6s						
MOA				Sn	Sn	03 00 38.5	+2.9
	comp=E,0.3nm,0.1s						
WTTA	Wattenberg	11.85	323	Pn	Pn	02 58 40.0	+0.2
	comp=E,1.7nm,0.4s						
WTTA				*e*Sn	Sn	03 00 50.2	-2.0
	comp=E,4.9nm,0.8s						
MOTA	Moosalm	12.17	322	*e*Pn	Pn	02 58 44.9	+0.8
	comp=E,1.8nm,0.6s						
GERES	GERESS Array B	12.23	333	Pn	Pn	02 58 45.9	+1.0
	comp=E,0.1nm,0.3s,baz=153,slow=15,SNR=3.4						
GERES				LR	LR	03 04 12.3	
	comp=E,85nm,18.2s,baz=211,slow=41						
DAVOX	Davos/Dischmat	12.41	317	LR	LR	03 06 03.5	
	comp=E,15nm,20.1s,baz=254,slow=49						
RETA	Reutte	12.43	322	*e*Pn	Pn	02 58 49.8	+2.2
	comp=E,0.1nm,0.1s						
ESDC	Sonseca Array	20.31	282	P	Pn	03 00 28.1	-0.5
	comp=E,2.5nm,0.7s,baz=76,slow=11,SNR=33						
MDT	Midelt	22.36	264	P	P	03 00 50.6	+1.7
	comp=E,1.9nm,0.9s,baz=47,slow=13,SNR=4.4						
HFS	Hagfors	22.57	349	P	P	03 00 51.7	+0.9
	comp=E,1.6nm,0.7s,baz=116,slow=9.8,SNR=4.7						
NB2	NORSAR Subarra	23.83	347	P	P	03 01 02.9	-0.7
	comp=Z,1.5nm,0.9s,baz=160,slow=11						
NOA	NORSAR Array B	23.83	347	P	P	03 01 04.0	+0.4
	comp=Z,0.4nm,0.6s,baz=160,slow=10,SNR=4.8						
EKA	Eskdalemuir Ar	24.12	323	P	P	03 01 05.6	-0.7
	comp=Z,1.1nm,0.7s,baz=120,slow=10,SNR=5.8						
GEYT	Alibeck	28.24	79	LR	LR	03 16 04.4	
	comp=Z,214nm,19.2s,baz=165,slow=43						
TORD	Torodi Ar. Bea	30.88	221	P	P	03 02 07.9	+0.7
	comp=Z,0.8nm,0.8s,baz=36,slow=9.2,SNR=4.9						
ARCES	ARCESS Array B	31.42	2	P	P	03 02 11.0	-0.5
	comp=Z,2.1nm,1.1s,baz=195,slow=9.3,SNR=3.3						
DBIC	Dimbokro	39.79	225	P	P	03 03 23.4	-0.5
	comp=Z,2.6nm,1.1s,baz=34,slow=7.3,SNR=3.1						
MKAR	Makanchi Array	44.21	59	P	P	03 03 59.3	-0.5
	comp=Z,1.6nm,0.4s,baz=273,slow=7.5,SNR=20						
ZALV	Zalesovo Beam	44.73	48	P	P	03 04 03.9	+0.1
	comp=Z,1.9nm,0.5s,baz=269,slow=8.3,SNR=5.0						
FRB	Frobisher Bay	56.77	328	LR	LR	03 30 51.9	
	comp=Z,70nm,19.1s,baz=266,slow=37						
SONM	Songino Array	59.46	51	P	P	03 05 53.0	-0.6
	comp=Z,0.5nm,0.5s,baz=287,slow=10,SNR=3.8						

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*ISCJB **24** 03:01:22.6±0.4, 24°.75N±0°.02×122°.27E±0°.01, h9^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.1km az=19.5*
*JMA **24** 03:01:23.3, 24°.71N×122°.24E, h50^{km}±2^{km}, M2.7*
*TAP **24** 03:01:23.6, 24°.72N×122°.14E, h6^{km}, ML3.5, C*
ISC 24 03:01:21.5±1.1**, 24°.79N**±0°.03×**122°.28E**±0°.02**, h12**^{km}±8^{km}**, n75, σ0^{s}.62**/137**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.28	211	*e*P	Pb	03 01 29.1	+0.7
	baz=184						
NTC	Toucheng	0.42	279	*e*P	Pb	03 01 30.5	-0.3
	baz=294						
NTC				S	Sb	03 01 36.7	-0.4
	baz=294						
TWC	Suao	0.43	246	*i* P	Pg	03 01 30.4	+0.3
	baz=246						
TWC				*i* S	Sg	03 01 34.7	-1.1
	baz=246						
TIPB	Shuangxi	0.45	294	P	Pb	03 01 31.3	-0.2
	baz=310						
TIPB				*e*S	Sb	03 01 39.0	+0.8
	baz=310						
ILA	Ilan	0.49	267	P	Pb	03 01 31.9	-0.1
	baz=276						
ILA				S	Sg	03 01 38.0	+0.4
	baz=276						
TWE	Neicheng	0.56	263	*i* P	Pb	03 01 33.4	+0.1
	baz=269						
TWE				*i* S	Sg	03 01 40.2	+0.1
	baz=269						
SLBB	Yuanshan	0.59	267	P	Pb	03 01 34.2	+0.4
	baz=273						
SLBB				S	Sg	03 01 41.3	+0.5
	baz=273						
NANB	Nanao	0.60	234	P	Pg	03 01 33.7	+0.4
	baz=230						
NANB				S	Sg	03 01 40.9	-0.4
	baz=230						
ENA	Nanau	0.61	234	P	Pg	03 01 33.7	+0.3
	baz=230						
ENA				S	Sg	03 01 41.3	-0.2
	baz=230						
TWA	Mucha	0.66	287	*i* P	Pn	03 01 36.4	-0.3
	baz=296						
TWA				S	Sb	03 01 45.0	+0.8
	baz=296						
ENTT	Nioudou	0.67	257	P	Pb	03 01 35.2	0.0
	baz=260						
ENTT				S	Sb	03 01 43.8	-0.6
	baz=260						
JYNG	Yonagunijimaku	0.69	119	P	Pn	03 01 37.0	-0.1
JYNG				S	Sn	03 01 47.4	-0.3
NHDH	Xindian Distri	0.71	284	*e*P	Pn	03 01 37.4	0.0
	baz=293						
NHDH				*e*S	Sb	03 01 46.4	+0.9
	baz=293						
NDT	Datong Townshi	0.72	255	P	Pb	03 01 36.5	+0.4
	baz=258						
NDT				*e*S	Sg	03 01 45.3	+0.2
	baz=258						
YOJ	Yonaguni jima	0.74	116	*e*P	Pn	03 01 37.6	-0.1
	baz=107						
YOJ				*e*S	Sn	03 01 48.8	-0.2
	baz=107						
YOJ	Yonaguni jima	0.74	116	P	Pn	03 01 37.6	-0.1
YOJ				S	Sn	03 01 48.4	-0.5
YM01	YM01	0.74	299	P	Pn	03 01 37.3	-0.5
	baz=309						
YM01				S	Sb	03 01 47.2	+0.8
	baz=309						
YM08	YM08	0.74	302	P	Pn	03 01 37.0	-0.8
	baz=312						
YM08				*e*S	Sb	03 01 47.3	+0.7
	baz=312						
TATO	Taipei	0.75	285	*e*P	Pn	03 01 37.8	0.0
	baz=293						
TATO				*e*S	Sb	03 01 47.4	+0.8
	baz=293						
TAP	Taipei	0.75	290	*e*S	Sb	03 01 47.2	+0.5
	baz=298						
YM10	YM10	0.75	299	P	Pn	03 01 37.5	-0.5
	baz=309						
YM10				*e*S	Sb	03 01 47.7	+0.9
	baz=309						
YM05	YM05	0.75	300	*e*P	Pn	03 01 37.5	-0.5
	baz=310						
YM05				*e*S	Sn	03 01 47.8	-1.5
	baz=310						
YM04	YM04	0.77	298	*e*P	Pn	03 01 37.7	-0.5
	baz=307						
YM04				*e*S	Sb	03 01 47.8	+0.5
	baz=307						
YM03	YM03	0.78	300	*e*P	Pn	03 01 38.3	-0.1
	baz=309						
YM03				*e*S	Sn	03 01 49.0	-1.0
	baz=309						
TWY	Chenhua	0.79	308	P	Pn	03 01 38.1	-0.3
	baz=318						
TWY				S	Sn	03 01 49.4	-0.8
	baz=318						
ANP	Anpu	0.80	300	*e*P	Pn	03 01 37.9	-0.7
	baz=309						
YHNB	Yeheng	0.83	262	*e*P	Pb	03 01 38.2	+0.2
	baz=265						
YHNB				*e*S	Sb	03 01 48.9	-0.3
	baz=265						
NTST	Danshui	0.84	296	*e*P	Pn	03 01 38.8	-0.4
	baz=304						
NTST				*e*S	Sn	03 01 51.2	-0.3
	baz=304						
TWS1	Kuangyinshan	0.84	292	P	Pn	03 01 39.3	+0.1
	baz=300						
TWS1				S	Sn	03 01 50.9	-0.6
	baz=300						
NSK	Sanguang	0.85	263	P	Pb	03 01 38.4	+0.2
	baz=266						
NSK				S	Sg	03 01 47.7	-1.4
	baz=266						
NACB	Ninganchiao	0.88	226	*e*P	Pg	03 01 38.3	-0.2
	baz=222						
NACB				*e*S	Sg	03 01 49.3	-0.6
	baz=222						
NNSB	Datong	0.89	247	*e*P	Pb	03 01 39.2	+0.2
	baz=247						
NNSB				*e*S	Sg	03 01 50.3	-0.2
	baz=247						
NNS	Nan Shan	0.90	247	*i* P	Pb	03 01 39.3	+0.2
	baz=247						
NNS				S	Sg	03 01 50.4	-0.3
	baz=247						
ETLH	Xiulin Townshi	0.93	232	*e*P	Pg	03 01 39.6	+0.1
	baz=229						
ETLH				*e*S	Sg	03 01 51.7	0.0
	baz=229						
WLTB	Daxi	0.94	274	*e*P	Pn	03 01 40.8	+0.2
	baz=279						
WLTB				*e*S	Sn	03 01 53.1	-0.8
	baz=279						
TWD	Chiawan	0.94	222	P	Pg	03 01 39.9	+0.2
	baz=217						
TWD				S	Sg	03 01 51.8	-0.2
	baz=217						
NCUH	Zhongli	1.01	280	*e*S	Sn	03 01 54.9	-0.8
	baz=285						
HWA	Hwalien	1.02	218	*e*P	Pn	03 01 42.1	+0.5
	baz=213						
HWA				*e*S	Sb	03 01 54.4	0.0
	baz=213						
WHF	Hehuan Shan	1.13	236	P	Pn	03 01 43.6	+0.1
	baz=234						
WHF				*i* S	Sb	03 01 57.9	-0.1
	baz=234						
TWT	Tachien	1.14	242	P	Pg	03 01 44.5	+1.0
	baz=242						
TWT				*e*S	Sb	03 01 57.8	-0.3
	baz=242						
LIOB	Emei	1.16	263	P	Pg	03 01 44.5	+0.6
	baz=265						
LIOB				*e*S	Sn	03 01 59.3	-0.1
	baz=265						
NSTT	Nanjuang	1.18	263	*e*P	Pg	03 01 45.3	+1.2
	baz=264						
NSTT				S	Sn	03 02 00.3	+0.5
	baz=264						
SBCB	Hsinchu	1.18	270	*e*P	Pg	03 01 44.2	0.0
	baz=273						
ESL	Shilin	1.24	219	P	Pg	03 01 45.5	+0.1
	baz=215						
ESL				S	Sb	03 02 00.8	-0.1
	baz=215						
CHGB	Renai	1.24	235	*e*P	Pg	03 01 45.5	+0.1
	baz=233						
CHGB				*e*S	Sn	03 02 01.4	-0.4
	baz=233						
EGFH	Guangfu	1.36	215	*e*P	Pg	03 01 48.1	+0.5
	baz=211						
EGFH				*e*S	Sg	03 02 05.1	-0.3
	baz=211						
IRIF	Iriomote-Funau	1.39	109	P	Pn	03 01 46.9	+0.1
IRIF				*e*S	Sn	03 02 04.0	-1.1
NSY	Sanyi	1.43	255	*e*P	Pg	03 01 48.6	-0.4
	baz=256						
NSY				*e*S	Sb	03 02 06.2	-0.2
	baz=256						
DPDB	Guoxing	1.45	239	P	Pg	03 01 49.2	-0.1
	baz=238						
DPDB				S	Sb	03 02 07.2	+0.4
	baz=238						
VWDT	VWDT	1.47	226	*e*P	Pg	03 01 49.5	-0.2
	baz=223						
VWDT				*e*S	Sg	03 02 08.2	-0.5
	baz=223						
PTSB	Yuanli	1.48	257	*e*P	Pb	03 01 49.4	+0.4
	baz=258						
PTSB				*e*S	Sb	03 02 07.9	+0.3
	baz=258						
HGSD	Ruisui	1.51	211	*e*P	Pg	03 01 50.5	0.0
	baz=208						
HGSD				*e*S	Sb	03 02 08.8	+0.2
	baz=208						
EHY	Hungye	1.55	215	*e*P	Pb	03 01 50.1	0.0
	baz=211						
EHY				*e*S	Sb	03 02 10.2	+0.5
	baz=211						
HATJ	Hateruma jima	1.57	117	P	Pn	03 01 49.6	+0.4
HATJ				*e*S	Sn	03 02 09.3	-0.1
SSLB	Suanglung	1.57	231	*e*P	Pg	03 01 51.3	-0.3
	baz=229						
SSLB				*e*S	Sb	03 02 10.2	-0.1
	baz=229						
TYC	Yuchr	1.57	236	P	Pg	03 01 51.7	0.0
	baz=235						
TYC				*e*S	Sn	03 02 09.5	+0.1
	baz=235						
TCU	Taichung	1.60	247	*e*P	Pb	03 01 51.0	0.0
	baz=246						
TCU				*e*S	Sb	03 02 11.2	+0.1
	baz=246						
YULB	Yu-li	1.66	213	*e*P	Pb	03 01 51.3	-0.7
	baz=210						
YULB				*e*S	Sb	03 02 12.7	-0.1
	baz=210						
JKRS	Kuro-shima	1.67	109	P	Pn	03 01 51.4	+0.9
JKRS				*e*S	Sn	03 02 12.3	+0.5
TWF1	Yuli	1.69	212	*e*P	Pb	03 01 51.8	-0.7
	baz=209						
TWF1				*e*S	Sn	03 02 12.3	-0.2
	baz=209						
WJS	Zhushan	1.71	236	*e*P	Pb	03 01 53.2	+0.3
	baz=235						
WJS				*e*S	Sb	03 02 13.7	-0.8
	baz=235						
WNT	Mingjian	1.72	238	*e*P	Pb	03 01 52.5	-0.5
	baz=237						
WNT				*e*S	Sn	03 02 13.7	+0.6
	baz=237						
JIJ	Ishigaki jima	1.75	104	P	Pn	03 01 52.6	+1.0
JIJ				S	Sn	03 02 13.8	0.0
YUS	Yu-Shan	1.77	224	*e*S	Sn	03 02 15.1	-0.1
	baz=221						
JISG	Ishigakijimahi	1.85	96	P	Pn	03 01 54.2	+1.1
WGK	Gukeng	1.92	235	*e*P	Pn	03 01 55.1	+1.1
	baz=234						
ELDTW	Lidau	1.97	216	*e*P	Pb	03 01 56.8	-0.6
	baz=213						
ELDTW				*e*S	Sb	03 02 20.8	-1.2
	baz=213						
TPUB	Ta-pu	2.12	226	*e*P	Pb	03 01 59.0	-0.8
	baz=224						
TPUB				*e*S	Sn	03 02 23.1	+0.1
	baz=224						
STYT	Tauyuan	2.14	221	*e*P	Pb	03 01 59.0	-1.2
	baz=219						
WTP	Ta-pu	2.17	225	*e*P	Pb	03 02 01.4	+0.7
	baz=223						
TWK	Hsinying	2.23	228	*e*P	Pb	03 02 02.2	+0.4
	baz=226						
TWK				*e*S	Sn	03 02 25.8	-0.1
	baz=226						
TWG	Pinlang	2.25	210	*e*P	Pb	03 02 00.6	-1.5
	baz=207						
MASBT	Mashibuluo	2.64	215	*e*P	Pn	03 02 06.3	+2.3
	baz=213						
MASBT				*e*S	Sn	03 02 36.8	+0.8
	baz=213						
EAST	Anshuo	2.73	209	*e*P	Pb	03 02 08.1	-2.3
	baz=206						
PHUB	P'eng-hu	2.78	243	*e*P	Pn	03 02 06.4	+0.5
	baz=242						

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*ATH **24** 03:01:32.8, 38°.24N×22°.10E, h15^{km}±1^{km}, ML2.9/37, Error ellipse: s-maj=1.1km s-min=0.6km az=325.0*
*IDC **24** 03:01:32.5±1.6, 38°.14N×22°.12E, h0^{km}, mb3.5/3, mb1 3.5/6, mb1mx3.2/52, mbtmp3.4/6, ML3.2/3, Error ellipse: s-maj=38.6km s-min=23.6km az=118.0*
*ISCJB **24** 03:01:33.2±0.2, 38°.24N±0°.02×22°.10E±0°.02, h11^{km}±1^{km}, mb3.5/3, Error ellipse: s-maj=2.7km s-min=2.5km az=135.2*
*THE **24** 03:01:33.4, 38°.24N×22°.10E, h10^{km}, ML3.2/11, Error ellipse: s-maj=0.7km s-min=0.4km az=348.0*
ISC 24 03:01:33.4±0.7**, 38°.23N**±0°.02×**22°.10E**±0°.02**, h11**^{km}±3^{km}**, n99, σ0^{s}.66**/129**, mb3.6**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIG2	Aigio	0.02	295	P	Pg	03 01 35.2	-0.3
AIG2				S	Sg	03 01 36.7	-0.2
AIG3	Aigion	0.02	13	P	Pg	03 01 35.3	-0.2
AIG4	Aigion	0.03	321	P	Pg	03 01 35.3	-0.1
ALIK	Aliki, Aigiali	0.03	21	P	Pg	03 01 35.3	-0.2
ALIK				S	Sg	03 01 37.0	0.0
AIG1	Aigion	0.04	124	P	Pg	03 01 35.4	-0.2
AIG1				S	Sg	03 01 36.9	-0.2
LAKA	Lakka	0.09	275	P	Pg	03 01 35.9	-0.2
LAKA				S	Sg	03 01 37.7	-0.4
	6μm,0.2s						
LAKA	Lakka	0.09	275	P	Pg	03 01 35.9	-0.2
LAKA				S	Sg	03 01 37.8	-0.4
LAKA				AML	AML	03 01 37.8	
	comp=E,27544μm,0.2s						
LAKA				AML	AML	03 01 38.1	
	comp=N,33738μm,0.4s						
TRAZ	Trapeza	0.11	125	P	Pg	03 01 36.4	0.0
TRAZ				S	Sg	03 01 38.6	+0.1
	comp=N,15μm,0.1s						
TRAZ	Trapeza	0.11	125	P	Pg	03 01 36.4	0.0
TRAZ				S	Sg	03 01 38.4	-0.1
TRAZ				AML	AML	03 01 38.7	
	comp=E,20407μm,0.2s						
TRAZ				AML	AML	03 01 39.2	
	comp=N,32524μm,0.2s						
TRIZ	Trizonia	0.13	352	P	Pg	03 01 36.5	-0.2
TRIZ				S	Sg	03 01 38.9	-0.1
	comp=N,21μm,0.3s						
TRIZ	Trizonia	0.13	352	P	Pg	03 01 36.5	-0.2
TRIZ				S	Sg	03 01 38.8	-0.1
KALE	Kalithea	0.16	12	P	Pg	03 01 37.1	-0.1
KALE				S	Sg	03 01 39.8	0.0
	comp=N,41μm,0.2s						
KALE	Kalithea	0.16	12	P	Pg	03 01 37.1	-0.1
KALE				S	Sg	03 01 39.4	-0.4
KALE				AML	AML	03 01 40.5	
	comp=E,48170μm,0.2s						
KALE				AML	AML	03 01 40.6	
SERG	Sergoula	0.18	350	P	Pg	03 01 37.2	-0.3
SERG				S	Sg	03 01 40.2	-0.1
	comp=E,29μm,0.2s						
SERG	Sergoula	0.18	350	P	Pg	03 01 37.2	-0.3
SERG				S	Sg	03 01 40.2	-0.1
SERG				AML	AML	03 01 40.8	
	comp=E,56407μm,0.3s						
SERG				AML	AML	03 01 40.8	
	comp=N,59140μm,0.2s						
KLV	Kalavryta, Ach	0.19	167	P	Pg	03 01 37.4	-0.2
KLV				S	Sg	03 01 40.3	-0.2
	comp=N,6μm,0.2s						
KLV	Kalavryta, Ach	0.19	167	P	Pg	03 01 37.4	-0.2
KLV				S	Sg	03 01 40.3	-0.2
KLV				AML	AML	03 01 40.9	
	comp=N,9555μm,0.2s						
KLV				AML	AML	03 01 41.8	
	comp=E,12900μm,0.3s						
UPR	University Cam	0.25	282	P	Pg	03 01 38.8	+0.2
UPR				S	Sg	03 01 42.3	+0.2
UPR	University Cam	0.25	282	P	Pg	03 01 38.8	+0.2
UPR				S	Sg	03 01 42.6	+0.4
GUR	Goura	0.35	147	P	Pg	03 01 40.0	-0.5
GUR				S	Sg	03 01 45.7	+0.4
	comp=E,5μm,0.5s						
GUR	Goura	0.35	147	P	Pg	03 01 40.1	-0.4
GUR				S	Sg	03 01 45.4	+0.1
GUR				AML	AML	03 01 46.2	
	comp=N,11600μm,0.4s						
GUR				AML	AML	03 01 46.3	
	comp=E,8762μm,0.5s						
DSF	Desfina	0.38	62	P	Pg	03 01 40.6	-0.5
DSF				S	Sg	03 01 46.2	0.0
	comp=E,5μm,0.2s						
DSF	Desfina	0.38	62	P	Pg	03 01 40.6	-0.5
DSF				S	Sg	03 01 45.8	-0.3
DSF				AML	AML	03 01 46.9	
	comp=N,7625μm,0.2s						
DSF				AML	AML	03 01 47.3	
	comp=E,11637μm,0.2s						
ANX	Ano Chora	0.39	339	P	Pg	03 01 40.7	-0.5
ANX				S	Sg	03 01 46.6	+0.3
	comp=E,4μm,0.3s						
ANX	Ano Chora	0.39	339	P	Pg	03 01 40.6	-0.5
ANX				S	Sg	03 01 46.0	-0.3
ANX				AML	AML	03 01 47.4	
	comp=E,7153μm,0.4s						
ANX				AML	AML	03 01 52.1	
	comp=N,8464μm,0.3s						
DRO	Drossia	0.41	228	P	Pg	03 01 41.4	-0.2
DRO				S	Sg	03 01 47.9	+0.8
	comp=N,8μm,0.3s						
DRO	Drossia	0.41	228	P	Pg	03 01 41.4	-0.2
DRO				S	Sg	03 01 47.4	+0.3
DRO				AML	AML	03 01 50.0	
	comp=N,15825μm,0.2s						
DRO				AML	AML	03 01 52.1	
	comp=E,15177μm,0.4s						
PVO	Paravola	0.59	311	P	Pg	03 01 44.5	-0.5
PVO	Paravola	0.59	311	P	Pg	03 01 44.7	-0.2
PVO				AML	AML	03 01 57.4	
	comp=N,2037μm,0.3s						
PVO				AML	AML	03 01 58.3	
	comp=E,2485μm,0.3s						
PROD	Prodromos	0.63	87	P	Pg	03 01 45.6	-0.1
PROD				AML	AML	03 01 56.0	
	comp=E,2822μm,0.3s						
PROD				AML	AML	03 01 57.2	
	comp=N,1954μm,0.3s						
ACOR	Acrocorinthos	0.70	119	P	Pg	03 01 47.0	0.0
ACOR				S	Sg	03 01 56.6	+0.4
ACOR				AML	AML	03 02 00.5	
	comp=N,634μm,0.4s						
ACOR				AML	AML	03 02 02.6	
	comp=E,592μm,0.3s						
TRIP	Tripoli	0.72	169	P	Pg	03 01 46.5	-0.8
TRIP	Tripoli	0.72	169	P	Pg	03 01 46.8	-0.5
TRIP				AML	AML	03 02 01.4	
	comp=E,2300μm,0.3s						
TRIP				AML	AML	03 02 02.8	
	comp=N,1442μm,0.5s						
EVR	Evrytania	0.72	342	P	Pg	03 01 46.6	-0.8
EVR				S	Sg	03 01 56.7	-0.2
	comp=N,798nm,0.4s						
EVR	Evrytania	0.72	342	P	Pg	03 01 46.9	-0.5
EVR				AML	AML	03 02 00.6	
	comp=E,1642μm,0.5s						
EVR				AML	AML	03 02 02.1	
	comp=N,1646μm,0.4s						
LOUT	Loutraki	0.73	109	P	Pb	03 01 47.9	-0.3
LOUT	Loutraki	0.73	109	P	Pg	03 01 47.8	+0.1
AMT	Artemida-Makis	0.76	204	P	Pg	03 01 47.6	-0.6
AMT	Artemida-Makis	0.76	204	P	Pg	03 01 47.7	-0.5
AMT				AML	AML	03 02 02.1	
	comp=N,8237μm,0.5s						
AMT				AML	AML	03 02 05.1	
	comp=E,4019μm,0.4s						
VTN	Vitineika	0.79	247	P	Pb	03 01 49.2	+0.1
AGG	Agios Georgios	0.81	13	P	Pg	03 01 47.9	-1.2
AGG	Agios Georgios	0.81	13	P	Pg	03 01 48.3	-0.8
AGG				AML	AML	03 02 02.9	
	comp=E,2032μm,0.3s						
AGG				AML	AML	03 02 05.0	
	comp=N,1906μm,0.7s						
LKR	Lokris	0.82	59	P	Pg	03 01 48.0	-1.3
LKR	Lokris	0.82	59	P	Pg	03 01 48.2	-1.1
LKR				S	Sg	03 02 00.2	+0.1
LKR				AML	AML	03 02 02.5	
	comp=E,2191μm,0.3s						
LKR				AML	AML	03 02 05.0	
	comp=N,1494μm,0.2s						
ATAL	Atalanti	0.86	57	P	Pg	03 01 48.6	-1.4

ATAL	Atalanti	0.86	57	P	Pg	03 01 49.1	-0.9
ATAL				S	Sg	03 02 01.3	+0.1
ATAL				AML	AML	03 02 06.4	
	comp=N,854µm,0.3s						
ATAL				AML	AML	03 02 07.0	
	comp=E,762µm,0.4s						
VLX	Vlachokerasia	0.89	165	P	Pg	03 01 49.8	-0.8
VLX	Vlachokerasia	0.89	165	P	Pg	03 01 49.4	-1.2
VLX				AML	AML	03 02 04.7	
	comp=N,3145µm,0.4s						
VLX				AML	AML	03 02 09.3	
	comp=E,5262µm,0.4s						
VIL2	Platees	0.92	91	P	Pn	03 01 52.1	-0.3
VIL2				AML	AML	03 02 07.7	
	comp=N,3010µm,0.5s						
VIL2				AML	AML	03 02 10.8	
	comp=E,3350µm,0.7s						
VILL	Villia	0.96	94	P	Pb	03 01 52.3	+0.2
EPID	Epidavros	1.02	127	P	Pb	03 01 52.3	-0.8
KFL	Anninata	1.04	264	P	Pb	03 01 53.0	-0.4
KFL	Anninata	1.04	264	P	Pb	03 01 53.3	-0.2
ITM	Ithomi	1.06	187	P	Pb	03 01 52.7	-1.1
ITM	Ithomi	1.06	187	P	Pb	03 01 52.7	-1.1
ITM				AML	AML	03 02 11.2	
	comp=E,1077µm,0.3s						
ITM				AML	AML	03 02 13.1	
	comp=N,1140µm,0.4s						
SMIA	Simia	1.08	53	P	Pb	03 01 53.2	-1.0
SMIA	Simia	1.08	53	P	Pb	03 01 53.3	-0.9
SMIA				AML	AML	03 02 14.4	
	comp=E,2028µm,0.5s						
SMIA				AML	AML	03 02 17.4	
	comp=N,2211µm,0.6s						
DID	Didima	1.16	128	P	Pb	03 01 54.8	-0.6
DID	Didima	1.16	128	P	Pb	03 01 54.8	-0.6
DID				AML	AML	03 02 13.7	
	comp=E,1742µm,0.4s						
DID				AML	AML	03 02 14.5	
	comp=N,1463µm,0.4s						
VLMS	Volimes, Zakyn	1.19	253	P	Pn	03 01 55.0	-1.0
VLMS				S	Sn	03 02 12.7	+0.6
VLMS				AML	AML	03 02 18.8	
	comp=E,1742µm,0.2s						
VLMS				AML	AML	03 02 20.0	
	comp=N,2634µm,0.3s						
KRND	KRANIDI	1.19	135	P	Pn	03 01 55.4	-0.6
KRND	KRANIDI	1.19	135	P	Pn	03 01 55.6	-0.4
KRND				AML	AML	03 02 16.2	
	comp=N,1275µm,0.8s						
KRND				AML	AML	03 02 16.6	
	comp=E,1582µm,0.5s						
VLS	Valsamata	1.19	268	P	Pn	03 01 54.8	-1.2
VLS	Valsamata	1.19	268	P	Pn	03 01 55.1	-0.9
VLS				AML	AML	03 02 15.1	
	comp=E,594µm,0.2s						
VLS				AML	AML	03 02 17.8	
	comp=N,1044µm,0.3s						
EVGI	Lefkada island	1.20	289	P	Pn	03 01 54.9	-1.2
EVGI	Lefkada island	1.20	289	P	Pn	03 01 54.9	-1.2
FSK	Fiskardo	1.23	281	P	Pn	03 01 55.7	-0.8
LKD2	Lefkada island	1.26	297	P	Pn	03 01 56.2	-0.8
LKD2	Lefkada island	1.26	297	P	Pn	03 01 56.4	-0.5
LKD2				AML	AML	03 02 23.6	
	comp=E,1237µm,0.6s						
LKD2				AML	AML	03 02 27.0	
	comp=N,952µm,0.8s						
MRKA	Markates	1.26	68	P	Pn	03 01 56.8	-0.2
MRKA	Markates	1.26	68	P	Pn	03 01 56.9	-0.1
MRKA				AML	AML	03 02 16.1	
	comp=N,574µm,0.5s						
MRKA				AML	AML	03 02 21.0	
	comp=E,487µm,0.6s						
TSLK	Tsoukalades, L	1.28	298	P	Pn	03 01 57.1	-0.1
TSLK	Tsoukalades, L	1.28	298	P	Pb	03 01 57.2	-0.2
ATH	Athens Observa	1.30	101	P	Pb	03 01 57.7	-0.3
ATH				AML	AML	03 02 20.0	
	comp=E,848µm,0.7s						
ATH				AML	AML	03 02 25.0	
	comp=N,606µm,0.6s						
THL	Klokotos Trika	1.33	357	P	Pb	03 01 58.4	0.0
THL	Klokotos Trika	1.33	357	P	Pb	03 01 58.5	0.0
THL				AML	AML	03 02 19.9	
	comp=E,456µm,0.6s						
THL				AML	AML	03 02 21.6	
	comp=N,307µm,0.5s						
ATHU	Athens Univers	1.36	101	P	Pn	03 01 58.3	0.0
ATHU				AML	AML	03 02 21.0	
	comp=N,393µm,0.6s						
ATHU				AML	AML	03 02 23.1	
	comp=E,115µm,0.4s						
PYL	PYLOS	1.36	192	P	Pn	03 01 57.9	-0.5
PYL	PYLOS	1.36	192	P	Pn	03 01 58.1	-0.3
PYL				AML	AML	03 02 24.1	
	comp=E,739µm,0.7s						
PYL				AML	AML	03 02 26.6	
	comp=N,678µm,0.6s						
NEO	Neokhori	1.39	39	P	Pn	03 01 58.5	-0.3
NEO	Neokhori	1.39	39	P	Pn	03 01 58.5	-0.3
NEO				AML	AML	03 02 24.6	
	comp=N,648µm,0.3s						
NEO				AML	AML	03 02 25.7	
	comp=E,493µm,0.3s						
PTL	Penteli	1.41	97	P	Pn	03 01 58.7	-0.3
PTL				AML	AML	03 02 20.7	
	comp=E,659µm,0.7s						
PTL				AML	AML	03 02 22.8	
	comp=N,379µm,0.9s						
XOR	Xorichti	1.42	37	P	Pn	03 01 58.7	-0.5
XOR	Xorichti	1.42	37	P	Pn	03 01 59.0	-0.2
SKIA	Skiathos	1.42	49	P	Pn	03 01 59.0	-0.2
SKIA				AML	AML	03 02 23.2	
	comp=N,401µm,0.6s						
SKIA				AML	AML	03 02 26.9	
	comp=E,235µm,0.6s						
DYR	Agios Nikonas	1.48	173	P	Pn	03 01 59.7	-0.3
DYR	Agios Nikonas	1.48	173	P	Pn	03 01 59.9	-0.1
DYR				AML	AML	03 02 25.6	
	comp=E,179µm,0.6s						
DYR				AML	AML	03 02 29.6	
	comp=N,138µm,0.5s						
VLI	Veliai	1.65	156	P	Pn	03 02 02.6	+0.3
VLI	Veliai	1.65	156	P	Pn	03 02 02.7	+0.3
VLI				AML	AML	03 02 32.2	
	comp=E,386µm,0.5s						
VLI				AML	AML	03 02 32.5	
	comp=N,406µm,0.3s						
LIT	Litokhoron	1.89	9	P	Pn	03 02 05.3	-0.4
LIT	Litokhoron	1.89	9	P	Pn	03 02 05.7	0.0
KTHA	Kythira Island	2.12	158	P	Pn	03 02 09.8	+1.0
ANKY	Antikythira Is	2.55	157	P	Pn	03 02 15.4	+0.7
IDI	Anoyia	3.70	142	Pn	Pn	03 02 30.3	-0.2
	comp=N,1.3nm,0.3s,baz=293,slow=5.0,SNR=10						
MLR	Muntele Rosu	7.80	20	Pn	Pn	03 03 29.6	+2.7
	comp=N,0.2nm,0.3s,baz=112,slow=16,SNR=2.2						
BRTR	Keskin Array B	9.11	77	Pn	Pn	03 03 47.5	+2.6
	comp=N,0.2nm,0.3s,baz=261,slow=12,SNR=11						
TORD	Torodi Ar. Bea	30.87	221	P	P	03 07 50.0	+0.1
	comp=N,0.3nm,0.9s,baz=28,slow=11,SNR=1.4						
MKAR	Makanchi Array	44.21	59	P	P	03 09 42.0	-0.4
	comp=N,0.4nm,0.4s,baz=287,slow=5.3,SNR=3.5						
ZALV	Zalesovo Beam	44.73	48	P	P	03 09 48.7	+2.3
	comp=N,0.5nm,0.3s,baz=262,slow=10.0,SNR=2.6						

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*IDC **24** 03:09:01.9±1.4, 11°.66N×126°.61E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.7/47, mbtmp4.1/6, MS2.6/1, Ms1 2.6/1, ms1mx2.2/57, Error ellipse: s-maj=164.9km s-min=20.5km az=70.0*

*MAN **24** 03:09:03.6, 11°.61N×126°.29E, h19km, mb4.9, ML3.8, MS3.7*

*NEIC **24** 03:09:06.6±1.5, 11°.44N×126°.67E, h45km±10km, mb4.5/12, Error ellipse: s-maj=31.3km s-min=14.7km az=71.0*

ISC 24 03:09:01.1±2.5**, 11°.56N**±0°.04×**126°.34E**±0°.06**, h1**km±15km**, n36, σ1s.75**/41**, mb4.2**/16**, 3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.88	273	eP	Pb	03 09 18.4	-0.8
BESP				eS	Sb	03 09 30.1	-1.4
PLP	Palo	1.39	254	⇓iP	Pn	03 09 26.2	-1.4
PLP				i S	Sn	03 09 43.1	-3.5
OCLP	Ormoc	1.77	254	eP	Pb	03 09 34.0	-0.3
OCLP				eS	Sg	03 09 59.3	+1.3
CNP	Catarman	1.89	300	eP	Pb	03 09 35.2	-1.2
CNP				eS	Sn	03 09 56.8	-2.3
MSLP	Maasin	2.03	226	eP	Pn	03 09 37.1	+0.7
MSLP				eS	Sb	03 10 04.0	-0.4
LLP	Lapu-Lapu	2.63	242	eP	Pn	03 09 45.3	+0.6
LLP				eS	Sb	03 10 22.0	0.0
BUTP	Butuan	2.67	195	eP	Pn	03 09 47.1	+2.0
BUTP				eS	Sn	03 10 19.6	+1.5
PVCP	Virac	2.94	314	eP	Pn	03 09 48.8	-0.2
PVCP				eS	Sg	03 10 36.0	+0.3
RCP	Roxas	3.52	270	⇓eP	Pn	03 09 58.7	+1.8
RCP				eS	Sn	03 10 39.5	+0.2
JAP	San Jose, Anti	4.38	260	⇓eP	Pb	03 10 17.2	-1.7
TNTI	Ternate	10.76	174	ePn	Pn	03 11 35.9	-0.5
HKPS	Hong Kong Po S	15.79	314	ePn	P	03 12 46.5	-2.4
	173nm,1.5s						
GUMO	Guam	18.20	82	LR	LR	03 19 36.0	
	comp=Z,19nm,18.9s,baz=160,slow=35						
LHMI	Lhok Sumawe	29.73	260	eP	P	03 15 11.4	+2.2
	115nm,1.1s						
AS31	Alice Springs	35.78	168	eP	P	03 16 00.8	-1.2
	1.1nm,1.1s						
ASAR	Alice Springs	35.78	168	P	P	03 16 03.1	+1.1
	1.0nm,0.3s,baz=353,slow=6.6,SNR=6.2						
CTAO	Charters Tower	37.05	148	eP	P	03 16 08.9	-4.1
	28nm,1.4s						
LSA	Lhasa	37.35	304	eP	P	03 16 19.0	+3.0
	3.8nm,0.7s						
H11N1	WAKE ISLAND Hy	39.80	73	T	T	04 00 15.1	
	baz=265,slow=74,SNR=8.9						
H11N2	WAKE ISLAND Hy	39.81	73	T	T	04 00 11.5	
	baz=265,slow=74,SNR=7.2						
H11N3	WAKE ISLAND Hy	39.82	73	T	T	04 00 13.1	
	baz=265,slow=74,SNR=9.1						
SONA0	Songino Array	39.85	339	eP	P	03 16 37.4	+1.1
SONM	Songino Array	39.85	339	P	P	03 16 37.4	+1.1
	0.4nm,0.4s,baz=153,slow=8.1,SNR=2.4						
MORW	Morawa	41.59	194	eP	P	03 16 49.5	-1.2
	25nm,1.4s						
BBOO	Buckleboo	45.08	168	eP	P	03 17 19.1	+0.2
	19nm,1.4s						
STKA	Stephens Creek	45.59	162	P	P	03 17 24.3	+1.4
	2.3nm,0.5s,baz=14,slow=4.2,SNR=4.8						
STKA	Stephens Creek	45.59	162	eP	P	03 17 21.6	-1.3
	2.1nm,1.4s						
MK31	Makanchi Array	51.06	322	eP	P	03 18 07.0	+2.0
	2.1nm,0.8s						
MK32	Makanchi Array	51.06	322	eP	P	03 18 06.9	+1.8
MKAR	Makanchi Array	51.06	322	P	P	03 18 06.9	+1.8
	1.9nm,0.6s,baz=117,slow=8.4,SNR=12						
MAKZ	Makanchi	51.25	322	eP	P	03 18 08.7	+2.2
	4.5nm,1.3s						
CAN	Canberra	51.32	156	eP	P	03 18 03.8	-3.4
	20nm,1.5s						
KURK	Kurchatov	55.06	325	eP	P	03 18 34.5	+0.1
	6.9nm,1.1s						
ARCES	ARCESS Array B	83.02	340	P	P	03 21 29.1	+1.2
	0.7nm,0.7s,baz=64,slow=6.1,SNR=3.4						
FIA0	FINESS Array S	84.80	332	eP	P	03 21 37.3	+0.3
FINES	FINESS Array B	84.80	332	P	P	03 21 37.3	+0.3
	2.1nm,0.9s,baz=64,slow=8.7,SNR=4.2						

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*ISCJB **24** 03:14:41.6±0.4, 50°.28N±0°.02×19°.01E±0°.03, h0km, Error ellipse: s-maj=3.8km s-min=2.1km az=20.3*

*VIE **24** 03:14:44.0±1.2, 50°.23N×19°.05E, h0km, mb2.1/6, ml2.6/6, Error ellipse: s-maj=11.9km s-min=9.0km az=139.0, Suspected Mining induced.*

*IDC **24** 03:14:45.1±1.8, 50°.14N×19°.05E, h0km, mb1 3.2/5, mb1mx3.1/47, mbtmp3.2/5, ML2.6/5, Error ellipse: s-maj=26.4km s-min=7.7km az=125.0*

ISC 24 03:14:42.0±0.7**, 50°.24N**±0°.03×**19°.11E**±0°.02**, h0**km**, n47, σ1s.68**/82**, 6C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	Chorzow	0.09	303	ePg	Pg	03 14 47.2	+3.5
CHZP				eSg	Sg	03 14 49.1	+4.2
OJC	Ojcow	0.44	93	ePg	Pb	03 14 53.7	+1.0
OJC				eSg	Sb	03 15 00.4	+0.5
RAC	Raciborz	0.61	255	ePg	Pb	03 14 56.4	+0.9
RAC				eSg	Sb	03 15 05.3	+0.7
OKC	Ostrava-Krasne	0.74	237	ePG	Pg	03 14 57.2	+1.1
OKC				eSG	Sg	03 15 06.0	+0.3
	comp=Z,57nm,0.6s						
MORC	Moravsky Berou	1.11	246	⇑iP	Pb	03 15 04.5	+0.4
MORC	Moravsky Berou	1.11	246	S	Sn	03 15 20.5	-0.4
MORC	Moravsky Berou	1.11	246	ePG	Pn	03 15 04.9	+0.1
MORC				eSG	Sg	03 15 17.4	-0.3
LANS	Liptovska Anna	1.12	168	ePG	Pn	03 15 06.1	+1.2
LANS				eSG	Sn	03 15 21.0	0.0
LANS				eLG	Lg	03 15 22.7	
NIE	Niedzica	1.13	136	ePg	Pn	03 15 06.4	+1.4
NIE				eSg	Sn	03 15 22.4	+1.1
JAVC	Velka Javorina	1.67	215	ePN	Pg	03 15 14.3	+0.3
JAVC				eSG	Sb	03 15 35.2	0.0
VYHS	Vyhne	1.76	186	ePN	Pb	03 15 15.0	-0.1
VYHS				eSN	Sb	03 15 38.3	+0.6
DPC	Dobruska-Polom	1.79	275	ePG	Pb	03 15 15.4	-0.2
DPC				eSG	Sb	03 15 39.1	+0.5
	comp=Z,45nm,0.6s						
OSTC	Ostas	1.88	281	ePG	Pn	03 15 16.5	+1.2
OSTC				eSG	Sg	03 15 43.1	+0.9
	comp=Z,52nm,1.0s						
VRAC	Vranov	1.88	241	Pn	Pb	03 15 16.8	-0.3
	8.7nm,0.3s,baz=57,slow=13,SNR=42						
VRAC				Pg	Pg	03 15 18.3	+0.4
	8.7nm,0.3s,baz=64,slow=14,SNR=41						
VRAC				Lg	Lg	03 15 41.7	
	6.0nm,0.3s,baz=139,slow=19,SNR=18						
VRAC	Vranov	1.88	241	⇑iP	Pb	03 15 16.9	-0.3
VRAC	Vranov	1.88	241	S	Sn	03 15 39.0	-0.7
VRAC	Vranov	1.88	241	ePN	Pb	03 15 16.9	-0.3
VRAC				eSG	Sb	03 15 41.5	+0.3
KSP	Ksiaz	1.89	290	ePn	Pn	03 15 16.3	+0.7
KSP				ePg	Pg	03 15 19.7	+1.5
KSP				eSg	Sg	03 15 42.5	-0.3
KECS	Kecovo	1.98	152	eSN	Sn	03 15 43.2	+1.1
KECS				eLG	Lg	03 15 50.7	
CHVC	Chvalec	1.98	281	ePG	Pb	03 15 18.5	-0.4
CHVC				eSG	Sg	03 15 46.9	+1.2
	comp=Z,28nm,0.6s						
UPC	Upice	2.00	279	ePG	Pg	03 15 20.4	+0.1
UPC				eSG	Sb	03 15 45.6	+1.0
	comp=Z,22nm,0.5s						
SMOL	Smolenice	2.05	213	ePN	Pn	03 15 18.8	+1.1
SMOL				eSN	Sn	03 15 44.2	+0.3
KRUC	Moravsky	2.12	237	ePN	Pn	03 15 20.1	+1.4
KRUC				eSG	Sb	03 15 48.8	+0.7
MODS	Modra-Piesok	2.22	213	ePG	Pg	03 15 26.7	+2.2
MODS				eSN	Sn	03 15 48.7	+0.5
MODS				eLG	Lg	03 15 55.0	
PSZ	Piszkesteto	2.38	167	⇑iP	Pn	03 15 21.0	-1.3
KOLS	Kolonicke sedl	2.44	121	ePG	Pg	03 15 31.7	+3.0
KOLS				eSN	Sn	03 15 55.2	+1.6
TREC	Trest	2.53	249	ePG	Pb	03 15 28.7	+0.4
TREC				eSG	Sg	03 16 03.8	+0.6
	comp=Z,38nm,1.1s						
GOPC	GO Pecny, Ondr	2.80	265	eSG	Sg	03 16 12.1	+0.1
	comp=Z,17nm,0.8s						
PVCC	Panska Ves	2.92	277	ePG	Pb	03 15 36.2	+1.3
PVCC				eSG	Sg	03 16 15.9	+0.2
	comp=Z,29nm,0.6s						
CONA	Conrad Observa	3.15	224	ePn	Pn	03 15 33.4	+0.6
	0.4nm,0.2s						
CONA				Sn	Sn	03 16 11.2	0.0
	0.9nm,0.2s						
BRG	Berggiesshubel	3.35	283	PG	Pg	03 15 46.5	+0.3
BRG				SG	Sg	03 16 32.3	+2.7
	11nm,0.4s						
KHC	Kasperske Hory	3.76	255	ePN	Pn	03 15 42.5	+1.3
KHC				eSN	Sn	03 16 25.5	-0.6
KHC				eSG	Sg	03 16 42.9	+0.2
	comp=Z,21nm,0.9s						
GERES	GERESS Array B	3.79	250	Pn	Pn	03 15 44.1	+2.5
	0.5nm,0.3s,baz=68,slow=14,SNR=13						
GERES				Pg	Pg	03 15 53.2	-1.3
	1.0nm,0.3s,baz=65,slow=18,SNR=15						
GERES				Lg	Lg	03 16 42.5	
	3.0nm,0.3s,baz=65,slow=28,SNR=10						
ARSA	Arzberg	3.82	220	Pg	Pg	03 15 58.3	+3.2
	1.5nm,0.4s						
ARSA				Sg	Sg	03 16 44.1	-0.5
	2.8nm,0.7s						
MOA	Molln	3.98	235	ePn	Pn	03 15 46.0	+1.7
	0.3nm,0.1s						
MOA				Sn	Sn	03 16 32.8	+1.1
	0.1nm,0.1s						
CLL	Collm	4.02	288	ePn	Pn	03 15 48.0	+3.3
CLL				ePg	Pg	03 16 00.0	+1.1
CLL				eSg	Sg	03 16 53.0	+2.0
	comp=Z,11nm,0.6s						
DRGR		4.20	144	⇓iP	Pn	03 15 47.1	-0.2
NKC	Novy Kostel	4.28	272	eSG	Sg	03 16 58.9	-0.3
	comp=Z,10nm,0.5s						
BURAR	Bucovina Array	4.81	121	⇓iP	Pn	03 15 56.0	+0.3
BZS	Buzias	4.92	159	⇑iP	Pn	03 15 57.1	-0.1
KBA	Koelnbreinsper	4.96	233	Pn	Pn	03 16 01.2	+3.4
	comp=Z,0.5nm,0.2s						
KBA				eSn	Sn	03 16 56.6	+0.7
	comp=Z,1.2nm,0.3s						
GZR	Gura Zlata	5.44	152	⇑iP	Pn	03 16 04.3	-0.1
MDVR	Moldovita	5.74	161	⇑iP	Pn	03 16 07.2	-1.2
DAVOX	Davos/Dischmat	7.04	244	Pn	Pn	03 16 26.9	+0.5
	comp=Z,0.4nm,0.3s,baz=60,slow=14,SNR=3.8						
HFS	Hagfors	10.38	345	Pn	Pn	03 17 11.6	-0.3
	comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=3.7						
HFS				Sn	Sn	03 19 03.7	-5.2
	comp=Z,0.1nm,0.3s,baz=158,slow=28,SNR=5.1						
NOA	NORSAR Array B	11.69	341	Pn	Pn	03 17 27.9	-2.1
	comp=Z,0.0nm,0.3s,baz=151,slow=12,SNR=3.9						
FINES	FINESS Array B	11.88	16	Pn	Pn	03 17 31.4	-1.0
	comp=Z,0.2nm,0.3s,baz=200,slow=12,SNR=6.5						
FINES				Sn	Sn	03 19 38.2	-7.3
	comp=Z,0.1nm,0.3s,baz=200,slow=24,SNR=3.8						

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*ISCJB **24** 03:22:25.4±0.4, 24°.76N±0°.02×122°.26E±0°.01, h8km±2km, Error ellipse: s-maj=2.9km s-min=2.2km az=14.5*

*TAP **24** 03:22:26.9, 24°.76N×122°.16E, h15km, ML3.0, C*

*JMA **24** 03:22:26.5±0.1, 24°.69N×122°.23E, h47km±4km, M2.3*

ISC 24 03:22:26.0±1.0**, 24°.76N**±0°.02×**122°.23E**±0°.02**, h19**km±2km**, n63, σ0s.65**/117**, 6C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.23	203	⇑P	Pg	03 22 31.9	+0.4
	baz=192						
EOS1				eS	Sg	03 22 36.3	+1.1
	baz=192						
NTC	Toucheng	0.37	285	eP	Pg	03 22 33.3	-0.6
	baz=287						
TWC	Suao	0.38	247	⇑P	Pg	03 22 33.2	-0.8
	baz=240						
TWC				eS	Sg	03 22 37.7	-1.6
	baz=240						
TIPB	Shuangxi	0.42	300	P	Pg	03 22 34.2	-0.6
	baz=298						
TIPB				eS	Sg	03 22 39.9	-0.8
	baz=298						
TWE	Neicheng	0.51	266	P	Pb	03 22 36.0	-0.4
	baz=264						
TWE				S	Sg	03 22 42.6	-0.7
	baz=264						
WFSB	Wu-fen Shan	0.51	307	⇑P	Pg	03 22 37.1	+0.7
	baz=313						
WFSB				S	Sb	03 22 44.4	+1.0
	baz=313						
SLBB	Yuanshan	0.54	270	P	Pg	03 22 36.9	0.0
	baz=269						
SLBB				S	Sg	03 22 44.1	-0.1
	baz=269						
NANB	Nanao	0.55	233	⇑P	Pb	03 22 36.4	-0.5
	baz=222						
NANB				S	Sb	03 22 43.2	-1.1
	baz=222						
ENA	Nanau	0.55	233	eP	Pb	03 22 36.6	-0.4
	baz=222						
ENA				eS	Sb	03 22 43.2	-1.3
	baz=222						
ENTT	Nioudou	0.61	259	eP	Pb	03 22 38.0	0.0
	baz=257						
ENTT				eS	Sb	03 22 45.9	-0.3
	baz=257						
TWA	Mucha	0.62	291	eP	Pn	03 22 39.2	-0.7
	baz=286						
TWA				eS	Sg	03 22 47.4	+0.5
	baz=286						
NDT	Datong Townshi	0.67	257	eP	Pb	03 22 39.0	-0.1
	baz=255						
NDT				S	Sb	03 22 47.3	-0.6
	baz=255						
NHDH	Xindian Distri	0.67	288	eP	Pn	03 22 40.0	-0.5
	baz=282						
NHDH				eS	Sg	03 22 48.9	+0.6
	baz=282						
TATO	Taipei	0.71	288	eP	Pg	03 22 40.4	+0.5
	baz=283						
TATO				eS	Sn	03 22 50.3	-1.0
	baz=283						
YM01	YM01	0.71	303	⇑P	Pg	03 22 40.4	+0.3
	baz=307						
YM01				S	Sg	03 22 50.1	+0.5
	baz=307						
YM08	YM08	0.72	306	eP	Pb	03 22 39.8	-0.1
	baz=310						
YM08				eS	Sb	03 22 49.7	+0.3
	baz=310						
JYNG	Yonagunijimaku	0.72	115	P	Pb	03 22 40.0	+0.1
JYNG				S	Sg	03 22 50.6	+0.7
YM10	YM10	0.72	303	eP	Pg	03 22 40.5	+0.2
	baz=307						
YM10				eS	Sg	03 22 50.5	+0.6
	baz=307						
YM05	YM05	0.72	304	P	Pg	03 22 40.4	+0.1
	baz=308						
YM05				eS	Sg	03 22 50.4	+0.4
	baz=308						
YM04	YM04	0.74	302	eP	Pg	03 22 40.6	0.0
	baz=306						
YM04				eS	Sg	03 22 50.7	+0.2
	baz=306						
YM03	YM03	0.75	304	eP	Pb	03 22 40.7	+0.1
	baz=307						
YM03				eS	Sg	03 22 51.1	+0.2
	baz=307						
TWY	Chenhua	0.77	312	⇑eP	Pg	03 22 41.2	+0.1
	baz=317						
TWY				S	Sg	03 22 52.0	+0.6
	baz=317						
YOJ	Yonaguni jima	0.77	112	eP	Pg	03 22 41.3	+0.2
	baz=109						
YOJ				eS	Sg	03 22 51.5	0.0
	baz=109						
YOJ	Yonaguni jima	0.77	112	P	Pb	03 22 40.6	-0.2
YOJ				S	Sg	03 22 51.5	0.0
YHNB	Yeheng	0.78	264	eP	Pb	03 22 40.8	-0.2
	baz=263						
YHNB				eS	Sb	03 22 50.0	-1.3
	baz=263						
NSK	Sanguang	0.80	264	eP	Pb	03 22 41.2	0.0
	baz=263						
NSK				eS	Sb	03 22 50.3	-1.4
	baz=263						
NTST	Danshui	0.81	300	eP	Pn	03 22 42.6	+0.1
	baz=303						
NTST				eS	Sn	03 22 53.7	-0.2
	baz=303						
NACB	Ninganchiao	0.82	225	eP	Pb	03 22 41.2	-0.4
	baz=221						
NACB				eS	Sb	03 22 52.2	-0.1
	baz=221						
NNSB	Datong	0.84	247	eP	Pb	03 22 42.0	0.0
	baz=235						
NNSB				eS	Sb	03 22 52.9	0.0
	baz=235						
NNS	Nan Shan	0.84	248	eP	Pb	03 22 41.8	-0.3
	baz=236						
NNS				eS	Sb	03 22 52.7	-0.3
	baz=236						
ETLH	Xiulin Townshi	0.88	231	eP	Pb	03 22 42.4	-0.3
	baz=218						
ETLH				eS	Sb	03 22 54.1	+0.1
	baz=218						
TWD	Chiawan	0.89	221	eP	Pb	03 22 42.7	-0.1
	baz=223						
TWD				eS	Sb	03 22 54.1	-0.1
	baz=223						
WHF	Hehuan Shan	1.07	235	⇓P	Pn	03 22 46.5	+0.1
	baz=232						
WHF				eS	Sn	03 23 00.2	-0.7

	baz=232						
TWT	Tachien	1.08	242	*e*P	Pg	03 22 47.7	+0.6
	baz=230						
TWT				*e*S	Sg	03 23 01.4	0.0
	baz=230						
LIOB	Emei	1.11	264	*e*P	Pg	03 22 47.7	+0.1
	baz=265						
LIOB				*e*S	Sg	03 23 02.0	-0.1
	baz=265						
NSTT	Nanjuang	1.12	264	*e*P	Pg	03 22 48.0	+0.2
	baz=264						
NSTT				*e*S	Sg	03 23 02.3	-0.3
	baz=264						
CHGB	Renai	1.19	234	*e*P	Pg	03 22 48.7	-0.4
	baz=232						
CHGB				*e*S	Sn	03 23 03.6	+0.1
	baz=232						
ESL	Shilin	1.19	218	*e*P	Pg	03 22 48.8	-0.3
	baz=232						
ESL				*e*S	Sn	03 23 03.5	+0.3
	baz=232						
EGFH	Guangfu	1.31	214	*e*P	Pb	03 22 50.2	+0.2
	baz=193						
TWQ1	Liyutan	1.39	253	*e*S	Sg	03 23 10.8	-0.2
	baz=252						
DPDB	Guoxing	1.39	239	*e*P	Pb	03 22 51.7	+0.3
	baz=237						
DPDB				*e*S	Sb	03 23 09.5	+0.7
	baz=237						
VWDT	VWDT	1.41	225	*e*P	Pb	03 22 52.1	+0.4
	baz=222						
VWDT				*e*S	Sb	03 23 09.8	+0.5
	baz=222						
IRIF	Iriomote-Funau	1.43	107	P	Pn	03 22 49.9	-1.0
IRIF				*e*S	Sn	03 23 08.6	-0.6
HGSD	Ruisui	1.46	210	*e*P	Pb	03 22 52.4	-0.2
	baz=189						
HGSD				*e*S	Sg	03 23 12.7	-0.6
	baz=189						
SSLB	Suanglung	1.51	230	*e*P	Pb	03 22 53.8	+0.3
	baz=236						
SSLB				*e*S	Sb	03 23 12.4	+0.1
	baz=236						
TYC	Yuchr	1.51	236	*e*P	Pg	03 22 54.4	-0.8
	baz=234						
TYC				*e*S	Sb	03 23 13.0	+0.7
	baz=234						
HATJ	Hateruma jima	1.60	116	P	Pn	03 22 53.0	-0.2
HATJ				*e*S	Sn	03 23 11.8	-1.6
YULB	Yu-li	1.60	212	*e*P	Pn	03 22 53.7	+0.4
	baz=207						
YULB				*e*S	Sb	03 23 14.3	-0.6
	baz=207						
TWF1	Yuli	1.64	211	*e*P	Pn	03 22 54.6	+0.7
	baz=223						
TWF1				*e*S	Sb	03 23 16.1	+0.2
	baz=223						
WHYT	Xinyi Township	1.64	230	*e*P	Pb	03 22 56.0	+0.3
	baz=212						
JKRS	Kuro-shima	1.70	107	P	Pn	03 22 54.8	+0.1
JKRS				S	Sn	03 23 15.7	-0.3
YUS	Yu-Shan	1.72	223	*e*P	Pb	03 22 57.8	+0.5
	baz=219						
YUS				*e*S	Sb	03 23 19.8	+1.1
	baz=219						
JIJ	Ishigaki jima	1.79	102	P	Pn	03 22 55.9	0.0
JIJ				S	Sn	03 23 17.1	-0.9
ALS	Alishan	1.80	227	*e*P	Pb	03 22 59.2	+0.7
	baz=210						
ALS				*e*S	Sg	03 23 22.6	-1.6
	baz=210						
CHN5	Tsauling	1.83	231	*e*P	Pb	03 22 59.5	+0.6
	baz=228						
CHN5				*e*S	Sb	03 23 22.7	+1.2
	baz=228						
JISG	Ishigakijimahi	1.90	95	*e*S	Sn	03 23 21.3	+0.4
TPUB	Ta-pu	2.06	226	*e*P	Pb	03 23 02.8	-0.1
	baz=204						
WTP	Ta-pu	2.11	225	*e*P	Pb	03 23 04.0	+0.3
	baz=220						
WTP				*e*S	Sb	03 23 30.3	+0.8
	baz=220						
TWK	Hsinying	2.18	227	*e*P	Pb	03 23 04.8	0.0
	baz=223						
TWK				*e*S	Sb	03 23 32.8	+1.3
	baz=223						
SLGT	Liugui	2.28	220	*e*P	Pb	03 23 06.0	-0.5
	baz=216						
SLGT				*e*S	Sb	03 23 34.4	+0.1
	baz=216						
MASBT	Mashibuluo	2.59	215	*e*P	Pn	03 23 09.1	+2.2
	baz=196						
EAST	Anshuo	2.68	208	*e*P	Pn	03 23 09.5	+1.3
	baz=190						
PHUB	P'eng-hu	2.73	243	*e*S	Sn	03 23 42.5	+1.4
	baz=239						

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*IDC **24** 03:25:13.2±8.1,20°.84S×175°.75W,h190^{km}±71^{km},mb3.6/7, mb1 3.8/8,mb1mx3.5/36,mbtmp4.1/8,Error ellipse: s-maj=43.3km s-min=22.6km az=141.0*

ISC 24 03:25:01.3±0.9,**20°.8S**±0°.3×**175°.5W**±0°.2,**h89**^{km},**n14, σ1^{s}50**/15,**mb4.2**/7,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.90	263	P	P	03 28 56.7	+3.6
	0.3nm,0.3s,baz=80,slow=19,SNR=12						
STKA	Stephens Creek	39.80	245	P	P	03 32 25.3	-0.6
	1.8nm,0.5s,baz=96,slow=10,SNR=7.7						
ASAR	Alice Springs	46.76	257	P	P	03 33 21.6	-0.5
	4.9nm,0.8s,baz=88,slow=8.2,SNR=31						
ASAR				PcP	PcP	03 34 52.4	-1.8
	0.6nm,0.7s,baz=102,slow=4.0,SNR=4.3						
WRA	Warramunga Arr	46.91	262	P	P	03 33 22.3	-1.0
	4.1nm,0.9s,baz=94,slow=8.4,SNR=5.8						
PETK	Petropavlovsk-	77.24	344	P	P	03 36 45.5	0.0
	3.3nm,0.9s,baz=136,slow=9.3,SNR=5.0						
NVAR	Mina Array Bea	79.66	42	P	P	03 37 00.7	+1.3
	0.9nm,0.8s,baz=225,slow=8.7,SNR=8.0						
MAW	Mawson	82.04	199	P	P	03 37 11.8	+0.4
	1.0nm,0.8s,baz=117,slow=4.5,SNR=3.5						
TXAR	Lajitas Array	85.25	56	P	P	03 37 29.9	+1.3
	0.2nm,0.7s,baz=209,slow=7.2,SNR=5.1						
KURBB	Kurchatov Arra	115.92	317	PKP	PKPdf	03 43 32.6	-0.9
	0.2nm,0.5s,baz=93,slow=2.3,SNR=4.0						
BVAR	Borovoye Array	120.87	320	PKP	PKPdf	03 43 42.4	-0.6
	0.6nm,0.4s,baz=69,slow=8.1,SNR=3.5						
AKASG	Malin Array Be	144.44	333	PKP	PKPab	03 44 24.4	-1.1
	0.2nm,0.3s,baz=38,slow=4.8,SNR=7.6						
EKA	Eskdalemuir Ar	145.08	8	PKPbc	PKPbc	03 44 26.1	-1.6
	0.5nm,0.5s,baz=343,slow=2.6,SNR=4.4						
BRTR	Keskin Array B	148.82	314	PKPbc	PKPbc	03 44 38.2	-0.8
	0.5nm,0.6s,baz=9.1,slow=3.6,SNR=3.0						
GERES	GERESS Array B	151.12	347	PKPbc	PKPbc	03 44 44.2	0.0
	0.5nm,0.6s,baz=75,slow=1.5,SNR=6.2						

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*SJA **24** 03:29:53.8±0.6,21°.04S×68°.99W,h123^{km}±14^{km},ML2.3, MW4.0*

*ISCJB **24** 03:29:54.8±1.2,21°.06S±0°.04×69°.02W±0°.10, h119^{km}±11^{km},Error ellipse: s-maj=15.4km s-min=6.4km az=3.0*

*GUC **24** 03:29:54.9±0.5,21°.04S×69°.05W,h112^{km}±3^{km},ML2.7*

ISC 24 03:29:55.7±2.0,**21°.05S**±0°.04×**69°.01W**±0°.08, **h111**^{km}±16^{km},**n14,σ0^{s}51**/25,**8C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.45	271	⇑*i*P	Pn	03 30 12.1	-0.4
PB01				*e*S	Sn	03 30 24.7	-0.3
PB01				IAML		03 30 25.3	
	comp=N,440nm,0.3s						
PB01				IAML		03 30 26.3	
	comp=E,423nm,0.2s						
PB09	IPOC Station P	0.78	196	⇑*i*P	Pn	03 30 14.5	-0.6
PB09				*e*S	Sn	03 30 29.9	+0.3
PB02	IPOC Station P	0.87	252	*i* P	Pn	03 30 15.8	0.0
PB02				*i* S	Sn	03 30 32.1	+1.1
PB02	IPOC Station P	0.87	252	⇑*i*P	Pn	03 30 15.8	0.0
PB02				*e*S	Sn	03 30 31.2	+0.2
PB02				IAML		03 30 33.7	
	comp=E,520nm,0.2s						
PB08	IPOC Station P	0.91	351	*i* P	Pn	03 30 16.2	-0.4
PB08	IPOC Station P	0.91	351	⇑*i*P	Pn	03 30 16.6	0.0
PB08				*e*S	Sn	03 30 32.5	+0.3
PB08				IAML		03 30 34.9	
	comp=E,157nm,0.2s						
PB07	IPOC Station P	1.06	230	*i* P	Pn	03 30 17.5	-0.3
PB07				*i* S	Sn	03 30 35.9	+1.4
PB07	IPOC Station P	1.06	230	⇑*i*P	Pn	03 30 17.5	-0.3
PB07				*e*S	Sn	03 30 34.6	+0.1
PB07				IAML		03 30 35.6	
	comp=N,147nm,0.1s						
PB03	IPOC Station P	1.21	215	⇑*i*P	Pn	03 30 19.0	-0.5
PB03				*e*S	Sn	03 30 37.2	-0.3
PB03				IAML		03 30 38.7	
	comp=E,134nm,0.1s						
GO01	Chusmiza	1.38	353	⇑*i*P	Pn	03 30 21.6	-0.2
GO01				*e*S	Sn	03 30 41.9	+0.5
GO01				IAML		03 30 44.1	
	comp=E,182nm,0.2s						
PB11	IPOC Station P	1.42	335	*i* P	Pn	03 30 21.8	-0.1
PB11	IPOC Station P	1.42	335	⇑*i*P	Pn	03 30 21.6	-0.2
PB11				*e*S	Sn	03 30 41.8	+0.3
PB11				IAML		03 30 43.1	
	comp=E,172nm,0.2s						
PSGC	Pisagua	1.78	324	⇓*i*P	Pn	03 30 25.8	-0.4
PSGC				*e*S	Sn	03 30 49.0	-0.3
PSGC				IAML		03 30 54.4	
	comp=N,40nm,0.3s						
HJA	Humahuaca	3.97	123	*i* P	Pn	03 30 55.1	0.0
HJA				IAML		03 30 55.5	
	comp=Z,3.4nm,0.4s						

MAN 24 03:30:15.3,7°.86N×126°.44E,h2^{km},mb4.5,ML3.3,MS3.2, 3C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.33	347	⇑*i*P	Pb	03 30 23.6	-0.4
BIPH				*i* S	Sb	03 30 28.4	-1.3
MATI	Mati	0.92	191	*e*P	Pg	03 30 33.4	+0.3
DMPH	Davao City--Mi	1.20	230	⇑*i*P	Pn	03 30 40.7	+1.6
DMPH				*i* S	Sn	03 31 01.7	+5.7
BUKP	Musuan	1.36	271	*e*P	Pn	03 30 41.4	0.0
BUKP				*e*S	Sb	03 30 59.7	+0.2
BUTP	Butuan	1.37	324	*e*P	Pn	03 30 40.4	-1.0
BUTP				*e*S	Sn	03 31 01.8	+1.7
KCP	Kidapawan	1.58	238	⇓*i*P	Pn	03 30 44.4	-0.1
KCP				*i* S	Sn	03 31 01.4	-4.1
CGP	Cagayan de Oro	1.82	289	⇑*e*P	Pn	03 30 47.2	-0.5
CGP				*e*S	Sn	03 31 09.2	-2.2
DDMP	Don Marcelino,	1.89	202	*e*P	Pn	03 30 48.2	-0.4
DDMP				*e*S	Sg	03 31 16.3	+0.3
CTBH	Cotabato--PC H	2.26	254	⇓*i*P	Pn	03 30 54.4	+0.6
CTBH				*i* S	Sn	03 31 20.5	-1.7
MSLP	Maasin	2.75	326	*e*P	Pg	03 31 08.4	+0.4

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*MOS **24** 03:32:27.2±1.2,22°.98S×177°.20W,h104^{km},mb5.8/56, Error ellipse: s-maj=7.0km s-min=6.3km az=82.3*

*ISCJB **24** 03:32:28.8±0.7,23°.10S±0°.02×177°.25W±0°.02, h123^{km}±6^{km},mb5.6/414,Error ellipse: s-maj=4.2km s-min=2.8km az=154.9*

*NEIC **24** 03:32:33.6±1.8,23°.13S×177°.22W,h156^{km}±3^{km}, mb5.5/388,MW5.9,MW5.9,Error ellipse: s-maj=9.9km s-min=9.0km az=97.0,Moment Tensor Solution. s41 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.52; $M_{\theta\theta}$1.65; $M_{\phi\phi}$-0.14; $M_{r\theta}$-3.37; $M_{\theta\phi}$1.99; $M_{\phi r}$-8.55; Best double couple: $M_0$9.50000×10^{17} NP1:ϕ_s23.00000°,δ85.00000°, λ-102.00000°. NP2:ϕ_s272.00000°,δ13.00000°, λ-21.00000°. Principal axes: T 9.5500, Plg39.0000°, Azm124.0000°; N -0.0200, Plg12.0000°, Azm24.0000°; P -9.5300, Plg48.0000°, Azm279.0000°;*

*BJI **24** 03:32:33.1±0.0,23°.10S×177°.20W,h167^{km},mb5.5/64, mB5.7/64*

*NEIC **24** 03:32:35.0±0.0,22°.96S×177°.05W,h170^{km} Best double couple: NP1:ϕ_s19.00000°,δ87.00000°,λ-103.00000°. NP2:ϕ_s278.00000°,δ14.00000°,λ-10.00000°. Principal axes: T 0.9600, Plg40.0000°, Azm121.0000°; N 0.1300, Plg13.0000°, Azm19.0000°; P -1.0900, Plg45.0000°, Azm274.0000°;*

*GCMT **24** 03:32:37.6±0.1,23°.23S±0°.01×176°.81W,h169^{km}, MW6.0/141,Moment Tensor Solution. s137,c303; s141,c433; Duration: 2^{s}3 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.12±.01; $M_{\theta\theta}$0.17±.01; $M_{\phi\phi}$-0.05±.01; $M_{r\theta}$-0.34±.01; $M_{\theta\phi}$0.22±.01; $M_{\phi r}$-0.97±.01; Best double couple: $M_0$1.06100×10^{18} NP1:ϕ_s20.00000°,δ87.00000°, λ-103.00000°. NP2:ϕ_s276.00000°,δ14.00000°, λ-14.00000°. Principal axes: T 1.0600, Plg40.0000°, Azm122.0000°; N 0.0000, Plg13.0000°, Azm21.0000°; P -1.0610, Plg47.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **24** 03:32:42.1±1.1,23°.00S×177°.27W,h228^{km}±9^{km},mb5.2/37, mb1 5.2/38,mb1mx5.2/39,mbtmp5.7/38 Error ellipse: s-maj=10.0km s-min=7.6km az=165.0*

ISC 24 03:32:34.4±0.3,**23°.16S**±0°.03×**177°.15W**±0°.03, **h168**^{km}±2^{km},**h168**^{km}**:pP-P,n1807,σ1^{s}68**/1951,**mb5.5**/407, **111C-69D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	6.10	186	P	Pn	03 34 03.9	+1.3
RIZ				S	Sn	03 35 11.3	-0.6
RAO	Raoul Island	6.11	186	*e*Pn	Pn	03 33 56.6	-6.0
RAO				*e*Sn	Sn	03 35 08.6	-3.4
RAO	Raoul Island	6.11	186	*e*P	Pn	03 33 56.6	-6.1
RAO				*e*		03 35 08.6	
GLKZ	Green Lake	6.12	186	P	Pn	03 34 02.7	-0.1
GLKZ				S	Sn	03 35 11.2	-1.1
NIUE	Niue	7.87	60	*e*Pn	Pn	03 34 20.2	-5.9
NIUE	Niue	7.87	60	P	Pn	03 34 19.7	-6.4
	baz=7.6						
NIUE				S	Sn	03 35 38.2	-16
	baz=7.6						
MARNC	Mare, Loyalty	13.81	274	*e*P	P	03 35 46.4	+0.1
MARNC				*e*Sn	Sn	03 38 13.5	-3.4
PINNC	Pines Island,	14.21	269	*e*P	P	03 35 52.1	+1.5
PINNC				*e*Sn	Sn	03 38 22.6	-3.7
OUZ	Omahuta	14.47	212	*e*P	Pn	03 35 48.6	-2.8
OUZ	Omahuta	14.47	212	P	P	03 35 55.5	+2.0
GRZ	Great Barrier	14.53	204	P	P	03 35 55.7	+1.6
NFK	Norfolk Island	14.61	243	P	P	03 35 58.5	+3.4
	baz=15,SNR=17						
WCZ	Waipu Caves	14.72	208	P	P	03 35 57.1	+0.9
KUZ	Kuaotunu	14.87	203	P	P	03 35 59.9	+2.0
MXZ	Matakaoa Point	14.88	194	*e*Pn	Pn	03 35 54.6	-1.9
MXZ	Matakaoa Point	14.88	194	P	Pn	03 35 56.3	-0.2
FUNA	Funafuti	14.97	346	*e*Pn	Pn	03 35 55.0	-2.7
WMGZ	Waiomatatini S	15.10	194	P	Pn	03 35 54.0	-5.2
WIAZ	Waiheke Island	15.13	204	P	P	03 36 01.5	+0.7
ONTNC	Ouen Toro	15.15	270	*e*P	P	03 36 03.6	+2.5
	946nm,1.0s						
HAZ	Te Kaha	15.19	195	P	Pn	03 35 55.8	-4.4
DZM	Mont Dzumac	15.19	271	*e*P	P	03 36 04.6	+2.9
	3μm,1.6s						
DZM				*e*LR	LR	03 39 37.6	
	comp=Z,6μm,26.0s						
DZM	Mont Dzumac	15.19	271	P	P	03 36 03.7	+2.0
	13nm,0.3s,baz=97,slow=15,SNR=99						
DZM	Mont Dzumac	15.19	271	*e*P	P	03 36 01.9	+0.3
	827nm,0.8s						
PKGZ	Pakihiroa	15.24	194	P	Pn	03 35 55.2	-5.8
ETAZ	East Tamaki Re	15.35	205	P	P	03 36 05.4	+2.2
PUZ	Puketiti	15.38	194	P	Pn	03 35 57.1	-5.5
MKAZ	Moumakai	15.40	204	P	P	03 36 04.0	+0.3
RUGZ	Raukumara Rang	15.41	196	P	Pn	03 35 59.7	-3.4
WTAZ	Waiatarua	15.47	206	P	P	03 36 05.5	+0.9
TWGZ	Tauwhareparae	15.54	194	P	Pn	03 36 03.0	-1.7
OPRZ	Ohinepanea	15.60	199	P	Pn	03 36 05.6	+0.3
MWZ	Matawai	15.80	196	P	Pn	03 36 01.7	-6.0
TKGZ	Te Karaka	15.82	195	P	Pn	03 36 04.0	-4.0
URZ	Urewera	15.83	197	P	Pn	03 36 06.4	-1.7
	64nm,0.3s,baz=357,slow=6.9,SNR=63						
URZ				S	S	03 38 54.0	-10
	36nm,0.3s,baz=246,slow=23,SNR=10						
URZ	Urewera	15.83	197	*e*P	Pn	03 36 05.7	-2.4
	236nm,0.8s						
URZ	Urewera	15.83	197	P	Pn	03 36 04.9	-3.3
TOZ	Tahuroa Road	15.84	202	P	P	03 36 11.2	+2.7
RAGZ	Rawiri	15.98	196	P	Pn	03 36 05.3	-4.7
MUGZ	Murupara	16.13	197	P	Pn	03 36 08.8	-3.0
GRRZ	Galatos Road	16.20	199	P	P	03 36 11.3	-1.3
RAR	Rarotonga	16.21	86	P	P	03 36 10.1	-2.8
	5.6nm,0.3s,baz=187,slow=7.9,SNR=18						
RAR				S	S	03 38 58.8	-14
	38nm,0.3s,baz=91,slow=21,SNR=7.6						
RAR	Rarotonga	16.21	86	*e*Pn	P	03 36 11.5	-1.4
	3μm,1.5s						
PRGZ	Paritu Road	16.27	194	P	P	03 36 11.3	-2.1
TLZ	Tolley Road	16.36	201	P	Pn	03 36 14.6	0.0
KNZ	Kokohu	16.42	194	P	P	03 36 13.5	-1.5
RAHZ	Arahi	16.46	196	P	P	03 36 13.5	-2.0
MTHZ	Maungataniwha	16.46	197	P	P	03 36 13.6	-2.0
MHGZ	Mahia Peninsul	16.49	194	P	P	03 36 13.5	-2.3
MRHZ	Matea Rd	16.56	198	P	P	03 36 13.8	-2.9
HIZ	Hauiti	16.76	202	*e*P	Pn	03 36 19.6	+0.3
	299nm,0.6s						
BKZ	Black Stump Fm	16.85	197	*e*P	P	03 36 16.6	-3.2
	66nm,0.7s						
BKZ				*e*S	S	03 39 12.4	-14
BKZ	Black Stump Fm	16.85	197	P	P	03 36 16.5	-3.2
WPHZ	Waipukurau	17.70	196	P	P	03 36 27.5	-1.6
WPHZ				S	S	03 39 32.1	-12
PRWZ	Pori Road	18.29	197	P	P	03 36 33.0	-2.5
PRWZ				S	S	03 39 42.4	-13
BFZ	Birch Farm	18.34	196	*e*P	P	03 36 33.7	-2.3
	313nm,1.0s						
CAW	Cannon Point	19.05	198	P	P	03 36 41.0	-2.8
DUWZ	D'Urville Isla	19.13	201	P	P	03 36 42.4	-2.2
TRWZ	Traveller	19.15	197	P	P	03 36 42.4	-2.5
PAWZ	Paruwai Farm	19.21	197	P	P	03 36 43.8	-1.7
MSWZ	Moikau Station	19.29	198	P	P	03 36 43.8	-2.5
SNZO	South Karori	19.35	199	*e*P	P	03 36 45.5	-1.4
	102nm,0.6s						
TCW	Tory Channel	19.39	200	P	P	03 36 44.3	-3.1
TCW				S	S	03 40 07.5	-10
BHW	Baring Head	19.39	198	P	P	03 36 45.6	-1.8
PLWZ	Palliser	19.43	197	P	P	03 36 45.9	-2.0
QRZ	Quartz Range	19.64	204	*e*P	P	03 36 50.1	0.0
	155nm,0.7s						
QRZ	Quartz Range	19.64	204	P	P	03 36 49.3	-0.8
NNZ	Nelson	19.68	202	P	P	03 36 48.9	-1.6
TUWZ	Tuamarina	19.69	200	P	P	03 36 46.7	-3.9
BSWZ	Blackbirch Sta	19.97	200	P	P	03 36 55.0	+1.3
THZ	Tophouse	20.33	202	*e*P	P	03 36 54.7	-2.8
	90nm,0.7s						
THZ	Tophouse	20.33	202	P	P	03 36 54.8	-2.8
DSZ	Denniston Nort	20.71	204	P	P	03 37 03.9	+2.3
KHZ	Kahutara	20.71	200	*e*P	P	03 36 58.3	-3.2
	266nm,1.2s						
KHZ	Kahutara	20.71	200	P	P	03 36 58.6	-2.9
KNTN	Kanton	20.94	15	*e*P	P	03 37 01.3	-2.9
	225nm,0.8s						
GVZ	Greta Valley S	21.37	200	P	P	03 37 04.8	-3.8
LTZ	Lake Taylor	21.45	202	*e*P	P	03 37 07.0	-2.6
	197nm,0.5s						
LTZ				*e*S	S	03 40 53.4	-3.5
LTZ	Lake Taylor	21.45	202	P	P	03 37 08.6	-0.9
AMCZ	Amberley	21.68	201	P	P	03 37 15.0	+3.2
INZ	Inchbonnie	21.69	203	P	P	03 37 10.6	-1.3
OXZ	Oxford	22.01	201	*e*P	P	03 37 10.1	-5.1
	265nm,0.5s						
OXZ	Oxford	22.01	201	P	P	03 37 11.7	-3.5
CRLZ	Canterbury Las	22.05	200	*e*P	P	03 37 12.6	-3.0
	260nm,1.5s						
MQZ	McQueen's Vall	22.15	200	*e*P	P	03 37 14.7	-1.9
	40nm,0.7s						
MQZ	McQueen's Vall	22.15	200	P	P	03 37 13.9	-2.7
LHI	Lord Howe Isla	22.68	243	*e*P	P	03 37 24.8	+3.2
	904nm,0.9s						
LHI	Lord Howe Isla	22.68	243	P	P	03 37 24.8	+3.2
	baz=23,SNR=24						
RPZ	Rata Peaks	22.70	203	P	P	03 37 21.4	-0.3
	160nm,0.5s,baz=349,slow=1.4,SNR=22						
RPZ				S	S	03 41 13.0	-4.2
	25nm,0.6s,baz=310,slow=20,SNR=4.0						
RPZ	Rata Peaks	22.70	203	*e*P	P	03 37 21.4	-0.3
	156nm,0.6s						
RPZ				*e*S	S	03 41 16.2	-1.0
RPZ	Rata Peaks	22.70	203	P	P	03 37 22.0	+0.3
FOZ	Fox Glacier	23.00	205	*e*P	P	03 37 23.5	-0.9
	282nm,0.6s						
FOZ				*e*S	S	03 41 25.8	+3.9
LBZ	Lake Benmore	23.59	203	*e*P	P	03 37 27.9	-1.9
	59nm,0.7s						
ODZ	Otahua Downs	24.00	202	*e*P	P	03 37 32.4	-1.2
	83nm,1.0s						
WKZ	Wanaka	24.40	204	*e*P	P	03 37 36.4	-0.8
	165nm,1.1s						
MLZ	Mavora Lakes	25.20	205	*e*P	P	03 37 44.2	-0.2
	137nm,0.7s						
TBI	Tubuai	25.43	96	*e*P	P	03 37 45.4	-1.3
	1μm,1.4s						
TBI				*e*S	S	03 41 55.3	-5.9
	2μm,27.8s						
TBI				*e*LQ	LQ	03 43 10.2	
	5μm,27.0s						
TBI				*e*LR	LR	03 44 15.2	
	comp=Z,6μm,27.0s						
TBI	Tubuai	25.43	96	*e*T	T	04 02 40.2	
	98nm,0.4s						
DCZ	Deep Cove	25.66	206	*e*P	P	03 37 48.7	+0.2
	91nm,0.5s						
DCZ				*e*S	S	03 42 06.2	+1.9
WHZ	Wether Hill Ro	25.70	204	*e*P	P	03 37 48.8	-0.1
	133nm,0.7s						
HNR	Honiara	25.82	298	P	P	03 37 52.5	+2.2
	1μm,0.7s,baz=190,slow=2.6,SNR=34						
HNR	Honiara	25.82	298	*e*P	P	03 37 51.4	+1.1
	2μm,0.8s						
HNR	Honiara	25.82	298	*e*P	P	03 37 51.4	+1.1
HNR				pmax	pmax		
	comp=Z,2μm,0.8s						
HNR	Honiara	25.82	298	*e*P	P	03 37 50.0	-0.3
TARA	Tarawa	26.21	337	*e*P	P	03 37 52.7	-1.1
	comp=Z,339nm,1.0s						
PAE	Paea	26.39	83	*e*P	P	03 37 54.1	-1.3
	comp=Z,67nm,1.4s						
PAE	Paea	26.39	83	*e*T	T	04 03 25.6	
	comp=Z,120nm,0.3s						
PPT2	Papeete2	26.42	83	*e*P	P	03 37 54.8	-0.9
	comp=Z,325nm,1.2s						
PPT2				*e*S	S	03 42 11.4	-5.6
	comp=Z,566nm,24.5s						
PPT2				*e*LQ	LQ	03 43 34.4	
	comp=Z,5μm,26.2s						
PPT2				*e*LR	LR	03 44 39.9	
	comp=Z,5μm,25.5s						
PPT2	Papeete2	26.42	83	*e*T	T	04 03 30.2	
	comp=Z,108nm,0.3s						
PPT	Papeete	26.42	83	P	P	03 37 55.5	-0.2
	comp=Z,163nm,0.7s,baz=58,slow=3.1,SNR=20						
PPTF	Pamatai, Papee	26.43	83	*e*P	P	03 37 55.2	-0.6
	comp=Z,233nm,0.8s						
TIAR	Tiarei	26.64	83	*e*P	P	03 37 56.6	-1.0
	comp=Z,373nm,1.5s						
TVO	Taravao	26.66	84	*e*P	P	03 37 56.7	-1.2
	comp=Z,156nm,1.3s						
TVO	Taravao	26.66	84	*e*T	T	04 03 33.6	
	comp=Z,14nm,0.4s						
MEH	Mehetia	27.72	84	*e*P	P	03 38 06.1	-1.2
	comp=Z,62nm,0.9s						
MEH	Mehetia	27.72	84	*e*T	T	04 05 11.6	
	comp=Z,145nm,0.3s						
ARMA	Armidale	28.73	249	*e*P	P	03 38 18.8	+2.5
	comp=Z,469nm,1.4s						
ARMA	Armidale	28.73	249	P	P	03 38 18.6	+2.4
	baz=29,SNR=36						
PMOR	Pomariorio Ree	28.77	79	*e*P	P	03 38 15.4	-1.2
	comp=Z,228nm,0.9s						
EIDS	Eidsvold	29.01	259	*e*P	P	03 38 20.2	+1.5
	comp=Z,347nm,1.1s						
EIDS	Eidsvold	29.01	259	P	P	03 38 20.2	+1.5
	baz=29,SNR=44						
MGCD	Mangrove Creek	29.61	243	P	P	03 38 26.6	+2.7
	baz=30,SNR=12						
RIV	Riverview	29.70	242	P	P	03 38 26.5	+1.8
	baz=30,SNR=3.1						
RMQ	Roma	31.06	257	P	P	03 38 39.1	+2.3
	baz=31,SNR=147						
CNB	Canberra Magne	31.48	240	P	P	03 38 42.4	+2.0
	baz=32,SNR=41						
CAN	Canberra	31.77	240	*e*P	P	03 38 44.4	+1.5
	comp=Z,375nm,1.2s						
CAN	Canberra	31.77	240	*e*P	P	03 38 44.4	+1.5
CAN				pmax	pmax		

	comp=Z,375nm,1.2s						
YNG	**Young**	**32.04**	**242**	P	**P**	**03 38 47.6**	**+2.3**
	baz=32,SNR=15						
MILA	**Mila**	**32.09**	**237**	P	**P**	**03 38 47.6**	**+1.9**
	baz=32,SNR=8.5						
CMSA	**Cobar Meteorol**	**33.91**	**248**	P	**P**	**03 39 02.3**	**+0.8**
	baz=34,SNR=193						
CTAO	**Charters Tower**	**34.10**	**268**	*e*P	**P**	**03 39 04.8**	**+1.5**
	comp=Z,831nm,0.6s						
CTAO	**Charters Tower**	**34.10**	**268**	*e*P	**P**	**03 39 04.8**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,831nm,0.6s						
TOO	**Toolangi**	**35.04**	**237**	*e*P	**P**	**03 39 12.2**	**+1.0**
	comp=Z,248nm,1.0s						
TOO	**Toolangi**	**35.04**	**237**	P	**P**	**03 39 12.2**	**+1.0**
	baz=35,SNR=58						
TOO	**Toolangi**	**35.04**	**237**	*e*P	**P**	**03 39 12.2**	**+1.0**
TOO				pmax	pmax		
	comp=Z,248nm,1.0s						
KWAJ	**Kwajalein Atol**	**35.09**	**333**	*e*P	**P**	**03 39 12.6**	**+0.9**
	comp=Z,360nm,1.0s						
KWAJ	**Kwajalein Atol**	**35.09**	**333**	*e*P	**P**	**03 39 12.6**	**+0.9**
KWAJ				pmax	pmax		
	comp=Z,360nm,1.0s						
RABL	**Rabaul**	**35.13**	**298**	*e*P	**P**	**03 39 09.9**	**-2.3**
	comp=Z,228nm,0.6s						
MOO	**Moorlands**	**35.27**	**228**	P	**P**	**03 39 14.2**	**+1.2**
	baz=36,SNR=17						
TAU	**Tasmania Unive**	**35.35**	**228**	*e*P	**P**	**03 39 15.5**	**+1.8**
	comp=Z,100nm,0.8s						
TAU				*e*PcP	**PcP**	**03 41 43.2**	**+3.1**
TAU	**Tasmania Unive**	**35.35**	**228**	*e*P	**P**	**03 39 15.5**	**+1.8**
TAU				*e*		03 41 43.2	
TAU				pmax	pmax		
	comp=Z,100nm,0.8s						
MTSU	**Mount Surprise**	**36.33**	**271**	P	**P**	**03 39 23.7**	**+1.3**
	baz=36,SNR=323						
PMG	**Port Moresby**	**36.76**	**286**	P	**P**	**03 39 27.0**	**+0.9**
	comp=Z,1µm,0.8s,baz=100,slow=5.1,SNR=134						
PMG	**Port Moresby**	**36.76**	**286**	*e*P	**P**	**03 39 26.9**	**+0.9**
	comp=Z,2µm,0.9s						
PMG	**Port Moresby**	**36.76**	**286**	*ce*P	**P**	**03 39 27.1**	**+1.0**
STKA	**Stephens Creek**	**37.42**	**247**	P	**P**	**03 39 32.8**	**+1.3**
	comp=Z,88nm,0.6s,baz=90,slow=9.5,SNR=118						
STKA	**Stephens Creek**	**37.42**	**247**	*e*P	**P**	**03 39 31.9**	**+0.4**
	comp=Z,54nm,1.0s						
STKA	**Stephens Creek**	**37.42**	**247**	P	**P**	**03 39 31.9**	**+0.5**
	baz=38,SNR=134						
STKA	**Stephens Creek**	**37.42**	**247**	*e*P	**P**	**03 39 31.9**	**+0.5**
STKA				pmax	pmax		
	comp=Z,54nm,1.0s						
ARPS	**Mount Arapiles**	**37.74**	**239**	P	**P**	**03 39 34.9**	**+0.8**
	baz=38,SNR=62						
TAOE	**Nuku Hiva Isla**	**38.17**	**74**	*e*S	**S**	**03 45 14.3**	**-4.8**
	comp=Z,979nm,23.3s						
TAOE				*e*LQ	LQ	03 48 28.0	
	comp=Z,6µm,28.8s						
TAOE				*e*LR	LR	03 50 04.9	
	comp=Z,2µm,26.4s						
TAOE	**Nuku Hiva Isla**	**38.17**	**74**	*e*T	T	04 17 50.8	
	comp=Z,72nm,0.3s						
TAOE	**Nuku Hiva Isla**	**38.17**	**74**	*e*P	**P**	**03 39 37.0**	**-1.0**
	comp=Z,591nm,1.1s						
PATS	**Pohnpei**	**38.27**	**318**	*e*P	**P**	**03 39 39.3**	**+0.6**
	comp=Z,410nm,1.2s						
COEN	**Coen**	**38.60**	**277**	*e*P	**P**	**03 39 42.7**	**+1.2**
	comp=Z,279nm,1.0s						
COEN	**Coen**	**38.60**	**277**	P	**P**	**03 39 42.6**	**+1.1**
	baz=39,SNR=37						
RKT	**Rikitea**	**38.69**	**99**	*e*P	**P**	**03 39 40.7**	**-1.4**
	comp=Z,392nm,1.2s						
HTT	**Hallett**	**39.76**	**245**	P	**P**	**03 39 50.8**	**-0.1**
	baz=40,SNR=138						
QIS	**Mount Isa**	**40.11**	**265**	P	**P**	**03 39 54.2**	**+0.2**
	baz=40,SNR=73						
MANU	**Manus Island**	**40.28**	**296**	*e*P	**P**	**03 39 56.2**	**+0.8**
	comp=Z,408nm,1.3s						
JOHN	**Johnston Islan**	**40.34**	**11**	*e*P	**P**	**03 39 55.0**	**-0.7**
	comp=Z,170nm,0.8s						
BBOO	**Buckleboo**	**42.13**	**246**	*e*P	**P**	**03 40 10.0**	**-0.4**
	comp=Z,175nm,1.0s						
BBOO	**Buckleboo**	**42.13**	**246**	P	**P**	**03 40 09.9**	**-0.4**
	baz=42,SNR=128						
PTCN	**Pitcairn Islan**	**42.83**	**102**	*e*P	**P**	**03 40 17.6**	**+1.6**
	comp=Z,1µm,1.0s						
MMPI	**Merauke**	**43.21**	**283**	P	**P**	**03 40 22.9**	**+3.7**
AS31	**Alice Springs**	**44.73**	**259**	*e*P	**P**	**03 40 31.4**	**0.0**
	comp=Z,127nm,1.0s						
AS31				*e*PcP	**PcP**	**03 42 11.5**	**+0.8**
AS31				*e*S	**S**	**03 46 53.2**	**-2.4**
ASAR	**Alice Springs**	**44.74**	**259**	P	**P**	**03 40 31.2**	**-0.1**
	comp=Z,260nm,0.9s,baz=95,slow=8.1,SNR=742						
ASAR				PcP	**PcP**	**03 42 11.5**	**+0.8**
	comp=Z,45nm,0.7s,baz=101,slow=4.3,SNR=8.2						
ASAR				S	**S**	**03 46 53.2**	**-2.4**
	comp=Z,8.3nm,0.8s,baz=92,slow=14,SNR=5.4						
WAKE	**Wake Island**	**45.05**	**338**	*e*P	**P**	**03 40 32.4**	**-1.2**
	comp=Z,366nm,0.8s						
WB2	**Warramunga Arr**	**45.06**	**264**	*e*P	**P**	**03 40 33.5**	**-0.4**
	comp=Z,460nm,0.8s						
WB2				*e*S	**S**	**03 46 56.3**	**-4.0**
WRAB	**Tennant Creek**	**45.06**	**264**	*e*P	**P**	**03 40 33.8**	**-0.1**
	comp=Z,510nm,0.9s						
WRAB	**Tennant Creek**	**45.06**	**264**	*ce*P	**P**	**03 40 33.6**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,897nm,1.3s						
WR1	**Warramunga Arr**	**45.07**	**264**	*e*P	**P**	**03 40 34.1**	**+0.1**
WR1				*e*S	**S**	**03 46 56.5**	**-4.0**
WRA	**Warramunga Arr**	**45.07**	**264**	P	**P**	**03 40 34.1**	**+0.1**
	comp=Z,299nm,0.5s,baz=95,slow=10,SNR=284						
WRA				S	**S**	**03 46 56.5**	**-4.0**
	comp=Z,25nm,0.8s,baz=104,slow=14,SNR=9.7						
GENI	**Genyem**	**46.09**	**290**	P	**P**	**03 40 42.2**	**+0.2**
	comp=Z,540nm,1.1s,comp=Z,9µm						
KHU	**Kahuku**	**47.10**	**28**	*e*P	**P**	**03 40 48.7**	**-1.2**
	comp=Z,275nm,1.5s						
KHU	**Kahuku**	**47.10**	**28**	*e*P	**P**	**03 40 48.7**	**-1.2**
KHU				pmax	pmax		
	comp=Z,275nm,1.5s						
KHLU	**Kahalu`u**	**47.29**	**28**	*e*P	**P**	**03 40 50.5**	**-0.7**
	comp=Z,224nm,0.8s						
MLOA	**Mauna Loa Obse**	**47.37**	**28**	*e*P	**P**	**03 40 52.3**	**0.0**
	comp=Z,81nm,0.9s						
KKO	**Keanakako`i**	**47.39**	**29**	*e*P	**P**	**03 40 51.4**	**-0.6**
	comp=Z,374nm,1.4s						
HUH	**Hualalai**	**47.39**	**28**	*e*P	**P**	**03 40 52.6**	**+0.4**
	comp=Z,110nm,0.8s						
BYL	**Byron's Ledge**	**47.40**	**29**	*e*P	**P**	**03 40 53.5**	**+1.4**
	comp=Z,354nm,1.3s						
MLH	**Mauna Loa**	**47.42**	**28**	*e*P	**P**	**03 40 54.1**	**+1.7**
	comp=Z,181nm,1.1s						
MLH	**Mauna Loa**	**47.42**	**28**	*e*P	**P**	**03 40 54.1**	**+1.7**
MLH				pmax	pmax		
	comp=Z,181nm,1.1s						
STCH	**Steam Cracks**	**47.44**	**29**	*e*P	**P**	**03 40 53.1**	**+0.8**
	comp=Z,245nm,0.8s						
HMH	**Humu‘ula Sheep**	**47.47**	**28**	*e*P	**P**	**03 40 53.3**	**+0.4**
	comp=Z,338nm,0.9s						
POHA	**Pohakuloa**	**47.59**	**28**	*e*P	**P**	**03 40 55.3**	**+1.6**
	comp=Z,124nm,0.8s						
HPAH	**Hawaii Prepara**	**47.76**	**28**	*e*P	**P**	**03 40 55.6**	**+0.8**
	comp=Z,281nm,0.9s						
MHA	**Mahukona**	**47.81**	**27**	*e*P	**P**	**03 40 57.3**	**+2.2**
MHA	**Mahukona**	**47.81**	**27**	*e*P	**P**	**03 40 57.3**	**+2.2**
KIP	**Kipapa**	**48.08**	**24**	*e*P	**P**	**03 40 57.5**	**+0.3**
	comp=Z,335nm,1.1s						
KIP	**Kipapa**	**48.08**	**24**	*e*P	**P**	**03 40 57.5**	**+0.3**
KIP				pmax	pmax		
	comp=Z,335nm,1.1s						
KHLH	**Kahului Airpor**	**48.23**	**26**	*e*P	**P**	**03 40 59.8**	**+1.5**
	comp=Z,155nm,1.2s						
KDU	**Kakadu**	**48.84**	**273**	P	**P**	**03 41 02.5**	**-0.6**
	baz=49,SNR=87						
FORT	**Forrest**	**49.02**	**249**	*e*P	**P**	**03 41 03.4**	**-1.0**
	comp=Z,600nm,0.7s						
FORT	**Forrest**	**49.02**	**249**	P	**P**	**03 41 03.9**	**-0.5**
	baz=49,SNR=168						
WRKA	**Warakurna**	**49.55**	**256**	P	**P**	**03 41 08.0**	**-0.6**
	baz=50,SNR=823						
MTN	**Manton Dam**	**50.02**	**272**	*e*P	**P**	**03 41 11.8**	**-0.3**
	comp=Z,197nm,0.6s						
MTN	**Manton Dam**	**50.02**	**272**	P	**P**	**03 41 11.6**	**-0.5**
	baz=50,SNR=88						
KNRA	**Kununurra**	**51.31**	**268**	P	**P**	**03 41 21.7**	**-0.1**
	baz=52,SNR=140						
GUMO	**Guam**	**52.11**	**311**	P	**P**	**03 41 27.8**	**+0.2**
	comp=Z,454nm,1.0s,baz=161,slow=6.0,SNR=26						
GUMO	**Guam**	**52.11**	**311**	*e*P	**P**	**03 41 28.3**	**+0.7**
	comp=Z,858nm,1.1s						
GUMO	**Guam**	**52.11**	**311**	*e*P	**P**	**03 41 28.3**	**+0.7**
GUMO				pmax	pmax		
	comp=Z,858nm,1.1s						
FAKI	**Fak Fak**	**52.90**	**285**	*e*P	**P**	**03 41 33.4**	**-0.2**
	comp=Z,305nm,1.0s						
ANA2	**Anatahan**	**53.48**	**314**	*e*P	**P**	**03 41 37.9**	**+0.2**
	comp=Z,369nm,0.9s						
SARN	**Sarigan**	**53.69**	**314**	*e*P	**P**	**03 41 39.0**	**-0.3**
	comp=Z,88nm,0.9s						
KMBL	**Kambalda**	**54.22**	**247**	P	**P**	**03 41 42.3**	**-0.7**
	baz=54,SNR=9.8						
SWI	**Sorong**	**54.72**	**286**	P	**P**	**03 41 46.5**	**-0.2**
SBA	**Scott Base**	**55.28**	**184**	*e*P	**P**	**03 41 51.6**	**+1.8**
	comp=Z,113nm,0.8s						
SBA	**Scott Base**	**55.28**	**184**	*e*P	**P**	**03 41 51.7**	**+1.8**
SBA				pmax	pmax		
	comp=Z,113nm,0.8s						
MSAI	**Masohi**	**55.68**	**282**	P	**P**	**03 41 53.2**	**-0.5**
PALU	**Palau**	**56.17**	**297**	P	**P**	**03 41 57.9**	**+0.8**
	baz=56,SNR=6.9						
AAI	**Ambon**	**56.20**	**282**	P	**P**	**03 41 57.5**	**+0.2**
NLAI	**Namlea**	**57.37**	**282**	P	**P**	**03 42 05.3**	**-0.3**
SOEI	**Soe**	**57.40**	**273**	*e*P	**P**	**03 42 07.6**	**+1.6**
	comp=Z,2µm,0.9s						
SOEI	**Soe**	**57.40**	**273**	P	**P**	**03 42 06.9**	**+1.0**
BATI	**Baumata**	**57.79**	**272**	P	**P**	**03 42 10.0**	**+1.4**
MEEK	**Meekatharra**	**57.83**	**252**	P	**P**	**03 42 07.6**	**-1.1**
	baz=58,SNR=23						
RKGY	**Rocky Gully**	**57.90**	**243**	P	**P**	**03 42 09.9**	**+0.9**
	baz=58,SNR=20						
NWAO	**Narrogin (SRO)**	**57.91**	**245**	P	**P**	**03 42 09.1**	**-0.1**
	baz=58,SNR=15						
MBWA	**Marble Bar**	**58.08**	**259**	P	**P**	**03 42 10.2**	**-0.3**
	SNR=16						
LBMI	**Labuha**	**58.15**	**284**	P	**P**	**03 42 11.2**	**+0.1**
BLDU	**Ballidu**	**58.73**	**247**	P	**P**	**03 42 14.2**	**-0.6**
	baz=59,SNR=38						
SANI	**Sanana**	**58.89**	**282**	P	**P**	**03 42 15.5**	**-0.6**
TNTI	**Ternate**	**58.92**	**286**	*e*P	**P**	**03 42 16.0**	**-0.3**
	comp=Z,493nm,0.9s						
TNTI	**Ternate**	**58.92**	**286**	P	**P**	**03 42 16.3**	**0.0**
MUN	**Mundaring**	**58.92**	**246**	P	**P**	**03 42 16.2**	**+0.1**
	baz=59,SNR=16						
MORW	**Morawa**	**59.58**	**249**	*e*P	**P**	**03 42 20.3**	**-0.4**
	comp=Z,104nm,0.8s						
MORW	**Morawa**	**59.58**	**249**	P	**P**	**03 42 20.1**	**-0.6**
	baz=60,SNR=66						
MMRI	**Maumere**	**59.67**	**273**	*e*P	**P**	**03 42 21.2**	**-0.3**
	comp=Z,470nm,0.9s						
EDFI	**Ende, Flores**	**60.13**	**273**	P	**P**	**03 42 24.6**	**-0.2**
RPN	**Rapa Nui**	**60.85**	**109**	*e*P	**P**	**03 42 31.0**	**+1.6**
	comp=Z,434nm,1.0s						
RPN	**Rapa Nui**	**60.85**	**109**	*e*P	**P**	**03 42 31.0**	**+1.6**
RPN				pmax	pmax		
	comp=Z,434nm,1.0s						
WSI	**Waingapu**	**61.08**	**272**	P	**P**	**03 42 31.3**	**+0.2**
KDI	**Kendari**	**61.13**	**279**	P	**P**	**03 42 31.2**	**-0.2**
SGSI	**Sangihe**	**61.90**	**288**	P	**P**	**03 42 36.4**	**-0.2**
CASY	**Casey**	**61.92**	**206**	*e*P	**P**	**03 42 36.7**	**+0.9**
	comp=Z,166nm,0.8s						
CASY				*e*S	**S**	**03 50 47.1**	**+1.1**
WBSI	**Waikabubak, Su**	**61.92**	**271**	P	**P**	**03 42 36.7**	**-0.1**
LUWI	**Luwuk**	**62.22**	**282**	*e*P	**P**	**03 42 37.9**	**-0.8**
	comp=Z,454nm,0.9s						
LUWI	**Luwuk**	**62.22**	**282**	P	**P**	**03 42 39.1**	**+0.4**
GIRL	**Giralia**	**62.63**	**256**	*e*P	**P**	**03 42 43.5**	**+2.2**
	comp=Z,1µm,1.5s						
GIRL	**Giralia**	**62.63**	**256**	P	**P**	**03 42 42.4**	**+1.1**
	baz=63,SNR=28						
BKSI	**Bulukumba**	**62.87**	**276**	P	**P**	**03 42 42.4**	**-0.6**
DDMP	**Don Marcelino,**	**62.91**	**290**	*e*P	**P**	**03 42 41.2**	**-2.0**
BNSI	**Bone**	**63.25**	**277**	P	**P**	**03 42 45.0**	**-0.5**
KAPI	**Kappang**	**63.33**	**276**	P	**P**	**03 42 46.5**	**+0.4**
	comp=Z,63nm,0.7s,baz=137,slow=6.7,SNR=23						
KAPI	**Kappang**	**63.33**	**276**	*e*P	**P**	**03 42 46.5**	**+0.4**
	comp=Z,112nm,0.8s						
KAPI	**Kappang**	**63.33**	**276**	P	**P**	**03 42 46.9**	**+0.9**
	SNR=11						
DAV	**Davao City (W)**	**63.51**	**291**	P	**P**	**03 42 48.1**	**+1.0**
	comp=Z,642nm,0.7s,baz=50,slow=0.8,SNR=10						
DAV	**Davao City (W)**	**63.51**	**291**	*e*P	**P**	**03 42 48.1**	**+1.0**
	comp=Z,566nm,0.6s						
DAV	**Davao City (W)**	**63.51**	**291**	P	**P**	**03 42 47.7**	**+0.5**
	SNR=7.4						
DAV	**Davao City (W)**	**63.51**	**291**	⇓*i*P	**P**	**03 42 45.0**	**-2.2**
DMPH	**Davao City--Mi**	**63.57**	**291**	⇓*i*P	**P**	**03 42 48.0**	**+0.4**
PLAI	**Plampang**	**63.70**	**271**	P	**P**	**03 42 48.4**	**-0.1**
SPSI	**Sidrap Palu**	**63.73**	**277**	P	**P**	**03 42 48.0**	**-0.7**
KCP	**Kidapawan**	**63.90**	**291**	⇓*i*P	**P**	**03 42 49.1**	**-0.7**
TTSI	**Tana Toraja**	**64.06**	**278**	P	**P**	**03 42 50.6**	**-0.2**
SKMP	**Bagumbayan, Su**	**64.13**	**290**	*e*P	**P**	**03 42 50.6**	**-0.7**
BUKP	**Musuan**	**64.35**	**292**	*e*P	**P**	**03 42 53.2**	**+0.5**
BUTP	**Butuan**	**64.43**	**293**	*e*P	**P**	**03 42 53.8**	**+0.7**
CTBH	**Cotabato--PC H**	**64.73**	**291**	⇓*e*P	**P**	**03 42 54.8**	**-0.3**
MSLP	**Maasin**	**65.67**	**294**	*e*P	**P**	**03 43 00.6**	**-0.5**
SRBI	**Singaraja**	**66.33**	**271**	P	**P**	**03 43 05.3**	**-0.2**
QSPA	**South Pole Qui**	**66.92**	**180**	P	**P**	**03 43 10.1**	**+1.6**
	comp=Z,183nm,0.8s,baz=33,slow=1.5,SNR=452						
QSPA	**South Pole Qui**	**66.92**	**180**	*e*P	**P**	**03 43 10.0**	**+1.5**
	comp=Z,229nm,0.9s						
QSPA				*e*S	**S**	**03 51 52.0**	**+4.2**
JAGI	**Jajag, Banyuwa**	**67.17**	**270**	*e*P	**P**	**03 43 10.8**	**0.0**
	comp=Z,199nm,0.9s						
JAGI	**Jajag, Banyuwa**	**67.17**	**270**	P	**P**	**03 43 11.2**	**+0.4**
	comp=Z,270nm,1.4s,comp=Z,3µm						
KBKI	**Kotabaru**	**67.29**	**276**	P	**P**	**03 43 13.1**	**+1.6**
SMKI	**Samarinda**	**67.50**	**280**	P	**P**	**03 43 15.7**	**+2.8**
KMMI	**Kalianget**	**67.86**	**272**	P	**P**	**03 43 17.3**	**+2.2**
PVCP	**Virac**	**68.06**	**296**	*e*P	**P**	**03 43 17.1**	**+0.8**
RCP	**Roxas**	**68.18**	**294**	⇑*e*P	**P**	**03 43 16.6**	**-0.4**
OTRP	**Odiongan**	**69.19**	**294**	*e*P	**P**	**03 43 22.3**	**-1.0**
GRJI	**Gresik**	**69.28**	**271**	P	**P**	**03 43 25.0**	**+1.1**
JHJ2	**Mitsune**	**69.39**	**322**	*e*P	**P**	**03 43 23.8**	**-0.3**
	comp=Z,173nm,0.9s						
MTKI	**Muara Teweh, K**	**69.40**	**278**	P	**P**	**03 43 26.9**	**+2.2**
JHJ	**Hachijo jima 2**	**69.41**	**322**	P	**P**	**03 43 23.8**	**-0.4**
	comp=Z,187nm,0.9s,baz=220,slow=8.7,SNR=7.9						
PWJI	**Pagerwojo**	**69.49**	**270**	P	**P**	**03 43 25.6**	**+0.4**
NGJI	**Ngawi**	**70.05**	**270**	P	**P**	**03 43 31.0**	**+2.4**
WOJI	**Wonogiri, Jawa**	**70.37**	**270**	P	**P**	**03 43 31.6**	**+1.0**
UGM	**Wanagama**	**70.71**	**270**	*e*P	**P**	**03 43 33.2**	**+0.5**
	comp=Z,244nm,0.8s						
UGM	**Wanagama**	**70.71**	**270**	P	**P**	**03 43 33.7**	**+1.0**
YOGI	**Yogyakarta**	**70.96**	**270**	P	**P**	**03 43 34.5**	**+0.4**
TGY	**Tagaytay City**	**70.99**	**295**	P	**P**	**03 43 35.3**	**+1.1**
	comp=Z,187nm,0.5s,baz=214,slow=7.7,SNR=5.8						
SMRI	**Semarang**	**71.11**	**270**	*e*P	**P**	**03 43 35.3**	**+0.2**
	comp=Z,199nm,0.9s						
SMRI	**Semarang**	**71.11**	**270**	P	**P**	**03 43 36.5**	**+1.4**
KKM	**Kota Kinabalu**	**71.21**	**285**	*e*P	**P**	**03 43 34.7**	**-1.0**
	comp=Z,64nm,0.6s						
PBKI	**Pangkalan Bun**	**71.64**	**275**	P	P	03 43 46.2	+8.0
SMPP	**San Manuel, Pa**	**72.25**	**297**	*e*P	**P**	**03 43 39.5**	**-2.2**
KPJI	**Karang Pucung**	**72.39**	**269**	P	**P**	**03 43 43.0**	**+0.3**
JOW	**Kunigami**	**72.47**	**310**	P	**P**	**03 43 42.9**	**0.0**
	comp=Z,1.7nm,0.3s,baz=130,slow=14,SNR=9.6						
JOW	**Kunigami**	**72.47**	**310**	*e*P	**P**	**03 43 42.9**	**0.0**
	comp=Z,30nm,1.1s						
INU	**Inuyama**	**72.60**	**322**	*e*P	**P**	**03 43 43.0**	**-0.4**
	comp=Z,30nm,0.8s						
CMJI	**Cimerak**	**72.67**	**269**	P	**P**	**03 43 43.9**	**-0.4**
MJAR	**Matsushiro Arr**	**72.81**	**324**	P	**P**	**03 43 43.5**	**-1.2**
	comp=Z,24nm,0.7s,baz=162,slow=5.7,SNR=33						
MAJO	**Matsushiro**	**72.81**	**324**	*e*P	**P**	**03 43 43.8**	**-0.8**
	comp=Z,27nm,0.7s						
MAJO	**Matsushiro**	**72.81**	**324**	*e*P	**P**	**03 43 43.8**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,27nm,0.7s						
MAT	**Matsushiro**	**72.81**	**324**	P	**P**	**03 43 43.4**	**-1.3**
MAT				S	**S**	**03 52 55.8**	**-1.1**
MJB9	**Matsu-Tunnel**	**72.81**	**324**	*e*P	**P**	**03 43 44.1**	**-0.6**
	comp=Z,28nm,0.7s						
SBUM	**Sibu**	**73.24**	**280**	*e*P	**P**	**03 43 47.3**	**-0.4**
	comp=Z,16nm,0.9s						
JCJI	**Jatiwangi**	**73.31**	**270**	P	**P**	**03 43 48.9**	**+0.8**
CISI	**Cisompet, Garu**	**73.33**	**269**	*e*P	**P**	**03 43 48.1**	**-0.3**
	comp=Z,178nm,0.8s						
CISI	**Cisompet, Garu**	**73.33**	**269**	P	**P**	**03 43 48.3**	**0.0**
LEM	**Lembang**	**73.79**	**269**	P	**P**	**03 43 51.8**	**+0.7**
	comp=Z,372nm,0.7s,baz=86,slow=6.0,SNR=23						
XMIS	**Christmas Isla**	**74.26**	**265**	*e*P	**P**	**03 43 54.9**	**+1.3**
	comp=Z,194nm,0.8s						
KSM	**Kuching**	**74.57**	**278**	*e*P	**P**	**03 43 54.4**	**-1.1**
	comp=Z,164nm,0.7s						
KIWB	**Kanaga Island**	**74.69**	**0**	*e*P	**P**	**03 43 53.7**	**-1.5**
SKJI	**Sukabumi**	**74.70**	**269**	P	**P**	**03 43 57.3**	**+1.1**
ADK	**Adak**	**74.72**	**0**	*e*P	**P**	**03 43 54.4**	**-0.9**
	comp=Z,64nm,0.7s						
ADK	**Adak**	**74.72**	**0**	*e*P	**P**	**03 43 54.4**	**-0.9**
ADK				pmax	pmax		
	comp=Z,64nm,0.7s						
JNU	**Nakatsue**	**74.74**	**317**	P	**P**	**03 43 55.4**	**-0.6**
	comp=Z,56nm,0.8s,baz=144,slow=0.4,SNR=16						
JNU	**Nakatsue**	**74.74**	**317**	*e*P	**P**	**03 43 55.6**	**-0.4**
	comp=Z,69nm,0.9s						
YOJ	**Yonaguni jima**	**74.91**	**305**	*e*P	**P**	**03 43 56.8**	**-0.2**
	comp=Z,159nm,1.2s						
YOJ				*e*pP	**pP**	**03 44 33.4**	**-3.5**
YOJ	**Yonaguni jima**	**74.91**	**305**	*e*P	**P**	**03 43 56.8**	**-0.2**
YOJ				*e**PP	**pP**	**03 44 33.4**	**-3.5**
YOJ				pmax	pmax		
	comp=Z,159nm,1.2s						
GSTR	**Great Sitkin T**	**74.93**	**1**	*e*P	**P**	**03 43 56.4**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**74.97**	**333**	*d i*P	**P**	**03 43 55.7**	**-1.2**
YUK				*e*		03 44 08.2	
YUK				*i* *PP	pP	03 44 25.7	-11
YUK				*e*		03 46 43.4	
YUK				*e*PPP	PPP	03 48 31.2	
YUK				*e*S	**S**	**03 53 23.7**	**+3.1**
YUK				*e*		03 53 55.4	
YUK				*i* *SS	**pS**	**03 54 16.0**	**+6.9**
YUK				*e*SS	**SS**	**03 58 15.1**	**+1.6**
YUK				pmax	pmax		
	comp=Z,244nm,0.6s						
YUK				pmax	pmax		
	comp=Z,275nm,1.1s						
KUR	**Kuril'sk**	**75.16**	**335**	*d i*P	**P**	**03 43 57.0**	**-1.0**
KUR				*e*		03 46 54.0	
KUR				*i* PPP	PPP	03 48 42.9	
KUR				*i* S	**S**	**03 53 25.8**	**+3.2**
KUR				*e*SS	**SS**	**03 58 24.2**	**+7.9**
KUR				pmax	pmax		
	comp=Z,900nm,5.5s						
KUR				MLR	MLR		
	comp=Z,400nm,15.0s						
KUR				MLR	MLR		
	comp=N,400nm,12.0s						
TPI	**Tanjungpandan**	**75.31**	**273**	P	**P**	**03 43 59.5**	**-0.2**
SBJI	**Serang**	**75.42**	**270**	P	**P**	**03 44 03.6**	**+3.3**
TWG	**Pinlang**	**75.47**	**303**	*e*P	**P**	**03 43 58.4**	**-2.0**
	comp=N,285nm,0.6s						
YULB	**Yu-li**	**75.61**	**303**	*e*P	**P**	**03 43 60.0**	**-1.2**
	comp=N,33nm,0.8s						
CGJI	**Cibinong**	**75.64**	**269**	P	**P**	**03 44 01.2**	**-0.3**
NACB	**Ninganchiao**	**75.81**	**304**	*e*P	**P**	**03 44 00.2**	**-2.1**
	comp=N,111nm,0.9s						
SMY	**Shemya**	**75.95**	**355**	*e*P	**P**	**03 44 01.6**	**-0.7**
	comp=N,128nm,1.0s						
SMY	**Shemya**	**75.95**	**355**	*e*P	**P**	**03 44 01.6**	**-0.7**
SMY				pmax	pmax		
	comp=Z,128nm,1.0s						
SSLB	**Suanglung**	**76.09**	**304**	*e*P	**P**	**03 44 02.2**	**-1.7**
	comp=Z,97nm,0.6s						
NIKH	**Nikolski High**	**76.15**	**5**	*e*P	**P**	**03 44 01.9**	**-1.6**
	comp=Z,372nm,0.8s						
YHNB	**Yeheng**	**76.25**	**305**	*e*P	**P**	**03 44 04.0**	**-0.8**
	comp=Z,62nm,0.8s						
TATO	**Taipei**	**76.34**	**305**	*e*P	**P**	**03 44 05.3**	**+0.1**
	comp=Z,91nm,0.7s						
TATO				*e*pP	**pP**	**03 44 40.8**	**-4.5**
ASAJ	**Asahikawa**	**76.43**	**331**	P	**P**	**03 44 05.5**	**+0.3**
	comp=Z,42nm,0.8s,baz=229,slow=8.6,SNR=24						
BLSI	**Bandar Lampung**	**76.52**	**270**	P	**P**	**03 44 07.5**	**+0.9**
PPBI	**Pangkal Pinang**	**76.93**	**273**	P	**P**	**03 44 10.2**	**+1.3**
KLI	**Kotabumi**	**77.07**	**270**	P	**P**	**03 44 11.1**	**+1.5**
KASI	**Kota Agung**	**77.15**	**269**	P	**P**	**03 44 09.6**	**-0.5**
SKR	**Severo-Kuril’s**	**77.22**	**343**	*e*P	**P**	**03 44 06.9**	**-2.6**
SKR				*e*		03 44 30.1	
SKR				*e*S	**S**	**03 53 40.7**	**-4.2**
SKR				*e**SS	pS	03 54 43.7	+10
SKR				pmax	pmax		
	comp=Z,300nm,6.0s						
SKR				pmax	pmax		
	comp=Z,58nm,1.6s						
SKR				pmax	pmax		
	comp=Z,500nm,5.3s						
SKR				MLR	MLR		
	comp=Z,400nm,17.0s						
SKR				MLR	MLR		
	comp=Z,500nm,14.0s						
UNV	**Unalaska Valle**	**77.23**	**6**	*e*P	**P**	**03 44 08.5**	**-1.0**
	comp=Z,109nm,0.8s						
KLSI		**77.25**	**270**	P	**P**	**03 44 09.7**	**-0.9**
AKUT	**Akutan**	**77.60**	**7**	*e*P	**P**	**03 44 10.8**	**-0.8**
	comp=Z,122nm,0.8s						
LWLI	**Liwa**	**77.75**	**270**	P	**P**	**03 44 13.7**	**+0.2**
MDSI	**Maura Dua**	**77.84**	**270**	P	**P**	**03 44 13.9**	**0.0**
QZH	**Quanzhou**	**78.53**	**303**	⇓*i*P	**P**	**03 44 16.9**	**-0.5**
QZH				pP	**pP**	**03 44 58.6**	**+0.9**
QZH				sP	**sP**	**03 45 15.5**	**+0.3**
QZH				S	**S**	**03 53 56.1**	**-3.9**
QZH				pmax	pmax		
	comp=Z,700nm,6.8s						
QZH				LR	LR		
	comp=Z,560nm,22.3s						
PMSA	**Palmer Station**	**78.55**	**156**	*e*P	**P**	**03 44 18.3**	**+1.5**
	comp=Z,57nm,0.8s						
PMSA	**Palmer Station**	**78.55**	**156**	*e*P	**P**	**03 44 17.5**	**+0.7**
YSS	**Yuzh-Sakhalins**	**78.61**	**333**	*e*P	**P**	**03 44 17.6**	**+0.2**
	comp=Z,106nm,1.2s						
YSS	**Yuzh-Sakhalins**	**78.61**	**333**	κ *i*P	**P**	**03 44 17.5**	**+0.2**
YSS				*e**SP	**pP**	**03 44 57.5**	**+0.1**
YSS				*e*S	**S**	**03 54 02.7**	**+2.7**
YSS				*e*PS	**pS**	**03 54 48.2**	**-1.1**
YSS				pmax	pmax		
	comp=Z,70nm,1.1s						
YSS				pmax	pmax		
	comp=Z,600nm,16.0s						
LHSI	**Lahat**	**78.69**	**271**	P	**P**	**03 44 19.0**	**+0.4**
PET	**Petropavlovsk**	**78.73**	**345**	*e*P	**P**	**03 44 16.6**	**-1.2**
	comp=Z,34nm,0.9s						
PET	**Petropavlovsk**	**78.73**	**345**	*d i*P	**P**	**03 44 14.0**	**-3.8**
PET				*i* S	**S**	**03 53 57.9**	**-3.0**
PET				*i* *SS	**sS**	**03 55 08.0**	**-2.9**
PET				*e*SS	**SS**	**03 59 06.3**	**-3.5**
PET				pmax	pmax		
	comp=Z,500nm,7.8s						
PET				pmax	pmax		
	comp=Z,45nm,0.9s						
PET				pmax	pmax		
	comp=Z,500nm,15.9s						
SCZ2	**Santa Cruz Isl**	**78.87**	**46**	P	**P**	**03 44 20.4**	**+1.3**
	baz=232						
SCI2	**San Clemente I**	**78.98**	**47**	P	**P**	**03 44 20.5**	**+0.8**
	baz=233						
PEA0B	**Petropavlovsk-**	**79.03**	**345**	*e*P	**P**	**03 44 18.8**	**-0.7**
	comp=Z,93nm,1.1s						
PETK	**Petropavlovsk-**	**79.03**	**345**	P	**P**	**03 44 18.6**	**-0.9**
	comp=Z,38nm,0.7s,baz=124,slow=7.4,SNR=44						
PETK				PKiKP	**PKiKP**	**03 49 53.0**	**+1.0**
	comp=Z,3.2nm,0.6s,baz=104,slow=4.5,SNR=4.9						
PEA1	**Petropavlovsk-**	**79.03**	**345**	*e*P	**P**	**03 44 18.6**	**-0.9**
SBC	**Santa Barbara**	**79.09**	**45**	P	**P**	**03 44 21.6**	**+1.3**
	baz=232						
PKM	**Mcpherson Peak**	**79.30**	**45**	P	**P**	**03 44 22.8**	**+1.2**
	baz=232,SNR=23						
BLG	**Laguna Peak, P**	**79.31**	**46**	P	**P**	**03 44 22.1**	**+0.6**
	baz=233						
CIS	**Catalina Islan**	**79.32**	**47**	P	**P**	**03 44 22.2**	**+0.6**
	baz=233						
MAW	**Mawson**	**79.34**	**200**	P	**P**	**03 44 22.7**	**+1.7**
	comp=Z,159nm,1.1s,baz=134,slow=5.9,SNR=183						
MAW	**Mawson**	**79.34**	**200**	*e*P	**P**	**03 44 22.8**	**+1.7**
	comp=Z,31nm,0.8s						
MAW	**Mawson**	**79.34**	**200**	P	**P**	**03 44 22.7**	**+1.7**
	baz=79,SNR=207						
MAW	**Mawson**	**79.34**	**200**	*e*P	**P**	**03 44 22.8**	**+1.7**
MAW				pmax	pmax		
	comp=Z,31nm,0.8s						
KSRS	**Korea Array**	**79.39**	**319**	P	**P**	**03 44 21.9**	**+0.2**
	comp=Z,19nm,0.9s,baz=137,slow=6.0,SNR=22						
KSRS	**Korea Array**	**79.39**	**319**	P	**P**	**03 44 22.0**	**+0.2**
KS15	**Wonju Array Si**	**79.41**	**318**	*e*P	**P**	**03 44 22.3**	**+0.4**
	comp=Z,49nm,1.1s						
JMBI	**JAMBI**	**79.43**	**273**	P	**P**	**03 44 24.5**	**+1.9**
SAO	**San Andreas Ge**	**79.43**	**42**	*e*P	**P**	**03 44 23.2**	**+1.1**
	comp=Z,43nm,0.9s						
SAO	**San Andreas Ge**	**79.43**	**42**	*e*P	**P**	**03 44 23.2**	**+1.1**

SAO				pmax	pmax		
	comp=Z,43nm,0.9s						
MCCM	Marconi Confer	79.44	41	*e*P	P	03 44 23.3	+1.3
	comp=Z,23nm,0.9s						
SMMC	Simmler	79.45	44	P	P	03 44 23.6	+1.3
	baz=232						
SDPT	Sand Point	79.48	10	*e*P	P	03 44 21.6	-0.2
	comp=Z,328nm,0.8s						
FMP	Fort Macarthur	79.59	46	P	P	03 44 23.6	+0.6
	baz=233						
TPRI	Tanjung Pinang	79.63	275	P	P	03 44 25.9	+2.3
OSI	Osito Audit: C	79.85	46	*e*P	P	03 44 25.8	+1.4
	comp=Z,52nm,0.9s						
OSI	Osito Audit: C	79.85	46	P	P	03 44 25.3	+0.9
	baz=233						
HOPS	Hopland Field	79.88	40	*e*P	P	03 44 25.6	+1.2
	comp=Z,43nm,0.9s						
DECC	Green Verdugo	79.89	46	P	P	03 44 25.0	+0.4
	baz=233,SNR=5.1						
TEY	Ternei	79.89	329	⇑*e*P	P	03 44 24.8	+0.5
TEY				pmax	pmax		
	comp=N,10.0nm,1.6s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
109C	Camp Elliot, M	79.91	48	P	P	03 44 25.3	+0.6
	baz=234						
CPE	Camp Elliot	79.91	48	*e*P	P	03 44 25.5	+0.8
	comp=Z,26nm,1.1s						
GDXM	Geysers	79.92	40	*e*P	P	03 44 26.6	+1.8
	comp=Z,26nm,1.1s						
PASC	Pasadena Art C	79.94	46	*e*P	P	03 44 25.6	+0.7
	comp=Z,55nm,0.8s						
SSE	Sheshan	79.99	310	P	P	03 44 27.3	+2.1
SSE				S	S	03 54 20.0	+4.8
SSE				pmax	pmax		
	comp=Z,260nm,5.3s						
SSE				LR	LR		
	comp=Z,200nm,25.1s						
SSE				LR	LR		
	comp=Z,210nm,20.8s						
KCPM	Cahto Peak	80.04	39	*e*P	P	03 44 26.8	+1.4
	comp=Z,34nm,1.0s						
MWC	Mount Wilson	80.05	46	*e*P	P	03 44 26.1	+0.4
	comp=Z,62nm,0.8s						
MWC	Mount Wilson	80.05	46	*e*P	P	03 44 26.1	+0.4
MWC				pmax	pmax		
	comp=Z,62nm,0.8s						
BAR	Barrett	80.08	48	*e*P	P	03 44 26.6	+0.9
	comp=Z,22nm,0.8s						
ARVC	Arvin	80.09	45	P	P	03 44 26.5	+0.9
	baz=233,SNR=14						
SPIA	Saint Paul Isl	80.23	4	*e*P	P	03 44 26.1	+0.3
	comp=Z,504nm,1.1s						
MURC	Murrieta	80.26	47	P	P	03 44 27.3	+0.7
	baz=234,SNR=18						
SRIG	Santa Rosalia	80.29	55	*e*P	P	03 44 27.4	+0.5
	comp=Z,90nm,1.0s						
KMRM	Mail Ridge	80.32	39	*e*P	P	03 44 28.5	+1.7
	comp=Z,140nm,0.9s						
BFSC	Mount Baldy Ra	80.33	46	P	P	03 44 27.6	+0.5
	baz=234,SNR=17						
VES	Vestal, Richgr	80.36	44	P	P	03 44 27.7	+0.7
	baz=232,SNR=30						
MONP2	Monument Peak	80.37	48	P	P	03 44 28.4	+0.9
	baz=234,SNR=23						
IKP	In-Ko-Pah, Jac	80.45	48	P	P	03 44 28.7	+0.9
	baz=235,SNR=24						
VOG	Valley Oaks Go	80.46	44	P	P	03 44 28.0	+0.5
	baz=232						
EDW2	Edwards Air Fo	80.49	46	P	P	03 44 28.8	+0.9
	baz=233,SNR=67						
JCC	Jacoby Creek,	80.53	38	*e*P	P	03 44 29.5	+1.7
	comp=Z,70nm,1.2s						
MYKOM	Kota Tinggi	80.59	276	*e*P	P	03 44 29.8	+1.0
	comp=Z,109nm,0.8s						
ISA	Isabella, Lake	80.64	45	*e*P	P	03 44 29.8	+1.1
	comp=Z,107nm,1.0s						
ISA	Isabella, Lake	80.64	45	*e*P	P	03 44 29.8	+1.1
ISA				pmax	pmax		
	comp=Z,107nm,1.0s						
ISA	Isabella, Lake	80.64	45	P	P	03 44 29.8	+1.1
	baz=233,SNR=55						
DLV	T Lat	80.65	287	*e*P	P	03 44 30.8	+1.4
	comp=Z,52nm,0.7s						
HKPS	Hong Kong Po S	80.67	299	*e*P	P	03 44 29.5	+0.5
	comp=Z,137nm,0.9s						
CHGN	Chignik	80.73	10	*e*P	P	03 44 28.5	+0.1
	comp=Z,225nm,1.0s						
KHMM	Horse Mountain	80.74	38	*e*P	P	03 44 30.7	+1.5
	comp=Z,31nm,0.9s						
PFO	Pinyon Flats O	80.77	47	P	P	03 44 29.5	+0.1
	comp=Z,27nm,0.9s,baz=262,slow=3.7,SNR=33						
PFO	Pinyon Flats O	80.77	47	*e*P	P	03 44 30.3	+0.9
	comp=Z,41nm,0.9s						
PFO	Pinyon Flats O	80.77	47	*e*P	P	03 44 30.3	+0.9
PFO				pmax	pmax		
	comp=Z,41nm,0.9s						
PFO	Pinyon Flats O	80.77	47	P	P	03 44 30.2	+0.7
	baz=234,SNR=22						
O02D	Mt. Diablo Mer	80.82	39	P	P	03 44 31.2	+1.6
	baz=229,SNR=42						
SWSC	Sam W. Stewart	80.83	48	P	P	03 44 30.5	+0.8
	baz=235,SNR=12						
BBRC	Big Bear Solar	80.83	47	P	P	03 44 30.7	+0.7
	baz=234						
GO10	Punta Arenas	80.88	144	*e*P	P	03 44 32.3	+2.5
	comp=Z,558nm,1.1s						
CMB	Columbia Colle	80.89	42	*e*P	P	03 44 30.6	+0.7
	comp=Z,23nm,0.8s						
CMB	Columbia Colle	80.89	42	*e*P	P	03 44 30.6	+0.7
CMB				pmax	pmax		
	comp=Z,23nm,0.8s						
GO09	Cerro Castillo	81.00	142	*e*P	P	03 44 32.3	+2.0
	comp=Z,321nm,1.4s						
LRMC	Laurel Mtn Rad	81.05	45	P	P	03 44 31.8	+0.9
	baz=233,SNR=18						
KRMB	Red Mountain	81.07	38	*e*P	P	03 44 32.8	+2.0
	comp=Z,74nm,1.3s						
AFDM	Forest Hills D	81.11	41	*e*P	P	03 44 31.7	+0.7
	comp=Z,28nm,1.2s						
RRX	Edison Barstow	81.14	46	P	P	03 44 32.0	+0.7
	baz=234						
ORV	Oroville	81.17	40	*e*P	P	03 44 32.2	+0.9
	comp=Z,20nm,0.8s						
ORV	Oroville	81.17	40	*e*P	P	03 44 32.2	+0.9
ORV				pmax	pmax		
	comp=Z,20nm,0.8s						
WDC	Whiskeytown Da	81.22	39	*e*P	P	03 44 32.7	+1.2
	comp=Z,33nm,0.9s						
WDC	Whiskeytown Da	81.22	39	*e*P	P	03 44 32.7	+1.2
WDC				pmax	pmax		
	comp=Z,33nm,0.9s						
BELC	Belle Mtn. Jos	81.30	47	P	P	03 44 33.3	+1.0
	baz=235,SNR=48						
CWC	Cottonwood Cre	81.36	44	P	P	03 44 33.4	+0.9
	baz=233						
N02D	Trinity Center	81.39	39	P	P	03 44 34.0	+1.5
	baz=229,SNR=18						
MDPB	Devils Postpil	81.45	43	*e*P	P	03 44 34.0	+0.8
	comp=Z,41nm,1.1s						
O03E	Paynes Creek	81.47	40	P	P	03 44 33.5	+0.6
	baz=230,SNR=30						
BC3	Big Chuckawall	81.47	48	P	P	03 44 34.3	+1.2
	baz=235,SNR=32						
OMMB	Old Mammoth Mi	81.49	43	*e*P	P	03 44 34.3	+0.9
	comp=Z,48nm,1.4s						
MPMC	Manual Prospec	81.52	45	P	P	03 44 34.4	+0.9
	baz=233,SNR=62						
GSC	Goldstone, Bar	81.52	46	*e*P	P	03 44 34.3	+0.9
	comp=Z,65nm,1.1s						
GSC	Goldstone, Bar	81.52	46	*e*P	P	03 44 34.3	+0.9
GSC				pmax	pmax		
	comp=Z,65nm,1.1s						
GSC	Goldstone, Bar	81.52	46	P	P	03 44 34.2	+0.8
	baz=234,SNR=35						
HEC	Hector,Ludlow	81.56	47	P	P	03 44 34.4	+0.8
	baz=234,SNR=70						
GLA	Glamis	81.56	49	*e*P	P	03 44 34.9	+1.4
	comp=Z,102nm,1.1s						
GLA	Glamis	81.56	49	*e*P	P	03 44 34.9	+1.4
GLA				pmax	pmax		
	comp=Z,102nm,1.1s						
GLA	Glamis	81.56	49	P	P	03 44 34.9	+1.4
	baz=235,SNR=25						
M02C	Callahan	81.58	38	P	P	03 44 35.1	+1.6
	baz=229,SNR=14						
DAC	Darwin (Calif)	81.58	45	*e*P	P	03 44 36.6	+2.8
	comp=Z,17nm,0.9s						
USRK	Ussuriysk Ar.	81.59	326	P	P	03 44 34.0	+0.6
	comp=Z,66nm,0.7s,baz=126,slow=2.4,SNR=76						
USA0B	Ussuriysk Arra	81.59	326	*e*P	P	03 44 34.1	+0.7
	comp=Z,106nm,0.9s						
MLAC	Mammoth, Mammo	81.60	43	P	P	03 44 35.0	+1.1
	baz=232,SNR=6.8						
TIN	Tinemaha, Big	81.64	44	P	P	03 44 35.1	+1.1
	baz=233,SNR=7.4						
GZH	Guangzhou	81.70	299	P	P	03 44 35.4	+1.0
GZH				S	S	03 54 35.3	+2.0
GZH				pmax	pmax		
	comp=Z,960nm,6.7s						
SDSI	Sungai Dareh	81.74	273	P	P	03 44 34.2	-0.7
SII	Sitkinak Islan	81.75	13	*e*P	P	03 44 34.7	+0.8
	comp=Z,265nm,1.0s						
WAKR	Walker	81.77	42	*e*P	P	03 44 35.8	+1.1
	comp=Z,48nm,1.1s						
TYV	Tymovskoe	81.78	336	*e*P	P	03 44 34.1	0.0
TYV				*e*S	S	03 54 34.9	+2.0
TYV				pmax	pmax		
	comp=Z,71nm,1.3s						
TYV				pmax	pmax		
	comp=Z,600nm,4.9s						
TYV				smax	smax		
	comp=E,500nm,7.0s						
YBH	Yreka Blue Hor	81.88	38	P	P	03 44 36.0	+0.9
	comp=E,20nm,0.8s,baz=65,slow=1.0,SNR=26						
YBH	Yreka Blue Hor	81.88	38	*e*P	P	03 44 36.4	+1.3
	comp=E,32nm,0.9s						
YBH	Yreka Blue Hor	81.88	38	*e*P	P	03 44 36.4	+1.3
YBH				pmax	pmax		
	comp=Z,32nm,0.9s						
IRM	Iron Mountain	81.97	48	P	P	03 44 37.0	+1.3
	baz=235,SNR=57						
K02D	Willamette Mer	81.98	37	P	P	03 44 36.9	+1.3
	baz=228						
GMRC	Granite Mounta	81.98	47	P	P	03 44 36.8	+0.9
	baz=235,SNR=37						
PNTR	Pine Nut	82.03	42	*e*P	P	03 44 37.1	+1.0
	comp=Z,72nm,0.9s						
BEKR	Beckworth	82.05	41	*e*P	P	03 44 36.9	+0.8
	comp=Z,38nm,1.2s						
VCNR	Virginia City	82.12	41	*e*P	P	03 44 37.5	+0.9
	comp=Z,35nm,0.9s						
113A	Mohawk Valley,	82.14	49	*e*P	P	03 44 37.5	+1.0
	comp=Z,50nm,0.9s						
J01E	Myrtle Point	82.15	36	P	P	03 44 37.5	+1.3
	baz=228,SNR=6.4						
HSIG		82.16	54	*e*P	P	03 44 36.9	+0.2
	comp=Z,44nm,0.8s						
GRAC	Grapevine Rang	82.16	44	P	P	03 44 37.8	+1.2
	baz=233,SNR=71						
Y12C	Blythe	82.17	48	*e*P	P	03 44 37.8	+1.2
	comp=Z,70nm,0.9s						
Y12C	Blythe	82.17	48	P	P	03 44 37.8	+1.2
	baz=236,SNR=41						
FURC	Furnace Creek,	82.17	45	P	P	03 44 37.4	+0.9
	baz=234,SNR=32						
NJ2	Nanjing	82.17	310	⇓P	P	03 44 36.8	+0.1
NJ2				pP	pP	03 45 19.1	+1.9
NJ2				sP	sP	03 45 36.8	+2.2
NJ2				PP	PP	03 47 45.3	-2.4
NJ2				S	S	03 54 38.8	+1.0
NJ2				SS	SS	04 00 06.9	+4.9
NJ2				pmax	pmax		
	comp=Z,62nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,850nm,11.4s						
TUQ	Turquoise Moun	82.18	46	P	P	03 44 37.7	+0.9
	baz=234,SNR=46						
YERR	Yerington	82.18	42	*e*P	P	03 44 37.6	+0.7
	comp=Z,39nm,1.0s						
SHOC	Shoshone, Teco	82.22	46	P	P	03 44 37.7	+0.8
	baz=234,SNR=39						
HUMO	Hull Mountain	82.31	37	*e*P	P	03 44 38.9	+1.7
	comp=Z,64nm,1.3s						
214A	Organ Pipe Nat	82.37	51	P	P	03 44 38.9	+1.2
	baz=237,SNR=17						
RYN	Ryan	82.41	42	*e*P	P	03 44 38.9	+0.9
	comp=Z,15nm,1.0s						
M04C	Macdoel	82.41	38	P	P	03 44 38.8	+0.9
	baz=230,SNR=9.4						
NV01	Mina Array Sit	82.42	43	*e*P	P	03 44 38.9	+0.7
NVAR	Mina Array Bea	82.42	43	P	P	03 44 38.9	+0.7
	comp=Z,18nm,0.7s,baz=223,slow=7.8,SNR=112						
NVAR				PKKPbc	PKKPbc	04 03 01.1	-4.0
	comp=Z,0.6nm,0.7s,baz=86,slow=2.1,SNR=3.9						
NVAR				PKPPKP	P'P'df	04 11 10.5	+2.6
	comp=Z,2.1nm,0.8s,baz=105,slow=1.8,SNR=11						
L04D	Klamath Falls	82.43	38	P	P	03 44 39.0	+1.0
	baz=229,SNR=11						
NV11	Mina Array Sit	82.52	43	*e*P	P	03 44 39.3	+0.7
	comp=Z,5.0nm,1.3s						
LDFC	Landfair	82.52	47	*e*P	P	03 44 40.1	+1.5
	comp=Z,162nm,0.9s						
PAHR	Pah Rah Range	82.54	41	*e*P	P	03 44 39.4	+0.8
	comp=Z,43nm,1.0s						
OHAK	Old Harbor	82.55	13	*e*P	P	03 44 38.2	+0.2
	comp=Z,160nm,1.5s						
BKNI	Bangkinang	82.59	274	P	P	03 44 42.2	+2.9
PDSI	Padang	82.64	272	P	P	03 44 38.5	-1.1
QIZ	Qiongzhong	82.66	294	*e*P	P	03 44 41.1	+1.6
	comp=Z,37nm,0.9s						
QIZ	Qiongzhong	82.66	294	P	P	03 44 38.8	-0.7
QIZ				sP	sP	03 45 39.3	+1.7
QIZ				S	S	03 54 45.6	+2.4
QIZ				sS	sS	03 55 53.8	-1.0
QIZ				pmax	pmax		
	comp=Z,630nm,10.2s						
NEE2	Needles Airpor	82.68	47	P	P	03 44 40.5	+1.2
	baz=235						
PDMCI	Parker Dam,Lak	82.74	48	P	P	03 44 40.9	+1.3
	baz=236,SNR=45						
I03D	Drain, OR	82.82	36	P	P	03 44 41.0	+1.3
	baz=228,SNR=5.9						
I02D	Swisshome	82.82	36	P	P	03 44 41.2	+1.5
	baz=228						
TPNV	Topopah Spring	82.85	45	*e*P	P	03 44 41.3	+1.0
	comp=Z,83nm,1.4s						
TPNV	Topopah Spring	82.85	45	P	P	03 44 41.3	+1.0
	baz=234,SNR=44						
KVN	Kaiserville	82.93	42	*e*P	P	03 44 41.2	+0.6
	comp=Z,41nm,1.0s						
KVN	Kaiserville	82.93	42	*e*P	P	03 44 41.3	+0.6
KVN				pmax	pmax		
	comp=Z,41nm,1.0s						
K04D	Chiloquin, OR	83.00	38	P	P	03 44 41.9	+1.0
	baz=230						
MDJ	Mudanjiang	83.14	325	*e*P	P	03 44 42.0	+0.6
	comp=Z,97nm,0.9s						
MDJ	Mudanjiang	83.14	325	P	P	03 44 41.8	+0.4
MDJ				pP	pwP	03 45 25.4	+0.2
MDJ				S	S	03 54 50.0	+3.0
MDJ				pmax	pmax		
	comp=Z,69nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,1µm,6.7s						
J04D	Umpqua Nationa	83.20	37	P	P	03 44 43.2	+1.2
	baz=229,SNR=15						
KDAK	Kodiak Island	83.21	13	P	P	03 44 41.6	+0.2
	comp=Z,28nm,0.6s,baz=196,slow=3.7,SNR=32						
KDAK	Kodiak Island	83.21	13	*e*P	P	03 44 42.1	+0.7
	comp=Z,124nm,1.1s						
KDAK	Kodiak Island	83.21	13	*e*P	P	03 44 42.1	+0.7
KDAK				pmax	pmax		
	comp=Z,124nm,1.1s						
SHPR	Sheep Range	83.31	46	*e*P	P	03 44 43.8	+1.2
	comp=Z,22nm,1.0s						
Y14A	Wickenburg	83.32	49	*e*P	P	03 44 43.8	+1.1
	comp=Z,74nm,0.9s						
W13A	Hualapai Mount	83.36	48	*e*P	P	03 44 44.3	+1.3
	comp=Z,49nm,0.9s						
MOD	Modoc Plateau	83.37	39	*e*P	P	03 44 43.8	+0.9
	comp=Z,41nm,0.8s						
I04A	Tendick Farm,	83.39	37	P	P	03 44 43.5	+0.7
	baz=229,SNR=17						
H04D	Lebanon	83.69	36	P	P	03 44 45.5	+1.3
	baz=229,SNR=12						
J05D	Fort Rock, OR	83.72	37	P	P	03 44 45.8	+1.3
	baz=230,SNR=38						
SISI	Saibi	83.74	271	P	P	03 44 45.6	+0.4
G03D	McMinnville, O	83.87	35	P	P	03 44 46.2	+1.1
	baz=228,SNR=7.0						
TUC	Tucson	84.01	51	*e*P	P	03 44 47.7	+1.5
	comp=Z,110nm,0.9s						
TUC	Tucson	84.01	51	*e*P	P	03 44 47.7	+1.5
TUC				pmax	pmax		
	comp=Z,110nm,0.9s						
TUC	Tucson	84.01	51	P	P	03 44 47.9	+1.6
	baz=238						
R11A	Troy Canyon, C	84.09	44	*e*P	P	03 44 47.1	+0.4
	comp=Z,14nm,1.0s						
R11A	Troy Canyon, C	84.09	44	P	P	03 44 47.1	+0.4
	baz=234,SNR=32						
DL2	Dalian	84.19	317	⇓*i*P	P	03 44 45.8	-1.1
DL2				pP	pP	03 45 27.3	-0.4
DL2				sP	sP	03 45 41.9	-3.2
DL2				PP	PP	03 48 00.4	-3.6
DL2				SKS	SKSac	03 54 49.5	-4.9
DL2				S	S	03 54 55.0	-2.8
DL2				pmax	pmax		
	comp=Z,73nm,0.9s						
DL2				pmax	pmax		
	comp=Z,560nm,8.5s						
PINE	Pine Mountain	84.20	37	*e*P	P	03 44 48.3	+1.2
	comp=Z,55nm,0.9s						
GRNR	Gornyy	84.22	332	*e*P	P	03 44 47.6	+0.9
GRNR				*e*		03 48 03.2	
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
IPM	Ipoh	84.25	277	*e*P	P	03 44 48.0	+0.2
	comp=Z,224nm,0.8s						
BMN	Battle Mountai	84.30	42	*e*P	P	03 44 48.3	+0.7
	comp=Z,46nm,0.7s						
BMN	Battle Mountai	84.30	42	*e*P	P	03 44 48.3	+0.7
BMN				pmax	pmax		
	comp=Z,46nm,0.7s						
I05D	Terrebonne, OR	84.33	37	P	P	03 44 48.6	+1.0
	baz=230						
F04D	Rainier, OR	84.58	35	P	P	03 44 50.2	+1.5
	baz=228						
WHN	Wuhan	84.65	306	⇓*i*P	P	03 44 49.6	+0.3
WHN				pP	pP	03 45 28.8	-1.3
WHN				PP	PP	03 48 07.3	-0.6
WHN				S	SKSac	03 54 56.0	-1.7
WHN				pmax	pmax		
	comp=Z,100nm,1.1s						
WHN				pmax	pmax		
	comp=Z,1µm,5.8s						
WHN				LR	LR		
	comp=Z,360nm,8.6s						
WHN				LR	LR		
	comp=Z,860nm,15.1s						
WHN				LR	LR		
	comp=Z,980nm,18.1s						
WVOR	Wild Horse Val	84.67	39	*e*P	P	03 44 50.2	+0.8
	comp=Z,53nm,1.0s						
WVOR	Wild Horse Val	84.67	39	*e*P	P	03 44 50.2	+0.8
WVOR				pmax	pmax		
	comp=Z,53nm,1.0s						
X16A	Lo Mia Camp, P	84.67	49	*e*P	P	03 44 51.1	+1.5
	comp=Z,82nm,0.9s						
SNY	Shenyang	84.74	320	⇓P	P	03 44 49.3	-0.2
SNY				S	SKSac	03 54 57.1	-0.6
SNY				pmax	pmax		
	comp=Z,750nm,7.3s						
SNY				LR	LR		
	comp=Z,630nm,20.0s						
SNY				LR	LR		
	comp=Z,320nm,23.4s						
SNY				LR	LR		
	comp=Z,1µm,38.4s						
LCMT	Little Creek M	84.86	46	*e*P	P	03 44 50.6	+0.2
	comp=Z,44nm,1.0s						
CN2	Changchun	84.88	322	*e*P	P	03 44 49.3	-0.9
CN2				*e*pP	pP	03 45 29.3	-1.7
CN2				*e*PP	PP	03 48 09.8	+0.3
CN2				SKS	SKSac	03 54 55.0	-3.5
CN2				*e*sS	sS	03 56 13.0	-2.9
CN2				*e*SS	SS	04 00 42.8	+1.3
CN2				pmax	pmax		
	comp=Z,130nm,1.5s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,480nm,22.0s						
CN2				LR	LR		
	comp=Z,390nm,22.0s						
CN2				LR	LR		
	comp=Z,530nm,22.0s						
KULM	Kulim	84.92	278	*e*P	P	03 44 51.6	+0.5
	comp=Z,103nm,0.7s						
G05D	Wamic, OR	84.93	36	P	P	03 44 51.1	+0.7
	baz=230						
NLWA	Neilton Lookou	85.01	33	*e*P	P	03 44 52.6	+1.8
	comp=Z,65nm,1.2s						
CCUT	Cedar City	85.08	46	*e*P	P	03 44 53.0	+1.3
	comp=Z,40nm,0.9s						
CNPM	China Poot	85.10	13	*e*P	P	03 44 51.2	+0.3
	comp=Z,99nm,0.8s						
E04D	Cinebar	85.12	34	P	P	03 44 52.7	+1.4
	baz=229						
HOM	Homer	85.14	13	*e*P	P	03 44 51.9	+0.8
	comp=Z,253nm,0.9s						
HPIG		85.14	58	*e*P	P	03 44 52.1	0.0
	comp=Z,36nm,0.8s						
KNB	Kanab	85.14	46	*e*P	P	03 44 53.3	+1.3
	comp=Z,36nm,0.9s						
U15A	North Rim	85.17	47	*e*P	P	03 44 53.5	+1.3
	comp=Z,80nm,1.0s						
I07A	Izee	85.19	38	*e*P	P	03 44 53.3	+1.4
	comp=Z,27nm,1.1s						
KLR	Kul'dur	85.20	329	P	P	03 44 52.0	+0.3
	comp=Z,26nm,0.8s,baz=51,slow=0.8,SNR=48						
KLR				PKKP	PKKPdf	04 02 53.4	+1.8
	comp=Z,1.9nm,0.9s,baz=312,slow=3.6,SNR=4.5						
F05D	White Salmon	85.27	35	P	P	03 44 52.9	+0.8
	baz=230						
SZCU	Shurtz Canyon	85.29	46	*e*P	P	03 44 53.9	+1.2
	comp=Z,43nm,1.0s						
WUAZ	Wupatki	85.31	48	*e*P	P	03 44 54.0	+1.2
	comp=Z,46nm,1.1s						
WUAZ	Wupatki	85.31	48	P	P	03 44 54.0	+1.2
	baz=237						
PSUT	Pine Spring	85.31	45	*e*P	P	03 44 53.5	+0.7
	comp=Z,18nm,0.8s						
J08A	Circle Bar Ran	85.33	39	*e*P	P	03 44 53.3	+0.7
	comp=Z,51nm,1.3s						
DIB	Dawson Inlet,	85.34	25	*e*P	P	03 44 53.7	+1.5
	comp=Z,55nm,1.0s						
SNAA	Sanae	85.34	178	P	P	03 44 52.4	+0.1
SNAA	Sanae	85.34	178	PKKP	PKKPbc	04 02 55.6	-2.3
SNAA				SKS	SKSac	03 55 01.5	+0.4
SNAA	Sanae	85.34	178	PKKPbc	PKKPbc	04 02 54.9	-3.1
	comp=Z,3.0nm,0.7s,baz=17,slow=0.5,SNR=18						
SNAA	Sanae	85.34	178	*e*P	P	03 44 52.2	-0.1
	comp=Z,76nm,1.1s						
SNAA	Sanae	85.34	178	*e*P	P	03 44 52.2	-0.1
SNAA				pmax	pmax		
	comp=Z,76nm,1.1s						
BRLK	Bradley Lake	85.39	13	*e*P	P	03 44 52.5	+0.1
	comp=Z,96nm,0.8s						
D04E	Lakebay	85.43	34	P	P	03 44 54.8	+2.0
	baz=229						
VNA3	Neumayer Olymp	85.45	176	P	P	03 44 52.8	+0.1
VNA3	Neumayer Olymp	85.45	176	PKKP	PKKPbc	04 02 56.1	-1.6
VNA3				S	S	03 55 09.6	+0.2
MOBC	Moresby Island	85.49	25	*e*P	P	03 44 55.8	+2.7
	comp=Z,81nm,1.4s						
D03D	Eldon	85.50	33	P	P	03 44 54.6	+1.4
	baz=228,SNR=9.5						
PSI	Prapat	85.51	275	P	P	03 44 53.1	-1.1
	comp=Z,89nm,0.9s,baz=89,slow=2.0,SNR=75						
PSI	Prapat	85.51	275	*e*P	P	03 44 53.2	-1.1
	comp=Z,114nm,0.9s						
TIA	Tai'an	85.64	312	P	P	03 44 54.0	-0.2
TIA				pP	pP	03 45 35.4	+0.3
TIA				S	SKSac	03 55 04.1	+0.3
TIA				pmax	pmax		
	comp=Z,110nm,1.0s						
TIA				pmax	pmax		
	comp=Z,690nm,3.4s						
TIA				LR	LR		
	comp=Z,560nm,22.4s						
TIA				LR	LR		
	comp=Z,510nm,24.2s						
TIA				LR	LR		
	comp=Z,750nm,37.3s						
LON	Longmire	85.64	35	*e*P	P	03 44 54.6	+0.6
	comp=Z,37nm,1.4s						
LON	Longmire	85.64	35	*e*P	P	03 44 54.6	+0.6
LON				pmax	pmax		
	comp=Z,37nm,1.4s						
RSO	Redoubt South	85.66	12	*e*P	P	03 44 53.6	-0.3

ZAIG	Zacatecas	85.68	63	eP	P	03 44 56.0	+1.0
	comp=Z,68nm,1.3s						
SKLT	Songkhla	85.70	280	P	P	03 44 57.2	+2.2
ELK	Elko	85.70	42	P	P	03 44 55.1	+0.4
	comp=Z,9.0nm,0.8s,baz=245,slow=4.1,SNR=44						
ELK	Elko	85.70	42	eP	P	03 44 55.1	+0.4
	comp=Z,12nm,0.9s						
ELK	Elko	85.70	42	eP	P	03 44 55.2	+0.5
ELK				pmax	pmax		
	comp=Z,12nm,0.9s						
PKCU	Pink Cliffs	85.72	46	eP	P	03 44 56.8	+1.9
	comp=Z,99nm,1.0s						
SVW2	Sparrevohn	85.76	10	eP	P	03 44 53.9	-0.3
	comp=Z,46nm,1.1s						
D05A	Enumclaw	85.84	34	eP	P	03 44 56.8	+1.9
	comp=Z,264nm,1.3s						
SEW	Seward	86.00	13	eP	P	03 44 55.4	+0.1
	comp=Z,62nm,0.9s						
VNA1	Neumayer--Stat	86.12	176	P	P	03 44 56.5	+0.5
VNA1	Neumayer--Stat	86.12	176	PKKP	PKKPbc	04 02 54.5	-1.5
VNA1				SKS	SKSac	03 54 57.6	-8.2
MTPU	Mount Pierson	86.13	46	eP	P	03 44 58.7	+1.6
	comp=Z,51nm,0.9s						
GSI	Gunungsitoli	86.16	273	eP	P	03 44 58.0	+0.7
	comp=Z,212nm,0.8s						
GSI	Gunungsitoli	86.16	273	P	P	03 44 58.7	+1.4
W18A	Petrified Fore	86.23	49	eP	P	03 44 58.3	+0.9
	comp=Z,78nm,1.3s						
W18A	Petrified Fore	86.23	49	P	P	03 44 58.3	+0.9
	baz=238						
G08A	Pilot Rock	86.25	37	eP	P	03 44 57.8	+0.7
	comp=Z,36nm,1.0s						
TCRU	Three Creeks R	86.27	45	eP	P	03 44 59.3	+1.7
	comp=Z,25nm,0.9s						
PANO	Nakornpanom	86.28	290	P	P	03 44 58.8	+1.1
121A	Cookes Peak, D	86.29	52	P	P	03 44 59.2	+1.5
	baz=240						
BBB	Bella Bella	86.37	28	P	P	03 44 57.8	+0.4
	comp=Z,45nm,0.8s,baz=258,slow=5.0,SNR=18						
BBB	Bella Bella	86.37	28	eP	P	03 44 59.0	+1.7
	comp=Z,60nm,0.9s						
CHBT	CHBT	86.44	285	P	P	03 45 02.1	+3.6
SPU	Mount Spurr	86.46	12	eP	P	03 44 56.7	-0.9
A04D	Lummi Island	86.48	33	P	P	03 44 59.4	+1.4
	baz=229						
B05A	Bryant	86.49	33	P	P	03 44 59.0	+1.0
	baz=229,SNR=12						
MA2	Magadan	86.55	344	P	P	03 44 57.1	-1.0
	comp=Z,32nm,0.8s,baz=113,slow=5.4,SNR=12						
MA2	Magadan	86.55	344	eP	P	03 44 56.8	-1.3
	comp=Z,61nm,1.0s						
MA2	Magadan	86.55	344	ceP	P	03 44 58.0	0.0
MA2				pmax	pmax		
	comp=Z,119nm,1.7s						
LTY	Liberty	86.57	35	eP	P	03 44 59.2	+0.7
	comp=Z,26nm,1.0s						
HAWA	Hanford	86.62	36	eP	P	03 44 59.8	+1.0
	comp=Z,50nm,1.3s						
GAMB	Gambell	86.75	2	eP	P	03 45 00.0	+1.2
	comp=Z,237nm,1.4s						
TLIG	Tlapa	86.76	69	eP	P	03 45 00.7	+0.4
	comp=Z,110nm,1.3s						
TRTT	Trang	86.81	280	P	P	03 45 02.7	+2.3
CRAG	Craig	86.83	23	eP	P	03 45 02.4	+2.9
	comp=Z,58nm,1.1s						
RC01	Rabbit Creek A	86.83	13	eP	P	03 44 59.4	0.0
	comp=Z,150nm,1.2s						
KCSI	Kotacane, Aceh	86.85	275	P	P	03 45 00.2	-0.4
C06D	Leavenworth	86.88	34	P	P	03 45 00.6	+0.6
	baz=230						
PLCA	Paso Flores	86.88	133	P	P	03 45 01.9	+1.4
	comp=Z,75nm,1.0s,baz=256,slow=4.8,SNR=92						
PLCA				PKKPbc	PKKPbc	04 02 51.8	-1.6
	comp=Z,4.7nm,1.0s,baz=96,slow=6.3,SNR=6.3						
PLCA				PKPPKP	P'P'df	04 10 57.0	-4.8
	comp=Z,2.9nm,0.9s,baz=110,slow=4.8,SNR=5.8						
PLCA	Paso Flores	86.88	133	eP	P	03 45 01.7	+1.2
	comp=Z,209nm,1.3s						
PLCA	Paso Flores	86.88	133	eP	P	03 45 01.7	+1.2
PLCA				pmax	pmax		
	comp=Z,209nm,1.3s						
PLCA	Paso Flores	86.88	133	eP	P	03 45 01.7	+1.2
MFID	Camas Ranch	86.91	40	eP	P	03 45 00.7	+0.4
	comp=Z,15nm,1.0s						
BMO	Blue Mountains	86.91	38	eP	P	03 45 00.5	+0.2
BMO	Blue Mountains	86.91	38	eP	P	03 45 00.5	+0.2
DUG	Dugway, Tooele	86.91	44	eP	P	03 45 00.8	+0.3
	comp=Z,8.0nm,0.8s						
DUG	Dugway, Tooele	86.91	44	eP	P	03 45 00.8	+0.3
DUG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DUG	Dugway, Tooele	86.91	44	P	P	03 45 00.9	+0.4
	baz=236						
E08A	Dider Farm, El	86.94	36	eP	P	03 45 01.5	+1.3
SUA	Susitna One	86.97	12	eP	P	03 44 59.9	-0.3
	comp=Z,81nm,0.7s						
KAIM	Kayak Island	87.02	16	eP	P	03 45 02.5	+2.2
	comp=Z,83nm,0.9s						
BGU	Big Grassy Mou	87.18	43	eP	P	03 45 02.3	+0.5
	comp=Z,8.2nm,1.0s						
GLI	Glacier Island	87.22	14	eP	P	03 45 01.1	-0.1
	comp=Z,117nm,0.8s						
EYAK	Cordova Ski Ar	87.23	15	eP	P	03 45 01.9	+0.6
	comp=Z,83nm,1.2s						
FID	Port Fidalgo	87.24	15	eP	P	03 45 01.4	+0.1
	comp=Z,112nm,1.2s						
NLU	North Lily Min	87.25	44	eP	P	03 45 03.2	+1.0
	comp=Z,11nm,1.0s						
TPTI		87.29	275	P	P	03 45 02.5	-0.2
SKT	Skwentna	87.30	12	eP	P	03 45 00.8	-0.8
	comp=Z,60nm,1.2s						
SIT	Sitka	87.30	21	eP	P	03 45 03.5	+1.9
	comp=Z,30nm,0.8s						
RAGM	Ragged Mountai	87.35	15	eP	P	03 45 02.7	+0.7
	comp=Z,94nm,1.2s						
D08A	Wollman Farm,	87.37	36	eP	P	03 45 03.4	+1.0
	comp=Z,52nm,1.0s						
KNK	Knik Glacier	87.39	13	eP	P	03 45 02.4	+0.2
	comp=Z,81nm,0.8s						
HMT	Hamilton	87.41	16	eP	P	03 45 02.6	+0.3
	comp=Z,48nm,0.8s						
PMR	Palmer	87.42	13	eP	P	03 45 02.0	-0.1
	comp=Z,83nm,1.0s						
PMR	Palmer	87.42	13	eP	P	03 45 02.0	-0.1
PMR				pmax	pmax		
	comp=Z,83nm,1.0s						
TTA	Tatalina	87.42	10	eP	P	03 45 02.6	+0.3
	comp=Z,237nm,1.5s						
TTA	Tatalina	87.42	10	eP	P	03 45 02.6	+0.3
TTA				pmax	pmax		
	comp=Z,237nm,1.5s						
E09A	Wood Farm, Sta	87.45	36	eP	P	03 45 03.4	+0.6
	comp=Z,37nm,1.0s						
TMUT	Trail Mountain	87.45	45	eP	P	03 45 04.6	+1.3
	comp=Z,98nm,0.7s						
MPU	Maple Canyon	87.57	44	eP	P	03 45 04.5	+0.8
	comp=Z,17nm,0.9s						
F10A	Beach Ranch, E	87.63	37	eP	P	03 45 03.9	+0.2
	comp=Z,58nm,0.9s						
MNTX	Cornudas Mount	87.66	54	eP	P	03 45 05.0	+0.9
	comp=Z,59nm,0.9s						
MNTX	Cornudas Mount	87.66	54	P	P	03 45 05.1	+1.0
	baz=241,SNR=99						
Y22D	IRIS PASSCAL I	87.69	51	eP	P	03 45 05.8	+1.4
	comp=Z,117nm,1.3s						
Y22D	IRIS PASSCAL I	87.69	51	P	P	03 45 05.8	+1.4
	baz=240						
LAZ	Ladron	87.70	51	eP	P	03 45 05.6	+1.1
LENM	Lemitar	87.70	51	eP	P	03 45 05.5	+1.1
SNSI	Sinabang, Aceh	87.74	274	P	P	03 45 07.7	+2.8
SPUT	South Promonto	87.76	43	eP	P	03 45 05.4	+0.9
	comp=Z,39nm,1.3s						
PLID	Pearl Lake	87.79	38	eP	P	03 45 04.9	+0.2
	comp=Z,52nm,1.5s						
SRU	San Rafael Swe	87.80	46	eP	P	03 45 05.5	+0.7
	comp=Z,78nm,0.8s						
HVU	Hansel Valley	87.82	42	eP	P	03 45 05.3	+0.6
	comp=Z,48nm,1.5s						
HLID	Hailey	87.83	40	eP	P	03 45 05.5	+0.7
	comp=Z,13nm,0.9s						
HLID	Hailey	87.83	40	P	P	03 45 05.6	+0.8
	baz=235						
TX31	Lajitas Ar. Si	87.83	57	eP	P	03 45 06.0	+0.9
	comp=Z,126nm,1.4s						
TXAR	Lajitas Array	87.83	57	P	P	03 45 06.0	+0.9
	comp=Z,28nm,0.8s,baz=214,slow=7.6,SNR=325						
TXAR				PKKP	PKKPdf	04 02 46.2	+0.1
	comp=Z,0.8nm,0.9s,baz=133,slow=4.4,SNR=3.4						
TXAR				PKPPKP	P'P'df	04 10 54.8	-4.0
	comp=Z,0.7nm,1.0s,baz=117,slow=1.7,SNR=5.7						
TXAR	Lajitas Array	87.83	57	P	P	03 45 06.0	+0.9
WRAK	Wrangell Islan	87.84	23	eP	P	03 45 05.8	+1.6
	comp=Z,75nm,1.0s						
P17A	Butcher Ranch,	87.85	45	eP	P	03 45 05.9	+0.8
	comp=Z,37nm,0.9s						
CTU	Camp Tracy	87.86	44	eP	P	03 45 05.5	+0.5
	comp=Z,28nm,1.1s						
NONG	Nongkai	87.94	291	P	P	03 45 06.7	+1.0
BNM	Barren Site	87.94	51	eP	P	03 45 06.7	+1.0
B08A	Colville Reser	87.96	34	eP	P	03 45 05.5	+0.3
	comp=Z,36nm,0.8s						
JLU	Jordanelle	88.00	44	eP	P	03 45 06.4	+0.6
	comp=Z,14nm,0.8s						
SCM	Sheep Creek Mo	88.02	14	eP	P	03 45 05.2	+0.1
	comp=Z,154nm,0.8s						
SCM	Sheep Creek Mo	88.02	14	eP	P	03 45 05.2	+0.1
SCM				pmax	pmax		
	comp=Z,154nm,0.8s						
PPLA	Purkeypile	88.02	11	eP	P	03 45 04.0	-1.2
	comp=Z,40nm,1.1s						
CHAI	Chaiyaphum	88.04	288	P	P	03 45 07.9	+1.7
CRQM	Cirque	88.06	16	eP	P	03 45 06.3	+0.8
	comp=Z,75nm,0.9s						
LLLB	Lillooet	88.13	32	eP	P	03 45 06.8	+0.9
	comp=Z,38nm,0.9s						
TGL	Tana Glacier	88.13	16	eP	P	03 45 06.7	+0.9
	comp=Z,56nm,0.9s						
MVCO	Mesa Verde	88.17	48	eP	P	03 45 07.0	+0.3
	comp=Z,12nm,1.1s						
MVCO	Mesa Verde	88.17	48	P	P	03 45 06.9	+0.3
	baz=239						
C09A	Chrisman Ranch	88.17	35	eP	P	03 45 06.9	+0.8
	comp=Z,38nm,0.8s						
ENH	Enshi	88.17	304	eP	P	03 45 07.0	+0.4
	comp=Z,153nm,1.0s						
PV05	Paradox Valley	88.21	47	eP	P	03 45 08.1	+1.3
	comp=Z,24nm,1.0s						
PCA	Pinnacle	88.26	18	eP	P	03 45 07.2	+0.9
	comp=Z,43nm,0.9s						
BCPM	Bancas Point	88.31	18	eP	P	03 45 05.6	-0.9
	comp=Z,42nm,1.0s						
BJT	Baijiatuau	88.32	315	eP	P	03 45 07.4	+0.4
	comp=Z,32nm,0.8s						
BJT	Baijiatuau	88.32	315	eP	P	03 45 07.4	+0.4
BJT				pmax	pmax		
	comp=Z,32nm,0.8s						
BJI	Beijing	88.33	315	P	P	03 45 06.9	-0.1
BJI				pP	pP	03 45 48.8	+0.7
BJI				sP	sP	03 46 03.1	-2.3
BJI				SKS	SKSac	03 55 17.4	-2.5
BJI				S	S	03 55 38.8	+1.0
BJI				pmax	pmax		
	comp=Z,20nm,1.4s						
MLSI	Meulaboh, Aceh	88.39	275	P	P	03 45 07.6	-0.4
PV10	Paradox Valley	88.40	47	eP	P	03 45 08.3	+0.5
	comp=Z,23nm,0.9s						
PV09	Paradox Valley	88.40	47	eP	P	03 45 08.4	+0.6
PV19	Morning Glory	88.41	47	eP	P	03 45 08.4	+0.7
	comp=Z,24nm,1.2s						
PV17	East Wray Mesa	88.41	47	eP	P	03 45 08.4	+0.6
	comp=Z,22nm,1.1s						
PV14	Lion Creek, Pa	88.41	47	eP	P	03 45 08.5	+0.7
	comp=Z,23nm,0.9s						
PV18	Skein Mesa, Pa	88.42	47	eP	P	03 45 08.4	+0.6
	comp=Z,13nm,0.9s						
EFI	East Falkland	88.43	147	eP	P	03 45 08.6	+1.2
	comp=Z,139nm,0.9s						
EFI	East Falkland	88.43	147	eP	P	03 45 08.6	+1.2
EFI				pmax	pmax		
	comp=Z,139nm,0.9s						
PV20	West Nyswonger	88.43	47	eP	P	03 45 08.5	+0.7
	comp=Z,17nm,1.0s						
PV13	Radium Mtn., P	88.44	47	eP	P	03 45 08.5	+0.6
	comp=Z,29nm,1.3s						
PV16	Nyswonger Mesa	88.45	47	eP	P	03 45 08.6	+0.6
	comp=Z,33nm,1.5s						
ANMO	Albuquerque	88.46	51	P	P	03 45 08.8	+0.8
	comp=Z,36nm,1.1s,baz=226,slow=4.9,SNR=79						
ANMO	Albuquerque	88.46	51	eP	P	03 45 08.8	+0.8
	comp=Z,58nm,1.1s						
ANMO	Albuquerque	88.46	51	ceP	P	03 45 08.7	+0.7
ANMO				pmax	pmax		
	comp=Z,63nm,1.3s						
ANMO	Albuquerque	88.46	51	P	P	03 45 08.9	+0.8
	baz=240						
PV23	Carpenter Ridg	88.46	47	eP	P	03 45 08.9	+0.8
	comp=Z,28nm,0.9s						
PV03	Paradox Valley	88.47	47	eP	P	03 45 08.2	+0.2
	comp=Z,13nm,1.0s						
PV11	David Mesa, Pa	88.47	47	eP	P	03 45 08.8	+0.7
	comp=Z,47nm,1.5s						
HWUT	Hardware Ranch	88.48	43	eP	P	03 45 08.1	+0.1
	comp=Z,8.3nm,0.8s						
BALM	Baldy	88.50	16	eP	P	03 45 08.0	+0.5
	comp=Z,61nm,0.7s						
BALM	Baldy	88.50	16	eP	P	03 45 08.0	+0.5
BALM				pmax	pmax		
	comp=Z,61nm,0.7s						
PV04	Paradox Valley	88.50	47	eP	P	03 45 08.7	+0.6
	comp=Z,15nm,0.8s						
CAST	Castle Rocks	88.52	11	eP	P	03 45 06.2	-1.2
	comp=Z,121nm,0.8s						
PV12	Saucer Basin,	88.53	47	eP	P	03 45 08.8	+0.5
	comp=Z,44nm,1.3s						
PV21	Cone Mtn., Par	88.54	47	eP	P	03 45 09.1	+0.7
	comp=Z,20nm,0.8s						
JIS	Juneau Island	88.57	21	eP	P	03 45 09.0	+1.4
	comp=Z,77nm,1.4s						
GO05	Huala	88.57	128	eP	P	03 45 09.2	+0.6
	comp=Z,56nm,1.0s						
PV01	Paradox Valley	88.59	47	eP	P	03 45 08.9	+0.3
	comp=Z,14nm,0.7s						
GYA	Guiyang	88.64	299	⇑iP	P	03 45 09.4	+0.4
GYA				PP	PP	03 48 39.1	-1.2
GYA				SKS	SKSac	03 55 22.1	-0.6
GYA				S	S	03 55 40.3	-1.3
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,450nm,10.5s						
GYA				LR	LR		
	comp=Z,300nm,14.0s						
GYA				LR	LR		
	comp=Z,440nm,18.2s						
GYA				LR	LR		
	comp=Z,450nm,18.2s						
BESE	Bessie Mountai	88.65	21	eP	P	03 45 10.3	+2.1
	comp=Z,93nm,1.2s						
GDL2	Guadalupe Moun	88.65	54	eP	P	03 45 10.0	+1.1
PV22	Blue Mesa, Par	88.65	47	eP	P	03 45 09.6	+0.7
	comp=Z,19nm,1.1s						
SLVN	Son La	88.67	294	eP	P	03 45 10.5	+1.3
	comp=Z,23nm,0.9s						
PV07	Paradox Valley	88.70	47	eP	P	03 45 09.6	+0.5
	comp=Z,15nm,1.0s						
CTGM	Chitina Glacie	88.70	17	eP	P	03 45 09.4	+1.0
	comp=Z,74nm,0.8s						
KTH	Kantishna Hill	88.85	11	eP	P	03 45 08.1	-0.9
	comp=Z,115nm,0.9s						
PHET	Kaeng Krachan	88.90	284	P	P	03 45 12.7	+2.4
CLNB	Carlsbad	89.05	54	eP	P	03 45 11.8	+1.1
NEW	Newport	89.07	35	P	P	03 45 10.6	+0.2
	comp=Z,18nm,1.1s,baz=240,slow=4.9,SNR=18						
NEW	Newport	89.07	35	eP	P	03 45 10.6	+0.2
	comp=Z,22nm,1.1s						
NEW	Newport	89.07	35	P	P	03 45 10.6	+0.2
	baz=233,SNR=14						
RND	Reindeer	89.11	12	eP	P	03 45 10.2	0.0
	comp=Z,187nm,0.9s						
RND	Reindeer	89.11	12	eP	P	03 45 10.2	0.0
RND				pmax	pmax		
	comp=Z,187nm,0.9s						
DHY	Denali Highway	89.11	13	eP	P	03 45 10.3	-0.1
	comp=Z,28nm,0.7s						
LNIG	Linares	89.17	63	eP	P	03 45 10.5	-0.9
	comp=Z,95nm,1.2s						
SKAG	Skagway	89.20	20	eP	P	03 45 12.5	+1.9
	comp=Z,68nm,1.2s						
PBKT	Sadao Pong	89.20	288	P	P	03 45 13.7	+2.1
BPAW	Bear Paw Mtn.	89.34	11	eP	P	03 45 09.9	-1.3
	comp=Z,19nm,0.8s						
MCK	McKinley	89.39	12	eP	P	03 45 11.3	-0.2
	comp=Z,108nm,0.9s						
MCK	McKinley	89.39	12	eP	P	03 45 11.3	-0.2
MCK				pmax	pmax		
	comp=Z,108nm,0.9s						
CPRX	Cap Rock	89.42	54	eP	P	03 45 13.6	+1.1
PAX	Paxson	89.43	14	eP	P	03 45 11.5	-0.3
	comp=Z,38nm,1.0s						
PAX	Paxson	89.43	14	eP	P	03 45 11.5	-0.3
PAX				pmax	pmax		
	comp=Z,38nm,1.0s						
MCMT	McKenzie Canyo	89.47	40	eP	P	03 45 13.4	+0.8
S22A	4UR Ranch, Cre	89.58	48	P	P	03 45 14.1	+0.7
	baz=240,SNR=34						
TIY	Taiyuan	89.63	312	eP	P	03 45 14.4	+1.1
TIY				pP	pP	03 45 55.9	+1.3
TIY				PP	PP	03 48 48.1	+0.2
TIY				SKS	SKSac	03 55 26.9	-1.0
TIY				S	S	03 55 48.4	-1.8
TIY				pmax	pmax		
	comp=Z,76nm,1.0s						
HYT	Haines Junctio	89.64	18	eP	P	03 45 13.7	+0.9
	comp=Z,28nm,0.9s						
BWN	Browne	89.69	12	eP	P	03 45 12.9	+0.1
	comp=Z,351nm,1.4s						
MENT	Mentasta	89.80	15	eP	P	03 45 14.1	+0.7
	comp=Z,65nm,0.8s						
O20A	White River Ci	89.84	46	eP	P	03 45 14.6	+0.3
	comp=Z,17nm,0.8s						
O20A	White River Ci	89.84	46	P	P	03 45 14.7	+0.3
	baz=239,SNR=16						
TPAW	Teton Pass	89.88	42	eP	P	03 45 15.3	+0.7
	comp=Z,40nm,1.3s						
FXWY	Fox Creek	89.91	42	eP	P	03 45 15.2	+0.5
	comp=Z,22nm,1.1s						
DLMT	Dillon	89.92	40	eP	P	03 45 15.4	+0.9
	comp=Z,35nm,1.0s						
SRDT	SRDT	89.93	286	P	P	03 45 18.2	+3.1
MSO	Missoula	89.97	38	eP	P	03 45 14.2	-0.5
	comp=Z,24nm,1.1s						
MSO	Missoula	89.97	38	P	P	03 45 14.5	-0.2
	baz=235,SNR=29						
SNOW	Snow King Moun	89.98	42	eP	P	03 45 15.9	+0.9
	comp=Z,60nm,1.3s						
IMW	Indian Meadow	90.11	41	eP	P	03 45 16.5	+0.8
	comp=Z,39nm,1.0s						
MOOW	Moose Ponds	90.14	42	eP	P	03 45 16.3	+0.6
	comp=Z,22nm,1.4s						
LOHW	Long Hollow	90.16	42	eP	P	03 45 16.4	+0.6
	comp=Z,40nm,1.4s						
DLBC	Dease Lake	90.18	23	P	P	03 45 16.9	+1.5
	comp=Z,42nm,1.0s,baz=231,slow=5.9,SNR=74						
DLBC				PKKP	PKKPdf	04 02 43.3	0.0
	comp=Z,2.8nm,0.8s,baz=323,slow=2.1,SNR=8.1						
DLBC	Dease Lake	90.18	23	eP	P	03 45 16.5	+1.2
	comp=Z,74nm,1.1s						
SMCO	Snowmass	90.20	47	eP	P	03 45 16.6	+0.3
	comp=Z,11nm,0.8s						
WRH	Wood River Hil	90.22	12	eP	P	03 45 15.0	-0.3
	comp=Z,311nm,1.4s						
RIDG	Independent Ri	90.24	14	eP	P	03 45 15.4	-0.1
	comp=Z,66nm,1.0s						
QLMT	Earthquake Lak	90.32	40	eP	P	03 45 17.9	+1.4
ZEA	Zeya	90.32	331	eP	P	03 45 16.0	0.0
ZEA				e		03 48 48.0	
ZEA				eS	SKSac	03 55 31.0	0.0
ZEA				ePS	ScS	03 55 58.0	-1.0
ZEA				pmax	pmax		
	comp=N,41nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,800nm,7.0s						
ZEA				pmax	pmax		
	comp=Z,300nm,9.0s						
ZEA				smax	smax		
	comp=E,500nm,9.0s						
ZEA				smax	smax		
	comp=N,500nm,8.0s						
PEL	Peldehue	90.35	126	eP	P	03 45 17.9	+1.0
	comp=N,97nm,1.2s						
FLWY	Flagg Ranch	90.35	41	eP	P	03 45 17.9	+1.2
	comp=N,51nm,0.9s						
BW06	Boulder Array	90.36	43	eP	P	03 45 16.7	0.0
	comp=N,27nm,0.9s						
BW06	Boulder Array	90.36	43	P	P	03 45 16.8	0.0
	baz=238,SNR=31						
PD31	Pinedale Array	90.36	43	eP	P	03 45 16.8	0.0
	comp=N,18nm,0.9s						
PDAR	Pinedale Array	90.36	43	P	P	03 45 16.8	0.0
	comp=N,19nm,0.8s,baz=213,slow=3.2,SNR=120						
PDAR				PKKPbc	PKKPbc	04 02 45.5	-0.7
	comp=N,2.5nm,0.9s,baz=79,slow=3.0,SNR=10.0						
PDAR				PKPPKP	P'P'df	04 10 54.4	+1.1
	comp=N,1.0nm,0.9s,baz=112,slow=1.6,SNR=5.9						
XAN	Xi'an	90.36	307	eP	P	03 45 16.6	-0.1
	comp=N,63nm,0.9s						
XAN	Xi'an	90.36	307	P	P	03 45 16.6	-0.1
XAN				pP	pP	03 45 58.1	+0.1
XAN				pmax	pmax		
	comp=N,74nm,1.1s						
XAN				pmax	pmax		
	comp=N,460nm,6.1s						
XAN				LR	LR		
	comp=N,820nm,16.3s						
XAN				LR	LR		
	comp=N,1µm,13.0s						
XAN				LR	LR		
	comp=N,630nm,19.5s						
XAN	Xi'an	90.36	307	eP	P	03 45 16.6	-0.1
XAN				pmax	pmax		
	comp=Z,63nm,0.9s						
YPP	Pitchstone Pla	90.39	41	eP	P	03 45 18.4	+1.5
	comp=Z,27nm,1.5s						
HDA	Harding Lake	90.39	13	eP	P	03 45 15.9	-0.2
	comp=Z,87nm,0.8s						
HDA	Harding Lake	90.39	13	P	P	03 45 15.9	-0.2
	baz=208						
YHB	Horse Butte	90.41	41	eP	P	03 45 18.7	+1.7
	comp=Z,39nm,1.0s						
CCB	Clear Creek Bu	90.43	12	eP	P	03 45 15.3	-0.9
	comp=Z,72nm,0.9s						
YFT	Old Faithful	90.47	41	eP	P	03 45 19.7	+2.4
	comp=Z,32nm,1.0s						
SDCO	Great Sand Dun	90.50	49	eP	P	03 45 17.9	+0.3
	comp=Z,41nm,1.4s						
SDCO	Great Sand Dun	90.50	49	P	P	03 45 17.9	+0.3
	baz=241,SNR=31						
YMR	Madison River	90.51	41	eP	P	03 45 19.0	+1.6
	comp=Z,35nm,0.9s						
H17A	Grant Village	90.59	41	eP	P	03 45 19.9	+2.1
	comp=Z,22nm,0.8s						
H17A	Grant Village	90.59	41	P	P	03 45 19.5	+1.7
	baz=238,SNR=18						
BOZ	Bozeman (W)	90.61	40	eP	P	03 45 18.6	+0.8
	comp=Z,53nm,0.9s						
BOZ	Bozeman (W)	90.61	40	eP	P	03 45 18.6	+0.8
BOZ				pmax	pmax		
	comp=Z,53nm,0.9s						
BOZ	Bozeman (W)	90.61	40	P	P	03 45 18.7	+0.8
	baz=237						
TCOL	CIGO, UAF Yank	90.62	12	P	P	03 45 16.7	-0.4
	baz=207						
COLA	College	90.63	12	eP	P	03 45 16.8	-0.3
	comp=Z,178nm,1.3s						
COLA	College	90.63	12	eP	P	03 45 16.8	-0.3
COLA				pmax	pmax		
	comp=Z,179nm,1.3s						
MDM	Murphy Dome	90.63	12	eP	P	03 45 17.7	+0.5
	comp=Z,64nm,1.0s						
SCRK	Sand Creek	90.64	14	eP	P	03 45 17.8	+0.4
	comp=Z,39nm,0.8s						
YHH	Holmes Hill	90.64	41	eP	P	03 45 19.3	+1.2
	comp=Z,33nm,1.2s						
MSTX	Muleshoe	90.66	53	eP	P	03 45 18.6	+0.4
	comp=Z,66nm,0.9s						
MSTX	Muleshoe	90.66	53	P	P	03 45 18.7	+0.4
	baz=242						
YNR	Norris Junctio	90.70	41	eP	P	03 45 21.5	+3.1
	comp=Z,18nm,1.0s						
833A	Chaparral WMA,	90.72	60	P	P	03 45 18.9	+0.4
	baz=244						
ILAR	Eielson Array	90.72	12	P	P	03 45 17.1	-0.5
	comp=Z,24nm,0.8s,baz=219,slow=6.0,SNR=130						
ILAR				PKiKP	PKiKP	03 50 10.4	-0.2
	comp=Z,0.8nm,0.6s,baz=330,slow=3.4,SNR=4.7						
ILAR				PKPPKP		04 10 55.6	
	comp=Z,0.8nm,0.7s,baz=335,slow=3.2,SNR=5.5						
ILB	Eielson Array	90.72	12	eP	P	03 45 17.1	-0.5
	comp=Z,56nm,1.0s						

LKWY	Lake	90.79	41	eP	P	03 45 21.3	+2.5
	comp=Z,33nm,0.9s						
UMPA	Umpang Tak	90.91	287	P	P	03 45 23.6	+4.0
POKR	Poker Plat Res	90.93	12	P	P	03 45 17.9	-0.7
	baz=207						
T25A	Trinidad	90.97	50	P	P	03 45 19.9	+0.1
	baz=242,SNR=11						
HRY	Holter Researc	91.11	39	eP	P	03 45 20.6	+0.6
LAMP	Lampang	91.16	290	P	P	03 45 22.8	+2.0
	comp=Z,384μm,0.8s						
KMI	Kunming	91.25	297	eP	P	03 45 24.4	+3.1
	comp=Z,68nm,1.0s						
KMI	Kunming	91.25	297	P	P	03 45 22.4	+1.1
KMI				pP	pP	03 46 03.8	+1.1
KMI				sP	sP	03 46 22.8	+2.8
KMI				SKS	SKSac	03 55 38.0	-0.1
KMI				S	ScS	03 56 08.1	-0.4
KMI				pmax	pmax		
	comp=Z,68nm,1.6s						
KMI				pmax	pmax		
	comp=Z,490nm,7.9s						
KMI				LR	LR		
	comp=Z,210nm,22.6s						
KMI				LR	LR		
	comp=Z,330nm,21.1s						
KMI				LR	LR		
	comp=Z,610nm,43.4s						
WALA	Waterton Lakes	91.26	36	eP	P	03 45 21.0	+0.4
	comp=Z,20nm,1.0s						
PAYA	Payao	91.30	290	P	P	03 45 22.9	+1.5
RWWY	Rawlins	91.30	45	eP	P	03 45 21.4	+0.2
	comp=Z,37nm,1.1s						
HIA	Hailar	91.30	324	eP	P	03 45 19.8	-0.9
	comp=Z,12nm,0.8s						
HIA	Hailar	91.30	324	eP	P	03 45 19.8	-0.9
HIA				pmax	pmax		
	comp=Z,12nm,0.8s						
Q24A	Divide	91.33	48	P	P	03 45 21.9	+0.4
	baz=241,SNR=13						
JCT	Junction City	91.34	57	eP	P	03 45 21.2	-0.2
	comp=Z,92nm,1.4s						
JCT	Junction City	91.34	57	eP	P	03 45 21.2	-0.2
JCT				pmax	pmax		
	comp=Z,92nm,1.4s						
JCT	Junction City	91.34	57	P	P	03 45 21.1	-0.2
	baz=244						
RDOG	Red Dog Mine	91.55	5	eP	P	03 45 21.9	+0.5
	comp=Z,59nm,0.8s						
CM31	Chiang Mai Arr	91.74	289	eP	P	03 45 25.7	+2.3
	comp=Z,122nm,1.0s						
CM31				ePP	PP	03 49 01.0	-3.8
CM31	Chiang Mai Arr	91.74	289	P	P	03 45 25.5	+2.1
	SNR=21						
CMAR	Chiang Mai Arr	91.74	289	P	P	03 45 24.8	+1.4
	comp=Z,54nm,0.8s,baz=132,slow=3.3,SNR=126						
CMAR				PP	PP	03 49 01.0	-3.8
	comp=Z,4.0nm,0.9s,baz=126,slow=6.0,SNR=5.3						
N23A	Red Feather La	91.74	46	P	P	03 45 23.6	+0.3
	baz=241,SNR=9.0						
BILL	Bilibino	91.75	354	eP	P	03 45 22.4	+0.1
BILL				e		03 46 05.6	
BILL				e		03 49 07.6	
BILL				pmax	pmax		
	comp=Z,111nm,1.0s						
HHC	Hu-ho-hao-te	91.76	314	P	P	03 45 22.8	-0.4
HHC				pP	pP	03 46 02.9	-1.5
HHC				PP	PP	03 49 05.8	+1.1
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
RLMT	Red Lodge	91.77	41	eP	P	03 45 24.2	+0.9
	comp=Z,27nm,1.0s						
RLMT	Red Lodge	91.77	41	P	P	03 45 24.1	+0.9
	baz=238,SNR=22						
DAWY	Dawson	91.79	16	eP	P	03 45 23.1	+0.4
	comp=Z,45nm,0.8s						
CCIG	Comitan	91.84	73	eP	P	03 45 25.2	+1.0
	comp=Z,38nm,1.1s						
CHTO	Chiang Mai	91.88	290	eP	P	03 45 25.1	+1.0
	comp=Z,116nm,0.9s						
CHTO	Chiang Mai	91.88	290	eP	P	03 45 25.1	+1.0
CHTO				pmax	pmax		
	comp=Z,116nm,0.9s						
CHTO	Chiang Mai	91.88	290	P	P	03 45 25.6	+1.5
	SNR=20						
GCMT	Greycliff	91.88	40	eP	P	03 45 25.0	+1.3
AMTX	Amarillo	91.88	53	eP	P	03 45 23.8	0.0
	comp=Z,37nm,0.9s						
AMTX	Amarillo	91.88	53	P	P	03 45 23.9	+0.1
	baz=243						
EGAK	Eagle	91.96	15	eP	P	03 45 23.6	+0.3
	comp=Z,56nm,0.8s						
K22A	Casper	92.22	44	eP	P	03 45 25.6	+0.2
	comp=Z,30nm,0.9s						
K22A	Casper	92.22	44	P	P	03 45 25.5	+0.2
	baz=240,SNR=15						
PHWY	Pilot Hill	92.25	46	eP	P	03 45 26.9	+1.3
	comp=Z,11nm,1.1s						
LCO	Las Campanas	92.27	123	eP	P	03 45 26.8	+0.6
	comp=Z,83nm,1.0s						
LCO	Las Campanas	92.27	123	eP	P	03 45 26.8	+0.6
LCO				pmax	pmax		
	comp=Z,83nm,1.0s						
LCO	Las Campanas	92.27	123	eP	P	03 45 26.7	+0.6
COLD	Coldfoot	92.34	10	eP	P	03 45 26.4	+1.3
	comp=Z,44nm,1.3s						
ABTX	Abilene, Hawle	92.40	56	eP	P	03 45 26.4	+0.2
	comp=Z,97nm,1.1s						
ABTX	Abilene, Hawle	92.40	56	P	P	03 45 26.5	+0.2
	baz=244						
BTO	Baotou	92.67	313	eP	P	03 45 26.3	-1.1
CD2	Chengdu	92.88	302	⇑iP	P	03 45 29.1	+0.6
CD2				pP	pP	03 46 09.8	0.0
CD2				sP	sP	03 46 24.9	-2.1
CD2				PP	PP	03 49 13.3	-0.3
CD2				SKS	SKSac	03 55 45.3	-1.3
CD2				S	ScS	03 56 21.9	+0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,750nm,7.1s						
CD2				LR	LR		
	comp=Z,1μm,36.8s						
CD2				LR	LR		
	comp=Z,760nm,18.6s						
CD2				LR	LR		
	comp=Z,690nm,24.5s						
EGMT	Eagleton	93.00	38	eP	P	03 45 29.4	+0.7
	comp=Z,21nm,1.1s						
EGMT	Eagleton	93.00	38	P	P	03 45 29.0	+0.4
	baz=238						
KSCO	Kaye Shedlock’	93.09	49	eP	P	03 45 29.9	+0.5
	comp=Z,95nm,1.4s						
KSCO	Kaye Shedlock’	93.09	49	P	P	03 45 29.8	+0.4
	baz=243						
435B	Jarrell	93.19	58	P	P	03 45 30.1	+0.2
	baz=245						
TOLK	Toolik Lake Re	93.73	10	eP	P	03 45 32.5	+0.9
	comp=Z,44nm,1.4s						
TOLK	Toolik Lake Re	93.73	10	P	P	03 45 32.4	+0.9
	baz=205						
WHTX	Lake Whitney,	93.80	57	eP	P	03 45 32.7	0.0
	comp=Z,41nm,0.9s						
WHTX	Lake Whitney,	93.80	57	P	P	03 45 32.7	0.0
	baz=245						
TRQA	Tornquist	93.96	134	eP	P	03 45 35.9	+2.4
WMOK	Wichita Mounta	93.96	54	eP	P	03 45 32.8	-0.6
	comp=Z,18nm,1.4s						
WMOK	Wichita Mounta	93.96	54	eP	P	03 45 32.8	-0.6
WMOK				pmax	pmax		
	comp=Z,18nm,1.4s						
WMOK	Wichita Mounta	93.96	54	P	P	03 45 32.7	-0.6
	baz=245						
HKT	Hockley	94.23	59	eP	P	03 45 35.3	+0.8
	comp=Z,17nm,1.3s						
HKT	Hockley	94.23	59	eP	P	03 45 35.3	+0.8
HKT				pmax	pmax		
	comp=Z,17nm,1.3s						
EPYK	Eagle Plains	94.33	15	eP	P	03 45 34.6	+0.4
	comp=Z,19nm,0.8s						
EPYK	Eagle Plains	94.33	15	P	P	03 45 34.3	0.0
	baz=217						
OGNE	Ogallala	94.37	47	P	P	03 45 35.2	0.0
	baz=243						
LAO	LASA Array	94.40	41	eP	P	03 45 35.6	+0.5
	comp=Z,18nm,0.8s						
LAO	LASA Array	94.40	41	P	P	03 45 36.3	+1.2
	baz=241						
RSSD	Black Hills	94.52	44	eP	P	03 45 36.0	+0.1
	comp=Z,59nm,0.9s						
RSSD	Black Hills	94.52	44	eP	P	03 45 36.0	+0.1
RSSD				pmax	pmax		
	comp=Z,59nm,0.9s						
RSSD	Black Hills	94.52	44	P	P	03 45 36.0	+0.1
	baz=242						
YAK	Yakutsk	94.86	338	eP	P	03 45 37.7	+1.0
	comp=Z,68nm,0.7s						
YAK	Yakutsk	94.86	338	eP	P	03 45 35.1	-1.6
YAK				e		03 49 22.7	
YAK				e		03 56 34.6	
YAK				pmax	pmax		
	comp=Z,53nm,0.8s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,1.0s						
YAK				pmax	pmax		
	comp=Z,80nm,2.1s						
YAK				pmax	pmax		
	comp=N,42nm,1.9s						
YAK				pmax	pmax		
	comp=E,53nm,1.9s						
GO02	Mina Guanaco	94.95	120	eP	P	03 45 40.1	+1.5
	comp=E,50nm,1.0s						
LZH	Lanzhou	95.00	307	eP	P	03 45 39.4	+1.2
LZH				SKS	SKSac	03 55 56.1	-2.0
LZH				eS	ScS	03 56 39.8	+0.6
LZH				sS	sS	03 57 45.3	-5.8
LZH				pmax	pmax		
	comp=E,67nm,1.0s						
LZH				pmax	pmax		
	comp=E,290nm,5.7s						
LZH				LR	LR		
	comp=E,1μm,16.3s						
LZH				LR	LR		
	comp=E,1μm,17.4s						
LZH				LR	LR		
	comp=E,2μm,17.9s						
CBKS	Cedar Bluff	95.02	50	P	P	03 45 38.1	-0.1
	baz=244						
JTS	Las Juntas de	95.98	81	eP	P	03 45 44.3	+1.3
	comp=E,36nm,1.1s						
DGMT	Dagmar	96.45	40	P	P	03 45 44.6	+0.2
	baz=242						
INK	Inuvik	96.62	15	P	P	03 45 44.1	-0.5
	comp=E,7.5nm,0.8s,baz=261,slow=2.6,SNR=16						
INK				PKiKP	PKiKP	03 50 22.8	+2.2
	comp=E,3.3nm,1.1s,baz=284,slow=4.2,SNR=3.5						
INK	Inuvik	96.62	15	eP	P	03 45 44.2	-0.3
	comp=E,8.9nm,0.7s						
INK				ePKiKP	PKiKP	03 50 22.8	+2.2
INK	Inuvik	96.62	15	eP	P	03 45 44.3	-0.3
INK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TUL1	Leonard	96.67	54	P	P	03 45 45.6	-0.1
	baz=246						
LVC	Limon Verde	96.70	118	eP	P	03 45 49.1	+2.4
	comp=Z,51nm,1.4s						
LVC	Limon Verde	96.70	118	eP	P	03 45 49.1	+2.4
LVC				pmax	pmax		
	comp=Z,51nm,1.4s						
LVC	Limon Verde	96.70	118	eP	P	03 45 48.3	+1.7
PB01	IPOC Station P	96.97	116	eP	P	03 45 49.1	+1.6
	comp=Z,38nm,1.3s						
BGNE	Belgrade	97.22	48	eP	Pdif	03 45 49.7	+1.6
	comp=Z,38nm,0.8s						
BGNE	Belgrade	97.22	48	P	Pdif	03 45 48.6	+0.5
	baz=246						
KSU1	Kansas State U	97.35	51	P	P	03 45 48.7	+0.1
	baz=246						
PB11	IPOC Station P	97.42	115	eP	Pdif	03 45 51.6	+1.9
	comp=Z,35nm,1.0s						
MNMC	Minye Minye	97.77	115	eP	Pdif	03 45 53.0	+1.6
	comp=Z,43nm,0.9s						
MIAR	Mount Ida	97.80	56	P	Pdif	03 45 51.4	+0.6
	baz=247						
GO01	Chusmiza	97.85	115	eP	Pdif	03 45 53.2	+1.2
	comp=Z,23nm,1.4s						
ULN	Ulaanbaatar	97.88	319	eP	Pdif	03 45 51.5	+0.5
	comp=Z,8.5nm,0.8s						
ULN	Ulaanbaatar	97.88	319	eP	Pdif	03 45 51.5	+0.5
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ULN	Ulaanbaatar	97.88	319	P	P	03 45 50.1	-0.8
	SNR=8.7						
W39A	Magazine	97.89	55	P	P	03 45 50.9	-0.2
	baz=247						
SONA0	Songino Array	98.26	319	eP	P	03 45 52.7	0.0
SONM	Songino Array	98.26	319	P	P	03 45 52.7	0.0
	comp=Z,3.1nm,0.8s,baz=85,slow=3.6,SNR=10						
SONM				PKKPbc	PKKPbc	04 02 23.5	-1.7
	comp=Z,1.5nm,0.7s,baz=323,slow=3.3,SNR=4.2						
X40A	Basin Creek Fa	98.35	56	P	P	03 45 53.0	-0.2
	baz=248						
YKA	Yellowknife Ar	98.59	25	P	P	03 45 53.3	-0.2
	comp=Z,6.3nm,0.9s,baz=238,slow=4.2,SNR=22						
YKA				PKiKP	PKiKP	03 50 25.2	+0.9
	comp=Z,1.5nm,0.7s,baz=248,slow=1.2,SNR=6.6						
YKA				PKKPbc	PKKPbc	04 02 21.9	-2.8
	comp=Z,2.5nm,0.7s,baz=35,slow=2.7,SNR=8.6						
YKB5	Yellowknife Ar	98.59	25	eP	P	03 45 53.3	-0.2
YKB5				ePKiKP	PKiKP	03 50 25.2	+0.9
YKW3	Yellowknife Ar	98.62	25	eP	Pdif	03 45 55.6	+1.9
	comp=Z,9.5nm,1.0s						
MDND	Maddock	98.94	42	eP	Pdif	03 45 55.8	+0.2
	comp=Z,22nm,0.8s						
MDND	Maddock	98.94	42	P	Pdif	03 45 55.9	+0.4
	baz=246						
U40A	Yellville	99.03	54	P	Pdif	03 45 56.2	-0.1
	baz=248						
W41B	Gary Mavity, V	99.05	56	P	Pdif	03 45 56.9	+0.6
	baz=248						
ECSD	EROS Data Cent	99.19	46	ePdif	Pdif	03 45 57.4	+0.6
	comp=Z,22nm,1.1s						
ECSD	EROS Data Cent	99.19	46	P	Pdif	03 45 57.3	+0.5
	baz=247						
GTA	Gaotai	99.25	309	⇑P	Pdif	03 45 58.0	+0.7
GTA				pP	pwP	03 46 41.8	-0.1
GTA				sP	sP	03 47 01.6	+5.4
GTA				PP	PP	03 50 03.1	+0.4
GTA				SKS	SKSac	03 56 17.8	-2.0
GTA				S	ScS	03 57 14.1	-0.3
GTA				SS	SS	04 04 04.9	-3.1
GTA				pmax	pmax		
	comp=Z,13nm,1.3s						
GTA				pmax	pmax		
	comp=Z,150nm,6.2s						
GTA				LR	LR		
	comp=Z,280nm,19.7s						
GTA				LR	LR		
	comp=Z,300nm,20.9s						
GTA				LR	LR		
	comp=Z,390nm,20.6s						
LPAZ	La Paz	100.32	113	P	Pdif	03 46 05.0	+1.7
	comp=Z,12nm,0.8s,baz=233,slow=2.9,SNR=44						
LPAZ				PP	PP	03 50 11.4	+0.2
	comp=Z,20nm,1.2s,baz=259,slow=5.4,SNR=12						
LPAZ				PKKPbc	PKKPbc	04 02 18.3	-0.3
	comp=Z,4.7nm,0.7s,baz=49,slow=1.0,SNR=12						
LPAZ	La Paz	100.32	113	ePdif	Pdif	03 46 04.8	+1.6
LPAZ	La Paz	100.32	113	eP	Pdif	03 46 04.8	+1.6
LPAZ	La Paz	100.32	113	eP	Pdif	03 46 03.0	-0.2
SHL	Shillong	100.48	293	eP	Pdif	03 46 03.5	+0.4
SHL				ex	x	03 50 12.0	
OGAUY	Aigu	100.89	135	eP	Pdif	03 46 06.6	+1.9
ZAK	Zakamensk	101.17	320	eP	Pdif	03 46 04.7	-0.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
AGMN	Agassiz Nation	101.42	42	P	Pdif	03 46 06.6	0.0
	baz=248						
TLY	Talaya	101.46	321	eP	Pdif	03 46 09.4	+2.7
TLY				ePS	PS	03 59 17.1	-9.1
TLY				ePPS	PPS	04 00 09.4	
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULM	Lac du Bonnet	102.14	40	PKKPbc	PKKPbc	04 02 13.6	-0.4
	comp=Z,4.8nm,0.7s,baz=60,slow=5.4,SNR=3.4						
ROSC	El Rosal	103.68	91	PKKPbc	PKKPbc	04 02 07.3	-1.2
	comp=Z,10nm,0.7s,baz=226,slow=14,SNR=6.0						
CPUP	Villa Florida	103.78	127	PKKPbc	PKKPbc	04 02 06.5	-1.6
	comp=Z,2.5nm,0.8s,baz=129,slow=2.0,SNR=3.2						
EYMN	Ely	104.04	44	P	Pdif	03 46 18.8	+0.5
	baz=251						
WMQ	Urumqi	109.25	310	Pdif	Pdif	03 46 42.9	+1.3
WMQ				S	Sdif	03 58 28.1	-9.4
WMQ				AMB	AMB		
	comp=Z,160nm,11.3s						
WMQ				LR	LR		
	comp=Z,270nm,18.7s						
WMQ				LR	LR		
	comp=Z,200nm,21.7s						
WMQ				LR	LR		
	comp=Z,510nm,21.7s						
RES	Resolute Bay	110.12	16	PKiKP	PKiKP	03 50 44.6	-0.5
	comp=Z,6.9nm,0.8s,baz=102,slow=0.5,SNR=7.7						
RES	Resolute Bay	110.12	16	ePKiKP	PKiKP	03 50 45.7	+0.6
FRTB	Fartura	111.22	129	eP	Pdif	03 46 52.4	+1.5
SPB	Sao Paulo	112.58	130	eP	Pdif	03 46 58.5	+1.7
ITRB	Iturama	112.85	125	eP	Pdif	03 46 59.8	+1.6
ZAA1	Zalesovo Array	113.04	321	ePdif	Pdif	03 46 59.9	+1.9
ZAA1				ePKiKP	PKiKP	03 50 50.5	-0.8
ZALV	Zalesovo Beam	113.04	321	Pdiff	Pdif	03 46 59.9	+1.9
	comp=Z,0.6nm,0.4s,baz=123,slow=5.3,SNR=2.3						
ZALV				PKiKP	PKiKP	03 50 50.5	-0.8
	comp=Z,12nm,0.7s,baz=166,slow=1.0,SNR=36						
MK31	Makanchi Array	113.58	313	i PKIKP	PKiKP	03 50 51.5	-1.1
MK31				pmax	pmax		
	comp=Z,25nm,0.9s						
MK32	Makanchi Array	113.58	313	ePKiKP	PKiKP	03 50 52.0	-0.6
MKAR	Makanchi Array	113.58	313	PKiKP	PKiKP	03 50 52.0	-0.6
	comp=Z,17nm,0.8s,baz=84,slow=2.3,SNR=38						
MKAR				PKKPbc	PKKPbc	04 01 37.5	-0.3
	comp=Z,5.0nm,0.8s,baz=278,slow=4.3,SNR=10						
MKAR	Makanchi Array	113.58	313	i PKIKP	PKiKP	03 50 52.0	-0.6
MAKZ	Makanchi	113.79	313	PKIKP	PKiKP	03 50 51.7	-1.3
MAKZ				pmax	pmax		
	comp=Z,22nm,0.8s						
PDGK	Podgornoye	115.00	308	PKIKP	PKPdf	03 50 54.2	-1.4
PDGK				pmax	pmax		
	comp=Z,19nm,1.0s						
HUMP	Col San Antoni	116.04	80	ePKPdf	PKPdf	03 50 57.2	-0.9
KURK	Kurchatov	116.47	316	ePKPdf	PKPdf	03 50 56.9	-1.0
KURK	Kurchatov	116.47	316	ePKIKP	PKPdf	03 50 56.9	-1.0
KDJ	Kajisay	116.50	307	ePKPdf	PKiKP	03 50 58.9	+0.3
KDJ	Kajisay	116.50	307	ePKIKP	PKiKP	03 50 58.9	+0.3
KURBB	Kurchatov Arra	116.52	316	PKP	PKPdf	03 50 57.0	-1.0
	comp=Z,18nm,0.8s,baz=101,slow=1.9,SNR=62						
KURBB				SKP		03 54 17.9	
	comp=Z,5.3nm,0.8s,baz=101,slow=2.1,SNR=8.3						
KURBB				PKKPbc	PKKPbc	04 01 27.0	-0.7
	comp=Z,4.2nm,0.8s,baz=271,slow=4.2,SNR=16						
KSH	Kashi	117.03	304	ePKP	PKiKP	03 51 01.5	+1.9
KSH				sPKP		03 52 00.1	
KSH				PP	PP	03 52 19.6	+7.6
KSH				PKS	PKSdf	03 54 37.1	+0.7
KSH				SKS	SKSdf	03 57 56.9	+0.9
KSH				SKKS	SKKSac	03 58 55.1	-0.5
KSH				AMB	AMB		
	comp=Z,200nm,5.1s						
KSH				LR	LR		
	comp=Z,250nm,13.6s						
KSH				LR	LR		
	comp=Z,190nm,15.1s						
KSH				LR	LR		
	comp=Z,130nm,13.9s						
BDFB	Brasilia	117.06	123	PKP	PKPdf	03 50 59.6	-0.7
	comp=Z,4.5nm,1.0s,baz=277,slow=9.0,SNR=3.2						
BDFB				PKKPbc	PKKPbc	04 01 26.0	+0.8
	comp=Z,5.0nm,0.7s,baz=46,slow=0.3,SNR=5.8						
NRN	Naryn	117.28	306	ePKPdf	PKiKP	03 51 00.5	+0.2
NRN	Naryn	117.28	306	ePKIKP	PKiKP	03 51 00.5	+0.2
BOOM	Boomskoye usch	117.46	307	ePKPdf	PKiKP	03 51 00.7	+0.3
BOOM	Boomskoye usch	117.46	307	ePKIKP	PKiKP	03 51 00.7	+0.3
TKM2	Tokmak 2	117.76	308	PKIKP	PKPdf	03 50 59.9	-1.1
TKM2				pmax	pmax		
	comp=Z,25nm,1.0s						
NIL	Nilore	118.24	297	ePKPdf	PKPdf	03 51 01.5	-0.5
NIL	Nilore	118.24	297	ePKIKP	PKPdf	03 51 01.5	-0.5
AAK	Ala-Archa	118.54	307	PKP	PKPdf	03 51 02.5	0.0
	comp=Z,7.0nm,0.7s,baz=92,slow=6.3,SNR=6.5						
AAK				PKKPbc	PKKPbc	04 01 20.8	+0.3
	comp=Z,7.8nm,0.8s,baz=201,slow=4.7,SNR=8.4						
AAK	Ala-Archa	118.54	307	ePKPdf	PKiKP	03 51 02.9	+0.4
AAK	Ala-Archa	118.54	307	PKIKP	PKPdf	03 51 01.2	-1.3
AAK				pmax	pmax		
	comp=Z,15nm,0.9s						
AAK	Ala-Archa	118.54	307	P	PKiKP	03 51 02.8	+0.3
	SNR=7.3						
PQI	Presque Isle	119.43	48	ePKPdf	PKPdf	03 51 03.1	-0.6
ARSB	Arslanbob	119.52	306	ePKPdf	PKPdf	03 51 03.8	-0.6
ABPO	Ambohimpanom	119.71	230	ePKPdf	PKiKP	03 51 07.9	+2.3
OPO	Ambohidratompo	120.04	230	PKP	PKiKP	03 51 07.0	+0.8
	comp=Z,24nm,0.9s,baz=145,slow=1.3,SNR=5.2						
SCHQ	Schefferville	120.26	39	PKKPbc	PKKPbc	04 01 14.2	-0.2
	comp=Z,8.8nm,0.8s,baz=83,slow=4.9,SNR=6.0						
BSFB	Barra de Sao F	120.32	131	eP	PKiKP	03 51 08.1	+1.6
OTUK	Ortayu	120.42	313	PKIKP	PKPdf	03 51 04.8	-0.9
OTUK				pmax	pmax		
	comp=Z,48nm,1.1s						
BTK	Batken	121.04	304	ePKPdf	PKPdf	03 51 07.2	-0.1
BTK	Batken	121.04	304	ePKIKP	PKPdf	03 51 07.2	-0.1
GAR	Garm	121.33	303	ePKPdf	PKiKP	03 51 08.3	+0.3
KK31	Karatay Array	121.50	307	ePKPdf	PKPdf	03 51 07.7	-0.3
KK31	Karatay Array	121.50	307	i PKIKP	PKPdf	03 51 07.6	-0.3
KK31				pmax	pmax		
	comp=Z,26nm,0.8s						
KKAR	Karatay Array	121.50	307	ePKPdf	PKPdf	03 51 07.7	-0.3
BVAR	Borovoye Array	121.60	319	PKP	PKPdf	03 51 07.2	-0.6
	comp=Z,19nm,0.6s,baz=90,slow=1.5,SNR=59						
BVAR				PKKPbc	PKKPbc	04 01 08.6	-0.7
	comp=Z,1.6nm,0.8s,baz=264,slow=3.0,SNR=4.9						
LMN	Caledonia Moun	121.62	49	ePKPdf	PKPdf	03 51 08.0	-0.1
BRVK	Borovoye	121.67	319	ePKPdf	PKPdf	03 51 07.4	-0.5
BRVK	Borovoye	121.67	319	c iPKIKP	PKPdf	03 51 07.6	-0.3
BRVK				pmax	pmax		
	comp=Z,54nm,1.3s						
BRVK	Borovoye	121.67	319	P	PKPdf	03 51 07.6	-0.3
	SNR=25						
KBL	Kabul	121.83	297	ePKPdf	PKiKP	03 51 09.7	+0.4
KBL	Kabul	121.83	297	ePKIKP	PKiKP	03 51 09.7	+0.4
SUR	Sutherland	122.17	198	PKP	PKiKP	03 51 10.6	+0.5
	comp=Z,46nm,0.8s,baz=127,slow=3.0,SNR=24						
SUR	Sutherland	122.17	198	ePKPdf	PKiKP	03 51 10.9	+0.8
CHGR	Chuyangaron	122.19	302	ePKPdf	PKiKP	03 51 12.1	+2.4
GBN	Guysborough	123.92	50	ePKPdf	PKiKP	03 51 13.0	+0.3
ILULI	Ilulissat	123.96	20	ePKPdf	PKPdf	03 51 11.9	+0.1
ILULI	Ilulissat	123.96	20	⇓iPKIKP	PKiKP	03 51 12.7	+0.6
ILULI				pmax	pmax		
	comp=Z,58nm,0.7s						
ILULI	Ilulissat	123.96	20	⇓iP	PKiKP	03 51 12.7	+0.6
	comp=Z,58nm,0.7s						
KBS	Kingsbay	124.01	358	ePKPdf	PKiKP	03 51 12.8	+0.7
KBS	Kingsbay	124.01	358	c iPKIKP	PKiKP	03 51 13.8	+1.8
KBS				pmax	pmax		
	comp=Z,263nm,1.3s						
KBS	Kingsbay	124.01	358	ePKPdf	PKiKP	03 51 12.4	+0.4
BOSA	Boshof	124.18	204	PKP	PKiKP	03 51 14.8	+0.7
	comp=Z,32nm,0.9s,baz=94,slow=0.4,SNR=20						
BOSA				PKKPbc	PKKPbc	04 00 58.5	-0.8
	comp=Z,2.4nm,0.6s,baz=341,slow=2.5,SNR=5.7						
BOSA	Boshof	124.18	204	ePKPdf	PKiKP	03 51 15.2	+1.1
SPA0	Spitsbergen Ar	124.55	357	ePKPdf	PKiKP	03 51 13.2	0.0
SPA0	Spitsbergen Ar	124.55	357	ePKPdf	PKPdf	03 51 12.7	-0.1
SPA0				epPKPdf	pPKPdf	03 51 58.4	+2.2
SFJD	Kangerlussuaq	125.09	23	ePKPdf	PKiKP	03 51 14.6	+0.2
SFJD	Kangerlussuaq	125.09	23	ePKIKP	PKiKP	03 51 14.6	+0.2
SFJD	Kangerlussuaq	125.09	23	i P	PKPdf	03 51 14.2	+0.2
DAG	Danmarks Havn	125.29	6	i PKIKP	PKPdf	03 51 13.3	-0.9
DAG				pmax	pmax		
	comp=Z,22nm,0.9s						
DAG	Danmarks Havn	125.29	6	i P	PKPdf	03 51 13.3	-0.9
	comp=Z,26nm,0.9s						
HSPB	Hornsund (broa	125.74	356	ePKPdf	PKPdf	03 51 15.0	0.0
SVE	Sverdlovsk	126.61	325	ePKIKP	PKiKP	03 51 17.6	-0.1
SVE				pmax	pmax		
	comp=Z,57nm,0.8s						
LBTB	Lobatse	127.27	206	PKP	PKiKP	03 51 21.1	+0.8
	comp=Z,12nm,0.8s,baz=118,slow=3.3,SNR=10						
LBTB	Lobatse	127.27	206	ePKPdf	PKiKP	03 51 21.4	+1.1
ARU	Arti	127.82	324	ePKPdf	PKPdf	03 51 19.7	+0.1
ARU	Arti	127.82	324	i PKIKP	PKPdf	03 51 19.9	+0.3
ARU						03 53 19.5	
IVI	Ivigtut	128.50	29	ePKPdf	PKPdf	03 51 19.8	-0.8
AB31	Akbulak array	128.54	315	i PKIKP	PKPdf	03 51 19.7	-1.5
AB31				pmax	pmax		
	comp=Z,18nm,1.0s						
ABKAR	Akbulak array	128.54	315	ePKPdf	PKPdf	03 51 21.1	0.0

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BIDO  Bidbid           129.52 282   P        PKiKP    03 51 27.0 +2.4
        SNR=5.5
NRS   Narsarsuaq       129.72  28  ePKPdf    PKPdf    03 51 22.4 -0.6
NRS   Narsarsuaq       129.72  28  i PKIKP   PKPdf    03 51 23.3 +0.3
NRS   Narsarsuaq       129.72  28  i P       PKPdf    03 51 23.3 +0.3
MATP  Matopo           129.97 212   PKP      PKiKP    03 51 26.4 +0.6
        comp=Z,22nm,0.8s,baz=166,slow=1.3,SNR=24
MATP                                SKP               03 54 34.0
        comp=Z,37nm,0.8s,baz=152,slow=4.2,SNR=21
SCO   Scoresbysund     130.47  11  ePKPdf    PKPdf    03 51 24.7 +0.5
SCO   Scoresbysund     130.47  11  i PKIKP   PKiKP    03 51 25.7 +0.6
SCO                                 pmax     pmax
        comp=Z,20nm,0.7s
SCO   Scoresbysund     130.47  11  i P       PKiKP    03 51 25.7 +0.6
        comp=Z,20nm,0.7s
GEYT  Alibeck          130.84 301   PKhKP    PKPpre   03 51 20.3
        comp=Z,4.0nm,0.6s,baz=230,slow=1.2,SNR=5.7
GEYT                                PKP      PKiKP    03 51 27.2 +0.3
        comp=Z,563nm,0.3s,baz=198,slow=0.5,SNR=18
GEYT                                PP       PP       03 53 42.6 -1.8
        comp=Z,8.2nm,0.8s,baz=197,slow=1.5,SNR=3.7
GEYT                                SKP               03 54 36.2
        comp=Z,44nm,1.0s,baz=96,slow=1.5,SNR=14
GYA0B ALIBECK ARRAY    130.84 301  ePKPdf    PKiKP    03 51 27.1 +0.1
HAMF  Hammerfest       130.96 351  ePKPdf    PKPdf    03 51 25.4 +0.3
HAMF                                IVmB_BB           03 51 27.4
        comp=Z,432nm,0.6s
LVZ   Lovozero         131.15 345  ePKPdf    PKPdf    03 51 26.1 +0.5
LVZ   Lovozero         131.15 345c iPKIKP    PKiKP    03 51 26.9 +0.3
LVZ                                 pmax     pmax
        comp=Z,73nm,1.7s
MDH   Madha            131.48 284   PKPdf    PKPdf    03 51 27.7 +0.2
UOSS  Minazif          131.50 283  ePKPdf    PKPdf    03 51 27.3 -0.3
UOSS  Minazif          131.50 283   PKPdf    PKPdf    03 51 27.3 -0.3
HATD  Hatta, Dubai     131.55 283  i PKPdf   PKPdf    03 51 27.7 +0.1
        SNR=20
HATD  Hatta, Dubai     131.55 283   P        PKiKP    03 51 29.0 +0.3
        SNR=7.0
BANOM Banah            131.57 285   PKPdf    PKiKP    03 51 28.6 -0.1
ASHO  Ashiyiah         131.59 283  i PKPdf   PKPdf    03 51 27.4 -0.3
        SNR=13
ASHO  Ashiyiah         131.59 283   P        PKiKP    03 51 30.7 +1.9
        SNR=6.5
MSFE  Esma-Masafi      131.61 284  i PKPdf   PKPdf    03 51 28.0 +0.2
        SNR=9.5
KIRV  Kirov            131.65 329   SKP      SKPbc    03 54 37.7 +1.0
        comp=Z,90nm,0.7s,baz=59,slow=3.2,SNR=22
ARCES ARCESS Array B   131.67 350   PKhKP    PKPpre   03 51 18.3
        comp=Z,4.9nm,0.8s,baz=349,slow=0.9,SNR=17
ARCES                               PKP      PKPdf    03 51 26.6 +0.1
        comp=Z,44nm,0.7s,baz=48,slow=1.8,SNR=65
ARCES                               SKP               03 54 38.1
        comp=Z,39nm,1.0s,baz=40,slow=4.0,SNR=15
ARE0  ARCESS Array S   131.67 350  ePKPdf    PKPdf    03 51 26.5 -0.1
ARE0  ARCESS Array S   131.67 350  ePKPdf    PKiKP    03 51 27.2 -0.4
ARE0                               eSKPdf    SKPab    03 54 38.3 +1.0
JMIC  Jan Mayen        131.70   5  ePKPdf    PKiKP    03 51 27.4 -0.1
APA   Apatity          131.70 345⇓iPKIKP     PKPdf    03 51 26.8 +0.2
APA                                i                  03 58 22.0
SHME  Shamm            131.73 285  i PKiKP   PKiKP    03 51 29.0  0.0
        SNR=7.2
ALNE  Al Ain           131.76 282  i PKiKP   PKiKP    03 51 29.9 +0.7
        SNR=12
PRGR  Permogore        131.77 334  ePKIKP    PKPdf    03 51 25.6 -1.3
PRGR                                pmax     pmax
        comp=Z,40nm,0.8s
NAZ   Nazwa, Dubai     132.00 283   PKiKP    PKiKP    03 51 29.5  0.0
FAQ   Al Faqa, Dubai   132.02 283   PKPdf    PKPdf    03 51 29.1 +0.6
ASUD  Al Ashush, Dub   132.23 283   PKiKP    PKiKP    03 51 30.3 +0.3
KTK1  Kautokeino       132.50 350  ePKPdf    PKPdf    03 51 28.6 +0.5
TRO   Tromso           132.53 352  ePKPdf    PKPdf    03 51 27.5 -0.6
TRO                                 IVmB_BB           03 51 30.5
        comp=Z,390nm,0.8s
LSZ   Lusaka           134.46 215   PKhKP    PKPpre   03 51 22.9
        comp=Z,3.2nm,0.7s,baz=50,slow=5.6,SNR=7.5
LSZ                                 PKP      PKiKP    03 51 34.8 -0.2
        comp=Z,24nm,0.8s,baz=136,slow=1.8,SNR=21
LSZ                                 SKP               03 54 49.8
        comp=Z,11nm,0.8s,baz=158,slow=2.1,SNR=6.1
LOF   Lofoten          134.54 354  ePKPdf    PKPpre   03 51 26.3
LOF                                 IVmB_BB           03 51 34.5
        comp=Z,331nm,2.1s
STEI  Steigen          134.57 353  ePKPdf    PKPpre   03 51 25.9
STEI                                IVmB_BB           03 51 33.3
        comp=Z,267nm,2.8s
STEI                               eSKPdf    SKPbc    03 54 47.4 +1.1
TSUM  Tsumeb           135.51 200   PKhKP    PKPpre   03 51 28.2
        comp=Z,2.5nm,0.8s,baz=143,slow=5.1,SNR=3.2
TSUM                                PKP      PKiKP    03 51 37.3 +0.3
        comp=Z,12nm,0.8s,baz=177,slow=2.0,SNR=15
TSUM                                SKP               03 54 52.9
        comp=Z,11nm,1.0s,baz=145,slow=5.5,SNR=4.4
TSUM  Tsumeb           135.51 200  ePKPdf    PKiKP    03 51 36.8 -0.3
STOK  Stokkvaagen      136.34 354  ePKPdf    PKPdf    03 51 35.8 +0.4
MOR8  Moi Rana         136.35 353  ePKPdf    PKPdf    03 51 35.6 +0.1
MOR8                               eSKPdf    SKPbc    03 54 52.8 +0.8
NSS   Namsos           138.21 354  ePKPdf    PKPpre   03 51 33.7
NSS                                 IVmBBB            03 51 41.0
        comp=Z,424nm,1.2s
MAK   Makhachkala      138.26 309  eP        Pdif     03 48 48.8 -1.6
MAK                                i                  03 51 37.5
MAK                                e                  03 52 13.5
MAK                                e                  03 58 41.0
MAK                                eSSS      SSS      04 17 42.0
MAK                                 pmax     pmax
        comp=Z,300nm,1.8s
AKT   Akhty            138.42 307  i PKIKP   PKiKP    03 51 42.6 +0.3
AKT                                e                  03 52 15.2
AKT                                e                  03 54 31.9
AKT                                 pmax     pmax
        comp=Z,66nm,1.0s
FIA1  FINESS Array S   138.53 343  ePKPpre   PKPpre   03 51 32.2
FIA0  FINESS Array S   138.53 343  ePKPpre   PKPpre   03 51 29.4
FIA0                               ePKPdf    PKiKP    03 51 40.8 -0.9
FIA0                               eSKPbc    SKPbc    03 54 59.5 +1.1
FIA0  FINESS Array S   138.53 343  ePKHKP    PKPpre   03 51 29.5
FIA0                               e                  03 51 40.8
FINES FINESS Array B   138.53 343   PKhKP    PKPpre   03 51 29.4
        comp=Z,6.3nm,0.5s,baz=50,slow=3.0,SNR=23
FINES                               PKP      PKiKP    03 51 40.8 -0.9
        comp=Z,27nm,0.7s,baz=29,slow=3.2,SNR=18
FINES                               SKPab    SKPbc    03 54 59.5 +1.1
        comp=Z,15nm,0.9s,baz=73,slow=6.4,SNR=8.6
MOS   Moscow           138.59 331  i PKIKP   PKPdf    03 51 39.1 -0.7
MOS                                 pmax     pmax
        comp=Z,82nm,0.9s
KMBO  Kilima Mbogo     138.73 239  ePKPpre   PKPpre   03 51 34.7
KMBO  Kilima Mbogo     138.73 239  ePKHKP    PKPpre   03 51 34.7
GROC  Groznyy          139.41 310  ePKIKP    PKPdf    03 51 40.7 -1.0
GROC                               e                  03 52 10.0
GROC                               e                  03 52 22.5
GROC                               e                  03 54 40.5
GROC                                pmax     pmax
        comp=Z,88nm,1.3s
OBN   Obninsk          139.45 331   PKhKP    PKPpre   03 51 34.1
        comp=Z,5.3nm,0.5s,baz=329,slow=5.9,SNR=2.3
OBN                                 PKP      PKPdf    03 51 41.8 +0.4
        comp=Z,8.5nm,0.5s,baz=10.0,slow=5.9,SNR=7.0
OBN                                 SKPab    SKPbc    03 55 01.3 +0.2
        comp=Z,2.7nm,0.4s,baz=288,slow=14,SNR=3.9
OBN   Obninsk          139.45 331  ePKPpre   PKPpre   03 51 34.1
OBN                                ePKPdf    PKiKP    03 51 42.8 -0.9
OBN                                eSKPdf    SKPbc    03 55 01.3 +0.2
OBN   Obninsk          139.45 331  i PKIKP   PKiKP    03 51 42.8 -0.9
OBN                                 pmax     pmax
        comp=Z,121nm,1.7s
TBLU  Trondheim        139.62 355  ePKPdf    PKPdf    03 51 36.8 -4.7
LPSR  Galich'ya Gora   139.78 326  ePKIKP    PKPdf    03 51 41.3 -0.8
LPSR                                pmax     pmax
        comp=Z,50nm,1.2s
VORR  Voronezh         140.13 325   PKIKP    PKPdf    03 51 41.0 -1.7
VORR                                pmax     pmax
        comp=Z,250nm,1.4s
VSR   Storozhevoye     140.39 324  ePKIKP    PKPdf    03 51 42.2 -1.0
VSR                                 pmax     pmax
        comp=Z,50nm,0.7s
MOL   Molde            140.48 357  ePKPdf    PKPdf    03 51 37.1 -5.9
TBLG  Delisi           140.55 308  ePKPpre   PKPdf    03 51 39.1 -4.8
GOF   Gofitskoye       140.73 314⇑ePKIKP     PKPdf    03 51 45.4 +1.3
GOF                                 pmax     pmax
        comp=Z,31nm,0.6s
VSU   Vasula           140.81 340  eP        PKPdf    03 51 42.7 -1.0
VSU                                 IAmb     IAmb     03 51 49.5
        comp=Z,124nm,1.0s
ZEI   Tsey             140.86 310  i PKHKP   PKPdf    03 51 38.2 -6.5
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ZEI                                 pmax     pmax
        comp=Z,30nm,0.9s
AKN   Aaknes           140.90 357  ePKPdf    PKPdf    03 51 38.3 -5.6
AKN                                eSKPdf    SKPdf    03 55 02.8  0.0
DOMB  Dombas           140.91 355  ePKPdf    PKPdf    03 51 37.4 -6.5
DOMB                                IVmB_BB           03 51 45.2
        comp=Z,340nm,3.9s
GNI   Garni            140.92 306  eP        PKPdf    03 51 43.9 -0.9
GNI   Garni            140.92 306   PKhKP    PKPdf    03 51 41.3 -3.5
        comp=Z,5.6nm,0.3s,baz=165,slow=2.7,SNR=5.1
GNI   Garni            140.92 306  ePKPpre   PKPdf    03 51 39.5 -5.3
GNI   Garni            140.92 306   PKPdf    PKPdf    03 51 39.7 -5.1
GNI   Garni            140.92 306   P        PKPdf    03 51 44.4 -0.4
        SNR=16
RAYN  Ar Rayn          140.94 279  ePKPpre   PKPdf    03 51 39.7 -5.4
ONI   Oni              141.23 310  eP        PKPdf    03 51 41.5 -3.6
KBZ   Khabaz           141.27 312   PKhKP    PKPdf    03 51 42.1 -2.9
        comp=Z,6.3nm,0.8s,baz=151,slow=3.5,SNR=10.0
KBZ                                 SKPab    SKiKP    03 55 08.0 -0.2
        comp=Z,7.4nm,0.9s,baz=112,slow=3.6,SNR=5.8
KIV   Kislovodsk       141.34 312  ePKPdf    PKPdf    03 51 46.1 +0.8
KIV   Kislovodsk       141.34 312   PKPdf    PKPdf    03 51 39.0 -6.4
KIV   Kislovodsk       141.34 312  i PKIKP   PKiKP    03 51 49.0 +0.9
KIV                                e                  03 54 49.7
KIV                                eSS       SS       04 13 10.3 +4.5
KIV                                 pmax     pmax
        comp=Z,73nm,1.1s
KIV                                 MLR      MLR
        comp=Z,797nm,24.0s
NC303 NORSAR Array S   141.50 353  ePKPpre   PKPdf    03 51 39.2 -5.8
NC204 NORSAR Array S   141.51 354  ePKPpre   PKPdf    03 51 39.8 -5.3
AKH   Akhalkalaki      141.53 308  ePKPpre   PKPdf    03 51 42.5 -3.4
AKH   Akhalkalaki      141.53 308⇑iP         PKPdf    03 51 42.3 -3.6
AKH   Akhalkalaki      141.53 308  ePKIKP    PKPdf    03 51 42.5 -3.4
NC405 NORSAR Array S   141.57 353  ePKPpre   PKPdf    03 51 39.8 -5.3
NB201 NORSAR Array S   141.68 353  ePKPpre   PKPdf    03 51 39.7 -5.6
NB2   NORSAR Subarra   141.70 353   PKP      PKPdf    03 51 39.8 -5.6
        comp=Z,30nm,1.1s,baz=16,slow=3.2
NB200 NORSAR Array S   141.70 353  ePKPpre   PKPdf    03 51 39.3 -6.0
NOA   NORSAR Array B   141.70 353   PKhKP    PKPdf    03 51 39.3 -6.0
        comp=Z,17nm,0.8s,baz=22,slow=2.5,SNR=69
NBO00 NORSAR Array S   141.75 354  ePKPpre   PKPdf    03 51 40.4 -5.1
CLDR  Caldiran         141.76 304  eP        PKPdf    03 51 41.6 -4.8
NAO01 NORSAR Array S   141.93 354  ePKPpre   PKPdf    03 51 40.1 -5.6
HYA   Hoyanger         141.95 357  ePKPdf    PKPdf    03 51 43.2 -2.5
HYA                                ePP       PP       03 54 53.5 +1.3
NC602 NORSAR Array S   141.96 353  ePKPpre   PKPdf    03 51 40.3 -5.5
NC602 NORSAR Array S   141.96 353  ePKPdf    PKPdf    03 51 40.8 -4.9
SUE   Sulen            142.10 358  ePKPdf    PKPdf    03 51 40.0 -6.0
HFS   Hagfors          142.28 351   PKhKP    PKPdf    03 51 41.9 -4.5
        comp=Z,39nm,0.5s,baz=44,slow=4.1,SNR=155
VANB  Van              142.28 304  eP        PKPdf    03 51 42.5 -4.7
SKAR  Skarslia         142.31 356  ePKPdf    PKPdf    03 51 43.1 -3.4
SKAR                                IVmB_BB           03 51 44.4
        comp=Z,408nm,2.5s
CUKT  Cukurca          142.37 301  eP        PKPdf    03 51 45.3 -2.1
AKDM  Akdamar-Van      142.65 303  eP        PKPdf    03 51 46.7 -1.3
ASK   Askoy            142.67 358  ePKPdf    PKPdf    03 51 43.9 -3.1
BER   Bergen           142.76 358  ePKPdf    PKPdf    03 51 44.3 -2.9
BER                                epPKPdf   pPKPdf   03 52 32.2 +1.6
BATM  Batumi           142.77 309⇑iP         PKPdf    03 51 44.8 -3.0
SLIT  Slitere, Latvi   142.80 343  eP        PKPdf    03 51 41.9 -5.4
SLIT                                IAmb     IAmb     03 51 47.5
        comp=Z,264nm,0.6s
BCA   Borcka           142.87 309  eP        PKPdf    03 51 44.9 -3.1
BCA   Borcka           142.87 309⇑iP         PKPdf    03 51 45.0 -3.1
KOPR  Koprukoy-ERZUR   143.11 306  eP        PKPab    03 51 44.7 +0.1
IZAR  Zarasai          143.14 338  eP        PKPbc    03 51 45.4  0.0
IZAR                                IAmb     IAmb     03 51 49.0
        comp=Z,15nm,0.6s
ODD1  Odda             143.18 357  ePKPdf    PKPbc    03 51 45.5  0.0
KONO  Kongsberg        143.23 354  ePKPpre   PKPab    03 51 44.7 +0.6
KONO  Kongsberg        143.23 354  ePKPdf    PKPab    03 51 42.3 -1.8
KONO                                IVmB_BB           03 51 47.7
        comp=Z,558nm,1.4s
KONO                               eSKPdf    SKPdf    03 55 06.0 -0.7
ISAL  Salakas          143.33 338  eP        PKPbc    03 51 45.8 -0.1
ISAL                                IAmb     IAmb     03 51 51.0
        comp=Z,26nm,0.9s
GURO  Guroymak-BITLI   143.33 304  eP        PKPbc    03 51 46.5 -0.2
IIGN  Ignalina         143.47 338  eP        PKPab    03 51 45.8 +0.5
IIGN                                IAmb     IAmb     03 51 50.4
        comp=Z,22nm,0.8s
SOC   Sochi            143.49 313  ePKIKP    PKPbc    03 51 47.2 +0.4
SOC                                e                  03 55 01.2
SOC                                ePPP      PPP      03 58 12.9
MICGM Minsk            143.52 335⇑eP         PKPab    03 51 45.0 -0.5
MICGM                               PM                03 51 48.0
        comp=Z,0.6nm,1.5s
MICGM                              e                  03 55 12.0
MNK   Minsk            143.52 335⇑ePKHKP     PKPab    03 51 45.0 -0.5
MNK                                e                  03 55 12.0
MNK                                 pmax     pmax
        comp=Z,630nm,1.5s
NACGM Naroch           143.62 337  eP        PKPab    03 51 46.0 +0.2
NACGM                               PM                03 51 48.0
        comp=Z,0.4nm,1.0s
BLS5  Blasjo           143.68 357  ePKPdf    PKPab    03 51 45.2 -0.8
KARO  Karliova-Bingo   143.89 306  eP        PKPbc    03 51 48.7 +0.3
KMY   Karmoy           143.94 358  ePKPdf    PKPbc    03 51 48.4 +0.8
MBAR  Mbarara          144.03 233   PKP      PKPdf    03 51 50.6 -0.5
        comp=Z,101nm,0.7s,baz=141,slow=3.4,SNR=91
SVAN  Silvan-Diyarba   144.06 304  eP        PKPbc    03 51 48.7  0.0
YEDI  Yedisu-Bingol    144.23 306  eP        PKPbc    03 51 49.6 +0.3
BNGB  Bingl            144.25 305  eP        PKPbc    03 51 49.7 +0.4
BAYT  Aydıntepe-Bayb   144.26 308  eP        PKPbc    03 51 49.7 +0.3
KTUT  Trabzon          144.34 309  eP        PKPab    03 51 49.3 +0.2
KTUT  Trabzon          144.34 309⇓iP         PKPbc    03 51 50.0 +0.6
BIGH  Upper Bighouse   144.37   6  eP        PKPab    03 51 44.9 -3.7
ANN   Anapa            144.49 316  i PKHKP   PKPab    03 51 48.6 -0.9
ANN                                e                  03 55 06.4
ANN                                 pmax     pmax
        comp=Z,450nm,1.5s
HOMB  Homborsund       144.69 355  ePKPbc    PKPab    03 51 49.9 +0.1
HOMB                               epPKPdf   pPKPdf   03 52 34.4 +0.6
HOMB                               eSKPdf    SKPdf    03 55 08.7 -0.4
SNART Snartemo         144.71 356  ePKPbc    PKPab    03 51 49.9  0.0
MAZI  Mazidag          144.79 303  eP        PKPab    03 51 50.4 -0.7
ERZN  Erzincan         144.80 306  eP        PKPab    03 51 51.2 +0.1
ASCN  Ascension        144.81 149  ePKPbc    PKPdf    03 51 53.1 +0.8
DYBB  Diyarbakir       144.92 304  eP        PKPdf    03 51 51.8  0.0
KAC   Achnashellach    145.19   8  eP        PKPbc    03 51 51.4 -0.1
KPL   Plockton         145.30   8  eP        PKPdf    03 51 49.5 -2.2
SVRC  Sivrice-ELAZID   145.44 305  eP        PKPab    03 51 53.8 +0.2
SUW   Suwalki          145.59 339  ePKP      PKPbc    03 51 52.9  0.0
SUW                                epPKP     pPKPdf   03 52 38.1 +2.5
SUW   Suwalki          145.59 339  ePKPdf    PKPdf    03 51 52.6 +0.3
SUW   Suwalki          145.59 339  ePKP2     PKPbc    03 51 52.9  0.0
AKASG Malin Array Be   145.70 330   PKPbc    PKPdf    03 51 52.3 -0.3
        comp=Z,114nm,0.6s,baz=41,slow=4.4,SNR=226
AKASG                               PP       PP       03 55 17.8 +2.6
        comp=Z,19nm,0.8s,baz=45,slow=2.5,SNR=7.0
AKBB  Malin Array Si   145.70 330  ePKPdf    PKPdf    03 51 52.4 -0.2
AKBB                               eSKPbc    SKiKP    03 55 17.8 +0.6
AKBB  Malin Array Si   145.70 330  ePKIKP    PKPdf    03 51 52.4 -0.2
AKBB                               e                  03 55 17.8
URFA  Urfa             146.06 303  eP        PKPab    03 51 55.7 -0.1
DRUM  Mains of Drumt   146.06   5  eP        PKPdf    03 51 53.1 +0.1
EDU   Dundee           146.37   6  eP        PKPbc    03 51 54.7 -0.4
MUD   Monsted U'grnd   146.42 354⇓iPKP2      PKPbc    03 51 55.4 +0.2
MUD                                 pmax     pmax
        comp=Z,180nm,0.7s
MUD   Monsted U'grnd   146.42 354⇓iP         PKPbc    03 51 55.4 +0.2
        comp=Z,178nm,0.7s
MUD                                i                  03 52 41.7
SIM   Simferopol'      146.51 318c iPKP2     PKPab    03 51 57.1 -0.1
EBH   Black Hill       146.62   6  eP        PKPbc    03 51 56.1 +0.3
COP   Copenhagen       146.75 350  i PKP2    PKPbc    03 51 56.1 -0.1
COP                                 pmax     pmax
        comp=Z,170nm,0.9s
COP   Copenhagen       146.75 350  i P       PKPbc    03 51 56.1 -0.1
        comp=Z,168nm,0.9s
COP                                i                  03 52 41.8
DARE  Darende-Malaty   146.76 306  eP        PKPdf    03 51 55.6 +0.6
TOKT  Tokat            146.88 309  eP        PKPbc    03 51 56.9 -0.3
H07N1 FLORES T-PHASE   146.90  52  ePKP      PKPbc    03 51 58.0 +0.8
PGBU  Glenifferbraes   146.94   8  eP        PKPbc    03 51 55.9 -0.8
H07S1 FLORES T-PHASE   146.94  53  ePKP      PKPbc    03 51 57.7 +0.4
KVT   Kavak            146.95 311  eP        PKPab    03 51 58.3 -0.8
EDI   Edinburgh        146.97   6  eP        PKPdf    03 51 55.2 +0.6
SEVA  Sevastopol       146.99 318⇑iP         PKPbc    03 51 57.2  0.0
EAU   Auchinoon        147.02   7  eP        PKPdf    03 51 55.2 +0.5
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ESY   Stoneypath       147.03   6  eP        PKPdf    03 51 54.0 -0.7
EBL   Broad Law        147.13   6  eP        PKPbc    03 51 56.4 -0.9
DIKM  Dikmen           147.27 312  eP        PKPbc    03 51 58.1  0.0
DIKM  Dikmen           147.27 312⇑iP         PKPbc    03 51 58.9 +0.8
GAZ   Gaziantep        147.37 303  eP        PKPbc    03 51 57.5 -1.1
KMRS  Kahramanmaras    147.51 304  eP        PKPbc    03 51 58.7 -0.3
EKA   Eskdalemuir Ar   147.56   6   PKPbc    PKPbc    03 51 58.8 +0.3
        comp=Z,78nm,0.7s,baz=342,slow=2.6,SNR=88
ESK   Eskdalemuir      147.57   6  ePKPdf    PKPdf    03 51 56.5 +0.9
ESK   Eskdalemuir      147.57   6  eP        PKPdf    03 51 56.2 +0.6
ESK   Eskdalemuir      147.57   6  ePKIKP    PKPdf    03 51 56.5 +0.9
RGN   Rugen            147.68 349  ePKPbc    PKiKP    03 52 00.2 -0.5
BHH   Howats Hill      147.79   7  eP        PKPdf    03 51 57.5 +1.6
GAL1  Galloway         147.83   8  eP        PKPdf    03 51 57.2 +1.2
BNN   Bunyan           147.89 307  eP        PKPdf    03 51 57.1 +0.2
BZK   Bozkurt          147.99 313  eP        PKPbc    03 52 00.7 +0.7
BZK   Bozkurt          147.99 313⇑iP         PKPbc    03 52 00.4 +0.4
YOZ   Yozgat           148.00 309  eP        PKPbc    03 52 00.6 +0.2
GKP   Gorka Klasztor   148.01 344  ePKP      PKPbc    03 51 59.9 +0.2
GKP   Gorka Klasztor   148.01 344  ePKP2     PKPbc    03 51 59.9 +0.2
EDMD  Edmundbyers      148.17   5  eP        PKPdf    03 51 57.8 +1.2
BEL   Belsk            148.21 339  ePKP      PKPbc    03 51 58.9 -1.3
BEL                                epPKP     pPKPab   03 52 47.0 +1.5
BEL   Belsk            148.21 339  ePKIKP    PKPbc    03 51 58.9 -1.3
CORM  Corum            148.29 310  eP        PKiKP    03 52 02.0 -0.6
KIS   Kishinev         148.37 325⇑iPKP       PKPdf    03 51 59.0 +1.8
        comp=Z,840nm,2.0s
KIS                                i pPKP    pPKPab   03 52 47.0 +0.6
KIS                                eSKS               03 59 50.0
KIS   Kishinev         148.37 325⇑iPKIKP     PKPdf    03 51 59.0 +1.8
KIS                                i                  03 52 06.0
KIS                                e                  03 55 30.0
KIS                                e                  04 08 00.0
KIS                                 pmax     pmax
        comp=Z,840nm,2.0s
KIS                                 MLR      MLR
        comp=Z,300nm,22.0s
MILM  Milestii Mici    148.42 325⇓iP         PKPbc    03 52 00.9 -0.1
IOMK  Kirk Michael     148.44   8  eP        PKPdf    03 51 58.6 +1.5
CEYT  Ceyhan           148.53 304  eP        PKiKP    03 52 02.4 -0.6
WIM   Isle of Man      148.54   8  eP        PKPdf    03 51 58.3 +1.1
ILGA  Ilgaz            148.57 312  ePKPdf    PKPbc    03 52 00.2 -1.6
LVV   L'vov            148.63 333  i PKHKP   PKPdf    03 51 56.7 -0.8
LVV                                e                  03 52 01.6
LVV                                ePPP      PPP      03 59 02.1
LVV                                 MLR      MLR
        comp=N,200nm,22.0s
LVV                                 MLR      MLR
        comp=Z,200nm,22.0s
ASF   Jabal al Asfar   148.64 294   PKPbc    PKPbc    03 52 02.2 +0.1
        comp=Z,123nm,0.8s,baz=42,slow=1.6,SNR=103
ASF   Jabal al Asfar   148.64 294   P        PKPdf    03 52 00.0 +1.8
        comp=Z,232nm,0.9s,comp=Z,2µm
ASF   Jabal al Asfar   148.64 294   P        PKPdf    03 52 00.0 +1.8
YURE  YUREGIR          148.68 303  eP        PKPbc    03 52 02.2 +0.2
CANT  Cankiri          148.83 311  eP        PKPbc    03 52 03.0 +0.7
TOTH  TOTAH            148.84 297  eP        PKiKP    03 52 04.3 +0.4
KURC  Kurucasile-Bar   148.88 314  eP        PKPbc    03 52 01.4 -0.9
IAS   Iasi             148.89 327⇑iP         PKPbc    03 52 01.9 -0.3
IAS   Iasi             148.89 327 ⇑PKIKP     PKPbc    03 52 01.9 -0.3
QASN  Qassioun         148.94 297  eP        PKiKP    03 52 04.4 +0.3
KRTS  Karatas          148.94 303  eP        PKPbc    03 52 02.6  0.0
KARA  Karaisali        148.99 304  eP        PKPbc    03 52 01.6 -1.2
PCED  Cedros           149.03  53  ePKP      PKiKP    03 52 03.7 -0.3
CALA  Caldeira         149.05  53  eP        PKPdf    03 51 57.8 -0.9
HPK   Haverah Park     149.06   5  eP        PKPdf    03 51 59.4 +1.3
HOR   Horta            149.12  53  ePKP      PKPbc    03 52 02.2 -0.8
BR101 Keskin Array S   149.17 310  ePKPbc    PKPbc    03 52 02.6 -0.7
BR131 Keskin Array S   149.17 310  ePKPdf    PKPdf    03 51 60.0 +1.0
BRTR  Keskin Array B   149.17 310   PKPbc    PKPbc    03 52 02.6 -0.7
        comp=Z,50nm,0.8s,baz=75,slow=1.4,SNR=47
GULE  Gulek            149.19 305  i P       PKPbc    03 52 03.9 +0.4
KIRS  Kırehir-Merke    149.20 308  i P       PKPdf    03 51 60.0 +1.0
KIRS                                IAML_P
        comp=Z,673nm,0.8s
BRBR  Barbar           149.23 297  eP        PKiKP    03 52 05.9 +1.1
HSUJ  Al Zarqa         149.24 294   P        PKPbc    03 52 02.5 -1.1
        comp=Z,982nm,1.1s,comp=Z,9µm
HSUJ  Al Zarqa         149.24 294   P        PKPbc    03 52 02.5 -1.1
PCAN  Candelaria       149.25  53  ePKP      PKPbc    03 52 02.3 -1.1
DED   Mersin           149.27 304  i P       PKPbc    03 52 03.7 +0.2
PICO  Pico             149.28  53  ePKP      PKPdf    03 52 00.5 +1.5
WPS   Cemaes, Angles   149.29   9  eP        PKPdf    03 51 59.2 +0.7
KWP   Kalwaria Pacla   149.31 334  ePKP      PKPdf    03 52 00.6 +2.0
KWP   Kalwaria Pacla   149.31 334  ePKPdf    PKPdf    03 52 00.3 +1.7
WME   Myndd Eilian     149.32   8  eP        PKPdf    03 51 59.5 +1.0
ROSA  Rosais           149.34  52  ePKP      PKPdf    03 52 00.3 +1.3
ROSA  Rosais           149.34  52  ePKPdf    PKPdf    03 52 00.8 +1.8
YAYX  Yaylak           149.34 308  eP        PKPbc    03 52 03.5 -0.2
BHL   Bhannes          149.37 298  eP        PKPdf    03 51 59.9 +0.6
SHBL  Chebaa           149.41 297  eP        PKPdf    03 52 00.1 +0.6
PPNO  Prainha do Nor   149.41  53  ePKP      PKiKP    03 52 04.5 -0.4
PGRA  Graciosa         149.41  52  ePKP      PKiKP    03 52 04.7 -0.1
WLF1  Llynfaes         149.41   9  eP        PKPdf    03 52 00.7 +2.1
YRC   Rhoscolyn        149.43   9  eP        PKPbc    03 52 02.7 -0.6
PRAR  RASCA            149.44 328⇑iP         PKPbc    03 52 03.5 -0.1
BIR   Birlad           149.47 325⇑iP         PKiKP    03 52 05.9 +1.3
BIR   Birlad           149.47 325 ⇑PKP2      PKiKP    03 52 05.9 +1.3
SWQJ  Swaqa            149.47 293   P        PKPbc    03 52 03.6 -0.6
        comp=Z,818nm,1.1s,comp=Z,8µm
SWQJ  Swaqa            149.47 293   P        PKPbc    03 52 03.6 -0.6
PMAN  Manadas          149.48  52  ePKP      PKiKP    03 52 04.7 -0.2
AKSY  AKSARAY - Alti   149.49 308  i P       PKPdf    03 51 59.6 +0.2
SHMJ  Saham            149.50 296   P        PKPbc    03 52 02.7 -1.5
        comp=Z,499nm,0.8s,comp=Z,4µm
SHMJ  Saham            149.50 296   P        PKPbc    03 52 02.7 -1.5
TLCR                   149.50 322⇓iP         PKPdf    03 52 01.2 +2.2
MERS  Mersin           149.51 304  eP        PKPbc    03 52 04.4 +0.2
SERE  Sereflikochisa   149.52 308  eP        PKPbc    03 52 02.2 -2.0
LBWR  Ladybower, Pea   149.60   5  eP        PKPdf    03 52 00.6 +1.6
WALJ  Wala             149.64 293   P        PKiKP    03 52 05.3 -0.2
        comp=Z,568nm,0.7s,comp=Z,5µm
WALJ  Wala             149.64 293   P        PKiKP    03 52 05.3 -0.2
KERG  Konya-Eregli     149.64 305  i P       PKPbc    03 52 04.5  0.0
GIUM  Giurgiulesti     149.65 323⇓iP         PKiKP    03 52 06.2 +1.2
ANTO  Ankara           149.71 310  eP        PKiKP    03 52 05.1 -0.4
ANTO  Ankara           149.71 310  ePKPdf    PKPdf    03 52 00.4 +0.7
ANTO  Ankara           149.71 310⇑iP         PKPdf    03 52 01.5 +1.8
LOD   Lodumlu          149.72 310  eP        PKPbc    03 52 04.0 -0.6
BR231 Keskin MP Arra   149.73 310  ePKPdf    PKPdf    03 52 01.6 +1.8
BUR08 Bucovina Ar. S   149.73 329  ePKPdf    PKPdf    03 52 01.4 +1.9
BURAR Bucovina Array   149.75 329⇓iP         PKPbc    03 52 02.1 -2.3
MMAI  Mount Meron Ar   149.75 296   PKPbc    PKiKP    03 52 05.6 -0.2
        comp=Z,222nm,0.7s,baz=58,slow=2.4,SNR=120
BIZ   Bicaz            149.79 327⇑iP         PKPdf    03 52 01.2 +1.7
TESR  Tescani          149.81 326⇓iP         PKPbc    03 52 02.6 -1.9
SULT  Sultanhani-AKS   149.83 307  eP        PKPbc    03 52 04.7 -0.2
MMLI  Mount Malkishu   149.84 295  eP        PKPbc    03 52 04.9 -0.1
MMLI  Mount Malkishu   149.84 295   P        PKPbc    03 52 04.2 -0.8
        comp=Z,476nm,1.7s,comp=Z,5µm
MMLI  Mount Malkishu   149.84 295   P        PKPbc    03 52 04.2 -0.8
JDRJ  Daraweish        149.87 292   P        PKiKP    03 52 06.4 +0.2
        comp=Z,983nm,1.2s,comp=Z,9µm
JDRJ  Daraweish        149.87 292   P        PKiKP    03 52 06.4 +0.2
CFR   Carcaliu         149.88 323⇑iP         PKPdf    03 52 01.4 +1.8
KULU  Kulu             149.89 309  eP        PKiKP    03 52 05.7 -0.2
HSNJ  Maan             149.90 291   P        PKiKP    03 52 06.4 +0.2
        comp=Z,1µm,0.8s,comp=Z,9µm
HSNJ  Maan             149.90 291   P        PKiKP    03 52 06.4 +0.2
OJC   Ojcow            149.91 338  ePKP      PKPdf    03 52 01.5 +2.0
OJC                                epPKP     pPKPab   03 52 51.4 -1.0
OJC   Ojcow            149.91 338  ePKPdf    PKPdf    03 52 00.8 +1.3
KIZK  Mersin           149.92 303  eP        PKPbc    03 52 04.3 -0.8
KIZK  Mersin           149.92 303  i P       PKiKP    03 52 05.6 -0.3
FOEL  Foel Wylfa       149.96   7  eP        PKPdf    03 52 00.3 +0.7
LISJ  El Lisan         149.96 293   P        PKiKP    03 52 06.4 +0.3
        comp=Z,342nm,1.2s,comp=Z,3µm
LISJ  El Lisan         149.96 293   P        PKiKP    03 52 06.4 +0.3
PETR  Petresti         150.03 325⇑iP         PKiKP    03 52 06.3 +0.5
KOLS  Kolonicke sedl   150.04 334  ePKIKP    PKPdf    03 52 00.5 +0.7
KOLS  Kolonicke sedl   150.04 334  ePKP      PKPdf    03 52 00.5 +0.7
KOLS                               e                  03 52 06.3
ADH   Angra Heroismo   150.09  52  ePKP      PKPdf    03 52 02.7 +2.5
ODBI  Odobesti         150.10 325⇑iP         PKiKP    03 52 07.0 +1.0
SILI  Silifke-Mersin   150.12 303  eP        PKPbc    03 52 05.9 +0.4
CHBY  Cihanbeyli       150.15 308  eP        PKPbc    03 52 05.1 -0.6
PSCM  Serra do Cume    150.16  52  ePKP      PKPbc    03 52 04.3 -1.3
TIRR  Tirgusor         150.17 322  ePKPbc    PKPbc    03 52 05.6 +0.2
TIRR  Tirgusor         150.17 322⇑iP         PKPdf    03 52 01.8 +1.7
TIRR  Tirgusor         150.17 322 ⇑PKIKP     PKPdf    03 52 01.8 +1.7
EREN  Erenkoy          150.17 302  eP        PKiKP    03 52 06.4  0.0
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VRI	Vrincioaia	150.20	325	eP	PKPbc	03 52 05.6	+0.1
VRI	Vrincioaia	150.20	325	⇓iP	PKPdf	03 52 01.7	+1.5
VRI	Vrincioaia	150.20	325	⇓PKIKP	PKPdf	03 52 01.7	+1.5
TSCT	Constanta Port	150.21	321	⇑iP	PKiKP	03 52 06.5	+0.3
PLOR	Plostina	150.25	325	⇓iP	PKPbc	03 52 05.4	-0.2
PLOR	Plostina	150.25	325	⇓PKIKP	PKPbc	03 52 05.4	-0.2
KEBE	Keben-Mersin	150.26	303	eP	PKiKP	03 52 06.5	-0.2
UZH	Uzhgorod	150.27	334	⇓iPKIKP	PKPbc	03 52 05.7	+0.2
UZH				e		03 52 12.7	
EFOR	EFORIE	150.27	321	⇑iP	PKPdf	03 52 02.8	+2.5
CWF	Charnwood Fore	150.30	5	eP	PKPdf	03 52 01.5	+1.4
HARR	Harsova	150.30	322	⇓iP	PKPdf	03 52 02.9	+2.6
HARR	Harsova	150.30	322	⇓PKIKP	PKPdf	03 52 02.9	+2.6
TLB	Topalu	150.30	322	⇓iP	PKPdf	03 52 02.0	+1.7
TLB	Topalu	150.30	322	⇓PKIKP	PKPdf	03 52 02.0	+1.7
IKL	Isikli	150.35	303	eP	PKPbc	03 52 05.3	-0.8
HLM1	Long Mynd	150.36	7	eP	PKPdf	03 52 01.1	+0.9
GRER		150.39	324	⇑iP	PKPab	03 52 12.9	0.0
AMAZ	Amatzia	150.40	293	P	PKPbc	03 52 06.6	+0.2
	comp=Z,736nm,1.2s,comp=Z,6µm						
AMAZ	Amatzia	150.40	293	P	PKPbc	03 52 06.6	+0.2
NIE	Niedzica	150.40	337	ePKP	PKPdf	03 52 03.0	+2.6
NIE				epPKP	pPKPbc	03 52 51.0	+2.2
NIE	Niedzica	150.40	337	ePKIKP	PKPdf	03 52 03.0	+2.6
PHNC	Paralimni	150.42	301	P	PKPbc	03 52 06.4	+0.1
BISRR	Bisoca	150.42	325	⇑iP	PKiKP	03 52 07.1	+0.4
WACR	West Acre	150.43	3	eP	PKPdf	03 52 01.7	+1.5
KSP	Ksiaz	150.45	343	ePKP	PKPdf	03 52 02.8	+2.4
KSP				epPKP	pPKPab	03 52 52.9	-1.8
KSP	Ksiaz	150.45	343	ePKIKP	PKPdf	03 52 02.8	+2.4
TSMN	Mangalia Port-	150.45	320	⇑iP	PKiKP	03 52 07.5	+0.8
CVDA	Cernavoda	150.46	322	⇑iP	PKiKP	03 52 06.9	+0.2
GULN	MERSIN_Gulnar	150.47	303	i P	PKPbc	03 52 05.7	-0.6
GULN				IAML_P			
	comp=Z,2µm,0.9s						
TEVE	Tevekalti-Mers	150.47	304	eP	PKPbc	03 52 05.9	-0.6
AKKU	Akkuyu-Mersin	150.47	303	eP	PKPbc	03 52 06.3	-0.1
HRFI	Mount Harif	150.48	290	eP	PKPbc	03 52 06.9	+0.3
HRFI	Mount Harif	150.48	290	P	PKPbc	03 52 05.7	-0.9
	comp=Z,385nm,1.4s,comp=Z,4µm						
HRFI	Mount Harif	150.48	290	P	PKPbc	03 52 05.7	-0.9
BMR	Baia Mare	150.49	331	⇓iP	PKPdf	03 52 02.1	+1.5
BMR	Baia Mare	150.49	331	⇓PKIKP	PKPdf	03 52 02.1	+1.5
OZUR		150.53	327	⇑iP	PKiKP	03 52 06.9	0.0
ARCR	ARCALIA	150.53	329	⇓iP	PKPdf	03 52 03.2	+2.5
MDUB	Mudurnu	150.55	313	eP	PKPbc	03 52 06.7	+0.1
MDUB	Mudurnu	150.55	313	ePKPdf	PKPdf	03 52 02.4	+1.4
EIL	Elat	150.59	290	eP	PKPbc	03 52 07.1	+0.2
EIL	Elat	150.59	290	PKP	PKPdf	03 52 02.7	+1.4
	comp=Z,92nm,1.2s,baz=23,slow=4.0,SNR=9.4						
EIL				PKPbc	PKiKP	03 52 07.5	0.0
	comp=Z,146nm,0.8s,baz=358,slow=2.4,SNR=69						
EIL	Elat	150.59	290	P	PKiKP	03 52 10.4	+2.9
	comp=Z,280nm,1.2s,comp=Z,3µm						
EIL	Elat	150.59	290	P	PKiKP	03 52 10.4	+2.9
AUMIH	MIHALICIK	150.62	311	eP	PKPbc	03 52 06.8	0.0
BTAS	Taskesti	150.63	313	i P	PKPbc	03 52 06.8	+0.1
BTAS				IAML_P			
	comp=Z,2µm,0.8s						
BERE	Bereket-Mersin	150.67	304	eP	PKPbc	03 52 07.2	+0.2
LADK	Ladik-KONYA	150.67	308	eP	PKPbc	03 52 05.3	-1.7
AMRR	Amara	150.68	323	⇑iP	PKPab	03 52 22.6	+8.5
ICOR	Ion Corvin	150.73	322	⇓iP	PKiKP	03 52 07.2	-0.1
OSTC	Ostas	150.73	342	ePKPDF	PKPdf	03 52 01.6	+0.7
OSTC				⇑ePKP	PKiKP	03 52 07.9	+0.7
OSTC				ex	x	03 52 54.1	
OSTC				eSS	SS	04 14 41.5	-8.8
CHVC	Chvalec	150.75	343	ePKPDF	PKPdf	03 52 01.4	+0.5
CHVC				⇑ePKP	PKiKP	03 52 07.5	+0.3
CHVC				ex	x	03 52 50.5	
KIZT	Kizilcal	150.76	309	eP	PKPbc	03 52 06.9	-0.2
AUSIV	SIVRIHISAR	150.76	310	eP	PKPbc	03 52 07.3	+0.2
PSN	Preselentsi	150.76	321	eP	PKiKP	03 52 07.2	-0.2
KONT	Konya--Tatoy	150.77	307	eP	PKPbc	03 52 06.9	-0.2
KONT	Konya--Tatoy	150.77	307	i P	PKPbc	03 52 06.8	-0.3
KONT				IAML_P			
	comp=Z,2µm,0.7s						
SVRH	Sivrihisar-ESK	150.77	310	eP	PKPbc	03 52 07.1	0.0
OKC	Ostrava-Krasne	150.79	340	ePKIKP	PKPdf	03 52 02.3	+1.4
OKC	Ostrava-Krasne	150.79	340	ePKPDF	PKPdf	03 52 02.3	+1.4
OKC				⇑ePKP	PKPbc	03 52 07.0	+0.3
OKC				epPKP	pPKPab	03 52 55.1	-1.0
ISR	Istrita	150.79	324	⇑iP	PKiKP	03 52 07.8	+0.3
ISR	Istrita	150.79	324	⇑PKIKP	PKiKP	03 52 07.8	+0.3
ERMK	Ermenek	150.81	304	i P	PKiKP	03 52 08.2	+0.2
ERMK				IAML_P			
	comp=Z,15µm,0.6s						
TEKE	Tekeli-Mersin	150.82	303	eP	PKPbc	03 52 06.9	-0.3
CLL	Collm	150.82	347	ePKPdf	PKPdf	03 52 01.0	+0.1
CLL	Collm	150.82	347	⇓ePKIKP	PKPdf	03 52 03.0	+2.1
CLL				e		03 52 15.0	
CLL				pmax	pmax		
	comp=Z,445nm,0.8s						
CLL				pmax	pmax		
	comp=Z,235nm,0.8s						
CLL	Collm	150.82	347	ePKPdf	PKPdf	03 52 03.0	+2.1
CLL				⇓iPKPbc	PKiKP	03 52 07.2	-0.1
	comp=Z,445nm,0.8s						
CLL				ePKPab	PKPab	03 52 15.0	+0.6
	comp=Z,235nm,0.8s						
CLL				e		03 52 30.0	
CLL				epPKPab	pPKPbc	03 52 52.0	+2.3
	comp=Z,117nm,1.0s						
CLL				ePP	PP	03 55 42.0	-2.5
CLL				epPP		03 56 30.0	
CLL				ePPP	PPP	03 59 12.0	
CLL				eSKKSac	SKKSac	04 02 18.0	-1.2
CLL				e		04 02 47.0	
CLL				ePcPPKPre		04 03 01.0	
CLL				esSKKSac		04 03 36.0	
CLL				eSKSP		04 05 43.0	
CLL				ePSKS		04 06 00.0	
CLL				e(sPSKS)		04 06 54.0	
CLL				ePPS	PPS	04 08 42.0	
CLL				esPPS		04 09 31.0	
CLL				eSS	SS	04 14 48.0	-3.0
CLL				esSS		04 16 06.0	
CLL				e		04 17 24.0	
CLL				eSSS	SSS	04 20 42.0	
CLL				e(SSSS)		04 25 24.0	
DOPR	Dopca	150.82	327	⇑iP	PKPbc	03 52 06.5	-0.4
KMER	Konya-Meram	150.83	307	i P	PKPbc	03 52 06.7	-0.7
KMER				IAML_P			
	comp=Z,442nm,0.4s						
UPC	Upice	150.83	343	ePKIKP	PKPdf	03 52 02.3	+1.3
UPC	Upice	150.83	343	ePKPDF	PKPdf	03 52 02.3	+1.3
UPC				⇑ePKP	PKiKP	03 52 07.8	+0.5
UPC				eSS	SS	04 14 45.6	-5.7
MCH1	Michaelchurch	150.86	7	eP	PKPdf	03 51 59.3	-1.7
MLR	Muntele Rosu	150.86	325	PKPbc	PKiKP	03 52 07.7	-0.1
	comp=Z,83nm,0.8s,baz=355,slow=1.9,SNR=53						
MLR	Muntele Rosu	150.86	325	ePKPdf	PKPdf	03 51 59.6	-1.8
MLR	Muntele Rosu	150.86	325	⇑iP	PKPdf	03 52 03.5	+2.1
MLR	Muntele Rosu	150.86	325	⇑PKIKP	PKPdf	03 52 03.5	+2.1
DPC	Dobruska-Polom	150.89	342	ePKIKP	PKPdf	03 52 01.8	+0.6
DPC				eSS	SS	04 14 49.8	-2.3
DPC	Dobruska-Polom	150.89	342	ePKPDF	PKPdf	03 52 01.8	+0.6
DPC				⇑ePKP	PKiKP	03 52 07.9	+0.4
DPC				epPKP	pPKPab	03 52 54.2	-2.3
DPC				eSS	SS	04 14 49.8	-2.3
KZIT	Kziot	150.93	292	eP	PKiKP	03 52 09.1	+0.9
KZIT	Kziot	150.93	292	P	PKiKP	03 52 08.1	-0.1
	comp=Z,733nm,1.0s,comp=Z,6µm						
KZIT	Kziot	150.93	292	P	PKiKP	03 52 10.2	+2.0
LANS	Liptovska Anna	150.93	337	ePKIKP	PKPdf	03 52 03.3	+2.1
LANS	Liptovska Anna	150.93	337	ePKP	PKPdf	03 52 03.3	+2.1
LANS				e		03 52 08.7	
CSS	Mathiatis	150.99	301	eP	PKPbc	03 52 07.9	+0.2
CSS	Mathiatis	150.99	301	ePKPdf	PKPdf	03 52 03.2	+1.4
CSS	Mathiatis	150.99	301	P	PKPbc	03 52 07.5	-0.2
CSS	Mathiatis	150.99	301	P	PKPbc	03 52 07.7	0.0
	comp=Z,132nm,0.8s,comp=Z,985nm						
CSS	Mathiatis	150.99	301	P	PKPbc	03 52 07.7	0.0
SAUV	Serdivan-Sakar	151.00	314	eP	PKPbc	03 52 06.9	-0.6
BRG	Berggiesshubel	151.02	345	i PKP	PKPdf	03 52 01.5	+0.2
	comp=Z,15nm,1.3s						
BRG	Berggiesshubel	151.02	345	i PKP	PKiKP	03 52 08.0	+0.3
	comp=Z,335nm,0.8s						
BRG				i pPKP	pPKPbc	03 52 51.0	+0.8
	comp=Z,149nm,1.3s						
BRG				ePKS	PKSdf	03 55 31.8	-4.0
	comp=Z,31nm,1.8s						
BRG				ePP	PP	03 55 47.4	+1.7
	comp=Z,20nm,1.4s						
BRG				SKKS		04 06 43.0	
BRG				SS	SS	04 14 49.0	-4.3
MAMC	Mammari	151.02	301	P	PKPbc	03 52 07.7	0.0
GULT	Gulveren	151.03	313	eP	PKPbc	03 52 07.9	+0.2
MORC	Moravsky Berou	151.03	340	ePKPdf	PKPdf	03 52 02.0	+0.6
MORC	Moravsky Berou	151.03	340	⇑iP	PKPdf	03 52 03.0	+1.6
MORC	Moravsky Berou	151.03	340	⇑PKIKP	PKPdf	03 52 03.0	+1.6
MORC	Moravsky Berou	151.03	340	ePKP	PKPdf	03 52 02.2	+0.8
MORC				e		03 52 08.2	
RASA	Rasa	151.04	322	⇑iP	PKiKP	03 52 08.9	+1.0
MONM	Monmouth	151.04	7	eP	PKPdf	03 52 03.1	+1.9
SPNC	Sapanca-Adapaz	151.04	314	eP	PKPbc	03 52 07.1	-0.5
LEHL	Lehliu	151.06	323	⇑iP	PKiKP	03 52 08.4	+0.4
WTSB	Winterswijk	151.08	355	ePKPdf	PKPdf	03 52 00.6	-0.7
WTSB				ePKPbc	PKPbc	03 52 06.6	-0.7
WTSB				ePKPab	PKPab	03 52 15.5	+0.1
	comp=Z,231nm,0.7s						
WTSB				epPKPbc	pPKPbc	03 52 51.5	+1.2
SECR		151.10	325	⇓iP	PKiKP	03 52 08.4	+0.3
KECS	Kecovo	151.10	335	ePKIKP	PKiKP	03 52 09.2	+1.2
KECS	Kecovo	151.10	335	ePKP	PKiKP	03 52 09.2	+1.2
SRCK	Saricakaya, Es	151.13	312	eP	PKPbc	03 52 07.8	0.0
SRCK	Saricakaya, Es	151.13	312	i P	PKiKP	03 52 08.2	-0.1
CIFT	Cifteler, Eski	151.13	311	eP	PKPbc	03 52 08.0	+0.1
CJR	Cluj-Napoca	151.16	330	⇑iP	PKiKP	03 52 08.8	+0.6
CJR	Cluj-Napoca	151.16	330	⇑PKIKP	PKiKP	03 52 08.8	+0.6
PVCC	Panska Ves	151.19	344	ePKIKP	PKPdf	03 52 03.7	+2.2
PVCC	Panska Ves	151.19	344	ePKPDF	PKPdf	03 52 03.7	+2.2
PVCC				⇑ePKP	PKiKP	03 52 08.8	+0.7
PVCC				epPKP	pPKPbc	03 52 54.1	+3.5
MDB	Medias	151.20	328	⇑iP	PKiKP	03 52 09.2	+0.9
MDB	Medias	151.20	328	⇑PKIKP	PKiKP	03 52 09.2	+0.9
PLAR	PLOIESTI	151.20	325	⇓iP	PKiKP	03 52 08.9	+0.6
DOGA	KONYA_Doganhis	151.22	308	i P	PKPbc	03 52 08.4	+0.2
DOGA				IAML_P			
	comp=Z,2µm,0.7s						
SULR		151.23	324	⇑iP	PKPbc	03 52 06.9	-1.0
SILT	Sile	151.25	315	eP	PKPbc	03 52 07.1	-0.9
SILT	Sile	151.25	315	⇑iP	PKiKP	03 52 08.6	+0.1
LEF	Lefka	151.29	301	eP	PKPbc	03 52 08.5	+0.1
LEF	Lefka	151.29	301	⇓iP	PKPbc	03 52 08.2	-0.1
LEF	Lefka	151.29	301	i P	PKPbc	03 52 08.4	+0.1
LEF				IAML_P			
	comp=Z,11µm,0.6s						
BORA	Eskisehir	151.32	312	eP	PKPbc	03 52 08.5	+0.1
BORA	Eskisehir	151.32	312	i P	PKPbc	03 52 06.6	-1.8
VOIR		151.36	326	⇓iP	PKPdf	03 52 04.6	+2.5
VOIR		151.36	326	⇓PKIKP	PKPdf	03 52 04.6	+2.5
GAZI	Gazipasa	151.40	304	i P	PKPbc	03 52 08.6	0.0
GAZI				IAML_P			
	comp=Z,3µm,0.8s						
SZAC	Souni	151.40	301	P	PKPbc	03 52 08.1	-0.5
HRT	Hereke	151.40	314	eP	PKPbc	03 52 08.5	0.0
LTVH	Ltavrtes, Hu	151.41	332	ePKiKP	PKPbc	03 52 06.1	-2.1
SWN1	Swindon	151.47	6	eP	PKPdf	03 52 05.1	+3.2
BOLV	Bolvadin	151.49	309	i P	PKiKP	03 52 09.2	-0.1
BOLV				IAML_P			
	comp=Z,3µm,0.7s						
MTUR	Matau	151.50	326	⇓iP	PKiKP	03 52 09.8	+0.8
MTUR	Matau	151.50	326	⇓PKIKP	PKiKP	03 52 09.8	+0.8
DRGR		151.51	331	⇓iP	PKPdf	03 52 03.0	+0.8
DRGR		151.51	331	⇓PKIKP	PKPdf	03 52 03.0	+0.8
ALFC	Alefka	151.51	302	P	PKPbc	03 52 08.6	-0.3
PSET	Sete Cidades	151.51	53	ePKP	PKPdf	03 52 04.6	+2.1
PRD	Provadia	151.51	320	eP	PKPbc	03 52 08.4	-0.1
AUKIR	Kırka- Seyitga	151.54	311	i P	PKPbc	03 52 08.9	0.0
ADVT	Abdulvahap	151.54	314	eP	PKPbc	03 52 07.9	-0.8
PDA	Ponta Delgada	151.58	53	ePKP	PKPdf	03 52 03.9	+1.4
KLYT	Kilyos	151.59	316	eP	PKPbc	03 52 08.8	0.0
KLYT	Kilyos	151.59	316	⇓iP	PKiKP	03 52 12.1	+2.9
ARR	Arges	151.62	327	⇑iP	PKPdf	03 52 04.2	+1.7
ISK	Istanbul-Kandi	151.68	315	eP	PKPbc	03 52 06.7	-2.3
ISK	Istanbul-Kandi	151.68	315	P	PKPdf	03 52 04.5	+1.9
KAVV	Kandilli-Istan	151.68	315	eP	PKPbc	03 52 06.7	-2.3
CMLA	Cha da Macela	151.68	53	ePKP	PKPdf	03 52 04.5	+1.8
CMLA	Cha da Macela	151.68	53	ePKPbc	PKiKP	03 52 10.5	+1.0
SGRR	Singureni	151.68	323	⇓iP	PKPbc	03 52 09.1	+0.2
PCALD	Caldeiras da R	151.69	52	ePKP	PKPdf	03 52 03.0	+0.3
PRU	Pruhonice	151.69	344	ePKIKP	PKPdf	03 52 04.1	+1.8
PRU	Pruhonice	151.69	344	ePKPDF	PKPdf	03 52 04.1	+1.8
PRU				⇑ePKP	PKiKP	03 52 10.6	+1.5
PRU				eSS	SS	04 14 56.7	-4.1
GOPC	GO Pecny, Ondr	151.70	344	ePKIKP	PKPdf	03 52 01.8	-0.6
GOPC	GO Pecny, Ondr	151.70	344	ePKPDF	PKPdf	03 52 01.8	-0.6
GOPC				⇑ePKP	PKiKP	03 52 09.3	+0.1
GOPC				epPKP	pPKPbc	03 52 55.8	+3.8
GOPC				eSS	SS	04 14 52.6	-8.3
VYHS	Vyhne	151.71	337	ePKIKP	PKPdf	03 52 03.5	+1.1
VYHS	Vyhne	151.71	337	ePKP	PKPdf	03 52 03.5	+1.1
VYHS				e		03 52 09.6	
VYHS				e		03 52 20.3	
KEPZ	Antalya-Kepez	151.71	306	i P	PKPbc	03 52 08.2	-1.1
KEPZ				IAML_P			
	comp=Z,3µm,0.7s						
YLV	Yalova	151.72	314	eP	PKPbc	03 52 09.2	0.0
YLV	Yalova	151.72	314	⇓iP	PKPbc	03 52 08.8	-0.4
YLV	Yalova	151.72	314	⇓PKIKP	PKPbc	03 52 08.8	-0.4
VRAC	Vranov	151.74	341	PKPbc	PKiKP	03 52 10.1	+0.8
	comp=Z,44nm,0.8s,baz=13,slow=1.1,SNR=44						
VRAC	Vranov	151.74	341	⇓iP	PKPdf	03 52 02.3	-0.1
VRAC	Vranov	151.74	341	⇓PKIKP	PKPdf	03 52 02.3	-0.1
VRAC	Vranov	151.74	341	ePKP	PKiKP	03 52 09.5	+0.2
BUY	Buyukada	151.75	315	eP	PKPbc	03 52 06.5	-2.7
PPCY	Paphos	151.79	301	P	PKPbc	03 52 09.2	-0.2
JAVC	Velka Javorina	151.79	339	ePKP	PKPdf	03 52 04.3	+1.7
JAVC				e		03 52 11.0	
PSZ	Piszkesteto	151.79	335	ePKPdf	PKPdf	03 52 04.3	+1.7
PSZ	Piszkesteto	151.79	335	⇑iP	PKPdf	03 52 04.4	+1.7
PSZ	Piszkesteto	151.79	335	⇑PKIKP	PKPdf	03 52 04.4	+1.7
PSZ	Piszkesteto	151.79	335	ePKiKP	PKPbc	03 52 06.1	-3.1
RAZG	Razgrad	151.80	322	⇑iP	PKPbc	03 52 08.6	-0.6
GOLR		151.81	325	⇑iP	PKiKP	03 52 12.9	+3.3
SHUT	Suhut-Afyon	151.84	309	eP	PKPbc	03 52 07.7	-1.9
BAGO	Egridir - ISPA	151.90	308	i P	PKiKP	03 52 10.8	+0.7
GEMT	Gemlik	151.91	314	eP	PKiKP	03 52 10.5	+0.6
BART	Pico Bartolome	151.93	52	ePKP	PKPdf	03 52 04.4	+1.2
CTKS	Kestanelik-??a	151.94	316	eP	PKPbc	03 52 09.6	0.0
NKC	Novy Kostel	151.95	347	ePKIKP	PKPdf	03 52 04.5	+1.8
NKC				e		03 52 19.2	
NKC	Novy Kostel	151.95	347	ePKPDF	PKPdf	03 52 04.5	+1.8
NKC				⇑ePKP	PKiKP	03 52 10.0	+0.3
NKC				ePKPAB	PKPab	03 52 19.2	0.0
CTYL	Yalikoy Yolu	151.95	317	⇑iP	PKPbc	03 52 06.4	-3.2
LOT	Lotru	152.00	328	eP	PKPab	03 52 15.8	-3.9
LOT	Lotru	152.00	328	⇓iP	PKiKP	03 52 10.3	+0.2
HUMR	Humele	152.02	325	⇑iP	PKiKP	03 52 10.0	0.0
KRUC	Moravsky	152.02	341	ePKP	PKPdf	03 52 02.9	+0.1
KRUC				e		03 52 10.0	
ARMT	Armutlu	152.06	315	eP	PKPbc	03 52 09.9	0.0
TREC	Trest	152.07	342	ePKIKP	PKPdf	03 52 03.1	+0.1
TREC	Trest	152.07	342	ePKPDF	PKPdf	03 52 03.1	+0.1
TREC				⇑ePKP	PKiKP	03 52 10.3	+0.3
ULDT	Uludag	152.09	314	i P	PKPbc	03 52 09.0	-1.3
DEV	Deva	152.10	329	⇑iP	PKiKP	03 52 10.3	+0.2
DEV	Deva	152.10	329	⇑PKIKP	PKiKP	03 52 10.3	+0.2
MDNY	Mudanya-Bursa	152.14	314	eP	PKPbc	03 52 09.1	-1.0
COPA	Copaceanca	152.15	324	⇓iP	PKPbc	03 52 08.1	-1.9
ISP	Isparta	152.16	308	eP	PKPbc	03 52 09.8	-0.6
ISP	Isparta	152.16	308	⇓iP	PKPbc	03 52 08.5	-1.9
ISP	Isparta	152.16	308	⇓PKIKP	PKPbc	03 52 08.5	-1.9
SMOL	Smolenice	152.17	339	ePKIKP	PKiKP	03 52 11.9	+1.7
SMOL	Smolenice	152.17	339	ePKP	PKiKP	03 52 11.9	+1.7
TVSB	Tavsanli	152.20	312	eP	PKiKP	03 52 10.8	+0.1
KZIL	AFYON_Kizioren	152.25	309	i P	PKPab	03 52 17.6	-3.5
KZIL				IAML_P			
	comp=Z,5µm,0.8s						
PSMA	Santa Maria	152.26	54	ePKP	PKPdf	03 52 05.5	+1.9
PSMN	Pico do Norte,	152.31	54	ePKP	PKPdf	03 52 04.7	+1.0
BEBN	Eben Emael	152.32	356	⇑PKPbc	PKiKP	03 52 11.5	+1.1
BEBN				⇑PKPab	PKPab	03 52 20.7	0.0
HGN	Heimansgroeve	152.34	356	ePKPdf	PKPdf	03 52 05.0	+1.8
HGN				ePKPbc	PKiKP	03 52 10.5	+0.1
HGN				epPKPdf	PKPab	03 52 20.7	-0.1
	comp=Z,194nm,0.8s						
HGN				epPKPbc	pPKPbc	03 52 54.9	+1.7
MODS	Modra-Piesok	152.34	339	ePKIKP	PKPdf	03 52 04.6	+1.2
MODS	Modra-Piesok	152.34	339	ePKP	PKPdf	03 52 04.6	+1.2
MODS				e		03 52 11.3	
PHSR	Pinarhisar	152.34	318	eP	PKPbc	03 52 10.6	+0.1
PHSR	Pinarhisar	152.34	318	⇓iP	PKiKP	03 52 10.7	-0.1
GDZ	Gediz	152.35	311	i P	PKiKP	03 52 11.3	+0.2
GDZ				IAML_P			
	comp=Z,4µm,0.5s						
SIRR	Siria	152.38	331	⇑iP	PKPdf	03 52 04.5	+1.0
ZIMR		152.38	323	⇓iP	PKiKP	03 52 11.9	+1.2
ZIMR		152.38	323	⇓PKIKP	PKiKP	03 52 11.9	+1.2
UCC	Uccle	152.39	358	ePKPdf	PKPdf	03 52 06.0	+2.7
UCC	Uccle	152.39	358	⇑PKPbc	PKiKP	03 52 11.9	+1.4
UCC				⇑PKPab	PKPab	03 52 20.8	-0.1
SRO	Srobarova	152.47	337	ePKIKP	PKiKP	03 52 11.5	+0.7
SRO	Srobarova	152.47	337	ePKP	PKiKP	03 52 11.5	+0.7
SRO				e		03 52 22.8	
BUD	Budapest	152.49	336	ePKiKP	PKPbc	03 52 10.0	-0.6
CRLT	Corlu	152.49	317	eP	PKPbc	03 52 10.2	-0.6
MEM	Membach	152.49	356	⇑PKPdf	PKPdf	03 52 05.2	+1.7
MEM				⇑PKPbc	PKiKP	03 52 11.2	+0.5
MEM				⇑PKPab	PKPab	03 52 22.9	+1.5
GZR	Gura Zlata	152.52	329	⇑iP	PKiKP	03 52 12.1	+1.0
GZR	Gura Zlata	152.52	329	⇑PKIKP	PKiKP	03 52 12.1	+1.0
KCTX	Karacabey (Bur	152.54	314	eP	PKPbc	03 52 10.9	-0.1
BRDR	BURDUR-Merkez	152.54	308	i P	PKiKP	03 52 11.4	0.0
BRDR				IAML_P			
	comp=Z,3µm,0.6s						
ZST	Bratislava	152.56	339	ePKIKP	PKPdf	03 52 05.5	+1.9
ZST	Bratislava	152.56	339	ePKP	PKPdf	03 52 05.5	+1.9
ZST				e		03 52 11.9	
ELND	Elena	152.56	321	⇑iP	PKPdf	03 52 05.7	+1.9
KORT	Korkueli	152.61	307	eP	PKPbc	03 52 10.7	-0.7
KORT	Korkueli	152.61	307	i P	PKiKP	03 52 12.6	+1.0
KORT				IAML_P			
	comp=Z,8µm,0.4s						
KHAL	Karahalli	152.67	310	i P	PKPab	03 52 18.6	-4.2
KHAL				IAML_P			
	comp=Z,3µm,0.8s						
SNF	Seneffe	152.68	358	⇑PKPbc	PKiKP	03 52 11.5	+0.4
SNF				⇑PKPab	PKPab	03 52 22.2	0.0
VLAD	Vladila	152.68	325	⇓iP	PKiKP	03 52 13.3	+2.0
EDRB	Edirne	152.70	319	eP	PKPbc	03 52 11.4	+0.1
EDRB	Edirne	152.70	319	P	PKPdf	03 52 04.8	+0.7
GRA1	Grafenberg Arr	152.71	348	ePKPdf	PKPdf	03 52 05.9	+2.0
GRFO	Grafenberg	152.71	348	ePKPbc	PKiKP	03 52 13.0	+1.7
AMBH	Ambrzfalva	152.72	332	ePKiKP	PKiKP	03 52 12.1	+0.7
BCLA	Clavier	152.72	357	⇑PKPbc	PKiKP	03 52 11.5	+0.3
BCLA				⇑PKPab	PKPab	03 52 21.4	-1.0
KHC	Kasperske Hory	152.73	345	ePKPdf	PKPdf	03 52 03.6	-0.3
KHC	Kasperske Hory	152.73	345	ePKIKP	PKPdf	03 52 04.1	+0.2
KHC				e		03 52 22.9	
KHC				eSS	SS	04 15 14.0	+1.8
KHC	Kasperske Hory	152.73	345	ePKPDF	PKPdf	03 52 04.1	+0.2
KHC				⇑ePKP	PKiKP	03 52 12.6	+1.2
KHC				ePKPAB	PKPab	03 52 22.9	+0.4
KHC				ex	x	03 53 09.5	
KHC				eSS	SS	04 15 14.0	+1.8
CRAR	CRAIOVA	152.77	326	⇑iP	PKiKP	03 52 13.3	+1.8
CRAR	CRAIOVA	152.77	326	⇑PKIKP	PKiKP	03 52 13.3	+1.8
EDC	Edincik	152.82	315	eP	PKPbc	03 52 11.7	+0.1
SRE	Strehaia	152.84	327	⇑iP	PKiKP	03 52 13.1	+1.4
SRE	Strehaia	152.84	327	⇑PKIKP	PKiKP	03 52 13.1	+1.4
USAK	Uak-Merkez	152.85	311	i P	PKPbc	03 52 10.2	-1.6
USAK				IAML_P			
	comp=Z,354nm,0.5s						
MRMT	Marmara Adasi	152.86	316	eP	PKPbc	03 52 11.6	-0.2
AKUM	Antalya-Kumluc	152.87	305	i P	PKiKP	03 52 12.8	+0.8
AKUM				IAML_P			
	comp=Z,1µm,0.4s						
CSKK	Cskako	152.87	337	ePKiKP	PKPdf	03 52 07.0	+2.9
BZS	Buzias	152.89	330	⇑iP	PKPdf	03 52 05.1	+0.9
BZS	Buzias	152.89	330	⇑PKIKP	PKPdf	03 52 05.1	+0.9
DEMI	Demirci	152.90	312	i P	PKiKP	03 52 12.3	+0.2
DEMI				IAML_P			
	comp=Z,2µm,0.8s						
GEC2	GERESS Array S	152.96	344	ePKPdf	PKPdf	03 52 04.5	+0.1
GEC2				ePKPbc	PKiKP	03 52 12.9	+1.0
GEC2	GERESS Array S	152.96	344	ePKIKP	PKPdf	03 52 04.5	+0.1
GERES	GERESS Array B	152.96	344	PKP	PKPdf	03 52 04.4	+0.1
	comp=Z,7.6nm,1.0s,baz=22,slow=1.4,SNR=30						
GERES				PKPbc	PKiKP	03 52 12.9	+1.0
	comp=Z,38nm,0.8s,baz=41,slow=1.8,SNR=72						
PLVB	Pleven	152.97	323	⇑iP	PKPdf	03 52 05.5	+1.1
ELL	Elmali	153.03	306	eP	PKPbc	03 52 11.4	-1.0
HERR	Herculane	153.07	328	⇑iP	PKiKP	03 52 12.4	+0.3
DOU	Dourbes	153.08	358	⇑PKPdf	PKPdf	03 52 05.1	+0.8
DOU				⇓PKPbc	PKiKP	03 52 12.0	+0.1
DOU				⇑PKPab	PKPab	03 52 23.8	-0.1
RKY	Sarkoy-Tekirda	153.08	316	eP	PKiKP	03 52 15.8	+3.4
GOLH	Golhisar	153.09	308	i P	PKiKP	03 52 13.4	+0.8
GOLH				IAML_P			
	comp=Z,1µm,0.6s						
BALB	Balikesir	153.18	314	eP	PKPbc	03 52 12.2	-0.2
BALB	Balikesir	153.18	314	ePKPbc	PKPbc	03 52 10.3	-2.1
SOP	Sopron	153.18	339	ePKiKP	PKPdf	03 52 06.0	+1.5
KULA	Kula-Manisa	153.19	311	eP	PKPbc	03 52 12.5	-0.1
KULA	Kula-Manisa	153.19	311	P	PKPdf	03 52 05.5	+0.5
CONA	Conrad Observa	153.19	340	ePKPdf	PKPdf	03 52 04.2	-0.5
	comp=Z,99nm,1.1s,SNR=17						
BAIL	Bailesti	153.22	326	⇑iP	PKiKP	03 52 18.2	+5.8
MANT	Manisa	153.27	311	ePKPbc	PKPbc	03 52 10.4	-2.6
BANR	Banloc	153.29	331	⇑iP	PKiKP	03 52 16.4	+3.9
TIH	Tihany	153.40	337	ePKiKP	PKPbc	03 52 11.1	-1.5
WLF	Walferdange	153.42	355	ePKPdf	PKPdf	03 52 06.4	+1.6
WLF	Walferdange	153.42	355	⇑PKPdf	PKPdf	03 52 06.8	+2.0
WLF				⇑PKPbc	PKiKP	03 52 13.4	+0.7
WLF				⇓PKPab	PKPab	03 52 25.7	+0.4
AKAS	Kas	153.45	305	eP	PKPbc	03 52 13.0	-0.3
AKAS	Kas	153.45	305	i P	PKiKP	03 52 13.7	+0.3
AKAS				IAML_P			
	comp=Z,4µm,0.6s						
TAVA	DENIZLI_Tavas	153.47	308	i P	PKiKP	03 52 14.0	+0.7
TAVA				IAML_P			
	comp=Z,2µm,0.5s						
MDVR	Moldovita	153.48	329	⇓iP	PKPdf	03 52 05.7	+0.5
KSL	Kastellorizon	153.50	305	P	PKPbc	03 52 09.6	-3.6
LPK	Lapseki	153.52	316	eP	PKPbc	03 52 13.2	+0.1
KDZ	Kurdzhali	153.62	320	eP	PKPbc	03 52 12.6	-0.7
ALN	Alexandroupoli	153.68	318	eP	PKPbc	03 52 10.9	-2.5
ALN	Alexandroupoli	153.68	318	ePKPdf	PKPdf	03 52 07.1	+1.6
ALN	Alexandroupoli	153.68	318	P	PKPdf	03 52 05.0	-0.5
MORH	Mrgy, Hungar	153.68	335	i P	PKPdf	03 52 04.3	-1.0
MORH	Mrgy, Hungar	153.68	335	ePKiKP	PKPdf	03 52 04.0	-1.3
FETY	Fethiye	153.69	307	eP	PKPbc	03 52 11.4	-2.2
FETY	Fethiye	153.69	307	P	PKPdf	03 52 05.7	0.0
JVM	Valle D.L. Mar	153.69	7	eP	PKPdf	03 52 06.4	+1.2
GELI	Tayfur-Gelibol	153.69	316	eP	PKiKP	03 52 13.8	+0.2
ENEZ	Enez	153.70	317	eP	PKPbc	03 52 13.3	-0.2
JSA	Saint Aubin	153.72	7	eP	PKPdf	03 52 06.8	+1.6
MOA	Molln	153.73	342	ePKPdf	PKPdf	03 52 06.5	+1.0
	comp=Z,4.6nm,0.7s,SNR=8.6						
RDO	Rodhopi	153.84	319	eP	PKiKP	03 52 14.2	+0.4
RDO	Rodhopi	153.84	319	P	PKPdf	03 52 05.6	-0.1
ARSA	Arzberg	153.90	340	ePKPdf	PKPdf	03 52 05.1	-0.6
	comp=Z,30nm,1.3s,SNR=5.1						
DALY	Dalyan (Mula)	153.93	307	eP	PKPbc	03 52 12.2	-1.9
DALY	Dalyan (Mula)	153.93	307	i P	pPKPdf	03 52 49.5	+0.2
DALY				IAML_P			
	comp=Z,492nm,0.4s						
TURN	Turunc	153.94	308	eP	PKiKP	03 52 20.0	+5.8
TURN	Turunc	153.94	308	i P	PKPab	03 52 26.7	-1.4
TURN				IAML_P			
	comp=Z,2µm,0.7s						
STU	Stuttgart	153.95	350	ePKPdf	PKPdf	03 52 06.8	+1.1
STU				ePKPbc	PKPbc	03 52 12.9	-0.9
AYDB	Zeytinkoy-Aydi	153.99	310	eP	PKiKP	03 52 15.2	+0.8
RZN	Rozhen	154.01	320	eP	PKPdf	03 52 10.0	+3.8
YER	Yerkesik	154.07	308	eP	PKPbc	03 52 14.2	-0.3
EZN	Ezine	154.10	315	eP	PKPbc	03 52 13.3	-1.1
EZN	Ezine	154.10	315	P	PKPdf	03 52 07.0	+0.9
EZN	Ezine	154.10	315	⇑iP	PKPdf	03 52 08.4	+2.3
DKL	Dikili	154.12	313	eP	PKPbc	03 52 14.0	-0.4
AYDN	Tasoluk	154.12	310	i P	PKPbc	03 52 12.0	-2.6
AYDN				IAML_P			
	comp=Z,438nm,0.8s						
BEHE	Becsehely	154.16	338	eP	PKPdf	03 52 07.3	+1.3
BEHE	Becsehely	154.16	338	ePKiKP	PKPdf	03 52 07.0	+1.0
VTS	Vitosha	154.24	324	ePKPdf	PKPdf	03 52 06.2	-0.2
VTS	Vitosha	154.24	324	ePKIKP	PKPdf	03 52 06.2	-0.2
VTS	Vitosha	154.24	324	P	PKPdf	03 52 08.4	+1.9
SMTH	Samothraki Isl	154.24	317	P	PKPdf	03 52 05.7	-0.6
BLCB	Balcova	154.37	312	eP	PKiKP	03 52 16.3	+1.3
PRK	Paraskevi	154.45	314	P	PKPdf	03 52 08.7	+2.1

BFO	Black Forest	154.50	351	*e*PKPdf	PKPdf	03 52 08.2	+1.7
BFO	Black Forest	154.50	351	*e*PKIKP	PKPdf	03 52 08.2	+1.7
LDF	La Druitiere	154.51	5	*e*PKIKP	PKPdf	03 52 06.9	+0.5
LDF				pmax	pmax		
	comp=Z,11nm,0.6s						
KAVA	Kavala	154.55	319	P	PKPdf	03 52 09.8	+3.1
SOKA	Soboth	154.56	340	*e*PKPdf	PKPdf	03 52 06.0	-0.7
	comp=Z,33nm,1.4s,SNR=11						
ARG	Arkhangelos	154.56	306	*e*P	PKPbc	03 52 12.0	-3.5
GCAM	G?zelcaml?	154.56	310	*e*P	PKPbc	03 52 13.6	-1.8
PERS	Pernice	154.57	340	*i* PKPdf	PKPdf	03 52 05.7	-1.0
MMB	Musomiste	154.64	321	*e*P	PKPbc	03 52 13.7	-1.8
TEKS	Tekeris	154.66	331	*e*P	PKPdf	03 52 06.8	0.0
THAS	Thassos island	154.66	318	P	PKPdf	03 52 06.1	-0.8
KBA	Koelnbreinsper	154.68	343	*e*PKPdf	PKPdf	03 52 05.7	-1.3
	comp=Z,17nm,0.7s,SNR=20						
URLA	Izmir	154.68	312	*e*P	PKiKP	03 52 16.2	+0.5
NVR	Nevrokopi	154.72	321	P	PKPdf	03 52 05.7	-1.3
SIGR	SIGRI	154.74	315	*e*P	PKiKP	03 52 16.9	+1.2
DAT	Datca	154.75	308	*e*P	PKPbc	03 52 13.4	-2.6
DAT	Datca	154.75	308	*i* P	PKPbc	03 52 14.0	-2.1
DAT				IAML_P			
	comp=Z,133nm,0.8s						
ECH	Echery	154.76	353	*e*PKPdf	PKPdf	03 52 08.3	+1.5
ECH	Echery	154.76	353	*e*PKIKP	PKPdf	03 52 08.3	+1.5
BODT	Bodrum	154.80	309	*e*P	PKPdf	03 52 10.8	+3.6
BODT	Bodrum	154.80	309	P	PKPdf	03 52 07.5	+0.3
DIVS	Divibare	154.80	330	*i* P	PKPdf	03 52 05.4	-1.7
KKB	Krupnik	154.83	323	*e*P	PKiKP	03 52 19.5	+3.6
OBKA	Obir	154.86	341	*e*PKPdf	PKPdf	03 52 07.0	-0.1
	comp=Z,5.7nm,0.7s,SNR=6.0						
WATA	Walderalm	154.88	346	*e*PKPdf	PKPdf	03 52 06.9	-0.3
	comp=Z,7.6nm,0.7s,SNR=8.1						
RETA	Reutte	154.91	347	*i* PKPdf	PKPdf	03 52 06.9	-0.2
	comp=Z,13nm,1.1s,SNR=11						
WTTA	Wattenberg	154.93	346	*e*PKPdf	PKPdf	03 52 07.0	-0.3
	comp=Z,33nm,1.0s,SNR=16						
MOTA	Moosalm	154.97	347	*e*PKPdf	PKPdf	03 52 06.9	-0.4
	comp=Z,35nm,1.3s,SNR=11						
MYKA	Terra Mystica	155.01	342	*e*PKPdf	PKPdf	03 52 06.5	-0.8
	comp=Z,14nm,1.1s,SNR=9.3						
SRS	Serrai	155.02	321	P	PKPdf	03 52 07.8	+0.4
CHOS	Chios island	155.04	313	*e*P	PKPdf	03 52 14.9	+7.3
SQTA	Sankt Quirin	155.07	346	*e*PKPdf	PKPdf	03 52 06.8	-0.6
	comp=Z,23nm,1.0s,SNR=18						
CRES	Cresnjev	155.18	339	*i* P	PKPdf	03 52 06.6	-0.9
CLF	Chambon-Foret	155.18	1	*e*PKPdf	PKPdf	03 52 08.8	+1.4
ABTA	Abfaltersbach	155.21	344	*e*PKPdf	PKPdf	03 52 06.6	-0.9
	comp=Z,57nm,1.2s,SNR=35						
BBLS	Lazići	155.25	331	*i* P	PKPdf	03 52 06.8	-0.9
DAVA	Damuels	155.27	349	*e*PKPdf	PKPdf	03 52 07.6	-0.1
	comp=Z,19nm,1.2s,SNR=8.4						
HAPS	Han Pijesak,Bl	155.28	331	*e*P	PKPdf	03 52 06.1	-1.7
OUR	Ouranopolis	155.28	319	*e*P	PKPdf	03 52 17.5	+10
LJU	Ljubljana	155.28	340	*i* P	PKPdf	03 52 06.9	-0.7
FETA	Feichten	155.36	347	*e*PKPdf	PKPdf	03 52 07.7	-0.2
	comp=Z,27nm,0.9s,SNR=42						
KNT	Kendrikon	155.40	322	*e*P	PKPdf	03 52 17.1	+9.2
VISS	Visnje	155.40	340	*i* PKPdf	PKPdf	03 52 07.0	-0.8
RUDO	Rudo	155.46	330	*e*P	PKPdf	03 52 07.5	-0.4
BLY	Banja Luka	155.47	335	*e*PKPdf	PKPdf	03 52 09.7	+1.8
BLY	Banja Luka	155.47	335	⇓*i*P	PKPdf	03 52 10.1	+2.2
BLY	Banja Luka	155.47	335	*i* P	PKPdf	03 52 07.1	-0.8
VAY	Valandovo	155.48	322	*i* PKP	PKPdf	03 52 01.2	-6.8
BOJS	Bojanci	155.53	339	*i* PKPdf	PKPdf	03 52 07.8	-0.2
KARP	Karpathos	155.55	306	*e*P	PKPdf	03 52 19.8	+11
JAVS	Javornik	155.56	341	*i* PKPdf	PKPdf	03 52 07.5	-0.6
PLG	Polygyros	155.58	319	P	PKPdf	03 52 08.7	+0.5
CEY	Cerknica	155.59	340	*i* P	PKPdf	03 52 07.3	-0.7
HORT	Hortiatis	155.64	320	*e*P	PKPdf	03 52 20.2	+12
SKO	Skopje	155.65	325	*i* PKP	PKPdf	03 52 08.2	0.0
DAVOX	Davos/Dischmat	155.76	348	PKP	PKPdf	03 52 09.8	+1.3
	comp=Z,19nm,0.9s,baz=169,slow=0.8,SNR=28						
TRI	Trieste	155.82	341	*e*PKPdf	PKPdf	03 52 09.7	+1.4
TRI				*e*PKPab	PKPab	03 52 34.8	-0.9
FUORN	Ofenpass-Fuorn	155.84	347	*e*PKPdf	PKPdf	03 52 08.9	+0.3
UPM	Unac-Piva	155.99	330	*e*P	PKPdf	03 52 09.2	+0.3
SSF	Saint Saulge	156.15	359	*e*PKIKP	PKPdf	03 52 09.8	+1.1
SSF				pmax	pmax		
	comp=Z,45nm,1.2s						
TUE	Stuetta	156.15	349	*e*PKPdf	PKPdf	03 52 09.2	+0.2
LIT	Litokhoron	156.32	320	P	PKPdf	03 52 07.5	-1.7
XOR	Xorichti	156.35	318	P	PKPdf	03 52 10.1	+0.9
PHP	Peshkopia	156.38	326	P	PKPdf	03 52 07.3	-2.0
BRY	Bratogost	156.40	330	*e*P	PKPdf	03 52 08.8	-0.5
PDG	Podgorica	156.42	328	⇑*i*P	PKPdf	03 52 09.1	-0.1
PDG	Podgorica	156.42	328	*e*P	PKPdf	03 52 07.7	-1.5
TTG	Podgorica	156.42	328	*e*PKPdf	PKPdf	03 52 08.8	-0.4
TTG	Podgorica	156.42	328	*e*PKIKP	PKPdf	03 52 08.8	-0.4
MFF	Saint Martin d	156.49	5	*e*PKIKP	PKPdf	03 52 09.9	+0.8
MFF				pmax	pmax		
	comp=Z,17nm,1.1s						
FNA	Florina	156.51	323	*e*PKPdf	PKPdf	03 52 11.8	+2.4
FNA	Florina	156.51	323	*e*PKIKP	PKPdf	03 52 11.8	+2.4
SENIN	Lac Senin/Sane	156.57	352	*e*PKPdf	PKPdf	03 52 10.0	+0.5
TREB	Trebinje	156.63	330	*e*P	PKPdf	03 52 12.1	+2.6
DRME	Dracevica, Mon	156.64	328	*e*P	PKPdf	03 52 07.4	-2.1
STON	Ston	156.79	331	*e*P	PKPdf	03 52 10.1	+0.5
TIR	Tirane	156.92	326	*e*PKPdf	PKPdf	03 52 12.1	+2.2
TIR	Tirane	156.92	326	⇓*i*P	PKPdf	03 52 22.6	+13
NEST	Nestorio	156.94	322	P	PKPdf	03 52 11.0	+0.9
PENT	Pentalofos	157.04	322	P	PKPdf	03 52 20.6	+10
KPRO	Kipourio	157.07	321	P	PKPdf	03 52 09.3	-0.9
AGG	Agios Georgios	157.09	318	*e*P	PKPdf	03 52 21.8	+12
AGG	Agios Georgios	157.09	318	*e*PKPdf	PKPdf	03 52 12.9	+2.6
IDI	Anoyia	157.34	307	*e*P	PKPdf	03 52 10.9	+0.2
IDI	Anoyia	157.34	307	PKP	PKPdf	03 52 12.2	+1.5
	comp=Z,32nm,1.1s,baz=66,slow=5.1,SNR=4.6						
DID	Didima	157.39	314	P	PKPdf	03 52 05.9	-4.7
LPG	La Plagne	157.49	353	*e*PKIKP	PKPdf	03 52 12.1	+1.2
LPG				pmax	pmax		
	comp=Z,14nm,0.9s						
JAN	Janina	157.56	321	P	PKPdf	03 52 11.5	+0.7
ANX	Ano Chora	157.60	318	P	PKPdf	03 52 13.0	+2.0
SERG	Sergoula	157.63	317	P	PKPdf	03 52 12.4	+1.5
GUR	Goura	157.73	316	P	PKPdf	03 52 12.1	+0.9
LAKA	Lakka	157.78	317	P	PKPdf	03 52 10.4	-0.7
KLV	Kalavryta, Ach	157.79	316	P	PKPdf	03 52 12.4	+1.2
IMMV	Iera Moni Meta	157.92	308	*e*P	PKPdf	03 52 14.2	+2.9
BNI	Bardonecchia	157.94	353	*e*PKPdf	PKPdf	03 52 11.9	+0.7
BNI	Bardonecchia	157.94	353	*e*PKIKP	PKPdf	03 52 11.9	+0.7
IGT	Igoumenitsa	157.94	322	P	PKPdf	03 52 08.6	-2.6
TRIP	Tripoli	158.01	315	P	PKPdf	03 52 13.2	+1.7
VLC	Villacollemand	158.15	345	*e*PKPab	PKPab	03 52 44.8	-1.1
LKD2	Lefkada island	158.25	320	P	PKPdf	03 52 12.1	+0.5
CAF	Calviac	158.28	2	*e*PKIKP	PKPdf	03 52 12.8	+1.3
CAF				pmax	pmax		
	comp=Z,24nm,1.3s						
EVGI	Lefkada island	158.35	319	P	PKPdf	03 52 11.7	0.0
DYR	Agios Nikonas	158.40	313	P	PKPdf	03 52 12.2	+0.3
ITM	Ithomi	158.44	315	*e*PKPdf	PKPdf	03 52 13.7	+1.8
ITM	Ithomi	158.44	315	P	PKPdf	03 52 13.5	+1.6
MATE	Matera	159.01	329	⇑*i*P	PKPdf	03 52 12.5	+0.1
PGAV	Gavieira, Arco	159.07	24	*e*PKPdf	PKPdf	03 52 12.9	+0.3
PGAV	Gavieira, Arco	159.07	24	*e*PKPab	PKPab	03 52 50.7	+0.6
PGAV	Gavieira, Arco	159.07	24	*e*PP	PP	03 56 29.7	-1.1
PCAB	Cabril	159.38	24	*e*PKPdf	PKPdf	03 52 14.4	+1.5
PCAB	Cabril	159.38	24	*e*PKPab	PKPab	03 52 52.7	+1.4
PTO	Porto	159.66	26	*e*PKPab	PKPab	03 52 52.9	+0.4
POLO	Lamas de Olo	159.76	24	*e*PKPdf	PKPdf	03 52 15.0	+1.6
POLO	Lamas de Olo	159.76	24	*e*PKPab	PKPab	03 52 53.5	+0.4
POLO	Lamas de Olo	159.76	24	*e*PP	PP	03 56 32.6	-2.0
PVRL	Vila Real	159.88	24	*e*PKPdf	PKPdf	03 52 14.7	+1.2
PVRL	Vila Real	159.88	24	*e*PKPab	PKPab	03 52 54.0	+0.5
PVRL	Vila Real	159.88	24	*e*PP	PP	03 56 35.3	+0.2
PMOZ	Porto Moniz, M	159.88	57	*e*PKPdf	PKPdf	03 52 16.1	+2.3
PMOZ	Porto Moniz, M	159.88	57	*e*PKPab	PKPab	03 52 54.4	+0.4
TIP	Timpagrande	160.12	327	*e*PKPdf	PKPdf	03 52 14.4	+0.5
TIP	Timpagrande	160.12	327	⇓*i*P	PKPdf	03 52 14.4	+0.5
PMAR	Madeira	160.14	57	*e*PKPdf	PKPdf	03 52 15.9	+1.7
PMAR	Madeira	160.14	57	*e*PKPab	PKPab	03 52 55.3	+0.1
MVO	Moncorvo	160.22	22	*e*PKPdf	PKPdf	03 52 15.0	+1.1
MVO	Moncorvo	160.22	22	*e*PKPab	PKPab	03 52 56.6	+1.6
PVIS	Viseu	160.29	25	*e*PKPdf	PKPdf	03 52 14.8	+0.8
PVIS	Viseu	160.29	25	*e*PKPab	PKPab	03 52 55.8	+0.4
PMPST	Porto Santo, M	160.44	55	*e*PKPab	PKPab	03 52 57.1	+0.8
COI	Coimbra	160.52	27	*e*PKPab	PKPab	03 52 58.5	+2.3
PCAS	Casmilo, Conde	160.61	27	*e*PKPdf	PKPdf	03 52 16.6	+2.3
PCAS	Casmilo, Conde	160.61	27	*e*PKPab	PKPab	03 52 56.9	+0.2
MTE	Manteigas	160.70	25	*e*PKPdf	PKPdf	03 52 15.3	+0.9
MTE	Manteigas	160.70	25	*e*PKPab	PKPab	03 52 57.4	+0.2
MTE	Manteigas	160.70	25	*e*PKPdf	PKPdf	03 52 15.3	+0.9
PTOM	Tomar	161.01	28	*e*PKPdf	PKPdf	03 52 16.0	+1.3
PTOM	Tomar	161.01	28	*e*PKPab	PKPab	03 52 58.9	+0.4
PMAFR	Mafra	161.16	30	*e*PKPdf	PKPdf	03 52 16.6	+1.7
PMAFR	Mafra	161.16	30	*e*PKPab	PKPab	03 52 59.8	+0.6
PMAFR	Mafra	161.16	30	*e*PP	PP	03 56 43.1	+0.9
PCBR	Castelo Branco	161.21	25	*e*PKPdf	PKPdf	03 52 15.8	+0.9
PCBR	Castelo Branco	161.21	25	*e*PKPab	PKPab	03 52 59.8	+0.5
ALMR	Almeirim	161.32	29	*e*PKPdf	PKPdf	03 52 15.0	-0.1
ALMR	Almeirim	161.32	29	*e*PKPdf	PKPdf	03 52 17.3	+2.2
ALMR	Almeirim	161.32	29	*e*PKPab	PKPab	03 53 01.1	+1.3
LIS	Lisbon	161.42	31	*e*PKPdf	PKPdf	03 52 15.1	-0.1
LIC	Lamto	161.53	155	*e*PKP2	PKPdf	03 52 14.9	-1.1
	comp=Z,108nm,1.4s						
LIC	Lamto	161.53	155	*e*PKP2	PKPab	03 53 01.7	+0.4
	comp=Z,221nm,1.0s						
PMTG	Montargil	161.55	28	*e*PKPdf	PKPdf	03 52 15.7	+0.4
PMTG	Montargil	161.55	28	*e*PKPab	PKPab	03 53 01.2	+0.4
PMTG	Montargil	161.55	28	*e*PP	PP	03 56 44.0	-0.1
PMRV	Marv??o	161.59	26	*e*PKPdf	PKPdf	03 52 16.4	+1.0
PMRV	Marv??o	161.59	26	*e*PKPab	PKPab	03 53 01.3	+0.3
PMRV	Marv??o	161.59	26	*e*PP	PP	03 56 42.1	-2.2
KIC	Kosan Boka	161.77	155	*e*PKP2	PKPdf	03 52 16.0	-0.3
	comp=Z,163nm,1.6s						
KIC	Kosan Boka	161.77	155	*e*PKP2	PKPab	03 53 02.4	+0.1
	comp=Z,196nm,1.0s						
TIC	Toumodi	161.92	154	*e*PKP2	PKPdf	03 52 14.9	-1.6
TIC	Toumodi	161.92	154	*e*PKP2	PKPab	03 53 03.3	+0.3
DBIC	Dimbokro	162.01	154	PKP	PKPdf	03 52 16.0	-0.5
	comp=Z,10.0nm,0.9s,baz=153,slow=4.4,SNR=5.7						
DBIC				PKPab	PKPab	03 53 04.0	+0.6
	comp=Z,46nm,0.8s,baz=185,slow=5.9,SNR=18						
PNCL	Nicolau / Gran	162.19	31	*e*PKPdf	PKPdf	03 52 17.4	+1.4
PNCL	Nicolau / Gran	162.19	31	*e*PP	PP	03 56 50.9	+3.3
PTEO	Sao Teotonio	162.55	32	*e*PKPdf	PKPdf	03 52 18.5	+2.1
PTEO	Sao Teotonio	162.55	32	*e*PP	PP	03 56 50.8	+1.2
ESDC	Sonseca Array	162.55	18	PKP	PKPdf	03 52 17.3	+0.9
	comp=Z,2.6nm,0.8s,baz=349,slow=2.7,SNR=28						
ESDC				PKPab	PKPab	03 53 06.7	+1.4
	comp=Z,7.8nm,0.7s,baz=330,slow=4.3,SNR=22						
ESLA	Sonseca Array	162.55	18	*e*PKPdf	PKPdf	03 52 18.3	+1.9
ESLA				*e*PKPab	PKPab	03 53 06.2	+1.0
PAB	San Pablo	162.56	19	*e*PKPdf	PKPdf	03 52 18.3	+1.9
PAB				*e*PKPab	PKPab	03 53 03.2	-2.1
PAB	San Pablo	162.56	19	*e*PKIKP	PKPdf	03 52 18.3	+1.9
PAB				*e*		03 53 03.2	
PBEJ	Beja	162.57	29	*e*PKPdf	PKPdf	03 52 20.5	+4.1
PBEJ	Beja	162.57	29	*e*PKPab	PKPab	03 53 03.6	-1.7
MORF	Marmelete	162.77	32	*e*PKPdf	PKPdf	03 52 16.6	0.0
MORF	Marmelete	162.77	32	*e*PKPdf	PKPdf	03 52 18.9	+2.2
PCVE	Castro Verde	162.81	30	*e*PKPdf	PKPdf	03 52 19.1	+2.5
PCVE	Castro Verde	162.81	30	*e*PKPab	PKPab	03 53 07.8	+1.4
PFVI	Vila Bisbo	162.82	33	*e*PKPdf	PKPdf	03 52 20.1	+3.5
PFVI	Vila Bisbo	162.82	33	*e*PKPab	PKPab	03 53 06.7	+0.2
CLTB	Caltabellotta	163.09	331	*e*PKPdf	PKPdf	03 52 16.5	-0.5
CLTB				*e*PKPab	PKPab	03 53 06.0	-1.7
PVAQ	Vaqueiros	163.14	30	*e*PKPdf	PKPdf	03 52 19.4	+2.5
PVAQ	Vaqueiros	163.14	30	*e*PKPab	PKPab	03 53 08.8	+0.9
PVAQ	Vaqueiros	163.14	30	*e*PP	PP	03 56 53.7	+1.1
PBDV	Barranco-do-Ve	163.17	31	*e*PKPdf	PKPdf	03 52 19.6	+2.6
HORN	Hornachuelos	163.79	24	P	PKPdf	03 52 20.3	+2.8
HORN	Hornachuelos	163.79	24	P	PKPdf	03 52 20.4	+2.8
SESP	Santiago Espad	164.39	16	P	PKPdf	03 52 21.0	+2.7
LIJA	Lijar	164.56	26	PKP1	PKPdf	03 52 20.5	+2.1
LIJA	Lijar	164.56	26	PKP2	PKPab	03 53 14.2	0.0
RSA	Sarsar	166.08	31	P	PKPdf	03 52 24.1	+4.4
CHEFC	Chefchaouen	166.12	29	P	PKPdf	03 52 24.0	+4.2
KEST	Kesra	166.26	337	PKP	PKPdf	03 52 20.9	+1.0
	comp=Z,7.6nm,0.8s,baz=196,slow=4.9,SNR=9.5						
KEST				PKPab	PKPab	03 53 21.6	-0.1
	comp=Z,23nm,0.7s,baz=297,slow=2.5,SNR=14						
KEST	Kesra	166.26	337	*e*PKPdf	PKPdf	03 52 21.1	+1.2
KEST				*e*PKPab	PKPab	03 53 22.1	+0.4
SET	Setif	166.82	351	P	PKPdf	03 52 23.0	+2.7
TAF	Taforalt	167.51	20	P	PKPdf	03 52 24.0	+3.2
JBK	JBK	167.90	22	P	PKPdf	03 52 23.0	+1.8
JBK	JBK	167.90	22	P	PKPdf	03 52 25.0	+3.7
CZD	Col de Zad	167.96	34	P	PKPdf	03 52 25.1	+3.7
MDT	Midelt	168.35	33	PKP	PKPdf	03 52 22.8	+1.4
	comp=Z,13nm,1.0s,baz=2.6,slow=2.0,SNR=18						
MDT				PKPab	PKPab	03 53 32.0	+0.9
	comp=Z,19nm,1.0s,baz=318,slow=2.8,SNR=6.4						
MDT	Midelt	168.35	33	P	PKPdf	03 52 24.7	+3.3
OUZM	OUZ	168.48	46	P	PKPdf	03 52 25.0	+3.3
GOLM	Goulmima	169.03	37	P	PKPdf	03 52 25.3	+3.4
TDRA	Tendrara	169.26	23	P	PKPdf	03 52 25.5	+3.3
ARF	Arif	169.64	36	P	PKPdf	03 52 26.0	+3.7
TOA0	Torodi Ar. Sit	169.98	174	*e*PKPdf	PKPdf	03 52 22.6	-0.2
TOA0				*e*PKPab	PKPab	03 53 39.5	+1.0
TOA0	Torodi Ar. Sit	169.98	174	P	PKPdf	03 52 25.3	+2.5
	SNR=7.2						
TORD	Torodi Ar. Bea	169.98	174	PKP	PKPdf	03 52 22.1	-0.7
	comp=Z,24nm,1.1s,baz=316,slow=1.8,SNR=44						
TORD				PKPab	PKPab	03 53 39.4	+0.9
	comp=Z,32nm,0.9s,baz=211,slow=2.6,SNR=18						
TORD				PP	PP	03 57 27.7	+0.5
	comp=Z,7.2nm,0.9s,baz=142,slow=7.5,SNR=5.2						
TOA1	Torodi Ar. Sit	169.99	174	*e*PKPdf	PKPdf	03 52 22.1	-0.7
TOA1				*e*PKPab	PKPab	03 53 39.4	+0.9
TOA1				*e*PP	PP	03 57 27.7	+0.5
TAM	Tamanrasset	177.51	262	*e*PKPdf	PKPdf	03 52 27.0	+1.5
TAM				*e*PKPab	PKPab	03 54 14.3	+2.0
TAM	Tamanrasset	177.51	262	*e*PKIKP	PKPdf	03 52 27.0	+1.5

MEX 24 03:45:51.6±0.7**, 16°.05N**×**95°.91W, h48**^{km}±9^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.34	215	*e*P	Pn	03 45 59.2	-1.8
HUIG				*e*S	Sn	03 46 06.0	-1.7
PANG	Puerto Angel	0.67	235	*i* P	Pn	03 46 03.7	-1.1
PANG				*i* S	Sn	03 46 13.0	-1.4
VHO	Vista Hermosa	1.29	322	*e*P	Pn	03 46 12.0	-1.4
VHO				*i* S	Sn	03 46 28.1	-1.5
CMIG	Matias Romero	1.42	43	*i* P	Pn	03 46 13.2	-1.9
CMIG				*i* S	Sn	03 46 29.9	-2.8
PCIG		2.61	97	*e*P	Pn	03 46 30.8	-0.5
PCIG				*i* S	Sn	03 46 59.9	-1.9
TGIG		2.77	74	*i* P	Pn	03 46 32.5	-1.0
TGIG				*e*S	Sn	03 47 03.3	-2.4
CCIG	Comitan	3.63	86	*e*P	Pn	03 46 44.9	-0.5
CCIG				*i* S	Sn	03 47 25.6	-1.6

ISCJB ***24*** *03:49:51.4±0.5, 52°.15N±0°.09×172°.67E±0°.06, h24*^{km}*, mb4.2/47, MS4.0/1, Error ellipse: s-maj=13.0km s-min=5.4km az=172.4*

IDC ***24*** *03:49:51.0±1.3, 52°.39N×172°.78E, h0*^{km}*, mb4.1/19, mb1 4.3/20, mb1mx4.0/77, mbtmp4.1/20, ML3.2/1, MS4.0/1, Ms1 3.9/1, ms1mx3.1/36, Error ellipse: s-maj=34.7km s-min=14.9km az=174.0*

NEIC ***24*** *03:49:52.6±1.5, 52°.27N×172°.62E, h15*^{km}*±5*^{km}*, mb4.2/38, Error ellipse: s-maj=18.0km s-min=6.7km az=169.0*

ISC 24 03:49:53.9±0.7**, 52°.3N**±0°.1×**172°.61E**±0°.05**, h24**^{km}**, n76, σ1**^{s}**.42**/72**, mb4.3**/47**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.02	63	*e*Pn	Pn	03 50 11.6	-1.0
SMY				*e*Sn	Sn	03 50 27.4	+1.3
ADK	Adak	6.62	89	*e*Pn	Pn	03 51 29.3	-0.2
PEA0B	Petropavlovsk-	9.09	281	*e*Pn	Pn	03 52 01.7	-1.8
PEA0B				*e*Sn	Sn	03 53 42.7	-2.2
PEA1	Petropavlovsk-	9.09	281	*e*Pn	Pn	03 52 04.1	+0.6
PEA1				*e*Sn	Sn	03 53 39.6	-5.3
PETK	Petropavlovsk-	9.09	281	Pn	Pn	03 52 04.1	+0.6
	1.1nm,0.3s,baz=90,slow=19,SNR=21						
PETK				Sn	Sn	03 53 39.6	-5.3
	0.2nm,0.3s,baz=82,slow=25,SNR=2.5						
NIKH	Nikolski High	11.29	79	*e*Pn	Pn	03 52 33.0	-0.5
ANM	Nome	16.74	34	*e*Pn	Pn	03 53 45.2	-1.2
	19nm,1.1s						
SVW2	Sparrevohn	19.39	50	*e*P	P	03 54 16.4	-1.3
	2.3nm,0.8s						
OHAK	Old Harbor	20.15	62	*e*P	P	03 54 24.3	-1.7
	7.3nm,0.6s						
KDAK	Kodiak Island	20.53	61	P	P	03 54 29.2	-0.9
	5.0nm,0.3s,baz=286,slow=5.7,SNR=30						
KDAK	Kodiak Island	20.53	61	*e*P	P	03 54 27.6	-2.5
	12nm,1.0s						
RSO	Redoubt South	20.64	53	*e*P	Pn	03 54 32.4	-1.5
CNPM	China Poot	21.30	56	*e*P	P	03 54 38.8	+0.3
	4.1nm,0.8s						
SKT	Skwentna	21.47	49	*e*P	P	03 54 40.3	0.0
	14nm,1.5s						
ASAJ	Asahikawa	21.48	260	P	P	03 54 44.0	+3.5
	8.1nm,0.7s,baz=69,slow=11,SNR=6.7						
CAST	Castle Rocks	21.53	45	*e*P	P	03 54 41.0	+0.1
	3.0nm,0.8s						
KTH	Kantishna Hill	22.07	45	*e*P	P	03 54 46.8	0.0
	6.4nm,1.0s						
BPAW	Bear Paw Mtn.	22.18	44	*e*P	P	03 54 48.5	+0.7
	3.4nm,0.9s						
COLD	Coldfoot	23.46	36	*e*P	P	03 54 59.8	-1.3
	5.2nm,1.4s						
WRH	Wood River Hil	23.49	44	*e*P	P	03 55 01.9	+0.4
	3.3nm,0.8s						
CCB	Clear Creek Bu	23.65	43	*e*P	P	03 55 01.8	-1.2
	3.3nm,1.0s						
FID	Port Fidalgo	23.75	53	*e*P	P	03 55 01.8	-2.2
	3.4nm,0.9s						
ILAR	Eielson Array	24.06	43	P	P	03 55 07.0	+0.1
	1.4nm,0.5s,baz=257,slow=8.2,SNR=16						
ILB	Eielson Array	24.06	43	*e*P	P	03 55 07.0	+0.1
	4.5nm,1.2s						
TOLK	Toolik Lake Re	24.22	33	*e*P	P	03 55 08.9	+0.5
	5.2nm,0.6s						
HMT	Hamilton	24.84	54	*e*P	P	03 55 13.8	-0.2
	19nm,1.3s						
DOT	Dot Lake	25.11	46	*e*P	P	03 55 15.2	-1.2
	3.6nm,0.6s						
EGAK	Eagle	26.49	44	*e*P	P	03 55 27.9	-0.9
	3.3nm,1.3s						
DAWY	Dawson	27.20	46	*e*P	P	03 55 35.9	+0.6
	3.6nm,1.4s						
HYT	Haines Junctio	28.14	53	*e*P	P	03 55 44.2	+0.3
	2.3nm,0.7s						
INK	Inuvik	29.87	37	*e*P	P	03 55 58.9	0.0
	6.6nm,1.4s						
H11N2	WAKE ISLAND Hy	32.79	190	T	T	04 31 39.1	
	baz=6.6,slow=76,SNR=7.7						
H11N3	WAKE ISLAND Hy	32.80	190	T	T	04 31 43.8	
	baz=6.6,slow=76,SNR=6.3						
H11N1	WAKE ISLAND Hy	32.81	190	T	T	04 31 39.3	
	baz=6.6,slow=76,SNR=7.6						
H11S1	WAKE ISLAND Hy	34.02	190	T	T	04 33 00.9	
	baz=7.0						
H11S3	WAKE ISLAND Hy	34.04	190	T	T	04 33 01.8	
	baz=7.0						
H11S2	WAKE ISLAND Hy	34.04	190	T	T	04 33 02.8	
	baz=7.0						
KEKH	Kekaha	37.01	134	*e*P	P	03 56 59.9	-1.5
	159nm,1.5s						
YKA	Yellowknife Ar	38.44	46	P	P	03 57 12.7	-0.4
	1.1nm,0.6s,baz=288,slow=7.8,SNR=5.1						
YKB5	Yellowknife Ar	38.44	46	*e*P	P	03 57 12.7	-0.4
SONA0	Songino Array	41.41	291	*e*P	P	03 57 39.7	+1.5
SONM	Songino Array	41.41	291	P	P	03 57 39.7	+1.5
	0.7nm,0.7s,baz=54,slow=7.3,SNR=2.8						
B08A	Colville Reser	42.18	67	*e*P	P	03 57 41.0	-3.4
	1.4nm,0.8s						
SPA0	Spitsbergen Ar	48.99	354	*e*P	P	03 58 38.3	+0.5
	41nm,1.3s						
SPITS	Spitsbergen Ar	48.99	354	P	P	03 58 38.3	+0.5
	1.2nm,0.5s,baz=49,slow=7.0,SNR=4.1						
PD31	Pinedale Array	51.01	68	*e*P	P	03 58 53.4	-0.5
	1.5nm,1.0s						
PDAR	Pinedale Array	51.01	68	P	P	03 58 53.4	-0.5
	0.9nm,0.6s,baz=319,slow=3.3,SNR=7.3						
PDAR				LR	LR	04 20 53.0	
	comp=Z,126nm,18.5s,baz=255,slow=37						
TMUT	Trail Mountain	52.30	72	*e*P	P	03 59 04.0	+0.4
	2.5nm,0.8s						
PV13	Radium Mtn., P	54.45	72	*e*P	P	03 59 19.3	0.0
	6.6nm,0.6s						
KURBB	Kurchatov Arra	54.52	309	P	P	03 59 20.0	+0.7
	2.0nm,0.6s,baz=53,slow=7.5,SNR=12						
ARCES	ARCESS Array B	56.14	347	P	P	03 59 30.8	0.0
	1.5nm,0.7s,baz=24,slow=7.6,SNR=9.4						
BVAR	Borovoye Array	56.61	315	P	P	03 59 35.0	+0.7
	1.6nm,0.7s,baz=45,slow=6.2,SNR=4.2						
MNTX	Cornudas Mount	60.97	75	*e*P	P	04 00 05.1	+0.2
	3.7nm,0.7s						
FIA0	FINESS Array S	63.53	343	*e*P	P	04 00 21.8	+0.2
FINES	FINESS Array B	63.53	343	P	P	04 00 21.8	+0.2
	4.0nm,0.8s,baz=90,slow=9.5,SNR=5.5						
TX31	Lajitas Ar. Si	63.69	76	*e*P	P	04 00 23.2	-0.1
	2.6nm,0.8s						
TXAR	Lajitas Array	63.69	76	P	P	04 00 23.1	-0.2
	1.9nm,0.6s,baz=304,slow=5.4,SNR=46						
AKTO	Aktyubinsk	63.70	320	P	P	04 00 23.9	+1.0
	1.7nm,0.5s,baz=63,slow=8.7,SNR=7.7						
ABKAR	Akbulak array	63.83	318	*e*P	P	04 00 25.0	+1.2
	2.1nm,0.6s						
FCAR	Ozark Folk Cen	65.50	63	*e*P	P	04 00 33.8	-1.1
	4.1nm,0.7s						
CM31	Chiang Mai Arr	65.65	269	*e*P	P	04 00 36.9	+0.9
	7.1nm,0.4s						
CMAR	Chiang Mai Arr	65.65	269	P	P	04 00 36.9	+0.9
	1.0nm,0.3s,baz=38,slow=6.0,SNR=2.9						
PBMO	Poplar Bluff	65.76	61	*e*P	P	04 00 35.5	-1.0
	5.5nm,0.8s						
NB2	NORSAR Subarra	66.05	350	P	P	04 00 38.5	+0.4
	comp=Z,1.2nm,0.6s,baz=12,slow=6.5						
NB200	NORSAR Array S	66.05	350	*e*P	P	04 00 38.5	+0.4
NOA	NORSAR Array B	66.05	350	P	P	04 00 38.5	+0.4
	comp=Z,1.5nm,0.6s,baz=12,slow=6.4,SNR=8.2						
WLAR	White Oak Lake	66.59	65	*e*P	P	04 00 42.1	+0.3
	comp=Z,12nm,0.6s						
HFS	Hagfors	66.66	349	P	P	04 00 42.2	+0.3
	comp=Z,2.3nm,0.4s,baz=47,slow=2.8,SNR=27						
CLTN	Cedars of Leba	68.45	59	*e*P	P	04 00 54.1	+0.4
	comp=Z,4.3nm,0.9s						
PQI	Presque Isle	68.62	40	*e*PcP	PcP	04 01 20.9	+1.5
LMN	Caledonia Moun	70.55	39	*e*pP	pP	04 01 10.6	-2.9
EKA	Eskdalemuir Ar	72.69	357	P	P	04 01 19.1	-0.1
	comp=Z,1.3nm,0.6s,baz=3.0,slow=5.0,SNR=5.2						
AKASG	Malin Array Be	72.82	337	P	P	04 01 20.2	+0.2
	comp=Z,1.3nm,0.6s,baz=27,slow=6.1,SNR=2.7						
AKBB	Malin Array Si	72.82	337	*e*P	P	04 01 20.2	+0.2
	comp=Z,3.2nm,0.9s						
GEC2	GERESS Array S	77.66	346	*e*P	P	04 01 49.4	+1.3
	comp=Z,8.1nm,1.5s						
GERES	GERESS Array B	77.66	346	P	P	04 01 49.4	+1.3
	comp=Z,1.5nm,0.5s,baz=28,slow=6.2,SNR=13						

NEIC ***24*** *03:51:43.7±2.4, 13°.61S×166°.89E, h115*^{km}*±8*^{km}*, mb4.4/9, Error ellipse: s-maj=32.4km s-min=4.9km az=95.0*

IDC ***24*** *03:51:46.1±4.2, 13°.71S×166°.88E, h127*^{km}*±38*^{km}*, mb3.8/9, mb1 4.0/10, mb1mx3.7/42, mbtmp4.2/10, Error ellipse: s-maj=33.3km s-min=22.5km az=111.0*

ISC 24 03:51:42.5±0.8**, 13°.62S**±0°.07×**167°.0E**±0°.2**, h100**^{km}**, n32, σ1**^{s}**.42**/34**, mb4.2**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.42	183	P	Pn	03 53 44.9	+3.0
	2.0nm,0.3s,baz=146,slow=21,SNR=17						
DZM				S	Sn	03 55 13.3	-2.0
	1.2nm,0.3s,baz=90,slow=20,SNR=3.7						
DZM	Mont Dzumac	8.42	183	*e*Pn	Pn	03 53 42.6	+0.7
DZM				*e*Sn	Sn	03 55 13.3	-2.0
ONTNC	Ouen Toro	8.66	183	*e*Pn	Pn	03 53 48.3	+3.3
PINNC	Pines Island,	8.96	177	*e*Pn	Pn	03 53 50.3	+1.3
STKA	Stephens Creek	29.51	228	P	P	03 57 37.2	-0.3
	1.3nm,0.4s,baz=42,slow=8.6,SNR=5.1						
WB2	Warramunga Arr	31.83	254	*e*P	P	03 57 55.1	-2.9
	13nm,1.4s						
WR1	Warramunga Arr	31.84	254	*e*P	P	03 57 56.9	-1.3
WRA	Warramunga Arr	31.84	254	P	P	03 57 56.9	-1.3
	2.3nm,0.8s,baz=91,slow=7.5,SNR=3.5						
AS31	Alice Springs	32.82	247	*e*P	P	03 58 06.1	-0.6
	1.4nm,1.1s						
ASAR	Alice Springs	32.82	247	P	P	03 58 06.5	-0.3
	1.1nm,0.3s,baz=73,slow=9.4,SNR=20						
BBOO	Buckleboo	34.05	231	*e*P	P	03 58 18.2	+0.9
	31nm,1.5s						
FORT	Forrest	39.63	238	*e*P	P	03 59 05.1	+0.5
	39nm,1.1s						
MCQ	Macquarie Isla	41.27	187	*e*P	P	03 59 16.9	-0.8
	195nm,1.1s						
MJAR	Matsushiro Arr	56.80	332	P	P	04 01 17.2	+0.8
	1.0nm,0.5s,baz=171,slow=8.7,SNR=4.7						
MAJO	Matsushiro	56.80	332	*e*P	P	04 01 15.1	-1.4
	5.1nm,0.9s						
MJB9	Matsu-Tunnel	56.80	332	*e*P	P	04 01 15.2	-1.2

	5.1nm,0.9s						
YOJ	Yonaguni jima	57.23	311	*e*P	P	04 01 18.8	-0.9
	31nm,0.9s						
PETK	Petropavlovsk-	66.93	354	P	P	04 02 24.5	+0.5
	0.8nm,0.3s,baz=180,slow=5.8,SNR=3.2						
PEA1	Petropavlovsk-	66.94	354	*e*P	P	04 02 24.5	+0.5
GSTR	Great Sitkin T	67.07	11	*e*P	P	04 02 22.9	-2.1
CMAR	Chiang Mai Arr	74.24	294	P	P	04 03 11.0	+1.8
	1.2nm,0.3s,baz=131,slow=4.6,SNR=5.4						
SONA0	Songino Array	81.44	324	*e*P	P	04 03 49.9	+1.2
SONM	Songino Array	81.44	324	P	P	04 03 49.9	+1.2
	1.0nm,0.7s,baz=132,slow=4.1,SNR=4.0						
MAW	Mawson	82.80	202	P	P	04 03 55.6	+0.3
	1.7nm,1.0s,baz=134,slow=6.7,SNR=6.6						
MAW	Mawson	82.80	202	*e*P	P	04 03 54.7	-0.6
	1.1nm,1.2s						
MK32	Makanchi Array	96.21	317	*e*P	P	04 05 00.1	+0.7
MKAR	Makanchi Array	96.21	317	P	P	04 05 00.1	+0.7
	0.8nm,0.7s,baz=66,slow=3.5,SNR=2.1						
ARCES	ARCESS Array B	119.11	345	PKP	PKPdf	04 10 18.9	-0.2
	0.9nm,0.4s,baz=85,slow=2.4,SNR=25						
FIA0	FINESS Array S	124.59	338	*e*PKPdf	PKPdf	04 10 29.3	-0.5
FINES	FINESS Array B	124.59	338	PKP	PKPdf	04 10 29.3	-0.5
	2.1nm,0.9s,baz=116,slow=4.4,SNR=5.1						
NB200	NORSAR Array S	129.48	345	*e*PKPdf	PKPdf	04 10 39.5	+0.2
NOA	NORSAR Array B	129.48	345	PKP	PKPdf	04 10 39.5	+0.2
	0.3nm,0.6s,baz=42,slow=2.4,SNR=3.5						

KRSC 24 04:19:26.8±0.3, 59°.80N×163°.85E, h56^{km}±9^{km}, ML3.9, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OSSR	Ossora	0.68	217	*e*P	Pn	04 19 40.4	-0.1
OSSR				*e*S	Sn	04 19 52.2	+1.7
TILK	Tilichiki	1.32	59	*e*P	Pn	04 19 49.8	+0.9
TILK				*e*S	Sn	04 20 08.2	+2.7
PALN	Palana	2.11	252	*e*P	Pn	04 20 01.2	+1.6
PALN				*e*S	Sn	04 20 28.5	+3.9
KBTR	Krutoberegovo	3.64	189	P	Pn	04 20 24.2	+3.7

MEX 24 04:24:34.4±0.5, 16°.04N×96°.77W, h9^{km}±4^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.70	113	*i* P	Pg	04 24 46.3	-1.5
HUIG				*e*S	Sg	04 24 55.5	-1.4
VHO	Vista Hermosa	1.03	2	*e*P	Pg	04 24 50.9	-3.2
VHO				*e*S	Sg	04 25 04.3	-3.3
CMIG	Matias Romero	2.09	60	*i* P	Pn	04 25 04.9	-4.7
CMIG				*i* S	Sn	04 25 31.5	-4.3
TLIG	Tlapa	2.29	312	*i* P	Pn	04 25 09.0	-3.5
TLIG				*i* S	Sn	04 25 35.5	-5.3

MAN 24 04:53:28.3, 11°.69N×126°.29E, h16^{km}, mb4.1, ML2.8, MS2.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.83	264	*e*P	Pb	04 53 44.0	-0.4
PLP	Palo	1.38	248	⇓*i*P	Pn	04 53 51.9	-1.1
PLP				*i* S	Sn	04 54 08.2	-2.8
CNP	Catarman	1.79	297	*e*P	Pn	04 53 58.1	-0.4
CNP				*e*S	Sb	04 54 22.1	-0.7
MSLP	Maasin	2.09	222	*e*P	Pn	04 54 03.7	+1.1
MSLP				*e*S	Sb	04 54 30.0	-1.5

*ISCJB **24** 05:17:15.2±0.4, 24°.58N±0°.02×122°.32E±0°.02, h79^{km}±4^{km},*
Error ellipse: s-maj=3.6km s-min=2.6km az=168.3
*JMA **24** 05:17:15.2±0.1, 24°.77N×122°.34E, h78^{km}±2^{km}, M2.4*
*TAP **24** 05:17:15.6, 24°.59N×122°.30E, h76^{km}, ML3.3, C*

ISC 24 05:17:15.3±1.3, 24°.58N±0°.03×122°.31E±0°.02, h81^{km}±6^{km}, n75, σ0^{s}.82/143, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.17	261	*e*P	Pn	05 17 27.5	+0.5
	baz=254						
EOS1				*e*S	Sn	05 17 36.5	+0.9
	baz=254						
TWC	Suao	0.42	275	P	Pn	05 17 28.4	-0.1
	baz=272						
TWC				S	Sn	05 17 37.6	-0.6
	baz=272						
NTC	Toucheng	0.52	302	P	Pn	05 17 29.6	+0.3
	baz=301						
NTC				S	Sn	05 17 39.3	-0.3
	baz=301						
NANB	Nanao	0.53	254	P	Pn	05 17 29.7	+0.2
	baz=251						
NANB				S	Sn	05 17 40.3	+0.4
	baz=251						
ENA	Nanau	0.54	254	P	Pn	05 17 29.8	+0.3
	baz=251						
ENA				S	Sn	05 17 40.0	0.0
	baz=251						
ILA	Ilan	0.55	290	*e*P	Pn	05 17 29.5	0.0
	baz=288						
ILA				*e*S	Sn	05 17 40.6	+0.5
	baz=288						
JYNG	Yonagunijimaku	0.59	102	P	Pn	05 17 30.1	+0.1
JYNG				*e*S	Sn	05 17 41.1	+0.3
TIPB	Shuangxi	0.59	312	P	Pn	05 17 30.1	+0.1
	baz=311						
TIPB				S	Sn	05 17 40.4	-0.5
	baz=311						
TWE	Neicheng	0.60	284	P	Pn	05 17 30.6	+0.5
	baz=282						
TWE				S	Sn	05 17 41.3	+0.2
	baz=282						
YOJ	Yonaguni jima	0.65	100	*e*P	Pn	05 17 30.4	-0.1
	baz=100						
YOJ				*e*S	Sn	05 17 41.3	-0.5
	baz=100						
YOJ	Yonaguni jima	0.65	100	P	Pn	05 17 30.6	+0.1
YOJ				*e*S	Sn	05 17 41.5	-0.3
ENTT	Nioudou	0.68	275	P	Pn	05 17 31.9	+1.0
	baz=273						
ENTT				*e*S	Sn	05 17 43.5	+1.1
	baz=273						
NWF	Wu-fen Shan	0.69	316	P	Pn	05 17 31.5	+0.5
	baz=315						
NWF				S	Sn	05 17 42.7	0.0
	baz=315						
WFSB	Wu-fen Shan	0.69	316	*e*P	Pn	05 17 31.4	+0.5
	baz=315						
WFSB				*e*S	Sn	05 17 42.6	0.0
	baz=315						
NDT	Datong Townshi	0.73	272	*e*P	Pn	05 17 32.3	+1.0
	baz=270						
NDT				*e*S	Sn	05 17 43.8	+0.5
	baz=270						
NACB	Ninganchiao	0.77	239	*e*P	Pn	05 17 31.2	-0.5
	baz=237						
NACB				*e*S	Sn	05 17 43.3	-0.7
	baz=237						
TWA	Mucha	0.77	301	P	Pn	05 17 32.3	+0.4
	baz=300						
TWA				S	Sn	05 17 43.5	-0.7
	baz=300						
NHDH	Xindian Distri	0.81	298	*e*P	Pn	05 17 32.9	+0.6
	baz=297						
NHDH				*e*S	Sn	05 17 44.8	-0.1
	baz=297						
TWD	Chiawan	0.82	233	*e*P	Pn	05 17 32.0	-0.3
	baz=231						
TWD				*e*S	Sn	05 17 44.4	-0.6
	baz=231						
ETLH	Xiulin Townshi	0.84	244	*e*P	Pn	05 17 32.6	-0.1
	baz=242						
ETLH				*e*S	Sn	05 17 44.8	-0.8
	baz=242						
TATO	Taipei	0.85	298	*e*P	Pn	05 17 32.5	-0.1
	baz=297						
TATO				*e*S	Sn	05 17 44.8	-0.7
	baz=297						
YHNB	Yeheng	0.86	276	*e*P	Pn	05 17 33.4	+0.5
	baz=275						
YHNB				*e*S	Sn	05 17 46.1	+0.2
	baz=275						
NNSB	Datong	0.86	260	*e*P	Pn	05 17 33.0	+0.1
	baz=258						
NNSB				*e*S	Sn	05 17 45.6	-0.4
	baz=258						
NNS	Nan Shan	0.86	261	*e*P	Pn	05 17 33.4	+0.4
	baz=259						
NNS				*e*S	Sn	05 17 46.0	-0.1
	baz=259						
NSK	Sanguang	0.87	277	P	Pn	05 17 33.5	+0.5
	baz=275						
NSK				S	Sn	05 17 46.4	+0.2
	baz=275						
HWA	Hwalien	0.88	227	*e*P	Pn	05 17 32.9	-0.1
	baz=225						
HWA				*e*S	Sn	05 17 45.8	-0.3
	baz=225						
YM01	YM01	0.88	310	*e*P	Pn	05 17 33.1	+0.1
	baz=309						
YM01				*e*S	Sn	05 17 46.1	-0.2
	baz=309						
YM10	YM10	0.89	310	*e*P	Pn	05 17 33.5	+0.3
	baz=309						
YM10				*e*S	Sn	05 17 46.4	-0.2
	baz=309						
YM08	YM08	0.89	313	*e*P	Pn	05 17 32.8	-0.4
	baz=312						
YM08				*e*S	Sn	05 17 45.5	-1.1
	baz=312						
YM05	YM05	0.90	311	*e*P	Pn	05 17 33.6	+0.3
	baz=310						
YM05				*e*S	Sn	05 17 46.1	-0.6
	baz=310						
YM04	YM04	0.91	309	*e*P	Pn	05 17 33.4	0.0
	baz=308						
YM04				*e*S	Sn	05 17 46.5	-0.4
	baz=308						
YM03	YM03	0.92	311	*e*S	Sn	05 17 47.0	-0.2
	baz=310						
TWY	Chenhua	0.95	317	*e*P	Pn	05 17 34.2	+0.4
	baz=317						
TWY				*e*S	Sn	05 17 47.6	-0.1
	baz=317						
TWS1	Kuangyinshan	0.96	303	*e*P	Pn	05 17 34.5	+0.5
	baz=302						
TWS1				*e*S	Sn	05 17 47.9	-0.1
	baz=302						
WLTB	Daxi	1.00	286	*e*P	Pn	05 17 33.6	-0.8
	baz=285						
WLTB				*e*S	Sn	05 17 49.9	+1.1
	baz=285						
WHF	Hehuan Shan	1.05	246	P	Pn	05 17 35.6	+0.2
	baz=244						
WHF				S	Sn	05 17 49.6	-0.8
	baz=244						
TWT	Tachien	1.08	253	P	Pn	05 17 36.6	+1.0
	baz=251						
TWT				S	Sn	05 17 51.0	+0.2
	baz=251						
NCUH	Zhongli	1.09	291	*e*P	Pn	05 17 36.0	+0.4
	baz=290						
NCUH				*e*S	Sn	05 17 50.6	-0.2
	baz=290						
ESL	Shilin	1.10	227	*e*P	Pn	05 17 34.9	-0.8
	baz=225						
ESL				*e*S	Sn	05 17 49.1	-1.9
	baz=225						
CHGB	Renai	1.16	244	*e*P	Pn	05 17 37.2	+0.6
	baz=242						
CHGB				*e*S	Sn	05 17 52.2	-0.3
	baz=242						
LIOB	Emei	1.18	274	*e*P	Pn	05 17 37.4	+0.7
	baz=272						
LIOB				*e*S	Sn	05 17 53.3	+0.7
	baz=272						
NSTT	Nanjuang	1.19	273	P	Pn	05 17 37.5	+0.7
	baz=271						
NSTT				S	Sn	05 17 53.2	+0.3
	baz=271						
EGFH	Guangfu	1.21	222	*e*P	Pn	05 17 36.4	-0.6
	baz=221						
EGFH				*e*S	Sn	05 17 51.8	-1.5
	baz=221						
IRIF	Iriomote-Funau	1.32	100	P	Pn	05 17 38.2	-0.1
IRIF				S	Sn	05 17 55.1	-0.5
VWDT	VWDT	1.35	233	*e*P	Pn	05 17 38.9	+0.2
	baz=231						
VWDT				*e*S	Sn	05 17 55.2	-1.1
	baz=231						
HGSD	Ruisui	1.35	217	*e*P	Pn	05 17 37.9	-0.9
	baz=216						
HGSD				*e*S	Sn	05 17 55.5	-0.9
	baz=216						
DPDB	Guoxing	1.37	247	*e*P	Pn	05 17 40.1	+1.0
	baz=246						
DPDB				*e*S	Sn	05 17 57.6	+0.6
	baz=246						
EHY	Hungye	1.40	221	*e*P	Pn	05 17 38.6	-0.8
	baz=219						
HATJ	Hateruma jima	1.46	110	P	Pn	05 17 40.9	+0.8
HATJ				*e*S	Sn	05 17 59.5	+0.6
SMLT	Sun Moon Lake	1.46	242	*e*P	Pn	05 17 42.0	+1.6
	baz=240						
SMLT				*e*S	Sn	05 18 00.4	+1.3
	baz=240						
SSLB	Suanglung	1.47	238	*e*P	Pn	05 17 41.3	+0.9
	baz=236						
SSLB				*e*S	Sn	05 17 59.7	+0.6
	baz=236						
TYC	Yuchr	1.49	244	P	Pn	05 17 41.5	+1.0
	baz=242						
TYC				*e*S	Sn	05 18 00.5	+1.0
	baz=242						
YULB	Yu-li	1.50	218	*e*P	Pn	05 17 39.7	-1.0
	baz=217						
TWF1	Yuli	1.53	217	*e*P	Pn	05 17 40.1	-1.1
	baz=216						
JKRS	Kuro-shima	1.58	102	P	Pn	05 17 42.3	+0.5
JKRS				S	Sn	05 18 02.2	+0.4
WHYT	Xinyi Township	1.59	237	P	Pn	05 17 42.9	+0.9
	baz=236						
WHYT				*e*S	Sn	05 18 02.6	+0.5
	baz=236						
WJS	Zhushan	1.63	243	*e*P	Pn	05 17 43.8	+1.4
	baz=241						
WJS				*e*S	Sn	05 18 04.1	+1.2
	baz=241						
WNT	Mingjian	1.64	245	*e*P	Pn	05 17 43.7	+1.2
	baz=244						
WNT				*e*S	Sn	05 18 04.5	+1.4
	baz=244						
YUS	Yu-Shan	1.65	229	P	Pn	05 17 43.4	+0.3
	baz=228						
YUS				*e*S	Sn	05 18 03.9	-0.2
	baz=228						
JIJ	Ishigaki jima	1.68	97	P	Pn	05 17 43.0	-0.1
JIJ				S	Sn	05 18 03.5	-0.6
CHN5	Tsauling	1.78	237	*e*P	Pn	05 17 45.0	+0.5
	baz=236						
CHN5				*e*S	Sn	05 18 09.1	+2.5
	baz=236						
ELDTW	Lidau	1.82	221	*e*P	Pn	05 17 44.4	-0.6
	baz=219						
ELDTW				*e*S	Sn	05 18 05.7	-1.8
	baz=219						
JISG	Ishigakijimahi	1.82	89	P	Pn	05 17 45.0	+0.1
JISG				S	Sn	05 18 07.7	+0.4
WDLH	Douliu	1.84	242	*e*P	Pn	05 17 46.3	+1.1
	baz=240						
WDLH				*e*S	Sn	05 18 09.1	+1.2
	baz=240						
STYT	Tauyuan	2.00	226	*e*P	Pn	05 17 47.9	+0.5
	baz=224						
STYT				*e*S	Sn	05 18 09.9	-1.8
	baz=224						
WTP	Ta-pu	2.04	230	*e*P	Pn	05 17 48.9	+1.0
	baz=228						
WTP				*e*S	Sn	05 18 15.2	+2.5
	baz=228						
TWK	Hsinying	2.12	232	*e*P	Pn	05 17 49.3	+0.4
	baz=231						
TWK				*e*S	Sn	05 18 15.8	+1.3
	baz=231						
JTJ	Tarama	2.18	88	P	Pn	05 17 50.4	+0.8
JTJ				S	Sn	05 18 16.5	+0.7
SLGT	Liugui	2.19	224	*e*P	Pn	05 17 50.9	+1.1
	baz=223						
SLGT				*e*S	Sn	05 18 17.8	+1.5
	baz=223						
PTTC	Pingtan	2.48	292	*e*P	Pn	05 17 52.5	-1.2
	baz=291						
MASBT	Mashibuluo	2.49	219	*e*P	Pn	05 17 52.3	-1.5
	baz=217						
MASBT				*e*S	Sn	05 18 22.7	-0.6
	baz=217						
EAST	Anshuo	2.56	212	*e*P	Pn	05 17 54.2	-0.6
	baz=211						
EAST				*e*S	Sn	05 18 25.7	+0.5
	baz=211						
PTMZ	Houxiangcun	2.94	280	*e*P	Pn	05 17 58.6	-1.2
	baz=278						
LYJJ	Jianjiangzhen	3.03	311	*e*P	Pn	05 18 01.6	+0.5
	baz=310						
LYJJ				*e*S	Sn	05 18 34.1	-2.2
	baz=310						
AXDP	Jialang	3.96	276	*e*P	Pn	05 18 12.8	-0.9
	baz=274						

SJA 24 05:19:32.9±0.5, 27°.28S×66°.54W, h68^{km}±19^{km}, ML2.2, MW3.5, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHML	Horco Molle	1.19	66	*i* P	Pn	05 19 55.1	+1.3
AHML				IAML		05 20 19.0	
	comp=Z,29nm,0.9s						
FSA	Cafayete	1.27	24	*i* P	Pn	05 19 56.3	+1.3
FSA				*i* S	Sn	05 20 13.9	+2.4
FSA				IAML		05 20 14.0	
	comp=Z,43nm,0.1s						
CYA	Choya	1.33	151	*i* P	Pn	05 19 56.7	+1.0
CYA				*i* S	Sn	05 20 14.7	+2.0
CYA				IAML		05 20 14.9	
	comp=Z,58nm,0.7s						
VCA	Vinchina	2.07	225	*i* P	Pn	05 20 07.3	+1.7
VCA				IAML		05 20 34.7	
	comp=Z,16nm,0.5s						
ACLC	CERRO LA CRUZ	2.17	189	*i* P	Pn	05 20 09.0	+2.0

*JMA **24** 05:20:43.1±0.2, 24°.37N×121°.91E, h55^{km}±3^{km}, M2.2*
*TAP **24** 05:20:43.9, 24°.44N×121°.94E, h29^{km}, ML3.0, B*
*ISCJB **24** 05:20:44.3±0.3, 24°.43N±0°.02×122°.00E±0°.02, h26^{km}±3^{km},*
Error ellipse: s-maj=3.3km s-min=2.5km az=154.2

ISC 24 05:20:44.2±0.9, 24°.44N±0°.02×121°.95E±0°.02, h30^{km}±4^{km}, n56, σ0^{s}.83/95, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	Nanao	0.19	268	P	Pb	05 20 49.9	-0.4
	baz=267						
NANB				S	Sb	05 20 54.0	-0.3
	baz=267						
ENA	Nanau	0.19	268	P	Pb	05 20 50.0	-0.4
	baz=267						
ENA				S	Sb	05 20 54.1	-0.4
	baz=267						
EOS1	EOS1	0.20	55	P	Pn	05 20 50.5	-0.6
	baz=50						
EOS1				S	Sn	05 20 55.7	+1.2
	baz=50						
TWC	Suao	0.20	331	P	Pn	05 20 50.0	-1.2
	baz=336						
TWC				S	Sn	05 20 54.1	-0.5
	baz=336						
TWE	Neicheng	0.39	318	*e*P	Pn	05 20 52.6	-1.2
	baz=320						
TWE				*e*S	Sn	05 20 59.1	-1.1
	baz=320						
ENTT	Nioudou	0.41	300	*i* P	Pn	05 20 53.1	-1.0
	baz=301						
ENTT				S	Sn	05 20 59.9	-0.9
	baz=301						
NACB	Ninganchiao	0.42	232	*e*P	Pb	05 20 53.2	-0.2
	baz=234						
NACB				*e*S	Sn	05 21 00.6	-0.4
	baz=234						
NTC	Toucheng	0.43	345	*e*P	Pn	05 20 53.1	-1.3
	baz=352						
NDT	Datong Townshi	0.43	293	P	Pn	05 20 53.6	-0.9
	baz=293						
NDT				S	Sn	05 21 00.9	-0.5
	baz=293						
TWD	Chiawan	0.48	223	P	Pb	05 20 54.3	0.0
	baz=227						
TWD				S	Sn	05 21 02.5	0.0
	baz=227						
ETLH	Xiulin Townshi	0.49	242	*e*P	Pb	05 20 54.4	-0.1
	baz=245						
ETLH				*e*S	Sn	05 21 02.6	-0.2
	baz=245						
NNSB	Datong	0.52	269	*e*P	Pn	05 20 54.9	-0.8
	baz=272						
NNSB				*e*S	Sn	05 21 03.1	-0.6
	baz=272						
NNS	Nan Shan	0.53	271	P	Pb	05 20 55.0	-0.2
	baz=273						
NNS				S	Sn	05 21 03.1	-0.8
	baz=273						
TIPB	Shuangxi	0.55	348	*e*P	Pn	05 20 55.4	-0.7
	baz=351						
TIPB				*e*S	Sn	05 21 03.0	-1.2
	baz=351						
HWA	Hwalien	0.56	215	*e*P	Pn	05 20 56.0	-0.1
	baz=213						
YHNB	Yeheng	0.57	294	*e*P	Pn	05 20 55.8	-0.7
	baz=299						
YHNB				*e*S	Sn	05 21 03.5	-1.5
	baz=299						
NSK	Sanguang	0.59	294	*e*P	Pn	05 20 56.0	-0.7
	baz=294						
NSK				*e*S	Sn	05 21 04.1	-1.3
	baz=294						
NWF	Wu-fen Shan	0.65	346	P	Pn	05 20 57.3	-0.2
	baz=340						
NWF				S	Sn	05 21 07.2	+0.3
	baz=340						
WFSB	Wu-fen Shan	0.65	346	*e*P	Pn	05 20 57.3	-0.2
	baz=340						
WFSB				*e*S	Sn	05 21 07.1	+0.3
	baz=340						
TATO	Taipei	0.68	322	*e*P	Pn	05 20 56.8	-1.1
	baz=318						
TATO				*e*S	Sn	05 21 07.1	-0.4
	baz=318						
WHF	Hehuan Shan	0.69	245	P	Pb	05 20 57.8	-0.3
	baz=245						
WHF				S	Sn	05 21 08.8	+0.5
	baz=245						
TWT	Tachien	0.73	256	P	Pb	05 20 58.8	+0.2
	baz=256						
TWT				S	Sn	05 21 09.5	+0.5
	baz=256						
ESL	Shilin	0.78	218	*e*P	Pn	05 20 58.4	-0.9
	baz=228						
YM01	YM01	0.79	334	*e*P	Pb	05 21 00.4	+0.9
	baz=344						
YM01				*e*S	Sn	05 21 11.3	+1.1
	baz=344						
YM10	YM10	0.80	334	*e*P	Pb	05 20 59.6	-0.1
	baz=344						
YM10				*e*S	Sn	05 21 10.7	+0.2
	baz=344						
CHGB	Renai	0.80	242	*e*P	Pb	05 20 59.7	-0.1
	baz=242						
CHGB				*e*S	Sn	05 21 12.0	+1.2
	baz=242						
YM05	YM05	0.81	334	*e*P	Pb	05 20 60.0	+0.1
	baz=344						
YM05				*e*S	Sn	05 21 11.5	+0.8
	baz=344						
YM04	YM04	0.81	332	*e*P	Pb	05 20 59.2	-0.6
	baz=342						
YM04				*e*S	Sn	05 21 11.6	+0.9
	baz=342						
YM08	YM08	0.82	336	*e*P	Pn	05 20 58.4	-1.4
	baz=346						
YM08				*e*S	Sn	05 21 11.3	+0.4
	baz=346						
TWS1	Kuangyinshan	0.82	324	P	Pb	05 21 00.2	+0.2
	baz=333						
TWS1				*e*S	Sn	05 21 13.0	+2.1
	baz=333						
YM03	YM03	0.83	333	*e*P	Pb	05 20 59.8	-0.4
	baz=333						
LIOB	Emei	0.88	284	P	Pb	05 21 01.6	+0.7
	baz=284						
LIOB				S	Sb	05 21 13.8	+1.4

	baz=284						
NSTT	Nanjuang	0.89	283	P	Pb	05 21 01.6	+0.5
	baz=283						
NSTT				S	Sb	05 21 14.1	+1.4
	baz=283						
JYNG	Yonagunijimaku	0.90	89	P	Pn	05 21 00.6	-0.3
JYNG				S	Sb	05 21 13.3	+0.2
YOJ	Yonaguni jima	0.96	88	*e*P	Pn	05 21 01.2	-0.5
	baz=81						
YOJ				*e*S	Sn	05 21 14.0	-0.4
	baz=81						
YOJ	Yonaguni jima	0.96	88	P	Pn	05 21 00.9	-0.8
YOJ				*e*S	Sb	05 21 15.0	+0.2
VWDT	VWDT	1.01	228	*e*P	Pn	05 21 02.0	-0.3
	baz=218						
DPDB	Guoxing	1.02	247	*e*P	Pn	05 21 02.0	-0.6
	baz=237						
HGSD	Ruisui	1.06	207	*e*P	Pn	05 21 03.5	+0.5
	baz=206						
TWQ1	Liyutan	1.08	266	P	Pb	05 21 05.2	+0.8
	baz=266						
TWQ1				*e*S	Sb	05 21 20.6	+2.4
	baz=266						
NSY	Sanyi	1.09	269	*e*P	Pb	05 21 05.3	+0.9
	baz=278						
EHY	Hungye	1.09	212	*e*P	Pn	05 21 01.9	-1.6
	baz=211						
SMLT	Sun Moon Lake	1.11	240	*e*P	Pb	05 21 05.8	+1.0
	baz=229						
SMLT				*e*S	Sb	05 21 20.6	+1.5
	baz=229						
SSLB	Suanglung	1.12	235	*e*P	Pb	05 21 04.4	-0.6
	baz=234						
TYC	Yuchr	1.13	242	*e*P	Pb	05 21 04.6	-0.6
	baz=242						
TYC				*e*S	Sb	05 21 20.7	+1.1
	baz=242						
YULB	Yu-li	1.20	210	*e*P	Pn	05 21 03.6	-1.4
	baz=209						
YUS	Yu-Shan	1.31	224	*e*P	Pn	05 21 07.2	+0.2
	baz=213						
YUS				*e*S	Sb	05 21 25.1	-0.2
	baz=213						
ALS	Alishan	1.40	229	*e*P	Pb	05 21 10.2	+0.3
	baz=217						
CHN5	Tsauling	1.43	235	*e*P	Pb	05 21 10.4	0.0
	baz=233						
IRIF	Iriomote-Funau	1.62	93	P	Pn	05 21 10.1	-0.7
IRIF				*e*S	Sn	05 21 30.9	+0.2
WTP	Ta-pu	1.71	226	*e*P	Pb	05 21 14.5	-0.5
	baz=225						
TWK	Hsinying	1.78	229	*e*P	Pb	05 21 16.2	0.0
	baz=228						
SLGT	Liugui	1.87	220	*e*P	Pb	05 21 16.4	-1.3
	baz=219						
JKRS	Kuro-shima	1.89	96	P	Pn	05 21 14.7	+0.3
JKRS				S	Sn	05 21 37.3	+0.1
JIJ	Ishigaki jima	2.00	92	P	Pn	05 21 16.3	+0.3
JIJ				S	Sn	05 21 39.2	-0.8
JISG	Ishigakijimahi	2.15	85	*e*S	Sn	05 21 44.1	+0.3

ATH ***24*** *05:28:34.8, 37°.34N×27°.03E, h26^{km}±3^{km}, ML2.7/1, Error ellipse: s-maj=5.8km s-min=1.4km az=110.0*
ISCJB ***24*** *05:28:36.6±0.5, 37°.33N±0°.04×27°.01E±0°.04, h23^{km}±9^{km}, Error ellipse: s-maj=6.2km s-min=5.3km az=2.0*
DDA ***24*** *05:28:36.4, 37°.36N×27°.03E, h7^{km}±3^{km}, ML2.4*
THE ***24*** *05:28:36.0, 37°.32N×26°.97E, h3^{km}±3^{km}, ML2.5/2, Error ellipse: s-maj=3.8km s-min=0.4km az=56.0*
ISC 24 05:28:36.2±1.3**, 37°.33N**±0°.03×**27°.01E**±0°.03**, h20**^{km}±4^{km}**, n15, σ0^{s}.74**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	Bodrum	0.36	138	P	Pb	05 28 43.6	-0.2
BODT				S	Sb	05 28 49.2	+0.3
SMG	Samos	0.40	340	P	Pb	05 28 44.0	-0.5
SMG				S	Sb	05 28 49.9	-0.3
	1μm,0.2s						
SMG	Samos	0.40	340	P	Pb	05 28 43.9	-0.7
SMG				S	Sb	05 28 49.7	-0.5
SMG				AML	AML	05 28 50.3	
	comp=N,2894μm,0.3s						
SMG				AML	AML	05 28 50.8	
	comp=E,2302μm,0.2s						
GCAM	G?zelcaml?	0.41	25	*i* P	Pb	05 28 45.0	+0.4
DGB	zmir	0.73	352	*i* P	Pb	05 28 49.9	-0.2
DAT	Datca	0.75	143	*i* P	Pn	05 28 51.5	-0.3
DAT				IAML_P			
	comp=Z,218nm,0.1s						
AYDN	Tasoluk	0.76	64	*i* P	Pn	05 28 51.2	-0.6
AYDN				*i* S	Sn	05 29 03.2	+0.4
AYDN				IAML_P			
	comp=Z,2μm,0.2s						
AMGA	Amorgos Island	1.02	241	P	Pb	05 28 54.6	-0.6
AMGA				S	Sn	05 29 09.0	-0.1
	comp=Z,172nm,0.4s						
AMGA	Amorgos Island	1.02	241	P	Pb	05 28 54.7	-0.5
AMGA				S	Sn	05 29 09.4	+0.3
YER	Yerkesik	1.03	100	P	Pn	05 28 56.1	+0.6
URLA	Izmir	1.08	342	*i* P	Pb	05 28 57.2	+1.0
URLA				IAML_P			
	comp=Z,2μm,0.3s						
APE	Apeiranthos	1.21	258	P	Pn	05 28 57.8	-0.2
APE	Apeiranthos	1.21	258	P	Pn	05 28 57.8	-0.2
APE				S	Sb	05 29 15.5	+1.8
TURN	Turunc	1.35	109	*i* P	Pn	05 28 58.3	-1.5
TURN				IAML_P			
	comp=Z,454nm,0.3s						
TAVA	DENIZLI_Tavas	1.52	84	*i* P	Pb	05 29 03.9	+0.2
TAVA				IAML_P			
	comp=Z,140nm,0.2s						

IDC ***24*** *05:30:49.7±1.1, 3°.48N×125°.29E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.7/37, mbtmp3.9/6, MS3.1/2, Ms1 3.1/2, ms1mx2.6/35, Error ellipse: s-maj=205.0km s-min=17.6km az=68.0*
MAN ***24*** *05:30:51.1, 3°.97N×126°.87E, h13^{km}, mb5.3, ML4.3, MS4.5*
ISCJB ***24*** *05:30:54.0±0.8, 3°.84N±0°.05×126°.56E±0°.07, h45^{km}, mb3.9/6, Error ellipse: s-maj=11.0km s-min=6.6km az=163.5*
DJA ***24*** *05:30:56.4±1.4, 4°N±10°×12°6E±1°0, h59^{km}±14^{km}, M4.4/4, MLv4.4/4*
ISC 24 05:30:55.6±1.0**, 3°.84N**±0°.06×**126°.5E**±0°.1**, h45**^{km}**, n14, σ1^{s}.53**/16**, mb4.0**/6**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.99	261	P	Pn	05 31 13.2	0.0
SGSI				S	Sn	05 31 25.6	-0.5
DDMP	Don Marcelino,	2.39	341	*e*P	Pn	05 31 30.5	-1.8
DDMP				*e*S	Sn	05 32 00.7	+0.4
SKMP	Bagumbayan, Su	3.31	324	*e*P	Pn	05 31 45.5	+0.6
SKMP				*e*S	Sn	05 32 23.1	+0.1
KCP	Kidapawan	3.45	336	⇑*e*P	Pn	05 31 48.0	+1.0
KCP				*i* S	Sn	05 32 13.6	-13
CTBH	Cotabato--PC H	4.04	326	⇓*i*P	Pn	05 31 58.2	+3.2
BUKP	Musuan	4.26	340	*e*P	Pn	05 31 57.4	-0.8
BUKP				*e*S	Sn	05 32 48.6	+1.9
SIJI	Sorong	6.67	134	LR	LR	05 35 27.1	
	comp=Z,72nm,21.6s,baz=160,slow=38						
BATI	Baumata	14.24	191	LR	LR	05 41 16.0	
	comp=Z,184nm,19.2s,baz=130,slow=46						
WRA	Warramunga Arr	24.86	162	P	P	05 36 14.0	-0.2
	2.7nm,0.6s,baz=344,slow=10,SNR=9.4						
ASAR	Alice Springs	28.27	166	P	P	05 36 44.5	-0.5
	0.6nm,0.6s,baz=342,slow=7.2,SNR=8.6						
STKA	Stephens Creek	38.31	159	P	P	05 38 14.1	+2.0
	1.8nm,0.6s,baz=332,slow=8.5,SNR=3.8						
SONM	Songino Array	47.12	342	P	P	05 39 22.9	-0.6
	0.6nm,0.3s,baz=152,slow=6.5,SNR=6.0						
MKAR	Makanchi Array	57.34	325	P	P	05 40 36.7	-2.5
	0.5nm,0.5s,baz=122,slow=7.5,SNR=7.2						
ZALV	Zalesovo Beam	60.39	333	P	P	05 40 59.7	-0.5
	0.6nm,0.5s,baz=120,slow=8.5,SNR=2.6						

ISCJB ***24*** *05:30:55.8±0.4, 24°.77N±0°.02×122°.25E±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=2.4km az=25.2*
JMA ***24*** *05:30:56.6±0.1, 24°.69N×122°.22E, h47^{km}±4^{km}, M2.6*
TAP ***24*** *05:30:56.8, 24°.77N×122°.16E, h15^{km}, ML3.1, C*
ISC 24 05:30:56.0±1.0**, 24°.75N**±0°.03×**122°.23E**±0°.02**, h21**^{km}±2^{km}**, n68, σ1^{s}.00**/109**, 7C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.22	204	⇑P	Pb	05 31 02.0	+0.2
	baz=192						
EOS1				*e*S	Sb	05 31 06.4	+0.6
	baz=192						
TWC	Suao	0.37	248	⇑*i*P	Pb	05 31 03.4	-0.4
	baz=240						
TWC				S	Sb	05 31 08.0	-1.0
	baz=240						
NTC	Toucheng	0.38	286	*e*P	Pb	05 31 03.4	-0.4
	baz=286						
TIPB	Shuangxi	0.43	301	⇓*i*P	Pb	05 31 04.4	-0.4
	baz=297						
TIPB				*e*S	Sb	05 31 09.3	-1.5
	baz=297						
ILA	Ilan	0.43	272	*e*P	Pb	05 31 05.0	+0.1
	baz=270						
ILA				*e*S	Sb	05 31 11.4	+0.4
	baz=270						
TWE	Neicheng	0.51	267	*e*P	Pb	05 31 06.0	-0.2
	baz=264						
TWE				S	Sb	05 31 12.4	-0.8
	baz=264						
NWF	Wu-fen Shan	0.52	308	P	Pb	05 31 07.2	+0.8
	baz=306						
NWF				S	Sb	05 31 14.3	+0.8
	baz=306						
WFSB	Wu-fen Shan	0.52	308	P	Pb	05 31 07.1	+0.7
	baz=306						
WFSB				S	Sb	05 31 14.3	+0.8
	baz=306						
NANB	Nanao	0.54	234	⇑*i*P	Pb	05 31 06.6	-0.3
	baz=222						
NANB				*e*S	Sb	05 31 13.5	-0.7
	baz=222						
ENA	Nanau	0.55	234	⇑P	Pb	05 31 06.6	-0.4
	baz=223						
ENTT	Nioudou	0.61	260	*e*P	Pb	05 31 08.1	0.0
	baz=257						
ENTT				S	Sb	05 31 16.2	-0.1
	baz=257						
TWA	Mucha	0.63	292	*e*P	Pn	05 31 09.3	-0.4
	baz=285						
TWA				S	Sb	05 31 17.4	+0.6
	baz=285						
NDT	Datong Townshi	0.67	257	*e*P	Pb	05 31 09.0	0.0
	baz=255						
NDT				*e*S	Sb	05 31 17.6	-0.2
	baz=255						
NHDH	Xindian Distri	0.67	289	*e*P	Pn	05 31 10.2	-0.1
	baz=282						
NHDH				*e*S	Sn	05 31 19.4	-0.8
	baz=282						
TATO	Taipei	0.71	289	P	Pn	05 31 10.7	-0.1
	baz=282						
TATO				S	Sn	05 31 20.2	-0.9
	baz=282						
YM01	YM01	0.71	304	⇑P	Pb	05 31 10.6	+0.7
	baz=306						
YM01				S	Sn	05 31 20.2	-1.2
	baz=306						
JYNG	Yonagunijimaku	0.72	114	P	Pn	05 31 10.1	-0.9
JYNG				*e*S	Sb	05 31 20.6	+1.3
YM08	YM08	0.72	307	⇑P	Pn	05 31 10.2	-0.9
	baz=310						
YM08				S	Sb	05 31 19.6	+0.2
	baz=310						
YM10	YM10	0.73	304	P	Pn	05 31 10.5	-0.6
	baz=307						
YM10				*e*S	Sb	05 31 20.3	+0.7
	baz=307						
YM05	YM05	0.73	305	⇑P	Pn	05 31 10.5	-0.7
	baz=307						
YM05				*e*S	Sb	05 31 20.2	+0.6
	baz=307						
YM04	YM04	0.74	303	*e*P	Pn	05 31 10.9	-0.5
	baz=305						
YM04				*e*S	Sb	05 31 20.8	+0.7
	baz=305						
YM03	YM03	0.76	305	*e*P	Pn	05 31 10.5	-1.0
	baz=306						
YOJ	Yonaguni jima	0.77	112	*e*P	Pn	05 31 11.2	-0.5
	baz=111						
YOJ	Yonaguni jima	0.77	112	P	Pn	05 31 10.9	-0.8
YOJ				S	Sb	05 31 21.7	+1.0
TWY	Chenhua	0.77	313	P	Pn	05 31 11.3	-0.4
	baz=316						
TWY				S	Sn	05 31 21.8	-1.0
	baz=316						
YHNB	Yeheng	0.78	264	*e*P	Pn	05 31 10.9	-1.0
	baz=258						
YHNB				*e*S	Sb	05 31 20.6	-0.4
	baz=258						
NSK	Sanguang	0.79	265	*e*P	Pn	05 31 11.3	-0.8
	baz=259						
NSK				*e*S	Sb	05 31 20.4	-1.1
	baz=259						
NACB	Ninganchiao	0.81	225	P	Pn	05 31 11.4	-0.8
	baz=221						
NACB				S	Sn	05 31 22.2	-1.5
	baz=221						
TWS1	Kuangyinshan	0.81	296	*e*P	Pb	05 31 12.5	+1.0
	baz=298						
TWS1				*e*S	Sn	05 31 23.2	-0.6
	baz=298						
NTST	Danshui	0.82	301	*e*P	Pb	05 31 13.1	+1.6
	baz=302						
NNSB	Datong	0.83	248	*e*P	Pb	05 31 12.0	+0.2
	baz=235						
NNSB				*e*S	Sn	05 31 22.6	-1.7
	baz=235						
NNS	Nan Shan	0.84	249	*e*P	Pb	05 31 12.2	+0.2
	baz=236						
NNS				*e*S	Sn	05 31 23.2	-1.3
	baz=236						
ETLH	Xiulin Townshi	0.87	232	*e*P	Pb	05 31 12.7	+0.2
	baz=218						
ETLH				*e*S	Sb	05 31 24.4	+0.8
	baz=218						
TWD	Chiawan	0.88	221	*e*P	Pb	05 31 12.9	+0.3
	baz=216						
TWD				*e*S	Sb	05 31 24.4	+0.5
	baz=216						
WHF	Hehuan Shan	1.06	236	*e*P	Pb	05 31 16.4	+0.4
	baz=232						
WHF				*e*S	Sb	05 31 30.6	+1.0
	baz=232						
TWT	Tachien	1.08	243	*e*P	Pb	05 31 16.9	+0.8
	baz=230						
TWT				*e*S	Sb	05 31 31.4	+1.7
	baz=230						
LIOB	Emei	1.11	265	*e*P	Pb	05 31 17.5	+1.0
	baz=263						
NSTT	Nanjuang	1.12	264	*e*P	Pb	05 31 17.9	+1.2
	baz=263						
NSTT				*e*S	Sb	05 31 32.3	+1.5
	baz=263						
CHGB	Renai	1.18	235	*e*P	Pb	05 31 18.6	+0.8
	baz=232						
CHGB				*e*S	Sb	05 31 33.9	+1.1
	baz=232						
ESL	Shilin	1.18	218	*e*P	Pb	05 31 18.8	+1.1
	baz=223						
EGFH	Guangfu	1.30	214	*e*P	Pb	05 31 20.7	+1.0
	baz=227						
NMLH	Miaoli	1.32	261	*e*P	Pb	05 31 21.8	+1.7
	baz=261						
NMLH				*e*S	Sb	05 31 39.2	+2.5
	baz=261						
NSY	Sanyi	1.38	256	*e*P	Pb	05 31 22.8	+1.8
	baz=245						
TWQ1	Liyutan	1.38	253	*e*P	Pb	05 31 23.0	+1.9
	baz=251						
DPDB	Guoxing	1.38	239	*e*P	Pb	05 31 21.5	+0.3
	baz=229						
DPDB				*e*S	Sb	05 31 39.4	+0.9
	baz=229						
VWDT	VWDT	1.40	225	*e*P	Pb	05 31 22.4	+0.9
	baz=222						
VWDT				*e*S	Sb	05 31 40.4	+1.5
	baz=222						
IRIF	Iriomote-Funau	1.43	106	P	Pn	05 31 20.2	-0.6
IRIF				*e*S	Sn	05 31 38.0	-1.0
HGSD	Ruisui	1.45	211	*e*P	Pb	05 31 23.2	+0.9
	baz=206						
HGSD				*e*S	Sb	05 31 43.2	+2.9
	baz=206						
SMLT	Sun Moon Lake	1.49	235	*e*P	Pb	05 31 24.4	+1.4
	baz=218						
EHY	Hungye	1.49	214	*e*P	Pb	05 31 23.2	+0.2
	baz=210						
SSLB	Suanglung	1.50	231	*e*P	Pb	05 31 24.3	+1.0
	baz=227						
TYC	Yuchr	1.51	236	*e*P	Pb	05 31 24.4	+1.1
	baz=233						
HATJ	Hateruma jima	1.60	115	P	Pn	05 31 22.7	-0.4
YULB	Yu-li	1.60	212	*e*P	Pb	05 31 24.8	0.0
	baz=207						
YULB				*e*S	Sb	05 31 45.1	+0.6
	baz=207						
TWF1	Yuli	1.63	212	*e*P	Pb	05 31 24.9	-0.5
	baz=207						
JKRS	Kuro-shima	1.70	107	P	Pn	05 31 24.6	+0.1
JKRS				*e*S	Sn	05 31 44.8	-0.9
JIJ	Ishigaki jima	1.79	102	P	Pn	05 31 26.2	+0.5
JIJ				*e*S	Sn	05 31 46.2	-1.6
ALS	Alishan	1.79	227	*e*P	Pb	05 31 29.5	+1.2
	baz=210						
CHN5	Tsauling	1.82	231	*e*P	Pb	05 31 30.6	+1.9
	baz=227						
JISG	Ishigakijimahi	1.90	94	P	Pn	05 31 27.6	+0.3
ELDTW	Lidau	1.91	216	*e*P	Pb	05 31 30.0	-0.2
	baz=197						
WTP	Ta-pu	2.10	225	*e*P	Pb	05 31 33.7	+0.2
	baz=204						
TWK	Hsinying	2.17	227	*e*P	Pb	05 31 34.1	-0.5
	baz=222						
SLGT	Liugui	2.27	220	*e*P	Pb	05 31 36.0	-0.3
	baz=216						
ECL	Taimali	2.44	209	*e*P	Pn	05 31 36.3	+1.6
	baz=193						
EAST	Anshuo	2.67	209	*e*P	Pb	05 31 41.1	-2.1
	baz=192						
PTMZ	Houxiangcun	2.84	277	*e*P	Pn	05 31 41.6	+1.5
	baz=274						
LYJJ	Jianjiangzhen	2.86	309	*e*P	Pn	05 31 40.1	-0.4
	baz=311						

IDC ***24*** *05:34:19.7±1.4, 36°.89N×140°.83E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.5/43, mbtmp3.6/4, ML2.6/1, Error ellipse: s-maj=33.6km s-min=25.7km az=144.0*
ISCJB ***24*** *05:34:20.0±0.5, 37°.11N±0°.03×140°.73E±0°.04, h10^{km}±3^{km}, mb3.8/3, Error ellipse: s-maj=6.3km s-min=4.6km az=30.4*
JMA ***24*** *05:34:20.5, 37°.11N×140°.68E, h8^{km}±1^{km}, M3.4*
JMA Felt II J1.
ISC 24 05:34:20.6±0.9**, 37°.11N**±0°.03×**140°.71E**±0°.03**, h7**^{km}±6^{km}**, n19, σ0^{s}.69**/23**, mb3.6**/3**, 5C, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.07	96	⇑P	Pg	05 34 22.7	+0.1
ONAJ				S	Sg	05 34 24.3	+0.4
JFFD	Fukushimafurud	0.12	261	⇑P	Pg	05 34 22.8	-0.4
JFFD				S	Sg	05 34 24.6	-0.4
JFK	Kawauchi	0.29	28	⇑P	Pg	05 34 26.3	-0.1
JFK				S	Sg	05 34 30.5	+0.3
JFT	Otama	0.50	324	P	Pg	05 34 30.3	-0.1
JFT				S	Sg	05 34 37.3	+0.3
JHO	Hitachi	0.51	193	P	Pg	05 34 30.2	-0.3
JHO				S	Sg	05 34 37.0	-0.1
JSB	Shiboa	0.65	258	⇑P	Pg	05 34 33.3	+0.2
JSB				S	Sg	05 34 42.2	+0.7
JMM	Marumori	0.76	5	P	Pg	05 34 34.6	-0.6
JMM				S	Sg	05 34 44.8	-0.3
JFY	Yanaizu	0.85	291	⇑P	Pg	05 34 36.6	-0.4
JFY				S	Sg	05 34 47.3	-0.8
MJAR	Matsushiro Arr	2.08	255	Pn	Pn	05 34 56.4	+0.4
	1.8nm,0.3s,baz=82,slow=15,SNR=50						
MJAR				Sn	Sn	05 35 23.5	+1.3
	4.3nm,0.3s,baz=69,slow=27,SNR=14						
MAT	Matsushiro	2.08	255	P	Pn	05 34 56.8	+0.8
MAT				S	Sb	05 35 24.5	-0.4
H11N2	WAKE ISLAND Hy	28.67	120	T	T	06 10 04.0	
	baz=313,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	28.68	120	T	T	06 10 05.7	
	baz=313,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	28.69	120	T	T	06 10 01.1	
	baz=313,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	29.38	122	T	T	06 11 01.6	
	baz=314,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	29.38	122	T	T	06 11 04.7	
	baz=314,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	29.39	122	T	T	06 11 05.9	
	baz=314,slow=75,SNR=16						
ILAR	Eielson Array	49.73	32	P	P	05 43 14.0	+0.8
	0.4nm,0.7s,baz=272,slow=6.2,SNR=4.5						
WRA	Warramunga Arr	57.06	187	P	P	05 44 06.2	-1.3
	2.1nm,0.8s,baz=7.0,slow=7.6,SNR=5.0						
ASAR	Alice Springs	60.79	187	P	P	05 44 32.1	-1.2
	0.3nm,0.6s,baz=18,slow=13,SNR=3.6						

SJA 24 05:41:55.1±0.6**, 31°.74S**×**70°.10W, h130**^{km}±6^{km}**, ML1.9, MW3.5, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.68	95	*i* P	Pn	05 42 16.7	+1.0
RTLS				*i* S	Sn	05 42 32.8	+1.5
RTLS				IAML		05 42 32.8	
	comp=Z,19nm,0.2s						
RTCV	Cerro Valdivia	1.33	96	*i* P	Pn	05 42 22.4	+1.1
RTCV				*i* S	Sn	05 42 42.1	+0.8
ACCO	Cerro Coronel	1.45	38	*i* P	Pn	05 42 23.8	+0.9
ACCO				*i* S	Sn	05 42 45.9	+1.8
AMOG	MOGNA	1.59	60	*i* P	Pn	05 42 25.0	+0.8
AMOG				*i* S	Sn	05 42 47.4	+0.9
AROD	Rodeo	1.66	19	*i* P	Pn	05 42 26.9	+1.6
AROD				*i* S	Sn	05 42 50.0	+1.7

IDC 24 05:46:31.3±7.0**, 20°.79S**×**169°.74E, h73**^{km}±63^{km}**, mb3.9**/2**, mb1 4.2**/3**, mb1mx3.6**/23**, mbtmp4.2**/3**, ML4.5**/1**, Error ellipse: s-maj=230.9km s-min=47.6km az=160.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.32	247	P	Pn	05 47 22.2	+1.2
	48nm,0.3s,baz=70,slow=15,SNR=1537						
DZM				S	Sn	05 47 59.3	-0.1
	151nm,0.3s,baz=329,slow=20,SNR=14						
WRA	Warramunga Arr	33.16	265	P	P	05 53 01.8	+0.7
	0.9nm,0.4s,baz=96,slow=8.9,SNR=6.3						
ASAR	Alice Springs	33.24	258	P	P	05 53 02.0	+0.2
	3.2nm,0.8s,baz=82,slow=8.7,SNR=26						
ARCES	ARCESS Array B	126.68	345	PKP	PKPdf	06 05 24.5	-1.2
	1.2nm,0.9s,baz=98,slow=1.4,SNR=2.7						

DDA ***24*** *06:04:39.7, 36°.98N×36°.08E, h6^{km}±4^{km}, ML2.7*
ISK ***24*** *06:04:39.1, 37°.09N×36°.00E, h8^{km}±1^{km}, ML2.7/7*
ISC 24 06:04:40.0±1.1**, 36°.99N**±0°.04×**36°.04E**±0°.02**, h11**^{km}±10^{km}**, n20, σ0^{s}.88**/28**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.23	276	PG	Pg	06 04 44.6	-0.3
YURE	YUREGIR	0.36	244	PG	Pg	06 04 47.2	-0.1
YURE	YUREGIR	0.36	244	*i* P	Pg	06 04 47.5	+0.2
KRTD	Karatas-Adana	0.64	232	PG	Pb	06 04 53.4	+0.2
ANDN	Andirin	0.64	22	*i* P	Pb	06 04 52.9	-0.5
ANDN				*i* S	Sb	06 05 02.1	-0.3
ANDN				IAML_P			
	comp=Z,1μm,0.2s						
KRTS	Karatas	0.68	233	PG	Pb	06 04 53.8	0.0
KRTS				SG	Sb	06 05 03.0	-0.2
KARA	Karaisali	0.83	289	PG	Pg	06 04 54.2	-1.9
KUZU	Kuzuini	0.86	104	*i* P	Pg	06 04 56.4	-0.2
KUZU				*i* S	Sg	06 05 07.9	+0.1
KMRS	Kahramanmaras	0.86	53	PG	Pb	06 04 55.9	-1.1
KMRS				SG	Sb	06 05 07.3	-1.3
YAYL	Yayladag	0.95	177	*i* P	Pg	06 04 58.5	+0.1
YAYL				IAML_P			
	comp=Z,11nm,0.2s						
GAZ	Gaziantep	0.95	78	PG	Pg	06 04 57.9	-0.5
MERS	Mersin	1.22	265	PN	Pb	06 05 02.5	-0.7
YAHY	KAYSERI_Yahyal	1.23	334	*i* P	Pn	06 05 04.1	+0.8

YAHY				*i* S	Sn	06 05 21.5	+1.5
YAHY				IAML_P			
	comp=Z,642nm,0.2s						
GZT	Gaziantep	1.27	73	*i* P	Pg	06 05 04.0	-0.5
GZT				*i* S	Sn	06 05 20.6	-0.4
KERG	Konya-Eregli	1.59	286	*i* P	Pn	06 05 07.6	-0.6
KERG				*i* S	Sg	06 05 31.8	+0.6
KERG				IAML_P			
	comp=Z,138nm,0.2s						
ELBS	KAHRAMANMARAS	1.59	33	*i* P	Pg	06 05 11.7	+1.1
ELBS				*i* S	Sg	06 05 33.0	+1.7
ATAB	Bozova	1.86	74	*i* P	Pg	06 05 15.4	-0.4
SURC	SANLIURFA_SURC	2.06	92	*i* P	Pg	06 05 18.3	-1.3
URFA	Urfa	2.27	78	PN	Pn	06 05 18.1	+0.6
SANL	SANLIURFA_Merk	2.37	85	*i* P	Pb	06 05 23.0	+0.3

*KRNET **24** 06:24:36.8±0.1, 40°.88N×74°.11E, h22^{km}, mb2.2*
*SOME **24** 06:24:37.4, 40°.85N×74°.17E, h10^{km}*
*NNC **24** 06:24:39.6±1.7, 41°.00N×74°.11E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=13.0km s-min=6.6km az=158.0*
ISC 24 06:24:34.5±1.8**, 40°.83N**±0°.08×**74°.12E**±0°.03**, h8**^{km}±13^{km}**, n19, σ0^{s}.96**/31**, 17C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	Arslanbob	0.99	300	⇑*i*P	Pn	06 24 55.0	+0.2
	baz=98						
ARSB				⇑*i*S	Sn	06 25 08.3	-0.8
	baz=98						
UCH	Uchtor	1.43	12	⇑*e*P	Pg	06 25 02.1	+0.2
	baz=12						
UCH				⇑*e*S	Sn	06 25 20.5	+0.3
	baz=12						
KZA	Kyzart	1.51	34	⇑*e*P	Pg	06 25 04.1	+0.6
	baz=35						
KZA				⇑*i*S	Sg	06 25 23.9	+0.9
	baz=35						
NRN	Naryn	1.54	66	⇑*e*P	Pb	06 25 04.0	+0.5
	baz=68						
NRN				⇑*i*S	Sg	06 25 25.0	+0.9
	baz=68						
AAK	Ala-Archa	1.83	9	⇓P	Pg	06 25 10.8	+1.2
	1.9nm,0.4s						
AAK				⇑S	Sg	06 25 31.4	-1.9
	1.7nm,0.4s						
KBK	Karagaybulak	1.93	19	⇓*e*P	Pg	06 25 10.9	-0.5
	baz=19						
KBK				⇓*i*S	Sg	06 25 35.6	-0.8
	baz=19						
MRKS	Merke	2.02	341	Pg	Pg	06 25 14.1	+0.8
	9.4nm,0.3s						
MRKS				Lg	Lg	06 25 40.8	
	4.1nm,0.1s						
MRKS	Merke	2.02	341	*e*P	Pg	06 25 14.1	+0.8
	9.4nm,0.3s						
MRKS				*e*S	Sg	06 25 40.8	+1.2
	4.1nm,0.1s						
ULHL	Ulahol	2.13	48	⇑*e*P	Pb	06 25 13.7	+0.3
	baz=49						
ULHL				⇑*i*S	Sg	06 25 41.1	-1.8
	baz=49						
BOOM	Boomskoye usch	2.15	39	⇑*i*P	Pb	06 25 14.0	+0.3
	baz=40						
BOOM				⇑*i*S	Sg	06 25 41.5	-2.0
	baz=40						
TKM2	Tokmak 2	2.36	27	⇑Pg	Pg	06 25 19.9	+0.1
	0.6nm,0.3s						
TKM2				⇑Lg	Lg	06 25 50.2	
	3.2nm,0.7s						
KST	Kastek	2.60	31	Pg	Pg	06 25 24.3	-0.1
	1.6nm,0.4s						
KST				Lg	Lg	06 25 58.4	
	5.4nm,0.4s						
KST	Kastek	2.60	31	*e*P	Pg	06 25 24.1	-0.3
	3.0nm,0.4s						
KST				*e*S	Sg	06 25 57.8	-0.3
	5.1nm,0.5s						
SGDS	Sogindy	2.65	8	Pg	Pg	06 25 24.8	-0.4
	2.8nm,0.3s						
SGDS				Lg	Lg	06 25 59.1	
	1.6nm,0.4s						
IUG	Iuzhnay	3.34	295	Pg	Pg	06 25 38.3	-0.2
	1.0nm,0.3s						
IUG				Lg	Lg	06 26 22.0	
	7.8nm,0.5s						
IUG	Iuzhnay	3.34	295	*e*P	Pg	06 25 38.2	-0.2
	1.0nm,0.3s						
IUG				*e*S	Sg	06 26 22.0	+0.2
	7.4nm,0.3s						
KK31	Karatay Array	3.52	311	⇑Pg	Pg	06 25 43.5	+1.6
	0.3nm,0.3s						
KK31				⇑Lg	Lg	06 26 25.8	
	0.9nm,0.4s,baz=129,slow=28,SNR=5.9						
BRLS	Borolday	3.88	306	Pg	Pg	06 25 47.5	-1.3
	0.7nm,0.2s						
BRLS				Lg	Lg	06 26 37.8	
	1.5nm,0.4s						
BRLS	Borolday	3.88	306	*e*P	Pg	06 25 48.0	-0.8
	0.9nm,0.2s						
BRLS				*e*S	Sg	06 26 38.3	-0.7
	1.8nm,0.3s						

*TIF **24** 06:30:55.4, 42°.38N×40°.98E, h26^{km}±3^{km}*
*DDA **24** 06:31:11.9, 41°.54N×41°.69E, h7^{km}±2^{km}, ML2.2*
ISC 24 06:30:56.4±1.1**, 42°.42N**±0°.03×**41°.04E**±0°.04**, h22**^{km}±9^{km}**, n17, σ1^{s}.15**/31**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	Batumi	0.95	149	P	Pb	06 31 14.2	0.0
BATM				S	Sn	06 31 28.0	+0.7
BATM	Batumi	0.95	149	*i* P	Pb	06 31 15.0	+0.8
BATM	Batumi	0.95	149	*e*Pg	Pb	06 31 14.2	0.0
BATM				*e*Sg	Sn	06 31 28.0	+0.7
DOMR	Dombai	0.97	26	*e*Pg	Pn	06 31 12.8	-2.0
DOMR				*e*Sg	Sb	06 31 26.7	-0.3
ARXR	Arkhyz	1.15	8	*e*Pg	Pb	06 31 17.9	+0.3
ARXR				*e*Sg	Sn	06 31 31.9	-0.5
DBOC	Borcka	1.17	156	*i* P	Pb	06 31 17.7	-0.3
TKB	Tkibuli	1.45	92	P	Pb	06 31 22.1	-0.6
TKB				S	Sb	06 31 42.2	+1.6
NEY	Neytrino	1.48	56	*e*Pg	Pb	06 31 23.0	-0.4
NEY				*e*Sg	Sn	06 31 41.5	+0.7
DBAD	Bademkaya	1.49	161	*i* P	Pb	06 31 22.2	-1.1
DBAD				IAML_P			
	comp=Z,646nm,0.1s						
DAGI	Agillar	1.50	154	*i* P	Pb	06 31 22.1	-1.3
DAGI				*i* S	Sb	06 31 40.2	-1.8
DAGI				IAML_P			
	comp=Z,329nm,0.1s						
SOC	Sochi	1.51	320	*e*Pg	Pn	06 31 21.9	-0.2
SOC				*e*Sg	Sb	06 31 43.5	+1.0
SHA1	Shidzhatmaz	1.77	41	*e*Pg	Pb	06 31 27.3	-0.9
SHA1				*e*Sg	Sb	06 31 50.4	+0.4
ONI	Oni	1.79	84	P	Pb	06 31 28.1	-0.3
ONI				S	Sb	06 31 52.6	+2.1
ONI	Oni	1.79	84	*e*Pg	Pb	06 31 28.1	-0.3
ONI				*e*Sg	Sb	06 31 52.6	+2.1
LZRR	Lazarevskoye	1.94	322	*e*Pg	Pn	06 31 28.3	+0.3
LZRR				*e*Sg	Sb	06 31 55.7	+1.0
ZEI	Tsey	2.14	79	*e*Pg	Pb	06 31 33.0	-1.6
ZEI				*e*Sg	Sb	06 32 00.6	-0.2
LACR	Lac	2.44	79	*e*Pn	Pn	06 31 36.4	+1.5
LACR				*i* Sn	Sb	06 32 07.4	-1.8

MAN 24 06:31:29.3, 7°.30N×124°.82E, h8^{km}, mb4.6, ML3.4, MS3.3, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.39	137	⇑*i*P	Pb	06 31 38.1	-0.5
KCP				*i* S	Sb	06 31 44.6	-0.3
CTBH	Cotabato--PC H	0.58	262	⇓*i*P	Pg	06 31 41.0	+0.6
BUKP	Musuan	0.62	23	*e*P	Pg	06 31 41.5	+0.1
BUKP				*e*S	Sg	06 31 50.1	+0.6
DMPH	Davao City--Mi	0.71	108	⇓*e*P	Pg	06 31 42.5	-0.6
DMPH				*i* S	Sn	06 31 57.8	+0.9
SKMP	Bagumbayan, Su	0.82	200	*e*P	Pg	06 31 44.6	-0.6
SKMP				*e*S	Sb	06 31 57.4	+0.2
CGP	Cagayan de Oro	1.15	354	⇑*i*P	Pg	06 31 50.1	-1.4
CGP				*i* S	Sg	06 32 05.0	-1.5
MATI	Mati	1.47	104	*e*P	Pn	06 31 56.0	-0.1
MATI				*e*S	Sb	06 32 15.8	+0.1
DDMP	Don Marcelino,	1.48	143	*e*P	Pn	06 31 55.6	-0.7
DDMP				*e*S	Sg	06 32 20.1	+3.1
BUTP	Butuan	1.84	25	*e*P	Pn	06 32 01.5	+0.3
BUTP				*e*S	Sg	06 32 35.4	+7.0
DCPH	Dipolog City	1.93	311	⇑*e*P	Pg	06 32 06.8	+0.4
MSLP	Maasin	2.81	1	*e*P	Pb	06 32 18.8	-1.1

UCR 24 06:34:18.2±1.2**, 9°.90N×84°.05W, h72**^{km}±4^{km}**, MW3.7, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJS	Escuela Geolog	0.04	354	*e*P	Pn	06 34 29.0	+0.2
SJS				*e*S	Sn	06 34 37.4	+0.9
HDC	Heredia	0.12	329	*e*P	Pn	06 34 28.7	-0.2
LCR2	La Lucha 2	0.16	163	*e*P	Pn	06 34 28.7	-0.5
LCR2				*e*S	Sn	06 34 37.0	0.0
CVTR	Volcan Turrial	0.31	67	*e*P	Pn	06 34 30.2	+0.1
SRA1	San Ramn	0.46	294	*e*P	Pn	06 34 30.9	-0.1
EDDO	Dominical	0.67	164	*e*P	Pn	06 34 32.9	0.0
EDLM	Las Mercedes	0.76	143	*e*P	Pn	06 34 34.0	-0.1
ARE1	Arenal 1	0.86	310	*e*P	Pn	06 34 35.5	+0.4
CEDE	Laguna Cedeo	0.87	312	*e*P	Pn	06 34 35.7	+0.4
JTS	Las Juntas de	0.97	294	*e*P	Pn	06 34 36.5	0.0
DRK0	Durika	1.01	128	*e*P	Pn	06 34 36.7	-0.5
EDBA	Buenos Aires	1.06	134	*e*P	Pn	06 34 37.0	-0.6
EDPN	Palmar Norte	1.10	148	*e*P	Pn	06 34 38.1	+0.1
MESS	Mesas	1.40	307	*e*P	Pn	06 34 42.5	+0.4
EDSV	San Vito	1.51	135	*e*P	Pn	06 34 43.9	+0.5
PTJ1	Puerto Jimnez	1.54	151	*e*P	Pn	06 34 45.1	+1.4
BUEV	Buena Vista	1.61	304	*e*P	Pn	06 34 45.7	+0.9
GB1A	Borinquen Arri	1.61	305	*e*P	Pn	06 34 45.0	+0.2
BRU2	Volcan	1.73	129	*e*P	Pn	06 34 46.6	+0.2
ESPN	Las Esperanzas	2.30	354	*e*P	Pn	06 34 53.9	0.0
ACON	Acoyapa	2.33	332	*e*P	Pn	06 34 54.5	+0.1

JMA 24 07:01:55.2±0.1**, 24°.72N×123°.42E, h20**^{km}±3^{km}**, M1.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.45	235	P	Pb	07 02 04.2	-0.3
YOJ				S	Sb	07 02 10.5	-0.3
IRIF	Iriomote-Funau	0.48	144	P	Pb	07 02 04.8	-0.1
IRIF				S	Sb	07 02 11.1	-0.4
JYNG	Yonagunijimaku	0.51	238	P	Pb	07 02 05.3	-0.1
JYNG				S	Sb	07 02 12.3	-0.1
JKRS	Kuro-shima	0.72	132	P	Pb	07 02 09.0	-0.1
JKRS				S	Sb	07 02 18.5	0.0
HATJ	Hateruma jima	0.75	152	P	Pb	07 02 09.4	-0.1
HATJ				S	Sb	07 02 19.0	-0.3
JIJ	Ishigaki jima	0.75	118	P	Pb	07 02 09.4	-0.1
JIJ				S	Sb	07 02 18.6	-0.7
JISG	Ishigakijimahi	0.82	99	P	Pb	07 02 10.5	-0.3
JISG				S	Sb	07 02 21.3	-0.1
JTJ	Tarama	1.17	94	P	Pb	07 02 16.7	0.0
JTJ				S	Sn	07 02 31.6	-0.2

TAP 24 07:01:56.6, 24°.46N×121°.94E, h12^{km}, ML2.1, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao	0.17	331	⇑*i*P	Pb	07 02 01.3	-0.5
	baz=333						
TWC				*i* S	Sg	07 02 04.1	+0.8
	baz=333						
NANB	Nanao	0.18	261	*e*P	Pb	07 02 01.6	-0.3
	baz=261						
NANB				*e*S	Sg	07 02 04.7	+1.3
	baz=261						
ENA	Nanau	0.18	262	P	Pb	07 02 01.5	-0.4
	baz=260						
ENA				*i* S	Sg	07 02 04.9	+1.4
	baz=260						
EOS1	EOS1	0.19	61	*e*P	Pg	07 02 01.0	+0.1
	baz=60						
EOS1				*e*S	Sg	07 02 04.4	+0.6
	baz=60						
TWE	Neicheng	0.36	317	*e*P	Pb	07 02 04.6	-0.4
	baz=317						
TWE				S	Sb	07 02 10.4	-0.3
	baz=317						
ENTT	Nioudou	0.39	298	P	Pb	07 02 05.6	+0.2
	baz=298						
ENTT				S	Sb	07 02 10.9	-0.5
	baz=298						
NDT	Datong Townshi	0.42	291	*e*P	Pb	07 02 06.4	+0.5
	baz=290						
NDT				*e*S	Sb	07 02 12.0	-0.2
	baz=290						
NACB	Ninganchiao	0.42	229	*e*P	Pg	07 02 05.3	+0.3
	baz=228						
NACB				*e*S	Sb	07 02 12.0	-0.4
	baz=228						
ETLH	Xiulin Townshi	0.49	240	*e*P	Pb	07 02 06.7	-0.4
	baz=239						
ETLH				*e*S	Sb	07 02 14.4	+0.1
	baz=239						
NNSB	Datong	0.51	267	*e*P	Pb	07 02 07.6	0.0
	baz=267						
NNSB				*e*S	Sb	07 02 14.9	-0.1
	baz=267						
NNS	Nan Shan	0.52	268	P	Pg	07 02 06.7	-0.1
	baz=268						
NNS				S	Sb	07 02 15.2	0.0
	baz=268						
TIPB	Shuangxi	0.53	348	P	Pb	07 02 08.0	+0.2
	baz=348						
TIPB				S	Sb	07 02 15.9	+0.5
	baz=348						
YHNB	Yeheng	0.56	293	*e*P	Pb	07 02 08.0	-0.3
	baz=292						
YHNB				*e*S	Sb	07 02 16.3	0.0
	baz=292						
NSK	Sanguang	0.57	293	S	Sb	07 02 16.8	0.0
	baz=292						
NWF	Wu-fen Shan	0.63	347	*e*P	Pb	07 02 09.6	0.0
	baz=346						
NWF				*e*S	Sb	07 02 18.9	+0.4
	baz=346						
WFSB	Wu-fen Shan	0.63	347	*e*P	Pb	07 02 09.8	+0.2
	baz=346						
WFSB				*e*S	Sb	07 02 18.6	+0.3
	baz=346						
WHF	Hehuan Shan	0.69	244	P	Pb	07 02 10.8	-0.1
	baz=243						
WHF				S	Sb	07 02 20.6	+0.2
	baz=243						

JMA 24 07:03:55.1±0.2**, 29°.72N×131°.69E, h50**^{km}±4^{km}**, M3.5, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMTN	Minamitane	0.96	315	P	Pn	07 04 12.5	+0.2
JMTN				*e*S	Sn	07 04 25.2	+0.2
JTN	Tanegashima 3	1.12	327	P	Pn	07 04 14.5	+0.1
JTN				*e*S	Sn	07 04 29.7	+1.0
JYAK	Yakushimahirau	1.15	297	P	Pn	07 04 15.1	+0.3
JYAK				S	Sn	07 04 29.8	+0.4
JKC	Kuchinoerabu	1.49	300	P	Pn	07 04 20.4	+0.9
JKC				S	Sn	07 04 39.0	+1.2
JNN	Nakanoshima	1.58	275	P	Pn	07 04 21.7	+1.0
JTSR	Tashiro 2	1.59	335	P	Pn	07 04 21.3	+0.5
JTSR				*e*S	Sn	07 04 40.3	+0.1
JNAR	Kushima--Naru	1.84	349	P	Pn	07 04 25.4	+1.2
JNAR				S	Sn	07 04 47.0	+0.7
JNKG	Nichinankitago	1.96	352	P	Pn	07 04 27.1	+1.3
JNKG				*e*S	Sn	07 04 50.2	+1.0
JSU	Suzuyama	2.07	329	P	Pn	07 04 28.2	+0.7
JSU				S	Sn	07 04 51.9	-0.3
JTZ	Takazaki	2.23	347	P	Pn	07 04 31.0	+1.3
JTZ				S	Sn	07 04 57.0	+0.9
JTAJ	Takarajima	2.24	256	P	Pn	07 04 30.8	+1.1
JAM	Amami Oshima	2.24	235	P	Pn	07 04 30.3	+0.5
JAM				S	Sn	07 04 56.1	-0.1
JTSN	Tsuno	2.52	356	P	Pn	07 04 34.5	+0.9
JSJ	Shimokoshiki	2.59	319	P	Pn	07 04 34.3	-0.2
JZO	Okuchi	2.59	339	P	Pn	07 04 35.6	+1.1
JAMN	Amaminishikomi	2.65	237	P	Pn	07 04 35.8	+0.5
JAMN				S	Sn	07 05 06.2	0.0
JTK	Tokunoshima	3.08	232	P	Pn	07 04 41.6	+0.3
JTK				S	Sn	07 05 16.8	-0.1
JKDJ	Kitadaitoujima	3.77	185	S	Sn	07 05 32.3	-1.6
JYRO	Yoronjima	3.92	228	P	Pn	07 04 53.1	+0.3
JYRO				S	Sn	07 05 35.5	-2.0

DDA 24 07:09:24.7, 39°.34N×29°.02E, h7^{km}±3^{km}, ML2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	Demirci	0.38	219	*i* P	Pb	07 09 33.9	+0.2
DEMI				*i* S	Sb	07 09 38.6	-1.2
DEMI				IAML_P			
	comp=Z,407nm,0.1s						
GDZ	Gediz	0.44	124	*i* P	Pg	07 09 33.8	+0.6
GDZ				*i* S	Sg	07 09 40.2	+1.3
DURS	Dursunbey	0.50	302	*i* P	Pg	07 09 34.0	-0.3
USAK	Uak-Merkez	0.62	180	*i* P	Pb	07 09 37.5	-0.4
ULDT	Uludag	0.81	6	*i* P	Pb	07 09 41.6	+0.4
ULDT				IAML_P			
	comp=Z,168nm,0.1s						
MANT	Manisa	0.92	203	*i* P	Pg	07 09 42.4	+0.1
MANT				*i* S	Sg	07 09 54.3	+0.1
KHAL	Karahalli	1.03	159	*i* P	Pb	07 09 45.2	+0.2
KHAL				IAML_P			
	comp=Z,141nm,0.2s						

JMA 24 07:09:55.3±0.1**, 24°.65N×123°.44E, h16**^{km}±3^{km}**, M1.4, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.41	140	P	Pg	07 10 03.5	-0.1
IRIF				*e*S	Sg	07 10 09.1	-0.2
YOJ	Yonaguni jima	0.43	244	P	Pg	07 10 03.7	-0.3
YOJ				S	Sg	07 10 09.6	-0.4
JYNG	Yonagunijimaku	0.49	246	P	Pg	07 10 05.1	0.0
JYNG				S	Sg	07 10 11.7	-0.1
JKRS	Kuro-shima	0.66	128	P	Pg	07 10 08.0	-0.3
JKRS				*e*S	Sb	07 10 17.3	-0.1
HATJ	Hateruma jima	0.68	151	P	Pg	07 10 08.1	-0.5
HATJ				*e*S	Sg	07 10 17.1	-0.5
JIJ	Ishigaki jima	0.70	114	P	Pg	07 10 08.4	-0.6
JIJ				S	Sg	07 10 18.1	-0.2
JISG	Ishigakijimahi	0.80	94	P	Pb	07 10 10.5	-0.2
JISG				S	Sb	07 10 21.2	-0.1
JTJ	Tarama	1.15	90	P	Pn	07 10 16.3	-0.4
JTJ				S	Sb	07 10 31.4	0.0

TAP 24 07:10:29.0, 24°.55N×121°.80E, h7^{km}, ML1.4, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	Suao	0.07	37	⇑*i*P	Pg	07 10 31.8	+0.9
	baz=43						
TWC				*i* S	Sg	07 10 33.4	+1.1
	baz=43						
NANB	Nanao	0.13	200	P	Pg	07 10 32.4	+0.7
	baz=200						
NANB				S	Sg	07 10 35.3	+1.6
	baz=200						
ENA	Nanau	0.13	204	*i* P	Pg	07 10 32.5	+0.7
	baz=200						
ENA				*i* S	Sg	07 10 35.2	+1.5
	baz=200						
TWE	Neicheng	0.21	325	*e*P	Pg	07 10 34.3	+1.1
	baz=327						
TWE				S	Sg	07 10 37.5	+1.5
	baz=327						
ENTT	Nioudou	0.23	293	P	Pg	07 10 34.5	+0.9
	baz=293						
ENTT				S	Sg	07 10 38.5	+1.8
	baz=293						
NDT	Datong Townshi	0.27	282	P	Pb	07 10 35.3	-0.9
	baz=281						
NDT				*e*S	Sb	07 10 40.0	-0.9
	baz=281						
EOS1	EOS1	0.30	90	*e*P	Pb	07 10 36.2	-0.5
	baz=90						
EOS1				*e*S	Sb	07 10 41.2	-0.6
	baz=90						
NNSB	Datong	0.40	253	*e*P	Pg	07 10 37.4	+0.6
	baz=252						
YHNB	Yeheng	0.40	287	*e*P	Pb	07 10 38.0	-0.5
	baz=287						
NSK	Sanguang	0.42	288	P	Pb	07 10 38.2	-0.7
	baz=287						
NSK				S	Sb	07 10 45.2	-0.3
	baz=287						
TIPB	Shuangxi	0.42	3	*e*P	Pb	07 10 38.6	-0.3
	baz=3.0						
TIPB				*e*S	Sb	07 10 44.8	-0.7
	baz=3.0						
ETLH	Xiulin Townshi	0.45	220	*e*P	Pb	07 10 38.7	-0.6
	baz=220						
ETLH				*e*S	Sb	07 10 46.2	0.0
	baz=220						

*ISCJB **24** 07:20:20.1±0.3, 3°.60N±0°.04×126°.16E±0°.07, h116^{km}, mb4.5/11, Error ellipse: s-maj=10.9km s-min=3.9km az=160.9*
*IDC **24** 07:20:20.7±4.7, 3°.50N×125°.77E, h114^{km}±53^{km}, mb4.0/4, mb1 4.2/6, mb1mx3.5/36, mbtmp4.5/6, MS3.4/1, Ms1 3.4/1, ms1mx2.4/34, Error ellipse: s-maj=120.5km s-min=13.2km az=67.0*
*DJA **24** 07:20:20.7±0.8, 4°N±5°×12°6E±°, h112^{km}±7^{km}, M4.8/8, mb5.0/4, mB5.2/4, MLv4.7/8, Mw(mB)4.6/4*
*NEIC **24** 07:20:21.1±1.2, 3°.57N×125°.92E, h120^{km}±4^{km}, mb4.5/11, Error ellipse: s-maj=28.4km s-min=8.7km az=68.0*
*MAN **24** 07:20:26.0, 4°.09N×125°.91E, h159^{km}, mb4.7, ML3.6, MS3.5*
ISC 24 07:20:20.5±0.6**, 3°.63N**±0°.05×**126°.04E**±0°.09**, h116**^{km}**, n35, σ1^{s}.52**/39**, mb4.6**/11**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.51	276	P	Pn	07 20 40.1	+2.0
SGSI				S	Sn	07 20 54.3	+3.0
DDMP	Don Marcelino,	2.48	352	*e*P	Pn	07 21 00.7	+0.8
DDMP				*e*S	Sn	07 21 30.4	+0.3
GSPH	General Santos	2.67	336	*e*P	Pn	07 21 04.3	+1.8
TNTI	Ternate	3.13	155	*e*Pn	Pn	07 21 09.2	+0.6
TNTI				*e*Sn	Sn	07 21 44.9	-0.6
TNTI	Ternate	3.13	155	P	Pn	07 21 09.1	+0.6
SKMP	Bagumbayan, Su	3.23	333	*e*P	Pn	07 21 11.1	+1.3
DAV	Davao City (W)	3.45	352	P	Pn	07 21 13.2	+0.6
	160nm,0.3s,baz=233,slow=20,SNR=3.0						
DAV				S	Sn	07 21 56.8	+3.9
	148nm,0.3s,baz=204,slow=19,SNR=2.3						
DMPH	Davao City--Mi	3.47	351	⇑*i*P	Pn	07 21 13.3	+0.4
DMPH				*i* S	Sn	07 22 11.0	+18
KCP	Kidapawan	3.49	344	⇓*i*P	Pn	07 21 14.9	+1.6
KCP				*e*S	Sn	07 21 51.2	-2.8
CTBH	Cotabato--PC H	3.99	333	⇑*i*P	Pn	07 21 21.3	+1.4
BUKP	Musuan	4.33	347	*e*P	Pn	07 21 26.0	+1.5
SANI	Sanana	5.64	181	P	Pn	07 21 40.4	-1.7
SIJI	Sorong	6.88	130	P	Pn	07 21 59.5	+0.7
	2.9nm,0.3s,baz=324,slow=18,SNR=5.6						
NLAI	Namlea	6.91	171	P	Pn	07 21 59.0	-0.2
FAKI	Fak Fak	8.99	136	*e*Pn	Pn	07 22 29.0	+1.5
SBUM	Sibu	13.85	266	*e*P	P	07 23 35.1	-1.4
JAGI	Jajag, Banyuwa	16.88	225	*e*P	P	07 24 12.2	+2.1
	43nm,1.1s						
MTN	Manton Dam	17.13	163	*e*P	P	07 24 11.3	-1.5
	34nm,1.1s						
COEN	Coen	24.38	136	*e*P	P	07 25 28.7	+0.6
	15nm,1.1s						
WR1	Warramunga Arr	24.80	161	*e*P	P	07 25 31.7	-0.3
WRA	Warramunga Arr	24.80	161	P	P	07 25 31.7	-0.3
	9.9nm,0.4s,baz=340,slow=10,SNR=80						
WB2	Warramunga Arr	24.81	161	*e*P	P	07 25 32.1	+0.1
	24nm,0.9s						
WC3	Warramunga Arr	24.83	161	*e*P	P	07 25 32.4	+0.2
	20nm,0.9s						
AS31	Alice Springs	28.19	165	*e*P	P	07 26 02.8	+0.4
	1.8nm,0.6s						

ASAR	Alice Springs	28.19	165	P	P	07 26 02.5	+0.2
	2.9nm,0.5s,baz=346,slow=7.9,SNR=66						
BBOO	Buckleboo	37.47	166	eP	P	07 27 23.6	+0.7
	12nm,0.5s						
STKA	Stephens Creek	38.29	158	P	P	07 27 30.5	+0.7
	6.2nm,0.6s,baz=331,slow=8.0,SNR=15						
STKA	Stephens Creek	38.29	158	eP	P	07 27 30.3	+0.5
	1.6nm,0.8s						
SONM	Songino Array	47.17	342	LR	LR	07 53 04.2	
	comp=Z,37nm,18.3s,baz=60,slow=42						
TLY	Talaya	51.41	342	eP	P	07 29 09.7	-3.8
	8.8nm,0.9s						
MK32	Makanchi Array	57.25	326	eP	P	07 29 55.7	-0.2
MKAR	Makanchi Array	57.25	326	P	P	07 29 55.7	-0.2
	0.3nm,0.5s,baz=114,slow=8.4,SNR=5.5						
BCPM	Bancas Point	89.06	30	eP	P	07 33 03.4	+1.0
	42nm,1.1s						
TORD	Torodi Ar. Bea	122.30	288	PKP	PKPdf	07 39 02.2	-0.8
	0.7nm,0.9s,baz=70,slow=2.4,SNR=3.8						
TOA1	Torodi Ar. Sit	122.30	288	ePKPdf	PKPdf	07 39 02.2	-0.8

ISK ***24*** *07:20:48.3, 38.°95N×43.°40E, h12^{km}, ML2.2/4*

ISCJB ***24*** *07:20:49.7±0.7, 38.°95N±0.°06×43.°5E±0.°1, h12^{km}±13^{km}, Error ellipse: s-maj=18.3km s-min=5.6km az=25.5*

DDA ***24*** *07:20:49.3, 38.°92N×43.°48E, h8^{km}±1^{km}, ML2.8*

ISC 24 07:20:49.3±1.0**, 38.°92N**±0.°04×**43.°47E**±0.°05**, h10**^{km}±8^{km}**, n9,** σ**1.^{s}11**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.11	48	iP	Pg	07 20 52.8	+0.7
VMUR				iS	Sg	07 20 54.1	-0.1
VANB	Van	0.33	191	PG	Pb	07 20 57.5	+0.1
VANB				SG	Sb	07 21 04.3	+1.5
TVAN	Van	0.39	187	iP	Pb	07 20 58.0	-0.6
TVAN				iS	Sb	07 21 04.1	-0.6
TVAN				IAML_P			
	comp=Z,4μm,0.2s						
CLDR	Caldiran	0.41	57	PG	Pg	07 20 57.5	-0.1
CLDR				SG	Sb	07 21 04.3	-1.1
CLDR	Caldiran	0.41	57	iP	Pg	07 20 57.5	-0.1
CLDR				iS	Sb	07 21 04.5	-0.9
CLDR				IAML_P			
	comp=Z,6μm,0.2s						
AKDM	Akdamar-Van	0.70	213	PG	Pg	07 21 02.3	-0.6
TUTA	Tutak	0.70	314	iP	Pb	07 21 03.1	-0.7
TUTA				IAML_P			
	comp=Z,2μm,0.2s						
GURO	Guroymak-BITLI	1.18	252	PN	Pb	07 21 10.6	-1.4
EATA	Eleskirt	1.21	322	iP	Pn	07 21 12.8	+0.2
EATA				iS	Sn	07 21 31.6	+2.3

ISCJB ***24*** *08:05:59.1±1.2, 11.°74S±0.°08×166.°4E±0.°2, h35^{km}, mb3.9/6, Error ellipse: s-maj=24.1km s-min=11.0km az=168.3*

IDC ***24*** *08:06:04.6±3.9, 11.°53S×166.°20E, h62^{km}±34^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.6/31, mbtmp4.0/8, ML3.8/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/21, Error ellipse: s-maj=35.7km s-min=28.5km az=114.0*

ISC 24 08:06:01.6±1.3**, 11.°55S**±0.°10×**166.°4E**±0.°2**, h35**^{km}**, n11,** σ**2.^{s}31**/10**, mb4.0**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.67	288	P	Pn	08 07 37.7	+0.5
	15nm,0.3s,baz=125,slow=6.2,SNR=3.0						
HNR				LR	LR	08 10 30.9	
	comp=Z,86nm,18.6s,baz=148,slow=41						
DZM	Mont Dzumac	10.46	180	P	Pn	08 08 32.4	+3.0
	0.1nm,0.3s,baz=43,slow=9.9,SNR=1.7						
DZM				S	Sn	08 10 21.9	-3.6
	0.1nm,0.3s,baz=307,slow=20,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.85	1	T	T	08 43 15.2	
	baz=182						
H11S3	WAKE ISLAND Hy	29.85	1	T	T	08 43 16.0	
	baz=182						
H11S1	WAKE ISLAND Hy	29.87	1	T	T	08 43 15.7	
	baz=182						
STKA	Stephens Creek	30.52	225	P	P	08 12 12.0	+0.3
	2.4nm,0.8s,baz=41,slow=11,SNR=3.2						
WRA	Warramunga Arr	31.91	251	P	P	08 12 22.8	-1.3
	2.7nm,1.0s,baz=84,slow=8.5,SNR=3.1						
ASAR	Alice Springs	33.14	244	P	P	08 12 33.1	-1.7
	1.3nm,0.7s,baz=69,slow=9.7,SNR=15						
ASAR				pP	pP	08 12 47.2	+2.9
	0.5nm,0.8s,baz=68,slow=9.4,SNR=2.4						
CMAR	Chiang Mai Arr	72.89	293	P	P	08 17 27.2	-0.5
	0.9nm,0.4s,baz=106,slow=6.1,SNR=3.4						
ILAR	Eielson Array	83.79	18	P	P	08 18 26.9	0.0
	0.2nm,0.7s,baz=240,slow=4.8,SNR=3.3						
MKAR	Makanchi Array	94.32	317	P	P	08 19 16.4	-1.2
	0.6nm,0.6s,baz=86,slow=6.4,SNR=6.1						

IDC ***24*** *08:21:03.2±6.5, 1.°47N×96.°65E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.8/4, MS2.8/1, Ms1 3.0/1, ms1mx2.6/31, Error ellipse: s-maj=311.0km s-min=23.8km az=56.0*

ISCJB ***24*** *08:21:09.8±0.7, 2.°23N±0.°04×97.°52E±0.°07, h10^{km}, mb3.7/4, Error ellipse: s-maj=10.0km s-min=5.1km az=2.4*

DJA ***24*** *08:21:09.9±0.3, 2.°N±2.°×9.°8E±.°, h10^{km}, M4.0/9, MLv4.0/9*

ISC 24 08:21:09.0±0.8**, 2.°22N**±0.°04×**97.°56E**±0.°07**, h10**^{km}**, n14,** σ**1.^{s}27**/14**, mb3.7**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.91	179	P	Pg	08 21 26.8	+0.3
GSI				S	Sb	08 21 40.5	+1.6
TPTI		1.11	340	P	Pb	08 21 29.6	-0.6
TPTI				S	Sg	08 21 44.6	-0.1
SNSI	Sinabang, Aceh	1.25	279	P	Pg	08 21 33.4	+0.4
KCSI	Kotacane, Aceh	1.31	9	P	Pn	08 21 33.2	-0.3
KCSI				S	Sb	08 21 51.1	+0.3
TSI	Tuntungan	1.62	38	P	Pn	08 21 39.2	+1.5
TSI				S	Sb	08 22 01.5	+1.9
MLSI	Meulaboh, Aceh	2.34	330	P	Pn	08 21 49.1	+1.5
CMAR	Chiang Mai Arr	16.20	5	LR	LR	08 31 15.3	
	comp=Z,35nm,20.5s,baz=170,slow=36						
H08S2	Diego Garcia H	26.86	248	T	T	08 54 12.6	
	baz=70,slow=75,SNR=8.4						
H08S3	Diego Garcia H	26.86	248	T	T	08 54 19.3	
	baz=70,slow=75,SNR=12						
H08S1	Diego Carcia H	26.88	248	T	T	08 54 16.0	
	baz=70,slow=75,SNR=4.3						
WRA	Warramunga Arr	42.27	123	P	P	08 29 01.7	-1.4
	1.4nm,0.8s,baz=295,slow=10,SNR=5.4						
ASAR	Alice Springs	43.72	128	P	P	08 29 12.8	-2.0
	0.2nm,0.4s,baz=296,slow=7.4,SNR=6.0						
MKAR	Makanchi Array	46.35	346	P	P	08 29 35.7	+0.3
	0.4nm,0.5s,baz=159,slow=8.3,SNR=4.5						
ZALV	Zalesovo Beam	52.62	351	P	P	08 30 22.4	-0.6
	1.2nm,0.3s,baz=157,slow=6.8,SNR=3.1						

ISCJB ***24*** *08:28:55.0±2.1, 33.°77N±0.°06×35.°6E±0.°1, h26^{km}±13^{km}, Error ellipse: s-maj=15.0km s-min=9.1km az=163.6*

GRAL ***24*** *08:28:54.2±0.3, 33.°81N×35.°72E, h31^{km}±2^{km}, MD2.9*

NSSC ***24*** *08:28:56.3±0.5, 33.°69N×35.°67E, h16^{km}±2^{km}, ML1.9*

ISC 24 08:28:54.9±1.5**, 33.°80N**±0.°06×**35.°8E**±0.°1**, h23**^{km}±15^{km}**, n7,** σ**0.^{s}43**/13**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	Bhannes	0.13	324	eP	Pb	08 28 59.4	-0.3
BHL				eS	Sb	08 29 03.4	+0.4
DQRL	Deir Qamar	0.17	239	eP	Pb	08 28 59.9	-0.2
QRWL	Qaraoun	0.25	193	eP	Pb	08 29 00.8	-0.3
QRWL				eS	Sb	08 29 05.7	+0.3
RCY	Rachaya	0.31	166	eP	Pb	08 29 01.8	-0.3
RCY				eS	Sb	08 29 07.3	+0.4
BRBR	Barbar	0.42	156	eP	Pb	08 29 04.0	+0.2
BRBR				eS	Sb	08 29 09.4	-0.5
BRBR				AML	AML	08 29 13.5	
	comp=N,87nm,0.6s						
BRBR				AML	AML	08 29 14.0	
	comp=E,444nm,0.5s						
QASN	Qassioun	0.51	121	eP	Pn	08 29 07.1	+0.1
QASN				eS	Sn	08 29 14.6	-0.4
QASN				AML	AML	08 29 18.5	
	comp=N,140nm,0.3s						
QASN				AML	AML	08 29 19.4	
	comp=E,130nm,0.3s						
TOTH	TOTAH	0.71	127	eP	Pn	08 29 10.2	+0.5
TOTH				eS	Sn	08 29 19.6	-0.3
TOTH				AML	AML	08 29 26.6	
	comp=E,22nm,0.5s						
TOTH				AML	AML	08 29 33.1	
	comp=N,21nm,0.6s						

IDC ***24*** *08:32:51.0±1.7, 41.°53S×174.°39E, h0^{km}, mb3.8/2, mb1 3.8/4, mb1mx3.7/16, mbtmp3.5/4, ML2.7/2, Error ellipse: s-maj=46.4km s-min=18.5km az=133.0*

ISCJB ***24*** *08:32:53.6±0.6, 41.°76S±0.°03×174.°39E±0.°03, h8^{km}±4^{km}, mb3.6/2, Error ellipse: s-maj=5.9km s-min=3.0km az=141.6*

WEL ***24*** *08:32:54.0, 41.°6S±0.°6×174.°3E±0.°6, h14^{km}±2^{km}, M3.8/29, ML4.0/17, MLv3.8/29, Error ellipse: s-maj=0.0km s-min=0.0km az=143.4*

ISC 24 08:32:53.4±0.9**, 41.°57S**±0.°03×**174.°33E**±0.°03**, h16**^{km}±7^{km}**, n88,** σ**1.^{s}31**/96**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.20	206	P	Pg	08 32 58.2	0.0
CMWZ				S	Sg	08 33 01.6	+0.2
TUWZ	Tuamarina	0.32	295	P	Pb	08 33 01.3	+0.5
TUWZ				S	Sb	08 33 06.6	+0.8
TCW	Tory Channel	0.36	353	P	Pb	08 33 02.6	+1.1
TCW				S	Sb	08 33 08.9	+2.1
BSWZ	Blackbirch Sta	0.37	247	P	Pb	08 33 01.4	-0.3
BSWZ				S	Sb	08 33 07.1	-0.2
BHW	Baring Head	0.43	69	P	Pn	08 33 04.0	-1.0
BHW				S	Sb	08 33 11.2	+2.2
PLWZ	Palliser	0.69	90	P	Pn	08 33 08.7	+0.1
MSWZ	Moikau Station	0.70	78	P	Pn	08 33 08.9	+0.2
CAW	Cannon Point	0.72	50	P	Pn	08 33 09.0	+0.1
NNZ	Nelson	0.80	296	P	Pn	08 33 09.7	-0.3
DUWZ	D’Urville Isla	0.82	338	P	Pn	08 33 10.8	+0.4
PAWZ	Paruwai Farm	0.84	78	P	Pn	08 33 11.4	+0.8
MTW	Mount Morrison	0.97	65	P	Pn	08 33 13.8	+1.4
OGWZ	Otaki Gorge	0.98	40	P	Pn	08 33 13.5	+1.0
TRWZ	Traveller	1.03	81	P	Pn	08 33 14.4	+1.2
KHZ	Kahutara	1.03	215	P	Pn	08 33 13.6	+0.4
THZ	Tophouse	1.09	259	P	Pn	08 33 14.3	+0.2
HOWZ	Holdsworth Sta	1.11	53	P	Pn	08 33 16.1	+1.7
TMWZ	Te Maipa	1.26	69	P	Pn	08 33 17.6	+1.2
MRZ	Mangatainoka R	1.30	46	P	Pb	08 33 19.0	+1.4
TIWZ	Tintock	1.41	57	P	Pg	08 33 20.3	-0.3
OHWZ	Ohakea	1.55	29	P	Pg	08 33 24.1	+0.9
QRZ	Quartz Range	1.55	298	P	Pg	08 33 22.9	-0.3
PRWZ	Pori Road	1.60	51	P	Pb	08 33 22.5	-0.1
POWZ	Post Office Ro	1.60	43	P	Pg	08 33 23.1	-1.1
BFZ	Birch Farm	1.69	59	P	Pn	08 33 23.0	+0.6
GVZ	Greta Valley S	1.70	214	P	Pn	08 33 22.6	+0.1
WAZ	Wanganui	1.88	16	P	Pg	08 33 29.9	+0.4
DVHZ	Dannevirke	1.88	48	P	Pn	08 33 25.9	+1.0
DSZ	Denniston Nort	1.90	264	P	Pb	08 33 27.4	-0.4
TSZ	Takapari Road	1.95	40	P	Pb	08 33 27.8	-0.7
LTZ	Lake Taylor	1.96	231	P	Pn	08 33 26.6	+0.6
ANWZ	Angora Road	1.96	56	P	Pb	08 33 27.5	-1.2
AMCZ	Amberley	2.04	217	P	Pn	08 33 26.2	-0.9
LREZ	Lake Rotokare	2.10	1	P	Pg	08 33 34.4	+0.6
PRHZ	Porangahau	2.17	54	P	Pn	08 33 29.6	+0.6
PNHZ	Pukenui	2.18	41	P	Pn	08 33 30.5	+1.5
NMEZ	Namu Road	2.18	351	P	Pg	08 33 34.4	-0.8
WPHZ	Waipukurau	2.19	47	P	Pb	08 33 32.7	0.0
PREZ	Palmer Road	2.23	357	P	Pg	08 33 35.3	-0.8
KHEZ	Kahui Hut	2.28	354	P	Pg	08 33 36.0	-1.2
NBEZ	Newall Road No	2.32	351	P	Pg	08 33 36.3	-1.7
MTVZ	Mangateitei	2.35	22	P	Pg	08 33 36.8	-1.6
OKCZ	Okains Bay	2.35	203	P	Pn	08 33 30.4	-1.0
CRLZ	Canterbury Las	2.37	212	P	Pn	08 33 31.2	-0.4
DREZ	Durham Road	2.38	358	P	Pg	08 33 37.2	-1.8
PKE	Pukeiti	2.38	354	P	Pg	08 33 37.3	-1.8
PKVZ	Pokaka	2.40	19	P	Pb	08 33 36.5	+0.2
MOVZ	Moawhango	2.41	27	P	Pb	08 33 35.5	-1.1
INZ	Inchbonnie	2.44	241	P	Pn	08 33 33.5	+0.9
OXZ	Oxford	2.44	223	P	Pn	08 33 32.0	-0.7
PXZ	Pawanui	2.46	52	P	Pn	08 33 33.0	+0.2
BHHZ	Black Hill Sta	2.46	33	P	Pb	08 33 35.6	-1.7
VRZ	Vera Road	2.46	8	P	Pb	08 33 37.4	+0.1
KRHZ	Kereru	2.47	40	P	Pn	08 33 34.1	+1.0
MQZ	McQueen’s Vall	2.47	210	P	Pn	08 33 31.4	-1.6
DRZ	Dome Shelter	2.47	23	P	Pg	08 33 39.7	-1.1
FWVZ	Far West T-bar	2.49	22	P	Pb	08 33 37.4	-0.5
TUVZ	Tukino	2.51	24	P	Pb	08 33 37.6	-0.6
NGZ	Ngauruhoe	2.58	22	P	Pb	08 33 39.5	+0.1
KAHZ	Kahuranaki	2.62	48	P	Pn	08 33 35.5	+0.3
WTVZ	West Tongariro	2.63	22	P	Pb	08 33 40.2	-0.1
TWVZ	Taurewa	2.63	19	P	Pg	08 33 42.3	-1.6
KRVZ	Karewarewa	2.66	22	P	Pg	08 33 42.8	-1.7
KWHZ	Kaweka Forest	2.67	37	P	Pg	08 33 43.7	-0.8
KATZ	Kakaramea	2.79	22	P	Pg	08 33 45.7	-1.2
RITZ	Rihia Road	2.84	25	P	Pg	08 33 46.4	-1.4
BKZ	Black Stump Fm	2.91	35	P	Pg	08 33 48.0	-1.2
RATZ	Rangitukua	2.91	23	P	Pg	08 33 48.4	-0.9
WATZ	Wairara	3.05	21	P	Pg	08 33 51.2	-0.6
WVZ	Waitaha Valley	3.06	239	P	Pn	08 33 43.7	+2.5
HIZ	Hauiti	3.08	8	P	Pb	08 33 47.4	-0.3
MRHZ	Matea Rd	3.16	31	P	Pg	08 33 51.8	-2.2
RPZ	Rata Peaks	3.23	227	Pn	Pn	08 33 43.6	+0.1
	1.7nm,0.3s,baz=18,slow=3.0,SNR=11						
RPZ				Pg	Pb	08 33 51.7	+1.3
	16nm,0.3s,baz=326,slow=2.8,SNR=68						
RPZ				Sn	Sn	08 34 19.6	-2.2
	9.9nm,0.3s,baz=322,slow=21,SNR=16						
RPZ	Rata Peaks	3.23	227	P	Pn	08 33 43.7	+0.2
TLZ	Tolley Road	3.36	16	P	Pb	08 33 52.2	-0.5
FOZ	Fox Glacier	3.87	238	P	Pn	08 33 56.3	+4.0
URZ	Urewera	3.93	34	Pn	Pn	08 33 53.1	-0.1
	0.2nm,0.3s,baz=224,slow=7.1,SNR=2.4						
URZ				Pg	Pb	08 34 01.6	-0.8
	2.1nm,0.3s,baz=237,slow=11,SNR=9.8						
URZ				Sn	Sn	08 34 40.7	+1.7
	1.7nm,0.3s,baz=255,slow=20,SNR=3.0						
URZ	Urewera	3.93	34	P	Pb	08 34 02.8	+0.4
TOZ	Tahuroa Road	3.94	14	P	Pb	08 34 00.7	-1.7
MWZ	Matawai	4.06	38	P	Pn	08 33 55.5	+0.6
ODZ	Otahua Downs	4.40	217	P	Pn	08 33 58.5	-1.0
AWAZ	Awhitu Peninsu	4.50	3	P	Pb	08 34 08.4	-3.6
MKAZ	Moumakai	4.50	8	P	Pb	08 34 08.4	-3.7
JCZ	Jackson Bay	4.79	237	P	Pn	08 34 09.0	+4.0
WCZ	Waipu Caves	5.62	0	P	Pb	08 34 25.4	-5.7
ASAR	Alice Springs	38.04	285	P	P	08 40 11.4	+0.3
	0.4nm,0.6s,baz=125,slow=6.5,SNR=4.9						
WRA	Warramunga Arr	40.10	290	P	P	08 40 28.2	-0.1
	1.9nm,0.9s,baz=127,slow=8.0,SNR=2.8						
TORD	Torodi Ar. Bea	150.97	195	PKPbc	PKPbc	08 52 45.2	-0.5
	0.3nm,0.7s,baz=166,slow=1.7,SNR=4.2						

UCR 24 08:33:56.8±0.4**, 10.°63N×86.°27W, h17**^{km}±4^{km}**, MD3.6, 1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUEV	Buena Vista	0.86	79	⇓iP	Pb	08 34 12.9	-0.6
BUEV				eS	Sb	08 34 24.4	-0.4
GB1A	Borinquen Arri	0.88	78	eP	Pb	08 34 12.7	-0.9
GB1A				eS	Sb	08 34 24.5	-0.6
JTS	Las Juntas de	1.34	105	eP	Pn	08 34 20.1	-0.7
ARE1	Arenal 1	1.54	96	eP	Pn	08 34 23.3	-0.2
ACON	Acoyapa	1.71	39	eP	Pn	08 34 25.8	-0.1

ISCJB ***24*** *09:13:10.9±0.7, 64.°89N±0.°04×30.°4E±0.°2, h0^{km}, Error ellipse: s-maj=9.6km s-min=5.0km az=15.9*

BER ***24*** *09:13:14.7±4.7, 64.°83N×30.°34E, h0^{km}, ML2.5(NAO), Suspected explosion*

IDC ***24*** *09:13:14.1±1.9, 64.°78N×31.°01E, h0^{km}, mb1 3.0/4, mb1mx2.8/43, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=24.5km s-min=9.1km az=103.0*

NAO ***24*** *09:13:15.0±1.4, 64.°87N×30.°19E, ML2.5*

ISC 24 09:13:13.1±1.0**, 64.°84N**±0.°04×**30.°60E**±0.°08**, h0**^{km}**, n19,** σ**2.^{s}00**/33**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	Apatity Array	2.95	18	Pn	Pn	09 14 01.5	+0.5
	baz=196,slow=11						
APA0				Lg	Lg	09 14 46.5	
	baz=204,slow=28						
APA0	Apatity Array	2.95	18	Pn	Pn	09 14 01.5	+0.5
	baz=196,slow=11						
APA0				Sg	Sg	09 14 46.5	-1.1
	baz=204,slow=28						
FIA0	FINESS Array S	3.97	213	Pn	Pn	09 14 15.2	+0.1
	baz=29,slow=14						
FIA0				Pg	Pb	09 14 24.4	+0.5
	baz=26,slow=16						
FIA0				Lg	Lg	09 15 14.4	
	baz=25,slow=37						
FIA0	FINESS Array S	3.97	213	Pn	Pn	09 14 15.2	+0.1
	baz=29,slow=14						
FIA0				Pg	Pb	09 14 24.4	+0.5
	baz=26,slow=16						
FIA0				Sg	Sb	09 15 14.4	+2.0
	baz=25,slow=37						
FINES	FINESS Array B	3.97	213	Pn	Pn	09 14 15.3	+0.1
	0.1nm,0.3s,baz=33,slow=13,SNR=7.6						
FINES				Pg	Pb	09 14 24.3	+0.5
	0.5nm,0.3s,baz=29,slow=15,SNR=10						
FINES				Sn	Sn	09 15 03.4	+1.1
	0.3nm,0.3s,baz=31,slow=19,SNR=3.5						
FINES				Lg	Lg	09 15 15.3	
	1.6nm,0.3s,baz=33,slow=28,SNR=13						
FINES				Rg	Rg	09 15 34.2	
	6.3nm,0.9s,baz=35,slow=29,SNR=5.0						
ARA0	ARCESS Array S	5.12	340	Pn	Pn	09 14 30.8	-0.1
	baz=156,slow=16						
ARA0				Sn	Sn	09 15 27.0	-3.6
	baz=161,slow=28						
ARA0				Lg	Lg	09 15 49.2	
	baz=154,slow=37						
ARA0	ARCESS Array S	5.12	340	Pn	Pn	09 14 30.8	-0.1
	baz=156,slow=16						
ARA0				Sn	Sn	09 15 27.0	-3.6
	baz=161,slow=28						
ARA0				Sg	Sb	09 15 49.2	+3.9
	baz=154,slow=37						
ARCES	ARCESS Array B	5.12	340	Pn	Pn	09 14 30.8	-0.1
	0.8nm,0.3s,baz=156,slow=14,SNR=81						
ARCES				Sn	Sn	09 15 29.5	-1.0
	0.5nm,0.3s,baz=159,slow=25,SNR=5.4						
ARCES				Lg	Lg	09 15 47.7	
	1.2nm,0.3s,baz=154,slow=31,SNR=11						
KIF	Kilpisjarvi	5.68	322	Pn	Pn	09 14 40.0	+1.5
KIF				Sn	Sn	09 15 46.2	+1.8
KIF				Lg	Lg	09 16 06.4	
KIF	Kilpisjarvi	5.68	322	Pn	Pn	09 14 40.0	+1.5
KIF				Sn	Sn	09 15 46.2	+1.8
KIF				Sg	Sb	09 16 06.4	+4.9
PRGR	Permogore	7.50	108	eP	Pn	09 15 04.8	+1.2
	33nm,0.5s						
HFS	Hagfors	9.12	247	Pn	Pn	09 15 25.8	+0.1
	0.1nm,0.3s,baz=48,slow=13,SNR=5.4						
HFS				Sn	Sn	09 17 04.6	-4.3
	0.2nm,0.3s,baz=56,slow=23,SNR=3.6						
HFS				Lg	Lg	09 17 54.6	
	0.3nm,0.3s,baz=57,slow=30,SNR=5.7						
HFS	Hagfors	9.12	247	Pn	Pn	09 15 24.3	-1.4
	baz=51,slow=12						
HFS	Hagfors	9.12	247	Pn	Pn	09 15 24.3	-1.4
	baz=51,slow=12						
NB2	NORSAR Subarra	9.60	256	Pn	Pn	09 15 30.2	-2.2
	baz=62,slow=16						
NB2	NORSAR Subarra	9.60	256	Pn	Pn	09 15 30.2	-2.2
	baz=62,slow=16						
NOA	NORSAR Array B	9.60	256	Pn	Pn	09 15 32.7	+0.4
	0.0nm,0.3s,baz=64,slow=21,SNR=3.8						
NOA				Lg	Lg	09 18 16.3	
	0.0nm,0.3s,baz=65,slow=21,SNR=4.5						
NRA0	NORESS Array S	9.63	254	Pn	Pn	09 15 31.6	-1.1
	baz=57,slow=16						
NRA0	NORESS Array S	9.63	254	Pn	Pn	09 15 31.6	-1.1
	baz=57,slow=16						

NNC ***24*** *09:22:02.4±2.2, 41.°75N×79.°18E, h0^{km}, mb3.3, mpv3.2, Error ellipse: s-maj=14.7km s-min=8.8km az=158.0*

KRNET ***24*** *09:22:03.9±0.1, 41.°88N×79.°26E, h18^{km}, mb2.5*

SOME ***24*** *09:22:03.4, 41.°80N×79.°32E, h15^{km}*

ISC 24 09:22:02.7±2.0**, 41.°82N**±0.°06×**79.°25E**±0.°05**, h0**^{km}±12^{km}**, n34,** σ**1.^{s}22**/57**, 14C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.92	317	⇑iP	Pg	09 22 20.2	-0.1
	baz=15						
PRZ				⇑iS	Sg	09 22 32.2	+0.1
	baz=15						
SATY	Saty	1.39	334	P	Pn	09 22 28.1	-1.3
	5.2nm,0.1s						
SATY				S	Sb	09 22 46.7	-1.1
	41nm,0.1s						
SATY	Saty	1.39	334	eP	Pn	09 22 28.6	-0.8
	5.4nm,0.1s						
SATY				eS	Sb	09 22 46.5	-1.3
	43nm,0.1s						
PDGK	Podgornoye	1.52	7	⇑P	Pn	09 22 30.7	-0.5
	1.5nm,0.2s						
PDGK				⇑S	Sg	09 22 56.9	+5.4
	23nm,0.4s						
PDGK	Podgornoye	1.52	7	⇓iP	Pn	09 22 30.8	-0.4
	baz=7.0						
PDGK				⇓iS	Sn	09 22 50.3	-1.4
	baz=7.0						
KDJ	Kajisay	1.57	282	⇑iP	Pb	09 22 32.5	-0.2
	baz=80						
KDJ				⇑iS	Sb	09 22 53.2	-0.1
	baz=80						
KPKS	Kokpek	1.70	346	eP	Pb	09 22 34.2	-0.6
	21nm,0.2s						
KPKS				eS	Sb	09 22 56.1	-0.7
	34nm,0.3s						
KTMS	Ketmen	1.82	26	Pg	Pb	09 22 36.6	-0.3
	11nm,0.1s						
KTMS				Lg	Lg	09 23 02.0	
	11nm,0.2s						
KTMS	Ketmen	1.82	26	eP	Pb	09 22 36.4	-0.5
	11nm,0.1s						
KTMS				eS	Sg	09 23 00.4	-0.7
	11nm,0.2s						
TNSS	Tian-Shan	2.10	306	Pg	Pb	09 22 42.1	+0.4
	3.5nm,0.3s						
TNSS				Lg	Lg	09 23 10.4	
	11nm,0.4s						
TNSS	Tian-Shan	2.10	306	eP	Pg	09 22 43.0	+0.1
	3.3nm,0.1s						
TNSS				eS	Sg	09 23 11.6	+1.6
	11nm,0.4s						
MDOK	Medeo	2.11	310	Pg	Pb	09 22 41.4	-0.5
	4.2nm,0.2s						
MDOK				Lg	Lg	09 23 09.8	
	40nm,0.5s						
MDOK	Medeo	2.11	310	eP	Pb	09 22 42.8	+0.9
	3.6nm,0.1s						
MDOK				eS	Sg	09 23 11.6	+1.1
	39nm,0.3s						
KOTS	Kotyrbulak	2.12	313	Pg	Pb	09 22 42.0	0.0
	3.7nm,0.2s						
KOTS				Lg	Lg	09 23 10.4	
	42nm,0.4s						
KOTS	Kotyrbulak	2.12	313	eP	Pb	09 22 42.7	+0.7
	3.5nm,0.1s						
KOTS				eS	Sg	09 23 10.9	+0.1
	30nm,0.2s						
ULHL	Ulahol	2.28	282	⇓iP	Pb	09 22 43.4	-1.4
	baz=80						
ULHL				⇓iS	Sb	09 23 12.2	-1.4
	baz=80						
IZV	Izvestkoviy	2.30	303	Pg	Pb	09 22 44.8	-0.3
	3.0nm,0.1s						
IZV				Lg	Lg	09 23 15.5	
	26nm,0.2s						
IZV	Izvestkoviy	2.30	303	eP	Pb	09 22 45.5	+0.4
	3.6nm,0.1s						
IZV				eS	Sg	09 23 15.7	-0.8
	26nm,0.2s						
MNBS	Baschi	2.34	345	Pg	Pb	09 22 45.7	-0.1
	6.0nm,0.3s						
MNBS				Lg	Lg	09 23 17.1	
	28nm,0.3s						
MNBS	Baschi	2.34	345	eP	Pb	09 22 46.3	+0.5
	6.2nm,0.1s						
MNBS				eS	Sg	09 23 17.1	-0.9

	16nm,0.2s						
NRN	Naryn	2.47	262	⇑iP	Pb	09 22 46.5	-1.5
	baz=61						
NRN				⇑iS	Sb	09 23 17.6	-1.5
	baz=61						
DJR	Jarkent	2.54	9	Pg	Pb	09 22 48.9	-0.3
	3.5nm,0.2s						
DJR				Lg	Lg	09 23 21.7	
	7.1nm,0.3s						
DJR	Jarkent	2.54	9	eP	Pb	09 22 48.8	-0.4
	3.5nm,0.2s						
DJR				eS	Sb	09 23 21.6	+0.5
	7.1nm,0.3s						
BOOM	Boomskoye usch	2.55	286	⇓iP	Pn	09 22 46.8	+1.4
	baz=85						
BOOM				⇓iS	Sn	09 23 18.3	+1.1
	baz=85						
CHKK	Chushkaly	2.63	321	eP	Pb	09 22 51.1	+0.5
	3.9nm,0.2s						
CHKK				eS	Sg	09 23 25.4	-1.7
	56nm,0.3s						
KTBS	Karatobe	2.67	316	Pg	Pb	09 22 51.8	+0.3
	2.4nm,0.2s						
KTBS				Lg	Lg	09 23 27.2	
	25nm,0.2s						
KTBS	Karatobe	2.67	316	eP	Pb	09 22 52.1	+0.7
	2.0nm,0.1s						
KTBS				eS	Sg	09 23 27.2	-1.4
	15nm,0.2s						
KST	Kastek	2.72	298	Pg	Pb	09 22 52.4	+0.1
	3.2nm,0.3s						
KST				Lg	Lg	09 23 28.3	
	9.8nm,0.6s						
KST	Kastek	2.72	298	eP	Pb	09 22 53.0	+0.7
	3.3nm,0.2s						
KST				eS	Sg	09 23 28.9	-1.3
	8.3nm,0.3s						
TKM2	Tokmak 2	2.92	293	⇑Pg	Pb	09 22 54.1	-1.6
	0.7nm,0.4s						
TKM2				⇑Lg	Lg	09 23 32.9	
	2.9nm,0.4s						
TKM2	Tokmak 2	2.92	293	⇑eP	Pn	09 22 51.9	+1.3
	baz=92						
TKM2				⇑iS	Sn	09 23 27.2	+0.8
	baz=92						
KZA	Kyzart	3.00	276	⇓eP	Pn	09 22 53.5	+1.8
	baz=75						
KZA				⇓iS	Sn	09 23 29.4	+0.9
	baz=75						
KAPS	Kapalarasan	3.46	1	Pg	Pb	09 23 05.1	+0.2
	0.9nm,0.2s						
KAPS				Lg	Lg	09 23 50.0	
	3.6nm,0.4s						
ARLS	Aral	3.68	272	⇑iP	Pn	09 23 02.5	+1.6
	baz=72						
ARLS				⇑iS	Sn	09 23 45.9	+0.8
	baz=72						

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*DDA **24** 09:23:56.7, 39°.45N×28°.13E, h7^{km}±5^{km}, ML2.5*
*ISK **24** 09:23:56.4, 39°.45N×28°.14E, h6^{km}, ML1.9/5*
*ISCJB **24** 09:23:57.1±0.6, 39°.45N±0°.03×28°.15E±0°.04, h2^{km}±5^{km},*
Error ellipse: s-maj=5.1km s-min=3.8km az=138.1
ISC 24 09:23:56.9±1.0**, 39°.45N**±0°.03×**28°.15E**±0°.03**, h9**^{km}±9^{km}**,**
n12, σ0ˢ.50/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	Balikesir	0.28	313	PG	Pg	09 24 02.6	+0.1
BALB				SG	Sg	09 24 07.2	+0.9
DURS	Dursunbey	0.30	59	iP	Pg	09 24 02.3	-0.6
DURS				iS	Sg	09 24 07.2	+0.4
STEP	BALIKESIR_Sava	0.34	258	iP	Pg	09 24 03.6	0.0
STEP				iS	Sb	09 24 09.3	-1.3
STEP				IAML_P			
	comp=Z,2µm,0.2s						
DEMI	Demirci	0.60	132	iP	Pg	09 24 08.4	-0.1
DEMI				iS	Sb	09 24 17.9	-0.3
USAK	Uak-Merkez	1.00	137	iP	Pn	09 24 17.1	0.0
USAK				iS	Sn	09 24 31.4	0.0
MANT	Manisa	1.01	161	iP	Pn	09 24 17.6	+0.2
MANT				iS	Sb	09 24 30.2	+0.1
MANT				IAML_P			
	comp=Z,482nm,0.1s						
KULA	Kula-Manisa	1.01	157	PG	Pb	09 24 16.4	-0.3
KULA				SG	Sb	09 24 30.7	+0.6
TVSB	Tavsanli	1.02	89	PG	Pb	09 24 16.6	-0.2
ULDT	Uludag	1.03	47	iP	Pn	09 24 17.8	0.0
ULDT				iS	Sn	09 24 32.6	+0.2
ULDT				IAML_P			
	comp=Z,440nm,0.2s						
GDZ	Gediz	1.10	109	iP	Pn	09 24 18.6	+0.1
GDZ				iS	Sg	09 24 32.3	+0.1
ARMT	Armutlu	1.24	26	PN	Pb	09 24 20.2	-0.4
ARMT				SN	Sn	09 24 38.4	+1.0
RKY	Sarkoy-Tekirda	1.44	329	PN	Pn	09 24 23.4	+0.1
RKY				SN	Sg	09 24 43.2	-0.2

DDA 24 09:43:24.7, 41°.23N×41°.62E, h7^{km}±2^{km}**, ML2.5,**
Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBOC	Borcka	0.12	18	iP	Pg	09 43 28.1	+0.7
DBOC				IAML_P			
	comp=Z,9µm,0.1s						
DBAD	Bademkaya	0.22	165	iP	Pg	09 43 30.6	+1.5
DBAD				iS	Sg	09 43 33.9	+1.8
DBAD				IAML_P			
	comp=Z,4µm,0.1s						
DAGI	Agillar	0.27	124	iP	Pb	09 43 31.1	-0.9
DAGI				iS	Sb	09 43 35.6	-1.2
DDEM	Demirkent	0.35	163	iP	Pg	09 43 32.4	+0.8
DDEM				iS	Sg	09 43 37.3	+1.1
DDEM				IAML_P			
	comp=Z,2µm,0.1s						

MAN 24 09:53:33.1, 12°.37N×124°.70E, h24^{km}**, mb3.8, ML2.5,**
MS2.0, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	Catarman	0.14	344	eP	Pb	09 53 38.8	+0.8
CNP				eS	Sb	09 53 43.1	+1.8
BESP	Borongan	1.05	137	eP	Pn	09 53 52.1	-0.2
BESP				eS	Sn	09 54 06.4	+0.2
PLP	Palo	1.23	167	⇑iP	Pn	09 53 54.4	-0.4
PLP				iS	Sb	09 54 11.0	-0.1

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*IDC **24** 10:00:51.5±1.0, 18°.29N×103°.33W, h0^{km}, mb4.0/12,*
mb1 4.1/17, mb1mx4.0/36, mbtmp3.9/17, ML3.6/5, MS3.4/9,
Ms1 3.4/9, ms1mx3.1/38, Error ellipse: s-maj=30.4km
s-min=13.8km az=48.0
*NEIC **24** 10:00:55.0±0.0, 18°.17N×103°.39W, h9^{km}, mb4.2/97,*
MD4.2(MEX), After MEX.
*MEX **24** 10:00:55.0±0.3, 18°.17N×103°.39W, h9^{km}±2^{km}, MD4.2*
ISC 24 10:00:53.3±1.2**, 18°.16N**±0°.07×**103°.41W**±0°.06**, h16**^{km}±6^{km}**,**
n272, σ1ˢ.84/276**, mb4.3**/67**, MS3.5**/7**, Near coast of**
Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.14	27	ePg	Pg	10 00 57.3	+0.1
MMIG				eSg	Sg	10 00 59.6	-0.2
MMIG	Aquila	0.14	27	eP	Pg	10 00 57.3	+0.1
MMIG				eS	Sg	10 00 59.6	-0.2
EZ5V		1.32	352	eP	Pn	10 01 16.1	-1.3
EZ5V				eS	Sb	10 01 33.0	-1.8
ZIIG	Zihuatanejo	1.94	106	ePn	Pn	10 01 24.5	-1.1
ZIIG				eSn	Sn	10 01 47.4	-2.1
ZIIG	Zihuatanejo	1.94	106	eP	Pn	10 01 24.5	-1.1
ZIIG				iS	Sn	10 01 47.4	-2.1
CJM	Chamela	2.04	311	ePn	Pn	10 01 26.7	-0.2
CJM				eSn	Sn	10 01 50.6	-1.5
CJM	Chamela	2.04	311	eP	Pn	10 01 26.7	-0.2
CJM				iS	Sn	10 01 50.6	-1.5
ZAIG	Zacatecas	4.65	10	ePn	Pn	10 02 03.0	-0.2
ZAIG				eSn	Sn	10 02 59.5	+2.4
TLIG	Tlapa	4.66	97	ePn	Pn	10 02 04.5	+1.4
TLIG				eSn	Sn	10 02 57.5	+0.5
LVIG	Laguna Verde	6.80	76	ePn	Pn	10 02 33.4	+1.0
H06E1	SOCORRO T-PHAS	7.16	276	T	T	10 09 51.1	
	SNR=46						
LNIG	Linares	7.64	28	ePn	Pn	10 02 45.7	+1.6
CMIG	Matias Romero	8.20	96	Pn	Pn	10 02 52.9	+1.1
	0.8nm,0.3s,baz=283,slow=13,SNR=10						
CMIG				Sn	Sn	10 04 28.8	+4.6
	0.8nm,0.3s,baz=70,slow=20,SNR=1.6						
CMIG				Lg	Lg	10 05 09.5	
	2.4nm,0.3s,baz=2.3,slow=23,SNR=11						
HPIG		8.98	347	ePn	Pn	10 03 04.7	+2.2
CCIG	Comitan	10.94	98	ePn	Pn	10 03 31.6	+2.2
TX31	Lajitas Ar. Si	11.12	359	ePn	Pn	10 03 34.2	+2.3
TXAR	Lajitas Array	11.12	359	Pn	Pn	10 03 33.8	+1.9
	0.1nm,0.3s,baz=175,slow=16,SNR=22						
TXAR				Sn	Sn	10 05 28.9	-7.1
	0.0nm,0.3s,baz=164,slow=30,SNR=2.8						
TXAR				Lg	Lg	10 06 37.3	
	0.1nm,0.3s,baz=162,slow=30,SNR=3.0						
TXAR				LR	LR	10 08 25.0	
	comp=Z,247nm,20.6s,baz=0.0,slow=41						
JCT	Junction City	12.70	14	ePn	Pn	10 03 55.5	+2.1
APG	El Apazote	12.80	102	Pn	Pn	10 03 55.2	+0.2
	0.2nm,0.3s,baz=312,slow=18,SNR=2.2						
APG				LR	LR	10 08 39.6	
	comp=Z,190nm,21.1s,baz=62,slow=37						
MNTX	Cornudas Mount	13.60	353	ePn	Pn	10 04 07.4	+1.9
MNTX	Cornudas Mount	13.60	353	P	Pn	10 04 06.6	+1.0
	baz=172						
WHTX	Lake Whitney,	14.79	20	ePn	Pn	10 04 21.9	+0.1
WHTX	Lake Whitney,	14.79	20	P	Pn	10 04 21.4	-0.4
	baz=203						
ABTX	Abilene, Hawle	14.80	13	ePn	Pn	10 04 21.6	-0.4
121A	Cookes Peak, D	14.84	345	P	Pn	10 04 24.1	+1.4
	baz=164						
TUC	Tucson	15.58	336	ePn	Pn	10 04 34.1	+1.7
	2.0nm,0.9s						
TUC	Tucson	15.58	336	P	Pn	10 04 33.7	+1.3
	baz=153						
NATX	Nacogdoches	15.68	29	ePn	Pn	10 04 34.0	+0.3
	38nm,0.6s						
NATX	Nacogdoches	15.68	29	P	Pn	10 04 36.8	+3.1
	baz=212,SNR=5.3						
MSTX	Muleshoe	15.76	2	ePn	Pn	10 04 35.4	+0.7
	12nm,1.1s						
MSTX	Muleshoe	15.76	2	P	Pn	10 04 34.9	+0.2
	baz=182,SNR=5.0						
ETX06	Route 59 and C	15.87	29	ePn	Pn	10 04 35.6	-0.5
	23nm,0.8s						
214A	Organ Pipe Nat	16.15	330	P	Pn	10 04 41.4	+1.7
	baz=146						
AMTX	Amarillo	16.73	5	P	Pn	10 04 46.8	-0.3
	baz=186						
ANMO	Albuquerque	16.94	351	Pn	Pn	10 04 48.5	-1.3
	0.1nm,0.3s,baz=32,slow=19,SNR=2.3						
ANMO	Albuquerque	16.94	351	ePn	Pn	10 04 49.2	-0.6
	2.2nm,1.0s						
ANMO	Albuquerque	16.94	351	P	Pn	10 04 48.9	-1.0
	baz=170						
WMOK	Wichita Mounta	17.02	13	ePn	Pn	10 04 49.7	-1.0
	2.8nm,0.8s						
WMOK	Wichita Mounta	17.02	13	P	Pn	10 04 49.3	-1.4
	baz=195						
X16A	Lo Mia Camp, P	17.70	338	eP	Pn	10 04 59.2	-0.3
	3.9nm,1.1s						
Z41A	Richland Creek	17.80	30	P	Pn	10 04 58.2	-2.2
	baz=215						
Y14A	Wickenburg	17.90	333	ePn	Pn	10 05 03.1	+1.4
	3.9nm,1.1s						
SWSC	Sam W. Stewart	18.46	325	P	P	10 05 08.8	+0.4
	baz=140						
MIAR	Mount Ida	18.53	26	eP	P	10 05 06.8	-2.3
	8.6nm,1.1s						
MIAR	Mount Ida	18.53	26	P	P	10 05 06.8	-2.3
	baz=211						
WUAZ	Wupatki	18.68	339	eP	P	10 05 11.6	+0.6
	4.8nm,1.0s						
WUAZ	Wupatki	18.68	339	P	P	10 05 11.4	+0.5
	baz=156						
TUL1	Leonard	18.93	19	eP	P	10 05 10.9	-2.6
	15nm,1.0s						
TUL1	Leonard	18.93	19	P	P	10 05 11.5	-2.0
	baz=203						
T25A	Trinidad	18.93	358	P	P	10 05 13.9	+0.2
	baz=177						
W39A	Magazine	19.00	25	eP	P	10 05 13.3	-1.1
	22nm,1.3s						
W39A	Magazine	19.00	25	P	P	10 05 12.7	-1.6
	baz=209,SNR=5.2						
IRM	Iron Mountain	19.07	329	P	P	10 05 16.1	+1.0
	baz=144						
W13A	Hualapai Mount	19.27	333	eP	Pn	10 05 21.8	+3.3
	2.1nm,1.0s						
PFO	Pinyon Flats O	19.32	325	P	P	10 05 18.5	+0.5
	0.2nm,0.3s,baz=154,slow=9.1,SNR=3.7						
PFO				LR	LR	10 12 28.5	
	comp=Z,105nm,19.0s,baz=148,slow=36						
PFO	Pinyon Flats O	19.32	325	eP	P	10 05 18.5	+0.5
	2.9nm,0.9s						
PFO	Pinyon Flats O	19.32	325	P	P	10 05 19.7	+1.7
	baz=140						
BELC	Belle Mtn. Jos	19.38	327	P	P	10 05 20.6	+2.0
	baz=141						
MVCO	Mesa Verde	19.50	348	eP	P	10 05 20.6	+0.6
	5.3nm,1.1s						
MVCO	Mesa Verde	19.50	348	P	P	10 05 20.2	+0.2
	baz=165						
SDCO	Great Sand Dun	19.60	355	eP	P	10 05 22.4	+1.2
	4.8nm,1.1s						
SDCO	Great Sand Dun	19.60	355	P	P	10 05 21.8	+0.6
	baz=174,SNR=7.5						
W41B	Gary Mavity, V	19.64	28	P	P	10 05 20.1	-1.2
	baz=213						
BRAL	Brewton	19.69	46	P	P	10 05 20.4	-1.5
	baz=232						
WHAR	Wooly Hollow	19.72	28	eP	P	10 05 19.9	-2.2
	11nm,0.8s						
MURC	Murrieta	19.72	324	P	P	10 05 23.0	+0.7
	baz=138						
S22A	4UR Ranch, Cre	19.74	352	P	P	10 05 23.0	+0.3
	baz=170						
GMRC	Granite Mounta	19.83	329	P	P	10 05 24.2	+0.6
	baz=144						
147A	Livingston	19.86	40	eP	P	10 05 21.1	-2.6
	24nm,0.9s						
147A	Livingston	19.86	40	P	P	10 05 21.7	-2.0
	baz=227						
HHAR	Hobbs	19.90	23	eP	P	10 05 21.5	-2.6
	5.2nm,0.9s						
249A	Camden	20.14	44	P	P	10 05 24.5	-2.2
	baz=231						
CIS	Catalina Islan	20.28	321	P	P	10 05 28.9	+0.6
	baz=135						
148A	Greensboro	20.28	42	P	P	10 05 25.5	-2.8
	baz=228						
FCAR	Ozark Folk Cen	20.29	27	eP	P	10 05 25.8	-2.6
	11nm,1.0s						
U40A	Yellville	20.38	25	P	P	10 05 27.0	-2.4
	baz=210,SNR=10.0						
BFSC	Mount Baldy Ra	20.45	324	P	P	10 05 30.2	-0.1
	baz=138						
PV05	Paradox Valley	20.46	347	eP	P	10 05 29.5	-1.0
	5.5nm,0.9s						
PV13	Radium Mtn., P	20.48	348	eP	P	10 05 30.2	-0.5
	3.7nm,1.0s						
KNB	Kanab	20.53	338	eP	P	10 05 31.7	+0.5
	2.3nm,0.8s						
PV17	East Wray Mesa	20.62	348	eP	P	10 05 32.1	-0.2
	5.4nm,1.0s						
PV12	Saucer Basin,	20.63	348	eP	P	10 05 32.2	-0.1
	3.9nm,1.0s						
MWC	Mount Wilson	20.66	324	eP	P	10 05 33.3	+0.6
	6.6nm,0.9s						
LCMT	Little Creek M	20.68	337	eP	P	10 05 33.4	+0.6
	1.8nm,0.8s						
PV20	West Nyswonger	20.68	348	eP	P	10 05 33.3	+0.4
	3.7nm,0.9s						
PV14	Lion Creek, Pa	20.73	347	eP	P	10 05 33.7	+0.3
	8.1nm,1.2s						
PV10	Paradox Valley	20.73	347	eP	P	10 05 33.3	-0.2
	9.2nm,0.8s						
PKCU	Pink Cliffs	20.74	340	eP	P	10 05 34.7	+1.1
	4.3nm,0.9s						
KSCO	Kaye Shedlock'	20.79	2	eP	P	10 05 33.4	-0.6
	7.6nm,1.0s						
GSC	Goldstone, Bar	20.81	328	eP	P	10 05 35.5	+1.4
	4.9nm,0.8s						
GSC	Goldstone, Bar	20.81	328	P	P	10 05 34.2	+0.1
	baz=142,SNR=5.3						
LRAL	Lakeview Retre	20.90	42	eP	P	10 05 32.5	-2.5
	11nm,1.1s						
LRAL	Lakeview Retre	20.90	42	P	P	10 05 32.6	-2.4
	baz=229						
SHPR	Sheep Range	21.01	333	eP	P	10 05 37.9	+1.6
	3.3nm,0.9s						
X46A	Booneville	21.01	36	P	P	10 05 35.0	-1.2
	baz=223						
SMCO	Snowmass	21.17	352	eP	P	10 05 37.6	-0.7
	4.1nm,1.3s						
MTPU	Mount Pierson	21.24	341	eP	P	10 05 40.0	+0.9
	4.2nm,0.9s						
Z49A	Columbiana	21.30	42	P	P	10 05 37.3	-2.1
	baz=229						
Y48A	Jasper	21.38	40	P	P	10 05 37.6	-2.6
	baz=227,SNR=5.7						
X47A	Russelville	21.39	37	P	P	10 05 38.3	-2.0
	baz=224						
PLAL	Pickwick Lake	21.61	36	eP	P	10 05 40.5	-2.2
	13nm,1.1s						
151A	Opelika	21.67	45	P	P	10 05 40.9	-2.5
	baz=233						
KSU1	Kansas State U	21.69	14	P	P	10 05 42.6	-0.8
	baz=198						
Z50A	Ashland	21.73	43	eP	P	10 05 42.4	-1.6
	12nm,0.8s						
Z50A	Ashland	21.73	43	P	P	10 05 41.5	-2.4
	baz=230						
MPMC	Manual Prospec	21.74	328	P	P	10 05 44.5	+0.2
	baz=141,SNR=8.5						
FURC	Furnace Creek,	21.76	330	P	P	10 05 44.1	-0.1
	baz=143						
Y49A	Blount Mountai	21.81	41	eP	P	10 05 44.1	-0.8
	7.1nm,0.8s						
Y49A	Blount Mountai	21.81	41	P	P	10 05 42.7	-2.1
	baz=228						
X48A	Hartselle	21.82	39	eP	P	10 05 43.7	-1.3
	8.8nm,0.8s						
X48A	Hartselle	21.82	39	P	P	10 05 43.2	-1.8
	baz=226						
TPNV	Topopah Spring	21.86	331	eP	P	10 05 46.5	+1.0
TPNV	Topopah Spring	21.86	331	P	P	10 05 46.1	+0.5
	baz=146,SNR=8.0						
ISA	Isabella, Lake	21.96	326	eP	P	10 05 46.5	0.0
	9.7nm,1.0s						
ISA	Isabella, Lake	21.96	326	P	P	10 05 46.9	+0.4
	baz=139						
W47A	Westpoint	22.07	36	P	P	10 05 45.2	-2.4
	baz=223,SNR=6.4						
TMUT	Trail Mountain	22.12	344	eP	P	10 05 49.5	+1.0
	2.3nm,0.9s						
152A	Waverly Hall	22.17	46	P	P	10 05 46.1	-2.6
	baz=234						
V46A	Holladay	22.19	35	P	P	10 05 46.9	-1.9
	baz=222						
Y50A	Piedmont	22.26	42	P	P	10 05 48.5	-1.1
	baz=230						
Z51A	Franklin	22.26	44	P	P	10 05 47.5	-2.1
	baz=232						
TIGA	Tifton	22.28	50	eP	P	10 05 47.7	-2.2
	68nm,1.4s						
X49A	Woodville	22.30	40	P	P	10 05 48.4	-1.7
	baz=227						
CWC	Cottonwood Cre	22.34	328	P	P	10 05 50.9	+0.2
	baz=141						
W48A	Pulaski	22.37	38	P	P	10 05 48.1	-2.7
	baz=225						
VES	Vestal, Richgr	22.42	325	P	P	10 05 52.2	+0.8
	baz=138						
GRAC	Grapevine Rang	22.42	330	P	P	10 05 52.0	+0.5
	baz=143						
CCM	Cathedral Cave	22.50	26	P	P	10 05 50.0	-2.2
	baz=211						
V47A	Nunnelly	22.53	36	P	P	10 05 50.0	-2.5
	baz=223,SNR=13						
U46A	Springville	22.57	34	P	P	10 05 50.9	-2.1
	baz=220						
WVT	Waverly	22.59	34	eP	P	10 05 50.8	-2.4
	4.3nm,0.8s						
WVT	Waverly	22.59	34	P	P	10 05 50.9	-2.2
	baz=222						
X50B	Fort Payne	22.68	41	P	P	10 05 51.3	-2.9
	baz=229						
Z52A	Williamson	22.68	45	P	P	10 05 51.4	-2.8
	baz=233						
Y51A	Rockmart	22.69	43	P	P	10 05 51.7	-2.6
	baz=231,SNR=7.1						
R11A	Troy Canyon, C	22.75	335	eP	P	10 05 56.0	+1.0
	1.9nm,1.0s						
R11A	Troy Canyon, C	22.75	335	P	P	10 05 55.2	+0.1
	baz=149						
W49A	Belvidere	22.75	39	P	P	10 05 51.9	-3.0
	baz=226						
N23A	Red Feather La	22.76	355	P	P	10 05 54.7	-0.5
	baz=174						
V48A	Smith Brothers	22.86	37	P	P	10 05 53.5	-2.5
	baz=224						
S44A	Carbondale	23.08	30	P	P	10 05 56.0	-2.3
	baz=216						
U47A	Clarksville	23.11	35	P	P	10 05 55.5	-3.1
	baz=222						
X51A	Calhoun	23.25	42	P	P	10 05 57.3	-2.7
	baz=230						
Z53A	Monticello	23.31	46	P	P	10 05 58.0	-2.6
	baz=234						
W50A	Signal Mountai	23.38	40	P	P	10 05 58.5	-2.9
	baz=228						
CLTN	Cedars of Leba	23.39	37	eP	P	10 05 58.7	-2.7
	12nm,1.1s						
V49A	McMinnville	23.41	38	P	P	10 05 59.1	-2.6
	baz=226						
GOGA	Godfrey	23.46	46	P	P	10 05 59.1	-3.0
	baz=234						
T47A	Sharon Grove	23.61	34	eP	P	10 06 01.3	-2.3
	27nm,1.1s						
T47A	Sharon Grove	23.61	34	P	P	10 06 01.0	-2.6
	baz=222,SNR=6.6						
Y53A	Monroe	23.64	45	P	P	10 06 01.0	-2.8
	baz=233						
OMMB	Old Mammoth Mi	23.71	328	eP	P	10 06 06.0	+1.1
	6.7nm,1.4s						
MDPB	Devils Postpil	23.77	328	eP	P	10 06 06.0	+0.6
	5.4nm,1.0s						
V50A	Pikevile	23.82	39	P	P	10 06 02.5	-3.2
	baz=228,SNR=9.0						
X52A	Dahlonega	23.89	43	P	P	10 06 02.9	-3.4
	baz=232,SNR=5.0						
NV11	Mina Array Sit	23.95	331	eP	P	10 06 08.0	+1.0
	0.8nm,1.4s						
U49A	Red Boiling Sp	24.00	37	P	P	10 06 04.7	-2.6
	baz=225						
NV01	Mina Array Sit	24.01	330	eP	P	10 06 08.8	+1.1
NVAR	Mina Array Bea	24.01	330	P	P	10 06 08.8	+1.1
	1.5nm,0.6s,baz=150,slow=10,SNR=21						
NVAR				PcP	PcP	10 09 49.7	+0.3
	0.1nm,0.5s,baz=144,slow=9.8,SNR=3.5						
NVAR				LR	LR	10 15 38.6	
	comp=Z,106nm,18.5s,baz=161,slow=37						
W52A	Murphy	24.17	42	eP	P	10 06 05.9	-3.1
	16nm,1.0s						
W52A	Murphy	24.17	42	P	P	10 06 06.6	-2.4
	baz=231						
X53A	Estanollee	24.21	44	P	P	10 06 06.1	-3.2
	baz=233						
Y54A	Tignall	24.25	46	P	P	10 06 06.5	-3.2
	baz=235						
RYN	Ryan	24.28	330	eP	P	10 06 10.1	0.0
	2.3nm,1.0s						
V51A	Loudon	24.36	40	eP	P	10 06 08.1	-2.6
	13nm,0.6s						
V51A	Loudon	24.36	40	P	P	10 06 08.4	-2.3
	baz=229						
KVN	Kaiserville	24.42	331	eP	P	10 06 12.0	+0.6
	3.4nm,0.7s						
U50A	Jamestown	24.48	38	P	P	10 06 09.2	-2.6
	baz=227						
P43A	Skaggs, Pawnee	24.56	26	P	P	10 06 10.3	-2.1
	baz=213						
T49A	Edmonton	24.56	36	P	P	10 06 09.9	-2.6
	baz=224						
WAKR	Walker	24.62	329	eP	P	10 06 14.2	+1.0
	3.5nm,1.1s						
TKL	Tuckaleechee C	24.63	41	P	P	10 06 09.3	-3.8
	8.7nm,0.8s,baz=198,slow=9.6,SNR=10						
TKL				LR	LR	10 18 19.2	
	comp=Z,41nm,18.5s,baz=260,slow=43						
ELK	Elko	24.70	338	P	P	10 06 14.4	+0.5
	0.6nm,0.6s,baz=235,slow=1.8,SNR=4.1						

W53A	Cullowhee	24.71	43	P	P	10 06 10.9	-3.0
	baz=232,SNR=7.6						
BG3	Lake Jocassee	24.75	43	*e*P	P	10 06 12.1	-2.1
	19nm,1.3s						
X54A	Belton	24.85	45	P	P	10 06 12.5	-2.6
	baz=234						
V52A	Sevierville	24.86	41	P	P	10 06 11.8	-3.3
	baz=230						
T50A	Nancy	24.90	37	P	P	10 06 12.4	-3.1
	baz=226,SNR=5.4						
YERR	Yerington	24.90	330	*e*P	P	10 06 16.8	+1.0
	2.5nm,0.8s						
U51A	La Follette	24.95	39	P	P	10 06 13.0	-3.0
	baz=228						
WCI	Wyandotte Cave	24.97	33	*e*P	P	10 06 14.2	-2.0
	9.4nm,0.7s						
WCI	Wyandotte Cave	24.97	33	P	P	10 06 13.6	-2.6
	baz=221						
PD31	Pinedale Array	25.08	349	*e*P	P	10 06 14.5	-2.9
	2.5nm,1.5s						
PDAR	Pinedale Array	25.08	349	P	P	10 06 16.2	-1.1
	1.0nm,0.9s,baz=161,slow=9.4,SNR=6.6						
PDAR				PcP	PcP	10 09 51.3	-0.4
	0.3nm,0.6s,baz=112,slow=4.0,SNR=3.4						
PNTR	Pine Nut	25.16	329	*e*P	P	10 06 19.4	+1.3
	4.7nm,0.9s						
S49A	Springfield	25.18	35	P	P	10 06 15.0	-3.1
	baz=224						
V53A	Saluda	25.24	42	*e*P	P	10 06 16.3	-2.4
	5.8nm,0.8s						
V53A	Saluda	25.24	42	P	P	10 06 16.0	-2.7
	baz=232						
W54A	Cherokee Point	25.30	44	P	P	10 06 15.9	-3.2
	baz=234						
TZTN	Tazewell	25.34	40	P	P	10 06 16.8	-2.8
	baz=229						
VCNR	Virginia City	25.34	330	*e*P	P	10 06 19.3	-0.4
	4.1nm,1.0s						
T51A	Gray	25.38	39	P	P	10 06 16.8	-3.1
	baz=228						
HDIL	Hopedale	25.42	26	P	P	10 06 17.6	-2.6
	baz=213						
BLO	Bloomington	25.57	32	*e*P	P	10 06 19.0	-2.6
	13nm,0.6s						
S50A	Richmond	25.61	37	P	P	10 06 20.1	-1.8
	baz=226						
Q48A	North Vernon	25.78	33	P	P	10 06 20.8	-2.8
	baz=221						
V54A	Nebo	25.86	43	P	P	10 06 21.6	-2.7
	baz=233						
KMSC	Kings Mountain	25.90	45	P	P	10 06 21.7	-2.9
	baz=235						
S51A	Beattyville	26.04	38	P	P	10 06 23.2	-2.7
	baz=227						
R50A	Paris	26.07	36	P	P	10 06 23.4	-2.8
	baz=225						
LOHW	Long Hollow	26.09	348	*e*P	P	10 06 25.9	-0.6
	2.2nm,0.8s						
BEKR	Beckworth	26.13	329	*e*P	P	10 06 27.5	+0.7
	3.0nm,0.9s						
T53A	Wise	26.24	40	P	P	10 06 25.4	-2.4
	baz=230						
P49A	Miami Univ. Ec	26.76	33	P	P	10 06 29.5	-2.8
	baz=222						
W57A	Gilead	26.81	46	P	P	10 06 28.9	-3.9
	baz=237						
V56A	Mocksville	26.84	45	P	P	10 06 29.1	-4.0
	baz=235						
U55A	TA2, Sparta	26.88	43	P	P	10 06 30.1	-3.4
	baz=233						
S53A	Williamson	26.94	39	P	P	10 06 30.6	-3.4
	baz=230						
HLID	Hailey	26.97	342	P	P	10 06 33.7	-0.7
	baz=156						
O48A	Farmland	27.07	32	P	P	10 06 31.5	-3.6
	baz=221						
Q51A	Peebles	27.14	36	P	P	10 06 32.6	-3.1
	baz=226						
U56A	King	27.22	44	P	P	10 06 34.0	-2.6
	baz=234						
S54A	Dingess, Beckl	27.51	40	P	P	10 06 36.5	-2.7
	baz=231						
Q52A	Bidwell	27.70	37	P	P	10 06 37.9	-3.0
	baz=227						
BLA	Blacksburg	27.71	42	P	P	10 06 38.4	-2.6
	baz=233						
P52A	Corning	28.24	36	P	P	10 06 43.7	-1.9
	baz=227						
P53A	Whipple	28.56	37	P	P	10 06 44.9	-3.6
	baz=228						
N51A	Ashland	29.00	34	P	P	10 06 50.0	-2.4
	baz=225						
AGMN	Agassiz Nation	30.68	10	P	P	10 07 05.1	-2.1
	baz=194						
N55A	Marion Center	30.80	38	P	P	10 07 05.0	-3.4
	baz=230						
O57A	Amberson	31.25	40	P	P	10 07 09.7	-2.6
	baz=233						
ULM	Lac du Bonnet	32.58	9	P	P	10 07 22.2	-1.6
	2.0nm,0.5s,baz=211,slow=3.9,SNR=3.3						
ULM				LR	LR	10 21 17.4	
	comp=Z,102nm,19.3s,baz=212,slow=38						
J54A	Appleton	32.63	35	P	P	10 07 21.3	-3.1
	baz=228						
M58A	Price's Panora	32.66	39	P	P	10 07 21.4	-3.3
	baz=233						
DLBC	Dease Lake	44.72	340	*e*P	P	10 09 07.0	+1.4
	6.9nm,0.9s						
YKA	Yellowknife Ar	44.97	353	LR	LR	10 29 34.0	
	comp=Z,10nm,20.2s,baz=162,slow=38						
PTGA	Pitinga	46.66	109	P	P	10 09 21.6	+0.1
	1.6nm,0.7s,baz=296,slow=16,SNR=3.8						
PTGA	Pitinga	46.66	109	*e*P	P	10 09 23.1	+1.5
LPAZ	La Paz	48.77	132	P	P	10 09 39.4	+0.9
	1.2nm,0.8s,baz=302,slow=4.9,SNR=4.7						
LPAZ	La Paz	48.77	132	*e*P	P	10 09 38.5	0.0
DAWY	Dawson	51.93	341	*e*P	P	10 10 00.6	-0.6
	2.2nm,0.8s						
FID	Port Fidalgo	52.34	335	*e*P	P	10 10 04.9	+0.7
	6.3nm,0.8s						
MENT	Mentasta	52.62	338	*e*P	P	10 10 06.2	-0.1
	2.9nm,0.7s						
EPYK	Eagle Plains	52.85	344	*e*P	P	10 10 07.9	-0.1
	5.5nm,0.8s						
EPYK	Eagle Plains	52.85	344	P	P	10 10 07.1	-0.9
	baz=139,SNR=5.8						
EGAK	Eagle	52.98	341	*e*P	P	10 10 08.9	0.0
	6.2nm,0.9s						
DOT	Dot Lake	53.19	339	*e*P	P	10 10 11.2	+0.7
	3.0nm,0.9s						
PAX	Paxson	53.27	338	*e*P	P	10 10 11.4	+0.3
	6.0nm,0.9s						
SCRK	Sand Creek	53.37	339	*e*P	P	10 10 12.4	+0.5
	4.9nm,1.1s						
RIDG	Independent Ri	53.52	339	*e*P	P	10 10 13.4	+0.5
	16nm,0.8s						
INK	Inuvik	53.60	347	*e*P	P	10 10 13.0	-0.4
	5.7nm,1.0s						
PMR	Palmer	53.88	335	*e*P	P	10 10 15.2	-0.2
	3.8nm,0.8s						
SUA	Susitna One	54.47	334	*e*P	P	10 10 20.2	+0.3
	5.9nm,0.7s						
HDA	Harding Lake	54.66	338	*e*P	P	10 10 21.4	+0.2
	5.7nm,1.0s						
HDA	Harding Lake	54.66	338	P	P	10 10 21.3	+0.1
	baz=127						
RND	Reindeer	54.77	337	*e*P	P	10 10 22.2	+0.1
	8.0nm,1.0s						
RSO	Redoubt South	54.83	333	*e*P	P	10 10 23.2	+0.5
ILAR	Eielson Array	54.86	339	P	P	10 10 22.2	-0.3
	4.4nm,0.9s,baz=146,slow=5.9,SNR=39						
ILAR				PcP	PcP	10 11 24.7	+0.1
	0.5nm,0.6s,baz=141,slow=2.1,SNR=4.3						
ILB	Eielson Array	54.86	339	*e*P	P	10 10 22.3	-0.3
	9.1nm,1.0s						
MCK	McKinley	54.98	337	*e*P	P	10 10 23.4	-0.1
	5.3nm,0.8s						
WRH	Wood River Hil	55.10	338	*e*P	P	10 10 23.5	-0.8
	3.2nm,0.8s						
CCB	Clear Creek Bu	55.10	338	*e*P	P	10 10 23.0	-1.4
	2.6nm,0.8s						
POKR	Poker Plat Res	55.25	339	P	P	10 10 25.0	-0.4
	baz=126						
PPLA	Purkeypile	55.78	335	*e*P	P	10 10 29.2	-0.2
	10nm,1.1s						
BPAW	Bear Paw Mtn.	55.94	337	*e*P	P	10 10 30.2	-0.2
	4.9nm,1.1s						
SVW2	Sparrevohn	56.35	333	*e*P	P	10 10 32.9	-0.5
	3.9nm,0.8s						
TTA	Tatalina	57.34	334	*e*P	P	10 10 40.2	-0.3
	5.2nm,0.8s						
COLD	Coldfoot	57.40	340	*e*P	P	10 10 41.3	+0.5
	4.3nm,0.8s						
TOLK	Toolik Lake Re	58.03	342	P	P	10 10 44.9	-0.3
	baz=126						
CPUP	Villa Florida	62.92	133	P	P	10 11 19.7	+0.6
	1.9nm,1.0s,baz=328,slow=11,SNR=2.9						
CPUP	Villa Florida	62.92	133	*e*P	P	10 11 21.0	+1.8
	10.0nm,1.4s						
PEA1	Petropavlovsk-	80.87	323	*e*P	P	10 13 07.3	+0.7
PETK	Petropavlovsk-	80.87	323	P	P	10 13 07.3	+0.7
	2.0nm,0.8s,baz=81,slow=12,SNR=4.7						
ARCES	ARCESS Array B	85.42	16	P	P	10 13 30.1	+0.4
	1.6nm,0.7s,baz=306,slow=4.1,SNR=5.0						
NB2	NORSAR Subarra	85.54	26	P	P	10 13 30.6	0.0
	comp=Z,0.6nm,0.8s,baz=308,slow=5.1						
NB200	NORSAR Array S	85.54	26	*e*P	P	10 13 30.4	-0.1
NOA	NORSAR Array B	85.54	26	P	P	10 13 30.4	-0.1
	comp=Z,1.4nm,0.9s,baz=300,slow=5.0,SNR=3.8						
ESDC	Sonseca Array	85.61	50	P	P	10 13 31.4	0.0
	comp=Z,0.3nm,0.3s,baz=307,slow=4.6,SNR=10						
ESDC				LR	LR	10 52 18.8	
	comp=Z,26nm,18.9s,baz=140,slow=36						
TORD	Torodi Ar. Bea	99.87	73	LR	LR	10 56 35.7	
	comp=Z,27nm,21.1s,baz=305,slow=34						
CD2	Chengdu	124.66	332	Pdif	Pdif	10 16 25.8	-2.2
QIZ	Qiongzhong	130.67	317	PKP	PKPdf	10 20 04.4	-0.1
QIZ				PP	PP	10 22 19.0	+0.3
QIZ	Qiongzhong	130.67	317	SS	SS	10 39 46.0	-1.1
QIZ				LR	LR		
	comp=N,280nm,28.9s						
QIZ				LR	LR		
	comp=E,260nm,18.1s						

IDC ***24*** *10:05:23.8±2.4, 3°.12S×127°.76E, h0^{km}, mb3.5/2, mb1 3.9/3, mb1mx3.6/23, mbtmp3.6/3, ML3.8/1, Error ellipse: s-maj=186.0km s-min=29.2km az=67.0*

ISCJB ***24*** *10:05:24.5±0.6, 2°.73S±0°.05×128°.38E±0°.04, h10^{km}, mb3.6/2, Error ellipse: s-maj=7.2km s-min=5.5km az=15.5*

DJA ***24*** *10:05:25.5±0.7, 3°S±6°×12°8E±°, h15^{km}±8^{km}, M3.6/6, MLv3.6/6*

ISC 24 10:05:24.8±0.8**, 2°.81S**±0°.06×**128°.37E**±0°.05**, h10**^{km}**, n8,** σ**1**^{s}**.09**/13**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.78	134	P	Pb	10 05 41.0	+0.5
MSAI				S	Sb	10 05 52.7	+1.6
NLAI	Namlea	1.33	251	P	Pn	10 05 50.0	+0.4
NLAI				S	Sg	10 06 09.1	+1.2
LBMI	Labuha	2.32	338	P	Pn	10 06 03.7	+0.5
LBMI				S	Sn	10 06 32.7	+0.9
SANI	Sanana	2.49	288	P	Pn	10 06 04.7	-0.8
SANI				S	Sn	10 06 35.0	-1.0
SWI	Sorong	3.48	56	P	Pn	10 06 18.8	-0.3
SWI				S	Sn	10 07 00.0	-0.3
WRA	Warramunga Arr	18.00	162	P	Pn	10 09 33.4	-2.0
	0.3nm,0.3s,baz=341,slow=12,SNR=1.9						
ASAR	Alice Springs	21.42	166	P	P	10 10 12.6	-0.6
	1.9nm,0.5s,baz=348,slow=12,SNR=36						
MKAR	Makanchi Array	63.85	327	P	P	10 15 57.6	0.0
	0.2nm,0.5s,baz=130,slow=6.4,SNR=1.8						

ISK ***24*** *10:13:50.3, 40°.10N×31°.68E, h6^{km}, ML2.1/9*

DDA ***24*** *10:13:50.2, 40°.21N×31°.74E, h7^{km}±3^{km}, ML2.5*

ISC 24 10:13:50.3±1.1**, 40°.15N**±0°.02×**31°.71E**±0°.03**, h2**^{km}±11^{km}**, n17,** σ**0**^{s}**.82**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIBS	BOLU	0.29	21	*i* P	Pg	10 13 55.0	-1.0
KIBS				*i* S	Sg	10 14 01.2	+1.4
AUMIH	MIHALICIK	0.33	212	PG	Pg	10 13 55.9	-0.8
AUMIH	MIHALICIK	0.33	212	*i* P	Pg	10 13 55.8	-0.8
AUMIH				*i* S	Sg	10 14 02.7	+1.8
MDUB	Mudurnu	0.51	310	PG	Pg	10 14 00.5	+0.4
MDUB				SG	Sb	10 14 09.4	-0.6
SVRH	Sivrihisar-ESK	0.71	192	PG	Pg	10 14 03.7	-0.3
SVRH				SG	Sg	10 14 13.9	+0.7
AUSIV	SIVRIHISAR	0.72	191	PG	Pg	10 14 03.7	-0.4
BCAM	Yenicaga	0.72	22	*i* P	Pg	10 14 04.1	0.0
BCAM				*i* S	Sg	10 14 13.4	-0.1
BCAM				IAML_P			
	comp=Z,1µm,0.4s						
SRCK	Saricakaya, Es	0.84	263	PG	Pg	10 14 06.3	-0.1
SRCK				SG	Sb	10 14 18.4	-0.9
ANTO	Ankara	0.88	108	PG	Pb	10 14 08.0	-0.2
GULT	Gulveren	0.96	288	PG	Pg	10 14 08.3	-0.4
SAHE	Sakarya_HENDEK	0.96	317	*i* P	Pb	10 14 09.5	-0.3
SAHE				*i* S	Sn	10 14 26.8	+1.6
SAHE				IAML_P			
	comp=Z,661nm,0.3s						
BORA	Eskisehir	1.00	255	PG	Pg	10 14 08.8	-0.7
BORA	Eskisehir	1.00	255	*i* P	Pg	10 14 09.6	+0.1
BORA				*i* S	Sn	10 14 25.6	-0.6
KIZT	Kizilcal	1.27	174	PN	Pg	10 14 14.3	-0.4
KKUL	Konya-Kulu	1.35	136	*i* P	Pb	10 14 16.6	+0.3
KKUL				*i* S	Sn	10 14 36.1	+1.4
KKUL				IAML_P			
	comp=Z,104nm,0.4s						
DELI	KIRIKKALE	1.70	94	*i* P	Pb	10 14 22.4	0.0
DELI				*i* S	Sg	10 14 44.9	-0.1
DELI				IAML_P			
	comp=Z,312nm,0.3s						
TVSB	Tavsanli	1.87	249	PN	Pn	10 14 22.9	-0.5

IDC ***24*** *10:38:59.3±0.9, 35°.97N×141°.88E, h0^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.6/39, mbtmp3.5/9, ML2.8/2, MS2.5/2, Ms1 2.5/2, ms1mx2.2/44, Error ellipse: s-maj=23.2km s-min=19.0km az=136.0*

ISCJB ***24*** *10:39:00.5±1.1, 36°.00N±0°.04×141°.87E±0°.06, h19^{km}±7^{km}, mb3.6/7, Error ellipse: s-maj=8.3km s-min=7.2km az=169.3*

JMA ***24*** *10:39:02.4±0.3, 36°.06N×141°.74E, h30^{km}, M3.3*

ISC 24 10:38:59.7±2.0**, 36°.03N**±0°.04×**141°.83E**±0°.06**, h3**^{km}±12^{km}**, n29,** σ**1**^{s}**.10**/30**, mb3.7**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.85	248	P	Pb	10 39 17.2	+0.1
CHOJ				S	Sb	10 39 28.3	-0.6
JHYU	Hitachinakayam	1.05	288	P	Pg	10 39 20.2	+0.4
JHYU				S	Sg	10 39 32.3	-1.2
JIHU	Itakohorinouch	1.06	267	P	Pb	10 39 21.0	+0.4
JIHU				S	Sb	10 39 34.7	-0.1
JHO	Hitachi	1.17	300	P	Pb	10 39 21.9	-0.6
JHO				S	Sb	10 39 37.2	-0.9
JSMT	Sammumatsuo	1.19	251	P	Pg	10 39 23.3	+0.9
BSO1	Boso 1	1.54	207	P	Pb	10 39 28.6	+0.1
JFK	Kawauchi	1.54	330	P	Pn	10 39 27.8	-0.2
JFT	Otama	1.91	322	P	Pn	10 39 33.8	+0.7
JAG	Ashikaga	1.96	282	P	Pn	10 39 32.8	-1.0
JMM	Marumori	2.01	336	P	Pn	10 39 35.0	+0.5
JFY	Yanaizu	2.19	310	P	Pb	10 39 39.0	-1.0
JKT	Katashina	2.21	290	P	Pn	10 39 37.4	+0.1
JKT				S	Sn	10 40 03.3	-1.8
MJAR	Matsushiro Arr	2.97	281	Pn	Pn	10 39 47.3	-0.4
	0.4nm,0.3s,baz=100,slow=3.8,SNR=14						
MJAR				Sn	Sn	10 40 25.3	+1.5
	0.5nm,0.3s,baz=37,slow=9.2,SNR=4.8						
MAT	Matsushiro	2.97	281	P	Pn	10 39 49.0	+1.3
MAT				S	Sn	10 40 25.5	+1.7
JHJ	Hachijo jima 2	3.36	211	Pn	Pn	10 39 52.5	-0.5
	9.7nm,0.3s,baz=331,slow=23,SNR=9.4						
JHJ				Sn	Sn	10 40 31.8	-1.6
	18nm,0.3s,baz=64,slow=21,SNR=5.1						
JHJ				LR	LR	10 40 56.3	
	comp=Z,33nm,18.5s,baz=87,slow=35						
KLR	Kul'dur	15.11	334	LR	LR	10 48 30.4	
	comp=Z,32nm,18.9s,baz=177,slow=38						
H11N2	WAKE ISLAND Hy	27.35	120	T	T	11 13 25.9	
	baz=311,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	27.36	120	T	T	11 13 34.0	
	baz=311,slow=75,SNR=7.6						
H11N3	WAKE ISLAND Hy	27.37	120	T	T	11 13 28.0	
	baz=311,slow=75,SNR=6.6						
H11S1	WAKE ISLAND Hy	28.04	122	T	T	11 14 11.6	
	baz=314,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	28.04	122	T	T	11 14 14.5	
	baz=314,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	28.06	122	T	T	11 14 11.8	
	baz=314,slow=75,SNR=14						
SONM	Songino Array	28.63	305	P	P	10 44 59.9	+2.5
	0.3nm,0.3s,baz=111,slow=7.9,SNR=1.8						
MKAR	Makanchi Array	44.94	303	P	P	10 47 14.5	-1.3
	0.4nm,0.6s,baz=84,slow=9.1,SNR=3.6						
ILAR	Eielson Array	50.17	32	P	P	10 47 55.5	-0.6
	0.7nm,0.8s,baz=263,slow=6.1,SNR=7.4						
WRA	Warramunga Arr	56.12	188	P	P	10 48 40.8	+0.5
	2.2nm,1.1s,baz=359,slow=6.7,SNR=2.7						
ASAR	Alice Springs	59.84	188	P	P	10 49 05.8	-0.7
	0.9nm,1.1s,baz=3.2,slow=6.0,SNR=2.9						
NVAR	Mina Array Bea	75.32	53	P	P	10 50 43.7	-0.9
	0.2nm,0.6s,baz=297,slow=4.0,SNR=2.4						
PDAR	Pinedale Array	78.13	45	P	P	10 51 01.8	+1.4
	0.2nm,0.3s,baz=297,slow=4.0,SNR=2.5						

DDA 24 10:39:40.5, 39°.34N×29°.15E, h5^{km}**, ML2.8, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.36	133	*i* P	Pb	10 39 49.4	-0.1
GDZ				*i* S	Sb	10 39 55.0	-0.5
GDZ				IAML_P			
	comp=Z,4µm,0.1s						
DEMI	Demirci	0.44	229	*i* P	Pg	10 39 47.7	-1.4
DEMI				*i* S	Sg	10 39 53.5	-1.4
DEMI				IAML_P			
	comp=Z,4µm,0.1s						
DURS	Dursunbey	0.58	297	*i* P	Pg	10 39 50.3	-1.5
DURS				*i* S	Sg	10 39 56.3	-3.0
USAK	Uak-Merkez	0.63	189	*i* P	Pg	10 39 53.0	+0.4
USAK				*i* S	Sg	10 40 00.0	-0.8
ULDT	Uludag	0.80	360	*i* P	Pb	10 39 57.2	+0.1
ULDT				*i* S	Sg	10 40 07.1	+0.7
ULDT				IAML_P			
	comp=Z,1µm,0.1s						
MANT	Manisa	0.96	209	*i* P	Pg	10 39 57.6	-1.3
MANT				*i* S	Sg	10 40 09.0	-2.4
KHAL	Karahalli	1.00	164	*i* P	Pb	10 40 00.5	+0.1
KHAL				*i* S	Sg	10 40 13.3	+0.6
KHAL				IAML_P			
	comp=Z,650nm,0.2s						
STEP	BALIKESIR_Sava	1.11	273	*i* P	Pg	10 40 00.6	-1.2
STEP				*i* S	Sg	10 40 13.6	-2.5
STEP				IAML_P			
	comp=Z,717nm,0.1s						
BORA	Eskisehir	1.15	61	*i* P	Pn	10 40 03.7	+0.4
BORA				*i* S	Sn	10 40 20.1	+0.7
BORA				IAML_P			
	comp=Z,1µm,0.1s						
SRCK	Saricakaya, Es	1.34	58	*i* P	Pg	10 40 07.4	+1.2
SRCK				*i* S	Sn	10 40 26.2	+2.1
GEYV	SAKARYA_Geyve	1.45	37	*i* P	Pg	10 40 08.7	+0.4
GEYV				*i* S	Sg	10 40 29.7	+2.7
AUMIH	MIHALICIK	1.88	73	*i* P	Pg	10 40 17.2	+0.6
AUMIH				*i* S	Sg	10 40 44.8	+3.8
SAHE	Sakarya_HENDEK	2.00	40	*i* P	Pg	10 40 19.8	+0.9
SAHE				*i* S	Sg	10 40 47.6	+2.8
SAHE				IAML_P			
	comp=Z,76nm,0.2s						

IDC ***24*** *10:51:30.8±0.5, 13°.51N×121°.78E, h0^{km}, mb4.2/24, mb1 4.3/24, mb1mx4.1/52, mbtmp4.2/24, MS3.6/16, Ms1 3.6/16, ms1mx3.4/33, Error ellipse: s-maj=16.9km s-min=9.2km az=47.0*

ISCJB ***24*** *10:51:33.3±0.4, 13°.56N±0°.02×121°.79E±0°.03, h25^{km}±3^{km}, mb4.5/52, MS3.5/15, Error ellipse: s-maj=4.3km s-min=3.4km az=171.3*

MAN ***24*** *10:51:33.4, 13°.53N×121°.78E, h16^{km}, mb5.5, ML4.6, MS4.8*

MAN INTENSITY IV - BOAC SANTA CRUZ AND MOGPOG MARINDUQUE; INTENSITY III - LUCENA CITY; ABRA DE ILOG OCCIDENTAL MINDORO.

NEIC ***24*** *10:51:35.8±1.5, 13°.47N×121°.69E, h35^{km}±5^{km}, mb4.4/29, Error ellipse: s-maj=19.0km s-min=10.1km az=98.0*

NEIC Felt [IV PIVS] at Boac, Mogpog and Santa Cruz, Marinduque. Felt [III PIVS] at Abra de Ilog, Mindoro and at Lucena, Luzon.

ISC 24 10:51:33.5±0.9**, 13°.58N**±0°.03×**121°.77E**±0°.03**, h16**^{km}±6^{km}**, n113,** σ**1**^{s}**.52**/121**, mb4.4**/52**, MS3.5**/15**, 4C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	Boac	0.14	149	*e*P	Pg	10 51 36.5	-0.9
BOAC				*e*S	Sb	10 51 40.5	-0.1
GQP	Guinayangan	0.73	64⇓	*i*P	Pg	10 51 46.7	-1.1
GQP				*i* S	Sg	10 51 56.1	-1.4
PGP	Puerto Galera	0.80	265⇑	*e*P	Pb	10 51 47.5	-1.6
PGP				*i* S	Sg	10 52 00.5	+0.8
AUQP	San Andres	0.92	106	*e*P	Pg	10 51 51.1	-0.2
AUQP				*e*S	Sn	10 52 09.9	+5.3
TGY	Tagaytay City	0.96	303	Pg	Pb	10 51 51.8	-0.1
	1µm,0.3s,baz=140,slow=3.1,SNR=83						
TGY				Lg	Lg	10 52 04.0	
	2µm,0.3s,baz=133,slow=21,SNR=8.5						
TGY	Tagaytay City	0.96	303⇑	*e*P	Pn	10 51 52.8	+0.3
TGY				*i* S	Sn	10 52 07.5	+1.6
POLP	Polilio Island	1.16	8	*e*P	Pn	10 51 53.8	-1.2
POLP				*e*S	Sg	10 52 12.9	+1.9
OTRP	Odiongan	1.23	169	*e*P	Pn	10 51 55.4	-0.7
OTRP				*e*S	Sg	10 52 12.9	-0.5
SJMP	San Jose	1.28	210	*e*P	Pn	10 51 56.0	-0.8
SJMP				*e*S	Sg	10 52 17.4	+2.5
LUBP	Lubang	1.49	276	*e*P	Pn	10 51 58.2	-1.5
LUBP				*e*S	Sg	10 52 22.0	+0.4
BALP	Baler	2.16	355	*e*P	Pn	10 52 09.8	+0.9
BUSP	Coron	2.19	225	*e*P	Pn	10 52 09.3	0.0
BUSP				*e*S	Sn	10 52 36.4	+0.2
RCP	Roxas	2.22	155⇑	*e*P	Pn	10 52 09.2	-0.5
RCP				*e*S	Sn	10 52 36.5	-0.3
PVCP	Virac	2.32	89	*e*P	Pn	10 52 11.3	+0.2
SMPP	San Manuel, Pa	2.77	338	*e*P	Pn	10 52 18.2	+0.9
CUYO	Cuyo Island	2.81	195	*e*P	Pn	10 52 17.1	-0.8
CUYO				*e*S	Sn	10 52 50.5	-0.9
JAP	San Jose, Anti	2.82	176⇑	*e*P	Pn	10 52 18.2	+0.2
SCZP	Santa Cruz	2.83	321	*e*P	Pn	10 52 19.9	+1.8
CNP	Catarman	3.01	110	*e*P	Pn	10 52 21.1	+0.5
CNP				*e*S	Sg	10 53 14.6	+4.3
GUIM	Jordan	3.04	165	*e*P	Pn	10 52 21.1	+0.1
GUIM				*e*S	Sb	10 53 01.5	-2.7
ENPP	El Nido	3.29	224	*e*P	Pn	10 52 25.2	+0.8
ENPP				*e*S	Sg	10 53 26.4	+7.2
BOLP	Bolinao	3.31	327	*e*P	Pn	10 52 26.3	+1.5
CAUP	Cauayan	3.35	1	*e*P	Pn	10 52 27.0	+1.8
PALP	Palanan	3.52	10	*e*P	Pn	10 52 27.4	-0.2
PALP				*e*S	Sb	10 53 14.4	-3.6
LLP	Lapu-Lapu	3.89	146	*e*P	Pn	10 52 34.0	+1.4
LLP				*e*S	Sn	10 53 18.7	+0.7
CVP	Callao Caves	4.10	1⇓	*e*P	Pn	10 52 37.2	+1.6
ABRA	Dolores	4.17	346	*e*P	Pb	10 52 42.0	-4.6
APYP	Conner	4.29	353	*e*P	Pn	10 52 40.1	+1.9
SNPH	Sibulan	4.45	161	*e*P	Pn	10 52 45.2	+4.8
MSLP	Maasin	4.57	138	*e*P	Pn	10 52 41.9	-0.1
TWG	Pinlang	9.22	356	*e*Pn	Pn	10 53 47.1	+1.2
KKM	Kota Kinabalu	9.27	217	*e*Pn	Pn	10 53 45.9	-0.9
TPUB	Ta-pu	9.73	354	*e*Pn	Pn	10 53 54.8	+1.9
YULB	Yu-li	9.77	357	*e*Pn	Pn	10 53 53.8	+0.3
SBUM	Sibu	14.54	221	*e*Pn	Pn	10 54 57.2	-1.6
KSM	Kuching	16.53	224	*e*Pn	Pn	10 55 23.6	-1.3
	15nm,1.0s						
KAPI	Kappang	18.58	186	LR	LR	11 03 25.7	
	comp=Z,169nm,18.8s,baz=112,slow=39						
CHAI	Chaiyaphum	19.27	279	P	Pn	10 56 01.3	+2.6
	65µm,1.0s,607µm						
PBKT	Sadao Pong	20.30	281	P	Pn	10 56 12.9	+2.0
	6.2nm,1.1s,470nm						
UTTA	Uttaradit	20.84	284	P	Pn	10 56 19.2	+2.0
	17µm,0.8s						
PHRA	Phrae	21.27	286	P	P	10 56 22.4	+3.0
	2.3nm,0.9s						
PAYA	Payao	21.77	288	P	P	10 56 27.9	+3.2
	59µm,0.8s,697µm						
UMPA	Umpang Tak	22.29	280	P	P	10 56 34.7	+4.3
	52µm,1.0s						

GUMO	Guam	22.45	87	LR	LR	11 06 25.3	
	comp=Z,77nm,18.3s,baz=248,slow=40						
CM31	Chiang Mai Arr	22.46	285	eP	P	10 56 31.9	-0.4
	28nm,1.1s						
CMAR	Chiang Mai Arr	22.46	285	P	P	10 56 31.9	-0.3
	9.8nm,1.0s,baz=94,slow=7.7,SNR=37						
CMAR				LR	LR	11 05 51.8	
	comp=Z,68nm,18.2s,baz=116,slow=38						
CHTO	Chiang Mai	22.52	286	eP	P	10 56 33.6	+0.7
	8.5nm,0.8s						
XAN	Xi'an	23.47	332	eP	P	10 56 42.0	-0.5
	10nm,0.5s						
BATI	Baumata	23.70	175	P	P	10 56 44.5	-0.4
	56nm,0.5s,baz=294,slow=4.6,SNR=7.7						
KS15	Wonju Array Si	24.39	12	eP	P	10 56 51.0	0.0
	9.8nm,1.1s						
KSRS	Korea Array	24.40	12	P	P	10 56 51.6	+0.3
	1.8nm,0.7s,baz=200,slow=8.6,SNR=3.5						
KSRS				LR	LR	11 07 11.0	
	comp=Z,136nm,19.9s,baz=204,slow=38						
LEM	Lembang	24.67	216	LR	LR	11 07 59.7	
	comp=Z,160nm,18.7s,baz=92,slow=40						
PSI	Prapat	24.99	247	LR	LR	11 07 35.8	
	comp=Z,243nm,19.2s,baz=69,slow=39						
JHJ	Hachijo jima 2	25.46	37	LR	LR	11 04 37.2	
	comp=Z,85nm,21.2s,baz=285,slow=31						
BJT	Baijiatuau	26.80	350	eP	P	10 57 14.0	+1.1
	14nm,0.5s						
USRK	Ussuriysk Ar.	31.75	14	P	P	10 57 58.1	+1.2
	1.9nm,0.6s,baz=191,slow=7.7,SNR=6.2						
USRK				LR	LR	11 11 13.4	
	comp=Z,80nm,19.8s,baz=183,slow=37						
WR1	Warramunga Arr	35.53	159	eP	P	10 58 29.3	-0.8
WRA	Warramunga Arr	35.53	159	P	P	10 58 29.3	-0.8
	2.9nm,0.6s,baz=340,slow=12,SNR=16						
COCO	West Island	35.59	225	eP	P	10 58 29.1	-1.4
	0.1nm,0.5s						
SONA0	Songino Array	36.48	343	eP	P	10 58 38.9	+0.8
SONM	Songino Array	36.48	343	P	P	10 58 38.8	+0.8
	1.7nm,0.5s,baz=151,slow=8.9,SNR=7.0						
SONM				LR	LR	11 14 49.2	
	comp=Z,173nm,21.3s,baz=99,slow=38						
KLR	Kul'dur	36.49	11	P	P	10 58 38.9	+1.0
	0.7nm,0.5s,baz=242,slow=2.7,SNR=5.1						
AS31	Alice Springs	38.87	162	eP	P	10 58 56.8	-1.5
	1.4nm,0.6s						
ASAR	Alice Springs	38.87	162	P	P	10 58 58.6	+0.3
	2.4nm,0.7s,baz=340,slow=6.9,SNR=21						
ASAR				LR	LR	11 16 39.6	
	comp=Z,43nm,18.9s,baz=332,slow=39						
TLY	Talaya	40.72	343	LR	LR	11 17 16.6	
	comp=Z,127nm,20.3s,baz=156,slow=38						
MK31	Makanchi Array	46.75	323	eP	P	11 00 02.8	+0.7
	2.3nm,0.8s						
MK32	Makanchi Array	46.75	323	eP	P	11 00 01.6	-0.4
MKAR	Makanchi Array	46.75	323	P	P	11 00 01.7	-0.4
	1.4nm,0.8s,baz=128,slow=9.7,SNR=6.1						
MKAR				PcP	PcP	11 01 34.9	-0.5
	0.5nm,0.7s,baz=102,slow=6.2,SNR=2.4						
KDJ	Kajisay	47.85	315	eP	P	11 00 09.1	-1.9
	5.2nm,0.8s						
NRN	Naryn	48.41	314	eP	P	11 00 13.4	-2.0
	6.6nm,0.9s						
PETK	Petropavlovsk-	48.64	28	P	P	11 00 17.3	+0.7
	2.4nm,0.8s,baz=201,slow=7.9,SNR=4.4						
PEA1	Petropavlovsk-	48.64	28	eP	P	11 00 17.3	+0.7
STKA	Stephens Creek	49.03	158	P	P	11 00 19.1	-0.8
	1.5nm,0.8s,baz=322,slow=8.3,SNR=3.4						
STKA				LR	LR	11 23 49.1	
	comp=Z,43nm,18.1s,baz=354,slow=40						
STKA	Stephens Creek	49.03	158	eP	P	11 00 16.2	-3.6
	2.7nm,1.4s						
ZALV	Zalesovo Beam	49.65	332	P	P	11 00 24.0	-0.2
	1.3nm,0.4s,baz=132,slow=7.4,SNR=6.5						
ZALV				LR	LR	11 22 21.6	
	comp=Z,50nm,19.3s,baz=72,slow=37						
ZAA1	Zalesovo Array	49.65	332	eP	P	11 00 24.0	-0.3
KURK	Kurchatov	50.87	326	eP	P	11 00 34.6	+1.0
	18nm,0.6s						
KURBB	Kurchatov Arra	50.87	326	P	P	11 00 34.5	+0.9
	7.4nm,0.7s,baz=130,slow=7.9,SNR=35						
KK31	Karatay Array	52.80	314	eP	P	11 00 47.2	-1.0
	4.3nm,0.9s						
KKAR	Karatay Array	52.80	314	eP	P	11 00 47.5	-0.7
	4.3nm,0.9s						
SEY	Seymchan	53.82	17	P	P	11 00 56.3	+1.0
	2.1nm,0.9s,baz=98,slow=7.5,SNR=2.3						
BVAR	Borovoye Array	56.46	326	P	P	11 01 14.4	-0.2
	6.9nm,0.9s,baz=99,slow=6.5,SNR=14						
BRVK	Borovoye	56.53	326	eP	P	11 01 15.8	+0.8
	12nm,0.8s						
GEYT	Alibeck	61.05	306	P	P	11 01 47.0	+0.2
	1.3nm,0.4s,baz=57,slow=5.3,SNR=2.6						
GEYT				LR	LR	11 30 15.3	
	comp=Z,44nm,19.7s,baz=345,slow=38						
ABKAR	Akbulak array	61.51	319	eP	P	11 01 49.9	+0.2
	3.4nm,0.8s						
AKTO	Aktyubinsk	62.98	320	P	P	11 01 60.0	+0.5
	2.5nm,0.8s,baz=108,slow=9.6,SNR=5.2						
ARU	Arti	64.06	327	eP	P	11 02 06.3	-0.2
	6.3nm,0.9s						
KIRV	Kirov	69.32	328	P	P	11 02 40.1	0.0
	16nm,0.4s,baz=69,slow=3.6						
CAST	Castle Rocks	76.25	28	eP	P	11 03 21.6	+0.4
	5.0nm,0.8s						
BPAW	Bear Paw Mtn.	76.69	27	eP	P	11 03 24.7	+1.0
	3.7nm,0.9s						
MCK	McKinley	77.63	27	eP	P	11 03 28.4	-0.5
	5.6nm,0.8s						
ILAR	Eielson Array	78.40	26	P	P	11 03 32.4	-0.8
	1.0nm,0.7s,baz=247,slow=4.4,SNR=5.4						
ILB	Eielson Array	78.40	26	eP	P	11 03 33.5	+0.2
	1.2nm,0.7s						
RIDG	Independent Ri	79.43	27	eP	P	11 03 38.7	-0.3
	6.3nm,0.9s						
ARCES	ARCESS Array B	79.57	339	P	P	11 03 39.8	+0.3
	4.6nm,0.8s,baz=81,slow=7.5,SNR=4.1						
SPA0	Spitsbergen Ar	79.92	348	eP	P	11 03 42.2	+0.9
	8.4nm,0.9s						
SPITS	Spitsbergen Ar	79.92	348	P	P	11 03 41.3	0.0
	7.2nm,0.7s,baz=54,slow=7.5,SNR=7.1						
BR101	Keskin Array S	80.04	308	eP	P	11 03 41.6	-1.2
BRTR	Keskin Array B	80.04	308	P	P	11 03 41.6	-1.2
	0.7nm,0.9s,baz=72,slow=4.7,SNR=2.6						
EGAK	Eagle	80.82	26	eP	P	11 03 47.0	+0.7
	1.6nm,0.9s						
FIA0	FINESS Array S	80.90	331	eP	P	11 03 46.0	-0.7
FINES	FINESS Array B	80.90	331	P	P	11 03 46.0	-0.7
	1.2nm,0.6s,baz=46,slow=8.2,SNR=6.3						
FINES				LR	LR	11 43 18.3	
	comp=Z,68nm,19.0s,baz=32,slow=38						
INK	Inuvik	82.83	21	P	P	11 03 57.1	+0.3
	1.7nm,0.9s,baz=294,slow=7.7,SNR=3.3						
INK	Inuvik	82.83	21	eP	P	11 03 57.5	+0.6
	2.6nm,0.9s						
BUR08	Bucovina Ar. S	84.45	318	eP	P	11 04 05.1	-0.6
	3.3nm,0.9s						
NC405	NORSAR Array S	87.59	333	eP	P	11 04 20.2	-0.6
	10.0nm,0.8s						
NB2	NORSAR Subarra	87.84	333	P	P	11 04 21.6	-0.5
	comp=Z,0.8nm,0.5s,baz=69,slow=4.8						
NB200	NORSAR Array S	87.84	333	eP	P	11 04 21.5	-0.6
NOA	NORSAR Array B	87.84	333	P	P	11 04 21.5	-0.6
	comp=Z,0.7nm,0.5s,baz=68,slow=4.7,SNR=7.4						
NOA				LR	LR	11 48 35.6	
	comp=Z,83nm,18.3s,baz=60,slow=39						
GEC2	GERESS Array S	91.38	321	eP	P	11 04 38.7	-0.3
	comp=Z,1.5nm,0.6s						
GERES	GERESS Array B	91.38	321	P	P	11 04 39.2	+0.2
	comp=Z,0.2nm,0.3s,baz=57,slow=3.6,SNR=4.3						
TXAR	Lajitas Array	118.82	45	PKP	PKPdf	11 10 21.6	-0.4
	comp=Z,0.4nm,0.7s,baz=288,slow=0.9,SNR=4.0						
PLCA	Paso Flores	150.88	161	PKPbc	PKPbc	11 11 25.3	-0.5
	comp=Z,2.6nm,0.9s,baz=174,slow=9.2,SNR=3.7						

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*IDC **24** 11:03:12.2±2.0, 41°.48S×174°.26E, h0km, mb4.0/2, mb1 4.2/2, mb1mx3.9/14, mbtmp4.0/2, Error ellipse: s-maj=107.6km s-min=45.5km az=24.0*

*NEIC **24** 11:03:12.3±0.0, 41°.72S×174°.40E, h5km, ML4.5(WEL), After WEL.*

*ISCJB **24** 11:03:14.4±0.3, 41°.73S±0°.02×174°.33E±0°.03, h24km±3km, mb4.4/3, Error ellipse: s-maj=5.1km s-min=2.7km az=138.4*

*WEL **24** 11:03:14.7, 41°.6S±0°.6×174°.3E±0°.6, h14km±2km, M4.3/19, ML4.6/12, MLv4.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=144.9*

ISC 24 11:03:14.4±1.0, **41°.67S**±0°.03×**174°.31E**±0°.02, **h18**km±3km, **n131**, σ**1s.38**/136, **mb3.9**/3, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.11	222	S	Sg	11 03 22.4	+1.5
BSWZ	Blackbirch Sta	0.33	261	P	Pb	11 03 22.2	+0.4
BSWZ				S	Sb	11 03 28.0	+1.3
TUWZ	Tuamarina	0.36	310	P	Pb	11 03 22.0	-0.4
TUWZ				S	Sb	11 03 27.2	-0.6
TCW	Tory Channel	0.46	357	P	Pg	11 03 23.3	-0.5
SNZO	South Karori	0.46	40	ePg	Pb	11 03 23.9	-0.2
SNZO				eSg	Sb	11 03 31.2	+0.7
BHW	Baring Head	0.49	59	P	Pb	11 03 24.6	+0.1
BHW				S	Sb	11 03 31.6	+0.2
PLWZ	Palliser	0.71	82	P	Pn	11 03 29.3	-0.3
MSWZ	Moikau Station	0.75	71	P	Pg	11 03 29.5	+0.3
CAW	Cannon Point	0.80	46	P	Pb	11 03 29.3	-0.4
NNZ	Nelson	0.83	302	P	Pg	11 03 30.3	-0.4
DUWZ	D'Urville Isla	0.91	341	P	Pn	11 03 33.0	+0.7
KHZ	Kahutara	0.94	217	ePg	Pn	11 03 34.2	+1.4
KHZ	Kahutara	0.94	217	P	Pn	11 03 34.2	+1.4
MTW	Mount Morrison	1.03	61	P	Pg	11 03 34.5	+0.1
THZ	Tophouse	1.06	264	ePg	Pg	11 03 35.0	+0.1
TRWZ	Traveller	1.07	76	P	Pn	11 03 34.7	+0.2
HOWZ	Holdsworth Sta	1.19	50	P	Pb	11 03 36.7	+0.3
TMWZ	Te Maipa	1.31	65	P	Pn	11 03 38.0	+0.2
MRZ	Mangatainoka R	1.39	44	P	Pb	11 03 39.5	-0.3
TIWZ	Tintock	1.48	54	P	Pn	11 03 40.7	+0.5
QRZ	Quartz Range	1.58	301	ePn	Pb	11 03 43.5	+0.3
QRZ				eSn	Sb	11 04 02.5	-0.4
QRZ	Quartz Range	1.58	301	P	Pg	11 03 43.7	-1.3
OHWZ	Ohakea	1.65	28	P	Pb	11 03 44.6	+0.4
PRWZ	Pori Road	1.68	49	P	Pn	11 03 43.2	+0.4
POWZ	Post Office Ro	1.68	41	P	Pn	11 03 43.6	+0.7
BFZ	Birch Farm	1.76	57	ePn	Pn	11 03 43.6	-0.4
LTZ	Lake Taylor	1.88	233	ePn	Pn	11 03 43.8	-1.9
LTZ	Lake Taylor	1.88	233	P	Pb	11 03 47.3	-1.0
AMCZ	Amberley	1.95	219	P	Pn	11 03 47.3	+0.8
DVHZ	Dannevirke	1.96	46	P	Pn	11 03 46.7	-0.1
WAZ	Wanganui	1.98	15	P	Pn	11 03 47.1	+0.1
ANWZ	Angora Road	2.03	54	P	Pn	11 03 48.6	+0.9
TSZ	Takapari Road	2.04	38	P	Pn	11 03 48.3	+0.5
LREZ	Lake Rotokare	2.21	2	P	Pb	11 03 53.5	-0.3
PRHZ	Porangahau	2.25	52	P	Pn	11 03 50.7	0.0
OKCZ	Okains Bay	2.25	204	P	Pn	11 03 50.9	+0.1
PNHZ	Pukenui	2.26	40	P	Pn	11 03 51.1	+0.2
WPHZ	Waipukurau	2.27	46	P	Pn	11 03 52.0	+0.9
NMEZ	Namu Road	2.27	352	P	Pb	11 03 53.4	-1.6
CRLZ	Canterbury Las	2.28	213	ePn	Pn	11 03 50.8	-0.3
CRLZ	Canterbury Las	2.28	213	P	Pn	11 03 51.3	+0.2
PREZ	Palmer Road	2.33	357	P	Pn	11 03 52.0	+0.2
OXZ	Oxford	2.36	225	ePn	Pn	11 03 52.4	+0.1
OXZ	Oxford	2.36	225	P	Pn	11 03 50.9	-1.3
MQZ	McQueen's Vall	2.38	210	ePn	Pn	11 03 51.9	-0.5
INZ	Inchbonnie	2.38	243	P	Pn	11 03 50.4	-2.1
KHEZ	Kahui Hut	2.38	354	P	Pn	11 03 52.9	+0.3
NBEZ	Newall Road No	2.42	352	P	Pn	11 03 54.5	+1.5
MTVZ	Mangateitei	2.44	22	P	Pb	11 03 56.8	-1.1
DREZ	Durham Road	2.48	358	P	Pn	11 03 54.9	+1.0
PKE	Pukeiti	2.48	354	P	Pn	11 03 53.6	-0.3
PKVZ	Pokaka	2.50	19	P	Pn	11 03 54.4	+0.2
MOVZ	Moawhango	2.51	26	P	Pn	11 03 55.6	+1.2
PXZ	Pawanui	2.53	51	P	Pn	11 03 53.9	-0.7
BHHZ	Black Hill Sta	2.55	32	P	Pn	11 03 56.1	+1.1
KRHZ	Kereru	2.56	38	P	Pn	11 03 55.0	0.0
VRZ	Vera Road	2.56	8	P	Pn	11 03 54.4	-0.6
DRZ	Dome Shelter	2.57	22	P	Pb	11 03 58.6	-1.6
WHVZ	Whangaehu Hut	2.57	23	P	Pn	11 03 57.4	+2.0
FWVZ	Far West T-bar	2.59	22	P	Pn	11 03 56.9	+1.3
TUVZ	Tukino	2.61	24	P	Pn	11 03 57.5	+1.7
NGZ	Ngauruhoe	2.68	22	P	Pn	11 03 58.7	+2.0
KAHZ	Kahuranaki	2.70	47	P	Pn	11 03 56.2	-0.7
WTVZ	West Tongariro	2.73	21	P	Pn	11 03 59.5	+2.1
TWVZ	Taurewa	2.73	19	P	Pb	11 04 00.3	-2.5
KWHZ	Kaweka Forest	2.76	36	P	Pn	11 03 58.4	+0.6
KRVZ	Karewarewa	2.76	22	P	Pb	11 04 01.3	-2.0
MCHZ	McNeill Hill	2.87	40	P	Pn	11 03 59.2	0.0
RITZ	Rihia Road	2.94	24	P	Pb	11 04 05.0	-1.2
WVZ	Waitaha Valley	3.00	241	P	Pn	11 04 00.7	-0.3
BKZ	Black Stump Fm	3.00	34	ePn	Pn	11 04 01.1	0.0
BKZ	Black Stump Fm	3.00	34	P	Pn	11 04 00.8	-0.3
RATZ	Rangitukua	3.01	22	P	Pb	11 04 05.8	-1.7
WATZ	Wairara	3.15	21	P	Pb	11 04 08.4	-1.4
ARHZ	Aropaoanui	3.15	41	P	Pn	11 04 04.0	+0.8
RPZ	Rata Peaks	3.15	228	ePn	Pn	11 04 02.1	-1.0
RPZ	Rata Peaks	3.15	228	P	Pn	11 04 03.8	+0.6
HIZ	Hauiti	3.18	8	ePn	Pn	11 04 03.6	+0.1
HIZ	Hauiti	3.18	8	P	Pn	11 04 03.7	+0.2
MRHZ	Matea Rd	3.26	30	P	Pn	11 04 04.8	+0.2
KUTZ	Kaahu Road	3.38	21	P	Pb	11 04 12.5	-1.3
TLZ	Tolley Road	3.46	16	P	Pn	11 04 09.6	+2.2
ALRZ	Allen Road	3.47	27	P	Pn	11 04 08.0	+0.5
ALRZ				P	Pb	11 04 12.7	-2.6
RAHZ	Arahi	3.47	39	P	Pn	11 04 07.8	+0.3
PRRZ	Plateau Road	3.54	27	P	Pb	11 04 14.3	-2.3
SNGZ	Shannon Statio	3.70	40	P	Pn	11 04 10.9	+0.3
MUGZ	Murupara	3.70	31	P	Pn	11 04 13.5	+2.8
FOZ	Fox Glacier	3.81	239	ePn	Pn	11 04 13.1	+1.0
FOZ	Fox Glacier	3.81	239	P	Pn	11 04 13.6	+1.5
RIGZ	Rimuhau	3.97	43	P	Pn	11 04 13.9	-0.4
URZ	Urewera	4.03	33	ePn	Pn	11 04 14.6	-0.5
URZ	Urewera	4.03	33	P	Pn	11 04 17.0	+1.9
TOZ	Tahuroa Road	4.04	14	P	Pn	11 04 17.8	+2.6
LBZ	Lake Benmore	4.07	227	ePn	Pn	11 04 17.0	+1.3
LBZ	Lake Benmore	4.07	227	P	Pn	11 04 17.4	+1.7
MWZ	Matawai	4.14	38	P	Pn	11 04 14.9	-1.9
ODZ	Otahua Downs	4.31	217	ePn	Pn	11 04 19.0	+0.1
ODZ	Otahua Downs	4.31	217	P	Pn	11 04 16.4	-2.6
ODZ				P	Pn	11 04 18.9	0.0
TWGZ	Tauwhareparae	4.48	40	P	Pn	11 04 20.9	-0.6
RUGZ	Raukumara Rang	4.51	36	P	Pn	11 04 22.2	+0.2
AWAZ	Awhitu Peninsu	4.60	3	P	Pn	11 04 23.9	+0.8
MKAZ	Moumakai	4.60	8	P	Pn	11 04 22.9	-0.2
JCZ	Jackson Bay	4.72	238	P	Pn	11 04 23.1	-1.6
ETAZ	East Tamaki Re	4.73	6	P	Pn	11 04 28.1	+3.3
WTAZ	Waiatarua	4.73	3	P	Pn	11 04 28.4	+3.5
HAZ	Te Kaha	4.73	36	P	Pn	11 04 27.0	+2.1
WIAZ	Waiheke Island	4.91	8	P	Pn	11 04 31.4	+4.2
MBAZ	Motutapu North	4.91	6	P	Pn	11 04 31.3	+4.0
WKZ	Wanaka	4.99	229	ePn	Pn	11 04 28.1	-0.4
WKZ	Wanaka	4.99	229	P	Pn	11 04 29.8	+1.4
KUZ	Kuaotunu	5.04	13	P	Pn	11 04 35.0	+6.0
ABAZ	Army Bay	5.08	5	P	Pn	11 04 34.4	+4.8
EAZ	Earnscleugh	5.09	224	P	Pn	11 04 31.5	+1.6
TUZ	Tuapeka	5.46	217	P	Pn	11 04 35.4	+0.6
WCZ	Waipu Caves	5.72	0	P	Pn	11 04 42.1	+3.7
MLZ	Mavora Lakes	5.83	229	ePn	Pn	11 04 39.0	-0.9
MLZ	Mavora Lakes	5.83	229	P	Pn	11 04 42.4	+2.5
SYZ	Scrubby Hill	6.13	216	P	Pn	11 04 44.9	+1.0
WHZ	Wether Hill Ro	6.25	225	ePn	Pn	11 04 44.0	-1.6
DCZ	Deep Cove	6.44	231	ePn	Pn	11 04 51.0	+2.8
OUZ	Omahuta	6.46	355	ePn	Pn	11 04 48.4	-0.2
OUZ	Omahuta	6.46	355	P	Pn	11 04 51.5	+3.0
CTZ	Chatham Island	7.00	110	P	Pn	11 04 56.6	+0.7
AS31	Alice Springs	38.05	285	eP	P	11 10 32.0	+0.1
ASAR	Alice Springs	38.05	285	P	P	11 10 31.7	-0.2
	0.9nm,0.4s,baz=126,slow=7.1,SNR=19						
WR1	Warramunga Arr	40.12	290	eP	P	11 10 48.7	-0.5
WRA	Warramunga Arr	40.12	290	P	P	11 10 48.7	-0.5
	1.5nm,0.6s,baz=130,slow=8.2,SNR=2.8						
HHC	Hu-ho-hao-te	99.86	317	P	Pdif	11 16 59.9	+2.3
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
ARCES	ARCESS Array B	147.72	340	PKPbc	PKPbc	11 22 56.4	-0.3
	comp=Z,0.6nm,0.6s,baz=27,slow=2.2,SNR=4.9						
TORD	Torodi Ar. Bea	150.87	195	PKPbc	PKiKP	11 23 07.1	+0.3
	comp=Z,0.4nm,0.5s,baz=171,slow=4.4,SNR=5.1						
TOA1	Torodi Ar. Sit	150.87	195	ePKPbc	PKiKP	11 23 07.1	+0.3

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*ISK **24** 11:30:15.8, 41°.66N×32°.51E, h1km, ML3.1/13*

*DDA **24** 11:30:15.8, 41°.70N×32°.39E, h19km, ML3.4*

*ISCJB **24** 11:30:16.3±0.5, 41°.80N±0°.02×32°.39E±0°.03, h10km±3km, Error ellipse: s-maj=3.2km s-min=3.2km az=178.9*

ISC 24 11:30:16.3±0.9, **41°.71N**±0°.02×**32°.42E**±0°.02, **h13**km±8km, **n60**, σ**1s.16**/76, **8C-9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTIN	Bartın	0.15	242	iP	Pb	11 30 20.8	-0.1
BTIN				iS	Sb	11 30 23.8	-0.1
KURC	Kurucasile-Bar	0.28	60	PG	Pg	11 30 21.8	-0.3
KURC				SG	Sg	11 30 26.3	+0.3
SAFT	Safranbolu	0.51	157	PG	Pg	11 30 25.4	-0.9
SAFT				SG	Sg	11 30 32.0	-1.0
KDZE	Karadeniz Ereo	0.83	242	PG	Pn	11 30 33.2	-0.5
BCAM	Yenicaga	0.93	197	iP	Pb	11 30 33.4	-1.0
BCAM				iS	Sg	11 30 46.7	+0.3
YIGI	Dzce	1.04	225	iP	Pb	11 30 35.9	-0.3
YIGI				iS	Sb	11 30 49.9	+0.1
ILGA	Ilgaz	1.17	123	iP	Pg	11 30 39.1	+0.2
ILGA				iS	Sg	11 30 55.9	+1.7
BZK	Bozkurt	1.21	77	PN	Pn	11 30 38.6	-0.3
BZK	Bozkurt	1.21	77	⇓iP	Pb	11 30 39.0	0.0
BZK	Bozkurt	1.21	77	S	Sg	11 30 56.0	+0.7
CMDR	Camlidere-ANKA	1.21	178	iP	Pg	11 30 39.6	0.0
CMDR				iS	Sg	11 30 56.5	+1.1
KIBS	BOLU	1.35	199	iP	Pg	11 30 42.6	+0.2
KIBS				iS	Sg	11 31 00.4	+0.4
KIBS				IAML_P			
	comp=Z,4μm,0.3s						
CANT	Cankiri	1.42	140	PN	Pb	11 30 43.1	+0.4
CANT				SN	Sg	11 31 02.2	+0.1
ELDT	Eldivan	1.43	148	iP	Pg	11 30 43.8	-0.1
ELDT				iS	Sg	11 31 03.2	+0.8
ELDT				IAML_P			
	comp=Z,3μm,0.3s						
SAHE	Sakarya_HENDEK	1.46	235	iP	Pb	11 30 43.4	+0.2
SAHE				iS	Sb	11 31 02.3	+0.6
SAHE				IAML_P			
	comp=Z,1μm,0.2s						
MDUB	Mudurnu	1.54	217	PN	Pg	11 30 45.6	-0.3
MDUB				SN	Sg	11 31 06.9	+0.9
BTAS	Taskesti	1.56	224	iP	Pg	11 30 45.9	-0.4
BTAS				iS	Sg	11 31 06.2	-0.4
KAGI	orum-Kargı	1.65	109	iP	Pg	11 30 47.3	-0.6
KAND	Kocaeli-Kandir	1.79	251	iP	Pb	11 30 48.0	-0.8
KAND				iS	Sn	11 31 09.3	-0.1
LOD	Lodumlu	1.83	172	PN	Pb	11 30 48.8	-0.9
SAUV	Serdivan-Sakar	1.85	239	PN	Pb	11 30 50.2	+0.2
ANTO	Ankara	1.86	171	PN	Pb	11 30 49.9	-0.2
GULT	Gulveren	1.92	229	PN	Pb	11 30 51.3	+0.1
AUMIH	MIHALICIK	1.97	202	PN	Pb	11 30 51.5	-0.6
AUMIH	MIHALICIK	1.97	202	iP	Pg	11 30 54.3	+0.2
AUMIH				iS	Sg	11 31 18.6	-1.1
GEYV	SAKARYA_Geyve	2.02	233	iP	Pb	11 30 53.0	+0.1
GEYV				iS	Sb	11 31 17.0	-0.8
DELI	KIRIKKALE	2.05	146	iP	Pb	11 30 51.8	-1.6
DIKM	Dikmen	2.12	91	PN	Pb	11 30 52.9	-1.7
DIKM	Dikmen	2.12	91	⇓iP	Pg	11 30 59.4	+2.4
DIKM	Dikmen	2.12	91	S	Sg	11 31 23.8	-0.8
SILT	Sile	2.16	256	⇑iP	Pb	11 30 54.3	-0.9
SILT	Sile	2.16	256	S	Sb	11 31 22.4	+0.5
CORM	Corum	2.26	132	PN	Pn	11 30 54.5	+1.0
CDAG	Cicekdag	2.56	144	iP	Pb	11 30 59.6	-2.4
CDAG				IAML_P			
	comp=Z,531nm,0.2s						
YLV	Yalova	2.57	245	⇓iP	Pb	11 31 03.0	+0.7
YLV	Yalova	2.57	245	S	Sb	11 31 33.3	-0.5
KLYT	Kilyos	2.58	261	⇑iP	Pg	11 31 04.2	-1.5
BUY	Buyukada	2.63	252	iP	Pn	11 31 00.7	+2.2
BUY				IAML_P			
	comp=Z,499nm,0.2s						
SEVA	Sevastopol	2.97	18	⇑iP	Pn	11 31 04.3	+1.2
SEVA	Sevastopol	2.97	18	S	Sn	11 31 38.3	-0.2
MANR	Mangalia	3.52	308	⇑iP	Sn	11 31 52.5	+0.3
MFTR	Murfatlar	3.84	311	⇓iP	Pn	11 31 16.0	+1.0
MFTR	Murfatlar	3.84	311	S	Sn	11 31 59.3	-0.6
ICOR	Ion Corvin	4.16	307	⇑iP	Pn	11 31 20.1	+0.6
ICOR	Ion Corvin	4.16	307	S	Sn	11 32 07.3	-0.6
HARR	Harsova	4.43	314	⇓iP	Pn	11 31 23.5	+0.3
RAZG	Razgrad	4.74	295	⇓iP	Pb	11 31 38.7	-0.6
RAZG	Razgrad	4.74	295	S	Sb	11 32 34.5	-1.7
VRI	Vrincioaia	5.85	317	S	Sn	11 32 50.7	+1.0
PLOR	Plostina	5.88	317	⇓iP	Pb	11 31 55.5	-3.2
PLOR	Plostina	5.88	317	S	Sn	11 32 53.5	+3.0
PLVB	Pleven	6.00	289	⇓iP	Pn	11 31 47.3	+2.5
MLR	Muntele Rosu	6.04	311	⇑iP	Pb	11 32 00.9	-0.4
MLR	Muntele Rosu	6.04	311	S	Sn	11 32 54.7	+0.4
VOIR		6.52	307	⇑iP	Pg	11 32 21.9	+0.7
VOIR		6.52	307	S	Sn	11 33 05.4	-0.9
DOPR	Dopca	6.63	312	S	Sn	11 33 07.1	-1.8
BURAR	Bucovina Array	7.83	321	⇑iP	Pn	11 32 11.4	+1.5
GZR	Gura Zlata	7.92	301	⇓iP	Pn	11 32 12.9	+1.8
GZR	Gura Zlata	7.92	301	S	Sn	11 33 37.3	-3.2

IDC 24 11:31:32.4±2.8, **9°.66S**×**121°.12E**, **h0**km, **mb3.8**/2, **mb1 3.8**/4, **mb1mx3.6**/20, **mbtmp3.7**/4, **ML3.3**/2, **Error ellipse: s-maj=186.8km s-min=29.4km az=55.0, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.36	130	Pn	Pn	11 35 23.4	-0.3
	0.1nm,0.3s,baz=306,slow=14,SNR=1.3						
WRA				Sn	Sn	11 38 15.4	-11
	0.1nm,0.3s,baz=293,slow=26,SNR=1.9						
ASAR	Alice Springs	18.53	140	P	Pn	11 35 50.8	0.0
	0.2nm,0.3s,baz=317,slow=13,SNR=6.5						
ASAR				S	Sn	11 39 06.1	-12
	0.1nm,0.3s,baz=308,slow=22,SNR=2.5						
SONM	Songino Array	58.71	348	P	P	11 41 32.0	0.0
	0.6nm,0.4s,baz=178,slow=6.7,SNR=2.9						
MKAR	Makanchi Array	66.00	332	P	P	11 42 20.7	-0.1
	0.4nm,0.5s,baz=135,slow=7.0,SNR=1.8						

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*DDA **24** 11:46:53.8, 38°.93N×26°.61E, h7km±3km, ML3.0*

*ISCJB **24** 11:46:54.8±0.6, 38°.94N±0°.03×26°.62E±0°.05, h12km±5km, Error ellipse: s-maj=7.2km s-min=4.2km az=167.9*

*ATH **24** 11:46:55.0, 38°.91N×26°.51E, h24km±2km, ML2.1/3, Error ellipse: s-maj=5.4km s-min=1.2km az=251.0*

ISC 24 11:46:54.3±1.1, **38°.95N**±0°.03×**26°.63E**±0°.04, **h15**km±12km, **n12**, σ**0s.56**/19, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEDA	zmir-Bergama	0.35	87	iP	Pg	11 47 01.3	-0.2
ZEDA				iS	Sb	11 47 07.5	0.0
ZEDA				IAML_P			
	comp=Z,8μm,0.1s						
AYVA	Ayvalik	0.36	7	iP	Pb	11 47 02.5	0.0
AYVA				iS	Sb	11 47 08.4	+0.4
AYVA				IAML_P			
	comp=Z,2μm,0.2s						
PRK	Paraskevi	0.41	317	P	Pb	11 47 03.3	0.0
PRK				S	Sb	11 47 09.8	+0.5
PRK				AML	AML	11 47 10.3	
	comp=N,796μm,0.5s						
PRK				AML	AML	11 47 11.6	
	comp=E,805μm,0.4s						
URLA	Izmir	0.59	183	iP	Pg	11 47 05.3	-0.6
URLA				iS	Sb	11 47 14.2	-0.2
SIGR	SIGRI	0.66	294	P	Pg	11 47 06.7	-0.4
SIGR				AML	AML	11 47 19.4	
	comp=E,426μm,0.4s						
SIGR				AML	AML	11 47 19.7	
	comp=N,247μm,0.2s						
CHOS	Chios island	0.72	219	P	Pg	11 47 07.6	-0.8
CHOS				AML	AML	11 47 21.8	
	comp=N,296μm,0.6s						
CHOS				AML	AML	11 47 22.7	
	comp=E,292μm,0.2s						
BAYC	CANAKKALE_Bayr	0.80	355	iP	Pg	11 47 09.4	-0.4
BAYC				iS	Sb	11 47 20.5	0.0
BAYC				IAML_P			
	comp=Z,2μm,0.2s						
BOZC	Bozcaada	1.00	334	iP	Pn	11 47 13.9	+0.1
BOZC				iS	Sg	11 47 27.0	+0.3
BOZC				IAML_P			
	comp=Z,4μm,0.2s						
SMG	Samos	1.25	172	P	Pg	11 47 17.9	-0.4
SMG				S	Sg	11 47 36.0	+1.4
LIA	Limnos Island	1.47	311	P	Pb	11 47 21.7	+0.4
SMTH	Samothraki Isl	1.74	331	P	Pb	11 47 25.6	-0.4
SART	Tekirdag	1.79	14	iP	Pb	11 47 26.3	-0.6

DDA ***24*** *11:49:01.8, 39°.34N×29°.02E, h12^{km}±2^{km}, ML3.6*
ISCJB ***24*** *11:49:02.6±0.3, 39°.34N±0°.01×29°.00E±0°.02, h3^{km}±3^{km}, Error ellipse: s-maj=2.7km s-min=2.3km az=168.8*
ISK ***24*** *11:49:02.2, 39°.34N×29°.03E, h3^{km}, ML3.5/55*
THE ***24*** *11:49:03.8, 39°.28N×28°.91E, h2^{km}±2^{km}, ML3.0/2, Error ellipse: s-maj=4.9km s-min=0.6km az=99.0*
ISC 24 11:49:03.0±1.0**, 39°.35N**±0°.02×**29°.02E**±0°.02**, h9**^{km}±9^{km}**, n86, σ0^{s}.79**/105**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	0.25	187	PG	Pg	11 49 07.8	-0.2
SMAA				SG	Sg	11 49 12.1	+0.8
TVSB	**Tavsanli**	0.36	73	PG	Pg	11 49 09.9	-0.2
SHAP	**Saphane-Kutahy**	0.36	154	PG	Pg	11 49 09.9	-0.2
SHAP				SG	Sg	11 49 14.8	0.0
DEMI	**Demirci**	0.38	218	*i* P	Pg	11 49 10.4	-0.2
DEMI				*i* S	Sg	11 49 15.8	+0.2
GEDZ	**Gediz**	0.43	135	PG	Pg	11 49 11.2	-0.2
GEDZ				SG	Sg	11 49 16.9	-0.1
GDZ	**Gediz**	0.44	126	*i* P	Pg	11 49 12.0	+0.4
GDZ				*i* S	Sg	11 49 17.7	+0.3
GDZ				IAML_P			
	comp=Z,61μm,0.1s						
DURS	**Dursunbey**	0.49	301	*i* P	Pg	11 49 12.5	-0.1
DURS				*i* S	Sg	11 49 19.0	-0.1
DURS				IAML_P			
	comp=Z,15μm,0.1s						
USAK	**Uak-Merkez**	0.63	180	*i* P	Pg	11 49 15.2	0.0
USAK				*i* S	Sg	11 49 23.3	-0.1
ORLT	**Orhaneli**	0.70	352	PG	Pg	11 49 16.0	-0.6
ULDT	**Uludag**	0.80	6	*i* P	Pg	11 49 17.3	-1.1
ULDT				IAML_P			
	comp=Z,9μm,0.1s						
KULA	**Kula-Manisa**	0.88	199	PG	Pg	11 49 19.3	-0.6
KULA	**Kula-Manisa**	0.88	199	P	Pg	11 49 19.1	-0.8
KULA				S	Sg	11 49 30.9	-0.4
MANT	**Manisa**	0.93	203	*i* P	Pg	11 49 20.1	-0.8
MANT				*i* S	Sg	11 49 32.0	-0.9
BALB	**Balikesir**	0.93	289	PG	Pb	11 49 21.2	-0.1
MDNY	**Mudanya-Bursa**	1.03	354	PG	Pg	11 49 22.4	-0.3
KHAL	**Karahalli**	1.04	159	*i* P	Pg	11 49 22.3	-0.7
KHAL				*i* S	Sb	11 49 36.9	-0.2
AKHS	**Akhisar**	1.05	244	*i* P	Pn	11 49 23.8	-0.1
AKHS				*i* S	Sb	11 49 37.7	+0.5
AKHS				IAML_P			
	comp=Z,6μm,0.1s						
AKS	**Akhisar**	1.05	244	PG	Pg	11 49 22.9	-0.2
IZI	**Iznik**	1.05	19	PG	Pg	11 49 23.2	0.0
IZI				SG	Sn	11 49 38.8	0.0
KCTX	**Karacabey (Bur**	1.05	331	PG	Pg	11 49 23.1	-0.1
GOMA	**Golmarmara-Man**	1.07	234	PG	Pg	11 49 23.3	-0.2
GEMT	**Gemlik**	1.09	7	PN	Pb	11 49 24.3	+0.2
GEMT				SN	Sn	11 49 39.5	-0.4
KHL	**Karahalli**	1.09	159	PN	Pg	11 49 23.7	-0.3
AFYO	**Afyonkarahisar**	1.14	119	*i* P	Pn	11 49 25.3	0.0
AFYO				*i* S	Sn	11 49 40.7	-0.4
AFYO				IAML_P			
	comp=Z,7μm,0.2s						
AUKIR	**Kırka- Seyitga**	1.17	93	*i* P	Pn	11 49 26.6	+0.9
ADVT	**Abdulvahap**	1.22	27	PN	Pn	11 49 26.5	+0.2
ARMT	**Armutlu**	1.22	354	PN	Pn	11 49 26.5	+0.1
BORA	**Eskisehir**	1.23	64	PN	Pg	11 49 25.7	-0.9
BORA	**Eskisehir**	1.23	64	*i* P	Pg	11 49 25.8	-0.9
BORA				*i* S	Sg	11 49 42.1	-0.5
BORA				IAML_P			
	comp=Z,10μm,0.2s						
GONE	**Gonen-Balikesi**	1.24	305	PN	Pn	11 49 26.7	+0.1
YLV	**Yalova**	1.25	12	PN	Pg	11 49 26.9	-0.1
EDC	**Edincik**	1.34	319	PN	Pn	11 49 28.0	+0.1
KZIL	**AFYON_Kizioren**	1.40	141	*i* P	Pb	11 49 29.2	-0.2
KZIL				*i* S	Sg	11 49 48.2	+0.3
KZIL				IAML_P			
	comp=Z,4μm,0.2s						
SRCK	**Saricakaya, Es**	1.42	60	PN	Pn	11 49 29.2	+0.2
SRCK	**Saricakaya, Es**	1.42	60	*i* P	Pn	11 49 29.3	+0.3
SRCK				*i* S	Sg	11 49 49.7	+1.0
ESKT	**Eskisehir**	1.43	82	PN	Pb	11 49 29.8	-0.1
SHUT	**Suhut-Afyon**	1.43	123	PN	Pb	11 49 29.7	-0.3
GEYV	**SAKARYA_Geyve**	1.50	40	*i* P	Pn	11 49 30.1	-0.1
BUY	**Buyukada**	1.51	3	PN	Pb	11 49 31.0	-0.1
HRT	**Hereke**	1.56	18	PN	Pn	11 49 30.4	-0.5
GULT	**Gulveren**	1.58	46	PN	Pn	11 49 31.6	+0.3
CIFT	**Cifteler, Eski**	1.58	89	PN	Pn	11 49 31.9	+0.5
CIFT	**Cifteler, Eski**	1.58	89	*i* P	Pb	11 49 32.5	0.0
CIFT				IAML_P			
	comp=Z,4μm,0.2s						
BOLV	**Bolvadin**	1.63	112	*i* P	Pn	11 49 31.3	-0.7
BOLV				*i* S	Sb	11 49 53.9	-0.2
AYDB	**Zeytinkoy-Aydi**	1.65	213	PN	Pn	11 49 32.5	+0.1
SPNC	**Sapanca-Adapaz**	1.66	36	PN	Pb	11 49 33.5	-0.3
DKL	**Dikili**	1.67	261	PN	Pn	11 49 33.1	+0.7
MRMT	**Marmara Adasi**	1.67	319	PN	Pb	11 49 33.3	-0.6
KAVV	**Kandilli-Istan**	1.72	1	PN	Pb	11 49 34.2	-0.5
SAUV	**Serdivan-Sakar**	1.72	35	PN	Pb	11 49 34.0	-0.7
ISK	**Istanbul-Kandi**	1.72	1	PN	Pn	11 49 34.0	+0.9
ISK	**Istanbul-Kandi**	1.72	1	P	Pn	11 49 34.1	+0.9
BLCB	**Balcova**	1.82	239	PN	Pn	11 49 35.5	+1.0
BRDR	**BURDUR-Merkez**	1.84	153	*i* P	Pn	11 49 35.0	+0.1
BRDR				*i* S	Sg	11 50 06.7	+4.6
BRDR				IAML_P			
	comp=Z,4μm,0.3s						
SILT	**Sile**	1.87	15	PN	Pb	11 49 36.5	-0.8
TAVA	**DENIZLI_Tavas**	1.88	183	*i* P	Pn	11 49 34.0	-1.4
KLYT	**Kilyos**	1.90	1	PN	Pb	11 49 37.0	-0.9
AYDN	**Tasoluk**	1.91	208	*i* P	Pn	11 49 34.6	-1.2
ISP	**Isparta**	1.92	142	PN	Pn	11 49 36.5	+0.4
CTKS	**Kestanelik-??a**	1.93	348	PN	Pn	11 49 36.8	+0.8
BAGO	**Egridir - ISPA**	1.94	134	*i* P	Pb	11 49 37.8	-0.8
SVRH	**Sivrihisar-ESK**	1.94	86	PN	Pn	11 49 37.3	+1.0
RKY	**Sarkoy-Tekirda**	1.95	314	PN	Pn	11 49 37.6	+1.3
BTAS	**Taskesti**	1.95	51	*i* P	Pn	11 49 36.3	-0.1
AUSIV	**SIVRIHISAR**	1.96	86	PN	Pb	11 49 37.9	-1.0
AUSIV	**SIVRIHISAR**	1.96	86	*i* P	Pg	11 49 39.8	-0.7
AUMIH	**MIHALICIK**	1.97	74	PN	Pn	11 49 37.5	+0.7
AUMIH	**MIHALICIK**	1.97	74	*i* P	Pb	11 49 39.2	0.0
MDUB	**Mudurnu**	2.02	55	PN	Pn	11 49 38.5	+1.2
LPK	**Lapseki**	2.02	301	PN	Pn	11 49 38.4	+1.1
SAHE	**Sakarya_HENDEK**	2.06	42	*i* P	Pn	11 49 37.8	0.0
URLA	**Izmir**	2.13	243	PN	Pn	11 49 39.8	+0.9
EZN	**Ezine**	2.14	284	PN	Pn	11 49 39.9	+1.1
GCAM	**G?zelcaml?**	2.16	221	PN	Pn	11 49 40.3	+1.1
CTYL	**Yalikoy Yolu**	2.20	346	PN	Pn	11 49 41.1	+1.4
GELI	**Tayfur-Gelibol**	2.22	299	PN	Pn	11 49 41.2	+1.2
KIZT	**Kizilcal**	2.27	101	PN	Pn	11 49 41.8	+0.9
YER	**Yerkesik**	2.28	195	PN	Pn	11 49 41.6	+0.7
YER	**Yerkesik**	2.28	195	P	Pn	11 49 40.3	-0.6
DALY	**Dalyan (Mula)**	2.54	187	PN	Pn	11 49 44.5	+0.1
KORT	**Korkueli**	2.57	155	PN	Pn	11 49 45.5	+0.6
ALN	**Alexandroupoli**	2.76	305	P	Pn	11 49 47.4	0.0
LADK	**Ladik-KONYA**	2.85	113	PN	Pn	11 49 50.3	+1.4
SMTH	**Samothraki Isl**	2.91	294	P	Pn	11 49 49.6	+0.1
KONT	**Konya--Tatoy**	2.97	117	PN	Pn	11 49 51.7	+1.4
KEPZ	**Antalya-Kepez**	3.18	139	*i* P	Pn	11 49 53.3	0.0

ISCJB ***24*** *11:52:05.0±0.4, 35°.46N±0°.04×96°.49W±0°.03, h10^{km}, Error ellipse: s-maj=6.1km s-min=3.3km az=161.8*
ANF ***24*** *11:52:04.6±1.3, 35°.38N×96°.47W, h1^{km}±13^{km}, ML3.6/8, Error ellipse: s-maj=16.6km s-min=6.3km az=148.0*
TUL ***24*** *11:52:05.0, 35°.37N×96°.48W, h9^{km}, ML3.5*
NEIC ***24*** *11:52:05.0±0.0, 35°.37N×96°.48W, h9^{km}, ML3.5(TUL), After TUL.*
NEIC Felt at Bixby, Earlsboro, Mannford and Paden.
ISC 24 11:52:05.3±0.8**, 35°.46N**±0°.05×**96°.51W**±0°.03**, h10**^{km}**, n24, σ0^{s}.91**/32**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUL1	**Leonard**	0.74	52	*e*Pg	Pg	11 52 19.6	0.0
TUL1	**Leonard**	0.74	52	P	Pg	11 52 19.4	-0.2
	baz=226						
TUL1				S	Sg	11 52 29.5	+0.3
	baz=226						
OK009	**Oakdale Elemen**	0.76	280	*e*Sg	Sg	11 52 30.8	+1.1
WMOK	**Wichita Mounta**	2.00	250	*e*Pn	Pb	11 52 40.1	-1.6
WMOK				*e*Sn	Sb	11 53 06.1	-0.5
WMOK	**Wichita Mounta**	2.00	250	P	Pn	11 52 39.5	+0.5
	baz=71						
W39A	**Magazine**	2.24	96	*e*Pn	Pn	11 52 42.7	+0.3
W39A	**Magazine**	2.24	96	P	Pn	11 52 42.6	+0.1
	baz=275						
W39A				S	Sn	11 53 10.4	+0.2
	baz=275						
HHAR	**Hobbs**	2.24	68	*e*Pn	Pn	11 52 43.3	+0.8
HHAR				*e*Sn	Sn	11 53 11.9	+1.6
MIAR	**Mount Ida**	2.57	110	*e*Pn	Pn	11 52 47.9	+0.9
MIAR	**Mount Ida**	2.57	110	P	Pn	11 52 47.4	+0.4
	baz=290						
MIAR				S	Sn	11 53 18.1	-0.3
	baz=290						
U40A	**Yellville**	3.10	72	P	Pn	11 52 54.6	+0.3
	baz=253						
U40A				S	Sn	11 53 32.2	+0.8
	baz=253						
X40A	**Basin Creek Fa**	3.17	107	*e*Pn	Pn	11 52 55.7	+0.6
X40A	**Basin Creek Fa**	3.17	107	P	Pn	11 52 55.3	+0.1
	baz=288						
WLAR	**White Oak Lake**	3.31	121	*e*Pn	Pn	11 52 57.2	+0.1
WHAR	**Wooly Hollow**	3.45	92	*e*Pn	Pn	11 52 59.5	+0.4
UALR	**University of**	3.48	100	*e*Pn	Pn	11 53 00.0	+0.5
W41B	**Gary Mavity, V**	3.50	93	P	Pn	11 52 59.7	+0.1
	baz=274						
W41B				S	Sn	11 53 41.5	+0.4
	baz=274						
WHTX	**Lake Whitney,**	3.54	193	*e*Pn	Pn	11 53 01.8	+1.4
WHTX	**Lake Whitney,**	3.54	193	Pb	Pb	11 53 05.8	-2.3
	baz=13						
WHTX				Sb	Sb	11 53 52.1	+0.9
	baz=13						
FCAR	**Ozark Folk Cen**	3.60	82	*e*Pn	Pn	11 53 01.3	+0.2
NATX	**Nacogdoches**	4.00	157	*e*Pn	Pn	11 53 08.7	+2.2
AMTX	**Amarillo**	4.28	264	*e*Pn	Pn	11 53 11.4	+0.9
CCM	**Cathedral Cave**	4.96	57	*e*Pn	Pn	11 53 20.3	+0.5
MSTX	**Muleshoe**	5.37	256	*e*Pn	Pn	11 53 25.6	+0.1

WEL 24 11:53:21.3, 41°.7S±0°.9×**174°.2E**±0°.7**, h15**^{km}±1^{km}**, M3.4**/21**, ML3.7**/15**, MLv3.4**/21**, Error ellipse: s-maj=0.0km s-min=0.0km az=161.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.08	181	P	Pg	11 53 24.8	+0.3
CMWZ				S	Sg	11 53 27.6	+1.1
BSWZ	**Blackbirch Sta**	0.26	259	P	Pb	11 53 27.4	-0.2
BSWZ				S	Sb	11 53 31.9	0.0
TUWZ	**Tuamarina**	0.31	319	P	Pb	11 53 28.4	-0.1
TUWZ				S	Sb	11 53 33.4	0.0
TCW	**Tory Channel**	0.46	6	P	Pb	11 53 30.7	-0.3
TCW				S	Sb	11 53 37.7	+0.2
BHW	**Baring Head**	0.56	63	P	Pb	11 53 33.0	+0.3
NNZ	**Nelson**	0.77	305	P	Pb	11 53 36.5	+0.1
PLWZ	**Palliser**	0.78	83	P	Pn	11 53 37.7	-0.1
MSWZ	**Moikau Station**	0.81	73	P	Pn	11 53 37.9	-0.3
CAW	**Cannon Point**	0.85	49	P	Pg	11 53 38.0	+0.2
DUWZ	**D’Urville Isla**	0.89	345	P	Pb	11 53 38.4	0.0
KHZ	**Kahutara**	0.90	214	P	Pn	11 53 39.8	+0.4
PAWZ	**Paruwai Farm**	0.95	73	P	Pn	11 53 40.1	0.0
THZ	**Tophouse**	0.99	264	P	Pg	11 53 40.4	0.0
MTW	**Mount Morrison**	1.09	63	P	Pn	11 53 42.1	+0.1
TRWZ	**Traveller**	1.14	77	P	Pb	11 53 42.4	-0.2
HOWZ	**Holdsworth Sta**	1.24	52	P	Pb	11 53 44.5	+0.1
TMWZ	**Te Maipa**	1.38	67	P	Pn	11 53 45.7	-0.3
MRZ	**Mangatainoka R**	1.44	46	P	Pb	11 53 47.3	-0.5
QRZ	**Quartz Range**	1.52	303	P	Pb	11 53 49.5	+0.3
TIWZ	**Tintock**	1.54	55	P	Pb	11 53 49.6	0.0
GVZ	**Greta Valley S**	1.57	214	P	Pn	11 53 48.7	+0.1
OHWZ	**Ohakea**	1.68	30	P	Pb	11 53 52.5	+0.7
PRWZ	**Pori Road**	1.73	51	P	Pn	11 53 51.4	+0.6
POWZ	**Post Office Ro**	1.73	43	P	Pb	11 53 52.3	-0.4
DSZ	**Denniston Nort**	1.81	267	P	Pb	11 53 54.0	-0.1
LTZ	**Lake Taylor**	1.82	232	P	Pn	11 53 52.6	+0.5
AMCZ	**Amberley**	1.90	217	P	Pn	11 53 52.8	-0.4
WAZ	**Wanganui**	2.00	17	P	Pb	11 53 57.9	+0.6
LREZ	**Lake Rotokare**	2.21	4	P	Pb	11 54 00.6	-0.2
OKCZ	**Okains Bay**	2.23	202	P	Pn	11 53 56.7	-0.9
CRLZ	**Canterbury Las**	2.24	211	P	Pn	11 53 57.2	-0.6
NMEZ	**Namu Road**	2.27	353	P	Pg	11 54 04.0	-0.7
OXZ	**Oxford**	2.31	223	P	Pn	11 53 58.1	-0.6
INZ	**Inchbonnie**	2.32	242	P	Pn	11 54 00.6	+1.8
PREZ	**Palmer Road**	2.32	359	P	Pb	11 54 03.3	+0.5
MQZ	**McQueen’s Vall**	2.34	209	P	Pn	11 53 57.6	-1.6
KHEZ	**Kahui Hut**	2.37	356	P	Pb	11 54 03.7	0.0
NBEZ	**Newall Road No**	2.41	354	P	Pb	11 54 05.9	+1.6
MTVZ	**Mangateitei**	2.47	23	P	Pg	11 54 07.4	-1.3
DREZ	**Durham Road**	2.47	360	P	Pb	11 54 05.0	-0.4
PKE	**Pukeiti**	2.48	356	P	Pb	11 54 04.0	-1.4
PKVZ	**Pokaka**	2.52	20	P	Pb	11 54 07.4	+1.1
MOVZ	**Moawhango**	2.54	28	P	Pb	11 54 07.1	+0.4
VRZ	**Vera Road**	2.57	9	P	Pb	11 54 05.5	-1.5
DRZ	**Dome Shelter**	2.60	24	P	Pg	11 54 10.1	-1.1
NGZ	**Ngauruhoe**	2.70	23	P	Pb	11 54 09.4	0.0
TWVZ	**Taurewa**	2.75	20	P	Pb	11 54 11.6	+1.4
WTVZ	**West Tongariro**	2.75	23	P	Pb	11 54 11.2	+0.9
KRVZ	**Karewarewa**	2.79	23	P	Pb	11 54 11.8	+1.0
WVZ	**Waitaha Valley**	2.94	240	P	Pb	11 54 12.1	-1.2
RATZ	**Rangitukua**	3.04	24	P	Pb	11 54 16.9	+1.9
RPZ	**Rata Peaks**	3.10	228	P	Pn	11 54 10.0	+0.3
WATZ	**Wairara**	3.17	22	P	Pb	11 54 18.7	+1.3
HIZ	**Hauiti**	3.19	9	P	Pb	11 54 14.4	-3.1
TLZ	**Tolley Road**	3.48	17	P	Pb	11 54 19.7	-2.9
FOZ	**Fox Glacier**	3.75	239	P	Pb	11 54 23.4	-3.6
TOZ	**Tahuroa Road**	4.05	15	P	Pn	11 54 27.0	+4.3
ODZ	**Otahua Downs**	4.26	216	P	Pn	11 54 24.8	-0.8
AWAZ	**Awhitu Peninsu**	4.61	4	P	Pn	11 54 34.2	+3.9
MKAZ	**Moumakai**	4.61	9	P	Pn	11 54 33.8	+3.4
JCZ	**Jackson Bay**	4.66	237	P	Pn	11 54 35.2	+4.1
ETAZ	**East Tamaki Re**	4.74	7	P	Pn	11 54 37.9	+5.8

JMA 24 11:54:31.6±0.1**, 28°.22N×129°.49E, h33**^{km}±2^{km}**, M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	0.22	28	P	Pn	11 54 38.0	-0.1
JAM				*e*S	Sb	11 54 42.7	-0.2
JAMN	**Amaminishikomi**	0.28	275	P	Pb	11 54 39.0	-0.1
JAMN				*e*S	Sb	11 54 44.6	+0.5
JZK	**Kikaishima**	0.43	77	P	Pb	11 54 41.2	0.0
JZK				*e*S	Sn	11 54 48.8	+0.5
JTK	**Tokunoshima**	0.64	228	P	Pn	11 54 43.6	-0.8
JTK				*e*S	Sb	11 54 52.8	-0.5
JTAJ	**Takarajima**	0.96	345	P	Pn	11 54 48.8	0.0
JTAJ				*e*S	Sn	11 55 01.7	+0.3
JOKE	**Okinoerabujima**	1.18	224	P	Pn	11 54 52.4	+0.6
JOKE				*e*S	Sb	11 55 08.3	-0.2
JYRO	**Yoronjima**	1.51	218	P	Pn	11 54 57.2	+0.9
JYRO				*e*S	Sb	11 55 16.6	-1.1
JNN	**Nakanoshima**	1.65	12	P	Pn	11 54 59.1	+0.8
JOW	**Kunigami**	1.75	218	P	Pn	11 55 00.4	+0.7
JIH	**Iheya**	1.79	229	P	Pn	11 55 01.2	+1.0
JNTH	**Nagotoyohara**	2.14	218	P	Pn	11 55 05.9	+0.9
JNTH				*e*S	Sn	11 55 31.7	+1.3
JYAK	**Yakushimahirau**	2.20	24	P	Pn	11 55 07.0	+1.2
JYAK				*e*S	Sn	11 55 33.1	+1.2
JKC	**Kuchinoerabu**	2.32	15	P	Pn	11 55 08.7	+1.3
JKC				*e*S	Sn	11 55 35.8	+1.0
JMTN	**Minamitane**	2.50	29	P	Pn	11 55 10.8	+0.9
JAGN	**Aguni-jima**	2.58	231	P	Pn	11 55 12.3	+1.3
JTN	**Tanegashima 3**	2.75	28	P	Pn	11 55 14.8	+1.4
JTN				*e*S	Sn	11 55 47.6	+2.0
JKDJ	**Kitadaitoujima**	2.78	144	P	Pn	11 55 12.6	-1.2
JMZ	**Minamidaito 2**	2.85	147	*e*S	Sn	11 55 44.7	-3.2
JKE	**Kume jima 2**	3.06	233	P	Pn	11 55 18.7	+1.1
JKE				*e*S	Sn	11 55 54.0	+0.9

NIED ***24*** *11:56:00, 36°.20N×141°.40E, h5^{km}, Mw3.9 Best double couple: $M_0$7.75000×10^{14} NP1:ϕ_s175.00000°, δ9.00000°, λ165.00000°. NP2:ϕ_s280.00000°, δ88.00000°, λ81.00000°.*
IDC ***24*** *11:56:39.4±0.7, 36°.16N×141°.40E, h0^{km}, mb3.9/13, mb1 4.0/17, mb1mx3.8/53, mbtmp3.8/17, ML3.3/3, MS2.9/3, Ms1 2.9/3, ms1mx2.5/35, Error ellipse: s-maj=18.3km s-min=14.9km az=92.0*
ISCJB ***24*** *11:56:40.3±0.9, 36°.21N±0°.03×141°.50E±0°.05, h20^{km}±6^{km}, mb3.9/16, MS3.3/1, Error ellipse: s-maj=6.7km s-min=5.3km az=3.4*
NEIC ***24*** *11:56:41.9±0.8, 36°.25N×141°.56E, h30^{km}±6^{km}, mb4.2/4, Error ellipse: s-maj=11.9km s-min=5.7km az=149.0*
JMA ***24*** *11:56:41.5±0.2, 36°.18N×141°.39E, h45^{km}±4^{km}, M3.5*
ISC 24 11:56:39.7±1.6**, 36°.26N**±0°.04×**141°.49E**±0°.05**, h6**^{km}±10^{km}**, n56, σ1^{s}.43**/58**, mb3.9**/16**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	0.73	276	P	Pb	11 56 54.9	0.0
JHYU				S	Sb	11 57 04.1	-1.1
CHOJ	**Chosi**	0.76	223	P	Pg	11 56 54.3	0.0
CHOJ				S	Sg	11 57 03.5	-0.6
JHO	**Hitachi**	0.82	295	P	Pb	11 56 56.2	-0.2
JHO				S	Sn	11 57 08.0	-2.3
JIHU	**Itakohorinouch**	0.83	249	P	Pg	11 56 56.0	+0.3
JIHU				S	Sg	11 57 06.4	-0.2
ONAJ	**Iwakimizuishiy**	1.00	327	P	Pb	11 56 59.6	0.0
JSMT	**Sammumatsuo**	1.05	234	P	Pb	11 56 59.6	-0.6
JYT	**Yasato**	1.05	268	P	Pg	11 56 58.8	-1.0
JFK	**Kawauchi**	1.21	336	P	Pb	11 57 02.7	-0.3
JFT	**Otama**	1.56	324	P	Pb	11 57 08.7	-0.3
JAG	**Ashikaga**	1.65	276	P	Pn	11 57 07.7	-1.6
BSO3	**Boso 3**	1.66	209	P	Pn	11 57 08.9	-0.3
JMM	**Marumori**	1.69	341	P	Pn	11 57 10.2	+0.3
MJAR	**Matsushiro Arr**	2.66	277	Pn	Pn	11 57 22.8	-0.4
	0.7nm,0.3s,baz=124,slow=8.7,SNR=26						
MJAR				Sn	Sn	11 57 55.2	-0.6
	0.8nm,0.3s,baz=83,slow=31,SNR=6.2						
MAJO	**Matsushiro**	2.66	277	*e*Pn	Pn	11 57 23.8	+0.6
MAJO				*e*Sn	Sn	11 57 55.2	-0.6
MAT	**Matsushiro**	2.66	277	P	Pn	11 57 23.3	+0.1
MAT				S	Sn	11 57 55.3	-0.5
MJB9	**Matsu-Tunnel**	2.67	277	*e*Pn	Pn	11 57 23.8	+0.6
JHJ2	**Mitsune**	3.43	204	*e*Pn	Pn	11 57 33.4	-0.3
JHJ	**Hachijo jima 2**	3.44	205	Pn	Pn	11 57 33.0	-0.9
	16nm,0.3s,baz=283,slow=23,SNR=15						
JHJ				Sn	Sn	11 58 14.0	-0.9
	28nm,0.3s,baz=74,slow=23,SNR=6.0						
JHJ				LR	LR	11 59 06.2	
	comp=Z,126nm,18.1s,baz=132,slow=44						
INU	**Inuyama**	3.75	257	*e*Pn	Pn	11 57 38.2	+0.1
ERM	**Erimo**	5.89	12	*e*Pn	Pn	11 58 06.0	-1.5
ASAJ	**Asahikawa**	7.89	6	Pn	Pn	11 58 35.5	+0.5
	0.9nm,0.3s,baz=235,slow=14,SNR=6.5						
ASAJ				Sn	Sn	11 59 58.9	-5.7
	0.2nm,0.3s,baz=101,slow=9.6,SNR=1.9						
JNU	**Nakatsue**	9.28	253	LR	LR	12 02 19.5	
	comp=Z,37nm,19.8s,baz=176,slow=37						
USRK	**Ussuriysk Ar.**	10.74	320	Pn	Pn	11 59 16.5	+2.4
	0.0nm,0.3s,baz=137,slow=16,SNR=2.4						
GUMO	**Guam**	22.78	171	P	P	12 01 42.4	-0.6
	20nm,0.6s,baz=22,slow=19,SNR=2.3						
SEY	**Seymchan**	27.53	11	P	P	12 02 29.1	+2.1
	0.7nm,0.5s,baz=180,slow=20,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	27.71	120	T	T	12 31 32.0	
	baz=312,slow=75,SNR=64						
H11N1	**WAKE ISLAND Hy**	27.71	120	T	T	12 31 31.3	
	baz=312,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	27.73	120	T	T	12 31 31.8	
	baz=312,slow=75,SNR=61						
SONA0	**Songino Array**	28.27	305	*e*P	P	12 02 35.6	+1.7
SONM	**Songino Array**	28.27	305	P	P	12 02 35.6	+1.7
	0.6nm,0.5s,baz=116,slow=9.8,SNR=2.8						
H11S1	**WAKE ISLAND Hy**	28.40	122	T	T	12 32 20.3	
	baz=314,slow=75,SNR=262						
H11S3	**WAKE ISLAND Hy**	28.40	122	T	T	12 32 17.2	
	baz=314,slow=75,SNR=166						
H11S2	**WAKE ISLAND Hy**	28.41	122	T	T	12 32 18.4	
	baz=314,slow=75,SNR=122						
ZAA1	**Zalesovo Array**	42.48	313	*e*P	P	12 04 36.3	+0.8
ZALV	**Zalesovo Beam**	42.48	313	P	P	12 04 36.3	+0.8
	0.8nm,0.4s,baz=98,slow=11,SNR=2.3						
KURBB	**Kurchatov Arra**	46.53	309	P	P	12 05 08.3	+0.5
	1.3nm,0.5s,baz=83,slow=7.6,SNR=12						
RSO	**Redoubt South**	47.47	38	*e*P	P	12 05 13.5	-1.8
ILAR	**Eielson Array**	50.11	32	P	P	12 05 37.1	+1.8
	1.4nm,0.7s,baz=262,slow=6.6,SNR=7.8						
ILB	**Eielson Array**	50.11	32	*e*P	P	12 05 33.9	-1.5
	1.7nm,0.7s						
WR1	**Warramunga Arr**	56.31	188	*e*P	P	12 06 20.8	-0.6
WRA	**Warramunga Arr**	56.31	188	P	P	12 06 20.8	-0.6
	2.8nm,1.1s,baz=5.2,slow=7.4,SNR=5.3						
AS31	**Alice Springs**	60.03	188	*e*P	P	12 06 46.3	-1.2
	1.9nm,1.4s						
ASAR	**Alice Springs**	60.03	188	P	P	12 06 47.3	-0.2
	0.4nm,0.7s,baz=24,slow=10,SNR=5.6						
NB200	**NORSAR Array S**	74.92	337	*e*P	P	12 08 22.2	+0.9
NOA	**NORSAR Array B**	74.92	337	P	P	12 08 22.2	+0.9
	0.3nm,0.7s,baz=38,slow=5.9,SNR=3.3						
NOA				LR	LR	12 44 36.1	
	comp=Z,16nm,19.1s,baz=125,slow=38						
AKASG	**Malin Array Be**	74.94	322	P	P	12 08 21.5	0.0
	0.5nm,0.4s,baz=46,slow=5.8,SNR=4.0						
AKBB	**Malin Array Si**	74.94	322	*e*P	P	12 08 19.3	-2.2
	3.3nm,1.1s						
NV01	**Mina Array Sit**	75.40	53	*e*P	P	12 08 26.9	+2.2
NVAR	**Mina Array Bea**	75.40	53	P	P	12 08 26.9	+2.2
	0.4nm,0.7s,baz=295,slow=5.6,SNR=5.2						
PD31	**Pinedale Array**	78.16	45	*e*P	P	12 08 38.3	-1.9
	3μm,0.7s						
PDAR	**Pinedale Array**	78.16	45	P	P	12 08 41.8	+1.6
	0.2nm,0.3s,baz=298,slow=1.9,SNR=2.9						
BR101	**Keskin Array S**	79.41	312	*e*P	P	12 08 47.4	+0.4
BRTR	**Keskin Array B**	79.41	312	P	P	12 08 47.4	+0.4
	0.4nm,0.6s,baz=69,slow=3.6,SNR=2.3						
TXAR	**Lajitas Array**	90.54	52	P	P	12 09 44.1	+1.0
	0.1nm,0.5s,baz=327,slow=2.1,SNR=3.5						
LPAZ	**La Paz**	147.02	61	PKPbc	PKPbc	12 16 24.6	0.0
	0.6nm,0.6s,baz=292,slow=5.4,SNR=2.6						
LPAZ	**La Paz**	147.02	61	*e*PKPdf	PKPdf	12 16 20.0	-2.6

IDC ***24*** *11:58:34.5±0.8, 28°.41N×51°.71E, h0^{km}, mb3.9/22, mb1 4.1/29, mb1mx4.0/47, mbtmp4.0/29, ML3.9/6, MS3.2/15, Ms1 3.2/15, ms1mx3.0/42, Error ellipse: s-maj=17.9km s-min=12.1km az=7.0*
ISCJB ***24*** *11:58:36.6±0.2, 28°.42N±0°.02×51°.64E±0°.03, h24^{km}, mb4.1/37, MS3.2/10, Error ellipse: s-maj=4.5km s-min=2.3km az=142.6*
TEH ***24*** *11:58:37.0, 28°.50N×51°.62E, h17^{km}, ML4.2*
NEIC ***24*** *11:58:38.1±0.0, 28°.57N×51°.63E, h21^{km}, mb4.2/20, ML4.2(THR), MN4.2(TEH), After THR.*
THR ***24*** *11:58:38.1, 28°.57N×51°.63E, h21^{km}, ML4.2*
DSN ***24*** *11:58:42.8±0.9, 28°.28N×52°.00E, h10^{km}, ML4.7/10, Error ellipse: s-maj=13.1km s-min=4.7km az=5.0*
OMAN ***24*** *11:58:45.3±1.0, 28°.19N×52°.02E, h23^{km}, ml4.6/11, Error ellipse: s-maj=16.0km s-min=9.3km az=46.0*
ISC 24 11:58:38.2±0.4**, 28°.47N**±0°.04×**51°.66E**±0°.04**, h24**^{km}**, n139, σ1^{s}.45**/154**, mb4.1**/37**, MS3.1**/10**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	1.18	99	AML	AML	11 59 24.5	
	comp=N,5μm,0.3s						
GHIR				Pg	Pb	11 59 00.8	+0.7
GHIR				Sg	Sb	11 59 17.0	+1.9
GHIR				AML	AML	11 59 24.7	
	comp=E,6μm,0.4s						
IKAZ	**Kazeroun**	1.31	7	*e*Pg	Pn	11 59 00.7	-0.7
IKAZ				IAMB	IAmb	11 59 25.6	
	comp=Z,73μm,0.4s						
SHI	**Shiraz**	1.39	32	*e*Sg	Sb	11 59 22.4	+1.5
SHI				*e*Pg	Pb	11 59 03.3	-0.3
SHI				IAMB	IAmb	11 59 25.7	
	comp=Z,62μm,0.5s						
JHRM	**Jahrom**	1.69	88	*e*Pn	Pb	11 59 08.3	-0.4
LMD1	**Lamerd**	1.74	130	*e*Pn	Pb	11 59 09.1	-0.4
IPAR	**Pars**	1.83	41	*e*Pn	Pb	11 59 10.6	-0.6
IPAR				IAMB	IAmb	11 59 40.4	
	comp=Z,26μm,0.7s						
IRAM	**Ramesheh**	3.39	10	*e*Pn	Pn	11 59 30.9	+1.1
IRAM				IAMB	IAmb	11 59 43.2	
	comp=Z,5μm,0.6s						
ZNGN	**Zangian**	3.70	349	*e*Pn	Pn	11 59 35.1	+0.9
JHBN	**Jahan bin**	3.85	347	*e*Pn	Pn	11 59 37.7	+1.5
JHBN				IAMB	IAmb	12 00 55.6	
	comp=Z,0.0nm,0.9s						
ISAD	**Sadrabad**	3.85	27	*e*Pn	Pn	11 59 38.9	+2.6
ISAD				IAMB	IAmb	11 59 52.8	
	comp=Z,5μm,0.6s						
IMEH	**Mehriz**	3.88	41	*e*Pn	Pn	11 59 39.0	+2.4
IMEH				IAMB	IAmb	11 59 42.8	
	comp=Z,6μm,0.4s						

ROKH	ROKH	3.90	352	ePn	Pn	11 59 37.7	+0.8
ROKH				IAMB	IAmb	12 01 01.0	
	comp=Z,0.0nm,1.0s						
IGAR	Gharneh	3.94	5	ePn	Pn	11 59 38.3	+1.0
IGAR				IAMB	IAmb	11 59 55.0	
	comp=Z,2µm,0.4s						
GENO	Geno	4.13	104	ePn	Pn	11 59 42.1	+2.1
IPIR	Pirpir	4.25	351	ePn	Pn	11 59 41.8	0.0
IZEF	Zefreh	4.45	7	ePn	Pn	11 59 45.9	+1.5
IZEF				IAMB	IAmb	12 00 07.5	
	comp=Z,1µm,0.7s						
NGRK	Negar Kerman	4.59	74	ePn	Pn	11 59 48.4	+1.9
YZKH	Yazd	4.66	32	ePn	Pn	11 59 48.9	+1.8
YZKH	Yazd	4.66	32	Pn	Pn	11 59 48.9	+1.8
SHME	Shamm	4.66	120	iP	Pn	11 59 47.9	+0.8
	SNR=22						
SHME				S	Sn	12 00 39.8	-0.7
SHME	Shamm	4.66	120	ePn	Pn	11 59 48.1	+1.0
NIAN	Nian	4.66	100	ePn	Pn	11 59 48.4	+1.2
NIAN				IAMB	IAmb	12 00 45.5	
	comp=Z,0.0nm,0.3s						
TVBK	TV Kerman	4.71	70	ePn	Pn	11 59 50.2	+2.1
IKLH	Kolahrood	4.83	359	ePn	Pn	11 59 50.6	+0.9
IKLH				IAMB	IAmb	12 00 54.3	
	comp=Z,1µm,0.5s						
BANOM	Banah	4.85	120	iP	Pn	11 59 50.6	+0.8
	SNR=111						
BANOM				S	Sn	12 00 43.9	-1.2
BANOM	Banah	4.85	120	P	Pn	11 59 50.7	+1.0
	SNR=111						
BANOM				S	Sn	12 00 45.1	0.0
AJN	Ajban	4.90	142	ePn	Pn	11 59 52.3	+1.9
NAZ	Nazwa, Dubai	4.98	133	iP	Pn	11 59 53.5	+2.0
	SNR=25						
NAZ	Nazwa, Dubai	4.98	133	P	Pn	11 59 53.8	+2.2
	SNR=25						
NAZ				S	Sn	12 00 49.4	+1.0
ASUD	Al Ashush, Dub	5.04	139	iP	Pn	11 59 54.4	+2.1
	SNR=39						
ASUD	Al Ashush, Dub	5.04	139	P	Pn	11 59 54.8	+2.4
	SNR=39						
MSFE	Esma-Masafi	5.07	127	iP	Pn	11 59 53.9	+1.1
	SNR=24						
FAQ	Al Faqa, Dubai	5.11	136	iP	Pn	11 59 55.3	+2.0
	SNR=7.2						
FAQ	Al Faqa, Dubai	5.11	136	P	Pn	11 59 55.5	+2.2
	SNR=8.3						
FAQ				S	Sn	12 00 52.3	+0.7
	SNR=18						
MDH	Madha	5.21	126	iP	Pn	11 59 56.0	+1.3
	SNR=9.3						
MDH	Madha	5.21	126	P	Pn	11 59 56.0	+1.3
	SNR=9.3						
MDH				S	Sn	12 00 53.0	-1.0
UOSS	Minazif	5.37	130	ePn	Pn	11 59 57.7	+0.9
UOSS				eSn	Sn	12 00 56.0	-2.0
UOSS	Minazif	5.37	130	iP	Pn	11 59 57.7	+0.9
	SNR=23						
UOSS	Minazif	5.37	130	ePn	Pn	11 59 57.8	+0.9
HATD	Hatta, Dubai	5.40	131	iP	Pn	11 59 58.7	+1.4
	SNR=24						
HATD	Hatta, Dubai	5.40	131	P	Pn	11 59 58.9	+1.5
	SNR=10						
HATD				S	Sn	12 00 58.5	-0.3
ASHO	Ashiyiah	5.45	133	iP	Pn	11 59 59.1	+1.1
	SNR=28						
ASHO	Ashiyiah	5.45	133	P	Pn	11 59 59.4	+1.3
	SNR=20						
ASHO				S	Sn	12 00 59.4	-0.6
KRSH	Karshahi	5.50	4	ePn	Pn	11 59 59.6	+0.8
KRSH				IAMB	IAmb	12 01 04.2	
	comp=Z,0.0nm,0.6s						
MZR	Muzera	5.69	163	P	Pn	12 00 03.5	+2.2
MZR	Muzera	5.69	163	P	Pn	12 00 04.4	+3.2
ALNE	Al Ain	5.73	139	iP	Pn	12 00 03.8	+2.0
	SNR=12						
ALNE	Al Ain	5.73	139	ePn	Pn	12 00 03.5	+1.7
IKMR	Kamar-syah	5.77	332	ePn	Pn	12 00 03.6	+1.3
GHVR	GHOM	6.00	357	ePn	Pn	12 00 06.6	+1.0
GHVR	GHOM	6.00	357	Pn	Pn	12 00 06.6	+1.0
ASAO	Ashtian	6.22	347	ePn	Pn	12 00 09.9	+1.2
ASAO	Ashtian	6.22	347	Pn	Pn	12 00 09.9	+1.2
HSAM	Samen	6.29	336	ePn	Pn	12 00 10.8	+1.0
IVRN	Varamin	6.51	0	ePn	Pn	12 00 12.6	+0.1
IKOM	Komasi	6.70	329	ePn	Pn	12 00 16.1	+0.8
TKDS	Koohdasht(Taba	6.95	41	ePn	Pn	12 00 20.0	+1.4
TABS	Tabas	6.97	41	ePn	Pn	12 00 20.5	+1.6
TABS	Tabas	6.97	41	Pn	Pn	12 00 20.5	+1.6
HOQ	Hoqain	7.04	132	P	Pn	12 00 21.0	+1.2
	SNR=12						
IRAZ	Razeghan	7.07	348	ePn	Pn	12 00 21.6	+1.2
IDMV	Damavand	7.09	2	ePn	Pn	12 00 21.7	+0.9
IANJ	Anjilo	7.24	15	ePn	Pn	12 00 23.6	+0.9
IVIS	Veis	7.30	327	ePn	Pn	12 00 24.2	+0.7
IVIS				IAMB	IAmb	12 01 07.7	
	comp=Z,499nm,0.4s						
HSRG	Sareghieh	7.34	338	ePn	Pn	12 00 26.0	+1.9
RAYN	Ar Rayn	7.41	230	ePn	Pn	12 00 24.9	0.0
QABG	Abgarm-Qazvin	7.43	347	ePn	Pn	12 00 26.3	+1.0
BSY	Bisya	7.58	138	P	Pn	12 00 28.7	+1.4
	SNR=17						
BSY				S	Sn	12 01 49.4	-3.1
SMDO	Samad	7.88	132	P	Pn	12 00 32.5	+1.0
	SNR=22						
SMDO				S	Sn	12 01 58.7	-1.4
WSAR	Wadi Sarin	8.16	128	Pn	Pn	12 00 35.3	+0.2
	comp=Z,5.3nm,0.3s,baz=315,slow=7.3,SNR=53						
WSAR				Sn	Sn	12 02 02.3	-4.3
	comp=Z,11nm,0.3s,baz=144,slow=18,SNR=9.2						
WSAR				LR	LR	12 04 11.1	
	comp=Z,181nm,19.5s,baz=332,slow=42						
WSAR	Wadi Sarin	8.16	128	P	Pn	12 00 35.3	+0.2
	SNR=30						
WSAR				S	Sn	12 02 02.4	-4.2
JMDO	Jabal Madar	8.41	135	P	Pn	12 00 39.1	+0.4
	SNR=5.5						
JMDO				S	Sn	12 02 08.6	-4.4
WBK	Wadi Bani Khal	8.81	130	P	Pn	12 00 44.8	+0.6
	SNR=7.7						
WBK				S	Sn	12 02 20.5	-2.2
SBZV	Sabzevar	9.36	31	ePn	Pn	12 00 53.3	+1.5
MHTO	MHTO	9.40	141	P	Pn	12 00 53.1	+1.0
	SNR=8.2						
MHTO				S	Sn	12 02 33.2	-4.0
IMYA	Miami	10.60	40	ePn	Pn	12 01 10.3	+1.5
GEYT	Alibeck	10.87	28	Pn	Pn	12 01 11.8	-0.5
	comp=Z,0.7nm,0.3s,baz=221,slow=11,SNR=4.1						
GEYT				Lg	Lg	12 04 37.8	
	comp=Z,0.4nm,0.3s,baz=214,slow=21,SNR=2.5						
GNI	Garni	12.97	336	LR	LR	12 06 32.3	
	comp=Z,52nm,20.7s,baz=150,slow=37						
ASF	Jabal al Asfar	13.28	290	Pn	Pn	12 01 45.5	+0.3
	comp=Z,0.2nm,0.3s,baz=105,slow=20,SNR=2.7						
ASF				Sn	S	12 04 26.9	-9.3
	comp=Z,0.2nm,0.3s,baz=95,slow=20,SNR=1.4						
ASF				Lg	Lg	12 05 50.6	
	comp=Z,0.1nm,0.3s,baz=243,slow=20,SNR=1.3						
EIL	Elat	14.66	279	Pn	Pn	12 02 06.7	+2.5
	baz=83,slow=17,SNR=1.7						
EIL				Lg	Lg	12 06 34.9	
	comp=Z,0.3nm,0.3s,baz=356,slow=7.7,SNR=2.6						
EIL				LR	LR	12 08 35.0	
	comp=Z,101nm,19.4s,baz=62,slow=41						
MMAI	Mount Meron Ar	14.69	292	Pn	Pn	12 02 05.3	+0.7
	comp=Z,1.0nm,0.3s,baz=116,slow=13,SNR=2.0						
MMAI				Lg	Lg	12 06 36.4	
	comp=Z,4.0nm,0.3s,baz=128,slow=49,SNR=4.8						
MMAI				LR	LR	12 08 28.1	
	comp=Z,64nm,18.0s,baz=105,slow=40						
KBZ	Khabaz	16.78	338	Pn	P	12 02 33.5	0.0
	comp=Z,0.1nm,0.3s,baz=171,slow=13,SNR=3.4						
KVAR	Kislovodsk Arr	17.05	337	P	P	12 02 36.5	-0.1
	baz=180,slow=20,SNR=1.9						
KIV	Kislovodsk	17.05	337	eP	Pn	12 02 35.7	+0.6
	comp=Z,30nm,1.5s						
BR101	Keskin Array S	18.64	312	eP	Pn	12 02 54.9	+0.2
BRTR	Keskin Array B	18.64	312	P	Pn	12 02 54.9	+0.2
	comp=Z,0.5nm,0.3s,baz=120,slow=13,SNR=4.9						
BRTR				LR	LR	12 12 39.5	
	comp=Z,16nm,18.2s,baz=82,slow=45						
BTK	Batken	19.56	49	eP	P	12 03 04.0	-0.4
	comp=Z,14nm,1.3s						
KK31	Karatay Array	21.08	41	eP	P	12 03 20.7	0.0
	comp=Z,18nm,1.1s						
KKAR	Karatay Array	21.08	41	eP	P	12 03 20.7	0.0
	comp=Z,18nm,1.1s						
ARSB	Arslanbob	21.62	48	eP	P	12 03 25.5	-1.2
	comp=Z,13nm,0.6s						
ABKAR	Akbulak array	21.71	15	eP	P	12 03 26.2	-1.2
	comp=Z,4.1nm,0.9s						
AKTO	Aktyubinsk	22.46	11	P	P	12 03 36.2	+0.7
	comp=Z,0.8nm,0.3s,baz=187,slow=13,SNR=3.8						
AKTO				LR	LR	12 14 33.1	
	comp=Z,48nm,18.0s,baz=182,slow=43						
AAK	Ala-Archa	23.25	47	P	P	12 03 44.1	+0.2
	comp=Z,1.5nm,0.3s,baz=232,slow=10.0,SNR=2.7						
AAK				LR	LR	12 12 55.0	
	comp=Z,32nm,19.2s,baz=237,slow=37						
NRN	Naryn	23.68	50	eP	P	12 03 46.5	-1.8
	comp=Z,8.6nm,1.1s						
IDI	Anoyia	23.68	293	P	P	12 03 48.8	+0.6
	comp=Z,3.4nm,0.3s,baz=115,slow=17,SNR=3.3						
BOOM	Boomskoye usch	24.11	48	eP	P	12 03 50.8	-1.5
	comp=Z,5.3nm,0.6s						
MLR	Muntele Rosu	26.49	317	P	P	12 04 14.5	+0.8
	comp=Z,0.9nm,0.3s,baz=101,slow=18,SNR=2.0						
AKASG	Malin Array Be	27.94	329	P	P	12 04 26.5	0.0
	comp=Z,0.2nm,0.2s,baz=130,slow=8.0,SNR=3.8						
BVAR	Borovoye Array	28.17	24	P	P	12 04 28.8	+0.3
	comp=Z,1.0nm,0.4s,baz=216,slow=7.3,SNR=8.2						
ARU	Arti	28.37	8	P	P	12 04 31.5	+1.2
	comp=Z,0.7nm,0.3s,baz=156,slow=20,SNR=2.0						
ARU				LR	LR	12 18 50.3	
	comp=Z,44nm,18.8s,baz=258,slow=43						
ARU	Arti	28.37	8	eP	P	12 04 28.8	-1.5
	comp=Z,2.0nm,0.6s						
MAKZ	Makanchi	29.93	44	eP	P	12 04 43.5	-0.8
	comp=Z,3.3nm,1.1s						
KURBB	Kurchatov Arra	30.02	35	P	P	12 04 45.7	+0.7
	comp=Z,1.3nm,0.8s,baz=235,slow=9.0,SNR=8.7						
MKAR	Makanchi Array	30.11	44	LR	LR	12 18 11.5	
	comp=Z,54nm,19.5s,baz=234,slow=39						
ZAA0	Zalesovo Array	35.10	34	eP	P	12 05 28.5	-0.9
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	35.10	34	P	P	12 05 29.6	+0.2
	comp=Z,1.5nm,0.3s,baz=241,slow=10,SNR=6.7						
ZAA1	Zalesovo Array	35.10	34	eP	P	12 05 29.6	+0.2
GEC2	GERESS Array S	35.45	316	eP	P	12 05 31.1	-1.5
	comp=Z,1.6nm,0.9s						
GERES	GERESS Array B	35.45	316	P	P	12 05 33.3	+0.6
	comp=Z,0.2nm,0.3s,baz=90,slow=11,SNR=2.2						
GERES				LR	LR	12 24 14.7	
	comp=Z,24nm,18.4s,baz=148,slow=43						
KEST	Kesra	36.35	292	P	P	12 05 41.1	+0.7
	comp=Z,1.2nm,0.7s,baz=72,slow=19,SNR=2.4						
KEST	Kesra	36.35	292	eP	P	12 05 39.7	-0.8
	comp=Z,2.9nm,0.8s						
FIA0	FINESS Array S	37.11	340	eP	P	12 05 46.5	-0.1
FIA1	FINESS Array S	37.11	340	eS	S	12 11 26.0	-5.2
FINES	FINESS Array B	37.11	340	P	P	12 05 46.5	-0.1
	comp=Z,2.4nm,0.5s,baz=149,slow=7.6,SNR=20						
FINES				LR	LR	12 24 05.0	
	comp=Z,37nm,18.8s,baz=199,slow=41						
GTA	Gaotai	40.99	62	eP	P	12 06 20.8	+1.4
GTA				pP	pP	12 06 26.6	-0.3
GTA				sP	sP	12 06 29.8	-0.1
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NC405	NORSAR Array S	42.07	332	eP	P	12 06 26.8	-1.0
	comp=Z,7.7nm,0.6s						
NB201	NORSAR Array S	42.21	332	eP	P	12 06 28.2	-0.8
	comp=Z,23nm,1.4s						
NB2	NORSAR Subarra	42.24	332	P	P	12 06 28.8	-0.5
	comp=Z,1.1nm,0.5s,baz=122,slow=8.6						
NB200	NORSAR Array S	42.24	332	eP	P	12 06 28.8	-0.5
NOA	NORSAR Array B	42.24	332	P	P	12 06 28.8	-0.5
	comp=Z,1.0nm,0.4s,baz=122,slow=8.3,SNR=12						
NOA				LR	LR	12 25 55.9	
	comp=Z,24nm,20.2s,baz=125,slow=39						
ARCES	ARCESS Array B	43.79	347	P	P	12 06 41.6	-0.1
	comp=Z,0.5nm,0.8s,baz=144,slow=7.8,SNR=2.7						
CM31	Chiang Mai Arr	44.26	92	eP	P	12 06 46.7	+0.6
	comp=Z,6.8nm,1.0s						
CMAR	Chiang Mai Arr	44.26	92	P	P	12 06 44.8	-1.3
	comp=Z,1.3nm,0.7s,baz=283,slow=8.1,SNR=6.1						
CMAR				LR	LR	12 30 36.5	
	comp=Z,59nm,18.0s,baz=244,slow=44						
SONA0	Songino Array	46.14	50	eP	P	12 07 01.0	+0.2
SONM	Songino Array	46.14	50	P	P	12 07 01.0	+0.2
	comp=Z,0.3nm,0.3s,baz=249,slow=7.6,SNR=2.6						
TOA1	Torodi Ar. Sit	48.79	263	eP	P	12 07 21.9	+0.2
TORD	Torodi Ar. Bea	48.79	263	P	P	12 07 21.9	+0.2
	comp=Z,1.3nm,0.9s,baz=51,slow=6.3,SNR=4.6						
DBIC	Dimbokro	57.51	259	P	P	12 08 26.5	+0.6
	comp=Z,4.5nm,0.9s,baz=72,slow=7.9,SNR=2.5						
DBIC	Dimbokro	57.51	259	eP	P	12 08 25.0	-0.9
	comp=Z,15nm,1.2s						
KS15	Wonju Array Si	63.00	60	eP	P	12 09 02.2	-1.1
	comp=Z,16nm,1.2s						
KSRS	Korea Array	63.03	60	P	P	12 09 03.4	0.0
	comp=Z,0.5nm,0.4s,baz=282,slow=5.8,SNR=2.6						
KSRS				LR	LR	12 39 10.8	
	comp=Z,36nm,19.6s,baz=168,slow=39						
USRK	Ussuriysk Ar.	64.16	52	P	P	12 09 10.8	0.0
	comp=Z,1.0nm,0.8s,baz=282,slow=7.2,SNR=2.4						
ILAR	Eielson Array	85.94	8	P	P	12 11 17.1	+1.1
	comp=Z,0.3nm,0.6s,baz=329,slow=4.6,SNR=3.2						
ILB	Eielson Array	85.94	8	eP	P	12 11 15.7	-0.3
	comp=Z,3.4nm,1.4s						
GUMO	Guam	86.40	77	LR	LR	12 54 04.6	
	comp=Z,32nm,20.2s,baz=180,slow=39						
WR1	Warramunga Arr	93.17	111	eP	P	12 11 50.5	-0.4
WRA	Warramunga Arr	93.17	111	P	P	12 11 50.5	-0.4
	comp=Z,0.7nm,0.8s,baz=310,slow=3.1,SNR=2.9						
AS31	Alice Springs	94.61	114	eP	P	12 11 56.5	-0.9
	comp=Z,1.0nm,1.1s						
ASAR	Alice Springs	94.61	114	P	P	12 11 56.6	-0.8
	comp=Z,0.5nm,0.5s,baz=302,slow=4.6,SNR=8.1						

WEL 24 12:09:55.4, 41°.6S±1°.0×**174°.3E**±0°.7**, h13**^{km}±2^{km}**, M3.4**/23**, ML3.7**/18**, MLv3.4**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=161.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	197	P	Pb	12 09 59.3	-0.3
CMWZ				S	Sb	12 10 02.2	-0.3
BSWZ	Blackbirch Sta	0.30	254	P	Pg	12 10 02.0	+0.4
BSWZ				S	Sb	12 10 07.1	-0.4
TUWZ	Tuamarina	0.31	310	P	Pb	12 10 02.5	-0.4
TUWZ				S	Sb	12 10 07.4	-0.4
TCW	Tory Channel	0.42	2	P	Pb	12 10 04.3	-0.4
TCW				S	Sb	12 10 10.2	-0.7
BHW	Baring Head	0.51	64	P	Pb	12 10 06.2	0.0
PLWZ	Palliser	0.75	86	P	Pb	12 10 10.9	+0.6
MSWZ	Moikau Station	0.77	74	P	Pb	12 10 11.1	+0.4
NNZ	Nelson	0.78	302	P	Pg	12 10 10.6	+0.1
CAW	Cannon Point	0.80	49	P	Pb	12 10 11.2	0.0
DUWZ	D'Urville Isla	0.87	343	P	Pb	12 10 12.3	-0.1
PAWZ	Paruwai Farm	0.91	75	P	Pn	12 10 13.7	-0.2
KHZ	Kahutara	0.95	214	P	Pn	12 10 14.2	-0.2
THZ	Tophouse	1.02	262	P	Pb	12 10 14.9	-0.2
MTW	Mount Morrison	1.05	64	P	Pn	12 10 15.7	-0.1
TRWZ	Traveller	1.10	78	P	Pb	12 10 15.9	-0.3
HOWZ	Holdsworth Sta	1.20	53	P	Pg	12 10 18.3	-0.2
TMWZ	Te Maipa	1.33	67	P	Pn	12 10 19.7	-0.1
MRZ	Mangatainoka R	1.39	46	P	Pn	12 10 20.8	+0.3
TIWZ	Tintock	1.49	56	P	Pb	12 10 23.3	+0.2
QRZ	Quartz Range	1.53	301	P	Pb	12 10 23.7	0.0
GVZ	Greta Valley S	1.62	214	P	Pn	12 10 23.0	-0.6
OHWZ	Ohakea	1.63	30	P	Pg	12 10 26.2	-0.6
PRWZ	Pori Road	1.68	51	P	Pn	12 10 24.7	+0.2
POWZ	Post Office Ro	1.68	43	P	Pn	12 10 25.1	+0.5
DSZ	Denniston Nort	1.84	266	P	Pb	12 10 28.4	-0.6
LTZ	Lake Taylor	1.87	231	P	Pn	12 10 27.2	0.0
WAZ	Wanganui	1.95	17	P	Pb	12 10 31.8	+1.0
TSZ	Takapari Road	2.03	40	P	Pn	12 10 29.7	+0.3
PNHZ	Pukenui	2.26	41	P	Pn	12 10 33.1	+0.6
OKCZ	Okains Bay	2.27	203	P	Pn	12 10 30.8	-1.9
PREZ	Palmer Road	2.29	358	P	Pb	12 10 37.0	+0.4
KHEZ	Kahui Hut	2.34	355	P	Pb	12 10 37.2	-0.3
OXZ	Oxford	2.36	223	P	Pn	12 10 32.7	-1.2
INZ	Inchbonnie	2.36	241	P	Pn	12 10 34.4	+0.5
NBEZ	Newall Road No	2.38	353	P	Pb	12 10 37.5	-0.6
MQZ	McQueen's Vall	2.39	209	P	Pn	12 10 32.0	-2.2
DREZ	Durham Road	2.44	359	P	Pb	12 10 38.9	-0.3
PKE	Pukeiti	2.44	355	P	Pb	12 10 39.9	+0.7
PKVZ	Pokaka	2.48	20	P	Pb	12 10 40.7	+0.8
MOVZ	Moawhango	2.50	28	P	Pb	12 10 40.4	+0.3
VRZ	Vera Road	2.53	9	P	Pb	12 10 39.9	-0.8
BHHZ	Black Hill Sta	2.54	33	P	Pb	12 10 39.3	-1.6
KRHZ	Kereru	2.55	40	P	Pg	12 10 43.0	-1.4
WHVZ	Whangaehu Hut	2.56	24	P	Pb	12 10 41.7	+0.5
FWVZ	Far West T-bar	2.57	23	P	Pb	12 10 42.1	+0.6
TUVZ	Tukino	2.59	25	P	Pb	12 10 41.5	-0.3
NGZ	Ngauruhoe	2.66	23	P	Pb	12 10 43.3	+0.4
KAHZ	Kahuranaki	2.71	48	P	Pb	12 10 41.2	-2.5
TWVZ	Taurewa	2.71	20	P	Pb	12 10 44.7	+0.9
WTVZ	West Tongariro	2.71	22	P	Pb	12 10 44.4	+0.6
KRVZ	Karewarewa	2.74	23	P	Pb	12 10 45.4	+1.0
KWHZ	Kaweka Forest	2.75	37	P	Pg	12 10 46.4	-1.7
KATZ	Kakaramea	2.87	23	P	Pb	12 10 48.2	+1.6
RITZ	Rihia Road	2.92	25	P	Pg	12 10 49.4	-1.9
WVZ	Waitaha Valley	2.98	240	P	Pb	12 10 45.9	-2.5
RATZ	Rangitukua	2.99	23	P	Pb	12 10 50.1	+1.5
BKZ	Black Stump Fm	2.99	35	P	Pb	12 10 49.7	+1.1
WATZ	Wairara	3.13	22	P	Pg	12 10 53.2	-2.2
HIZ	Hauiti	3.15	9	P	Pb	12 10 49.0	-2.2
RPZ	Rata Peaks	3.15	228	P	Pn	12 10 44.4	-0.4
KUTZ	Kaahu Road	3.36	21	P	Pb	12 10 56.6	+1.8
TLZ	Tolley Road	3.44	17	P	Pb	12 10 56.3	+0.1
FOZ	Fox Glacier	3.79	238	P	Pb	12 10 59.6	-2.6
TOZ	Tahuroa Road	4.01	14	P	Pb	12 11 04.0	-1.9
ODZ	Otahua Downs	4.31	216	P	Pn	12 10 59.0	-1.7
MKAZ	Moumakai	4.57	9	P	Pb	12 11 11.3	-4.2
JCZ	Jackson Bay	4.71	237	P	Pn	12 11 10.3	+4.1

IDC 24 12:11:26.8±31.0**, 17°.87S**×**175°.68W, h0**^{km}**, mb4.4**/4**, mb1 4.5**/4**, mb1mx3.9**/23**, mbtmp4.4**/4**, Error ellipse: s-maj=563.6km s-min=159.7km az=71.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.02	260	P	P	12 18 29.9	-0.1
	7.3nm,0.9s,baz=72,slow=6.8,SNR=2.7						
STKA	Stephens Creek	40.93	242	P	P	12 19 11.3	+0.1
	0.7nm,0.5s,baz=90,slow=2.0,SNR=1.4						
WRA	Warramunga Arr	47.19	259	P	P	12 20 01.6	-0.1
	0.7nm,0.3s,baz=97,slow=7.2,SNR=2.3						
ASAR	Alice Springs	47.30	254	P	P	12 20 02.3	-0.2
	17nm,0.5s,baz=88,slow=7.8,SNR=5.9						

KRSC 24 12:13:10.5±2.0**, 49°.34N**×**156°.78E, h41**^{km}±26^{km}**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.41	343	eP	Pn	12 13 32.6	-1.1
SKR				eS	Sn	12 13 50.1	-0.9
PAU	Pauzhetka	2.13	1	eP	Pn	12 13 45.8	+2.3
PAU				eS	Sn	12 14 12.1	+3.4
KDTR	Khodutka, Kamc	2.61	18	eP	Pn	12 13 53.4	+3.3
KDTR				eS	Sn	12 14 25.5	+5.0
ASAK	Asacha	3.13	13	eP	Pn	12 14 01.6	+4.2
MTVR	Mutnovka	3.27	15	eP	Pn	12 14 02.9	+3.5
MTVR				eS	Sn	12 14 42.1	+5.0
RUS	Russkaya	3.29	19	eP	Pn	12 14 03.1	+3.7
RUS				eS	Sn	12 14 42.8	+5.6
KRMR	Karymshinskiy	3.60	13	eP	Pn	12 14 06.6	+2.9
KRMR				eS	Sn	12 14 49.2	+4.3
APC	Apacha	3.60	4	eP	Pn	12 14 08.3	+4.6
DALK	Dalny	3.90	18	eP	Pn	12 14 11.5	+3.7
DALK				eS	Sn	12 14 56.8	+4.5
UGLR	Uglovaya	4.08	18	eP	Pn	12 14 15.0	+4.5
AVH	Avacha	4.12	17	eP	Pn	12 14 16.4	+5.5
SMAR	Somma	4.13	17	eP	Pn	12 14 16.0	+4.8
KRER	Koryakskii	4.16	17	eP	Pn	12 14 14.7	+3.1
SDLR	Sedlovina	4.16	18	eP	Pn	12 14 15.6	+4.1
SDLR				eS	Sn	12 15 04.4	+5.5
KRX	Arik	4.19	16	eP	Pn	12 14 16.8	+4.8
SPN	Mys Shipunski	4.28	27	eP	Pn	12 14 18.0	+4.9
SPN				eS	Sn	12 15 08.6	+6.9
GNL	Ganaly	4.42	9	eP	Pn	12 14 20.0	+4.9
MKZ	Mys Kozlova	6.05	28	eP	Pn	12 14 40.9	+3.5
MKZ				eS	Sn	12 15 50.2	+4.9
KBTR	Krutoberegovo	7.79	26	eP	Pn	12 15 05.6	+4.4
BKI	Bering	8.14	40	eS	Sn	12 16 39.2	+2.7

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*ISCJB **24** 12:20:45.8±0.9, 20°.1S±0°.1×177°.1W±0°.2, h500^{km}, Error ellipse: s-maj=21.1km s-min=15.8km az=31.5*

*IDC **24** 12:20:45.1±4.7, 20°.05S×177°.09W, h479^{km}±53^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.5/34, mbtmp4.5/11, Error ellipse: s-maj=28.0km s-min=21.3km az=43.0*

ISC 24 12:20:46.5±0.9**, 20°.1S**±0°.2×**177°.1W**±0°.2**, h500**^{km}**, n15,** σ**1^{s}.02**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.47	260	P	P	12 24 02.2	+0.4
	0.4nm,0.3s,baz=135,slow=4.3,SNR=6.2						
URZ	Urewera	18.77	194	P	P	12 24 33.7	0.0
	2.9nm,0.3s,baz=294,slow=3.1,SNR=25						
RPZ	Rata Peaks	25.54	200	P	P	12 25 35.2	+0.7
	7.3nm,1.0s,baz=344,slow=7.4,SNR=3.1						
CTA	Charters Tower	34.36	264	P	P	12 26 51.4	+0.2
	10nm,0.5s,baz=90,slow=11,SNR=26						
STKA	Stephens Creek	38.70	244	P	P	12 27 27.6	+0.7
	1.6nm,0.4s,baz=91,slow=10,SNR=8.9						
ASAR	Alice Springs	45.42	256	P	P	12 28 20.3	+0.1
	15nm,0.4s,baz=89,slow=6.6,SNR=192						
ASAR				PcP	pP	12 29 49.7	-2.6
	0.7nm,0.6s,baz=108,slow=4.1,SNR=4.2						
WRA	Warramunga Arr	45.48	261	P	P	12 28 20.4	-0.3
	7.3nm,0.3s,baz=90,slow=7.9,SNR=282						
SIJI	Sorong	53.94	284	P	P	12 29 23.7	+0.5
	12nm,0.6s,baz=73,slow=5.6,SNR=5.5						
MJAR	Matsushiro Arr	70.39	323	P	P	12 31 09.3	-0.4
	2.0nm,0.7s,baz=162,slow=5.7,SNR=6.1						
USRK	Ussuriysk Ar.	79.11	325	P	P	12 31 59.3	+0.7
	1.1nm,0.6s,baz=135,slow=3.1,SNR=3.3						
TXAR	Lajitas Array	86.15	57	P	P	12 32 34.5	-0.1
	0.0nm,0.3s,baz=268,slow=6.3,SNR=2.7						
ILAR	Eielson Array	87.75	12	P	P	12 32 41.7	+0.5
	0.3nm,0.6s,baz=213,slow=5.4,SNR=4.0						
AKASG	Malin Array Be	143.07	332	PKP	PKPdf	12 39 21.2	-1.6
	1.2nm,0.4s,baz=42,slow=4.6,SNR=7.4						
BRTR	Keskin Array B	147.18	313	PKPbc	PKiKP	12 39 34.4	-0.9
	0.9nm,0.5s,baz=149,slow=5.8,SNR=4.7						
GERES	GERESS Array B	150.04	346	PKPbc	PKiKP	12 39 41.8	+0.9
	0.7nm,0.7s,baz=82,slow=2.8,SNR=5.3						

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*ISCJB **24** 12:39:10.8±0.5, 41°.80S±0°.03×174°.30E±0°.03, h8^{km}±4^{km}, mb3.8/2, Error ellipse: s-maj=5.5km s-min=2.8km az=135.7*

*NEIC **24** 12:39:10.9±0.0, 41°.69S×174°.23E, h12^{km}, mb4.1/1, ML4.3(WEL), After WEL.*

*WEL **24** 12:39:11.0, 41°.7S±0°.8×174°.2E±0°.7, h8^{km}±2^{km}, M4.1/26, ML4.3/17, MLv4.1/26, Error ellipse: s-maj=0.0km s-min=0.0km az=162.2*

*IDC **24** 12:39:12.1±2.2, 43°.32S×173°.49E, h0^{km}, mb5.2/1, mb1 5.3/1, mb1mx4.0/15, mbtmp5.2/1, Error ellipse: s-maj=124.5km s-min=59.3km az=28.0*

ISC 24 12:39:11.2±0.9**, 41°.73S**±0°.03×**174°.26E**±0°.03**, h13**^{km}±5^{km}**, n124,** σ**1^{s}.47**/124**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.04	237	P	Pg	12 39 13.8	+0.3
CMWZ				S	Sg	12 39 15.6	+0.4
BSWZ	Blackbirch Sta	0.29	272	P	Pg	12 39 17.2	+0.1
BSWZ				S	Sb	12 39 21.9	-1.1
TUWZ	Tuamarina	0.38	321	P	Pg	12 39 18.3	-0.4
TUWZ				S	Sg	12 39 23.5	-0.4
TCW	Tory Channel	0.52	1	P	Pg	12 39 20.7	-0.6
TCW				S	Sg	12 39 27.5	-0.6
SNZO	South Karori	0.53	39	ePg	Pg	12 39 22.0	+0.4
BHW	Baring Head	0.56	55	P	Pb	12 39 22.9	0.0
PLWZ	Palliser	0.76	78	P	Pn	12 39 27.5	-0.2
MSWZ	Moikau Station	0.80	68	P	Pn	12 39 27.8	-0.5
NNZ	Nelson	0.83	307	P	Pg	12 39 26.5	-0.8
CAW	Cannon Point	0.87	45	P	Pg	12 39 27.8	-0.1
KHZ	Kahutara	0.87	218	ePg	Pn	12 39 29.9	+0.7
KHZ	Kahutara	0.87	218	P	Pn	12 39 29.8	+0.7
PAWZ	Paruwai Farm	0.94	69	P	Pn	12 39 30.2	+0.1
DUWZ	D'Urville Isla	0.96	344	P	Pb	12 39 28.5	-1.2
THZ	Tophouse	1.01	268	ePn	Pg	12 39 30.7	0.0
THZ	Tophouse	1.01	268	P	Pg	12 39 30.5	-0.2

MTW	Mount Morrison	1.09	59	P	Pg	12 39 32.6	+0.4
TRWZ	Traveller	1.12	73	P	Pn	12 39 32.8	+0.2
HOWZ	Holdsworth Sta	1.26	49	P	Pb	12 39 34.8	0.0
TMWZ	Te Maipa	1.37	64	P	Pn	12 39 35.5	-0.6
MRZ	Mangatainoka R	1.46	43	P	Pn	12 39 37.6	+0.4
GVZ	Greta Valley S	1.54	216	P	Pb	12 39 39.1	-0.5
TIWZ	Tintock	1.55	53	P	Pn	12 39 38.8	+0.3
QRZ	Quartz Range	1.59	304	ePn	Pb	12 39 39.6	-0.8
QRZ	Quartz Range	1.59	304	P	Pb	12 39 39.6	-0.8
OHWZ	Ohakea	1.72	28	P	Pb	12 39 42.9	+0.3
PRWZ	Pori Road	1.74	48	P	Pn	12 39 41.5	+0.3
POWZ	Post Office Ro	1.75	41	P	Pn	12 39 41.5	+0.2
LTZ	Lake Taylor	1.81	234	ePn	Pb	12 39 43.2	-1.1
LTZ	Lake Taylor	1.81	234	P	Pn	12 39 43.1	+0.9
BFZ	Birch Farm	1.83	56	ePn	Pn	12 39 42.1	-0.2
BFZ	Birch Farm	1.83	56	P	Pn	12 39 42.6	+0.2
DSZ	Denniston Nort	1.84	269	P	Pb	12 39 44.3	-0.4
AMCZ	Amberley	1.88	219	P	Pn	12 39 43.4	+0.4
DVHZ	Dannevirke	2.03	46	P	Pn	12 39 44.8	-0.3
WAZ	Wanganui	2.04	16	P	Pb	12 39 48.1	-0.1
TSZ	Takapari Road	2.11	38	P	Pn	12 39 46.3	+0.1
OKCZ	Okains Bay	2.18	204	P	Pn	12 39 47.1	-0.2
CRLZ	Canterbury Las	2.21	213	ePn	Pn	12 39 47.0	-0.6
CRLZ	Canterbury Las	2.21	213	P	Pn	12 39 48.0	+0.4
LREZ	Lake Rotokare	2.27	3	P	Pb	12 39 50.9	-1.0
OXZ	Oxford	2.29	225	ePn	Pn	12 39 48.5	-0.2
OXZ	Oxford	2.29	225	P	Pn	12 39 48.4	-0.3
MQZ	McQueen's Vall	2.31	210	ePn	Pn	12 39 48.1	-0.7
MQZ	McQueen's Vall	2.31	210	P	Pn	12 39 48.0	-0.9
PRHZ	Porangahau	2.31	52	P	Pn	12 39 48.1	-0.9
INZ	Inchbonnie	2.32	244	P	Pn	12 39 50.2	+1.1
NMEZ	Namu Road	2.33	353	P	Pb	12 39 53.5	+0.5
PNHZ	Pukenui	2.33	40	P	Pn	12 39 49.2	-0.1
WPHZ	Waipukurau	2.34	46	P	Pn	12 39 49.9	+0.5
PREZ	Palmer Road	2.38	358	P	Pb	12 39 54.0	0.0
KHEZ	Kahui Hut	2.44	356	P	Pb	12 39 54.3	-0.6
NBEZ	Newall Road No	2.47	353	P	Pb	12 39 54.9	-0.6
MTVZ	Mangateitei	2.51	22	P	Pb	12 39 55.4	-0.8
DREZ	Durham Road	2.54	359	P	Pb	12 39 54.3	-2.3
PKE	Pukeiti	2.54	355	P	Pb	12 39 54.5	-2.1
PKVZ	Pokaka	2.57	19	P	Pb	12 39 55.7	-1.5
MOVZ	Moawhango	2.58	27	P	Pn	12 39 54.7	+2.0
PXZ	Pawanui	2.60	50	P	Pn	12 39 52.9	-0.1
BHHZ	Black Hill Sta	2.62	32	P	Pn	12 39 54.2	+0.8
VRZ	Vera Road	2.63	8	P	Pb	12 39 55.9	-2.2
KRHZ	Kereru	2.63	38	P	Pn	12 39 53.1	-0.3
DRZ	Dome Shelter	2.64	23	P	Pb	12 39 59.1	+0.5
WHVZ	Whangaehu Hut	2.64	23	P	Pb	12 39 56.1	-2.4
FWVZ	Far West T-bar	2.66	22	P	Pn	12 39 55.8	+1.9
TUVZ	Tukino	2.68	24	P	Pn	12 39 55.7	+1.6
NGZ	Ngauruhoe	2.75	22	P	Pn	12 39 57.1	+2.0
KAHZ	Kahuranaki	2.77	47	P	Pn	12 39 54.9	-0.5
WTVZ	West Tongariro	2.80	22	P	Pn	12 39 57.8	+2.0
TWVZ	Taurewa	2.80	19	P	Pb	12 39 59.3	-1.8
KWHZ	Kaweka Forest	2.83	36	P	Pb	12 40 02.3	+0.7
KRVZ	Karewarewa	2.83	22	P	Pb	12 40 00.5	-1.2
WVZ	Waitaha Valley	2.94	242	P	Pn	12 39 59.1	+1.5
MCHZ	McNeill Hill	2.94	40	P	Pn	12 39 57.6	0.0
KATZ	Kakaramea	2.96	22	P	Pb	12 40 04.4	+0.6
RITZ	Rihia Road	3.00	24	P	Pb	12 40 04.7	+0.1
BKZ	Black Stump Fm	3.07	34	ePg	Pb	12 40 03.5	-2.2
BKZ	Black Stump Fm	3.07	34	P	Pn	12 40 00.4	+0.9
RATZ	Rangitukua	3.08	23	P	Pb	12 40 05.7	-0.2
RPZ	Rata Peaks	3.09	229	ePn	Pn	12 39 59.8	+0.1
RPZ	Rata Peaks	3.09	229	P	Pn	12 39 59.6	0.0
WATZ	Wairara	3.22	21	P	Pb	12 40 08.6	+0.3
HIZ	Hauiti	3.24	8	ePn	Pn	12 40 04.5	+2.7
HIZ	Hauiti	3.24	8	P	Pn	12 40 04.3	+2.6
MRHZ	Matea Rd	3.33	30	P	Pb	12 40 07.9	-2.1
TLZ	Tolley Road	3.53	17	P	Pn	12 40 08.3	+2.5
RAHZ	Arahi	3.54	38	P	Pn	12 40 07.9	+2.0
FOZ	Fox Glacier	3.74	240	ePn	Pn	12 40 09.1	+0.5
FOZ	Fox Glacier	3.74	240	P	Pn	12 40 12.4	+3.8
LBZ	Lake Benmore	4.00	227	ePn	Pn	12 40 12.5	+0.3
LBZ	Lake Benmore	4.00	227	P	Pn	12 40 12.8	+0.6
RIGZ	Rimuhau	4.04	43	P	Pn	12 40 12.6	-0.1
URZ	Urewera	4.10	33	ePn	Pn	12 40 14.7	+1.2
URZ	Urewera	4.10	33	P	Pn	12 40 14.7	+1.2
TOZ	Tahuroa Road	4.10	14	P	Pn	12 40 16.6	+3.0
MWZ	Matawai	4.21	38	P	Pn	12 40 14.5	-0.7
ODZ	Otahua Downs	4.24	217	ePn	Pn	12 40 15.1	-0.4
ODZ	Otahua Downs	4.24	217	P	Pn	12 40 15.1	-0.4
TWGZ	Tauwhareparae	4.55	40	P	Pb	12 40 25.8	-5.2
RUGZ	Raukumara Rang	4.58	36	P	Pn	12 40 24.2	+3.8
JCZ	Jackson Bay	4.66	238	P	Pn	12 40 24.7	+3.4
AWAZ	Awhitu Peninsu	4.67	4	P	Pn	12 40 24.5	+3.2
MKAZ	Moumakai	4.67	9	P	Pn	12 40 23.7	+2.3
WTAZ	Waiatarua	4.79	3	P	Pb	12 40 31.0	-4.1
ETAZ	East Tamaki Re	4.79	6	P	Pn	12 40 26.6	+3.5
HAZ	Te Kaha	4.80	36	P	Pn	12 40 26.1	+2.8
WKZ	Wanaka	4.92	229	ePn	Pn	12 40 25.0	+0.1
WKZ	Wanaka	4.92	229	P	Pn	12 40 31.0	+6.1
RVAZ	Riverhead Bore	4.96	3	P	Pn	12 40 29.0	+3.7
WIAZ	Waiheke Island	4.97	8	P	Pn	12 40 30.6	+5.0
MXZ	Matakaoa Point	5.20	38	ePn	Pn	12 40 27.5	-1.2
TUZ	Tuapeka	5.39	217	P	Pn	12 40 32.7	+1.4
MLZ	Mavora Lakes	5.76	229	ePn	Pn	12 40 37.4	+1.0
SYZ	Scrubby Hill	6.06	216	P	Pn	12 40 41.9	+1.5
WHZ	Wether Hill Ro	6.18	226	ePn	Pn	12 40 41.6	-0.5
DCZ	Deep Cove	6.37	232	ePn	Pn	12 40 44.2	-0.5
OUZ	Omahuta	6.52	355	ePn	Pn	12 40 45.9	-0.8
OUZ	Omahuta	6.52	355	P	Pn	12 40 52.5	+5.7
CTZ	Chatham Island	7.01	110	P	Pn	12 40 56.1	+2.6
AS31	Alice Springs	38.03	285	eP	P	12 46 28.2	-1.1
	1.6nm,0.4s						
ASAR	Alice Springs	38.03	285	P	P	12 46 31.4	+2.0
	0.5nm,0.5s,baz=133,slow=6.8,SNR=4.3						
ARCES	ARCESS Array B	147.76	340	PKPbc	PKPab	12 59 00.4	+3.4
	0.9nm,0.8s,baz=21,slow=3.3,SNR=1.7						
TORD	Torodi Ar. Bea	150.80	195	PKPbc	PKPbc	12 59 02.1	-1.6
	0.5nm,0.7s,baz=160,slow=1.7,SNR=2.4						
TOA1	Torodi Ar. Sit	150.81	195	ePKPbc	PKPbc	12 59 02.1	-1.6

IDC 24 12:43:33.0±12.0**, 6°.84S**×**129°.04E, h88km**±119km**, mb3.5**/2**, mb1 4.0**/4**, mb1mx3.5**/25**, mbtmp4.2**/4**, ML4.0**/2**, Error ellipse: s-maj=294.9km s-min=41.3km az=61.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.00	159	P	Pn	12 46 46.3	-1.2
	0.8nm,0.3s,baz=341,slow=13,SNR=4.9						
WRA				S	Sn	12 49 09.8	-12
	0.9nm,0.3s,baz=333,slow=22,SNR=4.7						
ASAR	Alice Springs	17.37	165	P	Pn	12 47 29.6	-0.3
	0.4nm,0.3s,baz=347,slow=10,SNR=38						
ASAR				S	Sn	12 50 32.1	-11
	0.3nm,0.3s,baz=352,slow=27,SNR=5.2						
STKA	Stephens Creek	27.53	156	P	P	12 49 11.9	+0.4
	1.0nm,0.6s,baz=329,slow=12,SNR=4.4						
MKAR	Makanchi Array	67.58	327	P	P	12 54 20.3	0.0
	0.4nm,0.4s,baz=115,slow=7.9,SNR=4.7						

JMA 24 12:44:38.9±0.2**, 24°.89N**×**123°.38E, h19km, M1.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.54	218	P	Pb	12 44 49.4	-0.3
YOJ				eS	Sb	12 44 57.1	0.0
JYNG	Yonagunijimaku	0.59	222	P	Pb	12 44 50.2	-0.3
JYNG				eS	Sg	12 44 58.8	+0.2
IRIF	Iriomote-Funau	0.64	150	P	Pb	12 44 51.0	-0.4
IRIF				S	Sb	12 44 59.9	+0.1
JKRS	Kuro-shima	0.87	138	S	Sb	12 45 06.5	0.0
JIJ	Ishigaki jima	0.87	127	P	Pb	12 44 55.5	+0.1
JIJ				S	Sb	12 45 05.7	-0.9
JISG	Ishigakijimahi	0.90	109	P	Pb	12 44 55.6	-0.3
JISG				eS	Sb	12 45 06.9	-0.6
HATJ	Hateruma jima	0.92	155	P	Pb	12 44 55.6	-0.6
HATJ				eS	Sb	12 45 07.7	-0.2
JTJ	Tarama	1.23	101	eS	Sn	12 45 17.3	+0.2

TAP 24 12:44:51.5, 24°.29N×**121°.48E, h8km, ML1.1, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.09	180	eP	Pg	12 44 54.9	+1.2
	baz=179						
ETLH				i S	Sg	12 44 56.2	+0.8
	baz=179						
NACB	Ninganchiao	0.16	139	eP	Pg	12 44 56.2	+1.3
	baz=138						
NACB				eS	Sg	12 44 58.4	+1.3
	baz=138						
NNSB	Datong	0.16	326	eP	Pg	12 44 56.4	+1.4
	baz=326						
NNSB				i S	Sg	12 44 58.9	+1.5
	baz=326						
NNS	Nan Shan	0.18	326	eP	Pg	12 44 56.1	+0.9
	baz=327						
NNS				i S	Sg	12 44 59.2	+1.4
	baz=327						
WHF	Hehuan Shan	0.25	233	P	Pg	12 44 57.8	+1.2
	baz=232						
WHF				S	Sg	12 45 01.2	+1.2
	baz=232						
NANB	Nanao	0.28	61	eP	Pb	12 44 58.1	-0.7
	baz=61						
NDT	Datong Townshi	0.31	5	eS	Sb	12 45 03.7	-0.8
	baz=5.0						
ENTT	Nioudou	0.35	13	eP	Pb	12 45 00.2	+0.1
	baz=13						
ENTT				eS	Sb	12 45 04.6	-1.3
	baz=13						
CHGB	Renai	0.36	230	eP	Pb	12 45 00.2	-0.2
	baz=230						
VWDT	VWDT	0.62	210	eP	Pb	12 45 04.7	+0.1
	baz=210						
VWDT				eS	Sb	12 45 14.4	+0.9
	baz=210						

WEL 24 12:52:55.2, 41°.6S±0°.8×**174°.3E**±0°.6**, h16km**±1km**, M3.6**/25**, ML3.9**/17**, MLv3.6**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=174.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	194	P	Pb	12 52 59.1	0.0
CMWZ				S	Sb	12 53 02.0	+0.4
BSWZ	Blackbirch Sta	0.29	255	P	Pb	12 53 01.9	-0.2
BSWZ				S	Sb	12 53 06.7	0.0
TUWZ	Tuamarina	0.31	312	P	Pb	12 53 02.3	-0.1
TUWZ				S	Sb	12 53 07.2	0.0
TCW	Tory Channel	0.43	3	P	Pb	12 53 04.2	-0.1
BHW	Baring Head	0.52	64	P	Pb	12 53 06.2	+0.3
PLWZ	Palliser	0.76	85	P	Pn	12 53 10.9	-0.3
NNZ	Nelson	0.78	302	P	Pb	12 53 10.4	+0.1
MSWZ	Moikau Station	0.78	74	P	Pn	12 53 11.1	-0.4
CAW	Cannon Point	0.81	49	P	Pg	12 53 11.2	+0.3
DUWZ	D'Urville Isla	0.87	343	P	Pg	12 53 12.1	0.0
PAWZ	Paruwai Farm	0.92	74	P	Pn	12 53 13.6	+0.1
KHZ	Kahutara	0.94	214	P	Pn	12 53 14.1	+0.4
THZ	Tophouse	1.02	263	P	Pg	12 53 14.7	-0.1
MTW	Mount Morrison	1.06	63	P	Pg	12 53 15.5	0.0
TRWZ	Traveller	1.10	78	P	Pb	12 53 16.0	0.0
HOWZ	Holdsworth Sta	1.21	53	P	Pb	12 53 17.9	+0.3
TMWZ	Te Maipa	1.34	67	P	Pn	12 53 19.4	0.0
MRZ	Mangatainoka R	1.40	46	P	Pb	12 53 20.7	-0.3
TIWZ	Tintock	1.50	56	P	Pn	12 53 21.9	+0.3
QRZ	Quartz Range	1.53	301	P	Pb	12 53 23.5	+0.3
GVZ	Greta Valley S	1.61	214	P	Pn	12 53 23.0	0.0
OHWZ	Ohakea	1.64	30	P	Pg	12 53 26.2	-0.5
PRWZ	Pori Road	1.69	51	P	Pn	12 53 24.5	+0.4
POWZ	Post Office Ro	1.69	43	P	Pn	12 53 24.9	+0.8
BFZ	Birch Farm	1.78	58	P	Pn	12 53 25.0	-0.3
DSZ	Denniston Nort	1.84	266	P	Pb	12 53 28.1	-0.3
LTZ	Lake Taylor	1.86	232	P	Pn	12 53 27.0	+0.5
AMCZ	Amberley	1.94	217	P	Pn	12 53 27.2	-0.3
WAZ	Wanganui	1.96	17	P	Pg	12 53 31.8	-1.0
DVHZ	Dannevirke	1.97	48	P	Pg	12 53 32.7	-0.4
TSZ	Takapari Road	2.04	40	P	Pn	12 53 29.8	+0.8
LREZ	Lake Rotokare	2.18	3	P	Pg	12 53 36.5	-0.4
NMEZ	Namu Road	2.24	353	P	Pg	12 53 38.0	-0.2
OKCZ	Okains Bay	2.26	202	P	Pn	12 53 30.9	-1.0
PRHZ	Porangahau	2.27	54	P	Pn	12 53 33.0	+1.1
PNHZ	Pukenui	2.27	41	P	Pn	12 53 33.0	+0.9
CRLZ	Canterbury Las	2.28	211	P	Pn	12 53 31.1	-1.0
WPHZ	Waipukurau	2.29	47	P	Pg	12 53 40.2	+1.2
PREZ	Palmer Road	2.29	358	P	Pb	12 53 36.9	+0.7
KHEZ	Kahui Hut	2.35	356	P	Pb	12 53 37.2	0.0
OXZ	Oxford	2.35	223	P	Pn	12 53 32.4	-0.8
INZ	Inchbonnie	2.35	242	P	Pn	12 53 34.0	+0.9
MQZ	McQueen's Vall	2.38	209	P	Pn	12 53 31.9	-1.6
NBEZ	Newall Road No	2.39	353	P	Pb	12 53 38.4	+0.6
MTVZ	Mangateitei	2.44	23	P	Pb	12 53 40.0	+1.4
DREZ	Durham Road	2.45	359	P	Pb	12 53 38.6	-0.2
PKE	Pukeiti	2.45	355	P	Pb	12 53 38.0	-0.9
PKVZ	Pokaka	2.49	20	P	Pb	12 53 39.9	+0.3
MOVZ	Moawhango	2.51	28	P	Pb	12 53 40.0	+0.2
VRZ	Vera Road	2.54	9	P	Pb	12 53 39.5	-0.9
PXZ	Pawanui	2.55	52	P	Pb	12 53 40.9	+0.4
BHHZ	Black Hill Sta	2.55	33	P	Pn	12 53 38.1	+2.1
KRHZ	Kereru	2.56	40	P	Pn	12 53 36.8	+0.7
DRZ	Dome Shelter	2.56	23	P	Pb	12 53 42.5	+1.6
WHVZ	Whangaehu Hut	2.56	24	P	Pb	12 53 40.1	-0.8
FWVZ	Far West T-bar	2.58	23	P	Pb	12 53 40.3	-0.9
TUVZ	Tukino	2.60	25	P	Pb	12 53 39.2	-2.3
NGZ	Ngauruhoe	2.67	23	P	Pb	12 53 43.2	+0.5
KAHZ	Kahuranaki	2.72	48	P	Pn	12 53 38.8	+0.6
TWVZ	Taurewa	2.72	20	P	Pb	12 53 44.3	+0.8
WTVZ	West Tongariro	2.72	23	P	Pb	12 53 43.4	-0.2
KRVZ	Karewarewa	2.75	23	P	Pb	12 53 44.3	+0.2
KWHZ	Kaweka Forest	2.76	38	P	Pb	12 53 46.1	+1.9
MCHZ	McNeill Hill	2.88	41	P	Pb	12 53 46.4	+0.3
KATZ	Kakaramea	2.88	23	P	Pb	12 53 47.8	+1.6
RITZ	Rihia Road	2.93	25	P	Pg	12 53 49.2	-2.1
WVZ	Waitaha Valley	2.97	240	P	Pb	12 53 45.7	-2.1
RATZ	Rangitukua	3.00	23	P	Pb	12 53 49.8	+1.5
BKZ	Black Stump Fm	3.00	35	P	Pb	12 53 48.8	+0.4
WATZ	Wairara	3.14	22	P	Pb	12 53 52.3	+1.7
RPZ	Rata Peaks	3.14	228	P	Pn	12 53 44.1	+0.1
HIZ	Hauiti	3.16	9	P	Pb	12 53 48.2	-2.7
MRHZ	Matea Rd	3.25	31	P	Pb	12 53 53.7	+1.1
KUTZ	Kaahu Road	3.37	21	P	Pb	12 53 56.2	+1.7
TLZ	Tolley Road	3.45	17	P	Pb	12 53 54.2	-1.7
FOZ	Fox Glacier	3.78	239	P	Pb	12 53 57.7	-3.9
TOZ	Tahuroa Road	4.02	14	P	Pb	12 54 01.5	-4.1
LBZ	Lake Benmore	4.05	226	P	Pn	12 53 57.9	+1.3
MWZ	Matawai	4.15	38	P	Pn	12 53 58.6	+0.6
ODZ	Otahua Downs	4.30	216	P	Pn	12 53 58.9	-1.0
TWGZ	Tauwhareparae	4.49	41	P	Pb	12 54 10.8	-2.9
MKAZ	Moumakai	4.58	9	P	Pn	12 54 08.5	+4.7
JCZ	Jackson Bay	4.70	237	P	Pn	12 54 09.5	+4.0

IDC 24 12:53:02.7±1.9, 3°.39N×125°.16E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/44, mbtmp3.8/3, Error ellipse: s-maj=186.9km s-min=25.4km az=64.0

MAN 24 12:53:03.7, 3°.83N×126°.81E, h11km, mb4.2, ML3.1, MS2.8

ISC 24 12:53:04.6±1.1**, 3°.8N**±0°.2×**126°.7E**±0°.3**, h10km, n9,** σ**2s.37**/11**, mb3.8**/4**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.46	337	eP	Pn	12 53 44.3	-0.5
DDMP				eS	Sn	12 54 16.2	+1.3
SKMP	Bagumbayan, Su	3.42	322	eP	Pn	12 53 59.1	+1.2
SKMP				eS	Sn	12 54 37.4	-1.1
KCP	Kidapawan	3.54	334	⇑eP	Pn	12 54 03.1	+3.4
KCP				eS	Sn	12 54 26.3	-15
CTBH	Cotabato--PC H	4.15	325	⇓iP	Pn	12 54 11.1	+3.1
BUKP	Musuan	4.34	338	eP	Pn	12 54 12.1	+1.4
WRA	Warramunga Arr	24.79	163	P	P	12 58 26.5	-0.4
	1.4nm,0.7s,baz=338,slow=10,SNR=2.6						
ASAR	Alice Springs	28.21	166	P	P	12 58 57.6	-0.1
	11nm,0.3s,baz=338,slow=6.5,SNR=4.7						
STKA	Stephens Creek	38.23	159	P	P	13 00 26.4	+1.5
	1.4nm,0.6s,baz=349,slow=10,SNR=3.2						
MKAR	Makanchi Array	57.45	325	P	P	13 02 49.9	-3.9
	0.4nm,0.5s,baz=118,slow=7.2,SNR=6.6						

ISK 24 12:59:09.9, 41°.70N×32°.46E, h5km, ML3.8/22

NEIC 24 12:59:09.9±0.0, 41°.69N×32°.46E, h5km, mb3.9/2, ML3.8(ISK), ML4.0(DDA), After ISK.

DDA 24 12:59:10.1, 41°.72N×32°.39E, h20km±1km, ML4.0

ISCJB 24 12:59:10.4±0.4, 41°.80N±0°.02×32°.41E±0°.02, h9km±3km, mb3.7/8, MS2.4/1, Error ellipse: s-maj=2.9km s-min=2.5km az=139.4

IDC 24 12:59:10.1±0.6, 41°.72N×32°.43E, h0km, mb3.7/9, mb1 3.7/13, mb1mx3.6/41, mbtmp3.7/13, ML3.8/4, MS2.5/6, Ms1 2.5/6, ms1mx2.3/43, Error ellipse: s-maj=17.4km s-min=6.8km az=60.0

BEO 24 12:59:18.9±1.0, 41°.79N×31°.80E, h0km, ML3.9/3

ISC 24 12:59:11.3±0.9**, 41°.74N**±0°.03×**32°.43E**±0°.02**, h13km**±6km**, n136,** σ**1s.49**/158**, mb3.7**/8**, 30C-27D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTIN	Bartın	0.17	233	⇓iP	Pg	12 59 15.4	+0.2
BTIN				i S	Sg	12 59 18.1	+0.1
KURC	Kurucasile-Bar	0.26	66	PG	Pg	12 59 16.7	0.0
KURC				SG	Sb	12 59 21.0	-1.1
SAFT	Safranbolu	0.54	159	PG	Pg	12 59 20.3	-1.5
KDZE	Karadeniz Ereo	0.86	240	PG	Pg	12 59 27.1	-0.7
KDZE	Karadeniz Ereo	0.86	240	⇑iP	Pg	12 59 27.5	-0.3
BCAM	Yenicaga	0.96	197	⇑iP	Pg	12 59 28.3	-1.6
BCAM				i S	Sg	12 59 41.7	-0.8
BCAM				IAML_P			
	comp=Z,24µm,0.3s						
YIGI	Dzce	1.07	224	⇑iP	Pb	12 59 30.3	-1.4
YIGI				i S	Sb	12 59 44.2	-1.3
ILGA	Ilgaz	1.19	125	ePg	Pb	12 59 33.1	-0.6
ILGA				eSg	Sb	12 59 47.3	-1.7
ILGA	Ilgaz	1.19	125	⇓iP	Pb	12 59 32.6	-1.2
ILGA				i S	Sn	12 59 50.9	+1.1
BZK	Bozkurt	1.20	79	PN	Pg	12 59 33.5	-0.8
BZK				SN	Sn	12 59 50.9	+1.2
BZK	Bozkurt	1.20	79	⇓iP	Pg	12 59 33.5	-0.8
CMDR	Camlidere-ANKA	1.25	178	⇓iP	Pg	12 59 34.9	-0.4
CMDR				i S	Sg	12 59 51.4	-0.1
KIBS	BOLU	1.39	199	⇑iP	Pn	12 59 36.1	-0.3
KIBS				i S	Sb	12 59 55.3	+0.5
KIBS				IAML_P			
	comp=Z,16µm,0.3s						
TOS	Tosya	1.39	120	PN	Pb	12 59 36.5	-0.6
CANT	Cankiri	1.45	141	PN	Pb	12 59 37.8	-0.3
ELDT	Eldivan	1.46	149	⇓iP	Pb	12 59 37.9	-0.4
ELDT				i S	Sg	12 59 57.7	-0.5
ELDT				IAML_P			
	comp=Z,13µm,0.3s						
SAHE	Sakarya_HENDEK	1.48	234	⇑iP	Pb	12 59 38.3	-0.3
SAHE				i S	Sn	12 59 56.4	-0.5
SAHE				IAML_P			
	comp=Z,9µm,0.3s						
MDUB	Mudurnu	1.57	217	PN	Pn	12 59 39.7	+0.7
MDUB	Mudurnu	1.57	217	ePn	Pb	12 59 39.8	-0.5
MDUB				eSn	Sg	13 00 01.6	-0.4
BTAS	Taskesti	1.59	223	⇓iP	Pn	12 59 39.4	+0.2
BTAS				i S	Sn	12 59 59.2	-0.4
BTAS				IAML_P			
	comp=Z,31µm,0.5s						
KAGI	orum-Kargı	1.65	111	⇓iP	Pb	12 59 41.0	-0.5
KAGI				i S	Sg	13 00 03.3	-1.2
KAGI				IAML_P			
	comp=Z,5µm,0.2s						
KAND	Kocaeli-Kandir	1.80	250	⇑iP	Pn	12 59 42.1	+0.1
KAND				i S	Sn	13 00 05.0	+0.3
KAND				IAML_P			
	comp=Z,2µm,0.2s						
LOD	Lodumlu	1.87	172	PN	Pb	12 59 44.0	-1.2
SAUV	Serdivan-Sakar	1.88	239	PN	Pn	12 59 44.3	+1.3
ANTO	Ankara	1.89	172	PN	Pb	12 59 44.4	-1.2
ANTO	Ankara	1.89	172	ePn	Pn	12 59 43.9	+0.6
ANTO	Ankara	1.89	172	⇑iP	Pg	12 59 47.0	-0.5
BR231	Keskin MP Arra	1.91	172	ePg	Pg	12 59 47.3	-0.7
SPNC	Sapanca-Adapaz	1.92	237	PN	Pb	12 59 45.2	-0.8
GULT	Gulveren	1.95	229	PN	Pb	12 59 46.1	-0.6
AUMIH	MIHALICIK	2.00	201	PN	Pn	12 59 45.6	+0.7
AUMIH	MIHALICIK	2.00	201	i P	Pb	12 59 47.9	+0.3
AUMIH				i S	Sg	13 00 14.5	-1.2
GEYV	SAKARYA_Geyve	2.04	233	⇑iP	Pn	12 59 46.8	+1.4
GEYV				i S	Sb	13 00 12.7	-0.8
GEYV				IAML_P			
	comp=Z,7µm,0.4s						
DELI	KIRIKKALE	2.08	147	⇓iP	Pn	12 59 46.4	+0.5
DELI				i S	Sb	13 00 13.7	-0.8
DIKM	Dikmen	2.12	92	PN	Pb	12 59 47.8	-1.7
SILT	Sile	2.18	255	PN	Pn	12 59 48.8	+1.7
SILT	Sile	2.18	255	⇑iP	Pn	12 59 47.2	+0.1
SRCK	Saricakaya, Es	2.18	219	PN	Pn	12 59 47.5	+0.3
SRCK	Saricakaya, Es	2.18	219	i P	Pn	12 59 48.2	+1.0
SRCK				i S	Sb	13 00 17.9	+0.5
BR101	Keskin Array S	2.21	155	ePn	Pn	12 59 48.3	+0.5
BR101				ePg	Pb	12 59 51.7	+0.5
BR131	Keskin Array S	2.21	155	ePn	Pn	12 59 48.1	+0.3
BRTR	Keskin Array B	2.21	155	Pn	Pn	12 59 48.3	+0.5
	comp=Z,17nm,0.3s,baz=342,slow=12,SNR=109						
BRTR				Pg	Pb	12 59 51.7	+0.5
	comp=Z,17nm,0.3s,baz=330,slow=17,SNR=138						
BRTR				Lg	Lg	13 00 20.0	
	comp=Z,25nm,0.3s,baz=338,slow=21,SNR=13						
HRT	Hereke	2.27	247	PN	Pn	12 59 49.8	+1.2
CORM	Corum	2.28	132	PN	Pn	12 59 49.5	+0.8
BORA	Eskisehir	2.39	220	PN	Pn	12 59 51.4	+1.2
SVRH	Sivrihisar-ESK	2.39	197	PN	Pn	12 59 51.8	+1.6
AUSIV	SIVRIHISAR	2.40	197	PN	Pn	12 59 51.5	+1.2
ADVT	Abdulvahap	2.42	238	PN	Pn	12 59 51.5	+1.0
CDAG	Cicekdag	2.58	144	i P	Pn	12 59 53.8	+1.0
CDAG				i S	Sg	13 00 32.5	-1.7
YLV	Yalova	2.59	244	⇓iP	Pn	12 59 54.0	+1.1
KKUL	Konya-Kulu	2.59	172	i P	Pg	12 59 59.9	-1.1
KKUL				i S	Sg	13 00 35.3	+0.7
KLYT	Kilyos	2.59	260	⇑iP	Pb	12 59 57.4	-0.1
KVT	Kavak	2.80	102	PN	Pn	12 59 57.4	+1.7
TSMN	Mangalia Port-	3.50	307	⇑iP	Sn	13 00 45.9	-0.6
MANR	Mangalia	3.51	308	⇑iP	Sn	13 00 47.3	+0.5
EFOR	EFORIE	3.64	311	⇓iP	Pn	13 00 08.5	+1.3
PHSR	Pinarhisar	3.68	270	⇑iP	Pn	13 00 10.6	+2.8
TSCT	Constanta Port	3.68	312	⇓iP	Pn	13 00 08.0	+0.2
MFTR	Murfatlar	3.82	311	⇓iP	Pn	13 00 11.6	+1.9
TSSL	Sulina	3.95	331	⇑iP	Sn	13 00 45.0	-13
TIRR	Tirgusor	4.00	314	ePn	Pn	13 00 12.4	+0.2
TIRR				eSn	Sn	13 00 57.6	-1.4
TIRR	Tirgusor	4.00	314	⇓iP	Pn	13 00 12.6	+0.3
BALB	Balikesir	4.05	240	ePg	Pg	13 00 27.1	-1.7
CVDA	Cernavoda	4.13	310	⇓iP	Pn	13 00 15.2	+1.2
ICOR	Ion Corvin	4.15	306	⇑iP	Pn	13 00 15.6	+1.4
ISP	Isparta	4.18	201	ePn	Pn	13 00 15.4	+0.6
ISP	Isparta	4.18	201	⇓iP	Pn	13 00 15.5	+0.7
TLCR		4.33	324	⇑iP	Pn	13 00 17.2	+0.4
HARR	Harsova	4.42	313	⇓iP	Pn	13 00 17.7	-0.2
RASA	Rasa	4.60	304	⇑iP	Pn	13 00 26.1	+5.7
CFR	Carcaliu	4.64	319	⇓iP	Pn	13 00 21.2	+0.1
RAZG	Razgrad	4.73	295	⇑iP	Pb	13 00 32.3	-1.8
ELND	Elena	5.00	286	⇓iP	Pb	13 00 32.7	-6.0
EZN	Ezine	5.01	250	⇑iP	Pn	13 00 28.1	+2.0
TUDR		5.17	320	⇑iP	Sn	13 01 28.0	+0.2
ISR	Istrita	5.46	310	⇑iP	Pn	13 00 33.8	+1.5
ODBI	Odobesti	5.60	318	⇓iP	Pn	13 00 40.5	+6.4
BISRR	Bisoca	5.63	314	⇑iP	Pn	13 00 38.1	+3.4
SECR		5.69	308	⇑iP	Pn	13 00 36.8	+1.4
COPA	Copaceanca	5.81	297	⇓iP	Pn	13 00 39.7	+2.6
VRI	Vrincioaia	5.83	317	⇓iP	Pn	13 00 39.5	+2.1
PLOR	Plostina	5.86	316	⇑iP	Pn	13 00 40.4	+2.5
PLVB	Pleven	6.00	289	⇑iP	Pn	13 00 43.9	+4.2
MLR	Muntele Rosu	6.02	311	Pn	Pn	13 00 41.9	+1.9
	comp=Z,1.3nm,0.3s,baz=127,slow=12,SNR=7.4						
MLR				Sn	Sn	13 01 49.9	+1.1
	comp=Z,4.9nm,0.3s,baz=107,slow=21,SNR=10						
MLR				LR	LR	13 03 42.6	
	comp=Z,67nm,18.2s,baz=118,slow=45						
HUMR	Humele	6.12	300	⇑iP	Pn	13 00 43.7	+2.3
TESR	Tescani	6.33	321	⇓iP	Pn	13 00 44.9	+0.7
MTUR	Matau	6.39	306	⇓iP	Pn	13 00 39.2	-6.0
OZUR		6.48	314	⇓iP	Pn	13 00 46.7	+0.4
VOIR		6.51	307	⇓iP	Pn	13 00 48.0	+1.2
DOPR	Dopca	6.62	312	⇑iP	Pn	13 00 49.1	+0.9
VTS	Vitosha	6.89	280	ePn	Pn	13 00 53.1	+1.0
LOT	Lotru	7.30	303	⇑iP	Pn	13 00 58.8	+1.2
ZAPS	Zavoj	7.40	285	ePn	Pn	13 01 00.6	+1.6
ZAPS				eSn	Sn	13 02 18.1	-4.7
BURAR	Bucovina Array	7.80	321	⇓iP	Pn	13 01 06.2	+1.7
BUR08	Bucovina Ar. S	7.83	321	ePn	Pn	13 01 05.7	+0.8
KIV	Kislovodsk	7.85	70	ePn	Pn	13 01 04.7	-0.5
KIV				eSn	Sn	13 02 33.0	-1.0
KVAR	Kislovodsk Arr	7.86	70	Pn	Pn	13 01 04.7	-0.7
	baz=340,slow=22,SNR=1.4						
KVAR				Sn	Sn	13 02 33.8	-0.4

	baz=92,slow=17,SNR=3.4						
GZR	Gura Zlata	7.90	301	⇑iP	Pn	13 01 07.5	+1.6
BARS	Barje	7.95	281	ePn	Pn	13 01 08.0	+1.6
BARS				eSn	Sn	13 02 31.3	-4.8
KBZ	Khabaz	7.96	72	LR	LR	13 05 10.4	
	comp=Z,35nm,18.7s,baz=204,slow=45						
BOVS	Bovan	8.12	287	ePn	Pn	13 01 11.1	+2.2
BOVS				eSn	Sn	13 02 34.7	-5.8
KUBS	Kucevo	8.31	292	ePn	Pn	13 01 14.0	+2.5
SELS	Selova	8.49	284	ePn	Pn	13 01 15.6	+1.7
DRGR		8.61	309	ePn	Pn	13 01 18.8	+3.3
DRGR		8.61	309	⇓iP	Pn	13 01 19.5	+4.0
BZS	Buzias	8.74	300	ePn	Pn	13 01 18.8	+1.5
BZS	Buzias	8.74	300	⇑iP	Pn	13 01 19.0	+1.7
GRUS	Gruza	8.88	288	ePn	Pn	13 01 21.3	+2.2
TRUS	Trudelj	9.16	290	ePn	Pn	13 01 23.8	+0.8
IVAS	Ivanjica	9.23	286	ePn	Pn	13 01 26.0	+1.9
AKASG	Malin Array Be	9.23	347	Pn	Pn	13 01 23.0	-1.0
	comp=Z,2.4nm,0.3s,baz=160,slow=14,SNR=5.3						
AKBB	Malin Array Si	9.23	347	ePn	Pn	13 01 23.3	-0.7
DIVS	Divibare	9.43	289	ePn	Pn	13 01 27.7	+0.9
TIR	Tirane	9.43	272	ePn	Pn	13 01 27.3	+0.5
GNI	Garni	9.45	96	LR	LR	13 05 36.0	
	comp=Z,15nm,21.9s,baz=125,slow=41						
BBLS	Lazići	9.81	287	ePn	Pn	13 01 33.8	+1.8
HAPS	Han Pijesak,BI	10.16	288	ePn	Pn	13 01 37.1	+0.2
VRAC	Vranov	13.42	310	LR	LR	13 07 57.1	
	comp=Z,28nm,19.5s,baz=88,slow=39						
GEC2	GERESS Array S	14.95	305	ePn	Pn	13 02 43.9	+1.6
GERES	GERESS Array B	14.95	305	Pn	Pn	13 02 43.9	+1.6
	comp=Z,0.2nm,0.3s,baz=117,slow=14,SNR=3.6						
GERES				LR	LR	13 10 34.3	
	comp=Z,20nm,18.1s,baz=70,slow=46						
FIA0	FINESS Array S	20.11	351	eP	P	13 03 44.3	-0.1
FINES	FINESS Array B	20.11	351	P	P	13 03 44.3	-0.1
	comp=Z,0.9nm,0.4s,baz=161,slow=12,SNR=5.5						
HFS	Hagfors	21.73	334	P	P	13 04 03.4	+1.4
	comp=Z,2.8nm,0.7s,baz=129,slow=14,SNR=6.3						
ARU	Arti	22.37	40	P	P	13 04 09.7	+0.9
	comp=Z,0.9nm,0.4s,baz=240,slow=5.5,SNR=4.0						
ARU	Arti	22.37	40	eP	P	13 04 09.2	+0.4
	comp=Z,3.9nm,0.8s						
NB2	NORSAR Subarra	23.23	333	P	P	13 04 22.1	+4.3
	comp=Z,2.5nm,0.8s,baz=137,slow=11						
NB200	NORSAR Array S	23.23	333	eP	P	13 04 17.8	-0.1
NOA	NORSAR Array B	23.23	333	P	P	13 04 17.8	-0.1
	comp=Z,1.0nm,0.7s,baz=138,slow=11,SNR=2.5						
NOA				LR	LR	13 14 34.3	
	comp=Z,13nm,18.4s,baz=215,slow=40						
ESDC	Sonseca Array	27.54	278	P	P	13 04 57.8	+0.1
	comp=Z,0.2nm,0.4s,baz=68,slow=9.5,SNR=5.9						
ARCES	ARCESS Array B	28.09	355	P	P	13 05 02.8	+0.6
	comp=Z,1.1nm,0.7s,baz=154,slow=8.6,SNR=3.8						
MK32	Makanchi Array	35.57	65	eP	P	13 06 09.0	+0.8
MKAR	Makanchi Array	35.57	65	P	P	13 06 09.0	+0.8
	comp=Z,0.4nm,0.7s,baz=297,slow=6.2,SNR=4.5						
TOA1	Torodi Ar. Sit	39.05	232	eP	P	13 06 38.4	+0.4
TORD	Torodi Ar. Bea	39.06	232	P	P	13 06 38.4	+0.4
	comp=Z,2.0nm,0.9s,baz=28,slow=10,SNR=7.7						
DBIC	Dimbokro	48.09	234	P	P	13 07 50.9	+0.2
	comp=Z,3.6nm,0.9s,baz=1.8,slow=8.7,SNR=3.2						
DBIC	Dimbokro	48.09	234	eP	P	13 07 51.3	+0.6
	comp=Z,39nm,1.6s						

WEL 24 13:24:50.0,42°S±1°×174°.3E±0°.8,h13^{km}±1^{km},M3.6/27, ML3.9/19,MLv3.6/27,Error ellipse: s-maj=0.0km s-min=0.0km az=148.2,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.08	201	P	Pg	13 24 53.0	+0.3
CMWZ				S	Sg	13 24 55.6	+0.9
BSWZ	Blackbirch Sta	0.28	262	P	Pb	13 24 56.5	-0.5
BSWZ				S	Sb	13 25 01.2	-0.4
TUWZ	Tuamarina	0.34	317	P	Pb	13 24 57.5	-0.3
TUWZ				S	Sb	13 25 02.4	-0.8
TCW	Tory Channel	0.47	2	P	Pg	13 24 59.6	+0.4
BHW	Baring Head	0.54	60	P	Pb	13 25 01.5	+0.3
PLWZ	Palliser	0.76	82	P	Pn	13 25 06.3	-0.2
MSWZ	Moikau Station	0.79	71	P	Pn	13 25 06.5	-0.5
NNZ	Nelson	0.80	305	P	Pg	13 25 05.6	+0.1
NNZ				S	Sb	13 25 16.4	-0.1
CAW	Cannon Point	0.84	47	P	Pb	13 25 06.6	+0.2
KHZ	Kahutara	0.91	215	P	Pn	13 25 09.1	+0.7
DUWZ	D’Urville Isla	0.91	344	P	Pb	13 25 07.8	+0.2
PAWZ	Paruwai Farm	0.93	72	P	Pn	13 25 08.9	+0.1
THZ	Tophouse	1.01	265	P	Pg	13 25 09.6	+0.1
MTW	Mount Morrison	1.07	62	P	Pn	13 25 11.1	+0.3
TRWZ	Traveller	1.11	76	P	Pn	13 25 11.3	0.0
HOWZ	Holdsworth Sta	1.23	51	P	Pb	13 25 13.4	+0.3
TMWZ	Te Maipa	1.36	66	P	Pn	13 25 14.8	+0.1
MRZ	Mangatainoka R	1.43	45	P	Pb	13 25 16.3	-0.1
TIWZ	Tintock	1.53	54	P	Pn	13 25 17.3	+0.2
QRZ	Quartz Range	1.55	303	P	Pb	13 25 18.9	+0.3
GVZ	Greta Valley S	1.57	215	P	Pn	13 25 18.0	+0.4
OHWZ	Ohakea	1.68	29	P	Pg	13 25 21.4	-0.7
PRWZ	Pori Road	1.72	50	P	Pn	13 25 19.8	+0.3
POWZ	Post Office Ro	1.72	42	P	Pn	13 25 20.3	+0.7
BFZ	Birch Farm	1.81	57	P	Pn	13 25 20.4	-0.4
DSZ	Denniston Nort	1.83	267	P	Pb	13 25 23.4	0.0
LTZ	Lake Taylor	1.84	232	P	Pn	13 25 22.1	+0.8
AMCZ	Amberley	1.91	218	P	Pn	13 25 22.2	-0.1
DVHZ	Dannevirke	2.00	47	P	Pn	13 25 22.8	-0.7
WAZ	Wanganui	2.00	16	P	Pb	13 25 27.2	+0.9
TSZ	Takapari Road	2.07	39	P	Pn	13 25 25.0	+0.5
LREZ	Lake Rotokare	2.22	3	P	Pb	13 25 29.5	-0.5
OKCZ	Okains Bay	2.23	203	P	Pn	13 25 25.8	-0.8
NMEZ	Namu Road	2.28	353	P	Pb	13 25 30.6	-0.3
PRHZ	Porangahau	2.29	53	P	Pn	13 25 26.4	-1.1
PNHZ	Pukenui	2.30	41	P	Pn	13 25 27.5	-0.1
OXZ	Oxford	2.32	224	P	Pn	13 25 27.1	-0.8
INZ	Inchbonnie	2.33	242	P	Pn	13 25 29.3	+1.3
PREZ	Palmer Road	2.33	358	P	Pb	13 25 32.5	+0.6
MQZ	McQueen’s Vall	2.34	210	P	Pn	13 25 27.0	-1.2
KHEZ	Kahui Hut	2.39	356	P	Pb	13 25 32.9	0.0
NBEZ	Newall Road No	2.42	353	P	Pb	13 25 32.6	-0.9
DREZ	Durham Road	2.49	359	P	Pb	13 25 33.6	-0.9
PKE	Pukeiti	2.49	355	P	Pb	13 25 32.9	-1.7
PKVZ	Pokaka	2.53	20	P	Pb	13 25 34.1	-1.2
MOVZ	Moawhango	2.54	27	P	Pb	13 25 33.4	-2.0
PXZ	Pawanui	2.58	51	P	Pn	13 25 31.3	0.0
VRZ	Vera Road	2.58	9	P	Pb	13 25 34.6	-1.5
BHHZ	Black Hill Sta	2.58	33	P	Pn	13 25 33.2	+1.7
KRHZ	Kereru	2.59	39	P	Pn	13 25 31.9	+0.3
WHVZ	Whangaehu Hut	2.60	24	P	Pb	13 25 35.3	-1.3
FWVZ	Far West T-bar	2.62	23	P	Pb	13 25 35.2	-1.6
TUVZ	Tukino	2.63	24	P	Pn	13 25 34.5	+2.1
NGZ	Ngauruhoe	2.70	23	P	Pb	13 25 36.9	-1.4
KAHZ	Kahuranaki	2.74	48	P	Pn	13 25 33.5	-0.3
WTVZ	West Tongariro	2.76	22	P	Pb	13 25 37.6	-1.6
TWVZ	Taurewa	2.76	20	P	Pb	13 25 40.4	+1.2
KRVZ	Karewarewa	2.79	23	P	Pb	13 25 40.1	+0.3
MCHZ	McNeill Hill	2.91	41	P	Pb	13 25 39.9	-1.8
KATZ	Kakaramea	2.92	23	P	Pb	13 25 43.5	+1.6
WVZ	Waitaha Valley	2.95	241	P	Pb	13 25 41.4	-1.0
BKZ	Black Stump Fm	3.04	35	P	Pb	13 25 45.3	+1.4
RPZ	Rata Peaks	3.11	228	P	Pn	13 25 39.4	+0.6
HIZ	Hauiti	3.19	9	P	Pb	13 25 43.9	-2.7
TLZ	Tolley Road	3.49	17	P	Pb	13 25 49.4	-2.2
FOZ	Fox Glacier	3.76	239	P	Pb	13 25 52.7	-3.5
TOZ	Tahuroa Road	4.06	14	P	Pb	13 25 58.0	-3.3
URZ	Urewera	4.06	34	P	Pn	13 25 55.2	+3.4
MWZ	Matawai	4.18	38	P	Pn	13 25 54.1	+0.6
ODZ	Otahua Downs	4.27	217	P	Pn	13 25 54.3	-0.4
TWGZ	Tauwhareparae	4.52	41	P	Pn	13 25 57.3	-0.8
AWAZ	Awhitu Peninsu	4.62	4	P	Pn	13 26 03.3	+3.9
MKAZ	Moumakai	4.62	9	P	Pn	13 26 03.5	+4.0
JCZ	Jackson Bay	4.68	237	P	Pn	13 26 04.4	+4.0
ETAZ	East Tamaki Re	4.75	7	P	Pn	13 26 05.5	+4.3
WIAZ	Waiheke Island	4.93	8	P	Pn	13 26 08.4	+4.7

*ISCJB **24** 13:25:23.8±1.5,32°.08S±0°.03×71°.9W±0°.1,h15^{km}±15^{km}, Error ellipse: s-maj=18.9km s-min=5.8km az=179.5*

*SJA **24** 13:25:26.8±0.6,32°.28S×71°.68W,h66^{km}±12^{km},ML3.6, MW3.8*

*GUC **24** 13:25:26.7±0.5,32°.01S×71°.35W,h23^{km}±8^{km},ML3.1*

ISC 24 13:25:21.1±1.9,**31°.94S**±0°.03×**71°.73W**±0°.08,**h0**^{km}±13^{km}, **n15,**σ1^{s}.**66**/26,**2C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO02	Combarbal	0.96	40	⇓iP	Pn	13 25 43.5	+1.6
CO02				i S	Sn	13 25 56.2	-0.1
PEL	Peldehue	1.49	144	⇓iP	Pg	13 25 50.1	+0.5
PEL				i S	Sn	13 26 07.8	-1.5
PEL				IAML		13 26 12.0	
	comp=E,507nm,0.5s						
CLCH	Cerro Calan	1.77	146	eP	Pg	13 25 54.8	-0.1
CLCH				i S	Sb	13 26 15.8	-1.4
CLCH				IAML		13 26 26.4	
	comp=N,574nm,0.5s						
FCH	Farellones	1.84	139	⇑iP	Pb	13 25 55.8	0.0
FCH				i S	Sb	13 26 18.1	-1.4
FCH				IAML		13 26 20.2	
	comp=E,213nm,0.2s						
GO04	Tololo Observa	1.93	25	eP	Pg	13 25 58.4	+0.3
GO04				i S	Sg	13 26 24.0	+0.9
RTLS	Leoncito	2.07	87	i P	Pg	13 26 01.4	+0.6
RTLS				i S	Sg	13 26 27.8	+0.2
RTLS				IAML		13 26 30.4	
	comp=Z,369nm,0.9s						
LMEL	Las Melosas	2.29	146	⇑iP	Pb	13 26 02.4	-1.1
LMEL				i S	Sb	13 26 30.2	-2.2
LMEL				IAML		13 26 35.8	
	comp=N,339nm,0.2s						
AROD	Rodeo	2.62	48	i P	Pg	13 26 10.4	-0.9
AROD				i S	Sg	13 26 44.9	-0.3
ZON	Zonda	2.63	82	i P	Pg	13 26 10.4	-1.0
RTCV	Cerro Valdivia	2.71	89	eP	Pb	13 26 10.3	-0.2
RTLL	Cerro Villicun	2.84	79	i P	Pb	13 26 12.6	-0.1
RTLL				i S	Sb	13 26 48.9	+0.9
CFA	Coronel Fontan	2.99	85	i P	Pb	13 26 14.3	-0.9
CFA				i S	Sb	13 26 52.9	+0.5
ACAN	Cantantal	3.87	96	i P	Pn	13 26 25.1	+3.3
ACAN				i S	Sb	13 27 14.0	-3.5
VCA	Vinchina	4.41	45	i P	Pb	13 26 36.5	-3.0
MRA	San Martin	5.12	97	i P	Pn	13 26 42.0	+2.9

*ISCJB **24** 13:29:51.9±1.0,20°.22S±0°.02×70°.92W±0°.03,h18^{km}±7^{km}, mb4.6/61,MS4.5/12,Error ellipse: s-maj=5.2km s-min=3.5km az=167.7*

*IDC **24** 13:29:51.4±0.6,20°.10S×70°.62W,h0^{km},mb4.2/11, mb1 4.5/14,mb1mx4.3/31,mbtmp4.3/14,ML4.3/3,MS4.4/12, Ms1 4.3/12,ms1mx4.1/23,Error ellipse: s-maj=16.6km s-min=11.4km az=75.0*

*GUC **24** 13:29:53.8±0.7,20°.18S×70°.82W,h40^{km}±2^{km},ML4.7, MW4.9*

*NEIC **24** 13:29:53.6±2.0,20°.21S×70°.76W,h18^{km}±3^{km},mb4.8/61, MW4.9(GUC),Error ellipse: s-maj=10.3km s-min=5.3km az=113.0*

NEIC Felt [III] at Alto Hospicio, Huara, Iquique and Pozo Almonte; [II] at Camina, La Tirana and Pica.

*BJI **24** 13:29:55.2±0.0,20°.20S×70°.70W,h20^{km},mB5.4/4, Ms5.5/2,Ms7 5.1/3*

*GCMT **24** 13:29:58.6±0.4,20°.11S±0°.03×71°.15W±0°.03,h22^{km}±1^{km}, MW5.0/60,Moment Tensor Solution. s31,c41; s60,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.05±.25; $M_{\theta\theta}$-0.15±.13; $M_{\phi\phi}$-2.90±.17; $M_{r\theta}$0.09±.19; $M_{\theta\phi}$0.43±.08; $M_{\phi r}$-1.76±.21; Best double couple: $M_0$3.48600×10^{16} NP1:ϕ_s174.00000°,δ60.00000°,λ93.00000°. NP2: ϕ_s348.00000°,δ30.00000°,λ85.00000°. Principal axes: T 3.5320, Plg75.0000°, Azm92.0000°; N -0.0870, Plg2.0000°, Azm353.0000°; P -3.4410, Plg15.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **24** 13:29:59.1±0.8,20°.14S×70°.76W,h97^{km},mb4.7*

ISC 24 13:29:54.3±0.8,**20°.17S**±0°.03×**70°.78W**±0°.05,**h23**^{km}±6^{km}, **n173,**σ1^{s}.**63**/179,**mb4.8**/61,**MS4.5**/12,**8C-2D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.83	48	⇓iP	Pb	13 30 10.3	0.0
PSGC				eS	Sn	13 30 22.3	-0.1
PB11	IPOC Station P	1.13	69	ePn	Pn	13 30 15.2	+0.3
PB11	IPOC Station P	1.13	69	⇓iP	Pn	13 30 15.1	+0.3
PB11				i S	Sn	13 30 30.3	+0.5
PB11				IAML		13 30 38.1	
	comp=N,22μm,0.4s						
PB02	IPOC Station P	1.41	144	⇑iP	Pn	13 30 18.5	-0.3
PB02				i S	Sn	13 30 37.9	+1.1
PB02				IAML		13 30 44.2	
	comp=E,43μm,0.4s						
PB01	IPOC Station P	1.49	126	ePn	Pn	13 30 20.2	+0.4
PB01	IPOC Station P	1.49	126	⇑iP	Pn	13 30 20.2	+0.4
PB01				i S	Sn	13 30 39.6	+0.9
PB01				IAML		13 30 46.9	
	comp=N,28μm,0.3s						
MNMC	Minye Minye	1.52	47	ePn	Pn	13 30 21.2	+0.9
MNMC	Minye Minye	1.52	47	⇑iP	Pn	13 30 21.1	+0.7
MNMC				i S	Sb	13 30 42.7	+1.9
PB08	IPOC Station P	1.53	89	⇑iP	Pn	13 30 21.4	+0.8
PB08				i S	Sb	13 30 42.2	+0.9
PB08				IAML		13 30 47.2	
	comp=N,8μm,0.4s						
GO01	Chusmiza	1.57	72	ePn	Pn	13 30 22.5	+1.3
GO01	Chusmiza	1.57	72	⇑iP	Pn	13 30 22.1	+0.9
GO01				i S	Sb	13 30 44.0	+1.4
PB12	IPOC Station P	1.60	15	⇑eP	Pn	13 30 21.2	-0.1
PB12				eS	Sb	13 30 42.4	-0.7
PB12				IAML		13 30 54.5	
	comp=E,11μm,0.5s						
PB07	IPOC Station P	1.76	152	⇑iP	Pn	13 30 23.0	-0.7
PB07				i S	Sn	13 30 47.5	+2.0
PB03	IPOC Station P	2.10	153	eP	Pn	13 30 27.6	-0.7
PB03				eS	Sn	13 30 53.8	-0.1
PB04	IPOC Station P	2.24	165	ePn	Pn	13 30 28.9	-1.3
LVC	Limon Verde	2.99	145	Pn	Pn	13 30 41.8	+1.1
	comp=E,32nm,0.3s,baz=325,slow=11,SNR=136						
LVC				Pg	Pb	13 30 47.0	-0.2
	comp=E,337nm,0.3s,baz=343,slow=12,SNR=79						
LVC				Sn	Sn	13 31 17.7	+1.6
	comp=E,205nm,0.3s,baz=98,slow=22,SNR=8.2						
LVC				Lg	Lg	13 31 24.4	
	comp=E,205nm,0.3s,baz=288,slow=7.7,SNR=9.1						
PB10	IPOC Station P	3.34	176	ePn	Pn	13 30 42.9	-2.2
LPAZ	La Paz	4.60	34	Pn	Pb	13 31 10.1	-4.7
	comp=E,11nm,0.3s,baz=255,slow=3.4,SNR=110						
LPAZ				Lg	Lg	13 32 16.7	
	comp=E,2.6nm,0.3s,baz=211,slow=17,SNR=2.1						
LPAZ	La Paz	4.60	34	ePn	Pn	13 31 07.1	+4.0
LPAZ	La Paz	4.60	34	eP	Pn	13 31 06.0	+2.9
LPAZ				eS	Sn	13 31 58.5	+2.3
GO02	Mina Guanaco	5.09	168	ePn	Pn	13 31 08.2	-1.4
GO03	Copiap	7.41	176	ePn	Pn	13 31 40.1	-1.1
LCO	Las Campanas	8.81	180	ePn	Pn	13 31 59.1	-1.4
GO04	Tololo Observa	9.96	180	ePn	Pn	13 32 15.4	-1.0
NNA	Nana	10.00	323	Pn	Pn	13 32 19.6	+2.8
	comp=E,1.7nm,0.3s,baz=131,slow=9.3,SNR=2.6						
NNA				Sn	Sn	13 34 03.9	-4.5
	comp=E,2.5nm,0.3s,baz=205,slow=19,SNR=2.2						
NNA				Lg	Lg	13 34 45.6	
	comp=E,3.4nm,0.3s,baz=102,slow=14,SNR=2.4						
NNA				LR	LR	13 35 46.4	
	comp=E,397nm,20.7s,baz=154,slow=35						
NNA	Nana	10.00	323	ePn	Pn	13 32 17.9	+1.2
SIV	San Ignacio	10.12	67	Pn	Pn	13 32 17.5	-0.8
	comp=E,6.5nm,0.3s,baz=258,slow=10,SNR=32						
SIV				Sn	Sn	13 34 08.7	-2.5
	baz=320,slow=17,SNR=1.4						
SIV				LR	LR	13 36 49.4	
	comp=E,3μm,18.1s,baz=272,slow=42						
CFA	Coronel Fontan	11.62	169	Pn	Pn	13 32 37.0	-1.8
	comp=E,0.8nm,0.3s,baz=335,slow=17,SNR=3.4						
CFA				LR	LR	13 37 19.5	
	comp=E,1μm,20.9s,baz=358,slow=38						
CPUP	Villa Florida	13.80	119	Pn	Pn	13 33 11.9	+3.3
	comp=E,0.4nm,0.3s,baz=305,slow=10,SNR=7.0						
CPUP				LR	LR	13 39 08.5	
	comp=E,780nm,20.5s,baz=298,slow=41						
CPUP	Villa Florida	13.80	119	ePn	Pn	13 33 07.2	-1.4
CPUP	Villa Florida	13.80	119	eP	Pn	13 33 11.9	+3.3
AQDB	Aquidauana	14.15	94	eP	Pn	13 33 13.9	+0.5
GO05	Huala	14.82	184	ePn	Pn	13 33 22.7	+0.1
C2SB	Chapadao do Su	16.98	88	eP	Pn	13 33 49.2	-1.2
PTGB	Pitanga	17.88	108	eP	Pn	13 34 02.2	+0.5
ITAB	Concordia	18.46	116	eP	P	13 34 07.0	-1.6
CPSB	Cacapava Do Su	18.68	126	eP	P	13 34 08.8	-2.2
FRTB	Fartura	19.95	103	eP	P	13 34 23.1	-1.9
PLCA	Paso Flores	20.50	180	P	P	13 34 32.3	+1.4
	comp=E,5.4nm,0.7s,baz=24,slow=11,SNR=8.8						
PLCA	Paso Flores	20.50	180	eP	P	13 34 30.6	-0.3
	comp=E,73nm,1.9s						
PLCA	Paso Flores	20.50	180	eP	P	13 34 29.4	-1.5
PTLC	Puerto Leguiza	20.59	349	eP	P	13 34 30.0	-1.9
BB19B	Bebedouro	20.84	96	eP	P	13 34 34.3	-0.4
PTGA	Pitinga	22.02	30	P	P	13 34 45.2	-2.1
	comp=E,12nm,0.3s,baz=204,slow=15,SNR=25						
PTGA				S	S	13 38 50.3	+0.9
	comp=E,2.2nm,0.6s,baz=99,slow=18,SNR=3.1						
PTGA	Pitinga	22.02	30	eP	P	13 34 45.5	-1.8
	comp=E,120nm,1.8s						
PTGA				eS	S	13 38 50.3	+0.9
PTGA	Pitinga	22.02	30	eP	P	13 34 45.6	-1.7
PTGA				eS	S	13 38 43.3	-6.1
BDFB	Brasilia	22.12	82	P	P	13 34 47.8	-0.7
	comp=E,5.2nm,0.5s,baz=268,slow=7.3,SNR=7.8						
BDFB				LR	LR	13 44 54.0	
	comp=E,1μm,21.8s,baz=278,slow=41						
BDFB	Brasilia	22.12	82	eP	P	13 34 45.7	-2.8
	comp=E,42nm,1.4s						
BDFB				eP	P	13 34 47.8	-0.7
FLOC	Florencia	22.14	347	eP	P	13 34 48.9	+0.3
CRUC	La Cruz	22.43	344	eP	P	13 34 58.8	+6.7
GUVC	San Jose del G	22.64	355	eP	P	13 34 52.3	-1.7
BBAC	Balboa, Cauca	22.94	343	eP	P	13 34 58.1	+0.8
BETC	Betania	23.16	348	eP	P	13 35 00.7	+1.3
POPC	Popayan, Colom	23.29	345	eP	P	13 35 02.4	+1.4
PRAC	Prado	24.07	350	eP	P	13 35 08.2	0.0
VILC	Villavicencio,	24.30	353	eP	P	13 35 09.9	-0.5
ORTC	Ortega, Tolima	24.32	349	eP	P	13 35 10.8	+0.2
ROSC	El Rosal	25.09	352	LR	LR	13 46 37.5	
	comp=E,942nm,18.2s,baz=208,slow=40						
GUY2C	Guyana, Caldas	25.63	349	eP	P	13 35 25.9	+3.0
NORC	Norcasia	25.88	351	eP	P	13 35 23.4	-1.3
RUSC	La Rusia	25.99	355	eP	P	13 35 27.6	+1.4
BARC	Barichara	26.69	355	eP	P	13 35 32.3	+0.1
PTBC	PUERTO BERRIO,	26.78	352	eP	P	13 35 29.2	-3.5
DBBC	Dabeiba	27.54	348	eP	P	13 35 49.4	+10
ZARC	Zaragoza, Cauc	27.77	351	eP	P	13 35 40.2	-1.5
SJG	San Juan	38.31	7	eP	P	13 37 11.9	-1.5
	comp=E,26nm,1.1s						
CBYP	Canovanas	38.50	8	eP	P	13 37 12.8	-2.3
	comp=E,20nm,0.8s						
V56A	Mocksville	56.42	351	eP	P	13 39 33.0	-1.2
	comp=E,11nm,1.0s						
X48A	Hartselle	56.48	344	eP	P	13 39 34.1	-0.4
	comp=E,18nm,1.4s						
V48A	Smith Brothers	57.64	345	eP	P	13 39 42.6	-0.2
	comp=E,7.7nm,0.9s						
CLTN	Cedars of Leba	57.85	345	eP	P	13 39 43.8	-0.4
	comp=E,8.3nm,1.4s						
S57A	Dark Hollow, R	58.13	352	eP	P	13 39 46.8	+0.7
	comp=E,13nm,1.1s						
TXAR	Lajitas Array	58.55	326	P	P	13 39 50.5	+1.2
	comp=E,1.3nm,1.1s,baz=148,slow=5.3,SNR=7.2						
MIAR	Mount Ida	58.57	338	eP	P	13 39 47.7	-1.6
	comp=E,13nm,1.2s						
T49A	Edmonton	58.64	346	eP	P	13 39 48.1	-1.6
	comp=E,12nm,1.0s						
T47A	Sharon Grove	58.90	345	eP	P	13 39 50.7	-0.8
	comp=E,16nm,1.1s						
O56A	Blue Knob Stat	60.56	353	eP	P	13 40 03.5	+0.6
	comp=E,19nm,1.1s						
CCM	Cathedral Cave	61.02	342	eP	P	13 40 06.0	-0.1
	comp=E,9.4nm,1.2s						
N55A	Marion Center	61.11	353	eP	P	13 40 07.2	+0.6
	comp=E,21nm,1.0s						
MNTX	Cornudas Mount	61.32	327	eP	P	13 40 08.9	+0.6
	comp=E,11nm,1.6s						
VNA3	Neumayer Olymp	61.90	161	P	P	13 40 12.9	+1.3
VNA1	Neumayer--Stat	62.12	160	P	P	13 40 15.3	+2.2
SNAA	Sanae	64.11	161	P	P	13 40 26.2	-0.2
SNAA	Sanae	64.11	161	eP	P	13 40 26.2	-0.2
	comp=E,15nm,1.4s						
SDCO	Great Sand Dun	66.22	330	eP	P	13 40 41.7	+0.9
	comp=E,11nm,1.4s						
X16A	Lo Mia Camp, P	66.65	324	eP	P	13 40 45.3	+1.8
	comp=E,6.0nm,1.3s						
WUAZ	Wupatki	67.44	325	eP	P	13 40 50.6	+2.2
	comp=E,4.3nm,0.9s						
KNB	Kanab	69.33	325	eP	P	13 41 01.8	+1.5
	comp=E,11nm,1.2s						
LCMT	Little Creek M	69.56	325	eP	P	13 41 02.7	+1.1
	comp=E,5.4nm,1.3s						
SRU	San Rafael Swe	69.72	328	eP	P	13 41 03.8	+1.1
	comp=E,7.4nm,1.1s						
MTPU	Mount Pierson	69.75	326	eP	P	13 41 04.3	+1.2
	comp=E,17nm,1.9s						
CCUT	Cedar City	70.02	325	eP	P	13 41 06.7	+2.1
	comp=E,6.3nm,0.9s						
QSPA	South Pole Qui	70.02	180	eP	P	13 41 05.3	+1.2
	comp=E,26nm,1.9s						
DBIC	Dimbokro	70.05	75	P	P	13 41 03.5	-1.4
	comp=E,3.6nm,0.7s,baz=220,slow=7.7,SNR=5.3						
DBIC				LR	LR	14 10 26.6	
	comp=E,326nm,19.5s,baz=225,slow=35						
DBIC	Dimbokro	70.05	75	eP	P	13 41 03.5	-1.4
	comp=E,16nm,1.1s						
SHPR	Sheep Range	70.25	323	eP	P	13 41 07.1	+1.1
	comp=E,6.2nm,1.2s						
ISA	Isabella, Lake	71.58	321	eP	P	13 41 14.0	+0.1
	comp=E,6.3nm,0.9s						
DUG	Dugway, Tooele	71.69	327	eP	P	13 41 14.9	+0.3
	comp=E,7.0nm,1.3s						
R11A	Troy Canyon, C	71.80	324	eP	P	13 41 16.2	+0.8
	comp=E,4.5nm,1.4s						
PD31	Pinedale Array	72.09	331	eP	P	13 41 16.9	-0.2
	comp=E,3.4nm,1.4s						
PDAR	Pinedale Array	72.09	331	P	P	13 41 16.9	-0.2
	comp=E,0.3nm,0.6s,baz=122,slow=5.4,SNR=4.5						
HWUT	Hardware Ranch	72.14	329	eP	P	13 41 18.2	+0.9
	comp=E,5.6nm,1.0s						
TBI	Tubuai	72.27	251	eLR	LR	14 03 26.4	
	comp=E,202nm,25.2s						
HVU	Hansel Valley	72.86	328	eP	P	13 41 22.9	+1.3
	comp=E,4.4nm,1.1s						
OMMB	Old Mammoth Mi	73.22	322	eP	P	13 41 24.9	+1.0
	comp=E,6.5nm,1.1s						
MDPB	Devils Postpil	73.28	322	eP	P	13 41 24.6	+0.4
	comp=E,3.1nm,1.0s						
TPAW	Teton Pass	73.30	331	eP	P	13 41 24.6	+0.3
	comp=E,8.7nm,1.4s						
NV01	Mina Array Sit	73.38	323	eP	P	13 41 26.4	+1.6
NVAR	Mina Array Bea	73.38	323	P	P	13 41 26.4	+1.6
	comp=E,1.5nm,1.0s,baz=134,slow=4.6,SNR=8.5						
FXWY	Fox Creek	73.45	331	eP	P	13 41 25.4	+0.3
	comp=E,4.0nm,1.1s						
IMW	Indian Meadow	73.61	331	eP	P	13 41 26.3	+0.2
	comp=E,12nm,1.6s						
FLWY	Flagg Ranch	73.64	331	eP	P	13 41 25.6	-0.6
	comp=E,27nm,1.8s						
KVN	Kaiserville	73.69	323	eP	P	13 41 25.1	-1.4
	comp=E,20nm,1.9s						
RLMT	Red Lodge	73.83	333	eP	P	13 41 27.1	-0.1
	comp=E,20nm,1.8s						
LAO	LASA Array	73.84	335	eP	P	13 41 27.5	+0.3
	comp=E,20nm,1.4s						
PPT2	Papeete2	73.92	257	eS	S	13 51 03.8	+4.3
	comp=E,98nm,23.5s						
PPT2	Papeete2	73.92	257	eLR	LR	14 04 14.8	
	comp=E,214nm,24.5s						
WAKR	Walker	74.07	322	eP	P	13 41 28.8	0.0
	comp=E,10nm,1.7s						
YHH	Holmes Hill	74.26	332	eP	P	13 41 29.6	-0.3
	comp=E,8.6nm,1.2s						
PAHR	Pah Rah Range	74.86	323	eP	P	13 41 32.1	-1.2
	comp=E,8.6nm,1.1s						
HLID	Hailey	74.99	329	eP	P	13 41 34.2	+0.2
	comp=E,3.6nm,0.9s						
MCMT	McKenzie Canyo	75.20	330	eP	P	13 41 35.6	+0.3
BOZ	Bozeman (W)	75.23	332	eP	P	13 41 36.2	+0.8
	comp=E,5.1nm,1.3s						
EGMT	Eagleton	76.33	334	eP	P	13 41 41.6	+0.1
	comp=E,9.6nm,1.1s						
SYO	Syowa Base	78.36	160	⇑eP	P	13 41 50.0	-2.5
TOA0	Torodi Ar. Sit	78.57	71	eP	P	13 41 53.6	-1.0
	comp=E,23nm,0.9s						
TOA1	Torodi Ar. Sit	78.57	71	eP	P	13 41 53.8	-0.9
TORD	Torodi Ar. Bea	78.57	71	P	P	13 41 53.8	-0.9
	comp=E,14nm,0.9s,baz=238,slow=5.3,SNR=33						
TORD				LR	LR	14 15 41.7	
	comp=E,320nm,18.5s,baz=285,slow=35						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WALA	**Waterton Lakes** comp=E,8.1nm,1.2s	**78.88**	**333**	*e*P	**P**	**13 41 56.4**	**+0.7**
LLLB	**Lillooet** comp=E,13nm,1.4s	**83.58**	**330**	*e*P	**P**	**13 42 21.4**	**+0.8**
MTE	**Manteigas** comp=E,14nm,1.2s	**84.15**	**43**	*e*P	**P**	**13 42 21.6**	**-2.2**
BOSA	**Boshof** comp=E,176nm,18.4s,baz=231,slow=34	**85.61**	**119**	LR	LR	14 17 33.0	
PAB	**San Pablo** comp=E,7.4nm,1.1s	**85.80**	**45**	*e*P	**P**	**13 42 31.4**	**-0.7**
MAW	**Mawson** comp=E,1.0nm,0.5s,baz=188,slow=5.8,SNR=9.1	**86.10**	**164**	P	**P**	**13 42 33.8**	**+0.7**
ESDC	**Sonseca Array** comp=E,1.0nm,0.8s,baz=244,slow=5.3,SNR=13	**86.13**	**45**	P	**P**	**13 42 34.3**	**+0.6**
YKA	**Yellowknife Ar** comp=E,4.2nm,0.9s,baz=139,slow=4.7,SNR=16	**89.36**	**341**	P	**P**	**13 42 49.1**	**+0.6**
YKB5	**Yellowknife Ar**	**89.36**	**341**	*e*P	**P**	**13 42 49.1**	**+0.6**
YKW3	**Yellowknife Ar** comp=E,10nm,1.1s	**89.42**	**341**	*e*P	**P**	**13 42 48.7**	**-0.1**
LSZ	**Lusaka** comp=E,170nm,18.7s,baz=236,slow=35	**92.96**	**107**	LR	LR	14 23 19.1	
KEST	**Kesra** comp=E,195nm,19.8s,baz=230,slow=36	**93.91**	**53**	LR	LR	14 26 31.0	
RPZ	**Rata Peaks** comp=E,238nm,20.6s,baz=132,slow=28	**94.91**	**220**	LR	LR	14 13 46.1	
DZM	**Mont Dzumac** comp=E,187nm,25.9s	**110.11**	**236**	*e*LR	LR	14 21 03.8	
KBZ	**Khabaz** comp=E,2.1nm,0.9s,baz=225,slow=6.7,SNR=4.6	**120.63**	**50**	PKP	**PKiKP**	**13 48 45.8**	**+1.4**
H11S2	**WAKE ISLAND Hy** baz=101,slow=75,SNR=110	**125.97**	**279**	T	T	16 08 25.6	
H11S1	**WAKE ISLAND Hy** baz=101,slow=75,SNR=180	**125.97**	**279**	T	T	16 08 25.8	
H11S3	**WAKE ISLAND Hy** baz=101,slow=75,SNR=138	**125.98**	**279**	T	T	16 08 27.2	
H11N3	**WAKE ISLAND Hy** baz=101,slow=74,SNR=78	**126.02**	**280**	T	T	16 08 26.9	
H11N2	**WAKE ISLAND Hy** baz=101,slow=74,SNR=64	**126.03**	**280**	T	T	16 08 29.0	
H11N1	**WAKE ISLAND Hy** baz=101,slow=74,SNR=70	**126.03**	**280**	T	T	16 08 23.9	
AKTO	**Aktyubinsk** comp=E,1.0nm,0.7s,baz=358,slow=6.7,SNR=3.9	**129.78**	**40**	PKP	**PKiKP**	**13 49 03.2**	**+0.8**
AS31	**Alice Springs**	**130.23**	**210**	*e*PKPdf	**PKPdf**	**13 49 03.0**	**-0.5**
ASAR	**Alice Springs** comp=E,13nm,0.4s,baz=107,slow=1.4,SNR=4.7	**130.23**	**210**	PKP	**PKPdf**	**13 49 03.0**	**-0.5**
ABKAR	**Akbulak array**	**131.33**	**41**	*e*PKPdf	**PKPdf**	**13 49 05.0**	**+0.3**
WR1	**Warramunga Arr**	**133.16**	**213**	*e*PKPdf	**PKPdf**	**13 49 10.0**	**+0.9**
WRA	**Warramunga Arr** comp=E,1.0nm,0.7s,baz=151,slow=1.9,SNR=5.0	**133.16**	**213**	PKP	**PKPdf**	**13 49 10.0**	**+0.9**
ZAA1	**Zalesovo Array**	**141.45**	**23**	*e*PKPdf	**PKPdf**	**13 49 24.4**	**+1.2**
ZALV	**Zalesovo Beam** comp=E,1.4nm,0.5s,baz=304,slow=3.4,SNR=5.8	**141.45**	**23**	PKP	**PKPdf**	**13 49 24.4**	**+1.2**
NRN	**Naryn**	**144.77**	**46**	*e*PKPdf	PKPbc	13 49 29.7	+0.8
KDJ	**Kajisay**	**145.22**	**44**	*e*PKPbc	**PKPbc**	**13 49 29.6**	**-0.6**
MAKZ	**Makanchi**	**145.36**	**34**	*e*PKPbc	**PKPbc**	**13 49 30.5**	**+0.2**
MK31	**Makanchi Array**	**145.53**	**33**	*e*PKPdf	**PKPdf**	**13 49 30.9**	**+0.2**
MK32	**Makanchi Array**	**145.53**	**33**	*e*PKPdf	**PKPdf**	**13 49 31.3**	**+0.6**
MKAR	**Makanchi Array** comp=E,9.6nm,0.9s,baz=326,slow=3.3,SNR=51	**145.53**	**33**	PKPbc	**PKPdf**	**13 49 31.3**	**+0.6**
KSH	**Kashi**	**145.58**	**49**	*e*PKPbc	**PKPab**	**13 49 32.4**	**+0.8**
KSH				PP	**PP**	**13 52 57.0**	**+5.2**
KSH				PKS	**PKSdf**	**13 53 06.8**	**+0.1**
KSH				SKS	**SKSdf**	**13 56 40.6**	**+1.5**
KSH				SKKS	**SKKSac**	**13 59 45.3**	**+2.3**
USRK	**Ussuriysk Ar.** comp=E,3.6nm,0.9s,baz=295,slow=0.9,SNR=7.4	**149.44**	**327**	PKPbc	**PKPbc**	**13 49 42.4**	**+0.7**
MJAR	**Matsushiro Arr** comp=E,3.8nm,0.9s,baz=214,slow=2.4,SNR=7.4	**149.88**	**309**	PKPbc	**PKPbc**	**13 49 42.6**	**-0.4**
WMQ	**Urumqi**	**150.34**	**32**	*e*PKPbc	**PKPdf**	**13 49 39.5**	**+0.7**
WMQ	comp=E,89nm,25.1s			LR	LR		
SONA0	**Songino Array**	**152.30**	**4**	*e*PKPbc	**PKPbc**	**13 49 49.4**	**+0.9**
SONM	**Songino Array** comp=E,1.9nm,0.8s,baz=349,slow=1.5,SNR=10.0	**152.30**	**4**	PKPbc	**PKPbc**	**13 49 49.4**	**+0.9**
GTA	**Gaotai**	**159.18**	**21**	*e*P	**PKPab**	**13 50 28.6**	**+0.6**
GTA				pP	pPKPab	13 50 34.3	-0.4
GTA				sP	sPKPab	13 50 36.9	-0.2
GTA	comp=Z,3.0nm,1.3s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**159.28**	**355**	PKP	**PKPdf**	**13 49 46.0**	**-5.2**
NJ2	**Nanjing**	**165.35**	**326**	*e*PKP	**PKPdf**	**13 49 55.8**	**-1.6**
CD2	**Chengdu**	**168.22**	**24**	PKP	**PKPdf**	**13 49 58.3**	**-1.4**

KNET ***24*** *13:30:50.9±0.3, 42°.45N×74°.12E, h18^{km}±2^{km}, ml1.6, Error ellipse: s-maj=2.2km s-min=2.0km az=40.0*
KRNET ***24*** *13:30:51.5±0.1, 42°.44N×74°.11E, h17^{km}, mb2.3*
SOME ***24*** *13:30:52.1, 42°.52N×74°.15E, h10^{km}*
NNC ***24*** *13:30:52.5±0.5, 42°.60N×74°.10E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=7.7km s-min=2.0km az=178.0*
ISC 24 13:30:52.0±1.0**, 42°.45N**±0°.02×**74°.12E**±0°.02**, h9**^{km}±9^{km}**, n56, σ1^s.02**/98**, 30C-21D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKS2	**Erkin-Say** baz=12	**0.33**	**310**	⇓*i*P	**Pg**	**13 30 58.5**	**-0.1**
EKS2	baz=12			⇓*i*S	**Sg**	**13 31 03.1**	**+0.1**
EKS2	**Erkin-Say** 9.5nm,0.2s,SNR=9.7	**0.33**	**310**	⇓P	**Pg**	**13 30 58.6**	**0.0**
EKS2	36nm,0.1s			⇑S	**Sg**	**13 31 03.5**	**+0.5**
AAK	**Ala-Archa** 1.8nm,0.2s	**0.34**	**55**	⇓P	**Pg**	**13 30 58.7**	**+0.1**
AAK	24nm,0.3s			⇑S	**Sg**	**13 31 03.6**	**+0.5**
AAK	**Ala-Archa** baz=55	**0.34**	**55**	⇓*i*P	**Pg**	**13 30 58.7**	**+0.1**
AAK	baz=55			⇓*i*S	**Sg**	**13 31 03.3**	**+0.2**
AAK	**Ala-Archa** 10nm,0.2s,SNR=16	**0.34**	**55**	⇓P	**Pg**	**13 30 58.8**	**+0.1**
AAK	64nm,0.2s			⇓S	**Sg**	**13 31 03.5**	**+0.4**
UCH	**Uchtor** baz=26	**0.36**	**127**	⇓*i*P	**Pg**	**13 30 58.9**	**-0.4**
UCH	baz=26			⇓*i*S	**Sg**	**13 31 04.3**	**+0.2**
UCH	**Uchtor** 20nm,0.1s,SNR=170	**0.36**	**127**	⇓P	**Pg**	**13 30 59.0**	**-0.4**
AML	**Almayashu** baz=25	**0.45**	**225**	⇑*e*P	**Pg**	**13 31 00.3**	**-0.5**
AML	baz=25			⇑*i*S	**Sg**	**13 31 06.1**	**-0.6**
AML	**Almayashu** 15nm,0.2s,SNR=22	**0.45**	**225**	⇑P	**Pg**	**13 31 00.4**	**-0.5**
AML	65nm,0.2s			⇑S	**Sg**	**13 31 06.4**	**-0.3**
ARLS	**Aral** baz=64	**0.60**	**166**	⇑*i*P	**Pg**	**13 31 03.0**	**-0.7**
ARLS	baz=64			⇑*i*S	**Sg**	**13 31 11.3**	**-0.4**
KBK	**Karagaybulak** baz=71	**0.65**	**71**	⇑*e*P	**Pg**	**13 31 04.1**	**-0.4**
KBK	baz=71			⇑*i*S	**Sg**	**13 31 13.0**	**0.0**
KBK	**Karagaybulak** 9.0nm,0.1s,SNR=11	**0.65**	**71**	⇓P	**Pg**	**13 31 04.1**	**-0.4**
KBK	94nm,0.3s			⇓S	**Sg**	**13 31 13.3**	**+0.4**
CHMS	**Chumysh** baz=40	**0.72**	**40**	⇑*e*P	**Pg**	**13 31 05.5**	**-0.4**
CHMS	baz=40			⇑*i*S	**Sg**	**13 31 15.5**	**+0.2**
CHMS	**Chumysh** 3.4nm,0.1s,SNR=11	**0.72**	**40**	⇑P	**Pg**	**13 31 05.7**	**-0.2**
CHMS	14nm,0.1s			⇑S	**Sg**	**13 31 15.5**	**+0.2**
MRKS	**Merke** 21nm,0.1s	**0.72**	**294**	P	**Pg**	**13 31 05.4**	**-0.6**
MRKS	33nm,0.2s			S	**Sg**	**13 31 15.1**	**-0.4**
MRKS	**Merke** 21nm,0.1s	**0.72**	**294**	*e*P	**Pg**	**13 31 05.3**	**-0.6**
MRKS	33nm,0.2s			*e*S	**Sg**	**13 31 15.0**	**-0.4**
USP	**Ospenovka** baz=19	**0.86**	**19**	⇓*i*P	**Pg**	**13 31 08.2**	**-0.4**
USP	baz=19			⇓*i*S	**Sg**	**13 31 19.7**	**-0.2**
USP	**Ospenovka** 3.3nm,0.1s,SNR=13	**0.86**	**19**	⇓P	**Pg**	**13 31 08.3**	**-0.4**
USP	9.2nm,0.1s			⇑S	**Sg**	**13 31 19.7**	**-0.2**
KZA	**Kyzart** baz=13	**0.92**	**113**	⇓*i*P	**Pg**	**13 31 08.9**	**-0.7**
KZA	baz=13			⇓*i*S	**Sg**	**13 31 21.3**	**-0.3**
KZA	**Kyzart** 38nm,0.2s,SNR=140	**0.92**	**113**	P	**Pg**	**13 31 09.0**	**-0.7**
KZA	27nm,0.1s			⇑S	**Sg**	**13 31 21.8**	**+0.2**
TKM2	**Tokmak 2** 1.1nm,0.3s	**1.19**	**66**	⇑P	**Pg**	**13 31 13.6**	**-1.2**
TKM2	2.9nm,0.2s			⇓S	**Sg**	**13 31 29.1**	**-1.1**
TKM2	**Tokmak 2** baz=66	**1.19**	**66**	⇑*i*P	**Pg**	**13 31 13.5**	**-1.2**
TKM2	baz=66			⇑*i*S	**Sg**	**13 31 29.4**	**-0.8**
TKM2	**Tokmak 2** 3.8nm,0.1s,SNR=15	**1.19**	**66**	⇑P	**Pg**	**13 31 13.7**	**-1.1**
TKM2	19nm,0.1s			⇑S	**Sg**	**13 31 29.6**	**-0.6**
BOOM	**Boomskoye usch** baz=87	**1.35**	**88**	⇑*i*P	**Pn**	**13 31 16.7**	**-0.5**
BOOM	baz=87			⇑*i*S	**Sg**	**13 31 34.8**	**-0.5**
KST	**Kastek** 4.5nm,0.3s	**1.48**	**66**	P	**Pn**	**13 31 19.2**	**+0.2**
KST	27nm,0.5s			S	**Sg**	**13 31 39.1**	**-0.6**
KST	**Kastek** 4.5nm,0.3s	**1.48**	**66**	*e*P	**Pb**	**13 31 19.4**	**-0.4**
KST	26nm,0.6s			*e*S	**Sg**	**13 31 39.0**	**-0.6**
ULHL	**Ulahol** baz=96	**1.58**	**97**	⇑*i*P	**Pn**	**13 31 20.4**	**-0.1**
ULHL	baz=96			⇑*i*S	**Sb**	**13 31 42.0**	**+0.1**
ULHL	**Ulahol** 3.4nm,0.1s,SNR=15	**1.58**	**97**	⇑P	**Pn**	**13 31 20.5**	**-0.1**
NRN	**Naryn** baz=26	**1.73**	**125**	⇑*i*P	**Pn**	**13 31 23.3**	**+0.7**
NRN	baz=26			⇑*i*S	**Sb**	**13 31 46.1**	**0.0**
MTBS	**Maitube** 2.6nm,0.2s	**1.83**	**67**	*e*P	**Pb**	**13 31 25.1**	**-0.7**
MTBS	11nm,0.2s			*e*S	**Sb**	**13 31 48.7**	**-0.1**
IZV	**Izvestkoviy** 3.7nm,0.3s	**1.93**	**71**	P	**Pb**	**13 31 27.3**	**-0.2**
IZV	11nm,0.2s			S	**Sg**	**13 31 52.7**	**-1.2**
IZV	**Izvestkoviy** 2.3nm,0.2s	**1.93**	**71**	*e*P	**Pb**	**13 31 27.2**	**-0.2**
IZV	9.7nm,0.3s			*e*S	**Sg**	**13 31 52.6**	**-1.3**
KUU	**Kurty** 2.0nm,0.2s	**2.17**	**48**	Pg	**Pb**	**13 31 30.7**	**-0.8**
KUU	10nm,0.3s			Lg	Lg	13 31 59.7	
KUU	**Kurty** 2.1nm,0.3s	**2.17**	**48**	*e*P	**Pb**	**13 31 30.7**	**-0.8**
KUU	9.9nm,0.4s			*e*S	**Sb**	**13 31 59.4**	**+0.8**
KTBS	**Karatobe** 2.4nm,0.2s	**2.26**	**55**	Pg	**Pb**	**13 31 32.6**	**-0.5**
KTBS	44nm,0.4s			Lg	Lg	13 32 02.6	
KTBS	**Karatobe** 2.5nm,0.3s	**2.26**	**55**	*e*P	**Pb**	**13 31 32.6**	**-0.5**
KTBS	45nm,0.4s			*e*S	**Sb**	**13 32 02.4**	**+1.2**
MDOK	**Medeo** 4.5nm,0.4s	**2.27**	**71**	Pg	**Pb**	**13 31 32.9**	**-0.3**
MDOK	8.0nm,0.3s			Lg	Lg	13 32 02.9	
MDOK	**Medeo** 3.2nm,0.3s	**2.27**	**71**	*e*P	**Pb**	**13 31 33.6**	**+0.4**
MDOK	8.6nm,0.3s			*e*S	**Sg**	**13 32 03.4**	**-1.5**
KDJ	**Kajisay** baz=97	**2.29**	**97**	⇓*i*P	**Pn**	**13 31 31.1**	**+0.9**
KDJ	baz=97			⇓*i*S	**Sn**	**13 32 00.4**	**+1.8**
KOTS	**Kotyrbulak** 2.5nm,0.2s	**2.34**	**69**	Pg	**Pb**	**13 31 34.8**	**+0.4**
KOTS	36nm,0.5s			Lg	Lg	13 32 05.4	
KOTS	**Kotyrbulak** 2.3nm,0.3s	**2.34**	**69**	*e*P	**Pb**	**13 31 34.7**	**+0.4**
KOTS	16nm,0.5s			*e*S	**Sg**	**13 32 05.2**	**-1.8**
CHKK	**Chushkaly** 1.1nm,0.1s	**2.52**	**55**	Pg	**Pb**	**13 31 37.3**	**-0.3**
CHKK	22nm,0.2s			Lg	Lg	13 32 10.4	
CHKK	**Chushkaly** 1.1nm,0.1s	**2.52**	**55**	*e*P	**Pb**	**13 31 37.2**	**-0.3**
CHKK	22nm,0.3s			*e*S	**Sb**	**13 32 10.2**	**+1.5**
BTLS	**Baital** 1.1nm,0.2s	**2.59**	**359**	Pg	**Pb**	**13 31 37.2**	**-1.5**
BTLS	2.2nm,0.6s			Lg	Lg	13 32 11.2	
BTLS	**Baital** 0.8nm,0.3s	**2.59**	**359**	*e*P	**Pb**	**13 31 37.8**	**-0.9**
BTLS	6.8nm,0.2s			*e*S	**Sb**	**13 32 10.6**	**-0.1**
KK31	**Karatay Array** 0.3nm,0.3s,baz=101,slow=17,SNR=3.9	**2.74**	**285**	⇑Pg	**Pn**	**13 31 38.0**	**+1.8**
KK31	1.3nm,0.3s,baz=100,slow=28,SNR=8.2			⇑Lg	Lg	13 32 16.5	
IUG	**Iuzhnay** 0.9nm,0.2s	**3.05**	**266**	Pg	**Pg**	**13 31 48.7**	**-1.7**
IUG	6.1nm,0.2s			Lg	Lg	13 32 29.0	
BRLS	**Borolday** 0.5nm,0.5s	**3.21**	**282**	*e*P	**Pg**	**13 31 51.7**	**-1.8**
BRLS	2.3nm,0.3s			*e*S	**Sg**	**13 32 34.4**	**-0.7**
SATY	**Saty** 3.3nm,0.3s	**3.21**	**78**	Pg	**Pb**	**13 31 50.8**	**+1.5**
SATY	6.6nm,0.2s			Lg	Lg	13 32 32.9	
SATY	**Saty** 2.1nm,0.2s	**3.21**	**78**	*e*P	**Pb**	**13 31 50.6**	**+1.2**
SATY	7.1nm,0.3s			*e*S	**Sg**	**13 32 32.5**	**-2.8**
ARXS	**Arharly** 0.8nm,0.2s	**3.23**	**56**	Pg	**Pb**	**13 31 49.8**	**+0.2**
ARXS	7.3nm,0.5s			Lg	Lg	13 32 30.9	
ARXS	**Arharly** 1.0nm,0.5s	**3.23**	**56**	*e*P	**Pb**	**13 31 49.4**	**-0.1**
ARXS	7.3nm,0.6s			*e*S	**Sb**	**13 32 30.5**	**+1.4**
MNBS	**Baschi** 0.7nm,0.2s	**3.52**	**61**	Pg	**Pb**	**13 31 56.7**	**+2.1**
MNBS	4.1nm,0.2s			Lg	Lg	13 32 41.6	
MNBS	**Baschi** 0.2nm,0.3s	**3.52**	**61**	*e*P	**Pb**	**13 31 55.9**	**+1.3**
MNBS	4.1nm,0.3s			*e*S	**Sg**	**13 32 41.6**	**-3.5**
UZB	**Uzynbulak** 1.1nm,0.4s	**3.67**	**77**	Pg	**Pb**	**13 31 58.3**	**+1.2**
UZB	4.6nm,0.5s			Lg	Lg	13 32 45.8	
UZB	**Uzynbulak** 0.6nm,0.2s	**3.67**	**77**	*e*P	**Pb**	**13 31 58.4**	**+1.2**
UZB	5.1nm,0.6s			*e*S	**Sg**	**13 32 45.9**	**-4.1**

IDC ***24*** *13:30:45.3±9.9, 33°.10S×178°.87W, h0^{km}, mb4.6/2, mb1 4.9/2, mb1mx3.9/18, mbtmp4.6/2, Error ellipse: s-maj=474.5km s-min=62.3km az=161.0*
WEL ***24*** *13:31:34.3±0.8, 32°S±7°×18°0E±1°7, h271^{km}±17^{km}, M4.5/19, mB4.5/3, MLv4.6/19, Mw(mB)3.7/3, Error ellipse: s-maj=0.0km s-min=0.0km az=109.1*
ISC 24 13:31:33.1±2.0**, 32°.6S**±0°.1×**179°.3E**±0°.2**, h350**^{km}**, n30, σ1^s.91**/32**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.07**	**36**	S	S	13 33 27.0	-12
MXZ	**Matakaoa Point**	**5.03**	**189**	S	**S**	**13 33 55.3**	**-2.2**
WMGZ	**Waiomatatini S**	**5.27**	**188**	P	**Pn**	**13 32 58.5**	**+2.9**
WMGZ				S	**S**	**13 34 00.9**	**-1.4**
HAZ	**Te Kaha**	**5.30**	**193**	P	**Pn**	**13 32 57.0**	**+1.1**
HAZ				S	**S**	**13 34 01.7**	**-1.4**
PKGZ	**Pakihiroa**	**5.38**	**191**	P	**Pn**	**13 32 59.3**	**+2.4**
OUZ	**Omahuta**	**5.45**	**240**	P	**Pn**	**13 32 59.3**	**+1.7**
RUGZ	**Raukumara Rang**	**5.53**	**194**	P	**Pn**	**13 33 00.4**	**+1.8**
PUZ	**Puketiti**	**5.54**	**189**	P	**Pn**	**13 33 00.9**	**+2.3**
TWGZ	**Tauwhareparae**	**5.68**	**191**	P	**Pn**	**13 33 02.8**	**+2.6**
TWGZ				S	**S**	**13 34 10.7**	**-0.1**
MWZ	**Matawai**	**5.91**	**194**	P	**Pn**	**13 33 05.7**	**+2.8**
URZ	**Urewera**	**5.94**	**197**	P	**Pn**	**13 33 03.5**	**+0.4**
CNGZ	**Carnagh Statio**	**5.95**	**189**	P	**Pn**	**13 33 06.4**	**+3.2**
TKGZ	**Te Karaka**	**5.96**	**191**	P	**Pn**	**13 33 02.3**	**-1.0**
MUGZ	**Murupara**	**6.23**	**199**	P	**Pn**	**13 33 08.6**	**+2.2**
RIGZ	**Rimuhau**	**6.23**	**191**	P	**Pn**	**13 33 08.6**	**+2.1**
SNGZ	**Shannon Statio**	**6.38**	**194**	P	**Pn**	**13 33 10.0**	**+1.8**
TLZ	**Tolley Road**	**6.51**	**207**	P	**Pn**	**13 33 14.3**	**+4.6**
RAHZ	**Arahi**	**6.57**	**196**	P	**Pn**	**13 33 11.6**	**+1.2**
ARHZ	**Aropaoanui**	**6.92**	**195**	P	**Pn**	**13 33 15.6**	**+1.2**
BKZ	**Black Stump Fm**	**6.95**	**199**	P	**Pn**	**13 33 15.6**	**+0.8**
MCHZ	**McNeill Hill**	**7.16**	**197**	P	**Pn**	**13 33 18.2**	**+1.0**
WTVZ	**West Tongariro**	**7.18**	**204**	P	**Pn**	**13 33 18.9**	**+1.3**
KWHZ	**Kaweka Forest**	**7.21**	**198**	P	**Pn**	**13 33 18.6**	**+0.6**
TUVZ	**Tukino**	**7.30**	**203**	P	**Pn**	**13 33 19.9**	**+0.9**
KRHZ	**Kereru**	**7.43**	**198**	P	**Pn**	**13 33 21.1**	**+0.6**
KAHZ	**Kahuranaki**	**7.46**	**195**	P	**Pn**	**13 33 21.5**	**+0.8**
PXZ	**Pawanui**	**7.69**	**194**	P	**Pn**	**13 33 23.9**	**+0.5**
ASAR	**Alice Springs** 9.4nm,0.3s,baz=108,slow=7.5,SNR=9.2	**40.79**	**271**	P	**P**	**13 38 41.1**	**-0.7**
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=123,slow=7.1,SNR=2.0	**41.98**	**276**	P	**P**	**13 38 50.6**	**-0.8**
FINES	**FINESS Array B** 1.2nm,0.7s,baz=33,slow=3.3,SNR=4.0	**146.35**	**337**	PKPbc	**PKPdf**	**13 50 29.5**	**-1.0**

MAN 24 13:32:24.7, 13°.26N×121°.36E, h26^{km}, mb3.5, ML2.2, MS1.5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.46**	**301**	⇓*e*P	Pn	13 32 36.1	+0.4
PGP				*i* S	Sn	13 32 44.1	+1.0
BOAC	**Boac**	**0.51**	**68**	*e*P	Pb	13 32 35.6	+0.4
BOAC				*e*S	Sn	13 32 45.9	+1.6
SJMP	**San Jose**	**0.83**	**196**	*e*P	Pb	13 32 39.9	-0.7
SJMP				*e*S	Sn	13 32 53.1	+0.9
OTRP	**Odiongan**	**1.10**	**144**	*e*P	Pb	13 32 47.7	+2.5
OTRP				*e*S	Sn	13 32 54.1	-4.8
LUBP	**Lubang**	**1.18**	**293**	*e*P	Pb	13 32 47.8	+1.3

KRNET ***24*** *13:58:39.5±0.1, 42°.59N×79°.59E, mb1.9*
SOME ***24*** *13:58:39.1, 42°.55N×79°.52E, h15^{km}*
NNC ***24*** *13:58:39.4±3.3, 42°.61N×79°.68E, h0^{km}, mpv2.8, Error ellipse: s-maj=21.1km s-min=11.9km az=176.0*
ISC 24 13:58:38.9±2.2**, 42°.59N**±0°.08×**79°.62E**±0°.04**, h2**^{km}±14^{km}**, n15, σ0^s.47**/29**, 7C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak** 4.2nm,0.2s	**0.71**	**322**	P	**Pg**	**13 58 52.6**	**0.0**
UZB	6.8nm,0.2s			S	**Sg**	**13 59 02.8**	**+0.9**
UZB	**Uzynbulak** 4.2nm,0.1s	**0.71**	**322**	*e*P	**Pg**	**13 58 52.6**	**0.0**
UZB	4.8nm,0.2s			*e*S	**Sg**	**13 59 02.8**	**+0.9**
PDGK	**Podgornoye** 0.4nm,0.2s	**0.75**	**353**	⇓P	**Pg**	**13 58 53.1**	**-0.2**
PDGK	3.0nm,0.3s			⇓S	**Sg**	**13 59 03.7**	**+0.7**
PDGK	**Podgornoye** baz=54	**0.75**	**353**	⇓*i*P	**Pg**	**13 58 53.3**	**0.0**
PDGK	baz=54			⇓*i*S	**Sg**	**13 59 03.9**	**+0.8**
KTMS	**Ketmen** 1.4nm,0.1s	**1.01**	**32**	P	**Pg**	**13 58 58.1**	**-0.3**
KTMS	3.0nm,0.2s			S	**Sg**	**13 59 11.6**	**0.0**
KTMS	**Ketmen** 1.2nm,0.1s	**1.01**	**32**	*e*P	**Pg**	**13 58 58.0**	**-0.3**
KTMS	3.0nm,0.2s			*e*S	**Sg**	**13 59 11.5**	**0.0**
KPKS	**Kokpek** 4.9nm,0.1s	**1.12**	**322**	*e*P	**Pg**	**13 58 59.8**	**-0.6**
KPKS	5.1nm,0.1s			*e*S	**Sg**	**13 59 14.4**	**-0.4**
MNBS	**Baschi** 1.7nm,0.1s	**1.74**	**330**	P	**Pb**	**13 59 11.0**	**-0.6**
MNBS	6.8nm,0.2s			S	**Sg**	**13 59 34.5**	**-0.3**
MNBS	**Baschi** 1.9nm,0.2s	**1.74**	**330**	*e*P	**Pb**	**13 59 11.1**	**-0.6**
MNBS	6.8nm,0.2s			*e*S	**Sg**	**13 59 34.6**	**-0.1**
DJR	**Jarkent** 1.4nm,0.1s	**1.75**	**4**	P	**Pn**	**13 59 10.7**	**+0.3**
DJR	5.7nm,0.5s			S	**Sb**	**13 59 34.1**	**-0.1**
DJR	**Jarkent** 0.5nm,0.1s	**1.75**	**4**	*e*P	**Pb**	**13 59 11.6**	**-0.2**
DJR	5.7nm,0.3s			*e*S	**Sg**	**13 59 35.0**	**-0.2**
KDJ	**Kajisay** baz=56	**1.86**	**257**	⇑*i*P	**Pn**	**13 59 12.4**	**+0.4**
KDJ	baz=56			⇑*i*S	**Sn**	**13 59 35.7**	**-0.6**
ULHL	**Ulahol** baz=63	**2.52**	**263**	⇑*i*P	**Pn**	**13 59 21.7**	**+0.6**
ULHL	baz=63			⇑*i*S	**Sn**	**13 59 52.4**	**-0.2**
BOOM	**Boomskoye usch** baz=69	**2.72**	**269**	⇑*i*P	**Pn**	**13 59 24.2**	**+0.4**
BOOM	baz=69			⇑*i*S	**Sn**	**13 59 57.6**	**+0.2**
MK31	**Makanchi Array** 0.1nm,0.3s,baz=344,slow=13,SNR=2.7	**4.62**	**23**	⇓Pg	**Pb**	**14 00 01.0**	**+0.3**
MK31	1.1nm,0.5s,baz=344,slow=28,SNR=6.9			⇑Lg	Lg	14 00 41.0	

NEIC ***24*** *13:59:21.8±1.8, 51°.27N×179°.00W, h35^{km}, mb5.3/452, MW5.1, ML5.6(AEIC), Error ellipse: s-maj=7.7km s-min=7.1km az=337.0, Moment Tensor Solution. s45 Moment tensor: Scale 10^{16}Nm; M_{rr}0.07; $M_{\theta\theta}$-5.94; $M_{\phi\phi}$5.87; $M_{r\theta}$1.92; $M_{\theta\phi}$-1.81; $M_{\phi r}$0.98; Best double couple: $M_0$6.50000×10^{16} NP1:ϕ_s308.00000°, δ73.00000°, λ-173.00000°. NP2:ϕ_s216.00000°, δ83.00000°, λ-17.00000°. Principal axes: T 6.2200, Plg7.0000°, Azm263.0000°; N 0.6000, Plg72.0000°, Azm14.0000°; P -6.8200, Plg17.0000°, Azm171.0000°;*
MOS ***24*** *13:59:22.2±1.1, 51°.36N×178°.94W, h51^{km}, mb5.3/107, MS4.3/14 Error ellipse: s-maj=5.6km s-min=4.6km az=87.9*
IDC ***24*** *13:59:22.3±1.4, 51°.43N×179°.01W, h33^{km}±9^{km}, mb4.7/35, mb1 4.9/36, mb1mx4.9/39, mbtmp5.0/36, ML5.7/1, MS4.4/35, Ms1 4.4/35, ms1mx4.3/44, Error ellipse: s-maj=11.8km s-min=8.5km az=153.0*
ISCJB ***24*** *13:59:23.3±0.3, 51°.41N±0°.03×178°.96W±0°.02, h60^{km}±2^{km}, mb5.2/489, MS4.5/68, Error ellipse: s-maj=4.5km s-min=1.9km az=179.5*
GCMT ***24*** *13:59:23.8±0.2, 51°.30N±0°.01×178°.96W±0°.02, h32^{km}, MW5.2/103, Moment Tensor Solution. s66,c106; s103,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.78±.19; $M_{\theta\theta}$-2.55±.14; $M_{\phi\phi}$6.33±.13; $M_{r\theta}$4.51±.23; $M_{\theta\phi}$-1.54±.12; $M_{\phi r}$0.65±.17; Best double couple: $M_0$7.23300×10^{16} NP1:ϕ_s317.00000°, δ59.00000°, λ-141.00000°. NP2:ϕ_s204.00000°, δ58.00000°, λ-38.00000°. Principal axes: T 6.5910, Plg1.0000°, Azm80.0000°; N 1.2850, Plg42.0000°, Azm349.0000°; P -7.8760, Plg48.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***24*** *13:59:24.0±0.0, 51°.58N×179°.43W, h56^{km}, mb5.1/69, mB5.1/49, Ms4.8/57, Ms7 4.6/51*
AEIC ***24*** *13:59:24.2±0.0, 51°.26N×178°.89W, h22^{km}*
ISC 24 13:59:21.4±0.5**, 51°.22N**±0°.04×**178°.92W**±0°.03**, h33**^{km}±3^{km}**, n1362, σ1^s.27**/1416**, mb5.3**/498**, MS4.5**/70**, 37C-35D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAEA	Gareloi East	0.57	11	*e*Pn	Pn	13 59 34.2	+1.1
TASE	Tanaga Southea	0.82	42	*e*Pn	Pb	13 59 38.1	+0.7
TANO	Tanaga North	0.85	35	*e*Pn	Pb	13 59 38.6	+0.8
TAFP	Tanaga Falls P	0.90	40	*e*Pn	Pb	13 59 38.9	+0.4
KIMD	Kanaga Island	1.18	62	*e*Pn	Pb	13 59 43.0	-0.3
KIWB	Kanaga Island	1.27	60	*e*Pn	Pb	13 59 44.2	-0.6
KIKV	Kanaga Island	1.27	58	*e*Pn	Pb	13 59 44.5	-0.3
KICM	Kanaga Island	1.28	56	*e*Pn	Pb	13 59 44.8	-0.1
ADK	Adak	1.54	64	*e*Pn	Pb	13 59 48.1	-1.3
ADK				*e*Sn	Sb	14 00 07.9	-0.6
ADK	Adak	1.54	64	*e*P	Pb	13 59 48.1	-1.3
ADK				*e*		14 00 07.9	
ADAG	Mount Adagdak	1.63	61	*e*Pn	Pb	13 59 50.0	-0.9
ETKA	Kagalaska Isla	1.69	67	*e*Pn	Pn	13 59 50.2	+1.5
GSTD	Great Sitkin T	1.92	63	*e*Pn	Pb	13 59 53.8	-2.0
GSMY	Great Sitkin M	1.96	64	*e*Pn	Pb	13 59 54.5	-2.0
GSTR	Great Sitkin T	1.98	63	*e*Pn	Pb	13 59 54.7	-2.2
SMY	Shemya	4.57	292	*e*Pn	Pn	14 00 28.2	+0.1
SMY				*e*Sn	Sn	14 01 23.3	+3.3
SMY	Shemya	4.57	292	*e*P	Pn	14 00 28.2	+0.1
SMY				*e*		14 01 23.3	
NIKH	Nikolski High	6.45	70	*e*Pn	Pn	14 00 55.8	+1.9
OKAK	Okmok	6.88	66	*e*Pn	Pn	14 01 01.6	+1.8
OKTU	Okmok Mt. Tuli	7.01	68	*e*Pn	Pn	14 01 05.1	+3.4
OKER	Okmok East Rim	7.02	67	*e*Pn	Pn	14 01 05.8	+3.9
SPIA	Saint Paul Isl	7.83	37	*e*Pn	Pn	14 01 15.6	+2.8
MREP	Makushin Rep't	7.87	66	*e*Pn	Pn	14 01 16.9	+3.5
MSW	Makushin Switc	7.87	65	*e*Pn	Pn	14 01 16.6	+3.2
UNV	Unalaska Valle	8.01	66	*e*Pn	Pn	14 01 17.5	+2.2
AKUT	Akutan	8.50	65	*e*Pn	Pn	14 01 24.6	+2.6
FALS	False Pass	10.02	63	*e*Pn	Pn	14 01 45.3	+2.5
SDPT	Sand Point	11.78	62	*e*Pn	Pn	14 02 07.5	+0.6
CHGN	Chignik	13.13	59	*e*Pn	Pn	14 02 25.8	+0.4
GAMB	Gambell	13.16	14	*e*Pn	Pn	14 02 28.7	+3.1
PET	Petropavlovsk	13.89	286	*e*Pn	Pn	14 02 37.2	+1.6
PET	Petropavlovsk	13.89	286	*e*P	Pn	14 02 36.9	+1.3
PET				*e*S	Sn	14 05 10.3	+1.9
PET				pmax	pmax		
	comp=Z,400nm,10.9s						
PET				pmax	pmax		
	comp=Z,65nm,0.9s						
PET				pmax	pmax		
	comp=Z,300nm,7.4s						
PET				MLR	MLR		
	comp=Z,1μm,17.0s						
PET				MLR	MLR		
	comp=Z,900nm,16.0s						
PEA0B	Petropavlovsk-	14.46	287	*e*Pn	Pn	14 02 44.8	+1.4
PEA1	Petropavlovsk-	14.46	287	*e*Pn	Pn	14 02 45.4	+1.9
PEA1				*e*Sn	Sn	14 05 16.6	-5.9
PETK	Petropavlovsk-	14.46	287	Pn	Pn	14 02 45.4	+1.9
	comp=Z,0.8nm,0.3s,baz=88,slow=19,SNR=26						
PETK				Sn	Sn	14 05 16.6	-5.9
	baz=81,slow=18,SNR=2.0						
PETK				LR	LR	14 08 00.3	
	comp=Z,2μm,21.8s,baz=99,slow=36						
CHIR	Chirikof Islan	14.57	63	*e*Pn	Pn	14 02 43.1	-1.8
ANM	Nome	15.14	23	*e*Pn	Pn	14 02 54.6	+2.1
	comp=Z,41nm,0.9s						
ANM	Nome	15.14	23	*e*P	Pn	14 02 54.6	+2.1
ANM				pmax	pmax		
	comp=Z,41nm,0.9s						
SII	Sitkinak Islan	15.48	60	*e*Pn	Pn	14 02 54.8	-2.3
	comp=Z,251nm,0.6s						
SKR	Severo-Kuril's	15.72	278	*e*P	Pn	14 03 00.2	+0.1
SKR				*e*S	Sn	14 05 58.8	+5.7
SKR				pmax	pmax		
	comp=Z,400nm,3.1s						
SKR				pmax	pmax		
	comp=Z,300nm,10.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.6s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
OHAK	Old Harbor	16.09	58	*e*Pn	Pn	14 03 02.0	-2.8
	comp=Z,165nm,0.5s						
SVW2	Sparrevohn	16.24	44	*e*P	P	14 03 09.2	-0.3
	comp=Z,362nm,1.6s						
KDAK	Kodiak Island	16.57	56	Pn	Pn	14 03 09.1	-1.9
	comp=Z,27nm,0.3s,baz=255,slow=7.2,SNR=140						
KDAK				Sn	Sn	14 06 10.9	-2.7
	comp=Z,1.9nm,0.3s,baz=338,slow=19,SNR=9.0						
KDAK	Kodiak Island	16.57	56	*e*Pn	Pn	14 03 09.1	-1.9
	comp=Z,100nm,0.6s						
KDAK				*e*Sn	Sn	14 06 10.9	-2.7
TTA	Tatalina	16.98	38	*e*P	P	14 03 18.4	+0.6
	comp=Z,75nm,1.0s						
TTA	Tatalina	16.98	38	*e*P	P	14 03 18.4	+0.6
TTA				pmax	pmax		
	comp=Z,75nm,1.0s						
RSO	Redoubt South	17.25	47	*e*P	P	14 03 22.3	+1.4
HOM	Homer	17.52	51	*e*P	P	14 03 24.3	+0.7
	comp=Z,427nm,0.8s						
CNPM	China Poot	17.68	51	*e*P	Pn	14 03 24.4	-0.3
	comp=Z,374nm,0.6s						
SPU	Mount Spurr	17.83	46	*e*P	P	14 03 27.3	+0.2
BRLK	Bradley Lake	17.91	51	*e*P	Pn	14 03 26.9	-0.7
	comp=Z,205nm,0.5s						
BILL	Bilibino	18.36	342	*e*Pn	Pn	14 03 34.2	+1.2
	comp=Z,52nm,0.8s						
BILL	Bilibino	18.36	342	*de*P	Pn	14 03 34.4	+1.4
BILL				pmax	pmax		
	comp=Z,85nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2μm,21.0s						
SKT	Skwentna	18.37	44	*e*Pn	Pn	14 03 35.1	+1.9
	comp=Z,200nm,1.0s						
PPLA	Purkeypile	18.48	41	*e*P	Pn	14 03 35.7	+1.1
	comp=Z,149nm,0.7s						
SUA	Susitna One	18.52	46	*e*P	P	14 03 34.5	-0.3
	comp=Z,67nm,0.7s						
RDOG	Red Dog Mine	18.61	19	*e*P	P	14 03 35.7	+0.1
	comp=Z,79nm,1.2s						
SEW	Seward	18.70	50	*e*P	P	14 03 36.2	-0.5
	comp=Z,119nm,0.6s						
CAST	Castle Rocks	18.77	39	*e*P	P	14 03 37.4	0.0
	comp=Z,104nm,0.7s						
RC01	Rabbit Creek A	18.85	47	*e*P	P	14 03 38.0	-0.3
	comp=Z,54nm,0.7s						
MA2	Magadan	18.99	308	P	Pn	14 03 42.3	+1.6
	comp=Z,1.0nm,0.3s,baz=87,slow=12,SNR=16						
MA2				LR	LR	14 10 13.9	
	comp=Z,1μm,21.2s,baz=104,slow=35						
MA2	Magadan	18.99	308	*e*P	P	14 03 40.0	+0.2
	comp=Z,16nm,0.9s						
KTH	Kantishna Hill	19.29	40	*e*P	Pn	14 03 44.4	0.0
	comp=Z,193nm,0.6s						
PMR	Palmer	19.29	46	*e*P	P	14 03 43.3	+0.2
	comp=Z,32nm,0.8s						
PMR	Palmer	19.29	46	*e*P	P	14 03 43.3	+0.2
PMR				pmax	pmax		
	comp=Z,32nm,0.8s						
SEY	Seymchan	19.31	318	P	Pn	14 03 45.2	+0.7
	comp=Z,0.4nm,0.3s,baz=119,slow=10,SNR=23						
SEY				LR	LR	14 11 14.7	
	comp=Z,2μm,20.2s,baz=153,slow=37						
SEY				ScP	ScP	14 11 36.5	-1.0
	comp=Z,0.3nm,0.3s,baz=130,slow=2.5,SNR=10						
BPAW	Bear Paw Mtn.	19.52	38	*e*P	Pn	14 03 47.1	+0.1
	comp=Z,98nm,0.8s						
KNK	Knik Glacier	19.54	47	*e*P	P	14 03 45.3	-0.6
	comp=Z,96nm,0.7s						
SML	Sawmill	19.72	46	*e*P	P	14 03 47.4	-0.5
	comp=Z,85nm,0.8s						
SML	Sawmill	19.72	46	*e*P	P	14 03 47.4	-0.5
SML				pmax	pmax		
	comp=Z,85nm,0.8s						
GLI	Glacier Island	20.03	49	*e*P	P	14 03 50.4	-0.7
	comp=Z,93nm,0.6s						
MLY	Manley	20.07	36	*e*P	Pn	14 03 52.9	-0.7
	comp=Z,112nm,1.2s						
RND	Reindeer	20.07	41	*e*P	P	14 03 51.7	0.0
	comp=Z,83nm,0.6s						
RND	Reindeer	20.07	41	*e*P	P	14 03 51.7	0.0
RND				pmax	pmax		
	comp=Z,83nm,0.6s						
BWN	Browne	20.14	39	*e*P	Pn	14 03 53.6	-0.8
	comp=Z,504nm,1.3s						
MCK	McKinley	20.17	40	*e*P	P	14 03 52.4	-0.3
	comp=Z,80nm,1.0s						
MCK	McKinley	20.17	40	*e*P	P	14 03 52.4	-0.3
MCK				pmax	pmax		
	comp=Z,80nm,1.0s						
SCM	Sheep Creek Mo	20.18	46	*e*P	P	14 03 52.4	-0.5
	comp=Z,106nm,0.8s						
SCM	Sheep Creek Mo	20.18	46	*e*P	P	14 03 52.4	-0.5
SCM				pmax	pmax		
	comp=Z,106nm,0.8s						
FID	Port Fidalgo	20.29	49	*e*P	P	14 03 53.6	-0.4
	comp=Z,88nm,0.5s						
DHY	Denali Highway	20.57	43	*e*P	P	14 03 57.2	0.0
	comp=Z,257nm,0.7s						
EYAK	Cordova Ski Ar	20.60	50	*e*P	P	14 03 56.0	-1.2
	comp=Z,40nm,0.5s						
WRH	Wood River Hil	20.82	39	*e*P	P	14 03 59.0	-0.7
	comp=Z,51nm,0.8s						
MDM	Murphy Dome	20.97	37	*e*P	P	14 04 01.7	+0.3
	comp=Z,66nm,0.8s						
CCB	Clear Creek Bu	21.00	38	*e*P	P	14 04 00.2	-1.4
	comp=Z,51nm,0.7s						
CCB				*e*PcP	PcP	14 08 07.5	0.0
TCOL	CIGO, UAF Yank	21.08	38	P	P	14 04 03.8	+1.4
	baz=245,SNR=18						
COLA	College	21.08	38	*e*P	P	14 04 03.2	+0.8
	comp=Z,115nm,0.8s						
COLA	College	21.08	38	*e*P	P	14 04 03.2	+0.8
COLA				pmax	pmax		
	comp=Z,115nm,0.8s						
RAGM	Ragged Mountai	21.09	51	*e*P	P	14 04 02.9	+0.3
	comp=Z,73nm,0.6s						
KAIM	Kayak Island	21.14	52	*e*P	P	14 04 02.9	-0.3
	comp=Z,63nm,0.7s						
HDA	Harding Lake	21.24	39	*e*P	P	14 04 04.3	0.0
	comp=Z,58nm,0.9s						
HDA	Harding Lake	21.24	39	P	P	14 04 04.6	+0.4
	baz=247,SNR=30						
HMT	Hamilton	21.28	51	*e*P	P	14 04 05.0	+0.3
	comp=Z,66nm,0.6s						
POKR	Poker Plat Res	21.35	37	P	P	14 04 06.8	+1.5
	baz=245,SNR=13						
PAX	Paxson	21.35	44	*e*P	P	14 04 06.1	+0.6
	comp=Z,86nm,0.8s						
PAX	Paxson	21.35	44	*e*P	P	14 04 06.1	+0.6
PAX				pmax	pmax		
	comp=Z,86nm,0.8s						
ILAR	Eielson Array	21.41	39	P	P	14 04 04.3	-1.8
	comp=Z,11nm,0.7s,baz=242,slow=10.0,SNR=64						
ILAR				PcP	PcP	14 08 08.4	+0.1
	comp=Z,5.4nm,0.6s,baz=291,slow=3.5,SNR=11						
ILAR				ScP	ScP	14 11 41.6	-0.9
	comp=Z,2.3nm,0.7s,baz=284,slow=3.1,SNR=14						
ILAR				LR	LR	14 13 03.7	
	comp=Z,2μm,19.2s,baz=248,slow=39						
ILAR				P3KPbc		14 38 02.3	
	comp=Z,1.1nm,0.9s,baz=47,slow=3.8,SNR=8.0						
ILB	Eielson Array	21.41	39	*e*P	P	14 04 04.5	-1.6
	comp=Z,89nm,1.0s						
ILB				*e*PcP	PcP	14 08 08.4	+0.1
COLD	Coldfoot	21.43	31	*e*P	P	14 04 06.4	+0.2
	comp=Z,46nm,0.9s						
RIDG	Independent Ri	21.86	42	*e*P	P	14 04 10.6	-0.3
	comp=Z,151nm,1.2s						
CRQM	Cirque	21.90	50	*e*P	P	14 04 12.3	+0.8
	comp=Z,70nm,0.8s						
WAX	Waxell Ridge	21.99	51	*e*P	P	14 04 13.2	+0.8
TGL	Tana Glacier	22.05	50	*e*P	P	14 04 13.8	+0.8
	comp=Z,47nm,0.8s						
MENT	Mentasta	22.11	44	*e*P	P	14 04 13.2	-0.4
	comp=Z,76nm,0.5s						
DOT	Dot Lake	22.17	43	*e*P	P	14 04 13.7	-0.5
	comp=Z,167nm,1.3s						
SCRK	Sand Creek	22.30	42	*e*P	P	14 04 14.8	-0.9
	comp=Z,71nm,0.9s						
BALM	Baldy	22.33	50	*e*P	P	14 04 16.2	+0.2
	comp=Z,32nm,0.6s						
BALM	Baldy	22.33	50	*e*P	P	14 04 16.2	+0.2
BALM				pmax	pmax		
	comp=Z,32nm,0.6s						
TOLK	Toolik Lake Re	22.44	28	*e*P	P	14 04 17.6	+0.5
	comp=Z,108nm,1.3s						
TOLK	Toolik Lake Re	22.44	28	P	P	14 04 17.7	+0.6
	baz=234,SNR=28						
KUR	Kuril'sk	22.79	268	⇑*e*P	P	14 04 23.4	+2.5
CTGM	Chitina Glacie	22.80	50	*e*P	P	14 04 21.0	-0.1
	comp=Z,46nm,0.7s						
PCA	Pinnacle	23.23	53	*e*P	P	14 04 25.8	+0.4
	comp=Z,57nm,0.6s						
BCPM	Bancas Point	23.53	53	*e*P	P	14 04 28.3	+0.1
	comp=Z,54nm,0.8s						
EGAK	Eagle	23.71	41	*e*P	P	14 04 29.7	-0.2
	comp=Z,252nm,1.4s						
TYV	Tymovskoe	23.98	284	*e*P	P	14 04 35.7	+3.1
TYV				pmax	pmax		
	comp=Z,28nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
DAWY	Dawson	24.27	43	*e*P	P	14 04 35.0	-0.2
	comp=Z,114nm,1.4s						
NKL	Nikolayevsk	24.62	290	*e*P	P	14 04 39.0	+0.7
NKL				pmax	pmax		
	comp=Z,26nm,1.0s						
YUK	Yuzh-Kuril'sk	24.62	267	*d i*P	P	14 04 39.7	+1.3
YUK				*i* S	S	14 08 57.7	+0.4
YUK				*i* *SS	sS	14 09 23.7	+12
YUK				pmax	pmax		
	comp=Z,223nm,1.7s						
YUK				MLR	MLR		
	comp=Z,572nm,19.0s						
HYT	Haines Junctio	24.65	51	*e*P	P	14 04 38.4	-0.4
	comp=Z,20nm,0.7s						
UGL	Uglegorsk	24.89	280	⇓*i*P	P	14 04 42.3	+1.4
UGL				S	PcP	14 08 14.9	-0.9
UGL				pmax	pmax		
	comp=Z,148nm,0.8s						
UGL				MLR	MLR		
	comp=N,900nm,17.0s						
UGL				MLR	MLR		
	comp=E,700nm,15.0s						
YSS	Yuzh-Sakhalins	25.26	275	*e*P	P	14 04 44.0	-0.3
	comp=E,76nm,0.8s						
YSS	Yuzh-Sakhalins	25.26	275	*e*P	P	14 04 45.4	+1.2
YSS				*e*		14 04 55.9	
YSS				*e*		14 05 33.9	
YSS				*e*S	S	14 09 08.9	+1.4
YSS				*e*SS	SnSn	14 10 17.9	+18
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS				smax	smax		
	comp=N,300nm,7.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS				MLR	MLR		
	comp=N,400nm,17.0s						
YSS				MLR	MLR		
	comp=E,600nm,18.0s						
SKAG	Skagway	25.70	54	*e*P	P	14 04 47.7	-0.3
	comp=E,18nm,0.7s						
SIT	Sitka	25.84	60	*e*P	P	14 04 48.8	-0.5
	comp=E,44nm,1.3s						
SIT	Sitka	25.84	60	*e*P	P	14 04 48.8	-0.5
SIT				pmax	pmax		
	comp=Z,44nm,1.3s						
EPYK	Eagle Plains	25.93	38	*e*P	P	14 04 49.2	-1.0
	comp=Z,38nm,1.0s						
EPYK	Eagle Plains	25.93	38	P	P	14 04 49.8	-0.4
	baz=255,SNR=27						
JIS	Juneau Island	26.24	57	*e*P	P	14 04 53.4	+0.4
	comp=Z,47nm,1.4s						
ASAJ	Asahikawa	26.63	270	P	P	14 04 58.0	+1.3
	comp=Z,40nm,1.0s,baz=48,slow=4.0,SNR=17						
ASAJ				LR	LR	14 13 46.4	
	comp=Z,471nm,21.5s,baz=89,slow=32						
ERM	Erimo	27.36	265	⇑*e*P	P	14 05 05.2	+2.0
ERM				pmax	pmax		
	comp=Z,32nm,1.3s						
WRAK	Wrangell Islan	27.55	61	*e*P	P	14 05 05.2	+0.4
	comp=Z,16nm,0.8s						
INK	Inuvik	27.63	35	P	P	14 05 05.3	-0.1
	comp=Z,4.0nm,0.4s,baz=224,slow=9.3,SNR=15						
INK				PcP	PcP	14 08 22.3	+0.5
	comp=Z,18nm,0.8s,baz=348,slow=3.0,SNR=8.1						
INK				ScP	ScP	14 11 59.0	-0.7
	comp=Z,5.9nm,0.8s,baz=297,slow=3.6,SNR=5.4						
INK				LR	LR	14 16 58.7	
	comp=Z,2μm,18.5s,baz=238,slow=38						
INK	Inuvik	27.63	35	*e*P	P	14 05 05.1	-0.3
	comp=Z,24nm,0.8s						
INK				*e*PcP	PcP	14 08 21.8	+0.1
INK	Inuvik	27.63	35	*e*P	P	14 05 05.1	-0.3
INK				*e*		14 08 21.8	
INK				pmax	pmax		
	comp=Z,24nm,0.8s						
GRNR	Gornyy	27.79	287	*e*P	P	14 05 07.7	+0.7
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
DIB	Dawson Inlet,	28.14	68	*e*P	P	14 05 11.9	+1.8
	comp=Z,18nm,0.6s						
MOBC	Moresby Island	28.45	68	*e*P	P	14 05 14.8	+1.8
DLBC	Dease Lake	28.51	56	P	P	14 05 14.9	+1.5
	comp=Z,5.0nm,0.8s,baz=288,slow=12,SNR=7.8						
DLBC				PcP	PcP	14 08 25.8	+1.6
	comp=Z,5.4nm,0.8s,baz=242,slow=1.9,SNR=3.3						
DLBC				LR	LR	14 16 16.9	
	comp=Z,2μm,21.3s,baz=278,slow=36						
YAK	Yakutsk	29.46	311	*e*P	P	14 05 22.8	+1.1
YAK				*e*PPP	PPP	14 06 20.7	
YAK				*e*		14 08 26.4	
YAK				*e*S	S	14 10 13.3	-0.2
YAK				*e*		14 12 07.9	
YAK				*e*		14 15 55.8	
YAK				pmax	pmax		
	comp=Z,20nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				smax	smax		
	comp=E,55nm,2.1s						
YAK				smax	smax		
	comp=N,25nm,1.8s						
YAK				MLR	MLR		
	comp=Z,821nm,18.0s						
YAK				MLR	MLR		
	comp=E,479nm,18.0s						
YAK				MLR	MLR		
	comp=N,466nm,18.0s						
TIXI	Tiksi	30.73	331	LR	LR	14 18 03.4	
	comp=N,524nm,20.1s,baz=112,slow=37						
TIXI	Tiksi	30.73	331	⇑*e*P	P	14 05 35.6	+2.7
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BBB	Bella Bella	30.98	68	*e*P	P	14 05 37.3	+2.1
	comp=Z,24nm,0.7s						
KLR	Kul'dur	31.15	286	LR	LR	14 17 58.2	
	comp=Z,1μm,21.0s,baz=74,slow=36						
KLR	Kul'dur	31.15	286	*d i*P	P	14 05 36.7	-0.1
KLR				pmax	pmax		
	comp=Z,24nm,0.7s						
ZEA	Zeya	32.23	296	*e*P	P	14 05 45.3	-0.9
ZEA				*e*S	S	14 10 54.0	-2.9
ZEA				pmax	pmax		
	comp=Z,27nm,0.9s						
ZEA				smax	smax		
	comp=E,300nm,12.0s						
ZEA				smax	smax		
	comp=N,400nm,10.0s						
ZEA				MLR	MLR		
	comp=E,600nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,16.0s						
USRK	Ussuriysk Ar.	33.24	277	P	P	14 05 55.4	+0.2
	comp=Z,11nm,0.8s,baz=59,slow=8.1,SNR=18						
USRK				PcP	PcP	14 08 38.1	+1.2
	comp=Z,6.4nm,0.8s,baz=21,slow=0.5,SNR=7.0						
USRK				LR	LR	14 18 27.1	
	comp=Z,519nm,21.7s,baz=47,slow=34						
H11N2	WAKE ISLAND Hy	33.36	205	T	T	14 41 17.8	
	baz=16,slow=74						
H11N3	WAKE ISLAND Hy	33.37	205	T	T	14 41 19.4	
	baz=16,slow=74						
H11N1	WAKE ISLAND Hy	33.38	205	T	T	14 41 11.2	
	baz=16						
MAJO	Matsushiro	33.69	261	*e*P	P	14 06 00.1	+0.9
	comp=Z,34nm,0.9s						
MAJO				*e*PcP	PcP	14 08 39.2	+0.9
MAJO	Matsushiro	33.69	261	*d i*P	P	14 06 00.4	+1.2
MAJO				pmax	pmax		
	comp=Z,41nm,1.0s						
MAT	Matsushiro	33.69	261	P	P	14 06 00.1	+0.9
MAT				S	S	14 11 18.2	-1.7
MJAR	Matsushiro Arr	33.69	261	P	P	14 06 00.6	+1.4
	comp=Z,10nm,0.8s,baz=52,slow=6.9,SNR=30						
MJAR				PcP	PcP	14 08 39.1	+0.8
	comp=Z,9.6nm,0.8s,baz=87,slow=1.2,SNR=14						
MJAR				LR	LR	14 17 36.4	
	comp=Z,955nm,22.0s,baz=75,slow=32						
MJB9	Matsu-Tunnel	33.69	261	*e*P	P	14 05 59.2	+0.1
	comp=Z,35nm,0.9s						
MJB9				*e*PcP	PcP	14 08 39.2	+0.8
VLA	Vladivostok	33.85	276	*de*P	P	14 06 01.3	+0.8
VLA				pmax	pmax		
	comp=Z,121nm,2.0s						
KIP	Kipapa	33.93	143	*e*P	P	14 06 01.3	0.0
	comp=Z,81nm,0.9s						
KIP	Kipapa	33.93	143	*e*P	P	14 06 01.3	0.0
KIP				pmax	pmax		
	comp=Z,81nm,0.9s						
MDJ	Mudanjiang	34.52	280	*e*P	P	14 06 05.9	-0.5
	comp=Z,21nm,1.0s						
MDJ	Mudanjiang	34.52	280	P	P	14 06 05.8	-0.5
MDJ				pP	sP	14 06 20.3	+0.9
MDJ				S	S	14 11 31.3	-1.4
MDJ				sS	sS	14 11 55.8	+8.6
MDJ				pmax	pmax		
	comp=Z,12nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.8s						
MDJ				LR	LR		
	comp=Z,410nm,17.8s						
MDJ				LR	LR		
	comp=Z,740nm,21.4s						
MDJ				LR	LR		
	comp=Z,1μm,19.8s						
H11S1	WAKE ISLAND Hy	34.58	205	T	T	14 42 51.7	
	baz=19						
MSHR	Mys Shultsa	34.59	275	*de*P	P	14 06 08.1	+1.2
H11S2	WAKE ISLAND Hy	34.59	205	T	T	14 42 53.1	
	baz=19						
H11S3	WAKE ISLAND Hy	34.59	205	T	T	14 42 54.0	
	baz=19						
PGC	Sidney	35.08	72	*e*P	P	14 06 12.0	+1.0
	comp=Z,23nm,0.6s						
LLLB	Lillooet	35.19	68	*e*P	P	14 06 13.9	+1.9
	comp=Z,24nm,0.8s						
INU	Inuyama	35.19	261	*e*P	P	14 06 11.0	-1.1
	comp=Z,25nm,1.3s						
YKW3	Yellowknife Ar	35.37	46	*e*P	P	14 06 13.3	-0.1
	comp=Z,16nm,0.8s						
YKW3				*e*PcP	PcP	14 08 43.4	+0.7
NLWA	Neilton Lookou	35.39	74	*e*P	P	14 06 15.3	+1.5
	comp=Z,48nm,1.1s						
YKA	Yellowknife Ar	35.39	46	P	P	14 06 13.6	0.0
	comp=Z,20nm,0.9s,baz=282,slow=8.4,SNR=30						
YKA				PcP	PcP	14 08 43.8	+1.1
	comp=Z,9.9nm,0.8s,baz=288,slow=2.7,SNR=14						
YKA				ScP	ScP	14 12 25.4	-0.4
	comp=Z,1.7nm,0.6s,baz=288,slow=3.3,SNR=6.7						
YKA				LR	LR	14 21 46.8	
	comp=Z,235nm,18.4s,baz=280,slow=38						
YKB5	Yellowknife Ar	35.39	46	*e*P	P	14 06 13.6	0.0
YKB5				*e*PcP	PcP	14 08 43.9	+1.1
YKB5				*e*ScP	ScP	14 12 25.4	-0.4
A04D	Lummi Island	35.49	71	P	P	14 06 17.6	+3.0
	baz=296						
D03D	Eldon	35.79	73	P	P	14 06 20.5	+3.3
	baz=297,SNR=46						
B05A	Bryant	36.06	72	P	P	14 06 22.2	+2.7
	baz=297,SNR=21						
B05A				S	S	14 11 57.7	+1.6
	baz=297						
D04E	Lakebay	36.15	74	P	P	14 06 23.9	+3.7
	baz=298						
F04D	Rainier, OR	36.52	76	P	P	14 06 26.5	+3.0
	baz=299,SNR=11						
E04D	Cinebar	36.57	75	P	P	14 06 27.1	+3.3
	baz=299,SNR=32						
D05A	Enumclaw	36.62	73	*e*P	P	14 06 25.6	+1.4
	comp=Z,79nm,0.9s						
G03D	McMinnville, O	36.80	77	P	P	14 06 28.7	+2.9
	baz=300,SNR=6.8						
C06D	Leavenworth	36.93	72	P	P	14 06 29.1	+2.2
	baz=298						
LON	Longmire	36.93	74	*e*P	P	14 06 27.8	+0.8
	comp=Z,28nm,0.6s						
LON	Longmire	36.93	74	*e*P	P	14 06 27.8	+0.8
LON				pmax	pmax		
	comp=Z,28nm,0.6s						

I02D	Swisshome	37.00	79	P	P	14 06 30.5	+3.0
	baz=301,SNR=5.5						
COR	Corvallis	37.09	78	*e*P	P	14 06 28.3	0.0
	comp=Z,83nm,0.9s						
COR	Corvallis	37.09	78	*e*P	P	14 06 28.3	0.0
COR				pmax	pmax		
	comp=Z,83nm,0.9s						
LTY	Liberty	37.38	73	*e*P	P	14 06 30.4	-0.4
	comp=Z,38nm,0.5s						
J01E	Myrtle Point	37.44	80	P	P	14 06 34.3	+3.0
	baz=302						
H04D	Lebanon	37.47	78	P	P	14 06 34.7	+3.2
	baz=301,SNR=19						
CN2	Changchun	37.50	281	*e*P	P	14 06 29.8	-2.0
CN2				*e*pP	sP	14 06 44.9	0.0
CN2				*e*PP	PnPn	14 07 58.3	-0.2
CN2				*e*S	S	14 12 11.8	-6.5
CN2				LR	LR		
	comp=Z,580nm,15.0s						
CN2				LR	LR		
	comp=Z,510nm,15.0s						
CN2				LR	LR		
	comp=Z,860nm,16.0s						
I03D	Drain, OR	37.52	79	P	P	14 06 35.2	+3.2
	baz=302						
F05D	White Salmon	37.56	75	P	P	14 06 35.1	+2.7
	baz=300,SNR=7.4						
B08A	Colville Reser	37.66	70	*e*P	P	14 06 33.3	+0.2
	comp=Z,59nm,0.7s						
K02D	Willamette Mer	37.86	81	P	P	14 06 37.7	+2.8
	baz=303,SNR=5.4						
G05D	Wamic, OR	37.97	76	P	P	14 06 38.7	+2.9
	baz=300,SNR=36						
BOD	Bodaibo	38.01	307	*e*P	P	14 06 34.5	-1.4
BOD				pmax	pmax		
	comp=Z,22nm,0.8s						
I04A	Tendick Farm,	38.05	78	P	P	14 06 39.3	+2.8
	baz=302,SNR=31						
L02E	Cave Junction	38.19	81	P	P	14 06 40.9	+3.3
	baz=303,SNR=5.5						
HUMO	Hull Mountain	38.34	80	*e*P	P	14 06 40.0	+1.0
	comp=Z,16nm,0.8s						
I05D	Terrebonne, OR	38.42	77	P	P	14 06 42.2	+2.5
	baz=302,SNR=24						
HAWA	Hanford	38.48	73	*e*P	P	14 06 41.7	+1.7
	comp=Z,52nm,0.5s						
D08A	Wollman Farm,	38.52	72	*e*P	P	14 06 41.8	+1.5
	comp=Z,32nm,0.6s						
J04D	Umpqua Nationa	38.53	79	P	P	14 06 43.7	+3.0
	baz=302,SNR=22						
C09A	Chrisman Ranch	38.55	71	*e*P	P	14 06 41.7	+1.1
	comp=Z,50nm,0.6s						
E08A	Dider Farm, El	38.72	73	*e*P	P	14 06 42.6	+0.6
	comp=Z,32nm,0.6s						
PINE	Pine Mountain	38.95	78	*e*P	P	14 06 45.7	+1.4
	comp=Z,45nm,1.1s						
L04D	Klamath Falls	38.96	81	P	P	14 06 47.0	+2.7
	baz=304,SNR=7.3						
NEW	Newport	39.01	69	*e*P	P	14 06 45.8	+1.3
	comp=Z,68nm,0.6s						
NEW	Newport	39.01	69	*e*P	P	14 06 45.8	+1.3
NEW				pmax	pmax		
	comp=Z,68nm,0.6s						
NEW	Newport	39.01	69	P	P	14 06 46.0	+1.5
	baz=298,SNR=81						
J05D	Fort Rock, OR	39.04	78	P	P	14 06 48.0	+3.0
	baz=303,SNR=20						
M02C	Callahan	39.08	82	P	P	14 06 48.0	+2.8
	baz=304						
K04D	Chiloquin, OR	39.08	80	P	P	14 06 47.9	+2.6
	baz=303						
E09A	Wood Farm, Sta	39.25	72	*e*P	P	14 06 48.3	+1.8
	comp=Z,45nm,1.0s						
G08A	Pilot Rock	39.38	74	*e*P	P	14 06 49.0	+1.2
	comp=Z,20nm,1.0s						
N02D	Trinity Center	39.41	82	P	P	14 06 50.7	+2.8
	baz=305						
M04C	Macdoel	39.49	81	P	P	14 06 51.7	+3.0
	baz=304,SNR=14						
KSRS	Korea Array	39.56	271	P	P	14 06 50.6	+1.5
	comp=Z,15nm,0.8s,baz=58,slow=8.2,SNR=42						
KSRS				PcP	PcP	14 08 57.2	+1.2
	comp=Z,6.9nm,0.9s,baz=51,slow=3.0,SNR=10.0						
KSRS				LR	LR	14 22 40.0	
	comp=Z,157nm,21.6s,baz=64,slow=35						
KS15	Wonju Array Si	39.60	271	*e*P	P	14 06 50.2	+0.8
	comp=Z,34nm,1.0s						
KS15				*e*PcP	PcP	14 08 57.2	+1.1
KCPM	Cahto Peak	39.60	85	*e*P	P	14 06 52.1	+2.5
	comp=Z,35nm,0.7s						
I07A	Izee	39.68	76	*e*P	P	14 06 52.5	+2.3
	comp=Z,40nm,0.6s						
WDC	Whiskeytown Da	39.73	83	*e*P	P	14 06 53.0	+2.4
	comp=Z,26nm,0.8s						
WDC	Whiskeytown Da	39.73	83	*e*P	P	14 06 53.0	+2.4
WDC				pmax	pmax		
	comp=Z,26nm,0.8s						
O02D	Mt. Diablo Mer	39.81	84	P	P	14 06 54.3	+3.0
	baz=306,SNR=14						
F10A	Beach Ranch, E	40.07	73	*e*P	P	14 06 54.8	+1.4
	comp=Z,22nm,0.8s						
HOPS	Hopland Field	40.33	85	*e*P	P	14 06 58.0	+2.5
	comp=Z,22nm,0.9s						
O03E	Paynes Creek	40.36	83	P	P	14 06 58.0	+2.1
	baz=306,SNR=9.3						
MOD	Modoc Plateau	40.38	80	*e*P	P	14 06 58.4	+2.4
	comp=Z,32nm,0.7s						
JNU	Nakatsue	40.48	263	LR	LR	14 22 26.7	
	comp=Z,789nm,21.6s,baz=70,slow=34						
JNU	Nakatsue	40.48	263	*e*P	P	14 06 58.5	+1.6
	comp=Z,66nm,1.0s						
WALA	Waterton Lakes	40.50	67	*e*P	P	14 06 58.3	+1.3
	comp=Z,26nm,0.9s						
TJN	Taejon	40.58	270*c*	*i*P	P	14 06 58.9	+1.3
BMO	Blue Mountains	40.61	74	*e*P	P	14 06 59.8	+1.9
	comp=Z,20nm,0.6s						
BMO	Blue Mountains	40.61	74	*e*P	P	14 06 59.8	+1.9
BMO				pmax	pmax		
	comp=Z,20nm,0.6s						
J08A	Circle Bar Ran	40.70	77	*e*P	P	14 07 00.7	+2.0
	comp=Z,42nm,0.8s						
ORV	Oroville	40.98	83	*e*P	P	14 07 02.5	+1.6
	comp=Z,14nm,0.8s						
ORV	Oroville	40.98	83	*e*P	P	14 07 02.5	+1.6
ORV				pmax	pmax		
	comp=Z,14nm,0.8s						
WVOR	Wild Horse Val	41.11	78	*e*P	P	14 07 04.0	+2.0
	comp=Z,45nm,0.7s						
WVOR	Wild Horse Val	41.11	78	*e*P	P	14 07 04.0	+2.0
WVOR				pmax	pmax		
	comp=Z,45nm,0.7s						
PLID	Pearl Lake	41.27	73	*e*P	P	14 07 04.7	+1.2
	comp=Z,11nm,0.7s						
BEKR	Beckworth	41.51	82	*e*P	P	14 07 07.1	+1.7
	comp=Z,19nm,0.8s						
MSO	Missoula	41.59	70	*e*P	P	14 07 07.1	+1.2
	comp=Z,43nm,0.6s						
MSO	Missoula	41.59	70	P	P	14 07 07.2	+1.2
	baz=301,SNR=31						
AFDM	Forest Hills D	41.67	84	*e*P	P	14 07 07.1	+0.5
	comp=Z,11nm,0.8s						
RUBR	Rubicon Trail	42.12	83	*e*P	P	14 07 11.1	+0.7
	comp=Z,34nm,0.7s						
PAHR	Pah Rah Range	42.21	82	*e*P	P	14 07 12.2	+1.1
	comp=Z,33nm,0.9s						
MFID	Camas Ranch	42.28	75	*e*P	P	14 07 12.6	+1.0
	comp=Z,19nm,0.8s						
VCNR	Virginia City	42.29	82	*e*P	P	14 07 13.5	+1.7
	comp=Z,27nm,0.7s						
PNTR	Pine Nut	42.44	83	*e*P	P	14 07 14.7	+1.6
	comp=Z,75nm,0.7s						
CMB	Columbia Colle	42.59	84	*e*P	P	14 07 13.7	-0.4
	comp=Z,14nm,0.8s						
CMB	Columbia Colle	42.59	84	*e*P	P	14 07 13.7	-0.4
CMB				pmax	pmax		
	comp=Z,14nm,0.8s						
DL2	Dalian	42.63	277	P	P	14 07 14.6	+0.2
DL2				S	S	14 13 37.3	+2.3
DL2				pmax	pmax		
	comp=Z,35nm,0.8s						
DL2				pmax	pmax		
	comp=Z,220nm,6.2s						
DL2				LR	LR		
	comp=Z,390nm,20.7s						
DL2				LR	LR		
	comp=Z,230nm,16.9s						
SAO	San Andreas Ge	42.70	87	*e*P	P	14 07 16.0	+1.0
	comp=Z,13nm,0.9s						
SAO	San Andreas Ge	42.70	87	*e*P	P	14 07 16.0	+1.0
SAO				pmax	pmax		
	comp=Z,13nm,0.9s						
YERR	Yerington	42.73	83	*e*P	P	14 07 16.8	+1.4
	comp=Z,26nm,0.8s						
HRY	Holter Researc	42.89	69	*e*P	P	14 07 17.5	+0.9
WAKR	Walker	42.89	83	*e*P	P	14 07 19.2	+2.4
	comp=Z,22nm,0.7s						
HLID	Hailey	43.05	74	*e*P	P	14 07 19.4	+1.4
	comp=Z,33nm,0.8s						
HLID	Hailey	43.05	74	P	P	14 07 19.9	+1.9
	baz=304,SNR=70						
BMN	Battle Mountai	43.12	79	*e*P	P	14 07 19.8	+1.3
	comp=Z,26nm,0.7s						
BMN	Battle Mountai	43.12	79	*e*P	P	14 07 19.8	+1.3
BMN				pmax	pmax		
	comp=Z,25nm,0.7s						
DLMT	Dillon	43.16	71	*e*P	P	14 07 19.7	+1.0
	comp=Z,11nm,0.7s						
MCMT	McKenzie Canyo	43.30	72	*e*P	P	14 07 21.2	+1.2
RYN	Ryan	43.39	82	*e*P	P	14 07 19.5	-1.2
	comp=Z,22nm,0.8s						
KVN	Kaiserville	43.40	82	*e*P	P	14 07 21.8	+1.0
	comp=Z,11nm,0.7s						
KVN	Kaiserville	43.40	82	*e*P	P	14 07 21.8	+1.0
KVN				pmax	pmax		
	comp=Z,11nm,0.7s						
EGMT	Eagleton	43.41	66	*e*P	P	14 07 21.0	+0.3
	comp=Z,51nm,0.8s						
EGMT	Eagleton	43.41	66	P	P	14 07 21.5	+0.8
	baz=301,SNR=51						
BOZ	Bozeman (W)	43.60	70	*e*P	P	14 07 23.5	+1.1
	comp=Z,74nm,0.7s						
BOZ	Bozeman (W)	43.60	70	*e*P	P	14 07 23.5	+1.1
BOZ				pmax	pmax		
	comp=Z,74nm,0.7s						
NV01	Mina Array Sit	43.65	83	*e*P	P	14 07 25.2	+2.3
NV01				*e*ScP	ScP	14 12 59.4	+0.9
NV01				*e*S	S	14 13 56.0	+5.6
NVAR	Mina Array Bea	43.65	83	P	P	14 07 25.2	+2.3
	comp=Z,12nm,0.7s,baz=294,slow=7.2,SNR=73						
NVAR				ScP	ScP	14 12 59.4	+0.9
	comp=Z,2.9nm,0.8s,baz=282,slow=4.9,SNR=8.6						
NVAR				S	S	14 13 56.0	+5.6
	comp=Z,0.3nm,0.7s,baz=293,slow=14,SNR=1.9						
NVAR				LR	LR	14 24 04.4	
	comp=Z,390nm,20.4s,baz=315,slow=34						
NVAR				PKPPKP	P'P'df	14 38 55.0	-21
	comp=Z,0.6nm,0.8s,baz=137,slow=3.3,SNR=3.8						
OMMB	Old Mammoth Mi	43.71	84	*e*P	P	14 07 24.7	+1.2
	comp=Z,20nm,1.1s						
NV11	Mina Array Sit	43.74	82	*e*P	P	14 07 25.2	+1.7
	comp=Z,1.4nm,1.0s						
MLAC	Mammoth, Mammo	43.80	84	P	P	14 07 26.5	+2.4
	baz=308						
PAGB	Antelope Grade	44.10	87	*e*P	P	14 07 27.8	+1.5
	comp=Z,26nm,0.8s						
QLMT	Earthquake Lak	44.14	71	*e*P	P	14 07 28.1	+1.3
ELK	Elko	44.16	78	*e*P	P	14 07 28.9	+1.9
	comp=Z,32nm,0.7s						
VOG	Valley Oaks Go	44.27	86	P	P	14 07 29.5	+1.9
	baz=309						
FFC	Flin Flon	44.29	54	*e*P	P	14 07 26.9	-0.7
	comp=Z,39nm,0.6s						
FFC	Flin Flon	44.29	54	*e*P	P	14 07 26.9	-0.7
FFC				pmax	pmax		
	comp=Z,39nm,0.6s						
YHB	Horse Butte	44.32	71	*e*P	P	14 07 29.1	+0.8
	comp=Z,97nm,0.8s						
YMR	Madison River	44.51	71	*e*P	P	14 07 30.9	+1.2
	comp=Z,68nm,0.8s						
YHH	Holmes Hill	44.51	70	*e*P	P	14 07 30.8	+1.0
	comp=Z,92nm,0.7s						
SMMC	Simmler	44.53	87	P	P	14 07 31.8	+2.1
	baz=310						
TIN	Tinemaha, Big	44.54	84	P	P	14 07 32.1	+2.2
	baz=309						
YNR	Norris Junctio	44.65	70	*e*P	P	14 07 32.2	+1.3
	comp=Z,69nm,0.8s						
GCMT	Greycliff	44.65	69	*e*P	P	14 07 31.9	+1.2
YFT	Old Faithful	44.70	71	*e*P	P	14 07 33.3	+2.0
	comp=Z,70nm,0.8s						
VES	Vestal, Richgr	44.77	86	P	P	14 07 33.2	+1.7
	baz=310						
YPP	Pitchstone Pla	44.82	71	*e*P	P	14 07 34.1	+1.7
	comp=Z,26nm,0.9s						
H17A	Grant Village	44.89	71	P	P	14 07 35.6	+2.8
	baz=304,SNR=32						
LKWY	Lake	44.90	70	*e*P	P	14 07 35.2	+2.3
	comp=Z,66nm,0.8s						
LKWY	Lake	44.90	70	*e*P	P	14 07 35.2	+2.3
LKWY				pmax	pmax		
	comp=Z,66nm,0.8s						
PKM	Mcpherson Peak	44.91	88	P	P	14 07 32.5	-0.5
	baz=310						
IMW	Indian Meadow	44.95	72	*e*P	P	14 07 34.7	+1.4
	comp=Z,30nm,0.9s						
FLWY	Flagg Ranch	44.99	71	*e*P	P	14 07 35.6	+2.0
	comp=Z,63nm,0.6s						
CWC	Cottonwood Cre	45.02	85	P	P	14 07 35.6	+1.9
	baz=309						
FXWY	Fox Creek	45.05	72	*e*P	P	14 07 35.4	+1.4
	comp=Z,9.2nm,0.8s						
HVU	Hansel Valley	45.06	75	*e*P	P	14 07 35.9	+1.8
	comp=Z,79nm,0.6s						
HVU	Hansel Valley	45.06	75	*e*P	P	14 07 35.9	+1.8
HVU				pmax	pmax		
	comp=Z,79nm,0.6s						
GRAC	Grapevine Rang	45.11	83	P	P	14 07 36.3	+1.9
	baz=309						
MOOW	Moose Ponds	45.15	72	*e*P	P	14 07 36.1	+1.2
	comp=Z,10nm,0.9s						
TPAW	Teton Pass	45.18	72	*e*P	P	14 07 37.0	+1.8
	comp=Z,44nm,1.5s						
RLMT	Red Lodge	45.26	69	*e*P	P	14 07 36.8	+1.1
	comp=Z,91nm,0.8s						
RLMT	Red Lodge	45.26	69	P	P	14 07 37.3	+1.7
	baz=304,SNR=108						
ISA	Isabella, Lake	45.26	86	*e*P	P	14 07 36.7	+1.1
	comp=Z,22nm,0.8s						
ISA	Isabella, Lake	45.26	86	*e*P	P	14 07 36.7	+1.1
ISA				pmax	pmax		
	comp=Z,22nm,0.8s						
ISA	Isabella, Lake	45.26	86	P	P	14 07 36.7	+1.1
	baz=310,SNR=10						
SBC	Santa Barbara	45.27	88	P	P	14 07 37.3	+1.8
	baz=311						
LOHW	Long Hollow	45.32	72	*e*P	P	14 07 37.4	+1.3
	comp=Z,14nm,0.8s						
R11A	Troy Canyon, C	45.39	81	*e*P	P	14 07 37.8	+1.1
	comp=Z,18nm,0.7s						
R11A	Troy Canyon, C	45.39	81	P	P	14 07 38.1	+1.4
	baz=308,SNR=51						
BGU	Big Grassy Mou	45.41	76	*e*P	P	14 07 37.8	+0.9
	comp=Z,30nm,0.8s						
IRK	Irkutsk	45.46	303	*e*P	P	14 07 37.6	+0.7
IRK				pmax	pmax		
	comp=Z,22nm,2.9s						
AHID	Auburn Hatcher	45.50	73	*e*P	P	14 07 39.3	+1.7
	comp=Z,30nm,0.9s						
MPMC	Manual Prospec	45.63	85	P	P	14 07 40.3	+1.6
	baz=310,SNR=29						
FURC	Furnace Creek,	45.76	84	P	P	14 07 41.4	+2.0
	baz=309,SNR=16						
TPNV	Topopah Spring	45.84	83	*e*P	P	14 07 41.3	+1.0
	comp=Z,61nm,0.8s						
TPNV	Topopah Spring	45.84	83	*e*P	P	14 07 41.3	+1.0
TPNV				pmax	pmax		
	comp=Z,61nm,0.8s						
TPNV	Topopah Spring	45.84	83	P	P	14 07 42.1	+1.8
	baz=309,SNR=90						
LRMC	Laurel Mtn Rad	45.87	85	P	P	14 07 41.9	+1.3
	baz=310,SNR=19						
BLG	Laguna Peak, P	45.89	88	P	P	14 07 41.8	+1.2
	baz=311						
HWUT	Hardware Ranch	45.90	75	*e*P	P	14 07 42.0	+1.3
	comp=Z,26nm,0.8s						
DUG	Dugway, Tooele	45.98	77	*e*P	P	14 07 42.6	+1.4
	comp=Z,52nm,0.7s						
DUG	Dugway, Tooele	45.98	77	*e*P	P	14 07 42.7	+1.4
DUG				pmax	pmax		
	comp=Z,52nm,0.7s						
DUG	Dugway, Tooele	45.98	77	P	P	14 07 43.3	+2.0
	baz=307,SNR=62						
EDW2	Edwards Air Fo	46.06	86	P	P	14 07 43.4	+1.4
	baz=310,SNR=7.2						
TLY	Talaya	46.08	302	ScP	ScP	14 13 08.5	+0.5
	comp=Z,1.0nm,0.3s,baz=269,slow=21,SNR=3.2						
TLY	Talaya	46.08	302	*e*P	P	14 07 42.5	+0.7
TLY				*e*S	S	14 14 32.5	+7.6
TLY				pmax	pmax		
	comp=Z,26nm,0.7s						
TLY				MLR	MLR		
	comp=Z,442nm,17.0s						
LAO	LASA Array	46.15	66	*e*P	P	14 07 43.6	+1.0
	comp=Z,63nm,0.6s						
LAO	LASA Array	46.15	66	P	P	14 07 43.8	+1.3
	baz=304,SNR=36						
DECC	Green Verdugo	46.26	87	P	P	14 07 45.0	+1.6
	baz=311						
ULN	Ulaanbaatar	46.26	296	*e*P	P	14 07 44.7	+1.3
	comp=Z,25nm,0.8s						
DGMT	Dagmar	46.32	63	*e*P	P	14 07 44.5	+0.7
	comp=Z,50nm,0.9s						
DGMT	Dagmar	46.32	63	P	P	14 07 44.7	+0.9
	baz=303						
CTU	Camp Tracy	46.33	76	*e*P	P	14 07 45.5	+1.4
	comp=Z,30nm,0.7s						
PSUT	Pine Spring	46.34	79	*e*P	P	14 07 45.6	+1.3
	comp=Z,36nm,0.7s						
PASC	Pasadena Art C	46.40	87	*e*P	P	14 07 43.3	-1.3
	comp=Z,13nm,0.7s						
BW06	Boulder Array	46.43	72	*e*P	P	14 07 46.3	+1.3
	comp=Z,112nm,1.3s						
BW06	Boulder Array	46.43	72	P	P	14 07 46.2	+1.3
	baz=306,SNR=93						
PD31	Pinedale Array	46.43	72	*e*P	P	14 07 46.3	+1.3
	comp=Z,83nm,1.3s						
PDAR	Pinedale Array	46.43	72	P	P	14 07 46.3	+1.3
	comp=Z,33nm,0.5s,baz=320,slow=3.4,SNR=429						
PDAR				ScP	ScP	14 13 12.2	+2.3
	comp=Z,3.0nm,0.9s,baz=288,slow=1.4,SNR=7.6						
PDAR				S	S	14 14 32.0	+1.5
	comp=Z,0.3nm,0.5s,baz=317,slow=6.1,SNR=4.4						
PDAR				LR	LR	14 25 09.3	
	comp=Z,447nm,21.9s,baz=316,slow=33						
MWC	Mount Wilson	46.45	87	*e*P	P	14 07 43.1	-2.0
	comp=Z,20nm,0.9s						
MWC	Mount Wilson	46.45	87	*e*P	P	14 07 43.1	-2.0
MWC				pmax	pmax		
	comp=Z,21nm,0.9s						
SHOC	Shoshone, Teco	46.49	84	P	P	14 07 46.5	+1.3
	baz=310						
GSC	Goldstone, Bar	46.54	85	*e*P	P	14 07 47.2	+1.5
	comp=Z,33nm,0.8s						
GSC	Goldstone, Bar	46.54	85	*e*P	P	14 07 47.2	+1.5
GSC				pmax	pmax		
	comp=Z,33nm,0.8s						
GSC	Goldstone, Bar	46.54	85	P	P	14 07 47.3	+1.5
	baz=310,SNR=21						
JLU	Jordanelle	46.57	76	*e*P	P	14 07 47.8	+1.7
	comp=Z,38nm,0.9s						
NLU	North Lily Min	46.57	77	*e*P	P	14 07 47.7	+1.6
	comp=Z,33nm,0.9s						
SONA0	Songino Array	46.65	297	*e*P	P	14 07 47.1	+0.6
SONA0				*e*ScP	ScP	14 13 10.8	+0.2
SONM	Songino Array	46.65	297	P	P	14 07 47.1	+0.6
	comp=Z,13nm,0.7s,baz=56,slow=9.3,SNR=39						
SONM				ScP	ScP	14 13 10.8	+0.2
	comp=Z,6.5nm,0.9s,baz=58,slow=3.0,SNR=15						
SONM				LR	LR	14 27 40.6	
	comp=Z,808nm,21.2s,baz=62,slow=36						
BFSC	Mount Baldy Ra	46.69	87	P	P	14 07 48.4	+1.5
	baz=311,SNR=9.0						
CIS	Catalina Islan	46.76	88	P	P	14 07 49.3	+1.9
	baz=312						
SHPR	Sheep Range	46.80	82	*e*P	P	14 07 47.4	-0.4
	comp=Z,7.6nm,0.8s						
MPU	Maple Canyon	46.81	76	*e*P	P	14 07 48.5	+0.6
	comp=Z,26nm,0.7s						
ZAK	Zakamensk	46.97	301	*e*P	P	14 07 49.2	+0.3
ZAK				*e*		14 09 21.7	
ZAK				pmax	pmax		
	comp=Z,16nm,1.4s						
TUQ	Turquoise Moun	47.00	84	P	P	14 07 50.8	+1.4
	baz=310,SNR=13						
TIA	Tai'an	47.11	277	P	P	14 07 50.3	+0.3
TIA				pmax	pmax		
	comp=Z,29nm,0.7s						
CCUT	Cedar City	47.26	80	*e*P	P	14 07 52.9	+1.4
	comp=Z,13nm,0.6s						
SZCU	Shurtz Canyon	47.40	80	*e*P	P	14 07 52.3	-0.3
	comp=Z,12nm,0.8s						
MOY	Mondy	47.49	304	*e*P	P	14 07 53.5	+0.6
MOY				pmax	pmax		
	comp=Z,24nm,1.9s						
TMUT	Trail Mountain	47.51	77	*e*P	P	14 07 55.0	+1.5
	comp=Z,54nm,0.7s						
GMRC	Granite Mounta	47.59	85	P	P	14 07 55.4	+1.4
	baz=311,SNR=13						
HHC	Hu-ho-hao-te	47.66	286	P	P	14 07 53.8	-0.6
HHC				S	S	14 14 42.6	-5.3
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC				LR	LR		
	comp=Z,880nm,20.4s						
LCMT	Little Creek M	47.67	81	*e*P	P	14 07 56.3	+1.7
	comp=Z,27nm,0.8s						
MTPU	Mount Pierson	47.68	79	*e*P	P	14 07 56.9	+2.0
	comp=Z,25nm,0.8s						
P17A	Butcher Ranch,	47.68	76	*e*P	P	14 07 56.1	+1.4
	comp=Z,40nm,0.6s						
LDFC	Landfair	47.74	84	*e*P	P	14 07 56.1	+0.9
	comp=Z,35nm,0.7s						
Q16A	Castle Valley	47.76	77	*e*P	P	14 07 57.1	+1.8
	comp=Z,31nm,0.6s						
PFO	Pinyon Flats O	47.85	86	*e*P	P	14 07 57.2	+1.2
	comp=Z,13nm,1.2s						
PFO	Pinyon Flats O	47.85	86	*e*P	P	14 07 57.3	+1.2
PFO				pmax	pmax		
	comp=Z,13nm,1.2s						
PFO	Pinyon Flats O	47.85	86	P	P	14 07 57.2	+1.2
	baz=311						
BELC	Belle Mtn. Jos	47.89	86	P	P	14 07 57.1	+0.8
	baz=311,SNR=8.7						
109C	Camp Elliot, M	47.92	88	P	P	14 07 57.8	+1.4
	baz=312						
KNB	Kanab	47.93	80	*e*P	P	14 07 57.9	+1.3
	comp=Z,25nm,0.7s						
KNB	Kanab	47.93	80	*e*P	P	14 07 57.9	+1.3
KNB				pmax	pmax		
	comp=Z,25nm,0.7s						
PKCU	Pink Cliffs	47.98	80	*e*P	P	14 07 59.2	+2.0
	comp=Z,21nm,0.7s						
SRU	San Rafael Swe	48.04	77	*e*P	P	14 07 58.6	+1.1
	comp=Z,53nm,0.6s						
SRU	San Rafael Swe	48.04	77	*e*P	P	14 07 58.6	+1.1
SRU				pmax	pmax		
	comp=Z,53nm,0.6s						
K22A	Casper	48.30	70	*e*P	P	14 08 00.1	+0.6
	comp=Z,58nm,0.9s						
K22A	Casper	48.30	70	P	P	14 08 00.2	+0.7
	baz=307,SNR=29						
IRM	Iron Mountain	48.32	85	P	P	14 08 00.5	+1.0
	baz=311,SNR=11						
BAR	Barrett	48.34	88	*e*P	P	14 08 00.8	+1.1
	comp=Z,14nm,0.9s						
MONP2	Monument Peak	48.35	87	P	P	14 08 01.4	+1.5
	baz=312,SNR=5.9						
BC3	Big Chuckawall	48.45	86	P	P	14 08 01.6	+1.0
	baz=312						
RWWY	Rawlins	48.47	72	*e*P	P	14 08 01.1	+0.2
	comp=Z,57nm,1.3s						
W13A	Hualapai Mount	48.49	83	*e*P	P	14 08 01.8	+0.8
	comp=Z,19nm,1.0s						
U15A	North Rim	48.63	81	*e*P	P	14 08 02.8	+0.6
	comp=Z,45nm,0.6s						
SWSC	Sam W. Stewart	48.71	87	P	P	14 08 03.4	+1.0
	baz=312						
IKP	In-Ko-Pah, Jac	48.71	87	P	P	14 08 04.0	+1.4
	baz=312						
BTO	Baotou	48.74	287	*e*P	P	14 08 03.0	+0.3
BTO				S	S	14 14 51.8	-11
NJ2	Nanjing	48.74	272	*e*P	P	14 08 01.4	-1.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
O20A	White River Ci	48.80	74	*e*P	P	14 08 04.2	+0.9
	comp=Z,150nm,0.6s						
O20A	White River Ci	48.80	74	P	P	14 08 04.6	+1.3
	baz=308,SNR=96						
PDMCI	Parker Dam,Lak	48.85	84	P	P	14 08 05.0	+1.5
	baz=311,SNR=6.5						

RSSD	Black Hills	48.89	67	*e*P	P	14 08 04.2	+0.2
	comp=Z,26nm,0.6s						
RSSD	Black Hills	48.89	67	*e*P	P	14 08 04.2	+0.2
RSSD				pmax	pmax		
	comp=Z,26nm,0.6s						
RSSD	Black Hills	48.89	67	P	P	14 08 04.5	+0.5
	baz=306						
Y12C	Blythe	48.98	85	*e*P	P	14 08 05.4	+0.9
	comp=Z,23nm,0.9s						
Y12C	Blythe	48.98	85	P	P	14 08 05.8	+1.3
	baz=312,SNR=6.7						
MDND	Maddock	49.22	61	*e*P	P	14 08 06.6	+0.4
	comp=Z,50nm,1.0s						
MDND	Maddock	49.22	61	P	P	14 08 06.4	+0.2
	baz=306						
GLA	Glamis	49.25	86	*e*P	P	14 08 07.0	+0.4
	comp=Z,31nm,0.8s						
GLA	Glamis	49.25	86	*e*P	P	14 08 07.0	+0.4
GLA				pmax	pmax		
	comp=Z,31nm,0.8s						
GLA	Glamis	49.25	86	P	P	14 08 07.9	+1.3
	baz=312,SNR=7.8						
PV09	Paradox Valley	49.27	76	*e*P	P	14 08 07.7	+0.7
PV21	Cone Mtn., Par	49.33	76	*e*P	P	14 08 08.4	+1.0
	comp=Z,64nm,0.5s						
PV23	Carpenter Ridg	49.37	76	*e*P	P	14 08 09.0	+1.1
	comp=Z,69nm,0.7s						
PV10	Paradox Valley	49.40	76	*e*P	P	14 08 09.0	+1.0
	comp=Z,92nm,0.6s						
PV14	Lion Creek, Pa	49.41	76	*e*P	P	14 08 08.9	+0.8
	comp=Z,67nm,0.7s						
PV22	Blue Mesa, Par	49.46	76	*e*P	P	14 08 08.8	+0.4
	comp=Z,72nm,0.8s						
PV20	West Nyswonger	49.47	76	*e*P	P	14 08 09.0	+0.6
	comp=Z,72nm,0.6s						
PV04	Paradox Valley	49.48	76	*e*P	P	14 08 09.4	+0.9
	comp=Z,73nm,0.6s						
PV19	Morning Glory	49.48	76	*e*P	P	14 08 09.0	+0.4
	comp=Z,60nm,0.6s						
PV17	East Wray Mesa	49.51	76	*e*P	P	14 08 09.7	+0.9
	comp=Z,130nm,0.5s						
PV16	Nyswonger Mesa	49.52	76	*e*P	P	14 08 09.8	+0.9
	comp=Z,83nm,0.5s						
PV05	Paradox Valley	49.55	77	*e*P	P	14 08 10.2	+1.0
	comp=Z,44nm,0.7s						
PV11	David Mesa, Pa	49.55	76	*e*P	P	14 08 10.1	+0.9
	comp=Z,180nm,0.5s						
PV18	Skein Mesa, Pa	49.56	76	*e*P	P	14 08 10.1	+0.9
	comp=Z,71nm,0.7s						
PV12	Saucer Basin,	49.59	76	*e*P	P	14 08 10.1	+0.7
	comp=Z,77nm,0.9s						
PV03	Paradox Valley	49.60	76	*e*P	P	14 08 10.4	+0.9
	comp=Z,89nm,0.5s						
PV07	Paradox Valley	49.60	76	*e*P	P	14 08 10.2	+0.6
	comp=Z,50nm,0.5s						
PV13	Radium Mtn., P	49.67	76	*e*P	P	14 08 11.2	+1.1
	comp=Z,181nm,0.6s						
PV02	Paradox Valley	49.69	76	*e*P	P	14 08 11.2	+0.9
	comp=Z,90nm,0.7s						
N23A	Red Feather La	49.71	72	P	P	14 08 11.9	+1.5
	baz=308,SNR=39						
PHWY	Pilot Hill	49.75	71	*e*P	P	14 08 11.4	+0.7
	comp=Z,11nm,0.8s						
WUAZ	Wupatki	49.79	81	*e*P	P	14 08 11.9	+1.0
	comp=Z,42nm,0.8s						
WUAZ	Wupatki	49.79	81	P	P	14 08 12.6	+1.7
	baz=311,SNR=37						
Y14A	Wickenburg	49.80	84	*e*P	P	14 08 11.4	+0.6
	comp=Z,20nm,0.9s						
ULM	Lac du Bonnet	49.83	57	P	P	14 08 10.6	-0.2
	comp=Z,2.7nm,0.3s,baz=334,slow=3.4,SNR=5.6						
ULM				PcP	PcP	14 09 31.0	0.0
	comp=Z,5.5nm,0.8s,baz=346,slow=5.9,SNR=3.1						
ULM				ScP	ScP	14 13 23.5	-0.4
	comp=Z,1.2nm,0.3s,baz=292,slow=5.0,SNR=3.2						
ULM				LR	LR	14 30 50.4	
	comp=Z,886nm,18.8s,baz=313,slow=38						
PV01	Paradox Valley	49.84	76	*e*P	P	14 08 12.2	+0.8
	comp=Z,48nm,0.6s						
KBS	Kingsbay	49.95	357	*e*P	P	14 08 11.4	+0.1
	comp=Z,31nm,0.9s						
KBS	Kingsbay	49.95	357	*de*P	P	14 08 13.6	+2.3
KBS				pmax	pmax		
	comp=Z,51nm,0.6s						
113A	Mohawk Valley,	50.10	85	*e*P	P	14 08 14.0	+1.0
	comp=Z,9.4nm,1.0s						
SMCO	Snowmass	50.16	74	*e*P	P	14 08 14.6	+0.7
	comp=Z,24nm,0.6s						
X16A	Lo Mia Camp, P	50.46	82	*e*P	P	14 08 16.9	+0.8
	comp=Z,22nm,1.0s						
MVCO	Mesa Verde	50.47	77	*e*P	P	14 08 17.1	+1.0
	comp=Z,25nm,0.6s						
MVCO	Mesa Verde	50.47	77	P	P	14 08 17.1	+1.0
	baz=310,SNR=8.1						
SPA0	Spitsbergen Ar	50.52	356	*e*P	P	14 08 15.0	-0.7
	comp=Z,46nm,0.9s						
AGMN	Agassiz Nation	50.98	59	*e*P	P	14 08 18.7	-0.8
	comp=Z,29nm,1.6s						
AGMN	Agassiz Nation	50.98	59	P	P	14 08 19.8	+0.2
	baz=307						
W18A	Petrified Fore	51.06	80	*e*P	P	14 08 21.8	+1.3
	comp=Z,30nm,0.8s						
W18A	Petrified Fore	51.06	80	P	P	14 08 22.1	+1.5
	baz=311,SNR=17						
S22A	4UR Ranch, Cre	51.15	76	P	P	14 08 23.3	+1.9
	baz=310,SNR=45						
214A	Organ Pipe Nat	51.24	85	P	P	14 08 23.0	+1.2
	baz=313,SNR=9.0						
Q24A	Divide	51.39	73	P	P	14 08 24.4	+1.3
	baz=310,SNR=13						
SUSD	Miller	51.61	64	P	P	14 08 24.2	-0.1
	baz=308,SNR=9.5						
SDCO	Great Sand Dun	51.96	75	*e*P	P	14 08 28.6	+1.2
	comp=Z,16nm,0.6s						
SDCO	Great Sand Dun	51.96	75	P	P	14 08 28.8	+1.5
	baz=310,SNR=53						
OGNE	Ogallala	52.00	69	*e*P	P	14 08 28.3	+0.9
	comp=Z,62nm,0.8s						
OGNE	Ogallala	52.00	69	P	P	14 08 28.9	+1.5
	baz=309,SNR=16						
TUC	Tucson	52.27	84	*e*P	P	14 08 30.5	+1.0
	comp=Z,25nm,0.9s						
TUC	Tucson	52.27	84	*e*P	P	14 08 30.5	+1.0
TUC				pmax	pmax		
	comp=Z,25nm,0.9s						
TUC	Tucson	52.27	84	P	P	14 08 30.8	+1.3
	baz=313						
WHN	Wuhan	52.59	274	⇑P	P	14 08 32.3	+0.6
WHN				S	S	14 15 57.0	+0.5
WHN				pmax	pmax		
	comp=Z,72nm,0.9s						
WHN				LR	LR		
	comp=Z,300nm,4.0s						
WHN				LR	LR		
	comp=Z,540nm,11.2s						
WHN				LR	LR		
	comp=Z,710nm,20.8s						
KSCO	Kaye Shedlock’	52.88	72	*e*P	P	14 08 35.7	+1.8
	comp=Z,81nm,1.0s						
KSCO	Kaye Shedlock’	52.88	72	P	P	14 08 35.6	+1.7
	baz=310,SNR=8.6						
T25A	Trinidad	53.01	75	P	P	14 08 36.5	+1.5
	baz=311,SNR=40						
LAZ	Ladron	53.14	79	*e*P	P	14 08 37.6	+1.6
ANMO	Albuquerque	53.20	78	*e*P	P	14 08 37.1	+0.7
	comp=Z,13nm,0.9s						
ANMO	Albuquerque	53.20	78	*e*P	P	14 08 37.2	+0.7
ANMO				pmax	pmax		
	comp=Z,13nm,0.9s						
ANMO	Albuquerque	53.20	78	P	P	14 08 37.8	+1.3
	baz=312						
SSLB	Suanglung	53.22	263	*e*P	P	14 08 36.6	+0.1
	comp=Z,41nm,0.9s						
YULB	Yu-li	53.29	262	*e*P	P	14 08 37.0	0.0
	comp=Z,85nm,1.8s						
ECSD	EROS Data Cent	53.37	64	*e*P	P	14 08 37.1	-0.2
	comp=Z,15nm,0.8s						
ECSD	EROS Data Cent	53.37	64	P	P	14 08 36.7	-0.7
	baz=309,SNR=14						
LENM	Lemitar	53.40	79	*e*P	P	14 08 39.0	+1.1
EYMN	Ely	53.52	57	*e*P	P	14 08 37.5	-0.9
	comp=Z,12nm,0.9s						
EYMN	Ely	53.52	57	P	P	14 08 37.9	-0.4
	baz=309,SNR=10						
XAN	Xi'an	53.61	281	*e*P	P	14 08 38.6	-0.7
	comp=Z,21nm,0.9s						
XAN	Xi'an	53.61	281	P	P	14 08 39.3	0.0
XAN				PP	PP	14 10 45.8	+5.8
XAN				S	S	14 16 08.4	-2.1
XAN				pmax	pmax		
	comp=Z,23nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,6.9s						
XAN				LR	LR		
	comp=Z,170nm,23.0s						
XAN				LR	LR		
	comp=Z,390nm,22.6s						
XAN				LR	LR		
	comp=Z,460nm,23.9s						
XAN	Xi'an	53.61	281	*e*P	P	14 08 38.6	-0.7
XAN				pmax	pmax		
	comp=Z,21nm,0.9s						
BNM	Barren Site	53.62	79	*e*P	P	14 08 40.6	+1.0
TPUB	Ta-pu	53.78	263	*e*P	P	14 08 40.8	+0.2
	comp=Z,22nm,0.8s						
BGNE	Belgrade	53.97	67	*e*P	P	14 08 41.9	0.0
	comp=Z,79nm,0.8s						
BGNE	Belgrade	53.97	67	P	P	14 08 42.4	+0.5
	baz=310,SNR=6.9						
121A	Cookes Peak, D	53.99	81	P	P	14 08 43.7	+1.4
	baz=313,SNR=18						
ZAA1	Zalesovo Array	54.08	313	*e*P	P	14 08 43.0	+0.7
ZAA1				*e*PcP	PcP	14 09 48.0	+1.1
ZAA1				*e*ScP	ScP	14 13 40.8	-1.3
ZAA0	Zalesovo Array	54.08	313	*e*PcP	PcP	14 09 47.1	+0.2
ZALV	Zalesovo Beam	54.08	313	P	P	14 08 43.0	+0.6
	comp=Z,0.8nm,0.4s,baz=46,slow=6.1,SNR=3.1						
ZALV				PcP	PcP	14 09 48.0	+1.1
	comp=Z,16nm,0.8s,baz=24,slow=3.6,SNR=21						
ZALV				ScP	ScP	14 13 40.8	-1.4
	comp=Z,1.6nm,0.7s,baz=33,slow=5.7,SNR=4.1						
ZALV				LR	LR	14 32 56.1	
	comp=Z,210nm,20.5s,baz=70,slow=37						
E38A	The Farm, Brul	54.33	58	*e*P	P	14 08 43.7	-0.6
	comp=Z,18nm,0.8s						
E38A	The Farm, Brul	54.33	58	P	P	14 08 44.5	+0.2
	baz=310,SNR=6.9						
SPMN	Marine on St.	54.53	60	P	P	14 08 45.5	-0.3
	baz=310						
CBKS	Cedar Bluff	54.72	70	*e*P	P	14 08 47.5	+0.2
CBKS	Cedar Bluff	54.72	70	*e*P	P	14 08 47.5	+0.2
CBKS	Cedar Bluff	54.72	70	P	P	14 08 48.4	+1.1
	baz=311,SNR=25						
C40A	Isle Royale Na	54.76	55	*e*P	P	14 08 46.6	-0.8
	comp=Z,10.0nm,0.9s						
C40A	Isle Royale Na	54.76	55	P	P	14 08 47.0	-0.4
	baz=310						
LZH	Lanzhou	55.35	286	*e*P	P	14 08 53.3	+1.2
LZH				pP	sP	14 09 09.5	+4.1
LZH				PP	PP	14 10 59.0	+3.3
LZH				*e*S	S	14 16 35.6	+1.5
LZH				pmax	pmax		
	comp=Z,51nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,19.0s						
G39A	Holcombe	55.38	59	P	P	14 08 51.4	-0.6
	baz=310,SNR=6.5						
GTA	Gaotai	55.55	292	⇓P	P	14 08 53.8	+0.4
GTA				pP	pP	14 09 03.0	-0.3
GTA				ScP	ScP	14 13 49.8	+0.7
GTA				S	S	14 16 37.3	+0.7
GTA				pmax	pmax		
	comp=Z,28nm,1.1s						
GTA				pmax	pmax		
	comp=Z,120nm,5.2s						
GTA				LR	LR		
	comp=Z,490nm,18.4s						
GTA				LR	LR		
	comp=Z,550nm,19.7s						
GTA				LR	LR		
	comp=Z,630nm,21.6s						
DGZ	Jazzator, Alta	55.57	308	⇑*e*P	P	14 08 53.6	+0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
D41A	Chassel	55.61	56	P	P	14 08 53.5	0.0
	baz=310						
ENH	Enshi	55.82	277	*e*P	P	14 08 54.0	-1.4
	comp=Z,22nm,0.9s						
G40A	Rib Lake	55.91	58	*e*P	P	14 08 55.6	-0.2
	comp=Z,15nm,0.8s						
G40A	Rib Lake	55.91	58	P	P	14 08 56.6	+0.9
	baz=311						
COWI	Conover	55.94	57	*e*P	P	14 08 55.4	-0.5
	comp=Z,8.2nm,0.8s						
MNTX	Cornudas Mount	56.05	80	*e*P	P	14 08 57.1	+0.1
	comp=Z,24nm,0.8s						
MNTX	Cornudas Mount	56.05	80	P	P	14 08 58.3	+1.3
	baz=314,SNR=42						
MSTX	Muleshoe	56.11	76	*e*P	P	14 08 57.9	+0.5
	comp=Z,107nm,1.6s						
MSTX	Muleshoe	56.11	76	P	P	14 08 58.2	+0.7
	baz=313,SNR=14						
AMTX	Amarillo	56.16	75	*e*P	P	14 08 57.9	+0.1
	comp=Z,31nm,0.5s						
AMTX	Amarillo	56.16	75	P	P	14 08 58.6	+0.8
	baz=313						
KSU1	Kansas State U	56.37	68	P	P	14 08 59.1	0.0
	baz=312,SNR=11						
SCIA	State Center	56.46	63	*e*P	P	14 08 59.8	+0.1
	comp=Z,43nm,0.6s						
SCIA	State Center	56.46	63	P	P	14 08 59.8	+0.1
	baz=311,SNR=6.7						
E43A	Lone Tree Farm	56.88	56	*e*P	P	14 09 02.6	0.0
	comp=Z,34nm,0.6s						
E43A	Lone Tree Farm	56.88	56	P	P	14 09 02.4	-0.2
	baz=312,SNR=12						
HAMF	Hammerfest	57.35	351	*e*P	P	14 09 06.0	+0.4
JFWS	Jewell Farm	57.44	61	*e*P	P	14 09 05.7	-0.9
	comp=Z,17nm,0.8s						
JFWS	Jewell Farm	57.44	61	*e*P	P	14 09 05.7	-0.9
JFWS				pmax	pmax		
	comp=Z,17nm,0.8s						
JFWS	Jewell Farm	57.44	61	P	P	14 09 06.1	-0.5
	baz=312,SNR=5.3						
L40A	Anamosa	57.47	62	*e*P	P	14 09 06.1	-0.7
	comp=Z,28nm,0.8s						
L40A	Anamosa	57.47	62	P	P	14 09 06.3	-0.5
	baz=312,SNR=7.7						
I42A	Draeger Farm,	57.51	59	*e*P	P	14 09 06.8	-0.3
	comp=Z,18nm,0.8s						
I42A	Draeger Farm,	57.51	59	P	P	14 09 06.8	-0.3
	baz=312,SNR=5.1						
H43A	Windswept, Lux	57.74	58	P	P	14 09 08.6	-0.1
	baz=312						
WMOK	Wichita Mounta	58.01	73	*e*P	P	14 09 10.9	+0.1
	comp=Z,31nm,0.8s						
WMOK	Wichita Mounta	58.01	73	*e*P	P	14 09 10.9	+0.1
WMOK				pmax	pmax		
	comp=Z,31nm,0.8s						
WMOK	Wichita Mounta	58.01	73	P	P	14 09 11.9	+1.1
	baz=313,SNR=43						
D46A	Sault St. Mari	58.05	54	P	P	14 09 10.4	-0.5
	baz=313						
N40A	Mertquake, Sal	58.05	63	P	P	14 09 10.5	-0.5
	baz=312						
ARCES	ARCESS Array B	58.23	350	P	P	14 09 11.4	-0.4
	comp=Z,8.9nm,0.8s,baz=25,slow=7.3,SNR=26						
ARCES				ScP	ScP	14 13 59.0	-1.2
	comp=Z,2.1nm,1.1s,baz=49,slow=4.1,SNR=4.2						
ARCES				LR	LR	14 38 09.0	
	comp=Z,230nm,18.1s,baz=30,slow=40						
ARCES				PKPPKP	P'P'df	14 38 53.7	-5.4
	comp=Z,2.7nm,1.0s,baz=202,slow=3.9,SNR=3.0						
ARCES				PKP2bc		14 39 03.5	
	comp=Z,2.1nm,0.9s,baz=151,slow=2.8,SNR=3.7						
ARE0	ARCESS Array S	58.23	350	*e*P	P	14 09 12.0	+0.2
	comp=Z,0.6nm,0.8s						
ARE0	ARCESS Array S	58.23	350	*e*P	P	14 09 12.2	+0.5
E46A	Sault Ste Mari	58.27	54	*e*P	P	14 09 12.6	+0.2
	comp=Z,61nm,0.8s						
E46A	Sault Ste Mari	58.27	54	P	P	14 09 12.2	-0.2
	baz=313,SNR=6.5						
M41A	Milan	58.30	62	P	P	14 09 12.2	-0.6
	baz=313,SNR=5.4						
L42A	Oliver, Polo	58.37	61	P	P	14 09 12.4	-0.7
	baz=313						
D47A	Chapleau	58.41	53	P	P	14 09 12.8	-0.6
	baz=313						
G45A	Suttons Bay	58.47	56	P	P	14 09 14.9	+1.1
	baz=313						
LVZ	Lovozero	58.57	346	*e*P	P	14 09 14.1	-0.1
	comp=Z,25nm,0.9s						
LVZ	Lovozero	58.57	346	*de*P	P	14 09 14.5	+0.3
LVZ				pmax	pmax		
	comp=Z,20nm,0.8s						
N41A	Harden Midland	58.58	63	*e*P	P	14 09 14.5	-0.1
	comp=Z,42nm,0.8s						
N41A	Harden Midland	58.58	63	P	P	14 09 14.5	-0.1
	baz=313						
K43A	Burlington	58.62	60	P	P	14 09 15.0	+0.1
	baz=313						
G46A	Petoskey	58.69	55	P	P	14 09 16.8	+1.4
	baz=313						
E47A	Iron Bridge	58.73	54	P	P	14 09 15.3	-0.3
	baz=313,SNR=5.2						
TRO	Tromso	58.75	353	*e*P	P	14 09 15.6	+0.2
TX31	Lajitas Ar. Si	58.75	81	*e*P	P	14 09 16.4	+0.3
	comp=Z,12nm,0.7s						
TXAR	Lajitas Array	58.75	81	P	P	14 09 17.1	+0.9
	comp=Z,6.5nm,0.6s,baz=299,slow=5.2,SNR=96						
TXAR				ScP	ScP	14 14 05.8	+2.5
	comp=Z,1.3nm,1.0s,baz=256,slow=3.6,SNR=5.8						
TXAR				PKP2bc		14 39 00.4	
	comp=Z,0.4nm,0.9s,baz=149,slow=4.2,SNR=4.1						
CD2	Chengdu	58.93	282	⇓*i*P	P	14 09 15.3	-2.0
CD2				S	S	14 17 15.8	-5.3
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
CD2				pmax	pmax		
	comp=Z,180nm,5.1s						
CD2				LR	LR		
	comp=Z,310nm,17.6s						
CD2				LR	LR		
	comp=Z,460nm,19.8s						
CD2				LR	LR		
	comp=Z,490nm,21.0s						
ABTX	Abilene, Hawle	58.94	75	*e*P	P	14 09 17.4	+0.1
	comp=Z,56nm,1.1s						
ABTX	Abilene, Hawle	58.94	75	P	P	14 09 18.4	+1.1
	baz=314,SNR=13						
KTK1	Kautokeino	58.97	351	*e*P	P	14 09 17.2	+0.3
PVCP	Virac	58.98	252	*e*P	P	14 09 18.4	+0.8
TUL1	Leonard	58.99	70	*e*P	P	14 09 17.4	-0.2
	comp=Z,57nm,0.8s						
TUL1	Leonard	58.99	70	P	P	14 09 18.2	+0.7
	baz=313,SNR=9.7						
H46A	Fife Lake	59.05	56	P	P	14 09 18.2	+0.4
	baz=313						
KURK	Kurchatov	59.07	314	*e*P	P	14 09 16.4	-1.5
	comp=Z,10nm,0.7s						
KURK	Kurchatov	59.07	314	*e*P	P	14 09 16.4	-1.5
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SMPP	San Manuel, Pa	59.11	257	*e*P	P	14 09 17.4	-1.1
SMPP	San Manuel, Pa	59.11	257	*e*P	P	14 09 17.4	-1.1
D49A	Beulah Townshi	59.13	52	P	P	14 09 17.6	-0.8
	baz=314						
KURBB	Kurchatov Arra	59.18	314	P	P	14 09 17.1	-1.5
	comp=Z,5.0nm,0.7s,baz=44,slow=6.5,SNR=2.1						
KURBB				ScP	ScP	14 14 03.3	-1.4
	comp=Z,2.5nm,1.0s,baz=43,slow=4.3,SNR=4.2						
MATQ	Matagami	59.20	48	P	P	14 09 17.5	-1.3
	baz=314						
E48A	Lockeyer	59.27	53	P	P	14 09 19.2	-0.1
	baz=314						
WMQ	Urumqi	59.36	303	*e*P	P	14 09 21.4	+1.3
WMQ				pP	sP	14 09 38.8	+5.3
WMQ				PcP	PcP	14 10 09.3	+1.5
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,430nm,16.9s						
WMQ				LR	LR		
	comp=Z,280nm,24.7s						
WMQ				LR	LR		
	comp=Z,430nm,24.7s						
F48A	Evansville	59.49	54	P	P	14 09 20.9	0.0
	baz=314						
HDIL	Hopedale	59.55	62	*e*P	P	14 09 21.6	+0.2
	comp=Z,72nm,0.6s						
HDIL	Hopedale	59.55	62	P	P	14 09 21.3	-0.1
	baz=313,SNR=9.4						
M44A	Midewin, Midew	59.68	61	*e*P	P	14 09 22.0	-0.2
	comp=Z,46nm,0.7s						
M44A	Midewin, Midew	59.68	61	P	P	14 09 21.7	-0.5
	baz=313						
HHAR	Hobbs	59.83	69	*e*P	P	14 09 22.9	-0.5
	comp=Z,29nm,0.8s						
F49A	Sandfield	59.83	54	P	P	14 09 22.6	-0.6
	baz=314						
K46A	Dorr	60.01	58	P	P	14 09 23.9	-0.6
	baz=314						
E50A	Wahnapitae	60.03	52	P	P	14 09 24.2	-0.4
	baz=314						
P43A	Skaggs, Pawnee	60.05	63	P	P	14 09 25.1	+0.2
	baz=314,SNR=18						
MK31	Makanchi Array	60.07	308	*e*P	P	14 09 22.8	-2.1
	comp=Z,5.7nm,0.8s						
MK31	Makanchi Array	60.07	308	*e*P	P	14 09 22.8	-2.1
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK32	Makanchi Array	60.07	308	*e*P	P	14 09 23.3	-1.6
MKAR	Makanchi Array	60.07	308	P	P	14 09 23.3	-1.6
	comp=Z,2.8nm,0.6s,baz=55,slow=6.3,SNR=19						
MKAR				LR	LR	14 36 27.4	
	comp=Z,454nm,20.2s,baz=40,slow=37						
CCM	Cathedral Cave	60.17	65	*e*P	P	14 09 24.9	-0.7
	comp=Z,23nm,0.6s						
CCM				*e*S	S	14 17 34.2	-2.5
CCM	Cathedral Cave	60.17	65	*e*P	P	14 09 24.9	-0.7
CCM				*e*S	S	14 17 34.2	-2.5
CCM				pmax	pmax		
	comp=Z,23nm,0.6s						
CCM	Cathedral Cave	60.17	65	P	P	14 09 25.3	-0.4
	baz=314						
SCHQ	Schefferville	60.17	38	P	P	14 09 25.3	-0.2
	comp=Z,15nm,0.8s,baz=330,slow=7.6,SNR=6.2						
SCHQ				LR	LR	14 37 01.1	
	comp=Z,1µm,18.5s,baz=324,slow=38						
SCHQ	Schefferville	60.17	38	*e*P	P	14 09 24.7	-0.7
	comp=Z,19nm,0.9s						
MAKZ	Makanchi	60.21	309	*e*P	P	14 09 24.1	-1.8
	comp=Z,6.6nm,0.6s						
MAKZ	Makanchi	60.21	309	*e*P	P	14 09 24.1	-1.8
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GYA	Guiyang	60.26	276	⇑*i*P	P	14 09 26.9	+0.3
GYA				pP	sP	14 09 42.8	+2.9
GYA				sP	pP	14 09 49.8	+13
GYA				PP	PP	14 11 41.4	+2.0
GYA				S	S	14 17 36.6	-1.9
GYA				sS	sS	14 18 02.8	+8.8
GYA				SS	SS	14 21 34.4	-1.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA				LR	LR		
	comp=Z,190nm,17.0s						
GYA				LR	LR		
	comp=Z,320nm,17.7s						
GYA				LR	LR		
	comp=Z,320nm,15.8s						
O44A	Mansfield	60.29	62	P	P	14 09 26.3	-0.2
	baz=314,SNR=5.0						
MANU	Manus Island	60.32	220	*e*P	P	14 09 27.4	+0.5
	comp=Z,90nm,1.0s						
JCT	Junction City	60.34	77	*e*P	P	14 09 26.8	-0.1
	comp=Z,22nm,0.8s						
JCT	Junction City	60.34	77	*e*P	P	14 09 26.8	-0.1
JCT				pmax	pmax		
	comp=Z,22nm,0.8s						
JCT	Junction City	60.34	77	P	P	14 09 26.9	-0.1
	baz=315						
SLM	Saint Louis	60.34	64	*e*P	P	14 09 27.0	+0.2
	comp=Z,58nm,0.6s						
SLM	Saint Louis	60.34	64	*e*P	P	14 09 27.0	+0.2
SLM				pmax	pmax		
	comp=Z,58nm,0.6s						
U40A	Yellville	60.41	68	P	P	14 09 27.0	-0.3
	baz=314,SNR=38						
K47A	Vermontville	60.44	58	P	P	14 09 27.0	-0.4
	baz=314,SNR=6.9						
TOBO	Tobermory, Bru	60.47	54	P	P	14 09 26.9	-0.6
	baz=314						
E51A	G1948 Merrick	60.57	51	P	P	14 09 27.3	-1.0

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      baz=315
CHGQ  Chibougamau      60.59  46  P      P      14 09 26.9 -1.4
      baz=316
LOF   Lofoten          60.60 355  eP     P      14 09 27.9 -0.2
J48A  Bridge Port      60.64  57  ePcP   PcP    14 10 13.7 +0.9
W39A  Magazine         60.67  69  eP     P      14 09 29.2 +0.1
      comp=Z,133nm,1.6s
W39A  Magazine         60.67  69  P      P      14 09 29.6 +0.5
      baz=314,SNR=24
STEI  Steigen          60.70 354  eP     P      14 09 28.8  0.0
WHTX  Lake Whitney,    60.71  74  eP     P      14 09 30.1 +0.7
      comp=Z,59nm,0.6s
WHTX  Lake Whitney,    60.71  74  P      P      14 09 30.5 +1.0
      baz=315,SNR=14
D52A  ZEK Kipawa Sen   60.78  50  P      P      14 09 28.9 -0.8
      baz=315
K48A  Perry            60.81  57  P      P      14 09 30.0  0.0
      baz=314
L47A  Sherwood         60.81  58  P      P      14 09 29.2 -0.8
      baz=314
SFIN  Lafayette        60.89  61  eP     P      14 09 30.9 +0.4
      comp=Z,94nm,0.8s
SFIN  Lafayette        60.89  61  P      P      14 09 30.9 +0.4
      baz=314,SNR=16
J49A  Marlette         60.94  56  P      P      14 09 30.7 -0.1
      baz=314
BVAR  Borovoye Array   60.96 320  ScP    ScP    14 14 09.9 -2.7
      comp=Z,2.6nm,0.8s,baz=45,slow=2.2,SNR=4.9
BRVK  Borovoye         60.98 320  eP     P      14 09 29.7 -1.2
      comp=Z,10nm,0.8s
BRVK  Borovoye         60.98 320c eP     P      14 09 30.0 -0.9
BRVK                              pmax   pmax
      comp=Z,11nm,1.1s
M47A  Cromwell         61.01  59  P      P      14 09 30.9 -0.4
      baz=314
KLBO  Killbear Provi   61.04  53  P      P      14 09 31.2 -0.2
      baz=315
D53A  Lac Vacive, Po   61.05  50  eP     P      14 09 30.6 -0.9
      comp=Z,10nm,0.9s
D53A  Lac Vacive, Po   61.05  50  P      P      14 09 30.7 -0.8
      baz=315
BMRO  Meriville Lake   61.06  54  P      P      14 09 31.8 +0.1
      baz=315
E52A  Mattawa          61.15  51  P      P      14 09 31.3 -0.9
      baz=315
FCAR  Ozark Folk Cen   61.16  68  eP     P      14 09 31.9 -0.6
      comp=Z,108nm,0.9s
F52A  Sundridge        61.17  52  P      P      14 09 31.6 -0.7
      baz=315
K49A  Clarkson         61.17  57  P      P      14 09 32.3 -0.2
      baz=315
BASO  Ashfield         61.24  55  P      P      14 09 33.5 +0.7
      baz=315
L48A  N Adams          61.24  58  P      P      14 09 32.3 -0.6
      baz=314
MIAR  Mount Ida        61.25  70  eP     P      14 09 33.0  0.0
      comp=Z,34nm,0.8s
MIAR  Mount Ida        61.25  70  eP     P      14 09 33.0  0.0
MIAR                              pmax   pmax
      comp=Z,34nm,0.8s
MIAR  Mount Ida        61.25  70  P      P      14 09 33.9 +0.8
      baz=315,SNR=35
MSLP  Maasin           61.30 249  eP     P      14 09 31.8 -1.8
N47A  Urbana           61.31  60  P      P      14 09 33.0 -0.3
      baz=314
P46A  Rosedale         61.36  62  P      P      14 09 34.0 +0.3
      baz=314,SNR=15
BUKO  Buck Lake        61.38  52  P      P      14 09 33.7 -0.1
      baz=315
M48A  Edgerton         61.41  59  eP     P      14 09 34.0 -0.1
      comp=Z,44nm,0.8s
M48A  Edgerton         61.41  59  P      P      14 09 33.4 -0.6
      baz=315
435B  Jarrell          61.48  76  P      P      14 09 34.8 +0.1
      baz=315
OLIL  Olney            61.48  63  eP     P      14 09 34.8 +0.3
      comp=Z,101nm,0.6s
L49A  Milan            61.48  58  P      P      14 09 34.4 -0.1
      baz=315
WHAR  Wooly Hollow     61.48  68  eP     P      14 09 34.4 -0.3
      comp=Z,49nm,0.9s
D54A  Lac Fusel, La    61.50  49  P      P      14 09 33.2 -1.4
      baz=316
PBMO  Poplar Bluff     61.52  66  eP     P      14 09 34.6 -0.2
      comp=Z,80nm,0.8s
S44A  Carbondale       61.55  64  P      P      14 09 35.1 +0.1
      baz=314,SNR=16
SIUC  Southern Illin   61.56  64  eP     P      14 09 35.0 -0.1
      comp=Z,61nm,0.7s
E53A  Dumoine, Ponti   61.57  51  P      P      14 09 33.9 -1.1
      baz=316
W41B  Gary Mavity, V   61.59  68  P      P      14 09 35.4 +0.1
      baz=315,SNR=35
K50A  Casco            61.62  56  P      P      14 09 35.0 -0.4
      baz=315
CLWO  Collingwood      61.63  54  P      P      14 09 35.9 +0.3
      baz=315,SNR=5.5
N48A  Decatur          61.68  59  P      P      14 09 35.6 -0.3
      baz=315,SNR=5.3
H52A  Wyevale          61.70  53  P      P      14 09 35.8 -0.2
      baz=315
I51A  Listowel         61.72  55  P      P      14 09 36.2 +0.1
      baz=315
X40A  Basin Creek Fa   61.73  69  eP     P      14 09 36.5 +0.3
      comp=Z,32nm,1.1s
X40A  Basin Creek Fa   61.73  69  P      P      14 09 36.7 +0.4
      baz=315,SNR=8.4
H06N1 SOCORRO T-PHAS61.73  95  T      T      15 16 58.0
      SNR=18
E54A  Lac Daplat, Po   61.76  50  P      P      14 09 35.3 -1.1
      baz=316
UALR  University of    61.81  69  eP     P      14 09 37.3 +0.5
      comp=Z,26nm,0.9s
M49A  Liberty Center   61.82  58  P      P      14 09 36.6 -0.2
      baz=315
PARMO Parma            61.99  66  eP     P      14 09 38.3 +0.3
      comp=Z,201nm,0.8s
G53A  Haliburton       61.99  52  P      P      14 09 37.8 -0.1
      baz=316,SNR=7.1
PRGR  Permogore        62.02 338  eP     P      14 09 35.6 -2.2
PRGR                              pmax   pmax
      comp=Z,41nm,0.7s
L50A  Kingsville       62.04  57  P      P      14 09 38.1 -0.2
      baz=315
O48A  Farmland         62.04  60  P      P      14 09 37.7 -0.6
      baz=315,SNR=7.9
BLO   Bloomington      62.05  62  eP     P      14 09 38.5 +0.1
      comp=Z,52nm,0.8s
BLO   Bloomington      62.05  62  eP     P      14 09 38.5 +0.1
BLO                               pmax   pmax
      comp=Z,52nm,0.8s
N49A  Columbus Grove   62.09  59  eP     P      14 09 38.6 -0.1
      comp=Z,25nm,0.7s
N49A  Columbus Grove   62.09  59  P      P      14 09 38.6 -0.1
      baz=315,SNR=6.0
833A  Chaparral WMA,   62.11  79  P      P      14 09 39.6 +0.7
      baz=316
WLAR  White Oak Lake   62.12  70  eP     P      14 09 39.5 +0.6
      comp=Z,80nm,0.6s
KONS  Konsvik          62.25 355  eP     P      14 09 39.2  0.0
USIN  University of    62.26  63  eP     P      14 09 40.0 +0.2
      comp=Z,174nm,0.6s
BANO  Bancroft         62.41  52  P      P      14 09 40.5 -0.3
      baz=316
P48A  Milroy           62.45  61  eP     P      14 09 40.7 -0.3
      comp=Z,64nm,0.7s
P48A  Milroy           62.45  61  P      P      14 09 40.8 -0.3
      baz=315,SNR=14
MOR8  Moi Rana         62.49 354  eP     P      14 09 39.7 -1.2
O49A  Covington        62.53  59  eP     P      14 09 41.5 -0.1
      comp=Z,17nm,0.8s
O49A  Covington        62.53  59  P      P      14 09 41.2 -0.4
      baz=315
NATX  Nacogdoches      62.56  73  P      P      14 09 42.6 +0.7
      baz=315
Q48A  North Vernon     62.66  61  P      P      14 09 42.3 -0.1
      baz=315
ARU   Arti             62.70 328  eP     P      14 09 41.6 -0.8
      comp=Z,11nm,0.6s
ARU   Arti             62.70 328c iP     P      14 09 42.3 -0.1
ARU                                             14 10 19.7
ARU                               S      S      14 18 08.8 +0.5
ARU                               SS     SS     14 22 10.3 -1.8
ARU                               pmax   pmax
      comp=Z,4.0nm,0.6s
ARU                               MLR    MLR
      comp=Z,436nm,17.0s
CCAR  Cane Creek       62.75  69  eP     P      14 09 43.4 +0.3
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      comp=Z,228nm,1.6s
N50A  Nevada           62.76  58  P      P      14 09 43.1  0.0
      baz=316,SNR=6.3
P49A  Miami Univ. Ec   62.79  60  P      P      14 09 43.1 -0.2
      baz=315,SNR=8.1
TYNO  Tyneside         62.81  54  P      P      14 09 42.9 -0.5
      baz=316
PLVO  Plevna           62.82  51  P      P      14 09 42.7 -0.7
      baz=316
DRWO  Darlington Wes   62.84  53  P      P      14 09 43.3 -0.2
      baz=316
G55A  Calabogie        62.84  51  P      P      14 09 42.6 -1.0
      baz=316
WCI   Wyandotte Cave   62.84  62  eP     P      14 09 43.8 +0.1
      comp=Z,62nm,0.7s
WCI   Wyandotte Cave   62.84  62  eP     P      14 09 43.8 +0.1
WCI                               pmax   pmax
      comp=Z,62nm,0.7s
WCI   Wyandotte Cave   62.84  62  P      P      14 09 43.9 +0.2
      baz=315
X43A  Marvell          62.85  68  P      P      14 09 44.3 +0.6
      baz=315
M51A  Elyria           62.87  57  P      P      14 09 43.3 -0.5
      baz=316
O50A  Cable            62.95  59  P      P      14 09 44.6 +0.2
      baz=316,SNR=15
WLVO  Wesleyville      62.97  53  P      P      14 09 44.1 -0.3
      baz=316
BUKP  Musuan           62.99 247  eP     P      14 09 46.0 +1.0
Q49A  Aurora           63.06  61  P      P      14 09 44.9 -0.2
      baz=316
BORG  Borgarnes        63.06  11  LR     LR     14 39 33.3
      comp=Z,79nm,19.8s,baz=340,slow=38
N51A  Ashland          63.06  58  P      P      14 09 44.9 -0.3
      baz=316
STCO  Saint Catharin   63.09  54  P      P      14 09 45.4 +0.2
      baz=316
I55A  Frankford        63.11  52  P      P      14 09 44.9 -0.5
      baz=316
H55A  Tweed            63.12  52  P      P      14 09 44.9 -0.5
      baz=316
HNR   Honiara          63.12 204  P      P      14 09 47.5 +1.8
      comp=Z,40nm,0.4s,baz=155,slow=23,SNR=18
HKT   Hockley          63.13  75  eP     P      14 09 46.3 +0.7
      comp=Z,16nm,0.8s
HKT   Hockley          63.13  75  eP     P      14 09 46.3 +0.7
HKT                               pmax   pmax
      comp=Z,16nm,0.8s
M52A  Chesterland      63.16  57  P      P      14 09 45.7 -0.1
      baz=316
ACSO  Alum Creek Sta   63.23  59  eP     P      14 09 46.5 +0.2
      comp=Z,30nm,0.8s
ACSO  Alum Creek Sta   63.23  59  P      P      14 09 46.4 +0.2
      baz=316
P50A  Jamestown        63.23  60  P      P      14 09 46.3 +0.1
      baz=316,SNR=8.8
T47A  Sharon Grove     63.27  64  eP     P      14 09 47.0 +0.5
      comp=Z,142nm,0.8s
T47A  Sharon Grove     63.27  64  P      P      14 09 47.3 +0.8
      baz=316,SNR=38
J54A  Appleton         63.31  54  P      P      14 09 46.8 +0.1
      baz=316
R49A  Shelbyville      63.42  61  eP     P      14 09 47.9 +0.4
      comp=Z,17nm,0.9s
R49A  Shelbyville      63.42  61  P      P      14 09 47.5  0.0
      baz=316
ERPA  Erie             63.45  55  P      P      14 09 46.8 -0.8
      baz=316
WVT   Waverly          63.46  65  eP     P      14 09 48.3 +0.5
      comp=Z,56nm,0.8s
WVT   Waverly          63.46  65  eP     P      14 09 48.3 +0.5
WVT                               pmax   pmax
      comp=Z,57nm,0.8s
WVT   Waverly          63.46  65  P      P      14 09 48.3 +0.5
      baz=316
MEDO  Medina           63.48  54  eP     P      14 09 48.3 +0.4
      comp=Z,50nm,0.9s
MEDO  Medina           63.48  54  P      P      14 09 47.7 -0.2
      baz=316
O51A  Pataskala        63.49  58  P      P      14 09 48.0  0.0
      baz=316,SNR=9.9
N52A  McGinn’s Farm,   63.50  57  P      P      14 09 47.9 -0.1
      baz=316
V46A  Holladay         63.53  65  P      P      14 09 48.8 +0.5
      baz=316,SNR=30
H56A  Elgin            63.54  51  P      P      14 09 47.7 -0.5
      baz=317
U47A  Clarksville      63.55  64  P      P      14 09 48.9 +0.5
      baz=316,SNR=12
M53A  WI Miller and    63.59  56  P      P      14 09 48.6 +0.1
      baz=316
KMI   Kunming          63.67 278  P      P      14 09 50.0 +0.4
KMI                               S      S      14 18 20.1 -1.7
KMI                               sS     sS     14 18 38.1 +0.8
KMI                               pmax   pmax
      comp=Z,31nm,1.1s
KMI                               pmax   pmax
      comp=Z,93nm,3.1s
KMI                               LR     LR
      comp=Z,170nm,20.2s
KMI                               LR     LR
      comp=Z,260nm,15.7s
KMI                               LR     LR
      comp=Z,320nm,31.6s
KCP   Kidapawan        63.68 247⇑ eP     P      14 09 50.9 +1.3
Q50A  Georgetown       63.68  60  P      P      14 09 49.4 +0.1
      baz=316,SNR=7.8
QIZ   Qiongzhong       63.68 268  P      P      14 09 49.4 -0.1
QIZ                               S      S      14 18 20.3 -1.2
QIZ                               pmax   pmax
      comp=Z,140nm,2.7s
QIZ                               LR     LR
      comp=Z,330nm,19.1s
QIZ                               LR     LR
      comp=Z,250nm,25.5s
QIZ                               LR     LR
      comp=Z,250nm,19.6s
OXF   Oxford           63.71  67  eP     P      14 09 48.6 -0.8
      comp=Z,291nm,0.9s
OXF   Oxford           63.71  67  eP     P      14 09 48.6 -0.8
ALLY  Alegheny Colle   63.71  56  eP     P      14 09 48.4 -1.0
      comp=Z,41nm,0.8s
S49A  Springfield      63.72  62  P      P      14 09 49.7 +0.3
      baz=316,SNR=17
L54A  Sinclairville    63.72  55  P      P      14 09 49.7 +0.3
      baz=316
P51A  Williamsport     63.72  59  P      P      14 09 49.7 +0.2
      baz=316
K54A  Basiliko Farm,   63.77  54  P      P      14 09 50.0 +0.3
      baz=317
V47A  Nunnelly         63.85  65  P      P      14 09 50.9 +0.5
      baz=316,SNR=28
W46A  Michie           63.86  66  P      P      14 09 50.8 +0.3
      baz=316,SNR=8.2
R50A  Paris            63.89  61  eP     P      14 09 50.9 +0.3
      comp=Z,35nm,0.9s
R50A  Paris            63.89  61  P      P      14 09 51.0 +0.3
      baz=316
Q51A  Peebles          63.89  60  eP     P      14 09 50.9 +0.2
      comp=Z,47nm,0.6s
Q51A  Peebles          63.89  60  P      P      14 09 51.1 +0.5
      baz=316,SNR=8.9
O52A  Adamsville       63.92  58  eP     P      14 09 51.0 +0.1
      comp=Z,71nm,0.8s
O52A  Adamsville       63.92  58  P      P      14 09 50.9 +0.1
      baz=316,SNR=12
N53A  Lisbon           63.96  57  P      P      14 09 50.9 -0.2
      baz=316
K55A  Perry            64.00  54  P      P      14 09 51.0 -0.3
      baz=317
M54A  Oil Creek Stat   64.06  56  eP     P      14 09 51.7 -0.1
      comp=Z,28nm,1.0s
M54A  Oil Creek Stat   64.06  56  P      P      14 09 51.2 -0.5
      baz=316
T49A  Edmonton         64.06  63  eP     P      14 09 52.1 +0.3
      comp=Z,44nm,0.6s
T49A  Edmonton         64.06  63  P      P      14 09 52.3 +0.5
      baz=316,SNR=18
MMNY  Mt. Morris Dam   64.08  54  eP     P      14 09 51.7 -0.1
      comp=Z,31nm,0.7s
KLMR  Klimovskoe       64.09 340  eP     P      14 09 50.8 -0.8
KLMR                              pmax   pmax
      comp=Z,22nm,1.3s
P52A  Corning          64.11  58  P      P      14 09 51.9 -0.2
      baz=316,SNR=5.8
PLAL  Pickwick Lake    64.14  66  eP     P      14 09 52.2 -0.1
      comp=Z,139nm,0.6s
ZAIG  Zacatecas        64.14  85  eP     P      14 09 52.7 -0.1
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      comp=Z,17nm,0.9s
X46A  Booneville       64.15  67  P      P      14 09 52.6 +0.3
      baz=316,SNR=21
O53A  New Philadelph   64.16  57  P      P      14 09 52.1 -0.3
      baz=316,SNR=5.1
L55A  Hinsdale         64.20  54  P      P      14 09 52.9 +0.2
      baz=317
W47A  Westpoint        64.22  65  P      P      14 09 53.3 +0.4
      baz=316,SNR=32
NSS   Namsos           64.27 355  eP     P      14 09 52.9 +0.3
S50A  Richmond         64.28  61  P      P      14 09 53.7 +0.5
      baz=316,SNR=6.4
R51A  Hillsboro        64.28  60  P      P      14 09 54.1 +0.8
      baz=316,SNR=8.7
N54A  Moraine State    64.29  56  eP     P      14 09 53.2  0.0
      comp=Z,26nm,0.6s
N54A  Moraine State    64.29  56  P      P      14 09 53.2  0.0
      baz=317,SNR=5.8
V48A  Smith Brothers   64.31  64  eP     P      14 09 53.3 -0.1
      comp=Z,62nm,0.8s
V48A  Smith Brothers   64.31  64  P      P      14 09 53.8 +0.4
      baz=316,SNR=28
CLTN  Cedars of Leba   64.34  64  eP     P      14 09 54.2 +0.6
      comp=Z,82nm,0.8s
U49A  Red Boiling Sp   64.35  63  P      P      14 09 54.2 +0.5
      baz=316,SNR=26
T50A  Nancy            64.51  62  P      P      14 09 55.4 +0.6
      baz=316,SNR=13
Q52A  Bidwell          64.52  59  P      P      14 09 54.1 -0.7
      baz=316
LNIG  Linares          64.53  81  eP     P      14 09 54.7 -0.3
      comp=Z,7.6nm,0.7s
M55A  Ridgway          64.56  55  P      P      14 09 55.2 +0.2
      baz=317,SNR=5.9
X47A  Russelville      64.60  66  P      P      14 09 55.4 +0.1
      baz=316,SNR=20
P53A  Whipple          64.62  58  P      P      14 09 55.2 -0.1
      baz=317
O54A  Avella           64.65  57  P      P      14 09 55.2 -0.4
      baz=317
W48A  Pulaski          64.68  65  P      P      14 09 56.4 +0.6
      baz=316,SNR=111
SUF   Sumiainen        64.68 348  P      P      14 09 56.6 +1.2
SUF                               pmax   pmax
      comp=Z,31nm,1.0s
VBMS  Vicksburg        64.70  70  P      P      14 09 56.8 +0.8
      baz=316
S51A  Beattyville      64.75  61  P      P      14 09 56.5 +0.2
      baz=316
R52A  Catlettsburg     64.77  60  P      P      14 09 56.4  0.0
      baz=316
V49A  McMinnville      64.82  64  P      P      14 09 57.2 +0.4
      baz=316,SNR=48
M56A  Emporium         64.84  55  P      P      14 09 56.7 -0.2
      baz=317,SNR=6.2
MOQ   Mont Orford      64.93  48  eP     P      14 09 56.6 -0.8
N55A  Marion Center    64.94  56  P      P      14 09 57.0 -0.5
      baz=317
U50A  Jamestown        64.94  63  P      P      14 09 57.1 -0.5
      baz=316,SNR=11
Q53A  Leroy            65.00  59  P      P      14 09 58.3 +0.4
      baz=317,SNR=22
T51A  Gray             65.05  62  P      P      14 09 58.6 +0.4
      baz=316,SNR=9.4
W49A  Belvidere        65.08  65  P      P      14 09 58.8 +0.3
      baz=316,SNR=32
X48A  Hartselle        65.11  66  eP     P      14 09 58.4 -0.3
      comp=Z,63nm,0.5s
X48A  Hartselle        65.11  66  P      P      14 09 58.6 -0.1
      baz=316,SNR=35
R53A  Hurricane        65.15  59  eP     P      14 09 59.3 +0.4
      comp=Z,50nm,0.6s
R53A  Hurricane        65.15  59  P      P      14 09 59.6 +0.7
      baz=317,SNR=7.8
O55A  Ligonier         65.19  56  P      P      14 09 59.0 -0.2
      baz=317
SWET  Sewanee          65.19  64  eP     P      14 09 59.3  0.0
      comp=Z,74nm,0.7s
N56A  West Decatur     65.20  55  P      P      14 09 58.9 -0.3
      baz=317
Q54A  Coxs Mills       65.28  58  eP     P      14 09 59.8 +0.1
      comp=Z,20nm,0.8s
Q54A  Coxs Mills       65.28  58  P      P      14 10 00.1 +0.4
      baz=317,SNR=6.1
V50A  Pikevile         65.34  63  P      P      14 10 00.4 +0.3
      baz=316,SNR=25
Y48A  Jasper           65.43  66  P      P      14 10 00.5 -0.2
      baz=316,SNR=25
P55A  Reedsville       65.43  57  P      P      14 10 00.6 -0.1
      baz=317
U51A  La Follette      65.43  62  P      P      14 10 00.9 +0.2
      baz=317,SNR=13
BINY  Binghamton       65.43  53  eP     P      14 10 00.8 +0.2
      comp=Z,24nm,0.6s
BINY  Binghamton       65.43  53  P      P      14 10 00.7  0.0
      baz=318
T52A  Hallie           65.47  61  eP     P      14 10 01.8 +0.8
      comp=Z,36nm,1.0s
T52A  Hallie           65.47  61  P      P      14 10 01.7 +0.8
      baz=317,SNR=5.5
X49A  Woodville        65.48  65  P      P      14 10 01.3 +0.2
      baz=316,SNR=85
S53A  Williamson       65.53  60  P      P      14 10 01.7 +0.4
      baz=317
O56A  Blue Knob Stat   65.53  56  eP     P      14 10 00.3 -1.0
O56A                              ePcP   PcP    14 10 33.3 +0.4
O56A  Blue Knob Stat   65.53  56  P      P      14 10 00.8 -0.6
      baz=317
W50A  Signal Mountai   65.56  64  eP     P      14 10 01.8 +0.2
      comp=Z,72nm,0.8s
W50A  Signal Mountai   65.56  64  P      P      14 10 02.0 +0.4
      baz=317,SNR=29
TZTN  Tazewell         65.57  62  eP     P      14 10 02.1 +0.5
      comp=Z,22nm,0.8s
TZTN  Tazewell         65.57  62  P      P      14 10 02.3 +0.7
      baz=317,SNR=6.3
L58A  Harry Jones Me   65.61  53  P      P      14 10 01.6 -0.2
      baz=318,SNR=8.3
SSPA  Standing Stone   65.62  55  eP     P      14 10 01.7 -0.2
      comp=Z,27nm,0.9s
SSPA  Standing Stone   65.62  55  P      P      14 10 01.8 -0.1
      baz=318
TBLU  Trondheim        65.64 355  eP     P      14 10 00.6 -1.0
V51A  Loudon           65.66  63  eP     P      14 10 02.6 +0.4
      comp=Z,49nm,0.6s
V51A  Loudon           65.66  63  P      P      14 10 02.6 +0.4
      baz=317,SNR=7.8
Q55A  Buckhannon       65.67  58  P      P      14 10 02.5 +0.3
      baz=317,SNR=7.5
147A  Livingston       65.69  68  eP     P      14 10 03.0 +0.7
      comp=Z,163nm,1.0s
147A  Livingston       65.69  68  P      P      14 10 03.2 +0.8
      baz=317,SNR=18
ACCN  Adirondack Com   65.70  51  eP     P      14 10 01.8 -0.6
      comp=Z,24nm,1.0s
N57A  Milroy           65.70  55  P      P      14 10 02.1 -0.3
      baz=318
R54A  Victor           65.78  59  P      P      14 10 03.2 +0.3
      baz=317,SNR=11
U52A  Thorn Hill       65.78  62  P      P      14 10 03.4 +0.4
      baz=317,SNR=6.6
M58A  Price’s Panora   65.80  54  P      P      14 10 03.0 -0.1
      baz=318,SNR=5.7
T53A  Wise             65.81  61  P      P      14 10 04.0 +0.8
      baz=317,SNR=8.4
PQI   Presque Isle     65.84  45  eP     P      14 10 02.1 -1.1
      comp=Z,17nm,0.7s
S54A  Dingess, Beckl   65.88  59  P      P      14 10 04.1 +0.4
      baz=317,SNR=5.2
W51A  Cleveland        65.90  64  P      P      14 10 04.1 +0.3
      baz=317,SNR=24
X50B  Fort Payne       65.90  65  P      P      14 10 04.0 +0.2
      baz=317,SNR=39
Y49A  Blount Mountai   65.90  66  eP     P      14 10 03.8  0.0
      comp=Z,65nm,0.6s
Y49A  Blount Mountai   65.90  66  P      P      14 10 03.8  0.0
      baz=317,SNR=34
FIA1  FINESS Array S   65.92 347  eP     P      14 10 02.1 -1.3
      comp=Z,22nm,0.9s
FIA0  FINESS Array S   65.92 347  eP     P      14 10 01.3 -2.1
FIA0  FINESS Array S   65.92 347  eP     P      14 10 01.3 -2.1
FINES FINESS Array B   65.92 347  P      P      14 10 01.3 -2.1
      comp=Z,16nm,0.8s,baz=35,slow=7.0,SNR=46
FINES                             PKPPKP P'P'df 14 38 39.6 -6.7
      comp=Z,2.3nm,0.8s,baz=123,slow=5.1,SNR=5.3
FINES                             LR     LR     14 44 50.7
      comp=Z,225nm,18.1s,baz=16,slow=42
FINES FINESS Array B   65.92 347  i P    P      14 10 02.2 -1.2
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FINES                                pmax    pmax
      comp=Z,17nm,0.8s
P56A  Dayton Farm, R   65.95  57  P      P        14 10 03.9 -0.1
      baz=318,SNR=7.8
KDJ   Kajisay          65.97 308  eP     P        14 10 03.5 -0.8
      comp=Z,15nm,0.8s
KDJ   Kajisay          65.97 308  eP     P        14 10 03.5 -0.8
KDJ                                pmax    pmax
      comp=Z,15nm,0.8s
V52A  Sevierville      66.05  62  eP     P        14 10 04.5 -0.2
      comp=Z,34nm,0.9s
V52A  Sevierville      66.05  62  P      P        14 10 05.3 +0.6
      baz=317,SNR=7.7
O57A  Amberson         66.06  55  P      P        14 10 04.4 -0.3
      baz=318,SNR=6.8
N58A  Sunbury          66.07  54  P      P        14 10 04.7  0.0
      baz=318
148A  Greensboro       66.11  67  P      P        14 10 05.4 +0.3
      baz=317,SNR=7.4
LRAL  Lakeview Retre   66.16  67  eP     P        14 10 05.2 -0.3
      comp=Z,52nm,0.8s
LRAL  Lakeview Retre   66.16  67  P      P        14 10 05.3 -0.1
      baz=317,SNR=27
R55A  Marlinton        66.17  58  eP     P        14 10 05.1 -0.4
R55A                              ePcP   PcP      14 10 36.5 +0.9
R55A  Marlinton        66.17  58  P      P        14 10 04.6 -1.0
      baz=317,SNR=6.1
M59A  Waymart          66.20  53  P      P        14 10 05.5 -0.1
      baz=318,SNR=8.7
U53A  Fall Branch      66.24  61  P      P        14 10 05.7 -0.2
      baz=317,SNR=6.0
Y50A  Piedmont         66.27  65  P      P        14 10 06.4 +0.3
      baz=317,SNR=44
X51A  Calhoun          66.27  64  eP     P        14 10 06.0 -0.2
      comp=Z,61nm,0.9s
X51A  Calhoun          66.27  64  P      P        14 10 06.6 +0.5
      baz=317,SNR=12
T54A  Tazewell         66.28  60  P      P        14 10 07.0 +0.8
      baz=317,SNR=19
BOOM  Boomskoye usch   66.31 309  eP     P        14 10 06.6 +0.1
      comp=Z,16nm,0.8s
BOOM  Boomskoye usch   66.31 309  eP     P        14 10 06.6 +0.1
BOOM                               pmax    pmax
      comp=Z,16nm,0.8s
Z49A  Columbiana       66.31  66  P      P        14 10 06.6 +0.2
      baz=317,SNR=64
PKME  Peaks-Kenny Pk   66.34  47  P      P        14 10 05.8 -0.5
      baz=320
S55A  Lewisburg        66.34  59  P      P        14 10 06.6  0.0
      baz=317
P57A  Homestead Farm   66.40  56  P      P        14 10 06.8  0.0
      baz=318
W52A  Murphy           66.41  63  eP     P        14 10 07.5 +0.4
      comp=Z,58nm,1.0s
W52A  Murphy           66.41  63  P      P        14 10 07.5 +0.4
      baz=317,SNR=12
R56A  Bull Pasture M   66.46  58  P      P        14 10 07.3 -0.1
      baz=318,SNR=5.8
N59A  State Game Lan   66.49  54  eP     P        14 10 07.6 +0.1
      comp=Z,31nm,0.7s
N59A  State Game Lan   66.49  54  P      P        14 10 07.5  0.0
      baz=318,SNR=7.8
O58A  Lewisberry       66.49  55  P      P        14 10 07.2 -0.3
      baz=318
Q57A  Strasburg        66.52  57  P      P        14 10 07.7 +0.1
      baz=318
U54A  Nelsons Funny    66.54  61  eP     P        14 10 08.4 +0.4
      comp=Z,38nm,0.6s
U54A  Nelsons Funny    66.54  61  P      P        14 10 08.8 +0.9
      baz=317,SNR=8.4
149A  Jones            66.60  67  P      P        14 10 08.7 +0.5
      baz=317,SNR=29
V53A  Saluda           66.61  62  eP     P        14 10 09.0 +0.6
      comp=Z,24nm,0.8s
V53A  Saluda           66.61  62  P      P        14 10 09.0 +0.6
      baz=317,SNR=8.8
Z50A  Ashland          66.62  66  eP     P        14 10 08.4  0.0
      comp=Z,157nm,0.7s
Z50A  Ashland          66.62  66  P      P        14 10 08.4  0.0
      baz=317,SNR=98
Y51A  Rockmart         66.64  65  P      P        14 10 08.4 -0.2
      baz=317,SNR=34
T55A  Pulaski          66.67  60  P      P        14 10 09.2 +0.5
      baz=318
P58A  Pank, Wackersv   66.77  56  P      P        14 10 08.7 -0.5
      baz=318
W53A  Cullowhee        66.78  62  P      P        14 10 10.1 +0.5
      baz=317,SNR=12
X52A  Dahlonega        66.79  63  P      P        14 10 10.1 +0.6
      baz=317,SNR=24
BLA   Blacksburg       66.80  59  eP     P        14 10 08.6 -0.9
      comp=Z,23nm,0.8s
BLA   Blacksburg       66.80  59  eP     P        14 10 08.6 -0.9
BLA                                pmax    pmax
      comp=Z,23nm,0.8s
BLA   Blacksburg       66.80  59  P      P        14 10 09.5  0.0
      baz=318
249A  Camden           66.86  67  P      P        14 10 10.6 +0.7
      baz=317,SNR=6.5
N60A  Cedar Hill Far   66.86  53  P      P        14 10 09.6 -0.2
      baz=319,SNR=6.1
MVL   Millersville     66.88  55  eP     P        14 10 09.3 -0.6
      comp=Z,13nm,0.8s
AAK   Ala-Archa        66.90 310  eP     P        14 10 09.9 -0.3
      comp=Z,16nm,0.7s
AAK   Ala-Archa        66.90 310  eP     P        14 10 09.9 -0.3
AAK                                pmax    pmax
      comp=Z,16nm,0.7s
DOMB  Dombas           66.90 356  eP     P        14 10 08.3 -1.5
S56A  Natural Bridge   66.91  58  P      P        14 10 10.5 +0.3
      baz=318,SNR=10
LUPA  Lehigh Univers   66.93  54  eP     P        14 10 10.1 -0.1
      comp=Z,3.6nm,0.7s
Q58A  Fox Den Farm,    66.97  56  P      P        14 10 10.2 -0.3
      baz=318,SNR=5.9
U55A  TA2, Sparta      66.98  60  P      P        14 10 11.2 +0.5
      baz=318,SNR=10
Z51A  Franklin         67.00  65  P      P        14 10 10.5 -0.3
      baz=317,SNR=11
R57A  Stanardsville    67.01  57  P      P        14 10 11.1 +0.3
      baz=318,SNR=9.6
V54A  Nebo             67.02  61  P      P        14 10 11.7 +0.8
      baz=318,SNR=17
150A  Eclectic         67.03  66  P      P        14 10 11.2 +0.2
      baz=317,SNR=28
BG3   Lake Jocassee    67.04  62  eP     P        14 10 11.8 +0.7
      comp=Z,31nm,0.7s
NRN   Naryn            67.07 308  eP     P        14 10 10.8 -0.8
      comp=Z,10nm,0.9s
NRN   Naryn            67.07 308  eP     P        14 10 10.8 -0.8
NRN                                pmax    pmax
      comp=Z,10.0nm,0.9s
O60A  Telford          67.12  54  P      P        14 10 10.3 -1.2
      baz=319
P59A  Jarrettsville    67.12  55  P      P        14 10 11.1 -0.4
      baz=318
PMG   Port Moresby     67.13 217  P      P        14 10 12.8 +1.1
      comp=Z,23nm,1.0s,baz=305,slow=5.8,SNR=3.6
T56A  Rocky Mt         67.14  59  P      P        14 10 11.3 -0.4
      baz=318
S57A  Dark Hollow, R   67.18  58  eP     P        14 10 11.9  0.0
      comp=Z,12nm,0.6s
S57A  Dark Hollow, R   67.18  58  P      P        14 10 12.1 +0.2
      baz=318
X53A  Estanollee       67.20  63  P      P        14 10 11.9 -0.1
      baz=317,SNR=15
M61A  Granite Spring   67.20  52  P      P        14 10 11.3 -0.6
      baz=319
Y52A  Lilburn          67.23  64  eP     P        14 10 12.0 -0.3
      comp=Z,76nm,0.8s
Y52A  Lilburn          67.23  64  P      P        14 10 12.7 +0.4
      baz=317,SNR=20
BRNJ  Basking Ridge    67.27  53  eP     P        14 10 10.8 -1.6
      comp=Z,25nm,0.7s
349A  Repton           67.27  68  P      P        14 10 13.7 +1.1
      baz=317,SNR=8.9
R58A  Rapidan          67.28  57  P      P        14 10 12.1 -0.4
      baz=318,SNR=6.3
250A  Grady            67.35  67  eP     P        14 10 13.5 +0.4
      comp=Z,206nm,0.7s
250A  Grady            67.35  67  P      P        14 10 13.7 +0.7
      baz=317,SNR=6.3
PAL   Palisades        67.36  52  P      P        14 10 11.8 -1.2
      baz=319
V55A  Taylorsville     67.36  61  P      P        14 10 13.6 +0.6
      baz=318,SNR=8.2
P60A  Greenville       67.38  54  P      P        14 10 12.5 -0.6
      baz=319
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W54A  Cherokee Point   67.39  62  P      P        14 10 13.9 +0.7
      baz=318,SNR=12
LSA   Lhasa            67.42 290  eP     P        14 10 15.2 +1.1
      comp=Z,24nm,0.7s
U56A  King             67.45  60  P      P        14 10 13.8 +0.2
      baz=318,SNR=5.7
BRAL  Brewton          67.49  68  eP     P        14 10 14.9 +1.0
      comp=Z,140nm,0.9s
BRAL  Brewton          67.49  68  P      P        14 10 14.9 +1.0
      baz=317,SNR=5.5
151A  Opelika          67.49  66  P      P        14 10 13.5 -0.5
      baz=317,SNR=11
Y53A  Monroe           67.51  64  P      P        14 10 14.5 +0.4
      baz=318,SNR=16
Z52A  Williamson       67.53  65  P      P        14 10 14.2  0.0
      baz=318,SNR=22
GGN   Saint George     67.56  45  eP     P        14 10 13.5 -0.6
      comp=Z,25nm,0.8s
T57A  Hurt             67.58  59  eP     P        14 10 14.4  0.0
      comp=Z,20nm,0.6s
T57A  Hurt             67.58  59  P      P        14 10 13.8 -0.6
      baz=318,SNR=11
NC204 NORSAR Array S   67.58 355  eP     P        14 10 13.3 -0.8
      comp=Z,35nm,1.1s
WES   Weston           67.58  50  eP     P        14 10 13.8 -0.5
      comp=Z,28nm,0.9s
WES   Weston           67.58  50  eP     P        14 10 13.8 -0.5
WES                                pmax    pmax
      comp=Z,28nm,0.9s
R58B  Mineral          67.60  57  eP     P        14 10 14.8 +0.3
      comp=Z,14nm,0.8s
R58B  Mineral          67.60  57  P      P        14 10 14.1 -0.4
      baz=318
EMMW  East Machias     67.60  46  eP     P        14 10 11.4 -2.9
      comp=Z,28nm,0.7s
NC303 NORSAR Array S   67.60 355  eP     P        14 10 12.9 -1.3
      comp=Z,26nm,1.1s
X54A  Belton           67.68  62  P      P        14 10 15.9 +0.8
      baz=318,SNR=19
NC405 NORSAR Array S   67.69 354  eP     P        14 10 13.7 -1.1
      comp=Z,31nm,1.1s
449A  Pace             67.69  68  P      P        14 10 15.2  0.0
      baz=317
350A  Dozier           67.72  67  P      P        14 10 15.8 +0.4
      baz=317
152A  Waverly Hall     67.74  65  eP     P        14 10 14.6 -0.9
      comp=Z,40nm,0.8s
152A  Waverly Hall     67.74  65  P      P        14 10 15.2 -0.2
      baz=318,SNR=12
251A  Midway           67.76  66  P      P        14 10 15.7 +0.1
      baz=318,SNR=15
S58A  Poland Farm, P   67.77  57  eP     P        14 10 16.0 +0.5
      comp=Z,18nm,0.8s
S58A  Poland Farm, P   67.77  57  P      P        14 10 15.4 -0.2
      baz=318,SNR=5.5
NB201 NORSAR Array S   67.78 355  eP     P        14 10 14.7 -0.6
      comp=Z,26nm,0.9s
V56A  Mocksville       67.79  60  eP     P        14 10 15.6 -0.2
      comp=Z,24nm,0.8s
V56A  Mocksville       67.79  60  P      P        14 10 16.0 +0.2
      baz=318,SNR=7.6
PAULI Pauline          67.79  62  eP     P        14 10 15.6 -0.2
      comp=Z,28nm,0.8s
NB2   NORSAR Subarra   67.79 355  P      P        14 10 14.5 -0.9
      comp=Z,9.6nm,0.8s,baz=6.5,slow=6.5
NB2   NORSAR Subarra   67.79 355  P      P        14 10 14.5 -0.9
      baz=6.5,slow=6.5
NB200 NORSAR Array S   67.79 355  eP     P        14 10 14.5 -0.9
NOA   NORSAR Array B   67.79 355  P      P        14 10 14.5 -0.9
      comp=Z,7.6nm,0.9s,baz=6.6,slow=6.4,SNR=32
NOA                               PKPPKP P'P'df   14 38 30.6  -13
      comp=Z,1.3nm,0.9s,baz=170,slow=3.6,SNR=4.9
NOA                               LR     LR       14 41 04.5
      comp=Z,116nm,19.8s,baz=340,slow=37
KMSC  Kings Mountain   67.82  61  eP     P        14 10 15.7 -0.3
      comp=Z,56nm,0.8s
KMSC  Kings Mountain   67.82  61  P      P        14 10 16.2 +0.3
      baz=318,SNR=23
R59A  King George, V   67.82  56  P      P        14 10 15.5 -0.3
      baz=318
LMN   Caledonia Moun   67.88  44  eP     P        14 10 15.5 -0.7
      comp=Z,36nm,0.8s
GOGA  Godfrey          67.90  64  eP     P        14 10 16.3 -0.2
      comp=Z,44nm,0.8s
GOGA  Godfrey          67.90  64  eP     P        14 10 16.3 -0.2
GOGA                               pmax    pmax
      comp=Z,44nm,0.8s
GOGA  Godfrey          67.90  64  P      P        14 10 16.6 +0.1
      baz=318,SNR=25
Z53A  Monticello       67.94  64  P      P        14 10 16.8  0.0
      baz=318,SNR=56
U57A  Blanch           67.96  59  P      P        14 10 16.8  0.0
      baz=318,SNR=7.4
HODGE Hodges           67.98  63  eP     P        14 10 17.3 +0.4
      comp=Z,70nm,0.7s
NAO01 NORSAR Array S   68.01 355  eP     P        14 10 16.4 -0.4
      comp=Z,14nm,0.8s
T58A  Grand View Acr   68.01  58  P      P        14 10 17.2 +0.1
      baz=318,SNR=5.0
Y54A  Tignall          68.01  63  P      P        14 10 17.7 +0.5
      baz=318,SNR=34
ABKAR Akbulak array    68.02 323  eP     P        14 10 16.0 -1.0
      comp=Z,7.4nm,1.0s
450A  Crestview        68.03  68  P      P        14 10 17.9 +0.6
      baz=318
FAKI  Fak Fak          68.03 234  eP     P        14 10 17.4 -0.1
      comp=Z,90nm,0.9s
FAKI  Fak Fak          68.03 234  P      P        14 10 18.2 +0.7
NC602 NORSAR Array S   68.08 354  eP     P        14 10 16.1 -1.1
      comp=Z,19nm,1.0s
NC602 NORSAR Array S   68.08 354  eP     P        14 10 16.3 -0.9
V57A  Coltrane Farms   68.12  60  P      P        14 10 17.6 -0.2
      baz=318
X55A  Gracelyn & Ava   68.15  62  P      P        14 10 18.8 +0.8
      baz=318,SNR=33
252A  Lumpkin          68.22  66  P      P        14 10 18.3 -0.2
      baz=318,SNR=5.8
W56A  Indian Trail     68.24  61  P      P        14 10 18.0 -0.6
      baz=318
153A  Fort Valley      68.26  65  P      P        14 10 18.7  0.0
      baz=318,SNR=8.4
PANO  Nakornpanom      68.38 271  P      P        14 10 20.7 +1.1
Z54A  Sparta           68.39  64  P      P        14 10 19.7 +0.2
      baz=318,SNR=24
Y55A  Saluda           68.42  63  P      P        14 10 20.4 +0.7
      baz=318,SNR=16
KK31  Karatay Array    68.43 312  eP     P        14 10 18.6 -1.1
      comp=Z,11nm,0.7s
KK31  Karatay Array    68.43 312  eP     P        14 10 18.6 -1.1
KK31                               pmax    pmax
      comp=Z,11nm,0.7s
KKAR  Karatay Array    68.43 312  eP     P        14 10 18.6 -1.1
      comp=Z,11nm,0.7s
KKAR  Karatay Array    68.43 312  eP     P        14 10 18.6 -1.1
KKAR                               pmax    pmax
      comp=Z,11nm,0.7s
S60A  Water View       68.43  56  P      P        14 10 22.0 +2.3
      baz=319
X56A  White Oak        68.47  62  P      P        14 10 20.5 +0.5
      baz=318,SNR=17
352A  Blakely          68.49  66  eP     P        14 10 20.0 -0.2
      comp=Z,84nm,0.9s
352A  Blakely          68.49  66  P      P        14 10 20.5 +0.3
      baz=318,SNR=6.0
JSC   Jenkinsville     68.50  62  eP     P        14 10 20.8 +0.6
      comp=Z,51nm,0.6s
JSC   Jenkinsville     68.50  62  eP     P        14 10 20.8 +0.6
JSC                                pmax    pmax
      comp=Z,51nm,0.6s
T59A  Double "B" Far   68.51  58  eP     P        14 10 20.5 +0.2
      comp=Z,30nm,0.8s
T59A  Double "B" Far   68.51  58  P      P        14 10 20.4 +0.1
      baz=319,SNR=8.4
253A  Americus         68.52  65  eP     P        14 10 19.7 -0.6
      comp=Z,76nm,0.8s
253A  Americus         68.52  65  P      P        14 10 20.4  0.0
      baz=318,SNR=6.8
KSH   Kashi            68.53 307  P      P        14 10 25.0 +4.5
KSH                               pP     PcP      14 10 40.9 -4.6
KSH                               sP     sP       14 10 48.5  +14
KSH                               PcP    pP       14 10 50.1  +19
KSH                               PP     PP       14 13 00.8 +9.3
KSH                               S      S        14 19 22.8 +2.5
KSH                               ScS    SKSac    14 20 16.4 -0.7
KSH                               SS     SS       14 23 49.8 +6.0
KSH                                pmax    pmax
      comp=Z,27nm,0.8s
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KSH                                pmax    pmax
      comp=Z,140nm,4.7s
KSH                               LR     LR
      comp=Z,820nm,20.6s
KSH                               LR     LR
      comp=Z,280nm,18.4s
KSH                               LR     LR
      comp=Z,300nm,16.6s
W57A  Gilead           68.55  60  eP     P        14 10 20.7 +0.2
      comp=Z,23nm,0.6s
W57A  Gilead           68.55  60  P      P        14 10 20.7 +0.2
      baz=318,SNR=7.6
V58A  Windy Hill, Pi   68.55  59  P      P        14 10 20.0 -0.5
      baz=318,SNR=7.7
TAOE  Nuku Hiva Isla   68.56 138  eLR    LR       14 31 06.7
      comp=Z,742nm,22.8s,baz=337
TAOE  Nuku Hiva Isla   68.56 138  eT     T        15 25 08.3
      comp=Z,115nm,0.2s
NONG  Nongkai          68.61 272  P      P        14 10 21.6 +0.5
ARSB  Arslanbob        68.63 310  eP     P        14 10 20.5 -0.7
      comp=Z,22nm,0.8s
BIRD  Birdtown, Kers   68.67  61  eP     P        14 10 21.4 +0.1
      comp=Z,29nm,0.7s
VSU   Vasula           68.68 346ceP      P        14 10 21.1 +0.2
VSU                                pmax    pmax
      comp=Z,77nm,1.0s
Z55A  Blythe           68.79  63  P      P        14 10 22.2 +0.2
      baz=318
T60A  Surry            68.81  57  P      P        14 10 22.5 +0.3
      baz=319
U59A  Littleton        68.84  58  eP     P        14 10 21.3 -1.0
      comp=Z,77nm,0.2s
U59A  Littleton        68.84  58  P      P        14 10 22.9 +0.6
      baz=319
353A  Camilla          69.00  66  P      P        14 10 23.4 +0.1
      baz=318
X57A  Johnson Farm,    69.01  61  P      P        14 10 24.0 +0.6
      baz=318
V59A  Middlesex        69.04  59  P      P        14 10 24.1 +0.5
      baz=319,SNR=14
155A  Kite             69.05  64  P      P        14 10 24.1 +0.4
      baz=318,SNR=8.9
W58A  Raeford          69.06  60  P      P        14 10 24.1 +0.4
      baz=319
254A  Abbeville        69.08  65  P      P        14 10 24.2 +0.3
      baz=318,SNR=8.3
U60A  Pendleton        69.09  58  P      P        14 10 23.6 -0.2
      baz=319
MOS   Moscow           69.17 339  eP     P        14 10 22.0 -2.0
KONO  Kongsberg        69.27 355  eP     P        14 10 24.0 -0.6
      comp=Z,8.4nm,0.8s
KONO  Kongsberg        69.27 355d iP     P        14 10 23.7 -0.9
KONO                               pmax    pmax
      comp=Z,23nm,2.5s
KONO  Kongsberg        69.27 355  eP     P        14 10 23.7 -0.9
552A  Lynn Haven       69.27  68  P      P        14 10 25.9 +0.8
      baz=318
453A  Whigham          69.30  66  eP     P        14 10 24.3 -1.0
      comp=Z,73nm,0.8s
453A  Whigham          69.30  66  P      P        14 10 26.3 +1.1
      baz=318,SNR=5.2
X58A  Rowland          69.35  60  P      P        14 10 26.0 +0.5
      baz=319
Z57A  Bowman           69.54  62  P      P        14 10 27.6 +0.9
      baz=319,SNR=11
255A  Hazlehurst       69.56  64  P      P        14 10 27.1 +0.3
      baz=318
156A  Sylvania         69.58  63  P      P        14 10 28.2 +1.3
      baz=318,SNR=5.8
U61A  Possum Corner    69.58  57  P      P        14 10 27.1 +0.2
      baz=319
Y58A  Scranton         69.66  61  eP     P        14 10 28.1 +0.7
      comp=Z,76nm,0.7s
Y58A  Scranton         69.66  61  P      P        14 10 28.0 +0.6
      baz=319,SNR=5.2
KKM   Kota Kinabalu    69.70 254  eP     P        14 10 28.0  0.0
      comp=Z,35nm,1.0s
PAYA  Payao            69.70 276  P      P        14 10 28.8 +0.9
553A  Crawfordville    69.73  67  P      P        14 10 28.4 +0.5
      baz=318
X59A  McDuffie Farm,   69.74  60  P      P        14 10 27.7 -0.2
      baz=319
355A  Pearson          69.78  65  P      P        14 10 28.7 +0.5
      baz=318,SNR=6.4
454A  Quitman          69.80  66  P      P        14 10 29.4 +1.1
      baz=318,SNR=5.2
157A  Early Branch     69.84  63  P      P        14 10 29.5 +1.0
      baz=319
256A  Glennville       69.86  64  P      P        14 10 27.6 -1.1
      baz=318
W60A  Pink Hill        69.86  59  P      P        14 10 28.5 -0.1
      baz=319
V61A  Roper            69.91  58  P      P        14 10 28.1 -0.8
      baz=319
NHSC  New Hope         69.97  62  eP     P        14 10 30.2 +0.9
      comp=Z,102nm,0.7s
NHSC  New Hope         69.97  62  P      P        14 10 29.6 +0.3
      baz=319
OBN   Obninsk          69.99 339deP      P        14 10 28.1 -0.9
OBN                               i               14 10 49.3
OBN                               e               14 13 05.7
OBN                               ePPP   PPP      14 14 47.2
OBN                                pmax    pmax
      comp=Z,39nm,1.7s
Z58A  St. Stephen      70.00  62  P      P        14 10 28.7 -0.9
      baz=319
SHL   Shillong         70.02 286  eP     P        14 10 30.5 +0.5
Y59A  Loris            70.03  61  P      P        14 10 29.7  0.0
      baz=319
PHRA  Phrae            70.12 275  P      P        14 10 31.0 +0.6
455A  Stateville       70.13  66  P      P        14 10 31.3 +1.0
      baz=318,SNR=12
W61A  Ground Anchor    70.16  58  P      P        14 10 31.4 +0.9
      baz=319
356A  Blackshear       70.21  65  P      P        14 10 31.4 +0.5
      baz=319
158A  Hollywood        70.24  62  P      P        14 10 31.6 +0.6
      baz=319
554A  Perry            70.24  67  P      P        14 10 31.5 +0.5
      baz=318
257A  Skidaway Islan   70.34  63  P      P        14 10 31.8 +0.2
      baz=319
Y60A  Bolivia          70.38  60  P      P        14 10 32.3 +0.5
      baz=319
LAMP  Lampang          70.47 275  P      P        14 10 34.5 +1.9
UTTA  Uttaradit        70.48 274  P      P        14 10 33.3 +0.7
CMMT  Chiang Mai       70.68 276  P      P        14 10 34.3 +0.4
CHTO  Chiang Mai       70.69 276  eP     P        14 10 34.0 +0.1
      comp=Z,21nm,1.0s
CHTO  Chiang Mai       70.69 276  eP     P        14 10 34.0 +0.1
CHTO                               pmax    pmax
      comp=Z,21nm,1.0s
456A  Hilliard         70.72  65  eP     P        14 10 35.1 +1.2
      comp=Z,137nm,0.6s
456A  Hilliard         70.72  65  P      P        14 10 33.4 -0.5
      baz=319
CM31  Chiang Mai Arr   70.95 276  eP     P        14 10 34.6 -0.9
      comp=Z,21nm,0.8s
CMAR  Chiang Mai Arr   70.95 276  P      P        14 10 35.9 +0.4
      comp=Z,15nm,0.8s,baz=26,slow=6.8,SNR=74
CMAR                              LR     LR       14 43 55.3
      comp=Z,159nm,19.9s,baz=69,slow=38
CHAI  Chaiyaphum       70.96 272  P      P        14 10 36.1 +0.5
PBKT  Sadao Pong       71.10 273  P      P        14 10 36.9 +0.5
557A  Orange Park      71.41  65  P      P        14 10 38.5 +0.3
      baz=319
657A  Interlachen      71.66  66  P      P        14 10 39.7 +0.1
      baz=319
GUN   Gumba            71.84 292  eP     P        14 10 42.2 +1.0
      comp=Z,167nm,0.8s
JIRN  Jiri             71.85 292  eP     P        14 10 42.3 +1.0
      comp=Z,285nm,1.0s
757A  Oxford           72.03  66  P      P        14 10 42.3 +0.5
      baz=319
KKN   Kakani           72.28 292  eP     P        14 10 44.4 +0.7
      comp=Z,62nm,0.6s
VRH   Novokhopyorsk    72.29 335  eP     P        14 10 49.9 +6.8
VRH                                pmax    pmax
      comp=Z,20nm,0.5s
PKI   Pulchoki         72.37 292  eP     P        14 10 45.0 +0.6
      comp=Z,131nm,1.0s
PKIN  Phulchoki        72.38 292  eP     P        14 10 44.9 +0.6
      comp=Z,32nm,0.5s
GKN   Gorkha           72.50 293  eP     P        14 10 45.6 +0.7
      comp=Z,180nm,1.0s
758A  Lake Helen       72.51  66  P      P        14 10 46.1 +1.4
      baz=319
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DMN	Daman	72.52	292	eP	P	14 10 45.3	+0.1
	comp=Z,98nm,1.0s						
UMPA	Umpang Tak	72.70	274	P	P	14 10 48.2	+2.2
UTHA	Uthaitani	72.82	274	P	P	14 10 47.9	+1.2
COEN	Coen	72.82	219	eP	P	14 10 44.3	-2.3
	comp=Z,41nm,1.2s						
957A	Wimauma	72.89	67	P	P	14 10 47.6	+0.6
	baz=319						
VSR	Storozhevoye	72.95	336	eP	P	14 10 46.3	-0.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
858A	St. Cloud	72.98	66	P	P	14 10 47.6	0.0
	baz=320						
DWPF	Disney Wildern	73.02	66	P	P	14 10 47.9	+0.1
	baz=320						
CHBT	CHBT	73.13	269	P	P	14 10 46.6	-2.0
PPT	Papeete	73.16	151	LR	LR	14 37 38.3	
	comp=Z,151nm,21.1s,baz=315,slow=31						
PPT2	Papeete2	73.18	151	eS	S	14 20 13.9	-0.5
	comp=Z,158nm,23.2s						
PPT2	Papeete2	73.18	151	eLR	LR	14 33 05.2	
	comp=Z,515nm,28.2s,baz=353						
PPT2	Papeete2	73.18	151	eT	T	15 30 53.7	
	comp=Z,19nm,0.2s						
PAE	Paea	73.25	151	eT	T	15 30 58.4	
	comp=Z,4.3nm,0.3s						
KOLN	Koldanda	73.27	293	eP	P	14 10 50.1	+0.5
	comp=Z,128nm,1.0s						
TVO	Taravao	73.47	151	eT	T	15 31 14.5	
	comp=Z,2.2nm,0.3s						
058A	Arcadia	73.60	67	P	P	14 10 52.0	+0.8
	baz=320						
959A	Okeechobee	73.78	66	P	P	14 10 53.8	+1.5
	baz=320,SNR=5.8						
SRDT	SRDT	73.93	273	P	P	14 10 55.2	+1.9
059A	Moore Haven	74.05	67	P	P	14 10 55.0	+1.2
	baz=320						
DZM	Mont Dzumac	74.10	194	eP	P	14 10 55.9	+1.8
	comp=Z,136nm,1.2s						
DZM	Mont Dzumac	74.10	194	eLR	LR	14 33 47.1	
	comp=Z,725nm,23.4s						
DZM	Mont Dzumac	74.10	194	P	P	14 10 56.7	+2.6
	comp=Z,50nm,1.0s,baz=51,slow=11,SNR=22						
059Z	Ave Maria	74.36	68	P	P	14 10 57.2	+1.5
	baz=320						
NIL	Nilore	74.44	304	eP	P	14 10 56.4	+0.3
	comp=Z,48nm,0.8s						
NIL	Nilore	74.44	304	eP	P	14 10 56.4	+0.3
NIL				pmax	pmax		
	comp=Z,48nm,0.8s						
060A	Indiantown	74.45	66	P	P	14 10 57.5	+1.3
	baz=320						
PINNC	Pines Island,	74.49	193	eP	P	14 10 56.7	+0.6
	comp=Z,55nm,0.9s						
PHET	Kaeng Krachan	74.71	272	P	P	14 10 59.3	+1.5
060Z	West Palm Beac	74.82	67	P	P	14 10 59.0	+0.7
	baz=320						
SBUM	Sibu	74.95	255	eP	P	14 10 58.3	-0.9
	comp=Z,6.6nm,0.7s						
061Z	Ochoppi	75.03	67	P	P	14 11 00.8	+1.3
	baz=320						
AKASG	Malin Array Be	75.67	342	P	P	14 11 01.9	-1.0
	comp=Z,7.8nm,0.7s,baz=21,slow=6.0,SNR=33						
AKASG				PP	PP	14 13 51.0	-0.8
	comp=Z,0.4nm,0.3s,baz=348,slow=8.6,SNR=4.0						
AKASG				LR	LR	14 47 51.0	
	comp=Z,178nm,20.8s,baz=30,slow=38						
AKBB	Malin Array Si	75.67	342	eP	P	14 11 01.6	-1.3
	comp=Z,14nm,0.6s						
AKBB				ePP	PP	14 13 51.0	-0.8
AKBB	Malin Array Si	75.67	342	eP	P	14 11 01.6	-1.3
AKBB				e		14 13 51.1	
AKBB				pmax	pmax		
	comp=Z,14nm,0.6s						
KBL	Kabul	75.87	308	eP	P	14 11 04.0	-0.6
	comp=Z,26nm,0.8s						
KBL	Kabul	75.87	308	eP	P	14 11 04.0	-0.6
KBL				pmax	pmax		
	comp=Z,26nm,0.8s						
KSM	Kuching	76.89	256	eP	P	14 11 10.1	-0.1
	comp=Z,30nm,1.0s						
MTN	Manton Dam	77.12	230	eP	P	14 11 11.0	-0.4
	comp=Z,67nm,0.8s						
CTAO	Charters Tower	77.31	213	eP	P	14 11 12.3	-0.1
	comp=Z,53nm,0.9s						
CTAO	Charters Tower	77.31	213	eP	P	14 11 12.3	-0.1
CTAO				pmax	pmax		
	comp=Z,53nm,0.9s						
CLL	Collm	77.34	352	eP	P	14 11 10.0	-2.3
CLL				e*PP	sP	14 11 26.0	-0.1
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	Collm	77.34	352	eP	P	14 11 12.0	-0.3
	comp=Z,5.0nm,1.0s						
CLL				ePcP	PcP	14 11 23.0	+0.2
CLL				e(pP)	sP	14 11 26.0	-0.1
CLL				ePP	PP	14 14 06.0	+0.1
CLL				LmV		14 48 00.0	
	comp=Z,100nm,20.9s						
BRG	Berggiesshubel	77.69	352	eP	P	14 11 13.7	-0.6
	comp=Z,17nm,1.6s						
CHVC	Chvalec	77.77	350	AMS	AMS	14 47 30.0	
	comp=Z,200nm,16.1s						
OSTC	Ostas	77.78	350	AMS	AMS	14 52 10.0	
	comp=Z,200nm,17.1s						
UPC	Upice	77.85	350	AMS	AMS	14 47 40.0	
	comp=Z,200nm,20.6s						
MAK	Makhachkala	77.89	327	eP	P	14 11 15.7	+0.2
MAK				eS	S	14 21 08.7	+2.7
MAK				pmax	pmax		
	comp=Z,124nm,1.1s						
DPC	Dobruska-Polom	77.97	350	eP	P	14 11 15.9	0.0
DPC				MLR	MLR		
	comp=Z,200nm,17.9s						
DPC	Dobruska-Polom	77.97	350	eP	P	14 11 15.9	0.0
DPC				AMS	AMS	14 50 00.0	
	comp=Z,200nm,17.9s						
PVCC	Panska Ves	77.98	351	AMS	AMS	14 48 00.0	
	comp=Z,200nm,17.8s						
GEYT	Alibeck	78.15	317	P	P	14 11 18.4	+1.3
	comp=Z,2.6nm,0.9s,baz=351,slow=7.3,SNR=6.1						
GEYT				LR	LR	14 49 35.5	
	comp=Z,443nm,19.0s,baz=35,slow=39						
OKC	Ostrava-Krasne	78.27	349	AMS	AMS	14 48 30.0	
	comp=Z,600nm,36.7s						
MORC	Moravsky Berou	78.40	349	eP	P	14 11 17.9	-0.4
MEM	Membach	78.46	357	⇑P	P	14 11 18.6	+0.1
NKC	Novy Kostel	78.46	353	eP	P	14 11 18.7	+0.1
NKC				MLR	MLR		
	comp=Z,200nm,21.4s						
NKC	Novy Kostel	78.46	353	eP	P	14 11 18.7	+0.1
NKC				AMS	AMS	14 54 50.0	
	comp=Z,200nm,21.4s						
PRU	Pruhonice	78.51	351	AMS	AMS	14 48 00.0	
	comp=Z,200nm,20.6s						
GOPC	GO Pecny, Ondr	78.56	351	AMS	AMS	14 48 10.0	
	comp=Z,200nm,25.9s						
KIV	Kislovodsk	78.57	331	eP	P	14 11 19.3	-0.1
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KIV				MLR	MLR		
	comp=Z,764nm,19.0s						
KOLS	Kolonicke sedl	78.59	346	eP	P	14 11 19.4	+0.1
KOLS				pmax	pmax		
	comp=Z,15nm,1.4s						
KOLS	Kolonicke sedl	78.59	346	eP	P	14 11 19.4	+0.1
SNF	Seneffe	78.61	358	⇑P	P	14 11 19.1	-0.3
TBI	Tubuai	78.65	153	eLR	LR	14 35 44.9	
	comp=Z,512nm,24.8s,baz=342						
TBI	Tubuai	78.65	153	eT	T	15 37 43.2	
	comp=Z,9.4nm,0.3s						
BCLA	Clavier	78.67	357	⇑P	P	14 11 19.9	+0.2
BCLA				⇑PcP	PcP	14 11 28.6	0.0
NCK	Nalchik	78.70	330	⇑eP	P	14 11 21.7	+1.7
NCK				pmax	pmax		
	comp=Z,62nm,1.2s						
BBSR	BB Station	78.70	52	eP	P	14 11 20.3	+0.1
	comp=Z,55nm,1.3s						
KBZ	Khabaz	78.71	330	P	P	14 11 20.1	+0.1
	comp=Z,5.8nm,1.0s,baz=78,slow=2.6,SNR=7.5						
KBZ				LR	LR	14 49 42.1	
	comp=Z,346nm,21.9s,baz=20,slow=38						
LANS	Liptovska Anna	78.78	348	eP	P	14 11 21.3	+0.9
LANS				pmax	pmax		
	comp=Z,12nm,1.5s						
LANS	Liptovska Anna	78.78	348	eP	P	14 11 21.3	+0.9
UZH	Uzhgorod	78.88	346	eP	P	14 11 21.1	+0.3
UZH				e		14 11 28.1	
UZH				e		14 11 33.3	
VRAC	Vranov	78.97	350	⇓iP	P	14 11 21.8	+0.4
VRAC	Vranov	78.97	350	eP	P	14 11 21.2	-0.2
DOU	Dourbes	79.01	358	⇓P	P	14 11 20.7	-0.8
	comp=Z,9.6nm,1.5s						
TREC	Trest	79.11	350	AMS	AMS	14 52 50.0	
	comp=Z,200nm,15.8s						
AKT	Akhty	79.12	326	eP	P	14 11 23.2	+0.7
AKT				e		14 11 31.2	
AKT				pmax	pmax		
	comp=Z,29nm,1.7s						
NEY	Neytrino	79.19	330	⇑eP	P	14 11 24.8	+1.9
NEY				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KRUC	Moravsky	79.24	350	eP	P	14 11 22.3	-0.5
ZEI	Tsey	79.24	329	eP	P	14 11 21.0	-2.2
ZEI				pmax	pmax		
	comp=Z,21nm,0.7s						
KIS	Kishinev	79.29	341	eP	P	14 11 21.0	-2.1
KIS	Kishinev	79.29	341	ePcP	PcP	14 11 30.0	-1.3
KIS				eL	L	14 42 08.0	
KIS				LRM	MLR	14 51 04.0	
	comp=Z,500nm,16.0s						
KIS	Kishinev	79.29	341	eP	P	14 11 21.0	-2.1
KIS				e		14 11 30.0	
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
JAVC	Velka Javorina	79.29	349	eP	P	14 11 24.1	+0.9
ANN	Anapa	79.31	335	eP	P	14 11 15.1	-8.2
ANN				e*PP	PcP	14 11 24.7	-6.7
ANN				eS	S	14 21 06.6	-14
ANN				eSS	SS	14 26 20.7	-6.2
ANN				pmax	pmax		
	comp=Z,106nm,1.5s						
TRPA	Tarpa	79.33	346	⇓iP	P	14 11 23.4	+0.1
TRPA	Tarpa	79.33	346	⇓eP	P	14 11 22.1	-1.2
BUR08	Bucovina Ar. S	79.35	344	eP	P	14 11 22.9	-0.7
	comp=Z,15nm,0.8s						
MILM	Milestii Mici	79.36	341	⇓iP	P	14 11 25.1	+1.6
BURAR	Bucovina Array	79.38	344	⇓iP	P	14 11 23.8	0.0
BURAR	Bucovina Array	79.38	344	P	P	14 11 23.8	0.0
WLF	Walferdange	79.40	357	⇓P	P	14 11 24.3	+0.6
KHC	Kasperske Hory	79.45	352	eP	P	14 11 23.4	-0.6
	comp=Z,6.9nm,1.4s						
KHC	Kasperske Hory	79.45	352	d iP	P	14 11 23.6	-0.5
KHC				pmax	pmax		
	comp=Z,28nm,1.4s						
KHC	Kasperske Hory	79.45	352	eP	P	14 11 24.1	0.0
KHC				ePCP	PcP	14 11 31.5	-0.5
KHC				AMS	AMS	14 52 20.0	
	comp=Z,200nm,19.6s						
VYHS	Vyhne	79.50	348	eP	P	14 11 24.4	+0.1
VYHS				pmax	pmax		
	comp=Z,13nm,1.4s						
VYHS	Vyhne	79.50	348	eP	P	14 11 24.4	+0.1
GEC2	GERESS Array S	79.73	352	eP	P	14 11 24.8	-0.8
	comp=Z,16nm,1.6s						
GEC2	GERESS Array S	79.73	352	eP	P	14 11 24.8	-0.8
GEC2				pmax	pmax		
	comp=Z,16nm,1.6s						
GERES	GERESS Array B	79.73	352	P	P	14 11 25.2	-0.4
	comp=Z,2.3nm,0.8s,baz=28,slow=6.0,SNR=13						
MODS	Modra-Piesok	79.81	349	eP	P	14 11 25.5	-0.5
MODS				pmax	pmax		
	comp=Z,21nm,1.4s						
MODS	Modra-Piesok	79.81	349	eP	P	14 11 25.5	-0.5
TBLG	Delisi	79.92	328	eP	P	14 11 26.1	-0.6
	comp=Z,24nm,0.9s						
TBLG	Delisi	79.92	328	eP	P	14 11 26.1	-0.6
TBLG				pmax	pmax		
	comp=Z,24nm,0.9s						
PSZ	Piszkesteto	79.92	347	eP	P	14 11 26.1	-0.5
	comp=Z,21nm,1.3s						
PSZ	Piszkesteto	79.92	347	⇑iP	P	14 11 26.8	+0.1
PSZ	Piszkesteto	79.92	347	eP	P	14 11 26.2	-0.5
PSZ				pmax	pmax		
	comp=Z,21nm,1.3s						
PSZ	Piszkesteto	79.92	347	eP	P	14 11 26.1	-0.5
ZST	Bratislava	80.01	349	eP	P	14 11 26.7	-0.3
ZST				pmax	pmax		
	comp=Z,22nm,1.5s						
ZST	Bratislava	80.01	349	eP	P	14 11 26.7	-0.3
ARCR	ARCALIA	80.04	344	⇑iP	P	14 11 27.9	+0.7
TESR	Tescani	80.18	342	⇑iP	P	14 11 27.9	-0.1
TGUH	Tegucigalpa,Un	80.20	80	eP	P	14 11 28.6	-0.2
	comp=Z,51nm,0.9s						
IPM	Ipoh	80.29	265	eP	P	14 11 27.7	-1.4
	comp=Z,18nm,0.8s						
CONA	Conrad Observa	80.42	350	eP	P	14 11 29.8	+0.4
	comp=Z,13nm,1.5s,SNR=7.1						
CJR	Cluj-Napoca	80.53	345	⇓iP	P	14 11 30.5	+0.6
LDF	La Druitiere	80.56	1	eP	P	14 11 29.2	-0.8
LDF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DRGR		80.60	345	⇑iP	P	14 11 30.2	-0.1
AKH	Akhalkalaki	80.61	329	eP	P	14 11 30.5	-0.2
	comp=Z,12nm,1.0s						
AKH	Akhalkalaki	80.61	329	⇓iP	P	14 11 34.0	+3.4
AKH	Akhalkalaki	80.61	329	P	P	14 11 30.5	-0.2
AKH				pmax	pmax		
	comp=Z,12nm,1.0s						
BFO	Black Forest	80.63	355	i P	P	14 11 30.8	+0.4
VRI	Vrincioaia	80.78	342	⇑iP	P	14 11 31.5	+0.2
VRI	Vrincioaia	80.78	342	P	P	14 11 31.5	+0.2
ECH	Echery	80.80	356	eP	P	14 11 30.3	-1.0
	comp=Z,10nm,1.2s						
ECH	Echery	80.80	356	eP	P	14 11 30.3	-1.0
ECH				pmax	pmax		
	comp=Z,11nm,1.2s						
PLOR	Plostina	80.81	342	⇑iP	P	14 11 31.7	+0.2
DOPR	Dopca	80.94	343	⇓iP	P	14 11 33.1	+1.0
TLCR		81.02	341	⇓iP	P	14 11 32.0	-0.5
BISRR	Bisoca	81.09	342	⇓iP	P	14 11 32.2	-0.8
ARSA	Arzberg	81.12	350	i PcP	P	14 11 33.8	+0.7
	comp=Z,7.1nm,1.1s						
CLF	Chambon-Foret	81.12	359	eP	P	14 11 32.9	-0.1
	comp=Z,40nm,1.1s						
CFR	Carcaliu	81.17	341	⇑iP	P	14 11 33.3	+0.1
BCA	Borcka	81.17	330	⇓iP	P	14 11 35.5	+2.1
SIRR	Siria	81.28	346	⇓iP	P	14 11 34.7	+0.8
RETA	Reutte	81.32	353	i P	P	14 11 34.2	+0.1
	comp=Z,7.2nm,0.9s						
WATA	Walderalm	81.41	353	i P	P	14 11 35.0	+0.2
	comp=Z,7.2nm,0.5s						
MOTA	Moosalm	81.43	353	i P	P	14 11 35.1	+0.2
	comp=Z,7.8nm,1.0s						
WTTA	Wattenberg	81.47	353	i P	P	14 11 35.4	+0.2
	comp=Z,19nm,1.1s,SNR=5.9						
KBA	Koelnbreinsper	81.51	352	i PcP	P	14 11 36.1	+0.8
	comp=Z,31nm,0.9s,SNR=16						
SQTA	Sankt Quirin	81.55	353	i PcP	P	14 11 35.8	+0.3
	comp=Z,10nm,0.9s						
ARR	Arges	81.66	343	⇑iP	P	14 11 36.9	+0.9
HARR	Harsova	81.67	341	⇑iP	P	14 11 36.1	+0.1
SECR		81.71	342	⇑iP	P	14 11 37.0	+0.8
SOKA	Soboth	81.74	350	i PcP	P	14 11 36.8	+0.4
	comp=Z,25nm,1.1s,SNR=18						
MORH	Mrgy, Hungar	81.77	348	eP	P	14 11 33.0	-3.4
PERS	Pernice	81.77	350	i P	P	14 11 36.4	-0.2
FETA	Feichten	81.78	353	i PcP	P	14 11 37.1	+0.3
	comp=Z,15nm,1.1s,SNR=7.4						
TIRR	Tirgusor	81.80	341	eP	P	14 11 35.9	-0.7
	comp=Z,39nm,0.9s						
TIRR	Tirgusor	81.80	341	⇑iP	P	14 11 36.3	-0.3
TIRR	Tirgusor	81.80	341	eP	P	14 11 35.9	-0.7
TIRR				pmax	pmax		
	comp=Z,39nm,0.9s						
WRAB	Tennant Creek	81.84	224	eP	P	14 11 36.1	-0.9
	comp=Z,35nm,0.9s						
WRAB	Tennant Creek	81.84	224	deP	P	14 11 37.0	0.0
WRAB				pmax	pmax		
	comp=Z,41nm,1.1s						
WB2	Warramunga Arr	81.84	224	eP	P	14 11 36.1	-0.9
	comp=Z,38nm,1.0s						
WR1	Warramunga Arr	81.85	224	eP	P	14 11 37.2	+0.1
WRA	Warramunga Arr	81.85	224	P	P	14 11 37.2	+0.1
	comp=Z,20nm,0.8s,baz=40,slow=6.6,SNR=38						
ABTA	Abfaltersbach	81.91	352	i P	P	14 11 37.4	+0.1
	comp=Z,15nm,1.1s,SNR=6.0						
BZS	Buzias	81.92	346	⇓iP	P	14 11 37.7	+0.4
MYKA	Terra Mystica	81.93	351	i P	P	14 11 37.2	-0.2
	comp=Z,8.6nm,1.3s						
GZR	Gura Zlata	81.95	345	⇓iP	P	14 11 37.3	-0.2
OBKA	Obir	81.96	351	i PcP	P	14 11 37.8	+0.3
	comp=Z,9.2nm,0.8s						
SSF	Saint Saulge	82.07	358	eP	P	14 11 37.1	-0.9
SSF				pmax	pmax		
	comp=Z,15nm,1.2s						
FUORN	Ofenpass-Fuorn	82.22	354	eP	P	14 11 38.5	-0.6
	comp=Z,7.4nm,0.7s						
TUE	Stuetta	82.42	354	eP	P	14 11 39.7	-0.4
	comp=Z,11nm,1.0s						
MFF	Saint Martin d	82.55	1	eP	P	14 11 39.7	-0.8
MFF				pmax	pmax		
	comp=Z,15nm,0.9s						
JAVS	Javornik	82.61	351	i P	P	14 11 40.2	-0.9
VISS	Visnje	82.62	350	i P	P	14 11 40.0	-1.0
MDVR	Moldovita	82.72	345	⇑iP	P	14 11 40.9	-0.6
BOJS	Bojanci	82.88	350	i P	P	14 11 41.6	-0.6
PSI	Prapat	82.91	266	eP	P	14 11 42.8	-0.2
	comp=Z,61nm,0.9s						
PSI	Prapat	82.91	266	eP	P	14 11 42.8	-0.2
PSI				pmax	pmax		
	comp=Z,61nm,0.9s						
VLAD	Vladila	83.02	343	⇑iP	P	14 11 33.3	-10
RAZG	Razgrad	83.04	342	⇑iP	P	14 11 43.0	-0.2
BLY	Banja Luka	83.39	349	eP	P	14 11 48.5	+3.6
LPL	La Plagne	83.52	356	eP	P	14 11 49.1	+3.2
LPL				pmax	pmax		
	comp=Z,17nm,1.4s						
PLVB	Pleven	83.57	343	⇑iP	P	14 11 46.0	+0.1
DIVS	Divibare	83.65	346	i P	P	14 11 45.8	-0.6
ILGA	Ilgaz	83.79	336	eP	P	14 11 47.2	-0.1
	comp=Z,44nm,1.6s						
HAPS	Han Pijesak,Bl	83.81	347	eP	P	14 11 46.3	-0.9
BBLS	Lazići	83.96	347	i P	P	14 11 47.9	-0.1
HYB	Hyderabad	84.20	290	i P	P	14 11 50.0	+0.5
HYB				epP	pP	14 11 59.0	-1.0
HYB				esP	sP	14 12 02.5	-0.9
RUDO	Rudo	84.21	347	eP	P	14 11 47.1	-2.1
CAF	Calviac	84.23	359	eP	P	14 11 48.8	-0.5
CAF				pmax	pmax		
	comp=Z,24nm,1.1s						
VTS	Vitosha	84.57	344	eP	P	14 11 50.4	-0.8
	comp=Z,11nm,0.8s						
VTS	Vitosha	84.57	344	⇑iP	P	14 11 50.8	-0.4
VTS	Vitosha	84.57	344	eP	P	14 11 50.4	-0.8
VTS				pmax	pmax		
	comp=Z,11nm,0.8s						
SILT	Sile	84.68	339	⇓iP	P	14 11 51.7	+0.1
UPM	Unac-Piva	84.68	347	eP	P	14 11 49.4	-2.4
GSI	Gunungsitoli	84.91	266	eP	P	14 11 52.6	-0.4
	comp=Z,30nm,0.8s						
MDUB	Mudurnu	84.97	337	eP	P	14 11 52.7	-0.4
	comp=Z,63nm,0.8s						
BRY	Bratogost	85.03	347	eP	P	14 11 52.4	-1.1
BR101	Keskin Array S	85.05	335	eP	P	14 11 53.5	-0.2
BR131	Keskin Array S	85.05	335	eP	P	14 11 53.1	-0.5
	comp=Z,16nm,0.8s						
BRTR	Keskin Array B	85.06	335	P	P	14 11 53.5	-0.2
	comp=Z,12nm,0.8s,baz=46,slow=3.6,SNR=60						
BRTR				LR	LR	14 55 29.7	
	comp=Z,86nm,19.2s,baz=1.0,slow=40						
ANTO	Ankara	85.14	336	⇑iP	P	14 11 54.5	+0.5
STON	Ston	85.17	348	eP	P	14 11 52.7	-1.3
TREB	Trebinje	85.24	347	eP	P	14 11 53.2	-1.1
YLV	Yalova	85.30	339	⇑iP	P	14 11 54.7	-0.1
YLV	Yalova	85.30	339	P	P	14 11 54.7	-0.1
AS31	Alice Springs	85.32	222	eP	P	14 11 55.7	+0.8
	comp=Z,6.0nm,0.8s						
ASAR	Alice Springs	85.32	222	P	P	14 11 55.7	+0.8
	comp=Z,20nm,0.8s,baz=22,slow=5.0,SNR=112						
ASAR				LR	LR	14 46 08.4	
	comp=Z,196nm,20.0s,baz=33,slow=33						
PDG	Podgorica	85.39	347	⇑iP	P	14 11 54.9	-0.2
PDG	Podgorica	85.39	347	eP	P	14 11 54.2	-0.9
TTG	Podgorica	85.39	347	eP	P	14 11 54.5	-0.6
	comp=Z,27nm,0.7s						
TTG	Podgorica	85.39	347	eP	P	14 11 54.5	-0.6
TTG				pmax	pmax		
	comp=Z,27nm,0.7s						
DRME	Dracevica, Mon	85.64	347	eP	P	14 11 55.6	-0.8
SDDR	Presa de Saban	85.92	65	eP	P	14 11 58.8	+0.7
	comp=Z,23nm,0.8s						
POO	Poona	86.05	295	ex	P	14 11 54.0	-4.8
PGAV	Gavieira, Arco	86.83	7	eSS	SS	14 28 01.1	-17
PGAV	Gavieira, Arco	86.83	7	eLR	LR	14 41 28.6	
	comp=Z,185nm,20.0s						
POLO	Lamas de Olo	87.46	7	eP	P	14 12 05.0	-0.4
	comp=Z,7.3nm,0.9s						
MVO	Moncorvo	87.72	6	eP	P	14 12 06.1	-0.5
	comp=Z,14nm,1.1s						
MVO	Moncorvo	87.72	6	eLR	LR	14 42 08.0	
	comp=Z,122nm,18.0s						
PVIS	Viseu	88.10	7	eP	P	14 12 08.1	-0.3
	comp=Z,15nm,0.9s						
MTE	Manteigas	88.44	7	eP	P	14 12 09.7	-0.4
	comp=Z,16nm,0.9s						
MTE	Manteigas	88.44	7	eLR	LR	14 42 13.2	
	comp=Z,177nm,20.0s						
MTE	Manteigas	88.44	7	eP	P	14 12 09.2	-0.8
	comp=Z,12nm,0.8s						
PCAS	Casmilo, Conde	88.72	7	eP	P	14 12 10.9	-0.4
	comp=Z,18nm,1.0s						
TIP	Timpagrande	88.93	348	eP	P	14 12 11.7	-0.7
	comp=Z,9.6nm,1.1s						
AOPR	Arecibo Observ	88.97	62	eP	P	14 12 12.8	0.0
	comp=Z,58nm,1.2s						
PCBR	Castelo Branco	89.00	7	eP	P	14 12 11.8	-0.8
PTOM	Tomar	89.15	7	eP	P	14 12 12.9	-0.4
	comp=Z,21nm,0.9s						
URZ	Urewera	89.18	183	P	P	14 12 13.1	+0.1
	comp=Z,16nm,1.0s,baz=269,slow=5.3,SNR=12						
OBIP	Obispado Ponce	89.30	62	eP	P	14 12 14.4	+0.1
	comp=Z,61nm,1.0s						
ESDC	Sonseca Array	89.37	4	P	P	14 12 13.4	-1.0
	comp=Z,5.5nm,0.8s,baz=355,slow=4.6,SNR=34						
ESDC				LR	LR	14 57 24.6	
	comp=Z,53nm,18.2s,baz=315,slow=39						
ESLA	Sonseca Array	89.37	4	eP	P	14 12 13.5	-0.9
	comp=Z,9.0nm,1.0s						
PMRV	Marv??o	89.42	7	eP	P	14 12 13.9	-0.7
	comp=Z,7.5nm,1.1s						
PAB	San Pablo	89.48	4	eP	P	14 12 12.7	-2.3
	comp=Z,5.5nm,0.9s						
PAB	San Pablo	89.48	4	eP	P	14 12 12.7	-2.3
PAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HUMP	Col San Antoni	89.64	61	eP	P	14 12 15.7	-0.2
	comp=Z,20nm,0.8s						
PMTG	Montargil	89.71	7	eP	P	14 12 14.8	-1.2
	comp=Z,9.5nm,1.5s						
STKA	Stephens Creek	89.75	213	P	P	14 12 17.7	+1.8
	comp=Z,40nm,0.7s,baz=357,slow=6.1,SNR=57						
STKA				LR	LR	14 47 22.9	
	comp=Z,328nm,21.6s,baz=24,slow=32						
STKA	Stephens Creek	89.75	213	eP	P	14 12 16.8	+0.9
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	89.75	213	eP	P	14 12 16.8	+0.9
STKA				pmax	pmax		
	comp=Z,13nm,0.9s						
MTP	Monte Pirata	89.84	61	eP	P	14 12 16.5	-0.3
	comp=Z,96nm,0.9s						
STVI	Saint Thomas	89.96	60	eP	P	14 12 17.7	+0.3
	comp=Z,37nm,0.8s						
BKZ	Black Stump Fm	90.10	184	eP	P	14 12 16.5	-0.9
	comp=Z,30nm,1.2s						
SMRT	St. Maarten	91.22	59	eP	P	14 12 23.7	+0.4
	comp=Z,58nm,0.7s						
PVAQ	Vaqueiros	91.41	7	eLR	LR	14 43 35.4	
	comp=Z,161nm,20.0s						
SMLC	San Martn de	92.36	73	eP	P	14 12 25.9	-2.7
ZARC	Zaragoza, Cauc	92.91	74	eP	P	14 12 30.1	-1.0
KEST	Kesra	93.11	353	P	P	14 12 31.0	-0.9
	comp=Z,5.9nm,0.9s,baz=39,slow=0.7,SNR=9.2						
KEST	Kesra	93.11	353	eP	P	14 12 30.8	-1.1
	comp=Z,7.6nm,0.9s						
PTBC	PUERTO BERRIO,	93.90	75	eP	P	14 12 35.2	-0.6
GUY2C	Guyana, Caldas	94.39	76	eP	P	14 12 36.9	-1.6
NORC	Norcasia	94.42	76	eP	P	14 12 36.9	-1.3
PMOZ	Porto Moniz, M	94.78	15	eLR	LR	14 45 45.0	
	comp=Z,89nm,18.0s						
RPZ	Rata Peaks	94.96	187	P	P	14 12 41.2	+1.5
	comp=Z,8.7nm,0.8s,baz=56,slow=3.6,SNR=2.9						
ROSC	El Rosal	95.32	76	LR	LR	14 55 37.2	
	comp=Z,131nm,22.0s,baz=94,slow=35						
ORTC	Ortega, Tolima	95.49	77	eP	P	14 12 41.9	-1.1
RAYN	Ar Rayn	95.95	320	eP	P	14 12 43.7	-1.4

	comp=Z,3.8nm,0.9s						
RAYN	Ar Rayn	95.95	320	eP	P	14 12 43.7	-1.4
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TOA1	Torodi Ar. Sit	115.89	359	ePKPdf	PKiKP	14 18 00.3	-0.4
TOA1				ePKKPbc	PKKPbc	14 28 30.7	+0.8
TOA0	Torodi Ar. Sit	115.90	359	ePKPdf	PKiKP	14 18 00.2	-0.6
TORD	Torodi Ar. Bea	115.90	359	PKP	PKiKP	14 18 00.3	-0.4
	comp=Z,4.5nm,0.8s,baz=352,slow=3.8,SNR=18						
TORD				PKKPbc	PKKPbc	14 28 30.7	+0.8
	comp=Z,2.6nm,0.9s,baz=155,slow=0.6,SNR=10						
DBIC	Dimbokro	122.11	7	PKP	PKPdf	14 18 12.3	-0.5
	comp=Z,11nm,0.6s,baz=24,slow=1.0,SNR=20						
TIC	Toumodi	122.12	7	ePKIKP	PKPdf	14 18 12.3	-0.5
KIC	Kosan Boka	122.43	7	ePKIKP	PKPdf	14 18 12.6	-0.8
	comp=Z,34nm,0.7s						
LIC	Lamto	122.54	7	ePKIKP	PKPdf	14 18 12.9	-0.7
	comp=Z,39nm,0.7s						
CPUP	Villa Florida	129.69	83	PKP	PKPdf	14 18 24.2	-2.6
	comp=Z,2.3nm,0.6s,baz=33,slow=3.4,SNR=4.0						
PLCA	Paso Flores	131.00	107	PKP	PKiKP	14 18 30.2	+0.4
	comp=Z,9.9nm,0.9s,baz=317,slow=2.8,SNR=14						
PLCA	Paso Flores	131.00	107	ePKPdf	PKPdf	14 18 29.1	+0.2
PLCA	Paso Flores	131.00	107	ePKIKP	PKPdf	14 18 29.1	+0.2
LSZ	Lusaka	138.06	319	PKP	PKPdf	14 18 41.0	-1.9
	comp=Z,2.3nm,0.6s,baz=72,slow=3.2,SNR=2.8						
LSZ	Lusaka	138.06	319	PKIKP	PKPdf	14 18 41.0	-1.9
QSPA	South Pole Qui	140.98	180	PKhKP	PKPpre	14 18 40.7	
	comp=Z,12nm,0.8s,baz=330,slow=1.6,SNR=25						
QSPA	South Pole Qui	140.98	180	ePKPpre	PKPpre	14 18 39.5	
MATP	Matopo	142.49	315	PKhKP	PKPpre	14 18 45.9	
	comp=Z,7.3nm,1.0s,baz=43,slow=4.1,SNR=9.4						
PMSA	Palmer Station	144.67	138	ePKPdf	PKPdf	14 18 52.9	-0.2
TSUM	Tsumeb	145.49	332	PKPbc	PKPbc	14 18 56.2	0.0
	comp=Z,16nm,0.7s,baz=348,slow=6.3,SNR=24						
TSUM	Tsumeb	145.49	332	ePKPdf	PKPdf	14 18 55.6	-0.5
MAW	Mawson	146.31	218	PKPbc	PKPab	14 18 57.7	-0.3
	comp=Z,34nm,0.8s,baz=73,slow=3.8,SNR=72						
MAW	Mawson	146.31	218	ePKPbc	PKPbc	14 18 56.7	-0.4
MAW	Mawson	146.31	218	ePKP2	PKPbc	14 18 56.7	-0.4
LBTB	Lobatse	147.79	315	PKPbc	PKPbc	14 19 03.4	+0.7
	comp=Z,84nm,0.7s,baz=25,slow=1.7,SNR=114						
LBTB	Lobatse	147.79	315	ePKPbc	PKPbc	14 19 02.9	+0.2
WIN	Windhoek	148.80	330	ePKPbc	PKPbc	14 19 06.0	+0.5
WIN	Windhoek	148.80	330	ePKP2	PKPbc	14 19 06.0	+0.5
BOSA	Boshof	151.02	312	PKPbc	PKiKP	14 19 11.5	+0.2
	comp=Z,38nm,0.8s,baz=34,slow=1.7,SNR=37						
BOSA	Boshof	151.02	312	ePKPbc	PKPbc	14 19 10.0	-0.7
BOSA	Boshof	151.02	312	ePKIKP	PKPbc	14 19 10.0	-0.7
SYO	Syowa Base	154.50	211	⇓ePKPdf	PKPdf	14 19 06.8	-1.7
SYO	Syowa Base	154.50	211	⇓iPKPbc	PKPbc	14 19 16.1	-0.8
SYO	Syowa Base	154.50	211	⇓isPKPdf	PKPab	14 19 30.6	-1.0
SYO	Syowa Base	154.50	211	⇑esPKPbc	sPKPab	14 19 44.0	-1.9
VNA3	Neumayer Olymp	159.32	170	PKPab	PKPab	14 19 52.6	+0.2
VNA3	Neumayer Olymp	159.32	170	PKPdf	PKPdf	14 19 13.6	-1.1
SNAA	Sanae	159.41	176	PKPab	PKPab	14 19 52.5	-0.3
SNAA	Sanae	159.41	176	PKPdf	PKPdf	14 19 13.6	-1.2
SNAA	Sanae	159.41	176	PKP	PKPdf	14 19 13.6	-1.2
	comp=Z,3.1nm,0.9s,baz=176,slow=2.7,SNR=14						
SNAA				PKPab	PKPab	14 19 52.5	-0.3
	comp=Z,11nm,1.1s,baz=201,slow=4.2,SNR=12						
VNA1	Neumayer--Stat	160.03	171	PKPab	PKPab	14 19 55.9	+0.5
VNA1	Neumayer--Stat	160.03	171	PKPdf	PKPdf	14 19 14.7	-0.7

IDC ***24*** *14:02:46.3±0.6, 15°.06S×173°.53W, h0^{km}, mb4.4/13, mb1 4.6/13, mb1mx4.3/34, mbtmp4.4/13, MS3.7/8, Ms1 3.7/8, ms1mx3.5/24, Error ellipse: s-maj=31.4km s-min=15.6km az=117.0*

ISCJB ***24*** *14:02:47.0±0.2, 14°.98S±0°.04×173°.53W±0°.08, h10^{km}, mb4.5/38, MS3.7/11, Error ellipse: s-maj=11.4km s-min=4.6km az=25.4*

NEIC ***24*** *14:02:48.1±0.2, 15°.14S×173°.32W, h10^{km}, mb4.6/35, Error ellipse: s-maj=8.1km s-min=6.2km az=129.0*

ISC 24 14:02:47.7±0.5**, 15°.10S**±0°.08×**173°.31W**±0°.09**, h10**^{km}**,**
n110, σ1^{s}10/88**, mb4.6**/38**, MS3.7**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.11	141	ePn	Pn	14 04 03.1	-1.2
FUNA	Funafuti	9.82	311	ePn	Pn	14 05 08.7	-0.3
KNTN	Kanton	12.35	7	ePn	Pn	14 05 42.1	-1.6
RAR	Rarotonga	14.22	117	Pn	Pn	14 06 07.4	-1.8
	2.8nm,0.3s,baz=82,slow=14,SNR=3.2						
MARNC	Mare, Loyalty	18.82	248	eP	Pn	14 07 08.0	-0.1
	59nm,0.8s						
PINNC	Pines Island,	19.68	245	eP	Pn	14 07 19.2	+0.7
	151nm,1.9s						
DZM	Mont Dzumac	20.40	247	P	Pn	14 07 27.6	+0.5
	3.7nm,0.7s,baz=130,slow=23,SNR=7.4						
DZM	Mont Dzumac	20.40	247	eP	Pn	14 07 27.4	+0.3
	47nm,1.6s						
PPT	Papeete	22.90	99	LR	LR	14 14 14.4	
	comp=Z,64nm,20.8s,baz=280,slow=30						
PAE	Paea	22.90	100	eT	T	14 30 56.2	
	3.9nm,0.3s						
PPT2	Papeete2	22.90	99	eLR	LR	14 13 08.9	
	comp=Z,366nm,26.8s						
PPT2	Papeete2	22.90	99	eT	T	14 30 56.9	
	5.4nm,0.4s						
OUZ	Omahuta	23.23	208	P	P	14 07 55.8	+0.7
KUZ	Kuaotunu	23.67	202	P	P	14 08 00.0	+0.6
WMGZ	Waiomatatini S	23.79	196	P	P	14 08 01.9	+1.3
HAZ	Te Kaha	23.91	198	P	P	14 08 02.8	+1.1
WIAZ	Waiheke Island	23.94	203	P	P	14 08 02.6	+0.6
TBI	Tubuai	23.94	114	eLR	LR	14 13 44.5	
	comp=Z,433nm,27.0s						
TBI	Tubuai	23.94	114	eT	T	14 32 19.4	
	14nm,0.4s						
PKGZ	Pakihiroa	23.95	197	P	P	14 08 05.3	+3.1
MBAZ	Motutapu North	24.01	204	P	P	14 08 03.8	+1.2
PUZ	Puketiti	24.07	196	P	P	14 08 04.1	+0.8
RUGZ	Raukumara Rang	24.14	198	P	P	14 08 04.5	+0.5
ETAZ	East Tamaki Re	24.16	204	P	P	14 08 04.6	+0.6
MKAZ	Moumakai	24.20	203	P	P	14 08 04.7	+0.3
TWGZ	Tauwhareparae	24.25	197	P	P	14 08 05.6	+0.7
WTAZ	Waiatarua	24.28	204	P	P	14 08 04.8	-0.4
AWAZ	Awhitu Peninsu	24.36	204	P	P	14 08 05.0	-0.9
MWZ	Matawai	24.52	198	P	P	14 08 07.8	+0.4
URZ	Urewera	24.58	198	P	P	14 08 06.8	-1.1
	12nm,0.3s,baz=53,slow=1.3,SNR=20						
URZ	Urewera	24.58	198	eP	P	14 08 06.8	-1.1
	110nm,2.0s						
URZ	Urewera	24.58	198	P	P	14 08 06.7	-1.1
TOZ	Tahuroa Road	24.63	202	P	P	14 08 09.7	+1.4
SNGZ	Shannon Statio	24.99	198	P	P	14 08 13.3	+1.6
TLZ	Tolley Road	25.15	201	P	P	14 08 15.3	+2.2
RAHZ	Arahi	25.19	198	P	P	14 08 15.9	+2.5
HIZ	Hauiti	25.56	202	P	P	14 08 18.5	+1.8
BKZ	Black Stump Fm	25.60	199	P	P	14 08 17.7	+0.5
RPZ	Rata Peaks	31.49	202	P	P	14 09 09.3	-0.4
	14nm,0.8s,baz=263,slow=1.9,SNR=5.9						
TAOE	Nuku Hiva Isla	32.99	83	eLR	LR	14 18 03.3	
	comp=Z,84nm,22.1s						
TAOE	Nuku Hiva Isla	32.99	83	eT	T	14 43 28.4	
	33nm,0.2s						
RKT	Rikitea	37.00	108	eT	T	14 48 35.0	
	5.6nm,0.3s						
H11S2	WAKE ISLAND Hy	38.75	329	T	T	14 50 52.4	
	baz=147,slow=76,SNR=6.1						
H11S3	WAKE ISLAND Hy	38.77	329	T	T	14 50 54.6	
	baz=147,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	38.77	329	T	T	14 51 22.9	
	baz=147,slow=76,SNR=3.6						
H11N3	WAKE ISLAND Hy	39.70	330	T	T	14 52 05.0	
	baz=147						
H11N1	WAKE ISLAND Hy	39.70	330	T	T	14 52 00.7	
	baz=147						
H11N2	WAKE ISLAND Hy	39.71	330	T	T	14 52 05.4	
	baz=147						
STKA	Stephens Creek	44.27	240	P	P	14 10 56.4	-1.3
	2.4nm,0.6s,baz=87,slow=9.9,SNR=7.5						
STKA	Stephens Creek	44.27	240	eP	P	14 10 56.8	-0.9
	13nm,0.9s						
AS31	Alice Springs	50.29	252	eP	P	14 11 43.6	-1.3
	6.0nm,0.8s						
ASAR	Alice Springs	50.29	252	P	P	14 11 43.0	-1.8
	2.7nm,0.4s,baz=90,slow=7.6,SNR=60						
MJAR	Matsushiro Arr	68.77	320	LR	LR	14 38 58.5	
	comp=Z,45nm,21.8s,baz=70,slow=32						
PETK	Petropavlovsk-	72.37	342	P	P	14 14 12.8	-0.9
	2.1nm,0.9s,baz=116,slow=5.6,SNR=3.5						
PEA1	Petropavlovsk-	72.38	342	eP	P	14 14 12.8	-0.9
PFO	Pinyon Flats O	72.65	47	LR	LR	14 38 01.9	
	comp=Z,97nm,19.3s,baz=318,slow=29						
NV01	Mina Array Sit	74.04	42	eP	P	14 14 25.8	+1.6
NVAR	Mina Array Bea	74.04	42	P	P	14 14 25.8	+1.6
	0.6nm,0.7s,baz=234,slow=11,SNR=4.3						
NVAR				LR	LR	14 40 07.9	
	comp=Z,98nm,21.4s,baz=342,slow=30						
QSPA	South Pole Qui	74.94	180	P	P	14 14 30.2	+1.3
	10nm,0.9s,baz=38,slow=3.6,SNR=6.0						
QSPA	South Pole Qui	74.94	180	eP	P	14 14 29.8	+0.9
	15nm,1.0s						
KSRS	Korea Array	76.01	315	LR	LR	14 42 41.0	
	comp=Z,35nm,21.6s,baz=30,slow=32						
J08A	Circle Bar Ran	76.78	38	eP	P	14 14 41.1	+1.5
	6.6nm,1.2s						
USRK	Ussuriysk Ar.	77.20	323	LR	LR	14 42 13.5	
	comp=Z,91nm,21.5s,baz=148,slow=31						
G08A	Pilot Rock	77.64	36	eP	P	14 14 45.7	+1.3
	5.3nm,1.0s						
BMO	Blue Mountains	78.33	37	eP	P	14 14 49.0	+0.7
	2.3nm,0.9s						
MFID	Camas Ranch	78.40	39	eP	P	14 14 49.9	+1.1
	4.1nm,1.0s						
TTA	Tatalina	78.94	8	eP	P	14 14 52.7	+1.5
	5.2nm,1.0s						
F10A	Beach Ranch, E	79.02	36	eP	P	14 14 52.8	+0.7
	6.3nm,1.2s						
TMUT	Trail Mountain	79.19	44	eP	P	14 14 55.2	+1.8
	6.3nm,1.0s						
HLID	Hailey	79.34	39	eP	P	14 14 55.4	+1.5
	6.6nm,0.9s						
HVU	Hansel Valley	79.42	41	eP	P	14 14 55.3	+0.9
	4.6nm,0.8s						
PV14	Lion Creek, Pa	80.25	46	eP	P	14 15 00.1	+1.0
	5.2nm,0.9s						
PV23	Carpenter Ridg	80.29	46	eP	P	14 15 00.3	+0.9
	6.7nm,0.9s						
TXAR	Lajitas Array	80.37	56	P	P	14 15 00.6	+0.8
	1.2nm,1.0s,baz=226,slow=8.7,SNR=3.5						
MCK	McKinley	80.81	11	eP	P	14 15 01.6	+0.4
	24nm,1.2s						
HYT	Haines Junctio	80.90	17	eP	P	14 15 02.6	+0.7
	6.1nm,1.1s						
MCMT	McKenzie Canyo	80.96	39	eP	P	14 15 04.0	+1.2
TPAW	Teton Pass	81.45	41	eP	P	14 15 06.8	+1.4
	6.4nm,0.8s						
FXWY	Fox Creek	81.48	41	eP	P	14 15 06.8	+1.3
	3.0nm,1.0s						
WRH	Wood River Hil	81.64	11	eP	P	14 15 06.3	+0.7
	17nm,1.2s						
IMW	Indian Meadow	81.66	40	eP	P	14 15 07.9	+1.3
	5.3nm,0.8s						
DOT	Dot Lake	81.69	13	eP	P	14 15 06.7	+0.7
	6.4nm,0.9s						
HDA	Harding Lake	81.79	11	eP	P	14 15 07.0	+0.5
	8.7nm,1.1s						
PD31	Pinedale Array	81.98	42	eP	P	14 15 08.8	+0.6
	2.1nm,0.9s						
PDAR	Pinedale Array	81.98	42	P	P	14 15 08.8	+0.6
	2.2nm,0.9s,baz=226,slow=3.3,SNR=7.6						
SCRK	Sand Creek	82.00	13	eP	P	14 15 08.4	+0.7
	4.6nm,1.0s						
COLA	College	82.05	11	eP	P	14 15 08.1	+0.3
	16nm,1.1s						
BOZ	Bozeman (W)	82.10	39	eP	P	14 15 10.0	+1.3
	2.6nm,0.8s						
ILAR	Eielson Array	82.13	11	P	P	14 15 07.4	-0.8
	1.8nm,0.8s,baz=209,slow=5.1,SNR=9.8						
ILB	Eielson Array	82.13	11	eP	P	14 15 08.5	+0.3
	7.1nm,1.2s						
HRY	Holter Researc	82.55	38	eP	P	14 15 12.0	+1.0
RWWY	Rawlins	83.01	44	eP	P	14 15 14.7	+1.1
	5.1nm,0.8s						
DAWY	Dawson	83.11	14	eP	P	14 15 14.5	+1.1
	4.1nm,0.9s						
MAW	Mawson	88.11	199	P	P	14 15 38.5	+0.2
	1.8nm,0.7s,baz=141,slow=8.8,SNR=9.2						
MAW	Mawson	88.11	199	eP	P	14 15 38.5	+0.2
	6.9nm,0.8s						
YKA	Yellowknife Ar	89.79	23	P	P	14 15 45.8	-0.2
	0.6nm,0.7s,baz=228,slow=4.6,SNR=3.2						
YKA				LR	LR	14 49 48.7	
	comp=Z,8.4nm,18.6s,baz=217,slow=31						
YKB5	Yellowknife Ar	89.79	23	eP	P	14 15 45.8	-0.2
VNA3	Neumayer Olymp	93.15	175	PKPdf	P	14 16 02.4	+0.7
SNAA	Sanae	93.20	177	PKPdf	P	14 16 01.8	-0.2
SNAA	Sanae	93.20	177	P	P	14 16 02.1	+0.1
	1.8nm,1.0s,baz=187,slow=7.0,SNR=6.4						
SNAA	Sanae	93.20	177	eP	P	14 16 02.5	+0.4
	5.4nm,1.0s						
ULM	Lac du Bonnet	93.64	39	LR	LR	14 52 17.2	
	comp=Z,108nm,20.0s,baz=293,slow=32						
VNA1	Neumayer--Stat	93.84	175	PKPdf	P	14 16 05.6	+0.8
ARCES	ARCESS Array B	124.33	352	PKP	PKPdf	14 21 46.7	+0.4
	1.2nm,0.8s,baz=52,slow=4.7,SNR=4.8						
KHC	Kasperske Hory	145.59	352	ePKP	PKPbc	14 22 27.0	+0.5
KHC				ex	x	14 22 39.0	
GEC2	GERESS Array S	145.86	352	ePKPdf	PKPbc	14 22 27.9	+0.6
GERES	GERESS Array B	145.86	352	PKPbc	PKPbc	14 22 28.0	+0.6
	0.3nm,0.3s,baz=42,slow=4.3,SNR=5.0						
BR101	Keskin Array S	145.98	321	ePKPdf	PKPab	14 22 29.1	+0.4
BRTR	Keskin Array B	145.98	321	PKPbc	PKPab	14 22 29.1	+0.4
	3.5nm,0.8s,baz=109,slow=3.0,SNR=15						
FUORN	Ofenpass-Fuorn	148.43	355	ePKPbc	PKPbc	14 22 35.8	+0.9

MAN 24 14:10:30.9, 7°.45N×124°.51E, h25^{km}, mb4.6, ML3.4, MS3.3,
2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	0.34	229	⇓iP	Pn	14 10 44.3	+4.1
CTBH				i S	Sn	14 10 53.3	+7.0
BUKP	Musuan	0.70	52	eP	Pn	14 10 45.3	+0.1
BUKP				eS	Sn	14 10 55.3	+0.1
KCP	Kidapawan	0.72	127	⇑iP	Pb	14 10 43.7	-1.1
KCP				i S	Sn	14 10 57.6	+1.7
SKMP	Bagumbayan, Su	0.92	178	eP	Pn	14 10 48.2	0.0
SKMP				eS	Sn	14 11 00.4	-0.3
CGP	Cagayan de Oro	1.02	10	⇑eP	Pn	14 10 49.4	-0.2
CGP				eS	Sn	14 11 09.7	+6.6
DDMP	Don Marcelino,	1.79	138	eP	Pn	14 11 00.3	+0.1
DDMP				eS	Sn	14 11 23.4	+1.2

MOS ***24*** *14:13:11.1±2.0, 50°.16N×88°.69E, h10^{km}, mb4.0/3, Error ellipse: s-maj=15.0km s-min=11.6km az=137.0*

IDC ***24*** *14:13:11.3±1.1, 50°.16N×88°.79E, h0^{km}, mb3.5/2, mb1 3.7/7, mb1mx3.5/55, mbtmp3.6/7, ML3.4/5, MS3.4/3, Ms1 3.4/3, ms1mx2.8/45, Error ellipse: s-maj=13.7km s-min=12.2km az=162.0*

ISCJB ***24*** *14:13:13.4±0.6, 50°.12N±0°.03×88°.60E±0°.04, h15^{km}±4^{km}, mb4.1/4, MS4.4/1, Error ellipse: s-maj=6.4km s-min=3.6km az=149.4*

NNC ***24*** *14:13:16.8±2.5, 50°.18N×88°.11E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=24.7km s-min=10.9km az=104.0*

ISC 24 14:13:13.5±1.0**, 50°.15N**±0°.04×**88°.56E**±0°.04**, h16**^{km}±6^{km}**,**
n53, σ2^{s}35/73**, mb3.8**/4**, 12C-11D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	Chagan-Uzun	0.15	250	P	Pg	14 13 17.2	-0.4
CUR				S	Sg	14 13 20.5	+0.1
AKAR	Aktash	0.63	286	P	Pg	14 13 25.2	-0.8
AKAR				S	Sg	14 13 34.4	+0.1
CHBI	Chibit, Altay	0.70	284	P	Pg	14 13 26.5	-0.8
CHBI				S	Sg	14 13 36.1	-0.4
DGZ	Jazzator, Alta	0.86	239	d iPG	Pb	14 13 29.5	-0.6
DGZ	Jazzator, Alta	0.86	239	P	Pb	14 13 29.5	-0.6
DGZ				Sg	Sb	14 13 40.6	-0.9
TEL	Teeli	1.36	50	P	Pn	14 13 37.2	-0.7
TEL				S	Sn	14 13 53.6	-2.0
TUNR	Tungur	1.44	271	Pg	Pb	14 13 40.0	0.0
TUNR				Sg	Sg	14 13 59.2	-0.6
ARTR	Artybash	1.84	334	Pg	Pb	14 13 47.6	+0.9
ARTR				Sg	Sb	14 14 10.3	+0.8
GALT	Gorno-Altaysk,	2.45	319	Pg	Pg	14 13 59.6	-0.9
GALT				Sg	Sg	14 14 31.3	-0.9
UKR	Ust'-Kan	2.54	289	P	Pb	14 13 57.7	-1.1
UKR				S	Sb	14 14 28.9	-1.0
TASR	Tashtagol	2.65	351	P	Pb	14 13 58.9	-1.6
DJO	Djoy, Khakassi	3.11	31	P	Pn	14 14 03.9	+1.9
DJOS	Djoyskaya Sosn	3.19	33	P	Pn	14 14 04.6	+1.7
CERR	Cheremushki	3.24	32	P	Pn	14 14 05.7	+2.0
VEH	Verkhnyaya Baz	3.29	19	P	Pn	14 14 06.5	+2.0
ELT	Eltsovka	3.43	336	P	Pn	14 14 09.4	+3.1
ARDR	Aradan	3.90	50	P	Pn	14 14 13.3	+0.4
ABNR	Abakan	4.00	25	P	Pn	14 14 18.0	+4.0
KZLR	Kyzyl	4.04	65	P	Pn	14 14 16.0	+1.3
ZAA0	Zalesovo Array	4.45	330	⇑Pn	Pn	14 14 21.8	+1.6
	1.0nm,0.6s						
ZAA0				⇑Pg	Pg	14 14 37.7	-1.0
	2.0nm,0.5s						
ZAA0				⇑Lg	Lg	14 15 31.2	
	31nm,0.8s						
ZALV	Zalesovo Beam	4.45	330	Pn	Pn	14 14 22.4	+2.1
	1.5nm,0.3s,baz=145,slow=12,SNR=12						
ZALV				Sn	Sn	14 15 13.8	+2.2
	5.5nm,0.3s,baz=144,slow=20,SNR=4.1						
ZALV				Lg	Lg	14 15 33.9	
	15nm,0.3s,baz=139,slow=26,SNR=7.3						
TDJR	Todzha	5.24	62	P	Pn	14 14 32.7	+1.4
MK31	Makanchi Array	5.36	234	⇑Pn	Pn	14 14 36.2	+3.4
	26nm,0.5s,baz=56,slow=13,SNR=241						
MK31				⇓Sn	Sn	14 15 37.5	+3.4
	27nm,0.5s,baz=56,slow=20,SNR=7.2						
MK31				⇓Lg	Lg	14 16 00.5	
	80nm,0.6s,baz=56,slow=29,SNR=7.6						
MK31	Makanchi Array	5.36	234	PN	Pn	14 14 36.2	+3.4
MK31				e		14 15 37.5	
MK31				pmax	pmax		
	comp=Z,26nm,0.5s						
MK31				smax	smax		
	comp=N,27nm,0.5s						
MKAR	Makanchi Array	5.36	234	Pn	Pn	14 14 36.2	+3.4
	comp=N,4.0nm,0.3s,baz=52,slow=16,SNR=268						
MKAR				Sn	Sn	14 15 38.3	+4.2
	comp=N,10.0nm,0.3s,baz=59,slow=24,SNR=10						
MKAR				Lg	Lg	14 16 02.4	
	comp=N,34nm,0.3s,baz=57,slow=31,SNR=16						
MKAR				LR	LR	14 16 50.4	
	comp=N,117nm,21.6s,baz=46,slow=40						
MKAR	Makanchi Array	5.36	234	P	Pn	14 14 36.2	+3.4
MAKZ	Makanchi	5.51	235	⇑Pn	Pn	14 14 38.0	+3.1
	comp=N,22nm,0.7s						
MAKZ				⇓Sn	Sn	14 15 40.7	+2.8
	comp=N,41nm,0.8s						
MAKZ				⇓Lg	Lg	14 16 04.3	
	comp=N,157nm,1.1s						
MAKZ	Makanchi	5.51	235	PN	Pn	14 14 38.0	+3.1
MAKZ						14 15 40.7	
MAKZ						14 16 03.0	
MAKZ				pmax	pmax		
	comp=Z,22nm,0.7s						
MAKZ				smax	smax		
	comp=N,41nm,0.8s						
MAKZ				smax	smax		
	comp=N,59nm,0.6s						
MAKZ	Makanchi	5.51	235	P	Pn	14 14 38.0	+3.1
KURK	Kurchatov	6.38	279	PN	Pn	14 14 50.0	+3.2
KURK						14 16 02.7	
KURK	Kurchatov	6.38	279	P	Pn	14 14 49.0	+2.2
KURBB	Kurchatov Arra	6.43	278	Pn	Pn	14 14 50.0	+2.4
	comp=N,0.9nm,0.3s,baz=90,slow=15,SNR=32						
KURBB				Sn	Sn	14 16 02.7	+2.2
	comp=N,0.7nm,0.3s,baz=85,slow=28,SNR=7.6						
KURBB				Lg	Lg	14 16 34.6	
	comp=N,1.6nm,0.3s,baz=89,slow=35,SNR=9.8						
KURBB	Kurchatov Arra	6.43	278	⇑Pn	Pn	14 14 48.6	+1.0
	comp=N,13nm,0.4s						
KURBB				⇓Sn	Sn	14 16 03.0	+2.4
	comp=N,59nm,0.6s						
KURBB				⇓Lg	Lg	14 16 33.4	
	comp=N,218nm,0.6s						
PDGK	Podgornoye	9.23	226	⇓Pn	Pn	14 15 25.9	-0.2
	comp=N,6.9nm,0.7s						
PDGK				⇑Sn	Sn	14 17 07.0	-2.7
	comp=N,13nm,0.8s						
PDGK				⇓Lg	Lg	14 18 00.6	
	comp=N,36nm,0.8s						
PDGK	Podgornoye	9.23	226	P	Pn	14 15 25.9	-0.2
PDGK				S	Sn	14 17 06.9	-2.7
TLY	Talaya	9.65	75	Lg	Lg	14 18 07.8	
	comp=N,0.0nm,0.3s,baz=231,slow=21,SNR=4.2						
OTUK	Ortayu	10.79	266	⇓Pn	Pn	14 15 48.4	+1.1
	comp=N,2.7nm,0.7s						
OTUK				⇑Sn	Sn	14 17 46.5	-1.1
	comp=N,2.6nm,0.5s						
OTUK				⇑Lg	Lg	14 18 49.2	
	comp=N,29nm,0.8s						
OTUK	Ortayu	10.79	266	P	Pn	14 15 48.4	+1.1
OTUK				SN	Sn	14 17 46.5	-1.1
BVAR	Borovoye Array	11.66	291	Pn	Pn	14 15 59.6	+0.4
	comp=N,0.3nm,0.3s,baz=100,slow=14,SNR=4.9						
BVAR				Sn	Sn	14 18 05.9	-3.0
	comp=N,1.1nm,0.3s,baz=100,slow=23,SNR=7.8						
BVAR				Lg	Lg	14 19 24.5	
	baz=87,slow=25,SNR=1.6						
BRVK	Borovoye	11.73	291	⇑Pn	Pn	14 16 00.9	+0.8
	comp=N,2.0nm,0.6s						
BRVK				⇑Sn	Sn	14 18 06.4	-4.1
	comp=N,6.9nm,0.7s						
BRVK				⇓Lg	Lg	14 19 20.7	
	comp=N,18nm,1.0s						
BRVK	Borovoye	11.73	291	P	Pn	14 16 00.9	+0.8
BRVK						14 18 06.4	
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK				smax	smax		
	comp=N,7.0nm,0.7s						
SONM	Songino Array	11.94	94	Lg	Lg	14 19 28.6	
	comp=N,0.9nm,0.3s,baz=269,slow=28,SNR=9.2						
AAK	Ala-Archa	12.27	238	Sn	Sn	14 18 23.6	-0.4
	comp=N,0.3nm,0.3s,baz=53,slow=20,SNR=3.0						
AAK				Lg	Lg	14 19 43.1	
	comp=N,0.3nm,0.3s,baz=180,slow=20,SNR=4.1						
AAK				LR	LR	14 21 02.6	
	comp=N,66nm,19.4s,baz=240,slow=38						
AB31	Akbulak array	18.49	278	P	Pn	14 17 32.6	+3.8
	comp=N,1.3nm,0.8s,baz=83,slow=8.3,SNR=4.6						
ARU	Arti	18.90	301	S	Sn	14 21 00.3	-4.4
	comp=N,0.0nm,0.3s,baz=294,slow=20,SNR=3.2						
AKTO	Aktyubinsk	19.46	283	P	Pn	14 17 41.3	+0.8
	comp=N,0.1nm,0.3s,baz=82,slow=9.0,SNR=3.5						
AKTO				S	Sn	14 21 11.2	-7.1
	comp=N,0.1nm,0.3s,baz=79,slow=10,SNR=2.1						
TIXI	Tiksi	28.17	26	⇑eP	P	14 19 02.2	-2.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	39.42	276	P	P	14 20 43.4	+0.7
	comp=Z,0.8nm,0.6s,baz=73,slow=9.6,SNR=4.6						
BRTR	Keskin Array B	39.42	276	i P	P	14 20 44.7	+2.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	57.63	25	P	P	14 23 02.5	+0.2
	comp=Z,0.4nm,0.9s,baz=329,slow=6.8,SNR=2.6						
ILAR	Eielson Array	57.63	25	eP	P	14 23 06.5	+4.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	83.74	139	P	P	14 25 40.2	-1.4
	comp=Z,9.9nm,0.3s,baz=344,slow=6.2,SNR=3.3						
DBIC	Dimbokro	87.12	277	LR	LR	15 12 29.1	
	comp=Z,135nm,18.6s,baz=336,slow=41						

WEL 24 14:15:15.0, 42°S±1°×**174°.2E**±0°.6**, h14**^{km}±2^{km}**, M4.0**/22**,**
ML4.3/16**, MLv4.0**/22**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=1.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.09	195	P	Pg	14 15 18.1	+0.1
CMWZ				S	Sg	14 15 20.9	+1.0
BSWZ	Blackbirch Sta	0.28	260	P	Pb	14 15 21.3	-0.5
BSWZ				S	Sb	14 15 26.0	-0.4
TUWZ	Tuamarina	0.33	316	P	Pb	14 15 22.3	-0.3
TUWZ				S	Sb	14 15 27.4	-0.3
TCW	Tory Channel	0.46	3	P	Pg	14 15 24.4	+0.3
BHW	Baring Head	0.54	62	P	Pb	14 15 26.4	+0.2
PLWZ	Palliser	0.77	83	P	Pn	14 15 31.1	-0.3
NNZ	Nelson	0.79	304	P	Pb	14 15 30.4	-0.1
MSWZ	Moikau Station	0.80	72	P	Pn	14 15 31.3	-0.5
CAW	Cannon Point	0.83	48	P	Pb	14 15 31.5	+0.2
DUWZ	D'Urville Isla	0.90	344	P	Pg	14 15 32.2	-0.1
KHZ	Kahutara	0.91	215	P	Pn	14 15 33.9	+0.5
KHZ				S	Sn	14 15 47.3	+0.9
PAWZ	Paruwai Farm	0.93	73	P	Pn	14 15 33.8	0.0
MTW	Mount Morrison	1.07	62	P	Pg	14 15 35.9	+0.2
TRWZ	Traveller	1.12	77	P	Pn	14 15 36.2	-0.1
HOWZ	Holdsworth Sta	1.23	52	P	Pb	14 15 38.2	+0.2
TMWZ	Te Maipa	1.36	66	P	Pn	14 15 39.5	-0.1

MRZ	Mangatainoka R	1.42	46	P	Pb	14 15 41.1	-0.2
TIWZ	Tintock	1.53	55	P	Pn	14 15 42.3	+0.4
QRZ	Quartz Range	1.54	302	P	Pb	14 15 43.5	+0.2
OHWZ	Ohakea	1.67	29	P	Pb	14 15 46.3	+0.8
PRWZ	Pori Road	1.71	50	P	Pn	14 15 44.9	+0.4
POWZ	Post Office Ro	1.72	43	P	Pn	14 15 45.3	+0.8
BFZ	Birch Farm	1.81	58	P	Pn	14 15 45.3	-0.3
WAZ	Wanganui	1.99	17	P	Pb	14 15 51.5	+0.5
DVHZ	Dannevirke	2.00	47	P	Pn	14 15 48.1	-0.3
TSZ	Takapari Road	2.07	40	P	Pn	14 15 49.8	+0.5
LREZ	Lake Rotokare	2.21	3	P	Pb	14 15 54.2	-0.5
NMEZ	Namu Road	2.27	353	P	Pb	14 15 55.4	-0.3
PRHZ	Porangahau	2.29	53	P	Pn	14 15 53.7	+1.3
PNHZ	Pukenui	2.30	41	P	Pn	14 15 52.7	+0.2
WPHZ	Waipukurau	2.31	47	P	Pg	14 15 59.4	+0.1
PREZ	Palmer Road	2.32	358	P	Pb	14 15 56.2	-0.5
KHEZ	Kahui Hut	2.38	356	P	Pb	14 15 57.2	-0.4
NBEZ	Newall Road No	2.41	353	P	Pb	14 15 57.8	-0.4
MTVZ	Mangateitei	2.46	23	P	Pb	14 16 00.4	+1.3
DREZ	Durham Road	2.48	359	P	Pb	14 15 58.5	-0.7
PKE	Pukeiti	2.48	355	P	Pb	14 15 57.6	-1.7
PKVZ	Pokaka	2.52	20	P	Pb	14 15 59.4	-0.6
MOVZ	Moawhango	2.53	28	P	Pb	14 15 59.1	-1.2
VRZ	Vera Road	2.57	9	P	Pb	14 15 59.0	-1.8
PXZ	Pawanui	2.57	51	P	Pb	14 16 00.3	-0.6
BHHZ	Black Hill Sta	2.58	33	P	Pn	14 15 57.7	+1.3
MHEZ	Mangahewa	2.59	1	P	Pg	14 16 03.1	-1.4
KRHZ	Kereru	2.59	39	P	Pn	14 15 56.6	+0.1
DRZ	Dome Shelter	2.59	23	P	Pb	14 16 02.6	+1.1
WHVZ	Whangaehu Hut	2.59	24	P	Pb	14 15 59.8	-1.6
FWVZ	Far West T-bar	2.61	23	P	Pb	14 15 59.4	-2.2
TUVZ	Tukino	2.63	25	P	Pn	14 15 59.4	+2.3
NGZ	Ngauruhoe	2.70	23	P	Pb	14 16 01.4	-1.7
KAHZ	Kahuranaki	2.74	48	P	Pn	14 15 58.2	-0.4
WTVZ	West Tongariro	2.75	22	P	Pb	14 16 02.4	-1.6
TWVZ	Taurewa	2.75	20	P	Pb	14 16 04.2	+0.3
KRVZ	Karewarewa	2.78	23	P	Pb	14 16 05.7	+1.1
KWHZ	Kaweka Forest	2.79	37	P	Pb	14 16 06.2	+1.6
MCHZ	McNeill Hill	2.90	41	P	Pn	14 16 01.9	+1.1
KATZ	Kakaramea	2.91	23	P	Pb	14 16 07.9	+1.2
RITZ	Rihia Road	2.96	25	P	Pb	14 16 08.5	+1.0
BKZ	Black Stump Fm	3.03	35	P	Pn	14 16 04.9	+2.3
RATZ	Rangitukua	3.03	23	P	Pb	14 16 09.2	+0.5
HATZ	Hinemaiaia	3.11	28	P	Pb	14 16 12.1	+2.0
WATZ	Wairara	3.17	22	P	Pb	14 16 12.5	+1.4
HIZ	Hauiti	3.19	9	P	Pn	14 16 07.8	+3.2
TLZ	Tolley Road	3.48	17	P	Pn	14 16 12.5	+3.8
ALRZ	Allen Road	3.49	28	P	Pb	14 16 16.3	-0.4
PRRZ	Plateau Road	3.57	28	P	Pb	14 16 17.5	-0.3
TOZ	Tahuroa Road	4.05	14	P	Pn	14 16 20.9	+4.3
URZ	Urewera	4.05	34	P	Pb	14 16 21.4	-4.8
MWZ	Matawai	4.18	38	P	Pn	14 16 17.2	-1.1
TWGZ	Tauwhareparae	4.52	41	P	Pn	14 16 24.6	+1.6
AWAZ	Awhitu Peninsu	4.61	4	P	Pn	14 16 28.0	+3.8
MKAZ	Moumakai	4.61	9	P	Pn	14 16 27.8	+3.6
WTAZ	Waiatarua	4.74	3	P	Pb	14 16 32.0	-5.8
ETAZ	East Tamaki Re	4.74	7	P	Pn	14 16 29.5	+3.6
HAZ	Te Kaha	4.76	36	P	Pn	14 16 31.6	+5.2
RVAZ	Riverhead Bore	4.90	3	P	Pn	14 16 31.6	+3.4
WIAZ	Waiheke Island	4.92	8	P	Pn	14 16 32.5	+4.1
MBAZ	Motutapu North	4.92	6	P	Pn	14 16 32.3	+3.8
OUZ	Omahuta	6.46	355	P	Pn	14 16 52.9	+3.3

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*IDC **24** 14:19:34.3±1.0, 23°.88N×125°.90E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.6/43, mbtmp3.8/7, ML2.9/3, Error ellipse: s-maj=35.9km s-min=20.4km az=83.0*

*ISCJB **24** 14:19:35.8±1.1, 23°.83N±0°.04×125°.90E±0°.03, h28^{km}±8^{km}, mb3.7/7, Error ellipse: s-maj=6.8km s-min=4.3km az=159.0*

*NEIC **24** 14:19:35.7±0.5, 23°.85N×125°.81E, h10^{km}, mb4.2/1, Error ellipse: s-maj=9.6km s-min=6.3km az=154.0*

*JMA **24** 14:19:36.4±0.1, 23°.83N×125°.89E, h69^{km}, M3.4*

ISC 24 14:19:36.0±3.4, **23°.86N**±0°.06×**125°.90E**±0°.04, **h16**^{km}±21^{km}, **n40**, σ**1^{s}07**/55, **mb3.8**/7, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.00	334	P	Pb	14 19 55.2	+0.2
JOGS				*e*S	Sb	14 20 09.1	+1.1
JMJ2	Miyako jima3	1.02	330	P	Pb	14 19 55.7	+0.4
JMJ2				*e*S	Sb	14 20 09.4	+0.9
JIRB	Irabujima	1.17	326	P	Pb	14 19 57.5	-0.4
JIRB				S	Sb	14 20 12.7	-0.1
JIKM	Ikemajima	1.22	331	P	Pn	14 19 58.4	0.0
JIKM				*e*S	Sb	14 20 14.7	+0.6
JTJ	Tarama	1.34	306	P	Pn	14 19 59.5	-0.6
JTJ				S	Sb	14 20 16.7	-1.0
JISG	Ishigakijimahi	1.62	297	P	Pn	14 20 03.4	-0.5
JIJ	Ishigaki jima	1.68	288	P	Pn	14 20 04.3	-0.5
JIJ				*e*S	Sn	14 20 25.1	-0.9
JKRS	Kuro-shima	1.77	283	P	Pn	14 20 05.5	-0.4
JKRS				S	Sn	14 20 27.6	-0.5
HATJ	Hateruma jima	1.92	276	P	Pn	14 20 07.3	-0.8
HATJ				S	Sn	14 20 30.2	-1.8
IRIF	Iriomote-Funau	2.04	284	P	Pn	14 20 09.0	-0.6
IRIF				*e*S	Sn	14 20 33.9	-0.9
JKE	Kume jima 2	2.59	18	P	Pn	14 20 16.9	-0.3
JKE				*e*S	Sn	14 20 46.4	-2.0
YOJ	Yonaguni jima	2.70	283	*e*Pn	Pn	14 20 18.0	-0.9
YOJ	Yonaguni jima	2.70	283	P	Pn	14 20 18.3	-0.5
JYNG	Yonagunijimaku	2.76	283	P	Pn	14 20 19.0	-0.6
JYNG				S	Sn	14 20 50.1	-2.5
JJT3	Tamagusuku3	2.85	37	P	Pn	14 20 20.6	-0.2
JAGN	Aguni-jima	2.98	24	P	Pn	14 20 22.3	-0.3
JAGN				*e*S	Sn	14 20 57.3	-0.8
JNTH	Nagotoyohara	3.28	36	P	Pn	14 20 26.0	-0.7
JNTH				S	Sn	14 21 04.6	-0.8
JOW	Kunigami	3.66	36	Pn	Pn	14 20 31.7	-0.3
	0.8nm,0.3s,baz=155,slow=13,SNR=31						
JOW				Sn	Sn	14 21 12.3	-2.6
	1.6nm,0.3s,baz=81,slow=18,SNR=2.5						
JOW	Kunigami	3.66	36	*e*Pn	Pn	14 20 31.4	-0.6
JOW				*e*Sn	Sn	14 21 12.3	-2.6
NACB	Ninganchiao	3.95	275	*e*Pn	Pn	14 20 34.0	-1.9
YHNB	Yeheng	4.20	282	*e*Pn	Pn	14 20 39.5	-0.1
YULB	Yu-li	4.24	265	*e*Pn	Pn	14 20 37.9	-2.2
SSLB	Suanglung	4.53	270	*e*Pn	Pn	14 20 42.9	-1.1
TPUB	Ta-pu	4.86	265	*e*Pn	Pn	14 20 48.4	-0.2
JNU	Nakatsue	10.21	24	Pn	Pn	14 22 01.5	-0.6
	0.2nm,0.3s,baz=6.8,slow=8.8,SNR=2.8						
JNU	Nakatsue	10.21	24	*e*Pn	Pn	14 22 01.2	-0.8
MAJO	Matsushiro	16.50	37	*e*P	P	14 23 28.8	-0.7
MJAR	Matsushiro Arr	16.50	37	Pn	P	14 23 28.8	-0.7
	0.0nm,0.3s,baz=226,slow=10,SNR=2.5						
MK32	Makanchi Array	41.61	314	*e*P	P	14 27 24.1	+0.8
MKAR	Makanchi Array	41.61	314	P	P	14 27 24.1	+0.8
	0.2nm,0.4s,baz=101,slow=7.9,SNR=3.1						
ZALV	Zalesovo Beam	42.91	325	P	P	14 27 34.5	+0.7
	0.4nm,0.3s,baz=129,slow=41,SNR=1.8						
ZAA1	Zalesovo Array	42.92	325	*e*P	P	14 27 34.5	+0.7
WR1	Warramunga Arr	44.31	169	*e*P	P	14 27 45.7	+0.4
WRA	Warramunga Arr	44.31	169	P	P	14 27 45.7	+0.4
	2.1nm,0.8s,baz=351,slow=10,SNR=3.8						
ASAR	Alice Springs	47.88	170	P	P	14 28 14.7	+1.2
	0.5nm,0.6s,baz=355,slow=13,SNR=6.9						
ABKAR	Akbulak array	56.75	314	*e*P	P	14 29 20.1	+1.0
	1.6nm,0.7s						
FIA0	FINESS Array S	73.88	330	*e*P	P	14 31 10.9	+1.1
FINES	FINESS Array B	73.88	330	P	P	14 31 10.9	+1.1
	1.2nm,0.7s,baz=57,slow=5.1,SNR=5.6						
NB200	NORSAR Array S	80.49	333	*e*P	P	14 31 47.5	+0.4
NOA	NORSAR Array B	80.49	333	P	P	14 31 47.5	+0.4
	0.5nm,0.8s,baz=57,slow=5.8,SNR=3.5						

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*SOME **24** 14:35:57.2, 40°.77N×77°.65E, h5^{km}*

*NNC **24** 14:35:58.1±0.9, 40°.83N×77°.68E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=6.0km s-min=4.1km az=169.0*

*KRNET **24** 14:35:59.4±0.1, 40°.86N×77°.52E, h13^{km}, mb2.9*

ISC 24 14:35:55.2±1.9, **40°.75N**±0°.08×**77°.67E**±0°.04, **h10**^{km}, **n56**, σ**1^{s}23**/82, **19C-16D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.43	345	⇑*i*P	Pg	14 36 23.4	+0.8
	baz=49						
KDJ				⇑*e*S	Sg	14 36 41.6	+0.4
	baz=49						
NRN	Naryn	1.43	299	⇓*i*P	Pg	14 36 23.8	+1.1
	baz=96						
NRN				⇓*i*S	Sg	14 36 41.3	-0.1
	baz=96						
PRZ	Przheval'sk	1.82	17	⇓*i*P	Pg	14 36 32.0	+1.9
	baz=22						
PRZ				⇓*i*S	Sg	14 36 55.2	+1.5
	baz=22						
ULHL	Ulahol	1.84	325	⇑*e*P	Pg	14 36 31.1	+0.6
	baz=26						
ULHL				⇑*i*S	Sb	14 36 53.0	+0.8
	baz=26						
ULHL	Ulahol	1.84	325	P	Pg	14 36 31.4	+0.9
	SNR=7.8						
BOOM	Boomskoye usch	2.17	324	⇓*i*P	Pg	14 36 36.5	-0.3
	baz=25						
BOOM				⇓*i*S	Sb	14 37 02.9	+1.2
	baz=25						
KZA	Kyzart	2.25	307	⇑*i*P	Pg	14 36 38.2	-0.2
	baz=6.0						
KZA				⇑*i*S	Sb	14 37 05.5	+1.2
	baz=6.0						
KZA	Kyzart	2.25	307	P	Pg	14 36 38.7	+0.3
	SNR=22						
TNSS	Tian-Shan	2.35	347	Pg	Pg	14 36 40.0	-0.2
	34nm,0.4s						
TNSS				Lg	Lg	14 37 11.1	
	17nm,0.3s						
TNSS	Tian-Shan	2.35	347	*e*P	Pg	14 36 40.0	-0.2
	17nm,0.3s						
TNSS				*e*S	Sg	14 37 11.5	+0.8
	18nm,0.5s						
SATY	Saty	2.38	13	Pg	Pg	14 36 40.4	-0.3
	14nm,0.3s						
SATY				Lg	Lg	14 37 11.7	
	39nm,0.5s						
SATY	Saty	2.38	13	*e*P	Pg	14 36 40.5	-0.1
	13nm,0.1s						
SATY				*e*S	Sg	14 37 12.1	+0.7
	33nm,0.5s						
IZV	Izvestkoviy	2.42	341	Pg	Pg	14 36 41.3	-0.2
	10nm,0.3s						
IZV				Lg	Lg	14 37 13.2	
	41nm,0.3s						
IZV	Izvestkoviy	2.42	341	*e*P	Pg	14 36 41.1	-0.4
	10nm,0.3s						
IZV				*e*S	Sg	14 37 13.1	+0.3
	41nm,0.3s						
MDOK	Medeo	2.46	349	Pg	Pg	14 36 41.0	-1.3
	14nm,0.3s						
MDOK				Lg	Lg	14 37 12.6	
	22nm,0.7s						
MDOK	Medeo	2.46	349	*e*P	Pg	14 36 41.7	-0.6
	15nm,0.4s						
MDOK				*e*S	Sg	14 37 14.1	0.0
	22nm,0.5s						
KOTS	Kotyrbulak	2.52	351	Pg	Pg	14 36 42.9	-0.5
	11nm,0.3s						
KOTS				Lg	Lg	14 37 16.4	
	51nm,0.3s						
AAA	Alma-Ata	2.52	347	Pg	Pg	14 36 43.7	+0.2
	35nm,0.1s						
AAA				Lg	Lg	14 37 17.4	
	30nm,0.3s						
MTBS	Maitube	2.55	339	Pg	Pg	14 36 43.0	-1.1
	12nm,0.3s						
MTBS				Lg	Lg	14 37 16.5	
	20nm,0.4s						
MTBS	Maitube	2.55	339	*e*P	Pg	14 36 43.4	-0.7
	9.8nm,0.3s						
MTBS				*e*S	Sg	14 37 17.2	0.0
	31nm,0.3s						
UZB	Uzynbulak	2.60	22	Pg	Pb	14 36 42.4	+0.4
	3.8nm,0.4s						
UZB				Lg	Lg	14 37 15.9	
	13nm,0.5s						
UZB	Uzynbulak	2.60	22	*e*P	Pg	14 36 44.0	-1.0
	3.4nm,0.3s						
UZB				*e*S	Sg	14 37 18.6	-0.2
	13nm,0.4s						
KST	Kastek	2.62	332	Pg	Pg	14 36 45.0	-0.4
	15nm,0.8s						
KST				Lg	Lg	14 37 20.1	
	44nm,0.6s						
KST	Kastek	2.62	332	*e*P	Pg	14 36 45.0	-0.4
	15nm,0.3s						
KST				*e*S	Sg	14 37 19.5	+0.1
	44nm,0.5s						
TKM2	Tokmak 2	2.67	325	⇑Pg	Pg	14 36 46.5	+0.2
	2.1nm,0.3s						
TKM2				⇑Lg	Lg	14 37 20.7	
	4.1nm,0.3s						
TKM2	Tokmak 2	2.67	325	⇑*i*P	Pg	14 36 45.9	-0.4
	baz=26						
TKM2				⇑*i*S	Sb	14 37 18.6	+2.6
	baz=26						
TKM2	Tokmak 2	2.67	325	P	Pg	14 36 46.3	0.0
	SNR=9.7						
ARLS	Aral	2.75	295	⇓*i*P	Pb	14 36 44.7	+0.1
	baz=94						
ARLS				⇓*i*S	Sb	14 37 17.3	-1.1
	baz=94						
KURS	Kuram	2.76	8	Pg	Pg	14 36 47.3	-0.9
	8.7nm,0.6s						
KURS				Lg	Lg	14 37 23.4	
	10nm,0.5s						
KURS	Kuram	2.76	8	*e*P	Pg	14 36 47.2	-0.9
	8.6nm,0.5s						
KURS				*e*S	Sg	14 37 23.4	-0.5
	7.8nm,0.6s						
KBK	Karagaybulak	2.79	314	⇓*e*P	Pg	14 36 48.3	-0.3
	baz=14						
KBK				⇓*i*S	Sg	14 37 24.5	-0.3
	baz=14						
UCH	Uchtor	2.79	303	⇑*i*P	Pg	14 36 47.1	-1.6
	baz=2.0						
UCH				⇑*i*S	Sg	14 37 24.4	-0.5
	baz=2.0						
UCH	Uchtor	2.79	303	P	Pg	14 36 48.4	-0.3
	SNR=8.3						
KPKS	Kokpek	2.82	15	*e*P	Pg	14 36 48.0	-1.2
	22nm,0.2s						
KPKS				*e*S	Sg	14 37 24.6	-1.2
	23nm,0.6s						
PDGK	Podgornoye	2.92	27	⇓Pg	Pg	14 36 49.8	-1.2
	3.2nm,0.4s						
PDGK				⇓Lg	Lg	14 37 28.0	
	44nm,0.9s						
PDGK	Podgornoye	2.92	27	⇑*i*P	Pb	14 36 48.5	+1.2
	baz=30						
PDGK				⇑*i*S	Sb	14 37 23.6	+0.5
	baz=30						
AAK	Ala-Archa	3.04	310	⇑Pg	Pg	14 36 52.8	-0.5
	3.2nm,0.4s						
AAK				⇑Lg	Lg	14 37 32.4	
	11nm,0.5s						
AAK	Ala-Archa	3.04	310	⇑*i*P	Pg	14 36 52.8	-0.5
	baz=9.0						
AAK				⇑*i*S	Sg	14 37 31.6	-1.0
	baz=9.0						
KTBS	Karatobe	3.05	346	Pg	Pg	14 36 52.0	-1.6
	5.4nm,0.3s						
KTBS				Lg	Lg	14 37 32.3	
	33nm,0.4s						
CHMS	Chumysh	3.13	317	⇓*e*P	Pg	14 36 53.6	-1.5
	baz=17						
CHMS				⇓*i*S	Sg	14 37 33.4	-2.3
	baz=17						
CHKK	Chushkaly	3.15	351	Pg	Pg	14 36 53.5	-1.9
	6.5nm,0.2s						
CHKK				Lg	Lg	14 37 34.6	
	42nm,0.2s						
AML	Almayashu	3.29	296	⇓*i*P	Pg	14 36 57.9	-0.3
	baz=95						
AML				⇓*i*S	Sb	14 37 36.8	+2.7
	baz=95						
AML	Almayashu	3.29	296	P	Pg	14 36 57.8	-0.4
	SNR=8.9						
KUU	Kurty	3.29	343	Pg	Pg	14 36 56.1	-2.1
	3.0nm,0.3s						
KUU				Lg	Lg	14 37 38.9	
	12nm,0.6s						
KUU	Kurty	3.29	343	*e*P	Pg	14 36 56.0	-2.3
	3.5nm,0.5s						
KUU				*e*S	Sg	14 37 38.7	-2.2
	18nm,0.7s						
KTMS	Ketmen	3.36	36	Pg	Pg	14 36 57.8	-1.6
	3.3nm,0.2s						
KTMS				Lg	Lg	14 37 41.6	
	32nm,0.7s						
MNBS	Baschi	3.37	9	Pg	Pg	14 36 58.1	-1.7
	2.8nm,0.5s						
MNBS				Lg	Lg	14 37 42.3	
	15nm,0.3s						
USP	Ospenovka	3.45	318	P	Sg	14 37 45.6	-0.3
	SNR=8.6						
ARXS	Arharly	3.46	2	Pg	Pg	14 37 00.2	-1.3
	3.0nm,0.5s						
ARXS				Lg	Lg	14 37 45.6	
	23nm,0.6s						
SGDS	Sogindy	3.52	321	Pg	Pg	14 37 00.8	-1.8
	3.4nm,0.3s						
SGDS				Lg	Lg	14 37 47.0	
	8.7nm,0.6s						
MRKS	Merke	3.88	302	Pg	Pg	14 37 08.1	-1.3
	2.9nm,0.3s						
MRKS				Lg	Lg	14 37 59.0	
	5.9nm,0.4s						
MRKS	Merke	3.88	302	*e*P	Pg	14 37 07.8	-1.6
	2.4nm,0.3s						
MRKS				*e*S	Sg	14 37 58.7	-0.9
	6.0nm,0.5s						
DJR	Jarkent	3.91	23	Pg	Pg	14 37 07.7	-2.4
	2.3nm,0.6s						
DJR				Lg	Lg	14 37 57.9	
	6.1nm,0.7s						
KAPS	Kapalarasan	4.70	15	*e*P	Pg	14 37 24.0	-1.2
	1.2nm,0.3s						
KAPS				*e*S	Sg	14 38 26.4	+0.3
	2.5nm,0.6s						
BTLS	Baital	5.05	329	Pg	Pg	14 37 27.4	-4.4
	1.7nm,0.2s						
BTLS				Lg	Lg	14 38 33.1	
	3.1nm,0.6s						
KK31	Karatay Array	5.83	296	⇑Pg	Pg	14 37 46.2	-0.7
	0.3nm,0.3s,baz=70,slow=14,SNR=4.9						
KK31				Lg	Lg	14 39 00.3	
	0.5nm,0.3s,baz=117,slow=29,SNR=5.8						

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*ISCJB **24** 14:40:00.7±1.0, 33°.79N±0°.04×35°.76E±0°.07, h8^{km}±13^{km}, Error ellipse: s-maj=11.1km s-min=5.4km az=150.1*

*NSSC **24** 14:40:00.5±0.3, 33°.78N×35°.74E, h6^{km}±6^{km}, ML1.3*

*GRAL **24** 14:40:01.4±0.3, 33°.79N×35°.78E, h1^{km}±18^{km}, MD2.6*

ISC 24 14:40:00.5±3.2, **33°.79N**±0°.04×**35°.7E**±0°.1, **h13**^{km}±27^{km}, **n7**, σ**0^{s}35**/12, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.13	328	*e*P	Pg	14 40 04.2	+0.1
BHL				*e*S	Sg	14 40 06.4	-0.1
DQRL	Deir Qamar	0.16	239	*e*P	Pg	14 40 04.9	+0.4
RCY	Rachaya	0.30	164	*e*P	Pg	14 40 06.7	-0.2
RCY				*e*S	Sg	14 40 10.5	-0.6
BRBR	Barbar	0.42	155	*e*P	Pg	14 40 08.7	-0.3
BRBR				*e*S	Sg	14 40 14.6	0.0
BRBR				AML	AML	14 40 18.7	
	comp=N,25nm,0.3s						
BRBR				AML	AML	14 40 20.0	
	comp=E,16nm,0.7s						
HWQ	Hawqa	0.52	20	*e*P	Pg	14 40 10.5	-0.2
QASN	Qassioun	0.52	120	*e*P	Pg	14 40 10.9	+0.2
QASN				*e*S	Sg	14 40 17.8	+0.1
QASN				AML	AML	14 40 25.4	
	comp=N,57nm,0.3s						
QASN				AML	AML	14 40 27.6	
	comp=E,77nm,0.3s						
TOTH	TOTAH	0.72	126	*e*P	Pg	14 40 14.9	+0.4
TOTH				*e*S	Sg	14 40 24.1	+0.2
TOTH				AML	AML	14 40 31.2	
	comp=E,7.6nm,0.3s						
TOTH				AML	AML	14 40 33.3	
	comp=N,5.8nm,0.3s						

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*IDC **24** 14:42:53.5±4.1, 23°.19N×142°.53E, h90^{km}±38^{km}, mb3.6/9, mb1 3.9/11, mb1mx3.6/43, mbtmp4.1/11, Error ellipse: s-maj=41.4km s-min=14.7km az=94.0*

*JMA **24** 14:42:57.4±0.1, 23°.41N×142°.41E, h165^{km}±3^{km}, M5.0*

ISC 24 14:42:59.7±0.8, **23°.41N**±0°.08×**142°.3E**±0°.2, **h150**^{km}, **n28**, σ**2^{s}31**/25, **mb3.7**/10, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	3.21	358	P	Pn	14 43 48.6	-1.1
JHH2				*e*S	Sn	14 44 27.5	-1.0
CBIJ	Chichi jima	3.67	358	P	Pn	14 43 54.5	-1.2
CBIJ				S	Sn	14 44 38.1	-1.0
JHJ	Hachijo jima 2	9.92	348	P	Pn	14 45 17.1	-1.6
	5.3nm,0.3s,baz=86,slow=21,SNR=16						
JHJ				S	Sn	14 47 04.3	-4.2
	2.0nm,0.3s,baz=66,slow=19,SNR=1.2						
BSO1	Boso 1	11.26	354	P	Pn	14 45 34.8	-1.0
JOD2	Odawara 2	12.14	347	P	Pn	14 45 46.1	-1.6
JRY	Ryogami san	12.90	348	P	Pn	14 45 55.1	-2.5
JAG	Ashikaga	13.20	350	P	Pn	14 45 57.7	-3.7
JHO	Hitachi	13.24	354	P	Pn	14 45 59.3	-2.6
MJAR	Matsushiro Arr	13.56	346	P	Pn	14 46 03.4	-2.6
	0.2nm,0.3s,baz=165,slow=11,SNR=18						
JMK	Ichinoseki	15.52	357	P	P	14 46 31.0	-0.6
KSRS	Korea Array	18.67	322	P	Pn	14 47 13.1	+4.8
	0.3nm,0.3s,baz=136,slow=12,SNR=10						
USRK	Ussuriysk Ar.	22.40	340	P	P	14 47 48.0	+2.2
	2.0nm,0.8s,baz=150,slow=9.9,SNR=3.8						
H11N1	WAKE ISLAND Hy	23.14	94	T	T	15 12 08.1	
	baz=279						
H11N2	WAKE ISLAND Hy	23.14	94	T	T	15 11 57.1	
	baz=279						
H11N3	WAKE ISLAND Hy	23.16	94	T	T	15 11 58.0	
	baz=279						
H11S3	WAKE ISLAND Hy	23.27	98	T	T	15 11 32.4	
	baz=289						
H11S1	WAKE ISLAND Hy	23.28	98	T	T	15 11 36.4	
	baz=289						
H11S2	WAKE ISLAND Hy	23.29	98	T	T	15 11 36.6	
	baz=289						
KLR	Kul'dur	27.08	345	P	P	14 48 31.1	+2.9
	0.8nm,0.6s,baz=153,slow=11,SNR=3.7						
WRA	Warramunga Arr	43.79	191	P	P	14 50 49.1	-1.6
	2.8nm,0.3s,baz=6.7,slow=7.9,SNR=7.1						
ASAR	Alice Springs	47.51	190	P	P	14 51 18.0	-1.8
	14nm,0.5s,baz=16,slow=12,SNR=11						
STKA	Stephens Creek	54.98	181	P	P	14 52 13.7	-1.7
	1.8nm,0.9s,baz=349,slow=16,SNR=4.1						
ILAR	Eielson Array	60.89	28	P	P	14 52 56.6	+0.4
	0.6nm,0.8s,baz=251,slow=4.7,SNR=5.8						
YKA	Yellowknife Ar	75.32	28	P	P	14 54 27.2	+1.0
	0.7nm,0.4s,baz=295,slow=5.7,SNR=4.9						
ARCES	ARCESS Array B	77.05	341	P	P	14 54 38.4	+2.6
	0.6nm,0.7s,baz=76,slow=10,SNR=3.6						
FINES	FINESS Array B	81.29	334	P	P	14 54 60.0	+1.0
	1.4nm,0.7s,baz=51,slow=6.1,SNR=5.3						
NVAR	Mina Array Bea	82.71	51	P	P	14 55 08.0	+0.9
	0.8nm,0.8s,baz=269,slow=6.7,SNR=6.3						
LPAZ	La Paz	150.54	82	PKPbc	PKiKP	15 02 35.9	-0.1
	1.4nm,0.5s,baz=324,slow=5.1,SNR=8.2						

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*NIED **24** 14:47:00, 23°.90N×121°.60E, h5^{km}, Mw4.5 Best double couple: $M_0$5.80000×10^{15} NP1:ϕ_s198.00000°, δ39.00000°, λ52.00000°. NP2:ϕ_s63.00000°, δ60.00000°, λ117.00000°.*

*IDC **24** 14:47:03.2±0.6, 23°.83N×121°.71E, h0^{km}, mb4.4/19, mb1 4.5/21, mb1mx4.4/37, mbtmp4.4/21, ML3.3/3, MS3.4/8, Ms1 3.4/8, ms1mx3.2/34, Error ellipse: s-maj=16.6km s-min=14.3km az=87.0*

*NEIC **24** 14:47:04.9±1.3, 23°.87N×121°.60E, h11^{km}±1^{km}, mb5.0/78, ML4.6(TAP), Error ellipse: s-maj=12.5km s-min=7.3km az=186.0*

NEIC Recorded [5 TAP] in Hualien; [2 TAP] in Nantou and Yilan; [1 TAP] in Changhua, Hsinchu, Taitung and Yunlin.

*BJI **24** 14:47:04.5±0.0, 23°.92N×121°.60E, h8^{km}, mb4.5/45, mB4.7/40, ML4.5/11, Ms4.5/55, Ms7 4.4/51*

*JMA **24** 14:47:04.3±0.1, 23°.89N×121°.59E, h0^{km}, M4.6*

*ASIES **24** 14:47:04.9, 23°.90N×121°.52E, h21^{km}, MW4.1*

*TAP **24** 14:47:05.8, 23°.91N×121°.53E, h9^{km}, ML4.8, C*

*ISCJB **24** 14:47:05.2±0.3, 23°.872N±0°.009×121°.62E±0°.01, h15^{km}±1^{km}, mb4.7/117, MS4.0/10, Error ellipse: s-maj=1.8km s-min=1.3km az=37.5*

*MOS **24** 14:47:06.9±1.3, 23°.92N×121°.66E, h33^{km}, mb5.0/37, Error ellipse: s-maj=10.6km s-min=7.4km az=79.5*

ISC 24 14:47:06.0±0.5, **23°.89N**±0°.01×**121°.57E**±0°.02, **h13**^{km}±3^{km}, **n368**, σ**1^{s}32**/451, **mb4.9**/117, **MS4.1**/10, **24C-52D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.10	19	⇑*i*P	Pg	14 47 09.2	+0.2
	baz=39						
HWA				*e*S	Sg	14 47 11.5	+0.4
	baz=39						
ESL	Shilin	0.14	240	⇑*i*P	Pg	14 47 08.8	-0.8
	baz=220						
ESL				*i* S	Sg	14 47 10.8	-1.3
	baz=220						
TWD	Chiawan	0.20	7	⇓*i*P	Pg	14 47 10.1	-0.3
	baz=14						
TWD				*i* S	Sg	14 47 12.7	-0.7
	baz=14						
EGFH	Guangfu	0.25	211	⇑*i*P	Pg	14 47 11.0	-0.3
	baz=208						
EGFH				S	Sg	14 47 14.5	-0.5
	baz=208						
NACB	Ninganchiao	0.29	4	*e*Pg	Pg	14 47 11.0	-1.0
NACB	Ninganchiao	0.29	4	⇓P	Pg	14 47 11.4	-0.6
	baz=10.0						
NACB				S	Sg	14 47 15.0	-1.1
	baz=10.0						
ETLH	Xiulin Townshi	0.33	346	⇓P	Pg	14 47 12.1	-0.7
	baz=352						
ETLH				S	Sg	14 47 16.4	-1.0
	baz=352						
WHF	Hehuan Shan	0.38	313	⇓*i*P	Pg	14 47 12.9	-0.9
	baz=304						
WHF				*i* S	Sg	14 47 17.3	-1.8
	baz=304						
CHGB	Renai	0.40	296	⇓P	Pg	14 47 13.5	-0.7
	baz=296						
CHGB				S	Sg	14 47 18.3	-1.3
	baz=296						
HGSD	Ruisui	0.41	199	⇑P	Pg	14 47 14.6	+0.3
	baz=205						
HGSD				*e*S	Sb	14 47 21.9	+0.5
	baz=205						
VWDT	VWDT	0.41	252	⇑P	Pg	14 47 14.0	-0.3
	baz=248						
VWDT				S	Sg	14 47 18.7	-1.1
	baz=248						
EHY	Hungye	0.44	211	⇑*i*P	Pg	14 47 14.1	-0.6
	baz=213						
EHY				*e*S	Sg	14 47 19.9	-0.8
	baz=213						
YULB	Yu-li	0.55	207	*e*Pg	Pg	14 47 15.8	-1.1
YULB	Yu-li	0.55	207	⇑P	Pg	14 47 15.9	-1.0
	baz=205						
YULB				S	Sg	14 47 23.9	-0.3
	baz=205						
ENA	Nanau	0.56	16	⇓*i*P	Pg	14 47 16.5	-0.5
	baz=17						
ENA				*e*S	Sg	14 47 23.9	-0.6
	baz=17						
NANB	Nanao	0.56	17	⇓*i*P	Pg	14 47 16.5	-0.5
	baz=17						
NANB				S	Sg	14 47 23.8	-0.8
	baz=17						
NNSB	Datong	0.57	342	⇓P	Pg	14 47 16.7	-0.5
	baz=346						
NNSB				S	Sg	14 47 23.3	-1.4
	baz=346						
SSLB	Suanglung	0.57	260	*e*Pg	Pg	14 47 15.9	-1.4
SSLB	Suanglung	0.57	260	⇓P	Pg	14 47 16.6	-0.7
	baz=258						
SSLB				S	Sg	14 47 23.0	-1.9
	baz=258						
NNS	Nan Shan	0.58	342	⇓*i*P	Pg	14 47 16.9	-0.5
	baz=346						
NNS				S	Sg	14 47 23.5	-1.7
	baz=346						
TWF1	Yuli	0.59	205	*e*P	Pg	14 47 16.7	-0.8
	baz=209						
TWF1				*e*S	Sg	14 47 25.3	0.0
	baz=209						
DPDB	Guoxing	0.61	284	⇓*i*P	Pg	14 47 17.4	-0.5
	baz=284						
DPDB				S	Sg	14 47 24.5	-1.5
	baz=284						
SMLT	Sun Moon Lake	0.61	270	⇓*i*P	Pg	14 47 17.5	-0.6
	baz=268						
SMLT				*i* S	Sg	14 47 25.2	-1.0
	baz=268						
WHYT	Xinyi Township	0.68	254	⇓P	Pg	14 47 18.7	-0.6
	baz=259						
WHYT				*e*S	Sg	14 47 27.2	-1.1
	baz=259						
YUS	Yu-Shan	0.69	235	⇑*i*P	Pg	14 47 19.1	-0.4
	baz=233						
NDT	Datong Townshi	0.71	356	⇓*i*P	Pg	14 47 19.6	-0.4
	baz=358						
NDT				S	Sg	14 47 28.1	-1.3
	baz=358						
ENTT	Nioudou	0.75	360	⇓*i*P	Pg	14 47 20.2	-0.4
	baz=2.0						
ENTT				*e*S	Sg	14 47 29.6	-0.9
	baz=2.0						
TWC	Suao	0.76	19	⇓*i*P	Pg	14 47 20.4	-0.4
	baz=13						
TWC				S	Sg	14 47 30.5	-0.3
	baz=13						
WJS	Zhushan	0.77	265	*e*P	Pg	14 47 20.9	-0.1
	baz=271						
WJS				S	Sg	14 47 31.8	+0.5
	baz=271						
YHNB	Yeheng	0.80	347	*e*Pg	Pg	14 47 20.8	-0.8
YHNB	Yeheng	0.80	347	⇓P	Pg	14 47 21.1	-0.5
	baz=350						
YHNB				S	Sg	14 47 30.5	-1.6
	baz=350						
CHKT	Chengkung	0.81	194	*e*P	Pg	14 47 21.3	-0.4
	baz=194						
CHKT				*e*S	Sb	14 47 34.2	+1.6
	baz=194						
NSK	Sanguang	0.81	346	⇓*i*P	Pg	14 47 21.2	-0.5
	baz=339						
NSK				S	Sg	14 47 31.0	-1.4
	baz=339						
WNT	Mingjian	0.81	270	⇓*i*P	Pg	14 47 22.0	+0.3
	baz=269						
WNT				S	Sg	14 47 32.9	+0.5
	baz=269						
EOS1	EOS1	0.83	38	P	Pg	14 47 23.1	+1.0
	baz=37						
TWE	Neicheng	0.84	6	⇓*i*P	Pg	14 47 21.8	-0.4
	baz=16						
TWE				S	Sg	14 47 32.8	-0.4
	baz=16						
TCU	Taichung	0.86	288	⇓P	Pg	14 47 23.1	+0.4
	baz=282						
TCU				*e*S	Sb	14 47 35.6	+1.4
	baz=282						
ELDTW	Lidau	0.86	216	*e*P	Pg	14 47 20.8	-1.9
	baz=207						
ELDTW				*e*S	Sg	14 47 32.8	-1.1
	baz=207						
TWQ1	Liyutan	0.86	302	⇓P	Pg	14 47 22.6	-0.1
	baz=303						
TWQ1				S	Sg	14 47 34.0	0.0
	baz=303						
SLBB	Yuanshan	0.87	4	⇓P	Pg	14 47 22.4	-0.4
	baz=5.0						
SLBB				*e*S	Sg	14 47 33.9	-0.3
	baz=5.0						
CHN5	Tsauling	0.87	251	⇓*i*P	Pg	14 47 22.9	+0.1
	baz=237						
CHN5				S	Sg	14 47 34.5	+0.3
	baz=237						
ILA	Ilan	0.89	10	P	Pg	14 47 22.9	-0.4
	baz=11						
ILA				S	Sg	14 47 35.2	+0.3
	baz=11						
NSTT	Nanjuang	0.91	325	⇓P	Pg	14 47 23.1	-0.4
	baz=327						
NSTT				S	Sg	14 47 34.6	-0.8
	baz=327						
NSY	Sanyi	0.91	306	P	Pg	14 47 23.8	+0.2
	baz=307						
NSY				S	Sg	14 47 35.2	-0.3
	baz=307						
LIOB	Emei	0.91	326	⇓*i*P	Pg	14 47 23.5	-0.1
	baz=328						
LIOB				S	Sg	14 47 34.6	-0.9
	baz=328						
WGK	Gukeng	0.94	258	⇓P	Pg	14 47 24.6	+0.3
	baz=257						
WGK				*e*S	Sg	14 47 36.5	-0.1
	baz=257						
WCHH	Zhanghua	0.95	282	⇓P	Pg	14 47 24.6	+0.3
	baz=282						
NMLH	Miaoli	0.96	312	⇓P	Pg	14 47 25.1	+0.5
	baz=313						
NMLH				S	Sg	14 47 37.3	+0.1
	baz=313						
WDLH	Douliu	0.97	258	⇓P	Pg	14 47 24.9	+0.3
	baz=257						
WDLH				*e*S	Sb	14 47 38.7	+1.4
	baz=257						
NTC	Toucheng	0.99	14	⇓P	Pg	14 47 24.5	-0.7
	baz=13						
NTC				*e*S	Sg	14 47 38.1	-0.1
	baz=13						
WLTB	Daxi	1.00	343	⇓*i*P	Pg	14 47 25.5	+0.1
	baz=356						
WLTB				S	Sg	14 47 37.4	-1.1
	baz=356						
STYT	Tauyuan	1.04	226	⇑*e*P	Pg	14 47 25.4	-0.7
	baz=225						
STYT				S	Sg	14 47 39.3	-0.3
	baz=225						
TPUB	Ta-pu	1.04	236	*e*Pn	Pg	14 47 25.8	-0.4
TPUB	Ta-pu	1.04	236	⇑P	Pg	14 47 25.9	-0.2
	baz=236						
TPUB				*e*S	Sg	14 47 38.5	-1.2
	baz=236						
CHN4	Tsaushan	1.04	239	⇑*i*P	Pg	14 47 26.1	0.0
	baz=231						
CHN4				*e*S	Sg	14 47 40.4	+0.7
	baz=231						
SBCB	Hsinchu	1.05	330	⇓P	Pg	14 47 26.7	+0.4
	baz=340						
SBCB				*e*S	Sg	14 47 40.1	+0.1
	baz=340						
HSN	Hsinchu	1.06	329	⇓*i*P	Pg	14 47 27.2	+0.6
	baz=342						
HSN				S	Sg	14 47 41.1	+0.6
	baz=342						
NHDH	Xindian Distri	1.07	358	⇓P	Pg	14 47 26.0	-0.7
	baz=358						
NHDH				S	Sg	14 47 40.5	-0.3
	baz=358						
WTP	Ta-pu	1.08	234	⇑P	Pg	14 47 26.6	-0.4
	baz=234						
WTP				S	Sg	14 47 40.9	-0.2
	baz=234						
TATO	Taipei	1.09	356	*e*Pn	Pb	14 47 26.5	-0.2
TATO	Taipei	1.09	356	⇓P	Pb	14 47 26.3	-0.3
	baz=358						
TATO				S	Sg	14 47 39.3	-1.9
	baz=358						
TWA	Mucha	1.09	1	⇓P	Pb	14 47 26.5	-0.3
	baz=353						
TWA				*e*S	Sg	14 47 40.2	-1.1
	baz=353						
TIPB	Shuangxi	1.11	12	⇓*i*P	Pb	14 47 26.4	-0.6
	baz=11						
TIPB				*e*S	Sg	14 47 39.4	-2.4
	baz=11						
CHY	Chiayi	1.12	250	*e*P	Pb	14 47 27.3	+0.1
	baz=249						
CHY				*e*S	Sg	14 47 43.3	+1.1
	baz=249						
NCUH	Zhongli	1.13	342	*e*P	Pb	14 47 27.6	+0.1
	baz=342						
NCUH				*e*S	Sb	14 47 42.3	+0.1
	baz=342						
NCU	National Centr	1.14	342	P	Pb	14 47 27.9	+0.4
	baz=354						
NCU				*e*S	Sb	14 47 42.9	+0.7
	baz=354						
TWG	Pinlang	1.16	203	*e*Pn	Pb	14 47 25.7	-2.1
TWG	Pinlang	1.16	203	*e*P	Pb	14 47 25.7	-2.1
	baz=204						
TWG				*e*S	Sb	14 47 44.1	+1.3
	baz=204						
TWGBT	Beinan	1.16	203	*e*P	Pb	14 47 25.3	-2.5
	baz=189						
WTCT	Ta-ch'eng	1.18	269	*e*P	Pb	14 47 27.7	-0.5
	baz=269						
WTCT				*e*S	Sb	14 47 44.0	+0.6
	baz=269						
SNST	Tainan City	1.19	236	*e*P	Pb	14 47 28.7	+0.3
	baz=236						
SNST				*e*S	Sb	14 47 44.8	+1.1
	baz=236						
TTN	Taitung	1.19	199	*e*P	Pb	14 47 27.6	-0.9
	baz=200						
NWF	Wu-fen Shan	1.20	9	P	Pb	14 47 28.5	-0.1
	baz=8.0						
WFSB	Wu-fen Shan	1.20	9	⇑*e*P	Pb	14 47 27.9	-0.7
	baz=8.0						
TWS1	Kuangyinshan	1.22	353	⇓P	Pn	14 47 29.0	+0.3
	baz=2.0						
TWS1				S	Sb	14 47 45.6	+1.1
	baz=2.0						
SLGT	Liugui	1.23	224	*e*P	Pn	14 47 29.2	+0.3
	baz=224						
SLGT				*e*S	Sb	14 47 45.5	+0.7
	baz=224						
WLGB	Puzi	1.23	251	⇓P	Pn	14 47 29.0	0.0
	baz=264						
WLGB				*e*S	Sb	14 47 46.1	+1.1
	baz=264						
WMLT	Mailiao	1.24	266	*e*P	Pn	14 47 29.1	+0.2
	baz=266						
YM01	YM01	1.25	360	⇓P	Pn	14 47 29.3	0.0
	baz=360						
YM01				*e*S	Sb	14 47 46.7	+1.0
	baz=360						
WSF	Szhu	1.26	259	⇓*e*P	Pn	14 47 29.3	0.0
	baz=258						
WSF				S	Sb	14 47 45.9	+0.1
	baz=258						
YM10	YM10	1.26	360	*e*P	Pn	14 47 29.2	-0.2
	baz=360						
YM10				*e*S	Sb	14 47 46.3	+0.3
	baz=360						
NTST	Danshui	1.28	355	*e*P	Pn	14 47 29.4	-0.1
	baz=16						
ANP	Anpu	1.30	358	*e*P	Pn	14 47 29.9	0.0
	baz=359						
ANP				*e*S	Sb	14 47 47.4	+0.5
	baz=359						
YM08	YM08	1.30	1	*e*P	Pn	14 47 29.8	-0.1
	baz=2.0						
CHN8	Yiju	1.36	247	*e*P	Pn	14 47 30.7	+0.1
	baz=247						
CHN3	Shinhua	1.37	234	*e*P	Pn	14 47 32.4	+1.5
	baz=234						
JYNG	Yonagunijimaku	1.38	66	P	Pn	14 47 30.7	-0.2
JYNG				*e*S	Sb	14 47 49.4	+0.3
TWY	Chenhua	1.38	1	*e*P	Pn	14 47 32.1	+1.1
	baz=1.0						
ECL	Taimali	1.40	204	*e*P	Pn	14 47 30.7	-0.6
	baz=190						
SSD	Sandimen	1.43	217	*e*P	Pn	14 47 31.8	+0.2
	baz=211						
YOJ	Yonaguni jima	1.44	66	*e*Pn	Pn	14 47 31.4	-0.2
YOJ	Yonaguni jima	1.44	66	⇑P	Pn	14 47 31.5	-0.2
	baz=62						
YOJ				*e*S	Sn	14 47 50.8	+0.4
	baz=62						
YOJ	Yonaguni jima	1.44	66	*e*P	Pn	14 47 31.5	-0.2
YOJ	Yonaguni jima	1.44	66	P	Pn	14 47 31.5	-0.2
YOJ				S	Sn	14 47 50.5	+0.1
SCLT	Jiali	1.45	241	*e*P	Pn	14 47 32.7	+0.8
	baz=241						
TAI1	Yung-k'ang	1.49	236	*e*P	Pb	14 47 35.2	+1.6
	baz=236						
SGLT	Jiouru	1.52	221	⇓P	Pb	14 47 35.2	+1.1
	baz=211						
SGLT				*e*S	Sg	14 47 57.9	+2.8
	baz=211						
MASBT	Mashibuluo	1.53	214	*e*P	Pn	14 47 33.2	+0.1
	baz=216						
MASBT				*e*S	Sb	14 47 55.2	+1.6
	baz=216						
SNJT	Kaohsiung City	1.60	225	*e*P	Pb	14 47 36.0	+0.5
	baz=229						
EAST	Anshuo	1.64	204	*e*P	Pn	14 47 33.0	-1.5
	baz=193						
TAW	Tawu	1.64	202	*e*P	Pn	14 47 34.9	+0.3
	baz=188						
SCZT	Fangliau	1.74	210	*e*P	Pn	14 47 37.0	+1.1
	baz=205						
LAY	Lan-yu	1.84	181	*e*P	Pn	14 47 35.1	-2.2
	baz=166						
WDGT	Dungji	1.86	251	*e*P	Pn	14 47 37.5	-0.1
	baz=252						
PHUB	P'eng-hu	1.87	259	⇑P	Pn	14 47 37.5	-0.1
	baz=259						
PHUB				*e*S	Sn	14 48 01.0	-0.1
	baz=259						
PNG	Penghu	1.87	261	⇑P	Pn	14 47 37.6	-0.2
	baz=261						
PNG				*e*S	Sn	14 48 01.5	+0.2
	baz=261						
WLCH	Liuqiu	1.88	216	*e*P	Pb	14 47 40.9	+0.7
	baz=237						
TWP	Hsiaoliuchiu	1.89	216	*e*P	Pn	14 47 40.0	+1.9
	baz=238						
IRIF	Iriomote-Funau	2.02	77	P	Pn	14 47 39.9	+0.1
IRIF				*e*S	Sn	14 48 05.4	+0.4
HATJ	Hateruma jima	2.05	85	P	Pn	14 47 40.5	+0.3
HATJ				*e*S	Sn	14 48 06.3	+0.7
TWK1	Hengchun	2.06	200	*e*P	Pn	14 47 39.7	-0.6
	baz=188						
TWKBT	Hengchun	2.06	200	*e*P	Pn	14 47 39.7	-0.6
	baz=188						
TSEB	Hengchuen, Pin	2.07	198	*e*P	Pn	14 47 41.2	+0.7
	baz=187						
VCHM	Qimei	2.08	251	*e*P	Pn	14 47 40.8	+0.2
	baz=235						
VCHM				*e*S	Sn	14 48 07.0	+0.7
	baz=235						
JKRS	Kuro-shima	2.26	81	P	Pn	14 47 44.3	+1.3
JKRS				*e*S	Sn	14 48 12.1	+1.4
PTTC	Pingtan	2.29	315	*e*P	Pn	14 47 43.2	-0.4
	baz=317						
JIJ	Ishigaki jima	2.40	78	P	Pn	14 47 44.7	-0.3
JIJ				*e*S	Sn	14 48 14.3	+0.1
PTMZ	Houxiangcun	2.51	298	*e*P	Pn	14 47 45.4	-1.2
	baz=299						
JISG	Ishigakijimahi	2.60	74	P	Pn	14 47 47.3	-0.4
JISG				S	Sn	14 48 19.4	+0.3
MATB	Ma-tsu	2.69	327	*e*P	Pn	14 47 48.7	-0.4
	baz=329						
QZH	Quanzhou	2.91	292	⇑*i*Pn	Pn	14 47 51.3	-0.7
QZH				Sn	Sn	14 48 25.5	-1.4
QZH				smax	smax		
	comp=N,790nm,0.8s						
QZH				smax	smax		
	comp=E,710nm,0.9s						
JTJ	Tarama	2.96	75	P	Pn	14 47 53.2	+0.6
JTJ				*e*S	Sn	14 48 29.6	+1.6
KNMB	Chin-men Tao	2.96	282	*e*Pn	Pn	14 47 51.9	-0.8
KNMB	Chin-men Tao	2.96	282	*e*P	Pn	14 47 52.3	-0.5
	baz=296						
LYJJ	Jianjiangzhen	3.12	329	*e*P	Pn	14 47 54.4	-0.5
	baz=317						
MHZQ	Yeshan	3.19	314	*e*P	Pn	14 47 55.1	-0.8
	baz=316						
XPSS	Dashiqiu	3.28	338	*e*P	Pn	14 47 56.7	-0.4
	baz=327						
JIRB	Irabujima	3.42	73	P	Pn	14 47 59.5	+0.5
JIRB				S	Sn	14 48 39.1	-0.3
AXDP	Jialang	3.44	288	*e*P	Pn	14 47 58.6	-0.6
	baz=288						
ZPLA	Ao Xicun	3.50	271	⇑*e*P	Pn	14 47 59.7	-0.4
	baz=272						
JIKM	Ikemajima	3.51	72	P	Pn	14 48 01.4	+1.2
JIKM				S	Sn	14 48 42.0	+0.4
JMJ	Miyako jima 2	3.52	74	*e*P	Pn	14 48 01.5	+1.1
	baz=72						
JMJ2	Miyako jima3	3.53	75	P	Pn	14 48 01.9	+1.3
JMJ2				*e*S	Sn	14 48 42.6	+0.4
JOGS	Gusukube	3.60	75	P	Pn	14 48 03.0	+1.4
JOGS				*e*S	Sn	14 48 45.6	+1.6
ZZJH	Jiuhuzhen	3.65	280	*e*P	Pn	14 48 01.8	-0.4
	baz=280						
JOW	Kunigami	6.74	63	Pn	Pn	14 48 43.6	-1.0
	1.4nm,0.3s,baz=182,slow=14,SNR=21						
JOW	Kunigami	6.74	63	*e*Pn	Pn	14 48 43.3	-1.3
JOW	Kunigami	6.74	63	*e*P	Pn	14 48 43.4	-1.2
	baz=62						
HKPS	Hong Kong Po S	7.03	258	*e*Pn	Pn	14 48 48.9	+0.2
SSE	Sheshan	7.19	357	P	Pn	14 48 52.4	+1.6
SSE				smax	smax		
	comp=N,79nm,1.4s						
SSE				smax	smax		
	comp=E,120nm,1.0s						
GZH	Guangzhou	7.59	266	P	Pn	14 48 52.0	-4.4
GZH				S	Sn	14 50 10.4	-12
GZH				smax	smax		
	comp=N,280nm,1.0s						
GZH				smax	smax		
	comp=E,290nm,1.0s						
NJ2	Nanjing	8.48	344	⇓*i*P	Pn	14 49 08.3	-0.3
NJ2				pP	Pb	14 49 11.6	-21
NJ2				pmax	pmax		
	comp=E,70nm,0.7s						
NJ2				smax	smax		
	comp=E,190nm,1.1s						
NJ2				smax	smax		
	comp=E,290nm,1.1s						
NJ2				LR	LR		
	comp=E,3μm,8.5s						
NJ2				LR	LR		
	comp=E,1μm,3.8s						
NJ2				LR	LR		
	comp=E,3μm,10.0s						
WHN	Wuhan	9.23	317	P	Pn	14 49 26.6	+7.7
WHN				S	Sn	14 51 14.8	+12
WHN				LR	LR		
	comp=N,4μm,10.9s						
WHN				LR	LR		
	comp=E,3μm,8.4s						
WHN				LR	LR		
	comp=Z,5μm,10.8s						
QIZ	Qiongzhong	11.94	248	P	Pn	14 49 52.8	-3.2
QIZ				S	Sn	14 52 09.0	-0.2
QIZ				LR	LR		
	comp=N,610nm,15.2s						
QIZ				LR	LR		
	comp=E,440nm,16.7s						
QIZ				LR	LR		
	comp=Z,400nm,16.2s						
JNU	Nakatsue	12.31	40	Pn	Pn	14 50 03.6	+2.6
	comp=Z,0.2nm,0.3s,baz=3.8,slow=2.0,SNR=3.6						
JNU				LR	LR	14 55 41.4	
	comp=Z,150nm,21.1s,baz=208,slow=42						
TIA	Tai'an	12.87	344	P	P	14 50 20.6	+1.1
TIA				S	Sn	14 53 31.3	+59
TIA				pmax	pmax		
	comp=Z,6.0nm,0.4s						
TIA				LR	LR		
	comp=N,1μm,9.3s						
TIA				LR	LR		
	comp=E,600nm,8.4s						
TIA				LR	LR		
	comp=Z,2μm,9.9s						
GYA	Guiyang	13.74	284	P	Pn	14 50 25.9	+5.2
GYA				S	Sn	14 53 02.9	+10
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,50nm,5.2s						
GYA				LR	LR		
	comp=Z,1μm,10.2s						
GYA				LR	LR		
	comp=Z,2μm,10.5s						
GYA				LR	LR		
	comp=Z,2μm,10.5s						
KS15	Wonju Array Si	14.56	20	*e*P	P	14 50 38.3	+0.1
KSRS	Korea Array	14.58	20	Pn	Pn	14 50 35.5	+3.5
	comp=Z,1.4nm,0.3s,baz=202,slow=12,SNR=35						
KSRS				LR	LR	14 56 38.2	
	comp=Z,61nm,19.3s,baz=200,slow=40						
XAN	Xi'an	14.98	315	P	P	14 50 48.4	+5.3
XAN				pP	Pn	14 50 58.9	+21
XAN				S	S	14 53 37.3	-3.9
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,82nm,4.5s						
XAN				smax	smax		
	comp=N,39nm,1.3s						
XAN				smax	smax		
	comp=E,29nm,1.3s						
XAN				LR	LR		

	comp=N,1µm,10.8s						
XAN				LR	LR		
	comp=E,1µm,9.6s						
XAN				LR	LR		
	comp=Z,1µm,10.7s						
DAV	**Davao City (W)**	**17.16**	**166**	LR	LR	14 56 51.1	
	comp=Z,181nm,21.6s,baz=354,slow=34						
KMI	**Kunming**	**17.18**	**278**	P	**Pn**	**14 51 05.9**	**-0.2**
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI				LR	LR		
	comp=Z,2µm,14.9s						
KMI				LR	LR		
	comp=Z,310nm,11.3s						
KMI				LR	LR		
	comp=Z,1µm,10.8s						
PANO	**Nakornpanom**	**17.23**	**250**	P	P	14 51 16.0	+7.9
	comp=Z,0.4nm,1.4s,comp=Z,220nm						
CD2	**Chengdu**	**17.29**	**298**	⇑*i*P	**P**	**14 51 10.8**	**+2.2**
CD2				S	**Sn**	**14 54 18.9**	**-0.5**
CD2				pmax	pmax		
	comp=Z,20nm,1.3s						
CD2				pmax	pmax		
	comp=Z,180nm,5.1s						
CD2				LR	LR		
	comp=Z,1µm,9.0s						
CD2				LR	LR		
	comp=Z,2µm,10.6s						
CD2				LR	LR		
	comp=Z,3µm,9.8s						
NONG	**Nongkai**	**18.15**	**255**	P	P	14 51 28.3	+10
	comp=Z,0.3nm,1.0s						
JHJ	**Hachijo jima 2**	**18.44**	**56**	P	**P**	**14 51 19.3**	**-2.0**
	comp=Z,1.9nm,0.3s,baz=234,slow=14,SNR=2.3						
JHJ				LR	LR	14 58 26.0	
	comp=Z,72nm,19.9s,baz=198,slow=37						
JHJ2	**Mitsune**	**18.46**	**56**	*e*P	**P**	**14 51 19.6**	**-2.0**
	comp=Z,166nm,1.1s						
HHC	**Hu-ho-hao-te**	**18.89**	**336**	P	**Pn**	**14 51 29.4**	**+2.6**
HHC				S	**Sn**	**14 54 57.6**	**-0.5**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.0s						
HHC				LR	LR		
	comp=Z,610nm,9.9s						
MAJO	**Matsushiro**	**19.09**	**45**	*e*P	**P**	**14 51 25.8**	**-2.7**
MAJO	**Matsushiro**	**19.09**	**45**	*e*P	**P**	**14 51 25.8**	**-2.7**
MAT	**Matsushiro**	**19.09**	**45**	P	**P**	**14 51 27.7**	**-0.7**
MJAR	**Matsushiro Arr**	**19.09**	**45**	P	**P**	**14 51 25.8**	**-2.7**
	comp=Z,0.0nm,0.3s,baz=238,slow=10,SNR=9.0						
MJAR				LR	LR	15 00 35.1	
	comp=Z,122nm,18.5s,baz=95,slow=43						
LZH	**Lanzhou**	**19.55**	**313**	*e*P	**Pn**	**14 51 38.8**	**+3.9**
LZH				pP	sP	14 51 41.6	+2.5
LZH				sP	pP	14 51 43.4	+6.0
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,230nm,4.6s						
LZH				LR	LR		
	comp=Z,680nm,9.8s						
LZH				LR	LR		
	comp=Z,910nm,10.0s						
LZH				LR	LR		
	comp=Z,1µm,10.8s						
CHAI	**Chaiyaphum**	**20.04**	**250**	P	Pn	14 51 48.1	+7.4
	comp=Z,32µm,1.0s						
CN2	**Changchun**	**20.12**	**8**	*e*P	**P**	**14 51 41.6**	**+2.0**
CN2				*e*PP	**PnPn**	**14 52 01.6**	**+5.6**
CN2				*e*S	**S**	**14 55 22.8**	**-2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,160nm,16.0s						
CN2				LR	LR		
	comp=Z,750nm,16.0s						
CN2				LR	LR		
	comp=Z,550nm,16.0s						
PBKT	**Sadao Pong**	**20.64**	**253**	P	Pn	14 51 51.1	+3.4
	comp=Z,6.9nm,1.3s						
PAYA	**Payao**	**20.66**	**262**	P	Pn	14 51 52.2	+4.1
	comp=Z,23µm,1.1s						
VLA	**Vladivostok**	**20.99**	**21**	⇑*e*P	**P**	**14 51 48.1**	**-0.9**
VLA				pmax	pmax		
	comp=Z,15nm,0.8s						
CMMT	**Chiang Mai**	**21.66**	**261**	P	**P**	**14 52 00.6**	**+4.2**
	comp=Z,12nm,1.3s						
CHTO	**Chiang Mai**	**21.66**	**261**	*e*P	**P**	**14 51 55.3**	**-1.2**
	comp=Z,19nm,1.0s						
CHTO	**Chiang Mai**	**21.66**	**261**	*e*P	**P**	**14 51 55.3**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,19nm,1.0s						
MDJ	**Mudanjiang**	**21.69**	**16**	*e*P	**P**	**14 51 56.4**	**-0.2**
	comp=Z,18nm,0.8s						
MDJ	**Mudanjiang**	**21.69**	**16**	P	**P**	**14 51 56.6**	**0.0**
MDJ				pP	pP	14 51 59.9	-0.2
MDJ				sP	sP	14 52 01.9	-0.5
MDJ				S	**S**	**14 55 57.9**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,15nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,240nm,3.6s						
MDJ				LR	LR		
	comp=Z,450nm,14.2s						
MDJ				LR	LR		
	comp=Z,730nm,17.1s						
MDJ				LR	LR		
	comp=Z,580nm,14.3s						
CM31	**Chiang Mai Arr**	**21.77**	**260**	*e*P	**P**	**14 51 59.5**	**+1.8**
	comp=Z,30nm,1.4s						
CMAR	**Chiang Mai Arr**	**21.77**	**260**	P	**P**	**14 51 59.5**	**+1.8**
	comp=Z,4.0nm,1.0s,baz=67,slow=7.4,SNR=11						
USRK	**Ussuriysk Ar.**	**21.99**	**20**	P	**P**	**14 51 59.9**	**+0.1**
	comp=Z,5.0nm,0.8s,baz=212,slow=8.5,SNR=8.5						
SBUM	**Sibu**	**23.15**	**204**	*e*P	**P**	**14 52 10.9**	**-1.3**
	comp=Z,4.5nm,0.7s						
GTA	**Gaotai**	**24.05**	**315**	⇓P	**P**	**14 52 21.8**	**+0.8**
GTA				pP	sP	14 52 26.3	-0.4
GTA				sP	pP	14 52 28.9	+3.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,70nm,5.1s						
GTA				LR	LR		
	comp=Z,320nm,14.0s						
GTA				LR	LR		
	comp=Z,480nm,14.9s						
GTA				LR	LR		
	comp=Z,830nm,13.3s						
ERM	**Erimo**	**25.47**	**40**	⇓*e*P	**P**	**14 52 31.1**	**-2.7**
ERM				pmax	pmax		
	comp=Z,32nm,1.1s						
ASAJ	**Asahikawa**	**26.53**	**35**	P	**P**	**14 52 42.7**	**-0.7**
	comp=Z,5.7nm,0.8s,baz=239,slow=12,SNR=7.7						
ASAJ				LR	LR	15 03 44.5	
	comp=Z,187nm,19.3s,baz=226,slow=38						
KLR	**Kul'dur**	**26.53**	**15**	P	**P**	**14 52 42.3**	**-1.0**
	comp=Z,19nm,1.0s,baz=228,slow=6.5,SNR=28						
KLR	**Kul'dur**	**26.53**	**15**	*de*P	**P**	**14 52 42.9**	**-0.4**
KLR				pmax	pmax		
	comp=Z,25nm,1.0s						
SONA0	**Songino Array**	**26.78**	**337**	*e*P	**P**	**14 52 46.6**	**+0.9**
SONM	**Songino Array**	**26.78**	**337**	P	**P**	**14 52 46.6**	**+0.9**
	comp=Z,5.4nm,0.8s,baz=154,slow=9.4,SNR=21						
SHL	**Shillong**	**26.99**	**280**	*e*P	**P**	**14 52 47.7**	**-0.3**
	comp=Z,33nm,1.4s						
SHL	**Shillong**	**26.99**	**280**	*e*P	**P**	**14 52 47.7**	**-0.3**
SHL				pmax	pmax		
	comp=Z,33nm,1.4s						
SHL	**Shillong**	**26.99**	**280**	*e*P	**P**	**14 52 50.0**	**+2.0**
LSA	**Lhasa**	**27.72**	**289**	*e*P	**P**	**14 52 54.0**	**-0.8**
	comp=Z,6.8nm,0.6s						
LSA	**Lhasa**	**27.72**	**289**	P	**P**	**14 52 55.9**	**+1.1**
LSA				pmax	pmax		
	comp=Z,26nm,1.0s						
LSA				LR	LR		
	comp=Z,200nm,5.7s						
LSA				LR	LR		
	comp=Z,240nm,5.1s						
LSA				LR	LR		
	comp=Z,320nm,4.6s						
LSA	**Lhasa**	**27.72**	**289**	*e*P	**P**	**14 52 54.0**	**-0.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KAPI	**Kappang**	**28.78**	**184**	LR	LR	15 04 32.9	
	comp=Z,82nm,20.6s,baz=98,slow=36						
ZEA	**Zeya**	**30.12**	**7**	*e*P	**P**	**14 53 15.0**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,18nm,1.2s						
ZEA				MLR	MLR		
	comp=N,500nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,12.0s						
TLY	**Talaya**	**30.98**	**338**	*e*P	**P**	**14 53 21.9**	**-1.1**
TLY				pmax	pmax		
	comp=Z,15nm,1.6s						
TLY				MLR	MLR		
	comp=Z,454nm,11.0s						
IRK	**Irkutsk**	**31.25**	**339**	*e*P	**P**	**14 53 24.7**	**-0.6**
IRK				pmax	pmax		
	comp=Z,19nm,2.6s						
MNSI	**Mandailing Nat**	**31.33**	**226**	P	**P**	**14 53 27.6**	**+1.3**
	comp=Z,16nm,1.0s						
PPSI	**Pulau Pagai**	**33.79**	**221**	P	**P**	**14 53 48.6**	**+0.7**
	comp=Z,277nm,0.6s						
WMQ	**Urumqi**	**34.12**	**314**	*e*P	**P**	**14 53 51.5**	**+0.9**
WMQ				sP	sP	14 53 57.9	+1.6
WMQ				PP	**PnPn**	**14 55 01.4**	**-2.8**
WMQ				S	**S**	**14 59 15.3**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,24nm,3.7s						
WMQ				LR	LR		
	comp=Z,270nm,14.9s						
WMQ				LR	LR		
	comp=Z,250nm,13.5s						
WMQ				LR	LR		
	comp=Z,130nm,14.9s						
YAK	**Yakutsk**	**38.53**	**6**	*e*P	**P**	**14 54 27.9**	**0.0**
YAK				*e**PP	**sP**	**14 54 37.9**	**+4.3**
YAK				*e*		14 56 02.3	
YAK				*e*		14 56 40.3	
YAK				*e*S	**S**	**15 00 24.1**	**+1.1**
YAK				*e**SS	**ScP**	**15 00 37.2**	**+8.9**
YAK				*e*SSS	SSS	15 03 34.3	
YAK				*e*		15 04 33.2	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,1.5s						
YAK				pmax	pmax		
	comp=Z,72nm,3.8s						
YAK				pmax	pmax		
	comp=N,21nm,3.8s						
YAK				pmax	pmax		
	comp=E,43nm,3.2s						
YAK				smax	smax		
	comp=E,57nm,3.4s						
YAK				smax	smax		
	comp=N,22nm,2.3s						
YAK				MLR	MLR		
	comp=Z,251nm,15.0s						
YAK				MLR	MLR		
	comp=E,90nm,11.0s						
YAK				MLR	MLR		
	comp=N,203nm,14.0s						
MK32	**Makanchi Array**	**38.80**	**316**	*e*P	**P**	**14 54 30.7**	**+0.2**
MKAR	**Makanchi Array**	**38.80**	**316**	P	**P**	**14 54 30.7**	**+0.2**
	comp=N,4.0nm,0.6s,baz=112,slow=9.6,SNR=5.4						
MKAR	**Makanchi Array**	**38.80**	**316**	*i* P	**P**	**14 54 32.5**	**+2.1**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PETK	**Petropavlovsk-**	**39.92**	**34**	LR	LR	15 11 36.4	
	comp=Z,52nm,18.5s,baz=219,slow=37						
PET	**Petropavlovsk**	**40.36**	**34**	*e*P	**P**	**14 54 41.6**	**-1.7**
PET				pmax	pmax		
	comp=Z,24nm,2.5s						
ZALV	**Zalesovo Beam**	**40.69**	**327**	P	**P**	**14 54 44.6**	**-1.4**
	comp=Z,2.5nm,0.5s,baz=111,slow=8.2,SNR=5.3						
ZAA1	**Zalesovo Array**	**40.69**	**327**	*e*P	**P**	**14 54 44.6**	**-1.4**
KSH	**Kashi**	**41.36**	**303**	*e*P	**P**	**14 54 55.0**	**+3.1**
KSH				PcP	**PcP**	**14 56 54.3**	**+4.1**
H11N1	**WAKE ISLAND Hy**	**42.15**	**87**	T	T	15 40 00.9	
	baz=283,slow=74,SNR=83						
H11N2	**WAKE ISLAND Hy**	**42.15**	**87**	T	T	15 40 01.1	
	baz=283,slow=74,SNR=59						
H11N3	**WAKE ISLAND Hy**	**42.17**	**87**	T	T	15 40 02.3	
	baz=283,slow=74,SNR=60						
H11S3	**WAKE ISLAND Hy**	**42.27**	**88**	T	T	15 40 06.1	
	baz=284,slow=74,SNR=364						
H11S1	**WAKE ISLAND Hy**	**42.28**	**88**	T	T	15 40 06.8	
	baz=284,slow=74,SNR=212						
H11S2	**WAKE ISLAND Hy**	**42.29**	**88**	T	T	15 40 08.1	
	baz=284,slow=74,SNR=177						
AAK	**Ala-Archa**	**42.97**	**308**	⇑*e*P	**P**	**14 55 07.6**	**+2.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SEY	**Seymchan**	**44.14**	**20**	⇓*e*P	**P**	**14 55 13.6**	**-0.4**
WRAB	**Tennant Creek**	**45.30**	**163**	⇓*e*P	**P**	**14 55 23.0**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,31nm,2.5s						
WR1	**Warramunga Arr**	**45.31**	**163**	*e*P	**P**	**14 55 21.2**	**-2.6**
WRA	**Warramunga Arr**	**45.31**	**163**	P	**P**	**14 55 21.2**	**-2.6**
	comp=Z,4.5nm,0.9s,baz=351,slow=9.7,SNR=4.5						
TIXI	**Tiksi**	**47.97**	**3**	*e*P	**P**	**14 55 43.1**	**-1.0**
	comp=Z,15nm,0.9s						
TIXI	**Tiksi**	**47.97**	**3**	*de*P	**P**	**14 55 43.0**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,17nm,1.0s						
BRVK	**Borovoye**	**48.20**	**321**	*e*P	**P**	**14 55 45.2**	**-0.9**
	comp=Z,4.7nm,0.8s						
BRVK	**Borovoye**	**48.20**	**321**	⇑*e*P	**P**	**14 55 47.1**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AS31	**Alice Springs**	**48.76**	**165**	*e*P	**P**	**14 55 49.9**	**-0.9**
	comp=Z,2.4nm,1.1s						
ASAR	**Alice Springs**	**48.76**	**165**	P	**P**	**14 55 49.8**	**-0.9**
	comp=Z,6.0nm,1.0s,baz=344,slow=6.6,SNR=12						
BILL	**Bilibino**	**51.84**	**20**	⇑*e*P	**P**	**14 56 13.2**	**-0.3**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ABKAR	**Akbulak array**	**53.90**	**314**	*e*P	**P**	**14 56 27.3**	**-1.7**
	comp=Z,3.9nm,0.8s						
SVE	**Sverdlovsk**	**54.49**	**324**	*e*P	**P**	**14 56 34.4**	**+1.2**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GEYT	**Alibeck**	**55.25**	**301**	P	**P**	**14 56 41.7**	**+2.6**
	comp=Z,4.1nm,0.8s,baz=48,slow=2.2,SNR=7.0						
GYA0B	**ALIBECK ARRAY**	**55.25**	**301**	*e*P	**P**	**14 56 37.0**	**-2.1**
	comp=Z,7.4nm,0.8s						
ARU	**Arti**	**55.56**	**323**	*d i*P	**P**	**14 56 41.6**	**+0.7**
ARU						14 58 41.5	
ARU				S	**S**	**15 04 29.2**	**+3.2**
ARU				SS	**SS**	**15 08 14.0**	**+3.3**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
STKA	**Stephens Creek**	**58.66**	**160**	P	**P**	**14 57 00.8**	**-2.3**
	comp=Z,5.5nm,0.7s,baz=317,slow=7.2,SNR=8.6						
STKA	**Stephens Creek**	**58.66**	**160**	*e*P	**P**	**14 57 02.1**	**-1.0**
	comp=Z,2.1nm,1.0s						
STKA	**Stephens Creek**	**58.66**	**160**	*e*P	**P**	**14 57 02.1**	**-1.0**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PRGR	**Permogore**	**62.62**	**329**	*e*P	**P**	**14 57 27.3**	**-2.4**
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZEI	**Tsey**	**65.39**	**308**	*e*P	**P**	**14 57 51.2**	**+2.6**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TTA	**Tatalina**	**65.59**	**30**	*e*P	**P**	**14 57 49.0**	**-0.4**
	comp=Z,7.0nm,0.9s						
TTA	**Tatalina**	**65.59**	**30**	*e*P	**P**	**14 57 49.0**	**-0.4**
TTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLMR	**Klimovskoe**	**65.60**	**328**	*e*P	**P**	**14 57 48.7**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KBZ	**Khabaz**	**65.94**	**309**	P	**P**	**14 57 55.6**	**+3.7**
	comp=Z,4.0nm,0.8s,baz=82,slow=7.1,SNR=4.0						
SVW2	**Sparrevohn**	**65.97**	**32**	*e*P	**P**	**14 57 51.3**	**-0.4**
	comp=Z,6.7nm,0.8s						
KIV	**Kislovodsk**	**66.05**	**309**	*e*P	**P**	**14 57 51.6**	**-1.1**
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
NEY	**Neytrino**	**66.16**	**308**	⇓*e*P	**P**	**14 57 57.1**	**+3.6**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CAST	**Castle Rocks**	**67.30**	**29**	*e*P	**P**	**14 57 59.9**	**-0.4**
	comp=Z,10nm,0.8s						
PPLA	**Purkeypile**	**67.33**	**30**	*e*P	**P**	**14 57 59.9**	**-0.7**
	comp=Z,7.6nm,0.9s						
RSO	**Redoubt South**	**67.42**	**32**	*e*P	**P**	**14 58 01.3**	**0.0**
TOLK	**Toolik Lake Re**	**67.58**	**23**	*e*P	**P**	**14 58 02.0**	**0.0**
	comp=Z,11nm,0.9s						
TOLK	**Toolik Lake Re**	**67.58**	**23**	P	**P**	**14 58 01.4**	**-0.6**
	baz=278						
SPU	**Mount Spurr**	**67.65**	**32**	*e*P	**P**	**14 58 01.7**	**-0.8**
MLY	**Manley**	**67.65**	**27**	*e*P	**P**	**14 58 02.5**	**0.0**
	comp=Z,9.9nm,0.9s						
OHAK	**Old Harbor**	**67.66**	**36**	*e*P	**P**	**14 58 01.6**	**-1.0**
	comp=Z,30nm,1.5s						
BPAW	**Bear Paw Mtn.**	**67.69**	**28**	*e*P	**P**	**14 58 01.8**	**-0.9**
	comp=Z,7.9nm,0.9s						
SKT	**Skwentna**	**67.77**	**31**	*e*P	**P**	**14 58 02.2**	**-1.1**
	comp=Z,4.1nm,0.9s						
KTH	**Kantishna Hill**	**67.80**	**29**	*e*P	**P**	**14 58 02.8**	**-0.7**
	comp=Z,9.8nm,0.8s						
KDAK	**Kodiak Island**	**67.94**	**35**	P	**P**	**14 58 03.9**	**-0.4**
	comp=Z,14nm,0.9s,baz=319,slow=2.1,SNR=10						
KDAK	**Kodiak Island**	**67.94**	**35**	*e*P	**P**	**14 58 03.5**	**-0.9**
	comp=Z,16nm,0.9s						
KDAK	**Kodiak Island**	**67.94**	**35**	*e*P	**P**	**14 58 03.5**	**-0.9**
KDAK				pmax	pmax		
	comp=Z,16nm,0.9s						
OBN	**Obninsk**	**67.95**	**322**	*e*P	**P**	**14 58 04.4**	**0.0**
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SUA	**Susitna One**	**68.22**	**31**	*e*P	**P**	**14 58 05.7**	**-0.5**
	comp=Z,14nm,0.9s						
BWN	**Browne**	**68.33**	**28**	*e*P	**P**	**14 58 06.5**	**-0.2**
	comp=Z,28nm,0.4s						
BRLK	**Bradley Lake**	**68.46**	**33**	*e*P	**P**	**14 58 06.5**	**-1.1**
	comp=Z,17nm,0.9s						
MCK	**McKinley**	**68.64**	**29**	*e*P	**P**	**14 58 06.9**	**-1.8**
	comp=Z,8.1nm,1.0s						
MCK	**McKinley**	**68.64**	**29**	*e*P	**P**	**14 58 06.9**	**-1.8**
MCK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RND	**Reindeer**	**68.74**	**29**	*e*P	**P**	**14 58 07.7**	**-1.7**
	comp=Z,28nm,0.8s						
RND	**Reindeer**	**68.74**	**29**	*e*P	**P**	**14 58 07.7**	**-1.7**
RND				pmax	pmax		
	comp=Z,28nm,0.8s						
WRH	**Wood River Hil**	**68.87**	**28**	*e*P	**P**	**14 58 09.0**	**-1.0**
	comp=Z,10nm,1.2s						
TCOL	**CIGO, UAF Yank**	**68.89**	**27**	P	**P**	**14 58 10.5**	**+0.4**
	baz=281						
COLA	**College**	**68.89**	**27**	⇑*e*P	**P**	**14 58 10.2**	**+0.1**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CCB	**Clear Creek Bu**	**68.95**	**27**	*e*P	**P**	**14 58 08.9**	**-1.6**
	comp=Z,2.5nm,0.8s						
PMR	**Palmer**	**68.96**	**31**	*e*P	**P**	**14 58 09.3**	**-1.4**
	comp=Z,8.0nm,0.9s						
PMR	**Palmer**	**68.96**	**31**	*e*P	**P**	**14 58 09.3**	**-1.4**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
POKR	**Poker Plat Res**	**69.02**	**27**	P	**P**	**14 58 10.5**	**-0.5**
	baz=281						
SEW	**Seward**	**69.10**	**32**	*e*P	**P**	**14 58 09.5**	**-2.0**
	comp=Z,13nm,1.0s						
KNK	**Knik Glacier**	**69.31**	**31**	*e*P	**P**	**14 58 11.1**	**-1.9**
	comp=Z,13nm,1.1s						
ILAR	**Eielson Array**	**69.31**	**27**	P	**P**	**14 58 11.7**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=294,slow=8.4,SNR=26						
ILB	**Eielson Array**	**69.31**	**27**	*e*P	**P**	**14 58 10.5**	**-2.3**
	comp=Z,5.0nm,0.9s						
HDA	**Harding Lake**	**69.36**	**28**	*e*P	**P**	**14 58 10.7**	**-2.5**
	comp=Z,14nm,1.0s						
HDA	**Harding Lake**	**69.36**	**28**	P	**P**	**14 58 11.8**	**-1.4**
	baz=282						
SCM	**Sheep Creek Mo**	**69.75**	**30**	*e*P	**P**	**14 58 14.7**	**-1.0**
	comp=Z,15nm,0.9s						
SCM	**Sheep Creek Mo**	**69.75**	**30**	*e*P	**P**	**14 58 14.7**	**-1.0**
SCM				pmax	pmax		
	comp=Z,15nm,0.9s						
GLI	**Glacier Island**	**70.08**	**31**	*e*P	**P**	**14 58 15.9**	**-1.7**
	comp=Z,10nm,1.0s						
PAX	**Paxson**	**70.33**	**29**	*e*P	**P**	**14 58 18.2**	**-1.1**
	comp=Z,4.1nm,0.8s						
PAX	**Paxson**	**70.33**	**29**	*e*P	**P**	**14 58 18.2**	**-1.1**
PAX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FID	**Port Fidalgo**	**70.40**	**31**	*e*P	**P**	**14 58 18.2**	**-1.4**
	comp=Z,16nm,1.2s						
RIDG	**Independent Ri**	**70.42**	**28**	*e*P	**P**	**14 58 18.2**	**-1.5**
	comp=Z,12nm,1.0s						
SCRK	**Sand Creek**	**70.73**	**28**	*e*P	**P**	**14 58 20.6**	**-1.1**
	comp=Z,9.3nm,0.9s						
DOT	**Dot Lake**	**70.78**	**28**	*e*P	**P**	**14 58 20.6**	**-1.3**
	comp=Z,7.6nm,0.9s						
MENT	**Mentasta**	**71.11**	**29**	*e*P	**P**	**14 58 23.6**	**-0.4**
	comp=Z,12nm,1.0s						
EGAK	**Eagle**	**71.69**	**27**	*e*P	**P**	**14 58 26.2**	**-1.1**
	comp=Z,13nm,0.8s						
FIA0	**FINESS Array S**	**71.88**	**330**	*e*P	**P**	**14 58 28.0**	**-0.5**
FIA0	**FINESS Array S**	**71.88**	**330**	*e*P	**P**	**14 58 28.0**	**-0.5**
FINES	**FINESS Array B**	**71.88**	**330**	P	**P**	**14 58 28.0**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=79,slow=9.9,SNR=3.9						
FINES	**FINESS Array B**	**71.88**	**330**	*i* P	**P**	**14 58 31.2**	**+2.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DAWY	**Dawson**	**72.64**	**27**	*e*P	**P**	**14 58 32.4**	**-0.7**
	comp=Z,18nm,0.9s						
CTGM	**Chitina Glacie**	**72.76**	**30**	*e*P	**P**	**14 58 32.8**	**-1.2**
	comp=Z,11nm,1.1s						
EPYK	**Eagle Plains**	**72.93**	**24**	*e*P	**P**	**14 58 34.2**	**-0.5**
	comp=Z,27nm,0.9s						
EPYK	**Eagle Plains**	**72.93**	**24**	P	**P**	**14 58 33.7**	**-1.1**
	baz=290						
AKASG	**Malin Array Be**	**73.33**	**318**	P	**P**	**14 58 37.0**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=60,slow=6.8,SNR=3.2						
AKBB	**Malin Array Si**	**73.33**	**318**	*e*P	**P**	**14 58 37.0**	**-0.3**
	comp=Z,5.8nm,1.2s						
INK	**Inuvik**	**73.37**	**22**	*e*P	**P**	**14 58 36.7**	**-0.5**
	comp=Z,24nm,0.9s						
INK	**Inuvik**	**73.37**	**22**	*e*P	**P**	**14 58 36.7**	**-0.5**
INK				pmax	pmax		
	comp=Z,24nm,0.9s						
BR101	**Keskin Array S**	**73.63**	**307**	*e*P	**P**	**14 58 39.8**	**+0.2**
BRTR	**Keskin Array B**	**73.63**	**307**	P	**P**	**14 58 39.8**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=106,slow=4.0,SNR=6.3						
SKAG	**Skagway**	**76.10**	**31**	*e*P	**P**	**14 58 52.9**	**-0.4**
	comp=Z,14nm,1.0s						
BESE	**Bessie Mountai**	**76.68**	**32**	*e*P	**P**	**14 58 55.2**	**-1.4**
	comp=Z,16nm,1.2s						
JIS	**Juneau Island**	**77.03**	**32**	*e*P	**P**	**14 58 57.5**	**-1.0**
	comp=Z,14nm,1.2s						
SIT	**Sitka**	**77.07**	**33**	*e*P	**P**	**14 58 57.8**	**-0.9**
	comp=Z,11nm,0.9s						
SIT	**Sitka**	**77.07**	**33**	*e*P	**P**	**14 58 57.8**	**-0.9**
SIT				pmax	pmax		
	comp=Z,11nm,0.9s						
NC405	**NORSAR Array S**	**78.40**	**332**	*e*P	**P**	**14 59 05.2**	**-0.9**
	comp=Z,16nm,1.2s						
NB2	**NORSAR Subarra**	**78.65**	**332**	P	**P**	**14 59 07.2**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=61,slow=5.6						
NB200	**NORSAR Array S**	**78.65**	**332**	*e*P	**P**	**14 59 07.3**	**-0.2**
NOA	**NORSAR Array B**	**78.65**	**332**	P	**P**	**14 59 07.3**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=59,slow=5.6,SNR=8.3						
VYHS	**Vyhne**	**80.42**	**319**	*e*P	**P**	**14 59 20.9**	**+3.5**
VYHS	**Vyhne**	**80.42**	**319**	*e*P	**P**	**14 59 20.9**	**+3.5**
YKW3	**Yellowknife Ar**	**83.06**	**23**	*e*P	**P**	**14 59 29.7**	**-1.3**
	comp=Z,20nm,0.9s						
YKA	**Yellowknife Ar**	**83.11**	**23**	P	**P**	**14 59 29.9**	**-1.3**
	comp=Z,12nm,0.8s,baz=315,slow=5.0,SNR=51						
YKB5	**Yellowknife Ar**	**83.11**	**23**	*e*P	**P**	**14 59 29.9**	**-1.3**
GEC2	**GERESS Array S**	**83.30**	**321**	*e*P	**P**	**14 59 33.6**	**+0.9**
	comp=Z,11nm,0.8s						
GEC2	**GERESS Array S**	**83.30**	**321**	*e*P	**P**	**14 59 33.6**	**+0.9**
GEC2				pmax	pmax		
	comp=Z,11nm,0.8s						
GERES	**GERESS Array B**	**83.30**	**321**	P	**P**	**14 59 33.6**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=64,slow=2.3,SNR=3.7						
D03D	**Eldon**	**88.24**	**38**	P	**P**	**14 59 58.0**	**+0.9**
	baz=304						
B05A	**Bryant**	**88.38**	**37**	P	**P**	**14 59 57.9**	**+0.2**
	baz=305						
E04D	**Cinebar**	**89.09**	**38**	P	**P**	**15 00 01.2**	**+0.1**
	baz=305						
LON	**Longmire**	**89.41**	**38**	*e*P	**P**	**15 00 01.4**	**-1.3**
	comp=Z,7.1nm,0.9s						
LON	**Longmire**	**89.41**	**38**	*e*P	**P**	**15 00 01.4**	**-1.3**
LON				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LTY	**Liberty**	**89.75**	**37**	*e*P	**P**	**15 00 03.7**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.6nm,0.8s						
B08A	Colville Reser	89.82	36	*e*P	P	15 00 03.9	-0.7
	comp=Z,14nm,0.9s						
H04D	Lebanon	90.14	40	P	P	15 00 06.6	+0.5
	baz=304						
I03D	Drain, OR	90.24	41	P	P	15 00 08.2	+1.7
	baz=304						
H04A	Detroit Lake	90.38	40	*e*P	P	15 00 07.0	-0.2
	comp=Z,15nm,1.1s						
G05D	Wamic, OR	90.56	39	P	P	15 00 09.2	+1.2
	baz=306						
C09A	Chrisman Ranch	90.72	36	*e*P	P	15 00 08.1	-0.6
	comp=Z,8.2nm,0.8s						
I04A	Tendick Farm,	90.75	41	P	P	15 00 10.0	+1.0
	baz=305						
D08A	Wollman Farm,	90.83	37	*e*P	P	15 00 07.5	-1.7
	comp=Z,11nm,0.9s						
NEW	Newport	91.05	35	*e*P	P	15 00 09.6	-0.7
	comp=Z,8.2nm,1.0s						
NEW	Newport	91.05	35	*e*P	P	15 00 09.6	-0.7
NEW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NEW	Newport	91.05	35	P	P	15 00 10.4	+0.2
	baz=309						
J04D	Umpqua Nationa	91.25	41	P	P	15 00 12.5	+0.9
	baz=305						
E09A	Wood Farm, Sta	91.58	37	*e*P	P	15 00 12.2	-0.5
	comp=Z,8.8nm,1.0s						
PINE	Pine Mountain	91.62	40	*e*P	P	15 00 12.8	-0.4
	comp=Z,16nm,1.0s						
L04D	Klamath Falls	91.71	42	P	P	15 00 14.2	+0.6
	baz=305						
J05D	Fort Rock, OR	91.74	41	P	P	15 00 15.2	+1.4
	baz=306						
WALA	Waterton Lakes	92.17	33	*e*P	P	15 00 16.4	+0.8
	comp=Z,11nm,1.2s						
M04C	Macdoel	92.24	42	P	P	15 00 17.1	+1.0
	baz=305						
F10A	Beach Ranch, E	92.42	37	*e*P	P	15 00 17.5	+0.7
	comp=Z,3.5nm,0.8s						
O02D	Mt. Diablo Mer	92.56	44	P	P	15 00 19.2	+1.6
	baz=304						
BMO	Blue Mountains	93.07	38	*e*P	P	15 00 19.8	0.0
	comp=Z,4.4nm,0.9s						
BMO	Blue Mountains	93.07	38	*e*P	P	15 00 19.8	0.0
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MOD	Modoc Plateau	93.11	41	*e*P	P	15 00 19.9	-0.2
	comp=Z,9.8nm,0.9s						
O03E	Paynes Creek	93.12	43	P	P	15 00 20.5	+0.5
	baz=305						
FFC	Flin Flon	93.26	24	*e*P	P	15 00 20.0	-0.3
	comp=Z,92nm,0.9s						
FFC	Flin Flon	93.26	24	*e*P	P	15 00 20.0	-0.3
J08A	Circle Bar Ran	93.32	39	*e*P	P	15 00 21.6	+0.7
	comp=Z,8.2nm,1.0s						
BEKR	Beckworth	94.27	43	*e*P	P	15 00 24.4	-1.1
	comp=Z,7.2nm,0.9s						
PAHR	Pah Rah Range	94.97	43	*e*P	P	15 00 27.4	-1.3
	comp=Z,6.3nm,1.0s						
DLMT	Dillon	95.29	35	*e*P	P	15 00 29.4	-0.7
	comp=Z,5.0nm,0.9s						
CMB	Columbia Colle	95.32	44	*e*P	P	15 00 30.1	0.0
	comp=Z,4.1nm,0.8s						
CMB	Columbia Colle	95.32	44	*e*P	P	15 00 30.2	0.0
CMB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HLID	Hailey	95.49	37	*e*P	P	15 00 31.4	+0.4
	comp=Z,2.4nm,0.8s						
HLID	Hailey	95.49	37	P	P	15 00 32.0	+1.0
	baz=310						
KVN	Kaiserville	96.16	43	*e*P	P	15 00 34.7	+0.5
	comp=Z,5.4nm,1.0s						
KVN	Kaiserville	96.16	43	*e*P	P	15 00 34.7	+0.5
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NV01	Mina Array Sit	96.41	43	*e*P	P	15 00 36.3	+0.9
NVAR	Mina Array Bea	96.41	43	P	P	15 00 36.3	+0.9
	comp=Z,2.1nm,0.8s,baz=286,slow=5.1,SNR=13						
PKM	Mcpherson Peak	97.53	47	P	P	15 00 39.3	-1.2
	baz=306						
CWC	Cottonwood Cre	97.75	45	P	P	15 00 41.7	+0.3
	baz=307						
MPMC	Manual Prospec	98.36	45	P	P	15 00 44.6	+0.4
	baz=308						
PLCA	Paso Flores	160.36	152	PKP	PKPdf	15 07 04.0	-1.6
	comp=Z,0.9nm,0.5s,baz=320,slow=2.6,SNR=3.3						
PLCA	Paso Flores	160.36	152	*e*PKIKP	PKPdf	15 07 04.0	-1.6
LPAZ	La Paz	168.16	52	PKP	PKPdf	15 07 15.2	+1.2
	comp=Z,1.1nm,0.8s,baz=6.0,slow=4.0,SNR=3.6						
LPAZ				PKPab	PKPab	15 08 21.2	-0.7
	comp=Z,2.9nm,0.9s,baz=356,slow=8.0,SNR=7.7						

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*IDC **24** 14:47:23.1±2.4, 11°.87S×166°.66E, h165^{km}±20^{km}, mb4.1/22, mb1 4.2/24, mb1mx4.1/35, mbtmp4.6/24, Error ellipse: s-maj=16.1km s-min=11.1km az=89.0*

*NEIC **24** 14:47:23.9±0.2, 11°.83S×166°.64E, mb4.7/28, Error ellipse: s-maj=6.4km s-min=4.4km az=93.0*

*ISCJB **24** 14:47:25.2±0.2, 11°.91S±0°.03×166°.58E±0°.06, h200^{km}, mb4.4/49, Error ellipse: s-maj=8.4km s-min=4.3km az=163.7*

*BJI **24** 14:47:25.8±0.0, 11°.56S×166°.81E, h199^{km}, mb4.6/26, mB4.8/17*

ISC 24 14:47:26.2±0.4**, 11°.90S**±0°.06×**166°.61E**±0°.09**, h200**^{km}**, n117,** σ**1^{s}61**/125**, mb4.6**/49**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.99	290	P	Pn	14 49 03.8	-2.6
	5.8nm,0.3s,baz=75,slow=16,SNR=3.3						
HNR				S	Sn	14 50 37.2	+11
	1.0nm,0.3s,baz=44,slow=18,SNR=1.8						
HNR	Honiara	6.99	290	*e*Pn	Pn	14 49 05.4	-1.0
HNR				S	Sn	14 50 37.2	+11
MARNC	Mare, Loyalty	9.63	172	*e*Pn	Pn	14 49 38.4	-2.2
DZM	Mont Dzumac	10.12	181	P	Pn	14 49 48.2	+1.1
	4.0nm,0.3s,baz=336,slow=12,SNR=69						
DZM				S	Sn	14 51 37.4	-2.8
	0.7nm,0.3s,baz=319,slow=19,SNR=3.5						
DZM	Mont Dzumac	10.12	181	*e*Pn	Pn	14 49 48.0	+0.9
ONTNC	Ouen Toro	10.35	181	*e*Pn	Pn	14 49 49.9	-0.1
PINNC	Pines Island,	10.69	176	*e*Pn	Pn	14 49 55.9	+1.5
PMG	Port Moresby	19.27	276	P	Pn	14 51 36.7	-2.7
	0.7nm,0.3s,baz=140,slow=12,SNR=3.8						
PMG	Port Moresby	19.27	276	*e*P	Pn	14 51 37.0	-2.5
	34nm,1.1s						
EIDS	Eidsvold	19.87	225	*e*P	Pn	14 51 43.7	-2.8
	66nm,0.8s						
CTA	Charters Tower	21.17	245	P	P	14 51 57.0	+0.8
	16nm,0.6s,baz=78,slow=12,SNR=21						
OUZ	Omahuta	24.07	166	P	P	14 52 26.9	+3.6
MKAZ	Moumakai	26.25	164	P	P	14 52 44.5	+1.6
HIZ	Hauiti	27.51	166	P	P	14 52 55.4	+1.3
HAZ	Te Kaha	27.63	161	P	P	14 52 56.8	+1.6
URZ	Urewera	27.88	162	P	P	14 52 56.8	-0.6
	10nm,1.0s,baz=264,slow=6.0,SNR=6.7						
URZ	Urewera	27.88	162	P	P	14 52 57.1	-0.3
MUGZ	Murupara	27.98	163	P	P	14 52 59.3	+1.0
MWZ	Matawai	28.07	162	P	P	14 52 58.6	-0.6
WTVZ	West Tongariro	28.26	165	P	P	14 53 03.0	+2.1
NGZ	Ngauruhoe	28.32	165	P	P	14 53 04.0	+2.5
MTHZ	Maungataniwha	28.35	163	P	P	14 53 02.8	+1.1
SNGZ	Shannon Statio	28.43	162	P	P	14 53 02.8	+0.4
RIGZ	Rimuhau	28.49	161	P	P	14 53 03.9	+1.0
BKZ	Black Stump Fm	28.54	164	*e*P	P	14 53 03.3	-0.1
	39nm,1.3s						
BKZ	Black Stump Fm	28.54	164	P	P	14 53 04.1	+0.7
BHHZ	Black Hill Sta	28.73	165	P	P	14 53 05.1	+0.1
KWHZ	Kaweka Forest	28.77	164	P	P	14 53 05.8	+0.5
ARHZ	Aropaoanui	28.77	163	P	P	14 53 06.2	+0.9
STKA	Stephens Creek	30.42	225	P	P	14 53 20.6	+0.6
	12nm,0.8s,baz=39,slow=7.7,SNR=22						
STKA	Stephens Creek	30.42	225	*e*P	P	14 53 20.7	+0.6
	3.4nm,0.8s						
TOO	Toolangi	31.80	213	*e*P	P	14 53 32.4	+0.3
	12nm,0.8s						
RPZ	Rata Peaks	31.93	174	P	P	14 53 34.5	+1.4
	20nm,0.6s,baz=312,slow=3.4,SNR=17						
RPZ	Rata Peaks	31.93	174	*e*P	P	14 53 34.0	+0.9
	18nm,0.7s						
WR1	Warramunga Arr	32.00	251	*e*P	P	14 53 33.6	-0.4
WR1				*e*PcP	PcP	14 56 20.4	+1.3
WRA	Warramunga Arr	32.00	251	P	P	14 53 33.6	-0.4
	10nm,0.9s,baz=75,slow=9.8,SNR=32						
WRA				PcP	PcP	14 56 20.4	+1.3
	4.8nm,0.8s,baz=62,slow=4.8,SNR=5.7						
AS31	Alice Springs	33.18	245	*e*P	P	14 53 43.7	-0.5
	4.4nm,0.8s						
AS31				*e*PcP	PcP	14 56 23.0	+0.6
AS31				*e*ScP	ScP	14 59 52.7	+4.9
ASAR	Alice Springs	33.18	245	P	P	14 53 43.8	-0.5
	14nm,0.8s,baz=74,slow=9.5,SNR=92						
ASAR				PcP	PcP	14 56 23.0	+0.6
	4.2nm,0.8s,baz=80,slow=2.8,SNR=8.7						
ASAR				ScP	ScP	14 59 52.7	+4.9
	2.2nm,0.9s,baz=75,slow=3.6,SNR=7.8						
BBOO	Buckleboo	34.88	228	*e*P	P	14 53 58.9	+0.2
	24nm,0.7s						
SIJI	Sorong	36.73	285	P	P	14 54 15.2	+0.5
	29nm,0.8s,baz=72,slow=9.3,SNR=9.4						
FORT	Forrest	40.26	236	*e*P	P	14 54 44.1	+0.3
	51nm,0.8s						
MJAR	Matsushiro Arr	55.11	332	P	P	14 56 37.3	-0.5
	4.2nm,0.9s,baz=169,slow=6.5,SNR=9.2						
MAJO	Matsushiro	55.12	332	*e*P	P	14 56 37.3	-0.5
MAT	Matsushiro	55.12	332	P	P	14 56 37.1	-0.7
SBUM	Sibu	55.89	281	*e*P	P	14 56 43.7	-0.1
	3.2nm,0.9s						
JNU	Nakatsue	56.26	324	P	P	14 56 46.3	+0.2
	6.9nm,0.8s,baz=80,slow=0.9,SNR=5.2						
JNU	Nakatsue	56.26	324	*e*P	P	14 56 46.3	+0.2
	37nm,1.3s						
ASAJ	Asahikawa	59.88	340	P	P	14 57 12.0	+1.2
	4.0nm,0.7s,baz=205,slow=10,SNR=7.0						
KSRS	Korea Array	61.05	325	P	P	14 57 19.7	+0.8
	0.5nm,0.6s,baz=142,slow=4.6,SNR=4.5						
KS15	Wonju Array Si	61.07	325	*e*P	P	14 57 19.7	+0.6
	118nm,1.9s						
KSAR	Wonju Array Be	61.07	325	P	P	14 57 19.7	+0.6
NJ2	Nanjing	63.22	315	*e*P	P	14 57 34.8	+1.3
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
USRK	Ussuriysk Ar.	64.08	333	P	P	14 57 39.6	+0.7
	4.5nm,0.9s,baz=134,slow=5.5,SNR=5.8						
PETK	Petropavlovsk-	65.19	354	P	P	14 57 46.4	+0.5
	2.4nm,0.9s,baz=140,slow=9.5,SNR=4.4						
PEA1	Petropavlovsk-	65.20	354	*e*P	P	14 57 46.4	+0.5
CASY	Casey	65.90	202	*e*P	P	14 57 50.1	-0.1
	22nm,1.2s						
CN2	Changchun	66.90	329	*e*P	P	14 57 57.8	+0.8
CN2				*e*pP	pwP	14 58 45.6	+0.2
CN2				*e*S	S	15 06 33.1	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
IPM	Ipoh	67.20	280	*e*P	P	14 57 59.8	+0.3
	38nm,1.3s						
KLR	Kul'dur	68.17	336	P	P	14 58 05.7	+0.9
	3.9nm,0.9s,baz=124,slow=1.5,SNR=8.4						
PSI	Prapat	68.82	278	*e*P	P	14 58 08.8	-0.9
	15nm,0.9s						
GSI	Gunungsitoli	69.78	276	*e*P	P	14 58 15.9	+0.4
	22nm,0.7s						
XAN	Xi'an	71.32	312	P	P	14 58 25.3	+0.9
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PHRA	Phrae	72.09	294	P	P	14 58 32.2	+3.0
KMI	Kunming	72.28	301	P	P	14 58 33.3	+2.7
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
PAYA	Payao	72.69	295	P	P	14 58 35.0	+2.2
HHC	Hu-ho-hao-te	73.03	319	P	P	14 58 36.1	+1.6
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
CM31	Chiang Mai Arr	73.22	294	*e*P	P	14 58 37.4	+1.4
	14nm,0.9s						
CMAR	Chiang Mai Arr	73.22	294	P	P	14 58 37.4	+1.4
	7.2nm,0.8s,baz=118,slow=4.5,SNR=33						
CMMT	Chiang Mai	73.33	294	P	P	14 58 38.7	+2.1
CHTO	Chiang Mai	73.34	294	*e*P	P	14 58 38.0	+1.4
	17nm,1.3s						
CD2	Chengdu	73.79	307	*e*P	P	14 58 39.0	0.0
LZH	Lanzhou	75.95	312	*e*P	P	14 58 54.0	+2.5
LZH				pP	pwP	14 59 44.3	+1.1
LZH				sP	sP	15 00 06.3	+7.3
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,90nm,4.6s						
QSPA	South Pole Qui	78.11	180	*e*P	P	14 59 03.2	+0.3
	30nm,1.0s						
ULN	Ulaanbaatar	79.48	324	*e*P	P	14 59 12.4	+1.6
	7.4nm,0.7s						
BILL	Bilibino	79.73	360	*e*P	P	14 59 11.4	0.0
	12nm,1.3s						
SONA0	Songino Array	79.85	324	*e*P	P	14 59 13.3	+0.6
SONM	Songino Array	79.85	324	P	P	14 59 13.3	+0.6
	1.5nm,0.3s,baz=144,slow=6.2,SNR=14						
GTA	Gaotai	80.25	314	⇑P	P	14 59 16.6	+1.6
GTA				pP	pwP	15 00 06.8	+0.5
GTA				sP	sP	15 00 29.6	+6.3
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,88nm,7.0s						
CAST	Castle Rocks	81.50	17	*e*P	P	14 59 20.7	-0.3
	15nm,1.4s						
HDA	Harding Lake	83.78	18	*e*P	P	14 59 32.4	-0.2
	14nm,1.0s						
ILAR	Eielson Array	84.05	18	P	P	14 59 33.9	-0.1
	4.1nm,0.9s,baz=226,slow=6.1,SNR=18						
ILB	Eielson Array	84.05	18	*e*P	P	14 59 33.9	-0.1
	5.0nm,0.9s						
DOT	Dot Lake	84.18	20	*e*P	P	14 59 34.8	+0.1
	6.3nm,1.0s						
MAW	Mawson	84.25	202	P	P	14 59 35.2	+0.2
	3.8nm,0.7s,baz=106,slow=6.9,SNR=9.8						
MAW	Mawson	84.25	202	*e*P	P	14 59 34.9	-0.1
	2.6nm,1.2s						
NV01	Mina Array Sit	85.93	50	*e*P	P	14 59 44.7	+0.5
NV01				*e*pP	pP	15 00 27.9	-4.8
NVAR	Mina Array Bea	85.93	50	P	P	14 59 44.7	+0.5
	0.4nm,0.8s,baz=217,slow=4.7,SNR=4.2						
NVAR				pP	pP	15 00 27.9	-4.8
	0.9nm,0.8s,baz=229,slow=8.2,SNR=4.0						
WMQ	Urumqi	90.29	315	*e*P	P	15 00 05.1	+0.5
WMQ				sP	sP	15 01 15.0	+1.0
PD31	Pinedale Array	93.51	47	*e*P	P	15 00 21.0	+1.3
	5.8nm,1.9s						
PDAR	Pinedale Array	93.51	47	P	P	15 00 21.0	+1.3
	0.2nm,0.3s,baz=244,slow=3.9,SNR=5.0						
LAZ	Ladron	93.58	56	*e*pP	pP	15 01 04.5	-4.6
MK32	Makanchi Array	94.72	317	*e*P	P	15 00 25.4	+0.6
MKAR	Makanchi Array	94.72	317	P	P	15 00 25.4	+0.6
	5.8nm,0.7s,baz=96,slow=6.4,SNR=38						
ZALV	Zalesovo Beam	94.74	324	P	P	15 00 24.7	0.0
	0.6nm,0.3s,baz=108,slow=4.8,SNR=4.7						
ZAA1	Zalesovo Array	94.74	324	*e*P	P	15 00 24.7	0.0
MAKZ	Makanchi	94.93	317	*e*P	P	15 00 25.9	+0.1
	7.7nm,1.0s						
ARCES	ARCESS Array B	117.37	346	PKP	PKiKP	15 05 47.5	+0.1
	0.9nm,0.4s,baz=93,slow=2.3,SNR=19						
FINES	FINESS Array B	122.87	339	PKP	PKiKP	15 05 58.9	+0.6
	1.5nm,0.5s,baz=12,slow=2.0,SNR=18						
NB200	NORSAR Array S	127.74	345	*e*PKPdf	PKiKP	15 06 07.8	-0.3
NOA	NORSAR Array B	127.74	345	PKP	PKiKP	15 06 07.8	-0.3
	0.7nm,0.8s,baz=32,slow=2.0,SNR=3.9						
AKASG	Malin Array Be	128.03	327	PKP	PKiKP	15 06 09.1	+0.2
	0.2nm,0.3s,baz=89,slow=1.2,SNR=4.0						
AKBB	Malin Array Si	128.03	327	*e*PKPdf	PKiKP	15 06 09.1	+0.2
BR101	Keskin Array S	130.16	312	*e*PKPdf	PKiKP	15 06 13.8	0.0
BRTR	Keskin Array B	130.16	312	PKP	PKiKP	15 06 13.8	0.0
	1.1nm,0.9s,baz=185,slow=3.1,SNR=6.0						
GEC2	GERESS Array S	136.84	334	*e*PKPdf	PKiKP	15 06 26.3	-0.7
GERES	GERESS Array B	136.84	334	PKP	PKiKP	15 06 26.3	-0.7
	0.5nm,0.7s,baz=66,slow=1.2,SNR=5.4						
KEST	Kesra	148.60	323	PKPbc	PKPab	15 06 51.1	-3.1
	9.9nm,0.9s,baz=253,slow=2.0,SNR=12						
KEST	Kesra	148.60	323	*e*PKPbc	PKPab	15 06 51.6	-2.6
POLO	Lamas de Olo	150.23	351	*e*PKPab	PKiKP	15 06 54.9	+0.2
MVO	Moncorvo	150.32	350	*e*PKPab	PKPab	15 06 55.6	-5.4
ESDC	Sonseca Array	151.10	345	PKPbc	PKiKP	15 06 57.2	+0.7
	2.4nm,0.8s,baz=21,slow=2.4,SNR=12						
MTE	Manteigas	151.15	351	*e*PKPab	PKiKP	15 06 56.6	0.0
COI	Coimbra	151.46	352	*e*PKPab	PKPab	15 06 59.5	-6.2
PMRV	Marv??o	152.07	350	*e*PKPab	PKiKP	15 06 58.4	-0.1
PMTG	Montargil	152.55	351	*e*PKPab	PKiKP	15 07 00.1	+0.7
TORD	Torodi Ar. Bea	165.22	276	PKP	PKPdf	15 07 08.3	+0.7
	2.5nm,0.9s,baz=341,slow=3.0,SNR=7.2						
TORD				PKPab	PKPab	15 08 07.8	+1.7
	0.9nm,1.0s,baz=32,slow=5.6,SNR=3.4						
TOA1	Torodi Ar. Sit	165.22	276	*e*PKPdf	PKPdf	15 07 08.3	+0.7
TOA1				*e*PKPab	PKPab	15 08 07.8	+1.7

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*ISCJB **24** 14:49:04.1±0.4, 54°.26N±0°.03×86°.24E±0°.05, h0^{km}, Error ellipse: s-maj=4.5km s-min=3.0km az=140.1*

*NNC **24** 14:49:09.8±2.8, 54°.00N×85°.97E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=21.0km s-min=18.7km az=18.0, Suspected Mining explosion.*

ISC 24 14:49:04.6±0.8**, 54°.25N**±0°.03×**86°.18E**±0°.04**, h0**^{km}**, n24,** σ**1^{s}38**/43**, 3C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELT	Eltsovka	0.99	178	P	Pg	14 49 22.3	-1.3
ELT				S	Sg	14 49 35.9	-0.6
KEM	Kemerovo	1.09	357	P	Pg	14 49 24.4	-1.2
KEM				S	Sg	14 49 40.1	+0.4
KHAR	Kharino, NSO,	1.56	285	P	Pn	14 49 32.4	-1.1
KHAR				S	Sn	14 49 54.6	+0.3
TASR	Tashtagol	1.81	145	P	Pn	14 49 36.3	-0.7
TASR				S	Sn	14 50 00.5	-0.1
NVSII	Novosibirsk	1.81	290	P	Pn	14 49 37.4	+0.3
NVS	Novosibirsk	1.81	290	P	Pn	14 49 37.4	+0.4
NVS				S	Sn	14 50 01.9	+1.2
ALXA	Alekseevka, NS	2.20	289	P	Pb	14 49 45.0	-0.2
ALXA				S	Sb	14 50 14.0	+1.0
GALT	Gorno-Altaysk,	2.30	184	P	Pb	14 49 45.4	-1.5
GALT				S	Sb	14 50 16.1	+0.2
ARTR	Artybash	2.55	164	P	Pn	14 49 47.8	+0.7
ARTR				S	Sn	14 50 15.3	-3.5
VEH	Verkhnyaya Baz	2.65	110	P	Pn	14 49 49.0	+0.3
DJO	Djoy, Khakassi	3.35	114	P	Pn	14 49 58.3	+0.1
CERR	Cheremushki	3.42	112	P	Pn	14 49 59.8	+0.7
CERR				S	Sn	14 50 39.9	-0.5
UKR	Ust'-Kan	3.43	195	P	Pn	14 50 01.0	+1.7
UKR				S	Sn	14 50 41.5	+0.8
CHBI	Chibit, Altay	4.03	168	P	Pn	14 50 08.5	+1.0
CHBI				S	Sn	14 50 56.8	+1.4
AKAR	Aktash	4.04	167	P	Pn	14 50 09.3	+1.6
AKAR				S	Sn	14 50 57.9	+2.2
TEL	Teeli	4.06	141	P	Pn	14 50 09.2	+1.2
TEL				S	Sn	14 50 58.0	+1.8
CUR	Chagan-Uzun	4.37	161	P	Pn	14 50 14.4	+2.1
CUR				S	Sn	14 51 06.4	+2.5
DGZ	Jazzator, Alta	4.62	170	P	Pn	14 50 16.7	+0.9
DGZ				S	Sn	14 51 12.7	+2.5
ARDR	Aradan	4.65	108	P	Pn	14 50 15.1	-1.0
ARDR				S	Sn	14 51 12.6	+1.8
SHTK	Zheleznogorsk-	4.73	61	P	Pn	14 50 17.8	+0.7
KURK	Kurchatov	5.82	236	P	Pn	14 50 32.3	+0.3
KURBB	Kurchatov Arra	5.92	235	⇑Pn	Pn	14 50 35.3	+1.8
	4.9nm,0.4s						
KURBB				⇓Sn	Sn	14 51 41.6	-0.3
	12nm,0.4s						
KURBB				⇑Lg	Lg	14 52 13.5	
	31nm,0.6s						
MK31	Makanchi Array	7.87	200	Pn	Pn	14 51 01.8	+1.6
	0.5nm,0.2s,baz=25,slow=12,SNR=76						
MK31				Sn	Sn	14 52 28.4	-1.5
	2.2nm,0.5s,baz=24,slow=26,SNR=5.5						
MK31				⇓Lg	Lg	14 53 11.8	
	8.6nm,0.7s,baz=29,slow=30,SNR=6.4						
MAKZ	Makanchi	7.92	201	⇑Pn	Pn	14 51 02.6	+1.7
	1.1nm,0.4s						
MAKZ				⇓Sn	Sn	14 52 31.0	-0.1
	4.3nm,0.6s						
MAKZ				⇓Lg	Lg	14 53 12.6	
	6.5nm,0.8s						

IDC 24 15:03:11.1±1.8**, 27°.67S**×**23°.06E, h0**^{km}**, mb3.4**/1**, mb1 3.0**/4**, mb1mx3.0**/32**, mbtmp3.1**/4**, ML2.3**/3**, Error ellipse: s-maj=17.9km s-min=15.8km az=66.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I47ZA	BOSHOF INFRASO	2.15	117	*i*		15 14 50.0	
	baz=295,slow=312,SNR=1.7						
BOSA	Boshof	2.16	116	Pn	Pn	15 03 49.4	+0.9
	0.8nm,0.3s,baz=294,slow=16,SNR=16						
BOSA				Pg	Pb	15 03 51.8	+0.6
	0.8nm,0.3s,baz=298,slow=16,SNR=3.3						
BOSA				Lg	Lg	15 04 18.1	
	4.9nm,0.3s,baz=245,slow=11,SNR=20						
BOSA				Rg	Rg	15 04 29.7	
	16nm,0.8s,baz=263,slow=2.1,SNR=5.4						
LBTB	Lobatse	3.49	41	Pn	Pn	15 04 07.2	+0.5
	0.1nm,0.3s,baz=225,slow=16,SNR=2.4						
LBTB				Pg	Pb	15 04 15.4	+1.6
	1.4nm,0.3s,baz=220,slow=15,SNR=17						
LBTB				Sn	Sn	15 04 47.9	-0.9
	0.7nm,0.3s,baz=307,slow=10,SNR=8.5						
LBTB				Lg	Lg	15 05 02.4	
	3.1nm,0.3s,baz=308,slow=23,SNR=13						
SUR	Sutherland	5.08	202	Pn	Pn	15 04 29.0	+0.3
	0.2nm,0.3s,baz=22,slow=14,SNR=9.0						
SUR				Sn	Sn	15 05 26.2	-2.1
	0.8nm,0.3s,baz=200,slow=10,SNR=1.5						
SUR				Lg	Lg	15 05 46.3	
	1.3nm,0.3s,baz=109,slow=24,SNR=8.3						
MATP	Matopo	8.76	36	Sn	Sn	15 07 13.4	+15
	0.2nm,0.3s,baz=270,slow=19,SNR=1.6						
MATP				Lg	Lg	15 07 41.4	
	0.2nm,0.3s,baz=126,slow=14,SNR=2.3						
TORD	Torodi Ar. Bea	45.55	330	P	P	15 11 31.8	-1.0
	0.3nm,0.5s,baz=148,slow=10,SNR=2.1						

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*IDC **24** 15:08:00.9±2.9, 19°.14S×169°.15E, h164^{km}±29^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.5/24, mbtmp4.1/8, Error ellipse: s-maj=38.8km s-min=21.5km az=156.0*

*ISCJB **24** 15:08:02.7±1.1, 19°.4S±0°.1×169°.1E±0°.2, h200^{km}, mb3.9/8, Error ellipse: s-maj=30.8km s-min=11.2km az=38.2*

ISC 24 15:08:03.4±1.2**, 19°.5S**±0°.2×**169°.2E**±0°.2**, h200**^{km}**, n12,** σ**1^{s}94**/14**, mb4.0**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.66	224	P	Pn	15 09 00.2	-0.8
	24nm,0.3s,baz=129,slow=13,SNR=423						
DZM				S	Sn	15 09 45.7	-0.6
	9.8nm,0.3s,baz=150,slow=22,SNR=5.9						
CTA	Charters Tower	21.59	264	P	P	15 12 38.7	+1.0
	3.3nm,0.4s,baz=88,slow=13,SNR=9.8						
PMG	Port Moresby	23.53	292	P	P	15 12 55.1	-0.6
	12nm,0.7s,baz=202,slow=19,SNR=4.3						
STKA	Stephens Creek	27.69	238	P	P	15 13 36.2	+3.2
	2.6nm,0.6s,baz=67,slow=9.2,SNR=7.3						
WRA	Warramunga Arr	32.78	263	P	P	15 14 17.7	-0.2
	1.8nm,0.5s,baz=79,slow=7.3,SNR=19						
ASAR	Alice Springs	33.03	256	P	P	15 14 21.0	+0.9
	14nm,0.4s,baz=82,slow=8.6,SNR=522						
ASAR				pP	pP	15 14 58.4	-1.5
	1.9nm,0.6s,baz=84,slow=9.3,SNR=3.3						
PETK	Petropavlovsk-	72.94	353	P	P	15 19 11.1	+0.5
	1.3nm,0.8s,baz=129,slow=5.7,SNR=3.0						
NVAR	Mina Array Bea	88.98	49	P	P	15 20 37.2	+1.4
	0.1nm,0.5s,baz=225,slow=8.6,SNR=2.4						
ILAR	Eielson Array	90.45	17	P	P	15 20 40.4	-1.3
	0.3nm,0.4s,baz=233,slow=5.2,SNR=6.4						
MKAR	Makanchi Array	101.86	315	P	Pdif	15 21 37.1	+3.2
	0.1nm,0.5s,baz=105,slow=9.1,SNR=3.1						
ARCES	ARCESS Array B	125.26	345	PKP	PKiKP	15 26 40.2	+0.3
	1.1nm,0.8s,baz=103,slow=3.9,SNR=5.3						
GERES	GERESS Array B	144.66	332	PKP	PKiKP	15 27 16.6	-3.4
	0.5nm,0.6s,baz=50,slow=2.3,SNR=5.4						

MEX 24 15:17:29.9±0.5**, 19°.09N**×**104°.64W, h13**^{km}±7^{km}**, MD3.7, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	0.56	317	*e*P	Pg	15 17 39.4	-1.5
CJM				*e*S	Sg	15 17 47.1	-1.3
EZ5V		1.05	68	*e*P	Pb	15 17 47.1	-3.1
EZ5V				*e*S	Sb	15 18 00.3	-3.8
MMIG	Aquila	1.46	123	*e*P	Pn	15 17 52.6	-3.4

MMIG				*i* S	Sn	15 18 10.1	-5.0
ANIG	**Ahuacatlan**	**1.96**	**3**	*e*P	Pn	15 18 00.1	-2.9
ANIG				*i* S	Sn	15 18 23.0	-4.6
ARIG	**Puente Sto Nin**	**4.15**	**100**	*i* P	Pn	15 18 29.6	-3.4
ARIG				*i* S	Sn	15 19 17.5	-3.9

MAN 24 15:19:09.8, 13°.05N×120°.21E, h33km, mb3.5, ML2.2, MS1.6, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.85**	**58**	⇓*e*P	Pb	15 19 26.0	-0.2
PGP				*i* S	Sb	15 19 37.5	+0.2
BUSP	**Coron**	**1.04**	**181**	*e*P	Pn	15 19 28.5	+0.4
SJMP	**San Jose**	**1.06**	**124**	*e*P	Pn	15 19 28.6	+0.2
SJMP				*e*S	Sn	15 19 41.8	-0.3
BOAC	**Boac**	**1.64**	**76**	*e*P	Pb	15 19 42.9	+3.4
ENPP	**El Nido**	**1.99**	**203**	*e*P	Pn	15 19 41.6	+0.4
CUYO	**Cuyo Island**	**2.33**	**160**	*e*P	Pn	15 19 46.1	+0.3

THE 24 15:21:28.1, 38°.66N×20°.71E, h14km±1km, ML1.1/2, Error ellipse: s-maj=3.8km s-min=0.4km az=278.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVGI	**Lefkada island**	**0.06**	**226**	P	Pg	15 21 30.9	0.0
EVGI				S	Sg	15 21 32.9	+0.2
LKD2	**Lefkada island**	**0.13**	**343**	P	Pg	15 21 31.6	-0.2
LKD2				S	Sg	15 21 34.2	0.0
	78nm,0.2s						
TSLK	**Tsoukalades, L**	**0.17**	**346**	P	Pg	15 21 32.3	+0.1
TSLK				S	Sg	15 21 35.4	+0.4
FSK	**Fiskardo**	**0.23**	**210**	P	Pg	15 21 33.0	-0.2
FSK				S	Sg	15 21 37.1	+0.5
	90nm,0.3s						

ATH 24 15:21:54.3, 38°.23N×22°.10E, h11km±1km, ML0.9/2, Error ellipse: s-maj=1.9km s-min=1.2km az=284.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIG2	**Aigio**	**0.02**	**311**	P	Pg	15 21 55.8	-0.4
AIG2				S	Sg	15 21 57.5	-0.2
AIG4	**Aigion**	**0.03**	**331**	P	Pg	15 21 56.3	0.0
AIG4				S	Sg	15 21 58.0	+0.2
AIG1	**Aigion**	**0.04**	**115**	P	Pg	15 21 56.3	0.0
AIG1				S	Sg	15 21 57.6	-0.2
LAKA	**Lakka**	**0.09**	**279**	P	Pg	15 21 56.9	0.0
LAKA				S	Sg	15 21 58.7	-0.2
LAKA				AML	AML	15 21 58.9	
	comp=N,242µm,0.2s						
LAKA				AML	AML	15 21 59.1	
	comp=E,174µm,0.2s						
TRIZ	**Trizonia**	**0.14**	**353**	P	Pg	15 21 57.6	0.0
KALE	**Kalithea**	**0.17**	**12**	P	Pg	15 21 58.1	0.0
KALE				S	Sg	15 22 00.9	+0.1
KALE				AML	AML	15 22 01.5	
	comp=E,82µm,0.2s						
KALE				AML	AML	15 22 02.0	
	comp=N,101µm,0.2s						
KLV	**Kalavryta, Ach**	**0.19**	**166**	P	Pg	15 21 58.3	-0.1
KLV				S	Sg	15 22 01.7	+0.5
SERG	**Sergoula**	**0.19**	**351**	P	Pg	15 21 58.4	0.0
GUR	**Goura**	**0.35**	**146**	P	Pg	15 22 00.9	-0.4

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*ISCJB **24** 15:26:36.4±0.7, 38°.23N±0°.04×32°.39E±0°.06, h5km±8km, Error ellipse: s-maj=7.9km s-min=6.0km az=173.1*
*ISK **24** 15:26:36.1, 38°.23N×32°.38E, h5km, ML1.8/5*
*DDA **24** 15:26:36.2, 38°.21N×32°.35E, h7km±3km, ML2.6*
ISC 24 15:26:35.9±1.1, **38°.23N**±0°.03×**32°.37E**±0°.05, **h7**km±7km, **n10**, σ**0ˢ.77**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LADK	**Ladik-KONYA**	**0.03**	**194**	PG	**Pg**	**15 26 37.5**	**0.0**
LADK				SG	**Sg**	**15 26 38.2**	**-0.3**
KONT	**Konya--Tatoy**	**0.28**	**182**	PG	**Pg**	**15 26 41.9**	**+0.4**
KONT				SG	**Sg**	**15 26 46.2**	**+1.0**
KONT	**Konya--Tatoy**	**0.28**	**182**	*i* P	**Pb**	**15 26 43.0**	**-0.3**
KONT				*i* S	**Sg**	**15 26 46.2**	**+1.0**
KONT				IAML_P			
	comp=Z,6µm,0.1s						
KDHN	**Kadinhani**	**0.36**	**326**	*i* P	**Pb**	**15 26 44.9**	**+0.2**
KDHN				*i* S	**Sg**	**15 26 49.0**	**+1.2**
KDHN				IAML_P			
	comp=Z,3µm,0.2s						
KMER	**Konya-Meram**	**0.46**	**180**	*i* P	**Pb**	**15 26 46.1**	**-0.2**
KMER				IAML_P			
	comp=Z,474nm,0.1s						
CHBY	**Cihanbeyli**	**0.54**	**49**	PG	**Pb**	**15 26 47.0**	**-0.8**
DOGA	**KONYA_Doganhis**	**0.57**	**258**	*i* P	**Pb**	**15 26 47.8**	**-0.5**
DOGA				*i* S	**Sb**	**15 26 55.4**	**-1.2**
DOGA				IAML_P			
	comp=Z,867nm,0.1s						
KIZT	**Kizilcal**	**0.76**	**330**	PG	**Pb**	**15 26 51.2**	**-0.3**
KULU	**Kulu**	**0.95**	**31**	PG	**Pb**	**15 26 54.7**	**-0.1**
YAYX	**Yaylak**	**1.33**	**57**	PN	**Pb**	**15 27 01.2**	**-0.1**

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*NIED **24** 15:32:00, 23°.90N×121°.60E, h5km, Mw4.6 Best double couple: $M_0$9.00000×10^{15} NP1:ϕ_s197.00000°, δ37.00000°, λ50.00000°. NP2:ϕ_s64.00000°, δ62.00000°, λ116.00000°.*
*IDC **24** 15:32:12.5±0.5, 23°.87N×121°.70E, h0km, mb4.5/23, mb1 4.6/26, mb1mx4.6/34, mbtmp4.5/26, ML3.6/4, MS3.6/17, Ms1 3.6/17, ms1mx3.5/32, Error ellipse: s-maj=14.1km s-min=12.9km az=90.0*
*NEIC **24** 15:32:13.9±1.6, 23°.87N×121°.59E, h10km±3km, mb5.1/118, MW4.5, ML4.7(TAP), Error ellipse: s-maj=11.5km s-min=7.3km az=182.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{15}Nm; M_{rr}6.61; $M_{\theta\theta}$-3.86; $M_{\phi\phi}$-2.75; $M_{r\theta}$-0.08; $M_{\theta\phi}$-5.00; $M_{\phi r}$-0.59; Best double couple: $M_0$7.60000×10^{15} NP1:ϕ_s224.00000°, δ47.00000°, λ84.00000°. NP2:ϕ_s53.00000°, δ43.00000°, λ96.00000°. Principal axes: T 6.6600, Plg85.0000°, Azm69.0000°; N 1.6900, Plg4.0000°, Azm228.0000°; P -8.3500, Plg2.0000°, Azm318.0000°;*
NEIC Felt at Taichung and Yungho. Recorded [5 TAP] in Hualien; [2 TAP] in Nantou and Yilan; [1TAP] in Changhua, Chiayi, Hsinchu, Miaoli, Taoyuan and Yunlin.
*JMA **24** 15:32:13.5, 23°.88N×121°.57E, h0km, M4.7*
*ASIES **24** 15:32:14.3, 23°.92N×121°.54E, h21km, MW4.2*
*MOS **24** 15:32:14.0±1.4, 23°.84N×121°.65E, h21km, mb5.1/53, MS4.3/7, Error ellipse: s-maj=8.3km s-min=5.6km az=113.4*
*BJI **24** 15:32:14.5±0.0, 23°.95N×121°.55E, h8km, mb4.5/50, mB4.7/42, ML4.6/6, Ms4.6/64, Ms7 4.6/57*
*TAP **24** 15:32:15.0, 23°.91N×121°.53E, h11km, ML5.0, C*
*ISCJB **24** 15:32:15.2±0.2, 23°.884N±0°.009×121°.61E±0°.01, h22km±1km, mb4.9/162, MS3.9/26, Error ellipse: s-maj=2.0km s-min=1.2km az=35.8*
ISC 24 15:32:15.1±0.5, **23°.87N**±0°.01×**121°.60E**±0°.02, **h13**km±3km, **n484**, σ**1ˢ.47**/599, **mb5.0**/161, **MS4.1**/27, **41C-50D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.10**	**2**	⇑*i*P	**Pg**	**15 32 18.4**	**+0.3**
	baz=43						
HWA				S	**Sg**	**15 32 20.7**	**+0.4**
	baz=43						
ESL	**Shilin**	**0.17**	**249**	⇑*i*P	**Pg**	**15 32 18.2**	**-0.8**
	baz=222						
ESL				*i* S	**Sg**	**15 32 20.3**	**-1.4**
	baz=222						
TWD	**Chiawan**	**0.21**	**359**	⇓*i*P	**Pg**	**15 32 19.4**	**-0.3**
	baz=13						
TWD				S	**Sg**	**15 32 22.1**	**-0.7**
	baz=13						
EGFH	**Guangfu**	**0.26**	**218**	⇑*i*P	**Pg**	**15 32 20.5**	**-0.1**
	baz=209						
EGFH				S	**Sg**	**15 32 24.0**	**-0.3**
	baz=209						
NACB	**Ninganchiao**	**0.30**	**359**	*e*Pg	**Pg**	**15 32 19.7**	**-1.6**
NACB	**Ninganchiao**	**0.30**	**359**	⇓P	**Pg**	**15 32 20.7**	**-0.6**
	baz=11						
NACB				S	**Sg**	**15 32 24.3**	**-1.2**
	baz=11						
ETLH	**Xiulin Townshi**	**0.35**	**342**	⇓*i*P	**Pg**	**15 32 21.4**	**-0.8**
	baz=350						
ETLH				*e*S	**Sg**	**15 32 25.5**	**-1.6**
	baz=350						
WHF	**Hehuan Shan**	**0.41**	**311**	⇓*i*P	**Pg**	**15 32 22.4**	**-1.1**
	baz=304						
WHF				*i* S	**Sg**	**15 32 26.9**	**-2.2**
	baz=304						
HGSD	**Ruisui**	**0.41**	**203**	⇑P	**Pb**	**15 32 24.0**	**-0.3**
	baz=206						
HGSD				*e*S	**Sb**	**15 32 32.0**	**+1.5**
	baz=206						
CHGB	**Renai**	**0.43**	**295**	⇓P	**Pg**	**15 32 22.8**	**-1.0**
	baz=296						
CHGB				S	**Sg**	**15 32 27.8**	**-1.9**
	baz=296						
VWDT	**VWDT**	**0.44**	**254**	⇑P	**Pg**	**15 32 23.4**	**-0.4**
	baz=248						
VWDT				S	**Sg**	**15 32 28.2**	**-1.5**
	baz=248						
EHY	**Hungye**	**0.45**	**215**	⇑*i*P	**Pg**	**15 32 23.6**	**-0.4**
	baz=214						
EHY				*e*S	**Sg**	**15 32 29.1**	**-0.9**
	baz=214						
TWT	**Tachien**	**0.54**	**314**	⇓*i*P	**Pg**	**15 32 25.2**	**-0.6**
	baz=307						
TWT				S	**Sg**	**15 32 31.7**	**-1.5**
	baz=307						
YULB	**Yu-li**	**0.55**	**210**	*e*Pg	**Pg**	**15 32 24.7**	**-1.3**
YULB	**Yu-li**	**0.55**	**210**	⇑P	**Pg**	**15 32 25.6**	**-0.5**
	baz=214						
YULB				S	**Sg**	**15 32 33.3**	**-0.1**
	baz=214						
ENA	**Nanau**	**0.57**	**13**	⇓*i*P	**Pg**	**15 32 25.9**	**-0.4**
	baz=8.0						
ENA				S	**Sg**	**15 32 33.3**	**-0.5**
	baz=8.0						
NANB	**Nanao**	**0.57**	**14**	⇓*i*P	**Pg**	**15 32 25.8**	**-0.5**
	baz=8.0						
NANB				S	**Sg**	**15 32 33.1**	**-0.7**
	baz=8.0						
NNSB	**Datong**	**0.59**	**340**	⇓P	**Pg**	**15 32 26.1**	**-0.6**
	baz=344						
NNSB				S	**Sg**	**15 32 32.8**	**-1.7**
	baz=344						
TWF1	**Yuli**	**0.59**	**208**	P	**Pg**	**15 32 26.1**	**-0.6**
	baz=210						
TWF1				*e*S	**Sg**	**15 32 34.3**	**-0.2**
	baz=210						
SSLB	**Suanglung**	**0.60**	**262**	*e*Pg	**Pg**	**15 32 25.1**	**-1.8**
SSLB	**Suanglung**	**0.60**	**262**	⇓P	**Pg**	**15 32 26.0**	**-0.9**
	baz=266						
SSLB				S	**Sg**	**15 32 32.6**	**-2.2**
	baz=266						
NNS	**Nan Shan**	**0.60**	**340**	⇓*i*P	**Pg**	**15 32 26.3**	**-0.6**
	baz=344						
NNS				S	**Sg**	**15 32 33.2**	**-1.8**
	baz=344						
DPDB	**Guoxing**	**0.64**	**285**	⇓*i*P	**Pg**	**15 32 26.8**	**-0.8**
	baz=283						
DPDB				S	**Sg**	**15 32 34.0**	**-2.1**
	baz=283						
SMLT	**Sun Moon Lake**	**0.64**	**271**	⇓*i*P	**Pg**	**15 32 27.0**	**-0.7**
	baz=268						
SMLT				*i* S	**Sg**	**15 32 34.6**	**-1.6**
	baz=268						
TYC	**Yuchr**	**0.68**	**273**	⇓*i*P	**Pg**	**15 32 27.4**	**-1.0**
	baz=280						
TYC				*i* S	**Sg**	**15 32 35.5**	**-2.0**
	baz=280						
WHYT	**Xinyi Township**	**0.71**	**256**	⇓*i*P	**Pg**	**15 32 28.2**	**-0.7**
	baz=259						
WHYT				S	**Sg**	**15 32 37.1**	**-1.2**
	baz=259						
YUS	**Yu-Shan**	**0.71**	**237**	⇑*i*P	**Pg**	**15 32 28.5**	**-0.5**
	baz=233						
YUS				S	**Sg**	**15 32 37.2**	**-1.2**
	baz=233						
NDT	**Datong Townshi**	**0.73**	**354**	⇓*i*P	**Pg**	**15 32 29.0**	**-0.4**
	baz=351						
NDT				S	**Sg**	**15 32 37.6**	**-1.4**
	baz=351						
ENTT	**Nioudou**	**0.76**	**358**	⇓*i*P	**Pg**	**15 32 29.6**	**-0.4**
	baz=1.0						
ENTT				S	**Sg**	**15 32 39.6**	**-0.4**
	baz=1.0						
TWC	**Suao**	**0.77**	**17**	⇓*i*P	**Pg**	**15 32 29.8**	**-0.3**
	baz=13						
TWC				S	**Sg**	**15 32 40.3**	**+0.2**
	baz=13						
CHKT	**Chengkung**	**0.80**	**196**	*e*P	**Pb**	**15 32 30.8**	**-0.1**
	baz=194						
CHKT				S	**Sn**	**15 32 43.5**	**-0.4**
	baz=194						
WJS	**Zhushan**	**0.80**	**266**	P	**Pg**	**15 32 30.5**	**-0.2**
	baz=264						
WJS				S	**Sg**	**15 32 41.4**	**+0.1**
	baz=264						
ALS	**Alishan**	**0.81**	**244**	⇑*i*P	**Pg**	**15 32 30.7**	**-0.3**
	baz=241						
ALS				S	**Sg**	**15 32 40.8**	**-0.9**
	baz=241						
YHNB	**Yeheng**	**0.82**	**345**	*e*Pg	**Pg**	**15 32 29.7**	**-1.3**
YHNB	**Yeheng**	**0.82**	**345**	⇓P	**Pg**	**15 32 30.5**	**-0.5**
	baz=339						
YHNB				S	**Sg**	**15 32 39.9**	**-2.0**
	baz=339						
EOS1	**EOS1**	**0.83**	**35**	⇓P	**Pn**	**15 32 32.2**	**-0.3**
	baz=23						
EOS1				S	**Sn**	**15 32 45.1**	**+0.6**
	baz=23						
NSK	**Sanguang**	**0.83**	**344**	⇓*i*P	**Pg**	**15 32 30.6**	**-0.6**
	baz=338						
NSK				*i* S	**Sg**	**15 32 40.2**	**-1.9**
	baz=338						
WNT	**Mingjian**	**0.84**	**270**	⇓P	**Pb**	**15 32 31.5**	**-0.1**
	baz=273						
WNT				S	**Sg**	**15 32 42.5**	**+0.1**
	baz=273						
TWE	**Neicheng**	**0.85**	**4**	⇓*i*P	**Pg**	**15 32 31.1**	**-0.4**
	baz=15						
TWE				S	**Sg**	**15 32 41.7**	**-0.9**
	baz=15						
ELDTW	**Lidau**	**0.87**	**218**	P	**Pg**	**15 32 30.7**	**-1.3**
	baz=207						
ELDTW				S	**Sg**	**15 32 42.1**	**-1.2**
	baz=207						
SLBB	**Yuanshan**	**0.88**	**2**	⇓*i*P	**Pg**	**15 32 31.8**	**-0.3**
	baz=4.0						
SLBB				S	**Sg**	**15 32 42.7**	**-0.9**
	baz=4.0						
TCU	**Taichung**	**0.89**	**288**	⇓P	**Pb**	**15 32 32.6**	**+0.1**
	baz=284						
TCU				*e*S	**Sb**	**15 32 44.9**	**+0.7**
	baz=284						
CHN5	**Tsauling**	**0.89**	**252**	⇓*i*P	**Pb**	**15 32 32.4**	**-0.1**
	baz=240						
CHN5				*i* S	**Sg**	**15 32 43.7**	**-0.4**
	baz=240						
TWQ1	**Liyutan**	**0.89**	**302**	⇓*i*P	**Pg**	**15 32 32.0**	**-0.4**
	baz=303						
TWQ1				S	**Sg**	**15 32 43.5**	**-0.6**
	baz=303						
ILA	**Ilan**	**0.90**	**9**	P	**Pg**	**15 32 32.3**	**-0.3**
	baz=11						
ILA				S	**Sb**	**15 32 44.8**	**+0.3**
	baz=11						
NSTT	**Nanjuang**	**0.93**	**324**	⇓*i*P	**Pg**	**15 32 32.6**	**-0.5**
	baz=326						
NSTT				S	**Sg**	**15 32 44.0**	**-1.3**
	baz=326						
LIOB	**Emei**	**0.94**	**325**	⇓*i*P	**Pg**	**15 32 32.8**	**-0.4**
	baz=327						
LIOB				S	**Sg**	**15 32 44.1**	**-1.4**
	baz=327						
NSY	**Sanyi**	**0.94**	**305**	⇓P	**Pb**	**15 32 33.3**	**0.0**
	baz=306						
NSY				S	**Sg**	**15 32 45.2**	**-0.3**
	baz=306						
WGK	**Gukeng**	**0.97**	**259**	⇓*i*P	**Pn**	**15 32 34.2**	**-0.2**
	baz=257						
WGK				*i* S	**Sn**	**15 32 47.4**	**-0.8**
	baz=257						
WCHH	**Zhanghua**	**0.98**	**282**	⇓*i*P	**Pg**	**15 32 34.0**	**0.0**
	baz=281						
WCHH				S	**Sn**	**15 32 47.9**	**-0.3**
	baz=281						
NMLH	**Miaoli**	**0.99**	**312**	⇓*i*P	**Pn**	**15 32 34.6**	**-0.2**
	baz=312						
NMLH				S	**Sb**	**15 32 47.0**	**-0.2**
	baz=312						
WDLH	**Douliu**	**0.99**	**260**	⇓*i*P	**Pg**	**15 32 34.4**	**+0.1**
	baz=258						
WDLH				*e*S	**Sn**	**15 32 47.9**	**-0.7**
	baz=258						
NTC	**Toucheng**	**1.00**	**12**	⇓P	**Pb**	**15 32 33.9**	**-0.5**
	baz=13						
NTC				*e*S	**Sb**	**15 32 47.2**	**-0.2**
	baz=13						
WLTB	**Daxi**	**1.02**	**342**	⇓*i*P	**Pg**	**15 32 34.9**	**0.0**
	baz=352						
WLTB				S	**Sb**	**15 32 47.6**	**-0.6**
	baz=352						
STYT	**Tauyuan**	**1.05**	**228**	⇑P	**Pb**	**15 32 34.7**	**-0.5**
	baz=226						
STYT				S	**Sg**	**15 32 49.2**	**+0.1**
	baz=226						
TPUB	**Ta-pu**	**1.06**	**238**	*e*Pn	**Pb**	**15 32 35.0**	**-0.3**
TPUB	**Ta-pu**	**1.06**	**238**	⇑P	**Pg**	**15 32 35.4**	**-0.2**
	baz=236						
TPUB				S	**Sb**	**15 32 48.2**	**-0.9**
	baz=236						
CHN4	**Tsaushan**	**1.06**	**241**	⇑*i*P	**Pn**	**15 32 35.6**	**-0.1**
	baz=232						
CHN4				*e*S	**Sg**	**15 32 49.4**	**-0.1**
	baz=232						
SBCB	**Hsinchu**	**1.07**	**329**	⇓P	**Pn**	**15 32 36.1**	**+0.2**
	baz=330						
SBCB				S	**Sg**	**15 32 49.9**	**0.0**
	baz=330						
NHDH	**Xindian Distri**	**1.09**	**356**	⇓P	**Pb**	**15 32 35.4**	**-0.4**
	baz=357						
NHDH				S	**Sb**	**15 32 49.2**	**-0.8**
	baz=357						
HSN	**Hsinchu**	**1.09**	**328**	⇓P	**Pg**	**15 32 36.4**	**+0.2**
	baz=341						
HSN				S	**Sg**	**15 32 50.6**	**+0.2**
	baz=341						
WTP	**Ta-pu**	**1.10**	**236**	⇑P	**Pb**	**15 32 36.1**	**+0.1**
	baz=234						
WTP				S	**Sn**	**15 32 51.4**	**0.0**
	baz=234						
TATO	**Taipei**	**1.10**	**355**	*e*Pn	**Pb**	**15 32 35.2**	**-0.9**
TATO	**Taipei**	**1.10**	**355**	⇓P	**Pb**	**15 32 35.7**	**-0.4**
	baz=355						
TATO				*e*S	**Sb**	**15 32 48.1**	**-2.2**
	baz=355						
TWA	**Mucha**	**1.10**	**359**	⇓P	**Pb**	**15 32 35.8**	**-0.3**
	baz=352						
TWA				*e*S	**Sb**	**15 32 48.9**	**-1.5**
	baz=352						
TIPB	**Shuangxi**	**1.11**	**11**	⇑*i*P	**Pb**	**15 32 35.5**	**-0.8**
	baz=11						
TIPB				*e*S	**Sb**	**15 32 49.5**	**-1.3**
	baz=11						
RLNB	**Erlin**	**1.14**	**271**	⇓P	**Pb**	**15 32 36.5**	**-0.2**
	baz=270						
RLNB				S	**Sg**	**15 32 51.6**	**-0.3**
	baz=270						
CHY	**Chiayi**	**1.14**	**251**	*e*P	**Pb**	**15 32 36.4**	**-0.4**
	baz=249						
CHY				S	**Sn**	**15 32 52.5**	**+0.2**
	baz=249						
NCUH	**Zhongli**	**1.15**	**341**	P	**Pg**	**15 32 37.4**	**0.0**
	baz=341						
NCUH				S	**Sn**	**15 32 52.9**	**+0.2**
	baz=341						
NCU	**National Centr**	**1.16**	**341**	⇑*i*P	**Pg**	**15 32 37.4**	**0.0**
	baz=350						
NCU				S	**Sn**	**15 32 52.6**	**-0.1**
	baz=350						
TWGBT	**Beinan**	**1.16**	**205**	⇑*e*P	**Pb**	**15 32 34.4**	**-2.6**
	baz=189						
TWG	**Pinlang**	**1.16**	**205**	*e*Pn	**Pb**	**15 32 34.6**	**-2.4**
TWG	**Pinlang**	**1.16**	**205**	*e*P	**Pb**	**15 32 34.6**	**-2.4**
	baz=189						
TAP	**Taipei**	**1.16**	**356**	P	**Pb**	**15 32 37.0**	**-0.1**
	baz=356						
TAP				*e*S	**Sb**	**15 32 51.2**	**-1.0**
	baz=356						
TWK	**Hsinying**	**1.19**	**240**	⇑*i*P	**Pn**	**15 32 37.4**	**-0.1**
	baz=226						
TWK				S	**Sb**	**15 32 53.0**	**+0.1**
	baz=226						
TTN	**Taitung**	**1.19**	**201**	*e*P	**Pn**	**15 32 36.8**	**-0.7**
	baz=198						
NWF	**Wu-fen Shan**	**1.20**	**8**	⇑P	**Pn**	**15 32 37.3**	**-0.5**
	baz=7.0						
NWF				*e*S	**Sb**	**15 32 53.1**	**-0.3**
	baz=7.0						
WFSB	**Wu-fen Shan**	**1.20**	**8**	⇑P	**Pn**	**15 32 37.2**	**-0.4**
	baz=7.0						
WFSB				S	**Sb**	**15 32 52.9**	**-0.3**
	baz=7.0						
SNST	**Tainan City**	**1.20**	**238**	*e*P	**Pb**	**15 32 37.7**	**-0.1**
	baz=237						
WTCT	**Ta-ch'eng**	**1.21**	**270**	⇓*i*P	**Pn**	**15 32 37.3**	**-0.4**
	baz=269						
WTCT				*e*S	**Sb**	**15 32 52.2**	**-1.2**
	baz=269						
TWS1	**Kuangyinshan**	**1.23**	**352**	⇑*e*P	**Pn**	**15 32 37.8**	**-0.3**
	baz=352						
TWS1				S	**Sg**	**15 32 56.0**	**+1.0**
	baz=352						
SLGT	**Liugui**	**1.24**	**225**	⇑P	**Pb**	**15 32 38.4**	**0.0**
	baz=224						
SLGT				*e*S	**Sg**	**15 32 55.1**	**0.0**
	baz=224						
WLGB	**Puzi**	**1.26**	**252**	P	**Pb**	**15 32 38.7**	**0.0**
	baz=264						
WLGB				S	**Sg**	**15 32 56.0**	**+0.3**
	baz=264						
WMLT	**Mailiao**	**1.26**	**267**	*e*P	**Pb**	**15 32 38.7**	**-0.1**
	baz=266						
WMLT				*e*S	**Sb**	**15 32 55.0**	**0.0**
	baz=266						
YM01	**YM01**	**1.27**	**359**	*e*P	**Pn**	**15 32 38.4**	**-0.2**
	baz=358						
YM01				*e*S	**Sb**	**15 32 54.7**	**-0.5**
	baz=358						
YM04	**YM04**	**1.28**	**357**	⇑P	**Pn**	**15 32 37.8**	**-0.9**
	baz=357						
YM04				S	**Sb**	**15 32 55.4**	**-0.1**
	baz=357						
YM10	**YM10**	**1.28**	**358**	⇑P	**Pn**	**15 32 37.9**	**-0.9**
	baz=357						
YM10				*e*S	**Sg**	**15 32 56.2**	**-0.1**
	baz=357						
YM05	**YM05**	**1.28**	**359**	⇑P	**Pn**	**15 32 38.0**	**-0.9**
	baz=357						
YM05				S	**Sb**	**15 32 55.6**	**-0.1**
	baz=357						
WSF	**Szhu**	**1.29**	**260**	P	**Pn**	**15 32 38.9**	**+0.1**
	baz=259						
WSF				S	**Sn**	**15 32 56.1**	**+0.2**
	baz=259						
NTST	**Danshui**	**1.29**	**354**	P	**Pb**	**15 32 39.1**	**-0.2**
	baz=8.0						
NTST				S	**Sg**	**15 32 57.3**	**+0.4**
	baz=8.0						
YM03	**YM03**	**1.30**	**358**	⇓P	**Pb**	**15 32 39.4**	**-0.1**
	baz=357						
YM03				S	**Sb**	**15 32 56.1**	**-0.1**
	baz=357						
ANP	**Anpu**	**1.31**	**357**	*e*P	**Pn**	**15 32 38.9**	**-0.4**
	baz=356						
ANP				*e*S	**Sb**	**15 32 55.4**	**-1.0**
	baz=356						
YM08	**YM08**	**1.31**	**360**	*e*P	**Pn**	**15 32 37.9**	**-1.3**
	baz=359						
YM08				S	**Sb**	**15 32 56.0**	**-0.3**
	baz=359						
JYNG	**Yonagunijimaku**	**1.35**	**65**	P	**Pn**	**15 32 39.9**	**+0.1**
JYNG				*e*S	**Sg**	**15 32 59.3**	**+0.4**
CHN8	**Yiju**	**1.38**	**248**	⇑P	**Pn**	**15 32 40.3**	**+0.2**
	baz=247						
CHN8				S	**Sg**	**15 32 59.3**	**-0.4**
	baz=247						
CHN3	**Shinhua**	**1.39**	**235**	P	**Pb**	**15 32 41.2**	**+0.3**
	baz=234						
CHN3				*e*S	**Sg**	**15 33 01.0**	**+1.2**
	baz=234						
TWY	**Chenhua**	**1.40**	**360**	*e*P	**Pn**	**15 32 40.5**	**+0.2**
	baz=359						
TWY				*e*S	**Sn**	**15 32 57.7**	**-1.0**
	baz=359						

ECL	Taimali	1.40	205	*e*P	Pn	15 32 38.4	-2.1
	baz=189						
YOJ	Yonaguni jima	1.41	65	*e*Pn	Pn	15 32 39.6	-1.0
YOJ	Yonaguni jima	1.41	65	⇑P	Pn	15 32 40.9	+0.3
	baz=63						
YOJ				*e*S	Sg	15 33 00.2	-0.5
	baz=63						
YOJ	Yonaguni jima	1.41	65	*e*P	Pn	15 32 39.6	-1.0
YOJ	Yonaguni jima	1.41	65	P	Pn	15 32 40.8	+0.3
YOJ				S	Sg	15 33 00.1	-0.6
SSD	Sandimen	1.43	219	*e*P	Pn	15 32 41.2	+0.3
	baz=220						
SSD				S	Sg	15 33 02.1	+0.7
	baz=220						
SCLT	Jiali	1.47	242	*e*P	Pn	15 32 41.6	+0.3
	baz=241						
SCLT				*e*S	Sb	15 33 01.2	+0.3
	baz=241						
TAI1	Yung-k'ang	1.51	237	*e*P	Pg	15 32 43.8	-0.4
	baz=237						
SGLT	Jiouru	1.53	222	⇓P	Pg	15 32 44.5	-0.1
	baz=238						
MASBT	Mashibuluo	1.54	216	*e*P	Pn	15 32 41.8	-0.6
	baz=218						
MASBT				*e*S	Sb	15 33 03.6	+0.6
	baz=218						
SNJT	Kaohsiung City	1.61	226	*e*P	Pb	15 32 44.5	-0.3
	baz=226						
EAST	Anshuo	1.64	205	*e*P	Pn	15 32 43.0	-0.7
	baz=192						
TAW	Tawu	1.64	203	*e*P	Pn	15 32 41.9	-1.8
	baz=188						
SCZT	Fangliau	1.75	211	*e*P	Pb	15 32 46.1	-1.0
	baz=210						
KAU	Kaohsiung	1.76	223	*e*P	Pg	15 32 48.3	-0.6
	baz=243						
LAY	Lan-yu	1.83	181	*e*P	Pn	15 32 44.6	-1.7
	baz=175						
LAY				*e*S	Sn	15 33 08.0	-1.4
	baz=175						
WDGT	Dungji	1.88	251	P	Pn	15 32 47.4	+0.4
	baz=236						
WDGT				*e*S	Sn	15 33 11.1	+0.4
	baz=236						
WLCH	Liuqiu	1.89	217	*e*P	Pb	15 32 49.7	+0.3
	baz=216						
PHUB	P'eng-hu	1.90	259	⇑P	Pn	15 32 46.9	-0.3
	baz=259						
PHUB				*e*S	Sn	15 33 10.5	-0.5
	baz=259						
PNG	Penghu	1.90	261	*e*P	Pn	15 32 47.2	0.0
	baz=260						
PNG				*e*S	Sn	15 33 11.4	+0.3
	baz=260						
TWP	Hsiaoliuchiu	1.90	217	*e*P	Pb	15 32 49.3	-0.4
	baz=216						
IRIF	Iriomote-Funau	2.00	76	P	Pn	15 32 49.2	+0.6
IRIF				S	Sb	15 33 15.4	-0.8
HEN	Hengchun	2.02	203	*e*P	Pb	15 32 51.9	+0.1
	baz=194						
HATJ	Hateruma jima	2.02	84	P	Pn	15 32 49.7	+0.7
HATJ				S	Sn	15 33 15.3	+1.2
TWK1	Hengchun	2.06	201	*e*P	Pn	15 32 49.0	-0.4
	baz=186						
TWKBT	Hengchun	2.06	201	*e*P	Pn	15 32 50.8	+1.3
	baz=186						
TSEB	Hengchuen, Pin	2.07	198	*e*P	Pb	15 32 51.4	-1.2
	baz=186						
VCHM	Qimei	2.10	252	*e*P	Pn	15 32 50.2	+0.2
	baz=236						
VCHM				S	Sn	15 33 16.4	+0.4
	baz=236						
JKRS	Kuro-shima	2.23	80	P	Pn	15 32 53.4	+1.6
JKRS				S	Sb	15 33 21.2	-1.6
PTTC	Pingtan	2.32	315	*e*P	Pn	15 32 51.9	-1.2
	baz=317						
JIJ	Ishigaki jima	2.37	78	P	Pn	15 32 54.0	+0.2
JIJ				S	Sn	15 33 22.7	0.0
PTMZ	Houxiangcun	2.54	298	*e*P	Pn	15 32 55.0	-1.1
	baz=299						
JISG	Ishigakijimahi	2.57	73	P	Pn	15 32 56.9	+0.4
JISG				S	Sn	15 33 28.4	+0.7
MATB	Ma-tsu	2.72	327	*e*P	Pn	15 32 57.7	-0.9
	baz=325						
MATB				*e*S	Sn	15 33 29.2	-2.2
	baz=325						
JTJ	Tarama	2.93	74	P	Pn	15 33 02.5	+1.1
JTJ				*e*S	Sn	15 33 37.1	+0.6
QZH	Quanzhou	2.94	292	Pn	Pn	15 33 00.1	-1.5
QZH				Sn	Sn	15 33 34.1	-2.7
QZH				smax	smax		
	comp=N,2µm,0.9s						
QZH				smax	smax		
	comp=E,1µm,1.1s						
KNMB	Chin-men Tao	2.99	282	*e*Pn	Pn	15 33 01.4	-1.0
KNMB	Chin-men Tao	2.99	282	*e*P	Pn	15 33 01.6	-0.7
	baz=283						
LYJJ	Jianjiangzhen	3.14	328	⇑*e*P	Pn	15 33 03.6	-0.8
	baz=318						
MHZQ	Yeshan	3.22	314	*e*P	Pn	15 33 05.5	+0.1
	baz=316						
XPSS	Dashiqiu	3.30	338	⇑*e*P	Pn	15 33 05.4	-1.1
	baz=327						
JIRB	Irabujima	3.39	73	P	Pn	15 33 08.8	+1.0
JIRB				S	Sn	15 33 48.6	+0.7
AXDP	Jialang	3.46	288	*e*P	Pn	15 33 08.2	-0.5
	baz=289						
JIKM	Ikemajima	3.48	72	P	Pn	15 33 10.6	+1.5
JIKM				S	Sn	15 33 51.3	+1.1
JMJ	Miyako jima 2	3.50	74	*e*P	Pn	15 33 10.9	+1.7
	baz=72						
JMJ				*e*S	Sn	15 33 51.6	+1.1
	baz=72						
JMJ2	Miyako jima3	3.51	75	P	Pn	15 33 11.1	+1.7
JMJ2				S	Sn	15 33 52.5	+1.7
ZPLA	Ao Xicun	3.53	272	⇑*e*P	Pn	15 33 09.1	-0.5
	baz=273						
JOGS	Gusukube	3.58	75	P	Pn	15 33 11.6	+1.2
JOGS				S	Sn	15 33 53.6	+1.0
ZZJH	Jiuhuzhen	3.68	280	*e*P	Pn	15 33 11.2	-0.4
	baz=281						
JOW	Kunigami	6.72	63	Pn	Pn	15 33 52.5	-1.0
	1.5nm,0.3s,baz=167,slow=13,SNR=20						
JOW				Sn	Sn	15 35 10.5	+0.6
	0.2nm,0.3s,baz=98,slow=15,SNR=3.2						
JOW	Kunigami	6.72	63	*e*P	Pn	15 33 52.6	-1.0
	baz=64						
SSE	Sheshan	7.20	357	P	Pn	15 34 02.3	+2.1
SSE				S	Sn	15 35 23.1	+1.2
MCO	Taipa Grande	7.61	258	P	Sg	15 36 13.0	-6.5
GZH	Guangzhou	7.62	266	P	Pn	15 34 01.8	-4.1
GZH				S	Sn	15 35 19.8	-12
GZH				smax	smax		
	comp=N,710nm,0.9s						
GZH				smax	smax		
	comp=E,660nm,0.9s						
NJ2	Nanjing	8.50	344	⇑*i*P	Pn	15 34 17.5	-0.5
NJ2				S	Sn	15 35 50.3	-3.5
NJ2				pmax	pmax		
	comp=E,160nm,0.8s						
NJ2				LR	LR		
	comp=E,4µm,7.7s						
NJ2				LR	LR		
	comp=E,2µm,3.9s						
NJ2				LR	LR		
	comp=E,4µm,9.2s						
WHN	Wuhan	9.26	317	P	Pn	15 34 23.3	-5.1
WHN				S	Sn	15 36 11.0	-1.5
WHN				LR	LR		
	comp=N,6µm,11.8s						
WHN				LR	LR		
	comp=E,5µm,8.4s						
WHN				LR	LR		
	comp=Z,7µm,10.9s						
QIZ	Qiongzhong	11.96	248	P	Pn	15 35 04.6	-0.9
QIZ				S	Sn	15 37 20.4	+1.6
QIZ				LR	LR		
	comp=Z,770nm,16.7s						
QIZ				LR	LR		
	comp=Z,710nm,18.6s						
QIZ				LR	LR		
	comp=Z,670nm,14.7s						
JNU	Nakatsue	12.30	39	Pn	Pn	15 35 10.6	+0.6
	comp=Z,0.3nm,0.3s,baz=307,slow=10,SNR=3.1						
TIA	Tai'an	12.89	344	P	Pn	15 35 19.3	+1.2
TIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TIA				LR	LR		
	comp=Z,2µm,9.6s						
TIA				LR	LR		
	comp=Z,1µm,8.8s						
TIA				LR	LR		
	comp=Z,3µm,9.0s						
GYA	Guiyang	13.77	284	⇑*i*P	Pn	15 35 31.3	+1.0
GYA				PP	P	15 35 42.1	+3.3
GYA				S	Sn	15 38 08.8	+5.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,70nm,4.4s						
GYA				LR	LR		
	comp=Z,2µm,10.2s						
GYA				LR	LR		
	comp=Z,2µm,9.7s						
GYA				LR	LR		
	comp=Z,3µm,10.8s						
KS15	Wonju Array Si	14.56	20	*e*Pn	Pn	15 35 40.5	-0.4
KSRS	Korea Array	14.58	20	Pn	Pn	15 35 41.5	+0.4
	comp=Z,1.1nm,0.3s,baz=199,slow=11,SNR=23						
DL2	Dalian	14.99	0	P	P	15 35 53.9	+1.8
DL2				*e*S	S	15 38 49.3	-0.9
DL2				pmax	pmax		
	comp=Z,50nm,0.8s						
DL2				pmax	pmax		
	comp=Z,130nm,11.3s						
DL2				LR	LR		
	comp=N,290nm,16.5s						
DL2				LR	LR		
	comp=E,1µm,16.5s						
DL2				LR	LR		
	comp=Z,1µm,12.8s						
XAN	Xi'an	15.01	315	*e*Pn	Pn	15 35 46.5	-0.6
XAN	Xi'an	15.01	315	P	Pn	15 35 48.3	+1.2
XAN				pP	P	15 35 53.8	+1.3
XAN				S	Sn	15 38 37.6	+4.3
XAN				pmax	pmax		
	comp=Z,17nm,1.2s						
XAN				pmax	pmax		
	comp=Z,150nm,3.7s						
XAN				LR	LR		
	comp=Z,1µm,4.9s						
XAN				LR	LR		
	comp=Z,1µm,5.1s						
XAN				LR	LR		
	comp=Z,2µm,11.4s						
XAN	Xi'an	15.01	315	*e*P	Pn	15 35 46.5	-0.6
TIY	Taiyuan	15.87	332	*e*P	P	15 36 05.0	+2.9
DAV	Davao City (W)	17.14	166	LR	LR	15 43 14.7	
	comp=Z,136nm,18.9s,baz=356,slow=39						
KMI	Kunming	17.21	278	P	P	15 36 18.1	+0.9
KMI				PP	PnPn	15 36 29.5	+3.9
KMI				S	Sn	15 39 24.8	-2.4
KMI				SS	SnSn	15 39 46.8	+6.3
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,60nm,3.3s						
KMI				LR	LR		
	comp=Z,2µm,14.4s						
KMI				LR	LR		
	comp=Z,570nm,14.7s						
KMI				LR	LR		
	comp=Z,2µm,10.9s						
PANO	Nakornpanom	17.26	250	P	P	15 36 24.9	+7.5
	comp=Z,0.4nm,2.3s,comp=Z,399nm						
CD2	Chengdu	17.32	298	⇑*i*P	P	15 36 17.4	-0.7
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,140nm,3.9s						
CD2				LR	LR		
	comp=Z,2µm,8.8s						
CD2				LR	LR		
	comp=Z,3µm,11.4s						
CD2				LR	LR		
	comp=Z,4µm,10.2s						
NONG	Nongkai	18.17	255	P	P	15 36 37.0	+9.4
	comp=Z,0.3nm,1.3s						
JHJ	Hachijo jima 2	18.42	56	P	P	15 36 29.3	-0.9
	comp=Z,5.4nm,0.3s,baz=182,slow=10,SNR=7.8						
JHJ				LR	LR	15 43 35.2	
	comp=Z,95nm,21.2s,baz=276,slow=37						
JHJ2	Mitsune	18.45	56	*e*P	Pn	15 36 30.8	+0.2
	comp=Z,120nm,0.8s						
HHC	Hu-ho-hao-te	18.91	336	P	Pn	15 36 37.3	+1.1
HHC				S	Sn	15 40 06.6	-1.2
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,5.3s						
HHC				LR	LR		
	comp=Z,940nm,11.3s						
MAJO	Matsushiro	19.08	45	*e*P	P	15 36 37.6	+0.2
	comp=Z,17nm,1.0s						
MAJO	Matsushiro	19.08	45	*e*P	P	15 36 37.6	+0.2
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s						
MAT	Matsushiro	19.08	45	P	P	15 36 35.8	-1.7
MJB9	Matsu-Tunnel	19.08	45	*e*P	P	15 36 37.5	+0.1
	comp=Z,18nm,1.0s						
MJAR	Matsushiro Arr	19.08	45	P	P	15 36 35.6	-1.9
	comp=Z,0.0nm,0.3s,baz=238,slow=10,SNR=11						
MJAR				LR	LR	15 44 41.4	
	comp=Z,195nm,18.8s,baz=235,slow=39						
BTO	Baotou	19.32	332	*e*P	Pn	15 36 43.0	+1.8
BTO				S	S	15 40 20.4	+1.9
LZH	Lanzhou	19.58	313	*e*P	Pn	15 36 47.3	+2.9
LZH				pP	sP	15 36 49.9	+1.4
LZH				sP	pP	15 36 51.9	+5.0
LZH				PP	PnPn	15 37 03.5	+5.6
LZH				sS	Sn	15 40 26.1	+2.0
LZH				SS	S	15 40 48.5	+24
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH				pmax	pmax		
	comp=Z,280nm,4.9s						
LZH				LR	LR		
	comp=Z,920nm,10.0s						
LZH				LR	LR		
	comp=Z,1µm,10.3s						
LZH				LR	LR		
	comp=Z,2µm,11.7s						
CN2	Changchun	20.13	8	*e*P	P	15 36 48.5	-0.3
CN2				*e*PP	sP	15 37 07.8	+14
CN2				*e*S	S	15 40 30.6	-4.0
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,280nm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
PHRA	Phrae	20.62	259	P	Pn	15 37 04.1	+7.4
	comp=Z,2.5nm,1.3s,comp=Z,807nm						
PBKT	Sadao Pong	20.66	253	P	Pn	15 36 58.0	+0.8
	comp=Z,6.6nm,1.3s,comp=Z,550nm						
PAYA	Payao	20.69	262	P	Pn	15 36 58.5	+1.0
	comp=Z,28µm,1.3s						
VLA	Vladivostok	20.99	21	*ce*P	P	15 36 58.0	-0.2
VLA				pmax	pmax		
	comp=Z,50nm,1.1s						
CMMT	Chiang Mai	21.68	261	P	P	15 37 08.7	+2.8
	comp=Z,12nm,1.2s						
CHTO	Chiang Mai	21.69	261	*e*P	P	15 37 06.0	+0.1
	comp=Z,24nm,1.0s						
CHTO	Chiang Mai	21.69	261	*e*P	P	15 37 06.0	+0.1
CHTO				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ	Mudanjiang	21.70	16	*e*P	P	15 37 04.7	-1.0
	comp=Z,43nm,1.0s						
MDJ	Mudanjiang	21.70	16	P	P	15 37 06.4	+0.6
MDJ				S	S	15 41 08.6	+3.0
MDJ				pmax	pmax		
	comp=Z,31nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,220nm,4.0s						
MDJ				LR	LR		
	comp=Z,500nm,16.1s						
MDJ				LR	LR		
	comp=Z,1µm,16.0s						
MDJ				LR	LR		
	comp=Z,680nm,15.0s						
CM31	Chiang Mai Arr	21.80	260	*e*P	P	15 37 09.2	+2.1
CMAR	Chiang Mai Arr	21.80	260	P	P	15 37 09.2	+2.1
	comp=Z,4.8nm,1.0s,baz=60,slow=8.3,SNR=17						
CMAR				LR	LR	15 45 41.2	
	comp=Z,120nm,20.4s,baz=78,slow=37						
USRK	Ussuriysk Ar.	21.99	20	P	P	15 37 08.8	-0.1
	comp=Z,9.5nm,0.7s,baz=204,slow=9.7,SNR=25						
UTHA	Uthaitani	22.42	252	P	P	15 37 23.3	+10
	comp=Z,20µm,1.1s						
UMPA	Umpang Tak	22.66	255	P	P	15 37 24.8	+8.4
	comp=Z,30µm,1.0s						
SBUM	Sibu	23.15	204	*e*P	P	15 37 21.0	-0.4
	comp=Z,6.7nm,0.9s						
GTA	Gaotai	24.07	315	⇓P	P	15 37 30.8	+0.4
GTA				pP	sP	15 37 35.4	-0.7
GTA				sP	pP	15 37 37.9	+3.3
GTA				PcP	PcP	15 41 14.8	+3.0
GTA				S	S	15 41 52.6	+4.9
GTA				pmax	pmax		
	comp=Z,7.0nm,2.1s						
GTA				pmax	pmax		
	comp=Z,170nm,5.9s						
GTA				LR	LR		
	comp=Z,490nm,13.7s						
GTA				LR	LR		
	comp=Z,790nm,12.4s						
GTA				LR	LR		
	comp=Z,1µm,12.4s						
GUMO	Guam	24.26	111	LR	LR	15 46 20.4	
	comp=Z,70nm,18.1s,baz=289,slow=35						
KSM	Kuching	24.81	208	*e*P	P	15 37 36.2	-0.9
	comp=Z,16nm,1.0s						
LBMI	Labuha	25.03	166	P	P	15 37 37.7	-1.4
HIA	Hailar	25.39	357	*e*P	P	15 37 43.1	+1.0
	comp=Z,17nm,0.9s						
HIA	Hailar	25.39	357	*e*P	P	15 37 43.1	+1.0
HIA				pmax	pmax		
	comp=Z,17nm,0.9s						
ASAJ	Asahikawa	26.52	35	P	P	15 37 50.8	-1.7
	comp=Z,10.0nm,0.9s,baz=236,slow=8.5,SNR=7.1						
ASAJ				LR	LR	15 48 53.6	
	comp=Z,191nm,19.7s,baz=190,slow=38						
KLR	Kul'dur	26.54	15	P	P	15 37 51.9	-0.6
	comp=Z,33nm,0.9s,baz=229,slow=8.7,SNR=41						
KLR	Kul'dur	26.54	15	*d i*P	P	15 37 52.2	-0.3
KLR				pmax	pmax		
	comp=Z,40nm,0.9s						
ULN	Ulaanbaatar	26.59	338	*e*P	P	15 37 54.2	+0.9
	comp=Z,17nm,0.9s						
ULN	Ulaanbaatar	26.59	338	*e*P	P	15 37 54.2	+0.9
ULN				pmax	pmax		
	comp=Z,17nm,0.9s						
SONA0	Songino Array	26.80	337	*e*P	P	15 37 55.2	+0.1
SONM	Songino Array	26.80	337	P	P	15 37 55.2	+0.1
	comp=Z,8.8nm,0.8s,baz=161,slow=6.7,SNR=24						
SONM				LR	LR	15 48 32.6	
	comp=Z,233nm,19.3s,baz=117,slow=36						
SHL	Shillong	27.02	280	P	P	15 38 00.2	+2.8
SHL				pmax	pmax		
	comp=Z,26nm,1.1s						
SHL	Shillong	27.02	280	*e*P	P	15 38 00.0	+2.6
LSA	Lhasa	27.75	289	*e*P	P	15 38 05.1	+0.9
	comp=Z,13nm,0.7s						
LSA	Lhasa	27.75	289	P	P	15 38 05.8	+1.6
LSA				LR	LR		
	comp=Z,540nm,7.4s						
LSA				LR	LR		
	comp=Z,3µm,11.1s						
LSA	Lhasa	27.75	289	*e*P	P	15 38 05.1	+0.9
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
YSS	Yuzh-Sakhalins	28.59	31	*e*P	P	15 38 12.5	+1.6
	comp=Z,42nm,1.0s						
YSS	Yuzh-Sakhalins	28.59	31	*e*P	P	15 38 13.2	+2.3
YSS				*e*		15 38 21.7	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS				MLR	MLR		
	comp=N,200nm,11.0s						
KAPI	Kappang	28.77	184	LR	LR	15 49 54.3	
	comp=N,94nm,21.2s,baz=310,slow=37						
ZAK	Zakamensk	30.06	336	*e*P	P	15 38 24.3	+0.3
ZAK				*e*		15 39 19.4	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZEA	Zeya	30.13	7	*e*P	P	15 38 23.2	-1.3
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
ZEA				MLR	MLR		
	comp=N,800nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,13.0s						
TLY	Talaya	31.00	338	*e*P	P	15 38 32.8	+0.5
TLY				pmax	pmax		
	comp=Z,11nm,0.6s						
TLY				MLR	MLR		
	comp=Z,977nm,15.0s						
IRK	Irkutsk	31.27	339	*e*P	P	15 38 34.2	-0.4
IRK				pmax	pmax		
	comp=Z,28nm,2.3s						
MNSI	Mandailing Nat	31.34	226	P	P	15 38 40.2	+4.7
EDFI	Ende, Flores	32.42	180	P	P	15 38 42.5	-2.7
WMQ	Urumqi	34.15	314	*e*P	P	15 39 02.8	+2.8
WMQ				pP	sP	15 39 06.9	+1.2
WMQ				S	S	15 44 21.0	-4.9
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,28nm,3.7s						
WMQ				LR	LR		
	comp=Z,330nm,10.5s						
WMQ				LR	LR		
	comp=Z,320nm,12.9s						
WMQ				LR	LR		
	comp=Z,240nm,12.3s						
DGZ	Jazzator, Alta	37.07	323	⇓*e*P	P	15 39 26.0	+0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SKR	Severo-Kuril's	37.78	36	⇑*e*P	P	15 39 29.8	-1.1
YAK	Yakutsk	38.54	6	*e*P	P	15 39 36.6	-0.5
	comp=Z,13nm,0.8s						
YAK	Yakutsk	38.54	6	*e*P	P	15 39 36.3	-0.8
YAK				*e**PP	sP	15 39 48.0	+5.8
YAK				*e*PPP	PPP	15 41 29.9	
YAK				*e*		15 41 49.9	
YAK				*e*S	S	15 45 30.2	-2.1
YAK				*e*SSS	SSS	15 48 39.2	
YAK				*e*		15 49 39.1	
YAK				pmax	pmax		
	comp=Z,19nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,12nm,1.3s						
YAK				smax	smax		
	comp=N,42nm,3.3s						
YAK				smax	smax		
	comp=E,43nm,3.2s						
YAK				MLR	MLR		
	comp=Z,355nm,14.0s						
YAK				MLR	MLR		
	comp=N,241nm,12.0s						
YAK				MLR	MLR		
	comp=E,166nm,12.0s						
MK31	Makanchi Array	38.83	316	*e*P	P	15 39 39.4	-0.5
	comp=E,7.6nm,0.9s						
MK31	Makanchi Array	38.83	316	*i* P	P	15 39 39.6	-0.2
MK31				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MK32	Makanchi Array	38.83	316	*e*P	P	15 39 39.7	-0.1
MKAR	Makanchi Array	38.83	316	P	P	15 39 39.7	-0.1
	comp=Z,7.5nm,0.8s,baz=103,slow=9.4,SNR=56						
MKAR				LR	LR	15 56 26.4	
	comp=Z,91nm,18.5s,baz=106,slow=37						
MAKZ	Makanchi	39.03	316	*e*P	P	15 39 41.1	-0.4
	comp=Z,11nm,0.8s						
MAKZ	Makanchi	39.03	316	*e*P	P	15 39 41.1	-0.4
MAKZ				pmax	pmax		
	comp=Z,11nm,0.8s						
PDGK	Podgornoye	39.58	310	P	P	15 39 45.3	-1.0
PDGK				pmax	pmax		
	comp=Z,14nm,1.0s						
PETK	Petropavlovsk-	39.91	34	P	P	15 39 47.8	-1.0

	comp=Z,1.5nm,0.7s,baz=196,slow=7.9,SNR=6.0						
PETK				LR	LR	15 56 45.4	
	comp=Z,76nm,18.5s,baz=222,slow=37						
PEA1	Petropavlovsk-	39.91	34	*e*P	P	15 39 47.8	-1.0
ZAA0	Zalesovo Array	40.71	327	*e*P	P	15 39 54.0	-1.3
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	40.71	327	P	P	15 39 54.0	-1.3
	comp=Z,6.5nm,0.5s,baz=110,slow=7.8,SNR=22						
ZALV				LR	LR	15 58 25.1	
	comp=Z,105nm,21.7s,baz=70,slow=39						
ZAA1	Zalesovo Array	40.71	327	*e*P	P	15 39 54.0	-1.3
RABL	Rabaul	40.80	129	*e*P	P	15 39 55.8	-0.8
	comp=Z,50nm,1.0s						
KDJ	Kajisay	40.95	307	P	P	15 40 01.5	+3.8
KDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH	Kashi	41.39	303	P	P	15 40 06.1	+4.8
KSH				PP	PnPn	15 41 46.3	+4.8
KSH				PcP	PcP	15 42 04.0	+4.6
KSH				S	S	15 46 24.4	+8.4
KSH				SS	SS	15 49 22.0	+2.1
KSH				ScS	ScS	15 50 09.3	+3.9
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,83nm,5.8s						
KSH				LR	LR		
	comp=Z,500nm,12.9s						
KSH				LR	LR		
	comp=Z,280nm,12.7s						
KSH				LR	LR		
	comp=Z,400nm,13.5s						
PMG	Port Moresby	41.45	140	*e*P	P	15 39 59.9	-1.9
	comp=Z,41nm,1.0s						
PMG	Port Moresby	41.45	140	*e*P	P	15 39 59.9	-1.9
PMG				pmax	pmax		
	comp=Z,41nm,1.0s						
NRN	Naryn	41.68	306	*e*P	P	15 40 03.3	-0.6
	comp=Z,12nm,0.9s						
NRN	Naryn	41.68	306	*e*P	P	15 40 03.3	-0.6
NRN				pmax	pmax		
	comp=Z,12nm,0.9s						
H11N1	WAKE ISLAND Hy	42.12	87	T	T	16 25 09.9	
	baz=283,slow=74,SNR=46						
H11N2	WAKE ISLAND Hy	42.12	87	T	T	16 25 10.0	
	baz=283,slow=74,SNR=43						
H11N3	WAKE ISLAND Hy	42.14	87	T	T	16 25 11.9	
	baz=283,slow=74,SNR=57						
H11S3	WAKE ISLAND Hy	42.24	88	T	T	16 25 15.7	
	baz=284,slow=74,SNR=206						
H11S1	WAKE ISLAND Hy	42.25	88	T	T	16 25 16.5	
	baz=284,slow=74,SNR=101						
TKM2	Tokmak 2	42.26	308	P	P	15 40 10.3	+1.8
TKM2				pmax	pmax		
	comp=Z,11nm,0.8s						
H11S2	WAKE ISLAND Hy	42.26	88	T	T	16 25 14.5	
	baz=284,slow=74,SNR=97						
KURK	Kurchatov	42.57	320	*e*P	P	15 40 07.7	-3.0
	comp=Z,7.9nm,0.9s						
KURK	Kurchatov	42.57	320	*e*P	P	15 40 07.7	-3.0
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK	Ala-Archa	43.00	308⇓	*e*P	P	15 40 16.4	+1.9
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SEY	Seymchan	44.14	20⇑	*e*P	P	15 40 23.3	+0.2
WRAB	Tennant Creek	45.28	163⇑	*e*P	P	15 40 31.3	-1.4
WRAB				pmax	pmax		
	comp=Z,16nm,1.3s						
WR1	Warramunga Arr	45.29	163	*e*P	P	15 40 31.1	-1.7
WRA	Warramunga Arr	45.29	163	P	P	15 40 31.1	-1.7
	comp=Z,5.9nm,0.7s,baz=346,slow=9.6,SNR=22						
WB2	Warramunga Arr	45.29	163	*e*P	P	15 40 31.7	-1.0
	comp=Z,60nm,1.9s						
OTUK	Ortayu	45.68	315	P	P	15 40 35.0	-0.7
GAR	Garm	45.70	302	*e*P	P	15 40 34.6	-1.4
	comp=Z,16nm,1.1s						
GAR	Garm	45.70	302	*e*P	P	15 40 34.7	-1.4
GAR				pmax	pmax		
	comp=Z,17nm,1.1s						
KK31	Karatay Array	45.96	308	*e*P	P	15 40 37.0	-1.0
	comp=Z,6.0nm,1.0s						
KK31	Karatay Array	45.96	308	*e*P	P	15 40 37.0	-1.0
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	Karatay Array	45.96	308	*e*P	P	15 40 38.1	+0.1
	comp=Z,6.0nm,1.0s						
KKAR	Karatay Array	45.96	308	*e*P	P	15 40 38.1	+0.1
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBL	Kabul	46.64	296	*e*P	P	15 40 43.5	-0.2
	comp=Z,57nm,1.9s						
KBL	Kabul	46.64	296	*e*P	P	15 40 43.5	-0.2
KBL				pmax	pmax		
	comp=Z,57nm,1.9s						
TIXI	Tiksi	47.98	3	*e*P	P	15 40 52.3	-1.0
	comp=Z,24nm,0.9s						
TIXI	Tiksi	47.98	3	*de*P	P	15 40 52.5	-0.8
TIXI				pmax	pmax		
	comp=Z,29nm,1.0s						
BRVK	Borovoye	48.23	321	*e*P	P	15 40 54.3	-1.2
	comp=Z,8.3nm,0.8s						
BRVK	Borovoye	48.23	321	*ce*P	P	15 40 54.7	-0.8
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AS31	Alice Springs	48.74	165	*e*P	P	15 40 59.2	-0.5
	comp=Z,1.9nm,0.9s						
AS31				*e*PcP	PcP	15 42 23.2	-1.5
ASAR	Alice Springs	48.74	165	P	P	15 40 58.7	-1.0
	comp=Z,3.4nm,1.0s,baz=347,slow=12,SNR=18						
ASAR				PcP	PcP	15 42 23.2	-1.5
	comp=Z,1.9nm,0.9s,baz=344,slow=3.4,SNR=5.7						
BILL	Bilibino	51.85	20	*e*P	P	15 41 21.8	-0.9
BILL				*e*		15 41 25.3	
BILL				*e*		15 42 34.7	
BILL				*e*		15 43 16.9	
BILL				pmax	pmax		
	comp=Z,15nm,1.0s						
AB31	Akbulak array	53.93	314	*i* P	P	15 41 38.1	-0.3
AB31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ABKAR	Akbulak array	53.93	314	*e*P	P	15 41 36.5	-1.9
	comp=Z,5.2nm,0.8s						
SVE	Sverdlovsk	54.52	324	*e*P	P	15 41 44.2	+1.6
SVE				pmax	pmax		
	comp=Z,11nm,0.8s						
SVE				MLR	MLR		
	comp=Z,222nm,15.0s						
GEYT	Alibeck	55.28	301	P	P	15 41 49.9	+1.4
	comp=Z,4.7nm,0.8s,baz=101,slow=3.0,SNR=9.2						
GYA0B	ALIBECK ARRAY	55.28	301	*e*P	P	15 41 47.5	-1.0
	comp=Z,11nm,0.8s						
ARU	Arti	55.58	323	*e*P	P	15 41 48.1	-2.1
	comp=Z,9.9nm,0.8s						
ARU	Arti	55.58	323	*c i*P	P	15 41 49.0	-1.3
ARU				S	S	15 49 36.7	+1.2
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARU				MLR	MLR		
	comp=Z,106nm,14.0s						
STKA	Stephens Creek	58.64	160	P	P	15 42 11.4	-0.7
	comp=Z,8.7nm,0.6s,baz=337,slow=6.4,SNR=31						
STKA	Stephens Creek	58.64	160	*e*P	P	15 42 10.8	-1.3
	comp=Z,2.2nm,0.7s						
STKA	Stephens Creek	58.64	160	*e*P	P	15 42 10.8	-1.3
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PRGR	Permogore	62.64	329	*e*P	P	15 42 35.9	-3.2
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GNI	Garni	65.29	305⇑	*e*P	P	15 42 54.6	-2.5
GNI				pmax	pmax		
	comp=Z,105nm,1.5s						
ZEI	Tsey	65.42	308	*e*P	P	15 42 59.9	+1.9
VRH	Novokhopyorsk	65.54	317	*e*P	P	15 42 57.8	-0.5
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
TTA	Tatalina	65.58	30	*e*P	P	15 42 57.4	-1.1
	comp=Z,11nm,0.9s						
TTA	Tatalina	65.58	30	*e*P	P	15 42 57.4	-1.1
TTA				pmax	pmax		
	comp=Z,11nm,0.9s						
KLMR	Klimovskoe	65.63	328	*e*P	P	15 42 59.1	+0.4
KLMR				pmax	pmax		
	comp=Z,11nm,1.3s						
SVW2	Sparrevohn	65.96	32	*e*P	P	15 43 00.9	0.0
	comp=Z,12nm,0.8s						
KBZ	Khabaz	65.97	309	P	P	15 43 01.5	+0.3
	comp=Z,1.9nm,0.6s,baz=117,slow=6.8,SNR=2.5						
KBZ				LR	LR	16 13 34.4	
	comp=Z,52nm,19.4s,baz=64,slow=38						
KIV	Kislovodsk	66.08	309	*e*P	P	15 43 04.1	+2.0
KIV				pmax	pmax		
	comp=Z,37nm,1.0s						
KIV				MLR	MLR		
	comp=Z,128nm,17.0s						
VSR	Storozhevoye	67.13	317	*e*P	P	15 43 08.5	0.0
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CAST	Castle Rocks	67.30	29	*e*P	P	15 43 09.2	-0.2
	comp=Z,20nm,0.8s						
PPLA	Purkeypile	67.33	30	*e*P	P	15 43 09.5	-0.3
	comp=Z,15nm,0.8s						
RSO	Redoubt South	67.42	32	*e*P	P	15 43 10.7	+0.2
COLD	Coldfoot	67.55	25	*e*P	P	15 43 11.0	+0.1
	comp=Z,4.1nm,0.8s						
TOLK	Toolik Lake Re	67.58	23	*e*P	P	15 43 11.1	-0.1
	comp=Z,19nm,0.8s						
TOLK	Toolik Lake Re	67.58	23	P	P	15 43 11.4	+0.2
	baz=278						
MLY	Manley	67.65	27	*e*P	P	15 43 10.9	-0.7
	comp=Z,18nm,0.8s						
OHAK	Old Harbor	67.66	36	*e*P	P	15 43 11.6	-0.1
	comp=Z,18nm,0.9s						
BPAW	Bear Paw Mtn.	67.68	28	*e*P	P	15 43 11.3	-0.5
	comp=Z,15nm,0.8s						
SKT	Skwentna	67.77	31	*e*P	P	15 43 08.6	-3.8
	comp=Z,11nm,0.9s						
KTH	Kantishna Hill	67.80	29	*e*P	P	15 43 10.9	-1.7
	comp=Z,16nm,0.8s						
KDAK	Kodiak Island	67.94	35	*e*P	P	15 43 12.1	-1.4
	comp=Z,22nm,0.8s						
KDAK	Kodiak Island	67.94	35	*e*P	P	15 43 12.1	-1.4
KDAK				pmax	pmax		
	comp=Z,22nm,0.8s						
OBN	Obninsk	67.98	322	*e*P	P	15 43 13.5	-0.3
OBN				*e*		15 43 36.5	
OBN				*e*		15 45 39.2	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SUA	Susitna One	68.22	31	*e*P	P	15 43 14.1	-1.3
	comp=Z,36nm,0.8s						
CNPM	China Poot	68.32	33	*e*P	P	15 43 15.0	-1.0
	comp=Z,16nm,0.9s						
BWN	Browne	68.33	28	*e*P	P	15 43 15.2	-0.6
	comp=Z,25nm,0.8s						
BRLK	Bradley Lake	68.46	33	*e*P	P	15 43 14.6	-2.2
	comp=Z,26nm,0.8s						
MCK	McKinley	68.64	29	*e*P	P	15 43 15.3	-2.6
	comp=Z,10nm,0.7s						
MCK	McKinley	68.64	29	*e*P	P	15 43 15.3	-2.6
MCK				pmax	pmax		
	comp=Z,11nm,0.7s						
MDM	Murphy Dome	68.71	27	*e*P	P	15 43 15.8	-2.5
	comp=Z,19nm,1.0s						
RND	Reindeer	68.74	29	*e*P	P	15 43 15.5	-3.0
	comp=Z,52nm,0.7s						
RND	Reindeer	68.74	29	*e*P	P	15 43 15.5	-3.0
RND				pmax	pmax		
	comp=Z,52nm,0.7s						
RAYN	Ar Rayn	68.80	287	*e*P	P	15 43 16.6	-3.0
	comp=Z,11nm,1.3s						
RAYN	Ar Rayn	68.80	287	*e*P	P	15 43 16.6	-3.0
RAYN				pmax	pmax		
	comp=Z,11nm,1.3s						
WRH	Wood River Hil	68.86	28	*e*P	P	15 43 17.6	-1.6
	comp=Z,10nm,0.8s						
TCOL	CIGO, UAF Yank	68.88	27	P	P	15 43 19.9	+0.6
	baz=281						
COLA	College	68.89	27	*e*P	P	15 43 18.6	-0.7
	comp=Z,19nm,0.6s						
COLA	College	68.89	27	*ce*P	P	15 43 18.9	-0.4
COLA				pmax	pmax		
	comp=Z,15nm,0.7s						
CCB	Clear Creek Bu	68.95	27	*e*P	P	15 43 18.2	-1.5
	comp=Z,6.0nm,1.0s						
POKR	Poker Plat Res	69.01	27	P	P	15 43 20.4	+0.3
	baz=281						
SEW	Seward	69.10	32	*e*P	P	15 43 19.2	-1.4
	comp=Z,24nm,1.1s						
KNK	Knik Glacier	69.31	31	*e*P	P	15 43 19.8	-2.3
	comp=Z,24nm,1.0s						
ILAR	Eielson Array	69.31	27	P	P	15 43 21.1	-0.9
	comp=Z,3.3nm,0.8s,baz=274,slow=3.2,SNR=43						
ILB	Eielson Array	69.31	27	*e*P	P	15 43 20.5	-1.4
	comp=Z,5.4nm,0.7s						
HDA	Harding Lake	69.36	28	*e*P	P	15 43 20.7	-1.6
	comp=Z,17nm,0.9s						
HDA	Harding Lake	69.36	28	P	P	15 43 21.5	-0.8
	baz=282						
ANN	Anapa	69.58	311	*e*P	P	15 43 19.3	-4.7
ANN				*e**PP	pP	15 43 22.6	-5.7
ANN				*e*		15 45 53.0	
ANN				*e*S	S	15 52 26.2	-5.6
ANN				pmax	pmax		
	comp=Z,98nm,1.0s						
SCM	Sheep Creek Mo	69.75	30	*e*P	P	15 43 23.9	-0.9
	comp=Z,34nm,0.8s						
SCM	Sheep Creek Mo	69.75	30	*e*P	P	15 43 23.9	-0.9
SCM				pmax	pmax		
	comp=Z,34nm,0.8s						
ARCES	ARCESS Array B	69.97	338	P	P	15 43 25.1	-0.9
	comp=Z,1.1nm,0.7s,baz=56,slow=6.6,SNR=3.9						
ARCES				LR	LR	16 17 34.2	
	comp=Z,67nm,18.1s,baz=99,slow=39						
GLI	Glacier Island	70.07	31	*e*P	P	15 43 25.6	-1.1
	comp=Z,24nm,0.9s						
PAX	Paxson	70.33	29	*e*P	P	15 43 27.0	-1.4
	comp=Z,9.9nm,0.8s						
PAX	Paxson	70.33	29	*e*P	P	15 43 27.0	-1.4
PAX				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FID	Port Fidalgo	70.40	31	*e*P	P	15 43 27.4	-1.3
	comp=Z,18nm,0.9s						
RIDG	Independent Ri	70.42	28	*e*P	P	15 43 27.8	-1.0
	comp=Z,14nm,0.8s						
SCRK	Sand Creek	70.72	28	*e*P	P	15 43 29.6	-1.2
	comp=Z,17nm,0.8s						
DOT	Dot Lake	70.78	28	*e*P	P	15 43 30.1	-1.0
	comp=Z,12nm,0.8s						
EYAK	Cordova Ski Ar	70.79	32	*e*P	P	15 43 31.0	-0.1
	comp=Z,21nm,1.2s						
MENT	Mentasta	71.11	29	*e*P	P	15 43 33.0	-0.1
	comp=Z,14nm,0.9s						
RAGM	Ragged Mountai	71.35	32	*e*P	P	15 43 34.4	-0.1
	comp=Z,26nm,1.2s						
KAIM	Kayak Island	71.60	32	*e*P	P	15 43 36.2	+0.2
	comp=Z,41nm,1.2s						
FIA0	FINESS Array S	71.91	330	*e*P	P	15 43 36.4	-1.4
FIA0	FINESS Array S	71.91	330	*e*P	P	15 43 36.4	-1.4
FINES	FINESS Array B	71.91	330	P	P	15 43 36.4	-1.4
	comp=Z,3.1nm,0.8s,baz=58,slow=8.4,SNR=8.7						
FINES				LR	LR	16 18 06.8	
	comp=Z,109nm,18.9s,baz=58,slow=38						
FINES	FINESS Array B	71.91	330	*i* P	P	15 43 39.9	+2.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CRQM	Cirque	71.98	31	*e*P	P	15 43 38.0	-0.5
	comp=Z,14nm,1.0s						
BALM	Baldy	72.27	31	*e*P	P	15 43 39.3	-0.9
	comp=Z,12nm,1.2s						
BALM	Baldy	72.27	31	*e*P	P	15 43 39.3	-0.9
BALM				pmax	pmax		
	comp=Z,12nm,1.2s						
DAWY	Dawson	72.64	27	*e*P	P	15 43 41.3	-0.9
	comp=Z,27nm,0.8s						
EPYK	Eagle Plains	72.93	24	*e*P	P	15 43 42.9	-1.0
	comp=Z,49nm,1.0s						
EPYK	Eagle Plains	72.93	24	P	P	15 43 43.7	-0.2
	baz=290						
AKASG	Malin Array Be	73.36	318	P	P	15 43 46.3	-0.3
	comp=Z,2.2nm,0.6s,baz=59,slow=6.3,SNR=4.6						
AKBB	Malin Array Si	73.36	318	*e*P	P	15 43 45.8	-0.8
	comp=Z,3.9nm,0.9s						
AKBB	Malin Array Si	73.36	318	*e*P	P	15 43 45.8	-0.8
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	73.37	22	*e*P	P	15 43 46.0	-0.4
	comp=Z,40nm,0.9s						
INK	Inuvik	73.37	22	*e*P	P	15 43 46.0	-0.4
INK				pmax	pmax		
	comp=Z,40nm,0.9s						
BR101	Keskin Array S	73.66	307	*e*P	P	15 43 48.3	-0.6
BR131	Keskin Array S	73.66	307	*e*P	P	15 43 47.3	-1.6
	comp=Z,3.4nm,0.9s						
BRTR	Keskin Array B	73.66	307	P	P	15 43 48.3	-0.6
	comp=Z,1.9nm,0.8s,baz=74,slow=6.2,SNR=11						
BRTR				LR	LR	16 20 55.3	
	comp=Z,15nm,19.0s,baz=92,slow=40						
BRTR	Keskin Array B	73.66	307	*i* P	P	15 43 51.2	+2.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HYT	Haines Junctio	74.57	30	*e*P	P	15 43 53.1	-0.6
	comp=Z,39nm,1.7s						
NC405	NORSAR Array S	78.43	332	*e*P	P	15 44 13.7	-1.8
	comp=Z,23nm,1.1s						
NB2	NORSAR Subarra	78.68	332	P	P	15 44 16.2	-0.7
	comp=Z,1.3nm,0.8s,baz=56,slow=5.9						
NB200	NORSAR Array S	78.68	332	*e*P	P	15 44 15.1	-1.8
NOA	NORSAR Array B	78.68	332	P	P	15 44 15.1	-1.8
	comp=Z,1.8nm,0.7s,baz=58,slow=5.6,SNR=12						
NOA				LR	LR	16 20 47.3	
	comp=Z,53nm,19.9s,baz=55,slow=37						
DLBC	Dease Lake	79.02	31	*e*P	P	15 44 18.2	-0.6
	comp=Z,20nm,1.0s						
VTS	Vitosha	80.03	312	*e*P	P	15 44 23.6	-1.1
	comp=Z,7.5nm,1.1s						
VTS	Vitosha	80.03	312	*e*P	P	15 44 23.7	-1.1
VTS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DIB	Dawson Inlet,	80.19	36	*e*P	P	15 44 24.2	-0.9
	comp=Z,14nm,1.0s						
VYHS	Vyhne	80.45	319	*e*P	P	15 44 28.8	+2.1
VYHS	Vyhne	80.45	319	*e*P	P	15 44 28.8	+2.1
CLL	Collm	82.53	323	*e*P	P	15 44 36.0	-1.6
CLL	Collm	82.53	323	*e*P	P	15 44 36.0	-1.6
YKW3	Yellowknife Ar	83.06	23	*e*P	P	15 44 39.0	-1.1
	comp=Z,34nm,0.8s						
YKA	Yellowknife Ar	83.11	23	P	P	15 44 40.1	-0.3
	comp=Z,22nm,0.7s,baz=314,slow=4.9,SNR=88						
YKA				LR	LR	16 24 32.5	
	comp=Z,5.3nm,19.0s,baz=334,slow=38						
YKB5	Yellowknife Ar	83.11	23	*e*P	P	15 44 40.1	-0.3
GERES	GERESS Array B	83.32	321	P	P	15 44 42.2	+0.2
	comp=Z,0.5nm,0.2s,baz=58,slow=5.0,SNR=6.6						
KMBO	Kilima Mbogo	85.28	267	P	P	15 44 54.3	+1.6
	comp=Z,2.4nm,0.9s,baz=20,slow=5.7,SNR=5.2						
LLLB	Lillooet	87.15	35	*e*P	P	15 44 59.8	-1.2
	comp=Z,13nm,0.9s						
NLWA	Neilton Lookou	87.88	38	*e*P	P	15 45 03.9	-0.6
	comp=Z,23nm,0.9s						
D03D	Eldon	88.24	38	P	P	15 45 06.5	+0.3
	baz=304,SNR=13						
B05A	Bryant	88.37	37	P	P	15 45 07.4	+0.6
	baz=305,SNR=5.2						
D04E	Lakebay	88.61	38	P	P	15 45 08.6	+0.7
	baz=304						
D05A	Enumclaw	89.05	38	*e*P	P	15 45 10.4	+0.4
	comp=Z,35nm,0.8s						
E04D	Cinebar	89.08	38	P	P	15 45 11.3	+1.1
	baz=305						
F04D	Rainier, OR	89.10	39	P	P	15 45 11.0	+0.8
	baz=304						
C06D	Leavenworth	89.23	37	P	P	15 45 11.6	+0.7
	baz=306						
LON	Longmire	89.40	38	*e*P	P	15 45 11.9	+0.1
	comp=Z,12nm,0.8s						
LON	Longmire	89.40	38	*e*P	P	15 45 11.9	+0.1
LON				pmax	pmax		
	comp=Z,12nm,0.8s						
G03D	McMinnville, O	89.44	40	P	P	15 45 12.4	+0.5
	baz=304						
I02D	Swisshome	89.71	41	P	P	15 45 13.8	+0.7
	baz=304						
LTY	Liberty	89.74	37	*e*P	P	15 45 13.6	+0.2
	comp=Z,12nm,0.8s						
B08A	Colville Reser	89.81	36	*e*P	P	15 45 13.4	-0.3
	comp=Z,22nm,0.9s						
KEBM	Edson Butte	90.09	42	*e*P	P	15 45 14.4	-0.7
	comp=Z,126nm,1.5s						
F05D	White Salmon	90.10	39	P	P	15 45 15.2	+0.2
	baz=305						
H04D	Lebanon	90.13	40	P	P	15 45 16.0	+0.8
	baz=304						
J01E	Myrtle Point	90.18	42	P	P	15 45 15.6	+0.2
	baz=304						
I03D	Drain, OR	90.23	41	P	P	15 45 16.2	+0.6
	baz=304						
H04A	Detroit Lake	90.37	40	*e*P	P	15 45 15.8	-0.5
	comp=Z,10nm,0.9s						
G05D	Wamic, OR	90.55	39	P	P	15 45 17.7	+0.5
	baz=306						
K02D	Willamette Mer	90.60	42	P	P	15 45 18.1	+0.6
	baz=304						
C09A	Chrisman Ranch	90.72	36	*e*P	P	15 45 17.9	0.0
	comp=Z,16nm,1.0s						
I04A	Tendick Farm,	90.74	41	P	P	15 45 18.4	+0.3
	baz=305,SNR=6.2						
D08A	Wollman Farm,	90.82	37	*e*P	P	15 45 19.2	+0.8
	comp=Z,15nm,0.8s						
HAWA	Hanford	90.88	37	*e*P	P	15 45 19.4	+0.8
	comp=Z,16nm,0.9s						
L02E	Cave Junction	90.94	42	P	P	15 45 19.5	+0.5
	baz=304						
NEW	Newport	91.04	35	*e*P	P	15 45 19.9	+0.5
	comp=Z,12nm,0.9s						
NEW	Newport	91.04	35	*e*P	P	15 45 19.9	+0.5
NEW				pmax	pmax		
	comp=Z,12nm,0.9s						
NEW	Newport	91.04	35	P	P	15 45 20.2	+0.8
	baz=309						
I05D	Terrebonne, OR	91.06	40	P	P	15 45 19.9	+0.3
	baz=306						
HUMO	Hull Mountain	91.08	42	*e*P	P	15 45 20.8	+1.1
	comp=Z,7.5nm,0.9s						
E08A	Dider Farm, El	91.08	37	*e*P	P	15 45 20.0	+0.5
	comp=Z,13nm,0.9s						
J04D	Umpqua Nationa	91.24	41	P	P	15 45 21.3	+0.7
	baz=305,SNR=11						
E09A	Wood Farm, Sta	91.57	37	*e*P	P	15 45 21.5	-0.3
	comp=Z,12nm,1.0s						
L04D	Klamath Falls	91.70	42	P	P	15 45 22.4	-0.4
	baz=305						
YBH	Yreka Blue Hor	91.73	42	*e*P	P	15 45 20.9	-1.9
	comp=Z,15nm,1.1s						
YBH	Yreka Blue Hor	91.73	42	*e*P	P	15 45 20.9	-1.9
YBH				pmax	pmax		
	comp=Z,15nm,1.1s						
J05D	Fort Rock, OR	91.73	41	P	P	15 45 22.7	-0.2
	baz=306,SNR=8.5						
K04D	Chiloquin, OR	91.80	41	P	P	15 45 23.8	+0.6
	baz=305						
M02C	Callahan	91.83	43	P	P	15 45 23.7	+0.5
	baz=304						
N02D	Trinity Center	92.16	43	P	P	15 45 25.5	+0.7
	baz=304						
WALA	Waterton Lakes	92.17	33	*e*P	P	15 45 25.1	+0.4
	comp=Z,18nm,1.1s						
M04C	Macdoel	92.23	42	P	P	15 45 26.3	+1.1
	baz=305						
F10A	Beach Ranch, E	92.41	37	*e*P	P	15 45 25.5	-0.3
	comp=Z,7.0nm,0.8s						
WDC	Whiskeytown Da	92.48	43	*e*P	P	15 45 26.4	+0.2
	comp=Z,8.8nm,1.1s						
WDC	Whiskeytown Da	92.48	43	*e*P	P	15 45 26.4	+0.2
WDC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
O02D	Mt. Diablo Mer	92.55	44	P	P	15 45 27.6	+1.0
	baz=304						
BMO	Blue Mountains	93.06	38	*e*P	P	15 45 28.7	-0.2
	comp=Z,6.7nm,0.8s						
BMO	Blue Mountains	93.06	38	*e*P	P	15 45 28.7	-0.2
BMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MOD	Modoc Plateau	93.10	41	*e*P	P	15 45 29.6	+0.4
	comp=Z,17nm,0.9s						
O03E	Paynes Creek	93.11	43	P	P	15 45 29.6	+0.4
	baz=305						
FFC	Flin Flon	93.26	24	*e*P	P	15 45 29.2	-0.3
	comp=Z,137nm,0.8s						
FFC	Flin Flon	93.26	24	*e*P	P	15 45 29.2	-0.3
J08A	Circle Bar Ran	93.31	39	*e*P	P	15 45 30.7	+0.6
	comp=Z,14nm,1.0s						
MSO	Missoula	93.61	35	*e*P	P	15 45 30.3	-1.1
	comp=Z,6.1nm,0.9s						
MSO	Missoula	93.61	35	P	P	15 45 31.9	+0.5
	baz=311						
AFDM	Forest Hills D	94.41	44	*e*P	P	15 45 34.2	-0.9
	comp=Z,7.8nm,1.1s						
EGMT	Eagleton	94.90	32	P	P	15 45 37.5	+0.2
	baz=314						

CMB	Columbia Colle	95.31	44	*e*P	P	15 45 39.0	-0.3
	comp=Z,7.5nm,0.9s						
CMB	Columbia Colle	95.31	44	*e*P	P	15 45 39.0	-0.3
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YERR	Yerington	95.48	43	*e*P	P	15 45 40.4	+0.2
	comp=Z,6.3nm,1.0s						
HLID	Hailey	95.49	37	*e*P	P	15 45 40.8	+0.6
	comp=Z,4.8nm,0.9s						
HLID	Hailey	95.49	37	P	P	15 45 40.8	+0.6
	baz=310						
WAKR	Walker	95.64	44	*e*P	P	15 45 40.9	-0.1
	comp=Z,3.8nm,0.8s						
RYN	Ryan	96.14	43	*e*P	P	15 45 42.9	-0.3
	comp=Z,7.0nm,1.0s						
MDPB	Devils Postpil	96.38	44	*e*P	P	15 45 43.5	-1.0
	comp=Z,4.6nm,1.0s						
NV01	Mina Array Sit	96.40	43	*e*P	P	15 45 44.7	+0.2
NVAR	Mina Array Bea	96.40	43	P	P	15 45 44.7	+0.2
	comp=Z,3.6nm,0.8s,baz=285,slow=5.4,SNR=27						
OMMB	Old Mammoth Mi	96.45	44	*e*P	P	15 45 43.9	-0.9
	comp=Z,4.7nm,1.1s						
NV11	Mina Array Sit	96.49	43	*e*P	P	15 45 45.2	+0.4
	comp=Z,0.2nm,0.9s						
PKM	Mcpherson Peak	97.52	47	P	Pdif	15 45 50.4	+0.7
	baz=306						
LAO	LASA Array	97.54	31	P	P	15 45 48.9	-0.4
	baz=317						
CWC	Cottonwood Cre	97.74	45	P	Pdif	15 45 51.1	+0.6
	baz=307						
ISA	Isabella, Lake	97.95	45	P	P	15 45 51.3	-0.1
	baz=307						
R11A	Troy Canyon, C	98.13	42	*e*P	Pdif	15 45 52.4	+0.1
	comp=Z,1.5nm,0.8s						
R11A	Troy Canyon, C	98.13	42	P	Pdif	15 45 53.1	+0.9
	baz=309						
MPMC	Manual Prospec	98.35	45	P	Pdif	15 45 53.8	+0.5
	baz=308						
FURC	Furnace Creek,	98.50	44	P	Pdif	15 45 54.5	+0.9
	baz=308						
LRMC	Laurel Mtn Rad	98.57	45	P	Pdif	15 45 54.7	+0.5
	baz=307						
DUG	Dugway, Tooele	98.59	39	P	Pdif	15 45 54.6	+0.4
	baz=311						
TPNV	Topopah Spring	98.59	43	*e*P	P	15 45 54.1	-0.2
	comp=Z,3.2nm,1.0s						
TPNV	Topopah Spring	98.59	43	*e*P	P	15 45 54.1	-0.2
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TPNV	Topopah Spring	98.59	43	P	Pdif	15 45 54.9	+0.6
	baz=308						
BW06	Boulder Array	98.66	35	P	P	15 45 54.5	-0.1
	baz=314						
PD31	Pinedale Array	98.66	35	*e*P	P	15 45 54.1	-0.5
PDAR	Pinedale Array	98.66	35	P	P	15 45 54.1	-0.5
	comp=Z,0.3nm,0.6s,baz=308,slow=4.4,SNR=3.5						
EDW2	Edwards Air Fo	98.73	46	P	Pdif	15 45 55.3	+0.4
	baz=307						
GSC	Goldstone, Bar	99.25	45	P	Pdif	15 45 57.8	+0.7
	baz=308						
BFSC	Mount Baldy Ra	99.34	46	P	Pdif	15 45 57.5	-0.2
	baz=307						
TUQ	Turquoise Moun	99.73	44	P	Pdif	15 45 59.6	+0.2
	baz=308						
IRM	Iron Mountain	101.03	45	P	Pdif	15 46 06.1	+1.0
	baz=309						
SNAA	Sanae	123.06	198	PKPdf	PKPdf	15 51 09.3	-1.3
VNA3	Neumayer Olymp	125.18	197	PKPdf	PKPdf	15 51 14.2	-0.5
SDV	Santo Domingo	145.31	22	*e*PKPbc	PKPbc	15 51 52.4	-1.2
LPAZ	La Paz	168.15	52	PKP	PKPdf	15 52 22.3	-0.8
	comp=Z,1.2nm,0.7s,baz=288,slow=3.2,SNR=2.8						
LPAZ				PKPab	PKPab	15 53 30.2	-0.8
	comp=Z,3.2nm,0.8s,baz=354,slow=7.6,SNR=9.8						

NIED ***24*** *15:41:00,23°.90N×121°.60E,h5^{km},Mw4.5 Best double couple: M$_0$5.66000×10^{15} NP1:ϕ_s186.00000°,δ6.00000°, λ19.00000°. NP2:ϕ_s77.00000°,δ88.00000°,λ96.00000°.*

IDC ***24*** *15:41:11.2±0.7,23°.88N×121°.73E,h0^{km},mb3.9/16, mb1 4.0/18,mb1mx3.9/36,mbtmp3.9/18,ML3.0/2,Error ellipse: s-maj=19.4km s-min=15.7km az=74.0*

JMA ***24*** *15:41:11.5,23°.87N×121°.58E,h0^{km},M3.8*

TAP ***24*** *15:41:12.8,23°.90N×121°.52E,h11^{km},ML4.3,C*

NEIC ***24*** *15:41:12.5±0.3,23°.85N×121°.64E,h10^{km},mb4.3/9,Error ellipse: s-maj=7.0km s-min=5.4km az=127.0*

ASIES ***24*** *15:41:12.0,23°.90N×121°.51E,h23^{km},MW3.7*

ISCJB ***24*** *15:41:12.2±0.2,23°.870N±0°.009×121°.60E±0°.01, h7^{km}±1^{km},mb4.0/26,MS3.5/1,Error ellipse: s-maj=2.0km s-min=1.3km az=32.9*

BJI ***24*** *15:41:12.4±0.0,23°.94N×121°.54E,h5^{km},mb4.2/22, mB4.4/1,ML4.0/6,Ms4.0/9,Ms7 3.8/9*

ISC 24 15:41:12.9±0.8,**23°.88N**±0°.01×**121°.58E**±0°.01,**h10**^{km}±5^{km}, **n197**,σ**1^s.09**/273,**mb4.0**/26,**14C-44D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.10	15	⇑*i*P	Pg	15 41 16.4	+1.0
	baz=45						
HWA				S	Sg	15 41 19.1	+1.8
	baz=45						
ESL	Shilin	0.15	243	⇑*i*P	Pg	15 41 15.9	-0.3
	baz=222						
ESL				S	Sg	15 41 17.8	-0.6
	baz=222						
TWD	Chiawan	0.20	5	⇓*i*P	Pg	15 41 17.4	+0.4
	baz=14						
TWD				*i* S	Sg	15 41 19.9	+0.1
	baz=14						
EGFH	Guangfu	0.25	213	⇑*i*P	Pg	15 41 18.1	+0.1
	baz=207						
EGFH				S	Sg	15 41 21.5	0.0
	baz=207						
NACB	Ninganchiao	0.29	3	*e*Pg	Pg	15 41 18.5	-0.2
NACB	Ninganchiao	0.29	3	⇓P	Pg	15 41 18.6	-0.1
	baz=12						
NACB				S	Sg	15 41 22.4	-0.3
	baz=12						
ETLH	Xiulin Townshi	0.34	345	⇓P	Pg	15 41 19.4	-0.3
	baz=352						
ETLH				S	Sg	15 41 23.6	-0.5
	baz=352						
WHF	Hehuan Shan	0.39	313	⇓*i*P	Pg	15 41 20.1	-0.6
	baz=317						
WHF				S	Sg	15 41 24.8	-1.1
	baz=317						
CHGB	Renai	0.41	296	⇓P	Pg	15 41 20.6	-0.4
	baz=304						
CHGB				S	Sg	15 41 25.5	-0.9
	baz=304						
HGSD	Ruisui	0.41	200	⇑P	Pb	15 41 21.6	-0.7
	baz=206						
HGSD				S	Sb	15 41 29.0	+0.3
	baz=206						
VWDT	VWDT	0.42	252	⇑P	Pg	15 41 21.1	0.0
	baz=249						
VWDT				S	Sg	15 41 25.9	-0.7
	baz=249						
EHY	Hungye	0.44	212	⇑*i*P	Pg	15 41 21.2	-0.3
	baz=208						
EHY				S	Sg	15 41 26.8	-0.6
	baz=208						
TWT	Tachien	0.52	315	⇓*i*P	Pb	15 41 23.1	-1.2
	baz=308						
TWT				S	Sg	15 41 29.2	-0.8
	baz=308						
YULB	Yu-li	0.55	208	*e*Pg	Pg	15 41 23.1	-0.4
YULB	Yu-li	0.55	208	⇑P	Pg	15 41 23.2	-0.4
	baz=207						
YULB				S	Sg	15 41 30.8	-0.1
	baz=207						
ENA	Nanau	0.56	15	⇓*i*P	Pb	15 41 23.8	-1.1
	baz=8.0						
ENA				S	Sg	15 41 31.1	-0.2
	baz=8.0						
NANB	Nanao	0.57	16	⇓*i*P	Pb	15 41 23.8	-1.2
	baz=9.0						
NANB				*e*S	Sg	15 41 31.0	-0.3
	baz=9.0						
NNSB	Datong	0.57	342	⇓P	Pb	15 41 23.9	-1.2
	baz=345						
NNSB				S	Sg	15 41 30.6	-1.0
	baz=345						
SSLB	Suanglung	0.58	261	*e*Pg	Pg	15 41 23.6	-0.6
SSLB	Suanglung	0.58	261	⇓P	Pg	15 41 23.7	-0.5
	baz=267						
SSLB				S	Sg	15 41 30.1	-1.6
	baz=267						
NNS	Nan Shan	0.59	342	⇓*i*P	Pb	15 41 24.1	-1.2
	baz=345						
NNS				S	Sg	15 41 30.9	-1.1
	baz=345						
TWF1	Yuli	0.59	206	P	Pg	15 41 23.8	-0.4
	baz=210						
TWF1				S	Sg	15 41 32.3	+0.3
	baz=210						
DPDB	Guoxing	0.61	284	⇓*i*P	Pg	15 41 24.5	-0.3
	baz=284						
DPDB				S	Sg	15 41 31.5	-1.3
	baz=284						
SMLT	Sun Moon Lake	0.62	270	⇓*i*P	Pg	15 41 24.6	-0.3
	baz=269						
SMLT				*i* S	Sg	15 41 32.1	-1.0
	baz=269						
TYC	Yuchr	0.66	272	⇓*i*P	Pg	15 41 25.1	-0.6
	baz=281						
TYC				*i* S	Sg	15 41 32.7	-1.6
	baz=281						
WHYT	Xinyi Township	0.69	255	⇓P	Pg	15 41 25.8	-0.4
	baz=260						
WHYT				*e*S	Sg	15 41 34.3	-1.0
	baz=260						
YUS	Yu-Shan	0.69	236	⇑*i*P	Pg	15 41 26.2	-0.2
	baz=233						
YUS				S	Sg	15 41 34.9	-0.6
	baz=233						
NDT	Datong Townshi	0.72	355	⇓*i*P	Pb	15 41 26.8	-0.8
	baz=351						
NDT				S	Sg	15 41 35.7	-0.5
	baz=351						
ENTT	Nioudou	0.76	359	⇓*i*P	Pb	15 41 27.5	-0.7
	baz=1.0						
ENTT				S	Sb	15 41 37.5	-1.0
	baz=1.0						
TWC	Suao	0.77	19	⇓*i*P	Pb	15 41 27.7	-0.7
	baz=13						
TWC				S	Sb	15 41 38.5	-0.3
	baz=13						
WJS	Zhushan	0.78	266	⇓P	Pb	15 41 28.6	+0.1
	baz=265						
WJS				S	Sb	15 41 39.3	+0.1
	baz=265						
ALS	Alishan	0.80	243	⇑*i*P	Pg	15 41 28.4	0.0
	baz=240						
ALS				S	Sg	15 41 38.3	-0.5
	baz=240						
CHKT	Chengkung	0.80	194	*e*P	Pg	15 41 28.4	0.0
	baz=191						
YHNB	Yeheng	0.81	347	*e*Pg	Pb	15 41 28.2	-0.8
YHNB	Yeheng	0.81	347	⇓P	Pb	15 41 28.3	-0.8
	baz=339						
YHNB				S	Sg	15 41 38.1	-0.9
	baz=339						
NSK	Sanguang	0.81	346	⇓*i*P	Pb	15 41 28.4	-0.8
	baz=339						
NSK				*i* S	Sg	15 41 38.3	-1.0
	baz=339						
WNT	Mingjian	0.82	270	⇓*i*P	Pb	15 41 29.2	0.0
	baz=273						
WNT				S	Sb	15 41 40.4	+0.1
	baz=273						
EOS1	EOS1	0.83	37	*e*P	Pn	15 41 30.5	-0.2
	baz=39						
TWE	Neicheng	0.84	6	⇓*i*P	Pb	15 41 29.0	-0.6
	baz=15						
TWE				S	Sb	15 41 40.0	-0.9
	baz=15						
ELDTW	Lidau	0.86	217	P	Pg	15 41 28.4	-1.1
	baz=202						
TCU	Taichung	0.86	288	⇓P	Pn	15 41 30.1	-1.1
	baz=289						
TWQ1	Liyutan	0.87	302	⇓*i*P	Pb	15 41 29.7	-0.4
	baz=303						
TWQ1				*e*S	Sb	15 41 41.3	-0.5
	baz=303						
SLBB	Yuanshan	0.87	4	⇓*i*P	Pb	15 41 29.7	-0.5
	baz=4.0						
SLBB				S	Sb	15 41 41.7	-0.2
	baz=4.0						
CHN5	Tsauling	0.87	251	⇓*i*P	Pb	15 41 30.0	-0.2
	baz=239						
CHN5				S	Sb	15 41 41.3	-0.6
	baz=239						
ILA	Ilan	0.89	10	P	Pb	15 41 30.0	-0.5
	baz=18						
ILA				S	Sn	15 41 42.6	-1.9
	baz=18						
NSTT	Nanjuang	0.91	325	⇓*i*P	Pb	15 41 30.5	-0.4
	baz=326						
NSTT				S	Sg	15 41 41.7	-0.6
	baz=326						
NSY	Sanyi	0.92	306	⇓P	Pn	15 41 31.1	-0.8
	baz=306						
NSY				S	Sb	15 41 43.1	0.0
	baz=306						
LIOB	Emei	0.92	326	*e*P	Pb	15 41 30.7	-0.3
	baz=327						
LIOB				*e*S	Sg	15 41 41.8	-0.7
	baz=327						
WGK	Gukeng	0.95	258	⇓*i*P	Pn	15 41 31.7	-0.6
	baz=258						
WCHH	Zhanghua	0.95	282	⇓P	Pn	15 41 31.7	-0.7
	baz=281						
WCHH				*e*S	Sn	15 41 46.2	+0.2
	baz=281						
NMLH	Miaoli	0.97	312	⇓*i*P	Pn	15 41 32.4	-0.2
	baz=313						
NMLH				S	Sn	15 41 45.1	-1.4
	baz=313						
WDLH	Douliu	0.97	259	*e*P	Pb	15 41 31.5	-0.3
	baz=258						
WDLH				S	Sn	15 41 45.8	-0.7
	baz=258						
NTC	Toucheng	0.99	13	⇓P	Pb	15 41 31.6	-0.6
	baz=16						
WLTB	Daxi	1.01	343	⇓P	Pn	15 41 32.8	-0.4
	baz=353						
WLTB				S	Sg	15 41 44.8	-0.7
	baz=353						
STYT	Tauyuan	1.04	227	⇑*i*P	Pg	15 41 32.3	-0.5
	baz=226						
STYT				S	Sg	15 41 45.8	-0.6
	baz=226						
TPUB	Ta-pu	1.04	237	*e*Pg	Pb	15 41 32.8	-0.3
TPUB	Ta-pu	1.04	237	⇑P	Pn	15 41 33.0	-0.6
	baz=235						
TPUB				S	Sg	15 41 46.3	-0.3
	baz=235						
CHN4	Tsaushan	1.04	240	⇑*i*P	Pn	15 41 33.4	-0.3
	baz=231						
CHN4				*e*S	Sb	15 41 47.1	+0.2
	baz=231						
SBCB	Hsinchu	1.05	329	⇓P	Pn	15 41 33.8	+0.1
	baz=330						
SBCB				S	Sn	15 41 47.9	-0.7
	baz=330						
HSN	Hsinchu	1.07	329	⇓*i*P	Pn	15 41 34.5	+0.5
	baz=341						
HSN				S	Sn	15 41 48.6	-0.3
	baz=341						
NHDH	Xindian Distri	1.08	358	*e*P	Pn	15 41 33.8	-0.3
	baz=359						
WTP	Ta-pu	1.09	235	⇑*i*P	Pn	15 41 33.9	-0.3
	baz=233						
WTP				*e*S	Sn	15 41 49.9	+0.5
	baz=233						
TATO	Taipei	1.09	356	*e*Pn	Pn	15 41 33.7	-0.5
TATO	Taipei	1.09	356	P	Pn	15 41 33.8	-0.5
	baz=356						
TATO				*e*S	Sg	15 41 46.2	-1.9
	baz=356						
TWA	Mucha	1.09	0	P	Pn	15 41 33.6	-0.7
	baz=353						
TWA				S	Sg	15 41 47.2	-0.9
	baz=353						
TIPB	Shuangxi	1.11	12	⇓P	Pn	15 41 33.8	-0.8
	baz=11						
TIPB				*e*S	Sg	15 41 47.0	-1.6
	baz=11						
RLNB	Erlin	1.11	271	⇓P	Pn	15 41 34.1	-0.5
	baz=270						
RLNB				S	Sn	15 41 49.5	-0.5
	baz=270						
CHY	Chiayi	1.12	250	*e*P	Pn	15 41 34.4	-0.3
	baz=250						
NCUH	Zhongli	1.14	342	P	Pn	15 41 34.6	-0.3
NCU	National Centr	1.14	342	P	Pn	15 41 35.1	+0.1
	baz=341						
NCU				S	Sn	15 41 50.8	+0.2
	baz=341						
TWGBT	Beinan	1.15	203	P	Pb	15 41 32.8	-2.2
	baz=189						
TAP	Taipei	1.15	357	⇑P	Pn	15 41 35.3	+0.2
	baz=359						
TWG	Pinlang	1.15	204	*e*Pn	Pb	15 41 32.7	-2.3
TWG	Pinlang	1.15	204	*e*P	Pb	15 41 32.5	-2.5
	baz=189						
TWK	Hsinying	1.17	239	⇓P	Pg	15 41 35.4	0.0
	baz=227						
TWK				S	Sg	15 41 50.5	-0.1
	baz=227						
WTCT	Ta-ch'eng	1.19	269	P	Pn	15 41 35.1	-0.5
	baz=269						
WTCT				S	Sn	15 41 51.6	-0.2
	baz=269						
SNST	Tainan City	1.19	237	*e*P	Pg	15 41 36.0	+0.2
	baz=236						
TTN	Taitung	1.19	199	*e*P	Pn	15 41 34.4	-1.3
	baz=198						
NWF	Wu-fen Shan	1.20	9	*e*P	Pg	15 41 35.7	-0.3
	baz=7.0						
NWF				S	Sn	15 41 52.5	+0.3
	baz=7.0						
WFSB	Wu-fen Shan	1.20	9	*e*P	Pg	15 41 35.4	-0.5
	baz=7.0						
WFSB				S	Sn	15 41 52.0	-0.1
	baz=7.0						
TWS1	Kuangyinshan	1.22	353	*e*P	Pg	15 41 36.5	+0.1
	baz=353						
TWS1				S	Sn	15 41 52.9	+0.2
	baz=353						
SLGT	Liugui	1.23	224	*e*P	Pg	15 41 36.3	-0.3
	baz=207						
WLGB	Puzi	1.24	251	*e*P	Pg	15 41 36.3	-0.4
	baz=264						
WLGB				S	Sn	15 41 54.0	+1.0
	baz=264						
YM01	YM01	1.26	360	⇓P	Pg	15 41 36.7	-0.4
	baz=358						
YM01				*e*S	Sn	15 41 54.7	+1.1
	baz=358						
WSF	Szhu	1.26	259	*e*P	Pb	15 41 36.5	-0.3
	baz=258						
WSF				S	Sg	15 41 53.8	+0.2
	baz=258						
YM04	YM04	1.27	358	⇓P	Pg	15 41 36.6	-0.6
	baz=357						
YM04				S	Sn	15 41 53.7	-0.2
	baz=357						
YM10	YM10	1.27	359	⇓P	Pg	15 41 36.9	-0.4
	baz=358						
YM10				S	Sn	15 41 53.9	0.0
	baz=358						
YM05	YM05	1.28	360	P	Pg	15 41 37.0	-0.5
	baz=358						
YM05				S	Sn	15 41 54.0	-0.1
	baz=358						
YM03	YM03	1.29	359	⇓P	Pg	15 41 37.1	-0.6
ANP	Anpu	1.30	358	*e*P	Pg	15 41 37.4	-0.5
	baz=360						
YM08	YM08	1.30	1	*e*P	Pb	15 41 36.6	-0.8
	baz=2.0						
CHN8	Yiju	1.36	247	P	Pg	15 41 38.5	-0.6
	baz=246						
CHN8				*e*S	Sg	15 41 58.0	+1.3
	baz=246						
CHN3	Shinhua	1.37	234	*e*P	Pg	15 41 39.4	+0.2
	baz=235						
JYNG	Yonagunijimaku	1.37	65	P	Pb	15 41 38.0	-0.7
JYNG				*e*S	Sg	15 41 57.1	0.0
TWY	Chenhua	1.39	1	*e*P	Pg	15 41 38.8	-0.7
	baz=4.0						
ECL	Taimali	1.40	204	*e*P	Pn	15 41 37.0	-1.6
	baz=189						
SSD	Sandimen	1.43	218	P	Pn	15 41 38.9	+0.1
	baz=218						
SSD				*e*S	Sg	15 42 00.0	+1.2
	baz=218						
YOJ	Yonaguni jima	1.43	66	*e*Pn	Pn	15 41 38.4	-0.6
YOJ	Yonaguni jima	1.43	66	P	Pb	15 41 38.8	-0.9
	baz=62						
YOJ				*e*S	Sg	15 41 58.2	-0.8
	baz=62						
YOJ	Yonaguni jima	1.43	66	P	Pb	15 41 38.8	-0.9
YOJ				*e*S	Sg	15 41 58.3	-0.7
SCLT	Jiali	1.45	241	*e*P	Pg	15 41 40.2	-0.5
	baz=240						
SCLT				*e*S	Sg	15 41 59.6	0.0
	baz=240						
SGLT	Jiouru	1.52	221	P	Pg	15 41 41.8	-0.4
	baz=209						
MASBT	Mashibuluo	1.53	215	*e*P	Pn	15 41 40.5	+0.2
	baz=203						
SNJT	Kaohsiung City	1.60	226	*e*P	Pg	15 41 42.9	-0.7
	baz=226						
EAST	Anshuo	1.64	204	*e*P	Pn	15 41 39.9	-1.9
	baz=191						
TAW	Tawu	1.64	203	*e*P	Pb	15 41 42.6	-0.7
	baz=189						
SCZT	Fangliau	1.74	211	*e*P	Pb	15 41 44.0	-1.0
	baz=210						
LAY	Lan-yu	1.83	181	*e*P	Pn	15 41 42.2	-2.3
	baz=165						
WDGT	Dungji	1.86	251	*e*P	Pn	15 41 45.2	+0.3
	baz=253						
PHUB	P'eng-hu	1.87	259	⇓P	Pn	15 41 44.9	-0.2
	baz=258						
PHUB				*e*S	Sn	15 42 08.4	-0.4
	baz=258						
PNG	Penghu	1.88	261	P	Pn	15 41 44.8	-0.3
	baz=260						
PNG				*e*S	Sn	15 42 08.8	0.0
	baz=260						
WLCH	Liuqiu	1.88	216	*e*P	Pg	15 41 48.3	-0.7
	baz=216						
TWP	Hsiaoliuchiu	1.89	216	*e*P	Pb	15 41 46.2	-1.4
	baz=238						
IRIF	Iriomote-Funau	2.02	77	P	Pn	15 41 47.2	+0.2
IRIF				*e*S	Sn	15 42 12.8	+0.5
HEN	Hengchun	2.02	203	*e*P	Pb	15 41 49.0	-0.7
	baz=194						
HATJ	Hateruma jima	2.05	85	S	Sn	15 42 13.0	0.0
TWK1	Hengchun	2.06	200	*e*P	Pn	15 41 47.0	-0.6
	baz=186						
TWKBT	Hengchun	2.06	200	*e*P	Pn	15 41 46.3	-1.3
	baz=186						
TSEB	Hengchuen, Pin	2.07	198	*e*P	Pn	15 41 48.5	+0.8
	baz=185						
VCHM	Qimei	2.08	252	*e*P	Pn	15 41 47.9	0.0
	baz=253						
JKRS	Kuro-shima	2.25	80	P	Pn	15 41 51.2	+1.0
JKRS				S	Sb	15 42 19.3	-2.3
PTTC	Pingtan	2.30	315	*e*P	Pn	15 41 49.8	-1.1
	baz=317						
JIJ	Ishigaki jima	2.39	78	P	Pn	15 41 51.9	-0.3
JIJ				*e*S	Sn	15 42 20.5	-1.1
PTMZ	Houxiangcun	2.52	298	*e*P	Pn	15 41 52.7	-1.2
	baz=300						
JISG	Ishigakijimahi	2.59	74	P	Pn	15 41 54.7	-0.2
JISG				*e*S	Sn	15 42 26.3	-0.2
MATB	Ma-tsu	2.70	327	*e*P	Pn	15 41 55.9	-0.5
	baz=329						
QZH	Quanzhou	2.92	292	Pn	Pn	15 41 58.6	-0.8
QZH				Sn	Sn	15 42 31.4	-3.2
QZH				smax	smax		
	comp=N,380nm,0.8s						
QZH				smax	smax		
	comp=E,280nm,1.1s						
JTJ	Tarama	2.95	75	P	Pn	15 42 00.5	+0.7
JTJ				*e*S	Sn	15 42 36.0	+0.6
KNMB	Chin-men Tao	2.97	282	*e*Pn	Pn	15 41 59.1	-1.0
KNMB	Chin-men Tao	2.97	282	*e*P	Pn	15 41 59.1	-1.0
	baz=283						
LYJJ	Jianjiangzhen	3.12	329	*e*P	Pn	15 42 01.8	-0.5
	baz=318						
MHZQ	Yeshan	3.20	314	*e*P	Pn	15 42 02.5	-0.7
	baz=317						
XPSS	Dashiqiu	3.28	338	*e*P	Pn	15 42 04.2	-0.2
	baz=328						
JIRB	Irabujima	3.41	73	*e*S	Sn	15 42 47.9	+1.1
AXDP	Jialang	3.44	288	*e*P	Pn	15 42 05.8	-0.8

	baz=289						
ZPLA	Ao Xicun	3.50	272	*e*P	Pn	15 42 06.9	-0.5
	baz=273						
JIKM	Ikemajima	3.50	72	*e*S	Sn	15 42 49.7	+0.7
JMJ	Miyako jima 2	3.52	74	*e*P	Pn	15 42 09.3	+1.6
	baz=73						
JMJ2	Miyako jima3	3.53	75	*e*S	Sn	15 42 49.5	-0.1
JOGS	Gusukube	3.60	75	*e*S	Sn	15 42 52.6	+1.2
ZZJH	Jiuhuzhen	3.65	280	*e*P	Pn	15 42 09.2	-0.3
	baz=281						
JOW	Kunigami	6.73	63	Pn	Pn	15 42 50.8	-1.0
	1.0nm,0.3s,baz=173,slow=13,SNR=14						
JOW	Kunigami	6.73	63	*e*Pn	Pn	15 42 50.6	-1.3
WHN	Wuhan	9.24	317	*e*P	Pn	15 43 34.8	+8.6
WHN				S	Sn	15 45 22.0	+12
WHN				LR	LR		
	comp=N,930nm,12.3s						
WHN				LR	LR		
	comp=E,880nm,8.4s						
WHN				LR	LR		
	comp=Z,1µm,11.0s						
KSAR	Wonju Array Be	14.56	20	Pn	P	15 44 42.6	-3.0
KSRS	Korea Array	14.58	20	Pn	P	15 44 42.6	-3.2
	comp=Z,0.8nm,0.3s,baz=197,slow=12,SNR=24						
XAN	Xi'an	14.99	315	P	P	15 44 49.8	-0.7
XAN				S	Sn	15 47 38.8	+7.7
XAN				LR	LR		
	comp=Z,340nm,11.9s						
XAN				LR	LR		
	comp=Z,250nm,10.8s						
XAN				LR	LR		
	comp=Z,250nm,10.3s						
KMI	Kunming	17.19	278	P	Pn	15 45 12.8	-0.7
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CD2	Chengdu	17.29	298	*e*P	Pn	15 45 13.1	-1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	18.89	336	P	Pn	15 45 33.3	-0.9
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
MAJO	Matsushiro	19.09	45	*e*P	P	15 45 34.4	-1.4
MJAR	Matsushiro Arr	19.09	45	P	P	15 45 34.4	-1.4
	comp=Z,0.0nm,0.3s,baz=237,slow=11,SNR=4.7						
LZH	Lanzhou	19.55	313	*e*P	Pn	15 45 46.8	+4.5
LZH				pP	sP	15 45 49.6	+4.4
LZH				sP	pP	15 45 52.1	+8.2
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
CM31	Chiang Mai Arr	21.77	260	*e*P	P	15 46 07.2	+2.2
CMAR	Chiang Mai Arr	21.77	260	P	P	15 46 07.2	+2.2
	comp=Z,0.7nm,0.3s,baz=59,slow=8.7,SNR=2.1						
USRK	Ussuriysk Ar.	21.99	20	P	P	15 46 07.8	+0.7
	comp=Z,1.3nm,0.5s,baz=218,slow=11,SNR=7.0						
KLR	Kul'dur	26.54	15	P	P	15 46 50.1	-0.7
	comp=Z,5.0nm,0.9s,baz=223,slow=7.0,SNR=12						
SONA0	Songino Array	26.79	337	*e*P	P	15 46 54.0	+0.9
SONM	Songino Array	26.79	337	P	P	15 46 54.0	+0.9
	comp=Z,2.5nm,0.8s,baz=146,slow=8.3,SNR=7.7						
WMQ	Urumqi	34.12	314	*e*P	P	15 47 58.5	+0.5
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,100nm,21.3s						
WMQ				LR	LR		
	comp=Z,92nm,18.9s						
WMQ				LR	LR		
	comp=Z,47nm,15.1s						
MK31	Makanchi Array	38.80	316	*e*P	P	15 48 38.4	+0.5
	comp=Z,1.5nm,0.8s						
MK32	Makanchi Array	38.80	316	*e*P	P	15 48 37.4	-0.5
MK32				*e*PcP	PcP	15 50 50.8	+1.6
MKAR	Makanchi Array	38.80	316	P	P	15 48 37.4	-0.5
	comp=Z,1.6nm,0.9s,baz=102,slow=10.0,SNR=14						
MKAR				PcP	PcP	15 50 50.8	+1.6
	comp=Z,0.5nm,0.7s,baz=72,slow=4.0,SNR=3.6						
MAKZ	Makanchi	39.01	316	*e*P	P	15 48 40.0	+0.4
	comp=Z,2.9nm,0.9s						
ZALV	Zalesovo Beam	40.69	327	P	P	15 48 51.9	-1.5
	comp=Z,0.7nm,0.5s,baz=108,slow=9.4,SNR=3.2						
ZAA1	Zalesovo Array	40.69	327	*e*P	P	15 48 51.9	-1.6
KSH	Kashi	41.36	303	*e*P	P	15 49 01.8	+2.4
H11N1	WAKE ISLAND Hy	42.15	87	T	T	16 34 09.6	
	baz=283,slow=74,SNR=22						
H11N2	WAKE ISLAND Hy	42.15	87	T	T	16 34 08.1	
	baz=283,slow=74,SNR=19						
H11N3	WAKE ISLAND Hy	42.16	87	T	T	16 34 09.3	
	baz=283,slow=74,SNR=15						
H11S3	WAKE ISLAND Hy	42.27	88	T	T	16 34 13.0	
	baz=284,slow=74,SNR=39						
H11S1	WAKE ISLAND Hy	42.28	88	T	T	16 34 12.1	
	baz=284,slow=74,SNR=33						
H11S2	WAKE ISLAND Hy	42.29	88	T	T	16 34 12.7	
	baz=284,slow=74,SNR=22						
KURBB	Kurchatov Arra	42.57	320	P	P	15 49 09.8	+0.9
	comp=Z,0.7nm,0.8s,baz=111,slow=9.1,SNR=5.4						
WR1	Warramunga Arr	45.30	163	*e*P	P	15 49 30.3	-0.8
WRA	Warramunga Arr	45.30	163	P	P	15 49 30.3	-0.8
	comp=Z,1.2nm,0.8s,baz=339,slow=12,SNR=3.8						
AS31	Alice Springs	48.76	165	*e*P	P	15 49 57.2	-0.9
	comp=Z,2.3nm,1.4s						
ASAR	Alice Springs	48.76	165	P	P	15 49 57.2	-0.9
	comp=Z,1.7nm,1.0s,baz=342,slow=7.4,SNR=10						
ABKAR	Akbulak array	53.91	314	*e*P	P	15 50 36.3	-0.2
	comp=Z,2.2nm,0.8s						
GEYT	Alibeck	55.26	301	P	P	15 50 46.9	+0.3
	comp=Z,0.9nm,0.6s,baz=88,slow=4.5,SNR=2.1						
STKA	Stephens Creek	58.66	160	P	P	15 51 09.9	-0.6
	comp=Z,1.5nm,0.7s,baz=340,slow=5.7,SNR=4.7						
STKA	Stephens Creek	58.66	160	*e*P	P	15 51 09.9	-0.6
	comp=Z,3.7nm,1.6s						
SUA	Susitna One	68.23	31	*e*P	P	15 52 13.2	-0.5
	comp=Z,4.1nm,0.8s						
RND	Reindeer	68.74	29	*e*P	P	15 52 15.2	-1.6
	comp=Z,8.8nm,0.8s						
ILAR	Eielson Array	69.32	27	P	P	15 52 19.2	-1.1
	comp=Z,0.9nm,0.6s,baz=290,slow=8.3,SNR=9.1						
SCRK	Sand Creek	70.73	28	*e*P	P	15 52 28.5	-0.6
	comp=Z,3.0nm,0.9s						
EGAK	Eagle	71.69	27	*e*P	P	15 52 34.1	-0.6
	comp=Z,3.8nm,0.8s						
FIA0	FINESS Array S	71.89	330	*e*P	P	15 52 38.0	+2.0
FINES	FINESS Array B	71.89	330	P	P	15 52 38.0	+2.0
	comp=Z,1.8nm,0.9s,baz=60,slow=8.2,SNR=3.9						
BR101	Keskin Array S	73.64	307	*e*P	P	15 52 49.4	+2.4
BRTR	Keskin Array B	73.64	307	P	P	15 52 49.4	+2.4
	comp=Z,0.5nm,0.7s,baz=64,slow=5.1,SNR=3.2						
NB200	NORSAR Array S	78.66	332	*e*P	P	15 53 13.6	-1.4
NOA	NORSAR Array B	78.66	332	P	P	15 53 13.6	-1.4
	comp=Z,0.2nm,0.6s,baz=55,slow=7.6,SNR=2.2						
YKA	Yellowknife Ar	83.11	23	P	P	15 53 37.5	-1.2
	comp=Z,4.1nm,0.8s,baz=313,slow=5.0,SNR=20						
YKB5	Yellowknife Ar	83.11	23	*e*P	P	15 53 37.5	-1.2
NV01	Mina Array Sit	96.41	43	*e*P	P	15 54 43.8	+1.0
NVAR	Mina Array Bea	96.41	43	P	P	15 54 43.8	+1.0
	comp=Z,0.6nm,0.7s,baz=279,slow=6.1,SNR=6.2						

KRSC 24 16:00:57.9±2.2**, 49°.56N**×**156°.92E, h46**^{km}±25^{km}**, ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.24	336	*e*P	Pn	16 01 18.4	-0.4
SKR				*e*S	Sn	16 01 33.7	-0.6
ASAK	Asacha	2.90	12	*e*P	Pn	16 01 46.3	+4.7
MTVR	Mutnovka	3.04	15	*e*P	Pn	16 01 47.0	+3.5
MTVR				*e*S	Sn	16 02 22.8	+4.1
RUS	Russkaya	3.05	19	*e*P	Pn	16 01 46.8	+3.2
RUS				*e*S	Sn	16 02 23.9	+5.1
APC	Apacha	3.38	2	*e*P	Pn	16 01 51.4	+3.4
DALK	Dalny	3.66	18	*e*P	Pn	16 01 56.3	+4.3
DALK				*e*S	Sn	16 02 39.5	+5.6
AVH	Avacha	3.88	16	*e*P	Pn	16 02 00.6	+5.5
KRX	Arik	3.96	15	*e*P	Pn	16 02 01.1	+4.9
GNL	Ganaly	4.19	8	*e*P	Pn	16 02 03.7	+4.3
MKZ	Mys Kozlova	5.82	29	*e*P	Pn	16 02 25.3	+3.8
MKZ				*e*S	Sn	16 03 31.6	+4.8
KBTR	Krutoberegovo	7.55	26	*e*P	Pn	16 02 49.3	+4.0
BKI	Bering	7.91	41	*e*S	Sn	16 04 20.0	+1.8

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*ISCJB **24** 16:22:06.1±0.2, 22°.81S±0°.06×179°.45W±0°.06, h550^{km}, mb4.1/54, Error ellipse: s-maj=9.5km s-min=5.8km az=136.9*

*IDC **24** 16:22:06.1±3.1, 22°.78S×179°.43W, h544^{km}±33^{km}, mb3.6/12, mb1 3.8/14, mb1mx3.7/29, mbtmp4.5/14, Error ellipse: s-maj=21.1km s-min=16.9km az=123.0*

*NEIC **24** 16:22:06.9±0.7, 22°.80S×179°.45W, h551^{km}±9^{km}, mb4.2/41, Error ellipse: s-maj=8.3km s-min=7.7km az=110.0*

ISC 24 16:22:06.2±0.4**, 22°.91S**±0°.08×**179°.34W**±0°.09**, h550**^{km}**, n142,** σ**1ˢ.34**/151**, mb4.2**/54**, 30C-17D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	11.79	275	*e*P	P	16 24 42.3	-0.3
PINNC	Pines Island,	12.20	269	*e*P	P	16 24 46.9	+0.1
DZM	Mont Dzumac	13.17	271	P	P	16 24 56.1	-0.9
	1.2nm,0.3s,baz=80,slow=18,SNR=20						
DZM	Mont Dzumac	13.17	271	*e*P	P	16 24 56.5	-0.5
OUZ	Omahuta	13.72	205	*e*P	P	16 25 04.5	+2.2
URZ	Urewera	15.60	190	P	P	16 25 21.8	+0.2
	1.3nm,0.3s,baz=42,slow=6.7,SNR=6.4						
URZ				S	S	16 27 55.6	-6.0
	0.3nm,0.3s,baz=18,slow=20,SNR=4.3						
BKZ	Black Stump Fm	16.59	191	*e*P	P	16 25 32.1	+1.0
	58nm,1.6s						
BFZ	Birch Farm	18.10	191	*e*P	P	16 25 44.8	-0.1
	76nm,1.5s						
RAR	Rarotonga	18.21	88	*e*P	P	16 25 45.2	-0.8
	423nm,1.9s						
SNZO	South Karori	19.02	194	*e*P	P	16 25 55.1	+2.0
	209nm,1.4s						
QRZ	Quartz Range	19.13	199	*e*P	P	16 25 56.2	+2.1
	261nm,1.9s						
CTA	Charters Tower	32.10	268	P	P	16 27 48.6	-0.2
	13nm,0.4s,baz=94,slow=10,SNR=28						
STKA	Stephens Creek	35.66	247	P	P	16 28 18.4	-0.1
	3.5nm,0.6s,baz=93,slow=10,SNR=15						
STKA				PcP	PcP	16 30 32.0	+0.4
	1.1nm,0.4s,baz=94,slow=5.5,SNR=4.1						
AS31	Alice Springs	42.81	259	*e*P	P	16 29 15.8	-0.3
	2.6nm,0.9s						
ASAR	Alice Springs	42.81	259	P	P	16 29 15.8	-0.4
	11nm,0.3s,baz=86,slow=7.8,SNR=93						
ASAR				PcP	PcP	16 30 55.1	+0.3
	1.2nm,0.5s,baz=98,slow=5.3,SNR=7.4						
WRA	Warramunga Arr	43.09	265	P	P	16 29 17.4	-1.0
	5.4nm,0.5s,baz=96,slow=8.5,SNR=76						
QSPA	South Pole Qui	67.17	180	*e*P	P	16 32 07.4	+1.9
	4.9nm,0.8s						
MJAR	Matsushiro Arr	71.44	325	P	P	16 32 30.3	-1.0
	1.6nm,0.9s,baz=151,slow=2.8,SNR=4.3						
PETK	Petropavlovsk-	78.29	346	P	P	16 33 08.9	-0.3
	6.7nm,0.7s,baz=108,slow=7.7,SNR=22						
MAW	Mawson	78.88	200	P	P	16 33 13.5	+1.3
	1.2nm,0.5s,baz=140,slow=9.2,SNR=7.5						
USRK	Ussuriysk Ar.	80.27	327	P	P	16 33 20.1	+0.2
	1.4nm,0.7s,baz=168,slow=1.3,SNR=4.4						
ISA	Isabella, Lake	81.90	46	*e*P	P	16 33 29.6	+1.0
	6.9nm,0.8s						
CMB	Columbia Colle	82.07	43	*e*P	P	16 33 29.9	+0.6
	5.8nm,0.9s						
AFDM	Forest Hills D	82.25	42	*e*P	P	16 33 30.4	+0.2
	6.7nm,1.0s						
MDPB	Devils Postpil	82.66	44	*e*P	P	16 33 33.3	+0.7
	5.4nm,1.0s						
GSC	Goldstone, Bar	82.81	47	*e*P	P	16 33 33.8	+0.5
	3.4nm,0.8s						
WAKR	Walker	82.95	43	*e*P	P	16 33 34.9	+0.9
	6.0nm,0.9s						
PNTR	Pine Nut	83.19	43	*e*P	P	16 33 36.1	+0.9
	11nm,0.8s						
113A	Mohawk Valley,	83.53	51	*e*P	P	16 33 37.8	+1.1
	4.5nm,0.4s						
NVAR	Mina Array Bea	83.62	44	P	P	16 33 37.7	+0.3
	3.2nm,0.9s,baz=222,slow=8.0,SNR=18						
NV11	Mina Array Sit	83.72	44	*e*P	P	16 33 38.3	+0.6
	0.3nm,1.0s						
SYO	Syowa Base	84.11	193	⇑*e*P	P	16 33 38.0	-1.0
SYO	Syowa Base	84.11	193	⇓*e*PcP	PcP	16 33 43.6	+2.0
TPNV	Topopah Spring	84.11	46	*e*P	P	16 33 40.4	+0.7
	4.1nm,1.3s						
KVN	Kaiserville	84.11	43	*e*P	P	16 33 40.2	+0.4
	3.1nm,1.0s						
Y14A	Wickenburg	84.69	50	*e*P	P	16 33 43.6	+1.0
	3.2nm,0.9s						
W13A	Hualapai Mount	84.69	49	*e*P	P	16 33 43.6	+0.9
	2.6nm,0.6s						
PINE	Pine Mountain	85.24	38	*e*P	P	16 33 46.1	+1.0
	28nm,1.6s						
TUC	Tucson	85.44	52	*e*P	P	16 33 47.5	+1.3
	4.2nm,0.8s						
SNAA	Sanae	85.64	179	P	P	16 33 46.7	+0.2
WVOR	Wild Horse Val	85.77	40	*e*P	P	16 33 47.7	+0.1
	3.8nm,0.9s						
VNA3	Neumayer Olymp	85.82	177	P	P	16 33 47.5	+0.2
X16A	Lo Mia Camp, P	86.04	50	*e*P	P	16 33 50.7	+1.5
	3.0nm,0.9s						
CCUT	Cedar City	86.36	47	*e*P	P	16 33 51.8	+1.1
	2.5nm,0.8s						
J08A	Circle Bar Ran	86.41	40	*e*P	P	16 33 51.3	+0.7
	6.0nm,1.3s						
U15A	North Rim	86.49	48	*e*P	P	16 33 52.5	+1.1
	6.9nm,0.8s						
PSUT	Pine Spring	86.56	46	*e*P	P	16 33 52.2	+0.6
	2.2nm,1.0s						
SUA	Susitna One	87.18	13	*e*P	P	16 33 53.0	-0.8
	27nm,1.0s						
G08A	Pilot Rock	87.28	38	*e*P	P	16 33 55.0	+0.4
	9.4nm,1.1s						
MTPU	Mount Pierson	87.41	47	*e*P	P	16 33 57.2	+1.4
	3.2nm,0.9s						
GLI	Glacier Island	87.49	15	*e*P	P	16 33 54.6	-0.5
	36nm,0.5s						
BMO	Blue Mountains	87.97	39	*e*P	P	16 33 58.1	+0.3
	1.9nm,0.8s						
F10A	Beach Ranch, E	88.66	38	*e*P	P	16 34 01.2	+0.1
	5.5nm,0.8s						
TMUT	Trail Mountain	88.72	46	*e*P	P	16 34 02.8	+1.0
	6.1nm,0.7s						
B08A	Colville Reser	88.91	35	*e*P	P	16 34 02.4	+0.3
	4.1nm,0.9s						
HLID	Hailey	88.95	41	*e*P	P	16 34 03.2	+0.6
	3.8nm,0.9s						
HVU	Hansel Valley	89.00	43	*e*P	P	16 34 03.2	+0.4
	4.3nm,1.0s						
MNTX	Cornudas Mount	89.15	55	*e*P	P	16 34 04.6	+1.0
	3.4nm,0.9s						
TX31	Lajitas Ar. Si	89.39	58	*e*P	P	16 34 06.2	+1.3
	3.8nm,1.0s						
TXAR	Lajitas Array	89.39	58	P	P	16 34 06.1	+1.2
	1.9nm,0.8s,baz=211,slow=6.5,SNR=22						
CMAR	Chiang Mai Arr	89.76	290	P	P	16 34 08.0	+1.3
	1.8nm,0.9s,baz=134,slow=2.9,SNR=6.8						
ANMO	Albuquerque	89.87	52	*e*P	P	16 34 07.8	+0.7
	4.2nm,1.0s						
HHC	Hu-ho-hao-te	90.16	315	P	P	16 34 10.4	+2.2
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
MCMT	McKenzie Canyo	90.59	41	*e*P	P	16 34 10.8	+0.6
REDW	Red Top Meadow	91.04	43	*e*P	P	16 34 13.2	+0.8
	comp=Z,5.2nm,0.8s						
CD2	Chengdu	91.05	303	*e*P	P	16 34 11.8	-0.7
IMW	Indian Meadow	91.26	42	*e*P	P	16 34 14.3	+0.9
	comp=Z,4.4nm,1.1s						
SMCO	Snowmass	91.51	48	*e*P	P	16 34 15.1	+0.3
	comp=Z,2.1nm,0.7s						
PDAR	Pinedale Array	91.56	44	P	P	16 34 14.8	+0.1
	comp=Z,1.5nm,0.8s,baz=204,slow=3.3,SNR=11						
SDCO	Great Sand Dun	91.86	50	*e*P	P	16 34 16.6	+0.2
	comp=Z,2.1nm,0.8s						
YAK	Yakutsk	93.89	338	*e*P	P	16 34 24.1	-0.4
	comp=Z,11nm,0.8s						
ARCES	ARCESS Array B	131.05	349	PKP	PKPdf	16 40 14.1	-0.8
	comp=Z,1.6nm,0.5s,baz=0.0,slow=1.8,SNR=18						
FINES	FINESS Array B	137.70	342	PKhKP	PKPpre	16 40 15.6	
	comp=Z,0.5nm,0.5s,baz=29,slow=4.4,SNR=4.5						
FINES				PKP	PKPdf	16 40 27.4	-0.1
	comp=Z,0.9nm,0.6s,baz=108,slow=3.5,SNR=4.7						
NC303	NORSAR Array S	141.00	352	*e*PKPpre	PKPdf	16 40 27.1	-6.4
NB2	NORSAR Subarra	141.20	352	PKP	PKPdf	16 40 28.1	-5.8
	comp=Z,1.2nm,0.6s,baz=14,slow=3.1						
NOA	NORSAR Array B	141.20	352	PKhKP	PKPdf	16 40 28.5	-5.4
	comp=Z,1.6nm,0.7s,baz=16,slow=4.6,SNR=14						
NOA				PKP	PKiKP	16 40 35.9	-1.0
	comp=Z,0.6nm,0.4s,baz=14,slow=3.9,SNR=4.8						
KONO	Kongsberg	142.75	353	*e*PKPpre	PKPdf	16 40 33.0	-3.6
AKASG	Malin Array Be	144.47	328	PKP	PKPbc	16 40 38.5	-1.4
	comp=Z,5.3nm,0.5s,baz=43,slow=4.2,SNR=29						
AKBB	Malin Array Si	144.47	328	*e*PKPbc	PKPbc	16 40 38.4	-1.5
SUW	Suwalki	144.61	337	*e*PKPbc	PKPbc	16 40 40.6	+0.3
BZK	Bozkurt	146.34	312	⇑*i*P	PKPbc	16 40 45.5	-0.2
BR131	Keskin Array S	147.46	309	*e*PKPbc	PKPbc	16 40 48.0	-0.9
BRTR	Keskin Array B	147.46	309	PKPbc	PKPbc	16 40 48.5	-0.4
	comp=Z,2.5nm,0.7s,baz=145,slow=5.3,SNR=15						
ANTO	Ankara	148.01	309	⇑*i*P	PKPbc	16 40 50.1	-0.1
TLCR		148.06	321	⇑*i*P	PKPab	16 40 55.5	+0.6
CFR	Carcaliu	148.46	321	⇑*i*P	PKPbc	16 40 50.6	-0.4
BUR08	Bucovina Ar. S	148.47	328	*e*PKPbc	PKPbc	16 40 52.0	+0.9
TESR	Tescani	148.47	325	⇓*i*P	PKPbc	16 40 50.7	-0.4
BIZ	Bicaz	148.48	326	⇑*i*P	PKPbc	16 40 51.6	+0.5
BURAR	Bucovina Array	148.48	327	⇓*i*P	PKiKP	16 40 52.6	+0.3
VRI	Vrincioaia	148.84	324	⇑*i*P	PKPbc	16 40 51.9	-0.1
TLB	Topalu	148.86	321	⇑*i*P	PKPbc	16 40 52.3	+0.3
HARR	Harsova	148.86	321	⇓*i*P	PKPbc	16 40 52.1	0.0
KOLS	Kolonicke sedl	148.91	332	*e*PKP	PKiKP	16 40 53.1	+0.1
BISRR	Bisoca	149.04	323	⇑*i*P	PKPab	16 41 02.1	+3.0
TRPA	Tarpa	149.39	331	⇓*i*P	PKPbc	16 40 53.6	+0.4
ISR	Istrita	149.40	323	⇑*i*P	PKiKP	16 40 56.9	+2.7
LEF	Lefka	149.44	301	⇓*i*P	PKPbc	16 40 53.3	-0.5
RASA	Rasa	149.59	321	⇓*i*P	PKPbc	16 40 54.1	+0.3
LEHL	Lehliu	149.63	321	⇑*i*P	PKPbc	16 40 54.3	+0.4
SILT	Sile	149.64	314	⇑*i*P	PKPbc	16 40 54.5	+0.5
SECR		149.72	323	⇑*i*P	PKPbc	16 40 54.0	-0.1
PLAR	PLOIESTI	149.81	323	⇓*i*P	PKPbc	16 40 54.0	-0.3
OKC	Ostrava-Krasne	149.82	337	⇑*e*PKP	PKPbc	16 40 54.2	0.0
SULR		149.83	322	⇑*i*P	PKPbc	16 40 54.3	-0.1
OSTC	Ostas	149.85	340	⇑*e*PKP	PKiKP	16 40 55.1	+0.2
OSTC				*e*PKPAB	PKPab	16 41 03.0	+0.8
CHVC	Chvalec	149.88	340	⇑*e*PKP	PKPbc	16 40 54.5	+0.1
LANS	Liptovska Anna	149.89	335	*e*PKP	PKiKP	16 40 56.0	+0.9
LANS				*e*		16 41 03.5	
UPC	Upice	149.96	340	⇑*e*PKP	PKPbc	16 40 54.7	+0.2
DPC	Dobruska-Polom	150.00	340	⇑*e*PKP	PKPbc	16 40 55.1	+0.4
VOIR		150.02	324	⇑*i*P	PKPbc	16 40 54.3	-0.6
CLL	Collm	150.08	344	*e*PKPbc	PKPbc	16 40 54.5	-0.2
CLL	Collm	150.08	344	⇑*i*PKPbc	PKPbc	16 40 54.7	-0.1
	comp=Z,21nm,0.9s						
CLL				*i* PKiKP	PKiKP	16 40 56.7	+1.4
CLL				⇓*i*PKPab	PKPab	16 41 02.9	-0.2
	comp=Z,7.0nm,0.9s						
MORC	Moravsky Berou	150.08	338	*e*PKPbc	PKPbc	16 40 54.8	-0.1
MORC	Moravsky Berou	150.08	338	⇑*i*P	PKPbc	16 40 54.8	-0.1
MORC	Moravsky Berou	150.08	338	*e*PKP	PKPbc	16 40 55.0	+0.1
YLV	Yalova	150.09	313	⇓*i*P	PKiKP	16 40 55.9	+0.1
KUBB	Kubrat	150.22	321	⇓*i*P	PKPbc	16 40 54.0	-1.3
BRG	Berggiesshubel	150.24	343	*i* PKP	PKPbc	16 40 55.3	+0.2
	comp=Z,12nm,0.6s						
DRGR		150.28	329	⇓*i*P	PKPbc	16 40 54.7	-0.8
ARR	Arges	150.28	325	⇓*i*P	PKiKP	16 40 56.8	+0.7
PVCC	Panska Ves	150.37	342	⇑*e*PKP	PKPbc	16 40 55.9	+0.4
PVCC				*e*PKPAB	PKPab	16 41 05.0	+0.7
LOZB	Loznitsa	150.41	320	⇑*i*P	PKiKP	16 40 59.7	+3.4
VYHS	Vyhne	150.67	335	*e*PKP	PKPbc	16 40 56.4	+0.2
VYHS				*e*		16 41 06.1	
LOT	Lotru	150.69	326	⇑*i*P	PKPbc	16 40 56.0	-0.5
PSZ	Piszkesteto	150.70	333	⇑*i*P	PKiKP	16 40 57.2	+0.3
JAVC	Velka Javorina	150.81	337	*e*PKP	PKiKP	16 40 57.8	+0.8
VRAC	Vranov	150.81	338	⇑*i*P	PKPbc	16 40 56.9	+0.4
VRAC	Vranov	150.81	338	*e*PKP	PKPbc	16 40 56.4	-0.1
PRU	Pruhonice	150.86	341	⇑*e*PKP	PKPbc	16 40 57.1	+0.5
PRU				*e*PKPAB	PKPab	16 41 06.9	+0.5
KRUC	Moravsky	151.09	338	*e*PKP	PKPbc	16 40 57.0	-0.2
SIRR	Siria	151.16	329	⇓*i*P	PKPbc	16 40 57.6	+0.1
GZR	Gura Zlata	151.24	327	⇑*i*P	PKPbc	16 40 57.3	-0.4
MODS	Modra-Piesok	151.36	337	*e*PKP	PKPbc	16 40 57.8	0.0
PLVB	Pleven	151.55	322	⇓*i*P	PKPbc	16 40 58.5	+0.1
BZS	Buzias	151.65	328	⇓*i*P	PKPbc	16 40 58.3	-0.2
KHC	Kasperske Hory	151.91	342	⇑*e*PKP	PKPbc	16 40 59.1	0.0
KHC				*e*PKPAB	PKPab	16 41 11.5	+0.6
GERES	GERESS Array B	152.13	341	PKPbc	PKPbc	16 40 59.1	-0.6
	comp=Z,1.1nm,0.7s,baz=17,slow=1.4,SNR=11						
GERES				PKPab	PKPab	16 41 11.1	-0.9
	comp=Z,0.6nm,0.5s,baz=25,slow=3.2,SNR=5.4						
MDVR	Moldovita	152.20	327	⇓*i*P	PKPbc	16 40 58.8	-1.1
FUORN	Ofenpass-Fuorn	155.11	344	*e*PKPab	PKPab	16 41 24.7	-0.2
ESDC	Sonseca Array	162.83	12	PKPab	PKPab	16 41 57.5	-1.1
	comp=Z,0.2nm,0.3s,baz=354,slow=5.9,SNR=4.6						
TORD	Torodi Ar. Bea	170.24	186	PKP	PKPdf	16 41 11.0	-0.9
	comp=Z,1.0nm,0.9s,baz=323,slow=3.6,SNR=4.3						
TORD				PKPab	PKPab	16 42 32.1	+0.5
	comp=Z,1.1nm,0.7s,baz=170,slow=4.0,SNR=5.1						

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*IDC **24** 16:33:05.6±3.1, 45°.10S×81°.80W, h0^{km}, mb4.0/5, mb1 4.3/7, mb1mx4.0/27, mbtmp4.0/7, ML3.6/2, MS3.7/9, Ms1 3.7/9, ms1mx3.5/20, Error ellipse: s-maj=91.8km s-min=33.7km az=157.0*

ISC 24 16:33:07.1±2.9**, 45°.1S**±0°.5×**81°.7W**±0°.2**, h10**^{km}**, n19,** σ**0ˢ.86**/8**, mb3.9**/5**, MS3.8**/7**, Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	9.27	66	Pn	Pn	16 35 21.0	+0.1
	0.1nm,0.3s,baz=263,slow=13,SNR=5.9						
PLCA				LR	LR	16 38 29.4	
	comp=Z,529nm,18.7s,baz=267,slow=35						
CFA	Coronel Fontan	17.08	43	P	P	16 37 06.8	-1.0
	0.3nm,0.3s,baz=216,slow=10.0,SNR=7.2						
CFA				LR	LR	16 42 26.8	
	comp=Z,236nm,21.8s,baz=312,slow=33						
LVC	Limon Verde	24.75	29	P	P	16 38 29.1	-0.1
	6.9nm,0.8s,baz=184,slow=7.0,SNR=4.2						
LVC				LR	LR	16 45 32.8	
	comp=Z,132nm,21.2s,baz=206,slow=30						
CPUP	Villa Florida	27.07	54	LR	LR	16 49 38.0	
	comp=Z,325nm,18.3s,baz=214,slow=37						
RPN	Rapa Nui	28.42	300	LR	LR	16 46 51.4	
	comp=Z,240nm,18.6s,baz=17,slow=29						
LPAZ	La Paz	30.90	26	P	P	16 39 25.5	+0.9
	3.6nm,1.1s,baz=196,slow=7.0,SNR=6.8						
LPAZ				LR	LR	16 48 55.7	
	comp=Z,81nm,22.0s,baz=164,slow=31						
BDFB	Brasilia	40.80	55	LR	LR	16 56 28.1	
	comp=Z,143nm,18.1s,baz=124,slow=34						
TXAR	Lajitas Array	76.72	340	P	P	16 44 57.4	-1.0
	0.5nm,1.0s,baz=170,slow=11,SNR=4.0						
DBIC	Dimbokro	85.49	76	LR	LR	17 23 08.6	
	comp=Z,26nm,18.1s,baz=190,slow=35						
NVAR	Mina Array Bea	89.44	332	P	P	16 46 04.9	+0.9
	0.5nm,0.7s,baz=166,slow=7.0,SNR=4.8						
PDAR	Pinedale Array	90.93	340	P	P	16 46 11.3	+0.4
	0.3nm,0.5s,baz=170,slow=5.5,SNR=3.7						
STKA	Stephens Creek	93.88	216	LR	LR	17 22 57.3	
	comp=Z,47nm,18.6s,baz=200,slow=32						
H11S2	WAKE ISLAND Hy	118.02	268	T	T	19 00 25.9	
	baz=132,slow=76						
H11S1	WAKE ISLAND Hy	118.04	269	T	T	19 00 28.1	
	baz=132,slow=76,SNR=4.0						
H11S3	WAKE ISLAND Hy	118.04	268	T	T	19 00 28.6	
	baz=132,slow=76,SNR=4.5						
H11N3	WAKE ISLAND Hy	118.69	270	T	T	19 01 18.8	
	baz=130						
H11N1	WAKE ISLAND Hy	118.70	270	T	T	19 01 18.2	
	baz=130						
H11N2	WAKE ISLAND Hy	118.71	270	T	T	19 01 18.1	
	baz=130						
ILAR	Eielson Array	120.68	333	PKP	PKiKP	16 51 57.8	-0.3
	0.5nm,0.7s,baz=152,slow=2.0,SNR=4.7						

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*ISCJB **24** 16:46:01.0±0.4, 35°.50N±0°.01×118°.25W±0°.02, h2^{km}±3^{km}, mb4.6/2, MS4.2/1, Error ellipse: s-maj=2.3km s-min=2.0km az=3.3*

*ANF **24** 16:46:01.7±0.1, 35°.49N×118°.28W, h10^{km}±1^{km}, ML4.2/44, Error ellipse: s-maj=1.0km s-min=0.9km az=138.0*

*SCEDC **24** 16:46:02.6, 35°.49N×118°.29W, h7^{km}*

*NEIC **24** 16:46:02.6±0.0, 35°.49N×118°.29W, h7^{km}, ML4.3(PAS), After PAS.*

NEIC Felt [III] at Caliente and Kernville; [II] at Bakersfield, California City, Inyokern, Lake Isabella, Ridgecrest and Tehachapi. Felt in much of the Bakersfield area.

*PAS **24** 16:46:02.6, 35°.49N×118°.29W, h7^{km}, ML4.3*

*IDC **24** 16:46:02.6±1.5, 35°.54N×118°.14W, h0^{km}, mb3.8/1, mb1 3.8/6, mb1mx3.5/51, mbtmp3.5/6, ML4.0/5, MS2.8/3, Ms1 2.8/3, ms1mx2.4/45, Error ellipse: s-maj=30.3km s-min=6.5km az=72.0*

ISC 24 16:46:01.8±1.1**, 35°.48N**±0°.02×**118°.31W**±0°.02**, h1**^{km}±9^{km}**, n137,** σ**1ˢ.07**/165**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISA	Isabella, Lake	0.23	323	ePg	Pg	16 46 07.1	+0.9
ISA	Isabella, Lake	0.23	323	P	Pg	16 46 06.7	+0.5
	baz=139,SNR=1000						
ISA				S	Sg	16 46 10.1	+0.9
	baz=139						
LRMC	Laurel Mtn Rad	0.51	90	P	Pg	16 46 11.5	0.0
	baz=271						
LRMC				S	Sg	16 46 18.4	+0.2
	baz=271						
ARVC	Arvin	0.55	231	P	Pb	16 46 13.3	-1.0
	baz=51,SNR=265						
ARVC				S	Sb	16 46 21.0	-1.7
	baz=51						
EDW2	Edwards Air Fo	0.65	157	P	Pg	16 46 14.5	+0.3
	baz=338,SNR=729						
EDW2				S	Sg	16 46 23.1	+0.5
	baz=338						
VES	Vestal, Richgr	0.73	300	P	Pb	16 46 16.4	-0.9
	baz=118,SNR=618						
VES				S	Sb	16 46 26.7	-1.1
	baz=118						
MPMC	Manual Prospec	0.88	49	P	Pg	16 46 18.6	0.0
	baz=229,SNR=1000						
MPMC				S	Sg	16 46 30.0	0.0
	baz=229						
OSI	Osito Audit: C	0.93	202	ePg	Pg	16 46 19.8	+0.3
OSI	Osito Audit: C	0.93	202	P	Pg	16 46 19.8	+0.3
	baz=22,SNR=208						
OSI				S	Sg	16 46 32.4	+0.9
	baz=22						
CWC	Cottonwood Cre	0.98	11	P	Pg	16 46 20.2	-0.3
	baz=190						
CWC				S	Sg	16 46 33.0	-0.2
	baz=190						
DAC	Darwin (Calif)	0.98	36	ePn	Pn	16 46 22.4	-0.6
VOG	Valley Oaks Go	1.21	314	P	Pb	16 46 24.8	-0.8
	baz=133,SNR=81						
DECC	Green Verdugo	1.22	181	P	Pg	16 46 25.1	-0.1
	baz=1.8,SNR=150						
DECC				S	Sn	16 46 42.5	-0.7
	baz=1.8						
RRX	Edison Barstow	1.23	119	P	Pg	16 46 25.0	-0.3
	baz=300,SNR=72						
RRX				S	Sg	16 46 41.8	+0.6
	baz=300						
GSC	Goldstone, Bar	1.24	98	ePn	Pg	16 46 24.8	-0.6
GSC	Goldstone, Bar	1.24	98	P	Pg	16 46 24.9	-0.5
	baz=279,SNR=1000						
GSC				S	Sg	16 46 41.8	+0.3
	baz=279						
MWC	Mount Wilson	1.27	171	ePn	Pg	16 46 25.8	-0.3
PASC	Pasadena Art C	1.31	176	ePn	Pn	16 46 26.4	-0.9
BFSC	Mount Baldy Ra	1.35	157	P	Pn	16 46 26.9	-0.9
	baz=338,SNR=277						
BFSC				S	Sb	16 46 44.9	-0.8
	baz=338						
PKM	Mcpherson Peak	1.37	245	P	Pn	16 46 27.4	-0.8
	baz=64,SNR=250						
PKM				S	Sn	16 46 45.8	-1.3
	baz=64						
SMMC	Simmler	1.39	264	P	Pn	16 46 27.5	-0.9
	baz=82,SNR=43						
SMMC				S	Sn	16 46 46.3	-1.2
	baz=82						
BLG	Laguna Peak, P	1.50	205	Pb	Pn	16 46 29.9	0.0
	baz=25,SNR=167						
BLG				S	Sg	16 46 50.3	+0.3
	baz=25						
FURC	Furnace Creek,	1.53	49	P	Pn	16 46 28.9	-1.3
	baz=230						
FURC				Sb	Sb	16 46 50.7	-0.1
	baz=230						
SBC	Santa Barbara	1.55	229	Pb	Pg	16 46 31.3	-0.1
	baz=48,SNR=39						
SBC				Sb	Sg	16 46 52.5	+0.9
	baz=48						
TIN	Tinemaha, Big	1.57	2	Pb	Pb	16 46 31.3	-0.5
	baz=182,SNR=192						
TIN				Sb	Sg	16 46 52.5	+0.1
	baz=182						
PAGB	Antelope Grade	1.60	280	ePn	Pn	16 46 30.4	-0.9
BBRC	Big Bear Solar	1.66	136	P	Pn	16 46 31.0	-1.3
	baz=318						
BBRC				Sb	Sn	16 46 54.7	+0.2
	baz=318						
GRAC	Grapevine Rang	1.69	26	P	Pn	16 46 32.4	-0.2
	baz=206,SNR=1000						
SHOC	Shoshone, Teco	1.71	75	P	Pn	16 46 31.0	-1.7
	baz=256,SNR=677						
HEC	Hector,Ludlow	1.74	111	P	Pn	16 46 31.9	-1.3
	baz=293,SNR=245						
FMP	Fort Macarthur	1.76	180	P	Pn	16 46 33.2	-0.3
	baz=0.2,SNR=11						
FMP				S	Sn	16 46 56.5	0.0
	baz=0.2						
SCZ2	Santa Cruz Isl	1.84	217	P	Pn	16 46 34.2	-0.4
	baz=36,SNR=23						
SCZ2				Sb	Sg	16 47 00.7	-0.2
	baz=36						
TUQ	Turquoise Moun	1.94	91	P	Pn	16 46 34.5	-1.5
	baz=272,SNR=488						
TUQ				Sb	Sb	16 47 02.7	-0.2
	baz=272						
CIS	Catalina Islan	2.07	183	P	Pn	16 46 37.2	-0.6
	baz=2.9,SNR=106						
CIS				Sb	Sb	16 47 07.4	+0.9
	baz=2.9						
MURC	Murrieta	2.08	154	P	Pn	16 46 37.5	-0.5
	baz=335,SNR=59						
MURC				Sb	Sb	16 47 07.5	+0.6
	baz=335						
MLAC	Mammoth, Mammo	2.19	349	Pb	Pb	16 46 41.4	-1.0
	baz=168						
MLAC				Sb	Sg	16 47 11.1	-1.1
	baz=168						
OMMB	Old Mammoth Mi	2.20	345	ePn	Pb	16 46 41.4	-1.2
TPNV	Topopah Spring	2.22	48	ePn	Pn	16 46 39.3	-0.6
TPNV	Topopah Spring	2.22	48	P	Pn	16 46 39.3	-0.6
	baz=229,SNR=392						
TPNV				Sb	Sb	16 47 11.5	+0.7
	baz=229						
MDPB	Devils Postpil	2.24	344	ePn	Pb	16 46 42.2	-1.0
GMRC	Granite Mounta	2.28	107	P	Pn	16 46 38.6	-2.0
	baz=289,SNR=190						
BELC	Belle Mtn. Jos	2.40	127	P	Pn	16 46 40.9	-1.5
	baz=309,SNR=63						
PFO	Pinyon Flats O	2.41	140	Pn	Pn	16 46 41.6	-0.8
	9.1nm,0.3s,baz=316,slow=14,SNR=109						
PFO				Pg	Pb	16 46 46.0	0.0
	46nm,0.3s,baz=316,slow=17,SNR=140						
PFO				Lg	Lg	16 47 17.5	
	191nm,0.3s,baz=229,slow=20,SNR=23						
PFO	Pinyon Flats O	2.41	140	P	Pn	16 46 41.5	-0.9
	baz=322,SNR=113						
SCI2	San Clemente I	2.50	185	Sb	Sg	16 47 21.0	-1.1
	baz=4.8						
LDFC	Landfair	2.65	98	ePn	Pn	16 46 43.1	-2.6
SHPR	Sheep Range	2.75	67	ePn	Pn	16 46 46.3	-0.9
109C	Camp Elliot, M	2.77	159	P	Pn	16 46 46.8	-0.5
	baz=340						
CPE	Camp Elliot	2.77	159	ePn	Pn	16 46 46.9	-0.4
SAO	San Andreas Ge	2.85	298	ePn	Pn	16 46 48.3	-0.1
IRM	Iron Mountain	2.91	116	P	Pn	16 46 47.4	-1.9
	baz=298,SNR=140						
NV01	Mina Array Sit	2.95	0	ePn	Pn	16 46 50.2	+0.3
NV01				ePg	Pb	16 46 55.0	-0.2
NVAR	Mina Array Bea	2.95	0	Pn	Pn	16 46 50.2	+0.3
	27nm,0.3s,baz=181,slow=15,SNR=93						
NVAR				Pg	Pb	16 46 55.0	-0.2
	43nm,0.3s,baz=177,slow=17,SNR=230						
NVAR				Lg	Lg	16 47 33.6	
	70nm,0.3s,baz=177,slow=20,SNR=12						
NVAR				LR	LR	16 48 09.9	
	comp=Z,164nm,19.6s,baz=200,slow=44						
NV11	Mina Array Sit	2.95	2	ePn	Pn	16 46 50.4	+0.4
BC3	Big Chuckawall	2.97	127	P	Pn	16 46 48.2	-2.0
	baz=309,SNR=14						
MONP2	Monument Peak	3.02	148	P	Pn	16 46 50.0	-0.9
	baz=330						
MONP2				Sb	Sb	16 47 35.1	+1.3
	baz=330						
CMB	Columbia Colle	3.05	327	ePn	Pn	16 46 52.2	+0.9
BAR	Barrett	3.10	154	ePn	Pn	16 46 51.8	-0.1
RYN	Ryan	3.15	357	ePn	Pn	16 46 53.4	+0.7
WAKR	Walker	3.15	344	ePn	Pn	16 46 54.2	+1.4
SWSC	Sam W. Stewart	3.27	140	P	Pn	16 46 52.6	-1.6
	baz=322						
IKP	In-Ko-Pah, Jac	3.36	147	P	Pn	16 46 54.0	-1.5
	baz=328						
IKP				Sb	Sb	16 47 45.1	+1.6
	baz=328						
Y12C	Blythe	3.56	118	ePn	Pn	16 46 56.0	-2.2
Y12C	Blythe	3.56	118	P	Pn	16 46 56.4	-1.8
	baz=300,SNR=13						
KVN	Kaiserville	3.57	3	ePn	Pn	16 46 59.1	+0.6
YERR	Yerington	3.58	348	ePn	Pn	16 46 59.6	+1.0
R11A	Troy Canyon, C	3.60	36	ePn	Pn	16 46 58.3	-0.6
R11A	Troy Canyon, C	3.60	36	P	Pn	16 46 57.9	-1.0
	baz=218						
PDMCI	Parker Dam,Lak	3.62	108	P	Pn	16 46 57.2	-1.7
	baz=290,SNR=35						
W13A	Hualapai Mount	3.63	95	ePn	Pn	16 46 58.0	-1.4
PNTR	Pine Nut	3.75	344	ePn	Pn	16 47 02.6	+1.6
GLA	Glamis	3.76	129	ePn	Pn	16 46 59.6	-1.4
GLA	Glamis	3.76	129	P	Pn	16 46 59.2	-1.8
	baz=311,SNR=7.3						
RUBR	Rubicon Trail	3.86	338	ePn	Pn	16 47 03.2	+0.7
VCNR	Virginia City	3.96	345	ePn	Pn	16 47 03.5	-0.3
AFDM	Forest Hills D	4.07	329	ePn	Pn	16 47 05.6	+0.4
PAHR	Pah Rah Range	4.31	349	ePn	Pn	16 47 08.8	+0.2
LCMT	Little Creek M	4.37	68	ePn	Pn	16 47 09.2	-0.2
CCUT	Cedar City	4.49	61	ePn	Pn	16 47 10.6	-0.5
MCCM	Marconi Confer	4.53	307	ePn	Pn	16 47 11.8	+0.2
Y14A	Wickenburg	4.63	108	ePn	Pn	16 47 11.1	-1.9
113A	Mohawk Valley,	4.63	124	ePn	Pn	16 47 10.7	-2.2
BEKR	Beckworth	4.67	340	ePn	Pn	16 47 12.8	-0.9
PSUT	Pine Spring	4.69	48	ePn	Pn	16 47 13.8	-0.1
KNB	Kanab	4.69	69	ePn	Pn	16 47 13.9	+0.1
SZCU	Shurtz Canyon	4.70	62	ePn	Pn	16 47 13.5	-0.6
ORV	Oroville	4.80	329	ePn	Pn	16 47 15.9	+0.8
GDXM	Geysers	4.89	314	ePn	Pn	16 47 16.6	0.0
U15A	North Rim	4.97	77	ePn	Pn	16 47 17.8	-0.1
BMN	Battle Mountai	5.02	9	ePn	Pn	16 47 18.5	+0.1
HOPS	Hopland Field	5.17	314	ePn	Pn	16 47 21.6	+1.3
PKCU	Pink Cliffs	5.21	66	ePn	Pn	16 47 20.8	-0.4
MTPU	Mount Pierson	5.54	61	ePn	Pn	16 47 25.9	+0.1
TCRU	Three Creeks R	5.63	55	ePg	Pg	16 47 47.7	-2.0
WUAZ	Wupatki	5.66	88	ePn	Pn	16 47 27.2	+0.1
WUAZ	Wupatki	5.66	88	P	Pn	16 47 27.1	-0.1
	baz=272						
X16A	Lo Mia Camp, P	5.74	99	ePn	Pn	16 47 27.2	-1.0
214A	Organ Pipe Nat	5.77	126	P	Pn	16 47 27.1	-1.5
	baz=309						
ELK	Elko	5.79	24	Pn	Pn	16 47 30.0	+1.0
	1.7nm,0.3s,baz=202,slow=9.3,SNR=44						
ELK				Pg	Pb	16 47 47.0	+3.3
	8.0nm,0.3s,baz=231,slow=13,SNR=25						
ELK				Lg	Lg	16 49 03.0	
	5.7nm,0.3s,baz=116,slow=16,SNR=7.3						
ELK	Elko	5.79	24	ePn	Pn	16 47 29.2	+0.2
KCPM	Cahto Peak	5.93	317	ePn	Pn	16 47 30.7	-0.2
WDC	Whiskeytown Da	6.09	328	ePn	Pn	16 47 34.2	+1.2
DUG	Dugway, Tooele	6.41	41	ePn	Pn	16 47 35.9	-1.6
DUG				ePg	Pg	16 48 01.2	-3.3
MOD	Modoc Plateau	6.60	347	ePn	Pn	16 47 38.5	-1.6
TMUT	Trail Mountain	6.81	54	ePn	Pn	16 47 42.1	-1.1
BGU	Big Grassy Mou	6.84	36	ePn	Pn	16 47 43.8	+0.3
TUC	Tucson	7.00	115	ePn	Pn	16 47 43.9	-1.7
TUC	Tucson	7.00	115	P	Pn	16 47 43.9	-1.7
	baz=299						
W18A	Petrified Fore	7.02	90	ePn	Pn	16 47 45.8	-0.1
YBH	Yreka Blue Hor	7.13	332	Lg	Lg	16 49 47.2	
	0.2nm,0.3s,baz=37,slow=7.3,SNR=3.9						
SRU	San Rafael Swe	7.18	57	ePn	Pn	16 47 45.2	-2.9
P17A	Butcher Ranch,	7.22	54	ePn	Pn	16 47 49.2	+0.6
SPUT	South Promonto	7.42	37	ePn	Pn	16 47 51.7	+0.4
JLU	Jordanelle	7.44	45	ePn	Pn	16 47 50.2	-1.5
HVU	Hansel Valley	7.63	33	ePn	Pn	16 47 52.7	-1.6
J08A	Circle Bar Ran	7.87	359	ePn	Pn	16 47 57.3	-0.1
PV09	Paradox Valley	7.93	65	ePn	Pn	16 47 58.5	-0.1
PV14	Lion Creek, Pa	7.97	66	ePn	Pn	16 47 58.8	-0.2
PV19	Morning Glory	7.99	67	ePn	Pn	16 47 59.7	+0.6
PV17	East Wray Mesa	7.99	67	ePn	Pn	16 47 59.8	+0.5
PV20	West Nyswonger	8.01	66	ePn	Pn	16 47 59.0	-0.5
PV23	Carpenter Ridg	8.01	66	ePn	Pn	16 48 00.6	+1.0
PV18	Skein Mesa, Pa	8.02	67	ePn	Pn	16 48 00.4	+0.7
PV04	Paradox Valley	8.07	66	ePn	Pn	16 48 01.8	+1.5
PV03	Paradox Valley	8.07	67	ePn	Pn	16 47 59.7	-0.7
PV12	Saucer Basin,	8.12	67	ePn	Pn	16 48 01.2	+0.1
PV22	Blue Mesa, Par	8.20	65	ePn	Pn	16 48 01.2	-1.0
LAZ	Ladron	9.23	93	ePn	Pn	16 48 18.1	+1.9
ANMO	Albuquerque	9.71	90	LR	LR	16 52 29.2	
	comp=Z,77nm,18.1s,baz=268,slow=40						
PD31	Pinedale Array	9.95	40	ePn	Pn	16 48 26.8	+0.7
PDAR	Pinedale Array	9.95	40	Pn	Pn	16 48 26.8	+0.7
	0.1nm,0.3s,baz=216,slow=13,SNR=2.2						
NEW	Newport	12.81	4	LR	LR	16 54 07.6	
	comp=Z,35nm,20.6s,baz=153,slow=38						
TXAR	Lajitas Array	13.79	112	Pn	Pn	16 49 19.9	+1.3
	0.3nm,0.3s,baz=291,slow=12,SNR=20						
ULM	Lac du Bonnet	21.98	41	P	P	16 50 58.1	+1.1
	1.5nm,0.3s,baz=230,slow=4.7,SNR=3.7						
Q54A	Coxs Mills	29.90	72	eP	P	16 52 16.4	+5.3
HHC	Hu-ho-hao-te	91.30	325	P	P	16 59 09.3	0.0
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,77nm,5.1s						
WMQ	Urumqi	97.60	341	eP	Pdif	16 59 39.4	+1.3
WMQ				LR	LR		
	comp=N,250nm,28.9s						
WMQ				LR	LR		
	comp=E,350nm,29.7s						
WMQ				LR	LR		
	comp=Z,30nm,29.1s						

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*NNC **24** 16:51:52.3±4.0, 36°.41N×52°.92E, h0^{km}, mb4.1, Error ellipse: s-maj=45.4km s-min=32.0km az=1.0*
*TEH **24** 16:51:53.8, 35°.99N×53°.54E, h7^{km}, ML4.2*
*ISCJB **24** 16:51:54.6±0.2, 36°.11N±0°.02×53°.48E±0°.02, h10^{km}, mb4.0/25, MS3.0/3, Error ellipse: s-maj=2.3km s-min=2.1km az=23.6*
*IDC **24** 16:51:54.1±1.0, 35°.87N×53°.59E, h0^{km}, mb3.8/13, mb1 4.0/21, mb1mx3.8/52, mbtmp3.9/21, ML3.5/6, MS3.1/8, Ms1 3.1/8, ms1mx2.8/39, Error ellipse: s-maj=19.2km s-min=10.9km az=175.0*
*THR **24** 16:51:55.2, 36°.07N×53°.47E, h18^{km}, ML4.3*
*MOS **24** 16:51:57.7±1.5, 36°.25N×53°.56E, h25^{km}, mb4.3/14, Error ellipse: s-maj=6.9km s-min=5.3km az=111.6*
*NEIC **24** 16:51:57.8±2.0, 36°.03N×53°.60E, h20^{km}±16^{km}, mb4.1/14, ML4.3(THR), MN4.2(TEH), Error ellipse: s-maj=9.7km s-min=4.4km az=183.0*
*AZER **24** 16:52:01.0±1.8, 36°.14N×53°.00E, h10^{km}, ml4.2/5, Error ellipse: s-maj=30.8km s-min=13.9km az=54.0*
ISC 24 16:51:55.1±0.4**, 36°.05N**±0°.03×**53°.52E**±0°.03**, h10^{km}, n214, σ2^{s}.08**/246**, mb4.0**/25**, MS3.0**/3**, 5C-6D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHM	Shahmirzad	0.30	217	ePg	Pg	16 51 59.5	-1.8
ISHM				eSg	Sb	16 52 05.3	-2.6
IGLO	Ghaloghah	0.52	29	IAMB	IAmb	16 52 18.6	
	comp=Z,38μm,1.0s						
IGLO				ePg	Pg	16 52 04.6	-0.7
IALA	Alasht	0.58	274	IAMB	IAmb	16 52 15.0	
	comp=Z,16μm,0.8s						
IALA				ePg	Pg	16 52 04.9	-1.4
IANJ	Anjilo	0.66	151	IAMB	IAmb	16 52 20.6	
	comp=Z,11μm,0.7s						
IANJ				ePg	Pg	16 52 05.4	-2.6
IFIR	Firoozkooh	0.74	237	IAMB	IAmb	16 52 19.1	
	comp=Z,10μm,0.3s						
IFIR				ePg	Pg	16 52 07.4	-2.1
ILAS	Lasjerd	0.81	215	IAMB	IAmb	16 52 22.4	
	comp=Z,9μm,0.3s						
ILAS				ePg	Pb	16 52 09.2	-2.1
IDMV	Damavand	1.30	249	ePg	Pn	16 52 17.5	-2.0
IDMV				IAMB	IAmb	16 52 46.8	
	comp=Z,51μm,0.4s						
TEH	Tehran	1.76	260	ePn	Pb	16 52 26.7	-0.9
IVRN	Varamin	1.80	235	ePn	Pb	16 52 26.8	-1.4
IHSB	Hasanabad	1.92	252	ePn	Pb	16 52 28.8	-1.5
IHSB				IAMB	IAmb	16 53 00.7	
	comp=Z,0.0nm,0.4s						
IMND	Minoodasht	1.94	51	ePn	Pb	16 52 29.1	-1.4
CHTH	Charan	1.95	267	ePn	Pb	16 52 29.0	-1.8
CHTH	Charan	1.95	267	Pn	Pb	16 52 29.0	-1.8
THKV	Tehran--Karaj	2.15	267	ePn	Pb	16 52 31.8	-2.4
THKV	Tehran--Karaj	2.15	267	AML	AML	16 53 10.0	
	comp=N,2μm,0.5s						
THKV				AML	AML	16 53 14.4	
	comp=E,2μm,0.4s						
THKV	Tehran--Karaj	2.15	267	Pn	Pb	16 52 31.8	-2.4
IMHD	Mahdasht	2.34	262	ePn	Pb	16 52 35.7	-1.8
QALM	Alamut, Qazvin	2.35	280	ePn	Pb	16 52 36.4	-1.3
KRSH	Karshahi	2.36	209	ePn	Pn	16 52 33.8	-0.3
KRSH				IAMB	IAmb	16 53 12.0	
	comp=Z,0.0nm,0.4s						
GHVR	GHOM	2.40	230	ePn	Pb	16 52 36.1	-2.3
GHVR	GHOM	2.40	230	AML	AML	16 53 17.7	
	comp=N,2μm,0.4s						
GHVR	GHOM	2.40	230	Pn	Pb	16 52 36.1	-2.3
GHVR				Sg	Sg	16 53 11.0	-1.2
MRVT	Maraveh tapeh	2.62	51	ePn	Pb	16 52 39.0	-3.1
MRVT	Maraveh tapeh	2.62	51	P	Pb	16 52 39.0	-3.1
IGZV	Ghazvin	2.69	278	ePn	Pb	16 52 40.4	-3.1
IGZV				IAMB	IAmb	16 53 23.0	
	comp=Z,8μm,0.6s						
ANAR	Anarak	2.86	176	ePn	Pn	16 52 40.8	-0.1
ANAR				IAMB	IAmb	16 53 35.8	
	comp=Z,0.0nm,0.8s						
IRAZ	Razeghan	2.99	259	ePn	Pn	16 52 44.3	+1.5
IRAZ				IAMB	IAmb	16 53 40.4	
	comp=Z,13μm,0.6s						
IKLH	Kolahrood	3.16	211	ePn	Pn	16 52 45.1	0.0
IKLH				IAMB	IAmb	16 52 55.6	
	comp=Z,10μm,0.4s						
QABG	Abgarm-Qazvin	3.21	265	ePn	Pn	16 52 47.7	+1.8
ASAO	Ashtian	3.23	243	ePn	Pn	16 52 47.0	+1.0
ASAO	Ashtian	3.23	243	Pn	Pn	16 52 47.0	+1.0
NASN	Na'in	3.29	190	ePn	Pb	16 52 48.4	-5.4
NASN	Na'in	3.29	190	P	Pb	16 52 48.4	-5.4
IZEF	Zefreh	3.29	198	ePn	Pn	16 52 46.2	-0.8
SBZV	Sabzevar	3.33	83	ePn	Pn	16 52 48.7	+1.3
ISFR	Sfrayin	3.75	73	ePn	Pn	16 52 55.2	+2.0
HAGD	Aghdareh	3.78	252	ePn	Pn	16 52 56.0	+2.4
HAGD				IAMB	IAmb	16 53 06.5	
	comp=Z,0.0nm,0.6s						
TKDS	Koohdasht(Taba	3.83	128	ePn	Pn	16 52 54.4	+0.1
IGAR	Gharneh	3.83	199	ePn	Pn	16 52 54.9	+0.5
IGAR				IAMB	IAmb	16 53 06.5	
	comp=Z,2μm,0.6s						
IPIR	Pirpir	4.00	214	ePn	Pn	16 52 58.6	+1.9
IKRD	Kardeh	4.09	78	ePn	Pg	16 53 10.5	-3.0
ISAD	Sadrabad	4.13	178	ePn	Pn	16 52 58.3	-0.2
ISAD				IAMB	IAmb	16 54 11.0	
	comp=Z,6μm,0.9s						
GEYT	Alibeck	4.13	62	Pn	Pn	16 53 00.2	+1.9
	comp=Z,5.8nm,0.3s,baz=251,slow=12,SNR=92						
GEYT				Sn	Sn	16 53 48.6	+1.9
	baz=277,slow=19,SNR=1.9						
GEYT				Lg	Lg	16 54 08.1	
	comp=Z,1.8nm,0.3s,baz=253,slow=34,SNR=2.4						
GYA0	ALIBECK ARRAY	4.13	62	P	Pn	16 52 59.2	+0.9
GYA0B	ALIBECK ARRAY	4.13	62	ePn	Pn	16 53 00.7	+2.4
GYA0B	ALIBECK ARRAY	4.13	62	S	Sb	16 53 54.8	-3.1
ROKH	ROKH	4.23	210	ePn	Pn	16 53 01.6	+1.8
IAKL	Akhelmad	4.26	81	ePn	Pn	16 53 01.6	+1.2
IRAM	Ramesheh	4.33	193	ePn	Pn	16 53 01.3	+0.1
HSRG	Sareghieh	4.34	261	ePn	Pn	16 53 02.8	+1.4
IEMG	Emamgholi	4.34	70	ePn	Pn	16 53 02.9	+1.5
IEMG				IAMB	IAmb	16 54 26.6	
	comp=Z,2μm,0.8s						
HSAM	Samen	4.43	247	ePn	Pn	16 53 05.2	+2.6
IPAY	Payeh	4.45	83	ePn	Pn	16 53 04.1	+1.3
JHBN	Jahan bin	4.48	213	ePn	Pn	16 53 05.2	+1.8
ZNGN	Zangian	4.50	210	ePn	Pn	16 53 04.9	+1.3
ASTR	Astara	4.53	305	Pn	Pn	16 53 03.1	-0.6
	SNR=21						
ASTR				Sn	Sn	16 53 55.2	-1.2
ASTR	Astara	4.53	305	P	Pn	16 53 03.1	-0.6
	SNR=21						
ASTR				S	Sn	16 53 55.2	-1.2
LKRN	Lenkeran, Azer	4.62	307	P	Pn	16 53 03.1	-1.7
LKRN	Lenkeran, Azer	4.62	307	Pn	Pn	16 53 03.2	-1.7
	SNR=4.3						
LKRN				Sn	Sn	16 53 57.6	-0.9
LKRN	Lenkeran, Azer	4.62	307	P	Pn	16 53 03.2	-1.7
	SNR=4.3						
LKRN				S	Sn	16 53 57.6	-0.9
IMEH	Mehriz	4.73	169	IAMB	IAmb	16 53 09.4	
	comp=Z,2μm,0.4s						
IMEH				ePn	Pn	16 53 07.2	+0.4
IBAF	Bafgh	4.76	158	ePn	Pn	16 53 07.7	+0.6
IBAF				IAMB	IAmb	16 54 44.3	
	comp=Z,3μm,0.8s						
LRK	Lerik	4.87	304	Pn	Pn	16 53 08.6	0.0
	SNR=24						
LRK				Sn	Sn	16 54 03.2	-1.9
LRK	Lerik	4.87	304	P	Pn	16 53 08.6	0.0
	SNR=24						
LRK				S	Sn	16 54 03.2	-1.9
IKMR	Kamar-syah	4.92	241	ePn	Pn	16 53 11.8	+2.7
IDOB	Doab	4.93	244	ePn	Pn	16 53 12.1	+2.6
GLBA	Clilabad	5.17	310	Pn	Pn	16 53 12.7	+0.2
	SNR=10						
GLBA				Sn	Sn	16 54 12.4	+0.2
GLBA	Clilabad	5.17	310	P	Pn	16 53 12.7	+0.2
	SNR=10						
GLBA				S	Sn	16 54 12.4	+0.2
IKOM	Komasi	5.27	251	ePn	Pn	16 53 16.5	+2.5
ALIB	Äli-Bayra	5.29	319	Pn	Pn	16 53 14.1	0.0
	SNR=6.9						
ALIB				Sn	Sn	16 54 16.1	+1.0
ALIB	Äli-Bayra	5.29	319	P	Pn	16 53 14.1	0.0
	SNR=6.9						
ALIB				S	Sn	16 54 16.1	+1.0
IKFM	Kafar-mosalman	5.30	243	ePn	Pn	16 53 16.4	+2.1
IMYA	Miami	5.33	85	ePn	Pn	16 53 17.2	+2.3
IHSH	Hashtrud	5.48	296	ePn	Pn	16 53 15.4	-1.7
IHRS	Heris	5.65	296	ePn	Pn	16 53 20.9	+1.6
GBS	Qobustan	5.75	323	Pn	Pn	16 53 23.7	+3.2
	SNR=3.2						
GBS				Sn	Sn	16 54 27.1	+0.5
GBS	Qobustan	5.75	323	P	Pn	16 53 23.7	+3.2
	SNR=3.2						
GBS				S	Sn	16 54 27.1	+0.5
IDHR	Dehrash	5.98	259	ePn	Pn	16 53 25.4	+1.5
ATGJ	Altiaghaj	6.00	325	Pn	Pn	16 53 25.3	+1.2
	SNR=4.8						
ATGJ				Sn	Sn	16 54 32.7	-0.2
ATGJ	Altiaghaj	6.00	325	P	Pn	16 53 25.3	+1.2
	SNR=4.8						
ATGJ				S	Sn	16 54 32.7	-0.2
PQL	Pirkuli	6.11	322	Pn	Pn	16 53 26.7	+1.1
	SNR=15						
PQL				Sn	Sn	16 54 36.3	+0.7
PQL	Pirkuli	6.11	322	P	Pn	16 53 26.7	+1.1
	SNR=15						
PQL				S	Sn	16 54 36.3	+0.7
SIZA	Siyzn	6.19	326	Pn	Pn	16 53 29.3	+2.7
	SNR=5.4						
SIZA				Sn	Sn	16 54 38.2	+0.7
SIZA	Siyzn	6.19	326	P	Pn	16 53 29.3	+2.7
	SNR=5.4						
SIZA				S	Sn	16 54 38.2	+0.7
IPAR	Pars	6.20	184	ePn	Pn	16 53 28.4	+1.4
IAZR	Azarshahr	6.26	287	ePn	Pn	16 53 30.0	+2.3
IKAZ	Kazeroun	6.41	193	ePn	Pn	16 53 30.6	+0.7
QUBA	Quba, Azerbaij	6.60	325	Pn	Pn	16 53 33.9	+1.7
	SNR=4.3						
QUBA				Sn	Sn	16 54 46.0	-1.4
QUBA	Quba, Azerbaij	6.60	325	P	Pn	16 53 33.9	+1.7
	SNR=4.3						
QUBA				S	Sn	16 54 46.0	-1.4
QBL	Gabala	6.62	319	Pn	Pn	16 53 33.6	+1.2
	SNR=4.5						
QBL				Sn	Sn	16 54 44.8	-3.1
QBL	Gabala	6.62	319	P	Pn	16 53 33.6	+1.2
	SNR=4.5						
QBL				S	Sn	16 54 44.8	-3.1
XNQ	Khinaliq	6.63	322	Pn	Pn	16 53 34.6	+1.9
	SNR=8.1						
XNQ				Sn	Sn	16 54 47.0	-1.4
XNQ	Khinaliq	6.63	322	P	Pn	16 53 34.6	+1.9
	SNR=8.1						
XNQ				S	Sn	16 54 47.0	-1.4
ISHB	Shabestar	6.69	292	ePn	Pn	16 53 36.7	+3.0

IMRD	Marand	6.77	295	ePn	Pn	16 53 37.8	+3.2
QSAR	Qusar	6.83	325	Pn	Pn	16 53 36.7	+1.4
	SNR=3.8						
QSAR				Sn	Sn	16 54 51.6	-1.5
QSAR	Qusar	6.83	325	P	Pn	16 53 36.7	+1.4
	SNR=3.8						
QSAR				S	Sn	16 54 51.6	-1.5
AKT	Akhty	7.06	322	eP	Pn	16 53 40.1	+1.5
AKT				eS	Sn	16 54 57.5	-1.5
AKT				pmax	pmax		
	comp=Z,16nm,0.4s						
AKT				smax	smax		
	comp=E,69nm,0.4s						
AKT				smax	smax		
	comp=N,75nm,0.5s						
AKT				smax	smax		
	comp=N,61nm,0.4s						
SEKA	Sheki	7.14	318	P	Pn	16 53 41.0	+1.4
SEKA	Sheki	7.14	318	Pn	Pn	16 53 41.1	+1.4
	SNR=3.4						
SEKA				Sn	Sn	16 54 58.2	-2.7
SEKA				Sn	Sn	16 54 58.2	-2.7
SEKA	Sheki	7.14	318	P	Pn	16 53 41.1	+1.4
	SNR=3.4						
SEKA				S	Sn	16 54 58.2	-2.7
SEKA				S	Sn	16 54 58.2	-2.7
GANJ	Ganja	7.28	311	P	Pn	16 53 42.0	+0.4
GANJ	Ganja	7.28	311	Pn	Pn	16 53 42.0	+0.4
	SNR=5.9						
GANJ				Sn	Sn	16 55 01.1	-3.2
GANJ	Ganja	7.28	311	P	Pn	16 53 42.0	+0.4
	SNR=5.9						
GANJ				S	Sn	16 55 01.1	-3.2
GDB	GEDABAY	7.68	310	Pn	Pn	16 53 48.0	+0.9
	SNR=16						
GDB				Sn	Sn	16 55 09.7	-4.4
GDB	GEDABAY	7.68	310	P	Pn	16 53 48.0	+0.9
	SNR=16						
GDB				S	Sn	16 55 09.7	-4.4
ZKTA	Zakatala	7.75	318	P	Pn	16 53 49.7	+1.8
ZKTA	Zakatala	7.75	318	Pn	Pn	16 53 49.8	+1.8
	SNR=5.2						
ZKTA				Sn	Sn	16 55 13.6	-2.2
ZKTA	Zakatala	7.75	318	P	Pn	16 53 49.8	+1.8
	SNR=5.2						
ZKTA				S	Sn	16 55 13.6	-2.2
DDFL	Dedoflistskaro	7.90	315	P	Pn	16 53 48.8	-1.4
GNI	Garni	8.04	303	Pn	Pn	16 53 57.1	+5.0
	comp=N,1.8nm,0.3s,baz=194,slow=18,SNR=4.5						
GNI				Sn	Sn	16 55 29.5	+6.4
	comp=N,0.8nm,0.3s,baz=9.5,slow=18,SNR=1.6						
GNI				LR	LR	16 58 05.1	
	comp=N,62nm,20.0s,baz=108,slow=45						
GNI	Garni	8.04	303	ePn	Pn	16 53 55.4	+3.3
GNI				Sn	Sn	16 55 29.6	+6.4
GNI	Garni	8.04	303	eP	Pn	16 53 55.4	+3.3
GNI						16 55 29.6	
LGD	Lagodekhi	8.09	318	P	Pn	16 53 54.0	+1.4
QZX	Qazax, Azerbai	8.11	311	Pn	Pn	16 53 53.7	+0.8
	SNR=5.2						
QZX				Sn	Sn	16 55 21.6	-3.0
QZX	Qazax, Azerbai	8.11	311	P	Pn	16 53 53.7	+0.8
	SNR=5.2						
QZX				S	Sn	16 55 21.6	-3.0
GROC	Groznyy	9.30	323	eP	Pn	16 54 11.6	+2.4
GROC				eS	Sn	16 55 55.8	+2.0
GROC				pmax	pmax		
	comp=Z,13nm,0.5s						
ONI	Oni	10.17	313	P	Pn	16 54 22.3	+1.2
KBZ	Khabaz	11.19	316	Pn	Pn	16 54 38.7	+3.6
	comp=Z,0.2nm,0.3s,baz=143,slow=3.7,SNR=3.0						
KBZ				Sn	Sn	16 56 41.9	+1.7
	comp=Z,0.4nm,0.3s,baz=312,slow=14,SNR=3.2						
KVAR	Kislovodsk Arr	11.45	317	Sn	Sn	16 56 47.2	+0.4
	baz=27,slow=4.5,SNR=3.0						
KIV	Kislovodsk	11.45	317	eSn	Sn	16 56 47.1	+0.4
KIV	Kislovodsk	11.45	317	eP	Pn	16 54 39.8	+1.0
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,26nm,10.0s						
WSAR	Wadi Sarin	13.51	159	LR	LR	17 00 04.4	
	comp=Z,46nm,18.5s,baz=12,slow=37						
GAR	Garm	13.65	73	ePn	Pn	16 55 08.4	-0.5
GAR	Garm	13.65	73	eP	Pn	16 55 08.4	-0.5
AB31	Akbulak array	14.01	18	⇑P	Pn	16 55 12.5	-1.1
	comp=Z,1.7nm,0.5s,baz=205,slow=13,SNR=15						
AB31				⇓S	Sn	16 57 43.1	-6.0
	comp=Z,1.9nm,0.6s,baz=203,slow=23,SNR=3.5						
AB31	Akbulak array	14.01	18	P	Pn	16 55 12.5	-1.1
AB31				S	Sn	16 57 43.1	-6.0
ABKAR	Akbulak array	14.01	18	ePn	Pn	16 55 13.4	-0.2
BTK	Batken	14.21	68	ePn	Pn	16 55 15.5	-0.9
RAYN	Ar Rayn	14.28	211	ePn	Pn	16 55 13.0	-4.5
RAYN	Ar Rayn	14.28	211	eP	Pn	16 55 13.0	-4.5
ASF	Jabal al Asfar	14.30	259	Pn	Pn	16 55 19.8	+2.0
	comp=Z,0.1nm,0.3s,baz=169,slow=6.9,SNR=4.3						
AKTO	Aktyubinsk	14.74	11	Pn	Pn	16 55 22.2	-1.4
	comp=Z,0.4nm,0.3s,baz=198,slow=13,SNR=9.0						
AKTO				Sn	Sn	16 58 02.2	-4.7
	comp=Z,0.2nm,0.3s,baz=86,slow=16,SNR=3.6						
AKTO	Aktyubinsk	14.74	11	⇓S	Sn	16 57 59.8	-7.2
	comp=Z,3.3nm,0.7s						
KK31	Karatay Array	14.87	57	ePn	Pn	16 55 24.6	-0.7
KK31	Karatay Array	14.87	57	⇑P	Pn	16 55 23.6	-1.7
	comp=Z,3.5nm,0.8s,baz=243,slow=17,SNR=21						
KK31	Karatay Array	14.87	57	eP	Pn	16 55 24.6	-0.7
KKAR	Karatay Array	14.87	57	ePn	Pn	16 55 24.6	-0.7
KKAR	Karatay Array	14.87	57	eP	Pn	16 55 24.6	-0.7
ANN	Anapa	15.03	310	eP	Pn	16 55 23.9	-3.5
ANN				eS	Sn	16 58 08.5	-5.4
ANN				pmax	pmax		
	comp=Z,72nm,0.9s						
MMAI	Mount Meron Ar	15.23	264	LR	LR	17 02 11.6	
	comp=Z,126nm,18.3s,baz=55,slow=40						
ARSB	Arslanbob	16.08	65	ePn	Pn	16 55 40.4	-1.0
	comp=Z,16nm,1.0s						
BR101	Keskin Array S	16.12	289	eP	P	16 55 45.7	+0.6
BR131	Keskin Array S	16.12	289	ePn	P	16 55 42.7	-2.4
	comp=Z,5.4nm,1.3s						
BRTR	Keskin Array B	16.12	289	Pn	P	16 55 45.7	+0.6
	comp=Z,0.1nm,0.3s,baz=105,slow=12,SNR=11						
BRTR				LR	LR	17 02 57.6	
	comp=Z,46nm,18.9s,baz=94,slow=41						
EIL	Elat	16.84	253	Pn	P	16 55 52.0	-1.0
	baz=72,slow=4.4,SNR=3.3						
AAK	Ala-Archa	17.49	62	P	P	16 55 59.4	-1.0
	comp=Z,0.6nm,0.3s,baz=213,slow=7.0,SNR=7.8						
AAK				LR	LR	17 04 13.5	
	comp=Z,37nm,20.0s,baz=249,slow=42						
AAK	Ala-Archa	17.49	62	eP	P	16 55 59.4	-1.0
	comp=Z,7.5nm,0.9s						
AAK	Ala-Archa	17.49	62	⇓eP	P	16 55 59.3	-1.0
AAK				pmax	pmax		
	comp=Z,18nm,1.7s						
NRN	Naryn	18.32	66	eP	P	16 56 09.4	-0.4
	comp=Z,7.2nm,0.8s						
NRN	Naryn	18.32	66	eP	P	16 56 09.4	-0.4
NRN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VSR	Storozhevoye	18.33	330	eP	Pn	16 56 07.5	-1.8
VSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KDJ	Kajisay	19.32	64	eP	Pn	16 56 23.7	+2.2
	comp=Z,4.7nm,0.8s						
KDJ	Kajisay	19.32	64	eP	Pn	16 56 23.7	+2.2
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LPSR	Galich'ya Gora	19.50	333	eP	P	16 56 21.1	-1.1
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
PRZ	Przheval'sk	20.27	64	eP	Pn	16 56 33.8	+0.9
	comp=Z,24nm,1.4s						
PRZ	Przheval'sk	20.27	64	eP	Pn	16 56 33.8	+0.9
PRZ				pmax	pmax		
	comp=Z,24nm,1.4s						
ARU	Arti	20.67	8	P	Pn	16 56 37.3	+0.1
	comp=Z,2.5nm,0.5s,baz=194,slow=7.0,SNR=11						
ARU				LR	LR	17 06 16.5	
	comp=Z,74nm,20.4s,baz=182,slow=41						
ARU	Arti	20.67	8	eP	Pn	16 56 37.2	0.0
	comp=Z,13nm,1.0s						
ARU	Arti	20.67	8	c iP	Pn	16 56 38.4	+1.2
ARU						16 56 55.3	
ARU				SS	Sn	17 00 52.8	+23
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	Borovoye	20.70	30	eP	Pn	16 56 36.8	-0.8
BRVK	Borovoye	20.70	30	d iP	Pn	16 56 37.2	-0.3
BRVK				pmax	pmax		
	comp=Z,16nm,1.3s						
BVAR	Borovoye Array	20.71	30	P	Pn	16 56 36.7	-1.0
	comp=Z,5.5nm,0.7s,baz=217,slow=9.3,SNR=30						
SVE	Sverdlovsk	21.33	11	eP	P	16 56 44.8	+2.8
KIS	Kishinev	21.40	308	eP	P	16 56 42.0	-0.8
KIS	Kishinev	21.40	308	eP	P	16 56 42.0	-0.8
KIS				e		16 56 54.0	
OBN	Obninsk	22.35	334	⇓eP	P	16 56 54.4	+1.5
OBN				pmax	pmax		
	comp=Z,35nm,2.1s						
KIRV	Kirov	22.71	354	LR	LR	17 08 40.0	
	comp=Z,56nm,18.1s,baz=185,slow=44						
AKASG	Malin Array Be	22.80	318	P	P	16 57 00.0	+2.2
	comp=Z,1.1nm,0.5s,baz=123,slow=11,SNR=6.1						
AKBB	Malin Array Si	22.80	318	eP	P	16 56 59.8	+2.0
	comp=Z,5.7nm,1.0s						
AKBB	Malin Array Si	22.80	318	eP	P	16 56 59.8	+2.0
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MLR	Muntele Rosu	22.82	303	P	P	16 57 01.2	+3.0
	comp=Z,3.8nm,0.8s,baz=179,slow=1.4,SNR=4.9						
KURBB	Kurchatov Arra	23.16	43	P	P	16 57 03.2	+1.7
	comp=Z,2.5nm,1.0s,baz=244,slow=10,SNR=11						
KURK	Kurchatov	23.25	43	eP	P	16 57 03.4	+0.9
	comp=Z,13nm,1.1s						
KURK	Kurchatov	23.25	43	eP	P	16 57 03.4	+0.9
KURK				pmax	pmax		
	comp=Z,13nm,1.1s						
MAKZ	Makanchi	23.77	54	eP	P	16 57 09.1	+1.4
	comp=Z,9.0nm,1.4s						
MAKZ	Makanchi	23.77	54	eP	P	16 57 09.1	+1.4
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MK31	Makanchi Array	23.97	54	eP	P	16 57 10.0	+0.4
	comp=Z,3.4nm,0.9s						
MK31	Makanchi Array	23.97	54	P	P	16 57 10.8	+1.2
	comp=Z,5.5nm,1.0s,baz=166,slow=7.0,SNR=22						
MK31	Makanchi Array	23.97	54	eP	P	16 57 10.0	+0.4
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK32	Makanchi Array	23.97	54	eP	P	16 57 10.4	+0.8
MKAR	Makanchi Array	23.97	54	P	P	16 57 10.4	+0.8
	comp=Z,2.7nm,0.8s,baz=246,slow=6.8,SNR=22						
MKAR				LR	LR	17 07 03.4	
	comp=Z,45nm,19.6s,baz=261,slow=38						
PRGR	Permogore	26.09	351	eP	P	16 57 29.8	+1.2
PRGR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KLMR	Klimovskoe	26.39	345	eP	P	16 57 31.9	+0.6
KLMR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAA0	Zalesovo Array	28.13	41	eP	P	16 57 48.7	+1.6
	comp=Z,2.8nm,1.0s						
ZALV	Zalesovo Beam	28.13	41	P	P	16 57 48.5	+1.4
	comp=Z,1.5nm,0.8s,baz=270,slow=8.9,SNR=5.8						
ZALV	Zalesovo Beam	28.13	41	i P	P	16 57 48.9	+1.8
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAA1	Zalesovo Array	28.13	41	eP	P	16 57 48.5	+1.3
VYHS	Vyhne	28.27	307	eP	P	16 57 50.9	+2.5
VYHS	Vyhne	28.27	307	eP	P	16 57 50.9	+2.5
VSU	Vasula	28.52	330	d eP	P	16 57 54.7	+4.3
VSU				pmax	pmax		
	comp=Z,23nm,1.3s						
FIA0	FINESS Array S	30.75	334	eP	P	16 58 12.9	+2.7
FIA0	FINESS Array S	30.75	334	eP	P	16 58 12.9	+2.7
FINES	FINESS Array B	30.75	334	P	P	16 58 12.9	+2.7
	comp=Z,0.8nm,0.7s,baz=123,slow=10,SNR=3.0						
GEC2	GERESS Array S	31.68	306	eP	P	16 58 20.7	+2.0
	comp=Z,10nm,1.9s						
GEC2	GERESS Array S	31.68	306	eP	P	16 58 20.7	+2.0
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
GERES	GERESS Array B	31.68	306	P	P	16 58 20.7	+2.0
	comp=Z,0.4nm,0.6s,baz=90,slow=9.8,SNR=3.9						
GTA	Gaotai	36.46	70	eP	P	16 59 03.8	+3.4
GTA				pP	sP	16 59 10.0	+4.4
GTA				sP	pP	16 59 12.8	+8.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
NB200	NORSAR Array S	36.53	327	eP	P	16 59 01.4	+0.9
NOA	NORSAR Array B	36.53	327	P	P	16 59 01.4	+0.9
	comp=Z,0.4nm,0.8s,baz=114,slow=8.2,SNR=2.1						
TLY	Talaya	38.56	50	⇑eP	P	16 59 19.2	+1.4
CM31	Chiang Mai Arr	43.59	101	eP	P	16 59 59.2	-0.4
	comp=Z,30nm,1.8s						
CMAR	Chiang Mai Arr	43.59	101	P	P	16 59 59.2	-0.4
	comp=Z,2.5nm,0.8s,baz=300,slow=7.9,SNR=13						
CMAR	Chiang Mai Arr	43.59	101	c eP	P	17 00 00.8	+1.2
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN	Xi'an	44.88	76	P	P	17 00 12.6	+2.7
XAN				pP	sP	17 00 26.8	+12
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,85nm,6.2s						
WHN	Wuhan	50.43	78	eP	P	17 00 58.3	+5.4
TOA1	Torodi Ar. Sit	51.66	258	eP	P	17 01 02.6	+0.3
TORD	Torodi Ar. Bea	51.66	258	P	P	17 01 02.6	+0.3
	comp=Z,0.5nm,0.7s,baz=67,slow=8.0,SNR=2.6						
KS15	Wonju Array Si	58.09	65	eP	P	17 01 49.4	+0.7
	comp=Z,114nm,1.9s						
KSAR	Wonju Array Be	58.09	65	P	P	17 01 49.4	+0.7
KSAR	Wonju Array Be	58.09	65	P	P	17 01 49.4	+0.7
KSRS	Korea Array	58.12	65	P	P	17 01 49.4	+0.5
	comp=Z,2.5nm,0.8s,baz=277,slow=6.7,SNR=6.3						
BILL	Bilibino	64.85	23	eP	P	17 02 36.6	+2.7
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ERM	Erimo	66.77	54	eP	P	17 02 48.7	+2.1

IDC ***24*** *16:54:14.9±2.3, 18°.99S×178°.06W, h434km±26km, mb3.9/23, mb1 4.0/24, mb1mx3.9/34, mbtmp4.7/24, Error ellipse: s-maj=16.1km s-min=10.7km az=144.0*

ISCJB ***24*** *16:54:15.8±0.2, 18°.97S±0°.06×178°.13W±0°.05, h450km, mb4.2/87, Error ellipse: s-maj=8.5km s-min=5.3km az=143.9*

NEIC ***24*** *16:54:17.2±0.7, 18°.95S×178°.08W, h455km±8km, mb4.3/69, Error ellipse: s-maj=8.1km s-min=5.2km az=158.0*

ISC 24 16:54:16.7±0.4**, 18°.94S**±0°.08×**178°.05W**±0°.08**, h450**km**, n156,** $\sigma 0^{s}.94$/162**, mb4.3**/87**, 4C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.69	92	eP	P	16 56 07.9	-0.9
RAO	Raoul Island	10.26	179	eP	P	16 56 37.6	+1.0
MARNC	Mare, Loyalty	13.31	257	eP	P	16 57 10.9	+1.1
PINNC	Pines Island,	14.04	252	eP	P	16 57 19.5	+1.9
DZM	Mont Dzumac	14.85	255	P	P	16 57 22.9	-3.5
	0.1nm,0.3s,baz=112,slow=19,SNR=2.5						
DZM	Mont Dzumac	14.85	255	eP	P	16 57 27.7	+1.2
OUZ	Omahuta	17.82	203	eP	P	16 58 00.5	+3.0
	79nm,1.3s						
URZ	Urewera	19.70	191	P	P	16 58 12.9	-2.3
	3.2nm,0.3s,baz=270,slow=3.9,SNR=18						
URZ	Urewera	19.70	191	eP	P	16 58 12.6	-2.6
	104nm,1.8s						
BKZ	Black Stump Fm	20.70	192	eP	P	16 58 21.8	-2.5
	54nm,1.6s						
HNR	Honiara	23.30	291	P	P	16 58 45.5	-2.7
	41nm,0.7s,baz=166,slow=8.3,SNR=2.5						
RPZ	Rata Peaks	26.34	198	P	P	16 59 13.6	-1.3
	7.3nm,0.5s,baz=22,slow=6.0,SNR=6.8						
TOO	Toolangi	36.79	232	eP	P	17 00 45.8	+0.9
	12nm,0.8s						
MANU	Manus Island	37.79	292	eP	P	17 00 54.5	+1.1
	44nm,0.7s						
STKA	Stephens Creek	38.44	242	P	P	17 00 58.1	-0.3
	2.5nm,0.4s,baz=82,slow=9.3,SNR=16						
STKA	Stephens Creek	38.44	242	eP	P	17 00 58.1	-0.3
	6.0nm,1.8s						
WR1	Warramunga Arr	44.78	261	eP	P	17 01 48.1	-1.1
WRA	Warramunga Arr	44.79	261	P	P	17 01 48.1	-1.1
	3.5nm,0.3s,baz=88,slow=7.4,SNR=130						
AS31	Alice Springs	44.84	255	eP	P	17 01 49.8	+0.2
	7.1nm,0.6s						
AS31				eS	S	17 07 52.2	-1.3
ASAR	Alice Springs	44.84	255	P	P	17 01 50.0	+0.4
	23nm,0.4s,baz=89,slow=8.9,SNR=874						
ASAR				S	S	17 07 52.2	-1.3
	1.0nm,0.8s,baz=89,slow=16,SNR=5.8						
CASY	Casey	65.34	205	eP	P	17 04 13.0	+0.1
	8.8nm,1.0s						
MJAR	Matsushiro Arr	68.94	323	P	P	17 04 35.0	-0.5
	4.2nm,0.5s,baz=161,slow=5.9,SNR=14						
MAJO	Matsushiro	68.94	323	eP	P	17 04 35.5	0.0
	7.4nm,0.6s						
MAT	Matsushiro	68.94	323	P	P	17 04 34.9	-0.7
QSPA	South Pole Qui	71.12	180	eP	P	17 04 48.9	+0.6
	8.0nm,0.8s						
JNU	Nakatsue	71.12	316	P	P	17 04 50.0	+1.2
	2.9nm,0.6s,baz=335,slow=0.5,SNR=5.1						
JNU	Nakatsue	71.12	316	eP	P	17 04 50.0	+1.2
	115nm,1.9s						
ASAJ	Asahikawa	72.34	331	P	P	17 04 56.3	+0.7
	8.1nm,0.8s,baz=237,slow=6.2,SNR=6.3						
PETK	Petropavlovsk-	74.76	345	P	P	17 05 08.6	-0.7
	11nm,0.7s,baz=125,slow=8.1,SNR=27						
PEA1	Petropavlovsk-	74.77	345	eP	P	17 05 08.6	-0.7
KSRS	Korea Array	75.69	318	P	P	17 05 15.4	+0.6
	0.8nm,0.5s,baz=136,slow=5.8,SNR=4.1						
KS15	Wonju Array Si	75.71	318	eP	P	17 05 15.4	+0.5
	139nm,2.0s						
KSAR	Wonju Array Be	75.71	318	P	P	17 05 15.4	+0.5
USRK	Ussuriysk Ar.	77.66	326	P	P	17 05 25.5	0.0
	1.7nm,0.8s,baz=101,slow=7.5,SNR=3.2						
ISA	Isabella, Lake	78.29	46	eP	P	17 05 30.0	+0.8
	7.3nm,1.0s						
CMB	Columbia Colle	78.36	43	eP	P	17 05 30.1	+0.5
	3.1nm,0.8s						
AFDM	Forest Hills D	78.52	42	eP	P	17 05 30.9	+0.6
	3.5nm,0.8s						
MDPB	Devils Postpil	78.98	44	eP	P	17 05 33.5	+0.4
	7.2nm,1.0s						
YBH	Yreka Blue Hor	79.11	39	P	P	17 05 33.6	0.0
	3.9nm,0.7s,baz=241,slow=2.5,SNR=5.7						
WAKR	Walker	79.24	43	eP	P	17 05 35.1	+0.7
	5.8nm,0.8s						
KDAK	Kodiak Island	79.32	14	P	P	17 05 33.4	-0.8
	5.0nm,0.6s,baz=81,slow=7.0,SNR=11						
KDAK	Kodiak Island	79.32	14	eP	P	17 05 33.4	-0.8
	20nm,1.4s						
YERR	Yerington	79.64	43	eP	P	17 05 37.1	+0.5
	8.0nm,0.7s						
NV01	Mina Array Sit	79.94	44	eP	P	17 05 38.2	+0.1
NVAR	Mina Array Bea	79.94	44	P	P	17 05 38.2	+0.1
	3.7nm,0.9s,baz=226,slow=7.4,SNR=19						
PAHR	Pah Rah Range	79.96	42	eP	P	17 05 38.9	+0.7
	3.0nm,0.8s						
NV11	Mina Array Sit	80.03	44	eP	P	17 05 39.3	+0.7
	0.2nm,0.7s						
KVN	Kaiserville	80.41	43	eP	P	17 05 40.9	+0.3
	3.0nm,0.7s						
PINE	Pine Mountain	81.39	38	eP	P	17 05 46.3	+0.7
	12nm,0.8s						
R11A	Troy Canyon, C	81.69	45	eP	P	17 05 47.6	+0.4
	2.2nm,0.9s						
RSO	Redoubt South	81.74	12	eP	P	17 05 46.8	-0.2
BMN	Battle Mountai	81.74	42	eP	P	17 05 47.7	+0.2
	5.8nm,0.9s						
WVOR	Wild Horse Val	81.98	40	eP	P	17 05 49.3	+0.8
	7.0nm,0.9s						
TUC	Tucson	82.06	52	eP	P	17 05 50.6	+1.4
	3.9nm,1.0s						
MA2	Magadan	82.28	345	P	P	17 05 48.9	-0.6
	5.2nm,0.6s,baz=147,slow=8.7,SNR=5.2						
X16A	Lo Mia Camp, P	82.59	50	eP	P	17 05 53.1	+1.2
	3.3nm,1.0s						
J08A	Circle Bar Ran	82.60	39	eP	P	17 05 52.4	+0.7
	6.6nm,1.1s						
CCUT	Cedar City	82.78	46	eP	P	17 05 53.9	+1.1
	4.3nm,0.9s						
KNB	Kanab	82.88	47	eP	P	17 05 54.3	+1.0
	3.6nm,0.8s						
PSUT	Pine Spring	82.94	45	eP	P	17 05 54.2	+0.5
	2.9nm,0.7s						
U15A	North Rim	82.96	48	eP	P	17 05 55.0	+1.1
	6.3nm,0.7s						
SUA	Susitna One	83.06	13	eP	P	17 05 53.2	-0.4
	6.9nm,0.7s						
BBB	Bella Bella	83.06	28	P	P	17 05 53.1	-0.5
	3.5nm,0.7s,baz=294,slow=5.3,SNR=8.6						
ELK	Elko	83.18	43	eP	P	17 05 54.8	0.0
	4.1nm,0.8s						
GLI	Glacier Island	83.36	15	eP	P	17 05 54.5	-0.4
	17nm,0.5s						
G08A	Pilot Rock	83.42	38	eP	P	17 05 56.3	+0.6
	12nm,1.5s						
TTA	Tatalina	83.43	10	eP	P	17 05 55.6	+0.2
HAWA	Hanford	83.73	36	eP	P	17 05 57.8	+0.6
	6.8nm,0.8s						
MTPU	Mount Pierson	83.83	46	eP	P	17 05 59.2	+0.9
	3.2nm,0.8s						
E08A	Dider Farm, El	84.06	37	eP	P	17 05 59.5	+0.8
	5.5nm,0.8s						
WAX	Waxell Ridge	84.08	17	eP	P	17 05 58.6	-0.1
	21nm,0.6s						
BMO	Blue Mountains	84.14	39	eP	P	17 05 59.5	+0.2
	2.9nm,0.8s						
SCM	Sheep Creek Mo	84.14	14	eP	P	17 05 58.8	-0.2
	21nm,0.6s						
MFID	Camas Ranch	84.24	40	eP	P	17 06 00.3	+0.4
	2.6nm,0.8s						
CRQM	Cirque	84.26	16	eP	P	17 05 59.9	+0.2
	9.6nm,0.8s						
BALM	Baldy	84.71	17	eP	P	17 06 01.8	0.0
	12nm,0.6s						
F10A	Beach Ranch, E	84.81	38	eP	P	17 06 02.8	+0.2
	9.3nm,1.0s						
SEY	Seymchan	84.86	347	P	P	17 06 01.4	-0.8
	9.3nm,0.4s,baz=154,slow=5.9,SNR=48						
KTH	Kantishna Hill	84.91	12	eP	P	17 06 01.6	-1.1
	9.3nm,0.9s						
B08A	Colville Reser	84.99	35	eP	P	17 06 03.0	-0.4
	5.2nm,0.8s						
HLID	Hailey	85.19	41	eP	P	17 06 04.7	+0.1
	3.2nm,0.8s						
RND	Reindeer	85.20	13	eP	P	17 06 03.7	-0.4
	18nm,0.8s						
BPAW	Bear Paw Mtn.	85.40	12	eP	P	17 06 04.5	-0.5
	12nm,1.8s						
MCK	McKinley	85.47	13	eP	P	17 06 05.0	-0.3
	13nm,1.0s						
SRU	San Rafael Swe	85.49	46	eP	P	17 06 06.4	+0.2
	3.0nm,0.8s						
TX31	Lajitas Ar. Si	86.26	57	eP	P	17 06 11.2	+1.1
	2.2nm,0.7s						
TXAR	Lajitas Array	86.26	57	P	P	17 06 11.3	+1.2
	2.4nm,0.7s,baz=221,slow=6.3,SNR=37						
WRH	Wood River Hil	86.30	13	eP	P	17 06 09.0	-0.3
	20nm,1.2s						
HDA	Harding Lake	86.49	13	eP	P	17 06 09.8	-0.4
	7.2nm,0.7s						
CCB	Clear Creek Bu	86.52	13	eP	P	17 06 09.4	-0.9
	11nm,0.5s						
MCMT	McKenzie Canyo	86.80	40	eP	P	17 06 13.2	+0.8
ILAR	Eielson Array	86.82	13	P	P	17 06 10.7	-1.1
	2.9nm,0.4s,baz=216,slow=4.8,SNR=30						
ILB	Eielson Array	86.82	13	eP	P	17 06 11.0	-0.8
	11nm,1.1s						
DLMT	Dillon	87.23	40	eP	P	17 06 15.0	+0.7
	4.3nm,0.8s						
IMW	Indian Meadow	87.53	42	eP	P	17 06 16.4	+0.4
	4.1nm,0.8s						
LOHW	Long Hollow	87.60	42	eP	P	17 06 16.8	+0.5
	2.2nm,0.7s						
QLMT	Earthquake Lak	87.68	41	eP	P	17 06 17.4	+0.9
FLWY	Flagg Ranch	87.77	42	eP	P	17 06 18.2	+1.2
	4.9nm,0.8s						
BW06	Boulder Array	87.87	43	eP	P	17 06 17.7	+0.2
	2.7nm,0.8s						
PD31	Pinedale Array	87.87	43	eP	P	17 06 17.4	-0.1
	1.9nm,0.8s						
PDAR	Pinedale Array	87.87	43	P	P	17 06 17.2	-0.3
	1.6nm,0.6s,baz=214,slow=2.8,SNR=14						
BOZ	Bozeman (W)	87.94	40	eP	P	17 06 18.4	+0.7
	3.0nm,0.9s						
DAWY	Dawson	87.98	16	eP	P	17 06 17.6	+0.2
	4.4nm,0.6s						
SYO	Syowa Base	88.22	193	⇓eP	P	17 06 16.6	-1.8
HHC	Hu-ho-hao-te	88.23	314	P	P	17 06 20.0	+0.9
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
MSTX	Muleshoe	88.83	54	eP	P	17 06 21.3	-0.8
	comp=Z,4.4nm,0.8s						
CM31	Chiang Mai Arr	89.55	290	eP	P	17 06 25.9	+0.4

	comp=Z,21nm,1.5s						
CMAR	**Chiang Mai Arr**	89.55	290	P	P	17 06 25.9	+0.4
	comp=Z,1.9nm,0.9s,baz=108,slow=3.4,SNR=8.5						
SNAA	**Sanae**	89.56	178	P	P	17 06 26.0	+1.2
VNA3	**Neumayer Olymp**	89.69	176	P	P	17 06 25.2	-0.1
CD2	**Chengdu**	89.91	303	*e*P	P	17 06 26.8	-0.3
EPYK	**Eagle Plains**	90.51	15	*e*P	P	17 06 29.0	0.0
	comp=Z,14nm,0.3s						
LZH	**Lanzhou**	91.79	308	*e*P	P	17 06 37.6	+1.8
LZH				pP	pP	17 08 18.5	+1.1
LZH				sP	sP	17 09 04.5	+1.1
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
INK	**Inuvik**	92.79	15	P	P	17 06 39.1	-0.3
	comp=Z,4.2nm,0.6s,baz=215,slow=5.8,SNR=6.1						
INK	**Inuvik**	92.79	15	*e*P	P	17 06 39.0	-0.4
	comp=Z,5.3nm,0.8s						
YKA	**Yellowknife Ar**	95.13	25	P	P	17 06 49.5	-0.6
	comp=Z,1.1nm,0.6s,baz=241,slow=4.3,SNR=5.1						
YKB5	**Yellowknife Ar**	95.13	25	*e*P	P	17 06 49.5	-0.6
SLM	**Saint Louis**	99.93	53	*e*Pdif	Pdif	17 07 11.6	-0.7
	comp=Z,91nm,0.9s						
MK32	**Makanchi Array**	110.09	314	*e*PKiKP	PKiKP	17 11 55.3	-0.9
MKAR	**Makanchi Array**	110.09	314	PKiKP	PKiKP	17 11 55.3	-0.9
	comp=Z,0.2nm,0.4s,baz=132,slow=4.3,SNR=5.0						
SPA0	**Spitsbergen Ar**	120.32	357	*e*PKPdf	PKPdf	17 12 15.2	+0.2
SPITS	**Spitsbergen Ar**	120.32	357	PKP	PKPdf	17 12 15.1	+0.2
	comp=Z,0.8nm,0.5s,baz=343,slow=1.5,SNR=4.0						
ARCES	**ARCESS Array B**	127.39	350	PKP	PKPdf	17 12 28.6	-0.2
	comp=Z,1.2nm,0.4s,baz=14,slow=1.5,SNR=22						
FIA0	**FINESS Array S**	134.27	344	*e*PKPdf	PKPdf	17 12 42.0	+0.1
FINES	**FINESS Array B**	134.27	344	PKP	PKPdf	17 12 42.0	+0.1
	comp=Z,0.9nm,0.6s,baz=266,slow=2.9,SNR=5.2						
NB2	**NORSAR Subarra**	137.44	353	PKP	PKiKP	17 12 50.1	+0.2
	comp=Z,0.2nm,0.5s,baz=17,slow=2.6						
NB200	**NORSAR Array S**	137.44	353	*e*PKPdf	PKPdf	17 12 48.8	+0.9
NOA	**NORSAR Array B**	137.44	353	PKP	PKPdf	17 12 48.8	+0.9
	comp=Z,0.4nm,0.7s,baz=13,slow=3.9,SNR=4.1						
AKASG	**Malin Array Be**	141.63	332	PKhKP	PKPpre	17 12 49.0	
	comp=Z,0.6nm,0.5s,baz=44,slow=4.1,SNR=4.3						
BR101	**Keskin Array S**	145.74	314	*e*PKPdf	PKPdf	17 13 03.9	+0.4
BRTR	**Keskin Array B**	145.74	314	PKPbc	PKPdf	17 13 03.9	+0.4
	comp=Z,1.5nm,0.8s,baz=138,slow=3.3,SNR=7.9						
KOLS	**Kolonicke sedl**	145.88	336	*e*PKP	PKPab	17 13 06.6	+0.4
CLL	**Collm**	146.54	347	*e*PKPbc	PKPbc	17 13 06.6	+0.1
CLL	**Collm**	146.54	347	*e*PKPdf	PKPbc	17 13 07.0	+0.5
CLL				*i* PKPbc	PKPab	17 13 07.3	-1.4
	comp=Z,15nm,0.6s						
CLL				*i* PKiKP	PKiKP	17 13 09.1	+0.3
	comp=Z,9.0nm,0.6s						
CLL				*e*pPKPdf	pPKPdf	17 14 53.0	+0.4
CLL				*e*SKPdf	SKPdf	17 15 54.0	-1.1
UPC	**Upice**	146.57	344	⇑*e*PKP	PKPbc	17 13 08.2	+1.5
DPC	**Dobruska-Polom**	146.63	343	⇑*e*PKP	PKPbc	17 13 08.3	+1.4
BRG	**Berggiesshubel**	146.75	346	*i* PKP	PKPbc	17 13 08.3	+1.2
	comp=Z,5.5nm,0.9s						
PRU	**Pruhonice**	147.43	345	⇑*e*PKP	PKPbc	17 13 09.7	+0.8
VYHS	**Vyhne**	147.50	339	*e*PKP	PKPbc	17 13 08.8	-0.4
MODS	**Modra-Piesok**	148.12	341	*e*PKP	PKPbc	17 13 11.7	+0.9
KHC	**Kasperske Hory**	148.46	345	*e*PKPbc	PKPbc	17 13 11.8	+0.1
KHC	**Kasperske Hory**	148.46	345	⇑*e*PKP	PKPbc	17 13 11.8	+0.1
KHC				*e*PKPAB	PKPab	17 13 18.0	+1.4
GEC2	**GERESS Array S**	148.69	345	*e*PKPbc	PKPbc	17 13 13.0	+0.7
GERES	**GERESS Array B**	148.69	345	PKPbc	PKPbc	17 13 12.2	-0.1
	comp=Z,2.4nm,0.6s,baz=34,slow=3.7,SNR=20						
CONA	**Conrad Observa**	148.95	342	*i* PKiKP	PKiKP	17 13 14.2	+0.2
	comp=Z,3.0nm,0.7s						
MOA	**Molln**	149.47	344	PKPab	PKPab	17 13 18.6	-2.2
	comp=Z,2.2nm,1.0s						
SOKA	**Soboth**	150.32	342	*i* PKiKP	PKPbc	17 13 16.8	+0.5
	comp=Z,1.9nm,0.7s						
KBA	**Koelnbreinsper**	150.42	344	*i* PKiKP	PKPbc	17 13 16.7	0.0
	comp=Z,4.0nm,0.6s						
WATA	**Walderalm**	150.60	347	*i* PKiKP	PKPbc	17 13 17.6	+0.6
	comp=Z,3.5nm,0.5s						
WTTA	**Wattenberg**	150.66	346	*i* PKiKP	PKPbc	17 13 17.2	0.0
	comp=Z,8.0nm,0.5s						
MOTA	**Moosalm**	150.70	347	*i* PKiKP	PKiKP	17 13 18.6	+0.8
	comp=Z,4.2nm,0.8s						
SQTA	**Sankt Quirin**	150.79	347	*i* PKiKP	PKiKP	17 13 18.3	+0.4
	comp=Z,4.7nm,0.5s						
ABTA	**Abfaltersbach**	150.94	345	*i* PKPbc	PKPbc	17 13 17.2	-0.5
	comp=Z,7.5nm,0.6s						
DAVA	**Damuels**	150.99	349	*i* PKiKP	PKiKP	17 13 19.7	+1.3
	comp=Z,2.9nm,0.5s						
FETA	**Feichten**	151.08	348	*i* PKiKP	PKiKP	17 13 19.1	+0.5
	comp=Z,3.7nm,0.7s						
ESDC	**Sonseca Array**	158.72	13	PKPab	PKPab	17 13 59.2	-1.3
	comp=Z,1.0nm,0.8s,baz=344,slow=4.8,SNR=6.6						

ISCJB ***24*** *16:54:20.2±0.3, 24°.79N±0°.02×121°.93E±0°.02, h85^{km}±2^{km},*
Error ellipse: s-maj=3.1km s-min=2.2km az=156.2
JMA ***24*** *16:54:20.0±0.2, 24°.73N×121°.90E, h85^{km}±2^{km}, M2.7*
TAP ***24*** *16:54:20.8, 24°.74N×121°.91E, h81^{km}, ML3.6, B*
ISC 24 16:54:20.7±1.2, **24°.78N**±0°.03×**121°.92E**±0°.02, **h83**^{km}±5^{km},
n106, σ0^{s}.84/193, **6C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	**Toucheng**	0.11	314	P	Pn	16 54 32.5	-0.2
	baz=336						
NTC				S	Sn	16 54 41.2	-0.3
	baz=336						
ILA	**Ilan**	0.16	266	*i* P	Pn	16 54 33.1	+0.3
	baz=287						
ILA				S	Sn	16 54 42.0	+0.4
	baz=287						
TWC	**Suao**	0.18	201	⇑*i*P	Pn	16 54 32.9	0.0
	baz=198						
TWC				*i* S	Sn	16 54 41.6	-0.1
	baz=198						
TIPB	**Shuangxi**	0.21	336	⇓*i*P	Pn	16 54 32.9	-0.1
	baz=343						
TIPB				S	Sn	16 54 41.3	-0.8
	baz=343						
TWE	**Neicheng**	0.24	256	P	Pn	16 54 33.3	+0.2
	baz=263						
TWE				*e*S	Sn	16 54 41.9	-0.2
	baz=263						
EOS1	**EOS1**	0.30	140	P	Pn	16 54 33.4	+0.1
	baz=133						
EOS1				*e*S	Sn	16 54 42.8	+0.1
	baz=133						
NWF	**Wu-fen Shan**	0.32	337	*e*P	Pn	16 54 33.5	-0.1
	baz=348						
NWF				*e*S	Sn	16 54 42.6	-0.6
	baz=348						
WFSB	**Wu-fen Shan**	0.32	337	*e*P	Pn	16 54 33.5	0.0
	baz=348						
WFSB				*e*S	Sn	16 54 42.6	-0.4
	baz=348						
ENTT	**Nioudou**	0.35	247	⇑*i*P	Pn	16 54 34.2	+0.5
	baz=258						
ENTT				S	Sn	16 54 44.0	+0.7
	baz=258						
TWA	**Mucha**	0.37	304	⇑P	Pn	16 54 33.9	0.0
	baz=313						
TWA				*e*S	Sn	16 54 43.2	-0.3
	baz=313						
NANB	**Nanao**	0.38	204	⇑P	Pn	16 54 34.1	+0.1
	baz=200						
NANB				*e*S	Sn	16 54 44.3	+0.7
	baz=200						
ENA	**Nanau**	0.38	205	*i* P	Pn	16 54 34.1	+0.2
	baz=200						
ENA				S	Sn	16 54 44.8	+1.1
	baz=200						
NHDH	**Xindian Distri**	0.40	297	⇓*i*P	Pn	16 54 34.3	+0.3
	baz=306						
NHDH				*e*S	Sn	16 54 44.0	+0.1
	baz=306						
NDT	**Datong Townshi**	0.41	245	*e*P	Pn	16 54 34.6	+0.5
	baz=258						
NDT				*e*S	Sn	16 54 44.8	+0.8
	baz=258						
TATO	**Taipei**	0.44	297	*e*P	Pn	16 54 34.4	+0.1
	baz=305						
TATO				*e*S	Sn	16 54 43.9	-0.5
	baz=305						
TAP	**Taipei**	0.46	305	*e*P	Pn	16 54 34.6	+0.2
	baz=315						
TAP				*e*S	Sn	16 54 44.5	-0.1
	baz=315						
YM01	**YM01**	0.48	319	P	Pn	16 54 34.7	0.0
	baz=328						
YM01				*e*S	Sn	16 54 44.6	-0.5
	baz=328						
YM10	**YM10**	0.50	319	*e*P	Pn	16 54 34.9	0.0
	baz=328						
YM10				*e*S	Sn	16 54 45.0	-0.4
	baz=328						
YHNB	**Yeheng**	0.51	258	⇑*e*P	Pn	16 54 34.9	0.0
	baz=261						
YHNB				*e*S	Sn	16 54 45.0	-0.5
	baz=261						
YM08	**YM08**	0.51	324	*e*P	Pn	16 54 34.7	-0.2
	baz=332						
YM08				*e*S	Sn	16 54 44.5	-0.9
	baz=332						
NSK	**Sanguang**	0.52	259	*e*P	Pn	16 54 35.0	0.0
	baz=262						
NSK				*e*S	Sn	16 54 45.1	-0.5
	baz=262						
ANP	**Anpu**	0.55	318	*e*P	Pn	16 54 35.3	0.0
	baz=327						
ANP				*e*S	Sn	16 54 45.7	-0.4
	baz=327						
TWS1	**Kuangyinshan**	0.56	305	*e*P	Pn	16 54 35.7	+0.4
	baz=316						
TWS1				*e*S	Sn	16 54 47.1	+1.0
	baz=316						
NTST	**Danshui**	0.57	312	*e*P	Pn	16 54 35.8	+0.3
	baz=320						
NTST				*e*S	Sn	16 54 46.6	+0.3
	baz=320						
TWY	**Chenhua**	0.57	330	*e*P	Pn	16 54 35.9	+0.4
	baz=340						
TWY				*e*S	Sn	16 54 46.8	+0.4
	baz=340						
NNSB	**Datong**	0.60	235	*i* P	Pn	16 54 36.3	+0.4
	baz=241						
NNSB				*e*S	Sn	16 54 47.0	0.0
	baz=241						
NNS	**Nan Shan**	0.60	236	P	Pn	16 54 36.2	+0.3
	baz=242						
NNS				*e*S	Sn	16 54 47.1	+0.1
	baz=242						
WLTB	**Daxi**	0.61	277	*e*P	Pn	16 54 36.2	+0.4
	baz=281						
WLTB				*e*S	Sn	16 54 47.6	+0.6
	baz=281						
NACB	**Ninganchiao**	0.67	206	*e*P	Pn	16 54 35.7	-0.7
	baz=217						
NACB				*e*S	Sn	16 54 47.4	-0.6
	baz=217						
NCU	**National Centr**	0.69	286	*e*P	Pn	16 54 36.9	+0.4
	baz=281						
NCU				*e*S	Sn	16 54 49.2	+0.8
	baz=281						
NCUH	**Zhongli**	0.69	286	*e*P	Pn	16 54 37.0	+0.4
	baz=280						
NCUH				*e*S	Sn	16 54 49.6	+1.2
	baz=280						
ETLH	**Xiulin Townshi**	0.69	215	*e*P	Pn	16 54 36.5	-0.2
	baz=223						
ETLH				*e*S	Sn	16 54 48.1	-0.5
	baz=223						
TWD	**Chiawan**	0.75	203	*e*P	Pn	16 54 36.6	-0.6
	baz=212						
TWD				*e*S	Sn	16 54 48.6	-0.9
	baz=212						
LIOB	**Emei**	0.83	261	*e*P	Pn	16 54 38.2	+0.1
	baz=263						
LIOB				*e*S	Sn	16 54 51.1	+0.1
	baz=263						
HWA	**Hwalien**	0.85	200	*e*P	Pn	16 54 38.0	-0.2
	baz=209						
NSTT	**Nanjuang**	0.85	260	*e*P	Pn	16 54 38.6	+0.4
	baz=262						
NSTT				*e*S	Sn	16 54 51.2	-0.1
	baz=262						
SBCB	**Hsinchu**	0.85	271	*e*P	Pn	16 54 38.6	+0.3
	baz=273						
SBCB				*e*S	Sn	16 54 51.6	+0.3
	baz=273						
HSN	**Hsinchu**	0.86	272	*e*P	Pn	16 54 38.3	-0.1
	baz=276						
HSN				*e*S	Sn	16 54 51.3	-0.3
	baz=276						
WHF	**Hehuan Shan**	0.87	224	⇓*e*P	Pn	16 54 39.1	+0.2
	baz=218						
WHF				*e*S	Sn	16 54 52.9	+0.5
	baz=218						
CHGB	**Renai**	0.98	224	⇑P	Pn	16 54 40.5	+0.4
	baz=217						
CHGB				S	Sn	16 54 54.0	-0.4
	baz=217						
JYNG	**Yonagunijimaku**	0.99	109	P	Pn	16 54 39.6	-0.2
JYNG				S	Sn	16 54 53.4	-0.7
YOJ	**Yonaguni jima**	1.04	107	⇓*e*P	Pn	16 54 40.2	-0.3
	baz=101						
YOJ				*e*S	Sn	16 54 54.8	-0.4
	baz=101						
YOJ	**Yonaguni jima**	1.04	107	P	Pn	16 54 40.1	-0.3
YOJ				*e*S	Sn	16 54 54.4	-0.9
NMLH	**Miaoli**	1.05	257	*e*P	Pn	16 54 41.0	+0.4
	baz=258						
NMLH				*e*S	Sn	16 54 55.9	+0.3
	baz=258						
ESL	**Shilin**	1.06	205	P	Pn	16 54 39.4	-1.3
	baz=204						
NSY	**Sanyi**	1.11	251	*e*P	Pn	16 54 42.0	+0.6
	baz=252						
NSY				*e*S	Sn	16 54 57.4	+0.6
	baz=252						
TWQ1	**Liyutan**	1.13	248	*e*P	Pn	16 54 41.8	+0.3
	baz=249						
TWQ1				*e*S	Sn	16 54 57.1	0.0
	baz=249						
DPDB	**Guoxing**	1.17	231	*e*P	Pn	16 54 43.5	+1.4
	baz=240						
DPDB				*e*S	Sn	16 54 59.0	+0.9
	baz=240						
EGFH	**Guangfu**	1.19	202	*e*P	Pn	16 54 41.0	-1.4
	baz=206						
EGFH				*e*S	Sn	16 54 56.5	-2.0
	baz=206						
VWDT	**VWDT**	1.24	215	P	Pn	16 54 43.2	+0.3
	baz=208						
VWDT				S	Sn	16 54 59.6	0.0
	baz=208						
SMLT	**Sun Moon Lake**	1.29	226	*e*P	Pn	16 54 44.5	+0.9
	baz=234						
SMLT				*e*S	Sn	16 55 02.2	+1.4
	baz=234						
TCU	**Taichung**	1.29	241	*e*P	Pn	16 54 44.1	+0.6
	baz=250						
TCU				*e*S	Sn	16 55 01.1	+0.3
	baz=250						
SSLB	**Suanglung**	1.32	222	*e*P	Pn	16 54 44.8	+0.8
	baz=232						
SSLB				*e*S	Sn	16 55 02.2	+0.7
	baz=232						
HGSD	**Ruisui**	1.36	200	P	Pn	16 54 44.0	-0.3
	baz=206						
HGSD				*e*S	Sn	16 55 02.3	+0.1
	baz=206						
EHY	**Hungye**	1.38	203	*e*P	Pn	16 54 44.2	-0.4
	baz=202						
WCHH	**Zhanghua**	1.42	241	*e*P	Pn	16 54 46.1	+1.0
	baz=241						
WCHH				*e*S	Sn	16 55 04.1	+0.4
	baz=241						
WNT	**Mingjian**	1.44	232	*e*P	Pn	16 54 46.0	+0.5
	baz=231						
WJS	**Zhushan**	1.44	229	*e*P	Pn	16 54 47.1	+1.6
	baz=240						
WJS				*e*S	Sn	16 55 05.6	+1.4
	baz=240						
WHYT	**Xinyi Township**	1.45	222	*e*P	Pn	16 54 46.8	+1.2
	baz=231						
WHYT				*e*S	Sn	16 55 06.3	+1.9
	baz=231						
YULB	**Yu-li**	1.49	203	*e*P	Pn	16 54 45.1	-1.0
	baz=202						
TWF1	**Yuli**	1.53	202	*e*P	Pn	16 54 46.5	0.0
	baz=206						
ALS	**Alishan**	1.62	219	*e*P	Pn	16 54 49.0	+0.9
	baz=227						
ALS				*e*S	Sn	16 55 10.4	+1.8
	baz=227						
WGK	**Gukeng**	1.65	229	*e*P	Pn	16 54 49.0	+0.9
	baz=238						
WGK				*e*S	Sn	16 55 09.8	+0.9
	baz=238						
WDLH	**Douliu**	1.66	230	*e*P	Pn	16 54 48.8	+0.6
	baz=239						
WDLH				*e*S	Sn	16 55 09.7	+0.6
	baz=239						
RLNB	**Erlin**	1.67	239	*e*P	Pn	16 54 48.5	+0.1
	baz=238						
RLNB				*e*S	Sn	16 55 09.5	+0.1
	baz=238						
IRIF	**Iriomote-Funau**	1.71	105	P	Pn	16 54 48.5	-0.3
IRIF				S	Sn	16 55 09.6	-0.6
WTCT	**Ta-ch'eng**	1.75	239	*e*P	Pn	16 54 49.5	0.0
	baz=238						
WTCT				*e*S	Sn	16 55 11.1	0.0
	baz=238						
ELDTW	**Lidau**	1.78	208	P	Pn	16 54 50.1	+0.1
	baz=197						
ELDTW				*e*S	Sn	16 55 11.6	-0.6
	baz=197						
CHN4	**Tsaushan**	1.87	221	*e*P	Pn	16 54 52.2	+1.2
	baz=219						
CHN4				*e*S	Sn	16 55 15.8	+1.8
	baz=219						
CHY	**Chiayi**	1.87	227	*e*P	Pn	16 54 51.8	+0.9
	baz=235						
CHY				*e*S	Sn	16 55 14.8	+0.8
	baz=235						
TPUB	**Ta-pu**	1.88	219	*e*P	Pn	16 54 51.9	+0.7
	baz=217						
TPUB				*e*S	Sn	16 55 15.6	+1.1
	baz=217						
WSF	**Szhu**	1.92	234	*e*P	Pn	16 54 52.4	+0.7
	baz=233						
WSF				*e*S	Sn	16 55 15.3	+0.1
	baz=233						
STYT	**Tauyuan**	1.93	214	*e*P	Pn	16 54 53.1	+1.3
	baz=202						
STYT				*e*S	Sn	16 55 16.8	+1.3
	baz=202						
WTP	**Ta-pu**	1.94	218	*e*P	Pn	16 54 53.1	+1.2
	baz=227						
WTP				*e*S	Sn	16 55 16.9	+1.2
	baz=227						
WLGB	**Puzi**	1.96	229	*e*P	Pn	16 54 52.8	+0.5
	baz=237						
WLGB				*e*S	Sn	16 55 17.1	+0.9
	baz=237						
JKRS	**Kuro-shima**	1.98	105	P	Pn	16 54 52.9	+0.5
JKRS				S	Sn	16 55 16.8	+0.2
TWK	**Hsinying**	1.99	221	*e*P	Pn	16 54 54.0	+1.3
	baz=219						
TWK				*e*S	Sn	16 55 18.2	+1.1
	baz=219						
JIJ	**Ishigaki jima**	2.07	101	P	Pn	16 54 53.3	-0.3
JIJ				S	Sn	16 55 17.9	-0.8
PTTC	**Pingtan**	2.08	291	⇓*e*P	Pn	16 54 53.1	-0.6
	baz=290						
SGST	**Jiashian**	2.08	216	*e*P	Pn	16 54 54.9	+1.0
	baz=224						
SGST				*e*S	Sn	16 55 20.0	+0.8
	baz=224						
TWG	**Pinlang**	2.10	202	*e*P	Pn	16 54 53.4	-0.6
	baz=190						
TWG				*e*S	Sn	16 55 17.3	-2.2
	baz=190						
TWGBT	**Beinan**	2.10	202	*e*P	Pn	16 54 53.1	-0.9
	baz=190						
TWGBT				*e*S	Sn	16 55 17.1	-2.3
	baz=190						
CHN8	**Yiju**	2.11	228	*e*P	Pn	16 54 54.2	0.0
	baz=237						
CHN8				*e*S	Sn	16 55 21.0	+1.2
	baz=237						
SLGT	**Liugui**	2.12	214	*e*P	Pn	16 54 56.0	+1.6
	baz=222						
SLGT				*e*S	Sn	16 55 21.5	+1.4
	baz=222						
JISG	**Ishigakijimahi**	2.18	94	P	Pn	16 54 55.2	0.0
JISG				*e*S	Sn	16 55 21.8	+0.3
MATB	**Ma-tsu**	2.25	308	*e*P	Pn	16 54 55.6	-0.4
	baz=308						
SSD	**Sandimen**	2.34	211	*e*P	Pn	16 54 58.5	+1.2
	baz=208						
SSD				*e*S	Sn	16 55 25.1	-0.2
	baz=208						
ECL	**Taimali**	2.34	202	*e*P	Pn	16 54 56.9	-0.5
	baz=192						
ECL				*e*S	Sn	16 55 23.2	-2.1
	baz=192						
MASBT	**Mashibuluo**	2.46	209	*e*P	Pn	16 54 59.8	+0.9
	baz=206						
MASBT				*e*S	Sn	16 55 28.9	+0.9
	baz=206						
PNG	**Penghu**	2.47	241	*e*P	Pn	16 54 58.0	-1.0
	baz=240						
PNG				*e*S	Sn	16 55 26.1	-2.3
	baz=240						
PHUB	**P'eng-hu**	2.49	240	*e*P	Pn	16 54 57.7	-1.5
	baz=239						
PHUB				*e*S	Sn	16 55 26.1	-2.6
	baz=239						
JTJ	**Tarama**	2.54	92	P	Pn	16 55 01.5	+1.7
JTJ				S	Sn	16 55 30.8	+0.9
PTMZ	**Houxiangcun**	2.56	276	⇓*e*P	Pn	16 54 59.6	-0.5
	baz=275						
LYJJ	**Jianjiangzhen**	2.63	313	P	Pn	16 55 00.8	-0.4
	baz=313						
XPSS	**Dashiqiu**	2.65	324	*e*P	Pn	16 55 01.2	-0.2
	baz=327						
XPSS				*e*S	Sn	16 55 31.9	-0.7
	baz=327						
SCZT	**Fangliau**	2.67	207	*e*P	Pn	16 55 01.9	+0.1
	baz=205						
LAY	**Lan-yu**	2.75	187	*e*P	Pn	16 55 01.4	-1.3
	baz=185						
VCHM	**Qimei**	2.76	236	*e*P	Pn	16 55 02.5	-0.5
	baz=234						
VCHM				*e*S	Sn	16 55 33.1	-2.2
	baz=234						
MHZQ	**Yeshan**	2.92	297	*e*P	Pn	16 55 04.8	-0.3
	baz=296						
JIRB	**Irabujima**	2.96	88	*e*S	Sn	16 55 40.5	+0.4
JMJ	**Miyako jima 2**	3.07	89	*e*P	Pn	16 55 08.2	+1.2
	baz=89						
JMJ2	**Miyako jima3**	3.10	90	P	Pn	16 55 09.1	+1.6
JMJ2				*e*S	Sn	16 55 43.5	0.0
JOGS	**Gusukube**	3.17	90	*e*S	Sn	16 55 46.8	+1.6
KNMB	**Chin-men Tao**	3.23	265	*e*P	Pn	16 55 08.3	-0.9
	baz=263						
AXDP	**Jialang**	3.59	273	*e*P	Pn	16 55 13.9	-0.2
	baz=270						
ZPLA	**Ao Xicun**	3.89	258	*e*P	Pn	16 55 17.8	-0.4
	baz=256						

UCR 24 17:15:50.2±1.4, **8°.83N×83°.93W, h6^{km}, MW3.7, 3C-4D,**
Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	**Dominical**	0.43	9	⇓*e*P	Pg	17 15 59.1	+0.5
EDPN	**Palmar Norte**	0.49	74	*e*P	Pg	17 15 59.6	-0.1
EDPN				*e*S	Sb	17 16 07.7	-1.1
EDLM	**Las Mercedes**	0.56	37	⇓*i*P	Pg	17 16 01.3	+0.2
EDLM				*e*S	Sb	17 16 10.1	-0.9
DRK0	**Durika**	0.81	57	⇑*i*P	Pg	17 16 05.3	-0.4
DRK0				*e*S	Sb	17 16 17.4	-0.7
LCR2	**La Lucha 2**	0.91	356	⇓*i*P	Pg	17 16 07.0	-0.7
LCR2				*e*S	Sg	17 16 20.4	+0.7
EDSV	**San Vito**	0.95	90	*e*P	Pg	17 16 07.9	-0.6
EDSV				*e*S	Sb	17 16 22.9	+0.7
HDC	**Heredia**	1.18	351	*e*P	Pg	17 16 10.6	-2.3
HDC				*e*S	Sg	17 16 28.0	-0.3
CVTR	**Volcan Turrial**	1.20	8	⇓*i*P	Pg	17 16 12.2	-1.1
CVTR				*e*S	Sb	17 16 29.7	+0.1
BRU2	**Volcan**	1.23	91	⇑*i*P	Pg	17 16 11.9	-1.9
JTS	**Las Juntas de**	1.77	325	*e*P	Pn	17 16 20.9	-0.6
ARE1	**Arenal 1**	1.80	335	⇑*i*P	Pn	17 16 22.4	+0.5

MAN 24 17:16:50.2, 7°.03N×125°.10E, h31^{km}, mb4.0, ML2.8, MS2.4,
1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	0.86	283	⇓*i*P	Pb	17 17 09.9	+3.2

MAN 24 17:28:03.2, 10°.06N×123°.22E, h1^{km}, mb4.3, ML3.1, MS2.8, 1C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.71	178⇓	iP	Pb	17 28 18.1	-0.3
SNPH				iS	Sb	17 28 28.4	-0.4
TBP	Tagbilaran	0.73	120	eP	Pg	17 28 17.4	+0.2
LLP	Lapu-Lapu	0.78	71	eP	Pg	17 28 18.0	-0.2
LLP				eS	Sg	17 28 29.0	+0.6
DCPH	Dipolog City	1.47	175⇑	eP	Pn	17 28 31.1	+0.2
DCPH				eS	Sg	17 28 50.3	-0.3
MSLP	Maasin	1.62	87	eP	Pn	17 28 33.1	+0.2
MSLP				eS	Sg	17 28 55.4	+0.1
OCLP	Ormoc	1.69	54	eP	Pn	17 28 34.0	+0.1
OCLP				eS	Sg	17 28 58.4	+0.9
CUYO	Cuyo Island	2.30	290	eP	Pb	17 28 44.8	-0.7
CUYO				eS	Sn	17 29 08.1	-3.2

MEX 24 17:28:45.2±0.6, 14°.93N×93°.72W, h46^{km}±32^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.91	32	eP	Pn	17 28 59.7	-1.9
PCIG				eS	Sn	17 29 11.6	-2.0
TGIG		1.93	17	eP	Pn	17 29 13.8	-1.8
TGIG				iS	Sn	17 29 36.5	-2.1
CCIG	Comitan	2.03	48	eP	Pn	17 29 16.4	-0.8
CCIG				eS	Sn	17 29 39.4	-2.1
CMIG	Matias Romero	2.42	333	eP	Pn	17 29 14.5	-7.9
CMIG				eS	Sn	17 29 41.5	-9.3

MEX 24 17:28:55.5±1.7, 30°.38N×109°.56W, h3^{km}±657^{km}, MD3.5, Sonora

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGIG		1.37	90	iP	Pn	17 29 18.7	-3.0
CGIG				iS	Sg	17 29 35.8	-3.7
HSIG		1.81	222	iP	Pn	17 29 24.6	-3.1
HSIG				eS	Sn	17 29 46.7	-4.5

*ISCJB **24** 17:39:29.3±0.6, 4°.23S±0°.08×143°.4E±0°.1, h132^{km}, mb3.6/8, Error ellipse: s-maj=19.9km s-min=8.7km az=155.7*

*IDC **24** 17:39:30.4±3.5, 4°.23S×143°.41E, h125^{km}±36^{km}, mb3.5/8, mb1 3.7/10, mb1mx3.5/33, mbtmp4.0/10, Error ellipse: s-maj=29.7km s-min=21.0km az=92.0*

ISC 24 17:39:30.9±0.8, 4°.2S±0°.1×143°.5E±0°.2, h132^{km}, n11, σ0^s.72/12, mb3.7/8, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.32	145	P	Pn	17 41 02.8	+1.0
	0.8nm,0.3s,baz=166,slow=4.2,SNR=3.4						
PMG				S	Sn	17 42 12.4	-0.5
	1.5nm,0.3s,baz=356,slow=19,SNR=3.6						
WRA	Warramunga Arr	17.97	209	P	P	17 43 31.4	+0.1
	1.2nm,0.3s,baz=27,slow=11,SNR=50						
ASAR	Alice Springs	21.41	205	P	P	17 44 07.8	-0.8
	0.9nm,0.4s,baz=33,slow=12,SNR=30						
KSRS	Korea Array	43.92	342	P	P	17 47 25.3	+0.7
	2.2nm,0.6s,baz=160,slow=8.8,SNR=8.0						
USRK	Ussuriysk Ar.	49.30	349	P	P	17 48 06.9	+0.4
	1.0nm,0.8s,baz=134,slow=6.2,SNR=5.0						
PETK	Petropavlovsk-	58.38	10	P	P	17 49 12.5	+0.2
	1.4nm,0.8s,baz=187,slow=5.8,SNR=3.6						
MKAR	Makanchi Array	73.90	321	P	P	17 50 52.0	+0.4
	1.0nm,0.7s,baz=101,slow=8.9,SNR=9.4						
ZALV	Zalesovo Beam	75.66	329	P	P	17 51 01.2	-0.3
	0.9nm,0.5s,baz=102,slow=5.0,SNR=5.7						
BVAR	Borovoye Array	83.28	324	P	P	17 51 42.6	-0.2
	1.1nm,0.6s,baz=118,slow=7.0,SNR=8.4						
ILAR	Eielson Array	85.27	24	P	P	17 51 51.3	-1.3
	0.4nm,0.6s,baz=253,slow=5.2,SNR=4.1						
SIV	San Ignacio	148.50	130	PKPbc	PKiKP	17 59 04.5	-0.3
	1.7nm,0.5s,baz=248,slow=7.0,SNR=6.7						

MEX 24 17:53:14.9±0.4, 14°.82N×93°.89W, h10^{km}±34^{km}, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.09	36	eP	Pb	17 53 32.4	-3.5
PCIG				eS	Sg	17 53 45.9	-4.2
TGIG		2.08	21	eP	Pn	17 53 46.8	-3.2
TGIG				iS	Sn	17 54 11.7	-4.4
CCIG	Comitan	2.23	49	iP	Pn	17 53 49.8	-2.3
CCIG				iS	Sn	17 54 15.6	-4.1
CMIG	Matias Romero	2.46	337	eP	Pn	17 53 47.0	-8.1
CMIG				iS	Sn	17 54 16.1	-9.0

MAN 24 17:54:31.9, 19°.14N×121°.06E, h15^{km}, mb4.1, ML2.9, MS2.6, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	1.28	172	eP	Pn	17 54 54.3	-1.0
APYP				eS	Sg	17 55 13.1	-0.2
SGCP	Mt. Cagua	1.29	133	eP	Pn	17 54 54.7	-0.8
SGCP				eS	Sb	17 55 11.0	-1.4
ABRA	Dolores	1.52	193	eP	Pn	17 54 57.5	-1.0
ABRA				eS	Sg	17 55 21.2	+0.4
CVP	Callao Caves	1.60	153⇑	iP	Pn	17 54 59.8	+0.1
CVP				iS	Sb	17 55 21.1	-0.2
CAUP	Cauayan	2.30	161	eP	Pb	17 55 12.3	-0.8

*ISCJB **24** 18:00:50.2±0.7, 69°.07N±0°.04×144°.5W±0°.1, h10^{km}, Error ellipse: s-maj=7.5km s-min=4.7km az=137.4*

*AEIC **24** 18:00:51.7, 69°.15N×144°.50W, h14^{km}, ML3.0*

*NEIC **24** 18:00:51.7±0.0, 69°.15N×144°.50W, h14^{km}, ML3.0(AEIC), After AEIC.*

ISC 24 18:00:51.7±1.4, 69°.13N±0°.06×144°.57W±0°.05, h10^{km}, n31, σ0^s.84/37, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BM3	Burnt Mountain	1.72	181	ePn	Pn	18 01 21.4	-0.3
BM3				eSg	Sb	18 01 45.0	-0.1
PS01	TAPS Pump Stn	1.81	311	ePn	Pn	18 01 23.0	+0.2
PS01				eSn	Sn	18 01 45.8	0.0
TOLK	Toolik Lake Re	1.88	257	ePn	Pn	18 01 22.7	-1.2
TOLK	Toolik Lake Re	1.88	257	P	Pn	18 01 23.8	-0.1
	baz=72						
TOLK				S	Sn	18 01 48.5	+0.9
	baz=72						
PS04	TAPS Pump Stn4	1.88	250	ePn	Pn	18 01 23.7	-0.2
PS04				eSg	Sn	18 01 49.4	+1.6
FYU	Fort Yukon	2.59	186	ePn	Pn	18 01 33.1	-0.5
COLD	Coldfoot	2.84	230	ePn	Pn	18 01 36.6	-0.5
EPYK	Eagle Plains	4.07	129	ePn	Pn	18 01 53.9	-0.1
EPYK	Eagle Plains	4.07	129	P	Pn	18 01 53.8	-0.3
	baz=317						
EPYK				S	Sn	18 02 41.2	-0.5
	baz=317						
POKR	Poker Plat Res	4.19	197	S	Sn	18 02 44.4	-0.1
	baz=14						
MDM	Murphy Dome	4.43	201	ePn	Pn	18 01 57.5	-1.4
TCOL	CIGO, UAF Yank	4.47	198	S	Sn	18 02 53.3	+1.9
	baz=16						
ILB	Eielson Array	4.47	193	ePn	Pn	18 01 59.0	-0.5
CCB	Clear Creek Bu	4.68	197	ePn	Pn	18 02 01.7	-0.7
IM3	Indian Mountai	4.73	232	ePn	Pn	18 02 02.4	-0.6
MLY	Manley	4.77	213	ePn	Pn	18 02 01.5	-2.1
HDA	Harding Lake	4.84	192	ePn	Pn	18 02 03.4	-1.1
HDA	Harding Lake	4.84	192	P	Pn	18 02 04.3	-0.2
	baz=10						
HDA				S	Sn	18 03 00.9	+0.4
	baz=10						
WRH	Wood River Hil	4.88	198	ePn	Pn	18 02 04.6	-0.5
SCRK	Sand Creek	5.18	177	ePn	Pn	18 02 08.9	-0.4
BWN	Browne	5.35	204	ePn	Pn	18 02 10.8	-0.7
RIDG	Independent Ri	5.42	181	ePn	Pn	18 02 11.6	-0.9
DOT	Dot Lake	5.51	178	ePn	Pn	18 02 13.4	-0.4
BPAW	Bear Paw Mtn.	5.66	210	ePn	Pn	18 02 15.0	-0.8
MCK	McKinley	5.70	200	ePn	Pn	18 02 17.2	+0.9
BCA3	Beaver Creek A	6.20	168	ePn	Pn	18 02 23.9	+0.7
PAX	Paxson	6.20	184	ePn	Pn	18 02 22.8	-0.5
MENT	Mentasta	6.23	176	ePn	Pn	18 02 23.2	-0.4
CAST	Castle Rocks	6.49	211	ePn	Pn	18 02 26.2	-0.8
PPLA	Purkeypile	6.99	210	ePn	Pn	18 02 33.4	-0.7
HYT	Haines Junctio	8.85	157	ePn	Pn	18 02 59.8	+0.1

IDC 24 18:09:20.4±1.8, 6°.38S×144°.04E, h0^{km}, mb3.5/2, mb1 3.7/5, mb1mx3.5/29, mbtmp3.5/5, ML3.0/2, Error ellipse: s-maj=49.3km s-min=29.2km az=70.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.31	134	Pn	Pn	18 10 26.9	-0.3
	0.6nm,0.3s,baz=309,slow=14,SNR=3.0						
PMG				Sn	Sn	18 11 12.6	-5.6
	2.7nm,0.3s,baz=323,slow=22,SNR=6.5						
WRA	Warramunga Arr	16.45	214	Pn	Pn	18 13 10.9	-1.9
	0.1nm,0.3s,baz=35,slow=13,SNR=2.7						
ASAR	Alice Springs	19.76	209	P	Pn	18 13 53.1	-0.5
	0.0nm,0.3s,baz=34,slow=10,SNR=5.6						
CMAR	Chiang Mai Arr	50.86	300	P	P	18 18 23.8	+0.3
	0.7nm,0.7s,baz=122,slow=7.2,SNR=4.2						
MKAR	Makanchi Array	75.94	321	P	P	18 21 09.1	-0.2
	0.3nm,0.8s,baz=96,slow=7.2,SNR=2.6						

WEL 24 18:12:01.1, 41°.6S±0°.8×174°.3E±0°.8, h9^{km}±2^{km}, M3.4/11, ML3.6/7, MLv3.4/11, Error ellipse: s-maj=0.0km s-min=0.0km az=132.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	217	S	Sg	18 12 08.5	+1.5
TUWZ	Tuamarina	0.36	303	P	Pg	18 12 08.8	+0.7
TUWZ				S	Sb	18 12 14.4	-0.8
BSWZ	Blackbirch Sta	0.36	255	P	Pg	18 12 08.9	+0.7
BSWZ				S	Sb	18 12 14.8	-0.7
TCW	Tory Channel	0.41	353	P	Pb	18 12 10.1	-0.5
TCW				S	Sb	18 12 16.4	-0.6
BHW	Baring Head	0.45	62	P	Pb	18 12 10.6	-0.6
PLWZ	Palliser	0.69	86	P	Pb	18 12 15.8	+0.5
MSWZ	Moikau Station	0.71	73	P	Pb	18 12 15.9	+0.2
CAW	Cannon Point	0.75	47	P	Pb	18 12 16.3	0.0
NNZ	Nelson	0.83	299	P	Pg	18 12 17.3	+0.2
DUWZ	D'Urville Isla	0.88	339	P	Pn	18 12 20.0	+0.3
KHZ	Kahutara	0.99	217	P	Pn	18 12 21.2	+0.1

*IDC **24** 18:16:57.6±0.7, 62°.90N×149°.10W, h0^{km}, mb3.7/11, mb1 3.9/15, mb1mx3.7/47, mbtmp3.7/15, ML3.3/4, MS2.6/4, Ms1 2.6/4, ms1mx2.3/46, Error ellipse: s-maj=13.7km s-min=10.2km az=110.0*

*ISCJB **24** 18:16:59.2±0.5, 62°.95N±0°.02×148°.73W±0°.05, h15^{km}±3^{km}, mb3.8/11, MS3.1/1, Error ellipse: s-maj=3.6km s-min=2.6km az=10.9*

*AEIC **24** 18:16:59.5, 62°.92N×148°.71W, h11^{km}, ML3.8, MW3.7(NEIC)*

*NEIC **24** 18:16:59.5±0.0, 62°.92N×148°.71W, h11^{km}, MW3.7, ML3.8(AEIC), Moment Tensor Solution. s54 Moment tensor: Scale 10^{14}Nm; M_{rr}2.63; $M_{\theta\theta}$-0.68; $M_{\phi\phi}$-1.95; $M_{r\theta}$-0.95; $M_{\theta\phi}$-1.60; $M_{\phi r}$-2.50; Best double couple: $M_0$3.90000×10^{14} NP1:ϕ_s204.00000°, δ67.00000°, λ81.00000°. NP2:ϕ_s46.00000°, δ25.00000°, λ110.00000°. Principal axes: T 3.7500, Plg67.0000°, Azm98.0000°; N 0.3100, Plg8.0000°, Azm208.0000°; P -4.0600, Plg21.0000°, Azm301.0000°; After AEIC.*

NEIC Felt at Cantwell and Talkeetna.

*ANF **24** 18:17:00.7±3.2, 62°.99N×148°.57W, h10^{km}, ML4.2/3 Error ellipse: s-maj=34.9km s-min=14.8km az=26.0*

ISC 24 18:16:58.9±1.1, 62°.91N±0°.02×148°.74W±0°.03, h9^{km}±7^{km}, n103, σ1^s.30/116, mb3.8/11, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUR	Hurricane	0.42	280	ePg	Pg	18 17 07.6	+0.6
RND	Reindeer	0.50	354	ePg	Pg	18 17 08.7	+0.1
RND				eSg	Sg	18 17 15.1	-0.2
DHY	Denali Highway	0.64	74	ePg	Pg	18 17 11.2	-0.2
DHY				eSg	Sg	18 17 19.7	-0.1
MCK	McKinley	0.83	354	ePg	Pg	18 17 14.7	-0.2
SML	Sawmill	1.12	170	ePn	Pb	18 17 19.5	-0.9
KTH	Kantishna Hill	1.18	304	ePn	Pb	18 17 21.3	-0.2
SCM	Sheep Creek Mo	1.26	148	ePn	Pn	18 17 22.0	-0.7
BWN	Browne	1.31	346	ePn	Pn	18 17 23.3	-0.1
BWN				ePn	Pb	18 17 23.5	-0.1
PMR	Palmer	1.33	188	ePn	Pn	18 17 23.5	-0.1
PMR				eSn	Sb	18 17 39.8	-1.3
PS10	TAPS Pump St10	1.44	68	ePn	Pn	18 17 25.4	+0.2
PAX	Paxson	1.50	86	ePn	Pn	18 17 25.7	-0.3
KNK	Knik Glacier	1.50	175	ePn	Pn	18 17 26.0	0.0
BPAW	Bear Paw Mtn.	1.57	321	ePn	Pn	18 17 26.7	-0.2
PPLA	Purkeypile	1.58	271	ePn	Pn	18 17 27.5	+0.4
SKT	Skwentna	1.60	236	ePn	Pn	18 17 27.6	+0.4
WRH	Wood River Hil	1.60	10	ePn	Pn	18 17 27.3	+0.1
CAST	Castle Rocks	1.60	290	ePn	Pn	18 17 28.0	+0.6
HDA	Harding Lake	1.71	27	ePn	Pn	18 17 28.7	0.0
HDA	Harding Lake	1.71	27	P	Pn	18 17 29.0	+0.2
	baz=209						
HDA				S	Sn	18 17 51.1	+0.4
	baz=209						
SUA	Susitna One	1.73	214	ePn	Pn	18 17 29.2	0.0
PS11	TAPS Pump St11	1.73	117	ePn	Pb	18 17 30.3	-0.4
CCB	Clear Creek Bu	1.79	13	ePn	Pn	18 17 29.7	-0.2
PS08	TAPS Pump Stn8	1.85	27	ePn	Pn	18 17 30.8	0.0
RC01	Rabbit Creek A	1.88	195	ePn	Pn	18 17 32.2	+1.0
RIDG	Independent Ri	1.95	63	ePn	Pn	18 17 33.2	+1.1
TCOL	CIGO, UAF Yank	2.01	11	P	Pn	18 17 33.1	+0.2
	baz=191						
TCOL				S	Sn	18 17 58.4	+0.2
	baz=191						
COLA	College	2.01	11	ePn	Pn	18 17 33.0	+0.1
ILAR	Eielson Array	2.04	23	Pn	Pn	18 17 33.1	-0.3
	18nm,0.3s,baz=203,slow=14,SNR=150						
ILAR				Pg	Pb	18 17 37.1	+1.0
	26nm,0.3s,baz=203,slow=18,SNR=117						
ILAR				Sn	Sn	18 17 59.3	+0.3
	87nm,0.3s,baz=214,slow=21,SNR=35						
ILAR				Lg	Lg	18 18 03.2	
	164nm,0.3s,baz=203,slow=27,SNR=40						
ILB	Eielson Array	2.04	23	ePn	Pn	18 17 33.1	-0.3
MDM	Murphy Dome	2.07	6	ePn	Pn	18 17 34.0	+0.2
JPK	Jack Peak	2.12	151	ePn	Pn	18 17 34.7	+0.3
VMT	TAPS Tl Valdez	2.15	148	ePn	Pn	18 17 35.6	+0.9
GLI	Glacier Island	2.18	158	ePn	Pn	18 17 36.6	+1.4
DOT	Dot Lake	2.24	69	ePn	Pn	18 17 36.6	+0.5
POKR	Poker Plat Res	2.29	14	P	Pn	18 17 37.2	+0.4
	baz=195						
POKR				S	Sn	18 18 05.0	-0.1
	baz=195						
MENT	Mentasta	2.30	87	ePn	Pn	18 17 37.0	+0.1
MLY	Manley	2.31	338	ePn	Pn	18 17 37.0	-0.1
SPU	Mount Spurr	2.33	224	ePn	Pn	18 17 38.0	+0.6
SCRK	Sand Creek	2.39	61	ePn	Pn	18 17 38.3	0.0
FID	Port Fidalgo	2.42	153	ePn	Pn	18 17 40.1	+1.6
FID				ePn	Pb	18 17 40.6	-1.8
PS07	TAPS Pump Stn7	2.42	5	ePn	Pn	18 17 39.5	+0.9
EYAK	Cordova Ski Ar	2.76	148	ePn	Pn	18 17 45.4	+2.2
SEW	Seward	2.83	187	ePn	Pn	18 17 46.7	+2.5
SGAM	Sherman Glacie	2.94	144	ePn	Pn	18 17 47.2	+1.5
PRP	Porcupine Dome	2.97	27	ePn	Pn	18 17 46.0	-0.3
PS06	TAPS Pump Stn6	2.99	352	ePn	Pn	18 17 47.1	+0.7
RDJH	Redoubt Jeurge	3.02	222	ePn	Pn	18 17 49.5	+2.6
RSO	Redoubt South	3.11	220	ePn	Pn	18 17 51.2	+3.0
BCA3	Beaver Creek A	3.18	84	ePn	Pn	18 17 50.3	+1.3
RAGM	Ragged Mountai	3.19	141	ePn	Pn	18 17 50.5	+1.4
BRLK	Bradley Lake	3.32	199	ePn	Pn	18 17 54.4	+3.4
BRSE	Bradley Lake S	3.32	198	ePn	Pn	18 17 53.2	+2.3
TTA	Tatalina	3.33	274	ePn	Pn	18 17 50.7	-0.4
TT01	Tatalina	3.33	273	ePn	Pn	18 17 51.1	+0.1
HMT	Hamilton	3.35	138	ePn	Pn	18 17 52.0	+0.6
CRQM	Cirque	3.42	127	ePn	Pn	18 17 53.0	+0.5
TGL	Tana Glacier	3.54	125	ePn	Pn	18 17 54.9	+0.9
BALM	Baldy	3.55	119	ePn	Pn	18 17 54.8	+0.5
CNPM	China Poot	3.60	201	ePn	Pn	18 17 57.4	+2.6
KAIM	Kayak Island	3.64	143	ePn	Pn	18 17 56.5	+1.2
SVW2	Sparrevohn	3.70	244	ePn	Pn	18 17 57.3	+1.1
WAX	Waxell Ridge	3.73	129	ePn	Pn	18 17 57.6	+0.9
IM3	Indian Mountai	3.77	327	ePn	Pn	18 17 57.6	+0.5
EGAK	Eagle	3.85	57	ePn	Pn	18 17 57.9	-0.2
SNH	Sunshine Point	3.93	131	ePn	Pn	18 18 02.1	+2.7
FYU	Fort Yukon	3.97	21	ePn	Pn	18 17 59.9	+0.1
AUL	Augustine Lava	4.21	215	ePn	Pn	18 18 07.3	+4.2
DAWY	Dawson	4.35	70	ePn	Pn	18 18 06.2	+1.1
COLD	Coldfoot	4.38	353	ePn	Pn	18 18 06.7	+1.2
FONW	Fourpeaked Sta	4.80	214	ePn	Pn	18 18 14.3	+2.9
BM3	Burnt Mountain	4.85	19	ePn	Pn	18 18 12.5	+0.5
PCA	Pinnacle	4.94	121	ePn	Pn	18 18 14.4	+1.1
KAHC	Katmai Hardscr	5.26	219	ePn	Pn	18 18 20.6	+3.0
BCPM	Bancas Point	5.28	120	ePn	Pn	18 18 15.2	-2.6
KDAK	Kodiak Island	5.48	202	Pn	Pn	18 18 21.5	+0.9
	2.1nm,0.3s,baz=23,slow=13,SNR=64						
KDAK				Sn	Sn	18 19 24.8	+1.1
	3.4nm,0.3s,baz=66,slow=20,SNR=3.8						
KDAK				Lg	Lg	18 19 52.3	
	1.0nm,0.3s,baz=163,slow=18,SNR=3.9						
KDAK				LR	LR	18 19 57.2	
	comp=Z,28nm,20.1s,baz=309,slow=33						
KABU	Katmai Buttres	5.66	218	ePn	Pn	18 18 25.7	+2.6
HYT	Haines Junctio	5.71	106	ePn	Pn	18 18 26.3	+2.4
TOLK	Toolik Lake Re	5.77	357	ePn	Pn	18 18 26.8	+2.2
TOLK	Toolik Lake Re	5.77	357	P	Pn	18 18 25.3	+0.8
	baz=176						
TOLK				S	Sn	18 19 30.6	-0.3
	baz=176						
OHAK	Old Harbor	6.14	204	ePn	Pn	18 18 29.4	-0.2
EPYK	Eagle Plains	6.22	51	ePn	Pn	18 18 30.5	-0.2
EPYK	Eagle Plains	6.22	51	P	Pn	18 18 30.7	0.0
	baz=242						
EPYK				S	Sn	18 19 41.9	0.0
	baz=242						
INK	Inuvik	8.29	43	Pn	Pn	18 19 00.6	+1.6
	0.4nm,0.3s,baz=234,slow=15,SNR=4.5						
INK				Sn	Sn	18 20 29.5	-3.1
	0.5nm,0.3s,baz=257,slow=14,SNR=3.2						
INK				Lg	Lg	18 21 18.7	
	0.2nm,0.3s,baz=171,slow=17,SNR=3.7						
DLBC	Dease Lake	10.20	108	Lg	Lg	18 22 23.8	
	0.3nm,0.3s,baz=204,slow=20,SNR=4.0						
DLBC				LR	LR	18 23 40.8	
	comp=Z,69nm,21.7s,baz=338,slow=39						
BBB	Bella Bella	15.34	125	Pn	P	18 20 38.7	-1.3
	0.0nm,0.3s,baz=337,slow=13,SNR=2.1						
YKA	Yellowknife Ar	15.56	76	Pn	Pn	18 20 38.3	+0.3
	0.1nm,0.3s,baz=288,slow=13,SNR=4.0						
YKA				LR	LR	18 27 02.9	
	comp=Z,8.0nm,18.6s,baz=209,slow=38						
YKB5	Yellowknife Ar	15.56	76	ePn	Pn	18 20 38.3	+0.3
ELK	Elko	29.76	122	LR	LR	18 36 48.1	
	comp=Z,41nm,19.7s,baz=214,slow=40						
PDAR	Pinedale Array	30.36	113	P	P	18 23 12.3	+1.3
	0.6nm,0.6s,baz=324,slow=7.3,SNR=6.5						
NV01	Mina Array Sit	30.64	129	eP	P	18 23 15.0	+1.5
NVAR	Mina Array Bea	30.64	129	P	P	18 23 15.0	+1.5
	0.5nm,0.8s,baz=330,slow=8.6,SNR=3.5						
TXAR	Lajitas Array	44.30	118	P	P	18 25 10.1	+1.2
	0.6nm,0.5s,baz=330,slow=7.3,SNR=7.2						
TXAR				PcP	PcP	18 26 54.1	+1.1
	0.3nm,0.7s,baz=317,slow=7.7,SNR=2.9						
ARCES	ARCESS Array B	47.78	3	P	P	18 25 35.1	-0.6
	0.6nm,0.7s,baz=354,slow=7.3,SNR=2.8						
KSRS	Korea Array	54.51	284	P	P	18 26 26.3	-0.2
	1.7nm,0.6s,baz=26,slow=6.9,SNR=2.6						
SONA0	Songino Array	54.70	307	eP	P	18 26 26.8	-1.2
SONM	Songino Array	54.70	307	P	P	18 26 26.8	-1.2
	0.3nm,0.4s,baz=24,slow=5.2,SNR=2.9						
FIA0	FINESS Array S	55.91	3	eP	P	18 26 35.0	-1.3
FINES	FINESS Array B	55.91	3	P	P	18 26 35.0	-1.3
	1.1nm,0.8s,baz=39,slow=9.0,SNR=2.3						
ARU	Arti	59.12	343	P	P	18 26 58.1	-1.0
	0.6nm,0.4s,baz=342,slow=20,SNR=2.7						
BVAR	Borovoye Array	60.40	334	P	P	18 27 07.1	-0.9
	1.0nm,0.7s,baz=62,slow=6.9,SNR=6.1						
ABKAR	Akbulak array	65.89	340	eP	P	18 27 43.4	-1.0
ESDC	Sonseca Array	73.94	28	P	P	18 28 34.2	+0.1
	0.2nm,0.5s,baz=343,slow=4.0,SNR=3.7						
CMAR	Chiang Mai Arr	83.41	298	P	P	18 29 27.9	+1.4
	0.7nm,0.7s,baz=18,slow=6.5,SNR=4.0						

*IDC **24** 18:22:22.2±4.2, 20°.80S×179°.95W, h0^{km}, mb4.1/2, mb1 4.3/2, mb1mx3.7/21, mbtmp4.1/2, Error ellipse: s-maj=255.5km s-min=41.6km az=154.0*

*NEIC **24** 18:23:13.5±1.5, 23°.58S×179°.61E, h478^{km}±14^{km}, mb4.8/10, Error ellipse: s-maj=39.0km s-min=30.2km az=86.0*

ISC 24 18:23:20.0±1.6, 24°.1S±0°.2×179°.3E±0°.2, h537^{km}, n18, σ1^s.55/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUZ	Omahuta	12.16	203	eP	P	18 25 56.6	-3.5
URZ	Urewera	14.27	187	eP	P	18 26 21.8	0.0
BKZ	Black Stump Fm	15.23	188	eP	P	18 26 32.6	+0.5
	87nm,2.0s						
QRZ	Quartz Range	17.64	197	eP	P	18 26 57.7	+2.6
	311nm,2.0s						
THZ	Tophouse	18.43	195	eP	P	18 27 03.8	+1.5
	82nm,1.8s						
KHZ	Kahutara	18.91	193	eP	P	18 27 07.5	+0.9
	158nm,2.0s						
LTZ	Lake Taylor	19.55	196	eP	P	18 27 13.5	+1.1
	64nm,1.6s						
OXZ	Oxford	20.11	196	eP	P	18 27 20.3	+2.7
	91nm,1.8s						
CTAO	Charters Tower	30.83	271	eP	P	18 28 53.7	+1.2
	65nm,1.7s						
ASAR	Alice Springs	41.37	261	P	P	18 30 20.2	+0.6
	0.8nm,0.5s,baz=100,slow=6.9,SNR=33						
WB2	Warramunga Arr	41.73	267	eP	P	18 30 22.6	+0.1
	35nm,1.7s						
WR1	Warramunga Arr	41.75	267	eP	P	18 30 22.2	-0.3
WRA	Warramunga Arr	41.75	267	P	P	18 30 22.2	-0.3
	1.4nm,0.3s,baz=95,slow=9.0,SNR=35						
ARCES	ARCESS Array B	131.92	348	PKP	PKPdf	18 41 30.8	-0.8
	1.1nm,0.9s,baz=45,slow=2.7,SNR=3.2						
FIA0	FINESS Array S	138.40	341	ePKPdf	PKPdf	18 41 42.9	-0.9
FINES	FINESS Array B	138.40	341	PKP	PKPdf	18 41 42.9	-0.9
	0.9nm,0.8s,baz=45,slow=2.4,SNR=2.8						
BR101	Keskin Array S	147.16	307	ePKPbc	PKPbc	18 42 02.7	-0.6
BRTR	Keskin Array B	147.16	307	PKPbc	PKPbc	18 42 02.7	-0.6
	0.9nm,0.7s,baz=90,slow=4.3,SNR=5.8						

*SOME **24** 18:25:12.3, 49°.48N×88°.38E, h15^{km}*

*BJI **24** 18:25:14.0±0.0, 47°.41N×89°.74E, h7^{km}, mb3.9/2, ML3.4/6*

*NNC **24** 18:25:18.9±3.5, 47°.44N×89°.06E, h0^{km}, mb3.9, mpv3.4, Error ellipse: s-maj=27.3km s-min=20.4km az=104.0*

ISC 24 18:25:16.9±0.8, 47°.47N±0°.03×89°.28E±0°.04, h11^{km}, n39, σ2^s.78/64, 7C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	Jazzator, Alta	2.55	332	Pg	Pg	18 26 06.1	+0.4
DGZ				Sg	Sg	18 26 40.2	+1.5
CUR	Chagan-Uzun	2.71	347	Pg	Pg	18 26 08.4	-0.3
CUR				Sg	Sg	18 26 43.0	-0.8
ZSN	Zaisan	3.00	271	eP	Pb	18 26 12.2	+2.0
	1.7nm,0.6s						
ZSN				eS	Sg	18 26 54.8	+1.7
	58nm,0.5s						
AKAR	Aktash	3.06	340	Pg	Pg	18 26 15.1	-0.3
AKAR				Sg	Sg	18 26 54.0	-1.1
CHBI	Chibit, Altay	3.08	338	Pg	Pg	18 26 15.8	0.0
CHBI				Sg	Sg	18 26 54.6	-1.1
TUNR	Tungur	3.33	325	Pg	Pg	18 26 21.4	+0.8
TUNR				Sg	Sg	18 27 05.3	+1.7
TEL	Teeli	3.60	9	Pg	Pb	18 26 23.2	+2.6
TEL				Sg	Sb	18 27 06.7	+2.3
WMQ	Urumqi	3.81	198	ePn	Pn	18 26 15.9	+0.3
WMQ				Sn	Sn	18 27 02.0	+1.6
WMQ				smax	smax		
	comp=N,74nm,0.7s						
WMQ				smax	smax		
	comp=E,89nm,0.7s						
ARTR	Artybash	4.53	344	Pg	Pg	18 26 40.6	-2.9
ARTR				Sg	Sg	18 27 41.0	-1.1
UKR	Ust'-Kan	4.56	321	Pn	Pn	18 26 29.6	+3.7
UKR				Pg	Pg	18 26 43.9	-0.2
UKR				Sg	Sg	18 27 46.6	+3.5
MK31	Makanchi Array	4.82	265	Pn	Pn	18 26 31.6	+2.3
	0.9nm,0.4s,baz=87,slow=15,SNR=40						

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MK31                                Pg     Pg     18 26 45.9  -3.2
      2.9nm,0.5s,baz=87,slow=16,SNR=18
MK31                               ⇓Lg     Lg     18 27 51.1
      26nm,0.5s,baz=83,slow=31,SNR=8.1
MKAR  Makanchi Array      4.82 265  Pg     Pg     18 26 46.5  -2.6
MKAR                                Sg     Sg     18 27 51.8  +0.3
GALT  Gorno-Altaysk,      4.99 336  Pn     Pn     18 26 33.9  +2.3
GALT                                Pg     Pg     18 26 49.8  -2.5
GALT                                Sg     Sg     18 27 57.0  +0.1
MAKZ  Makanchi            5.03 265 ⇓Pn     Pn     18 26 34.0  +1.8
MAKZ                               ⇓Pg     Pb     18 26 47.7  +2.9
      3.0nm,0.7s
MAKZ                               ⇑Lg     Lg     18 27 56.6
      21nm,0.5s
MAKZ  Makanchi            5.03 265  Pn     Pn     18 26 34.4  +2.1
MAKZ                                Pg     Pg     18 26 49.2  -3.9
MAKZ                                Sg     Sg     18 27 56.1  -2.1
TASR  Tashtagol           5.37 351  Pg     Pg     18 26 59.2  -0.5
TASR                                Sg     Sg     18 28 08.3  -0.9
KZLR  Kyzyl               5.41  36  Pn     Pn     18 26 39.5  +2.1
KZLR                                Pg     Pb     18 26 49.8  -1.6
KZLR                                Sg     Sb     18 28 00.6  +4.3
DJO   Djoy, Khakassi      5.46  12  Pg     Pb     18 26 55.5  +3.3
DJO                                 Sg     Sb     18 28 02.8  +5.1
DJOS  Djoyskaya Sosn      5.50  14  Sg     Sb     18 28 05.3  +6.4
CERR  Cheremushki         5.56  13  Sg     Sg     18 28 08.5  -6.9
ARDR  Aradan              5.77  26  Pn     Pn     18 26 43.7  +1.2
ARDR                                Pg     Pb     18 26 58.7  +1.2
ARDR                                Sg     Sb     18 28 13.0  +6.4
VEH   Verkhnyaya Baz      5.83   6  Pg     Pb     18 27 02.7  +4.1
VEH                                 Sg     Sg     18 28 16.5  -7.4
ELT   Eltsovka            6.12 343  Pg     Pg     18 27 09.7  -4.2
ELT                                 Sg     Sg     18 28 30.1  -3.0
ABNR  Abakan              6.41  12  Sg     Sg     18 28 33.9  -8.6
TDJR  Todzha              6.61  39  Pn     Pn     18 26 56.3  +2.3
TDJR                                Pg     Pb     18 27 11.9   0.0
TDJR                                Sg     Sb     18 28 33.6  +2.8
ZAA0  Zalesovo Array      7.08 338 ⇑Lg     Lg     18 29 00.0
      4.3nm,1.1s
KAPS  Kapalarasan         7.20 256  eP     Pb     18 27 16.4  -5.5
KAPS                                eS     Sg     18 29 04.8  -3.2
KURK  Kurchatov           7.72 299  Pn     Pn     18 27 10.3  +1.3
KURK                                Sg     Sg     18 29 25.4  +1.1
KURBB Kurchatov Arra      7.74 298 ⇑Pn     Pn     18 27 10.7  +1.4
      5.9nm,0.5s
KURBB                              ⇑Sn     Sn     18 28 38.9  +2.0
      17nm,0.7s
KURBB                              ⇓Lg     Lg     18 29 25.8
      64nm,0.7s
PDGK  Podgornoye          8.04 243 ⇑Sn     Sn     18 28 43.8  -0.8
      11nm,0.9s
PDGK                               ⇑Lg     Lg     18 29 30.3
      14nm,0.8s
BSTK  Bystrovka, Nov      8.24 332  Pg     Pg     18 27 50.3  -4.2
BSTK                                Sg     Sg     18 29 40.8  -0.3
NVS   Novosibirsk         8.30 335  Sg     Sg     18 29 42.5  -0.4
NVSII Novosibirsk         8.30 335  Sg     Sg     18 29 42.5  -0.4
ALXA  Alekseevka, NS      8.57 333  Sg     Sg     18 29 55.7  +4.1
MOY   Mondy               8.69  57  Pg     Pg     18 27 47.2   -16
MOY                                 Sg     Sg     18 29 38.4   -17
SHTK  Zheleznogorsk-      9.27  15  Sg     Sn     18 29 54.6   +40
TLY   Talaya             10.23  60  Sg     Sn     18 30 25.6   +47
GTA   Gaotai             11.10 133  eP     Pn     18 27 53.8  -1.9
GTA                                 pP            18 27 57.8
GTA                                 sP            18 28 00.8
GTA                                 pmax   pmax
      comp=Z,2.0nm,1.0s
OTUK  Ortayu             11.41 280 ⇑Pn     Pn     18 28 00.3  +0.6
      5.2nm,0.8s
OTUK                               ⇓Sn     Sn     18 30 04.6  -2.6
      2.3nm,0.7s
OTUK                               ⇓Lg     Lg     18 31 17.9
      14nm,1.1s
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NIED **24** *18:43:00, 39°.60N×144°.60E, h5^{km}, Mw3.8 Best double couple: M₀5.94000×10^{14} NP1:φ$_s$332.00000°, δ43.00000°, λ-138.00000°. NP2:φ$_s$208.00000°, δ63.00000°, λ-56.00000°.*

IDC **24** *18:43:24.4±1.1, 39°.45N×144°.73E, h0^{km}, mb3.7/10, mb1 3.8/15, mb1mx3.7/50, mbtmp3.7/15, ML2.7/4, MS2.8/5, Ms1 2.8/5, ms1mx2.5/44, Error ellipse: s-maj=27.2km s-min=18.1km az=107.0*

ISCJB **24** *18:43:26.2±0.6, 39°.52N±0°.04×144°.60E±0°.05, h23^{km}, mb3.6/10, Error ellipse: s-maj=6.4km s-min=4.0km az=135.4*

JMA **24** *18:43:28.5±0.2, 39°.60N×144°.57E, h49^{km}, M3.7*

ISC 24 18:43:27.6±0.8, **39°.49N**±0°.05×**144°.71E**±0°.08, **h23**^{km}, **n34**, σ**2^{s}.36**/49, **mb3.8**/10, **Off east coast of Honshu**

```
Code  Station Name         Δ°  AZ°  Phase ID         Time      Res
                                    Op     ISC     h  m  s     ISC
MIYJ  Miyakonagasawa      2.23 273  P      Pn     18 44 02.6  -0.6
MIYJ                                S      Sn     18 44 27.5  -2.5
JTH   Tanohata            2.24 282  P      Pn     18 44 02.5  -0.7
JTH                                 eS     Sn     18 44 28.3  -1.8
OFUJ  Ofunato             2.39 261  P      Pn     18 44 04.8  -0.5
OFUJ                                eS     Sn     18 44 31.4  -2.5
JANG  Nango               2.61 291  P      Pn     18 44 07.2  -1.1
JANG                                eS     Sn     18 44 35.9  -3.4
JOM   Ohasama             2.64 271  P      Pn     18 44 08.6  -0.2
JOM                                 eS     Sn     18 44 38.3  -1.8
JMK   Ichinoseki          2.76 260  P      Pn     18 44 10.1  -0.3
JMK                                 eS     Sn     18 44 40.7  -2.3
JNBK  Urakawa-nobuka      3.16 333  P      Pn     18 44 15.3  -0.6
JNBK                                S      Sn     18 44 51.7  -1.1
JCH   Churui              3.28 342  P      Pn     18 44 16.2  -1.4
JCH                                 eS     Sn     18 44 51.9  -4.0
JOT   Ohata               3.37 305  P      Pn     18 44 18.6  -0.2
JOT                                 eS     Sn     18 44 55.5  -2.6
JYK   Kaneyama            3.42 262  P      Pn     18 44 19.7  +0.2
JYK                                 eS     Sn     18 44 58.6  -0.8
JAK   Akkeshi             3.50 360  P      Pn     18 44 18.0  -2.6
JAK                                 eS     Sn     18 44 57.9  -3.4
JAR   Ashorobuto          3.87 350  P      Pn     18 44 23.5  -2.2
JAR                                 S      Sn     18 45 05.6  -4.8
NEM2  Nemuro 2            3.95  11  P      Pn     18 44 23.7  -3.1
NEM2                                eS     Sn     18 45 06.2  -6.1
ASAJ  Asahikawa           4.88 342  Pn     Pn     18 44 38.7  -0.9
      0.3nm,0.3s,baz=185,slow=20,SNR=8.5
ASAJ                                Sn     Sn     18 45 37.2  +1.8
      0.8nm,0.3s,baz=278,slow=32,SNR=6.3
JRY   Ryogami san         5.76 235  P      Pn     18 44 50.4  -1.3
JRY                                 S      Sn     18 45 53.2  -3.8
MJAR  Matsushiro Arr      5.91 242  Pn     Pn     18 44 54.0  +0.2
      0.4nm,0.3s,baz=53,slow=10,SNR=29
MJAR                                Sn     Sn     18 45 59.1  -1.7
      0.1nm,0.3s,baz=85,slow=26,SNR=2.8
MJAR                                LR     LR     18 47 24.1
      comp=Z,117nm,19.0s,baz=55,slow=41
MAT   Matsushiro          5.91 242  P      Pn     18 44 54.2  +0.4
MAT                                 S      Sn     18 45 58.8  -2.0
JHJ   Hachijo jima 2      7.49 214  Pn     Pn     18 45 13.8  -1.6
      9.9nm,0.3s,baz=99,slow=17,SNR=11
JHJ                                 Sn     Sn     18 46 32.5  -7.3
      9.2nm,0.3s,baz=72,slow=20,SNR=2.1
JHJ                                 LR     LR     18 47 50.0
      comp=Z,11nm,21.5s,baz=268,slow=36
USRK  Ussuriysk Ar.      10.59 300  Pn     Pn     18 45 58.7  +0.9
      0.2nm,0.3s,baz=110,slow=12,SNR=6.1
JNU   Nakatsue           12.83 245  LR     LR     18 51 42.9
      comp=Z,76nm,18.2s,baz=53,slow=39
KSRS  Korea Array        13.31 267  LR     LR     18 50 51.4
      comp=Z,46nm,20.8s,baz=126,slow=34
KLR   Kul'dur            13.43 321  LR     LR     18 52 30.8
      comp=Z,46nm,18.4s,baz=156,slow=40
PETK  Petropavlovsk-     16.28  29  Pn     Pn     18 47 15.1  +0.6
      0.1nm,0.3s,baz=190,slow=17,SNR=3.4
SEY   Seymchan           23.93   9  P      P      18 48 40.2  +0.7
      2.5nm,0.9s,baz=204,slow=14,SNR=5.8
SONM  Songino Array      28.70 300  P      P      18 49 24.2  +1.2
      0.4nm,0.7s,baz=98,slow=8.9,SNR=2.3
MKAR  Makanchi Array     45.06 301  P      P      18 51 42.1  +0.6
      0.4nm,0.7s,baz=88,slow=7.8,SNR=4.1
ILAR  Eielson Array      46.03  34  P      P      18 51 50.7  +1.7
      0.5nm,0.8s,baz=263,slow=8.3,SNR=6.3
ASAR  Alice Springs      63.63 191  P      P      18 53 56.6  -0.2
      0.8nm,0.8s,baz=9.5,slow=7.9,SNR=4.2
FINES FINESS Array B     67.83 333  P      P      18 54 23.5  +0.1
      0.7nm,0.6s,baz=27,slow=9.4,SNR=3.1
KBZ   Khabaz             71.25 311  P      P      18 54 47.5  +2.7
      0.7nm,0.5s,baz=28,slow=2.3,SNR=3.5
NB2   NORSAR Subarra     72.90 338  P      P      18 54 54.8  +0.3
      comp=Z,0.9nm,0.8s,baz=37,slow=5.9
NOA   NORSAR Array B     72.90 338  P      P      18 54 54.0  -0.4
      comp=Z,0.5nm,0.7s,baz=36,slow=5.9,SNR=3.9
AKASG Malin Array Be     73.91 323  P      P      18 55 00.2  -0.4
      comp=Z,0.6nm,0.4s,baz=48,slow=6.5,SNR=4.5
BRTR  Keskin Array B     79.12 313  P      P      18 55 31.8  +1.3
      comp=Z,0.3nm,0.7s,baz=18,slow=5.2,SNR=3.3
```

IDC **24** *18:44:43.3±0.7, 12°.18N×125°.04E, h0^{km}, mb3.8/10, mb1 3.9/10, mb1mx3.7/40, mbtmp3.8/10, MS3.0/8, Ms1 3.1/8, ms1mx2.8/37, Error ellipse: s-maj=34.4km s-min=15.9km az=72.0*

ISCJB **24** *18:44:49.5±0.4, 12°.29N±0°.03×125°.05E±0°.04, h59^{km}±4^{km}, mb4.0/14, MS3.0/5, Error ellipse: s-maj=7.1km s-min=3.9km az=159.4*

MAN **24** *18:44:49.8, 12°.28N×125°.02E, h35^{km}, mb5.0, ML3.9, MS3.9*

NEIC **24** *18:44:51.0±0.6, 12°.10N×124°.99E, h59^{km}±5^{km}, mb4.4/5, Error ellipse: s-maj=38.8km s-min=15.1km az=76.0*

ISC 24 18:44:50.2±1.0, **12°.27N**±0°.03×**125°.04E**±0°.05, **h47**^{km}±9^{km}, **n55**, σ**1^{s}.58**/63, **mb3.9**/14, **MS2.8**/5, **3C-2D**, **Samar**

```
Code  Station Name         Δ°  AZ°  Phase ID         Time      Res
                                    Op     ISC     h  m  s     ISC
CNP   Catarman            0.44 303  eP     Pn     18 44 59.5  -1.1
CNP                                 eS     Sn     18 45 07.8  -0.2
BESP  Borongan            0.77 150  eP     Pn     18 45 04.3  -0.5
BESP                                eS     Sn     18 45 16.9  +1.5
PLP   Palo                1.10 183⇓eP     Pn     18 45 09.0  -0.3
PLP                                 i S    Sn     18 45 24.3  +0.9
OCLP  Ormoc               1.28 199  eP     Pn     18 45 12.3  +0.5
MMPH  Masbate             1.39 274⇓iP     Pn     18 45 13.3  +0.1
MMPH                                i S    Sn     18 45 30.6  +0.1
PVCP  Virac               1.58 327  eP     Pn     18 45 16.5  +0.7
PVCP                                eS     Sn     18 45 39.2  +4.1
MSLP  Maasin              2.13 185  eP     Pn     18 45 24.7  +1.3
MSLP                                eS     Sn     18 45 51.1  +2.4
LLP   Lapu-Lapu           2.21 209  eP     Pn     18 45 24.2  -0.3
LLP                                 i S    Sn     18 45 50.4  -0.3
RCP   Roxas               2.36 253⇑eP     Pn     18 45 26.9  +0.4
RCP                                 eS     Sn     18 45 54.5  +0.2
AUQP  San Andres          2.54 295  eP     Pn     18 45 30.8  +1.8
OTRP  Odiongan            2.96 272  eP     Pn     18 45 34.0  -0.7
BUTP  Butuan              3.33 170  eP     Pn     18 45 43.8  +3.9
BUTP                                eS     Sn     18 46 27.7   +10
BOAC  Boac                3.34 291  eP     Pn     18 45 40.2  +0.3
BOAC                                eS     Sn     18 46 22.1  +3.7
JAP   San Jose, Anti      3.39 244⇑eP     Pn     18 45 42.9  +2.2
SNPH  Sibulan             3.41 212  eP     Pn     18 45 42.5  +1.5
SNPH                                eS     Sn     18 46 21.9  +1.6
SJMP  San Jose            3.84 273  eP     Pn     18 45 47.8  +1.0
POLP  Polilio Island      3.88 309  eP     Pn     18 45 48.8  +1.3
POLP                                eS     Sn     18 46 35.4  +3.5
DCPH  Dipolog City        4.03 205⇑eP     Pn     18 45 50.0  +0.6
DCPH                                eS     Sn     18 46 36.8  +1.5
CUYO  Cuyo Island         4.19 251  eP     Pn     18 45 51.7   0.0
BUKP  Musuan              4.36 180  eP     Pn     18 45 56.5  +2.4
TGY   Tagaytay City       4.39 295  LR     LR     18 47 58.6
      comp=Z,162nm,18.7s,baz=112,slow=44
PAGZ  Pagadian            4.69 201  eP     Pn     18 45 59.7  +1.2
BUSP  Coron               4.75 267  eP     Pn     18 45 60.0  +0.7
BALP  Baler               4.82 316  eP     Pn     18 46 00.5  +0.2
BALP                                eS     Sn     18 46 51.2  -3.7
DAV   Davao City (W)      5.20 174  LR     LR     18 48 39.1
      comp=Z,176nm,18.6s,baz=4.0,slow=46
PALP  Palanan             5.40 332  eP     Pn     18 46 08.2  -0.1
MATI  Mati                5.42 167  eP     Pn     18 46 09.9  +1.2
CAUP  Cauayan             5.59 327  eP     Pn     18 46 12.2  +1.2
SMPP  San Manuel, Pa      5.72 313  eP     Pn     18 46 13.6  +0.8
APYP  Conner              6.66 327  eP     Pn     18 46 24.8  -0.8
APYP                                eS     Sn     18 47 40.0  -0.2
GUMO  Guam               19.37  84  LR     LR     18 55 05.0
      comp=Z,36nm,19.7s,baz=255,slow=32
JHJ   Hachijo jima 2     24.75  31  LR     LR     18 58 04.5
      comp=Z,29nm,21.9s,baz=288,slow=32
KSRS  Korea Array        25.21   5  LR     LR     19 00 28.2
      comp=Z,28nm,19.7s,baz=178,slow=37
CMAR  Chiang Mai Arr     25.89 287  P      P      18 50 17.1  -1.0
      0.3nm,0.3s,baz=96,slow=7.6,SNR=6.0
CMAR                                LR     LR     19 00 11.2
      comp=Z,13nm,19.1s,baz=190,slow=36
MJAR  Matsushiro Arr     26.92  24  LR     LR     18 59 53.4
      comp=Z,35nm,20.6s,baz=55,slow=34
WR1   Warramunga Arr     33.29 164  eP     P      18 51 21.7  -2.0
WRA   Warramunga Arr     33.29 164  P      P      18 51 21.7  -2.0
      1.2nm,0.7s,baz=341,slow=12,SNR=6.0
AS31  Alice Springs      36.75 166  eP     P      18 51 51.6  -1.8
      1.6nm,1.1s
ASAR  Alice Springs      36.75 166  P      P      18 51 51.8  -1.7
      1.0nm,0.4s,baz=349,slow=7.7,SNR=28
ASAR                                PcP    PcP    18 54 16.1  +0.9
      0.4nm,0.7s,baz=343,slow=2.9,SNR=3.7
SONA0 Songino Array      38.74 340  eP     P      18 52 11.0  +0.9
SONM  Songino Array      38.74 340  P      P      18 52 11.0  +0.9
      0.5nm,0.5s,baz=142,slow=7.2,SNR=4.3
BBOO  Buckleboo          46.05 167  eP     P      18 53 07.8  -1.7
      88nm,1.8s
STKA  Stephens Creek     46.67 161  P      P      18 53 13.3  -1.1
      1.2nm,0.8s,baz=333,slow=9.0,SNR=2.3
STKA  Stephens Creek     46.67 161  eP     P      18 53 13.1  -1.3
      8.3nm,2.0s
PETK  Petropavlovsk-     48.35  26  P      P      18 53 28.0  +0.9
      0.7nm,0.6s,baz=209,slow=11,SNR=3.7
PEA1  Petropavlovsk-     48.35  26  eP     P      18 53 28.1  +0.9
MK32  Makanchi Array     49.72 322  eP     P      18 53 38.0  +0.2
MKAR  Makanchi Array     49.72 322  P      P      18 53 38.0  +0.2
      0.5nm,0.5s,baz=111,slow=10,SNR=6.3
KURK  Kurchatov          53.75 325  eP     P      18 54 07.6  -0.1
      2.8nm,0.6s
URZ   Urewera            69.95 139  LR     LR     19 30 07.3
      comp=Z,62nm,18.0s,baz=234,slow=39
BPAW  Bear Paw Mtn.      76.42  27  eP     P      18 56 34.9  +0.2
      3.7nm,0.9s
ILAR  Eielson Array      78.18  26  P      P      18 56 43.3  -1.2
      0.4nm,0.8s,baz=239,slow=5.1,SNR=4.2
ARCES ARCESS Array B     81.91 339  P      P      18 57 03.2  -1.4
      0.9nm,0.7s,baz=75,slow=6.5,SNR=5.8
FIA0  FINESS Array S     83.57 331  eP     P      18 57 14.2  +1.0
FINES FINESS Array B     83.57 331  P      P      18 57 14.2  +1.0
      0.4nm,0.4s,baz=101,slow=8.0,SNR=3.9
```

ISCJB **24** *18:47:44.8±0.5, 2°.76N±0°.05×127°.14E±0°.07, h100^{km}, mb3.9/5, Error ellipse: s-maj=12.3km s-min=4.4km az=147.2*

MAN **24** *18:47:44.2, 2°.82N×126°.70E, h0^{km}, mb4.7, ML3.6, MS3.5*

IDC **24** *18:47:46.0±1.5, 1°.33N×126°.58E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.6/36, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=52.6km s-min=22.6km az=54.0*

DJA **24** *18:47:46.3±0.4, 3°N±4°×12°7E±°, h44^{km}±48^{km}, M4.3/10, mb4.3/5, mB4.5/2, MLv4.2/10, Mw(mB)3.7/2*

NEIC **24** *18:47:54.1±2.4, 0°.97N×125°.97E, h58^{km}±14^{km}, mb4.2/2, Error ellipse: s-maj=33.9km s-min=17.8km az=210.0*

ISC 24 18:47:45.8±0.9, **2°.77N**±0°.07×**127°.12E**±0°.10, **h100**^{km}, **n21**, σ**0^{s}.93**/23, **mb4.1**/5, **Northern Molucca Sea**

```
Code  Station Name         Δ°  AZ°  Phase ID         Time      Res
                                    Op     ISC     h  m  s     ISC
SGSI  Sangihe             1.83 300  P      Pn     18 48 16.2   0.0
SGSI                                S      Sn     18 48 38.4  -0.9
TNTI  Ternate             2.00 173  ePn    Pn     18 48 17.6  -0.8
TNTI  Ternate             2.00 173  P      Pn     18 48 17.4  -1.0
LBMI  Labuha              3.40 173  P      Pn     18 48 36.5  -0.5
DDMP  Don Marcelino,      3.60 337  eP     Pn     18 48 39.0  -0.5
DDMP                                eS     Sn     18 49 21.9  +0.7
GSPH  General Santos      3.94 327  eP     Pn     18 48 45.1  +0.8
MATI  Mati                4.24 348  eP     Pn     18 48 49.3  +1.1
SKMP  Bagumbayan, Su      4.52 326  eP     Pn     18 48 52.2  +0.2
SKMP                                eS     Sn     18 49 41.2  -2.4
BUKP  Musuan              5.47 338  eP     Pn     18 49 06.5  +1.5
SIJI  Sorong              5.50 131  Pn     Pn     18 49 05.5  +0.1
      2.1nm,0.3s,baz=343,slow=19,SNR=18
SIJI                                Sn     Sn     18 50 06.8  -0.6
      0.6nm,0.3s,baz=307,slow=20,SNR=2.8
LUWI  Luwuk               5.76 229  P      Pn     18 49 10.0  +1.2
PAGZ  Pagadian            6.27 324  eP     Pn     18 49 16.4  +0.7
FAKI  Fak Fak             7.63 138  P      Pn     18 49 34.7  +0.4
WR1   Warramunga Arr     23.66 163  eP     P      18 52 48.1  -0.1
WRA   Warramunga Arr     23.66 163  P      P      18 52 48.1  -0.2
      3.7nm,0.5s,baz=341,slow=12,SNR=25
WB2   Warramunga Arr     23.66 163  eP     P      18 52 48.3   0.0
      16nm,1.4s
ASAR  Alice Springs      27.09 166  P      P      18 53 19.8  +0.5
      0.4nm,0.6s,baz=340,slow=8.4,SNR=4.6
STKA  Stephens Creek     37.10 159  P      P      18 54 47.2  +0.6
      3.5nm,0.6s,baz=346,slow=11,SNR=7.4
STKA  Stephens Creek     37.10 159  eP     P      18 54 47.7  +1.1
      5.2nm,1.7s
MK32  Makanchi Array     58.56 325  eP     P      18 57 50.7   +19
MKAR  Makanchi Array     58.56 325  P      P      18 57 50.7   +19
      0.4nm,0.6s,baz=119,slow=8.6,SNR=5.7
```

ISCJB **24** *18:49:29.1±0.7, 36°.65N±0°.05×70°.34E±0°.09, h204^{km}, mb3.1/4, Error ellipse: s-maj=10.2km s-min=6.5km az=164.6*

NNC **24** *18:49:34.9±3.4, 36°.97N×70°.54E, h219^{km}±49^{km}, mb2.7, mpv3.8, Error ellipse: s-maj=34.0km s-min=26.0km az=179.0*

IDC **24** *18:49:36.5±17.0, 36°.40N×70°.78E, h306^{km}±213^{km}, mb2.9/5, mb1 2.8/6, mb1mx2.6/45, mbtmp3.5/6, Error ellipse: s-maj=92.2km s-min=49.4km az=85.0*

ISC 24 18:49:30.1±0.9, **36°.65N**±0°.08×**70°.40E**±0°.09, **h204**^{km}, **n22**, σ**1^{s}.12**/25, **mb3.3**/4, **2C-4D**, **Hindu Kush region**

```
Code  Station Name         Δ°  AZ°  Phase ID         Time      Res
                                    Op     ISC     h  m  s     ISC
AML   Almayashu           6.04  24  P      Pn     18 50 58.6  +0.5
      SNR=80
UCH   Uchtor              6.41  28  P      Pn     18 51 03.7  +0.6
      SNR=30
KK31  Karatay Array       6.45   1  P      Pn     18 51 04.0  +0.9
      1.2nm,0.2s,baz=171,slow=10,SNR=76
KK31                               ⇓S      S      18 52 14.2  -2.5
      0.8nm,0.3s,baz=184,slow=18,SNR=5.2
EKS2  Erkin-Say           6.54  22  P      Pn     18 51 05.9  +1.5
      SNR=7.9
KZA   Kyzart              6.59  33  P      Pn     18 51 05.3   0.0
      SNR=9.0
AAK   Ala-Archa           6.76  27 ⇑P      Pn     18 51 08.0  +0.7
      2.9nm,0.3s
AAK                                ⇓S      S      18 52 23.2  -1.1
      8.7nm,0.6s
TKM2  Tokmak 2            7.43  31 ⇑P      Pn     18 51 16.2  +0.2
      5.7nm,0.6s
TKM2                               ⇓S      S      18 52 37.9  -2.2
      3.2nm,0.7s
TKM2  Tokmak 2            7.43  31  P      Pn     18 51 16.3  +0.3
      SNR=15
MKAR  Makanchi Array     13.46  37  P      P      18 52 36.9  +1.4
      0.1nm,0.3s,baz=235,slow=5.1,SNR=5.3
AB31  Akbulak array      14.72 332  P      P      18 52 51.2  +1.8
      0.5nm,0.4s,baz=140,slow=11,SNR=15
GKN   Gorkha             14.79 122  eP     P      18 52 50.6   0.0
      14nm,0.3s
DMN   Daman              15.36 122  eP     P      18 52 57.2  +0.2
      6.2nm,0.2s
KKN   Kakani             15.37 121  eP     Pn     18 52 56.9  +0.1
      18nm,0.4s
PKIN  Phulchoki          15.58 121  eP     P      18 52 58.8  -0.6
      14nm,0.4s
PKI   Pulchoki           15.59 121  eP     Pn     18 52 59.7   0.0
      8.9nm,0.4s
AKTO  Aktyubinsk         16.41 331 ⇓P      Pn     18 53 08.7  -0.3
      3.3nm,0.8s
ZALV  Zalesovo Beam      19.98  26  P      P      18 53 47.3  +0.6
      0.9nm,0.3s,baz=217,slow=9.9,SNR=3.3
FINES FINESS Array B     37.09 326  P      P      18 56 20.6  +0.2
      0.7nm,0.8s,baz=65,slow=9.8,SNR=3.1
ARCES ARCESS Array B     40.82 338  P      P      18 56 51.5  +0.3
      0.6nm,0.6s,baz=121,slow=8.7,SNR=6.6
NB2   NORSAR Subarra     43.97 323  P      P      18 57 16.9  +0.1
      comp=Z,0.2nm,0.5s,baz=93,slow=7.9
NOA   NORSAR Array B     43.97 323  P      P      18 57 16.5  -0.3
      comp=Z,0.4nm,0.8s,baz=97,slow=7.8,SNR=4.0
TORD  Torodi Ar. Bea     65.24 268  P      P      18 59 48.0  -2.1
      comp=Z,0.3nm,0.6s,baz=37,slow=6.6,SNR=4.5
```

ROM 24 18:59:37.7±0.1, **43°.401N**±0°.003×**12°.664E**±0°.004, **h10**^{km}, **ML0.8**/5, **Error ellipse: s-maj=0.4km s-min=0.2km az=43.0**, **Central Italy**

```
Code  Station Name         Δ°  AZ°  Phase ID         Time      Res
                                    Op     ISC     h  m  s     ISC
ATFO  Monte Foce - G      0.08 243  P      Pg     18 59 40.5  +0.4
ATFO                                S      Sg     18 59 42.4  +0.5
ATFO                                AML    AML
      comp=E,138μm,0.3s
ATFO                                AML    AML
      comp=N,117μm,0.1s
ATFO                                AML    AML
      comp=E,138μm,0.3s
ATFO                                AML    AML
      comp=N,117μm,0.1s
FOSV  Fossato di Vic      0.13 146  P      Pg     18 59 41.3  +0.5
FOSV                                S      Sg     18 59 43.6  +0.7
PIEI  Pieia               0.16 325  P      Pg     18 59 41.9  +0.5
PIEI                                S      Sg     18 59 44.9  +1.0
PIEI                                AML    AML
      comp=E,48μm,0.4s
PIEI                                AML    AML
      comp=N,49μm,0.2s
PIEI                                AML    AML
      comp=N,49μm,0.2s
PIEI                                AML    AML
      comp=E,48μm,0.4s
ATVO  AVT- Monte Val      0.19 264  P      Pg     18 59 42.3  +0.6
ATVO                                S      Sg     18 59 45.6  +1.1
ATVO                                AML    AML
      comp=E,39μm,0.4s
ATVO                                AML    AML
      comp=N,28μm,0.5s
ATVO                                AML    AML
      comp=N,28μm,0.5s
ATVO                                AML    AML
      comp=E,39μm,0.4s
ATPI  Pietralunga -       0.20 285  P      Pg     18 59 42.6  +0.7
ATPI                                S      Sg     18 59 46.1  +1.3
ATCC  AVT- Casa Cast      0.22 185  P      Pg     18 59 42.9  +0.7
ATCC                                S      Sg     18 59 46.8  +1.5
ATCC                                AML    AML
      comp=E,74μm,0.1s
ATCC                                AML    AML
      comp=N,83μm,0.3s
ATCC                                AML    AML
      comp=N,83μm,0.3s
ATCC                                AML    AML
      comp=E,74μm,0.1s
ASSB  Assisi San Ben      0.36 181  P      Pg     18 59 45.2  +0.4
ASSB                                S      Sb     18 59 50.9  -0.9
ASSB                                AML    AML
      comp=E,14μm,0.8s
ASSB                                AML    AML
      comp=N,18μm,0.2s
ASSB                                AML    AML
      comp=N,18μm,0.2s
ASSB                                AML    AML
      comp=E,14μm,0.8s
```

GEN **24** *18:59:53.5, 44°.19N×10°.18E, h4^{km}, Ml1.9*

ROM 24 18:59:52.7±0.1, **44°.176N**±0°.006×**10°.183E**±0°.005, **h8**^{km}, **ML2.0**/11, **Error ellipse: s-maj=0.7km s-min=0.3km az=6.0**, **Northern Italy**

```
Code  Station Name         Δ°  AZ°  Phase ID         Time      Res
                                    Op     ISC     h  m  s     ISC
T0912 Minucciano (LU      0.02 112  P      Pg     18 59 54.6  +0.3
T0912                               S      Sg     18 59 55.5  +0.2
T0912                               AML    AML
      comp=E,21300μm,0.5s
T0912                               AML    AML
      comp=N,27800μm,0.4s
T0912                               AML    AML
      comp=E,21400μm,0.5s
T0912                               AML    AML
      comp=N,26500μm,0.4s
EQUI  Equi                0.02 245  P      Pg     18 59 54.5  +0.3
EQUI                                S      Sg     18 59 55.3   0.0
EQUI  Equi                0.02 245  P      Pg     18 59 54.5  +0.2
EQUI                                S      Sg     18 59 55.3   0.0
EQUI                                AML    AML
      comp=E,4340μm,0.4s
EQUI                                AML    AML
```

	comp=N,5485µm,0.4s						
FIVI	**Fivizzano**	**0.07**	**327**	P	Pg	18 59 55.0	+0.3
FIVI				S	Sg	18 59 56.2	0.0
T0911	**Castelpoggio (**	**0.10**	**231**	P	Pg	18 59 55.8	+0.7
T0911				S	Sg	18 59 57.6	+0.8
T0911				AML	AML		
	comp=E,1495µm,0.4s						
T0911				AML	AML		
	comp=N,1131µm,0.2s						
T0911				AML	AML		
	comp=E,1495µm,0.4s						
T0911				AML	AML		
	comp=N,1180µm,0.2s						
T0911				AML	AML		
	comp=E,1495µm,0.3s						
T0911				AML	AML		
	comp=N,1127µm,0.2s						
T0911				AML	AML		
	comp=E,1495µm,0.3s						
T0911				AML	AML		
	comp=N,1180µm,0.2s						
T0911				AML	AML		
	comp=E,1495µm,0.3s						
T0911				AML	AML		
	comp=E,1495µm,0.3s						
T0911				AML	AML		
	comp=N,1127µm,0.2s						
T0911				AML	AML		
	comp=N,1180µm,0.2s						
VLC	**Villacollemand**	**0.15**	**96**	P	Pg	18 59 56.6	+0.8
VLC				S	Sg	18 59 59.2	+1.2
VLC				AML	AML		
	comp=E,1030µm,0.7s						
VLC				AML	AML		
	comp=N,1665µm,0.1s						
VLC				AML	AML		
	comp=E,1033µm,0.7s						
VLC				AML	AML		
	comp=N,1775µm,0.1s						
VLC				AML	AML		
	comp=E,1030µm,0.7s						
VLC				AML	AML		
	comp=N,1665µm,0.1s						
VLC				AML	AML		
	comp=E,1033µm,0.7s						
VLC				AML	AML		
	comp=N,1775µm,0.1s						
VLC				AML	AML		
	comp=N,1665µm,0.1s						
VLC				AML	AML		
	comp=E,1030µm,0.7s						
VLC				AML	AML		
	comp=N,1775µm,0.1s						
VLC				AML	AML		
	comp=E,1033µm,0.7s						
FOSD	**Fosdinovo**	**0.15**	**243**	P	Pg	18 59 56.8	+0.9
FOSD				S	Sg	18 59 59.3	+1.3
SARO	**Sassorosso**	**0.16**	**87**	P	Pg	18 59 56.8	+0.8
SARO				S	Sg	18 59 59.3	+0.9
CARD	**Cardoso**	**0.26**	**125**	P	Pg	18 59 58.7	+0.8
CARD				S	Sg	19 00 02.5	+1.1
CARD	**Cardoso**	**0.26**	**125**	P	Pg	18 59 58.8	+0.9
CARD				S	Sg	19 00 02.7	+1.3
CARD				AML	AML		
	comp=E,593µm,0.7s						
CARD				AML	AML		
	comp=N,654µm,0.1s						
CARD				AML	AML		
	comp=E,593µm,0.7s						
CARD				AML	AML		
	comp=N,655µm,0.1s						
CARD				AML	AML		
	comp=N,655µm,0.1s						
CARD				AML	AML		
	comp=E,593µm,0.7s						
PLMA	**Palmaria, Port**	**0.27**	**242**	P	Pb	18 59 58.9	-0.9
PLMA				S	Sg	19 00 02.7	+1.0
PLMA				AML	AML		
	comp=E,661µm,0.3s						
PLMA				AML	AML		
	comp=N,584µm,0.7s						
PLMA				AML	AML		
	comp=E,661µm,0.3s						
PLMA				AML	AML		
	comp=N,584µm,0.7s						
PLMA				AML	AML		
	comp=E,661µm,0.3s						
PLMA				AML	AML		
	comp=N,584µm,0.7s						
BDI	**Bagni Di Lucca**	**0.32**	**111**	P	Pg	18 59 59.6	+0.6
BDI				S	Sb	19 00 04.7	-1.4
BDI				AML	AML		
	comp=E,224µm,0.5s						
BDI				AML	AML		
	comp=N,316µm,0.3s						
BDI				AML	AML		
	comp=N,316µm,0.3s						
BDI				AML	AML		
	comp=E,224µm,0.5s						
CODM	**Codolo**	**0.32**	**312**	P	Pg	18 59 58.4	-0.6
CODM				S	Sg	19 00 03.6	+0.3
GRAM	**Graiana**	**0.33**	**345**	P	Pg	18 59 59.9	+0.8
GRAM				S	Sg	19 00 04.6	+1.1
GRAM	**Graiana**	**0.33**	**345**	P	Pg	18 59 59.9	+0.7
GRAM				AML	AML		
	comp=E,1008µm,0.3s						
GRAM				AML	AML		
	comp=N,1320µm,0.3s						
GRAM				AML	AML		
	comp=E,1008µm,0.3s						
GRAM				AML	AML		
	comp=N,1320µm,0.3s						
GRAM				AML	AML		
	comp=E,1008µm,0.3s						
GRAM				AML	AML		
	comp=N,1320µm,0.3s						
MAIM	**Mastiano**	**0.34**	**140**	P	Pb	19 00 00.3	-0.7
MAIM				S	Sg	19 00 05.0	+1.1
MAIM	**Mastiano**	**0.34**	**140**	P	Pb	19 00 00.3	-0.7
MAIM				S	Sb	19 00 05.4	-1.2
MAIM				AML	AML		
	comp=E,456µm,0.3s						
MAIM				AML	AML		
	comp=N,250µm,1.0s						
MAIM				AML	AML		
	comp=E,456µm,0.3s						
MAIM				AML	AML		
	comp=N,250µm,1.0s						
MAIM				AML	AML		
	comp=N,250µm,1.0s						
MAIM				AML	AML		
	comp=E,456µm,0.3s						
POPM	**Popiglio**	**0.43**	**107**	P	Pg	19 00 01.8	+0.6
POPM				S	Sb	19 00 08.1	-1.2
POPM	**Popiglio**	**0.43**	**107**	P	Pg	19 00 01.9	+0.7
POPM				S	Sb	19 00 08.5	-0.7
POPM				AML	AML		
	comp=E,471µm,0.1s						
POPM				AML	AML		
	comp=N,458µm,1.1s						
POPM				AML	AML		
	comp=N,458µm,1.1s						
POPM				AML	AML		
	comp=E,471µm,0.1s						
MSSA	**Maissana**	**0.50**	**287**	P	Pg	19 00 03.0	+0.6
MSSA				S	Sb	19 00 10.3	-0.9
MTCR	**Monte La Croce**	**0.61**	**104**	P	Pb	19 00 05.1	-0.5
CRMI	**Carmignano**	**0.69**	**124**	P	Pb	19 00 07.2	+0.3
CRMI				AML	AML		
	comp=E,45µm,0.3s						
CRMI				AML	AML		
	comp=N,50µm,0.5s						
CRMI				AML	AML		
	comp=N,50µm,0.5s						
CRMI				AML	AML		
	comp=E,45µm,0.3s						
GROG	**Isola di Gorgo**	**0.78**	**196**	P	Pb	19 00 08.3	-0.2
GROG				AML	AML		
	comp=E,113µm,0.2s						
GROG				AML	AML		
	comp=N,73µm,1.3s						
GROG				AML	AML		
	comp=E,113µm,0.2s						
GROG				AML	AML		
	comp=N,73µm,1.3s						
BOB	**Bobbio (Coli)**	**0.79**	**319**	P	Pb	19 00 09.0	+0.3
BOB				AML	AML		
	comp=E,73µm,0.5s						
BOB				AML	AML		
	comp=N,97µm,0.4s						
BOB				AML	AML		
	comp=E,73µm,0.5s						
BOB				AML	AML		
	comp=N,97µm,0.4s						
CASP	**Castiglione de**	**1.47**	**160**	P	Pn	19 00 19.5	0.0

*ZUR **24** 19:03:34.6, 45°.63N×6°.69E, h2^{km}±2^{km}, MLh2.5/18, Error ellipse: s-maj=4.3km s-min=1.7km az=53.0*

*ROM **24** 19:03:34.9±0.2, 45°.617N±0°.004×6°.78E±0°.01, h6^{km}, ML2.2/15, Error ellipse: s-maj=0.8km s-min=0.5km az=77.0*

*GEN **24** 19:03:34.5, 45°.64N×6°.70E, h3^{km}±2^{km}, Ml2.2*

*LDG **24** 19:03:34.6±0.0, 45°.64N×6°.69E, h4^{km}, Md3.0/2, Ml3.0/34, Error ellipse: s-maj=0.7km s-min=0.6km az=78.0*

*STR **24** 19:03:36.3±0.3, 46°N±2°×°±°, h1^{km}±1^{km}, MLv2.6/7*

*VIE **24** 19:03:41.8±1.0, 45°.84N×7°.02E, h8^{km}, mb2.3/3, ml2.3/4, Error ellipse: s-maj=25.0km s-min=6.7km az=140.0*

ISC 24 19:03:33.8±0.8**, 45°.66N**±0°.01×**6°.62E**±0°.01**, h10**^{km}±4^{km}**, n125,** σ1.^{s}**39**/193**, 4C-2D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RSL	**Roselend**	**0.03**	**9**	Pg	**Pg**	**19 03 36.3**	**+0.3**
RSL	**Roselend**	**0.03**	**9**	⇑Pg	**Pg**	**19 03 36.3**	**+0.3**
RSL				Sg	**Sg**	**19 03 37.2**	**-0.2**
LPL	**La Plagne**	**0.17**	**151**	*e*Pg	**Pg**	**19 03 37.8**	**+0.2**
LPL				*e*Sg	**Sg**	**19 03 39.4**	**-0.8**
	2µm,0.3s						
LPG	**La Plagne**	**0.19**	**150**	*e*Pg	**Pg**	**19 03 38.3**	**+0.3**
LPG				*e*Sg	**Sg**	**19 03 40.0**	**-0.9**
	1µm,0.3s						
MRGE	**Morge**	**0.33**	**71**	⇓Pg	**Pg**	**19 03 40.3**	**-0.1**
MRGE	**Morge**	**0.33**	**71**	P	**Pg**	**19 03 40.4**	**-0.1**
MRGE				S	**Sg**	**19 03 45.0**	**+0.1**
MRGE				AML	AML		
	comp=E,671µm,1.0s						
MRGE				AML	AML		
	comp=N,902µm,0.5s						
MRGE				AML	AML		
	comp=E,671µm,1.0s						
MRGE				AML	AML		
	comp=N,902µm,0.5s						
MRGE				AML	AML		
	comp=N,902µm,0.5s						
MRGE				AML	AML		
	comp=E,671µm,1.0s						
LSD	**Lago del Serru**	**0.41**	**119**	P	**Pg**	**19 03 41.8**	**-0.2**
LSD				S	**Sg**	**19 03 46.3**	**-1.2**
LSD	**Lago del Serru**	**0.41**	**119**	⇑Pg	**Pg**	**19 03 41.8**	**-0.2**
LSD				Sg	**Sg**	**19 03 46.5**	**-1.1**
LSD	**Lago del Serru**	**0.41**	**119**	P	**Pg**	**19 03 41.8**	**-0.2**
LSD				S	**Sg**	**19 03 46.5**	**-1.1**
LSD				AML	AML		
	comp=E,806µm,0.4s						
LSD				AML	AML		
	comp=N,940µm,0.3s						
LSD				AML	AML		
	comp=E,806µm,0.4s						
LSD				AML	AML		
	comp=N,940µm,0.3s						
LSD				AML	AML		
	comp=N,940µm,0.3s						
LSD				AML	AML		
	comp=E,806µm,0.4s						
OGSI	**Sixt**	**0.42**	**13**	⇓Pg	**Pb**	**19 03 42.7**	**-0.6**
REMY	**Saint-Rhmy-en**	**0.42**	**65**	P	**Pg**	**19 03 42.4**	**+0.3**
REMY				S	**Sg**	**19 03 47.6**	**0.0**
REMY	**Saint-Rhmy-en**	**0.42**	**65**	Pg	**Pg**	**19 03 42.3**	**+0.3**
REMY	**Saint-Rhmy-en**	**0.42**	**65**	P	**Pg**	**19 03 42.3**	**+0.2**
REMY				S	**Sg**	**19 03 48.0**	**+0.4**
REMY				AML	AML		
	comp=E,613µm,0.8s						
REMY				AML	AML		
	comp=N,845µm,1.2s						
REMY				AML	AML		
	comp=E,613µm,0.8s						
REMY				AML	AML		
	comp=N,845µm,1.2s						
REMY				AML	AML		
	comp=E,613µm,0.8s						
REMY				AML	AML		
	comp=N,845µm,1.2s						
SALAN	**Lac Salanfe**	**0.54**	**27**	Pg	**Pb**	**19 03 45.0**	**-0.6**
OG02	**Monnetier-Morn**	**0.57**	**331**	Pg	**Pb**	**19 03 46.9**	**+1.1**
OG02				Sg	**Sb**	**19 03 55.0**	**+1.1**
OGSM	**Saint Maurice**	**0.65**	**266**	Pg	**Pn**	**19 03 48.8**	**-0.2**
OGSM				Sg	**Sb**	**19 03 57.5**	**+1.2**
GRYON	**Gryon**	**0.68**	**30**	⇑Pg	**Pb**	**19 03 47.5**	**-0.3**
GRYON				Sg	**Sg**	**19 03 55.7**	**-0.3**
RSP	**Reno Superiore**	**0.69**	**138**	P	**Pg**	**19 03 46.8**	**-0.3**
RSP				S	**Sg**	**19 03 55.2**	**-0.9**
RSP	**Reno Superiore**	**0.69**	**138**	P	**Pg**	**19 03 46.8**	**-0.3**
RSP				S	**Sg**	**19 03 55.5**	**-0.6**
RSP				AML	AML		
	comp=E,498µm,1.4s						
RSP				AML	AML		
	comp=N,410µm,0.6s						
RSP				AML	AML		
	comp=E,498µm,1.4s						
RSP				AML	AML		
	comp=N,410µm,0.6s						
RSP				AML	AML		
	comp=N,410µm,0.6s						
RSP				AML	AML		
	comp=E,498µm,1.4s						
DIX	**Grande Dixence**	**0.69**	**52**	⇑Pg	**Pb**	**19 03 47.4**	**-0.7**
DIX	**Grande Dixence**	**0.69**	**52**	P	**Pb**	**19 03 47.4**	**-0.7**
DIX				AML	AML		
	comp=E,103µm,1.2s						
DIX				AML	AML		
	comp=N,131µm,0.5s						
DIX				AML	AML		
	comp=E,103µm,1.2s						
DIX				AML	AML		
	comp=N,131µm,0.5s						
DIX				AML	AML		
	comp=E,103µm,1.2s						
DIX				AML	AML		
	comp=N,131µm,0.5s						
AIGLE	**Aigle**	**0.72**	**19**	Pg	**Pb**	**19 03 48.4**	**-0.1**
RRL	**Rocca Remolon**	**0.75**	**171**	P	**Pb**	**19 03 48.7**	**-0.4**
RRL				S	**Sg**	**19 03 57.8**	**-0.4**
RRL	**Rocca Remolon**	**0.75**	**171**	P	**Pb**	**19 03 48.7**	**-0.4**
RRL				S	**Sb**	**19 03 59.2**	**-0.2**
RRL				AML	AML		
	comp=E,235µm,1.5s						
RRL				AML	AML		
	comp=N,212µm,0.8s						
RRL				AML	AML		
	comp=E,235µm,1.5s						
RRL				AML	AML		
	comp=N,212µm,0.8s						
RRL				AML	AML		
	comp=E,235µm,1.5s						
RRL				AML	AML		
	comp=N,212µm,0.8s						
SIOV	**Sion-Valere**	**0.77**	**42**	Pg	**Pb**	**19 03 49.1**	**-0.2**
TRAV	**Traversella**	**0.81**	**100**	P	**Pg**	**19 03 49.0**	**-0.4**
TRAV				S	**Sg**	**19 03 58.3**	**-1.6**
TRAV	**Traversella**	**0.81**	**100**	Pg	**Pg**	**19 03 49.0**	**-0.4**
TRAV	**Traversella**	**0.81**	**100**	P	**Pg**	**19 03 49.0**	**-0.4**
TRAV				S	**Sg**	**19 03 59.0**	**-0.9**
TRAV				AML	AML		
	comp=E,210µm,1.3s						
TRAV				AML	AML		
	comp=N,276µm,0.3s						
TRAV				AML	AML		
	comp=E,210µm,1.3s						
TRAV				AML	AML		
	comp=N,276µm,0.3s						
TRAV				AML	AML		
	comp=N,276µm,0.3s						
TRAV				AML	AML		
	comp=E,210µm,1.3s						
OG35	**Corcelles**	**0.83**	**298**	Pg	**Pn**	**19 03 52.2**	**+0.7**
OG35	**Corcelles**	**0.83**	**298**	Pn	**Pn**	**19 03 52.2**	**+0.7**
OG35				Sg	**Sn**	**19 04 04.1**	**+0.3**
SENIN	**Lac Senin/Sane**	**0.85**	**34**	Pg	**Pb**	**19 03 50.6**	**-0.1**
GIMEL	**St. Georges /**	**0.91**	**344**	Pn	**Pn**	**19 03 53.6**	**+0.9**
GIMEL	**St. Georges /**	**0.91**	**344**	P	**Pn**	**19 03 53.6**	**+0.9**
GIMEL				S	**Sn**	**19 04 08.1**	**+2.2**
GIMEL				AML	AML		
	comp=E,300µm,0.7s						
GIMEL				AML	AML		
	comp=N,266µm,0.7s						
GIMEL				AML	AML		
	comp=N,266µm,0.7s						
GIMEL				AML	AML		
	comp=E,300µm,0.7s						
ORIF	**Oris-en-Rattie**	**0.91**	**215**	*e*Pg	**Pb**	**19 03 51.9**	**+0.2**
ORIF	**Oris-en-Rattie**	**0.91**	**215**	*e*Pn	**Pn**	**19 03 52.9**	**+0.2**
ORIF				*e*Sg	**Sb**	**19 04 04.1**	**+0.3**
	comp=E,67nm,0.2s						
BHB	**Bricherasio**	**0.94**	**151**	P	**Pg**	**19 03 51.7**	**-0.1**
BHB				S	**Sg**	**19 04 03.4**	**-0.7**
BHB	**Bricherasio**	**0.94**	**151**	P	**Pg**	**19 03 51.8**	**-0.1**
BHB				S	**Sg**	**19 04 03.7**	**-0.4**
BHB				AML	AML		
	comp=E,154µm,0.3s						
BHB				AML	AML		
	comp=N,176µm,0.5s						
BHB				AML	AML		
	comp=N,176µm,0.5s						
BHB				AML	AML		
	comp=E,154µm,0.3s						
MBDF	**Montbardon**	**0.94**	**173**	*e*Pg	**Pg**	**19 03 51.9**	**0.0**
MBDF				*e*Sn	**Sb**	**19 04 05.9**	**+1.1**
	comp=E,56nm,0.3s						
LKBD	**Leukerbad**	**1.01**	**44**	Pn	**Pb**	**19 03 53.7**	**+0.2**
LKBD2	**Leukerbad 2**	**1.01**	**45**	Pn	**Pb**	**19 03 53.3**	**-0.2**
EMBD	**Embd, Matterta**	**1.01**	**56**	Pn	**Pb**	**19 03 53.1**	**-0.4**
MMK	**Mattmark**	**1.02**	**67**	P	**Pg**	**19 03 53.0**	**-0.4**
MMK				AML	AML		
	comp=E,77µm,1.0s						
MMK				AML	AML		
	comp=N,100µm,1.1s						
MMK				AML	AML		
	comp=N,100µm,1.1s						
MMK				AML	AML		
	comp=E,77µm,1.0s						
CABF	**La Chapelle**	**1.02**	**339**	*e*Pn	**Pn**	**19 03 55.0**	**+0.8**
CABF	**La Chapelle**	**1.02**	**339**	*e*P	**Pn**	**19 03 56.8**	**+2.6**
CABF				*e*Sg	**Sb**	**19 04 07.8**	**+0.7**
CABF				*e*Sn	**Sn**	**19 04 09.2**	**+0.6**
	comp=E,43nm,0.2s						
SIMPL	**Simplonpass**	**1.14**	**59**	Pn	**Pb**	**19 03 55.3**	**-0.3**
SURF	**Saint Ours**	**1.19**	**173**	Sg	**Sn**	**19 04 14.8**	**+1.9**
PZZ	**Stroppo**	**1.21**	**163**	P	**Pg**	**19 03 56.5**	**-0.5**
PZZ				AML	AML		
	comp=E,288µm,1.0s						
PZZ				AML	AML		
	comp=N,260µm,0.2s						
PZZ				AML	AML		
	comp=N,260µm,0.2s						
PZZ				AML	AML		
	comp=E,288µm,1.0s						
BRANT	**Les Verrieres**	**1.28**	**356**	Pn	**Pg**	**19 03 59.7**	**+1.3**
ENR	**Entracque**	**1.54**	**158**	P	**Pn**	**19 04 01.8**	**+0.4**
ENR				AML	AML		
	comp=E,48µm,1.5s						
ENR				AML	AML		
	comp=N,51µm,1.1s						
ENR				AML	AML		
	comp=E,48µm,1.5s						
ENR				AML	AML		
	comp=N,51µm,1.1s						
OGDI	**Digne**	**1.57**	**188**	Pn	**Pg**	**19 04 05.3**	**+1.5**
CHMF	**Charmoille**	**1.59**	**1**	Pg	**Pg**	**19 04 05.8**	**+1.5**
CHMF				Sn	**Sg**	**19 04 25.1**	**+0.2**
CHMF	**Charmoille**	**1.59**	**1**	Pn	**Pg**	**19 04 04.1**	**-0.2**
VIVF	**Saint-Julien-l**	**1.59**	**240**	*e*Pg	**Pg**	**19 04 04.6**	**+0.2**
VIVF				*e*Sg	**Sg**	**19 04 25.6**	**+0.6**
	comp=N,28nm,0.2s						
GBOS	**Grotte di Boss**	**1.66**	**148**	P	**Pb**	**19 04 04.2**	**-0.4**
GBOS				AML	AML		
	comp=E,41µm,0.8s						
GBOS				AML	AML		
	comp=N,39µm,0.8s						
GBOS				AML	AML		
	comp=N,39µm,0.8s						
GBOS				AML	AML		
	comp=E,41µm,0.8s						
LOMF	**Lomont**	**1.70**	**5**	Pn	**Pg**	**19 04 07.7**	**+1.4**
MUGIO	**Muggio**	**1.71**	**80**	P	**Pb**	**19 04 05.1**	**-0.3**
MUGIO				AML	AML		
	comp=E,74µm,0.8s						
MUGIO				AML	AML		
	comp=N,75µm,0.5s						
MUGIO				AML	AML		
	comp=E,74µm,0.8s						
MUGIO				AML	AML		
	comp=N,75µm,0.5s						
BLAF	**les Blancs**	**1.76**	**194**	Pn	**Pg**	**19 04 08.5**	**+1.0**
SMRF	**Simiane la Rot**	**1.84**	**204**	*e*Pg	**Pg**	**19 04 08.6**	**-0.5**
SMRF				*e*Sg	**Sg**	**19 04 32.6**	**-0.4**
	comp=N,15nm,0.5s						
SBF	**Sospel**	**1.89**	**162**	*e*P	**Pb**	**19 04 07.5**	**-0.9**
SBF	**Sospel**	**1.89**	**162**	*e*Pg	**Pb**	**19 04 09.0**	**+0.6**
SBF				*e*Sg	**Sb**	**19 04 32.8**	**+0.7**
	comp=N,28nm,0.3s						
ESCA	**l'Escarene**	**1.91**	**163**	Pn	**Pg**	**19 04 10.7**	**+0.3**
ESCA				Pg	**Pb**	**19 04 12.7**	**+4.1**
CALF	**Calern**	**1.92**	**173**	Pn	**Pg**	**19 04 11.1**	**+0.4**
CALF				Pg	**Pb**	**19 04 13.2**	**+4.2**
IMI	**Imperia**	**1.97**	**152**	AML	AML		
	comp=N,60µm,0.9s						
IMI				AML	AML		
	comp=E,59µm,0.4s						
IMI				AML	AML		
	comp=N,60µm,0.9s						
IMI				AML	AML		
	comp=E,59µm,0.4s						
FRF	**La Foret Royal**	**2.10**	**179**	*e*Pg	**Pb**	**19 04 12.7**	**+0.8**
FRF				*e*Sg	**Sg**	**19 04 40.3**	**-1.0**
	comp=E,17nm,0.4s						
HINF	**Hinteralfeld**	**2.16**	**4**	*e*Pn	**Pn**	**19 04 10.1**	**+0.2**
HINF	**Hinteralfeld**	**2.16**	**4**	*e*P	**Pb**	**19 04 12.2**	**-0.8**
HINF	**Hinteralfeld**	**2.16**	**4**	*e*Pg	**Pg**	**19 04 15.1**	**-0.2**
HINF				*e*Sg	**Sg**	**19 04 43.2**	**-0.1**
	comp=E,29nm,0.4s						
SMF	**Signal de Mont**	**2.17**	**298**	*e*P	**Pb**	**19 04 12.6**	**-0.5**
SMF	**Signal de Mont**	**2.17**	**298**	*e*Pg	**Pg**	**19 04 15.8**	**+0.5**
SMF				*e*Sg	**Sg**	**19 04 44.4**	**+1.0**
	comp=E,69nm,0.3s						
LMR	**La Mourre**	**2.33**	**182**	*e*P	**Pb**	**19 04 14.5**	**-1.3**
LMR	**La Mourre**	**2.33**	**182**	*e*Pg	**Pg**	**19 04 17.7**	**-0.7**
LMR				*e*Sg	**Sg**	**19 04 47.3**	**-1.3**
	comp=E,12nm,0.5s						
HAU	**Haudompre**	**2.35**	**356**	*e*Pn	**Pn**	**19 04 12.7**	**+0.2**
HAU	**Haudompre**	**2.35**	**356**	*e*P	**Pn**	**19 04 14.4**	**+1.9**
HAU	**Haudompre**	**2.35**	**356**	*e*Pg	**Pg**	**19 04 18.9**	**0.0**
HAU				*e*Sn	**Sn**	**19 04 40.3**	**-1.1**
HAU				*e*Sg	**Sg**	**19 04 49.1**	**-0.3**
	comp=E,35nm,0.4s						
LOR	**Lormes**	**2.50**	**311**	*e*P	**Pb**	**19 04 17.3**	**-1.4**
	baz=134						
LOR	**Lormes**	**2.50**	**311**	*e*Pg	**Pg**	**19 04 22.5**	**+0.9**
	baz=132						
LOR				*e*Sg	**Sg**	**19 04 54.8**	**+0.9**
	comp=E,19nm,0.2s,baz=145						
LASF	**Ste Croix**	**2.52**	**232**	*e*P	**Pb**	**19 04 17.7**	**-1.5**
LASF				*e*Sn	**Sn**	**19 04 44.4**	**-1.2**
LASF				*e*Sg	**Sg**	**19 04 54.5**	**-0.4**
	comp=E,9.5nm,0.3s						
AVF	**Avril sur Loir**	**2.53**	**298**	*e*Pn	**Pn**	**19 04 15.4**	**+0.5**
AVF	**Avril sur Loir**	**2.53**	**298**	*e*P	**Pb**	**19 04 18.0**	**-1.3**
AVF	**Avril sur Loir**	**2.53**	**298**	*e*Pg	**Pg**	**19 04 22.5**	**+0.2**
AVF				*e*Sg	**Sg**	**19 04 55.8**	**+0.6**
	comp=E,57nm,0.4s						
SSF	**Saint Saulge**	**2.57**	**304**	*e*Pn	**Pn**	**19 04 16.0**	**+0.5**
SSF	**Saint Saulge**	**2.57**	**304**	*e*P	**Pb**	**19 04 18.9**	**-1.1**
SSF	**Saint Saulge**	**2.57**	**304**	*e*Pg	**Pg**	**19 04 23.4**	**+0.3**
SSF				*e*Sn	**Sn**	**19 04 45.9**	**-0.9**
SSF				*e*Sg	**Sg**	**19 04 56.5**	**+0.1**
	comp=E,17nm,0.3s						
SFTF	**Sexfontaines**	**2.77**	**338**	*e*P	**Pb**	**19 04 21.2**	**-2.1**
	baz=154						
SFTF	**Sexfontaines**	**2.77**	**338**	*e*Pg	**Pg**	**19 04 26.5**	**-0.3**
	baz=152						
SFTF				*e*Sg	**Sg**	**19 05 03.0**	**+0.4**
	comp=E,29nm,0.4s						
BGF	**Bois d'Agland**	**2.77**	**290**	*e*Pn	**Pn**	**19 04 18.8**	**+0.6**
BGF	**Bois d'Agland**	**2.77**	**290**	*e*P	**Pb**	**19 04 21.3**	**-2.1**
BGF	**Bois d'Agland**	**2.77**	**290**	*e*Pg	**Pg**	**19 04 27.1**	**+0.2**

BGF				*e*Sg	Sg	19 05 03.9	+1.0
	comp=E,47nm,0.4s						
DAVA	**Damuels**	2.78	53	Pn	Pb	19 04 22.3	-1.3
	comp=E,0.5nm,0.2s						
DAVA				*e*Pg	Pg	19 04 27.8	+0.8
	comp=E,10nm,0.5s						
DAVA				*e*Sg	Sg	19 05 03.5	+0.5
	comp=E,20nm,0.5s						
CDF	**Champ du Feu**	2.79	9	*e*Pn	Pn	19 04 19.3	+0.8
CDF	**Champ du Feu**	2.79	9	*e*Pg	Pg	19 04 26.4	-0.8
CDF				*e*Sn	Sn	19 04 50.9	-1.4
CDF				*e*Sg	Sg	19 05 02.6	-0.8
	comp=E,6.1nm,0.3s						
PAGF	**Fort de Pagny**	2.96	348	*e*Pn	Pn	19 04 21.1	+0.3
PAGF	**Fort de Pagny**	2.96	348	*e*P	Pn	19 04 23.5	+2.7
PAGF	**Fort de Pagny**	2.96	348	*e*Pg	Pg	19 04 29.9	-0.6
	baz=170						
PAGF				*e*Sg	Sg	19 05 08.4	-0.4
	comp=E,7.3nm,0.4s,baz=172						
MEZF	**Maizieres J'vi**	3.04	340	*e*Pn	Pn	19 04 22.2	+0.3
MEZF	**Maizieres J'vi**	3.04	340	*e*Pg	Pg	19 04 31.4	-0.6
	baz=157						
MEZF				*e*Sg	Sg	19 05 10.9	-0.4
	comp=E,33nm,0.5s						
TCF	**Toulx Ste Croi**	3.14	283	*e*Pn	Pn	19 04 23.9	+0.6
TCF	**Toulx Ste Croi**	3.14	283	*e*P	Pn	19 04 26.2	+2.9
TCF	**Toulx Ste Croi**	3.14	283	*e*Pg	Pg	19 04 34.0	+0.1
TCF				*e*Sn	Sn	19 05 00.2	-0.6
	comp=E,7.2nm,0.4s						
TCF				*e*Sg	Sg	19 05 15.1	+0.5
	comp=E,9.4nm,0.3s						
HYF	**Humbligny**	3.19	302	*e*Pn	Pn	19 04 24.2	+0.3
HYF	**Humbligny**	3.19	302	*e*P	Pb	19 04 27.6	-2.9
HYF	**Humbligny**	3.19	302	*e*Pg	Pg	19 04 34.8	0.0
HYF				*e*Sg	Sg	19 05 16.3	+0.2
CAF	**Calviac**	3.30	259	*e*P	Pn	19 04 28.8	+3.3
CAF				*e*Sg	Sg	19 05 17.9	-1.8
	comp=E,8.3nm,0.3s						
MOTA	**Moosalm**	3.52	60	*i* Pn	Pn	19 04 32.2	+3.5
	comp=E,1.8nm,0.2s,SNR=7.7						
SQTA	**Sankt Quirin**	3.54	62	*e*Pn	Pb	19 04 32.8	-3.7
	comp=E,2.4nm,0.2s,SNR=6.0						
RJF	**Les Rejaudoux**	3.61	266	*e*P	Pn	19 04 33.6	+3.9
RJF	**Les Rejaudoux**	3.61	266	*e*Pg	Pg	19 04 42.4	-0.5
RJF				*e*Sg	Sg	19 05 29.1	-0.5
	comp=E,8.0nm,0.3s						
WTTA	**Wattenberg**	3.82	63	*e*Pn	Pn	19 04 36.8	+4.0
	comp=E,1.3nm,0.2s						
WTTA				Sg	Sg	19 05 35.8	-0.6
	comp=E,9.0nm,0.7s						
MTLF	**Montolieu**	3.91	235	*e*Pn	Pn	19 04 34.1	+0.2
MTLF	**Montolieu**	3.91	235	*e*P	Pn	19 04 36.9	+3.0
MTLF	**Montolieu**	3.91	235	*e*Pg	Pg	19 04 47.7	-1.0
MTLF				*e*Sg	Sg	19 05 37.9	-1.5
	comp=E,2.5nm,0.4s						
LFF	**La Frestale**	4.21	262	*e*Sg	Sg	19 05 47.8	-1.2
	comp=E,10.0nm,0.4s						
GIVF	**Givet**	4.61	345	*e*P	Pn	19 04 46.9	+3.5
BAIF	**Baives**	4.69	341	*e*Pn	Pn	19 04 44.5	-0.1
BAIF	**Baives**	4.69	341	*e*P	Pn	19 04 47.5	+2.9
BAIF				*e*Sn	Sn	19 05 36.6	-2.4
BAIF				*e*Sg	Sg	19 06 02.4	-1.9
MFF	**Saint Martin d**	4.80	284	*e*Pn	Pn	19 04 46.1	+0.1
MFF	**Saint Martin d**	4.80	284	*e*P	Pn	19 04 49.7	+3.7
MFF				*e*Sn	Sn	19 05 39.8	-1.8
MFF				*e*Sg	Sg	19 06 06.3	-1.4
	comp=E,5.8nm,0.5s						
EPF	**Esparros**	5.21	242	*e*Sg	Sg	19 06 19.0	-2.2
	comp=E,2.1nm,0.4s						
LDF	**La Druitiere**	5.46	305	*e*Pn	Pn	19 04 57.1	+2.0
LDF				*e*Sn	Sn	19 05 55.3	-2.5
LDF				*e*Sg	Sg	19 06 26.4	-2.5
	comp=E,1.6nm,0.3s						
FLN	**La Foliniere**	5.75	305	*e*Pn	Pn	19 04 59.4	+0.3
FLN				*e*Sg	Sg	19 06 36.2	-2.0
	comp=E,4.2nm,0.4s						
GRR	**Gorron**	5.79	301	*e*Pn	Pn	19 04 59.8	+0.1
GRR	**Gorron**	5.79	301	*e*P	Pn	19 05 03.0	+3.3
GRR				*e*Sn	Sn	19 06 03.7	-2.5
ETSF	**Etsaut**	5.85	244	*e*Sg	Sg	19 06 38.7	-2.7
	comp=E,1.0nm,0.3s						
KHC	**Kasperske Hory**	5.86	51	*e*PN	Pn	19 05 02.0	+1.3
KHC				*e*SN	Sn	19 06 06.5	-1.4
KHC				*e*SG	Sg	19 06 44.0	+2.1
QUIF	**Quistinic**	7.09	292	*e*P	Pn	19 05 22.1	+4.7

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*DDA **24** 19:06:44.7, 38°.73N×43°.48E, h7^{km}±2^{km}, ML2.6*
*ISK **24** 19:06:44.2, 38°.74N×43°.42E, h14^{km}, ML2.1/4*
*ISCJB **24** 19:06:45.3±0.5, 38°.73N±0°.04×43°.44E±0°.06, h13^{km}, Error ellipse: s-maj=8.1km s-min=3.9km az=31.2*
ISC 24 19:06:44.7±0.9**, 38°.75N**±0°.04×**43°.44E**±0°.06**, h13^{km}, n10, σ0^{s}.45**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	0.16	196	PG	Pb	19 06 49.4	-0.3
VANB				SG	Sb	19 06 53.8	+0.9
TVAN	**Van**	0.22	188	*i* P	Pg	19 06 49.6	-0.2
TVAN				*i* S	Sg	19 06 53.5	+0.4
TVAN				IAML_P			
	comp=Z,10µm,0.2s						
VMUR	**Van-Muradiye**	0.26	23	*i* P	Pb	19 06 51.2	-0.3
VMUR				*i* S	Sb	19 06 56.8	+0.9
VMUR				IAML_P			
	comp=Z,1µm,0.1s						
GEVA	**Gevas**	0.53	215	*i* P	Pg	19 06 55.0	-0.2
GEVA				IAML_P			
	comp=Z,1µm,0.2s						
CLDR	**Caldiran**	0.54	43	PG	Pg	19 06 55.3	-0.1
CLDR				SG	Sb	19 07 04.1	+0.1
CLDR	**Caldiran**	0.54	43	*i* P	Pg	19 06 55.4	-0.1
CLDR				IAML_P			
	comp=Z,2µm,0.1s						
AKDM	**Akdamar-Van**	0.56	221	PG	Pg	19 06 55.3	-0.4
ADCV	**BITLIS_Adilcev**	0.56	276	*i* P	Pb	19 06 57.0	+0.4
ADCV				IAML_P			
	comp=Z,343nm,0.1s						
TUTA	**Tutak**	0.82	323	*i* P	Pn	19 07 01.9	-0.2
GURO	**Guroymak-BITLI**	1.12	260	PN	Pb	19 07 05.8	-0.3
GURO				SN	Sn	19 07 21.4	-0.3

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*ROM **24** 19:13:43.7±0.3, 43°.557N±0°.009×13°.83E±0°.02, h9^{km}, ML2.8/3, Error ellipse: s-maj=1.5km s-min=0.8km az=243.0*
*ISCJB **24** 19:13:45.0±0.4, 43°.54N±0°.03×13°.75E±0°.04, h13^{km}±3^{km}, Error ellipse: s-maj=5.5km s-min=4.0km az=147.1*
ISC 24 19:13:45.0±0.9**, 43°.52N**±0°.03×**13°.79E**±0°.03**, h16^{km}**±6^{km}**, n30, σ0^{s}.72**/37**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOI	**Ancona**	0.14	281	P	Pg	19 13 48.0	-0.9
AOI				S	Sg	19 13 50.7	-0.7
AOI				AML	AML		
	comp=E,2895µm,0.3s						
AOI				AML	AML		
	comp=N,2590µm,0.5s						
AOI				AML	AML		
	comp=E,2895µm,0.3s						
AOI				AML	AML		
	comp=N,2590µm,0.5s						
AOI				AML	AML		
	comp=E,2895µm,0.3s						
AOI				AML	AML		
	comp=N,2590µm,0.5s						
PP3	**Marolino**	0.20	222	P	Pg	19 13 49.0	-0.6
PP3				S	Sg	19 13 53.3	+0.6
PP3				AML	AML		
	comp=E,4635µm,0.8s						
PP3				AML	AML		
	comp=N,6420µm,0.4s						
PP3				AML	AML		
	comp=E,4810µm,0.8s						
PP3				AML	AML		
	comp=N,6435µm,0.4s						
PP3				AML	AML		
	comp=E,4635µm,0.8s						
PP3				AML	AML		
	comp=N,6420µm,0.4s						
PP3				AML	AML		
	comp=E,4810µm,0.8s						
PP3				AML	AML		
	comp=N,6435µm,0.4s						
PP3				AML	AML		
	comp=N,6420µm,0.4s						
PP3				AML	AML		
	comp=N,6435µm,0.4s						
PP3				AML	AML		
	comp=E,4635µm,0.8s						
PP3				AML	AML		
	comp=E,4810µm,0.8s						
PCRO	**Pietralacroce**	0.20	294	P	Pg	19 13 49.4	-0.3
CIMA	**Civitanova Mar**	0.23	202	P	Pg	19 13 50.1	-0.1
CIMA				S	Sg	19 13 55.3	+1.6
CADA	**Capodarco di F**	0.33	183	P	Pg	19 13 51.7	-0.2
CADA				S	Sb	19 13 57.8	+0.2
CADA				AML	AML		
	comp=E,3500µm,0.4s						
CADA				AML	AML		
	comp=N,3345µm,0.7s						
CING	**Cingoli**	0.46	251	P	Pg	19 13 53.7	-0.4
EL6	**Elcito**	0.54	249	P	Pg	19 13 55.1	-0.5
EL6				S	Sb	19 14 04.2	+0.5
CSP1	**Cessapalombo**	0.61	225	P	Pg	19 13 56.3	-0.7
ARVD	**Arcevia**	0.62	268	P	Pg	19 13 56.5	-0.6
SNTG	**Esanatoglia**	0.67	247	P	Pg	19 13 57.5	-0.7
FDMO	**Fiordimonte**	0.71	227	P	Pg	19 13 57.9	-0.9
TRTR	**Tortoreto Alta**	0.72	173	P	Pb	19 13 59.1	-0.1
CESI	**CESI - Serrava**	0.83	231	P	Pg	19 14 00.2	-0.9
NRCA	**Norcia**	0.85	216	P	Pg	19 14 00.3	-1.2
ATFO	**Monte Foce - G**	0.90	260	P	Pg	19 14 01.9	-0.6
ATCC	**AVT- Casa Cast**	0.90	248	P	Pg	19 14 01.6	-0.9
PIEI	**Pieia**	0.91	271	P	Pg	19 14 01.9	-0.7
TERO	**Teramo**	0.91	189	P	Pg	19 14 02.2	-0.5
ASSB	**Assisi San Ben**	0.95	240	P	Pg	19 14 03.0	-0.4
DUGI	**Dugi Otok**	1.03	63	*i* Pg	Pn	19 14 05.3	+0.4
LNSS	**Leonessa**	1.07	211	P	Pb	19 14 04.3	-1.0
ARRO	**Arrone**	1.21	219	AML	AML		
	comp=E,170µm,1.2s						
ARRO				AML	AML		
	comp=E,170µm,1.2s						
ARRO				AML	AML		
	comp=N,150µm,1.5s						
ARRO				AML	AML		
	comp=N,150µm,1.5s						
NVLJ	**Novalja**	1.30	37	*i* Pn	Pg	19 14 09.3	-0.7
NVLJ				Sn	Sg	19 14 27.3	+0.3
ZIRJ	**Zirje**	1.35	84	*e*Pn	Pb	19 14 09.8	-0.2
ZIRJ				Sn	Sg	19 14 29.0	+0.3
MORI	**Morici**	1.43	76	*e*Pn	Pg	19 14 11.6	-1.0
MORI				Sn	Sg	19 14 31.2	0.0
UDBI	**Udbina**	1.74	54	*e*Pn	Pb	19 14 16.7	0.0
HVAR	**Hvar**	1.97	99	*e*Pn	Pn	19 14 18.4	+0.7
STON	**Ston**	2.93	102	*e*Pn	Pn	19 14 30.2	-0.8
SOKA	**Soboth**	3.27	15	Sn	Sn	19 15 14.8	+0.4
	comp=N,1.4nm,0.5s						
ABTA	**Abfaltersbach**	3.35	345	*i* Pn	Pn	19 14 38.0	+1.2

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*MAN **24** 19:15:25.2, 2°.80N×127°.82E, h5^{km}, mb5.1, ML4.1, MS4.2*
*ISCJB **24** 19:15:31.0±0.4, 3°.21N±0°.04×128°.10E±0°.06, h100^{km}, mb3.9/12, Error ellipse: s-maj=9.1km s-min=4.5km az=158.9*
*DJA **24** 19:15:31.0±0.5, 3°N±3°×12°8E±°, h50^{km}, M4.8/10, mb4.8/5, mB5.3/4, MLv4.8/10, Mw(mB)4.7/4*
*IDC **24** 19:15:32.4±2.7, 3°.24N×128°.25E, h95^{km}±26^{km}, mb3.7/12, mb1 3.8/13, mb1mx3.6/35, mbtmp4.1/13, MS3.3/1, Ms1 3.2/1, ms1mx2.3/32, Error ellipse: s-maj=28.6km s-min=12.2km az=76.0*
ISC 24 19:15:32.7±0.6**, 3°.16N**±0°.05×**128°.05E**±0°.08**, h100^{km}, n27, σ1^{s}.56**/35**, mb4.0**/12**, 1C, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	2.46	196	P	Pn	19 16 11.6	+0.2
TNTI				S	Sn	19 16 43.1	+2.1
SGSI	**Sangihe**	2.57	282	P	Pn	19 16 10.4	-2.3
SGSI				S	Sn	19 16 39.8	-3.7
DDMP	**Don Marcelino,**	3.74	322	*e*P	Pn	19 16 26.4	-2.1
DDMP				*e*S	Sn	19 17 14.7	+3.1
LBMI	**Labuha**	3.81	188	P	Pn	19 16 30.9	+1.5
MATI	**Mati**	4.17	335	*e*P	Pn	19 16 34.6	+0.4
MATI				*e*S	Sn	19 17 21.2	-0.7
GSPH	**General Santos**	4.24	313	*e*P	Pn	19 16 35.1	-0.3
KCP	**Kidapawan**	4.83	323⇑	*e*P	Pn	19 16 42.5	-0.8
KCP				*e*S	Sn	19 17 09.8	-28
SKMP	**Bagumbayan, Su**	4.83	314	*e*P	Pn	19 16 42.6	-0.6
SIJI	**Sorong**	5.13	141	P	Pn	19 16 48.0	+0.7
	52nm,0.3s,baz=308,slow=19,SNR=314						
SIJI				S	Sn	19 17 43.4	-1.9
	15nm,0.3s,baz=183,slow=23,SNR=17						
BUKP	**Musuan**	5.55	328	*e*P	Pn	19 16 52.7	-0.3
BUKP				*e*S	Sn	19 17 59.8	+4.2
BUTP	**Butuan**	6.26	337	*e*P	Pn	19 17 04.2	+1.6
LUWI	**Luwuk**	6.72	232	P	Pn	19 17 08.5	-0.4
FAKI	**Fak Fak**	7.35	145	P	Pn	19 17 17.8	+0.3
WRA	**Warramunga Arr**	23.77	165	P	P	19 20 36.0	-0.2
	1.2nm,0.3s,baz=344,slow=12,SNR=17						
ASAR	**Alice Springs**	27.26	168	P	P	19 21 07.9	+0.1
	0.3nm,0.4s,baz=352,slow=7.8,SNR=14						
ASAR				PcP	PcP	19 24 26.1	+0.7
	0.4nm,0.6s,baz=358,slow=2.2,SNR=6.4						
CMAR	**Chiang Mai Arr**	32.29	300	P	P	19 21 54.1	+1.7
	1.0nm,0.9s,baz=117,slow=7.2,SNR=6.1						
KSRS	**Korea Array**	34.13	360	P	P	19 22 07.1	-1.0
	3.3nm,0.8s,baz=179,slow=10,SNR=8.2						
MJAR	**Matsushiro Arr**	34.52	15	P	P	19 22 09.7	-1.8
	1.9nm,0.7s,baz=191,slow=10.0,SNR=6.3						
STKA	**Stephens Creek**	37.14	161	P	P	19 22 34.3	+0.4
	4.7nm,0.7s,baz=332,slow=8.0,SNR=15						
STKA				LR	LR	19 38 36.4	
	comp=Z,44nm,18.7s,baz=189,slow=37						
USRK	**Ussuriysk Ar.**	41.02	4	P	P	19 23 05.8	-0.2
	2.9nm,0.7s,baz=176,slow=7.5,SNR=7.3						
SONM	**Songino Array**	48.27	341	P	P	19 24 03.5	-0.3
	0.6nm,0.8s,baz=138,slow=8.7,SNR=4.1						
PETK	**Petropavlovsk-**	55.47	21	P	P	19 24 56.3	-0.7
	2.1nm,0.6s,baz=189,slow=3.5,SNR=6.0						
MKAR	**Makanchi Array**	58.78	325	P	P	19 25 21.0	+0.5
	2.1nm,0.7s,baz=121,slow=8.1,SNR=24						
MKAR				PcP	PcP	19 26 09.8	+0.6
	0.8nm,0.7s,baz=138,slow=5.2,SNR=4.3						
ILAR	**Eielson Array**	85.06	25	P	P	19 27 56.8	-0.3
	0.7nm,0.9s,baz=316,slow=3.9,SNR=4.9						
ARCES	**ARCESS Array B**	91.44	340	P	P	19 28 25.9	-1.4
	0.6nm,0.7s,baz=83,slow=7.4,SNR=5.3						
TXAR	**Lajitas Array**	120.90	53	PKP	PKiKP	19 34 14.9	+0.5
	0.2nm,0.6s,baz=307,slow=2.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	124.34	288	PKP	PKiKP	19 34 21.4	0.0
	0.2nm,0.4s,baz=108,slow=2.2,SNR=3.9						

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*IDC **24** 19:18:21.1±1.9, 15°.63S×174°.43W, h0^{km}, mb4.1/6, mb1 4.4/6, mb1mx4.0/24, mbtmp4.1/6, MS3.6/1, Ms1 3.6/1, ms1mx2.7/32, Error ellipse: s-maj=81.4km s-min=25.7km az=141.0*
*ISCJB **24** 19:18:25.0±1.6, 15°.5S±0°.4×174°.5W±0°.3, h33^{km}, mb4.3/8, MS3.5/1, Error ellipse: s-maj=65.9km s-min=16.4km az=142.0*
*NEIC **24** 19:18:27.5±0.1, 15°.24S×174°.62W, h35^{km}±9^{km}, mb4.4/4, Error ellipse: s-maj=57.2km s-min=25.6km az=140.0*
ISC 24 19:18:26.3±1.7**, 15°.6S**±0°.4×**174°.4W**±0°.3**, h35^{km}, n15, σ0^{s}.79**/15**, mb4.2**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	30.60	201	LR	LR	19 35 57.4	
	comp=Z,120nm,20.6s,baz=104,slow=34						
WR1	**Warramunga Arr**	48.84	257	*e*P	P	19 27 09.1	+0.4
WRA	**Warramunga Arr**	48.84	257	P	P	19 27 09.1	+0.4
	1.7nm,0.9s,baz=91,slow=8.6,SNR=4.0						
AS31	**Alice Springs**	49.11	252	*e*P	P	19 27 11.4	+0.6
	1.4nm,0.6s						
ASAR	**Alice Springs**	49.11	252	P	P	19 27 11.3	+0.6
	4.4nm,0.6s,baz=86,slow=7.9,SNR=66						
ASAR				PcP	PcP	19 28 32.5	-1.6
	0.4nm,0.9s,baz=91,slow=3.9,SNR=2.9						
PETK	**Petropavlovsk-**	72.56	343	P	P	19 29 49.8	+0.2
	1.9nm,0.6s,baz=126,slow=7.3,SNR=8.0						
PEA1	**Petropavlovsk-**	72.57	343	*e*P	P	19 29 49.8	+0.2
DIB	**Dawson Inlet,**	77.46	24	*e*P	P	19 30 17.4	-0.4
	8.8nm,0.6s						
MOBC	**Moresby Island**	77.62	25	*e*P	P	19 30 17.9	-0.9
ILAR	**Eielson Array**	82.87	12	P	P	19 30 47.0	+0.2
	0.6nm,0.8s,baz=215,slow=4.3,SNR=3.6						
ILB	**Eielson Array**	82.87	12	*e*P	P	19 30 46.2	-0.6
	9.4nm,1.8s						
PD31	**Pinedale Array**	83.09	42	*e*P	P	19 30 49.3	+0.5
	4.6nm,1.8s						
PDAR	**Pinedale Array**	83.09	42	P	P	19 30 50.2	+1.5
	0.7nm,0.6s,baz=204,slow=3.3,SNR=5.8						
CMAR	**Chiang Mai Arr**	91.77	289	P	P	19 31 30.9	-0.1
	1.1nm,0.9s,baz=95,slow=3.0,SNR=3.9						
GERES	**GERESS Array B**	146.22	350	PKPbc	PKPdf	19 38 01.8	-0.3
	0.2nm,0.3s,baz=12,slow=6.8,SNR=4.3						

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*ISCJB **24** 19:35:06.3±0.4, 29°.44N±0°.04×105°.85E±0°.08, h10^{km}, mb3.8/16, MS2.6/1, Error ellipse: s-maj=9.7km s-min=5.3km az=174.7*
*BJI **24** 19:35:07.8±0.0, 29°.34N×105°.74E, h5^{km}, mb3.7/7, ML4.0/8, Ms3.7/5, Ms7 3.4/1*
*IDC **24** 19:35:12.4±4.0, 29°.40N×105°.86E, h42^{km}±39^{km}, mb3.6/17, mb1 3.7/19, mb1mx3.5/53, mbtmp3.8/19, ML3.6/2, MS2.8/2, Ms1 2.9/2, ms1mx2.4/42, Error ellipse: s-maj=20.7km s-min=14.5km az=53.0*
ISC 24 19:35:08.1±0.5**, 29°.41N**±0°.03×**105°.93E**±0°.08**, h10^{km}, n25, σ0^{s}.99**/30**, mb3.9**/16**, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	3.01	167⇑	*i*Pn	Pn	19 35 56.5	+0.5
GYA				Pg	Pg	19 36 05.3	-0.6
GYA				Sn	Sn	19 36 34.1	+1.9
GYA				Sg	Sg	19 36 43.3	-1.6
GYA				smax	smax		
	comp=N,290nm,0.6s						
GYA				smax	smax		
	comp=E,210nm,0.9s						
XAN	**Xi'an**	5.28	28	Pn	Pn	19 36 28.9	+1.8
XAN				Pg	Pb	19 36 46.8	+6.3
XAN				Sn	Sn	19 37 28.9	+0.9
XAN				Sg	Sg	19 37 55.3	-2.2
XAN				smax	smax		
	comp=N,170nm,0.9s						
XAN				smax	smax		
	comp=E,230nm,1.0s						
LZH	**Lanzhou**	6.89	346	Pg	Pg	19 37 20.1	+0.1
LZH				Sg	Sg	19 38 49.3	+0.1
LZH				smax	smax		
	comp=N,64nm,1.0s						
LZH				smax	smax		
	comp=E,84nm,0.7s						
LZH				LR	LR		
	comp=N,240nm,6.5s						
LZH				LR	LR		
	comp=E,320nm,6.5s						
LZH				LR	LR		
	comp=Z,370nm,8.9s						
GTA	**Gaotai**	11.18	335	*e*P	Pn	19 37 48.5	+0.4
GTA				pP		19 37 55.5	
GTA				sP		19 37 58.8	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	12.63	212	P	Pn	19 38 09.4	+1.4
	comp=Z,0.1nm,0.3s,baz=19,slow=12,SNR=4.1						
CMAR				LR	LR	19 43 24.8	
	comp=Z,46nm,18.7s,baz=215,slow=39						
SONM	**Songino Array**	18.40	1	P	P	19 39 23.9	+0.4
	comp=Z,0.3nm,0.3s,baz=184,slow=12,SNR=5.3						
KSRS	**Korea Array**	20.00	61	P	P	19 39 41.6	+0.7
	comp=Z,0.8nm,0.6s,baz=242,slow=12,SNR=2.9						
WMQ	**Urumqi**	20.45	320	*e*P	Pn	19 39 47.3	-0.7
WMQ				pP	sP	19 39 51.3	+1.1
WMQ				pmax	pmax		
	comp=Z,11nm,0.8s						
WMQ				LR	LR		
	comp=Z,54nm,4.1s						
WMQ				LR	LR		
	comp=Z,37nm,5.3s						
MKAR	**Makanchi Array**	25.29	320	P	P	19 40 34.6	-0.1
	comp=Z,2.0nm,0.6s,baz=116,slow=11,SNR=18						
MKAR				LR	LR	19 51 31.0	
	comp=Z,19nm,18.1s,baz=194,slow=39						
USRK	**Ussuriysk Ar.**	25.42	47	P	P	19 40 36.8	+0.9
	comp=Z,1.3nm,0.7s,baz=257,slow=9.6,SNR=3.7						
ZALV	**Zalesovo Beam**	28.93	334	P	P	19 41 07.0	-0.3
	comp=Z,0.8nm,0.4s,baz=125,slow=9.9,SNR=3.9						
KURBB	**Kurchatov Arra**	29.54	324	P	P	19 41 11.9	-0.8
	comp=Z,1.1nm,0.7s,baz=129,slow=9.1,SNR=14						
BVAR	**Borovoye Array**	35.09	322	P	P	19 42 00.2	-1.2
	comp=Z,0.9nm,0.6s,baz=71,slow=11,SNR=6.4						
GEYT	**Alibeck**	40.32	295	P	P	19 42 46.0	+0.1
	comp=Z,2.3nm,0.8s,baz=85,slow=6.4,SNR=4.3						
ARU	**Arti**	42.73	323	P	P	19 43 04.2	-1.1
	comp=Z,1.2nm,0.7s,baz=148,slow=6.1,SNR=7.4						
TIXI	**Tiksi**	44.12	10	P	P	19 43 16.4	+0.1
	comp=Z,1.7nm,0.4s,baz=276,slow=1.0,SNR=10						
WRA	**Warramunga Arr**	56.20	147	P	P	19 44 48.2	-0.3
	comp=Z,1.2nm,0.7s,baz=347,slow=9.9,SNR=3.1						
BRTR	**Keskin Array B**	58.95	301	P	P	19 45 07.8	-0.2
	comp=Z,0.4nm,0.7s,baz=112,slow=6.4,SNR=3.1						
ASAR	**Alice Springs**	59.23	150	P	P	19 45 09.4	-0.4
	comp=Z,0.4nm,0.6s,baz=331,slow=6.8,SNR=8.8						
ARCES	**ARCESS Array B**	59.44	336	P	P	19 45 10.2	-0.5
	comp=Z,0.4nm,0.5s,baz=82,slow=8.7,SNR=5.8						
FINES	**FINESS Array B**	59.85	327	P	P	19 45 13.0	-0.6
	comp=Z,0.9nm,0.6s,baz=98,slow=7.3,SNR=5.5						
SPITS	**Spitsbergen Ar**	61.35	346	P	P	19 45 23.6	-0.1
	comp=Z,2.4nm,0.8s,baz=71,slow=6.2,SNR=3.4						
NB2	**NORSAR Subarra**	66.93	328	P	P	19 45 59.2	-1.3
	comp=Z,0.4nm,0.5s,baz=74,slow=6.5						
NOA	**NORSAR Array B**	66.93	328	P	P	19 45 59.6	-0.9
	comp=Z,0.7nm,0.6s,baz=72,slow=6.4,SNR=7.6						
GERES	**GERESS Array B**	69.86	315	P	P	19 46 19.4	+0.2
	comp=Z,0.2nm,0.5s,baz=86,slow=4.1,SNR=3.4						

WEL 24 19:42:36.3, 42°S±4°×**17°4E**±°**, h5^{km}, M3.3**/25**, ML3.6**/19**, MLv3.3**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=179.5, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.20	226	P	Pg	19 42 41.3	+1.0
TUWZ	**Tuamarina**	0.39	297	P	Pg	19 42 44.4	+0.4
TUWZ				S	Sg	19 42 50.1	+1.0
BHW	**Baring Head**	0.40	60	P	Pb	19 42 45.7	-0.2
BHW				S	Sb	19 42 52.4	+0.1
TCW	**Tory Channel**	0.41	346	P	Pg	19 42 44.9	+0.7
BSWZ	**Blackbirch Sta**	0.41	255	P	Pg	19 42 45.0	+0.6
BSWZ				S	Sb	19 42 51.5	-1.2
PLWZ	**Palliser**	0.64	87	P	Pb	19 42 50.4	+0.4
MSWZ	**Moikau Station**	0.66	73	P	Pb	19 42 50.7	+0.4
CAW	**Cannon Point**	0.70	45	P	Pb	19 42 50.8	-0.2
PAWZ	**Paruwai Farm**	0.80	74	P	Pb	19 42 53.1	+0.5
NNZ	**Nelson**	0.87	296	P	Pg	19 42 53.0	0.0
DUWZ	**D'Urville Isla**	0.89	335	P	Pn	19 42 55.1	-0.4
MTW	**Mount Morrison**	0.94	62	P	Pn	19 42 55.6	-0.5
OGWZ	**Otaki Gorge**	0.98	36	P	Pg	19 42 55.3	+0.3
TRWZ	**Traveller**	0.98	78	P	Pn	19 42 56.6	-0.2
KHZ	**Kahutara**	1.04	218	P	Pn	19 42 57.2	-0.3
HOWZ	**Holdsworth Sta**	1.09	50	P	Pb	19 42 58.0	+0.3
THZ	**Tophouse**	1.14	262	P	Pg	19 42 58.0	-0.2
TMWZ	**Te Maipa**	1.22	66	P	Pg	19 42 59.6	-0.2
MRZ	**Mangatainoka R**	1.29	43	P	Pg	19 43 01.1	0.0
OHWZ	**Ohakea**	1.56	26	P	Pg	19 43 06.2	0.0
PRWZ	**Pori Road**	1.58	49	P	Pn	19 43 04.8	-0.2
POWZ	**Post Office Ro**	1.59	41	P	Pn	19 43 05.7	+0.5
QRZ	**Quartz Range**	1.62	298	P	Pb	19 43 06.5	-0.2
BFZ	**Birch Farm**	1.67	57	P	Pn	19 43 05.3	-0.8
GVZ	**Greta Valley S**	1.70	216	P	Pn	19 43 06.0	-0.7
WAZ	**Wanganui**	1.90	13	P	Pb	19 43 11.7	+0.2
TSZ	**Takapari Road**	1.94	38	P	Pn	19 43 10.1	+0.1
LTZ	**Lake Taylor**	1.98	233	P	Pn	19 43 10.5	0.0
LREZ	**Lake Rotokare**	2.14	360	P	Pb	19 43 16.0	+0.3
PNHZ	**Pukenui**	2.17	39	P	Pn	19 43 13.0	-0.2
NMEZ	**Namu Road**	2.23	349	P	Pb	19 43 16.6	-0.5
PREZ	**Palmer Road**	2.27	355	P	Pb	19 43 17.7	-0.1
KHEZ	**Kahui Hut**	2.33	352	P	Pb	19 43 17.7	-1.2
OKCZ	**Okains Bay**	2.34	205	P	Pn	19 43 13.5	-1.9
MTVZ	**Mangateitei**	2.36	20	P	Pb	19 43 19.5	+0.1
NBEZ	**Newall Road No**	2.37	350	P	Pb	19 43 19.9	+0.4
PKVZ	**Pokaka**	2.42	17	P	Pb	19 43 20.8	+0.4
MOVZ	**Moawhango**	2.42	25	P	Pn	19 43 18.3	+1.7
PKE	**Pukeiti**	2.43	352	P	Pb	19 43 19.8	-0.7
BHHZ	**Black Hill Sta**	2.46	31	P	Pb	19 43 21.6	+0.5
KRHZ	**Kereru**	2.46	38	P	Pn	19 43 18.9	+1.7

MQZ	McQueen's Vall	2.47	211	P	Pn	19 43 14.7	-2.4
WHVZ	Whangaehu Hut	2.49	22	P	Pn	19 43 19.5	+1.8
VRZ	Vera Road	2.49	6	P	Pb	19 43 20.2	-1.4
FWVZ	Far West T-bar	2.51	21	P	Pb	19 43 21.6	-0.3
TUVZ	Tukino	2.52	23	P	Pn	19 43 19.6	+1.5
NGZ	Ngauruhoe	2.59	21	P	Pb	19 43 23.5	+0.1
WTVZ	West Tongariro	2.65	20	P	Pb	19 43 24.9	+0.6
KRVZ	Karewarewa	2.68	21	P	Pb	19 43 25.7	+0.9
HIZ	Hauiti	3.11	6	P	Pb	19 43 29.1	-2.9
AWAZ	Awhitu Peninsu	4.54	2	P	Pn	19 43 49.9	+4.3

IDC ***24*** *19:48:26.2±6.3, 21°73N×124°03E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.4/32, mbtmp3.8/3, Error ellipse: s-maj=428.7km s-min=28.3km az=61.0*

ISCJB ***24*** *19:48:32.8±1.0, 20°25N±0°06×120°90E±0°07, h10^{km}, mb3.6/3, Error ellipse: s-maj=11.2km s-min=7.0km az=34.8*

MAN ***24*** *19:48:34.5, 20°31N×121°10E, h74^{km}, mb5.0, ML3.9, MS3.9*

ISC 24 19:48:33.7±1.2**, 20°28N**±0°07×**121°03E**±0°09**, h10^{km}, n12,** σ**1^{s}47**/17**, mb4.0**/3**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.89	79	eP	Pn	19 48 52.0	-0.3
BBP				eS	Sn	19 49 05.8	+0.5
BBP	Basco	0.89	79	⇓iP	Pn	19 48 52.1	-0.2
BBP				i S	Sn	19 49 06.0	+0.8
SGCP	Mt. Cagua	2.24	154	eP	Pn	19 49 10.9	+0.1
SGCP				eS	Sn	19 49 36.5	-2.0
APYP	Conner	2.41	175	eP	Pn	19 49 12.1	-1.1
APYP				eS	Sn	19 49 43.2	+0.4
ABRA	Dolores	2.63	187	eP	Pn	19 49 15.7	-0.6
ABRA				eS	Sn	19 49 47.8	-0.4
CVP	Callao Caves	2.67	164	⇑iP	Pn	19 49 17.1	+0.4
CAUP	Cauayan	3.40	167	eP	Pn	19 49 30.9	+4.1
PALP	Palanan	3.46	157	eP	Pn	19 49 29.0	+1.4
SMPP	San Manuel, Pa	4.12	185	eP	Pn	19 49 37.9	+1.2
MKAR	Makanchi Array	41.11	319	P	P	19 56 18.3	+0.5
	0.3nm,0.7s,baz=124,slow=7.2,SNR=4.1						
WRA	Warramunga Arr	42.04	161	P	P	19 56 24.3	-1.4
	2.1nm,0.5s,baz=348,slow=11,SNR=12						
ASAR	Alice Springs	45.44	163	P	P	19 56 52.5	-0.5
	0.8nm,0.5s,baz=346,slow=6.8,SNR=16						

BJI ***24*** *19:51:53.0±0.0, 12°79N×93°23E, h41^{km}, mb4.5/40, mB4.6/27, Ms4.0/5, Ms7 3.8/2*

MOS ***24*** *19:51:53.5±1.0, 13°09N×93°21E, h33^{km}, mb4.5/24, Error ellipse: s-maj=10.7km s-min=6.4km az=100.1*

NEIC ***24*** *19:51:55.0±1.2, 12°98N×93°24E, h34^{km}±6^{km}, mb4.7/33, Error ellipse: s-maj=16.9km s-min=8.4km az=132.0*

ISCJB ***24*** *19:51:56.9±1.2, 13°05N±0°05×93°26E±0°06, h66^{km}±10^{km}, mb4.4/64, Error ellipse: s-maj=10.5km s-min=7.4km az=147.9*

IDC ***24*** *19:51:57.8±2.5, 13°08N×93°28E, h55^{km}±21^{km}, mb3.9/20, mb1 4.0/22, mb1mx3.9/38, mbtmp4.2/22, ML4.3/2, MS3.4/6, Ms1 3.4/6, ms1mx3.0/32, Error ellipse: s-maj=17.4km s-min=11.9km az=55.0*

ISC 24 19:51:57.9±1.4**, 13°09N**±0°06×**93°18E**±0°08**, h56^{km}**±11^{km}**, n136,** σ**1^{s}36**/147**, mb4.4**/64**, MS3.5**/6**, 4C-3D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDT	SRDT	5.91	77	P	Pn	19 53 25.0	+2.1
	25nm,0.6s,1µm0.1nm						
PHET	Kaeng Krachan	6.29	91	P	Pn	19 53 28.4	+0.2
	107µm,0.8s,361nm						
UMPA	Umpang Tak	6.31	60	P	Pn	19 53 28.2	-0.3
	210µm,0.7s,745nm						
UTHA	Uthaitani	6.55	67	P	Pn	19 53 32.1	+0.4
	59µm,0.6s,697µm229nm						
CM31	Chiang Mai Arr	7.70	45	ePn	Pn	19 53 45.2	-2.3
CM31				eSn	Sn	19 55 11.8	-1.5
CMAR	Chiang Mai Arr	7.70	45	P	Pn	19 53 46.7	-0.8
	2.5nm,0.3s,baz=236,slow=15,SNR=63						
CMAR				S	Sn	19 55 12.3	-1.1
	0.4nm,0.3s,baz=238,slow=18,SNR=3.4						
CMAR				LR	LR	19 57 06.8	
	comp=Z,138nm,19.3s,baz=204,slow=40						
CHTO	Chiang Mai	7.95	44	ePn	Pn	19 53 49.1	-1.7
CHTO	Chiang Mai	7.95	44	eP	Pn	19 53 49.1	-1.7
CMMT	Chiang Mai	7.95	44	P	Pn	19 53 50.5	-0.4
	12nm,0.6s,0.0nm						
LAMP	Lampang	8.23	48	P	Pn	19 53 57.2	+2.4
	97µm,0.6s,377nm						
PBKT	Sadao Pong	8.29	64	P	Pn	19 53 56.5	+0.9
	21nm,1.1s,0.1nm						
UTTA	Uttaradit	8.49	56	P	Pn	19 53 59.0	+0.8
	40µm,0.8s,315µm125nm						
PHRA	Phrae	8.66	51	P	Pn	19 54 02.1	+1.5
	2.0nm,0.8s						
PAYA	Payao	8.95	45	P	Pn	19 54 05.1	+0.4
	102µm,0.6s						
CHAI	Chaiyaphum	8.98	71	P	Pn	19 54 06.7	+1.7
	46µm,0.9s,450µm						
NONG	Nongkai	10.80	61	P	Pn	19 54 32.4	+2.5
	0.3nm,1.0s						
PSI	Prapat	11.70	150	P	Pn	19 54 44.0	+1.8
	0.5nm,0.3s,baz=342,slow=20,SNR=1.7						
PANO	Nakornpanom	11.76	69	P	Pn	19 54 48.6	+5.7
PALK	Pallekele	13.57	246	S	Sn	19 57 25.3	-12
	0.5nm,0.3s,baz=114,slow=20,SNR=3.1						
KMI	Kunming	14.99	36	P	P	19 55 29.8	-1.2
KMI				sP	Pn	19 55 41.8	+15
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	Lhasa	16.64	354	eP	Pn	19 55 47.8	0.0
	23nm,1.5s						
LSA	Lhasa	16.64	354	eP	Pn	19 55 47.8	0.0
LSA				pmax	pmax		
	comp=Z,23nm,1.5s						
CD2	Chengdu	20.24	27	P	P	19 56 28.8	+0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
ENH	Enshi	22.80	39	eP	P	19 56 54.1	-2.0
	comp=Z,30nm,0.8s						
LZH	Lanzhou	24.83	21	eP	P	19 57 15.4	+0.2
LZH				pP	pP	19 57 26.3	-2.6
LZH				sP	sP	19 57 31.8	-3.7
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,120nm,4.4s						
XAN	Xi'an	25.30	32	eP	P	19 57 17.6	-1.7
	comp=Z,11nm,0.9s						
XAN	Xi'an	25.30	32	P	P	19 57 19.0	-0.3
XAN				pP	pP	19 57 35.0	+2.1
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN	Xi'an	25.30	32	eP	P	19 57 17.6	-1.7
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
WHN	Wuhan	26.15	45	eP	P	19 57 30.9	+3.9
GTA	Gaotai	26.87	11	⇑P	P	19 57 34.3	+0.8
GTA				pP	pP	19 57 40.4	-7.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,22nm,4.6s						
TGY	Tagaytay City	27.00	85	LR	LR	20 06 54.8	
	comp=Z,168nm,20.0s,baz=177,slow=33						
JAGI	Jajag, Banyuwa	29.88	135	eP	P	19 57 57.2	-3.3
	comp=Z,60nm,0.7s						
NJ2	Nanjing	30.17	47	eP	P	19 58 02.1	-0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSH	Kashi	30.39	333	eP	P	19 58 04.5	-0.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	Urumqi	30.98	352	eP	P	19 58 12.4	+2.4
WMQ				pP	pP	19 58 23.0	-1.1
WMQ				sP	sP	19 58 28.5	-2.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,53nm,5.1s						
WMQ				LR	LR		
	comp=Z,95nm,20.7s						
WMQ				LR	LR		
	comp=Z,220nm,19.5s						
HHC	Hu-ho-hao-te	32.00	27	P	P	19 58 20.0	+1.0
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,60nm,5.2s						
ARSB	Arslanbob	33.20	332	eP	P	19 58 30.6	+1.1
	comp=Z,18nm,1.6s						
AAK	Ala-Archa	33.59	335	⇑eP	P	19 58 32.3	-0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	34.82	347	eP	P	19 58 43.4	0.0
	comp=Z,3.6nm,0.9s						
MK31	Makanchi Array	34.82	347	eP	P	19 58 43.4	0.0
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK32	Makanchi Array	34.82	347	eP	P	19 58 43.9	+0.5
MK32				ePcP	PcP	20 01 16.0	+0.4
MKAR	Makanchi Array	34.82	347	P	P	19 58 43.9	+0.4
	comp=Z,4.2nm,0.8s,baz=161,slow=8.2,SNR=40						
MKAR				PcP	PcP	20 01 16.0	+0.4
	comp=Z,0.3nm,0.5s,baz=202,slow=4.0,SNR=4.2						
MKAR				LR	LR	20 17 42.4	
	comp=Z,35nm,18.4s,baz=152,slow=44						
MAKZ	Makanchi	34.91	347	eP	P	19 58 44.0	-0.1
	comp=Z,3.4nm,0.7s						
MAKZ	Makanchi	34.91	347	eP	P	19 58 44.0	-0.1
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONA0	Songino Array	36.35	15	eP	P	19 58 57.2	+0.6
SONA0				ePcP	PcP	20 01 21.7	+1.5
SONM	Songino Array	36.35	15	P	P	19 58 57.2	+0.6
	comp=Z,3.3nm,0.9s,baz=199,slow=9.0,SNR=15						
SONM				PcP	PcP	20 01 21.7	+1.5
	comp=Z,0.6nm,0.6s,baz=198,slow=4.2,SNR=3.9						
SONM				LR	LR	20 16 12.6	
	comp=Z,58nm,18.2s,baz=182,slow=40						
ULN	Ulaanbaatar	36.55	16	eP	P	19 58 58.9	+0.5
	comp=Z,2.1nm,0.9s						
ULN	Ulaanbaatar	36.55	16	eP	P	19 58 58.9	+0.5
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGZ	Jazzator, Alta	36.81	354	⇑eP	P	19 58 59.9	-0.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TJN	Taejon	38.43	47	deP	P	19 59 13.8	-0.4
KS15	Wonju Array Si	39.31	46	eP	P	19 59 21.0	-0.6
	comp=Z,53nm,1.5s						
KSRS	Korea Array	39.34	46	P	P	19 59 21.0	-0.8
	comp=Z,4.9nm,0.7s,baz=240,slow=8.9,SNR=13						
KURK	Kurchatov	39.35	345	eP	P	19 59 22.1	+0.3
	comp=Z,3.6nm,0.9s						
KURK	Kurchatov	39.35	345	eP	P	19 59 22.1	+0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	Talaya	39.41	10	eP	P	19 59 23.6	+1.4
	comp=Z,2.0nm,0.7s						
TLY	Talaya	39.41	10	eP	P	19 59 23.8	+1.6
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GEYT	Alibeck	39.79	315	P	P	19 59 27.8	+2.1
	comp=Z,3.5nm,0.7s,baz=128,slow=9.6,SNR=7.4						
ZAA0	Zalesovo Array	41.29	353	eP	P	19 59 37.9	+0.2
	comp=Z,4.2nm,0.7s						
ZALV	Zalesovo Beam	41.29	353	P	P	19 59 37.9	+0.2
	comp=Z,3.9nm,0.5s,baz=178,slow=8.8,SNR=23						
ZAA1	Zalesovo Array	41.30	353	eP	P	19 59 37.9	+0.2
BRVK	Borovoye	43.85	340	eP	P	19 59 58.0	-0.5
	comp=Z,3.5nm,0.8s						
BRVK	Borovoye	43.85	340	eP	P	19 59 58.0	-0.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ABKAR	Akbulak array	45.25	330	eP	P	20 00 10.8	+1.1
	comp=Z,3.3nm,0.7s						
RAYN	Ar Rayn	46.25	290	eP	P	20 00 14.7	-3.4
	comp=Z,14nm,1.9s						
RAYN	Ar Rayn	46.25	290	eP	P	20 00 14.7	-3.4
RAYN				pmax	pmax		
	comp=Z,14nm,1.9s						
MJB9	Matsu-Tunnel	46.53	52	eP	P	20 00 19.0	-1.1
	comp=Z,22nm,1.8s						
MAJO	Matsushiro	46.53	52	eP	P	20 00 19.2	-0.9
	comp=Z,23nm,1.8s						
MAJO				ePcP	PcP	20 01 53.6	0.0
MAJO	Matsushiro	46.53	52	eP	P	20 00 19.2	-0.9
MAJO				e		20 01 53.6	
MAJO				pmax	pmax		
	comp=Z,23nm,1.8s						
MJAR	Matsushiro Arr	46.53	52	PcP	PcP	20 01 53.6	0.0
	comp=Z,1.2nm,0.6s,baz=204,slow=1.6,SNR=5.3						
SVE	Sverdlovsk	50.24	337	eP	P	20 00 48.0	-0.2
SVE				pmax	pmax		
	comp=Z,13nm,0.9s						
ARU	Arti	50.76	336	eP	P	20 00 52.2	+0.1
	comp=Z,4.3nm,0.7s						
ARU	Arti	50.76	336	d iP	P	20 00 51.8	-0.3
ARU						20 02 03.9	
ARU						20 02 43.1	
ARU				S	S	20 08 09.1	+5.6
ARU				SS	SS	20 11 32.9	-5.6
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	52.14	128	P	P	20 01 01.6	-1.4
	comp=Z,2.4nm,0.6s,baz=297,slow=9.4,SNR=16						
WRA				PcP	PcP	20 02 14.1	-0.2
	comp=Z,0.9nm,0.5s,baz=280,slow=4.6,SNR=6.9						
WR1	Warramunga Arr	52.14	128	eP	P	20 01 01.6	-1.4
WR1				ePcP	PcP	20 02 14.1	-0.2
WRAB	Tennant Creek	52.14	128	eP	P	20 01 01.8	-1.2
	comp=Z,39nm,1.6s						
WRAB	Tennant Creek	52.14	128	eP	P	20 01 01.8	-1.2
WRAB				pmax	pmax		
	comp=Z,39nm,1.6s						
WB2	Warramunga Arr	52.15	128	eP	P	20 01 01.6	-1.4
	comp=Z,42nm,1.9s						
KIV	Kislovodsk	52.89	316	eP	P	20 01 10.2	+1.8
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
AS31	Alice Springs	54.04	132	eP	P	20 01 15.8	-1.2
	comp=Z,8.3nm,1.9s						
ASAR	Alice Springs	54.04	132	P	P	20 01 15.8	-1.3
	comp=Z,0.8nm,0.5s,baz=307,slow=6.8,SNR=27						
ASAR				PcP	PcP	20 02 21.3	-0.2
	comp=Z,0.9nm,0.7s,baz=311,slow=4.1,SNR=6.6						
ASAR				ScP	ScP	20 06 14.6	-0.3
	comp=Z,0.4nm,0.8s,baz=325,slow=4.7,SNR=3.5						
ANN	Anapa	56.74	315	eP	P	20 01 32.7	-3.3
ANN				e		20 03 38.6	
ANN				eS	S	20 09 25.6	+0.9
BR101	Keskin Array S	58.38	309	eP	P	20 01 47.6	-0.3
BR131	Keskin Array S	58.38	309	eP	P	20 01 47.6	-0.3
	comp=Z,4.4nm,1.4s						
BR131	Keskin Array S	58.38	309	eP	P	20 01 47.7	-0.2
BR131				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BRTR	Keskin Array B	58.38	309	P	P	20 01 47.6	-0.3
	comp=Z,0.8nm,0.9s,baz=114,slow=11,SNR=5.6						
BRTR	Keskin Array B	58.38	309	eP	P	20 01 48.2	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PRGR	Permogore	59.22	336	eP	P	20 01 51.9	-1.2
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
OBN	Obninsk	60.51	327	eP	P	20 02 03.0	+0.9
OBN				e		20 02 47.3	
OBN				e		20 04 18.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLMR	Klimovskoe	61.39	333	eP	P	20 02 06.8	-1.1
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TIXI	Tiksi	62.35	12	P	P	20 02 13.4	-0.9
	baz=230,slow=5.1						
TIXI	Tiksi	62.35	12	eP	P	20 02 13.1	-1.1
	comp=Z,14nm,1.5s						
TIXI	Tiksi	62.35	12	⇑iP	P	20 02 13.3	-0.9
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	Malin Array Be	63.53	320	P	P	20 02 22.1	-0.3
	comp=Z,0.1nm,0.3s,baz=85,slow=6.1,SNR=4.4						
PETK	Petropavlovsk-	64.39	37	P	P	20 02 26.8	-1.2
	comp=Z,0.9nm,0.6s,baz=197,slow=3.1,SNR=3.6						
PETK				LR	LR	20 32 48.1	
	comp=Z,28nm,18.2s,baz=194,slow=38						
PEA1	Petropavlovsk-	64.39	37	eP	P	20 02 26.8	-1.2
STKA	Stephens Creek	64.41	135	P	P	20 02 27.2	-1.3
	comp=Z,1.0nm,0.6s,baz=328,slow=3.5,SNR=3.1						
STKA	Stephens Creek	64.41	135	eP	P	20 02 30.3	+1.8
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FIA0	FINESS Array S	67.69	331	eP	P	20 02 49.2	+0.2
FIA0	FINESS Array S	67.69	331	eP	P	20 02 49.3	+0.2
FINES	FINESS Array B	67.69	331	P	P	20 02 49.2	+0.2
	comp=Z,3.3nm,0.6s,baz=96,slow=7.5,SNR=14						
SUW	Suwalki	67.77	323	eP	P	20 02 49.9	+0.2
	comp=Z,15nm,0.8s						
SUW	Suwalki	67.77	323	eP	P	20 02 49.9	+0.2
SUW				pmax	pmax		
	comp=Z,15nm,0.8s						
VYHS	Vyhne	69.94	317	eP	P	20 03 04.4	+1.0
VYHS	Vyhne	69.94	317	eP	P	20 03 04.4	+1.0
ARCES	ARCESS Array B	70.07	340	P	P	20 03 03.7	0.0
	comp=Z,2.1nm,0.6s,baz=101,slow=7.1,SNR=14						
ARCES				LR	LR	20 36 25.8	
	comp=Z,23nm,19.1s,baz=221,slow=38						
ARCES	ARCESS Array B	70.07	340	eP	P	20 03 04.5	+0.8
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MORC	Moravsky Berou	70.85	318	eP	P	20 03 10.0	+1.1
	comp=Z,3.0nm,0.9s						
MORC	Moravsky Berou	70.85	318	eP	P	20 03 10.0	+1.1
MORC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL	Bilibino	71.63	22	eP	P	20 03 14.6	+1.4
BILL				e		20 03 26.7	
BILL				e		20 05 53.7	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GEC2	GERESS Array S	73.35	317	eP	P	20 03 24.4	+0.4
	comp=Z,3.7nm,0.8s						
GEC2	GERESS Array S	73.35	317	eP	P	20 03 24.4	+0.4
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	73.35	317	P	P	20 03 24.2	+0.3
	comp=Z,3.1nm,0.9s,baz=77,slow=5.9,SNR=22						
GERES	GERESS Array B	73.35	317	eP	P	20 03 24.9	+0.9
GERES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	Kasperske Hory	73.43	318	⇓eP	P	20 03 24.3	0.0
KHC				pmax	pmax		
	comp=Z,6.0nm,1.5s						
NC405	NORSAR Array S	74.52	330	eP	P	20 03 30.3	-0.1
	comp=Z,41nm,1.8s						
NC602	NORSAR Array S	74.59	330	eP	P	20 03 30.7	-0.1
	comp=Z,19nm,1.4s						
NB2	NORSAR Subarra	74.76	330	P	P	20 03 31.5	-0.3
	comp=Z,1.4nm,0.6s,baz=89,slow=5.9						
NB200	NORSAR Array S	74.76	330	eP	P	20 03 31.6	-0.3
NOA	NORSAR Array B	74.76	330	P	P	20 03 31.6	-0.3
	comp=Z,2.1nm,0.7s,baz=90,slow=5.7,SNR=17						
BOSA	Boshof	77.60	237	P	P	20 03 49.7	+1.1
	comp=Z,1.6nm,0.6s,baz=37,slow=8.5,SNR=4.8						
ESDC	Sonseca Array	87.16	310	P	P	20 04 38.6	+0.3
	comp=Z,0.5nm,0.5s,baz=55,slow=4.1,SNR=4.9						
TORD	Torodi Ar. Bea	88.49	283	P	P	20 04 43.7	-1.4
	comp=Z,0.8nm,0.7s,baz=67,slow=5.0,SNR=3.9						
TOA1	Torodi Ar. Sit	88.49	283	eP	P	20 04 43.7	-1.4
CAST	Castle Rocks	89.00	24	eP	P	20 04 47.5	+1.0
	comp=Z,10nm,0.7s						
ILAR	Eielson Array	90.29	22	P	P	20 04 51.6	-0.9
	comp=Z,0.9nm,0.8s,baz=315,slow=4.6,SNR=5.6						
ILAR	Eielson Array	90.29	22	eP	P	20 04 55.1	+2.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILB	Eielson Array	90.29	22	eP	P	20 04 51.6	-0.9
	comp=Z,12nm,2.0s						
RC01	Rabbit Creek A	91.08	26	eP	P	20 04 56.2	0.0
	comp=Z,12nm,0.6s						
BRLK	Bradley Lake	91.24	27	eP	P	20 04 57.1	+0.1
	comp=Z,16nm,0.6s						
KDAK	Kodiak Island	91.39	29	P	P	20 04 57.1	-0.6
	comp=Z,3.2nm,0.9s,baz=288,slow=8.2,SNR=5.3						
MENT	Mentasta	92.48	23	eP	P	20 05 04.0	+1.3
	comp=Z,3.1nm,0.8s						
NV01	Mina Array Sit	120.89	29	ePKPdf	PKiKP	20 10 45.6	+0.8
NVAR	Mina Array Bea	120.89	29	PKP	PKiKP	20 10 45.6	+0.8
	comp=Z,0.6nm,0.6s,baz=313,slow=1.7,SNR=4.2						
TXAR	Lajitas Array	134.80	21	PKP	PKPdf	20 11 11.3	+0.1
	comp=Z,0.4nm,0.6s,baz=179,slow=1.4,SNR=5.6						
TEIG	Tepich	146.86	2	PKPbc	PKPbc	20 11 34.5	-0.3
	comp=Z,7.2nm,0.6s,baz=300,slow=1.2,SNR=7.7						
PLCA	Paso Flores	148.99	204	PKPbc	PKiKP	20 11 41.0	-0.4
	comp=Z,2.0nm,0.8s,baz=162,slow=3.2,SNR=3.2						

MEX 24 19:59:31.5±0.7**, 25°74N×100°46W, h5^{km}, MD3.7, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	1.23	133	eP	Pg	19 59 53.7	-1.4
	baz=313,slow=8.6						
LNIG				i S	Sg	20 00 07.0	-4.0

IDC ***24*** *20:02:55.8±1.3, 10°43N×126°34E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.6/42, mbtmp3.9/7, ML4.5/1, MS3.4/7, Ms1 3.4/7, ms1mx3.0/42, Error ellipse: s-maj=72.0km s-min=17.9km az=74.0*

NEIC ***24*** *20:02:58.5±2.4, 10°44N×126°08E, h10^{km}, mb4.5/7, Error ellipse: s-maj=43.8km s-min=15.1km az=84.0*

NEIC Felt [IV PIVS] at San Francisco and Surigao; [III PIVS] at Malimono, Mindanao.

MAN ***24*** *20:02:59.4, 9°85N×125°33E, h14^{km}, mb4.9, ML3.9, MS3.9*

MAN INTENSITY IV- SURIGAO CITY; SAN FRANCISCO SURIGAO DEL NORTE; INTENSITY III - MALIMONO SURIGAO DEL NORTE.

ISC 24 20:03:00.3±1.0**, 9°88N**±0°03×**125°20E**±0°03**, h17^{km}**±7^{km}**, n48,** σ**1^{s}94**/56**, mb4.0**/13**, MS3.5**/6**, 6C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.30	109	⇓iP	Pn	20 03 09.8	-0.1
SCPH				i S	Sg	20 03 12.6	+1.3
MSLP	Maasin	0.42	307	eP	Pn	20 03 10.6	-0.8
MSLP				eS	Sn	20 03 19.0	+0.1
BUTP	Butuan	1.00	155	eP	Pb	20 03 15.7	-3.4
BUTP				eS	Sb	20 03 31.7	-0.3
LLP	Lapu-Lapu	1.29	290	⇑eP	Pg	20 03 24.1	-1.1
LLP				eS	Sg	20 03 43.6	+1.6
PLP	Palo	1.29	350	⇑eP	Pn	20 03 21.9	-1.7
PLP				eS	Sg	20 03 42.9	+0.7
OCLP	Ormoc	1.30	334	eP	Pg	20 03 24.4	-1.0
OCLP				eS	Sg	20 03 48.3	+5.9
TBP	Tagbilaran	1.33	262	eP	Pg	20 03 24.8	-1.1
TBP				i S	Sg	20 03 45.0	+1.6
CGP	Cagayan de Oro	1.50	199	⇓eP	Pn	20 03 24.6	-1.8
CGP				eS	Sn	20 03 45.4	-0.2
BESP	Borongan	1.73	8	eP	Pn	20 03 27.2	-2.3
BUKP	Musuan	1.99	184	eP	Pn	20 03 28.7	-4.5
BUKP				eS	Sn	20 03 57.0	-0.8
SNPH	Sibulan	2.01	255	eP	Pb	20 03 35.8	-0.6
BIPH	Bislig	2.04	146	⇑iP	Pn	20 03 31.3	-2.6
BIPH				eS	Sn	20 03 57.6	-1.3
DCPH	Dipolog City	2.23	235	⇑eP	Pb	20 03 37.9	-2.2
DCPH				eS	Sb	20 04 06.7	-0.8
CNP	Catarman	2.67	349	eP	Pn	20 03 42.7	+0.3
CNP				eS	Sb	20 04 18.7	-1.3
PAGZ	Pagadian	2.70	222	eP	Pb	20 03 47.2	-0.9
DMPH	Davao City--Mi	2.80	174	eP	Pb	20 03 50.3	+0.5
DMPH				eS	Sg	20 04 42.7	+12
CTBH	Cotabato--PC H	2.81	200	⇓iP	Pn	20 03 44.1	-0.3
DAV	Davao City (W)	2.82	172	Pn	Pb	20 03 50.2	+0.1
	42nm,0.3s,baz=29,slow=5.0,SNR=3.6						
DAV				Sn	Sg	20 04 33.6	+2.6
	baz=66,slow=18,SNR=4.0						
DAV				LR	LR	20 05 04.9	
	comp=Z,323nm,21.9s,baz=88,slow=38						
KCP	Kidapawan	2.85	182	⇑eP	Pn	20 03 44.9	-0.3
KCP				eS	Sg	20 04 42.1	+10
RCP	Roxas	2.93	305	⇑eP	Pb	20 03 48.8	-3.3
MATI	Mati	3.10	160	eP	Pn	20 03 49.0	+0.6
MATI				eS	Sn	20 04 27.4	+2.4
JAP	San Jose, Anti	3.31	285	⇓eP	Pn	20 03 48.6	-2.7
DDMP	Don Marcelino,	3.79	172	eP	Pn	20 03 59.8	+1.9
PVCP	Virac	3.83	345	eP	Pn	20 03 60.0	+1.5
OTRP	Odiongan	3.98	309	eP	Pn	20 04 03.5	+3.0
JNU	Nakatsue	23.71	12	LR	LR	20 17 58.5	
	comp=Z,30nm,18.2s,baz=189,slow=39						

JHJ	**Hachijo jima 2**	**26.75**	**28**	LR	LR	20 17 37.6	
	comp=Z,23nm,20.0s,baz=70,slow=34						
CMAR	**Chiang Mai Arr**	**26.82**	**291**	LR	LR	20 19 22.1	
	comp=Z,68nm,18.1s,baz=180,slow=36						
WR1	**Warramunga Arr**	**30.97**	**163**	*e*P	**P**	**20 09 18.0**	**+1.2**
WRA	**Warramunga Arr**	**30.97**	**163**	P	**P**	**20 09 18.0**	**+1.2**
	2.4nm,1.1s,baz=340,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**34.41**	**166**	P	**P**	**20 09 46.0**	**-1.0**
	0.4nm,0.8s,baz=354,slow=7.1,SNR=3.9						
STKA	**Stephens Creek**	**44.39**	**160**	P	**P**	**20 11 09.8**	**-0.2**
	2.0nm,0.9s,baz=350,slow=13,SNR=3.7						
WMQ	**Urumqi**	**46.89**	**323**	*e*P	**P**	**20 11 28.4**	**-1.4**
	14nm,0.8s						
MK31	**Makanchi Array**	**51.70**	**323**	*e*P	**P**	**20 12 06.6**	**+0.1**
	2.1nm,1.4s						
MK32	**Makanchi Array**	**51.70**	**323**	*e*P	**P**	**20 12 06.7**	**+0.1**
MKAR	**Makanchi Array**	**51.70**	**323**	P	**P**	**20 12 06.7**	**+0.1**
	0.8nm,0.6s,baz=124,slow=8.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**54.47**	**332**	P	**P**	**20 12 25.6**	**-1.1**
	0.3nm,0.3s,baz=161,slow=32,SNR=2.1						
ZAA1	**Zalesovo Array**	**54.47**	**332**	*e*P	**P**	**20 12 25.6**	**-1.1**
KURK	**Kurchatov**	**55.79**	**326**	*e*P	**P**	**20 12 36.2**	**-0.1**
	1.4nm,0.8s						
BTK	**Batken**	**56.65**	**312**	*e*P	**P**	**20 12 42.4**	**-0.4**
	4.6nm,0.5s						
KBL	**Kabul**	**56.68**	**305**	*e*P	**P**	**20 12 45.5**	**+2.3**
	10nm,1.6s						
KK31	**Karatay Array**	**57.77**	**315**	*e*P	**P**	**20 12 50.8**	**+0.2**
	4.3nm,1.5s						
CASY	**Casey**	**76.72**	**186**	*e*P	**P**	**20 14 54.4**	**+4.3**
	6.4nm,0.4s						
RAR	**Rarotonga**	**79.85**	**114**	LR	LR	20 42 18.4	
	comp=Z,111nm,20.9s,baz=292,slow=30						
MMAI	**Mount Meron Ar**	**84.53**	**302**	LR	LR	20 59 44.2	
	comp=Z,33nm,18.8s,baz=235,slow=40						
BRTR	**Keskin Array B**	**84.96**	**309**	LR	LR	20 55 46.8	
	comp=Z,32nm,21.6s,baz=278,slow=37						
FIA0	**FINESS Array S**	**85.73**	**332**	*e*P	**P**	**20 15 36.2**	**-2.0**
FINES	**FINESS Array B**	**85.73**	**332**	P	**P**	**20 15 36.2**	**-2.0**
	0.9nm,0.7s,baz=66,slow=5.0,SNR=2.6						

ISCJB ***24*** *20:12:46.7±0.5, 55°.76N±0°.06×155°.7E±0°.2, h10^{km}, mb3.3/8, MS3.2/1, Error ellipse: s-maj=16.4km s-min=6.7km az=155.5*

IDC ***24*** *20:12:46.8±0.8, 55°.74N×155°.76E, h0^{km}, mb3.4/8, mb1 3.6/13, mb1mx3.5/37, mbtmp3.4/13, ML3.3/4, MS3.2/1, Ms1 3.2/1, ms1mx2.2/39, Error ellipse: s-maj=23.6km s-min=11.6km az=63.0*

ISC 24 20:12:48.2±0.6**, 55°.68N**±0°.08×**155°.7E**±0°.1**, h10**^{km}**, n15, σ1**^{s}**70**/16**, mb3.3**/8**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**2.82**	**155**	Pn	**Pb**	**20 13 35.8**	**-2.8**
	2.9nm,0.3s,baz=326,slow=12,SNR=77						
PETK				Pg	**Pg**	**20 13 43.2**	**+1.1**
	24nm,0.3s,baz=335,slow=16,SNR=108						
PETK				Sn	**Sn**	**20 14 09.8**	**+2.5**
	11nm,0.3s,baz=339,slow=12,SNR=3.8						
PETK				Lg	Lg	20 14 18.8	
	5.7nm,0.3s,baz=341,slow=11,SNR=2.5						
MA2	**Magadan**	**4.73**	**328**	Pn	**Pn**	**20 14 00.2**	**+0.7**
	0.8nm,0.3s,baz=106,slow=18,SNR=2.8						
MA2				Lg	Lg	20 15 19.4	
	1.0nm,0.3s,baz=163,slow=19,SNR=2.0						
SEY	**Seymchan**	**7.47**	**348**	Pn	**Pn**	**20 14 38.0**	**+0.8**
	0.5nm,0.3s,baz=158,slow=10.0,SNR=8.7						
SEY				Lg	Lg	20 16 50.9	
	0.2nm,0.3s,baz=238,slow=22,SNR=2.6						
USRK	**Ussuriysk Ar.**	**19.01**	**243**	P	**P**	**20 17 08.7**	**-1.2**
	0.1nm,0.3s,baz=61,slow=10,SNR=3.9						
TIXI	**Tiksi**	**19.66**	**335**	P	**P**	**20 17 14.7**	**-2.1**
	0.1nm,0.3s,baz=127,slow=3.0,SNR=1.8						
MKAR	**Makanchi Array**	**44.79**	**291**	P	**P**	**20 21 03.4**	**+1.6**
	0.1nm,0.4s,baz=54,slow=7.3,SNR=2.2						
ARU	**Arti**	**49.77**	**314**	LR	LR	20 43 38.3	
	comp=Z,24nm,18.5s,baz=118,slow=37						
FINES	**FINESS Array B**	**56.70**	**334**	P	**P**	**20 22 31.8**	**+0.5**
	1.9nm,1.0s,baz=45,slow=8.3,SNR=2.6						
NVAR	**Mina Array Bea**	**57.22**	**69**	P	**P**	**20 22 34.8**	**-0.8**
	0.1nm,0.5s,baz=308,slow=4.4,SNR=3.0						
PDAR	**Pinedale Array**	**58.44**	**59**	P	**P**	**20 22 43.5**	**-0.6**
	0.1nm,0.4s,baz=17,slow=1.2,SNR=2.0						
NB2	**NORSAR Subarra**	**60.30**	**341**	P	**P**	**20 22 59.0**	**+2.6**
	comp=Z,0.9nm,0.8s,baz=20,slow=6.9						
NOA	**NORSAR Array B**	**60.30**	**341**	P	**P**	**20 22 54.7**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=23,slow=6.8,SNR=2.3						
TXAR	**Lajitas Array**	**71.89**	**65**	P	**P**	**20 24 12.3**	**+0.8**
	comp=Z,0.1nm,0.6s,baz=296,slow=2.9,SNR=2.2						
BRTR	**Keskin Array B**	**72.99**	**317**	P	**P**	**20 24 17.0**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=13,slow=3.1,SNR=2.0						
ASAR	**Alice Springs**	**81.19**	**200**	P	**P**	**20 25 04.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=18,slow=6.4,SNR=3.6						

GRAL ***24*** *20:17:18.6±0.3, 34°.53N×36°.23E, h33^{km}±2^{km}, MD2.9*

NSSC ***24*** *20:17:23.2±0.3, 33°.93N×36°.23E, h76^{km}±5^{km}, ML1.7*

ISC 24 20:17:18.4±3.2**, 34°.3N**±0°.1×**36°.3E**±0°.1**, h4**^{km}±17^{km}**, n7, σ0**^{s}**40**/12**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWQ	**Hawqa**	**0.32**	**268**	*e*P	**Pb**	**20 17 26.4**	**-0.3**
BHL	**Bhannes**	**0.68**	**236**	*e*P	**Pb**	**20 17 32.7**	**-0.2**
BHL				*e*S	**Sb**	**20 17 43.0**	**+0.3**
QASN	**Qassioun**	**0.76**	**183**	*e*P	**Pn**	**20 17 36.3**	**+0.3**
QASN				*e*S	**Sb**	**20 17 45.0**	**+0.1**
QASN				AML	AML	20 17 47.6	
	comp=E,98nm,0.4s						
QASN				AML	AML	20 17 49.4	
	comp=N,87nm,0.5s						
DQRL	**Deir Qamar**	**0.86**	**227**	*e*P	**Pg**	**20 17 35.3**	**+0.4**
DQRL				*e*S	**Sb**	**20 17 47.8**	**-0.1**
TOTH	**TOTAH**	**0.93**	**175**	*e*P	**Pn**	**20 17 38.1**	**-0.2**
TOTH				*e*S	**Sg**	**20 17 47.8**	**-0.5**
TOTH				AML	AML	20 17 52.7	
	comp=E,23nm,0.4s						
TOTH				AML	AML	20 17 55.4	
	comp=N,21nm,0.5s						
BRBR	**Barbar**	**0.93**	**200**	*e*P	**Pb**	**20 17 37.3**	**+0.1**
BRBR				*e*S	**Sg**	**20 17 47.8**	**-0.6**
BRBR				AML	AML	20 17 51.5	
	comp=E,14nm,0.3s						
BRBR				AML	AML	20 17 53.8	
	comp=N,26nm,0.4s						
SHBL	**Chebaa**	**1.06**	**208**	*e*P	**Pg**	**20 17 39.0**	**+0.4**

ANF 24 20:35:26.8±0.1**, 37°.35N**×**81°.48W, ML2.5**/23**, ML2.5**/23**, Error ellipse: s-maj=1.2km s-min=1.0km az=51.0, West Virginia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T54A	**Tazewell**	**0.30**	**194**	P	Pg	20 35 32.4	-0.1
	baz=14						
T54A				S	Sg	20 35 37.1	+0.8
	baz=14						
S54A	**Dingess, Beckl**	**0.47**	**17**	P	Pg	20 35 35.8	0.0
	baz=197						
T55A	**Pulaski**	**0.60**	**113**	S	Sg	20 35 47.2	+1.0
	baz=293						
S53A	**Williamson**	**0.61**	**303**	S	Sg	20 35 47.3	+1.0
	baz=123						
BLA	**Blacksburg**	**0.86**	**99**	S	Sb	20 35 55.8	-0.9
	baz=280						
U54A	**Nelsons Funny**	**0.87**	**198**	S	Sg	20 35 55.4	+0.6
	baz=18						
S55A	**Lewisburg**	**0.89**	**61**	S	Sg	20 35 55.4	+0.1
	baz=242						
R54A	**Victor**	**0.92**	**25**	P	Pg	20 35 44.4	0.0
	baz=205						
T53A	**Wise**	**0.92**	**247**	S	Sg	20 35 56.6	+0.4
	baz=66						
U55A	**TA2, Sparta**	**0.92**	**157**	S	Sg	20 35 56.3	+0.1
	baz=338						
S52A	**Salyersville**	**1.31**	**285**	P	Pg	20 35 50.7	-1.2
	baz=104						
S52A				S	Sb	20 36 09.6	0.0
	baz=104						
U56A	**King**	**1.34**	**138**	S	Sn	20 36 10.9	-0.3
	baz=319						
R55A	**Marlinton**	**1.43**	**49**	P	Pn	20 35 53.3	-0.7
	baz=230						
Q53A	**Leroy**	**1.50**	**359**	P	Pn	20 35 54.8	-0.2
	baz=179						
S56A	**Natural Bridge**	**1.56**	**77**	S	Sg	20 36 17.6	+0.7
	baz=258						
V54A	**Nebo**	**1.61**	**194**	S	Sg	20 36 18.9	+0.3
	baz=13						
Q54A	**Coxs Mills**	**1.71**	**17**	P	Pn	20 35 56.8	-1.0
	baz=198						
Q54A				S	Sg	20 36 21.8	+0.1
	baz=198						
Q52A	**Bidwell**	**1.72**	**339**	S	Sb	20 36 21.5	-0.1
	baz=159						
V56A	**Mocksville**	**1.73**	**152**	S	Sb	20 36 21.5	-0.3
	baz=333						
U52A	**Thorn Hill**	**1.79**	**238**	S	Sn	20 36 22.4	+0.1
	baz=57						
R56A	**Bull Pasture M**	**1.96**	**57**	S	Sb	20 36 27.5	-0.8
	baz=238						
Q55A	**Buckhannon**	**1.98**	**34**	S	Sb	20 36 28.4	-0.5
	baz=214						
Q51A	**Peebles**	**2.22**	**319**	S	Sn	20 36 34.5	+1.4
	baz=138						

ANF 24 20:35:41.9±0.2**, 37°.94N**×**81°.34W, ML2.5**/14**, Error ellipse: s-maj=1.8km s-min=1.4km az=66.0, West Virginia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
S54A	**Dingess, Beckl**	**0.14**	**172**	P	Pg	20 35 44.5	0.0
	baz=352						
S54A				S	Sg	20 35 46.7	+0.5
	baz=352						
R54A	**Victor**	**0.37**	**48**	P	Pg	20 35 49.4	+0.5
	baz=228,SNR=32						
R54A				S	Sg	20 35 55.1	+1.4
	baz=228						
R53A	**Hurricane**	**0.63**	**309**	P	Pg	20 35 54.1	+0.3
	baz=129						
R53A				S	Sg	20 36 02.1	+0.1
	baz=129						
S55A	**Lewisburg**	**0.68**	**104**	S	Sg	20 36 04.7	+1.0
	baz=284						
T55A	**Pulaski**	**0.93**	**152**	S	Sg	20 36 12.4	+0.8
	baz=332						
Q53A	**Leroy**	**0.93**	**351**	S	Sb	20 36 13.1	-0.8
	baz=171						
R55A	**Marlinton**	**1.02**	**70**	S	Sg	20 36 15.0	+0.4
	baz=250						
T53A	**Wise**	**1.35**	**225**	P	Pn	20 36 08.0	0.0
	baz=45,SNR=6.4						
P52A	**Corning**	**1.81**	**340**	S	Sb	20 36 38.6	-0.4
	baz=160						
S57A	**Dark Hollow, R**	**1.89**	**95**	S	Sb	20 36 41.2	-0.4
	baz=276						
T57A	**Hurt**	**1.90**	**119**	Sb	Sg	20 36 43.3	+0.3
	baz=300						
Q51A	**Peebles**	**1.92**	**305**	S	Sn	20 36 41.4	+0.8
	baz=124						
P55A	**Reedsville**	**1.96**	**36**	S	Sb	20 36 43.3	-0.3
	baz=217						
TZTN	**Tazewell**	**2.25**	**232**	P	Pn	20 36 20.6	+0.3
	baz=51,SNR=8.0						

WEL 24 20:50:11.0, 42°S±1°×**174°.3E**±0°.8**, h11**^{km}±2^{km}**, M3.5**/20**, ML3.8**/15**, MLv3.5**/20**, Error ellipse: s-maj=0.0km s-min=0.0km az=159.3, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.13**	**193**	P	Pb	20 50 15.0	-0.6
CMWZ				S	Sg	20 50 17.5	+1.1
BSWZ	**Blackbirch Sta**	**0.30**	**252**	P	Pg	20 50 17.7	+0.6
BSWZ				S	Sb	20 50 22.6	-0.7
TUWZ	**Tuamarina**	**0.30**	**309**	P	Pg	20 50 17.7	+0.6
TUWZ				S	Sb	20 50 22.7	-0.8
TCW	**Tory Channel**	**0.41**	**2**	P	Pg	20 50 19.7	+0.6
TCW				S	Sg	20 50 25.5	+1.0
BHW	**Baring Head**	**0.51**	**66**	P	Pb	20 50 21.9	-0.1
PLWZ	**Palliser**	**0.75**	**86**	P	Pb	20 50 26.7	+0.6
NNZ	**Nelson**	**0.77**	**301**	P	Pg	20 50 26.1	+0.2
MSWZ	**Moikau Station**	**0.78**	**75**	P	Pb	20 50 26.9	+0.4
CAW	**Cannon Point**	**0.80**	**50**	P	Pb	20 50 27.0	+0.1
DUWZ	**D'Urville Isla**	**0.86**	**343**	P	Pg	20 50 27.6	+0.1
PAWZ	**Paruwai Farm**	**0.91**	**75**	P	Pn	20 50 29.5	-0.3
MTW	**Mount Morrison**	**1.05**	**64**	P	Pn	20 50 31.7	+0.1
OGWZ	**Otaki Gorge**	**1.06**	**41**	P	Pb	20 50 31.4	0.0
TRWZ	**Traveller**	**1.10**	**79**	P	Pn	20 50 32.4	0.0
HOWZ	**Holdsworth Sta**	**1.19**	**53**	P	Pg	20 50 34.0	0.0
TMWZ	**Te Maipa**	**1.33**	**68**	P	Pn	20 50 35.2	-0.4
MRZ	**Mangatainoka R**	**1.39**	**47**	P	Pb	20 50 36.9	0.0
QRZ	**Quartz Range**	**1.52**	**301**	P	Pb	20 50 39.4	+0.1
GVZ	**Greta Valley S**	**1.62**	**214**	P	Pn	20 50 39.8	+0.2
OHWZ	**Ohakea**	**1.63**	**30**	P	Pg	20 50 41.8	-0.4
PRWZ	**Pori Road**	**1.68**	**51**	P	Pn	20 50 40.2	-0.1
DSZ	**Denniston Nort**	**1.84**	**265**	P	Pb	20 50 44.3	-0.4
LTZ	**Lake Taylor**	**1.88**	**231**	P	Pn	20 50 43.4	+0.3
WAZ	**Wanganui**	**1.95**	**17**	P	Pb	20 50 47.2	+0.7
DVHZ	**Dannevirke**	**1.96**	**48**	P	Pn	20 50 43.9	-0.3
TSZ	**Takapari Road**	**2.03**	**40**	P	Pn	20 50 45.4	+0.2
OKCZ	**Okains Bay**	**2.28**	**202**	P	Pn	20 50 47.5	-1.1
KHEZ	**Kahui Hut**	**2.33**	**355**	P	Pb	20 50 53.4	+0.3
INZ	**Inchbonnie**	**2.36**	**241**	P	Pn	20 50 50.4	+0.6
OXZ	**Oxford**	**2.36**	**223**	P	Pn	20 50 49.4	-0.4
NBEZ	**Newall Road No**	**2.37**	**353**	P	Pb	20 50 53.3	-0.4
VRZ	**Vera Road**	**2.52**	**9**	P	Pb	20 50 55.5	-0.8
BHHZ	**Black Hill Sta**	**2.54**	**33**	P	Pb	20 50 57.6	+1.0
WHVZ	**Whangaehu Hut**	**2.55**	**24**	P	Pb	20 50 57.5	+0.6
KRHZ	**Kereru**	**2.55**	**40**	P	Pn	20 50 52.5	+0.1
FWVZ	**Far West T-bar**	**2.56**	**23**	P	Pb	20 50 57.9	+0.8
TUVZ	**Tukino**	**2.58**	**25**	P	Pg	20 50 59.3	-1.1
NGZ	**Ngauruhoe**	**2.65**	**23**	P	Pb	20 50 59.7	+1.1
KAHZ	**Kahuranaki**	**2.70**	**48**	P	Pn	20 50 55.1	+0.6
TWVZ	**Taurewa**	**2.70**	**20**	P	Pb	20 51 01.1	+1.6
WTVZ	**West Tongariro**	**2.70**	**23**	P	Pb	20 51 00.5	+1.0
KRVZ	**Karewarewa**	**2.74**	**23**	P	Pb	20 51 01.2	+1.2
KWHZ	**Kaweka Forest**	**2.75**	**38**	P	Pb	20 51 01.7	+1.5
WVZ	**Waitaha Valley**	**2.98**	**240**	P	Pb	20 51 03.4	-0.7
BKZ	**Black Stump Fm**	**2.99**	**36**	P	Pb	20 51 05.5	+1.2
HIZ	**Hauiti**	**3.14**	**9**	P	Pb	20 51 06.6	-0.2
FOZ	**Fox Glacier**	**3.79**	**238**	P	Pb	20 51 15.5	-2.4
ODZ	**Otahua Downs**	**4.32**	**216**	P	Pn	20 51 16.8	+0.2
JCZ	**Jackson Bay**	**4.71**	**237**	P	Pn	20 51 25.9	+3.9

IDC ***24*** *20:51:23.0±0.8, 38°.92N×26°.24E, h0^{km}, mb3.7/12, mb1 3.8/17, mb1mx3.6/45, mbtmp3.6/17, ML3.6/5, MS3.0/8, Ms1 3.0/8, ms1mx2.7/45, Error ellipse: s-maj=14.2km s-min=12.6km az=40.0*

DDA ***24*** *20:51:23.6, 38°.99N×26°.04E, h34^{km}±1^{km}, ML3.8*

NEIC ***24*** *20:51:24.2±0.0, 38°.99N×26°.11E, h12^{km}, ML4.1(ISK), After ISK.*

ISK ***24*** *20:51:24.2, 38°.98N×26°.11E, h14^{km}, ML4.1/49*

ATH ***24*** *20:51:24.0, 38°.99N×26°.10E, h29^{km}, ML3.7/28, Error ellipse: s-maj=1.2km s-min=0.7km az=88.0*

ISCJB ***24*** *20:51:25.1±0.2, 38°.990N±0°.009×26°.08E±0°.01, h25^{km}±2^{km}, mb3.6/12, MS3.1/7, Error ellipse: s-maj=1.6km s-min=1.4km az=27.0*

SOF ***24*** *20:51:25.8, 39°.30N×26°.41E, h2^{km}, MD3.6*

THE ***24*** *20:51:25.4, 39°.00N×26°.07E, h14^{km}, ML3.5/41, Error ellipse: s-maj=0.8km s-min=0.4km az=86.0*

BEO ***24*** *20:51:27.1±0.5, 39°.08N×26°.15E, h10^{km}, ML3.8/10*

ISC 24 20:51:25.2±0.8**, 38°.97N**±0°.01×**26°.10E**±0°.01**, h14**^{km}±6^{km}**, n384, σ1**^{s}**18**/474**, mb3.7**/12**, MS3.0**/7**, 20C-20D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.30**	**322**	PG	**Pg**	**20 51 31.0**	**-0.5**
SIGR				SG	**Sg**	**20 51 35.7**	**-0.2**
SIGR	**SIGRI**	**0.30**	**322**	P	**Pg**	**20 51 31.1**	**-0.5**
SIGR				S	**Sg**	**20 51 35.1**	**-0.8**
	59µm,0.4s						
SIGR	**SIGRI**	**0.30**	**322**	P	**Pg**	**20 51 31.1**	**-0.5**
SIGR				S	**Sg**	**20 51 35.7**	**-0.2**
SIGR				AML	AML	20 51 36.0	
SIGR				AML	AML	20 51 36.0	
	comp=N,78783µm,0.5s						
PRK	**Paraskevi**	**0.31**	**26**	P	**Pg**	**20 51 31.7**	**+0.1**
PRK				S	**Sg**	**20 51 34.8**	**-1.1**
PRK	**Paraskevi**	**0.31**	**26**	P	**Pg**	**20 51 31.8**	**+0.1**
PRK				S	**Sg**	**20 51 36.0**	**0.0**
PRK				AML	AML	20 51 36.6	
PRK				AML	AML	20 51 36.9	
GPNR	**Gulpinar-Canak**	**0.48**	**3**	PG	**Pg**	**20 51 34.0**	**-0.9**
GPNR				SG	**Sg**	**20 51 41.3**	**-0.1**
KRBN	**Karaburun**	**0.52**	**136**	PG	**Pg**	**20 51 35.3**	**-0.2**
CAND	**Candarli**	**0.55**	**92**	PG	**Pg**	**20 51 35.8**	**-0.3**
FOCM	**Foa**	**0.56**	**117**	PG	**Pg**	**20 51 35.9**	**-0.3**
AYVA	**Ayvalik**	**0.57**	**54**	*i* P	**Pg**	**20 51 36.2**	**-0.3**
AYVA				*i* S	**Sg**	**20 51 43.6**	**-0.5**
AYVA				IAML_P			
	comp=Z,6µm,0.1s						
CHOS	**Chios island**	**0.58**	**183**	PG	**Pg**	**20 51 36.4**	**-0.4**
CHOS	**Chios island**	**0.58**	**183**	P	**Pg**	**20 51 36.3**	**-0.4**
CHOS				S	**Sn**	**20 51 47.4**	**-1.2**
CHOS	**Chios island**	**0.58**	**183**	P	**Pg**	**20 51 36.3**	**-0.4**
CHOS				S	**Sb**	**20 51 45.6**	**+0.1**
CHOS				AML	AML	20 51 49.2	
	comp=E,87012µm,0.3s						
CHOS				AML	AML	20 51 49.2	
	comp=N,53911µm,0.3s						
PSRA	**Psara**	**0.60**	**224**	P	**Pb**	**20 51 38.0**	**+0.5**
PSRA				S	**Sb**	**20 51 45.9**	**+0.1**
PSRA				AML	AML	20 51 50.2	
	comp=N,69067µm,0.2s						
PSRA				AML	AML	20 51 50.9	
	comp=E,74265µm,0.2s						
DKL	**Dikili**	**0.64**	**81**	PG	**Pg**	**20 51 36.8**	**-0.9**
DKL				SG	**Sg**	**20 51 45.9**	**-0.3**
CESE	**eme**	**0.66**	**166**	PG	**Pg**	**20 51 37.6**	**-0.5**
URLA	**Izmir**	**0.72**	**147**	PG	**Pg**	**20 51 38.6**	**-0.7**
URLA	**Izmir**	**0.72**	**147**	*i* P	**Pg**	**20 51 39.2**	**-0.1**
URLA				*i* S	**Sb**	**20 51 50.2**	**+0.8**
URLA				IAML_P			
	comp=Z,51µm,0.4s						
ZEDA	**zmir-Bergama**	**0.76**	**90**	*i* P	**Pg**	**20 51 39.6**	**-0.5**
ZEDA				*i* S	**Sn**	**20 51 52.6**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.84**	**24**	*i* P	**Pg**	**20 51 40.8**	**-0.8**
BAYC				*i* S	**Sb**	**20 51 53.4**	**+0.5**
BAYC				IAML_P			
	comp=Z,14µm,0.2s						
BOZC	**Bozcaada**	**0.87**	**358**	PG	**Pb**	**20 51 40.8**	**-1.3**
BOZC	**Bozcaada**	**0.87**	**358**	*i* P	**Pb**	**20 51 41.7**	**-0.5**
BOZC				*i* S	**Sg**	**20 51 52.2**	**-1.4**
BOZC				IAML_P			
	comp=Z,43µm,0.3s						
EZN	**Ezine**	**0.87**	**12**	PG	**Pb**	**20 51 40.7**	**-1.4**
EZN	**Ezine**	**0.87**	**12**	P	**Pb**	**20 51 40.7**	**-1.4**
EZN				S	**Sb**	**20 51 52.9**	**-0.8**
EZN	**Ezine**	**0.87**	**12**	⇓*i*P	**Pb**	**20 51 41.5**	**-0.6**
EZN				S	**Sb**	**20 51 53.2**	**-0.5**
BLCB	**Balcova**	**0.94**	**128**	PG	**Pb**	**20 51 43.0**	**-0.3**
GMLD	**Gumuldur**	**1.10**	**144**	PN	**Pb**	**20 51 45.7**	**-0.3**
DGB	**zmir**	**1.10**	**146**	*i* P	**Pb**	**20 51 45.6**	**-0.5**
DGB				*i* S	**Sb**	**20 51 59.5**	**-0.8**
LIA	**Limnos Island**	**1.17**	**323**	P	**Pn**	**20 51 46.6**	**-0.5**
LIA				S	**Sb**	**20 52 01.6**	**-0.5**
	comp=Z,6µm,0.4s						
LIA	**Limnos Island**	**1.17**	**323**	P	**Pn**	**20 51 46.7**	**-0.4**
LIA				S	**Sb**	**20 52 01.5**	**-0.6**
LIA				AML	AML	20 52 04.0	
	comp=E,19132µm,0.4s						
LIA				AML	AML	20 52 07.0	
	comp=N,6742µm,0.4s						
SKY	**Skiros Island**	**1.21**	**266**	P	**Pb**	**20 51 47.9**	**-0.1**
SKY				S	**Sb**	**20 52 03.3**	**-0.1**
	comp=N,4µm,0.2s						
SKY	**Skiros Island**	**1.21**	**266**	P	**Pb**	**20 51 47.8**	**-0.1**
SKY				S	**Sb**	**20 52 02.8**	**-0.6**
SKY				AML	AML	20 52 07.7	
	comp=N,7496µm,0.2s						
SKY				AML	AML	20 52 08.0	
	comp=E,6966µm,0.2s						
GOKC	**Gokceada-Canak**	**1.23**	**354**	PN	**Pn**	**20 51 47.1**	**-1.0**
STEP	**BALIKESIR_Sava**	**1.32**	**72**	*i* P	**Pb**	**20 51 49.8**	**0.0**
AKHS	**Akhisar**	**1.34**	**93**	*i* P	**Pn**	**20 51 49.1**	**-0.5**
AKHS				IAML_P			
	comp=Z,11µm,0.2s						
AKS	**Akhisar**	**1.34**	**93**	PN	**Pn**	**20 51 49.0**	**-0.6**
SMG	**Samos**	**1.39**	**155**	P	**Pn**	**20 51 50.5**	**+0.3**
SMG				S	**Sb**	**20 52 08.8**	**+0.3**
	comp=Z,5µm,0.7s						
SMG	**Samos**	**1.39**	**155**	P	**Pn**	**20 51 49.5**	**-0.7**
SMG				S	**Sb**	**20 52 09.0**	**+0.5**
SMG				AML	AML	20 52 13.2	
	comp=E,9491µm,0.7s						
SMG				AML	AML	20 52 14.2	
	comp=N,11248µm,0.7s						
GOMA	**Golmarmara-Man**	**1.45**	**100**	PN	**Pn**	**20 51 50.6**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.46**	**11**	PN	**Pn**	**20 51 50.6**	**-0.5**
LPK	**Lapseki**	**1.49**	**20**	PN	**Pn**	**20 51 50.9**	**-0.7**
BALB	**Balikesir**	**1.54**	**64**	PN	**Pn**	**20 51 51.6**	**-0.6**
BALB	**Balikesir**	**1.54**	**64**	*e*Pn	**Pn**	**20 51 51.7**	**-0.6**
GCAM	**G?zelcaml?**	**1.55**	**144**	PN	**Pn**	**20 51 51.5**	**-0.9**
GCAM	**G?zelcaml?**	**1.55**	**144**	*i* P	**Pg**	**20 51 54.7**	**-0.3**
GCAM				*i* S	**Sn**	**20 52 12.1**	**-0.2**
GCAM				IAML_P			
	comp=Z,8µm,0.3s						
SMTH	**Samothraki Isl**	**1.56**	**344**	P	**Pn**	**20 51 51.9**	**-0.7**
SMTH				S	**Sn**	**20 52 11.8**	**-0.8**
	comp=Z,2µm,0.5s						
SMTH	**Samothraki Isl**	**1.56**	**344**	P	**Pn**	**20 51 51.8**	**-0.7**
SMTH				S	**Sn**	**20 52 11.7**	**-0.8**
SMTH				AML	AML	20 52 15.9	
	comp=E,3508µm,0.5s						
SMTH				AML	AML	20 52 16.9	
	comp=N,4124µm,0.4s						
KARY	**Karystos**	**1.60**	**235**	P	**Pn**	**20 51 52.2**	**-0.9**
KARY				S	**Sn**	**20 52 12.6**	**-1.0**
	comp=N,1µm,0.7s						
KARY	**Karystos**	**1.60**	**235**	P	**Pn**	**20 51 52.5**	**-0.6**
KARY				S	**Sn**	**20 52 12.6**	**-1.0**
KARY				AML	AML	20 52 18.8	
	comp=E,2467µm,0.5s						
KARY				AML	AML	20 52 24.9	
	comp=N,1674µm,0.6s						
TNSA	**Tinos**	**1.61**	**208**	P	**Pn**	**20 51 53.2**	**0.0**
TNSA				S	**Sn**	**20 52 13.4**	**-0.2**
TNSA				AML	AML	20 52 20.6	
	comp=N,4758µm,0.6s						
TNSA				AML	AML	20 52 20.6	
	comp=E,2949µm,0.4s						
GONE	**Gonen-Balikesi**	**1.63**	**48**	PN	**Pn**	**20 51 53.2**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**125**	PN	**Pn**	**20 51 54.7**	**-0.4**
ENEZ	**Enez**	**1.76**	**1**	PN	**Pn**	**20 51 54.5**	**-0.8**
EREA	**Eretria**	**1.78**	**253**	P	**Pn**	**20 51 55.1**	**-0.5**
EREA				S	**Sn**	**20 52 17.1**	**-0.9**
	comp=E,1µm,0.8s						
EREA	**Eretria**	**1.78**	**253**	P	**Pn**	**20 51 55.1**	**-0.5**
EREA				S	**Sn**	**20 52 17.4**	**-0.6**
EREA				AML	AML	20 52 29.4	
	comp=E,1915µm,0.5s						
EREA				AML	AML	20 52 33.7	
	comp=N,2021µm,0.5s						
KESN	**Edirne-Kesan**	**1.91**	**13**	*i* P	**Pn**	**20 51 58.4**	**+0.8**
KESN				*i* S	**Sn**	**20 52 21.6**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.91**	**26**	PN	**Pn**	**20 51 56.6**	**-0.8**
AYDN	**Tasoluk**	**1.92**	**132**	*i* P	**Pn**	**20 51 57.5**	**0.0**
AYDN				*i* S	**Sn**	**20 52 21.6**	**+0.1**
AYDN				IAML_P			
	comp=Z,969nm,0.1s						
ALN	**Alexandroupoli**	**1.92**	**359**	PN	**Pn**	**20 51 57.1**	**-0.5**
ALN	**Alexandroupoli**	**1.92**	**359**	*e*Pn	**Pn**	**20 51 57.0**	**-0.5**
ALN	**Alexandroupoli**	**1.92**	**359**	P	**Pn**	**20 51 57.2**	**-0.3**
ALN				S	**Sn**	**20 52 22.1**	**+0.6**
	comp=Z,1µm,0.4s						
ALN	**Alexandroupoli**	**1.92**	**359**	P	**Pn**	**20 51 57.3**	**-0.3**
ALN				S	**Sn**	**20 52 20.3**	**-1.2**
ALN				AML	AML	20 52 26.1	
	comp=N,1841µm,0.4s						
ALN				AML	AML	20 52 26.4	
	comp=E,2574µm,0.5s						
EDC	**Edincik**	**1.94**	**44**	PN	**Pn**	**20 51 57.2**	**-0.5**
THAS	**Thassos island**	**1.95**	**327**	P	**Pn**	**20 51 57.2**	**-0.7**
THAS				S	**Sn**	**20 52 20.2**	**-1.9**
	comp=E,808nm,0.6s						
THAS	**Thassos island**	**1.95**	**327**	P	**Pn**	**20 51 57.3**	**-0.5**
THAS				S	**Sn**	**20 52 20.1**	**-2.0**
THAS				AML	AML	20 52 33.0	
	comp=N,1964µm,0.5s						
THAS				AML	AML	20 52 34.6	
	comp=E,1204µm,0.7s						
DURS	**Dursunbey**	**1.95**	**70**	*i* P	**Pn**	**20 51 58.3**	**+0.4**

DURS				iS	Sn	20 52 23.1	+0.8
DURS				IAML_P			
	comp=Z,6µm,0.3s						
APE	Apeiranthos	1.95	193	PN	Pn	20 51 57.0	-1.0
APE	Apeiranthos	1.95	193	P	Pn	20 51 56.8	-1.2
APE				S	Sn	20 52 21.9	-0.4
	comp=Z,732nm,0.6s						
APE	Apeiranthos	1.95	193	⇓iP	Pn	20 51 57.2	-0.8
APE	Apeiranthos	1.95	193	S	Sn	20 52 23.4	+1.1
APE	Apeiranthos	1.95	193	P	Pn	20 51 57.0	-1.0
APE				S	Sn	20 52 22.4	+0.1
APE				AML	AML	20 52 30.7	
	comp=E,1332µm,0.4s						
APE				AML	AML	20 52 33.5	
	comp=N,1347µm,0.3s						
MRKA	Markates	1.98	263	P	Pn	20 51 58.0	-0.3
MRKA				S	Sn	20 52 21.5	-1.4
	comp=N,1µm,0.6s						
MRKA	Markates	1.98	263	P	Pn	20 51 58.1	-0.3
MRKA				S	Sn	20 52 21.7	-1.1
MRKA				AML	AML	20 52 34.3	
	comp=N,2620µm,0.6s						
MRKA				AML	AML	20 52 38.6	
	comp=E,1472µm,0.6s						
PTL	Penteli	1.98	243	P	Pn	20 51 57.8	-0.5
PTL				S	Sn	20 52 21.4	-1.5
	comp=E,878nm,0.6s						
PTL	Penteli	1.98	243	P	Pn	20 51 57.7	-0.5
PTL				AML	AML	20 52 31.8	
	comp=N,2027µm,0.6s						
PTL				AML	AML	20 52 34.7	
	comp=E,1161µm,0.5s						
MANT	Manisa	1.98	103	ePn	Pn	20 51 58.5	0.0
DEMI	Demirci	2.04	87	iP	Pn	20 51 59.4	+0.1
DEMI				iS	Sb	20 52 27.0	-0.4
KULA	Kula-Manisa	2.06	102	PN	Pn	20 51 59.1	-0.3
KULA	Kula-Manisa	2.06	102	P	Pn	20 51 59.3	-0.1
SKIA	Skiathos	2.06	276	P	Pn	20 51 59.3	-0.1
SKIA				S	Sn	20 52 23.8	-1.0
	comp=E,630nm,0.7s						
SKIA	Skiathos	2.06	276	P	Pn	20 51 59.3	-0.1
SKIA				AML	AML	20 52 37.4	
	comp=N,1319µm,0.4s						
SKIA				AML	AML	20 52 47.3	
	comp=E,1095µm,0.9s						
ATHU	Athens Univers	2.07	242	P	Pn	20 51 58.8	-0.8
ATHU				S	Sn	20 52 23.6	-1.6
	comp=E,332nm,0.7s						
ATHU	Athens Univers	2.07	242	P	Pn	20 51 58.8	-0.8
ATHU				S	Sn	20 52 25.2	0.0
ATHU				AML	AML	20 52 33.4	
	comp=N,995µm,0.6s						
ATHU				AML	AML	20 52 41.1	
	comp=E,377µm,0.8s						
ATH	Athens Observa	2.12	243	P	Pn	20 51 59.9	-0.3
ATH				S	Sn	20 52 24.5	-1.8
	comp=E,862nm,1.4s						
ATH	Athens Observa	2.12	243	P	Pn	20 51 59.3	-0.9
ATH				AML	AML	20 52 36.0	
	comp=E,1535µm,0.6s						
ATH				AML	AML	20 52 36.2	
	comp=N,1222µm,0.3s						
OUR	Ouranopolis	2.13	310	PN	Pn	20 52 00.1	-0.2
OUR	Ouranopolis	2.13	310	P	Pn	20 52 00.3	0.0
OUR				S	Sn	20 52 24.9	-1.6
	comp=N,555nm,0.8s						
OUR	Ouranopolis	2.13	310	P	Pn	20 52 00.2	0.0
OUR				S	Sn	20 52 24.9	-1.6
VLY	Voula,Athens	2.13	239	P	Pn	20 51 59.8	-0.5
VLY				S	Sn	20 52 24.9	-1.6
	comp=N,912nm,0.8s						
VLY	Voula,Athens	2.13	239	P	Pn	20 51 59.7	-0.5
BODT	Bodrum	2.13	153	PN	Pn	20 51 59.9	-0.5
BODT	Bodrum	2.13	153	P	Pn	20 52 00.1	-0.3
AMGA	Amorgos Island	2.14	184	P	Pn	20 51 59.6	-1.0
AMGA				S	Sn	20 52 25.7	-1.2
	comp=N,680nm,0.4s						
AMGA	Amorgos Island	2.14	184	P	Pn	20 51 59.4	-1.1
KCTX	Karacabey (Bur	2.17	53	PN	Pn	20 52 00.3	-0.7
SERI	Serifos	2.21	216	P	Pn	20 52 01.9	+0.4
SERI				S	Sn	20 52 28.8	+0.2
	comp=N,742nm,0.7s						
SERI	Serifos	2.21	216	P	Pn	20 52 01.9	+0.4
SERI				AML	AML	20 52 39.2	
	comp=N,1078µm,0.5s						
SERI				AML	AML	20 52 41.9	
	comp=E,1835µm,0.6s						
RDO	Rodhopi	2.21	349	PN	Pn	20 52 01.3	-0.3
RDO	Rodhopi	2.21	349	P	Pn	20 52 01.2	-0.3
RDO				S	Sn	20 52 28.4	-0.3
	comp=E,730nm,0.8s						
RDO	Rodhopi	2.21	349	P	Pn	20 52 01.6	+0.1
RDO				AML	AML	20 52 29.4	
	comp=N,1423µm,0.7s						
RDO				AML	AML	20 52 47.3	
	comp=E,1447µm,1.0s						
SMAA	Simav-Kutahya	2.25	86	PN	Pn	20 52 01.8	-0.3
SMIA	Simia	2.25	269	P	Pn	20 52 02.1	0.0
SMIA	Simia	2.25	269	P	Pn	20 52 01.6	-0.5
SMIA				AML	AML	20 52 50.2	
	comp=E,2491µm,0.9s						
SMIA				AML	AML	20 52 54.4	
	comp=N,2448µm,0.6s						
NEO	Neokhori	2.26	279	P	Pn	20 52 01.9	-0.3
NEO				S	Sn	20 52 28.2	-1.7
	comp=N,405nm,0.7s						
NEO	Neokhori	2.26	279	P	Pn	20 52 02.0	-0.2
XOR	Xorichti	2.29	281	P	Pn	20 52 02.2	-0.4
XOR	Xorichti	2.29	281	P	Pn	20 52 02.2	-0.4
USAK	Uak-Merkez	2.29	95	iP	Pn	20 52 03.7	+1.0
TKR	Tekirdag	2.30	28	PN	Pn	20 52 01.8	-0.9
VILL	Villia	2.33	251	P	Pn	20 52 02.8	-0.3
VILL				S	Sn	20 52 31.7	+0.2
	comp=N,695nm,0.7s						
IOSP	Ios island	2.33	196	P	Pn	20 52 01.9	-1.3
IOSP				S	Sn	20 52 30.2	-1.4
	comp=N,1µm,0.6s						
IOSP	Ios island	2.33	196	P	Pn	20 52 02.1	-1.1
IOSP				S	Sn	20 52 30.3	-1.4
IOSP				AML	AML	20 52 43.8	
	comp=E,2434µm,0.6s						
IOSP				AML	AML	20 52 48.5	
	comp=N,2499µm,0.4s						
VIL2	Platees	2.34	252	P	Pn	20 52 03.2	-0.2
VIL2				AML	AML	20 52 51.4	
	comp=N,1003µm,0.7s						
VIL2				AML	AML	20 52 53.8	
	comp=E,1501µm,0.8s						
KAVA	Kavala	2.36	329	PN	Pg	20 52 13.6	+3.1
KAVA	Kavala	2.36	329	P	Pn	20 52 03.2	-0.3
KAVA				S	Sn	20 52 30.4	-1.9
	comp=E,410nm,0.5s						
KAVA	Kavala	2.36	329	P	Pn	20 52 03.2	-0.3
KAVA				S	Sn	20 52 30.4	-1.9
KVLA	Kavala	2.36	327	P	Pn	20 52 03.5	0.0
ORLT	Orhaneli	2.42	63	PN	Pn	20 52 04.2	-0.2
ATAL	Atalanti	2.42	264	P	Pn	20 52 04.2	-0.2
ATAL				S	Sn	20 52 32.3	-1.4
	comp=E,182nm,0.6s						
ATAL	Atalanti	2.42	264	P	Pn	20 52 04.1	-0.2
ATAL				S	Sn	20 52 32.7	-1.0
ATAL				AML	AML	20 52 47.0	
	comp=N,383µm,0.5s						
ATAL				AML	AML	20 52 54.9	
	comp=E,277µm,1.1s						
SHAP	Saphane-Kutahy	2.44	88	PN	Pn	20 52 04.5	-0.2
LKR	Lokris	2.44	263	P	Pn	20 52 04.7	+0.1
LKR				S	Sn	20 52 33.1	-1.2
	comp=E,202nm,0.3s						
PLG	Polygyros	2.48	305	P	Pn	20 52 05.3	+0.1
PLG	Polygyros	2.48	305	P	Pn	20 52 05.4	+0.1
CRLT	Corlu	2.50	30	PN	Pn	20 52 05.6	+0.2
YER	Yerkesik	2.52	136	PN	Pn	20 52 05.4	-0.4
YER	Yerkesik	2.52	136	P	Pn	20 52 06.0	+0.2
DAT	Datca	2.53	152	PN	Pn	20 52 05.1	-0.8
DAT	Datca	2.53	152	iP	Pn	20 52 06.0	+0.1
MDNY	Mudanya-Bursa	2.56	56	PN	Pn	20 52 06.0	-0.3
GEDZ	Gediz	2.58	87	PN	Pn	20 52 06.2	-0.5
THT2	Imerovigli	2.59	192	P	Pn	20 52 06.4	-0.3
PROD	Prodromos	2.60	255	P	Pn	20 52 07.6	+0.7
PROD				S	Sn	20 52 37.5	-0.8
PROD	Prodromos	2.60	255	P	Pn	20 52 07.6	+0.7
PROD				AML	AML	20 52 56.7	
	comp=E,904µm,0.6s						
PROD				AML	AML	20 52 57.2	
	comp=N,817µm,0.5s						
THR8	Santorini-Mono	2.61	191	P	Pn	20 52 06.6	-0.3
THR8	Santorini-Mono	2.61	191	P	Pn	20 52 07.3	+0.4
THR3	Thira Island,	2.62	192	P	Pn	20 52 06.2	-0.8
THR3	Thira Island,	2.62	192	P	Pn	20 52 06.6	-0.4
THR5	Thira Island,	2.62	193	P	Pn	20 52 06.2	-0.9
THR5	Thira Island,	2.62	193	P	Pn	20 52 06.5	-0.6
ULDT	Uludag	2.62	63	iP	Pn	20 52 07.9	+0.6
ULDT				iS	Sg	20 52 48.0	-1.7
GDZ	Gediz	2.64	86	iP	Pn	20 52 07.5	0.0
LOUT	Loutraki	2.64	249	P	Pn	20 52 07.3	-0.1
LOUT				S	Sn	20 52 38.4	-0.8
	comp=N,785nm,0.6s						
MHLO	Agia Marina, M	2.64	211	P	Pn	20 52 06.3	-1.1
MHLO	Agia Marina, M	2.64	211	P	Pn	20 52 05.7	-1.7
TVSB	Tavsanli	2.66	79	PN	Pn	20 52 07.4	-0.3
ARMT	Armutlu	2.66	52	PN	Pn	20 52 07.4	-0.3
THR6	Thira Island,	2.67	192	P	Pn	20 52 07.0	-0.8
THR6	Thira Island,	2.67	192	P	Pn	20 52 07.4	-0.4
THR9	Santorini-Faro	2.67	193	P	Pn	20 52 07.3	-0.5
THR9	Santorini-Faro	2.67	193	P	Pn	20 52 07.3	-0.5
TAVA	DENIZLI_Tavas	2.68	123	iP	Pn	20 52 08.6	+0.6
DID	Didima	2.69	238	P	Pn	20 52 07.7	-0.3
DID				S	Sn	20 52 39.5	-0.9
	comp=N,480nm,0.7s						
AXAR	Agios Charalam	2.69	267	P	Pn	20 52 08.2	+0.1
AXAR				AML	AML	20 53 04.0	
	comp=N,1219µm,0.6s						
AXAR				AML	AML	20 53 14.3	
	comp=E,981µm,1.1s						
EPID	Epidavros	2.71	241	P	Pn	20 52 08.0	-0.3
KHAL	Karahalli	2.72	102	iP	Pn	20 52 09.9	+1.2
KDZ	Kurdzhali	2.73	349	PN	Pn	20 52 08.4	-0.2
KDZ	Kurdzhali	2.73	349	iP	Pn	20 52 08.4	-0.2
GEMT	Gemlik	2.80	58	PN	Pn	20 52 09.8	+0.2
KRND	KRANIDI	2.81	237	P	Pn	20 52 09.6	-0.1
KRND				S	Sn	20 52 43.2	-0.2
	comp=E,398nm,0.7s						
HORT	Hortiatis	2.82	306	PN	Pn	20 52 10.1	+0.1
HORT	Hortiatis	2.82	306	P	Pn	20 52 10.5	+0.5
HORT				S	Sn	20 52 42.3	-1.6
	comp=E,208nm,0.5s						
DSF	Desfina	2.85	260	P	Pn	20 52 10.1	-0.2
DSF				S	Sn	20 52 43.4	-1.0
	comp=E,278nm,0.9s						
PHSR	Pinarhisar	2.87	22	PN	Pn	20 52 10.4	-0.2
PHSR	Pinarhisar	2.87	22	⇑iP	Pn	20 52 10.7	+0.1
PHSR	Pinarhisar	2.87	22	S	Sn	20 52 44.9	0.0
SRS	Serrai	2.88	319	ePn	Pn	20 52 11.6	+0.9
SRS				eSn	Sn	20 52 46.0	+0.9
SRS	Serrai	2.88	319	P	Pn	20 52 10.6	-0.1
SRS				S	Sn	20 52 42.9	-2.2
	comp=E,242nm,0.6s						
TURN	Turunc	2.88	136	PN	Pn	20 52 09.1	-1.6
KIRK	Kırklareli	2.91	15	iP	Pn	20 52 11.8	+0.7
RZN	Rozhen	2.91	339	iP	Pn	20 52 11.6	+0.3
EDRB	Edirne	2.92	10	PN	Pn	20 52 10.6	-0.6
EDRB	Edirne	2.92	10	P	Pn	20 52 11.2	0.0
EDRB				S	Sn	20 52 45.8	-0.2
CTKS	Kestanelik-??a	2.92	38	PN	Pn	20 52 11.1	-0.1
NVR	Nevrokopi	2.93	325	P	Pn	20 52 11.4	0.0
NVR				S	Sn	20 52 44.7	-1.7
	comp=E,185nm,0.7s						
NVR	Nevrokopi	2.93	325	P	Pn	20 52 11.6	+0.2
AGG	Agios Georgios	2.94	272	PN	Pn	20 52 11.5	0.0
AGG	Agios Georgios	2.94	272	ePn	Pn	20 52 11.6	+0.1
AGG	Agios Georgios	2.94	272	P	Pn	20 52 12.2	+0.7
YLV	Yalova	2.98	57	PN	Pn	20 52 11.8	-0.5
YLV	Yalova	2.98	57	⇓iP	Pn	20 52 11.7	-0.5
YLV	Yalova	2.98	57	S	Sg	20 52 58.8	-2.4
BUY	Buyukada	2.99	50	PN	Pn	20 52 11.7	-0.5
BUY	Buyukada	2.99	50	iP	Pn	20 52 13.1	+0.9
LIT	Litokhoron	3.01	293	ePn	Pn	20 52 12.5	0.0
LIT	Litokhoron	3.01	293	P	Pn	20 52 12.9	+0.4
LIT				S	Sn	20 52 47.6	-0.7
	comp=E,122nm,0.3s						
CTYL	Yalikoy Yolu	3.01	33	PN	Pn	20 52 12.1	-0.4
CTYL	Yalikoy Yolu	3.01	33	⇑iP	Pn	20 52 12.5	0.0
CTYL	Yalikoy Yolu	3.01	33	S	Sn	20 52 50.4	+2.1
ISK	Istanbul-Kandi	3.09	46	PN	Pn	20 52 13.6	0.0
ISK	Istanbul-Kandi	3.09	46	P	Pn	20 52 12.8	-0.8
ISK				S	Sn	20 52 48.8	-1.5
KAVV	Kandilli-Istan	3.09	46	PN	Pn	20 52 13.6	0.0
GUR	Goura	3.12	252	P	Pn	20 52 14.3	+0.2
TRAZ	Trapeza	3.15	256	P	Pn	20 52 15.0	+0.6
TRAZ				S	Sn	20 52 51.5	-0.3
	comp=E,208nm,0.4s						
TRAZ	Trapeza	3.15	256	P	Pn	20 52 15.1	+0.7
TRAZ				S	Sn	20 52 51.4	-0.5
KALE	Kalithea	3.15	261	P	Pn	20 52 14.6	+0.2
KALE				S	Sn	20 52 50.7	-1.2
	comp=E,168nm,0.8s						
KALE	Kalithea	3.15	261	P	Pn	20 52 14.7	+0.2
KALE				S	Sn	20 52 51.0	-0.9
KALE				AML	AML	20 53 20.7	
	comp=N,424µm,1.0s						
KALE				AML	AML	20 53 21.4	
	comp=E,245µm,0.8s						
MMB	Musomiste	3.18	326	P	Pn	20 52 14.8	-0.1
ARG	Arkhangelos	3.19	149	P	Pn	20 52 15.0	+0.1
ARG	Arkhangelos	3.19	149	P	Pn	20 52 15.3	+0.4
ALIK	Aliki, Aigiali	3.20	258	P	Pn	20 52 16.6	+1.5
TRIZ	Trizonia	3.21	260	P	Pn	20 52 15.9	+0.7
TRIZ				S	Sn	20 52 52.8	-0.4
	comp=E,190nm,1.1s						
TRIZ	Trizonia	3.21	260	P	Pn	20 52 15.7	+0.5
TRIZ				S	Sn	20 52 53.3	+0.1
KLYT	Kilyos	3.21	44	⇓iP	Pn	20 52 14.9	-0.3
KLYT	Kilyos	3.21	44	S	Sn	20 52 53.5	+0.3
SERG	Sergoula	3.21	261	P	Pn	20 52 15.4	+0.1
SERG				S	Sn	20 52 52.6	-0.7
	comp=E,168nm,0.4s						
THL	Klokotos Trika	3.22	282	P	Pn	20 52 16.3	+0.9
THL	Klokotos Trika	3.22	282	P	Pn	20 52 16.4	+0.9
THL				S	Sn	20 52 53.1	-0.5
KLV	Kalavryta, Ach	3.23	255	P	Pn	20 52 16.3	+0.7
KLV	Kalavryta, Ach	3.23	255	P	Pn	20 52 15.7	+0.1
KZIL	AFYON_Kizioren	3.25	101	iP	Pn	20 52 17.4	+1.6
ANX	Ano Chora	3.29	265	P	Pn	20 52 17.0	+0.6
KNT	Kendrikon	3.29	313	P	Pn	20 52 17.4	+1.1
PLD	Plovdiv	3.31	342	PN	Pn	20 52 16.7	+0.2
PLD	Plovdiv	3.31	342	ePn	Pn	20 52 17.1	+0.6
PLD				eSn	Sn	20 52 54.9	-0.7
PLD	Plovdiv	3.31	342	P	Pn	20 52 17.4	+0.9
LAKA	Lakka	3.31	259	P	Pn	20 52 17.2	+0.6
LAKA	Lakka	3.31	259	P	Pn	20 52 17.1	+0.6
FETY	Fethiye	3.32	134	P	Pn	20 52 18.0	+1.2
VLX	Vlachokerasia	3.34	243	P	Pn	20 52 17.1	0.0
VLX	Vlachokerasia	3.34	243	P	Pn	20 52 17.7	+0.7
EVR	Evrytania	3.34	270	P	Pn	20 52 18.1	+0.9
EVR	Evrytania	3.34	270	P	Pn	20 52 18.3	+1.1
VLI	Veliai	3.36	229	P	Pn	20 52 16.6	-0.7
VLI				S	Sn	20 52 55.9	-1.1
	comp=E,215nm,0.8s						
VLI	Veliai	3.36	229	P	Pn	20 52 17.1	-0.3
BRDR	BURDUR-Merkez	3.37	111	iP	Pn	20 52 18.4	+0.9
SILT	Sile	3.49	50	⇓iP	Pb	20 52 29.0	+2.3
SILT	Sile	3.49	50	S	Sg	20 53 14.1	-3.1
JMB	Yambol	3.51	6	Pg	Pb	20 52 28.9	+1.8
KARP	Karpathos	3.52	166	P	Pn	20 52 19.4	-0.1
VAY	Valandovo	3.58	312	iPn	Pn	20 52 16.3	-4.0
PVO	Paravola	3.59	266	P	Pn	20 52 20.7	+0.3
DRO	Drossia	3.59	255	P	Pn	20 52 21.2	+0.7
KTHA	Kythira Island	3.63	223	P	Pn	20 52 20.1	-0.8
KTHA				S	Sn	20 53 02.6	-0.9
	comp=E,120nm,1.3s						
KTHA	Kythira Island	3.63	223	P	Pn	20 52 20.2	-0.8
KTHA				S	Sn	20 53 02.7	-0.9
KTHR	Kythira	3.65	223	P	Pn	20 52 20.7	-0.6
KTHR				S	Sn	20 53 03.3	-0.9
ISP	Isparta	3.66	107	⇓iP	Pn	20 52 21.1	-0.4
KKB	Krupnik	3.69	322	P	Pn	20 52 23.8	+1.9
NPS	Neapolis	3.72	186	P	Pn	20 52 21.5	-0.8
NPS	Neapolis	3.72	186	P	Pn	20 52 21.3	-1.0
AMT	Artemida-Makis	3.74	249	P	Pn	20 52 24.2	+1.6
ITM	Ithomi	3.75	243	ePn	Pn	20 52 23.3	+0.7
ITM	Ithomi	3.75	243	P	Pn	20 52 23.5	+0.9
STIA	Sitia Lasithi	3.76	180	P	Pn	20 52 22.8	0.0
KPRO	Kipourio	3.79	287	P	Pn	20 52 24.1	+0.8
IDI	Anoyia	3.80	195	Pn	Pn	20 52 21.9	-1.5
	comp=E,1.8nm,0.3s,baz=1.5,slow=4.4,SNR=22						
IDI				Sn	Sn	20 53 04.0	-3.9
	comp=E,7.6nm,0.3s,baz=357,slow=19,SNR=6.0						
IDI				LR	LR	20 54 08.6	
	comp=E,194nm,21.8s,baz=70,slow=44						
IDI	Anoyia	3.80	195	P	Pn	20 52 22.3	-1.1
ANKY	Antikythira Is	3.81	217	P	Pn	20 52 23.1	-0.4
ANKY	Antikythira Is	3.81	217	P	Pn	20 52 22.7	-0.8
LAST	Lasithi	3.83	188	P	Pn	20 52 23.4	-0.5
LAST	Lasithi	3.83	188	P	Pn	20 52 22.5	-1.4
ZKR	Zakros	3.85	179	P	Pn	20 52 23.5	-0.5
PGB	Panagyurishte	3.86	338	P	Pn	20 52 24.3	0.0
VAM	Vamos	3.87	204	P	Pn	20 52 22.7	-1.6
VAM	Vamos	3.87	204	P	Pn	20 52 23.2	-1.1
IMMV	Iera Moni Meta	3.89	206	P	Pn	20 52 24.3	-0.3
IMMV	Iera Moni Meta	3.89	206	P	Pn	20 52 24.0	-0.5
ELND	Elena	3.96	358	⇑iP	Pn	20 52 25.6	+0.1
ELND	Elena	3.96	358	S	Sn	20 53 11.1	-0.6
PYL	PYLOS	4.02	240	P	Pn	20 52 27.7	+1.4
FNA	Florina	4.06	298	ePn	Pn	20 52 30.3	+3.3
FNA	Florina	4.06	298	ePn	Pn	20 52 29.1	+2.2
FNA				eSn	Sn	20 53 14.3	0.0
SIVA	Sivas	4.08	195	P	Pn	20 52 27.9	+0.8
NEST	Nestorio	4.15	292	P	Pn	20 52 30.0	+1.7
MDUB	Mudurnu	4.21	68	ePn	Pn	20 52 29.9	+0.8
VTS	Vitosha	4.24	330	ePn	Pn	20 52 29.8	+0.2
VTS	Vitosha	4.24	330	⇓iP	Pn	20 52 30.2	+0.7
VTS	Vitosha	4.24	330	S	Sb	20 53 31.1	+0.3
VTS	Vitosha	4.24	330	P	Pn	20 52 30.5	+1.0
PVL	Pavlikeni	4.28	352	P	Pn	20 52 29.5	-0.4
IGT	Igoumenitsa	4.51	279	ePn	Pn	20 52 36.3	+3.2
PLVB	Pleven	4.55	346	⇑iP	Pn	20 52 32.4	-1.2
RAZG	Razgrad	4.60	4	⇓iP	Pn	20 52 34.8	+0.4
RAZG	Razgrad	4.60	4	S	Sn	20 53 27.0	-0.6
SKO	Skopje	4.65	312	ePn	Pn	20 52 29.6	-5.4
MPEP	Malo Peshtene	4.73	339	P	Pn	20 52 36.9	+0.8
KEK	Kerkira	4.94	281	P	Pn	20 52 38.5	-0.5
BARS	Barje	5.03	321	ePn	Pn	20 52 41.4	+1.2
BARS	Barje	5.03	321	ePn	Pb	20 52 53.8	+0.8
BARS				eSg	Sg	20 54 05.7	-0.9
ZAPS	Zavoj	5.03	330	ePn	Pn	20 52 41.7	+1.4
ZAPS				eSg	Sg	20 54 04.1	-2.6
ANTO	Ankara	5.26	78	ePn	Pn	20 52 42.1	-1.4
RASA	Rasa	5.30	8	⇓iP	Pn	20 52 44.0	+0.1
CVDA	Cernavoda	5.55	15	⇓iP	Pn	20 52 35.4	-12
ZAGS	Zajecar	5.64	330	ePn	Pn	20 52 49.3	+0.7
SELS	Selova	5.67	320	ePn	Pn	20 52 49.7	+0.7
SELS				eSg	Sg	20 54 25.5	-1.7
BOVS	Bovan	5.71	326	ePn	Pn	20 52 50.9	+1.3
TIRR	Tirgusor	5.75	17	ePn	Pn	20 52 50.3	+0.2
TIRR	Tirgusor	5.75	17	⇓iP	Pn	20 52 50.0	-0.1
TIRR	Tirgusor	5.75	17	S	Sn	20 53 53.8	-2.0
TLB	Topalu	5.79	14	⇑iP	Pn	20 52 50.8	+0.1
HARR	Harsova	5.88	13	⇑iP	Pn	20 52 51.8	0.0
BR131	Keskin Array S	5.89	80	ePn	Pn	20 52 53.1	+0.8
BRTR	Keskin Array B	5.89	80	Pn	Pn	20 52 53.3	+1.0
	comp=E,1.3nm,0.3s,baz=258,slow=13,SNR=48						
BRTR				Lg	Lg	20 54 27.8	
	baz=282,slow=27,SNR=2.0						
SRE	Strehaia	6.08	340	⇑iP	Pn	20 52 54.6	-0.1
DRME	Dracevica, Mon	6.17	304	ePn	Pn	20 52 59.6	+3.8
ILGA	Ilgaz	6.21	68	ePn	Pn	20 52 53.5	-3.1
PDG	Podgorica	6.24	306	ePn	Pn	20 53 00.7	+3.8
TTG	Podgorica	6.24	306	ePn	Pn	20 52 54.4	-2.4
SJES	Sjenica	6.30	315	ePn	Pn	20 52 58.5	+0.7
GRUS	Gruza	6.36	322	ePn	Pn	20 53 00.2	+1.7
GRUS				eSg	Sg	20 54 47.4	-2.0
KUBS	Kucevo	6.36	330	ePn	Pn	20 52 59.5	+0.9
KUBS				eSg	Sg	20 54 47.7	-1.7
CFR	Carcaliu	6.38	13	⇓iP	Pn	20 52 59.3	+0.5
IVAS	Ivanjica	6.42	318	ePn	Pn	20 53 00.1	+0.7
VOIR		6.51	353	⇑iP	Pn	20 53 00.6	0.0
VOIR		6.51	353	S	Sn	20 54 11.2	-3.4
MLR	Muntele Rosu	6.52	359	Pn	Pn	20 53 01.9	+1.1
	comp=E,2.1nm,0.3s,baz=163,slow=8.3,SNR=48						
MLR				Sn	Sn	20 54 14.1	-0.9
	comp=E,1.8nm,0.3s,baz=78,slow=22,SNR=3.2						
MLR				Lg	Lg	20 54 53.6	
	comp=E,0.5nm,0.3s,baz=264,slow=13,SNR=1.8						
TLCR		6.53	17	⇓iP	Pn	20 53 01.1	+0.3
TLCR		6.53	17	S	Sn	20 54 12.2	-2.8
BISRR	Bisoca	6.59	4	⇑iP	Pn	20 53 01.5	-0.2
MDVR	Moldovita	6.66	332	⇓iP	Pn	20 53 01.8	-0.9
LOT	Lotru	6.70	346	⇑iP	Pn	20 53 03.0	-0.3
LOT	Lotru	6.70	346	S	Sn	20 54 13.1	-6.3
HCY	Herceg Novi	6.74	303	ePn	Pn	20 53 08.3	+4.6
TRUS	Trudelj	6.76	323	ePn	Pn	20 53 04.6	+0.6
DIVS	Divibare	6.87	320	ePn	Pn	20 53 06.3	+0.7
DIVS				eSg	Sg	20 55 03.2	-2.4
DIVS	Divibare	6.87	320	ePn	Pn	20 53 05.3	-0.3
RUDO	Rudo	6.87	315	ePn	Pn	20 53 05.6	+0.1
GZR	Gura Zlata	6.87	340	⇓iP	Pn	20 53 05.5	-0.1
GZR	Gura Zlata	6.87	340	S	Sn	20 54 18.9	-4.7
UPM	Unac-Piva	6.88	310	ePn	Pn	20 53 08.4	+2.6
PLOR	Plostina	6.89	3	⇑iP	Pn	20 53 05.6	-0.2
VRI	Vrincioaia	6.91	4	⇓iP	Pn	20 53 07.6	+1.6
BRY	Bratogost	6.94	307	ePn	Pn	20 53 09.6	+3.0
TREB	Trebinje	6.96	305	ePn	Pn	20 53 10.5	+3.7
DOPR	Dopca	7.01	356	⇓iP	Pn	20 53 06.7	-0.8
DOPR	Dopca	7.01	356	S	Sn	20 54 25.1	-1.9
BBLS	Lazići	7.01	316	ePn	Pn	20 53 08.9	+1.4
BBLS	Lazići	7.01	316	ePn	Pn	20 53 08.5	+1.0
DBRK	Dubrovnik	7.07	304	P	Pn	20 53 09.4	+1.2
OZUR		7.12	358	⇑iP	Pn	20 53 09.0	0.0
OZUR		7.12	358	S	Sn	20 54 27.5	-2.2
TIP	Timpagrande	7.27	275	ePn	Pn	20 53 10.3	-0.8
TIP	Timpagrande	7.27	275	⇓iP	Pn	20 53 08.1	-3.0
HAPS	Han Pijesak,Bl	7.41	316	ePn	Pn	20 53 13.0	+0.1
BZS	Buzias	7.42	335	ePn	Pn	20 53 13.6	+0.5
BZS				eSg	Sg	20 55 20.7	-2.6
BZS	Buzias	7.42	335	⇑iP	Pn	20 53 12.9	-0.2
STON	Ston	7.46	304	P	Pn	20 53 14.8	+1.3
STON	Ston	7.46	304	ePn	Pn	20 53 14.2	+0.7
TESR	Tescani	7.55	3	⇑iP	Pn	20 53 15.3	+0.5
SEVA	Sevastopol	7.93	43	⇓iP	Pn	20 53 20.1	0.0
CJR	Cluj-Napoca	7.95	347	⇑iP	Pn	20 53 20.7	+0.3
BIZ	Bicaz	7.96	0	⇑iP	Pn	20 53 21.0	+0.5
SIRR	Siria	7.99	337	⇑iP	Pn	20 53 20.9	0.0
MAKA	Makarska	8.09	305	P	Pn	20 53 26.8	+4.5
MILM	Milestii Mici	8.19	13	⇑iP	Pn	20 53 24.2	+0.6
DRGR		8.20	343	⇓iP	Pn	20 53 23.2	-0.6
DRGR		8.20	343	S	Sn	20 54 56.8	+0.5
KIS	Kishinev	8.27	13	LRM	MLR	20 56 40.0	
	comp=E,300nm,16.0s						
HVAR	Hvar	8.41	303	P	Pn	20 53 27.4	+0.8
BURAR	Bucovina Array	8.66	356	⇑iP	Pn	20 53 29.3	-0.9
BUR08	Bucovina Ar. S	8.69	356	ePn	Pn	20 53 32.7	+2.1
BLY	Banja Luka	8.80	314	⇑iP	Pn	20 53 31.1	-0.9
BLY	Banja Luka	8.80	314	ePn	Pn	20 53 34.5	+2.5
MORH	Mrgy, Hungar	9.09	325	ePn	Pn	20 53 35.7	-0.2
ZIRJ	Zirje	9.15	304	P	Pn	20 53 37.2	+0.5
MORI	Morici	9.21	305	P	Pn	20 53 39.0	+1.4
MMAI	Mount Meron Ar	9.60	125	Pn	Pn	20 53 41.9	-1.1
	comp=E,0.4nm,0.3s,baz=305,slow=15,SNR=2.8						
DUGI	Dugi Otok	9.68	305	P	Pn	20 53 45.2	+1.1
CRES	Cresnjev	10.43	314	ePn	Pn	20 53 54.0	-0.3
VYHS	Vyhne	10.87	334	ePN	Pn	20 54 00.5	+0.2
OKC	Ostrava-Krasne	12.25	335	AMS	AMS	20 59 10.0	
	comp=E,100nm,17.7s						
GERES	GERESS Array B	13.30	322	Pn	Pn	20 54 36.4	+2.8
	comp=E,0.1nm,0.3s,baz=130,slow=11,SNR=2.2						
OSTC	Ostas	13.53	332	AMS	AMS	20 59 40.0	
	comp=E,100nm,12.7s						
GNI	Garni	14.44	79	LR	LR	21 00 19.3	
	comp=E,38nm,19.5s,baz=286,slow=37						
CLL	Collm	15.38	328	ePP	P	20 55 12.0	+5.7
FINES	FINESS Array B	22.50	360	P	P	20 56 24.6	+0.6
	comp=E,3.2nm,1.1s,baz=172,slow=13,SNR=3.4						
FINES				LR	LR	21 05 28.2	
	comp=E,58nm,18.9s,baz=160,slow=38						
HFS	Hagfors	22.58	344	LR	LR	21 06 27.8	
	comp=E,58nm,18.2s,baz=152,slow=40						
ESDC	Sonseca Array	23.22	281	P	P	20 56 33.9	+2.0
	comp=E,0.8nm,0.6s,baz=77,slow=10,SNR=7.8						
NB2	NORSAR Subarra	23.96	342	P	P	20 56 38.1	-0.7
	comp=Z,12nm,1.7s,baz=146,slow=10						
NOA	NORSAR Array B	23.96	342	P	P	20 56 38.4	-0.5
	comp=Z,1.2nm,1.0s,baz=153,slow=8.7,SNR=4.3						
KIRV	Kirov	24.70	30	LR	LR	21 07 05.8	
	comp=Z,30nm,18.8s,baz=121,slow=38						
GEYT	Alibeck	25.03	82	P	P	20 56 47.2	-1.7
	comp=Z,2.7nm,0.8s,baz=277,slow=12,SNR=5.4						

AKTO	**Aktyubinsk**	**25.22**	**53**	P	**P**	**20 56 50.2**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=253,slow=9.9,SNR=4.2						
AKTO				LR	LR	21 07 44.7	
	comp=Z,13nm,20.7s,baz=258,slow=39						
EKA	**Eskdalemuir Ar**	**25.49**	**320**	P	**P**	**20 56 54.0**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=108,slow=10.0,SNR=4.4						
ARCES	**ARCESS Array B**	**30.63**	**360**	LR	LR	21 10 55.1	
	comp=Z,30nm,19.4s,baz=256,slow=38						
TORD	**Torodi Ar. Bea**	**33.58**	**227**	P	**P**	**20 58 05.4**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=32,slow=8.7,SNR=4.3						
KURBB	**Kurchatov Arra**	**38.23**	**55**	P	**P**	**20 58 43.0**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=280,slow=9.0,SNR=6.1						
MKAR	**Makanchi Array**	**41.14**	**60**	P	**P**	**20 59 09.2**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=282,slow=6.4,SNR=19						
ZALV	**Zalesovo Beam**	**41.89**	**49**	P	**P**	**20 59 14.8**	**0.0**
	comp=Z,0.5nm,0.5s,baz=258,slow=6.8,SNR=1.7						
WMQ	**Urumqi**	**45.53**	**63**	*e*P	**P**	**20 59 45.0**	**+0.7**
WMQ				sP	sP	20 59 53.4	+3.0
WMQ				LR	LR		
	comp=N,130nm,28.8s						
WMQ				LR	LR		
	comp=E,220nm,28.9s						
WMQ				LR	LR		
	comp=Z,240nm,27.1s						
CMAR	**Chiang Mai Arr**	**65.46**	**86**	P	**P**	**21 02 06.9**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=228,slow=30,SNR=4.8						
ILAR	**Eielson Array**	**76.45**	**357**	LR	LR	21 41 23.4	
	comp=Z,20nm,18.7s,baz=118,slow=39						
TXAR	**Lajitas Array**	**97.47**	**317**	P	**P**	**21 04 58.1**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=63,slow=2.2,SNR=2.7						
ASAR	**Alice Springs**	**117.94**	**99**	PKP	**PKPdf**	**21 10 10.3**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=356,slow=1.8,SNR=2.6						

*DDA **24** 20:55:46.9, 40°.29N×37°.94E, h15^{km}±1^{km}, ML3.5*
*ISK **24** 20:55:47.2, 40°.34N×37°.93E, h4^{km}, ML2.9/17*
ISC 24 20:55:47.1±1.0**, 40°.29N**±0°.02×**37°.93E**±0°.02**, h15**^{km}±10^{km}**,**
n40, σ1^{s}.50/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUSE	**Susehri**	**0.22**	**112**	*i* P	**Pb**	**20 55 53.1**	**+0.2**
SUSE				*i* S	**Sb**	**20 55 56.8**	**-0.1**
CUZAR	**Zara_SIVAS**	**0.42**	**197**	*i* P	**Pb**	**20 55 56.4**	**+0.1**
CUZAR				*i* S	**Sg**	**20 56 01.2**	**-0.2**
RSDY	**Resadiye-TOKAT**	**0.47**	**283**	PG	**Pb**	**20 55 56.9**	**-0.2**
RSDY				SG	**Sb**	**20 56 03.9**	**-0.1**
ORDU	**Ordu-Boztepe**	**0.70**	**355**	*i* P	**Pb**	**20 56 01.4**	**+0.3**
ORDU				*i* S	**Sb**	**20 56 11.0**	**+0.5**
SCER	**sogukcermik**	**0.75**	**235**	*i* P	**Pb**	**20 56 01.8**	**-0.2**
SCER				IAML_P			
	comp=Z,13μm,0.1s						
ERBA	**Erbaa**	**0.98**	**294**	*i* P	**Pn**	**20 56 06.5**	**+0.1**
ERBA				*i* S	**Sb**	**20 56 18.2**	**-0.3**
ERBA				IAML_P			
	comp=Z,17μm,0.1s						
KELT	**Kelkit**	**1.02**	**98**	*i* P	**Pb**	**20 56 06.5**	**-0.2**
KELT				*i* S	**Sb**	**20 56 19.3**	**-0.6**
KELT				IAML_P			
	comp=Z,10μm,0.2s						
CUKAN	**kangal_SIVAS**	**1.04**	**200**	*i* P	**Pn**	**20 56 07.2**	**0.0**
CUKAN				*i* S	**Sg**	**20 56 21.0**	**+0.3**
TOKT	**Tokat**	**1.06**	**272**	PG	**Pn**	**20 56 07.4**	**-0.1**
REFA	**Refahiye_ERZN**	**1.10**	**144**	*i* P	Pb	20 56 01.7	-6.2
REFA				*i* S	Sb	20 56 09.0	-13
REFA				IAML_P			
	comp=Z,5μm,0.1s						
KEMA	**Kemaliye**	**1.11**	**157**	*i* P	**Pg**	**20 56 08.4**	**-0.1**
KEMA				IAML_P			
	comp=Z,6μm,0.1s						
TOKA	**Tokat**	**1.11**	**272**	*i* P	**Pg**	**20 56 08.8**	**+0.3**
TOKA				IAML_P			
	comp=Z,3μm,0.2s						
CUALT	**Altinyayla-SIV**	**1.36**	**222**	*i* P	**Pg**	**20 56 13.1**	**-0.3**
CUALT				*i* S	**Sg**	**20 56 33.2**	**+2.1**
HEKM	**Malatya_Hekimh**	**1.41**	**179**	*i* P	**Pg**	**20 56 14.4**	**+0.1**
HEKM				IAML_P			
	comp=Z,7μm,0.2s						
MACK	**Trabzon**	**1.54**	**64**	*i* P	**Pg**	**20 56 16.8**	**0.0**
MACK				*i* S	**Sg**	**20 56 36.6**	**-0.2**
ERZN	**Erzincan**	**1.55**	**117**	PN	**Pg**	**20 56 16.7**	**-0.1**
KTUT	**Trabzon**	**1.56**	**63**	PN	**Pg**	**20 56 16.2**	**-0.9**
KTUT				SN	**Sg**	**20 56 37.5**	**+0.1**
CUSAR	**Sarkisla-SIVAS**	**1.56**	**237**	*i* P	**Pn**	**20 56 10.8**	**-3.6**
CUSAR				*i* S	**Sn**	**20 56 31.9**	**-2.6**
KVT	**Kavak**	**1.64**	**299**	PN	**Pb**	**20 56 17.4**	**+0.4**
BAYT	**Aydıntepe-Bayb**	**1.69**	**86**	PN	**Pb**	**20 56 18.2**	**+0.2**
SAMS	**Samsun-Alacam**	**1.70**	**309**	*i* P	**Pg**	**20 56 18.8**	**-1.0**
SAMS				IAML_P			
	comp=Z,772nm,0.1s						
TNCL	**Tunceli-Merkez**	**1.71**	**133**	*i* P	**Pg**	**20 56 19.2**	**-0.8**
TNCL				IAML_P			
	comp=Z,490nm,0.2s						
DARE	**Darende-Malaty**	**1.75**	**192**	PN	**Pg**	**20 56 19.9**	**-0.9**
KOPT	**Kop Dagi**	**1.99**	**97**	*i* P	**Pg**	**20 56 24.5**	**-0.7**
KOPT				IAML_P			
	comp=Z,855nm,0.3s						
AKCD	**Akcadag**	**1.99**	**180**	*i* P	**Pg**	**20 56 24.7**	**-0.6**
AKCD				IAML_P			
	comp=Z,2μm,0.2s						
ELBS	**KAHRAMANMARAS_**	**2.06**	**198**	*i* P	**Pb**	**20 56 24.4**	**+0.2**
ELBS				*i* S	**Sb**	**20 56 51.1**	**+1.4**
ELBS				IAML_P			
	comp=Z,265nm,0.3s						
YOZ	**Yozgat**	**2.11**	**253**	PN	**Pb**	**20 56 24.7**	**-0.4**
BNN	**Bunyan**	**2.16**	**229**	PN	**Pb**	**20 56 25.4**	**-0.6**
YEDI	**Yedisu-Bingol**	**2.18**	**112**	PN	**Pb**	**20 56 25.9**	**-0.5**
SVRC	**Sivrice-ELAZID**	**2.19**	**150**	PN	**Pb**	**20 56 26.0**	**-0.5**
KRIK	**Erzurum-spir**	**2.29**	**88**	*i* P	**Pg**	**20 56 29.7**	**-1.3**
KRIK				*i* S	**Sb**	**20 56 58.2**	**+1.8**
DIKM	**Dikmen**	**2.44**	**305**	PN	**Pb**	**20 56 28.9**	**-1.7**
CORM	**Corum**	**2.53**	**269**	PN	**Pb**	**20 56 30.3**	**-1.9**
KMRS	**Kahramanmaras**	**2.90**	**196**	PN	**Pb**	**20 56 36.2**	**-2.3**
BCA	**Borcka**	**3.03**	**66**	PN	**Pb**	**20 56 37.4**	**-3.3**
BATM	**Batumi**	**3.14**	**64**	PN	**Pn**	**20 56 38.7**	**+2.7**
BZK	**Bozkurt**	**3.40**	**301**	PN	**Pn**	**20 56 42.1**	**+2.5**
YAYX	**Yaylak**	**3.46**	**248**	PN	**Pn**	**20 56 43.2**	**+2.7**
KULU	**Kulu**	**4.00**	**253**	PN	**Pn**	**20 56 51.4**	**+3.4**
SULT	**Sultanhani-AKS**	**4.01**	**240**	PN	**Pn**	**20 56 52.0**	**+3.9**

*ISK **24** 21:11:57.8, 38°.29N×38°.27E, h8^{km}, ML2.2/6*
*DDA **24** 21:11:58.2, 38°.32N×38°.27E, h7^{km}±3^{km}, ML2.7*
ISC 24 21:11:58.4±1.1**, 38°.31N**±0°.03×**38°.27E**±0°.03**, h10**^{km}±10^{km}**,**
n19, σ0^{s}.73/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKCD	**Akcadag**	**0.28**	**267**	*i* P	**Pg**	**21 12 04.1**	**0.0**
AKCD				*i* S	**Sg**	**21 12 08.3**	**+0.4**
ELZG	**Elazig**	**0.59**	**71**	*i* P	**Pb**	**21 12 10.3**	**-0.7**
ELZG				IAML_P			
	comp=Z,2μm,0.2s						
HEKM	**Malatya_Hekimh**	**0.62**	**337**	*i* P	**Pb**	**21 12 11.2**	**-0.3**
HEKM				*i* S	**Sb**	**21 12 19.4**	**-1.1**
DARE	**Darende-Malaty**	**0.67**	**293**	PG	**Pg**	**21 12 11.3**	**-0.2**
DARE				SG	**Sb**	**21 12 21.3**	**-0.6**
SVRC	**Sivrice-ELAZID**	**0.81**	**85**	PG	**Pg**	**21 12 13.9**	**-0.3**
SVRC				SG	**Sb**	**21 12 25.8**	**-0.2**
CUGUR	**Gurin_SVAS**	**0.89**	**298**	*i* P	**Pb**	**21 12 15.9**	**-0.2**
ELBS	**KAHRAMANMARAS_**	**0.90**	**271**	*i* P	**Pg**	**21 12 15.5**	**-0.3**
ELBS				*i* S	**Sg**	**21 12 26.6**	**-0.8**
ELBS				IAML_P			
	comp=Z,220nm,0.1s						
URFA	**Urfa**	**0.97**	**153**	PG	**Pg**	**21 12 16.7**	**-0.4**
URFA				SG	**Sb**	**21 12 30.0**	**-0.3**
KEMA	**Kemaliye**	**0.97**	**10**	*i* P	**Pb**	**21 12 17.6**	**0.0**
KEMA				*i* S	**Sn**	**21 12 31.5**	**-0.8**
KEMA				IAML_P			
	comp=Z,717nm,0.1s						
GZT	**Gaziantep**	**1.10**	**211**	*i* P	**Pn**	**21 12 21.5**	**+1.3**
GZT				*i* S	**Sn**	**21 12 36.1**	**+0.5**
CUKAN	**kangal_SIVAS**	**1.19**	**328**	*i* P	**Pn**	**21 12 21.6**	**+0.3**
CUKAN				*i* S	**Sn**	**21 12 37.5**	**-0.2**
SANL	**SANLIURFA_Merk**	**1.27**	**153**	*i* P	**Pg**	**21 12 23.6**	**+0.8**
KMRS	**Kahramanmaras**	**1.35**	**234**	PN	**Pb**	**21 12 23.5**	**-0.4**
GAZ	**Gaziantep**	**1.41**	**217**	PN	**Pb**	**21 12 24.7**	**-0.3**
SURC	**SANLIURFA_SURC**	**1.45**	**169**	*i* P	**Pg**	**21 12 26.9**	**+0.6**
SURC				IAML_P			
	comp=Z,216nm,0.2s						
CUZAR	**Zara_SIVAS**	**1.62**	**346**	*i* P	**Pg**	**21 12 31.9**	**+2.2**
ANDN	**Andirin**	**1.69**	**245**	*i* P	**Pb**	**21 12 29.3**	**-0.4**
ANDN				IAML_P			
	comp=Z,582nm,0.2s						
MAZI	**Mazidag**	**1.92**	**116**	PN	**Pn**	**21 12 31.5**	**+0.2**
BNN	**Bunyan**	**1.98**	**287**	PN	**Pn**	**21 12 32.6**	**+0.4**

*ISCJB **24** 21:25:48.7±1.2, 5°.07N±0°.05×125°.6E±0°.1, h189^{km}±12^{km}, Error ellipse: s-maj=21.4km s-min=8.0km az=172.3*
*MAN **24** 21:25:51.0, 5°.05N×125°.58E, h157^{km}, mb4.1, ML2.9, MS2.5*
*DJA **24** 21:25:51.0±0.6, 5°N±3°×12°6E±$^{\circ}$, h180^{km}±7^{km}, M4.2/7, mb4.4/2, mB4.9/1, MLv4.1/7, Mw(mB)4.2/1*
ISC 24 21:25:48.8±2.0**, 5°.06N**±0°.05×**125°.7E**±0°.1**, h190**^{km}±16^{km}**,**
n10, σ1^{s}.59/15**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.04**	**3**	*e*P	**Pn**	**21 26 18.4**	**+0.5**
DDMP				*e*S	**Sn**	**21 26 40.9**	**+0.4**
SGSI	**Sangihe**	**1.37**	**185**	P	**Pn**	**21 26 21.3**	**+0.8**
SGSI				S	**Sn**	**21 26 45.6**	**+0.4**
SKMP	**Bagumbayan, Su**	**1.83**	**323**	*e*P	**Pn**	**21 26 23.9**	**-1.0**
SKMP				*e*S	**Sn**	**21 26 51.1**	**-1.8**
MATI	**Mati**	**1.97**	**18**	*e*P	**Pn**	**21 26 26.4**	**+0.1**
MATI				*e*S	**Sn**	**21 26 54.2**	**-1.3**
DMPH	**Davao City--Mi**	**2.02**	**356**	*e*P	**Sn**	**21 26 54.2**	**-2.3**
KCP	**Kidapawan**	**2.02**	**344**	⇑*e*P	**Pn**	**21 26 30.4**	**+3.4**
KCP				*i* S	Sn	21 27 11.1	+15
CTBH	**Cotabato--PC H**	**2.57**	**327**	⇑*i*P	**Pn**	**21 26 33.3**	**+0.4**
BUKP	**Musuan**	**2.87**	**348**	*e*P	**Pn**	**21 26 38.2**	**+1.8**
BUKP				*e*S	**Sn**	**21 27 13.1**	**-0.6**
TNTI	**Ternate**	**4.59**	**158**	P	**Pn**	**21 26 58.1**	**+0.4**
LBMI	**Labuha**	**5.95**	**162**	P	**Pn**	**21 27 15.2**	**-0.2**

*BJI **24** 21:39:17.5±0.0, 4°.05S×101°.55E, h66^{km}, mb5.1/61, mB5.0/42, Ms4.3/34, Ms7 4.1/23*
*MOS **24** 21:39:22.1±1.0, 3°.30S×101°.70E, h57^{km}, mb5.5/53, Error ellipse: s-maj=8.3km s-min=4.3km az=116.0*
*NEIC **24** 21:39:22.3±2.0, 3°.61S×101°.51E, h57^{km}±3^{km}, mb5.2/88, Error ellipse: s-maj=13.7km s-min=7.1km az=46.0*
NEIC Felt [III] at Bengkulu and [II] at Kepahiang.
*DJA **24** 21:39:23.5±0.2, 4°S±2°×10°2E±$^{\circ}$, h54^{km}±2^{km}, M5.0/50, mB5.5/18, mb5.1/50, MLv5.2/30, Mw(mB)4.9/18*
*IDC **24** 21:39:23.9±1.9, 3°.34S×101°.68E, h60^{km}±16^{km}, mb4.7/27, mb1 4.7/30, mb1mx4.7/37, mbtmp4.9/30, MS3.7/25, Ms1 3.7/25, ms1mx3.6/35, Error ellipse: s-maj=14.5km s-min=9.7km az=56.0*
*ISCJB **24** 21:39:23.2±0.3, 3°.42S±0°.03×101°.66E±0°.03, h70^{km}±2^{km}, mb5.0/130, Error ellipse: s-maj=5.5km s-min=2.7km az=42.4*
ISC 24 21:39:22.8±0.5**, 3°.49S**±0°.04×**101°.57E**±0°.04**, h59**^{km}±3^{km}**,**
h60^{km}:pP-P, n722, σ1^{s}.38/747**, mb5.1**/147**, MS3.8**/33**,**
52C-20D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.39**	**355**	P	**Pn**	**21 39 47.0**	**+0.8**
KRJI				S	**Sn**	**21 40 03.9**	**+0.3**
MNAI	**Manna**	**1.63**	**122**	*e*Pn	**Pn**	**21 39 49.3**	**-0.1**
MNAI				*e*Sn	**Sn**	**21 40 09.5**	**+0.2**
MNAI	**Manna**	**1.63**	**122**	P	**Pn**	**21 39 49.2**	**-0.1**
MNAI				S	**Sn**	**21 40 09.1**	**-0.2**
PPSI	**Pulau Pagai**	**1.72**	**295**	P	**Pn**	**21 39 51.8**	**+1.4**
PPSI				S	**Sn**	**21 40 12.1**	**+0.7**
LHSI	**Lahat**	**1.98**	**100**	P	**Pn**	**21 39 55.2**	**+1.2**
LHSI				S	**Sn**	**21 40 19.6**	**+1.9**
SDSI	**Sungai Dareh**	**2.54**	**357**	P	**Pn**	**21 40 03.6**	**+1.9**
JMBI	**JAMBI**	**2.77**	**48**	P	**Pn**	**21 40 05.7**	**+0.9**
MDSI	**Maura Dua**	**2.78**	**111**	P	**Pn**	**21 40 06.2**	**+1.2**
PDSI	**Padang**	**2.79**	**337**	P	**Pn**	**21 40 05.9**	**+0.8**
LWLI	**Liwa**	**2.91**	**122**	P	**Pn**	**21 40 08.0**	**+1.2**
RGRI	**Rengat**	**3.21**	**14**	P	**Pn**	**21 40 13.0**	**+2.2**
PMBI	**Palembang**	**3.24**	**80**	P	**Pn**	**21 40 11.3**	**0.0**
SISI	**Saibi**	**3.28**	**311**	P	**Pn**	**21 40 13.1**	**+1.3**
KLSI		**3.37**	**111**	P	**Pn**	**21 40 14.5**	**+1.5**
KASI	**Kota Agung**	**3.55**	**125**	P	**Pn**	**21 40 15.8**	**+0.3**
KLI	**Kotabumi**	**3.55**	**113**	P	**Pn**	**21 40 18.3**	**+2.8**
KLI				S	**Pn**	**21 40 17.9**	**+2.4**
BKNI	**Bangkinang**	**3.83**	**352**	*e*Pn	**Pn**	**21 40 20.9**	**+1.6**
BKNI	**Bangkinang**	**3.83**	**352**	P	**Pn**	**21 40 20.9**	**+1.6**
BLSI	**Bandar Lampung**	**4.11**	**117**	P	**Pn**	**21 40 25.6**	**+2.4**
DSRI	**Dabo**	**4.24**	**45**	P	**Pn**	**21 40 26.3**	**+1.4**
MNSI	**Mandailing Nat**	**4.70**	**335**	P	**Pn**	**21 40 32.1**	**+0.9**
PPBI	**Pangkal Pinang**	**4.75**	**74**	P	**Pn**	**21 40 33.0**	**+1.1**
CGJI	**Cibinong**	**5.15**	**127**	P	**Pn**	**21 40 37.4**	**0.0**
	360nm,0.7s,5μm2.7nm						
SBJI	**Serang**	**5.24**	**120**	P	**Pn**	**21 40 40.7**	**+2.0**
	193nm,0.8s,1.7nm						
TPRI	**Tanjung Pinang**	**5.28**	**34**	P	**Pn**	**21 40 41.0**	**+1.8**
	589nm,0.6s,7μm2.0nm						
MYKOM	**Kota Tinggi**	**5.72**	**24**	*e*Pn	**Pn**	**21 40 46.8**	**+1.7**
CBJI	**Citeko**	**6.01**	**119**	P	Pn	21 40 54.5	+5.3
TPI	**Tanjungpandan**	**6.12**	**83**	P	**Pn**	**21 40 51.2**	**+0.5**
	43nm,0.8s,0.5nm						
GSI	**Gunungsitoli**	**6.21**	**320**	*e*Pn	**Pn**	**21 40 52.4**	**+0.4**
GSI				*e*Sn	**Sn**	**21 42 01.1**	**-0.6**
GSI	**Gunungsitoli**	**6.21**	**320**	P	**Pn**	**21 40 52.2**	**+0.2**
	357nm,0.5s,1.6nm						
PSI	**Prapat**	**6.78**	**337**	P	**Pn**	**21 40 59.5**	**-0.4**
	4.2nm,0.3s,baz=164,slow=11,SNR=14						
PSI				LR	LR	21 42 59.7	
	comp=Z,271nm,18.3s,baz=140,slow=33						
PSI	**Prapat**	**6.78**	**337**	*e*Pn	**Pn**	**21 40 58.9**	**-1.1**
LEM	**Lembang**	**6.87**	**119**	P	**Pn**	**21 41 03.0**	**+1.8**
	2.7nm,0.3s,baz=294,slow=19,SNR=2.8						
LEM				LR	LR	21 44 07.0	
	comp=Z,726nm,19.7s,baz=295,slow=41						
CISI	**Cisompet, Garu**	**7.41**	**123**	*e*Pn	**Pn**	**21 41 08.0**	**-0.5**
CISI				*e*Sn	**Sn**	**21 42 27.6**	**-3.7**
CISI	**Cisompet, Garu**	**7.41**	**123**	P	**Pn**	**21 41 08.1**	**-0.4**
	210nm,0.5s,4μm2.1nm						
SNSI	**Sinabang, Aceh**	**7.86**	**318**	P	**Pn**	**21 41 16.2**	**+1.6**
	571nm,0.7s,7μm1.6nm						
KCSI	**Kotacane, Aceh**	**7.93**	**331**	P	**Pn**	**21 41 15.8**	**+0.2**
	56nm,0.9s,0.6nm						
IPM	**Ipoh**	**7.93**	**356**	*e*Pn	**Pn**	**21 41 18.5**	**+2.9**
XMIS	**Christmas Isla**	**8.04**	**150**	*e*Pn	Pn	21 41 11.4	-5.6
CMJI	**Cimerak**	**8.06**	**122**	P	**Pn**	**21 41 18.3**	**+1.0**
	146nm,0.5s						
KPJI	**Karang Pucung**	**8.26**	**118**	P	**Pn**	**21 41 22.5**	**+2.4**
	147nm,0.6s						
KULM	**Kulim**	**8.77**	**354**	*e*Pn	**Pn**	**21 41 29.1**	**+2.1**
MLSI	**Meulaboh, Aceh**	**9.27**	**326**	P	**Pn**	**21 41 34.7**	**+0.8**
	424nm,0.6s						
SMRI	**Semarang**	**9.51**	**112**	*e*Pn	**Pn**	**21 41 39.4**	**+2.2**
SMRI	**Semarang**	**9.51**	**112**	P	**Pn**	**21 41 39.4**	**+2.2**
LHMI	**Lhok Sumawe**	**9.81**	**332**	*e*Pn	**Pn**	**21 41 41.8**	**+0.5**
LHMI	**Lhok Sumawe**	**9.81**	**332**	P	**Pn**	**21 41 42.2**	**+0.9**
	97nm,1.0s						
KSM	**Kuching**	**10.03**	**61**	*e*Pn	**Pn**	**21 41 44.1**	**-0.1**
SKLT	**Songkhla**	**10.63**	**355**	P	**Pn**	**21 41 53.7**	**+1.2**
	30nm,1.0s,461nm						
TRTT	**Trang**	**11.40**	**351**	P	**Pn**	**21 42 07.4**	**+4.4**
	58nm,1.1s						
SBUM	**Sibu**	**12.17**	**61**	*e*Pn	**Pn**	**21 42 17.1**	**+3.6**
JAGI	**Jajag, Banyuwa**	**13.45**	**112**	*e*Pn	**Pn**	**21 42 30.1**	**-0.9**
JAGI	**Jajag, Banyuwa**	**13.45**	**112**	P	**Pn**	**21 42 30.1**	**-0.9**
	85nm,0.7s						
SRBI	**Singaraja**	**14.32**	**109**	P	**Pn**	**21 42 44.5**	**+2.0**
	48nm,1.1s						
PLAI	**Plampang**	**16.96**	**109**	P	**P**	**21 43 16.8**	**-0.6**
	78nm,0.7s						
SRAK	**Srakaew**	**17.39**	**2**	P	**P**	**21 43 22.8**	**+0.7**
	407μm,0.9s						
KKM	**Kota Kinabalu**	**17.42**	**57**	*e*P	**P**	**21 43 24.2**	**+1.6**
	60nm,1.3s						
SPSI	**Sidrap Palu**	**18.16**	**92**	P	**P**	**21 43 30.7**	**0.0**
KAPI	**Kappang**	**18.19**	**95**	P	**Pn**	**21 43 31.9**	**+0.5**
	6.2nm,0.3s,baz=280,slow=8.7,SNR=17						
KAPI				LR	LR	21 50 42.9	
	comp=Z,243nm,21.1s,baz=119,slow=38						
KAPI	**Kappang**	**18.19**	**95**	*e*P	**Pn**	**21 43 31.2**	**-0.1**
	92nm,1.0s						
KAPI	**Kappang**	**18.19**	**95**	*e*P	**Pn**	**21 43 31.3**	**-0.1**
KAPI				pmax	pmax		
	comp=Z,92nm,1.0s						
TTSI	**Tana Toraja**	**18.22**	**89**	P	**Pn**	**21 43 33.7**	**+1.9**
	comp=Z,63nm,1.1s,comp=Z,645nm						
BNSI	**Bone**	**18.51**	**93**	P	**Pn**	**21 43 36.5**	**+1.2**
	comp=Z,98nm,0.9s						
BKSI	**Bulukumba**	**18.59**	**96**	P	**Pn**	**21 43 36.2**	**+0.1**
	comp=Z,60nm,0.7s,comp=Z,666nm						
WBSI	**Waikabubak, Su**	**18.72**	**110**	P	**P**	**21 43 36.5**	**-0.3**
UTHA	**Uthaitani**	**19.04**	**354**	P	**Pn**	**21 43 46.4**	**+4.9**
	comp=Z,27μm,0.9s						
CHAI	**Chaiyaphum**	**19.27**	**1**	P	**Pn**	**21 43 44.2**	**-0.1**
	comp=Z,42μm,0.8s						
PBKT	**Sadao Pong**	**19.94**	**358**	P	**Pn**	**21 43 51.5**	**-0.6**
	comp=Z,6.7nm,0.6s						
PANO	**Nakornpanom**	**20.72**	**8**	P	**P**	**21 43 59.2**	**+0.7**
	comp=Z,1.9nm,0.8s						
KDI	**Kendari**	**21.01**	**92**	P	**P**	**21 44 04.1**	**+2.4**
	comp=Z,122nm,1.6s,comp=Z,5μm						
UTTA	**Uttaradit**	**21.12**	**357**	P	**P**	**21 44 06.2**	**+3.4**
	comp=Z,21μm,0.8s						
MMRI	**Maumere**	**21.17**	**105**	*e*P	**P**	**21 44 03.6**	**+0.2**
	comp=Z,167nm,1.6s						
LUWI	**Luwuk**	**21.32**	**84**	*e*P	**P**	**21 44 05.7**	**+0.7**
	comp=Z,193nm,1.2s						
LUWI	**Luwuk**	**21.32**	**84**	P	**P**	**21 44 06.5**	**+1.5**
NONG	**Nongkai**	**21.47**	**4**	P	**P**	**21 44 05.2**	**-1.3**
	comp=Z,1.0nm,0.9s						
CM31	**Chiang Mai Arr**	**21.96**	**353**	*e*P	**P**	**21 44 11.6**	**-0.2**
	comp=Z,20nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.96**	**353**	P	**P**	**21 44 09.8**	**-2.0**
	comp=Z,12nm,0.6s,baz=186,slow=9.2,SNR=36						
CMAR				PcP	**PcP**	**21 48 10.0**	**+1.1**
	comp=Z,3.2nm,0.7s,baz=204,slow=2.9,SNR=10.0						
CMAR				LR	LR	21 52 30.3	
	comp=Z,236nm,20.0s,baz=180,slow=36						
CMAR	**Chiang Mai Arr**	**21.96**	**353**	*i* P	**P**	**21 44 11.6**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,12nm,0.6s						
CMMT	**Chiang Mai**	**22.31**	**353**	P	**P**	**21 44 15.8**	**+0.2**
	comp=Z,8.4nm,0.9s						
CHTO	**Chiang Mai**	**22.31**	**353**	*e*P	**P**	**21 44 14.8**	**-0.8**
	comp=Z,14nm,1.0s						
CHTO	**Chiang Mai**	**22.31**	**353**	*e*P	**P**	**21 44 14.8**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,14nm,1.0s						
GIRL	**Giralia**	**22.65**	**148**	*e*P	**P**	**21 44 17.9**	**-1.3**
	comp=Z,720nm,1.9s						
PAYA	**Payao**	**22.77**	**356**	P	**P**	**21 44 20.5**	**+0.1**
	comp=Z,35μm,0.7s						
BATI	**Baumata**	**22.91**	**108**	P	**P**	**21 44 21.5**	**-0.5**
	comp=Z,34nm,0.4s,baz=270,slow=8.1,SNR=6.3						
BATI				S	**S**	**21 48 19.4**	**-8.3**
	comp=Z,25nm,0.6s,baz=330,slow=20,SNR=3.6						
BATI				LR	LR	21 54 39.7	
	comp=Z,247nm,19.5s,baz=256,slow=40						
SOEI	**Soe**	**23.38**	**107**	*e*P	**P**	**21 44 24.6**	**-2.1**
	comp=Z,58nm,0.9s						
PALK	**Pallekele**	**23.41**	**297**	LR	LR	21 52 25.9	
	comp=Z,111nm,19.7s,baz=115,slow=33						
PALK	**Pallekele**	**23.41**	**297**	P	**P**	**21 44 30.7**	**+3.8**
QIZ	**Qiongzhong**	**23.81**	**20**	*e*P	**P**	**21 44 31.8**	**+1.4**
	comp=Z,150nm,1.8s						
QIZ	**Qiongzhong**	**23.81**	**20**	P	**P**	**21 44 31.6**	**+1.2**
QIZ				S	**S**	**21 48 48.1**	**+6.0**
QIZ				pmax	pmax		
	comp=Z,330nm,2.5s						
QIZ				LR	LR		
	comp=Z,280nm,4.1s						
QIZ				LR	LR		
	comp=Z,280nm,3.3s						
QIZ				LR	LR		
	comp=Z,260nm,30.4s						
TGY	**Tagaytay City**	**25.97**	**47**	P	**P**	**21 44 50.5**	**+0.3**
	comp=Z,98nm,0.3s,baz=257,slow=3.1,SNR=8.1						
TGY				LR	LR	21 56 34.3	
	comp=Z,199nm,20.1s,baz=228,slow=40						
LBMI	**Labuha**	**26.06**	**84**	P	**P**	**21 44 47.5**	**-3.5**
TNTI	**Ternate**	**26.13**	**81**	*e*P	**P**	**21 44 50.7**	**-0.9**
	comp=Z,12nm,0.7s						
TNTI	**Ternate**	**26.13**	**81**	P	**P**	**21 44 51.3**	**-0.3**
DAV	**Davao City (W)**	**26.16**	**66**	LR	LR	21 56 20.8	
	comp=Z,100nm,20.0s,baz=262,slow=39						
MEEK	**Meekatharra**	**28.22**	**146**	P	**P**	**21 45 12.4**	**+2.1**
	baz=28,SNR=4.1						
KMI	**Kunming**	**28.46**	**2**	P	**P**	**21 45 16.3**	**+3.7**
KMI				S	**S**	**21 50 00.3**	**+4.1**
KMI				sS	sS	21 50 27.0	+5.9
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,49nm,3.8s						
KMI				LR	LR		
	comp=Z,300nm,18.9s						
KMI				LR	LR		
	comp=Z,220nm,19.8s						
KMI				LR	LR		
	comp=Z,350nm,20.6s						
H08S2	**Diego Garcia H**	**29.23**	**261**	T	T	22 15 07.4	
	baz=84,slow=75,SNR=254						
H08S3	**Diego Garcia H**	**29.23**	**261**	T	T	22 15 07.9	
	baz=84,slow=75,SNR=132						
H08S1	**Diego Carcia H**	**29.25**	**261**	T	T	22 15 08.7	
	baz=84,slow=75,SNR=196						
KNRA	**Kununurra**	**29.37**	**116**	P	**P**	**21 45 20.0**	**-0.6**
	baz=29,SNR=3.8						
SIJI	**Sorong**	**29.78**	**86**	P	**P**	**21 45 24.3**	**0.0**
	comp=Z,14nm,0.6s,baz=46,slow=7.5,SNR=4.2						
GYA	**Guiyang**	**30.18**	**9**	⇑*i*P	**P**	**21 45 28.3**	**+0.6**
GYA				pP	pP	21 45 43.0	+0.6
GYA				sP	sP	21 45 49.3	-0.1
GYA				PP	**PnPn**	**21 46 30.5**	**+3.1**
GYA				S	**S**	**21 50 21.1**	**-1.8**
GYA				sS	sS	21 50 50.4	+2.6
GYA				SS	**ScP**	**21 52 09.3**	**+4.1**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.9s						
GYA				LR	LR		
	comp=Z,290nm,17.0s						
GYA				LR	LR		
	comp=Z,320nm,17.2s						
SHL	**Shillong**	**30.37**	**343**	*e*P	**P**	**21 45 31.0**	**+1.5**
H08N1	**Diego Carcia H**	**30.57**	**263**	T	T	22 17 23.6	
	baz=90,slow=74,SNR=18						
H08N2	**Diego Garcia H**	**30.59**	**264**	T	T	22 17 26.0	
	baz=90,slow=74,SNR=15						
H08N3	**Diego Garcia H**	**30.59**	**263**	T	T	22 17 28.0	
	baz=90,slow=74,SNR=32						
KDU	**Kakadu**	**31.89**	**108**	P	**P**	**21 45 41.0**	**-1.9**
	baz=32,SNR=4.0						
NWAO	**Narrogin (SRO)**	**32.75**	**155**	P	**P**	**21 45 53.2**	**+3.1**
	comp=Z,17nm,1.1s,baz=257,slow=14,SNR=2.8						
H01W3	**Cape Leeuwin H**	**33.35**	**161**	T	T	22 20 28.5	
	baz=338,slow=76,SNR=38						
H01W2	**Cape Leeuwin H**	**33.36**	**161**	T	T	22 20 26.2	
	baz=338,slow=76,SNR=25						
H01W1	**Cape Leeuwin H**	**33.36**	**161**	T	T	22 20 28.0	
	baz=338,slow=76,SNR=32						
WRKA	**Warakurna**	**33.47**	**132**	P	**P**	**21 45 57.8**	**+1.2**
	baz=34,SNR=25						
KMBL	**Kambalda**	**33.69**	**148**	P	**P**	**21 45 59.6**	**+1.3**
	baz=34,SNR=5.3						
CD2	**Chengdu**	**34.27**	**3**	*e*P	**P**	**21 46 05.1**	**+1.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JIRN	**Jiri**	**34.34**	**335**	*e*P	**P**	**21 46 05.6**	**+1.2**
	comp=Z,216nm,0.8s						
ENH	**Enshi**	**34.41**	**12**	*e*P	**P**	**21 46 04.5**	**-0.2**
	comp=Z,30nm,0.6s						
LSA	**Lhasa**	**34.48**	**344**	*e*P	**P**	**21 46 06.4**	**+0.7**
	comp=Z,12nm,0.9s						
LSA	**Lhasa**	**34.48**	**344**	*i* P	**P**	**21 46 06.5**	**+0.8**
	SNR=10						
LSA	**Lhasa**	**34.48**	**344**	*e*P	**P**	**21 46 06.4**	**+0.7**
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
PKI	**Pulchoki**	**34.59**	**334**	*e*P	**P**	**21 46 07.3**	**+0.7**
	comp=Z,33nm,0.7s						
PKIN	**Phulchoki**	**34.60**	**334**	*e*P	**P**	**21 46 07.1**	**+0.5**
	comp=Z,25nm,0.6s						
DMN	**Daman**	**34.76**	**334**	*e*P	**P**	**21 46 08.9**	**+1.0**
	comp=Z,73nm,0.9s						
KKN	**Kakani**	**34.84**	**334**	*e*P	**P**	**21 46 09.6**	**+1.0**
	comp=Z,108nm,0.7s						
GKN	**Gorkha**	**35.30**	**334**	*e*P	**P**	**21 46 13.5**	**+1.0**
WRA	**Warramunga Arr**	**35.89**	**120**	P	**P**	**21 46 17.5**	**-0.1**
	comp=Z,12nm,0.4s,baz=294,slow=10.0,SNR=83						
WRA				S	**S**	**21 51 46.1**	**-5.6**
	comp=Z,5.9nm,1.0s,baz=296,slow=20,SNR=3.7						
WRAB	**Tennant Creek**	**35.90**	**120**	*e*P	**P**	**21 46 17.6**	**0.0**
	comp=Z,30nm,0.9s						
WRAB	**Tennant Creek**	**35.90**	**120**	*e*P	**P**	**21 46 17.6**	**0.0**

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WRAB                                 pmax   pmax
       comp=Z,30nm,0.9s
WB2    Warramunga Arr   35.90 120  eP     P       21 46 16.8  -0.8
       comp=Z,21nm,0.8s
WHN    Wuhan            35.98  19   P     P       21 46 12.0  -6.0
WHN                                 S     S       21 51 50.1  -2.4
WHN                                 LR    LR
       comp=Z,430nm,20.6s
DANN   Dangsing         36.00 333  eP     P       21 46 19.9  +1.3
       comp=Z,128nm,0.7s
ASAR   Alice Springs    37.11 126   P     P       21 46 28.4  +0.5
       comp=Z,14nm,0.7s,baz=297,slow=8.1,SNR=148
ASAR                                PcP   PcP     21 48 47.5  +0.1
       comp=Z,1.8nm,0.7s,baz=298,slow=2.0,SNR=4.0
ASAR                                S     S       21 52 06.1  -4.2
       comp=Z,3.6nm,1.0s,baz=301,slow=14,SNR=10
ASAR                                LR    LR      22 03 05.7
       comp=Z,82nm,19.8s,baz=285,slow=38
AS31   Alice Springs    37.12 126  eP     P       21 46 28.4  +0.5
       comp=Z,5.7nm,0.6s
XAN    Xi'an            37.97  10  eP     P       21 46 34.6  -0.4
       comp=Z,97nm,1.5s
XAN    Xi'an            37.97  10   P     P       21 46 34.6  -0.4
XAN                                 pmax  pmax
       comp=Z,35nm,0.8s
XAN                                 pmax  pmax
       comp=Z,93nm,3.8s
XAN                                 LR    LR
       comp=Z,190nm,15.2s
XAN                                 LR    LR
       comp=Z,100nm,16.3s
XAN                                 LR    LR
       comp=Z,180nm,14.6s
XAN    Xi'an            37.97  10  eP     P       21 46 34.6  -0.4
XAN                                 pmax  pmax
       comp=Z,97nm,1.5s
NJ2    Nanjing          38.97  24  eP     P       21 46 46.3  +2.9
NJ2                                 pmax  pmax
       comp=Z,14nm,0.5s
LZH    Lanzhou          39.43   3  eP     P       21 46 47.9  +0.6
LZH                                 pP    pP      21 47 01.8  -0.6
LZH                                 PP    PnPn    21 48 25.9  +3.7
LZH                                 pmax  pmax
       comp=Z,35nm,0.9s
LZH                                 pmax  pmax
       comp=Z,85nm,4.1s
LZH                                 LR    LR
       comp=Z,360nm,13.2s
LZH                                 LR    LR
       comp=Z,230nm,14.6s
LZH                                 LR    LR
       comp=Z,430nm,17.9s
QIS    Mount Isa        40.73 118   P     P       21 46 58.6  +0.4
       baz=41,SNR=13
GTA    Gaotai           42.72 358 ⇑P      P       21 47 14.4  +0.1
GTA                                 PcP   PcP     21 49 06.1  +1.0
GTA                                 pmax  pmax
       comp=Z,9.0nm,1.1s
GTA                                 pmax  pmax
       comp=Z,62nm,6.5s
GTA                                 LR    LR
       comp=Z,200nm,18.1s
GTA                                 LR    LR
       comp=Z,150nm,19.7s
GTA                                 LR    LR
       comp=Z,400nm,20.0s
BBOO   Buckleboo        43.49 136   P     P       21 47 19.9  -0.6
       baz=44,SNR=6.7
MTSU   Mount Surprise   44.29 112   P     P       21 47 27.7  +0.5
       baz=44,SNR=8.2
HHC    Hu-ho-hao-te     45.06  11   P     P       21 47 33.6  +0.6
HHC                                 pmax  pmax
       comp=Z,12nm,0.8s
BJT    Baijiatuau       45.32  16  eP     P       21 47 35.4  +0.4
       comp=Z,14nm,0.6s
BJT    Baijiatuau       45.32  16  eP     P       21 47 35.4  +0.4
BJT                                 pmax  pmax
       comp=Z,14nm,0.6s
BJI    Beijing          45.35  16   P     P       21 47 35.8  +0.7
BJI                                 pmax  pmax
       comp=Z,9.0nm,0.7s
NIL    Nilore           45.60 326  eP     P       21 47 38.1  +0.7
       comp=Z,108nm,0.6s
NIL    Nilore           45.60 326  eP     P       21 47 38.1  +0.7
NIL                                 pmax  pmax
       comp=Z,108nm,0.6s
PMG    Port Moresby     45.65 100   LR    LR      22 07 21.8
       comp=Z,112nm,20.9s,baz=264,slow=37
PMG    Port Moresby     45.65 100⇑eP      P       21 47 38.1  +0.1
PMG                                 pmax  pmax
       comp=Z,188nm,1.2s
JNU    Nakatsue         45.77  35  eP     P       21 47 39.5  +0.9
       comp=Z,42nm,1.2s
HTT    Hallett          45.84 135   P     P       21 47 40.6  +1.3
       baz=46,SNR=11
CTAO   Charters Tower   46.55 114  eP     P       21 47 45.3  +0.3
       comp=Z,40nm,1.1s
CTAO   Charters Tower   46.55 114  eP     P       21 47 45.3  +0.3
CTAO                                pmax  pmax
       comp=Z,40nm,1.1s
STKA   Stephens Creek   46.99 132   P     P       21 47 49.5  +1.3
       comp=Z,19nm,0.6s,baz=308,slow=7.1,SNR=49
STKA                                LR    LR      22 07 55.0
       comp=Z,114nm,21.9s,baz=326,slow=36
STKA   Stephens Creek   46.99 132  eP     P       21 47 49.7  +1.4
       comp=Z,4.6nm,0.8s
STKA   Stephens Creek   46.99 132   P     P       21 47 49.6  +1.3
       baz=47,SNR=20
STKA   Stephens Creek   46.99 132  eP     P       21 47 49.7  +1.4
STKA                                pmax  pmax
       comp=Z,5.0nm,0.8s
KSRS   Korea Array      47.53  29   P     P       21 47 51.2  -1.1
       comp=Z,3.1nm,0.8s,baz=222,slow=8.1,SNR=8.6
KSRS                                LR    LR      22 06 50.6
       comp=Z,28nm,21.6s,baz=232,slow=35
KBL    Kabul            48.65 324  eP     P       21 48 01.6  +0.3
       comp=Z,11nm,0.6s
KBL    Kabul            48.65 324  eP     P       21 48 01.6  +0.3
KBL                                 pmax  pmax
       comp=Z,11nm,0.6s
WMQ    Urumqi           48.72 347  eP     P       21 48 02.4  +0.9
       comp=Z,232nm,0.7s
WMQ    Urumqi           48.72 347  eP     P       21 48 03.3  +1.8
WMQ                                 S     S       21 54 56.1  -3.8
WMQ                                 sS    sS      21 55 30.6  +4.7
WMQ                                 pmax  pmax
       comp=Z,240nm,3.8s
WMQ                                 LR    LR
       comp=Z,76nm,29.1s
WMQ                                 LR    LR
       comp=Z,200nm,29.2s
WMQ    Urumqi           48.72 347  eP     P       21 48 02.4  +0.9
WMQ                                 pmax  pmax
       comp=Z,232nm,0.7s
KSH    Kashi            48.85 334   P     P       21 48 02.1  -0.5
KSH                                 pP    pP      21 48 18.1   0.0
KSH                                 sP    sP      21 48 25.4  +0.5
KSH                                 PP    PP      21 49 57.6  +1.1
KSH                                 S     S       21 54 58.3  -3.6
KSH                                 ScS   ScS     21 57 41.9  -8.0
KSH                                 SS    SS      21 58 26.5  -6.9
KSH                                 pmax  pmax
       comp=Z,28nm,1.0s
KSH                                 pmax  pmax
       comp=Z,190nm,4.5s
KSH                                 LR    LR
       comp=Z,320nm,15.6s
KSH                                 LR    LR
       comp=Z,240nm,11.6s
CMSA   Cobar Meteorol   49.96 129   P     P       21 48 12.6  +1.4
       baz=50,SNR=47
PRZ    Przheval'sk      50.35 338  eP     P       21 48 16.0  +2.0
       comp=Z,36nm,0.8s
PRZ                                ePcP   PcP     21 49 30.0  -2.0
NRN    Naryn            50.42 335  eP     P       21 48 15.3  +0.6
       comp=Z,19nm,0.7s
NRN                                ePcP   PcP     21 49 30.5  -1.9
NRN    Naryn            50.42 335  eP     P       21 48 15.3  +0.6
NRN                                e              21 49 30.5
NRN                                 pmax  pmax
       comp=Z,19nm,0.7s
PDGK   Podgornoye       50.68 339  i P    P       21 48 17.2  +0.7
PDGK                                pmax  pmax
       comp=Z,50nm,0.8s
ULHL   Ulahol           50.99 336   P     P       21 48 20.7  +1.7
       SNR=10
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GAR    Garm             51.17 329  eP     P       21 48 19.2  -1.0
       comp=Z,45nm,1.2s
GAR    Garm             51.17 329  eP     P       21 48 19.2  -1.0
GAR                                 pmax  pmax
       comp=Z,45nm,1.2s
KZA    Kyzart           51.27 335   P     P       21 48 22.3  +1.0
       SNR=27
SONM   Songino Array    51.28   4   P     P       21 48 22.0  +1.1
       comp=Z,29nm,0.7s,baz=189,slow=9.1,SNR=170
SONM                                PcP   PcP     21 49 35.7  +0.4
       comp=Z,3.4nm,0.7s,baz=179,slow=2.3,SNR=2.4
SONM                                LR    LR      22 11 48.1
       comp=Z,136nm,20.1s,baz=178,slow=38
ULN    Ulaanbaatar      51.36   5  eP     P       21 48 23.4  +1.8
       comp=Z,21nm,1.0s
ULN    Ulaanbaatar      51.36   5  eP     P       21 48 23.4  +1.8
ULN                                 pmax  pmax
       comp=Z,21nm,1.0s
ULN    Ulaanbaatar      51.36   5   P     P       21 48 24.0  +2.4
       SNR=9.9
UCH    Uchtor           51.70 334   P     P       21 48 25.6  +1.0
       SNR=13
CN2    Changchun        51.74  22  eP     P       21 48 23.3  -0.9
CN2                                esP    sP      21 48 46.1  -0.6
CN2                                eS     S       21 55 40.8  -0.9
CN2                                 pmax  pmax
       comp=Z,10.0nm,1.0s
CN2                                 pmax  pmax
       comp=Z,200nm,3.0s
CN2                                 LR    LR
       comp=Z,170nm,15.0s
CN2                                 LR    LR
       comp=Z,140nm,15.0s
CN2                                 LR    LR
       comp=Z,150nm,16.0s
TKM2   Tokmak 2         51.82 336  i P    P       21 48 25.8  +0.7
TKM2                                pmax  pmax
       comp=Z,26nm,0.7s
TKM2   Tokmak 2         51.82 336   P     P       21 48 25.9  +0.8
       SNR=62
KBK    Karagaybulak     51.87 335   P     P       21 48 26.9  +1.4
       SNR=14
AML    Almayashu        51.98 334   P     P       21 48 27.5  +1.0
       SNR=33
AAK    Ala-Archa        52.05 335  eP     P       21 48 27.4  +0.6
       comp=Z,9.7nm,0.8s
AAK    Ala-Archa        52.05 335  i P    P       21 48 27.9  +1.1
       SNR=6.4
AAK    Ala-Archa        52.05 335c iP     P       21 48 27.8  +1.1
AAK                                 pmax  pmax
       comp=Z,10.0nm,0.8s
AAK    Ala-Archa        52.05 335   P     P       21 48 28.0  +1.3
       SNR=6.8
AAK    Ala-Archa        52.05 335   P     P       21 48 28.0  +1.3
       SNR=5.9
FRU1   Bishkek          52.13 335  eP     P       21 48 28.0  +0.8
       comp=Z,27nm,0.9s
FRU1   Bishkek          52.13 335  eP     P       21 48 28.0  +0.8
FRU1                                pmax  pmax
       comp=Z,27nm,0.9s
CHMS   Chumysh          52.23 335   P     P       21 48 28.5  +0.6
       SNR=14
EIDS   Eidsvold         52.26 120  eP     P       21 48 28.1  -0.4
       comp=Z,15nm,0.8s
EIDS   Eidsvold         52.26 120   P     P       21 48 28.4  -0.1
       baz=52,SNR=6.4
ALNE   Al Ain           52.31 304   P     P       21 48 31.1  +2.2
UOSS   Minazif          52.32 305   P     P       21 48 31.2  +2.3
EKS2   Erkin-Say        52.37 334   P     P       21 48 30.4  +1.3
       SNR=73
MDH    Madha            52.40 306   P     P       21 48 30.5  +1.1
MAJO   Matsushiro       52.47  37  eP     P       21 48 28.6  -1.2
MAJO   Matsushiro       52.47  37⇑eP      P       21 48 30.1  +0.3
MAJO                                pmax  pmax
       comp=Z,14nm,1.5s
MAT    Matsushiro       52.47  37   P     P       21 48 28.6  -1.2
MAT                                eS     S       21 56 08.4  +16
MJAR   Matsushiro Arr   52.47  37   P     P       21 48 28.6  -1.2
       comp=Z,5.5nm,0.6s,baz=206,slow=7.7,SNR=15
MJAR                                LR    LR      22 12 07.2
       comp=Z,33nm,19.2s,baz=265,slow=38
MSFE   Esma-Masafi      52.54 306   P     P       21 48 32.6  +2.1
USP    Ospenovka        52.56 335   P     P       21 48 31.1  +0.7
       SNR=16
FAQ    Al Faqa, Dubai   52.73 305   P     P       21 48 34.3  +2.4
MKAR   Makanchi Array   52.88 343   P     P       21 48 33.4  +0.7
       comp=Z,56nm,0.5s,baz=156,slow=8.4,SNR=543
MKAR                                LR    LR      22 15 13.5
       comp=Z,53nm,20.0s,baz=146,slow=41
MKAR   Makanchi Array   52.88 343  i P    P       21 48 33.0  +0.3
MKAR                                pmax  pmax
       comp=Z,56nm,0.5s
ASUD   Al Ashush, Dub   52.90 304   P     P       21 48 35.5  +2.4
MAKZ   Makanchi         52.99 343  eP     P       21 48 33.6  +0.2
       comp=Z,45nm,1.1s
MAKZ   Makanchi         52.99 343  eP     P       21 48 33.6  +0.2
MAKZ                                pmax  pmax
       comp=Z,45nm,1.1s
ZAK    Zakamensk        53.68   1  eP     P       21 48 38.8  +0.2
ZAK                                 pmax  pmax
       comp=Z,8.0nm,0.9s
MDJ    Mudanjiang       54.05  24   P     P       21 48 42.4  +1.1
MDJ                                 pmax  pmax
       comp=Z,14nm,0.8s
MDJ                                 pmax  pmax
       comp=Z,200nm,4.5s
KK31   Karatay Array    54.19 332  eP     P       21 48 42.3   0.0
       comp=Z,5.2nm,0.8s
KK31   Karatay Array    54.19 332  eP     P       21 48 42.3   0.0
KK31                                pmax  pmax
       comp=Z,5.0nm,0.8s
KKAR   Karatay Array    54.19 332  eP     P       21 48 42.0  -0.3
       comp=Z,5.2nm,0.8s
KKAR   Karatay Array    54.19 332  eP     P       21 48 42.1  -0.3
KKAR                                pmax  pmax
       comp=Z,5.0nm,0.8s
DGZ    Jazzator, Alta   54.37 349c iP     P       21 48 44.6  +0.9
DGZ                                 pmax  pmax
       comp=Z,51nm,0.8s
USRK   Ussuriysk Ar.    54.75  26   P     P       21 48 46.6  +0.3
       comp=Z,26nm,0.6s,baz=215,slow=5.0,SNR=81
USRK                                LR    LR      22 14 12.2
       comp=Z,120nm,18.2s,baz=206,slow=38
MOY    Mondy            54.95 360  eP     P       21 48 48.6  +0.8
MOY                                 pmax  pmax
       comp=Z,12nm,1.7s
TLY    Talaya           54.99   2c iP     P       21 48 49.1  +1.2
TLY    Talaya           54.99   2   P     P       21 48 49.5  +1.6
       SNR=10
IRK    Irkutsk          55.57   2  eP     P       21 48 52.6  +0.5
IRK                                 pmax  pmax
       comp=Z,23nm,2.8s
KURBB  Kurchatov Arra   57.42 343   S     S       21 56 52.8  -5.0
       comp=Z,0.3nm,0.7s,baz=150,slow=15,SNR=3.2
KURK   Kurchatov        57.48 343  eP     P       21 49 05.9  +0.3
       comp=Z,26nm,0.8s
KURK   Kurchatov        57.48 343  eP     P       21 49 05.9  +0.3
KURK                                pmax  pmax
       comp=Z,26nm,0.8s
OTUK   Ortayu           57.50 337  i P    P       21 49 05.6  -0.3
OTUK                                pmax  pmax
       comp=Z,13nm,0.6s
GEYT   Alibeck          57.59 320   P     P       21 49 07.6  +0.8
       comp=Z,16nm,0.9s,baz=146,slow=8.2,SNR=29
GEYT                                LR    LR      22 15 46.8
       comp=Z,70nm,21.0s,baz=105,slow=38
GYA0B  ALIBECK ARRAY    57.59 320  eP     P       21 49 07.4  +0.6
       comp=Z,15nm,0.9s
ZALV   Zalesovo Beam    58.92 349   P     P       21 49 15.7  +0.1
       comp=Z,60nm,0.8s,baz=169,slow=5.3,SNR=182
ZALV                                S     S       21 57 13.1  -4.1
       comp=Z,0.8nm,0.8s,baz=172,slow=21,SNR=3.6
ZALV                                LR    LR      22 17 52.0
       comp=Z,101nm,21.0s,baz=66,slow=39
ZALV   Zalesovo Beam    58.92 349  i P    P       21 49 15.6  -0.1
ZALV                                pmax  pmax
       comp=Z,60nm,0.8s
RAYN   Ar Rayn          60.83 299  eP     P       21 49 28.7  -0.8
       comp=Z,25nm,1.9s
RAYN   Ar Rayn          60.83 299   P     P       21 49 30.7  +1.2
RAYN   Ar Rayn          60.83 299  eP     P       21 49 28.7  -0.8
RAYN                                pmax  pmax
       comp=Z,25nm,1.9s
ZEA    Zeya             60.94  17  eP     P       21 49 30.0  +0.5
ZEA                                 pmax  pmax
       comp=Z,27nm,0.9s
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YUK    Yuzh-Kuril'sk    61.74  35⇑eP      P       21 49 37.4  +2.3
BOD    Bodaibo          61.93   8  eP     P       21 49 36.0  -0.1
BOD                                 pmax  pmax
       comp=Z,19nm,0.8s
YSS    Yuzh-Sakhalins   61.93  31  eP     P       21 49 36.4  +0.1
       comp=Z,58nm,1.0s
YSS    Yuzh-Sakhalins   61.93  31  eP     P       21 49 36.9  +0.6
YSS                                e              21 49 51.8
YSS                                 pmax  pmax
       comp=Z,50nm,0.9s
YSS                                 MLR   MLR
       comp=Z,300nm,17.0s
BRVK   Borovoye         62.18 339  eP     P       21 49 37.6  -0.3
       comp=Z,9.7nm,0.6s
BRVK                               ePP    PP      21 51 53.9  -1.6
BRVK   Borovoye         62.18 339  eP     P       21 49 37.6  -0.3
BRVK                               e              21 51 53.9
BRVK                                pmax  pmax
       comp=Z,10.0nm,0.6s
BRVK   Borovoye         62.18 339   P     P       21 49 37.9   0.0
       SNR=5.1
KUR    Kuril'sk         63.60  35⇓eP      P       21 49 47.1  -0.4
AB31   Akbulak array    63.69 331   P     P       21 49 47.6  -0.4
AB31                                pmax  pmax
       comp=Z,26nm,0.7s
ABKAR  Akbulak array    63.69 331  eP     P       21 49 48.1   0.0
       comp=Z,31nm,0.8s
ABKAR                              ePP    PP      21 52 09.0  +0.2
AKTO   Aktyubinsk       65.41 331  i P    P       21 49 58.5  -0.7
AKTO                                pmax  pmax
       comp=Z,11nm,0.9s
DZM    Mont Dzumac      65.43 113  eP     P       21 49 60.0  -0.1
       comp=Z,36nm,0.8s
AKT    Akhty            66.26 318⇑iP      P       21 50 06.2  +1.2
AKT                                e              21 50 36.3
AKT                                 pmax  pmax
       comp=Z,22nm,0.8s
GNI    Garni            67.68 316   P     P       21 50 15.4  +1.3
GNI    Garni            67.68 316⇓eP      P       21 50 15.3  +1.1
GNI                                 pmax  pmax
       comp=Z,25nm,0.8s
GROC   Groznyy          68.33 319  eP     P       21 50 15.4  -2.5
GROC                               e*PP   pP      21 50 29.6  -4.6
GROC                               e*SP   sP      21 50 35.3  -5.5
GROC                               e              21 50 40.4
GROC                               e              21 52 46.6
GROC                                pmax  pmax
       comp=Z,68nm,0.9s
TBLG   Delisi           68.37 318  eP     P       21 50 19.3  +1.0
       comp=Z,49nm,1.1s
TBLG   Delisi           68.37 318  eP     P       21 50 19.3  +1.0
TBLG                                pmax  pmax
       comp=Z,49nm,1.1s
SVE    Sverdlovsk       68.65 337  eP     P       21 50 20.2  +0.6
SVE                                 pmax  pmax
       comp=Z,32nm,0.9s
YAK    Yakutsk          68.79  14  eP     P       21 50 19.7  -0.7
       comp=Z,40nm,0.7s
YAK    Yakutsk          68.79  14  eP     P       21 50 19.2  -1.2
YAK                                e*PP   pP      21 50 34.1  -2.5
YAK                                e              21 50 45.7
YAK                                e              21 52 57.9
YAK                                ePPP   PPP     21 54 28.7
YAK                                eS     S       21 59 18.9  -0.4
YAK                                e*SS   pS      21 59 42.5  +3.4
YAK                                e              22 00 18.4
YAK                                eSS    SS      22 03 42.3  -3.1
YAK                                 pmax  pmax
       comp=Z,42nm,0.9s
YAK                                 pmax  pmax
       comp=E,11nm,1.4s
YAK                                 pmax  pmax
       comp=N,16nm,1.0s
YAK                                 pmax  pmax
       comp=Z,53nm,3.0s
YAK                                 pmax  pmax
       comp=N,32nm,2.4s
YAK                                 smax  smax
       comp=N,60nm,3.7s
YAK                                 smax  smax
       comp=E,54nm,3.8s
AKH    Akhalkalaki      69.07 317  eP     P       21 50 24.4  +1.5
       comp=E,6.3nm,0.9s
ARU    Arti             69.19 336   P     P       21 50 23.0   0.0
       baz=133,slow=19
ARU    Arti             69.19 336  eP     P       21 50 22.9  -0.2
       comp=E,17nm,1.0s
ARU    Arti             69.19 336c iP     P       21 50 22.7  -0.3
ARU                                 *PP   pP      21 50 36.4  -2.8
ARU                                               21 50 48.5
ARU                                               21 52 54.7
ARU                                 S     S       21 59 26.6  +2.3
ARU                                 SS    SS      22 03 52.2  +0.3
ARU                                 pmax  pmax
       comp=Z,19nm,1.0s
MAW    Mawson           69.25 195   P     P       21 50 25.9  +2.8
       comp=Z,1.2nm,0.8s,baz=26,slow=11,SNR=3.2
MAW                                 LR    LR      22 15 42.8
       comp=Z,141nm,18.5s,baz=36,slow=31
ZEI    Tsey             69.39 318  eP     P       21 50 25.4  +0.6
ZEI                                 pmax  pmax
       comp=Z,27nm,0.8s
NCK    Nalchik          69.89 319⇑eP      P       21 50 29.1  +1.4
NCK                                 pmax  pmax
       comp=Z,30nm,0.8s
NEY    Neytrino         70.36 318⇓eP      P       21 50 32.2  +1.4
NEY                                 pmax  pmax
       comp=Z,4.0nm,0.8s
KBZ    Khabaz           70.45 319   P     P       21 50 32.2  +1.2
       comp=Z,24nm,0.8s,baz=128,slow=5.3,SNR=50
KIV    Kislovodsk       70.69 319  eP     P       21 50 32.9  +0.2
       comp=Z,21nm,0.9s
KIV    Kislovodsk       70.69 319  i P    P       21 50 33.7  +1.1
       SNR=6.0
KIV    Kislovodsk       70.69 319  eP     P       21 50 33.2  +0.6
KIV                                 pmax  pmax
       comp=Z,82nm,1.1s
KIV    Kislovodsk       70.69 319   P     P       21 50 34.9  +2.3
       SNR=6.9
GOF    Gofitskoye       70.93 320⇑eP      P       21 50 33.9   0.0
SKR    Severo-Kuril’s   71.23  33⇓iP      P       21 50 36.3  +0.7
SOC    Sochi            72.50 318  eP     P       21 50 42.9  -0.5
SOC                                e              21 53 21.6
SOC                                ePPP   PPP     21 55 07.8
SOC                                eS     S       22 00 06.3  +3.0
SOC                                eSS    SS      22 04 45.0  +1.8
SOC                                 pmax  pmax
       comp=Z,27nm,0.7s
PETK   Petropavlovsk-   73.31  32   P     P       21 50 47.6  -0.3
       comp=Z,6.7nm,0.6s,baz=259,slow=0.0,SNR=28
MA2    Magadan          73.74  24   P     P       21 50 51.0  +0.6
       comp=Z,16nm,0.5s,baz=202,slow=11
MA2    Magadan          73.74  24  eP     P       21 50 49.8  -0.6
MA2                                ePcP   P       21 50 51.0  +0.6
MA2    Magadan          73.74  24c iP     P       21 50 50.6  +0.2
MA2                                 pmax  pmax
       comp=Z,19nm,0.7s
PET    Petropavlovsk    73.77  32  eP     P       21 50 50.1  -0.6
       comp=Z,25nm,0.6s
PET    Petropavlovsk    73.77  32  eP     P       21 50 50.1  -0.6
PET                                 pmax  pmax
       comp=Z,25nm,0.6s
VRH    Novokhopyorsk    74.43 326  eP     P       21 50 54.2  -0.3
VRH                                 pmax  pmax
       comp=Z,40nm,0.7s
ANN    Anapa            74.48 318  eP     P       21 50 53.8  -1.2
ANN                                e*PP   PcP     21 51 06.6  -2.7
ANN                                eS     S       22 00 25.9  +0.4
ANN                                 pmax  pmax
       comp=Z,66nm,1.3s
BR131  Keskin Array S   75.48 312   P     P       21 51 01.2  +0.1
       SNR=11
BRTR   Keskin Array B   75.48 312   P     P       21 51 01.4  +0.4
       comp=Z,12nm,0.6s,baz=136,slow=7.2,SNR=84
BRTR                                LR    LR      22 26 09.1
       comp=Z,14nm,20.6s,baz=114,slow=37
BRTR   Keskin Array B   75.48 312  i P    P       21 51 01.2  +0.1
BRTR                                pmax  pmax
       comp=Z,12nm,0.6s
VORD   Divnogorie       75.71 325  eP     P       21 51 01.4  -0.5
VORD                                pmax  pmax
       comp=Z,20nm,1.2s
ILGA   Ilgaz            75.82 314  eP     P       21 51 03.8  +0.7
       comp=Z,13nm,0.8s
BZK    Bozkurt          75.89 315⇑iP      P       21 51 03.5  +0.4
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VSR	Storozhevoye	75.89	325	eP	P	21 51 02.3	-0.6
VSR				pmax	pmax		
	comp=Z,50nm,1.2s						
BKZ	Black Stump Fm	76.12	129	eP	P	21 51 03.9	-0.8
	comp=Z,18nm,0.8s						
BOSA	Boshof	76.33	242	P	P	21 51 07.3	+1.2
	comp=Z,2.3nm,0.6s,baz=96,slow=4.2,SNR=9.3						
BOSA				LR	LR	22 16 42.6	
	comp=Z,112nm,21.9s,baz=106,slow=29						
LPSR	Galich'ya Gora	76.59	326	eP	P	21 51 06.9	0.0
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
SIM	Simferopol'	76.75	318	eP	P	21 51 09.2	+1.2
SIM				eS	S	22 00 47.0	-3.6
SIM				pmax	pmax		
	comp=Z,21nm,0.9s						
TIXI	Tiksi	77.08	9	P	P	21 51 08.1	-1.2
	comp=Z,3.9nm,0.4s,baz=196,slow=2.6,SNR=19						
TIXI	Tiksi	77.08	9	eP	P	21 51 08.1	-1.2
	comp=Z,24nm,1.4s						
PRGR	Permogore	77.65	336	eP	P	21 51 12.2	-0.4
PRGR				e*PP	PcP	21 51 23.9	+1.3
PRGR				e		21 54 05.6	
PRGR				pmax	pmax		
	comp=Z,25nm,0.7s						
MOS	Moscow	78.57	329	eP	P	21 51 17.5	-0.4
MOS				pmax	pmax		
	comp=Z,29nm,0.9s						
YLV	Yalova	78.85	312	⇑iP	P	21 51 20.6	+0.7
YLV	Yalova	78.85	312	⇑P	P	21 51 20.6	+0.7
OBN	Obninsk	78.88	328	⇓iP	P	21 51 20.6	+1.1
OBN	Obninsk	78.88	328	eP	P	21 51 20.2	+0.7
OBN				e		21 51 29.6	
OBN				e		21 54 18.9	
OBN				pmax	pmax		
	comp=Z,16nm,0.6s						
KLMR	Klimovskoe	79.84	334	eP	P	21 51 23.8	-0.9
KLMR				pmax	pmax		
	comp=Z,23nm,1.3s						
CTYL	Yalikoy Yolu	79.87	313	⇓iP	P	21 51 26.0	+0.7
TIRR	Tirgusor	80.51	316	⇑iP	P	21 51 29.8	+1.2
TIRR	Tirgusor	80.51	316	⇑P	P	21 51 29.8	+1.2
MILM	Milestii Mici	80.86	318	⇑iP	P	21 51 31.3	+0.8
CFR	Carcaliu	80.88	317	⇑iP	P	21 51 30.5	-0.1
CFR	Carcaliu	80.88	317	⇑P	P	21 51 30.5	-0.1
HARR	Harsova	80.90	316	⇑iP	P	21 51 31.8	+1.1
HARR	Harsova	80.90	316	⇑P	P	21 51 31.8	+1.1
AKASG	Malin Array Be	81.61	322	P	P	21 51 34.4	0.0
	comp=Z,6.0nm,0.6s,baz=83,slow=5.0,SNR=25						
AKASG				LR	LR	22 33 43.2	
	comp=Z,28nm,18.6s,baz=65,slow=40						
ELND	Elena	81.94	314	⇓iP	P	21 51 37.5	+1.2
VRI	Vrincioaia	82.00	317	⇑iP	P	21 51 38.3	+1.7
VRI	Vrincioaia	82.00	317	⇑P	P	21 51 38.3	+1.7
PLOR	Plostina	82.05	317	⇑iP	P	21 51 38.2	+1.3
PLOR	Plostina	82.05	317	⇑P	P	21 51 38.2	+1.3
TESR	Tescani	82.21	318	⇓iP	P	21 51 39.0	+1.4
ZIMR		82.46	315	⇓iP	P	21 51 40.6	+1.6
ZIMR		82.46	315	⇓P	P	21 51 40.6	+1.6
RZN	Rozhen	82.53	313	P	P	21 51 40.9	+1.2
BIZ	Bicaz	82.67	318	⇓iP	P	21 51 40.4	+0.4
PRAR	RASCA	82.68	318	⇓iP	P	21 51 41.4	+1.3
DOPR	Dopca	82.94	317	⇑iP	P	21 51 42.2	+0.7
PLVB	Pleven	82.94	314	⇓iP	P	21 51 42.5	+1.0
VOIR		83.06	316	⇓iP	P	21 51 42.8	+0.6
VOIR		83.06	316	⇓P	P	21 51 42.8	+0.6
PGB	Panagyurishte	83.10	313	P	P	21 51 43.3	+0.9
MMB	Musomiste	83.24	312	P	P	21 51 45.8	+2.6
ARR	Arges	83.33	316	⇑iP	P	21 51 44.6	+1.0
BURAR	Bucovina Array	83.41	319	⇑iP	P	21 51 45.9	+1.9
BURAR	Bucovina Array	83.41	319	⇑P	P	21 51 45.9	+1.9
MICGM	Minsk	83.43	326	e	P	21 51 44.0	+0.2
MNK	Minsk	83.43	326	eP	P	21 51 44.0	+0.2
MPEP	Malo Peshtene	83.56	314	P	P	21 51 45.8	+1.1
KKB	Krupnik	83.77	313	P	P	21 51 46.3	+0.5
VTS	Vitosha	83.79	313	⇓iP	P	21 51 47.3	+1.2
VTS	Vitosha	83.79	313	⇓P	P	21 51 47.3	+1.2
VTS	Vitosha	83.79	313	P	P	21 51 46.9	+0.8
ARCR	ARCALIA	83.87	318	⇑iP	P	21 51 48.1	+1.9
BILL	Bilibino	84.00	20	eP	P	21 51 46.4	0.0
BILL				ePPP	PPP	21 56 49.5	
BILL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VAY	Valandovo	84.05	312	i P	P	21 51 58.5	+11
BMR	Baia Mare	84.56	318	⇑iP	P	21 51 51.0	+1.3
BMR	Baia Mare	84.56	318	⇑P	P	21 51 51.0	+1.3
IIGN	Ignalina	84.57	326	eP	P	21 51 51.0	+1.4
IIGN				IAmb	IAmb	21 51 52.0	
	comp=Z,12nm,0.6s						
GZR	Gura Zlata	84.62	316	⇑iP	P	21 51 51.2	+1.1
GZR	Gura Zlata	84.62	316	⇑P	P	21 51 51.2	+1.1
IZAR	Zarasai	84.66	327	eP	P	21 51 51.0	+1.0
IZAR				IAmb	IAmb	21 51 52.5	
	comp=Z,5.5nm,0.8s						
ISAL	Salakas	84.68	326	eP	P	21 51 51.3	+1.2
ISAL				IAmb	IAmb	21 51 52.5	
	comp=Z,6.8nm,0.8s						
LVZ	Lovozero	84.71	340	⇓eP	P	21 51 50.3	+0.2
LVZ				pmax	pmax		
	comp=Z,12nm,0.7s						
HERR	Herculane	84.78	315	⇑iP	P	21 51 52.0	+1.2
DRGR		84.92	317	⇑iP	P	21 51 53.0	+1.4
DRGR		84.92	317	⇑P	P	21 51 53.0	+1.4
VSU	Vasula	85.08	329	eP	P	21 51 52.5	+0.5
MDVR	Moldovita	85.25	315	⇑iP	P	21 51 54.5	+1.2
TRPA	Tarpa	85.28	319	⇑iP	P	21 51 54.8	+1.6
BZS	Buzias	85.46	316	⇑iP	P	21 51 55.4	+1.2
BZS	Buzias	85.46	316	⇑P	P	21 51 55.4	+1.2
UZH	Uzhgorod	85.53	319	eP	P	21 51 48.0	-6.5
UZH				e		21 52 12.0	
SIRR	Siria	85.54	317	⇓iP	P	21 51 56.1	+1.4
KOLS	Kolonicke sedl	85.59	319	eP	P	21 51 56.9	+2.0
KOLS				pmax	pmax		
	comp=Z,23nm,0.9s						
KOLS	Kolonicke sedl	85.59	319	eP	P	21 51 56.9	+2.0
SUW	Suwalki	86.00	325	eP	P	21 51 57.7	+1.0
SUW	Suwalki	86.00	325	eP	P	21 51 57.7	+1.0
FINES	FINESS Array B	86.15	332	P	P	21 51 58.2	+0.9
	comp=Z,3.7nm,0.6s,baz=104,slow=5.2,SNR=40						
FINES				PP	PP	21 55 15.3	-3.1
	comp=Z,1.4nm,0.6s,baz=108,slow=6.2,SNR=4.6						
FINES				LR	LR	22 34 24.2	
	comp=Z,42nm,19.7s,baz=112,slow=38						
SUF	Sumiainen	86.44	333	P	P	21 52 00.7	+2.0
SUF				pmax	pmax		
	comp=Z,16nm,0.9s						
PDG	Podgorica	86.66	313	⇑iP	P	21 52 01.2	+1.0
PSZ	Piszkesteto	86.99	318	⇑iP	P	21 52 03.2	+1.4
PSZ	Piszkesteto	86.99	318	⇑P	P	21 52 03.2	+1.4
OJC	Ojcow	87.40	320	eP	P	21 52 05.2	+1.6
OJC	Ojcow	87.40	320	eP	P	21 52 05.2	+1.6
LANS	Liptovska Anna	87.45	319	eP	P	21 52 06.0	+2.0
LANS	Liptovska Anna	87.45	319	eP	P	21 52 06.0	+2.0
MORH	Mrgy, Hungar	87.60	316	eP	P	21 52 05.1	+0.4
VYHS	Vyhne	87.77	319	eP	P	21 52 06.8	+1.3
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VYHS	Vyhne	87.77	319	eP	P	21 52 06.8	+1.3
CSKK	Cskako	88.01	318	eP	P	21 52 08.1	+1.4
VAF	Ylistaro	88.06	333	P	P	21 52 08.9	+2.4
VAF				pmax	pmax		
	comp=Z,31nm,0.9s						
TIH	Tihany	88.20	317	⇓eP	P	21 52 08.1	+0.6
ARCES	ARCESS Array B	88.40	340	P	P	21 52 08.8	+0.8
	comp=Z,13nm,0.7s,baz=96,slow=4.9,SNR=43						
ARCES				PP	PP	21 55 33.9	-2.4
	comp=Z,1.8nm,0.9s,baz=109,slow=8.9,SNR=3.1						
ARCES				LR	LR	22 37 44.2	
	comp=Z,33nm,18.7s,baz=98,slow=40						
ARE0	ARCESS Array S	88.40	340	⇑iP	P	21 52 08.2	+0.2
OKC	Ostrava-Krasne	88.40	320	eP	P	21 52 10.0	+1.6
OKC	Ostrava-Krasne	88.40	320	eP	P	21 52 10.0	+1.6
BLY	Banja Luka	88.44	315	⇑iP	P	21 52 10.5	+1.8
JAVC	Velka Javorina	88.59	319	eP	P	21 52 11.2	+1.8
SMOL	Smolenice	88.70	319	eP	P	21 52 11.3	+1.4
SMOL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SMOL	Smolenice	88.70	319	eP	P	21 52 11.3	+1.4
MORC	Moravsky Berou	88.78	320	⇑iP	P	21 52 12.0	+1.7
MORC	Moravsky Berou	88.78	320	⇑P	P	21 52 12.0	+1.7
MORC	Moravsky Berou	88.78	320	eP	P	21 52 11.6	+1.3
MODS	Modra-Piesok	88.79	318	eP	P	21 52 11.2	+0.9
MODS				pmax	pmax		
	comp=Z,15nm,1.5s						
MODS	Modra-Piesok	88.79	318	eP	P	21 52 11.2	+0.9
ZST	Bratislava	88.89	318	eP	P	21 52 11.5	+0.8
ZST				pmax	pmax		
	comp=Z,14nm,1.0s						
ZST	Bratislava	88.89	318	eP	P	21 52 11.5	+0.8
BEHE	Becsehely	88.92	316	eP	P	21 52 12.1	+1.1
KTK1	Kautokeino	89.06	339	eP	P	21 52 11.8	+0.6
HAMF	Hammerfest	89.26	341	eP	P	21 52 12.3	+0.3
VRAC	Vranov	89.34	319	eP	P	21 52 14.1	+1.2
GKP	Gorka Klasztor	89.38	323	eP	P	21 52 14.4	+1.5
GKP	Gorka Klasztor	89.38	323	eP	P	21 52 14.4	+1.5
KRUC	Moravsky	89.44	319	eP	P	21 52 14.3	+0.9
DPC	Dobruska-Polom	89.62	320	eP	P	21 52 16.2	+2.0
DPC	Dobruska-Polom	89.62	320	eP	P	21 52 16.2	+2.0
CONA	Conrad Observa	89.69	318	i PcP	P	21 52 15.7	+1.1
	comp=Z,4.3nm,1.1s						
KSP	Ksiaz	89.69	321	eP	P	21 52 16.5	+2.0
KSP	Ksiaz	89.69	321	eP	P	21 52 16.5	+2.0
OSTC	Ostas	89.71	321	eP	P	21 52 15.9	+1.3
CHVC	Chvalec	89.82	321	eP	P	21 52 16.4	+1.3
UPC	Upice	89.84	320	eP	P	21 52 17.3	+2.1
UPC	Upice	89.84	320	eP	P	21 52 17.3	+2.1
ARSA	Arzberg	89.85	317	i PcP	P	21 52 16.9	+1.6
	comp=Z,8.4nm,0.9s						
TREC	Trest	90.06	319	eP	P	21 52 17.8	+1.5
TREC	Trest	90.06	319	eP	P	21 52 17.8	+1.5
SOKA	Soboth	90.13	317	i PcP	P	21 52 18.3	+1.6
	comp=Z,14nm,0.9s,SNR=7.0						
TRO	Tromso	90.68	340	eP	P	21 52 18.9	+0.3
PRU	Pruhonice	90.73	320	eP	P	21 52 20.8	+1.5
PRU	Pruhonice	90.73	320	eP	P	21 52 20.8	+1.5
MOA	Molln	90.75	318	i PcP	P	21 52 20.5	+1.0
	comp=Z,2.8nm,0.7s						
MYKA	Terra Mystica	91.08	316	i PcP	P	21 52 22.4	+1.3
	comp=Z,4.2nm,0.8s						
BRG	Berggiesshubel	91.18	321	i P	P	21 52 22.8	+1.4
	comp=Z,6.5nm,0.9s						
BRG				e		21 55 59.6	
	comp=Z,2.9nm,0.9s						
GERES	GERESS Array B	91.19	319	P	P	21 52 22.9	+1.2
	comp=Z,3.2nm,0.8s,baz=91,slow=5.3,SNR=26						
SNAA	Sanae	91.22	198	P	P	21 52 23.7	+2.4
KHC	Kasperske Hory	91.30	319	eP	P	21 52 23.0	+1.0
KHC				e		21 52 37.5	
KHC	Kasperske Hory	91.30	319	eP	P	21 52 23.0	+1.0
KHC				epP	pP	21 52 37.5	-1.3
CLL	Collm	91.80	321	i P	P	21 52 25.2	+1.0
CLL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CLL	Collm	91.80	321	i P	P	21 52 25.2	+1.0
	comp=Z,3.0nm,1.1s						
STEI	Steigen	91.82	338	⇑iP	P	21 52 24.4	+0.4
ABTA	Abfaltersbach	91.87	317	i PcP	P	21 52 25.5	+0.7
	comp=Z,3.6nm,0.8s						
MOR8	Moi Rana	92.00	336	eP	P	21 52 25.0	+0.1
SPA0	Spitsbergen Ar	92.40	348	eP	P	21 52 26.5	-0.1
SPITS	Spitsbergen Ar	92.40	348	P	P	21 52 25.8	-0.7
	comp=Z,2.9nm,0.7s,baz=126,slow=14,SNR=4.0						
LOF	Lofoten	92.47	338	eP	P	21 52 27.1	+0.1
HSPB	Hornsund (broa	92.48	347	eP	P	21 52 27.2	+0.4
WTTA	Wattenberg	92.49	317	i PcP	P	21 52 28.2	+0.4
	comp=Z,6.7nm,0.7s						
WATA	Walderalm	92.54	317	i PcP	P	21 52 28.9	+0.9
	comp=Z,2.7nm,0.6s						
KONS	Konsvik	92.55	336	eP	P	21 52 27.8	+0.5
SQTA	Sankt Quirin	92.78	317	i PcP	P	21 52 29.7	+0.7
	comp=Z,6.3nm,0.6s						
MOTA	Moosalm	92.86	317	i PcP	P	21 52 30.6	+1.1
	comp=Z,6.7nm,0.9s,SNR=5.4						
NSS	Namsos	92.95	334	⇑iP	P	21 52 29.6	+0.3
NC602	NORSAR Array S	93.03	331	eP	P	21 52 29.7	0.0
RETA	Reutte	93.09	317	i PcP	P	21 52 31.2	+0.8
	comp=Z,4.5nm,0.6s						
FETA	Feichten	93.10	317	i PcP	P	21 52 31.7	+1.1
	comp=Z,3.9nm,0.8s						
NB2	NORSAR Subarra	93.20	331	P	P	21 52 30.6	0.0
	comp=Z,1.2nm,0.7s,baz=92,slow=4.8						
NB2	NORSAR Subarra	93.20	331	P	P	21 52 30.6	0.0
	baz=92,slow=4.8						
NOA	NORSAR Array B	93.20	331	P	P	21 52 30.8	+0.2
	comp=Z,2.7nm,0.9s,baz=95,slow=5.0,SNR=16						
NOA				PP	PP	21 56 06.8	-7.8
	comp=Z,0.7nm,1.0s,baz=94,slow=6.7,SNR=3.7						
NOA				LR	LR	22 38 03.1	
	comp=Z,32nm,21.8s,baz=105,slow=38						
FUORN	Ofenpass-Fuorn	93.41	316	eP	P	21 52 32.3	+0.1
	comp=Z,5.2nm,0.8s						
DAVA	Damuels	93.69	317	i PcP	P	21 52 34.5	+1.2
	comp=Z,7.3nm,0.8s						
KEST	Kesra	93.82	305	P	P	21 52 36.3	+2.2
	comp=Z,5.9nm,0.9s,baz=260,slow=2.9,SNR=7.2						
KONO	Kongsberg	93.99	329	eP	P	21 52 34.5	+0.4
DOMB	Dombas	94.24	332	eP	P	21 52 35.4	+0.1
BLS5	Blasjo	95.59	329	eP	P	21 52 41.0	-0.6
TOLK	Toolik Lake Re	100.05	21	P	Pdif	21 53 01.9	+0.5
	baz=286						
HDA	Harding Lake	102.31	24	P	Pdif	21 53 12.4	+0.9
	baz=288						
B05A	Bryant	121.83	33	P	PKiKP	21 58 10.6	+0.1
	baz=306						
E04D	Cinebar	122.55	35	P	PKiKP	21 58 12.0	-0.1
	baz=304						
H04D	Lebanon	123.58	37	P	PKPdf	21 58 13.7	-0.2
	baz=303						
I04A	Tendick Farm,	124.18	37	P	PKPdf	21 58 15.1	-0.1
	baz=303						
NEW	Newport	124.44	30	P	PKiKP	21 58 15.7	-0.1
	baz=311						
J04D	Umpqua Nationa	124.67	38	P	PKPdf	21 58 16.3	0.0
	baz=303						
L04D	Klamath Falls	125.10	39	P	PKPdf	21 58 17.1	0.0
	baz=302						
J05D	Fort Rock, OR	125.17	37	P	PKPdf	21 58 17.3	+0.1
	baz=304						
FFC	Flin Flon	125.45	17	i PKIKP	PKiKP	21 58 17.6	+0.1
M04C	Macdoel	125.62	39	P	PKPdf	21 58 18.0	-0.1
	baz=302						
O02D	Mt. Diablo Mer	125.85	41	P	PKPdf	21 58 18.5	0.0
	baz=301						
MSO	Missoula	127.00	30	P	PKPdf	21 58 20.7	+0.2
	baz=314						
EGMT	Eagleton	128.11	26	P	PKiKP	21 58 23.1	-0.1
	baz=319						
HLID	Hailey	128.95	33	P	PKiKP	21 58 25.0	-0.1
	baz=311						
KVN	Kaiserville	129.51	40	ePKPdf	PKiKP	21 58 27.1	+0.7
NV01	Mina Array Sit	129.72	41	ePKPdf	PKiKP	21 58 26.9	0.0
NVAR	Mina Array Bea	129.72	41	PKP	PKiKP	21 58 26.9	0.0
	comp=Z,1.2nm,0.5s,baz=299,slow=2.8,SNR=13						
NVAR				SKPbc	SKPbc	22 01 44.4	+0.9
	comp=Z,0.8nm,0.7s,baz=247,slow=1.8,SNR=5.3						
ELK	Elko	130.28	37	ePKPdf	PKPdf	21 58 25.0	-2.1
ELK	Elko	130.28	37	ePKIKP	PKPdf	21 58 25.0	-2.1
FXWY	Fox Creek	130.70	31	ePKPdf	PKiKP	21 58 29.1	+0.4
CWC	Cottonwood Cre	130.96	43	P	PKPdf	21 58 28.9	+0.4
	baz=303						
ULM	Lac du Bonnet	131.12	15	PKP	PKPdf	21 58 27.6	-0.6
	comp=Z,2.7nm,0.6s,baz=54,slow=4.4,SNR=3.6						
R11A	Troy Canyon, C	131.52	39	ePKPdf	PKiKP	21 58 31.1	+0.6
R11A	Troy Canyon, C	131.52	39	P	PKiKP	21 58 30.3	-0.1
	baz=306						
MPMC	Manual Prospec	131.56	43	P	PKiKP	21 58 30.2	-0.5
	baz=303						
TPNV	Topopah Spring	131.90	41	P	PKiKP	21 58 30.9	-0.3
	baz=305						
PDAR	Pinedale Array	132.07	31	PKP	PKPdf	21 58 30.1	-0.4
	comp=Z,0.5nm,0.4s,baz=259,slow=1.5,SNR=5.6						
PDAR				SKPbc	SKPbc	22 01 51.8	0.0
	comp=Z,0.6nm,0.7s,baz=321,slow=1.9,SNR=5.8						
CHGQ	Chibougamau	133.62	356	P	PKiKP	21 58 33.9	-0.2
	baz=5.7						
C40A	Isle Royale Na	134.79	10	P	PKiKP	21 58 36.0	-0.5
	baz=345						
N23A	Red Feather La	135.28	30	P	PKPdf	21 58 37.3	+0.7
	baz=319						
D41A	Chassel	135.72	10	P	PKiKP	21 58 37.9	-0.5
	baz=346						
D54A	Lac Fusel, La	136.48	358	P	PKiKP	21 58 39.5	-0.6
	baz=2.7						
D46A	Sault St. Mari	136.49	6	P	PKiKP	21 58 39.4	-0.7
	baz=352						
RCBR	Riachuelo	136.53	258	PKP	PKPdf	21 58 38.1	-1.3
	comp=Z,113nm,0.8s,baz=102,slow=0.7,SNR=4.4						
X16A	Lo Mia Camp, P	136.55	41	ePKPdf	PKPdf	21 58 39.7	+0.6
ECSD	EROS Data Cent	136.81	19	P	PKiKP	21 58 40.1	-0.7
	baz=333						
G39A	Holcombe	136.90	13	P	PKiKP	21 58 40.4	-0.5
	baz=341						
E47A	Iron Bridge	136.99	5	P	PKiKP	21 58 40.7	-0.4
	baz=353						
E48A	Lockeyer	137.05	4	P	PKiKP	21 58 40.6	-0.6
	baz=355						
G40A	Rib Lake	137.12	12	P	PKiKP	21 58 40.5	-0.9
	baz=343						
S22A	4UR Ranch, Cre	137.13	34	P	PKPdf	21 58 40.7	+0.5
	baz=316						
W18A	Petrified Fore	137.20	39	P	PKiKP	21 58 41.5	-0.6
	baz=310						
E54A	Lac Daplat, Po	137.21	359	P	PKiKP	21 58 41.0	-0.5
	baz=1.9						
E53A	Dumoine, Ponti	137.27	359	P	PKiKP	21 58 41.4	-0.3
	baz=1.2						
G47A	Hillman	138.21	6	P	PKiKP	21 58 42.8	-0.8
	baz=352						
BGNE	Belgrade	138.30	22	P	PKiKP	21 58 43.2	-0.7
	baz=330						
H43A	Windswept, Lux	138.36	10	P	PKiKP	21 58 43.5	-0.4
	baz=346						
G55A	Calabogie	138.38	358	P	PKiKP	21 58 43.4	-0.5
	baz=2.7						
PLVO	Plevna	138.60	359	P	PKiKP	21 58 44.1	-0.3
	baz=2.1						
BANO	Bancroft	138.63	359	P	PKiKP	21 58 43.7	-0.8
	baz=0.8						
JFWS	Jewell Farm	139.35	13	P	PKiKP	21 58 45.2	-0.8
	baz=342						
K54A	Basiliko Farm,	141.05	0	P	PKPdf	21 58 47.9	+1.1
	baz=360						
N41A	Harden Midland	141.29	15	P	PKPdf	21 58 48.5	+1.3
	baz=340						
L48A	N Adams	141.34	7	P	PKiKP	21 58 48.9	-1.2
	baz=350						
BINY	Binghamton	141.40	357	P	PKiKP	21 58 49.1	-1.1
	baz=4.0						
ERPA	Erie	141.51	2	P	PKiKP	21 58 49.6	-0.8
	baz=358						
L58A	Harry Jones Me	141.54	357	P	PKiKP	21 58 49.8	-0.7
	baz=4.2						
MSTX	Muleshoe	142.13	34	P	PKiKP	21 58 51.4	-0.7
	baz=318						
M54A	Oil Creek Stat	142.13	2	P	PKiKP	21 58 50.9	-0.8
	baz=358						
M56A	Emporium	142.17	360	P	PKiKP	21 58 51.3	-0.5
	baz=0.5						
N60A	Cedar Hill Far	142.66	356	P	PKPdf	21 58 48.3	-1.4
	baz=5.6						
O56A	Blue Knob Stat	143.39	0	P	PKPbc	21 58 48.5	+0.2
	baz=360						
O58A	Lewisberry	143.51	358	P	PKPbc	21 58 48.3	-0.2
	baz=2.6						
WMOK	Wichita Mounta	143.61	29	P	PKPab	21 58 48.3	+0.1
	baz=324,SNR=12						
P49A	Miami Univ. Ec	143.67	8	P	PKPab	21 58 48.1	-0.2
	baz=350						
P50A	Jamestown	143.72	7	P	PKPab	21 58 48.3	-0.1
	baz=351						
CFA	Coronel Fontan	143.78	195	PKP	PKPdf	21 58 51.7	-0.3
	comp=Z,2.8nm,0.4s,baz=203,slow=2.5,SNR=8.5						
P52A	Corning	143.86	5	P	PKPab	21 58 49.2	+0.3
	baz=354						
P51A	Williamsport	143.93	6	P	PKPab	21 58 48.1	-1.1
	baz=352						
TUL1	Leonard	143.97	24	P	PKPab	21 58 49.5	0.0
	baz=330						
P59A	Jarrettsville	144.00	357	P	PKPbc	21 58 50.5	+0.5
	baz=3.5						
CPUP	Villa Florida	144.00	213	PKP	PKPdf	21 58 52.1	-0.4
	comp=Z,4.2nm,0.6s,baz=122,slow=1.4,SNR=7.6						
P53A	Whipple	144.07	4	P	PKPbc	21 58 50.5	+0.2
	baz=355						
Q48A	North Vernon	144.10	10	P	PKPab	21 58 49.5	-0.4
	baz=348						
P55A	Reedsville	144.12	2	P	PKPab	21 58 49.9	-0.1
	baz=358						
P56A	Dayton Farm, R	144.15	1	P	PKPab	21 58 49.7	-0.4
	baz=359						
P58A	Pank, Wackersv	144.15	359	P	PKPbc	21 58 50.7	+0.2
	baz=2.0						
Q49A	Aurora	144.16	9	P	PKPab	21 58 49.5	-0.6
	baz=349						
P57A	Homestead Farm	144.17	359	P	PKPbc	21 58 50.6	+0.1
	baz=0.8						
Q51A	Peebles	144.34	7	P	PKPbc	21 58 51.4	+0.2
	baz=352						
BDFB	Brasilia	144.40	237	PKP	PKPdf	21 58 53.9	+0.3
	comp=Z,6.5nm,0.6s,baz=161,slow=3.9,SNR=11						
BDFB	Brasilia	144.40	237	ePKPdf	PKPbc	21 58 52.3	+0.2
Q50A	Georgetown	144.45	7	P	PKPab	21 58 50.4	-0.8
	baz=351						
Q52A	Bidwell	144.52	5	P	PKPab	21 58 50.6	-0.8
	baz=354						
S44A	Carbondale	144.54	15	P	PKPab	21 58 51.4	-0.2
	baz=341						
Q60A	Greensboro	144.57	357	P	PKPab	21 58 50.5	-1.1
	baz=4.6						
Q54A	Coxs Mills	144.60	3	P	PKPab	21 58 51.0	-0.8
	baz=356						
Q56A	Snyder Ridge,	144.60	1	P	PKPab	21 58 51.6	-0.2
	baz=359						
Q57A	Strasburg	144.62	360	P	PKPab	21 58 51.6	-0.3
	baz=0.1,SNR=11						
Q55A	Buckhannon	144.63	2	P	PKPab	21 58 51.6	-0.3
	baz=357						
Q53A	Leroy	144.68	4	P	PKPab	21 58 51.6	-0.5
	baz=355						
WCI	Wyandotte Cave	144.68	11	ePKPdf	PKPab	21 58 51.7	-0.4
WCI	Wyandotte Cave	144.68	11	ePKIKP	PKPab	21 58 51.7	-0.4
WCI	Wyandotte Cave	144.68	11	P	PKPab	21 58 51.8	-0.3
	baz=346						
U40A	Yellville	144.69	20	P	PKPab	21 58 51.6	-0.6
	baz=335						
Q58A	Fox Den Farm,	144.71	359	P	PKPab	21 58 51.7	-0.4
	baz=1.4,SNR=5.1						
R49A	Shelbyville	144.82	9	P	PKPab	21 58 52.0	-0.6
	baz=348						
TX31	Lajitas Ar. Si	144.87	40	ePKPbc	PKPdf	21 58 54.2	+0.1
TXAR	Lajitas Array	144.87	40	PKP	PKPdf	21 58 54.1	+0.1
	comp=Z,21nm,0.6s,baz=283,slow=1.0,SNR=183						
R50A	Paris	144.95	8	P	PKPab	21 58 52.0	-1.1
	baz=350						
R51A	Hillsboro	145.03	7	P	PKPbc	21 58 52.2	-1.1
	baz=351						
R52A	Catlettsburg	145.10	6	P	PKPbc	21 58 52.6	-1.0
	baz=353						
R53A	Hurricane	145.17	5	P	PKPbc	21 58 53.4	-0.4
	baz=354						
R56A	Bull Pasture M	145.23	1	P	PKPbc	21 58 53.9	-0.2
	baz=358,SNR=7.5						
S49A	Springfield	145.29	10	P	PKPbc	21 58 53.4	-0.8
	baz=348						
R55A	Marlinton	145.34	2	P	PKPbc	21 58 53.8	-0.6
	baz=357						
R60A	Leonardtown, M	145.34	357	P	PKPbc	21 58 54.3	0.0
	baz=3.4						
R58A	Rapidan	145.35	359	P	PKPbc	21 58 54.2	-0.1
	baz=0.8,SNR=14						
R57A	Stanardsville	145.35	0	P	PKPbc	21 58 54.3	-0.1
	baz=360,SNR=15						
W39A	Magazine	145.39	22	P	PKPbc	21 58 54.1	-0.5
	baz=332,SNR=10						
R54A	Victor	145.39	4	P	PKPbc	21 58 53.8	-0.8
	baz=356						
CBN	Corbin Frederi	145.43	359	P	PKPbc	21 58 54.5	-0.1
	baz=2.0						
S50A	Richmond	145.53	8	P	PKPdf	21 58 54.4	-0.5
	baz=350						
S51A	Beattyville	145.68	7	P	PKPdf	21 58 54.9	-0.2
	baz=351						
R58B	Mineral	145.68	359	P	PKPdf	21 58 55.2	+0.1
	baz=1.1,SNR=8.5						
S52A	Salyersville	145.71	7	P	PKPdf	21 58 55.0	-0.2
	baz=352						
T47A	Sharon Grove	145.72	12	P	PKPdf	21 58 55.0	-0.1
	baz=345						
S54A	Dingess, Beckl	145.75	4	P	PKPdf	21 58 55.2	-0.1
	baz=355						
S53A	Williamson	145.80	5	P	PKPbc	21 58 55.7	-0.1
	baz=354						
S55A	Lewisburg	145.83	3	P	PKPdf	21 58 55.1	-0.3
	baz=356						
S59A	Mechanicsville	145.87	358	P	PKPbc	21 58 56.0	0.0
	baz=2.1,SNR=5.2						

S57A	**Dark Hollow, R** baz=359,SNR=5.9	145.89	1	P	PKPbc	21 58 55.9	-0.1
S60A	**Water View** baz=3.3	145.91	357	P	PKPab	21 58 56.4	-0.2
T49A	**Edmonton** baz=347	145.91	10	P	PKPdf	21 58 55.4	-0.1
S56A	**Natural Bridge** baz=358	145.96	2	P	PKPdf	21 58 55.7	+0.1
W41B	**Gary Mavity, V** baz=335,SNR=5.2	145.97	20	P	PKPdf	21 58 55.6	0.0
S58A	**Poland Farm, P** baz=0.8,SNR=6.0	146.04	359	P	PKPbc	21 58 56.1	-0.3
MIAR	**Mount Ida** baz=332	146.04	23	P	PKPbc	21 58 56.7	+0.1
T50A	**Nancy** baz=349	146.11	9	P	PKPdf	21 58 55.7	-0.2
T52A	**Hallie** baz=352	146.28	7	P	PKPbc	21 58 57.1	-0.2
T51A	**Gray** baz=350	146.30	8	P	PKPdf	21 58 56.7	+0.5
X40A	**Basin Creek Fa** baz=334,SNR=13	146.37	22	P	PKPbc	21 58 57.6	0.0
WVT	**Waverly**	146.38	14	*e*PKPbc	PKPbc	21 58 57.4	-0.2
WVT	**Waverly**	146.38	14	*e*PKP2	PKPbc	21 58 57.4	-0.2
WVT	**Waverly** baz=343	146.38	14	P	PKPbc	21 58 57.4	-0.2
JCT	**Junction City** baz=319	146.40	35	P	PKPab	21 58 58.4	-0.4
U49A	**Red Boiling Sp** baz=347	146.44	11	P	PKPbc	21 58 57.1	-0.6
T53A	**Wise** baz=353,SNR=5.6	146.45	6	P	PKPbc	21 58 57.6	-0.3
T55A	**Pulaski** baz=356	146.46	3	P	PKPbc	21 58 57.4	-0.5
T54A	**Tazewell** baz=354,SNR=8.7	146.46	5	P	PKPbc	21 58 57.4	-0.5
WHTX	**Lake Whitney,** baz=324	146.48	30	P	PKPbc	21 58 58.1	+0.1
T56A	**Rocky Mt** baz=357,SNR=7.7	146.59	2	P	PKPbc	21 58 57.7	-0.5
V46A	**Holladay** baz=342,SNR=9.2	146.62	14	P	PKPbc	21 58 57.7	-0.5
T57A	**Hurt** baz=359,SNR=5.2	146.64	1	P	PKPbc	21 58 58.2	-0.2
T59A	**Double "B" Far**	146.67	359	*e*PKPbc	PKPbc	21 58 58.0	-0.4
T59A	**Double "B" Far** baz=1.7,SNR=9.7	146.67	359	P	PKPbc	21 58 58.4	0.0
U50A	**Jamestown** baz=348,SNR=21	146.70	9	P	PKPbc	21 58 57.9	-0.6
T58A	**Grand View Acr** baz=360,SNR=8.9	146.70	0	P	PKPbc	21 58 58.5	+0.1
V47A	**Nunnelly** baz=343,SNR=11	146.74	14	P	PKPbc	21 58 58.0	-0.6
TZTN	**Tazewell** baz=351	146.77	8	P	PKPbc	21 58 58.4	-0.4
U51A	**La Follette** baz=350	146.87	8	P	PKPbc	21 58 59.2	+0.1
U52A	**Thorn Hill** baz=351	146.94	7	P	PKPbc	21 58 59.2	-0.1
V48A	**Smith Brothers** baz=345,SNR=11	146.98	13	P	PKPbc	21 58 58.5	-0.9
U55A	**TA2, Sparta** baz=355,SNR=7.2	147.06	4	P	PKPbc	21 58 59.1	-0.6
V49A	**McMinnville** baz=346,SNR=10	147.15	11	P	PKPbc	21 58 59.0	-0.8
U60A	**Pendleton** baz=2.5	147.16	358	P	PKPbc	21 58 59.9	+0.2
W46A	**Michie** baz=342	147.19	15	P	PKPbc	21 58 59.2	-0.7
U57A	**Blanch** baz=358,SNR=8.1	147.21	1	P	PKPbc	21 58 59.8	-0.2
U56A	**King** baz=356	147.25	3	P	PKPbc	21 58 59.6	-0.5
U58A	**Oxford** baz=360,SNR=8.2	147.25	0	P	PKPbc	21 59 00.2	+0.1
U61A	**Possum Corner** baz=3.8	147.26	357	P	PKPab	21 59 01.5	-0.3
W47A	**Westpoint** baz=343,SNR=22	147.27	14	P	PKPbc	21 58 59.7	-0.4
U59A	**Littleton** baz=1.3	147.29	359	P	PKPbc	21 59 01.0	+0.9
435B	**Jarrell** baz=323	147.38	32	P	PKPbc	21 59 00.8	+0.2
V51A	**Loudon** baz=349	147.38	9	P	PKPbc	21 58 59.8	-0.7
V50A	**Pikevile** baz=348,SNR=13	147.39	10	P	PKPbc	21 59 00.1	-0.4
V52A	**Sevierville** baz=350,SNR=6.5	147.45	8	P	PKPbc	21 59 00.3	-0.4
Z41A	**Richland Creek** baz=333	147.48	23	P	PKPbc	21 59 01.1	+0.3
OXF	**Oxford** baz=339	147.49	17	P	PKPbc	21 59 00.2	-0.5
W48A	**Pulaski** baz=344,SNR=14	147.53	13	P	PKPbc	21 59 00.2	-0.7
X46A	**Booneville** baz=341,SNR=6.2	147.68	16	P	PKPbc	21 59 00.8	-0.5
V55A	**Taylorsville** baz=355,SNR=5.1	147.69	4	P	PKPbc	21 59 00.9	-0.4
W49A	**Belvidere** baz=345,SNR=14	147.70	12	P	PKPbc	21 59 00.8	-0.5
V54A	**Nebo** baz=354,SNR=7.5	147.71	5	P	PKPbc	21 59 00.9	-0.5
V53A	**Saluda** baz=352,SNR=13	147.72	7	P	PKPbc	21 59 01.1	-0.4
V57A	**Coltrane Farms** baz=358	147.74	2	P	PKPbc	21 59 01.2	-0.2
V56A	**Mocksville** baz=356	147.78	3	P	PKPbc	21 59 01.3	-0.3
W50A	**Signal Mountai** baz=347,SNR=5.7	147.81	11	P	PKPbc	21 59 01.1	-0.6
V61A	**Roper** baz=3.6	147.81	357	P	PKPbc	21 59 02.1	+0.6
V58A	**Windy Hill, Pi** baz=359	147.85	1	P	PKPbc	21 59 01.7	0.0
V60A	**Jim Taylor Roa** baz=2.3	147.86	358	P	PKPbc	21 59 01.9	+0.2
V59A	**Middlesex** baz=0.5,SNR=8.5	147.88	360	P	PKPbc	21 59 02.1	+0.3
X47A	**Russelville** baz=342,SNR=12	147.91	15	P	PKPbc	21 59 01.0	-0.9
W51A	**Cleveland** baz=348,SNR=9.5	147.94	10	P	PKPbc	21 59 01.6	-0.4
NATX	**Nacogdoches** baz=328	148.00	27	P	PKPbc	21 59 02.7	+0.5
W52A	**Murphy** baz=350,SNR=7.8	148.14	9	P	PKPbc	21 59 02.3	-0.2
X48A	**Hartselle** baz=344,SNR=10	148.17	14	P	PKPbc	21 59 01.9	-0.7
W53A	**Cullowhee** baz=351,SNR=16	148.17	7	P	PKPbc	21 59 02.8	0.0
833A	**Chaparral WMA,** baz=317	148.24	37	P	PKiKP	21 59 03.9	-0.8
X49A	**Woodville** baz=345,SNR=18	148.27	12	P	PKPbc	21 59 02.7	-0.2
W54A	**Cherokee Point** baz=353,SNR=5.4	148.37	6	P	PKPbc	21 59 02.8	-0.3
KMSC	**Kings Mountain** baz=355,SNR=8.4	148.39	5	P	PKPbc	21 59 02.9	-0.3
CNNC	**Cliffs of the** baz=1.1	148.40	359	P	PKPbc	21 59 03.9	+0.7
W61A	**Ground Anchor** baz=2.9	148.44	358	P	PKPbc	21 59 03.7	+0.5
W56A	**Indian Trail** baz=356	148.45	3	P	PKPbc	21 59 02.9	-0.4
W57A	**Gilead** baz=357	148.46	2	P	PKPbc	21 59 03.2	-0.2
X50B	**Fort Payne** baz=346,SNR=5.4	148.46	11	P	PKPbc	21 59 02.5	-0.9
X51A	**Calhoun** baz=348	148.51	10	P	PKPbc	21 59 03.4	0.0
BBSR	**BB Station**	148.51	337	*e*PKPbc	PKPbc	21 59 03.3	-0.3
W60A	**Pink Hill** baz=1.5	148.59	359	P	PKPbc	21 59 04.0	+0.3
X52A	**Dahlonega** baz=350,SNR=7.9	148.63	9	P	PKPbc	21 59 03.9	0.0
Y48A	**Jasper** baz=343	148.65	14	P	PKPbc	21 59 02.9	-0.9
X53A	**Estanollee** baz=351,SNR=8.0	148.81	8	P	PKPbc	21 59 04.3	0.0
X54A	**Belton** baz=352,SNR=12	148.88	6	P	PKPbc	21 59 04.4	-0.1
Y49A	**Blount Mountai** baz=345,SNR=16	148.88	13	P	PKPbc	21 59 04.1	-0.4
HKT	**Hockley**	148.94	30	*e*PKPbc	PKPdf	21 59 02.3	+1.7
HKT	**Hockley**	148.94	30	*e*PKIKP	PKPdf	21 59 02.3	+1.7
X55A	**Gracelyn & Ava** baz=354,SNR=7.0	149.03	5	P	PKPbc	21 59 04.6	-0.2
X56A	**White Oak** baz=355,SNR=6.5	149.06	4	P	PKPbc	21 59 04.7	-0.2
X60A	**Albert Glenn T** baz=1.0	149.06	359	P	PKPbc	21 59 05.4	+0.5
X58A	**Rowland** baz=358	149.08	1	P	PKPbc	21 59 04.9	0.0
Y51A	**Rockmart** baz=347	149.12	11	P	PKPbc	21 59 04.7	-0.4
X57A	**Johnson Farm,** baz=357	149.14	3	P	PKPbc	21 59 05.2	+0.1
VBMS	**Vicksburg** baz=336	149.25	20	P	PKPbc	21 59 05.9	+0.4
Y52A	**Lilburn** baz=349,SNR=5.8	149.32	9	P	PKPbc	21 59 05.9	+0.3
Y53A	**Monroe** baz=350,SNR=6.3	149.41	8	P	PKPbc	21 59 06.0	+0.2
Y54A	**Tignall** baz=352,SNR=7.3	149.52	7	P	PKPbc	21 59 06.2	+0.1
LRAL	**Lakeview Retre** baz=343	149.53	14	P	PKPbc	21 59 05.6	-0.5
147A	**Livingston** baz=340	149.53	17	P	PKPbc	21 59 06.2	0.0
Y55A	**Saluda** baz=353	149.54	6	P	PKPbc	21 59 06.3	+0.1
Z50A	**Ashland** baz=345,SNR=5.3	149.57	12	P	PKPbc	21 59 06.0	-0.3
Y57A	**Sumter** baz=356	149.57	3	P	PKPbc	21 59 06.2	0.0
Y60A	**Bolivia** baz=0.5	149.64	360	P	PKPbc	21 59 06.5	+0.2
Y59A	**Loris** baz=359	149.65	1	P	PKPbc	21 59 06.7	+0.3
Z51A	**Franklin** baz=347	149.66	11	P	PKPbc	21 59 06.2	-0.2
Y58A	**Scranton** baz=358	149.72	2	P	PKPbc	21 59 06.9	+0.3
Y56A	**Pelion** baz=354	149.73	5	P	PKPbc	21 59 06.8	+0.2
148A	**Greensboro** baz=342	149.75	15	P	PKPbc	21 59 06.6	0.0
GOGA	**Godfrey** baz=350	149.86	8	P	PKPbc	21 59 07.0	+0.1
Z52A	**Williamson** baz=348	149.93	10	P	PKPbc	21 59 07.2	+0.1
Z53A	**Monticello** baz=350	149.97	9	P	PKPbc	21 59 07.2	0.0
149A	**Jones** baz=343	150.00	14	P	PKPbc	21 59 07.1	-0.2
Z54A	**Sparta** baz=351	150.12	7	P	PKPbc	21 59 07.8	+0.3
150A	**Eclectic** baz=345	150.17	13	P	PKPbc	21 59 07.5	-0.2
Z56A	**Williston** baz=354	150.19	5	P	PKPbc	21 59 07.9	+0.2
Z57A	**Bowman** baz=356	150.27	4	P	PKiKP	21 59 08.9	+0.2
Z58A	**St. Stephen** baz=357	150.28	2	P	PKiKP	21 59 09.1	+0.4
152A	**Waverly Hall** baz=347	150.38	11	P	PKPbc	21 59 08.4	+0.2
Z59A	**Georgetown, SC** baz=358	150.39	1	P	PKiKP	21 59 08.6	-0.4
151A	**Opelika** baz=346	150.40	12	P	PKPbc	21 59 08.4	+0.1
NHSC	**New Hope** baz=357	150.49	3	P	PKiKP	21 59 09.0	-0.2
249A	**Camden** baz=342	150.51	15	P	PKPbc	21 59 08.9	+0.4
LNIG	**Linares**	150.62	42	*e*PKPbc	PKPbc	21 59 08.8	-0.2
LNIG				*e*PKPab	PKPab	21 59 15.4	-0.5
154A	**Montrose** baz=351	150.70	8	P	PKiKP	21 59 09.3	-0.3
250A	**Grady** baz=344	150.72	14	P	PKPbc	21 59 09.3	+0.3
155A	**Kite** baz=352	150.77	7	P	PKiKP	21 59 09.7	0.0
251A	**Midway** baz=346	150.80	12	P	PKiKP	21 59 09.8	-0.1
156A	**Sylvania** baz=354	150.84	5	P	PKiKP	21 59 10.1	+0.2
158A	**Hollywood** baz=356	150.86	3	P	PKiKP	21 59 09.6	-0.3
252A	**Lumpkin** baz=347	151.03	11	P	PKPbc	21 59 10.0	+0.3
253A	**Americus** baz=348	151.08	10	P	PKPbc	21 59 10.0	+0.2
349A	**Repton** baz=342	151.08	16	P	PKiKP	21 59 10.5	+0.1
350A	**Dozier** baz=344	151.23	14	P	PKiKP	21 59 10.7	0.0
BRAL	**Brewton** baz=342	151.29	16	P	PKiKP	21 59 11.2	+0.3
254A	**Abbeville** baz=350	151.32	9	P	PKiKP	21 59 10.9	0.0
255A	**Hazlehurst** baz=352	151.46	7	P	PKiKP	21 59 11.2	0.0
256A	**Glennville** baz=353	151.47	6	P	PKiKP	21 59 11.0	-0.2
352A	**Blakely** baz=346	151.49	12	P	PKiKP	21 59 11.4	+0.2
257A	**Skidaway Islan** baz=355	151.56	5	P	PKPbc	21 59 10.9	0.0
353A	**Camilla** baz=348	151.76	11	P	PKPbc	21 59 11.5	+0.1
TIGA	**Tifton** baz=349	151.78	9	P	PKPbc	21 59 11.4	-0.1
356A	**Blackshear** baz=352	152.09	7	P	PKiKP	21 59 12.7	+0.2
451A	**Vernon** baz=344	152.15	14	P	PKPbc	21 59 12.3	0.0
453A	**Whigham** baz=347	152.22	11	P	PKiKP	21 59 12.9	+0.1
455A	**Stateville** baz=350	152.55	9	P	PKPbc	21 59 13.2	0.0
456A	**Hilliard** baz=352	152.70	7	P	PKPbc	21 59 13.2	-0.3
457A	**Yulee** baz=353	152.85	6	P	PKPbc	21 59 13.0	-0.9
555A	**McAlpin** baz=350	153.16	9	P	PKPbc	21 59 14.2	-0.4
556A	**Lake Butler** baz=351	153.36	8	P	PKiKP	21 59 15.2	0.0
557A	**Orange Park** baz=353	153.43	6	P	PKPbc	21 59 15.2	0.0
SIV	**San Ignacio** baz=79,slow=5.2	154.13	221	PKP	PKPdf	21 59 10.5	+1.5
LPAZ	**La Paz** comp=Z,1.4nm,0.8s,baz=60,slow=3.5,SNR=3.7	157.87	207	PKP	PKPdf	21 59 16.0	+1.3
LPAZ	**La Paz**	157.87	207	PKIKP	PKPdf	21 59 16.0	+1.3
SDDR	**Presa de Saban**	163.09	336	*e*PKPdf	PKPdf	21 59 17.6	-2.0
SDDR				*e*PKPab	PKPab	22 00 09.6	+0.2

ATH 24 21:49:22.1, 38°.22N×22°.07E, h11^{km}±1^{km}, ML0.4/2, Error ellipse: s-maj=1.8km s-min=0.9km az=67.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG2	**Aigio**	0.02	3	P	Pg	21 49 23.9	-0.2
AIG2				S	Sg	21 49 25.3	-0.1
AIG4	**Aigion**	0.04	5	P	Pg	21 49 24.1	0.0
AIG4				S	Sg	21 49 25.7	+0.2
AIG3	**Aigion**	0.05	36	P	Pg	21 49 24.4	+0.2
AIG3				S	Sg	21 49 25.8	+0.1
AIG1	**Aigion**	0.06	99	P	Pg	21 49 23.9	-0.3
AIG1				S	Sg	21 49 25.8	0.0
LAKA	**Lakka**	0.08	286	P	Pg	21 49 24.5	0.0
LAKA				S	Sg	21 49 26.2	-0.1
LAKA	comp=N,42µm,0.2s			AML	AML	21 49 26.5	
LAKA	comp=E,34µm,0.2s			AML	AML	21 49 26.6	
TRAZ	**Trapeza**	0.12	114	P	Pg	21 49 25.2	+0.1
TRAZ				S	Sg	21 49 27.2	-0.1
TRAZ	comp=N,105µm,0.3s			AML	AML	21 49 29.4	
TRAZ	comp=E,66µm,0.3s			AML	AML	21 49 30.3	
TRIZ	**Trizonia**	0.15	1	P	Pg	21 49 25.3	-0.1
TRIZ				S	Sg	21 49 27.9	0.0
KALE	**Kalithea**	0.18	18	P	Pg	21 49 26.0	-0.1
KALE				S	Sg	21 49 29.1	+0.3
KLV	**Kalavryta, Ach**	0.19	160	P	Pg	21 49 26.1	0.0
KLV				S	Sg	21 49 29.3	+0.4
SERG	**Sergoula**	0.20	357	P	Pg	21 49 26.3	+0.1

SJA 24 21:49:33.9±0.3, 25°.44S×65°.37W, h16^{km}±4^{km}, ML3.2, MW3.7, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	0.73	350	*e*P	Pb	21 49 48.5	+0.1
SLA				*e*S	Sn	21 49 59.5	-1.2
SLA	comp=Z,570nm,0.6s			IAML		21 50 02.0	
AZAP	**Zapla**	1.25	13	*e*P	Pg	21 49 58.1	+0.1
AZAP				*e*S	Sg	21 50 15.8	+1.5
AZAP	comp=Z,838nm,0.3s			IAML		21 50 19.7	
YJA	**Yavi**	3.26	358	*e*P	Pb	21 50 28.3	-3.3

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*ROM **24** 21:50:10.2±0.2, 44°.820N±0°.007×11°.253E±0°.009, h10^{km}, ML2.4/7, Error ellipse: s-maj=0.8km s-min=0.6km az=218.0*

ISC 24 21:50:12.5±0.9, 44°.88N±0°.02×11°.23E±0°.03, h15^{km}±6^{km}, n40, σ1^{s}.15/62, 3C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SERM	**Sermide**	0.14	19	P	**Pb**	**21 50 16.6**	**-0.2**
SERM				S	**Sg**	**21 50 20.5**	**+1.9**
SERM	comp=E,740µm,0.9s			AML	AML		
SERM	comp=N,756µm,0.5s			AML	AML		
RAVA	**Ravarino**	0.15	213	P	**Pb**	**21 50 15.7**	**-1.4**
RAVA				S	**Sg**	**21 50 19.4**	**+0.5**
RAVA	comp=E,7875µm,0.6s			AML	AML		
RAVA	comp=N,6005µm,0.3s			AML	AML		
RAVA	comp=E,7875µm,0.6s			AML	AML		
RAVA	comp=N,6010µm,0.3s			AML	AML		
RAVA	comp=N,6010µm,0.3s			AML	AML		
RAVA	comp=E,7875µm,0.6s			AML	AML		
CAVE	**Cavezzo**	0.16	264	P	**Pb**	**21 50 16.0**	**-1.3**
CAVE				S	**Sg**	**21 50 19.7**	**+0.5**
CAVE	comp=E,1380µm,1.2s			AML	AML		
CAVE	comp=N,894µm,0.2s			AML	AML		
CAVE	comp=E,1380µm,1.2s			AML	AML		
CAVE	comp=N,894µm,0.2s			AML	AML		
CAVE	comp=E,1380µm,1.2s			AML	AML		
CAVE	comp=N,894µm,0.2s			AML	AML		
SBPO	**S.Benedetto Po**	0.28	307	P	**Pn**	**21 50 20.9**	**-1.2**
FIU	**Minerbio Fiu**	0.30	143	P	**Pb**	**21 50 18.1**	**-1.6**
FIU				S	**Sg**	**21 50 22.7**	**-0.5**
NOVE	**Novellara**	0.38	257	P	**Pn**	**21 50 21.4**	**-2.1**
TEOL	**Teolo**	0.57	33⇓	*e*Pg	**Pn**	**21 50 24.1**	**-2.0**
TEOL				*e*Sg	**Sb**	**21 50 33.3**	**+1.1**
TEOL	**Teolo**	0.57	33	P	**Pn**	**21 50 24.2**	**-2.0**
TEOL	comp=E,386µm,0.3s			AML	AML		
TEOL	comp=N,382µm,1.5s			AML	AML		
TEOL	comp=E,386µm,0.3s			AML	AML		
TEOL	comp=N,382µm,1.5s			AML	AML		
TEOL	comp=N,382µm,1.5s			AML	AML		
TEOL	comp=E,386µm,0.3s			AML	AML		
ZOVE	**Zovencedo**	0.60	17	P	**Pb**	**21 50 24.6**	**-0.1**
MARN	**Marana (Italy)**	0.76	359	*e*Pg	**Pn**	**21 50 27.9**	**-0.8**
MARN				*e*Sg	**Sn**	**21 50 38.9**	**-1.0**
BRIS	**BRISIGHELLA** comp=E,118µm,1.2s	0.76	165	AML	AML		
BRIS	comp=N,98µm,0.4s			AML	AML		
BRIS	comp=E,118µm,1.2s			AML	AML		
BRIS	comp=N,98µm,0.4s			AML	AML		
ROVR	**Rover Verones**	0.77	352	P	**Pn**	**21 50 27.9**	**-1.2**
ROVR	comp=E,118µm,0.4s			AML	AML		
ROVR	comp=N,198µm,1.0s			AML	AML		
ROVR	comp=E,118µm,0.4s			AML	AML		
ROVR	comp=N,198µm,1.0s			AML	AML		
ROVR	comp=E,118µm,0.4s			AML	AML		
ROVR	comp=N,198µm,1.0s			AML	AML		
BALD	**Monte Baldo**	0.85	340	*e*Pg	**Pn**	**21 50 30.4**	**+0.1**
BALD				*e*Sg	**Sn**	**21 50 43.3**	**+0.7**
POPM	**Popiglio**	0.90	202	P	**Pn**	**21 50 31.4**	**+0.6**
POPM				S	**Sn**	**21 50 42.9**	**-0.7**
SARO	**Sassorosso**	0.92	221	P	**Pn**	**21 50 31.9**	**+0.8**
SARO				S	**Sn**	**21 50 44.8**	**+0.8**
MAGA	**Magasa**	0.99	335	P	**Pn**	**21 50 31.7**	**-0.4**
MAGA	comp=E,1390µm,0.5s			AML	AML		
MAGA	comp=N,694µm,1.6s			AML	AML		
MAGA	comp=N,694µm,1.6s			AML	AML		
MAGA	comp=E,1390µm,0.5s			AML	AML		
DOSS	**Dosso del Somm**	1.00	358	*e*Pg	**Pn**	**21 50 32.1**	**-0.1**
DOSS				*e*Sg	**Sn**	**21 50 46.5**	**+0.3**
EQUI	**Equi**	1.05	228	P	**Pn**	**21 50 34.3**	**+1.5**
EQUI				S	**Sn**	**21 50 50.2**	**+3.0**
CGRP	**Cima Grappa**	1.07	22⇑	*e*Pg	**Pn**	**21 50 33.2**	**-0.1**
CGRP				*e*Sg	**Sn**	**21 50 49.4**	**+1.4**
CGRP	**Cima Grappa**	1.07	22	P	**Pn**	**21 50 33.1**	**-0.1**
CGRP	comp=E,80µm,0.5s			AML	AML		
CGRP	comp=N,76µm,0.4s			AML	AML		
CGRP	comp=N,76µm,0.4s			AML	AML		
CGRP	comp=E,80µm,0.5s			AML	AML		
MAIM	**Mastiano**	1.10	209	P	**Pn**	**21 50 34.3**	**+0.9**
MAIM				S	**Sn**	**21 50 50.0**	**+1.5**
PANI	**Panarotta**	1.17	3⇑	*e*Pg	**Pg**	**21 50 34.9**	**-0.2**
RNI	**Roncone**	1.18	339⇑	*e*Pg	**Pg**	**21 50 35.1**	**-0.2**
RNI				*e*Sg	**Sn**	**21 50 52.5**	**+1.9**
CTI	**Castel Tesino**	1.20	14	P	**Pg**	**21 50 35.1**	**-0.6**
CTI	comp=E,130µm,1.6s			AML	AML		
CTI	comp=N,142µm,1.5s			AML	AML		
CTI	comp=N,142µm,1.5s			AML	AML		
CTI	comp=E,130µm,1.6s			AML	AML		
GAGG	**Gaggia**	1.22	351⇓	*e*Pg	**Pg**	**21 50 35.9**	**-0.1**
GAGG				*e*Sg	**Sn**	**21 50 52.9**	**+1.3**
MABI	**Malga Bissina**	1.28	337	P	**Pg**	**21 50 36.7**	**-0.4**
MABI	comp=E,47µm,0.4s			AML	AML		
MABI	comp=N,51µm,0.7s			AML	AML		
MABI	comp=E,47µm,0.4s			AML	AML		
MABI	comp=N,51µm,0.7s			AML	AML		
APPI	**Appiano**	1.60	360	P	**Pg**	**21 50 42.1**	**-1.2**
APPI	comp=E,121µm,0.2s			AML	AML		
APPI	comp=N,73µm,0.2s			AML	AML		
APPI	comp=E,121µm,0.2s			AML	AML		
APPI	comp=N,73µm,0.2s			AML	AML		
MOSI	**Grossmontoni**	1.80	345	P	**Pg**	**21 50 46.8**	**-0.3**

MOSI				AML	AML		
	comp=E,103µm,0.4s						
MOSI				AML	AML		
	comp=N,161µm,0.8s						
MOSI				AML	AML		
	comp=N,161µm,0.8s						
MOSI				AML	AML		
	comp=E,103µm,0.4s						
FUORN	Ofenpass-Fuorn	1.87	339	P	Pg	21 50 47.4	-1.0
FUORN				AML	AML		
	comp=E,51µm,0.5s						
FUORN				AML	AML		
	comp=N,44µm,0.4s						
FUORN				AML	AML		
	comp=E,51µm,0.5s						
FUORN				AML	AML		
	comp=N,44µm,0.4s						
ABTA	Abfaltersbach	2.07	25	Pg	Pg	21 50 51.8	-0.4
	comp=N,1.1nm,0.2s						
ABTA				Sg	Sg	21 51 22.1	+3.0
	comp=N,2.6nm,0.3s						
FETA	Feichten	2.17	351	Pn	Pg	21 50 53.1	-1.0
	comp=N,1.0nm,0.3s						
FETA				eSn	Sg	21 51 22.2	-0.1
	comp=N,2.3nm,0.4s						
SQTA	Sankt Quirin	2.34	360	ePn	Pb	21 50 54.9	+0.4
	comp=N,0.8nm,0.1s,SNR=8.6						
SQTA				Sn	Sg	21 51 26.7	-1.0
	comp=N,6.1nm,0.2s						
WTTA	Wattenberg	2.40	7	i Pn	Pg	21 50 56.4	-2.2
	comp=N,1.3nm,0.2s						
WTTA				i Sg	Sg	21 51 29.2	-0.5
	comp=N,15nm,0.5s						
MYKA	Terra Mystica	2.43	43	Pg	Pg	21 50 59.0	-0.1
	comp=N,1.0nm,0.2s						
MYKA				Sg	Sg	21 51 32.0	+1.4
	comp=N,3.1nm,0.4s						
MOTA	Moosalm	2.46	358	Pn	Pb	21 50 56.4	-0.2
	comp=N,0.9nm,0.2s,SNR=5.5						
MOTA				i Sg	Sg	21 51 32.2	+0.4
	comp=N,2.2nm,0.3s						
WATA	Walderalm	2.46	5	ePn	Pb	21 50 56.1	-0.6
	comp=N,0.4nm,0.2s						
WATA				i Sg	Sg	21 51 32.0	+0.2
	comp=N,2.6nm,0.2s						
DAVA	Damuels	2.58	339	Sn	Sb	21 51 30.5	+0.2
	comp=N,2.4nm,0.3s						
RETA	Reutte	2.63	353	i Sn	Sb	21 51 31.2	-0.2
	comp=N,0.8nm,0.4s						
KBA	Koelnbreinsper	2.64	33	Pg	Pg	21 51 02.1	-1.1
	comp=N,2.3nm,0.3s						
KBA				Sg	Sg	21 51 38.2	+0.7
	comp=N,4.1nm,0.5s						
OBKA	Obir	2.84	54	Sg	Sg	21 51 44.2	+0.6
	comp=N,6.2nm,0.5s						

ROM 24 21:50:17.6±0.0, 43°.413N±0°.001×12°.503E±0°.001, h6km, ML0.2/2, Error ellipse: s-maj=0.7km s-min=0.1km az=133.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	AVT- Monte Val	0.08	246	P	Pg	21 50 19.6	+0.2
ATVO				S	Sg	21 50 21.1	+0.5
ATVO				AML	AML		
	comp=E,26µm,0.8s						
ATVO				AML	AML		
	comp=N,20µm,0.5s						
ATVO				AML	AML		
	comp=N,20µm,0.5s						
ATVO				AML	AML		
	comp=E,26µm,0.8s						
ATPI	Pietralunga -	0.08	297	P	Pg	21 50 19.8	+0.2
ATPI				S	Sg	21 50 21.3	+0.5
PIEI	Pieia	0.12	11	P	Pg	21 50 20.6	+0.4
PIEI				S	Sg	21 50 22.8	+0.8
PIEI				AML	AML		
	comp=E,22µm,0.6s						
PIEI				AML	AML		
	comp=N,19µm,0.5s						
PIEI				AML	AML		
	comp=N,19µm,0.5s						
PIEI				AML	AML		
	comp=E,22µm,0.6s						
MOMA	Monte Martano	0.61	175	AML	AML		
	comp=E,46µm,0.1s						
MOMA				AML	AML		
	comp=E,46µm,0.1s						
MOMA				AML	AML		
	comp=N,50µm,1.0s						
MOMA				AML	AML		
	comp=N,50µm,1.0s						

SJA ***24*** *21:56:42.8±0.5, 20°.75S×68°.81W, h101km±4km, ML2.5, MW2.9*
ISCJB ***24*** *21:56:43.6±1.0, 20°.69S±0°.04×68°.9W±0°.1, h116km±11km, Error ellipse: s-maj=16.3km s-min=6.0km az=3.0*
GUC ***24*** *21:56:44.8±0.6, 20°.65S×68°.97W, h105km±4km, ML3.1*
ISC 24 21:56:43.9±1.8, 20°.68S±0°.04×68°.84W±0°.09, h111km±14km, n17, σ0s.77/28, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.61	331	eP	Pn	21 57 01.5	-0.7
PB08				eS	Sn	21 57 15.1	-0.7
PB08	IPOC Station P	0.61	331	⇑iP	Pn	21 57 02.5	+0.3
PB08				i S	Sn	21 57 15.5	-0.3
PB08				IAML		21 57 19.1	
	comp=N,1µm,0.2s						
PB01	IPOC Station P	0.71	239	eS	Sn	21 57 18.6	+2.0
PB01	IPOC Station P	0.71	239	⇑iP	Pn	21 57 02.6	-0.1
PB01				i S	Sn	21 57 16.2	-0.4
PB01				IAML		21 57 18.8	
	comp=E,2µm,0.2s						
GO01	Chusmiza	1.06	341	eP	Pn	21 57 06.8	+0.4
GO01				i S	Sn	21 57 23.3	0.0
GO01				IAML		21 57 28.1	
	comp=N,1µm,0.1s						
PB09	IPOC Station P	1.18	199	⇑iP	Pn	21 57 08.4	+1.1
PB09				IAML		21 57 31.2	
	comp=E,125nm,0.3s						
PB02	IPOC Station P	1.18	237	eP	Pn	21 57 06.3	-1.0
PB02	IPOC Station P	1.18	237	⇑iP	Pn	21 57 07.3	0.0
PB02				i S	Sn	21 57 24.4	-0.5
PB02				IAML		21 57 28.0	
	comp=E,866nm,0.2s						
PB11	IPOC Station P	1.19	320	eP	Pn	21 57 07.5	0.0
PB11				eS	Sn	21 57 25.6	+0.3
PB11	IPOC Station P	1.19	320	⇑iP	Pn	21 57 07.3	-0.2
PB11				i S	Sn	21 57 24.3	-0.9
PB11				IAML		21 57 28.2	
	comp=E,587nm,0.3s						
PB07	IPOC Station P	1.43	223	⇑iP	Pn	21 57 10.4	+0.2
PB07				i S	Sn	21 57 29.8	-0.4
PB07				IAML		21 57 33.5	
	comp=E,515nm,0.6s						
PB03	IPOC Station P	1.61	212	⇓iP	Pn	21 57 12.9	+0.6
PB03				i S	Sn	21 57 34.0	+0.1
PB03				IAML		21 57 38.9	
	comp=E,190nm,0.2s						
PSGC	Pisagua	1.62	311	eP	Pn	21 57 12.0	-0.4
PSGC				i S	Sn	21 57 33.1	-0.9
PSGC				IAML		21 57 36.0	
	comp=N,180nm,0.5s						
PSGCX	Pisagua	1.62	311	eP	Pn	21 57 12.2	-0.1
MNMC	Minye Minye	1.70	335	eP	Pn	21 57 14.2	+0.7
MNMC				i S	Sn	21 57 37.5	+1.5
MNMC				IAML		21 57 45.3	
	comp=E,552nm,0.2s						
MNMCX	Minye Minye	1.70	335	eP	Pn	21 57 14.3	+0.8
AZAP	Zapla	4.96	136	eP	Pn	21 57 55.8	-0.7
AZAP				IAML		21 58 50.7	
	comp=Z,3.0nm,0.1s						

NNC ***24*** *22:16:14.3±6.5, 50°.49N×92°.23E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=75.1km s-min=57.9km az=147.0*
ISC 24 22:16:13.1±0.9, 50°.97N±0°.06×92°.97E±0°.05, h10km, n22, σ3s.10/37, 3C-3D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZLR	Kyzyl	1.19	51	Pg	Pg	22 16 35.7	-0.3
KZLR				Sg	Sn	22 16 55.2	+3.2
ARDR	Aradan	1.64	10	Pg	Pn	22 16 40.4	-1.7
ARDR				Sg	Sn	22 17 03.3	0.0
TEL	Teeli	1.75	273	Pg	Pn	22 16 34.2	-9.4
TEL				Sg	Sn	22 16 52.4	-14
DJOS	Djoyskaya Sosn	2.07	333	Pg	Pn	22 16 45.3	-2.7
DJOS				Sg	Sn	22 17 10.4	-3.5
DJO	Djoy, Khakassi	2.12	330	Pg	Pn	22 16 45.2	-3.4
DJO				Sg	Sn	22 17 11.0	-4.0
CERR	Cheremushki	2.12	334	Pg	Pn	22 16 46.4	-2.2
CERR				Sg	Sn	22 17 12.5	-2.5
TDJR	Todzha	2.42	52	Pg	Pb	22 16 55.6	-1.2
TDJR				Sg	Sg	22 17 30.8	0.0
VEH	Verkhnyaya Baz	2.81	325	Pg	Pn	22 16 57.1	-1.1
VEH				Sg	Sn	22 17 29.3	-2.9
ABNR	Abakan	2.92	342	Pg	Pn	22 17 00.3	+0.8
ABNR				Sg	Sn	22 17 37.9	+3.2
CUR	Chagan-Uzun	3.07	255	Pg	Pn	22 16 58.3	-3.5
CUR				Sg	Sn	22 17 32.7	-6.0
AKAR	Aktash	3.47	261	Pg	Pn	22 17 05.6	-1.7
AKAR				Sg	Sn	22 17 44.1	-4.4
CHBI	Chibit, Altay	3.54	261	Pg	Pn	22 17 06.2	-2.0
CHBI				Sg	Sn	22 17 47.4	-2.8
TASR	Tashtagol	3.63	302	Pg	Pn	22 17 11.1	+1.7
TASR				Sg	Sn	22 17 52.4	+0.1
ARTR	Artybash	3.66	285	Pg	Pn	22 17 09.0	-0.8
ARTR				Sg	Sn	22 17 51.2	-1.8
DGZ	Jazzator, Alta	3.77	252	Pg	Pn	22 17 12.6	+1.1
DGZ				Sg	Sn	22 17 54.4	-1.4
TUNR	Tungur	4.31	262	Pg	Pn	22 17 20.9	+2.2
TUNR				Sg	Sn	22 18 11.9	+2.8
GALT	Gorno-Altaysk,	4.50	285	Pg	Pn	22 17 22.9	+1.5
GALT				Sg	Sn	22 18 17.4	+3.6
ELT	Eltsovka	4.74	302	Pg	Pn	22 17 28.6	+4.0
ELT				Sg	Sn	22 18 25.6	+6.0
UKR	Ust'-Kan	5.18	273	Pg	Pn	22 17 36.0	+5.2
UKR				Sg	Sn	22 18 38.0	+7.4
MK31	Makanchi Array	8.18	243	Pn	Pn	22 18 04.5	-7.4
	0.1nm,0.2s,baz=52,slow=15,SNR=14						
MK31				⇓Pg	Pb	22 18 33.6	-1.3
	0.8nm,0.5s,baz=67,slow=15,SNR=5.5						
MK31				⇑Lg	Lg	22 20 17.4	
	6.0nm,0.8s,baz=46,slow=27,SNR=5.2						
MAKZ	Makanchi	8.35	244	⇓Pn	Pn	22 18 07.0	-7.2
	0.3nm,0.4s						
MAKZ				⇓Lg	Lg	22 20 21.0	
	5.7nm,0.8s						
KURBB	Kurchatov Arra	9.16	273	⇑Pn	Pn	22 18 23.2	-2.0
	0.8nm,0.5s						
KURBB				⇑Lg	Lg	22 20 45.1	
	18nm,0.8s						

ISCJB ***24*** *22:35:52.8±1.3, 46°.8N±0°.2×152°.8E±0°.2, h68km, mb3.6/6, Error ellipse: s-maj=31.2km s-min=12.6km az=136.0*
IDC ***24*** *22:35:55.0±3.3, 46°.79N×152°.70E, h68km±27km, mb3.5/7, mb1 3.5/10, mb1mx3.3/54, mbtmp3.7/10, MS2.9/1, Ms1 2.9/1, ms1mx2.2/35, Error ellipse: s-maj=36.8km s-min=20.3km az=116.0*
ISC 24 22:35:54.8±1.5, 46°.8N±0°.2×152°.8E±0°.2, h68km, n13, σ0s.42/11, mb3.7/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	7.09	25	P	Pn	22 37 35.9	0.0
	0.1nm,0.3s,baz=199,slow=15,SNR=2.3						
ASAJ	Asahikawa	7.62	253	P	Pn	22 37 42.6	-0.4
	0.5nm,0.3s,baz=72,slow=20,SNR=3.5						
ASAJ				S	Sn	22 39 21.0	+13
	0.3nm,0.3s,baz=168,slow=19,SNR=1.8						
USRK	Ussuriysk Ar.	14.79	268	P	Pn	22 39 20.8	+0.8
	0.4nm,0.3s,baz=75,slow=10,SNR=7.3						
KSRS	Korea Array	20.57	252	P	P	22 40 28.1	+0.2
	1.2nm,0.7s,baz=56,slow=11,SNR=3.1						
JNU	Nakatsue	21.52	238	LR	LR	22 49 28.1	
	comp=Z,27nm,18.2s,baz=352,slow=38						
MKAR	Makanchi Array	46.71	297	P	P	22 44 16.2	-0.5
	0.2nm,0.4s,baz=65,slow=6.6,SNR=6.1						
FINES	FINESS Array B	63.91	335	P	P	22 46 19.9	0.0
	0.7nm,0.4s,baz=51,slow=7.3,SNR=15						
NB2	NORSAR Subarra	68.12	341	P	P	22 46 47.2	+0.1
	comp=Z,0.4nm,0.5s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.12	341	P	P	22 46 47.5	+0.4
	comp=Z,0.9nm,0.8s,baz=27,slow=6.2,SNR=7.4						
HFS	Hagfors	68.35	339	P	P	22 46 48.4	0.0
	comp=Z,1.0nm,0.4s,baz=54,slow=7.3,SNR=13						
AKASG	Malin Array Be	71.39	326	P	P	22 47 07.0	-0.3
	comp=Z,0.5nm,0.3s,baz=38,slow=6.2,SNR=3.7						
ASAR	Alice Springs	72.16	198	P	P	22 47 12.3	+0.2
	comp=Z,0.5nm,0.7s,baz=18,slow=6.3,SNR=3.6						
TXAR	Lajitas Array	77.69	60	pP	pP	22 47 59.5	-2.3
	comp=Z,0.5nm,0.6s,baz=302,slow=4.7,SNR=6.0						

IDC ***24*** *22:41:47.5±0.9, 52°.17N×160°.50E, h0km, mb4.0/22, mb1 4.1/24, mb1mx4.0/54, mbtmp4.0/24, ML4.0/2, MS3.5/10, Ms1 3.6/10, ms1mx3.2/36, Error ellipse: s-maj=23.6km s-min=14.3km az=164.0*
KRSC ***24*** *22:41:48.4±1.7, 52°.04N×160°.71E, h61km±20km, ML4.4*
ISCJB ***24*** *22:41:50.0±0.6, 52°.02N±0°.03×160°.69E±0°.05, h37km±4km, mb4.2/47, MS3.6/11, Error ellipse: s-maj=6.3km s-min=3.9km az=150.1*
MOS ***24*** *22:41:50.3±0.9, 52°.02N×160°.64E, h40km, mb4.4/18, Error ellipse: s-maj=8.1km s-min=4.4km az=107.6*
NEIC ***24*** *22:41:50.8±2.4, 52°.10N×160°.66E, h34km±4km, mb4.2/28, Error ellipse: s-maj=12.3km s-min=5.4km az=215.0*
ISC 24 22:41:51.2±0.7, 52°.05N±0°.04×160°.66E±0°.03, h32km±4km, n172, σ1s.36/192, mb4.2/47, MS3.7/11, 7C-7D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.12	340	i P	Pn	22 42 09.6	-1.0
SPN				eS	Sn	22 42 23.6	-1.3
SPN	Mys Shipunski	1.12	340	PN	Pn	22 42 09.6	-1.0
SPN				S	Sn	22 42 23.6	-1.3
RUS	Russkaya	1.37	287	eP	Pn	22 42 13.3	-0.8
RUS				eS	Sn	22 42 30.1	-1.0
RUS	Russkaya	1.37	287	PN	Pn	22 42 13.3	-0.8
RUS				S	Sn	22 42 30.1	-1.0
NLC	Nalytchevo	1.38	325	eP	Pn	22 42 13.8	-0.3
NLC				eS	Sn	22 42 30.9	-0.3
NLC	Nalytchevo	1.38	325	PN	Pn	22 42 13.8	-0.3
NLC				S	Sn	22 42 30.9	-0.3
DALK	Dalny	1.52	311	eP	Pn	22 42 15.9	-0.2
DALK	Dalny	1.52	311	PN	Pn	22 42 15.9	-0.2
PET	Petropavlovsk	1.56	309	ePn	Pn	22 42 16.6	-0.1
PET	Petropavlovsk	1.56	309	PN	Pn	22 42 16.6	-0.1
PET				S	Sn	22 42 35.7	-0.2
MTVR	Mutnovka	1.58	287	eP	Pn	22 42 16.8	-0.3
MTVR				eS	Sn	22 42 35.9	-0.6
MTVR	Mutnovka	1.58	287	PN	Pn	22 42 16.8	-0.3
MTVR				S	Sn	22 42 35.9	-0.6
UGLR	Uglovaya	1.61	317	eP	Pn	22 42 18.6	+1.1
UGLR	Uglovaya	1.61	317	PN	Pn	22 42 18.6	+1.1
KDTR	Khodutka, Kamc	1.62	262	i P	Pn	22 42 16.7	-0.7
KDTR				eS	Sn	22 42 35.6	-1.5
KDTR	Khodutka, Kamc	1.62	262	PN	Pn	22 42 16.7	-0.7
KDTR				S	Sn	22 42 35.6	-1.5
SDLR	Sedlovina	1.64	319	eP	Pn	22 42 17.9	+0.1
SDLR	Sedlovina	1.64	319	PN	Pn	22 42 17.9	+0.1
SMAR	Somma	1.66	318	eP	Pn	22 42 18.2	0.0
SMAR	Somma	1.66	318	PN	Pn	22 42 18.2	0.0
AVH	Avacha	1.69	317	eP	Pn	22 42 18.7	+0.2
AVH	Avacha	1.69	317	PN	Pn	22 42 18.7	+0.2
KRER	Koryakskii	1.71	318	eP	Pn	22 42 18.9	0.0
KRER	Koryakskii	1.71	318	PN	Pn	22 42 18.9	0.0
ASAK	Asacha	1.73	282	eP	Pn	22 42 19.1	0.0
ASAK	Asacha	1.73	282	PN	Pn	22 42 19.1	0.0
KRMR	Karymshinskiy	1.73	298	eP	Pn	22 42 18.9	-0.1
KRMR				eS	Sn	22 42 39.9	-0.1
KRMR	Karymshinskiy	1.73	298	PN	Pn	22 42 18.9	-0.1
KRMR				S	Sn	22 42 39.9	-0.1
KOK	Koryaka	1.75	316	eP	Pn	22 42 20.3	+0.9
KOK	Koryaka	1.75	316	PN	Pn	22 42 20.3	+0.9
KRX	Arik	1.79	318	eP	Pn	22 42 20.3	+0.3
KRX	Arik	1.79	318	PN	Pn	22 42 20.3	+0.3
PEA0B	Petropavlovsk-	2.09	302	ePn	Pn	22 42 24.6	+0.6
PETK	Petropavlovsk-	2.09	302	Pn	Pn	22 42 23.6	-0.4
	20nm,0.3s,baz=109,slow=18,SNR=116						
PETK				Sn	Sb	22 42 53.2	-0.8
	35nm,0.3s,baz=96,slow=22,SNR=7.2						
PETK				LR	LR	22 42 57.0	
	comp=Z,316nm,19.4s,baz=52,slow=36						
PEA1	Petropavlovsk-	2.10	302	ePn	Pn	22 42 23.6	-0.4
PEA1				eSg	Sb	22 42 53.2	-0.9
APC	Apacha	2.31	294	eP	Pn	22 42 28.1	+1.1
APC				eS	Sn	22 42 55.8	+1.5
APC	Apacha	2.31	294	PN	Pn	22 42 28.1	+1.1
APC				S	Sn	22 42 55.8	+1.5
GNL	Ganaly	2.33	316	eP	Pn	22 42 28.2	+0.9
GNL	Ganaly	2.33	316	PN	Pn	22 42 28.2	+0.9
PAU	Pauzhetka	2.46	258	eP	Pn	22 42 28.5	-0.5
PAU	Pauzhetka	2.46	258	PN	Pn	22 42 28.5	-0.5
MKZ	Mys Kozlova	2.59	14	eP	Pn	22 42 30.4	-0.4
MKZ				eS	Sn	22 42 59.6	-1.5
MKZ	Mys Kozlova	2.59	14	PN	Pn	22 42 30.4	-0.4
MKZ				S	Sn	22 42 59.6	-1.5
KZV	Kizimen	3.08	356	eP	Pn	22 42 38.4	+0.8
KZV				eS	Sn	22 43 13.9	+0.6
KZV	Kizimen	3.08	356	PN	Pn	22 42 38.4	+0.8
KZV				S	Sn	22 43 13.9	+0.6
SKR	Severo-Kuril's	3.16	246	eP	Pn	22 42 38.2	-0.4
SKR				eS	Sn	22 43 13.9	-1.3
SKR	Severo-Kuril's	3.16	246	PN	Pn	22 42 38.2	-0.4
SKR				S	Sn	22 43 13.9	-1.3
TUMD	Tumrok D	3.16	357	eP	Pn	22 42 38.9	+0.2
TUMD				eS	Sn	22 43 14.3	-1.0
TUMR	Tumrok	3.25	355	eP	Pn	22 42 41.3	+1.3
TUMR	Tumrok	3.25	355	PN	Pn	22 42 38.9	-1.1
ESO	Esso	4.05	344	eP	Pn	22 42 51.9	+1.0
ESO	Esso	4.05	344	PN	Pn	22 42 51.9	+1.0
SRDR	Sredinnyy	4.31	353	eP	Pn	22 42 55.4	+0.9
SRDR	Sredinnyy	4.31	353	PN	Pn	22 42 55.4	+0.9
KBTR	Krutoberegovo	4.35	16	eP	Pn	22 42 55.9	+0.9
KBTR	Krutoberegovo	4.35	16	PN	Pn	22 42 55.9	+0.9
KBG	Krutoberegovo	4.38	15	eP	Pn	22 42 56.6	+1.2
KBG	Krutoberegovo	4.38	15	PN	Pn	22 42 56.6	+1.2
BKI	Bering	4.47	43	eP	Pn	22 42 56.5	-0.1
BKI				eS	Sn	22 43 43.2	-4.2
BKI	Bering	4.47	43	PN	Pn	22 42 56.5	-0.1
MA2	Magadan	9.36	327	LR	LR	22 48 25.4	
	comp=Z,234nm,18.2s,baz=165,slow=43						
SEY	Seymchan	11.77	341	⇑ePN	Pn	22 44 37.0	+0.4
ADK	Adak	13.96	82	ePn	Pn	22 45 07.9	+1.3
ADK	Adak	13.96	82	eP	Pn	22 45 07.9	+1.3
GSTR	Great Sitkin T	14.31	81	ePn	Pn	22 45 09.6	-1.8
ASAJ	Asahikawa	14.42	244	Pn	Pn	22 45 12.4	-0.4
	1.4nm,0.3s,baz=69,slow=12,SNR=7.1						
ERM	Erimo	15.55	237	ePn	Pn	22 45 26.0	-1.9
	20nm,0.9s						
ERM	Erimo	15.55	237	eP	Pn	22 45 26.0	-1.9
ERM				pmax	pmax		
	comp=Z,20nm,0.9s						
BILL	Bilibino	16.27	8	ePn	Pn	22 45 35.5	-1.5
	comp=Z,7.4nm,0.8s						
BILL	Bilibino	16.27	8	eP	P	22 45 41.7	+2.0
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,147nm,17.0s						
KLR	Kul'dur	18.50	273	P	P	22 46 04.5	0.0
	comp=Z,0.3nm,0.3s,baz=60,slow=14,SNR=5.2						
NIKH	Nikolski High	18.52	75	eP	Pn	22 46 04.9	-0.1
	comp=Z,36nm,1.0s						
YAK	Yakutsk	19.39	313	eP	P	22 46 12.0	-2.1
	comp=Z,26nm,0.5s						
YAK	Yakutsk	19.39	313	eP	P	22 46 12.0	-2.1
YAK				pmax	pmax		
	comp=Z,26nm,0.5s						
USA0B	Ussuriysk Arra	20.58	259	eP	P	22 46 26.4	-0.8
USRK	Ussuriysk Ar.	20.58	259	P	P	22 46 25.9	-1.3
	comp=Z,5.0nm,0.9s,baz=60,slow=11,SNR=6.5						
ANM	Nome	21.47	41	eP	P	22 46 34.6	-2.0
	comp=Z,22nm,1.1s						
ANM	Nome	21.47	41	eP	P	22 46 34.6	-2.0
ANM				pmax	pmax		
	comp=Z,22nm,1.1s						
MDJ	Mudanjiang	21.82	262	eP	P	22 46 37.6	-3.0
	comp=Z,5.3nm,0.8s						
MJA0	Matsu Arr-Jizo	22.17	234	eP	P	22 46 48.1	+3.7
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJB9	Matsu-Tunnel	22.19	235	eP	P	22 46 45.0	+0.4
	comp=Z,12nm,1.1s						
MAJO	Matsushiro	22.19	235	eP	P	22 46 45.0	+0.4
	comp=Z,11nm,1.1s						
MAJO	Matsushiro	22.19	235	eP	P	22 46 45.0	+0.4
MAJO				pmax	pmax		
	comp=Z,11nm,1.1s						
MJAR	Matsushiro Arr	22.19	235	P	P	22 46 45.5	+0.9
	comp=Z,2.3nm,0.7s,baz=19,slow=11,SNR=8.3						
TIXI	Tiksi	24.17	336	P	P	22 47 03.5	-0.6
	comp=Z,3.3nm,0.4s,baz=114,slow=10,SNR=8.5						
TIXI	Tiksi	24.17	336	eP	P	22 47 02.5	-1.5
	comp=Z,6.7nm,1.0s						
TIXI	Tiksi	24.17	336	i P	P	22 47 03.6	-0.5
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TTA	Tatalina	25.19	48	eP	P	22 47 12.5	-0.9
	comp=Z,2.2nm,1.0s						
TTA	Tatalina	25.19	48	eP	P	22 47 12.5	-0.9
TTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SVW2	Sparrevohn	25.29	52	eP	P	22 47 13.2	-1.1
	comp=Z,3.0nm,1.2s						
CHIA	Chirikof Islan	25.70	64	eP	P	22 47 17.5	-0.6
	comp=Z,76nm,1.2s						
SII	Sitkinak Islan	26.35	62	eP	P	22 47 24.9	+0.9
	comp=Z,30nm,1.0s						
KDAK	Kodiak Island	27.03	59	P	P	22 47 30.7	+0.7
	comp=Z,0.8nm,0.5s,baz=282,slow=9.3,SNR=3.2						
KDAK	Kodiak Island	27.03	59	eP	P	22 47 30.7	+0.7
	comp=Z,4.4nm,1.1s						
KSRS	Korea Array	27.17	250	LR	LR	22 58 34.2	
	comp=Z,42nm,18.8s,baz=40,slow=37						
SUA	Susitna One	27.62	51	eP	P	22 47 35.1	-0.3
	comp=Z,2.3nm,0.8s						
MLY	Manley	27.68	43	eP	P	22 47 34.5	-1.4
	comp=Z,3.7nm,0.4s						
COLD	Coldfoot	28.14	39	eP	P	22 47 36.5	-3.4
	comp=Z,1.4nm,0.9s						
BWN	Browne	28.19	45	eP	P	22 47 37.7	-2.7
	comp=Z,20nm,1.1s						
TOLK	Toolik Lake Re	28.60	36	eP	P	22 47 40.3	-3.8
	comp=Z,3.2nm,1.0s						
DAWY	Dawson	32.60	45	eP	P	22 48 15.2	-4.2
	comp=Z,1.4nm,1.1s						
H11N2	WAKE ISLAND Hy	32.62	169	T	T	23 24 18.6	
	baz=352,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	32.64	169	T	T	23 24 21.5	
	baz=352,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	32.64	169	T	T	23 24 19.2	
	baz=352,slow=75,SNR=22						
YKU2	Yakutat	33.32	53	eP	P	22 48 21.9	-3.7
H11S1	WAKE ISLAND Hy	33.81	170	T	T	23 25 55.6	
	baz=352						
H11S3	WAKE ISLAND Hy	33.82	170	T	T	23 25 56.2	
	baz=352						
H11S2	WAKE ISLAND Hy	33.83	170	T	T	23 25 53.7	
	baz=352						
TLY	Talaya	34.43	293	⇓eP	P	22 48 34.4	-1.0
SONA0	Songino Array	34.49	285	eP	P	22 48 35.4	-0.7
SONM	Songino Array	34.49	285	P	P	22 48 35.4	-0.7
	comp=Z,0.4nm,0.4s,baz=90,slow=8.6,SNR=4.0						
SONM				LR	LR	23 04 24.5	
	comp=Z,228nm,18.4s,baz=70,slow=40						
ZALV	Zalesovo Beam	43.64	304	P	P	22 49 50.6	-1.6
	comp=Z,0.8nm,0.5s,baz=67,slow=8.0,SNR=5.0						
ZALV				LR	LR	23 09 36.3	
	comp=Z,97nm,19.0s,baz=70,slow=38						
ZALV	Zalesovo Beam	43.64	304	eP	P	22 49 51.3	-0.9
SPITS	Spitsbergen Ar	48.22	351	P	P	22 50 29.1	+1.0
	comp=Z,2.6nm,0.4s,baz=59,slow=9.8,SNR=23						
KURK	Kurchatov	48.58	303	eP	P	22 50 29.9	-1.3
	comp=Z,6.3nm,1.0s						
KURK	Kurchatov	48.58	303	eP	P	22 50 29.9	-1.3
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	Makanchi Array	48.92	297	eP	P	22 50 32.7	-1.2
	comp=Z,0.9nm,0.6s						
MK31	Makanchi Array	48.92	297	eP	P	22 50 32.7	-1.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	48.92	297	P	P	22 50 32.7	-1.2

	comp=Z,0.9nm,0.5s,baz=56,slow=7.0,SNR=29						
MAKZ	**Makanchi**	**49.09**	**297**	*e*P	**P**	**22 50 33.9**	**-1.3**
	comp=Z,1.9nm,0.9s						
MAKZ	**Makanchi**	**49.09**	**297**	*e*P	**P**	**22 50 33.9**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK	**Borovoye**	**51.34**	**309**	*e*P	**P**	**22 50 51.6**	**-0.5**
	comp=Z,3.6nm,0.6s						
BRVK	**Borovoye**	**51.34**	**309**	*d i*P	**P**	**22 50 51.4**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	**ARCESS Array B**	**54.39**	**342**	P	**P**	**22 51 14.4**	**0.0**
	comp=Z,1.3nm,0.8s,baz=37,slow=7.6,SNR=11						
ARCES	**ARCESS Array B**	**54.39**	**342**	*e*P	**P**	**22 51 14.9**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARU	**Arti**	**54.40**	**318**	P	**P**	**22 51 14.3**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=38,slow=5.1,SNR=9.0						
ARU	**Arti**	**54.40**	**318**	*e*P	**P**	**22 51 14.2**	**-0.4**
	comp=Z,3.3nm,0.6s						
ARU	**Arti**	**54.40**	**318**	*c i*P	**P**	**22 51 13.9**	**-0.7**
ARU				*PP	**sP**	**22 51 25.8**	**-0.6**
ARU				S	**S**	**22 58 43.6**	**-6.8**
ARU				pmax	pmax		
	comp=Z,13nm,2.2s						
NV01	**Mina Array Sit**	**55.78**	**70**	*e*P	**P**	**22 51 26.2**	**+1.2**
NVAR	**Mina Array Bea**	**55.78**	**70**	P	**P**	**22 51 26.3**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=297,slow=6.0,SNR=2.1						
AAK	**Ala-Archa**	**55.85**	**297**	⇓*e*P	**P**	**22 51 25.1**	**-0.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIRV	**Kirov**	**56.44**	**324**	P	**P**	**22 51 30.0**	**+0.9**
	comp=Z,6.0nm,0.6s,baz=112,slow=5.4,SNR=3.5						
KSH	**Kashi**	**57.13**	**294**	*e*P	**P**	**22 51 35.8**	**+1.2**
KSH				PcP	**PcP**	**22 52 31.5**	**+2.5**
KSH				PP	**PP**	**22 53 44.4**	**+3.1**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,74nm,8.0s						
CMAR	**Chiang Mai Arr**	**58.31**	**259**	P	**P**	**22 51 45.1**	**+2.1**
	comp=Z,1.5nm,0.6s,baz=24,slow=7.0,SNR=8.5						
CMAR				LR	LR	23 20 01.0	
	comp=Z,72nm,18.2s,baz=144,slow=39						
CMAR	**Chiang Mai Arr**	**58.31**	**259**	*e*P	**P**	**22 51 45.2**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PFO	**Pinyon Flats O**	**60.18**	**73**	LR	LR	23 17 01.0	
	comp=Z,22nm,18.4s,baz=212,slow=35						
FINES	**FINESS Array B**	**61.22**	**337**	P	**P**	**22 52 03.5**	**+1.2**
	comp=Z,3.6nm,0.5s,baz=33,slow=7.9,SNR=48						
FINES				LR	LR	23 22 14.8	
	comp=Z,50nm,19.0s,baz=14,slow=40						
OBN	**Obninsk**	**63.58**	**328**	*e*P	**P**	**22 52 19.9**	**+1.7**
OBN				*e*		22 52 59.0	
OBN				*e*		22 54 38.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,40nm,17.0s						
VSU	**Vasula**	**63.64**	**335**	⇑*e*P	**P**	**22 52 19.5**	**+1.0**
VSU				pmax	pmax		
	comp=Z,15nm,0.8s						
NB2	**NORSAR Subarra**	**64.64**	**344**	P	**P**	**22 52 25.4**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=21,slow=6.9						
NOA	**NORSAR Array B**	**64.64**	**344**	P	**P**	**22 52 26.0**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=21,slow=6.7,SNR=16						
NOA				LR	LR	23 23 10.2	
	comp=Z,26nm,19.1s,baz=65,slow=38						
NOA	**NORSAR Array B**	**64.64**	**344**	*e*P	**P**	**22 52 25.8**	**+0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ANMO	**Albuquerque**	**64.98**	**65**	⇑*e*P	P	22 52 36.7	+8.7
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.6s						
HFS	**Hagfors**	**65.05**	**342**	P	**P**	**22 52 27.7**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=46,slow=4.3,SNR=20						
AKASG	**Malin Array Be**	**69.69**	**329**	P	**P**	**22 52 57.2**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=32,slow=6.2,SNR=8.6						
AKASG	**Malin Array Be**	**69.69**	**329**	*i* P	**P**	**22 52 57.5**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	**Malin Array Si**	**69.69**	**329**	*e*P	**P**	**22 52 57.1**	**-0.1**
	comp=Z,5.1nm,1.0s						
AKBB	**Malin Array Si**	**69.69**	**329**	*e*P	**P**	**22 52 57.2**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIEV	**Kiev**	**69.70**	**329**	P	**P**	**22 52 58.0**	**+0.7**
KIV	**Kislovodsk**	**70.44**	**317**	*e*P	**P**	**22 53 01.9**	**-0.2**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,99nm,17.0s						
KBZ	**Khabaz**	**70.53**	**317**	P	**P**	**22 53 03.6**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=44,slow=4.1,SNR=5.0						
TXAR	**Lajitas Array**	**70.73**	**67**	P	**P**	**22 53 06.2**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=294,slow=4.3,SNR=8.1						
EKA	**Eskdalemuir Ar**	**72.14**	**350**	P	**P**	**22 53 13.1**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=17,slow=5.3,SNR=5.2						
KOLS	**Kolonicke sedl**	**73.33**	**333**	*e*P	**P**	**22 53 20.6**	**+1.3**
KOLS	**Kolonicke sedl**	**73.33**	**333**	*e*P	**P**	**22 53 20.6**	**+1.3**
CLL	**Collm**	**73.45**	**339**	*e*P	**P**	**22 53 21.0**	**+1.1**
CLL				*e*		22 53 32.0	
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	**Collm**	**73.45**	**339**	*e*P	**P**	**22 53 21.0**	**+1.1**
	comp=Z,3.0nm,0.9s						
CLL				*e*(pP)	**sP**	**22 53 32.0**	**+0.3**
BUR08	**Bucovina Ar. S**	**73.63**	**330**	*e*P	**P**	**22 53 22.2**	**+1.0**
	comp=Z,2.2nm,0.7s						
BURAR	**Bucovina Array**	**73.65**	**330**	⇑*i*P	**P**	**22 53 22.2**	**+0.9**
BURAR	**Bucovina Array**	**73.65**	**330**	P	**P**	**22 53 22.1**	**+0.8**
LANS	**Liptovska Anna**	**73.90**	**335**	*e*P	**P**	**22 53 25.3**	**+2.6**
LANS	**Liptovska Anna**	**73.90**	**335**	*e*P	**P**	**22 53 25.3**	**+2.6**
BIZ	**Bicaz**	**73.98**	**329**	⇑*i*P	**P**	**22 53 23.8**	**+0.7**
TRPA	**Tarpa**	**73.98**	**332**	⇓*i*P	**P**	**22 53 24.1**	**+1.1**
CFR	**Carcaliu**	**74.88**	**327**	⇑*i*P	**P**	**22 53 28.7**	**+0.4**
GERES	**GERESS Array B**	**75.61**	**338**	P	**P**	**22 53 32.6**	**0.0**
	comp=Z,0.2nm,0.4s,baz=45,slow=4.4,SNR=3.5						
GERES				LR	LR	23 29 16.6	
	comp=Z,25nm,21.6s,baz=292,slow=38						
VOIR		**75.65**	**329**	⇓*i*P	**P**	**22 53 33.3**	**+0.4**
GZR	**Gura Zlata**	**76.39**	**331**	⇓*i*P	**P**	**22 53 37.0**	**-0.1**
BR101	**Keskin Array S**	**77.65**	**321**	*e*P	**P**	**22 53 43.9**	**-0.5**
BRTR	**Keskin Array B**	**77.65**	**321**	P	**P**	**22 53 43.9**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=0.0,slow=2.5,SNR=5.5						
BRTR				LR	LR	23 31 44.8	
	comp=Z,18nm,18.2s,baz=84,slow=39						
BRTR	**Keskin Array B**	**77.65**	**321**	*e*P	**P**	**22 53 45.5**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
VTS	**Vitosha**	**78.76**	**329**	⇓*i*P	**P**	**22 53 50.7**	**+0.3**

WEL 24 23:05:24.2, 41°.6S±0°.9×**174°.4E**±0°.8**, h12**^{km}±2^{km}**, M3.3**/28, **ML3.5**/20**, MLv3.3**/28**, Error ellipse: s-maj=0.0km s-min=0.0km az=144.1, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.16**	**220**	P	Pb	23 05 28.6	-0.6
CMWZ				S	Sg	23 05 31.9	+1.2
TUWZ	**Tuamarina**	**0.36**	**302**	P	Pb	23 05 32.2	-0.4
TUWZ				S	Sb	23 05 38.0	-0.3
BSWZ	**Blackbirch Sta**	**0.37**	**256**	P	Pg	23 05 32.1	+0.5
BSWZ				S	Sb	23 05 38.3	-0.1
TCW	**Tory Channel**	**0.42**	**352**	P	Pb	23 05 33.1	-0.4
TCW				S	Sb	23 05 39.4	-0.4
BHW	**Baring Head**	**0.45**	**61**	P	Pb	23 05 33.9	-0.1
PLWZ	**Palliser**	**0.68**	**86**	P	Pb	23 05 38.5	+0.4
MSWZ	**Moikau Station**	**0.71**	**73**	P	Pb	23 05 38.8	+0.3
CAW	**Cannon Point**	**0.75**	**46**	P	Pb	23 05 39.3	+0.1
NNZ	**Nelson**	**0.84**	**299**	P	Pb	23 05 40.6	-0.1
PAWZ	**Paruwai Farm**	**0.84**	**74**	P	Pb	23 05 41.3	+0.5
DUWZ	**D'Urville Isla**	**0.89**	**338**	P	Pb	23 05 41.6	+0.1
MTW	**Mount Morrison**	**0.98**	**62**	P	Pn	23 05 43.8	0.0
KHZ	**Kahutara**	**0.99**	**217**	P	Pn	23 05 44.0	0.0
OGWZ	**Otaki Gorge**	**1.02**	**38**	P	Pn	23 05 44.1	-0.2
TRWZ	**Traveller**	**1.03**	**78**	P	Pg	23 05 44.2	+0.1
THZ	**Tophouse**	**1.09**	**262**	P	Pg	23 05 45.3	0.0
HOWZ	**Holdsworth Sta**	**1.14**	**51**	P	Pg	23 05 46.3	+0.1
TMWZ	**Te Maipa**	**1.27**	**66**	P	Pn	23 05 47.5	-0.3
MRZ	**Mangatainoka R**	**1.34**	**44**	P	Pb	23 05 49.3	+0.1
QRZ	**Quartz Range**	**1.59**	**300**	P	Pb	23 05 54.0	+0.4
OHWZ	**Ohakea**	**1.59**	**28**	P	Pg	23 05 54.3	-0.5
PRWZ	**Pori Road**	**1.63**	**49**	P	Pn	23 05 52.9	+0.2
POWZ	**Post Office Ro**	**1.63**	**41**	P	Pn	23 05 53.2	+0.5
GVZ	**Greta Valley S**	**1.66**	**216**	P	Pn	23 05 52.9	-0.2
DSZ	**Denniston Nort**	**1.91**	**266**	P	Pb	23 05 58.4	-0.6
LTZ	**Lake Taylor**	**1.93**	**233**	P	Pn	23 05 57.4	+0.5
WAZ	**Wanganui**	**1.93**	**15**	P	Pg	23 06 00.9	-0.4
TSZ	**Takapari Road**	**1.98**	**38**	P	Pn	23 05 57.8	+0.1
PNHZ	**Pukenui**	**2.21**	**40**	P	Pn	23 06 00.6	-0.2
PREZ	**Palmer Road**	**2.29**	**356**	P	Pb	23 06 06.4	+1.0
OKCZ	**Okains Bay**	**2.30**	**204**	P	Pn	23 06 00.5	-1.4
KHEZ	**Kahui Hut**	**2.34**	**354**	P	Pb	23 06 07.6	+1.2
OXZ	**Oxford**	**2.41**	**224**	P	Pn	23 06 02.4	-1.1
INZ	**Inchbonnie**	**2.42**	**242**	P	Pn	23 06 04.2	+0.6
MQZ	**McQueen's Vall**	**2.43**	**210**	P	Pn	23 06 01.7	-1.9
PKVZ	**Pokaka**	**2.45**	**18**	P	Pg	23 06 10.1	-1.2
MOVZ	**Moawhango**	**2.46**	**26**	P	Pb	23 06 09.4	+1.0
BHHZ	**Black Hill Sta**	**2.50**	**32**	P	Pg	23 06 11.1	-1.1
KRHZ	**Kereru**	**2.51**	**38**	P	Pn	23 06 05.1	+0.3
VRZ	**Vera Road**	**2.52**	**7**	P	Pb	23 06 10.0	+0.7
WHVZ	**Whangaehu Hut**	**2.52**	**22**	P	Pb	23 06 10.4	+0.8
FWVZ	**Far West T-bar**	**2.54**	**22**	P	Pb	23 06 11.0	+1.1
TUVZ	**Tukino**	**2.56**	**23**	P	Pb	23 06 09.0	-1.1
NGZ	**Ngauruhoe**	**2.63**	**22**	P	Pb	23 06 12.8	+1.5
KAHZ	**Kahuranaki**	**2.65**	**47**	P	Pb	23 06 12.0	+0.3
WTVZ	**West Tongariro**	**2.68**	**21**	P	Pb	23 06 13.7	+1.6
TWVZ	**Taurewa**	**2.68**	**18**	P	Pg	23 06 14.0	-1.7
KRVZ	**Karewarewa**	**2.71**	**22**	P	Pg	23 06 14.8	-1.4
RITZ	**Rihia Road**	**2.89**	**24**	P	Pg	23 06 18.0	-1.5
BKZ	**Black Stump Fm**	**2.95**	**34**	P	Pb	23 06 18.6	+1.8
WVZ	**Waitaha Valley**	**3.05**	**240**	P	Pb	23 06 19.2	+0.9
HIZ	**Hauiti**	**3.13**	**7**	P	Pb	23 06 19.6	-0.2
RVAZ	**Riverhead Bore**	**4.85**	**2**	P	Pb	23 06 44.0	-5.1

DDA ***24*** *23:16:32.4, 37°.88N×35°.96E, h35*^{km}*±5*^{km}*, ML2.5*

ISCJB ***24*** *23:16:34.8±0.6, 37°.78N±0°.03×35°.85E±0°.04, h3*^{km}*±12*^{km}*, Error ellipse: s-maj=5.6km s-min=5.4km az=6.7*

ISK ***24*** *23:16:34.5, 37°.80N×35°.83E, h7*^{km}*, ML1.7/6*

ISC 24 23:16:35.0±1.0**, 37°.79N**±0°.04×**35°.86E**±0°.03**, h14**^{km}±10^{km}**, n9, σ0**^{s}**.48**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIM	**ADANA**	**0.26**	**43**	*i* P	**Pg**	**23 16 40.9**	**+0.4**
SAIM				*i* S	**Sg**	**23 16 43.6**	**-0.8**
ANDN	**Andirin**	**0.44**	**118**	*i* P	**Pg**	**23 16 43.9**	**+0.2**
ANDN				*i* S	**Sg**	**23 16 49.5**	**-0.2**
ANDN				IAML_P			
	comp=Z,2μm,0.2s						
YAHY	**KAYSERI_Yahyal**	**0.50**	**308**	*i* P	**Pg**	**23 16 45.1**	**+0.2**
YAHY				*i* S	**Sg**	**23 16 51.7**	**+0.1**
YAHY				IAML_P			
	comp=Z,415nm,0.1s						
CEYT	**Ceyhan**	**0.78**	**187**	PG	**Pb**	**23 16 50.2**	**-0.2**
KARA	**Karaisali**	**0.83**	**231**	PG	**Pb**	**23 16 50.4**	**-0.8**
KARA				SG	**Sg**	**23 17 02.6**	**+0.6**
KMRS	**Kahramanmaras**	**0.87**	**109**	PG	**Pb**	**23 16 51.9**	**-0.1**
BNN	**Bunyan**	**1.06**	**359**	PG	**Pb**	**23 16 55.4**	**+0.1**
BNN				SG	**Sn**	**23 17 10.1**	**-0.2**
GAZ	**Gaziantep**	**1.24**	**119**	PN	**Pg**	**23 16 59.4**	**+0.5**
MERS	**Mersin**	**1.41**	**230**	PN	**Pb**	**23 17 01.1**	**0.0**

IDC ***24*** *23:37:25.7±1.9, 6°.10S×151°.78E, h0*^{km}*, mb3.9/3, mb1 4.2/4, mb1mx3.7/38, mbtmp4.0/4, ML2.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/21, Error ellipse: s-maj=123.3km s-min=25.1km az=129.0*

ISC 24 23:37:32.2±2.5**, 5°.8S**±0°.9×**151°.2E**±1°.0**, h36**^{km}**, n7, σ0**^{s}**.46**/7**, mb3.9**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.42**	**228**	Pn	**Pn**	**23 38 51.0**	**+0.4**
	3.8nm,0.3s,baz=45,slow=10.0,SNR=3.9						
PMG				Sn	**Sn**	**23 39 51.3**	**-0.5**
	3.7nm,0.3s,baz=52,slow=17,SNR=4.1						
GUMO	**Guam**	**20.22**	**342**	LR	LR	23 48 48.5	
	comp=Z,22nm,20.4s,baz=118,slow=33						
WRA	**Warramunga Arr**	**21.64**	**228**	P	**P**	**23 42 19.4**	**-0.3**
	1.5nm,0.4s,baz=56,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**24.40**	**221**	P	**P**	**23 42 47.3**	**-0.1**
	3.3nm,0.8s,baz=53,slow=8.9,SNR=15						
ILAR	**Eielson Array**	**83.63**	**22**	P	**P**	**23 49 56.3**	**-0.4**
	0.7nm,0.6s,baz=248,slow=5.6,SNR=7.4						
GERES	**GERESS Array B**	**124.02**	**327**	PKP	**PKiKP**	**23 56 27.5**	**+0.2**
	0.4nm,0.6s,baz=48,slow=1.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**149.08**	**286**	PKPbc	**PKPbc**	**23 57 18.1**	**+0.4**
	1.3nm,0.6s,baz=93,slow=3.3,SNR=8.5						

ISCJB ***24*** *23:43:44.9±0.2, 38°.33N±0°.02×73°.54E±0°.03, h107*^{km}*, mb4.3/56, Error ellipse: s-maj=3.1km s-min=2.9km az=4.3*

MOS ***24*** *23:43:47.0±1.2, 38°.45N×73°.52E, h124*^{km}*, mb4.5/28, Error ellipse: s-maj=5.8km s-min=4.2km az=102.0*

NEIC ***24*** *23:43:47.6±2.7, 38°.38N×73°.41E, h128*^{km}*±7*^{km}*, mb4.4/22, Error ellipse: s-maj=9.0km s-min=5.5km az=85.0*

BJI ***24*** *23:43:48.5±0.0, 38°.47N×73°.65E, h137*^{km}*, mb4.6/20, mB4.7/15*

IDC ***24*** *23:43:48.3±2.1, 38°.41N×73°.53E, h125*^{km}*±19*^{km}*, mb3.9/23, mb1 4.0/27, mb1mx3.8/49, mbtmp4.3/27, MS2.9/6, Ms1 2.9/6, ms1mx2.6/33, Error ellipse: s-maj=14.7km s-min=9.6km az=2.0*

NNC ***24*** *23:43:49.6±2.2, 38°.66N×73°.30E, h170*^{km}*±34*^{km}*, mb3.9, mpv4.7, Error ellipse: s-maj=25.3km s-min=12.1km az=179.0*

ISC 24 23:43:45.6±0.3**, 38°.35N**±0°.04×**73°.51E**±0°.03**, h107**^{km}**, n234, σ2**^{s}**.36**/262**, mb4.3**/56**, 24C-13D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.25**	**58**	P	**Pn**	**23 44 19.8**	**-1.9**
KSH				S	**Sn**	**23 44 42.6**	**-6.8**
KSH				pmax	pmax		
	comp=Z,7μm,0.7s						
GAR	**Garm**	**2.58**	**286**	*e*Pn	**Pn**	**23 44 27.4**	**+1.4**
GAR				*e*Sn	**Sn**	**23 44 50.6**	**-6.6**
GAR	**Garm**	**2.58**	**286**	*e*PN	**Pn**	**23 44 27.5**	**+1.4**
BTK	**Batken**	**2.70**	**310**	*e*Pn	**Pn**	**23 44 29.9**	**+2.4**
BTK				*e*Sn	**Sn**	**23 45 02.1**	**+2.2**
BTK	**Batken**	**2.70**	**310**	*e*PN	**Pn**	**23 44 30.0**	**+2.4**
BTK				*e*		23 45 02.1	
ARSB	**Arslanbob**	**3.00**	**352**	*e*Pn	**Pn**	**23 44 33.4**	**+1.8**
ARSB				*e*Sn	**Sn**	**23 45 07.0**	**0.0**
CHGR	**Chuyangaron**	**3.43**	**276**	*e*P	Pn	23 44 54.4	+17
NRN	**Naryn**	**3.63**	**31**	*e*Pn	**Pn**	**23 44 41.6**	**+1.4**
NRN	**Naryn**	**3.63**	**31**	*e*PN	**Pn**	**23 44 41.6**	**+1.4**
AML	**Almayashu**	**3.78**	**2**	P	**Pn**	**23 44 44.4**	**+2.1**
	SNR=317						
UCH	**Uchtor**	**3.95**	**11**	P	**Pn**	**23 44 46.9**	**+2.3**
	SNR=70						
KZA	**Kyzart**	**3.95**	**19**	P	**Pn**	**23 44 46.6**	**+1.9**
	SNR=84						
EKS2	**Erkin-Say**	**4.31**	**3**	P	**Pn**	**23 44 51.8**	**+2.6**
	SNR=131						
AAK	**Ala-Archa**	**4.35**	**10**	P	**Pn**	**23 44 52.2**	**+2.6**
	9.1nm,0.3s,baz=183,slow=13,SNR=29						
AAK				S	**Sn**	**23 45 41.0**	**+1.6**
	36nm,0.3s,baz=237,slow=10,SNR=15						
AAK	**Ala-Archa**	**4.35**	**10**	⇑P	**Pn**	**23 44 52.0**	**+2.3**
	27nm,0.6s						
AAK				S	**Sn**	**23 45 40.3**	**+0.9**
	1μm,1.2s						
AAK	**Ala-Archa**	**4.35**	**10**	P	**Pn**	**23 44 52.3**	**+2.6**
	SNR=22						
TAS	**Tashkent**	**4.41**	**314**	PN	**Pn**	**23 44 51.2**	**+0.8**
ULHL	**Ulahol**	**4.42**	**27**	P	**Pn**	**23 44 52.6**	**+1.9**
	SNR=41						
KBK	**Karagaybulak**	**4.44**	**14**	P	**Pn**	**23 44 53.5**	**+2.5**
	SNR=10						
BOOM	**Boomskoye usch**	**4.53**	**23**	*e*Pn	**Pn**	**23 44 54.6**	**+2.4**
BOOM	**Boomskoye usch**	**4.53**	**23**	*e*PN	**Pn**	**23 44 54.6**	**+2.4**
FRU1	**Bishkek**	**4.54**	**10**	*e*Pn	**Pn**	**23 44 54.9**	**+2.8**
FRU1	**Bishkek**	**4.54**	**10**	PN	**Pn**	**23 44 56.7**	**+4.6**
CHCP	**Chirah Chowk**	**4.69**	**183**	P	**Pn**	**23 44 58.6**	**+4.4**
NIL	**Nilore**	**4.70**	**183**	*e*Pn	**Pn**	**23 44 58.7**	**+4.4**
NIL				*e*Sn	**Sn**	**23 45 42.2**	**-5.6**
NIL	**Nilore**	**4.70**	**183**	*e*PN	**Pn**	**23 44 58.7**	**+4.4**
CEP	**Cherat**	**4.70**	**196**	P	**Pn**	**23 44 57.8**	**+3.3**
CEP				S	**Sn**	**23 45 49.0**	**+1.0**
KDJ	**Kajisay**	**4.70**	**35**	*e*Pn	**Pn**	**23 44 56.6**	**+2.1**
KDJ	**Kajisay**	**4.70**	**35**	*e*PN	**Pn**	**23 44 56.6**	**+2.1**
CHMS	**Chumysh**	**4.74**	**11**	P	**Pn**	**23 44 57.2**	**+2.4**
	SNR=11						
TKM2	**Tokmak 2**	**4.83**	**19**	⇑P	**Pn**	**23 44 58.4**	**+2.2**
	43nm,0.6s						
TKM2				⇑S	**Sn**	**23 45 51.8**	**+0.6**
	249nm,0.9s						
TKM2	**Tokmak 2**	**4.83**	**19**	PN	**Pn**	**23 44 58.4**	**+2.2**
TKM2				S	**Sn**	**23 45 51.8**	**+0.6**
TKM2	**Tokmak 2**	**4.83**	**19**	P	**Pn**	**23 44 58.5**	**+2.2**
	SNR=116						
USP	**Ospenovka**	**4.97**	**8**	P	**Pn**	**23 45 01.2**	**+3.3**
	SNR=6.8						
KBL	**Kabul**	**5.24**	**225**	*e*Pn	**Pn**	**23 45 05.2**	**+3.4**
KBL	**Kabul**	**5.24**	**225**	*e*PN	**Pn**	**23 45 05.2**	**+3.4**
KK31	**Karatay Array**	**5.26**	**335**	*e*Pn	**Pn**	**23 45 03.4**	**+1.5**
KK31	**Karatay Array**	**5.26**	**335**	P	**Pn**	**23 45 03.3**	**+1.3**
	87nm,0.3s,baz=148,slow=12,SNR=1315						
KK31				S	**Sn**	**23 45 59.2**	**-2.2**
	513nm,0.7s,baz=153,slow=21,SNR=35						
KK31	**Karatay Array**	**5.26**	**335**	PN	**Pn**	**23 45 03.3**	**+1.3**
KKAR	**Karatay Array**	**5.26**	**335**	*e*Pn	**Pn**	**23 45 03.4**	**+1.5**
KKAR				*e*Sn	**Sn**	**23 45 59.5**	**-2.0**
KKAR	**Karatay Array**	**5.26**	**335**	*e*PN	**Pn**	**23 45 03.4**	**+1.5**
AAA	**Alma-Ata**	**5.50**	**27**	*e*PN	Pn	23 45 20.1	+15
AAA				pmax	pmax		
	comp=Z,49nm,0.4s						
KNDC	**Almaty**	**5.52**	**27**	⇑P	**Pn**	**23 45 09.5**	**+4.0**
	comp=Z,41nm,0.6s						
KNDC				⇑S	**Sn**	**23 46 08.6**	**+0.9**
	comp=Z,411nm,0.9s						
PRZ	**Przheval'sk**	**5.56**	**41**	*e*Pn	**Pn**	**23 45 08.9**	**+2.7**
PRZ	**Przheval'sk**	**5.56**	**41**	*e*PN	**Pn**	**23 45 08.9**	**+2.7**
THW	**Thamme Wali**	**5.73**	**195**	P	**Pn**	**23 45 10.7**	**+2.4**
SARP	**Sargodha**	**6.45**	**186**	P	**Pn**	**23 45 19.9**	**+1.8**
DHRM	**DHARAMSHALA**	**6.50**	**159**	*e*P	**Pn**	**23 45 20.3**	**+1.3**
DHRM				*e*S	**Sn**	**23 46 29.3**	**-2.5**
DHRM				IAML		23 46 33.6	
	comp=N,825nm,0.3s						
DHRM				IAML		23 46 35.2	
	comp=E,1μm,0.8s						
PDGK	**Podgornoye**	**6.73**	**40**	⇑P	**Pn**	**23 45 22.9**	**+1.0**
	comp=E,185nm,0.9s						
PDGK	**Podgornoye**	**6.73**	**40**	*i* PN	**Pn**	**23 45 22.9**	**+1.0**
PDGK				pmax	pmax		
	comp=Z,185nm,0.9s						
BHK	**Bhakra**	**7.32**	**160**	*e*x	**Pn**	**23 45 34.0**	**+4.1**
BHK				*e*S	**Sn**	**23 46 46.4**	**-5.0**
SMLA	**Simla**	**7.81**	**156**	*e*P	**Pn**	**23 45 36.5**	**0.0**
SMLA				*e*S	**Sn**	**23 46 56.9**	**-6.3**
DDI	**Dehra Dun**	**8.85**	**154**	*e*P	**Pn**	**23 45 50.4**	**-0.2**
DDI				*e*S	**Sn**	**23 47 21.9**	**-6.7**
OTUK	**Ortayu**	**9.93**	**355**	P	**Pn**	**23 46 05.0**	**-0.1**
NDI	**New Delhi**	**10.12**	**161**	*e*P	**Pn**	**23 46 09.0**	**+1.0**
NDI				*e*S	**Sn**	**23 47 53.0**	**-6.6**
MAKZ	**Makanchi**	**10.50**	**34**	*e*Pn	**Pn**	**23 46 13.4**	**+0.5**
MAKZ	**Makanchi**	**10.50**	**34**	*e*P	**Pn**	**23 46 13.4**	**+0.5**
MK31	**Makanchi Array**	**10.63**	**35**	*e*Pn	**Pn**	**23 46 15.6**	**+0.9**
MK31	**Makanchi Array**	**10.63**	**35**	⇑P	**Pn**	**23 46 15.1**	**+0.4**
	comp=Z,17nm,0.8s,baz=211,slow=13,SNR=110						
MK31	**Makanchi Array**	**10.63**	**35**	*e*P	**Pn**	**23 46 15.6**	**+0.9**
MKAR	**Makanchi Array**	**10.63**	**35**	P	**Pn**	**23 46 15.8**	**+1.1**
	comp=Z,1.4nm,0.3s,baz=211,slow=14,SNR=124						
MKAR				LR	LR	23 50 09.4	
	comp=Z,35nm,20.9s,baz=227,slow=36						
WMQ	**Urumqi**	**12.01**	**58**	*e*P	**Pn**	**23 46 33.1**	**-0.2**
WMQ				sP	P	23 47 11.4	+30
WMQ				pmax	pmax		
	comp=Z,31nm,1.1s						
WMQ				LR	LR		
	comp=Z,220nm,4.0s						
WMQ				LR	LR		
	comp=Z,190nm,4.0s						
WMQ				LR	LR		
	comp=Z,84nm,7.5s						
GEYT	**Alibeck**	**12.13**	**273**	P	**Pn**	**23 46 31.1**	**-3.7**
	comp=Z,4.5nm,0.3s,baz=112,slow=9.1,SNR=71						
GEYT				S	Sn	23 48 35.9	-12
	comp=Z,1.6nm,0.3s,baz=107,slow=13,SNR=3.8						
GEYT				LR	LR	23 52 24.8	
	comp=Z,38nm,20.3s,baz=35,slow=42						
GYA0B	**ALIBECK ARRAY**	**12.13**	**273**	*e*Pn	**Pn**	**23 46 31.6**	**-3.3**
GYA0B				*e*Sn	Sn	23 48 38.0	-10
GYA0B	**ALIBECK ARRAY**	**12.13**	**273**	⇓P	**Pn**	**23 46 31.7**	**-3.1**
KURBB	**Kurchatov Arra**	**12.78**	**15**	P	**Pn**	**23 46 41.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=11						
KURBB	**Kurchatov Arra**	**12.78**	**15**	⇓P	**Pn**	**23 46 41.8**	**-1.3**
	comp=Z,14nm,0.7s						
KURK	**Kurchatov**	**12.88**	**15**	*e*Pn	**Pn**	**23 46 42.4**	**-2.1**
KURK	**Kurchatov**	**12.88**	**15**	*e*P	**Pn**	**23 46 42.4**	**-2.1**
GKN	**Gorkha**	**13.89**	**135**	*e*P	**Pn**	**23 46 54.8**	**-3.2**
	comp=Z,40nm,0.3s						
KKN	**Kakani**	**14.42**	**133**	*e*P	**Pn**	**23 47 01.2**	**-3.6**
	comp=Z,65nm,0.5s						
DMN	**Daman**	**14.46**	**134**	*e*P	**Pn**	**23 47 01.4**	**-4.0**
	comp=Z,35nm,0.5s						
AB31	**Akbulak array**	**14.63**	**323**	⇑P	**Pn**	**23 47 03.6**	**-3.5**
	comp=Z,24nm,0.7s,baz=136,slow=12,SNR=379						
AB31	**Akbulak array**	**14.63**	**323**	*i* P	**Pn**	**23 47 05.1**	**-2.0**
AB31				pmax	pmax		
	comp=Z,24nm,0.6s						
ABKAR	**Akbulak array**	**14.63**	**323**	*e*Pn	**Pn**	**23 47 05.3**	**-1.8**
PKIN	**Phulchoki**	**14.65**	**134**	*e*P	**Pn**	**23 47 04.1**	**-3.7**
	comp=Z,22nm,0.6s						
PKI	**Pulchoki**	**14.66**	**134**	*e*P	**Pn**	**23 47 04.4**	**-3.6**
	comp=Z,15nm,0.6s						
BVAR	**Borovoye Array**	**14.83**	**353**	P	**Pn**	**23 47 08.5**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=161,slow=14,SNR=24						
BVAR				S	**Sn**	**23 49 46.3**	**-7.0**
	comp=Z,0.4nm,0.3s,baz=161,slow=18,SNR=5.2						
BRVK	**Borovoye**	**14.88**	**352**	*e*Pn	**Pn**	**23 47 09.1**	**-1.2**
BRVK	**Borovoye**	**14.88**	**352**	⇑P	**Pn**	**23 47 08.1**	**-2.2**
	comp=Z,24nm,0.7s						
BRVK	**Borovoye**	**14.88**	**352**	*d i*P	**Pn**	**23 47 08.8**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,15nm,1.2s						
JIRN	**Jiri**	**15.04**	**131**	*e*P	**Pn**	**23 47 10.3**	**-2.6**
	comp=Z,133nm,0.5s						
DGZ	**Jazzator, Alta**	**15.10**	**37**	*d i*P	**Pn**	**23 47 12.3**	**-1.0**
BHJ	**Bhuj**	**15.41**	**193**	*e*P	**Pn**	**23 47 16.9**	**-0.2**
AKTO	**Aktyubinsk**	**16.35**	**323**	P	**Pn**	**23 47 27.9**	**-0.7**
	comp=Z,5.0nm,0.3s,baz=116,slow=11,SNR=90						
AKTO				S	**Sn**	**23 50 19.6**	**-10**
	comp=Z,0.5nm,0.3s,baz=152,slow=22,SNR=6.5						
AKTO				LR	LR	23 54 46.8	
	comp=Z,20nm,20.6s,baz=128,slow=40						
AKTO	**Aktyubinsk**	**16.35**	**323**	⇑P	**Pn**	**23 47 26.7**	**-2.0**
	comp=Z,24nm,0.6s						
LSA	**Lhasa**	**16.96**	**115**	*e*P	**Pn**	**23 47 36.2**	**-0.6**
	comp=Z,16nm,1.1s						
LSA	**Lhasa**	**16.96**	**115**	P	**P**	**23 47 38.5**	**+1.5**
LSA				pmax	pmax		
	comp=Z,46nm,1.3s						
LSA	**Lhasa**	**16.96**	**115**	*e*P	**Pn**	**23 47 36.2**	**-0.6**
LSA				pmax	pmax		
	comp=Z,16nm,1.1s						
ZAA0	**Zalesovo Array**	**17.42**	**23**	*e*P	**P**	**23 47 41.0**	**-0.4**
	comp=Z,10nm,0.7s						
ZALV	**Zalesovo Beam**	**17.42**	**23**	P	**P**	**23 47 41.3**	**0.0**
	comp=Z,1.3nm,0.3s,baz=216,slow=12,SNR=39						
ZALV				S	**Sn**	**23 50 47.8**	**-7.8**
	baz=209,slow=14,SNR=2.5						
BOK	**Bokaro**	**17.94**	**140**	*e*x	**P**	**23 47 46.2**	**-1.1**
LKRN	**Lenkeran, Azer**	**19.34**	**279**	P	**Pn**	**23 48 06.8**	**+2.1**
WSAR	**Wadi Sarin**	**19.71**	**224**	P	**Pn**	**23 48 08.5**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=70,slow=5.6,SNR=18						
AKT	**Akhty**	**20.00**	**287**	*e*P	**Pn**	**23 48 11.3**	**-1.1**
AKT				*e*S	**S**	**23 51 50.6**	**+1.8**
AKT				pmax	pmax		
	comp=Z,22nm,0.7s						
SHL	**Shillong**	**20.09**	**124**	P	Pn	23 48 12.6	-1.1
SHL	**Shillong**	**20.09**	**124**	*e*x	**P**	**23 48 12.1**	**+1.1**
SVE	**Sverdlovsk**	**20.36**	**339**	*e*P	**P**	**23 48 13.9**	**+0.6**
SVE				*e*S	**S**	**23 51 57.1**	**+1.7**
SVE				pmax	pmax		
	comp=Z,28nm,0.8s						
SEKA	**Sheki**	**20.40**	**286**	P	**P**	**23 48 15.4**	**+1.4**
GTA	**Gaotai**	**20.49**	**79**	⇑P	Pn	23 48 17.1	-1.1
GTA				pP	sP	23 48 44.6	-5.9
GTA				sP	pP	23 49 00.8	+24
GTA				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA				pmax	pmax		
	comp=Z,67nm,5.2s						
MNGR	**Mingechevir, A**	**20.49**	**285**	P	Pn	23 48 17.5	-0.6

ARU	**Arti**	**20.64**	**336**	P	**P**	**23 48 17.1**	**+0.8**
	comp=Z,7.4nm,0.6s,baz=145,slow=6.5,SNR=21						
ARU				LR	LR	23 56 16.6	
	comp=Z,41nm,21.5s,baz=124,slow=36						
ARU	**Arti**	**20.64**	**336**	eP	**P**	**23 48 16.2**	**-0.1**
	comp=Z,25nm,0.7s						
ARU	**Arti**	**20.64**	**336**	d iP	**P**	**23 48 16.4**	**0.0**
ARU						23 48 48.6	
ARU				S	**S**	**23 51 57.5**	**-3.4**
ARU				SS	Sn	23 52 42.0	+29
ARU				pmax	pmax		
	comp=Z,55nm,1.3s						
ZKTA	**Zakatala**	**20.83**	**288**	P	**P**	**23 48 20.2**	**+1.6**
GANJ	**Ganja**	**21.08**	**285**	P	**P**	**23 48 24.0**	**+2.7**
MOKO	**MOKOCHONG**	**21.37**	**118**	ex	**P**	**23 48 19.8**	**-4.8**
GROC	**Groznyy**	**21.49**	**292**	eP	**P**	**23 48 26.3**	**+0.7**
GROC				e*PP	**pP**	**23 48 51.7**	**+4.5**
GROC				e*SP	sP	23 49 09.4	+8.4
GROC				eS	**S**	**23 52 18.9**	**+1.2**
GROC				e*SS	**sS**	**23 52 57.8**	**+3.9**
GROC				pmax	pmax		
	comp=Z,73nm,1.3s						
NAX	**Nakhchivan**	**21.83**	**281**	P	**P**	**23 48 33.2**	**+3.8**
TBLG	**Delisi**	**22.24**	**288**	eP	**P**	**23 48 31.8**	**-1.7**
	comp=Z,9.5nm,0.8s						
TBLG	**Delisi**	**22.24**	**288**	eP	**P**	**23 48 31.8**	**-1.7**
TBLG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GNI	**Garni**	**22.31**	**284**	P	**P**	**23 48 37.5**	**+3.0**
	comp=Z,10nm,0.8s,baz=165,slow=15,SNR=3.1						
GNI	**Garni**	**22.31**	**284**	eP	**P**	**23 48 33.1**	**-1.4**
	comp=Z,39nm,1.0s						
GNI	**Garni**	**22.31**	**284**	eP	**P**	**23 48 33.1**	**-1.4**
GNI				pmax	pmax		
	comp=Z,39nm,1.0s						
ZEI	**Tsey**	**22.86**	**291**	eP	**P**	**23 48 42.4**	**+2.3**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.4s						
NCK	**Nalchik**	**23.11**	**292**	⇑eP	**P**	**23 48 42.9**	**+0.7**
AKH	**Akhalkalaki**	**23.18**	**287**	eP	**P**	**23 48 45.2**	**+2.2**
	comp=Z,12nm,1.2s						
AKH	**Akhalkalaki**	**23.18**	**287**	eP	**P**	**23 48 45.3**	**+2.2**
AKH				pmax	pmax		
	comp=Z,12nm,1.2s						
MOY	**Mondy**	**23.39**	**46**	eP	**P**	**23 48 46.8**	**+2.0**
MOY				pmax	pmax		
	comp=Z,16nm,1.8s						
KBZ	**Khabaz**	**23.63**	**293**	P	**P**	**23 48 48.5**	**+1.6**
	comp=Z,2.5nm,0.7s,baz=113,slow=8.9,SNR=6.8						
NEY	**Neytrino**	**23.74**	**292**	ceP	**P**	**23 48 50.7**	**+2.6**
KIV	**Kislovodsk**	**23.79**	**293**	eP	**P**	**23 48 50.0**	**+1.5**
KIV				eS	**S**	**23 52 52.2**	**-4.0**
KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
KIV				MLR	MLR		
	comp=Z,51nm,14.0s						
ZAK	**Zakamensk**	**24.27**	**51**	eP	**P**	**23 48 54.5**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KIRV	**Kirov**	**25.54**	**330**	P	**P**	**23 49 04.9**	**+1.0**
	comp=Z,9.9nm,0.6s,baz=144,slow=10,SNR=5.7						
SONA0	**Songino Array**	**25.65**	**58**	eP	**P**	**23 49 06.8**	**+1.4**
SONM	**Songino Array**	**25.65**	**58**	P	**P**	**23 49 06.8**	**+1.4**
	comp=Z,5.7nm,0.9s,baz=259,slow=10,SNR=25						
SONM	**Songino Array**	**25.65**	**58**	eP	**P**	**23 49 07.2**	**+1.9**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CD2	**Chengdu**	**25.89**	**97**	eP	**P**	**23 49 07.1**	**-0.5**
CD2				pmax	pmax		
	comp=Z,12nm,0.6s						
ULN	**Ulaanbaatar**	**26.09**	**58**	eP	**P**	**23 49 11.8**	**+2.5**
	comp=Z,5.5nm,0.9s						
ULN	**Ulaanbaatar**	**26.09**	**58**	eP	**P**	**23 49 11.8**	**+2.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANN	**Anapa**	**27.58**	**295**	eP	**P**	**23 49 20.7**	**-1.8**
ANN				e*PP	**pP**	**23 49 51.2**	**+3.7**
ANN				e		23 50 12.1	
ANN				e		23 52 36.7	
ANN				eS	**S**	**23 53 49.7**	**-6.3**
ANN				pmax	pmax		
	comp=Z,54nm,1.1s						
KMI	**Kunming**	**28.01**	**110**	P	**P**	**23 49 29.0**	**+2.2**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**29.28**	**73**	P	**P**	**23 49 39.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**29.72**	**125**	P	**P**	**23 49 43.8**	**+2.0**
	comp=Z,0.4nm,0.2s,baz=312,slow=12,SNR=2.7						
OBN	**Obninsk**	**29.91**	**316**	eP	**P**	**23 49 42.3**	**-0.7**
OBN				e		23 50 23.8	
OBN				i		23 50 47.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BRTR	**Keskin Array B**	**30.83**	**285**	P	**P**	**23 49 53.3**	**+1.8**
	comp=Z,1.9nm,0.5s,baz=100,slow=8.7,SNR=20						
KLMR	**Klimovskoe**	**30.91**	**328**	eP	**P**	**23 49 48.3**	**-3.5**
KLMR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKASG	**Malin Array Be**	**33.41**	**306**	P	**P**	**23 50 13.8**	**+0.1**
	comp=Z,2.1nm,0.4s,baz=79,slow=8.1,SNR=16						
AKASG	**Malin Array Be**	**33.41**	**306**	eP	**P**	**23 50 14.0**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MILM	**Milestii Mici**	**33.59**	**299**	⇑iP	**P**	**23 50 16.1**	**+0.7**
CFR	**Carcaliu**	**34.16**	**296**	⇓iP	**P**	**23 50 21.7**	**+1.4**
WHN	**Wuhan**	**34.35**	**91**	eP	**P**	**23 50 22.9**	**+0.8**
VRI	**Vrincioaia**	**35.09**	**298**	⇑iP	**P**	**23 50 30.3**	**+1.9**
VRI	**Vrincioaia**	**35.09**	**298**	P	**P**	**23 50 32.9**	**+4.5**
VRI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PLOR	**Plostina**	**35.15**	**298**	⇓iP	**P**	**23 50 30.9**	**+2.0**
PLOR	**Plostina**	**35.15**	**298**	P	**P**	**23 50 30.9**	**+2.0**
BIZ	**Bicaz**	**35.45**	**300**	⇑iP	**P**	**23 50 33.1**	**+1.7**
BURAR	**Bucovina Array**	**36.01**	**301**	⇑iP	**P**	**23 50 37.4**	**+1.1**
DOPR	**Dopca**	**36.01**	**298**	⇑iP	**P**	**23 50 38.4**	**+2.1**
VOIR		**36.30**	**297**	⇑iP	**P**	**23 50 40.6**	**+1.8**
LVZ	**Lovozero**	**36.52**	**336**	deP	**P**	**23 50 40.8**	**+0.5**
LVZ				pmax	pmax		
	comp=Z,34nm,2.3s						
FIA0	**FINESS Array S**	**37.11**	**324**	eP	**P**	**23 50 46.0**	**+0.7**
FIA0	**FINESS Array S**	**37.11**	**324**	eP	**P**	**23 50 46.0**	**+0.7**
FINES	**FINESS Array B**	**37.11**	**324**	P	**P**	**23 50 46.0**	**+0.7**
	comp=Z,5.4nm,0.5s,baz=106,slow=9.1,SNR=71						
FINES				LR	LR	00 06 24.9	
	comp=Z,38nm,21.1s,baz=192,slow=37						
FINES	**FINESS Array B**	**37.11**	**324**	eP	**P**	**23 50 45.6**	**+0.3**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LOT	**Lotru**	**37.20**	**297**	⇓iP	**P**	**23 50 48.1**	**+1.6**
SUF	**Sumiainen**	**37.46**	**326**	P	**P**	**23 50 49.4**	**+1.2**
SUF				pmax	pmax		
	comp=Z,14nm,0.7s						
TRPA	**Tarpa**	**37.77**	**302**	⇓iP	**P**	**23 50 51.7**	**+0.6**
DRGR		**37.78**	**300**	⇑iP	**P**	**23 50 53.1**	**+1.8**
DRGR		**37.78**	**300**	P	**P**	**23 50 53.0**	**+1.8**
KOLS	**Kolonicke sedl**	**37.89**	**303**	eP	**P**	**23 50 53.4**	**+1.2**
KOLS				e		23 52 23.5	
KOLS	**Kolonicke sedl**	**37.89**	**303**	eP	**P**	**23 50 53.4**	**+1.2**
KOLS				ePP	**PP**	**23 52 23.5**	**+2.9**
GZR	**Gura Zlata**	**37.90**	**297**	⇓iP	**P**	**23 50 53.9**	**+1.6**
BZS	**Buzias**	**38.67**	**298**	⇓iP	**P**	**23 51 00.9**	**+2.2**
MDVR	**Moldovita**	**38.73**	**297**	⇑iP	**P**	**23 51 01.1**	**+1.8**
OJC	**Ojcow**	**39.42**	**305**	eP	**P**	**23 51 04.2**	**-0.7**
	comp=Z,5.5nm,0.8s						
OJC				ePcP	**PcP**	**23 53 06.9**	**-3.9**
OJC	**Ojcow**	**39.42**	**305**	eP	**P**	**23 51 04.2**	**-0.7**
OJC				e		23 53 06.9	
OJC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VYHS	**Vyhne**	**40.20**	**303**	eP	**P**	**23 51 13.1**	**+1.7**
VYHS				e		23 52 45.2	
VYHS	**Vyhne**	**40.20**	**303**	eP	**P**	**23 51 13.1**	**+1.7**
VYHS				ePP	**PP**	**23 52 45.2**	**-0.5**
ARCES	**ARCESS Array B**	**40.23**	**336**	P	**P**	**23 51 12.2**	**+0.9**
	comp=Z,8.6nm,0.4s,baz=109,slow=8.4,SNR=226						
ARCES	**ARCESS Array B**	**40.23**	**336**	eP	**P**	**23 51 11.9**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ARE0	**ARCESS Array S**	**40.23**	**336**	eP	**P**	**23 51 12.3**	**+1.0**
KTK1	**Kautokeino**	**40.76**	**335**	eP	**P**	**23 51 16.3**	**+0.6**
MORC	**Moravsky Berou**	**40.91**	**305**	eP	**P**	**23 51 18.6**	**+1.4**
JAVC	**Velka Javorina**	**40.93**	**303**	eP	**P**	**23 51 19.8**	**+2.4**
HAMF	**Hammerfest**	**41.26**	**337**	eP	**P**	**23 51 20.6**	**+0.9**
YAK	**Yakutsk**	**41.30**	**36**	eP	**P**	**23 51 20.8**	**+0.7**
YAK				pmax	pmax		
	comp=Z,17nm,0.5s						
DPC	**Dobruska-Polom**	**41.63**	**306**	eP	**P**	**23 51 24.8**	**+1.7**
DPC	**Dobruska-Polom**	**41.63**	**306**	eP	**P**	**23 51 24.8**	**+1.7**
KRUC	**Moravsky**	**41.73**	**304**	eP	**P**	**23 51 25.6**	**+1.7**
CONA	**Conrad Observa**	**42.25**	**302**	i P	**P**	**23 51 29.7**	**+1.5**
	comp=Z,8.8nm,1.6s						
TRO	**Tromso**	**42.41**	**335**	eP	**P**	**23 51 30.1**	**+1.1**
KSRS	**Korea Array**	**42.41**	**74**	P	**P**	**23 51 30.2**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=283,slow=7.1,SNR=3.9						
KLR	**Kul'dur**	**42.45**	**56**	P	**P**	**23 51 30.7**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=264,slow=7.5,SNR=8.0						
KLR	**Kul'dur**	**42.45**	**56**	⇑eP	**P**	**23 51 30.6**	**+0.9**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.8s						
ARSA	**Arzberg**	**42.58**	**301**	i P	**P**	**23 51 28.8**	**-2.0**
	comp=Z,2.6nm,1.1s						
PRU	**Pruhonice**	**42.81**	**306**	eP	**P**	**23 51 34.1**	**+1.5**
PRU	**Pruhonice**	**42.81**	**306**	eP	**P**	**23 51 34.1**	**+1.5**
SOKA	**Soboth**	**43.02**	**301**	i P	**P**	**23 51 35.9**	**+1.4**
	comp=Z,4.3nm,0.8s						
BRG	**Berggiesshubel**	**43.08**	**307**	i P	**P**	**23 51 36.1**	**+1.4**
	comp=Z,4.6nm,0.7s						
MOR8	**Moi Rana**	**43.21**	**329**	eP	**P**	**23 51 35.6**	**-0.1**
STEI	**Steigen**	**43.25**	**332**	eP	**P**	**23 51 36.2**	**+0.3**
TIXI	**Tiksi**	**43.31**	**22**	P	**P**	**23 51 37.2**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=269,slow=4.7,SNR=6.3						
GERES	**GERESS Array B**	**43.52**	**304**	P	**P**	**23 51 39.5**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=62,slow=6.2,SNR=10.0						
KHC	**Kasperske Hory**	**43.56**	**304**	eP	**P**	**23 51 39.8**	**+1.0**
	comp=Z,1.4nm,0.6s						
KHC	**Kasperske Hory**	**43.56**	**304**	d iP	**P**	**23 51 39.7**	**+1.0**
KHC				pmax	pmax		
	comp=Z,18nm,1.7s						
KHC	**Kasperske Hory**	**43.56**	**304**	eP	**P**	**23 51 40.1**	**+1.4**
CLL	**Collm**	**43.62**	**308**	i P	**P**	**23 51 39.8**	**+0.7**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
CLL	**Collm**	**43.62**	**308**	i P	**P**	**23 51 39.8**	**+0.7**
	comp=Z,4.0nm,0.5s						
CLL				Lm	MLR	00 25 00.0	
	comp=Z,100nm,21.5s						
NC602	**NORSAR Array S**	**43.97**	**321**	eP	**P**	**23 51 41.6**	**-0.1**
NB201	**NORSAR Array S**	**44.10**	**322**	eP	**P**	**23 51 42.4**	**-0.5**
	comp=Z,13nm,0.7s						
NB2	**NORSAR Subarra**	**44.13**	**322**	P	**P**	**23 51 43.2**	**+0.1**
	comp=Z,4.9nm,0.5s,baz=92,slow=7.9						
NB2	**NORSAR Subarra**	**44.13**	**322**	P	**P**	**23 51 43.2**	**+0.1**
	baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.13**	**322**	P	**P**	**23 51 43.4**	**+0.3**
	comp=Z,6.1nm,0.5s,baz=92,slow=7.7,SNR=99						
NOA				LR	LR	00 10 44.3	
	comp=Z,21nm,21.1s,baz=320,slow=37						
NAO01	**NORSAR Array S**	**44.29**	**321**	eP	**P**	**23 51 43.7**	**-0.6**
	comp=Z,9.4nm,0.8s						
NBO00	**NORSAR Array S**	**44.35**	**322**	eP	**P**	**23 51 44.2**	**-0.6**
	comp=Z,11nm,0.6s						
KONO	**Kongsberg**	**44.94**	**320**	eP	**P**	**23 51 49.0**	**-0.4**
	comp=Z,7.2nm,0.6s						
KONO	**Kongsberg**	**44.94**	**320**	eP	**P**	**23 51 49.0**	**-0.4**
KONO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KONO	**Kongsberg**	**44.94**	**320**	eP	**P**	**23 51 49.7**	**+0.3**
DOMB	**Dombas**	**45.18**	**323**	eP	**P**	**23 51 52.3**	**+0.9**
FETA	**Feichten**	**45.84**	**302**	i P	**P**	**23 51 57.2**	**+0.2**
	comp=Z,5.0nm,1.2s						
AKN	**Aaknes**	**46.16**	**323**	eP	**P**	**23 51 60.0**	**+0.9**
BFO	**Black Forest**	**47.12**	**304**	ceP	**P**	**23 52 08.4**	**+1.6**
CDF	**Champ du Feu**	**47.79**	**305**	eP	**P**	**23 52 12.2**	**+0.2**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPL	**La Plagne**	**48.90**	**301**	eP	**P**	**23 52 21.7**	**+0.9**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KEST	**Kesra**	**50.35**	**288**	P	**P**	**23 52 33.1**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=259,slow=1.7,SNR=9.3						
KEST	**Kesra**	**50.35**	**288**	eP	**P**	**23 52 31.6**	**-0.2**
	comp=Z,2.2nm,0.7s						
MAJO	**Matsushiro**	**50.44**	**71**	eP	**P**	**23 52 32.5**	**+0.2**
MAJO	**Matsushiro**	**50.44**	**71**	eP	**P**	**23 52 32.5**	**+0.2**
MJAR	**Matsushiro Arr**	**50.44**	**71**	P	**P**	**23 52 32.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=288,slow=8.0,SNR=4.2						
SSF	**Saint Saulge**	**50.60**	**304**	eP	**P**	**23 52 33.1**	**-0.2**
SSF				pmax	pmax		
	comp=Z,13nm,1.5s						
SEY	**Seymchan**	**51.77**	**35**	⇑eP	**P**	**23 52 43.0**	**+1.2**
CAF	**Calviac**	**52.22**	**302**	eP	**P**	**23 52 46.0**	**+0.5**
CAF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MFF	**Saint Martin d**	**53.12**	**304**	eP	**P**	**23 52 51.9**	**-0.2**
MFF				pmax	pmax		
	comp=Z,37nm,1.8s						
ESDC	**Sonseca Array**	**58.36**	**298**	P	**P**	**23 53 30.0**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=54,slow=7.1,SNR=15						
TOA1	**Torodi Ar. Sit**	**67.75**	**269**	eP	**P**	**23 54 31.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**67.75**	**269**	P	**P**	**23 54 31.6**	**-0.4**
	comp=Z,2.4nm,0.4s,baz=42,slow=5.9,SNR=65						
ILAR	**Eielson Array**	**72.44**	**17**	P	**P**	**23 54 59.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=308,slow=4.4,SNR=4.2						
ILAR	**Eielson Array**	**72.44**	**17**	eP	**P**	**23 54 59.7**	**-0.2**
DBIC	**Dimbokro**	**76.77**	**268**	P	**P**	**23 55 25.6**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=90,slow=2.0,SNR=4.5						
YKA	**Yellowknife Ar**	**79.29**	**4**	P	**P**	**23 55 39.2**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=350,slow=5.6,SNR=11						
YKB5	**Yellowknife Ar**	**79.29**	**4**	eP	**P**	**23 55 39.2**	**+0.4**
WR1	**Warramunga Arr**	**81.31**	**124**	eP	**P**	**23 55 50.1**	**-0.2**
WRA	**Warramunga Arr**	**81.31**	**124**	P	**P**	**23 55 50.1**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=298,slow=5.4,SNR=2.8						

ATH 25 00:18:46.2, 38°.13N×21°.66E, h25^{km}±3^{km}, ML1.6/4, Error ellipse: s-maj=3.8km s-min=1.3km az=228.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.17**	**246**	P	Pb	00 18 51.5	0.0
RLS				S	Sb	00 18 55.3	+0.3
RLS				AML	AML	00 18 55.5	
	comp=N,734µm,0.1s						
RLS				AML	AML	00 18 55.6	
	comp=E,1225µm,0.1s						
RLS	**Riolos of Patr**	**0.17**	**246**	P	Pb	00 18 51.5	0.0
RLS				S	Sb	00 18 55.3	+0.3
RLS				AML	AML	00 18 55.5	
	comp=N,734µm,0.1s						
RLS				AML	AML	00 18 55.6	
	comp=E,1225µm,0.1s						
DRO	**Drossia**	**0.18**	**167**	P	Pb	00 18 51.6	0.0
DRO				S	Sb	00 18 56.0	+0.7
DRO				AML	AML	00 18 56.2	
	comp=N,375µm,0.2s						
DRO				AML	AML	00 18 56.3	
	comp=E,1152µm,0.1s						
DRO	**Drossia**	**0.18**	**167**	P	Pb	00 18 51.6	0.0
DRO				S	Sb	00 18 55.7	+0.4
DRO				AML	AML	00 18 56.2	
	comp=N,375µm,0.2s						
DRO				AML	AML	00 18 56.3	
	comp=E,1152µm,0.1s						
LAKA	**Lakka**	**0.28**	**66**	P	Pb	00 18 53.0	+0.1
LAKA				S	Sb	00 18 57.8	+0.3
AIG4	**Aigion**	**0.35**	**69**	P	Pb	00 18 54.1	+0.1
KLV	**Kalavryta, Ach**	**0.40**	**102**	P	Pb	00 18 54.7	-0.1
KLV				S	Sb	00 19 01.4	+0.9
KLV				AML	AML	00 19 02.9	
	comp=E,27µm,0.1s						
KLV				AML	AML	00 19 03.1	
	comp=N,36µm,0.2s						
KLV	**Kalavryta, Ach**	**0.40**	**102**	P	Pb	00 18 54.8	+0.1
KLV				S	Sb	00 19 01.8	+1.2
TRIZ	**Trizonia**	**0.40**	**54**	P	Pb	00 18 54.4	-0.4
SERG	**Sergoula**	**0.42**	**47**	P	Pb	00 18 55.2	0.0
SERG				S	Sb	00 19 01.9	+0.6
SERG				AML	AML	00 19 02.2	
	comp=N,102µm,0.2s						
SERG				AML	AML	00 19 02.9	
	comp=E,62µm,0.2s						
SERG	**Sergoula**	**0.42**	**47**	P	Pb	00 18 55.2	0.0
SERG				S	Sb	00 19 01.0	-0.3
SERG				AML	AML	00 19 02.2	
	comp=N,102µm,0.2s						
SERG				AML	AML	00 19 02.9	
	comp=E,62µm,0.2s						
TRAZ	**Trapeza**	**0.44**	**84**	P	Pb	00 18 55.5	+0.1
KALE	**Kalithea**	**0.46**	**55**	P	Pb	00 18 55.8	0.0
PVO	**Paravola**	**0.50**	**348**	P	Pb	00 18 56.5	+0.1
PVO	**Paravola**	**0.50**	**348**	P	Pb	00 18 56.6	+0.2
ANX	**Ano Chora**	**0.51**	**24**	P	Pb	00 18 56.9	+0.3
ANX				AML	AML	00 19 07.9	
	comp=E,36µm,0.3s						
ANX				AML	AML	00 19 08.9	
	comp=N,54µm,0.5s						
ANX	**Ano Chora**	**0.51**	**24**	P	Pb	00 18 56.8	+0.2
GUR	**Goura**	**0.57**	**109**	P	Pb	00 18 57.4	-0.2
GUR				AML	AML	00 19 09.0	
	comp=N,118µm,0.3s						
GUR				AML	AML	00 19 10.2	
	comp=E,77µm,0.3s						
GUR	**Goura**	**0.57**	**109**	P	Pb	00 18 57.4	-0.2
GUR				S	Sb	00 19 06.3	+0.9
GUR				AML	AML	00 19 09.0	
	comp=N,118µm,0.3s						
GUR				AML	AML	00 19 10.2	
	comp=E,77µm,0.3s						
AMT	**Artemida-Makis**	**0.59**	**176**	P	Pb	00 18 58.3	+0.3
AMT	**Artemida-Makis**	**0.59**	**176**	P	Pb	00 18 58.2	+0.2
VLS	**Valsamata**	**0.84**	**274**	P	Pb	00 19 01.8	-0.4

SJA 25 00:29:09.4±0.4, 30°.51S×64°.66W, h77^{km}±17^{km}, ML2.0, MW3.9, 1C, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APLL	**PUNTA DE LOS L**	**1.62**	**274**	i P	Pn	00 29 37.5	+1.3
APLL				IAML		00 29 51.4	
	comp=Z,15nm,0.3s						
ACLC	**CERRO LA CRUZ**	**2.26**	**298**	i P	Pn	00 29 46.9	+2.0
ACLC				⇑iS	Sn	00 30 14.3	+2.3
AZAP	**Zapla**	**6.28**	**357**	i P	Pn	00 30 41.3	+1.6

ISCJB ***25*** *00:30:12.9±0.5, 24°.73N±0°.02×122°.22E±0°.02, h9^{km}±3^{km},*
Error ellipse: s-maj=3.9km s-min=2.7km az=22.8
JMA ***25*** *00:30:12.5, 24°.69N×122°.22E, h0^{km}, M2.3*
TAP ***25*** *00:30:13.2, 24°.72N×122°.17E, h16^{km}±1^{km}, ML3.0, C*

ISC 25 00:30:13.2±0.9, 24°.72N±0°.03×122°.21E±0°.02, h16^{km}±7^{km}, n41, σ0.^{s}54/67, 6C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.18**	**202**	⇑iP	**Pg**	**00 30 18.4**	**+0.6**
	baz=191						
TWC	**Suao**	**0.34**	**251**	⇑iP	**Pg**	**00 30 19.7**	**-0.6**
	baz=247						
TIPB	**Shuangxi**	**0.42**	**306**	eP	**Pb**	**00 30 22.2**	**-0.2**
	baz=308						
TWE	**Neicheng**	**0.49**	**270**	P	**Pg**	**00 30 22.6**	**-0.3**
	baz=269						
TWE				S	**Sb**	**00 30 29.6**	**-0.7**
	baz=269						
NANB	**Nanao**	**0.51**	**235**	⇑iP	**Pg**	**00 30 22.9**	**-0.4**
	baz=232						
NANB				eS	**Sg**	**00 30 29.6**	**-0.6**
	baz=232						
ENA	**Nanau**	**0.51**	**235**	P	**Pg**	**00 30 23.1**	**-0.4**
	baz=232						
ENA				eS	**Sb**	**00 30 30.4**	**-0.6**
	baz=232						
NWF	**Wu-fen Shan**	**0.52**	**312**	⇑iP	**Pb**	**00 30 23.7**	**-0.2**
	baz=314						
NWF				S	**Sg**	**00 30 30.9**	**+0.3**
	baz=314						
WFSB	**Wu-fen Shan**	**0.52**	**312**	⇑iP	**Pb**	**00 30 23.6**	**-0.3**
	baz=314						
WFSB				S	**Sb**	**00 30 30.9**	**-0.2**
	baz=314						
ENTT	**Nioudou**	**0.59**	**262**	eP	**Pg**	**00 30 24.5**	**-0.3**
	baz=261						
ENTT				eS	**Sb**	**00 30 33.5**	**+0.3**
	baz=261						
TWA	**Mucha**	**0.62**	**295**	eP	**Pb**	**00 30 25.8**	**+0.2**
	baz=295						
TWA				S	**Sb**	**00 30 34.7**	**+0.6**
	baz=295						
NDT	**Datong Townshi**	**0.64**	**259**	eP	**Pg**	**00 30 25.5**	**-0.3**
	baz=258						
NHDH	**Xindian Distri**	**0.66**	**291**	P	**Pb**	**00 30 26.8**	**+0.5**
	baz=292						
NHDH				S	**Sb**	**00 30 36.0**	**+0.7**
	baz=292						
TATO	**Taipei**	**0.70**	**291**	eP	**Pg**	**00 30 26.5**	**-0.4**
	baz=292						
TATO				S	**Sb**	**00 30 36.5**	**+0.1**
	baz=292						
YM01	**YM01**	**0.71**	**306**	⇑iP	**Pg**	**00 30 26.8**	**-0.4**
	baz=307						
YM01				i S	**Sb**	**00 30 36.8**	**0.0**
	baz=307						
JYNG	**Yonagunijimaku**	**0.73**	**112**	P	**Pg**	**00 30 26.5**	**-0.9**
JYNG				eS	**Sg**	**00 30 37.1**	**+0.1**
YM10	**YM10**	**0.73**	**307**	P	**Pg**	**00 30 27.1**	**-0.4**
	baz=308						
YM10				S	**Sg**	**00 30 37.1**	**0.0**
	baz=308						
YM05	**YM05**	**0.73**	**307**	P	**Pg**	**00 30 27.2**	**-0.3**
	baz=308						
YM05				eS	**Sg**	**00 30 37.1**	**-0.1**
	baz=308						
YM04	**YM04**	**0.74**	**305**	P	**Pg**	**00 30 27.2**	**-0.6**
	baz=306						
YM04				eS	**Sg**	**00 30 37.4**	**-0.2**
	baz=306						
YHNB	**Yeheng**	**0.76**	**266**	⇓P	**Pg**	**00 30 27.5**	**-0.5**
	baz=265						
YHNB				S	**Sb**	**00 30 38.2**	**+0.1**
	baz=265						
YM03	**YM03**	**0.76**	**307**	eP	**Pb**	**00 30 28.3**	**+0.3**
	baz=308						
NSK	**Sanguang**	**0.77**	**267**	eP	**Pg**	**00 30 27.7**	**-0.6**
	baz=266						
TWY	**Chenhua**	**0.78**	**315**	eP	**Pg**	**00 30 27.8**	**-0.6**
	baz=317						
TWY				eS	**Sg**	**00 30 38.5**	**-0.3**
	baz=317						
YOJ	**Yonaguni jima**	**0.78**	**109**	eP	**Pg**	**00 30 27.1**	**-1.3**
	baz=108						
YOJ				eS	**Sg**	**00 30 38.1**	**-0.6**
	baz=108						
YOJ	**Yonaguni jima**	**0.78**	**109**	P	**Pg**	**00 30 27.3**	**-1.1**
YOJ				S	**Sg**	**00 30 38.1**	**-0.6**
NACB	**Ninganchiao**	**0.78**	**226**	⇓iP	**Pb**	**00 30 28.0**	**-0.3**
	baz=223						
NACB				S	**Sb**	**00 30 38.8**	**+0.1**
	baz=223						
NNSB	**Datong**	**0.80**	**249**	P	**Pg**	**00 30 28.4**	**-0.5**
	baz=247						
NNSB				S	**Sb**	**00 30 39.6**	**+0.1**
	baz=247						
NNS	**Nan Shan**	**0.81**	**250**	eP	**Pg**	**00 30 28.3**	**-0.7**
	baz=248						
ETLH	**Xiulin Townshi**	**0.83**	**232**	eP	**Pb**	**00 30 29.1**	**-0.2**
	baz=230						
ETLH				eS	**Sb**	**00 30 40.9**	**+0.6**
	baz=230						
TWD	**Chiawan**	**0.85**	**221**	eP	**Pb**	**00 30 29.4**	**-0.1**
	baz=218						
WHF	**Hehuan Shan**	**1.03**	**236**	eP	**Pb**	**00 30 33.0**	**+0.1**
	baz=234						
WHF				eS	**Sn**	**00 30 47.5**	**-0.1**
	baz=234						
LIOB	**Emei**	**1.08**	**266**	eP	**Pg**	**00 30 33.4**	**-0.8**
	baz=265						
CHGB	**Renai**	**1.15**	**235**	eP	**Pb**	**00 30 34.7**	**0.0**
	baz=233						
CHGB				eS	**Sb**	**00 30 50.1**	**+0.6**
	baz=233						
TWQ1	**Liyutan**	**1.36**	**254**	eP	**Pn**	**00 30 37.5**	**0.0**
	baz=253						
VWDT	**VWDT**	**1.37**	**225**	eP	**Pn**	**00 30 38.1**	**+0.6**
	baz=224						
HGSD	**Ruisui**	**1.42**	**210**	eP	**Pg**	**00 30 40.2**	**-0.3**
	baz=208						
IRIF	**Iriomote-Funau**	**1.44**	**105**	P	**Pn**	**00 30 39.2**	**+0.6**
IRIF				eS	**Sn**	**00 30 56.9**	**-0.3**
SSLB	**Suanglung**	**1.47**	**231**	eP	**Pg**	**00 30 40.7**	**-0.9**
	baz=229						
YULB	**Yu-li**	**1.56**	**212**	eP	**Pn**	**00 30 40.7**	**+0.4**
	baz=210						
HATJ	**Hateruma jima**	**1.60**	**114**	P	**Pn**	**00 30 41.9**	**+1.1**
HATJ				eS	**Sb**	**00 31 03.5**	**+1.1**
JIJ	**Ishigaki jima**	**1.80**	**101**	P	**Pn**	**00 30 43.9**	**+0.4**
JIJ				eS	**Sn**	**00 31 07.2**	**+1.2**

CHN4	**Tsaushan**	**2.01**	**228**	*e*P	**Pn**	**00 30 46.7**	**+0.3**
	baz=226						

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*IDC **25** 00:35:14.8±9.4,24°.05S×178°.87E,h591km±77km,mb3.2/4,mb1 3.3/5,mb1mx3.1/23,mbtmp4.2/5,Error ellipse: s-maj=121.5km s-min=36.7km az=125.0*

ISC 25 00:35:06.2±1.7**,24°.5S**±0°.4×**179°.7E**±0°.2**,h531km,n11,σ1ˢ83**/11**,mb3.9**/4**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.39**	**279**	P	**P**	**00 37 48.5**	**-0.4**
	0.7nm,0.3s,baz=80,slow=19,SNR=11						
STKA	**Stephens Creek**	**34.21**	**249**	P	**P**	**00 41 08.7**	**+1.1**
	1.7nm,0.4s,baz=84,slow=8.2,SNR=7.9						
ASAR	**Alice Springs**	**41.63**	**261**	P	**P**	**00 42 08.1**	**-0.2**
	2.1nm,0.7s,baz=96,slow=8.2,SNR=14						
WRA	**Warramunga Arr**	**42.06**	**267**	P	**P**	**00 42 10.7**	**-1.0**
	2.7nm,0.5s,baz=94,slow=8.7,SNR=12						
PETK	**Petropavlovsk-**	**79.62**	**347**	P	**P**	**00 46 19.2**	**+1.3**
	1.6nm,0.8s,baz=91,slow=4.3,SNR=4.6						
ARCES	**ARCESS Array B**	**132.42**	**348**	PKP	**PKPdf**	**00 53 20.6**	**+1.2**
	1.1nm,0.9s,baz=5.7,slow=2.7,SNR=3.2						
FINES	**FINESS Array B**	**138.93**	**341**	PKhKP	**PKPdf**	**00 53 28.5**	**-3.1**
	1.3nm,0.9s,baz=121,slow=22,SNR=2.6						
NB2	**NORSAR Subarra**	**142.64**	**351**	PKP	**PKPdf**	**00 53 36.4**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=18,slow=2.9						
NOA	**NORSAR Array B**	**142.64**	**351**	PKhKP	**PKPdf**	**00 53 36.6**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=24,slow=3.8,SNR=4.0						
AKASG	**Malin Array Be**	**145.31**	**327**	PKP	**PKPbc**	**00 53 44.7**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=42,slow=4.1,SNR=3.4						
BRTR	**Keskin Array B**	**147.70**	**306**	PKPbc	**PKPdf**	**00 53 49.8**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=158,slow=1.5,SNR=3.2						

GUC 25 00:41:44.2±0.6**,32°.80S×70°.47W,h81km±4km,ML3.5,2C-5D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.39**	**208**	⇓*i*P	Pn	00 41 58.0	+0.7
PEL				*i* S	Sn	00 42 08.5	+1.6
PEL				IAML		00 42 09.4	
	comp=N,2μm,0.1s						
FCH	**Farellones**	**0.54**	**164**	⇓*i*P	Pn	00 41 59.9	+1.0
FCH				*i* S	Sn	00 42 11.7	+2.1
FCH				IAML		00 42 13.3	
	comp=E,2μm,0.2s						
CLCH	**Cerro Calan**	**0.59**	**186**	⇓*i*P	Pn	00 41 59.9	+0.9
CLCH				*i* S	Sn	00 42 11.6	+1.7
CLCH				IAML		00 42 13.0	
	comp=E,2μm,0.5s						
STL	**Santa Lucia**	**0.65**	**193**	*e*P	Pn	00 42 01.2	+1.8
STL				*i* S	Sn	00 42 13.4	+2.6
STL				IAML		00 42 14.3	
	comp=E,6μm,0.2s						
FSR	**Penalolen**	**0.68**	**184**	⇓*i*P	Pn	00 42 01.8	+2.0
FSR				*i* S	Sn	00 42 14.1	+2.8
ANTU	**Antumapu**	**0.78**	**190**	⇑*i*P	Pn	00 42 02.6	+1.8
ANTU				*i* S	Sn	00 42 15.6	+2.4
ANTU				IAML		00 42 16.5	
	comp=E,3μm,0.2s						
LMEL	**Las Melosas**	**1.07**	**168**	⇓*i*P	Pn	00 42 05.0	+0.7
LMEL				*i* S	Sn	00 42 21.3	+2.0
LMEL				IAML		00 42 25.5	
	comp=N,3μm,0.1s						
CO02	**Combarbal**	**1.66**	**344**	⇑*i*P	Pn	00 42 12.8	+1.1
CO02				*e*S	Sn	00 42 35.0	+2.4
GO05	**Huala**	**2.52**	**209**	*e*P	Pn	00 42 21.5	-1.6
GO05				*i* S	Sn	00 42 51.5	-1.3

TRN 25 01:19:40.6,15°.55N×59°.24W,h63km,MD3.9,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**1.75**	**244**	*e*P	Pn	01 20 10.0	+1.2
MVM	**Montagne Vaucl**	**1.88**	**238**	*e*P	Pn	01 20 11.7	+1.2
MPOM	**Morne Pois Mar**	**1.91**	**235**	*e*P	Pn	01 20 11.9	+1.1
LPMF	**Morne Lapointe**	**1.93**	**240**	*e*P	Pn	01 20 11.9	+0.8
DLPL	**La Plaine**	**1.94**	**264**	*e*P	Pn	01 20 13.2	+1.8
DLPL				*e*S	Sn	01 20 36.9	+2.0
BAMF	**Morne Balai**	**1.98**	**249**	*e*P	Pn	01 20 13.8	+1.9
ZAM	**Aeronautique**	**1.98**	**241**	*e*P	Pn	01 20 12.8	+1.0
DWS	**Wesley**	**1.99**	**271**	*e*P	Pn	01 20 13.8	+1.7
DWS				*e*S	Sn	01 20 38.6	+2.7
CXM	**Morne La Croix**	**2.00**	**249**	*e*P	Pn	01 20 14.3	+2.1
GBMF	**Grand Be**	**2.00**	**248**	*e*P	Pn	01 20 13.8	+1.6
MAGL	**Barre de l’ile**	**2.00**	**282**	*e*P	Pn	01 20 14.5	+2.3
FDF	**Fort de France**	**2.01**	**247**	*e*P	Pn	01 20 13.7	+1.4
FDF				*e*S	Sn	01 20 37.6	+1.1
TRMF	**Trois Ilets**	**2.02**	**240**	*e*P	Pn	01 20 13.7	+1.4
PML	**Morne Lenard**	**2.02**	**248**	*e*P	Pn	01 20 14.5	+2.0
PCM	**Pelee Case Pet**	**2.03**	**249**	*e*P	Pn	01 20 14.4	+1.8
BIM	**Bigot**	**2.04**	**240**	*e*P	Pn	01 20 14.2	+1.5
MDPO	**Dominica; Chan**	**2.13**	**271**	*e*P	Pn	01 20 15.1	+1.2
MDPO				*e*S	Sn	01 20 40.3	+1.0
SLBI	**Saint Lucia, B**	**2.26**	**228**	*e*P	Pn	01 20 17.6	+1.9
SLBI				*e*S	Sn	01 20 44.6	+2.1
TDBA	**Terre de Bas,**	**2.32**	**278**	*e*P	Pn	01 20 19.4	+2.9
CBE	**Ff, Capester**	**2.33**	**283**	*e*P	Pn	01 20 19.6	+2.8
ABD	**La Joyeuse, An**	**2.35**	**293**	*e*P	Pn	01 20 18.3	+1.5
BBGH	**Gun Hill**	**2.41**	**187**	*e*P	Pn	01 20 18.7	+0.9
BBGH				*e*S	Sn	01 20 48.2	+2.1
SLB	**Belfond**	**2.44**	**226**	*e*P	Pn	01 20 20.8	+2.6
SLB				*e*S	Sn	01 20 49.4	+2.4
MCLT	**Moule a Chique**	**2.46**	**222**	*e*P	Pn	01 20 20.6	+2.2
MCLT				*e*S	Sn	01 20 47.3	0.0
SSV	**Crater Summit**	**2.91**	**221**	*e*P	Pn	01 20 26.4	+1.8
SSV				*e*S	Sn	01 21 00.2	+1.8
SVCV	**St. Vincent, C**	**2.92**	**219**	*e*P	Pn	01 20 26.4	+1.7
SVCV				*e*S	Sn	01 20 59.7	+1.1
BPA	**Boggy Peak**	**2.92**	**301**	*e*P	Pn	01 20 26.9	+2.3
BPA				*e*S	Sn	01 21 00.1	+1.5
SVV	**Soufriere Volc**	**2.93**	**221**	*e*P	Pn	01 20 26.3	+1.5
SVV				*e*S	Sn	01 21 00.0	+1.2
SVB	**Belmont**	**2.98**	**221**	*e*P	Pn	01 20 27.2	+1.6
SVB				*e*S	Sn	01 21 01.3	+1.1
MLYT	**Lee's Yard**	**3.06**	**293**	*e*P	Pn	01 20 28.6	+1.9
MLYT				*e*S	Sn	01 21 03.4	+1.2
ANWB	**Willy Bob**	**3.22**	**311**	*e*P	Pn	01 20 29.6	+0.8
ANWB				*e*S	Sn	01 21 07.3	+1.3
SKI	**Saint Kitts**	**3.79**	**298**	*e*P	Pn	01 20 39.0	+2.3
SKI				*e*S	Sn	01 21 21.3	+1.2
GRSS	**Sisters**	**3.97**	**216**	*e*P	Pn	01 20 40.3	+1.3
GRSS				*e*S	Sn	01 21 24.1	-0.2
GRHS	**Sauteurs**	**4.04**	**215**	*e*P	Pn	01 20 42.5	+2.4
GRHS				*e*S	Sn	01 21 26.8	+0.6
GRGR	**Grenville**	**4.12**	**215**	*e*P	Pn	01 20 42.8	+1.6
GRGR	**Grenville**	**4.12**	**215**	*e*S	Sn	01 21 29.2	+1.0
TOSP	**Speyside**	**4.41**	**197**	*e*P	Pn	01 20 47.0	+1.9
TOSP	**Speyside**	**4.41**	**197**	*e*S	Sn	01 21 35.0	-0.1
SMRT	**St. Maarten**	**4.43**	**305**	*e*P	Pn	01 20 47.3	+1.9
SMRT	**St. Maarten**	**4.43**	**305**	*e*S	Sn	01 21 36.3	+0.5

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*KRSC **25** 01:19:39.5±1.7,52°.06N×160°.67E,h69km±20km,ML4.1*

*MOS **25** 01:19:40.6±1.3,51°.97N×160°.66E,h39km,mb4.7/7,Error ellipse: s-maj=8.5km s-min=4.7km az=105.9*

*IDC **25** 01:19:40.0±1.1,52°.33N×160°.09E,h0km,mb3.8/13,mb1 4.0/15,mb1mx3.8/39,mbtmp3.8/15,ML3.6/2,MS3.1/3,Ms1 3.1/3,ms1mx2.6/37,Error ellipse: s-maj=28.9km s-min=18.6km az=154.0*

*ISCJB **25** 01:19:42.3±0.7,52°.08N±0°.04×160°.54E±0°.06,h41km±6km,mb4.2/30,MS3.1/2,Error ellipse: s-maj=8.4km s-min=4.4km az=141.6*

*NEIC **25** 01:19:42.6±1.9,51°.98N×160°.26E,h33km±6km,mb4.5/20,Error ellipse: s-maj=12.6km s-min=9.5km az=150.0*

ISC 25 01:19:41.5±0.7**,52°.08N**±0°.05×**160°.46E**±0°.05**,h22km**±4km**,n130,σ1ˢ62**/149**,mb4.3**/30**,1C-1D,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.06**	**346**	*i* P	**Pn**	**01 20 00.5**	**-0.5**
SPN				*e*S	**Sn**	**01 20 14.6**	**-0.4**
SPN	**Mys Shipunski**	**1.06**	**346**	PN	**Pn**	**01 20 00.5**	**-0.5**
SPN				S	**Sn**	**01 20 14.6**	**-0.4**
RUS	**Russkaya**	**1.25**	**287**	*e*P	**Pb**	**01 20 04.2**	**0.0**
RUS				*e*S	**Sb**	**01 20 21.2**	**+1.4**
RUS	**Russkaya**	**1.25**	**287**	PN	**Pb**	**01 20 04.2**	**0.0**
RUS				S	**Sb**	**01 20 21.2**	**+1.4**
NLC	**Nalytchevo**	**1.29**	**329**	*i* P	**Pb**	**01 20 04.8**	**-0.2**
NLC				*e*S	**Sb**	**01 20 22.0**	**+1.0**
NLC	**Nalytchevo**	**1.29**	**329**	PN	**Pb**	**01 20 04.8**	**-0.2**
NLC				S	**Sb**	**01 20 22.0**	**+1.0**
DALK	**Dalny**	**1.41**	**313**	*e*P	**Pb**	**01 20 06.6**	**-0.5**
DALK				*e*S	**Sb**	**01 20 25.2**	**+0.6**
DALK	**Dalny**	**1.41**	**313**	PN	**Pb**	**01 20 06.6**	**-0.5**
DALK				S	**Sb**	**01 20 25.2**	**+0.6**
PET	**Petropavlovsk**	**1.45**	**311**	*e*Pn	**Pn**	**01 20 06.5**	**+0.1**
PET				*e*Sn	**Sn**	**01 20 21.2**	**-3.6**
PET	**Petropavlovsk**	**1.45**	**311**	*e*PN	**Pn**	**01 20 06.5**	**+0.1**
MTVR	**Mutnovka**	**1.45**	**287**	*e*P	**Pb**	**01 20 07.6**	**-0.3**
MTVR				*e*S	**Sb**	**01 20 26.8**	**+0.8**
MTVR	**Mutnovka**	**1.45**	**287**	PN	**Pb**	**01 20 07.6**	**-0.3**
MTVR				S	**Sb**	**01 20 26.8**	**+0.8**
KDTR	**Khodutka, Kamc**	**1.50**	**261**	*i* P	**Pn**	**01 20 07.4**	**+0.4**
KDTR				*e*S	**Sb**	**01 20 26.5**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.50**	**261**	PN	**Pn**	**01 20 07.4**	**+0.4**
KDTR				S	**Sb**	**01 20 26.5**	**-0.5**
UGLR	**Uglovaya**	**1.51**	**319**	*e*P	**Pb**	**01 20 08.4**	**-0.4**
UGLR	**Uglovaya**	**1.51**	**319**	PN	**Pb**	**01 20 08.4**	**-0.4**
SDLR	**Sedlovina**	**1.54**	**322**	*e*P	**Pb**	**01 20 08.7**	**-0.6**
SDLR	**Sedlovina**	**1.54**	**322**	PN	**Pb**	**01 20 08.7**	**-0.6**
SMAR	**Somma**	**1.56**	**320**	*e*P	**Pb**	**01 20 09.1**	**-0.6**
SMAR	**Somma**	**1.56**	**320**	PN	**Pb**	**01 20 09.1**	**-0.6**
AVH	**Avacha**	**1.58**	**319**	*e*P	**Pb**	**01 20 09.5**	**-0.6**
AVH	**Avacha**	**1.58**	**319**	PN	**Pb**	**01 20 09.5**	**-0.6**
ASAK	**Asacha**	**1.60**	**282**	*e*P	**Pb**	**01 20 09.9**	**-0.4**
ASAK	**Asacha**	**1.60**	**282**	PN	**Pb**	**01 20 09.9**	**-0.4**
KRER	**Koryakskii**	**1.61**	**320**	*e*P	**Pb**	**01 20 10.1**	**-0.5**
KRER	**Koryakskii**	**1.61**	**320**	PN	**Pb**	**01 20 10.1**	**-0.5**
KRMR	**Karymshinskiy**	**1.61**	**299**	*e*P	**Pb**	**01 20 09.6**	**-0.8**
KRMR				*e*S	**Sb**	**01 20 29.9**	**-0.4**
KRMR	**Karymshinskiy**	**1.61**	**299**	PN	**Pb**	**01 20 09.6**	**-0.8**
KRMR				S	**Sb**	**01 20 29.9**	**-0.4**
KOK	**Koryaka**	**1.65**	**318**	*e*P	**Pb**	**01 20 11.0**	**-0.1**
KOK	**Koryaka**	**1.65**	**318**	PN	**Pb**	**01 20 11.0**	**-0.1**
KRX	**Arik**	**1.69**	**320**	*e*P	**Pb**	**01 20 11.1**	**-0.8**
KRX	**Arik**	**1.69**	**320**	PN	**Pb**	**01 20 11.1**	**-0.8**
PEA0B	**Petropavlovsk-**	**1.97**	**303**	*e*Pn	**Pb**	**01 20 15.2**	**-1.4**
PEA0B				*e*Sn	**Sn**	**01 20 34.0**	**-3.6**
PETK	**Petropavlovsk-**	**1.97**	**303**	Pn	**Pb**	**01 20 15.2**	**-1.4**
	15nm,0.3s,baz=109,slow=19,SNR=139						
PETK				LR	LR	01 20 47.7	
	comp=Z,112nm,20.4s,baz=48,slow=41						
PETK				Sn	**Sb**	**01 20 48.3**	**+7.5**
	20nm,0.3s,baz=124,slow=18,SNR=7.1						
PEA1	**Petropavlovsk-**	**1.98**	**303**	*e*Pn	**Pb**	**01 20 15.2**	**-1.4**
APC	**Apacha**	**2.19**	**294**	*e*P	**Pb**	**01 20 18.7**	**-1.6**
APC	**Apacha**	**2.19**	**294**	PN	**Pb**	**01 20 18.7**	**-1.6**
GNL	**Ganaly**	**2.22**	**318**	*e*P	**Pb**	**01 20 19.3**	**-1.7**
GNL	**Ganaly**	**2.22**	**318**	PN	**Pb**	**01 20 19.3**	**-1.7**
PAU	**Pauzhetka**	**2.34**	**256**	*e*P	**Pn**	**01 20 19.6**	**+0.9**
PAU	**Pauzhetka**	**2.34**	**256**	PN	**Pn**	**01 20 19.6**	**+0.9**
MKZ	**Mys Kozlova**	**2.60**	**17**	*e*P	**Pn**	**01 20 21.2**	**-0.9**
MKZ				*e*S	**Sn**	**01 20 50.3**	**-2.7**
MKZ	**Mys Kozlova**	**2.60**	**17**	PN	**Pn**	**01 20 21.2**	**-0.9**
MKZ				S	**Sn**	**01 20 50.3**	**-2.7**
KZV	**Kizimen**	**3.04**	**358**	*e*P	**Pn**	**01 20 29.3**	**+0.9**
KZV				*e*S	**Sn**	**01 21 03.9**	**-0.3**
KZV	**Kizimen**	**3.04**	**358**	PN	**Pn**	**01 20 29.3**	**+0.9**
KZV				S	**Sn**	**01 21 03.9**	**-0.3**
SKR	**Severo-Kuril’s**	**3.06**	**245**	*e*P	**Pn**	**01 20 29.1**	**+0.6**
SKR				*e*S	**Sn**	**01 21 04.2**	**-0.1**
SKR	**Severo-Kuril’s**	**3.06**	**245**	*e*PN	**Pn**	**01 20 29.0**	**+0.6**
SKR				*e*S	**Sn**	**01 21 03.4**	**-0.9**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax	smax		
	comp=E,289nm,0.5s						
SKR				smax	smax		
	comp=N,314nm,0.6s						
SKR				MLR	MLR		
	comp=Z,200nm,14.0s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
TUMD	**Tumrok D**	**3.13**	**359**	*e*P	**Pn**	**01 20 29.7**	**+0.2**
TUMD				*e*S	**Sn**	**01 21 05.0**	**-1.2**
TUMR	**Tumrok**	**3.22**	**357**	*e*P	**Pn**	**01 20 32.0**	**+1.2**
TUMR	**Tumrok**	**3.22**	**357**	PN	**Pn**	**01 20 29.7**	**-1.1**
KRSR	**Krestovskiy**	**4.15**	**1**	*e*P	**Pn**	**01 20 44.2**	**+0.7**
KRSR	**Krestovskiy**	**4.15**	**1**	PN	**Pn**	**01 20 44.2**	**+0.7**
SRDR	**Sredinnyy**	**4.27**	**354**	*e*P	**Pn**	**01 20 46.5**	**+1.3**
SRDR	**Sredinnyy**	**4.27**	**354**	PN	**Pn**	**01 20 46.5**	**+1.3**
KBTR	**Krutoberegovo**	**4.37**	**18**	*e*P	**Pn**	**01 20 45.3**	**-1.1**
KBTR	**Krutoberegovo**	**4.37**	**18**	PN	**Pn**	**01 20 45.3**	**-1.1**
KBG	**Krutoberegovo**	**4.39**	**17**	*e*P	**Pn**	**01 20 47.2**	**+0.5**
KBG	**Krutoberegovo**	**4.39**	**17**	PN	**Pn**	**01 20 47.2**	**+0.5**
BKI	**Bering**	**4.54**	**44**	*e*P	**Pn**	**01 20 47.5**	**-1.2**
BKI				*e*S	**Sn**	**01 21 34.4**	**-6.3**
BKI	**Bering**	**4.54**	**44**	PN	**Pn**	**01 20 47.5**	**-1.2**
MA2	**Magadan**	**9.27**	**328**	LR	LR	01 26 16.0	
	comp=Z,88nm,19.4s,baz=196,slow=44						
ASAJ	**Asahikawa**	**14.32**	**243**	Pn	**Pn**	**01 23 00.8**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=150,slow=20,SNR=3.2						
ERM	**Erimo**	**15.46**	**236**	*e*Pn	**Pn**	**01 23 15.1**	**-2.9**
	comp=Z,31nm,1.0s						
ERM	**Erimo**	**15.46**	**236**	*e*P	**Pn**	**01 23 15.1**	**-2.9**
ERM				pmax	pmax		
	comp=Z,31nm,1.0s						
BILL	**Bilibino**	**16.26**	**8**	⇑*e*P	**P**	**01 23 32.8**	**+1.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,146nm,20.0s						
KLR	**Kul'dur**	**18.37**	**272**	P	**P**	**01 23 52.5**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=191,slow=10,SNR=2.5						
USA0B	**Ussuriysk Arra**	**20.47**	**259**	*e*P	**P**	**01 24 16.1**	**-1.3**
	comp=Z,10nm,1.3s						
USRK	**Ussuriysk Ar.**	**20.47**	**259**	P	**P**	**01 24 15.8**	**-1.6**
	comp=Z,2.0nm,0.8s,baz=144,slow=33,SNR=4.4						
FALS	**False Pass**	**21.53**	**68**	*e*P	**P**	**01 24 34.1**	**+5.2**
	comp=Z,63nm,0.5s						
ANM	**Nome**	**21.54**	**41**	*e*P	**P**	**01 24 29.1**	**+0.3**
	comp=Z,29nm,1.3s						
ANM	**Nome**	**21.54**	**41**	*e*P	**P**	**01 24 29.1**	**+0.3**
ANM				pmax	pmax		
	comp=Z,29nm,1.3s						
MAJO	**Matsushiro**	**22.11**	**234**	*e*P	**P**	**01 24 36.8**	**+1.6**
MAJO	**Matsushiro**	**22.11**	**234**	*e*P	**P**	**01 24 36.8**	**+1.6**
MJAR	**Matsushiro Arr**	**22.11**	**234**	P	**P**	**01 24 36.8**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=17,slow=10,SNR=4.0						
INU	**Inuyama**	**23.64**	**234**	*e*P	**P**	**01 24 47.3**	**-3.7**
	comp=Z,5.2nm,0.6s						
TIXI	**Tiksi**	**24.10**	**336**	P	**P**	**01 24 52.4**	**-2.6**
	comp=Z,1.3nm,0.3s,baz=126,slow=9.7,SNR=6.0						
TIXI	**Tiksi**	**24.10**	**336**	*e*P	**P**	**01 24 54.4**	**-0.6**
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**24.10**	**336**	⇓*e*P	**P**	**01 24 54.4**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHIA	**Chirikof Islan**	**25.81**	**64**	*e*P	**P**	**01 25 11.0**	**+0.3**
	comp=Z,84nm,1.5s						
CAST	**Castle Rocks**	**27.07**	**47**	*e*P	**P**	**01 25 22.9**	**+0.9**
	comp=Z,3.7nm,1.4s						
HOM	**Homer**	**27.38**	**55**	*e*P	**P**	**01 25 26.7**	**+1.8**
	comp=Z,65nm,0.8s						
BPAW	**Bear Paw Mtn.**	**27.59**	**45**	*e*P	**P**	**01 25 29.3**	**+2.6**
	comp=Z,1.9nm,1.0s						
SUA	**Susitna One**	**27.70**	**51**	*e*P	**P**	**01 25 28.2**	**+0.4**
	comp=Z,1.6nm,0.7s						
MLY	**Manley**	**27.75**	**43**	*e*P	**P**	**01 25 28.0**	**-0.2**
	comp=Z,4.9nm,0.6s						
BWN	**Browne**	**28.26**	**45**	*e*P	**P**	**01 25 36.7**	**+4.0**
	comp=Z,71nm,1.2s						
HMT	**Hamilton**	**30.97**	**53**	*e*P	**P**	**01 25 57.7**	**+1.0**
	comp=Z,15nm,1.3s						
TGL	**Tana Glacier**	**31.60**	**52**	*e*P	**P**	**01 26 02.3**	**0.0**
	comp=Z,14nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**32.67**	**169**	T	T	02 02 18.3	
	baz=352,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**32.69**	**169**	T	T	02 02 19.7	
	baz=352,slow=75,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	**32.69**	**169**	T	T	02 02 18.5	
	baz=352,slow=75,SNR=10						
SONM	**Songino Array**	**34.36**	**285**	LR	LR	01 42 15.7	
	comp=Z,72nm,20.9s,baz=64,slow=40						
YOJ	**Yonaguni jima**	**39.60**	**240**	*e*P	**P**	**01 27 09.4**	**-1.7**
	comp=Z,123nm,1.2s						
YOJ	**Yonaguni jima**	**39.60**	**240**	*e*P	**P**	**01 27 09.4**	**-1.7**
WHN	**Wuhan**	**39.91**	**256**	P	**P**	**01 27 12.5**	**-1.2**
GUMO	**Guam**	**40.38**	**204**	LR	LR	01 43 54.0	
	comp=Z,13nm,18.9s,baz=93,slow=36						
KURK	**Kurchatov**	**48.46**	**303**	*e*P	**P**	**01 28 20.5**	**-1.5**
	comp=Z,2.7nm,0.8s						
KURK	**Kurchatov**	**48.46**	**303**	*e*P	**P**	**01 28 20.5**	**-1.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**48.80**	**297**	*e*P	**P**	**01 28 23.8**	**-0.9**
	comp=Z,0.9nm,0.6s						
MK31	**Makanchi Array**	**48.80**	**297**	*e*P	**P**	**01 28 23.8**	**-0.9**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK32	**Makanchi Array**	**48.80**	**297**	*e*P	**P**	**01 28 23.5**	**-1.2**
MKAR	**Makanchi Array**	**48.80**	**297**	P	**P**	**01 28 23.5**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=65,slow=6.7,SNR=9.7						
BRVK	**Borovoye**	**51.23**	**309**	*e*P	**P**	**01 28 42.6**	**-0.4**
	comp=Z,3.4nm,0.6s						
BRVK	**Borovoye**	**51.23**	**309**	*e*P	**P**	**01 28 42.6**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WVOR	**Wild Horse Val**	**53.05**	**66**	*e*P	**P**	**01 28 56.2**	**-0.6**
	comp=Z,3.0nm,0.4s						
WVOR	**Wild Horse Val**	**53.05**	**66**	*e*P	**P**	**01 28 56.2**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ARCES	**ARCESS Array B**	**54.32**	**342**	P	**P**	**01 29 05.2**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=48,slow=8.6,SNR=5.6						
NV01	**Mina Array Sit**	**55.88**	**70**	*e*P	**P**	**01 29 20.5**	**+2.9**
NVAR	**Mina Array Bea**	**55.88**	**70**	P	**P**	**01 29 20.5**	**+2.9**
	comp=Z,0.1nm,0.4s,baz=294,slow=6.8,SNR=2.5						
CMAR	**Chiang Mai Arr**	**58.20**	**259**	P	**P**	**01 29 36.0**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=30,slow=5.6,SNR=4.9						
CMAR	**Chiang Mai Arr**	**58.20**	**259**	P	**P**	**01 29 36.0**	**+2.1**
FIA0	**FINESS Array S**	**61.14**	**337**	*e*P	**P**	**01 29 54.3**	**+0.7**
FIA0	**FINESS Array S**	**61.14**	**337**	*e*P	**P**	**01 29 54.3**	**+0.7**
FINES	**FINESS Array B**	**61.14**	**337**	P	**P**	**01 29 54.3**	**+0.7**
	comp=Z,4.2nm,0.7s,baz=32,slow=8.1,SNR=23						
NB2	**NORSAR Subarra**	**64.58**	**344**	P	**P**	**01 30 16.5**	**0.0**
	comp=Z,0.5nm,0.5s,baz=20,slow=6.9						
NB200	**NORSAR Array S**	**64.58**	**344**	*e*P	**P**	**01 30 16.6**	**+0.1**
NOA	**NORSAR Array B**	**64.58**	**344**	P	**P**	**01 30 16.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=22,slow=6.7,SNR=12						
AKASG	**Malin Array Be**	**69.60**	**329**	P	**P**	**01 30 48.0**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=29,slow=6.6,SNR=4.3						
AKASG	**Malin Array Be**	**69.60**	**329**	*i* P	**P**	**01 30 46.4**	**-2.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KIV	**Kislovodsk**	**70.33**	**317**	*e*P	**P**	**01 30 50.9**	**-2.3**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TXAR	**Lajitas Array**	**70.83**	**67**	P	**P**	**01 30 58.3**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=303,slow=4.6,SNR=3.9						
KOLS	**Kolonicke sedl**	**73.25**	**333**	*e*P	**P**	**01 31 11.8**	**+1.2**
KOLS	**Kolonicke sedl**	**73.25**	**333**	*e*P	**P**	**01 31 11.8**	**+1.2**
CLL	**Collm**	**73.38**	**339**	*e*P	**P**	**01 31 13.0**	**+1.7**
CLL	**Collm**	**73.38**	**339**	*e*P	**P**	**01 31 13.0**	**+1.7**
VYHS	**Vyhne**	**74.59**	**335**	*e*P	**P**	**01 31 19.9**	**+1.5**
VYHS	**Vyhne**	**74.59**	**335**	*e*P	**P**	**01 31 19.9**	**+1.5**
GERES	**GERESS Array B**	**75.54**	**338**	P	**P**	**01 31 24.7**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=51,slow=6.4,SNR=3.9						
GERES	**GERESS Array B**	**75.54**	**338**	*e*P	**P**	**01 31 24.2**	**+0.2**
BR101	**Keskin Array S**	**77.55**	**321**	*e*P	**P**	**01 31 36.2**	**+0.6**
BRTR	**Keskin Array B**	**77.55**	**321**	P	**P**	**01 31 36.2**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=67,slow=3.7,SNR=3.9						

IDC 25 01:28:14.2±2.0**,5°.13S×128°.67E,h0km,mb3.6**/2**,mb1 3.7**/4**,mb1mx3.4**/28**,mbtmp3.6**/4**,ML3.4**/2**,Error ellipse: s-maj=180.9km s-min=27.8km az=68.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.73**	**160**	Pn	Pn	01 31 58.0	+0.6
	0.1nm,0.3s,baz=342,slow=13,SNR=2.9						
WRA				Sn	Sn	01 34 39.5	-13
	0.5nm,0.3s,baz=334,slow=22,SNR=7.2						
ASAR	**Alice Springs**	**19.11**	**165**	P	P	01 32 38.6	-0.3
	0.2nm,0.3s,baz=347,slow=10,SNR=7.1						
ASAR				S	Sn	01 36 03.7	-11
	0.1nm,0.3s,baz=2.7,slow=21,SNR=3.3						
MKAR	**Makanchi Array**	**65.94**	**327**	P	P	01 39 02.6	+0.4
	0.4nm,0.5s,baz=127,slow=8.2,SNR=4.8						
KURBB	**Kurchatov Arra**	**70.23**	**329**	P	P	01 39 28.8	-0.2
	0.4nm,0.7s,baz=116,slow=4.2						

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*IDC **25** 01:38:13.8±0.8,27°.74N×104°.50E,h0km,mb3.8/15,mb1 4.0/16,mb1mx3.7/49,mbtmp3.8/16,ML4.2/1,MS3.0/2,Ms1 3.0/2,ms1mx2.5/34,Error ellipse: s-maj=23.3km s-min=15.9km az=52.0*

*NEIC **25** 01:38:15.8±2.3,27°.64N×104°.28E,h15km±5km,mb4.1/9,Error ellipse: s-maj=17.9km s-min=2.7km az=121.0*

*ISCJB **25** 01:38:16.0±0.4,27°.65N±0°.04×104°.46E±0°.06,h33km,mb4.0/22,MS3.0/2,Error ellipse: s-maj=8.2km s-min=5.6km az=30.1*

ISC 25 01:38:18.3±0.6**,27°.67N**±0°.07×**104°.38E**±0°.08**,h35km,n36,σ1ˢ28**/38**,mb4.0**/22**,Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.93**	**210**	*e*Pn	**Pn**	**01 39 00.5**	**-2.1**
KMI				*e*Sn	**Sn**	**01 39 35.3**	**-1.4**
ENH	**Enshi**	**5.17**	**59**	*e*Pn	**Pn**	**01 39 33.7**	**+0.4**
ENH				*e*Sn	**Sn**	**01 40 30.1**	**-1.7**
XAN	**Xi'an**	**7.46**	**30**	*e*Pn	**Pn**	**01 40 03.6**	**-1.0**
XAN				*e*Sn	**Sn**	**01 41 25.0**	**-2.9**
CMAR	**Chiang Mai Arr**	**10.44**	**210**	Pn	**Pn**	**01 40 46.7**	**+1.1**
	0.5nm,0.3s,baz=22,slow=11,SNR=4.6						
SONA0	**Songino Array**	**20.20**	**4**	*e*P	**P**	**01 42 51.2**	**+1.1**
SONM	**Songino Array**	**20.20**	**4**	P	**P**	**01 42 51.2**	**+1.2**
	0.5nm,0.4s,baz=135,slow=47,SNR=3.5						
KSRS	**Korea Array**	**22.07**	**58**	P	**P**	**01 43 07.4**	**-2.7**
	0.5nm,0.4s,baz=241,slow=10,SNR=2.2						
MK31	**Makanchi Array**	**25.80**	**324**	*e*P	**P**	**01 43 45.1**	**-1.0**
	2.1nm,0.9s						
MK32	**Makanchi Array**	**25.80**	**324**	*e*P	**P**	**01 43 47.9**	**+1.8**
MKAR	**Makanchi Array**	**25.80**	**324**	P	**P**	**01 43 47.9**	**+1.8**
	1.9nm,0.7s,baz=128,slow=12,SNR=12						
USRK	**Ussuriysk Ar.**	**27.60**	**46**	P	**P**	**01 44 01.5**	**-0.7**
	1.0nm,0.7s,baz=257,slow=12,SNR=2.8						
DAV	**Davao City (W)**	**28.70**	**132**	LR	LR	01 56 27.5	
	comp=Z,18nm,19.0s,baz=141,slow=38						
ZALV	**Zalesovo Beam**	**29.93**	**337**	P	**P**	**01 44 24.0**	**+1.1**
	2.6nm,0.7s,baz=140,slow=8.3,SNR=9.6						
ZAA1	**Zalesovo Array**	**29.94**	**337**	*e*P	**P**	**01 44 24.0**	**+1.1**
KURBB	**Kurchatov Arra**	**30.17**	**326**	P	**P**	**01 44 25.9**	**+0.9**
	1.9nm,0.5s,baz=130,slow=9.8,SNR=25						
KURK	**Kurchatov**	**30.19**	**327**	*e*P	**P**	**01 44 26.1**	**+1.0**
	3.0nm,0.6s						
PALK	**Pallekele**	**30.24**	**232**	*e*P	**P**	**01 44 24.5**	**-1.5**
	20nm,1.0s						
MNAI	**Manna**	**31.87**	**183**	*e*P	**P**	**01 44 41.2**	**+0.9**
	356nm,1.3s						
BVAR	**Borovoye Array**	**35.67**	**325**	P	**P**	**01 45 13.8**	**+0.8**
	0.8nm,0.5s,baz=136,slow=9.5,SNR=5.2						
BRVK	**Borovoye**	**35.75**	**325**	*e*P	**P**	**01 45 12.8**	**-0.9**
	1.8nm,0.8s						
GEYT	**Alibeck**	**39.86**	**297**	P	**P**	**01 45 49.9**	**+1.3**
	2.1nm,0.7s,baz=116,slow=6.6,SNR=3.4						
GEYT				LR	LR	02 03 42.1	
	comp=Z,35nm,18.9s,baz=50,slow=38						
ABKAR	**Akbulak array**	**40.19**	**315**	*e*P	**P**	**01 45 51.8**	**+0.7**
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**55.51**	**145**	P	**P**	**01 47 50.7**	**+0.6**
	1.3nm,0.5s,baz=327,slow=7.1,SNR=10						
WR1	**Warramunga Arr**	**55.51**	**145**	*e*P	**P**	**01 47 50.7**	**+0.6**
AS31	**Alice Springs**	**58.45**	**148**	*e*P	**P**	**01 48 12.3**	**+1.5**
	1.3nm,1.1s						
ASAR	**Alice Springs**	**58.45**	**148**	P	**P**	**01 48 12.3**	**+1.5**
	0.6nm,0.7s,baz=330,slow=6.7,SNR=6.1						
AKASG	**Malin Array Be**	**59.93**	**315**	P	**P**	**01 48 20.4**	**-0.3**
	0.2nm,0.3s,baz=70,slow=6.0,SNR=3.5						
AKBB	**Malin Array Si**	**59.93**	**315**	*e*P	**P**	**01 48 20.4**	**-0.3**
	4.8nm,1.4s						
ARCES	**ARCESS Array B**	**60.49**	**337**	P	**P**	**01 48 25.2**	**+0.9**
	3.2nm,1.1s,baz=93,slow=8.5,SNR=4.7						
FIA0	**FINESS Array S**	**60.56**	**327**	*e*P	**P**	**01 48 25.3**	**+0.4**
FINES	**FINESS Array B**	**60.56**	**327**	P	**P**	**01 48 25.3**	**+0.4**
	0.7nm,0.6s,baz=104,slow=8.0,SNR=5.7						
NB2	**NORSAR Subarra**	**67.68**	**328**	P	**P**	**01 49 11.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=72,slow=6.9						
NB200	**NORSAR Array S**	**67.68**	**328**	*e*P	**P**	**01 49 11.3**	**-0.4**
NOA	**NORSAR Array B**	**67.68**	**328**	P	**P**	**01 49 11.3**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=84,slow=4.8,SNR=6.5						

GEC2	GERESS Array S	70.13	315	eP	P	01 49 27.7	+0.5
	comp=Z,1.4nm,1.0s						
GERES	GERESS Array B	70.13	315	P	P	01 49 27.7	+0.5
	comp=Z,0.5nm,0.8s,baz=79,slow=6.9,SNR=4.6						

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*IDC **25** 01:41:15.7±0.9, 30°.86N×141°.90E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.7/39, mbtmp3.7/10, ML3.2/2, MS2.6/3, Ms1 2.6/3, ms1mx2.3/45, Error ellipse: s-maj=33.7km s-min=19.0km az=81.0*

*ISCJB **25** 01:41:17.7±0.8, 30°.89N±0°.07×141°.8E±0°.2, h24^{km}, mb3.8/8, Error ellipse: s-maj=25.0km s-min=7.8km az=166.3*

*JMA **25** 01:41:20.3±0.8, 31°.09N×142°.26E, h102^{km}, M3.2*

ISC 25 01:41:19.4±0.9, **30°.85N**±0°.10×**141°.9E**±0°.2, **h24**^{km}, **n17**, σ**1^{s}22**/18, **mb3.9**/8, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	3.87	349	P	Pn	01 42 16.4	-0.6
BSO1				eS	Sn	01 42 59.5	-1.9
BSO4	Boso 4	4.33	343	P	Pn	01 42 25.6	+1.9
BSO4				eS	Sn	01 43 16.5	+3.1
JHU	Hanno	5.45	337	P	Pn	01 42 39.1	0.0
JHU				eS	Sn	01 43 40.3	-0.7
JRY	Ryogami san	5.73	335	P	Pn	01 42 42.8	-0.2
JAG	Ashikaga	5.92	341	P	Pn	01 42 46.4	+0.8
MJAR	Matsushiro Arr	6.46	333	Pn	Pn	01 42 52.9	-0.1
	0.2nm,0.3s,baz=152,slow=11,SNR=17						
MJAR				LR	LR	01 45 25.6	
	comp=Z,41nm,18.9s,baz=115,slow=39						
JNU	Nakatsue	9.62	286	LR	LR	01 47 19.8	
	comp=Z,43nm,18.1s,baz=170,slow=38						
KSRS	Korea Array	13.31	303	LR	LR	01 49 16.5	
	comp=Z,26nm,18.3s,baz=235,slow=36						
KLR	Kul'dur	19.90	340	P	P	01 45 47.7	-1.3
	0.1nm,0.3s,baz=176,slow=13,SNR=3.5						
SONM	Songino Array	31.92	312	P	P	01 47 42.9	-0.3
	0.7nm,0.5s,baz=119,slow=8.8,SNR=4.2						
MKAR	Makanchi Array	47.95	307	P	P	01 49 56.1	0.0
	1.1nm,0.8s,baz=95,slow=8.6,SNR=7.1						
WRA	Warramunga Arr	51.02	189	P	P	01 50 19.3	-0.2
	0.9nm,0.4s,baz=353,slow=5.7,SNR=8.8						
ILAR	Eielson Array	54.58	30	P	P	01 50 44.8	-0.5
	0.4nm,0.6s,baz=254,slow=6.4,SNR=3.8						
ASAR	Alice Springs	54.74	189	P	P	01 50 47.0	0.0
	0.7nm,0.5s,baz=1.5,slow=5.1,SNR=12						
NOA	NORSAR Array B	80.05	338	P	P	01 53 26.3	-0.4
	0.2nm,0.6s,baz=42,slow=5.1,SNR=2.7						
BRTR	Keskin Array B	83.28	312	P	P	01 53 45.1	+0.7
	0.7nm,0.8s,baz=77,slow=5.3,SNR=3.7						
TXAR	Lajitas Array	93.56	53	P	P	01 54 34.8	+0.9
	0.3nm,0.8s,baz=304,slow=1.8,SNR=3.4						

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*NEIC **25** 01:58:54.0±0.0, 41°.74S×174°.16E, h5^{km}, ML4.2(WEL), After WEL.*

WEL 25 01:58:54.6, **42°S**±1°×**174°.1E**±0°.6, **h20**^{km}±1^{km}, **M4.0**/35, **ML4.3**/24, **MLv4.0**/35, **Error ellipse: s-maj=0.0km s-min=0.0km az=179.5**, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.10	126	P	Pg	01 58 58.9	+0.4
BSWZ	Blackbirch Sta	0.17	261	P	Pg	01 58 59.8	+0.4
BSWZ				S	Sg	01 59 03.4	+0.8
TUWZ	Tuamarina	0.29	335	P	Pb	01 59 01.5	+0.5
TUWZ				S	Sg	01 59 06.1	+0.7
TCW	Tory Channel	0.49	15	P	Pg	01 59 04.7	0.0
SNZO	South Karori	0.59	50	ePg	Pb	01 59 06.2	+0.1
SNZO				eSg	Sb	01 59 13.5	-0.6
BHW	Baring Head	0.64	64	P	Pg	01 59 07.8	+0.5
BHW				S	Sg	01 59 16.8	+0.9
NNZ	Nelson	0.72	311	P	Pg	01 59 09.2	+0.4
KHZ	Kahutara	0.84	210	ePn	Pn	01 59 12.2	+0.9
KHZ				eSg	Sn	01 59 25.2	+2.2
KHZ	Kahutara	0.84	210	P	Pn	01 59 12.3	+1.0
PLWZ	Palliser	0.87	82	P	Pn	01 59 12.1	+0.4
DUWZ	D'Urville Isla	0.90	351	P	Pg	01 59 11.8	-0.3
MSWZ	Moikau Station	0.90	73	P	Pg	01 59 12.7	+0.5
THZ	Tophouse	0.90	265	ePg	Pn	01 59 12.7	+0.4
THZ				eSn	Sn	01 59 27.1	+2.4
THZ	Tophouse	0.90	265	P	Pn	01 59 12.6	+0.4
CAW	Cannon Point	0.93	52	P	Pg	01 59 12.7	0.0
PAWZ	Paruwai Farm	1.04	73	P	Pg	01 59 14.5	-0.3
MTW	Mount Morrison	1.18	64	P	Pb	01 59 16.4	+0.2
OGWZ	Otaki Gorge	1.19	43	P	Pg	01 59 17.0	-0.6
TRWZ	Traveller	1.22	77	P	Pn	01 59 16.7	+0.2
HOWZ	Holdsworth Sta	1.32	54	P	Pb	01 59 18.7	-0.1
TMWZ	Te Maipa	1.46	67	P	Pn	01 59 20.1	+0.1
QRZ	Quartz Range	1.47	305	ePn	Pg	01 59 22.2	-0.7
QRZ				eSn	Sg	01 59 41.6	-0.4
QRZ	Quartz Range	1.47	305	P	Pg	01 59 22.2	-0.7
GVZ	Greta Valley S	1.50	211	P	Pb	01 59 21.8	0.0
MRZ	Mangatainoka R	1.51	48	P	Pb	01 59 21.5	-0.5
DSZ	Denniston Nort	1.72	267	P	Pb	01 59 26.2	+0.6
OHWZ	Ohakea	1.74	32	P	Pb	01 59 26.8	+0.9
LTZ	Lake Taylor	1.75	231	ePn	Pb	01 59 26.9	+0.9
LTZ				eSn	Sb	01 59 47.3	-0.2
LTZ	Lake Taylor	1.75	231	P	Pb	01 59 25.6	-0.4
POWZ	Post Office Ro	1.81	45	P	Pb	01 59 25.9	-1.1
PRWZ	Pori Road	1.81	52	P	Pn	01 59 25.3	+0.7
AMCZ	Amberley	1.83	215	P	Pn	01 59 25.8	+0.8
BFZ	Birch Farm	1.90	59	ePn	Pn	01 59 25.7	-0.2
BFZ				eSn	Sb	01 59 51.0	-1.0
BFZ	Birch Farm	1.90	59	P	Pn	01 59 26.3	+0.4
WAZ	Wanganui	2.04	19	P	Pb	01 59 31.9	+0.8
DVHZ	Dannevirke	2.09	49	P	Pn	01 59 28.5	0.0
TSZ	Takapari Road	2.15	41	P	Pn	01 59 30.1	+0.7
OKCZ	Okains Bay	2.17	200	P	Pn	01 59 29.5	-0.2
CRLZ	Canterbury Las	2.18	210	ePn	Pn	01 59 30.1	+0.4
CRLZ				eSg	Sn	01 59 56.9	+0.8
INZ	Inchbonnie	2.23	241	P	Pb	01 59 32.8	-1.4
LREZ	Lake Rotokare	2.24	6	P	Pb	01 59 33.3	-1.0
OXZ	Oxford	2.24	222	ePn	Pn	01 59 31.0	+0.4
OXZ				eSn	Sb	01 59 59.8	-1.8
OXZ	Oxford	2.24	222	P	Pn	01 59 30.8	+0.2
MQZ	McQueen's Vall	2.28	207	ePn	Pn	01 59 30.2	-1.0
MQZ				eSn	Sn	01 59 58.0	-0.6
MQZ	McQueen's Vall	2.28	207	P	Pn	01 59 30.5	-0.6
PREZ	Palmer Road	2.34	1	P	Pb	01 59 35.9	-0.3
PNHZ	Pukenui	2.38	43	P	Pn	01 59 33.3	+0.7
KHEZ	Kahui Hut	2.39	358	P	Pb	01 59 36.8	-0.2
WPHZ	Waipukurau	2.40	48	P	Pn	01 59 33.3	+0.5
NBEZ	Newall Road No	2.42	356	P	Pb	01 59 37.4	-0.1
PKE	Pukeiti	2.49	358	P	Pb	01 59 37.7	-1.0
DREZ	Durham Road	2.50	2	P	Pb	01 59 39.8	+1.1
MTVZ	Mangateitei	2.53	25	P	Pb	01 59 40.1	+0.8
PKVZ	Pokaka	2.58	22	P	Pb	01 59 38.6	-1.6
MOVZ	Moawhango	2.60	29	P	Pb	01 59 38.2	-2.4
VRZ	Vera Road	2.61	11	P	Pb	01 59 39.3	-1.4
BHHZ	Black Hill Sta	2.66	35	P	Pn	01 59 38.5	+2.1
DRZ	Dome Shelter	2.66	25	P	Pb	01 59 43.0	+1.3
WHVZ	Whangaehu Hut	2.66	26	P	Pb	01 59 39.4	-2.2
FWVZ	Far West T-bar	2.67	25	P	Pb	01 59 39.8	-2.1
KRHZ	Kereru	2.67	41	P	Pn	01 59 37.1	+0.5
TUVZ	Tukino	2.69	27	P	Pb	01 59 39.7	-2.5
NGZ	Ngauruhoe	2.76	25	P	Pb	01 59 40.9	-2.4
TWVZ	Taurewa	2.81	22	P	Pn	01 59 41.2	+2.8
WTVZ	West Tongariro	2.81	24	P	Pb	01 59 41.6	-2.6
KRVZ	Karewarewa	2.84	25	P	Pb	01 59 44.5	-0.3
WVZ	Waitaha Valley	2.85	240	P	Pb	01 59 43.6	-1.2
KATZ	Kakaramea	2.97	25	P	Pb	01 59 48.5	+1.5
RPZ	Rata Peaks	3.03	227	ePn	Pn	01 59 42.3	+0.9
RPZ				eSn	Sn	02 00 18.8	+1.7
RPZ	Rata Peaks	3.03	227	P	Pn	01 59 43.7	+2.3
RATZ	Rangitukua	3.09	25	P	Pb	01 59 50.4	+1.5
BKZ	Black Stump Fm	3.11	37	ePn	Pn	01 59 42.9	+0.3
BKZ				eSn	Sn	02 00 21.8	+2.6
BKZ	Black Stump Fm	3.11	37	P	Pn	01 59 43.7	+1.1
HIZ	Hauiti	3.22	11	ePn	Pn	01 59 46.0	+1.9
HIZ				eSn	Sn	02 00 24.5	+2.6
HIZ	Hauiti	3.22	11	P	Pn	01 59 47.1	+3.0
WATZ	Wairara	3.23	23	P	Pb	01 59 51.7	+0.5
TLZ	Tolley Road	3.53	19	P	Pn	01 59 51.7	+3.4
FOZ	Fox Glacier	3.66	238	ePn	Pn	01 59 52.0	+1.9
FOZ	Fox Glacier	3.66	238	P	Pb	01 59 54.8	-3.8
LBZ	Lake Benmore	3.94	226	ePn	Pn	01 59 54.6	+0.6
LBZ				eSn	Sn	02 00 38.3	-1.2
LBZ	Lake Benmore	3.94	226	P	Pn	01 59 55.3	+1.3
TOZ	Tahuroa Road	4.10	16	P	Pn	01 59 59.9	+3.8
URZ	Urewera	4.13	35	ePn	Pn	01 59 57.7	+1.2
URZ				eSn	Sn	02 00 47.1	+2.8
ODZ	Otahua Downs	4.20	216	ePn	Pn	01 59 57.8	+0.3
ODZ				eSn	Sn	02 00 44.0	-1.9
ODZ	Otahua Downs	4.20	216	P	Pn	01 59 58.2	+0.7
JCZ	Jackson Bay	4.58	237	P	Pn	02 00 07.4	+4.6
RUGZ	Raukumara Rang	4.62	38	P	Pn	02 00 06.9	+3.4
AWAZ	Awhitu Peninsu	4.64	5	P	Pn	02 00 07.5	+4.0
MKAZ	Moumakai	4.65	10	P	Pn	02 00 06.5	+2.8
WKZ	Wanaka	4.86	228	ePn	Pn	02 00 08.6	+2.0
WKZ				eSn	Sn	02 01 02.3	0.0
WIAZ	Waiheke Island	4.95	10	P	Pn	02 00 12.6	+4.7
OUZ	Omahuta	6.47	356	ePn	Pn	02 00 31.1	+2.3
OUZ				eSn	Sn	02 01 47.3	+5.4
CTZ	Chatham Island	7.13	110	P	Pn	02 00 39.4	+1.6

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*ISCJB **25** 02:07:17.3±0.2, 15°.79S±0°.03×71°.89W±0°.05, h10^{km}, mb4.6/51, MS3.7/12, Error ellipse: s-maj=7.7km s-min=3.1km az=153.9*

*ARE **25** 02:07:20.0±0.0, 15°.75S×72°.01W, h7^{km}*

*NEIC **25** 02:07:20.8±2.3, 15°.83S×72°.01W, h19^{km}±3^{km}, mb4.7/55, ML4.5(ARE), Error ellipse: s-maj=11.9km s-min=5.1km az=70.0*

NEIC Felt [II] at Huambo.

*GCMT **25** 02:07:21.8±0.3, 15°.71S±0°.02×71°.87W±0°.04, h19^{km}±1^{km}, MW4.8/65, Moment Tensor Solution. s33,c34; s65,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.99±.14; $M_{\theta\theta}$1.83±.09; $M_{\phi\phi}$0.15±.09; $M_{r\theta}$-0.12±.16; $M_{\theta\phi}$-0.43±.07; $M_{\phi r}$-0.20±.24; Best double couple: $M_0$1.97500×10^{16} NP1:ϕ_s97.00000°, δ46.00000°, λ-99.00000°. NP2: ϕ_s290.00000°, δ44.00000°, λ-81.00000°. Principal axes: T 1.9350, Plg1.0000°, Azm193.0000°; N 0.0740, Plg6.0000°, Azm103.0000°; P -2.0150, Plg84.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **25** 02:07:24.3±1.7, 15°.62S×71°.71W, h44^{km}±17^{km}, mb3.8/9, mb1 4.0/15, mb1mx3.9/30, mbtmp4.1/15, ML3.8/6, MS3.8/18, Ms1 3.7/18, ms1mx3.7/25 Error ellipse: s-maj=21.0km s-min=12.1km az=52.0*

ISC 25 02:07:19.2±0.4, **15°.75S**±0°.05×**71°.88W**±0°.06, **h10**^{km}, **n107**, σ**1^{s}73**/107, **mb4.7**/51, **MS3.6**/12, **1D**, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I08BO	LAS PENAS INFR	3.33	98	i		02 27 30.0	
	baz=279,slow=326,SNR=1.5						
LPAZ	La Paz	3.64	99	P	Pb	02 08 23.1	-1.0
	1.1nm,0.3s,baz=252,slow=9.7,SNR=21						
LPAZ				LR	LR	02 09 37.1	
	comp=Z,340nm,18.1s,baz=246,slow=38						
LPAZ	La Paz	3.64	99	ePn	Pn	02 08 19.9	+3.7
LPAZ				eSn	Sn	02 09 00.1	+0.4
MNMC	Minye Minye	4.01	147	ePn	Pn	02 08 24.9	+3.9
MNMC				eSn	Sn	02 09 07.3	-0.8
PB11	IPOC Station P	4.52	152	ePn	Pn	02 08 30.7	+2.9
PB11				eSn	Sn	02 09 21.1	+0.6
GO01	Chusmiza	4.66	147	ePn	Pn	02 08 34.6	+4.5
GO01				eSn	Sn	02 09 21.8	-2.8
PB01	IPOC Station P	5.73	157	ePn	Pn	02 08 46.1	+1.6
PB01				eSn	Sn	02 09 49.4	-1.1
NNA	Nana	6.10	307	P	Pn	02 08 51.0	+1.4
	2.4nm,0.3s,baz=145,slow=16,SNR=4.0						
NNA				S	Sn	02 10 04.0	+4.5
	0.4nm,0.3s,baz=252,slow=19,SNR=2.1						
NNA				LR	LR	02 11 12.9	
	comp=Z,1μm,19.9s,baz=133,slow=37						
NNA	Nana	6.10	307	ePn	Pn	02 08 51.5	+1.9
NNA				eSn	Sn	02 09 57.1	-2.3
PB04	IPOC Station P	6.75	166	ePn	Pn	02 08 59.3	+0.7
PB04				eSn	Sn	02 10 15.0	-0.7
LVC	Limon Verde	7.38	158	P	Pn	02 09 09.2	+1.9
	5.0nm,0.3s,baz=341,slow=9.8,SNR=22						
LVC				S	Sn	02 10 35.4	+4.0
	3.2nm,0.3s,baz=207,slow=14,SNR=3.4						
LVC				LR	LR	02 11 57.7	
	comp=Z,1μm,22.0s,baz=326,slow=37						
LVC	Limon Verde	7.38	158	ePn	Pn	02 09 06.4	-0.9
PB10	IPOC Station P	7.82	171	ePn	Pn	02 09 12.9	-0.2
PB10				eSn	Sn	02 10 40.2	-1.6
GO02	Mina Guanaco	9.61	167	ePn	Pn	02 09 38.5	+0.6
SIV	San Ignacio	10.40	93	P	Pn	02 09 49.7	+1.1
	0.9nm,0.3s,baz=287,slow=12,SNR=31						
SIV				LR	LR	02 14 20.1	
	comp=Z,412nm,21.6s,baz=282,slow=41						
GO03	Copiap	11.88	173	ePn	Pn	02 10 08.3	-0.6
GO04	Tololo Observa	14.39	176	ePn	Pn	02 10 40.3	-3.0
CFA	Coronel Fontan	16.13	169	P	Pn	02 11 09.3	+3.1
	0.2nm,0.3s,baz=340,slow=12,SNR=12						
CPUP	Villa Florida	17.17	130	P	Pn	02 11 20.7	+1.5
	0.1nm,0.3s,baz=255,slow=12,SNR=2.3						
CPUP				LR	LR	02 19 36.1	
	comp=Z,210nm,18.9s,baz=316,slow=43						
CPUP	Villa Florida	17.17	130	ePn	Pn	02 11 20.2	+0.9
	16nm,1.4s						
PTGA	Pitinga	19.00	39	P	P	02 11 40.8	-0.3
	0.2nm,0.3s,baz=220,slow=16,SNR=9.9						
PTGA				LR	LR	02 19 25.0	
	comp=Z,785nm,18.8s,baz=222,slow=38						
PTGA	Pitinga	19.00	39	eP	P	02 11 41.2	0.0
	36nm,1.4s						
ROSC	El Rosal	20.60	353	LR	LR	02 21 54.7	
	comp=Z,116nm,18.1s,baz=200,slow=42						
BDFB	Brasilia	22.97	93	P	P	02 12 23.2	-1.1
	1.8nm,0.6s,baz=149,slow=18,SNR=3.0						
BDFB				LR	LR	02 22 24.6	
	comp=Z,152nm,20.3s,baz=286,slow=40						
SDV	Santo Domingo	24.51	3	P	P	02 12 39.8	+0.6
	6.4nm,0.3s,baz=194,slow=10.0,SNR=5.2						
SDV	Santo Domingo	24.51	3	eP	P	02 12 39.6	+0.4
	40nm,1.3s						
PLCA	Paso Flores	24.92	178	P	P	02 12 44.7	+2.1
	11nm,1.1s,baz=17,slow=12,SNR=9.7						
PLCA				LR	LR	02 22 54.2	
	comp=Z,180nm,19.5s,baz=28,slow=37						
PLCA	Paso Flores	24.92	178	eP	P	02 12 40.6	-1.9
	16nm,1.1s						
MDP	Montagnes des	28.14	44	LR	LR	02 24 56.7	
	comp=Z,642nm,18.5s,baz=220,slow=38						
JTS	Las Juntas de	28.93	333	LR	LR	02 25 45.3	
	comp=Z,158nm,21.5s,baz=216,slow=38						
RPN	Rapa Nui	36.52	246	eP	P	02 14 24.1	-1.1
	150nm,1.1s						
656A	Willston	46.02	347	eP	P	02 15 42.7	-0.3
	67nm,1.3s						
HOPE	Hope Point	47.25	152	eP	P	02 15 52.1	-0.3
	47nm,1.3s						
PMSA	Palmer Station	49.27	176	eP	P	02 16 08.9	+1.1
	104nm,0.6s						
250A	Grady	49.42	344	eP	P	02 16 08.7	-0.7
	17nm,1.1s						
152A	Waverly Hall	49.69	346	eP	P	02 16 09.7	-1.7
	13nm,1.3s						
Z50A	Ashland	50.54	345	eP	P	02 16 18.1	+0.2
	16nm,1.3s						
LRAL	Lakeview Retre	50.62	344	eP	P	02 16 19.0	+0.6
	7.7nm,1.4s						
T57A	Hurt	52.92	353	eP	P	02 16 35.1	-0.5
	34nm,1.3s						
WLAR	White Oak Lake	53.17	338	eP	P	02 16 37.7	+0.3
	25nm,1.1s						
S57A	Dark Hollow, R	53.64	353	eP	P	02 16 40.7	-0.2
	37nm,1.4s						
MIAR	Mount Ida	54.11	338	eP	P	02 16 43.6	-0.8
	5.8nm,0.9s						
T49A	Edmonton	54.12	347	eP	P	02 16 43.0	-1.4
	15nm,1.4s						
TXAR	Lajitas Array	54.32	326	P	P	02 16 45.2	-1.0
	0.2nm,0.5s,baz=150,slow=8.7,SNR=6.3						
TXAR				LR	LR	02 38 34.1	
	comp=Z,48nm,20.6s,baz=0.0,slow=34						
W39A	Magazine	54.77	338	eP	P	02 16 51.1	+2.0
	11nm,1.4s						
ABTX	Abilene, Hawle	54.95	331	eP	P	02 16 50.2	-0.4
	17nm,1.3s						
PBMO	Poplar Bluff	55.10	342	eP	P	02 16 52.3	+0.7
	17nm,1.4s						
HHAR	Hobbs	55.79	338	eP	P	02 16 55.5	-1.1
	11nm,1.2s						
O56A	Blue Knob Stat	56.07	354	eP	P	02 17 01.0	+2.5
	20nm,1.5s						
SSPA	Standing Stone	56.37	355	eP	P	02 17 01.8	+1.2
	11nm,1.4s						
N55A	Marion Center	56.63	354	eP	P	02 17 02.3	-0.1
	35nm,1.3s						
MSTX	Muleshoe	57.54	330	eP	P	02 17 11.2	+2.0
	13nm,1.3s						
LAZ	Ladron	60.10	327	eP	P	02 17 26.3	-0.8
SDCO	Great Sand Dun	61.89	330	eP	P	02 17 38.2	-1.1
	12nm,1.4s						
D53A	Lac Vacive, Po	62.76	356	eP	P	02 17 42.1	-2.4
	12nm,1.3s						
Y14A	Wickenburg	63.06	322	eP	P	02 17 48.9	+2.0
	5.4nm,1.3s						
WUAZ	Wupatki	63.24	324	eP	P	02 17 48.9	+0.6
	6.1nm,1.2s						
ECSD	EROS Data Cent	63.38	340	eP	P	02 17 50.5	+1.8
	20nm,1.4s						
PV01	Paradox Valley	63.70	328	eP	P	02 17 51.7	+0.4
	7.8nm,1.3s						
PV13	Radium Mtn., P	63.85	328	eP	P	02 17 54.7	+2.4
	6.3nm,1.3s						
PV20	West Nyswonger	64.06	328	epP	pP	02 18 00.8	+2.4
KNB	Kanab	65.14	325	eP	P	02 18 02.0	+1.4
	8.4nm,1.4s						
EYMN	Ely	65.79	346	eP	P	02 18 03.5	-0.9
	8.8nm,1.2s						
CCUT	Cedar City	65.82	325	eP	P	02 18 06.3	+1.2
	6.9nm,1.4s						
SHPR	Sheep Range	66.11	323	eP	P	02 18 09.1	+2.2
	4.4nm,1.3s						
AGMN	Agassiz Nation	67.25	343	eP	P	02 18 13.2	-0.6
	5.5nm,0.9s						
DUG	Dugway, Tooele	67.43	327	eP	P	02 18 16.4	+1.1
	6.1nm,1.1s						
R11A	Troy Canyon, C	67.63	324	eP	P	02 18 17.6	+0.9
	2.6nm,1.1s						
BW06	Boulder Array	67.75	331	eP	P	02 18 19.7	+2.4
PD31	Pinedale Array	67.75	331	eP	P	02 18 17.7	+0.4
	2.8nm,1.4s						
PDAR	Pinedale Array	67.75	331	P	P	02 18 17.7	+0.4
	0.6nm,0.8s,baz=148,slow=5.3,SNR=6.6						
PDAR				LR	LR	02 49 46.1	
	comp=Z,42nm,21.2s,baz=136,slow=38						
MDND	Maddock	67.99	340	eP	P	02 18 18.5	0.0
	43nm,1.3s						
BGU	Big Grassy Mou	68.08	327	eP	P	02 18 21.7	+2.3
	3.5nm,1.2s						
ULM	Lac du Bonnet	69.03	344	P	P	02 18 23.8	-1.1
	2.8nm,0.8s,baz=204,slow=4.0,SNR=4.1						
ULM				LR	LR	02 50 23.4	
	comp=Z,55nm,21.9s,baz=162,slow=37						
ULM	Lac du Bonnet	69.03	344	eP	P	02 18 25.9	+1.0
	12nm,1.3s						
OMMB	Old Mammoth Mi	69.12	321	eP	P	02 18 26.3	+0.1
	4.9nm,1.3s						
SCHQ	Schefferville	70.43	3	LR	LR	02 51 33.0	
	comp=Z,60nm,19.9s,baz=65,slow=38						
PAHR	Pah Rah Range	70.72	323	eP	P	02 18 36.9	+1.2
	5.5nm,1.1s						
BOZ	Bozeman (W)	70.87	332	eP	P	02 18 36.6	+0.1
	3.4nm,1.4s						
MFID	Camas Ranch	71.31	328	eP	P	02 18 39.9	+0.7
	14nm,1.4s						
BMO	Blue Mountains	73.08	328	eP	P	02 18 49.5	-0.2
	2.5nm,1.1s						
TOA1	Torodi Ar. Sit	78.21	73	eP	P	02 19 17.6	-2.1
TORD	Torodi Ar. Bea	78.21	73	P	P	02 19 17.6	-2.1
	1.5nm,0.9s,baz=276,slow=4.9,SNR=5.6						
SYO	Syowa Base	82.84	160⇓	eP	P	02 19 43.1	-0.4
ESDC	Sonseca Array	83.81	46	P	P	02 19 48.4	-0.6
	0.3nm,0.7s,baz=266,slow=5.0,SNR=4.6						
ESDC				LR	LR	02 52 55.9	
	comp=Z,32nm,21.0s,baz=245,slow=33						
YKA	Yellowknife Ar	84.86	342	P	P	02 19 53.4	-0.4
	1.2nm,0.8s,baz=134,slow=5.3,SNR=3.8						
YKB5	Yellowknife Ar	84.86	342	eP	P	02 19 53.4	-0.4
MAW	Mawson	90.61	164	LR	LR	02 59 47.3	
	comp=Z,54nm,22.0s,baz=234,slow=35						
KEST	Kesra	92.14	54	LR	LR	03 03 50.0	
	comp=Z,58nm,18.3s,baz=239,slow=37						
AKTO	Aktyubinsk	127.04	38	PKP	PKPdf	02 26 23.7	+0.1
	1.0nm,0.7s,baz=262,slow=4.9,SNR=5.1						
AS31	Alice Springs	133.42	213	ePKPdf	PKPdf	02 26 36.2	-0.4
ASAR	Alice Springs	133.42	213	PKP	PKPdf	02 26 36.2	-0.4
	0.5nm,0.7s,baz=138,slow=2.1,SNR=4.3						
ZAA1	Zalesovo Array	137.76	20	ePKPdf	PKPdf	02 26 41.2	-2.5
ZALV	Zalesovo Beam	137.76	20	PKP	PKPdf	02 26 41.2	-2.5
	0.9nm,0.3s,baz=305,slow=5.1,SNR=4.2						
KURBB	Kurchatov Arra	137.84	28	PKP	PKPdf	02 26 44.3	+0.4
	0.6nm,0.8s,baz=317,slow=2.6,SNR=3.4						
MK32	Makanchi Array	142.32	29	ePKPpre	PKPdf	02 26 48.3	-3.9
MKAR	Makanchi Array	142.32	29	PKhKP	PKPdf	02 26 48.3	-3.9
	0.6nm,0.7s,baz=333,slow=1.9,SNR=4.1						
KSH	Kashi	143.28	44	ePKP	PKPbc	02 26 53.4	+2.1
KSH				pPKP	sPKPdf	02 27 05.9	+4.9
KSH				sPKP		02 27 08.8	
KSH				PKS	PKSdf	02 30 28.3	-1.8
USRK	Ussuriysk Ar.	145.16	329	PKPbc	PKPbc	02 26 55.4	-1.4
	1.8nm,0.8s,baz=46,slow=8.6,SNR=5.2						
MAT	Matsushiro	146.19	313	PKP	PKPdf	02 26 57.9	-1.4
MJAR	Matsushiro Arr	146.19	313	PKPbc	PKPdf	02 26 59.4	+0.1
	7.2nm,1.1s,baz=49,slow=0.4,SNR=12						
SONA0	Songino Array	147.97	2	ePKPbc	PKPdf	02 27 05.6	+3.6
SONM	Songino Array	147.97	2	PKPbc	PKPdf	02 27 05.6	+3.6
	6.9nm,1.0s,baz=340,slow=2.1,SNR=17						
KSRS	Korea Array	152.17	325	PKPbc	PKPbc	02 27 15.6	+0.2
	2.1nm,0.8s,baz=5.0,slow=2.0,SNR=7.6						
KS15	Wonju Array Si	152.20	325	ePKPbc	PKPbc	02 27 15.6	+0.1
WHN	Wuhan	164.21	340	PKP	PKPdf	02 27 09.3	-14
CD2	Chengdu	164.39	14	PKP	PKPdf	02 27 24.1	+0.3

IDC 25 02:21:48.5±3.4, **30°.05S**×**177°.36W**, **h0**^{km}, **mb4.1**/4, **mb1 4.3**/4, **mb1mx3.9**/24, **mbtmp4.1**/4, **Error ellipse: s-maj=142.6km s-min=37.2km az=156.0**, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	34.29	278	P	P	02 28 37.4	+0.6
	2.0nm,0.5s,baz=98,slow=14,SNR=2.8						
STKA	Stephens Creek	35.10	256	P	P	02 28 43.9	+0.3
	2.7nm,0.8s,baz=104,slow=12,SNR=3.7						
ASAR	Alice Springs	43.68	266	P	P	02 29 54.5	-0.9
	1.0nm,0.7s,baz=108,slow=7.4,SNR=9.7						
WRA	Warramunga Arr	44.64	271	P	P	02 30 02.2	-0.9
	1.7nm,0.4s,baz=102,slow=8.4,SNR=16						
FINES	FINESS Array B	145.00	341	PKPbc	PKPbc	02 41 25.9	-0.4
	1.4nm,0.3s,baz=55,slow=4.1,SNR=27						
NB2	NORSAR Subarra	148.48	352	PKP	PKPbc	02 41 36.0	-0.6
	comp=Z,0.4nm,0.7s,baz=12,slow=4.4						
NOA	NORSAR Array B	148.48	352	PKPbc	PKPbc	02 41 36.3	-0.2
	comp=Z,0.3nm,0.7s,baz=13,slow=4.3,SNR=4.9						

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*IDC **25** 02:24:20.8±0.7, 14°.68N×55°.76E, h0^{km}, mb3.8/17, mb1 3.9/18, mb1mx3.7/60, mbtmp3.8/18, ML3.8/1, MS3.7/24, Ms1 3.7/24, ms1mx3.5/41, Error ellipse: s-maj=21.3km s-min=13.8km az=121.0*

*ISCJB **25** 02:24:21.2±0.5, 14°.72N±0°.07×55°.73E±0°.07, h18^{km}, mb4.2/35, MS3.6/22, Error ellipse: s-maj=10.5km s-min=8.5km az=141.6*

*GCMT **25** 02:24:21.3±0.4, 14°.69N±0°.03×55°.78E±0°.03, h16^{km}±1^{km}, MW4.9/68, Moment Tensor Solution. s21,c23; s68,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.03±.12; $M_{\theta\theta}$0.93±.08; $M_{\phi\phi}$0.10±.09; $M_{r\theta}$2.28±.43; $M_{\theta\phi}$-0.93±.07; $M_{\phi r}$-0.01±.26; Best double couple: $M_0$2.65000×10^{16} NP1:ϕ_s274.00000°, δ78.00000°, λ-109.00000°. NP2: ϕ_s153.00000°, δ23.00000°, λ-34.00000°. Principal axes: T 2.6690, Plg30.0000°, Azm20.0000°; N -0.0400, Plg19.0000°, Azm279.0000°; P -2.6310, Plg53.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 02:24:21.3±2.1, 14°.67N×55°.78E, h10^{km}±5^{km}, mb4.5/19 Error ellipse: s-maj=14.5km s-min=7.8km az=58.0*

ISC 25 02:24:22.9±0.6, **14°.69N**±0°.09×**55°.76E**±0°.09, **h18**^{km}, **n63**, σ**1^{s}18**/44, **mb4.1**/35, **MS3.6**/22, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	8.93	17	Pn	Pn	02 26 31.1	+0.1
	1.0nm,0.3s,baz=227,slow=11,SNR=8.9						

WSAR				LR	LR	02 29 58.7	
	comp=Z,1µm,18.5s,baz=236,slow=38						
ATD	**Arta Tunnel**	12.96	257	LR	LR	02 31 16.4	
	comp=Z,490nm,19.0s,baz=126,slow=32						
RAYN	**Ar Rayn**	13.07	314	*e*Pn	**Pn**	**02 27 27.3**	**-0.6**
KBL	**Kabul**	23.11	29	*e*P	**P**	**02 29 28.0**	**-0.3**
	34nm,1.7s						
GEYT	**Alibeck**	23.24	5	P	**P**	**02 29 30.4**	**+1.1**
	4.5nm,0.8s,baz=202,slow=7.4,SNR=7.4						
GEYT				LR	LR	02 40 19.1	
	comp=Z,144nm,18.0s,baz=170,slow=41						
GYA0B	**ALIBECK ARRAY**	23.24	5	*e*P	**P**	**02 29 27.4**	**-1.9**
	14nm,1.3s						
KMBO	**Kilima Mbogo**	24.13	231	P	**P**	**02 29 40.3**	**+1.9**
	0.9nm,0.6s,baz=31,slow=14,SNR=2.8						
KMBO				LR	LR	02 38 46.8	
	comp=Z,399nm,20.9s,baz=82,slow=36						
KMBO	**Kilima Mbogo**	24.13	231	*e*P	**P**	**02 29 36.7**	**-1.7**
	24nm,1.5s						
ASF	**Jabal al Asfar**	24.47	319	P	**P**	**02 29 40.3**	**-0.9**
	0.5nm,0.3s,baz=207,slow=11,SNR=3.1						
NIL	**Nilore**	24.65	37	*e*P	**P**	**02 29 41.8**	**-0.9**
	16nm,1.8s						
PALK	**Pallekele**	25.56	104	LR	LR	02 37 47.6	
	comp=Z,185nm,20.2s,baz=300,slow=32						
H08N2	**Diego Garcia H**	25.78	143	T	T	02 56 12.1	
	baz=324,slow=76,SNR=177						
H08N3	**Diego Garcia H**	25.79	143	T	T	02 56 17.2	
	baz=324,slow=76,SNR=146						
H08N1	**Diego Carcia H**	25.80	143	T	T	02 56 16.5	
	baz=324,slow=76,SNR=149						
MMAI	**Mount Meron Ar**	25.98	318	LR	LR	02 42 12.2	
	comp=Z,85nm,19.8s,baz=205,slow=41						
CHGR	**Chuyangaron**	26.64	24	*e*P	**P**	**02 30 01.4**	**+0.6**
	85nm,2.0s						
GNI	**Garni**	27.13	341	LR	LR	02 43 00.2	
	comp=Z,314nm,18.3s,baz=146,slow=41						
BTK	**Batken**	28.50	25	*e*P	**P**	**02 30 16.5**	**-0.9**
	31nm,1.6s						
KBZ	**Khabaz**	30.96	342	LR	LR	02 45 13.5	
	comp=Z,167nm,18.5s,baz=158,slow=40						
KIV	**Kislovodsk**	31.23	342	*e*P	**P**	**02 30 42.0**	**+0.5**
	4.6nm,0.7s						
BRTR	**Keskin Array B**	31.59	326	LR	LR	02 44 58.0	
	comp=Z,62nm,18.9s,baz=115,slow=39						
AAK	**Ala-Archa**	32.18	26	P	**P**	**02 30 52.0**	**+2.0**
	1.3nm,0.3s,baz=197,slow=6.7,SNR=4.2						
AAK				LR	LR	02 45 57.9	
	comp=Z,137nm,20.0s,baz=215,slow=40						
AAK	**Ala-Archa**	32.18	26	*e*P	**P**	**02 30 50.2**	**+0.2**
	20nm,1.9s						
KDJ	**Kajisay**	33.01	30	*e*P	**P**	**02 30 55.3**	**-2.0**
	5.4nm,1.1s						
ABKAR	**Akbulak array**	34.64	5	*e*P	**P**	**02 31 12.4**	**+1.3**
	8.8nm,1.4s						
AKTO	**Aktyubinsk**	35.69	2	P	**P**	**02 31 21.2**	**+1.0**
	1.8nm,0.5s,baz=178,slow=8.1,SNR=11						
AKTO				LR	LR	02 48 50.2	
	comp=Z,127nm,18.6s,baz=177,slow=41						
TIRR	**Tirgusor**	37.67	327	*e*P	**P**	**02 31 36.5**	**-0.6**
	22nm,1.1s						
MAKZ	**Makanchi**	38.79	29	*e*P	**P**	**02 31 45.0**	**-1.6**
	11nm,1.6s						
MK31	**Makanchi Array**	38.92	29	*e*P	**P**	**02 31 49.8**	**+2.0**
	6.0nm,1.9s						
MK32	**Makanchi Array**	38.92	29	*e*P	**P**	**02 31 47.9**	**+0.2**
MKAR	**Makanchi Array**	38.92	29	P	**P**	**02 31 47.9**	**+0.2**
	0.4nm,0.6s,baz=217,slow=10,SNR=3.8						
MKAR				LR	LR	02 50 06.3	
	comp=Z,154nm,19.6s,baz=220,slow=40						
VTS	**Vitosha**	39.44	321	*e*P	**P**	**02 31 50.9**	**-1.3**
	2.2nm,1.0s						
KURBB	**Kurchatov Arra**	40.30	22	P	**P**	**02 32 00.3**	**+1.2**
	1.1nm,0.9s,baz=220,slow=7.8,SNR=6.1						
KURK	**Kurchatov**	40.41	22	*e*P	**P**	**02 31 59.6**	**-0.4**
	2.6nm,1.0s						
CMAR	**Chiang Mai Arr**	41.49	79	P	**P**	**02 32 10.7**	**+1.3**
	0.8nm,0.3s,baz=283,slow=9.2,SNR=5.6						
CMAR				LR	LR	02 48 33.9	
	comp=Z,50nm,19.8s,baz=224,slow=35						
AKASG	**Malin Array Be**	41.83	335	LR	LR	02 52 58.4	
	comp=Z,73nm,20.4s,baz=130,slow=41						
OBN	**Obninsk**	43.00	344	LR	LR	02 52 54.9	
	comp=Z,20nm,19.9s,baz=307,slow=40						
MATP	**Matopo**	44.00	218	P	**P**	**02 32 30.7**	**+1.0**
	1.5nm,0.5s,baz=37,slow=9.2,SNR=11						
PSI	**Prapat**	44.18	101	LR	LR	02 49 03.5	
	comp=Z,77nm,18.8s,baz=250,slow=34						
BLY	**Banja Luka**	44.28	320	*e*P	**P**	**02 32 32.0**	**+0.5**
	4.6nm,0.7s						
ZALV	**Zalesovo Beam**	45.31	24	P	**P**	**02 32 38.6**	**-1.0**
	1.0nm,0.4s,baz=216,slow=9.7,SNR=4.6						
ZALV				LR	LR	02 53 56.4	
	comp=Z,105nm,19.4s,baz=250,slow=39						
ZAA1	**Zalesovo Array**	45.31	24	*e*P	**P**	**02 32 38.6**	**-1.1**
TUE	**Stuetta**	49.96	319	*e*P	**P**	**02 33 14.6**	**-1.6**
	2.5nm,0.9s						
MNAI	**Manna**	50.46	108	*e*P	**P**	**02 33 20.5**	**+0.4**
	317nm,1.1s						
FIA0	**FINESS Array S**	51.31	342	*e*P	**P**	**02 33 26.5**	**+0.6**
FINES	**FINESS Array B**	51.31	342	P	**P**	**02 33 26.5**	**+0.6**
	2.2nm,0.8s,baz=119,slow=11,SNR=6.2						
FINES				LR	LR	02 58 25.2	
	comp=Z,50nm,18.4s,baz=189,slow=40						
BOSA	**Boshof**	52.19	214	P	**P**	**02 33 33.6**	**+0.6**
	0.7nm,0.4s,baz=53,slow=10,SNR=3.3						
TORD	**Torodi Ar. Bea**	52.39	275	P	**P**	**02 33 34.3**	**-0.3**
	0.2nm,0.6s,baz=89,slow=5.9,SNR=5.6						
TOA1	**Torodi Ar. Sit**	52.40	275	*e*P	**P**	**02 33 34.3**	**-0.3**
HFS	**Hagfors**	54.70	336	P	**P**	**02 33 51.3**	**+0.4**
	0.6nm,0.7s,baz=85,slow=17,SNR=4.7						
NB200	**NORSAR Array S**	56.23	336	*e*P	**P**	**02 34 03.3**	**+1.4**
NOA	**NORSAR Array B**	56.23	336	P	**P**	**02 34 03.3**	**+1.4**
	0.1nm,0.5s,baz=124,slow=5.8,SNR=2.9						
NOA				LR	LR	03 03 02.7	
	comp=Z,46nm,19.0s,baz=250,slow=41						
ESDC	**Sonseca Array**	57.53	308	P	**P**	**02 34 12.0**	**+0.5**
	1.8nm,0.7s,baz=84,slow=6.3,SNR=24						
ARCES	**ARCESS Array B**	58.00	348	P	**P**	**02 34 15.9**	**+1.6**
	1.4nm,0.7s,baz=146,slow=8.8,SNR=12						
ARCES				LR	LR	03 03 08.7	
	comp=Z,76nm,18.8s,baz=170,slow=40						
SMRI	**Semarang**	58.37	108	*e*P	**P**	**02 34 15.6**	**-2.1**
	152nm,1.5s						
DBIC	**Dimbokro**	59.95	269	LR	LR	03 01 33.1	
	comp=Z,62nm,18.2s,baz=85,slow=37						
KSRS	**Korea Array**	67.14	55	LR	LR	03 04 21.9	
	comp=Z,54nm,20.6s,baz=232,slow=36						
H01W3	**Cape Leeuwin H**	74.12	133	T	T	03 56 45.2	
	baz=302,slow=75,SNR=30						
H01W2	**Cape Leeuwin H**	74.13	133	T	T	03 56 45.5	
	baz=302,slow=75,SNR=25						
H01W1	**Cape Leeuwin H**	74.14	133	T	T	03 56 40.0	
	baz=302,slow=75,SNR=28						
MJAR	**Matsushiro Arr**	75.42	56	LR	LR	03 09 51.2	
	comp=Z,35nm,21.3s,baz=75,slow=36						
ASAR	**Alice Springs**	85.32	116	P	**P**	**02 36 58.5**	**-1.0**
	0.9nm,0.8s,baz=309,slow=6.0,SNR=5.1						
PETK	**Petropavlovsk-**	85.39	36	LR	LR	03 19 31.1	
	comp=Z,47nm,19.5s,baz=310,slow=39						

IDC 25 02:39:51.9±3.0**, 6°.46S×128°.63E, h0^{km}, mb3.9**/1**, mb1 3.8**/3**, mb1mx3.4**/36**, mbtmp3.6**/3**, ML3.6**/2**, Error ellipse: s-maj=326.6km s-min=31.1km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.51	158	Pn	Pn	02 43 17.7	-0.9
	0.4nm,0.3s,baz=335,slow=13,SNR=9.7						
WRA				Sn	Sn	02 45 46.5	-14
	0.7nm,0.3s,baz=330,slow=22,SNR=7.0						
ASAR	**Alice Springs**	17.85	164	P	P	02 44 02.4	-0.2
	0.1nm,0.3s,baz=344,slow=9.6,SNR=4.0						
ASAR				S	Sn	02 47 07.1	-14
	0.1nm,0.3s,baz=354,slow=28,SNR=2.7						
MKAR	**Makanchi Array**	67.03	327	P	P	02 50 46.9	0.0
	0.5nm,0.3s,baz=112,slow=8.0,SNR=9.6						

IDC 25 02:41:36.6±2.0**, 10°.08N×91°.09E, h0^{km}, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.5**/46**, mbtmp3.8**/5**, ML4.4**/1**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.7**/28**, Error ellipse: s-maj=70.2km s-min=23.5km az=63.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	11.28	42	Pn	Pn	02 44 18.6	-0.6
	0.8nm,0.3s,baz=227,slow=14,SNR=5.8						
H08S3	**Diego Garcia H**	25.55	227	T	T	03 15 20.8	
	baz=47,slow=75,SNR=165						
H08S2	**Diego Garcia H**	25.55	227	T	T	03 15 21.3	
	baz=47,slow=75,SNR=179						
H08S1	**Diego Carcia H**	25.57	227	T	T	03 15 22.3	
	baz=47,slow=75,SNR=136						
KAPI	**Kappang**	32.25	116	LR	LR	03 02 04.1	
	comp=Z,31nm,18.5s,baz=134,slow=38						
MKAR	**Makanchi Array**	37.35	350	P	P	02 48 50.1	-0.7
	0.4nm,0.6s,baz=169,slow=9.4,SNR=3.8						
MKAR				LR	LR	03 05 56.8	
	comp=Z,27nm,21.6s,baz=160,slow=39						
KURBB	**Kurchatov Arra**	41.73	348	P	P	02 49 27.6	+0.3
	0.5nm,0.9s,baz=150,slow=6.4,SNR=4.1						
WRA	**Warramunga Arr**	51.98	125	P	P	02 50 47.4	-0.6
	1.1nm,0.3s,baz=297,slow=9.9,SNR=18						
ASAR	**Alice Springs**	53.63	129	P	P	02 51 00.9	+0.7
	0.6nm,0.5s,baz=305,slow=7.2,SNR=10						

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*ISN **25** 03:26:20.0±1.4, 33°.52N×47°.28E, h0^{km}±5^{km}, ML3.1*

*ISCJB **25** 03:26:21.9±0.3, 33°.52N±0°.03×47°.31E±0°.03, h10^{km}, Error ellipse: s-maj=4.2km s-min=3.2km az=10.7*

*TEH **25** 03:26:21.4, 33°.53N×47°.40E, h8^{km}, ML3.2*

*THR **25** 03:26:23.8, 33°.59N×47°.42E, h15^{km}, ML3.2*

ISC 25 03:26:21.3±0.8**, 33°.52N**±0°.04×**47°.34E**±0°.03**, h10^{km}, n40, σ1^{s}50**/46**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	0.42	89	*e*Pg	**Pg**	**03 26 29.1**	**-0.4**
IKOM	**Komasi**	0.67	12	*e*Pg	**Pg**	**03 26 33.9**	**-0.4**
IKOM				IAMB	IAmb	03 26 45.6	
	comp=Z,0.0nm,0.6s						
IDOB	**Doab**	0.75	69	*e*Pg	**Pg**	**03 26 35.3**	**-0.4**
KCHF	**Cheshme Sefid,**	0.80	342	*e*Pg	**Pb**	**03 26 36.8**	**-0.5**
KCHF				IAMB	IAmb	03 26 49.0	
	comp=Z,0.0nm,0.4s						
IKMR	**Kamar-syah**	0.87	90	*e*Pg	**Pg**	**03 26 36.9**	**-1.1**
IKMR				IAMB	IAmb	03 26 50.5	
	comp=Z,0.0nm,0.4s						
IGHG	**Ghaleghazi**	1.03	322	*e*Pg	**Pn**	**03 26 42.7**	**+0.6**
IGHG				IAMB	IAmb	03 27 19.1	
	comp=Z,4µm,0.8s						
IBZA	**Bozab**	1.04	24	*e*Pg	**Pn**	**03 26 42.2**	**0.0**
IVIS	**Veis**	1.09	338	*e*Pg	**Pn**	**03 26 43.1**	**+0.4**
IVIS				*e*Sg	**Sn**	**03 26 57.4**	**-0.5**
IBDR	**Badra**	1.25	251	*e*Pg	**Pn**	**03 26 44.0**	**-0.8**
	baz=70						
IBDR				AML	AML	03 26 44.9	
	comp=Z,105nm,0.4s						
IBDR				*e*Sg	**Sn**	**03 27 02.0**	**+0.3**
HSAM	**Samen**	1.26	56	*e*Pg	**Pn**	**03 26 44.3**	**-0.8**
IDHR	**Dehrash**	1.42	326	*e*Pn	**Pg**	**03 26 48.8**	**+0.2**
IDHR				IAMB	IAmb	03 27 18.2	
	comp=Z,0.0nm,1.4s						
ILIN	**Lien**	1.43	347	*e*Pn	**Pg**	**03 26 48.7**	**-0.1**
ILIN				IAMB	IAmb	03 26 50.8	
	comp=Z,4µm,0.3s						
SNGE	**Sanandaj**	1.57	0	*e*Pn	**Pg**	**03 26 51.6**	**+0.1**
SNGE	**Sanandaj**	1.57	0	Pg	**Pg**	**03 26 51.6**	**+0.1**
HSRG	**Sareghieh**	1.89	24	*e*Pn	**Pg**	**03 26 56.6**	**-0.9**
HAGD	**Aghdareh**	1.98	48	*e*Pn	**Pb**	**03 26 56.8**	**-0.7**
KHMZ	**Khomeyn**	2.19	83	*e*Pn	**Pb**	**03 27 01.1**	**-0.1**
KHMZ	**Khomeyn**	2.19	83	AML	AML	03 27 39.1	
	comp=E,193nm,0.4s						
KHMZ				AML	AML	03 27 41.5	
	comp=N,117nm,0.8s						
KHMZ	**Khomeyn**	2.19	83	Pn	**Pb**	**03 27 01.1**	**-0.1**
KHMZ				Sg	**Sg**	**03 27 31.0**	**-0.8**
ASAO	**Ashtian**	2.45	64	*e*Pn	**Pb**	**03 27 04.4**	**-1.2**
ASAO	**Ashtian**	2.45	64	Pn	**Pb**	**03 27 04.4**	**-1.2**
BHD	**Baghdad**	2.49	265	*e*Pn	**Pn**	**03 27 03.2**	**+1.4**
BHD				AML	AML	03 27 08.4	
	comp=Z,3µm,0.2s						
BHD				*e*Sn	**Sn**	**03 27 34.0**	**+1.7**
NSR	**Nassriya**	2.70	203	*e*Pn	**Pn**	**03 27 06.0**	**+1.3**
NSR				AML	AML	03 27 08.4	
	comp=Z,220nm,0.2s						
NSR				*e*Sn	**Sb**	**03 27 40.0**	**-2.8**
IRAZ	**Razeghan**	2.85	48	*e*Pn	**Pb**	**03 27 10.3**	**-2.0**
IRAZ				IAMB	IAmb	03 28 03.7	
	comp=Z,2µm,0.6s						
QABG	**Abgarm-Qazvin**	2.86	40	*e*Pn	**Pb**	**03 27 10.8**	**-1.8**
JHBN	**Jahan bin**	3.08	114	*e*Pn	**Pn**	**03 27 11.7**	**+1.5**
IPIR	**Pirpir**	3.09	105	*e*Pn	**Pn**	**03 27 12.0**	**+1.6**
IKRK	**Kirkuk**	3.11	308	*e*Pn	**Pn**	**03 27 11.4**	**+1.0**
IKRK				AML	AML	03 27 13.6	
	comp=Z,72nm,0.3s						
IKRK				*e*Sn	**Sn**	**03 27 50.0**	**+2.3**
ZNGN	**Zangian**	3.27	114	*e*Pn	**Pn**	**03 27 14.4**	**+1.5**
ROKH	**ROKH**	3.32	110	*e*Pn	**Pn**	**03 27 15.6**	**+2.2**
GHVR	**GHOM**	3.42	73	*e*Pn	**Pn**	**03 27 17.0**	**+2.2**
GHVR	**GHOM**	3.42	73	Pn	**Pn**	**03 27 16.9**	**+2.2**
IKLH	**Kolahrood**	3.55	92	*e*Pn	**Pn**	**03 27 19.1**	**+2.5**
IKLH				IAMB	IAmb	03 28 27.3	
	comp=Z,581nm,0.5s						
IGZV	**Ghazvin**	3.71	39	*e*Pn	**Pn**	**03 27 20.5**	**+1.6**
IVRN	**Varamin**	3.92	67	*e*Pn	**Pn**	**03 27 23.9**	**+2.3**
KRSH	**Karshahi**	4.02	82	*e*Pn	**Pn**	**03 27 25.7**	**+2.7**
IZEF	**Zefreh**	4.22	97	*e*Pn	**Pn**	**03 27 27.0**	**+1.0**
IDMV	**Damavand**	4.38	61	*e*Pn	**Pn**	**03 27 30.5**	**+2.4**
IDMV				IAMB	IAmb	03 29 05.7	
	comp=Z,477nm,0.6s						
MSL	**Mosul**	4.51	311	*e*Pn	**Pn**	**03 27 31.0**	**+1.4**
MSL				AML	AML	03 27 33.4	
	comp=Z,66nm,0.1s						
MSL				*e*Sn	**Sn**	**03 28 24.0**	**+1.8**
IRAM	**Ramesheh**	4.58	110	*e*Pn	**Pn**	**03 27 33.1**	**+2.3**

IDC 25 03:26:49.5±1.7**, 7°.51S×127°.05E, h0^{km}, mb3.6**/2**, mb1 4.0**/4**, mb1mx3.6**/29**, mbtmp3.8**/4**, ML4.0**/2**, Error ellipse: s-maj=215.7km s-min=30.3km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.24	151	Pn	Pn	03 30 11.0	-1.6
	0.7nm,0.3s,baz=324,slow=14,SNR=21						
WRA				Sn	Sn	03 32 34.8	-17
	1.6nm,0.3s,baz=334,slow=24,SNR=8.9						
ASAR	**Alice Springs**	17.36	158	Pn	P	03 30 54.7	-0.2
	0.5nm,0.3s,baz=340,slow=10,SNR=38						
ASAR				Sn	Sn	03 33 54.9	-12
	0.5nm,0.3s,baz=344,slow=24,SNR=8.8						
MKAR	**Makanchi Array**	67.08	328	P	P	03 37 45.4	+0.5
	0.2nm,0.5s,baz=134,slow=7.0,SNR=3.5						
KURBB	**Kurchatov Arra**	71.44	330	P	P	03 38 11.2	-0.5
	0.2nm,0.3s,baz=137,slow=5.1,SNR=3.1						

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*ISCJB **25** 03:27:31.3±1.2, 43°.38N±0°.06×78°.89E±0°.05, h12^{km}±10^{km}, Error ellipse: s-maj=9.8km s-min=6.3km az=12.6*

*NNC **25** 03:27:31.8±1.0, 43°.37N×78°.92E, h0^{km}, mpv2.9, Error ellipse: s-maj=11.9km s-min=4.8km az=177.0*

*SOME **25** 03:27:32.5, 43°.33N×78°.85E, h0^{km}*

ISC 25 03:27:31.3±2.3**, 43°.39N**±0°.06×**78°.88E**±0°.04**, h15^{km}**±18^{km}**, n6, σ0^{s}43**/12**, 2C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPKS	**Kokpek**	0.17	299	*e*P	**Pg**	**03 27 35.8**	**+0.2**
	69nm,0.1s						
KPKS				*e*S	**Sg**	**03 27 38.1**	**-0.2**
	62nm,0.3s						
UZB	**Uzynbulak**	0.26	157	P	**Pg**	**03 27 37.3**	**+0.3**
	12nm,0.1s						
UZB				S	**Sg**	**03 27 40.6**	**-0.2**
	34nm,0.1s						
UZB	**Uzynbulak**	0.26	157	*e*P	**Pg**	**03 27 37.3**	**+0.3**
	12nm,0.1s						
UZB				*e*S	**Sg**	**03 27 40.6**	**-0.2**
	34nm,0.1s						
PDGK	**Podgornoye**	0.45	97	⇑P	**Pg**	**03 27 40.7**	**+0.4**
	1.5nm,0.4s						
PDGK				⇑S	**Sg**	**03 27 45.7**	**-0.7**
	3.2nm,0.4s						
SATY	**Saty**	0.48	227	P	**Pg**	**03 27 41.1**	**+0.2**
	6.4nm,0.1s						
SATY				S	**Sg**	**03 27 46.9**	**-0.4**
	14nm,0.1s						
SATY	**Saty**	0.48	227	*e*P	**Pg**	**03 27 41.1**	**+0.2**
	6.2nm,0.1s						
SATY				*e*S	**Sg**	**03 27 46.9**	**-0.4**
	15nm,0.2s						

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*NEIC **25** 03:39:07.7±0.0, 40°.36N×127°.24W, h5^{km}, MD2.9(NCEDC), After NCEDC.*

*NCEDC **25** 03:39:07.7, 40°.36N×127°.24W, h5^{km}, MD2.9*

*ANF **25** 03:39:09.4±3.6, 40°.86N×127°.06W, ML3.3/1, Error ellipse: s-maj=38.8km s-min=17.5km az=49.0*

ISC 25 03:39:04.5±3.0**, 40°.53N**±0°.06×**127°.5W**±0°.2**, h16^{km}, n21, σ1^{s}48**/31**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCC	**Jacoby Creek,**	2.63	83	*e*Pn	**Pn**	**03 39 46.3**	**0.0**
JCC				*e*Sn	**Sn**	**03 40 15.7**	**-2.2**
KHMM	**Horse Mountain**	2.86	82	*e*Pn	**Pn**	**03 39 50.4**	**+0.7**
KHMM				*e*Sn	**Sn**	**03 40 21.8**	**-2.1**
KMRM	**Mail Ridge**	2.89	95	*e*Pn	**Pn**	**03 39 51.2**	**+1.3**
KMRM				*e*Sn	**Sn**	**03 40 24.1**	**-0.3**
KCPM	**Cahto Peak**	3.10	105	*e*Pn	**Pn**	**03 39 52.5**	**-0.4**
KCPM				*e*Sn	**Sn**	**03 40 27.1**	**-2.5**
L02E	**Cave Junction**	3.33	60	P	**Pn**	**03 39 56.3**	**+0.3**
	baz=238,SNR=6.8						
L02E				S	**Sn**	**03 40 31.5**	**-3.8**
	baz=238						
K02D	**Willamette Mer**	3.58	52	P	**Pn**	**03 39 59.4**	**-0.1**
	baz=230,SNR=9.3						
O02D	**Mt. Diablo Mer**	3.59	94	P	**Pn**	**03 40 01.0**	**+1.4**
	baz=274,SNR=7.5						
O02D				S	**Sn**	**03 40 42.6**	**+0.8**
	baz=274						
M02C	**Callahan**	3.60	75	S	**Sn**	**03 40 41.3**	**-0.6**
	baz=254						
N02D	**Trinity Center**	3.65	82	S	**Sn**	**03 40 43.1**	**0.0**
	baz=261						
HOPS	**Hopland Field**	3.72	113	*e*Pn	**Pn**	**03 40 01.3**	**-0.1**
HOPS				*e*Sn	**Sn**	**03 40 42.9**	**-1.9**
J01E	**Myrtle Point**	3.73	44	P	**Pn**	**03 40 01.4**	**+0.1**
	baz=222,SNR=5.9						
WDC	**Whiskeytown Da**	3.75	88	*e*Pn	**Pn**	**03 40 02.9**	**+1.1**
WDC				*e*Sn	**Sn**	**03 40 45.9**	**+0.2**
YBH	**Yreka Blue Hor**	3.79	70	*e*Pn	**Pn**	**03 40 04.3**	**+2.0**
YBH				*e*Sn	**Sn**	**03 40 48.5**	**+1.9**
L04D	**Klamath Falls**	4.23	65	P	**Pn**	**03 40 10.9**	**+2.4**
	baz=245,SNR=6.3						
MCCM	**Marconi Confer**	4.28	122	*e*Pn	**Pn**	**03 40 09.7**	**+0.7**
O03E	**Paynes Creek**	4.33	91	S	**Sn**	**03 41 00.2**	**+0.1**
	baz=273						
M04C	**Macdoel**	4.43	72	P	**Pn**	**03 40 13.2**	**+2.0**
	baz=252,SNR=6.7						
I02D	**Swisshome**	4.47	36	P	**Pn**	**03 40 12.0**	**+0.4**
	baz=215,SNR=9.3						
J05D	**Fort Rock, OR**	5.40	57	P	**Pn**	**03 40 25.9**	**+1.3**
	baz=239,SNR=7.1						
SAO	**San Andreas Ge**	6.03	127	*e*Pn	**Pn**	**03 40 34.1**	**+1.0**
SAO				*e*Sn	**Sn**	**03 41 41.2**	**-0.5**
WVOR	**Wild Horse Val**	6.90	71	*e*Pn	**Pn**	**03 40 45.4**	**+0.3**

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*KRNET **25** 03:39:16.2±0.1, 41°.33N×75°.74E, h20^{km}, mb3.8*

*IDC **25** 03:39:16.0±1.5, 41°.13N×75°.05E, h0^{km}, mb3.4/3, mb1 3.4/7, mb1mx3.2/48, mbtmp3.3/7, ML2.9/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/34, Error ellipse: s-maj=20.2km s-min=16.8km az=91.0*

*SOME **25** 03:39:17.0, 41°.38N×75°.78E, h15^{km}, MS2.8*

*KNET **25** 03:39:17.7±0.5, 41°.46N×75°.66E, h6^{km}±3^{km}, ml3.5, Error ellipse: s-maj=3.4km s-min=2.6km az=154.0*

*NNC **25** 03:39:19.0±1.5, 41°.43N×75°.75E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=10.8km s-min=6.9km az=175.0*

ISC 25 03:39:15.2±1.1**, 41°.31N**±0°.05×**75°.82E**±0°.02**, h9^{km}**±6^{km}**, n89, σ1^{s}25**/141**, mb3.6**/4**, 25C-47D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	0.18	48	⇑*i*P	**Pb**	**03 39 20.7**	**+1.6**
	baz=62						
NRN				⇑*i*S	**Sb**	**03 39 24.2**	**+2.3**
	baz=62						
KZA	**Kyzart**	0.88	331	⇓*i*P	**Pg**	**03 39 32.0**	**-0.1**
	baz=34						
KZA				⇓*i*S	**Sg**	**03 39 43.2**	**-0.3**
	baz=34						
KZA	**Kyzart**	0.88	331	P	**Pg**	**03 39 32.0**	**-0.1**
	181nm,0.1s,SNR=1022						
KZA				⇓S	**Sg**	**03 39 41.6**	**-1.9**
	2µm,0.2s						
ULHL	**Ulahol**	0.98	18	⇓*i*P	**Pn**	**03 39 34.8**	**-0.6**
	baz=22						
ULHL				⇓*i*S	**Sn**	**03 39 48.0**	**-1.6**
	baz=22						
ULHL	**Ulahol**	0.98	18	⇓P	**Pn**	**03 39 34.8**	**-0.6**
	206nm,0.1s,SNR=365						
ULHL				⇑S	**Sn**	**03 39 48.0**	**-1.6**
	1µm,0.2s						
BOOM	**Boomskoye usch**	1.18	4	⇑*i*P	**Pn**	**03 39 38.0**	**0.0**
	baz=8.0						
BOOM				⇑*i*S	**Sn**	**03 39 53.8**	**-0.5**
	baz=8.0						
ARLS	**Aral**	1.25	296	⇓*i*P	**Pn**	**03 39 37.8**	**-1.2**
	baz=98						
ARLS				⇓*i*S	**Sb**	**03 39 53.4**	**-1.9**
	baz=98						
KDJ	**Kajisay**	1.30	51	⇓*i*P	**Pg**	**03 39 41.1**	**+0.9**
	baz=53						
KDJ				⇓*i*S	**Sg**	**03 39 59.0**	**+1.9**
	baz=53						
UCH	**Uchtor**	1.34	313	⇓*i*P	**Pn**	**03 39 39.9**	**-0.6**
	baz=15						
UCH				⇓*i*S	**Sb**	**03 39 57.2**	**-1.0**
	baz=15						
UCH	**Uchtor**	1.34	313	⇓P	**Pn**	**03 39 39.9**	**-0.6**
	82nm,0.2s,SNR=304						
UCH				⇓S	**Sb**	**03 39 57.3**	**-0.9**
	829nm,0.4s						
KBK	**Karagaybulak**	1.49	334	⇑*i*P	**Pb**	**03 39 43.3**	**+0.1**
	baz=36						
KBK				⇑*i*S	**Sb**	**03 40 02.4**	**+0.1**
	baz=36						
KBK	**Karagaybulak**	1.49	334	P	**Pb**	**03 39 43.4**	**+0.2**
	276nm,0.1s,SNR=300						
KBK				⇓S	**Sg**	**03 40 03.0**	**-0.1**
	2µm,0.2s						
TKM2	**Tokmak 2**	1.61	354	⇓P	**Pb**	**03 39 45.7**	**+0.5**
	38nm,0.2s						
TKM2				⇓S	**Sg**	**03 40 07.0**	**-0.2**
	242nm,0.3s						
TKM2	**Tokmak 2**	1.61	354	⇓*i*P	**Pb**	**03 39 45.8**	**+0.5**
	baz=56						
TKM2				⇓*i*S	**Sb**	**03 40 06.4**	**+0.5**
	baz=56						
TKM2	**Tokmak 2**	1.61	354	P	**Pb**	**03 39 45.7**	**+0.4**
	115nm,0.1s,SNR=219						
TKM2				⇓S	**Sg**	**03 40 07.1**	**0.0**
	680nm,0.1s						
AAK	**Ala-Archa**	1.65	324	Pg	**Pb**	**03 39 45.9**	**-0.1**
	46nm,0.3s,baz=104,slow=4.6,SNR=90						
AAK				Lg	Lg	03 40 06.4	
	72nm,0.3s,baz=343,slow=18,SNR=14						
AAK	**Ala-Archa**	1.65	324	⇑P	**Pb**	**03 39 45.7**	**-0.1**
	47nm,0.4s						
AAK				⇑S	**Sb**	**03 40 07.3**	**+0.4**
	171nm,0.3s						
AAK	**Ala-Archa**	1.65	324	⇓*i*P	**Pb**	**03 39 45.8**	**-0.1**
	baz=25						
AAK				⇓*i*S	**Sb**	**03 40 07.0**	**+0.1**
	baz=25						
AAK	**Ala-Archa**	1.65	324	⇓P	**Pb**	**03 39 45.8**	**-0.1**
	107nm,0.2s,SNR=67						
AAK				⇓S	**Sb**	**03 40 07.1**	**+0.2**
	262nm,0.2s						
KST	**Kastek**	1.73	3	P	**Pg**	**03 39 48.1**	**-0.2**
	241nm,0.8s						
KST				S	**Sg**	**03 40 11.6**	**+0.7**
	495nm,0.5s						
KST	**Kastek**	1.73	3	⇓*i*P	**Pg**	**03 39 48.1**	**-0.2**
	142nm,0.3s						
KST				*e*S	**Sg**	**03 40 10.6**	**-0.2**
	529nm,0.4s						
FRU1	**Bishkek**	1.74	330	⇓*i*P	**Pb**	**03 39 47.2**	**-0.1**
	baz=31						
FRU1				⇓*i*S	**Sb**	**03 40 09.3**	**0.0**
	baz=31						

AML	Almayashu baz=98	1.79	298	⇓iP	Pb	03 39 48.0	-0.4
AML	baz=98			⇓iS	Sb	03 40 10.7	-0.4
AML	Almayashu 80nm,0.2s,SNR=329	1.79	298	⇑P	Pn	03 39 47.9	+1.2
IZV	Izvestkoviy 154nm,0.4s	1.82	19	P	Pg	03 39 50.2	+0.1
IZV	374nm,0.2s			S	Sg	03 40 14.7	+1.0
IZV	Izvestkoviy 154nm,0.4s	1.82	19	eP	Pg	03 39 50.2	+0.1
IZV	374nm,0.2s			eS	Sg	03 40 14.1	+0.5
CHMS	Chumysh baz=37	1.86	335	⇓iP	Pb	03 39 49.3	-0.1
CHMS	baz=37			⇓iS	Sb	03 40 13.1	+0.3
CHMS	Chumysh 299nm,0.3s,SNR=230	1.86	335	⇑P	Pb	03 39 49.8	+0.3
CHMS	248nm,0.1s			⇓S	Sb	03 40 13.9	+1.1
MTBS	Maitube 108nm,0.3s	1.87	14	P	Pg	03 39 50.9	-0.2
MTBS	778nm,0.2s			S	Sg	03 40 16.0	+0.7
MTBS	Maitube 105nm,0.1s	1.87	14	⇑iP	Pg	03 39 50.9	-0.2
MTBS	778nm,0.2s			eS	Sg	03 40 15.4	+0.1
TNSS	Tian-Shan 207nm,0.5s	1.91	26	Pg	Pg	03 39 52.2	+0.3
TNSS	594nm,0.3s			Lg	Lg	03 40 18.1	
TNSS	Tian-Shan 207nm,0.5s	1.91	26	⇑iP	Pg	03 39 52.2	+0.3
TNSS	574nm,0.3s			eS	Sg	03 40 17.8	+1.0
EKS2	Erkin-Say baz=13	2.03	312	⇓eP	Pb	03 39 51.4	-1.0
EKS2	baz=13			⇓iS	Sn	03 40 16.6	+1.3
EKS2	Erkin-Say 85nm,0.3s,SNR=67	2.03	312	⇓P	Pb	03 39 51.8	-0.6
AAA	Alma-Ata 144nm,0.2s	2.06	23	Pg	Pg	03 39 55.0	+0.3
AAA	661nm,0.2s			Lg	Lg	03 40 23.0	
AAA	Alma-Ata 144nm,0.2s	2.06	23	eP	Pg	03 39 55.0	+0.3
AAA	661nm,0.2s			eS	Sg	03 40 22.7	+1.3
MDOK	Medeo 417nm,0.5s	2.06	26	Pg	Pg	03 39 54.5	-0.2
MDOK	400nm,0.4s			Lg	Lg	03 40 22.5	
MDOK	Medeo 151nm,0.5s	2.06	26	eP	Pg	03 39 54.5	-0.2
MDOK	398nm,0.3s			eS	Sg	03 40 21.8	+0.4
KNDC	Almaty 92nm,0.2s	2.08	24	⇓P	Pg	03 39 54.9	-0.2
KNDC	243nm,0.3s			⇑S	Sg	03 40 24.1	+1.9
ARSB	Arslanbob baz=71	2.14	271	⇓eP	Pn	03 39 52.7	+1.5
ARSB	baz=71			⇓iS	Sn	03 40 19.2	+1.2
KOTS	Kotyrbulak 122nm,0.3s	2.14	26	Pg	Pg	03 39 56.2	-0.1
KOTS	3µm,0.3s			Lg	Lg	03 40 24.8	
KOTS	Kotyrbulak 122nm,0.3s	2.14	26	eP	Pg	03 39 56.2	-0.1
KOTS	3µm,0.3s			eS	Sg	03 40 24.8	+0.7
USP	Ospenovka baz=35	2.18	334	⇓iP	Pb	03 39 53.9	-1.0
USP	baz=35			⇓iS	Sb	03 40 21.0	-1.1
USP	Ospenovka 245nm,0.2s,SNR=295	2.18	334	⇑P	Pb	03 39 55.0	+0.1
PRZ	Przheval'sk baz=59	2.25	58	⇑iP	Pb	03 39 56.0	-0.1
PRZ	baz=59			⇑iS	Sb	03 40 24.6	+0.4
SGDS	Sogindy 426nm,0.4s	2.31	338	Pg	Pb	03 39 58.0	+0.9
SGDS	425nm,0.2s			Lg	Lg	03 40 28.0	
MRKS	Merke 134nm,0.5s	2.41	307	Pg	Pb	03 39 58.5	-0.2
MRKS	304nm,0.4s			Lg	Lg	03 40 29.5	
MRKS	Merke 130nm,0.6s	2.41	307	⇑iP	Pb	03 39 58.5	-0.2
MRKS	304nm,0.4s			eS	Sb	03 40 28.2	-0.3
KTBS	Karatobe 211nm,0.3s	2.48	15	Pg	Pg	03 40 01.7	-1.0
KTBS	883nm,0.5s			Lg	Lg	03 40 34.0	
KTBS	Karatobe 211nm,0.3s	2.48	15	eP	Pg	03 40 01.7	-1.0
KTBS	883nm,0.5s			eS	Sg	03 40 34.0	-0.8
SATY	Saty 98nm,0.3s	2.59	47	Pg	Pg	03 40 04.7	-0.2
SATY	695nm,0.3s			Lg	Lg	03 40 38.9	
SATY	Saty 98nm,0.3s	2.59	47	eP	Pg	03 40 04.7	-0.2
SATY	695nm,0.3s			eS	Sg	03 40 38.9	+0.4
KUU	Kurty 89nm,0.3s	2.60	8	Pg	Pg	03 40 04.1	-1.0
KUU	348nm,0.4s			Lg	Lg	03 40 38.0	
KUU	Kurty 89nm,0.3s	2.60	8	eP	Pg	03 40 04.1	-1.0
KUU	348nm,0.4s			eS	Sg	03 40 38.0	-0.9
CHKK	Chushkaly 85nm,0.3s	2.68	18	Pg	Pg	03 40 06.0	-0.6
CHKK	657nm,0.2s			Lg	Lg	03 40 41.6	
CHKK	Chushkaly 85nm,0.3s	2.68	18	⇑iP	Pg	03 40 06.0	-0.6
CHKK	657nm,0.2s			eS	Sg	03 40 40.9	-0.4
KURS	Kuram 67nm,0.5s	2.78	38	Pg	Pg	03 40 07.8	-0.7
KURS	209nm,0.5s			Lg	Lg	03 40 44.3	
KURS	Kuram 67nm,0.5s	2.78	38	eP	Pg	03 40 07.8	-0.7
KURS	209nm,0.5s			eS	Sg	03 40 44.3	-0.2
ARK	Arkit baz=80	2.94	281	⇑iP	Pn	03 40 03.1	+1.0
ARK	baz=80			⇑iS	Sn	03 40 37.8	+0.2
UZB	Uzynbulak 39nm,0.5s	3.00	51	Pg	Pg	03 40 11.4	-1.3
UZB	175nm,0.3s			Lg	Lg	03 40 50.4	
UZB	Uzynbulak 39nm,0.5s	3.00	51	eP	Pg	03 40 11.4	-1.3
UZB	175nm,0.3s			eS	Sg	03 40 50.4	-1.1
KPKS	Kokpek 77nm,0.3s	3.02	44	eP	Pg	03 40 11.7	-1.4
KPKS	757nm,0.3s			eS	Sg	03 40 50.9	-1.3
ARXS	Arharly 58nm,0.4s	3.25	26	Pg	Pg	03 40 15.8	-1.6
ARXS	653nm,0.5s			Lg	Lg	03 40 58.4	
ARXS	Arharly 58nm,0.4s	3.25	26	eP	Pg	03 40 15.8	-1.6
ARXS	653nm,0.5s			eS	Sg	03 40 58.4	-1.2
MNBS	Baschi 25nm,0.3s	3.35	34	Pg	Pg	03 40 18.5	-1.0
MNBS	236nm,0.3s			Lg	Lg	03 41 02.7	
MNBS	Baschi 25nm,0.3s	3.35	34	eP	Pg	03 40 18.5	-1.0
MNBS	236nm,0.3s			eS	Sg	03 41 02.7	-0.2
PDGK	Podgornoye 2.9nm,0.5s	3.38	52	⇓Pn	Pb	03 40 13.4	-2.0
PDGK	21nm,0.6s			⇓Pg	Pg	03 40 22.5	+2.5
PDGK	82nm,0.7s			⇑Lg	Lg	03 41 01.8	
PDGK	Podgornoye baz=53	3.38	52	⇓eP	Pb	03 40 11.7	-3.7
PDGK	baz=53			⇓eS	Sn	03 40 51.7	+3.1
BTLS	Baital 15nm,0.3s	3.94	341	eP	Pb	03 40 27.3	+2.4
BTLS	137nm,0.6s			eS	Sg	03 41 17.4	-4.4
KTMS	Ketmen 21nm,0.4s	3.97	56	Pg	Pg	03 40 29.2	-2.1
KTMS	38nm,0.5s			Lg	Lg	03 41 21.1	
KTMS	Ketmen 21nm,0.4s	3.97	56	eP	Pg	03 40 29.2	-2.1
KTMS	38nm,0.5s			eS	Sg	03 41 21.1	-1.8
TDK	Taldyqorghan 114nm,0.4s	4.14	26	eP	Pg	03 40 31.7	-2.8
TDK	273nm,0.4s			eS	Sg	03 41 25.0	-3.1
DJR	Jarkent 23nm,0.4s	4.20	43	Pg	Pg	03 40 34.1	-1.5
DJR	65nm,0.3s			Lg	Lg	03 41 28.2	
DJR	Jarkent 23nm,0.4s	4.20	43	eP	Pg	03 40 34.1	-1.5
DJR	65nm,0.3s			eS	Sg	03 41 29.4	-0.6
KK31	Karatay Array 2.5nm,0.3s,baz=110,slow=15,SNR=32	4.33	296	Pn	Pb	03 40 32.4	+0.9
KK31	22nm,0.5s,baz=107,slow=28,SNR=9.1			⇓Lg	Lg	03 41 28.3	
KAPS	Kapalarasan 23nm,0.7s	4.73	32	Pg	Pg	03 40 43.1	-2.7
KAPS	55nm,0.5s			Lg	Lg	03 41 42.7	
KAPS	Kapalarasan 22nm,0.7s	4.73	32	⇓iP	Pg	03 40 43.1	-2.7
KAPS	46nm,0.4s			eS	Sg	03 41 44.7	-2.4
MK31	Makanchi Array 0.2nm,0.2s,baz=220,slow=16,SNR=7.8	7.19	38	Pn	Pb	03 41 12.0	-8.1
MK31	2.0nm,0.6s,baz=225,slow=14,SNR=3.9			⇑Pg	Pg	03 41 32.3	-0.5
MK31	5.1nm,0.7s,baz=222,slow=26,SNR=3.9			Lg	Lg	03 43 00.9	
MKAR	Makanchi Array 0.3nm,0.3s,baz=222,slow=16,SNR=7.5	7.19	38	Pn	Pb	03 41 10.3	-10
MKAR	0.6nm,0.3s,baz=237,slow=18,SNR=3.3			Sn	Sb	03 42 46.9	+0.9
MKAR	comp=Z,50nm,20.1s,baz=90,slow=39			LR	LR	03 44 13.6	
OTUK	Ortayu 3.4nm,1.1s	7.36	342	⇑Pn	Pb	03 41 15.2	-7.8
OTUK	23nm,0.7s			⇑Lg	Lg	03 43 03.1	
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=202,slow=13,SNR=2.8	9.50	11	Pn	Pn	03 41 35.9	+3.9
KURBB	0.1nm,0.3s,baz=207,slow=20,SNR=4.9			Pg		03 42 15.6	
KURBB	0.2nm,0.3s,baz=206,slow=29,SNR=4.2			Lg	Lg	03 44 13.3	
KURBB	Kurchatov Arra 18nm,0.8s	9.50	11	⇓Lg	Lg	03 44 14.5	
BVAR	Borovoye Array 0.2nm,0.3s,baz=168,slow=10,SNR=2.5	12.28	344	Pn	Pn	03 42 11.2	+1.1
BVAR	0.2nm,0.3s,baz=165,slow=22,SNR=3.0			Sn	Sn	03 44 43.5	+16
BVAR	0.7nm,0.3s,baz=147,slow=28,SNR=7.6			Lg	Lg	03 45 41.2	
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=223,slow=14,SNR=2.6	14.00	22	Pn	P	03 42 41.7	+0.1
ZALV	0.3nm,0.3s,baz=218,slow=35,SNR=2.1			Lg	Lg	03 46 39.0	
AKTO	Aktyubinsk 0.1nm,0.3s,baz=109,slow=16,SNR=2.8	15.36	312	Pn	P	03 42 57.0	+0.2
ARCES	ARCESS Array B 0.7nm,0.7s,baz=92,slow=10,SNR=3.4	38.29	334	P	P	03 46 36.2	+0.7
BRG	Berggiesshubel 1.7nm,0.7s	42.80	305	eP	P	03 47 03.3	-10
NOA	NORSAR Array B 0.2nm,0.6s,baz=86,slow=8.5,SNR=2.7	42.97	320	P	P	03 47 14.2	-0.1
TORD	Torodi Ar. Bea 0.3nm,0.5s,baz=34,slow=6.1,SNR=5.2	69.55	270	P	P	03 50 23.8	-0.8

*IDC **25** 03:49:11.0±2.4, 0°.58S×132°.63E, h0^{km}, mb4.1/5, mb1 4.2/6, mb1mx3.8/33, mbtmp4.1/6, ML4.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/26, Error ellipse: s-maj=183.2km s-min=19.1km az=72.0*
*ISCJB **25** 03:49:13.3±0.7, 0°.53S±0°.06×133°.05E±0°.05, h35^{km}, MS2.8/1, Error ellipse: s-maj=8.5km s-min=7.0km az=32.7*
*DJA **25** 03:49:16.3±1.0, 0°S±5°×13°3E±°, h37^{km}±22^{km}, M4.6/8, mb5.0/5, mB5.2/2, MLv4.5/8, Mw(mB)4.5/2*
*NEIC **25** 03:49:21.1±1.5, 0°.95S×132°.07E, h78^{km}±9^{km}, mb4.3/6, Error ellipse: s-maj=21.2km s-min=12.5km az=84.0*
ISC 25 03:49:15.9±0.9, **0°.62S**±0°.07×**133°.00E**±0°.09, **h35^{km}, n23, σ2^{s}.72**/27, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	Sorong	1.76	262	P	Pn	03 49 43.7	-0.2
SWI				S	Sn	03 50 06.5	+1.4
FAKI	Fak Fak	2.40	198	ePn	Pn	03 49 53.0	+0.2
FAKI				eSn	Sn	03 50 17.3	-3.7
FAKI	Fak Fak	2.40	198	P	Pn	03 49 54.6	+1.8
FAKI				S	Sn	03 50 24.8	+3.7
MSAI	Masohi	4.89	236	P	Pn	03 50 29.3	+2.3
MSAI				S	Sn	03 51 24.1	+1.7
LBMI	Labuha 75nm,0.8s,1µm0.3nm	5.50	270	P	Pn	03 50 35.5	+0.1
LBMI	75nm,0.8s,1µm0.3nm			S	Sn	03 51 37.1	-0.4
NLAI	Namlea	6.45	246	P	Pn	03 50 48.7	+0.3
MTN	Manton Dam	12.28	189	ePn	Pn	03 52 05.8	-2.7
MTN				eSn	Sn	03 54 17.8	-6.5
PCI	Palu	13.17	269	P	Pn	03 52 03.5	-17
WR1	Warramunga Arr	19.25	176	eP	P	03 53 38.4	+0.9
WR1				eS	S	03 57 03.4	-10
WRA	Warramunga Arr 0.8nm,0.3s,baz=349,slow=11,SNR=27	19.25	176	P	P	03 53 38.4	+0.9
WRA	0.2nm,0.3s,baz=357,slow=24,SNR=4.4			S	S	03 57 03.4	-10
WB2	Warramunga Arr 7.6nm,0.9s	19.25	176	eP	P	03 53 38.0	+0.5
WB2				eS	S	03 57 07.5	-6.2
AS31	Alice Springs 3.9nm,0.4s	22.92	178	eP	P	03 54 17.9	+0.8
ASAR	Alice Springs 4.5nm,0.5s,baz=356,slow=10,SNR=49	22.93	178	P	P	03 54 18.1	+1.0
ASAR	0.8nm,0.7s,baz=3.8,slow=30,SNR=5.2			S	S	03 58 32.9	+8.0
STKA	Stephens Creek 6.1nm,0.7s,baz=345,slow=9.2,SNR=11	32.13	166	P	P	03 55 40.4	+0.2
STKA	Stephens Creek 1.5nm,0.8s	32.13	166	eP	P	03 55 40.4	+0.2
JNU	Nakatsue comp=Z,18nm,21.6s,baz=191,slow=32	33.62	357	LR	LR	04 06 51.4	
MDJ	Mudanjiang 17nm,1.5s	45.14	357	eP	P	03 57 32.1	+3.0
JOHN	Johnston Islan 134nm,1.0s	59.19	70	eP	P	03 59 21.4	+7.4
MK32	Makanchi Array	64.71	324	eP	P	03 59 49.9	-0.8
MKAR	Makanchi Array 0.3nm,0.5s,baz=108,slow=7.7,SNR=3.5	64.71	324	P	P	03 59 49.9	-0.8
ARSB	Arslanbob 7.5nm,0.3s	68.33	315	eP	P	04 00 11.0	-3.1
KURBB	Kurchatov Arra 0.7nm,0.7s,baz=128,slow=6.2,SNR=7.3	68.79	326	P	P	04 00 15.5	-1.0
BVAR	Borovoye Array 0.5nm,0.6s,baz=123,slow=5.3,SNR=4.2	74.38	326	P	P	04 00 48.9	-1.3

MEX 25 03:50:56.1±0.6, **16°.62N**×**94°.91W, h94^{km}**±7^{km}, **MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.47	3	i P	Pn	03 51 10.0	-1.0
CMIG				eS	Sn	03 51 20.3	-1.8
HUIG	Huatulco	1.43	234	eP	Pn	03 51 19.5	-1.7
HUIG				eS	Sn	03 51 38.8	-1.3
TUIG	Tuzandepetl	1.48	18	i P	Pn	03 51 20.8	-1.0
TUIG				eS	Sn	03 51 40.0	-1.3
TGIG		1.72	84	i P	Pn	03 51 22.8	-2.0
TGIG				i S	Sn	03 51 44.8	-2.0
VHO	Vista Hermosa	1.80	285	i P	Pn	03 51 25.2	-0.8
VHO				i S	Sn	03 51 47.7	-1.2
PCIG		1.86	119	i P	Pn	03 51 25.9	-0.7
PCIG				eS	Sn	03 51 47.7	-2.2
CCIG	Comitan	2.68	97	i P	Pn	03 51 37.3	-0.3
CCIG				i S	Sn	03 52 08.9	-0.6

WEL 25 04:13:33.0, 42°S±1°×**174°.2E**±0°.7, **h17^{km}**±1^{km}, **M3.3**/25, **ML3.5**/18, **MLv3.3**/25, **Error ellipse: s-maj=0.0km s-min=0.0km az=164.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.09	176	P	Pg	04 13 36.8	+0.3
CMWZ				S	Sg	04 13 39.7	+1.0
BSWZ	Blackbirch Sta	0.25	257	P	Pb	04 13 39.1	-0.1
BSWZ				S	Sb	04 13 43.3	0.0
TUWZ	Tuamarina	0.30	319	P	Pb	04 13 40.0	0.0
TUWZ				S	Sb	04 13 44.7	+0.1
TCW	Tory Channel	0.45	7	P	Pb	04 13 42.4	-0.1
TCW				S	Sb	04 13 49.0	+0.1
BHW	Baring Head	0.56	64	P	Pb	04 13 44.7	+0.4
BHW				S	Sb	04 13 52.7	+0.7
NNZ	Nelson	0.76	305	P	Pg	04 13 48.0	+0.2
PLWZ	Palliser	0.79	84	P	Pn	04 13 49.5	0.0
MSWZ	Moikau Station	0.82	73	P	Pn	04 13 49.7	-0.1
CAW	Cannon Point	0.85	50	P	Pg	04 13 49.6	+0.1
DUWZ	D'Urville Isla	0.88	346	P	Pg	04 13 50.2	+0.1
KHZ	Kahutara	0.91	213	P	Pn	04 13 51.4	+0.4
PAWZ	Paruwai Farm	0.96	74	P	Pn	04 13 52.0	+0.2
THZ	Tophouse	0.98	263	P	Pg	04 13 52.0	0.0
MTW	Mount Morrison	1.09	63	P	Pn	04 13 53.8	+0.2
OGWZ	Otaki Gorge	1.11	41	P	Pg	04 13 54.1	-0.3
TRWZ	Traveller	1.14	77	P	Pn	04 13 54.2	-0.1
HOWZ	Holdsworth Sta	1.25	53	P	Pb	04 13 56.1	0.0
TMWZ	Te Maipa	1.38	67	P	Pn	04 13 57.7	+0.1
MRZ	Mangatainoka R	1.44	47	P	Pb	04 13 58.9	-0.5
QRZ	Quartz Range	1.51	303	P	Pb	04 14 01.1	+0.5
GVZ	Greta Valley S	1.57	213	P	Pn	04 14 00.3	+0.2
OHWZ	Ohakea	1.68	30	P	Pb	04 14 04.0	+0.6
PRWZ	Pori Road	1.73	51	P	Pn	04 14 03.3	+0.9
POWZ	Post Office Ro	1.73	44	P	Pn	04 14 03.0	+0.7
DSZ	Denniston Nort	1.80	266	P	Pb	04 14 05.1	-0.5
LTZ	Lake Taylor	1.82	231	P	Pn	04 14 04.3	+0.6
WAZ	Wanganui	1.99	18	P	Pb	04 14 08.8	0.0
DVHZ	Dannevirke	2.01	48	P	Pn	04 14 06.2	0.0
TSZ	Takapari Road	2.08	40	P	Pn	04 14 07.5	+0.3
OKCZ	Okains Bay	2.23	202	P	Pn	04 14 08.4	-0.8
PNHZ	Pukenui	2.31	42	P	Pn	04 14 10.9	+0.6
INZ	Inchbonnie	2.31	242	P	Pb	04 14 13.9	-0.3
OXZ	Oxford	2.31	223	P	Pb	04 14 15.2	+0.9
KHEZ	Kahui Hut	2.37	356	P	Pb	04 14 16.3	+1.1
NBEZ	Newall Road No	2.40	354	P	Pg	04 14 19.5	+0.5
DREZ	Durham Road	2.47	360	P	Pg	04 14 20.8	+0.5
PKE	Pukeiti	2.47	356	P	Pg	04 14 20.2	-0.1
MTVZ	Mangateitei	2.47	23	P	Pb	04 14 18.5	+1.6
PKVZ	Pokaka	2.52	21	P	Pb	04 14 19.2	+1.4
MOVZ	Moawhango	2.54	28	P	Pb	04 14 18.3	+0.2
VRZ	Vera Road	2.56	10	P	Pb	04 14 17.4	-1.2
TRVZ	Turoa	2.57	24	P	Pb	04 14 19.4	+0.6
BHHZ	Black Hill Sta	2.59	34	P	Pb	04 14 16.7	-2.2
DRZ	Dome Shelter	2.59	24	P	Pg	04 14 21.7	-1.0
WHVZ	Whangaehu Hut	2.60	24	P	Pb	04 14 19.2	0.0
KRHZ	Kereru	2.60	40	P	Pb	04 14 20.8	+1.6
FWVZ	Far West T-bar	2.61	24	P	Pb	04 14 19.5	0.0
TUVZ	Tukino	2.63	25	P	Pn	04 14 17.1	+2.2
NGZ	Ngauruhoe	2.70	24	P	Pb	04 14 21.5	+0.6
TWVZ	Taurewa	2.75	20	P	Pb	04 14 22.4	+0.6
WTVZ	West Tongariro	2.75	23	P	Pb	04 14 22.9	+1.1
KAHZ	Kahuranaki	2.75	48	P	Pn	04 14 18.2	+1.7
KRVZ	Karewarewa	2.79	24	P	Pb	04 14 24.3	+1.9
KWHZ	Kaweka Forest	2.80	38	P	Pg	04 14 25.8	-0.8
RITZ	Rihia Road	2.96	26	P	Pg	04 14 28.4	-1.3
RATZ	Rangitukua	3.03	24	P	Pb	04 14 28.6	+2.0
BKZ	Black Stump Fm	3.04	36	P	Pb	04 14 28.1	+1.4
RPZ	Rata Peaks	3.10	227	P	Pg	04 14 30.4	-2.0
WATZ	Wairara	3.17	22	P	Pb	04 14 30.8	+1.9
HIZ	Hauiti	3.18	9	P	Pb	04 14 26.0	-3.0
TLZ	Tolley Road	3.48	18	P	Pb	04 14 35.6	+1.4
FOZ	Fox Glacier	3.74	239	P	Pb	04 14 38.7	+0.1
MKAZ	Moumakai	4.61	10	P	Pb	04 14 50.3	-3.0
JCZ	Jackson Bay	4.66	237	P	Pb	04 14 49.5	-4.7
RVAZ	Riverhead Bore	4.89	4	P	Pn	04 14 47.9	+2.2
WKZ	Wanaka	4.94	228	P	Pn	04 14 49.2	+2.7

*IDC **25** 04:25:57.2±0.7, 28°.69S×177°.50W, h0^{km}, mb4.4/11, mb1 4.6/11, mb1mx4.3/33, mbtmp4.4/11, MS3.6/10, Ms1 3.6/10, ms1mx3.4/19, Error ellipse: s-maj=26.8km s-min=22.2km az=101.0*
*ISCJB **25** 04:26:05.9±0.3, 28°.88S±0°.06×177°.83W±0°.08, h73^{km}, mb4.3/31, Error ellipse: s-maj=11.7km s-min=7.0km az=33.0*
*NEIC **25** 04:26:07.0±1.8, 28°.72S×177°.91W, h73^{km}±5^{km}, mb4.5/27, Error ellipse: s-maj=20.8km s-min=10.9km az=97.0*
ISC 25 04:26:07.2±0.5, **28°.84S**±0°.07×**177°.8W**±0°.1, **h73^{km}, n84, σ1^{s}.46**/74, **mb4.4**/31, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.43	200	ePn	Pn	04 26 19.9	+0.2
RAO				eSn	Sn	04 26 30.3	+1.4
URZ	Urewera 0.3nm,0.3s,baz=267,slow=5.0,SNR=2.9	10.32	203	Pn	Pn	04 28 25.7	-6.6
URZ	4.7nm,0.3s,baz=198,slow=16,SNR=13			Sn	Sn	04 30 22.9	-3.4
URZ	Urewera	10.32	203	ePn	Pn	04 28 27.6	-4.7
URZ				eSn	Sn	04 30 24.2	-2.1
QRZ	Quartz Range	14.36	211	ePn	Pn	04 29 27.4	+0.7
ONTNC	Ouen Toro 52nm,1.2s	15.66	291	ePn	Pn	04 29 40.5	-3.0
DZM	Mont Dzumac 41nm,1.4s	15.78	292	eP	P	04 29 51.5	+3.9
DZM	comp=Z,1µm,26.7s			eLR	LR	04 33 35.0	
DZM	Mont Dzumac comp=Z,560nm,21.7s,baz=162,slow=33	15.78	292	LR	LR	04 34 39.2	
RAR	Rarotonga comp=Z,322nm,20.2s,baz=264,slow=31	17.96	69	LR	LR	04 35 06.4	
MLZ	Mavora Lakes 39nm,1.2s	19.93	210	eP	P	04 30 31.8	-1.2
DCZ	Deep Cove	20.44	212	eP	P	04 30 36.9	-1.6
TBI	Tubuai comp=Z,549nm,30.2s	25.95	84	eLR	LR	04 37 43.5	
TBI	Tubuai 19nm,0.2s	25.95	84	eT	T	04 58 08.8	
PAE	Paea 14nm,0.3s	28.10	73	eT	T	05 00 45.3	
PPT2	Papeete2 comp=Z,505nm,26.5s,baz=236	28.14	73	eLR	LR	04 38 55.5	
PPT2	Papeete2 7.0nm,0.3s	28.14	73	eT	T	05 00 50.4	
PPT	Papeete comp=Z,29nm,18.2s,baz=295,slow=35	28.15	73	LR	LR	04 42 10.6	
TVO	Taravao 2.1nm,0.3s	28.32	73	eT	T	05 01 02.5	
VAH	Vaihoa 34nm,0.2s	30.93	70	eT	T	05 04 16.9	
STKA	Stephens Creek comp=Z,138nm,19.7s,baz=35,slow=34	35.07	255	LR	LR	04 45 40.3	
TAOE	Nuku Hiva Isla comp=Z,281nm,29.9s	40.51	68	eLR	LR	04 44 21.8	
AS31	Alice Springs 1.4nm,0.8s	43.43	265	eP	P	04 34 01.9	-1.2
AS31				ePcP	PcP	04 35 51.1	+0.8
ASAR	Alice Springs 3.9nm,0.8s,baz=114,slow=8.1,SNR=23	43.43	265	P	P	04 34 03.9	+0.8
ASAR	1.1nm,0.8s,baz=117,slow=3.6,SNR=3.5			PcP	PcP	04 35 51.1	+0.8
ASAR	comp=Z,161nm,19.5s,baz=106,slow=35			LR	LR	04 51 12.3	
WR1	Warramunga Arr	44.28	270	eP	P	04 34 10.7	+0.8
WRA	Warramunga Arr	44.28	270	P	P	04 34 10.6	+0.8

	6.8nm,0.8s,baz=106,slow=8.8,SNR=18						
CASY	Casey	56.62	207	eP	P	04 35 41.9	-0.3
	17nm,1.1s						
QSPA	South Pole Qui	61.26	180	P	P	04 36 15.9	+1.3
	14nm,1.1s,baz=34,slow=4.4,SNR=13						
MAW	Mawson	73.84	200	P	P	04 37 34.5	+1.0
	3.6nm,0.8s,baz=101,slow=4.6,SNR=8.6						
MAW	Mawson	73.84	200	eP	P	04 37 34.9	+1.5
	1.0nm,0.9s						
MJAR	Matsushiro Arr	77.09	325	P	P	04 37 52.3	-0.2
	3.8nm,0.9s,baz=168,slow=5.8,SNR=6.9						
MJAR				LR	LR	05 08 52.4	
	comp=Z,14nm,19.8s,baz=120,slow=33						
MAJO	Matsushiro	77.09	325	eP	P	04 37 52.4	-0.2
MJB9	Matsu-Tunnel	77.10	325	eP	P	04 37 51.8	-0.7
	6.6nm,0.7s						
SNAA	Sanae	79.70	178	P	P	04 38 05.6	-1.0
VNA3	Neumayer Olymp	79.84	176	P	P	04 38 07.0	-0.2
VNA1	Neumayer--Stat	80.51	176	P	P	04 38 10.8	0.0
KSRS	Korea Array	83.31	319	P	P	04 38 27.1	+1.3
	2.1nm,0.9s,baz=148,slow=6.3,SNR=5.8						
KSRS				LR	LR	05 11 53.1	
	comp=Z,15nm,20.8s,baz=180,slow=33						
KS15	Wonju Array Si	83.32	319	eP	P	04 38 27.1	+1.2
	18nm,1.4s						
PETK	Petropavlovsk-	84.36	345	P	P	04 38 30.2	-0.7
	2.8nm,0.6s,baz=119,slow=6.7,SNR=7.5						
PETK				LR	LR	05 12 29.6	
	comp=Z,30nm,19.4s,baz=142,slow=33						
PEA1	Petropavlovsk-	84.37	345	eP	P	04 38 30.2	-0.7
CMB	Columbia Colle	85.46	42	eP	P	04 38 36.4	-0.4
	3.6nm,0.9s						
AFDM	Forest Hills D	85.73	41	eP	P	04 38 38.7	+0.6
	2.5nm,0.8s						
GSC	Goldstone, Bar	85.85	46	eP	P	04 38 39.3	+0.4
	3.6nm,0.9s						
USRK	Ussuriysk Ar.	85.99	326	P	P	04 38 40.4	+1.2
	2.0nm,0.7s,baz=168,slow=2.8,SNR=6.3						
WAKR	Walker	86.33	42	eP	P	04 38 41.2	-0.1
	5.2nm,1.1s						
NV01	Mina Array Sit	86.95	43	eP	P	04 38 43.5	-0.8
NVAR	Mina Array Bea	86.95	43	P	P	04 38 43.5	-0.8
	2.0nm,0.9s,baz=220,slow=8.6,SNR=12						
NVAR				LR	LR	05 08 43.8	
	comp=Z,46nm,21.2s,baz=248,slow=30						
NV11	Mina Array Sit	87.04	43	eP	P	04 38 44.8	0.0
	0.3nm,1.2s						
TPNV	Topopah Spring	87.24	45	eP	P	04 38 46.1	+0.4
	3.5nm,1.1s						
PEL	Peldehue	87.41	127	epP	pP	04 39 03.6	-2.5
Y14A	Wickenburg	87.45	49	eP	P	04 38 46.9	+0.2
	3.0nm,1.0s						
Y14A				epP	pP	04 39 03.8	-2.4
KVN	Kaiserville	87.47	42	eP	P	04 38 46.3	-0.6
KVN				epP	pP	04 39 05.3	-1.0
TUC	Tucson	87.97	51	eP	P	04 38 49.9	+0.7
	2.7nm,0.9s						
TUC				epP	pP	04 39 08.5	-0.2
X16A	Lo Mia Camp, P	88.77	49	eP	P	04 38 53.7	+0.5
	4.1nm,1.0s						
X16A				epP	pP	04 39 12.5	-0.1
CCUT	Cedar City	89.42	46	eP	P	04 38 56.5	+0.4
CCUT				epP	pP	04 39 15.2	-0.4
U15A	North Rim	89.42	47	eP	P	04 38 56.6	+0.4
	3.3nm,1.0s						
KNB	Kanab	89.43	46	eP	P	04 38 57.0	+0.8
	8.5nm,1.4s						
KLR	Kul'dur	89.81	330	P	P	04 38 58.8	+1.5
	2.5nm,0.7s,baz=11,slow=2.6,SNR=8.8						
MTPU	Mount Pierson	90.46	46	eP	P	04 39 02.3	+1.2
	4.5nm,1.2s						
G08A	Pilot Rock	91.09	37	eP	P	04 39 03.1	-0.5
	5.2nm,1.1s						
TX31	Lajitas Ar. Si	91.36	57	eP	P	04 39 02.5	-2.7
	2.7nm,1.4s						
TX31				epP	pP	04 39 24.2	-0.5
TXAR	Lajitas Array	91.36	57	P	P	04 39 04.7	-0.5
	0.7nm,1.0s,baz=210,slow=7.2,SNR=5.6						
TXAR				LR	LR	05 10 23.6	
	comp=Z,17nm,20.7s,baz=0.0,slow=29						
ANMO	Albuquerque	92.44	51	eP	P	04 39 08.7	-1.4
	2.0nm,1.1s						
ANMO				epP	pP	04 39 29.1	-0.6
PV13	Radium Mtn., P	92.67	47	eP	P	04 39 12.4	+1.1
	6.5nm,1.0s						
MK32	Makanchi Array	116.93	311	ePKPdf	PKPdf	04 44 41.2	-2.1
MKAR	Makanchi Array	116.93	311	PKP	PKPdf	04 44 41.2	-2.1
	0.4nm,0.6s,baz=147,slow=2.5,SNR=4.7						
ARCES	ARCESS Array B	137.12	348	PKhKP	PKPpre	04 45 14.5	
	2.1nm,0.8s,baz=120,slow=1.9,SNR=5.5						
H10S2	ASCENSION HYDR	139.03	154	T	T	07 21 13.6	
	baz=205,slow=75,SNR=25						
H10S3	ASCENSION HYDR	139.03	154	T	T	07 21 18.6	
	baz=205,slow=75,SNR=19						
H10S1	ASCENSION HYDR	139.05	154	T	T	07 21 23.7	
	baz=205,slow=75,SNR=7.6						
H10N3	ASCENSION HYDR	140.11	154	T	T	07 22 16.7	
	baz=204,slow=74,SNR=21						
H10N1	ASCENSION HYDR	140.12	154	T	T	07 22 16.4	
	baz=204,slow=74,SNR=44						
H10N2	ASCENSION HYDR	140.13	154	T	T	07 22 34.7	
	baz=204						
FIA0	FINESS Array S	143.76	341	ePKPpre	PKPab	04 45 29.3	-0.8
FINES	FINESS Array B	143.76	341	PKhKP	PKPab	04 45 29.3	-0.8
	4.0nm,0.7s,baz=77,slow=4.1,SNR=16						
NB2	NORSAR Subarra	147.25	352	PKP	PKPdf	04 45 39.5	+0.3
	comp=Z,13nm,1.0s,baz=13,slow=2.9						
NB200	NORSAR Array S	147.25	352	ePKPbc	PKPdf	04 45 39.8	+0.6
NOA	NORSAR Array B	147.25	352	PKPbc	PKPdf	04 45 39.8	+0.6
	comp=Z,4.6nm,1.0s,baz=10,slow=4.1,SNR=30						
AKASG	Malin Array Be	150.18	325	PKPbc	PKPbc	04 45 48.0	-1.3
	comp=Z,12nm,0.9s,baz=45,slow=3.0,SNR=30						
AKBB	Malin Array Si	150.18	325	ePKPbc	PKPbc	04 45 48.7	-0.6
BR101	Keskin Array S	152.02	301	ePKPbc	PKPbc	04 45 53.4	-0.8
BRTR	Keskin Array B	152.02	301	PKPbc	PKPbc	04 45 53.4	-0.8
	comp=Z,1.3nm,0.8s,baz=287,slow=0.2,SNR=6.8						
CLL	Collm	156.15	343	ePKPab	PKPab	04 46 20.0	-0.7
	comp=Z,6.0nm,1.1s						
BRG	Berggiesshubel	156.29	341	ePKP	PKPab	04 46 20.7	-0.7
	comp=Z,4.3nm,0.8s						
TORD	Torodi Ar. Bea	164.38	178	PKP	PKPdf	04 46 02.5	-0.5
	comp=Z,1.9nm,1.1s,baz=333,slow=2.3,SNR=4.9						
TORD				PKPab	PKPab	04 47 02.3	+4.9
	comp=Z,1.7nm,1.0s,baz=198,slow=2.3,SNR=6.7						
TOA1	Torodi Ar. Sit	164.38	178	ePKPdf	PKPdf	04 46 02.5	-0.5
TOA1				ePKPab	PKPab	04 47 02.3	+4.9

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*ISCJB **25** 04:28:56.7±0.2, 21°.59S±0°.07×179°.43W±0°.06, h604^{km}, mb4.3/71, Error ellipse: s-maj=10.1km s-min=5.2km az=147.7*

*NEIC **25** 04:28:58.0±1.6, 21°.50S×179°.44W, h606^{km}±6^{km}, mb4.3/65, Error ellipse: s-maj=18.9km s-min=17.1km az=114.0*

*IDC **25** 04:29:00.6±2.3, 21°.47S×179°.49W, h638^{km}±27^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.6/39, mbtmp4.8/13, Error ellipse: s-maj=16.3km s-min=12.5km az=150.0*

ISC 25 04:28:57.6±0.4, **21°.58S**±0°.09×**179°.38W**±0°.08, **h604**^{km}, **n170**, σ**0^{s}94**/178, **mb4.3**/71, **30C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	11.72	268	eP	P	04 31 33.3	-0.2
PINNC	Pines Island,	12.26	263	eP	P	04 31 39.3	+0.4
DZM	Mont Dzumac	13.18	265	P	P	04 31 48.3	0.0
	4.2nm,0.3s,baz=81,slow=20,SNR=22						
DZM	Mont Dzumac	13.18	265	eP	P	04 31 47.6	-0.7
BFZ	Birch Farm	19.40	190	eP	P	04 32 46.2	+0.7
	76nm,1.0s						
LTZ	Lake Taylor	22.27	196	eP	P	04 33 09.5	-1.8
	23nm,1.2s						
HNR	Honiara	23.26	298	eP	P	04 33 20.1	-0.3
	89nm,0.6s						
WKZ	Wanaka	25.08	200	eP	P	04 33 35.3	-0.8
EIDS	Eidsvold	27.33	256	eP	P	04 33 56.4	+0.3
	22nm,0.6s						
ARMA	Armidale	27.44	245	eP	P	04 33 58.4	+1.2
	16nm,0.7s						
CTA	Charters Tower	32.12	266	P	P	04 34 37.9	+0.7
	29nm,0.5s,baz=91,slow=10,SNR=30						
CTAO	Charters Tower	32.12	266	eP	P	04 34 38.0	+0.7
	24nm,0.7s						
STKA	Stephens Creek	36.16	245	P	P	04 35 11.8	+1.0
	8.0nm,0.4s,baz=92,slow=10,SNR=25						
STKA	Stephens Creek	36.16	245	eP	P	04 35 11.9	+1.0
	2.6nm,0.6s						
AS31	Alice Springs	43.02	258	eP	P	04 36 06.0	+0.2
	6.3nm,0.6s						
AS31				ePcP	PcP	04 37 42.0	+0.1
AS31				eScP	ScP	04 40 38.9	+2.6
AS31				eS	S	04 41 47.5	-1.6
ASAR	Alice Springs	43.02	258	P	P	04 36 06.1	+0.3
	22nm,0.5s,baz=94,slow=7.9,SNR=86						
ASAR				PcP	PcP	04 37 42.0	+0.1
	2.4nm,0.6s,baz=107,slow=4.1,SNR=5.5						
ASAR				ScP	ScP	04 40 38.9	+2.6
	1.8nm,0.7s,baz=101,slow=3.9,SNR=7.9						
ASAR				S	S	04 41 47.5	-1.6
	3.5nm,0.8s,baz=96,slow=15,SNR=18						
WB2	Warramunga Arr	43.17	263	eP	P	04 36 06.5	-0.5
	25nm,0.8s						
WRAB	Tennant Creek	43.18	263	eP	P	04 36 06.9	-0.1
	19nm,0.8s						
WR1	Warramunga Arr	43.18	263	eP	P	04 36 06.8	-0.2
WRA	Warramunga Arr	43.19	263	P	P	04 36 06.8	-0.2
	11nm,0.2s,baz=93,slow=8.4,SNR=46						
CASY	Casey	62.44	205	eP	P	04 38 23.2	+0.5
	5.8nm,1.1s						
QSPA	South Pole Qui	68.49	180	P	P	04 39 01.4	+0.8
	12nm,0.8s,baz=339,slow=0.3,SNR=26						
QSPA	South Pole Qui	68.49	180	eP	P	04 39 01.5	+1.0
	11nm,0.8s						
PETK	Petropavlovsk-	76.99	346	P	P	04 39 48.8	-0.3
	4.7nm,0.6s,baz=125,slow=5.9,SNR=8.9						
PEA1	Petropavlovsk-	77.00	346	eP	P	04 39 48.8	-0.3
MAW	Mawson	80.11	200	P	P	04 40 06.2	+0.7
	2.0nm,0.6s,baz=126,slow=7.1,SNR=6.5						
MAW	Mawson	80.11	200	eP	P	04 40 06.2	+0.7
	0.7nm,0.8s						
KMRM	Mail Ridge	80.41	40	eP	P	04 40 05.6	-1.9
	23nm,0.9s						
CMB	Columbia Colle	81.13	43	eP	P	04 40 08.5	-2.8
	5.5nm,1.1s						
WDC	Whiskeytown Da	81.33	40	eP	P	04 40 11.8	-0.4
	4.1nm,0.9s						
MDPB	Devils Postpil	81.73	44	eP	P	04 40 15.4	+0.7
	3.7nm,0.8s						
WAKR	Walker	82.01	43	eP	P	04 40 17.0	+1.0
	5.1nm,0.7s						
GLA	Glamis	82.11	50	eP	P	04 40 16.0	-0.4
	6.1nm,0.6s						
BEKR	Beckworth	82.23	42	eP	P	04 40 17.6	+0.6
	3.4nm,0.7s						
PNTR	Pine Nut	82.25	43	eP	P	04 40 18.1	+0.9
	13nm,0.8s						
VCNR	Virginia City	82.33	43	eP	P	04 40 18.4	+0.8
	3.3nm,0.8s						
YERR	Yerington	82.41	43	eP	P	04 40 18.6	+0.6
	5.5nm,0.8s						
NV01	Mina Array Sit	82.69	44	eP	P	04 40 19.7	+0.3
NVAR	Mina Array Bea	82.69	44	P	P	04 40 19.7	+0.3
	3.1nm,0.8s,baz=225,slow=7.9,SNR=14						
PAHR	Pah Rah Range	82.74	42	eP	P	04 40 20.2	+0.7
	4.4nm,0.9s						
NV11	Mina Array Sit	82.79	44	eP	P	04 40 20.4	+0.6
	0.2nm,0.7s						
KVN	Kaiserville	83.18	43	eP	P	04 40 21.9	+0.2
	3.4nm,0.7s						
TPNV	Topopah Spring	83.22	46	eP	P	04 40 22.6	+0.6
	3.0nm,0.8s						
W13A	Hualapai Mount	83.84	49	eP	P	04 40 25.8	+0.5
	1.8nm,0.7s						
Y14A	Wickenburg	83.86	50	eP	P	04 40 25.9	+0.8
	3.2nm,1.1s						
PINE	Pine Mountain	84.23	38	eP	P	04 40 28.0	+1.2
	6.1nm,0.8s						
TUC	Tucson	84.66	52	eP	P	04 40 30.4	+1.3
	3.3nm,1.0s						
SYO	Syowa Base	85.39	193	⇑eP	P	04 40 30.0	-1.8
J08A	Circle Bar Ran	85.42	40	eP	P	04 40 33.1	+0.6
	5.3nm,1.1s						
CCUT	Cedar City	85.48	47	eP	P	04 40 34.4	+1.3
	3.1nm,1.1s						
U15A	North Rim	85.64	48	eP	P	04 40 34.7	+0.7
	5.6nm,0.7s						
SUA	Susitna One	85.90	13	eP	P	04 40 33.6	-0.7
	7.0nm,0.6s						
ELK	Elko	85.95	43	eP	P	04 40 35.6	+0.3
	2.6nm,1.1s						
PMR	Palmer	86.37	14	eP	P	04 40 35.9	-0.5
	4.9nm,0.5s						
MTPU	Mount Pierson	86.54	47	eP	P	04 40 39.7	+1.4
	3.6nm,1.0s						
GHO	Glory Hole Cre	86.57	14	eP	P	04 40 37.0	-0.5
	18nm,0.6s						
HAWA	Hanford	86.58	37	eP	P	04 40 38.6	+0.9
	8.1nm,1.0s						
SNAA	Sanae	86.97	179	P	P	04 40 38.1	-1.2
SCM	Sheep Creek Mo	86.99	15	eP	P	04 40 39.1	-0.4
	17nm,0.6s						
MFID	Camas Ranch	87.04	41	eP	P	04 40 40.9	+0.7
	4.7nm,1.0s						
VNA3	Neumayer Olymp	87.15	177	P	P	04 40 39.3	-0.9
D08A	Wollman Farm,	87.31	37	eP	P	04 40 41.8	+0.6
	9.4nm,1.0s						
BALM	Baldy	87.58	17	eP	P	04 40 42.1	-0.2
	6.8nm,0.6s						
F10A	Beach Ranch, E	87.64	38	eP	P	04 40 42.8	-0.1
	7.1nm,0.8s						
KTH	Kantishna Hill	87.74	12	eP	P	04 40 41.5	-1.4
	6.0nm,0.9s						
TMUT	Trail Mountain	87.83	46	eP	P	04 40 45.4	+1.2
	3.6nm,0.8s						
HLID	Hailey	87.98	41	eP	P	04 40 45.4	+0.7
	3.3nm,0.8s						
RND	Reindeer	88.03	13	eP	P	04 40 43.8	-0.5
	12nm,0.8s						
SPUT	South Promonto	88.04	44	eP	P	04 40 44.0	-0.9
	4.1nm,1.1s						
SRU	San Rafael Swe	88.20	47	eP	P	04 40 46.3	+0.5
	5.8nm,1.1s						
MCK	McKinley	88.31	13	eP	P	04 40 45.1	-0.3
	5.5nm,0.7s						
TX31	Lajitas Ar. Si	88.72	58	eP	P	04 40 49.4	+1.0
	3.7nm,0.9s						
TXAR	Lajitas Array	88.72	58	P	P	04 40 49.0	+0.7
	2.7nm,0.8s,baz=213,slow=6.0,SNR=23						
HWUT	Hardware Ranch	88.76	44	eP	P	04 40 48.5	+0.1
	2.6nm,0.7s						
ANMO	Albuquerque	89.08	52	eP	P	04 40 50.4	+0.4
	3.1nm,1.1s						
WRH	Wood River Hil	89.14	13	eP	P	04 40 48.5	-0.8
	6.9nm,0.9s						
HHC	Hu-ho-hao-te	89.19	315	eP	P	04 40 51.3	+1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,72nm,4.8s						
HDA	Harding Lake	89.32	13	eP	P	04 40 49.4	-0.8
	comp=Z,4.1nm,0.6s						
CCB	Clear Creek Bu	89.35	13	eP	P	04 40 49.2	-1.0
	comp=Z,5.3nm,0.5s						
PLCA	Paso Flores	89.46	134	P	P	04 40 52.5	+0.8
	comp=Z,1.7nm,0.6s,baz=272,slow=5.6,SNR=8.7						
MCMT	McKenzie Canyo	89.61	41	eP	P	04 40 52.9	+0.6
ILAR	Eielson Array	89.65	13	P	P	04 40 50.2	-1.5
	comp=Z,1.2nm,0.4s,baz=217,slow=4.8,SNR=19						
ILB	Eielson Array	89.65	13	eP	P	04 40 50.6	-1.1
	comp=Z,2.9nm,1.0s						
CD2	Chengdu	90.29	303	eP	P	04 40 55.5	0.0
LNIG	Linares	90.29	63	eP	P	04 40 55.3	-0.3
	comp=Z,4.9nm,0.8s						
BW06	Boulder Array	90.63	44	eP	P	04 40 56.8	-0.3
	comp=Z,2.4nm,1.0s						
PD31	Pinedale Array	90.63	44	eP	P	04 40 56.8	-0.2
	comp=Z,1.6nm,1.0s						
PDAR	Pinedale Array	90.63	44	P	P	04 40 56.5	-0.6
	comp=Z,1.4nm,0.8s,baz=208,slow=2.1,SNR=12						
DAWY	Dawson	90.85	16	eP	P	04 40 57.0	-0.3
	comp=Z,2.2nm,0.6s						
EGAK	Eagle	90.98	15	eP	P	04 40 57.6	-0.2
	comp=Z,3.2nm,0.8s						
LZH	Lanzhou	92.41	308	eP	P	04 41 05.9	+0.6
LZH				pP	pP	04 43 16.0	+1.2
LZH				sP	sP	04 44 13.8	-0.5
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
MK32	Makanchi Array	111.00	313	ePKiKP	PKiKP	04 46 21.6	-1.7
MKAR	Makanchi Array	111.00	313	PKiKP	PKiKP	04 46 21.6	-1.7
	comp=Z,0.5nm,0.4s,baz=229,slow=0.9,SNR=5.1						
CHGR	Chuyangaron	119.61	303	ePKPdf	PKiKP	04 46 42.4	+2.1
ANGG	Ammassalik, Gr	129.50	19	ePKPpre	PKPpre	04 46 51.7	
ARCES	ARCESS Array B	129.74	349	PKP	PKPdf	04 46 57.5	-1.0
	comp=Z,3.1nm,0.6s,baz=66,slow=1.1,SNR=22						
NB2	NORSAR Subarra	139.88	352	PKP	PKPdf	04 47 09.5	-8.1
	comp=Z,0.7nm,0.5s,baz=24,slow=3.1						
NB200	NORSAR Array S	139.88	352	ePKPpre	PKPdf	04 47 09.3	-8.3
NOA	NORSAR Array B	139.88	352	PKhKP	PKPdf	04 47 09.3	-8.3
	comp=Z,0.3nm,0.5s,baz=42,slow=1.2,SNR=6.5						
MBAR	Mbarara	143.25	237	ePKPdf	PKPdf	04 47 24.7	-0.5
AKASG	Malin Array Be	143.31	329	PKP	PKPab	04 47 21.3	-1.1
	comp=Z,5.8nm,0.5s,baz=43,slow=4.4,SNR=29						
AKBB	Malin Array Si	143.31	329	ePKPdf	PKPab	04 47 21.4	-1.0
BR101	Keskin Array S	146.58	310	ePKPbc	PKPbc	04 47 32.0	-0.7
BR131	Keskin Array S	146.58	310	ePKPbc	PKPbc	04 47 32.2	-0.5
BRTR	Keskin Array B	146.58	310	PKPbc	PKPbc	04 47 32.0	-0.7
	comp=Z,3.2nm,0.6s,baz=134,slow=3.9,SNR=14						
BUR08	Bucovina Ar. S	147.32	329	ePKPbc	PKPbc	04 47 35.1	+0.7
BURAR	Bucovina Array	147.34	329	⇑iP	PKiKP	04 47 35.5	-0.6
BIZ	Bicaz	147.36	327	⇓iP	PKPbc	04 47 34.6	+0.2
TESR	Tescani	147.36	326	⇑iP	PKPbc	04 47 33.7	-0.7
CFR	Carcaliu	147.39	323	⇑iP	PKPbc	04 47 34.3	-0.2
KOLS	Kolonicke sedl	147.71	333	ePKP	PKiKP	04 47 36.0	-0.7
VRI	Vrincioaia	147.73	325	⇑iP	PKPbc	04 47 35.1	-0.3
TLB	Topalu	147.79	322	⇓iP	PKPbc	04 47 35.4	-0.2
TRPA	Tarpa	148.20	332	⇑iP	PKPbc	04 47 35.6	-0.9
MLR	Muntele Rosu	148.40	325	ePKPbc	PKPbc	04 47 36.4	-0.9
LANS	Liptovska Anna	148.67	336	ePKP	PKiKP	04 47 38.5	-0.2
LANS				e		04 47 44.3	
UPC	Upice	148.69	341	⇑ePKP	PKPbc	04 47 37.8	+0.2
DPC	Dobruska-Polom	148.74	340	⇑ePKP	PKPbc	04 47 37.9	+0.1
DPC				ePKPAB	PKPab	04 47 44.8	+0.7
CLL	Collm	148.79	345	ePKPbc	PKPbc	04 47 37.6	-0.3
CLL	Collm	148.79	345	⇑iPKPbc	PKPbc	04 47 37.5	-0.3
	comp=Z,10.0nm,0.6s						
CLL				ePKPab	PKPab	04 47 44.0	-0.2
	comp=Z,6.0nm,0.8s						
CLL				epPKPab	pPKPab	04 50 01.0	+4.6
MORC	Moravsky Berou	148.84	339	ePKPbc	PKPbc	04 47 38.0	-0.1
MORC	Moravsky Berou	148.84	339	ePKP	PKPbc	04 47 37.9	-0.1
VOIR		148.91	326	⇑iP	PKPbc	04 47 37.5	-0.9
BRG	Berggiesshubel	148.95	344	i PKP	PKPbc	04 47 38.1	-0.1
	comp=Z,6.9nm,0.7s						
PVCC	Panska Ves	149.10	343	⇑ePKP	PKPbc	04 47 38.8	+0.2
DRGR		149.12	330	⇑iP	PKPbc	04 47 38.0	-0.9
ARR	Arges	149.17	326	⇓iP	PKiKP	04 47 39.7	-0.2
PSZ	Piszkesteto	149.49	334	⇑iP	PKPbc	04 47 40.0	+0.3
VRAC	Vranov	149.56	339	⇑iP	PKPbc	04 47 39.5	-0.3
VRAC	Vranov	149.56	339	ePKP	PKPbc	04 47 39.4	-0.3
JAVC	Velka Javorina	149.57	338	ePKP	PKiKP	04 47 40.9	+0.3
GOPC	GO Pecny, Ondr	149.59	342	⇑ePKP	PKPbc	04 47 39.4	-0.4
PRU	Pruhonice	149.59	342	⇑ePKP	PKPbc	04 47 39.7	-0.1
KRUC	Moravsky	149.83	339	ePKP	PKPbc	04 47 40.1	-0.3
NKC	Novy Kostel	149.92	345	⇑ePKP	PKiKP	04 47 41.0	-0.2
TREC	Trest	149.92	340	⇑ePKP	PKPbc	04 47 40.6	0.0
SIRR	Siria	150.00	330	⇑iP	PKPbc	04 47 40.9	0.0
GZR	Gura Zlata	150.10	328	⇓iP	PKPbc	04 47 40.6	-0.6
MODS	Modra-Piesok	150.12	337	ePKP	PKPdf	04 47 36.0	+0.7
MODS				e		04 47 40.5	
PLVB	Pleven	150.48	323	⇑iP	PKPbc	04 47 41.9	-0.2
BZS	Buzias	150.50	329	⇑iP	PKPbc	04 47 41.4	-0.7
KHC	Kasperske Hory	150.63	343	ePKPbc	PKPbc	04 47 42.3	-0.1
KHC	Kasperske Hory	150.63	343	⇑ePKP	PKPbc	04 47 42.1	-0.2
KHC				ePKPAB	PKPab	04 47 52.0	0.0
HERR	Herculane	150.64	327	⇑iP	PKPbc	04 47 41.7	-0.7
MEM	Membach	150.72	353	⇑PKPbc	PKPbc	04 47 42.0	-0.4
GEC2	GERESS Array S	150.86	342	ePKPbc	PKPbc	04 47 42.4	-0.5
GERES	GERESS Array B	150.86	342	PKPbc	PKPbc	04 47 42.4	-0.5
	comp=Z,2.8nm,0.6s,baz=45,slow=2.3,SNR=22						
BCLA	Clavier	150.98	354	⇑PKPbc	PKPbc	04 47 42.3	-0.7
BCLA				⇑PKPab	PKPab	04 47 52.2	-1.1
SNF	Seneffe	150.99	355	⇑PKPbc	PKPbc	04 47 42.5	-0.5
CONA	Conrad Observa	150.99	339	i PKPbc	PKPbc	04 47 42.4	-0.9
	comp=Z,7.9nm,1.1s						
MDVR	Moldovita	151.06	328	⇑iP	PKPbc	04 47 42.8	-0.6
DOU	Dourbes	151.37	355	⇑PKPbc	PKPbc	04 47 43.5	-0.4
EZN	Ezine	151.53	316	⇑iP	PKPbc	04 47 43.9	-0.7
MOA	Molln	151.58	340	i PKPbc	PKPbc	04 47 42.1	-2.4
	comp=Z,1.6nm,0.5s						
ARSA	Arzberg	151.69	338	i PKiKP	PKiKP	04 47 45.3	+0.3
	comp=Z,2.1nm,0.6s						
SOKA	Soboth	152.36	338	i PKPbc	PKPbc	04 47 45.3	-1.0
	comp=Z,2.7nm,0.9s						
KBA	Koelnbreinsper	152.55	341	i PKPbc	PKPbc	04 47 45.7	-1.1
	comp=Z,4.2nm,1.0s						
MYKA	Terra Mystica	152.86	340	i PKPbc	PKPbc	04 47 44.6	-2.8
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	152.87	343	i PKPbc	PKPbc	04 47 47.0	-0.6
	comp=Z,2.2nm,0.5s						
RETA	Reutte	152.89	345	i PKiKP	PKiKP	04 47 47.6	+0.2
	comp=Z,1.0nm,0.4s						
MOTA	Moosalm	152.93	344	i PKPbc	PKPbc	04 47 47.1	-0.5
	comp=Z,1.4nm,0.6s						
SQTA	Sankt Quirin	153.02	344	i PKPbc	PKPbc	04 47 47.1	-0.7
	comp=Z,2.3nm,0.6s						
ABTA	Abfaltersbach	153.10	342	i PKPbc	PKPbc	04 47 46.5	-1.4
	comp=Z,3.8nm,0.6s						
BOJS	Bojanci	153.29	337	i PKPbc	PKPbc	04 47 47.8	-0.4
VOJS	Vojsko	153.31	339	i PKPbc	PKPbc	04 47 47.1	-1.3
FETA	Feichten	153.33	344	i PKPbc	PKPbc	04 47 48.2	-0.3
	comp=Z,3.6nm,1.3s						
ESDC	Sonseca Array	161.54	11	PKPab	PKPab	04 48 39.3	-0.1
	comp=Z,0.2nm,0.4s,baz=352,slow=3.1,SNR=5.8						
DBIC	Dimbokro	164.26	160	PKP	PKPdf	04 47 52.5	-1.3
	comp=Z,2.9nm,0.7s,baz=63,slow=2.3,SNR=4.1						
DBIC				PKPab	PKPab	04 48 52.1	+0.3
	comp=Z,6.1nm,1.1s,baz=142,slow=4.3,SNR=4.0						
TORD	Torodi Ar. Bea	171.55	187	PKP	PKPdf	04 47 57.3	-1.3
	comp=Z,1.3nm,0.9s,baz=343,slow=0.6,SNR=5.4						
TORD				PKPab	PKPab	04 49 23.7	-0.2
	comp=Z,0.3nm,0.5s,baz=153,slow=3.2,SNR=4.6						
TOA1	Torodi Ar. Sit	171.56	187	ePKPdf	PKPdf	04 47 57.3	-1.3
TOA1				ePKPab	PKPab	04 49 23.7	-0.3

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*NIED **25** 04:37:00, 38°.20N×142°.30E, h32^{km}, Mw3.8 Best double couple: $M_0$5.95000×10^{14} NP1:ϕ_s80.00000°, δ36.00000°, λ141.00000°. NP2:ϕ_s204.00000°, δ68.00000°, λ60.00000°.*

*IDC **25** 04:37:04.8±1.2, 37°.93N×142°.79E, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.7/33, mbtmp3.7/6, ML2.6/2, MS3.0/6, Ms1 3.0/6, ms1mx2.7/33, Error ellipse: s-maj=30.9km s-min=26.8km az=133.0*

*JMA **25** 04:37:09.4±0.1, 38°.21N×142°.45E, h35^{km}±2^{km}, M4.2*

JMA Felt I J1.

ISC 25 04:37:07.0±2.7, **38°.11N**±0°.06×**142°.50E**±0°.07, **h14**^{km}±16^{km}, **n30**, σ**1^{s}61**/28, **mb3.8**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.84	284	P	Pb	04 37 23.9	+0.5
JIO	Ouri	0.97	291	P	Pb	04 37 25.8	+0.2
JIO				S	Sg	04 37 37.3	-1.1
JKMT	Kesennumamotoy	1.07	311	P	Pb	04 37 27.1	-0.2
JKMT				S	Sb	04 37 39.7	-1.4
OFUJ	Ofunato	1.17	326	P	Pn	04 37 28.3	-0.6
OFUJ				eS	Sb	04 37 41.9	-2.1
JMK	Ichinoseki	1.31	310	P	Pn	04 37 30.7	-0.2
JMM	Marumori	1.37	260	P	Pn	04 37 31.8	+0.1
JMM				S	Sn	04 37 48.2	-1.4
JOU	Okura	1.47	281	P	Pn	04 37 33.7	+0.6
JOU				eS	Sn	04 37 51.4	-0.7
JFK	Kawauchi	1.49	241	P	Pn	04 37 33.4	0.0
JOM	Ohasama	1.66	326	P	Pn	04 37 35.8	+0.1
JFT	Otama	1.81	252	P	Pn	04 37 39.2	+1.4
JFT				S	Sn	04 38 00.7	+0.1
JYK	Kaneyama	1.86	296	P	Pn	04 37 39.3	+0.8
JRG	Rokugo	1.94	312	P	Pn	04 37 40.9	+1.3
MJAR	Matsushiro Arr	3.76	247	Pn	Pn	04 38 07.3	+2.6
	0.2nm,0.3s,baz=54,slow=9.7,SNR=4.8						
MJAR				LR	LR	04 39 48.9	
	comp=Z,161nm,18.6s,baz=85,slow=42						
MAT	Matsushiro	3.76	247	P	Pn	04 38 08.4	+3.8
MAT				eS	Sn	04 38 48.2	-0.5
JHJ	Hachijo jima 2	5.45	205	Pn	Pn	04 38 28.8	+1.0
	9.8nm,0.3s,baz=306,slow=23,SNR=5.8						
JHJ				Sn	Sn	04 39 27.8	-2.5
	14nm,0.3s,baz=103,slow=24,SNR=7.4						
USRK	Ussuriysk Ar.	9.99	311	Pn	Pn	04 39 33.8	+3.8
	0.8nm,0.3s,baz=119,slow=14,SNR=17						
USRK				LR	LR	04 43 11.9	
	comp=Z,40nm,21.5s,baz=140,slow=36						
JNU	Nakatsue	10.69	246	LR	LR	04 44 10.1	
	comp=Z,105nm,18.3s,baz=344,slow=39						
KSRS	Korea Array	11.56	271	LR	LR	04 43 59.1	
	comp=Z,47nm,19.7s,baz=85,slow=35						

KLR	Kul'dur	13.55	329	LR	LR	04 45 28.0	
	comp=Z,70nm,18.1s,baz=146,slow=36						
H11N2	WAKE ISLAND Hy	27.99	124	T	T	05 12 07.7	
	baz=313,slow=75,SNR=151						
H11N1	WAKE ISLAND Hy	28.00	124	T	T	05 12 09.8	
	baz=313						
H11N3	WAKE ISLAND Hy	28.01	124	T	T	05 12 21.3	
	baz=313,slow=75,SNR=111						
H11S1	WAKE ISLAND Hy	28.75	126	T	T	05 14 18.6	
	baz=318,slow=76,SNR=65						
H11S3	WAKE ISLAND Hy	28.76	126	T	T	05 14 20.5	
	baz=318,slow=76,SNR=78						
H11S2	WAKE ISLAND Hy	28.77	126	T	T	05 14 20.9	
	baz=318,slow=76,SNR=48						
TLY	Talaya	30.30	309	LR	LR	04 56 41.0	
	comp=Z,32nm,18.0s,baz=183,slow=38						
MKAR	Makanchi Array	44.29	301	P	P	04 45 17.6	+1.4
	0.8nm,0.5s,baz=87,slow=10,SNR=6.6						
ILAR	Eielson Array	48.12	33	P	P	04 45 46.4	+0.4
	0.5nm,0.7s,baz=264,slow=6.9,SNR=6.9						
WRA	Warramunga Arr	58.25	189	P	P	04 46 59.7	-1.3
	0.5nm,0.5s,baz=11,slow=9.3,SNR=4.3						
TXAR	Lajitas Array	88.78	53	P	P	04 50 00.7	0.0
	0.2nm,0.6s,baz=321,slow=3.2,SNR=3.8						

MEX 25 04:46:22.8±0.8, 14.°51N×94.°33W, h17km±23km, MD3.7, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.60	42	*e*P	Pn	04 46 46.2	-4.1
PCIG				*i* S	Sn	04 47 05.5	-5.1
TGIG		2.54	27	*e*P	Pn	04 47 00.6	-2.7
TGIG				*i* S	Sn	04 47 30.5	-3.4
CMIG	Matias Romero	2.62	348	*e*P	Pn	04 47 01.4	-3.1
CMIG				*e*S	Sn	04 47 31.7	-4.3
CCIG	Comitan	2.75	50	*i* P	Pn	04 47 04.6	-1.8
CCIG				*e*S	Sn	04 47 35.7	-3.6

MEX 25 04:57:41.8±0.7, 15.°04N×97.°26W, h17km±22km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.32	57	*i* P	Pn	04 58 01.5	-4.0
HUIG				*e*S	Sn	04 58 17.9	-4.9
VHO	Vista Hermosa	2.08	14	*e*P	Pn	04 58 13.9	-2.3
VHO				*i* S	Sn	04 58 38.1	-3.6
TLIG	Tlapa	2.80	334	*i* P	Pn	04 58 23.8	-2.2
TLIG				*i* S	Sn	04 58 56.5	-3.0
CMIG	Matias Romero	3.06	48	*e*P	Pn	04 58 27.0	-2.4
CMIG				*i* S	Sn	04 59 01.4	-4.3

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*ISK **25** 05:00:27.6, 39.°82N×30.°50E, h6km, ML3.4/47*
*DDA **25** 05:00:27.9, 39.°83N×30.°51E, h6km±1km, ML3.7*
*THE **25** 05:00:29.5, 39.°89N×30.°56E, h0km±1km, ML2.8/2, Error ellipse: s-maj=5.3km s-min=1.4km az=92.0*
ISC 25 05:00:28.3±0.9, 39.°82N±0.°02×30.°50E±0.°02, h5km±6km, n84, σ0.^{s}51/112, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	Eskisehir	0.07	327	PG	Pg	05 00 29.9	-0.1
BORA				SG	Sg	05 00 31.3	+0.1
BORA	Eskisehir	0.07	327	*i* P	Pg	05 00 30.2	+0.1
BORA				*i* S	Sg	05 00 31.3	+0.1
BORA				IAML_P			
SRCK	Saricakaya, Es	0.24	23	PG	Pg	05 00 33.0	0.0
SRCK				SG	Sg	05 00 36.4	+0.2
SRCK	Saricakaya, Es	0.24	23	*i* P	Pg	05 00 33.1	0.0
SRCK				*i* S	Sg	05 00 36.1	-0.1
ESKT	Eskisehir	0.40	138	PG	Pg	05 00 36.0	-0.1
ESKT				SG	Sg	05 00 42.0	+0.6
AUKIR	Kırka- Seyitga	0.54	178	*i* P	Pb	05 00 39.7	-0.7
AUKIR				*i* S	Sb	05 00 47.2	-1.3
GULT	Gulveren	0.61	1	PG	Pg	05 00 39.9	-0.2
CIFT	Cifteler, Eski	0.63	137	PG	Pg	05 00 40.3	-0.1
CIFT	Cifteler, Eski	0.63	137	*i* P	Pg	05 00 41.0	+0.6
CIFT				IAML_P			
	comp=Z,7µm,0.1s						
GEYV	SAKARYA_Geyve	0.68	347	*i* P	Pg	05 00 41.7	+0.2
GEYV				IAML_P			
	comp=Z,19µm,0.3s						
AUMIH	MIHALICIK	0.76	86	PG	Pg	05 00 42.6	-0.2
AUMIH	MIHALICIK	0.76	86	*i* P	Pg	05 00 42.3	-0.5
AUMIH				*i* S	Sb	05 00 53.8	-1.0
BTAS	Taskesti	0.84	27	*i* P	Pg	05 00 44.5	0.0
BTAS				*i* S	Sb	05 00 57.0	-0.1
BTAS				IAML_P			
	comp=Z,12µm,0.2s						
MDUB	Mudurnu	0.84	39	PG	Pg	05 00 44.3	-0.2
ADVT	Abdulvahap	0.85	316	PG	Pg	05 00 44.1	-0.5
SVRH	Sivrihisar-ESK	0.87	115	PG	Pg	05 00 44.6	-0.4
SPNC	Sapanca-Adapaz	0.88	350	PG	Pg	05 00 44.9	-0.3
AUSIV	SIVRIHISAR	0.89	115	PG	Pg	05 00 45.1	-0.2
AUSIV	SIVRIHISAR	0.89	115	*i* P	Pb	05 00 45.8	-0.5
AUSIV				*i* S	Sb	05 00 58.3	-0.2
TVSB	Tavsanli	0.89	246	PG	Pg	05 00 44.9	-0.4
SAUV	Serdivan-Sakar	0.93	352	PG	Pg	05 00 45.9	-0.2
IZI	Iznik	0.94	303	PG	Pg	05 00 46.2	-0.3
AFYO	Afyonkarahisar	1.04	189	*i* P	Pb	05 00 48.7	-0.3
AFYO				*i* S	Sb	05 01 03.4	+0.4
AFYO				IAML_P			
	comp=Z,10µm,0.1s						
SAHE	Sakarya_HENDEK	1.06	14	*i* P	Pg	05 00 48.1	-0.7
SAHE				*i* S	Sn	05 01 05.7	+0.5
SAHE				IAML_P			
	comp=Z,6µm,0.3s						
GDZ	Gediz	1.08	228	*i* P	Pg	05 00 48.7	-0.3
GDZ				*i* S	Sb	05 01 04.4	+0.4
GDZ				IAML_P			
	comp=Z,7µm,0.2s						
ULDT	Uludag	1.10	287	*i* P	Pg	05 00 49.3	-0.1
ULDT				*i* S	Sg	05 01 03.9	+0.2
ULDT				IAML_P			
	comp=Z,8µm,0.1s						
YLV	Yalova	1.14	311	PN	Pg	05 00 50.2	-0.1
GEDZ	Gediz	1.15	228	PN	Pg	05 00 50.1	-0.2
BOLV	Bolvadin	1.15	162	*i* P	Pb	05 00 50.7	-0.1
BOLV				*i* S	Sn	05 01 06.8	-0.7
BOLV				IAML_P			
	comp=Z,10µm,0.1s						
GEMT	Gemlik	1.18	302	PN	Pg	05 00 50.6	-0.4
HRT	Hereke	1.19	328	PN	Pg	05 00 50.5	-0.6
KIBS	BOLU	1.20	60	*i* P	Pb	05 00 51.3	-0.3
KIBS				*i* S	Sn	05 01 08.2	-0.3
KIBS				IAML_P			
	comp=Z,8µm,0.3s						
ORLT	Orhaneli	1.26	281	PN	Pg	05 00 51.9	-0.5
SHUT	Suhut-Afyon	1.27	178	PN	Pg	05 00 52.2	-0.4
SHAP	Saphane-Kutahy	1.27	232	PN	Pg	05 00 52.4	-0.3
KAND	Kocaeli-Kandir	1.29	350	*i* P	Pn	05 00 52.8	-0.3
KAND				*i* S	Sg	05 01 09.5	-0.5
YIGI	Dzce	1.35	32	*i* P	Pn	05 00 53.6	-0.3
YIGI				*i* S	Sn	05 01 12.3	+0.1
MDNY	Mudanya-Bursa	1.36	294	PN	Pn	05 00 53.6	-0.3
KIZT	Kizilcal	1.42	131	PN	Pn	05 00 54.6	-0.3
ARMT	Armutlu	1.46	301	PN	Pn	05 00 54.9	-0.5
BUY	Buyukada	1.48	315	PN	Pb	05 00 55.8	-0.5
BUY	Buyukada	1.48	315	*i* P	Pb	05 00 55.9	-0.3
BUY				*i* S	Sg	05 01 15.8	0.0
SILT	Sile	1.48	334	PN	Pn	05 00 55.7	0.0
BCAM	Yenicaga	1.55	50	*i* P	Pn	05 00 56.6	-0.2
BCAM				*i* S	Sg	05 01 19.3	+1.0
DURS	Dursunbey	1.58	263	*i* P	Pb	05 00 57.6	-0.5
KZIL	AFYON_Kizioren	1.59	190	*i* P	Pb	05 00 58.2	0.0
KZIL				*i* S	Sg	05 01 20.6	+1.3
DEMI	Demirci	1.59	241	*i* P	Pb	05 00 57.9	-0.3
DEMI				*i* S	Sb	05 01 18.7	+0.1
USAK	Uak-Merkez	1.60	227	*i* P	Pg	05 00 59.0	+0.1
USAK				*i* S	Sn	05 01 17.0	-1.3
KHAL	Karahalli	1.65	209	*i* P	Pn	05 00 58.5	+0.5
KHAL				*i* S	Sb	05 01 20.2	-0.2
CMDR	Camlidere-ANKA	1.65	65	*i* P	Pb	05 00 59.5	+0.2
CMDR				*i* S	Sg	05 01 22.6	+1.1
KAVV	Kandilli-Istan	1.66	319	PN	Pn	05 00 58.3	+0.2
ISK	Istanbul-Kandi	1.66	319	PN	Pn	05 00 58.4	+0.3
ISK	Istanbul-Kandi	1.66	319	P	Pn	05 00 58.6	+0.5
ISK				S	Sb	05 01 20.6	-0.1
KCTX	Karacabey (Bur	1.71	286	PN	Pn	05 00 59.0	+0.2
LOD	Lodumlu	1.74	87	PN	Pn	05 00 59.3	0.0
ANTO	Ankara	1.76	88	PN	Pn	05 00 59.5	-0.1
KDHN	Kadinhani	1.80	135	*i* P	Pn	05 01 00.1	-0.1
KLYT	Kilyos	1.81	323	PN	Pn	05 01 00.3	+0.1
BAGO	Egridir - ISPA	1.84	173	*i* P	Pg	05 01 03.9	+0.3
DOGA	KONYA_Doganhis	1.94	152	*i* P	Pn	05 01 02.9	+0.9
KULA	Kula-Manisa	1.94	228	PN	Pn	05 01 01.9	-0.1
KULA	Kula-Manisa	1.94	228	P	Pb	05 01 03.3	-0.9
KULA				S	Sg	05 01 30.1	-0.5
ISP	Isparta	2.00	180	PN	Pn	05 01 02.8	0.0
BALB	Balikesir	2.03	266	PN	Pn	05 01 03.5	+0.3
CTKS	Kestanelik-??a	2.08	314	PN	Pn	05 01 03.7	-0.1
KULU	Kulu	2.08	111	PN	Pn	05 01 03.8	-0.3
EDC	Edincik	2.09	285	PN	Pn	05 01 03.7	-0.4
LADK	Ladik-KONYA	2.17	138	PN	Pn	05 01 05.2	-0.1
GONE	Gonen-Balikesi	2.18	277	PN	Pn	05 01 05.3	+0.1
CHBY	Cihanbeyli	2.23	123	PN	Pn	05 01 05.9	-0.1
BTIN	Bartın	2.25	36	*i* P	Pb	05 01 09.7	+0.3
CTYL	Yalikoy Yolu	2.36	315	PN	Pn	05 01 07.8	+0.1
MRMT	Marmara Adasi	2.36	290	PN	Pn	05 01 07.9	+0.1
KONT	Konya--Tatoy	2.37	142	PN	Pn	05 01 08.1	+0.2
KONT	Konya--Tatoy	2.37	142	*i* P	Pg	05 01 13.4	-0.3
CANT	Cankiri	2.51	71	PN	Pn	05 01 10.0	+0.1
SERE	Sereflikochisa	2.53	109	PN	Pn	05 01 10.3	+0.1
DELI	KIRIKKALE	2.63	85	*i* P	Pn	05 01 11.9	+0.3
KURC	Kurucasile-Bar	2.64	39	PN	Pn	05 01 11.7	+0.1
RKY	Sarkoy-Tekirda	2.69	290	PN	Pn	05 01 12.7	+0.4
ALN	Alexandroupoli	3.57	289	P	Pn	05 01 24.7	+0.3
ALN				S	Sn	05 02 09.0	+2.0
	comp=Z,22nm,1.5s						
SIGR	SIGRI	3.65	262	P	Pn	05 01 26.0	+0.6
SIGR				S	Sn	05 02 10.6	+1.8
	comp=Z,52nm,0.8s						
SMTH	Samothraki Isl	3.87	281	P	Pn	05 01 28.3	-0.2
LIA	Limnos Island	4.10	273	P	Pn	05 01 32.4	+0.8

UCR 25 05:07:58.1±6.9, 11.°36N×85.°64W, h162km±90km, MW4.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GB1A	Borinquen Arri	0.59	156	*e*P	Pn	05 08 21.3	-0.2
BUEV	Buena Vista	0.60	157	*e*P	Pn	05 08 21.1	-0.4
ACON	Acoyapa	0.76	37	*e*P	Pn	05 08 21.8	-0.5
PLVR	Palo Verde	1.04	164	*e*P	Pn	05 08 23.7	-1.0
CEDE	Laguna Cedeo	1.27	133	*e*P	Pn	05 08 26.6	+0.1
ARE1	Arenal 1	1.27	134	*e*P	Pn	05 08 25.9	-0.6
CNGN	Cerro Negro	1.53	318	*e*P	Pn	05 08 29.4	+0.4
ESPN	Las Esperanzas	1.56	58	*e*P	Pn	05 08 28.5	-0.6
MATN	Matagalpa	1.59	350	*e*P	Pn	05 08 29.9	+0.3
SRA1	San Ramn	1.71	138	*e*P	Pn	05 08 29.4	-1.5
ESTN	Estel	1.87	338	*e*P	Pn	05 08 33.0	+0.4
HDC	Heredia	2.02	132	*e*P	Pn	05 08 37.6	+3.2
RCON	San Juan de Ri	2.17	347	*e*P	Pn	05 08 36.4	+0.3
LCR2	La Lucha 2	2.28	135	*e*P	Pn	05 08 36.0	-1.4
EDLM	Las Mercedes	2.89	135	*e*P	Pn	05 08 43.3	-1.4
BRU2	Volcan	3.87	131	*e*P	Pn	05 08 55.4	-1.7

MEX 25 05:09:26.0±0.4, 17.°92N×103.°21W, h8km±5km, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.39	341	*e*P	Pg	05 09 33.3	-0.3
MMIG				*i* S	Sg	05 09 38.9	+0.1
EZ5V		1.59	347	*i* P	Pn	05 09 51.3	-3.4
EZ5V				*i* S	Sn	05 10 10.1	-5.5
ZIIG	Zihuatanejo	1.69	100	*i* P	Pn	05 09 51.6	-4.2
ZIIG				*i* S	Sn	05 10 13.0	-4.6
ARIG	Puente Sto Nin	2.75	82	*i* P	Pn	05 10 07.9	-2.5
ARIG				*e*S	Sn	05 10 39.5	-4.3

IDC 25 05:13:50.4±5.3, 1.°86N×30.°46W, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/27, mbtmp3.5/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/24, Error ellipse: s-maj=203.8km s-min=34.3km az=175.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	18.61	121	T	T	05 37 35.8	
	baz=300,slow=75,SNR=79						
H10N2	ASCENSION HYDR	18.61	121	T	T	05 37 30.8	
	baz=300,slow=75,SNR=126						
H10N1	ASCENSION HYDR	18.63	121	T	T	05 37 32.5	
	baz=300,slow=75,SNR=139						
H10S3	ASCENSION HYDR	19.06	125	T	T	05 38 10.6	
	baz=303,slow=74,SNR=26						
H10S1	ASCENSION HYDR	19.07	124	T	T	05 38 02.9	
	baz=303,slow=74,SNR=18						
H10S2	ASCENSION HYDR	19.08	125	T	T	05 38 17.9	
	baz=303,slow=74,SNR=23						
BDFB	Brasilia	24.57	224	LR	LR	05 27 07.2	
	comp=Z,79nm,19.5s,baz=64,slow=32						
DBIC	Dimbokro	25.97	79	LR	LR	05 27 45.2	
	comp=Z,111nm,18.0s,baz=240,slow=32						
TORD	Torodi Ar. Bea	33.74	69	P	P	05 20 33.9	-0.1
	0.6nm,0.7s,baz=258,slow=10,SNR=4.7						
TORD				LR	LR	05 32 39.6	
	comp=Z,126nm,19.0s,baz=300,slow=34						
LPAZ	La Paz	41.34	243	LR	LR	05 38 56.0	
	comp=Z,77nm,18.1s,baz=86,slow=36						
BOSA	Boshof	61.34	124	LR	LR	05 46 35.4	
	comp=Z,32nm,18.5s,baz=256,slow=32						
BRTR	Keskin Array B	69.07	48	LR	LR	05 57 57.2	
	comp=Z,24nm,18.4s,baz=270,slow=38						
AKASG	Malin Array Be	69.78	36	P	P	05 25 02.5	0.0
	0.2nm,0.3s,baz=245,slow=8.1,SNR=6.3						
TXAR	Lajitas Array	74.46	300	P	P	05 25 31.2	0.0
	0.4nm,1.0s,baz=125,slow=7.8,SNR=2.7						

IDC 25 05:48:18.2±3.6, 5.°61S×149.°73E, h141km±35km, mb3.4/4, mb1 3.5/5, mb1mx3.2/26, mbtmp3.9/5, Error ellipse: s-maj=32.3km s-min=27.4km az=114.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.55	214	P	Pn	05 49 26.2	+0.8
	4.5nm,0.3s,baz=45,slow=8.7,SNR=5.1						
PMG				S	Sn	05 50 18.1	+0.3
	13nm,0.3s,baz=143,slow=16,SNR=9.8						
WRA	Warramunga Arr	20.66	225	P	P	05 52 46.9	-0.1
	1.4nm,0.3s,baz=49,slow=11,SNR=33						
DZM	Mont Dzumac	23.00	137	P	P	05 53 10.7	-0.3
	3.5nm,0.8s,baz=322,slow=19,SNR=4.8						
ASAR	Alice Springs	23.54	219	P	P	05 53 16.1	+0.2
	0.6nm,0.4s,baz=51,slow=9.3,SNR=9.2						
PETK	Petropavlovsk-	58.89	6	P	P	05 58 02.0	0.0
	0.8nm,0.5s,baz=150,slow=4.6,SNR=4.4						

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*IDC **25** 06:06:34.7±1.9, 56.°43S×26.°75W, h0km, mb4.4/1, mb1 4.4/1, mb1mx3.7/15, mbtmp4.4/1, MS3.5/1, Ms1 3.4/1, ms1mx2.9/14, Error ellipse: s-maj=113.4km s-min=69.3km az=132.0*
*ISCJB **25** 06:06:38.9±0.7, 56.°3S±0.°1×26.°4W±0.°1, h35km, mb4.5/5, MS3.5/1, Error ellipse: s-maj=17.3km s-min=9.6km az=24.6*
*NEIC **25** 06:06:43.0±1.3, 56.°39S×26.°43W, h58km±7km, mb4.5/5, Error ellipse: s-maj=27.3km s-min=11.9km az=211.0*
ISC 25 06:06:42.8±0.9, 56.°6S±0.°2×26.°6W±0.°2, h35km, n22, σ2.^{s}08/15, mb4.6/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	6.06	288	*e*Pn	Pn	06 08 10.6	+0.8
HOPE				*e*Sn	Sn	06 09 17.9	+0.1
SNAA	Sanae	18.16	156	*e*P	P	06 10 51.1	-0.8
	5.4nm,1.1s						
QSPA	South Pole Qui	33.70	180	*e*P	P	06 13 20.3	0.0
	1.5nm,0.4s						
BOSA	Boshof	45.79	75	LR	LR	06 29 56.0	
	comp=Z,58nm,19.0s,baz=224,slow=31						
H10S2	ASCENSION HYDR	48.39	16	T	T	07 07 52.4	
	baz=190,slow=74,SNR=10						
H10S3	ASCENSION HYDR	48.40	16	T	T	07 07 52.6	
	baz=190,slow=74,SNR=11						
H10S1	ASCENSION HYDR	48.41	16	T	T	07 07 50.1	
	baz=190						
MNMC	Minye Minye	49.13	302	*e*P	P	06 15 24.6	-2.7
	5.6nm,0.7s						
H10N1	ASCENSION HYDR	49.51	16	T	T	07 09 16.5	
	baz=189,slow=75,SNR=8.2						
H10N3	ASCENSION HYDR	49.51	16	T	T	07 09 16.4	
	baz=189,slow=75,SNR=21						
H10N2	ASCENSION HYDR	49.53	16	T	T	07 09 20.2	
	baz=189,slow=75,SNR=14						
LPAZ	La Paz	50.92	305	*e*P	P	06 15 39.1	-2.1
	3.9nm,0.6s						
TOA0	Torodi Ar. Sit	73.34	29	*e*P	P	06 18 06.5	-4.2
	12nm,1.5s						
TORD	Torodi Ar. Bea	73.34	29	P	P	06 18 07.6	-3.1
	2.0nm,0.5s,baz=205,slow=6.1,SNR=31						
TOA1	Torodi Ar. Sit	73.34	29	*e*P	P	06 18 07.6	-3.1
ARCES	ARCESS Array B	131.29	22	PKP	PKPdf	06 25 47.4	-2.1
	0.6nm,0.7s,baz=197,slow=2.8,SNR=3.6						
EPYK	Eagle Plains	147.00	316	*e*PKPbc	PKPdf	06 26 17.4	-0.7
RIDG	Independent Ri	149.57	309	*e*PKPdf	PKPdf	06 26 20.9	-1.4
RIDG				*e*PKPab	PKPbc	06 26 29.8	+2.9
SONA0	Songino Array	150.44	87	*e*PKPbc	PKPdf	06 26 26.9	+2.5
SONM	Songino Array	150.44	87	PKPbc	PKPdf	06 26 26.9	+2.5
	0.5nm,0.5s,baz=209,slow=2.4,SNR=3.9						
SML	Sawmill	150.57	305	*e*PKPdf	PKPdf	06 26 20.8	-3.2
SML				*e*PKPbc	PKPbc	06 26 29.1	-0.3
SML				*e*PKPab	pPKPdf	06 26 36.3	+1.8
ILAR	Eielson Array	150.68	311	PKPbc	PKPdf	06 26 26.3	+2.2
	1.1nm,1.0s,baz=121,slow=2.0,SNR=6.1						

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*ISCJB **25** 07:15:52.4±0.3, 79.°03N±0.°03×115.°1W±0.°2, h10km, mb4.1/33, MS2.9/4, Error ellipse: s-maj=5.4km s-min=3.6km az=144.6*
*IDC **25** 07:15:54.0±0.7, 79.°24N×115.°56W, h0km, mb3.9/12, mb1 4.1/16, mb1mx3.9/47, mbtmp3.9/16, ML3.8/4, MS3.0/4, Ms1 3.0/4, ms1mx2.5/44, Error ellipse: s-maj=23.1km s-min=13.3km az=110.0*
*OTT **25** 07:15:54.4±0.7, 79.°21N×116.°16W, h18km, ML4.5/8, 274km west from Isachsen, Nu*
*NEIC **25** 07:15:54.6±2.0, 79.°07N×115.°33W, h10km, mb4.0/53, Error ellipse: s-maj=13.2km s-min=7.2km az=189.0*
ISC 25 07:15:54.5±0.5, 78.°93N±0.°05×115.°39W±0.°05, h10km, n93, σ2.^{s}25/106, mb4.2/33, MS2.9/4, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	Resolute Bay	6.29	122	Pn	Pn	07 17 28.8	+1.7
	1.9nm,0.3s,baz=326,slow=14,SNR=44						
RES				Sn	Sn	07 18 39.0	+0.1
	7.2nm,0.3s,baz=57,slow=19,SNR=7.7						
RES	Resolute Bay	6.29	122	*e*Pn	Pn	07 17 28.8	+1.7
RES				*e*Sn	Sn	07 18 38.4	-0.5
RES	Resolute Bay	6.29	122	PN	Pn	07 17 28.9	+1.7
RES				SN	Sn	07 18 40.0	+1.1
RES				Trac		07 18 42.7	
	comp=Z,18nm,0.3s						
TULEG	Thule	9.95	80	*e*Sn	Sn	07 20 06.9	-1.7
CB31	Cambridge Bay	10.23	159	PN	Pn	07 18 21.4	+0.4
CB31				SN	Sn	07 20 11.8	-3.7
CB31				Trac		07 20 19.1	
	comp=Z,48nm,0.3s						
KUKN	Kugluktuk,NWT	11.17	179	PN	Pn	07 18 35.4	+1.4
KUKN				SN	Sn	07 20 35.3	-3.4
KUKN				Trac		07 21 10.0	
	comp=Z,18nm,0.6s						
INK	Inuvik	11.74	215	Pn	Pn	07 18 41.9	+0.3
	0.4nm,0.3s,baz=6.8,slow=20,SNR=8.0						
INK				Sn	Sn	07 20 45.2	-7.3
	0.8nm,0.3s,baz=255,slow=15,SNR=5.2						
INK	Inuvik	11.74	215	*e*Pn	Pn	07 18 42.4	+0.7
INK				*e*Sn	Sn	07 20 48.7	-3.7
INK	Inuvik	11.74	215	PN	Pn	07 18 42.0	+0.3
INK				SN	Sn	07 20 45.8	-6.7
INK				Trac		07 21 04.3	
	comp=Z,7.4nm,0.6s						
DHRN	Dharma Camp	12.02	188	PN	Pn	07 18 46.4	+0.9
DHRN				SN	Sn	07 20 56.4	-3.0
DHRN				Trac		07 21 32.4	
	comp=Z,27nm,1.5s						
ILON	Igloolik, Nuna	12.96	119	PN	Pn	07 18 59.6	+1.3
ILON				SN	Sn	07 21 17.4	-4.8
ILON				Trac		07 21 38.1	
	comp=Z,16nm,0.9s						
TOLK	Toolik Lake Re	13.71	240	*e*Pn	Pn	07 19 09.2	+0.5
TOLK				*e*Sn	Sn	07 21 35.8	-5.0
EPYK	Eagle Plains	13.96	217	*e*Pn	Pn	07 19 11.3	-0.7
EPYK				*e*Sn	Sn	07 21 49.2	+2.4
NOWN	Norman Wells,	14.09	200	PN	Pn	07 19 14.1	+0.4
NOWN				SN	Sn	07 21 43.7	-6.2
NOWN				Trac		07 21 53.5	
	comp=Z,9.0nm,0.7s						
FYU	Fort Yukon	14.92	231	*e*Pn	Pn	07 19 26.3	+1.2
	9.1nm,0.8s						
COLD	Coldfoot	15.09	239	*e*Pn	Pn	07 19 28.3	+1.0
	3.8nm,0.7s						
COLD				*e*Sn	Sn	07 22 11.8	-2.5
PRP	Porcupine Dome	15.94	230	*e*Pn	Pn	07 19 38.5	-0.1
	6.3nm,0.9s						
PRP				*e*Sn	Sn	07 22 34.7	-0.5
EGAK	Eagle	16.04	222	*e*Pn	Pn	07 19 41.0	+1.3
	9.8nm,1.0s						
EGAK				*e*Sn	Sn	07 22 38.8	+1.5
EDZN	EDZO	16.29	181	PN	Pn	07 19 43.1	+0.1
YKW3	Yellowknife Ar	16.46	179	*e*Pn	Pn	07 19 45.8	+0.7
	20nm,1.5s						
YKW3	Yellowknife Ar	16.46	179	PN	Pn	07 19 46.9	+1.8
YKW3				PN	P	07 19 47.0	-0.8
YKW3				SN	Sn	07 22 40.5	-7.0
YKW3				Trac		07 22 56.5	
	comp=Z,13nm,0.8s						
YKW3				Trac		07 23 41.9	
	comp=Z,11nm,0.6s						
DAWY	Dawson	16.50	219	*e*Pn	Pn	07 19 45.8	+0.1
	2.9nm,0.8s						
YKA	Yellowknife Ar	16.53	179	Pn	Pn	07 19 44.1	-1.9
	0.6nm,0.3s,baz=356,slow=12,SNR=18						
YKA				Sn	Sn	07 22 39.5	-10
	0.8nm,0.3s,baz=1.9,slow=22,SNR=11						
RDOG	Red Dog Mine	16.61	256	*e*Pn	Pn	07 19 46.5	-0.6
	13nm,0.9s						
ILAR	Eielson Array	16.85	231	P	P	07 19 54.2	+2.1
	0.2nm,0.3s,baz=14,slow=12,SNR=16						
ILB	Eielson Array	16.85	231	*e*P	P	07 19 52.2	+0.1
	3.3nm,0.6s						
COLA	College	16.90	232	*e*P	P	07 19 54.5	+1.9
	6.0nm,0.6s						
CCB	Clear Creek Bu	17.10	232	*e*P	P	07 19 55.5	+0.6
	6.3nm,1.3s						
CCB				*e*Sn	Sn	07 23 06.5	+3.4
HDA	Harding Lake	17.20	230	*e*P	P	07 19 57.9	+1.9
	4.1nm,1.0s						
WRH	Wood River Hil	17.31	232	*e*P	P	07 19 57.7	+0.5
	3.9nm,0.8s						
DOT	Dot Lake	17.51	225	*e*P	P	07 20 00.9	+1.5
	6.5nm,0.8s						
RIDG	Independent Ri	17.53	227	*e*P	P	07 20 01.4	+1.7
	9.3nm,1.0s						
BPAW	Bear Paw Mtn.	18.11	235	*e*P	P	07 20 08.8	+2.8
	6.1nm,1.1s						
MCK	McKinley	18.14	232	*e*Pn	Pn	07 20 05.4	-0.6
	7.3nm,1.0s						
KTH	Kantishna Hill	18.61	235	*e*P	Pn	07 20 13.8	+1.9
	6.6nm,1.1s						
CAST	Castle Rocks	18.92	236	*e*P	Pn	07 20 15.9	+0.3
	3.4nm,1.0s						
WHY	Whitehorse	19.33	210	*e*P	Pn	07 20 21.4	+0.7
	4.4nm,0.6s						
PPLA	Purkeypile	19.43	236	*e*P	Pn	07 20 21.8	-0.1
	18nm,1.5s						
HYT	Haines Junctio	19.44	214	*e*P	P	07 20 21.7	+0.9
	4.7nm,1.0s						
SML	Sawmill	19.87	229	*e*P	Pn	07 20 26.8	-0.2
	4.4nm,0.8s						
GHO	Glory Hole Cre	19.99	230	*e*P	Pn	07 20 29.0	+0.6
	6.2nm,1.0s						
PMR	Palmer	20.20	230	*e*P	Pn	07 20 31.1	+0.4
	3.6nm,1.0s						
FRB	Frobisher Bay	20.35	111	LR	LR	07 28 12.0	
	comp=Z,21nm,18.7s,baz=320,slow=36						
SKAG	Skagway	20.56	210	*e*P	P	07 20 34.5	+1.7
	2.6nm,0.8s						
SUA	Susitna One	20.56	232	*e*P	P	07 20 34.4	+1.4
	12nm,0.9s						
RC01	Rabbit Creek A	20.77	231	*e*P	P	07 20 35.3	+0.2
	13nm,1.2s						

SFJD	Kangerlussuaq	20.84	88	eP	P	07 20 34.9	-0.9
	42nm,1.5s						
DLBC	Dease Lake	21.13	202	P	P	07 20 43.9	+4.9
	8.6nm,0.8s,baz=12,slow=8.6,SNR=8.2						
DLBC	Dease Lake	21.13	202	eP	P	07 20 40.6	+1.6
	8.4nm,0.8s						
KAIM	Kayak Island	21.14	223	eP	P	07 20 41.0	+2.0
	18nm,1.0s						
FCC	Fort Churchill	21.38	149	eP	P	07 20 42.7	+1.0
	16nm,1.0s						
BESE	Bessie Mountai	21.38	209	eP	P	07 20 42.0	+0.3
	4.7nm,0.8s						
JIS	Juneau Island	21.64	208	eP	P	07 20 46.0	+1.6
	7.1nm,0.7s						
SVW2	Sparrevohn	21.68	238	eP	P	07 20 46.1	+1.3
	7.4nm,1.2s						
CNPM	China Poot	22.49	231	eP	P	07 20 56.3	+2.7
	9.5nm,0.9s						
KDAK	Kodiak Island	24.36	232	P	P	07 21 15.1	+2.9
	5.0nm,0.7s,baz=35,slow=5.9,SNR=13						
KDAK	Kodiak Island	24.36	232	eP	P	07 21 14.9	+2.7
	8.2nm,1.0s						
FFC	Flin Flon	24.74	161	eP	P	07 21 16.2	+0.6
	3.0nm,0.7s						
OHAK	Old Harbor	25.01	232	eP	P	07 21 19.4	+1.4
	4.3nm,0.7s						
NRS	Narsarsuaq	27.10	89	eP	P	07 21 35.0	-1.8
	23nm,0.9s						
ARCES	ARCESS Array B	30.03	26	P	P	07 22 01.3	-1.6
	1.1nm,0.8s,baz=345,slow=8.8,SNR=6.1						
MA2	Magadan	33.07	291	LR	LR	07 36 33.5	
	comp=Z,19nm,19.1s,baz=93,slow=38						
YFT	Old Faithful	34.65	174	eP	P	07 22 44.8	+1.0
	2.3nm,0.5s						
RSSD	Black Hills	35.20	166	eP	P	07 22 49.8	+1.2
	4.0nm,0.9s						
ECSD	EROS Data Cent	36.05	157	eP	P	07 22 55.4	-0.2
	2.7nm,1.1s						
PD31	Pinedale Array	36.36	173	eP	P	07 22 59.7	+1.2
	1.9nm,1.5s						
PDAR	Pinedale Array	36.36	173	P	P	07 23 01.7	+3.3
	0.2nm,0.6s,baz=10,slow=5.5,SNR=3.2						
NB2	NORSAR Subarra	36.77	41	P	P	07 23 00.9	-0.7
	comp=Z,0.8nm,0.8s,baz=346,slow=8.6						
NB200	NORSAR Array S	36.77	41	eP	P	07 23 00.9	-0.7
NOA	NORSAR Array B	36.77	41	P	P	07 23 00.9	-0.7
	comp=Z,0.4nm,0.6s,baz=344,slow=8.5,SNR=4.4						
PETK	Petropavlovsk-	37.90	281	LR	LR	07 40 49.6	
	comp=Z,23nm,18.0s,baz=29,slow=40						
FIA1	FINESS Array S	38.01	29	eP	P	07 23 10.6	-1.4
	comp=Z,5.0nm,0.8s						
FIA0	FINESS Array S	38.02	29	eP	P	07 23 10.8	-1.2
FINES	FINESS Array B	38.02	29	P	P	07 23 10.8	-1.2
	comp=Z,3.7nm,0.7s,baz=0.0,slow=8.2,SNR=16						
TUL1	Leonard	43.89	157	eP	P	07 24 02.3	+1.6
	comp=Z,4.7nm,0.8s						
WMOK	Wichita Mounta	44.84	160	eP	P	07 24 10.5	+2.1
	comp=Z,2.0nm,0.8s						
MIAR	Mount Ida	45.42	154	eP	P	07 24 15.3	+2.4
	comp=Z,3.4nm,1.0s						
PFO	Pinyon Flats O	45.43	181	eP	P	07 24 14.8	+1.6
	comp=Z,8.8nm,1.5s						
TXAR	Lajitas Array	49.95	167	P	P	07 24 52.4	+4.2
	comp=Z,0.3nm,0.7s,baz=18,slow=6.1,SNR=2.9						
SONA0	Songino Array	51.10	325	eP	P	07 24 56.0	-0.7
SONM	Songino Array	51.10	325	P	P	07 24 56.0	-0.7
	comp=Z,0.7nm,0.4s,baz=1.1,slow=7.4,SNR=4.0						
ABKAR	Akbulak array	52.04	4	eP	P	07 25 03.0	-0.6
	comp=Z,5.5nm,1.1s						
MK31	Makanchi Array	54.10	345	eP	P	07 25 16.9	-1.9
	comp=Z,2.7nm,1.4s						
MK32	Makanchi Array	54.10	345	eP	P	07 25 16.5	-2.3
MKAR	Makanchi Array	54.10	345	P	P	07 25 16.5	-2.3
	comp=Z,1.3nm,0.7s,baz=12,slow=6.2,SNR=10						
MAKZ	Makanchi	54.10	345	eP	P	07 25 16.5	-2.3
	comp=Z,6.1nm,1.6s						
ESDC	Sonseca Array	55.29	61	P	P	07 25 28.5	+0.9
	comp=Z,0.2nm,0.3s,baz=349,slow=7.3,SNR=5.7						
KBZ	Khabaz	56.93	19	P	P	07 25 40.0	+0.9
	comp=Z,2.6nm,0.7s,baz=333,slow=4.0,SNR=5.1						
KKAR	Karatay Array	58.18	355	eP	P	07 25 47.1	-0.9
	comp=Z,1.7nm,0.8s						
KSRS	Korea Array	58.33	303	LR	LR	07 52 48.6	
	comp=Z,24nm,18.5s,baz=348,slow=38						
TOA1	Torodi Ar. Sit	82.17	61	eP	P	07 28 15.1	-0.2
TORD	Torodi Ar. Bea	82.18	61	P	P	07 28 15.1	-0.2
	comp=Z,1.0nm,0.8s,baz=344,slow=4.8,SNR=4.2						
ASAR	Alice Springs	117.02	286	PKP	PKPdf	07 34 37.8	-1.0
	comp=Z,0.4nm,0.6s,baz=347,slow=1.5,SNR=8.4						

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*SJA **25** 07:26:13.4±0.8, 20.°42S×68.°78W, h116km±5km, ML3.4, MW4.0*

*ISCJB **25** 07:26:14.4±0.8, 20.°42S±0.°03×68.°89W±0.°09, h122km±8km, Error ellipse: s-maj=13.9km s-min=4.6km az=176.0*

*GUC **25** 07:26:14.9±0.8, 20.°38S×68.°92W, h112km±3km, ML3.9*

ISC 25 07:26:15.0±1.6, **20.°41S**±0.°03×**68.°85W**±0.°08, **h114**km±10km, **n24**, σ**0.s57**/40, **4C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.39	313	i P	Pn	07 26 32.0	-0.2
PB08				i S	Sn	07 26 45.0	-0.1
PB08	IPOC Station P	0.39	313	⇓eP	Pn	07 26 32.1	-0.2
PB08				eS	Sn	07 26 44.9	-0.2
PB08				IAML		07 26 45.6	
	comp=E,6μm,0.2s						
GO01	Chusmiza	0.81	336	⇓eP	Pn	07 26 35.1	-0.2
GO01				eS	Sn	07 26 50.1	-0.4
PB01	IPOC Station P	0.87	223	⇑eP	Pn	07 26 35.3	-0.1
PB01				eS	Sn	07 26 51.0	+0.3
PB01				IAML		07 26 51.3	
	comp=N,4μm,0.2s						
PB11	IPOC Station P	1.00	310	i P	Pn	07 26 36.3	-0.5
PB11	IPOC Station P	1.00	310	⇓eP	Pn	07 26 36.5	-0.2
PB11				eS	Sn	07 26 52.4	-0.7
PB11				IAML		07 26 54.7	
	comp=N,4μm,0.3s						
PB02	IPOC Station P	1.33	227	i P	Pn	07 26 40.2	-0.1
PB02				i S	Sn	07 27 00.4	+1.0
PB02	IPOC Station P	1.33	227	⇑eP	Pn	07 26 40.2	-0.1
PB02				eS	Sn	07 26 59.9	+0.6
PB02				IAML		07 27 01.4	
	comp=E,4μm,0.3s						
PB09	IPOC Station P	1.43	195	eP	Pn	07 26 42.0	+0.7
PB09				eS	Sn	07 27 02.9	+1.4
PSGC	Pisagua	1.45	304	i P	Pn	07 26 41.2	-0.4
PSGC				eS	Sn	07 27 00.9	-0.8
PSGC				IAML		07 27 04.0	
	comp=N,1μm,0.7s						
PSGCX	Pisagua	1.45	304	i P	Pn	07 26 41.1	-0.5
PSGCX				i S	Sn	07 27 02.7	+0.9
MNMC	Minye Minye	1.46	331	⇓eP	Pn	07 26 42.3	+0.4
MNMC				eS	Sn	07 27 02.3	+0.1
MNMC				IAML		07 27 04.5	
	comp=E,4μm,0.5s						
MNMCX	Minye Minye	1.46	331	i P	Pn	07 26 42.3	+0.4
MNMCX				i S	Sn	07 27 02.9	+0.7
PB07	IPOC Station P	1.63	216	i P	Pn	07 26 43.4	-0.4
PB07	IPOC Station P	1.63	216	⇑iP	Pn	07 26 43.6	-0.2
PB07				eS	Sn	07 27 05.5	-0.1
PB07				IAML		07 27 06.7	
	comp=N,864nm,0.3s						
PB03	IPOC Station P	1.83	207	i P	Pn	07 26 46.0	-0.3
PB03	IPOC Station P	1.83	207	⇑iP	Pn	07 26 46.1	-0.2
PB03				eS	Sn	07 27 09.9	-0.2
PB03				IAML		07 27 11.7	
	comp=E,605nm,0.3s						
PB16	IPOC Station P	2.16	343	i P	Pn	07 26 50.9	+0.1
PB16	IPOC Station P	2.16	343	i P	Pn	07 26 51.6	+0.8
PB16				eS	Sn	07 27 19.1	+1.1
LVC	Limon Verde	2.19	181	i P	Pn	07 26 50.6	-0.3
PB12	IPOC Station P	2.27	322	i P	Pn	07 26 51.3	-0.5
PB12				eS	Sn	07 27 19.3	-0.6
PB12				IAML		07 27 24.5	
	comp=N,734nm,0.3s						
PB06	IPOC Station P	2.38	196	i P	Pn	07 26 53.0	-0.1
PB05	IPOC Station P	2.73	207	i P	Pn	07 26 57.5	-0.2
AZAP	Zapla	5.16	138	i P	Pn	07 27 29.5	-0.8
AZAP				IAML		07 27 32.8	
	comp=Z,20nm,0.5s						

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*ISCJB **25** 07:31:06.9±0.4, 85.°46N±0.°06×85.°3E±0.°5, h15km, mb4.1/21, MS2.9/6, Error ellipse: s-maj=9.4km s-min=5.8km az=164.8*

*NEIC **25** 07:31:07.7±2.9, 85.°42N×86.°38E, h10km±5km, mb4.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=180.0*

*IDC **25** 07:31:07.2±1.1, 85.°30N×89.°43E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.5/40, mbtmp3.7/7, ML3.7/2, MS3.0/7, Ms1 3.0/7, ms1mx2.6/45, Error ellipse: s-maj=35.6km s-min=18.7km az=139.0*

ISC 25 07:31:09.2±0.7, **85.°4N**±0.°1×**86.°28E**±0.°06, **h15**km, **n35**, σ**1.s46**/33, **mb4.1**/21, **MS2.9**/7, **North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	10.84	278	ePn	Pn	07 33 44.3	+0.8
KBS				eSn	Sn	07 35 43.1	-1.2
SPA0	Spitsbergen Ar	11.18	272	ePn	Pn	07 33 49.1	+0.9
SPA0				eSn	Sn	07 35 51.5	-1.0
SPITS	Spitsbergen Ar	11.18	272	Pn	Pn	07 33 49.5	+1.4
	baz=47,slow=16,SNR=8.1						
SPITS				Sn	Sn	07 35 50.7	-1.8
	baz=41,slow=28,SNR=2.7						
TIXI	Tiksi	15.37	126	ePn	Pn	07 34 42.5	-2.7
	3.0nm,1.1s						
ARCES	ARCESS Array B	18.75	253	P	Pn	07 35 30.1	+2.5
	0.3nm,0.3s,baz=20,slow=11,SNR=8.8						
LVZ	Lovozero	19.69	242	eP	P	07 35 37.0	-0.3
	22nm,1.1s						
RES	Resolute Bay	20.03	1	LR	LR	07 43 39.2	
	comp=Z,50nm,20.3s,baz=264,slow=37						
INK	Inuvik	25.54	34	P	P	07 36 37.9	+1.3
	5.0nm,1.1s,baz=341,slow=9.1,SNR=4.4						
INK	Inuvik	25.54	34	eP	P	07 36 35.5	-1.2
	3.9nm,0.9s						
SFJD	Kangerlussuaq	26.70	323	LR	LR	07 46 45.1	
	comp=Z,37nm,20.2s,baz=338,slow=35						
FIA0	FINESS Array S	26.70	248	eP	P	07 36 50.3	+3.1
FINES	FINESS Array B	26.70	248	P	P	07 36 50.3	+3.1
	0.8nm,0.6s,baz=30,slow=12,SNR=6.3						
MLY	Manley	27.89	50	eP	P	07 36 57.6	-0.2
	8.1nm,1.8s						
NB201	NORSAR Array S	28.24	263	eP	P	07 37 00.1	-1.0
	18nm,1.5s						
NOA	NORSAR Array B	28.26	263	LR	LR	07 48 25.6	
	comp=Z,8.1nm,20.3s,baz=240,slow=36						
NBO00	NORSAR Array S	28.30	264	eP	P	07 36 60.0	-1.6
	14nm,1.4s						
ILAR	Eielson Array	28.38	46	P	P	07 37 01.2	-1.0
	0.5nm,0.8s,baz=349,slow=8.9,SNR=6.0						
CCB	Clear Creek Bu	28.45	47	eP	P	07 37 01.6	-1.2
	3.1nm,1.1s						
HFS	Hagfors	28.96	261	LR	LR	07 48 21.9	
	comp=Z,23nm,21.1s,baz=215,slow=35						
TTA	Tatalina	29.64	55	eP	P	07 37 12.6	-0.9
	3.3nm,1.0s						
DOT	Dot Lake	29.65	44	eP	P	07 37 13.7	+0.1
	7.4nm,0.9s						
MENT	Mentasta	30.38	44	eP	P	07 37 20.4	+0.4
	6.3nm,0.6s						
SKT	Skwentna	30.87	51	eP	P	07 37 23.5	-0.8
	8.3nm,0.6s						
ZALV	Zalesovo Beam	31.61	182	LR	LR	07 51 22.1	
	comp=Z,37nm,18.4s,baz=73,slow=38						
DLBC	Dease Lake	35.55	32	eP	P	07 38 05.4	+0.2
	8.8nm,1.8s						
PEA0B	Petropavlovsk-	35.83	103	eP	P	07 38 09.5	+1.9
	40nm,1.5s						
ABKAR	Akbulak array	36.84	209	eP	P	07 38 17.0	+0.9
	9.2nm,2.0s						
AKBB	Malin Array Si	37.14	242	eP	P	07 38 17.8	-0.9
	10nm,1.8s						
MAKZ	Makanchi	38.77	185	eP	P	07 38 31.1	-1.5
	5.2nm,1.6s						
MK31	Makanchi Array	38.79	184	eP	P	07 38 31.8	-0.9
	4.7nm,1.8s						
MK32	Makanchi Array	38.79	184	eP	P	07 38 31.8	-0.9
MKAR	Makanchi Array	38.79	184	P	P	07 38 31.8	-0.9
	0.5nm,0.6s,baz=4.1,slow=8.5,SNR=7.6						
MKAR				LR	LR	07 57 40.8	
	comp=Z,19nm,18.4s,baz=351,slow=41						
BOOM	Boomskoye usch	43.16	191	eP	P	07 39 09.7	+0.8
	3.0nm,0.8s						
KDJ	Kajisay	43.50	190	eP	P	07 39 12.4	+0.7
	2.7nm,0.8s						
TXAR	Lajitas Array	65.39	10	P	P	07 41 50.8	0.0
	0.5nm,0.6s,baz=356,slow=3.4,SNR=9.5						
TXAR				LR	LR	08 09 10.9	
	comp=Z,26nm,20.8s,baz=0.0,slow=35						

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*IDC **25** 07:31:38.8±10.0, 60.°79S×25.°15W, h0km, mb4.0/2, mb1 4.0/2, mb1mx3.7/14, mbtmp4.0/2, Error ellipse: s-maj=709.4km s-min=52.3km az=96.0*

ISC 25 07:31:41.7±2.5, **60.°9S**±0.°2×**23.°8W**±0.°8, **h10**km, **n6**, σ**0.s32**/6, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	11.63	154	P	Pn	07 34 27.8	+0.4
VNA3	Neumayer Olymp	11.81	157	P	Pn	07 34 29.7	-0.3
VNA3				S	Sn	07 36 30.2	-11
SNAA	Sanae	13.59	151	P	Pn	07 34 54.1	-0.2
SNAA				S	Sn	07 37 16.6	-8.6
TORD	Torodi Ar. Bea	76.53	26	P	P	07 43 31.7	-0.1
	1.4nm,0.8s,baz=191,slow=6.7,SNR=5.4						
ASAR	Alice Springs	93.81	160	P	P	07 44 59.1	+0.1
	0.3nm,0.6s,baz=179,slow=4.0,SNR=5.0						
SONM	Songino Array	148.99	92	PKPbc	PKPbc	07 51 28.9	0.0
	0.6nm,0.6s,baz=222,slow=2.0,SNR=4.0						

WEL 25 07:41:24.6, 41.°6S±1.°0×**174.°2E**±0.°7, **h15**km±2km, **M3.8**/37, **ML4.0**/26, **MLv3.8**/37, **Error ellipse: s-maj=0.0km s-min=0.0km az=161.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.12	190	P	Pb	07 41 28.5	-0.2
CMWZ				S	Sb	07 41 31.5	+0.1
BSWZ	Blackbirch Sta	0.29	252	P	Pb	07 41 31.3	-0.1
BSWZ				S	Sb	07 41 36.2	+0.1
TUWZ	Tuamarina	0.30	311	P	Pb	07 41 31.4	-0.2
TUWZ				S	Sb	07 41 36.0	-0.3
TCW	Tory Channel	0.42	3	P	Pb	07 41 33.3	-0.3
TCW				S	Sg	07 41 39.1	+0.5
BHW	Baring Head	0.52	65	P	Pb	07 41 35.7	+0.3
PLWZ	Palliser	0.76	86	P	Pn	07 41 40.5	-0.3
NNZ	Nelson	0.77	302	P	Pb	07 41 39.7	+0.1
MSWZ	Moikau Station	0.78	75	P	Pn	07 41 40.7	-0.4
CAW	Cannon Point	0.81	50	P	Pb	07 41 40.6	+0.3
DUWZ	D'Urville Isla	0.86	343	P	Pg	07 41 41.2	0.0
PAWZ	Paruwai Farm	0.92	75	P	Pn	07 41 43.3	+0.3
KHZ	Kahutara	0.95	213	P	Pn	07 41 44.4	+1.0
THZ	Tophouse	1.01	262	P	Pn	07 41 44.4	+0.1
MTW	Mount Morrison	1.06	64	P	Pg	07 41 45.4	+0.5
OGWZ	Otaki Gorge	1.07	41	P	Pn	07 41 45.0	0.0
TRWZ	Traveller	1.11	79	P	Pg	07 41 45.9	0.0
HOWZ	Holdsworth Sta	1.20	53	P	Pg	07 41 47.6	-0.1
TMWZ	Te Maipa	1.34	68	P	Pn	07 41 49.1	+0.3
MRZ	Mangatainoka R	1.40	47	P	Pb	07 41 50.5	+0.2
TIWZ	Tintock	1.50	56	P	Pn	07 41 51.4	+0.4
QRZ	Quartz Range	1.52	301	P	Pb	07 41 53.0	+0.5
GVZ	Greta Valley S	1.61	213	P	Pn	07 41 53.2	+0.7
OHWZ	Ohakea	1.64	30	P	Pg	07 41 55.3	-0.7
POWZ	Post Office Ro	1.69	44	P	Pn	07 41 54.3	+0.8
PRWZ	Pori Road	1.69	51	P	Pn	07 41 54.1	+0.6
BFZ	Birch Farm	1.78	59	P	Pn	07 41 54.6	-0.2
DSZ	Denniston Nort	1.83	265	P	Pb	07 41 57.9	+0.2
LTZ	Lake Taylor	1.86	231	P	Pb	07 41 57.2	-1.1
AMCZ	Amberley	1.95	217	P	Pn	07 41 57.5	+0.4
WAZ	Wanganui	1.95	17	P	Pg	07 42 01.1	-1.0
DVHZ	Dannevirke	1.97	48	P	Pn	07 41 57.6	+0.2
TSZ	Takapari Road	2.04	40	P	Pn	07 41 59.0	+0.6
LREZ	Lake Rotokare	2.17	3	P	Pg	07 42 04.8	-1.3
PNHZ	Pukenui	2.27	42	P	Pn	07 42 01.8	+0.3
OKCZ	Okains Bay	2.27	202	P	Pn	07 42 01.0	-0.5
WPHZ	Waipukurau	2.28	48	P	Pn	07 42 02.1	+0.4
CRLZ	Canterbury Las	2.29	211	P	Pn	07 42 01.3	-0.4
KHEZ	Kahui Hut	2.34	356	P	Pb	07 42 06.6	+0.2
INZ	Inchbonnie	2.35	241	P	Pn	07 42 04.1	+1.5
OXZ	Oxford	2.35	223	P	Pn	07 42 02.3	-0.4
NBEZ	Newall Road No	2.37	353	P	Pb	07 42 07.8	+0.8
MQZ	McQueen's Vall	2.39	209	P	Pn	07 42 02.2	-0.9
PKVZ	Pokaka	2.48	20	P	Pb	07 42 10.0	+1.1
MOVZ	Moawhango	2.50	28	P	Pn	07 42 06.8	+2.1
TRVZ	Turoa	2.53	24	P	Pb	07 42 10.7	+0.9
VRZ	Vera Road	2.53	9	P	Pb	07 42 08.9	-0.7
BHHZ	Black Hill Sta	2.54	34	P	Pb	07 42 10.8	+0.8
PXZ	Pawanui	2.55	52	P	Pn	07 42 05.1	-0.2
DRZ	Dome Shelter	2.56	24	P	Pg	07 42 12.1	-1.5
WHVZ	Whangaehu Hut	2.56	24	P	Pb	07 42 08.5	-1.8
KRHZ	Kereru	2.56	40	P	Pn	07 42 05.9	+0.4
FWVZ	Far West T-bar	2.57	23	P	Pb	07 42 08.8	-1.7
TUVZ	Tukino	2.59	25	P	Pb	07 42 08.8	-2.0
NGZ	Ngauruhoe	2.66	23	P	Pb	07 42 10.0	-2.0
TWVZ	Taurewa	2.71	20	P	Pb	07 42 14.3	+1.5
WTVZ	West Tongariro	2.71	23	P	Pb	07 42 13.7	+0.9
KRVZ	Karewarewa	2.75	23	P	Pg	07 42 15.7	-1.5
KATZ	Kakaramea	2.87	23	P	Pg	07 42 18.6	-1.0
MCHZ	McNeill Hill	2.87	41	P	Pb	07 42 13.7	-1.7
WVZ	Waitaha Valley	2.98	240	P	Pn	07 42 12.9	+1.8
RATZ	Rangitukua	3.00	23	P	Pg	07 42 20.1	-1.8
BKZ	Black Stump Fm	3.00	36	P	Pn	07 42 12.1	+0.5
WATZ	Wairara	3.13	22	P	Pb	07 42 21.7	+1.8
RPZ	Rata Peaks	3.14	227	P	Pn	07 42 14.2	+0.6
HIZ	Hauiti	3.15	9	P	Pb	07 42 17.5	-2.6
MUGZ	Murupara	3.69	32	P	Pn	07 42 22.9	+1.8
SNGZ	Shannon Statio	3.70	41	P	Pn	07 42 22.3	+1.0
FOZ	Fox Glacier	3.78	238	P	Pn	07 42 25.6	+3.3
TOZ	Tahuroa Road	4.01	14	P	Pb	07 42 32.2	-2.7
URZ	Urewera	4.02	34	P	Pn	07 42 27.3	+1.8
LBZ	Lake Benmore	4.06	226	P	Pn	07 42 28.7	+2.6
ODZ	Otahua Downs	4.31	216	P	Pn	07 42 29.1	-0.4
RUGZ	Raukumara Rang	4.51	37	P	Pn	07 42 33.6	+1.1
AWAZ	Awhitu Peninsu	4.57	4	P	Pb	07 42 39.7	-4.7
MKAZ	Moumakai	4.57	9	P	Pn	07 42 37.4	+4.2
ETAZ	East Tamaki Re	4.70	7	P	Pb	07 42 43.3	-3.3
JCZ	Jackson Bay	4.70	237	P	Pn	07 42 38.5	+3.5
WIAZ	Waiheke Island	4.88	8	P	Pb	07 42 45.5	-4.1
MBAZ	Motutapu North	4.88	6	P	Pb	07 42 44.9	-4.8
MSZ	Milford Sound	5.53	234	P	Pn	07 42 52.4	+6.1
OUZ	Omahuta	6.42	355	P	Pn	07 43 06.1	+7.6
CTZ	Chatham Island	7.06	110	P	Pn	07 43 08.8	+1.5

MAN 25 07:44:49.1, 6.°13N×126.°36E, h113km, mb4.1, ML2.8, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	1.40	268	eP	Sn	07 45 36.8	+2.0

NNC 25 08:01:14.9±7.2, **53.°90N×86.°21E, h0km, mb3.7, mpv3.3, 2C-1D, Error ellipse: s-maj=67.4km s-min=60.4km az=26.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	Kurchatov	5.64	239	Pn	Pn	08 02 39.1	-0.9
	4.5nm,1.3s						
KURK				⇑Lg	Lg	08 04 13.7	
	4.3nm,1.0s						
KURBB	Kurchatov Arra	5.75	238	Pn	Pn	08 02 40.6	-0.7
	1.6nm,0.5s,baz=53,slow=15						
KURBB				⇑Lg	Lg	08 04 17.6	
	5.8nm,0.6s,baz=58,slow=28						
MK31	Makanchi Array	7.54	201	Pn	Pn	08 03 07.7	+1.7
	1.3nm,0.7s,baz=34,slow=14,SNR=9.8						
MK31				⇓Lg	Lg	08 05 19.2	
	2.3nm,1.1s,baz=90,slow=44,SNR=3.7						

UCR 25 08:43:23.0±1.2, **11.°83N×83.°42W, h34**km±27km, **MD4.0, 1C-1D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACON	Acoyapa	1.72	275	⇑iP	Pn	08 43 50.9	+0.3
CVTR	Volcan Turrial	1.83	191	eP	Pn	08 43 52.7	+0.3
CVTR				eS	Sn	08 44 14.5	-0.1
CEDE	Laguna Cedeo	1.83	223	eP	Pn	08 43 52.5	+0.4
HDC	Heredia	1.94	201	⇓iP	Pn	08 43 54.3	+0.6
HDC				eS	Sn	08 44 17.4	+0.4
LCR2	La Lucha 2	2.15	195	eP	Pn	08 43 57.4	+0.7
BUEV	Buena Vista	2.20	242	i P	Pn	08 43 58.0	+0.7
BUEV				eP	Pb	08 43 58.1	-4.2
EDLM	Las Mercedes	2.54	184	eP	Pn	08 44 03.0	+1.1
DRK0	Durika	2.56	176	eP	Pn	08 44 02.4	+0.1

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*ISK **25** 08:46:02.8, 39.°65N×29.°45E, h5km, ML1.8/6, Suspected Mining explosion.*

*ISCJB **25** 08:46:03.4±0.5, 39.°69N±0.°03×29.°44E±0.°04, h0km, Error ellipse: s-maj=4.4km s-min=3.5km az=40.3*

*DDA **25** 08:46:03.5, 39.°67N×29.°43E, h7km±3km, ML2.6*

ISC 25 08:46:03.2±0.9, **39.°69N**±0.°03×**29.°46E**±0.°03, **h0**km, **n14**, σ**0.s50**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVSB	Tavsanli	0.24	180	PG	Pg	08 46 07.5	-0.2
TVSB				SG	Sg	08 46 10.9	+0.2
GDZ	Gediz	0.60	178	i P	Pg	08 46 14.3	-0.3
GDZ				i S	Sg	08 46 23.1	+0.8
DURS	Dursunbey	0.77	264	i P	Pg	08 46 18.3	+0.4
DURS				i S	Sb	08 46 29.6	-0.8
DURS				IAML_P			
	comp=Z,852nm,0.1s						
BORA	Eskisehir	0.79	76	PG	Pg	08 46 18.7	+0.4
BORA	Eskisehir	0.79	76	i P	Pg	08 46 18.0	-0.3
BORA				i S	Sb	08 46 31.2	0.0
BORA				IAML_P			
	comp=Z,1μm,0.1s						
MDNY	Mudanya-Bursa	0.81	327	PG	Pb	08 46 19.8	-0.4
DEMI	Demirci	0.86	222	i P	Pg	08 46 19.6	-0.2
DEMI				IAML_P			
	comp=Z,480nm,0.1s						
SRCK	Saricakaya, Es	0.96	68	PG	Pb	08 46 22.3	-0.5
SRCK	Saricakaya, Es	0.96	68	i P	Pn	08 46 23.9	-0.1
SRCK				i S	Sb	08 46 37.1	+1.0
ARMT	Armutlu	0.99	333	PG	Pb	08 46 22.8	-0.4
KCTX	Karacabey (Bur	1.03	305	PG	Pg	08 46 23.1	+0.3
USAK	Uak-Merkez	1.03	200	i P	Pb	08 46 23.6	-0.3
USAK				i S	Sb	08 46 38.7	+0.7
USAK				IAML_P			
	comp=Z,910nm,0.2s						
KHAL	Karahalli	1.31	179	i P	Pn	08 46 29.3	+0.4
KHAL				i S	Sn	08 46 46.9	-0.3
KHAL				IAML_P			
	comp=Z,226nm,0.1s						
SVRH	Sivrihisar-ESK	1.61	98	PN	Pn	08 46 32.8	-0.2

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*ISCJB **25** 08:56:43.4±0.3, 8.°48S±0.°05×117.°24E±0.°03, h10km, mb4.1/9, Error ellipse: s-maj=6.6km s-min=4.6km az=5.2*

*IDC **25** 08:56:44.9±1.2, 8.°40S×117.°33E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/27, mbtmp4.0/6, ML3.9/1, Error ellipse: s-maj=38.1km s-min=19.7km az=66.0*

*DJA **25** 08:56:45.8±0.3, 8°S±4°×11°7E±°, h10km, M4.3/10, mb4.5/1, MLv4.2/10*

*NEIC **25** 08:56:45.2±1.9, 8.°52S×117.°30E, h10km±1km, mb4.3/9, Error ellipse: s-maj=12.9km s-min=5.5km az=173.0*

ISC 25 08:56:45.2±0.6, **8.°40S**±0.°06×**117.°17E**±0.°04, **h10**km, **n34**, σ**1.s47**/40, **mb4.0**/9, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.74	125	P	Pg	08 57 00.4	+1.0
PLAI				S	Sg	08 57 11.1	+2.0
DNP	Denpasar	1.96	262	P	Pn	08 57 19.9	+1.4
SRBI	Singaraja	1.96	279	P	Pn	08 57 18.1	-0.4
SRBI				S	Sn	08 57 43.1	-0.1
WBSI	Waikabubak, Su	2.52	119	P	Pn	08 57 27.4	+1.1
WBSI				S	Sn	08 58 00.0	+2.9
JAGI	Jajag, Banyuwa	2.98	268	ePn	Pn	08 57 32.9	+0.3
JAGI	Jajag, Banyuwa	2.98	268	P	Pn	08 57 32.8	+0.2
GMJI	Gumukmas	3.69	272	P	Pn	08 57 42.6	+0.3
KAPI	Kappang	4.23	38	Pn	Pn	08 57 49.6	-0.2
	6.9nm,0.3s,baz=197,slow=3.6,SNR=34						
KAPI				Sn	Sn	08 58 38.2	-1.1
	24nm,0.3s,baz=217,slow=22,SNR=13						
KAPI	Kappang	4.23	38	ePn	Pn	08 57 49.6	-0.2
KAPI				eSn	Sn	08 58 39.2	-0.1
BKSI	Bulukumba	4.24	44	P	Pn	08 57 50.0	+0.1

BNSI	**Bone**	**4.93**	**36**	P	**Pn**	**08 58 00.7**	**+1.3**
UGM	**Wanagama**	**6.60**	**274**	*e*Pn	**Pn**	**08 58 23.5**	**+1.2**
UGM				*e*Sn	**Sn**	**08 59 40.4**	**+2.7**
SOEI	**Soe**	**7.14**	**101**	*e*Pn	**Pn**	**08 58 27.2**	**-2.6**
SOEI	**Soe**	**7.14**	**101**	P	**Pn**	**08 58 31.2**	**+1.3**
MTN	**Manton Dam**	**14.42**	**109**	*e*Pn	**Pn**	**09 00 07.1**	**-2.4**
GIRL	**Giralia**	**14.44**	**191**	*e*Pn	**Pn**	**09 00 09.0**	**-0.8**
WR1	**Warramunga Arr**	**20.20**	**126**	*e*Pn	**P**	**09 01 20.5**	**+0.2**
WRA	**Warramunga Arr** 5.5nm,0.4s,baz=294,slow=13,SNR=56	**20.20**	**126**	P	**P**	**09 01 20.5**	**+0.2**
WRAB	**Tennant Creek** 7.2nm,0.9s	**20.20**	**126**	*e*P	**P**	**09 01 19.0**	**-1.3**
WB2	**Warramunga Arr** 13nm,1.1s	**20.20**	**126**	*e*P	**P**	**09 01 19.7**	**-0.7**
MORW	**Morawa** 22nm,1.4s	**20.59**	**183**	*e*P	**P**	**09 01 21.5**	**-2.9**
AS31	**Alice Springs** 1.4nm,0.7s	**22.08**	**135**	*e*P	**P**	**09 01 39.8**	**-0.8**
ASAR	**Alice Springs** 2.9nm,0.6s,baz=312,slow=9.6,SNR=29	**22.08**	**135**	P	**P**	**09 01 40.5**	**-0.1**
NWAO	**Narrogin (SRO)** 19nm,1.3s	**24.41**	**180**	*e*P	**P**	**09 02 02.8**	**-1.2**
FORT	**Forrest** 11nm,1.0s	**24.48**	**157**	*e*P	**P**	**09 02 03.6**	**-1.0**
COEN	**Coen** 48nm,1.4s	**26.09**	**105**	*e*P	**P**	**09 02 16.7**	**-2.7**
BBOO	**Buckleboo** 24nm,1.5s	**29.93**	**147**	*e*P	**P**	**09 02 53.0**	**-0.6**
STKA	**Stephens Creek** 0.8nm,0.6s,baz=329,slow=7.7,SNR=5.0	**32.58**	**139**	P	**P**	**09 03 17.2**	**+0.3**
STKA	**Stephens Creek** 1.1nm,1.2s	**32.58**	**139**	*e*P	**P**	**09 03 15.9**	**-1.0**
SONA0	**Songino Array**	**56.80**	**351**	*e*P	**P**	**09 06 30.8**	**+1.1**
SONM	**Songino Array** 0.6nm,0.5s,baz=179,slow=5.8,SNR=3.1	**56.80**	**351**	P	**P**	**09 06 30.8**	**+1.1**
MK32	**Makanchi Array**	**63.11**	**334**	*e*P	**P**	**09 07 15.4**	**+2.3**
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=141,slow=9.5,SNR=4.6	**63.11**	**334**	P	**P**	**09 07 15.4**	**+2.3**
CPUP	**Villa Florida** 3.6nm,1.0s,baz=127,slow=5.1,SNR=4.8	**145.07**	**189**	PKPbc	**PKPbc**	**09 16 23.0**	**0.0**

JMA ***25*** *09:12:49.9, 23.°11N×121.°39E, h0^{km}, M3.4*
ISCJB ***25*** *09:12:51.2±0.3, 23.°09N±0.°01×121.°29E±0.°01, h12^{km}±2^{km}, Error ellipse: s-maj=2.4km s-min=1.7km az=42.1*
TAP ***25*** *09:12:51.6, 23.°15N×121.°20E, h11^{km}, ML3.9, B*
ASIES ***25*** *09:12:52.2, 23.°16N×121.°20E, h22^{km}, MW3.2*
ISC 25 09:12:51.7±0.8**, 23.°12N**±0.°02×**121.°26E**±0.°02**, h16**^{km}±5^{km}**, n114, σ1.^{s}00**/195**, 3C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung** baz=107	**0.10**	**101**	*i* P	**Pg**	**09 12 56.3**	**+1.2**
CHKT	baz=107			*i* S	**Sg**	**09 13 00.0**	**+2.7**
ELDTW	**Lidau** baz=284	**0.23**	**288**	⇓*i*P	**Pg**	**09 12 55.8**	**-1.3**
ELDTW	baz=284			*i* S	**Sg**	**09 12 58.3**	**-2.3**
TWF1	**Yuli** baz=18	**0.24**	**9**	⇓*i*P	**Pg**	**09 12 56.6**	**-0.4**
TWF1	baz=18			*i* S	**Sg**	**09 12 60.0**	**-0.7**
YULB	**Yu-li** baz=9.0	**0.28**	**8**	⇑P	**Pg**	**09 12 57.1**	**-0.5**
YULB	baz=9.0			S	**Sg**	**09 13 00.8**	**-1.0**
TWGBT	**Beinan** baz=205	**0.34**	**209**	⇓P	**Pg**	**09 12 58.5**	**-0.3**
TWGBT	baz=205			S	**Sg**	**09 13 03.5**	**-0.1**
TWG	**Pinlang** baz=205	**0.34**	**210**	⇓*i*P	**Pg**	**09 12 58.5**	**-0.3**
TWG	baz=205			S	**Sg**	**09 13 03.7**	**+0.1**
TTN	**Taitung** baz=168	**0.38**	**196**	P	**Pg**	**09 13 00.5**	**+1.1**
TTN	baz=168			S	**Sb**	**09 13 07.7**	**+2.1**
EHY	**Hungye** baz=9.0	**0.39**	**9**	P	**Pg**	**09 12 59.2**	**-0.5**
EHY	baz=9.0			S	**Sg**	**09 13 04.3**	**-0.9**
HGSD	**Ruisui** baz=16	**0.40**	**22**	⇑P	**Pg**	**09 13 00.1**	**+0.1**
HGSD	baz=16			S	**Sg**	**09 13 06.7**	**+1.2**
YUS	**Yu-Shan** baz=326	**0.46**	**323**	⇓*i*P	**Pg**	**09 13 00.3**	**-0.9**
YUS	baz=326			*i* S	**Sg**	**09 13 05.6**	**-2.0**
EGFH	**Guangfu** baz=20	**0.57**	**16**	P	**Pg**	**09 13 02.5**	**-0.5**
EGFH	baz=20			*e*S	**Sg**	**09 13 10.1**	**-0.5**
SLGT	**Liugui** baz=260	**0.58**	**258**	P	**Pg**	**09 13 02.7**	**-0.4**
SLGT	baz=260			*e*S	**Sg**	**09 13 09.8**	**-1.0**
ECL	**Taimali** baz=214	**0.59**	**208**	*e*P	**Pg**	**09 13 02.2**	**-1.2**
ECL	baz=214			*e*S	**Sg**	**09 13 10.5**	**-0.7**
TPUB	**Ta-pu** baz=294	**0.60**	**288**	⇓P	**Pg**	**09 13 03.4**	**-0.3**
TPUB	baz=294			S	**Sg**	**09 13 11.1**	**-0.7**
WTP	**Ta-pu** baz=283	**0.61**	**282**	⇓*i*P	**Pg**	**09 13 03.2**	**-0.5**
WTP	baz=283			S	**Sg**	**09 13 11.2**	**-0.5**
VWDT	**VWDT** baz=348	**0.64**	**350**	⇓P	**Pb**	**09 13 03.6**	**-1.0**
VWDT	baz=348			S	**Sb**	**09 13 11.9**	**-1.5**
CHN4	**Tsaushan** baz=298	**0.65**	**291**	⇓*i*P	**Pb**	**09 13 04.5**	**-0.4**
CHN4	baz=298			S	**Sb**	**09 13 12.8**	**-0.9**
CHN1	**Nanshi** baz=269	**0.68**	**276**	⇓*i*P	**Pb**	**09 13 05.0**	**-0.2**
CHN1	baz=269			*e*S	**Sb**	**09 13 14.4**	**0.0**
SSD	**Sandimen** baz=229	**0.69**	**237**	P	**Pb**	**09 13 04.0**	**-1.4**
SSD	baz=229			*e*S	**Sb**	**09 13 12.5**	**-2.1**
WHYT	**Xinyi Township** baz=331	**0.69**	**327**	⇓P	**Pb**	**09 13 04.6**	**-0.8**
WHYT	baz=331			*e*S	**Sb**	**09 13 13.9**	**-0.7**
SNST	**Tainan City** baz=277	**0.71**	**278**	P	**Pb**	**09 13 05.5**	**-0.2**
SNST	baz=277			S	**Sb**	**09 13 15.5**	**+0.3**
ESL	**Shilin** baz=17	**0.71**	**13**	P	**Pb**	**09 13 05.1**	**-0.7**
ESL	baz=17			*e*S	**Sb**	**09 13 14.0**	**-1.4**
SSLB	**Suanglung** baz=339	**0.72**	**337**	⇓P	**Pb**	**09 13 04.8**	**-1.3**
SSLB	baz=339			*e*S	**Sb**	**09 13 13.3**	**-2.5**
TWK	**Hsinying** baz=290	**0.72**	**282**	⇓*i*P	**Pb**	**09 13 05.6**	**-0.4**
TWK	baz=290			S	**Sb**	**09 13 15.4**	**-0.4**
MASBT	**Mashibuluo** baz=227	**0.77**	**229**	⇓P	**Pb**	**09 13 05.6**	**-1.1**
MASBT	baz=227			*e*S	**Sb**	**09 13 14.7**	**-2.2**
SGLT	**Jiouru** baz=236	**0.81**	**241**	*e*P	**Pb**	**09 13 07.6**	**+0.2**
CHN3	**Shinhua** baz=266	**0.82**	**267**	P	**Pg**	**09 13 09.1**	**+1.3**
CHN3	baz=266			*e*S	**Sn**	**09 13 21.5**	**+0.9**
EAST	**Anshuo** baz=192	**0.82**	**207**	*e*P	**Pb**	**09 13 06.0**	**-1.8**
TAW	**Tawu** baz=201	**0.83**	**204**	*e*P	**Pb**	**09 13 05.9**	**-1.8**
SMLT	**Sun Moon Lake** baz=345	**0.83**	**337**	⇓*i*P	**Pb**	**09 13 07.1**	**-0.8**
SMLT	baz=345			S	**Sb**	**09 13 18.1**	**-0.8**
WGK	**Gukeng** baz=313	**0.85**	**312**	*e*P	**Pb**	**09 13 08.3**	**+0.1**
WGK	baz=313			*e*S	**Sg**	**09 13 20.7**	**+1.1**
WJS	**Zhushan** baz=326	**0.85**	**325**	P	**Pb**	**09 13 08.7**	**+0.5**
WJS	baz=326			*e*S	**Sb**	**09 13 20.2**	**+0.8**
CHY	**Chiayi** baz=297	**0.85**	**296**	*e*P	**Pb**	**09 13 08.0**	**-0.2**
CHY	baz=297			*e*S	**Sb**	**09 13 20.5**	**+1.0**
TYC	**Yuchr** baz=343	**0.86**	**335**	P	**Pb**	**09 13 07.9**	**-0.6**
TYC	baz=343			S	**Sb**	**09 13 19.5**	**-0.3**
WDLH	**Douliu** baz=311	**0.87**	**311**	⇓*e*P	**Pb**	**09 13 08.9**	**+0.4**
WDLH	baz=311			*e*S	**Sg**	**09 13 21.7**	**+1.6**
HWA	**Hwalien** baz=15	**0.91**	**20**	*e*P	**Pb**	**09 13 09.6**	**+0.4**
WNT	**Mingjian** baz=327	**0.92**	**325**	⇓P	**Pb**	**09 13 10.1**	**+0.7**
WNT	baz=327			*e*S	**Sg**	**09 13 22.8**	**+1.0**
SNJT	**Kaohsiung City** baz=247	**0.92**	**247**	*e*P	**Pn**	**09 13 11.5**	**+1.4**
SNJT	baz=247			*e*S	**Sn**	**09 13 26.1**	**+3.0**
CHGB	**Renai** baz=358	**0.94**	**355**	P	**Pb**	**09 13 08.6**	**-1.2**
CHGB	baz=358			S	**Sb**	**09 13 21.1**	**-1.1**
SCZT	**Fangliau** baz=223	**0.95**	**219**	*e*P	**Pb**	**09 13 09.2**	**-0.7**
WLGB	**Puzi** baz=292	**0.95**	**292**	*e*P	**Pb**	**09 13 09.9**	**0.0**
WLGB	baz=292			S	**Sg**	**09 13 23.9**	**+1.3**
DPDB	**Guoxing** baz=348	**0.96**	**342**	P	**Pb**	**09 13 09.4**	**-0.7**
DPDB	baz=348			*e*S	**Sb**	**09 13 22.6**	**0.0**
SCLT	**Jiali** baz=285	**0.98**	**274**	*e*P	**Pb**	**09 13 10.9**	**+0.5**
SCLT	baz=285			*e*S	**Sn**	**09 13 25.6**	**+1.1**
CHN8	**Yiju** baz=283	**0.99**	**283**	*e*P	**Pb**	**09 13 10.6**	**+0.1**
CHN8	baz=283			*e*S	**Sg**	**09 13 25.0**	**+1.2**
TWD	**Chiawan** baz=20	**1.01**	**18**	*e*P	**Pb**	**09 13 10.6**	**-0.3**
TWD	baz=20			*e*S	**Sb**	**09 13 23.5**	**-0.4**
WHF	**Hehuan Shan** baz=14	**1.02**	**0**	⇓P	**Pb**	**09 13 10.5**	**-0.8**
WHF	baz=14			S	**Sb**	**09 13 24.7**	**-0.1**
WSF	**Szhu** baz=299	**1.08**	**299**	*e*P	**Pb**	**09 13 11.9**	**-0.2**
WSF	baz=299			*e*S	**Sn**	**09 13 27.4**	**+0.4**
NACB	**Ninganchiao** baz=18	**1.10**	**16**	*e*P	**Pb**	**09 13 11.5**	**-0.8**
NACB	baz=18			*e*S	**Sb**	**09 13 26.1**	**-0.4**
ETLH	**Xiulin Townshi** baz=23	**1.10**	**11**	*e*P	**Pb**	**09 13 12.1**	**-0.5**
ETLH	baz=23			*e*S	**Sb**	**09 13 27.0**	**+0.3**
LAY	**Lan-yu** baz=149	**1.11**	**166**	*e*P	**Pb**	**09 13 11.2**	**-1.3**
WLCH	**Liuqiu** baz=229	**1.11**	**227**	*e*P	**Pg**	**09 13 16.2**	**+2.9**
RLNB	**Erlin** baz=314	**1.13**	**313**	*e*P	**Pn**	**09 13 13.0**	**+0.1**
RLNB	baz=314			*e*S	**Sb**	**09 13 27.4**	**+0.1**
TWT	**Tachien** baz=7.0	**1.13**	**356**	P	**Pn**	**09 13 12.5**	**-0.7**
TWT	baz=7.0			S	**Sb**	**09 13 27.3**	**-0.4**
WCHH	**Zhanghua** baz=327	**1.15**	**326**	*e*P	**Pn**	**09 13 14.1**	**+0.8**
WCHH	baz=327			*e*S	**Sb**	**09 13 29.2**	**+1.1**
TCU	**Taichung** baz=335	**1.16**	**333**	*e*P	**Pn**	**09 13 14.1**	**+0.8**
TCU	baz=335			*e*S	**Sb**	**09 13 29.2**	**+1.1**
HEN	**Hengchun** baz=193	**1.21**	**204**	*e*P	**Pg**	**09 13 16.0**	**+1.0**
TWK1	**Hengchun** baz=183	**1.24**	**200**	*e*P	**Pn**	**09 13 15.1**	**+0.6**
TWKBT	**Hengchun** baz=183	**1.24**	**199**	*e*P	**Pb**	**09 13 15.9**	**+1.0**
TSEB	**Hengchuen, Pin** baz=181	**1.26**	**195**	*e*P	**Pn**	**09 13 13.9**	**-0.7**
NNSB	**Datong** baz=21	**1.31**	**5**	⇓P	**Pn**	**09 13 15.6**	**+0.1**
NNSB	baz=21			*e*S	**Sn**	**09 13 32.2**	**-0.7**
NNS	**Nan Shan** baz=20	**1.32**	**5**	P	**Pn**	**09 13 16.0**	**+0.3**
NNS	baz=20			S	**Sn**	**09 13 32.8**	**-0.3**
WDJ	**Dajia District** baz=337	**1.35**	**335**	*e*P	**Pn**	**09 13 16.6**	**+0.6**
WDJ	baz=337			*e*S	**Sg**	**09 13 36.0**	**+0.7**
NSY	**Sanyi** baz=328	**1.37**	**341**	*e*P	**Pb**	**09 13 17.8**	**+0.8**
NSY	baz=328			*e*S	**Sg**	**09 13 36.6**	**+0.6**
ENA	**Nanau** baz=19	**1.38**	**19**	*e*P	**Pn**	**09 13 16.7**	**+0.3**
NANB	**Nanao** baz=21	**1.38**	**19**	*e*P	**Pn**	**09 13 15.2**	**-1.2**
NANB	baz=21			*e*S	**Sn**	**09 13 35.2**	**+0.8**
PTSB	**Yuanli** baz=328	**1.42**	**339**	*e*P	**Pn**	**09 13 17.9**	**+1.0**
PTSB	baz=328			S	**Sg**	**09 13 37.8**	**+0.3**
NMLH	**Miaoli** baz=345	**1.48**	**343**	*e*P	**Pb**	**09 13 19.2**	**+0.4**
NMLH	baz=345			S	**Sb**	**09 13 39.3**	**+1.8**
WDGT	**Dungji** baz=276	**1.48**	**276**	P	**Pn**	**09 13 17.6**	**-0.1**
WDGT	baz=276			S	**Sn**	**09 13 36.3**	**-0.4**
NDT	**Datong Townshi** baz=22	**1.50**	**9**	*e*P	**Pb**	**09 13 19.5**	**+0.3**
NDT	baz=22			S	**Sn**	**09 13 37.7**	**+0.5**
NSTT	**Nanjuang** baz=3.0	**1.52**	**351**	*e*P	**Pn**	**09 13 19.8**	**+1.4**
NSTT	baz=3.0			*e*S	**Sb**	**09 13 39.8**	**+1.0**
LIOB	**Emei** baz=4.0	**1.54**	**352**	*e*P	**Pn**	**09 13 20.0**	**+1.4**
LIOB	baz=4.0			S	**Sb**	**09 13 40.0**	**+0.8**
ENTT	**Nioudou** baz=28	**1.54**	**11**	*e*P	**Pn**	**09 13 19.7**	**+1.0**
ENTT	baz=28			*e*S	**Sn**	**09 13 39.3**	**+0.9**
YHNB	**Yeheng** baz=19	**1.55**	**4**	P	**Pn**	**09 13 19.7**	**+0.9**
YHNB	baz=19			S	**Sn**	**09 13 39.1**	**+0.4**
NSK	**Sanguang** baz=18	**1.55**	**3**	P	**Pn**	**09 13 20.1**	**+1.2**
NSK	baz=18			S	**Sn**	**09 13 39.0**	**+0.2**
TWC	**Suao** baz=20	**1.58**	**20**	*e*P	**Pn**	**09 13 20.1**	**+1.0**
PHUB	**P'eng-hu** baz=285	**1.60**	**285**	P	**Pn**	**09 13 19.2**	**-0.2**
PHUB	baz=285			*e*S	**Sn**	**09 13 39.1**	**-0.6**
PNG	**Penghu** baz=273	**1.63**	**286**	*e*P	**Pn**	**09 13 19.7**	**-0.1**
PNG	baz=273			S	**Sn**	**09 13 39.9**	**-0.6**
EOS1	**EOS1** baz=51	**1.63**	**29**	*e*P	**Pn**	**09 13 20.6**	**+0.7**
TWE	**Neicheng** baz=28	**1.64**	**13**	*e*P	**Pn**	**09 13 21.1**	**+1.2**
TWE	baz=28			*e*S	**Sn**	**09 13 42.1**	**+1.3**
SBCB	**Hsinchu** baz=355	**1.69**	**352**	*e*P	**Pn**	**09 13 22.2**	**+1.6**
SBCB	baz=355			*e*S	**Sb**	**09 13 44.3**	**+0.8**
VCHM	**Qimei** baz=274	**1.69**	**273**	*e*P	**Pn**	**09 13 20.2**	**-0.4**
VCHM	baz=274			*e*S	**Sn**	**09 13 40.7**	**-1.2**
WLTB	**Daxi**	**1.73**	**360**	*e*P	**Pb**	**09 13 24.2**	**+1.1**
NTC	**Toucheng** baz=16	**1.81**	**17**	*e*P	**Pn**	**09 13 24.1**	**+1.9**
NCUH	**Zhongli** baz=356	**1.84**	**358**	*e*P	**Pb**	**09 13 25.0**	**-0.2**
NHDH	**Xindian Distri** baz=20	**1.85**	**8**	*e*P	**Pn**	**09 13 24.8**	**+1.9**
TATO	**Taipei** baz=27	**1.86**	**6**	*e*P	**Pn**	**09 13 25.0**	**+2.0**
TATO	baz=27			*e*S	**Sb**	**09 13 49.2**	**+0.7**
TWA	**Mucha** baz=21	**1.88**	**9**	*e*P	**Pb**	**09 13 25.8**	**+0.1**
TIPB	**Shuangxi** baz=18	**1.92**	**16**	*e*P	**Pn**	**09 13 24.9**	**+1.0**
TIPB	baz=18			*e*S	**Sb**	**09 13 49.7**	**-0.4**
TWS1	**Kuangyinshan** baz=27	**1.98**	**4**	*e*P	**Pn**	**09 13 26.4**	**+1.7**
TWS1	baz=27			*e*S	**Sb**	**09 13 53.3**	**+1.4**
NWF	**Wu-fen Shan** baz=25	**2.00**	**14**	*e*P	**Pn**	**09 13 26.6**	**+1.5**
WFSB	**Wu-fen Shan** baz=25	**2.00**	**14**	*e*P	**Pn**	**09 13 26.6**	**+1.7**
JYNG	**Yonagunijimaku**	**2.04**	**49**	P	**Pn**	**09 13 25.3**	**-0.1**
JYNG				S	**Sn**	**09 13 50.7**	**+0.1**
YM01	**YM01** baz=25	**2.04**	**8**	*e*P	**Pb**	**09 13 28.9**	**+0.4**
YM10	**YM10** baz=25	**2.05**	**8**	*e*P	**Pb**	**09 13 28.3**	**-0.4**
YOJ	**Yonaguni jima** baz=45	**2.09**	**50**	⇑P	**Pn**	**09 13 26.0**	**-0.2**
YOJ	baz=45			*e*S	**Sn**	**09 13 51.5**	**-0.4**
YOJ	**Yonaguni jima**	**2.09**	**50**	P	**Pn**	**09 13 25.9**	**-0.2**
YOJ				*e*S	**Sn**	**09 13 52.1**	**+0.2**
HATJ	**Hateruma jima**	**2.52**	**68**	P	**Pn**	**09 13 31.7**	**-0.3**
HATJ				*e*S	**Sn**	**09 14 02.3**	**-0.1**
IRIF	**Iriomote-Funau**	**2.57**	**61**	P	**Pn**	**09 13 33.1**	**+0.3**
IRIF				S	**Sn**	**09 14 04.0**	**+0.3**
PTTC	**Pingtan** baz=328	**2.73**	**331**	*e*P	**Pn**	**09 13 35.2**	**+0.2**
PTMZ	**Houxiangcun** baz=315	**2.73**	**315**	*e*P	**Pn**	**09 13 35.0**	**0.0**
PTMZ	baz=315			*e*S	**Sn**	**09 14 07.2**	**-0.5**
JKRS	**Kuro-shima**	**2.76**	**66**	P	**Pn**	**09 13 35.2**	**-0.1**
JKRS				*e*S	**Sn**	**09 14 07.8**	**-0.6**
JIJ	**Ishigaki jima**	**2.92**	**64**	P	**Pn**	**09 13 37.2**	**-0.4**
JIJ				*e*S	**Sn**	**09 14 10.7**	**-1.7**
KNMB	**Chin-men Tao** baz=296	**2.95**	**298**	*e*P	**Pn**	**09 13 38.3**	**+0.3**
QZH	**Quanzhou**	**3.04**	**307**	Pn	**Pn**	**09 13 39.0**	**-0.2**
QZH				Sn	**Sn**	**09 14 13.0**	**-2.3**
QZH	comp=N,110nm,0.7s			smax	smax		
QZH	comp=E,70nm,0.5s			smax	smax		
JISG	**Ishigakijimahi**	**3.15**	**62**	P	**Pn**	**09 13 40.1**	**-0.7**
JISG				S	**Sn**	**09 14 16.5**	**-1.7**
MATB	**Ma-tsu** baz=335	**3.25**	**339**	*e*P	**Pn**	**09 13 42.2**	**+0.1**
ZPLA	**Ao Xicun** baz=284	**3.32**	**285**	*e*P	**Pn**	**09 13 43.0**	**0.0**
AXDP	**Jialang** baz=299	**3.49**	**301**	*e*P	**Pn**	**09 13 44.9**	**-0.5**
JTJ	**Tarama**	**3.50**	**64**	P	**Pn**	**09 13 45.5**	**0.0**
JTJ				*e*S	**Sn**	**09 14 25.8**	**-0.9**
ZZJH	**Jiuhuzhen** baz=291	**3.58**	**293**	*e*P	**Pn**	**09 13 46.7**	**0.0**
MHZQ	**Yeshan** baz=325	**3.59**	**326**	*e*P	**Pn**	**09 13 47.2**	**+0.4**
LYJJ	**Jianjiangzhen** baz=335	**3.68**	**339**	*e*P	**Pn**	**09 13 48.6**	**+0.7**
XPSS	**Dashiqiu** baz=342	**3.92**	**346**	*e*P	**Pn**	**09 13 51.5**	**+0.2**
JMJ	**Miyako jima 2** baz=71	**4.06**	**65**	*e*P	**Pn**	**09 13 53.2**	**0.0**

IDC ***25*** *09:27:31.5±0.9, 12.°05N×143.°33E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.6/51, mbtmp3.8/7, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/33, Error ellipse: s-maj=35.8km s-min=18.6km az=116.0*
ISCJB ***25*** *09:27:33.6±0.8, 12.°0N±0.°1×143.°3E±0.°2, h25^{km}, mb3.8/6, MS3.0/2, Error ellipse: s-maj=27.5km s-min=9.8km az=40.2*
ISC 25 09:27:35.3±1.0**, 12.°0N**±0.°2×**143.°4E**±0.°2**, h25**^{km}**, n12, σ0.^{s}93**/8**, mb4.0**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam** 23nm,0.3s,baz=163,slow=4.8,SNR=13	**2.16**	**43**	Pn	**Pn**	**09 28 09.6**	**-0.1**
GUMO	25nm,0.3s,baz=25,slow=23,SNR=9.5			Sn	**Sn**	**09 28 36.2**	**+0.5**
H11N1	**WAKE ISLAND Hy** baz=255,slow=75,SNR=11	**23.89**	**68**	T	T	09 57 34.0	
H11N2	**WAKE ISLAND Hy** baz=255,slow=75,SNR=12	**23.90**	**68**	T	T	09 57 39.6	
H11N3	**WAKE ISLAND Hy** baz=255,slow=75,SNR=9.6	**23.90**	**68**	T	T	09 57 40.3	
MJAR	**Matsushiro Arr** comp=Z,33nm,18.0s,baz=175,slow=35	**24.86**	**350**	LR	LR	09 41 54.1	
WRA	**Warramunga Arr** 1.4nm,0.7s,baz=11,slow=9.3,SNR=6.6	**32.97**	**196**	P	**P**	**09 34 08.7**	**+0.4**
ASAR	**Alice Springs** 0.5nm,0.8s,baz=25,slow=10,SNR=4.3	**36.64**	**195**	P	**P**	**09 34 39.7**	**-0.4**
KLR	**Kul'dur** comp=Z,25nm,19.9s,baz=176,slow=34	**38.33**	**348**	LR	LR	09 49 15.6	
KURBB	**Kurchatov Arra** 1.0nm,0.7s,baz=105,slow=6.0,SNR=4.6	**64.88**	**320**	P	**P**	**09 38 12.7**	**+0.3**
BVAR	**Borovoye Array** 0.9nm,0.4s,baz=116,slow=3.4,SNR=4.3	**70.25**	**322**	P	**P**	**09 38 46.9**	**+0.5**
ILAR	**Eielson Array** 0.5nm,0.7s,baz=271,slow=4.9,SNR=5.6	**70.62**	**25**	P	**P**	**09 38 46.8**	**-1.6**
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=268,slow=4.2,SNR=5.0	**89.06**	**51**	P	**P**	**09 40 29.8**	**+0.8**

MEX 25 09:29:16.0±0.7**, 15.°80N**×**97.°34W, h9**^{km}±5^{km}**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.18**	**92**	*e*P	Pb	09 29 34.8	-3.9
HUIG				*e*S	Sg	09 29 49.0	-5.1
VHO	**Vista Hermosa**	**1.39**	**25**	*e*P	Pn	09 29 38.9	-3.0
VHO				*e*S	Sb	09 29 55.9	-4.4
TLIG	**Tlapa**	**2.11**	**326**	*i* P	Pn	09 29 48.5	-3.2
TLIG				*i* S	Sn	09 30 13.5	-4.7
CMIG	**Matias Romero**	**2.68**	**61**	*e*P	Pn	09 29 56.5	-2.9
CMIG				*i* S	Sn	09 30 28.4	-3.7

ISN ***25*** *09:30:48.7±1.5, 33.°60N×47.°33E, h14^{km}±8^{km}, ML3.6*
TEH ***25*** *09:30:52.2, 33.°61N×47.°46E, h12^{km}, ML3.5*
THR ***25*** *09:30:53.0, 33.°58N×47.°51E, h14^{km}, ML3.5*
ISC 25 09:30:50.2±1.5**, 33.°52N**±0.°04×**47.°34E**±0.°03**, h9**^{km}±12^{km}**, n36, σ1.^{s}65**/41**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.43**	**89**	*e*Pg	**Pg**	**09 30 58.3**	**-0.2**
IKFM				*e*Sg	**Sb**	**09 31 04.7**	**-1.7**
IKOM	**Komasi** comp=Z,0.0nm,0.3s	**0.67**	**12**	IAMB	IAmb	09 31 16.1	
IKOM				*e*Pg	**Pg**	**09 31 03.3**	**+0.1**
IDOB	**Doab**	**0.75**	**69**	*e*Pg	**Pg**	**09 31 04.6**	**-0.1**
KCHF	**Cheshme Sefid,** comp=Z,0.0nm,0.4s	**0.80**	**342**	IAMB	IAmb	09 31 18.5	
KCHF				*e*Pg	**Pb**	**09 31 06.4**	**+0.1**

IKMR	Kamar-syah	0.87	90	IAMB	IAmb	09 31 19.9	
	comp=Z,0.0nm,0.4s						
IKMR				ePg	Pg	09 31 06.5	-0.4
IGHG	Ghaleghazi	1.03	322	ePg	Pn	09 31 11.9	+0.8
IGHG				IAMB	IAmb	09 31 47.8	
	comp=Z,8μm,0.6s						
IBZA	Bozab	1.04	24	ePg	Pn	09 31 11.8	+0.5
IVIS	Veis	1.08	338	ePg	Pn	09 31 12.4	+0.7
IVIS				eSg	Sn	09 31 27.2	+0.3
IVIS				IAMB	IAmb	09 31 35.4	
	comp=Z,5μm,0.4s						
HSAM	Samen	1.26	56	ePg	Pg	09 31 13.2	-1.2
HSAM				IAMB	IAmb	09 31 36.3	
	comp=Z,0.0nm,0.8s						
IDHR	Dehrash	1.42	326	ePg	Pg	09 31 18.3	+0.9
IDHR				IAMB	IAmb	09 31 44.0	
	comp=Z,0.0nm,0.3s						
SNGE	Sanandaj	1.57	0	ePg	Pg	09 31 20.9	+0.6
SNGE	Sanandaj	1.57	0	Pg	Pg	09 31 20.9	+0.6
HSRG	Sareghieh	1.89	24	ePn	Pg	09 31 25.8	-0.6
KHMZ	Khomeyn	2.20	84	ePn	Pb	09 31 30.3	+0.1
KHMZ	Khomeyn	2.20	84	AML	AML	09 32 08.1	
	comp=E,310nm,0.4s						
KHMZ	Khomeyn	2.20	84	Pg	Pb	09 31 30.3	+0.1
KHMZ				Sg	Sb	09 31 57.8	+0.1
ASAO	Ashtian	2.46	65	ePn	Pb	09 31 32.9	-1.8
ASAO	Ashtian	2.46	65	Pn	Pb	09 31 32.9	-1.8
BHD	Baghdad	2.49	265	ePg	Pn	09 31 33.0	+2.2
BHD				AML	AML	09 31 33.7	
	comp=Z,4μm,0.4s						
BHD				eSg	Sb	09 32 05.5	-0.2
NSR	Nassriya	2.70	202	ePn	Pn	09 31 34.0	+0.2
NSR				AML	AML	09 31 37.1	
	comp=Z,156nm,0.4s						
NSR				eSn	Sn	09 32 07.0	+0.5
IRAZ	Razeghan	2.85	48	ePn	Pb	09 31 39.7	-1.7
IRAZ				IAMB	IAmb	09 32 27.5	
	comp=Z,4μm,0.8s						
JHBN	Jahan bin	3.08	114	ePn	Pn	09 31 41.2	+1.9
JHBN				IAMB	IAmb	09 32 37.2	
	comp=Z,0.0nm,0.6s						
IPIR	Pirpir	3.10	105	ePn	Pn	09 31 41.7	+2.2
IPIR				IAMB	IAmb	09 32 38.5	
	comp=Z,2μm,0.7s						
ZNGN	Zangian	3.27	114	ePn	Pn	09 31 43.5	+1.5
ROKH	ROKH	3.32	110	ePn	Pn	09 31 44.5	+1.9
ROKH				IAMB	IAmb	09 32 38.2	
	comp=Z,0.0nm,0.4s						
GHVR	GHOM	3.42	73	AML	AML	09 32 51.6	
	comp=N,117nm,0.7s						
IMHD	Mahdasht	3.50	51	ePn	Pn	09 31 47.0	+2.1
IKLH	Kolahrood	3.55	92	ePn	Pn	09 31 48.4	+2.6
KRSH	Karshahi	4.02	82	ePn	Pn	09 31 54.8	+2.6
IZEF	Zefreh	4.23	97	ePn	Pn	09 31 57.1	+2.0
MSL	Mosul	4.51	311	ePn	Pn	09 31 57.0	-1.7
MSL				eSn	Sn	09 32 49.0	-2.2
IRAM	Ramesheh	4.58	110	ePn	Pn	09 32 01.6	+1.7
IPRN	Peran	4.93	55	ePn	Pn	09 32 08.1	+3.5
ANAR	Anarak	5.36	92	ePn	Pn	09 32 12.3	+1.8
RTB	Rutbah	5.91	267	ePn	Pn	09 32 18.0	0.0
RTB				AML	AML	09 32 21.9	
	comp=Z,51nm,0.6s						
RTB				eSn	Sn	09 33 24.0	-1.8
IGLO	Ghaloghah	6.10	59	ePn	Pn	09 32 24.3	+3.5

WEL 25 09:32:43.2,41°.7S±1°.0×174°.2E±0°.8,h10^{km}±2^{km},M3.7/28, ML4.0/21,MLv3.7/28,Error ellipse: s-maj=0.0km s-min=0.0km az=169.0,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.08	191	P	Pg	09 32 46.1	+0.6
CMWZ				S	Sg	09 32 48.0	+0.8
BSWZ	Blackbirch Sta	0.27	261	P	Pg	09 32 49.4	+0.7
BSWZ				S	Sb	09 32 53.8	-1.0
TUWZ	Tuamarina	0.33	318	P	Pb	09 32 50.4	-0.6
TUWZ				S	Sb	09 32 55.3	-1.1
TCW	Tory Channel	0.46	4	P	Pg	09 32 52.8	+0.6
TCW				S	Sb	09 32 59.5	-0.8
BHW	Baring Head	0.55	61	P	Pb	09 32 55.0	+0.1
PLWZ	Palliser	0.77	83	P	Pn	09 32 59.7	-0.5
NNZ	Nelson	0.79	305	P	Pg	09 32 58.6	+0.3
MSWZ	Moikau Station	0.81	72	P	Pb	09 32 59.9	+0.7
CAW	Cannon Point	0.84	48	P	Pb	09 32 60.0	+0.1
DUWZ	D'Urville Isla	0.90	345	P	Pb	09 33 00.7	-0.2
KHZ	Kahutara	0.91	215	P	Pn	09 33 02.1	+0.1
PAWZ	Paruwai Farm	0.94	72	P	Pn	09 33 02.6	+0.1
THZ	Tophouse	1.00	264	P	Pb	09 33 02.6	0.0
MTW	Mount Morrison	1.08	62	P	Pn	09 33 04.6	+0.2
OGWZ	Otaki Gorge	1.11	40	P	Pb	09 33 04.4	0.0
TRWZ	Traveller	1.13	76	P	Pg	09 33 04.9	+0.1
HOWZ	Holdsworth Sta	1.24	52	P	Pg	09 33 07.2	+0.3
TMWZ	Te Maipa	1.37	66	P	Pn	09 33 08.4	+0.1
MRZ	Mangatainoka R	1.43	46	P	Pb	09 33 09.8	-0.1
QRZ	Quartz Range	1.54	303	P	Pb	09 33 11.8	0.0
GVZ	Greta Valley S	1.57	214	P	Pn	09 33 11.3	+0.2
OHWZ	Ohakea	1.68	30	P	Pb	09 33 14.7	+0.5
PRWZ	Pori Road	1.72	50	P	Pn	09 33 13.8	+0.5
POWZ	Post Office Ro	1.73	43	P	Pb	09 33 14.2	-0.8
BFZ	Birch Farm	1.81	58	P	Pn	09 33 13.8	-0.6
DSZ	Denniston Nort	1.82	267	P	Pb	09 33 16.4	-0.2
LTZ	Lake Taylor	1.83	232	P	Pn	09 33 15.3	+0.5
AMCZ	Amberley	1.91	217	P	Pn	09 33 15.4	-0.3
WAZ	Wanganui	2.00	17	P	Pb	09 33 20.1	+0.5
DVHZ	Dannevirke	2.01	47	P	Pn	09 33 17.2	+0.1
TSZ	Takapari Road	2.08	40	P	Pn	09 33 18.8	+0.7
LREZ	Lake Rotokare	2.21	3	P	Pb	09 33 23.4	+0.2
OKCZ	Okains Bay	2.23	202	P	Pn	09 33 19.2	-0.9
CRLZ	Canterbury Las	2.24	211	P	Pn	09 33 19.8	-0.5
NMEZ	Namu Road	2.27	353	P	Pg	09 33 26.0	-0.7
PNHZ	Pukenui	2.31	41	P	Pn	09 33 21.4	+0.2
OXZ	Oxford	2.32	224	P	Pn	09 33 20.5	-0.9
INZ	Inchbonnie	2.32	242	P	Pn	09 33 22.4	+1.0
MQZ	McQueen's Vall	2.34	209	P	Pn	09 33 20.2	-1.5
KHEZ	Kahui Hut	2.38	356	P	Pb	09 33 26.4	+0.2
NBEZ	Newall Road No	2.42	353	P	Pb	09 33 26.0	-0.8
MTVZ	Mangateitei	2.47	23	P	Pb	09 33 27.9	+0.2
DREZ	Durham Road	2.48	359	P	Pb	09 33 28.1	+0.3
PKE	Pukeiti	2.48	356	P	Pb	09 33 28.5	+0.6
PKVZ	Pokaka	2.53	20	P	Pb	09 33 27.7	-0.9
MOVZ	Moawhango	2.54	28	P	Pb	09 33 28.5	-0.4
TRVZ	Turoa	2.57	23	P	Pb	09 33 28.8	-0.8
VRZ	Vera Road	2.58	9	P	Pb	09 33 28.0	-1.4
PXZ	Pawanui	2.58	51	P	Pn	09 33 24.0	-1.0
BHHZ	Black Hill Sta	2.59	33	P	Pn	09 33 26.2	+1.0
KRHZ	Kereru	2.60	39	P	Pn	09 33 25.2	-0.1
DRZ	Dome Shelter	2.60	23	P	Pb	09 33 28.9	-1.2
WHVZ	Whangaehu Hut	2.60	24	P	Pb	09 33 28.3	-1.7
FWVZ	Far West T-bar	2.62	23	P	Pb	09 33 29.0	-1.3
TUVZ	Tukino	2.63	25	P	Pn	09 33 27.9	+2.1
NGZ	Ngauruhoe	2.70	23	P	Pb	09 33 30.9	-0.8
KAHZ	Kahuranaki	2.75	48	P	Pn	09 33 29.6	+2.3
TWVZ	Taurewa	2.76	20	P	Pb	09 33 33.8	+1.2
WTVZ	West Tongariro	2.76	23	P	Pb	09 33 33.2	+0.7
KRVZ	Karewarewa	2.79	23	P	Pn	09 33 29.4	+1.4
KRVZ				P	Pb	09 33 34.3	+1.1
KWHZ	Kaweka Forest	2.80	37	P	Pg	09 33 35.9	-0.9
KATZ	Kakaramea	2.92	23	P	Pg	09 33 38.2	-0.9
WVZ	Waitaha Valley	2.94	240	P	Pn	09 33 31.4	+1.4
RITZ	Rihia Road	2.96	25	P	Pb	09 33 37.0	+0.9
RATZ	Rangitukua	3.04	23	P	Pg	09 33 39.6	-1.8
BKZ	Black Stump Fm	3.04	35	P	Pn	09 33 34.2	+2.8
RPZ	Rata Peaks	3.11	228	P	Pn	09 33 32.0	-0.3
WATZ	Wairara	3.18	22	P	Pb	09 33 41.0	+1.4
HIZ	Hauiti	3.19	9	P	Pb	09 33 36.9	-3.0
MRHZ	Matea Rd	3.29	31	P	Pb	09 33 43.3	+1.6
TLZ	Tolley Road	3.49	17	P	Pb	09 33 46.0	+1.0
MUGZ	Murupara	3.74	32	P	Pb	09 33 48.5	-0.8
FOZ	Fox Glacier	3.75	239	P	Pb	09 33 46.2	-3.3
LBZ	Lake Benmore	4.02	226	P	Pn	09 33 47.5	+2.7
TOZ	Tahuroa Road	4.06	14	P	Pb	09 33 52.0	-2.7
URZ	Urewera	4.06	34	P	Pb	09 33 53.9	-0.9
MWZ	Matawai	4.18	38	P	Pn	09 33 48.8	+1.7
ODZ	Otahua Downs	4.27	217	P	Pn	09 33 47.3	-0.8
AWAZ	Awhitu Peninsu	4.61	4	P	Pn	09 33 57.4	+4.5
MKAZ	Moumakai	4.62	9	P	Pn	09 33 56.1	+3.1
JCZ	Jackson Bay	4.67	237	P	Pn	09 33 57.8	+4.1
RVAZ	Riverhead Bore	4.90	3	P	Pn	09 33 58.3	+1.4

UCR 25 09:35:00.4±1.8,10°.82N×86°.12W,h14^{km}±30^{km},MD3.6,2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	Buena Vista	0.70	91	⇓iP	Pg	09 35 13.4	-0.8
BUEV				eS	Sg	09 35 23.3	-0.2
GB1A	Borinquen Arri	0.71	90	eP	Pg	09 35 13.7	-0.7
GB1A				eS	Sg	09 35 22.9	-0.8
ARE1	Arenal 1	1.43	104	eS	Sn	09 35 44.6	+0.1
ACON	Acoyapa	1.48	39	⇓iP	Pb	09 35 27.3	-0.3
ESPN	Las Esperanzas	2.25	52	eP	Pn	09 35 35.5	-1.8

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*IDC **25** 09:48:06.0±1.2,41°.45S×174°.10E,h0^{km},mb3.7/3, mb1 3.9/5,mb1mx3.7/30,mbtmp3.7/5,ML3.2/2,Error ellipse: s-maj=31.0km s-min=27.3km az=102.0*

*ISCJB **25** 09:48:07.5±0.5,41°.76S±0°.02×174°.31E±0°.03,h11^{km}±3^{km}, mb3.7/3,Error ellipse: s-maj=4.9km s-min=2.6km az=140.2*

*NEIC **25** 09:48:07.0±0.0,41°.68S×174°.26E,h14^{km},ML4.2(WEL), After WEL.*

*WEL **25** 09:48:07.6,41°.7S±0°.9×174°.3E±0°.8,h11^{km}±2^{km},M4.0/31, ML4.3/19,MLv4.0/31,Error ellipse: s-maj=0.0km s-min=0.0km az=150.2*

ISC 25 09:48:08.0±0.8,41°.70S±0°.03×174°.27E±0°.02,h14^{km}±5^{km}, n117,σ1^{s}41/122,mb3.9/3,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.06	219	P	Pg	09 48 10.7	-0.1
CMWZ				S	Sg	09 48 13.5	+0.8
BSWZ	Blackbirch Sta	0.29	267	P	Pg	09 48 14.2	+0.1
BSWZ				S	Sb	09 48 19.2	-0.6
TUWZ	Tuamarina	0.36	318	P	Pg	09 48 14.9	-0.5
TUWZ				S	Sb	09 48 20.4	-1.4
TCW	Tory Channel	0.49	1	P	Pg	09 48 16.9	-0.8
SNZO	South Karori	0.51	40	ePg	Pg	09 48 17.9	-0.2
SNZO				eSg	Sb	09 48 26.0	0.0
BHW	Baring Head	0.54	57	P	Pg	09 48 18.8	+0.2
BHW				S	Sb	09 48 26.6	-0.3
PLWZ	Palliser	0.75	80	P	Pb	09 48 23.5	+0.5
MSWZ	Moikau Station	0.79	69	P	Pg	09 48 23.7	+0.3
NNZ	Nelson	0.82	306	P	Pb	09 48 23.2	-0.9
CAW	Cannon Point	0.84	46	P	Pb	09 48 23.8	-0.6
KHZ	Kahutara	0.90	217	ePg	Pn	09 48 26.9	+0.7
KHZ				eSg	Sn	09 48 41.0	+2.1
KHZ	Kahutara	0.90	217	P	Pn	09 48 26.7	+0.6
PAWZ	Paruwai Farm	0.93	70	P	Pg	09 48 26.4	+0.5
DUWZ	D'Urville Isla	0.94	344	P	Pb	09 48 24.9	-1.1
THZ	Tophouse	1.02	266	ePn	Pg	09 48 27.4	-0.4
THZ	Tophouse	1.02	266	P	Pg	09 48 27.3	-0.4
MTW	Mount Morrison	1.08	60	P	Pb	09 48 28.4	0.0
TRWZ	Traveller	1.11	75	P	Pb	09 48 28.7	-0.2
OGWZ	Otaki Gorge	1.12	38	P	Pb	09 48 28.3	-0.8
HOWZ	Holdsworth Sta	1.24	50	P	Pb	09 48 31.0	-0.1
TMWZ	Te Maipa	1.36	65	P	Pn	09 48 32.3	-0.3
MRZ	Mangatainoka R	1.44	44	P	Pn	09 48 33.7	+0.1
TIWZ	Tintock	1.53	53	P	Pn	09 48 35.1	+0.1
GVZ	Greta Valley S	1.56	215	P	Pn	09 48 35.7	+0.3
QRZ	Quartz Range	1.57	303	ePn	Pb	09 48 36.3	-0.6
QRZ				eSn	Sg	09 48 58.1	-0.6
QRZ	Quartz Range	1.57	303	P	Pb	09 48 36.3	-0.6
OHWZ	Ohakea	1.69	28	P	Pb	09 48 38.7	-0.2
PRWZ	Pori Road	1.72	49	P	Pn	09 48 37.4	-0.1
POWZ	Post Office Ro	1.73	41	P	Pn	09 48 37.8	+0.1
BFZ	Birch Farm	1.81	56	ePn	Pn	09 48 39.0	+0.3
BFZ	Birch Farm	1.81	56	P	Pn	09 48 38.5	-0.2
LTZ	Lake Taylor	1.83	233	ePn	Pn	09 48 39.6	+0.5
LTZ	Lake Taylor	1.83	233	P	Pn	09 48 39.7	+0.5
DSZ	Denniston Nort	1.84	268	P	Pb	09 48 41.0	-0.5
AMCZ	Amberley	1.90	218	P	Pn	09 48 39.8	-0.2
DVHZ	Dannevirke	2.01	46	P	Pn	09 48 40.9	-0.6
WAZ	Wanganui	2.02	16	P	Pb	09 48 43.9	-0.6
TSZ	Takapari Road	2.08	39	P	Pn	09 48 42.4	-0.2
OKCZ	Okains Bay	2.21	203	P	Pn	09 48 43.7	-0.6
CRLZ	Canterbury Las	2.23	212	ePn	Pn	09 48 44.3	-0.2
CRLZ	Canterbury Las	2.23	212	P	Pn	09 48 43.9	-0.6
LREZ	Lake Rotokare	2.24	3	P	Pb	09 48 47.0	-1.2
NMEZ	Namu Road	2.31	352	P	Pb	09 48 48.2	-1.1
PNHZ	Pukenui	2.31	40	P	Pn	09 48 45.3	-0.4
OXZ	Oxford	2.31	225	ePn	Pn	09 48 44.9	-0.8
OXZ	Oxford	2.31	225	P	Pn	09 48 45.0	-0.6
MQZ	McQueen's Vall	2.33	210	ePn	Pn	09 48 44.5	-1.4
MQZ	McQueen's Vall	2.33	210	P	Pn	09 48 44.6	-1.3
INZ	Inchbonnie	2.33	243	P	Pn	09 48 46.7	+0.8
KHEZ	Kahui Hut	2.41	355	P	Pb	09 48 49.7	-1.5
NBEZ	Newall Road No	2.45	353	P	Pb	09 48 49.4	-2.5
MTVZ	Mangateitei	2.49	22	P	Pb	09 48 51.3	-1.2
DREZ	Durham Road	2.51	359	P	Pb	09 48 50.8	-2.0
PKE	Pukeiti	2.51	355	P	Pn	09 48 50.0	+1.6
PKVZ	Pokaka	2.55	19	P	Pn	09 48 50.6	+1.7
MOVZ	Moawhango	2.56	27	P	Pn	09 48 49.6	+0.5
PXZ	Pawanui	2.58	51	P	Pn	09 48 48.0	-1.3
TRVZ	Turoa	2.59	23	P	Pn	09 48 51.4	+1.7
BHHZ	Black Hill Sta	2.60	32	P	Pn	09 48 50.2	+0.5
VRZ	Vera Road	2.60	8	P	Pn	09 48 51.1	+1.5
KRHZ	Kereru	2.60	39	P	Pn	09 48 49.1	-0.6
DRZ	Dome Shelter	2.62	23	P	Pb	09 48 53.2	-1.6
WHVZ	Whangaehu Hut	2.62	23	P	Pn	09 48 51.7	+1.6
MHEZ	Mangahewa	2.62	1	P	Pb	09 48 53.6	-1.2
FWVZ	Far West T-bar	2.63	22	P	Pn	09 48 52.0	+1.7
TUVZ	Tukino	2.65	24	P	Pb	09 48 52.7	-2.6
NGZ	Ngauruhoe	2.72	22	P	Pn	09 48 53.2	+1.7
KAHZ	Kahuranaki	2.75	47	P	Pn	09 48 50.6	-1.1
WTVZ	West Tongariro	2.77	22	P	Pb	09 48 55.1	-2.4
TWVZ	Taurewa	2.78	19	P	Pn	09 48 54.0	+1.9
WVZ	Waitaha Valley	2.95	241	P	Pn	09 48 55.4	+1.0
RITZ	Rihia Road	2.98	25	P	Pb	09 48 58.7	-2.2
BKZ	Black Stump Fm	3.05	35	ePn	Pn	09 48 54.4	-1.5
BKZ	Black Stump Fm	3.05	35	P	Pn	09 48 55.3	-0.6
RATZ	Rangitukua	3.06	23	P	Pb	09 49 02.7	+0.5
RPZ	Rata Peaks	3.11	229	Pn	Pn	09 48 56.3	-0.3
	7.4nm,0.3s,baz=87,slow=2.6,SNR=32						
RPZ				Sn	Sn	09 49 33.7	+0.2
	11nm,0.3s,baz=317,slow=23,SNR=11						
RPZ	Rata Peaks	3.11	229	ePn	Pn	09 48 56.2	-0.4
RPZ	Rata Peaks	3.11	229	P	Pn	09 48 56.4	-0.3
WATZ	Wairara	3.19	21	P	Pb	09 49 02.8	-1.7
HIZ	Hauiti	3.22	8	ePn	Pn	09 48 59.7	+1.6
HIZ	Hauiti	3.22	8	P	Pn	09 49 00.3	+2.2
MRHZ	Matea Rd	3.30	31	P	Pn	09 48 58.3	-1.0
MTHZ	Maungataniwha	3.46	36	P	Pn	09 49 00.3	-1.2
SNGZ	Shannon Statio	3.75	40	P	Pn	09 49 06.2	+0.8
MUGZ	Murupara	3.75	32	P	Pn	09 49 05.6	+0.1
FOZ	Fox Glacier	3.76	239	ePn	Pn	09 49 07.2	+1.7
FOZ	Fox Glacier	3.76	239	P	Pn	09 49 07.0	+1.5
LBZ	Lake Benmore	4.02	227	ePn	Pn	09 49 09.3	+0.2
LBZ	Lake Benmore	4.02	227	P	Pn	09 49 10.8	+1.7
URZ	Urewera	4.07	33	Pn	Pn	09 49 07.4	-2.4
	0.5nm,0.3s,baz=201,slow=8.6,SNR=6.5						
URZ	Urewera	4.07	33	ePn	Pn	09 49 11.9	+2.1
URZ	Urewera	4.07	33	P	Pn	09 49 09.8	0.0
TOZ	Tahuroa Road	4.08	14	P	Pn	09 49 13.0	+3.1
ODZ	Otahua Downs	4.26	217	ePn	Pn	09 49 12.1	-0.3
ODZ	Otahua Downs	4.26	217	P	Pn	09 49 11.7	-0.7
TWGZ	Tauwhareparae	4.53	40	P	Pn	09 49 17.5	+1.3
RUGZ	Raukumara Rang	4.56	36	P	Pn	09 49 18.1	+1.4
AWAZ	Awhitu Peninsu	4.64	4	P	Pn	09 49 20.6	+3.0
MKAZ	Moumakai	4.64	9	P	Pn	09 49 19.4	+1.7
JCZ	Jackson Bay	4.67	238	P	Pn	09 49 20.1	+1.9
WTAZ	Waiatarua	4.77	3	P	Pn	09 49 23.4	+3.9
ETAZ	East Tamaki Re	4.77	6	P	Pn	09 49 22.2	+2.8
HAZ	Te Kaha	4.78	36	P	Pn	09 49 19.9	+0.3
RVAZ	Riverhead Bore	4.93	3	P	Pn	09 49 24.3	+2.7
WKZ	Wanaka	4.94	229	ePn	Pn	09 49 22.6	+0.7
WIAZ	Waiheke Island	4.95	8	P	Pn	09 49 25.2	+3.4
MBAZ	Motutapu North	4.95	6	P	Pn	09 49 27.1	+5.2
ABAZ	Army Bay	5.11	5	P	Pn	09 49 28.4	+4.2
MSZ	Milford Sound	5.50	235	P	Pn	09 49 36.3	+6.9
MLZ	Mavora Lakes	5.78	229	ePn	Pn	09 49 39.9	+6.6
OUZ	Omahuta	6.49	355	ePn	Pn	09 49 45.5	+2.4
OUZ	Omahuta	6.49	355	P	Pn	09 49 45.4	+2.4
ASAR	Alice Springs	38.03	285	P	P	09 55 24.3	-1.6
	0.2nm,0.4s,baz=125,slow=6.8,SNR=5.4						
WRA	Warramunga Arr	40.10	290	P	P	09 55 42.0	-1.2
	2.2nm,0.8s,baz=132,slow=7.1,SNR=5.8						
QSPA	South Pole Qui	48.43	180	P	P	09 56 52.2	+2.6
	1.1nm,0.7s,baz=23,slow=1.5,SNR=7.3						
ARCES	ARCESS Array B	147.74	340	PKPbc	PKPbc	10 07 49.7	-1.3
	1.0nm,1.0s,baz=7.1,slow=3.6,SNR=3.7						
TORD	Torodi Ar. Bea	150.82	195	PKPbc	PKiKP	10 08 00.7	-0.3
	0.6nm,0.5s,baz=196,slow=0.9,SNR=12						

SJA 25 09:49:37.3±0.7,30°.83S×64°.85W,h76^{km}±141^{km},ML3.4, MW3.6,Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	1.51	286	i P	Pn	09 50 04.3	+1.7
APLL				i S	Sn	09 50 23.4	+1.6
APLL				IAML		09 50 23.4	
	comp=Z,398nm,0.2s						
ACLC	CERRO LA CRUZ	2.29	307	i P	Pn	09 50 15.1	+1.9
ACLC				i S	Sn	09 50 43.2	+2.6
AZAP	Zapla	6.58	358	i P	Pn	09 51 13.0	+1.4

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*IDC **25** 10:01:38.5±1.3,9°.12N×126°.05E,h0^{km},mb3.8/4, mb1 3.9/4,mb1mx3.5/32,mbtmp3.8/4,MS2.8/1,Ms1 2.8/1, ms1mx2.2/39,Error ellipse: s-maj=62.8km s-min=28.2km az=77.0*

*ISCJB **25** 10:01:43.2±1.7,9°.16N±0°.04×126°.54E±0°.06,h29^{km}±12^{km}, mb3.8/4,Error ellipse: s-maj=10.4km s-min=6.4km az=169.1*

*MAN **25** 10:01:44.8,9°.14N×126°.38E,h22^{km},mb4.5,ML3.4,MS3.2*

ISC 25 10:01:43.9±1.6,9°.15N±0°.05×126°.44E±0°.07,h29^{km}±12^{km}, n22,σ1^{s}79/21,mb3.8/4,1C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.82	258	eP	Pb	10 01 59.3	-0.4
BUTP				eS	Sn	10 02 11.3	+0.6
BIPH	Bislig	0.96	184	⇑iP	Pb	10 02 02.0	+0.1
BIPH				i S	Sb	10 02 14.3	0.0
MSLP	Maasin	1.84	302	eP	Pn	10 02 15.0	+1.5
MSLP				eS	Sb	10 02 38.8	-0.7
BUKP	Musuan	1.85	227	eP	Pb	10 02 16.1	-1.1
BUKP				eS	Sb	10 02 38.8	-1.1
CGP	Cagayan de Oro	1.85	248	⇓eP	Pn	10 02 14.9	+1.2
PLP	Palo	2.47	325	⇓eP	Pn	10 02 23.8	+1.6
PLP				eS	Sn	10 02 54.9	+3.5
TBP	Tagbilaran	2.60	282	eP	Pn	10 02 25.4	+1.4
TBP				eS	Sn	10 02 56.4	+1.8
BESP	Borongan	2.63	338	eP	Pn	10 02 25.6	+1.1
DDMP	Don Marcelino,	3.10	193	eP	Pn	10 02 33.9	+2.9
CNP	Catarman	3.77	333	eP	Pn	10 02 41.1	+1.0
RCP	Roxas	4.35	304	⇓eP	Pn	10 02 51.0	+2.9
KAPI	Kappang	15.56	206	LR	LR	10 12 20.7	
	comp=Z,36nm,18.5s,baz=295,slow=42						
ASAR	Alice Springs	33.42	168	P	P	10 08 19.8	-0.5
	0.4nm,0.8s,baz=351,slow=7.2,SNR=6.3						
H11S3	WAKE ISLAND Hy	40.09	72	T	T	10 52 13.5	
	baz=262,slow=75,SNR=65						
H11S1	WAKE ISLAND Hy	40.11	72	T	T	10 52 12.4	
	baz=262,slow=75,SNR=89						
H11S2	WAKE ISLAND Hy	40.11	72	T	T	10 52 14.2	
	baz=262,slow=75,SNR=87						
H11N1	WAKE ISLAND Hy	40.47	70	T	T	10 52 43.0	
	baz=264,slow=75,SNR=18						
H11N2	WAKE ISLAND Hy	40.47	70	T	T	10 52 41.8	
	baz=264,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	40.48	70	T	T	10 52 50.8	
	baz=264,slow=75,SNR=15						
PETK	Petropavlovsk-	50.59	24	P	P	10 10 40.4	+0.5
	0.7nm,0.6s,baz=190,slow=1.2,SNR=5.5						
MKAR	Makanchi Array	53.02	323	P	P	10 10 56.1	-2.1
	0.7nm,0.6s,baz=122,slow=7.6,SNR=7.3						
ARCES	ARCESS Array B	85.30	340	P	P	10 14 15.9	-1.8
	1.7nm,0.8s,baz=79,slow=6.3,SNR=9.1						

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*ISCJB **25** 10:28:50.2±0.7,13°.06N±0°.06×90°.08W±0°.04,h29^{km}, mb4.2/1,MS2.9/3,Error ellipse: s-maj=8.8km s-min=4.9km az=13.1*

*SNET **25** 10:28:50.3±0.8,13°.09N×90°.05W,h20^{km}±5^{km},ML4.0*

*NEIC **25** 10:28:51.5±2.3,13°.03N×90°.08W,h32^{km}±9^{km}, MD4.0(SNET),MD4.0(MEX),Error ellipse: s-maj=24.4km s-min=9.9km az=211.0*

NEIC Felt [I] at Sonsonate.

*IDC **25** 10:28:52.9±6.5,13°.08N×90°.04W,h30^{km}±47^{km},mb3.6/2, mb1 4.2/5,mb1mx3.6/35,mbtmp4.0/5,ML3.7/3,MS3.1/4, Ms1 3.1/4,ms1mx2.7/32,Error ellipse: s-maj=51.4km s-min=23.9km az=50.0*

*MEX **25** 10:28:56.7±0.6,13°.02N×90°.62W,h20^{km},MD4.0*

ISC 25 10:28:51.0±1.1,13°.07N±0°.07×90°.12W±0°.04,h29^{km},n39, σ2^{s}01/53,MS3.0/3,1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.89	32	eP	Pn	10 29 06.6	-1.2
CEVE				eS	Sn	10 29 19.8	-0.1
CEVE				IAML		10 29 21.8	
	comp=Z,10μm,0.3s						
SNJE	San Jose	0.94	32	eP	Pn	10 29 07.0	-1.4
RTR	El Retiro	0.94	29	eP	Pn	10 29 07.3	-1.1
CEDA	San Andres	1.01	44	eP	Pn	10 29 08.2	-1.1
CEDA				IAML		10 29 31.0	
	comp=Z,5μm,0.3s						
SNET	Serv Nac Est T	1.06	54	eP	Pn	10 29 08.5	-1.5
SNET				eS	Sn	10 29 22.6	-1.1
SNET				IAML		10 29 28.1	
	comp=Z,3μm,0.3s						
UNIC	Universidad Ca	1.06	31	eP	Pn	10 29 08.8	-1.2
UEES	Universidad Ev	1.07	53	eP	Pn	10 29 08.6	-1.5
UEES				IAML		10 29 31.4	
	comp=Z,3μm,0.3s						
LOMA	Loma Larga	1.08	58	eP	Pn	10 29 08.8	-1.4
LOMA				IAML		10 29 27.5	
	comp=Z,6μm,0.4s						
OPAM	Oficina de Pla	1.10	54	eP	Pn	10 29 09.7	-0.8
LFU	La Fuente	1.19	55	eP	Pn	10 29 10.7	-0.9
PAVA	Las Pavas	1.31	61	eP	Pn	10 29 12.8	-0.7
MTO3	Montecristo	1.51	29	⇓eP	Pn	10 29 16.1	-0.2
LCY	Lacayo	1.81	79	eP	Pn	10 29 20.1	-0.2
APG	El Apazote	1.95	350	Pn	Pn	10 29 23.1	+0.7
	comp=Z,29nm,0.3s,baz=130,slow=11,SNR=415						
APG				Sn	Sb	10 29 49.8	-0.3
	comp=Z,43nm,0.3s,baz=78,slow=18,SNR=11						
APG				LR	LR	10 30 21.8	
	comp=Z,228nm,20.9s,baz=103,slow=46						
LCND	La Caada	2.18	83	eP	Pn	10 29 24.9	-0.4
CNCH	Conchagua	2.23	84	eP	Pn	10 29 25.5	-0.6
THIG		2.77	311	ePn	Pn	10 29 33.9	+0.5
THIG				eSn	Sn	10 30 01.1	-4.9
THIG		2.77	311	i P	Pn	10 29 33.9	+0.5
THIG				i S	Sn	10 30 01.1	-4.9
TGUH	Tegucigalpa,Un	2.93	70	ePn	Pn	10 29 35.2	-0.5
ESTN	Estel	3.65	89	ePn	Pn	10 29 44.9	-0.7
CCIG	Comitan	3.75	329	ePn	Pn	10 29 49.2	+2.2
CCIG				ePn	Pn	10 29 49.5	+2.5
CCIG				eSn	Sn	10 30 30.1	-0.3
CCIG				eSn	Sn	10 30 30.1	-0.3
CCIG	Comitan	3.75	329	eP	Pn	10 29 49.2	+2.2
CCIG				i S	Sn	10 30 29.9	-0.3
PCIG		3.99	311	ePn	Pn	10 29 50.3	+0.1
PCIG				eSn	Sn	10 30 31.6	-4.4
PCIG		3.99	311	eP	Pn	10 29 50.3	+0.1
PCIG				eS	Sn	10 30 32.2	-3.8
TGIG		4.70	322	ePn	Pn	10 30 01.2	+1.2
TGIG				eSn	Sn	10 30 50.8	-2.8
TGIG		4.70	322	i P	Pn	10 30 01.2	+1.2
TGIG				i S	Sn	10 30 51.0	-2.5
JTS	Las Juntas de	5.76	118	Pn	Pn	10 30 16.6	+2.0
	comp=Z,1.3nm,0.3s,baz=356,slow=14,SNR=19						
JTS				Sn	Sn	10 31 16.9	-2.9
	baz=0.0,slow=19,SNR=1.8						
JTS	Las Juntas de	5.76	118	ePn	Pn	10 30 15.7	+1.1
CMIG	Matias Romero	6.10	312	Pn	Pn	10 30 20.5	+1.3
	comp=Z,1.2nm,0.3s,baz=135,slow=11,SNR=15						
CMIG				Sn	Sn	10 31 26.4	-1.6
	comp=Z,1.1nm,0.3s,baz=113,slow=15,SNR=3.1						
CMIG	Matias Romero	6.10	312	ePn	Pn	10 30 20.1	+0.9
CMIG				eSn	Sn	10 31 23.9	-4.2
CMIG	Matias Romero	6.10	312	i P	Pn	10 30 20.1	+0.9
CMIG				i S	Sn	10 31 24.4	-3.7
TEIG	Tepich	7.33	14	Pn	Pn	10 30 37.3	+1.2
	comp=Z,4.0nm,0.3s,baz=195,slow=12,SNR=52						
TEIG				LR	LR	10 33 51.3	
	comp=Z,118nm,19.5s,baz=336,slow=41						
TX31	Lajitas Ar. Si	20.50	324	ePn	Pn	10 33 30.2	+1.0

TXAR	Lajitas Array	20.50	324	P	Pn	10 33 30.0	+0.8
	comp=Z,1.3nm,0.7s,baz=148,slow=11,SNR=22						
TXAR				LR	LR	10 41 36.7	
	comp=Z,61nm,20.5s,baz=0.0,slow=37						
SJG	San Juan	23.61	75	LR	LR	10 43 53.1	
	comp=Z,39nm,19.3s,baz=266,slow=38						
NNA	Nana	28.16	152	LR	LR	10 44 35.0	
	comp=Z,36nm,20.5s,baz=193,slow=34						
NV11	Mina Array Sit	35.46	320	eP	P	10 35 47.5	+2.4
NVAR	Mina Array Bea	35.55	320	P	P	10 35 48.5	+2.6
	comp=Z,2.2nm,0.7s,baz=135,slow=8.1,SNR=26						
NVAR				PcP	PcP	10 38 16.6	+1.8
	comp=Z,0.6nm,0.8s,baz=147,slow=4.0,SNR=4.7						
CMAR	Chiang Mai Arr	147.43	344	PKPbc	PKPbc	10 48 32.6	-0.4
	comp=Z,0.8nm,0.4s,baz=305,slow=2.3,SNR=4.2						

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*IDC **25** 10:42:40.7±3.9, 6°.37S×149°.35E, h28^{km}±26^{km}, mb4.1/11, mb1 4.4/13, mb1mx4.2/28, mbtmp4.3/13, ML4.7/1, MS3.8/6, Ms1 3.8/6, ms1mx3.5/30, Error ellipse: s-maj=24.7km s-min=14.2km az=98.0*

*ISCJB **25** 10:42:41.9±0.3, 6°.40S±0°.04×149°.18E±0°.07, h53^{km}, mb4.5/21, MS3.9/6, Error ellipse: s-maj=10.5km s-min=5.1km az=21.6*

*DJA **25** 10:42:43.6±0.5, 6°S±5°×14°9E±°, h62^{km}±7^{km}, M4.8/5, mb4.6/5, MLv4.9/3*

*NEIC **25** 10:42:43.8±0.8, 6°.40S×149°.23E, h55^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=12.8km s-min=6.3km az=129.0*

ISC 25 10:42:43.9±0.5**, 6°.44S**±0°.06×**149°.20E**±0°.08**, h53**^{km}**, n57, σ1**^{s}**.78**/60**, mb4.4**/21**, MS3.9**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.57	214	Pn	Pn	10 43 37.6	+0.8
	86nm,0.3s,baz=48,slow=5.7,SNR=180						
PMG				Sn	Sn	10 44 19.5	+1.7
	65nm,0.3s,baz=63,slow=18,SNR=12						
PMG				LR	LR	10 45 17.7	
	comp=Z,1μm,19.5s,baz=332,slow=42						
PMG	Port Moresby	3.57	214	ePn	Pn	10 43 37.5	+0.7
PMG				eSn	Sn	10 44 18.8	+1.0
RABL	Rabaul	3.70	53	ePn	Pn	10 43 37.7	-0.9
MANU	Manus Island	4.74	337	ePn	Pn	10 43 52.5	-0.3
COEN	Coen	9.53	218	ePn	Pn	10 44 57.9	-0.7
COEN				eSn	Sn	10 46 40.1	-4.3
CTAO	Charters Tower	13.86	192	ePn	Pn	10 45 58.5	+0.8
EIDS	Eidsvold	18.91	175	eP	P	10 47 00.4	+0.2
	12nm,0.8s						
MTN	Manton Dam	18.91	249	eP	P	10 47 00.8	+0.5
	25nm,1.0s						
WRAB	Tennant Creek	19.69	226	eP	P	10 47 09.3	+0.4
	42nm,0.8s						
WB2	Warramunga Arr	19.70	226	eP	P	10 47 09.5	+0.5
	31nm,0.8s						
WR1	Warramunga Arr	19.71	226	eP	P	10 47 09.4	+0.3
WRA	Warramunga Arr	19.71	226	P	P	10 47 09.4	+0.3
	2.4nm,0.3s,baz=54,slow=10,SNR=84						
AS31	Alice Springs	22.57	219	eP	P	10 47 40.0	+0.1
	7.1nm,0.6s						
ASAR	Alice Springs	22.57	219	P	P	10 47 40.0	+0.1
	5.5nm,0.6s,baz=54,slow=9.3,SNR=129						
ASAR				PcP	PcP	10 51 31.9	0.0
	1.4nm,0.9s,baz=46,slow=2.9,SNR=4.1						
ASAR				ScP	ScP	10 55 09.2	+3.8
	0.7nm,0.9s,baz=48,slow=2.8,SNR=4.2						
ASAR				LR	LR	10 56 45.8	
	comp=Z,205nm,19.6s,baz=47,slow=37						
DZM	Mont Dzumac	22.77	135	P	P	10 47 41.0	-1.2
	7.4nm,0.7s,baz=318,slow=11,SNR=8.4						
DZM				LR	LR	10 55 04.2	
	comp=Z,259nm,21.3s,baz=321,slow=33						
DZM	Mont Dzumac	22.77	135	eP	P	10 47 40.9	-1.2
	11nm,0.9s						
STKA	Stephens Creek	26.28	195	P	P	10 48 15.6	+1.2
	5.2nm,0.8s,baz=2.2,slow=9.9,SNR=8.3						
STKA				LR	LR	10 58 56.5	
	comp=Z,220nm,19.2s,baz=29,slow=37						
STKA	Stephens Creek	26.28	195	eP	P	10 48 14.5	+0.1
	3.2nm,1.1s						
EDFI	Ende, Flores	27.36	263	P	P	10 48 22.9	-1.6
WSI	Waingapu	28.79	262	P	P	10 48 33.6	-3.5
FORT	Forrest	31.30	217	eP	P	10 48 59.2	+0.2
	16nm,0.8s						
MJAR	Matsushiro Arr	43.98	347	P	P	10 50 44.1	-1.9
	1.8nm,0.7s,baz=166,slow=8.8,SNR=4.3						
MAJO	Matsushiro	43.98	347	eP	P	10 50 44.1	-1.9
MAT	Matsushiro	43.98	347	P	P	10 50 46.6	+0.5
MAT				S	S	10 57 12.4	-1.9
KSRS	Korea Array	47.98	337	P	P	10 51 18.0	+0.6
	2.3nm,0.6s,baz=154,slow=8.4,SNR=9.2						
WHN	Wuhan	49.67	320	P	P	10 51 33.8	+3.3
USRK	Ussuriysk Ar.	52.75	344	P	P	10 51 54.7	+1.3
	2.5nm,0.6s,baz=180,slow=4.9,SNR=12						
CD2	Chengdu	57.16	313	eP	P	10 52 25.0	-0.6
HHC	Hu-ho-hao-te	58.38	327	eP	P	10 52 37.5	+3.5
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,82nm,4.5s						
PEA0B	Petropavlovsk-	59.76	6	eP	P	10 52 43.5	+0.3
	comp=Z,9.9nm,0.7s						
PETK	Petropavlovsk-	59.76	6	P	P	10 52 43.1	-0.1
	comp=Z,6.5nm,0.5s,baz=164,slow=6.4,SNR=21						
PEA1	Petropavlovsk-	59.77	6	eP	P	10 52 43.1	-0.1
LZH	Lanzhou	59.98	318	eP	P	10 52 48.8	+3.5
LZH				pP	sP	10 53 06.3	+1.5
LZH				sP	pwP	10 53 11.0	+8.7
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ	Urumqi	74.56	319	eP	P	10 54 19.0	+1.7
WMQ				LR	LR		
	comp=N,270nm,20.3s						
WMQ				LR	LR		
	comp=E,150nm,17.1s						
WMQ				LR	LR		
	comp=Z,310nm,19.3s						
MK32	Makanchi Array	79.24	320	eP	P	10 54 42.7	-0.8
MKAR	Makanchi Array	79.24	320	P	P	10 54 42.7	-0.8
	comp=Z,0.6nm,0.7s,baz=117,slow=5.6,SNR=2.2						
ZALV	Zalesovo Beam	80.56	327	P	P	10 54 49.9	-0.6
	comp=Z,2.2nm,0.6s,baz=124,slow=7.1,SNR=3.8						
ZAA1	Zalesovo Array	80.56	327	eP	P	10 54 49.9	-0.6
KSH	Kashi	81.31	311	eP	P	10 54 54.0	-1.0
KSH				pP	pP	10 55 07.5	-2.2
KSH	Kashi	81.31	311	S	S	11 04 56.5	-5.4
KSH	Kashi	81.31	311	sS	sS	11 05 25.5	-0.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.2s						
KSH				pmax	pmax		
	comp=Z,75nm,3.4s						
KSH				LR	LR		
	comp=N,450nm,18.1s						
KSH				LR	LR		
	comp=E,130nm,9.8s						
KSH				LR	LR		
	comp=Z,260nm,11.9s						
QSPA	South Pole Qui	83.53	180	eP	P	10 55 06.3	+0.2
	comp=Z,6.8nm,1.0s						
MLY	Manley	83.71	22	eP	P	10 55 05.9	-0.9
	comp=Z,2.4nm,0.6s						
DHY	Denali Highway	84.08	24	eP	P	10 55 08.8	-0.1
	comp=Z,2.7nm,0.9s						
COLA	College	84.71	22	eP	P	10 55 10.1	-1.7
	comp=Z,9.7nm,0.3s						
ILAR	Eielson Array	85.03	23	P	P	10 55 11.3	-2.1
	comp=Z,1.9nm,0.8s,baz=252,slow=4.9,SNR=15						
YBH	Yreka Blue Hor	92.81	49	LR	LR	11 31 49.3	
	comp=Z,49nm,19.9s,baz=234,slow=32						
NV01	Mina Array Sit	95.91	52	eP	P	10 56 05.2	-0.3
NVAR	Mina Array Bea	95.91	52	P	P	10 56 05.2	-0.3
	comp=Z,0.3nm,0.6s,baz=264,slow=8.0,SNR=4.4						
ELK	Elko	98.37	50	LR	LR	11 35 16.1	
	comp=Z,41nm,20.1s,baz=252,slow=32						
KOLS	Kolonicke sedl	118.53	323	ePKP	PKPdf	11 01 25.7	-0.2
VYHS	Vyhne	120.75	324	ePKP	PKiKP	11 01 35.3	+5.0
GERES	GERESS Array B	123.50	326	PKP	PKPdf	11 01 34.5	-1.1
	comp=Z,0.5nm,0.6s,baz=11,slow=1.4,SNR=4.7						
LPAZ	La Paz	136.70	122	PKP	PKPdf	11 02 02.4	+0.2
	comp=Z,1.2nm,0.9s,baz=214,slow=0.5,SNR=4.0						
TORD	Torodi Ar. Bea	147.32	284	PKPbc	PKPbc	11 02 22.0	-0.7
	comp=Z,5.4nm,0.9s,baz=49,slow=2.8,SNR=15						
TOA1	Torodi Ar. Sit	147.32	284	ePKPbc	PKPbc	11 02 22.0	-0.7
BDFB	Brasilia	152.21	142	PKPbc	PKPbc	11 02 34.3	-0.6
	comp=Z,5.5nm,0.6s,baz=131,slow=2.4,SNR=7.0						

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*MAN **25** 10:51:23.0, 7°.39N×124°.84E, h1^{km}, mb5.6, ML4.6, MS4.9*

MAN INTENSITY IV - CARMEN NORTH COTABATO; INTENSITY III - DANGCAGAN BUKIDNON; & MATALAM NORTH COTABATO; INTENSITY II - KIDAPAWAN; CAGAYAN DE ORO CITY; COTABATO CITY; DAVAO CITY; KORONADAL CITY; TACURONG CITY; MIDSAYAP NORTH COTABATO.

*DJA **25** 10:51:23.3±4.7, 8°N±39°×12°5E±°, h10^{km}, M5.3/7, mB5.6/7, mb5.4/6, MLv5.4/7, Mw(mB)5.1/7*

*IDC **25** 10:51:24.4±2.9, 7°.31N×124°.83E, h12^{km}±19^{km}, mb4.3/14, mb1 4.4/15, mb1mx4.2/41, mbtmp4.4/15, ML4.9/1, MS4.2/23, Ms1 4.2/23, ms1mx4.0/36, Error ellipse: s-maj=20.1km s-min=12.7km az=56.0*

*ISCJB **25** 10:51:24.9±0.6, 7°.36N±0°.02×125°.00E±0°.03, h25^{km}±5^{km}, mb4.5/50, MS4.3/33, Error ellipse: s-maj=5.4km s-min=3.4km az=164.6*

*BJI **25** 10:51:26.3±0.0, 7°.08N×125°.05E, h45^{km}, mb4.7/51, mB5.0/37, Ms4.6/42, Ms7 4.4/41*

*NEIC **25** 10:51:26.0±1.5, 7°.41N×125°.04E, h20^{km}±3^{km}, mb4.6/49, Error ellipse: s-maj=10.2km s-min=7.2km az=214.0*

NEIC Felt [IV PIVS] at Carmen; [III PIVS] at Dancagan, Kabacan and Matalam; [II PIVS] at Cagayan de Oro, Cotabato, Davao, Kidapawan, Koronadal, Midsayap and Tacurong.

ISC 25 10:51:24.9±1.0**, 7°.40N**±0°.03×**125°.01E**±0°.04**, h10**^{km}±6^{km}**, n127, σ2**^{s}**.15**/132**, mb4.6**/51**, MS4.3**/33**, 7C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.48	6	eP	Pg	10 51 33.8	-0.6
DAV	Davao City (W)	0.65	120	Pg	Pn	10 51 38.8	-1.5
	4μm,0.3s,baz=285,slow=3.5,SNR=184						
DAV				Lg	Lg	10 51 52.2	
	3μm,0.3s,baz=321,slow=23,SNR=50						
SKMP	Bagumbayan, Su	0.98	208	eP	Pb	10 51 39.5	-4.6
SKMP				eS	Sg	10 51 56.7	0.0
CGP	Cagayan de Oro	1.10	344	⇑iP	Pb	10 51 42.9	-3.1
CGP				i S	Sb	10 51 58.2	-2.3
GSPH	General Santos	1.30	183	eP	Pg	10 51 51.5	+1.5
MATI	Mati	1.32	110	eP	Pb	10 51 49.2	-0.6
DDMP	Don Marcelino,	1.46	151	eP	Pn	10 51 50.5	-0.9
DDMP				eS	Sg	10 52 14.1	+2.1
BIPH	Bislig	1.55	60	⇑iP	Pb	10 51 53.5	-0.4
BIPH				i S	Sg	10 52 16.1	+1.2
PAGZ	Pagadian	1.67	286	eP	Pn	10 51 50.6	-3.7
PAGZ				eS	Sn	10 52 11.8	-4.1
BUTP	Butuan	1.68	21	eP	Pb	10 51 55.8	-0.1
DCPH	Dipolog City	2.02	306	⇑eP	Pn	10 51 59.4	+0.3
DCPH				eS	Sg	10 52 29.9	-0.1
TBP	Tagbilaran	2.55	334	eP	Pn	10 52 05.8	-0.6
TBP				eS	Sn	10 52 37.5	0.0
SNPH	Sibulan	2.61	318	⇑iP	Pn	10 52 08.0	+0.7
SNPH				i S	Sb	10 52 47.1	+3.0
MSLP	Maasin	2.73	357	eP	Pn	10 52 08.1	-0.7
MSLP				eS	Sb	10 52 48.4	+1.0
ZCP	Zamboanga City	2.95	261	⇓iP	Pn	10 52 09.5	-2.4
ZCP				i S	Sn	10 52 45.7	-1.7
LLP	Lapu-Lapu	3.08	341	eP	Pn	10 52 12.9	-0.8
LLP				eS	Sn	10 52 51.3	+0.6
OCLP	Ormoc	3.65	354	eP	Pn	10 52 21.8	+0.1
SGSI	Sangihe	3.72	172	P	Pn	10 52 22.0	-0.5
PLP	Palo	3.75	360	⇑eP	Pn	10 52 22.5	-0.4
PLP				eS	Sn	10 52 57.1	-10
GUIM	Jordan	4.00	324	eP	Pn	10 52 25.4	-1.0
JAP	San Jose, Anti	4.50	318	⇑eP	Pn	10 52 35.1	+1.9
RCP	Roxas	4.70	332	⇓eP	Pn	10 52 35.7	-0.3
CNP	Catarman	5.09	356	eP	Pn	10 52 45.3	+3.9
OTRP	Odiongan	5.75	329	eP	Pn	10 52 52.0	+1.6
TNTI	Ternate	6.99	160	ePn	Pn	10 53 08.1	+0.6
TNTI	Ternate	6.99	160	P	Pn	10 53 10.2	+2.7
LUWI	Luwuk	8.67	195	ePn	Pn	10 53 31.8	+1.1
LUWI	Luwuk	8.67	195	P	Pn	10 53 33.6	+3.0
	732nm,1.0s,6μm						
KKM	Kota Kinabalu	8.84	262	ePn	Pn	10 53 34.5	+1.6
SANI	Sanana	9.43	174	P	Pn	10 53 37.8	-3.2
FAKI	Fak Fak	12.54	145	ePn	Pn	10 54 24.4	+0.8
KAPI	Kappang	13.40	203	LR	LR	11 00 24.2	
	comp=Z,2μm,19.8s,baz=300,slow=41						
SBUM	Sibu	13.65	250	ePn	Pn	10 54 38.1	-0.7
KSM	Kuching	15.79	249	eP	P	10 55 10.1	-1.4
	20nm,1.0s						
MMRI	Maumere	16.16	190	ePn	Pn	10 55 13.4	+1.0
	76nm,1.1s						
YULB	Yu-li	16.30	348	eP	P	10 55 16.2	-1.0
	18nm,1.0s						
TPUB	Ta-pu	16.36	346	eP	P	10 55 16.9	-1.0
	42nm,1.0s						
SSLB	Suanglung	16.76	347	eP	Pn	10 55 20.3	+0.4
	18nm,1.0s						
YHNB	Yeheng	17.53	349	eP	P	10 55 30.3	-0.5
	15nm,0.8s						
BATI	Baumata	17.54	184	P	Pn	10 55 29.7	-0.1
	3.7nm,0.3s,baz=228,slow=3.3,SNR=8.1						
BATI				LR	LR	11 03 19.1	
	comp=Z,1μm,20.3s,baz=8.5,slow=41						
QZH	Quanzhou	18.50	341	eP	Pn	10 55 44.0	+2.5
QZH				S	S	10 59 14.0	+1.4
QZH				LR	LR		
	comp=N,1μm,20.4s						
QZH				LR	LR		
	comp=E,730nm,18.5s						
QZH				LR	LR		
	comp=Z,1μm,18.5s						
QIZ	Qiongzhong	18.73	310	P	P	10 55 44.0	-0.1
QIZ				S	Sn	10 59 15.0	+0.8
QIZ				pmax	pmax		
	comp=Z,30nm,1.2s						
QIZ				LR	LR		
	comp=N,2μm,13.7s						
QIZ				LR	LR		
	comp=E,2μm,17.7s						
QIZ				LR	LR		
	comp=Z,2μm,17.7s						
JOW	Kunigami	19.58	9	eP	Pn	10 55 53.8	-0.8
	16nm,0.9s						
GUMO	Guam	20.47	71	LR	LR	11 04 35.7	
	comp=Z,248nm,19.6s,baz=250,slow=38						
MTN	Manton Dam	21.01	163	eP	P	10 56 07.2	-1.6
	43nm,0.8s						
MTN	Manton Dam	21.01	163	P	P	10 56 08.1	-0.7
	baz=21,SNR=7.1						
KDU	Kakadu	21.29	160	P	P	10 56 10.4	-1.4
	baz=21,SNR=15						
PANO	Nakornpanom	22.14	298	P	P	10 56 21.7	+0.6
	0.5nm,1.9s,222nm						
KNRA	Kununurra	23.22	171	P	P	10 56 31.6	-0.8
	baz=23,SNR=11						
NONG	Nongkai	23.79	299	P	P	10 56 40.9	+2.8
	0.2nm,1.2s						
IPM	Ipoh	24.03	264	eP	P	10 56 40.4	0.0
	20nm,1.1s						
CHAI	Chaiyaphum	24.06	293	P	P	10 56 45.5	+4.8
	21μm,0.9s						
SKLT	Songkhla	24.19	271	P	P	10 56 44.7	+2.8
	13nm,1.6s,460nm						
SLVN	Son La	24.65	306	eP	P	10 56 46.7	+0.6
	10.0nm,1.1s						
WHN	Wuhan	25.10	338	P	P	10 56 54.3	+4.3
WHN				LR	LR		
	comp=N,950nm,6.5s						
WHN				LR	LR		
	comp=E,950nm,12.7s						
WHN				LR	LR		
	comp=Z,1μm,15.5s						
NJ2	Nanjing	25.19	348	eP	P	10 56 51.8	+1.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PBKT	Sadao Pong	25.19	293	P	P	10 56 58.5	+7.5
GYA	Guiyang	25.77	320	eP	P	10 56 59.0	+2.7
GYA				pP	sP	10 57 09.8	+9.3
GYA				PP	PnPn	10 57 40.5	+7.5
GYA				S	S	11 01 23.8	-1.9
GYA				sS	sS	11 01 41.0	+10
GYA				SS	SnSn	11 02 31.3	+10
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,180nm,4.0s						
GYA				LR	LR		
	comp=N,630nm,17.8s						
GYA				LR	LR		
	comp=E,780nm,15.8s						
GYA				LR	LR		
	comp=Z,540nm,18.0s						
PSI	Prapat	26.37	261	LR	LR	11 10 59.0	
	comp=Z,749nm,18.1s,baz=75,slow=45						
PSI	Prapat	26.37	261	eP	P	10 57 01.9	+0.1
	8.0nm,0.8s						
PHRA	Phrae	26.51	297	P	P	10 57 04.0	+1.1
	2.4nm,1.4s,642nm						
PAYA	Payao	27.15	298	P	P	10 57 12.5	+3.8
	13μm,0.8s						
KMI	Kunming	27.63	312	P	P	10 57 16.5	+3.3
KMI				pP	sP	10 57 28.0	+11
KMI				sP	pP	10 57 33.0	+17
KMI				S	S	11 01 58.5	+3.2
KMI				pmax	pmax		
	comp=Z,19nm,1.5s						
KMI				pmax	pmax		
	comp=Z,85nm,3.1s						
KMI				LR	LR		
	comp=N,350nm,17.4s						
KMI				LR	LR		
	comp=E,960nm,17.8s						
KMI				LR	LR		
	comp=Z,1μm,16.6s						
CMAR	Chiang Mai Arr	27.64	296	P	P	10 57 12.0	-1.2
	1.3nm,0.8s,baz=99,slow=4.0,SNR=3.5						
CMAR				LR	LR	11 08 50.0	
	comp=Z,1μm,18.3s,baz=118,slow=38						
PMG	Port Moresby	27.67	127	LR	LR	11 10 08.1	
	comp=Z,452nm,18.1s,baz=293,slow=40						
GSI	Gunungsitoli	28.00	259	eP	P	10 57 16.0	-0.4
	33nm,1.1s						
WRAB	Tennant Creek	28.67	161	eP	P	10 57 21.3	-0.9
	10nm,0.9s						
WRA	Warramunga Arr	28.68	161	P	P	10 57 19.6	-2.7
	8.2nm,1.0s,baz=342,slow=12,SNR=13						
JHJ	Hachijo jima 2	29.03	26	LR	LR	11 10 14.9	
	comp=Z,713nm,18.1s,baz=258,slow=39						
XAN	Xi'an	30.39	333	P	P	10 57 36.0	-1.5
XAN				PP	PP	10 58 45.0	-1.1
XAN				S	S	11 02 33.0	-5.3
XAN				SS	ScP	11 04 24.5	+4.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,90nm,4.9s						
XAN				LR	LR		
	comp=N,440nm,17.4s						
XAN				LR	LR		
	comp=E,470nm,16.8s						
XAN				LR	LR		
	comp=Z,740nm,18.2s						
CD2	Chengdu	30.70	322	P	P	10 57 39.8	-0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
QIS	Mount Isa	31.27	153	P	P	10 57 43.2	-2.1
	baz=31,SNR=4.4						
MJAR	Matsushiro Arr	31.41	21	LR	LR	11 09 58.4	
	comp=Z,547nm,20.9s,baz=205,slow=35						
AS31	Alice Springs	32.07	165	eP	P	10 57 50.8	-1.5
	1.6nm,0.6s						
ASAR	Alice Springs	32.07	165	P	P	10 57 50.0	-2.3
	2.9nm,0.8s,baz=341,slow=6.8,SNR=24						
WRKA	Warakurna	32.40	174	P	P	10 57 53.4	-1.7
	baz=32,SNR=10						
BJT	Baijiatuau	33.44	348	eP	P	10 58 03.4	-0.6
	14nm,0.8s						
CTA	Charters Tower	34.39	143	LR	LR	11 15 08.4	
	comp=Z,529nm,18.5s,baz=334,slow=41						
LZH	Lanzhou	34.50	329	eP	P	10 58 14.0	+0.4
LZH				pP	sP	10 58 26.8	+9.0
LZH				sP	pP	10 58 32.8	+16
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=N,540nm,15.4s						
LZH				LR	LR		
	comp=E,710nm,13.3s						
LZH				LR	LR		
	comp=Z,1μm,17.4s						
HHC	Hu-ho-hao-te	35.41	342	eP	P	10 58 23.5	+2.2
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,4.2s						
HHC				LR	LR		
	comp=Z,740nm,17.0s						
SHL	Shillong	36.38	304	eP	P	10 58 30.0	+0.1
USRK	Ussuriysk Ar.	37.16	8	P	P	10 58 35.1	-1.0
	1.7nm,0.6s,baz=188,slow=5.8,SNR=7.5						
USRK				LR	LR	11 13 10.3	
	comp=Z,271nm,21.8s,baz=187,slow=35						
GTA	Gaotai	39.09	328	⇑P	P	10 58 52.0	-0.7
GTA				pP	sP	10 59 02.5	+5.6
GTA				sP	pP	10 59 06.5	+11
GTA				S	S	11 04 54.8	+2.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,47nm,5.2s						
GTA				LR	LR		
	comp=N,290nm,18.7s						
GTA				LR	LR		
	comp=E,330nm,20.0s						
GTA				LR	LR		
	comp=Z,780nm,18.1s						
BBOO	Buckleboo	41.34	166	eP	P	10 59 10.7	-0.5
	25nm,0.8s						
BBOO	Buckleboo	41.34	166	P	P	10 59 09.5	-1.6
	baz=41,SNR=19						
STKA	Stephens Creek	42.14	159	P	P	10 59 16.6	-1.1
	7.2nm,0.8s,baz=326,slow=12,SNR=10						
STKA				LR	LR	11 18 00.3	
	comp=Z,265nm,21.4s,baz=336,slow=38						
STKA	Stephens Creek	42.14	159	eP	P	10 59 16.7	-1.1
	3.7nm,0.9s						
STKA	Stephens Creek	42.14	159	P	P	10 59 16.8	-0.9
	baz=42,SNR=7.4						
HTT	Hallett	42.70	163	P	P	10 59 22.4	+0.1
	baz=43,SNR=7.4						
SONA0	Songino Array	43.30	342	eP	P	10 59 26.0	-1.2
SONM	Songino Array	43.30	342	P	P	10 59 26.0	-1.2
	5.7nm,1.0s,baz=162,slow=9.3,SNR=14						
TLY	Talaya	47.54	342	P	P	10 59 59.9	-0.6
	6.9nm,0.7s,baz=192,slow=3.3,SNR=9.5						
WMQ	Urumqi	48.76	324	eP	P	11 00 10.5	+0.3
WMQ				pP	sP	11 00 19.8	+5.3
WMQ				sP	pP	11 00 31.3	+18
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,45nm,3.7s						
WMQ				LR	LR		
	comp=N,300nm,18.1s						
WMQ				LR	LR		
	comp=E,230nm,21.3s						
WMQ				LR	LR		
	comp=Z,450nm,22.9s						
DZM	Mont Dzumac	50.06	127	eLR	LR	11 14 12.4	
	comp=Z,801nm,32.7s						
PETK	Petropavlovsk-	52.75	24	P	P	11 00 39.7	-0.3
	2.1nm,0.5s,baz=208,slow=3.4,SNR=6.7						
PEA1	Petropavlovsk-	52.76	24	eP	P	11 00 39.7	-0.4
MKAR	Makanchi Array	53.59	325	P	P	11 00 45.5	-0.9
	9.3nm,0.8s,baz=123,slow=8.8,SNR=22						
MKAR				LR	LR	11 25 37.9	
	comp=Z,193nm,18.1s,baz=114,slow=38						
MAKZ	Makanchi	53.78	324	eP	P	11 00 47.0	-0.8
	8.8nm,0.9s						
KSH	Kashi	54.27	314	eP	P	11 00 55.0	+3.4
KSH				sP	sP	11 01 12.5	+17
KSH				PP	PP	11 02 58.8	+5.3
KSH				S	S	11 08 29.0	-0.5
KSH				sS	sS	11 08 51.3	+17
KSH				SS	SS	11 12 12.5	+1.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KSH				pmax	pmax		
	comp=Z,110nm,4.4s						
KSH				LR	LR		
	comp=N,220nm,12.0s						
KSH				LR	LR		
	comp=Z,290nm,15.5s						
NIL	Nilore	54.36	306	eP	P	11 00 51.8	-0.5
	24nm,1.0s						

KDJ	**Kajisay**	**54.50**	**317**	*e*P	**P**	**11 00 52.4**	**-0.9**
	6.6nm,0.8s						
NRN	**Naryn**	**55.01**	**316**	*e*P	**P**	**11 00 56.2**	**-1.0**
	4.4nm,0.6s						
MA2	**Magadan**	**55.62**	**16**	LR	LR	11 24 59.8	
	comp=Z,118nm,20.3s,baz=212,slow=36						
ZALV	**Zalesovo Beam**	**56.56**	**333**	P	**P**	**11 01 06.1**	**-1.6**
	1.8nm,0.6s,baz=128,slow=6.0,SNR=4.4						
KURK	**Kurchatov**	**57.75**	**327**	*e*P	**P**	**11 01 14.8**	**-1.3**
	16nm,1.1s						
BRVK	**Borovoye**	**63.41**	**327**	*e*P	**P**	**11 01 56.5**	**+1.8**
	6.8nm,0.8s						
TIXI	**Tiksi**	**64.23**	**1**	*e*P	**P**	**11 02 00.1**	**+0.3**
	3.3nm,0.9s						
GEYT	**Alibeck**	**67.29**	**308**	P	**P**	**11 02 19.8**	**-0.5**
	2.2nm,0.4s,baz=133,slow=6.3,SNR=5.1						
GEYT				LR	LR	11 34 14.5	
	comp=Z,123nm,19.8s,baz=105,slow=38						
ABKAR	**Akbulak array**	**68.25**	**320**	*e*P	**P**	**11 02 24.2**	**-1.9**
	5.1nm,1.1s						
RAYN	**Ar Rayn**	**77.49**	**292**	*e*P	**P**	**11 03 21.8**	**+0.3**
	4.5nm,1.0s						
KBZ	**Khabaz**	**79.24**	**313**	LR	LR	11 44 29.2	
	comp=Z,126nm,18.4s,baz=82,slow=40						
CCB	**Clear Creek Bu**	**82.16**	**26**	*e*P	**P**	**11 03 44.6**	**-1.3**
	4.6nm,1.1s						
DHY	**Denali Highway**	**82.38**	**27**	*e*P	**P**	**11 03 46.6**	**-0.7**
	3.8nm,0.9s						
ILAR	**Eielson Array**	**82.55**	**26**	P	**P**	**11 03 46.2**	**-1.8**
	1.1nm,0.7s,baz=246,slow=5.1,SNR=9.9						
ILAR				LR	LR	11 40 05.0	
	comp=Z,42nm,20.8s,baz=289,slow=35						
EGAK	**Eagle**	**85.00**	**25**	*e*P	**P**	**11 03 58.6**	**-1.8**
	7.3nm,1.0s						
BR101	**Keskin Array S**	**86.38**	**309**	*e*P	**P**	**11 04 07.2**	**-0.9**
BRTR	**Keskin Array B**	**86.38**	**309**	P	**P**	**11 04 07.2**	**-0.9**
	1.7nm,0.9s,baz=116,slow=5.7,SNR=6.7						
BRTR				LR	LR	11 50 34.5	
	comp=Z,53nm,18.4s,baz=78,slow=41						
MAW	**Mawson**	**86.59**	**200**	LR	LR	11 39 34.4	
	comp=Z,95nm,20.0s,baz=69,slow=33						
FIA0	**FINESS Array S**	**87.81**	**332**	*e*P	**P**	**11 04 13.8**	**-0.5**
FINES	**FINESS Array B**	**87.81**	**332**	P	**P**	**11 04 13.8**	**-0.5**
	1.0nm,0.7s,baz=91,slow=9.7,SNR=3.4						
FINES				LR	LR	11 49 10.1	
	comp=Z,209nm,18.2s,baz=64,slow=40						
PPT2	**Papeete2**	**87.87**	**108**	*e*LR	LR	11 31 29.4	
	comp=Z,242nm,25.0s						
AKASG	**Malin Array Be**	**87.99**	**321**	LR	LR	11 47 02.6	
	comp=Z,68nm,19.2s,baz=80,slow=38						
NOA	**NORSAR Array B**	**94.76**	**333**	LR	LR	11 53 38.7	
	comp=Z,144nm,18.1s,baz=75,slow=39						
TAOE	**Nuku Hiva Isla**	**95.87**	**98**	*e*LR	LR	11 35 13.0	
	comp=Z,198nm,22.8s						
GERES	**GERESS Array B**	**98.17**	**322**	LR	LR	11 54 01.1	
	comp=Z,58nm,18.9s,baz=66,slow=38						
MATP	**Matopo**	**98.62**	**250**	LR	LR	11 45 28.3	
	comp=Z,51nm,20.1s,baz=66,slow=33						
PLCA	**Paso Flores**	**144.02**	**160**	PKP	**PKPdf**	**11 11 00.9**	**-0.5**
	1.9nm,0.8s,baz=236,slow=5.7,SNR=5.5						

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*NSSC **25** 10:54:24.8±0.3, 33°.68N×35°.67E, h31^{km}±5^{km}, MD1.0, ML1.9*

*GRAL **25** 10:54:25.3±0.3, 33°.78N×35°.76E, h4^{km}±8^{km}, MD2.8*

ISC 25 10:54:24.2±1.2, 33°.78N±0°.03×35°.70E±0°.05, h14^{km}±11^{km}, n8, σ0^{s}.35/13, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.13**	**342**	*e*P	**Pg**	**10 54 28.1**	**+0.2**
DQRL	**Deir Qamar**	**0.13**	**234**	*e*P	**Pb**	**10 54 28.6**	**0.0**
QRWL	**Qaraoun**	**0.24**	**184**	*e*P	**Pg**	**10 54 29.6**	**+0.1**
RCY	**Rachaya**	**0.31**	**159**	*e*P	**Pg**	**10 54 30.6**	**-0.1**
RCY				*e*S	**Sg**	**10 54 34.4**	**-0.7**
BRBR	**Barbar**	**0.43**	**151**	*e*P	**Pg**	**10 54 32.9**	**0.0**
BRBR				*e*S	**Sg**	**10 54 39.1**	**+0.4**
BRBR				AML	AML	10 54 42.1	
	comp=N,110nm,0.6s						
BRBR				AML	AML	10 54 43.3	
	comp=E,56nm,0.3s						
HWQ	**Hawqa**	**0.53**	**22**	*e*P	**Pg**	**10 54 34.6**	**-0.2**
HWQ				*e*S	**Sg**	**10 54 41.7**	**-0.2**
QASN	**Qassioun**	**0.54**	**117**	*e*P	**Pb**	**10 54 35.9**	**+0.4**
QASN				*e*S	**Sb**	**10 54 43.2**	**0.0**
QASN				AML	AML	10 54 48.0	
	comp=E,216nm,0.5s						
QASN				AML	AML	10 54 50.2	
	comp=N,125nm,0.3s						
TOTH	**TOTAH**	**0.74**	**125**	*e*P	**Pb**	**10 54 38.9**	**0.0**
TOTH				*e*S	**Sg**	**10 54 48.0**	**-0.4**
TOTH				AML	AML	10 54 56.5	
	comp=E,26nm,0.8s						
TOTH				AML	AML	10 55 00.8	
	comp=N,22nm,0.4s						

MAN 25 11:03:08.3, 7°.19N×125°.12E, h37^{km}, mb3.9, ML2.7, MS2.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.69**	**355**	*e*P	Pn	11 03 22.6	+0.9
BUKP				*e*S	Sn	11 03 32.3	+1.1
BUKP	**Musuan**	**0.69**	**355**	*e*P	Pn	11 03 22.6	+0.9
BUKP				*e*S	Sn	11 03 32.3	+1.1
SKMP	**Bagumbayan, Su**	**0.88**	**221**	*e*P	Pn	11 03 27.3	+3.2
SKMP	**Bagumbayan, Su**	**0.88**	**221**	*e*P	Pn	11 03 27.3	+3.2
MATI	**Mati**	**1.15**	**102**	*e*P	Pn	11 03 27.8	0.0
MATI	**Mati**	**1.15**	**102**	*e*P	Pn	11 03 27.8	0.0
DDMP	**Don Marcelino,**	**1.22**	**151**	*e*P	Pn	11 03 29.5	+0.6
DDMP	**Don Marcelino,**	**1.22**	**151**	*e*P	Pn	11 03 29.5	+0.6

MEX 25 11:04:37.5±0.7, 16°.13N×98°.99W, h26^{km}±10^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**1.13**	**311**	*i* P	Pn	11 04 55.2	-2.5
ACP2				*i* S	Sn	11 05 08.2	-4.3
TLIG	**Tlapa**	**1.48**	**16**	*e*P	Pn	11 05 00.2	-2.4
TLIG				*i* S	Sn	11 05 17.6	-3.7
CAIG	**El Cayaco**	**1.53**	**307**	*i* P	Pn	11 05 01.2	-2.0
CAIG				*i* S	Sn	11 05 18.1	-4.1
VHO	**Vista Hermosa**	**2.36**	**66**	*i* P	Pn	11 05 11.8	-3.0
VHO				*e*S	Sn	11 05 39.5	-3.5
HUIG	**Huatulco**	**2.80**	**97**	*i* P	Pn	11 05 18.6	-2.0
HUIG				*e*S	Sn	11 05 50.3	-3.3
CMIG	**Matias Romero**	**4.05**	**76**	*e*P	Pn	11 05 35.7	-2.2
CMIG				*e*S	Sn	11 06 21.7	-2.9

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*IDC **25** 11:05:56.9±1.2, 6°.99N×124°.72E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/46, mbtmp3.5/4, Error ellipse: s-maj=21.5km s-min=11.6km az=177.0*

*MAN **25** 11:05:57.4, 7°.29N×124°.83E, h8^{km}, mb5.3, ML4.3, MS4.4*

MAN INTENSITY III - CARMEN AND KABACAN NORTH COTABATO; INTENSITY II - MATALAM NORTH COTABATO.

*ISCJB **25** 11:05:58.7±0.6, 7°.31N±0°.04×124°.86E±0°.06, h26^{km}, mb3.4/4, Error ellipse: s-maj=8.7km s-min=5.5km az=150.7*

ISC 25 11:06:00.4±0.8, 7°.34N±0°.04×124°.89E±0°.05, h26^{km}, n18, σ2^{s}.71/22, mb3.5/4, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.56**	**17**	*e*P	Pb	11 05 58.4	-13
BUKP				*e*S	**Sb**	**11 06 15.9**	**-3.5**
DAV	**Davao City (W)**	**0.73**	**111**	Pg	**Pb**	**11 06 12.9**	**-1.6**
	218nm,0.3s,baz=9.1,slow=2.2,SNR=7.3						
DAV				Lg	Lg	11 06 25.6	
	333nm,0.3s,baz=265,slow=15,SNR=40						
SKMP	**Bagumbayan, Su**	**0.89**	**203**	*e*P	**Pb**	**11 06 13.0**	**-4.2**
CGP	**Cagayan de Oro**	**1.12**	**350**	⇑*i*P	Pn	11 06 07.9	-13
CGP				*i* S	**Sn**	**11 06 31.3**	**-3.8**
GSPH	**General Santos**	**1.25**	**177**	*e*P	**Sn**	**11 06 44.4**	**+6.1**
MATI	**Mati**	**1.41**	**106**	*e*P	**Pn**	**11 06 23.9**	**-0.5**
MATI				*e*S	**Sb**	**11 06 43.4**	**-0.3**
DDMP	**Don Marcelino,**	**1.47**	**146**	*e*P	**Pn**	**11 06 23.8**	**-1.4**
DDMP				*e*S	**Sb**	**11 06 47.5**	**+2.1**
BUTP	**Butuan**	**1.77**	**24**	*e*P	**Pn**	**11 06 29.7**	**+0.3**
BUTP				*e*S	**Sb**	**11 06 57.3**	**+3.3**
DCPH	**Dipolog City**	**1.96**	**309**	⇑*e*P	**Pn**	**11 06 32.8**	**+0.8**
SNPH	**Sibulan**	**2.58**	**321**	*e*P	**Pn**	**11 06 39.9**	**-0.6**
MSLP	**Maasin**	**2.78**	**359**	*e*P	**Pn**	**11 06 42.8**	**-0.4**
LLP	**Lapu-Lapu**	**3.10**	**343**	*e*P	**Pn**	**11 06 47.0**	**-0.6**
LLP				*e*S	**Sn**	**11 07 27.4**	**+3.6**
RCP	**Roxas**	**4.70**	**333**	⇑*e*P	**Pn**	**11 07 10.9**	**+1.3**
WRA	**Warramunga Arr**	**28.66**	**161**	P	**P**	**11 11 53.6**	**-1.7**
	1.1nm,1.0s,baz=339,slow=12,SNR=2.0						
ASAR	**Alice Springs**	**32.05**	**164**	P	**P**	**11 12 22.9**	**-2.3**
	0.2nm,0.5s,baz=341,slow=7.0,SNR=9.0						
SONM	**Songino Array**	**43.32**	**342**	P	**P**	**11 14 02.8**	**+2.5**
	0.4nm,0.5s,baz=168,slow=7.4,SNR=2.3						
MKAR	**Makanchi Array**	**53.57**	**325**	P	**P**	**11 15 21.5**	**+2.3**
	0.3nm,0.5s,baz=145,slow=7.1,SNR=3.4						
PLCA	**Paso Flores**	**144.00**	**160**	PKP	**PKPdf**	**11 25 33.0**	**-1.2**
	2.3nm,1.0s,baz=225,slow=8.6,SNR=3.0						

MAN 25 11:08:40.1, 7°.34N×125°.13E, h30^{km}, mb3.6, ML2.3, MS1.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.54**	**353**	*e*P	Pn	11 08 52.1	+0.3
BUKP				*e*S	Sn	11 09 00.9	+0.9
SKMP	**Bagumbayan, Su**	**0.99**	**216**	*e*P	Pn	11 08 57.5	-0.5
SKMP				*e*S	Sb	11 09 11.4	-0.2
CGP	**Cagayan de Oro**	**1.19**	**339**	⇑*i*P	Pn	11 09 01.2	+0.5
CGP				*i* S	Sn	11 09 16.3	+0.3

MAN 25 11:13:26.0, 7°.34N×124°.91E, h6^{km}, mb4.7, ML3.6, MS3.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.56**	**16**	*e*P	Pg	11 13 37.3	+0.4
BUKP				*e*S	Sb	11 13 46.9	+0.2
SKMP	**Bagumbayan, Su**	**0.89**	**204**	*e*P	Pg	11 13 42.9	-0.1
SKMP				*e*S	Sn	11 13 58.3	+0.1
CGP	**Cagayan de Oro**	**1.13**	**349**	⇑*i*P	Pg	11 13 46.8	-0.9
CGP				*i* S	Sg	11 14 01.3	-1.2
MATI	**Mati**	**1.40**	**106**	*e*P	Sb	11 14 07.0	-3.5
DDMP	**Don Marcelino,**	**1.46**	**147**	*e*P	Pg	11 13 54.9	+0.8
DDMP				*e*S	Sg	11 14 17.3	+4.3

MAN 25 11:14:14.5, 7°.39N×125°.17E, h31^{km}, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.49**	**348**	*e*P	Pn	11 14 25.8	+0.3
BUKP				*e*S	Sn	11 14 34.1	+1.1
SKMP	**Bagumbayan, Su**	**1.07**	**215**	*e*P	Pn	11 14 33.0	-0.3
SKMP				*e*S	Sn	11 14 42.2	-4.9
CGP	**Cagayan de Oro**	**1.15**	**336**	⇑*i*P	Pn	11 14 34.9	+0.5
CGP				*i* S	Sn	11 14 49.4	+0.2

MAN 25 11:18:05.6, 7°.07N×126°.33E, h1^{km}, mb4.1, ML2.8, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.14**	**213**	*e*P	Pb	11 18 28.1	0.0
DDMP				*e*S	Sn	11 18 45.0	0.0
GSPH	**General Santos**	**1.69**	**235**	*e*P	Pg	11 18 51.3	+13
SKMP	**Bagumbayan, Su**	**1.86**	**253**	*e*P	Pn	11 18 38.3	-0.3
SKMP				*e*S	Sb	11 19 03.8	-0.4

KRSC 25 11:33:54.5±1.8, 48°.27N×156°.38E, h40^{km}±26^{km}, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.42**	**356**	*e*P	Pn	11 34 32.8	+1.3
SKR				*e*S	Sn	11 35 00.7	+0.9
PAU	**Pauzhetka**	**3.21**	**5**	*e*P	Pn	11 34 46.9	+4.5
PAU				*e*S	Sn	11 35 25.5	+6.2
KDTR	**Khodutka, Kamc**	**3.71**	**17**	*e*P	Pn	11 34 53.0	+3.8
KDTR				*e*S	Sn	11 35 37.4	+5.9
ASAK	**Asacha**	**4.23**	**13**	*e*P	Pn	11 35 00.5	+4.1
MTVR	**Mutnovka**	**4.37**	**15**	*e*P	Pn	11 35 02.6	+4.2
MTVR				*e*S	Sn	11 35 53.3	+5.2
RUS	**Russkaya**	**4.38**	**17**	*e*P	Pn	11 35 02.1	+3.6
RUS				*e*S	Sn	11 35 52.9	+4.7
APC	**Apacha**	**4.68**	**6**	*e*P	Pn	11 35 06.2	+3.6
KRMR	**Karymshinskiy**	**4.70**	**13**	*e*P	Pn	11 35 06.5	+3.7
KRMR				*e*S	Sn	11 35 59.3	+3.4
DALK	**Dalny**	**5.00**	**17**	*e*P	Pn	11 35 11.4	+4.5
DALK				*e*S	Sn	11 36 09.1	+5.8
UGLR	**Uglovaya**	**5.18**	**17**	*e*P	Pn	11 35 14.4	+4.9
AVH	**Avacha**	**5.22**	**16**	*e*P	Pn	11 35 15.7	+5.7
SMAR	**Somma**	**5.23**	**16**	*e*P	Pn	11 35 15.7	+5.4
KRX	**Arik**	**5.29**	**15**	*e*P	Pn	11 35 17.2	+6.1
SPN	**Mys Shipunski**	**5.36**	**24**	*e*P	Pn	11 35 17.0	+5.2
SPN				*e*S	Sn	11 36 18.3	+6.1
GNL	**Ganaly**	**5.52**	**10**	*e*P	Pn	11 35 18.1	+3.9
MKZ	**Mys Kozlova**	**7.12**	**26**	*e*P	Pn	11 35 40.9	+4.8
MKZ				*e*S	Sn	11 37 00.7	+5.1
KBTR	**Krutoberegovo**	**8.87**	**24**	*e*P	Pn	11 36 04.9	+4.9
BKI	**Bering**	**9.14**	**37**	*e*S	Sn	11 37 47.6	+2.6

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*ISK **25** 11:37:39.7, 39°.60N×28°.85E, h2^{km}, ML1.9/5*

*DDA **25** 11:37:40.9, 39°.63N×28°.86E, h7^{km}±3^{km}, ML2.6*

ISC 25 11:37:41.0±1.2, 39°.65N±0°.03×28°.84E±0°.03, h7^{km}±11^{km}, n12, σ1^{s}.02/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.28**	**261**	*i* P	**Pb**	**11 37 47.9**	**-0.6**
DURS				*i* S	**Sb**	**11 37 52.5**	**-1.1**
DURS				IAML_P			
	comp=Z,2μm,0.1s						
TVSB	**Tavsanli**	**0.52**	**112**	PG	**Pg**	**11 37 50.3**	**-0.8**
TVSB				SG	**Sg**	**11 37 57.9**	**0.0**
DEMI	**Demirci**	**0.61**	**189**	*i* P	**Pb**	**11 37 53.6**	**-0.5**
DEMI				*i* S	**Sn**	**11 38 09.0**	**+2.6**
DEMI				IAML_P			
	comp=Z,1μm,0.1s						
GDZ	**Gediz**	**0.75**	**138**	*i* P	**Pg**	**11 37 55.4**	**0.0**
GDZ				*i* S	**Sg**	**11 38 05.6**	**+0.5**
GDZ				IAML_P			
	comp=Z,2μm,0.1s						
ARMT	**Armutlu**	**0.92**	**1**	PG	**Pg**	**11 37 58.8**	**+0.2**
ARMT				SG	**Sn**	**11 38 13.5**	**-0.4**
GONE	**Gonen-Balikesi**	**0.97**	**295**	PG	**Pg**	**11 37 59.8**	**+0.1**
YLV	**Yalova**	**1.00**	**24**	PG	**Pb**	**11 38 00.6**	**-0.2**
MANT	**Manisa**	**1.18**	**191**	*i* P	**Pn**	**11 38 04.0**	**-0.2**
BORA	**Eskisehir**	**1.27**	**79**	*i* S	**Sn**	**11 38 22.5**	**0.0**
MRMT	**Marmara Adasi**	**1.35**	**315**	PN	**Pg**	**11 38 07.1**	**+0.2**
SRCK	**Saricakaya, Es**	**1.43**	**73**	PN	**Pb**	**11 38 07.5**	**-0.5**
SRCK	**Saricakaya, Es**	**1.43**	**73**	*i* P	**Pn**	**11 38 07.4**	**-0.1**
SRCK				*i* S	**Sg**	**11 38 29.1**	**+2.1**

MEX 25 11:50:00.6±0.6, 15°.45N×95°.67W, h7^{km}±7^{km}, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.53**	**307**	*i* P	Pg	11 50 10.2	-0.7
HUIG				*i* S	Sg	11 50 18.5	+0.6
CMIG	**Matias Romero**	**1.80**	**25**	*e*P	Pn	11 50 28.5	-3.6
CMIG				*e*S	Sn	11 50 50.4	-4.7
VHO	**Vista Hermosa**	**1.91**	**328**	*i* P	Pn	11 50 30.3	-3.5
VHO				*i* S	Sn	11 50 52.8	-5.4
PCIG		**2.37**	**83**	*i* P	Pn	11 50 36.9	-3.0
PCIG				*e*S	Sn	11 51 05.0	-4.3

MEX 25 11:50:20.5±1.1, 17°.28N×97°.83W, h58^{km}±10^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**1.94**	**305**	*i* P	Pn	11 50 50.6	-0.6
PLIG				*i* S	Sn	11 51 12.0	-2.5

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*IDC **25** 11:54:59.5±1.3, 35°.83N×23°.30E, h0^{km}, mb3.8/8, mb1 3.8/8, mb1mx3.5/48, mbtmp3.8/8, MS3.2/1, Ms1 3.0/1, ms1mx2.4/35, Error ellipse: s-maj=27.5km s-min=14.0km az=33.0*

*ISCJB **25** 11:55:03.7±0.5, 35°.35N±0°.03×23°.38E±0°.03, h72^{km}±4^{km}, mb3.5/8, Error ellipse: s-maj=6.1km s-min=3.3km az=38.9*

*ATH **25** 11:55:04.4, 35°.36N×23°.39E, h38^{km}±1^{km}, ML3.2/12, Error ellipse: s-maj=2.7km s-min=0.9km az=227.0*

*THE **25** 11:55:06.2, 35°.40N×23°.45E, h26^{km}, ML3.1/19, Error ellipse: s-maj=1.4km s-min=0.5km az=46.0*

ISC 25 11:55:04.2±0.9, 35°.38N±0°.04×23°.39E±0°.04, h49^{km}±8^{km}, n81, σ1^{s}.75/119, mb3.6/8, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMMV	**Iera Moni Meta**	**0.49**	**80**	P	**Pn**	**11 55 15.3**	**-0.1**
IMMV				S	**Sn**	**11 55 22.3**	**-1.0**
	5μm,0.5s						
IMMV	**Iera Moni Meta**	**0.49**	**80**	P	**Pn**	**11 55 15.3**	**-0.1**
IMMV				S	**Sn**	**11 55 22.6**	**-0.7**
IMMV				AML	AML	11 55 24.0	
	comp=E,10796μm,0.5s						
IMMV				AML	AML	11 55 24.1	
	comp=N,9604μm,0.6s						
ANKY	**Antikythira Is**	**0.49**	**352**	P	**Pn**	**11 55 15.7**	**+0.4**
ANKY				S	**Sn**	**11 55 24.1**	**+0.8**
	comp=N,3μm,0.3s						
ANKY	**Antikythira Is**	**0.49**	**352**	P	**Pn**	**11 55 15.8**	**+0.4**
ANKY				S	**Sn**	**11 55 24.1**	**+0.8**
ANKY				AML	AML	11 55 25.9	
	comp=E,7053μm,0.4s						
ANKY				AML	AML	11 55 26.3	
	comp=N,5040μm,0.3s						
VAM	**Vamos**	**0.67**	**87**	P	**Pn**	**11 55 17.9**	**+0.4**
VAM				S	**Sn**	**11 55 27.7**	**+0.6**
	comp=N,3μm,0.3s						
VAM	**Vamos**	**0.67**	**87**	P	**Pn**	**11 55 17.9**	**+0.4**
VAM				S	**Sn**	**11 55 27.7**	**+0.6**
VAM				AML	AML	11 55 28.5	
	comp=N,5533μm,0.4s						
VAM				AML	AML	11 55 29.9	
	comp=E,5175μm,0.3s						
GVD	**Gavdhos**	**0.79**	**133**	P	**Pn**	**11 55 19.7**	**+0.6**
GVD				S	**Sn**	**11 55 32.0**	**+2.2**
	comp=E,3μm,0.4s						
GVD	**Gavdhos**	**0.79**	**133**	P	**Pn**	**11 55 19.6**	**+0.5**
GVD				S	**Sn**	**11 55 31.3**	**+1.5**
GVD				AML	AML	11 55 37.1	
	comp=N,5738μm,0.3s						
GVD				AML	AML	11 55 37.9	
	comp=E,4995μm,0.6s						
PRNS	**Prines Rethymn**	**0.91**	**90**	P	**Pn**	**11 55 21.3**	**+0.6**
PRNS				S	**Sn**	**11 55 33.2**	**+0.4**
KTHA	**Kythira Island**	**0.92**	**343**	P	**Pn**	**11 55 22.8**	**+1.9**
KTHA				S	**Sn**	**11 55 35.3**	**+2.3**
	comp=E,2μm,0.4s						
KTHA	**Kythira Island**	**0.92**	**343**	P	**Pn**	**11 55 22.6**	**+1.8**
KTHA				S	**Sn**	**11 55 36.0**	**+2.9**
KTHA				AML	AML	11 55 39.6	
	comp=E,6014μm,0.5s						
KTHA				AML	AML	11 55 40.3	
	comp=N,3106μm,0.3s						
KTHR	**Kythira**	**0.94**	**341**	P	**Pn**	**11 55 22.9**	**+1.8**
KTHR				S	**Sn**	**11 55 36.0**	**+2.5**
SIVA	**Sivas**	**1.22**	**107**	P	**Pn**	**11 55 26.1**	**+1.2**
SIVA				S	**Sn**	**11 55 41.5**	**+1.2**
	comp=N,1μm,0.6s						
SIVA	**Sivas**	**1.22**	**107**	P	**Pn**	**11 55 25.8**	**+0.9**
SIVA				S	**Sn**	**11 55 43.9**	**+3.6**
SIVA				AML	AML	11 55 49.1	
	comp=E,2485μm,0.6s						
SIVA				AML	AML	11 56 02.9	
	comp=N,2117μm,0.5s						
IDI	**Anoyia**	**1.23**	**94**	Pg	**Pn**	**11 55 26.5**	**+1.3**
	comp=N,10nm,0.3s,baz=272,slow=9.9,SNR=84						
IDI				Lg	Lg	11 55 45.5	
	comp=N,31nm,0.3s,baz=18,slow=20,SNR=7.5						
IDI				LR	LR	11 56 14.5	
	comp=N,110nm,20.9s,baz=271,slow=53						
IDI	**Anoyia**	**1.23**	**94**	P	**Pn**	**11 55 26.4**	**+1.3**
IDI				S	**Sn**	**11 55 43.5**	**+2.8**
IDI				AML	AML	11 55 48.2	
	comp=E,645μm,0.7s						
IDI				AML	AML	11 55 59.8	
	comp=N,935μm,0.5s						
VLI	**Veliai**	**1.39**	**345**	P	**Pn**	**11 55 29.3**	**+2.1**
VLI				S	**Sn**	**11 55 47.8**	**+3.4**
	comp=N,505nm,0.5s						
VLI	**Veliai**	**1.39**	**345**	P	**Pn**	**11 55 29.5**	**+2.3**
VLI				S	**Sn**	**11 55 47.6**	**+3.2**
VLI				AML	AML	11 55 52.5	
	comp=E,1118μm,0.4s						
VLI				AML	AML	11 55 52.7	
	comp=N,879μm,0.4s						
MHLO	**Agia Marina, M**	**1.55**	**32**	P	**Pn**	**11 55 30.0**	**+0.6**
MHLO				S	**Sn**	**11 55 50.6**	**+2.3**
MHLO	**Agia Marina, M**	**1.55**	**32**	P	**Pn**	**11 55 30.5**	**+1.1**
MHLO				S	**Sn**	**11 55 50.5**	**+2.2**
MHLO				AML	AML	11 55 57.9	
	comp=N,2548μm,0.7s						
MHLO				AML	AML	11 55 59.4	
	comp=E,3352μm,0.5s						
DYR	**Agios Nikonas**	**1.62**	**329**	P	**Pn**	**11 55 32.0**	**+1.6**
DYR				S	**Sn**	**11 55 53.2**	**+2.9**
DYR	**Agios Nikonas**	**1.62**	**329**	P	**Pn**	**11 55 32.1**	**+1.6**
DYR				S	**Sn**	**11 55 53.4**	**+3.1**
DYR				AML	AML	11 56 09.2	
	comp=N,194μm,0.8s						
DYR				AML	AML	11 56 10.4	
	comp=E,187μm,0.9s						
LAST	**Lasithi**	**1.73**	**97**	P	**Pn**	**11 55 33.5**	**+1.6**
LAST	**Lasithi**	**1.73**	**97**	P	**Pn**	**11 55 33.5**	**+1.6**
LAST				S	**Sn**	**11 55 55.6**	**+2.8**
LAST				AML	AML	11 56 08.2	
	comp=N,580μm,0.6s						
LAST				AML	AML	11 56 10.5	
	comp=E,355μm,0.8s						
NPS	**Neapolis**	**1.82**	**93**	P	**Pn**	**11 55 34.7**	**+1.6**
NPS	**Neapolis**	**1.82**	**93**	P	**Pn**	**11 55 34.8**	**+1.6**
THR9	**Santorini-Faro**	**1.88**	**58**	P	**Pn**	**11 55 34.1**	**+0.3**
THR5	**Thira Island,**	**1.90**	**56**	P	**Pn**	**11 55 34.7**	**+0.5**
SAP3	**Santorini-Thir**	**1.91**	**56**	P	**Pn**	**11 55 34.5**	**+0.2**
THR3	**Thira Island,**	**1.93**	**57**	P	**Pn**	**11 55 35.6**	**+1.0**
SERI	**Serifos**	**1.99**	**26**	P	**Pn**	**11 55 35.6**	**+0.1**
SERI				S	**Sn**	**11 56 00.6**	**+1.4**
	comp=E,198nm,0.2s						
KRND	**KRANIDI**	**2.01**	**355**	P	**Pn**	**11 55 36.8**	**+1.1**
KRND				S	**Sn**	**11 56 03.5**	**+3.8**
	comp=E,350nm,0.6s						
IOSP	**Ios island**	**2.04**	**48**	P	**Pn**	**11 55 36.6**	**+0.4**
IOSP				S	**Sn**	**11 56 00.7**	**+0.2**
	comp=E,460nm,0.4s						
DID	**Didima**	**2.13**	**357**	P	**Pn**	**11 55 37.6**	**+0.2**
DID				S	**Sn**	**11 56 04.8**	**+2.2**
	comp=E,245nm,0.7s						
DID	**Didima**	**2.13**	**357**	P	**Pn**	**11 55 38.8**	**+1.4**
DID				S	**Sn**	**11 56 05.3**	**+2.7**
DID				AML	AML	11 56 09.8	
	comp=E,504μm,0.3s						
DID				AML	AML	11 56 12.7	
	comp=N,372μm,0.2s						
VLX	**Vlachokerasia**	**2.15**	**338**	P	**Pn**	**11 55 40.7**	**+3.0**
VLX	**Vlachokerasia**	**2.15**	**338**	P	**Pn**	**11 55 40.7**	**+3.0**
ITM	**Ithomi**	**2.15**	**327**	P	**Pn**	**11 55 38.7**	**+1.0**
ITM	**Ithomi**	**2.15**	**327**	P	**Pn**	**11 55 39.2**	**+1.6**
ANAF	**Anafi Island**	**2.17**	**63**	P	**Pn**	**11 55 38.4**	**+0.5**
ANAF				S	**Sn**	**11 56 04.1**	**+0.5**
	comp=N,588nm,0.7s						
APE	**Apeiranthos**	**2.42**	**45**	P	**Pn**	**11 55 41.5**	**+0.1**
APE				S	**Sn**	**11 56 09.9**	**+0.1**
	comp=N,148nm,1.0s						
VLY	**Voula,Athens**	**2.49**	**7**	P	**Pn**	**11 55 43.5**	**+1.2**
VLY				S	**Sn**	**11 56 13.4**	**+1.9**
	comp=N,148nm,0.5s						
AMT	**Artemida-Makis**	**2.54**	**328**	P	**Pn**	**11 55 44.3**	**+1.3**
LOUT	**Loutraki**	**2.63**	**353**	P	**Pn**	**11 55 46.1**	**+1.9**
GUR	**Goura**	**2.69**	**342**	P	**Pn**	**11 55 47.3**	**+2.2**
PTL	**Penteli**	**2.69**	**8**	P	**Pn**	**11 55 46.6**	**+1.5**
PTL				S	**Sn**	**11 56 17.6**	**+1.1**
	comp=N,98nm,0.7s						
KARY	**Karystos**	**2.78**	**17**	P	**Pn**	**11 55 47.2**	**+0.9**
KARY				S	**Sn**	**11 56 19.0**	**+0.4**
	comp=N,88nm,0.8s						
KLV	**Kalavryta, Ach**	**2.84**	**340**	P	**Pn**	**11 55 48.7**	**+1.5**
KLV				S	**Sn**	**11 56 22.3**	**+2.1**

	comp=N,70nm,0.6s						
DRO	**Drossia**	**2.90**	**333**	P	**Pn**	**11 55 49.0**	**+1.0**
TRAZ	**Trapeza**	**2.94**	**342**	P	**Pn**	**11 55 49.8**	**+1.3**
LAKA	**Lakka**	**3.07**	**339**	P	**Pn**	**11 55 52.0**	**+1.7**
DSF	**Desfina**	**3.11**	**347**	P	**Pn**	**11 55 52.0**	**+1.2**
ZKS	**Zakynthos**	**3.12**	**319**	P	**Pn**	**11 55 50.2**	**-0.8**
ZKS				S	**Sn**	**11 56 25.4**	**-1.6**
TRIZ	**Trizonia**	**3.16**	**341**	P	**Pn**	**11 55 52.9**	**+1.4**
SERG	**Sergoula**	**3.21**	**341**	P	**Pn**	**11 55 53.2**	**+1.0**
LKR	**Lokris**	**3.28**	**355**	P	**Pn**	**11 55 53.8**	**+0.7**
ATAL	**Atalanti**	**3.32**	**355**	P	**Pn**	**11 55 54.6**	**+0.9**
MRKA	**Markates**	**3.33**	**3**	P	**Pn**	**11 55 54.9**	**+1.1**
MRKA				S	**Sn**	**11 56 33.5**	**+1.4**
	comp=N,85nm,0.4s						
KFL	**Anninata**	**3.44**	**323**	P	**Pn**	**11 55 55.5**	**+0.3**
PVO	**Paravola**	**3.56**	**336**	P	**Pn**	**11 55 58.9**	**+1.9**
AGG	**Agios Georgios**	**3.74**	**347**	P	**Pn**	**11 56 00.9**	**+1.5**
AGG				S	**Sn**	**11 56 44.7**	**+2.6**
FSK	**Fiskardo**	**3.82**	**324**	P	**Pn**	**11 56 00.9**	**+0.4**
LKD2	**Lefkada island**	**4.04**	**328**	P	**Pn**	**11 56 04.5**	**+0.9**
LKD2				S	**Sn**	**11 56 48.7**	**-1.0**
TSLK	**Tsoukalades, L**	**4.08**	**328**	P	**Pn**	**11 56 05.5**	**+1.5**
THL	**Klokotos Trika**	**4.32**	**346**	P	**Pn**	**11 56 08.4**	**+1.0**
THL				S	**Sn**	**11 56 57.8**	**+1.3**
KEK	**Kerkira**	**5.18**	**328**	P	**Pn**	**11 56 18.5**	**-0.7**
KEK				S	**Sn**	**11 57 13.1**	**-4.6**
	comp=N,25nm,0.5s						
DBRK	**Dubrovnik**	**8.34**	**332**	*e*Pn	**Pn**	**11 56 59.4**	**-3.1**
BRTR	**Keskin Array B**	**9.22**	**59**	Pn	**Pn**	**11 57 16.7**	**+2.0**
	comp=N,0.1nm,0.3s,baz=233,slow=12,SNR=5.7						
HVAR	**Hvar**	**9.46**	**327**	*e*Pn	**Pn**	**11 57 15.7**	**-2.1**
ZIRJ	**Zirje**	**10.20**	**326**	*e*Pn	**Pn**	**11 57 24.5**	**-3.4**
ZIRJ				Sn	Sn	11 59 10.3	-10
MORI	**Morici**	**10.34**	**327**	*e*Pn	**Pn**	**11 57 27.9**	**-1.9**
VYHS	**Vyhne**	**13.53**	**347**	*e*PN	**Pn**	**11 58 12.1**	**-1.4**
KBZ	**Khabaz**	**17.18**	**55**	LR	LR	12 06 16.2	
	comp=N,68nm,18.4s,baz=12,slow=40						
HFS	**Hagfors**	**25.56**	**349**	P	**P**	**12 00 27.1**	**-1.1**
	comp=N,1.0nm,0.5s,baz=140,slow=9.5,SNR=7.5						
FINES	**FINESS Array B**	**26.14**	**3**	P	**P**	**12 00 31.8**	**-1.7**
	comp=N,0.4nm,0.3s,baz=171,slow=9.8,SNR=4.0						
GEYT	**Alibeck**	**27.89**	**74**	P	**P**	**12 00 49.4**	**0.0**
	comp=N,1.9nm,0.3s,baz=287,slow=7.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**29.55**	**227**	P	**P**	**12 01 07.8**	**+3.5**
	comp=N,0.4nm,0.6s,baz=56,slow=8.7,SNR=1.6						
ARCES	**ARCESS Array B**	**34.23**	**1**	P	**P**	**12 01 42.9**	**-2.0**
	comp=N,0.7nm,0.7s,baz=165,slow=9.8,SNR=5.7						
MKAR	**Makanchi Array**	**44.87**	**57**	P	**P**	**12 03 12.4**	**-1.3**
	comp=N,0.4nm,0.4s,baz=272,slow=7.9,SNR=7.1						
ZALV	**Zalesovo Beam**	**45.90**	**46**	P	**P**	**12 03 20.1**	**-1.6**
	comp=N,0.9nm,0.3s,baz=260,slow=8.6,SNR=2.9						
YKA	**Yellowknife Ar**	**76.79**	**341**	P	**P**	**12 06 49.9**	**-0.3**
	comp=N,0.4nm,0.6s,baz=31,slow=5.8,SNR=1.4						

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*ISCJB **25** 11:58:24.5±1.3, 24°.87N±0°.03×122°.49E±0°.03, h2^{km}±12^{km}, Error ellipse: s-maj=6.5km s-min=3.9km az=34.1*

*JMA **25** 11:58:25.5±0.1, 24°.88N×122°.47E, h11^{km}, M2.2*

*TAP **25** 11:58:25.5, 24°.89N×122°.48E, h22^{km}±1^{km}, ML2.5, C*

ISC 25 11:58:25.4±1.1**, 24°.87N**±0°.04×**122°.48E**±0°.03**, h16**^{km}±10^{km}**, n32, σ0^{s}.42**/53**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.45**	**225**	P	**Pb**	**11 58 35.0**	**0.0**
	baz=215						
EOS1				*e*S	**Sb**	**11 58 43.2**	**+1.8**
	baz=215						
JYNG	**Yonagunijimaku**	**0.60**	**134**	P	**Pg**	**11 58 37.2**	**0.0**
JYNG				*e*S	**Sg**	**11 58 45.4**	**+0.2**
TIPB	**Shuangxi**	**0.60**	**280**	P	**Pg**	**11 58 37.2**	**-0.1**
	baz=278						
TIPB				S	**Sb**	**11 58 45.6**	**-0.3**
	baz=278						
TWC	**Suao**	**0.63**	**246**	P	**Pg**	**11 58 37.4**	**-0.4**
	baz=244						
YOJ	**Yonaguni jima**	**0.63**	**130**	P	**Pg**	**11 58 37.9**	**-0.1**
	baz=123						
YOJ				S	**Sg**	**11 58 46.5**	**+0.2**
	baz=123						
YOJ	**Yonaguni jima**	**0.63**	**130**	P	**Pg**	**11 58 37.8**	**-0.1**
YOJ				*e*S	**Sg**	**11 58 46.1**	**-0.2**
NWF	**Wu-fen Shan**	**0.66**	**288**	⇑*i*P	**Pb**	**11 58 38.7**	**0.0**
	baz=286						
NWF				S	**Sb**	**11 58 47.9**	**+0.2**
	baz=286						
WFSB	**Wu-fen Shan**	**0.66**	**288**	P	**Pb**	**11 58 38.7**	**+0.1**
	baz=286						
WFSB				*e*S	**Sb**	**11 58 48.1**	**+0.5**
	baz=286						
TWE	**Neicheng**	**0.75**	**259**	P	**Pb**	**11 58 40.0**	**-0.1**
	baz=257						
NANB	**Nanao**	**0.80**	**236**	P	**Pb**	**11 58 40.2**	**-0.7**
	baz=236						
NANB				*e*S	**Sb**	**11 58 51.0**	**-0.4**
	baz=236						
ENA	**Nanau**	**0.80**	**237**	*e*P	**Pb**	**11 58 40.8**	**-0.2**
	baz=236						
ENA				*e*S	**Sb**	**11 58 51.4**	**-0.2**
	baz=236						
TWA	**Mucha**	**0.82**	**278**	*e*S	**Sg**	**11 58 52.8**	**+0.6**
	baz=276						
PCYT	**Pengchaiyu**	**0.84**	**334**	*e*P	**Pg**	**11 58 41.6**	**-0.2**
	baz=319						
ENTT	**Nioudou**	**0.86**	**255**	P	**Pb**	**11 58 42.0**	**0.0**
	baz=243						
ENTT				*e*S	**Sg**	**11 58 53.7**	**+0.1**
	baz=243						
YM08	**YM08**	**0.86**	**292**	P	**Pg**	**11 58 42.3**	**0.0**
	baz=290						
YM08				*e*S	**Sg**	**11 58 54.0**	**+0.3**
	baz=290						
YM01	**YM01**	**0.87**	**289**	P	**Pg**	**11 58 42.6**	**+0.2**
	baz=287						
YM05	**YM05**	**0.88**	**290**	*e*P	**Pb**	**11 58 42.1**	**-0.2**
	baz=288						
YM10	**YM10**	**0.88**	**289**	P	**Pg**	**11 58 42.4**	**-0.1**
	baz=288						
TWY	**Chenhua**	**0.89**	**297**	P	**Pg**	**11 58 42.9**	**+0.1**
	baz=296						
TWY				*e*S	**Sg**	**11 58 54.7**	**+0.2**
	baz=296						
YM04	**YM04**	**0.90**	**288**	*e*P	**Pb**	**11 58 42.4**	**-0.2**
	baz=287						
YM03	**YM03**	**0.91**	**290**	*e*P	**Pb**	**11 58 41.6**	**-1.2**
	baz=289						
NDT	**Datong Townshi**	**0.92**	**253**	P	**Pb**	**11 58 42.8**	**-0.2**
	baz=243						
NDT				*e*S	**Sb**	**11 58 54.9**	**0.0**
	baz=243						
ANP	**Anpu**	**0.92**	**290**	*e*P	**Pb**	**11 58 43.0**	**-0.1**
	baz=289						
YHNB	**Yeheng**	**1.02**	**259**	P	**Pb**	**11 58 44.9**	**+0.1**
	baz=246						
YHNB				*e*S	**Sn**	**11 58 59.0**	**-0.2**
	baz=246						
NSK	**Sanguang**	**1.04**	**259**	P	**Pb**	**11 58 44.6**	**-0.4**
	baz=246						
NSK				*e*S	**Sg**	**11 58 58.8**	**-0.3**
	baz=246						
NACB	**Ninganchiao**	**1.06**	**229**	P	**Pb**	**11 58 44.8**	**-0.7**
	baz=237						
NACB				*e*S	**Sb**	**11 58 59.0**	**-0.1**
	baz=237						
NNSB	**Datong**	**1.09**	**246**	P	**Pb**	**11 58 45.7**	**-0.2**
	baz=246						
NNSB				*e*S	**Sb**	**11 58 59.8**	**-0.2**
	baz=246						
NNS	**Nan Shan**	**1.09**	**247**	*e*P	**Pn**	**11 58 46.3**	**+0.1**
	baz=246						
NNS				*e*S	**Sb**	**11 58 59.6**	**-0.5**
	baz=246						
ETLH	**Xiulin Townshi**	**1.12**	**234**	P	**Pb**	**11 58 46.2**	**-0.3**
	baz=242						
ETLH				*e*S	**Sb**	**11 59 01.4**	**+0.5**
	baz=242						
WHF	**Hehuan Shan**	**1.32**	**237**	*e*P	**Pn**	**11 58 49.9**	**+0.3**
	baz=237						
NSTT	**Nanjuang**	**1.36**	**260**	*e*P	**Pg**	**11 58 51.6**	**-0.1**
	baz=259						
NSTT				*e*S	**Sg**	**11 59 09.4**	**-0.1**
	baz=259						
CHGB	**Renai**	**1.44**	**236**	*e*P	**Pb**	**11 58 52.1**	**+0.2**
	baz=246						
CHGB				*e*S	**Sg**	**11 59 12.2**	**+0.3**
	baz=246						

MAN 25 12:04:10.6, 7°.46N×124°.78E, h16^{km}**, mb3.7, ML2.5, MS2.0, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.50**	**34**	*e*P	Pg	12 04 20.4	-0.3
BUKP				*e*S	Sb	12 04 29.3	+1.1
SKMP	**Bagumbayan, Su**	**0.96**	**194**	*e*P	Pb	12 04 26.1	-2.8
CGP	**Cagayan de Oro**	**0.99**	**355**	⇑*i*P	Pb	12 04 29.4	-0.1
CGP				*i* S	Sn	12 04 43.9	+0.2
DDMP	**Don Marcelino,**	**1.63**	**145**	*e*P	Pn	12 04 38.7	-0.1
DDMP				*e*S	Sb	12 05 00.2	-0.5

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*IDC **25** 12:05:44.9±1.0, 7°.33N×124°.73E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.6/31, mbtmp3.8/6, MS3.5/16, Ms1 3.5/16, ms1mx3.3/39, Error ellipse: s-maj=25.2km s-min=10.7km az=25.0*

*MAN **25** 12:05:45.0, 7°.36N×124°.76E, h1^{km}, mb5.1, ML4.0, MS4.1*

ISC 25 12:05:46.3±1.2**, 7°.35N**±0°.03×**124°.81E**±0°.03**, h7**^{km}±8^{km}**, n36, σ1^{s}.96**/34**, mb3.7**/7**, MS3.5**/14**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.58**	**26**	*e*P	**Pg**	**12 05 56.6**	**-1.1**
BUKP				*e*S	**Sg**	**12 06 05.9**	**+0.6**
DAV	**Davao City (W)**	**0.81**	**110**	Pg	**Pg**	**12 06 01.6**	**-0.4**
	698nm,0.3s,baz=278,slow=2.6,SNR=26						
DAV				Lg	Lg	12 06 14.7	
	234nm,0.3s,baz=140,slow=23,SNR=12						
DAV				LR	LR	12 06 33.7	
	comp=Z,3µm,19.6s,baz=175,slow=55						
SKMP	**Bagumbayan, Su**	**0.86**	**198**	*e*P	**Pg**	**12 06 01.6**	**-1.4**
CGP	**Cagayan de Oro**	**1.11**	**354**	⇑*i*P	**Pg**	**12 06 05.7**	**-1.9**
CGP				*i* S	**Sg**	**12 06 19.7**	**-2.3**
GSPH	**General Santos**	**1.26**	**174**	*e*P	**Pn**	**12 06 12.2**	**+1.7**
MATI	**Mati**	**1.49**	**105**	*e*P	**Pn**	**12 06 12.4**	**-1.2**
MATI				*e*S	**Sg**	**12 06 35.2**	**+0.8**
PAGZ	**Pagadian**	**1.50**	**289**	*e*P	**Pn**	**12 06 12.5**	**-1.1**
PAGZ				*e*S	**Sg**	**12 06 35.0**	**+0.5**
DDMP	**Don Marcelino,**	**1.53**	**144**	*e*P	**Pn**	**12 06 13.1**	**-1.0**
DDMP				*e*S	**Sg**	**12 06 36.5**	**+1.1**
BIPH	**Bislig**	**1.75**	**62**	*e*P	**Pn**	**12 06 15.8**	**-1.4**
BIPH				*i* S	**Sn**	**12 06 39.4**	**-0.3**
BUTP	**Butuan**	**1.80**	**26**	*e*P	**Pn**	**12 06 18.2**	**+0.4**
BUTP				*e*S	**Sg**	**12 06 48.9**	**+4.6**
DCPH	**Dipolog City**	**1.89**	**311**	⇑*e*P	**Pg**	**12 06 22.3**	**-0.4**
DCPH				*e*S	**Sg**	**12 06 49.9**	**+2.6**
SNPH	**Sibulan**	**2.52**	**322**	*e*P	**Pb**	**12 06 31.8**	**-0.2**
SNPH				*e*S	**Sg**	**12 07 11.8**	**+4.4**
MSLP	**Maasin**	**2.77**	**1**	*e*P	**Pn**	**12 06 30.4**	**-0.7**
MSLP				*e*S	**Sb**	**12 07 10.9**	**+0.6**
LLP	**Lapu-Lapu**	**3.06**	**344**	*e*P	**Pn**	**12 06 35.6**	**+0.3**
LLP				*e*S	**Sb**	**12 07 16.8**	**-2.1**
GUIM	**Jordan**	**3.93**	**326**	*e*P	**Pn**	**12 06 43.2**	**-3.9**
RCP	**Roxas**	**4.65**	**334**	⇑*e*P	**Pn**	**12 06 60.0**	**+2.9**
KAPI	**Kappang**	**13.28**	**202**	LR	LR	12 13 59.6	
	comp=Z,251nm,21.4s,baz=110,slow=37						
BATI	**Baumata**	**17.48**	**184**	LR	LR	12 17 54.1	
	comp=Z,118nm,21.4s,baz=118,slow=42						
GUMO	**Guam**	**20.67**	**71**	LR	LR	12 16 38.3	
	comp=Z,88nm,21.8s,baz=256,slow=32						
PSI	**Prapat**	**26.17**	**261**	LR	LR	12 23 13.1	
	comp=Z,78nm,18.6s,baz=38,slow=40						
JNU	**Nakatsue**	**26.26**	**12**	LR	LR	12 20 51.1	
	comp=Z,94nm,20.8s,baz=210,slow=34						
CMAR	**Chiang Mai Arr**	**27.48**	**296**	LR	LR	12 23 02.2	
	comp=Z,142nm,18.2s,baz=115,slow=38						
WRA	**Warramunga Arr**	**28.70**	**161**	P	**P**	**12 11 45.7**	**+1.4**
	0.9nm,0.8s,baz=342,slow=12,SNR=1.6						
KSRS	**Korea Array**	**30.10**	**5**	LR	LR	12 24 26.5	
	comp=Z,51nm,20.4s,baz=190,slow=37						
MJAR	**Matsushiro Arr**	**31.53**	**21**	LR	LR	12 23 22.9	
	comp=Z,72nm,21.4s,baz=200,slow=34						
ASAR	**Alice Springs**	**32.08**	**164**	P	**P**	**12 12 12.6**	**-1.6**
	0.9nm,0.9s,baz=339,slow=7.0,SNR=17						
STKA	**Stephens Creek**	**42.17**	**159**	P	**P**	**12 13 39.5**	**-0.2**
	2.7nm,0.9s,baz=306,slow=8.7,SNR=2.2						
STKA				LR	LR	12 31 37.1	
	comp=Z,66nm,20.8s,baz=29,slow=37						
SONM	**Songino Array**	**43.28**	**342**	P	**P**	**12 13 48.7**	**-0.1**
	0.6nm,0.4s,baz=168,slow=7.6,SNR=4.4						
SONM				LR	LR	12 32 53.0	
	comp=Z,100nm,20.7s,baz=140,slow=38						
PETK	**Petropavlovsk-**	**52.88**	**24**	P	**P**	**12 15 05.8**	**+3.0**
	1.9nm,1.0s,baz=199,slow=8.5,SNR=3.3						
PETK				LR	LR	12 37 56.9	
	comp=Z,24nm,19.7s,baz=238,slow=36						
MKAR	**Makanchi Array**	**53.51**	**325**	P	**P**	**12 15 07.5**	**-0.1**
	1.5nm,0.7s,baz=126,slow=9.2,SNR=11						
ZALV	**Zalesovo Beam**	**56.52**	**333**	LR	LR	12 40 54.2	
	comp=Z,37nm,18.2s,baz=70,slow=37						
AKTO	**Aktyubinsk**	**69.66**	**321**	LR	LR	12 50 27.0	
	comp=Z,36nm,18.1s,baz=105,slow=38						
ARU	**Arti**	**70.88**	**327**	LR	LR	12 48 49.5	
	comp=Z,33nm,19.2s,baz=121,slow=36						
KIRV	**Kirov**	**76.16**	**329**	LR	LR	12 54 19.6	
	comp=Z,44nm,20.0s,baz=186,slow=38						
KVAR	**Kislovodsk Arr**	**79.27**	**313**	LR	LR	12 58 05.2	
	comp=Z,24nm,18.1s,baz=267,slow=40						
ILAR	**Eielson Array**	**82.68**	**26**	P	**P**	**12 18 09.1**	**-1.3**
	0.2nm,0.6s,baz=280,slow=5.4,SNR=2.2						

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*ISCJB **25** 12:09:24.9±0.1, 6°.78N±0°.01×73°.08W±0°.02, h159^{km}±1^{km}, mb4.7/88, Error ellipse: s-maj=2.9km s-min=2.0km az=32.4*

*NEIC **25** 12:09:25.0±1.7, 6°.73N×72°.99W, h153^{km}±5^{km}, mb4.8/289, Error ellipse: s-maj=11.0km s-min=4.5km az=150.0*

NEIC Felt [II] at Medellin. Also felt at Bucaramanga.

*RSNC **25** 12:09:26.9±1.2, 6°.82N×73°.15W, h148^{km}±4^{km}, ML5.2, Mw4.7*

*IDC **25** 12:09:26.1±0.4, 6°.78N×72°.96W, h161^{km}±4^{km}, mb4.1/22, mb1 4.3/30, mb1mx4.2/34, mbtmp4.6/30, MS3.4/6, Ms1 3.4/6, ms1mx3.0/34, Error ellipse: s-maj=8.2km s-min=6.0km az=119.0*

*GCMT **25** 12:09:29.0±0.3, 6°.87N±0°.02×73°.13W±0°.03, h155^{km}±3^{km}, MW5.0/77, Moment Tensor Solution. s14,c15; s77,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.27±.12; $M_{\theta\theta}$2.17±.15; $M_{\phi\phi}$-1.90±.17; $M_{r\theta}$-0.34±.09; $M_{\theta\phi}$-2.26±.13; $M_{\phi r}$-1.65±.10; Best double couple: $M_0$3.45900×10^{16} NP1:ϕ_s337.00000°, δ77.00000°, λ-24.00000°. NP2: ϕ_s72.00000°, δ67.00000°, λ-166.00000°. Principal axes: T 3.2180, Plg7.0000°, Azm26.0000°; N 0.4830, Plg63.0000°, Azm129.0000°; P -3.7000, Plg26.0000°, Azm293.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 12:09:25.7±0.4**, 6°.83N**±0°.02×**73°.08W**±0°.03**, h159**^{km}±3^{km}**, h160**^{km}**:pP-P, n651, σ1^{s}.60**/718**, mb4.7**/88**, 22C-12D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**205**	⇑*i*P	**Pn**	**12 09 47.1**	**-0.5**
	comp=Z,22µm,0.2s						
BARC				*e*S	**Sn**	**12 10 01.9**	**-2.4**
BARC				*i*		12 10 03.3	
	comp=Z,22µm,0.2s						
GIRC	**Giron, Santand**	**0.28**	**335**	⇓*i*P	**Pn**	**12 09 47.2**	**-0.3**
GIRC				*e*S	**Sn**	**12 10 02.8**	**-1.4**
GIRC				*i*		12 10 04.4	
	comp=Z,29µm,0.4s						
PAMC	**Pamplona, Colo**	**0.63**	**36**	⇓*i*P	**Pn**	**12 09 50.1**	**+0.7**
PAMC				*e*S	**Sn**	**12 10 06.8**	**-0.7**
PAMC				*i*		12 10 09.1	
	comp=Z,28µm,0.5s						
BRRC	**Barranca, Sant**	**0.69**	**294**	⇑*i*P	**Pn**	**12 09 49.0**	**-0.2**
BRRC				*e*S	**Sn**	**12 10 05.2**	**-1.9**
BRRC				*i*		12 10 08.5	
	comp=Z,12µm,0.2s						
GRMC	**Gramalote, San**	**0.93**	**17**	*e*P	**Pn**	**12 09 53.0**	**+2.0**
RUSC	**La Rusia**	**0.93**	**180**	*e*P	**Pn**	**12 09 51.1**	**-0.3**
RUSC				*e*S	**Sn**	**12 10 09.0**	**-2.1**
RUSC				*i*		12 10 11.0	
	comp=Z,15µm,0.2s						
RUSC				*i*		12 10 11.6	
	comp=N,44µm,0.4s						
GUEC	**Guerrero, Nort**	**1.01**	**9**	*e*P	**Pn**	**12 09 52.3**	**+0.4**
CAPV	**Capacho**	**1.28**	**36**	⇑*i*P	**Pn**	**12 09 55.2**	**+1.1**
CAPV				*e*S	**Sn**	**12 10 17.0**	**+1.1**
TAMC	**Tame, Arauca**	**1.33**	**107**	⇓*i*P	**Pn**	**12 09 55.6**	**+1.2**
TAMC				*e*S	**Sn**	**12 10 16.4**	**0.0**
TAMC				*i*		12 10 18.8	
	comp=N,7µm,0.8s						
PTBC	**PUERTO BERRIO,**	**1.40**	**258**	⇑*i*P	**Pn**	**12 09 53.5**	**-1.5**
PTBC				*e*S	**Sn**	**12 10 14.8**	**-2.7**
OCAC	**Ocana**	**1.43**	**350**	⇑*i*P	**Pn**	**12 09 55.2**	**-0.2**
OCAC				*e*S	**Sn**	**12 10 17.1**	**-1.2**
OCAC				*i*		12 10 23.4	
	comp=N,42µm,0.3s						
SPBC	**San Pablo de B**	**1.53**	**220**	⇑*i*P	**Pn**	**12 09 55.9**	**-0.5**
SPBC				*e*S	**Sn**	**12 10 17.9**	**-2.1**
SPBC				*i*		12 10 24.9	
	comp=N,32µm,0.3s						
YOPC	**Yopal, Colombi**	**1.60**	**156**	⇓*i*P	**Pn**	**12 09 57.9**	**+0.7**
YOPC				*e*S	**Sn**	**12 10 20.7**	**-0.7**
YOPC				*i*		12 10 26.1	
	comp=N,41µm,0.8s						
CTAU	**Tausa, Cundina**	**1.88**	**211**	⇓*i*P	**Pn**	**12 10 02.0**	**+1.4**
CTAU				*e*S	**Sn**	**12 10 25.0**	**-2.4**
CTAU				*i*		12 10 35.0	
	comp=Z,10µm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.89**	**291**	⇓*i*P	**Pn**	**12 09 59.2**	**-1.0**
ZARC				*e*S	**Sn**	**12 10 25.1**	**-1.6**
ZARC				*i*		12 10 30.5	
	comp=Z,13µm,0.4s						
CTAB	**Cerro Tablazo,**	**2.12**	**212**	⇑*e*P	**Pn**	**12 10 04.4**	**+1.1**
NORC	**Norcasia**	**2.18**	**235**	⇑*i*P	**Pn**	**12 10 02.7**	**-0.8**
NORC				*e*S	**Sn**	**12 10 31.0**	**-1.8**
NORC				*i*		12 10 37.0	
	comp=Z,8µm,0.2s						
CNOCA	**NORCASIA, CALD**	**2.18**	**235**	*e*P	**Pn**	**12 10 02.7**	**-0.8**
SMLC	**San Martn de**	**2.20**	**333**	*e*P	**Pn**	**12 10 03.0**	**-0.8**
SMLC				*e*S	**Sn**	**12 10 31.7**	**-1.4**
SMLC				*i*		12 10 36.6	
	comp=N,14µm,0.3s						
CHIC	**Chingaza**	**2.28**	**197**	⇑*i*P	**Pn**	**12 10 05.0**	**0.0**
CHIC				*e*S	**Sn**	**12 10 34.7**	**-0.8**
CHIC				*i*		12 10 37.4	
	comp=N,20µm,0.5s						
CROSA	**EL ROSAL, CUND**	**2.32**	**212**	*e*P	**Pn**	**12 10 06.3**	**+0.7**
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**	**12 10 07.0**	**+1.4**
	comp=N,3µm,0.3s,baz=313,slow=4.9,SNR=395						
ROSC				LR	LR	12 10 30.5	
	comp=N,895nm,19.4s,baz=258,slow=27						
ROSC				S	**Sn**	**12 10 37.9**	**+1.4**
	comp=N,5µm,0.3s,baz=194,slow=22,SNR=23						
ROSC	**El Rosal**	**2.33**	**212**	*e*Pn	**Pn**	**12 10 06.7**	**+1.0**
ROSC				*e*Sn	**Sn**	**12 10 34.4**	**-2.1**
ROSC	**El Rosal**	**2.33**	**212**	⇑*i*P	**Pn**	**12 10 06.8**	**+1.1**
ROSC				*e*S	**Sn**	**12 10 36.9**	**+0.4**
HELC	**Santa Helena**	**2.52**	**256**	⇑*e*P	**Pn**	**12 10 06.8**	**-1.1**
HELC				*e*S	**Sn**	**12 10 38.5**	**-1.9**
UREC	**San Jos de Ur**	**2.61**	**291**	*e*P	**Pn**	**12 10 07.2**	**-1.4**
UREC				*e*S	**Sn**	**12 10 38.7**	**-3.1**
SOCV	**Socops**	**2.63**	**56**	⇑*e*P	**Pn**	**12 10 09.6**	**+0.6**
SOCV				*e*S	**Sn**	**12 10 41.6**	**-0.8**
VILC	**Villavicencio,**	**2.77**	**193**	⇓*i*P	**Pn**	**12 10 10.4**	**-0.3**
VILC				*e*S	**Sn**	**12 10 44.1**	**-1.5**
GUY2C	**Guyana, Caldas**	**2.78**	**235**	*e*P	**Pn**	**12 10 10.9**	**-0.2**
GUY2C				*e*S	**Sn**	**12 10 47.0**	**+0.7**
RREF	**El Recreo**	**2.96**	**230**	⇑*e*P	**Pn**	**12 10 13.1**	**-0.4**
RREF				*e*S	**Sn**	**12 10 51.8**	**+1.2**
RREF				*i*		12 10 57.5	
	comp=Z,6µm,0.3s						
DBBC	**Dabeiba**	**3.12**	**274**	⇓*i*P	**Pn**	**12 10 14.6**	**-0.4**
DBBC				⇓*e*P	**Pn**	**12 10 14.6**	**-0.4**
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**12 10 16.9**	**+1.1**
	comp=Z,293nm,0.3s,baz=234,slow=11,SNR=605						
SDV				S	**Sn**	**12 10 53.6**	**-1.0**
	comp=Z,890nm,0.3s,baz=54,slow=22,SNR=44						
SDV	**Santo Domingo**	**3.17**	**50**	*e*Pn	**Pn**	**12 10 16.7**	**+0.9**
SDV				*e*Sn	**Sn**	**12 10 53.2**	**-1.4**
SDV	**Santo Domingo**	**3.17**	**50**	*e*P	**Pn**	**12 10 16.7**	**+0.9**
SDV				*e*S	**Sn**	**12 10 54.3**	**-0.3**
ARGC	**Ariguani, Magd**	**3.23**	**339**	*e*P	**Pn**	**12 10 17.2**	**+0.9**
ARGC				*e*S	**Sn**	**12 10 55.0**	**-0.7**
ARGC				*i*		12 11 07.6	
	comp=Z,3µm,0.3s						
PRAC	**Prado**	**3.58**	**210**	⇑*i*P	**Pn**	**12 10 20.1**	**-0.8**
PRAC				*e*S	**Sn**	**12 11 03.3**	**-0.5**
PRAC				*i*		12 11 09.5	
	comp=Z,5µm,0.4s						
ORTC	**Ortega, Tolima**	**3.62**	**217**	⇑*e*P	**Pn**	**12 10 20.9**	**-0.4**
ORTC				*e*S	**Sn**	**12 11 03.1**	**-1.4**
ORTC				*i*		12 11 10.9	
	comp=Z,3µm,0.5s						
CVALL	**Valledupar, Ce**	**3.66**	**357**	*e*P	**Pn**	**12 10 21.1**	**-0.8**
CVALL				*e*S	**Sn**	**12 11 05.1**	**-0.6**
SJCC	**San Jacinto, C**	**3.69**	**326**	⇓*i*P	**Pn**	**12 10 20.9**	**-1.5**
SJCC				*e*S	**Sn**	**12 11 02.3**	**-4.1**
SJCC				*i*		12 11 10.8	
	comp=Z,2µm,0.3s						
PLMC	**San Jos del P**	**3.72**	**239**	*e*P	**Pn**	**12 10 22.6**	**0.0**
PLMC				*e*S	**Sn**	**12 11 06.2**	**-0.8**
PLMC				*i*		12 11 09.5	
	comp=Z,3µm,0.3s						
GUVC	**San Jose del G**	**4.28**	**174**	*e*P	**Pn**	**12 10 29.3**	**-0.6**
GUVC				*e*S	**Sn**	**12 11 17.8**	**-2.1**
GUVC				*i*		12 11 22.5	
	comp=N,14µm,0.6s						
YOTC	**Yotoco, Valle**	**4.31**	**229**	⇑*e*P	**Pn**	**12 10 29.4**	**-1.0**
YOTC				*e*S	**Sn**	**12 11 22.1**	**+1.4**
SOLC	**Bahia Solano**	**4.35**	**262**	*e*P	**Pn**	**12 10 31.1**	**+0.3**
SMRC	**Santa Marta, M**	**4.46**	**345**	*e*P	**Pn**	**12 10 31.8**	**-0.4**
SMRC				*e*S	**Sn**	**12 11 19.8**	**-4.3**
SMRC				*i*		12 11 25.1	
	comp=N,3µm,0.4s						
MACC	**Macarena, Meta**	**4.71**	**189**	⇑*i*P	**Pn**	**12 10 33.9**	**-1.7**
MACC				*e*S	**Sn**	**12 11 24.9**	**-5.3**
BETC	**Betania**	**4.74**	**210**	*e*P	**Pn**	**12 10 34.8**	**-1.2**
MARP	**Paez Belalcaza**	**4.89**	**216**	⇑*e*P	**Pn**	**12 10 36.8**	**-1.3**
MARP				*e*S	**Sn**	**12 11 33.7**	**-1.0**
URIC	**Uribia, Colomb**	**4.96**	**12**	⇑*e*P	**Pn**	**12 10 37.6**	**-1.2**
URIC				*e*S	**Sn**	**12 11 31.0**	**-5.0**
URIC				*i*		12 11 37.4	
	comp=N,891nm,0.5s						
MALC	**Bahia Malaga**	**5.08**	**237**	*e*P	**Pn**	**12 10 41.2**	**+0.9**
MALC				*e*S	**Sn**	**12 11 39.9**	**+1.2**
UPD2	**Meteti**	**5.19**	**290**	*e*P	**Pn**	**12 10 39.7**	**-2.1**
POPC	**Popayan, Colom**	**5.57**	**220**	*e*P	**Pn**	**12 10 46.7**	**-0.4**
POPC				*e*S	**Sn**	**12 11 48.1**	**-2.6**
FLOC	**Florencia**	**5.81**	**206**	⇑*i*P	**Pn**	**12 10 49.3**	**-0.7**
FLOC				*e*S	**Sn**	**12 11 55.0**	**-1.1**
FLOC				*i*		12 12 30.9	
	comp=Z,532nm,0.8s						
SOTA	**Rioblanco**	**5.84**	**217**	⇑*e*P	**Pn**	**12 10 51.3**	**+0.4**
BBAC	**Balboa, Cauca**	**6.33**	**221**	*e*P	**Pn**	**12 10 56.6**	**-0.5**
BBAC				*e*S	**Sn**	**12 12 06.9**	**-1.9**
BBAC				*i*		12 12 10.5	
	comp=N,936nm,0.4s						
GRGC	**Isla de Gorgon**	**6.34**	**233**	*e*P	**Pn**	**12 10 55.3**	**-1.8**
CRUC	**La Cruz**	**6.50**	**217**	⇓*e*P	**Pn**	**12 11 00.7**	**+1.2**
UPA	**Univ. de Panam**	**6.75**	**289**	*e*P	**Pn**	**12 10 59.9**	**-2.6**
PTLC	**Puerto Leguiza**	**6.83**	**195**	*e*P	**Pn**	**12 11 05.8**	**+2.2**
GCUF	**Volcan Galeras**	**7.00**	**218**	*e*P	**Pn**	**12 11 06.9**	**+0.5**
GCUF				*e*S	**Sn**	**12 12 24.0**	**-1.4**
BCIP	**Isla Barro Col**	**7.09**	**290**	*e*P	**Pn**	**12 11 04.6**	**-2.4**
AZU	**Azuero**	**7.21**	**278**	⇓*e*P	**Pn**	**12 11 06.8**	**-1.8**
PCRV	**Puerto La Cruz**	**8.99**	**68**	P	**Pn**	**12 11 31.7**	**-0.6**
	comp=N,4.5nm,0.3s,baz=253,slow=1.5,SNR=20						
PCRV				S	**Sn**	**12 13 09.1**	**-3.2**
	comp=N,3.1nm,0.3s,baz=103,slow=19,SNR=4.0						
HDC	**Heredia**	**11.37**	**287**	*e*Pn	**Pn**	**12 12 03.4**	**-0.3**
PCJ	**Portland Cotta**	**11.56**	**340**	*i* P	**Pn**	**12 12 08.4**	**+2.3**
HOJ	**Hope**	**11.68**	**342**	*i* P	**Pn**	**12 12 10.8**	**+3.3**
BANI	**BANI**	**11.80**	**13**	*e*Pn	**Pn**	**12 12 07.5**	**-1.8**
MCJ	**Malvern**	**11.91**	**338**	*i* P	**Pn**	**12 12 13.3**	**+2.6**
MCJ				*i* S	Sn	12 14 08.9	-14
CVJ	**Coleyville**	**12.14**	**339**	*i* P	**Pn**	**12 12 16.3**	**+2.6**
MTDJ	**Mount Denham**	**12.14**	**339**	*e*Pn	**Pn**	**12 12 15.9**	**+2.3**
TRN	**Trinidad (W)**	**12.14**	**71**	*e*P	**P**	**12 12 19.0**	**-0.7**
SDDR	**Presa de Saban**	**12.21**	**8**	*e*Pn	**Pn**	**12 12 14.8**	**+0.3**
JTS	**Las Juntas de**	**12.24**	**287**	P	**Pn**	**12 12 16.9**	**+2.0**
	comp=N,2.6nm,0.3s,baz=128,slow=7.1,SNR=12						
JTS				S	**Sn**	**12 14 32.3**	**+1.8**
	comp=N,0.6nm,0.3s,baz=22,slow=19,SNR=1.9						
JTS	**Las Juntas de**	**12.24**	**287**	*e*Pn	**Pn**	**12 12 16.9**	**+2.0**
JTS				*e*P	**P**	**12 12 17.2**	**-3.5**
ESPN	**Las Esperanzas**	**12.29**	**297**	*e*Pn	**Pn**	**12 12 14.6**	**-0.9**
GRGR	**Grenville**	**12.44**	**64**	*e*P	**Pn**	**12 12 19.1**	**+1.6**

GRGR	Grenville	12.44	64	eP	Pn	12 12 20.0	+2.6
MPR	Mayaguez	12.71	27	ePn	Pn	12 12 17.4	-3.6
OBIP	Obispado Ponce	12.81	29	ePn	Pn	12 12 20.0	-2.2
AGP	Aguadilla	12.88	26	ePn	Pn	12 12 23.3	+0.2
ACON	Acoyapa	12.98	294	ePn	Pn	12 12 24.3	-0.1
AOPR	Arecibo Observ	13.00	28	ePn	Pn	12 12 22.9	-1.9
SJG	San Juan	13.09	30	P	Pn	12 12 23.3	-2.5
	comp=N,19nm,0.3s,baz=205,slow=12,SNR=26						
SJG				S	Sn	12 14 38.8	-12
	baz=13,slow=22,SNR=3.0						
TOSP	Speyside	13.15	69	eP	P	12 12 29.9	-0.9
GTBY	Guantanamo Bay	13.17	352	ePn	Pn	12 12 27.7	+0.9
SVB	Belmont	13.28	60	eP	Pn	12 12 26.9	-1.4
SVV	Soufriere Volc	13.34	60	eP	Pn	12 12 27.9	-1.0
SSV	Crater Summit	13.36	60	eP	Pn	12 12 28.6	-0.8
CBYP	Canovanas	13.38	31	ePn	Pn	12 12 27.5	-2.0
SVCV	St. Vincent, C	13.38	60	eP	Pn	12 12 29.4	0.0
CUPR	Culebra, Puert	13.71	33	ePn	Pn	12 12 32.3	-1.3
SLB	Belfond	13.73	59	eP	Pn	12 12 34.7	+0.7
MCLT	Moule a Chique	13.76	59	ePn	P	12 12 37.9	+0.3
MCLT	Moule a Chique	13.76	59	eP	P	12 12 36.7	-0.9
SLBI	Saint Lucia, B	13.88	58	eP	Pn	12 12 35.4	-0.5
BIM	Bigot	14.05	56	eP	Pn	12 12 38.4	+0.3
TRMF	Trois Ilets	14.08	56	eP	P	12 12 41.6	+0.5
PCM	Pelee Case Pet	14.10	55	eP	P	12 12 44.5	+3.1
FDF	Fort de France	14.10	55	ePn	Pn	12 12 37.7	-0.9
FDF	Fort de France	14.10	55	eP	Pn	12 12 38.8	+0.1
FDF	Fort de France	14.10	55	eP	P	12 12 41.3	-0.1
ZAM	Aeronautique	14.11	56	eP	P	12 12 45.7	+4.1
GBMF	Grand Be	14.12	55	eP	P	12 12 41.3	-0.5
CXM	Morne La Croix	14.13	55	eP	Pn	12 12 39.6	+0.5
LPMF	Morne Lapointe	14.17	56	eP	P	12 12 42.6	+0.5
MPOM	Morne Pois Mar	14.19	57	eP	Pn	12 12 40.6	+0.9
MDPO	Dominica; Chan	14.33	52	eP	Pn	12 12 41.7	+0.2
MDPO	Dominica; Chan	14.33	52	eP	P	12 12 44.9	+1.0
CBCY	The Bluff, Cay	14.38	334	eP	P	12 12 44.0	-0.4
SABA	Saba	14.39	41	eP	Pn	12 12 42.5	+0.2
DWS	Wesley	14.44	52	eP	Pn	12 12 42.9	+0.1
SEUS	St. Eustatius	14.47	42	eP	Pn	12 12 43.0	-0.3
MLYT	Lee's Yard	14.49	46	eP	Pn	12 12 42.7	-0.8
SKI	Saint Kitts	14.52	43	eP	Pn	12 12 44.1	+0.2
MAGL	Barre de l'ile	14.68	51	eP	P	12 12 47.4	-0.5
FSCY	Frank Sound, G	14.70	328	ePn	Pn	12 12 46.6	+0.5
BBGH	Gun Hill	14.71	64	eP	Pn	12 12 38.9	-7.4
GRTK	Grand Turk	14.72	7	ePn	Pn	12 12 45.3	-1.0
BBSP	Saint Philip	14.79	64	eP	P	12 12 53.5	+4.4
SMRT	St. Maarten	14.82	40	ePn	Pn	12 12 46.9	-0.7
SMRT	St. Maarten	14.82	40	eP	P	12 12 49.0	-0.4
ABD	La Joyeuse, An	14.85	49	eP	Pn	12 12 48.6	+0.7
ATAH	Atahualpa	14.85	201	P	P	12 12 49.3	-0.8
	comp=N,2.7nm,0.3s,baz=75,slow=7.8,SNR=9.5						
ATAH				S	S	12 15 40.4	+1.1
	comp=N,0.4nm,0.3s,baz=191,slow=18,SNR=4.6						
BPA	Boggy Peak	14.95	46	eP	P	12 12 51.9	+1.1
PTGA	Pitinga	15.08	119	P	Pn	12 12 50.1	-0.8
	comp=N,1.1nm,0.3s,baz=297,slow=14,SNR=20						
PTGA	Pitinga	15.08	119	eP	Pn	12 12 49.9	-0.9
ANWB	Willy Bob	15.41	45	ePn	Pn	12 12 54.3	-0.5
	comp=N,122nm,0.8s						
ANWB	Willy Bob	15.41	45	eP	Pn	12 12 54.0	-0.8
PAYG	Puerto Ayora	18.72	247	eP	P	12 13 32.2	-0.2
	comp=N,44nm,0.8s						
APG	El Apazote	18.90	297	P	P	12 13 34.5	0.0
	comp=N,1.3nm,0.3s,baz=132,slow=6.2,SNR=34						
NNA	Nana	19.06	191	P	P	12 13 36.5	+0.5
	comp=N,1.6nm,0.3s,baz=355,slow=8.5,SNR=7.7						
NNA				S	S	12 17 07.1	+3.1
	comp=N,1.7nm,0.3s,baz=142,slow=18,SNR=2.3						
NNA	Nana	19.06	191	eP	P	12 13 34.6	-1.4
	comp=N,22nm,0.8s						
TEIG	Tepich	19.87	314	P	P	12 13 46.3	+1.6
	comp=N,9.9nm,0.3s,baz=137,slow=7.9,SNR=54						
TEIG	Tepich	19.87	314	eP	Pn	12 13 46.5	-1.5
	comp=N,119nm,0.8s						
061Z	Ochoppi	20.36	339	P	P	12 13 51.1	+1.3
	baz=157						
MDP	Montagnes des	20.39	94	P	Pn	12 13 52.9	-1.5
	comp=N,25nm,0.9s,baz=284,slow=13,SNR=6.1						
MDP				pP	pP	12 14 16.9	-1.3
	comp=N,28nm,0.8s,baz=274,slow=13,SNR=5.3						
060Z	West Palm Beac	20.74	341	P	P	12 13 55.4	+1.5
	baz=159						
CCIG	Comitan	20.89	298	eP	P	12 13 56.3	+0.5
	comp=N,50nm,0.7s						
957A	Wimauma	22.48	338	P	P	12 14 13.4	+1.5
	baz=156						
LPAZ	La Paz	23.48	168	P	P	12 14 22.4	+0.6
	comp=N,6.1nm,0.7s,baz=360,slow=9.9,SNR=22						
LPAZ	La Paz	23.48	168	eP	P	12 14 20.8	-1.1
	comp=N,9.3nm,0.9s						
CMIG	Matias Romero	23.62	298	P	P	12 14 19.9	-2.6
	comp=N,5.2nm,0.5s,baz=128,slow=7.0,SNR=9.3						
CMIG				LR	LR	12 24 53.0	
	comp=N,133nm,18.6s,baz=116,slow=39						
658A	Bunnell	23.76	342	P	P	12 14 24.9	+1.3
	baz=159						
657A	Interlachen	24.11	341	P	P	12 14 28.4	+1.7
	baz=158						
656A	Willston	24.13	339	eP	P	12 14 26.9	-0.1
	comp=N,53nm,1.1s						
656A	Willston	24.13	339	P	P	12 14 28.9	+1.9
	baz=156						
557A	Orange Park	24.46	342	P	P	12 14 32.2	+2.2
	baz=159						
556A	Lake Butler	24.67	340	P	P	12 14 33.6	+1.8
	baz=157						
555A	McAlpin	24.97	339	P	P	12 14 36.0	+1.4
	baz=156						
455A	Stateville	25.56	340	P	P	12 14 42.1	+2.3
	baz=157						
SIV	San Ignacio	25.60	152	P	P	12 14 39.9	-0.5
	comp=N,7.0nm,0.8s,baz=336,slow=9.0,SNR=32						
357A	Townsend	25.71	343	P	P	12 14 42.6	+1.4
	baz=160						
454A	Quitman	25.75	339	P	P	12 14 43.6	+2.1
	baz=155						
MNMC	Minye Minye	26.02	172	eP	P	12 14 43.1	-1.3
	comp=N,6.5nm,1.0s						
453A	Whigham	26.13	338	P	P	12 14 47.7	+2.7
	baz=154						
TIGA	Tifton	26.39	339	P	P	12 14 48.8	+1.5
	baz=156						
452A	Marianna	26.46	336	P	P	12 14 49.9	+1.9
	baz=152						
353A	Camilla	26.53	338	P	P	12 14 50.4	+1.8
	baz=155						
GO01	Chusmiza	26.60	172	eP	P	12 14 48.6	-1.3
	comp=N,11nm,1.0s						
254A	Abbeville	26.75	340	P	P	12 14 52.9	+2.3
	baz=157						
352A	Blakely	26.92	337	P	P	12 14 54.4	+2.4
	baz=153						
253A	Americus	27.14	339	P	P	12 14 56.0	+2.0
	baz=155						
449A	Pace	27.25	333	P	P	12 14 56.6	+1.5
	baz=148						
Z57A	Bowman	27.27	346	P	P	12 14 57.1	+1.9
	baz=163						
252A	Lumpkin	27.30	338	P	P	12 14 57.7	+2.2
	baz=154						
Y59A	Loris	27.56	350	P	P	12 14 59.9	+2.2
	baz=167						
Y58A	Scranton	27.63	348	eP	P	12 14 59.5	+1.1
	comp=N,47nm,0.4s						
Y58A	Scranton	27.63	348	P	P	12 15 00.7	+2.3
	baz=166						
251A	Midway	27.65	337	P	P	12 15 00.3	+1.8
	baz=153,SNR=9.8						
349A	Repton	27.75	333	P	P	12 15 01.5	+2.0
	baz=149						
Z54A	Sparta	27.80	342	P	P	12 15 01.7	+1.8
	baz=159						
250A	Grady	27.89	336	P	P	12 15 02.8	+2.0
	baz=151						
152A	Waverly Hall	27.90	339	P	P	12 15 03.4	+2.5
	baz=155,SNR=13						
151A	Opelika	28.00	338	P	P	12 15 03.8	+2.1
	baz=153						
Z53A	Monticello	28.07	341	P	P	12 15 04.2	+1.9
	baz=157,SNR=5.5						
GOGA	Godfrey	28.16	341	P	P	12 15 04.9	+1.9
	baz=158						
Y55A	Saluda	28.18	344	P	P	12 15 05.0	+1.7
	baz=161,SNR=9.2						
X58A	Rowland	28.19	349	P	P	12 15 05.6	+2.3
	baz=167						
249A	Camden	28.25	334	P	P	12 15 05.7	+1.8
	baz=149						
Z52A	Williamson	28.27	340	P	P	12 15 06.5	+2.4
	baz=156,SNR=7.4						
Y54A	Tignall	28.34	343	P	P	12 15 06.7	+2.1
	baz=160						
150A	Eclectic	28.34	337	P	P	12 15 06.6	+1.9
	baz=152						
JSC	Jenkinsville	28.35	346	eP	P	12 15 04.5	-0.3
	comp=N,13nm,0.7s						
X56A	White Oak	28.50	346	P	P	12 15 08.1	+2.0
	baz=163						
Y53A	Monroe	28.60	342	P	P	12 15 09.2	+2.2
	baz=158						
X55A	Gracelyn & Ava	28.62	345	P	P	12 15 09.4	+2.2
	baz=162						
149A	Jones	28.65	335	P	P	12 15 09.6	+2.2
	baz=151,SNR=5.6						
Z51A	Franklin	28.65	339	P	P	12 15 09.7	+2.3
	baz=154,SNR=8.3						
Y52A	Lilburn	28.76	341	eP	P	12 15 08.7	+0.3
	comp=N,9.9nm,0.6s						
Y52A	Lilburn	28.76	341	P	P	12 15 10.6	+2.2
	baz=157						
Z50A	Ashland	28.88	337	eP	P	12 15 10.8	+1.3
	comp=N,30nm,0.8s						
Z50A	Ashland	28.88	337	P	P	12 15 11.9	+2.4
	baz=153,SNR=22						
W57A	Gilead	28.90	348	P	P	12 15 11.5	+1.9
	baz=166						
W56A	Indian Trail	29.01	347	P	P	12 15 12.8	+2.1
	baz=164						
Z49A	Columbiana	29.06	336	P	P	12 15 13.5	+2.4
	baz=152,SNR=21						
LRAL	Lakeview Retre	29.11	335	eP	P	12 15 12.1	+0.6
	comp=N,15nm,0.8s						
LRAL	Lakeview Retre	29.11	335	P	P	12 15 13.8	+2.3
	baz=151,SNR=9.4						
X53A	Estanollee	29.12	342	P	P	12 15 13.4	+1.8
	baz=159						
Y51A	Rockmart	29.14	339	P	P	12 15 13.6	+1.8
	baz=155						
KMSC	Kings Mountain	29.19	346	P	P	12 15 14.0	+1.8
	baz=163						
V59A	Middlesex	29.19	351	P	P	12 15 14.3	+2.1
	baz=169						
147A	Livingston	29.35	333	P	P	12 15 15.7	+2.1
	baz=148						
W54A	Cherokee Point	29.35	345	P	P	12 15 15.1	+1.5
	baz=161						
V58A	Windy Hill, Pi	29.36	350	P	P	12 15 15.3	+1.7
	baz=168						
Y50A	Piedmont	29.37	338	P	P	12 15 15.6	+1.8
	baz=154,SNR=10						
X52A	Dahlonega	29.39	342	P	P	12 15 15.9	+1.9
	baz=158						
LVC	Limon Verde	29.54	172	P	P	12 15 15.0	-0.8
	comp=N,2.1nm,0.5s,baz=273,slow=3.9,SNR=3.7						
LVC	Limon Verde	29.54	172	eP	P	12 15 14.6	-1.3
	comp=N,4.4nm,0.9s						
V57A	Coltrane Farms	29.57	349	P	P	12 15 17.3	+1.7
	baz=166						
Y49A	Blount Mountai	29.60	337	eP	P	12 15 17.0	+1.2
	comp=N,27nm,0.7s						
Y49A	Blount Mountai	29.60	337	P	P	12 15 17.5	+1.7
	baz=152,SNR=16						
V56A	Mocksville	29.64	348	P	P	12 15 17.7	+1.5
	baz=165						
X51A	Calhoun	29.67	340	P	P	12 15 18.0	+1.5
	baz=156						
W53A	Cullowhee	29.70	343	P	P	12 15 18.7	+1.9
	baz=159						
X50B	Fort Payne	29.85	339	P	P	12 15 20.0	+1.9
	baz=154,SNR=7.9						
U58A	Oxford	29.85	351	P	P	12 15 20.2	+2.1
	baz=169,SNR=6.8						
W52A	Murphy	29.85	342	P	P	12 15 20.3	+2.2
	baz=158,SNR=9.5						
V54A	Nebo	29.94	345	P	P	12 15 21.1	+2.2
	baz=162,SNR=6.6						
Y48A	Jasper	29.95	336	P	P	12 15 20.7	+1.8
	baz=151,SNR=7.7						
U57A	Blanch	30.02	350	P	P	12 15 21.4	+1.9
	baz=167,SNR=6.9						
V53A	Saluda	30.07	344	P	P	12 15 22.2	+2.2
	baz=160,SNR=5.7						
U56A	King	30.14	348	P	P	12 15 22.7	+2.1
	baz=165						
X49A	Woodville	30.14	338	P	P	12 15 22.6	+1.9
	baz=153,SNR=14						
W51A	Cleveland	30.18	341	P	P	12 15 23.2	+2.3
	baz=156,SNR=5.8						
T59A	Double "B" Far	30.28	353	P	P	12 15 23.9	+2.1
	baz=171,SNR=5.3						
TKL	Tuckaleechee C	30.33	343	P	P	12 15 23.8	+1.5
	comp=N,5.8nm,1.0s,baz=178,slow=7.3,SNR=3.1						
X48A	Hartselle	30.37	337	P	P	12 15 24.7	+2.1
	baz=152,SNR=20						
T58A	Grand View Acr	30.39	351	P	P	12 15 25.0	+2.2
	baz=169,SNR=9.4						
W50A	Signal Mountai	30.40	340	P	P	12 15 25.1	+2.2
	baz=155,SNR=11						
U55A	TA2, Sparta	30.43	347	P	P	12 15 25.8	+2.6
	baz=164						
V52A	Sevierville	30.45	343	P	P	12 15 25.8	+2.5
	baz=159						
T57A	Hurt	30.56	350	P	P	12 15 26.4	+2.1
	baz=168,SNR=6.0						
U54A	Nelsons Funny	30.62	346	P	P	12 15 27.2	+2.3
	baz=163,SNR=11						
SWET	Sewanee	30.63	339	epP	pP	12 15 53.7	-4.9
V51A	Loudon	30.64	342	eP	P	12 15 26.4	+1.4
	comp=N,28nm,1.0s						
V51A	Loudon	30.64	342	P	P	12 15 27.5	+2.5
	baz=158,SNR=8.4						
U53A	Fall Branch	30.66	345	P	P	12 15 27.3	+2.1
	baz=161,SNR=5.1						
W49A	Belvidere	30.66	338	P	P	12 15 27.2	+2.0
	baz=154						
T56A	Rocky Mt	30.73	349	P	P	12 15 27.8	+2.0
	baz=166						
X47A	Russelville	30.75	336	P	P	12 15 27.8	+1.8
	baz=150,SNR=8.8						
V50A	Pikevile	30.76	341	P	P	12 15 28.3	+2.3
	baz=156						
U52A	Thorn Hill	30.90	344	P	P	12 15 29.0	+1.7
	baz=160						
W48A	Pulaski	30.93	338	P	P	12 15 29.7	+2.2
	baz=152,SNR=13						
T55A	Pulaski	30.96	348	P	P	12 15 29.9	+2.0
	baz=165						
BLA	Blacksburg	30.98	349	P	P	12 15 30.2	+2.2
	baz=166						
S58A	Poland Farm, P	30.98	352	P	P	12 15 29.8	+1.9
	baz=170						
U51A	La Follette	31.07	343	P	P	12 15 30.7	+1.9
	baz=159						
T54A	Tazewell	31.08	347	P	P	12 15 31.0	+2.1
	baz=163,SNR=6.2						
X46A	Booneville	31.09	335	P	P	12 15 30.3	+1.3
	baz=149						
TZTN	Tazewell	31.09	344	eP	P	12 15 28.9	0.0
	comp=N,14nm,1.0s						
TZTN	Tazewell	31.09	344	P	P	12 15 30.8	+1.9
	baz=160						
V49A	McMinnville	31.12	340	P	P	12 15 31.2	+2.0
	baz=155,SNR=7.6						
T53A	Wise	31.23	345	P	P	12 15 32.4	+2.1
	baz=162						
S57A	Dark Hollow, R	31.25	351	P	P	12 15 32.7	+2.3
	baz=169,SNR=6.3						
R58B	Mineral	31.30	353	P	P	12 15 33.2	+2.4
	baz=171						
U50A	Jamestown	31.36	342	P	P	12 15 33.5	+2.2
	baz=157,SNR=7.3						
OXF	Oxford	31.41	334	P	P	12 15 33.0	+1.3
	baz=148						
HKT	Hockley	31.42	320	eP	P	12 15 33.5	+1.7
	comp=N,6.4nm,0.8s						
V48A	Smith Brothers	31.42	338	P	P	12 15 34.1	+2.2
	baz=153,SNR=20						
R59A	King George, V	31.45	354	P	P	12 15 34.7	+2.7
	baz=172						
T52A	Hallie	31.47	345	P	P	12 15 34.4	+2.1
	baz=161						
W46A	Michie	31.50	336	P	P	12 15 34.0	+1.5
	baz=150						
S55A	Lewisburg	31.54	349	P	P	12 15 35.1	+2.2
	baz=166,SNR=5.4						
T51A	Gray	31.60	343	P	P	12 15 35.7	+2.2
	baz=159,SNR=15						
R58A	Rapidan	31.65	353	P	P	12 15 36.1	+2.3
	baz=171						
S54A	Dingess, Beckl	31.73	348	P	P	12 15 36.3	+1.8
	baz=164						
U49A	Red Boiling Sp	31.75	340	P	P	12 15 36.5	+1.8
	baz=156						
V47A	Nunnelly	31.76	337	P	P	12 15 36.7	+1.9
	baz=152,SNR=34						
AZAP	Zapla	31.84	166	i P	P	12 15 34.5	-1.4
AZAP				i S	pP	12 16 08.8	-1.8
T50A	Nancy	31.91	342	P	P	12 15 38.2	+2.0
	baz=158,SNR=7.4						
R56A	Bull Pasture M	31.96	351	P	P	12 15 39.3	+2.7
	baz=168						
R55A	Marlinton	31.96	349	eP	P	12 15 39.2	+2.6
	comp=N,14nm,0.8s						
R55A	Marlinton	31.96	349	P	P	12 15 39.6	+2.9
	baz=167,SNR=5.1						
NATX	Nacogdoches	31.96	324	P	P	12 15 38.1	+1.4
	baz=136						
V46A	Holladay	31.97	337	P	P	12 15 37.8	+1.2
	baz=151						
GO02	Mina Guanaco	31.98	174	eP	P	12 15 36.4	-0.8
	comp=N,3.4nm,0.9s						
R54A	Victor	32.03	348	P	P	12 15 39.7	+2.5
	baz=165						
Z41A	Richland Creek	32.04	328	P	P	12 15 38.1	+0.8
	baz=141						
X43A	Marvell	32.09	332	P	P	12 15 39.5	+1.8
	baz=145						
S51A	Beattyville	32.13	344	P	P	12 15 40.5	+2.4
	baz=160						
WVT	Waverly	32.15	337	eP	P	12 15 39.8	+1.6
	comp=N,35nm,1.0s						
WVT	Waverly	32.15	337	P	P	12 15 39.8	+1.6
	baz=152						
T49A	Edmonton	32.21	341	P	P	12 15 40.6	+1.8
	baz=156,SNR=7.8						
Q58A	Fox Den Farm,	32.24	353	P	P	12 15 41.2	+2.2
	baz=171						
R53A	Hurricane	32.38	347	P	P	12 15 41.5	+1.2
	baz=163						
S50A	Richmond	32.39	343	P	P	12 15 42.4	+2.1
	baz=159,SNR=5.0						
Q56A	Snyder Ridge,	32.54	351	P	P	12 15 43.7	+2.0
	baz=169						
T47A	Sharon Grove	32.64	339	eP	P	12 15 42.1	-0.4
	comp=N,33nm,0.7s						
T47A	Sharon Grove	32.64	339	P	P	12 15 44.2	+1.7
	baz=154,SNR=13						
Q55A	Buckhannon	32.65	350	P	P	12 15 45.4	+2.8
	baz=167,SNR=5.6						
R51A	Hillsboro	32.75	345	P	P	12 15 45.6	+2.2
	baz=160						
S49A	Springfield	32.76	342	P	P	12 15 45.5	+2.0
	baz=157,SNR=11						
Q54A	Coxs Mills	32.77	349	P	P	12 15 46.2	+2.6
	baz=166						
P59A	Jarrettsville	32.78	355	P	P	12 15 46.3	+2.7
	baz=174						
Q53A	Leroy	32.79	348	P	P	12 15 46.7	+2.9
	baz=164,SNR=5.1						
833A	Chaparral WMA,	32.82	314	P	P	12 15 44.3	+0.2
	baz=126						
P57A	Homestead Farm	32.82	353	P	P	12 15 46.4	+2.4
	baz=171						
P60A	Greenville	32.92	356	P	P	12 15 47.6	+2.7
	baz=175						
R50A	Paris	32.93	344	eP	P	12 15 45.3	+0.3
	comp=N,27nm,0.9s						
R50A	Paris	32.93	344	P	P	12 15 47.4	+2.3
	baz=159,SNR=11						
P56A	Dayton Farm, R	32.95	352	P	P	12 15 47.6	+2.5
	baz=169						
X40A	Basin Creek Fa	33.02	329	P	P	12 15 46.6	+0.8
	baz=142,SNR=18						
Q52A	Bidwell	33.05	347	P	P	12 15 48.3	+2.3
	baz=163,SNR=6.2						
435B	Jarrell	33.10	319	P	P	12 15 47.6	+1.0
	baz=131,SNR=5.4						
MVL	Millersville	33.16	355	eP	P	12 15 47.3	+0.4
	comp=N,8.8nm,0.7s						
R49A	Shelbyville	33.19	342	P	P	12 15 48.6	+1.4
	baz=158						
MCWV	Mont Chateau	33.25	350	P	P	12 15 50.2	+2.4
	baz=168						
W41B	Gary Mavity, V	33.27	331	P	P	12 15 49.1	+1.1
	baz=144,SNR=7.0						
O58A	Lewisberry	33.33	355	P	P	12 15 50.5	+2.1
	baz=173						
Q50A	Georgetown	33.36	344	P	P	12 15 50.6	+1.8
	baz=160,SNR=8.9						
Q51A	Peebles	33.37	345	P	P	12 15 50.0	+1.2
	baz=161,SNR=7.4						
BDFB	Brasilia	33.38	132	P	P	12 15 49.9	+0.6
	comp=N,7.4nm,0.8s,baz=314,slow=8.5,SNR=6.6						
O60A	Telford	33.41	357	P	P	12 15 51.0	+1.8
	baz=176						
MIAR	Mount Ida	33.45	328	P	P	12 15 49.9	+0.4
	baz=141,SNR=9.8						
O59A	Robesonia	33.46	356	P	P	12 15 51.5	+1.9
	baz=174						
WCI	Wyandotte Cave	33.48	341	eP	P	12 15 52.0	+2.2
	comp=N,35nm,0.8s						
WCI	Wyandotte Cave	33.48	341	P	P	12 15 51.5	+1.8
	baz=156						
O57A	Amberson	33.49	354	P	P	12 15 52.1	+2.2
	baz=172						
O56A	Blue Knob Stat	33.66	352	eP	P	12 15 52.5	+1.1
	comp=N,12nm,0.8s						
O56A	Blue Knob Stat	33.66	352	P	P	12 15 53.5	+2.1
	baz=170						
P52A	Corning	33.67	347	P	P	12 15 53.0	+1.6
	baz=164,SNR=7.8						
LUPA	Lehigh Univers	33.69	357	eP	P	12 15 51.7	+0.1
	comp=N,4.8nm,0.9s						
O55A	Ligonier	33.70	351	P	P	12 15 54.4	+2.7
	baz=169						
P51A	Williamsport	33.73	346	P	P	12 15 53.9	+2.0
	baz=162						
Q49A	Aurora	33.77	343	P	P	12 15 54.2	+2.0
	baz=158						
WHTX	Lake Whitney,	33.82	321	P	P	12 15 53.9	+1.1
	baz=133						
O54A	Avella	33.85	350	P	P	12 15 54.8	+1.8
	baz=167						
SSPA	Standing Stone	33.94	353	eP	P	12 15 54.5	+0.7
	comp=N,6.3nm,0.7s						
SSPA	Standing Stone	33.94	353	P	P	12 15 55.7	+2.0
	baz=171						
Q48A	North Vernon	33.94	342	P	P	12 15 55.3	+1.6
	baz=157						
N60A	Cedar Hill Far	33.95	357	P	P	12 15 56.4	+2.6
	baz=176,SNR=5.3						
N57A	Milroy	34.02	354	P	P	12 15 56.3	+1.9
	baz=172						
N59A	State Game Lan	34.03	356	P	P	12 15 57.4	+2.9
	baz=175,SNR=5.9						
P50A	Jamestown	34.04	345	P	P	12 15 56.5	+2.0
	baz=161,SNR=6.3						
PAL	Palisades	34.04	359	eP	P	12 15 54.9	+0.3
	comp=N,35nm,0.7s						
PAL	Palisades	34.04	359	P	P	12 15 56.5	+2.0
	baz=178						
W39A	Magazine	34.06	329	P	P	12 15 56.0	+1.2
	baz=141,SNR=33						
S44A	Carbondale	34.06	337	P	P	12 15 56.2	+1.4
	baz=150,SNR=17						
O52A	Adamsville	34.07	348	eP	P	12 15 55.6	+0.8
	comp=N,28nm,0.7s						
O52A	Adamsville	34.07	348	P	P	12 15 57.1	+2.3
	baz=164,SNR=6.0						
O53A	New Philadelph	34.07	349	P	P	12 15 57.5	+2.6
	baz=165						
N55A	Marion Center	34.22	352	eP	P	12 15 58.2	+2.0
	comp=N,13nm,0.8s						
N55A	Marion Center	34.22	352	P	P	12 15 58.1	+2.0
	baz=169						
O51A	Pataskala	34.26	347	P	P	12 15 58.3	+1.8
	baz=163						
N56A	West Decatur	34.27	353	P	P	12 15 58.8	+2.2
	baz=171						
M61A	Granite Spring	34.34	359	P	P	12 15 59.4	+2.2
	baz=179						
JCT	Junction City	34.39	317	P	P	12 15 57.9	+0.1

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      baz=128
ACSO  Alum Creek Sta   34.43 347  P     P    12 16 00.2 +2.3
      baz=162
O50A  Cable            34.50 346  P     P    12 16 00.4 +1.8
      baz=161,SNR=11
U40A  Yellville        34.51 331  P     P    12 15 59.9 +1.1
      baz=144,SNR=82
M58A  Price's Panora   34.53 356  P     P    12 16 01.3 +2.4
      baz=174
N53A  Lisbon           34.54 350  P     P    12 16 01.1 +2.2
      baz=166
N54A  Moraine State    34.55 351  P     P    12 16 01.1 +2.2
      baz=168
M59A  Waymart          34.63 357  P     P    12 16 02.1 +2.4
      baz=176,SNR=5.8
N52A  McGinn's Farm,   34.71 348  P     P    12 16 02.3 +2.0
      baz=165
O49A  Covington        34.72 345  P     P    12 16 02.1 +1.6
      baz=160
M56A  Emporium         34.81 353  P     P    12 16 03.3 +2.1
      baz=171,SNR=8.1
M55A  Ridgway          34.87 353  P     P    12 16 03.9 +2.2
      baz=170
N50A  Nevada           34.98 347  P     P    12 16 04.6 +2.0
      baz=162,SNR=6.1
M54A  Oil Creek Stat   35.03 351  P     P    12 16 05.5 +2.4
      baz=168
P46A  Rosedale         35.04 341  P     P    12 16 04.9 +1.7
      baz=155,SNR=21
L58A  Harry Jones Me   35.16 356  P     P    12 16 06.4 +2.2
      baz=175,SNR=5.9
CCM   Cathedral Cave   35.19 335  eP    P    12 16 05.6 +1.1
      comp=N,77nm,0.7s
CCM   Cathedral Cave   35.19 335  P     P    12 16 05.6 +1.1
      baz=148
BINY  Binghamton       35.32 356  eP    P    12 16 06.0 +0.4
      comp=N,20nm,0.8s
BINY  Binghamton       35.32 356  P     P    12 16 08.0 +2.4
      baz=175
N49A  Columbus Grove   35.37 345  P     P    12 16 07.4 +1.4
      baz=161
L55A  Hinsdale         35.53 353  P     P    12 16 09.3 +1.9
      baz=171
N48A  Decatur          35.53 344  P     P    12 16 08.9 +1.5
      baz=159
M50A  Fremont          35.56 347  P     P    12 16 09.2 +1.6
      baz=163
HRV   Adam Dziewonsk   35.56   2  eP    P    12 16 08.2 +0.7
      comp=N,12nm,0.9s
HRV   Adam Dziewonsk   35.56   2  P     P    12 16 09.9 +2.3
      baz=182
ABTX  Abilene, Hawle   35.63 320  eP    P    12 16 09.4 +1.0
ABTX  Abilene, Hawle   35.63 320  P     P    12 16 09.3 +1.0
      baz=130,SNR=14
TUL1  Leonard          35.66 327  P     P    12 16 08.8 +0.3
      baz=139,SNR=7.9
SFIN  Lafayette        35.69 342  P     P    12 16 10.0 +1.2
      baz=156,SNR=12
N47A  Urbana           35.73 344  P     P    12 16 10.3 +1.2
      baz=158,SNR=5.7
M49A  Liberty Center   35.84 346  P     P    12 16 12.0 +2.0
      baz=161
P43A  Skaggs, Pawnee   35.86 338  P     P    12 16 11.0 +0.8
      baz=151,SNR=11
K54A  Basiliko Farm,   35.98 353  P     P    12 16 13.1 +1.8
      baz=170
K55A  Perry            36.03 354  P     P    12 16 13.4 +1.8
      baz=171
M48A  Edgerton         36.04 345  P     P    12 16 13.0 +1.3
      baz=160
L50A  Kingsville       36.12 348  P     P    12 16 14.7 +2.3
      baz=163
CPUP  Villa Florida    36.33 156  P     P    12 16 10.7  -3.7
      comp=N,3.1nm,0.9s,baz=334,slow=8.7,SNR=3.9
CPUP  Villa Florida    36.33 156  eP    P    12 16 10.7  -3.7
      comp=N,6.3nm,1.1s
K52A  Tillsonburg      36.44 351  P     P    12 16 16.5 +1.4
      baz=167
TXAR  Lajitas Array    36.49 312  P     P    12 16 16.7 +0.9
      comp=N,15nm,0.6s,baz=127,slow=9.1,SNR=268
TXAR                              PcP   PcP  12 18 38.1 +1.8
      comp=N,2.9nm,0.6s,baz=132,slow=6.0,SNR=9.2
TXAR                              ScP   ScP  12 22 09.3 +1.2
      comp=N,0.5nm,0.8s,baz=112,slow=4.0,SNR=3.8
TXAR                              LR    LR   12 34 20.3
      comp=N,35nm,19.4s,baz=0.0,slow=41
MEDO  Medina           36.50 353  P     P    12 16 17.6 +2.0
      baz=171
WMOK  Wichita Mounta   36.50 323  P     P    12 16 15.7  -0.1
      baz=134,SNR=35
ACLC  CERRO LA CRUZ    36.52 171  i P   P    12 16 11.5  -4.6
ACLC                              i S   sP   12 17 12.3 +2.3
HDIL  Hopedale         36.59 339  P     P    12 16 16.8 +0.4
      baz=152,SNR=5.4
TYNO  Tyneside         36.62 352  P     P    12 16 17.8 +1.2
      baz=169
L47A  Sherwood         36.62 345  P     P    12 16 18.0 +1.3
      baz=160
J54A  Appleton         36.63 353  P     P    12 16 18.9 +2.2
      baz=171
K50A  Casco            36.78 348  P     P    12 16 20.0 +2.1
      baz=164
J52A  Paris            36.85 351  P     P    12 16 20.7 +2.1
      baz=168
L46A  Eue Claire       36.95 344  P     P    12 16 21.1 +1.6
      baz=158
PECO  Prince Edward    37.12 355  eP    P    12 16 22.1 +1.3
      comp=N,17nm,1.0s
PECO  Prince Edward    37.12 355  P     P    12 16 22.7 +1.9
      baz=173
K48A  Perry            37.13 346  P     P    12 16 22.2 +1.2
      baz=162,SNR=5.8
ACTO  Acton            37.15 352  P     P    12 16 22.6 +1.5
      baz=168
K47A  Vermontville     37.22 345  P     P    12 16 23.0 +1.3
      baz=160
DRWO  Darlington Wes   37.23 353  P     P    12 16 23.6 +1.9
      baz=171
DRCO  St. Marys Ceme   37.23 353  P     P    12 16 23.7 +2.0
      baz=171
WLVO  Wesleyville      37.24 354  P     P    12 16 24.0 +2.2
      baz=171
LBNH  Lisbon           37.28   1  eP    P    12 16 24.4 +2.2
      comp=N,38nm,0.8s
N41A  Harden Midland   37.29 337  P     P    12 16 22.6 +0.3
      baz=150,SNR=5.2
PKRO  Pickering        37.36 353  P     P    12 16 25.2 +2.4
      baz=170
K46A  Dorr             37.44 345  P     P    12 16 24.9 +1.3
      baz=159
J49A  Marlette         37.45 348  P     P    12 16 25.1 +1.5
      baz=163,SNR=5.6
I55A  Frankford        37.46 355  P     P    12 16 25.2 +1.5
      baz=172
I51A  Listowel         37.49 351  P     P    12 16 25.2 +1.3
      baz=167,SNR=6.3
J48A  Bridge Port      37.53 347  P     P    12 16 25.4 +1.2
      baz=162
APLL  PUNTA DE LOS L   37.54 171  i P   P    12 16 22.2  -2.3
APLL                              IAML       12 16 23.2
      comp=Z,29nm,0.9s
LONY  Lake Ozonia      37.67 358  eP    P    12 16 26.7 +1.2
      comp=Z,5.3nm,0.8s
LONY  Lake Ozonia      37.67 358  P     P    12 16 27.1 +1.7
      baz=177
J47A  Sunmer           37.71 346  P     P    12 16 26.9 +1.1
      baz=161,SNR=6.1
H56A  Elgin            37.72 356  P     P    12 16 27.6 +1.8
      baz=175,SNR=6.2
N40A  Mertquake, Sal   37.73 337  P     P    12 16 26.3 +0.4
      baz=149
H55A  Tweed            37.75 355  P     P    12 16 27.6 +1.5
      baz=173,SNR=9.8
DELO  Deloro Mine      37.75 355  P     P    12 16 26.9 +0.8
      baz=172
M41A  Milan            37.76 338  P     P    12 16 26.2   0.0
      baz=151
BASO  Ashfield         37.80 350  P     P    12 16 28.5 +2.0
      baz=166
I49A  Point Hope       37.94 349  eP    P    12 16 27.9 +0.2
      comp=Z,54nm,0.7s
I49A  Point Hope       37.94 349  P     P    12 16 29.0 +1.3
      baz=164,SNR=5.0
L42A  Oliver, Polo     38.00 340  P     P    12 16 28.3 +0.1
      baz=153
CLWO  Collingwood      38.01 352  P     P    12 16 30.3 +2.1
      baz=168,SNR=6.8
EMMW  East Machias     38.05   7  eP    P    12 16 30.9 +2.3
      comp=Z,67nm,0.7s
H52A  Wyevale          38.14 352  P     P    12 16 30.8 +1.5
      baz=169
K43A  Burlington       38.19 342  P     P    12 16 30.3 +0.4
      baz=155
PLVO  Plevna           38.23 355  P     P    12 16 31.9 +1.8
      baz=174,SNR=6.2
J45A  Montague         38.30 344  P     P    12 16 32.0 +1.2
      baz=158
I48A  Sherman Twp      38.36 348  P     P    12 16 32.3 +1.1
      baz=163
AMTX  Amarillo         38.38 321  P     P    12 16 32.7 +1.0
      baz=130
G55A  Calabogie        38.41 356  P     P    12 16 33.3 +1.7
      baz=174,SNR=6.8
PKME  Peaks-Kenny Pk   38.43   4  eP    P    12 16 33.6 +1.8
      comp=Z,29nm,0.9s
PKME  Peaks-Kenny Pk   38.43   4  P     P    12 16 33.2 +1.4
      baz=186
G53A  Haliburton       38.45 354  P     P    12 16 34.0 +2.0
      baz=171,SNR=8.5
CFA   Coronel Fontan   38.49 173  P     P    12 16 31.2  -1.3
      comp=Z,2.5nm,0.5s,baz=334,slow=9.1,SNR=4.8
KSU1  Kansas State U   38.51 330  P     P    12 16 32.3  -0.2
      baz=140,SNR=7.6
MSTX  Muleshoe         38.51 319  P     P    12 16 33.2 +0.4
      baz=128,SNR=11
GGN   Saint George     38.53   7  eP    P    12 16 35.0 +2.4
      comp=Z,69nm,0.8s
L40A  Anamosa          38.60 338  P     P    12 16 33.4 +0.1
      baz=150,SNR=12
CPRX  Cap Rock         38.68 317  eP    P    12 16 33.6  -0.7
H48A  Harrisville      38.77 348  P     P    12 16 35.5 +0.9
      baz=164,SNR=5.4
BUKO  Buck Lake        38.86 353  P     P    12 16 36.6 +1.3
      baz=170,SNR=5.7
PEMO  Pembroke         38.87 355  P     P    12 16 36.8 +1.4
      baz=173,SNR=7.8
KLBO  Killbear Provi   38.88 352  P     P    12 16 37.0 +1.5
      baz=169
TOBO  Tobermory, Bru   38.95 350  P     P    12 16 37.6 +1.4
      baz=166
JFWS  Jewell Farm      39.01 340  P     P    12 16 37.2 +0.6
      baz=152,SNR=20
F52A  Sundridge        39.20 353  P     P    12 16 39.6 +1.4
      baz=170
ALGO  Algonquin Park   39.22 355  P     P    12 16 40.0 +1.7
      baz=172,SNR=14
SCIA  State Center     39.24 336  P     P    12 16 39.3 +0.7
      baz=147,SNR=6.2
TRQ   Mont Tremblant   39.27 358  eP    P    12 16 39.8 +0.9
H45A  Beulah           39.32 345  P     P    12 16 40.2 +1.0
      baz=159
G47A  Hillman          39.33 348  P     P    12 16 40.9 +1.6
      baz=163
F51A  Arnstein         39.40 352  P     P    12 16 41.5 +1.6
      baz=169
I42A  Draeger Farm,    39.45 342  P     P    12 16 41.1 +0.8
      baz=155,SNR=9.4
LMN   Caledonia Moun   39.53   9  eP    P    12 16 42.5 +1.5
      comp=Z,57nm,0.8s
F49A  Sandfield        39.56 350  P     P    12 16 42.3 +1.1
      baz=166,SNR=6.2
E53A  Dumoine, Ponti   39.60 355  P     P    12 16 43.2 +1.6
      baz=173
E52A  Mattawa          39.61 354  P     P    12 16 42.7 +1.2
      baz=171,SNR=6.3
G45A  Suttons Bay      39.61 346  P     P    12 16 43.1 +1.5
      baz=160
E54A  Lac Daplat, Po   39.62 356  P     P    12 16 42.7 +1.1
      baz=174,SNR=6.0
H43A  Windswept, Lux   39.63 343  P     P    12 16 42.7 +0.9
      baz=157
F48A  Evansville       39.72 350  P     P    12 16 43.6 +1.1
      baz=165,SNR=9.9
GBN   Guysborough      39.73  13  eP    P    12 16 43.4 +0.9
      comp=Z,12nm,0.6s
I41A  Arkdale          39.90 341  P     P    12 16 44.7 +0.7
      baz=153,SNR=9.3
PQI   Presque Isle     39.94   5  eP    P    12 16 46.4 +2.2
      comp=Z,41nm,0.7s
E51A  G1948 Merrick    39.95 353  P     P    12 16 45.6 +1.2
      baz=170,SNR=6.6
E50A  Wahnapitae       40.00 352  P     P    12 16 46.1 +1.3
      baz=168
D52A  ZEK Kipawa Sen   40.27 354  P     P    12 16 49.1 +2.1
      baz=172
E48A  Lockeyer         40.28 350  P     P    12 16 48.6 +1.6
      baz=166,SNR=21
D54A  Lac Fusel, La    40.30 356  P     P    12 16 49.2 +1.9
      baz=174,SNR=13
D53A  Lac Vacive, Po   40.30 355  P     P    12 16 48.6 +1.3
      baz=173,SNR=7.0
E47A  Iron Bridge      40.45 349  P     P    12 16 49.8 +1.3
      baz=164,SNR=7.2
E46A  Sault Ste Mari   40.57 348  P     P    12 16 50.7 +1.3
      baz=163,SNR=9.9
BATG  Bathurst New B   40.75   7  eP    P    12 16 52.6 +1.7
      comp=Z,64nm,1.0s
D49A  Beulah Townshi   40.92 351  P     P    12 16 53.7 +1.3
      baz=167,SNR=9.5
F42A  Maple Grove Fa   40.92 344  P     P    12 16 53.3 +0.9
      baz=157
D47A  Chapleau         41.00 350  P     P    12 16 54.3 +1.3
      baz=165
D46A  Sault St. Mari   41.02 349  P     P    12 16 54.1 +1.0
      baz=163
BGNE  Belgrade         41.03 331  eP    P    12 16 53.8 +0.4
      comp=Z,33nm,0.4s
BGNE  Belgrade         41.03 331  P     P    12 16 53.4   0.0
      baz=140
G40A  Rib Lake         41.09 342  P     P    12 16 54.4 +0.6
      baz=154,SNR=10
121A  Cookes Peak, D   41.17 313  P     P    12 16 56.6 +1.7
      baz=121,SNR=16
E43A  Lone Tree Farm   41.19 345  P     P    12 16 54.9 +0.3
      baz=159,SNR=5.6
G39A  Holcombe         41.41 341  P     P    12 16 57.1 +0.7
      baz=152,SNR=8.1
COWI  Conover          41.52 343  eP    P    12 16 58.0 +0.8
      comp=Z,24nm,0.9s
T25A  Trinidad         41.52 321  P     P    12 16 58.4 +0.7
      baz=129,SNR=9.8
ANMO  Albuquerque      41.54 317  P     P    12 16 59.2 +1.3
      comp=Z,5.6nm,0.6s,baz=97,slow=7.0,SNR=16
ANMO  Albuquerque      41.54 317  eP    P    12 16 59.3 +1.5
      comp=Z,6.1nm,0.7s
ANMO  Albuquerque      41.54 317  P     P    12 16 59.3 +1.5
      baz=125
KSCO  Kaye Shedlock'   41.67 325  P     P    12 16 59.7 +0.9
      baz=133
SPMN  Marine on St.    41.92 339  P     P    12 17 01.8 +1.3
      baz=150
ECSD  EROS Data Cent   42.16 334  P     P    12 17 02.4  -0.1
      baz=144,SNR=15
LSQQ  Lebel-sur-Quev   42.22 356  P     P    12 17 03.9 +1.1
      baz=174
D41A  Chassel          42.23 344  eP    P    12 17 04.2 +1.2
      comp=Z,13nm,0.6s
D41A  Chassel          42.23 344  P     P    12 17 04.0 +1.0
      baz=157
SDCO  Great Sand Dun   42.57 321  P     P    12 17 08.1 +1.8
      baz=128,SNR=53
E38A  The Farm, Brul   42.71 341  P     P    12 17 07.3 +0.5
      baz=152
CHGQ  Chibougamau      42.95 359  P     P    12 17 10.1 +1.3
      baz=178,SNR=5.8
MATQ  Matagami         42.96 356  P     P    12 17 10.2 +1.3
      baz=173,SNR=7.2
C40A  Isle Royale Na   43.18 344  P     P    12 17 11.6 +1.0
      baz=156,SNR=8.0
TUC   Tucson           43.28 311  eP    P    12 17 12.7 +0.9
      comp=Z,17nm,0.8s
TUC   Tucson           43.28 311  P     P    12 17 13.2 +1.4
      baz=118
S22A  4UR Ranch, Cre   43.41 320  P     P    12 17 14.8 +1.8
      baz=127,SNR=20
SUSD  Miller           43.75 333  P     P    12 17 15.6 +0.3
      baz=141,SNR=23
EYMN  Ely              43.88 342  eP    P    12 17 16.9 +0.6
      comp=Z,42nm,0.7s
EYMN  Ely              43.88 342  P     P    12 17 16.9 +0.6
      baz=153,SNR=24
W18A  Petrified Fore   43.89 315  P     P    12 17 18.5 +1.7
      baz=121,SNR=18
MVCO  Mesa Verde       44.18 318  P     P    12 17 20.4 +1.3
      baz=124,SNR=12
214A  Organ Pipe Nat   44.66 309  P     P    12 17 24.3 +1.5
      baz=116,SNR=13
N23A  Red Feather La   44.82 324  P     P    12 17 25.7 +1.5
      baz=130,SNR=12
WUAZ  Wupatki          45.25 315  P     P    12 17 29.2 +1.7
      baz=120,SNR=60
AGMN  Agassiz Nation   45.64 339  P     P    12 17 30.8 +0.6
      baz=148,SNR=15
O20A  White River Ci   45.72 322  P     P    12 17 32.8 +1.6
      baz=127,SNR=13
RSSD  Black Hills      45.96 329  eP    P    12 17 34.1 +1.0
      comp=Z,8.1nm,0.8s
RSSD  Black Hills      45.96 329  P     P    12 17 33.8 +0.8
      baz=135
K22A  Casper           46.29 326  P     P    12 17 36.8 +1.2
      baz=131,SNR=6.2
GLA   Glamis           46.66 310  P     P    12 17 38.4  -0.1
      baz=115,SNR=10
PDMCI Parker Dam,Lak   46.69 312  P     P    12 17 39.4 +0.8
      baz=116
MDND  Maddock          46.71 336  P     P    12 17 39.2 +0.7
      baz=142,SNR=14
Y12C  Blythe           46.73 311  P     P    12 17 39.8 +0.9
      baz=116
ULM   Lac du Bonnet    47.30 340  P     P    12 17 43.2 +0.2
      comp=Z,36nm,0.7s,baz=151,slow=7.9,SNR=37
ULM                               LR    LR   12 38 26.7
      comp=Z,55nm,19.9s,baz=174,slow=37
IRM   Iron Mountain    47.37 311  P     P    12 17 45.3 +1.4
      baz=115,SNR=12
PLCA  Paso Flores      47.38 177  P     P    12 17 42.5  -1.4
      comp=Z,3.1nm,0.8s,baz=354,slow=10,SNR=5.5
PLCA                              ScP   ScP  12 22 49.6  -1.5
      comp=Z,1.7nm,0.9s,baz=354,slow=6.8,SNR=3.5
PLCA  Paso Flores      47.38 177  eP    P    12 17 42.8  -1.1
      comp=Z,3.4nm,0.9s
PLCA                              eScP  ScP  12 22 49.6  -1.5
BC3   Big Chuckawall   47.39 310  P     P    12 17 45.4 +1.2
      baz=115
IKP   In-Ko-Pah, Jac   47.49 309  P     P    12 17 46.2 +1.2
      baz=113
MONP2 Monument Peak    47.83 309  P     P    12 17 48.8 +1.1
      baz=113,SNR=6.7
BELC  Belle Mtn. Jos   47.95 310  P     P    12 17 49.6 +1.1
      baz=114,SNR=10.0
GMRC  Granite Mounta   48.02 311  P     P    12 17 50.3 +1.3
      baz=116,SNR=5.1
BW06  Boulder Array    48.10 324  P     P    12 17 50.4 +0.7
      baz=128,SNR=17
PD31  Pinedale Array   48.10 324  eScP  ScP  12 22 55.4 +0.8
PDAR  Pinedale Array   48.10 324  P     P    12 17 50.4 +0.7
      comp=Z,7.4nm,0.6s,baz=135,slow=9.3,SNR=62
PDAR                              PcP   PcP  12 19 15.4 +0.6
      comp=Z,1.2nm,0.6s,baz=120,slow=5.3,SNR=2.9
PDAR                              ScP   ScP  12 22 55.4 +0.8
      comp=Z,0.9nm,0.8s,baz=123,slow=5.5,SNR=4.9
SCHQ  Schefferville    48.13   5  P     P    12 17 51.0 +1.7
      comp=Z,69nm,0.7s,baz=185,slow=5.6,SNR=40
SCHQ                              LR    LR   12 37 34.5
      comp=Z,43nm,20.7s,baz=268,slow=35
SCHQ  Schefferville    48.13   5  eP    P    12 17 51.1 +1.7
      comp=Z,76nm,0.7s
PFO   Pinyon Flats O   48.14 310  P     P    12 17 51.0 +1.0
      baz=114
TUQ   Turquoise Moun   48.50 312  P     P    12 17 53.9 +1.2
      baz=116,SNR=15
HEC   Hector,Ludlow    48.55 311  P     P    12 17 54.6 +1.5
      baz=115,SNR=11
DUG   Dugway, Tooele   48.64 319  P     P    12 17 55.2 +1.5
      baz=122,SNR=18
MURC  Murrieta         48.70 309  P     P    12 17 55.5 +1.3
      baz=113
BBRC  Big Bear Solar   48.75 310  P     P    12 17 56.5 +1.8
      baz=114,SNR=6.8
LAO   LASA Array       48.85 330  P     P    12 17 55.8 +0.6
      baz=134,SNR=6.6
SHOC  Shoshone, Teco   48.96 313  P     P    12 17 57.2 +1.1
      baz=116,SNR=13
GSC   Goldstone, Bar   49.09 312  P     P    12 17 58.5 +1.3
      baz=115,SNR=23
DGMT  Dagmar           49.17 333  P     P    12 17 59.0 +1.6
      baz=137,SNR=37
BFSC  Mount Baldy Ra   49.30 310  P     P    12 17 59.0 +0.1
      baz=113
MOOW  Moose Ponds      49.38 324  eP    P    12 18 00.2 +0.7
      comp=Z,15nm,0.8s
TPNV  Topopah Spring   49.40 314  eP    P    12 18 01.3 +1.7
      comp=Z,16nm,0.9s
TPNV  Topopah Spring   49.40 314  P     P    12 18 01.2 +1.6
      baz=117,SNR=32
RLMT  Red Lodge        49.40 327  P     P    12 18 00.4 +0.9
      baz=130,SNR=10
HVU   Hansel Valley    49.47 321  eP    P    12 18 01.0 +0.9
      comp=Z,9.7nm,0.7s
FXWY  Fox Creek        49.48 324  eP    P    12 18 01.1 +0.9
      comp=Z,8.3nm,0.8s
SCI2  San Clemente I   49.51 308  P     P    12 18 01.4 +1.1
      baz=112
FLWY  Flagg Ranch      49.56 325  eP    P    12 18 02.0 +1.2
      comp=Z,7.2nm,0.9s
R11A  Troy Canyon, C   49.57 316  P     P    12 18 02.3 +1.4
      baz=118,SNR=35
IMW   Indian Meadow    49.59 324  eP    P    12 18 01.9 +0.9
      comp=Z,17nm,0.6s
FURC  Furnace Creek,   49.63 313  P     P    12 18 02.8 +1.7
      baz=116,SNR=7.5
H17A  Grant Village    49.68 325  P     P    12 18 03.7 +2.0
      baz=128,SNR=7.0
EDW2  Edwards Air Fo   49.81 311  P     P    12 18 03.6 +1.0
      baz=114,SNR=7.5
LRMC  Laurel Mtn Rad   49.82 311  P     P    12 18 03.9 +1.2
      baz=114,SNR=8.4
MPMC  Manual Prospec   49.91 312  P     P    12 18 04.3 +0.8
      baz=115,SNR=8.2
GRAC  Grapevine Rang   50.22 313  P     P    12 18 07.3 +1.6
      baz=116
ISA   Isabella, Lake   50.48 311  P     P    12 18 08.9 +1.3
      baz=114
CWC   Cottonwood Cre   50.51 312  P     P    12 18 09.0 +1.1
      baz=115
ARVC  Arvin            50.54 310  P     P    12 18 09.4 +1.4
      baz=113
SCZ2  Santa Cruz Isl   50.73 309  P     P    12 18 10.6 +1.1
      baz=112
TIN   Tinemaha, Big    50.87 313  P     P    12 18 12.3 +1.7
      baz=115
VES   Vestal, Richgr   51.01 311  P     P    12 18 13.2 +1.7
      baz=113,SNR=7.5
PKM   Mcpherson Peak   51.20 310  P     P    12 18 14.0 +0.9
      baz=112
HLID  Hailey           51.46 322  P     P    12 18 16.1 +1.1
      baz=123,SNR=33
SMMC  Simmler          51.49 310  P     P    12 18 16.7 +1.6
      baz=112,SNR=5.4
NV01  Mina Array Sit   51.51 315  ePcP  PcP  12 19 28.9 +1.4
NVAR  Mina Array Bea   51.51 315  P     P    12 18 16.8 +1.3
      comp=Z,7.7nm,0.7s,baz=124,slow=7.2,SNR=78
NVAR                              PcP   PcP  12 19 28.9 +1.4
      comp=Z,2.4nm,0.6s,baz=129,slow=5.0,SNR=6.3
NVAR                              LR    LR   12 44 20.6
      comp=Z,34nm,19.0s,baz=168,slow=41
EGMT  Eagleton         51.53 329  P     P    12 18 16.2 +1.0
      baz=131,SNR=8.3
MSO   Missoula         53.03 326  P     P    12 18 27.3 +0.9
      baz=126,SNR=7.9
FFC   Flin Flon        53.10 339  eP    P    12 18 27.0 +0.4
      comp=Z,77nm,0.8s
O03E  Paynes Creek     54.76 315  P     P    12 18 39.0   0.0
      baz=114,SNR=10
M04C  Macdoel          55.40 317  P     P    12 18 44.4 +0.7
      baz=115,SNR=13
O02D  Mt. Diablo Mer   55.40 315  P     P    12 18 43.1  -0.5
      baz=113,SNR=9.5
NEW   Newport          55.62 326  P     P    12 18 45.3 +0.3
      baz=123,SNR=6.6
J05D  Fort Rock, OR    55.64 319  P     P    12 18 46.5 +1.1
      baz=116,SNR=23
L04D  Klamath Falls    55.89 317  P     P    12 18 47.8 +0.6
      baz=115,SNR=5.6
M02C  Callahan         55.93 316  P     P    12 18 47.5 +0.1
      baz=114
I05D  Terrebonne, OR   56.18 320  P     P    12 18 50.5 +1.4
      baz=117
J04D  Umpqua Nationa   56.20 318  P     P    12 18 50.5 +1.1
      baz=116,SNR=18
G05D  Wamic, OR        56.58 321  P     P    12 18 53.7 +1.9
      baz=118
I04A  Tendick Farm,    56.63 319  P     P    12 18 52.7 +0.4
      baz=116
```

L02E	Cave Junction	56.75	317	P	P	12 18 53.4	+0.3
	baz=114						
K02D	Willamette Mer	57.01	317	P	P	12 18 55.6	+0.6
	baz=114						
J01E	Myrtle Point	57.37	318	P	P	12 18 58.7	+1.3
	baz=114						
I02D	Swisshome	57.70	319	P	P	12 19 01.1	+1.4
	baz=115						
G03D	McMinnville, O	57.80	320	P	P	12 19 01.6	+1.3
	baz=116						
E04D	Cinebar	57.96	322	P	P	12 19 02.1	+0.7
	baz=117						
D04E	Lakebay	58.37	322	P	P	12 19 05.4	+1.2
	baz=117						
B05A	Bryant	58.47	324	P	P	12 19 04.6	-0.4
	baz=118						
D03D	Eldon	58.72	323	P	P	12 19 07.3	+0.6
	baz=117						
YKA	Yellowknife Ar	63.27	340	P	P	12 19 37.4	+0.3
	comp=Z,20nm,0.7s,baz=132,slow=6.7,SNR=88						
YKW3	Yellowknife Ar	63.32	340	*e*P	P	12 19 38.0	+0.6
	comp=Z,25nm,0.7s						
ILULI	Ilulissat	63.96	9	*i* P	P	12 19 41.0	-0.4
TIC	Toumodi	67.53	86	*e*P	P	12 20 04.3	-1.1
LIC	Lamto	67.56	86	*e*P	P	12 20 04.5	-1.1
	comp=Z,123nm,1.9s						
DBIC	Dimbokro	67.69	86	P	P	12 20 05.2	-1.2
	comp=Z,7.8nm,0.8s,baz=247,slow=2.8,SNR=12						
DBIC				pP	pP	12 20 45.7	+0.4
	comp=Z,7.6nm,0.8s,baz=238,slow=4.6,SNR=2.9						
DBIC	Dimbokro	67.69	86	*e*P	P	12 20 05.2	-1.2
	comp=Z,8.8nm,0.8s						
KIC	Kosan Boka	67.83	86	*e*P	P	12 20 06.1	-1.2
	comp=Z,38nm,0.9s						
ESDC	Sonseca Array	69.61	50	P	P	12 20 18.0	0.0
	comp=Z,0.2nm,0.3s,baz=225,slow=6.1,SNR=4.1						
HYT	Haines Junctio	71.76	332	*e*P	P	12 20 31.9	+1.3
	comp=Z,6.8nm,1.1s						
INK	Inuvik	73.04	340	*e*P	P	12 20 38.8	+0.9
	comp=Z,9.3nm,0.6s						
EPYK	Eagle Plains	73.40	338	P	P	12 20 40.8	+0.8
	baz=112,SNR=6.4						
TOA1	Torodi Ar. Sit	73.69	78	*e*P	P	12 20 41.3	-1.4
TOA1				*e*pP	pP	12 21 22.4	-0.1
TORD	Torodi Ar. Bea	73.69	78	P	P	12 20 41.3	-1.4
	comp=Z,1.1nm,0.8s,baz=260,slow=5.2,SNR=4.2						
TORD				pP	pP	12 21 22.4	-0.1
	comp=Z,0.8nm,0.7s,baz=291,slow=5.6,SNR=3.1						
DAG	Danmarks Havn	75.64	11⇑	*i*P	P	12 20 52.8	+0.1
	comp=Z,15nm,0.8s						
HDA	Harding Lake	76.93	335	P	P	12 21 00.7	+0.4
	baz=102						
ILAR	Eielson Array	76.98	335	P	P	12 21 01.1	+0.6
	comp=Z,3.0nm,0.7s,baz=112,slow=4.6,SNR=37						
ILAR				pP	pP	12 21 39.2	-0.5
	comp=Z,0.4nm,0.6s,baz=182,slow=31,SNR=2.3						
ILAR				PP	PP	12 23 56.2	+0.5
	comp=Z,0.7nm,0.7s,baz=78,slow=7.3,SNR=4.3						
CCB	Clear Creek Bu	77.34	335	*e*P	P	12 21 03.4	+0.9
	comp=Z,3.0nm,0.7s						
PPT	Papeete	79.30	251	P	P	12 21 14.6	+0.5
	comp=Z,122nm,1.1s,baz=70,slow=18,SNR=2.5						
KEST	Kesra	79.91	55	P	P	12 21 16.5	-0.8
	comp=Z,1.2nm,0.6s,baz=265,slow=11,SNR=2.4						
NC204	NORSAR Array S	81.09	29	*e*P	P	12 21 23.8	+0.8
	comp=Z,15nm,1.0s						
NAO01	NORSAR Array S	81.14	30	*e*P	P	12 21 24.1	+0.9
	comp=Z,12nm,0.9s						
NB2	NORSAR Subarra	81.30	29	P	P	12 21 24.6	+0.5
	comp=Z,5.5nm,0.8s,baz=268,slow=5.6						
NOA	NORSAR Array B	81.30	29	P	P	12 21 24.6	+0.5
	comp=Z,2.6nm,0.6s,baz=267,slow=5.3,SNR=22						
NC405	NORSAR Array S	81.55	29	*e*P	P	12 21 26.2	+0.9
	comp=Z,14nm,0.9s						
GERES	GERESS Array B	82.79	42	P	P	12 21 31.9	-0.3
	comp=Z,1.5nm,0.7s,baz=248,slow=3.6,SNR=10						
VYHS	Vyhne	86.21	42	*e*P	P	12 21 50.2	+0.9
ARCES	ARCESS Array B	86.65	20	P	P	12 21 51.5	+0.5
	comp=Z,3.3nm,0.7s,baz=278,slow=3.5,SNR=17						
VNA3	Neumayer Olymp	88.16	163	P	P	12 21 56.9	-1.2
VNA1	Neumayer--Stat	88.31	162	P	P	12 21 56.8	-1.9
FINES	FINESS Array B	88.42	28	P	P	12 21 59.6	+0.1
	comp=Z,2.9nm,0.9s,baz=268,slow=5.3,SNR=8.1						
SNAA	Sanae	90.33	163	P	P	12 22 07.2	-1.1
ZALV	Zalesovo Beam	116.65	14	PKP	PKiKP	12 27 51.6	+0.7
	comp=Z,2.5nm,0.5s,baz=284,slow=2.3,SNR=9.6						
MK31	Makanchi Array	122.30	20	*e*PKPdf	PKPdf	12 28 02.0	0.0
MKAR	Makanchi Array	122.30	20	PKP	PKPdf	12 28 01.9	-0.1
	comp=Z,1.2nm,0.4s,baz=294,slow=3.0,SNR=12						
SONA0	Songino Array	125.57	0	*e*PKPdf	PKiKP	12 28 09.3	+0.5
SONM	Songino Array	125.57	0	PKP	PKiKP	12 28 09.3	+0.5
	comp=Z,0.8nm,0.5s,baz=27,slow=0.7,SNR=5.0						
WMQ	Urumqi	126.67	17	*e*PKP	PKPdf	12 28 10.8	+0.2
WMQ				LR	LR		
	comp=Z,350nm,29.1s						
WMQ				LR	LR		
	comp=Z,250nm,28.8s						
WMQ				LR	LR		
	comp=Z,110nm,28.9s						
HHC	Hu-ho-hao-te	132.37	355	*e*PKP	PKPdf	12 28 20.3	-1.2
HHC				LR	LR		
	comp=Z,14nm,12.8s						
HHC				LR	LR		
	comp=Z,7.0nm,10.2s						
GTA	Gaotai	133.53	8	*e*PKP	PKiKP	12 28 25.0	-0.1
STKA	Stephens Creek	139.19	228	PKP	PKPdf	12 28 34.4	+0.1
	comp=Z,1.8nm,0.8s,baz=117,slow=4.4,SNR=4.2						
NJ2	Nanjing	139.70	344	*e*PKP	PKPdf	12 28 35.5	+0.3
WHN	Wuhan	142.17	350	PKP	PKiKP	12 28 44.0	+1.3
CD2	Chengdu	142.36	4	PKP	PKPdf	12 28 39.0	-1.1
MDRS	Chennai	146.94	53	*e*x	PKPdf	12 28 42.5	-5.8
MDRS				*e*x	x	12 34 18.6	
MDRS				*e*x	x	12 41 28.6	
MDRS				*e*x	x	12 47 56.6	
MDRS				*e*x	x	12 53 14.6	
FORT	Forrest	149.01	217	*e*PKPbc	PKPbc	12 28 54.5	-1.0
AS31	Alice Springs	149.15	234	*e*PKPdf	PKPdf	12 28 52.0	+0.2
ASAR	Alice Springs	149.15	234	PKP	PKPdf	12 28 52.1	+0.3
	comp=Z,11nm,0.6s,baz=108,slow=1.4,SNR=92						
ASAR				PKPbc	PKPbc	12 28 55.5	-0.7
	comp=Z,13nm,0.6s,baz=126,slow=3.4,SNR=156						
ASAR				pPKPbc	pPKPbc	12 29 38.3	-0.2
	comp=Z,3.1nm,0.9s,baz=117,slow=4.2,SNR=1.9						
WB2	Warramunga Arr	150.37	241	*e*PKPbc	PKPbc	12 28 59.0	-0.1
WRAB	Tennant Creek	150.37	241	*e*PKPbc	PKPbc	12 28 59.0	-0.2
WR1	Warramunga Arr	150.38	241	*e*PKPbc	PKPbc	12 28 59.1	-0.1
WRA	Warramunga Arr	150.38	241	PKP	PKPdf	12 28 54.4	+0.5
	comp=Z,11nm,0.4s,baz=127,slow=2.0,SNR=10						
WRA				PKPbc	PKPbc	12 28 59.1	-0.1
	comp=Z,11nm,0.5s,baz=136,slow=1.9,SNR=142						
CMAR	Chiang Mai Arr	153.67	17	PKP	PKPdf	12 28 58.0	-0.8
	comp=Z,1.7nm,0.6s,baz=318,slow=1.2,SNR=11						
CMAR				PKPbc	PKiKP	12 29 07.3	+0.5
	comp=Z,5.0nm,0.6s,baz=325,slow=3.1,SNR=19						
CMAR				PKPab	PKPab	12 29 19.2	-0.5
	comp=Z,1.7nm,0.6s,baz=330,slow=4.9,SNR=4.4						

MAN 25 12:15:58.6, 7°.39N × 124°.87E, h3^{km}, mb4.4, ML3.2, MS3.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.52	21	*e*P	Pg	12 16 09.3	+0.7
BUKP				*e*S	Sb	12 16 18.1	-0.2
SKMP	Bagumbayan, Su	0.93	201	*e*P	Pg	12 16 14.4	-1.9
CGP	Cagayan de Oro	1.07	351	*e*P	Pg	12 16 18.7	-0.4
MATI	Mati	1.45	108	*e*P	Pn	12 16 24.8	-0.9
DDMP	Don Marcelino,	1.53	147	*e*P	Pn	12 16 26.7	-0.1
DDMP				*e*S	Sg	12 16 51.9	+4.2

MAN 25 12:20:40.7, 7°.45N × 124°.81E, h10^{km}, mb4.3, ML3.1, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.49	30	*e*P	Pg	12 20 50.8	+0.4
BUKP				*e*S	Sb	12 20 59.4	+0.6
SKMP	Bagumbayan, Su	0.96	196	*e*P	Pg	12 20 55.4	-3.8
SKMP				*e*S	Sg	12 21 07.8	-4.1
CGP	Cagayan de Oro	1.00	353⇑	*e*P	Pg	12 20 60.0	-0.1
CGP				*e*S	Sn	12 21 15.0	-0.1
MATI	Mati	1.52	109	*e*P	Sn	12 21 22.0	-5.8
DDMP	Don Marcelino,	1.61	146	*e*P	Pn	12 21 08.1	-1.1
DDMP				*e*S	Sb	12 21 30.9	+0.1

JMA 25 12:44:05.9, 37°.12N × 140°.70E, h7^{km}±1^{km}, M1.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.08	103	P	Pg	12 44 07.9	0.0
JFFD	Fukushimafurud	0.12	255	P	Pg	12 44 08.5	+0.1
JFK	Kawauchi	0.28	29	P	Pg	12 44 11.6	+0.1
JFT	Otama	0.49	324	P	Pg	12 44 15.8	+0.4
JHO	Hitachi	0.52	192	P	Pg	12 44 15.6	-0.3
JMM	Marumori	0.75	6	P	Pg	12 44 20.0	-0.3
JFY	Yanaizu	0.84	290	P	Pg	12 44 22.2	+0.1

ISCJB ***25*** *12:44:07.7±0.5, 37°.11N±0°.03 × 140°.73E±0°.04, h4^{km}±4^{km}, mb3.7/2, MS3.1/2, Error ellipse: s-maj=5.8km s-min=5.0km az=143.2*

JMA ***25*** *12:44:08.0, 37°.12N × 140°.70E, h7^{km}±1^{km}, M3.0*

JMA Felt I J1.

IDC ***25*** *12:44:11.3±3.1, 36°.75N × 140°.38E, h0^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.2/53, mbtmp3.5/3, MS3.2/2, Ms1 3.2/2, ms1mx2.4/39, Error ellipse: s-maj=65.4km s-min=32.0km az=44.0*

ISC 25 12:44:08.0±1.0, 37°.11N±0°.03 × 140°.70E±0°.03, h3^{km}±9^{km}, n22, σ0^{s}.70/21, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.08	95	P	Pg	12 44 09.9	+0.1
ONAJ				S	Sg	12 44 11.4	+0.5
ONAJ	Iwakimizuishiy	0.08	95	S	Pg	12 44 09.4	-0.4
JFFD	Fukushimafurud	0.11	261	P	Pg	12 44 10.5	+0.3
JFFD				S	Sg	12 44 12.3	+0.6
JFFD	Fukushimafurud	0.11	261	S	Pg	12 44 10.2	0.0
JFK	Kawauchi	0.29	29	P	Pg	12 44 13.7	-0.1
JFK				S	Sg	12 44 17.7	+0.1
JFK	Kawauchi	0.29	29	S	Pb	12 44 15.6	-0.4
JFT	Otama	0.50	325	P	Pg	12 44 17.9	+0.3
JFT				S	Sg	12 44 24.7	+0.6
JHO	Hitachi	0.51	192	P	Pg	12 44 17.8	0.0
JHO				S	Sg	12 44 24.8	+0.5
JSB	Shiboa	0.64	258	P	Pb	12 44 21.0	-0.8
JSB				S	Sb	12 44 30.1	-1.0
MJAR	Matsushiro Arr	2.07	255	Pn	Pn	12 44 43.1	-0.6
	1.0nm,0.3s,baz=71,slow=15,SNR=38						
MJAR				Sn	Sb	12 45 11.1	-1.3
	1.7nm,0.3s,baz=352,slow=31,SNR=15						
MJAR				LR	LR	12 45 19.9	
	comp=Z,18nm,19.7s,baz=90,slow=40						
MAT	Matsushiro	2.07	255	P	Pn	12 44 43.7	0.0
MAT				S	Sb	12 45 12.4	-0.1
USRK	Ussuriysk Ar.	9.69	320	Pn	Pn	12 46 32.7	+4.5
	baz=119,slow=17,SNR=4.2						
H11N2	WAKE ISLAND Hy	28.68	120	T	T	13 19 51.6	
	baz=313,slow=75,SNR=5.0						
H11N1	WAKE ISLAND Hy	28.69	120	T	T	13 19 51.8	
	baz=313,slow=75,SNR=6.9						
H11N3	WAKE ISLAND Hy	28.70	120	T	T	13 19 53.5	
	baz=313,slow=75,SNR=5.5						
H11S1	WAKE ISLAND Hy	29.38	122	T	T	13 20 51.2	
	baz=314,slow=75,SNR=6.3						
H11S3	WAKE ISLAND Hy	29.39	122	T	T	13 20 50.6	
	baz=314,slow=75,SNR=6.1						
H11S2	WAKE ISLAND Hy	29.40	122	T	T	13 20 49.4	
	baz=314,slow=75,SNR=3.5						
TLY	Talaya	29.85	311	LR	LR	13 03 31.0	
	comp=Z,25nm,18.1s,baz=184,slow=39						
WRA	Warramunga Arr	57.06	187	P	P	12 53 55.7	+0.2
	1.0nm,0.8s,baz=359,slow=9.2,SNR=1.7						
ASAR	Alice Springs	60.79	187	P	P	12 54 23.0	+1.7
	0.3nm,0.8s,baz=25,slow=14,SNR=2.2						
GNI	Garni	71.20	306	LR	LR	13 28 24.6	
	comp=Z,20nm,18.9s,baz=289,slow=37						

MAN 25 12:45:00.4, 7°.55N × 124°.89E, h30^{km}, mb3.9, ML2.6, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.37	27	*e*P	Pn	12 45 10.1	+0.3
BUKP				*e*S	Sn	12 45 17.9	+1.9
CGP	Cagayan de Oro	0.92	348	*e*P	Pb	12 45 19.6	+1.7
CGP				*e*S	Sb	12 45 33.7	+3.9
SKMP	Bagumbayan, Su	1.08	199	*e*P	Pn	12 45 19.4	-0.2
DDMP	Don Marcelino,	1.65	150	*e*P	Pn	12 45 27.6	+0.2
DDMP				*e*S	Sb	12 45 51.4	+0.7

MEX 25 13:19:57.2±0.7, 16°.98N × 100°.33W, h5^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.10	40	*e*P	Pg	13 19 58.4	-0.8
CAIG				*i* S	Sg	13 20 00.2	-0.4
MEIG	Mezcala	1.16	36	*i* P	Pg	13 20 15.7	-3.9
MEIG				*i* S	Sg	13 20 30.6	-4.1
ARIG	Puente Sto Nin	1.30	359	*i* P	Pn	13 20 18.2	-3.9
ARIG				*i* S	Sg	13 20 34.7	-4.3
PLIG	Platanillo	1.62	29	*i* P	Pn	13 20 22.5	-4.0
PLIG				*i* S	Sn	13 20 43.7	-4.0
TLIG	Tlapa	1.78	71	*i* P	Pn	13 20 25.5	-3.3
TLIG				*i* S	Sn	13 20 46.8	-5.1

BJI ***25*** *13:25:33.6±0.0, 27°.97S × 177°.52W, h91^{km}, mb5.3/36, mB5.5/24*

NEIC ***25*** *13:25:35.3±2.2, 28°.36S × 177°.84W, h92^{km}±3^{km}, mb5.0/82, Error ellipse: s-maj=16.5km s-min=10.0km az=114.0*

ISCJB ***25*** *13:25:35.4±0.1, 28°.49S±0°.02 × 177°.93W±0°.04, h100^{km}, mb4.9/67, Error ellipse: s-maj=5.2km s-min=2.3km az=24.5*

MOS ***25*** *13:25:36.6±1.4, 28°.38S × 177°.91W, h112^{km}, mb5.2/18, Error ellipse: s-maj=13.9km s-min=13.0km az=88.5*

IDC ***25*** *13:25:42.2±1.8, 28°.15S × 178°.00W, h146^{km}±14^{km}, mb4.4/17, mb1 4.6/18, mb1mx4.6/21, mbtmp4.8/18, MS3.5/6, Ms1 3.5/6, ms1mx3.3/20, Error ellipse: s-maj=15.6km s-min=13.7km az=130.0*

GCMT ***25*** *13:25:44.3±0.2, 28°.17S±0°.02 × 177°.85W±0°.02, h145^{km}±1^{km}, MW5.1/98, Moment Tensor Solution. s64,c77; s98,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.60±.14; $M_{\theta\theta}$-2.64±.21; $M_{\phi\phi}$5.24±.20; $M_{r\theta}$-3.01±.12; $M_{\theta\phi}$-2.80±.17; $M_{\phi r}$-2.04±.12; Best double couple: $M_0$6.44700×10^{16} NP1:ϕ_s20.00000°,δ68.00000°, λ-37.00000°. NP2:ϕ_s126.00000°,δ56.00000°, λ-153.00000°. Principal axes: T 6.2720, Plg8.0000°, Azm75.0000°; N 0.3500, Plg48.0000°, Azm173.0000°; P -6.6220, Plg41.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 13:25:36.3±0.3, 28°.46S±0°.04 × 177°.82W±0°.06, h100^{km}, n520, σ1^{s}.53/530, mb5.1/67, 39C-16D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	0.79	187	P	Pn	13 26 06.8	+12
RAO	Raoul Island	0.79	186	*e*Sn	Sn	13 26 06.8	-1.5
GLKZ	Green Lake	0.80	186	P	Pn	13 26 06.9	+12
GLKZ				S	Sn	13 26 25.7	+17
MXZ	Matakaoa Point	9.64	199	*e*Pn	Pn	13 27 53.6	+1.6
MXZ	Matakaoa Point	9.64	199	P	Pn	13 27 51.6	-0.4
WMGZ	Waiomatatini S	9.85	198	P	Pn	13 27 54.6	-0.2
WMGZ				S	Sn	13 29 41.1	-2.3
OUZ	Omahuta	9.93	225	*e*P	Pn	13 28 04.6	+8.7
OUZ	Omahuta	9.93	225	P	Pn	13 28 03.5	+7.6
HAZ	Te Kaha	9.97	201	P	Pn	13 27 56.3	-0.2
HAZ				S	Sn	13 29 48.7	+2.2
WCZ	Waipu Caves	9.97	220	P	Pn	13 28 03.7	+7.2
PKGZ	Pakihiroa	10.01	199	P	Pn	13 27 55.8	-1.3
PUZ	Puketiti	10.13	198	P	Pn	13 27 57.4	-1.3
PUZ				S	Sn	13 29 48.1	-2.2
RUGZ	Raukumara Rang	10.20	201	P	Pn	13 28 00.3	+0.6
RUGZ				S	Sn	13 29 53.1	+0.9
WIAZ	Waiheke Island	10.21	214	P	Pn	13 28 01.2	+1.5
TWGZ	Tauwhareparae	10.30	199	P	Pn	13 28 00.6	-0.4
TWGZ				S	Sn	13 29 55.2	+0.6
MKAZ	Moumakai	10.44	213	P	Pn	13 28 07.1	+4.2
CNGZ	Carnagh Statio	10.53	197	P	Pn	13 28 04.1	0.0
MWZ	Matawai	10.58	200	P	Pn	13 28 03.1	-1.8
MWZ				S	Sn	13 30 00.2	-1.1
TKGZ	Te Karaka	10.58	199	P	Pn	13 28 02.4	-2.4
URZ	Urewera	10.65	202	*e*Pn	Pn	13 28 04.5	-1.2
URZ	Urewera	10.65	202	P	Pn	13 28 04.5	-1.2
RAGZ	Rawiri	10.77	200	P	Pn	13 28 06.2	-1.2
RIGZ	Rimuhau	10.86	199	P	Pn	13 28 07.8	-0.8
MUGZ	Murupara	10.96	203	P	Pn	13 28 09.1	-0.8
SNGZ	Shannon Statio	11.05	200	P	Pn	13 28 08.6	-2.6
KNZ	Kokohu	11.18	198	P	Pn	13 28 10.8	-2.1
MHGZ	Mahia Peninsul	11.24	197	P	Pn	13 28 11.1	-2.5
RAHZ	Arahi	11.25	201	P	Pn	13 28 14.1	+0.1
ARHZ	Aropaoanui	11.60	200	P	Pn	13 28 15.9	-2.7
BKZ	Black Stump Fm	11.67	202	*e*Pn	Pn	13 28 19.3	-0.2
BKZ	Black Stump Fm	11.67	202	P	Pn	13 28 19.1	-0.5
NIUE	Niue	11.81	39	*e*Pn	Pn	13 28 19.3	-2.2
NIUE				*e*Sn	Sn	13 30 18.0	-13
NIUE	Niue	11.81	39	P	Pn	13 28 18.1	-3.3
	baz=11,SNR=29						
MCHZ	McNeill Hill	11.86	201	P	Pn	13 28 21.8	-0.2
KAHZ	Kahuranaki	12.12	200	P	Pn	13 28 23.1	-2.5
VRZ	Vera Road	12.29	208	P	Pn	13 28 30.0	+2.3
TSZ	Takapari Road	12.65	202	P	Pn	13 28 30.5	-2.0
BFZ	Birch Farm	13.13	200	*e*Pn	Pn	13 28 36.0	-2.7
BFZ				*e*Sn	Sn	13 31 01.0	-2.0
TRWZ	Traveller	13.95	201	P	Pn	13 28 52.0	+2.5
PAWZ	Paruwai Farm	14.02	201	P	Pn	13 28 52.7	+2.3
MSWZ	Moikau Station	14.11	202	P	P	13 28 56.2	+0.1
SNZO	South Karori	14.20	204	*e*P	P	13 28 57.8	+0.8
BHW	Baring Head	14.23	203	P	Pn	13 28 49.1	-3.9
PLWZ	Palliser	14.24	202	P	Pn	13 28 55.7	+2.4
TCW	Tory Channel	14.27	205	P	Pn	13 28 51.7	-1.9
MARNC	Mare, Loyalty	14.58	295	*e*P	P	13 29 05.4	+4.0
QRZ	Quartz Range	14.65	210	P	Pn	13 28 58.8	+0.3
CMWZ	Cape Campbell	14.76	204	P	Pn	13 29 00.4	+0.6
THZ	Tophouse	15.27	207	*e*Pn	Pn	13 29 05.8	-0.6
	30nm,0.4s						
AFI	Afiamalu	15.53	22	*e*P	Pn	13 29 11.9	+2.0
	122nm,1.1s						
AFI	Afiamalu	15.53	22	*e*P	Pn	13 29 11.9	+2.0
AFI				pmax	pmax		
	comp=Z,122nm,1.1s						
DZM	Mont Dzumac	15.58	291	*e*P	P	13 29 15.3	+2.7
	comp=Z,144nm,0.9s						
DZM	Mont Dzumac	15.58	291	P	P	13 29 15.7	+3.0
	comp=Z,0.4nm,0.3s,baz=110,slow=16,SNR=12						
DZM	Mont Dzumac	15.58	291	*e*P	Pn	13 29 12.0	+1.5
	comp=Z,65nm,0.8s						
KHZ	Kahutara	15.59	204	*e*P	P	13 29 13.9	+1.5
	comp=Z,66nm,1.1s						
LTZ	Lake Taylor	16.38	207	*e*P	P	13 29 22.4	+1.1
	comp=Z,12nm,1.0s						
OXZ	Oxford	16.93	206	*e*P	Pn	13 29 27.7	+0.8
	comp=Z,47nm,0.5s						
RPZ	Rata Peaks	17.65	207	P	P	13 29 35.9	+0.7
	comp=Z,2.2nm,0.3s,baz=34,slow=4.1,SNR=9.4						
RPZ				S	Sn	13 32 36.2	-16
	comp=Z,1.2nm,0.3s,baz=63,slow=16,SNR=7.5						
RPZ				LR	LR	13 36 39.0	
	comp=Z,102nm,21.2s,baz=8.0,slow=37						
RPZ	Rata Peaks	17.65	207	*e*P	Pn	13 29 36.4	+0.8
	comp=Z,31nm,1.1s						
RAR	Rarotonga	17.89	70	P	Pn	13 29 40.9	+2.2
	comp=Z,2.8nm,0.3s,baz=254,slow=6.9,SNR=3.1						
RAR	Rarotonga	17.89	70	*e*P	P	13 29 37.6	-0.4
	comp=Z,115nm,1.1s						
RAR	Rarotonga	17.89	70	*e*P	P	13 29 37.6	-0.4
RAR				pmax	pmax		
	comp=Z,115nm,1.1s						
FOZ	Fox Glacier	18.03	210	*e*P	P	13 29 37.5	-1.8
	comp=Z,40nm,1.1s						
LBZ	Lake Benmore	18.56	208	P	Pn	13 29 48.8	+2.2
ODZ	Otahua Downs	18.92	206	*e*P	P	13 29 48.7	-0.4
	comp=Z,7.7nm,0.9s						
WKZ	Wanaka	19.41	209	*e*P	P	13 29 54.0	-0.4
TBI	Tubuai	25.98	85	*e*LR	LR	13 37 44.8	
	comp=Z,289nm,35.2s						
TBI	Tubuai	25.98	85	*e*T	T	13 57 05.9	
	comp=Z,21nm,0.4s						
KNTN	Kanton	26.20	14	*e*P	P	13 31 00.6	-1.2
	comp=Z,100nm,0.8s						
ARMA	Armidale	26.64	258	*e*P	P	13 31 03.3	-2.4
	comp=Z,5.1nm,0.8s						
EIDS	Eidsvold	27.86	269	*e*P	P	13 31 18.6	+2.0
	comp=Z,13nm,0.8s						
EIDS	Eidsvold	27.86	269	P	P	13 31 18.4	+1.8
	baz=28,SNR=4.6						
PAE	Paea	28.05	74	*e*T	T	13 59 29.5	
	comp=Z,12nm,0.3s						
PPT2	Papeete2	28.09	73	*e*LR	LR	13 38 42.5	
	comp=Z,361nm,28.8s						
PPT2	Papeete2	28.09	73	*e*T	T	13 59 32.5	
	comp=Z,8.1nm,0.4s						
PPT	Papeete	28.10	73	LR	LR	13 41 24.3	
	comp=Z,116nm,18.5s,baz=289,slow=34						
HNR	Honiara	28.20	308	LR	LR	13 40 10.0	
	comp=Z,118nm,18.1s,baz=146,slow=31						
RMQ	Roma	29.66	266	P	P	13 31 34.1	+1.5
	baz=30,SNR=4.0						
CMSA	Cobar Meteorol	31.65	255	P	P	13 31 52.2	+2.1
	baz=32,SNR=9.5						
CTAO	Charters Tower	33.69	276	*e*P	P	13 32 09.2	+1.2
	comp=Z,19nm,0.8s						
CTAO	Charters Tower	33.69	276	*e*P	P	13 32 09.2	+1.2
CTAO				pmax	pmax		
	comp=Z,19nm,0.8s						
STKA	Stephens Creek	35.11	254	P	P	13 32 21.3	+1.2
	comp=Z,4.3nm,0.7s,baz=96,slow=10,SNR=7.7						
STKA				PcP	PcP	13 34 50.4	+0.8
	comp=Z,5.9nm,0.7s,baz=77,slow=5.6,SNR=5.1						
STKA	Stephens Creek	35.11	254	*e*P	P	13 32 20.6	+0.5
	comp=Z,1.4nm,0.9s						
STKA				*e*PcP	PcP	13 34 50.4	+0.8
STKA	Stephens Creek	35.11	254	P	P	13 32 22.6	+2.5
	baz=35,SNR=5.4						
STKA	Stephens Creek	35.11	254	*e*P	P	13 32 20.6	+0.5
STKA				*e*		13 34 50.4	
MTSU	Mount Surprise	36.13	278	P	P	13 32 30.5	+1.5
	baz=36,SNR=15						
HTT	Hallett	37.23	251	P	P	13 32 39.7	+1.5
	baz=37,SNR=8.0						
PMG	Port Moresby	37.95	293	PcP	PcP	13 34 58.8	+0.4
	comp=Z,62nm,1.2s,baz=252,slow=3.8,SNR=3.9						
PMG	Port Moresby	37.95	293	*i* P	P	13 32 45.4	+1.0
PMG				pmax	pmax		
	comp=Z,124nm,1.1s						
COEN	Coen	38.93	283	*e*P	P	13 32 53.5	+0.9
	comp=Z,14nm,0.8s						
QIS	Mount Isa	39.37	272	P	P	13 32 56.9	+0.7
	baz=40,SNR=3.6						
BBOO	Buckleboo	39.68	252	*e*P	P	13 32 58.9	+0.2
	comp=Z,7.6nm,0.9s						
BBOO	Buckleboo	39.68	252	P	P	13 32 59.5	+0.8
	baz=40,SNR=8.5						
TAOE	Nuku Hiva Isla	40.43	69	*e*LR	LR	13 44 24.4	
	comp=Z,190nm,27.1s						
AS31	Alice Springs	43.40	265	*e*PP	PP	13 35 15.4	+3.4
ASAR	Alice Springs	43.40	265	P	P	13 33 29.1	-0.1
	comp=Z,3.7nm,0.7s,baz=92,slow=7.4,SNR=39						
ASAR				PcP	PcP	13 35 15.4	-0.6
	comp=Z,6.4nm,0.7s,baz=111,slow=3.9,SNR=13						
ASAR				ScP	ScP	13 38 52.7	-5.6
	comp=Z,1.2nm,0.8s,baz=120,slow=4.3,SNR=5.5						
ASAR				S	S	13 39 43.0	-7.1
	comp=Z,0.7nm,0.8s,baz=108,slow=12,SNR=4.2						
WC3	Warramunga Arr	44.18	270	*e*P	P	13 33 35.1	-0.3
	comp=Z,14nm,0.7s						
WB2	Warramunga Arr	44.20	270	*e*P	P	13 33 35.5	-0.2
	comp=Z,17nm,0.7s						
WRAB	Tennant Creek	44.21	270	*e*P	P	13 33 35.7	-0.1
	comp=Z,14nm,0.7s						
WRAB	Tennant Creek	44.21	270	*ce*P	P	13 33 35.6	-0.1
WRAB				*i* *PP	sP	13 34 10.3	+0.7
WRAB				pmax	pmax		
	comp=Z,17nm,1.0s						
WR1	Warramunga Arr	44.21	270	*e*PcP	PcP	13 35 18.5	-0.3
WRA	Warramunga Arr	44.21	270	P	P	13 33 35.3	-0.4
	comp=Z,12nm,0.6s,baz=104,slow=8.7,SNR=47						
WRA				PcP	PcP	13 35 18.5	-0.3
	comp=Z,18nm,0.9s,baz=130,slow=3.4,SNR=9.7						
WRA				ScP	ScP	13 38 55.7	-6.0
	comp=Z,2.9nm,0.8s,baz=100,slow=3.5,SNR=4.7						
WRA				S	S	13 39 54.1	-7.9
	comp=Z,1.5nm,0.8s,baz=110,slow=8.9,SNR=3.3						
FORT	Forrest	46.72	253	*e*P	P	13 33 55.0	-0.4

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       comp=Z,18nm,0.6s
FORT   Forrest            46.72 253    P       P        13 33 54.8 -0.6
       baz=47,SNR=10.0
GENI   Genyem             47.56 295    P       P        13 34 02.4 +0.4
WRKA   Warakurna          47.91 261    P       P        13 34 04.1 -0.6
       baz=48,SNR=29
KDU    Kakadu             48.76 278    P       P        13 34 11.3  0.0
       baz=49,SNR=3.6
MTN    Manton Dam         49.86 277    P       P        13 34 21.0 +1.4
       baz=50,SNR=3.5
KNRA   Kununurra          50.74 273    P       P        13 34 27.3 +1.0
       baz=51,SNR=4.5
CASY   Casey              56.92 207   eP       P        13 35 11.0 +0.4
       comp=Z,12nm,0.4s
QSPA   South Pole Qui     61.64 180    P       P        13 35 47.0 +3.7
       comp=Z,8.4nm,0.6s,baz=316,slow=0.5,SNR=87
QSPA   South Pole Qui     61.64 180   eP       P        13 35 46.8 +3.5
       comp=Z,9.7nm,0.6s
MAW    Mawson             74.17 200    P       P        13 37 03.2 +1.7
       comp=Z,5.6nm,0.9s,baz=132,slow=9.4,SNR=8.1
MAW    Mawson             74.17 200   eP       P        13 37 03.1 +1.7
       comp=Z,1.2nm,0.9s
MAW    Mawson             74.17 200    P       P        13 37 03.7 +2.2
       baz=74,SNR=5.3
KASI   Kota Agung         76.56 271    P       P        13 37 16.2  0.0
PPBI   Pangkal Pinang     76.70 275    P       P        13 37 17.2 +0.3
MJAR   Matsushiro Arr     76.75 325    P       P        13 37 15.1 -1.6
       comp=Z,24nm,0.9s,baz=166,slow=5.7,SNR=49
MJAR                                   LR      LR       14 07 30.8
       comp=Z,13nm,20.9s,baz=175,slow=33
KLSI                      76.75 272    P       P        13 37 16.0 -1.2
MAJO   Matsushiro         76.75 325   eP       P        13 37 16.2 -0.5
       comp=Z,35nm,0.9s
MAJO   Matsushiro         76.75 325d iP       P        13 37 15.2 -1.5
MAJO                                   pmax    pmax
       comp=Z,43nm,1.0s
MAT    Matsushiro         76.75 325    P       P        13 37 14.7 -2.0
MAT                                    S       S        13 46 55.4 -0.3
MJB9   Matsu-Tunnel       76.75 325   eP       P        13 37 16.2 -0.5
       comp=Z,36nm,0.9s
MDSI   Maura Dua          77.33 272    P       P        13 37 18.5 -2.0
YOJ    Yonaguni jima      77.52 307   eP       P        13 37 20.8 -0.4
       comp=Z,77nm,0.8s
YOJ    Yonaguni jima      77.52 307   eP       P        13 37 20.8 -0.4
YOJ                                    pmax    pmax
       comp=Z,77nm,0.8s
JNU    Nakatsue           78.22 318   eP       P        13 37 24.0 -0.9
       comp=Z,69nm,1.1s
SYO    Syowa Base         79.03 193⇓iP       P        13 37 29.0 +0.1
SYO    Syowa Base         79.03 193⇓ePcP     PcP      13 37 35.0 -2.1
SNAA   Sanae              80.08 178    P       P        13 37 36.2 +1.6
SNAA   Sanae              80.08 178   eP       P        13 37 36.1 +1.4
       comp=Z,7.7nm,0.8s
SNAA   Sanae              80.08 178   eP       P        13 37 36.1 +1.4
SNAA                                   pmax    pmax
       comp=Z,8.0nm,0.8s
VNA3   Neumayer Olymp     80.22 176    P       P        13 37 36.9 +1.5
MYKOM  Kota Tinggi        80.60 277   eP       P        13 37 37.6 -0.7
       comp=Z,39nm,0.8s
KRJI   Kerinci            80.84 273    P       P        13 37 39.5 -0.3
VNA1   Neumayer--Stat     80.89 176    P       P        13 37 40.6 +1.8
DLV    T  Lat             81.69 288   eP       P        13 37 44.1 -0.2
       comp=Z,29nm,0.8s
PDSI   Padang             82.28 273    P       P        13 37 45.2 -2.0
TJN    Taejon             82.56 318ceP       P        13 37 47.9 -0.2
KSRS   Korea Array        82.98 319    P       P        13 37 50.1 -0.1
       comp=Z,10nm,0.8s,baz=141,slow=5.6,SNR=38
KSRS                                   LR      LR       14 12 31.1
       comp=Z,25nm,19.0s,baz=155,slow=34
KS15   Wonju Array Si     82.99 319   eP       P        13 37 50.9 +0.7
YSS    Yuzh-Sakhalins     83.08 334   eP       P        13 37 50.9 +0.4
       comp=Z,46nm,0.8s
YSS    Yuzh-Sakhalins     83.08 334   eP       P        13 37 50.6 +0.1
YSS                                    pmax    pmax
       comp=Z,62nm,0.9s
CIS    Catalina Islan     83.39  46    P       P        13 37 53.2 +0.7
       baz=230
PKM    Mcpherson Peak     83.48  45    P       P        13 37 54.4 +1.2
       baz=229
SMMC   Simmler            83.65  44    P       P        13 37 55.3 +1.5
       baz=228
PET    Petropavlovsk      83.69 346   eP       P        13 37 52.1 -1.4
PET                                    pmax    pmax
       comp=Z,20nm,0.7s
PLCA   Paso Flores        83.71 133    P       P        13 37 56.8 +2.4
       comp=Z,2.1nm,0.8s,baz=222,slow=8.5,SNR=3.8
PLCA   Paso Flores        83.71 133   eP       P        13 37 55.9 +1.6
       comp=Z,6.9nm,1.1s
PLCA   Paso Flores        83.71 133   eP       P        13 37 55.9 +1.6
PLCA                                   pmax    pmax
       comp=Z,7.0nm,1.1s
SAO    San Andreas Ge     83.74  42   eP       P        13 37 55.0 +0.8
       comp=Z,13nm,1.0s
SAO    San Andreas Ge     83.74  42   eP       P        13 37 55.0 +0.8
SAO                                    pmax    pmax
       comp=Z,13nm,1.0s
MNSI   Mandailing Nat     83.86 274    P       P        13 37 53.6 -1.8
PETK   Petropavlovsk-     83.98 345    P       P        13 37 53.8 -1.2
       comp=Z,28nm,0.7s,baz=122,slow=6.7,SNR=66
PETK                                   LR      LR       14 13 05.0
       comp=Z,29nm,18.4s,baz=148,slow=34
OSI    Osito Audit: C     83.98  45    P       P        13 37 56.8 +1.2
       baz=229
ARVC   Arvin              84.25  45    P       P        13 37 57.7 +0.9
       baz=229
MURC   Murrieta           84.30  47    P       P        13 37 58.0 +0.9
       baz=230
MONP2  Monument Peak      84.36  48    P       P        13 37 58.8 +1.1
       baz=231,SNR=6.9
IPM    Ipoh               84.36 278   eP       P        13 37 57.1 -0.8
       comp=Z,28nm,0.8s
IKP    In-Ko-Pah, Jac     84.41  48    P       P        13 37 59.1 +1.3
       baz=231
BFSC   Mount Baldy Ra     84.41  46    P       P        13 37 58.3 +0.5
       baz=230,SNR=7.1
KCPM   Cahto Peak         84.52  39   eP       P        13 37 57.9 -0.3
       comp=Z,21nm,0.9s
VES    Vestal, Richgr     84.56  44    P       P        13 37 59.1 +0.8
       baz=229
EDW2   Edwards Air Fo     84.61  46    P       P        13 37 59.4 +0.7
       baz=230,SNR=10
PFO    Pinyon Flats O     84.78  47    P       P        13 38 00.6 +0.9
       baz=231
SWSC   Sam W. Stewart     84.80  48    P       P        13 38 00.6 +1.0
       baz=231
ISA    Isabella, Lake     84.82  45    P       P        13 38 00.6 +0.9
       baz=230,SNR=13
KMRM   Mail Ridge         84.82  39   eP       P        13 37 59.7  0.0
       comp=Z,28nm,0.9s
BBRC   Big Bear Solar     84.90  47    P       P        13 38 01.3 +0.9
       baz=230
NJ2    Nanjing            85.11 310   eP       P        13 38 01.5 +0.4
NJ2                                    pmax    pmax
       comp=Z,41nm,0.7s
LRMC   Laurel Mtn Rad     85.19  45    P       P        13 38 02.5 +0.8
       baz=230,SNR=13
RRX    Edison Barstow     85.24  46    P       P        13 38 02.7 +0.9
       baz=230
O02D   Mt. Diablo Mer     85.30  39    P       P        13 38 03.4 +1.4
       baz=226,SNR=27
BELC   Belle Mtn. Jos     85.33  47    P       P        13 38 03.6 +1.1
       baz=231,SNR=15
BC3    Big Chuckawall     85.47  48    P       P        13 38 04.6 +1.6
       baz=231,SNR=6.5
GLA    Glamis             85.50  49    P       P        13 38 04.7 +1.5
       baz=232,SNR=6.1
CWC    Cottonwood Cre     85.56  44    P       P        13 38 04.4 +0.8
       baz=230
GSC    Goldstone, Bar     85.63  46    P       P        13 38 04.5 +0.7
       baz=230,SNR=12
HEC    Hector,Ludlow      85.63  46    P       P        13 38 04.6 +0.8
       baz=231,SNR=11
USRK   Ussuriysk Ar.      85.64 326    P       P        13 38 03.6 +0.1
       comp=Z,11nm,0.9s,baz=149,slow=3.9,SNR=18
MPMC   Manual Prospec     85.68  45    P       P        13 38 05.0 +0.8
       baz=230,SNR=16
WDC    Whiskeytown Da     85.72  39   eP       P        13 38 05.2 +1.2
       comp=Z,27nm,1.0s
WDC    Whiskeytown Da     85.72  39   eP       P        13 38 05.2 +1.2
WDC                                    pmax    pmax
       comp=Z,27nm,1.0s
GSI    Gunungsitoli       85.86 274   eP       P        13 38 05.6 +0.2
       comp=Z,74nm,0.9s
GSI    Gunungsitoli       85.86 274    P       P        13 38 05.3 -0.1
TIN    Tinemaha, Big      85.87  44    P       P        13 38 06.0 +1.0
       baz=230
MLAC   Mammoth, Mammo85.88  43    P       P        13 38 06.2 +1.0
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       baz=229
N02D   Trinity Center     85.90  39    P       P        13 38 06.2 +1.2
       baz=226,SNR=6.6
O03E   Paynes Creek       85.93  39    P       P        13 38 05.2  0.0
       baz=227,SNR=12
IRM    Iron Mountain      85.98  48    P       P        13 38 06.8 +1.3
       baz=232,SNR=14
GMRC   Granite Mounta     86.03  47    P       P        13 38 07.0 +1.1
       baz=231,SNR=8.3
M02C   Callahan           86.10  38    P       P        13 38 07.1 +1.1
       baz=226,SNR=11
Y12C   Blythe             86.13  48    P       P        13 38 07.7 +1.5
       baz=232
214A   Organ Pipe Nat     86.19  51    P       P        13 38 07.9 +1.3
       baz=233
TUQ    Turquoise Moun     86.27  46    P       P        13 38 07.8 +0.7
       baz=231,SNR=8.6
FURC   Furnace Creek,     86.33  45    P       P        13 38 07.8 +0.7
       baz=230
SHOC   Shoshone, Teco     86.34  46    P       P        13 38 07.9 +0.6
       baz=231,SNR=10
TYV    Tymovskoe          86.35 336   eP       P        13 38 05.8 -1.0
TYV                                    pmax    pmax
       comp=Z,20nm,0.9s
GRAC   Grapevine Rang     86.36  44    P       P        13 38 08.4 +1.0
       baz=230,SNR=8.5
PNTR   Pine Nut           86.38  42   eP       P        13 38 08.3 +0.7
       comp=Z,17nm,1.0s
K02D   Willamette Mer     86.57  37    P       P        13 38 09.2 +1.0
       baz=226
RYN    Ryan               86.71  42   eP       P        13 38 09.1  0.0
       comp=Z,4.9nm,0.8s
NVAR   Mina Array Bea     86.72  43    P       P        13 38 09.8 +0.6
       comp=Z,9.1nm,0.8s,baz=220,slow=7.8,SNR=59
PDMCI  Parker Dam,Lak     86.72  48    P       P        13 38 10.4 +1.3
       baz=232,SNR=6.9
KCSI   Kotacane, Aceh     86.75 276    P       P        13 38 08.5 -1.2
J01E   Myrtle Point       86.76  36    P       P        13 38 09.8 +0.8
       baz=225
NV11   Mina Array Sit     86.81  43   eP       P        13 38 09.2 -0.4
       comp=Z,1.3nm,1.1s
M04C   Macdoel            86.92  38    P       P        13 38 10.9 +0.8
       baz=227
L04D   Klamath Falls      86.97  38    P       P        13 38 10.9 +0.6
       baz=227
TPNV   Topopah Spring     87.02  45   eP       P        13 38 11.6 +0.8
       comp=Z,14nm,1.1s
TPNV   Topopah Spring     87.02  45   eP       P        13 38 11.6 +0.8
TPNV                                   pmax    pmax
       comp=Z,14nm,1.1s
TPNV   Topopah Spring     87.02  45    P       P        13 38 11.5 +0.8
       baz=231,SNR=14
MDJ    Mudanjiang         87.12 325    P       P        13 38 11.0 +0.2
MDJ                                    pmax    pmax
       comp=Z,35nm,1.3s
MDJ                                    pmax    pmax
       comp=Z,100nm,2.7s
WHN    Wuhan              87.31 307    P       P        13 38 12.3 +0.3
J04D   Umpqua Nationa     87.78  37    P       P        13 38 14.9 +0.7
       baz=227
TUC    Tucson             87.78  51    P       P        13 38 15.9 +1.5
       baz=234
I04A   Tendick Farm,      88.00  37    P       P        13 38 15.2 +0.2
       baz=226
SRAK   Srakaew            88.14 287    P       P        13 38 15.4 -0.9
J05D   Fort Rock, OR      88.27  38    P       P        13 38 17.1 +0.7
       baz=227
R11A   Troy Canyon, C     88.31  44    P       P        13 38 17.1 +0.3
       baz=231
H04D   Lebanon            88.33  36    P       P        13 38 17.0 +0.5
       baz=226
G03D   McMinnville, O     88.54  35    P       P        13 38 18.6 +1.2
       baz=226
GRNR   Gornyy             88.63 333   eP       P        13 38 17.8  0.0
GRNR                                   pmax    pmax
       comp=Z,16nm,1.0s
CN2    Changchun          88.70 323   eP       P        13 38 18.0 -0.3
CN2                                    pmax    pmax
       comp=Z,40nm,1.0s
TIA    Tai'an             88.77 313    P       P        13 38 19.0 +0.2
TIA                                    pmax    pmax
       comp=Z,48nm,0.8s
PINE   Pine Mountain      88.77  37   eP       P        13 38 19.9 +1.0
       comp=Z,17nm,0.9s
NKL    Nikolayevsk        88.93 336   eP       P        13 38 18.0 -1.0
NKL                                    pmax    pmax
       comp=Z,43nm,1.0s
I05D   Terrebonne, OR     88.93  37    P       P        13 38 20.3 +0.9
       baz=227
CHAI   Chaiyaphum         89.13 289    P       P        13 38 21.3 +0.4
NONG   Nongkai            89.24 291    P       P        13 38 22.2 +0.8
WUAZ   Wupatki            89.27  48    P       P        13 38 22.6 +1.2
       baz=234
F04D   Rainier, OR        89.27  35    P       P        13 38 22.1 +1.2
       baz=226
KLR    Kul'dur            89.45 330  i P       P        13 38 22.0 +0.4
KLR                                    pmax    pmax
       comp=Z,23nm,0.9s
G05D   Wamic, OR          89.56  36    P       P        13 38 23.0 +0.7
       baz=227
PHET   Kaeng Krachan      89.65 285    P       P        13 38 25.3 +1.9
E04D   Cinebar            89.82  35    P       P        13 38 24.6 +1.1
       baz=226
F05D   White Salmon       89.92  36    P       P        13 38 24.6 +0.6
       baz=227
121A   Cookes Peak, D     89.99  53    P       P        13 38 26.3 +1.4
       baz=236
W18A   Petrified Fore     90.12  50    P       P        13 38 26.4 +1.0
       baz=235
D04E   Lakebay            90.15  34    P       P        13 38 26.4 +1.5
       baz=226
D03D   Eldon              90.24  34    P       P        13 38 26.3 +0.9
       baz=226
PBKT   Sadao Pong         90.30 289    P       P        13 38 27.6 +1.2
GYA    Guiyang            90.72 300    P       P        13 38 28.5 +0.2
GYA                                    pP      pP       13 38 53.5 -0.7
GYA                                    PP      PP       13 42 08.0 +2.6
GYA                                    SKS     SKSac    13 48 49.8 -1.4
GYA                                    S       S        13 49 14.5 -2.0
GYA                                    pmax    pmax
       comp=Z,20nm,1.0s
GYA                                    pmax    pmax
       comp=Z,110nm,5.4s
SRDT   SRDT               90.78 286    P       P        13 38 31.4 +2.8
UTHA   Uthaitani          91.09 287    P       P        13 38 31.5 +1.4
DUG    Dugway, Tooele     91.14  44    P       P        13 38 30.3 +0.3
       baz=233
TXAR   Lajitas Array      91.21  57    P       P        13 38 31.6 +1.1
       comp=Z,0.9nm,0.8s,baz=210,slow=7.3,SNR=13
B05A   Bryant             91.23  34    P       P        13 38 30.7 +0.8
       baz=227
A04D   Lummi Island       91.25  33    P       P        13 38 30.8 +0.8
       baz=226
MA2    Magadan            91.47 345    P       P        13 38 29.8 -1.0
       comp=Z,4.7nm,0.8s,baz=180,slow=13,SNR=2.3
PHRA   Phrae              91.86 290    P       P        13 38 36.0 +2.4
D08A   Wollman Farm,      92.01  36   eP       P        13 38 34.2 +0.5
       comp=Z,12nm,0.9s
HLID   Hailey             92.24  41    P       P        13 38 35.8 +0.7
       baz=232
ANMO   Albuquerque        92.25  51deP       P        13 38 35.9 +0.6
ANMO                                   pmax    pmax
       comp=Z,6.0nm,1.4s
ANMO   Albuquerque        92.25  51    P       P        13 38 36.0 +0.6
       baz=237
LAMP   Lampang            92.37 290    P       P        13 38 39.7 +3.7
CMAR   Chiang Mai Arr     92.91 289    P       P        13 38 39.6 +1.1
       comp=Z,5.9nm,0.9s,baz=142,slow=3.6,SNR=24
CMAR                                   PP      PP       13 42 22.0 -0.6
       comp=Z,0.4nm,0.3s,baz=147,slow=5.2,SNR=4.7
XAN    Xi'an              93.07 307    P       P        13 38 38.5 -0.4
XAN                                    pmax    pmax
       comp=Z,23nm,1.0s
XAN                                    pmax    pmax
       comp=Z,100nm,5.7s
CMMT   Chiang Mai         93.07 290    P       P        13 38 40.2 +1.0
CHTO   Chiang Mai         93.08 290   eP       P        13 38 39.0 -0.2
       comp=Z,9.7nm,0.8s
CHTO   Chiang Mai         93.08 290   eP       P        13 38 39.1 -0.2
CHTO                                   pmax    pmax
       comp=Z,10.0nm,0.8s
KMI    Kunming            93.09 297    P       P        13 38 40.3 +0.9
KMI                                    pmax    pmax
       comp=Z,13nm,1.4s
S22A   4UR Ranch, Cre     93.54  49    P       P        13 38 42.5 +1.2
       baz=236
SEY    Seymchan           94.13 347    P       P        13 38 41.8 -1.2
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       comp=Z,12nm,0.8s,baz=150,slow=5.3,SNR=37
SDCO   Great Sand Dun     94.42  49    P       P        13 38 46.1 +0.7
       baz=237
BW06   Boulder Array      94.63  43    P       P        13 38 46.5 +0.4
       baz=235
PDAR   Pinedale Array     94.63  43    P       P        13 38 46.0 -0.2
       comp=Z,2.6nm,1.0s,baz=204,slow=3.3,SNR=17
PDAR                                   PKKPbc  PKKPdf   13 55 44.0 -0.8
       comp=Z,0.3nm,0.7s,baz=79,slow=9.3,SNR=2.6
HHC    Hu-ho-hao-te       95.00 314   eP       P        13 38 48.0 +0.3
HHC                                    pmax    pmax
       comp=Z,19nm,1.0s
HHC                                    LR      LR
       comp=Z,10.0nm,13.6s
HHC                                    LR      LR
       comp=Z,6.0nm,12.8s
CD2    Chengdu            95.19 302⇑iP       P        13 38 49.5 +0.8
MLY    Manley             95.54  11   eP       P        13 38 47.5 -2.0
       comp=Z,4.5nm,1.2s
DOT    Dot Lake           95.60  14   eP       P        13 38 48.3 -1.5
       comp=Z,6.5nm,0.8s
HDA    Harding Lake       95.67  13   eP       P        13 38 48.8 -1.3
       comp=Z,7.2nm,0.7s
HDA    Harding Lake       95.67  13    P       P        13 38 48.7 -1.3
       baz=207
TCOL   CIGO, UAF Yank     95.91  12    P       P        13 38 50.2 -0.9
       baz=206
COLA   College            95.92  12  i P       P        13 38 49.8 -1.3
COLA                                   pmax    pmax
       comp=Z,9.0nm,0.9s
ILAR   Eielson Array      96.01  13    P       P        13 38 49.9 -1.7
       comp=Z,2.1nm,0.8s,baz=220,slow=5.6,SNR=25
ILAR                                   PP      PP       13 42 44.1 -1.7
       comp=Z,0.9nm,1.0s,baz=218,slow=6.8,SNR=3.8
POKR   Poker Plat Res     96.21  12    P       P        13 38 52.2 -0.3
       baz=207
K22A   Casper             96.42  45    P       P        13 38 54.5 +0.3
       baz=237
BILL   Bilibino           96.94 354⇓iP       P        13 38 57.0 +1.3
BILL                                  e*PP     sP       13 39 35.4 +3.6
BILL                                   pmax    pmax
       comp=Z,6.0nm,1.1s
WMOK   Wichita Mounta     97.53  55    P       P        13 39 00.2 +0.9
       baz=241
RSSD   Black Hills        98.74  44    P       P        13 39 05.1 +0.5
       baz=239
TOLK   Toolik Lake Re     99.03  10    P       Pdif     13 39 06.3 +1.2
       baz=205
EPYK   Eagle Plains       99.58  16    P       Pdif     13 39 09.1 +1.5
       baz=216
SONM   Songino Array     101.81 318    P       Pdif     13 39 17.3 -0.8
       comp=Z,0.7nm,0.7s,baz=121,slow=5.6,SNR=3.2
GTA    Gaotai            102.07 308  ⇑P       Pdif     13 39 19.5  0.0
GTA                                    pmax    pmax
       comp=Z,3.0nm,1.1s
GTA                                    pmax    pmax
       comp=Z,26nm,6.7s
GTA                                    LR      LR
       comp=Z,100nm,19.4s
GTA                                    LR      LR
       comp=Z,80nm,19.7s
GTA                                    LR      LR
       comp=Z,91nm,19.4s
WMQ    Urumqi            112.14 309   ePKP     PKiKP    13 44 00.0  0.0
WMQ                                    PP      PP       13 44 48.5 +2.2
WMQ                                    AMB     AMB
       comp=Z,85nm,4.5s
WMQ                                    LR      LR
       comp=Z,320nm,29.0s
WMQ                                    LR      LR
       comp=Z,420nm,29.2s
WMQ                                    LR      LR
       comp=Z,80nm,29.0s
SMLA   Simla             116.07 293   ex       Pdif     13 40 27.0 +5.3
MKAR   Makanchi Array    116.64 311    PKP     PKPdf    13 44 07.0 -1.5
       comp=Z,4.1nm,0.8s,baz=73,slow=2.5,SNR=29
MKAR                                   PP      PP       13 45 16.4 -1.5
       comp=Z,0.6nm,0.8s,baz=79,slow=7.5,SNR=3.8
ZAA1   Zalesovo Array    116.68 319   ePKPdf   PKPdf    13 44 06.5 -1.8
ZALV   Zalesovo Beam     116.68 319    PKP     PKPdf    13 44 06.5 -1.8
       comp=Z,1.5nm,0.6s,baz=338,slow=1.6,SNR=7.2
KSH    Kashi             119.38 302   ePKP     PKPdf    13 44 14.0 -0.1
KSH                                    PP      PP       13 45 43.0 +5.8
KSH                                    PKS     PKSdf    13 47 49.5 -1.4
KURK   Kurchatov         119.81 315  i PKIKP   PKPdf    13 44 13.3 -1.1
AAK    Ala-Archa         121.15 305c iPKIKP   PKPdf    13 44 17.0 -0.5
AAK                                    pmax    pmax
       comp=Z,3.0nm,0.7s
KBL    Kabul             123.58 294   ePKPdf   PKPdf    13 44 22.4 -0.1
KBL    Kabul             123.58 294   ePKIKP   PKPdf    13 44 22.4 -0.1
BRVK   Borovoye          125.18 317   ePKPdf   PKPdf    13 44 23.7 -0.9
BRVK   Borovoye          125.18 317c iPKIKP   PKPdf    13 44 23.6 -1.1
BRVK                                   pmax    pmax
       comp=Z,12nm,1.0s
KBS    Kingsbay          129.27 358c iPKIKP   PKPdf    13 44 32.5 +0.7
KBS                                    pmax    pmax
       comp=Z,51nm,1.7s
KBS    Kingsbay          129.27 358   ePKPdf   PKPdf    13 44 31.5 -0.3
SPA0   Spitsbergen Ar    129.79 356   ePKPdf   PKPdf    13 44 30.9 -1.9
SPITS  Spitsbergen Ar    129.79 356    PKP     PKPdf    13 44 32.1 -0.7
       comp=Z,8.3nm,0.7s,baz=98,slow=6.0,SNR=10
ARU    Arti              131.68 322    PKP     PKPdf    13 44 36.0 -0.9
       comp=Z,2.0nm,0.5s,baz=168,slow=2.2,SNR=9.7
ARU    Arti              131.68 322  i PKIKP   PKPdf    13 44 36.3 -0.6
GEYT   Alibeck           132.85 297    PKP     PKPdf    13 44 40.6 +0.8
       comp=Z,5.8nm,0.7s,baz=96,slow=1.5,SNR=8.2
GEYT                                   SKPbc   SKPbc    13 47 53.5 -4.9
       comp=Z,1.3nm,0.6s,baz=186,slow=1.3,SNR=4.7
AKTO   Aktyubinsk        132.90 314    PKP     PKPdf    13 44 38.3 -1.1
       comp=Z,8.4nm,0.8s,baz=21,slow=1.4,SNR=28
LVZ    Lovozero          136.05 343c iPKIKP   PKPdf    13 44 45.4 +0.5
LVZ                                    pmax    pmax
       comp=Z,32nm,1.7s
HAMF   Hammerfest        136.06 350   ePKPdf   PKPdf    13 44 44.3 -0.4
PRGR   Permogore         136.20 332   ePKIKP   PKPdf    13 44 43.0 -2.2
PRGR                                   pmax    pmax
       comp=Z,7.0nm,0.5s
ARCES  ARCESS Array B 136.73 348    PKhKP   PKPpre   13 44 37.8
       comp=Z,1.4nm,0.7s,baz=66,slow=2.9,SNR=8.2
ARCES                                  PKP     PKPdf    13 44 44.8 -1.2
       comp=Z,4.4nm,0.6s,baz=45,slow=1.4,SNR=21
ARCES                                  SKPbc   SKPbc    13 48 02.7 -6.9
       comp=Z,2.8nm,0.9s,baz=102,slow=4.0,SNR=4.3
ARE0   ARCESS Array S 136.73 348   ePKPdf   PKPdf    13 44 45.1 -1.0
ARE0   ARCESS Array S 136.73 348   ePKPdf   PKPdf    13 44 44.7 -1.3
KTK1   Kautokeino        137.59 349   ePKPdf   PKPdf    13 44 47.4 -0.2
TRO    Tromso            137.67 351   ePKPdf   PKPdf    13 44 46.9 -0.8
KLMR   Klimovskoe        139.12 333   ePKIKP   PKPdf    13 44 48.7 -1.9
KLMR                                   pmax    pmax
       comp=Z,8.0nm,1.0s
STEI   Steigen           139.74 352   ePKPdf   PKPdf    13 44 52.2 +0.7
H10N3  ASCENSION HYDR140.48 153    T       T        16 21 53.5
       baz=204,slow=75,SNR=6.1
H10N1  ASCENSION HYDR140.48 153    T       T        16 22 12.4
       baz=204,slow=75,SNR=8.2
H10N2  ASCENSION HYDR140.50 153    T       T        16 21 44.9
       baz=204,slow=75,SNR=7.5
MOR8   Moi Rana          141.51 352   ePKPdf   PKPdf    13 44 54.2 -0.6
VRH    Novokhopyorsk     142.72 319   ePKIKP   PKPdf    13 44 55.5 -1.9
VRH                                    pmax    pmax
       comp=Z,10.0nm,0.5s
MOS    Moscow            142.81 327   ePKHKP   PKPpre   13 44 43.4
FINES  FINESS Array B    143.38 341    PKhKP   PKPab    13 44 53.7 -0.8
       comp=Z,6.0nm,0.7s,baz=57,slow=3.0,SNR=24
NSS    Namsos            143.38 353   e        PKPab    13 44 53.6 -0.8
ZEI    Tsey              143.57 304  i PKIKP   PKPab    13 44 55.6 -0.6
ZEI                                    pmax    pmax
       comp=Z,16nm,1.0s
OBN    Obninsk           143.66 327⇓ePKIKP   PKPab    13 44 55.7 -0.1
OBN                                   e                 13 45 41.9
OBN                                   e                 13 48 10.3
OBN                                    pmax    pmax
       comp=Z,15nm,1.2s
NCK    Nalchik           143.67 306  i PKIKP   PKPab    13 44 57.5 +1.2
LPSR   Galich'ya Gora    143.71 322   ePKHKP   PKPab    13 44 54.9 -1.2
LPSR                                   pmax    pmax
       comp=Z,10.0nm,0.8s
ONI    Oni               143.93 304    P       PKPab    13 44 58.7 +1.3
CLDR   Caldiran          144.00 298    P       PKPab    13 44 58.4 +0.4
AKH    Akhalkalaki       144.08 302⇑iP       PKPab    13 44 58.9 +0.7
KBZ    Khabaz            144.13 306    PKP     PKPab    13 44 58.0 +0.1
       comp=Z,10nm,1.0s,baz=87,slow=4.1,SNR=17
VSR    Storozhevoye      144.19 320   ePKIKP   PKPab    13 44 56.5 -1.5
VSR                                    pmax    pmax
       comp=Z,40nm,1.9s
VORD   Divnogorie        144.22 319   ePKIKP   PKPab    13 44 56.3 -1.8
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VORD				pmax	pmax		
	comp=Z,20nm,1.6s						
KIV	Kislovodsk	144.23	307	⇑iP	PKPab	13 44 58.9	+0.3
KIV	Kislovodsk	144.23	307	i PKIKP	PKPab	13 44 57.9	-0.7
KIV				pmax	pmax		
	comp=Z,75nm,1.1s						
SHA1	Shidzhatmaz	144.30	306	i PKIKP	PKPab	13 44 58.7	-0.3
CUKT	Cukurca	144.34	295	P	PKPab	13 44 58.9	-0.3
NEY	Neytrino	144.35	305	i PKIKP	PKPab	13 44 58.6	-0.5
AKDM	Akdamar-Van	144.78	297	P	PKPab	13 45 01.1	+0.2
TBLU	Trondheim	144.81	354	ePKPbc	PKPab	13 44 58.0	-2.0
SENK	Senkaya-Erzuru	145.05	301	P	PKPbc	13 45 01.8	0.0
BATM	Batumi	145.39	303	P	PKPdf	13 45 02.1	-0.3
BATM	Batumi	145.39	303	⇑iP	PKPdf	13 45 02.5	+0.1
BCA	Borcka	145.47	303	P	PKPdf	13 45 02.3	-0.3
BCA	Borcka	145.47	303	⇓iP	PKPdf	13 45 02.6	0.0
GURO	Guroymak-BITLI	145.51	297	P	PKPdf	13 45 03.5	+0.6
VSU	Vasula	145.51	337	eP	PKPdf	13 45 00.5	-1.5
VSU				IAmb	IAmb	13 45 02.0	
	comp=Z,349nm,0.9s						
MOL	Molde	145.71	356	ePKPdf	PKPdf	13 45 01.6	-0.6
DOMB	Dombas	146.11	354	ePKPdf	PKPdf	13 45 02.6	-0.5
AKN	Aaknes	146.13	356	ePKPdf	PKPdf	13 45 03.0	0.0
BNGB	Bingl	146.52	298	P	PKPdf	13 45 06.5	+1.9
YEDI	Yedisu-Bingol	146.57	299	P	PKPdf	13 45 06.4	+1.7
NC303	NORSAR Array S	146.66	352	ePKPdf	PKPdf	13 45 04.7	+0.7
NC204	NORSAR Array S	146.69	352	ePKPdf	PKPdf	13 45 05.0	+0.9
NC405	NORSAR Array S	146.73	352	ePKPbc	PKPdf	13 45 05.8	+1.7
MAZI	Mazidag	146.84	296	P	PKPdf	13 45 06.9	+1.7
NB2	NORSAR Subarra	146.86	352	PKP	PKPdf	13 45 04.7	+0.3
	comp=Z,24nm,0.7s,baz=22,slow=3.0						
NB2	NORSAR Subarra	146.86	352	PKP	PKPdf	13 45 04.7	+0.3
	baz=22,slow=3.0						
NOA	NORSAR Array B	146.86	352	PKPbc	PKPdf	13 45 04.2	-0.1
	comp=Z,16nm,0.6s,baz=14,slow=4.3,SNR=86						
KTUT	Trabzon	146.92	302	⇑iP	PKPbc	13 45 07.9	+0.8
NBO00	NORSAR Array S	146.92	352	ePKPbc	PKPdf	13 45 05.6	+1.2
NC602	NORSAR Array S	147.12	352	ePKPbc	PKPdf	13 45 05.7	+0.9
NC602	NORSAR Array S	147.12	352	ePKPdf	PKPdf	13 45 05.3	+0.5
HYA	Hoyanger	147.19	356	ePKPbc	PKPdf	13 45 06.7	+2.0
SUE	Sulen	147.36	358	ePKPbc	PKPdf	13 45 06.8	+1.7
HFS	Hagfors	147.38	349	PKP	PKPdf	13 45 03.8	-1.4
	comp=Z,49nm,0.8s,baz=126,slow=2.0,SNR=92						
HFS				PKPbc	PKPbc	13 45 06.3	-1.5
	comp=Z,50nm,0.8s,baz=64,slow=3.4,SNR=96						
SKAR	Skarslia	147.52	354	ePKPbc	PKPdf	13 45 07.4	+1.9
SLIT	Slitere, Latvi	147.61	340	eP	PKPdf	13 45 05.7	+0.1
SLIT				IAmb	IAmb	13 45 06.7	
	comp=Z,72nm,0.7s						
ANN	Anapa	147.65	310	ePKHKP	PKPdf	13 45 04.0	-2.1
ANN				i		13 45 07.8	
ANN				e		13 52 01.8	
ANN				pmax	pmax		
	comp=Z,101nm,1.5s						
SVRC	Sivrice-ELAZID	147.66	298	P	PKPbc	13 45 09.8	+0.3
IZAR	Zarasai	147.73	334	eP	PKPdf	13 45 07.5	+1.6
IZAR				IAmb	IAmb	13 45 09.9	
	comp=Z,31nm,0.8s						
ISAL	Salakas	147.91	334	eP	PKPdf	13 45 07.9	+1.7
ISAL				IAmb	IAmb	13 45 10.4	
	comp=Z,18nm,0.8s						
ASK	Askoy	147.92	357	ePKPbc	PKPdf	13 45 08.2	+2.1
MICGM	Minsk	147.98	332	⇑eP	PKPdf	13 45 07.0	+0.7
MICGM				PM		13 45 08.0	
	comp=Z,0.2nm,1.0s						
MNK	Minsk	147.98	332	⇑ePKIKP	PKPdf	13 45 07.0	+0.7
MNK				pmax	pmax		
	comp=Z,220nm,1.0s						
BER	Bergen	148.01	357	ePKPbc	PKPdf	13 45 08.4	+2.2
IIGN	Ignalina	148.04	334	eP	PKPdf	13 45 08.2	+1.7
IIGN				IAmb	IAmb	13 45 10.7	
	comp=Z,22nm,0.7s						
URFA	Urfa	148.14	296	P	PKPbc	13 45 10.9	+0.2
NACGM	Naroch	148.14	333	e	PKPab	13 45 18.0	+4.9
KONO	Kongsberg	148.41	353	d iPKP2	PKPdf	13 45 09.3	+2.4
KONO				pmax	pmax		
	comp=Z,54nm,1.0s						
KONO	Kongsberg	148.41	353	ePKPbc	PKPdf	13 45 09.3	+2.4
ODD1	Odda	148.41	356	ePKPbc	PKPdf	13 45 09.6	+2.7
BLS5	Blasjo	148.91	356	ePKPbc	PKPdf	13 45 10.9	+3.2
KMY	Karmoy	149.19	357	ePKPbc	PKPbc	13 45 11.6	-0.8
KMRS	Kahramanmaras	149.65	296	P	PKPbc	13 45 13.4	-1.0
SIM	Simferopol'	149.81	312	⇑iPKP2	PKPbc	13 45 15.0	+0.5
SIM				pmax	pmax		
	comp=Z,32nm,0.7s						
AKASG	Malin Array Be	149.83	325	PKPbc	PKPdf	13 45 13.0	+3.6
	comp=Z,45nm,0.8s,baz=44,slow=3.0,SNR=24						
HOMB	Homborsund	149.88	353	ePKPbc	PKPbc	13 45 13.5	-0.6
SNART	Snartemo	149.93	355	ePKPbc	PKPbc	13 45 13.6	-0.7
DIKM	Dikmen	150.09	305	⇓iP	PKPbc	13 45 15.4	+0.1
SUW	Suwalki	150.21	335	ePKP	PKPbc	13 45 14.1	-1.0
SUW	Suwalki	150.21	335	ePKIKP	PKPbc	13 45 14.1	-1.0
BNN	Bunyan	150.27	299	P	PKPdf	13 45 11.4	+0.7
YOZ	Yozgat	150.52	301	P	PKPbc	13 45 15.8	-0.8
YURE	YUREGIR	150.74	295	P	PKPbc	13 45 16.8	-0.2
BZK	Bozkurt	150.90	306	⇑iP	PKPbc	13 45 17.2	0.0
CORM	Corum	150.92	302	P	PKPbc	13 45 17.5	0.0
MUD	Monsted U'grnd	151.58	352	i PKIKP	PKPbc	13 45 17.6	-0.6
MUD				pmax	pmax		
	comp=Z,30nm,0.9s						
MUD	Monsted U'grnd	151.58	352	i P	PKPbc	13 45 17.6	-0.6
	comp=Z,30nm,0.9s						
MERS	Mersin	151.61	296	P	PKPbc	13 45 18.4	-0.7
BR101	Keskin Array S	151.76	302	ePKPbc	PKPbc	13 45 18.4	-1.1
BR131	Keskin Array S	151.76	302	ePKPbc	PKPbc	13 45 18.8	-0.7
BRTR	Keskin Array B	151.76	302	PKPbc	PKPbc	13 45 18.4	-1.1
	comp=Z,11nm,0.9s,baz=126,slow=2.6,SNR=23						
COP	Copenhagen	151.81	348	i PKIKP	PKPbc	13 45 18.5	-0.3
COP				pmax	pmax		
	comp=Z,48nm,0.7s						
COP	Copenhagen	151.81	348	i P	PKPbc	13 45 18.5	-0.3
	comp=Z,48nm,0.7s						
KIZK	Mersin	151.97	295	P	PKPbc	13 45 19.0	-0.8
KEBE	Keben-Mersin	152.31	295	P	PKPbc	13 45 20.5	-0.2
ANTO	Ankara	152.36	302	P	PKPbc	13 45 20.2	-0.5
ANTO	Ankara	152.36	302	⇓iP	PKPbc	13 45 20.0	-0.7
ANTO	Ankara	152.36	302	⇓PKIKP	PKPbc	13 45 20.0	-0.7
IKL	Isikli	152.36	294	P	PKPbc	13 45 20.2	-0.5
CHBY	Cihanbeyli	152.59	300	P	PKPbc	13 45 19.9	-1.4
BERE	Bereket-Mersin	152.72	295	P	PKPbc	13 45 20.3	-1.4
CSS	Mathiatis	152.79	292	P	PKPbc	13 45 20.7	-1.0
CSS	Mathiatis	152.79	292	ePKPbc	PKPbc	13 45 21.1	-0.6
BEL	Belsk	152.82	334	ePKP	PKPbc	13 45 21.0	-0.2
BEL	Belsk	152.82	334	ePKIKP	PKPbc	13 45 21.0	-0.2
TEKE	Tekeli-Mersin	152.83	294	P	PKPbc	13 45 20.7	-1.1
GKP	Gorka Klasztor	152.84	340	ePKP	PKPbc	13 45 21.0	-0.2
GKP	Gorka Klasztor	152.84	340	ePKIKP	PKPbc	13 45 21.0	-0.2
LVV	L'vov	152.94	328	ePKIKP	PKPbc	13 45 20.6	-0.9
LVV				e		13 45 32.8	
CFR	Carcaliu	153.52	316	⇑iP	PKPbc	13 45 22.4	-0.5
CFR	Carcaliu	153.52	316	⇑PKIKP	PKPbc	13 45 22.4	-0.5
KWP	Kalwaria Pacla	153.68	329	ePKP	PKPab	13 45 35.4	-0.9
KWP	Kalwaria Pacla	153.68	329	ePKP2	PKPab	13 45 35.4	-0.9
BIZ	Bicaz	153.74	321	⇑iP	PKPbc	13 45 23.2	-0.2
BURAR	Bucovina Array	153.81	323	⇑iP	PKPbc	13 45 24.4	+0.8
TLB	Topalu	153.87	315	⇓iP	PKPbc	13 45 23.9	+0.2
TLB	Topalu	153.87	315	⇓PKIKP	PKPbc	13 45 23.9	+0.2
VRI	Vrincioaia	154.00	319	⇑iP	PKPab	13 45 38.5	+0.7
VRI	Vrincioaia	154.00	319	⇑PKP2	PKPab	13 45 38.5	+0.7
PLOR	Plostina	154.05	319	⇑iP	PKPab	13 45 37.2	-0.8
PLOR	Plostina	154.05	319	⇑PKP2	PKPab	13 45 37.2	-0.8
SILT	Sile	154.25	307	⇑iP	PKPab	13 45 38.7	-0.3
KOLS	Kolonicke sedl	154.38	328	ePKIKP	PKPbc	13 45 24.9	+0.2
KOLS				e		13 45 39.7	
KOLS	Kolonicke sedl	154.38	328	ePKP	PKPbc	13 45 24.9	+0.2
KOLS				e		13 45 39.7	
OJC	Ojcow	154.48	333	ePKPdf	PKPdf	13 45 15.3	-1.0
OJC				ePKPbc	PKPbc	13 45 24.6	-0.3
OJC				ePKPab	PKPab	13 45 38.3	-1.3
OJC	Ojcow	154.48	333	ePKIKP	PKPdf	13 45 15.4	-1.0
UZH	Uzhgorod	154.59	328	ePKP2	PKPab	13 45 38.0	-2.1
YLV	Yalova	154.65	306	⇑iP	PKPab	13 45 40.3	-0.5
YLV	Yalova	154.65	306	⇑PKP2	PKPab	13 45 40.3	-0.5
MLR	Muntele Rosu	154.66	319	⇓iP	PKPab	13 45 35.1	-5.7
DOPR	Dopca	154.71	320	⇓iP	PKPbc	13 45 24.9	-0.6
PRD	Provadia	154.94	313	eP	PKPab	13 45 42.1	+0.3
VOIR		155.21	319	⇑iP	PKPab	13 45 34.9	-8.1
KSP	Ksiaz	155.23	338	ePKPdf	PKPdf	13 45 17.1	-0.2
KSP				ePKPbc	PKPbc	13 45 26.4	
KSP				ePKPab	PKPab	13 45 42.3	-0.5
KSP	Ksiaz	155.23	338	ePKIKP	PKPdf	13 45 17.2	-0.2
LANS	Liptovska Anna	155.45	332	ePKIKP	PKPdf	13 45 21.6	+3.8
LANS	Liptovska Anna	155.45	332	ePKP	PKPdf	13 45 21.6	+3.8
ARR	Arges	155.49	320	⇑iP	PKPab	13 45 45.2	+1.0
OSTC	Ostas	155.50	338	ePKPDF	PKPdf	13 45 16.6	-1.2
OSTC				ePKPAB	PKPab	13 45 44.9	+0.9
KECS	Kecovo	155.52	330	ePKP2	PKPab	13 45 43.5	-0.6
KECS	Kecovo	155.52	330	ePKP	PKPab	13 45 43.5	-0.6
CHVC	Chvalec	155.53	338	ePKPAB	PKPab	13 45 43.2	-0.9
UPC	Upice	155.61	338	ePKIKP	PKPdf	13 45 22.7	+4.8
UPC				e		13 45 43.8	
UPC	Upice	155.61	338	ePKPDF	PKPdf	13 45 22.7	+4.8
UPC				ePKPAB	PKPab	13 45 43.8	-0.6
DPC	Dobruska-Polom	155.64	338	⇑ePKP	PKPdf	13 45 27.3	+9.2
DPC				ePKPAB	PKPab	13 45 43.8	-0.8
DRGR		155.64	324	⇑iP	PKPdf	13 45 27.0	+8.8
MORC	Moravsky Berou	155.70	335	⇑iP	PKPab	13 45 43.9	-1.0
MORC	Moravsky Berou	155.70	335	⇑PKP2	PKPab	13 45 43.9	-1.0
MORC	Moravsky Berou	155.70	335	ePKP	PKPab	13 45 44.0	-1.0
CLL	Collm	155.77	343	⇓iPKPbc	PKPdf	13 45 26.8	+8.7
	comp=Z,13nm,1.2s						
CLL				i PKPab	PKPab	13 45 43.8	-1.2
CLL				e(PP)		13 49 30.0	
CLL				e		14 13 00.0	
BRG	Berggiesshubel	155.91	342	ePKP	PKPdf	13 45 17.6	-0.7
	comp=Z,8.1nm,1.3s						
BRG				e		13 45 44.6	
	comp=Z,7.4nm,0.8s						
PVCC	Panska Ves	156.04	340	ePKP2	PKPab	13 45 46.0	-0.3
PVCC	Panska Ves	156.04	340	ePKPAB	PKPab	13 45 46.0	-0.3
PSZ	Piszkesteto	156.20	330	⇑iP	PKPdf	13 45 29.2	+10
VYHS	Vyhne	156.22	332	ePKP	PKPdf	13 45 29.0	+10
VYHS				e		13 45 46.3	
JAVC	Velka Javorina	156.40	334	ePKP	PKPab	13 45 48.1	+0.1
VRAC	Vranov	156.43	336	ePKP	PKPab	13 45 47.4	-0.6
GZR	Gura Zlata	156.51	322	⇑iP	PKPdf	13 45 28.9	+10
GZR	Gura Zlata	156.51	322	⇑PKIKP	PKPdf	13 45 28.9	+10
KRUC	Moravsky	156.71	336	ePKP	PKPab	13 45 48.5	-0.7
SMOL	Smolenice	156.77	334	ePKP2	PKPab	13 45 49.9	+0.4
SMOL	Smolenice	156.77	334	ePKP	PKPab	13 45 49.9	+0.4
LIC	Lamto	156.85	162	ePKP2	PKPab	13 45 52.1	+1.5
	comp=Z,50nm,1.0s						
MODS	Modra-Piesok	156.94	334	ePKP2	PKPab	13 45 49.7	-0.6
MODS	Modra-Piesok	156.94	334	ePKP	PKPab	13 45 49.7	-0.6
KIC	Kosan Boka	157.06	162	ePKP2	PKPab	13 45 53.2	+1.6
	comp=Z,31nm,1.0s						
TIC	Toumodi	157.25	161	ePKP2	PKPab	13 45 53.7	+1.3
KHC	Kasperske Hory	157.58	340	ePKIKP	PKPdf	13 45 19.3	-1.3
KHC				e		13 45 52.1	
KHC	Kasperske Hory	157.58	340	ePKPDF	PKPdf	13 45 19.3	-1.3
KHC				ePKPAB	PKPab	13 45 52.1	-0.9
GERES	GERESS Array B	157.79	340	PKP	PKPdf	13 45 19.5	-1.5
	comp=Z,0.3nm,0.2s,baz=93,slow=6.7,SNR=5.2						
GERES				PKPab	PKPab	13 45 51.6	-2.4
	comp=Z,1.6nm,0.7s,baz=26,slow=3.4,SNR=7.5						
CONA	Conrad Observa	157.85	335	i PKPab	PKPab	13 45 54.0	-0.3
	comp=Z,12nm,1.1s,SNR=8.1						
VTS	Vitosha	157.87	315	⇑iP	PKPab	13 45 55.0	+0.3
VTS	Vitosha	157.87	315	⇑PKP2	PKPab	13 45 55.0	+0.3
VTS	Vitosha	157.87	315	eP	PKPab	13 45 54.9	+0.3
MMB	Musomiste	158.10	312	eP	PKPab	13 45 55.2	-0.4
MOA	Molln	158.49	337	i P	PKPab	13 45 56.6	-0.4
	comp=Z,11nm,1.1s						
VAY	Valandovo	158.98	313	i P	PKPab	13 45 58.6	-0.7
SOKA	Soboth	159.21	334	i PKPab	PKPab	13 45 59.1	-1.1
	comp=Z,9.2nm,0.9s,SNR=6.4						
SKO	Skopje	159.34	316	i P	PKPab	13 46 01.2	+0.3
KBA	Koelnbreinsper	159.47	338	i P	PKPab	13 45 58.5	-2.9
	comp=Z,4.2nm,0.9s						
OBKA	Obir	159.53	335	i P	PKPab	13 45 58.7	-2.9
	comp=Z,5.7nm,0.8s						
MYKA	Terra Mystica	159.75	337	i PKPab	PKPab	13 46 01.0	-1.5
	comp=Z,8.4nm,0.6s,SNR=7.6						
WATA	Walderalm	159.78	341	i PKPab	PKPab	13 46 02.5	-0.2
	comp=Z,4.2nm,0.5s						
WTTA	Wattenberg	159.83	341	i PKPab	PKPab	13 46 02.5	-0.5
	comp=Z,12nm,0.7s,SNR=5.8						
RETA	Reutte	159.86	343	i PKPab	PKPab	13 46 02.1	-0.9
	comp=Z,6.9nm,1.1s						
MOTA	Moosalm	159.90	342	i PKPab	PKPab	13 46 02.4	-0.8
	comp=Z,5.1nm,0.9s						
SQTA	Sankt Quirin	159.99	342	i PKPab	PKPab	13 46 02.3	-1.3
	comp=Z,11nm,0.9s						
ABTA	Abfaltersbach	160.03	339	i PKPab	PKPab	13 46 02.3	-1.4
	comp=Z,7.0nm,0.6s						
DAVA	Damuels	160.27	344	i PKPab	PKPab	13 46 03.9	-0.9
	comp=Z,8.3nm,0.9s						
FETA	Feichten	160.30	342	i PKPab	PKPab	13 46 04.1	-0.9
	comp=Z,3.7nm,1.0s						
PDG	Podgorica	160.36	320	⇑iP	PKPab	13 46 04.6	-0.6
PGAV	Gavieira, Arco	164.07	30	ePKPdf	PKPdf	13 45 28.3	+0.4
TORD	Torodi Ar. Bea	164.75	178	PKP	PKPdf	13 45 29.0	-0.1
	comp=Z,2.6nm,0.8s,baz=350,slow=2.3,SNR=12						
TORD				PKPab	PKPab	13 46 25.9	+0.8
	comp=Z,4.9nm,0.9s,baz=199,slow=1.9,SNR=12						
POLO	Lamas de Olo	164.76	30	ePKPab	PKPab	13 46 24.1	-0.6
TOA1	Torodi Ar. Sit	164.76	178	ePKPdf	PKPdf	13 45 29.0	-0.1
TOA1				ePKPab	PKPab	13 46 25.9	+0.8
PVIS	Viseu	165.24	31	ePKPab	PKPab	13 46 25.3	-1.5
MVO	Moncorvo	165.26	28	ePKPdf	PKPdf	13 45 29.5	+0.6
MVO	Moncorvo	165.26	28	ePKPab	PKPab	13 46 26.6	-0.2
MTE	Manteigas	165.66	31	ePKPdf	PKPdf	13 45 29.7	+0.4
MTE	Manteigas	165.66	31	ePKPab	PKPab	13 46 28.5	-0.1
PCBR	Castelo Branco	166.13	33	ePKPdf	PKPdf	13 45 30.2	+0.7
PCBR	Castelo Branco	166.13	33	ePKPab	PKPab	13 46 30.3	-0.3
PMRV	Marv??o	166.49	33	ePKPdf	PKPdf	13 45 29.8	-0.1
PMRV	Marv??o	166.49	33	ePKPab	PKPab	13 46 31.7	-0.6
PNCL	Nicolau / Gran	166.87	40	ePKPdf	PKPdf	13 45 30.1	-0.1
PNCL	Nicolau / Gran	166.87	40	ePKPab	PKPab	13 46 33.6	-0.4
ESDC	Sonseca Array	167.72	23	PKP	PKPdf	13 45 30.9	+0.1
	comp=Z,0.4nm,0.4s,baz=330,slow=2.4,SNR=10						
ESDC				PKPab	PKPab	13 46 37.0	-0.7
	comp=Z,0.6nm,0.3s,baz=349,slow=3.4,SNR=7.9						
ESDC				PP	PP	13 50 23.9	-1.9
	comp=Z,0.1nm,0.3s,baz=330,slow=4.6,SNR=4.0						
KEST	Kesra	170.54	322	PKP	PKPdf	13 45 32.6	-0.1
	comp=Z,1.8nm,0.5s,baz=86,slow=3.1,SNR=4.3						
KEST				PKPab	PKPab	13 46 49.1	-1.3
	comp=Z,6.0nm,0.8s,baz=278,slow=4.5,SNR=7.7						

TIF ***25*** *13:31:22.8,42°.34N×40°.89E,h38^{km}±1^{km}*
DDA ***25*** *13:32:06.0,42°.37N×40°.99E,h16^{km},ML3.6*
ISC 25 13:31:21.5±1.2,**42°.43N**±0°.02×**41°.01E**±0°.03,**h7**^{km}±10^{km},
n23,σ**0^{s}.58**/46,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATM	Batumi	0.97	148	P	Pn	13 31 41.5	-0.1
BATM				S	Sn	13 31 54.8	-0.8
BATM	Batumi	0.97	148	i P	Pn	13 31 42.1	+0.5
BATM				i S	Sn	13 31 56.9	+1.3
BATM	Batumi	0.97	148	ePg	Pn	13 31 41.5	-0.1
BATM				eSg	Sn	13 31 54.8	-0.8
DOMR	Dombai	0.97	27	ePg	Pb	13 31 41.1	+0.2
DOMR				i Sg	Sb	13 31 53.9	-0.1
ARXR	Arkhyz	1.15	10	ePg	Pn	13 31 44.2	0.0
ARXR				i Sg	Sb	13 31 59.1	+0.1
DBOC	Borcka	1.19	155	i P	Pn	13 31 44.7	+0.1
DBOC				i S	Sn	13 32 00.5	-0.5
DBOC				IAML_P			
	comp=Z,7µm,0.1s						
RPOR	Krasnaya Polya	1.38	337	ePg	Pg	13 31 48.3	+0.3
RPOR				eSg	Sn	13 32 06.9	+1.0
TKB	Tkibuli	1.47	92	P	Pb	13 31 49.2	-0.1
TKB				S	Sg	13 32 08.7	-0.2
SOC	Sochi	1.50	321	ePg	Pg	13 31 50.2	0.0
SOC				eSg	Sg	13 32 09.8	+0.2
DBAD	Bademkaya	1.50	160	i P	Pg	13 31 49.9	-0.4
DBAD				i S	Sn	13 32 07.8	-1.0
DBAD				IAML_P			
	comp=Z,2µm,0.1s						
NEY	Neytrino	1.50	56	ePg	Pg	13 31 50.1	-0.3
NEY				eSg	Sb	13 32 09.5	+0.3
DAGI	Agillar	1.51	153	i P	Pn	13 31 49.3	+0.2
DAGI				i S	Sn	13 32 08.7	-0.4
DAGI				IAML_P			
	comp=Z,1µm,0.1s						
EPOS	Posof	1.58	125	i P	Pb	13 31 51.0	-0.1
EPOS				i S	Sg	13 32 13.7	+1.4
DDEM	Demirkent	1.63	160	i P	Pg	13 31 52.8	0.0
DDEM				i S	Sb	13 32 13.1	+0.2
DDEM				IAML_P			
	comp=Z,3µm,0.2s						
SHA1	Shidzhatmaz	1.78	42	ePg	Pg	13 31 55.5	-0.2
SHA1				eSg	Sg	13 32 18.2	-0.6
ONI	Oni	1.81	84	P	Pg	13 31 56.0	-0.2
ONI				S	Sg	13 32 20.3	+0.5
ONI	Oni	1.81	84	ePg	Pg	13 31 56.0	-0.2
ONI				eSg	Sg	13 32 20.3	+0.5
LZRR	Lazarevskoye	1.92	322	ePg	Pg	13 31 58.6	+0.3
LZRR				i Sg	Sg	13 32 23.4	+0.1
KIV0	Kislovodsk Arr	1.96	38	ePg	Pg	13 31 58.6	-0.6
KIV0				eSg	Sg	13 32 23.6	-1.0
KRIK	Erzurum-spir	2.09	182	i P	Pb	13 31 59.3	-0.6
KRIK				i S	Sn	13 32 24.1	+0.5
ZEI	Tsey	2.17	79	ePg	Pb	13 32 00.4	-0.8
ZEI				eSg	Sb	13 32 28.6	+0.2
AGYR	Agha	2.24	321	ePg	Pg	13 32 04.6	+0.1
AGYR				i Sg	Sg	13 32 32.9	-0.7
LACR	Lac	2.46	80	i Pn	Pg	13 32 09.9	+1.3
LACR				eSn	Sg	13 32 40.8	+0.3

MEX 25 13:35:58.2±1.2,**18°.70N**×**103°.34W,h18**^{km}±999^{km},**MD3.5,**
Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.41	181	eP	Pg	13 36 06.2	-0.4
MMIG				eS	Sg	13 36 09.7	-2.6
EZ5V		0.81	342	i P	Pb	13 36 11.3	-2.7
EZ5V				i S	Sb	13 36 22.2	-2.6
ARIG	Puente Sto Nin	2.87	98	i P	Pn	13 36 40.0	-3.2
ARIG				i S	Sn	13 37 13.6	-3.7

ISK ***25*** *13:39:20.6,38°.35N×31°.85E,h5^{km},ML2.0/6*
ISCJB ***25*** *13:39:21.2±0.6,38°.36N±0°.03×31°.83E±0°.05,h4^{km}±8^{km},*
Error ellipse: s-maj=6.5km s-min=4.9km az=29.0
DDA ***25*** *13:39:21.2,38°.32N×31°.84E,h7^{km}±5^{km},ML2.6*
ISC 25 13:39:21.3±1.0,**38°.33N**±0°.03×**31°.82E**±0°.03,**h10**^{km}±9^{km},
n14,σ**1^{s}.53**/23,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOGA	KONYA_Doganhis	0.25	208	i P	Pg	13 39 26.1	-0.4
DOGA				i S	Sg	13 39 31.0	+1.0
DOGA				IAML_P			
	comp=Z,4µm,0.2s						
KDHN	Kadinhani	0.30	51	i P	Pg	13 39 27.4	-0.1
KDHN				i S	Sg	13 39 32.2	+0.6
KDHN				IAML_P			
	comp=Z,7µm,0.2s						
LADK	Ladik-KONYA	0.45	106	PG	Pg	13 39 29.4	-0.7
LADK				SG	Sg	13 39 35.9	-0.2
KIZT	Kizilcal	0.55	5	PG	Pg	13 39 31.4	-0.7
KONT	Konya--Tatoy	0.57	132	PG	Pg	13 39 31.8	-0.7
KONT	Konya--Tatoy	0.57	132	i P	Pb	13 39 32.5	-1.0
KONT				i S	Sb	13 39 40.5	-1.1
KONT				IAML_P			
	comp=Z,3µm,0.2s						
KMER	Konya-Meram	0.71	142	i P	Pb	13 39 35.6	-0.2
KMER				i S	Sn	13 39 46.7	-1.8
KMER				IAML_P			
	comp=Z,367nm,0.1s						
BOLV	Bolvadin	0.78	300	i P	Pg	13 39 33.7	-2.7
BOLV				i S	Sb	13 39 49.0	+1.2
BOLV				IAML_P			
	comp=Z,251nm,0.1s						
BAGO	Egridir - ISPA	0.88	248	i P	Pg	13 39 38.5	+0.3
BAGO				i S	Sn	13 39 52.3	-0.3
BAGO				IAML_P			
	comp=Z,521nm,0.2s						
CHBY	Cihanbeyli	0.88	73	PG	Pg	13 39 37.3	-1.0
AUSIV	SIVRIHISAR	1.13	349	PN	Pb	13 39 42.4	-0.6
SVRH	Sivrihisar-ESK	1.14	348	PN	Pb	13 39 42.5	-0.7
KKUL	Konya-Kulu	1.20	45	i P	Pg	13 39 45.1	+0.7
KKUL				i S	Sn	13 40 03.8	+3.1
KKUL				IAML_P			
	comp=Z,175nm,0.2s						
KEPZ	Antalya-Kepez	1.43	187	i P	Pg	13 39 48.2	-0.6
KEPZ				i S	Sg	13 40 11.3	+3.8
KEPZ				IAML_P			
	comp=Z,361nm,0.2s						

DDA 25 13:43:51.2,40°.22N×**33°.12E,h7**^{km}±2^{km},**ML2.6,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DELI	KIRIKKALE	0.65	110	i P	Pg	13 44 04.0	+0.3
DELI				i S	Sb	13 44 14.9	+0.6
DELI				IAML_P			
	comp=Z,299nm,0.2s						
BCAM	Yenicaga	1.00	307	i P	Pb	13 44 11.2	+0.3
BCAM				i S	Sn	13 44 29.7	+3.5
BCAM				IAML_P			
	comp=Z,1µm,0.1s						
CDAG	Cicekdag	1.13	121	eP	Pn	13 44 13.9	+0.3
CDAG				i S	Sn	13 44 32.4	+2.9
CDAG				IAML_P			
	comp=Z,430nm,0.1s						
KIRS	Kırehir-Merke	1.25	150	i P	Pn	13 44 15.7	+0.5
KIRS				i S	Sn	13 44 35.4	+3.1
KIRS				IAML_P			
	comp=Z,218nm,0.1s						

MEX 25 13:53:48.8±0.8,**17°.22N**×**100°.05W,h30**^{km}±8^{km},**MD3.7,**
Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.27	230	eP	Pb	13 53 53.9	-1.9
CAIG				i S	Sb	13 53 59.6	-1.0
MEIG	Mezcala	0.81	31	eP	Pn	13 54 01.4	-2.9
MEIG				i S	Sb	13 54 12.6	-2.6
ARIG	Puente Sto Nin	1.09	345	eP	Pn	13 54 05.2	-2.9
ARIG				eS	Sn	13 54 19.3	-2.9
PLIG	Platanillo	1.28	24	eP	Pn	13 54 08.4	-2.3
PLIG				i S	Sn	13 54 24.2	-2.7
ZIIG	Zihuatanejo	1.40	286	eP	Pn	13 54 10.6	-1.8
ZIIG				i S	Sn	13 54 27.5	-2.3
TLIG	Tlapa	1.46	76	eP	Pn	13 54 11.3	-2.0
TLIG				eS	Sn	13 54 29.3	-2.2
MMIG	Aquila	3.31	289	i P	Pn	13 54 36.7	-1.9
MMIG				eS	Sn	13 55 15.5	-1.5

MAN 25 13:57:40.4,9°.78N×**122°.27E,h34**^{km},**mb4.0,ML2.8,MS2.4,**
1C,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	1.05	114	⇑iP	Pn	13 57 59.2	+0.4
SNPH				i S	Sn	13 58 12.4	0.0
CUYO	Cuyo Island	1.62	311	eP	Pn	13 58 06.9	+0.2
CUYO				eS	Sn	13 58 27.1	+0.6

MEX 25 14:02:15.9±0.5,**16°.92N**×**98°.57W,h10**^{km}±8^{km},**MD3.5,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIG	Platanillo	1.72	329	i P	Pn	14 02 43.0	-3.0
PLIG				i S	Sn	14 03 02.6	-5.4

IDC ***25*** *14:11:52.0±1.1,53°.07N×170°.93E,h0^{km},mb3.8/13,*
mb1 4.0/13,mb1mx3.8/36,mbtmp3.8/13,Error ellipse:
s-maj=28.5km s-min=20.1km az=8.0
ISCJB ***25*** *14:11:54.5±0.5,53°.10N±0°.08×170°.93E±0°.05,h24^{km},*
mb3.9/27,Error ellipse: s-maj=11.2km s-min=3.9km
az=176.0
MOS ***25*** *14:11:55.9±1.2,53°.02N×170°.90E,h42^{km},mb4.0/2,Error*
ellipse: s-maj=11.5km s-min=8.6km az=34.3
NEIC ***25*** *14:11:56.4±2.2,53°.10N×171°.02E,h26^{km}±6^{km},mb4.0/20,*
Error ellipse: s-maj=25.7km s-min=7.6km az=187.0
KRSC ***25*** *14:12:01.9±1.6,53°.22N×170°.19E,h137^{km}±42^{km},ML4.1*
ISC 25 14:11:55.1±0.7,**52°.96N**±0°.10×**170°.77E**±0°.05,**h24**^{km},**n82,**
σ**2^{s}.57**/96,**mb3.9**/27,**Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	2.03	95	ePn	Pn	14 12 27.1	-0.7
SMY				eSn	Sn	14 12 47.2	-5.2

SMY	Shemya	2.03	95	*e*P	Pn	14 12 27.1	-0.7
SMY				*e*		14 12 47.2	
BKI	Bering	3.61	310	*e*P	Pn	14 12 53.0	+3.5
BKI				*e*S	Sn	14 13 31.3	0.0
BKI	Bering	3.61	310	P	Pn	14 12 53.0	+3.5
BKI				S	Sn	14 13 31.3	0.0
MKZ	Mys Kozlova	5.59	290	*e*P	Pn	14 13 18.4	+1.7
MKZ				*e*S	Sn	14 14 15.9	-4.3
MKZ	Mys Kozlova	5.59	290	P	Pn	14 13 18.4	+1.7
MKZ				S	Sn	14 14 15.9	-4.3
KBTR	Krutoberegovo	5.65	308	*e*P	Pn	14 13 18.5	+1.0
KBTR	Krutoberegovo	5.65	308	P	Pn	14 13 18.5	+1.0
SPN	Mys Shipunski	6.49	275	*e*P	Pn	14 13 33.0	+4.0
SPN				*e*S	Sn	14 14 39.7	-2.4
SPN	Mys Shipunski	6.49	275	P	Pn	14 13 33.0	+4.0
SPN				S	Sn	14 14 39.7	-2.4
TUMD	Tumrok D	6.50	294	*e*P	Pn	14 13 31.3	+2.1
TUMD				*e*S	Sn	14 14 38.7	-3.9
TUMR	Tumrok	6.66	295	P	Pn	14 13 31.3	-0.2
SDLR	Sedlovina	7.16	277	*e*P	Pn	14 13 41.8	+3.4
SDLR				*e*S	Sn	14 14 56.1	-2.9
SDLR	Sedlovina	7.16	277	P	Pn	14 13 41.8	+3.4
SDLR				S	Sn	14 14 56.1	-2.9
UGLR	Uglovaya	7.20	277	*e*P	Pn	14 13 43.0	+4.1
UGLR	Uglovaya	7.20	277	P	Pn	14 13 43.0	+4.1
SMAR	Somma	7.21	277	*e*P	Pn	14 13 41.9	+2.7
SMAR	Somma	7.21	277	P	Pn	14 13 41.9	+2.7
AVH	Avacha	7.25	277	*e*P	Pn	14 13 42.5	+3.0
AVH				*e*S	Sn	14 14 56.7	-4.4
AVH	Avacha	7.25	277	P	Pn	14 13 42.5	+3.0
AVH				S	Sn	14 14 56.7	-4.4
DALK	Dalny	7.25	275	*e*P	Pn	14 13 43.9	+4.4
DALK				*e*S	Sn	14 14 59.3	-1.7
DALK	Dalny	7.25	275	P	Pn	14 13 43.9	+4.4
DALK				S	Sn	14 14 59.3	-1.7
KRMR	Karymshinskiy	7.65	274	*e*S	Sn	14 15 07.6	-3.1
GNL	Ganaly	7.72	281	*e*P	Pn	14 13 50.1	+4.1
GNL				*e*S	Sn	14 15 08.8	-3.8
GNL	Ganaly	7.72	281	P	Pn	14 13 50.1	+4.1
GNL				S	Sn	14 15 08.8	-3.8
ASAK	Asacha	7.85	271	*e*P	Pn	14 13 51.1	+3.4
ASAK	Asacha	7.85	271	P	Pn	14 13 51.1	+3.4
KDTR	Khodutka, Kamc	7.85	267	*e*P	Pn	14 13 50.5	+2.8
KDTR				*e*S	Sn	14 15 11.8	-4.0
KDTR	Khodutka, Kamc	7.85	267	P	Pn	14 13 50.5	+2.8
KDTR				S	Sn	14 15 11.8	-4.0
PEA0B	Petropavlovsk-	7.88	276	*e*Pn	Pn	14 13 53.6	+5.5
PEA1	Petropavlovsk-	7.88	276	*e*Pn	Pn	14 13 52.5	+4.3
PEA1				*e*Sn	Sn	14 15 13.6	-3.0
PETK	Petropavlovsk-	7.88	276	Pn	Pn	14 13 52.5	+4.3
	0.6nm,0.3s,baz=93,slow=20,SNR=12						
PETK				Sn	Sn	14 15 13.6	-3.0
	0.5nm,0.3s,baz=90,slow=19,SNR=4.7						
TILK	Tilichiki	7.92	343	*e*P	Pn	14 13 52.4	+3.8
TILK	Tilichiki	7.92	343	P	Pn	14 13 52.4	+3.8
SPIA	Saint Paul Isl	11.66	61	*e*Pn	Pn	14 14 40.4	+0.6
OHAK	Old Harbor	20.84	64	*e*P	P	14 16 33.1	-1.7
	4.7nm,0.8s						
KDAK	Kodiak Island	21.19	62	P	P	14 16 36.5	-2.0
	1.4nm,0.3s,baz=288,slow=3.4,SNR=17						
KDAK	Kodiak Island	21.19	62	*e*P	P	14 16 36.5	-2.0
KDAK				*e*Pn	P	14 16 36.6	-1.9
CAST	Castle Rocks	21.86	47	*e*P	P	14 16 44.5	-1.2
	1.5nm,0.9s						
CNPM	China Poot	21.86	57	*e*P	P	14 16 46.1	+0.3
	7.9nm,1.1s						
SUA	Susitna One	22.20	52	*e*P	P	14 16 49.2	-0.3
BWN	Browne	23.15	45	*e*P	P	14 17 00.1	+0.8
	9.8nm,0.5s						
RND	Reindeer	23.30	47	*e*P	P	14 17 00.6	-0.3
	2.9nm,1.1s						
RND	Reindeer	23.30	47	*e*P	P	14 17 00.6	-0.3
RND				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KNK	Knik Glacier	23.30	53	*e*P	P	14 16 59.8	-1.0
	comp=Z,19nm,0.6s						
SML	Sawmill	23.38	52	*e*P	P	14 17 02.4	+0.7
	comp=Z,3.7nm,0.8s						
SML	Sawmill	23.38	52	*e*P	P	14 17 02.4	+0.7
SML				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRH	Wood River Hil	23.79	45	*e*P	P	14 17 04.4	-1.1
	comp=Z,2.3nm,0.8s						
MDM	Murphy Dome	23.81	44	*e*P	P	14 17 03.6	-2.2
	comp=Z,6.6nm,1.0s						
CCB	Clear Creek Bu	23.94	45	*e*P	P	14 17 05.0	-1.9
	comp=Z,2.2nm,0.8s						
TOLK	Toolik Lake Re	24.28	35	*e*P	P	14 17 08.9	-1.3
	comp=Z,3.1nm,0.6s						
ILAR	Eielson Array	24.35	44	P	P	14 17 09.2	-1.6
	comp=Z,0.8nm,0.4s,baz=252,slow=6.6,SNR=14						
ILB	Eielson Array	24.35	44	*e*P	P	14 17 09.9	-0.8
	comp=Z,2.2nm,1.0s						
FYU	Fort Yukon	25.33	40	*e*P	P	14 17 20.1	+0.5
	comp=Z,4.7nm,0.6s						
TIXI	Tiksi	26.12	331	P	P	14 17 27.1	+0.4
	comp=Z,1.3nm,0.8s,baz=121,slow=9.0,SNR=3.5						
EGAK	Eagle	26.79	45	*e*P	P	14 17 32.2	-0.6
	comp=Z,3.2nm,0.8s						
EPYK	Eagle Plains	28.70	42	*e*P	P	14 17 50.3	+0.4
	comp=Z,2.0nm,0.8s						
INK	Inuvik	30.01	38	P	P	14 18 01.4	0.0
	comp=Z,0.9nm,0.5s,baz=243,slow=6.8,SNR=3.3						
INK	Inuvik	30.01	38	*e*P	P	14 18 01.4	0.0
	comp=Z,2.9nm,1.0s						
H11N2	WAKE ISLAND Hy	33.30	187	T	T	14 53 47.5	
	baz=4.7,slow=76,SNR=999						
H11N3	WAKE ISLAND Hy	33.31	187	T	T	14 53 48.4	
	baz=4.7,slow=76,SNR=915						
H11N1	WAKE ISLAND Hy	33.32	187	T	T	14 53 48.9	
	baz=4.7,slow=76,SNR=1106						
H11S1	WAKE ISLAND Hy	34.53	187	T	T	14 55 19.2	
	baz=4.6,slow=76,SNR=1424						
H11S3	WAKE ISLAND Hy	34.54	187	T	T	14 55 20.7	
	baz=4.6,slow=76,SNR=987						
H11S2	WAKE ISLAND Hy	34.55	187	T	T	14 55 20.6	
	baz=4.6,slow=76,SNR=909						
WALA	Waterton Lakes	45.52	63	*e*P	P	14 20 12.6	0.0
	comp=Z,3.5nm,0.8s						
NV01	Mina Array Sit	49.60	77	*e*P	P	14 20 44.3	-0.2
NVAR	Mina Array Bea	49.60	77	P	P	14 20 44.3	-0.2
	comp=Z,0.4nm,0.7s,baz=297,slow=8.6,SNR=3.1						
PD31	Pinedale Array	51.79	67	*e*P	P	14 21 00.7	-0.3
	comp=Z,1.8nm,1.1s						
PDAR	Pinedale Array	51.79	67	P	P	14 21 00.7	-0.3
	comp=Z,0.9nm,0.6s,baz=306,slow=3.6,SNR=8.7						
ARCES	ARCESS Array B	55.21	346	P	P	14 21 24.9	-0.4
	comp=Z,1.0nm,0.7s,baz=26,slow=9.0,SNR=4.3						
FIA0	FINESS Array S	62.54	342	*e*P	P	14 22 16.7	+0.4
FIA0	FINESS Array S	62.54	342	*e*P	P	14 22 16.7	+0.4
FINES	FINESS Array B	62.54	342	P	P	14 22 16.7	+0.4
	comp=Z,1.4nm,0.8s,baz=22,slow=2.1,SNR=5.0						
TXAR	Lajitas Array	64.60	75	P	P	14 22 30.4	-0.1
	comp=Z,0.5nm,0.6s,baz=297,slow=4.0,SNR=7.9						
NB2	NORSAR Subarra	65.18	349	P	P	14 22 33.7	0.0
	comp=Z,0.9nm,0.5s,baz=12,slow=6.9						
NB200	NORSAR Array S	65.18	349	*e*P	P	14 22 33.8	0.0
NOA	NORSAR Array B	65.18	349	P	P	14 22 33.8	0.0
	comp=Z,0.9nm,0.4s,baz=13,slow=6.6,SNR=13						
GERES	GERESS Array B	76.72	345	P	P	14 23 44.0	0.0
	comp=Z,0.5nm,0.3s,baz=27,slow=12,SNR=6.5						
BR101	Keskin Array S	80.50	328	*e*P	P	14 24 05.5	+0.5
BRTR	Keskin Array B	80.51	328	P	P	14 24 05.5	+0.5
	comp=Z,0.7nm,0.7s,baz=31,slow=5.9,SNR=4.4						
ASAR	Alice Springs	82.77	214	P	P	14 24 18.3	+1.5
	comp=Z,0.3nm,0.5s,baz=19,slow=6.9,SNR=3.8						

MAN 25 14:23:28.8, 8°.73N×125°.70E, h67km, mb4.0, ML2.8, MS2.4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.25	341	*e*P	Pn	14 23 40.0	+0.7
BUTP				*e*S	Sn	14 23 50.4	+3.4
BIPH	Bislig	0.85	130	*e*P	Pn	14 23 46.1	+0.8
BIPH				*e*S	Sn	14 23 57.8	+0.3
CGP	Cagayan de Oro	1.04	255	*e*P	Pn	14 23 49.0	+1.4
CGP				*e*S	Sn	14 24 02.8	+1.2
BUKP	Musuan	1.06	217	*e*P	Pn	14 23 49.3	+1.3
BUKP				*e*S	Sn	14 24 03.6	+1.4
MSLP	Maasin	1.62	329	*e*P	Pn	14 24 04.0	+8.6
MSLP				*e*S	Sn	14 24 17.1	+1.7
MATI	Mati	1.86	163	*e*P	Pn	14 24 01.4	+2.9
DDMP	Don Marcelino,	2.61	180	*e*P	Pn	14 24 09.5	+0.8

*GUC **25** 14:27:26.7±0.8, 31°.02S×71°.71W, h45km±13km, ML3.9*
*SJA **25** 14:27:26.4±0.9, 30°.69S×72°.04W, h72km±28km, ML3.7, MW4.0*

ISC 25 14:27:23.1±2.3, 31°.06S±0°.06×72°.0W±0°.1, h5km±14km, n15, σ1s.85/20, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.83	100	⇓*i*P	Pn	14 27 40.9	-0.8
CO02				*i* S	Sg	14 27 50.7	+0.9
LSCH	La Serena	1.30	28	*e*P	Pg	14 27 48.2	+0.2
LSCH				*i* S	Sb	14 28 03.6	-1.4
GO04	Tololo Observa	1.33	49	*e*P	Pg	14 27 48.8	+0.2
GO04				*e*S	Sb	14 28 05.4	-0.7
GO04	Tololo Observa	1.33	49	⇓*i*P	Pg	14 27 48.6	0.0
GO04				*i* S	Sb	14 28 05.3	-0.8
PEL	Peldehue	2.34	153	*e*P	Pb	14 28 04.4	-1.5
PEL				*i* S	Sn	14 28 31.2	-0.5
PEL				IAML		14 28 39.7	
	comp=E,660nm,0.3s						
FCH	Farellones	2.67	149	*e*P	Pb	14 28 09.3	-2.3
FCH				IAML		14 28 54.5	
	comp=E,251nm,0.3s						
ZON	Zonda	2.84	101	*e*P	Pb	14 28 13.9	-0.5
AMOG	MOGNA	2.97	89	*e*P	Pb	14 28 15.1	-1.6
RTLL	Cerro Villicun	2.99	96	*e*P	Pb	14 28 14.6	-2.4
RTLL				IAML		14 29 01.4	
	comp=Z,171nm,0.5s						
RTCV	Cerro Valdivia	3.02	106	*e*P	Pb	14 28 16.7	-0.8
LMEL	Las Melosas	3.15	153	*e*P	Pn	14 28 15.8	+2.1
LMEL				IAML		14 29 08.7	
	comp=N,308nm,0.4s						
CFA	Coronel Fontan	3.22	101	*e*P	Pb	14 28 18.7	-2.2
ACAN	Cantantal	4.24	108	*e*P	Pn	14 28 31.9	+3.4
ACLC	CERRO LA CRUZ	4.62	71	*e*P	Pn	14 28 36.5	+2.6
APLL	PUNTA DE LOS L	4.71	83	*e*P	Pn	14 28 37.4	+2.3
APLL				IAML		14 29 43.6	
	comp=Z,61nm,0.4s						

MEX 25 14:29:23.1±0.6, 16°.09N×98°.15W, h5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.67	54	*i* P	Pn	14 29 49.2	-4.1
VHO				*i* S	Sn	14 30 11.2	-4.1
HUIG	Huatulco	1.99	99	*i* P	Pn	14 29 54.4	-3.1
HUIG				*i* S	Sn	14 30 19.1	-3.8
PLIG	Platanillo	2.62	331	*i* P	Pn	14 30 04.2	-2.1
PLIG				*i* S	Sn	14 30 35.3	-3.3
YAIG	Yautepec	2.89	343	*i* P	Pn	14 30 06.9	-3.1
YAIG				*i* S	Sn	14 30 41.1	-4.0

*IDC **25** 14:39:37.7±1.7, 25°.07S×69°.26W, h69km±15km, mb3.3/2, mb1 3.5/5, mb1mx3.3/31, mbtmp3.5/5, Error ellipse: s-maj=48.7km s-min=11.5km az=89.0*
*SJA **25** 14:39:38.0±1.1, 24°.94S×69°.36W, h70km, ML2.9, MW2.9*
*ISCJB **25** 14:39:39.1±0.6, 24°.92S±0°.03×69°.48W±0°.08, h94km±6km, mb3.2/2, Error ellipse: s-maj=11.8km s-min=5.3km az=4.2*
*GUC **25** 14:39:39.2±0.9, 24°.88S×69°.47W, h84km±5km, ML3.9*

ISC 25 14:39:38.3±0.8, 24°.94S±0°.04×69°.40W±0°.06, h83km±8km, n27, σ2s.17/43, 1C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	0.28	217	*e*P	Pn	14 39 52.6	+1.3
GO02				*e*S	Sn	14 40 03.0	+2.2
GO02				IAML		14 40 03.5	
	comp=E,34μm,0.1s						
PB14	IPOC Station P	0.96	288	*e*P	Pn	14 39 58.5	+1.0
PB14				*e*S	Sn	14 40 12.7	+1.1
PB14	IPOC Station P	0.96	288	⇑*e*P	Pn	14 39 58.4	+1.0
PB14				*e*S	Sn	14 40 12.6	+0.9
PB14				IAML		14 40 13.9	
	comp=E,3μm,0.4s						
PB15	IPOC Station P	1.72	358	*e*P	Pn	14 40 08.2	+1.4
PB15				*e*S	Sn	14 40 30.5	+2.0
PB15	IPOC Station P	1.72	358	⇓*e*P	Pn	14 40 08.1	+1.2
PB15				*e*S	Sn	14 40 29.9	+1.5
PB15				IAML		14 40 34.0	
	comp=N,6μm,0.3s						
PB10	IPOC Station P	1.76	323	*e*P	Pn	14 40 08.2	+1.0
PB10				*e*S	Sn	14 40 27.2	-1.9
PB10	IPOC Station P	1.76	323	*e*P	Pn	14 40 08.0	+0.8
PB10				*e*S	Sn	14 40 29.0	-0.1
PB10				IAML		14 40 37.7	
	comp=E,660nm,0.3s						
CRCH	Chaqaral	1.79	218	*e*P	Pn	14 40 08.9	+1.5
CRCH				IAML		14 40 35.6	
	comp=E,2μm,0.5s						
PB05	IPOC Station P	2.20	340	*e*P	Pn	14 40 13.6	+0.5
PB05				*e*S	Sn	14 40 43.2	+3.6
PB05				IAML		14 40 47.4	
	comp=Z,93nm,0.7s						
PB05	IPOC Station P	2.20	340	⇓*e*P	Pn	14 40 13.5	+0.5
PB05				IAML		14 40 47.8	
	comp=N,577nm,0.4s						
PB06	IPOC Station P	2.23	356	*e*P	Pn	14 40 14.4	+0.9
PB06				*e*S	Sn	14 40 41.6	+1.4
PB06	IPOC Station P	2.23	356	⇓*e*P	Pn	14 40 14.4	+0.9
PB06				*e*S	Sn	14 40 41.2	+1.0
PB06				IAML		14 40 45.1	
	comp=E,830nm,0.6s						
LVC	Limon Verde	2.36	11	P	Pn	14 40 16.9	+1.5
	comp=E,8.8nm,0.3s,baz=172,slow=8.8,SNR=91						
LVC				S	Sn	14 40 45.5	+1.8
	comp=E,76nm,0.3s,baz=43,slow=19,SNR=20						
LVC	Limon Verde	2.36	11	*e*P	Pn	14 40 16.9	+1.5
LVC				*e*S	Sn	14 40 45.5	+1.8
LVC				IAML		14 40 50.2	
	comp=Z,143nm,0.5s						
LVC	Limon Verde	2.36	11	*e*P	Pn	14 40 16.8	+1.4
PB04	IPOC Station P	2.68	345	⇓*e*P	Pn	14 40 19.4	-0.2
GO03	Copiap	2.75	196	*e*P	Pn	14 40 21.9	+1.4
GO03				*e*S	Sn	14 40 55.7	+2.9
PB03	IPOC Station P	2.89	353	*e*P	Pn	14 40 22.6	+0.2
PB03				*e*S	Sn	14 40 59.4	+3.0
PB03				IAML		14 41 05.0	
	comp=Z,108nm,0.5s						
AZAP	Zapla	4.01	81	*e*P	Pn	14 40 41.4	+3.8
AZAP				IAML		14 40 42.6	
	comp=Z,17nm,0.2s						
AZAP				IAML		14 41 44.1	
	comp=Z,5.7nm,0.5s						
CFA	Coronel Fontan	6.72	171	P	Pn	14 41 11.7	-2.8
	comp=Z,0.5nm,0.3s,baz=317,slow=18,SNR=2.2						
CFA				S	Sn	14 42 25.5	-4.0
	comp=Z,1.1nm,0.3s,baz=225,slow=20,SNR=3.7						
LPAZ	La Paz	8.69	8	P	Pn	14 41 43.1	+1.3
	comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=2.4						
SIV	San Ignacio	11.83	43	P	Pn	14 42 20.4	-3.7
	comp=Z,2.0nm,0.3s,baz=243,slow=12,SNR=18						
SIV				S	Sn	14 44 27.5	-6.8
	comp=Z,0.1nm,0.3s,baz=235,slow=19,SNR=2.0						
PDAR	Pinedale Array	76.86	331	P	P	14 51 23.4	+1.9
	comp=Z,0.1nm,0.4s,baz=138,slow=7.2,SNR=3.1						
TORD	Torodi Ar. Bea	78.94	70	P	P	14 51 33.8	+0.5
	comp=Z,0.5nm,0.5s,baz=235,slow=6.0,SNR=4.8						
ASAR	Alice Springs	126.67	207	PKP	PKPdf	14 58 33.3	+0.5
	comp=Z,0.5nm,1.2s,baz=126,slow=1.6,SNR=2.8						
ZALV	Zalesovo Beam	145.22	27	PKPbc	PKPbc	14 59 06.1	+0.3
	comp=Z,1.9nm,0.8s,baz=323,slow=4.5,SNR=4.8						
MKAR	Makanchi Array	148.63	39	PKPbc	PKPbc	14 59 16.6	+0.8
	comp=Z,0.4nm,0.5s,baz=298,slow=2.6,SNR=4.9						

*JSO **25** 14:42:45.9±0.4, 31°N±3°×3°5E±°, h10km, M2.6/9, Mjma2.6/9, ML2.4/4, MLv2.6/9*
*ISCJB **25** 14:42:46.2±0.6, 30°.89N±0°.05×34°.98E±0°.06, h8km, Error ellipse: s-maj=7.5km s-min=6.1km az=32.2*
*HLW **25** 14:42:48.1, 30°.86N×34°.84E, h10km±8km, Md2.5*

ISC 25 14:42:45.9±1.0, 30°.89N±0°.04×34°.97E±0°.04, h8km, n12, σ1s.25/13, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZIT	Kziot	0.49	272	P	Pb	14 42 56.7	-0.1
LISJ	El Lisan	0.56	52	P	Pg	14 42 57.2	+0.4
JDRJ	Daraweish	0.62	105	P	Pb	14 42 59.6	+0.4
AMAZ	Amatzia	0.64	356	P	Pb	14 42 59.1	-0.3
HRFI	Mount Harif	0.85	176	P	Pg	14 43 02.2	-0.2
HSNJ	Maan	0.89	135	P	Pg	14 43 03.8	+0.8
WALJ	Wala	0.98	47	P	Pg	14 43 04.9	0.0
RSH		1.07	274	P	Pg	14 43 06.9	+0.4
	baz=277						
EIL	Elat	1.22	181	P	Pn	14 43 05.8	-3.5
HBST	Basata	1.68	187	P	Pn	14 43 16.9	+1.3
	baz=184						
HBST				S	Sn	14 43 38.0	+0.6
	baz=184						
ASF	Jabal al Asfar	2.09	52	P	Pn	14 43 20.9	-0.4
SUZ	Suez	2.12	241	P	Pn	14 43 22.1	+0.4
	baz=241						

MAN 25 14:42:50.9, 7°.63N×126°.14E, h18km, mb4.1, ML2.9, MS2.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.59	21	*e*P	Pg	14 43 02.4	-0.4
BIPH				*i* S	Sn	14 43 15.3	+1.6
MATI	Mati	0.69	171	*e*P	Pg	14 43 04.9	+0.5
MATI				*e*S	Sn	14 43 20.3	+4.3
BUKP	Musuan	1.10	283	*e*P	Pb	14 43 10.7	-0.8
BUKP				*e*S	Sg	14 43 29.8	+3.1
BUTP	Butuan	1.43	339	*e*P	Pn	14 43 08.4	-7.6
BUTP				*e*S	Sg	14 43 37.1	-0.1
DDMP	Don Marcelino,	1.57	196	*e*P	Pn	14 43 14.9	-3.0
DDMP				*e*S	Sb	14 43 38.7	-0.4
CGP	Cagayan de Oro	1.65	300	⇓*e*P	Pn	14 43 17.0	-2.1
CGP				*e*S	Sb	14 43 41.0	-0.4

RSNC 25 14:43:16.4±1.1, 5°.29N×73°.76W, h143km±6km, ML3.3, Mw3.6, 8C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.47	320	⇑*e*P	Pn	14 43 37.0	+0.1
SPBC				*e*S	Sn	14 43 53.4	+0.8
SPBC				*i*		14 43 56.0	
	comp=Z,411nm,0.2s						
CHIC	Chingaza	0.66	177	⇑*i*P	Pn	14 43 38.3	-0.1
CHIC				*e*S	Sn	14 43 53.8	-1.4
CHIC				*i*		14 43 55.3	
	comp=N,921nm,0.5s						
CHIC				*i*		14 43 56.6	
	comp=Z,237nm,0.4s						
ROSC	El Rosal	0.71	231	⇑*i*P	Pn	14 43 39.8	+1.1
ROSC				*e*S	Sn	14 43 57.5	+1.8
RUSC	La Rusia	0.91	48	⇑*i*P	Pn	14 43 40.4	+0.1
RUSC				*e*S	Sn	14 43 58.5	+0.1
RUSC				*i*		14 44 00.2	
	comp=Z,210nm,0.2s						
NORC	Norcasia	1.13	284	⇑*e*P	Pn	14 43 41.5	-0.3
NORC				*e*S	Sn	14 44 01.1	-0.1
NORC				*i*		14 44 02.8	
	comp=N,1μm,0.2s						
VILC	Villavicencio,	1.17	177	*e*P	Pn	14 43 41.5	-0.8
VILC				*e*S	Sn	14 44 01.1	-0.9
VILC				*i*		14 44 03.4	
	comp=Z,544nm,0.3s						
YOPC	Yopal, Colombi	1.34	87	*e*P	Pn	14 43 43.8	-0.1
YOPC				*e*S	Sn	14 44 04.1	-0.7
YOPC				*i*		14 44 06.2	
	comp=N,526nm,0.4s						
BARC	Barichara	1.42	24	*e*P	Pn	14 43 44.2	-0.7
BARC				*e*S	Sn	14 44 05.4	-1.2
BARC				*i*		14 44 08.0	
	comp=Z,174nm,0.3s						
PTBC	PUERTO BERRIO,	1.42	331	⇑*i*P	Pn	14 43 43.7	-1.0
PTBC				*e*S	Sn	14 44 05.5	-0.7
PTBC				*i*		14 44 07.7	
	comp=N,308nm,0.4s						
GUY2C	Guyana, Caldas	1.60	268	*e*P	Pn	14 43 46.6	-0.3
GUY2C				*e*S	Sn	14 44 10.1	-0.2
GUY2C				*i*		14 44 16.0	
	comp=Z,48nm,0.4s						
RREF	El Recreo	1.62	256	*e*P	Pn	14 43 47.5	+0.1
RREF				*e*S	Sn	14 44 11.3	+0.2
RREF				*i*		14 44 14.2	
	comp=Z,72nm,0.2s						
BRRC	Barranca, Sant	1.81	2	*e*P	Pn	14 43 48.6	-0.3
BRRC				*e*S	Sn	14 44 13.6	-0.3
BRRC				*i*		14 44 24.0	
	comp=Z,129nm,0.3s						
GIRC	Giron, Santand	1.87	18	*e*P	Pn	14 43 49.3	-0.5
PRAC	Prado	1.92	216	⇑*i*P	Pn	14 43 49.9	-0.4
PRAC				*e*S	Sn	14 44 15.5	-0.8
PRAC				*i*		14 44 17.8	
	comp=Z,213nm,0.8s						
HELC	Santa Helena	1.97	297	*e*P	Pn	14 43 51.0	-0.2
HELC				*e*S	Sn	14 44 16.6	-1.2
HELC				*i*		14 44 20.7	
	comp=Z,179nm,0.4s						
ORTC	Ortega, Tolima	2.02	227	⇑*e*P	Pn	14 43 50.7	-0.6
ORTC				*e*S	Sn	14 44 16.9	-1.2
TAMC	Tame, Arauca	2.27	60	*e*P	Pn	14 43 53.9	-0.5
TAMC				*e*S	Sn	14 44 22.8	-0.9
TAMC				*i*		14 44 24.7	
	comp=Z,108nm,0.3s						
PAMC	Pamplona, Colo	2.30	27	*e*P	Pn	14 43 55.5	+0.3
PAMC				*e*S	Sn	14 44 24.1	-0.9
PAMC				*i*		14 44 28.0	
	comp=N,46nm,0.5s						
ZARC	Zaragoza, Cauc	2.44	334	⇓*e*P	Pn	14 43 54.7	-1.8
ZARC				*e*S	Sn	14 44 26.0	-1.5
ZARC				*i*		14 44 30.2	
	comp=Z,120nm,0.6s						
OCAC	Ocana	2.96	9	*e*P	Pn	14 44 02.6	-0.7
OCAC				*e*S	Sn	14 44 39.2	-0.2
OCAC				*i*		14 44 42.0	
	comp=Z,71nm,0.4s						
DBBC	Dabeiba	2.98	305	*e*P	Pn	14 44 03.4	+0.1
DBBC				*e*S	Sn	14 44 38.8	-0.8
DBBC				*i*		14 44 40.9	
	comp=Z,100nm,0.4s						
MACC	Macarena, Meta	3.12	182	*e*P	Pn	14 44 02.7	-2.5
MACC				*e*S	Sn	14 44 37.9	-5.0
SMLC	San Martn de	3.50	355	*e*P	Pn	14 44 08.0	-2.0
SMLC				*e*S	Sn	14 44 48.3	-3.4
SMLC				*i*		14 44 51.6	
	comp=N,139nm,0.2s						
SJCC	San Jacinto, C	4.79	343	*e*P	Pn	14 44 23.7	-3.3
SJCC				*e*S	Sn	14 45 15.9	-6.1

MAN 25 14:47:48.5, 9°.13N×125°.58E, h113km, mb4.1, ML2.9, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.16	167	*e*P	Pn	14 48 00.2	-4.0
BUTP				*e*S	Sn	14 48 14.9	-1.1
CGP	Cagayan de Oro	1.10	233	*e*P	Pn	14 48 13.9	+2.9
CGP				*e*S	Sn	14 48 27.5	-0.5
MSLP	Maasin	1.23	325	*e*P	Pn	14 48 21.9	+10
BUKP	Musuan	1.34	203	*e*P	Pn	14 48 14.4	+0.7
BUKP				*e*S	Sn	14 48 29.2	-3.6
MATI	Mati	2.27	163	*e*P	Pn	14 48 25.9	+0.8
DDMP	Don Marcelino,	3.01	178	*e*P	Pn	14 48 35.6	+0.9
POLP	Polilio Island	6.61	328	*e*P	Pn	14 49 24.6	+1.4

MAN 25 14:58:19.9, 7°.48N×125°.85E, h1km, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.87	297	*e*P	Pg	14 58 36.0	-0.6
BUKP				*e*S	Sn	14 58 52.8	0.0
CGP	Cagayan de Oro	1.50	310	⇑*e*P	Pg	14 58 53.6	+5.0
CGP				*i* S	Sb	14 59 07.8	-0.2
SKMP	Bagumbayan, Su	1.60	234	*e*P	Pn	14 58 49.3	-0.1

IDC 25 14:59:45.6±63.0, 17°.93S×179°.85E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/30, mbtmp3.7/3, Error ellipse: s-maj=1141.0km s-min=161.4km az=78.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.17**	**241**	P	P	15 06 57.8	-0.7
	0.4nm,0.3s,baz=60,slow=16,SNR=2.9						
WRA	**Warramunga Arr**	**43.00**	**260**	P	P	15 07 47.3	+0.2
	1.7nm,1.0s,baz=93,slow=7.7,SNR=8.8						
ASAR	**Alice Springs**	**43.19**	**254**	P	P	15 07 48.6	0.0
	0.5nm,0.7s,baz=89,slow=8.0,SNR=16						

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*JMA **25** 15:01:17.8±0.3, 32°.41N×137°.38E, h438km, M3.4*
*ISCJB **25** 15:01:19.6±0.6, 32°.61N±0°.07×136°.89E±0°.08, h400km, mb3.3/7, Error ellipse: s-maj=10.3km s-min=8.2km az=137.4*
*IDC **25** 15:01:21.1±0.7, 32°.74N×137°.21E, h415km±10km, mb3.0/7, mb1 2.9/14, mb1mx2.8/47, mbtmp3.7/14, Error ellipse: s-maj=23.9km s-min=12.4km az=72.0*
ISC 25 15:01:20.7±0.9**, 32°.70N**±0°.09×**137°.09E**±0°.09**, h400km, n30, σ1s.82**/37**, mb3.3**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.31**	**79**	P	**Pn**	**15 02 20.8**	**+2.1**
	3.9nm,0.3s,baz=101,slow=23,SNR=12						
JHJ				S	**S**	**15 03 07.7**	**+2.2**
	6.9nm,0.3s,baz=128,slow=19,SNR=2.7						
JMKN	**Mikurajimanish**	**2.41**	**60**	S	**S**	**15 03 09.0**	**+2.1**
JNY	**Yasuok**	**2.73**	**13**	P	**Pn**	**15 02 24.4**	**+2.6**
JYTA	**Yamagatataniai**	**2.90**	**354**	P	**Pn**	**15 02 26.0**	**+3.0**
JYN	**Shimob**	**3.04**	**23**	P	**Pn**	**15 02 26.9**	**+2.6**
JOD2	**Odawara 2**	**3.05**	**32**	P	**Pn**	**15 02 26.0**	**+1.7**
JOD2				S	**S**	**15 03 19.5**	**+3.6**
BSO3	**Boso 3**	**3.54**	**53**	P	**Pn**	**15 02 28.7**	**+0.5**
BSO4	**Boso 4**	**3.54**	**49**	P	**Pn**	**15 02 29.0**	**+0.6**
BSO4				S	**S**	**15 03 24.3**	**+1.0**
JKG	**Kaga**	**3.62**	**350**	P	**Pn**	**15 02 31.7**	**+2.5**
JHU	**Hanno**	**3.63**	**29**	P	**Pn**	**15 02 30.6**	**+1.3**
JRY	**Ryogami san**	**3.64**	**24**	P	**Pn**	**15 02 31.1**	**+1.7**
JRY				S	**S**	**15 03 29.2**	**+4.1**
BSO1	**Boso 1**	**3.79**	**58**	P	**Pn**	**15 02 30.5**	**+0.4**
MAT	**Matsushiro**	**3.95**	**13**	P	**Pn**	**15 02 34.0**	**+1.8**
MAT				S	**S**	**15 03 29.5**	**-0.8**
MAT	**Matsushiro**	**3.95**	**13**	P	**Pn**	**15 02 34.1**	**+1.8**
MJAR	**Matsushiro Arr**	**3.95**	**13**	P	**Pn**	**15 02 33.1**	**+0.8**
	1.4nm,0.3s,baz=192,slow=10,SNR=94						
MJAR				S	**S**	**15 03 30.2**	**-0.1**
	baz=208,slow=23,SNR=5.1						
JAG	**Ashikaga**	**4.20**	**27**	P	**Pn**	**15 02 34.8**	**+0.2**
JNU	**Nakatsue**	**5.24**	**276**	P	**Pn**	**15 02 47.7**	**+2.5**
	0.4nm,0.3s,baz=139,slow=0.5,SNR=4.7						
JFK	**Kawauchi**	**5.60**	**33**	P	**Pn**	**15 02 48.9**	**-0.1**
JFK				S	**S**	**15 03 59.0**	**-1.9**
KSRS	**Korea Array**	**8.88**	**305**	P	**Pn**	**15 03 27.5**	**+1.8**
	0.2nm,0.3s,baz=113,slow=10,SNR=3.7						
USRK	**Ussuriysk Ar.**	**12.16**	**342**	P	**P**	**15 04 02.7**	**+0.7**
	0.1nm,0.3s,baz=153,slow=9.7,SNR=2.8						
ASAJ	**Asahikawa**	**12.19**	**19**	P	**Pn**	**15 04 02.6**	**-1.3**
	0.3nm,0.3s,baz=194,slow=17,SNR=5.2						
KLR	**Kul'dur**	**16.99**	**348**	P	**P**	**15 04 53.7**	**-0.7**
	0.1nm,0.3s,baz=177,slow=19,SNR=2.9						
MKAR	**Makanchi Array**	**43.56**	**305**	P	**P**	**15 08 46.7**	**-0.4**
	0.6nm,0.7s,baz=82,slow=10,SNR=6.7						
WRA	**Warramunga Arr**	**52.41**	**183**	P	**P**	**15 09 53.2**	**-0.9**
	0.4nm,0.3s,baz=0.1,slow=6.7,SNR=6.7						
ASAR	**Alice Springs**	**56.13**	**184**	P	**P**	**15 10 19.6**	**-0.9**
	0.4nm,0.9s,baz=11,slow=11,SNR=4.3						
ARCES	**ARCESS Array B**	**66.78**	**339**	P	**P**	**15 11 29.8**	**-0.5**
	1.8nm,1.0s,baz=64,slow=10,SNR=8.2						
FINES	**FINESS Array B**	**70.96**	**332**	P	**P**	**15 11 55.5**	**-0.3**
	0.7nm,0.4s,baz=63,slow=6.4,SNR=12						
AKASG	**Malin Array Be**	**75.50**	**321**	P	**P**	**15 12 20.4**	**-1.7**
	0.5nm,0.4s,baz=39,slow=18,SNR=3.4						
NB2	**NORSAR Subarra**	**76.75**	**336**	P	**P**	**15 12 28.3**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=44,slow=5.6						
NOA	**NORSAR Array B**	**76.75**	**336**	P	**P**	**15 12 28.0**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=46,slow=5.5,SNR=4.9						

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*NSSC **25** 15:27:17.3±0.3, 33°.87N×35°.71E, h7km±6km, MD1.0, ML1.8*
*GRAL **25** 15:27:19.8±0.3, 33°.78N×35°.79E, h0km±21km, MD2.7*
ISC 25 15:27:17.3±1.1**, 33°.77N**±0°.04×**35°.68E**±0°.06**, h25km**±7km**, n9, σ0s.68**/16**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DQRL	**Deir Qamar**	**0.11**	**234**	*e*P	**Pn**	**15 27 23.4**	**-0.2**
DQRL				*e*S	**Sb**	**15 27 25.9**	**+0.4**
BHL	**Bhannes**	**0.13**	**352**	*e*P	**Pb**	**15 27 22.7**	**+0.2**
BHL				*e*S	**Sb**	**15 27 24.9**	**-1.0**
BEYL	**Beirut**	**0.18**	**303**	*e*P	**Pn**	**15 27 24.5**	**0.0**
QRWL	**Qaraoun**	**0.22**	**179**	*e*P	**Pb**	**15 27 24.1**	**+0.7**
QRWL				*e*S	**Sb**	**15 27 27.5**	**0.0**
RCY	**Rachaya**	**0.30**	**154**	*e*P	**Pb**	**15 27 24.9**	**+0.4**
RCY				*e*S	**Sb**	**15 27 28.7**	**-0.8**
BRBR	**Barbar**	**0.43**	**147**	*e*P	**Pn**	**15 27 27.2**	**-0.9**
BRBR				*e*S	**Sn**	**15 27 34.3**	**-0.8**
BRBR				AML	AML	15 27 36.4	
	comp=N,78nm,0.3s						
BRBR				AML	AML	15 27 41.0	
	comp=E,50nm,0.4s						
HWQ	**Hawqa**	**0.55**	**24**	*e*P	**Pb**	**15 27 29.0**	**+0.4**
QASN	**Qassioun**	**0.55**	**115**	*e*P	**Pn**	**15 27 29.1**	**-0.6**
QASN				*e*S	**Sb**	**15 27 36.7**	**+0.6**
QASN				AML	AML	15 27 42.0	
	comp=N,84nm,0.3s						
QASN				AML	AML	15 27 47.5	
	comp=E,156nm,0.5s						
TOTH	**TOTAH**	**0.75**	**123**	*e*P	**Pn**	**15 27 33.0**	**+0.6**
TOTH				*e*S	**Sn**	**15 27 43.4**	**+0.5**
TOTH				AML	AML	15 27 49.4	
	comp=E,24nm,0.5s						
TOTH				AML	AML	15 27 56.9	
	comp=N,17nm,0.5s						

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*ISK **25** 15:28:27.8, 39°.82N×35°.26E, h15km, ML2.0/4*
*ISCJB **25** 15:28:28.7±1.0, 39°.80N±0°.06×35°.2E±0°.1, h10km±9km, Error ellipse: s-maj=16.7km s-min=7.3km az=156.7*
*DDA **25** 15:28:28.6, 39°.79N×35°.15E, h7km±1km, ML2.5*
ISC 25 15:28:28.4±1.2**, 39°.81N**±0°.05×**35°.19E**±0°.06**, h13km**±11km**, n9, σ0s.28**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.20**	**150**	PG	**Pg**	**15 28 32.7**	**-0.1**
YOZ				SG	**Sg**	**15 28 36.0**	**+0.1**
COAL	**Corum-Alaca**	**0.47**	**340**	*i* P	**Pb**	**15 28 38.7**	**+0.1**
COAL				IAML_P			
	comp=Z,954nm,0.2s						
SIRC	**Yozgat**	**0.48**	**184**	*i* P	**Pg**	**15 28 38.0**	**+0.2**
SIRC				*i* S	**Sb**	**15 28 45.4**	**-0.3**
SIRC				IAML_P			
	comp=Z,2μm,0.1s						
CORM	**Corum**	**0.57**	**310**	PG	**Pb**	**15 28 40.1**	**-0.2**
CDAG	**Cicekdag**	**0.66**	**254**	*i* P	**Pb**	**15 28 41.9**	**0.0**
CDAG				*i* S	**Sg**	**15 28 50.3**	**+0.3**
CDAG				IAML_P			
	comp=Z,1μm,0.1s						
DELI	**KIRIKKALE**	**1.00**	**281**	*i* P	**Pg**	**15 28 47.4**	**-0.2**
DELI				IAML_P			
	comp=Z,400nm,0.3s						
KIRS	**Kırehir-Merke**	**1.20**	**236**	*i* P	**Pn**	**15 28 50.9**	**-0.1**
KIRS				IAML_P			
	comp=Z,264nm,0.2s						
YAYX	**Yaylak**	**1.38**	**231**	PN	**Pb**	**15 28 53.9**	**-0.2**
SERE	**Sereflikochisa**	**1.53**	**236**	PN	**Pn**	**15 28 56.0**	**+0.4**

MAN 25 15:52:30.8, 7°.38N×124°.76E, h23km, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.58**	**32**	*e*P	Pb	15 52 42.2	-0.1
BUKP				*e*S	Sb	15 52 50.1	0.0
SKMP	**Bagumbayan, Su**	**0.88**	**194**	*e*P	Pb	15 52 46.9	-0.6
CGP	**Cagayan de Oro**	**1.07**	**357**	⇑*i*P	Pn	15 52 50.2	-0.1
CGP				*i* S	Sn	15 53 04.7	+0.3
MATI	**Mati**	**1.55**	**106**	*e*P	Pb	15 53 12.3	+13
DDMP	**Don Marcelino,**	**1.58**	**143**	*e*P	Pn	15 52 57.5	+0.1
DDMP				*e*S	Sb	15 53 24.2	+5.2
BUTP	**Butuan**	**1.79**	**28**	*e*P	Pb	15 53 02.1	-0.9
BUTP				*e*S	Sb	15 53 30.0	+5.0

MAN 25 15:54:06.9, 7°.43N×124°.86E, h15km, mb4.0, ML2.7, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.49**	**25**	*e*P	Pb	15 54 17.1	-0.2
BUKP				*e*S	Sb	15 54 25.6	+1.3
SKMP	**Bagumbayan, Su**	**0.96**	**199**	*e*P	Pb	15 54 22.6	-2.7
CGP	**Cagayan de Oro**	**1.03**	**351**	⇑*i*P	Pb	15 54 26.2	-0.2
CGP				*i* S	Sn	15 54 40.7	-0.3
MATI	**Mati**	**1.47**	**109**	*e*P	Pg	15 54 48.9	+14
DDMP	**Don Marcelino,**	**1.57**	**147**	*e*P	Pn	15 54 34.2	-0.1
DDMP				*e*S	Sn	15 54 54.8	+0.4

MAN 25 16:01:44.3, 7°.42N×124°.86E, h32km, mb3.9, ML2.7, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.50**	**24**	*e*P	Pn	16 01 55.8	+0.5
BUKP				*e*S	Sn	16 02 04.1	+1.1
SKMP	**Bagumbayan, Su**	**0.94**	**199**	*e*P	Pn	16 02 01.2	-0.2
SKMP				*e*S	Sb	16 02 20.5	+6.1
CGP	**Cagayan de Oro**	**1.05**	**351**	⇑*i*P	Pb	16 02 05.4	+1.5

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*IDC **25** 16:08:12.0±1.2, 36°.34N×7°.36E, h0km, mb3.3/5, mb1 3.6/7, mb1mx3.3/47, mbtmp3.5/7, ML5.0/1, MS2.8/2, Ms1 2.8/2, ms1mx2.3/32, Error ellipse: s-maj=23.3km s-min=14.2km az=14.0*
*CRAAG **25** 16:08:12.2, 36°.42N×7°.33E, Ml3.7*
*ISCJB **25** 16:08:14.3±0.6, 36°.73N±0°.03×7°.41E±0°.04, h27km±6km, mb3.5/3, Error ellipse: s-maj=6.3km s-min=4.4km az=44.0*
*TUN **25** 16:08:16.7, 36°.54N×7°.59E, h22km±4km, MD3.5*
*LDG **25** 16:08:17.6±0.1, 36°.63N×7°.60E, h20km, Ml3.6/19, Error ellipse: s-maj=3.6km s-min=2.4km az=46.0*
ISC 25 16:08:14.1±1.0**, 36°.55N**±0°.05×**7°.38E**±0°.04**, h24km**±8km**, n73, σ2s.82**/78**, mb3.4**/4**, 1C-1D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAH	**Djebel Manchou**	**0.09**	**24**	P	**Pb**	**16 08 18.6**	**+0.1**
ABSA	**Djebel Ababsia**	**0.28**	**163**	P	**Pb**	**16 08 17.1**	**-3.7**
CAEH	**'Ain El Ouahch**	**0.48**	**299**	P	**Pb**	**16 08 23.8**	**-0.2**
CKFL	**Kef-Lekhel**	**0.55**	**255**	P	**Pb**	**16 08 22.2**	**-2.9**
GHAT	**Ghardimaou**	**0.75**	**94**	*i* P	**Pn**	**16 08 29.9**	**+0.8**
CASM	**Ain Smara**	**0.77**	**248**	P	**Pb**	**16 08 26.8**	**-2.0**
CTEI	**Djebel Teioual**	**0.92**	**239**	P	**Pn**	**16 08 29.7**	**-2.0**
DFRA	**Djebel Bou Aff**	**1.21**	**270**	P	**Pn**	**16 08 35.6**	**0.0**
BLIT	**Baltah**	**1.28**	**82**	*i* P	**Pn**	**16 08 37.1**	**+0.6**
KRIT	**Krib**	**1.39**	**98**	*i* P	**Pn**	**16 08 38.0**	**0.0**
THTN	**Thala**	**1.45**	**132**	*i* P	**Pn**	**16 08 39.0**	**+0.1**
TAMR	**Tamra**	**1.48**	**70**	*i* P	**Pn**	**16 08 39.4**	**+0.3**
CKHR	**Kef el Ahmar**	**1.60**	**251**	P	**Pn**	**16 08 40.8**	**-0.2**
SET	**Setif**	**1.63**	**258**	P	**Pb**	**16 08 43.0**	**-0.5**
KEST	**Kesra**	**1.79**	**116**	Pg	**Pn**	**16 08 44.2**	**+0.7**
	25nm,0.3s,baz=81,slow=17,SNR=160						
KEST				Lg	Lg	16 09 06.3	
	17nm,0.3s,baz=235,slow=6.6,SNR=8.2						
TROT	**Trozza**	**2.05**	**118**	*i* P	**Pn**	**16 08 48.6**	**+1.4**
SYA	**Sidi Yaiche**	**2.14**	**147**	*i* P	**Pn**	**16 08 50.5**	**+2.0**
BERT	**Berda**	**2.66**	**149**	*i* P	**Pn**	**16 08 57.1**	**+1.7**
BTHT	**Jabal bu Thady**	**2.75**	**120**	⇑*i*Pn	**Pn**	**16 08 57.7**	**+1.0**
BTHT	**Jabal bu Thady**	**2.75**	**120**	*i* P	**Pn**	**16 08 57.8**	**+1.0**
MAHO	**Mahon**	**4.14**	**325**	⇓*i*P	**Pn**	**16 09 16.8**	**+1.0**
MAHO				*e*S	**Sn**	**16 10 06.4**	**+2.9**
MAHO				*e*Cod		16 12 25.7	
LMR	**La Mourre**	**6.81**	**355**	*e*Pn	**Pn**	**16 09 52.7**	**+0.2**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**16 11 05.5**	**-3.8**
	19nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**7.03**	**356**	*e*Pn	**Pn**	**16 09 55.6**	**+0.1**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**16 11 10.8**	**-3.8**
	13nm,0.3s						
SBF	**Sospel**	**7.31**	**0**	*e*Pn	**Pn**	**16 09 59.2**	**-0.2**
SBF	**Sospel**	**7.31**	**0**	*e*P	Pn	16 10 05.4	+6.0
SBF				*e*Sn	**Sn**	**16 11 17.6**	**-4.0**
	19nm,0.3s						
SMRF	**Simiane la Rot**	**7.55**	**350**	*e*Pn	**Pn**	**16 10 03.7**	**+1.1**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**16 11 23.9**	**-3.5**
	11nm,0.4s						
MTLF	**Montolieu**	**7.86**	**331**	*e*Pn	**Pn**	**16 10 07.2**	**+0.4**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**16 11 31.2**	**-3.8**
	1.7nm,0.3s						
LASF	**Ste Croix**	**7.99**	**341**	*e*Pn	**Pn**	**16 10 09.9**	**+1.3**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**16 11 34.2**	**-4.0**
	3.2nm,0.3s						
MBDF	**Montbardon**	**8.19**	**357**	*e*Pn	**Pn**	**16 10 11.3**	**-0.2**
	SNR=1.0						
MBDF	**Montbardon**	**8.19**	**357**	*e*P	Pn	16 10 16.9	+5.4
MBDF				*e*Sn	**Sn**	**16 11 38.4**	**-4.9**
	5.4nm,0.4s						
EPF	**Esparros**	**8.44**	**322**	*e*Pn	**Pn**	**16 10 17.8**	**+2.9**
EPF				*e*Sn	**Sn**	**16 11 46.1**	**-3.3**
	3.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.44**	**353**	*e*Pn	**Pn**	**16 10 15.8**	**+0.9**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**8.44**	**353**	*e*P	Pn	16 10 21.1	+6.2
ORIF				*e*Sn	**Sn**	**16 11 44.6**	**-4.9**
	3.2nm,0.4s,SNR=1.0						
VIVF	**Saint-Julien-l**	**8.55**	**347**	*e*Pn	**Pn**	**16 10 16.7**	**+0.3**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**16 11 47.5**	**-4.6**
	2.2nm,0.3s,SNR=1.0						
ETSF	**Etsaut**	**8.81**	**319**	*e*Pn	**Pn**	**16 10 22.8**	**+2.9**
	SNR=1.0						
LPG	**La Plagne**	**8.96**	**357**	*e*Pn	**Pn**	**16 10 22.7**	**+0.5**
LPG	**La Plagne**	**8.96**	**357**	*e*P	Pn	16 10 27.9	+5.7
LPG				*e*Sn	**Sn**	**16 11 56.8**	**-5.6**
	2.1nm,0.3s						
LPL	**La Plagne**	**8.97**	**357**	*e*Pn	**Pn**	**16 10 23.0**	**+0.6**
LPL	**La Plagne**	**8.97**	**357**	*e*P	Pn	16 10 28.7	+6.3
LPL				*e*Sn	**Sn**	**16 11 57.0**	**-5.8**
	3.9nm,0.3s						
CAF	**Calviac**	**9.29**	**336**	*e*Pn	**Pn**	**16 10 28.0**	**+1.5**
CAF				*e*Sn	**Sn**	**16 12 05.6**	**-4.6**
	0.9nm,0.2s						
SJPF	**Ste Jean**	**9.31**	**317**	*e*Pn	**Pn**	**16 10 28.9**	**+2.1**
	SNR=1.0						
SJPF				*e*Sn	**Sn**	**16 12 07.0**	**-3.8**
	1.4nm,0.3s						
ESDC	**Sonseca Array**	**9.47**	**293**	Pn	**Pn**	**16 10 31.9**	**+2.9**
	3.7nm,0.3s,baz=99,slow=14,SNR=58						
LFF	**La Frestale**	**9.78**	**331**	*e*Pn	**Pn**	**16 10 34.2**	**+1.1**
RJF	**Les Rejaudoux**	**9.80**	**335**	*e*Pn	**Pn**	**16 10 34.5**	**+1.0**
RJF	**Les Rejaudoux**	**9.80**	**335**	*e*P	Pn	16 10 40.8	+7.3
CABF	**La Chapelle**	**10.10**	**355**	*e*Pn	**Pn**	**16 10 36.8**	**-0.9**
CABF				*e*Sn	**Sn**	**16 12 24.0**	**-6.3**
	2.8nm,0.5s						
SMF	**Signal de Mont**	**10.43**	**346**	*e*Pn	**Pn**	**16 10 41.6**	**-0.5**
TCF	**Toulx Ste Croi**	**10.47**	**340**	*e*Pn	**Pn**	**16 10 43.9**	**+1.2**
TCF				*e*Sn	**Sn**	**16 12 31.9**	**-7.4**
	2.0nm,0.2s						
MDT	**Midelt**	**10.54**	**253**	Pn	**Pn**	**16 10 44.2**	**+0.4**
	0.2nm,0.3s,baz=1.1,slow=4.4,SNR=10						
BGF	**Bois d'Agland**	**10.56**	**343**	*e*Pn	**Pn**	**16 10 44.6**	**+0.7**
BGF	**Bois d'Agland**	**10.56**	**343**	*e*P	Pn	16 10 51.1	+7.2
AVF	**Avril sur Loir**	**10.67**	**345**	*e*Pn	**Pn**	**16 10 44.9**	**-0.4**
LOR	**Lormes**	**11.03**	**347**	*e*P	Pn	16 10 57.0	+6.7
	baz=158						
HINF	**Hinteralfeld**	**11.27**	**358**	*e*Pn	**Pn**	**16 10 54.1**	**+0.5**
HAU	**Haudompre**	**11.48**	**357**	*e*Pn	**Pn**	**16 10 56.5**	**+0.1**
CDF	**Champ du Feu**	**11.86**	**360**	*e*Sn	**Sn**	**16 13 07.0**	**-6.3**
	9.6nm,0.6s						
PMRV	**Marv??o**	**12.00**	**288**	*e*P	Pn	16 11 08.4	+4.7
	7.6nm,1.9s						
PAGF	**Fort de Pagny**	**12.06**	**355**	*e*Pn	**Pn**	**16 11 04.9**	**+0.5**
MEZF	**Maizieres J'vi**	**12.07**	**353**	*e*Pn	**Pn**	**16 11 04.8**	**+0.3**
	baz=169						
PVAQ	**Vaqueiros**	**12.11**	**279**	*e*P	**Pn**	**16 11 06.7**	**+1.7**
	14nm,1.6s						
MVO	**Moncorvo**	**12.14**	**297**	*e*P	**Pn**	**16 11 09.4**	**+3.9**
	6.7nm,1.6s						
PBRG	**Braganca**	**12.14**	**300**	*e*P	**Pn**	**16 11 09.1**	**+3.5**
	9.0nm,1.3s						
MTE	**Manteigas**	**12.31**	**293**	*e*P	**Pn**	**16 11 12.1**	**+4.2**
	15nm,1.7s						
PVIS	**Viseu**	**12.64**	**294**	*e*P	**Pn**	**16 11 15.7**	**+3.3**
	11nm,1.4s						
POLO	**Lamas de Olo**	**12.75**	**297**	*e*P	**Pn**	**16 11 18.1**	**+4.2**
	7.2nm,1.9s						
GERES	**GERESS Array B**	**13.13**	**19**	LR	LR	16 16 57.4	
	comp=Z,44nm,18.3s,baz=170,slow=39						
QUIF	**Quistinic**	**13.77**	**329**	*e*Pn	**Pn**	**16 11 28.2**	**+0.5**
VRAC	**Vranov**	**14.41**	**25**	LR	LR	16 17 17.3	
	comp=Z,35nm,19.4s,baz=195,slow=37						
BRTR	**Keskin Array B**	**20.88**	**73**	P	Pn	16 12 57.5	+0.4
	1.0nm,0.7s,baz=261,slow=9.8,SNR=7.6						
AKASG	**Malin Array Be**	**21.11**	**41**	P	**P**	**16 12 59.8**	**+2.9**
	0.4nm,0.4s,baz=237,slow=8.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**23.85**	**194**	P	**P**	**16 13 24.6**	**-1.1**
	0.7nm,0.6s,baz=5.2,slow=11,SNR=4.1						
KURBB	**Kurchatov Arra**	**51.48**	**50**	P	**P**	**16 17 19.9**	**+2.4**
	0.3nm,0.6s,baz=286,slow=9.6,SNR=3.0						
MKAR	**Makanchi Array**	**54.91**	**54**	P	**P**	**16 17 44.5**	**+1.7**
	0.5nm,0.7s,baz=283,slow=5.1,SNR=5.6						

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*IDC **25** 16:15:54.9±8.0, 36°.69N×71°.57E, h72km±31km, mb3.6/4, mb1 3.6/11, mb1mx3.2/50, mbtmp3.9/11, Error ellipse: s-maj=115.3km s-min=27.7km az=156.0*
*ISCJB **25** 16:15:57.7±0.5, 36°.95N±0°.05×71°.39E±0°.07, h106km, mb3.8/4, Error ellipse: s-maj=8.1km s-min=6.1km az=156.2*
*NNC **25** 16:16:02.6±8.1, 37°.29N×70°.96E, h88km±698km, mb3.6, mpv3.9, Error ellipse: s-maj=84.2km s-min=49.1km az=146.0*
ISC 25 16:15:57.8±0.8**, 36°.97N**±0°.07×**71°.30E**±0°.06**, h106km, n30, σ2s.50**/36**, mb3.7**/4**, 2C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.47**	**19**	P	**Pn**	**16 17 18.4**	**+1.1**
	SNR=44						
UCH	**Uchtor**	**5.80**	**24**	P	**Pn**	**16 17 23.2**	**+1.4**
	SNR=17						
KZA	**Kyzart**	**5.94**	**30**	P	**Pn**	**16 17 25.2**	**+1.6**
	SNR=6.6						
EKS2	**Erkin-Say**	**5.99**	**18**	P	**Pn**	**16 17 26.2**	**+2.2**
	SNR=7.2						
KK31	**Karatay Array**	**6.15**	**355**	P	**Pn**	**16 17 27.2**	**+1.0**
	1.8nm,0.3s,baz=175,slow=12,SNR=32						
KK31				⇑S	**Sn**	**16 18 28.1**	**-7.0**
	2.3nm,0.2s,baz=172,slow=17,SNR=5.9						
AAK	**Ala-Archa**	**6.17**	**22**	P	**Pn**	**16 17 27.5**	**+1.0**
	4.9nm,0.3s,baz=172,slow=5.7,SNR=14						
AAK				S	**Sn**	**16 18 31.6**	**-4.1**
	1.9nm,0.3s,baz=360,slow=10,SNR=4.1						
AAK	**Ala-Archa**	**6.17**	**22**	⇓P	**Pn**	**16 17 27.7**	**+1.2**
	7.3nm,0.3s						
AAK				⇑S	**Sn**	**16 18 31.8**	**-3.9**
	6.1nm,0.6s						
AAK	**Ala-Archa**	**6.17**	**22**	P	**Pn**	**16 17 28.4**	**+1.9**
	SNR=10						
CHMS	**Chumysh**	**6.57**	**23**	P	**Pn**	**16 17 33.3**	**+1.4**
	SNR=18						
USP	**Ospenovka**	**6.75**	**20**	P	**Pn**	**16 17 34.7**	**+0.5**
	SNR=6.7						
TKM2	**Tokmak 2**	**6.79**	**28**	⇓P	**Pn**	**16 17 35.6**	**+0.5**
	6.8nm,0.6s						
TKM2				⇓S	**Sn**	**16 18 51.6**	**+0.6**
	2.2nm,0.5s						
TKM2	**Tokmak 2**	**6.79**	**28**	P	**Pn**	**16 17 36.2**	**+1.2**
	SNR=15						
GEYT	**Alibeck**	**10.53**	**279**	P	**Pn**	**16 18 25.9**	**+0.3**
	1.8nm,0.3s,baz=94,slow=9.3,SNR=25						
GEYT				S	**Sn**	**16 20 17.4**	**-4.1**
	3.2nm,0.3s,baz=287,slow=4.1,SNR=16						
GYA0B	**ALIBECK ARRAY**	**10.53**	**279**	⇓P	**Pn**	**16 18 25.5**	**-0.1**
GYA0B				⇓S	**Sn**	**16 20 18.7**	**-2.8**
MKAR	**Makanchi Array**	**12.77**	**36**	P	**Pn**	**16 18 54.9**	**-0.5**
	0.2nm,0.3s,baz=224,slow=14,SNR=13						
KOLN	**Koldanda**	**13.85**	**128**	*e*P	**Pn**	**16 19 10.1**	**+0.3**
	11nm,0.4s						
KURBB	**Kurchatov Arra**	**14.60**	**19**	P	**Pn**	**16 19 18.5**	**-0.5**
	0.0nm,0.3s,baz=207,slow=10,SNR=2.5						
KKN	**Kakani**	**14.93**	**124**	*e*P	**Pn**	**16 19 22.8**	**-0.8**
	3.7nm,0.2s						
DMN	**Daman**	**14.93**	**125**	*e*P	**P**	**16 19 23.9**	**-2.7**
	8.1nm,0.4s						
PKIN	**Phulchoki**	**15.15**	**124**	*e*P	**P**	**16 19 26.4**	**-2.6**
	6.6nm,0.3s						
PKI	**Pulchoki**	**15.16**	**124**	*e*P	**Pn**	**16 19 25.9**	**-0.7**
	4.8nm,0.2s						
JIRN	**Jiri**	**15.62**	**122**	*e*P	**Pn**	**16 19 31.4**	**-1.0**
	28nm,0.3s						
BVAR	**Borovoye Array**	**16.06**	**358**	P	**P**	**16 19 39.3**	**+0.6**
	0.2nm,0.3s,baz=169,slow=16,SNR=4.6						
AKTO	**Aktyubinsk**	**16.50**	**329**	P	**P**	**16 19 45.7**	**+2.2**
	1.0nm,0.3s,baz=128,slow=12,SNR=17						
ZALV	**Zalesovo Beam**	**19.38**	**25**	P	**P**	**16 20 15.7**	**+0.6**
	0.3nm,0.3s,baz=217,slow=12,SNR=5.7						
FINES	**FINESS Array B**	**37.23**	**326**	P	**P**	**16 23 01.8**	**+3.2**
	0.4nm,0.5s,baz=109,slow=12,SNR=4.1						
ARCES	**ARCESS Array B**	**40.80**	**337**	P	**P**	**16 23 31.6**	**+3.3**
	1.3nm,0.9s,baz=110,slow=7.8,SNR=5.4						
HFS	**Hagfors**	**42.85**	**322**	P	**P**	**16 23 48.7**	**+3.7**
	2.2nm,0.4s,baz=97,slow=11,SNR=22						
NB2	**NORSAR Subarra**	**44.15**	**323**	P	**P**	**16 23 59.1**	**+3.5**
	comp=Z,0.6nm,0.4s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.15**	**323**	P	**P**	**16 23 58.7**	**+3.2**
	comp=Z,0.6nm,0.5s,baz=96,slow=7.7,SNR=8.3						

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*ISCJB **25** 16:18:49.4±0.9, 22°.69S±0°.05×68°.71W±0°.07, h111km±10km, Error ellipse: s-maj=11.4km s-min=8.2km az=175.2*
*GUC **25** 16:18:49.2±0.6, 22°.67S×68°.66W, h104km±3km, ML3.6*
*SJA **25** 16:18:49.1±0.4, 22°.74S×68°.69W, h103km±2km, ML3.0, MW3.3*
ISC 25 16:18:50.4±1.7**, 22°.69S**±0°.05×**68°.71W**±0°.06**, h103km**±11km**, n20, σ0s.50**/31**, 8C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.20**	**294**	*e*P	**Pn**	**16 19 05.0**	**-0.5**
LVC				*e*S	**Sn**	**16 19 16.6**	**-0.1**
LVC				IAML		16 19 17.6	
	comp=Z,1μm,0.1s						
LVC	**Limon Verde**	**0.20**	**294**	*e*P	**Pn**	**16 19 04.9**	**-0.5**
LVC				*i* S	**Sn**	**16 19 16.2**	**-0.5**
PB06	**IPOC Station P**	**0.80**	**269**	*e*P	**Pn**	**16 19 09.0**	**-0.2**
PB06				*e*S	**Sn**	**16 19 23.6**	**+0.2**
PB06	**IPOC Station P**	**0.80**	**269**	⇑*i*P	**Pn**	**16 19 08.9**	**-0.2**
PB06				*i* S	**Sn**	**16 19 24.1**	**+0.8**
PB06				IAML		16 19 27.8	
	comp=N,3μm,0.1s						
PB15	**IPOC Station P**	**0.87**	**234**	⇑*i*P	**Pn**	**16 19 10.0**	**0.0**
PB15				*i* S	**Sn**	**16 19 25.6**	**+1.0**
PB09	**IPOC Station P**	**1.02**	**331**	*e*P	**Pn**	**16 19 11.6**	**+0.1**
PB09				*e*S	**Sn**	**16 19 28.2**	**+0.9**
PB09	**IPOC Station P**	**1.02**	**331**	⇓*i*P	**Pn**	**16 19 11.8**	**+0.3**
PB09				*i* S	**Sn**	**16 19 28.5**	**+1.2**
PB09				IAML		16 19 29.9	
	comp=N,861nm,0.3s						
PB03	**IPOC Station P**	**1.16**	**303**	⇑*i*P	**Pn**	**16 19 12.8**	**-0.2**
PB03				*i* S	**Sn**	**16 19 29.7**	**-0.4**
PB03				IAML		16 19 30.9	
	comp=E,2μm,0.1s						
PB04	**IPOC Station P**	**1.38**	**285**	⇑*i*P	**Pn**	**16 19 15.3**	**-0.3**
PB04				*i* S	**Sn**	**16 19 35.3**	**+0.7**
PB05	**IPOC Station P**	**1.39**	**263**	*e*P	**Pn**	**16 19 15.2**	**-0.4**
PB05	**IPOC Station P**	**1.39**	**263**	⇑*i*P	**Pn**	**16 19 15.2**	**-0.4**
PB05				*i* S	**Sn**	**16 19 34.2**	**-0.4**
PB05				IAML		16 19 38.7	
	comp=N,586nm,0.3s						
PB07	**IPOC Station P**	**1.46**	**311**	⇑*i*P	**Pn**	**16 19 16.3**	**-0.1**
PB07				*i* S	**Sn**	**16 19 36.2**	**0.0**
PB07				IAML		16 19 37.1	
	comp=E,1μm,0.2s						
PB02	**IPOC Station P**	**1.76**	**321**	⇑*i*P	**Pn**	**16 19 19.8**	**-0.3**
PB02				*i* S	**Sn**	**16 19 42.1**	**-0.6**
PB02				IAML		16 19 49.6	
	comp=E,997nm,0.2s						
PB01	**IPOC Station P**	**1.79**	**336**	⇓*i*P	**Pn**	**16 19 20.2**	**-0.4**
PB01				*i* S	**Sn**	**16 19 43.8**	**+0.2**
PB01				IAML		16 19 45.8	
	comp=E,641nm,0.4s						
PB10	**IPOC Station P**	**1.89**	**244**	*e*P	**Pn**	**16 19 21.6**	**-0.1**
PB10	**IPOC Station P**	**1.89**	**244**	IAML		16 19 52.4	
	comp=N,235nm,0.2s						

PB08	IPOC Station P	2.57	351	⇑iP	Pn	16 19 31.0	0.0
GO02	Mina Guanaco	2.59	198	IAML		16 20 09.8	
	comp=E,422nm,0.3s						
GO01	Chusmiza	3.04	351	⇓iP	Pn	16 19 37.0	-0.3
AZAP	Zapla	3.67	115	eP	Pn	16 19 45.3	-0.1
AZAP				IAML		16 19 45.9	
	comp=Z,8.2nm,0.6s						

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*ISK **25** 16:23:42.7, 41°.68N×32°.43E, h5km, ML3.4/30*
*DDA **25** 16:23:42.6, 41°.73N×32°.38E, h18km±1km, ML3.5*
*ISCJB **25** 16:23:43.4±0.4, 41°.81N±0°.01×32°.39E±0°.02, h14km±3km, Error ellipse: s-maj=2.9km s-min=2.3km az=148.6*
ISC 25 16:23:43.9±0.9**, 41°.72N**±0°.03×**32°.40E**±0°.02**, h11**km±7km**, n141,** $\sigma 0^{s}92$/154**, 23C-17D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTIN	Bartın	0.14	233	iP	Pg	16 23 47.6	+0.3
BTIN				iS	Sg	16 23 50.0	+0.5
KURC	Kurucasile-Bar	0.28	64	PG	Pg	16 23 48.9	-0.7
KURC				SG	Sg	16 23 53.3	-0.2
SAFT	Safranbolu	0.53	156	PG	Pg	16 23 52.4	-1.8
SAFT				SG	Sg	16 23 59.0	-2.1
KDZE	Karadeniz Ereo	0.83	241	PG	Pg	16 23 59.3	-0.6
KDZE	Karadeniz Ereo	0.83	241	⇓iP	Pb	16 24 00.6	+0.2
KDZE	Karadeniz Ereo	0.83	241	S	Sb	16 24 12.2	+0.6
BCAM	Yenicaga	0.94	196	iP	Pg	16 24 00.9	-1.1
BCAM				iS	Sg	16 24 14.0	-0.3
BCAM				IAML_P			
	comp=Z,12μm,0.3s						
YIGI	Dzce	1.05	224	iP	Pg	16 24 04.0	-0.1
YIGI				iS	Sg	16 24 17.2	-0.5
YIGI				IAML_P			
	comp=Z,11μm,0.3s						
ILGA	Ilgaz	1.19	124	iP	Pb	16 24 06.0	-0.8
ILGA				iS	Sn	16 24 23.0	-0.2
BZK	Bozkurt	1.22	78	PN	Pn	16 24 05.7	-1.2
BZK	Bozkurt	1.22	78	⇓iP	Pn	16 24 05.9	-1.0
BZK	Bozkurt	1.22	78	S	Sn	16 24 26.6	+3.2
CMDR	Camlidere-ANKA	1.23	177	iP	Pn	16 24 06.2	-1.0
KIBS	BOLU	1.37	198	iP	Pn	16 24 09.2	+0.1
KIBS				iS	Sg	16 24 29.0	+1.1
KIBS				IAML_P			
	comp=Z,7μm,0.3s						
TOS	Tosya	1.40	119	PN	Pn	16 24 08.2	-1.3
CANT	Cankiri	1.44	140	PN	Pn	16 24 09.9	-0.2
ELDT	Eldivan	1.45	148	iP	Pb	16 24 11.0	-0.1
ELDT				IAML_P			
	comp=Z,5μm,0.3s						
SAHE	Sakarya_HENDEK	1.46	234	iP	Pb	16 24 11.0	-0.1
SAHE				iS	Sg	16 24 30.4	-0.3
MDUB	Mudurnu	1.55	217	PN	Pn	16 24 10.9	-0.7
BTAS	Taskesti	1.56	223	iP	Pb	16 24 12.5	-0.4
BTAS				iS	Sg	16 24 34.3	+0.1
KAGI	orum-Kargı	1.67	110	iP	Pn	16 24 13.0	-0.1
KAGI				iS	Sb	16 24 36.3	+0.6
KAGI				IAML_P			
	comp=Z,3μm,0.2s						
KAND	Kocaeli-Kandir	1.78	250	iP	Pn	16 24 14.6	-0.1
KAND				iS	Sn	16 24 38.1	+0.9
SAUV	Serdivan-Sakar	1.85	239	PN	Pn	16 24 15.9	+0.3
LOD	Lodumlu	1.85	171	PN	Pn	16 24 15.6	-0.1
ANTO	Ankara	1.88	171	PN	Pn	16 24 15.9	-0.2
ANTO	Ankara	1.88	171	⇑iP	Pb	16 24 18.8	+0.5
SPNC	Sapanca-Adapaz	1.89	237	PN	Pn	16 24 16.3	+0.1
GULT	Gulveren	1.92	229	PN	Pn	16 24 17.2	+0.5
AUMIH	MIHALICIK	1.98	201	PN	Pn	16 24 17.6	0.0
GEYV	SAKARYA_Geyve	2.02	233	iP	Pb	16 24 19.6	-1.0
GEYV				iS	Sb	16 24 45.5	-0.2
GEYV				IAML_P			
	comp=Z,4μm,0.5s						
DELI	KIRIKKALE	2.07	146	iP	Pn	16 24 19.3	+0.5
DELI				iS	Sn	16 24 45.4	+0.7
DIKM	Dikmen	2.14	91	PN	Pn	16 24 19.6	0.0
DIKM	Dikmen	2.14	91	⇓iP	Pb	16 24 23.0	+0.3
DIKM	Dikmen	2.14	91	S	Sb	16 24 49.8	+0.5
SILT	Sile	2.15	256	PN	Pn	16 24 19.8	0.0
SILT	Sile	2.15	256	⇓iP	Pb	16 24 21.7	-1.2
SILT	Sile	2.15	256	S	Sn	16 24 47.2	+0.7
SRCK	Saricakaya, Es	2.15	219	PN	Pn	16 24 20.0	+0.2
SRCK	Saricakaya, Es	2.15	219	iP	Pn	16 24 20.8	+1.0
SRCK				IAML_P			
	comp=Z,875nm,0.2s						
BBAL	Bala	2.25	166	iP	Pg	16 24 26.1	-0.8
HRT	Hereke	2.25	247	PN	Pn	16 24 22.1	+0.9
CORM	Corum	2.29	132	PN	Pn	16 24 21.4	-0.3
BORA	Eskisehir	2.36	219	PN	Pn	16 24 23.4	+0.6
SVRH	Sivrihisar-ESK	2.37	197	PN	Pn	16 24 22.9	0.0
AUSIV	SIVRIHISAR	2.37	196	PN	Pn	16 24 22.8	-0.1
AUSIV	SIVRIHISAR	2.37	196	iP	Pb	16 24 27.6	+0.9
ADVT	Abdulvahap	2.39	238	PN	Pn	16 24 23.6	+0.5
YLV	Yalova	2.56	244	PN	Pn	16 24 25.7	+0.2
YLV	Yalova	2.56	244	⇑iP	Pn	16 24 27.5	+2.0
YLV	Yalova	2.56	244	S	Sn	16 24 58.1	+1.3
KLYT	Kilyos	2.57	261	PN	Pn	16 24 26.2	+0.7
KLYT	Kilyos	2.57	261	⇑iP	Pn	16 24 27.2	+1.7
KLYT	Kilyos	2.57	261	S	Sn	16 24 57.4	+0.7
CIFT	Cifteler, Eski	2.57	204	PN	Pn	16 24 26.1	+0.5
HAVZ	Havza	2.58	103	iP	Pb	16 24 31.2	+1.0
ISK	Istanbul-Kandi	2.60	256	PN	Pn	16 24 25.9	0.0
KAVV	Kandilli-Istan	2.60	256	PN	Pn	16 24 26.3	+0.4
BUY	Buyukada	2.62	252	PN	Pn	16 24 26.5	+0.2
KULU	Kulu	2.72	170	PN	Pn	16 24 27.9	+0.3
KVT	Kavak	2.81	102	PN	Pn	16 24 28.9	0.0
KIZT	Kizilcal	2.87	188	PN	Pn	16 24 29.5	-0.2
ARMT	Armutlu	2.91	248	PN	Pn	16 24 31.5	+1.2
ULDT	Uludag	2.94	239	iP	Pn	16 24 33.0	+2.2
SEVA	Sevastopol	2.96	18	⇑iP	Pn	16 24 33.5	+2.6
SEVA	Sevastopol	2.96	18	S	Sn	16 25 06.6	+0.2
CTKS	Kestanelik-??a	2.97	262	PN	Pn	16 24 31.2	+0.2
YAYX	Yaylak	2.98	158	PN	Pn	16 24 31.5	+0.2
YOZ	Yozgat	3.04	132	PN	Pn	16 24 32.5	+0.4
CTYL	Yalikoy Yolu	3.10	267	⇑iP	Pn	16 24 33.5	+0.8
CTYL	Yalikoy Yolu	3.10	267	S	Sn	16 25 09.8	0.0
CHBY	Cihanbeyli	3.16	173	PN	Pn	16 24 34.2	+0.5
TVSB	Tavsanli	3.19	226	PN	Pn	16 24 34.2	0.0
KCTX	Karacabey (Bur	3.39	246	PN	Pn	16 24 37.5	+0.6
TOKT	Tokat	3.43	113	PN	Pn	16 24 38.1	+0.7
TSMN	Mangalia Port-	3.49	308	S	Sn	16 25 19.3	-0.2
MANR	Mangalia	3.50	308	⇑iP	Pn	16 24 39.0	+0.7
MANR	Mangalia	3.50	308	S	Sn	16 25 19.5	-0.3
EFOR	EFORIE	3.64	312	S	Sn	16 25 23.2	+0.1
PHSR	Pinarhisar	3.66	270	⇑iP	Pn	16 24 41.6	+1.1
PHSR	Pinarhisar	3.66	270	S	Sn	16 25 23.7	+0.1
TSCT	Constanta Port	3.67	313	S	Sn	16 25 24.1	+0.1
MFTR	Murfatlar	3.82	311	⇑iP	Pn	16 24 43.2	+0.6
MFTR	Murfatlar	3.82	311	S	Sn	16 25 27.0	-0.5
TIRR	Tirgusor	4.00	314	⇓iP	Pn	16 24 45.0	-0.2
TIRR	Tirgusor	4.00	314	S	Sn	16 25 31.3	-0.8
ICOR	Ion Corvin	4.14	307	⇑iP	Pn	16 24 47.9	+0.8
ICOR	Ion Corvin	4.14	307	S	Sn	16 25 34.5	-1.0
TLB	Topalu	4.29	313	⇓iP	Pn	16 24 48.9	-0.2
TLB	Topalu	4.29	313	S	Sn	16 25 38.3	-0.8
TLCR		4.34	324	⇑iP	Pn	16 24 49.5	-0.3
TLCR		4.34	324	S	Sn	16 25 39.3	-1.0
HARR	Harsova	4.41	314	⇑iP	Pn	16 24 51.8	+0.9
RASA	Rasa	4.59	305	S	Sn	16 25 46.2	-0.4
CFR	Carcaliu	4.64	319	⇑iP	Pn	16 24 53.9	-0.1
CFR	Carcaliu	4.64	319	S	Sn	16 25 47.5	-0.4
AMRR	Amara	4.70	310	⇑iP	Pn	16 24 56.1	+1.3
AMRR	Amara	4.70	310	S	Sn	16 25 48.8	-0.4
RAZG	Razgrad	4.72	295	⇓iP	Pn	16 24 56.4	+1.3
RAZG	Razgrad	4.72	295	S	Sn	16 25 49.5	-0.4
ELND	Elena	4.99	286	⇑iP	Pn	16 25 00.0	+1.2
ELND	Elena	4.99	286	S	Sn	16 25 55.7	-0.8
EZN	Ezine	4.99	250	⇑iP	Pn	16 25 00.3	+1.5
EZN	Ezine	4.99	250	S	Sn	16 25 57.0	+0.6
ISR	Istrita	5.45	310	⇓iP	Pn	16 25 06.7	+1.5
ISR	Istrita	5.45	310	S	Sn	16 26 07.6	-0.4
BISRR	Bisoca	5.63	315	⇓iP	Pn	16 25 09.0	+1.4
BISRR	Bisoca	5.63	315	S	Sn	16 26 11.9	-0.4
VRI	Vrincioaia	5.83	317	⇓iP	Pn	16 25 11.6	+1.2
VRI	Vrincioaia	5.83	317	S	Sn	16 26 16.7	-0.6
PLOR	Plostina	5.86	317	⇓iP	Pn	16 25 12.0	+1.2
PLOR	Plostina	5.86	317	S	Sn	16 26 17.6	-0.4
PLVB	Pleven	5.98	289	⇓iP	Pn	16 25 13.9	+1.5
PLVB	Pleven	5.98	289	S	Sn	16 26 19.6	-1.4
MLR	Muntele Rosu	6.01	311	⇑iP	Pn	16 25 14.0	+1.0
MLR	Muntele Rosu	6.01	311	S	Sn	16 26 21.0	-0.9
TESR	Tescani	6.33	321	⇑iP	Pn	16 25 18.1	+0.9
TESR	Tescani	6.33	321	S	Sn	16 26 28.5	-1.0
VOIR		6.50	307	⇑iP	Pn	16 25 20.6	+0.9
VOIR		6.50	307	S	Sn	16 26 33.2	-0.7
DOPR	Dopca	6.61	312	⇓iP	Pn	16 25 22.3	+1.2
DOPR	Dopca	6.61	312	S	Sn	16 26 35.1	-1.4
ARR	Arges	6.72	305	⇑iP	Pn	16 25 23.8	+1.2
ARR	Arges	6.72	305	S	Sn	16 26 38.2	-1.0
VTS	Vitosha	6.87	281	⇑iP	Pn	16 25 26.3	+1.5
VTS	Vitosha	6.87	281	S	Sn	16 26 42.2	-0.9
BIZ	Bicaz	6.90	321	⇑iP	Pn	16 25 26.0	+1.0
BIZ	Bicaz	6.90	321	S	Sn	16 26 43.1	-0.4
LOT	Lotru	7.29	304	⇑iP	Pn	16 25 31.3	+0.8
LOT	Lotru	7.29	304	S	Sn	16 26 52.3	-1.0
BLKB	Belogradchik	7.42	288	S	Sn	16 26 55.7	-0.6
BURAR	Bucovina Array	7.80	321	⇓iP	Pn	16 25 38.4	+0.9
BURAR	Bucovina Array	7.80	321	S	Sn	16 27 06.2	+0.3
GZR	Gura Zlata	7.89	301	⇓iP	Pn	16 25 39.9	+1.2
GZR	Gura Zlata	7.89	301	S	Sn	16 27 05.4	-2.7
MDVR	Moldovita	8.38	295	⇓iP	Pn	16 25 46.3	+0.9
MDVR	Moldovita	8.38	295	S	Sn	16 27 18.2	-1.8
DRGR		8.60	309	⇓iP	Pn	16 25 49.4	+0.9
DRGR		8.60	309	S	Sn	16 27 24.9	-0.6
BZS	Buzias	8.73	300	⇑iP	Pn	16 25 50.8	+0.7
BZS	Buzias	8.73	300	S	Sn	16 27 28.0	-0.6
VYHS	Vyhne	11.73	310	ePN	Pn	16 26 32.0	+0.8

IDC 25 16:25:16.1±1.6**, 1°.82N×127°.29E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/30**, mbtmp3.6**/5**, Error ellipse: s-maj=155.0km s-min=18.9km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.71	163	P	P	16 30 19.9	+0.2
	2.1nm,0.6s,baz=340,slow=12,SNR=14						
ASAR	Alice Springs	26.14	166	P	P	16 30 53.8	+1.5
	0.5nm,0.5s,baz=353,slow=8.6,SNR=25						
STKA	Stephens Creek	36.16	159	P	P	16 32 18.6	-1.8
	1.3nm,0.7s,baz=332,slow=17,SNR=2.6						
MKAR	Makanchi Array	59.43	326	P	P	16 35 21.0	+0.3
	0.3nm,0.6s,baz=113,slow=8.5,SNR=4.4						
BVAR	Borovoye Array	69.21	327	P	P	16 36 24.4	-0.3
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.9						

JMA 25 16:43:15.0±0.2**, 24°.79N×123°.22E, h32**km**, M1.9, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.38	210	P	Pb	16 43 23.3	-0.4
YOJ				eS	Sb	16 43 29.1	-0.5
JYNG	Yonagunijimaku	0.42	217	P	Pb	16 43 24.1	-0.2
JYNG				eS	Sb	16 43 29.9	-0.8
IRIF	Iriomote-Funau	0.65	134	P	Pb	16 43 27.5	-0.4
IRIF				eS	Sb	16 43 36.9	+0.1
HATJ	Hateruma jima	0.90	144	P	Pn	16 43 31.3	-0.2
JKRS	Kuro-shima	0.91	127	P	Pn	16 43 31.7	+0.2
JKRS				eS	Sn	16 43 43.2	-0.3
JIJ	Ishigaki jima	0.94	117	P	Pn	16 43 31.7	-0.3
JIJ				eS	Sb	16 43 45.1	+0.1
JISG	Ishigakijimahi	1.01	101	P	Pn	16 43 32.5	-0.5
JTJ	Tarama	1.36	96	P	Pn	16 43 38.6	+0.9
JTJ				S	Sb	16 43 56.1	-0.7

TAP 25 16:43:22.1, 24°.85N×122°.39E, h7km±1km**, ML2.4, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.39	219	eP	Pb	16 43 31.1	-0.2
	baz=218						
EOS1				eS	Sb	16 43 37.5	+0.1
	baz=218						
TIPB	Shuangxi	0.53	283	iP	Pb	16 43 33.6	-0.2
	baz=283						
TIPB				iS	Sb	16 43 42.0	+0.3
	baz=283						
TWC	Suao	0.55	244	P	Pg	16 43 33.4	+0.7
	baz=243						
TWC				eS	Sb	16 43 42.0	-0.2
	baz=243						
ILA	Ilan	0.59	262	eS	Sb	16 43 43.8	+0.4
	baz=261						
NWF	Wu-fen Shan	0.60	292	P	Pb	16 43 35.0	0.0
	baz=291						
NWF				S	Sb	16 43 43.8	+0.1
	baz=291						
WFSB	Wu-fen Shan	0.60	292	P	Pb	16 43 34.7	-0.2
	baz=291						
WFSB				S	Sb	16 43 44.1	+0.5
	baz=291						
TWE	Neicheng	0.67	259	eP	Pb	16 43 36.2	0.0
	baz=258						
TWE				eS	Sb	16 43 46.9	+1.2
	baz=258						
NANB	Nanao	0.72	234	P	Pb	16 43 36.5	-0.5
	baz=234						
NANB				S	Sb	16 43 47.6	+0.5
	baz=234						
ENA	Nanau	0.73	235	eP	Pb	16 43 36.7	-0.5
	baz=234						
ENA				eS	Sb	16 43 48.4	+1.0
	baz=234						
ENTT	Nioudou	0.78	255	eP	Pb	16 43 38.7	+0.6
	baz=254						
ENTT				S	Sb	16 43 50.1	+1.2
	baz=254						
YM01	YM01	0.80	292	eP	Pb	16 43 38.7	+0.2
	baz=291						
YM01				eS	Sb	16 43 50.5	+0.9
	baz=291						
YM08	YM08	0.80	295	eP	Pb	16 43 38.4	0.0
	baz=294						
YM08				eS	Sb	16 43 50.1	+0.5
	baz=294						
YM05	YM05	0.81	293	P	Pb	16 43 38.8	+0.2
	baz=292						
YM05				eS	Sn	16 43 51.6	-0.9
	baz=292						
YM10	YM10	0.81	292	eP	Pb	16 43 38.9	+0.3
	baz=291						
YM10				eS	Sb	16 43 50.5	+0.6
	baz=291						
YM04	YM04	0.83	291	eP	Pb	16 43 39.1	+0.1
	baz=291						
YM04				eS	Sb	16 43 51.5	+1.1
	baz=291						
TWY	Chenhua	0.83	301	eP	Pb	16 43 38.9	-0.1
	baz=300						
TWY				S	Sb	16 43 51.2	+0.7
	baz=300						
NDT	Datong Townshi	0.84	253	eP	Pn	16 43 40.0	-0.5
	baz=252						
NDT				eS	Sb	16 43 51.3	+0.8
	baz=252						
YM03	YM03	0.84	293	eP	Pb	16 43 39.1	0.0
	baz=292						
ANP	Anpu	0.86	293	eP	Pb	16 43 39.3	-0.2
	baz=292						
YHNB	Yeheng	0.94	259	P	Pb	16 43 40.8	0.0
	baz=258						
YHNB				eS	Sn	16 43 55.3	-0.4
	baz=258						
NSK	Sanguang	0.96	260	eP	Pb	16 43 41.3	+0.2
	baz=259						
NACB	Ninganchiao	0.99	227	P	Pb	16 43 41.6	-0.1
	baz=227						
NACB				eS	Sn	16 43 56.3	-0.5
	baz=227						
NNS	Nan Shan	1.02	246	eP	Pb	16 43 42.2	+0.1
	baz=245						
NNS				eS	Sn	16 43 56.8	-0.8
	baz=245						
ETLH	Xiulin Townshi	1.05	232	eP	Pb	16 43 42.7	0.0
	baz=232						
ETLH				eS	Sn	16 43 58.0	-0.4
	baz=232						
CHGB	Renai	1.36	235	eP	Pg	16 43 48.4	+0.2
	baz=234						
CHGB				eS	Sn	16 44 06.5	+0.2
	baz=234						

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*CNRM **25** 16:43:57.1, 36°.62N×9°.00W, h23km, ml2.9*
*MDD **25** 16:44:00.8±0.8, 36°.95N×9°.02W, h32km±3km, mbLg2.7/48, Error ellipse: s-maj=7.5km s-min=4.2km az=51.0, PRXIMO*
*INMG **25** 16:44:00.4±1.3, 36°.86N×8°.94W, h27km±3km, MD2.9, ML2.6, Error ellipse: s-maj=5.1km s-min=2.5km az=60.0*
*IGIL **25** 16:44:00.4, 36°.84N×8°.95W, h28km, ML2.9*
ISC 25 16:43:57.4±1.3**, 36°.82N**±0°.04×**9°.00W**±0°.05**, h41**km±10km**, n88,** $\sigma 1^{s}90$/174**, 2C-10D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.34	25	⇓iPg	Pn	16 44 07.5	+1.2
PFVI				eSg	Sn	16 44 11.7	-0.7
PFVI				A	A	16 44 13.6	
	659nm,0.1s						
PFVI	Vila Bisbo	0.34	25	⇓P	Pn	16 44 07.4	+1.2
	106nm,0.3s,SNR=18						
PFVI				S	Sn	16 44 11.3	-1.1
	1μm,0.1s,SNR=10						
PFVI	Vila Bisbo	0.34	25	P	Pn	16 44 06.2	0.0
PFVI				S	Sn	16 44 14.1	+1.7
MORF	Marmelete	0.56	30	eP	Pn	16 44 10.2	+1.1
MORF				eS	Sn	16 44 17.6	+0.3
MORF				AML	AML	16 44 18.3	
	comp=N,978nm,0.1s						
MORF	Marmelete	0.56	30	⇓iPg	Pn	16 44 10.2	+1.1
MORF				eSg	Sn	16 44 17.8	+0.5
MORF				A	A	16 44 18.2	
	comp=N,870nm,0.2s						
MORF	Marmelete	0.56	30	P	Pn	16 44 10.2	+1.1
MORF				S	Sn	16 44 17.8	+0.5
	comp=N,870nm,0.2s						
PTEO	Sao Teotonio	0.76	17	⇓iPg	Pn	16 44 13.0	+1.3
PTEO				eSg	Sn	16 44 23.0	+1.1
PTEO				A	A	16 44 24.3	
	comp=N,138nm,0.3s						
PTEO	Sao Teotonio	0.76	17	P	Pn	16 44 13.0	+1.3
PTEO				S	Sn	16 44 23.0	+1.1
	comp=N,69nm,0.3s						
PBDV	Barranco-do-Ve	0.96	64	⇓iP	Pn	16 44 15.8	+1.4
PBDV				eS	Sn	16 44 27.7	+0.8
PBDV				A	A	16 44 31.6	
	comp=N,41nm,0.1s						
PBDV	Barranco-do-Ve	0.96	64	P	Pn	16 44 15.8	+1.4
PBDV				S	Sn	16 44 27.7	+0.8
	comp=N,41nm,0.1s						
PCVE	Castro Verde	1.12	43	⇓eP	Pn	16 44 18.0	+1.4
PCVE				eS	Sn	16 44 31.4	+0.6
PCVE				A	A	16 44 33.4	
	comp=N,38nm,0.1s						
PCVE	Castro Verde	1.12	43	P	Pn	16 44 18.0	+1.4
PCVE				S	Sn	16 44 31.4	+0.6
	comp=N,38nm,0.1s						
PVAQ	Vaqueiros	1.18	60	eP	Pn	16 44 18.8	+1.3
PVAQ				eS	Sn	16 44 32.5	+0.1
PVAQ				A	A	16 44 43.5	
	comp=N,49nm,0.1s						
PVAQ	Vaqueiros	1.18	60	P	Pn	16 44 18.8	+1.3
PVAQ				S	Sn	16 44 32.5	+0.1
	comp=N,49nm,0.1s						
PVAQ	Vaqueiros	1.18	60	P	Pn	16 44 21.3	+3.8
PVAQ				S	Sn	16 44 37.0	+4.7
PNCL	Nicolau / Gran	1.34	16	⇓iP	Pn	16 44 20.7	+1.0
PNCL				eS	Sn	16 44 36.4	+0.1
PNCL				A	A	16 44 41.8	
	comp=N,47nm,0.1s						
PNCL	Nicolau / Gran	1.34	16	P	Pn	16 44 20.7	+1.0
PNCL				S	Sn	16 44 36.4	+0.1
	comp=N,47nm,0.1s						
EGRO	El Granado	1.41	59	P	Pn	16 44 21.8	+1.2
	comp=N,3.6nm,0.5s,SNR=20						
EGRO				S	Sn	16 44 38.2	+0.2
	comp=N,29nm,0.1s						
PBEJ	Beja	1.50	37	⇓eP	Pn	16 44 24.0	+2.1
PBEJ				eS	Sn	16 44 41.9	+1.6
PBEJ				A	A	16 44 50.2	
	comp=N,32nm,0.1s						
PBEJ	Beja	1.50	37	P	Pn	16 44 24.0	+2.1
PBEJ				S	Sn	16 44 41.9	+1.6
	comp=N,16nm,0.1s						
PBAR	Barrancos	2.06	49	ePn	Pn	16 44 31.2	+1.6
PBAR				eSn	Sn	16 44 55.1	+1.0
PBAR				A	A	16 45 10.2	
	comp=N,26nm,0.4s						
PBAR	Barrancos	2.06	49	P	Pn	16 44 31.2	+1.6
PBAR				S	Sn	16 44 55.1	+1.0
	comp=N,26nm,0.4s						
EMIN	Mina Concepcio	2.08	62	P	Pn	16 44 31.0	+1.1
	comp=N,1.5nm,0.3s,SNR=24						
EMIN				S	Sn	16 44 56.0	+1.4
	comp=N,4.5nm,0.1s,SNR=7.1						
PMAFR	Mafra	2.14	354	ePn	Pn	16 44 32.1	+1.4
PMAFR				eSn	Sn	16 44 57.5	+1.5
PMAFR				A	A	16 44 58.8	
	comp=N,65nm,0.3s						
PMAFR	Mafra	2.14	354	P	Pn	16 44 32.3	+1.6
	comp=N,22nm,0.3s,SNR=40						
PMAFR				S	Sn	16 44 54.9	-1.1
	comp=N,60nm,0.1s						
PMTG	Montargil	2.33	15	⇓iPn	Pn	16 44 34.2	+1.0
PMTG				eSn	Sn	16 44 59.8	-0.7
PMTG				A	A	16 45 01.7	
	comp=N,27nm,0.3s						
PMTG	Montargil	2.33	15	P	Pn	16 44 34.2	+1.0
PMTG				S	Sn	16 44 59.8	-0.7
	comp=N,27nm,0.3s						
ALMR	Almeirim	2.35	8	eP	Pn	16 44 35.7	+2.1
ALMR				eS	Sn	16 45 01.1	-0.1
ALMR				AML	AML	16 45 05.4	
	comp=N,35nm,0.2s						
ALMR	Almeirim	2.35	8	ePn	Pn	16 44 36.0	+2.4
ALMR				eSn	Sn	16 45 02.8	+1.6
ALMR				A	A	16 45 18.7	
	comp=N,30nm,0.5s						
ALMR	Almeirim	2.35	8	P	Pn	16 44 36.0	+2.4
ALMR				S	Sn	16 45 01.1	-0.1
	comp=N,17nm,0.2s						
ESPR	Espera	2.53	88	⇑P	Pn	16 44 37.7	+1.8
	comp=N,8.0nm,0.2s,SNR=18						
ESPR				S	Sn	16 45 06.7	+1.2
	comp=N,35nm,0.2s						
PTOM	Tomar	2.83	9	ePn	Pn	16 44 41.5	+1.4
PTOM				eSn	Sn	16 45 12.9	-0.1
PTOM				A	A	16 45 14.7	
	comp=N,33nm,0.1s						
PTOM	Tomar	2.83	9	P	Pn	16 44 41.5	+1.4
PTOM				S	Sn	16 45 12.9	-0.1
	comp=N,16nm,0.1s						
PMRV	Marv??o	2.90	26	ePn	Pn	16 44 42.0	+0.9
PMRV				eSn	Sn	16 45 14.2	-0.4
PMRV				A	A	16 45 15.7	
	comp=N,19nm,0.1s						
PMRV	Marv??o	2.90	26	P	Pn	16 44 42.0	+0.9
PMRV				S	Sn	16 45 14.2	-0.4
	comp=N,19nm,0.1s						
ECEU	Ceuta	3.07	106	P	Pn	16 44 45.8	+2.4
	comp=N,3.2nm,2.7s,SNR=7.9						
ECEU				S	Sn	16 45 21.7	+2.8
	comp=N,15nm,2.3s,SNR=7.9						
ECAB	El Cabril	3.12	65	P	Pn	16 44 45.5	+1.4
	comp=N,4.1nm,0.1s,SNR=43						
ECAB				S	Sn	16 45 19.2	-0.9
	comp=N,6.4nm,0.1s						
HORN	Hornachuelos	3.16	70	P	Pn	16 44 46.8	+2.2
HORN				S	Sn	16 45 24.2	+3.1
PCBR	Castelo Branco	3.24	21	ePn	Pn	16 44 47.0	+1.2
PCBR				eSn	Sn	16 45 22.2	-1.0
PCBR				A	A	16 45 25.4	
	comp=N,13nm,0.9s						
PCBR	Castelo Branco	3.24	21	P	Pn	16 44 47.0	+1.2
PCBR				S	Sn	16 45 22.2	-1.0
	comp=N,6.4nm,0.9s						
PCAS	Casmilo, Conde	3.25	7	ePn	Pn	16 44 47.3	+1.4
PCAS				eSn	Sn	16 45 23.2	-0.1
PCAS				A	A	16 45 25.2	
	comp=N,11nm,0.2s						
PCAS	Casmilo, Conde	3.25	7	P	Pn	16 44 47.3	+1.4
PCAS				S	Sn	16 45 23.2	-0.1
	comp=N,11nm,0.2s						
EMIJ	Mijas	3.41	93	P	Pn	16 44 51.1	+3.0
	comp=N,0.8nm,0.2s,SNR=7.9						
EMIJ				S	Sn	16 45 28.3	+1.0
	comp=N,3.3nm,0.2s,SNR=7.9						
CHEFC	Chefchaouen	3.43	119	P	Pn	16 44 50.1	+1.6
CHEFC				S	Sn	16 45 27.4	-0.5

MTE	**Manteigas**	**3.75**	**17**	⇑ePn	**Pn**	**16 44 53.9**	**+1.1**
MTE				eSn	**Sn**	**16 45 34.3**	**-1.5**
MTE				A	A	16 45 36.2	
	comp=N,18nm,0.2s						
MTE	**Manteigas**	**3.75**	**17**	P	**Pn**	**16 44 53.9**	**+1.1**
MTE				S	**Sn**	**16 45 34.3**	**-1.5**
	comp=N,8.9nm,0.2s						
EADA	**Adamuz**	**3.77**	**68**	P	**Pn**	**16 44 54.7**	**+1.6**
	comp=N,0.9nm,0.3s,SNR=4.4						
EADA				S	**Sn**	**16 45 34.6**	**-1.6**
	comp=N,7.2nm,0.1s,SNR=5.1						
ZHG	**ZHG**	**3.88**	**149**	P	**Pn**	**16 44 54.7**	**0.0**
ZHG				S	**Sn**	**16 45 38.6**	**-0.6**
EGOR	**Sierra Gorda,**	**3.93**	**84**	P	**Pn**	**16 44 58.0**	**+2.6**
	comp=N,0.4nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**16 45 40.0**	**-0.4**
	comp=N,3.2nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**3.97**	**34**	P	**Pn**	**16 44 56.8**	**+1.0**
	comp=N,3.1nm,0.4s,SNR=7.9						
EPLA				S	**Sn**	**16 45 39.2**	**-1.9**
	comp=N,11nm,0.1s,SNR=10						
PVIS	**Viseu**	**3.98**	**12**	ePn	**Pn**	**16 44 56.9**	**+0.9**
PVIS				eSn	**Sn**	**16 45 39.7**	**-1.8**
PVIS				A	A	16 45 42.6	
	comp=N,16nm,0.3s						
PVIS	**Viseu**	**3.98**	**12**	P	**Pn**	**16 44 56.9**	**+0.9**
PVIS				S	**Sn**	**16 45 39.7**	**-1.8**
	comp=N,7.8nm,0.3s						
PALE	**Palemas**	**4.41**	**110**	P	**Pn**	**16 44 59.3**	**-2.6**
PALE				S	**Sn**	**16 45 51.7**	**-0.2**
EQUE	**Quentar**	**4.47**	**83**	P	**Pn**	**16 45 05.3**	**+2.5**
	comp=N,0.6nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**16 45 53.0**	**-0.5**
	comp=N,0.9nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**4.57**	**52**	P	**Pn**	**16 45 05.1**	**+1.0**
	comp=N,1.0nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**16 45 53.3**	**-2.6**
	comp=N,2.1nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**4.60**	**19**	ePn	**Pn**	**16 45 05.5**	**+1.0**
MVO				eSn	**Sn**	**16 45 54.6**	**-2.1**
MVO				A	A	16 45 57.5	
	comp=N,6.4nm,0.3s						
MVO	**Moncorvo**	**4.60**	**19**	P	**Pn**	**16 45 05.3**	**+0.8**
	comp=N,5.0nm,0.2s,SNR=11						
MVO				S	**Sn**	**16 45 53.4**	**-3.3**
	comp=N,7.3nm,0.1s						
LCRM	**LCR**	**4.62**	**131**	P	**Pn**	**16 45 04.5**	**-0.3**
LCRM				S	**Sn**	**16 45 56.9**	**-0.3**
POLO	**Lamas de Olo**	**4.64**	**11**	ePn	**Pn**	**16 45 06.3**	**+1.2**
POLO				eSn	**Sn**	**16 45 55.6**	**-2.2**
POLO				A	A	16 45 58.1	
	comp=N,2.8nm,0.5s						
POLO	**Lamas de Olo**	**4.64**	**11**	P	**Pn**	**16 45 06.3**	**+1.2**
POLO				S	**Sn**	**16 45 55.6**	**-2.2**
	comp=N,2.8nm,0.5s						
AKLM	**AKL**	**4.78**	**117**	P	**Pn**	**16 45 03.2**	**-3.8**
AKLM				S	**Sn**	**16 46 01.5**	**+0.3**
EQES	**Quesada**	**4.83**	**77**	P	**Pn**	**16 45 09.2**	**+1.5**
	comp=N,1.2nm,0.3s,SNR=9.6						
EQES				S	**Sn**	**16 46 01.6**	**-0.8**
	comp=N,4.4nm,0.1s,SNR=8.8						
ESDC	**Sonseca Array**	**4.88**	**53**	P	**Pn**	**16 45 09.6**	**+1.2**
	comp=N,0.4nm,0.2s,baz=241,slow=13,SNR=8.1						
ESDC				S	**Sn**	**16 46 01.6**	**-2.1**
	comp=N,1.4nm,0.2s,baz=239,slow=24,SNR=22						
EBER	**Berja**	**4.90**	**87**	P	**Pn**	**16 45 11.5**	**+2.7**
	comp=N,0.5nm,1.6s,SNR=7.9						
EBER				S	**Sn**	**16 46 03.2**	**-1.2**
	comp=N,4.5nm,3.2s,SNR=7.9						
PCAB	**Cabril**	**4.94**	**9**	⇓ePn	**Pn**	**16 45 10.4**	**+1.3**
PCAB				eSn	**Sn**	**16 46 02.8**	**-2.2**
PCAB				A	A	16 46 05.8	
	comp=N,7.5nm,0.3s						
PCAB	**Cabril**	**4.94**	**9**	P	**Pn**	**16 45 10.4**	**+1.3**
PCAB				S	**Sn**	**16 46 02.8**	**-2.2**
	comp=N,3.8nm,0.3s						
CZD	**Col de Zad**	**4.99**	**138**	P	**Pn**	**16 45 11.1**	**+1.0**
CZD				S	**Sn**	**16 46 04.8**	**-1.9**
ELOB	**Lobios**	**5.09**	**8**	P	**Pn**	**16 45 12.0**	**+0.8**
	comp=N,5.1nm,0.2s,SNR=30						
ELOB				S	**Sn**	**16 46 05.7**	**-3.1**
	comp=N,4.6nm,0.1s,SNR=8.7						
PGAV	**Gavieira, Arco**	**5.17**	**6**	ePn	**Pn**	**16 45 13.5**	**+1.2**
PGAV				eSn	**Sn**	**16 46 08.5**	**-2.2**
PGAV				A	A	16 46 11.0	
	comp=N,3.7nm,0.3s						
PGAV	**Gavieira, Arco**	**5.17**	**6**	P	**Pn**	**16 45 13.5**	**+1.2**
PGAV				S	**Sn**	**16 46 08.5**	**-2.2**
	comp=N,3.7nm,0.3s						
MD31	**MD31**	**5.27**	**137**	P	**Pn**	**16 45 13.7**	**0.0**
MD31				S	**Sn**	**16 46 10.7**	**-2.6**
SESP	**Santiago Espad**	**5.30**	**74**	P	**Pn**	**16 45 15.9**	**+1.7**
	comp=N,1.8nm,0.2s,SNR=4.0						
SESP				S	**Sn**	**16 46 11.4**	**-2.6**
	comp=N,3.4nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**5.33**	**2**	P	**Pn**	**16 45 15.4**	**+1.0**
	comp=N,1.9nm,0.2s,SNR=7.9						
EZAM				S	**Sn**	**16 46 11.2**	**-3.3**
	comp=N,1.0nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**5.38**	**43**	P	**Pn**	**16 45 16.6**	**+1.4**
	comp=N,0.4nm,0.2s,SNR=5.8						
GUD				S	**Sn**	**16 46 13.4**	**-2.6**
	comp=N,1.3nm,0.1s						
MDT	**Midelt**	**5.39**	**137**	P	**Pn**	**16 45 15.7**	**+0.2**
MDT				S	**Sn**	**16 46 13.3**	**-3.0**
ECAL	**Calabor**	**5.41**	**18**	P	**Pn**	**16 45 16.6**	**+1.1**
	comp=N,9.5nm,0.3s,SNR=8.7						
ECAL				S	**Sn**	**16 46 12.8**	**-3.7**
	comp=N,8.7nm,0.3s						
OUK	**Oukaimeden**	**5.68**	**170**	P	**Pn**	**16 45 20.2**	**+0.6**
OUK				S	**Sn**	**16 46 21.8**	**-2.0**
JBK	**JBK**	**5.80**	**113**	P	**Pn**	**16 45 20.2**	**-0.9**
JBK				S	**Sn**	**16 46 24.4**	**-2.1**
EAGO	**Agolada(Pontev**	**6.01**	**6**	P	**Pn**	**16 45 24.9**	**+1.0**
	comp=N,2.6nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**16 46 27.6**	**-3.8**
	comp=N,1.3nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.12**	**0**	P	**Pn**	**16 45 26.3**	**+1.0**
	comp=N,3.5nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**16 46 30.0**	**-4.0**
	comp=N,1.8nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**6.18**	**71**	S	**Sn**	**16 46 33.0**	**-2.7**
	comp=N,1.7nm,0.2s,SNR=7.9						
OUZM	**OUZ**	**6.19**	**162**	P	**Pn**	**16 45 26.8**	**+0.4**
OUZM				S	**Sn**	**16 46 33.6**	**-2.3**
TTIG	**Tnine Tigouga,**	**6.28**	**176**	P	**Pn**	**16 45 25.5**	**-2.1**
TTIG				S	**Sn**	**16 46 33.6**	**-4.6**
EPON	**Pontenova**	**6.65**	**12**	P	**Pn**	**16 45 34.2**	**+1.6**
	comp=N,0.9nm,0.2s,SNR=7.9						
EPON				S	**Sn**	**16 46 41.9**	**-5.2**
	comp=N,0.9nm,0.3s,SNR=7.9						
ETOR	**Torete**	**6.73**	**52**	P	**Pn**	**16 45 35.6**	**+1.8**
	comp=N,1.0nm,0.3s,SNR=5.7						
ETOR				S	**Sn**	**16 46 45.7**	**-3.6**
	comp=N,1.2nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**7.09**	**23**	P	**Pn**	**16 45 40.4**	**+1.7**
	comp=N,0.8nm,0.3s,SNR=7.9						
EARI				S	**Sn**	**16 46 52.9**	**-5.1**
	comp=N,1.9nm,4.5s,SNR=7.9						
EMOS	**Mosqueruela**	**7.56**	**60**	P	**Pn**	**16 45 47.5**	**+2.3**
	comp=N,0.5nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**16 47 05.5**	**-4.2**
	comp=N,4.6nm,0.7s,SNR=7.9						
EALK	**Alkurruntz**	**8.59**	**40**	S	**Sn**	**16 47 29.3**	**-5.6**
	comp=N,5.6nm,4.5s,SNR=7.9						

MAN 25 16:52:37.2, 6°.47N×123°.66E, h20^{km}, mb3.8, ML2.5, MS2.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.88**	**87**	eP	Pb	16 52 52.7	-1.0
SKMP				eS	Sb	16 53 04.6	-0.4
DDMP	**Don Marcelino,**	**2.07**	**100**	eP	Pn	16 53 11.3	+0.4
DDMP				eS	Sn	16 53 37.3	+1.3
MATI	**Mati**	**2.62**	**79**	eP	Pb	16 53 36.5	+13

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*ISCJB **25** 16:54:39.5±0.3, 50°.08N±0°.02×18°.32E±0°.02, h0^{km}, Error ellipse: s-maj=3.1km s-min=1.6km az=15.9*
*BGR **25** 16:54:41.9±0.3, 50°.09N×18°.40E, h1^{km}, ML3.0/23, Error ellipse: s-maj=5.6km s-min=3.3km az=5.0*
*IPEC **25** 16:54:41.7±0.2, 50°.06N×18°.47E, h0^{km}, ML2.3/3, Error ellipse: s-maj=2.0km s-min=1.1km az=160.0*
*PRU **25** 16:54:42.1±0.0, 50°.04N×18°.44E, h0^{km}*

ISC 25 16:54:40.7±0.7, 50°.05N±0°.02×18°.42E±0°.02, h0^{km}, n71, σ1^{s}.23/123, 2C-8D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**284**	ePg	**Pg**	**16 54 46.2**	**+2.7**
RAC				eSg	**Sg**	**16 54 49.6**	**+4.1**
OKC	**Ostrava-Krasne**	**0.28**	**220**	ePg	**Pb**	**16 54 48.3**	**-0.3**
OKC				eSg	**Sb**	**16 54 53.0**	**-0.7**
OKC	**Ostrava-Krasne**	**0.28**	**220**	ePG	**Pb**	**16 54 48.2**	**-0.3**
OKC				eSG	**Sb**	**16 54 51.9**	**-1.8**
	comp=Z,286nm,0.5s						
CHZP	**Chorzow**	**0.44**	**56**	ePg	**Pb**	**16 54 50.8**	**-0.6**
CHZP				eSg	**Sb**	**16 54 57.2**	**-1.4**
MORC	**Moravsky Berou**	**0.63**	**245**	⇓iP	**Pb**	**16 54 54.4**	**-0.3**
MORC				S	**Sb**	**16 55 03.3**	**-0.7**
MORC	**Moravsky Berou**	**0.63**	**245**	ePG	**Pb**	**16 54 54.3**	**-0.3**
MORC				eSG	**Sb**	**16 55 02.4**	**-1.6**
MORC	**Moravsky Berou**	**0.63**	**245**	ePg	**Pb**	**16 54 54.2**	**-0.3**
	baz=64						
MORC				eSg	**Sg**	**16 55 02.3**	**+1.4**
	81nm,0.4s,baz=64						
MORC	**Moravsky Berou**	**0.63**	**245**	ePg	**Pb**	**16 54 54.4**	**-0.3**
MORC				eSg	**Sb**	**16 55 03.6**	**-0.4**
OJC	**Ojcow**	**0.90**	**79**	ePg	**Pb**	**16 54 58.5**	**-0.8**
OJC				eSg	**Sb**	**16 55 10.8**	**-1.1**
OJC	**Ojcow**	**0.90**	**79**	ePg	**Pb**	**16 54 58.7**	**-0.6**
OJC				eSg	**Sb**	**16 55 11.2**	**-0.6**
LANS	**Liptovska Anna**	**1.13**	**142**	ePG	**Pn**	**16 55 03.8**	**0.0**
LANS				eSG	**Sn**	**16 55 20.3**	**+0.3**
LANS				eLG	Lg	16 55 23.1	
JAVC	**Velka Javorina**	**1.29**	**203**	ePG	**Pn**	**16 55 07.2**	**+1.2**
NIE	**Niedzica**	**1.37**	**117**	ePb	**Pb**	**16 55 07.5**	**+0.2**
NIE				ePg	**Pn**	**16 55 08.1**	**+0.9**
NIE				eSg	**Sn**	**16 55 28.0**	**+1.9**
DPC	**Dobruska-Polom**	**1.38**	**283**	ePg	**Pb**	**16 55 07.8**	**+0.3**
DPC				eSg	**Sg**	**16 55 24.7**	**-0.4**
DPC	**Dobruska-Polom**	**1.38**	**283**	ePG	**Pb**	**16 55 07.8**	**+0.3**
DPC				eSG	**Sn**	**16 55 27.2**	**+0.9**
	comp=Z,117nm,0.5s						
VRAC	**Vranov**	**1.40**	**239**	⇑iP	**Pb**	**16 55 08.3**	**+0.6**
VRAC	**Vranov**	**1.40**	**239**	S	**Sn**	**16 55 27.8**	**+1.1**
VRAC	**Vranov**	**1.40**	**239**	ePG	**Pb**	**16 55 08.3**	**+0.6**
VRAC				eSG	**Sn**	**16 55 27.0**	**+0.3**
VRAC	**Vranov**	**1.40**	**239**	ePg	**Pb**	**16 55 08.2**	**+0.6**
	baz=58						
VRAC				eSg	**Sn**	**16 55 26.9**	**+0.3**
	33nm,0.2s,baz=58						
OSTC	**Ostas**	**1.50**	**291**	ePG	**Pb**	**16 55 09.3**	**-0.2**
OSTC				eSG	**Sn**	**16 55 31.2**	**+2.0**
	comp=Z,64nm,0.6s						
KSP	**Ksiaz**	**1.57**	**301**	ePn	**Pb**	**16 55 10.1**	**-0.7**
KSP				ePg	**Pg**	**16 55 12.3**	**+1.5**
KSP				eSg	**Sg**	**16 55 32.5**	**+1.3**
KSP	**Ksiaz**	**1.57**	**301**	ePn	**Pb**	**16 55 10.0**	**-0.7**
KSP				eSg	**Sg**	**16 55 32.5**	**+1.3**
VYHS	**Vyhne**	**1.58**	**170**	ePG	**Pb**	**16 55 10.6**	**-0.2**
VYHS				eSG	**Sg**	**16 55 32.7**	**+1.3**
CHVC	**Chvalec**	**1.61**	**291**	ePG	**Pg**	**16 55 11.0**	**-0.5**
CHVC				eSG	**Sg**	**16 55 34.5**	**+2.1**
	comp=Z,35nm,0.6s						
UPC	**Upice**	**1.61**	**287**	ePG	**Pg**	**16 55 11.6**	**0.0**
UPC				eSG	**Sg**	**16 55 33.7**	**+1.2**
	comp=Z,33nm,0.5s						
KRUC	**Moravsky**	**1.65**	**234**	ePG	**Pg**	**16 55 12.2**	**-0.1**
KRUC				eSG	**Sg**	**16 55 34.6**	**+1.0**
KRUC	**Moravsky**	**1.65**	**234**	ePg	**Pg**	**16 55 12.2**	**-0.1**
	baz=53						
KRUC				eSg	**Sg**	**16 55 34.6**	**+1.0**
	24nm,0.4s,baz=53						
SMOL	**Smolenice**	**1.67**	**203**	ePN	**Pb**	**16 55 12.0**	**-0.3**
SMOL				eSG	**Sg**	**16 55 36.1**	**+1.8**
MODS	**Modra-Piesok**	**1.84**	**205**	ePN	**Pn**	**16 55 13.4**	**-0.1**
MODS				eSN	**Sn**	**16 55 37.0**	**-0.5**
MODS				eLG	Lg	16 55 46.7	
TREC	**Trest**	**2.05**	**250**	ePG	**Pb**	**16 55 18.8**	**0.0**
TREC				eSG	**Sg**	**16 55 47.6**	**+1.1**
	comp=Z,23nm,0.3s						
KECS	**Kecovo**	**2.07**	**138**	ePN	**Pn**	**16 55 17.4**	**+0.7**
KECS				eSN	**Sn**	**16 55 43.3**	**+0.1**
KECS				eLG	Lg	16 55 47.4	
PSZ	**Piszkesteto**	**2.34**	**155**	⇓iP	**Pn**	**16 55 20.1**	**-0.4**
PSZ	**Piszkesteto**	**2.34**	**155**	S	**Sn**	**16 55 48.6**	**-1.4**
GOPC	**GO Pecny, Ondr**	**2.35**	**268**	eSG	**Sg**	**16 55 56.5**	**+0.4**
	comp=Z,21nm,0.5s						
PRU	**Pruhonice**	**2.50**	**270**	eSG	**Sg**	**16 56 01.5**	**+0.4**
	comp=Z,16nm,0.5s						
PVCC	**Panska Ves**	**2.52**	**282**	ePG	**Pg**	**16 55 28.1**	**-0.8**
PVCC				eSG	**Sg**	**16 56 02.9**	**+1.4**
	comp=Z,42nm,0.5s						
CONA	**Conrad Observa**	**2.71**	**219**	Pn	**Pn**	**16 55 26.3**	**+0.7**
	0.7nm,0.2s						
KOLS	**Kolonicke sedl**	**2.75**	**112**	ePG	**Pg**	**16 55 34.7**	**+1.3**
KOLS				eSN	**Sn**	**16 56 00.9**	**+0.9**
KOLS				eLG	Lg	16 56 20.7	
BRG	**Berggiesshubel**	**2.98**	**288**	PG	**Pg**	**16 55 36.6**	**-1.1**
BRG				SG	**Sg**	**16 56 15.9**	**-0.4**
	19nm,0.7s						
BRG	**Berggiesshubel**	**2.98**	**288**	ePg	**Pg**	**16 55 36.7**	**-1.1**
BRG				eSg	**Sg**	**16 56 15.3**	**-1.0**
KHC	**Kasperske Hory**	**3.28**	**256**	ePN	**Pn**	**16 55 34.2**	**+0.8**
KHC				ePG	**Pg**	**16 55 42.5**	**-1.1**
KHC				eSG	**Sg**	**16 56 26.4**	**+0.3**
	comp=Z,14nm,0.5s						
GEC2	**GERESS Array S**	**3.31**	**250**	ePg	**Pg**	**16 55 42.4**	**-1.6**
GEC2				eSg	**Sg**	**16 56 25.3**	**-1.6**
TRPA	**Tarpa**	**3.32**	**124**	⇑iP	**Pn**	**16 55 33.7**	**-0.2**
FBE	**Freiberg**	**3.35**	**287**	ePg	**Pg**	**16 55 43.5**	**-1.4**
FBE				eSg	**Sg**	**16 56 27.6**	**-0.7**
ARSA	**Arzberg**	**3.40**	**216**	i Pn	**Pn**	**16 55 36.5**	**+1.6**
	3.0nm,0.4s						
MOA	**Molln**	**3.51**	**233**	ePn	**Pn**	**16 55 37.1**	**+0.5**
	0.6nm,0.2s						
MOA				Sg	**Sg**	**16 56 33.3**	**-0.2**
CLL	**Collm**	**3.67**	**292**	ePg	**Pg**	**16 55 52.0**	**+1.0**
CLL				eSg	**Sg**	**16 56 39.0**	**+0.5**
	comp=Z,14nm,0.5s						
WET	**Wettzell**	**3.72**	**258**	ePn	**Pn**	**16 55 39.7**	**+0.3**
WET				eSg	**Sg**	**16 56 39.9**	**-0.2**
TANN	**Tannenbergstha**	**3.84**	**278**	ePg	**Pg**	**16 55 52.6**	**-1.7**
TANN				eSg	**Sg**	**16 56 43.3**	**-0.9**
ABG1	**Leinawald**	**3.84**	**286**	eSg	**Sg**	**16 56 45.2**	**+1.1**
NKC	**Novy Kostel**	**3.85**	**275**	eSg	**Sg**	**16 56 44.6**	**+0.4**
NKC	**Novy Kostel**	**3.85**	**275**	eSG	**Sg**	**16 56 44.9**	**+0.7**
	comp=Z,24nm,1.0s						
MULD	**Muldenberg**	**3.88**	**278**	ePg	**Pg**	**16 55 52.8**	**-2.2**
MULD				eSg	**Sg**	**16 56 43.0**	**-2.3**
WERN	**Wernitzgruen**	**3.89**	**276**	ePn	**Pn**	**16 55 42.6**	**+0.8**
WERN				eSg	**Sg**	**16 56 43.9**	**-1.8**
SCHF	**Schoenfels**	**3.90**	**282**	ePg	**Pg**	**16 55 53.7**	**-1.8**
SCHF				eSg	**Sg**	**16 56 45.8**	**-0.2**
GUNZ	**Gunzen**	**3.92**	**277**	ePg	**Pg**	**16 55 53.3**	**-2.6**
GUNZ				eSg	**Sg**	**16 56 45.8**	**-0.9**
ROHR	**Rohrbach**	**3.93**	**275**	ePg	**Pg**	**16 55 54.8**	**-1.2**
ROTZ	**Rotzenmuhle**	**4.03**	**268**	ePg	**Pg**	**16 55 55.9**	**-2.0**
ROTZ				eSg	**Sg**	**16 56 49.0**	**-0.9**
PLN	**Plauen**	**4.04**	**279**	eSg	**Sg**	**16 56 48.2**	**-2.3**
TRIB	**Obertriebel**	**4.05**	**277**	ePn	**Pn**	**16 55 44.3**	**+0.3**
TRIB				ePg	**Pg**	**16 55 56.9**	**-1.3**
TRIB				eSg	**Sg**	**16 56 49.7**	**-1.0**
MANZ	**Manzenberg**	**4.07**	**272**	ePg	**Pg**	**16 55 57.0**	**-1.7**
MANZ				eSg	**Sg**	**16 56 50.0**	**-1.4**
DRGR		**4.33**	**137**	⇓iP	**Pn**	**16 55 47.6**	**-0.3**
DRGR		**4.33**	**137**	S	**Sn**	**16 56 38.3**	**-0.8**
SIRR	**Siria**	**4.36**	**149**	⇓iP	**Pn**	**16 55 48.7**	**+0.5**
OBKA	**Obir**	**4.38**	**218**	i Pn	**Pn**	**16 55 50.1**	**+1.5**
	comp=Z,2.8nm,0.5s						
MOX	**Moxa**	**4.40**	**280**	ePn	**Pn**	**16 55 49.8**	**+1.0**
MOX				ePg	**Pg**	**16 56 03.1**	**-1.8**
MOX				eSg	**Sg**	**16 57 01.3**	**-0.7**
BZS	**Buzias**	**4.93**	**153**	⇓iP	**Pn**	**16 55 55.5**	**-0.5**
BURAR	**Bucovina Array**	**5.11**	**116**	⇓iP	**Pn**	**16 55 58.5**	**0.0**
WTTA	**Wattenberg**	**5.29**	**241**	Sg	**Sg**	**16 57 35.4**	**+4.9**
	comp=Z,4.2nm,0.4s						
GZR	**Gura Zlata**	**5.51**	**146**	⇓iP	**Pn**	**16 56 03.8**	**-0.2**
MDVR	**Moldovita**	**5.72**	**156**	⇓iP	**Pn**	**16 56 06.5**	**-0.5**

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*NIED **25** 16:55:00, 36°.90N×141°.10E, h53^{km}, Mw4.0 Best double couple: $M_0$1.10000×10^{15} NP1:ϕ_s77.00000°, δ41.00000°, λ28.00000°. NP2:ϕ_s326.00000°, δ72.00000°, λ128.00000°.*
*ISCJB **25** 16:55:31.8±0.6, 36°.88N±0°.04×141°.16E±0°.06, h57^{km}±4^{km}, mb3.8/12, MS3.3/3, Error ellipse: s-maj=8.7km s-min=5.4km az=24.5*
*JMA **25** 16:55:33.6±0.1, 36°.88N×141°.07E, h51^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s87.00000°, δ64.00000°, λ61.00000°. NP2:ϕ_s318.00000°, δ38.00000°, λ135.00000°. Principal axes: T Plg60.0000°, Azm314.0000°; N Plg26.0000°, Azm100.0000°; P Plg14.0000°, Azm197.0000°;*
JMA Felt II J1.
*IDC **25** 16:55:33.8±1.9, 36°.95N×141°.00E, h53^{km}±16^{km}, mb3.6/12, mb1 3.6/19, mb1mx3.5/52, mbtmp3.8/19, ML3.1/5, MS2.8/6, Ms1 2.8/6, ms1mx2.6/38 Error ellipse: s-maj=18.9km s-min=12.9km az=103.0*

ISC 25 16:55:33.1±1.1, 36°.89N±0°.05×141°.11E±0°.08, h48^{km}±8^{km}, n39, σ0^{s}.84/42, mb3.9/12, MS2.8/3, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.33**	**311**	⇓P	**Pn**	**16 55 42.7**	**+0.3**
ONAJ				S	**Sn**	**16 55 49.1**	**+0.1**
JFFD	**Fukushimafurud**	**0.48**	**295**	⇓P	**Pn**	**16 55 44.4**	**+0.4**
JFFD				S	**Sn**	**16 55 51.7**	**-0.2**
JFK	**Kawauchi**	**0.51**	**339**	⇓P	**Pn**	**16 55 44.7**	**+0.3**
JFK				S	**Sn**	**16 55 52.5**	**-0.1**
JHO	**Hitachi**	**0.51**	**238**	⇓P	**Pn**	**16 55 44.6**	**+0.2**
JHO				S	**Sn**	**16 55 52.1**	**-0.4**
JFT	**Otama**	**0.88**	**316**	⇓P	**Pn**	**16 55 50.2**	**+1.0**
JFT				S	**Sn**	**16 56 01.8**	**+0.8**
JMM	**Marumori**	**1.01**	**346**	⇓P	**Pn**	**16 55 51.2**	**+0.3**
JMM				S	**Sn**	**16 56 04.2**	**+0.2**
JFY	**Yanaizu**	**1.24**	**295**	P	**Pn**	**16 55 54.8**	**+0.8**
JFY				eS	**Sn**	**16 56 09.8**	**+0.2**
JAG	**Ashikaga**	**1.41**	**251**	⇓P	**Pn**	**16 55 56.6**	**+0.3**
JAG				S	**Sn**	**16 56 13.1**	**-0.6**
JKT	**Katashina**	**1.50**	**266**	⇓P	**Pn**	**16 55 58.6**	**+1.0**
JKT				S	**Sn**	**16 56 16.6**	**+0.6**
MJAR	**Matsushiro Arr**	**2.36**	**262**	P	**Pn**	**16 56 10.0**	**+0.7**
	4.1nm,0.3s,baz=87,slow=13,SNR=122						
MJAR				S	**Sn**	**16 56 38.9**	**+1.9**
	9.9nm,0.3s,baz=346,slow=15,SNR=12						
MJAR				LR	LR	16 57 12.9	
	comp=Z,150nm,21.0s,baz=100,slow=44						
MAT	**Matsushiro**	**2.36**	**262**	P	**Pn**	**16 56 11.0**	**+1.7**
MAT				S	**Sn**	**16 56 38.9**	**+1.9**
JHJ	**Hachijo jima 2**	**3.91**	**197**	P	**Pn**	**16 56 31.1**	**+0.4**
	34nm,0.3s,baz=319,slow=23,SNR=39						
JHJ				S	**Sn**	**16 57 14.6**	**-0.7**
	60nm,0.3s,baz=12,slow=22,SNR=3.9						
ASAJ	**Asahikawa**	**7.31**	**8**	P	**Pn**	**16 57 16.4**	**-0.7**
	1.1nm,0.3s,baz=219,slow=19,SNR=11						
ASAJ				S	**Sn**	**16 58 37.8**	**-1.0**
	0.7nm,0.3s,baz=30,slow=18,SNR=3.4						
JNU	**Nakatsue**	**9.19**	**249**	P	**Pn**	**16 57 41.9**	**-1.2**
	0.1nm,0.3s,baz=57,slow=13,SNR=2.2						
USRK	**Ussuriysk Ar.**	**10.07**	**319**	P	**Pn**	**16 57 54.8**	**-0.2**
	0.0nm,0.3s,baz=132,slow=12,SNR=2.8						
KSRS	**Korea Array**	**10.54**	**277**	P	**Pn**	**16 58 01.9**	**+0.5**
	0.1nm,0.3s,baz=90,slow=14,SNR=2.8						
KSRS				LR	LR	17 01 53.1	
	comp=Z,40nm,21.8s,baz=120,slow=36						
KLR	**Kul'dur**	**14.09**	**334**	LR	LR	17 03 09.3	
	comp=Z,37nm,20.0s,baz=190,slow=32						
PETK	**Petropavlovsk-**	**19.94**	**30**	P	**P**	**17 00 02.2**	**+1.4**
	0.1nm,0.3s,baz=224,slow=7.7,SNR=3.2						
PETK				LR	LR	17 07 34.9	
	comp=Z,35nm,19.1s,baz=190,slow=36						
MA2	**Magadan**	**23.55**	**12**	LR	LR	17 11 32.5	
	comp=Z,26nm,18.8s,baz=320,slow=41						
SONM	**Songino Array**	**27.67**	**304**	P	**P**	**17 01 15.8**	**-0.7**
	2.5nm,0.6s,baz=102,slow=8.3,SNR=12						
H11N2	**WAKE ISLAND Hy**	**28.28**	**120**	T	T	17 31 25.0	
	baz=313,slow=75,SNR=40						
H11N1	**WAKE ISLAND Hy**	**28.29**	**120**	T	T	17 31 28.1	
	baz=313,slow=75,SNR=49						
H11N3	**WAKE ISLAND Hy**	**28.30**	**120**	T	T	17 31 28.8	
	baz=313,slow=75,SNR=55						
H11S1	**WAKE ISLAND Hy**	**28.99**	**122**	T	T	17 32 18.4	
	baz=314,slow=76,SNR=112						
H11S3	**WAKE ISLAND Hy**	**28.99**	**122**	T	T	17 32 15.4	
	baz=314,slow=76,SNR=76						
H11S2	**WAKE ISLAND Hy**	**29.00**	**122**	T	T	17 32 16.2	
	baz=314,slow=76,SNR=74						
TLY	**Talaya**	**30.24**	**311**	LR	LR	17 15 07.0	
	comp=Z,21nm,18.0s,baz=182,slow=39						
ZALV	**Zalesovo Beam**	**41.83**	**313**	P	**P**	**17 03 17.7**	**-0.3**
	2.7nm,0.6s,baz=94,slow=8.3,SNR=11						
MKAR	**Makanchi Array**	**43.99**	**302**	P	**P**	**17 03 35.2**	**-0.4**
	1.7nm,0.7s,baz=89,slow=9.9,SNR=18						
ILAR	**Eielson Array**	**49.75**	**32**	P	**P**	**17 04 20.4**	**+0.2**
	0.3nm,0.7s,baz=282,slow=6.2,SNR=4.2						
ARU	**Arti**	**56.31**	**319**	P	**P**	**17 05 07.5**	**-1.1**
	0.7nm,0.4s,baz=19,slow=7.1,SNR=4.1						
WRA	**Warramunga Arr**	**56.88**	**188**	P	**P**	**17 05 12.9**	**-0.2**
	0.7nm,0.5s,baz=358,slow=7.4,SNR=7.0						
ASAR	**Alice Springs**	**60.61**	**188**	P	**P**	**17 05 39.6**	**+0.7**
	0.6nm,0.9s,baz=5.8,slow=7.8,SNR=7.6						
FINES	**FINESS Array B**	**68.83**	**332**	P	**P**	**17 06 31.1**	**-0.9**
	1.1nm,0.7s,baz=70,slow=9.0,SNR=3.7						
NOA	**NORSAR Array B**	**74.23**	**337**	P	**P**	**17 07 04.1**	**-0.5**
	0.2nm,0.5s,baz=40,slow=5.7,SNR=2.3						
AKASG	**Malin Array Be**	**74.26**	**322**	P	**P**	**17 07 04.3**	**-0.6**
	0.7nm,0.4s,baz=44,slow=5.5,SNR=4.6						
NVAR	**Mina Array Bea**	**75.27**	**53**	P	**P**	**17 07 12.4**	**+1.1**
	0.2nm,0.4s,baz=330,slow=6.7,SNR=2.5						
GERES	**GERESS Array B**	**82.71**	**328**	P	**P**	**17 07 51.3**	**-0.3**
	0.3nm,0.5s,baz=64,slow=6.7,SNR=3.5						
PPT	**Papeete**	**84.79**	**116**	LR	LR	17 47 03.6	
	comp=Z,113nm,18.7s,baz=92,slow=36						

MEX 25 16:59:32.7±0.6, 17°.22N×95°.15W, h50^{km}±8^{km}, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.29**	**117**	eP	Pn	16 59 40.2	-1.6
CMIG				i S	Sn	16 59 46.5	-1.7
VHO	**Vista Hermosa**	**1.52**	**265**	i P	Pn	16 59 55.5	-2.2
VHO				eS	Sn	17 00 14.7	-1.7

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*ISCJB **25** 17:01:44.6±0.3, 67°.05N±0°.02×20°.95E±0°.06, h0^{km}, Error ellipse: s-maj=3.7km s-min=3.1km az=10.1*
*UPP **25** 17:01:45.3±0.1, 67°.06N×20°.92E, h0^{km}, ML2.0, Explosion*
*IDC **25** 17:01:46.4±0.9, 67°.03N×21°.29E, h0^{km}, mb1 2.5/4, mb1mx2.5/52, mbtmp2.5/4, ML1.9/4, Error ellipse: s-maj=17.3km s-min=8.7km az=116.0*
*HEL **25** 17:01:46.6, 67°.08N×21°.16E, h0^{km}, ML2.2, Explosion*
*NAO **25** 17:01:46.2±1.3, 67°.05N×21°.18E, ML2.3*
*BER **25** 17:01:49.1±3.6, 67°.02N×21°.15E, h0^{km}, ML1.6, ML2.3(NAO), Suspected explosion*

ISC 25 17:01:45.3±0.7, 67°.05N±0°.02×20°.95E±0°.03, h0^{km}, n49, σ1^{s}.04/69, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.17**	**297**	P	**Pg**	**17 01 48.4**	**-0.1**
DUNU				S	**Sg**	**17 01 50.8**	**+0.1**
DUNU	**Dundret**	**0.17**	**297**	i P	**Pg**	**17 01 48.4**	**-0.1**
DUNU				i S	**Sg**	**17 01 50.8**	**+0.1**
MASU	**Masugnsbyn**	**0.58**	**44**	P	**Pg**	**17 01 56.2**	**-0.2**
MASU	**Masugnsbyn**	**0.58**	**44**	i P	**Pg**	**17 01 56.2**	**-0.2**
ERTU	**Ertsjaerv**	**0.70**	**135**	P	**Pg**	**17 01 58.6**	**0.0**
ERTU				S	**Sg**	**17 02 08.2**	**+0.6**
ERTU	**Ertsjaerv**	**0.70**	**135**	eP	**Pg**	**17 01 58.5**	**-0.1**
PAJU	**Pajala**	**0.85**	**91**	P	**Pg**	**17 02 01.7**	**+0.2**
PAJU				S	**Sb**	**17 02 14.4**	**-0.4**
PAJU	**Pajala**	**0.85**	**91**	i P	**Pg**	**17 02 01.7**	**+0.2**
PAJU				i S	**Sb**	**17 02 14.4**	**-0.4**
HARU	**Harads**	**0.89**	**179**	P	**Pg**	**17 02 02.5**	**+0.2**
HARU	**Harads**	**0.89**	**179**	eP	**Pg**	**17 02 02.5**	**+0.2**
RATU	**Laukkuluspa**	**0.94**	**327**	P	**Pg**	**17 02 02.4**	**-0.9**
RATU	**Laukkuluspa**	**0.94**	**327**	eP	**Pg**	**17 02 02.4**	**-0.9**
LANU	**Lannavaara**	**1.08**	**21**	P	**Pg**	**17 02 05.3**	**-0.7**
LANU	**Lannavaara**	**1.08**	**21**	eP	**Pg**	**17 02 05.3**	**-0.7**
SJUU	**Sjulsmark**	**1.57**	**170**	P	**Pn**	**17 02 14.4**	**0.0**
SJUU	**Sjulsmark**	**1.57**	**170**	eP	**Pn**	**17 02 14.4**	**0.0**
TOF	**Tornio**	**1.66**	**124**	eP	**Pn**	**17 02 15.9**	**+0.3**
TOF				MSG		17 02 35.1	
	comp=Z,30nm,0.2s						

HEF	**Hetta**	**1.71**	**36**	Pn	**Pn**	**17 02 15.4**	**-0.9**
HEF				Sn	**Sn**	**17 02 39.0**	**+0.1**
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**17 02 16.2**	**-0.1**
HEF				MSG		17 02 35.6	
	comp=Z,14nm,0.2s						
HEF				*e*SG	**Sn**	**17 02 38.5**	**-0.4**
HEF	**Hetta**	**1.71**	**36**	Pn	**Pn**	**17 02 15.4**	**-0.9**
HEF				Sn	**Sn**	**17 02 39.0**	**+0.1**
LILU	**Lilltraesk**	**1.82**	**195**	P	**Pn**	**17 02 18.6**	**+0.7**
LILU	**Lilltraesk**	**1.82**	**195**	*e*P	**Pn**	**17 02 18.6**	**+0.7**
KIF	**Kilpisjarvi**	**1.97**	**358**	Pn	**Pb**	**17 02 21.4**	**-0.6**
KIF				Sn	**Sg**	**17 02 49.9**	**+1.4**
KIF	**Kilpisjarvi**	**1.97**	**358**	*e*PG	**Pb**	**17 02 21.8**	**-0.1**
KIF				MSG		17 02 45.2	
	comp=Z,28nm,0.2s						
KIF	**Kilpisjarvi**	**1.97**	**358**	Pn	**Pb**	**17 02 21.4**	**-0.6**
KIF				Sn	**Sg**	**17 02 49.9**	**+1.4**
RNF	**Rovaniemi**	**2.05**	**100**	*e*P	**Pn**	**17 02 21.7**	**+0.8**
KTK1	**Kautokeino**	**2.15**	**22**	*e*P	**Pb**	**17 02 24.0**	**-1.1**
KTK1				*e*S	**Sn**	**17 02 50.0**	**+0.2**
KTK1				IAML		17 02 56.3	
	comp=Z,8.1nm,0.4s						
SGF	**Sodankyl**	**2.20**	**77**	*e*PB	**Pn**	**17 02 24.2**	**+1.1**
SGF				*e*SG	**Sg**	**17 02 56.4**	**+0.4**
OUL	**Oulu**	**2.82**	**132**	*e*PB	**Pb**	**17 02 34.7**	**-1.7**
	baz=316						
ARA0	**ARCESS Array S**	**3.02**	**32**	Pn	**Pn**	**17 02 34.5**	**+0.3**
	baz=217,slow=16						
ARA0				Sn	**Sn**	**17 03 12.5**	**+1.4**
	baz=205,slow=22						
ARA0	**ARCESS Array S**	**3.02**	**32**	Pn	**Pn**	**17 02 34.5**	**+0.3**
	baz=217,slow=16						
ARA0				Sn	**Sn**	**17 03 12.5**	**+1.4**
	baz=205,slow=22						
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn	**Pn**	**17 02 34.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=215,slow=14,SNR=8.7						
ARCES				Sn	**Sn**	**17 03 12.8**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=214,slow=20,SNR=5.4						
ARE0	**ARCESS Array S**	**3.02**	**32**	*e*P	**Pn**	**17 02 34.8**	**+0.5**
	baz=212						
ARE0				*e*SB	**Sb**	**17 03 16.7**	**-0.5**
OUF	**Merijarvi**	**3.11**	**148**	*e*PB	**Pb**	**17 02 38.7**	**-2.7**
	baz=330						
OUF				MSG		17 03 17.6	
	comp=Z,3.2nm,0.2s						
UMAU	**Umeaa**	**3.18**	**182**	*e*P	**Pn**	**17 02 37.2**	**+0.8**
MSF	**Maaselka**	**3.44**	**106**	*e*P	**Pn**	**17 02 42.4**	**+2.4**
VAF	**Ylistaro**	**4.09**	**169**	*e*P	**Pn**	**17 02 52.3**	**+3.4**
HEMU	**Hemsoen**	**4.56**	**197**	*e*P	**Pn**	**17 02 57.6**	**+2.1**
APA0	**Apatity Array**	**4.69**	**78**	Pn	**Pn**	**17 02 57.1**	**-0.1**
	baz=267,slow=8.6						
APA0	**Apatity Array**	**4.69**	**78**	Pn	**Pn**	**17 02 57.1**	**-0.1**
	baz=267,slow=8.6						
FIA0	**FINESS Array S**	**6.05**	**156**	Pn	**Pn**	**17 03 16.9**	**+1.0**
	baz=349,slow=16						
FIA0				Sn	**Sn**	**17 04 25.4**	**-0.3**
	baz=347,slow=18						
FIA0	**FINESS Array S**	**6.05**	**156**	Pn	**Pn**	**17 03 16.9**	**+1.0**
	baz=349,slow=16						
FIA0				Sn	**Sn**	**17 04 25.4**	**-0.3**
	baz=347,slow=18						
FINES	**FINESS Array B**	**6.05**	**156**	Pn	**Pn**	**17 03 16.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=8.9						
FINES				Sn	**Sn**	**17 04 24.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=348,slow=23,SNR=3.0						
FINES				Lg	Lg	17 04 47.4	
	comp=Z,0.2nm,0.3s,baz=354,slow=23,SNR=7.3						
NB2	**NORSAR Subarra**	**7.38**	**220**	Pn	**Pn**	**17 03 36.0**	**+1.7**
	baz=24,slow=12						
NB2	**NORSAR Subarra**	**7.38**	**220**	Pn	**Pn**	**17 03 36.0**	**+1.7**
	baz=24,slow=12						
NOA	**NORSAR Array B**	**7.38**	**220**	Pn	**Pn**	**17 03 34.6**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=138,slow=14,SNR=2.6						
NOA				Sn	**Sn**	**17 04 57.9**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=46,slow=21,SNR=2.3						
NRA0	**NORESS Array S**	**7.57**	**218**	Pn	**Pn**	**17 03 38.5**	**+1.8**
	baz=36,slow=12						
NRA0	**NORESS Array S**	**7.57**	**218**	Pn	**Pn**	**17 03 38.5**	**+1.8**
	baz=36,slow=12						
HFS	**Hagfors**	**7.65**	**208**	Pn	**Pn**	**17 03 37.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=30,slow=15,SNR=6.1						

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*ISK **25** 17:05:17.6, 38°.96N×43°.87E, h3^{km}, ML3.5/20*
*NSSP **25** 17:05:17.7, 38°.97N×43°.87E, h8^{km}, Ms3.5*
*AZER **25** 17:05:18.3±1.6, 38°.88N×43°.81E, h6^{km}, ml3.4/17, Error ellipse: s-maj=13.0km s-min=10.7km az=49.0*
*TEH **25** 17:05:18.4, 39°.00N×43°.83E, h7^{km}, ML3.5*
*DDA **25** 17:05:18.4, 38°.99N×43°.81E, h5^{km}±2^{km}, ML3.5*
ISC 25 17:05:18.2±0.9, **38°.97N**±0°.02×**43°.86E**±0°.02, **h10**^{km}±7^{km}, **n108**, σ**1^{s}.49**/128, **3C-1D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLDR	**Caldiran**	**0.17**	**14**	PG	**Pg**	**17 05 22.1**	**0.0**
CLDR				SG	**Sg**	**17 05 25.5**	**+0.7**
CLDR	**Caldiran**	**0.17**	**14**	*i*P	**Pg**	**17 05 22.1**	**0.0**
CLDR				*i*S	**Sg**	**17 05 26.7**	**+1.9**
CLDR				IAML_P			
	comp=Z,279µm,0.1s						
CLDR	**Caldiran**	**0.17**	**14**	*e*Pg	**Pg**	**17 05 22.1**	**0.0**
VMUR	**Van-Muradiye**	**0.23**	**274**	*i*P	**Pg**	**17 05 22.9**	**-0.1**
VMUR				*i*S	**Sg**	**17 05 26.7**	**+0.5**
VMUR				IAML_P			
	comp=Z,39µm,0.1s						
VMUR	**Van-Muradiye**	**0.23**	**274**	*e*Pg	**Pg**	**17 05 22.4**	**-0.6**
ERCV	**ERCIS-VAN**	**0.41**	**277**	*e*Pg	**Pg**	**17 05 26.0**	**-0.4**
VANB	**Van**	**0.53**	**225**	PG	**Pb**	**17 05 29.8**	**+0.1**
VANB	**Van**	**0.53**	**225**	*e*Pg	**Pb**	**17 05 29.9**	**+0.2**
TVAN	**Van**	**0.57**	**219**	*i*P	**Pb**	**17 05 30.4**	**-0.1**
TVAN				IAML_P			
	comp=Z,52µm,0.3s						
TVAN	**Van**	**0.57**	**219**	*e*Pg	**Pb**	**17 05 30.2**	**-0.3**
DYDN	**Diyadin**	**0.59**	**347**	*i*P	**Pb**	**17 05 29.8**	**-1.0**
DYDN				*i*S	**Sb**	**17 05 38.0**	**-1.2**
DYDN				IAML_P			
	comp=Z,10µm,0.1s						
DYDN	**Diyadin**	**0.59**	**347**	*e*Pg	**Pg**	**17 05 29.3**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.90**	**260**	*i*P	**Pb**	**17 05 35.9**	**-0.2**
ADCV				*i*S	**Sn**	**17 05 49.5**	**-0.9**
ADCV				IAML_P			
	comp=Z,5µm,0.4s						
ADCV	**BITLIS_Adilcev**	**0.90**	**260**	*e*Pn	**Pb**	**17 05 35.4**	**-0.7**
IGDI	**IGDIR**	**0.91**	**10**	*i*P	**Pb**	**17 05 36.0**	**-0.2**
IGDI				*i*S	**Sn**	**17 05 50.5**	**0.0**
IGDI				IAML_P			
	comp=Z,4µm,0.3s						
IGDI	**IGDIR**	**0.91**	**10**	*e*Pg	**Pg**	**17 05 35.4**	**-0.4**
TUTA	**Tutak**	**0.92**	**298**	*i*P	**Pb**	**17 05 35.8**	**-0.7**
TUTA	**Tutak**	**0.92**	**298**	*e*Pg	**Pg**	**17 05 35.3**	**-0.7**
BASK	**Baskale_VAN**	**0.93**	**173**	*i*P	**Pn**	**17 05 37.2**	**-0.3**
BASK				*i*S	**Sn**	**17 05 54.8**	**+3.8**
BASK				IAML_P			
	comp=Z,9µm,0.3s						
BASK	**Baskale_VAN**	**0.93**	**173**	*e*Pg	**Pn**	**17 05 36.6**	**-1.0**
AKDM	**Akdamar-Van**	**0.94**	**227**	PG	**Pb**	**17 05 36.2**	**-0.6**
AKDM	**Akdamar-Van**	**0.94**	**227**	*e*Pg	**Pb**	**17 05 36.2**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.04**	**280**	PG	**Pn**	**17 05 38.3**	**-0.7**
MLAZ	**Malazgirt-MUS**	**1.04**	**280**	*e*Pg	**Pn**	**17 05 38.7**	**-0.3**
TASB	**TASBURUN-IGDIR**	**1.05**	**16**	PG	**Pn**	**17 05 38.4**	**-0.8**
TASB	**TASBURUN-IGDIR**	**1.05**	**16**	*e*Pg	**Pb**	**17 05 38.3**	**-0.3**
HYR	**Heyderabad**	**1.07**	**46**	*e*Pg	**Pn**	**17 05 38.8**	**-0.6**
HYR	**Heyderabad**	**1.07**	**46**	P	**Pn**	**17 05 38.7**	**-0.6**
	SNR=23						
HYR				S	**Sn**	**17 05 58.5**	**+4.1**
NAX	**Nakhchivan**	**1.29**	**81**	*e*Pg	**Pg**	**17 05 43.2**	**+0.3**
NAX	**Nakhchivan**	**1.29**	**81**	P	**Pg**	**17 05 43.3**	**+0.3**
NAX				S	**Sn**	**17 06 03.1**	**+3.4**
ARUZ	**Aruch**	**1.32**	**8**	⇑*i*P	**Pg**	**17 05 45.0**	**+1.4**
ARUZ				⇑*i*S	**Sg**	**17 06 04.6**	**+3.9**
GNI	**Garni**	**1.36**	**30**	PN	**Pg**	**17 05 44.1**	**-0.2**
GNI	**Garni**	**1.36**	**30**	⇑*i*P	**Pg**	**17 05 43.9**	**-0.4**
GNI				⇓*i*S	**Sg**	**17 06 02.7**	**+0.8**
SBZ	**Shahbuz**	**1.38**	**72**	*e*Pg	**Pg**	**17 05 44.5**	**-0.2**
SBZ	**Shahbuz**	**1.38**	**72**	P	**Pg**	**17 05 44.6**	**-0.2**
	SNR=55						
SBZ				S	**Sg**	**17 06 05.1**	**+2.5**
EATA	**Eleskirt**	**1.39**	**310**	*i*P	**Pb**	**17 05 44.1**	**-0.4**
EATA				IAML_P			
	comp=Z,6µm,0.3s						
EATA	**Eleskirt**	**1.39**	**310**	*e*Pg	**Pb**	**17 05 44.0**	**-0.4**
HAKT	**HAKKARI**	**1.42**	**185**	*i*P	**Pg**	**17 05 45.1**	**-0.4**
HAKT	**HAKKARI**	**1.42**	**185**	*e*Pg	**Pg**	**17 05 45.0**	**-0.4**
YOVA	**Hakkari_Yksek**	**1.42**	**166**	*i*P	**Pg**	**17 05 46.1**	**+0.6**
YOVA	**Hakkari_Yksek**	**1.42**	**166**	*e*Pg	**Pg**	**17 05 46.0**	**+0.4**
IMRD	**Marand**	**1.46**	**100**	*e*Pg	**Pg**	**17 05 45.7**	**-0.6**
IMRD				IAMB	IAmb	17 06 18.4	
	comp=Z,10µm,0.6s						
BLIS	**Bitlis-Merkez**	**1.48**	**248**	*i*P	**Pb**	**17 05 45.4**	**-0.5**
BLIS				IAML_P			
	comp=Z,10µm,0.5s						
BLIS	**Bitlis-Merkez**	**1.48**	**248**	*e*Pg	**Pb**	**17 05 45.1**	**-0.8**
GURO	**Guroymak-BITLI**	**1.49**	**254**	PN	**Pb**	**17 05 45.7**	**-0.4**
GURO	**Guroymak-BITLI**	**1.49**	**254**	*e*Pn	**Pb**	**17 05 45.5**	**-0.6**
ISHB	**Shabestar**	**1.54**	**116**	*e*Pn	**Pb**	**17 05 46.5**	**-0.5**
ISHB				IAMB	IAmb	17 05 52.5	
	comp=Z,5µm,0.4s						
ORD	**Ordubad**	**1.66**	**91**	*e*Pn	**Pg**	**17 05 49.1**	**-1.0**
ORD	**Ordubad**	**1.66**	**91**	P	**Pg**	**17 05 49.1**	**-1.0**
	SNR=8.1						
ORD				S	**Sg**	**17 06 13.6**	**+1.9**
CUKT	**Cukurca**	**1.73**	**187**	PN	**Pb**	**17 05 49.3**	**-1.0**
CUKT	**Cukurca**	**1.73**	**187**	*i*P	**Pg**	**17 05 52.1**	**+0.6**
CUKT	**Cukurca**	**1.73**	**187**	*e*Pn	**Pb**	**17 05 49.1**	**-1.2**
KARS	**Kars**	**1.76**	**340**	*e*Pn	**Pb**	**17 05 50.0**	**-0.7**
SRTM	**Siirt_Merkez**	**1.81**	**238**	*i*P	**Pg**	**17 05 52.4**	**-0.6**
SRTM				IAML_P			
	comp=Z,3µm,0.6s						
SRTM	**Siirt_Merkez**	**1.81**	**238**	*e*Pn	**Pb**	**17 05 51.6**	**0.0**
MUSM	**Mu-Merkez**	**1.85**	**263**	*i*P	**Pb**	**17 05 52.0**	**-0.3**
MUSM	**Mu-Merkez**	**1.85**	**263**	*e*Pn	**Pb**	**17 05 51.4**	**-0.9**
HOMI	**Horasan**	**1.85**	**306**	*i*P	**Pg**	**17 05 54.5**	**+0.6**
HOMI				IAML_P			
	comp=Z,8µm,0.5s						
KOPR	**Koprukoy-ERZUR**	**1.86**	**304**	PN	**Pb**	**17 05 51.5**	**-0.9**
KOPR	**Koprukoy-ERZUR**	**1.86**	**304**	*e*Pn	**Pb**	**17 05 51.9**	**-0.5**
SIRN	**Sırnak**	**1.86**	**218**	*i*P	**Pg**	**17 05 53.6**	**-0.3**
SIRN				IAML_P			
	comp=Z,4µm,0.6s						
SIRN	**Sırnak**	**1.86**	**218**	*e*Pn	**Pg**	**17 05 53.3**	**-0.7**
VRTB	**Varto-Mus**	**1.88**	**276**	PN	**Pb**	**17 05 51.8**	**-1.0**
VRTB	**Varto-Mus**	**1.88**	**276**	*e*Pn	**Pb**	**17 05 52.3**	**-0.5**
ITBZ	**Tabriz**	**1.94**	**112**	*e*Pn	**Pg**	**17 05 54.6**	**-0.8**
ITBZ				IAMB	IAmb	17 06 00.6	
	comp=Z,2µm,0.4s						
SENK	**Senkaya-Erzuru**	**1.97**	**324**	PN	**Pb**	**17 05 53.1**	**-1.2**
SENK	**Senkaya-Erzuru**	**1.97**	**324**	*e*Pn	**Pb**	**17 05 53.3**	**-1.0**
STEZ	**Stepenevan**	**2.07**	**11**	*e*P	**Pb**	**17 05 55.0**	**-1.0**
STEZ				*e*S	**Sg**	**17 06 23.0**	**-1.7**
IAZR	**Azarshahr**	**2.11**	**127**	*e*Pn	**Pg**	**17 05 56.9**	**-1.7**
IAZR				IAMB	IAmb	17 06 08.0	
	comp=Z,5µm,0.5s						
KARO	**Karliova-Bingo**	**2.21**	**280**	PN	**Pb**	**17 05 56.5**	**-2.0**
AKDA	**Akdag**	**2.24**	**301**	*i*P	**Pg**	**17 06 00.4**	**-0.7**
SVAN	**Silvan-Diyarba**	**2.24**	**249**	PN	**Pb**	**17 05 56.8**	**-2.1**
SVAN	**Silvan-Diyarba**	**2.24**	**249**	*e*Pn	**Pb**	**17 05 57.2**	**-1.7**
GDB	**GEDABAY**	**2.27**	**39**	*e*Pn	**Pb**	**17 05 58.6**	**-0.9**
GDB	**GEDABAY**	**2.27**	**39**	P	**Pb**	**17 05 58.7**	**-0.9**
	SNR=26						
GDB				S	**Sg**	**17 06 29.9**	**-1.4**
ECAT	**Cat-ERZURUM**	**2.33**	**287**	*i*P	**Pg**	**17 06 02.5**	**-0.3**
QZX	**Qazax, Azerbai**	**2.38**	**29**	*e*Pn	**Pb**	**17 05 59.7**	**-1.5**
QZX	**Qazax, Azerbai**	**2.38**	**29**	P	**Pb**	**17 05 59.8**	**-1.5**
QZX				S	**Sg**	**17 06 32.6**	**-2.2**
BNGB	**Bingl**	**2.48**	**271**	PN	**Pb**	**17 06 00.5**	**-2.5**
DDEM	**Demirkent**	**2.51**	**320**	*i*P	**Pg**	**17 06 06.6**	**+0.2**
DDEM				IAML_P			
	comp=Z,903nm,0.3s						
GANJ	**Ganja**	**2.53**	**48**	*e*Pn	**Pb**	**17 06 02.1**	**-1.6**
GANJ	**Ganja**	**2.53**	**48**	P	**Pb**	**17 06 02.2**	**-1.6**
GANJ				S	**Sb**	**17 06 33.5**	**-1.4**
IHRS	**Heris**	**2.57**	**104**	IAMB	IAmb	17 06 09.5	
	comp=Z,2µm,0.4s						
IHRS				*e*Pn	**Pb**	**17 06 03.5**	**-1.2**
YEDI	**Yedisu-Bingol**	**2.62**	**281**	PN	**Pn**	**17 06 01.9**	**+1.1**
BINT	**Bingol**	**2.63**	**269**	*e*Pn	**Pn**	**17 06 00.8**	**-0.2**
MAHB	**Mahabad**	**2.64**	**146**	*e*Pn	**Pb**	**17 06 05.1**	**-0.6**
IHSH	**Hashtrud**	**2.74**	**103**	*e*Pn	**Pg**	**17 06 13.7**	**+2.9**
IHSH				IAMB	IAmb	17 06 29.4	
	comp=Z,824nm,0.4s						
TBLG	**Delisi**	**2.83**	**13**	PN	**Pn**	**17 06 05.6**	**+2.0**
TBLG	**Delisi**	**2.83**	**13**	P	**Pb**	**17 06 10.1**	**+1.1**
BRDA	**Brd**	**2.87**	**62**	*e*Pn	**Pn**	**17 06 05.4**	**+1.4**
BRDA	**Brd**	**2.87**	**62**	P	**Pn**	**17 06 05.4**	**+1.4**
BCA	**Borcka**	**3.01**	**326**	PN	**Pn**	**17 06 07.8**	**+1.8**
MAZI	**Mazidag**	**3.09**	**242**	PN	**Pn**	**17 06 08.8**	**+1.6**
DYBB	**Diyarbakir**	**3.10**	**252**	PN	**Pn**	**17 06 09.0**	**+1.7**
BATM	**Batumi**	**3.11**	**328**	PN	**Pn**	**17 06 08.9**	**+1.5**
BATM	**Batumi**	**3.11**	**328**	P	**Pg**	**17 06 16.0**	**-1.8**
ISRB	**Sarab**	**3.20**	**110**	*e*Pn	**Pb**	**17 06 12.6**	**-2.7**
ISRB				IAMB	IAmb	17 06 29.6	
	comp=Z,873nm,0.6s						
LGD	**Lagodekhi**	**3.39**	**32**	P	**Pb**	**17 06 19.1**	**+0.7**
SEKA	**Sheki**	**3.40**	**48**	P	**Pb**	**17 06 14.7**	**-3.9**
ZKTA	**Zakatala**	**3.40**	**38**	P	**Pn**	**17 06 13.6**	**+2.3**
ZKTA				S	**Sb**	**17 06 58.5**	**-1.4**
LRK	**Lerik**	**3.51**	**94**	P	**Pn**	**17 06 13.9**	**+0.8**
GLBA	**Clilabad**	**3.53**	**84**	P	**Pn**	**17 06 14.2**	**+1.0**
GLBA				S	**Sb**	**17 07 00.5**	**-3.4**
SVRC	**Sivrice-ELAZID**	**3.62**	**262**	PN	**Pn**	**17 06 16.8**	**+2.3**
LKRN	**Lenkeran, Azer**	**3.85**	**92**	P	**Pn**	**17 06 18.5**	**+1.0**
LKRN				S	**Sb**	**17 07 09.2**	**-3.6**
ASTR	**Astara**	**3.87**	**95**	P	**Pn**	**17 06 19.2**	**+1.3**
XNQ	**Khinaliq**	**3.95**	**55**	P	**Pn**	**17 06 21.2**	**+2.1**
QSAR	**Qusar**	**4.22**	**52**	P	**Pn**	**17 06 24.8**	**+2.2**
QUBA	**Quba, Azerbaij**	**4.27**	**55**	P	**Pb**	**17 06 28.8**	**-4.6**

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*ISK **25** 17:12:21.5, 39°.08N×28°.16E, h8^{km}, ML2.2/17*
*DDA **25** 17:12:21.7, 39°.08N×28°.15E, h7^{km}±4^{km}, ML2.8*
*ISCJB **25** 17:12:22.1±0.4, 39°.08N±0°.02×28°.14E±0°.03, h10^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.5km az=44.5*
ISC 25 17:12:22.2±1.0, **39°.08N**±0°.03×**28°.13E**±0°.02, **h14**^{km}±10^{km}, **n29**, σ**0^{s}.42**/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.32**	**231**	*i*P	**Pg**	**17 12 29.1**	**+0.2**
AKHS				IAML_P			
	comp=Z,8µm,0.2s						
AKS	**Akhisar**	**0.32**	**231**	PG	**Pg**	**17 12 28.8**	**-0.1**
AKS				SG	**Sg**	**17 12 33.9**	**+0.5**
STEP	**BALIKESIR_Sava**	**0.44**	**313**	*i*P	**Pg**	**17 12 30.7**	**-0.3**
STEP				*i*S	**Sb**	**17 12 37.9**	**-0.3**
STEP				IAML_P			
	comp=Z,2µm,0.1s						
DEMI	**Demirci**	**0.46**	**95**	*i*P	**Pb**	**17 12 31.9**	**-0.1**
DEMI				*i*S	**Sg**	**17 12 37.6**	**+0.1**
DEMI				IAML_P			
	comp=Z,2µm,0.1s						
DURS	**Dursunbey**	**0.58**	**27**	*i*P	**Pb**	**17 12 35.0**	**+0.7**
DURS				IAML_P			
	comp=Z,1µm,0.1s						
BALB	**Balikesir**	**0.59**	**341**	PG	**Pb**	**17 12 34.3**	**-0.1**
BALB				SG	**Sb**	**17 12 42.3**	**-0.3**
MANT	**Manisa**	**0.68**	**151**	*i*P	**Pb**	**17 12 36.1**	**+0.2**
MANT				*i*S	**Sb**	**17 12 44.7**	**-0.5**
MANT				IAML_P			
	comp=Z,1µm,0.1s						
KULA	**Kula-Manisa**	**0.70**	**144**	PG	**Pg**	**17 12 35.7**	**-0.2**
KULA				SG	**Sg**	**17 12 44.7**	**-0.5**
BALY	**Balya**	**0.77**	**329**	*i*P	**Pg**	**17 12 36.8**	**-0.4**
BALY				IAML_P			
	comp=Z,2µm,0.1s						
USAK	**Uak-Merkez**	**0.78**	**118**	*i*P	**Pg**	**17 12 37.3**	**-0.2**
USAK				*i*S	**Sb**	**17 12 48.1**	**+0.1**
DKL	**Dikili**	**0.96**	**270**	PG	**Pg**	**17 12 40.8**	**+0.1**
GONE	**Gonen-Balikesi**	**1.02**	**340**	PG	**Pb**	**17 12 41.9**	**+0.2**
TVSB	**Tavsanli**	**1.09**	**70**	PG	**Pb**	**17 12 42.7**	**-0.3**
BLCB	**Balcova**	**1.10**	**231**	PN	**Pb**	**17 12 43.1**	**+0.1**
ORLT	**Orhaneli**	**1.13**	**31**	PN	**Pb**	**17 12 43.4**	**-0.2**
KCTX	**Karacabey (Bur**	**1.20**	**8**	PN	**Pn**	**17 12 44.4**	**-0.1**
EDC	**Edincik**	**1.28**	**351**	PN	**Pb**	**17 12 46.3**	**+0.2**
ULDT	**Uludag**	**1.31**	**36**	*i*P	**Pg**	**17 12 47.3**	**-0.2**
ULDT				IAML_P			
	comp=Z,464nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**1.40**	**299**	*i*P	**Pb**	**17 12 48.2**	**+0.2**
BAYC				IAML_P			
	comp=Z,927nm,0.2s						
URLA	**Izmir**	**1.40**	**240**	PN	**Pb**	**17 12 47.9**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.41**	**24**	PN	**Pb**	**17 12 48.3**	**0.0**
MRMT	**Marmara Adasi**	**1.58**	**345**	PN	**Pn**	**17 12 49.8**	**0.0**
ARMT	**Armutlu**	**1.58**	**20**	PN	**Pn**	**17 12 50.5**	**+0.6**
LPK	**Lapseki**	**1.67**	**321**	PN	**Pn**	**17 12 51.4**	**+0.4**
YLV	**Yalova**	**1.76**	**32**	PN	**Pn**	**17 12 52.9**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.77**	**336**	PN	**Pn**	**17 12 53.2**	**+0.8**
CHOS	**Chios island**	**1.77**	**248**	PN	**Pb**	**17 12 53.7**	**-0.8**
SIGR	**SIGRI**	**1.78**	**275**	PN	**Pn**	**17 12 53.3**	**+0.8**
BOZC	**Bozcaada**	**1.78**	**296**	PN	**Pb**	**17 12 53.7**	**-0.9**

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*ISCJB **25** 17:14:52.2±0.5, 7°.50S±0°.05×128°.69E±0°.07, h150^{km}, mb3.8/8, Error ellipse: s-maj=10.2km s-min=6.4km az=11.4*
*IDC **25** 17:14:54.1±1.9, 7°.53S×128°.64E, h151^{km}±19^{km}, mb3.6/8, mb1 3.7/11, mb1mx3.4/36, mbtmp4.1/11, Error ellipse: s-maj=18.8km s-min=13.6km az=83.0*
ISC 25 17:14:53.2±0.6, **7°.63S**±0°.06×**128°.83E**±0°.09, **h150**^{km}, **n12**, σ**2^{s}.27**/16, **mb3.8**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.71**	**243**	P	**Pn**	**17 16 17.4**	**+1.3**
	83nm,0.3s,baz=80,slow=5.3,SNR=91						
BATI				S	**Sn**	**17 17 18.4**	**-2.5**
	13nm,0.3s,baz=12,slow=20,SNR=3.0						
SIJI	**Sorong**	**7.14**	**20**	P	**Pn**	**17 16 35.8**	**+0.6**
	3.2nm,0.3s,baz=134,slow=3.7,SNR=49						
SIJI				S	**Sn**	**17 17 52.5**	**-2.8**
	1.3nm,0.3s,baz=270,slow=20,SNR=3.7						
WRA	**Warramunga Arr**	**13.35**	**157**	P	**Pn**	**17 17 58.7**	**+1.7**
	0.9nm,0.3s,baz=330,slow=14,SNR=25						
WRA				S	**Sn**	**17 20 20.2**	**-4.6**
	1.3nm,0.3s,baz=329,slow=23,SNR=6.2						
ASAR	**Alice Springs**	**16.67**	**164**	P	**Pn**	**17 18 41.1**	**+2.9**
	0.6nm,0.3s,baz=339,slow=10,SNR=36						
ASAR				S	**S**	**17 21 41.1**	**-2.5**
	0.2nm,0.3s,baz=320,slow=17,SNR=3.7						
STKA	**Stephens Creek**	**26.89**	**155**	P	**P**	**17 20 21.9**	**+1.7**
	1.4nm,0.5s,baz=326,slow=10,SNR=6.6						
CMAR	**Chiang Mai Arr**	**39.27**	**312**	P	**P**	**17 22 06.3**	**-1.2**
	0.6nm,0.5s,baz=135,slow=7.5,SNR=3.6						
SONM	**Songino Array**	**58.68**	**342**	P	**P**	**17 24 35.2**	**+0.2**
	0.7nm,0.7s,baz=168,slow=7.4,SNR=3.0						
PETK	**Petropavlovsk-**	**65.29**	**19**	P	**P**	**17 25 19.6**	**+0.7**
	1.2nm,0.6s,baz=151,slow=4.5,SNR=4.0						
MKAR	**Makanchi Array**	**68.13**	**327**	P	**P**	**17 25 36.7**	**-0.3**
	1.4nm,0.5s,baz=125,slow=7.7,SNR=20						
ZALV	**Zalesovo Beam**	**71.64**	**334**	P	**P**	**17 25 56.6**	**-1.7**
	1.0nm,0.5s,baz=124,slow=2.9,SNR=5.4						
SEY	**Seymchan**	**72.64**	**11**	P	**P**	**17 26 04.2**	**+0.2**
	0.9nm,0.6s,baz=162,slow=19,SNR=4.0						
QSPA	**South Pole Qui**	**82.35**	**180**	P	**P**	**17 27 00.2**	**+2.1**
	0.9nm,0.5s,baz=136,slow=1.3,SNR=14						

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*ISCJB **25** 17:17:28.9±0.5, 10°.89S±0°.06×165°.71E±0°.06, h35^{km}, mb4.3/13, MS3.8/5, Error ellipse: s-maj=10.2km s-min=7.6km az=41.9*
*IDC **25** 17:17:31.1±3.6, 10°.80S×165°.72E, h41^{km}±30^{km}, mb4.1/10, mb1 4.3/12, mb1mx4.0/36, mbtmp4.4/12, ML4.7/2, MS3.8/4, Ms1 3.8/4, ms1mx3.2/23, Error ellipse: s-maj=23.7km s-min=18.0km az=55.0*
*NEIC **25** 17:17:32.9±1.6, 10°.92S×165°.67E, h57^{km}±10^{km}, mb4.6/8, Error ellipse: s-maj=20.2km s-min=14.2km az=219.0*
ISC 25 17:17:30.6±0.7, **10°.93S**±0°.07×**165°.78E**±0°.08, **h35**^{km}, **n44**, σ**1^{s}.52**/38, **mb4.2**/13, **MS3.9**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.93**	**284**	P	**Pn**	**17 18 55.9**	**-0.1**
	51nm,0.3s,baz=138,slow=4.7,SNR=40						
HNR				S	**Sn**	**17 20 01.7**	**-1.1**
	baz=18,slow=20,SNR=1.5						
HNR	**Honiara**	**5.93**	**284**	*e*Pn	**Pn**	**17 18 55.5**	**-0.5**
HNR	**Honiara**	**5.93**	**284**	*e*P	**Pn**	**17 18 56.0**	**-0.1**
HNR				*e*S	**Sn**	**17 20 04.0**	**+1.2**
MARNC	**Mare, Loyalty**	**10.71**	**169**	*e*Pn	**Pn**	**17 20 04.3**	**+2.6**
DZM	**Mont Dzumac**	**11.10**	**177**	*e*Pn	**Pn**	**17 20 10.0**	**+3.0**
	11nm,0.2s						
DZM				*e*Sn	**Sn**	**17 22 04.8**	**-5.2**
	4.8nm,0.3s						
DZM				*e*LR	LR	17 22 40.6	
	comp=Z,356nm,23.8s						
DZM	**Mont Dzumac**	**11.10**	**177**	P	**Pn**	**17 20 08.7**	**+1.7**
	2.3nm,0.3s,baz=317,slow=9.5,SNR=48						
DZM				S	**Sn**	**17 22 08.3**	**-1.7**
	0.7nm,0.3s,baz=163,slow=19,SNR=3.7						
DZM				LR	LR	17 23 50.6	
	comp=Z,347nm,18.1s,baz=11,slow=34						
DZM	**Mont Dzumac**	**11.10**	**177**	*e*Pn	**Pn**	**17 20 08.9**	**+1.9**
PINNC	**Pines Island,**	**11.73**	**172**	*e*Pn	**Pn**	**17 20 17.9**	**+2.4**
PMG	**Port Moresby**	**18.39**	**273**	LR	LR	17 28 36.5	
	comp=Z,457nm,18.1s,baz=92,slow=36						
EIDS	**Eidsvold**	**20.01**	**222**	*e*P	**P**	**17 22 01.7**	**+1.3**
	22nm,0.9s						
MANU	**Manus Island**	**20.30**	**294**	*e*P	**P**	**17 22 05.1**	**+1.4**
	36nm,0.8s						
CTA	**Charters Tower**	**20.89**	**242**	P	**P**	**17 22 11.2**	**+1.2**
	20nm,0.8s,baz=73,slow=11,SNR=16						
CTAO	**Charters Tower**	**20.89**	**242**	*e*P	**P**	**17 22 10.9**	**+0.9**
	28nm,0.9s						
URZ	**Urewera**	**29.05**	**161**	P	**P**	**17 23 28.1**	**+0.6**
	4.4nm,0.5s,baz=356,slow=13,SNR=3.4						
H11S2	**WAKE ISLAND Hy**	**29.24**	**2**	T	T	17 53 50.9	
	baz=181,slow=76,SNR=81						
H11S3	**WAKE ISLAND Hy**	**29.25**	**2**	T	T	17 53 51.5	
	baz=181,slow=76,SNR=51						
H11S1	**WAKE ISLAND Hy**	**29.26**	**2**	T	T	17 53 52.2	
	baz=181,slow=76,SNR=76						
BKZ	**Black Stump Fm**	**29.70**	**163**	*e*P	**P**	**17 23 33.3**	**-0.1**
	44nm,1.3s						
H11N1	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	17 55 23.5	
	baz=182,slow=76,SNR=57						
H11N3	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	17 55 22.8	
	baz=182,slow=76,SNR=22						
H11N2	**WAKE ISLAND Hy**	**30.48**	**2**	T	T	17 55 25.0	
	baz=182,slow=76,SNR=49						
STKA	**Stephens Creek**	**30.55**	**223**	P	**P**	**17 23 40.9**	**-0.1**
	2.6nm,0.5s,baz=37,slow=10,SNR=7.9						
STKA	**Stephens Creek**	**30.55**	**223**	*e*P	**P**	**17 23 40.5**	**-0.5**
	4.3nm,1.8s						
WR1	**Warramunga Arr**	**31.55**	**250**	*e*P	**P**	**17 23 49.7**	**-0.3**
WRA	**Warramunga Arr**	**31.56**	**250**	P	**P**	**17 23 49.7**	**-0.3**
	3.4nm,0.6s,baz=74,slow=8.8,SNR=6.3						
AS31	**Alice Springs**	**32.87**	**243**	*e*P	**P**	**17 24 00.5**	**-1.1**
	1.7nm,0.8s						
ASAR	**Alice Springs**	**32.88**	**243**	P	**P**	**17 24 00.8**	**-0.7**
	8.0nm,0.8s,baz=70,slow=9.8,SNR=25						
ASAR				PcP	**PcP**	**17 26 45.5**	**-0.3**
	0.3nm,0.8s,baz=82,slow=2.0,SNR=2.1						
ASAR				LR	LR	17 36 04.4	
	comp=Z,114nm,21.3s,baz=88,slow=34						
BBOO	**Buckleboo**	**34.93**	**227**	*e*P	**P**	**17 24 19.2**	**-0.1**
	13nm,0.9s						
PPT2	**Papeete2**	**43.69**	**104**	*e*LR	LR	17 37 48.5	
	comp=Z,144nm,24.5s						
TBI	**Tubuai**	**44.34**	**112**	*e*LR	LR	17 38 11.5	
	comp=Z,230nm,29.8s						
TAOE	**Nuku Hiva Isla**	**53.25**	**93**	*e*LR	LR	17 42 08.5	
	comp=Z,217nm,28.9s						
QSPA	**South Pole Qui**	**79.08**	**180**	P	**P**	**17 29 32.4**	**+1.2**
	1.9nm,0.9s,baz=160,slow=0.9,SNR=6.5						
ILAR	**Eielson Array**	**83.39**	**18**	P	**P**	**17 29 52.9**	**-1.0**
	0.6nm,0.6s,baz=240,slow=4.9,SNR=5.9						
EGAK	**Eagle**	**85.25**	**20**	*e*P	**P**	**17 30 04.2**	**+0.9**
	5.6nm,1.0s						
NV01	**Mina Array Sit**	**85.92**	**50**	*e*P	**P**	**17 30 07.4**	**-0.2**
NVAR	**Mina Array Bea**	**85.92**	**50**	P	**P**	**17 30 07.4**	**-0.2**
	1.2nm,0.9s,baz=236,slow=7.5,SNR=6.1						
MK32	**Makanchi Array**	**93.46**	**317**	*e*P	**P**	**17 30 41.2**	**-1.4**
MKAR	**Makanchi Array**	**93.46**	**317**	P	**P**	**17 30 41.2**	**-1.4**
	0.6nm,0.7s,baz=91,slow=6.8,SNR=6.6						
ZALV	**Zalesovo Beam**	**93.48**	**324**	P	**P**	**17 30 41.4**	**-1.1**
	0.4nm,0.4s,baz=46,slow=4.2,SNR=2.8						
ZAA1	**Zalesovo Array**	**93.48**	**324**	*e*P	**P**	**17 30 41.4**	**-1.1**
TXAR	**Lajitas Array**	**95.74**	**61**	LR	LR	18 05 11.5	
	comp=Z,41nm,21.6s,baz=0.0,slow=30						
ARCES	**ARCESS Array B**	**116.23**	**345**	PKP	**PKiKP**	**17 36 08.4**	**-1.4**
	0.4nm,0.7s,baz=52,slow=1.5,SNR=6.3						
NB200	**NORSAR Array S**	**126.60**	**345**	*e*PKPdf	**PKPdf**	**17 36 30.1**	**+0.1**
NOA	**NORSAR Array B**	**126.60**	**345**	PKP	**PKPdf**	**17 36 30.1**	**+0.1**
	0.4nm,0.8s,baz=40,slow=1.8,SNR=3.2						

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*IDC **25** 17:26:31.6±1.2, 31°.45S×72°.21W, h0^{km}, mb3.9/5, mb1 4.0/10, mb1mx3.9/35, mbtmp3.8/10, ML3.6/4, MS3.9/1, Ms1 3.8/1, ms1mx2.9/25, Error ellipse: s-maj=32.4km s-min=25.3km az=29.0*

ISCJB ***25*** *17:26:32.1±1.8, 31°.52S±0°.03×72°.31W±0°.08, h15^{km}±13^{km}, mb3.9/5, MS3.8/1, Error ellipse: s-maj=11.5km s-min=5.6km az=1.8*

NEIC ***25*** *17:26:32.9±1.4, 31°.51S×72°.09W, h7^{km}±4^{km}, mb4.4/2, Error ellipse: s-maj=21.5km s-min=8.1km az=90.0*

SJA ***25*** *17:26:34.3±0.8, 31°.17S×72°.61W, h63^{km}±18^{km}, ML3.8, MW4.5*

GUC ***25*** *17:26:34.4±0.6, 31°.51S×72°.07W, h52^{km}±8^{km}, ML3.5*

ISC 25 17:26:31.5±2.2**, 31°.50S**±0°.04×**72°.25W**±0°.07**, h3^{km}**±13^{km}**, n36, σ1^s.38**/44**, mb4.1**/5**, 2C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CO02	Combarbal	1.11	75	⇓iP	Pg	17 26 53.0	+0.3
CO02				i S	Sg	17 27 07.2	0.0
LSCH	La Serena	1.81	29	eP	Pn	17 27 03.9	+0.3
LSCH				i S	Sn	17 27 25.9	-1.0
LSCH				IAML		17 27 36.6	
	comp=N,730nm,0.6s						
GO04	Tololo Observa	1.82	44	ePn	Pn	17 27 03.7	-0.3
GO04	Tololo Observa	1.82	44	eP	Pb	17 27 05.6	0.0
GO04				eS	Sb	17 27 28.9	0.0
GO04	Tololo Observa	1.82	44	⇑iP	Pn	17 27 04.1	+0.1
GO04				i S	Sn	17 27 27.7	0.0
PEL	Peldehue	2.11	142	ePn	Pn	17 27 07.6	-0.2
PEL	Peldehue	2.11	142	⇑iP	Pn	17 27 08.0	+0.2
PEL				i S	Sn	17 27 33.0	-1.7
PEL				IAML		17 27 42.4	
	comp=E,418nm,0.3s						
RCDM	Rinconada Maip	2.33	149	eP	Pn	17 27 11.9	+1.0
CLCH	Cerro Calan	2.38	143	eP	Pn	17 27 11.9	+0.3
CLCH				i S	Sn	17 27 39.9	-1.6
CLCH				IAML		17 28 03.2	
	comp=E,810nm,0.7s						
FCH	Farellones	2.46	138	eP	Pn	17 27 13.3	+0.3
FCH				IAML		17 27 58.0	
	comp=E,196nm,0.2s						
LCO	Las Campanas	2.82	29	ePn	Pn	17 27 17.9	+0.2
LMEL	Las Melosas	2.91	144	eP	Pn	17 27 20.0	+1.0
LMEL				IAML		17 28 10.1	
	comp=N,245nm,0.3s						
ZON	Zonda	3.05	92	eP	Pb	17 27 27.9	+1.3
ZON				IAML		17 28 22.1	
	comp=Z,130nm,0.6s						
RTCV	Cerro Valdivia	3.18	98	eP	Pb	17 27 28.8	0.0
RTLL	Cerro Villicun	3.23	88	eP	Pb	17 27 29.3	-0.3
RTLL				IAML		17 28 16.9	
	comp=Z,202nm,0.3s						
AMOG	MOGNA	3.27	81	eP	Pb	17 27 29.3	-0.9
CFA	Coronel Fontan	3.43	93	Pn	Pn	17 27 27.6	+1.7
	comp=Z,0.4nm,0.3s,baz=264,slow=16,SNR=2.4						
CFA				Sn	Sb	17 28 12.4	-2.6
	comp=Z,8.0nm,0.3s,baz=214,slow=13,SNR=3.6						
GO05	Huala	3.51	176	ePn	Pn	17 27 26.8	-0.4
ACAN	Cantantal	4.37	102	eP	Pb	17 27 45.5	-3.6
ACLC	CERRO LA CRUZ	5.02	67	eP	Pn	17 27 52.1	+4.1
APLL	PUNTA DE LOS L	5.04	79	eP	Pn	17 27 52.7	+4.7
APLL				IAML		17 29 14.9	
	comp=Z,54nm,0.5s						
PLCA	Paso Flores	9.32	172	Pn	Pn	17 28 47.0	+0.2
	comp=Z,0.2nm,0.3s,baz=360,slow=9.5,SNR=6.9						
CPUP	Villa Florida	14.04	72	Pn	Pn	17 29 50.2	-1.2
	comp=Z,0.0nm,0.3s,baz=188,slow=15,SNR=2.2						
LPAZ	La Paz	15.60	15	Pn	Pn	17 30 11.8	-1.2
	comp=Z,0.1nm,0.3s,baz=183,slow=5.7,SNR=3.6						
LPAZ	La Paz	15.60	15	ePn	Pn	17 30 12.3	-0.7
	comp=Z,3.0nm,0.9s						
SIV	San Ignacio	18.50	36	P	P	17 30 48.2	-0.8
	comp=Z,0.2nm,0.3s,baz=220,slow=13,SNR=5.4						
BDFB	Brasilia	27.16	60	P	P	17 32 16.1	-0.3
	comp=Z,2.0nm,0.5s,baz=204,slow=12,SNR=2.6						
BDFB				LR	LR	17 44 28.5	
	comp=Z,234nm,18.4s,baz=147,slow=40						
TEIG	Tepich	53.68	341	P	P	17 35 55.8	+1.1
	comp=Z,4.5nm,1.0s,baz=168,slow=2.9,SNR=6.6						
TEIG	Tepich	53.68	341	eP	P	17 35 55.8	+1.1
	comp=Z,44nm,1.6s						
TXAR	Lajitas Array	67.47	330	P	P	17 37 27.9	-1.0
	comp=Z,0.3nm,0.7s,baz=156,slow=8.9,SNR=4.6						
NV01	Mina Array Sit	81.73	325	eP	P	17 38 53.7	+2.0
NVAR	Mina Array Bea	81.73	325	P	P	17 38 53.7	+2.0
	comp=Z,0.2nm,0.6s,baz=134,slow=7.8,SNR=2.5						
TORD	Torodi Ar. Bea	83.53	70	P	P	17 39 01.9	+0.6
	comp=Z,1.0nm,0.7s,baz=268,slow=5.4,SNR=5.1						
TOA1	Torodi Ar. Sit	83.53	70	eP	P	17 39 01.9	+0.6
ZAA1	Zalesovo Array	152.17	30	ePKPbc	PKPbc	17 46 28.1	+0.1
ZAA1				ePKPab	PKPab	17 46 37.6	-0.1
ZALV	Zalesovo Beam	152.18	30	PKPbc	PKPbc	17 46 28.1	+0.1
	comp=Z,2.4nm,0.6s,baz=297,slow=3.9,SNR=11						
ZALV				PKPab	PKPab	17 46 37.6	-0.1
	comp=Z,3.3nm,0.8s,baz=294,slow=1.5,SNR=4.4						

ISCJB ***25*** *17:28:50.0±0.5, 38°.48N±0°.04×28°.48E±0°.05, h6^{km}±5^{km}, Error ellipse: s-maj=7.4km s-min=4.7km az=44.9*

ISK ***25*** *17:28:49.3, 38°.46N×28°.50E, h6^{km}, ML2.1/10*

DDA ***25*** *17:28:49.8, 38°.52N×28°.51E, h4^{km}±1^{km}, ML2.8*

ISC 25 17:28:49.9±1.0**, 38°.47N**±0°.04×**28°.49E**±0°.03**, h5^{km}**±8^{km}**, n20, σ0^s.49**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MANT	Manisa	0.06	66	i P	Pg	17 28 51.3	-0.2
MANT				i S	Sg	17 28 53.1	+0.4
MANT				IAML_P			
	comp=Z,78μm,0.3s						
KULA	Kula-Manisa	0.14	70	PG	Pg	17 28 52.7	-0.1
USAK	Uak-Merkez	0.48	59	i P	Pg	17 28 59.5	+0.3
DEMI	Demirci	0.60	17	i P	Pb	17 29 01.9	-1.1
DEMI				i S	Sg	17 29 09.6	+0.2
DEMI				IAML_P			
	comp=Z,2μm,0.2s						
AYDB	Zeytinkoy-Aydi	0.70	222	PG	Pg	17 29 03.3	-0.1
AYDB				SG	Sg	17 29 13.4	+0.9
KHAL	Karahalli	0.79	97	i P	Pg	17 29 05.1	-0.1
KHAL				i S	Sb	17 29 17.9	+0.6
KHAL				IAML_P			
	comp=Z,1μm,0.1s						
AYDN	Tasoluk	0.94	211	i P	Pn	17 29 09.4	-0.4
AYDN				IAML_P			
	comp=Z,1μm,0.2s						
GDZ	Gediz	0.99	51	i P	Pb	17 29 09.5	-0.2
STEP	BALIKESIR_Sava	1.09	327	i P	Pn	17 29 11.6	-0.3
STEP				IAML_P			
	comp=Z,848nm,0.2s						
BLCB	Balcova	1.14	266	PN	Pg	17 29 11.7	-0.1
TVSB	Tavsanli	1.24	37	PN	Pg	17 29 12.9	-0.8
BALB	Balikesir	1.26	338	PN	Pg	17 29 14.5	+0.3
YER	Yerkesik	1.34	187	PN	Pn	17 29 15.1	-0.2
DKL	Dikili	1.38	296	PN	Pb	17 29 15.9	-0.2
URLA	Izmir	1.49	267	PN	Pb	17 29 17.5	-0.6
KCTX	Karacabey (Bur	1.80	357	PN	Pn	17 29 21.8	+0.2
CHOS	Chios island	1.91	268	PN	Pn	17 29 23.6	+0.4
BORA	Eskisehir	2.08	47	PN	Pn	17 29 26.1	+0.6
ARMT	Armutlu	2.12	8	PN	Pn	17 29 26.4	+0.4
YLV	Yalova	2.21	18	PN	Pn	17 29 27.3	+0.1

IDC ***25*** *17:53:35.6±1.8, 33°.38N×76°.51E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.3/41, mbtmp3.4/7, ML2.8/2, Error ellipse: s-maj=67.9km s-min=20.7km az=62.0*

ISCJB ***25*** *17:53:39.7±0.7, 33°.64N±0°.06×76°.8E±0°.2, h31^{km}, mb3.5/4, Error ellipse: s-maj=23.2km s-min=7.9km az=2.0*

ISC 25 17:53:41.3±0.9**, 33°.61N**±0°.08×**76°.7E**±0°.2**, h31^{km}, n8, σ0^s.99**/9**, mb3.5**/4**, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BHK	Bhakra	2.20	187	eP	Pn	17 54 16.0	+0.3
BHK				eS	Sn	17 54 42.8	+0.9
MKAR	Makanchi Array	13.83	16	Pn	Pn	17 56 56.4	+1.2
	0.0nm,0.3s,baz=201,slow=11,SNR=2.4						
KURBB	Kurchatov Arra	17.05	4	P	Pn	17 57 37.0	-0.3
	0.0nm,0.3s,baz=189,slow=12,SNR=5.3						
BVAR	Borovoye Array	19.93	349	P	Pn	17 58 12.4	+0.2
	0.8nm,0.8s,baz=164,slow=12,SNR=3.9						
AKTO	Aktyubinsk	21.71	326	P	P	17 58 28.9	-0.8
	0.8nm,0.5s,baz=115,slow=13,SNR=4.7						
CMAR	Chiang Mai Arr	24.95	122	P	P	17 59 02.1	+0.1
	1.1nm,0.7s,baz=304,slow=8.9,SNR=6.7						
WRA	Warramunga Arr	76.48	125	P	P	18 05 26.9	-1.5
	1.2nm,0.9s,baz=323,slow=5.4,SNR=2.6						
ASAR	Alice Springs	78.76	128	P	P	18 05 40.3	-0.7
	0.3nm,0.7s,baz=323,slow=5.3,SNR=4.5						

ISCJB ***25*** *18:04:31.0±0.2, 43°.80N±0°.02×105°.26W±0°.04, h0^{km}, mb4.0/8, Error ellipse: s-maj=3.8km s-min=3.0km az=21.2*

IDC ***25*** *18:04:31.9±0.8, 43°.77N×105°.46W, h0^{km}, mb3.9/8, mb1 3.9/16, mb1mx3.8/42, mbtmp3.8/16, ML3.3/6, Error ellipse: s-maj=19.7km s-min=7.3km az=149.0*

NEIC ***25*** *18:04:32.8±0.2, 43°.80N×105°.26W, h0^{km}, ML3.8, Error ellipse: s-maj=3.1km s-min=2.5km az=120.0, Suspected Mining explosion.*

NEIC 57 km [36 miles] SSE of Gillette.

ANF ***25*** *18:04:32.8±0.8, 43°.77N×105°.34W, ML4.0/11, Error ellipse: s-maj=11.7km s-min=7.9km az=130.0*

ISC 25 18:04:32.3±0.5**, 43°.84N**±0°.04×**105°.27W**±0°.06**, h0^{km}, n118, σ1^s.09**/120**, mb4.1**/8**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.94	72	ePg	Pb	18 04 51.5	-0.1
RSSD	Black Hills	0.94	72	P	Pb	18 04 51.8	+0.2
	baz=251						
K22A	Casper	1.50	218	ePn	Pn	18 04 58.1	-2.5
K22A	Casper	1.50	218	P	Pn	18 04 58.7	-1.9
	baz=38						
K22A				S	Sb	18 05 20.5	-0.3
	baz=38						
LAO	LASA Array	2.93	347	ePn	Pn	18 05 21.6	+1.4
LAO	LASA Array	2.93	347	P	Pn	18 05 22.0	+1.7
	baz=166						
LAO				Sb	Sg	18 06 05.6	-0.9
	baz=166						
N23A	Red Feather La	2.98	190	P	Pn	18 05 21.5	+0.4
	baz=9.7						
N23A				S	Sn	18 05 58.3	+0.6
	baz=9.7						
RLMT	Red Lodge	3.14	296	ePn	Pn	18 05 23.8	+0.5
RLMT	Red Lodge	3.14	296	P	Pn	18 05 24.0	+0.8
	baz=113						
BW06	Boulder Array	3.31	253	ePn	Pn	18 05 25.2	-0.4
BW06	Boulder Array	3.31	253	P	Pn	18 05 25.7	+0.1
	baz=70						
PD31	Pinedale Array	3.31	253	ePn	Pn	18 05 24.9	-0.6
PDAR	Pinedale Array	3.31	253	Pn	Pn	18 05 25.4	-0.1
	9.5nm,0.3s,baz=65,slow=15,SNR=84						
PDAR				Lg	Lg	18 06 09.9	
	12nm,0.3s,baz=77,slow=34,SNR=5.6						
GCMT	Greycliff	3.69	304	ePn	Pn	18 05 31.8	+1.1
OGNE	Ogallala	3.75	139	ePn	Pn	18 05 31.7	+0.1
OGNE	Ogallala	3.75	139	P	Pn	18 05 32.4	+0.8
	baz=321						
LKWY	Lake	3.76	283	ePn	Pn	18 05 33.6	+1.8
H17A	Grant Village	3.86	280	ePn	Pn	18 05 35.0	+1.8
H17A	Grant Village	3.86	280	P	Pn	18 05 35.2	+2.0
	baz=97						
YNR	Norris Junctio	3.98	285	ePn	Pn	18 05 35.5	+0.6
YPP	Pitchstone Pla	4.01	278	ePn	Pn	18 05 36.2	+0.9
YFT	Old Faithful	4.05	281	ePn	Pn	18 05 36.3	+0.5
YHH	Holmes Hill	4.12	285	ePn	Pn	18 05 37.0	+0.3
YMR	Madison River	4.17	283	ePn	Pn	18 05 38.1	+0.6
O20A	White River Ci	4.31	212	ePn	Pn	18 05 39.3	0.0
O20A	White River Ci	4.31	212	P	Pn	18 05 39.5	+0.1
	baz=30						
O20A				Sb	Sb	18 06 44.7	+3.0
	baz=30						
YHB	Horse Butte	4.35	284	ePn	Pn	18 05 39.8	-0.1
AHID	Auburn Hatcher	4.39	258	ePn	Pn	18 05 40.0	-0.4
QLMT	Earthquake Lak	4.53	285	ePn	Pn	18 05 42.8	+0.4
DGMT	Dagmar	4.69	9	ePn	Pn	18 05 46.8	+2.4
DGMT	Dagmar	4.69	9	P	Pn	18 05 46.9	+2.4
	baz=189						
BOZ	Bozeman (W)	4.86	293	ePn	Pn	18 05 47.4	+0.6
Q24A	Divide	4.87	179	P	Pn	18 05 47.2	+0.1
	baz=359						
HWUT	Hardware Ranch	5.14	246	ePn	Pn	18 05 50.8	0.0
KSCO	Kaye Shedlock’	5.21	157	ePn	Pn	18 05 51.5	-0.2
EGMT	Eagleton	5.23	325	ePn	Pn	18 05 52.8	+1.0
HRY	Holter Researc	5.45	304	ePn	Pn	18 05 55.9	+1.0
LRM	Limekiln Ridge	5.48	294	ePn	Pn	18 05 59.0	+3.5
MCMT	McKenzie Canyo	5.53	283	ePn	Pn	18 05 57.6	+1.5
JLU	Jordanelle	5.61	237	ePn	Pn	18 05 56.7	-0.5
MDND	Maddock	5.63	43	ePn	Pn	18 05 59.7	+2.3
CTU	Camp Tracy	5.74	239	ePn	Pn	18 05 58.4	-0.6
BGNE	Belgrade	5.79	112	ePn	Pn	18 06 00.5	+1.1
HVU	Hansel Valley	5.89	252	ePn	Pn	18 06 01.7	+0.7
PV22	Blue Mesa, Par	5.92	208	ePn	Pn	18 06 01.5	0.0
PV07	Paradox Valley	5.96	206	ePn	Pn	18 06 02.4	+0.3
PV21	Cone Mtn., Par	5.96	209	ePn	Pn	18 06 02.2	+0.1
P17A	Butcher Ranch,	5.98	225	ePn	Pn	18 06 02.8	+0.5
PV23	Carpenter Ridg	6.08	209	ePn	Pn	18 06 03.8	+0.2
PV09	Paradox Valley	6.08	210	ePn	Pn	18 06 03.1	-0.6
SDCO	Great Sand Dun	6.09	182	ePn	Pn	18 06 04.6	+0.7
MPU	Maple Canyon	6.09	233	ePn	Pn	18 06 03.1	-0.7
PV04	Paradox Valley	6.09	208	ePn	Pn	18 06 04.1	+0.3
PV12	Saucer Basin,	6.12	207	ePn	Pn	18 06 04.8	+0.5
PV14	Lion Creek, Pa	6.15	209	ePn	Pn	18 06 05.1	+0.4
PV10	Paradox Valley	6.15	209	ePn	Pn	18 06 06.0	+1.3
SRU	San Rafael Swe	6.15	222	ePn	Pn	18 06 04.1	-0.5
PV20	West Nyswonger	6.16	208	ePn	Pn	18 06 04.5	-0.2
PV11	David Mesa, Pa	6.17	207	ePn	Pn	18 06 04.9	0.0
PV16	Nyswonger Mesa	6.17	208	ePn	Pn	18 06 05.3	+0.4
PV19	Morning Glory	6.19	208	ePn	Pn	18 06 05.7	+0.5
PV03	Paradox Valley	6.20	207	ePn	Pn	18 06 05.4	+0.1
PV02	Paradox Valley	6.21	206	ePn	Pn	18 06 06.2	+0.8
PV17	East Wray Mesa	6.21	208	ePn	Pn	18 06 05.1	-0.3
PV01	Paradox Valley	6.22	205	ePn	Pn	18 06 06.6	+1.0
PV18	Skein Mesa, Pa	6.22	207	ePn	Pn	18 06 05.5	-0.2
ECSD	EROS Data Cent	6.27	88	ePn	Pn	18 06 07.3	+1.3
PV13	Radium Mtn., P	6.28	207	ePn	Pn	18 06 06.3	0.0
TMUT	Trail Mountain	6.36	226	ePn	Pn	18 06 07.8	+0.2
NLU	North Lily Min	6.39	235	ePn	Pn	18 06 07.7	-0.2
BGU	Big Grassy Mou	6.44	246	ePn	Pn	18 06 09.0	+0.5
PV05	Paradox Valley	6.44	208	ePn	Pn	18 06 07.7	-1.0
CBKS	Cedar Bluff	6.52	138	ePn	Pn	18 06 08.2	-1.3
HLID	Hailey	6.63	271	ePn	Pn	18 06 13.2	+2.0
DUG	Dugway, Tooele	6.69	240	ePn	Pn	18 06 11.8	-0.2
MVCO	Mesa Verde	7.06	201	ePn	Pn	18 06 17.7	+0.6
MTPU	Mount Pierson	7.80	224	ePn	Pn	18 06 26.9	-0.5
AGMN	Agassiz Nation	7.92	52	ePn	Pn	18 06 29.6	+1.0
ELK	Elko	8.01	251	Pn	Pn	18 06 30.4	+0.2
	0.6nm,0.3s,baz=69,slow=7.7,SNR=6.8						
ELK				Lg	Lg	18 08 36.7	
	0.1nm,0.3s,baz=124,slow=3.6,SNR=3.2						
ELK	Elko	8.01	251	ePn	Pn	18 06 31.0	+0.9
ELK				Lg	Lg	18 08 36.7	
PSUT	Pine Spring	8.36	234	ePn	Pn	18 06 35.9	+1.0
SZCU	Shurtz Canyon	8.61	226	ePn	Pn	18 06 38.5	+0.2
F10A	Beach Ranch, E	8.75	288	ePn	Pn	18 06 40.9	+0.7
CCUT	Cedar City	8.78	227	ePn	Pn	18 06 41.6	+0.8
KNB	Kanab	8.92	223	ePn	Pn	18 06 43.0	+0.5
ANMO	Albuquerque	8.93	186	Lg	Lg	18 09 09.8	
	0.0nm,0.3s,baz=60,slow=20,SNR=2.2						
ULM	Lac du Bonnet	9.07	42	Pn	Pn	18 06 44.1	-0.3
	3.5nm,0.3s,baz=234,slow=11,SNR=14						
ULM				Lg	Lg	18 09 13.2	
	1.1nm,0.3s,baz=311,slow=19,SNR=2.6						
ULM	Lac du Bonnet	9.07	42	ePn	Pn	18 06 45.1	+0.8
ULM				Lg	Lg	18 09 13.2	
U15A	North Rim	9.14	218	ePn	Pn	18 06 45.4	-0.4
NEW	Newport	9.35	302	Pn	Pn	18 06 46.1	-2.3
	0.1nm,0.3s,baz=90,slow=19,SNR=2.3						
NEW				Lg	Lg	18 09 12.7	
	0.1nm,0.3s,baz=345,slow=19,SNR=2.9						
I56US	NEWPORT INFRAS	9.36	302	i		18 59 50.0	
	baz=117,slow=312,SNR=3.0						
R11A	Troy Canyon, C	9.52	238	ePn	Pn	18 06 51.7	+0.9
WUAZ	Wupatki	9.54	212	ePn	Pn	18 06 51.0	-0.2
WMOK	Wichita Mounta	10.38	149	ePn	Pn	18 07 00.0	-2.5
KVN	Kaiserville	10.75	248	ePn	Pn	18 07 07.9	+0.3
FFC	Flin Flon	11.11	10	ePn	Pn	18 07 12.2	-0.1
NV01	Mina Array Sit	11.21	246	ePn	Pn	18 07 15.0	+1.0
NVAR	Mina Array Bea	11.21	246	Pn	Pn	18 07 15.0	+1.0
	0.3nm,0.3s,baz=51,slow=12,SNR=14						
YBH	Yreka Blue Hor	12.99	267	Pn	Pn	18 07 40.1	+1.9
	0.2nm,0.3s,baz=78,slow=3.9,SNR=6.6						
PGC	Sidney	13.46	297	ePn	Pn	18 07 40.4	-4.1
TXAR	Lajitas Array	14.53	174	Pn	Pn	18 07 59.7	+0.4
	baz=358,slow=13,SNR=2.6						
WVT	Waverly	15.41	114	eP	P	18 08 14.9	-0.8
SWET	Sewanee	17.20	113	eP	P	18 08 35.9	+0.3
YKA	Yellowknife Ar	19.47	347	P	P	18 09 00.8	+0.4
	0.1nm,0.3s,baz=160,slow=13,SNR=4.1						
YKB5	Yellowknife Ar	19.47	347	eP	P	18 09 00.8	+0.4
ILAR	Eielson Array	31.19	327	P	P	18 10 53.7	+0.9
	0.3nm,0.5s,baz=113,slow=6.4,SNR=2.9						
ARCES	ARCESS Array B	61.32	18	P	P	18 14 48.4	-0.8
	1.0nm,0.6s,baz=334,slow=5.5,SNR=11						
NB200	NORSAR Array S	63.52	29	eP	P	18 15 03.2	-0.9
NOA	NORSAR Array B	63.52	29	P	P	18 15 03.2	-0.9
	0.3nm,0.7s,baz=312,slow=6.7,SNR=2.5						
FIA0	FINESS Array S	67.94	23	eP	P	18 15 31.6	-0.8
FINES	FINESS Array B	67.94	23	P	P	18 15 31.6	-0.8
	1.4nm,0.9s,baz=356,slow=8.4,SNR=3.3						
AKASG	Malin Array Be	77.87	28	P	P	18 16 31.3	-0.2
	0.4nm,0.4s,baz=349,slow=3.0,SNR=3.1						
ZAA1	Zalesovo Array	82.20	354	eP	P	18 16 54.3	-0.6
ZALV	Zalesovo Beam	82.21	354	P	P	18 16 54.3	-0.6
	1.4nm,0.6s,baz=1.6,slow=4.3,SNR=6.3						
SONA0	Songino Array	84.55	339	eP	P	18 17 07.6	+0.3
SONM	Songino Array	84.55	339	P	P	18 17 07.6	+0.3
	0.9nm,0.8s,baz=2.7,slow=6.2,SNR=4.1						
MK32	Makanchi Array	89.51	355	eP	P	18 17 31.7	+0.4
MKAR	Makanchi Array	89.51	355	P	P	18 17 31.7	+0.4
	1.2nm,0.7s,baz=10,slow=4.5,SNR=15						

GCG 25 18:17:34.4±0.3**, 14°.85N×91°.45W, h50^{km}, MD3.9, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
STG3	Santiaguito 3,	0.18	220	eP	Pn	18 17 43.3	+0.4
FUG	Fuego 3	0.71	124	eP	Pn	18 17 48.8	+0.3
PCG	Pacaya	0.94	119	eP	Pn	18 17 52.1	+0.6

MAN 25 18:23:08.8, 7°.37N×124°.83E, h1^{km}, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.56	25	eP	Pg	18 23 19.9	+0.4
BUKP				eS	Sg	18 23 28.0	+1.2
SKMP	Bagumbayan, Su	0.89	198	eP	Pg	18 23 25.2	-0.7
SKMP				eS	Sn	18 23 43.8	+1.7
CGP	Cagayan de Oro	1.08	353	⇑iP	Pg	18 23 29.1	-0.5
CGP				i S	Sg	18 23 43.4	-0.3
MATI	Mati	1.48	106	eP	Pn	18 23 35.2	-1.4
MATI				eS	Sn	18 23 57.2	+0.5
DDMP	Don Marcelino,	1.53	145	eP	Pn	18 23 36.8	-0.6
DDMP				eS	Sg	18 23 59.8	+1.6
BUTP	Butuan	1.77	26	eP	Pb	18 23 41.7	-0.5
MSLP	Maasin	2.75	1	eP	Pn	18 23 55.4	+1.4

IDC 25 18:24:54.0±10.0**, 28°.55N×141°.38E, h0^{km}, mb3.8**/2**, mb1 3.9**/3**, mb1mx3.4**/24**, mbtmp3.6**/3**, ML2.5**/1**, Error ellipse: s-maj=660.2km s-min=34.4km az=82.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	8.40	342	Pn	Pn	18 26 56.7	-0.3
	0.1nm,0.3s,baz=127,slow=13,SNR=4.8						
WRA	Warramunga Arr	48.69	189	P	P	18 33 39.3	-0.9
	1.2nm,0.5s,baz=7.0,slow=7.6,SNR=20						
ASAR	Alice Springs	52.42	189	P	P	18 34 08.8	+0.6
	0.5nm,0.7s,baz=10,slow=6.3,SNR=10						

GEN 25 18:49:02.0, 44°.18N×10°.12E, h6^{km}±1^{km}**, Ml0.1, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
EQUI	Equi	0.03	119	P	Pg	18 49 03.4	+0.3
EQUI				S	Sg	18 49 04.0	+0.1
SARO	Sassorosso	0.20	88	P	Pg	18 49 06.1	+0.1
SARO				S	Sg	18 49 09.0	+0.4

ROM 25 18:49:50.0±0.1**, 43°.552N**±0°.006×**12°.13E**±0°.01**, h10^{km}, ML0.6**/2**, Error ellipse: s-maj=0.8km s-min=0.7km az=67.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BADI	Badiali	0.09	117	P	Pg	18 49 53.0	+0.4
BADI				S	Sg	18 49 54.9	+0.6
PARC	Parchiule	0.12	40	P	Pg	18 49 53.5	+0.5
PARC				S	Sg	18 49 55.8	+0.7
PARC				AML	AML		
	comp=E,45μm,1.4s						
PARC				AML	AML		
	comp=N,56μm,0.1s						
PARC				AML	AML		
	comp=N,56μm,0.1s						
PARC				AML	AML		
	comp=E,45μm,1.4s						
PARC				AML	AML		
	comp=N,56μm,0.1s						
PARC				AML	AML		
	comp=E,45μm,1.4s						
CAFI	Castiglion Fio	0.25	208	P	Pg	18 49 55.8	+0.7
CAFI				AML	AML		
	comp=E,14μm,0.1s						
CAFI				AML	AML		
	comp=N,14μm,0.1s						
CAFI				AML	AML		
	comp=N,14μm,0.1s						
CAFI				AML	AML		
	comp=E,14μm,0.1s						
CAFI				AML	AML		
	comp=N,14μm,0.1s						
CAFI				AML	AML		
	comp=E,14μm,0.1s						
ATVO	AVT- Monte Val	0.26	130	P	Pb	18 49 56.4	-0.6
ATVO				S	Sb	18 50 00.5	-1.0
SNTG	Esanatoglia	0.66	116	AML	AML		
	comp=E,20μm,0.1s						
SNTG				AML	AML		
	comp=E,20μm,0.1s						
SNTG				AML	AML		
	comp=N,39μm,0.2s						
SNTG				AML	AML		
	comp=N,39μm,0.2s						
SNTG				AML	AML		
	comp=E,20μm,0.1s						
SNTG				AML	AML		
	comp=N,39μm,0.2s						

DJA 25 18:52:57.1±0.4**, 7°S**±3°×**10°5E**±°**, h10^{km}, M3.6**/7**, MLv3.6**/7**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
CGJI	Cibinong	0.66	32	P	Pb	18 53 10.5	-0.3
CGJI				S	Sg	18 53 18.0	-0.7
CBJI	Citeko	1.68	63	P	Pn	18 53 26.6	+0.1
CBJI				S	Sn	18 53 47.3	-0.8
BLSI	Bandar Lampung	1.80	357	S	Sn	18 53 51.1	-0.1
KASI	Kota Agung	1.85	333	P	Pn	18 53 28.4	-0.5
KASI				S	Sn	18 53 53.0	+0.7
LEM	Lembang	2.29	81	P	Pn	18 53 36.3	+1.2
CISI	Cisompet, Garu	2.48	99	P	Pn	18 53 37.9	+0.2
KLSI		2.55	346	P	Pn	18 53 39.5	+1.0
MDSI	Maura Dua	2.92	337	P	Pn	18 53 44.0	+0.4

MAN 25 19:00:27.5, 9°.10N×128°.31E, h69^{km}, mb4.0, ML2.8, MS2.4, East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	2.13	245	eP	Pn	19 01 00.6	-0.4
BUTP	Butuan	2.66	267	eP	Pn	19 01 09.4	+1.3
MATI	Mati	2.95	224	eP	Pn	19 01 13.3	+1.2
BUKP	Musuan	3.43	250	eP	Pn	19 01 22.9	+4.1
CNP	Catarman	4.93	314	eP	Pn	19 01 40.9	+1.7

SJA 25 19:02:30.3±0.6**, 31°.37S×65°.16W, h10^{km}**±4^{km}**, ML2.5, MW3.6, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TCA	Tanti	0.48	86	eP	Pg	19 02 40.3	+0.6

TCA				*e*S	Sb	19 02 47.6	-0.5
TCA				IAML		19 02 48.1	
	comp=Z,205nm,0.5s						
MRA	**San Martin**	**1.15**	**204**	*e*P	Pb	19 02 52.4	-0.1
MRA				*e*S	Sn	19 03 08.4	-0.2
MRA				IAML		19 03 11.5	
	comp=Z,206nm,0.3s						
APLL	**PUNTA DE LOS L**	**1.53**	**309**	*e*P	Pb	19 02 59.1	+0.3
APLL				*e*S	Sg	19 03 20.3	+0.8
ACAN	**Cantantal**	**1.95**	**242**	*e*P	Pb	19 03 06.0	0.0
ACAN				*e*S	Sg	19 03 32.0	-1.1
ACLC	**CERRO LA CRUZ**	**2.48**	**321**	*e*P	Pn	19 03 13.0	+1.9
CFA	**Coronel Fontan**	**2.64**	**264**	*e*P	Pn	19 03 15.4	+2.3
CYA	**Choya**	**2.97**	**349**	*e*P	Pn	19 03 20.4	+2.8

NIED ***25*** *19:05:00, 40°.20N×142°.50E, h38^{km}, Mw4.9 Best double couple: $M_0$2.39000×10^{16} NP1:ϕ_s166.00000°, δ21.00000°, λ50.00000°. NP2:ϕ_s28.00000°, δ74.00000°, λ104.00000°.*

BJI ***25*** *19:05:02.6±0.0, 40°.05N×142°.67E, h43^{km}, mb5.0/73, mB4.9/48, Ms4.4/66, Ms7 4.3/57*

MOS ***25*** *19:05:05.1±0.9, 40°.27N×142°.39E, h39^{km}, mb5.4/66, MS4.5/18, Error ellipse: s-maj=5.9km s-min=3.5km az=102.3*

ISCJB ***25*** *19:05:05.5±0.3, 40°.19N±0°.02×142°.42E±0°.02, h45^{km}±2^{km}, mb5.0/223, MS4.3/60, Error ellipse: s-maj=3.6km s-min=2.4km az=139.6*

JMA ***25*** *19:05:05.8±0.1, 40°.14N×142°.46E, h35^{km}±1^{km}, M4.9 Broadband fault plane solution: P waves. NP1: ϕ_s16.00000°, δ56.00000°, λ93.00000°. NP2:ϕ_s190.00000°, δ34.00000°, λ85.00000°. Principal axes: T Plg79.0000°, Azm299.0000°; N Plg3.0000°, Azm195.0000°; P Plg11.0000°, Azm104.0000°;*

JMA Felt III J1.

IDC ***25*** *19:05:06.3±1.6, 40°.15N×142°.43E, h41^{km}±14^{km}, mb4.5/39, mb1 4.6/44, mb1mx4.6/51, mbtmp4.7/44, ML4.3/5, MS4.0/29, Ms1 4.0/29, ms1mx3.9/36 Error ellipse: s-maj=11.8km s-min=8.5km az=119.0*

NEIC ***25*** *19:05:07.1±2.2, 40°.20N×142°.47E, h45^{km}±4^{km}, mb5.0/184, Error ellipse: s-maj=12.6km s-min=7.2km az=115.0*

NEIC Recorded [3 JMA] in Aomori and Iwate.

GCMT ***25*** *19:05:09.1±0.3, 40°.25N±0°.02×142°.63E±0°.03, h45^{km}±1^{km}, MW4.9/77, Moment Tensor Solution. s40,c46; s77,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.36±.14; $M_{\theta\theta}$-0.09±.10; $M_{\phi\phi}$-2.27±.09; $M_{r\theta}$0.92±.07; $M_{\theta\phi}$-0.33±.07; $M_{\phi r}$1.49±.08; Best double couple: $M_0$2.91900×10^{16} NP1:ϕ_s22.00000°, δ64.00000°, λ102.00000°. NP2: ϕ_s177.00000°, δ29.00000°, λ68.00000°. Principal axes: T 3.0060, Plg69.0000°, Azm316.0000°; N -0.1740, Plg10.0000°, Azm196.0000°; P -2.8330, Plg18.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 19:05:06.4±0.4, **40°.18N**±0°.03×**142°.47E**±0°.04, **h43**^{km}±3^{km}, **h43**^{km}**:pP-P, n818,** $\sigma 1^{s}$**.42**/891, **mb5.0**/244, **MS4.4**/61, **71C-40D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.52**	**243**	⇓P	**Pn**	**19 05 16.4**	**-1.1**
JTH				S	**Sn**	**19 05 24.1**	**-1.4**
JKEN	**Kujiedanarisaw**	**0.58**	**273**	⇓P	**Pn**	**19 05 17.2**	**-1.1**
JKEN				S	**Sn**	**19 05 25.3**	**-1.5**
JANG	**Nango**	**0.76**	**285**	⇓P	**Pn**	**19 05 19.9**	**-0.7**
JANG				S	**Sn**	**19 05 29.6**	**-1.3**
MIYJ	**Miyakonagasawa**	**0.78**	**220**	⇓P	**Pn**	**19 05 19.7**	**-1.3**
MIYJ				S	**Sn**	**19 05 29.4**	**-2.2**
JKZ	**Kuzumaki**	**0.90**	**258**	⇓P	**Pn**	**19 05 22.2**	**-0.4**
JKZ				S	**Sn**	**19 05 33.7**	**-0.7**
JOM	**Ohasama**	**1.15**	**232**	⇓P	**Pn**	**19 05 25.9**	**-0.1**
JOM				S	**Sn**	**19 05 40.7**	**+0.2**
JARK	**Aomorirokkasho**	**1.18**	**315**	⇓P	**Pn**	**19 05 26.4**	**+0.1**
JARK				*e*S	**Sn**	**19 05 41.8**	**+0.6**
JTM	**Tenmabayashi**	**1.23**	**300**	⇓P	**Pn**	**19 05 27.4**	**+0.4**
JTM				*e*S	**Sn**	**19 05 43.2**	**+0.8**
OFUJ	**Ofunato**	**1.26**	**210**	P	**Pn**	**19 05 27.0**	**-0.5**
OFUJ				S	**Sn**	**19 05 42.7**	**-0.6**
JAH	**Hinai**	**1.41**	**271**	⇓P	**Pn**	**19 05 30.1**	**+0.6**
JAH				S	**Sn**	**19 05 48.3**	**+1.5**
JMK	**Ichinoseki**	**1.56**	**219**	⇓P	**Pn**	**19 05 31.7**	**+0.1**
JMK				S	**Sn**	**19 05 51.6**	**+1.0**
ERM	**Erimo**	**1.90**	**16**	*e*Pn	**Pn**	**19 05 36.7**	**+0.4**
ERM	**Erimo**	**1.90**	**16**	*e*P	**Pn**	**19 05 36.7**	**+0.4**
ASAJ	**Asahikawa**	**3.93**	**1**	P	**Pn**	**19 06 04.7**	**+0.5**
	28nm,0.3s,baz=198,slow=10,SNR=141						
ASAJ				S	**Sn**	**19 06 50.1**	**+1.1**
	35nm,0.3s,baz=207,slow=8.2,SNR=5.1						
ASAJ				LR	LR	19 08 05.0	
	comp=Z,4µm,21.7s,baz=197,slow=45						
GLVR	**Golovnino**	**4.22**	**32**	⇓*i*P	**Pn**	**19 06 07.4**	**-0.7**
GLVR				*i* S	**Sn**	**19 06 51.7**	**-4.3**
GLVR				pmax	pmax		
	comp=E,111nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.4s						
GLVR				pmax	pmax		
	comp=N,205nm,0.2s						
GLVR				smax	smax		
	comp=N,5µm,0.8s						
GLVR				smax	smax		
	comp=E,5µm,0.9s						
GRPR	**Tuman**	**4.53**	**32**	*d i*P	**Pn**	**19 06 11.6**	**-0.8**
GRPR				*i* S	**Sn**	**19 06 59.4**	**-4.4**
GRPR				pmax	pmax		
	comp=Z,733nm,0.3s						
GRPR				pmax	pmax		
	comp=E,584nm,0.4s						
GRPR				pmax	pmax		
	comp=N,153nm,0.2s						
GRPR				smax	smax		
	comp=E,4µm,0.5s						
GRPR				smax	smax		
	comp=N,2µm,0.4s						
LAGR	**Lagunnoye**	**4.59**	**31**	*d i*P	**Pn**	**19 06 12.8**	**-0.4**
LAGR				*i* S	**Sn**	**19 07 01.6**	**-3.6**
LAGR				pmax	pmax		
	comp=E,662nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,847nm,0.4s						
LAGR				pmax	pmax		
	comp=N,412nm,0.2s						
LAGR				smax	smax		
	comp=E,10µm,0.5s						
LAGR				smax	smax		
	comp=N,4µm,1.1s						
YUK	**Yuzh-Kuril'sk**	**4.60**	**32**	*d i*P	**Pn**	**19 06 12.7**	**-0.6**
YUK				*i* S	**Sn**	**19 07 01.2**	**-4.3**
YUK				pmax	pmax		
	comp=N,420nm,0.5s						
YUK				pmax	pmax		
	comp=E,198nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1µm,0.5s						
YUK				smax	smax		
	comp=N,5µm,0.5s						
YUK				smax	smax		
	comp=E,3µm,0.5s						
YUK				MLR	MLR		
	comp=Z,724nm,9.0s						
MAJO	**Matsushiro**	**4.94**	**224**	*e*Pn	**Pn**	**19 06 20.2**	**+2.2**
MAJO				*e*Sn	**Sn**	**19 07 18.8**	**+4.8**
MAJO	**Matsushiro**	**4.94**	**224**	*e*P	**Pn**	**19 06 20.3**	**+2.2**
MAJO				*e*		19 07 18.8	
MAT	**Matsushiro**	**4.94**	**224**	P	**Pn**	**19 06 20.3**	**+2.2**
MAT				S	**Sn**	**19 07 12.0**	**-2.0**
MJAR	**Matsushiro Arr**	**4.94**	**224**	P	**Pn**	**19 06 20.3**	**+2.2**
	comp=Z,8.5nm,0.3s,baz=34,slow=14,SNR=774						
MJAR				S	**Sn**	**19 07 18.8**	**+4.8**
	baz=43,slow=1.1,SNR=1.3						
MJAR				LR	LR	19 08 28.6	
	comp=Z,2µm,20.4s,baz=40,slow=41						
MJB9	**Matsu-Tunnel**	**4.94**	**224**	*e*Pn	**Pn**	**19 06 20.3**	**+2.2**
KUR	**Kuril'sk**	**6.42**	**36**	*d i*P	**Pn**	**19 06 37.7**	**-0.6**
TEY	**Ternei**	**6.50**	**320**	⇑*e*P	**Pn**	**19 06 41.6**	**+2.2**
TEY				pmax	pmax		
	comp=E,30nm,1.0s						
TEY				pmax	pmax		
	comp=N,30nm,1.3s						
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS	**Yuzh-Sakhalins**	**6.77**	**2**	*e*Pn	**Pn**	**19 06 43.8**	**+0.6**
YSS	**Yuzh-Sakhalins**	**6.77**	**2**	α *i*P	**Pn**	**19 06 44.0**	**+0.9**
YSS				*e*S	**Sn**	**19 08 02.0**	**+3.1**
YSS				pmax	pmax		
	comp=Z,110nm,1.0s						
YSS				MLR	MLR		
	comp=E,900nm,17.0s						
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
JHJ	**Hachijo jima 2**	**7.37**	**198**	P	**Pn**	**19 06 49.7**	**-1.7**
	comp=Z,55nm,0.3s,baz=80,slow=5.5,SNR=21						
JHJ				S	**Sn**	**19 08 07.8**	**-6.0**
	comp=Z,71nm,0.3s,baz=61,slow=23,SNR=2.5						
JHJ2	**Mitsune**	**7.37**	**198**	*e*Pn	**Pn**	**19 06 50.0**	**-1.4**
USA0B	**Ussuriysk Arra**	**8.75**	**301**	*e*Pn	**Pn**	**19 07 11.8**	**+1.5**
USRK	**Ussuriysk Ar.**	**8.75**	**301**	P	**Pn**	**19 07 10.1**	**-0.2**
	comp=Z,5.2nm,0.3s,baz=102,slow=13,SNR=87						
USRK				LR	LR	19 10 29.9	
	comp=Z,2µm,18.8s,baz=111,slow=37						
MSHR	**Mys Shultsa**	**8.84**	**289**	*i* P	**Pn**	**19 07 12.7**	**+1.3**
UGL	**Uglegorsk**	**8.90**	**358**	*e*P	**Pn**	**19 07 14.5**	**+2.3**
UGL				S	**Sn**	**19 08 46.2**	**-4.9**
UGL				pmax	pmax		
	comp=Z,73nm,1.0s						
UGL				MLR	MLR		
	comp=N,1µm,16.0s						
UGL				MLR	MLR		
	comp=Z,1µm,16.0s						
UGL				MLR	MLR		
	comp=E,1µm,14.0s						
MDJ	**Mudanjiang**	**10.50**	**299**	*e*Pn	**Pn**	**19 07 34.8**	**+0.6**
MDJ	**Mudanjiang**	**10.50**	**299**	P	**Pn**	**19 07 37.8**	**+3.6**
MDJ				S	Sn	19 09 39.8	+9.4
MDJ				pmax	pmax		
	comp=E,31nm,1.1s						
MDJ				LR	LR		
	comp=E,1µm,13.8s						
MDJ				LR	LR		
	comp=E,2µm,16.7s						
TYV	**Tymovskoe**	**10.68**	**1**	*e*P	**Pn**	**19 07 37.6**	**+1.0**
TYV				*e*S	**Sn**	**19 09 36.4**	**+1.6**
TYV				pmax	pmax		
	comp=Z,29nm,0.7s						
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
TYV				smax	smax		
	comp=E,10.0nm,1.0s						
TYV				smax	smax		
	comp=N,200nm,6.7s						
GRNR	**Gornyy**	**11.40**	**340**	*e*P	**Pn**	**19 07 48.8**	**+2.3**
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
JNU	**Nakatsue**	**11.67**	**236**	P	**Pn**	**19 07 50.3**	**0.0**
	comp=Z,1.3nm,0.3s,baz=61,slow=6.9,SNR=15						
JNU				LR	LR	19 12 53.7	
	comp=Z,909nm,18.2s,baz=42,slow=40						
JNU	**Nakatsue**	**11.67**	**236**	*e*Pn	**Pn**	**19 07 51.1**	**+0.8**
KSRS	**Korea Array**	**11.67**	**261**	P	**Pn**	**19 07 52.5**	**+2.3**
	comp=Z,1.8nm,0.3s,baz=84,slow=13,SNR=30						
KSRS				S	**Sn**	**19 10 06.3**	**+7.3**
	comp=Z,0.4nm,0.3s,baz=73,slow=38,SNR=3.2						
KSRS				LR	LR	19 12 05.9	
	comp=Z,1µm,18.5s,baz=80,slow=36						
KS15	**Wonju Array Si**	**11.70**	**261**	*e*Pn	**Pn**	**19 07 51.4**	**+0.7**
KS15				*e*Sn	**Sn**	**19 10 06.3**	**+6.5**
KLR	**Kul'dur**	**11.82**	**323**	P	**Pn**	**19 07 52.6**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=131,slow=12,SNR=20						
KLR				LR	LR	19 12 39.9	
	comp=Z,1µm,18.1s,baz=138,slow=38						
KLR	**Kul'dur**	**11.82**	**323**	*i* P	**Pn**	**19 07 52.9**	**+0.7**
KLR				pmax	pmax		
	comp=Z,21nm,1.0s						
NKL	**Nikolayevsk**	**13.03**	**355**	*e*P	**Pn**	**19 08 07.0**	**-1.7**
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
OKH	**Okha**	**13.38**	**1**	*de*P	**P**	**19 08 17.9**	**-4.0**
OKH				*e*S	**Sn**	**19 10 41.6**	**+1.1**
OKH				smax	smax		
	comp=E,200nm,15.9s						
SKR	**Severo-Kuril's**	**14.19**	**38**	*e*P	**Pn**	**19 08 20.7**	**-3.8**
SKR				pmax	pmax		
	comp=Z,34nm,1.0s						
SKR				pmax	pmax		
	comp=Z,200nm,3.8s						
SKR				MLR	MLR		
	comp=Z,400nm,16.0s						
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
DL2	**Dalian**	**16.13**	**272**	P	**Pn**	**19 08 50.5**	**+0.6**
DL2				sP	**pP**	**19 09 04.3**	**+1.4**
DL2				S	**Sn**	**19 11 52.0**	**+4.4**
DL2				pmax	pmax		
	comp=Z,64nm,0.7s						
DL2				pmax	pmax		
	comp=Z,160nm,6.1s						
PETK	**Petropavlovsk-**	**16.58**	**34**	LR	LR	19 15 48.3	
	comp=Z,226nm,18.5s,baz=219,slow=39						
PET	**Petropavlovsk**	**16.94**	**35**	*e*P	**P**	**19 09 03.0**	**+1.6**
PET				*e*S	**Sn**	**19 12 07.6**	**+0.6**
PET				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
ZEA	**Zeya**	**17.03**	**328**	*e*P	**Pn**	**19 08 58.8**	**-2.3**
ZEA				pmax	pmax		
	comp=N,54nm,0.9s						
ZEA				pmax	pmax		
	comp=E,54nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,87nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
ZEA				MLR	MLR		
	comp=E,600nm,18.0s						
ZEA				MLR	MLR		
	comp=N,900nm,15.0s						
HIA	**Hailar**	**18.47**	**307**	*e*P	**P**	**19 09 16.6**	**-1.9**
	comp=N,26nm,0.9s						
HIA	**Hailar**	**18.47**	**307**	*e*P	**P**	**19 09 16.6**	**-1.9**
HIA				pmax	pmax		
	comp=Z,26nm,0.9s						
BJI	**Beijing**	**20.09**	**278**	P	**P**	**19 09 34.5**	**-1.7**
BJI				S	**S**	**19 13 10.5**	**-9.0**
BJI				PcP	**PcP**	**19 13 50.3**	**+0.2**
BJI				pmax	pmax		
	comp=Z,12nm,0.9s						
BJT	**Baijiatuau**	**20.10**	**278**	*e*P	**P**	**19 09 33.8**	**-2.5**
	comp=Z,20nm,0.8s						
BJT	**Baijiatuau**	**20.10**	**278**	*e*P	**P**	**19 09 33.8**	**-2.5**
BJT				pmax	pmax		
	comp=Z,20nm,0.8s						
MA2	**Magadan**	**20.11**	**12**	P	**P**	**19 09 35.6**	**-0.6**
	comp=Z,19nm,0.7s,baz=198,slow=10,SNR=15						
MA2				LR	LR	19 18 52.5	
	comp=Z,352nm,18.1s,baz=200,slow=41						
MA2	**Magadan**	**20.11**	**12**	*e*P	**P**	**19 09 35.7**	**-0.6**
	comp=Z,28nm,0.9s						
MA2	**Magadan**	**20.11**	**12**	*ce*P	**P**	**19 09 35.2**	**-1.0**
MA2				pmax	pmax		
	comp=Z,27nm,1.0s						
TIA	**Tai'an**	**20.29**	**267**	P	**P**	**19 09 37.0**	**-1.4**
TIA				S	**S**	**19 13 14.5**	**-9.0**
TIA				pmax	pmax		
	comp=Z,14nm,1.1s						
TIA				LR	LR		
	comp=Z,240nm,14.8s						
TIA				LR	LR		
	comp=Z,690nm,17.7s						
TIA				LR	LR		
	comp=Z,950nm,18.1s						
NJ2	**Nanjing**	**20.69**	**254**	*e*P	**P**	**19 09 42.5**	**-0.2**
NJ2				pP	**pP**	**19 09 52.5**	**-0.7**
NJ2				S	**S**	**19 13 30.5**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,78nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,120nm,3.8s						
NJ2				LR	LR		
	comp=Z,430nm,15.7s						
NJ2				LR	LR		
	comp=Z,540nm,17.2s						
NJ2				LR	LR		
	comp=Z,760nm,16.7s						
CIT	**Chita**	**23.12**	**310**	*e*P	**P**	**19 10 05.9**	**-2.6**
CIT				*e*		19 10 14.8	
CIT				*e*		19 10 25.3	
CIT				*e*		19 10 37.8	
CIT				*e*		19 10 41.3	
CIT				pmax	pmax		
	comp=Z,155nm,1.1s						
YAK	**Yakutsk**	**23.22**	**345**	*e*P	**P**	**19 10 06.5**	**-2.7**
	comp=Z,108nm,0.7s						
YAK	**Yakutsk**	**23.22**	**345**	*c i*P	**P**	**19 10 06.7**	**-2.6**
YAK				*e**PP	**sP**	**19 10 24.0**	**-1.0**
YAK				*e*S	**S**	**19 14 12.5**	**-5.3**
YAK				*e*SS	**SnSn**	**19 14 58.5**	**+4.2**
YAK				pmax	pmax		
	comp=Z,36nm,0.6s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				smax	smax		
	comp=N,146nm,1.9s						
YAK				smax	smax		
	comp=E,84nm,2.0s						
HHC	**Hu-ho-hao-te**	**23.45**	**282**	*e*P	**P**	**19 10 12.5**	**+0.6**
HHC				pmax	pmax		
	comp=E,28nm,1.1s						
HHC				pmax	pmax		
	comp=E,110nm,4.1s						
HHC				LR	LR		
	comp=E,1µm,13.5s						
YHNB	**Yeheng**	**23.50**	**235**	*e*P	**P**	**19 10 09.9**	**-2.5**
	comp=E,125nm,1.9s						
SEY	**Seymchan**	**23.55**	**11**	P	**P**	**19 10 11.4**	**-1.0**
	comp=E,25nm,0.7s,baz=183,slow=8.3,SNR=34						
SEY	**Seymchan**	**23.55**	**11**	*i* P	**P**	**19 10 11.7**	**-0.7**
SSLB	**Suanglung**	**24.40**	**234**	*e*P	**P**	**19 10 18.9**	**-1.9**
	comp=E,36nm,1.4s						
BTO	**Baotou**	**24.65**	**282**	*e*P	**P**	**19 10 21.8**	**-1.1**
WHN	**Wuhan**	**24.78**	**256**	P	**P**	**19 10 23.3**	**-0.8**
WHN				pmax	pmax		
	comp=E,64nm,0.6s						
WHN				LR	LR		
	comp=E,2µm,20.0s						
WHN				LR	LR		
	comp=E,1µm,13.5s						
WHN				LR	LR		
	comp=E,2µm,17.8s						
TPUB	**Ta-pu**	**24.96**	**234**	*e*P	**P**	**19 10 24.8**	**-1.0**
	comp=E,33nm,1.0s						
TWG	**Pinlang**	**25.04**	**233**	*e*P	**P**	**19 10 26.0**	**-0.5**
	comp=E,101nm,0.8s						
BOD	**Bodaibo**	**25.40**	**324**	*e*P	**P**	**19 10 28.8**	**-0.6**
BOD				pmax	pmax		
	comp=Z,164nm,0.7s						
ULN	**Ulaanbaatar**	**26.42**	**299**	*e*P	**P**	**19 10 39.7**	**+0.7**
	comp=Z,14nm,0.8s						
ULN	**Ulaanbaatar**	**26.42**	**299**	*e*P	**P**	**19 10 39.7**	**+0.7**
ULN				pmax	pmax		
	comp=Z,14nm,0.8s						
ULN	**Ulaanbaatar**	**26.42**	**299**	P	**P**	**19 10 40.9**	**+1.9**
	SNR=6.4						
ULN				P	**P**	**19 10 40.9**	**+1.9**
	SNR=6.4						
GUMO	**Guam**	**26.57**	**175**	LR	LR	19 20 03.3	
	comp=Z,217nm,21.9s,baz=14,slow=34						
SONA0	**Songino Array**	**26.86**	**299**	*e*PcP	**PcP**	**19 14 04.1**	**-0.4**
SONM	**Songino Array**	**26.86**	**299**	P	**P**	**19 10 43.1**	**+0.1**
	comp=Z,12nm,0.5s,baz=103,slow=8.7,SNR=61						
SONM				PcP	**PcP**	**19 14 04.1**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=98,slow=6.0,SNR=3.3						
SONM				LR	LR	19 21 55.3	
	comp=Z,866nm,18.9s,baz=89,slow=38						
XAN	**Xi'an**	**27.34**	**268**	*e*P	**P**	**19 10 44.9**	**-2.4**
	comp=Z,11nm,0.6s						
XAN	**Xi'an**	**27.34**	**268**	P	**P**	**19 10 45.3**	**-2.0**
XAN				PP	PP	19 11 37.8	-12
XAN				S	**S**	**19 15 14.5**	**-10**
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				pmax	pmax		
	comp=Z,160nm,5.9s						
XAN				LR	LR		
	comp=Z,210nm,12.2s						
XAN				LR	LR		
	comp=Z,470nm,16.0s						
XAN				LR	LR		
	comp=Z,480nm,16.0s						
XAN	**Xi'an**	**27.34**	**268**	*e*P	**P**	**19 10 44.9**	**-2.4**
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
ENH	**Enshi**	**28.56**	**260**	*e*P	**P**	**19 10 57.4**	**-0.8**
	comp=Z,20nm,0.6s						
IRK	**Irkutsk**	**28.71**	**308**	*e*P	**P**	**19 10 57.2**	**-2.1**
IRK				*e*		19 11 58.2	
IRK				pmax	pmax		
	comp=Z,28nm,1.4s						
TLY	**Talaya**	**29.01**	**306**	P	**P**	**19 11 01.8**	**-0.1**
	comp=Z,5.7nm,0.7s,baz=111,slow=8.1,SNR=12						
TLY				LR	LR	19 23 23.9	
	comp=Z,592nm,18.2s,baz=117,slow=38						
TLY	**Talaya**	**29.01**	**306**	*e*P	**P**	**19 11 02.0**	**+0.1**
	comp=Z,14nm,0.9s						
TLY	**Talaya**	**29.01**	**306**	*e*P	**P**	**19 11 02.7**	**+0.7**
TLY				pmax	pmax		
	comp=Z,47nm,1.4s						
TLY				MLR	MLR		
	comp=Z,2µm,20.0s						
TLY	**Talaya**	**29.01**	**306**	P	**P**	**19 11 02.6**	**+0.7**
	SNR=8.8						
TLY				P	**P**	**19 11 02.6**	**+0.7**
	SNR=8.8						
ZAK	**Zakamensk**	**29.09**	**304**	*e*P	**P**	**19 11 02.4**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,20nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**29.22**	**127**	T	T	19 41 57.6	
	baz=319,slow=75,SNR=5131						
H11N1	**WAKE ISLAND Hy**	**29.23**	**127**	T	T	19 42 02.6	
	baz=319,slow=75,SNR=5847						
H11N3	**WAKE ISLAND Hy**	**29.23**	**127**	T	T	19 41 58.8	
	baz=319,slow=75,SNR=5786						
H11S1	**WAKE ISLAND Hy**	**30.03**	**129**	T	T	19 42 59.4	
	baz=320,slow=76,SNR=739						
H11S3	**WAKE ISLAND Hy**	**30.04**	**129**	T	T	19 43 04.5	
	baz=320,slow=76,SNR=472						
H11S2	**WAKE ISLAND Hy**	**30.05**	**129**	T	T	19 43 00.7	
	baz=320,slow=76,SNR=328						
LZH	**Lanzhou**	**30.49**	**275**	*e*P	**P**	**19 11 13.5**	**-1.9**
LZH				pP	pP	19 11 25.0	-1.9
LZH				sP	sP	19 11 30.3	-1.8
LZH				PP	**PnPn**	**19 12 14.5**	**-0.8**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
LZH				LR	LR		
	comp=Z,1µm,17.6s						
LZH				LR	LR		
	comp=Z,1µm,19.0s						
BILL	**Bilibino**	**30.78**	**17**	⇑*e*P	**P**	**19 11 17.4**	**0.0**
BILL				*e*		19 12 14.2	
BILL				*e*S	**S**	**19 16 17.1**	**-0.3**
BILL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,366nm,19.0s						
TGY	**Tagaytay City**	**32.11**	**222**	LR	LR	19 26 54.1	
	comp=Z,73nm,18.5s,baz=356,slow=41						
TIXI	**Tiksi**	**32.28**	**352**	P	**P**	**19 11 29.7**	**-0.8**
	comp=Z,7.5nm,0.6s,baz=193,slow=3.5,SNR=14						
TIXI	**Tiksi**	**32.28**	**352**	*e*P	**P**	**19 11 29.1**	**-1.4**
	comp=Z,8.6nm,0.7s						
TIXI	**Tiksi**	**32.28**	**352**	*ce*P	**P**	**19 11 30.4**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA	**Gaotai**	**32.55**	**283**	⇑P	**P**	**19 11 33.0**	**-0.5**
GTA				PcP	**PcP**	**19 14 20.5**	**+1.3**
GTA				S	**S**	**19 16 45.3**	**-0.7**
GTA				PcS	**PcS**	**19 18 04.5**	**+0.1**
GTA				pmax	pmax		
	comp=Z,19nm,1.5s						
GTA				pmax	pmax		
	comp=Z,97nm,5.2s						
GTA				LR	LR		
	comp=Z,230nm,18.4s						
GTA				LR	LR		
	comp=Z,690nm,19.4s						

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GTA                                LR      LR
      comp=Z,1µm,18.4s
CD2   Chengdu           32.61 266  P       P       19 11 33.5  -0.5
CD2                                pmax    pmax
      comp=Z,30nm,0.7s
GYA   Guiyang           32.67 256⇑iP       P       19 11 33.5  -1.1
GYA                                pP      pP      19 11 46.0  -0.1
GYA                                PP      PnPn    19 12 43.8  +0.4
GYA                                S       S       19 16 41.5  -6.4
GYA                                sS      sS      19 17 03.8  -3.1
GYA                                pmax    pmax
      comp=Z,20nm,0.8s
GYA                                pmax    pmax
      comp=Z,110nm,4.4s
GYA                                LR      LR
      comp=Z,300nm,12.0s
GYA                                LR      LR
      comp=Z,440nm,14.7s
GYA                                LR      LR
      comp=Z,610nm,16.1s
QIZ   Qiongzhong        35.05 243  P       P       19 11 54.5  -0.6
QIZ                                S       S       19 17 26.8  +2.3
QIZ                                pmax    pmax
      comp=Z,19nm,2.3s
QIZ                                LR      LR
      comp=Z,320nm,15.2s
QIZ                                LR      LR
      comp=Z,310nm,20.1s
QIZ                                LR      LR
      comp=Z,350nm,25.0s
KMI   Kunming           36.34 258 eP       P       19 12 05.9  -0.6
      comp=Z,38nm,0.9s
KMI   Kunming           36.34 258  P       P       19 12 06.3  -0.2
KMI                                pP      pP      19 12 17.5  -0.6
KMI                                sP      sP      19 12 25.0  +1.8
KMI                                S       S       19 17 44.0  -0.8
KMI                                sS      sS      19 18 02.5  -1.4
KMI                                pmax    pmax
      comp=Z,47nm,1.0s
KMI                                pmax    pmax
      comp=Z,140nm,3.1s
KMI                                LR      LR
      comp=Z,470nm,17.6s
KMI                                LR      LR
      comp=Z,450nm,16.7s
KMI                                LR      LR
      comp=Z,600nm,14.9s
KMI   Kunming           36.34 258 eP       P       19 12 05.9  -0.6
KMI                                pmax    pmax
      comp=Z,38nm,0.9s
SLVN  Son La            37.73 252 eP       P       19 12 17.2  -0.9
      comp=Z,26nm,1.0s
DGZ   Jazzator, Alta    39.30 303c iP      P       19 12 32.1  +1.0
DGZ                                pmax    pmax
      comp=Z,66nm,0.8s
PANO  Nakornpanom       39.94 246  P       P       19 12 38.2  +1.6
      comp=Z,0.4nm,1.5s,comp=Z,345nm
WMQ   Urumqi            40.24 294 eP       P       19 12 37.7  -1.2
      comp=Z,120nm,1.6s
WMQ   Urumqi            40.24 294 eP       P       19 12 40.0  +1.1
WMQ                                pP      pP      19 12 49.0  -1.6
WMQ                                sP      sP      19 12 58.3  +2.6
WMQ                                pmax    pmax
      comp=Z,33nm,0.7s
WMQ                                pmax    pmax
      comp=Z,94nm,3.8s
WMQ                                LR      LR
      comp=Z,330nm,26.3s
WMQ                                LR      LR
      comp=Z,470nm,29.2s
WMQ   Urumqi            40.24 294 eP       P       19 12 37.7  -1.2
WMQ                                pmax    pmax
      comp=Z,120nm,1.6s
NONG  Nongkai           40.37 249  P       P       19 12 40.4  +0.3
      comp=Z,0.8nm,0.9s
ZAA1  Zalesovo Array    40.47 310 ePcP     PcP     19 14 42.2  -0.3
ZAA0  Zalesovo Array    40.47 310 eP       P       19 12 40.4  -0.2
      comp=Z,25nm,0.8s
ZALV  Zalesovo Beam     40.47 310  P       P       19 12 40.5  -0.1
      comp=Z,22nm,0.5s,baz=95,slow=7.6,SNR=92
ZALV                               PcP     PcP     19 14 42.2  -0.3
      comp=Z,7.1nm,0.5s,baz=86,slow=4.3,SNR=6.0
ZALV                               LR      LR      19 30 17.3
      comp=Z,586nm,18.9s,baz=70,slow=37
DLV   T  Lat            41.08 236 eP       P       19 12 46.7  +0.6
      comp=Z,17nm,0.8s
ZIRO  ZIRO              41.82 268 eP       P       19 12 52.6  +0.4
PAYA  Payao             41.91 253  P       P       19 12 55.0  +2.2
      comp=Z,31µm,0.7s
MOKO  MOKOCHONG         41.93 266 eP       P       19 12 53.2  +0.2
TTA   Tatalina          42.39  37 eP       P       19 12 57.1  +0.9
      comp=Z,6.1nm,1.0s
TTA   Tatalina          42.39  37 eP       P       19 12 57.1  +0.9
TTA                                pmax    pmax
      comp=Z,6.0nm,1.0s
UTTA  Uttaradit         42.44 251  P       P       19 12 57.4  +0.4
      comp=Z,45µm,1.1s,comp=Z,337µm
SVW2  Sparrevohn        42.54  39 eP       P       19 12 59.1  +1.7
      comp=Z,9.8nm,1.0s
KOHI  KOHIMA            42.56 265 eP       P       19 12 57.3  -0.9
KOHI                               IAmb    IAmb    19 12 58.0
      comp=Z,41nm,0.9s
LAMP  Lampang           42.61 252  P       P       19 13 00.7  +2.2
      comp=Z,29µm,0.6s
CHAI  Chaiyaphum        42.63 247  P       P       19 12 58.7   0.0
      comp=Z,70µm,0.8s,comp=Z,629µm
LSA   Lhasa             42.83 272 eP       P       19 13 01.5  +0.8
      comp=Z,14nm,0.8s
LSA   Lhasa             42.83 272 i P      P       19 13 01.7  +1.0
      SNR=15
PBKT  Sadao Pong        42.91 249  P       P       19 13 01.3  +0.4
      comp=Z,10nm,1.1s
CMMT  Chiang Mai        42.93 253  P       P       19 13 01.4  +0.3
      comp=Z,11nm,1.0s
CHTO  Chiang Mai        42.93 253 eP       P       19 13 01.3  +0.2
      comp=Z,16nm,0.8s
CHTO  Chiang Mai        42.93 253 eP       P       19 13 01.3  +0.2
CHTO                               pmax    pmax
      comp=Z,16nm,0.8s
TEZP  TEZPUR            43.09 267 eP       P       19 13 02.1  -0.1
CM31  Chiang Mai Arr    43.15 253 eP       P       19 13 03.0  +0.1
      comp=Z,15nm,1.1s
CM31                              ePcP     PcP     19 14 51.7  -0.2
CM31                              eScP     ScP     19 18 38.9  -0.6
CMAR  Chiang Mai Arr    43.15 253  P       P       19 13 03.1  +0.2
      comp=Z,5.5nm,0.9s,baz=49,slow=6.7,SNR=28
CMAR                               PcP     PcP     19 14 51.7  -0.2
      comp=Z,1.7nm,0.7s,baz=30,slow=3.4,SNR=4.2
CMAR                               ScP     ScP     19 18 38.9  -0.6
      comp=Z,0.7nm,0.8s,baz=42,slow=2.8,SNR=4.3
CMAR                               LR      LR      19 31 17.4
      comp=Z,70nm,20.5s,baz=65,slow=36
MK32  Makanchi Array    43.22 299 ePcP     PcP     19 14 51.5  -0.3
MKAR  Makanchi Array    43.22 299  P       P       19 13 03.2  +0.1
      comp=Z,13nm,0.5s,baz=84,slow=10,SNR=85
MKAR                               PcP     PcP     19 14 51.5  -0.3
      comp=Z,0.8nm,0.4s,baz=80,slow=1.8,SNR=1.6
TAWA  Tawang            43.31 269 eP       P       19 13 04.7  +0.3
MAKZ  Makanchi          43.42 300 eP       P       19 13 04.8   0.0
      comp=Z,27nm,0.7s
MAKZ  Makanchi          43.42 300 eP       P       19 13 04.8   0.0
MAKZ                               pmax    pmax
      comp=Z,27nm,0.7s
RSO   Redoubt South     43.94  40 eP       P       19 13 10.0  +1.0
PPLA  Purkeypile        44.13  37 eP       P       19 13 11.5  +1.1
CAST  Castle Rocks      44.18  36 eP       P       19 13 12.3  +1.7
      comp=Z,11nm,0.8s
KDAK  Kodiak Island     44.23  44  P       P       19 13 11.2  +0.1
      comp=Z,6.7nm,0.7s,baz=196,slow=4.1,SNR=9.9
KDAK                               PcP     PcP     19 14 55.5  +0.6
      comp=Z,5.9nm,0.7s,baz=255,slow=6.0,SNR=2.4
KDAK  Kodiak Island     44.23  44 eP       P       19 13 11.4  +0.3
      comp=Z,13nm,0.8s
KDAK                              ePcP     PcP     19 14 55.5  +0.6
KDAK  Kodiak Island     44.23  44 eP       P       19 13 11.4  +0.3
KDAK                              e                19 14 55.5
KDAK                               pmax    pmax
      comp=Z,13nm,0.8s
SHL   Shillong          44.34 267 eP       P       19 13 11.7  -0.9
      comp=Z,26nm,0.6s
SHL   Shillong          44.34 267 eP       P       19 13 11.7  -0.9
SHL                                pmax    pmax
      comp=Z,26nm,0.6s
SHL   Shillong          44.34 267 eP       P       19 13 11.7  -0.9
SHL                                IAmb    IAmb    19 13 14.6
      comp=Z,10nm,0.3s
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SANI  Sanana            44.65 204  P       P       19 13 13.5  -1.4
BPAW  Bear Paw Mtn.     44.66  35 eP       P       19 13 15.9  +1.4
      comp=Z,11nm,1.1s
UMPA  Umpang Tak        44.67 251  P       P       19 13 18.0  +3.0
      comp=Z,47µm,1.2s
UTHA  Uthaitani         44.67 249  P       P       19 13 16.9  +1.8
      comp=Z,30µm,0.9s
KTH   Kantishna Hill    44.70  36 eP       P       19 13 16.2  +1.4
      comp=Z,25nm,1.0s
KURK  Kurchatov         44.70 306 eP       P       19 13 14.8  -0.1
      comp=Z,86nm,0.7s
KURK  Kurchatov         44.70 306 eP       P       19 13 14.8  -0.1
KURK                               pmax    pmax
      comp=Z,86nm,0.7s
KURK  Kurchatov         44.70 306  P       P       19 13 14.9   0.0
      SNR=38
KURK                               P       P       19 13 14.9   0.0
      SNR=38
MLY   Manley            44.76  34 eP       P       19 13 16.9  +1.7
      comp=Z,7.7nm,0.8s
SUA   Susitna One       44.87  39 eP       P       19 13 17.4  +1.1
      comp=Z,8.1nm,0.8s
BRLK  Bradley Lake      44.93  41 eP       P       19 13 17.9  +1.3
      comp=Z,12nm,0.9s
COLD  Coldfoot          45.01  31 eP       P       19 13 18.1  +1.0
      comp=Z,6.6nm,0.8s
BWN   Browne            45.32  35 eP       P       19 13 21.1  +1.4
      comp=Z,38nm,0.8s
TURI  Tura              45.54 268 eP       P       19 13 21.9   0.0
MCK   McKinley          45.58  35 eP       P       19 13 22.1  +0.4
      comp=Z,15nm,1.2s
MCK   McKinley          45.58  35 eP       P       19 13 22.1  +0.4
MCK                                pmax    pmax
      comp=Z,15nm,1.2s
RND   Reindeer          45.63  36 eP       P       19 13 22.8  +0.6
      comp=Z,21nm,1.3s
RND   Reindeer          45.63  36 eP       P       19 13 22.8  +0.6
RND                                pmax    pmax
      comp=Z,21nm,1.3s
WRH   Wood River Hil    45.91  34 eP       P       19 13 24.4  +0.1
      comp=Z,7.7nm,0.9s
GTK   Tadong            45.95 271 eP       P       19 13 24.9  -0.3
GTK                                IAmb    IAmb    19 13 27.8
      comp=Z,16nm,0.5s
SML   Sawmill           45.99  38 eP       P       19 13 25.6  +0.6
      comp=Z,14nm,0.8s
SML   Sawmill           45.99  38 eP       P       19 13 25.6  +0.6
SML                                pmax    pmax
      comp=Z,14nm,0.8s
COLA  College           45.99  34 i P      P       19 13 26.2  +1.3
COLA                               pmax    pmax
      comp=Z,6.0nm,0.8s
CCB   Clear Creek Bu    46.02  34 eP       P       19 13 25.7  +0.6
      comp=Z,5.5nm,0.7s
POKR  Poker Plat Res    46.16  33  P       P       19 13 27.5  +1.3
      baz=273
DHY   Denali Highway    46.32  36 eP       P       19 13 28.1  +0.4
      comp=Z,11nm,0.7s
PHET  Kaeng Krachan     46.34 246  P       P       19 13 29.4  +1.2
      comp=Z,77µm,0.6s,comp=Z,719µm
HDA   Harding Lake      46.41  34  P       P       19 13 28.7  +0.4
      baz=274
ILAR  Eielson Array     46.41  34  P       P       19 13 29.1  +0.9
      comp=Z,6.3nm,0.7s,baz=269,slow=6.2,SNR=54
ILB   Eielson Array     46.41  34 eP       P       19 13 28.8  +0.6
      comp=Z,12nm,0.8s
SCM   Sheep Creek Mo    46.46  38 eP       P       19 13 29.9  +1.1
      comp=Z,26nm,1.2s
SCM   Sheep Creek Mo    46.46  38 eP       P       19 13 29.9  +1.1
SCM                                pmax    pmax
      comp=Z,26nm,1.2s
PRP   Porcupine Dome    46.93  33 eP       P       19 13 33.6  +1.1
      comp=Z,13nm,0.8s
PRZ   Przheval'sk       47.13 295 eP       P       19 13 35.0  +0.5
      comp=Z,26nm,1.0s
PRZ   Przheval'sk       47.13 295 eP       P       19 13 35.0  +0.5
PRZ                                pmax    pmax
      comp=Z,26nm,1.0s
PAX   Paxson            47.20  36 eP       P       19 13 36.0  +1.5
      comp=Z,7.7nm,1.1s
PAX   Paxson            47.20  36 eP       P       19 13 36.0  +1.5
PAX                                pmax    pmax
      comp=Z,8.0nm,1.1s
EYAK  Cordova Ski Ar    47.38  40 eP       P       19 13 36.9  +1.1
      comp=Z,12nm,0.9s
JIRN  Jiri              47.62 273 eP       P       19 13 39.1  +0.5
      comp=Z,46nm,0.5s
DOT   Dot Lake          47.75  35 eP       P       19 13 39.8  +1.1
      comp=Z,11nm,0.6s
MENT  Mentasta          47.99  36 eP       P       19 13 42.3  +1.6
      comp=Z,14nm,0.9s
KDJ   Kajisay           48.10 295 eP       P       19 13 41.2  -0.8
      comp=Z,22nm,1.1s
KDJ   Kajisay           48.10 295 eP       P       19 13 41.2  -0.8
KDJ                                pmax    pmax
      comp=Z,22nm,1.1s
HMT   Hamilton          48.15  40 eP       P       19 13 43.1  +1.3
      comp=Z,21nm,1.2s
KKN   Kakani            48.25 274 eP       P       19 13 43.6  +0.3
      comp=Z,119nm,0.6s
PKI   Pulchoki          48.26 273 eP       P       19 13 43.3  -0.2
      comp=Z,20nm,0.5s
PKIN  Phulchoki         48.27 273 eP       P       19 13 43.3  -0.2
      comp=Z,12nm,0.5s
DMN   Daman             48.48 273 eP       P       19 13 45.1   0.0
      comp=Z,33nm,0.6s
GKN   Gorkha            48.64 274 eP       P       19 13 46.3  +0.1
      comp=Z,34nm,0.3s
TKM2  Tokmak 2          48.92 296  P       P       19 13 49.0  +0.8
      SNR=66
DANN  Dangsing          49.13 275 eP       P       19 13 50.8  +0.6
      comp=Z,215nm,0.6s
BRVK  Borovoye          49.16 311 eP       P       19 13 50.2  +0.5
      comp=Z,57nm,1.0s
BRVK  Borovoye          49.16 311ceP       P       19 13 50.0  +0.3
BRVK                               pmax    pmax
      comp=Z,52nm,1.0s
BRVK  Borovoye          49.16 311  P       P       19 13 50.3  +0.5
      SNR=19
BRVK                               P       P       19 13 50.3  +0.5
      SNR=19
OTUK  Ortayu            49.30 304  P       P       19 13 50.9   0.0
OTUK                               pmax    pmax
      comp=Z,16nm,0.7s
KBK   Karagaybulak      49.46 296  P       P       19 13 53.0  +0.7
      SNR=39
KZA   Kyzart            49.46 295  P       P       19 13 53.9  +1.2
      SNR=13
CHMS  Chumysh           49.47 297  P       P       19 13 52.4  +0.1
      SNR=10
KOLN  Koldanda          49.55 275 eP       P       19 13 51.6  -1.6
      comp=Z,43nm,0.5s
USP   Ospenovka         49.55 297  P       P       19 13 53.1  +0.3
      SNR=15
KAPI  Kappang           49.59 210  P       P       19 13 53.2  -0.1
      comp=Z,3.7nm,0.3s,baz=24,slow=20,SNR=2.2
SKLT  Songkhla          49.76 240  P       P       19 13 56.4  +1.7
      comp=Z,21nm,0.9s
AAK   Ala-Archa         49.78 296 eP       P       19 13 54.9  +0.2
      comp=Z,13nm,1.0s
AAK   Ala-Archa         49.78 296  P       P       19 13 55.1  +0.3
AAK   Ala-Archa         49.78 296 eP       P       19 13 54.9  +0.2
AAK                                pmax    pmax
      comp=Z,13nm,1.0s
AAK   Ala-Archa         49.78 296  P       P       19 13 55.3  +0.5
      SNR=7.2
AAK                                P       P       19 13 55.3  +0.5
      SNR=7.2
AAK   Ala-Archa         49.78 296  P       P       19 13 54.8   0.0
      SNR=5.0
BOK   Bokaro            49.88 269 ex       P       19 13 51.6  -4.0
TRTT  Trang             49.89 242  P       P       19 13 56.7  +1.0
      comp=Z,22nm,0.9s
UCH   Uchtor            49.92 296  P       P       19 13 57.1  +0.9
      SNR=11
KSH   Kashi             49.94 292  P       P       19 14 00.3  +4.3
KSH                                pP      sP      19 14 13.0  +0.1
KSH                                sP      pP      19 14 18.8   +11
KSH                                PcP     PcP     19 15 20.5  +4.8
KSH                                PP      PP      19 15 58.0  +7.1
KSH                                S       S       19 21 08.3  +5.0
KSH                                sS      sS      19 21 29.0  +5.9
KSH                                pmax    pmax
      comp=Z,2.0nm,0.1s
KSH                                pmax    pmax
      comp=Z,130nm,5.3s
KSH                                LR      LR
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      comp=Z,160nm,6.8s
KSH                                LR      LR
      comp=Z,170nm,8.9s
KSH                                LR      LR
      comp=Z,560nm,17.6s
EKS2  Erkin-Say         50.26 297  P       P       19 13 58.2  -0.1
      SNR=29
EPYK  Eagle Plains      50.40  31  P       P       19 14 00.4  +1.5
      baz=281
AML   Almayashu         50.52 296  P       P       19 14 01.4  +0.7
      SNR=28
PKDT  Phuket            50.77 243  P       P       19 14 03.6  +1.2
      comp=Z,66nm,0.8s
KULM  Kulim             51.14 239 eP       P       19 14 05.7  +0.6
      comp=Z,23nm,0.8s
INK   Inuvik            51.22  28  P       P       19 14 06.0  +1.0
      comp=Z,13nm,0.7s,baz=282,slow=7.3,SNR=25
INK   Inuvik            51.22  28  P       P       19 14 06.0  +1.0
HYT   Haines Junctio    51.30  38 eP       P       19 14 08.1  +2.2
      comp=Z,39nm,1.0s
IPM   Ipoh              51.51 237 eP       P       19 14 07.5  -0.4
      comp=Z,16nm,0.8s
BWNR  Bhubaneshwar      51.92 265 eP       P       19 14 12.3  +1.4
DDI   Dehra Dun         52.49 281 eP       P       19 14 14.7  -0.4
WHY   Whitehorse        52.58  38 eP       P       19 14 17.2  +1.7
      comp=Z,7.2nm,0.8s
SMLA  Simla             52.76 282 eP       P       19 14 16.9  -0.2
DHRM  DHARAMSHALA       52.87 284 eP       P       19 14 17.9  -0.2
BATI  Baumata           53.08 203  P       P       19 14 19.4   0.0
      comp=Z,15nm,0.4s,baz=51,slow=2.5,SNR=9.1
BTK   Batken            53.34 295 eP       P       19 14 20.6  -0.7
      comp=Z,36nm,1.5s
BTK   Batken            53.34 295 eP       P       19 14 20.6  -0.7
BTK                                pmax    pmax
      comp=Z,37nm,1.5s
SVE   Sverdlovsk        53.37 317d iP      P       19 14 22.0  +0.9
SVE                                pmax    pmax
      comp=Z,114nm,0.8s
SVE                                MLR     MLR
      comp=Z,742nm,16.0s
JIS   Juneau Island     53.56  41 eP       P       19 14 22.1  -0.4
      comp=Z,14nm,1.0s
PSI   Prapat            54.14 238 eP       P       19 14 27.0  -0.4
      comp=Z,14nm,0.7s
PSI   Prapat            54.14 238 eP       P       19 14 27.0  -0.4
PSI                                pmax    pmax
      comp=Z,14nm,0.7s
NIL   Nilore            54.46 287 eP       P       19 14 29.6  +0.1
      comp=Z,46nm,0.6s
NIL   Nilore            54.46 287 eP       P       19 14 29.6  +0.1
NIL                                pmax    pmax
      comp=Z,46nm,0.6s
ARU   Arti              54.58 317 eP       P       19 14 29.9  -0.1
      comp=Z,76nm,0.8s
ARU   Arti              54.58 317d iP      P       19 14 30.1  +0.1
ARU                                *PP     pP      19 14 43.8  +1.7
ARU                                                19 15 31.8
ARU                                                19 16 29.1
ARU                                S       S       19 22 07.6  +1.4
ARU                                *SS     sS      19 22 26.6  +0.2
ARU                                                19 24 15.6
ARU                                SS      SS      19 25 47.7  -0.9
ARU                                pmax    pmax
      comp=Z,71nm,0.7s
ARU                                MLR     MLR
      comp=Z,715nm,16.0s
DLBC  Dease Lake        55.66  40  P       P       19 14 38.6  +0.8
      comp=Z,1.7nm,0.7s,baz=305,slow=7.4,SNR=5.1
DLBC  Dease Lake        55.66  40 eP       P       19 14 39.9  +2.0
      comp=Z,12nm,1.3s
NGP   Nagpur            56.60 270 eP       P       19 14 43.7  -1.2
NGP                                IAmb    IAmb    19 14 44.6
      comp=Z,28nm,1.1s
MDSI  Maura Dua         56.66 228  P       P       19 14 57.1   +12
BHPL  Bhopal            56.67 274 eP       P       19 14 44.8  -0.7
BHPL                               IAmb    IAmb    19 14 45.5
      comp=Z,50nm,1.5s
KBL   Kabul             57.10 290 eP       P       19 14 48.3  -0.3
      comp=Z,93nm,0.8s
KBL   Kabul             57.10 290 eP       P       19 14 48.3  -0.3
KBL                                pmax    pmax
      comp=Z,93nm,0.8s
KBS   Kingsbay          57.70 350 eP       P       19 14 52.5  +0.5
      comp=Z,26nm,1.0s
KBS   Kingsbay          57.70 350ceP       P       19 14 53.7  +1.7
KBS                                pmax    pmax
      comp=Z,48nm,1.3s
KBS   Kingsbay          57.70 350 eP       P       19 14 52.7  +0.8
HSPB  Hornsund (broa    58.55 348 eP       P       19 14 58.6  +0.8
PRGR  Permogore         58.59 326 eP       P       19 14 57.9  -0.5
PRGR                               pmax    pmax
      comp=Z,62nm,1.0s
HYB   Hyderabad         59.15 267 i P      P       19 15 03.0  +0.1
RES   Resolute Bay      59.35  15  P       P       19 15 03.7  +0.2
      comp=Z,15nm,0.7s,baz=302,slow=5.5,SNR=9.4
RES   Resolute Bay      59.35  15 eP       P       19 15 03.2  -0.3
      comp=Z,18nm,0.8s
RES   Resolute Bay      59.35  15 eP       P       19 15 03.2  -0.3
RES                                pmax    pmax
      comp=Z,17nm,0.8s
WRAB  Tennant Creek     60.28 189ceP       P       19 15 13.9  +3.4
WRAB                               pmax    pmax
      comp=Z,24nm,2.5s
WB2   Warramunga Arr    60.29 189 eP       P       19 15 09.4  -1.1
      comp=Z,15nm,0.8s
WRA   Warramunga Arr    60.29 189  P       P       19 15 09.4  -1.1
      comp=Z,6.0nm,0.6s,baz=359,slow=7.6,SNR=22
YKA   Yellowknife Ar    60.68  31  P       P       19 15 13.4  +0.6
      comp=Z,4.6nm,0.9s,baz=301,slow=6.8,SNR=4.9
YKA                                LR      LR      19 42 20.4
      comp=Z,5.3nm,21.8s,baz=316,slow=37
HAMF  Hammerfest        61.13 341 eP       P       19 15 15.5  -0.2
ARCES ARCESS Array B    61.35 339  P       P       19 15 17.4  +0.2
      comp=Z,8.9nm,0.8s,baz=52,slow=8.2,SNR=23
ARE0  ARCESS Array S    61.35 339 eP       P       19 15 17.3  +0.1
      comp=Z,0.6nm,1.0s
ARE0  ARCESS Array S    61.35 339 eP       P       19 15 17.5  +0.2
KLMR  Klimovskoe        61.55 327 eP       P       19 15 17.4  -1.3
KLMR                              e                19 17 33.1
KLMR                               pmax    pmax
      comp=Z,53nm,1.4s
KTK1  Kautokeino        62.31 339 eP       P       19 15 23.8  +0.2
TRO   Tromso            63.01 341 eP       P       19 15 28.0  -0.3
GEYT  Alibeck           63.06 298  P       P       19 15 29.3  +0.1
      comp=Z,33nm,0.8s,baz=29,slow=3.4,SNR=71
GEYT                               LR      LR      19 44 46.5
      comp=Z,115nm,19.1s,baz=65,slow=38
A04D  Lummi Island      63.97  47  P       P       19 15 37.5  +2.6
      baz=302
AS31  Alice Springs     64.02 189 eP       P       19 15 35.1  -0.3
      comp=Z,2.3nm,0.9s
ASAR  Alice Springs     64.02 189  P       P       19 15 35.0  -0.4
      comp=Z,4.2nm,0.8s,baz=1.8,slow=6.1,SNR=55
ASAR                               LR      LR      19 43 03.4
      comp=Z,93nm,21.8s,baz=17,slow=36
D03D  Eldon             64.38  49  P       P       19 15 39.3  +1.6
      baz=302
B05A  Bryant            64.55  47  P       P       19 15 39.9  +1.1
      baz=302
STEI  Steigen           65.17 341 eP       P       19 15 42.2  -0.3
E04D  Cinebar           65.20  49  P       P       19 15 44.7  +1.6
      baz=303
MOS   Moscow            65.23 323 eP       P       19 15 41.8  -1.2
MOS                               e                19 15 51.7
MOS                               e                19 18 03.2
MOS                                pmax    pmax
      comp=Z,47nm,1.1s
SUF   Sumiainen         65.55 333  P       P       19 15 45.0   0.0
SUF                                pmax    pmax
      comp=Z,36nm,0.8s
VRH   Novokhopyorsk     65.81 317 eP       P       19 15 46.5  -0.4
VRH                                pmax    pmax
      comp=Z,60nm,0.7s
VRH                                MLR     MLR
      comp=Z,600nm,16.0s
DZM   Mont Dzumac       65.84 156 eLR      LR      19 35 32.7
      comp=Z,278nm,22.6s
B08A  Colville Reser    66.05  46 eP       P       19 15 48.6  +0.1
      comp=Z,14nm,1.4s
OBN   Obninsk           66.08 323⇑eP       P       19 15 48.7  +0.2
OBN                               e                19 16 19.2
OBN                               e                19 18 14.4
OBN                                pmax    pmax
      comp=Z,82nm,1.7s
OBN                                MLR     MLR
      comp=Z,345nm,16.0s
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J01E	Myrtle Point	66.24	53	P	P	19 15 50.2	+0.4
	baz=303						
FINES	FINESS Array B	66.42	332	P	P	19 15 50.6	0.0
	comp=Z,27nm,0.7s,baz=46,slow=8.2,SNR=113						
FINES				LR	LR	19 47 09.6	
	comp=Z,345nm,19.4s,baz=44,slow=38						
LPSR	Galich'ya Gora	66.43	320	*e*P	P	19 15 50.9	+0.1
LPSR				pmax	pmax		
	comp=Z,80nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,330nm,19.0s						
H04A	Detroit Lake	66.45	51	*e*P	P	19 15 52.5	+1.3
	comp=Z,19nm,1.2s						
MOR8	Moi Rana	66.70	340	*e*P	P	19 15 51.3	-1.1
I04A	Tendick Farm,	66.81	52	P	P	19 15 53.2	-0.3
	baz=304						
VSR	Storozhevoye	67.12	318	*e*P	P	19 15 55.0	-0.3
VSR				pmax	pmax		
	comp=Z,70nm,1.0s						
VSR				MLR	MLR		
	comp=Z,480nm,19.0s						
I05D	Terrebonne, OR	67.15	51	P	P	19 15 56.5	+0.8
	baz=304						
VORD	Divnogorie	67.20	318	*e*P	P	19 15 55.6	-0.2
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
NEW	Newport	67.31	45	P	P	19 15 57.5	+0.9
	comp=Z,3.7nm,0.8s,baz=292,slow=3.9,SNR=6.4						
NEW	Newport	67.31	45	P	P	19 15 57.5	+0.9
	baz=305						
PINE	Pine Mountain	67.69	51	*e*P	P	19 16 00.5	+1.2
	comp=Z,16nm,0.9s						
L04D	Klamath Falls	67.76	53	P	P	19 16 01.1	+1.4
	baz=305						
YBH	Yreka Blue Hor	67.79	54	P	P	19 16 00.3	+0.5
	comp=Z,0.9nm,0.3s,baz=248,slow=19,SNR=2.9						
J05D	Fort Rock, OR	67.81	52	P	P	19 16 00.2	+0.2
	baz=305						
AKT	Akhty	67.88	306	*e*P	P	19 16 00.4	0.0
AKT				*e*		19 16 27.3	
AKT				*e*S	S	19 24 59.6	+3.8
AKT				pmax	pmax		
	comp=Z,35nm,0.7s						
M02C	Callahan	67.89	54	P	P	19 16 00.9	+0.5
	baz=305						
GROC	Groznyy	68.08	308	*e*P	P	19 15 58.7	-2.8
GROC				*e**PP	pP	19 16 14.0	+0.1
GROC				*e*		19 16 26.8	
GROC				*e*S	S	19 24 54.1	-3.8
GROC				*e**SS	sS	19 25 20.0	+1.3
GROC				pmax	pmax		
	comp=Z,25nm,0.6s						
VSU	Vasula	68.17	329	*e*P	P	19 16 01.5	-0.2
VSU				IAmb	IAmb	19 16 02.5	
	comp=Z,64nm,1.0s						
VSU	Vasula	68.17	329	*ce*P	P	19 16 01.8	+0.1
VSU				pmax	pmax		
	comp=Z,61nm,0.9s						
N02D	Trinity Center	68.22	54	P	P	19 16 03.9	+1.4
	baz=305						
M04C	Macdoel	68.30	53	P	P	19 16 04.0	+1.0
	baz=305						
SEKA	Sheki	68.36	306	P	P	19 16 03.4	0.0
ZKTA	Zakatala	68.47	307	P	P	19 16 04.3	+0.3
WALA	Waterton Lakes	68.57	43	*e*P	P	19 16 06.0	+1.4
	comp=Z,9.9nm,1.0s						
O02D	Mt. Diablo Mer	68.62	55	P	P	19 16 06.9	+1.9
	baz=305						
GOF	Gofitskoye	68.63	311	⇑*e*P	P	19 16 05.3	+0.4
GOF				pmax	pmax		
	comp=Z,83nm,0.9s						
NSS	Namsos	68.63	339	*e*P	P	19 16 04.2	-0.3
MNGR	Mingechevir, A	68.69	306	P	P	19 16 05.6	+0.3
LKRN	Lenkeran, Azer	68.80	303	P	P	19 16 06.0	0.0
DDFL	Dedoflistskaro	68.89	307	*i* P	P	19 16 05.1	-1.6
BMO	Blue Mountains	69.21	48	*e*P	P	19 16 09.2	+0.7
	comp=Z,5.6nm,1.0s						
BMO	Blue Mountains	69.21	48	*e*P	P	19 16 09.3	+0.7
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NCK	Nalchik	69.22	310	*i* P	P	19 16 09.1	+0.5
GANJ	Ganja	69.23	306	P	P	19 16 08.9	+0.2
J08A	Circle Bar Ran	69.41	50	*e*P	P	19 16 11.5	+1.6
	comp=Z,8.0nm,0.9s						
ZEI	Tsey	69.45	309	*e*P	P	19 16 09.4	-0.9
ZEI				pmax	pmax		
	comp=Z,26nm,1.1s						
KIV	Kislovodsk	69.48	311	*e*P	P	19 16 09.9	-0.4
	comp=Z,60nm,0.8s						
KIV	Kislovodsk	69.48	311	⇑*i*P	P	19 16 11.3	+1.0
KIV	Kislovodsk	69.48	311	*i* P	P	19 16 11.2	+0.9
	SNR=25						
KIV	Kislovodsk	69.48	311	⇑P	P	19 16 11.3	+1.0
KIV	Kislovodsk	69.48	311	P	P	19 16 11.2	+0.9
	SNR=20						
KIV				P	P	19 16 11.2	+0.9
	SNR=20						
KBZ	Khabaz	69.49	310	P	P	19 16 10.7	+0.5
	comp=Z,32nm,0.9s,baz=67,slow=4.6,SNR=52						
KBZ				LR	LR	19 49 10.9	
	comp=Z,182nm,20.1s,baz=42,slow=38						
TBLG	Delisi	69.57	308	*e*P	P	19 16 11.5	+0.7
	comp=Z,30nm,0.9s						
TBLG	Delisi	69.57	308	*e*P	P	19 16 11.5	+0.7
TBLG				pmax	pmax		
	comp=Z,30nm,0.9s						
SHA1	Shidzhatmaz	69.63	310	*i* P	P	19 16 12.3	+0.9
NEY	Neytrino	69.88	310	*i* P	P	19 16 13.2	+0.3
NEY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MSO	Missoula	69.90	45	*e*pP	pP	19 16 22.9	-2.1
	comp=Z,12nm,1.2s						
MSO	Missoula	69.90	45	P	P	19 16 13.3	+0.5
	baz=308						
TBLU	Trondheim	70.11	339	*e*P	P	19 16 10.8	-2.8
BEKR	Beckworth	70.32	54	*e*P	P	19 16 16.4	+0.7
	comp=Z,16nm,1.4s						
MICGM	Minsk	70.36	326	⇓*e*P	P	19 16 15.0	-0.4
MICGM				PM		19 16 16.0	
	comp=Z,0.1nm,1.0s						
MNK	Minsk	70.36	326	⇓*e*P	P	19 16 15.0	-0.4
MNK				pmax	pmax		
	comp=Z,140nm,1.0s						
ISAL	Salakas	70.38	327	*e*P	P	19 16 15.8	+0.3
ISAL				IAmb	IAmb	19 16 17.4	
	comp=Z,21nm,1.0s						
SLIT	Slitere, Latvi	70.45	330	*e*P	P	19 16 15.3	-0.5
SLIT				IAmb	IAmb	19 16 16.2	
	comp=Z,102nm,0.8s						
IIGN	Ignalina	70.49	327	*e*P	P	19 16 16.6	+0.5
IIGN				IAmb	IAmb	19 16 18.2	
	comp=Z,24nm,1.1s						
GNI	Garni	70.50	306	*e*P	P	19 16 17.3	+0.6
	comp=Z,95nm,1.5s						
GNI	Garni	70.50	306	*e*P	P	19 16 17.3	+0.6
GNI				pmax	pmax		
	comp=Z,95nm,1.5s						
AKH	Akhalkalaki	70.51	308	*e*P	P	19 16 17.7	+0.9
AKH	Akhalkalaki	70.51	308	⇓*i*P	P	19 16 18.4	+1.6
AKH	Akhalkalaki	70.51	308	P	P	19 16 17.7	+0.9
NACGM	Naroch	70.56	326	*e*	P	19 16 18.0	+1.5
NAX	Nakhchivan	70.61	305	P	P	19 16 17.4	+0.1
FFC	Flin Flon	70.62	34	*e*P	P	19 16 17.4	+0.4
	comp=Z,150nm,0.8s						
FFC	Flin Flon	70.62	34	*e*P	P	19 16 17.4	+0.4
FFC				pmax	pmax		
	comp=Z,150nm,0.8s						
FCC	Fort Churchill	70.82	27	*e*P	P	19 16 18.4	+0.3
	comp=Z,17nm,1.0s						
FCC	Fort Churchill	70.82	27	*e*P	P	19 16 18.4	+0.3
FCC				pmax	pmax		
	comp=Z,17nm,1.0s						
EPOS	Posof	70.92	308	*i* P	P	19 16 21.8	+2.6
SHME	Shamm	71.04	288	*i* P	P	19 16 20.1	+0.1
	SNR=10						
IGDI	IGDIR	71.08	306	*i* P	P	19 16 21.8	+1.7
IGDI				IAML_P			
	comp=Z,235nm,0.5s						
LRM	Limekiln Ridge	71.33	45	*e*sP	sP	19 16 36.7	-2.1
MDH	Madha	71.37	288	P	P	19 16 21.6	-0.4
EGMT	Eagleton	71.38	42	P	P	19 16 22.3	+0.5
	baz=310						
DOMB	Dombas	71.41	339	*e*P	P	19 16 21.9	+0.2
SOC	Sochi	71.42	312	*e*P	P	19 16 21.6	-0.4
SOC				*e*		19 19 02.2	
SOC				*e*PPP	PPP	19 20 45.0	
SOC				*e*S	S	19 25 35.6	-1.5
SOC				*e*SS	SS	19 30 15.6	+4.2
SOC				*e*SSS	SSS	19 33 18.7	
SOC				pmax	pmax		
	comp=Z,41nm,0.9s						
SOC				MLR	MLR		
	comp=Z,197nm,21.0s						
MSFE	Esma-Masafi	71.44	288	*i* P	P	19 16 22.8	+0.4
	SNR=8.3						
BATM	Batumi	71.48	309	⇓*i*P	P	19 16 23.2	+0.8
BATM	Batumi	71.48	309	*i* P	P	19 16 23.7	+1.3
YERR	Yerington	71.54	54	*e*P	P	19 16 23.7	+0.6
	comp=Z,20nm,1.4s						
NB2	NORSAR Subarra	71.61	337	P	P	19 16 22.7	-0.2
	comp=Z,23nm,0.8s,baz=37,slow=6.2						
NB2	NORSAR Subarra	71.61	337	P	P	19 16 22.7	-0.2
	baz=37,slow=6.2						
NOA	NORSAR Array B	71.61	337	P	P	19 16 22.9	+0.1
	comp=Z,16nm,0.8s,baz=38,slow=6.1,SNR=129						
NOA	NORSAR Array B	71.61	337	P	P	19 16 23.0	+0.1
BCA	Borcka	71.61	309	⇑*i*P	P	19 16 23.9	+0.6
HLID	Hailey	71.64	48	*e*P	P	19 16 23.1	-0.5
	comp=Z,4.0nm,1.0s						
HLID	Hailey	71.64	48	P	P	19 16 24.9	+1.3
	baz=308						
UOSS	Minazif	71.65	287	*e*P	P	19 16 23.6	-0.1
	comp=Z,32nm,0.7s						
UOSS	Minazif	71.65	287	*i* P	P	19 16 23.6	-0.1
	SNR=12						
DBOC	Borcka	71.65	309	*i* P	P	19 16 24.3	+0.8
DBOC				IAML_P			
	comp=Z,558nm,0.3s						
STKA	Stephens Creek	71.70	181	P	P	19 16 24.0	+0.4
	comp=Z,1.4nm,0.7s,baz=328,slow=9.8,SNR=3.6						
STKA				LR	LR	19 45 12.6	
	comp=Z,33nm,21.6s,baz=25,slow=34						
NC602	NORSAR Array S	71.75	337	*e*P	P	19 16 23.3	-0.3
	comp=Z,14nm,0.9s						
NC602	NORSAR Array S	71.75	337	*e*P	P	19 16 23.4	-0.3
HATD	Hatta, Dubai	71.77	287	*i* P	P	19 16 24.7	+0.3
	SNR=14						
DBAD	Bademkaya	71.83	309	*i* P	P	19 16 26.3	+1.7
DBAD				IAML_P			
	comp=Z,1µm,0.7s						
BMN	Battle Mountai	71.91	52	*e*P	P	19 16 26.6	+1.4
	comp=Z,4.8nm,0.8s						
BMN	Battle Mountai	71.91	52	*e*P	P	19 16 26.6	+1.4
BMN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOZ	Bozeman (W)	71.92	45	P	P	19 16 26.4	+1.2
	baz=309						
ANN	Anapa	71.95	314	*e*P	P	19 16 23.7	-1.4
ANN				*e*S	S	19 25 40.5	-2.6
ANN				pmax	pmax		
	comp=Z,96nm,1.6s						
ANN				MLR	MLR		
	comp=Z,294nm,19.0s						
NAZ	Nazwa, Dubai	72.02	288	P	P	19 16 26.1	+0.2
EATA	Eleskirt	72.05	307	*i* P	P	19 16 28.7	+2.4
EATA				IAML_P			
	comp=Z,327nm,0.5s						
RYN	Ryan	72.20	54	*e*P	P	19 16 27.6	+0.6
	comp=Z,13nm,1.5s						
KVN	Kaiserville	72.21	54	*e*P	P	19 16 28.3	+1.2
	comp=Z,8.2nm,1.0s						
KVN	Kaiserville	72.21	54	*e*P	P	19 16 28.3	+1.2
KVN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AKASG	Malin Array Be	72.32	322	P	P	19 16 27.2	0.0
	comp=Z,9.8nm,0.5s,baz=45,slow=6.4,SNR=52						
AKASG				PP	PP	19 19 07.3	-0.5
	comp=Z,1.0nm,0.5s,baz=41,slow=9.0,SNR=4.4						
AKASG				LR	LR	19 51 27.5	
	comp=Z,168nm,19.0s,baz=40,slow=38						
MDPB	Devils Postpil	72.46	55	*e*P	P	19 16 29.8	+1.1
	comp=Z,5.9nm,1.2s						
NVAR	Mina Array Bea	72.46	54	P	P	19 16 29.6	+1.0
	comp=Z,1.9nm,0.9s,baz=288,slow=4.9,SNR=7.2						
NVAR				LR	LR	19 45 02.7	
	comp=Z,30nm,20.5s,baz=282,slow=33						
ASUD	Al Ashush, Dub	72.48	288	P	P	19 16 29.0	+0.4
ALNE	Al Ain	72.51	287	*i* P	P	19 16 28.9	0.0
	SNR=13						
NV11	Mina Array Sit	72.55	54	*e*PcP	PcP	19 16 48.6	+2.1
OSL	Oslo	72.64	337	*e*P	P	19 16 29.5	+0.6
SFJD	Kangerlussuaq	72.68	5	P	P	19 16 29.4	+0.3
	comp=Z,8.3nm,0.7s,baz=11,slow=16,SNR=2.7						
SUW	Suwalki	72.69	327	*e*P	P	19 16 29.1	-0.3
SUW	Suwalki	72.69	327	*e*P	P	19 16 29.0	-0.3
	comp=Z,58nm,1.3s						
SUW	Suwalki	72.69	327	*e*P	P	19 16 29.0	-0.3
SUW				pmax	pmax		
	comp=Z,58nm,1.3s						
HAKT	HAKKARI	72.70	305	*i* P	P	19 16 30.8	+0.7
HAKT				IAML_P			
	comp=Z,288nm,0.5s						
KRIK	Erzurum-spir	72.71	308	*i* P	P	19 16 32.6	+2.5
KRIK				IAML_P			
	comp=Z,34nm,0.3s						
SKAR	Skarslia	72.74	338	*e*P	P	19 16 30.4	+0.7
YHH	Holmes Hill	72.86	46	*e*P	P	19 16 31.6	+0.6
	comp=Z,7.6nm,1.1s						
ELK	Elko	72.91	51	P	P	19 16 32.1	+0.8
	comp=Z,0.5nm,0.3s,baz=308,slow=12,SNR=2.1						
ELK	Elko	72.91	51	*e*P	P	19 16 31.4	+0.1
	comp=Z,3.0nm,0.9s						
ELK	Elko	72.91	51	*e*P	P	19 16 31.4	+0.1
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HYA	Hoyanger	72.92	339	*e*P	P	19 16 31.0	+0.4
CUKT	Cukurca	72.95	304	*i* P	P	19 16 32.2	+0.8
CUKT				IAML_P			
	comp=Z,1µm,0.6s						
KONO	Kongsberg	73.20	337	*e*P	P	19 16 32.6	+0.3
	comp=Z,11nm,0.9s						
KONO	Kongsberg	73.20	337	*ce*P	P	19 16 32.5	+0.2
KONO				pmax	pmax		
	comp=Z,11nm,0.9s						
KONO	Kongsberg	73.20	337	*e*P	P	19 16 32.6	+0.2
H17A	Grant Village	73.27	46	*e*P	P	19 16 35.9	+2.5
	comp=Z,24nm,1.3s						
H17A	Grant Village	73.27	46	P	P	19 16 35.2	+1.8
	baz=310						
MUSM	Mu-Merkez	73.35	307	*i* P	P	19 16 35.1	+1.3
MUSM				IAML_P			
	comp=Z,17nm,0.3s						
SUE	Sulen	73.39	340	*e*P	P	19 16 33.4	0.0
RLMT	Red Lodge	73.51	45	P	P	19 16 34.9	+0.2
	baz=311						
FRB	Frobisher Bay	73.52	14	P	P	19 16 34.1	0.0
	comp=Z,23nm,0.7s,baz=341,slow=6.1,SNR=17						
FRB				LR	LR	19 51 39.2	
	comp=Z,148nm,20.1s,baz=357,slow=38						
SRTM	Siirt_Merkez	73.55	306	*i* P	P	19 16 36.3	+1.3
SRTM				IAML_P			
	comp=Z,890nm,0.6s						
PKM	Mcpherson Peak	73.66	58	P	P	19 16 35.3	-0.5
	baz=308						
SIM	Simferopol'	73.67	315	*de*P	P	19 16 36.6	+1.2
SIM				*e*S	S	19 26 06.0	+3.3
SIM				pmax	pmax		
	comp=Z,32nm,0.9s						
SIM				MLR	MLR		
	comp=N,100nm,15.0s						
ASK	Askoy	73.76	340	*e*P	P	19 16 36.2	+0.7
BER	Bergen	73.81	339	*e*P	P	19 16 36.5	+0.7
CWC	Cottonwood Cre	73.82	56	P	P	19 16 36.7	0.0
	baz=308						
KELT	Kelkit	73.83	309	*i* P	P	19 16 38.5	+1.8
KELT				IAML_P			
	comp=Z,864nm,0.8s						
ODD1	Odda	73.85	339	*e*P	P	19 16 37.0	+0.8
DGMT	Dagmar	73.88	40	P	P	19 16 37.2	+0.7
	baz=313						
R11A	Troy Canyon, C	74.19	53	*e*P	P	19 16 39.4	+0.6
	comp=Z,9.5nm,1.4s						
R11A	Troy Canyon, C	74.19	53	P	P	19 16 37.9	-0.8
	baz=309						
BLS5	Blasjo	74.30	338	*e*P	P	19 16 39.0	+0.2
MPMC	Manual Prospec	74.43	56	P	P	19 16 41.1	+0.9
	baz=309						
FURC	Furnace Creek,	74.57	55	P	P	19 16 41.0	+0.2
	baz=309						
BORG	Borgarnes	74.64	353	*e*P	P	19 16 41.3	+0.7
	comp=Z,24nm,0.8s						
BORG	Borgarnes	74.64	353	*i* P	P	19 16 43.6	+3.0
TPNV	Topopah Spring	74.66	55	P	P	19 16 42.3	+0.8
	baz=309						
LRMC	Laurel Mtn Rad	74.67	56	P	P	19 16 42.1	+0.6
	baz=309						
DUG	Dugway, Tooele	74.69	50	*e*P	P	19 16 40.1	-1.5
	comp=Z,6.6nm,0.9s						
DUG	Dugway, Tooele	74.69	50	*e*P	P	19 16 40.1	-1.5
DUG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DUG	Dugway, Tooele	74.69	50	P	P	19 16 41.6	0.0
	baz=310						
KMY	Karmoy	74.82	339	*e*P	P	19 16 42.4	+0.7
EDW2	Edwards Air Fo	74.84	57	P	P	19 16 43.0	+0.5
	baz=309						
BW06	Boulder Array	74.89	47	P	P	19 16 43.0	+0.2
	baz=311						
PDAR	Pinedale Array	74.89	47	P	P	19 16 43.0	+0.2
	comp=Z,1.0nm,0.6s,baz=242,slow=1.9,SNR=4.8						
SNART	Snartemo	74.99	337	*e*P	P	19 16 43.5	+0.8
KIS	Kishinev	75.04	320	*e*P	P	19 16 42.0	-1.3
KIS				*e*L	L	19 45 32.0	
KIS				LRM	MLR	19 52 14.0	
	comp=Z,300nm,20.0s						
KIS	Kishinev	75.04	320	*e*P	P	19 16 42.0	-1.3
KIS				*e*		19 16 56.0	
KIS				MLR	MLR		
	comp=Z,300nm,20.0s						
MILM	Milestii Mici	75.10	319	⇓*i*P	P	19 16 43.8	+0.2
BEL	Belsk	75.27	327	*e*P	P	19 16 45.5	+1.0
BEL	Belsk	75.27	327	*e*P	P	19 16 45.5	+1.0
LVV	L'vov	75.33	324	*e*P	P	19 16 45.3	+0.4
GSC	Goldstone, Bar	75.34	56	P	P	19 16 47.0	+1.7
	baz=309						
BZK	Bozkurt	75.69	313	⇓*i*P	P	19 16 48.2	+1.1
HEC	Hector,Ludlow	75.94	56	P	P	19 16 50.0	+1.2
	baz=309						
CCUT	Cedar City	76.06	53	*e*P	P	19 16 49.7	+0.1
	comp=Z,13nm,1.6s						
CUSAR	Sarkisla-SIVAS	76.08	310	*i* P	P	19 16 45.9	-3.7
COAL	Corum-Alaca	76.26	311	*i* P	P	19 16 52.8	+2.3
COAL				IAML_P			
	comp=Z,181nm,0.7s						
TLCR		76.29	318	⇓*i*P	P	19 16 50.9	+0.5
TLCR		76.29	318	⇓P	P	19 16 50.9	+0.5
BURAR	Bucovina Array	76.36	322	⇑*i*P	P	19 16 51.8	+0.9
BURAR	Bucovina Array	76.36	322	⇑P	P	19 16 51.8	+0.9
P17A	Butcher Ranch,	76.37	50	*e*P	P	19 16 51.0	-0.3
	comp=Z,13nm,1.0s						
GMRC	Granite Mounta	76.39	56	P	P	19 16 52.3	+0.9
	baz=310						
ULM	Lac du Bonnet	76.43	34	LR	LR	19 53 03.7	
	comp=Z,42nm,18.8s,baz=54,slow=38						
TESR	Tescani	76.45	320	⇑*i*P	P	19 16 52.0	+0.6
MTPU	Mount Pierson	76.45	52	*e*P	P	19 16 52.8	+0.8
	comp=Z,4.1nm,0.8s						
LCMT	Little Creek M	76.47	53	*e*P	P	19 16 52.9	+1.1
	comp=Z,6.2nm,1.0s						
GZT	Gaziantep	76.63	308	*i* P	P	19 16 54.1	+1.4
GZT				IAML_P			
	comp=Z,151nm,0.3s						
CFR	Carcaliu	76.64	319	⇑*i*P	P	19 16 52.9	+0.5
CFR	Carcaliu	76.64	319	⇑P	P	19 16 52.9	+0.5
BELC	Belle Mtn. Jos	76.67	57	P	P	19 16 53.7	+0.7
	baz=310						
KOLS	Kolonicke sedl	76.76	324	*e*P	P	19 16 53.7	+0.6
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KOLS	Kolonicke sedl	76.76	324	*e*P	P	19 16 53.7	+0.6
VRI	Vrincioaia	76.86	320	⇑*i*P	P	19 16 54.4	+0.7
VRI	Vrincioaia	76.86	320	⇑P	P	19 16 54.4	+0.7
OJC	Ojcow	76.89	326	*e*P	P	19 16 54.5	+0.7
OJC				*e*pP	pP	19 17 07.7	+1.4
OJC	Ojcow	76.89	326	*e*P	P	19 16 54.5	+0.7
OJC				*e**PP	pP	19 17 07.7	+1.4
PLOR	Plostina	76.91	320	⇓*i*P	P	19 16 55.0	+0.9
PLOR	Plostina	76.91	320	⇓P	P	19 16 55.0	+0.9
UZH	Uzhgorod	76.97	324	⇑*i*P	P	19 16 54.0	-0.2
UZH				*i*		19 17 11.5	
TIRR	Tirgusor	77.00	318	⇑*i*P	P	19 16 55.1	+0.6
TIRR	Tirgusor	77.00	318	⇑P	P	19 16 55.1	+0.6
CDAG	Cicekdag	77.03	311	*i* P	P	19 16 56.2	+1.3
CDAG				IAML_P			
	comp=Z,870nm,0.6s						
DELI	KIRIKKALE	77.04	312	*i* P	P	19 16 56.1	+1.1
DELI				IAML_P			
	comp=Z,323nm,0.4s						
HARR	Harsova	77.09	318	⇑*i*P	P	19 16 55.5	+0.5
HARR	Harsova	77.09	318	⇑P	P	19 16 55.5	+0.5
TLB	Topalu	77.10	318	⇑*i*P	P	19 16 55.7	+0.7
TLB	Topalu	77.10	318	⇑P	P	19 16 55.7	+0.7
SAIM	ADANA	77.11	309	*i* P	P	19 16 57.6	+2.2
SAIM				IAML_P			
	comp=Z,111nm,0.1s						
ARCR	ARCALIA	77.14	322	⇓*i*P	P	19 16 56.8	+1.5
OZUR		77.16	320	⇑*i*P	P	19 16 57.0	+1.5
ANDN	Andirin	77.22	308	*i* P	P	19 16 57.5	+1.5
ANDN				IAML_P			
	comp=Z,1µm,0.8s						
TRPA	Tarpa	77.23	323	⇓*i*P	P	19 16 57.1	+1.4
TRPA	Tarpa	77.23	323	⇑*e*P	P	19 16 56.0	+0.3
KAMA	Osmaniye	77.28	308	*i* P	P	19 16 57.6	+1.3
KAMA				IAML_P			
	comp=Z,63nm,0.1s						
KUZU	Kuzuini	77.30	307	*i* P	P	19 16 58.0	+1.5
KUZU				IAML_P			
	comp=Z,83nm,0.3s						
BR131	Keskin Array S	77.39	312	P	P	19 16 57.5	+0.5
	SNR=9.0						
BRTR	Keskin Array B	77.39	312	P	P	19 16 57.4	+0.5
	comp=Z,4.6nm,0.6s,baz=102,slow=3.3,SNR=29						
BRTR				PP	PP	19 19 52.0	+0.9
	comp=Z,1.2nm,0.8s,baz=20,slow=3.9,SNR=4.0						
BRTR				LR	LR	19 56 27.5	
	comp=Z,79nm,19.4s,baz=54,slow=40						
YAHY	KAYSERI_Yahyal	77.46	309	*i* P	P	19 16 58.5	+1.1
YAHY				IAML_P			
	comp=Z,8.9nm,0.1s						
ISR	Istrita	77.48	319	⇓*i*P	P	19 16 59.0	+1.7
ISR	Istrita	77.48	319	⇓P	P	19 16 59.0	+1.7
MLR	Muntele Rosu	77.52	320	⇓*i*P	P	19 16 58.4	+0.8
MLR	Muntele Rosu	77.52	320	⇓P	P	19 16 58.4	+0.8
ICOR	Ion Corvin	77.55	318	⇑*i*P	P	19 16 58.7	+1.1
KIRS	Kırehir-Merke	77.62	311	*i* P	P	19 16 59.3	+1.1
KIRS				IAML_P			
	comp=Z,283nm,1.0s						
ANTO	Ankara	77.77	312	*e*P	P	19 16 60.0	+1.0
	comp=Z,41nm,1.0s						
ANTO	Ankara	77.77	312	⇑*i*P	P	19 16 59.9	+1.0
ANTO	Ankara	77.77	312	*e*P	P	19 17 00.0	+1.0
ANTO				pmax	pmax		
	comp=Z,41nm,1.0s						
ANTO	Ankara	77.77	312	P	P	19 17 00.1	+1.1
	SNR=7.7						
ANTO				P	P	19 17 00.1	+1.1
	SNR=7.7						
Y12C	Blythe	77.78	56	*e*P	P	19 17 00.8	+1.8
	comp=Z,7.1nm,0.8s						
SECR		77.78	319	⇑*i*P	P	19 16 59.5	+0.6
LANS	Liptovska Anna	77.83	326	*e*P	P	19 17 00.8	+1.7
LANS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LANS	Liptovska Anna	77.83	326	*e*P	P	19 17 00.8	+1.7
KSP	Ksiaz	77.86	328	*e*P	P	19 16 59.3	+0.1
KSP				*e*pP	pP	19 17 11.9	+0.2
KSP	Ksiaz	77.86	328	*e*P	P	19 16 59.3	+0.1
KSP				*e**PP	pP	19 17 11.9	+0.2
OKC	Ostrava-Krasne	77.87	327	*e*P	P	19 16 59.8	+0.5
OKC				*e*		19 17 13.7	
OKC				MLR	MLR		
	comp=Z,300nm,17.3s						
OKC	Ostrava-Krasne	77.87	327	*e*P	P	19 16 59.8	+0.5
OKC				*e*pP	pP	19 17 13.7	+1.9
OKC				AMS	AMS	19 54 00.0	
	comp=Z,300nm,17.3s						
VOIR		78.00	320	⇑*i*P	P	19 17 00.8	+0.6
VOIR		78.00	320	⇑P	P	19 17 00.8	+0.6
AKSY	AKSARAY - Alti	78.03	311	*i* P	P	19 17 01.8	+1.3
AKSY				IAML_P			
	comp=Z,196nm,0.5s						
PV10	Paradox Valley	78.09	50	*e*P	P	19 17 02.1	+1.1
	comp=Z,20nm,0.8s						
PV14	Lion Creek, Pa	78.10	50	*e*P	P	19 17 00.7	-0.4
	comp=Z,10nm,0.7s						

OSTC	Ostas	78.11	328	eP	P	19 17 01.3	+0.7
OSTC				ex	x	19 17 14.8	
OSTC				AMS	AMS	19 54 00.0	
	comp=Z,300nm,18.5s						
DRGR		78.13	322	⇑iP	P	19 17 01.5	+0.6
DRGR		78.13	322	⇑P	P	19 17 01.5	+0.6
YURE	YUREGIR	78.14	308	i P	P	19 17 03.7	+2.7
CHVC	Chvalec	78.15	328	eP	P	19 17 01.7	+0.8
CHVC				ex	x	19 17 14.9	
CHVC				AMS	AMS	19 54 10.0	
	comp=Z,300nm,17.6s						
PV20	West Nyswonger	78.16	50	eP	P	19 17 01.9	+0.6
	comp=Z,19nm,1.2s						
KKUL	Konya-Kulu	78.17	312	i P	P	19 17 02.7	+1.4
KKUL				IAML_P			
	comp=Z,587nm,0.7s						
MORC	Moravsky Berou	78.17	327	⇑iP	P	19 17 02.0	+1.0
MORC	Moravsky Berou	78.17	327	⇑P	P	19 17 02.0	+1.0
MORC	Moravsky Berou	78.17	327	eP	P	19 17 01.8	+0.8
DPC	Dobruska-Polom	78.23	328	eP	P	19 17 02.2	+0.9
DPC				e		19 17 15.0	
DPC				MLR	MLR		
	comp=Z,200nm,20.8s						
DPC	Dobruska-Polom	78.23	328	eP	P	19 17 02.2	+0.9
DPC				epP	pP	19 17 15.0	+1.1
DPC				AMS	AMS	19 54 00.0	
	comp=Z,200nm,20.8s						
UPC	Upice	78.23	328	eP	P	19 17 01.9	+0.6
UPC				e		19 17 15.4	
UPC				MLR	MLR		
	comp=Z,300nm,22.6s						
UPC	Upice	78.23	328	eP	P	19 17 01.9	+0.6
UPC				epP	pP	19 17 15.4	+1.6
UPC				AMS	AMS	19 54 00.0	
	comp=Z,300nm,22.6s						
GULE	Gulek	78.35	309	i P	P	19 17 04.0	+1.6
GULE				IAML_P			
	comp=Z,895nm,0.5s						
PV13	Radium Mtn., P	78.36	50	eP	P	19 17 03.5	+1.0
	comp=Z,9.9nm,0.9s						
DED	Mersin	78.55	309	i P	P	19 17 04.5	+1.2
DED				IAML_P			
	comp=Z,721nm,0.4s						
PSZ	Piszkesteto	78.58	325	⇓iP	P	19 17 04.6	+1.3
PSZ	Piszkesteto	78.58	325	⇓P	P	19 17 04.6	+1.3
PSZ	Piszkesteto	78.58	325	⇑eP	P	19 17 04.0	+0.7
WUAZ	Wupatki	78.59	53	P	P	19 17 05.1	+1.3
	baz=312						
VYHS	Vyhne	78.60	326	eP	P	19 17 04.3	+0.9
VYHS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VYHS	Vyhne	78.60	326	eP	P	19 17 04.3	+0.9
SILT	Sile	78.64	315	⇑iP	P	19 17 01.1	-2.6
BRG	Berggiesshubel	78.76	330	eP	P	19 17 04.6	+0.4
	comp=Z,8.5nm,1.0s						
BRG				e		19 17 17.5	
	comp=Z,11nm,1.1s						
	comp=N,102nm,14.3s						
	comp=E,113nm,16.4s						
	comp=Z,176nm,17.7s						
CLL	Collm	78.78	330	⇑iP	P	19 17 04.5	+0.3
CLL				i *PP	pP	19 17 17.8	+1.0
CLL				pmax	pmax		
	comp=Z,13nm,0.6s						
CLL	Collm	78.78	330	⇑iP	P	19 17 04.5	+0.3
	comp=Z,13nm,0.6s						
CLL				ePcP	PcP	19 17 12.0	-0.9
CLL				i pP	pP	19 17 17.8	+1.0
CLL				ePP	PP	19 20 01.0	-1.2
CLL				e		19 26 12.0	
CLL				eS	S	19 27 00.0	+1.5
CLL				ePS		19 27 42.0	
CLL				eSS	SS	19 32 00.0	-2.3
CLL				e		19 33 24.0	
CLL				e		19 36 24.0	
CLL				LmH		19 53 00.0	
	comp=N,100nm,20.9s						
CLL				LmH		19 53 00.0	
	comp=E,200nm,21.1s						
PVCC	Panska Ves	78.79	329	eP	P	19 17 05.2	+0.9
PVCC				e		19 17 18.4	
PVCC				MLR	MLR		
	comp=Z,300nm,16.2s						
PVCC	Panska Ves	78.79	329	eP	P	19 17 05.2	+0.9
PVCC				epP	pP	19 17 18.4	+1.5
PVCC				AMS	AMS	19 54 40.0	
	comp=Z,300nm,16.2s						
JAVC	Velka Javorina	78.82	326	eP	P	19 17 06.3	+1.7
DRUM	Mains of Drumt	78.85	341	eP	P	19 17 04.8	+0.2
DRUM				IAmb	IAmb	19 17 06.5	
	comp=Z,17nm,0.9s						
KLYT	Kilyos	78.90	315	⇓iP	P	19 17 05.8	+0.7
VRAC	Vranov	78.93	327	⇑iP	P	19 17 06.2	+1.1
VRAC	Vranov	78.93	327	⇑P	P	19 17 06.2	+1.1
VRAC	Vranov	78.93	327	eP	P	19 17 06.2	+1.1
KAC	Achnashellach	78.98	343	eP	P	19 17 05.9	+0.6
GZR	Gura Zlata	79.13	321	⇑iP	P	19 17 06.9	+0.5
GZR	Gura Zlata	79.13	321	⇑P	P	19 17 06.9	+0.5
CTYL	Yalikoy Yolu	79.15	316	⇑iP	P	19 17 07.1	+0.6
GOPC	GO Pecny, Ondr	79.19	329	eP	P	19 17 07.1	+0.5
GOPC				e		19 17 20.6	
GOPC				MLR	MLR		
	comp=Z,300nm,18.6s						
GOPC	GO Pecny, Ondr	79.19	329	eP	P	19 17 07.1	+0.5
GOPC				epP	pP	19 17 20.6	+1.5
GOPC				AMS	AMS	19 54 50.0	
	comp=Z,300nm,18.6s						
MVCO	Mesa Verde	79.19	50	eP	P	19 17 06.0	-1.1
	comp=Z,27nm,1.8s						
SMOL	Smolenice	79.19	326	eP	P	19 17 08.1	+1.5
SMOL				pmax	pmax		
	comp=Z,14nm,0.7s						
SMOL	Smolenice	79.19	326	eP	P	19 17 08.1	+1.5
KRUC	Moravsky	79.20	327	eP	P	19 17 07.4	+0.8
KPL	Plockton	79.21	343	eP	P	19 17 06.7	+0.3
KPL				IAmb	IAmb	19 17 07.6	
	comp=Z,25nm,0.6s						
PRU	Pruhonice	79.23	329	eP	P	19 17 07.3	+0.6
PRU				e		19 17 20.3	
PRU				MLR	MLR		
	comp=Z,300nm,21.5s						
PRU	Pruhonice	79.23	329	eP	P	19 17 07.3	+0.6
PRU				epP	pP	19 17 20.3	+1.0
PRU				AMS	AMS	19 54 50.0	
	comp=Z,300nm,21.5s						
BUD	Budapest	79.29	325	⇑eP	P	19 17 08.0	+0.9
SRO	Srobarova	79.35	325	eP	P	19 17 09.6	+2.2
SRO	Srobarova	79.35	325	eP	P	19 17 09.6	+2.2
VLAD	Vladila	79.35	320	⇑iP	P	19 17 08.0	+0.5
MODS	Modra-Piesok	79.36	326	eP	P	19 17 07.8	+0.3
MODS				pmax	pmax		
	comp=Z,12nm,1.0s						
MODS	Modra-Piesok	79.36	326	eP	P	19 17 07.8	+0.3
AMBH	Ambrzfalva	79.38	323	eP	pP	19 17 21.1	+0.9
ELND	Elena	79.38	318	⇓iP	P	19 17 08.6	+0.9
TREC	Trest	79.39	328	eP	P	19 17 08.4	+0.7
TREC				e		19 17 22.0	
TREC				MLR	MLR		
	comp=Z,300nm,18.2s						
TREC	Trest	79.39	328	eP	P	19 17 08.4	+0.7
TREC				epP	pP	19 17 22.0	+1.8
TREC				AMS	AMS	19 54 50.0	
	comp=Z,300nm,18.2s						
PHSR	Pinarhisar	79.45	316	⇑iP	P	19 17 09.1	+1.0
BZS	Buzias	79.51	322	⇑iP	P	19 17 08.6	+0.2
BZS	Buzias	79.51	322	⇑P	P	19 17 08.6	+0.2
ZST	Bratislava	79.58	326	eP	P	19 17 08.5	-0.2
ZST				pmax	pmax		
	comp=Z,13nm,1.3s						
ZST	Bratislava	79.58	326	eP	P	19 17 08.5	-0.2
PLVB	Pleven	79.69	319	⇓iP	P	19 17 10.2	+0.8
EDRB	Edirne	79.71	317	P	P	19 17 10.5	+1.0
S22A	4UR Ranch, Cre	79.80	49	P	P	19 17 11.4	+1.0
	baz=313						
NKC	Novy Kostel	79.85	330	eP	P	19 17 10.6	+0.4
NKC				e		19 17 24.2	
NKC				MLR	MLR		
	comp=Z,200nm,20.9s						
NKC	Novy Kostel	79.85	330	eP	P	19 17 10.6	+0.4
NKC				epP	pP	19 17 24.2	+1.5
NKC				AMS	AMS	19 53 20.0	
	comp=Z,200nm,20.9s						
EBL	Broad Law	80.01	341	eP	P	19 17 11.6	+0.7
214A	Organ Pipe Nat	80.04	57	P	P	19 17 11.4	-0.1
	baz=311						
EYMN	Ely	80.05	34	P	P	19 17 11.1	-0.2
	baz=321						
MDVR	Moldovita	80.09	322	⇑iP	P	19 17 11.9	+0.3
SOP	Sopron	80.20	326	⇑eP	P	19 17 13.0	+0.9
RAYN	Ar Rayn	80.23	292	eP	P	19 17 12.5	-0.2
	comp=Z,10nm,0.6s						
RAYN	Ar Rayn	80.23	292	i P	P	19 17 12.5	-0.2
	SNR=13						
RAYN	Ar Rayn	80.23	292	eP	P	19 17 12.5	-0.2
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KHC	Kasperske Hory	80.29	329	eP	P	19 17 12.3	-0.3
KHC				e		19 17 26.1	
KHC				MLR	MLR		
	comp=Z,300nm,22.1s						
KHC	Kasperske Hory	80.29	329	eP	P	19 17 12.3	-0.3
KHC				epP	pP	19 17 26.1	+0.9
KHC				AMS	AMS	19 55 40.0	
	comp=Z,300nm,22.1s						
CONA	Conrad Observa	80.31	327	i P	P	19 17 14.0	+1.2
	comp=Z,16nm,1.1s,SNR=12						
PGBU	Gleniifferbraes	80.33	342	eP	P	19 17 13.3	+0.7
PGBU				IAmb	IAmb	19 17 14.3	
	comp=Z,29nm,0.8s						
MORH	Mrgy, Hungar	80.42	324	i P	P	19 17 13.0	-0.3
MORH	Mrgy, Hungar	80.42	324	⇑eP	P	19 17 13.0	-0.3
ESK	Eskdalemuir	80.46	341	eP	P	19 17 14.2	+0.9
	comp=Z,9.7nm,0.8s						
ESK	Eskdalemuir	80.46	341	eP	P	19 17 13.7	+0.4
ESK				IAmb	IAmb	19 17 14.2	
	comp=Z,8.9nm,0.6s						
ESK	Eskdalemuir	80.46	341	eP	P	19 17 14.2	+0.9
ESK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GERES	GERESS Array B	80.47	329	P	P	19 17 13.8	+0.2
	comp=Z,4.2nm,0.6s,baz=32,slow=5.2,SNR=50						
GERES				PP	PP	19 20 10.7	-5.7
	comp=Z,0.9nm,0.8s,baz=52,slow=6.4,SNR=3.6						
GERES				LR	LR	19 56 01.8	
	comp=Z,227nm,19.9s,baz=43,slow=38						
SDCO	Great Sand Dun	80.56	48	P	P	19 17 15.4	+0.8
	baz=314						
FRGS	Fruska Gora	80.70	323	i P	P	19 17 15.0	+0.2
GRFO	Grafenberg	80.75	330	eP	P	19 17 15.5	+0.5
	comp=Z,24nm,0.7s						
GRFO	Grafenberg	80.75	330	eP	P	19 17 15.5	+0.5
GRFO				pmax	pmax		
	comp=Z,24nm,0.7s						
CSS	Mathiatis	80.78	308	eP	P	19 17 15.6	+0.2
	comp=Z,17nm,0.7s						
CSS	Mathiatis	80.78	308	P	P	19 17 15.6	+0.2
RDO	Rodhopi	80.84	317	eP	P	19 17 16.4	+0.8
RDO	Rodhopi	80.84	317	P	P	19 17 16.4	+0.8
ECSD	EROS Data Cent	80.94	39	P	P	19 17 16.3	+0.2
	baz=318						
VTS	Vitosha	80.94	319	eP	P	19 17 17.3	+0.9
VTS	Vitosha	80.94	319	P	P	19 17 17.3	+0.9
VTS	Vitosha	80.94	319	⇑iP	P	19 17 17.3	+0.9
VTS	Vitosha	80.94	319	⇑P	P	19 17 17.3	+0.9
VTS	Vitosha	80.94	319	eP	P	19 17 17.2	+0.9
ARSA	Arzberg	80.98	327	i P	P	19 17 17.2	+0.9
	comp=Z,3.9nm,0.7s						
MOA	Molln	81.03	328	i P	P	19 17 17.2	+0.7
	comp=Z,3.4nm,0.6s						
BEHE	Becsehely	81.05	325	eP	P	19 17 17.0	+0.4
E38A	The Farm, Brul	81.07	34	eP	P	19 17 16.7	-0.1
	comp=Z,9.2nm,0.9s						
E38A	The Farm, Brul	81.07	34	P	P	19 17 16.5	-0.3
	baz=321						
TUC	Tucson	81.09	55	epP	pP	19 17 32.7	+3.1
KESW	Keswick, Cumbr	81.09	341	eP	P	19 17 17.6	+0.9
GAL1	Galloway	81.24	342	eP	P	19 17 17.9	+0.4
GAL1				IAmb	IAmb	19 17 18.6	
	comp=Z,25nm,0.7s						
HPK	Haverah Park	81.27	339	eP	P	19 17 18.1	+0.5
HPK				IAmb	IAmb	19 17 19.0	
	comp=Z,12nm,0.7s						
CLGH	Cloghs, Cushen	81.38	342	eP	P	19 17 18.9	+0.8
CLGH				IAmb	IAmb	19 17 19.6	
	comp=Z,35nm,1.0s						
DIVS	Divibare	81.41	322	i P	P	19 17 18.8	+0.1
MMB	Musomiste	81.45	318	eP	P	19 17 19.6	+0.7
KKB	Krupnik	81.57	319	eP	P	19 17 20.0	+0.5
PERS	Pernice	81.64	326	i P	P	19 17 20.3	+0.4
PERS				epP	pP	19 17 33.4	+1.0
SOKA	Soboth	81.64	326	i P	P	19 17 20.5	+0.7
	comp=Z,16nm,0.6s,SNR=21						
LBWR	Ladybower, Pea	81.80	339	eP	P	19 17 21.1	+0.7
LBWR				IAmb	IAmb	19 17 21.9	
	comp=Z,46nm,0.9s						
BBLS	Lazići	81.87	322	i P	P	19 17 21.7	+0.6
MEM	Membach	81.87	334	⇑P	P	19 17 20.9	+0.1
	comp=Z,7.6nm,0.9s						
MEM				⇑pP	pP	19 17 34.0	+0.6
HAPS	Han Pijesak,Bl	81.91	323	i P	P	19 17 21.1	-0.3
LIA	Limnos Island	81.93	316	P	P	19 17 21.3	-0.1
ANMO	Albuquerque	81.94	51	LR	LR	19 48 22.5	
	comp=Z,30nm,21.7s,baz=343,slow=32						
ANMO	Albuquerque	81.94	51	eP	P	19 17 23.7	+1.9
ANMO				epP	sP	19 17 37.2	-1.7
ANMO	Albuquerque	81.94	51	ceP	P	19 17 23.6	+1.8
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	81.94	51	P	P	19 17 21.1	-0.8
	baz=314						
OBKA	Obir	81.98	327	i P	P	19 17 22.0	+0.4
	comp=Z,10.0nm,0.6s,SNR=8.8						
KBA	Koelnbreinsper	82.02	328	i P	P	19 17 22.3	+0.3
	comp=Z,18nm,1.0s,SNR=13						
SCHQ	Schefferville	82.09	17	P	P	19 17 22.2	+0.3
	comp=Z,5.0nm,0.6s,baz=23,slow=9.0,SNR=3.9						
SCHQ				LR	LR	19 55 18.1	
	comp=Z,91nm,21.8s,baz=315,slow=37						
GMM	Mts of Mourne	82.11	342	eP	P	19 17 22.5	+0.4
CRES	Cresnjev	82.13	326	i P	P	19 17 22.2	-0.2
BLY	Banja Luka	82.21	324	i P	P	19 17 22.4	-0.4
VAY	Valandovo	82.24	319	i P	P	19 17 23.6	+0.6
MYKA	Terra Mystica	82.26	327	i P	P	19 17 23.2	0.0
	comp=Z,10nm,0.6s,SNR=7.7						
BCLA	Clavier	82.27	334	⇑P	P	19 17 22.8	-0.2
SKO	Skopje	82.32	320	i P	P	19 17 24.5	+1.1
LJU	Ljubljana	82.36	326	i P	P	19 17 23.5	-0.1
LJU	Ljubljana	82.36	326	i P	P	19 17 23.4	-0.1
BOJS	Bojanci	82.47	326	i P	P	19 17 24.2	+0.1
PLG	Polygyros	82.49	318	P	P	19 17 24.4	0.0
MGRS	Mrkonjic Grad	82.51	324	eP	P	19 17 24.6	+0.2
WATA	Walderalm	82.53	329	i P	P	19 17 25.0	+0.4
	comp=Z,7.8nm,0.5s						
WTTA	Wattenberg	82.56	329	i P	P	19 17 25.5	+0.6
	comp=Z,11nm,0.8s,SNR=6.2						
UPM	Unac-Piva	82.61	322	eP	P	19 17 24.7	-0.4
WLF	Walferdange	82.62	333	⇑P	P	19 17 25.6	+0.7
ABTA	Abfaltersbach	82.63	328	i P	P	19 17 24.5	-0.6
	comp=Z,10.0nm,1.2s,SNR=5.7						
CEY	Cerknica	82.64	326	i P	P	19 17 24.7	-0.4
FOEL	Foel Wylfa	82.65	340	eP	P	19 17 25.6	+0.6
FOEL				IAmb	IAmb	19 17 27.4	
	comp=Z,28nm,0.7s						
MOTA	Moosalm	82.71	329	i P	P	19 17 26.1	+0.6
	comp=Z,21nm,1.0s,SNR=12						
RETA	Reutte	82.73	329	i P	P	19 17 26.2	+0.7
	comp=Z,18nm,0.8s,SNR=13						
SQTA	Sankt Quirin	82.77	329	i P	P	19 17 26.4	+0.6
	comp=Z,5.4nm,0.6s,SNR=5.9						
DOU	Dourbes	82.78	334	⇑P	P	19 17 25.1	-0.6
121A	Cookes Peak, D	82.80	53	P	P	19 17 27.1	+0.8
	baz=314						
BFO	Black Forest	82.96	331	eP	P	19 17 26.9	+0.2
	comp=Z,24nm,1.3s						
BFO	Black Forest	82.96	331	eP	P	19 17 26.9	+0.2
BFO				pmax	pmax		
	comp=Z,24nm,1.3s						
BRY	Bratogost	83.01	322	eP	P	19 17 26.7	-0.5
PDG	Podgorica	83.03	321	⇑iP	P	19 17 27.1	0.0
PDG	Podgorica	83.03	321	i P	P	19 17 27.2	+0.1
FETA	Feichten	83.12	329	i P	P	19 17 28.2	+0.5
	comp=Z,11nm,1.1s,SNR=7.6						
E43A	Lone Tree Farm	83.17	32	P	P	19 17 27.2	-0.5
	baz=324						
DAVA	Damuels	83.24	330	i P	P	19 17 28.8	+0.5
	comp=Z,15nm,0.9s,SNR=9.0						
TREB	Trebinje	83.24	322	eP	P	19 17 27.3	-0.9
DRME	Dracevica, Mon	83.25	321	i P	P	19 17 28.3	+0.1
CDF	Champ du Feu	83.28	332	eP	P	19 17 27.8	-0.6
CDF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XOR	Xorichti	83.36	317	P	P	19 17 28.2	-0.7
STRD	Stroud	83.37	339	eP	P	19 17 29.2	+0.6
STRD				IAmb	IAmb	19 17 30.3	
	comp=Z,47nm,0.7s						
HCY	Herceg Novi	83.38	322	eP	P	19 17 28.0	-0.9
MCH1	Michaelchurch	83.40	339	eP	P	19 17 29.1	+0.3
MCH1				IAmb	IAmb	19 17 30.1	
	comp=Z,21nm,0.6s						
STON	Ston	83.43	323	i P	P	19 17 28.0	-1.1
MONM	Monmouth	83.49	339	eP	P	19 17 29.6	+0.4
MONM				IAmb	IAmb	19 17 30.6	
	comp=Z,19nm,0.8s						
WOL	Wolverton	83.52	338	eP	P	19 17 29.4	0.0
THL	Klokotos Trika	83.83	318	P	P	19 17 29.2	-2.0
D46A	Sault St. Mari	83.91	30	P	P	19 17 31.1	-0.4
	baz=326						
ATAL	Atalanti	83.95	317	eP	P	19 17 31.0	-0.9
ATAL	Atalanti	83.95	317	P	P	19 17 31.0	-0.9
KARP	Karpathos	83.98	312	eP	P	19 17 32.0	-0.1
	comp=Z,78nm,1.2s						
KARP	Karpathos	83.98	312	P	P	19 17 32.0	-0.1
LKR	Lokris	83.99	317	P	P	19 17 31.1	-1.0
D47A	Chapleau	84.13	29	P	P	19 17 32.2	-0.5
	baz=327						
I42A	Draeger Farm,	84.36	35	P	P	19 17 34.3	+0.4
	baz=323						
EVR	Evrytania	84.42	318	P	P	19 17 29.7	-4.7
LSQQ	Lebel-sur-Quev	84.55	25	P	P	19 17 34.3	-0.5
	baz=331						
D49A	Beulah Townshi	84.59	28	P	P	19 17 34.1	-0.9
	baz=328						
ANX	Ano Chora	84.60	317	P	P	19 17 34.8	-0.5
CHGQ	Chibougamau	84.61	23	P	P	19 17 34.7	-0.4
	baz=333						
SERG	Sergoula	84.66	317	P	P	19 17 34.5	-1.1
PMOR	Pomariorio Ree	84.70	115	eT	T	20 50 56.0	
	comp=Z,22nm,0.2s						
AMTX	Amarillo	84.76	48	P	P	19 17 37.2	+1.0
	baz=316						
L40A	Anamosa	84.77	37	P	P	19 17 35.9	-0.1
	baz=322						
MSTX	Muleshoe	84.79	49	P	P	19 17 37.5	+1.1
	baz=316						
GUR	Goura	84.87	317	eP	P	19 17 35.2	-1.5
GUR	Goura	84.87	317	P	P	19 17 35.2	-1.5
E48A	Lockeyer	84.96	29	P	P	19 17 36.2	-0.7
	baz=327						
LAST	Lasithi	85.21	313	P	P	19 17 38.2	-0.2
VLDQ	Val d'Or	85.22	26	epP	pP	19 17 46.9	-3.7
	comp=Z,9.3nm,0.6s						
PPT	Papeete	85.33	117	LR	LR	19 47 33.5	
	comp=Z,167nm,22.0s,baz=352,slow=30						
F48A	Evansville	85.34	30	P	P	19 17 38.1	-0.7
	baz=327						
PPT2	Papeete2	85.34	117	eLR	LR	19 44 21.2	
	comp=Z,345nm,23.0s						
PPT2	Papeete2	85.34	117	eT	T	20 51 42.4	
	comp=Z,14nm,0.3s						
FSK	Fiskardo	85.40	318	P	P	19 17 35.8	-3.4
SSF	Saint Saulge	85.76	333	eP	P	19 17 41.2	+0.4
SSF				pmax	pmax		
	comp=Z,16nm,0.8s						
E51A	G1948 Merrick	85.89	28	P	P	19 17 41.3	-0.2
	baz=329						
PYL	PYLOS	85.97	316	eP	P	19 17 40.6	-1.4
PYL	PYLOS	85.97	316	P	P	19 17 40.6	-1.4
D53A	Lac Vacive, Po	86.04	26	epP	pP	19 17 57.6	+2.8
D53A	Lac Vacive, Po	86.04	26	P	P	19 17 41.5	-0.7
	baz=330						
TAOE	Nuku Hiva Isla	86.15	105	eLR	LR	19 44 57.6	
	comp=Z,254nm,21.7s						
F51A	Arnstein	86.26	28	P	P	19 17 42.5	-0.8
	baz=329						
I48A	Sherman Twp	86.29	31	P	P	19 17 42.8	-0.7
	baz=326						
D54A	Lac Fusel, La	86.33	26	P	P	19 17 42.7	-1.0
	baz=331						
WMOK	Wichita Mounta	86.50	46	P	P	19 17 45.2	+0.4
	baz=318						
E53A	Dumoine, Ponti	86.66	27	P	P	19 17 44.7	-0.6
	baz=330						
MFF	Saint Martin d	87.38	335	eP	P	19 17 48.8	+0.1
MFF				pmax	pmax		
	comp=Z,22nm,0.8s						
G53A	Haliburton	87.41	28	P	P	19 17 48.3	-0.7
	baz=330						
PEMO	Pembroke	87.42	27	P	P	19 17 48.9	0.0
	baz=331						
TXAR	Lajitas Array	87.56	53	P	P	19 17 50.7	+0.6
	comp=Z,0.8nm,0.6s,baz=298,slow=2.7,SNR=8.5						
ABTX	Abilene, Hawle	87.57	48	P	P	19 17 50.2	+0.2
	baz=318						
BANO	Bancroft	87.75	27	P	P	19 17 50.2	-0.4
	baz=330						
M47A	Cromwell	87.83	34	P	P	19 17 50.8	-0.2
	baz=325						
L48A	N Adams	87.85	33	P	P	19 17 51.2	0.0
	baz=326						
CCM	Cathedral Cave	87.90	40	eP	P	19 17 52.1	+0.7
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	87.90	40	eP	P	19 17 52.1	+0.7
CCM				pmax	pmax		
	comp=Z,16nm,1.0s						
CCM	Cathedral Cave	87.90	40	P	P	19 17 51.7	+0.3
	baz=322						
H53A	Bobcaygeon	87.90	28	P	P	19 17 51.2	-0.1
	baz=330						
G55A	Calabogie	87.97	27	P	P	19 17 52.4	+0.8
	baz=331						
CAF	Calviac	88.11	333	eP	P	19 17 52.6	+0.2
CAF				pmax	pmax		
	comp=Z,11nm,1.0s						
N47A	Urbana	88.19	34	P	P	19 17 53.0	+0.3
	baz=325						
U40A	Yellville	88.43	42	P	P	19 17 53.7	-0.3
	baz=321						
L50A	Kingsville	88.44	32	P	P	19 17 54.1	+0.3
	baz=327						
WLVO	Wesleyville	88.53	28	P	P	19 17 53.7	-0.6
	baz=330						
I55A	Frankford	88.53	28	P	P	19 17 54.1	-0.2
	baz=330						
P46A	Rosedale	88.55	36	P	P	19 17 54.4	-0.1
	baz=324						
N49A	Columbus Grove	88.81	33	epP	pP	19 18 10.6	+2.3
N49A	Columbus Grove	88.81	33	P	P	19 17 56.1	+0.5
	baz=326						
W39A	Magazine	88.84	43	P	P	19 17 56.1	+0.2
	baz=321						
O48A	Farmland	88.94	34	P	P	19 17 56.1	-0.2
	baz=326						
S44A	Carbondale	89.15	39	P	P	19 17 58.1	+0.8
	baz=323						
N50A	Nevada	89.36	33	P	P	19 17 59.3	+1.1
	baz=327						
TBI	Tubuai	89.44	122	eLR	LR	19 45 38.5	
	comp=Z,199nm,35.0s						
TBI	Tubuai	89.44	122	eT	T	20 56 47.7	
	comp=Z,32nm,0.3s						
M52A	Chesterland	89.45	31	P	P	19 17 59.6	+0.9
	baz=328						
MIAR	Mount Ida	89.45	43	epP	pP	19 18 11.1	-0.3
MIAR	Mount Ida	89.45	43	P	P	19 17 59.5	+0.7
	baz=321						
P48A	Milroy	89.48	35	P	P	19 17 59.3	+0.5
	baz=326						
ERPA	Erie	89.49	30	P	P	19 17 59.5	+0.7
	baz=329						
L53A	Girard	89.53	30	P	P	19 17 59.9	+0.9
	baz=329						
WHAR	Wooly Hollow	89.54	42	epP	pP	19 18 13.9	+2.1
L54A	Sinclairville	89.65	30	P	P	19 18 00.5	+0.9
	baz=329						
W41B	Gary Mavity, V	89.66	42	P	P	19 17 59.6	-0.1
	baz=321						
K55A	Perry	89.69	29	P	P	19 18 00.2	+0.4
	baz=330						
O50A	Cable	89.69	34	P	P	19 18 00.6	+0.8
	baz=327						
P49A	Miami Univ. Ec	89.72	35	P	P	19 18 00.1	+0.1
	baz=326						
M53A	WI Miller and	89.80	31	P	P	19 18 00.7	+0.3
	baz=328						
ACSO	Alum Creek Sta	89.89	33	P	P	19 18 01.2	+0.5

	baz=327						
M54A	Oil Creek Stat	90.14	30	P	P	19 18 02.3	+0.4
	baz=329						
M55A	Ridgway	90.52	30	P	P	19 18 04.4	+0.7
	baz=330						
M56A	Emporium	90.72	29	P	P	19 18 05.0	+0.4
	baz=330						
T47A	Sharon Grove	90.73	38	P	P	19 18 05.7	+1.0
	baz=324						
Q51A	Peebles	90.74	34	P	P	19 18 04.8	+0.1
	baz=327						
WVT	Waverly	91.08	39	P	P	19 18 06.4	0.0
	baz=324						
T49A	Edmonton	91.36	36	P	P	19 18 07.7	0.0
	baz=325						
M58A	Price's Panora	91.45	28	P	P	19 18 08.3	+0.3
	baz=331						
V47A	Nunnelly	91.47	39	P	P	19 18 07.8	-0.4
	baz=324						
SSPA	Standing Stone	91.57	30	P	P	19 18 09.2	+0.7
	baz=330						
N57A	Milroy	91.59	29	P	P	19 18 09.3	+0.6
	baz=331						
OXF	Oxford	91.61	41	P	P	19 18 09.5	+0.7
	baz=323						
T50A	Nancy	91.75	36	P	P	19 18 08.8	-0.6
	baz=326						
W47A	Westpoint	91.91	39	P	P	19 18 10.3	+0.1
	baz=324						
N59A	State Game Lan	92.10	28	P	P	19 18 11.8	+0.7
	baz=332						
W48A	Pulaski	92.31	39	P	P	19 18 11.9	-0.2
	baz=324						
KEST	Kesra	93.01	324	P	P	19 18 15.2	-0.1
	comp=Z,2.1nm,1.0s,baz=3.7,slow=7.5,SNR=3.9						
T54A	Tazewell	93.14	34	P	P	19 18 16.5	+0.6
	baz=328						
TKL	Tuckaleechee C	93.35	36	P	P	19 18 17.3	+0.4
	comp=Z,2.8nm,0.7s,baz=22,slow=5.4,SNR=3.6						
Z50A	Ashland	94.33	39	*e*pP	pP	19 18 30.8	-3.3
	comp=Z,13nm,0.8s						
Z50A	Ashland	94.33	39	P	P	19 18 21.6	+0.2
	baz=325						
X53A	Estanollee	94.53	36	P	P	19 18 23.1	+0.8
	baz=327						
ESDC	Sonseca Array	94.82	335	P	P	19 18 23.2	-0.4
	comp=Z,2.3nm,0.7s,baz=20,slow=4.2,SNR=14						
ESDC				LR	LR	20 06 30.0	
	comp=Z,117nm,18.5s,baz=20,slow=39						
Y54A	Tignall	95.34	36	P	P	19 18 26.5	+0.5
	baz=327						
KMBO	Kilima Mbogo	102.33	279	P	Pdif	19 18 57.2	-0.7
	comp=Z,0.6nm,0.3s,baz=39,slow=14,SNR=2.6						
TORD	Torodi Ar. Bea	115.65	317	PKP	PKiKP	19 23 43.4	-0.9
	comp=Z,0.7nm,0.5s,baz=16,slow=1.9,SNR=8.4						
TORD				PP	PP	19 24 45.5	-0.8
	comp=Z,3.7nm,1.0s,baz=19,slow=9.8,SNR=6.9						
MAW	Mawson	122.73	207	PKP	PKPdf	19 23 56.1	-0.1
	comp=Z,4.6nm,0.5s,baz=254,slow=3.7,SNR=16						
MAW	Mawson	122.73	207	*e*PKPdf	PKiKP	19 23 58.0	+1.6
MAW	Mawson	122.73	207	*e*PKIKP	PKiKP	19 23 58.0	+1.6
DBIC	Dimbokro	124.50	319	PKP	PKPdf	19 24 01.1	-0.3
	comp=Z,2.8nm,0.7s,baz=54,slow=7.7,SNR=4.0						
LBTB	Lobatse	125.76	266	*e*PKPdf	PKiKP	19 24 04.5	+0.6
LBTB	Lobatse	125.76	266	*e*PKIKP	PKiKP	19 24 04.5	+0.6
BOSA	Boshof	127.90	262	PKP	PKPdf	19 24 07.4	-0.1
	comp=Z,2.4nm,0.8s,baz=257,slow=4.5,SNR=3.5						
SNAA	Sanae	144.00	198	PKPdf	PKPab	19 24 33.1	-0.3
LPAZ	La Paz	144.34	57	PKP	PKPbc	19 24 37.8	+0.5
	comp=Z,2.1nm,0.7s,baz=336,slow=6.6,SNR=4.2						
PB11	IPOC Station P	145.80	63	*e*PKPdf	PKPab	19 24 42.1	+0.4
VNA3	Neumayer Olymp	145.82	196	PKPdf	PKPdf	19 24 38.9	-0.2
VNA1	Neumayer--Stat	145.97	197	PKPdf	PKPbc	19 24 39.8	-0.2
LVC	Limon Verde	148.22	66	*e*PKPbc	PKiKP	19 24 49.8	-0.2
LVC	Limon Verde	148.22	66	*e*PKP2	PKiKP	19 24 49.8	-0.2
BDFB	Brasilia	153.90	23	PKPbc	PKiKP	19 25 01.8	+0.2
	comp=Z,2.3nm,0.7s,baz=121,slow=5.9,SNR=2.6						
PLCA	Paso Flores	154.95	102	PKPbc	PKPbc	19 25 02.9	-0.1
	comp=Z,2.3nm,0.9s,baz=295,slow=2.9,SNR=3.1						
PLCA				PKPab	PKPab	19 25 16.9	-1.8
	comp=Z,1.2nm,0.7s,baz=328,slow=15,SNR=3.8						

MAN 25 19:08:42.0, 7°.16N×124°.81E, h0^{km}, mb3.7, ML2.4, MS1.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.76	19	*e*P	Pg	19 08 57.0	+0.4
BUKP				*e*S	Sg	19 09 05.0	-1.4
CGP	Cagayan de Oro	1.29	355⇑	*e*P	Pg	19 09 06.4	-0.4
CGP				*e*S	Sg	19 09 20.4	-3.2

ISK 25 19:14:16.8, 36°.63N×27°.99E, h12^{km}±1^{km}, ML1.9/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSB	Marmaris-Mugla	0.19	61	PG	Pg	19 14 21.3	+0.4
MRSB				SG	Sg	19 14 24.6	+0.8
DAT	Datca	0.35	287	PG	Pg	19 14 24.2	+0.4
DAT	Datca	0.35	287	*i* P	Pb	19 14 25.9	+0.8
DAT				*i* S	Sb	19 14 31.0	+0.4
DAT				IAML_P			
	comp=Z,142nm,0.1s						
ARG	Arkhangelos	0.42	165	PG	Pg	19 14 25.7	+0.5
TURN	Turunc	0.55	63	PG	Pg	19 14 22.4	-5.1
TURN				SG	Sg	19 14 26.7	-8.1
TURN	Turunc	0.55	63	*i* P	Pg	19 14 22.8	-4.8
TURN				IAML_P			
	comp=Z,878nm,0.1s						
YER	Yerkesik	0.56	25	PG	Pg	19 14 28.1	+0.4
DALY	Dalyan (Mula)	0.57	70	PG	Pb	19 14 28.4	-0.3
BODT	Bodrum	0.70	309	PG	Pb	19 14 30.8	-0.2
FETY	Fethiye	0.88	89	PG	Pb	19 14 34.1	0.0

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*ISCJB **25** 19:15:46.8±0.4, 2°.72N±0°.04×128°.60E±0°.06, h33^{km}, mb4.0/15, MS3.1/2, Error ellipse: s-maj=8.6km s-min=5.8km az=169.7*

*MAN **25** 19:15:49.7, 2°.23N×128°.18E, h126^{km}, mb5.0, ML3.9, MS3.9*

*NEIC **25** 19:15:49.6±1.2, 2°.68N×128°.47E, h49^{km}±8^{km}, mb4.0/5, Error ellipse: s-maj=19.8km s-min=14.5km az=74.0*

*DJA **25** 19:15:49.6±1.1, 3°N±6°×12°8E±°, h10^{km}±6^{km}, M4.4/7, mb4.3/1, MLv4.4/7*

*IDC **25** 19:15:51.9±2.0, 2°.62N×128°.59E, h66^{km}±19^{km}, mb3.8/13, mb1 3.9/15, mb1mx3.7/30, mbtmp4.1/15, MS3.2/2, Ms1 3.2/2, ms1mx2.7/28, Error ellipse: s-maj=24.6km s-min=11.1km az=73.0*

ISC 25 19:15:48.9±0.6, 2°.61N±0°.05×128°.61E±0°.08, h35^{km}, n41, σ1^{s}.85/37, mb4.1/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.21	214	*e*Pn	Pn	19 16 23.2	0.0
TNTI	Ternate	2.21	214	P	Pn	19 16 23.8	+0.6
SGSI	Sangihe	3.26	289	P	Pn	19 16 36.3	-1.3
SIJI	Sorong	4.36	142	P	Pn	19 16 56.7	+4.0
	20nm,0.3s,baz=121,slow=12,SNR=81						
SIJI				S	Sn	19 17 46.0	+3.7
	15nm,0.3s,baz=21,slow=22,SNR=15						
DDMP	Don Marcelino,	4.52	320	*e*P	Pn	19 16 57.5	+2.6
DDMP				*e*S	Sn	19 17 50.7	+4.4
MATI	Mati	4.91	331	*e*P	Pn	19 17 05.1	+4.8
SANI	Sanana	5.32	210	P	Pn	19 17 06.0	0.0
SKMP	Bagumbayan, Su	5.62	314	*e*P	Pn	19 17 12.0	+2.0
BUKP	Musuan	6.32	326	*e*P	Pn	19 17 22.7	+3.0
KAPI	Kappang	11.65	229	P	Pn	19 18 35.4	+2.6
	1.7nm,0.3s,baz=62,slow=9.4,SNR=3.2						
SBUM	Sibu	16.38	270	*e*P	Pn	19 19 35.5	-0.8
	12nm,1.1s						
KSM	Kuching	18.33	267	*e*P	P	19 20 00.0	-0.5
	21nm,1.1s						
PMG	Port Moresby	22.00	123	LR	LR	19 29 53.4	
	comp=Z,91nm,19.7s,baz=317,slow=38						
WR1	Warramunga Arr	23.11	166	*e*P	P	19 20 52.2	+0.2
WRA	Warramunga Arr	23.11	166	P	P	19 20 52.2	+0.2
	3.3nm,0.5s,baz=346,slow=12,SNR=16						
AS31	Alice Springs	26.62	169	*e*P	P	19 21 24.3	-0.1
	1.0nm,0.8s						
ASAR	Alice Springs	26.62	169	P	P	19 21 24.5	+0.1
	0.7nm,0.5s,baz=358,slow=8.6,SNR=9.9						
ASAR				PcP	PcP	19 24 47.5	-0.6
	0.6nm,0.4s,baz=354,slow=2.1,SNR=12						
ASAR				ScP	ScP	19 28 21.3	-4.4
	0.6nm,0.8s,baz=344,slow=1.9,SNR=4.7						
JNU	Nakatsue	30.43	4	P	P	19 21 58.1	0.0
	4.6nm,1.0s,baz=175,slow=19,SNR=3.6						
KS15	Wonju Array Si	34.67	359	*e*P	P	19 22 32.7	-2.5
	32nm,1.6s						
KSRS	Korea Array	34.68	359	P	P	19 22 35.8	+0.5
	3.2nm,0.5s,baz=174,slow=9.4,SNR=16						
KSRS				LR	LR	19 36 07.3	
	comp=Z,26nm,20.9s,baz=175,slow=35						
MAJO	Matsushiro	34.91	14	*e*P	P	19 22 36.6	-0.7
MJAR	Matsushiro Arr	34.91	14	P	P	19 22 36.6	-0.7
	1.8nm,0.7s,baz=196,slow=10.0,SNR=7.4						
STKA	Stephens Creek	36.45	161	P	P	19 22 50.8	+0.2
	4.4nm,0.7s,baz=337,slow=9.5,SNR=10						
STKA	Stephens Creek	36.45	161	*e*P	P	19 22 50.9	+0.2
	1.1nm,0.8s						
H11S3	WAKE ISLAND Hy	40.48	64	T	T	20 06 48.3	
	baz=252,slow=75,SNR=65						
H11S2	WAKE ISLAND Hy	40.50	64	T	T	20 06 48.0	
	baz=252,slow=75,SNR=52						
H11S1	WAKE ISLAND Hy	40.50	64	T	T	20 06 45.8	
	baz=252,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	41.06	63	T	T	20 07 19.7	
	baz=250,slow=75,SNR=163						
H11N2	WAKE ISLAND Hy	41.07	63	T	T	20 07 20.8	
	baz=250,slow=75,SNR=50						
H11N3	WAKE ISLAND Hy	41.08	63	T	T	20 07 29.8	
	baz=250,slow=75,SNR=117						
USRK	Ussuriysk Ar.	41.52	4	P	P	19 23 33.5	+0.7
	1.7nm,0.7s,baz=147,slow=3.9,SNR=4.9						
SONA0	Songino Array	48.97	340	*e*P	P	19 24 32.0	-0.1
SONM	Songino Array	48.97	340	P	P	19 24 32.0	-0.1
	0.7nm,0.7s,baz=152,slow=7.6,SNR=4.1						
PETK	Petropavlovsk-	55.78	21	P	P	19 25 21.3	-1.0
	3.7nm,0.8s,baz=173,slow=5.8,SNR=7.6						
PEA1	Petropavlovsk-	55.78	21	*e*P	P	19 25 21.3	-1.0
MK32	Makanchi Array	59.54	325	*e*P	P	19 25 48.1	-0.9
MKAR	Makanchi Array	59.54	325	P	P	19 25 48.1	-0.9
	1.0nm,0.6s,baz=115,slow=8.5,SNR=11						
ZALV	Zalesovo Beam	62.44	333	P	P	19 26 07.0	-1.4
	0.5nm,0.5s,baz=138,slow=4.1,SNR=3.0						
ZAA1	Zalesovo Array	62.44	333	*e*P	P	19 26 07.0	-1.5
GEYT	Alibeck	73.06	309	P	P	19 27 15.1	-0.7
	0.7nm,0.6s,baz=125,slow=4.0,SNR=3.0						
ARCES	ARCESS Array B	92.14	340	P	P	19 28 53.2	-1.3
	1.0nm,0.7s,baz=76,slow=7.5,SNR=3.8						

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*ISCJB **25** 19:18:09.3±0.4, 66°.21N±0°.03×142°.21W±0°.08, h11^{km}, mb4.0/1, Error ellipse: s-maj=5.0km s-min=4.1km az=148.1*

*IDC **25** 19:18:11.6±1.6, 66°.44N×142°.63W, h0^{km}, mb4.2/1, mb1 4.1/3, mb1mx3.3/33, mbtmp3.7/3, ML3.0/3, Error ellipse: s-maj=22.6km s-min=11.8km az=158.0*

*NEIC **25** 19:18:11.1±0.0, 66°.32N×142°.32W, h10^{km}, ML2.8(AEIC), After AEIC.*

*PGC **25** 19:18:11.4±0.0, 66°.31N×142°.23W, h1^{km}, ML3.2/6, 282km northwest of Dawson, Yt Northern Alaska*

ISC 25 19:18:10.6±0.7, 66°.34N±0°.03×142°.32W±0°.03, h11^{km}, n41, σ2^{s}.99/56, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FYU	Fort Yukon	1.19	282	*e*Pn	Pn	19 18 33.5	+0.4
FYU				*e*Sn	Sb	19 18 48.1	-0.5
BM3	Burnt Mountain	1.41	321	*e*Pn	Pn	19 18 36.4	+0.1
PRP	Porcupine Dome	1.55	239	*e*Pn	Pn	19 18 37.9	-0.4
EGAK	Eagle	1.64	162	*e*Pn	Pn	19 18 39.2	-0.2
EPYK	Eagle Plains	2.26	87	*e*Pn	Pn	19 18 48.0	+0.1
ILAR	Eielson Array	2.47	232	Pn	Pn	19 18 51.0	+0.2
	0.9nm,0.3s,baz=46,slow=14,SNR=13						
ILAR				Pg	Pb	19 18 56.0	+1.1
	3.3nm,0.3s,baz=45,slow=19,SNR=34						
ILAR				Sn	Sn	19 19 21.8	+0.9
	3.4nm,0.3s,baz=42,slow=30,SNR=6.4						
ILAR				Lg	Lg	19 19 27.0	
	15nm,0.3s,baz=48,slow=29,SNR=24						
ILB	Eielson Array	2.47	232	*e*Pn	Pn	19 18 50.7	0.0
SCRK	Sand Creek	2.48	197	*e*Pn	Pn	19 18 51.0	+0.1
DAWY	Dawson	2.60	150	*e*Pn	Pn	19 18 52.5	-0.1
DAWY	Dawson	2.60	150	Pn	Pn	19 18 52.6	0.0
DAWY				Sn	Sn	19 19 23.6	-0.5
COLA	College	2.73	240	*e*Pn	Pn	19 18 54.6	+0.4
HDA	Harding Lake	2.74	227	*e*Pn	Pn	19 18 54.6	+0.1
DOT	Dot Lake	2.80	196	*e*Pn	Pn	19 18 55.6	+0.2
DOT	Dot Lake	2.80	196	Pn	Pn	19 18 56.4	+1.0
DOT				Sg	Sb	19 19 36.9	+1.9
MDM	Murphy Dome	2.81	243	*e*Pn	Pn	19 18 55.4	-0.1
CCB	Clear Creek Bu	2.85	236	*e*Pn	Pn	19 18 55.8	-0.2
WRH	Wood River Hil	3.06	235	*e*Pn	Pn	19 18 58.5	-0.3
COLD	Coldfoot	3.25	289	*e*Pn	Pn	19 19 03.0	+1.6
COLD	Coldfoot	3.25	289	Pn	Pn	19 19 03.3	+1.9
COLD				Pg	Pg	19 19 11.4	-1.4
COLD				Sn	Sn	19 19 41.1	+1.1
COLD				Sg	Sb	19 19 50.9	+3.3
BCA3	Beaver Creek A	3.30	176	*e*Pn	Pn	19 19 04.1	+1.9
MENT	Mentasta	3.47	191	*e*Pn	Pn	19 19 04.3	-0.3
PAX	Paxson	3.65	203	Pn	Pn	19 19 08.7	+1.7
PAX				Sg	Sb	19 20 03.7	+4.4
MLY	Manley	3.72	253	*e*Pn	Pn	19 19 07.3	-0.7
INK	Inuvik	3.94	56	Pn	Pn	19 19 12.4	+1.5
	0.6nm,0.3s,baz=240,slow=14,SNR=4.1						
INK				Sn	Sn	19 19 57.8	+0.9
	1.5nm,0.3s,baz=225,slow=15,SNR=5.3						
INK				Lg	Lg	19 20 13.3	
	2.8nm,0.3s,baz=333,slow=26,SNR=6.0						
INK	Inuvik	3.94	56	Pn	Pn	19 19 12.4	+1.5
INK				Sn	Sn	19 19 57.5	+0.6
BVCY	Beaver Creek	4.00	170	Pn	Pn	19 19 12.7	+1.0
BVCY				Sg	Sb	19 20 14.1	+4.9
BPAW	Bear Paw Mtn.	4.28	242	*e*Pn	Pn	19 19 14.8	-0.9
YUK2	White River	4.62	171	Pn	Pn	19 19 21.4	+1.0
YUK2				Sg	Sg	19 20 33.3	-5.5
YUK3	Moose Creek	4.66	169	Sg	Sb	19 20 33.8	+5.3
SCM	Sheep Creek Mo	5.03	208	*e*Pn	Pn	19 19 25.0	-0.9
PTPK	Patty Peak	5.18	181	Pn	Pn	19 19 29.9	+1.8
PTPK				Sg	Sb	19 20 49.3	+5.9
YUK4	Talbot Arm	5.27	160	Sg	Sb	19 20 51.8	+5.6
PPLA	Purkeypile	5.47	235	*e*Pn	Pn	19 19 30.5	-1.6
YUK5	Granite Creek	5.59	157	Sg	Sg	19 21 03.5	-6.4
YUK6	Outpost Mounta	5.70	160	Sg	Sg	19 21 07.4	-6.0
HYT	Haines Junctio	5.94	157	Sg	Sg	19 21 14.3	-6.7
WHY	Whitehorse	6.60	146	Sg	Sg	19 21 34.5	-7.8
DHRN	Dharma Camp	9.05	75	Pn	Pn	19 20 20.2	-0.8
DHRN				Sn	Sn	19 21 55.6	-7.2
YKA	Yellowknife Ar	12.52	95	Pn	Pn	19 21 08.4	0.0
	0.2nm,0.3s,baz=296,slow=13,SNR=2.0						
YKB5	Yellowknife Ar	12.52	95	*e*Pn	Pn	19 21 08.4	0.0
PDAR	Pinedale Array	29.67	126	P	P	19 24 20.6	+4.3
	1.0nm,0.3s,baz=0.6,slow=8.6,SNR=1.4						

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*NEIC **25** 19:29:23.4±0.0, 66°.31N×142°.30W, h6^{km}, ML3.3(AEIC), After AEIC.*

*AEIC **25** 19:29:23.4, 66°.31N×142°.30W, h6^{km}, ML3.3*

*PGC **25** 19:29:24.4±0.0, 66°.30N×142°.22W, h1^{km}, ML3.6/6, 281km northwest of Dawson, Yt Northern Alaska*

ISC 25 19:29:21.1±1.6, 66°.33N±0°.03×142°.18W±0°.03, h2^{km}±11^{km}, n55, σ2^{s}.42/82, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FYU	Fort Yukon	1.25	282	*e*Pn	Pn	19 29 45.7	+0.2
FYU				*e*Sn	Sg	19 30 02.4	+1.3
BM3	Burnt Mountain	1.46	320	*e*Pn	Pn	19 29 49.4	+0.9
PRP	Porcupine Dome	1.60	241	*e*Pn	Pn	19 29 51.0	+0.5
EGAK	Eagle	1.61	164	*e*Pn	Pn	19 29 51.9	+1.3
EPYK	Eagle Plains	2.20	86	*e*Pn	Pn	19 30 00.9	+2.2
EPYK	Eagle Plains	2.20	86	P	Pn	19 30 01.2	+2.6
	baz=271						
EPYK				S	Sb	19 30 30.3	+1.0
	baz=271						
SCRK	Sand Creek	2.48	199	*e*Pn	Pn	19 30 04.0	+1.4
POKR	Poker Plat Res	2.49	243	P	Pn	19 30 03.6	+1.0
	baz=58						
POKR				S	Sn	19 30 34.7	+1.2
	baz=58						
ILB	Eielson Array	2.51	234	*e*Pn	Pn	19 30 03.5	+0.7
DAWY	Dawson	2.56	151	*e*Pn	Pn	19 30 05.4	+1.8
DAWY	Dawson	2.56	151	Pn	Pn	19 30 05.6	+2.0
DAWY				Sn	Sn	19 30 36.9	+1.6
DAWY				Sg	Sg	19 30 43.7	+0.5
PS08	TAPS Pump Stn8	2.64	229	*e*Pn	Pn	19 30 05.8	+1.2
PS08				*e*Sn	Sb	19 30 39.6	-2.3
COLA	College	2.77	241	*e*Pn	Pn	19 30 07.6	+1.2
HDA	Harding Lake	2.77	228	*e*Pn	Pn	19 30 07.7	+1.2
HDA	Harding Lake	2.77	228	P	Pn	19 30 07.8	+1.3
	baz=44						
HDA				S	Sn	19 30 42.0	+1.4
	baz=44						
TCOL	CIGO, UAF Yank	2.77	241	P	Pn	19 30 07.7	+1.2
	baz=56						
TCOL				Sb	Sb	19 30 47.9	+2.2
	baz=56						
DOT	Dot Lake	2.81	197	*e*Pn	Pn	19 30 08.8	+1.8
DOT	Dot Lake	2.81	197	Pn	Pn	19 30 09.2	+2.2
DOT				Pg	Pg	19 30 16.1	+1.3
DOT				Sg	Sg	19 30 50.0	-1.2
MDM	Murphy Dome	2.86	244	*e*Pn	Pn	19 30 08.1	+0.3
CCB	Clear Creek Bu	2.89	237	*e*Pn	Pn	19 30 08.6	+0.5
WRH	Wood River Hil	3.10	236	*e*Pn	Pn	19 30 11.5	+0.6
BCA3	Beaver Creek A	3.28	177	*e*Pn	Pn	19 30 16.3	+2.8
COLD	Coldfoot	3.31	290	*e*Pn	Pn	19 30 15.6	+1.8
COLD	Coldfoot	3.31	290	Pn	Pn	19 30 15.8	+2.0
COLD				Sn	Sn	19 30 53.8	+0.2
COLD				Sg	Sb	19 31 02.3	+1.3
PAX	Paxson	3.66	204	*e*Pn	Pn	19 30 17.9	-0.8
PAX	Paxson	3.66	204	Pn	Pn	19 30 21.7	+3.0
PAX				Sn	Sn	19 31 03.5	+1.0
PAX				Sg	Sg	19 31 16.3	-2.1
TOLK	Toolik Lake Re	3.67	313	P	Pn	19 30 20.5	+1.6
	baz=127						
TOLK				S	Sn	19 31 04.5	+1.8
	baz=127						
MLY	Manley	3.77	254	*e*Pn	Pn	19 30 19.9	-0.4
MCK	McKinley	3.87	231	*e*Pn	Pn	19 30 22.7	+1.1
INK	Inuvik	3.90	55	*e*Pn	Pn	19 30 24.8	+2.9
INK	Inuvik	3.90	55	Pn	Pn	19 30 24.9	+3.0
INK				Sn	Sn	19 31 10.4	+2.3
DHY	Denali Highway	3.95	217	*e*Pn	Pn	19 30 25.1	+2.3
BVCY	Beaver Creek	3.97	171	Pn	Pn	19 30 25.8	+2.8
BVCY				Sg	Sg	19 31 26.8	-1.7
RND	Reindeer	4.09	227	*e*Pn	Pn	19 30 26.2	+1.6
BPAW	Bear Paw Mtn.	4.33	243	*e*Pn	Pn	19 30 27.7	-0.2
YUK2	White River	4.60	172	Pn	Pn	19 30 34.3	+2.6
YUK2				Sg	Sg	19 31 46.5	-2.0
YUK3	Moose Creek	4.63	170	Pn	Pn	19 30 31.6	-0.6
YUK3				Sg	Sg	19 31 47.9	-1.8
KTH	Kantishna Hill	4.64	237	*e*Pn	Pn	19 30 31.8	-0.4
IM3	Indian Mountai	4.71	271	*e*Pn	Pn	19 30 34.2	+1.2
SCM	Sheep Creek Mo	5.04	209	*e*Pn	Pn	19 30 40.5	+2.8
PTPK	Patty Peak	5.16	182	Pn	Pn	19 30 42.6	+3.1
PTPK				Sg	Sg	19 32 03.5	-3.3
YUK4	Talbot Arm	5.24	161	Pn	Pn	19 30 42.0	+1.4
YUK4				Sg	Sb	19 32 02.7	+5.9
SML	Sawmill	5.28	214	*e*Pn	Pn	19 30 41.8	+0.9
BALM	Baldy	5.31	181	Pn	Pn	19 30 45.7	+4.2
BALM				Sg	Sg	19 32 09.2	-2.4
KIAG	Kiagna River	5.43	181	Pn	Pn	19 30 46.7	+3.6
PPLA	Purkeypile	5.51	236	*e*Pn	Pn	19 30 44.6	+0.4
YUK5	Granite Creek	5.56	158	Pn	Pn	19 30 47.5	+2.6
YUK5				Sg	Sg	19 32 15.4	-4.0
YUK6	Outpost Mounta	5.67	161	Pn	Pn	19 30 49.1	+2.7
YUK6				Sg	Sg	19 32 18.5	-4.4
HYT	Haines Junctio	5.90	157	Pn	Pn	19 30 52.1	+2.6
HYT				Sg	Sg	19 32 27.4	-3.1
RAGM	Ragged Mountai	6.07	192	*e*Pn	Pn	19 30 53.0	+1.3
YUK7	Dusty Glacier	6.09	161	Sg	Sg	19 32 32.7	-3.9
WHY	Whitehorse	6.56	147	Pn	Pn	19 31 00.4	+1.9
WHY				Sg	Sg	19 32 46.3	-5.1
PLBC	Pleasant Camp	7.39	156	Sg	Sg	19 33 14.3	-3.7
DHRN	Dharma Camp	9.00	75	Pn	Pn	19 31 32.8	+0.9
DHRN				Sn	Sn	19 33 08.3	-5.4
KUKN	Kugluktuk,NWT	10.63	70	Sn	Sn	19 33 47.1	-6.5

UCR 25 19:36:50.3±1.4, 11°.88N×83°.46W, h33^{km}±303^{km}, MW3.5, 1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEDE	Laguna Cedeo	1.85	222	*e*P	Pn	19 37 20.6	+0.8
CVTR	Volcan Turrial	1.87	189	*e*P	Pn	19 37 20.8	+0.4
CVTR				*e*S	Sn	19 37 43.0	-0.1
ARE1	Arenal 1	1.88	221	*e*P	Pn	19 37 19.9	-0.3
JTS	Las Juntas de	2.16	223	*e*P	Pn	19 37 23.6	-0.4
JTS				*e*P	Pb	19 37 23.9	-4.8
LCR2	La Lucha 2	2.19	194⇓	*i*P	Pn	19 37 25.6	+1.0
LCR2				*e*S	Sn	19 37 51.7	+1.0

WEL 25 19:43:05.0, 41°.7S±0°.8×174°.2E±0°.6, h13^{km}±1^{km}, M3.4/23, ML3.7/15, MLv3.4/23, Error ellipse: s-maj=0.0km s-min=0.0km az=4.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.08	175	P	Pg	19 43 08.3	+0.5
CMWZ				S	Sg	19 43 10.6	+0.8
BSWZ	Blackbirch Sta	0.25	259	P	Pb	19 43 10.9	-0.5
BSWZ				S	Sb	19 43 15.1	-0.7
TUWZ	Tuamarina	0.31	321	P	Pb	19 43 12.0	-0.4
TUWZ				S	Sb	19 43 17.0	-0.4
TCW	Tory Channel	0.46	7	P	Pb	19 43 14.6	-0.4
TCW				S	Sb	19 43 21.1	-0.6
BHW	Baring Head	0.56	63	P	Pb	19 43 16.9	+0.2
NNZ	Nelson	0.77	306	P	Pb	19 43 20.1	-0.1
PLWZ	Palliser	0.79	83	P	Pn	19 43 21.7	-0.3
MSWZ	Moikau Station	0.82	73	P	Pn	19 43 21.9	-0.5
CAW	Cannon Point	0.86	49	P	Pb	19 43 22.2	+0.4
DUWZ	D'Urville Isla	0.89	346	P	Pb	19 43 22.4	0.0
KHZ	Kahutara	0.90	213	P	Pn	19 43 23.5	+0.2
PAWZ	Paruwai Farm	0.96	73	P	Pn	19 43 24.2	0.0
THZ	Tophouse	0.98	264	P	Pg	19 43 24.0	+0.1
MTW	Mount Morrison	1.10	63	P	Pn	19 43 26.2	0.0
OGWZ	Otaki Gorge	1.12	41	P	Pn	19 43 26.5	+0.1
TRWZ	Traveller	1.15	77	P	Pb	19 43 25.2	-1.5
HOWZ	Holdsworth Sta	1.25	52	P	Pn	19 43 28.4	+0.1
TMWZ	Te Maipa	1.39	67	P	Pn	19 43 29.7	-0.5
MRZ	Mangatainoka R	1.45	46	P	Pn	19 43 31.3	+0.4
QRZ	Quartz Range	1.52	303	P	Pb	19 43 33.2	+0.2
GVZ	Greta Valley S	1.56	213	P	Pn	19 43 32.5	-0.1
PRWZ	Pori Road	1.74	51	P	Pn	19 43 35.0	0.0
DSZ	Denniston Nort	1.80	267	P	Pb	19 43 37.6	-0.2
LTZ	Lake Taylor	1.82	232	P	Pn	19 43 36.5	+0.4
BFZ	Birch Farm	1.83	58	P	Pn	19 43 36.2	0.0
AMCZ	Amberley	1.90	217	P	Pn	19 43 36.6	-0.5
DVHZ	Dannevirke	2.02	48	P	Pn	19 43 38.4	-0.4
TSZ	Takapari Road	2.09	40	P	Pn	19 43 40.0	+0.2
OKCZ	Okains Bay	2.22	202	P	Pn	19 43 40.4	-1.2
OXZ	Oxford	2.30	223	P	Pn	19 43 41.5	-1.2
INZ	Inchbonnie	2.31	242	P	Pn	19 43 43.5	+0.8
PNHZ	Pukenui	2.32	41	P	Pn	19 43 42.7	-0.2
MQZ	McQueen's Vall	2.33	209	P	Pn	19 43 41.4	-1.7
KHEZ	Kahui Hut	2.38	356	P	Pb	19 43 48.3	+0.6
TRVZ	Turoa	2.58	24	P	Pb	19 43 52.1	+0.8
WHVZ	Whangaehu Hut	2.61	24	P	Pb	19 43 52.5	+0.8
FWVZ	Far West T-bar	2.62	24	P	Pb	19 43 53.3	+1.3
TUVZ	Tukino	2.64	25	P	Pb	19 43 53.3	+1.0
NGZ	Ngauruhoe	2.71	24	P	Pb	19 43 54.6	+1.1
WTVZ	West Tongariro	2.76	23	P	Pb	19 43 55.7	+1.4
WVZ	Waitaha Valley	2.93	240	P	Pb	19 43 57.5	+0.4
RPZ	Rata Peaks	3.09	228	P	Pn	19 43 53.2	-0.4
HIZ	Hauiti	3.19	9	P	Pb	19 44 01.7	+0.1
LBZ	Lake Benmore	4.01	226	P	Pn	19 44 06.6	+0.5
ODZ	Otahua Downs	4.26	216	P	Pn	19 44 08.5	-1.0
MKAZ	Moumakai	4.62	10	P	Pb	19 44 22.2	-3.7
JCZ	Jackson Bay	4.65	237	P	Pn	19 44 18.9	+3.9
PKGZ	Pakihiroa	4.81	40	P	Pn	19 44 20.4	+3.2

MAN 25 19:57:29.0, 7°.38N×124°.83E, h4^{km}, mb5.0, ML3.9, MS3.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.55	25	*e*P	Pg	19 57 40.0	+0.3
BUKP				*e*S	Sb	19 57 49.1	-0.5
CGP	Cagayan de Oro	1.08	353⇑	*i*P	Pg	19 57 49.9	+0.1
CGP				*i* S	Sg	19 58 03.6	-0.2
DDMP	Don Marcelino,	1.54	145	*e*P	Pn	19 57 56.0	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
DDMP				*e*S	Sg	19 58 18.8	+0.2

PGC 25 20:24:52.5±1.9, 51°.48N×130°.90W, h20km, ML3.7/25, 205km Wsw of Bella Bella, Bc Haida Gwaii Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG4B	Hotspring	0.83	347	P	Pb	20 25 08.0	-0.3
HG4B				S	Sb	20 25 18.9	-0.1
HG3B	Hotspring	1.15	343	P	Pn	20 25 13.1	-0.3
HG3B				S	Sn	20 25 28.9	+0.5
BNB	Barry Inlet	1.21	335	P	Pn	20 25 13.9	-0.5
BNB				S	Sb	20 25 29.8	-0.3
HG1B	Mitchell Dam	1.64	333	Pn	Pn	20 25 21.0	+0.8
HG1B				Sn	Sn	20 25 40.4	-0.2
MOBC	Moresby Island	1.79	339	Pn	Pn	20 25 22.6	+0.4
MOBC				Pg	Pb	20 25 25.1	+0.5
MOBC				Sn	Sn	20 25 45.5	+1.0
MOBC				Sg	Sb	20 25 48.9	+2.3
BBB	Bella Bella	1.86	67	Pn	Pn	20 25 22.5	-0.7
BBB				Sn	Sn	20 25 46.4	+0.2
HOLB	Holberg	1.94	115	Pn	Pn	20 25 24.4	+0.1
HOLB				Sn	Sn	20 25 48.6	+0.5
DIB	Dawson Inlet,	1.98	331	Pn	Pn	20 25 24.6	-0.2
DIB				Sg	Sb	20 25 54.3	+2.4
PHC	Port Hardy	2.32	108	Pn	Pn	20 25 29.4	-0.1
PHC				Sn	Sn	20 25 55.1	-2.3
BPBC	Brooks Peninsu	2.39	123	Pn	Pn	20 25 30.8	+0.2
MAYB	Maynard	2.59	113	Pn	Pn	20 25 34.4	+1.0
MASB	Masset	2.63	345	Pn	Pn	20 25 35.2	+1.5
BCBC	Bella Coola	2.71	69	Pg	Pb	20 25 41.0	+0.6
TLCB	Telegraph Cove	2.73	109	Pn	Pn	20 25 35.5	+0.3
NDB	Naden	2.77	334	Pn	Pn	20 25 34.8	-0.9
NDB				Sg	Sb	20 26 18.9	+4.1
RUBB	Prince Rupert	2.87	8	Pn	Pn	20 25 37.4	+0.3
RUBB				Sg	Sb	20 26 19.0	+1.3
EDB	Eliza Dome	2.89	122	Pn	Pn	20 25 38.9	+1.5
NTKA	Nootka	3.32	123	Pn	Pn	20 25 44.6	+1.3
GDR	Gold River	3.54	117	Pn	Pn	20 25 47.1	+0.8
CBB	Campbell River	3.80	110	Pn	Pn	20 25 50.9	+1.0
BTB	Buttle Lake	3.98	118	Pn	Pn	20 25 53.1	+0.5
OZB	Mount Ozzard	4.29	124	Pn	Pn	20 25 59.1	+2.5
UBRB	Upper Baezaeko	4.42	69	Pn	Pn	20 26 00.0	+1.5
TXB	Texada	4.49	111	Pn	Pn	20 26 00.9	+1.5
MGB	Mount Grey	4.70	120	Pn	Pn	20 26 01.9	-0.4
SHB	Sechelt	4.86	110	Pn	Pn	20 26 04.3	-0.3
FSB	Fort Saint Jam	4.97	50	Pn	Pn	20 26 05.6	-0.4
PFB	Port Renfrew	5.08	122	Pg	Pb	20 26 24.6	+3.9
B926	Mesachie Lake	5.10	119	Pn	Pn	20 26 07.6	-0.2
GOBB	Galiano Island	5.38	115	Pn	Pn	20 26 11.4	-0.1
LLLB	Lillooet	5.75	95	Pn	Pn	20 26 16.8	0.0
DLBC	Dease Lake	6.99	4	Pn	Pn	20 26 33.4	-0.3

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*ISCJB **25** 20:27:37.8±0.7, 31°.11S±0°.07×179°.6W±0°.1, h400km, mb3.3/3, Error ellipse: s-maj=16.2km s-min=8.7km az=19.7*

*IDC **25** 20:27:40.9±17.0, 31°.12S×179°.96E, h389km±156km, mb3.1/3, mb1 3.2/3, mb1mx3.0/23, mbtmp3.9/3, Error ellipse: s-maj=89.0km s-min=48.0km az=79.0*

ISC 25 20:27:39.9±0.8, 31°.23S±0°.09×179°.7W±0°.1, h400km, n34, σ2ˢ.05/39, mb3.2/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.48	38	P	Pn	20 28 37.0	-2.1
GLKZ				S	S	20 29 21.4	-5.6
MXZ	Matakaoa Point	6.53	194	P	Pn	20 29 19.8	+1.6
KUZ	Kuaotunu	6.70	213	P	P	20 29 23.1	+2.4
WMGZ	Waiomatatini S	6.76	193	P	Pn	20 29 20.6	-0.1
WMGZ				S	S	20 30 35.4	-7.7
HAZ	Te Kaha	6.84	197	P	Pn	20 29 22.5	+0.9
HAZ				S	S	20 30 38.8	-5.9
WCZ	Waipu Caves	6.85	225	P	P	20 29 23.1	+0.8
OUZ	Omahuta	6.89	233	P	P	20 29 23.2	+0.3
PKGZ	Pakihiroa	6.90	195	P	Pn	20 29 22.5	+0.2
RUGZ	Raukumara Rang	7.06	197	P	Pn	20 29 23.7	-0.5
RUGZ				S	S	20 30 41.9	-7.7
WHRZ	Whale Island	7.16	202	P	P	20 29 27.7	+1.9
TWGZ	Tauwhareparae	7.19	195	P	Pn	20 29 25.9	+0.3
TWGZ				S	S	20 30 46.9	-5.3
CNGZ	Carnagh Statio	7.44	193	P	Pn	20 29 28.3	0.0
MWZ	Matawai	7.45	197	P	Pn	20 29 28.0	-0.5
URZ	Urewera	7.49	200	P	Pn	20 29 27.3	-1.6
RAGZ	Rawiri	7.63	197	P	Pn	20 29 31.0	+0.4
RIGZ	Rimuhau	7.75	195	P	Pn	20 29 32.3	+0.4
MUGZ	Murupara	7.80	201	P	Pn	20 29 32.2	-0.2
RTZ	Ruatahuna	7.86	199	P	Pn	20 29 31.7	-1.5
SNGZ	Shannon Statio	7.92	197	P	Pn	20 29 32.8	-1.1
TLZ	Tolley Road	8.10	208	P	P	20 29 38.3	+2.0
MTHZ	Maungataniwha	8.12	200	P	Pn	20 29 36.3	+0.1
MRHZ	Matea Rd	8.23	202	P	Pn	20 29 37.1	-0.3
BKZ	Black Stump Fm	8.51	200	P	Pn	20 29 41.5	+0.9
HIZ	Hauiti	8.54	210	P	P	20 29 43.7	+2.6
STKA	Stephens Creek	32.88	259	P	P	20 33 38.4	-0.2
	0.7nm,0.6s,baz=107,slow=14,SNR=3.5						
ASAR	Alice Springs	41.63	269	P	P	20 34 50.2	-0.9
	0.5nm,0.5s,baz=105,slow=7.3,SNR=8.5						
ASAR				PcP	PcP	20 36 40.3	+0.9
	0.3nm,0.4s,baz=117,slow=4.0,SNR=4.7						
WRA	Warramunga Arr	42.69	274	P	P	20 34 58.8	-0.8
	0.7nm,0.3s,baz=106,slow=8.7,SNR=2.4						
WRA				PcP	PcP	20 36 43.7	+0.6
	0.3nm,0.3s,baz=107,slow=3.3,SNR=2.5						
SNAA	Sanae	77.36	179	P	P	20 38 53.6	+2.2
VNA3	Neumayer Olymp	77.57	177	P	P	20 38 54.9	+2.4
KBZ	Khabaz	144.35	303	PKP	PKPdf	20 46 30.4	+1.6
	0.8nm,0.4s,baz=45,slow=1.4,SNR=2.4						
FINES	FINESS Array B	145.40	338	PKPbc	PKPab	20 46 32.1	+0.2
	1.7nm,0.5s,baz=58,slow=3.4,SNR=28						
NOA	NORSAR Array B	149.32	350	PKPbc	PKPbc	20 46 42.0	+0.4
	0.2nm,0.5s,baz=16,slow=4.2,SNR=4.0						
BRTR	Keskin Array B	151.69	297	PKPbc	PKiKP	20 46 49.3	+1.1
	0.6nm,0.5s,baz=101,slow=2.9,SNR=4.9						
TORD	Torodi Ar. Bea	161.96	184	PKPab	PKPab	20 47 45.0	+2.0
	0.3nm,0.4s,baz=164,slow=7.3,SNR=4.7						

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*IDC **25** 20:57:19.0±10.0, 13°.43N×90°.79W, h0km, mb3.6/2, mb1 4.1/3, mb1mx3.6/22, mbtmp3.6/3, ML3.8/1, Error ellipse: s-maj=349.7km s-min=121.8km az=31.0*

*GCG **25** 20:57:35.0±0.3, 14°.45N×91°.31W, h50km, MD4.2*

ISC 25 20:57:30.5±2.8, 13°.9N±0°.3×91°.5W±0°.1, h35km, n7, σ1ˢ.06/7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.80	356	*e*P	Pn	20 57 45.3	-0.1
FUG	Fuego 3	0.85	51	*e*P	Pn	20 57 46.2	+0.1
PCG	Pacaya	1.00	61	*e*P	Pn	20 57 48.4	+0.1
NBG	Las Nubes	1.32	59	*e*P	Pn	20 57 52.8	+0.1
TXAR	Lajitas Array	19.03	326	P	Pn	21 01 51.0	+0.3
	0.1nm,0.3s,baz=160,slow=12,SNR=17						
NVAR	Mina Array Bea	34.04	321	P	P	21 04 12.9	+1.3
	0.6nm,0.6s,baz=126,slow=10,SNR=5.5						
ILAR	Eielson Array	63.11	337	P	P	21 07 52.6	-1.6
	0.2nm,0.3s,baz=120,slow=4.6,SNR=4.2						

MAN 25 21:06:21.1, 10°.19N×125°.10E, h2km, mb3.9, ML2.7, MS2.3, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.25	257	*e*P	Pg	21 06 34.2	+8.3
MSLP				*e*S	Sg	21 06 42.4	+13
PLP	Palo	0.98	353⇑	*e*P	Pg	21 06 39.9	0.0
PLP				*i* S	Sg	21 06 51.5	-1.1
OCLP	Ormoc	0.98	330	*e*P	Pb	21 06 40.9	0.0
OCLP				*e*S	Sn	21 06 56.2	-0.3
BESP	Borongan	1.44	13	*e*P	Pn	21 06 47.5	-0.8
BESP				*e*S	Sn	21 07 08.3	+0.5
CNP	Catarman	2.35	349	*e*P	Pb	21 07 03.6	-0.6
CNP				*e*S	Sb	21 07 32.4	-1.3

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*ISCJB **25** 21:18:27.2±1.6, 3°.3N±0°.2×67°.2E±0°.3, h10km, mb3.5/6, MS3.2/5, Error ellipse: s-maj=50.7km s-min=22.4km az=146.1*

*IDC **25** 21:18:27.5±1.8, 3°.23N×67°.17E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/26, mbtmp3.5/6, MS3.2/5, Ms1 3.2/5, ms1mx3.0/24, Error ellipse: s-maj=61.8km s-min=29.8km az=55.0*

ISC 25 21:18:28.8±1.8, 3°.2N±0°.3×67°.1E±0°.3, h10km, n17, σ0ˢ.58/7, mb3.6/6, MS3.2/5, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	10.24	158	T	T	21 30 53.1	
	baz=336,slow=76,SNR=348						
H08N3	Diego Garcia H	10.26	158	T	T	21 30 54.1	
	baz=336,slow=76,SNR=302						
H08N1	Diego Carcia H	10.26	158	T	T	21 30 54.7	
	baz=336,slow=76,SNR=314						
GEYT	Alibeck	35.52	348	LR	LR	21 39 38.9	
	comp=Z,50nm,19.0s,baz=225,slow=36						
MKAR	Makanchi Array	45.36	15	P	P	21 26 46.5	-0.9
	0.1nm,0.4s,baz=200,slow=11,SNR=1.7						
KBZ	Khabaz	45.70	335	LR	LR	21 45 00.5	
	comp=Z,26nm,20.4s,baz=170,slow=35						
BRTR	Keskin Array B	47.33	325	P	P	21 27 03.3	+0.1
	0.4nm,0.7s,baz=128,slow=9.5,SNR=2.0						
BRTR				LR	LR	21 48 00.4	
	comp=Z,24nm,18.3s,baz=102,slow=37						
ZALV	Zalesovo Beam	52.61	13	P	P	21 27 42.8	0.0
	1.0nm,0.6s,baz=209,slow=5.7,SNR=2.2						
SONM	Songino Array	55.81	31	P	P	21 28 07.1	+0.7
	0.3nm,0.5s,baz=223,slow=7.9,SNR=1.8						
AKASG	Malin Array Be	57.04	332	LR	LR	21 54 47.0	
	comp=Z,12nm,21.1s,baz=270,slow=38						
H01W3	Cape Leeuwin H	58.13	135	T	T	22 30 50.6	
	baz=301						
H01W2	Cape Leeuwin H	58.14	135	T	T	22 30 51.1	
	baz=301						
H01W1	Cape Leeuwin H	58.15	135	T	T	22 30 51.9	
	baz=301						
WRA	Warramunga Arr	69.83	112	P	P	21 29 40.2	-0.1
	1.2nm,0.8s,baz=292,slow=7.1,SNR=2.3						
ASAR	Alice Springs	70.21	116	P	P	21 29 42.5	-0.1
	0.5nm,0.9s,baz=284,slow=5.6,SNR=1.9						
NOA	NORSAR Array B	71.27	335	LR	LR	22 00 52.5	
	comp=Z,17nm,20.3s,baz=180,slow=36						
TXAR	Lajitas Array	146.45	345	PKPbc	PKPbc	21 38 11.0	-0.1
	1.4nm,0.8s,baz=62,slow=2.1,SNR=9.2						

MAN 25 21:25:45.9, 7°.34N×124°.88E, h4km, mb3.8, ML2.6, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.56	18	*e*P	Pg	21 25 57.1	+0.4
BUKP				*e*S	Sg	21 26 05.1	+1.0
DDMP	Don Marcelino,	1.48	146	*e*P	Pn	21 26 12.7	-0.6
DDMP				*e*S	Sg	21 26 37.4	+4.0
PAGZ	Pagadian	1.57	289	*e*P	Pn	21 26 14.0	-0.5
PAGZ				*e*S	Sg	21 26 36.2	-0.2

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*IDC **25** 21:42:20.9±31.0, 22°.39S×173°.17W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.8/36, mbtmp4.2/4, Error ellipse: s-maj=573.0km s-min=157.4km az=77.0*

*ISCJB **25** 21:42:26.6±0.4, 21°.96S±0°.07×173°.75W±0°.07, h33km, mb5.2/24, Error ellipse: s-maj=12.8km s-min=6.5km az=138.7*

*NEIC **25** 21:42:28.1±2.0, 22°.01S×173°.81W, h36km±6km, mb4.8/26, Error ellipse: s-maj=18.0km s-min=13.8km az=131.0*

ISC 25 21:42:28.5±0.6, 21°.97S±0°.10×173°.76W±0°.09, h35km, n39, σ1ˢ.26/39, mb5.1/24, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.61	52	*e*Pn	Pn	21 43 37.5	+1.8
AFI	Afiamalu	8.23	14	*e*Pn	Pn	21 44 25.9	+0.3
RAR	Rarotonga	13.04	89	*e*Pn	Pn	21 45 31.1	-0.3
MARNC	Mare, Loyalty	16.93	268	*e*P	Pn	21 46 23.8	+1.1
	97nm,1.3s						
MXZ	Matakaoa Point	16.98	202	*e*P	P	21 46 25.1	+0.1
	194nm,1.5s						
OUZ	Omahuta	17.23	217	*e*P	Pn	21 46 26.7	+0.3
	119nm,2.0s						
PINNC	Pines Island,	17.40	264	*e*P	Pn	21 46 27.8	-0.9
	77nm,1.2s						
URZ	Urewera	18.04	204	*e*P	Pn	21 46 35.6	-0.8
	47nm,1.4s						
KWAJ	Kwajalein Atol	35.62	327	*e*P	P	21 49 24.8	+1.6
	187nm,0.9s						
CTA	Charters Tower	37.30	265	P	P	21 49 39.0	+1.5
	2.7nm,0.3s,baz=95,slow=11,SNR=5.6						
JOHN	Johnston Islan	38.69	6	*e*P	P	21 49 49.6	+0.5
	159nm,1.0s						
STKA	Stephens Creek	40.77	246	P	P	21 50 07.5	+1.0
	1.2nm,0.5s,baz=91,slow=10,SNR=5.2						
STKA	Stephens Creek	40.77	246	*e*P	P	21 50 07.5	+1.0
	8.1nm,1.9s						
HLP	Hilina Pali	44.81	25	*e*P	P	21 50 38.8	-0.4
	170nm,0.9s						
KKO	Keanakako`i	44.91	25	*e*P	P	21 50 39.5	-0.7
	234nm,0.9s						
OBL	Observatory Le	44.93	25	*e*P	P	21 50 40.8	+0.5
	2µm,1.7s						
HON	Honolulu	45.70	21	*e*P	P	21 50 47.7	+1.5
	111nm,0.8s						
ASAR	Alice Springs	48.05	257	P	P	21 51 05.7	+0.8
	1.0nm,0.5s,baz=102,slow=7.1,SNR=11						
WR1	Warramunga Arr	48.32	262	*e*P	P	21 51 07.7	+0.7
WRA	Warramunga Arr	48.32	262	P	P	21 51 07.7	+0.7
	4.7nm,1.1s,baz=104,slow=8.0,SNR=3.4						
FORT	Forrest	52.36	247	*e*P	P	21 51 37.5	+0.1
	30nm,1.2s						
LUWI	Luwuk	65.08	279	*e*P	P	21 53 05.2	-0.9
	42nm,1.0s						
KAPI	Kappang	66.34	274	*e*P	P	21 53 12.2	-2.1
	26nm,1.2s						
GSTR	Great Sitkin T	73.77	359	*e*P	P	21 53 57.2	-1.7
NACB	Ninganchiao	77.78	302	*e*P	P	21 54 20.1	-2.4
	13nm,0.8s						
KNMB	Chin-men Tao	80.46	301	*e*P	P	21 54 36.0	-1.1
	37nm,0.8s						
MOD	Modoc Plateau	80.50	37	*e*P	P	21 54 36.0	-1.1
	15nm,1.8s						
WVOR	Wild Horse Val	81.79	38	*e*P	P	21 54 43.1	-0.8
	11nm,1.7s						
BBB	Bella Bella	83.89	26	*e*P	P	21 54 54.6	+0.2
	22nm,1.4s						
RSO	Redoubt South	83.90	10	*e*P	P	21 54 54.2	-0.4
SEW	Seward	84.15	12	*e*P	P	21 54 55.8	+0.3
	15nm,1.0s						
Q16A	Castle Valley	84.22	44	*e*P	P	21 54 56.2	-0.5
	12nm,1.9s						
KAIM	Kayak Island	85.06	14	*e*P	P	21 55 01.2	+1.1
	63nm,1.5s						
GAMB	Gambell	85.47	1	*e*P	P	21 55 00.5	-1.6
LRM	Limekiln Ridge	87.38	38	*e*P	P	21 55 15.1	+2.8
YHB	Horse Butte	87.49	39	*e*P	P	21 55 11.7	-1.2
	7.5nm,0.6s						
WHY	Whitehorse	88.16	18	*e*P	P	21 55 15.8	+0.3
	18nm,2.0s						
DOT	Dot Lake	88.45	13	*e*P	P	21 55 17.8	+1.1
	11nm,1.1s						
GCMT	Greycliff	88.97	39	*e*P	P	21 55 17.1	-2.6

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*ISCJB **25** 21:45:04.2±0.6, 50°.86S±0°.08×162°.38E±0°.10, h10km, mb4.6/10, MS3.3/1, Error ellipse: s-maj=13.1km s-min=6.5km az=147.6*

*IDC **25** 21:45:04.1±0.9, 50°.99S×162°.33E, h0km, mb4.3/5, mb1 4.5/6, mb1mx4.2/23, mbtmp4.3/6, ML3.5/1, MS3.4/1, Ms1 3.3/1, ms1mx2.8/17, Error ellipse: s-maj=38.5km s-min=23.9km az=62.0*

*NEIC **25** 21:45:06.0±2.0, 50°.91S×162°.33E, h10km±1km, mb4.6/7, Error ellipse: s-maj=15.2km s-min=4.0km az=146.0*

ISC 25 21:45:05.7±0.6, 50°.89S±0°.09×162°.43E±0°.09, h10km, n53, σ1ˢ.01/57, mb4.5/10, 10C-2D, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	4.19	209	*e*Pn	Pn	21 46 10.2	+0.7
WHZ	Wether Hill Ro	6.20	38	*e*Pn	Pn	21 46 38.7	+1.4
DCZ	Deep Cove	6.28	32	*e*Pn	Pn	21 46 39.4	+1.1
MLZ	Mavora Lakes	6.71	37	*e*Pn	Pn	21 46 46.4	+2.2
WKZ	Wanaka	7.51	39	*e*Pn	Pn	21 46 58.0	+2.8
ODZ	Otahua Downs	8.04	46	*e*Pn	Pn	21 47 04.0	+1.7
LBZ	Lake Benmore	8.35	42	*e*Pn	Pn	21 47 07.2	+0.5
FOZ	Fox Glacier	8.91	37	*e*Pn	Pn	21 47 16.0	+1.7
RPZ	Rata Peaks	9.26	43	Pn	Pn	21 47 20.5	+1.4
	0.5nm,0.3s,baz=225,slow=8.6,SNR=2.1						
RPZ				Sn	Sn	21 49 02.6	-0.8
	0.2nm,0.3s,baz=343,slow=23,SNR=1.0						
MQZ	McQueen's Vall	9.99	48	*e*Pn	Pn	21 47 31.1	+2.0
THZ	Tophouse	11.64	42	*e*Pn	Pn	21 47 49.3	-2.5
SNZO	South Karori	12.80	46	*e*Pn	Pn	21 48 06.9	-0.7
TAU	Tasmania Unive	13.04	302	*e*Pn	Pn	21 48 10.5	-0.3
STKA	Stephens Creek	24.45	313	P	P	21 50 24.6	0.0
	3.2nm,0.7s,baz=135,slow=10,SNR=9.7						
STKA				LR	LR	21 57 28.5	
	comp=Z,94nm,19.6s,baz=201,slow=30						
STKA	Stephens Creek	24.45	313	*e*P	P	21 50 25.9	+1.3
	2.1nm,1.3s						
RAO	Raoul Island	26.18	42	*e*P	P	21 50 41.2	+1.1
	252nm,1.0s						
ASAR	Alice Springs	35.00	310	P	P	21 51 58.4	+0.1
	3.6nm,0.7s,baz=143,slow=8.4,SNR=32						
ASAR				PcP	PcP	21 54 30.2	0.0
	1.3nm,0.7s,baz=124,slow=3.2,SNR=8.3						
AS31	Alice Springs	35.00	310	*e*P	P	21 51 58.6	+0.4
	1.6nm,0.8s						
AS31				*e*PcP	PcP	21 54 30.2	-0.1
WB2	Warramunga Arr	37.99	314	*e*P	P	21 52 22.9	-0.8
	56nm,2.0s						
WR1	Warramunga Arr	38.00	314	*e*P	P	21 52 23.1	-0.6
WR1				*e*PcP	PcP	21 54 39.2	-0.1
WRA	Warramunga Arr	38.00	314	P	P	21 52 23.1	-0.6
	4.3nm,0.7s,baz=166,slow=8.2,SNR=11						
WRA				PcP	PcP	21 54 39.2	-0.1
	1.5nm,0.6s,baz=131,slow=2.5,SNR=8.8						
QSPA	South Pole Qui	39.23	180	P	P	21 52 32.6	-1.2
	1.5nm,1.1s,baz=9.2,slow=3.6,SNR=2.1						
QSPA	South Pole Qui	39.23	180	*e*P	P	21 52 34.6	+0.7
	36nm,2.0s						
MORW	Morawa	40.84	284	*e*P	P	21 52 46.5	-1.0
	101nm,1.5s						
KKH	Kailua Kona	79.17	40	*e*P	P	21 57 08.3	-2.2
CM31	Chiang Mai Arr	88.58	302	*e*P	P	21 57 59.5	+0.9
	8.7nm,0.9s						
CMAR	Chiang Mai Arr	88.58	302	P	P	21 57 59.5	+0.9
	1.4nm,0.3s,baz=167,slow=3.5,SNR=10.0						
MK32	Makanchi Array	119.19	309	*e*PKPdf	PKPdf	22 03 54.0	0.0
MKAR	Makanchi Array	119.19	309	PKP	PKPdf	22 03 54.0	0.0
	0.5nm,0.7s,baz=158,slow=0.8,SNR=4.4						
ILAR	Eielson Array	121.82	23	PKP	PKPdf	22 03 57.7	-0.8
	0.3nm,0.5s,baz=270,slow=3.2,SNR=3.3						
ILB	Eielson Array	121.82	23	*e*PKPdf	PKPdf	22 03 57.7	-0.8
BRTR	Keskin Array B	143.00	273	PKP	PKPdf	22 04 39.1	-0.1
	0.4nm,0.7s,baz=135,slow=0.8,SNR=2.5						
BR101	Keskin Array S	143.00	273	*e*PKPdf	PKPdf	22 04 39.1	-0.1
EZN	Ezine	147.69	267⇑	*i*P	PKPbc	22 04 50.4	+0.6
TLB	Topalu	149.09	276⇑	*i*P	PKPbc	22 04 53.1	-0.2
HARR	Harsova	149.21	276⇑	*i*P	PKPbc	22 04 53.3	-0.3
CFR	Carcaliu	149.30	277⇑	*i*P	PKPbc	22 04 53.7	-0.1
AKASG	Malin Array Be	150.81	288	PKPbc	PKPbc	22 04 56.9	-0.3
	2.4nm,0.6s,baz=84,slow=2.5,SNR=15						
AKBB	Malin Array Si	150.81	288	*e*PKPbc	PKPbc	22 04 57.4	+0.2
MLR	Muntele Rosu	150.82	277	*e*PKPbc	PKPbc	22 04 57.2	-0.4
MLR	Muntele Rosu	150.82	277⇑	*i*P	PKPbc	22 04 57.0	-0.7
VTS	Vitosha	151.16	269⇑	*i*P	PKPbc	22 04 58.8	+0.2
BIZ	Bicaz	151.34	279⇓	*i*P	PKiKP	22 04 59.7	+0.5
VOIR		151.36	276⇑	*i*P	PKPbc	22 04 58.3	-0.6
DOPR	Dopca	151.38	277⇓	*i*P	PKiKP	22 04 59.4	+0.1
BURAR	Bucovina Array	152.17	280⇑	*i*P	PKPbc	22 05 00.0	-0.7
LOT	Lotru	152.18	275⇑	*i*P	PKPbc	22 05 00.9	+0.1
BUR08	Bucovina Ar. S	152.19	280	*e*PKPbc	PKiKP	22 05 02.0	+0.9
ARCES	ARCESS Array B	152.51	329	PKPbc	PKiKP	22 05 01.8	+0.9
	3.0nm,0.7s,baz=66,slow=3.0,SNR=13						
DRGR		153.41	277⇑	*i*P	PKPbc	22 05 03.1	-0.3
FIA0	FINESS Array S	154.01	311	*e*PKPbc	PKiKP	22 05 04.5	+0.4
FINES	FINESS Array B	154.01	311	PKPbc	PKiKP	22 05 04.5	+0.4
	3.0nm,0.7s,baz=103,slow=4.6,SNR=17						
KEST	Kesra	155.42	242	PKPbc	PKPbc	22 05 07.6	
	1.2nm,0.5s,baz=189,slow=10.0,SNR=3.0						

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*ATH **25** 21:48:26.9, 35°.19N×24°.27E, h20km±2km, ML2.5/3, Error ellipse: s-maj=2.4km s-min=1.1km az=158.0*

*ISCJB **25** 21:48:27.4±0.6, 35°.19N±0°.03×24°.30E±0°.04, h8km±7km, Error ellipse: s-maj=5.6km s-min=4.6km az=19.3*

*THE **25** 21:48:27.5, 35°.18N×24°.26E, h10km±1km, ML2.5/3, Error ellipse: s-maj=1.6km s-min=0.4km az=91.0*

ISC 25 21:48:27.1±1.0, 35°.19N±0°.03×24°.28E±0°.03, h15km±8km, n14, σ0ˢ.39/24, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAM	Vamos	0.23	344	P	Pg	21 48 32.4	+0.2
VAM				S	Sg	21 48 36.2	+0.6
	1µm,0.1s						
VAM	Vamos	0.23	344	P	Pg	21 48 32.3	+0.2
VAM				S	Sg	21 48 35.9	+0.3
VAM				AML	AML	21 48 37.4	
	comp=E,1804µm,0.1s						
VAM				AML	AML	21 48 37.5	
	comp=N,3446µm,0.2s						
PRNS	Prines Rethymn	0.26	46	P	Pg	21 48 32.1	-0.5
PRNS				S	Sg	21 48 35.7	-0.7
IMMV	Iera Moni Meta	0.36	319	P	Pg	21 48 34.4	-0.1
IMMV				S	Sb	21 48 40.2	-0.6
	comp=N,1µm,0.3s						
IMMV	Iera Moni Meta	0.36	319	P	Pg	21 48 34.3	-0.3
IMMV				S	Sb	21 48 40.4	-0.4
IMMV				AML	AML	21 48 41.0	
	comp=E,2569µm,0.2s						
IMMV				AML	AML	21 48 43.5	
	comp=N,1572µm,0.3s						
GVDS	Gavdos	0.38	204	P	Pg	21 48 34.8	+0.1
GVDS				S	Sb	21 48 41.1	0.0
GVD	Gavdhos	0.38	204	P	Pg	21 48 34.6	-0.3
GVD				S	Sb	21 48 40.9	-0.4
	comp=N,948nm,0.4s						
GVD	Gavdhos	0.38	204	P	Pg	21 48 34.5	-0.3
GVD				S	Sb	21 48 40.9	-0.4
GVD				AML	AML	21 48 43.5	
	comp=N,1905µm,0.4s						
GVD				AML	AML	21 48 43.9	
	comp=E,1851µm,0.5s						
SIVA	Sivas	0.47	111	P	Pb	21 48 37.0	-0.1
SIVA	Sivas	0.47	111	P	Pg	21 48 36.8	+0.4
IDI	Anoyia	0.51	79	P	Pg	21 48 37.2	-0.1
IDI				S	Sg	21 48 44.8	+0.6
ANKY	Antikythira Is	1.04	311	P	Pb	21 48 47.0	+0.1
ANKY				S	Sn	21 49 02.0	+0.4
ANKY	Antikythira Is	1.04	311	P	Pb	21 48 46.9	0.0
KTHA	Kythira Island	1.45	318	P	Pb	21 48 54.1	+0.2

MAN 25 21:57:35.1, 10°.35N×125°.12E, h27km, mb4.3, ML3.1, MS2.8, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.34	230	*e*P	Pn	21 57 44.5	+0.2
MSLP				*e*S	Sn	21 57 52.5	+2.3
PLP	Palo	0.82	350⇑	*e*P	Pb	21 57 50.0	-0.8
PLP				*e*S	Sb	21 58 00.7	-0.8
OCLP	Ormoc	0.86	324	*e*P	Pb	21 57 51.4	0.0
OCLP				*e*S	Sn	21 58 03.8	+0.6
BESP	Borongan	1.28	14	*e*P	Pn	21 57 57.2	0.0
CNP	Catarman	2.19	348	*e*P	Pb	21 58 12.6	-1.6
CNP				*e*S	Sb	21 58 42.9	+1.9

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*IDC **25** 22:02:02.9±3.9, 51°.08N×159°.34E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.3/39, mbtmp3.6/4, ML2.9/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/50, Error ellipse: s-maj=258.2km s-min=74.5km az=63.0*

*KRSC **25** 22:02:10.3±1.3, 52°.04N×160°.14E, h56km±20km, ML4.0*

ISC 25 22:02:07.9±1.7, 51°.91N±0°.06×160°.10E±0°.05, h11km±10km, n35, σ1ˢ.32/42, mb4.1/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.11	299	*e*P	Pn	22 02 29.5	+0.2
SPN	Mys Shipunski	1.19	358	*e*P	Pg	22 02 30.9	+0.2
SPN				*e*S	Sb	22 02 45.2	-0.6
KDTR	Khodutka, Kamc	1.26	266	*e*P	Pg	22 02 33.4	+1.4
KDTR				*e*S	Sn	22 02 49.3	+1.1
MTVR	Mutnovka	1.31	297	*i* P	Pg	22 02 33.1	+0.1

MTVR				*e*S	Sb	22 02 49.2	-0.2
NLC	**Nalytchevo**	1.34	340	*e*P	Pb	22 02 33.0	0.0
NLC				*e*S	Sb	22 02 49.0	-1.2
DALK	**Dalny**	1.39	324	*e*P	Pn	22 02 33.3	+0.1
DALK				*e*S	Sb	22 02 49.3	-2.2
ASAK	**Asacha**	1.43	290	*e*P	Pg	22 02 35.5	+0.1
ASAK				*e*S	Sb	22 02 53.5	+0.6
UGLR	**Uglovaya**	1.51	330	*e*P	Pb	22 02 36.0	0.0
KRMR	**Karymshinskiy**	1.52	308	*e*P	Pb	22 02 35.9	-0.1
KRMR				*e*S	Sn	22 02 53.6	-1.0
SDLR	**Sedlovina**	1.56	332	*e*P	Pn	22 02 36.2	+0.6
SMAR	**Somma**	1.57	330	*e*P	Pn	22 02 36.1	+0.3
AVH	**Avacha**	1.59	329	*e*P	Pb	22 02 37.2	-0.1
KRER	**Koryakskii**	1.62	330	*e*P	Pb	22 02 37.7	-0.2
KOK	**Koryaka**	1.64	328	*e*P	Pb	22 02 38.5	+0.3
KRX	**Arik**	1.70	329	*e*P	Pn	22 02 38.2	+0.7
PETK	**Petropavlovsk-**	1.89	310	Pn	Pb	22 02 41.7	-0.7
	16nm,0.3s,baz=121,slow=18,SNR=135						
PETK				Sn	Sn	22 03 05.2	+1.2
	21nm,0.3s,baz=125,slow=9.0,SNR=8.4						
PETK				LR	LR	22 03 28.0	
	comp=Z,76nm,18.5s,baz=157,slow=38						
APC	**Apacha**	2.06	301	*e*P	Pb	22 02 45.1	-0.2
APC				*e*S	Sb	22 03 10.5	-0.5
PAU	**Pauzhetka**	2.09	259	*e*P	Pg	22 02 47.0	-1.0
PAU				*e*S	Sg	22 03 13.7	-1.4
GNL	**Ganaly**	2.21	325	*e*P	Pn	22 02 46.3	+1.7
SKR	**Severo-Kuril's**	2.78	245	*e*S	Sb	22 03 29.3	-2.3
MKZ	**Mys Kozlova**	2.83	20	*e*P	Pn	22 02 53.9	+1.0
MKZ				*e*S	Sn	22 03 25.1	-1.8
TUMD	**Tumrok D**	3.30	3	*e*P	Pn	22 03 01.3	+1.8
TUMD				*e*S	Sn	22 03 37.6	-1.1
TUMR	**Tumrok**	3.38	0	*e*P	Pn	22 03 03.5	+2.9
KBTR	**Krutoberegovo**	4.59	19	*e*P	Pn	22 03 19.4	+2.2
BKI	**Bering**	4.81	44	*e*P	Pn	22 03 21.8	+1.7
BKI				*e*S	Sn	22 04 12.1	-3.7
H11N2	**WAKE ISLAND Hy**	32.56	168	T	T	22 43 55.9	
	baz=349						
H11N3	**WAKE ISLAND Hy**	32.57	168	T	T	22 43 54.9	
	baz=349						
H11N1	**WAKE ISLAND Hy**	32.57	168	T	T	22 43 57.6	
	baz=349						
H11S1	**WAKE ISLAND Hy**	33.74	169	T	T	22 45 20.5	
	baz=354						
H11S3	**WAKE ISLAND Hy**	33.75	169	T	T	22 45 21.1	
	baz=354						
H11S2	**WAKE ISLAND Hy**	33.76	169	T	T	22 45 20.5	
	baz=354						
FINES	**FINESS Array B**	61.21	337	P	P	22 12 22.2	+0.1
	2.0nm,1.0s,baz=46,slow=8.2,SNR=5.0						
NB2	**NORSAR Subarra**	64.68	344	P	P	22 12 46.2	+0.9
	comp=Z,1.4nm,1.1s,baz=26,slow=6.9						
NOA	**NORSAR Array B**	64.68	344	P	P	22 12 46.5	+1.2
	comp=Z,0.2nm,0.6s,baz=23,slow=6.7,SNR=4.0						
AKASG	**Malin Array Be**	69.63	329	P	P	22 13 16.7	0.0
	comp=Z,0.5nm,0.3s,baz=28,slow=7.0,SNR=3.8						

SNET 25 22:14:49.4±1.3,12°.50N×87°.99W,h26km±7km,ML3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	0.78	11	*e*P	Pb	22 15 03.7	-0.8
CNCH				*e*P	Pn	22 15 04.1	-0.8
LCND	**La Caada**	0.81	7	*e*P	Pb	22 15 04.3	-0.5
LCND				*e*S	Sn	22 15 16.4	+0.2
LCND				IAML		22 15 19.4	
	comp=Z,3µm,0.2s						
LCY	**Lacayo**	0.96	342	*e*P	Pn	22 15 07.3	0.0
LCY				*e*S	Sn	22 15 20.3	+0.1
PACA	**Pacayal**	1.01	341	*e*P	Pn	22 15 07.9	-0.1
PACA				*e*S	Sn	22 15 22.4	+0.9
LOMA	**Loma Larga**	1.62	315	*e*P	Pn	22 15 16.6	+0.3
LOMA				*e*S	Sn	22 15 37.4	+1.1

IDC ***25*** *22:35:38.5±1.3,38°.28N×20°.11E,h0km,mb3.7/7, mb1 3.6/14,mb1mx3.5/63,mbtmp3.5/14,ML3.3/5,MS2.9/3, Ms1 2.9/3,ms1mx2.4/42,Error ellipse: s-maj=22.7km s-min=15.5km az=3.0*

ISCJB ***25*** *22:35:42.9±0.4,38°.65N±0°.01×20°.41E±0°.02,h1km±3km, mb3.6/7,MS2.9/2,Error ellipse: s-maj=3.1km s-min=1.9km az=142.9*

ATH ***25*** *22:35:44.7,38°.64N×20°.62E,h8km±1km,ML3.4/27,Error ellipse: s-maj=1.4km s-min=0.8km az=260.0*

THE ***25*** *22:35:45.0,38°.65N×20°.56E,h0km±1km,ML3.4/32,Error ellipse: s-maj=1.5km s-min=0.6km az=237.0*

ISC 25 22:35:43.4±0.7,38°.63N±0°.01×20°.49E±0°.02,h12km±4km, n213,σ1s.70/261,mb3.6/7,7C-4D,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVGI	**Lefkada island**	0.13	93	P	Pg	22 35 46.6	-0.2
EVGI				S	Sg	22 35 48.0	-1.1
EVGI	**Lefkada island**	0.13	93	P	Pg	22 35 46.6	-0.2
EVGI				S	Sg	22 35 48.2	-0.9
FSK	**Fiskardo**	0.18	161	P	Pb	22 35 48.8	+0.2
FSK				S	Sb	22 35 52.4	+2.2
	69µm,0.3s						
FSK	**Fiskardo**	0.18	161	P	Pb	22 35 48.9	+0.2
FSK				S	Sb	22 35 52.3	+2.1
LKD2	**Lefkada island**	0.21	39	P	Pg	22 35 47.7	-0.3
LKD2				S	Sg	22 35 49.9	-1.2
LKD2	**Lefkada island**	0.21	39	P	Pg	22 35 47.6	-0.3
LKD2				S	Sg	22 35 50.0	-1.1
LKD2				AML	AML	22 35 55.0	
	comp=N,28699µm,0.3s						
LKD2				AML	AML	22 35 57.1	
	comp=E,28156µm,0.6s						
TSLK	**Tsoukalades, L**	0.24	33	P	Pg	22 35 48.4	0.0
TSLK				S	Sg	22 35 50.8	-1.1
	comp=E,22µm,0.7s						
TSLK	**Tsoukalades, L**	0.24	33	P	Pg	22 35 48.5	0.0
TSLK				S	Sg	22 35 51.5	-0.4
TSLK				AML	AML	22 35 55.0	
	comp=N,42548µm,0.4s						
TSLK				AML	AML	22 35 55.3	
	comp=E,48222µm,0.8s						
MGNA	**Meganis**	0.24	83	P	Pg	22 35 48.3	-0.2
MGNA				S	Sg	22 35 50.7	-1.2
MGNA				AML	AML	22 35 52.3	
	comp=N,72187µm,0.2s						
MGNA				AML	AML	22 35 52.5	
	comp=E,36930µm,0.2s						
VLS	**Valsamata**	0.46	170	P	Pb	22 35 53.5	+0.1
VLS				S	Sb	22 36 01.3	+1.2
	comp=E,26µm,0.4s						
VLS	**Valsamata**	0.46	170	P	Pb	22 35 53.7	+0.3
VLS				S	Sb	22 36 01.1	+1.0
VLS				AML	AML	22 36 01.9	
	comp=E,55093µm,0.5s						
VLS				AML	AML	22 36 02.1	
	comp=N,50194µm,0.4s						
KFL	**Anninata**	0.57	156	P	Pb	22 35 55.4	+0.1
KFL				S	Sn	22 36 05.1	-1.5
	comp=N,12µm,0.4s						
KFL	**Anninata**	0.57	156	P	Pb	22 35 55.5	+0.1
KFL				S	Sb	22 36 03.4	+0.1
KFL				AML	AML	22 36 10.8	
	comp=N,24836µm,0.5s						
KFL				AML	AML	22 36 12.1	
	comp=E,23613µm,0.4s						
VLMS	**Volimes, Zakyn**	0.76	170	P	Pb	22 35 58.9	+0.2
VLMS				S	Sn	22 36 10.5	-0.9
VLMS				AML	AML	22 36 14.5	
	comp=N,14185µm,0.3s						
VLMS				AML	AML	22 36 18.8	
	comp=E,7348µm,0.4s						
PVO	**Paravola**	0.81	90	P	Pb	22 35 59.4	-0.1
PVO				S	Sn	22 36 11.2	-1.4
	comp=E,9µm,0.5s						
PVO	**Paravola**	0.81	90	P	Pb	22 35 59.4	-0.1
PVO				AML	AML	22 36 13.1	
	comp=N,25882µm,0.6s						
PVO				AML	AML	22 36 14.4	
	comp=E,9474µm,0.3s						
VTN	**Vitineika**	0.90	142	P	Pn	22 36 01.6	-0.2
VTN	**Vitineika**	0.90	142	P	Pn	22 36 01.5	-0.2
IGT	**Igoumenitsa**	0.91	352	P	Pb	22 36 01.0	-0.2
IGT				S	Sn	22 36 14.8	-0.3
	comp=E,2µm,0.8s						
IGT	**Igoumenitsa**	0.91	352	P	Pb	22 36 01.0	-0.2
IGT				S	Sn	22 36 15.8	+0.7
IGT				AML	AML	22 36 23.2	
	comp=N,1530µm,0.5s						
IGT				AML	AML	22 36 24.6	
	comp=E,2975µm,0.7s						
RLS	**Riolos of Patr**	0.96	126	P	Pg	22 36 01.8	-0.1
RLS				S	Sn	22 36 17.2	+1.1
	comp=E,2µm,0.5s						
RLS	**Riolos of Patr**	0.96	126	P	Pg	22 36 01.7	-0.1
RLS				AML	AML	22 36 24.9	
	comp=E,4256µm,0.5s						
RLS				AML	AML	22 36 28.9	
	comp=N,3310µm,1.0s						
ZKS	**Zakynthos**	0.96	166	P	Pg	22 36 01.9	-0.1
ZKS				S	Sn	22 36 17.1	+0.9
	comp=N,7µm,1.0s						
ZKS	**Zakynthos**	0.96	166	P	Pg	22 36 01.9	-0.1
ZKS				AML	AML	22 36 29.8	
	comp=N,13162µm,1.0s						
ZKS				AML	AML	22 36 34.8	
	comp=E,12754µm,1.1s						
JAN	**Janina**	1.06	15	P	Pg	22 36 04.5	+0.5
JAN				S	Sn	22 36 18.9	0.0
	comp=E,2µm,0.7s						
JAN	**Janina**	1.06	15	P	Pg	22 36 04.6	+0.5
JAN				S	Sn	22 36 18.9	0.0
JAN				AML	AML	22 36 25.4	
	comp=E,3615µm,0.8s						
JAN				AML	AML	22 36 26.3	
	comp=N,3200µm,0.6s						
EVR	**Evrytania**	1.07	74	P	Pb	22 36 03.4	-0.6
EVR				S	Sn	22 36 18.0	-1.2
	comp=N,2µm,1.0s						
EVR	**Evrytania**	1.07	74	P	Pb	22 36 03.4	-0.6
EVR				AML	AML	22 36 29.5	
	comp=E,2033µm,1.0s						
EVR				AML	AML	22 36 32.2	
	comp=N,2374µm,0.8s						
UPR	**University Cam**	1.07	108	P	Pn	22 36 04.0	-0.3
UPR	**University Cam**	1.07	108	P	Pn	22 36 03.9	-0.4
ANX	**Ano Chora**	1.12	91	P	Pb	22 36 04.3	-0.5
ANX				S	Sg	22 36 19.2	-0.5
	comp=N,5µm,0.7s						
ANX	**Ano Chora**	1.12	91	P	Pb	22 36 04.4	-0.5
ANX				AML	AML	22 36 28.3	
	comp=N,9504µm,0.7s						
ANX				AML	AML	22 36 29.3	
	comp=E,11198µm,0.7s						
DRO	**Drossia**	1.17	125	P	Pn	22 36 05.3	-0.4
DRO				S	Sn	22 36 23.2	+1.6
	comp=E,3µm,0.4s						
DRO	**Drossia**	1.17	125	P	Pg	22 36 05.6	-0.5
DRO				AML	AML	22 36 33.5	
	comp=N,6748µm,0.5s						
DRO				AML	AML	22 36 33.6	
	comp=E,6188µm,0.4s						
KASA	**Kassiopi**	1.20	339	P	Pg	22 36 07.0	+0.5
KEK	**Kerkira**	1.21	334	P	Pg	22 36 07.7	+1.0
KEK				S	Sg	22 36 26.6	+4.1
	comp=E,832nm,1.0s						
KEK	**Kerkira**	1.21	334	P	Pg	22 36 07.7	+1.0
KEK				AML	AML	22 36 28.7	
	comp=E,1677µm,0.7s						
KEK				AML	AML	22 36 34.8	
	comp=N,1521µm,0.6s						
LAKA	**Lakka**	1.23	108	P	Pn	22 36 05.9	-0.6
LAKA				S	Sg	22 36 25.7	+2.5
	comp=N,2µm,0.7s						
LAKA	**Lakka**	1.23	108	P	Pn	22 36 05.9	-0.6
LAKA				AML	AML	22 36 33.4	
	comp=N,3988µm,0.7s						
LAKA				AML	AML	22 36 36.8	
	comp=E,3661µm,0.7s						
SERG	**Sergoula**	1.25	99	P	Pn	22 36 06.2	-0.5
SERG				S	Sg	22 36 24.7	+1.0
	comp=E,2µm,0.9s						
SERG	**Sergoula**	1.25	99	P	Pn	22 36 06.2	-0.5
TRIZ	**Trizonia**	1.27	101	P	Pn	22 36 06.5	-0.4
TRIZ				S	Sg	22 36 25.9	+1.5
	comp=E,3µm,1.1s						
TRIZ	**Trizonia**	1.27	101	P	Pb	22 36 06.7	-0.6
MEV	**Metsovon**	1.29	26	P	Pg	22 36 08.6	+0.3
AIG4	**Aigion**	1.30	106	P	Pn	22 36 07.1	-0.3
AIG2	**Aigio**	1.30	107	P	Pb	22 36 07.5	-0.3
SRN	**Sarande**	1.31	343	P	Pg	22 36 09.6	+1.0
SRN				S	Sg	22 36 27.8	+2.2
	comp=E,580nm,0.7s						
KALE	**Kalithea**	1.32	100	P	Pn	22 36 07.3	-0.4
KALE				S	Sg	22 36 27.5	+1.6
	comp=E,2µm,0.6s						
KALE	**Kalithea**	1.32	100	P	Pn	22 36 07.4	-0.3
KALE				AML	AML	22 36 36.4	
	comp=N,2850µm,0.8s						
KALE				AML	AML	22 36 38.9	
	comp=E,3417µm,0.6s						
AIG3	**Aigion**	1.32	106	P	Pb	22 36 07.5	-0.6
ALIK	**Aliki, Aigiali**	1.32	106	P	Pn	22 36 07.5	-0.2
AIG1	**Aigion**	1.36	107	P	Pb	22 36 08.6	-0.2
TRAZ	**Trapeza**	1.43	108	P	Pb	22 36 09.2	-0.8
TRAZ				S	Sg	22 36 31.7	+2.2
	comp=E,2µm,0.8s						
TRAZ	**Trapeza**	1.43	108	P	Pb	22 36 09.2	-0.8
TRAZ				AML	AML	22 36 39.5	
	comp=E,3733µm,0.6s						
TRAZ				AML	AML	22 36 43.0	
	comp=N,3780µm,0.4s						
KLV	**Kalavryta, Ach**	1.43	114	P	Pn	22 36 09.2	0.0
KLV				S	Sg	22 36 31.6	+2.1
	comp=N,870nm,0.9s						
KLV	**Kalavryta, Ach**	1.43	114	P	Pn	22 36 09.1	-0.1
AMT	**Artemida-Makis**	1.46	138	P	Pb	22 36 10.5	0.0
AMT				S	Sg	22 36 31.2	+0.9
	comp=N,2µm,0.8s						
AMT	**Artemida-Makis**	1.46	138	P	Pg	22 36 11.1	-0.4
KPRO	**Kipourio**	1.49	27	P	Pg	22 36 12.2	+0.1
KPRO				S	Sg	22 36 32.7	+1.3
	comp=N,1µm,0.9s						
KPRO	**Kipourio**	1.49	27	P	Pg	22 36 12.4	+0.3
KPRO				AML	AML	22 36 40.9	
	comp=E,1368µm,0.8s						
KPRO				AML	AML	22 36 42.8	
	comp=N,2578µm,1.1s						
AGG	**Agios Georgios**	1.49	74	P	Pb	22 36 11.1	0.0
AGG				S	Sg	22 36 33.7	+2.2
	comp=N,2µm,1.1s						
AGG	**Agios Georgios**	1.49	74	P	Pb	22 36 10.8	-0.3
AGG				AML	AML	22 36 41.5	
	comp=E,3143µm,0.7s						
AGG				AML	AML	22 36 42.0	
	comp=N,2269µm,1.0s						
THL	**Klokotos Trika**	1.51	51	P	Pb	22 36 11.3	-0.1
THL				S	Sg	22 36 33.3	+1.2
	comp=N,808nm,1.0s						
THL	**Klokotos Trika**	1.51	51	P	Pb	22 36 11.5	+0.1
THL				AML	AML	22 36 39.9	
	comp=N,1917µm,0.8s						
THL				AML	AML	22 36 40.2	
	comp=E,1376µm,0.9s						
DSF	**Desfina**	1.61	97	P	Pb	22 36 12.6	-0.6
DSF				S	Sg	22 36 35.1	-0.3
	comp=E,872nm,0.9s						
DSF	**Desfina**	1.61	97	P	Pb	22 36 12.3	-0.8
DSF				AML	AML	22 36 44.1	
	comp=N,1885µm,0.9s						
DSF				AML	AML	22 36 45.0	
	comp=E,1051µm,0.6s						
GUR	**Goura**	1.61	115	P	Pb	22 36 12.2	-1.0
GUR	**Goura**	1.61	115	P	Pb	22 36 12.3	-1.0
GUR				AML	AML	22 36 47.1	
	comp=N,3716µm,0.5s						
GUR				AML	AML	22 36 48.6	
	comp=E,2914µm,0.6s						
PENT	**Pentalofos**	1.65	18	P	Pg	22 36 15.4	+0.4
PENT				S	Sg	22 36 38.0	+1.6
	comp=E,565nm,1.1s						
PENT	**Pentalofos**	1.65	18	P	Pg	22 36 15.3	+0.2
PENT				AML	AML	22 36 46.5	
	comp=N,1148µm,0.6s						
PENT				AML	AML	22 36 52.5	
	comp=E,759µm,0.9s						
TPE	**Tepelena**	1.71	348	P	Pb	22 36 15.7	+1.0
TPE				S	Sg	22 36 39.0	+0.7
	comp=E,1µm,1.2s						
LRSO	**Larissa Observ**	1.81	54	AML	AML	22 36 48.0	
	comp=N,4839µm,0.9s						
LRSO				AML	AML	22 36 55.0	
	comp=E,2529µm,0.8s						
NEST	**Nestorio**	1.84	13	P	Pg	22 36 18.8	+0.1
NEST				S	Sb	22 36 40.7	+0.7
	comp=E,342nm,0.9s						
NEST	**Nestorio**	1.84	13	P	Pg	22 36 19.3	+0.6
ITM	**Ithomi**	1.84	141	P	Pb	22 36 17.4	+0.4
ITM	**Ithomi**	1.84	141	P	Pb	22 36 17.1	+0.1
PROD	**Prodromos**	1.93	100	P	Pb	22 36 18.9	+0.4
PROD				S	Sb	22 36 42.4	-0.1
PROD	**Prodromos**	1.93	100	P	Pg	22 36 19.2	-1.3
PROD				AML	AML	22 36 53.1	
	comp=N,1426µm,0.6s						
PROD				AML	AML	22 36 56.0	
	comp=E,1993µm,0.6s						
KZN	**Kozani**	1.95	30	P	Pb	22 36 19.2	+0.3
KZN	**Kozani**	1.95	30	P	Pb	22 36 19.7	+0.8
VLX	**Vlachokerasia**	1.95	129	P	Pb	22 36 19.3	+0.4
VLX	**Vlachokerasia**	1.95	129	P	Pb	22 36 19.0	0.0
LKR	**Lokris**	1.97	89	P	Pb	22 36 19.2	+0.1
ATAL	**Atalanti**	1.98	87	P	Pb	22 36 19.9	+0.4
ATAL				S	Sb	22 36 44.5	+0.4
	comp=E,550nm,0.8s						
ATAL	**Atalanti**	1.98	87	P	Pb	22 36 19.9	+0.4
ATAL				AML	AML	22 36 54.5	
	comp=N,1223µm,1.0s						
ATAL				AML	AML	22 37 04.2	
	comp=E,840µm,0.8s						
PYL	**PYLOS**	1.99	150	P	Pb	22 36 20.2	+0.6
PYL				S	Sg	22 36 45.5	-2.0
	comp=E,310nm,0.8s						
PYL	**PYLOS**	1.99	150	P	Pb	22 36 20.2	+0.6
ACOR	**Acrocorinthos**	2.01	111	P	Pb	22 36 20.3	+0.3
LOUT	**Loutraki**	2.06	107	P	Pb	22 36 21.1	+0.4
LOUT	**Loutraki**	2.06	107	P	Pb	22 36 20.9	+0.2
LIT	**Litokhoron**	2.14	46	P	Pb	22 36 20.8	-1.3
LIT	**Litokhoron**	2.14	46	P	Pg	22 36 23.4	-1.1
SMIA	**Simia**	2.14	82	P	Pb	22 36 21.8	-0.3
SMIA	**Simia**	2.14	82	P	Pb	22 36 22.4	+0.2
KTI	**Kastanea**	2.17	35	P	Pb	22 36 23.1	+0.5
VIL2	**Platees**	2.22	100	P	Pb	22 36 23.4	-0.1
XOR	**Xorichti**	2.23	70	P	Pb	22 36 22.6	-1.0
XOR	**Xorichti**	2.23	70	P	Pb	22 36 22.7	-1.0
NEO	**Neokhori**	2.24	71	P	Pb	22 36 23.1	-0.7
NEO				S	Sb	22 36 51.2	-0.2
	comp=E,325nm,0.8s						
NEO	**Neokhori**	2.24	71	P	Pb	22 36 22.5	-1.2
FNA	**Florina**	2.26	17	P	Pb	22 36 23.5	-0.7
FNA	**Florina**	2.26	17	P	Pb	22 36 23.5	-0.7
VILL	**Villia**	2.27	101	P	Pb	22 36 23.4	-0.9
VILL				S	Sb	22 36 50.4	-1.9
	comp=E,792nm,0.9s						
EPID	**Epidavros**	2.31	115	P	Pb	22 36 24.2	-0.8
DYR	**Agios Nikonas**	2.37	141	P	Pg	22 36 27.4	-1.5
DYR	**Agios Nikonas**	2.37	141	P	Pg	22 36 27.4	-1.5
SKIA	**Skiathos**	2.38	76	P	Pb	22 36 24.8	-1.5
SKIA	**Skiathos**	2.38	76	P	Pb	22 36 25.6	-0.7
MRKA	**Markates**	2.43	87	P	Pb	22 36 25.8	-1.2
MRKA	**Markates**	2.43	87	P	Pb	22 36 25.9	-1.2
DID	**Didima**	2.44	116	P	Pb	22 36 25.6	-1.7
DID	**Didima**	2.44	116	P	Pb	22 36 25.7	-1.5
KRND	**KRANIDI**	2.44	120	P	Pb	22 36 26.1	-1.1
KRND	**KRANIDI**	2.44	120	P	Pb	22 36 26.1	-1.1
ATHU	**Athens Univers**	2.67	103	P	Pb	22 36 29.0	-2.2
ATHU	**Athens Univers**	2.67	103	P	Pb	22 36 29.1	-2.2
EREA	**Eretria**	2.71	93	P	Pb	22 36 29.9	-1.9
EREA	**Eretria**	2.71	93	P	Pb	22 36 29.9	-1.9
VLY	**Voula,Athens**	2.71	106	P	Pb	22 36 29.4	-2.5
VLY	**Voula,Athens**	2.71	106	P	Pb	22 36 29.8	-2.1
PTL	**Penteli**	2.72	101	P	Pb	22 36 29.4	-2.6
PTL	**Penteli**	2.72	101	P	Pb	22 36 29.9	-2.1
VLI	**Veliai**	2.72	134	P	Pb	22 36 30.8	-1.2
TIR	**Tirane**	2.76	350	P	Pn	22 36 29.7	+2.3
TIR	**Tirane**	2.76	350	⇑*i*P	Pb	22 36 30.5	-2.2
TIR	**Tirane**	2.76	350	S	Sb	22 37 05.6	-0.8
PLG	**Polygyros**	2.88	52	P	Pn	22 36 31.3	+2.2
PLG	**Polygyros**	2.88	52	P	Pn	22 36 31.3	+2.2
TIP	**Timpagrande**	2.96	282	⇑*i*P	Pb	22 36 33.7	-2.5
TIP	**Timpagrande**	2.96	282	S	Sb	22 37 11.4	-1.0
PHP	**Peshkopia**	3.05	359	P	Pn	22 36 34.2	+2.6
KTHR	**Kythira**	3.10	139	P	Pb	22 36 37.5	-0.9
KTHA	**Kythira Island**	3.13	138	P	Pb	22 36 36.8	-2.2
KTHA	**Kythira Island**	3.13	138	P	Pb	22 36 37.5	-1.5
VAY	**Valandovo**	3.13	30	*i* Pn	Pb	22 36 36.5	-2.5
VAY				*i* Sn	Sb	22 37 13.9	-3.1
KNT	**Kendrikon**	3.14	35	P	Pn	22 36 34.6	+1.9
OUR	**Ouranopolis**	3.19	57	P	Pb	22 36 36.5	-3.6
SKO	**Skopje**	3.42	12	*i* Pn	Pn	22 36 40.1	+3.6
SKO				*i* Sn	Sn	22 37 19.4	+2.5
SRS	**Serrai**	3.45	43	P	Pn	22 36 39.4	+2.5
SERI	**Serifos**	3.48	114	P	Pn	22 36 40.4	+3.0
SERI	**Serifos**	3.48	114	P	Pn	22 36 40.6	+3.1
MATE	**Matera**	3.55	306	⇑*i*P	Pn	22 36 42.4	+4.1
MATE	**Matera**	3.55	306	S	Sn	22 37 24.7	+4.5
ANKY	**Antikythira Is**	3.55	140	P	Pb	22 36 43.5	-2.7
DRME	**Dracevica, Mon**	3.69	345	*e*Pn	Pn	22 36 41.7	+1.4
NVR	**Nevrokopi**	3.75	43	P	Pn	22 36 44.4	+3.2
KKB	**Krupnik**	3.79	31	*e*P	Pb	22 36 47.6	-2.7
THAS	**Thassos island**	3.82	58	P	Pn	22 36 43.8	+1.8
MMB	**Musomiste**	3.86	39	*e*P	Sg	22 37 47.5	+0.1
PDG	**Podgorica**	3.91	346	⇑*i*P	Pn	22 36 45.9	+2.6
PDG	**Podgorica**	3.91	346	S	Sn	22 37 33.2	+4.1
PDG	**Podgorica**	3.91	346	*e*Pn	Pn	22 36 44.7	+1.4
HCY	**Herceg Novi**	4.11	339	*e*Pn	Pn	22 36 45.8	-0.2
VAM	**Vamos**	4.38	136	P	Pn	22 36 52.4	+2.7
TREB	**Trebinje**	4.40	339	*e*Pn	Pn	22 36 50.1	+0.1
DBRK	**Dubrovnik**	4.41	337	*e*Pn	Pn	22 36 50.5	+0.4
DBRK				Sn	Sn	22 37 39.8	-1.7
VTS	**Vitosha**	4.50	27	⇑*i*P	Pn	22 36 55.0	+3.5
VTS	**Vitosha**	4.50	27	S	Sn	22 37 49.6	+5.8
VTS	**Vitosha**	4.50	27	*e*P	Pn	22 36 54.7	+3.2
BRY	**Bratogost**	4.52	341	*e*Pn	Pn	22 36 52.3	+0.5
RDO	**Rodhopi**	4.63	55	P	Pn	22 36 55.1	+2.0
UPM	**Unac-Piva**	4.73	346	*e*Pn	Pn	22 36 57.0	+2.3
STON	**Ston**	4.74	334	*e*Pn	Pn	22 36 54.7	0.0
STON				Sn	Sn	22 37 47.6	-1.8
STON	**Ston**	4.74	334	*e*Pn	Pn	22 36 54.2	-0.4
IDI	**Anoyia**	4.85	132	Pn	Pn	22 36 54.5	-1.8
	comp=E,0.1nm,0.3s,baz=317,slow=19,SNR=1.9						
IDI				Lg	Lg	22 37 55.8	
	comp=E,2.2nm,0.3s,baz=288,slow=20,SNR=6.7						
VAE	**Valguarnera**	4.93	258	Pn	Pn	22 36 49.9	-7.5
	comp=E,0.5nm,0.3s,baz=163,slow=19,SNR=3.3						
VAE				Pg	Pb	22 37 01.1	-8.6
	comp=E,0.6nm,0.3s,baz=67,slow=15,SNR=3.0						
VAE				Lg	Lg	22 37 55.6	
	comp=E,0.9nm,0.3s,baz=166,slow=19,SNR=1.9						
RUDO	**Rudo**	5.06	351	*e*Pn	Pn	22 36 58.8	-0.2
BBLS	**Lazići**	5.30	351	*e*Pn	Pn	22 37 03.0	+0.6
MAKA	**Makarska**	5.34	332	*e*Pn	Pn	22 37 04.3	+1.4
MAKA				Sn	Sn	22 38 01.8	-2.5
DIVS	**Divibare**	5.48	356	*e*Pn	Pn	22 37 05.4	+0.5
HVAR	**Hvar**	5.48	327	*e*Pn	Pn	22 37 05.4	+0.6
HAPS	**Han Pijesak,Bl**	5.58	349	*e*Pn	Pn	22 37 05.9	-0.3
ELND	**Elena**	5.93	42	⇓*i*P	Pn	22 37 14.7	+3.7
ELND	**Elena**	5.93	42	S	Sn	22 38 23.6	+4.8
ZIRJ	**Zirje**	6.21	325	*e*Pn	Pn	22 37 16.1	+1.3
ZIRJ				Sn	Sn	22 38 24.2	-1.5
MGRS	**Mrkonjic Grad**	6.32	337	*e*Pn	Pn	22 37 18.6	+2.2
MORI	**Morici**	6.35	327	*i* Pn	Pn	22 37 18.1	+1.3
MORI				Sn	Sn	22 38 27.0	-2.2
FRGS	**Fruska Gora**	6.54	356	*e*Pn	Pn	22 37 13.9	-5.6
AQU	**L'Aquila**	6.56	307	*e*Pn	Pn	22 37 21.0	+1.3
BLY	**Banja Luka**	6.60	339	⇓*i*P	Pn	22 37 23.6	+3.4
BLY	**Banja Luka**	6.60	339	S	Sn	22 38 39.8	+4.6
BLY	**Banja Luka**	6.60	339	*e*Pn	Pn	22 37 18.8	-1.4
DUGI	**Dugi Otok**	6.74	324	*i* Pn	Pn	22 37 23.8	+1.7
DUGI				Sn	Sn	22 38 37.1	-1.7
UDBI	**Udbina**	6.88	331	*e*Pn	Pn	22 37 26.0	+1.9
NVLJ	**Novalja**	7.27	326	*e*Pn	Pn	22 37 30.4	+1.0
NVLJ				Sn	Sn	22 38 49.5	-2.3
VOIR		7.60	25	⇑*i*P	Pn	22 37 38.4	+4.4
MORH	**Mrgy, Hungar**	7.70	350	*e*Pn	Pn	22 37 34.8	-0.5
OZLJ	**Ozalj**	7.92	334	*e*Pn	Pn	22 37 40.2	+2.0
MLR	**Muntele Rosu**	7.97	29	Pn	Pn	22 37 44.5	+5.4
	comp=E,0.1nm,0.3s,baz=250,slow=10,SNR=5.1						
MLR	**Muntele Rosu**	7.97	29	⇑*i*P	Pn	22 37 42.3	+3.2
RIY	**Rijeka**	8.05	328	*e*Pn	Pn	22 37 39.9	-0.2
CRES	**Cresnjev**	8.10	334	*e*Pn	Pn	22 37 40.9	+0.1
CEY	**Cerknica**	8.41	330	*e*Pn	Pn	22 37 46.0	+0.9
PLOR	**Plostina**	8.54	30	⇓*i*P	Pn	22 37 51.2	+4.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VRI	Vrincioaia	8.58	31	⇓iP	Pn	22 37 51.7	+4.3
SOKA	Soboth	8.99	335	ePn	Pn	22 37 54.2	+1.1
	comp=E,1.3nm,0.4s						
SOKA				eSn	Sn	22 39 31.6	-2.7
	comp=E,1.4nm,0.6s						
OBKA	Obir	9.01	333	ePn	Pn	22 37 56.9	+3.5
	comp=E,2.4nm,0.5s						
KEST	Kesra	9.35	255	Pn	Pn	22 37 50.5	-7.6
	comp=E,0.2nm,0.3s,baz=79,slow=5.2,SNR=2.9						
VYHS	Vyhne	9.94	354	ePN	Pn	22 38 08.0	+2.1
VYHS				e		23 09 04.9	
ABTA	Abfaltersbach	10.01	327	i Sn	Sn	22 39 59.1	-0.1
	comp=E,4.0nm,0.9s						
BRTR	Keskin Array B	10.27	80	Pn	Pn	22 38 15.0	+4.3
	comp=E,0.1nm,0.3s,baz=270,slow=12,SNR=3.1						
VRAC	Vranov	11.04	347	LR	LR	22 43 56.8	
	comp=E,27nm,20.4s,baz=161,slow=44						
GERES	GERESS Array B	11.33	337	Pn	Pn	22 38 24.8	-0.3
	comp=E,0.1nm,0.3s,baz=156,slow=14,SNR=6.6						
ESDC	Sonseca Array	18.98	281	P	P	22 39 59.0	-5.7
	comp=E,0.0nm,0.3s,baz=77,slow=11,SNR=2.8						
HFS	Hagfors	21.95	351	P	P	22 40 38.1	+1.5
	comp=E,1.1nm,0.6s,baz=182,slow=12,SNR=8.7						
EKA	Eskdalemuir Ar	23.05	324	P	P	22 40 46.9	-1.5
	comp=E,5.6nm,1.0s,baz=124,slow=11,SNR=4.2						
FINES	FINESS Array B	23.10	7	P	P	22 40 48.2	-0.7
	comp=E,1.0nm,0.5s,baz=161,slow=8.1,SNR=12						
NB2	NORSAR Subarra	23.17	349	P	P	22 40 49.8	+0.2
	comp=Z,0.2nm,0.6s,baz=155,slow=9.3						
NOA	NORSAR Array B	23.17	349	P	P	22 40 50.1	+0.5
	comp=Z,0.3nm,0.6s,baz=157,slow=9.1,SNR=5.3						
NOA				LR	LR	22 51 42.7	
	comp=Z,15nm,18.3s,baz=350,slow=41						
GEYT	Alibeck	29.41	79	P	P	22 41 47.5	+0.7
	comp=Z,1.4nm,0.5s,baz=281,slow=8.5,SNR=4.9						
DBIC	Dimbokro	39.21	222	LR	LR	22 58 47.0	
	comp=Z,49nm,19.3s,baz=108,slow=36						
MKAR	Makanchi Array	45.09	59	P	P	22 43 58.1	-1.2
	comp=Z,0.4nm,0.5s,baz=280,slow=6.9,SNR=12						
ZALV	Zalesovo Beam	45.41	48	P	P	22 44 02.1	+0.5
	comp=Z,1.9nm,0.5s,baz=276,slow=9.0,SNR=7.4						

ISCJB ***25*** *22:48:42.4±0.4, 63°.23S±0°.05×169°.5E±0°.2, h10^{km}, MS4.2/14, Error ellipse: s-maj=15.8km s-min=6.6km az=2.9*

IDC ***25*** *22:48:42.5±0.9, 63°.14S×169°.85E, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx4.1/18, mbtmp4.1/5, ML3.0/1, MS4.2/13, Ms1 4.2/13, ms1mx4.2/14, Error ellipse: s-maj=48.7km s-min=22.8km az=67.0*

NEIC ***25*** *22:48:44.1±1.8, 63°.22S×169°.52E, h10^{km}±1^{km}, mb4.8/20, Error ellipse: s-maj=21.0km s-min=13.3km az=98.0*

GCMT ***25*** *22:48:45.1±0.3, 63°.06S±0°.01×169°.96E±0°.05, h15^{km}±2^{km}, MW5.1/78, Moment Tensor Solution. s22,c22; s78,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.84±.26; M$_{\theta\theta}$4.91±.23; M$_{\phi\phi}$-4.06±.18; M$_{r\theta}$-2.78±.57; M$_{\theta\phi}$0.74±.15; M$_{\phi r}$-0.47±.43; Best double couple: M$_0$5.12600×10^{16} NP1:ϕ_s219.00000°, δ79.00000°, λ160.00000°. NP2: ϕ_s313.00000°, δ70.00000°, λ12.00000°. Principal axes: T 6.1070, Plg22.0000°, Azm175.0000°; N -1.9560, Plg67.0000°, Azm11.0000°; P -4.1450, Plg6.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 22:48:44.1±0.5, **63°.24S**±0°.07×**169°.6E**±0°.1, **h10**^{km}, **n63**, σ**0**^{s}**.77**/35, **MS4.2**/14, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	Scott Base	14.71	182	ePn	Pn	22 52 12.7	+0.9
WHZ	Wether Hill Ro	17.41	356	ePn	Pn	22 52 46.5	-0.3
	226nm,1.8s						
DCZ	Deep Cove	17.87	354	eP	P	22 52 54.1	+1.0
	62nm,1.0s						
MLZ	Mavora Lakes	17.93	357	eP	P	22 52 53.7	-0.2
	128nm,1.6s						
ODZ	Otahua Downs	18.24	2	eP	Pn	22 52 56.5	-0.6
	56nm,1.2s						
WKZ	Wanaka	18.45	359	eP	Pn	22 52 59.6	-0.1
	474nm,1.9s						
LBZ	Lake Benmore	18.89	1	eP	Pn	22 53 04.9	-0.1
	286nm,1.7s						
RPZ	Rata Peaks	19.58	3	P	P	22 53 10.9	-1.0
	0.1nm,0.3s,baz=180,slow=4.0,SNR=1.9						
RPZ				LR	LR	22 59 22.5	
	comp=Z,2μm,21.4s,baz=213,slow=33						
RPZ	Rata Peaks	19.58	3	eP	Pn	22 53 13.6	+0.4
	168nm,1.7s						
FOZ	Fox Glacier	19.75	0	eP	P	22 53 14.1	+0.4
	151nm,1.6s						
CASY	Casey	24.55	237	eP	P	22 54 03.0	-0.4
	27nm,1.5s						
URZ	Urewera	25.42	14	LR	LR	23 02 34.1	
	comp=Z,891nm,21.4s,baz=187,slow=33						
QSPA	South Pole Qui	26.85	180	P	P	22 54 24.1	-0.4
	4.5nm,1.1s,baz=34,slow=4.7,SNR=5.8						
QSPA				LR	LR	23 03 32.6	
	comp=Z,863nm,20.1s,baz=30,slow=33						
QSPA	South Pole Qui	26.85	180	eP	P	22 54 24.7	+0.2
	41nm,1.8s						
OUZ	Omahuta	28.16	7	eP	P	22 54 36.8	+0.6
	22nm,1.3s						
STKA	Stephens Creek	36.04	317	LR	LR	23 08 28.9	
	comp=Z,460nm,18.2s,baz=155,slow=33						
MAW	Mawson	39.31	215	LR	LR	23 12 22.0	
	comp=Z,840nm,18.7s,baz=132,slow=36						
DZM	Mont Dzumac	41.20	356	eLR	LR	23 07 41.5	
	comp=Z,878nm,23.4s						
DZM	Mont Dzumac	41.20	356	LR	LR	23 12 58.9	
	comp=Z,395nm,18.1s,baz=181,slow=35						
H01W1	Cape Leeuwin H	44.04	283	T	T	23 44 13.3	
	baz=147,slow=76,SNR=222						
H01W2	Cape Leeuwin H	44.05	283	T	T	23 44 13.7	
	baz=147,slow=76,SNR=269						
H01W3	Cape Leeuwin H	44.06	283	T	T	23 44 14.5	
	baz=147,slow=76,SNR=198						
SNAA	Sanae	45.26	183	P	P	22 57 00.7	-0.3
SNAA	Sanae	45.26	183	eP	P	22 57 00.5	-0.5
	32nm,2.0s						
VNA3	Neumayer Olymp	45.79	180	P	P	22 57 04.4	-0.8
ASAR	Alice Springs	46.13	312	P	P	22 57 08.0	-0.5
	1.2nm,0.9s,baz=154,slow=7.3,SNR=7.7						
ASAR				LR	LR	23 15 02.6	
	comp=Z,225nm,18.4s,baz=156,slow=34						
VNA1	Neumayer--Stat	46.38	181	P	P	22 57 07.7	-2.1
RAR	Rarotonga	46.83	41	LR	LR	23 12 00.5	
	comp=Z,171nm,18.8s,baz=211,slow=30						
RAR	Rarotonga	46.83	41	eP	P	22 57 13.9	+0.1
	461nm,1.9s						
TBI	Tubuai	48.27	54	eLQ	LQ	23 08 31.0	
	737nm,26.2s						
TBI				eLR	LR	23 10 52.9	
	comp=Z,324nm,25.5s						
TBI	Tubuai	48.27	54	eT	T	23 48 40.5	
	17nm,0.3s						
WR1	Warramunga Arr	49.45	314	eP	P	22 57 33.4	-0.8
WRA	Warramunga Arr	49.45	314	P	P	22 57 33.4	-0.8
	3.1nm,1.1s,baz=168,slow=9.4,SNR=3.7						
PAE	Paea	53.45	51	eT	T	23 55 08.0	
	6.0nm,0.3s						
PPT2	Papeete2	53.52	51	eLR	LR	23 13 15.7	
	comp=Z,305nm,25.8s						
PPT2	Papeete2	53.52	51	eT	T	23 55 14.2	
	10nm,0.3s						
PPT	Papeete	53.54	51	LR	LR	23 13 43.0	
	comp=Z,129nm,20.5s,baz=176,slow=28						
TIAR	Tiarei	53.63	51	eT	T	23 55 22.0	
	10nm,0.3s						
RKT	Rikitea	54.22	69	eT	T	23 56 12.5	
	13nm,0.3s						
VAH	Vaihoa	56.38	52	eT	T	23 58 48.6	
	138nm,0.3s						
CRZF	Crozet Islands	60.12	225	eP	P	22 58 52.1	+1.0
	94nm,1.2s						
SAUI	Saumlaki	61.65	316	eP	P	22 59 02.2	+0.4
	1μm,1.5s						
CISI	Cisompet, Garu	70.81	292	eP	P	23 00 01.6	+0.8
	205nm,1.6s						
JOHN	Johnston Islan	81.36	20	eP	P	23 01 00.7	+0.2
	126nm,0.8s						
RER	Riviere de l'E	81.42	240	eP	P	23 01 00.1	-1.0
	107nm,1.1s						
LVC	Limon Verde	82.97	127	eP	P	23 01 10.3	+0.7
	7.8nm,0.9s						
BOSA	Boshof	84.18	211	LR	LR	23 35 40.5	
	comp=Z,130nm,21.2s,baz=170,slow=33						
H08S2	Diego Garcia H	86.43	260	T	T	00 37 24.8	
	baz=152,slow=76,SNR=145						
H08S1	Diego Carcia H	86.43	260	T	T	00 37 18.5	
	baz=152,slow=76,SNR=129						
H08S3	Diego Garcia H	86.45	260	T	T	00 37 26.3	
	baz=152,slow=76,SNR=170						
HON	Honolulu	88.05	30	eP	P	23 01 33.8	-0.4
	124nm,0.9s						
H08N1	Diego Carcia H	88.24	260	T	T	00 39 32.9	
	baz=166,slow=71,SNR=5.6						
H08N3	Diego Garcia H	88.25	259	T	T	00 39 37.9	
	baz=166,slow=71,SNR=6.7						
H08N2	Diego Garcia H	88.26	260	T	T	00 39 34.6	
	baz=166,slow=71,SNR=5.7						
LPAZ	La Paz	89.06	126	P	P	23 01 39.5	-0.5
	0.7nm,0.7s,baz=225,slow=11,SNR=2.2						
LPAZ				LR	LR	23 33 49.4	
	comp=Z,72nm,18.4s,baz=197,slow=30						
BDFB	Brasilia	96.12	144	LR	LR	23 43 01.5	
	comp=Z,95nm,19.8s,baz=175,slow=34						
CMAR	Chiang Mai Arr	97.95	295	LR	LR	23 45 41.5	
	comp=Z,44nm,18.4s,baz=169,slow=35						
TORD	Torodi Ar. Bea	129.25	195	PKP	PKPdf	23 07 52.2	-0.1
	1.5nm,1.0s,baz=174,slow=1.8,SNR=2.3						
TOA1	Torodi Ar. Sit	129.26	195	ePKPdf	PKPdf	23 07 52.2	-0.1
ILAR	Eielson Array	131.68	23	PKP	PKPdf	23 07 54.3	-1.1
	0.4nm,0.5s,baz=234,slow=3.0,SNR=3.8						
KBZ	Khabaz	144.13	263	PKP	PKPbc	23 08 17.1	+0.2
	2.9nm,0.9s,baz=112,slow=7.7,SNR=3.8						
ARU	Arti	146.27	291	PKPbc	PKPab	23 08 23.8	-0.4
	0.4nm,0.4s,baz=169,slow=10,SNR=3.4						
KEST	Kesra	149.89	213	PKPbc	PKiKP	23 08 36.2	+1.6
	1.7nm,0.8s,baz=101,slow=15,SNR=2.8						

WEL 25 22:54:19.6, 42°S±1°×**174°.2E**±0°.6, **h15**^{km}±2^{km}, **M3.3**/22, **ML3.6**/15, **MLv3.3**/22, **Error ellipse: s-maj=0.0km s-min=0.0km az=172.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	181	P	Pb	22 54 23.5	+0.1
CMWZ				S	Sb	22 54 26.3	+0.3
BSWZ	Blackbirch Sta	0.27	253	P	Pb	22 54 25.8	-0.2
BSWZ				S	Sb	22 54 30.2	-0.2
TUWZ	Tuamarina	0.29	315	P	Pb	22 54 26.3	-0.1
TUWZ				S	Sb	22 54 31.0	-0.1
TCW	Tory Channel	0.43	6	P	Pb	22 54 28.5	-0.3
BHW	Baring Head	0.54	65	P	Pb	22 54 31.0	+0.3
NNZ	Nelson	0.76	303	P	Pb	22 54 34.4	0.0
NNZ				S	Sb	22 54 45.0	+0.5
PLWZ	Palliser	0.78	85	P	Pn	22 54 35.8	-0.3
MSWZ	Moikau Station	0.81	74	P	Pn	22 54 36.0	-0.3
MSWZ				S	Sn	22 54 47.3	-0.8
DUWZ	D'Urville Isla	0.86	345	P	Pg	22 54 36.3	0.0
KHZ	Kahutara	0.93	213	P	Pn	22 54 38.4	+0.3
PAWZ	Paruwai Farm	0.94	75	P	Pn	22 54 38.4	+0.1
THZ	Tophouse	0.99	262	P	Pg	22 54 38.7	0.0
MTW	Mount Morrison	1.08	64	P	Pn	22 54 40.2	+0.1
OGWZ	Otaki Gorge	1.09	42	P	Pn	22 54 40.3	+0.1
TRWZ	Traveller	1.13	78	P	Pb	22 54 40.5	-0.3
HOWZ	Holdsworth Sta	1.23	53	P	Pn	22 54 42.2	0.0
TMWZ	Te Maipa	1.37	68	P	Pn	22 54 43.7	-0.4
MRZ	Mangatainoka R	1.42	47	P	Pb	22 54 45.2	-0.5
QRZ	Quartz Range	1.51	302	P	Pb	22 54 47.6	+0.4
TIWZ	Tintock	1.52	56	P	Pb	22 54 47.4	-0.1
GVZ	Greta Valley S	1.59	213	P	Pn	22 54 47.1	-0.1
OHWZ	Ohakea	1.65	31	P	Pb	22 54 50.5	+0.8
PRWZ	Pori Road	1.71	51	P	Pn	22 54 48.7	-0.1
BFZ	Birch Farm	1.81	59	P	Pn	22 54 48.8	-1.3
DSZ	Denniston Nort	1.81	266	P	Pb	22 54 52.2	-0.2
LTZ	Lake Taylor	1.84	231	P	Pn	22 54 51.1	+0.4
AMCZ	Amberley	1.93	216	P	Pn	22 54 51.4	-0.4
WAZ	Wanganui	1.97	18	P	Pb	22 54 55.8	+0.7
DVHZ	Dannevirke	1.99	49	P	Pn	22 54 52.3	-0.4
TSZ	Takapari Road	2.06	41	P	Pn	22 54 53.9	+0.3
OKCZ	Okains Bay	2.25	202	P	Pn	22 54 55.2	-1.1
PNHZ	Pukenui	2.29	42	P	Pn	22 54 56.4	-0.3
PREZ	Palmer Road	2.29	359	P	Pb	22 55 00.9	+0.3
KHEZ	Kahui Hut	2.34	356	P	Pb	22 55 01.2	-0.4
MQZ	McQueen's Vall	2.37	209	P	Pn	22 54 56.1	-1.7
NBEZ	Newall Road No	2.38	353	P	Pb	22 55 01.6	-0.5
MTVZ	Mangateitei	2.44	23	P	Pb	22 55 02.0	-1.2
PKE	Pukeiti	2.45	356	P	Pb	22 55 01.6	-1.7
MOVZ	Moawhango	2.52	28	P	Pb	22 55 04.3	-0.1
VRZ	Vera Road	2.54	10	P	Pb	22 55 03.7	-1.1
BHHZ	Black Hill Sta	2.56	34	P	Pb	22 55 05.6	+0.3
DRZ	Dome Shelter	2.57	24	P	Pb	22 55 05.2	-0.3
WHVZ	Whangaehu Hut	2.57	24	P	Pn	22 55 02.7	+1.9
KRHZ	Kereru	2.58	40	P	Pn	22 55 00.4	-0.4
FWVZ	Far West T-bar	2.59	24	P	Pb	22 55 06.5	+0.8
TUVZ	Tukino	2.61	25	P	Pb	22 55 04.3	-1.8
NGZ	Ngauruhoe	2.67	24	P	Pb	22 55 06.4	-0.8
TWVZ	Taurewa	2.73	20	P	Pb	22 55 09.1	+1.0
WTVZ	West Tongariro	2.73	23	P	Pb	22 55 09.0	+0.9
KAHZ	Kahuranaki	2.73	49	P	Pb	22 55 09.7	+1.6
KWHZ	Kaweka Forest	2.78	38	P	Pg	22 55 12.1	-0.7
RITZ	Rihia Road	2.94	26	P	Pg	22 55 14.6	-1.3
WVZ	Waitaha Valley	2.95	240	P	Pb	22 55 12.3	+0.4
BKZ	Black Stump Fm	3.02	36	P	Pb	22 55 14.1	+1.1
WATZ	Wairara	3.15	22	P	Pb	22 55 16.7	+1.5
HIZ	Hauiti	3.16	9	P	Pb	22 55 12.8	-2.6
MRHZ	Matea Rd	3.27	32	P	Pb	22 55 18.9	+1.7
TLZ	Tolley Road	3.46	18	P	Pb	22 55 21.7	+1.2
ODZ	Otahua Downs	4.29	216	P	Pn	22 55 25.4	+1.2
MKAZ	Moumakai	4.58	9	P	Pn	22 55 33.8	+5.5
JCZ	Jackson Bay	4.68	237	P	Pn	22 55 35.2	+5.5

ISCJB ***25*** *23:01:33.9±0.2, 40°.96S±0°.02×174°.47E±0°.03, h56^{km}, mb4.1/3, Error ellipse: s-maj=3.9km s-min=2.6km az=36.9*

IDC ***25*** *23:01:34.4±2.0, 40°.73S×174°.45E, h66^{km}±19^{km}, mb3.7/3, mb1 3.9/5, mb1mx3.7/25, mbtmp3.9/5, Error ellipse: s-maj=24.9km s-min=14.7km az=131.0*

WEL ***25*** *23:01:34.5, 41°S±1°×17°4E±°, h60^{km}±3^{km}, M4.2/39, ML4.5/30, MLv4.2/39, Error ellipse: s-maj=0.0km s-min=0.0km az=87.4*

ISC 25 23:01:33.6±0.7, **40°.97S**±0°.03×**174°.49E**±0°.03, **h56**^{km}, **n113**, σ**1**^{s}**.52**/118, **mb4.2**/3, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCW	Tory Channel	0.29	213	P	Pn	23 01 44.4	+1.1
TCW				S	Sn	23 01 51.1	+0.9
DUWZ	D'Urville Isla	0.46	291	P	Pn	23 01 45.2	+0.3
CAW	Cannon Point	0.46	108	P	Pn	23 01 46.9	+2.0
CAW				S	Sn	23 01 55.4	+2.4
BHW	Baring Head	0.53	147	P	Pn	23 01 47.2	+1.6
OGWZ	Otaki Gorge	0.54	74	P	Pn	23 01 47.5	+1.7
OGWZ				S	Sn	23 01 56.8	+2.3
TUWZ	Tuamarina	0.62	221	P	Pn	23 01 48.0	+1.3
MSWZ	Moikau Station	0.73	128	P	Pn	23 01 49.7	+1.6
HOWZ	Holdsworth Sta	0.78	85	P	Pn	23 01 50.2	+1.4
MTW	Mount Morrison	0.79	104	P	Pn	23 01 50.1	+1.3
CMWZ	Cape Campbell	0.81	195	P	Pn	23 01 52.1	+3.0
PAWZ	Paruwai Farm	0.82	121	P	Pn	23 01 50.6	+1.4
PLWZ	Palliser	0.84	136	P	Pn	23 01 50.8	+1.3
NNZ	Nelson	0.87	253	P	Pn	23 01 50.8	+0.9
BSWZ	Blackbirch Sta	0.88	211	P	Pn	23 01 51.8	+1.8
MRZ	Mangatainoka R	0.88	70	P	Pn	23 01 51.3	+1.2
OHWZ	Ohakea	0.99	40	P	Pn	23 01 53.1	+1.8
TRWZ	Traveller	1.00	116	P	Pn	23 01 53.0	+1.4
TMWZ	Te Maipa	1.07	98	P	Pn	23 01 53.7	+1.1
TIWZ	Tintock	1.08	80	P	Pn	23 01 53.7	+1.1
POWZ	Post Office Ro	1.13	60	P	Pn	23 01 54.3	+1.0
PRWZ	Pori Road	1.20	70	P	Pn	23 01 55.3	+1.1
WAZ	Wanganui	1.27	18	P	Pn	23 01 57.2	+2.0
CPWZ	Castlepoint	1.30	88	P	Pn	23 01 57.2	+1.7
BFZ	Birch Farm	1.37	79	P	Pn	23 01 57.0	+0.6
THZ	Tophouse	1.43	236	P	Pn	23 01 58.7	+1.4
DVHZ	Dannevirke	1.44	63	P	Pn	23 01 57.9	+0.4
TSZ	Takapari Road	1.45	52	P	Pn	23 01 58.2	+0.7
QRZ	Quartz Range	1.49	275	P	Pn	23 01 58.8	+0.7
LREZ	Lake Rotokare	1.50	358	P	Pn	23 01 59.8	+1.4
ANWZ	Angora Road	1.59	72	P	Pn	23 02 00.2	+0.7
KHZ	Kahutara	1.61	206	P	Pn	23 02 01.1	+1.3
NMEZ	Namu Road	1.62	343	P	Pn	23 02 01.2	+1.4
PREZ	Palmer Road	1.64	351	P	Pn	23 02 02.4	+2.2
PNHZ	Pukenui	1.68	52	P	Pn	23 02 01.0	+0.3
KHEZ	Kahui Hut	1.71	348	P	Pn	23 02 02.7	+1.5
WPHZ	Waipukurau	1.74	59	P	Pn	23 02 01.9	+0.4
MTVZ	Mangateitei	1.75	26	P	Pn	23 02 03.5	+1.8
NBEZ	Newall Road No	1.76	344	P	Pn	23 02 03.0	+1.2
PRHZ	Porangahau	1.78	68	P	Pn	23 02 02.4	+0.4
DREZ	Durham Road	1.79	353	P	Pn	23 02 03.9	+1.7
PKVZ	Pokaka	1.80	22	P	Pn	23 02 03.8	+1.5
PKE	Pukeiti	1.81	348	P	Pn	23 02 04.2	+1.7
MOVZ	Moawhango	1.83	32	P	Pn	23 02 03.6	+0.8
VRZ	Vera Road	1.85	7	P	Pn	23 02 04.7	+1.7
DRZ	Dome Shelter	1.88	26	P	Pn	23 02 05.3	+1.6
WHVZ	Whangaehu Hut	1.88	27	P	Pn	23 02 05.2	+1.5
FWVZ	Far West T-bar	1.90	26	P	Pn	23 02 05.2	+1.4
BHHZ	Black Hill Sta	1.91	40	P	Pn	23 02 04.8	+1.0
TUVZ	Tukino	1.92	28	P	Pn	23 02 05.6	+1.5
KRHZ	Kereru	1.96	48	P	Pn	23 02 04.4	0.0
NGZ	Ngauruhoe	1.98	26	P	Pn	23 02 06.6	+1.7
TWVZ	Taurewa	2.03	21	P	Pn	23 02 06.9	+1.3
WTVZ	West Tongariro	2.03	25	P	Pn	23 02 07.2	+1.6
PXZ	Pawanui	2.04	64	P	Pn	23 02 05.2	-0.4
KWHZ	Kaweka Forest	2.14	45	P	Pn	23 02 07.2	+0.2
DSZ	Denniston Nort	2.16	248	P	Pn	23 02 08.2	+0.9
KAHZ	Kahuranaki	2.17	58	P	Pn	23 02 07.3	-0.1
RITZ	Rihia Road	2.25	28	P	Pn	23 02 09.7	+1.2
GVZ	Greta Valley S	2.27	208	P	Pn	23 02 09.5	+0.7
MCHZ	McNeill Hill	2.27	49	P	Pn	23 02 09.2	+0.4
BKZ	Black Stump Fm	2.37	41	P	Pn	23 02 10.1	0.0
WATZ	Wairara	2.45	23	P	Pn	23 02 12.5	+1.3
LTZ	Lake Taylor	2.46	222	P	Pn	23 02 12.2	+0.9
HIZ	Hauiti	2.47	7	P	Pn	23 02 13.1	+1.7
MRHZ	Matea Rd	2.60	36	P	Pn	23 02 12.9	-0.3
TLZ	Tolley Road	2.75	17	P	Pn	23 02 16.8	+1.4
RAHZ	Arahi	2.86	45	P	Pn	23 02 16.2	-0.6
INZ	Inchbonnie	2.87	231	P	Pn	23 02 17.5	+0.5
OKCZ	Okains Bay	2.95	201	P	Pn	23 02 18.1	+0.1
RTZ	Ruatahuna	3.03	40	P	Pn	23 02 18.5	-0.7
MUGZ	Murupara	3.05	36	P	Pn	23 02 18.2	-1.1
MQZ	McQueen's Vall	3.06	206	P	Pn	23 02 18.4	-1.0
SNGZ	Shannon Statio	3.10	46	P	Pn	23 02 19.0	-1.1
KNZ	Kokohu	3.12	53	P	Pn	23 02 19.0	-1.4
MHGZ	Mahia Peninsul	3.19	57	P	Pn	23 02 20.0	-1.3
PRGZ	Paritu Road	3.31	53	P	Pn	23 02 21.3	-1.7
TOZ	Tahuroa Road	3.33	14	P	Pn	23 02 24.2	+1.1
RAGZ	Rawiri	3.34	43	P	Pn	23 02 21.8	-1.7
URZ	Urewera	3.38	38	P	Pn	23 02 21.7	-2.2
	6.8nm,0.3s,baz=253,slow=3.8,SNR=36						
URZ				S	Sn	23 03 00.3	-2.4
	35nm,0.3s,baz=96,slow=19,SNR=19						
URZ	Urewera	3.38	38	P	Pn	23 02 22.3	-1.5
RIGZ	Rimuhau	3.38	49	P	Pn	23 02 22.2	-1.8
WVZ	Waitaha Valley	3.50	232	P	Pn	23 02 26.4	+0.9
MWZ	Matawai	3.52	43	P	Pn	23 02 24.1	-1.9
TKGZ	Te Karaka	3.62	47	P	Pn	23 02 25.2	-2.0
RPZ	Rata Peaks	3.74	222	P	Pn	23 02 30.0	+1.1
	5.8nm,0.3s,baz=40,slow=7.3,SNR=10						
RPZ				S	Sn	23 03 07.4	-4.3
	6.7nm,0.3s,baz=326,slow=3.6,SNR=6.5						
RPZ	Rata Peaks	3.74	222	P	Pn	23 02 30.3	+1.4
TWGZ	Tauwhareparae	3.88	45	P	Pn	23 02 29.3	-1.5
RUGZ	Raukumara Rang	3.88	41	P	Pn	23 02 29.2	-1.7
MKAZ	Moumakai	3.89	8	P	Pn	23 02 32.2	+1.2
AWAZ	Awhitu Peninsu	3.90	2	P	Pn	23 02 33.0	+1.9
ETAZ	East Tamaki Re	4.02	5	P	Pn	23 02 34.7	+2.0
WTAZ	Waiatarua	4.03	1	P	Pn	23 02 36.0	+3.2
HAZ	Te Kaha	4.10	40	P	Pn	23 02 32.8	-0.9
PUZ	Puketiti	4.11	46	P	Pn	23 02 33.8	-0.1
WIAZ	Waiheke Island	4.20	7	P	Pn	23 02 36.6	+1.5
MBAZ	Motutapu North	4.20	5	P	Pn	23 02 37.6	+2.5
FOZ	Fox Glacier	4.31	232	P	Pn	23 02 36.9	+0.2
KUZ	Kuaotunu	4.32	13	P	Pn	23 02 39.0	+2.1
LBZ	Lake Benmore	4.66	221	P	Pn	23 02 43.2	+1.7
ODZ	Otahua Downs	4.95	213	P	Pn	23 02 45.6	+0.1
WCZ	Waipu Caves	5.02	359	P	Pn	23 02 49.0	+2.6
JCZ	Jackson Bay	5.23	232	P	Pn	23 02 49.0	-0.4
OUZ	Omahuta	5.78	353	P	Pn	23 02 59.3	+2.5
CTZ	Chatham Island	7.15	116	P	Pn	23 03 17.1	+1.6
ASAR	Alice Springs	38.00	284	P	P	23 08 46.0	-0.4
	1.4nm,0.5s,baz=125,slow=7.1,SNR=17						
WRA	Warramunga Arr	40.00	289	P	P	23 09 02.6	-0.5
	1.6nm,0.3s,baz=131,slow=8.3,SNR=17						
QSPA	South Pole Qui	49.16	180	P	P	23 10 18.3	+2.7
	0.9nm,0.4s,baz=126,slow=8.7,SNR=13						
DBIC	Dimbokro	145.84	181	PKPbc	PKPbc	23 21 07.1	+0.1
	2.9nm,0.8s,baz=115,slow=7.3,SNR=4.4						
MMAI	Mount Meron Ar	146.61	270	PKPbc	PKPdf	23 21 07.5	+0.2
	0.5nm,0.3s,baz=103,slow=5.0,SNR=3.9						
ARCES	ARCESS Array B	147.10	341	PKPbc	PKPdf	23 21 07.7	+0.9
	1.7nm,0.7s,baz=64,slow=2.4,SNR=9.1						
BRTR	Keskin Array B	150.30	281	PKPbc	PKPbc	23 21 17.1	-1.4
	1.3nm,1.0s,baz=129,slow=4.9,SNR=4.5						
TORD	Torodi Ar. Bea	151.58	195	PKPbc	PKPbc	23 21 20.8	-1.1
	0.3nm,0.3s,baz=133,slow=2.0,SNR=7.2						
FINES	FINESS Array B	151.97	328	PKPbc	PKPbc	23 21 18.6	-2.8
	1.4nm,1.0s,baz=65,slow=6.9,SNR=4.5						

IDC ***25*** *23:05:48.8±0.7, 37°.34N×26°.97E, h0^{km}, mb3.8/12, mb1 3.8/22, mb1mx3.7/52, mbtmp3.7/22, ML3.4/9, MS3.0/9, Ms1 3.0/9, ms1mx2.9/33, Error ellipse: s-maj=14.0km s-min=11.1km az=142.0*

DDA ***25*** *23:05:48.8, 37°.39N×26°.84E, h25^{km}±1^{km}, ML4.1*

ATH ***25*** *23:05:49.6, 37°.42N×26°.90E, h27^{km}±1^{km}, ML3.9/14, Error ellipse: s-maj=1.8km s-min=1.1km az=84.0*

ISCJB ***25*** *23:05:49.6±0.3, 37°.43N±0°.01×26°.88E±0°.01, h10^{km}±2^{km}, mb3.7/12, MS3.0/4, Error ellipse: s-maj=2.0km s-min=1.9km az=157.7*

ISK ***25*** *23:05:49.2, 37°.40N×26°.88E, h15^{km}, ML4.2/45*

THE ***25*** *23:05:50.6, 37°.41N×26°.85E, h3^{km}±1^{km}, ML3.9/20, Error ellipse: s-maj=1.3km s-min=0.5km az=64.0*

ISC 25 23:05:49.6±1.0, **37°.40N**±0°.02×**26°.88E**±0°.01, **h8**^{km}±7^{km}, **n275**, σ**1**^{s}**.31**/321, **mb3.9**/12, **MS3.1**/4, **25C-14D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIDI	Didim-Aydin	0.29	94	PG	Pb	23 05 56.2	-0.9
SMG	Samos	0.31	354	P	Pb	23 05 56.4	-1.1
SMG				S	Sb	23 06 01.4	-1.3
	34μm,0.3s						
SMG	Samos	0.31	354	P	Pb	23 05 56.4	-1.1
SMG				S	Sb	23 06 01.5	-1.3
SMG				AML	AML	23 06 02.6	
	comp=E,81171μm,0.3s						
SMG				AML	AML	23 06 03.0	
	comp=N,53501μm,0.2s						
GCAM	G?zelcaml?	0.41	43	PG	Pb	23 05 58.0	-1.2
GCAM				SG	Sb	23 06 04.4	-1.2
GCAM	G?zelcaml?	0.41	43	⇓iP	Pb	23 05 58.9	-0.3
GCAM				i S	Sb	23 06 05.2	-0.4
GCAM				IAML_P			
	comp=Z,316μm,0.1s						
YKAV	Yalikavak-Bodr	0.42	130	PG	Pg	23 05 57.9	0.0
YKAV				SG	Sg	23 06 04.1	+0.7
BODT	Bodrum	0.48	134	PG	Pg	23 05 59.3	+0.3
DGB	zmir	0.65	0	⇑iP	Pb	23 06 02.3	-1.0
DGB				i S	Sb	23 06 12.1	-0.4
GMLD	Gumuldur	0.68	3	PG	Pb	23 06 02.8	-0.9
NISR	Nisiros	0.81	166	P	Pn	23 06 06.8	-0.6
NISR				S	Sn	23 06 19.0	-0.6
	comp=Z,9μm,0.6s						
NISR	Nisiros	0.81	166	P	Pn	23 06 06.4	-0.9
NISR				AML	AML	23 06 23.7	
	comp=E,21476μm,0.3s						
NISR				AML	AML	23 06 28.0	
	comp=N,14648μm,0.8s						
AYDN	Tasoluk	0.84	72	⇓iP	Pg	23 06 05.5	-0.3
AYDN				i S	Sb	23 06 18.1	+0.2
AYDN				IAML_P			
	comp=Z,99μm,0.2s						
DAT	Datca	0.87	140	PG	Pb	23 06 06.9	-0.2
DAT	Datca	0.87	140	⇑iP	Pb	23 06 06.7	-0.4
DAT				i S	Sb	23 06 19.2	+0.2
ZEY	zmir	0.89	341	⇑iP	Pn	23 06 07.1	-1.3
ZEY				i S	Sn	23 06 21.7	+0.2
DATC	Datca-Mugla	0.90	135	PG	Pb	23 06 07.1	-0.3
AMGA	Amorgos Island	0.97	234	P	Pn	23 06 08.8	-0.8
AMGA				S	Sn	23 06 22.8	-0.7
	comp=Z,13μm,0.7s						
AMGA	Amorgos Island	0.97	234	P	Pn	23 06 08.8	-0.8
AMGA				S	Sn	23 06 22.7	-0.8
AMGA				AML	AML	23 06 24.9	

	comp=N,26450µm,0.7s						
AMGA				AML	AML	23 06 26.1	
	comp=E,24182µm,0.7s						
AYDB	Zeytinkoy-Aydi	0.97	56	PG	Pb	23 06 08.2	-0.6
URLA	Izmir	0.98	347	PG	Pb	23 06 08.6	-0.4
URLA	Izmir	0.98	347	⇑iP	Pn	23 06 09.0	-0.8
URLA				iS	Sn	23 06 25.3	+1.4
URLA				IAML_P			
	comp=Z,111µm,0.3s						
BLCB	Balcova	0.99	8	PG	Pb	23 06 08.8	-0.3
APE	Apeiranthos	1.12	253	PN	Pn	23 06 11.1	-0.6
APE	Apeiranthos	1.12	253	P	Pn	23 06 11.5	-0.2
APE				S	Sn	23 06 26.2	-1.2
	comp=Z,3µm,0.8s						
APE	Apeiranthos	1.12	253	⇑iP	Pn	23 06 11.9	+0.2
APE				S	Sb	23 06 24.8	-1.3
APE	Apeiranthos	1.12	253	P	Pn	23 06 11.6	-0.2
APE				S	Sn	23 06 27.8	+0.5
APE				AML	AML	23 06 34.0	
	comp=N,6235µm,0.5s						
APE				AML	AML	23 06 35.1	
	comp=E,3145µm,0.4s						
YER	Yerkesik	1.15	103	PN	Pg	23 06 11.5	-0.3
CHOS	Chios island	1.18	327	P	Pn	23 06 11.6	-0.9
CHOS				S	Sn	23 06 28.3	-0.6
	comp=E,4µm,0.8s						
CHOS	Chios island	1.18	327	P	Pn	23 06 11.8	-0.7
CHOS				S	Sn	23 06 28.2	-0.6
CHOS				AML	AML	23 06 35.0	
	comp=E,8002µm,0.6s						
CHOS				AML	AML	23 06 35.9	
	comp=N,7072µm,0.5s						
KRBN	Karaburun	1.22	348	PN	Pn	23 06 12.6	-0.4
MRSB	Marmaris-Mugla	1.26	122	PN	Pn	23 06 13.0	-0.5
FOCM	Foa	1.32	355	PN	Pb	23 06 13.8	-0.8
ANAF	Anafi Island	1.37	221	P	Pg	23 06 15.8	0.0
ANAF				S	Sg	23 06 35.4	+1.8
	comp=N,12µm,0.4s						
ANAF	Anafi Island	1.37	221	P	Pg	23 06 15.6	-0.2
ANAF				AML	AML	23 06 38.8	
	comp=E,24589µm,0.5s						
ANAF				AML	AML	23 06 40.4	
	comp=N,21849µm,0.3s						
TNSA	Tinos	1.37	276	P	Pg	23 06 16.1	+0.1
IOSP	Ios island	1.44	242	P	Pn	23 06 15.4	-0.6
IOSP				S	Sg	23 06 35.0	-0.9
	comp=N,4µm,0.6s						
IOSP	Ios island	1.44	242	P	Pb	23 06 15.8	-0.9
IOSP				S	Sg	23 06 35.5	-0.4
IOSP				AML	AML	23 06 40.1	
	comp=N,9181µm,0.3s						
IOSP				AML	AML	23 06 40.9	
	comp=E,7136µm,0.4s						
TURN	Turunc	1.48	110	PN	Pn	23 06 12.7	-3.8
TURN	Turunc	1.48	110	⇓iP	Pn	23 06 13.1	-3.4
TURN				iS	Sn	23 06 32.1	-3.9
TURN				IAML_P			
	comp=Z,9µm,0.2s						
THR8	Santorini-Mono	1.50	229	P	Pg	23 06 18.2	-0.1
CMBO	Columbo, Santo	1.50	232	P	Pb	23 06 16.6	-1.1
THT2	Imerovigli	1.51	231	P	Pb	23 06 17.2	-0.7
THT2				S	Sg	23 06 38.7	+0.5
	comp=Z,4µm,1.0s						
THR7	Fira-Santorini	1.52	230	P	Pb	23 06 17.3	-0.7
DALY	Dalyan (Mula)	1.54	112	PN	Pn	23 06 17.4	+0.1
DALY	Dalyan (Mula)	1.54	112	⇑iP	Pb	23 06 17.6	-0.8
DALY				iS	Sg	23 06 40.0	+1.0
PSRA	Psara	1.54	318	P	Pb	23 06 17.6	-0.8
GOMA	Golmarmara-Man	1.54	32	PN	Pn	23 06 17.1	-0.3
ARG	Arkhangelos	1.55	139	PN	Pn	23 06 17.0	-0.5
ARG	Arkhangelos	1.55	139	P	Pn	23 06 16.9	-0.5
ARG				S	Sg	23 06 38.9	-0.6
	comp=Z,4µm,0.7s						
ARG	Arkhangelos	1.55	139	P	Pn	23 06 17.0	-0.5
ARG				AML	AML	23 06 43.9	
	comp=N,8833µm,0.8s						
ARG				AML	AML	23 06 46.5	
	comp=E,7456µm,0.9s						
SAP3	Santorini-Thir	1.56	232	P	Pg	23 06 18.3	-1.2
SAP3				S	Sg	23 06 39.9	+0.1
	comp=E,10µm,1.4s						
THR5	Thira Island,	1.57	232	P	Pg	23 06 18.4	-1.3
ZEDA	zmir-Bergama	1.57	6	⇑iP	Pn	23 06 17.6	-0.2
ZEDA				iS	Sg	23 06 42.0	+1.8
ZEDA				IAML_P			
	comp=Z,4µm,0.1s						
SAP1	Santorini-Akro	1.58	229	P	Pb	23 06 17.9	-1.2
SAP1				S	Sg	23 06 39.3	-1.1
	comp=Z,8µm,1.0s						
SAP1	Santorini-Akro	1.58	229	P	Pb	23 06 18.4	-0.6
THR6	Thira Island,	1.58	229	P	Pb	23 06 18.1	-1.0
THR9	Santorini-Faro	1.60	230	P	Pb	23 06 18.3	-1.1
TAVA	DENIZLI_Tavas	1.62	87	⇓iP	Pn	23 06 18.2	-0.4
TAVA				iS	Sg	23 06 42.4	+0.6
AKHS	Akhisar	1.65	26	⇓iP	Pn	23 06 18.8	-0.2
AKHS				iS	Sg	23 06 43.9	+1.2
AKS	Akhisar	1.65	26	PN	Pn	23 06 18.8	-0.2
DKL	Dikili	1.67	1	PN	Pn	23 06 19.0	-0.2
MANT	Manisa	1.72	50	iP	Pn	23 06 19.4	-0.7
MANT				iS	Sb	23 06 42.9	-0.6
DENT	Denizli	1.75	78	PN	Pn	23 06 20.0	-0.3
KULA	Kula-Manisa	1.80	51	PN	Pn	23 06 20.0	-1.0
KARP	Karpathos	1.86	173	PN	Pn	23 06 21.8	-0.1
PRK	Paraskevi	1.90	346	P	Pb	23 06 22.8	-1.8
PRK				S	Sb	23 06 48.5	0.0
	comp=Z,5µm,0.8s						
PRK	Paraskevi	1.90	346	P	Pn	23 06 22.7	+0.3
PRK				AML	AML	23 06 56.8	
	comp=E,8869µm,0.7s						
PRK				AML	AML	23 07 04.3	
	comp=N,10677µm,0.9s						
AYVA	Ayvalik	1.91	356	⇑iP	Pn	23 06 22.3	-0.2
AYVA				iS	Sg	23 06 52.8	+1.8
SERI	Serifos	1.92	264	P	Pn	23 06 22.2	-0.4
SERI				S	Sn	23 06 46.9	-0.1
	comp=N,1µm,0.9s						
SERI	Serifos	1.92	264	P	Pn	23 06 22.3	-0.4
SERI				AML	AML	23 06 52.8	
	comp=N,2782µm,0.8s						
SERI				AML	AML	23 06 56.4	
	comp=E,1214µm,0.5s						
FETY	Fethiye	1.92	113	PN	Pn	23 06 22.6	-0.1
FETY	Fethiye	1.92	113	iP	Pb	23 06 24.1	-0.9
FETY				iS	Sb	23 06 50.0	+0.8
FETY				IAML_P			
	comp=Z,18µm,0.3s						
SIGR	SIGRI	1.98	336	P	Pn	23 06 22.8	-0.6
SIGR	SIGRI	1.98	336	P	Pn	23 06 22.9	-0.6
SIGR				AML	AML	23 07 00.2	
	comp=E,2081µm,0.7s						
SIGR				AML	AML	23 07 00.7	
	comp=N,2723µm,0.7s						
KARY	Karystos	2.04	289	P	Pn	23 06 24.4	+0.2
KARY				S	Sn	23 06 49.7	-0.1
	comp=N,752nm,1.4s						
KARY	Karystos	2.04	289	P	Pn	23 06 24.5	+0.3
KARY				S	Sn	23 06 49.0	-0.8
KARY				AML	AML	23 07 01.4	
	comp=E,1091µm,1.0s						
KARY				AML	AML	23 07 05.2	
	comp=N,1726µm,0.9s						
MHLA	Plaka, Milos I	2.07	252	P	Pb	23 06 25.6	-1.8
STEP	BALIKESIR_Sava	2.08	18	iP	Pn	23 06 24.1	-0.8
STEP				iS	Sg	23 06 58.1	+1.5
MHLO	Agia Marina, M	2.10	251	P	Pb	23 06 26.6	-1.4
MHLO	Agia Marina, M	2.10	251	P	Pb	23 06 26.0	-2.0
GPNR	Gulpinar-Canak	2.13	344	PN	Pn	23 06 25.6	0.0
USAK	Uak-Merkez	2.14	52	iP	Pn	23 06 25.0	-0.7
USAK				iS	Sg	23 06 59.4	+1.0
GOLH	Golhisar	2.15	94	⇓iP	Pn	23 06 26.9	+1.1
GOLH				iS	Sg	23 07 01.2	+2.6
DEMI	Demirci	2.19	41	iP	Pn	23 06 26.0	-0.4
DEMI				iS	Sg	23 06 59.5	-0.5
STIA	Sitia Lasithi	2.28	196	P	Pn	23 06 27.2	-0.4
KHAL	Karahalli	2.29	64	iP	Pn	23 06 27.9	+0.1
KHAL				iS	Sg	23 07 02.7	-0.4
KHAL				IAML_P			
	comp=Z,2µm,0.2s						
ZKR	Zakros	2.34	193	PN	Pn	23 06 28.0	-0.4
ZKR	Zakros	2.34	193	P	Pn	23 06 26.7	-1.7
ZKR				S	Sn	23 06 58.5	+1.1
	comp=Z,1µm,0.8s						
ZKR	Zakros	2.34	193	P	Pn	23 06 28.7	+0.3
ZKR				AML	AML	23 07 12.7	
	comp=N,1144µm,1.3s						
ZKR				AML	AML	23 07 17.1	
	comp=E,2451µm,1.0s						
BAYC	CANAKKALE_Bayr	2.35	354	⇑iP	Pn	23 06 28.6	+0.1
BAYC				iS	Sg	23 07 05.9	+0.7
BAYC				IAML_P			
	comp=Z,2µm,0.2s						
NPS	Neapolis	2.36	206	P	Pn	23 06 28.3	-0.5
NPS	Neapolis	2.36	206	P	Pn	23 06 28.3	-0.5
BALB	Balikesir	2.37	19	PN	Pn	23 06 28.7	-0.1
SMAA	Simav-Kutahya	2.37	44	PN	Pn	23 06 28.8	-0.1
SHAP	Saphane-Kutahy	2.46	48	PN	Pn	23 06 29.9	-0.2
EZN	Ezine	2.46	350	PN	Pn	23 06 29.7	-0.3
EZN	Ezine	2.46	350	⇑iP	Pn	23 06 30.4	+0.4
EZN	Ezine	2.46	350	S	Sg	23 07 11.5	+2.8
PTL	Penteli	2.47	286	P	Pn	23 06 30.8	+0.5
PTL	Penteli	2.47	286	P	Pn	23 06 30.8	+0.5
AKAS	Kas	2.48	117	PN	Pn	23 06 30.5	0.0
VLY	Voula,Athens	2.49	281	P	Pn	23 06 30.9	+0.5
VLY	Voula,Athens	2.49	281	P	Pn	23 06 31.2	+0.8
LAST	Lasithi	2.50	207	P	Pn	23 06 30.6	-0.2
LAST	Lasithi	2.50	207	P	Pn	23 06 30.5	-0.2
KSL	Kastellorizon	2.51	119	P	Pn	23 06 31.8	+1.1
KSL				S	Sn	23 07 03.2	+1.8
	comp=Z,1µm,1.0s						
KSL	Kastellorizon	2.51	119	P	Pn	23 06 32.0	+1.3
KSL				AML	AML	23 07 20.7	
	comp=N,1878µm,1.2s						
KSL				AML	AML	23 07 24.0	
	comp=E,1979µm,0.9s						
ELL	Elmali	2.51	104	PN	Pn	23 06 31.0	+0.1
ATHU	Athens Univers	2.52	284	P	Pn	23 06 31.4	+0.6
ATHU	Athens Univers	2.52	284	P	Pn	23 06 31.4	+0.6
BOZC	Bozcaada	2.52	345	PN	Pn	23 06 30.4	-0.5
BOZC	Bozcaada	2.52	345	iP	Pn	23 06 31.0	+0.1
DURS	Dursunbey	2.53	29	iP	Pn	23 06 30.7	-0.4
DURS				iS	Sg	23 07 12.2	+1.3
EREA	Eretria	2.54	295	P	Pn	23 06 31.6	+0.4
EREA				S	Sn	23 07 03.0	+0.6
	comp=E,425nm,1.6s						
EREA	Eretria	2.54	295	P	Pn	23 06 31.7	+0.4
BRDR	BURDUR-Merkez	2.55	82	iP	Pn	23 06 32.6	+1.2
BRDR				iS	Sg	23 07 16.0	+4.5
BRDR				IAML_P			
	comp=Z,2µm,0.3s						
KSTL	Kastelli Herak	2.55	215	P	Pn	23 06 31.5	+0.2
ATH	Athens Observa	2.57	284	P	Pn	23 06 32.5	+0.9
GEDZ	Gediz	2.58	50	PN	Pn	23 06 31.5	-0.3
IDI	Anoyia	2.65	218	PN	Pn	23 06 32.0	-0.7
IDI	Anoyia	2.65	218	Pn	Pn	23 06 32.4	-0.3
	comp=Z,3.2nm,0.3s,baz=56,slow=10,SNR=25						
IDI				Sn	Sn	23 07 02.1	-2.9
	comp=Z,13nm,0.3s,baz=85,slow=19,SNR=4.6						
IDI				Lg	Lg	23 07 13.4	
	comp=Z,25nm,0.3s,baz=290,slow=22,SNR=8.2						
IDI				LR	LR	23 07 51.3	
	comp=Z,227nm,21.0s,baz=74,slow=46						
IDI	Anoyia	2.65	218	P	Pn	23 06 32.4	-0.3
GDZ	Gediz	2.66	50	iP	Pn	23 06 33.5	+0.7
GONE	Gonen-Balikesi	2.72	13	PN	Pn	23 06 33.7	+0.1
KZIL	AFYON_Kizioren	2.72	71	iP	Pn	23 06 34.2	+0.4
KORT	Korkueli	2.80	97	PN	Pn	23 06 34.9	0.0
KORT	Korkueli	2.80	97	iP	Pb	23 06 37.8	-2.2
LIA	Limnos Island	2.83	333	P	Pn	23 06 35.1	0.0
LIA	Limnos Island	2.83	333	P	Pn	23 06 35.0	0.0
TMBK	Timbaki Herakl	2.88	217	P	Pb	23 06 38.2	-3.1
TVSB	Tavsanli	2.88	44	PN	Pn	23 06 35.5	-0.5
DID	Didima	2.90	273	P	Pn	23 06 36.1	0.0
MRKA	Markates	2.91	298	P	Pn	23 06 36.7	+0.5
MRKA				S	Sn	23 07 12.3	+1.0
	comp=Z,325nm,1.0s						
MRKA	Markates	2.91	298	P	Pn	23 06 36.7	+0.5
SIVA	Sivas	2.91	216	P	Pn	23 06 37.2	+1.0
VILL	Villia	2.92	286	P	Pn	23 06 37.2	+0.7
ISP	Isparta	2.93	81	PN	Pn	23 06 36.5	-0.1
ISP	Isparta	2.93	81	⇑iP	Pg	23 06 45.5	-0.2
VAM	Vamos	2.94	228	P	Pn	23 06 35.9	-0.7
BCK	Bucak	2.96	88	PN	Pn	23 06 37.3	+0.4
KRND	KRANIDI	2.97	271	P	Pn	23 06 37.5	+0.5
LPK	Lapseki	2.97	358	PN	Pn	23 06 37.2	+0.1
VIL2	Platees	2.97	287	P	Pn	23 06 37.2	+0.1
AKUM	Antalya-Kumluc	2.98	110	iP	Pn	23 06 39.5	+2.3
GELI	Tayfur-Gelibol	3.01	354	PN	Pn	23 06 37.8	+0.2
IMMV	Iera Moni Meta	3.03	231	PN	Pn	23 06 37.7	-0.2
IMMV	Iera Moni Meta	3.03	231	P	Pn	23 06 38.3	+0.4
IMMV	Iera Moni Meta	3.03	231	P	Pn	23 06 38.4	+0.5
EDC	Edincik	3.04	14	PN	Pn	23 06 37.8	-0.3
ANTB	Antalya	3.06	98	PN	Pn	23 06 38.6	+0.3
ORLT	Orhaneli	3.08	30	PN	Pn	23 06 38.2	-0.4
KCTX	Karacabey (Bur	3.09	22	PN	Pn	23 06 38.1	-0.6
SHUT	Suhut-Afyon	3.12	67	PN	Pn	23 06 39.3	0.0
LOUT	Loutraki	3.15	282	P	Pn	23 06 40.4	+0.9
LOUT	Loutraki	3.15	282	P	Pn	23 06 40.7	+1.1
SKIA	Skiathos	3.21	304	P	Pn	23 06 41.1	+0.7
SKIA	Skiathos	3.21	304	P	Pn	23 06 41.3	+0.9
ACOR	Acrocorinthos	3.22	280	P	Pn	23 06 41.3	+0.9
VLI	Veliai	3.22	259	P	Pn	23 06 40.9	+0.4
SMTH	Samothraki Isl	3.24	342	P	Pn	23 06 40.5	-0.3
SMTH	Samothraki Isl	3.24	342	P	Pn	23 06 40.2	-0.6
SMIA	Simia	3.25	298	P	Pn	23 06 41.8	+0.9
ANKY	Antikythira Is	3.26	243	P	Pn	23 06 41.5	+0.5
PROD	Prodromos	3.26	286	P	Pn	23 06 42.1	+1.0
PROD	Prodromos	3.26	286	P	Pn	23 06 42.0	+1.0
KTHA	Kythira Island	3.27	251	P	Pn	23 06 41.4	+0.3
KTHA	Kythira Island	3.27	251	P	Pn	23 06 42.3	+1.1
RKY	Sarkoy-Tekirda	3.29	4	PN	Pn	23 06 41.4	-0.1
ATAL	Atalanti	3.31	294	P	Pn	23 06 42.2	+0.6
ATAL	Atalanti	3.31	294	P	Pn	23 06 42.3	+0.6
LKR	Lokris	3.31	293	P	Pn	23 06 42.1	+0.4
MDNY	Mudanya-Bursa	3.35	27	PN	Pn	23 06 42.8	+0.5
NEO	Neokhori	3.44	305	P	Pn	23 06 44.1	+0.5
XOR	Xorichti	3.50	305	P	Pn	23 06 44.8	+0.5
ALN	Alexandroupoli	3.55	350	P	Pn	23 06 44.7	-0.3
ALN				S	Sn	23 07 26.8	-0.4
	comp=Z,220nm,0.9s						
ALN	Alexandroupoli	3.55	350	P	Pn	23 06 44.8	-0.3
VLX	Vlachokerasia	3.58	271	P	Pn	23 06 46.5	+0.9
DSF	Desfina	3.58	288	P	Pn	23 06 46.4	+0.8
THAS	Thassos island	3.62	333	P	Pn	23 06 45.5	-0.4
THAS	Thassos island	3.62	333	P	Pn	23 06 45.7	-0.2
GUR	Goura	3.64	280	P	Pn	23 06 47.3	+1.0
TRIP	Tripoli	3.67	273	P	Pn	23 06 48.3	+1.6
DYR	Agios Nikonas	3.69	261	P	Pn	23 06 48.9	+1.9
OUR	Ouranopolis	3.70	323	P	Pn	23 06 47.4	+0.3
YLV	Yalova	3.71	31	⇓iP	Pb	23 06 53.7	-1.8
YLV	Yalova	3.71	31	S	Sg	23 07 47.9	-1.0
TRAZ	Trapeza	3.77	283	P	Pn	23 06 47.3	-0.9
KLV	Kalavryta, Ach	3.80	281	P	Pn	23 06 48.6	0.0
RDO	Rodhopi	3.88	345	P	Pn	23 06 49.5	-0.1
AGG	Agios Georgios	3.93	296	P	Pn	23 06 51.5	+1.2
AGG	Agios Georgios	3.93	296	P	Pn	23 06 51.7	+1.4
ITM	Ithomi	3.95	268	P	Pn	23 06 52.5	+1.9
KAVA	Kavala	4.03	334	P	Pn	23 06 51.7	0.0
ANX	Ano Chora	4.09	288	P	Pn	23 06 54.1	+1.5
DRO	Drossia	4.13	279	P	Pn	23 06 54.0	+0.9
KLYT	Kilyos	4.20	23	⇑iP	Pb	23 06 59.2	-4.5
KLYT	Kilyos	4.20	23	S	Sg	23 08 00.8	-3.6
CTYL	Yalikoy Yolu	4.21	15	⇑iP	Pn	23 06 57.3	+3.2
CTYL	Yalikoy Yolu	4.21	15	S	Sg	23 08 05.1	+0.2
PHSR	Pinarhisar	4.25	7	⇑iP	Pn	23 06 57.2	+2.5
EVR	Evrytania	4.27	292	P	Pn	23 06 56.6	+1.6
SILT	Sile	4.32	29	⇓iP	Pb	23 07 01.3	-4.5
SILT	Sile	4.32	29	S	Sg	23 08 06.3	-2.0
HORT	Hortiatis	4.34	319	P	Pn	23 06 56.9	+0.9
LIT	Litokhoron	4.36	310	P	Pn	23 06 56.9	+0.7
THL	Klokotos Trika	4.38	301	P	Pn	23 06 58.0	+1.5
KDZ	Kurdzhali	4.39	346	eP	Pn	23 06 56.8	+0.2
PVO	Paravola	4.40	288	P	Pn	23 06 58.8	+2.1
SRS	Serrai	4.50	327	P	Pn	23 06 58.6	+0.5
NVR	Nevrokopi	4.58	330	P	Pn	23 06 59.7	+0.4
RZN	Rozhen	4.60	339	eP	Pn	23 07 00.2	+0.6
DIM	Dimitrovgrad	4.76	348	eP	Pn	23 07 01.6	0.0
MMB	Musomiste	4.84	331	eP	Pn	23 07 03.0	+0.2
KNT	Kendrikon	4.86	322	P	Pn	23 07 04.6	+1.5
VAY	Valandovo	5.14	321	i Pn	Pn	23 07 04.3	-2.7
KKB	Krupnik	5.34	328	eP	Pn	23 07 10.6	+1.0
LEF	Lefka	5.37	113	⇓iP	Pb	23 07 22.7	-0.9
NEST	Nestorio	5.45	305	P	Pn	23 07 12.8	+1.5
BRTR	Keskin Array B	5.79	64	Pn	Pn	23 07 17.1	+1.2
	comp=Z,4.2nm,0.3s,baz=242,slow=16,SNR=140						
BRTR				Sn	Sn	23 08 18.6	-4.0
	baz=239,slow=25,SNR=2.1						
PRD	Provadia	5.81	4	eP	Pn	23 07 15.6	-0.4
VTS	Vitosha	5.91	333	⇓iP	Pn	23 07 17.4	-0.2
VTS	Vitosha	5.91	333	eP	Pn	23 07 18.6	+1.0
ICOR	Ion Corvin	6.75	6	⇑iP	Pn	23 07 29.9	+1.0
TLB	Topalu	7.23	7	⇓iP	Pn	23 07 37.6	+2.0
PDG	Podgorica	7.71	313	⇓iP	Pn	23 07 41.8	-0.4
CFR	Carcaliu	7.83	7	⇑iP	Pn	23 07 45.8	+2.0
MLR	Muntele Rosu	8.11	355	Pn	Pn	23 07 48.7	+0.9
	comp=Z,0.1nm,0.3s,baz=165,slow=7.6,SNR=7.1						
MLR				LR	LR	23 11 00.0	
	comp=Z,110nm,21.2s,baz=288,slow=38						
MLR	Muntele Rosu	8.11	355	⇑iP	Pn	23 07 49.5	+1.7
VOIR		8.15	351	⇑iP	Pn	23 07 48.9	+0.7
TIP	Timpagrande	8.15	286	⇑iP	Pn	23 07 47.1	-1.2
MMAI	Mount Meron Ar	8.23	120	Pn	Pn	23 07 48.6	-0.9
	comp=Z,6.7nm,0.3s,baz=300,slow=12,SNR=30						
MMAI				Sn	Sn	23 09 15.0	-7.7
	comp=Z,12nm,0.3s,baz=308,slow=23,SNR=13						
LOT	Lotru	8.37	345	⇓iP	Pn	23 07 52.5	+1.1
PLOR	Plostina	8.45	359	⇑iP	Pn	23 07 54.5	+2.2
VRI	Vrincioaia	8.46	359	⇑iP	Pn	23 07 54.5	+2.0
MATE	Matera	8.55	295	⇑iP	Pn	23 07 52.5	-1.2
GZR	Gura Zlata	8.56	340	⇓iP	Pn	23 07 53.8	-0.1
BZS	Buzias	9.11	336	⇑iP	Pn	23 08 01.3	0.0
BIZ	Bicaz	9.55	357	⇑iP	Pn	23 08 09.4	+2.0
ASF	Jabal al Asfar	9.75	119	Pn	Pn	23 08 09.7	-0.6
	comp=Z,0.3nm,0.3s,baz=273,slow=6.4,SNR=4.8						
ASF				Sn	Sn	23 09 58.8	-1.2
	comp=Z,0.5nm,0.3s,baz=17,slow=14,SNR=3.9						
VAE	Valguarnera	9.91	274	Pn	Pn	23 08 16.0	+3.5
	comp=Z,0.2nm,0.3s,baz=15,slow=12,SNR=2.2						
EIL	Elat	10.23	137	Pn	Pn	23 08 13.7	-3.1
	comp=Z,0.4nm,0.3s,baz=4.1,slow=14,SNR=6.7						
EIL				Sn	Sn	23 10 02.5	-9.2
	comp=Z,2.2nm,0.3s,baz=280,slow=19,SNR=9.2						
EIL				LR	LR	23 12 56.6	
	comp=Z,66nm,20.9s,baz=309,slow=42						
BURAR	Bucovina Array	10.28	354	⇑iP	Pn	23 08 19.4	+1.9
AKASG	Malin Array Be	13.40	6	Pn	Pn	23 09 02.3	+2.2
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=2.6						
KBZ	Khabaz	13.71	58	LR	LR	23 16 24.5	
	comp=Z,54nm,19.2s,baz=271,slow=46						
KRUC	Moravsky	13.92	330	ePN	P	23 09 16.6	+1.2
OKC	Ostrava-Krasne	13.93	336	AMS	AMS	23 15 20.0	
	comp=Z,100nm,12.5s						
VRAC	Vranov	14.04	331	Pn	P	23 09 13.0	-3.8
	comp=Z,0.2nm,0.3s,baz=180,slow=19,SNR=1.8						
VRAC	Vranov	14.04	331	ePN	P	23 09 16.8	+0.1
ABTA	Abfaltersbach	14.16	316	i pP	P	23 09 21.6	+3.5
	comp=Z,1.2nm,0.6s						
GNI	Garni	14.21	73	LR	LR	23 15 09.1	
	comp=Z,48nm,21.9s,baz=282,slow=40						
TREC	Trest	14.47	329	eP	P	23 09 25.1	+3.6
TREC				AMS	AMS	23 14 50.0	
	comp=Z,100nm,9.7s						
GERES	GERESS Array B	14.92	324	Pn	P	23 09 25.2	-1.3
	comp=Z,0.1nm,0.3s,baz=130,slow=12,SNR=4.5						
DPC	Dobruska-Polom	14.99	333	eP	P	23 09 28.5	+1.1
DPC				AMS	AMS	23 16 10.0	
	comp=Z,100nm,18.2s						
SQTA	Sankt Quirin	15.16	315	i Pn	Pn	23 09 25.4	+1.2
	comp=Z,3.0nm,1.0s						
KHC	Kasperske Hory	15.18	325	eP	P	23 09 30.4	+1.0
KHC				AMS	AMS	23 15 00.0	
	comp=Z,100nm,13.9s						
OSTC	Ostas	15.20	333	AMS	AMS	23 16 30.0	
	comp=Z,200nm,17.6s						
UPC	Upice	15.24	333	AMS	AMS	23 16 20.0	
	comp=Z,200nm,17.9s						
CHVC	Chvalec	15.29	333	AMS	AMS	23 16 20.0	
	comp=Z,100nm,18.2s						
PRU	Pruhonice	15.40	329	eP	P	23 09 34.0	+2.2
PRU				AMS	AMS	23 16 30.0	
	comp=Z,200nm,8.6s						
NKC	Novy Kostel	16.48	326	AMS	AMS	23 18 10.0	
	comp=Z,100nm,15.1s						
CLL	Collm	17.04	329	eP	P	23 09 50.0	+0.1
CLL				e(PP)		23 09 54.0	
CLL				ePPP	PPP	23 10 02.0	
CLL				e		23 10 07.0	
FINES	FINESS Array B	24.07	359	P	P	23 11 05.1	-0.1
	comp=Z,1.2nm,0.8s,baz=173,slow=15,SNR=3.7						
FINES				LR	LR	23 20 29.1	
	comp=Z,58nm,18.5s,baz=168,slow=36						
ESDC	Sonseca Array	24.17	285	P	P	23 11 06.7	+0.3
	comp=Z,1.7nm,0.8s,baz=79,slow=9.5,SNR=6.6						
HFS	Hagfors	24.26	344	P	P	23 11 06.3	-0.6
	comp=Z,1.2nm,0.9s,baz=139,slow=9.9,SNR=4.1						
NB2	NORSAR Subarra	25.64	342	P	P	23 11 19.5	0.0
	comp=Z,1.8nm,1.0s,baz=150,slow=9.3						
NOA	NORSAR Array B	25.64	342	P	P	23 11 20.3	+0.8
	comp=Z,0.2nm,0.7s,baz=146,slow=9.1,SNR=5.0						
NOA				LR	LR	23 23 59.7	
	comp=Z,21nm,19.8s,baz=165,slow=42						
AKTO	Aktyubinsk	25.73	50	P	P	23 11 20.1	-0.3
	comp=Z,2.2nm,0.8s,baz=245,slow=11,SNR=4.4						
MDT	Midelt	26.09	269	P	P	23 11 25.1	+1.1
	comp=Z,3.4nm,0.8s,baz=92,slow=12,SNR=8.4						
ARU	Arti	28.43	38	LR	LR	23 24 33.3	
	comp=Z,42nm,19.3s,baz=274,slow=40						
TORD	Torodi Ar. Bea	32.99	230	P	P	23 12 25.8	+0.6
	comp=Z,2.2nm,0.7s,baz=43,slow=8.6,SNR=10						
KURBB	Kurchatov Arra	38.65	53	P	P	23 13 14.4	+1.0
	comp=Z,0.8nm,0.3s,baz=279,slow=8.6,SNR=13						
MKAR	Makanchi Array	41.41	59	P	P	23 13 37.3	+0.9
	comp=Z,1.5nm,0.7s,baz=286,slow=5.9,SNR=17						
ZALV	Zalesovo Beam	42.47	48	P	P	23 13 44.4	-0.5
	comp=Z,1.0nm,0.6s,baz=270,slow=10,SNR=5.5						
ZALV				LR	LR	23 36 52.0	
	comp=Z,30nm,18.3s,baz=246,slow=44						
KSRS	Korea Array	75.83	54	P	P	23 17 36.7	+0.3
	comp=Z,0.4nm,0.3s,baz=306,slow=4.5,SNR=4.8						
PETK	Petropavlovsk-	80.29	28	P	P	23 18 01.8	+1.0
	comp=Z,1.7nm,0.9s,baz=341,slow=7.6,SNR=2.4						

ISCJB ***25*** *23:06:19.7±1.6, 37°.1N±0°.2×71°.8E±0°.1, h100^{km}, mb3.5/7, Error ellipse: s-maj=23.5km s-min=7.7km az=154.8*

IDC ***25*** *23:06:21.3±3.3, 37°.10N×72°.02E, h111^{km}±31^{km}, mb3.0/6, mb1 3.1/11, mb1mx2.9/50, mbtmp3.4/11, Error ellipse: s-maj=30.7km s-min=21.3km az=28.0*

ISC 25 23:06:21.1±1.0**, 37°.22N**±0°.09×**71°.89E**±0°.08**, h100^{km}, n21, σ2^{s}07**/25**, mb3.5**/7**, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.10	15	P	Pn	23 07 37.8	+2.3
	SNR=44						
UCH	Uchtor	5.40	21	P	Pn	23 07 41.9	+2.3
	SNR=18						
KZA	Kyzart	5.50	27	P	Pn	23 07 43.1	+2.1
	SNR=6.5						
EKS2	Erkin-Say	5.63	14	P	Pn	23 07 44.7	+2.3
	SNR=13						
AAK	Ala-Archa	5.77	19	P	Pn	23 07 46.6	+2.3
	4.7nm,0.3s,baz=173,slow=6.1,SNR=18						
AAK				S	Sn	23 08 47.5	-1.8
	1.1nm,0.3s,baz=329,slow=20,SNR=21						
AAK	Ala-Archa	5.77	19	⇓Pn	Pn	23 07 46.7	+2.3
	10nm,0.5s						
AAK				⇑Sn	Sn	23 08 47.9	-1.4
	21nm,0.6s						
AAK	Ala-Archa	5.77	19	P	Pn	23 07 47.0	+2.6
	SNR=12						
KK31	Karatay Array	5.98	350	Pn	Pn	23 07 49.4	+2.3
	26nm,0.6s,baz=177,slow=13,SNR=175						
KK31				⇓Sn	Sn	23 08 49.7	-4.4
	6.8nm,0.5s,baz=174,slow=23,SNR=8.8						
CHMS	Chumysh	6.18	20	P	Pn	23 07 51.9	+2.2
	SNR=14						
TKM2	Tokmak 2	6.37	25	P	Pn	23 07 55.0	+2.5
	SNR=7.3						
GEYT	Alibeck	10.96	278	P	Pn	23 08 56.4	+1.6
	0.3nm,0.3s,baz=122,slow=12,SNR=5.9						
GEYT				S	Sn	23 10 53.2	-2.1
	0.8nm,0.3s,baz=99,slow=18,SNR=6.5						
MKAR	Makanchi Array	12.29	36	P	Pn	23 09 13.6	+1.0
	0.0nm,0.3s,baz=210,slow=12,SNR=2.7						
BVAR	Borovoye Array	15.85	357	P	Pn	23 09 57.6	-0.6
	0.1nm,0.3s,baz=160,slow=9.1,SNR=3.0						
AKTO	Aktyubinsk	16.54	327	P	Pn	23 10 06.6	-0.2
	0.2nm,0.3s,baz=132,slow=14,SNR=7.4						
CMAR	Chiang Mai Arr	30.19	121	P	P	23 12 19.6	-2.4

	0.9nm,0.3s,baz=301,slow=9.4,SNR=4.1						
FINES	FINESS Array B	37.30	325	P	P	23 13 23.4	+0.3
	0.8nm,0.8s,baz=127,slow=12,SNR=3.5						
ARCES	ARCESS Array B	40.76	337	P	P	23 13 52.5	+0.6
	1.7nm,1.1s,baz=106,slow=9.6,SNR=3.5						
HFS	Hagfors	42.95	321	P	P	23 14 09.9	+0.1
	0.4nm,0.5s,baz=97,slow=11,SNR=6.7						
NOA	NORSAR Array B	44.24	323	P	P	23 14 20.4	+0.3
	0.1nm,0.4s,baz=101,slow=7.2,SNR=2.8						
ESDC	Sonseca Array	57.76	298	P	P	23 16 02.0	+0.3
	0.1nm,0.3s,baz=48,slow=6.7,SNR=3.3						
TORD	Torodi Ar. Bea	66.45	269	P	P	23 17 00.1	+0.1
	0.2nm,0.4s,baz=65,slow=7.7,SNR=3.6						

HEL 25 23:24:36.6, 67°.82N×20°.37E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.29	271	*i* P	Pg	23 24 40.7	-1.5
RATU				*i* S	Sg	23 24 43.9	-2.1
LANU	Lannavaara	0.65	69	*e*P	Pg	23 24 49.2	+0.1
LANU				*e*S	Sg	23 24 57.3	-0.3
DUNU	Dundret	0.71	174	*i* P	Pg	23 24 49.7	-0.4
DUNU				*i* S	Sg	23 25 00.2	+1.0
KIF	Kilpisjarvi	1.20	7	*e*PN	Pg	23 24 58.9	-0.6
	baz=187						
KIF				MSG		23 25 14.2	
	comp=Z,9.3nm,0.2s						
KIF				*e*SN	Sg	23 25 14.9	-0.2
KIF	Kilpisjarvi	1.20	7	*e*P	Pg	23 24 59.4	-0.1
HEF	Hetta	1.37	63	*e*PN	Pg	23 25 02.1	-0.7
HEF				MSG		23 25 17.8	
	comp=Z,3.9nm,0.2s						
HEF				*e*SN	Sb	23 25 20.9	-0.2
HEF	Hetta	1.37	63	*e*P	Pg	23 25 02.0	-0.7
ERTU	Ertsjaerv	1.46	150	*e*PN	Pn	23 25 03.9	-0.3
ERTU				*e*SN	Sn	23 25 24.2	+0.4
TOF	Tornio	2.34	136	*e*PB	Pn	23 25 17.9	+1.6
	baz=317						
TOF				MSG		23 25 45.8	
	comp=Z,1.9nm,0.2s						
TOF				*e*SG	Sb	23 25 49.4	+0.4
RNF	Rovaniemi	2.51	116	*e*PG	Pb	23 25 21.0	-1.5
RNF				*e*SG	Sb	23 25 54.3	+0.4
ARE0	ARCESS Array S	2.55	45	*e*PG	Pn	23 25 20.4	+1.3

UPP 25 23:25:19.1±0.1, 67°.83N×20°.19E, h0km, ML1.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.23	270	P	Pg	23 25 23.6	+0.2
RATU				S	Sg	23 25 26.9	+0.6
LANU	Lannavaara	0.72	71	P	Pg	23 25 32.5	-0.3
DUNU	Dundret	0.72	168	P	Pg	23 25 32.6	-0.3
MASU	Masugnsbyn	0.79	117	P	Pg	23 25 33.9	-0.2
PAJU	Pajala	1.39	124	P	Pg	23 25 44.4	-1.2

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*KRNET **25** 23:48:51.7±0.1, 40°.57N×71°.32E, h20km, mb2.3*
*NNC **25** 23:48:59.5±10.0, 40°.80N×71°.73E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=72.5km s-min=34.2km az=2.0*

ISC 25 23:48:51.5±1.4, 40°.58N±0°.05×71°.34E±0°.07, h4km±14km, n14, σ1ˢ09/23, 15C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.66	217	⇑*i*P	Pg	23 49 04.2	0.0
	baz=17						
BTK				⇑*i*S	Sg	23 49 12.9	+0.2
	baz=17						
ARK	Arkit	1.30	21	⇑*i*P	Pn	23 49 16.0	-0.6
	baz=22						
ARK				⇑*i*S	Sb	23 49 33.2	-0.5
	baz=22						
ARSB	Arslanbob	1.45	59	⇑*i*P	Pn	23 49 18.4	-0.2
	baz=58						
ARSB				⇑*i*S	Sb	23 49 38.1	+0.1
	baz=58						
DZA	Taraz	2.31	360	Pg	Pg	23 49 36.9	+1.2
	17nm,0.3s						
DZA				Lg	Lg	23 50 03.1	
	37nm,0.4s						
AML	Almayashu	2.35	48	⇓*i*P	Pn	23 49 31.3	0.0
	baz=48						
AML				⇓*i*S	Sn	23 50 01.3	+0.5
	baz=48						
MRKS	Merke	2.58	33	Pg	Pg	23 49 41.6	+0.6
	4.4nm,0.5s						
MRKS				Lg	Lg	23 50 11.8	
	8.8nm,0.3s						
ARLS	Aral	2.59	60	⇑*i*P	Pn	23 49 35.2	+0.9
	baz=59						
ARLS				⇑*i*S	Sn	23 50 06.8	+0.5
	baz=59						
KK31	Karatay Array	2.59	347	⇑Pg	Pb	23 49 36.9	-1.7
	0.5nm,0.3s,baz=162,slow=17,SNR=13						
KK31				⇓Lg	Lg	23 50 11.3	
	4.6nm,0.5s,baz=161,slow=28,SNR=9.2						
EKS2	Erkin-Say	2.77	41	⇓*i*P	Pn	23 49 38.1	+1.4
	baz=41						
EKS2				⇓*i*S	Sn	23 50 11.5	+0.9
	baz=41						
UCH	Uchtor	2.90	54	⇑*i*P	Pn	23 49 38.2	-0.6
	baz=54						
UCH				⇑*i*S	Sn	23 50 13.5	-0.8
	baz=54						
KZA	Kyzart	3.30	62	⇑*i*P	Pn	23 49 45.5	+1.2
	baz=62						
KZA				⇑*i*S	Sn	23 50 24.2	0.0
	baz=62						
NRN	Naryn	3.63	75	⇑*i*P	Pn	23 49 49.1	+0.4
	baz=75						
NRN				⇑*i*S	Sn	23 50 30.9	-1.3
	baz=75						
SGDS	Sogindy	3.77	39	Pg	Pb	23 50 00.3	+1.7
SGDS				Lg	Lg	23 50 43.6	
KTBS	Karatobe	5.05	50	Pg	Pg	23 50 25.8	-2.5
	0.5nm,0.7s						
KTBS				Lg	Lg	23 51 27.1	
	1.0nm,0.8s						

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*ISCJB **26** 00:01:10.2±0.4, 45°.70N±0°.02×26°.54E±0°.03, h102km±3km, Error ellipse: s-maj=3.2km s-min=3.0km az=154.2*
*BUC **26** 00:01:10.7±0.5, 45°.72N×26°.54E, h100km±5km, MD3.6/6, Error ellipse: s-maj=5.0km s-min=3.9km az=87.0*
*SOF **26** 00:01:11.5, 45°.71N×26°.46E, h37km*
*BEO **26** 00:01:12.4±1.3, 45°.09N×27°.21E, h115km, ML3.8/5*

ISC 26 00:01:09.3±1.3, 45°.72N±0°.03×26°.52E±0°.02, h113km±6km, n118, σ1ˢ35/161, 66C-36D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.16	35	⇑*i*P	Pn	00 01 24.8	-0.2
PLOR				*i* S	Sn	00 01 34.9	-1.9
PLOR	Plostina	0.16	35	⇑*i*P	Pn	00 01 24.8	-0.2
VRI	Vrincioaia	0.21	45	⇑*i*P	Pn	00 01 25.1	0.0
VRI				*i* S	Sn	00 01 35.8	-1.2
VRI	Vrincioaia	0.21	45	⇑*i*P	Pn	00 01 25.1	0.0
ODBI	Odobesti	0.38	83	⇑*i*P	Pn	00 01 26.6	+0.9
ODBI				*i* S	Sn	00 01 37.4	-0.7
ODBI	Odobesti	0.38	83	⇑*i*P	Pn	00 01 26.6	+0.9
MLR	Muntele Rosu	0.46	240	⇑*i*P	Pn	00 01 26.9	+0.5
MLR				*i* S	Sn	00 01 38.5	-0.7
MLR	Muntele Rosu	0.46	240	⇑*i*P	Pn	00 01 26.9	+0.5
GRER		0.47	136	⇓*i*P	Pn	00 01 27.4	+1.2
GRER				*i* S	Sn	00 01 39.3	+0.3
GRER		0.47	136	⇓*i*P	Pn	00 01 27.4	+1.2
PETR	Petresti	0.50	89	⇑*i*P	Pn	00 01 27.0	+0.6
PETR				*i* S	Sn	00 01 38.8	-0.5
PETR	Petresti	0.50	89	⇑*i*P	Pn	00 01 27.0	+0.6
ISR	Istrita	0.60	178	⇑*i*P	Pn	00 01 27.9	+0.7
ISR				*i* S	Sn	00 01 40.3	-0.4
ISR	Istrita	0.60	178	⇑*i*P	Pn	00 01 27.9	+0.7
OZUR		0.63	307	⇑*i*P	Pn	00 01 27.5	+0.1
OZUR				*i* S	Sn	00 01 39.2	-1.9
OZUR		0.63	307	⇑*i*P	Pn	00 01 27.5	+0.1
SECR		0.75	205	⇓*i*P	Pn	00 01 29.6	+1.2
SECR				*i* S	Sn	00 01 43.1	+0.3
SECR		0.75	205	⇓*i*P	Pn	00 01 29.6	+1.2
TESR	Tescani	0.80	7	⇑*i*P	Pn	00 01 29.0	+0.2
TESR				*i* S	Sn	00 01 41.9	-1.6
TESR	Tescani	0.80	7	⇑*i*P	Pn	00 01 29.0	+0.2
TUDR		0.82	98	⇑*i*P	Pn	00 01 28.9	0.0
TUDR				*i* S	Sn	00 01 42.0	-1.7
TUDR		0.82	98	⇑*i*P	Pn	00 01 28.9	0.0
DOPR	Dopca	0.83	288	⇑*i*P	Pn	00 01 29.6	+0.6
DOPR				*i* S	Sn	00 01 43.1	-0.8
DOPR	Dopca	0.83	288	⇑*i*P	Pn	00 01 29.6	+0.6
PGOR	Pogoanele	0.88	158	⇓*i*P	Pn	00 01 30.2	+0.7
PGOR				*i* S	Sn	00 01 45.2	+0.5
PGOR	Pogoanele	0.88	158	⇓*i*P	Pn	00 01 30.2	+0.7
PLAR	PLOIESTI	0.88	203	⇓*i*P	Pn	00 01 30.7	+1.2
PLAR	PLOIESTI	0.88	203	⇓*i*P	Pn	00 01 30.7	+1.2
BIR	Birlad	0.95	54	⇓*i*P	Pn	00 01 30.9	+0.7
BIR				*i* S	Sn	00 01 45.2	-0.7
BIR	Birlad	0.95	54	⇓*i*P	Pn	00 01 30.9	+0.7
SULR		1.06	190	⇑*i*P	Pn	00 01 32.4	+1.1
SULR				*i* S	Sn	00 01 48.8	+0.9
SULR		1.06	190	⇑*i*P	Pn	00 01 32.4	+1.1
VOIR		1.07	255	⇓*i*P	Pn	00 01 32.3	+0.8
VOIR				*i* S	Sn	00 01 47.8	-0.5
VOIR		1.07	255	⇓*i*P	Pn	00 01 32.3	+0.8
GIUM	Giurgiulesti	1.21	101	⇑*i*P	Pn	00 01 34.1	+1.2
GIUM				*i* S	Sn	00 01 51.3	+0.5
GIUM	Giurgiulesti	1.21	101	⇑*i*P	Pn	00 01 34.1	+1.2
GIRR	Girov	1.24	360	⇑*i*P	Pn	00 01 34.2	+1.0
GIRR	Girov	1.24	360	⇑*i*P	Pn	00 01 34.2	+1.0
AMRR	Amara	1.25	152	⇑*i*P	Pn	00 01 34.1	+0.7
AMRR				*i* S	Sn	00 01 51.3	-0.3
AMRR	Amara	1.25	152	⇑*i*P	Pn	00 01 34.1	+0.7
BIZ	Bicaz	1.25	347	⇑*i*P	Pn	00 01 35.1	+1.7
BIZ				*i* S	Sn	00 01 52.5	+0.8
BIZ	Bicaz	1.25	347	⇑*i*P	Pn	00 01 35.1	+1.7
CFR	Carcaliu	1.26	115	⇑*i*P	Pn	00 01 33.5	0.0
CFR				*i* S	Sn	00 01 49.9	-1.9
CFR	Carcaliu	1.26	115	⇑*i*P	Pn	00 01 33.5	0.0
LEHL	Lehliu	1.26	170	⇑*i*P	Pn	00 01 34.5	+1.0
LEHL				*i* S	Sn	00 01 52.3	+0.5
LEHL	Lehliu	1.26	170	⇑*i*P	Pn	00 01 34.5	+1.0
ARR	Arges	1.37	256	⇑*i*P	Pn	00 01 35.4	+0.6
ARR				*i* S	Sn	00 01 54.0	-0.1
ARR	Arges	1.37	256	⇑*i*P	Pn	00 01 35.4	+0.6
GOLR		1.41	232	⇓*i*P	Pn	00 01 36.7	+1.6
GOLR				*i* S	Sn	00 01 55.3	+0.5
GOLR		1.41	232	⇓*i*P	Pn	00 01 36.7	+1.6
BUC1	Bucharest	1.42	194	⇑*i*P	Pn	00 01 36.3	+1.1
BUC1				*i* S	Sn	00 01 54.7	-0.2
BUC1	Bucharest	1.42	194	⇑*i*P	Pn	00 01 36.3	+1.1
HARR	Harsova	1.44	135	⇓*i*P	Pn	00 01 35.9	+0.4
HARR	Harsova	1.44	135	⇓*i*P	Pn	00 01 35.9	+0.4
SGRR	Singureni	1.54	195	⇓*i*P	Pn	00 01 37.5	+0.7
SGRR				*i* S	Sn	00 01 57.8	+0.1
SGRR	Singureni	1.54	195	⇓*i*P	Pn	00 01 37.5	+0.7
TLB	Topalu	1.57	136	⇓*i*P	Pn	00 01 37.5	+0.5
TLB				*i* S	Sn	00 01 56.2	-1.9
TLB	Topalu	1.57	136	⇓*i*P	Pn	00 01 37.5	+0.5
RASA	Rasa	1.57	163	⇓*i*P	Pn	00 01 37.8	+0.7
RASA				*i* S	Sn	00 01 57.7	-0.5
RASA	Rasa	1.57	163	⇓*i*P	Pn	00 01 37.8	+0.7
HUMR	Humele	1.61	223	⇓*i*P	Pn	00 01 38.5	+0.9
HUMR				*i* S	Sn	00 01 58.9	-0.2
HUMR	Humele	1.61	223	⇓*i*P	Pn	00 01 38.5	+0.9
IAS	Iasi	1.64	26	⇑*i*P	Pn	00 01 38.7	+0.8
IAS				*i* S	Sn	00 01 58.8	-0.9
IAS	Iasi	1.64	26	⇑*i*P	Pn	00 01 38.7	+0.8
TLCR		1.70	107	⇓*i*P	Pn	00 01 39.3	+0.6
TLCR				*i* S	Sn	00 02 00.0	-1.1
TLCR		1.70	107	⇓*i*P	Pn	00 01 39.3	+0.6
CVDA	Cernavoda	1.76	142	⇑*i*P	Pn	00 01 40.1	+0.8
CVDA				*i* S	Sn	00 02 00.6	-1.6
CVDA	Cernavoda	1.76	142	⇑*i*P	Pn	00 01 40.1	+0.8
COPA	Copaceanca	1.83	211	⇑*i*P	Pn	00 01 41.1	+0.8
COPA				*i* S	Sn	00 02 03.5	-0.4
COPA	Copaceanca	1.83	211	⇑*i*P	Pn	00 01 41.1	+0.8
TIRR	Tirgusor	1.84	133	⇓*i*P	Pn	00 01 41.1	+0.7
TIRR				*i* S	Sn	00 02 02.2	-1.9
TIRR	Tirgusor	1.84	133	⇓*i*P	Pn	00 01 41.1	+0.7
ICOR	Ion Corvin	1.84	150	⇑*i*P	Pn	00 01 41.5	+1.1
ICOR				*i* S	Sn	00 02 02.5	-1.7
ICOR	Ion Corvin	1.84	150	⇑*i*P	Pn	00 01 41.5	+1.1
LOT	Lotru	1.95	263	⇑*i*P	Pn	00 01 42.5	+0.7
LOT				*i* S	Sn	00 02 07.3	+0.6
LOT	Lotru	1.95	263	⇑*i*P	Pn	00 01 42.5	+0.7
MILM	Milestii Mici	1.99	52	⇑*i*P	Pn	00 01 43.2	+1.0
MILM				*i* S	Sn	00 02 06.2	-1.3
MILM	Milestii Mici	1.99	52	⇑*i*P	Pn	00 01 43.2	+1.0
MFTR	Murfatlar	2.05	138	⇓*i*P	Pn	00 01 43.7	+0.7
MFTR				*i* S	Sn	00 02 07.5	-1.3
MFTR	Murfatlar	2.05	138	⇓*i*P	Pn	00 01 43.7	+0.7
BURAR	Bucovina Array	2.10	335	⇑*i*P	Pn	00 01 46.3	+2.6
BURAR	Bucovina Array	2.10	335	⇑*i*P	Pn	00 01 46.3	+2.6
RAZG	Razgrad	2.15	180	⇑*i*P	Pn	00 01 45.0	+0.6
RAZG				*i* S	Sn	00 02 09.9	-1.3
RAZG	Razgrad	2.15	180	⇑*i*P	Pn	00 01 45.0	+0.6
ZIMR		2.22	202	⇓*i*P	Pn	00 01 46.0	+0.8
ZIMR				*i* S	Sn	00 02 11.7	-0.9
ZIMR		2.22	202	⇓*i*P	Pn	00 01 46.0	+0.8
VLAD	Vladila	2.28	222	⇑*i*P	Pn	00 01 46.6	+0.6
VLAD				*i* S	Sn	00 02 13.2	-0.9
VLAD	Vladila	2.28	222	⇑*i*P	Pn	00 01 46.6	+0.6
PSN	Preselentsi	2.36	149	*i* P	Pn	00 01 48.3	+1.3
MANR	Mangalia	2.41	141	⇑*i*P	Pn	00 01 48.7	+1.1
MANR	Mangalia	2.41	141	⇑*i*P	Pn	00 01 48.7	+1.1
PRD	Provadia	2.60	166	*i* P	Pn	00 01 51.8	+1.8
PVL	Pavlikeni	2.64	199	*i* P	Pn	00 01 53.1	+2.5
GZR	Gura Zlata	2.65	264	⇓*i*P	Pn	00 01 52.0	+1.2
GZR	Gura Zlata	2.65	264	⇓*i*P	Pn	00 01 52.0	+1.2
PLVB	Pleven	2.70	211	⇑*i*P	Pn	00 01 52.2	+0.8
PLVB				*i* S	Sn	00 02 21.9	-1.8
PLVB	Pleven	2.70	211	⇑*i*P	Pn	00 01 52.2	+0.8
BAIL	Bailesti	2.82	234	⇑*i*P	Pn	00 01 54.0	+1.0
BAIL				*i* S	Sn	00 02 27.0	+0.4
BAIL	Bailesti	2.82	234	⇑*i*P	Pn	00 01 54.0	+1.0
ELND	Elena	2.83	190	⇓*i*P	Pn	00 01 54.3	+1.2
ELND				*i* S	Sn	00 02 26.5	-0.3
ELND	Elena	2.83	190	⇓*i*P	Pn	00 01 54.3	+1.2
HERR	Herculane	3.01	255	⇑*i*P	Pn	00 01 56.9	+1.4
HERR				*i* S	Sn	00 02 30.4	-0.7
HERR	Herculane	3.01	255	⇑*i*P	Pn	00 01 56.9	+1.4
JMB	Yambol	3.25	179	*i* P	Pn	00 01 59.5	+0.8
ZAGS	Zajecar	3.60	240	*e*Sn	Sn	00 02 38.5	-6.5
KUBS	Kucevo	3.67	251	*e*Sn	Sn	00 02 43.5	-3.3
ZAPS	Zavoj	3.70	230	*e*Sn	Pn	00 02 05.7	+1.0
VTS	Vitosha	3.90	218	*e*Sn	Pn	00 02 06.7	-0.7
VTS	Vitosha	3.90	218	*e*Pn	Sn	00 02 38.6	-14
VTS	Vitosha	3.90	218	⇑*i*P	Pn	00 02 09.2	+1.8
VTS	Vitosha	3.90	218	⇑*i*P	Pn	00 02 09.2	+1.8
VTS	Vitosha	3.90	218	*i* P	Pn	00 02 08.9	+1.5
BARS	Barje	4.45	231	*e*Pn	Pn	00 02 16.9	+2.2
BARS				*e*Sn	Sn	00 02 40.3	-25
BARS				*e*Sn	Sn	00 02 55.9	-10
GRUS	Gruza	4.51	248	*e*Sn	Sn	00 03 02.9	-4.2
TRUS	Trudelj	4.59	253	*e*Sn	Sn	00 02 39.5	-29
SELS	Selova	4.60	239	*e*Sn	Sn	00 03 06.1	-3.1
DIVS	Divibare	4.91	253	*e*Sn	Sn	00 03 13.2	-3.5
IVAS	Ivanjica	5.02	247	*e*Pn	Pn	00 02 26.3	+3.9
IVAS				*e*Sn	Sn	00 03 15.4	-3.9

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*ISK **26** 00:22:54.6, 35°.99N×35°.91E, h13km, ML4.2/35*
*DDA **26** 00:22:54.9, 36°.06N×35°.87E, h26km±1km, ML4.3*
*GRAL **26** 00:22:54.8±0.6, 36°.30N×36°.00E, h21km±5km, MD4.2*
*MOS **26** 00:22:54.8±2.1, 35°.94N×35°.76E, h10km, mb4.3/19, Error ellipse: s-maj=8.3km s-min=4.2km az=106.2*
*IDC **26** 00:22:54.8±0.7, 36°.11N×35°.81E, h0km, mb3.9/15, mb1 3.9/22, mb1mx3.8/45, mbtmp3.9/22, ML3.8/6, MS3.2/10, Ms1 3.2/10, ms1mx2.9/38, Error ellipse: s-maj=15.3km s-min=11.0km az=89.0*
*NEIC **26** 00:22:55.5±0.0, 36°.03N×35°.89E, h17km, mb4.0/17, ML4.2(ISK), After ISK.*
NEIC Felt at Samandagi. Also felt at Aleppo, Syria.
*NIC **26** 00:22:55.1±0.3, 36°.23N×35°.83E, h11km, mb4.5, ML4.3*
*ISCJB **26** 00:22:55.9±0.4, 36°.04N±0°.01×35°.86E±0°.02, h13km±3km, mb4.0/34, MS3.5/6, Error ellipse: s-maj=2.5km s-min=1.8km az=178.9*
*GII **26** 00:22:56.3±0.0, 36°.10N×35°.72E, h10km, mb4.1/4, MD3.8/5*
*NSSC **26** 00:22:57.2±0.3, 35°.73N×35°.75E, h196km±36km, MD2.1, ML3.8*

ISC 26 00:22:55.9±0.9, 35°.96N±0°.02×35°.79E±0°.02, h15km±6km, n247, σ1ˢ96/276, mb4.2/34, MS3.4/6, 22C-14D, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAYL	Yayladag	0.27	74	⇓*i*P	Pg	00 23 01.6	-0.1
YAYL				*i* S	Sg	00 23 05.5	-0.2
KRTS	Karatas	0.70	332	PG	Pb	00 23 09.2	-0.6
KRTD	Karatas-Adana	0.70	335	PG	Pb	00 23 09.5	-0.3
YURE	YUREGIR	0.88	352	PG	Pg	00 23 11.6	-1.3
YURE				SG	Sg	00 23 23.8	-0.6
YURE	YUREGIR	0.88	352	*i* P	Pg	00 23 11.5	-1.4
YURE				*i* S	Sn	00 23 25.8	-0.4
CEYT	Ceyhan	1.05	358	PG	Pg	00 23 14.8	-1.4
DED	Mersin	1.28	322	*i* P	Pn	00 23 18.4	-0.9
DED				*i* S	Sg	00 23 37.0	-0.3
KUZU	Kuzuini	1.32	52	⇑*i*P	Pn	00 23 18.6	-1.2
KUZU				*i* S	Sb	00 23 36.7	-0.5
MERS	Mersin	1.37	312	PN	Pn	00 23 19.4	-1.1
MERS				SN	Sg	00 23 39.8	-0.2
EREN	Erenkoy	1.38	252	PN	Pg	00 23 22.7	+0.2
EREN	Erenkoy	1.38	252	*i* P	Pg	00 23 23.1	+0.5
EREN				*i* S	Sg	00 23 42.9	+2.4
EREN				IAML_P			
	comp=Z,8µm,0.2s						
KAMA	Osmaniye	1.42	30	⇑*i*P	Pn	00 23 19.8	-1.4
KAMA				*i* S	Sn	00 23 37.5	-2.1
KARA	Karaisali	1.43	336	PN	Pn	00 23 20.7	-0.6
KARA				SN	Sb	00 23 40.2	-0.1
KIZK	Mersin	1.43	292	PN	Pg	00 23 22.5	-0.9
KIZK				SN	Sg	00 23 41.8	-0.2
KIZK	Mersin	1.43	292	*i* P	Pg	00 23 21.9	-1.5
KIZK				*i* S	Sg	00 23 42.7	+0.7
KIZK				IAML_P			
	comp=Z,11µm,0.2s						
SLFK	Silifke-Mersin	1.55	287	PN	Pg	00 23 24.3	-1.4
GULE	Gulek	1.55	329	⇓*i*P	Pn	00 23 23.2	0.0
GULE				*i* S	Sb	00 23 43.9	-0.1
GULE				IAML_P			
	comp=Z,11µm,0.2s						
SILI	Silifke-Mersin	1.56	286	PN	Pg	00 23 24.5	-1.4
HCB	Kahramanmara	1.65	33	⇑*i*P	Pn	00 23 22.8	-1.6
HCB				*i* S	Sn	00 23 44.4	-0.9
GAZ	Gaziantep	1.67	43	PN	Pn	00 23 23.1	-1.6
ANDN	Andirin	1.68	15	⇑*i*P	Pn	00 23 24.1	-0.7
ANDN				*i* S	Sn	00 23 45.0	-1.1
ANDN				IAML_P			
	comp=Z,10µm,0.2s						
HWQ	Hawqa	1.68	176	*e*P	Pg	00 23 27.0	-1.3
HWQ				*e*S	Sg	00 23 50.5	+0.4
KARG	Kargicak-Mersi	1.70	279	PN	Pb	00 23 26.4	-0.5
PHNC	Paralimni	1.72	237	P	Pg	00 23 26.9	-2.1
	baz=49						
PHNC				S	Sg	00 23 52.2	+0.9
TISA	Tisan-Mersin	1.72	277	PN	Pb	00 23 26.6	-0.6
IKL	Isikli	1.73	280	PN	Pn	00 23 25.3	-0.1
KEBE	Keben-Mersin	1.75	287	PN	Pb	00 23 26.9	-0.8
YESI	Yesilovacik-Me	1.75	278	PN	Pb	00 23 26.9	-0.9
KMRS	Kahramanmaras	1.78	30	PN	Pn	00 23 24.6	-1.6
KMRS	Kahramanmaras	1.78	30	*e*Pn	Pn	00 23 24.7	-1.5
TEPE	Tepekoy-Mersin	1.82	279	PN	Pb	00 23 28.1	-0.9
AKK2	Akkuyu-Mersin	1.82	276	PN	Pb	00 23 27.9	-1.1
AKKU	Akkuyu-Mersin	1.82	277	PN	Pb	00 23 27.7	-1.3
AKK1	Akkuyu-Mersin	1.83	276	PN	Pb	00 23 28.1	-1.0
GULN	MERSIN_Gulnar	1.83	278	*i* P	Pb	00 23 28.7	-0.4
GULN				*i* S	Sb	00 23 51.4	-0.5
GULN				IAML_P			
	comp=Z,4µm,0.2s						
OREN	Orenkoy-Mersin	1.90	278	PN	Pb	00 23 28.7	-1.6
YORU	Yoruktepe-Mers	1.94	276	PN	Pn	00 23 28.5	+0.1
TEVE	Tevekalti-Mers	1.96	285	PN	Pb	00 23 29.9	-1.4
KERG	Konya-Eregli	1.98	318	⇓*i*P	Pb	00 23 30.4	-1.3
KERG				*i* S	Sg	00 23 57.4	-2.1
KERG				IAML_P			
	comp=Z,7µm,0.3s						
GZT	Gaziantep	2.00	45	⇑*i*P	Pn	00 23 27.7	-1.6
GZT				*i* S	Sb	00 23 57.3	+0.5
GZT				IAML_P			
	comp=Z,11µm,0.1s						
SAIM	ADANA	2.03	7	*i* P	Pn	00 23 29.3	-0.4
SAIM				*i* S	Sb	00 23 56.6	-1.0
SAIM				IAML_P			
	comp=Z,13µm,0.2s						
BHL	Bhannes	2.05	183	*e*P	Pb	00 23 32.1	-0.8
BEYL	Beirut	2.10	187	*e*P	Pb	00 23 33.0	-0.6
BERE	Bereket-Mersin	2.11	281	PN	Pb	00 23 31.9	-2.1
AKIN	Akıncılar- Kıb	2.12	244	PN	Pb	00 23 31.5	-2.5
YAHY	KAYSERI_Yahyal	2.16	351	*i* P	Pn	00 23 32.5	+1.0
YAHY				*i* S	Sn	00 23 58.4	+0.3
YAHY				IAML_P			
	comp=Z,15µm,0.6s						
TEKE	Tekeli-Mersin	2.17	276	PN	Pb	00 23 32.9	-2.1
MAMC	Mammari	2.24	250	P	Pb	00 23 33.7	-2.3
	baz=62						
CSS	Mathiatis	2.24	244	PN	Pn	00 23 32.7	+0.3
CSS	Mathiatis	2.24	244	*e*Pn	Pb	00 23 33.2	-2.9
CSS	Mathiatis	2.24	244	P	Pb	00 23 34.6	-1.5
	baz=57						
CSS				S	Sg	00 24 04.0	-3.9
CSS	Mathiatis	2.24	244	Pn	Pn	00 23 32.8	+0.3
CSS	Mathiatis	2.24	244	P	Pb	00 23 33.1	-2.9
DQRL	Deir Qamar	2.25	185	*e*P	Pb	00 23 35.3	-1.1
DQRL				*e*S	Sg	00 24 05.1	-3.4
NIG	Nigde	2.34	337	PN	Pn	00 23 35.3	+1.1
NIG	Nigde	2.34	337	*e*Pn	Pn	00 23 33.8	-0.4
QRWL	Qaraoun	2.41	182	*e*P	Pb	00 23 37.1	-1.9
ERMK	Ermenek	2.42	287	⇓*i*P	Pb	00 23 38.1	-1.2
ERMK				*i* S	Sb	00 24 08.7	-0.3
QASN	Qassioun	2.45	170	*e*P	Pb	00 23 39.2	-0.6
QASN				⇓*e*S	Sb	00 24 08.9	-1.0
QASN				AML	AML	00 24 27.2	
	comp=N,1µm,0.6s						
QASN				AML	AML	00 24 30.1	
	comp=E,2µm,0.5s						
SURC	SANLIURFA_SURC	2.46	67	*i* P	Pn	00 23 34.2	-1.3
SURC				*i* S	Sb	00 24 09.6	-0.2
SURC				IAML_P			
	comp=Z,9µm,0.3s						
RCY	Rachaya	2.46	179	*e*P	Pb	00 23 37.7	-2.1
LEF	Lefka	2.51	251	PN	Pn	00 23 37.0	+0.9
ATAB	Bozova	2.52	52	*i* P	Pn	00 23 35.3	-1.0
ATAB				*i* S	Sb	00 24 14.2	+2.6
ATAB				IAML_P			
	comp=Z,15µm,0.3s						
BRBR	Barbar	2.54	177	*e*P	Pb	00 23 39.7	-1.7
BRBR				*e*S	Sb	00 24 10.7	-1.9
BRBR				AML	AML	00 24 25.4	
	comp=N,568nm,0.4s						
BRBR				AML	AML	00 24 29.9	
	comp=E,361nm,0.5s						
ELBS	KAHRAMANMARAS_	2.59	24	⇑*i*P	Pn	00 23 37.8	+0.3
ELBS				*i* S	Sg	00 24 18.8	-0.5
SHBL	Chebaa	2.60	181	*e*P	Pb	00 23 39.9	-2.5
SHBL				*e*S	Sb	00 24 13.3	-1.0
TOTH	TOTAH	2.64	168	*e*P	Pb	00 23 41.6	-1.4
TOTH				*e*S	Sb	00 24 12.5	-2.8
NATI	Neve Ativ	2.69	181	Pn	Pb	00 23 40.9	-2.8
ALFC	Alefka	2.72	254	P	Pn	00 23 40.2	+1.1
	baz=66						
GEM	Giv'at Ha'Em	2.74	182	Pn	Pb	00 23 41.4	-3.3
GEM				Sn	Sb	00 24 17.7	-0.4
GAZI	Gazipasa	2.83	277	PN	Pn	00 23 42.2	+1.7
SANL	SANLIURFA_Merk	2.85	64	*i* P	Pn	00 23 41.0	+0.1
SANL				*i* S	Sb	00 24 20.2	-0.9
SANL				IAML_P			
	comp=Z,8µm,0.1s						
URFA	Urfa	2.85	58	PN	Pn	00 23 39.7	-1.2
URFA	Urfa	2.85	58	*e*Pn	Pn	00 23 40.1	-0.9
SULT	Sultanhani-AKS	2.88	322	PN	Pn	00 23 41.8	+0.4
AKCD	Akcadag	2.89	36	*i* P	Pn	00 23 41.9	+0.4
AKCD				*i* S	Sb	00 24 24.5	+2.1
BNN	Bunyan	2.89	1	PN	Pn	00 23 41.4	-0.1
BNN	Bunyan	2.89	1	*e*Pn	Pn	00 23 41.3	-0.2
HNTI	Hanita	2.91	190	Pn	Pb	00 23 44.4	-3.2
HNTI				Sn	Sb	00 24 19.8	-3.2
DARE	Darende-Malaty	2.94	27	PN	Pn	00 23 41.7	-0.5
MMA0B	Mount Meron ar	2.95	186	Pn	Pb	00 23 44.6	-3.7
MMA0B				Sn	Sb	00 24 21.6	-2.6
MMAI	Mount Meron Ar	2.95	186	Pn	Pb	00 23 44.7	-3.6

	comp=Z,75nm,0.3s,baz=358,slow=13,SNR=422						
MMAI				Sn	**Sb**	**00 24 21.8**	**-2.4**
	comp=Z,112nm,0.3s,baz=359,slow=25,SNR=5.6						
MMAI				LR	LR	00 25 12.1	
	comp=Z,364nm,18.5s,baz=345,slow=44						
KSHT	**Keshet**	**2.97**	**180**	Pn	**Pb**	**00 23 45.5**	**-3.1**
SHMJ	**Saham**	**3.22**	**180**	P	**Pn**	**00 23 47.2**	**+1.2**
BLGI	**Bet Lehem HaGe**	**3.25**	**189**	Pn	**Pn**	**00 23 48.6**	**+2.2**
BLGI				Sn	**Sb**	**00 24 29.7**	**-3.1**
YAYX	**Yaylak**	**3.37**	**333**	PN	**Pn**	**00 23 48.7**	**+0.7**
KONT	**Konya--Tatoy**	**3.39**	**307**	PN	**Pn**	**00 23 49.7**	**+1.4**
OFRI	**`Ofer**	**3.40**	**192**	Pn	**Pn**	**00 23 50.4**	**+2.0**
SERE	**Sereflikochisa**	**3.47**	**330**	PN	**Pn**	**00 23 50.2**	**+0.7**
CHBY	**Cihanbeyli**	**3.49**	**319**	PN	**Pn**	**00 23 51.5**	**+1.7**
MMLI	**Mount Malkishu**	**3.52**	**185**	Pn	**Pb**	**00 23 53.4**	**-4.6**
MMLI				Sn	**Sb**	**00 24 36.8**	**-3.9**
MMLI	**Mount Malkishu**	**3.52**	**185**	P	**Pn**	**00 23 52.3**	**+2.1**
LADK	**Ladik-KONYA**	**3.54**	**310**	PN	**Pn**	**00 23 52.1**	**+1.7**
YOZ	**Yozgat**	**3.69**	**354**	PN	**Pn**	**00 23 53.7**	**+1.1**
HMDT	**Nahal Hemdat**	**3.70**	**183**	Pn	**Pn**	**00 23 55.7**	**+3.1**
SVRC	**Sivrice-ELAZID**	**3.71**	**48**	PN	**Pn**	**00 23 52.0**	**-0.8**
SLTI	**Sal'it**	**3.76**	**190**	Pn	**Pn**	**00 23 56.1**	**+2.7**
SLTI				Sn	**Sb**	**00 24 42.3**	**-5.1**
KULU	**Kulu**	**3.79**	**325**	PN	**Pn**	**00 23 55.4**	**+1.5**
ASF	**Jabal al Asfar**	**3.89**	**166**	Pn	**Pn**	**00 23 58.7**	**+3.5**
	comp=Z,5.7nm,0.3s,baz=334,slow=8.5,SNR=22						
ASF				Lg	Lg	00 24 59.8	
	comp=Z,14nm,0.3s,baz=319,slow=20,SNR=4.3						
ASF	**Jabal al Asfar**	**3.89**	**166**	P	**Pn**	**00 23 58.8**	**+3.6**
DYBB	**Diyarbakir**	**4.01**	**59**	PN	**Pn**	**00 23 56.4**	**-0.5**
MAZI	**Mazidag**	**4.03**	**67**	PN	**Pn**	**00 23 56.6**	**-0.6**
BR131	**Keskin Array S**	**4.13**	**336**	*e*Pn	**Pn**	**00 23 59.7**	**+1.2**
BRTR	**Keskin Array B**	**4.13**	**336**	Pn	**Pn**	**00 24 00.2**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=169,slow=15,SNR=23						
BRTR				Lg	Lg	00 25 02.9	
	comp=Z,1.5nm,0.3s,baz=152,slow=28,SNR=5.1						
WALJ	**Wala**	**4.38**	**180**	P	**Pn**	**00 24 05.0**	**+3.0**
DSI	**Dead Sea**	**4.39**	**185**	Pn	**Pn**	**00 24 05.4**	**+3.4**
TOKT	**Tokat**	**4.39**	**8**	PN	**Pn**	**00 24 01.6**	**-0.5**
AMAZ	**Amatzia**	**4.47**	**190**	Pn	**Pn**	**00 24 06.7**	**+3.5**
AMAZ				Sn	**Sn**	**00 25 00.3**	**+5.3**
AMAZ	**Amatzia**	**4.47**	**190**	P	**Pn**	**00 24 06.3**	**+3.1**
BR231	**Keskin MP Arra**	**4.55**	**329**	*e*Pn	**Pn**	**00 24 05.5**	**+1.2**
ANTO	**Ankara**	**4.57**	**330**	*e*Pn	**Pn**	**00 24 03.5**	**-1.0**
ANTO				*e*Sn	**Sn**	**00 24 53.2**	**-4.1**
ANTO	**Ankara**	**4.57**	**330**	*e*P	**Pn**	**00 24 03.5**	**-1.0**
ANTO				*e*		00 24 53.2	
ISP	**Isparta**	**4.61**	**295**	*e*Pn	**Pn**	**00 24 06.2**	**+1.0**
ISP	**Isparta**	**4.61**	**295**	*e*P	**Pn**	**00 24 06.2**	**+1.0**
ISP	**Isparta**	**4.61**	**295**	Pn	**Pn**	**00 24 06.0**	**+0.8**
YTIR	**Yattir**	**4.62**	**187**	Pn	**Pn**	**00 24 08.5**	**+3.2**
YTIR				Sn	**Sn**	**00 25 03.5**	**+4.8**
LISJ	**El Lisan**	**4.71**	**183**	P	**Pn**	**00 24 10.2**	**+3.8**
KZIT	**Kziot**	**5.17**	**193**	Pn	**Pn**	**00 24 15.3**	**+2.5**
KZIT	**Kziot**	**5.17**	**193**	P	**Pn**	**00 24 15.1**	**+2.3**
JDRJ	**Daraweish**	**5.22**	**181**	P	**Pn**	**00 24 16.3**	**+2.7**
ILGA	**Ilgaz**	**5.34**	**343**	*e*Pn	**Pn**	**00 24 15.2**	**0.0**
ZFRI	**Zfri**	**5.41**	**186**	Pn	**Pn**	**00 24 19.3**	**+3.2**
PRNI	**Paran**	**5.63**	**187**	Pn	**Pn**	**00 24 22.2**	**+3.1**
HRFI	**Mount Harif**	**5.94**	**186**	Pn	**Pn**	**00 24 26.8**	**+3.4**
MBRI	**Mt Berech**	**6.19**	**187**	Pn	**Pn**	**00 24 30.5**	**+3.6**
EIL	**Elat**	**6.31**	**187**	Pn	**Pn**	**00 24 31.4**	**+2.9**
	comp=Z,0.8nm,0.3s,baz=313,slow=5.9,SNR=12						
EIL				Sn	**Sn**	**00 25 45.1**	**+4.8**
	comp=Z,2.0nm,0.3s,baz=348,slow=14,SNR=2.9						
EIL				LR	LR	00 27 19.3	
	comp=Z,241nm,19.8s,baz=42,slow=41						
EIL	**Elat**	**6.31**	**187**	Pn	**Pn**	**00 24 31.9**	**+3.5**
KARP	**Karpathos**	**7.03**	**269**	*e*Pn	**Pn**	**00 24 38.8**	**+0.5**
BALB	**Balikesir**	**7.26**	**303**	*e*Pn	**Pn**	**00 24 41.8**	**+0.4**
AKH	**Akhalkalaki**	**8.12**	**46**	⇓*i*P	Pg	00 25 31.6	+0.4
SOC	**Sochi**	**8.19**	**20**	*e*P	**Pn**	**00 24 53.6**	**-0.6**
SOC				*e*		00 26 30.8	
SOC				MLR	MLR		
	comp=Z,277nm,14.0s						
GNI	**Garni**	**8.21**	**57**	LR	LR	00 27 54.5	
	comp=Z,69nm,21.2s,baz=262,slow=37						
EZN	**Ezine**	**8.42**	**300**	⇓*i*P	**Pn**	**00 24 59.1**	**+1.8**
EZN	**Ezine**	**8.42**	**300**	⇓P	**Pn**	**00 24 59.1**	**+1.8**
IDI	**Anoyia**	**8.90**	**269**	Pn	**Pn**	**00 25 05.2**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=94,slow=14,SNR=9.5						
IDI				Sn	**Sn**	**00 26 41.4**	**-2.7**
	comp=Z,0.6nm,0.3s,baz=315,slow=20,SNR=3.6						
IDI				LR	LR	00 29 43.2	
	comp=Z,73nm,21.1s,baz=67,slow=46						
NEY	**Neytrino**	**9.03**	**34**	*i* P	Pn	00 25 11.7	+5.8
ZEI	**Tsey**	**9.27**	**40**	*e*P	**Pn**	**00 25 12.5**	**+3.3**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KBZ	**Khabaz**	**9.49**	**33**	LR	LR	00 29 25.9	
	comp=Z,110nm,18.9s,baz=222,slow=42						
KIV	**Kislovodsk**	**9.58**	**31**	*e*P	**Pn**	**00 25 17.8**	**+4.5**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,98nm,11.0s						
KVAR	**Kislovodsk Arr**	**9.58**	**31**	LR	LR	00 29 13.3	
	comp=Z,104nm,19.3s,baz=224,slow=40						
NCK	**Nalchik**	**9.63**	**36**	*i* P	**Pn**	**00 25 18.6**	**+4.7**
CFR	**Carcaliu**	**10.89**	**330**	⇓*i*P	Pn	00 25 37.9	+6.8
CFR	**Carcaliu**	**10.89**	**330**	⇓P	Pn	00 25 37.9	+6.8
MAK	**Makhachkala**	**11.44**	**49**	*e*P	**Pn**	**00 25 40.5**	**+1.9**
MAK				*e*S	**Sn**	**00 27 48.3**	**+2.3**
MAK				pmax	pmax		
	comp=Z,68nm,1.2s						
MAK				MLR	MLR		
	comp=Z,277nm,15.0s						
VTS	**Vitosha**	**11.78**	**308**	*e*Pn	**Pn**	**00 25 41.0**	**-2.4**
VTS	**Vitosha**	**11.78**	**308**	⇑*i*P	**Pn**	**00 25 45.5**	**+2.1**
VTS	**Vitosha**	**11.78**	**308**	*e*P	**Pn**	**00 25 41.0**	**-2.4**
VRI	**Vrincioaia**	**12.03**	**328**	⇑*i*P	Pn	00 25 52.7	+5.9
VRI	**Vrincioaia**	**12.03**	**328**	⇑P	Pn	00 25 52.7	+5.9
PLOR	**Plostina**	**12.05**	**328**	⇑*i*P	Pn	00 25 52.8	+5.7
PLOR	**Plostina**	**12.05**	**328**	⇑P	Pn	00 25 52.8	+5.7
MLR	**Muntele Rosu**	**12.09**	**325**	⇑*i*P	Pn	00 25 52.7	+5.0
MLR	**Muntele Rosu**	**12.09**	**325**	⇑P	Pn	00 25 52.7	+5.0
MILM	**Milestii Mici**	**12.13**	**337**	⇓*i*P	Pn	00 25 55.8	+7.7
VOIR		**12.48**	**323**	⇑*i*P	Pn	00 25 57.7	+4.7
VOIR		**12.48**	**323**	⇑P	Pn	00 25 57.7	+4.7
DOPR	**Dopca**	**12.71**	**325**	⇑*i*P	**Pn**	**00 26 00.0**	**+4.0**
GZR	**Gura Zlata**	**13.63**	**318**	⇑*i*P	**Pn**	**00 26 12.0**	**+3.3**
BURAR	**Bucovina Array**	**14.05**	**329**	⇑*i*P	**P**	**00 26 19.7**	**-2.5**
BURAR	**Bucovina Array**	**14.05**	**329**	⇑P	**P**	**00 26 19.7**	**-2.5**
PDG	**Podgorica**	**14.35**	**302**	⇑*i*P	**Pn**	**00 26 20.0**	**+1.6**
TTG	**Podgorica**	**14.35**	**302**	*e*Pn	**Pn**	**00 26 17.3**	**-1.1**
TTG	**Podgorica**	**14.35**	**302**	*e*P	**Pn**	**00 26 17.3**	**-1.1**
BZS	**Buzias**	**14.41**	**316**	⇑*i*P	**Pn**	**00 26 21.7**	**+2.4**
BZS	**Buzias**	**14.41**	**316**	⇑P	**Pn**	**00 26 21.7**	**+2.4**
TIP	**Timpagrande**	**15.43**	**288**	*e*Pn	**Pn**	**00 26 31.6**	**-1.5**
	comp=Z,10nm,1.3s						
TIP	**Timpagrande**	**15.43**	**288**	⇓*i*P	**Pn**	**00 26 34.3**	**+1.2**
VSR	**Storozhevoye**	**15.44**	**8**	*e*P	**P**	**00 26 38.1**	**+0.5**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKASG	**Malin Array Be**	**15.48**	**344**	Pn	**P**	**00 26 35.8**	**-2.1**
	comp=Z,1.3nm,0.3s,baz=166,slow=11,SNR=11						
VRH	**Novokhopyorsk**	**15.82**	**14**	*e*P	**P**	**00 26 41.0**	**-0.8**
VRH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KOLS	**Kolonicke sedl**	**16.32**	**327**	*e*P	**P**	**00 26 48.3**	**+0.9**
KOLS	**Kolonicke sedl**	**16.32**	**327**	*e*P	**P**	**00 26 48.3**	**+0.9**
KOLS				*e*sP	sP	00 27 01.6	+8.2
BLY	**Banja Luka**	**16.65**	**307**	⇓*i*P	**P**	**00 26 52.2**	**+1.2**
PSZ	**Piszkesteto**	**16.77**	**320**	*e*P	**Pn**	**00 26 50.8**	**+0.5**
	comp=Z,4.1nm,1.1s						
PSZ	**Piszkesteto**	**16.77**	**320**	*e*P	**Pn**	**00 26 50.8**	**+0.5**
PSZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VYHS	**Vyhne**	**17.68**	**320**	*e*P	**Pn**	**00 27 00.3**	**-1.3**
VYHS	**Vyhne**	**17.68**	**320**	*e*P	**Pn**	**00 27 00.3**	**-1.3**
VYHS				*e*		00 27 16.6	
GEYT	**Alibeck**	**17.95**	**77**	P	**P**	**00 27 06.0**	**+0.5**
	baz=273,slow=15,SNR=11						
GYA0B	**ALIBECK ARRAY**	**17.95**	**77**	*e*P	**Pn**	**00 27 03.2**	**-1.8**
	comp=Z,7.0nm,1.1s						
OBN	**Obninsk**	**19.16**	**1**	*e*P	**Pn**	**00 27 21.1**	**+1.6**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VRAC	**Vranov**	**19.35**	**320**	P	**Pn**	**00 27 21.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=131,slow=9.3,SNR=3.6						
MOS	**Moscow**	**19.82**	**3**	*e*P	**P**	**00 27 25.6**	**-0.2**
MOS				pmax	pmax		
	comp=Z,30nm,1.2s						
DPC	**Dobruska-Polom**	**20.13**	**322**	*e*P	Pn	00 27 34.8	+3.7
DPC	**Dobruska-Polom**	**20.13**	**322**	*e*P	Pn	00 27 34.8	+3.7
GEC2	**GERESS Array S**	**20.69**	**315**	*e*P	**P**	**00 27 34.9**	**-0.5**
	comp=Z,4.2nm,0.9s						
GEC2	**GERESS Array S**	**20.69**	**315**	*e*P	**P**	**00 27 34.9**	**-0.5**
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GERES	**GERESS Array B**	**20.69**	**315**	P	**P**	**00 27 35.4**	**0.0**
	comp=Z,2.4nm,0.8s,baz=118,slow=11,SNR=20						
GERES	**GERESS Array B**	**20.69**	**315**	*e*P	**P**	**00 27 33.8**	**-1.6**
GERES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PRU	**Pruhonice**	**20.84**	**319**	*e*P	**P**	**00 27 37.1**	**+0.2**
PRU				MLR	MLR		
	comp=Z,200nm,21.5s						
PRU	**Pruhonice**	**20.84**	**319**	*e*P	**P**	**00 27 37.1**	**+0.2**
PRU				AMS	AMS	00 30 20.0	
	comp=Z,200nm,21.5s						
KHC	**Kasperske Hory**	**20.90**	**316**	*e*P	**P**	**00 27 37.1**	**-0.6**
	comp=Z,1.2nm,0.9s						
KHC	**Kasperske Hory**	**20.90**	**316**	*i* P	**P**	**00 27 37.8**	**+0.1**
KHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KHC	**Kasperske Hory**	**20.90**	**316**	*e*P	**P**	**00 27 37.4**	**-0.3**
KHC				*e*x	x	00 27 51.5	
VLC	**Villacollemand**	**21.04**	**301**	*e*P	**P**	**00 27 39.1**	**-0.1**
	comp=Z,9.3nm,1.0s						
KEST	**Kesra**	**21.42**	**277**	P	**P**	**00 27 45.6**	**+2.2**
	comp=Z,5.0nm,1.0s,baz=76,slow=8.3,SNR=4.8						
KEST	**Kesra**	**21.42**	**277**	*e*P	**P**	**00 27 44.1**	**+0.7**
	comp=Z,9.2nm,1.0s						
MOTA	**Moosalm**	**21.58**	**309**	*i* P	**P**	**00 27 47.0**	**+2.0**
	comp=Z,6.4nm,1.2s						
AKTO	**Aktyubinsk**	**21.61**	**41**	P	**P**	**00 27 44.6**	**-0.6**
	comp=Z,7.3nm,0.7s,baz=239,slow=9.9,SNR=18						
AKTO				LR	LR	00 38 16.1	
	comp=Z,63nm,18.7s,baz=228,slow=43						
BRG	**Berggiesshubel**	**21.66**	**320**	*e*P	**P**	**00 27 49.7**	**+4.0**
	comp=Z,2.3nm,1.0s						
BRG	**Berggiesshubel**	**21.66**	**320**	*e*P	**P**	**00 27 49.7**	**+4.0**
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**21.85**	**307**	*e*P	**P**	**00 27 47.8**	**-0.3**
	comp=Z,2.5nm,0.8s						
ABKAR	**Akbulak array**	**22.08**	**46**	*e*P	**P**	**00 27 49.7**	**-0.5**
	comp=Z,4.2nm,1.0s						
DAVOX	**Davos/Dischmat**	**22.15**	**307**	LR	LR	00 36 30.8	
	comp=Z,82nm,19.4s,baz=12,slow=37						
CLL	**Collm**	**22.39**	**320**	*e*P	**P**	**00 27 54.0**	**+0.4**
TUE	**Stuetta**	**22.39**	**306**	*e*P	**P**	**00 27 52.6**	**-1.3**
	comp=Z,4.6nm,1.0s						
BFO	**Black Forest**	**23.68**	**310**	*e*P	**P**	**00 28 05.7**	**-1.2**
	comp=Z,9.2nm,1.3s						
BFO	**Black Forest**	**23.68**	**310**	*e*P	**P**	**00 28 05.7**	**-1.2**
BFO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SENIN	**Lac Senin/Sane**	**23.72**	**305**	*e*P	**P**	**00 28 07.0**	**-0.4**
	comp=Z,9.1nm,1.3s						
LPL	**La Plagne**	**23.89**	**303**	*e*P	**P**	**00 28 09.5**	**+0.4**
LPL				pmax	pmax		
	comp=Z,13nm,1.1s						
CDF	**Champ du Feu**	**24.36**	**310**	*e*P	**P**	**00 28 12.3**	**-1.1**
CDF				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ECH	**Echery**	**24.37**	**309**	*e*P	**P**	**00 28 13.0**	**-0.4**
	comp=Z,8.2nm,1.2s						
ECH	**Echery**	**24.37**	**309**	*e*P	**P**	**00 28 13.0**	**-0.4**
ECH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLMR	**Klimovskoe**	**25.03**	**4**	*e*P	**P**	**00 28 17.7**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARU	**Arti**	**25.62**	**30**	P	**P**	**00 28 24.6**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=195,slow=11,SNR=4.3						
ARU	**Arti**	**25.62**	**30**	*e*P	**P**	**00 28 24.6**	**+0.1**
	comp=Z,3.6nm,0.9s						
ARU	**Arti**	**25.62**	**30**	*d i*P	**P**	**00 28 24.3**	**-0.2**
ARU				S	**S**	**00 32 51.7**	**-0.3**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.6s						
FIA0	**FINESS Array S**	**26.24**	**349**	*e*P	**P**	**00 28 29.8**	**-0.3**
FIA0	**FINESS Array S**	**26.24**	**349**	*e*P	**P**	**00 28 29.8**	**-0.3**
FINES	**FINESS Array B**	**26.24**	**349**	P	**P**	**00 28 29.8**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=140,slow=15,SNR=11						
FINES	**FINESS Array B**	**26.24**	**349**	*e*P	**P**	**00 28 33.2**	**+3.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FIA1	**FINESS Array S**	**26.24**	**349**	*e*P	**P**	**00 28 32.0**	**+1.9**
	comp=Z,12nm,1.5s						
SSF	**Saint Saulge**	**26.42**	**305**	*e*P	**P**	**00 28 31.0**	**-0.9**
SSF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SVE	**Sverdlovsk**	**26.74**	**31**	*e*P	**P**	**00 28 36.3**	**+1.7**
SVE				pmax	pmax		
	comp=Z,16nm,1.4s						
HFS	**Hagfors**	**28.07**	**336**	P	**P**	**00 28 45.9**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=128,slow=9.6,SNR=8.3						
MFF	**Saint Martin d**	**28.79**	**303**	*e*P	**P**	**00 28 56.1**	**+3.0**
MFF				pmax	pmax		
	comp=Z,1.0nm,0.2s						
NB201	**NORSAR Array S**	**29.55**	**336**	*e*P	**P**	**00 28 58.9**	**-0.8**
	comp=Z,14nm,1.5s						
NB2	**NORSAR Subarra**	**29.56**	**336**	P	**P**	**00 28 59.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=132,slow=9.3						
NB200	**NORSAR Array S**	**29.56**	**336**	*e*P	**P**	**00 28 58.9**	**-1.0**
NOA	**NORSAR Array B**	**29.56**	**336**	P	**P**	**00 28 58.9**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=133,slow=8.5,SNR=3.4						
NOA	**NORSAR Array B**	**29.56**	**336**	*e*P	**P**	**00 29 03.9**	**+4.0**
ESDC	**Sonseca Array**	**31.44**	**289**	P	**P**	**00 29 16.6**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=83,slow=9.3,SNR=7.2						
KSH	**Kashi**	**31.79**	**71**	*e*P	**P**	**00 29 17.8**	**-2.1**
KSH				PcP	**PcP**	**00 32 10.0**	**-0.9**
KSH				S	**S**	**00 34 22.3**	**-7.4**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KSH				pmax	pmax		
	comp=Z,40nm,5.0s						
KSH				LR	LR		
	comp=N,52nm,6.2s						
KSH				LR	LR		
	comp=E,57nm,5.8s						
KSH				LR	LR		
	comp=Z,76nm,4.1s						
ARCES	**ARCESS Array B**	**34.10**	**354**	P	**P**	**00 29 40.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=178,slow=9.9,SNR=3.7						
ARCES	**ARCESS Array B**	**34.10**	**354**	P	**P**	**00 29 40.0**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK32	**Makanchi Array**	**36.05**	**58**	*e*P	**P**	**00 29 57.6**	**+1.0**
MKAR	**Makanchi Array**	**36.05**	**58**	P	**P**	**00 29 57.6**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=268,slow=7.5,SNR=14						
TOA1	**Torodi Ar. Sit**	**38.13**	**242**	*e*P	**P**	**00 30 15.6**	**+1.0**
TORD	**Torodi Ar. Bea**	**38.13**	**242**	P	**P**	**00 30 15.6**	**+1.0**
	comp=Z,1.1nm,1.0s,baz=39,slow=9.1,SNR=4.4						
TORD				LR	LR	00 50 32.7	
	comp=Z,57nm,18.6s,baz=300,slow=43						
ZALV	**Zalesovo Beam**	**38.19**	**46**	P	**P**	**00 30 13.1**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=268,slow=8.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**38.19**	**46**	*e*P	**P**	**00 30 14.8**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAA1	**Zalesovo Array**	**38.19**	**46**	*e*P	**P**	**00 30 13.1**	**-1.5**
WMQ	**Urumqi**	**40.03**	**62**	*e*P	**P**	**00 30 29.8**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,36nm,4.9s						
WMQ				LR	LR		
	comp=N,240nm,28.8s						
WMQ				LR	LR		
	comp=E,180nm,29.0s						
WMQ				LR	LR		
	comp=Z,58nm,21.3s						
LSZ	**Lusaka**	**51.46**	**189**	P	**P**	**00 32 03.7**	**+2.9**
	comp=Z,2.6nm,0.9s,baz=8.7,slow=6.3,SNR=4.5						
SONM	**Songino Array**	**52.16**	**54**	LR	LR	00 56 50.1	
	comp=Z,71nm,19.9s,baz=262,slow=39						
MATP	**Matopo**	**56.50**	**188**	P	**P**	**00 32 39.9**	**+2.3**
	comp=Z,1.7nm,0.7s,baz=349,slow=6.5,SNR=4.1						
KMI	**Kunming**	**57.67**	**81**	P	**P**	**00 32 46.0**	**-0.2**
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
BOSA	**Boshof**	**64.99**	**190**	P	**P**	**00 33 38.2**	**+2.9**
	comp=Z,2.9nm,0.9s,baz=346,slow=7.4,SNR=4.6						

TAP 26 00:41:04.1,24°.28N×121°.43E,h5^{km},ML1.5,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.08**	**147**	P	Pg	00 41 06.5	+0.6
	baz=147						
ETLH				S	Sg	00 41 07.9	+0.7
	baz=147						
NNSB	**Datong**	**0.16**	**343**	*i* P	Pg	00 41 07.8	+0.4
	baz=342						
NNSB				S	Sg	00 41 10.0	+0.5
	baz=342						
NNS	**Nan Shan**	**0.17**	**342**	S	Sg	00 41 10.6	+0.6
	baz=343						
NACB	**Ninganchiao**	**0.18**	**124**	P	Pg	00 41 08.1	+0.5
	baz=125						
NACB				*e*S	Sg	00 41 10.7	+0.7
	baz=125						
WHF	**Hehuan Shan**	**0.20**	**230**	P	Pg	00 41 08.8	+0.6
	baz=228						
WHF				*e*S	Sg	00 41 11.7	+0.9
	baz=228						
TWT	**Tachien**	**0.24**	**265**	S	Sg	00 41 13.4	+1.5
	baz=253						
TWD	**Chiawan**	**0.24**	**142**	P	Pg	00 41 09.8	+0.9
	baz=143						
TWD				*e*S	Sg	00 41 12.9	+0.8
	baz=143						
CHGB	**Renai**	**0.32**	**228**	P	Pg	00 41 11.1	+0.7
	baz=228						
CHGB				*e*S	Sg	00 41 16.2	+1.6
	baz=228						
NANB	**Nanao**	**0.33**	**62**	*e*P	Pg	00 41 10.5	+0.1
	baz=63						
NANB				*e*S	Sg	00 41 15.7	+0.9
	baz=63						
NDT	**Datong Townshi**	**0.33**	**13**	*e*P	Pg	00 41 11.4	+0.8
	baz=12						
NDT				*e*S	Sg	00 41 16.5	+1.5
	baz=12						
ENTT	**Nioudou**	**0.38**	**18**	*e*P	Pg	00 41 12.3	+0.8
	baz=11						
YHNB	**Yeheng**	**0.40**	**352**	*e*P	Pg	00 41 12.5	+0.7
	baz=352						
YHNB				*e*S	Sg	00 41 17.0	0.0
	baz=352						
NSK	**Sanguang**	**0.41**	**350**	*e*S	Sg	00 41 18.2	+0.9
	baz=350						

JMA 26 00:41:48.6±0.1,24°.11N×123°.59E,h17^{km}±2^{km},M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.20**	**105**	P	Pg	00 41 53.3	-0.2
HATJ				S	Sb	00 41 57.1	-0.3
IRIF	**Iriomote-Funau**	**0.26**	**30**	P	Pg	00 41 54.3	-0.1
IRIF				S	Sg	00 41 58.6	+0.3
JKRS	**Kuro-shima**	**0.40**	**72**	P	Pg	00 41 56.9	0.0
JKRS				*e*S	Sb	00 42 03.4	+0.2
JIJ	**Ishigaki jima**	**0.56**	**63**	P	Pg	00 41 59.4	-0.4
JIJ				S	Sg	00 42 07.5	+0.1
YOJ	**Yonaguni jima**	**0.63**	**304**	P	Pb	00 42 01.2	0.0
YOJ				S	Sg	00 42 09.6	0.0
JISG	**Ishigakijimahi**	**0.81**	**54**	P	Pb	00 42 03.6	-0.6
JISG				S	Sg	00 42 15.3	+0.1
JTJ	**Tarama**	**1.14**	**62**	P	Pn	00 42 09.5	-0.3
JTJ				S	Sn	00 42 24.8	-0.3

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*NIED **26** 00:42:00,39°.10N×142°.20E,h47^{km},Mw4.1 Best double couple: $M_0$1.48000×10^{15} NP1:ϕ_s200.00000°,δ19.00000°, λ52.00000°. NP2:ϕ_s59.00000°,δ75.00000°,λ102.00000°.*

*ISCJB **26** 00:42:44.5±0.8,39°.06N±0°.04×142°.17E±0°.09,h53^{km}±5^{km}, mb3.9/18,MS3.4/3,Error ellipse: s-maj=12.6km s-min=4.9km az=23.1*

*JMA **26** 00:42:44.8±0.1,39°.08N×142°.20E,h44^{km}±1^{km},M4.0 JMA Felt II J1.*

*IDC **26** 00:42:48.3±2.3,39°.05N×142°.11E,h75^{km}±20^{km},mb3.7/18, mb1 3.8/21,mb1mx3.8/35,mbtmp4.0/21,MS3.0/9, Ms1 3.0/9,ms1mx2.9/28,Error ellipse: s-maj=17.4km s-min=14.1km az=116.0*

ISC 26 00:42:45.3±1.3,39°.07N±0°.05×142°.15E±0°.09,h44^{km}±10^{km}, n43,σ1^s.39/45,mb4.0/18,MS3.4/3,10D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.37**	**272**	⇓P	**Pn**	**00 42 54.7**	**+0.1**
OFUJ				S	**Sn**	**00 43 01.5**	**+0.3**
MIYJ	**Miyakonagasawa**	**0.57**	**334**	⇓P	**Pn**	**00 42 56.6**	**-0.5**
MIYJ				S	**Sn**	**00 43 04.8**	**-0.7**
JKMT	**Kesennumamotoy**	**0.58**	**244**	⇓P	**Pn**	**00 42 57.2**	**0.0**
JKMT				S	**Sn**	**00 43 05.7**	**-0.1**
JMK	**Ichinoseki**	**0.73**	**261**	⇓P	**Pn**	**00 42 59.4**	**+0.2**
JMK				S	**Sn**	**00 43 09.7**	**+0.4**
JOM	**Ohasama**	**0.78**	**302**	⇓P	**Pn**	**00 43 00.0**	**+0.1**
JOM				*e*S	**Sn**	**00 43 10.4**	**-0.1**
JIO	**Ouri**	**0.87**	**226**	⇓P	**Pn**	**00 43 00.9**	**-0.2**
JIO				S	**Sn**	**00 43 11.9**	**-0.8**
JTH	**Tanohata**	**0.90**	**346**	⇓P	**Pn**	**00 43 00.8**	**-0.7**
JRG	**Rokugo**	**1.22**	**286**	⇓P	**Pn**	**00 43 06.3**	**+0.4**
JOU	**Okura**	**1.35**	**239**	P	**Pn**	**00 43 08.0**	**+0.3**
JOU				*e*S	**Sn**	**00 43 25.5**	**+1.0**
JANG	**Nango**	**1.40**	**340**	⇓P	**Pn**	**00 43 07.9**	**-0.4**
JANG				*e*S	**Sn**	**00 43 25.6**	**+0.1**
JYK	**Kaneyama**	**1.40**	**265**	⇓P	**Pn**	**00 43 09.0**	**+0.6**
MAT	**Matsushiro**	**4.01**	**232**	P	**Pn**	**00 43 48.4**	**+4.2**
MAT				*e*S	**Sn**	**00 44 32.7**	**+2.8**
MJAR	**Matsushiro Arr**	**4.01**	**232**	P	**Pn**	**00 43 46.8**	**+2.6**
	0.9nm,0.3s,baz=42,slow=11,SNR=32						
MJAR				S	**Sn**	**00 44 31.1**	**+1.2**
	0.6nm,0.3s,baz=58,slow=25,SNR=4.7						
MJAR				LR	LR	00 45 33.0	
	comp=Z,74nm,21.7s,baz=90,slow=42						
ASAJ	**Asahikawa**	**5.06**	**4**	P	**Pn**	**00 44 01.0**	**+2.5**
	5.7nm,0.3s,baz=203,slow=19,SNR=7.8						
ASAJ				S	**Sn**	**00 44 59.6**	**+4.0**
	1.8nm,0.3s,baz=139,slow=20,SNR=1.9						
ASAJ				LR	LR	00 46 27.1	
	comp=Z,169nm,21.7s,baz=170,slow=43						
JHJ	**Hachijo jima 2**	**6.23**	**199**	LR	LR	00 47 00.2	
	comp=Z,71nm,21.4s,baz=66,slow=41						
USRK	**Ussuriysk Ar.**	**9.17**	**307**	P	**Pn**	**00 44 58.7**	**+3.8**
	0.5nm,0.3s,baz=122,slow=16,SNR=15						
USRK				LR	LR	00 48 20.8	
	comp=Z,108nm,18.7s,baz=173,slow=36						
KSRS	**Korea Array**	**11.30**	**266**	P	Pn	00 45 30.4	+6.3
	0.1nm,0.3s,baz=80,slow=14,SNR=3.9						
KSRS				LR	LR	00 49 50.6	
	comp=Z,29nm,19.6s,baz=93,slow=37						
KLR	**Kul'dur**	**12.60**	**327**	LR	LR	00 50 32.4	
	comp=Z,105nm,19.4s,baz=180,slow=37						
MA2	**Magadan**	**21.25**	**12**	P	**P**	**00 47 27.4**	**0.0**
	7.7nm,0.5s,baz=173,slow=10,SNR=4.0						
SEY	**Seymchan**	**24.69**	**11**	P	**P**	**00 48 02.1**	**+0.3**
	3.3nm,0.7s,baz=187,slow=6.0,SNR=11						
SONM	**Songino Array**	**27.19**	**301**	P	**P**	**00 48 25.1**	**+0.3**
	0.4nm,0.4s,baz=103,slow=9.1,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**28.76**	**125**	T	T	01 19 00.8	
	baz=317,slow=75,SNR=1687						
H11N1	**WAKE ISLAND Hy**	**28.77**	**125**	T	T	01 19 01.5	
	baz=317,slow=75,SNR=1853						
H11N3	**WAKE ISLAND Hy**	**28.78**	**125**	T	T	01 19 05.0	
	baz=317,slow=75,SNR=1812						
H11S1	**WAKE ISLAND Hy**	**29.55**	**127**	T	T	01 19 59.6	
	baz=319,slow=76,SNR=82						
H11S3	**WAKE ISLAND Hy**	**29.55**	**127**	T	T	01 20 02.0	
	baz=319,slow=76,SNR=104						
H11S2	**WAKE ISLAND Hy**	**29.56**	**127**	T	T	01 20 00.5	
	baz=319,slow=76,SNR=90						
ZALV	**Zalesovo Beam**	**41.00**	**311**	P	**P**	**00 50 23.5**	**-0.3**
	1.8nm,0.6s,baz=97,slow=8.8,SNR=8.2						
ZALV				LR	LR	01 08 10.0	
	comp=Z,35nm,18.7s,baz=58,slow=37						
MKAR	**Makanchi Array**	**43.56**	**300**	P	**P**	**00 50 44.8**	**0.0**
	2.4nm,0.6s,baz=87,slow=10,SNR=25						
KDAK	**Kodiak Island**	**45.21**	**43**	P	**P**	**00 50 57.4**	**-0.3**
	3.4nm,0.7s,baz=296,slow=5.9,SNR=6.4						
ILAR	**Eielson Array**	**47.48**	**33**	P	**P**	**00 51 15.8**	**+0.4**
	1.6nm,0.6s,baz=269,slow=6.5,SNR=20						
WRA	**Warramunga Arr**	**59.15**	**189**	P	**P**	**00 52 40.6**	**-0.9**
	0.6nm,0.4s,baz=4.8,slow=7.5,SNR=11						
ARCES	**ARCESS Array B**	**62.30**	**339**	P	**P**	**00 53 02.1**	**-0.4**

	1.5nm,0.9s,baz=50,slow=8.4,SNR=6.3						
ASAR	Alice Springs	62.88	188	P	P	00 53 06.2	-0.6
	0.4nm,0.5s,baz=7.0,slow=8.4,SNR=4.6						
GEYT	Alibeck	63.37	298	P	P	00 53 09.4	-0.8
	1.4nm,0.7s,baz=62,slow=3.4,SNR=3.1						
FINES	FINESS Array B	67.29	332	P	P	00 53 34.2	-0.8
	3.4nm,0.7s,baz=63,slow=8.8,SNR=16						
FINES				LR	LR	01 24 39.3	
	comp=Z,41nm,18.4s,baz=21,slow=37						
NB2	NORSAR Subarra	72.54	337	P	P	00 54 06.9	-0.4
	comp=Z,0.4nm,0.5s,baz=31,slow=6.5						
NOA	NORSAR Array B	72.54	337	P	P	00 54 06.6	-0.7
	comp=Z,1.0nm,0.7s,baz=39,slow=6.0,SNR=12						
NOA				LR	LR	01 28 47.7	
	comp=Z,19nm,20.6s,baz=240,slow=38						
AKASG	Malin Array Be	73.05	322	P	P	00 54 09.5	-0.9
	comp=Z,0.9nm,0.4s,baz=47,slow=7.5,SNR=6.5						
PDAR	Pinedale Array	75.84	46	P	P	00 54 27.3	+0.2
	comp=Z,0.3nm,0.5s,baz=299,slow=2.2,SNR=3.5						
BRTR	Keskin Array B	77.94	312	P	P	00 54 38.8	-0.1
	comp=Z,0.5nm,0.8s,baz=50,slow=5.0,SNR=4.1						
GERES	GERESS Array B	81.29	328	P	P	00 54 56.2	-0.6
	comp=Z,0.5nm,0.7s,baz=39,slow=6.3,SNR=5.4						
TXAR	Lajitas Array	88.43	53	P	P	00 55 33.2	+0.2
	comp=Z,0.2nm,0.7s,baz=297,slow=4.0,SNR=3.3						

*ISCJB **26** 00:52:50.2±0.8, 36°.01N±0°.05×35°.80E±0°.04, h8^{km}±6^{km}, Error ellipse: s-maj=8.4km s-min=5.6km az=179.0*
*DDA **26** 00:52:50.9, 36°.12N×35°.90E, h7^{km}±3^{km}, ML2.9*
*ISK **26** 00:52:50.6, 36°.05N×35°.75E, h13^{km}, ML2.3/8*
ISC 26 00:52:50.7±1.2, 36°.05N±0°.06×35°.83E±0°.03, h13^{km}±9^{km}, n21, σ0^{s}.54/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAYL	Yayladag	0.23	93	iP	Pg	00 52 55.9	+0.2
YAYL				iS	Sg	00 52 58.9	-0.3
YAYL				IAML_P			
	comp=Z,22nm,0.1s						
KRTS	Karatas	0.64	325	PG	Pb	00 53 03.7	0.0
YURE	YUREGIR	0.79	349	PG	Pb	00 53 06.1	-0.3
YURE				SG	Sb	00 53 17.6	+0.6
YURE	YUREGIR	0.79	349	iP	Pn	00 53 07.1	-0.5
CEYT	Ceyhan	0.96	356	PG	Pb	00 53 09.2	0.0
DED	Mersin	1.23	318	iP	Pg	00 53 14.4	0.0
DED				IAML_P			
	comp=Z,587nm,0.1s						
KUZU	Kuzuini	1.24	54	iP	Pn	00 53 13.7	-0.1
KUZU				iS	Sn	00 53 30.4	0.0
KAMA	Osmaniye	1.32	31	iP	Pn	00 53 14.6	-0.4
KAMA				IAML_P			
	comp=Z,958nm,0.1s						
MERS	Mersin	1.33	308	PN	Pn	00 53 14.5	-0.5
MERS				SN	Sb	00 53 32.5	-0.1
KARA	Karaisali	1.36	333	PN	Pn	00 53 15.4	0.0
KARA				SN	Sg	00 53 33.4	-1.2
KIZK	Mersin	1.43	288	PN	Pn	00 53 16.1	-0.2
GULE	Gulek	1.50	326	iP	Pg	00 53 19.9	+0.4
GULE				iS	Sg	00 53 40.8	+1.9
GULE				IAML_P			
	comp=Z,454nm,0.2s						
GAZ	Gaziantep	1.58	44	PN	Pn	00 53 18.6	+0.1
KMRS	Kahramanmaras	1.69	30	PN	Pb	00 53 21.7	0.0
IKL	Isikli	1.74	277	PN	Pn	00 53 20.8	+0.2
KEBE	Keben-Mersin	1.75	284	PN	Pn	00 53 20.6	-0.2
AKKU	Akkuyu-Mersin	1.85	274	PN	Pn	00 53 21.9	-0.1
KERG	Konya-Eregli	1.93	315	iP	Pb	00 53 25.6	-0.2
KERG				iS	Sg	00 53 52.0	-0.8
KERG				IAML_P			
	comp=Z,162nm,0.2s						
TEVE	Tevekalti-Mers	1.96	282	PN	Pn	00 53 23.7	0.0
BERE	Bereket-Mersin	2.13	279	PN	Pn	00 53 26.0	0.0
TEKE	Tekeli-Mersin	2.20	273	PN	Pn	00 53 26.9	0.0

*DDA **26** 01:00:08.9, 36°.12N×35°.90E, h37^{km}±1^{km}, ML3.0*
*ISK **26** 01:00:08.1, 36°.06N×35°.88E, h18^{km}, ML3.1/22*
*GRAL **26** 01:00:08.8±0.3, 36°.03N×35°.82E, h0^{km}±639^{km}, MD3.5*
*NSSC **26** 01:00:08.3±0.3, 36°.04N×35°.67E, h4^{km}±999^{km}, MD2.1, ML2.7*
*ISCJB **26** 01:00:09.0±0.5, 36°.04N±0°.02×35°.88E±0°.03, h20^{km}±5^{km}, Error ellipse: s-maj=4.4km s-min=3.1km az=165.6*
ISC 26 01:00:09.1±1.1, 36°.07N±0°.03×35°.87E±0°.02, h19^{km}±3^{km}, n53, σ0^{s}.71/69, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAYL	Yayladag	0.20	100	iP	Pb	01 00 13.1	-0.6
YAYL				iS	Sg	01 00 17.2	-0.4
KRTD	Karatas-Adana	0.64	325	PG	Pg	01 00 21.7	0.0
KRTS	Karatas	0.64	322	PG	Pb	01 00 21.4	-0.3
YURE	YUREGIR	0.78	346	PG	Pb	01 00 23.8	-0.3
YURE				SG	Sg	01 00 35.5	+0.8
YURE	YUREGIR	0.78	346	iP	Pb	01 00 24.0	-0.1
CEYT	Ceyhan	0.94	354	PG	Pn	01 00 27.1	-0.3
CEYT				SG	Sn	01 00 40.9	+0.5
KUZU	Kuzuini	1.20	54	iP	Pb	01 00 31.5	+0.2
KUZU				iS	Sg	01 00 48.3	+0.2
DED	Mersin	1.24	316	iP	Pg	01 00 32.7	-0.3
DED				IAML_P			
	comp=Z,2µm,0.2s						
KAMA	Osmaniye	1.29	30	iP	Pn	01 00 32.3	+0.1
MERS	Mersin	1.35	307	PN	Pn	01 00 31.6	-1.4
MERS				SN	Sb	01 00 50.9	+0.2
KARA	Karaisali	1.36	331	PN	Pn	01 00 33.4	+0.3
KARA				SN	Sn	01 00 50.9	+0.3
KIZK	Mersin	1.45	287	PN	Pn	01 00 34.7	+0.3
KIZK	Mersin	1.45	287	iP	Pb	01 00 35.6	+0.1
EREN	Erenkoy	1.48	249	PN	Pn	01 00 34.3	-0.5
GULE	Gulek	1.50	324	iP	Pb	01 00 36.5	+0.1
GULE				IAML_P			
	comp=Z,575nm,0.2s						
HCB	Kahramanmara	1.52	33	iP	Pn	01 00 35.0	-0.3
GAZ	Gaziantep	1.54	44	PN	Pn	01 00 35.7	0.0
ANDN	Andirin	1.56	14	iP	Pn	01 00 36.2	+0.3
ANDN				IAML_P			
	comp=Z,547nm,0.2s						
SLFK	Silifke-Mersin	1.59	282	PN	Pn	01 00 36.5	+0.3
SILI	Silifke-Mersin	1.60	281	PN	Pn	01 00 35.9	-0.5
KMRS	Kahramanmaras	1.66	30	PN	Pn	01 00 37.1	-0.1
IKL	Isikli	1.77	276	PN	Pn	01 00 38.5	-0.3
KEBE	Keben-Mersin	1.78	283	PN	Pn	01 00 39.8	+0.8
HWQ	Hawqa	1.79	178	eP	Pn	01 00 39.1	0.0
HWQ				eS	Sn	01 01 01.5	+0.1
GZT	Gaziantep	1.87	46	iP	Pn	01 00 40.4	+0.1
GZT				IAML_P			
	comp=Z,504nm,0.1s						
AKKU	Akkuyu-Mersin	1.88	273	PN	Pn	01 00 40.2	0.0
GULN	MERSIN_Gulnar	1.89	274	iP	Pn	01 00 40.3	-0.1
GULN				iS	Sb	01 01 04.9	-1.2
SAIM	ADANA	1.91	5	iP	Pn	01 00 41.2	+0.4
SAIM				IAML_P			
	comp=Z,437nm,0.2s						
KERG	Konya-Eregli	1.94	314	iP	Pb	01 00 42.8	-1.1
KERG				iS	Sg	01 01 10.3	-1.3
KERG				IAML_P			
	comp=Z,394nm,0.3s						
TEVE	Tevekalti-Mers	1.99	281	PN	Pn	01 00 41.9	0.0
YAHY	KAYSERI_Yahyal	2.06	349	iP	Pb	01 00 44.6	-1.4
YAHY				iS	Sb	01 01 12.2	+0.8
YAHY				IAML_P			
	comp=Z,691nm,0.3s						
BERE	Bereket-Mersin	2.16	278	PN	Pn	01 00 44.6	+0.4
BHL	Bhannes	2.17	185	eP	Pn	01 00 44.2	-0.1
BHL				eS	Sn	01 01 10.3	-0.4
TEKE	Tekeli-Mersin	2.23	273	PN	Pn	01 00 45.0	-0.1
CSS	Mathiatis	2.35	243	PN	Pn	01 00 47.2	+0.5
SURC	SANLIURFA_SURC	2.35	69	iP	Pn	01 00 47.4	+0.6
DQRL	Deir Qamar	2.37	186	eP	Pn	01 00 47.1	0.0
DQRL				eS	Sn	01 01 15.2	-0.6
ATAB	Bozova	2.40	54	iP	Pg	01 00 54.5	-0.6
ATAB				iS	Sg	01 01 26.3	0.0
ERMK	Ermenek	2.45	284	iP	Pn	01 00 50.4	+2.0
ERMK				iS	Sb	01 01 23.7	+1.0
ERMK				IAML_P			
	comp=Z,426nm,0.3s						
ELBS	KAHRAMANMARAS	2.47	24	iP	Pn	01 00 49.3	+0.8
QASN	Qassioun	2.55	172	eP	Pn	01 00 51.0	+1.4
QASN				eS	Sn	01 01 21.0	+0.8
QASN				AML	AML	01 01 37.8	
	comp=N,105nm,0.5s						
QASN				AML	AML	01 01 39.3	
	comp=E,197nm,0.6s						
RCY	Rachaya	2.57	181	eS	Sn	01 01 20.4	-0.3
LEF	Lefka	2.60	250	PN	Pn	01 00 52.2	+2.0
BRBR	Barbar	2.65	179	eP	Pn	01 00 51.6	+0.5
BRBR				eS	Sn	01 01 23.2	+0.4
BRBR				AML	AML	01 01 34.2	
	comp=E,39nm,0.5s						
BRBR				AML	AML	01 01 40.8	
	comp=N,64nm,0.6s						
SHBL	Chebaa	2.72	182	eP	Pn	01 00 51.9	0.0
URFA	Urfa	2.74	59	PN	Pn	01 00 52.1	-0.1
TOTH	TOTAH	2.74	170	eP	Pn	01 00 53.7	+1.6
BNN	Bunyan	2.78	360	PN	Pn	01 00 53.3	+0.5
DARE	Darende-Malaty	2.81	27	PN	Pn	01 00 53.9	+0.7
SULT	Sultanhani-AKS	2.84	319	PN	Pn	01 00 54.7	+1.2
GAZI	Gazipasa	2.88	274	PN	Pn	01 00 54.7	+0.7
YAYX	Yaylak	3.30	331	PN	Pn	01 01 00.8	+0.9
SVRC	Sivrice-ELAZID	3.58	49	PN	Pn	01 01 04.0	+0.1

*KRNET **26** 01:02:13.4±0.1, 43°.53N×76°.42E, mb2.4*
*SOME **26** 01:02:21.7, 41°.27N×78°.48E, h15^{km}*
*NNC **26** 01:02:21.3±2.0, 41°.24N×78°.29E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=13.7km s-min=9.4km az=165.0*
ISC 26 01:02:16.4±2.2, 41°.0N±0°.1×78°.55E±0°.06, h20^{km}, n23, σ2^{s}.01/36, 6C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.54	319	⇓iP	Pn	01 02 40.8	-2.1
	baz=58						
KDJ				⇓iS	Sb	01 03 00.9	-2.7
	baz=58						
NRN	Naryn	1.98	284	⇑iP	Pn	01 02 49.9	+0.9
	baz=89						
NRN				⇑iS	Sb	01 03 16.8	+0.6
	baz=89						
SATY	Saty	2.08	357	P	Pb	01 02 55.1	+1.6
	6.3nm,0.3s						
SATY				S	Sb	01 03 19.4	+0.4
	7.1nm,0.3s						
SATY	Saty	2.08	357	eP	Pb	01 02 55.1	+1.6
	6.3nm,0.3s						
SATY				eS	Sb	01 03 19.4	+0.4
	7.1nm,0.3s						
UZB	Uzynbulak	2.19	9	P	Pb	01 02 56.4	+0.9
	3.5nm,0.8s						
UZB				S	Sb	01 03 21.7	-0.6
	8.6nm,0.6s						
UZB	Uzynbulak	2.19	9	eP	Pb	01 02 56.7	+1.2
	2.1nm,0.4s						
UZB				eS	Sb	01 03 21.7	-0.6
	8.6nm,0.6s						
PDGK	Podgornoye	2.45	16	⇑Pg	Pb	01 03 01.6	+1.7
	1.1nm,0.5s						
PDGK				⇓Lg	Lg	01 03 31.5	
	8.3nm,0.8s						
PDGK	Podgornoye	2.45	16	⇓iP	Pn	01 02 51.5	-3.9
	baz=94						
PDGK				⇓iS	Sn	01 03 19.5	-5.3
	baz=94						
MDOK	Medeo	2.45	333	Pg	Pb	01 03 01.1	+1.2
	1.7nm,0.3s						
MDOK				Lg	Lg	01 03 29.4	
	6.8nm,0.4s						
MDOK	Medeo	2.45	333	eP	Pb	01 03 01.1	+1.2
	1.7nm,0.3s						
MDOK				eS	Sb	01 03 29.4	-0.3
	6.8nm,0.4s						
KURS	Kuram	2.52	354	Pg	Pb	01 03 03.1	+2.1
	3.6nm,0.5s						
KURS				Lg	Lg	01 03 32.9	
	2.2nm,0.4s						
KURS	Kuram	2.52	354	eP	Pb	01 03 03.1	+2.1
	3.6nm,0.5s						
KURS				eS	Sb	01 03 32.9	+1.2
	2.2nm,0.4s						
KNDC	Almaty	2.53	333	⇑Pg	Pb	01 03 00.7	-0.4
	4.9nm,0.3s						
KNDC				⇑Lg	Lg	01 03 30.2	
	14nm,0.5s						
KTMS	Ketmen	2.81	28	eP	Pb	01 03 07.5	+1.6
	2.1nm,0.3s						
KTMS				eS	Sb	01 03 40.4	+0.5
	8.7nm,0.5s						
TKM2	Tokmak 2	2.94	312	⇓Pg	Pb	01 03 07.1	-1.1
	1.6nm,0.9s						
TKM2				⇑Lg	Lg	01 03 44.9	
	1.6nm,0.5s						
KTBS	Karatobe	3.06	334	Pg	Pb	01 03 13.0	+2.7
	1.2nm,0.4s						
KTBS				Lg	Lg	01 03 49.7	
	5.9nm,0.2s						
KTBS	Karatobe	3.06	334	eP	Pb	01 03 13.0	+2.7
	1.2nm,0.4s						
KTBS				eS	Sb	01 03 49.8	+2.6
	5.9nm,0.2s						
DGS	Degeres	3.06	318	Pg	Pb	01 03 11.9	+1.6
	1.0nm,0.3s						
DGS				Lg	Lg	01 03 47.9	
	2.3nm,0.6s						
DGS	Degeres	3.06	318	eP	Pb	01 03 12.7	+2.4
	1.0nm,0.3s						
DGS				eS	Sb	01 03 49.0	+1.7
	2.3nm,0.6s						
MNBS	Baschi	3.10	358	Pg	Pb	01 03 13.3	+2.4
	2.5nm,0.4s						
MNBS				Lg	Lg	01 03 50.4	
	4.8nm,0.1s						
MNBS	Baschi	3.10	358	eP	Pb	01 03 13.3	+2.4
	2.5nm,0.4s						
MNBS				eS	Sb	01 03 50.4	+2.1
	4.8nm,0.1s						
ARXS	Arharly	3.27	351	Pg	Pb	01 03 16.2	+2.4
	1.8nm,0.4s						
ARXS				Lg	Lg	01 03 55.4	
	6.9nm,0.5s						
ARXS	Arharly	3.27	351	eP	Pb	01 03 16.2	+2.4
	1.8nm,0.4s						
ARXS				eS	Sb	01 03 55.4	+2.0
	6.9nm,0.5s						

IDC 26 01:13:35.3±2.1, 4°.71N×94°.06E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/27, mbtmp3.7/6, Error ellipse: s-maj=89.0km s-min=21.8km az=58.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	24.78	240	T	T	01 44 48.8	
	baz=60,slow=76,SNR=30						
H08S3	Diego Garcia H	24.78	240	T	T	01 44 41.5	
	baz=60,slow=76,SNR=30						
H08S1	Diego Carcia H	24.79	240	T	T	01 44 41.8	
	baz=60,slow=76,SNR=30						
MKAR	Makanchi Array	43.14	348	P	P	01 21 38.1	+0.5
	0.4nm,0.3s,baz=161,slow=9.0,SNR=9.8						
SONM	Songino Array	44.25	12	P	P	01 21 46.1	-0.6
	0.4nm,0.5s,baz=194,slow=8.2,SNR=2.9						
WRA	Warramunga Arr	46.55	123	P	P	01 22 05.2	0.0
	1.9nm,0.7s,baz=292,slow=10,SNR=5.8						
ASAR	Alice Springs	48.00	128	P	P	01 22 16.4	-0.1
	0.4nm,0.6s,baz=303,slow=7.5,SNR=4.1						
ZALV	Zalesovo Beam	49.66	353	P	P	01 22 28.7	0.0
	0.5nm,0.4s,baz=162,slow=8.1,SNR=2.5						
FINES	FINESS Array B	75.46	333	P	P	01 25 20.7	-0.3
	0.3nm,0.3s,baz=102,slow=5.8,SNR=6.0						

*ISCJB **26** 01:27:21.7±0.5, 42°.87N±0°.04×144°.03E±0°.04, h93^{km}±3^{km}, mb3.4/4, Error ellipse: s-maj=7.0km s-min=3.8km az=160.3*
*JMA **26** 01:27:22.7±0.1, 42°.89N×144°.02E, h89^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s164.00000°, δ55.00000°, λ49.00000°. NP2: ϕ_s41.00000°, δ52.00000°, λ134.00000°. Principal axes: T Plg57.0000°, Azm15.0000°; N Plg33.0000°, Azm191.0000°; P Plg2.0000°, Azm282.0000°;*
JMA Felt I J1.
*SKHL **26** 01:27:23.8±0.6, 42°.99N×144°.01E, h100^{km}±2^{km}, mb4.0/5, msh5.2/5*
*MOS **26** 01:27:25.1±1.6, 43°.46N×144°.05E, h107^{km}, mb4.2/1, Error ellipse: s-maj=20.9km s-min=14.1km az=143.9*
*IDC **26** 01:27:25.8±3.7, 43°.17N×143°.97E, h108^{km}±22^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.0/39, mbtmp3.5/6, Error ellipse: s-maj=47.9km s-min=32.6km az=174.0*
ISC 26 01:27:22.2±0.9, 42°.85N±0°.05×144°.05E±0°.04, h91^{km}±6^{km}, n42, σ0^{s}.96/61, mb3.5/4, 4C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOB	Onbets	0.17	290	⇑P	Pn	01 27 35.7	+0.6
JOB				eS	Sn	01 27 45.0	+0.2
JAR	Ashorobuto	0.49	336	⇑P	Pn	01 27 36.9	-0.1
JAR				eS	Sn	01 27 47.4	-0.6
JAK	Akkeshi	0.50	72	P	Pn	01 27 37.2	+0.2
JAK				eS	Sn	01 27 48.1	+0.1
JCH	Churui	0.56	246	⇑P	Pn	01 27 37.8	+0.4
JCH				eS	Sn	01 27 48.6	-0.2
JKHN	Kushirohamanak	0.85	74	⇓P	Pn	01 27 40.8	+0.5
JKHN				eS	Sn	01 27 54.1	+0.3
JNK	Nakash	0.89	33	⇓P	Pn	01 27 40.6	-0.1
JNK				eS	Sn	01 27 53.8	-0.7
JEM	Erimo	1.06	219	P	Pn	01 27 42.7	+0.1
JNBK	Urakawa-nobuka	1.11	240	⇑P	Pn	01 27 43.4	+0.2
JNBK				eS	Sn	01 27 58.4	-0.6
JFR	Furan	1.11	287	⇓P	Pn	01 27 43.2	0.0
JFR				eS	Sn	01 27 58.6	-0.5
JTKR	Abashiri--Toko	1.13	355	P	Pn	01 27 43.9	+0.5
JTKR				eS	Sn	01 27 59.3	0.0
JBT2	Biratori 2	1.24	267	⇓P	Pn	01 27 44.9	+0.1
JBT2				eS	Sn	01 28 01.7	0.0
JMP	Maruseppu	1.26	337	⇓P	Pn	01 27 45.0	-0.1
JMP				eS	Sn	01 28 01.6	-0.7
JRA	Rausu	1.34	35	P	Pn	01 27 46.4	+0.4
JRA				eS	Sn	01 28 05.0	+1.0
NEM2	Nemuro 2	1.35	67	⇓P	Pn	01 27 45.8	-0.2
NEM2				eS	Sn	01 28 02.8	-1.2
JKK2	Kamakawa 2	1.40	318	⇓P	Pn	01 27 47.0	+0.3
JKK2				eS	Sn	01 28 04.7	-0.5
GLVR	Golovnino	1.40	50	ePN	Pn	01 27 47.4	+0.7
GLVR				eS	Sn	01 28 04.4	-0.7
GLVR				pmax	pmax		
	comp=N,17nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,275nm,0.1s						
GLVR				smax	smax		
	comp=N,180nm,0.2s						
GLVR				smax	smax		
	comp=E,802nm,0.2s						
GLVR	Golovnino	1.40	50	eP	Pn	01 27 47.0	+0.3
GLVR				AMB	AMB	01 27 47.0	
	comp=E,30nm,0.3s						
GLVR				eS	Sn	01 28 04.0	-1.1
GLVR				A	A	01 28 07.0	
	comp=E,180nm,0.4s						
GLVR				A	A	01 28 07.0	
	comp=E,800nm,0.4s						
JAB	Ashibetsu	1.49	297	P	Pn	01 27 48.9	+1.1
JKA	Kamikawa-asahi	1.65	321	eP	Pn	01 27 50.4	+0.5
ASAJ	Asahikawa	1.65	321	P	Pn	01 27 50.4	+0.5
	comp=E,6.2nm,0.3s,baz=174,slow=14,SNR=16						
ASAJ				S	Sn	01 28 10.2	-0.7
	comp=E,7.0nm,0.3s,baz=146,slow=18,SNR=12						
GRPR	Tuman	1.70	47	ePN	Pn	01 27 51.2	+0.7
GRPR				eS	Sn	01 28 12.2	+0.2
GRPR				pmax	pmax		
	comp=N,98nm,0.1s						
GRPR				pmax	pmax		
	comp=E,93nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,160nm,0.1s						
GRPR				smax	smax		
	comp=E,407nm,0.2s						
GRPR				smax	smax		
	comp=N,644nm,0.5s						
GRPR	Tuman	1.70	47	eP	Pn	01 27 51.0	+0.5
GRPR				AMB	AMB	01 27 53.0	
	comp=N,10.0nm,0.3s						
GRPR				AMB	AMB	01 27 53.0	
	comp=N,40nm,0.3s						
GRPR				eS	Sn	01 28 12.0	0.0
GRPR				A	A	01 28 14.0	
	comp=N,340nm,0.4s						
GRPR				A	A	01 28 14.0	
	comp=N,410nm,0.4s						
LAGR	Lagunnoye	1.75	46	PN	Pn	01 27 52.1	+0.9
LAGR				eS	Sn	01 28 13.8	+0.6
LAGR				smax	smax		
	comp=N,698nm,0.2s						
LAGR				smax	smax		
	comp=E,237nm,0.2s						
LAGR	Lagunnoye	1.75	46	eP	Pn	01 27 52.0	+0.9
LAGR				eS	Sn	01 28 13.0	-0.2
LAGR				A	A	01 28 20.0	
	comp=E,700nm,0.5s						
LAGR				A	A	01 28 20.0	
	comp=E,240nm,0.5s						
YUK	Yuzh-Kuril'sk	1.78	47	ePN	Pn	01 27 52.4	+0.9
YUK				eS	Sn	01 28 13.9	+0.1
YUK				pmax	pmax		
	comp=Z,358nm,0.3s						
YUK				pmax	pmax		
	comp=N,136nm,0.2s						
YUK				pmax	pmax		
	comp=E,109nm,0.1s						
YUK				smax	smax		
	comp=N,122nm,0.4s						
YUK				smax	smax		
	comp=E,449nm,0.4s						
YUK	Yuzh-Kuril'sk	1.78	47	eP	Pn	01 27 52.4	+0.9
YUK				AMB	AMB	01 27 54.1	
	comp=E,40nm,0.4s						
YUK				eS	Sn	01 28 13.9	+0.1
YUK				A	A	01 28 19.8	
	comp=E,120nm,0.4s						
YUK				A	A	01 28 19.8	
	comp=E,450nm,0.4s						
KUR	Kuril'sk	3.64	48	ePN	Pn	01 28 12.1	-4.3
KUR				eS	Sn	01 28 56.5	-1.8
KUR				pmax	pmax		
	comp=Z,29nm,0.4s						
KUR				smax	smax		
	comp=E,48nm,0.3s						
KUR	Kuril'sk	3.64	48	eP	Pn	01 28 18.9	+2.5
KUR				AMB	AMB	01 28 19.3	
	comp=E,10.0nm,0.5s						
KUR				eS	Sn	01 28 59.1	+0.8
KUR				A	A	01 29 06.0	
	comp=E,50nm,0.3s						
YSS	Yuzh-Sakhalins	4.21	348	eP	Pn	01 28 24.8	+0.8
YSS				AMB	AMB	01 28 25.5	
	comp=E,5.0nm,0.5s						
USRK	Ussuriysk Ar.	8.87	283	P	Pn	01 29 29.1	+1.7
	comp=E,0.3nm,0.3s,baz=100,slow=14,SNR=3.9						
SEY	Seymchan	20.71	11	P	P	01 31 53.0	-1.8
	comp=E,0.7nm,0.3s,baz=184,slow=15,SNR=3.9						
H11N2	WAKE ISLAND Hy	30.02	133	T	T	02 04 45.4	
	baz=327,slow=75,SNR=77						
H11N1	WAKE ISLAND Hy	30.03	133	T	T	02 04 52.3	
	baz=327,slow=75,SNR=75						
H11N3	WAKE ISLAND Hy	30.04	133	T	T	02 04 47.2	
	baz=327,slow=75,SNR=66						
H11S1	WAKE ISLAND Hy	30.93	135	T	T	02 06 01.2	
	baz=328,slow=76,SNR=140						
H11S3	WAKE ISLAND Hy	30.93	135	T	T	02 06 02.0	
	baz=328,slow=76,SNR=66						
H11S2	WAKE ISLAND Hy	30.94	135	T	T	02 06 02.4	
	baz=328,slow=76,SNR=67						
ILAR	Eielson Array	43.55	36	P	P	01 35 16.8	+0.2
	comp=E,0.4nm,0.4s,baz=263,slow=6.3,SNR=5.3						
FINES	FINESS Array B	64.63	332	P	P	01 37 49.4	-0.2
	comp=E,0.3nm,0.3s,baz=56,slow=7.9,SNR=6.4						
NB2	NORSAR Subarra	69.60	338	P	P	01 38 21.2	0.0
	comp=Z,0.2nm,0.4s,baz=34,slow=6.5						
NOA	NORSAR Array B	69.60	338	P	P	01 38 20.7	-0.5
	comp=Z,0.3nm,0.6s,baz=35,slow=6.1,SNR=5.3						
TXAR	Lajitas Array	85.03	54	P	P	01 39 48.9	+1.0
	comp=Z,0.2nm,0.8s,baz=305,slow=1.9,SNR=3.2						

*NIED **26** 01:33:00, 33°.80N×132°.80E, h44^{km}, Mw3.9 Best double couple: $M_0$9.25000×10^{14} NP1: ϕ_s197.00000°, δ27.00000°, λ-89.00000°. NP2: ϕ_s16.00000°, δ63.00000°, λ-90.00000°.*
*IDC **26** 01:33:25.9±3.2, 33°.62N×132°.64E, h35^{km}±24^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.4/38, mbtmp3.6/9, ML2.9/2, MS2.7/3,*

Ms1 2.7/3, ms1mx2.4/26, Error ellipse: s-maj=46.3km s-min=22.7km az=159.0

*ISCJB **26** 01:33:26.8±0.4, 33°.78N±0°.03×132°.73E±0°.06, h51^{km}±4^{km}, mb3.7/7, Error ellipse: s-maj=8.0km s-min=5.5km az=168.4*

*JMA **26** 01:33:27.8, 33°.78N×132°.76E, h42^{km}, M3.8 Broadband fault plane solution: P waves. NP1:φs1.00000°, δ66.00000°, λ-86.00000°. NP2:φs171.00000°, δ24.00000°, λ-99.00000°. Principal axes: T Plg21.0000°, Azm88.0000°; N Plg4.0000°, Azm179.0000°; P Plg69.0000°, Azm279.0000°;*

JMA Felt II J1.

ISC 26 01:33:27.3±0.8**, 33°.78N**±0°.03×**132°.75E**±0°.04**, h42**^{km}±6^{km}**, n23,** σ**0^{s}71**/30**, mb3.7**/8**, 8C-2D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JET	Tanbara	0.25	89	⇓P	Pn	01 33 35.4	+0.1
JET				S	Sn	01 33 41.0	+0.2
JNA	Nagahama	0.31	226	⇑P	Pn	01 33 36.2	+0.3
JNA				S	Sn	01 33 42.3	+0.4
JHM	Kurahashi	0.41	333	⇑P	Pn	01 33 37.2	+0.2
JHM				*e*S	Sn	01 33 44.3	+0.6
JKU	Kubokawa	0.53	151	⇓P	Pn	01 33 38.8	+0.2
JKU				S	Sn	01 33 47.1	+0.5
UWA2	Uwa jima 2	0.57	191	⇑P	Pn	01 33 39.6	+0.5
UWA2				S	Sn	01 33 48.1	+0.6
JTO	Tosashimizu	0.91	177	⇑P	Pn	01 33 44.3	+0.6
JTO				S	Sn	01 33 56.1	+0.4
JHT	Toyohira	0.93	343	⇑P	Pn	01 33 44.4	+0.5
JHT				S	Sn	01 33 57.3	+1.2
JMN	Monobe	0.94	93	⇑P	Pn	01 33 44.1	0.0
JJS	Sakaide	1.15	58	⇑P	Pn	01 33 46.9	0.0
JHS	Saijyo	1.26	14	⇑P	Pn	01 33 49.0	+0.5
JNU	Nakatsue	1.70	248	Pg	Pn	01 33 55.5	+1.0
	21nm,0.3s,baz=55,slow=4.8,SNR=72						
JNU				Lg	Lg	01 34 15.8	
	51nm,0.3s,baz=150,slow=20,SNR=13						
JNU				LR	LR	01 34 47.5	
	comp=Z,298nm,18.3s,baz=16,slow=52						
MJAR	Matsushiro Arr	5.25	57	Pn	Pn	01 34 45.6	+2.2
	0.4nm,0.3s,baz=244,slow=15,SNR=12						
MJAR				Lg	Lg	01 36 14.0	
	baz=230,slow=31,SNR=3.2						
MJAR				LR	LR	01 36 43.6	
	comp=Z,33nm,21.6s,baz=215,slow=36						
KSRS	Korea Array	5.38	314	Pn	Pn	01 34 45.5	+0.6
	0.4nm,0.3s,baz=126,slow=15,SNR=3.6						
KSRS				Sn	Sn	01 35 45.0	-0.7
	2.0nm,0.3s,baz=134,slow=24,SNR=4.8						
KSRS				Lg	Lg	01 36 17.1	
	0.3nm,0.3s,baz=138,slow=26,SNR=3.7						
KSRS				LR	LR	01 37 02.3	
	comp=Z,93nm,19.5s,baz=123,slow=40						
JHJ	Hachijo jima 2	5.92	94	LR	LR	01 37 11.1	
	comp=Z,97nm,19.0s,baz=220,slow=37						
SONM	Songino Array	24.25	313	P	P	01 38 40.9	+0.5
	1.5nm,0.7s,baz=135,slow=8.8,SNR=6.3						
ZALV	Zalesovo Beam	39.08	316	P	P	01 40 50.1	-0.1
	0.5nm,0.3s,baz=112,slow=11,SNR=3.2						
ILAR	Eielson Array	55.96	31	pP	pP	01 43 13.2	+0.1
	0.3nm,0.6s,baz=272,slow=7.2,SNR=2.8						
ARCES	ARCESS Array B	64.46	338	P	P	01 43 58.6	-0.4
	0.4nm,0.4s,baz=72,slow=9.1,SNR=7.0						
FINES	FINESS Array B	68.26	330	P	P	01 44 22.9	-0.5
	0.4nm,0.3s,baz=64,slow=6.3,SNR=7.0						
AKASG	Malin Array Be	72.35	320	P	P	01 44 48.1	-0.5
	0.7nm,0.5s,baz=50,slow=6.5,SNR=5.2						
NB2	NORSAR Subarra	74.25	334	P	P	01 44 59.2	-0.6
	comp=Z,0.1nm,0.4s,baz=46,slow=5.9						
NOA	NORSAR Array B	74.25	334	P	P	01 44 59.2	-0.6
	comp=Z,0.3nm,0.6s,baz=46,slow=5.7,SNR=5.5						
NOA				pP	pP	01 45 11.3	-0.9
	comp=Z,0.1nm,0.5s,baz=64,slow=21,SNR=3.3						
BRTR	Keskin Array B	75.49	308	P	P	01 45 07.7	+0.2
	comp=Z,0.7nm,0.8s,baz=124,slow=6.1,SNR=4.1						

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*IDC **26** 02:00:38.6±2.8, 28°.15S×69°.02W, h0^{km}, mb4.2/3, mb1 4.2/3, mb1mx3.8/15, mbtmp4.2/3, Error ellipse: s-maj=204.9km s-min=58.2km az=166.0*

*SJA **26** 02:00:52.5±0.7, 27°.41S×69°.12W, h134^{km}±8^{km}, ML3.5, MW3.7*

*ISCJB **26** 02:00:53.5±0.5, 27°.49S±0°.04×69°.15W±0°.05, h130^{km}±6^{km}, mb3.9/3, Error ellipse: s-maj=8.2km s-min=5.9km az=161.1*

*GUC **26** 02:00:54.0±0.6, 27°.53S×69°.19W, h125^{km}±4^{km}, ML3.8*

ISC 26 02:00:54.4±0.9**, 27°.47S**±0°.04×**69°.14W**±0°.05**, h125**^{km}±8^{km}**, n20,** σ**0^{s}78**/28**, mb3.8**/3**, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	0.98	263	*i* P	Pn	02 01 16.6	-0.2
GO03				*i* S	Sn	02 01 34.1	+0.5
GO03	Copiap	0.98	263	*e*P	Pn	02 01 16.5	-0.2
GO03				*e*S	Sn	02 01 33.3	-0.3
GO03				IAML		02 01 34.2	
	comp=E,5µm,0.2s						
VCA	Vinchina	1.51	147	*i* P	Pn	02 01 22.9	+0.5
VCA				IAML		02 01 46.3	
	comp=Z,384nm,0.5s						
VCA	Vinchina	1.51	147	*e*P	Pn	02 01 22.9	+0.5
VCA				*e*S	Sn	02 01 44.1	+0.4
VCA				IAML		02 01 47.1	
	comp=E,704nm,0.4s						
CRCH	Chaqaral	1.73	310	*e*P	Pn	02 01 24.9	0.0
CRCH				*e*S	Sn	02 01 47.0	-1.1
LCO	Las Campanas	2.06	222	⇑*i*P	Pn	02 01 29.2	+0.1
LCO				*e*S	Sn	02 01 55.5	-0.2
LCO				IAML		02 01 57.8	
	comp=E,1µm,0.2s						
GO02	Mina Guanaco	2.34	350	⇓*i*P	Pn	02 01 32.7	+0.1
GO02				*e*S	Sn	02 02 02.6	+0.7
GO02				IAML		02 02 08.2	
	comp=N,329nm,0.4s						
ACLC	CERRO LA CRUZ	2.74	136	*i* P	Pn	02 01 37.5	-0.2
ACLC				*i* S	Sn	02 02 10.7	-0.2
ACCO	Cerro Coronel	3.10	179	*i* P	Pn	02 01 43.5	+0.9
CYA	Choya	3.11	109	*i* P	Pn	02 01 41.5	-0.8
CYA				IAML		02 01 41.6	
	comp=Z,98nm,0.6s						
FSA	Cafayete	3.13	65	*i* P	Pn	02 01 41.9	-0.9
APLL	PUNTA DE LOS L	3.70	142	*i* P	Pn	02 01 49.5	-0.6
APLL				IAML		02 02 32.1	
	comp=Z,63nm,0.4s						
CO02	Combarbal	4.06	203	*e*P	Pn	02 01 53.8	-1.1
CO02				*e*S	Sn	02 02 39.9	-1.9
RTLS	Leoncito	4.31	182	*i* P	Pn	02 01 58.8	+0.3
RTLS				IAML		02 02 50.3	
	comp=Z,44nm,0.2s						
RTCV	Cerro Valdivia	4.41	173	*i* P	Pn	02 01 59.9	+0.4
BDFB	Brasilia	22.86	63	P	P	02 05 46.2	-1.2
	comp=Z,1.7nm,0.6s,baz=255,slow=11,SNR=4.0						
DBIC	Dimbokro	70.73	71	P	P	02 11 58.4	+1.1
	comp=Z,5.1nm,1.0s,baz=217,slow=7.4,SNR=6.6						
TORD	Torodi Ar. Bea	79.61	69	P	P	02 12 48.3	+0.1
	comp=Z,1.6nm,0.8s,baz=256,slow=4.3,SNR=14						
ZALV	Zalesovo Beam	147.35	29	PKPbc	PKPab	02 20 24.8	-0.4
	comp=Z,0.9nm,0.4s,baz=338,slow=3.4,SNR=4.8						
MKAR	Makanchi Array	150.41	42	PKPbc	PKiKP	02 20 32.7	+1.0
	comp=Z,1.1nm,0.6s,baz=326,slow=2.2,SNR=9.1						

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*ISCJB **26** 02:15:08.7±0.5, 40°.7S±0°.1×44°.7E±0°.1, h10^{km}, mb4.2/12, MS3.6/11, Error ellipse: s-maj=17.6km s-min=12.3km az=43.1*

*IDC **26** 02:15:08.8±0.7, 40°.68S×44°.62E, h0^{km}, mb4.1/10, mb1 4.3/10, mb1mx3.9/39, mbtmp4.2/10, MS3.6/12, Ms1 3.6/12, ms1mx3.5/32, Error ellipse: s-maj=27.5km s-min=17.6km az=29.0*

*NEIC **26** 02:15:11.3±1.0, 40°.69S×44°.65E, h15^{km}±4^{km}, mb4.2/8, Error ellipse: s-maj=23.1km s-min=19.0km az=46.0*

ISC 26 02:15:10.4±0.6**, 40°.7S**±0°.1×**44°.6E**±0°.1**, h10**^{km}**, n38,** σ**0^{s}58**/26**, mb4.2**/12**, MS3.6**/11**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	19.94	301	LR	LR	02 26 09.5	
	comp=Z,187nm,20.0s,baz=139,slow=33						
SUR	Sutherland	20.82	286	LR	LR	02 25 54.5	
	comp=Z,112nm,20.1s,baz=132,slow=31						
LBTB	Lobatse	22.29	309	P	P	02 20 08.2	+0.2
	2.9nm,0.8s,baz=171,slow=9.6,SNR=4.2						
LBTB				LR	LR	02 27 22.7	
	comp=Z,155nm,21.9s,baz=132,slow=33						
LBTB	Lobatse	22.29	309	*e*P	P	02 20 08.2	+0.2
	18nm,1.3s						
MATP	Matopo	24.44	321	P	P	02 20 27.8	-1.8
	2.8nm,1.0s,baz=165,slow=9.2,SNR=7.0						
MATP				LR	LR	02 28 23.7	
	comp=Z,140nm,20.9s,baz=144,slow=32						
MAW	Mawson	28.76	166	LR	LR	02 30 20.6	
	comp=Z,156nm,19.7s,baz=321,slow=32						
LSZ	Lusaka	29.09	326	LR	LR	02 31 39.6	
	comp=Z,278nm,19.6s,baz=162,slow=34						
SNAA	Sanae	38.86	202	P	P	02 22 36.1	+0.6
SNAA	Sanae	38.86	202	P	P	02 22 35.8	+0.3
	1.5nm,0.8s,baz=86,slow=6.2,SNR=7.7						
SNAA	Sanae	38.86	202	*e*P	P	02 22 35.8	+0.3
	4.7nm,1.1s						
KMBO	Kilima Mbogo	39.94	348	LR	LR	02 36 34.1	
	comp=Z,87nm,19.6s,baz=155,slow=32						
VNA3	Neumayer Olymp	40.71	204	P	P	02 22 51.2	+0.4
QSPA	South Pole Qui	49.52	180	LR	LR	02 42 53.9	
	comp=Z,126nm,18.3s,baz=246,slow=34						
QSPA	South Pole Qui	49.52	180	*e*P	P	02 24 00.3	-0.7
	27nm,1.9s						
H01W2	Cape Leeuwin H	53.92	108	T	T	03 22 37.4	
	baz=242,slow=75,SNR=3.9						
H01W3	Cape Leeuwin H	53.93	108	T	T	03 22 34.7	
	baz=242,slow=75,SNR=5.1						
H01W1	Cape Leeuwin H	53.94	108	T	T	03 22 49.9	
	baz=242,slow=75,SNR=3.9						
DBIC	Dimbokro	65.44	304	P	P	02 25 54.4	+0.8
	6.4nm,1.1s,baz=135,slow=13,SNR=2.9						
DBIC				LR	LR	02 52 37.9	
	comp=Z,51nm,18.1s,baz=108,slow=34						
DBIC	Dimbokro	65.44	304	*e*P	P	02 25 54.4	+0.8
	50nm,1.8s						
PSI	Prapat	65.67	63	P	P	02 25 56.0	+0.6
	1.6nm,0.4s,baz=180,slow=7.1,SNR=2.6						
PSI	Prapat	65.67	63	*e*P	P	02 25 56.0	+0.6
	31nm,1.9s						
TORD	Torodi Ar. Bea	66.71	314	P	P	02 26 01.6	-0.1
	1.3nm,1.1s,baz=149,slow=6.2,SNR=3.7						
TOA1	Torodi Ar. Sit	66.71	314	*e*P	P	02 26 01.6	-0.2
ASAR	Alice Springs	74.44	108	P	P	02 26 48.8	-0.3
	2.1nm,0.9s,baz=217,slow=5.5,SNR=10						
AS31	Alice Springs	74.44	108	*e*P	P	02 26 48.8	-0.3
	1.0nm,0.6s						
STKA	Stephens Creek	74.75	119	P	P	02 26 50.7	0.0
	3.4nm,0.7s,baz=232,slow=5.2,SNR=7.6						
STKA	Stephens Creek	74.75	119	*e*P	P	02 26 50.7	0.0
	1.2nm,0.9s						
WRA	Warramunga Arr	77.06	105	P	P	02 27 04.1	+0.1
	3.6nm,0.8s,baz=232,slow=6.0,SNR=6.6						
WR1	Warramunga Arr	77.06	105	*e*P	P	02 27 04.1	+0.1
CMAR	Chiang Mai Arr	77.47	52	LR	LR	02 59 35.7	
	comp=Z,33nm,19.0s,baz=182,slow=34						
PLCA	Paso Flores	79.86	224	P	P	02 27 19.3	+0.1
	1.4nm,0.8s,baz=141,slow=6.5,SNR=3.0						
PLCA	Paso Flores	79.86	224	*e*P	P	02 27 19.3	+0.1
	35nm,1.8s						
BRTR	Keskin Array B	80.66	351	LR	LR	03 03 54.1	
	comp=Z,16nm,18.5s,baz=102,slow=36						
KBZ	Khabaz	84.05	359	LR	LR	03 05 25.7	
	comp=Z,33nm,20.6s,baz=136,slow=36						
ULM	Lac du Bonnet	151.01	303	PKPbc	PKPbc	02 35 02.0	-0.8
	5.1nm,0.8s,baz=52,slow=3.2,SNR=4.3						
ECSD	EROS Data Cent	151.32	289	*e*PKPbc	PKPbc	02 35 03.4	-0.4
TXAR	Lajitas Array	151.83	256	PKPbc	PKPbc	02 35 05.4	-0.1
	1.1nm,0.9s,baz=140,slow=5.0,SNR=9.8						
TX31	Lajitas Ar. Si	151.83	256	*e*PKPbc	PKiKP	02 35 05.7	-0.2

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*PLV **26** 02:23:11.3±0.9, 21°.09N×102°.64E, h6^{km}±13^{km}, ML3.3*

ISC 26 02:23:11.2±1.2**, 21°.13N**±0°.06×**102°.60E**±0°.06**, h10**^{km}**, n11,** σ**1^{s}68**/12**, Laos**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBV	Dienbien	0.47	56	*i* Pg	Pg	02 23 19.9	-0.6
DBV				*e*Sg	Sg	02 23 27.3	+0.5
DBV				IAML		02 23 28.4	
DBV				IAML		02 23 28.4	
SLVN	Son La	1.23	80	*e*Pg	Pb	02 23 34.2	-0.4
SLVN				IAML		02 23 55.6	
SLVN				IAML		02 23 58.2	
SPV	Sa-pa	1.66	43	*e*Pg	Pg	02 23 43.7	+0.6
HBVN	Hoa-Binh	2.58	96	*e*Pg	Pg	02 23 59.4	-1.4
HBVN				IAML		02 24 47.3	
	comp=E,118nm,0.3s						
HBVN				IAML		02 24 49.4	
	comp=N,191nm,0.4s						
CCVB	Con Cuong	2.97	134	*e*Pn	Pn	02 23 58.2	-0.2
CCVB				IAML		02 24 53.4	
	comp=N,101nm,0.5s						
CCVB				IAML		02 24 57.4	
	comp=E,51nm,0.6s						
NONG	Nongkai	3.09	170	P	Pg	02 24 09.2	-1.2
BGV	Bac-Giang	3.39	86	*e*Pg	Pg	02 24 14.7	-1.4
BGV				IAML		02 25 09.2	
BGV				IAML		02 25 12.8	
PHRA	Phrae	3.44	221	P	Pb	02 24 14.4	+2.2
UTTA	Uttaradit	3.88	210	P	Pg	02 24 22.6	-2.9
CMMT	Chiang Mai	4.14	237	P	Pb	02 24 24.7	+0.6
PANO	Nakornpanom	4.39	154	P	Pg	02 24 37.6	+2.3

IDC 26 02:23:52.0±1.9**, 6°.98S**×**126°.54E, h0**^{km}**, mb3.5**/1**, mb1 3.8**/3**, mb1mx3.5**/39**, mbtmp3.6**/3**, ML3.6**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/19**, Error ellipse: s-maj=177.9km s-min=30.3km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.95	150	Pn	Pn	02 27 22.7	-2.0
	0.2nm,0.3s,baz=322,slow=13,SNR=6.9						
WRA				Sn	Sn	02 29 58.7	-12
	0.3nm,0.3s,baz=322,slow=25,SNR=5.0						
ASAR	Alice Springs	18.04	158	P	P	02 28 05.3	+0.5
	0.3nm,0.3s,baz=335,slow=12,SNR=11						
KSRS	Korea Array	44.22	2	LR	LR	02 52 37.9	
	comp=Z,25nm,18.2s,baz=140,slow=39						
MKAR	Makanchi Array	66.37	328	P	P	02 34 42.7	0.0
	0.4nm,0.7s,baz=127,slow=7.1,SNR=3.3						

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*ISCJB **26** 02:30:02.8±0.5, 0°.19S±0°.06×122°.91E±0°.06, h78^{km}, mb3.8/7, Error ellipse: s-maj=10.0km s-min=6.6km az=37.1*

*IDC **26** 02:30:04.5±2.5, 0°.20S×123°.14E, h79^{km}±24^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.5/38, mbtmp4.0/8, MS2.6/1, Ms1 2.6/1, ms1mx2.2/36, Error ellipse: s-maj=36.3km s-min=15.0km az=81.0*

*DJA **26** 02:30:05.8±0.4, 0°S±3°×12°3E±°, h56^{km}±17^{km}, M4.4/13, mB5.3/3, mb4.5/5, MLv4.3/13, Mw(mB)4.7/3*

ISC 26 02:30:04.2±0.8**, 0°.28S**±0°.08×**122°.96E**±0°.07**, h78**^{km}**, n18,** σ**1^{s}40**/22**, mb4.0**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.78	194	P	Pn	02 30 21.6	+0.9
SANI	Sanana	3.50	120	P	Pn	02 30 55.4	-1.0
KDI	Kendari	3.67	185	P	Pn	02 30 59.5	+0.8
TTSI	Tana Toraja	4.17	229	P	Pn	02 31 06.9	+1.4
TTSI				S	Sn	02 31 51.9	-1.2
LBMI	Labuha	4.56	95	P	Pn	02 31 13.8	+3.0
SPSI	Sidrap Palu	4.86	221	P	Pn	02 31 16.3	+1.4
BNSI	Bone	4.99	215	P	Pn	02 31 17.9	+1.2
NLAI	Namlea	5.08	125	P	Pn	02 31 19.1	+1.2
	143nm,0.8s,2µm0.5nm						
BBSI	Bau Bau	5.19	184	P	Pn	02 31 21.3	+1.8
KAPI	Kappang	5.69	214	P	Pn	02 31 28.1	+1.9
	7.5nm,0.3s,baz=21,slow=6.7,SNR=18						
KAPI				S	Sn	02 32 29.6	-0.7
	2.2nm,0.3s,baz=72,slow=20,SNR=4.2						
KAPI				LR	LR	02 34 16.8	
	comp=Z,52nm,20.1s,baz=102,slow=43						
BKSI	Bulukumba	5.76	209	P	Pn	02 31 28.5	+1.3
WRA	Warramunga Arr	22.50	151	P	P	02 34 56.8	-0.8
	2.2nm,0.8s,baz=336,slow=10.0,SNR=4.5						
ASAR	Alice Springs	25.56	156	P	P	02 35 27.2	+1.1
	0.8nm,0.6s,baz=334,slow=8.1,SNR=8.9						
ASAR				PcP	PcP	02 38 55.5	-0.1
	0.4nm,0.3s,baz=350,slow=2.0,SNR=5.6						
ASAR				ScP	ScP	02 42 27.1	-1.2
	0.4nm,0.7s,baz=351,slow=2.9,SNR=3.9						
KSRS	Korea Array	37.82	6	P	P	02 37 13.1	-0.1
	0.6nm,0.4s,baz=187,slow=8.6,SNR=4.5						
MJAR	Matsushiro Arr	39.27	20	P	P	02 37 23.4	-2.0
	3.3nm,0.7s,baz=200,slow=9.5,SNR=10.0						
USRK	Ussuriysk Ar.	45.01	9	P	P	02 38 11.2	-0.7
	1.6nm,0.7s,baz=191,slow=8.0,SNR=7.2						
SONM	Songino Array	50.04	345	P	P	02 38 51.1	+0.1
	1.6nm,0.7s,baz=160,slow=8.8,SNR=6.5						
MKAR	Makanchi Array	58.83	328	P	P	02 39 54.9	+0.2
	0.6nm,0.3s,baz=130,slow=8.1,SNR=14						

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*ISCJB **26** 02:37:59.3±0.4, 60°.62S±0°.09×26°.8W±0°.2, h19^{km}, mb4.5/17, MS3.4/3, Error ellipse: s-maj=16.6km s-min=8.2km az=135.1*

*IDC **26** 02:37:59.4±0.7, 60°.27S×26°.71W, h0^{km}, mb4.3/10, mb1 4.4/10, mb1mx4.2/24, mbtmp4.3/10, MS3.3/4, Ms1 3.3/4, ms1mx3.2/16, Error ellipse: s-maj=33.9km s-min=16.0km az=23.0*

*NEIC **26** 02:38:03.0±1.1, 60°.34S×26°.74W, h24^{km}±3^{km}, mb4.7/12, Error ellipse: s-maj=24.7km s-min=12.0km az=211.0*

ISC 26 02:38:01.8±0.5**, 60°.5S**±0°.1×**26°.8W**±0°.1**, h19**^{km}**, n60,** σ**0^{s}90**/56**, mb4.6**/17**, MS3.4**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	12.69	151	P	Pn	02 40 58.7	-2.2
VNA3	Neumayer Olymp	12.80	155	P	Pn	02 41 00.1	-2.4
VNA3	Neumayer Olymp	12.80	155	S	Sn	02 43 10.1	-14
SNAA	Sanae	14.69	150	P	Pn	02 41 26.3	-2.0
SNAA	Sanae	14.69	150	S	Sn	02 44 00.0	-10
SNAA	Sanae	14.69	150	Pn	Pn	02 41 25.2	-3.1
	1.0nm,0.3s,baz=317,slow=16,SNR=44						
SNAA				Sn	Sn	02 43 58.6	-12
	0.1nm,0.3s,baz=348,slow=20,SNR=2.3						
SNAA				LR	LR	02 45 39.4	
	comp=Z,64nm,20.9s,baz=209,slow=31						
SNAA	Sanae	14.69	150	*e*Pn	Pn	02 41 26.9	-1.4
SNAA				*e*Sn	Sn	02 43 58.6	-12
QSPA	South Pole Qui	29.77	180	*e*P	P	02 44 08.7	+1.8
	12nm,1.0s						
PLCA	Paso Flores	33.24	286	P	P	02 44 37.4	-0.1
	3.4nm,1.2s,baz=119,slow=10,SNR=2.2						
PLCA				LR	LR	02 55 53.9	
	comp=Z,86nm,20.8s,baz=224,slow=32						
PLCA	Paso Flores	33.24	286	*e*P	P	02 44 37.4	-0.1
	47nm,2.0s						
MAW	Mawson	36.53	140	P	P	02 45 06.8	+1.4
	2.5nm,0.8s,baz=267,slow=10.0,SNR=6.3						
MAW				LR	LR	02 58 35.0	
	comp=Z,55nm,18.5s,baz=222,slow=34						
MAW	Mawson	36.53	140	*e*P	P	02 45 06.9	+1.4
	1.2nm,1.0s						
CFA	Coronel Fontan	39.67	298	P	P	02 45 31.8	-0.6
	3.0nm,0.7s,baz=137,slow=5.3,SNR=4.1						
CPUP	Villa Florida	40.00	315	P	P	02 45 34.4	-0.7
	1.2nm,0.5s,baz=153,slow=8.1,SNR=4.8						
CPUP				LR	LR	03 01 54.3	
	comp=Z,52nm,19.1s,baz=194,slow=36						
GO02	Mina Guanaco	45.85	301	*e*P	P	02 46 23.2	+0.4
	14nm,0.7s						
BOSA	Boshof	47.01	71	P	P	02 46 31.9	+0.1
	4.3nm,0.9s,baz=195,slow=9.3,SNR=4.4						
LVC	Limon Verde	47.82	303	P	P	02 46 38.9	+0.6
	5.7nm,0.8s,baz=144,slow=8.2,SNR=4.3						
LVC	Limon Verde	47.82	303	*e*P	P	02 46 38.2	-0.2
	6.0nm,0.9s						
PB01	IPOC Station P	49.46	303	*e*P	P	02 46 51.1	+0.4
	17nm,1.1s						
LBTB	Lobatse	50.23	69	P	P	02 46 56.5	0.0
	3.7nm,0.9s,baz=243,slow=2.3,SNR=3.9						
LBTB	Lobatse	50.23	69	*e*P	P	02 46 56.5	0.0
	37nm,1.8s						
GO01	Chusmiza	50.57	305	*e*P	P	02 46 59.6	+0.1
	7.4nm,0.8s						
SIV	San Ignacio	50.85	316	P	P	02 47 00.2	-1.0
	4.1nm,0.9s,baz=173,slow=8.5,SNR=8.8						
MNMC	Minye Minye	51.21	304	*e*P	P	02 47 04.0	-0.1
	16nm,0.7s						
LPAZ	La Paz	53.19	308	P	P	02 47 19.4	+0.1
	2.2nm,0.4s,baz=101,slow=7.1,SNR=12						
LPAZ	La Paz	53.19	308	*e*P	P	02 47 19.2	-0.1
	13nm,1.4s						
H10N1	ASCENSION HYDR	53.32	15	T	T	03 45 11.8	
	baz=180,slow=72						
H10N3	ASCENSION HYDR	53.32	15	T	T	03 45 12.1	
	baz=180,slow=72						
H10N2	ASCENSION HYDR	53.34	15	T	T	03 45 17.3	
	baz=180,slow=72						
TOA0	Torodi Ar. Sit	76.83	28	*e*P	P	02 49 52.7	+0.6
	7.8nm,0.8s						
TORD	Torodi Ar. Bea	76.83	28	P	P	02 49 51.2	-0.8
	4.4nm,0.7s,baz=192,slow=5.5,SNR=21						
TOA1	Torodi Ar. Sit	76.83	28	*e*P	P	02 49 51.2	-0.9
COCO	West Island	94.92	125	*e*P	P	02 51 23.5	+0.8
	0.1nm,0.6s						
W18A	Petrified Fore	116.60	295	*e*PKPdf	PKiKP	02 56 44.3	+0.3
PD31	Pinedale Array	122.82	300	*e*PKPdf	PKiKP	02 56 56.1	+0.1
PDAR	Pinedale Array	122.82	300	PKP	PKiKP	02 56 56.1	+0.1
	0.2nm,0.4s,baz=81,slow=7.8,SNR=2.2						
CM31	Chiang Mai Arr	123.22	113	*e*PKPdf	PKiKP	02 56 57.7	+0.5
CMAR	Chiang Mai Arr	123.22	113	PKP	PKiKP	02 56 57.7	+0.5
	0.8nm,0.3s,baz=215,slow=2.2,SNR=3.6						
NB200	NORSAR Array S	124.67	21	*e*PKPdf	PKiKP	02 56 59.0	+0.2
NOA	NORSAR Array B	124.67	21	PKP	PKiKP	02 56 59.0	+0.2
	0.2nm,0.7s,baz=196,slow=1.8,SNR=3.7						
FIA0	FINESS Array S	128.17	29	*e*PKPdf	PKPdf	02 57 04.8	-0.2
FINES	FINESS Array B	128.17	29	PKP	PKPdf	02 57 04.8	-0.2
	1.2nm,0.8s,baz=158,slow=6.2,SNR=4.9						
ABKAR	Akbulak array	129.61	58	*e*PKPdf	PKPdf	02 57 08.3	+0.1
ARCES	ARCESS Array B	134.96	23	PKP	PKiKP	02 57 18.6	-0.6
	1.3nm,1.0s,baz=256,slow=3.6,SNR=3.4						
CD2	Chengdu	136.11	110	PKP	PKPdf	02 57 21.5	+0.4
BVAR	Borovoye Array	136.85	61	PKP	PKPdf	02 57 21.8	+0.1
	1.2nm,0.9s,baz=207,slow=3.0,SNR=5.0						
INK	Inuvik	149.26	316	PKPbc	PKPbc	02 57 47.0	-0.3
	5.7nm,1.0s,baz=129,slow=3.4,SNR=3.1						
DAWY	Dawson	149.77	306	*e*PKPbc	PKPbc	02 57 48.2	-0.6
SONA0	Songino Array	150.48	94	*e*PKPbc	PKiKP	02 57 51.6	-0.2
SONM	Songino Array	150.48	94	PKPbc	PKiKP	02 57 51.6	-0.2
	2.6nm,0.7s,baz=222,slow=2.0,SNR=12						
EGAK	Eagle	150.76	307	*e*PKPbc	PKiKP	02 57 52.5	+0.8
DOT	Dot Lake	151.50	304	*e*PKPbc	PKiKP	02 57 53.9	+0.6
SCRK	Sand Creek	151.59	304	*e*PKPbc	PKiKP	02 57 54.2	+0.6
SCRK				*e*PKPab	PKPab	02 58 01.7	-0.3
PAX	Paxson	151.81	302	*e*PKPbc	PKiKP	02 57 54.2	+0.1
RIDG	Independent Ri	151.85	304	*e*PKPbc	PKiKP	02 57 54.4	+0.3
KS15	Wonju Array Si	151.91	134	*e*PKPbc	PKiKP	02 57 55.6	+0.7
KSRS	Korea Array	151.93	134	PKPbc	PKiKP	02 57 55.6	+0.7
	0.9nm,0.7s,baz=174,slow=1.6,SNR=5.3						
ILAR	Eielson Array	153.05	305	PKPbc	PKPbc	02 57 56.3	0.0
	1.7nm,0.9s,baz=146,slow=2.1,SNR=11						
ILB	Eielson Array	153.05	305	*e*PKPbc	PKPbc	02 57 56.3	0.0
BPAW	Bear Paw Mtn.	154.53	302	*e*PKPbc	PKiKP	02 57 59.7	+0.1

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*SJA **26** 02:38:58.7±0.4, 22°.91S×69°.16W, h115^{km}±2^{km}, ML3.1, MW4.1*

*ISCJB **26** 02:38:59.0±0.6, 23°.02S±0°.04×69°.18W±0°.06, h117^{km}±5^{km}, mb3.8/2, Error ellipse: s-maj=9.2km s-min=7.3km az=179.4*

*IDC **26** 02:38:59.5±1.6, 23°.10S×68°.84W, h94^{km}±15^{km}, mb3.6/2, mb1 3.5/5, mb1mx3.3/31, mbtmp3.9/5, Error ellipse: s-maj=55.0km s-min=25.0km az=103.0*

*GUC **26** 02:39:00.2±0.8, 22°.97S×69°.19W, h106^{km}±4^{km}, ML3.9*

ISC 26 02:38:59.0±0.9**, 23°.06S**±0°.05×**69°.13W**±0°.05**, h105**^{km}±7^{km}**, n25,** σ**1^{s}71**/40**, 9C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	IPOC Station P	0.35	245	*i* P	Pn	02 39 16.3	+1.6
PB15				*i* S	Sn	02 39 29.7	+3.2
PB15	IPOC Station P	0.35	245	⇑*e*P	Pn	02 39 16.2	+1.5
PB15				*e*S	Sn	02 39 28.3	+1.8
LVC	Limon Verde	0.49	24	P	Pn	02 39 16.4	+0.6
	632nm,0.3s,baz=164,slow=5.3,SNR=4871						
LVC				S	Sn	02 39 28.3	0.0
	1µm,0.3s,baz=47,slow=20,SNR=221						
LVC	Limon Verde	0.49	24	*i* P	Pn	02 39 16.4	+0.6
LVC				*i* S	Sn	02 39 29.6	+1.3
PB06	IPOC Station P	0.54	311	*i* P	Pn	02 39 16.4	+0.5
PB06				*i* S	Sn	02 39 29.8	+1.3

PB06	IPOC Station P	0.54	311	⇑eP	Pn	02 39 16.9	+1.0
PB06				eS	Sn	02 39 29.3	+0.9
PB05	IPOC Station P	1.01	282	i P	Pn	02 39 20.6	+0.6
PB05	IPOC Station P	1.01	282	⇑eP	Pn	02 39 21.2	+1.1
PB05				eS	Sn	02 39 37.0	+1.0
PB03	IPOC Station P	1.16	330	⇑eP	Pn	02 39 22.7	+0.9
PB03				eS	Sn	02 39 39.1	+0.1
PB03				IAML		02 39 39.6	
	comp=E,4μm,0.3s						
PB04	IPOC Station P	1.19	307	i P	Pn	02 39 22.2	+0.2
PB04	IPOC Station P	1.19	307	⇑eP	Pn	02 39 22.9	+0.8
PB04				eS	Sn	02 39 40.1	+0.6
PB04				IAML		02 39 42.3	
	comp=N,2μm,0.2s						
PB09	IPOC Station P	1.27	355	⇑iP	Pn	02 39 24.1	+1.2
PB09				eS	Sn	02 39 41.5	+0.4
PB09				IAML		02 39 43.1	
	comp=E,5μm,0.5s						
PB10	IPOC Station P	1.39	251	⇑eP	Pn	02 39 25.5	+1.3
PB10				eS	Sn	02 39 44.5	+1.2
PB10				IAML		02 39 46.2	
	comp=E,638nm,0.5s						
PB07	IPOC Station P	1.50	332	⇑eP	Pn	02 39 26.3	+0.5
PB07				eS	Sn	02 39 46.1	+0.1
PB07				IAML		02 39 47.1	
	comp=E,2μm,0.2s						
PB02	IPOC Station P	1.88	338	eP	Pn	02 39 30.9	+0.6
PB02				eS	Sn	02 39 53.7	-0.5
PB14	IPOC Station P	1.94	217	IAML		02 39 59.6	
	comp=E,916nm,0.2s						
PB01	IPOC Station P	2.04	351	⇑iP	Pn	02 39 32.7	+0.3
PB01				eS	Sn	02 39 57.8	0.0
PB01				IAML		02 39 59.1	
	comp=N,2μm,0.3s						
GO02	Mina Guanaco	2.13	191	IAML		02 40 04.6	
	comp=E,878nm,0.1s						
HJA	Humahuaca	3.43	93	i P	Pn	02 39 53.5	+2.6
HJA				IAML		02 39 58.5	
	comp=Z,28nm,0.5s						
AZAP	Zapla	3.90	108	i P	Pn	02 39 59.6	+2.5
AZAP				IAML		02 40 06.6	
	comp=Z,33nm,0.6s						
LPAZ	La Paz	6.81	8	P	Pn	02 40 37.6	+0.7
	comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=8.3						
CFA	Coronel Fontan	8.54	175	P	Pn	02 40 58.9	-1.0
	comp=Z,1.5nm,0.3s,baz=348,slow=13,SNR=15						
CFA				S	Sn	02 42 28.0	-6.6
	comp=Z,0.4nm,0.3s,baz=248,slow=19,SNR=3.7						
SIV	San Ignacio	10.35	49	P	Pn	02 41 21.2	-3.3
	comp=Z,0.5nm,0.3s,baz=248,slow=12,SNR=10						
SIV				S	Sn	02 43 07.0	-12
	comp=Z,0.5nm,0.3s,baz=323,slow=22,SNR=8.2						
BDFB	Brasilia	21.23	73	P	P	02 43 36.7	0.0
	comp=Z,1.9nm,0.5s,baz=269,slow=8.7,SNR=3.6						
TORD	Torodi Ar. Bea	78.07	70	P	P	02 50 46.8	+0.1
	comp=Z,1.0nm,0.5s,baz=255,slow=4.8,SNR=5.6						
TORD				pP	pP	02 51 14.4	-0.3
	comp=Z,1.0nm,0.8s,baz=258,slow=3.7,SNR=4.1						
TORD				sP	sP	02 51 25.3	-1.0
	comp=Z,0.7nm,0.6s,baz=246,slow=4.8,SNR=3.7						

IDC 26 02:57:48.0±5.0, 20°.92S×176°.75W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/21, mbtmp4.0/3, Error ellipse: s-maj=211.5km s-min=56.3km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.67	245	P	P	03 05 13.1	-0.5
	1.3nm,0.5s,baz=85,slow=11,SNR=4.0						
ASAR	Alice Springs	45.56	257	P	P	03 06 09.9	-0.1
	1.5nm,0.8s,baz=91,slow=8.4,SNR=13						
WRA	Warramunga Arr	45.70	262	P	P	03 06 11.4	+0.2
	0.8nm,0.4s,baz=98,slow=7.7,SNR=11						
BRTR	Keskin Array B	147.98	313	PKPbc	PKPbc	03 17 35.1	-0.7
	0.3nm,0.5s,baz=70,slow=2.9,SNR=3.4						

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*ISCJB **26** 03:09:20.8±0.5, 50°.31N±0°.03×18°.71E±0°.03, h0km, Error ellipse: s-maj=4.6km s-min=2.5km az=15.8*
*PRU **26** 03:09:22.1±0.0, 50°.29N×18°.75E, h0km*
*VIE **26** 03:09:26.2±2.7, 50°.31N×18°.37E, h0km, mb1.8/2, ml2.6/3, Error ellipse: s-maj=20.5km s-min=6.8km az=72.0, Suspected Mining induced.*
ISC 26 03:09:22.2±0.8, 50°.28N±0°.04×18°.80E±0°.02, h0km, n23, σ0ˢ.96/43, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.12	85	ePg	Pg	03 09 25.0	+0.4
CHZP				eSg	Sg	03 09 27.0	+0.8
RAC	Raciborz	0.43	243	ePg	Pb	03 09 31.9	-0.9
RAC				eSg	Sb	03 09 38.9	-0.9
OKC	Ostrava-Krasne	0.61	224	ePG	Pg	03 09 34.2	+0.3
OKC				eSG	Sg	03 09 42.4	+0.6
	comp=Z,40nm,0.5s						
OJC	Ojcow	0.65	95	ePg	Pg	03 09 34.3	-0.2
OJC				eSg	Sg	03 09 43.2	+0.3
MORC	Moravsky Berou	0.95	239	ePG	Pg	03 09 40.5	+0.1
MORC				eSG	Sg	03 09 53.0	+0.2
LANS	Liptovska Anna	1.21	159	ePG	Pg	03 09 45.2	-0.2
LANS				eSG	Sg	03 10 01.5	+0.4
LANS				eLG	Lg	03 10 03.6	
DPC	Dobruska-Polom	1.59	273	ePG	Pn	03 09 51.1	-0.5
DPC				eSG	Sn	03 10 12.6	-0.3
	comp=Z,25nm,0.4s						
JAVC	Velka Javorina	1.60	208	ePN	Pb	03 09 52.7	0.0
OSTC	Ostas	1.67	280	ePG	Pn	03 09 52.7	-0.1
OSTC				eSG	Sn	03 10 14.7	-0.3
	comp=Z,16nm,0.6s						
KSP	Ksiaz	1.69	290	ePg	Pg	03 09 54.6	-0.1
KSP				eSg	Sg	03 10 17.4	+0.8
VRAC	Vranov	1.73	237	ePN	Pn	03 09 53.1	-0.4
VRAC				eSG	Sn	03 10 15.9	-0.4
CHVC	Chvalec	1.78	281	ePG	Pn	03 09 54.0	-0.2
CHVC				eSG	Sn	03 10 16.6	-1.0
	comp=Z,14nm,0.6s						
VYHS	Vyhne	1.79	179	ePN	Pn	03 09 53.8	-0.5
VYHS				eSN	Sn	03 10 16.5	-1.3
UPC	Upice	1.80	278	ePG	Pn	03 09 54.4	0.0
UPC				eSG	Sb	03 10 18.9	-0.1
	comp=Z,12nm,0.4s						
KRUC	Moravsky	1.98	233	ePN	Pn	03 09 56.8	-0.2
KRUC				eSG	Sn	03 10 22.7	+0.2
MODS	Modra-Piesok	2.15	208	ePN	Pn	03 09 59.1	-0.2
MODS				eSN	Sn	03 10 25.0	-1.7
MODS				eLG	Lg	03 10 38.5	
GOPC	GO Pecny, Ondr	2.61	263	ePG	Pb	03 10 08.8	-1.0
PRU	Pruhonice	2.75	266	ePG	Pb	03 10 12.0	-0.3
PRU				eSG	Sb	03 10 47.2	+0.7
	comp=Z,7.3nm,0.6s						
CONA	Conrad Observa	3.04	220	Pn	Pb	03 10 17.3	0.0
	0.6nm,0.2s						
BRG	Berggiesshubel	3.15	283	PG	Pg	03 10 23.2	+0.6
BRG				SG	Sg	03 11 02.6	-0.7
	9.6nm,0.6s						
KHC	Kasperske Hory	3.58	253	ePG	Pb	03 10 25.9	-0.4
KHC				eSG	Sg	03 11 15.6	-1.5
	comp=Z,11nm,0.6s						
CLL	Collm	3.82	288	ePg	Pg	03 10 37.0	+1.7
CLL				eSg	Sg	03 11 24.0	-0.8
	comp=Z,7.0nm,1.0s						
MOA	Molln	3.85	232	ePn	Pn	03 10 23.9	+1.3
	comp=Z,1.0nm,0.5s						
MOA				Sg	Sb	03 11 22.0	+4.0
	comp=Z,5.4nm,0.5s						

IDC 26 03:35:25.8±1.0, 2°.23N×121°.24E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/26, mbtmp3.8/6, Error ellipse: s-maj=242.4km s-min=19.2km az=62.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.51	150	P	P	03 40 58.0	+1.8
	2.1nm,1.0s,baz=332,slow=10,SNR=4.0						
ASAR	Alice Springs	28.54	155	P	P	03 41 21.5	-1.9
	0.2nm,0.5s,baz=337,slow=9.3,SNR=3.5						
STKA	Stephens Creek	39.03	152	P	P	03 42 54.3	-0.2
	1.9nm,0.8s,baz=319,slow=11,SNR=3.1						
MKAR	Makanchi Array	55.81	329	P	P	03 45 04.1	-0.7
	0.7nm,0.7s,baz=150,slow=6.7,SNR=5.6						
ZALV	Zalesovo Beam	59.57	336	P	P	03 45 32.5	+1.3
	0.8nm,0.4s,baz=148,slow=8.5,SNR=3.2						
KURBB	Kurchatov Arra	60.17	330	P	P	03 45 35.0	-0.4
	0.5nm,0.5s,baz=137,slow=6.3,SNR=7.4						

MEX 26 03:52:24.8±0.8, 16°.02N×97°.07W, h26km±7km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.95	105	eP	Pn	03 52 39.6	-2.9
HUIG				eS	Sb	03 52 51.9	-3.1
VHO	Vista Hermosa	1.09	17	eP	Pn	03 52 41.2	-3.5
VHO				eS	Sn	03 52 54.9	-4.2
CMIG	Matias Romero	2.35	63	eP	Pn	03 52 59.4	-2.3
CMIG				i S	Sn	03 53 27.0	-2.7

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*IDC **26** 04:02:38.0±1.9, 8°.16S×124°.91E, h0km, mb3.8/1, mb1 4.1/3, mb1mx3.6/31, mbtmp3.9/3, ML3.5/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/21, Error ellipse: s-maj=179.3km s-min=32.4km az=58.0*
*DJA **26** 04:02:41.8±0.5, 8°S±4°×12°5E±°, h10km, M4.2/6, mb5.2/1, MLv3.7/6*
ISC 26 04:02:40.0±1.1, 8°.02S±0°.07×124°.96E±0°.10, h10km, n11, σ2ˢ.09/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.86	202	P	Pn	04 03 12.0	-0.1
SOEI				S	Sn	04 03 36.4	+0.7
BATI	Baumata	2.52	210	P	Pn	04 03 22.6	+1.4
MMRI	Maumere	2.76	257	P	Pn	04 03 25.3	+0.9
EDFI	Ende, Flores	3.31	257	P	Pn	04 03 32.9	+0.8
BBSI	Bau Bau	3.46	317	P	Pn	04 03 33.2	-0.7
KAPI	Kappang	5.97	300	LR	LR	04 06 30.8	
	comp=Z,56nm,19.5s,baz=296,slow=39						
BNDI	Bandanaira	6.02	55	P	Pn	04 04 12.8	+3.6
SIJI	Sorong	9.48	42	LR	LR	04 09 05.4	
	comp=Z,56nm,19.1s,baz=43,slow=40						
WRA	Warramunga Arr	14.94	143	Pn	Pn	04 06 08.0	-3.5
	0.2nm,0.3s,baz=317,slow=13,SNR=7.8						
WRA				Sn	Sn	04 08 43.6	-14
	0.2nm,0.3s,baz=314,slow=25,SNR=4.1						
ASAR	Alice Springs	17.77	152	Pn	Pn	04 06 46.8	-0.9
	0.2nm,0.3s,baz=322,slow=11,SNR=13						
ASAR				Sn	Sn	04 09 54.4	-11
	0.1nm,0.3s,baz=330,slow=24,SNR=4.7						
MKAR	Makanchi Array	66.44	329	P	P	04 13 29.8	+0.2
	1.2nm,1.1s,baz=115,slow=6.8,SNR=3.6						

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*IDC **26** 04:06:18.2±0.8, 19°.78S×70°.37W, h0km, mb4.0/7, mb1 4.2/9, mb1mx4.0/31, mbtmp4.1/9, ML3.8/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/27, Error ellipse: s-maj=26.3km s-min=14.7km az=67.0*
*ISCJB **26** 04:06:22.4±0.7, 19°.93S±0°.03×70°.57W±0°.06, h50km±6km, mb4.4/10, MS3.4/2, Error ellipse: s-maj=10.1km s-min=4.9km az=177.2*
*NEIC **26** 04:06:22.0±0.0, 19°.95S×70°.56W, h24km, mb4.4/7, ML4.0(GUC), After GUC.*
NEIC Felt [III] at Huara and Pisagua; [II] at Alto Hospicio, Iquique, La Tirana, Oficina Maria Elena and Pozo Almonte.
*GUC **26** 04:06:22.1±0.6, 19°.95S×70°.56W, h27km±9km, ML4.1*
ISC 26 04:06:20.9±1.8, 19°.95S±0°.04×70°.62W±0°.07, h23km±13km, n62, σ1ˢ.62/60, mb4.6/10, 6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.58	53	⇓eP	Pb	04 06 32.6	0.0
PSGC				eS	Sb	04 06 40.2	-0.3
PSGC				IAML		04 06 43.9	
	comp=N,6μm,0.2s						
PB11	IPOC Station P	0.92	78	ePn	Pb	04 06 37.9	-0.5
PB11	IPOC Station P	0.92	78	⇓iP	Pb	04 06 38.2	-0.1
PB11				IAML		04 06 53.2	
	comp=N,9μm,0.2s						
MNMC	Minye Minye	1.26	50	ePn	Pn	04 06 43.5	+0.2
MNMC	Minye Minye	1.26	50	⇓iP	Pn	04 06 43.8	+0.5
MNMC				eS	Sb	04 07 00.1	-0.1
MNMC				IAML		04 07 03.2	
	comp=E,16μm,0.2s						
PB12	IPOC Station P	1.36	12	i P	Pn	04 06 45.1	+0.6
PB12				eS	Sb	04 07 03.1	+0.3
PB12				IAML		04 07 05.2	
	comp=E,5μm,0.2s						
GO01	Chusmiza	1.37	78	ePn	Pn	04 06 45.4	+0.5
GO01	Chusmiza	1.37	78	⇓iP	Pn	04 06 45.6	+0.7
GO01				eS	Sb	04 07 03.0	-0.3
GO01				IAML		04 07 04.6	
	comp=N,16μm,0.3s						
PB08	IPOC Station P	1.39	98	⇓iP	Pn	04 06 45.7	+0.6
PB08				eS	Sb	04 07 03.2	-0.6
PB08				IAML		04 07 04.5	
	comp=E,2μm,0.2s						
PB01	IPOC Station P	1.51	136	ePn	Pn	04 06 47.5	+0.9
PB01	IPOC Station P	1.51	136	i P	Pn	04 06 47.7	+1.1
PB01				eS	Sb	04 07 06.7	-0.4
PB01				IAML		04 07 12.2	
	comp=N,5μm,0.5s						
PB02	IPOC Station P	1.52	154	⇓iP	Pn	04 06 48.0	+1.3
PB02				eS	Sn	04 07 06.7	+1.0
PB02				IAML		04 07 10.8	
	comp=E,7μm,0.3s						
PB04	IPOC Station P	2.41	170	ePn	Pn	04 06 59.5	+0.5
LVC	Limon Verde	3.08	149	Pn	Pn	04 07 11.0	+2.6
	comp=E,18nm,0.3s,baz=338,slow=9.1,SNR=104						
LVC				Sn	Sn	04 07 47.3	+2.4
	comp=E,37nm,0.3s,baz=74,slow=18,SNR=6.6						
LVC				Lg	Lg	04 07 56.3	
	comp=E,99nm,0.3s,baz=78,slow=21,SNR=13						
LVC				LR	LR	04 08 41.1	
	comp=E,301nm,20.0s,baz=350,slow=46						
LVC	Limon Verde	3.08	149	ePn	Pn	04 07 10.0	+1.5
PB10	IPOC Station P	3.54	179	ePn	Pn	04 07 13.9	-0.6
LPAZ	La Paz	4.34	33	Pn	Pn	04 07 30.6	+4.5
	comp=E,2.8nm,0.3s,baz=202,slow=3.0,SNR=52						
LPAZ				LR	LR	04 09 27.7	
	comp=E,459nm,19.7s,baz=216,slow=46						
LPAZ	La Paz	4.34	33	ePn	Pn	04 07 29.9	+3.8
GO02	Mina Guanaco	5.27	170	ePn	Pn	04 07 38.5	0.0
SIV	San Ignacio	9.90	68	Pn	Pn	04 08 41.9	0.0
	comp=E,4.2nm,0.3s,baz=266,slow=11,SNR=78						
NNA	Nana	9.93	322	Sn	Sn	04 10 28.2	-4.8
	comp=E,1.5nm,0.3s,baz=227,slow=18,SNR=4.9						
CFA	Coronel Fontan	11.80	170	Pn	Pn	04 09 13.8	+6.0
	comp=E,0.3nm,0.3s,baz=342,slow=15,SNR=3.0						
CPUP	Villa Florida	13.77	120	Pn	Pn	04 09 34.4	-0.2
	comp=E,0.1nm,0.3s,baz=324,slow=14,SNR=2.2						
CPUP				LR	LR	04 15 19.2	
	comp=E,165nm,18.6s,baz=268,slow=40						
PLCA	Paso Flores	20.71	180	P	Pn	04 11 03.5	+1.5
	comp=E,2.3nm,0.6s,baz=22,slow=11,SNR=13						
PLCA				LR	LR	04 18 29.5	
	comp=E,125nm,18.2s,baz=232,slow=35						
PLCA	Paso Flores	20.71	180	ePn	Pn	04 11 03.5	+1.5
	comp=E,35nm,2.0s						
PTGA	Pitinga	21.76	30	P	P	04 11 09.2	-1.8
	comp=E,3.6nm,0.3s,baz=226,slow=11,SNR=13						
PTGA	Pitinga	21.76	30	eP	P	04 11 09.8	-1.2
	comp=E,4.1nm,0.7s						
BDFB	Brasilia	21.94	82	P	P	04 11 11.8	-1.2
	comp=E,1.7nm,0.4s,baz=272,slow=9.8,SNR=3.6						
POPC	Popayan, Colom	23.13	344	eP	P	04 11 28.5	+2.7
ORTC	Ortega, Tolima	24.15	349	eP	P	04 11 36.6	+1.2
YOTC	Yotoco, Valle	24.45	346	eP	P	04 11 42.5	+4.3
ROSC	El Rosal	24.91	351	LR	LR	04 22 06.9	
	comp=E,111nm,18.5s,baz=42,slow=38						
RREF	El Recreo	25.13	349	eP	P	04 11 48.0	+3.0
GUY2C	Guyana, Caldas	25.45	349	eP	P	04 11 49.5	+1.7
RUSC	La Rusia	25.80	354	eP	P	04 11 52.0	+1.2
HELC	Santa Helena	26.43	349	eP	P	04 11 57.0	+0.6
PTBC	PUERTO BERRIO,	26.60	351	eP	P	04 11 56.5	-1.0
SMLC	San Martn de	28.78	353	eP	P	04 12 15.5	-1.6
WVT	Waverly	58.11	344	eP	P	04 16 11.6	-0.9
	comp=E,4.9nm,0.8s						
TXAR	Lajitas Array	58.46	326	P	P	04 16 16.6	+1.4
	comp=E,0.3nm,0.9s,baz=149,slow=11,SNR=3.3						
T49A	Edmonton	58.47	346	eP	P	04 16 14.9	-0.1
	comp=E,8.0nm,0.9s						
N55A	Marion Center	60.92	353	eP	P	04 16 31.6	-0.3
	comp=E,11nm,0.8s						
SDCO	Great Sand Dun	66.11	330	eP	P	04 17 07.3	+0.8
	comp=E,4.9nm,1.2s						
DBIC	Dimbokro	69.85	75	P	P	04 17 28.6	-1.6
	comp=E,4.2nm,0.8s,baz=246,slow=2.7,SNR=4.8						
DBIC	Dimbokro	69.85	75	eP	P	04 17 28.6	-1.6
	comp=E,42nm,1.6s						
TOA1	Torodi Ar. Sit	78.36	71	eP	P	04 18 18.8	-1.2
TORD	Torodi Ar. Bea	78.36	71	P	P	04 18 18.8	-1.2
	comp=E,3.6nm,0.4s,baz=248,slow=5.6,SNR=86						
YKA	Yellowknife Ar	89.21	341	P	P	04 19 14.3	+0.1
	comp=E,0.6nm,0.6s,baz=142,slow=3.8,SNR=3.6						
YKB5	Yellowknife Ar	89.21	341	eP	P	04 19 14.3	+0.1
H11S2	WAKE ISLAND Hy	126.08	279	T	T	06 44 41.2	
	baz=101,slow=74,SNR=249						
H11S1	WAKE ISLAND Hy	126.09	279	T	T	06 44 39.6	
	baz=101,slow=74,SNR=130						
H11S3	WAKE ISLAND Hy	126.10	279	T	T	06 44 42.5	
	baz=101,slow=74,SNR=102						
H11N3	WAKE ISLAND Hy	126.13	280	T	T	06 44 44.8	
	baz=102,slow=74,SNR=96						
H11N2	WAKE ISLAND Hy	126.14	280	T	T	06 44 47.7	
	baz=102,slow=74,SNR=78						
H11N1	WAKE ISLAND Hy	126.15	280	T	T	06 44 45.5	
	baz=102,slow=74,SNR=70						
WR1	Warramunga Arr	133.42	213	ePKPdf	PKPdf	04 25 36.4	+0.4
WRA	Warramunga Arr	133.42	213	PKP	PKPdf	04 25 36.4	+0.3
	comp=E,1.5nm,1.0s,baz=214,slow=3.7,SNR=3.4						
MK32	Makanchi Array	145.28	33	ePKPbc	PKPbc	04 25 57.0	+0.5
MKAR	Makanchi Array	145.28	33	PKPbc	PKPbc	04 25 57.0	+0.5
	comp=E,3.2nm,0.6s,baz=350,slow=3.5,SNR=6.3						
USRK	Ussuriysk Ar.	149.35	327	PKPbc	PKPbc	04 26 09.3	+1.5
	comp=E,3.2nm,0.8s,baz=65,slow=6.0,SNR=7.7						
MJAR	Matsushiro Arr	149.86	309	PKPbc	PKPbc	04 26 10.4	+1.0
	comp=E,2.5nm,0.6s,baz=81,slow=1.4,SNR=6.7						
MAJO	Matsushiro	149.86	309	ePKPbc	PKPbc	04 26 10.4	+1.0

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*ISCJB **26** 04:21:07.2±0.2, 55°.43N±0°.02×110°.47E±0°.04, h10km, mb3.6/13, MS2.8/4, Error ellipse: s-maj=3.7km s-min=2.0km az=135.1*
*MOS **26** 04:21:08.1±1.0, 55°.54N×110°.43E, h14km, mb3.9/7, Error ellipse: s-maj=9.9km s-min=6.5km az=64.9*
*IDC **26** 04:21:09.8±1.2, 55°.69N×110°.07E, h0km, mb3.6/10, mb1 3.8/15, mb1mx3.7/43, mbtmp3.7/15, ML3.6/5, MS2.9/4, Ms1 2.9/4, ms1mx2.5/36, Error ellipse: s-maj=24.7km s-min=11.5km az=127.0*
*BYKL **26** 04:21:09.1±0.2, 55°.49N×110°.43E*
ISC 26 04:21:09.3±0.5, 55°.49N±0°.02×110°.43E±0°.02, h10km, n81, σ2ˢ.53/144, mb3.7/13, MS2.8/4, 8C-9D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.58	300	⇑iPg	Pg	04 21 20.1	-0.5
NIZ				Pmax		04 21 23.6	
	344nm,0.2s						
NIZ				eSg	Sg	04 21 28.3	0.0
NIZ				Smax		04 21 29.4	
	3μm,0.4s						
NIZ	Nizh Angarsk	0.58	300	⇑iPG	Pg	04 21 20.1	-0.5
NIZ				e		04 21 28.3	
NIZ				pmax	pmax		
	comp=Z,766nm,0.3s						
NIZ				smax	smax		
	comp=E,3μm,0.5s						
KMO	Kumora	0.59	47	⇓iPg	Pg	04 21 19.5	-1.3
KMO				Pmax		04 21 19.9	
	comp=E,1μm,0.4s						
KMO				eSg	Sg	04 21 27.2	-1.3
KMO				Smax		04 21 35.2	
	comp=E,4μm,0.8s						
KMO	Kumora	0.59	47	⇓iPG	Pg	04 21 19.5	-1.3
KMO				e		04 21 27.2	
KMO				pmax	pmax		
	comp=Z,1μm,0.4s						
KMO				smax	smax		
	comp=N,3μm,1.2s						
YLYR	Ulyunkhan	0.74	145	⇓iPg	Pg	04 21 22.9	-0.7
	comp=N,2μm,0.3s						
YLYR				⇑iPg	Pg	04 21 22.9	-0.7
	comp=N,1μm,0.3s						
YLYR				⇑iPg	Pg	04 21 22.9	-0.7
	comp=N,2μm,0.3s						
YLYR				Pmax		04 21 23.0	
	comp=N,2μm,0.2s						
YLYR				eSg	Sg	04 21 33.0	-0.3
YLYR				Smax		04 21 33.3	
	comp=N,2μm,0.2s						
YLYR	Ulyunkhan	0.74	145	⇑iPG	Pg	04 21 22.9	-0.7
YLYR				e		04 21 33.0	
YLYR				pmax	pmax		
	comp=Z,2μm,0.2s						
YLYR				smax	smax		
	comp=E,2μm,0.3s						
YOA	Uoyan	0.97	48	⇓iPg	Pg	04 21 26.7	-1.3
YOA				ePb	Pb	04 21 28.0	-0.3
YOA				max		04 21 28.4	
	comp=E,833nm,0.5s						
YOA				eSg	Sg	04 21 40.2	-0.5
YOA				Smax		04 21 51.3	
	comp=E,4μm,0.4s						
YOA	Uoyan	0.97	48	⇓iPG	Pg	04 21 26.3	-1.7
YOA				e		04 21 40.2	
YOA				pmax	pmax		
	comp=Z,826nm,0.5s						
YOA				smax	smax		
	comp=N,5μm,0.6s						
SYVR	Suvo	1.85	188	ePg	Pb	04 21 42.8	-0.4
SYVR				Pmax		04 21 47.3	
	comp=N,267nm,0.5s						
SYVR				e		04 21 56.4	
SYVR				eSg	Sg	04 22 07.9	-0.8
SYVR				Smax		04 22 10.5	
	comp=N,3μm,0.4s						
SVKR	Severomuysk	1.87	69	ePg	Pb	04 21 43.1	-0.6
SVKR				e		04 21 48.9	
SVKR				max		04 21 49.6	
	comp=N,695nm,0.4s						
SVKR				eSg	Sb	04 22 08.0	+0.9
SVKR				Smax		04 22 10.4	
	comp=N,6μm,0.6s						
SVKR	Severomuysk	1.87	69	ePN	Pb	04 21 43.0	-0.6
SVKR				e		04 22 08.1	
SVKR				pmax	pmax		
	comp=Z,437nm,0.5s						
SVKR				smax	smax		
	comp=N,6μm,0.6s						
MXMB	Maximikha	2.44	205	ePn	Pn	04 21 50.1	+0.9
MXMB				ePg	Pb	04 21 53.3	+0.1
MXMB				eSn	Sn	04 22 19.6	+0.6
MXMB				eSg	Sg	04 22 25.9	-1.6
OGRR	Ongureny	2.48	223	⇓iPn	Pb	04 21 51.9	-2.0
OGRR				ePg	Pg	04 21 54.7	-2.1
OGRR				Pmax		04 21 55.5	
	comp=N,261nm,0.2s						
OGRR				eSn	Sn	04 22 20.7	+0.7
OGRR				eSg	Sb	04 22 26.3	+1.8
OGRR				e		04 22 29.4	
OGRR				max		04 22 29.5	
	comp=N,1μm,0.3s						
OGRR	Ongureny	2.48	223	ePN	Pb	04 21 52.1	-1.8
OGRR				e		04 21 55.7	
OGRR				e		04 22 27.0	
OGRR				pmax	pmax		
	comp=Z,231nm,0.4s						
OGRR				smax	smax		
	comp=E,1μm,0.3s						
BOD	Bodaibo	3.06	39	e	Pn	04 21 59.8	+2.2
BOD				ePg	Pb	04 22 02.7	-1.0
BOD				Pmax		04 22 04.7	
	comp=E,36nm,0.5s						
BOD				eSn	Sn	04 22 34.1	-0.1
BOD				eSg	Sb	04 22 42.9	+1.8
BOD				Smax		04 22 45.1	
	comp=E,366nm,0.4s						
BOD	Bodaibo	3.06	39	ePN	Pn	04 21 59.3	+1.7
BOD				e		04 22 04.2	
BOD				e		04 22 42.2	
BOD				pmax	pmax		
	comp=Z,35nm,0.5s						
BOD				smax	smax		
	comp=E,367nm,0.5s						
KELR	Kotokel	3.06	208	ePn	Pn	04 21 58.7	+1.0
KELR				ePg	Pb	04 22 03.6	-0.3

KELR				*e*Sn	**Sn**	**04 22 32.5**	**-1.9**
KELR				*e*Sg	**Sg**	**04 22 44.4**	**-3.2**
KELR				*e*		04 22 49.2	
NLYR	**Nelyaty**	**3.13**	**69**	⇓*i*Pn	**Pn**	**04 21 59.4**	**+0.8**
NLYR				*e*Pg	**Pb**	**04 22 05.6**	**+0.7**
NLYR				*e*		04 22 12.7	
NLYR				*e*Sg	**Sg**	**04 22 46.3**	**-3.3**
TRG	**Tyrgan**	**3.64**	**223**	⇑*i*Pn	**Pn**	**04 22 07.1**	**+1.4**
TRG				*e*Pg	**Pb**	**04 22 14.4**	**+0.7**
TRG				Pmax		04 22 19.4	
	comp=E,79nm,0.2s						
TRG				*e*Sg	**Sb**	**04 23 01.3**	**+3.4**
TRG				Smax		04 23 10.1	
	comp=E,610nm,0.2s						
TRG	**Tyrgan**	**3.64**	**223**	*e*PN	**Pn**	**04 22 07.0**	**+1.4**
TRG				*e*		04 22 14.9	
TRG				*e*S	**Sn**	**04 22 48.6**	**-0.1**
TRG				*e*		04 23 00.9	
TRG				pmax	pmax		
	comp=Z,97nm,0.5s						
TRG				smax	smax		
	comp=E,606nm,0.4s						
TRTB	**Turuntaevo**	**3.66**	**208**	⇑*i*Pn	**Pn**	**04 22 07.3**	**+1.3**
TRTB				*e*Pg	**Pb**	**04 22 14.8**	**+0.7**
TRTB				*e*Sn	**Sn**	**04 22 48.9**	**-0.3**
TRTB				*e*Sg	**Sg**	**04 23 02.6**	**-4.2**
CIT	**Chita**	**3.94**	**151**	*e*Pn	**Pn**	**04 22 09.7**	**-0.1**
CIT				*e*Pg	**Pb**	**04 22 18.8**	**+0.1**
CIT				*e*		04 22 20.8	
CIT				max		04 22 21.3	
	comp=E,166nm,0.3s						
CIT				*e*Sg	**Sb**	**04 23 09.7**	**+3.3**
CIT				Smax		04 23 16.4	
	comp=E,516nm,0.2s						
CIT	**Chita**	**3.94**	**151**	*e*PN	**Pn**	**04 22 09.7**	**-0.1**
CIT				*e*		04 22 18.5	
CIT				*e*S	**Sn**	**04 22 54.9**	**-1.1**
CIT				*e*		04 23 08.6	
CIT				pmax	pmax		
	comp=Z,236nm,0.6s						
CIT				smax	smax		
	comp=E,650nm,0.7s						
UUDB	**Ulan-Yde**	**3.98**	**206**	*e*Pn	**Pn**	**04 22 11.6**	**+1.2**
UUDB				*e*Pg	**Pb**	**04 22 20.7**	**+1.2**
UUDB				Pmax		04 22 23.6	
	comp=E,163nm,0.8s						
UUDB				*e*Sn	**Sn**	**04 22 56.1**	**-1.0**
UUDB				*e*Sg	**Sg**	**04 23 13.2**	**-3.9**
UUDB				Smax		04 23 22.4	
	comp=E,655nm,0.9s						
KAB	**Kabansk**	**4.11**	**215**	*e*Pg	**Pb**	**04 22 22.3**	**+0.6**
KAB				Pmax		04 22 26.9	
	comp=E,168nm,0.3s						
KAB				*e*Sg	**Sg**	**04 23 16.4**	**-4.7**
KAB				Smax		04 23 31.3	
	comp=E,1µm,0.6s						
KAB	**Kabansk**	**4.11**	**215**	*e*PN	**Pb**	**04 22 23.7**	**+2.0**
KAB				*e*		04 23 18.2	
KAB				pmax	pmax		
	comp=Z,168nm,0.1s						
KAB				smax	smax		
	comp=E,1µm,0.8s						
HRMR	**Khuramsha**	**4.39**	**210**	Smax		04 22 27.5	
HRMR				*e*Sg	**Sg**	**04 23 25.5**	**-4.6**
HRMR				Smax		04 23 26.4	
	comp=E,1µm,0.5s						
BGT	**Bolshoye Golou**	**4.56**	**223**	Smax		04 22 19.9	
BGT				Smax		04 22 30.4	
	comp=E,68nm,0.4s						
BGT				Pmax		04 22 36.2	
BGT				*e*		04 23 06.6	
BGT				*e*Sg	**Sb**	**04 23 29.1**	**+4.8**
BGT				Smax		04 23 33.0	
	comp=E,232nm,0.3s						
CRS	**Chara**	**4.60**	**69**	*e*	Pn	04 22 06.0	-13
CRS				*e*		04 22 14.5	
CRS				*e*Pg	**Pb**	**04 22 31.5**	**+1.5**
CRS				Pmax		04 22 37.6	
	comp=E,141nm,1.1s						
CRS				*e*Sn	**Sn**	**04 23 11.5**	**-0.8**
CRS				*e*Sg	**Sg**	**04 23 31.3**	**-5.6**
CRS				Smax		04 23 36.5	
	comp=E,496nm,0.8s						
CRS				*e*		04 23 49.6	
IRK	**Irkutsk**	**4.88**	**231**	*e*Pn	**Pn**	**04 22 24.1**	**+1.3**
IRK				*e*Pg	**Pb**	**04 22 35.9**	**+1.0**
IRK				Pmax		04 22 40.5	
	comp=E,201nm,0.1s						
IRK				*e*Sn	**Sn**	**04 23 17.9**	**-1.4**
IRK				*e*Sg	**Sg**	**04 23 39.7**	**-6.3**
IRK				Smax		04 23 46.7	
	comp=E,887nm,0.4s						
IRK	**Irkutsk**	**4.88**	**231**	*e*PN	**Pn**	**04 22 23.8**	**+1.0**
IRK				*e*		04 22 36.5	
IRK				*e*S	**Sn**	**04 23 20.7**	**+1.4**
IRK				*e*		04 23 39.8	
IRK				pmax	pmax		
	comp=Z,151nm,0.2s						
IRK				smax	smax		
	comp=E,896nm,0.4s						
LSTR	**Listvyanka**	**4.92**	**225**	*e*Pn	**Pn**	**04 22 24.5**	**+1.2**
LSTR				*e*		04 22 31.9	
LSTR				*e*Pg	**Pb**	**04 22 37.7**	**+2.2**
LSTR				Pmax		04 22 39.7	
	comp=E,28nm,0.4s						
LSTR				*e*Sn	**Sn**	**04 23 18.8**	**-1.4**
LSTR				*e*Sg	**Sg**	**04 23 41.0**	**-6.2**
LSTR				*e*		04 23 47.7	
LSTR				max		04 23 48.8	
	comp=E,364nm,0.9s						
IVK	**Ivanovka**	**5.14**	**227**	*e*Pn	**Pn**	**04 22 26.0**	**-0.3**
IVK				*e*		04 22 33.9	
IVK				*e*Pg	**Pb**	**04 22 41.3**	**+2.0**
IVK				Pmax		04 22 45.3	
	comp=E,36nm,0.5s						
IVK				*e*Sn	**Sn**	**04 23 24.4**	**-1.3**
IVK				*e*Sg	**Sg**	**04 23 48.1**	**-6.2**
IVK				Smax		04 23 52.7	
	comp=E,227nm,0.7s						
TLY	**Talaya**	**5.56**	**229**	Pn	**Pn**	**04 22 32.3**	**+0.3**
	comp=E,0.0nm,0.3s,baz=78,slow=1.9,SNR=9.5						
TLY				Pg	**Pb**	**04 22 49.0**	**+2.6**
	comp=E,0.1nm,0.3s,baz=19,slow=8.5,SNR=12						
TLY				Sn	**Sn**	**04 23 37.4**	**+1.5**
	comp=E,0.1nm,0.3s,baz=245,slow=19,SNR=3.8						
TLY				Lg	Lg	04 24 00.1	
	comp=E,0.3nm,0.3s,baz=258,slow=10,SNR=12						
TLY	**Talaya**	**5.56**	**229**	*e*Pn	**Pn**	**04 22 31.9**	**-0.1**
TLY				*e*		04 22 40.5	
TLY				*e*Pg	**Pb**	**04 22 49.0**	**+2.6**
TLY				Pmax		04 22 51.6	
	comp=E,82nm,0.6s						
TLY				*e*Sn	**Sn**	**04 23 33.6**	**-2.3**
TLY				*e*		04 23 57.8	
TLY				*e*Sg	**Sg**	**04 24 01.6**	**-6.0**
TLY				Smax		04 24 03.1	
	comp=E,190nm,0.4s						
TLY	**Talaya**	**5.56**	**229**	*e*PN	**Pn**	**04 22 32.6**	**+0.6**
TLY				*e*		04 22 49.0	
TLY				*e*S	**Sn**	**04 23 35.7**	**-0.2**
TLY				*e*		04 24 00.2	
TLY				pmax	pmax		
	comp=Z,114nm,0.3s						
TLY				smax	smax		
	comp=N,84nm,0.4s						
TUP	**Tupik**	**5.59**	**97**	*e*Pn	**Pn**	**04 22 32.7**	**+0.3**
TUP				*e*Pg	**Pb**	**04 22 49.3**	**+2.4**
TUP				Pmax		04 22 52.6	
	comp=N,33nm,0.7s						
TUP				*e*Sn	**Sn**	**04 23 34.2**	**-2.5**
TUP				*e*Sg	**Sg**	**04 24 03.2**	**-5.4**
TUP				Smax		04 24 06.5	
	comp=N,435nm,0.8s						
TUP	**Tupik**	**5.59**	**97**	*e*PN	**Pn**	**04 22 32.6**	**+0.2**
TUP				*e*		04 22 49.3	
TUP				*e*S	**Sn**	**04 23 35.5**	**-1.2**
TUP				*e*		04 24 01.8	
TUP				pmax	pmax		
	comp=Z,33nm,0.7s						
TUP				smax	smax		
	comp=N,432nm,1.0s						
ARS	**Arshan**	**5.95**	**236**	*e*Pn	**Pn**	**04 22 37.7**	**+0.3**
ARS				*e*		04 22 46.4	
ARS				*e*Pg	**Pb**	**04 22 56.3**	**+3.3**
ARS				Pmax		04 23 04.1	
	comp=N,102nm,0.4s						
ARS				*e*Sn	**Sn**	**04 23 43.0**	**-2.6**
ARS				*e*Sg	**Sg**	**04 24 13.4**	**-6.7**
ARS				*e*		04 24 17.1	
ARS				max		04 24 17.5	
	comp=N,938nm,0.6s						
ARS	**Arshan**	**5.95**	**236**	*e*PN	**Pn**	**04 22 37.8**	**+0.3**
ARS				*e*		04 22 56.0	
ARS				*e*S	**Sn**	**04 23 44.5**	**-1.1**
ARS				*e*		04 24 11.1	
ARS				pmax	pmax		
	comp=Z,102nm,0.5s						
ARS				smax	smax		
	comp=E,932nm,0.5s						
ZAK	**Zakamensk**	**6.69**	**223**	*e*Pn	**Pn**	**04 22 49.1**	**+1.4**
ZAK				*e*Pg	**Pb**	**04 23 09.8**	**+4.1**
ZAK				Pmax		04 23 18.9	
	comp=E,14nm,0.5s						
ZAK				*e*Sn	**Sn**	**04 24 00.6**	**-3.4**
ZAK				*e*Sg	**Sg**	**04 24 35.6**	**-8.4**
ZAK				Smax		04 24 42.1	
	comp=E,122nm,1.2s						
ZAK	**Zakamensk**	**6.69**	**223**	*e*PN	**Pn**	**04 22 49.2**	**+1.5**
ZAK				*e*		04 23 11.0	
ZAK				*e*		04 24 35.8	
ZAK				pmax	pmax		
	comp=Z,14nm,0.5s						
ZAK				smax	smax		
	comp=E,122nm,1.0s						
MOY	**Mondy**	**6.80**	**240**	⇑*i*Pn	**Pn**	**04 22 51.3**	**+2.2**
MOY				*e*		04 22 59.8	
MOY				max		04 23 00.2	
	comp=E,71nm,0.7s						
MOY				*e*		04 24 08.5	
MOY				*e*Sg	**Sg**	**04 24 38.8**	**-8.6**
MOY				Smax		04 24 50.7	
	comp=E,195nm,0.7s						
MOY	**Mondy**	**6.80**	**240**	*e*PN	**Pn**	**04 22 51.0**	**+1.9**
MOY				*e*		04 23 12.4	
MOY				*e*		04 24 39.5	
MOY				pmax	pmax		
	comp=Z,42nm,0.6s						
MOY				smax	smax		
	comp=N,195nm,0.8s						
ORL	**Orlik**	**6.92**	**249**	⇓*i*Pn	**Pn**	**04 22 52.4**	**+1.6**
ORL				*e*		04 23 01.4	
ORL				*e*		04 24 10.2	
ORL				*e*Sg	**Sg**	**04 24 43.7**	**-7.6**
ORL				Smax		04 24 50.3	
	comp=N,253nm,1.2s						
ORL	**Orlik**	**6.92**	**249**	*e*PN	**Pn**	**04 22 52.6**	**+1.8**
ORL				*e*		04 23 14.9	
ORL				*e*		04 24 44.9	
ORL				pmax	pmax		
	comp=Z,69nm,0.8s						
ORL				smax	smax		
	comp=N,252nm,1.4s						
SONM	**Songino Array**	**8.06**	**200**	Pn	**Pn**	**04 23 08.0**	**+1.5**
	comp=N,0.7nm,0.3s,baz=17,slow=13,SNR=6.9						
SONM				Lg	Lg	04 25 22.5	
	comp=N,5.8nm,0.3s,baz=10,slow=28,SNR=9.0						
SONM	**Songino Array**	**8.06**	**200**	PN	**Pn**	**04 23 08.0**	**+1.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
IENR	**Iengra**	**8.15**	**79**	*e*Sg	**Sg**	**04 25 22.2**	**-8.4**
TDJR	**Todzha**	**9.00**	**256**	*e*Pn	**Pn**	**04 23 20.3**	**+1.0**
TDJR				*e*		04 23 25.7	
TDJR				*e*Sg		04 25 47.3	
ZEA	**Zeya**	**9.91**	**93**	*e*P	**Pn**	**04 23 32.2**	**+0.5**
ZEA				MLR	MLR		
	comp=E,400nm,6.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,6.0s						
YAK	**Yakutsk**	**11.92**	**49**	*i* P	**Pn**	**04 23 58.3**	**-0.7**
KLR	**Kul'dur**	**14.42**	**107**	Pn	**Pn**	**04 24 34.0**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=309,slow=14,SNR=21						
KLR				Lg	Lg	04 28 43.2	
	comp=Z,0.2nm,0.3s,baz=204,slow=16,SNR=10						
KLR	**Kul'dur**	**14.42**	**107**	*i* P	**Pn**	**04 24 34.3**	**+1.0**
ZALV	**Zalesovo Beam**	**14.86**	**275**	Pn	**Pn**	**04 24 38.5**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=76,slow=8.6,SNR=25						
ZALV				Lg	Lg	04 28 51.6	
	baz=66,slow=29,SNR=3.7						
DGZ	**Jazzator, Alta**	**15.09**	**257**	*d i*P	**Pn**	**04 24 44.4**	**+1.9**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TIXI	**Tiksi**	**18.03**	**19**	*i* P	**Pn**	**04 25 19.2**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s						
MKAR	**Makanchi Array**	**19.57**	**255**	P	**Pn**	**04 25 39.0**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=42,slow=9.0,SNR=25						
MKAR	**Makanchi Array**	**19.57**	**255**	P	**Pn**	**04 25 39.0**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**19.58**	**269**	*i* P	**P**	**04 25 37.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURBB	**Kurchatov Arra**	**19.68**	**269**	P	**P**	**04 25 38.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=66,slow=11,SNR=23						
KURBB				Lg	Lg	04 31 30.1	
	comp=Z,0.0nm,0.3s,baz=68,slow=30,SNR=5.6						
KSRS	**Korea Array**	**21.58**	**139**	LR	LR	04 35 20.1	
	comp=Z,31nm,18.6s,baz=245,slow=39						
SEY	**Seymchan**	**22.36**	**53**	P	**P**	**04 26 10.6**	**+3.5**
	comp=Z,0.7nm,0.4s,baz=312,slow=16,SNR=3.7						
BVAR	**Borovoye Array**	**23.30**	**281**	P	**P**	**04 26 17.0**	**0.0**
	comp=Z,1.0nm,0.4s,baz=68,slow=12,SNR=4.0						
BVAR	**Borovoye Array**	**23.30**	**281**	P	**P**	**04 26 17.0**	**0.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**23.34**	**281**	*i* P	**P**	**04 26 17.2**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.8s						
ASAJ	**Asahikawa**	**23.45**	**106**	LR	LR	04 36 02.1	
	comp=Z,32nm,18.6s,baz=356,slow=38						
AAK	**Ala-Archa**	**26.50**	**256**	*i* P	**P**	**04 26 46.8**	**0.0**
JNU	**Nakatsue**	**26.53**	**139**	LR	LR	04 36 56.3	
	comp=Z,31nm,20.1s,baz=168,slow=35						
MJAR	**Matsushiro Arr**	**26.75**	**124**	LR	LR	04 37 28.2	
	comp=Z,19nm,21.3s,baz=290,slow=36						
ARU	**Arti**	**28.49**	**294**	*i* P	**P**	**04 27 03.7**	**-0.6**
ARU				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**38.06**	**325**	P	**P**	**04 28 25.7**	**-1.6**
	comp=Z,1.4nm,0.9s,baz=71,slow=11,SNR=1.7						
OBN	**Obninsk**	**40.20**	**301**	*i* P	**P**	**04 28 45.5**	**+0.2**
OBN				*i*		04 28 52.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FINES	**FINESS Array B**	**41.59**	**314**	P	**P**	**04 28 56.2**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=69,slow=11,SNR=9.3						
AKASG	**Malin Array Be**	**46.38**	**300**	P	**P**	**04 29 34.7**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=49,slow=9.1,SNR=3.6						
ILAR	**Eielson Array**	**46.42**	**35**	P	**P**	**04 29 37.5**	**+2.0**
	comp=Z,0.6nm,0.9s,baz=304,slow=7.8,SNR=5.6						
NB2	**NORSAR Subarra**	**47.63**	**319**	P	**P**	**04 29 44.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=49,slow=7.4						
NOA	**NORSAR Array B**	**47.63**	**319**	P	**P**	**04 29 44.6**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=48,slow=7.3,SNR=5.7						
BRTR	**Keskin Array B**	**51.41**	**286**	P	**P**	**04 30 15.2**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=60,slow=12,SNR=2.7						
ESDC	**Sonseca Array**	**70.04**	**312**	P	**P**	**04 32 21.6**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=1.6,slow=5.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**89.56**	**293**	P	**P**	**04 34 07.2**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=36,slow=3.7,SNR=1.4						

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*IDC **26** 04:39:17.4±2.4, 15°.53N×96°.03W, h0^{km}, mb3.4/6, mb1 3.8/8, mb1mx3.7/33, mbtmp3.6/8, ML3.9/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/23, Error ellipse: s-maj=41.7km s-min=18.0km az=150.0*

*ISCJB **26** 04:39:21.4±0.6, 15°.73N±0°.07×96°.21W±0°.04, h26^{km}±4^{km}, mb3.8/10, MS2.8/1, Error ellipse: s-maj=11.3km s-min=5.8km az=4.3*

*NEIC **26** 04:39:23.3±0.0, 15°.72N×96°.28W, h19^{km}, mb4.2/14, MD4.1(MEX), After MEX.*

NEIC Felt at Santa Maria Huatulco.

*MEX **26** 04:39:23.3±0.7, 15°.72N×96°.28W, h19^{km}±9^{km}, MD4.1*

ISC 26 04:39:22.3±0.9**, 15°.71N**±0°.07×**96°.18W**±0°.03**, h25**^{km}±5^{km}**, n43,** σ1^{s}.**96**/53**, mb3.8**/10**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.09**	**52**	*e*Pg	**Pb**	**04 39 26.9**	**0.0**
HUIG				*e*Sg	**Sb**	**04 39 30.1**	**+0.1**
HUIG	**Huatulco**	**0.09**	**52**	*i* P	**Pb**	**04 39 26.9**	**0.0**
HUIG				*e*S	**Sb**	**04 39 30.1**	**+0.1**
PANG	**Puerto Angel**	**0.29**	**261**	*e*P	**Pb**	**04 39 27.4**	**-1.7**
PANG				*e*S	**Sb**	**04 39 31.2**	**-2.5**
VHO	**Vista Hermosa**	**1.45**	**339**	*e*Pn	**Pn**	**04 39 45.4**	**-1.7**
VHO				*e*Sn	**Sn**	**04 40 02.4**	**-3.1**
VHO	**Vista Hermosa**	**1.45**	**339**	*i* P	**Pn**	**04 39 45.4**	**-1.7**
VHO				*e*S	**Sn**	**04 40 02.4**	**-3.1**
CMIG	**Matias Romero**	**1.85**	**42**	Pn	**Pn**	**04 39 51.4**	**-1.0**
	26nm,0.3s,baz=221,slow=13,SNR=155						
CMIG				Lg	Lg	04 40 17.9	
	174nm,0.3s,baz=325,slow=22,SNR=6.3						
CMIG	**Matias Romero**	**1.85**	**42**	*e*Pn	**Pn**	**04 39 51.6**	**-0.9**
CMIG				*e*Sn	**Sn**	**04 40 14.8**	**-0.2**
CMIG	**Matias Romero**	**1.85**	**42**	*i* P	**Pn**	**04 39 51.6**	**-0.9**
CMIG				*e*S	**Sn**	**04 40 14.8**	**-0.2**
PCIG		**2.85**	**90**	*e*Pn	**Pn**	**04 40 07.0**	**+0.8**
PCIG				*e*Sn	**Sb**	**04 40 41.1**	**-5.9**
PCIG		**2.85**	**90**	*i* P	**Pn**	**04 40 07.0**	**+0.8**
PCIG				*i* S	**Sb**	**04 40 41.1**	**-5.9**
TLIG	**Tlapa**	**2.93**	**309**	*e*Pn	**Pn**	**04 40 09.5**	**+2.1**
TLIG				*e*Sg	**Sb**	**04 40 48.6**	**-0.9**
CCIG	**Comitan**	**3.93**	**81**	*e*Pn	**Pn**	**04 40 21.6**	**+0.4**
LVIG	**Laguna Verde**	**3.99**	**357**	*e*Pn	**Pn**	**04 40 21.3**	**-0.6**
APG	**El Apazote**	**5.56**	**97**	Pn	**Pn**	**04 40 44.9**	**+1.2**
	1.5nm,0.3s,baz=268,slow=23,SNR=5.6						
APG				Sn	**Sn**	**04 41 43.6**	**-3.3**
	1.3nm,0.3s,baz=355,slow=8.7,SNR=4.3						
APG				Lg	Lg	04 42 07.7	
	2.5nm,0.3s,baz=26,slow=17,SNR=5.5						
TEIG	**Tepich**	**8.76**	**58**	Pn	**Pn**	**04 41 25.4**	**-2.0**
	3.8nm,0.3s,baz=304,slow=1.4,SNR=25						
TEIG				Sn	**Sn**	**04 43 04.0**	**-1.3**
	2.6nm,0.3s,baz=72,slow=17,SNR=6.0						
TEIG				LR	LR	04 45 19.7	
	comp=Z,87nm,19.4s,baz=266,slow=42						
TEIG	**Tepich**	**8.76**	**58**	*e*Pn	**Pn**	**04 41 25.3**	**-2.1**
TEIG				*e*Sn	**Sn**	**04 43 08.4**	**+3.1**
TXAR	**Lajitas Array**	**15.21**	**334**	Pn	**P**	**04 42 59.2**	**-1.2**
	0.1nm,0.3s,baz=160,slow=13,SNR=8.1						
MIAR	**Mount Ida**	**18.90**	**7**	*e*P	**Pn**	**04 43 44.6**	**+2.9**
	4.6nm,0.7s						
W39A	**Magazine**	**19.52**	**6**	*e*P	**Pn**	**04 43 51.5**	**+2.3**
	37nm,1.8s						
TUL1	**Leonard**	**20.12**	**1**	*e*P	Pn	04 43 56.1	-0.1
	6.0nm,0.8s						
FCAR	**Ozark Folk Cen**	**20.42**	**9**	*e*P	**P**	**04 43 58.2**	**+0.6**
	9.3nm,0.8s						
PLAL	**Pickwick Lake**	**20.52**	**19**	*e*P	Pn	04 44 01.7	+0.7
	24nm,1.8s						
HHAR	**Hobbs**	**20.58**	**5**	*e*P	**P**	**04 44 00.4**	**+1.0**
	6.1nm,1.1s						
BNM	**Barren Site**	**20.63**	**335**	*e*P	**P**	**04 44 01.7**	**+1.5**
LENM	**Lemitar**	**20.79**	**334**	*e*P	**P**	**04 44 02.3**	**+0.5**
GOGA	**Godfrey**	**21.04**	**31**	*e*P	**P**	**04 44 05.3**	**+1.0**
	22nm,1.4s						
LAZ	**Ladron**	**21.06**	**334**	*e*P	**P**	**04 44 03.0**	**-1.8**
ANMO	**Albuquerque**	**21.26**	**336**	P	**P**	**04 44 07.7**	**+0.8**
	0.4nm,0.5s,baz=155,slow=9.6,SNR=3.6						
ANMO	**Albuquerque**	**21.26**	**336**	*e*P	**P**	**04 44 07.7**	**+0.8**
	2.0nm,0.8s						
T47A	**Sharon Grove**	**22.67**	**19**	*e*P	**P**	**04 44 22.3**	**+0.5**
	35nm,1.6s						
TKL	**Tuckaleechee C**	**22.75**	**27**	P	**P**	**04 44 22.2**	**-0.4**
	1.5nm,0.6s,baz=238,slow=9.5,SNR=3.6						
PV12	**Saucer Basin,**	**25.11**	**336**	*e*P	**P**	**04 44 46.8**	**+1.4**
	7.1nm,1.2s						
SJG	**San Juan**	**28.82**	**81**	LR	LR	04 56 52.2	
	comp=Z,23nm,19.8s,baz=199,slow=37						
PD31	**Pinedale Array**	**29.30**	**340**	*e*P	**P**	**04 45 23.6**	**+0.6**
	4.3nm,1.8s						
PDAR	**Pinedale Array**	**29.30**	**340**	P	**P**	**04 45 23.6**	**+0.6**
	0.2nm,0.6s,baz=134,slow=13,SNR=3.0						
NV01	**Mina Array Sit**	**29.85**	**324**	*e*P	**P**	**04 45 29.6**	**+1.7**
NVAR	**Mina Array Bea**	**29.85**	**324**	P	**P**	**04 45 29.6**	**+1.7**
	1.0nm,0.9s,baz=140,slow=10.0,SNR=7.4						
J08A	**Circle Bar Ran**	**33.48**	**330**	*e*P	**P**	**04 46 02.1**	**+2.5**
	2.9nm,0.8s						
ILAR	**Eielson Array**	**59.70**	**337**	P	**P**	**04 49 24.6**	**+0.2**
	0.2nm,0.4s,baz=126,slow=4.7,SNR=3.6						
ILB	**Eielson Array**	**59.70**	**337**	*e*P	**P**	**04 49 24.6**	**+0.2**
	2.7nm,1.2s						
NB200	**NORSAR Array S**	**84.55**	**28**	*e*P	**P**	**04 51 52.8**	**-0.4**
NOA	**NORSAR Array B**	**84.55**	**28**	P	**P**	**04 51 52.8**	**-0.4**
	0.2nm,0.6s,baz=300,slow=5.3,SNR=3.3						
LZH	**Lanzhou**	**125.11**	**340**	*e*PKP	**PKiKP**	**04 58 23.3**	**+1.7**
LZH				sPKP		04 58 35.8	

IDC 26 04:42:24.6±67.0**, 18°.70S**×**178°.64W, h0**^{km}**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/25**, mbtmp4.1**/3**, Error ellipse: s-maj=1226.0km s-min=161.5km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.06**	**242**	P	P	04 49 45.5	+0.4
	1.2nm,0.4s,baz=76,slow=8.3,SNR=5.9						
WRA	**Warramunga Arr**	**44.28**	**260**	P	P	04 50 36.1	-0.3
	0.7nm,0.3s,baz=97,slow=8.3,SNR=15						
ASAR	**Alice Springs**	**44.37**	**255**	P	P	04 50 36.7	-0.4
	1.4nm,0.6s,baz=90,slow=8.0,SNR=13						

IDC 26 05:32:03.5±6.2**, 19°.63S**×**177°.93W, h612**^{km}±74^{km}**, mb3.1**/6**, mb1 3.5**/7**, mb1mx3.1**/29**, mbtmp4.1**/7**, Error ellipse: s-maj=86.0km s-min=29.2km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.81**	**258**	P	P	05 35 10.5	+0.8
	1.2nm,0.3s,baz=76,slow=19,SNR=11						
STKA	**Stephens Creek**	**38.23**	**243**	P	P	05 38 32.7	-0.4
	2.6nm,0.5s,baz=85,slow=9.2,SNR=10						
ASAR	**Alice Springs**	**44.79**	**256**	P	P	05 39 24.9	+0.2
	5.7nm,0.5s,baz=90,slow=7.9,SNR=110						
ASAR				PcP	PcP	05 40 53.2	-0.1
	0.3nm,0.4s,baz=104,slow=3.9,SNR=2.8						
WRA	**Warramunga Arr**	**44.80**	**261**	P	P	05 39 24.6	-0.2
	3.5nm,0.3s,baz=93,slow=7.5,SNR=81						
TXAR	**Lajitas Array**	**86.53**	**57**	P	P	05 43 43.7	+0.3
	0.3nm,0.7s,baz=228,slow=3.5,SNR=3.8						
ILAR	**Eielson Array**	**87.46**	**13**	P	P	05 43 46.5	-0.2
	0.2nm,0.3s,baz=220,slow=6.8,SNR=3.4						
PDAR	**Pinedale Array**	**88.29**	**43**	P	P	05 43 51.2	-0.2
	0.2nm,0.4s,baz=233,slow=4.2,SNR=2.9						

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*ISCJB **26** 05:43:20.7±0.6, 37°.10N±0°.03×140°.75E±0°.05, h8^{km}±3^{km}, mb3.6/2, Error ellipse: s-maj=6.5km s-min=4.6km az=30.6*

*JMA **26** 05:43:21.0, 37°.11N×140°.71E, h6^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s207.00000°, δ51.00000°, λ-81.00000°. NP2: ϕ_s13.00000°, δ40.00000°, λ-101.00000°. Principal axes: T Plg6.0000°, Azm291.0000°; N Plg7.0000°, Azm22.0000°; P Plg81.0000°, Azm161.0000°;*

JMA Felt I J1.

*IDC **26** 05:43:24.6±2.5, 36°.32N×140°.54E, h0^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.2/38, mbtmp3.6/2 Error ellipse: s-maj=46.6km s-min=25.8km az=40.0*

ISC 26 05:43:20.9±0.9**, 37°.10N**±0°.03×**140°.73E**±0°.04**, h8**^{km}±6^{km}**, n18,** σ0^{s}.**53**/22**, 6C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.06**	**88**	⇑P	**Pg**	**05 43 22.8**	**+0.1**
ONAJ				S	**Sg**	**05 43 24.2**	**+0.2**
JFFD	**Fukushimafurud**	**0.13**	**266**	⇑P	**Pg**	**05 43 23.6**	**-0.2**
JFFD				S	**Sg**	**05 43 25.3**	**-0.5**
JFK	**Kawauchi**	**0.29**	**24**	P	**Pg**	**05 43 26.8**	**+0.1**
JFK				S	**Sg**	**05 43 31.0**	**+0.4**
JHO	**Hitachi**	**0.51**	**195**	⇓P	**Pg**	**05 43 30.6**	**0.0**
JHO				S	**Sg**	**05 43 37.7**	**+0.5**
JFT	**Otama**	**0.52**	**323**	⇑P	**Pg**	**05 43 31.1**	**+0.1**
JFT				S	**Sg**	**05 43 38.4**	**+0.6**
JSB	**Shiboa**	**0.66**	**259**	⇑P	**Pg**	**05 43 34.2**	**+0.6**
JSB				S	**Sb**	**05 43 43.3**	**-0.7**
JMM	**Marumori**	**0.77**	**4**	⇑P	**Pg**	**05 43 35.3**	**-0.3**

JMM				S	**Sg**	**05 43 45.7**	**+0.1**
JFY	**Yanaizu**	**0.87**	**291**	⇑P	**Pg**	**05 43 37.5**	**-0.1**
JFY				*e*S	**Sg**	**05 43 48.7**	**-0.3**
MJAR	**Matsushiro Arr**	**2.10**	**255**	Pn	**Pn**	**05 43 57.5**	**+1.2**
	1.8nm,0.3s,baz=95,slow=16,SNR=42						
MJAR				Sn	**Sb**	**05 44 24.8**	**-0.5**
	1.9nm,0.3s,baz=96,slow=26,SNR=15						
MAT	**Matsushiro**	**2.10**	**255**	P	**Pb**	**05 43 58.7**	**-0.5**
MAT				S	**Sb**	**05 44 26.0**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**28.66**	**120**	T	T	06 19 06.1	
	baz=313						
H11N1	**WAKE ISLAND Hy**	**28.66**	**120**	T	T	06 19 05.9	
	baz=313						
H11N3	**WAKE ISLAND Hy**	**28.67**	**120**	T	T	06 19 07.6	
	baz=313						
H11S1	**WAKE ISLAND Hy**	**29.36**	**122**	T	T	06 20 00.8	
	baz=314						
H11S3	**WAKE ISLAND Hy**	**29.36**	**122**	T	T	06 20 00.4	
	baz=314						
H11S2	**WAKE ISLAND Hy**	**29.37**	**122**	T	T	06 20 00.8	
	baz=314						
WRA	**Warramunga Arr**	**57.05**	**187**	P	**P**	**05 53 06.7**	**-0.8**
	0.6nm,0.5s,baz=352,slow=7.5,SNR=7.6						
ASAR	**Alice Springs**	**60.78**	**187**	P	**P**	**05 53 33.0**	**-0.3**
	0.1nm,0.3s,baz=17,slow=13,SNR=2.9						

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*ISCJB **26** 05:44:12.9±0.6, 37°.11N±0°.03×140°.75E±0°.04, h7^{km}±3^{km}, Error ellipse: s-maj=6.5km s-min=4.5km az=32.0*

*IDC **26** 05:44:12.2±2.2, 36°.95N×140°.86E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/38, mbtmp3.5/4, ML2.7/1, MS2.1/1, Ms1 2.1/1, ms1mx1.8/25, Error ellipse: s-maj=47.3km s-min=28.1km az=38.0*

*JMA **26** 05:44:13.2, 37°.10N×140°.70E, h6^{km}±1^{km}, M3.2*

JMA Felt II J1.

ISC 26 05:44:12.8±0.9, 37°.07N±0°.05×140°.73E±0°.04, h8^{km}±6^{km}, n20, σ0^{s}58/23, 7C, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.07**	**58**	⇑P	**Pg**	**05 44 14.9**	**+0.2**
ONAJ				S	**Sg**	**05 44 16.3**	**+0.2**
JFFD	**Fukushimafurud**	**0.14**	**280**	⇑P	**Pg**	**05 44 15.7**	**0.0**
JFFD				S	**Sg**	**05 44 17.4**	**-0.4**
JFK	**Kawauchi**	**0.32**	**21**	⇑P	**Pg**	**05 44 19.0**	**-0.1**
JFK				S	**Sg**	**05 44 23.2**	**-0.2**
JHO	**Hitachi**	**0.47**	**196**	P	**Pb**	**05 44 22.8**	**-0.6**
JHO				S	**Sb**	**05 44 29.8**	**-0.7**
JFT	**Otama**	**0.55**	**325**	⇑P	**Pg**	**05 44 23.2**	**-0.2**
JFT				S	**Sg**	**05 44 30.5**	**-0.1**
JSB	**Shiboa**	**0.66**	**262**	⇑P	**Pb**	**05 44 26.3**	**-0.2**
JSB				S	**Sb**	**05 44 35.6**	**-0.2**
JMM	**Marumori**	**0.80**	**4**	⇑P	**Pg**	**05 44 27.4**	**-0.8**
JMM				S	**Sg**	**05 44 37.8**	**-0.8**
JFY	**Yanaizu**	**0.89**	**293**	⇑P	**Pg**	**05 44 29.6**	**-0.2**
JFY				*e*S	**Sg**	**05 44 40.8**	**-0.5**
MJAR	**Matsushiro Arr**	**2.09**	**256**	Pn	**Pb**	**05 44 50.6**	**-0.4**
	2.6nm,0.3s,baz=96,slow=16,SNR=11						
MJAR				Sn	**Sb**	**05 45 17.6**	**+0.5**
	2.0nm,0.3s,baz=186,slow=24,SNR=8.5						
MJAR				LR	LR	05 45 53.3	
	comp=Z,37nm,19.1s,baz=100,slow=47						
MAT	**Matsushiro**	**2.09**	**256**	P	**Pb**	**05 44 50.8**	**-0.2**
MAT				S	**Sb**	**05 45 17.8**	**+0.6**
PETK	**Petropavlovsk-**	**19.94**	**31**	P	P	05 48 26.1	-19
	0.7nm,0.3s,baz=235,slow=4.2,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**28.64**	**120**	T	T	06 19 54.8	
	baz=312,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.64**	**120**	T	T	06 19 55.4	
	baz=312,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.65**	**120**	T	T	06 19 56.1	
	baz=312,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.34**	**122**	T	T	06 20 51.5	
	baz=314,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.34**	**122**	T	T	06 20 51.8	
	baz=314,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.36**	**122**	T	T	06 20 54.1	
	baz=314,slow=76						
MKAR	**Makanchi Array**	**43.64**	**302**	P	**P**	**05 52 19.3**	**+1.5**
	0.2nm,0.5s,baz=100,slow=6.6,SNR=3.6						
WRA	**Warramunga Arr**	**57.02**	**187**	P	**P**	**05 53 58.7**	**-0.5**
	0.6nm,0.5s,baz=352,slow=8.3,SNR=6.9						
ASAR	**Alice Springs**	**60.75**	**187**	P	**P**	**05 54 25.1**	**0.0**
	0.3nm,0.7s,baz=8.9,slow=7.8,SNR=4.1						

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*ISCJB **26** 05:47:52.1±1.7, 2°.7N±0°.2×67°.1E±0°.3, h10^{km}, mb3.8/6, MS3.3/6, Error ellipse: s-maj=52.7km s-min=22.3km az=145.5*

*IDC **26** 05:47:52.2±1.6, 2°.62N×67°.05E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.5/42, mbtmp3.8/6, MS3.4/6, Ms1 3.4/6, ms1mx3.0/28, Error ellipse: s-maj=54.9km s-min=24.9km az=55.0*

ISC 26 05:47:53.6±1.8, 2°.6N±0°.3×67°.0E±0°.3, h10^{km}, n18, σ0^{s}44/7, mb3.8/6, MS3.3/6, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N2	**Diego Garcia H**	**9.72**	**156**	T	T	06 00 16.0	
	baz=335,slow=75						
H08N3	**Diego Garcia H**	**9.74**	**156**	T	T	06 00 18.4	
	baz=335,slow=75						
H08N1	**Diego Carcia H**	**9.74**	**156**	T	T	06 00 18.1	
	baz=335,slow=75						
WSAR	**Wadi Sarin**	**22.06**	**339**	LR	LR	05 59 17.9	
	comp=Z,64nm,18.9s,baz=172,slow=31						
KMBO	**Kilima Mbogo**	**29.99**	**263**	LR	LR	06 03 46.4	
	comp=Z,51nm,18.3s,baz=116,slow=32						
GEYT	**Alibeck**	**36.09**	**348**	LR	LR	06 08 40.4	
	comp=Z,58nm,19.4s,baz=175,slow=35						
BRTR	**Keskin Array B**	**47.77**	**325**	P	**P**	**05 56 31.5**	**+0.3**
	0.6nm,0.9s,baz=130,slow=7.8,SNR=3.3						
BRTR				LR	LR	06 16 58.8	
	comp=Z,40nm,18.2s,baz=142,slow=37						
KURBB	**Kurchatov Arra**	**48.83**	**10**	P	**P**	**05 56 39.1**	**+0.1**
	0.2nm,0.4s,baz=208,slow=8.3,SNR=3.7						
ZALV	**Zalesovo Beam**	**53.23**	**13**	P	**P**	**05 57 11.5**	**-0.6**
	1.4nm,0.3s,baz=204,slow=9.2,SNR=1.4						
SONM	**Songino Array**	**56.38**	**31**	P	**P**	**05 57 35.6**	**+0.3**
	0.6nm,0.7s,baz=224,slow=8.1,SNR=3.4						
H01W3	**Cape Leeuwin H**	**57.78**	**135**	T	T	07 00 18.8	
	baz=300,slow=75						
H01W2	**Cape Leeuwin H**	**57.79**	**135**	T	T	07 00 19.8	
	baz=300,slow=75						
H01W1	**Cape Leeuwin H**	**57.80**	**135**	T	T	07 00 19.2	
	baz=300,slow=75						
WRA	**Warramunga Arr**	**69.69**	**112**	P	**P**	**05 59 04.3**	**+0.1**
	2.4nm,0.9s,baz=294,slow=8.1,SNR=5.5						
ASAR	**Alice Springs**	**70.03**	**116**	P	**P**	**05 59 06.3**	**+0.1**
	0.6nm,0.7s,baz=294,slow=5.8,SNR=5.3						
NOA	**NORSAR Array B**	**71.78**	**335**	LR	LR	06 31 08.4	
	comp=Z,18nm,20.8s,baz=235,slow=36						
STKA	**Stephens Creek**	**78.33**	**123**	LR	LR	06 30 21.6	
	comp=Z,29nm,20.9s,baz=208,slow=33						
TXAR	**Lajitas Array**	**147.01**	**345**	PKPbc	**PKPbc**	**06 07 37.0**	**-0.5**
	1.8nm,0.8s,baz=46,slow=2.6,SNR=24						

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*ISCJB **26** 06:10:21.4±0.8, 42°.44N±0°.04×43°.61E±0°.05, h0^{km}±9^{km}, Error ellipse: s-maj=8.2km s-min=4.5km az=149.7*

*NORS **26** 06:10:21.4±0.0, 42°.60N×43°.63E, h1^{km}, MPVA3.0*

ISC 26 06:10:21.4±1.3, 42°.43N±0°.04×43°.64E±0°.04, h0^{km}±12^{km}, n14, σ0^{s}68/30, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	**Oni**	**0.21**	**320**	P	**Pg**	**06 10 25.3**	**-0.1**
ONI				S	**Sg**	**06 10 27.6**	**-0.6**
ZEI	**Tsey**	**0.41**	**29**	*e*Pg	**Pg**	**06 10 29.1**	**-0.2**
ZEI				*e*Sg	**Sg**	**06 10 34.8**	**+0.2**
DIGR	**Digorskoe uzhe**	**0.47**	**355**	*e*Pg	**Pg**	**06 10 29.3**	**-1.1**
DIGR				*e*Sg	**Sg**	**06 10 36.3**	**-0.3**
TKB	**Tkibuli**	**0.48**	**261**	P	**Pg**	**06 10 30.8**	**+0.2**
TKB				S	**Sg**	**06 10 37.9**	**+1.1**
LACR	**Lac**	**0.63**	**51**	*e*Pg	**Pg**	**06 10 32.7**	**-0.8**
LACR				*e*Sg	**Sg**	**06 10 41.7**	**0.0**
KORR	**Kora**	**0.73**	**26**	*e*Pg	**Pg**	**06 10 35.3**	**-0.1**
KORR				*e*Sg	**Sg**	**06 10 46.3**	**+1.4**
LSNR	**Lesken**	**0.86**	**9**	*e*Pg	**Pg**	**06 10 37.6**	**-0.3**
LSNR				*e*Sg	**Sg**	**06 10 49.5**	**+0.4**
ARNR	**Ardon**	**0.89**	**32**	*e*Pg	**Pb**	**06 10 39.3**	**-0.4**
ARNR				*e*Sg	**Sb**	**06 10 52.5**	**+0.4**
VLKR	**Vladikavkaz**	**0.99**	**51**	*e*Pg	**Pn**	**06 10 42.5**	**-0.1**
VLKR				*e*Pg	**Pn**	**06 10 42.5**	**-0.1**
VLKR				*e*Sg	**Sn**	**06 10 56.7**	**-0.5**
VLKR				*e*Sg	**Sb**	**06 10 56.8**	**+1.9**
STDR	**Stavd-Durt**	**0.99**	**18**	*e*Pg	**Pg**	**06 10 40.9**	**+0.5**
STDR				*e*Sg	**Sb**	**06 10 55.2**	**+0.1**
EPOS	**Posof**	**1.15**	**217**	*i* P	**Pg**	**06 10 42.7**	**-0.7**
EPOS				*i* S	**Sg**	**06 10 58.1**	**-0.1**
DBOC	**Borcka**	**1.82**	**234**	*i* P	**Pb**	**06 10 55.6**	**0.0**
DBOC				*i* S	**Sb**	**06 11 19.1**	**+0.1**
DBOC				IAML_P			
	comp=Z,343nm,0.1s						
DAGI	**Agillar**	**1.86**	**224**	*i* P	**Pn**	**06 10 55.2**	**+0.6**
DAGI				*i* S	**Sn**	**06 11 18.6**	**-0.4**
DBAD	**Bademkaya**	**2.02**	**227**	*i* P	**Pb**	**06 10 58.9**	**-0.2**
DBAD				*i* S	**Sn**	**06 11 22.1**	**-0.8**

MEX 26 06:13:19.7±0.4, 17°.72N×95°.48W, h29^{km}±6^{km}, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.84**	**137**	*e*P	Pn	06 13 33.0	-2.7
CMIG				*e*S	Sb	06 13 43.8	-3.0
VHO	**Vista Hermosa**	**1.36**	**242**	*i* P	Pn	06 13 40.8	-2.2
VHO				*e*S	Sn	06 13 56.9	-3.2
HUIG	**Huatulco**	**2.03**	**197**	*i* P	Pn	06 13 50.2	-1.8
HUIG				*i* S	Sn	06 14 13.5	-2.9
TGIG		**2.44**	**112**	*i* P	Pn	06 13 56.1	-1.5
TGIG				*i* S	Sn	06 14 23.6	-2.9
PCIG		**2.95**	**132**	*e*P	Pn	06 14 03.8	-0.8
PCIG				*i* S	Sn	06 14 36.1	-2.9
CCIG	**Comitan**	**3.50**	**114**	*i* P	Pn	06 14 10.4	-2.0
CCIG				*i* S	Sn	06 14 50.6	-2.4

JMA 26 06:36:36.8±0.1, 24°.10N×123°.55E, h20^{km}±1^{km}, M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.24**	**100**	P	Pb	06 36 42.4	-0.1
HATJ				S	Sb	06 36 46.0	-0.3
IRIF	**Iriomote-Funau**	**0.29**	**35**	P	Pb	06 36 43.1	-0.2
IRIF				S	Sb	06 36 47.5	-0.2
JKRS	**Kuro-shima**	**0.44**	**72**	S	Sb	06 36 52.3	+0.2
JIJ	**Ishigaki jima**	**0.60**	**64**	P	Pb	06 36 48.3	-0.4
JIJ				S	Sb	06 36 56.4	-0.3
JYNG	**Yonagunijimaku**	**0.65**	**302**	P	Pb	06 36 49.2	-0.3
JYNG				S	Sb	06 36 57.8	-0.4

TAP 26 06:36:47.2, 23°.88N×121°.52E, h10^{km}±1^{km}, ML1.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESL	**Shilin**	**0.10**	**230**	P	Pg	06 36 50.4	+0.6
	baz=226						
ESL				*e*S	Sg	06 36 52.4	+0.8
	baz=226						
ETLH	**Xiulin Townshi**	**0.33**	**354**	*e*P	Pg	06 36 54.4	+0.6
	baz=354						
ETLH				*e*S	Sg	06 36 59.0	+0.7
	baz=354						
CHGB	**Renai**	**0.36**	**300**	*e*P	Pb	06 36 55.7	-0.2
	baz=300						
CHGB				*e*S	Sb	06 37 01.3	-0.4
	baz=300						
VWDT	**VWDT**	**0.37**	**250**	*e*P	Pb	06 36 56.0	+0.2
	baz=250						
VWDT				*e*S	Sb	06 37 01.4	-0.2
	baz=250						
SSLB	**Suanglung**	**0.52**	**260**	*e*S	Sb	06 37 06.4	+0.2
	baz=260						
YULB	**Yu-li**	**0.52**	**203**	*e*P	Pb	06 36 58.4	-0.1
	baz=202						
YULB				*e*S	Sb	06 37 06.3	+0.1
	baz=202						

IDC 26 06:40:26.7±2.4, 54°.11N×87°.18E, h0^{km}, mb1 2.8/2, mb1mx2.7/35, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=21.1km s-min=17.2km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.40**	**264**	Pg	Pn	06 40 51.6	-1.9
	2.3nm,0.3s,baz=79,slow=16,SNR=13						
ZALV				Lg	Lg	06 41 11.9	
	1.3nm,0.3s,baz=84,slow=25,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.34**	**240**	Pn	Pn	06 42 02.1	+0.8
	0.1nm,0.3s,baz=57,slow=14,SNR=8.8						
KURBB				Lg	Lg	06 43 47.7	
	0.0nm,0.3s,baz=56,slow=33,SNR=4.2						
MKAR	**Makanchi Array**	**7.96**	**205**	Pn	Pn	06 42 24.5	+0.9
	0.1nm,0.3s,baz=28,slow=13,SNR=3.9						
MKAR				Sn	Sn	06 43 54.4	+0.1
	0.1nm,0.3s,baz=27,slow=25,SNR=3.5						
MKAR				Lg	Lg	06 44 37.9	
	0.1nm,0.3s,baz=20,slow=29,SNR=6.8						
SONM	**Songino Array**	**13.62**	**110**	Pn	Pn	06 43 42.4	+1.3
	2.7nm,0.3s,baz=306,slow=17,SNR=18						

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*ISCJB **26** 06:52:14.3±0.5, 39°.42N±0°.03×26°.34E±0°.04, h11^{km}±6^{km}, Error ellipse: s-maj=5.5km s-min=4.7km az=174.4*

*ISK **26** 06:52:14.2, 39°.42N×26°.35E, h8^{km}, ML1.8/8*

*DDA **26** 06:52:14.4, 39°.46N×26°.40E, h7^{km}±3^{km}, ML2.6*

ISC 26 06:52:14.4±0.9, 39°.43N±0°.03×26°.35E±0°.03, h16^{km}±8^{km}, n14, σ0^{s}29/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPNR	**Gulpinar-Canak**	**0.17**	**280**	PG	**Pg**	**06 52 18.5**	**-0.2**
AYVA	**Ayvalik**	**0.29**	**114**	*i* P	**Pg**	**06 52 20.7**	**+0.2**
AYVA				*i* S	**Sg**	**06 52 24.9**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.35**	**25**	*i* P	**Pg**	**06 52 21.2**	**-0.5**
BAYC				*i* S	**Sb**	**06 52 27.3**	**-0.3**
EZN	**Ezine**	**0.40**	**357**	PG	**Pg**	**06 52 22.6**	**+0.1**
EZN				SG	**Sb**	**06 52 28.7**	**-0.3**
SIGR	**SIGRI**	**0.44**	**241**	PG	**Pg**	**06 52 23.2**	**-0.1**
SIGR				SG	**Sg**	**06 52 29.8**	**+0.4**
BOZC	**Bozcaada**	**0.47**	**331**	PG	**Pg**	**06 52 24.0**	**+0.1**
BOZC				SG	**Sb**	**06 52 30.9**	**-0.3**
BOZC	**Bozcaada**	**0.47**	**331**	*i* P	**Pg**	**06 52 24.1**	**+0.1**
BOZC				*i* S	**Sg**	**06 52 30.2**	**-0.1**
BOZC				IAML_P			
	comp=Z,2μm,0.2s						
DKL	**Dikili**	**0.56**	**130**	PG	**Pb**	**06 52 25.6**	**-0.2**
ZEDA	**zmir-Bergama**	**0.73**	**129**	*i* P	**Pg**	**06 52 28.2**	**-0.4**
ZEDA				IAML_P			
	comp=Z,790nm,0.1s						
GELI	**Tayfur-Gelibol**	**0.97**	**5**	PG	**Pg**	**06 52 33.2**	**-0.1**
BALY	**Balya**	**1.03**	**72**	*i* P	**Pn**	**06 52 34.8**	**+0.6**
BALY				*i* S	**Sb**	**06 52 47.2**	**0.0**
BALY				IAML_P			
	comp=Z,474nm,0.3s						
CHOS	**Chios island**	**1.06**	**193**	PG	**Pn**	**06 52 34.9**	**+0.1**
URLA	**Izmir**	**1.08**	**170**	PG	**Pg**	**06 52 35.2**	**-0.1**
ALN	**Alexandroupoli**	**1.49**	**351**	PN	**Pb**	**06 52 41.6**	**-0.1**

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*DDA **26** 06:53:46.0, 40°.77N×29°.03E, h4^{km}±5^{km}, ML2.8*

*ISK **26** 06:53:46.7, 40°.79N×29°.09E, h10^{km}, ML2.6/17*

*ISCJB **26** 06:53:47.1±0.3, 40°.78N±0°.02×29°.09E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.5km az=9.1*

ISC 26 06:53:46.8±0.9, 40°.78N±0°.02×29°.06E±0°.03, h12^{km}±7^{km}, n30, σ0^{s}45/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUY	**Buyukada**	**0.09**	**32**	PG	**Pg**	**06 53 49.6**	**+0.1**
BUY				SG	**Sg**	**06 53 50.9**	**-0.6**
KAVV	**Kandilli-Istan**	**0.29**	**0**	PG	**Pg**	**06 53 52.8**	**+0.1**
KAVV				SG	**Sg**	**06 53 57.1**	**+0.5**
ISK	**Istanbul-Kandi**	**0.29**	**0**	PG	**Pg**	**06 53 52.8**	**+0.1**
ISK				SG	**Sg**	**06 53 56.9**	**+0.2**
YLV	**Yalova**	**0.32**	**131**	PG	**Pg**	**06 53 53.4**	**+0.1**
GEMT	**Gemlik**	**0.36**	**164**	PG	**Pb**	**06 53 54.2**	**-0.8**
MDNY	**Mudanya-Bursa**	**0.43**	**198**	PG	**Pb**	**06 53 55.9**	**-0.3**
MDNY				SG	**Sb**	**06 54 02.5**	**-0.1**
HRT	**Hereke**	**0.47**	**84**	PG	**Pg**	**06 53 55.8**	**-0.1**
KLYT	**Kilyos**	**0.47**	**359**	PG	**Pb**	**06 53 56.4**	**-0.6**
IZI	**Iznik**	**0.54**	**144**	PG	**Pg**	**06 53 57.2**	**-0.2**
SILT	**Sile**	**0.58**	**50**	PG	**Pg**	**06 53 57.8**	**-0.3**
ELBA	**Catalca**	**0.60**	**308**	*i* P	**Pb**	**06 53 58.6**	**-0.6**
ELBA				*i* S	**Sb**	**06 54 07.6**	**0.0**
ELBA				IAML_P			
	comp=Z,6μm,0.1s						
CTKS	**Kestanelik-??a**	**0.62**	**318**	PG	**Pb**	**06 53 59.1**	**-0.4**
ADVT	**Abdulvahap**	**0.62**	**123**	PG	**Pg**	**06 53 58.8**	**-0.1**
ULDT	**Uludag**	**0.64**	**175**	*i* P	**Pb**	**06 54 00.1**	**+0.2**
ULDT				*i* S	**Sb**	**06 54 08.6**	**-0.3**
ULDT				IAML_P			
	comp=Z,1μm,0.2s						
KCTX	**Karacabey (Bur**	**0.74**	**226**	PG	**Pb**	**06 54 01.7**	**+0.1**
KAND	**Kocaeli-Kandir**	**0.92**	**69**	*i* P	**Pg**	**06 54 04.2**	**-0.2**
SAUV	**Serdivan-Sakar**	**0.96**	**92**	PG	**Pg**	**06 54 05.1**	**-0.3**
GEYV	**SAKARYA_Geyve**	**0.99**	**107**	*i* P	**Pb**	**06 54 06.0**	**+0.2**
EDC	**Edincik**	**1.01**	**245**	PG	**Pn**	**06 54 06.6**	**-0.1**
GULT	**Gulveren**	**1.16**	**107**	PN	**Pn**	**06 54 09.7**	**+0.8**
DURS	**Dursunbey**	**1.26**	**201**	*i* P	**Pg**	**06 54 11.8**	**+0.8**
DURS				*i* S	**Sb**	**06 54 27.2**	**+0.6**
DURS				IAML_P			
	comp=Z,658nm,0.2s						
TVSB	**Tavsanli**	**1.36**	**167**	PN	**Pb**	**06 54 12.3**	**+0.1**
SAHE	**Sakarya_HENDEK**	**1.36**	**86**	*i* P	**Pg**	**06 54 12.8**	**-0.2**
SAHE				*i* S	**Sn**	**06 54 30.2**	**+0.5**
BORA	**Eskisehir**	**1.39**	**130**	*i* P	**Pb**	**06 54 12.8**	**+0.1**
BORA				IAML_P			
	comp=Z,2μm,0.2s						
BALB	**Balikesir**	**1.45**	**219**	PN	**Pg**	**06 54 14.0**	**-0.6**
BALY	**Balya**	**1.51**	**227**	*i* P	**Pb**	**06 54 14.8**	**+0.1**
BALY				*i* S	**Sg**	**06 54 35.1**	**-0.3**
BALY				IAML_P			
	comp=Z,2μm,0.3s						
GDZ	**Gediz**	**1.72**	**169**	*i* P	**Pn**	**06 54 15.7**	**-0.9**
KIRK	**Kırklareli**	**1.79**	**305**	*i* P	**Pb**	**06 54 19.6**	**+0.2**
KIRK				IAML_P			
	comp=Z,300nm,0.2s						
USAK	**Uak-Merkez**	**2.06**	**181**	*i* P	**Pg**	**06 54 25.7**	**-0.6**
USAK				IAML_P			
	comp=Z,292nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**2.18**	**242**	*i* P	**Pb**	**06 54 26.9**	**+0.8**
BAYC				IAML_P			
	comp=Z,394nm,0.3s						

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*NEIC **26** 06:55:19.3±0.0, 45°.08S×167°.32E, h5^{km}, ML4.4(WEL), After WEL.*

WEL 26 06:55:18.2, 45°S±5°×16°7E±°, h5^{km}, M4.1/24, ML4.3/21, MLv4.1/24, Error ellipse: s-maj=0.0km s-min=0.0km az=58.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.43**	**184**	*e*Pg	Pb	06 55 28.4	+0.1
DCZ				*e*Sg	Sb	06 55 37.0	+2.0
DCZ	**Deep Cove**	**0.43**	**184**	P	Pb	06 55 28.6	+0.3
DCZ				S	Sb	06 55 36.5	+1.5
MSZ	**Milford Sound**	**0.63**	**55**	P	Pg	06 55 29.8	-0.5
MLZ	**Mavora Lakes**	**0.73**	**117**	*e*Pg	Pb	06 55 33.8	+0.5
MLZ				*e*Sg	Sb	06 55 43.7	+0.1
MLZ	**Mavora Lakes**	**0.73**	**117**	P	Pb	06 55 33.7	+0.4
MLZ				S	Sb	06 55 43.6	0.0
WHZ	**Wether Hill Ro**	**1.00**	**149**	*e*Pn	Pb	06 55 38.3	+0.3
WHZ				*e*Sn	Sn	06 55 53.0	-0.4
WHZ	**Wether Hill Ro**	**1.00**	**149**	P	Pb	06 55 38.4	+0.4
WHZ				S	Sb	06 55 52.4	+0.8
WKZ	**Wanaka**	**1.31**	**81**	*e*Pg	Pn	06 55 42.5	-0.6
WKZ				*e*Sn	Sn	06 56 03.8	+2.9
WKZ	**Wanaka**	**1.31**	**81**	P	Pn	06 55 42.7	-0.4
JCZ	**Jackson Bay**	**1.49**	**50**	P	Pn	06 55 44.0	-1.6
JCZ				S	Sn	06 56 04.6	-0.8
EAZ	**Earnscleugh**	**1.51**	**98**	P	Pb	06 55 46.3	-0.3
APZ	**The Paps**	**1.88**	**163**	P	Pb	06 55 53.0	+0.1
TUZ	**Tuapeka**	**1.94**	**119**	P	Pn	06 55 52.6	+0.9
TUZ				S	Sn	06 56 17.2	+0.8
SYZ	**Scrubby Hill**	**2.02**	**139**	P	Pn	06 55 53.6	+0.8
LBZ	**Lake Benmore**	**2.23**	**74**	*e*Pn	Pn	06 55 56.6	+0.9
LBZ	**Lake Benmore**	**2.23**	**74**	P	Pn	06 55 56.6	+0.9
FOZ	**Fox Glacier**	**2.41**	**52**	*e*Pn	Pn	06 55 56.5	-1.6
FOZ	**Fox Glacier**	**2.41**	**52**	P	Pn	06 55 56.6	-1.5
ODZ	**Otahua Downs**	**2.44**	**91**	*e*Pn	Pn	06 55 59.0	+0.4
ODZ				*e*Sn	Sn	06 56 28.4	-0.4
ODZ	**Otahua Downs**	**2.44**	**91**	P	Pn	06 55 59.2	+0.5
HHSZ	**Highcliff Hill**	**2.54**	**111**	P	Pn	06 56 01.9	+2.0
GCSZ	**Gaunt Creek Bo**	**2.83**	**54**	P	Pn	06 56 02.5	-1.5
RPZ	**Rata Peaks**	**3.06**	**66**	*e*Pn	Pn	06 56 06.7	-0.5
RPZ	**Rata Peaks**	**3.06**	**66**	P	Pn	06 56 07.0	-0.3
WVZ	**Waitaha Valley**	**3.22**	**54**	P	Pn	06 56 07.5	-1.8
MHCZ	**Mount Hutt**	**3.48**	**66**	P	Pn	06 56 11.8	-1.1
INZ	**Inchbonnie**	**3.84**	**55**	P	Pn	06 56 16.2	-1.7
OXZ	**Oxford**	**3.88**	**66**	*e*Pn	Pn	06 56 17.0	-1.4
OXZ	**Oxford**	**3.88**	**66**	P	Pn	06 56 17.0	-1.4
EYCZ	**Eyrewell**	**4.04**	**68**	P	Pn	06 56 19.3	-1.4
MQZ	**McQueen's Vall**	**4.13**	**73**	*e*Pn	Pn	06 56 21.5	-0.3
MQZ	**McQueen's Vall**	**4.13**	**73**	P	Pn	06 56 21.6	-0.2
CRLZ	**Canterbury Las**	**4.16**	**71**	*e*Pn	Pn	06 56 21.9	-0.3
LTZ	**Lake Taylor**	**4.30**	**60**	*e*Pn	Pn	06 56 23.1	-1.2
LTZ	**Lake Taylor**	**4.30**	**60**	P	Pn	06 56 21.7	-2.6
AMCZ	**Amberley**	**4.34**	**67**	P	Pn	06 56 23.9	-0.8
OKCZ	**Okains Bay**	**4.40**	**75**	P	Pn	06 56 25.6	0.0
GVZ	**Greta Valley S**	**4.69**	**66**	P	Pn	06 56 28.5	-1.1
DSZ	**Denniston Nort**	**4.70**	**47**	P	Pn	06 56 27.0	-2.7
THZ	**Tophouse**	**5.29**	**54**	*e*Pn	Pn	06 56 36.8	-1.1
THZ	**Tophouse**	**5.29**	**54**	P	Pn	06 56 36.6	-1.3
QRZ	**Quartz Range**	**5.75**	**45**	*e*Pn	Pn	06 56 42.0	-2.0
QRZ	**Quartz Range**	**5.75**	**45**	P	Pn	06 56 41.2	-2.8
NNZ	**Nelson**	**5.92**	**52**	P	Pn	06 56 44.8	-1.6
TUWZ	**Tuamarina**	**6.10**	**56**	P	Pn	06 56 48.8	-0.2
DUWZ	**D'Urville Isla**	**6.50**	**52**	P	Pn	06 56 53.9	-0.5
KHEZ	**Kahui Hut**	**7.65**	**44**	P	Pn	06 57 08.0	-2.2
VRZ	**Vera Road**	**8.15**	**46**	P	Pn	06 57 15.9	-1.2
PKVZ	**Pokaka**	**8.34**	**49**	P	Pn	06 57 19.9	+0.2
HIZ	**Hauiti**	**8.67**	**44**	*e*Pn	Pn	06 57 25.0	+0.8
HIZ	**Hauiti**	**8.67**	**44**	P	Pn	06 57 23.1	-1.0
BKZ	**Black Stump Fm**	**9.06**	**53**	*e*Pn	Pn	06 57 31.4	+1.8
WCZ	**Waipu Caves**	**10.59**	**33**	P	Pn	06 57 48.1	-2.3
OUZ	**Omahuta**	**10.96**	**29**	*e*Pn	Pn	06 57 53.4	-2.1
OUZ	**Omahuta**	**10.96**	**29**	P	Pn	06 57 53.4	-2.0

UCR 26 06:57:12.8±1.1, 10°.62N×85°.92W, h21^{km}±9^{km}, MW3.8, 5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUEV	**Buena Vista**	**0.54**	**71**	⇓*i*P	Pb	06 57 23.7	+0.1
BUEV				*e*S	Sb	06 57 31.3	+0.3
GB1A	**Borinquen Arri**	**0.55**	**69**	⇓*i*P	Pb	06 57 24.1	+0.1
GB1A				*e*S	Sb	06 57 31.3	-0.1
JTS	**Las Juntas de**	**1.01**	**109**	⇓*i*P	Pb	06 57 30.2	-1.4
JTS				*e*S	Sb	06 57 43.9	-0.5
ARE1	**Arenal 1**	**1.19**	**97**	*e*S	Sn	06 57 49.9	+0.1
CEDE	**Laguna Cedeo**	**1.20**	**96**	⇓*i*P	Pn	06 57 34.4	-0.1
ACON	**Acoyapa**	**1.53**	**29**	⇓*i*P	Pn	06 57 38.6	-0.3
HDC	**Heredia**	**1.88**	**109**	*e*P	Pn	06 57 44.1	+0.3
LCR2	**La Lucha 2**	**2.08**	**115**	*e*P	Pn	06 57 47.5	+0.8
ESPN	**Las Esperanzas**	**2.23**	**45**	*e*P	Pn	06 57 47.9	-0.6

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*NEIC **26** 07:07:15.6±2.2, 15°.38S×167°.69E, h124^{km}, mb5.4/252, MW6.1, MW6.1, MW6.1, Error ellipse: s-maj=11.1km s-min=8.7km az=33.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^{18}Nm; M_{rr}1.52; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-1.65; $M_{r\theta}$-0.47; $M_{\theta\phi}$0.20; $M_{\phi r}$-0.23; Best double couple: $M_0$1.70000×10^{18} NP1:ϕ_s191.00000°, δ51.00000°, λ113.00000°. NP2:ϕ_s337.00000°, δ45.00000°, λ64.00000°. Principal axes: T 1.6900, Plg72.0000°, Azm164.0000°; N -0.0100, Plg18.0000°, Azm355.0000°; P -1.6800, Plg3.0000°, Azm264.0000°;*

NEIC Felt at Luganville. Broadband depth 124 km.

*ISCJB **26** 07:07:16.1±0.7, 15°.36S±0°.03×167°.56E±0°.02, h138^{km}±6^{km}, mb5.5/157 Error ellipse: s-maj=4.6km s-min=3.5km az=174.4*

*IDC **26** 07:07:16.6±0.5, 15°.34S×167°.62E, h131^{km}±3^{km}, mb5.1/29, mb1 5.2/31, mb1mx5.2/33, mbtmp5.5/31, MS5.0/24, Ms1 5.0/24, ms1mx4.9/33, Error ellipse: s-maj=8.4km s-min=7.7km az=83.0*

NEIC **26** *07:07:17.0±0.0, 15.°06S×167.°27E, h130km, Moment Tensor Solution. s31 Moment tensor: Scale 10^{18}Nm; M_{rr}1.13; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-1.38; $M_{r\theta}$-0.41; $M_{\theta\phi}$0.19; $M_{\phi r}$-0.60; Best double couple: $M_0$1.50000×10^{18} NP1:ϕ_s194.00000°, δ60.00000°, λ114.00000°. NP2:ϕ_s332.00000°, δ37.00000°, λ55.00000°. Principal axes: T 1.4300, Plg65.0000°, Azm148.0000°; N 0.0900, Plg20.0000°, Azm1.0000°; P -1.5200, Plg12.0000°, Azm266.0000°;*

MOS **26** *07:07:18.9±1.2, 15.°25S×167.°45E, h156km, mb5.4/47 Error ellipse: s-maj=8.5km s-min=7.0km az=119.8*

GCMT **26** *07:07:18.6±0.1, 15.°30S×167.°32E, h131km, MW6.1/147, Moment Tensor Solution. s143,c324; s147,c524; Duration: 2^s7 Moment tensor: Scale 10^{18}Nm; M_{rr}1.39±.01; $M_{\theta\theta}$0.19±.01; $M_{\phi\phi}$-1.58±.01; $M_{r\theta}$-0.53±.01; $M_{\theta\phi}$0.18±.01; $M_{\phi r}$-0.20±.01; Best double couple: $M_0$1.60900×10^{18} NP1:ϕ_s194.00000°, δ52.00000°, λ118.00000°. NP2:ϕ_s334.00000°, δ46.00000°, λ60.00000°. Principal axes: T 1.6110, Plg69.0000°, Azm167.0000°; N -0.0040, Plg21.0000°, Azm356.0000°; P -1.6070, Plg3.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

BJI **26** *07:07:18.4±0.0, 14.°66S×167.°44E, h134km, mb5.4/85, mB5.7/65*

NEIC **26** *07:07:40.5±0.0, 14.°91S×167.°33E, h119km, Moment Tensor Solution. s33 Moment tensor: Scale 10^{18}Nm; M_{rr}1.46; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-1.60; $M_{r\theta}$-0.49; $M_{\theta\phi}$0.05; $M_{\phi r}$-0.33; Best double couple: $M_0$1.60000×10^{18} NP1:ϕ_s196.00000°, δ54.00000°, λ112.00000°. NP2:ϕ_s341.00000°, δ42.00000°, λ63.00000°. Principal axes: T 1.6500, Plg71.0000°, Azm162.0000°; N -0.0200, Plg18.0000°, Azm2.0000°; P -1.6300, Plg6.0000°, Azm270.0000°;*

ISC 26 07:07:17.3±0.3**, 15.°32S**±0.°03×**167.°62E**±0.°04**, h141**km±2km**, h142km:pP-P, n875,** $\sigma 1^s$**85**/999**, mb5.5**/157**, 69C-35D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	6.14	176	ePn	Pn	07 08 42.9	-3.0
MARNC				eSn	Sn	07 09 50.6	-4.4
DZM	Mont Dzumac	6.81	189	ePn	Pn	07 08 54.3	-0.6
	462nm,0.3s						
DZM				eSn	Sn	07 10 07.5	-3.7
	358nm,0.3s						
DZM				eLQ	LQ	07 10 10.4	
	56μm,27.7s						
DZM				eLR	LR	07 10 24.4	
	comp=Z,27μm,36.1s						
DZM	Mont Dzumac	6.81	189	P	Pn	07 08 54.3	-0.6
	149nm,0.3s,baz=40,slow=16,SNR=298						
DZM				S	Sn	07 10 11.6	+0.4
	91nm,0.3s,baz=306,slow=21,SNR=7.4						
DZM				LR	LR	07 10 14.8	
	comp=Z,8μm,21.6s,baz=10.0,slow=26						
DZM	Mont Dzumac	6.81	189	ePn	Pn	07 08 53.6	-1.3
DZM				eSn	Sn	07 10 10.0	-1.2
I22FR	PORTLAGUERRE I	6.87	186	i		07 48 10.0	
	baz=4.8,slow=321,SNR=2.6						
ONTNC	Ouen Toro	7.04	189	ePn	Pn	07 08 57.0	-0.8
ONTNC				eSn	Sn	07 10 14.9	-1.7
PINNC	Pines Island,	7.26	181	ePn	Pn	07 08 59.2	-1.6
HNR	Honiara	9.51	307	P	Pn	07 09 31.4	+0.4
	140nm,0.3s,baz=269,slow=9.8,SNR=23						
HNR				S	Sn	07 11 17.4	+1.0
	152nm,0.3s,baz=270,slow=20,SNR=4.6						
HNR				LR	LR	07 13 01.8	
	comp=Z,16μm,21.5s,baz=144,slow=36						
HNR	Honiara	9.51	307	ePn	Pn	07 09 31.3	+0.3
HNR				eSn	Sn	07 11 18.6	+2.3
HNR	Honiara	9.51	307	eP	Pn	07 09 31.0	0.0
HNR				eS	Sn	07 11 11.0	-5.3
FUNA	Funafuti	13.18	60	eP	P	07 10 22.1	-2.0
TARA	Tarawa	17.38	18	eP	Pn	07 11 11.6	+0.2
	699nm,1.5s						
LHI	Lord Howe Isla	17.92	204	ePn	Pn	07 11 17.3	-0.4
	169nm,1.3s						
LHI	Lord Howe Isla	17.92	204	P	Pn	07 11 17.8	+0.1
	baz=18,SNR=5.2						
EIDS	Eidsvold	18.43	235	ePn	Pn	07 11 23.4	-0.4
	494nm,1.0s						
EIDS	Eidsvold	18.43	235	P	Pn	07 11 23.8	0.0
	baz=18,SNR=142						
RABL	Rabaul	18.80	304	ePn	Pn	07 11 29.4	+1.1
	177nm,0.7s						
OUZ	Omahuta	20.53	166	eP	P	07 11 45.7	+1.2
	231nm,0.8s						
RMQ	Roma	20.80	235	P	P	07 11 48.8	+1.2
	baz=21,SNR=90						
PMG	Port Moresby	20.82	284	P	P	07 11 49.0	+1.1
	99nm,0.8s,baz=120,slow=7.6,SNR=9.6						
PMG	Port Moresby	20.82	284	eP	P	07 11 47.9	0.0
	340nm,1.0s						
PMG	Port Moresby	20.82	284	d iP	P	07 11 48.6	+0.7
PMG				pmax	pmax		
	comp=Z,1μm,1.7s						
CTA	Charters Tower	20.89	254	P	P	07 11 49.3	+0.7
	comp=Z,106nm,0.8s,baz=78,slow=12,SNR=64						
CTA				ScP	ScP	07 19 16.9	+1.9
	comp=Z,3.8nm,0.5s,baz=180,slow=1.0,SNR=4.6						
CTAO	Charters Tower	20.89	254	eP	P	07 11 49.0	+0.4
	comp=Z,182nm,1.0s						
CTAO				ePcP	PcP	07 15 52.4	+1.2
CTAO	Charters Tower	20.89	254	eP	P	07 11 49.0	+0.4
CTAO				e		07 15 52.4	
CTAO				pmax	pmax		
	comp=Z,183nm,1.0s						
ARMA	Armidale	21.01	222	P	P	07 11 50.9	+1.1
	baz=21,SNR=100						
NIUE	Niue	21.77	103	eP	P	07 12 00.7	+2.8
	comp=Z,258nm,0.8s						
NIUE	Niue	21.77	103	P	P	07 11 57.6	-0.4
	baz=22,SNR=5.0						
MTSU	Mount Surprise	22.49	260	P	P	07 12 05.8	+0.6
	baz=23,SNR=148						
MGCD	Mangrove Creek	23.26	217	P	P	07 12 13.5	+1.2
	baz=23,SNR=32						
RIV	Riverview	23.68	216	P	P	07 12 17.3	+1.2
	baz=24,SNR=6.2						
COEN	Coen	23.69	270	eP	P	07 12 16.7	+0.3
	comp=Z,130nm,1.1s						
COEN				ePcP	PcP	07 15 58.6	+1.7
COEN	Coen	23.69	270	P	P	07 12 16.6	+0.3
	baz=24,SNR=23						
PATS	Pohnpei	23.87	337	eP	P	07 12 19.5	+1.5
	comp=Z,790nm,1.5s						
PATS	Pohnpei	23.87	337	P	P	07 12 20.1	+2.2
	baz=24,SNR=5.3						
KNTN	Kanton	23.87	61	eP	P	07 12 19.3	+1.3
	comp=Z,399nm,1.5s						
MANU	Manus Island	23.94	302	eP	P	07 12 21.3	+2.7
	comp=Z,327nm,1.3s						
MXZ	Matakaoa Point	24.09	159	eP	P	07 12 18.8	-1.0
	comp=Z,183nm,0.8s						
URZ	Urewera	24.34	162	P	P	07 12 22.1	+0.1
	comp=Z,134nm,0.7s,baz=292,slow=2.3,SNR=64						
URZ				S	S	07 16 34.0	+3.0
	comp=Z,9.0nm,0.6s,baz=17,slow=18,SNR=5.6						
URZ				LR	LR	07 20 41.9	
	comp=Z,4μm,19.6s,baz=346,slow=33						
YNG	Young	25.64	219	P	P	07 12 34.9	+1.0
	baz=26,SNR=32						
CMSA	Cobar Meteorol	25.72	227	P	P	07 12 34.8	+0.2
	baz=26,SNR=112						
CNB	Canberra Magne	25.78	216	P	P	07 12 36.2	+1.0
	baz=26,SNR=29						
CAN	Canberra	25.99	217	P	P	07 12 38.3	+1.2
CAN				pmax	pmax		
	comp=Z,65nm,1.1s						
SNZO	South Karori	26.62	168	eP	P	07 12 41.0	-1.5
	comp=Z,125nm,0.6s						
QIS	Mount Isa	27.14	255	P	P	07 12 47.3	-0.2
	baz=27,SNR=26						
MILA	Mila	27.16	214	P	P	07 12 48.6	+1.0
	baz=27,SNR=8.4						
RPZ	Rata Peaks	28.45	175	P	P	07 12 58.9	0.0
	comp=Z,92nm,0.7s,baz=309,slow=1.7,SNR=34						
RPZ				LR	LR	07 23 51.1	
	comp=Z,3μm,18.3s,baz=350,slow=35						
RPZ	Rata Peaks	28.45	175	eP	P	07 12 59.4	+0.5
	comp=Z,100nm,0.7s						
RPZ				ePcP	PcP	07 16 07.8	+0.3
MQZ	McQueen's Vall	28.62	172	eP	P	07 12 59.4	-0.9
	comp=Z,131nm,0.8s						
STKA	Stephens Creek	28.88	231	P	P	07 13 03.5	+0.7
	comp=Z,126nm,0.7s,baz=44,slow=8.2,SNR=147						
STKA				PcP	PcP	07 16 09.2	+0.4
	comp=Z,30nm,0.6s,baz=75,slow=3.0,SNR=7.8						
STKA				ScP	ScP	07 19 38.9	+1.6
	comp=Z,17nm,0.7s,baz=84,slow=3.3,SNR=9.6						
STKA				PKiKP	PKiKP	07 23 41.9	-1.2
	comp=Z,1.3nm,0.7s,baz=225,slow=2.9,SNR=3.0						
STKA	Stephens Creek	28.88	231	eP	P	07 13 03.3	+0.5
	comp=Z,37nm,0.9s						
STKA				ePcP	PcP	07 16 09.4	+0.6
STKA				eScP	ScP	07 19 38.9	+1.6
STKA				eScS	PKiKP	07 23 41.9	-1.2
STKA	Stephens Creek	28.88	231	P	P	07 13 03.6	+0.7
	baz=29,SNR=144						
STKA	Stephens Creek	28.88	231	P	P	07 13 03.5	+0.7
STKA						07 16 09.2	
STKA				pmax	pmax		
	comp=Z,125nm,0.7s						
TOO	Toolangi	29.58	217	P	P	07 13 09.8	+0.8
	baz=30,SNR=31						
ARPS	Mount Arapiles	31.33	222	P	P	07 13 25.4	+1.0
	baz=31,SNR=25						
HTT	Hallett	31.60	230	P	P	07 13 27.4	+0.5
	baz=32,SNR=62						
WRAB	Tennant Creek	32.01	257	eP	P	07 13 28.9	-1.7
	comp=Z,61nm,1.0s						
WRAB	Tennant Creek	32.01	257	d iP	P	07 13 28.9	-1.7
WRAB				pmax	pmax		
	comp=Z,37nm,0.7s						
WRA	Warramunga Arr	32.02	257	P	P	07 13 29.3	-1.3
	comp=Z,28nm,0.5s,baz=80,slow=9.4,SNR=192						
WRA				PcP	PcP	07 16 17.7	+0.4
	comp=Z,18nm,0.7s,baz=83,slow=2.6,SNR=4.6						
WRA				S	S	07 18 32.9	+0.6
	comp=Z,14nm,0.9s,baz=86,slow=16,SNR=7.4						
WRA				ScP	ScP	07 19 49.1	+1.3
	comp=Z,7.3nm,0.8s,baz=79,slow=4.3,SNR=5.1						
WRA				PKiKP	PKiKP	07 23 44.0	-1.5
	comp=Z,4.4nm,1.0s,baz=339,slow=1.1,SNR=6.1						
MOO	Moorlands	32.24	209	P	P	07 13 34.2	+1.9
	baz=32,SNR=4.3						
TAU	Tasmania Unive	32.54	208	eP	P	07 13 35.4	+0.5
	comp=Z,182nm,1.3s						
TAU				ePcP	PcP	07 16 19.8	+1.6
TAU	Tasmania Unive	32.54	208	eP	P	07 13 35.4	+0.5
TAU				e		07 16 19.8	
TAU				pmax	pmax		
	comp=Z,182nm,1.3s						
AS31	Alice Springs	32.78	250	eP	P	07 13 36.3	-1.1
	comp=Z,52nm,0.5s						
ASAR	Alice Springs	32.78	250	P	P	07 13 36.5	-0.9
	comp=Z,102nm,0.5s,baz=78,slow=8.9,SNR=651						
ASAR				PcP	PcP	07 16 19.4	0.0
	comp=Z,18nm,0.7s,baz=87,slow=3.3,SNR=6.9						
ASAR				S	S	07 18 45.2	+1.0
	comp=Z,6.4nm,1.0s,baz=77,slow=18,SNR=4.7						
ASAR				ScP	ScP	07 19 51.7	+1.2
	comp=Z,18nm,0.8s,baz=88,slow=3.4,SNR=14						
ASAR				PKiKP	PKiKP	07 23 44.8	-1.2
	comp=Z,1.0nm,0.7s,baz=100,slow=1.3,SNR=5.4						
ASAR				LR	LR	07 27 13.8	
	comp=Z,9μm,18.2s,baz=86,slow=36						
BBOO	Buckleboo	33.49	233	eP	P	07 13 43.6	+0.3
	comp=Z,356nm,0.9s						
BBOO				ePcP	PcP	07 16 20.8	-0.3
BBOO	Buckleboo	33.49	233	P	P	07 13 43.8	+0.5
	baz=34,SNR=191						
KDU	Kakadu	34.18	270	P	P	07 13 48.8	-0.6
	baz=34,SNR=9.4						
MTN	Manton Dam	35.45	269	eP	P	07 14 00.9	+0.6
	comp=Z,46nm,0.9s						
MTN				ePcP	PcP	07 16 28.7	+1.6
MTN	Manton Dam	35.45	269	P	P	07 14 00.6	+0.2
	baz=36,SNR=8.4						
GUMO	Guam	36.49	321	eP	P	07 14 09.0	-0.2
	comp=Z,168nm,1.3s						
GUMO	Guam	36.49	321	eP	P	07 14 09.0	-0.2
GUMO				pmax	pmax		
	comp=Z,167nm,1.3s						
FAKI	Fak Fak	36.96	286	eP	P	07 14 13.2	0.0
	comp=Z,330nm,1.6s						
FAKI	Fak Fak	36.96	286	P	P	07 14 13.7	+0.5
	comp=Z,106nm,1.1s,comp=Z,2μm						
KNRA	Kununurra	37.41	264	P	P	07 14 16.1	-0.9
	baz=38,SNR=34						
WRKA	Warakurna	38.04	249	P	P	07 14 21.5	-0.8
	baz=38,SNR=118						
ANA2	Anatahan	38.18	325	eP	P	07 14 23.0	-0.4
	comp=Z,126nm,0.6s						
SIJI	Sorong	38.65	288	P	P	07 14 27.3	-0.1
	comp=Z,66nm,0.6s,baz=82,slow=7.6,SNR=18						
SWI	Sorong	38.66	288	P	P	07 14 27.9	+0.4
	comp=Z,110nm,0.6s,comp=Z,1μm						
FORT	Forrest	39.29	240	eP	P	07 14 32.6	0.0
	comp=Z,202nm,0.7s						
FORT	Forrest	39.29	240	P	P	07 14 32.9	+0.3
	baz=39,SNR=88						
PALU	Palau	39.82	302	P	P	07 14 38.9	+1.8
	baz=40,SNR=4.5						
PAE	Paea	41.04	99	eP	P	07 14 48.5	+1.3
	comp=Z,24nm,0.8s						
PPT2	Papeete2	41.05	99	eP	P	07 14 48.9	+1.6
	comp=Z,302nm,1.1s						
PPT2				eS	S	07 20 50.7	+1.0
	comp=Z,2μm,25.5s						
PPT2				eLQ	LQ	07 24 33.6	
	comp=Z,7μm,24.2s						
PPT2				eLR	LR	07 26 20.8	
	comp=Z,16μm,31.5s,baz=264						
PPT	Papeete	41.05	99	P	P	07 14 49.0	+1.8
	comp=Z,176nm,0.7s,baz=92,slow=4.6,SNR=13						
PPTF	Pamatai, Papee	41.06	99	eP	P	07 14 48.4	+1.0
	comp=Z,281nm,0.8s						
TBI	Tubuai	41.16	108	eS	S	07 20 51.6	+0.6
	comp=Z,3μm,27.5s						
TBI				eLQ	LQ	07 24 36.6	
	comp=Z,8μm,32.2s						
TBI				eLR	LR	07 26 18.9	
	comp=Z,11μm,36.8s,baz=272						
TIAR	Tiarei	41.27	99	eP	P	07 14 50.0	+0.9
	comp=Z,58nm,0.8s						
TVO	Taravao	41.35	100	eP	P	07 14 51.3	+1.5
	comp=Z,42nm,0.8s						
NLAI	Namlea	41.66	283	P	P	07 14 53.0	+0.7
MEH	Mehetia	42.47	100	eP	P	07 15 00.3	+1.5
	comp=Z,121nm,1.1s						
SOEI	Soe	42.62	272	eP	P	07 15 00.5	+0.3
	comp=Z,284nm,1.3s						
SOEI	Soe	42.62	272	P	P	07 15 00.7	+0.5
PMOR	Pomariorio Ree	42.88	96	eP	P	07 15 03.3	+1.2
	comp=Z,353nm,1.0s						
SANI	Sanana	43.11	284	P	P	07 15 04.7	+0.7
VAH	Vaihoa	43.11	96	eP	P	07 15 05.2	+1.2
	comp=Z,167nm,0.9s						
BATI	Baumata	43.12	271	P	P	07 15 05.4	+1.3
	comp=Z,164nm,0.7s,baz=44,slow=0.4,SNR=14						
BATI	Baumata	43.12	271	P	P	07 15 04.7	+0.6
KMBL	Kambalda	44.60	241	P	P	07 15 15.7	0.0
	baz=45,SNR=30						
MMRI	Maumere	44.82	273	eP	P	07 15 17.3	-0.3
	comp=Z,143nm,1.0s						
MMRI	Maumere	44.82	273	P	P	07 15 18.0	+0.3
	comp=Z,156nm,0.9s						
EDFI	Ende, Flores	45.32	273	P	P	07 15 22.0	+0.2
	comp=Z,70nm,0.7s,comp=Z,2μm						
PSA00	Pilbara Seismi	45.61	255	eP	P	07 15 23.8	0.0
	comp=Z,51nm,0.8s						
LUWI	Luwuk	46.47	283	P	P	07 15 31.4	+0.8
MEEK	Meekatharra	46.87	248	P	P	07 15 33.7	0.0
	baz=47,SNR=39						
DAV	Davao City (W)	47.23	295	⇑eP	P	07 15 35.2	-1.3
WBSI	Waikabubak, Su	47.35	271	P	P	07 15 38.2	+0.7
BKSI	Bulukumba	47.68	277	P	P	07 15 40.7	+0.7
BNSI	Bone	47.95	278	P	P	07 15 42.8	+0.8
KAPI	Kappang	48.11	277	eP	P	07 15 44.2	+0.8
	comp=Z,503nm,1.5s						
KAPI	Kappang	48.11	277	eP	P	07 15 44.2	+0.8
KAPI				pmax	pmax		
	comp=Z,503nm,1.5s						
SPSI	Sidrap Palu	48.39	278	P	P	07 15 45.4	-0.1
	comp=Z,28nm,0.9s,comp=Z,1μm						
TTSI	Tana Toraja	48.62	280	P	P	07 15 48.0	+0.8
NWAO	Narrogin (SRO)	48.74	240	eP	P	07 15 48.1	+0.2
	comp=Z,116nm,0.9s						
NWAO	Narrogin (SRO)	48.74	240	P	P	07 15 47.9	-0.1
	baz=49,SNR=12						
NWAO	Narrogin (SRO)	48.74	240	eP	P	07 15 48.1	+0.2
NWAO				pmax	pmax		
	comp=Z,116nm,0.9s						
BLDU	Ballidu	48.89	243	P	P	07 15 49.0	-0.1
	baz=49,SNR=10						
PLAI	Plampang	49.08	272	P	P	07 15 51.5	+0.8
RKGY	Rocky Gully	49.22	237	P	P	07 15 52.0	+0.5
	baz=49,SNR=5.0						
MORW	Morawa	49.32	245	P	P	07 15 52.6	+0.2
	baz=49,SNR=16						
MUN	Mundaring	49.47	241	P	P	07 15 53.6	+0.1
	baz=50,SNR=8.6						
HMH	Humu‘ula Sheep	50.21	47	eP	P	07 16 01.3	+1.8
	comp=Z,240nm,0.9s						
POHA	Pohakuloa	50.28	47	eP	P	07 16 00.8	+0.8
	comp=Z,100nm,0.8s						
MHA	Mahukona	50.30	47	eP	P	07 16 00.2	+0.4
MHA	Mahukona	50.30	47	eP	P	07 16 00.2	+0.4
GIRL	Giralia	50.79	253	P	P	07 16 05.1	+1.6
	baz=51,SNR=3.5						
TAOE	Nuku Hiva Isla	51.38	89	eP	P	07 16 09.8	+1.6
	comp=Z,560nm,0.9s						
TAOE				eS	S	07 23 17.4	+0.1
	comp=Z,3μm,26.6s						
TAOE				eLR	LR	07 31 04.5	
	comp=Z,9μm,36.2s						
TAOE	Nuku Hiva Isla	51.38	89	eP	P	07 16 09.4	+1.3
	comp=Z,223nm,0.8s						
KBKI	Kotabaru	52.02	278	P	P	07 16 13.7	+0.9
PWJI	Pagerwojo	55.02	271	P	P	07 16 35.2	+0.5
KKM	Kota Kinabalu	55.17	289	eP	P	07 16 36.1	+0.2
	comp=Z,611nm,1.7s						
NGJI	Ngawi	55.50	272	P	P	07 16 39.0	+0.9
WOJI	Wonogiri, Jawa	55.91	271	P	P	07 16 41.9	+0.8
SMRI	Semarang	56.56	272	P	P	07 16 46.6	+0.9
KPJI	Karang Pucung	57.95	271	P	P	07 16 56.3	+0.9
	comp=Z,187nm,0.8s						
MJAR	Matsushiro Arr	58.58	332	P	P	07 16 58.7	-0.7
	comp=Z,12nm,0.5s,baz=175,slow=8.3,SNR=33						
MJAR				pP	pP	07 17 30.5	-1.6
	comp=Z,12nm,0.7s,baz=172,slow=8.0,SNR=3.7						
MJAR				LR	LR	07 39 23.4	
	comp=Z,905nm,22.0s,baz=180,slow=33						
MAJO	Matsushiro	58.59	332	eP	P	07 16 58.5	-0.9
	comp=Z,182nm,1.8s						
MAJO	Matsushiro	58.59	332	eP	P	07 16 58.5	-0.9
MAJO				pmax	pmax		
	comp=Z,182nm,1.8s						
MAT	Matsushiro	58.59	332	P	P	07 16 58.9	-0.5
MAT				S	S	07 24 47.0	-5.5
MJB9	Matsu-Tunnel	58.59	332	eP	P	07 16 58.6	-0.8
	comp=Z,201nm,1.8s						
CISI	Cisompet, Garu	58.97	270	P	P	07 17 02.4	-0.2
	comp=Z,277nm,0.7s,comp=Z,3μm						
JNU	Nakatsue	59.60	324	eP	P	07 17 06.4	-0.1
	comp=Z,123nm,1.2s						
TPUB	Ta-pu	59.88	309	eP	P	07 17 07.8	-0.7
	comp=Z,65nm,1.0s						
SSLB	Suanglung	59.92	310	eP	P	07 17 08.3	-0.5
	comp=Z,68nm,1.2s						
YHNB	Yeheng	60.12	311	eP	P	07 17 10.8	+0.5
	comp=Z,178nm,1.0s						
CBJI	Citeko	60.17	271	P	P	07 17 10.3	-0.4
	comp=Z,174nm,0.8s						
TPI	Tanjungpandan	60.34	276	P	P	07 17 12.7	+0.8
	comp=Z,74nm,0.8s,comp=Z,1μm						
XMIS	Christmas Isla	60.43	267	eP	P	07 17 13.0	+0.4
	comp=Z,410nm,1.4s						
CGJI	Cibinong	61.24	271	P	P	07 17 17.5	-0.5
	comp=Z,478nm,0.6s,comp=Z,5μm						
ERM	Erimo	61.35	339	⇑eP	P	07 17 20.4	+2.3
ERM				pmax	pmax		
	comp=Z,33nm,1.0s						
YUK	Yuzh-Kuril'sk	62.32	342	P	P	07 17 20.3	-4.3
YUK				S	S	07 25 37.6	-2.1
QZH	Quanzhou	62.34	309	⇑iP	P	07 17 25.0	-0.1
QZH				pP	pP	07 17 55.0	-3.6
QZH				S	S	07 25 38.0	-2.6
QZH				pmax	pmax		
	comp=Z,30nm,0.5s						
QZH				pmax	pmax		
	comp=Z,670nm,3.9s						
QZH				LR	LR		
	comp=Z,2μm,26.1s						
QZH				LR	LR		
	comp=Z,1μm,24.6s						
QZH				LR	LR		
	comp=Z,2μm,33.6s						
SBA	Scott Base	62.55	180	eP	P	07 17 26.8	+1.1
	comp=Z,98nm,0.8s						
SBA	Scott Base	62.55	180	eP	P	07 17 26.8	+1.1
SBA				pmax	pmax		
	comp=Z,98nm,0.8s						
KASI	Kota Agung	62.66	272	P	P	07 17 27.4	-0.1
	comp=Z,206nm,0.4s						
KUR	Kuril'sk	62.88	344	c iP	P	07 17 29.2	+1.0
KUR				i		07 18 24.9	
KUR				i S	S	07 25 46.2	-0.4
KUR				pmax	pmax		
	comp=Z,207nm,1.8s						
KUR				pmax	pmax		
	comp=Z,1μm,3.3s						
KUR				pmax	pmax		
	comp=N,638nm,3.3s						
KUR				pmax	pmax		
	comp=E,738nm,3.3s						
CASY	Casey	63.11	202	eP	P	07 17 29.4	-0.1
	comp=E,58nm,1.1s						
LWLI	Liwa	63.20	272	P	P	07 17 31.2	0.0
	comp=E,53nm,0.6s						
MDSI	Maura Dua	63.22	273	P	P	07 17 29.7	-1.5
TJN	Taejon	63.95	325	c iP	P	07 17 35.8	+0.4
KSRS	Korea Array	64.42	326	P	P	07 17 38.9	+0.4
	comp=E,6.5nm,0.7s,baz=142,slow=7.2,SNR=30						
KSRS				LR	LR	07 46 12.4	
	comp=E,717nm,18.2s,baz=128,slow=36						
DLV	T Lat	64.50	291	eP	P	07 17 41.2	+1.4
	comp=E,203nm,1.7s						
MYKOM	Kota Tinggi	65.28	279	eP	P	07 17 44.9	+0.2
	comp=E,24nm,0.8s						
GZH	Guangzhou	65.39	305	P	P	07 17 46.8	+1.7
GZH				pP	pP	07 18 18.8	-0.3
GZH				S	S	07 26 20.8	+2.4
GZH				sS	sS	07 27 17.0	+0.5
GZH				pmax	pmax		
	comp=E,490nm,2.9s						
YSS	Yuzh-Sakhalins	65.89	342	eP	P	07 17 49.0	+1.2
	comp=E,197nm,1.3s						
YSS	Yuzh-Sakhalins	65.89	342	αeP	P	07 17 45.2	-2.6
YSS				e*PP	pP	07 18 19.9	-1.2
YSS				e*SP	sP	07 18 35.4	-0.7
YSS				eS	S	07 26 19.1	-4.5
YSS				pmax	pmax		
	comp=Z,1μm,3.9s						
YSS				pmax	pmax		
	comp=N,700nm,3.6s						
YSS				smax	smax		
	comp=N,2μm,9.2s						
YSS				smax	smax		
	comp=E,400nm,7.4s						
YSS				MLR	MLR		
	comp=Z,800nm,13.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
QIZ	Qiongzhong	66.32	299	P	P	07 17 53.0	+1.8
QIZ				pP	pP	07 18 24.0	-1.2
QIZ				sP	sP	07 18 39.5	-1.0
QIZ				S	S	07 26 33.8	+3.9
QIZ				sS	sS	07 27 26.8	-0.8
QIZ				pmax	pmax		
	comp=E,34nm,1.7s						
QIZ				LR	LR		
	comp=E,2μm,20.6s						
QIZ				LR	LR		
	comp=E,1μm,15.7s						
QIZ				LR	LR		
	comp=E,2μm,27.9s						
NJ2	Nanjing	66.33	316	⇓iP	P	07 17 52.5	+1.5
NJ2				PcP	PcP	07 18 21.3	+1.5
NJ2				pP	pP	07 18 23.5	-1.4
NJ2				sP	sP	07 18 39.5	-0.6
NJ2				PP	PP	07 20 19.8	+0.8
NJ2				S	S	07 26 30.0	+0.5

NJ2				ScS	SKSac	07 27 34.0	0.0
NJ2				pmax	pmax		
	comp=E,46nm,0.7s						
NJ2				pmax	pmax		
	comp=E,710nm,4.5s						
NJ2				LR	LR		
	comp=E,1µm,14.3s						
NJ2				LR	LR		
	comp=E,2µm,16.1s						
NJ2				LR	LR		
	comp=E,3µm,23.7s						
SKR	**Severo-Kuril's**	66.49	352	*e*P	P	07 17 49.9	-1.6
SKR				*e*		07 18 23.7	
SKR				*e*PPP	PPP	07 18 46.9	
SKR				*e*S	S	07 26 33.4	+2.8
SKR				pmax	pmax		
	comp=Z,1µm,4.5s						
SKR				pmax	pmax		
	comp=Z,300nm,6.7s						
MSHR	**Mys Shultsa**	66.66	331	⇑*e*P	P	07 17 55.2	+2.4
VLA	**Vladivostok**	66.75	332	*ce*P	P	07 17 54.8	+1.4
VLA				pmax	pmax		
	comp=Z,77nm,1.8s						
BKNI	**Bangkinang**	67.54	277	*e*P	P	07 17 59.8	+0.8
	comp=Z,146nm,1.0s						
BKNI	**Bangkinang**	67.54	277	P	P	07 18 00.2	+1.2
USRK	**Ussuriysk Ar.**	67.56	333	P	P	07 17 59.8	+1.3
	comp=Z,23nm,0.6s,baz=131,slow=6.3,SNR=68						
USRK				LR	LR	07 47 47.4	
	comp=Z,458nm,19.1s,baz=134,slow=36						
PPSI	**Pulau Pagai**	67.69	273	P	P	07 18 00.5	+0.6
PDSI	**Padang**	67.75	275	P	P	07 18 00.3	-0.1
	comp=Z,27nm,0.6s,comp=Z,4µm						
PET	**Petropavlovsk**	68.50	354	*e*P	P	07 18 05.2	+1.0
	comp=Z,82nm,1.4s						
PET	**Petropavlovsk**	68.50	354	*ce*P	P	07 18 04.0	-0.1
PET				*e**PP	pP	07 18 37.1	-0.3
PET				*e**SP	sP	07 18 58.5	+6.3
PET				*i* S	S	07 26 53.8	-0.8
PET				pmax	pmax		
	comp=Z,900nm,4.2s						
PET				pmax	pmax		
	comp=Z,30nm,0.8s						
PET				pmax	pmax		
	comp=Z,700nm,15.2s						
WHN	**Wuhan**	68.59	312	⇑P	P	07 18 05.5	+0.3
WHN				S	S	07 26 54.0	-2.5
WHN				pmax	pmax		
	comp=Z,860nm,2.0s						
WHN				pmax	pmax		
	comp=Z,1µm,3.4s						
WHN				LR	LR		
	comp=Z,2µm,13.0s						
WHN				LR	LR		
	comp=Z,2µm,13.1s						
WHN				LR	LR		
	comp=Z,6µm,32.2s						
PEA0B	**Petropavlovsk-**	68.68	354	*e*P	P	07 18 06.9	+1.6
	comp=Z,121nm,1.3s						
PETK	**Petropavlovsk-**	68.68	354	P	P	07 18 06.4	+1.1
	comp=Z,20nm,0.8s,baz=141,slow=7.5,SNR=28						
PETK	**Petropavlovsk-**	68.68	354	P	P	07 18 06.4	+1.1
PETK				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ	**Mudanjiang**	68.96	332	P	P	07 18 08.3	+1.1
MDJ				PP	PP	07 20 37.8	-3.8
MDJ				PcS		07 22 38.5	
MDJ				S	S	07 27 04.5	+4.1
MDJ				SS	SS	07 31 27.3	-1.9
MDJ				pmax	pmax		
	comp=Z,130nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,1µm,4.0s						
MDJ				LR	LR		
	comp=Z,1µm,28.4s						
MDJ				LR	LR		
	comp=Z,2µm,25.4s						
DL2	**Dalian**	68.97	323	⇑*i*P	P	07 18 08.0	+0.6
DL2				pP	pP	07 18 40.0	-1.3
DL2				sP	sP	07 19 00.5	+4.2
DL2				S	S	07 27 00.0	-0.7
DL2				sS	sS	07 27 56.8	-0.5
DL2				SS	SS	07 31 20.0	-10
DL2				pmax	pmax		
	comp=Z,78nm,1.2s						
DL2				pmax	pmax		
	comp=Z,700nm,6.8s						
TYV	**Tymovskoe**	69.44	343	*e*P	P	07 18 11.2	+1.2
TYV				*e*S	S	07 27 10.1	+4.4
TYV				pmax	pmax		
	comp=Z,1µm,4.2s						
TYV				pmax	pmax		
	comp=Z,56nm,1.6s						
SNY	**Shenyang**	69.88	326	⇑P	P	07 18 13.5	+0.6
SNY				PP	PP	07 20 50.0	+0.4
SNY				S	S	07 27 13.3	+2.0
SNY				SS	SS	07 31 37.3	-6.2
SNY				pmax	pmax		
	comp=Z,27nm,0.9s						
SNY				pmax	pmax		
	comp=Z,1µm,11.6s						
SNY				LR	LR		
	comp=Z,1µm,23.3s						
SNY				LR	LR		
	comp=Z,2µm,23.5s						
SNY				LR	LR		
	comp=Z,2µm,22.7s						
TIA	**Tai'an**	70.00	318	P	P	07 18 13.8	0.0
TIA				pP	pP	07 18 44.5	-3.4
TIA				sP	sP	07 19 06.0	+3.0
TIA				PP	PP	07 20 54.0	+3.2
TIA				S	S	07 27 12.0	-1.0
TIA				sS	sS	07 28 09.0	-0.2
TIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TIA				pmax	pmax		
	comp=Z,390nm,3.0s						
TIA				LR	LR		
	comp=Z,2µm,20.7s						
TIA				LR	LR		
	comp=Z,1µm,19.2s						
TIA				LR	LR		
	comp=Z,280nm,12.1s						
PANO	**Nakornpanom**	70.02	295	P	P	07 18 15.4	+1.2
	comp=Z,1.1nm,1.6s,comp=Z,26nm						
SKLT	**Songkhla**	70.03	284	P	P	07 18 15.9	+1.5
	comp=Z,40nm,1.7s,comp=Z,773nm						
CN2	**Changchun**	70.33	329	*e*P	P	07 18 16.0	+0.4
CN2				*e*pP	pP	07 18 49.5	0.0
CN2				*e*S	S	07 27 15.3	-1.1
CN2				pmax	pmax		
	comp=Z,80nm,1.2s						
CN2				pmax	pmax		
	comp=Z,2µm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
CN2				LR	LR		
	comp=Z,780nm,17.0s						
CN2				LR	LR		
	comp=Z,970nm,19.0s						
NIKH	**Nikolski High**	70.98	15	*e*P	P	07 18 19.3	0.0
	comp=Z,67nm,0.8s						
TRTT	**Trang**	71.12	284	P	P	07 18 22.5	+1.5
	comp=Z,70nm,1.4s,comp=Z,1µm						
GSI	**Gunungsitoli**	71.14	277	*e*P	P	07 18 21.8	+0.6
	comp=Z,99nm,1.0s						
GSI	**Gunungsitoli**	71.14	277	P	P	07 18 22.0	+0.8
	comp=Z,123nm,1.5s						
GRNR	**Gornyy**	71.26	340	*e*P	P	07 18 23.2	+2.1
GRNR				pmax	pmax		
	comp=N,48nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,110nm,1.0s						
KCSI	**Kotacane, Aceh**	71.59	279	P	P	07 18 23.4	-0.5
	comp=Z,44nm,0.9s,comp=Z,1µm						
NONG	**Nongkai**	71.66	295	P	P	07 18 25.2	+1.0
	comp=Z,1.5nm,1.5s						
KLR	**Kul'dur**	71.68	336	P	P	07 18 24.8	+1.2
	comp=Z,108nm,1.3s,baz=141,slow=5.7,SNR=65						
KLR	**Kul'dur**	71.68	336	*c i*P	P	07 18 24.5	+0.9
KLR				pmax	pmax		
	comp=Z,114nm,1.4s						
CHAI	**Chaiyaphum**	71.85	293	P	P	07 18 26.3	+1.0
	comp=Z,38µm,0.9s,comp=Z,495µm						
NKL	**Nikolayevsk**	72.03	343	*i* P	P	07 18 27.0	+1.4
NKL				*e*		07 19 03.0	
NKL				pmax	pmax		
	comp=Z,131nm,1.5s						
TPTI		72.08	279	P	P	07 18 28.1	+1.3
GYA	**Guiyang**	72.33	305	⇑*i*P	P	07 18 28.8	+0.6
GYA				pP	pP	07 19 01.8	-0.9
GYA				PP	PP	07 21 12.8	+1.8
GYA				S	S	07 27 42.5	+2.1
GYA				SKS	SKSac	07 28 09.5	-10
GYA				pmax	pmax		
	comp=Z,30nm,0.6s						
GYA				pmax	pmax		
	comp=Z,320nm,5.9s						
GYA				LR	LR		
	comp=Z,740nm,17.8s						
GYA				LR	LR		
	comp=Z,1µm,18.6s						
GYA				LR	LR		
	comp=Z,1µm,15.4s						
UNV	**Unalaska Valle**	72.37	16	*e*P	P	07 18 26.8	-0.8
	comp=Z,20nm,0.9s						
PHET	**Kaeng Krachan**	72.89	289	P	P	07 18 33.8	+2.3
	comp=Z,57µm,0.8s						
BJI	**Beijing**	72.94	321	P	P	07 18 32.0	+0.7
BJI				pP	pP	07 19 06.8	+1.1
BJI				S	S	07 27 46.0	-0.5
BJI				pmax	pmax		
	comp=Z,30nm,1.5s						
MLSI	**Meulaboh, Aceh**	73.12	279	P	P	07 18 33.3	+0.4
	comp=Z,194nm,1.1s						
UTTA	**Uttaradit**	73.81	294	P	P	07 18 38.3	+1.4
	comp=Z,56µm,1.6s,comp=Z,562µm						
SRDT	**SRDT**	73.85	290	P	P	07 18 39.6	+2.4
	comp=Z,30nm,1.8s,comp=Z,2µm						
TIY	**Taiyuan**	73.92	317	*e*P	P	07 18 39.3	+2.1
TIY				S	S	07 27 57.3	-0.6
TIY				pmax	pmax		
	comp=Z,130nm,1.2s						
UTHA	**Uthaitani**	73.99	291	P	P	07 18 39.9	+1.9
	comp=Z,57µm,1.4s,comp=Z,652µm						
XAN	**Xi'an**	74.34	313	P	P	07 18 40.3	+0.6
XAN				PcP	PcP	07 18 53.8	+0.1
XAN				pP	pP	07 19 11.5	-2.8
XAN				PP	PP	07 21 29.8	+1.9
XAN				S	S	07 28 03.0	+0.4
XAN				SKS	SKSac	07 28 29.0	-5.6
XAN				ScS	SKKSac	07 28 34.5	-0.4
XAN				SS	SS	07 32 47.5	-4.6
XAN				pmax	pmax		
	comp=Z,59nm,1.1s						
XAN				pmax	pmax		
	comp=Z,910nm,4.1s						
XAN				LR	LR		
	comp=Z,1µm,27.3s						
XAN				LR	LR		
	comp=Z,950nm,24.9s						
XAN				LR	LR		
	comp=Z,2µm,32.4s						
SPIA	**Saint Paul Isl**	74.54	12	*e*P	P	07 18 40.2	0.0
	comp=Z,64nm,0.9s						
QSPA	**South Pole Qui**	74.71	180	P	P	07 18 41.6	+0.2
	comp=Z,130nm,0.8s,baz=355,slow=0.9,SNR=609						
QSPA	**South Pole Qui**	74.71	180	*e*P	P	07 18 41.6	+0.2
	comp=Z,349nm,1.4s						
UMPA	**Umpang Tak**	74.75	292	P	P	07 18 45.0	+2.6
	comp=Z,53µm,1.0s						
KMI	**Kunming**	74.90	302	P	P	07 18 45.0	+1.6
KMI				pP	pP	07 19 18.3	+0.2
KMI				sP	sP	07 19 33.5	+0.3
KMI				PP	PP	07 21 36.8	+3.7
KMI				S	S	07 28 12.5	+2.9
KMI				sS	sS	07 29 09.3	+1.7
KMI				SS	SS	07 33 01.5	+0.2
KMI				pmax	pmax		
	comp=Z,96nm,1.2s						
KMI				pmax	pmax		
	comp=Z,640nm,3.1s						
KMI				LR	LR		
	comp=Z,460nm,15.8s						
KMI				LR	LR		
	comp=Z,750nm,19.8s						
KMI				LR	LR		
	comp=Z,1µm,22.5s						
LAMP	**Lampang**	74.92	294	P	P	07 18 45.0	+1.7
	comp=Z,153µm,0.7s						
PAYA	**Payao**	75.02	295	P	P	07 18 45.0	+1.1
	comp=Z,97µm,0.7s						
CM31	**Chiang Mai Arr**	75.50	294	P	P	07 18 48.3	+1.7
	SNR=9.1						
CMAR	**Chiang Mai Arr**	75.50	294	P	P	07 18 47.5	+0.9
	comp=Z,19nm,0.7s,baz=132,slow=4.9,SNR=74						
CMAR				pP	pP	07 19 21.4	-0.1
	comp=Z,40nm,1.0s,baz=128,slow=4.4,SNR=4.4						
CMAR				LR	LR	07 52 53.7	
	comp=Z,431nm,18.7s,baz=105,slow=36						
CMAR	**Chiang Mai Arr**	75.50	294	P	P	07 18 47.5	+0.9
CMAR				*PP	pP	07 19 21.4	-0.1
CMAR				pmax	pmax		
	comp=Z,21nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,431nm,18.7s						
CMMT	**Chiang Mai**	75.63	294	P	P	07 18 48.5	+1.1
	comp=Z,32nm,1.4s,comp=Z,707nm						
CHTO	**Chiang Mai**	75.63	294	*e*P	P	07 18 47.9	+0.6
	comp=Z,221nm,1.8s						
CHTO	**Chiang Mai**	75.63	294	*e*P	P	07 18 47.9	+0.6
CHTO				pmax	pmax		
	comp=Z,221nm,1.8s						
CHTO	**Chiang Mai**	75.63	294	P	P	07 18 47.4	+0.1
	SNR=12						
MA2	**Magadan**	75.88	351	*e*P	P	07 18 48.9	+1.0
	comp=Z,31nm,0.9s						
MA2	**Magadan**	75.88	351	*c i*P	P	07 18 47.7	-0.2
MA2				pmax	pmax		
	comp=Z,115nm,2.1s						
HHC	**Hu-ho-hao-te**	76.25	320	P	P	07 18 51.8	+1.2
HHC				pP	pP	07 19 24.5	-0.4
HHC				S	S	07 28 23.0	-0.6
HHC				pmax	pmax		
	comp=Z,71nm,0.8s						
HHC				pmax	pmax		
	comp=Z,440nm,5.8s						
CD2	**Chengdu**	76.64	308	⇑P	P	07 18 53.8	+0.9
CD2				pP	pP	07 19 26.8	-0.8
CD2				sP	sP	07 19 43.3	+0.8
CD2				S	S	07 28 28.5	+0.4
CD2				sS	sS	07 29 25.5	-1.2
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
CD2				pmax	pmax		
	comp=Z,840nm,4.3s						
CD2				LR	LR		
	comp=Z,1µm,20.1s						
CD2				LR	LR		
	comp=Z,1µm,21.6s						
CD2				LR	LR		
	comp=Z,2µm,17.6s						
ZEA	**Zeya**	76.97	337	*ce*P	P	07 18 55.2	+1.1
ZEA				*e*		07 19 53.0	
ZEA				*e*S	S	07 28 34.5	+3.9
ZEA				*e*SS	SS	07 33 27.0	-4.0
ZEA				pmax	pmax		
	comp=N,100nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,180nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,1µm,4.0s						
ZEA				pmax	pmax		
	comp=N,600nm,5.0s						
ZEA				smax	smax		
	comp=N,2µm,12.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,17.0s						
BTO	**Baotou**	77.09	319	*e*P	P	07 18 56.5	+1.2
BTO				*e*pP	pP	07 19 28.3	-1.7
BTO				S	S	07 28 19.8	-13
SEY	**Seymchan**	78.91	353	*c i*P	P	07 19 05.0	+0.4
LZH	**Lanzhou**	78.97	312	*e*P	P	07 19 07.0	+1.2
LZH				pP	pP	07 19 40.8	0.0
LZH				sP	sP	07 19 53.5	-2.2
LZH				*e*S	S	07 28 56.8	+3.6
LZH				SS	SS	07 34 01.3	-0.8
LZH				pmax	pmax		
	comp=Z,110nm,1.1s						
LZH				pmax	pmax		
	comp=Z,420nm,4.1s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
LZH				LR	LR		
	comp=Z,2µm,19.0s						
OHAK	**Old Harbor**	79.22	20	*e*P	P	07 19 06.5	+0.1
	comp=Z,55nm,1.2s						
KDAK	**Kodiak Island**	79.90	20	*e*P	P	07 19 11.8	+1.7
	comp=Z,27nm,1.0s						
KDAK	**Kodiak Island**	79.90	20	*e*P	P	07 19 11.8	+1.7
KDAK				pmax	pmax		
	comp=Z,27nm,1.0s						
MAW	**Mawson**	81.47	202	P	P	07 19 18.8	+0.4
	comp=Z,48nm,0.8s,baz=128,slow=6.6,SNR=64						
MAW				LR	LR	07 51 16.7	
	comp=Z,323nm,19.0s,baz=90,slow=32						
MAW	**Mawson**	81.47	202	*e*P	P	07 19 19.1	+0.7
	comp=Z,11nm,0.8s						
MAW	**Mawson**	81.47	202	P	P	07 19 19.0	+0.6
	baz=81,SNR=64						
CIT	**Chita**	81.75	330	*e*P	P	07 19 21.3	+1.1
CIT				pmax	pmax		
	comp=Z,223nm,1.8s						
YAK	**Yakutsk**	82.69	343	*e*P	P	07 19 24.8	0.0
	comp=Z,167nm,0.8s						
YAK	**Yakutsk**	82.69	343	*e*P	P	07 19 25.1	+0.4
YAK				*e**PP	pP	07 20 00.7	+1.4
YAK				*e*		07 22 33.7	
YAK				*e*S	S	07 29 31.1	+0.8
YAK				*e*SS	SS	07 34 59.0	+2.9
YAK				*e*SSS	SSS	07 38 21.4	
YAK				pmax	pmax		
	comp=Z,103nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,26nm,1.2s						
YAK				pmax	pmax		
	comp=Z,13nm,0.4s						
YAK				smax	smax		
	comp=N,106nm,1.9s						
YAK				smax	smax		
	comp=E,128nm,1.9s						
BILL	**Bilibino**	83.13	359	*c i*P	P	07 19 26.7	-0.2
BILL				pmax	pmax		
	comp=Z,43nm,1.3s						
SONM	**Songino Array**	83.17	324	P	P	07 19 28.3	+0.6
	comp=Z,27nm,0.6s,baz=152,slow=7.4,SNR=118						
GTA	**Gaotai**	83.32	314	⇑P	P	07 19 29.8	+1.1
GTA				pP	pP	07 20 04.8	+1.1
GTA				sP	sP	07 20 19.0	+0.6
GTA				S	S	07 29 38.0	0.0
GTA				sS	sS	07 30 31.8	-6.0
GTA				pmax	pmax		
	comp=Z,89nm,1.8s						
GTA				pmax	pmax		
	comp=Z,840nm,7.0s						
GTA				LR	LR		
	comp=Z,550nm,19.7s						
GTA				LR	LR		
	comp=Z,910nm,20.0s						
GTA				LR	LR		
	comp=Z,1µm,20.6s						
KCPM	**Cahto Peak**	84.13	46	*e*P	P	07 19 33.6	+0.8
	comp=Z,42nm,1.0s						
SHL	**Shillong**	84.14	298	⇑*i*P	P	07 19 35.0	+1.7
	comp=Z,22nm,0.7s						
SHL				*i* S	S	07 29 48.0	+1.1
SAO	**San Andreas Ge**	84.45	50	*e*P	P	07 19 35.5	+1.1
	comp=Z,15nm,1.0s						
SAO	**San Andreas Ge**	84.45	50	*e*P	P	07 19 35.5	+1.1
SAO				pmax	pmax		
	comp=Z,15nm,1.0s						
KHMM	**Horse Mountain**	84.53	45	*e*P	P	07 19 36.7	+1.8
	comp=Z,43nm,1.1s						
SCZ2	**Santa Cruz Isl**	84.74	53	P	P	07 19 36.8	+0.9
	baz=248						
SBC	**Santa Barbara**	84.85	52	P	P	07 19 37.8	+1.5
	baz=248						
O02D	**Mt. Diablo Mer**	84.89	46	P	P	07 19 37.7	+1.1
	baz=245,SNR=17						
PKM	**Mcpherson Peak**	84.94	52	P	P	07 19 37.8	+0.6
	baz=247						
SMMC	**Simmler**	84.97	51	P	P	07 19 37.8	+0.7
	baz=247						
BOD	**Bodaibo**	85.15	334	*e*P	P	07 19 37.4	+0.1
BOD				pmax	pmax		
	comp=Z,163nm,1.7s						
L02E	**Cave Junction**	85.17	44	P	P	07 19 38.9	+1.0
	baz=244						
SCI2	**San Clemente I**	85.21	54	P	P	07 19 38.9	+0.7
	baz=248						
BLG	**Laguna Peak, P**	85.22	53	P	P	07 19 38.8	+0.5
	baz=248						
N02D	**Trinity Center**	85.28	45	P	P	07 19 39.8	+1.2
	baz=245						
M02C	**Callahan**	85.36	45	P	P	07 19 40.1	+1.3
	baz=245						
K02D	**Willamette Mer**	85.36	44	P	P	07 19 39.4	+0.5
	baz=244						
J01E	**Myrtle Point**	85.39	43	P	P	07 19 39.1	+0.2
	baz=244						
CIS	**Catalina Islan**	85.46	54	P	P	07 19 40.3	+0.8
	baz=248						
YBH	**Yreka Blue Hor**	85.59	45	P	P	07 19 40.7	+0.6
	comp=Z,4.1nm,0.6s,baz=132,slow=20,SNR=6.1						
YBH				pP	pP	07 20 14.0	-1.0
	comp=Z,10.0nm,0.9s,baz=125,slow=9.5,SNR=3.6						
YBH				LR	LR	07 47 49.2	
	comp=Z,558nm,21.9s,baz=261,slow=28						
O03E	**Paynes Creek**	85.63	46	P	P	07 19 40.3	+0.1
	baz=246,SNR=16						
FMP	**Fort Macarthur**	85.67	54	P	P	07 19 41.3	+0.8
	baz=248						
OSI	**Osito Audit: C**	85.67	53	P	P	07 19 41.8	+1.2
	baz=248						
ARVC	**Arvin**	85.78	52	P	P	07 19 41.9	+0.9
	baz=248						
VOG	**Valley Oaks Go**	85.81	51	P	P	07 19 41.4	+0.3
	baz=248						
DECC	**Green Verdugo**	85.84	53	P	P	07 19 41.7	+0.3
	baz=248						
VES	**Vestal, Richgr**	85.85	51	P	P	07 19 41.9	+0.6
	baz=248						
L04D	**Klamath Falls**	86.07	44	P	P	07 19 43.0	+0.5
	baz=245						
LSA	**Lhasa**	86.16	302	P	P	07 19 44.5	+0.9
LSA				S	SKSac	07 29 56.0	-1.3
LSA				pmax	pmax		
	comp=Z,32nm,0.6s						
LSA				LR	LR		
	comp=Z,6µm,23.5s						
LSA				LR	LR		
	comp=Z,4µm,24.2s						
LSA				LR	LR		
	comp=Z,4µm,20.6s						
LSA	**Lhasa**	86.16	302	P	P	07 19 44.5	+0.9
M04C	**Macdoel**	86.21	45	P	P	07 19 43.7	+0.6
	baz=246						
ZAK	**Zakamensk**	86.23	325	*e*P	P	07 19 42.6	-0.4
ZAK				*e*		07 20 17.7	
ZAK				pmax	pmax		
	comp=Z,86nm,1.5s						
ISA	**Isabella, Lake**	86.25	52	P	P	07 19 44.4	+1.0
	baz=248,SNR=13						
109C	**Camp Elliot, M**	86.30	55	P	P	07 19 44.2	+0.5
	baz=249						
EDW2	**Edwards Air Fo**	86.33	53	P	P	07 19 44.4	+0.6
	baz=248,SNR=11						
BFSC	**Mount Baldy Ra**	86.35	53	P	P	07 19 44.4	+0.4
	baz=249,SNR=7.0						
MURC	**Murrieta**	86.48	54	P	P	07 19 45.2	+0.6
	baz=249						
K04D	**Chiloquin, OR**	86.61	44	P	P	07 19 45.6	+0.5
	baz=246						
IRK	**Irkutsk**	86.61	327	*e*P	P	07 19 44.5	-0.2
IRK				pmax	pmax		
	comp=Z,160nm,3.4s						
J04D	**Umpqua Nationa**	86.63	44	P	P	07 19 46.0	+0.8
	baz=245						
I04A	**Tendick Farm,**	86.66	43	P	P	07 19 45.2	0.0
	baz=245						
TLY	**Talaya**	86.67	326	LR	LR	07 57 03.1	
	comp=Z,647nm,21.4s,baz=134,slow=34						
TLY	**Talaya**	86.67	326	*e*P	P	07 19 45.0	0.0
	comp=Z,131nm,1.5s						

TLY	Talaya	86.67	326	c iP	P	07 19 44.7	-0.3
TLY				e		07 29 58.5	
TLY				eS	S	07 30 09.6	-0.6
TLY				eSS	SS	07 35 56.7	+1.5
TLY				pmax	pmax		
	comp=Z,254nm,1.6s						
TLY	Talaya	86.67	326	P	P	07 19 45.3	+0.3
	SNR=46						
HDA	Harding Lake	86.70	18	P	P	07 19 44.0	-0.9
	baz=223						
G03D	McMinnville, O	86.71	41	P	P	07 19 46.1	+0.8
	baz=244						
MLAC	Mammoth, Mammo	86.71	50	P	P	07 19 46.8	+1.0
	baz=248						
H04D	Lebanon	86.75	42	P	P	07 19 46.3	+0.7
	baz=245						
TCOL	CIGO, UAF Yank	86.77	17	P	P	07 19 43.8	-1.4
	baz=222						
COLA	College	86.78	17	eP	P	07 19 43.1	-2.0
	comp=Z,27nm,0.8s						
COLA	College	86.78	17	c iP	P	07 19 43.9	-1.2
COLA				pmax	pmax		
	comp=Z,16nm,0.9s						
LRMC	Laurel Mtn Rad	86.78	52	P	P	07 19 47.0	+0.9
	baz=249,SNR=8.1						
CWC	Cottonwood Cre	86.83	51	P	P	07 19 47.1	+0.8
	baz=248						
MONP2	Monument Peak	86.84	55	P	P	07 19 47.6	+1.0
	baz=250						
BBRC	Big Bear Solar	86.93	53	P	P	07 19 47.5	+0.5
	baz=249						
TIN	Tinemaha, Big	86.94	50	P	P	07 19 47.4	+0.6
	baz=248						
ILAR	Eielson Array	86.98	18	P	P	07 19 44.9	-1.3
	comp=Z,15nm,0.6s,baz=236,slow=5.3,SNR=113						
ILAR				pP	pP	07 20 21.6	+0.7
	comp=Z,15nm,0.8s,baz=234,slow=5.8,SNR=5.4						
ILAR				PKKP	PKKPdf	07 37 36.5	+1.3
	comp=Z,1.7nm,1.0s,baz=358,slow=2.4,SNR=8.1						
ILAR				PKPPKP	P'P'df	07 45 44.0	-0.2
	comp=Z,0.8nm,1.0s,baz=350,slow=2.2,SNR=5.1						
ILAR				LR	LR	07 52 03.2	
	comp=Z,1µm,21.6s,baz=234,slow=31						
ILAR	Eielson Array	86.98	18	P	P	07 19 44.9	-1.3
ILAR				*PP	pP	07 20 21.7	+0.7
ILAR				pmax	pmax		
	comp=Z,14nm,0.6s						
IKP	In-Ko-Pah, Jac	87.01	55	P	P	07 19 47.8	+0.6
	baz=250						
PFO	Pinyon Flats O	87.06	54	eP	P	07 19 48.9	+1.4
	comp=Z,14nm,1.0s						
PFO	Pinyon Flats O	87.06	54	eP	P	07 19 48.9	+1.4
PFO				pmax	pmax		
	comp=Z,14nm,1.0s						
PFO	Pinyon Flats O	87.06	54	P	P	07 19 48.0	+0.5
	baz=249						
BBB	Bella Bella	87.07	34	LR	LR	07 54 49.2	
	comp=Z,1µm,18.7s,baz=267,slow=33						
POKR	Poker Plat Res	87.08	17	P	P	07 19 45.3	-1.3
	baz=223						
RRX	Edison Barstow	87.09	53	P	P	07 19 47.8	+0.3
	baz=249						
MPMC	Manual Prospec	87.14	52	P	P	07 19 48.5	+0.6
	baz=249,SNR=16						
J05D	Fort Rock, OR	87.23	44	P	P	07 19 49.0	+0.9
	baz=246						
F04D	Rainier, OR	87.24	41	P	P	07 19 48.8	+0.9
	baz=244						
SWSC	Sam W. Stewart	87.35	55	P	P	07 19 49.4	+0.7
	baz=250						
GSC	Goldstone, Bar	87.39	52	P	P	07 19 49.9	+0.9
	baz=249,SNR=6.9						
NVAR	Mina Array Bea	87.40	49	P	P	07 19 49.6	+0.5
	comp=Z,6.6nm,0.9s,baz=230,slow=7.3,SNR=42						
NVAR				pP	pP	07 20 23.2	-0.8
	comp=Z,6.5nm,0.8s,baz=229,slow=8.3,SNR=4.3						
NVAR				PKKPbc	PKKPbc	07 37 40.2	+0.5
	comp=Z,1.1nm,0.6s,baz=90,slow=4.1,SNR=9.3						
NVAR				PKPPKP	P'P'df	07 45 46.2	+0.4
	comp=Z,1.3nm,0.8s,baz=90,slow=3.8,SNR=8.2						
NVAR				LR	LR	07 50 56.5	
	comp=Z,1µm,21.9s,baz=250,slow=30						
BELC	Belle Mtn. Jos	87.56	54	P	P	07 19 50.5	+0.7
	baz=250,SNR=9.5						
GRAC	Grapevine Rang	87.57	51	P	P	07 19 50.6	+0.9
	baz=249,SNR=12						
HEC	Hector,Ludlow	87.58	53	P	P	07 19 50.4	+0.5
	baz=249,SNR=11						
I05D	Terrebonne, OR	87.59	43	P	P	07 19 50.4	+0.7
	baz=246						
E04D	Cinebar	87.72	40	P	P	07 19 50.7	+0.6
	baz=245						
FURC	Furnace Creek,	87.76	51	P	P	07 19 51.0	+0.5
	baz=249,SNR=17						
D03D	Eldon	87.81	39	P	P	07 19 51.5	+0.9
	baz=244						
D04E	Lakebay	87.86	40	P	P	07 19 52.4	+1.6
	baz=245						
BC3	Big Chuckawall	87.87	54	P	P	07 19 52.2	+0.9
	baz=250						
G05D	Wamic, OR	87.97	42	P	P	07 19 52.4	+1.0
	baz=246						
SHOC	Shoshone, Teco	88.00	52	P	P	07 19 52.3	+0.5
	baz=249,SNR=7.6						
GMRC	Granite Mounta	88.09	53	P	P	07 19 53.0	+0.7
	baz=250,SNR=7.5						
TUQ	Turquoise Moun	88.11	53	P	P	07 19 53.0	+0.6
	baz=250,SNR=9.8						
F05D	White Salmon	88.14	41	P	P	07 19 52.9	+0.7
	baz=246						
GLA	Glamis	88.16	55	P	P	07 19 53.9	+1.3
	baz=250						
SYO	Syowa Base	88.24	196	⇑eP	P	07 19 49.0	-3.2
SYO	Syowa Base	88.24	196	⇑iP	P	07 19 52.2	0.0
IRM	Iron Mountain	88.28	54	P	P	07 19 54.1	+1.0
	baz=250,SNR=13						
TPNV	Topopah Spring	88.39	51	P	P	07 19 54.6	+0.8
	baz=249,SNR=18						
A04D	Lummi Island	88.55	38	P	P	07 19 54.7	+0.8
	baz=245						
Y12C	Blythe	88.63	55	P	P	07 19 55.9	+1.2
	baz=250						
B05A	Bryant	88.73	39	P	P	07 19 55.8	+0.9
	baz=245						
PALK	Pallekele	88.94	278	LR	LR	07 58 42.2	
	comp=Z,614nm,21.2s,baz=116,slow=35						
PALK	Pallekele	88.94	278	P	P	07 19 58.0	+1.2
PDMCI	Parker Dam,Lak	89.11	54	P	P	07 19 57.2	+0.3
	baz=251,SNR=11						
TOLK	Toolik Lake Re	89.14	14	P	P	07 19 57.0	+0.6
	baz=221						
DLBC	Dease Lake	89.30	28	LR	LR	07 53 24.3	
	comp=Z,954nm,20.6s,baz=320,slow=31						
C06D	Leavenworth	89.32	40	P	P	07 19 57.3	-0.4
	baz=246						
R11A	Troy Canyon, C	89.36	50	P	P	07 19 58.7	+0.4
	baz=250,SNR=10						
214A	Organ Pipe Nat	89.42	57	P	P	07 19 59.8	+1.2
	baz=252						
JIRN	Jiri	89.64	299	eP	P	07 19 59.5	-0.6
	comp=Z,40nm,0.6s						
PKI	Pulchoki	90.28	298	eP	P	07 20 03.2	+0.2
	comp=Z,43nm,0.7s						
PKIN	Phulchoki	90.29	298	eP	P	07 20 03.3	+0.3
	comp=Z,47nm,0.8s						
ELK	Elko	90.43	48	LR	LR	07 57 13.1	
	comp=Z,748nm,18.2s,baz=252,slow=33						
KKN	Kakani	90.45	299	eP	P	07 20 03.5	-0.2
	comp=Z,35nm,0.7s						
DMN	Daman	90.54	298	eP	P	07 20 04.5	+0.3
	comp=Z,51nm,0.7s						
TIXI	Tiksi	90.61	349	c iP	P	07 20 02.5	-0.6
TIXI				pmax	pmax		
	comp=Z,16nm,0.9s						
GKN	Gorkha	91.06	299	eP	P	07 20 06.0	-0.4
	comp=Z,48nm,0.7s						
PMSA	Palmer Station	91.10	160	P	P	07 20 05.8	+0.1
	comp=Z,23nm,0.9s,baz=251,slow=3.0,SNR=7.8						
PMSA	Palmer Station	91.10	160	eP	P	07 20 04.5	-1.2
	comp=Z,185nm,1.9s						
TUC	Tucson	91.16	57	eP	P	07 20 07.5	+0.8
	comp=Z,18nm,1.0s						
TUC	Tucson	91.16	57	eP	P	07 20 07.5	+0.8
TUC				pmax	pmax		
	comp=Z,19nm,1.0s						
TUC	Tucson	91.16	57	P	P	07 20 08.0	+1.3
	baz=252						
EPYK	Eagle Plains	91.20	19	P	P	07 20 08.2	+2.2
	baz=233						
WUAZ	Wupatki	91.65	54	P	P	07 20 09.9	+0.9
	baz=252						
NEW	Newport	91.79	40	P	P	07 20 09.2	0.0
	comp=Z,3.3nm,0.7s,baz=247,slow=3.9,SNR=11						
NEW				LR	LR	07 58 26.6	
	comp=Z,661nm,18.3s,baz=215,slow=33						
NEW	Newport	91.79	40	P	P	07 20 09.1	0.0
	baz=249,SNR=10.0						
DANN	Dangsing	91.90	299	eP	P	07 20 09.9	-0.6
HLID	Hailey	91.95	45	P	P	07 20 10.7	+0.5
	baz=251,SNR=5.6						
DUG	Dugway, Tooele	92.00	49	P	P	07 20 11.3	+0.8
	baz=252						
W18A	Petrified Fore	92.81	54	P	P	07 20 14.8	+0.4
	baz=253,SNR=6.1						
SNAA	Sanae	92.98	183	P	P	07 20 13.5	-0.9
SNAA	Sanae	92.98	183	P	P	07 20 13.4	-0.9
	comp=Z,51nm,1.1s,baz=197,slow=4.9,SNR=216						
SNAA	Sanae	92.98	183	eP	P	07 20 13.5	-0.9
	comp=Z,70nm,1.1s						
SNAA	Sanae	92.98	183	eP	P	07 20 13.5	-0.9
SNAA				pmax	pmax		
	comp=Z,70nm,1.1s						
MSO	Missoula	93.33	42	P	P	07 20 16.2	-0.3
	baz=251						
INK	Inuvik	93.34	19	PKKPbc	PKKPbc	07 37 21.8	-3.9
	comp=Z,1.5nm,0.6s,baz=94,slow=6.2,SNR=4.5						
INK				LR	LR	07 55 52.2	
	comp=Z,840nm,22.0s,baz=188,slow=31						
WMQ	Urumqi	93.38	314	P	P	07 20 18.3	+1.6
WMQ				pP	pP	07 20 50.5	-1.9
WMQ				sP	sP	07 21 07.3	+0.1
WMQ				PP	PP	07 24 04.3	+1.4
WMQ				SKS	SKSac	07 30 37.5	-0.4
WMQ				S	S	07 31 11.5	-1.0
WMQ				pmax	pmax		
	comp=Z,37nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.7s						
WMQ				LR	LR		
	comp=Z,460nm,27.7s						
WMQ				LR	LR		
	comp=Z,340nm,21.3s						
WMQ				LR	LR		
	comp=Z,1µm,27.7s						
VNA3	Neumayer Olymp	93.63	181	P	P	07 20 16.2	-1.1
121A	Cookes Peak, D	93.66	57	P	P	07 20 19.2	+0.8
	baz=254						
VNA1	Neumayer--Stat	94.20	181	P	P	07 20 19.1	-0.7
MVCO	Mesa Verde	94.36	53	P	P	07 20 21.7	+0.2
	baz=254						
H17A	Grant Village	94.84	45	P	P	07 20 25.0	+1.4
	baz=253						
BW06	Boulder Array	95.10	47	P	P	07 20 24.6	-0.2
	baz=254						
PDAR	Pinedale Array	95.10	47	P	P	07 20 24.4	-0.4
	comp=Z,1.3nm,0.8s,baz=242,slow=3.2,SNR=6.9						
PDAR				PP	PP	07 24 10.1	-6.4
	comp=Z,0.2nm,0.3s,baz=128,slow=9.6,SNR=4.3						
PDAR				PKKPbc	PKKPbc	07 37 18.4	-1.9
	comp=Z,2.1nm,0.7s,baz=94,slow=5.2,SNR=15						
PDAR				PKPPKP	P'P'df	07 45 30.1	-1.1
	comp=Z,0.4nm,0.7s,baz=45,slow=2.3,SNR=3.4						
PDAR				LR	LR	08 00 06.4	
	comp=Z,278nm,18.3s,baz=268,slow=33						
DGZ	Jazzator, Alta	95.33	320	c iP	P	07 20 25.4	-0.2
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
O20A	White River Ci	95.34	50	P	P	07 20 27.1	+1.2
	baz=254						
ANMO	Albuquerque	95.36	55	LR	LR	07 58 13.5	
	comp=Z,561nm,19.1s,baz=226,slow=32						
ANMO	Albuquerque	95.36	55	eP	P	07 20 28.2	+2.1
	comp=Z,8.8nm,1.2s						
ANMO	Albuquerque	95.36	55	eP	P	07 20 28.2	+2.1
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ANMO	Albuquerque	95.36	55	P	P	07 20 27.4	+1.3
	baz=255						
S22A	4UR Ranch, Cre	95.78	53	P	P	07 20 29.0	+0.9
	baz=255						
RLMT	Red Lodge	95.94	45	P	P	07 20 29.3	+0.8
	baz=254						
TXAR	Lajitas Array	96.26	61	P	P	07 20 31.1	+0.9
	comp=Z,0.7nm,0.6s,baz=223,slow=5.1,SNR=15						
TXAR				PP	PP	07 24 26.1	+0.5
	comp=Z,1.3nm,0.9s,baz=230,slow=9.7,SNR=7.4						
TXAR				PKKPbc	PKKPbc	07 37 15.7	-0.7
	comp=Z,1.0nm,0.6s,baz=98,slow=2.7,SNR=3.9						
TXAR				PKPPKP		07 45 29.7	
	comp=Z,0.8nm,1.1s,baz=53,slow=0.6,SNR=4.8						
TXAR				LR	LR	07 54 15.0	
	comp=Z,628nm,21.8s,baz=0.0,slow=29						
EGMT	Eagleton	96.40	42	P	P	07 20 30.8	+0.4
	baz=254						
SDCO	Great Sand Dun	96.80	53	P	P	07 20 33.4	+0.7
	baz=256						
N23A	Red Feather La	97.22	50	P	Pdif	07 20 35.0	+0.4
	baz=256						
K22A	Casper	97.23	48	P	P	07 20 34.2	-0.1
	baz=256						
Q24A	Divide	97.36	52	P	P	07 20 35.4	+0.1
	baz=256						
MKAR	Makanchi Array	97.86	316	P	Pdif	07 20 37.4	+0.4
	comp=Z,18nm,0.7s,baz=95,slow=6.2,SNR=96						
MKAR				pP	pP	07 21 10.7	-2.1
	comp=Z,12nm,0.8s,baz=80,slow=7.5,SNR=4.5						
MKAR				PKKPbc	PKKPbc	07 37 09.1	-3.6
	comp=Z,0.8nm,0.6s,baz=288,slow=3.5,SNR=6.8						
MKAR	Makanchi Array	97.86	316	P	Pdif	07 20 37.4	+0.4
MKAR				pmax	pmax		
	comp=Z,17nm,0.7s						
YKA	Yellowknife Ar	97.91	27	P	P	07 20 35.9	-0.8
	comp=Z,7.9nm,0.7s,baz=256,slow=4.4,SNR=12						
YKA				LR	LR	08 00 27.4	
	comp=Z,48nm,19.1s,baz=250,slow=33						
ZALV	Zalesovo Beam	98.07	324	P	P	07 20 37.0	-0.6
	comp=Z,13nm,0.6s,baz=120,slow=4.5,SNR=36						
ZALV				pP	pP	07 21 11.6	-1.4
	comp=Z,14nm,0.8s,baz=117,slow=5.0,SNR=5.1						
ZALV				LR	LR	08 04 45.1	
	comp=Z,352nm,19.9s,baz=73,slow=35						
ZALV	Zalesovo Beam	98.07	324	P	P	07 20 37.0	-0.6
ZALV				pmax	pmax		
	comp=Z,13nm,0.6s						
ZALV				MLR	MLR		
	comp=Z,352nm,19.9s						
MAKZ	Makanchi	98.08	316	eP	P	07 20 37.6	-0.3
	comp=Z,156nm,1.9s						
MAKZ	Makanchi	98.08	316	eP	P	07 20 37.6	-0.3
MAKZ				pmax	pmax		
	comp=Z,156nm,1.9s						
PDGK	Podgornoye	99.01	312	P	Pdif	07 20 43.2	+0.9
833A	Chaparral WMA,	99.69	63	P	Pdif	07 20 45.4	0.0
	baz=258						
JCT	Junction City	99.79	61	P	Pdif	07 20 45.7	-0.3
	baz=258						
DGMT	Dagmar	100.11	43	P	Pdif	07 20 47.2	+0.2
	baz=258						
OGNE	Ogallala	100.13	50	P	Pdif	07 20 47.5	+0.2
	baz=258						
ABTX	Abilene, Hawle	100.36	59	P	Pdif	07 20 48.9	+0.5
	baz=258						
KURK	Kurchatov	101.07	320	ePdif	Pdif	07 20 50.2	-0.8
KURK	Kurchatov	101.07	320	c iP	Pdif	07 20 50.3	-0.8
KURK	Kurchatov	101.07	320	P	Pdif	07 20 51.2	+0.1
	SNR=7.3						
WMOK	Wichita Mounta	101.47	57	P	Pdif	07 20 53.4	+0.1
	baz=259						
435B	Jarrell	101.72	61	P	Pdif	07 20 54.9	+0.5
	baz=259						
MDND	Maddock	103.04	44	P	Pdif	07 21 00.7	+0.7
	baz=262						
OTUK	Ortayu	104.75	317	P	Pdif	07 21 10.6	+3.0
OTUK				pmax	pmax		
	comp=Z,3.0nm,1.9s						
KK31	Karatay Array	105.44	311	ePdif	Pdif	07 21 10.9	+0.1
KK31	Karatay Array	105.44	311	eP	Pdif	07 21 10.9	+0.1
KKAR	Karatay Array	105.44	311	ePdif	Pdif	07 21 10.6	-0.2
KKAR	Karatay Array	105.44	311	eP	Pdif	07 21 10.6	-0.2
ULM	Lac du Bonnet	105.75	42	PKiKP	PKiKP	07 25 22.5	-1.6
	comp=Z,3.4nm,0.5s,baz=244,slow=3.1,SNR=4.0						
BRVK	Borovoye	106.48	321	ePdif	Pdif	07 21 15.8	+0.7
BRVK	Borovoye	106.48	321	eP	Pdif	07 21 15.8	+0.7
ARU	Arti	113.16	325	i PKIKP	PKiKP	07 25 37.5	-0.3
ARU						07 26 26.7	
ARU						07 32 39.3	
ARU				SP	SP	07 35 49.4	-0.4
ARU				PS	PKKPbc	07 36 02.0	-24
MDH	Madha	115.42	291	P	PKPdf	07 25 42.2	-0.9
POPC	Popayan, Colom	115.44	95	eP	PKPdf	07 25 41.9	-1.9
UOSS	Minazif	115.47	291	ePKPdf	PKPdf	07 25 42.2	-1.0
UOSS	Minazif	115.47	291	P	PKPdf	07 25 42.5	-0.7
HATD	Hatta, Dubai	115.52	290	i P	PKPdf	07 25 43.1	-0.2
	SNR=7.9						
MSFE	Esma-Masafi	115.55	291	P	PKPdf	07 25 43.2	-0.2
SPA0	Spitsbergen Ar	115.55	354	ePKPdf	PKPdf	07 25 42.0	+0.1
SHME	Shamm	115.63	292	P	PKPdf	07 25 43.2	-0.3
ALNE	Al Ain	115.79	290	i P	PKPdf	07 25 43.4	-0.4
	SNR=7.8						
NAZ	Nazwa, Dubai	115.96	291	P	PKPdf	07 25 43.9	-0.2
ASUD	Al Ashush, Dub	116.23	290	i P	PKiKP	07 25 44.7	+0.1
	SNR=12						
LPAZ	La Paz	116.64	117	PKP	PKiKP	07 25 46.7	+0.2
	comp=Z,1.0nm,0.6s,baz=19,slow=3.6,SNR=8.0						
LPAZ				PKKPbc	PKKPbc	07 36 13.2	-0.6
	comp=Z,1.5nm,0.8s,baz=55,slow=6.2,SNR=6.0						
LPAZ	La Paz	116.64	117	ePKPdf	PKiKP	07 25 47.4	+0.9
HSPB	Hornsund (broa	116.66	353	ePKPdf	PKPdf	07 25 43.8	-0.2
HSPB				ePP	PP	07 26 51.1	-2.5
ORTC	Ortega, Tolima	117.18	93	eP	PKPdf	07 25 45.4	-1.5
RREF	El Recreo	117.34	92	eP	PKPdf	07 25 47.5	-0.5
GUY2C	Guyana, Caldas	117.40	92	eP	PKPdf	07 25 46.8	-1.1
PRAC	Prado	117.48	94	eP	PKPdf	07 25 46.1	-1.3
HELC	Santa Helena	117.48	91	eP	PKPdf	07 25 47.5	-0.3
MZR	Muzera	117.75	288	i P	PKiKP	07 25 48.3	+0.6
	SNR=7.8						
D53A	Lac Vacive, Po	117.84	45	ePKPdf	PKPdf	07 25 45.5	-1.5
NORC	Norcasia	117.96	92	eP	PKPdf	07 25 46.7	-1.7
ROSC	El Rosal	118.31	93	PKP	PKPdf	07 25 48.6	-0.9
	comp=Z,9.9nm,0.5s,baz=186,slow=18,SNR=5.1						
PRGR	Permogore	118.35	333	ePKIKP	PKPdf	07 25 46.1	-1.5
PRGR				pmax	pmax		
	comp=Z,20nm,0.6s						
CHIC	Chingaza	118.83	93	eP	PKPdf	07 25 48.6	-1.9
BRRC	Barranca, Sant	119.45	90	eP	PKPdf	07 25 49.9	-1.3
LVZ	Lovozero	119.47	341	ePKPdf	PKPdf	07 25 48.6	-1.1
LVZ	Lovozero	119.47	341	d iPKIKP	PKPdf	07 25 49.3	-0.4
LVZ				pmax	pmax		
	comp=Z,12nm,0.6s						
RUSC	La Rusia	119.77	92	eP	PKPdf	07 25 51.0	-1.4
CPUP	Villa Florida	119.80	133	PKP	PKPdf	07 25 50.3	-1.2
	comp=Z,1.3nm,0.7s,baz=110,slow=2.5,SNR=4.2						
CPUP				SKP		07 29 14.4	
	comp=Z,2.2nm,0.9s,baz=236,slow=5.0,SNR=3.7						
CPUP				PKKPbc	PKKPbc	07 36 02.9	+0.9
	comp=Z,3.2nm,1.1s,baz=3.7,slow=3.0,SNR=3.0						
CPUP	Villa Florida	119.80	133	ePKPdf	PKPdf	07 25 50.5	-1.0
BARC	Barichara	119.84	91	eP	PKPdf	07 25 50.5	-1.8
APA	Apatity	120.05	341	⇓iPKIKP	PKPdf	07 25 49.9	-0.8
APA				i		07 29 55.0	
APA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OCAC	Ocana	120.08	89	eP	PKPdf	07 25 52.3	-0.3
HAMF	Hammerfest	120.51	347	ePKPdf	PKPdf	07 25 51.0	-0.5
ARCES	ARCESS Array B	120.91	345	PKP	PKPdf	07 25 52.1	-0.3
	comp=Z,34nm,0.5s,baz=66,slow=1.0,SNR=248						
ARCES				SKP		07 29 15.3	
	comp=Z,2.9nm,0.6s,baz=70,slow=0.7,SNR=4.4						
ARCES				PKKPbc	PKKPab	07 35 55.1	-1.7
	comp=Z,1.7nm,0.8s,baz=224,slow=3.3,SNR=5.6						
ARE0	ARCESS Array S	120.91	345	ePKPdf	PKPdf	07 25 52.1	-0.3
KLMR	Klimovskoe	121.36	333	ePKIKP	PKPdf	07 25 51.8	-1.6
KLMR				pmax	pmax		
	comp=Z,41nm,1.1s						
KTK1	Kautokeino	121.84	346	ePKPdf	PKPdf	07 25 53.7	-0.5
MAK	Makhachkala	122.26	311	eP	Pdif	07 22 18.5	-7.0
MAK				e		07 32 44.7	
MAK				ePS	SP	07 37 08.5	-4.1
MAK				eSS	SS	07 44 01.7	-0.2
MAK				eSSS	SSS	07 48 33.6	
MAK				MLR	MLR		
	comp=Z,320nm,17.0s						
AKT	Akhty	122.31	310	i PKIKP	PKiKP	07 25 56.6	+0.4
AKT				e		07 27 33.2	
AKT				pmax	pmax		
	comp=Z,43nm,1.2s						
TRO	Tromso	122.31	348	ePKPdf	PKPdf	07 25 54.5	-0.5
SOCV	Socops	122.47	90	eP	PKPdf	07 25 55.3	-1.7
SCHQ	Schefferville	122.60	34	PKP	PKPdf	07 25 55.2	-0.8
	comp=Z,7.2nm,0.6s,baz=220,slow=10,SNR=2.9						
SCHQ				PKKPbc	PKKPab	07 35 50.2	+0.3
	comp=Z,9.8nm,0.7s,baz=91,slow=7.1,SNR=3.9						
SIV	San Ignacio	122.73	121	PKKPbc	PKKPbc	07 35 50.7	-0.1
	comp=Z,0.9nm,0.9s,baz=128,slow=1.6,SNR=4.5						
BOSA	Boshof	123.14	220	PKP	PKPdf	07 25 58.1	0.0
	comp=Z,17nm,0.9s,baz=110,slow=1.4,SNR=19						
BOSA	Boshof	123.14	220	ePKPdf	PKPdf	07 25 57.6	-0.5
GROC	Groznyy	123.45	312	i PKIKP	PKPdf	07 25 58.1	+0.1
GROC				pmax	pmax		
	comp=Z,143nm,1.8s						
VRH	Novokhopyorsk	124.06	322	ePKIKP	PKPdf	07 25 58.7	-0.2
VRH				pmax	pmax		
	comp=Z,60nm,0.8s						
PQI	Presque Isle	124.43	44	ePKPdf	PKPdf	07 25 58.6	-1.1
STEI	Steigen	124.48	348	ePKPdf	PKPdf	07 25 58.6	-0.6
MOS	Moscow	124.56	328	i PKIKP	PKPdf	07 25 58.1	-1.6
MOS				e		07 26 54.1	
MOS				pmax	pmax		
	comp=Z,64nm,1.3s						
LOF	Lofoten	124.65	349	ePKPdf	PKPdf	07 25 58.6	-0.9
GNI	Garni	124.76	308	i P	PKiKP	07 26 01.6	+0.4
	SNR=5.4						
GNI	Garni	124.76	308	c iPKIKP	PKiKP	07 26 01.3	+0.1
GNI	Garni	124.76	308	P	PKiKP	07 26 01.5	+0.3
	SNR=5.5						
ZEI	Tsey	124.89	312	i PKIKP	PKiKP	07 26 01.3	-0.1
ZEI				pmax	pmax		
	comp=Z,30nm,1.1s						
NCK	Nalchik	124.96	313	⇑iPKIKP	PKiKP	07 26 03.1	+1.8
RAYN	Ar Rayn	125.11	288	ePKPdf	PKPdf	07 26 01.6	-0.2
RAYN	Ar Rayn	125.11	288	i P	PKiKP	07 26 02.2	+0.1
	SNR=30						
RAYN	Ar Rayn	125.11	288	ePKIKP	PKPdf	07 26 01.6	-0.2
LPSR	Galich'ya Gora	125.17	324	ePKIKP	PKiKP	07 26 01.3	0.0
LPSR				pmax	pmax		
	comp=Z,80nm,1.0s						
OBN	Obninsk	125.38	328	⇑iPKIKP	PKPdf	07 26 01.3	0.0
OBN				i		07 26 38.3	
OBN				pmax	pmax		
	comp=Z,27nm,1.1s						
KBZ	Khabaz	125.40	313	PKP	PKPdf	07 26 01.7	+0.1
	comp=Z,9.4nm,1.0s,baz=60,slow=1.7,SNR=12						
LBTB	Lobatse	125.43	223	ePKPdf	PKPdf	07 26 02.5	-0.1
LBTB	Lobatse	125.43	223	ePKIKP	PKPdf	07 26 02.5	-0.1
AKH	Akhalkalaki	125.47	310	⇓iP	PKiKP	07 26 03.5	+0.9
KIV	Kislovodsk	125.50	313	ePKPdf	PKiKP	07 26 02.8	+0.4
KIV	Kislovodsk	125.50	313	i P	PKiKP	07 26 02.7	+0.3
	SNR=8.1						
KIV	Kislovodsk	125.50	313	i PKIKP	PKPdf	07 26 02.0	0.0
KIV				e		07 27 53.6	
KIV				ePS	PS	07 37 55.7	-2.6
KIV				eSS	SS	07 44 44.6	+1.8
KIV				pmax	pmax		
	comp=Z,64nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,23.0s						
KIV	Kislovodsk	125.50	313	P	PKiKP	07 26 02.5	+0.1
	SNR=7.7						
VSR	Storozhevoye	125.56	323	ePKIKP	PKPdf	07 26 01.9	+0.1
VSR				pmax	pmax		
	comp=Z,50nm,1.1s						
VORD	Divnogorie	125.58	322	ePKIKP	PKPdf	07 26 00.3	-1.5
VORD				pmax	pmax		
	comp=Z,50nm,1.3s						
NEY	Neytrino	125.64	312	⇑iPKIKP	PKiKP	07 26 04.1	+1.3
MOR8	Moi Rana	126.14	347	ePKPdf	PKPdf	07 26 01.6	-0.9
KONS	Konsvik	126.14	348	ePKPdf	PKiKP	07 26 02.8	-0.1
STOK	Stokkvaagen	126.31	348	ePKPdf	PKPdf	07 26 02.8	+0.1
FINES	FINESS Array B	126.39	338	PKP	PKPdf	07 26 03.0	0.0
	comp=Z,13nm,0.8s,baz=75,slow=3.0,SNR=32						
BCA	Borcka	126.83	311	⇑iP	PKiKP	07 26 05.7	+0.6
NSS	Namsos	128.09	347	ePKPdf	PKPdf	07 26 05.2	-1.0
VSU	Vasula	128.09	335	eP	PKPdf	07 26 05.4	-1.0
VSU				ePP	PP	07 28 09.2	-1.9
VSU	Vasula	128.09	335	d iPKIKP	PKiKP	07 26 07.2	+0.2
VSU				pmax	pmax		
	comp=Z,140nm,1.7s						
KMBO	Kilima Mbogo	128.30	256	PKP	PKiKP	07 26 09.2	+0.2
	comp=Z,7.9nm,0.7s,baz=61,slow=1.5,SNR=16						

KMBO	Kilima Mbogo	128.30	256	ePKPdf	PKiKP	07 26 10.0	+0.9
SJG	San Juan	128.57	79	ePKPdf	PKPdf	07 26 08.1	-0.4
SJG	San Juan	128.57	79	ePKIKP	PKPdf	07 26 08.1	-0.4
HUMP	Col San Antoni	128.86	79	ePKPdf	PKPdf	07 26 07.8	-1.2
MTP	Monte Pirata	129.14	79	ePKPdf	PKPdf	07 26 08.2	-1.3
TBLU	Trondheim	129.58	347	ePKPdf	PKiKP	07 26 09.8	-0.1
LSZ	Lusaka	129.69	235	ePKPdf	PKPdf	07 26 11.1	+0.2
MICGM	Minsk	130.00	331	e	PKPdf	07 26 10.0	-0.1
MICGM				e		07 29 21.0	
MICGM				eLR	LR	08 22 02.0	
MNK	Minsk	130.00	331	ePKIKP	PKPdf	07 26 10.0	-0.1
IZAR	Zarasai	130.00	333	eP	PKiKP	07 26 11.3	+0.4
ISAL	Salakas	130.16	332	eP	PKiKP	07 26 11.5	+0.3
BORG	Borgarnes	130.25	5	PKP	PKiKP	07 26 11.1	0.0
	comp=Z,6.5nm,0.6s,baz=335,slow=2.2,SNR=16						
BORG				SKPbc	SKPbc	07 29 23.1	+2.6
	comp=Z,14nm,0.7s,baz=358,slow=1.7,SNR=20						
IIGN	Ignalina	130.26	332	eP	PKiKP	07 26 12.1	+0.6
IIGN				IAmb	IAmb	07 26 14.5	
	comp=Z,11nm,0.7s						
NACGM	Naroch	130.27	331	ePKP	PKiKP	07 26 13.0	+1.5
NACGM				eSKP		07 29 20.0	
NACGM				ePPP	PPP	07 31 38.0	
NACGM				eSKS	SKSdf	07 33 08.0	-0.9
NACGM				eSKKS	SKKSac	07 35 06.0	-2.4
NACGM				eSKSP		07 38 10.0	
PTGA	Pitinga	130.35	104	ePKPdf	PKPdf	07 26 11.1	-1.0
SLIT	Slitere, Latvi	130.41	336	eP	PKPdf	07 26 09.5	-1.3
SLIT				ePP	PP	07 28 20.7	-5.4
MOL	Molde	130.75	348	ePKPdf	PKPdf	07 26 11.0	-0.3
DOMB	Dombas	130.91	347	ePKPdf	PKPdf	07 26 11.9	+0.2
AKN	Aaknes	131.22	348	ePKPdf	PKiKP	07 26 13.2	0.0
NB2	NORSAR Subarra	131.28	345	PKPdf	PKPdf	07 26 12.5	0.0
	comp=Z,105nm,2.5s,baz=31,slow=1.9						
NB2	NORSAR Subarra	131.28	345	PKPdf	PKPdf	07 26 12.5	0.0
	baz=31,slow=1.9						
NOA	NORSAR Array B	131.28	345	PKhKP	PKPpre	07 25 59.2	
	comp=Z,0.3nm,0.5s,baz=78,slow=2.3,SNR=6.0						
NOA				PKP	PKPdf	07 26 12.8	+0.4
	comp=Z,6.4nm,0.6s,baz=32,slow=2.0,SNR=51						
NOA				SKPbc	SKPab	07 29 26.3	+1.4
	comp=Z,3.3nm,0.6s,baz=33,slow=2.9,SNR=14						
HFS	Hagfors	131.38	343	PKhKP	PKPpre	07 25 59.8	
	comp=Z,0.9nm,0.5s,baz=88,slow=5.2,SNR=7.0						
HFS				PKP	PKPdf	07 26 12.4	-0.2
	comp=Z,11nm,0.8s,baz=111,slow=3.3,SNR=24						
HFS				SKPbc	SKPab	07 29 26.3	+1.0
	comp=Z,4.2nm,0.7s,baz=64,slow=3.4,SNR=6.1						
NBO00	NORSAR Array S	131.40	345	ePKPdf	PKPdf	07 26 13.1	+0.4
AKASG	Malin Array Be	131.41	326	PKP	PKPdf	07 26 12.9	0.0
	comp=Z,4.6nm,0.7s,baz=49,slow=2.4,SNR=33						
AKASG				SKPbc	SKPab	07 29 26.8	+1.0
	comp=Z,3.6nm,0.6s,baz=47,slow=4.8,SNR=9.6						
AKASG	Malin Array Be	131.41	326	PKIKP	PKPdf	07 26 12.9	0.0
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NC602	NORSAR Array S	131.46	345	ePKPdf	PKPdf	07 26 12.6	-0.1
NC602	NORSAR Array S	131.46	345	ePKPdf	PKPdf	07 26 13.0	+0.2
SEVA	Sevastopol	131.48	317	⇑iP	PKiKP	07 26 15.6	+1.4
SKAR	Skarslia	132.29	346	ePKPdf	PKPdf	07 26 14.3	-0.1
HYA	Hoyanger	132.30	348	ePKPdf	PKPdf	07 26 14.3	+0.1
WIN	Windhoek	132.55	218	ePKPdf	PKiKP	07 26 17.7	+0.3
SUE	Sulen	132.68	349	ePKPdf	PKPdf	07 26 15.0	+0.1
KONO	Kongsberg	132.89	345	ePKPdf	PKPdf	07 26 15.4	-0.1
KONO	Kongsberg	132.89	345	⇑iPKIKP	PKiKP	07 26 16.4	-0.2
KONO				pmax	pmax		
	comp=Z,14nm,1.7s						
KONO	Kongsberg	132.89	345	ePKPdf	PKPdf	07 26 15.3	-0.1
FDF	Fort de France	132.97	84	ePKPdf	PKPdf	07 26 16.6	-0.3
ASK	Askoy	133.13	348	ePKPdf	PKPdf	07 26 16.4	+0.5
BR131	Keskin Array S	133.15	310	P	PKPdf	07 26 16.8	0.0
	SNR=9.9						
BRTR	Keskin Array B	133.15	310	PKP	PKPdf	07 26 16.6	-0.2
	comp=Z,7.8nm,0.8s,baz=139,slow=3.7,SNR=23						
BRTR				SKPbc	SKPab	07 29 35.1	+1.2
	comp=Z,1.9nm,0.7s,baz=116,slow=3.1,SNR=3.7						
BER	Bergen	133.19	348	ePKPdf	PKPdf	07 26 15.6	-0.3
BDFB	Brasilia	133.25	130	PKP	PKPdf	07 26 16.9	-0.6
	comp=Z,2.1nm,0.5s,baz=239,slow=1.9,SNR=4.8						
BDFB				SKPbc	SKPbc	07 29 33.7	+0.8
	comp=Z,6.4nm,0.8s,baz=202,slow=6.9,SNR=6.2						
BDFB	Brasilia	133.25	130	PKIKP	PKPdf	07 26 17.0	-0.6
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ODD1	Odda	133.35	347	ePKPdf	PKiKP	07 26 17.4	-0.2
KLNR	Kaliningrad	133.36	334	c iPKIKP	PKiKP	07 26 18.4	+0.7
KIS	Kishinev	133.50	322	ePKP	PKiKP	07 26 18.0	-0.3
KIS				LRM	MLR	08 23 10.0	
	comp=Z,300nm,20.0s						
KIS	Kishinev	133.50	322	ePKIKP	PKPdf	07 26 17.0	0.0
KIS				e		07 27 10.0	
MILM	Milestii Mici	133.54	321	⇓iP	PKPdf	07 26 17.5	+0.4
ANTO	Ankara	133.72	311	ePKPdf	PKiKP	07 26 18.8	-0.3
ANTO	Ankara	133.72	311	⇑iP	PKiKP	07 26 19.7	+0.6
ANTO	Ankara	133.72	311	ePKIKP	PKiKP	07 26 18.8	-0.3
ANTO	Ankara	133.72	311	P	PKPdf	07 26 18.1	+0.3
	SNR=7.1						
BLS5	Blasjo	133.83	347	ePKPdf	PKPdf	07 26 17.1	-0.1
HRFI	Mount Harif	134.18	297	P	PKPdf	07 26 19.4	+0.5
	comp=Z,34nm,1.9s						
KMY	Karmoy	134.28	347	ePKPdf	PKiKP	07 26 19.2	-0.2
EIL	Elat	134.31	297	P	PKPdf	07 26 19.5	+0.4
	comp=Z,29nm,2.2s						
TLCR		134.36	319	⇓iP	PKiKP	07 26 19.7	-0.3
TLCR		134.36	319	⇓PKIKP	PKiKP	07 26 19.7	-0.3
HOMB	Homborsund	134.37	345	ePKPdf	PKPdf	07 26 18.0	-0.2
KZIT	Kziot	134.60	298	P	PKPdf	07 26 14.7	-4.9
	comp=Z,60nm,1.2s						
SNART	Snartemo	134.63	346	ePKPdf	PKiKP	07 26 19.6	-0.6
LVV	L'vov	134.67	327	ePKIKP	PKPdf	07 26 18.3	-0.8
CFR	Carcaliu	134.78	320	⇓iP	PKiKP	07 26 21.1	+0.2
CFR	Carcaliu	134.78	320	⇓PKIKP	PKiKP	07 26 21.1	+0.2
TIRR	Tirgusor	134.94	319	⇓iP	PKiKP	07 26 21.3	+0.1
TIRR	Tirgusor	134.94	319	⇓PKIKP	PKiKP	07 26 21.3	+0.1
LEF	Lefka	135.00	305	⇓iP	PKiKP	07 26 21.5	-0.2
TESR	Tescani	135.04	322	⇓iP	PKPdf	07 26 20.6	+0.7
TLB	Topalu	135.12	319	⇑iP	PKiKP	07 26 22.0	+0.4
TLB	Topalu	135.12	319	⇑PKIKP	PKiKP	07 26 22.0	+0.4
BIZ	Bicaz	135.14	323	⇑iP	PKiKP	07 26 21.5	-0.1
HARR	Harsova	135.14	319	⇓iP	PKiKP	07 26 23.1	+1.5
HARR	Harsova	135.14	319	⇓PKIKP	PKiKP	07 26 23.1	+1.5
BURAR	Bucovina Array	135.28	324	⇑iP	PKiKP	07 26 22.6	+0.6
BURAR	Bucovina Array	135.28	324	⇑PKIKP	PKiKP	07 26 22.6	+0.6
VRI	Vrincioaia	135.32	321	⇑iP	PKPdf	07 26 20.8	+0.3
VRI	Vrincioaia	135.32	321	⇑PKIKP	PKPdf	07 26 20.8	+0.3
BISRR	Bisoca	135.49	321	⇓iP	PKiKP	07 26 26.3	+3.9
ICOR	Ion Corvin	135.49	318	⇑iP	PKiKP	07 26 24.3	+1.9
SILT	Sile	135.51	314	⇑iP	PKiKP	07 26 22.3	-0.2
MLR	Muntele Rosu	135.98	321	PKP	PKPdf	07 26 21.2	-0.7
	comp=Z,8.1nm,1.0s,baz=324,slow=3.0,SNR=7.7						
MLR				SKPbc	SKPbc	07 29 40.6	-0.1
	comp=Z,4.2nm,0.9s,baz=316,slow=4.3,SNR=3.9						
MLR	Muntele Rosu	135.98	321	⇑iP	PKPdf	07 26 22.5	+0.6
KOLS	Kolonicke sedl	136.12	327	ePKIKP	PKiKP	07 26 24.3	+0.7
KOLS	Kolonicke sedl	136.12	327	ePKP	PKiKP	07 26 24.3	+0.7
SECR		136.14	320	⇑iP	PKPdf	07 26 22.9	+0.9
PRD	Provadia	136.17	318	eP	PKPdf	07 26 22.4	+0.3
UZH	Uzhgorod	136.30	327	ePKIKP	PKPdf	07 26 23.0	+0.8
TRPA	Tarpa	136.47	326	⇓iP	PKPdf	07 26 23.0	+0.5
TRPA	Tarpa	136.47	326	ePKiKP	PKPdf	07 26 22.0	-0.4
VOIR		136.55	322	⇑iP	PKiKP	07 26 24.9	+0.3
VOIR		136.55	322	⇑PKIKP	PKiKP	07 26 24.9	+0.3
ARR	Arges	136.83	322	⇑iP	PKiKP	07 26 25.0	-0.2
DRGR		137.16	324	⇓iP	PKPdf	07 26 22.6	-1.3
DRGR		137.16	324	⇓PKIKP	PKPdf	07 26 22.6	-1.3
LTVH	Ltavrtes, Hu	137.26	326	⇑ePKiKP	PKPdf	07 26 23.1	-0.9
ELND	Elena	137.28	318	⇓iP	PKPdf	07 26 25.0	+0.8
LANS	Liptovska Anna	137.41	329	ePKIKP	PKiKP	07 26 27.7	+1.5
LANS	Liptovska Anna	137.41	329	ePKP	PKiKP	07 26 27.7	+1.5
OKC	Ostrava-Krasne	137.58	331	ePKIKP	PKPdf	07 26 20.9	-3.6
OKC				MLR	MLR		
	comp=Z,600nm,20.8s						
OKC	Ostrava-Krasne	137.58	331	ePKPpre	PKPdf	07 26 20.9	-3.6
OKC				ex	x	07 39 08.4	
OKC				AMS	AMS	08 21 00.0	
	comp=Z,600nm,20.8s						
PLVB	Pleven	137.86	319	⇓iP	PKiKP	07 26 27.6	+0.4
MORC	Moravsky Berou	137.91	331	⇓iP	PKiKP	07 26 26.8	-0.4
MORC	Moravsky Berou	137.91	331	⇓PKIKP	PKiKP	07 26 26.8	-0.4
MORC	Moravsky Berou	137.91	331	ePKP	PKPdf	07 26 19.0	-6.2
GZR	Gura Zlata	137.92	323	⇑iP	PKPdf	07 26 25.2	-0.2
GZR	Gura Zlata	137.92	323	⇑PKIKP	PKPdf	07 26 25.2	-0.2
OSTC	Ostas	137.96	333	ePKPpre	PKPdf	07 26 25.5	+0.3
OSTC				ePP	PP	07 29 08.8	-5.3
OSTC				ex	x	07 38 56.3	
OSTC				AMS	AMS	08 25 10.0	
	comp=Z,600nm,20.2s						
PSZ	Piszkesteto	137.99	328	⇓iP	PKPdf	07 26 25.9	+0.4
PSZ	Piszkesteto	137.99	328	⇓PKIKP	PKPdf	07 26 25.9	+0.4
PSZ	Piszkesteto	137.99	328	ePKiKP	PKPdf	07 26 25.0	-0.4
CHVC	Chvalec	138.00	333	ePKPpre	PKPpre	07 26 17.7	
CHVC				AMS	AMS	08 22 00.0	
	comp=Z,800nm,23.1s						
SIRR	Siria	138.06	324	⇑iP	PKiKP	07 26 27.4	-0.2
DPC	Dobruska-Polom	138.06	333	ePKHKP	PKPpre	07 26 10.0	
DPC				e		07 26 27.1	
DPC				MLR	MLR		
	comp=Z,800nm,23.2s						
DPC	Dobruska-Polom	138.06	333	ePKPDF	PKiKP	07 26 27.1	-0.4
DPC				AMS	AMS	08 21 20.0	
	comp=Z,800nm,23.2s						
SRE	Strehaia	138.07	322	⇑iP	PKiKP	07 26 27.0	-0.6
SRE	Strehaia	138.07	322	⇑PKIKP	PKiKP	07 26 27.0	-0.6
UPC	Upice	138.08	333	ePKHKP	PKPpre	07 26 16.2	
UPC				e		07 26 25.5	
UPC				e		07 29 14.6	
UPC				MLR	MLR		
	comp=Z,800nm,21.3s						
UPC	Upice	138.08	333	ePKPpre	PKPpre	07 26 16.2	
UPC				ePKPDF	PKPdf	07 26 25.5	+0.1
UPC				ePP	PP	07 29 14.6	-0.2
UPC				ePKKS		07 38 47.6	
UPC				AMS	AMS	08 22 10.0	
	comp=Z,800nm,21.3s						
ALN	Alexandroupoli	138.10	315	P	PKPdf	07 26 23.1	-2.6
VYHS	Vyhne	138.16	329	ePKIKP	PKiKP	07 26 27.3	-0.4
VYHS	Vyhne	138.16	329	ePKP	PKiKP	07 26 27.3	-0.4
KDZ	Kurdzhali	138.18	316	eP	PKPdf	07 26 25.1	-0.8
RDO	Rodhopi	138.33	316	P	PKPdf	07 26 25.3	-0.8
EZN	Ezine	138.36	314	⇓iP	PKiKP	07 26 28.1	-0.3
EZN	Ezine	138.36	314	⇓PKIKP	PKiKP	07 26 28.1	-0.3
HERR	Herculane	138.42	322	⇑iP	PKPdf	07 26 26.8	+0.6
MPEP	Malo Peshtene	138.43	320	eP	PKPdf	07 26 25.8	-0.5
BZS	Buzias	138.46	324	⇑iP	PKPdf	07 26 27.1	+0.8
BZS	Buzias	138.46	324	⇑PKIKP	PKPdf	07 26 27.1	+0.8
JAVC	Velka Javorina	138.48	330	ePKP	PKPdf	07 26 19.4	-6.9
AMBH	Ambrzfalva	138.53	325	ePKiKP	PKiKP	07 26 28.1	-0.4
PGB	Panagyurishte	138.57	318	eP	PKPdf	07 26 27.4	+0.7
RZN	Rozhen	138.63	317	eP	PKPdf	07 26 26.6	-0.4
SMTH	Samothraki Isl	138.64	315	P	PKPdf	07 26 23.6	-3.2
VRAC	Vranov	138.68	331	PKP	PKPdf	07 26 26.1	-0.5
	comp=Z,6.0nm,0.8s,baz=160,slow=0.7,SNR=11						
VRAC				SKPbc	SKPbc	07 29 49.8	+1.5
	comp=Z,3.6nm,0.4s,baz=135,slow=2.0,SNR=4.3						
VRAC	Vranov	138.68	331	⇓iP	PKPdf	07 26 21.0	-5.6
VRAC	Vranov	138.68	331	ePKP	PKPdf	07 26 19.4	-7.2
BRG	Berggiesshubel	138.69	335	i PKP	PKPdf	07 26 16.9	-10
	comp=Z,4.6nm,0.6s						
BRG				i		07 26 28.0	
	comp=Z,37nm,1.5s						
BRG				ePP	PP	07 29 11.8	-6.7
	comp=Z,29nm,1.9s						
BRG				i PKS		07 29 51.3	
	comp=Z,66nm,2.1s						
BRG				SKKS		07 41 56.0	
BRG				SS	SS	07 47 03.0	-18
PVCC	Panska Ves	138.69	334	ePKHKP	PKPpre	07 26 17.6	
PVCC				MLR	MLR		
	comp=Z,600nm,20.8s						
PVCC	Panska Ves	138.69	334	ePKPpre	PKPpre	07 26 17.6	
PVCC				AMS	AMS	08 23 20.0	
	comp=Z,600nm,20.8s						
BUD	Budapest	138.72	328	ePKiKP	PKiKP	07 26 28.1	-0.8
CLL	Collm	138.73	336	i PKIKP	PKPdf	07 26 27.5	+0.9
CLL	Collm	138.73	336	ePKPpre	PKPpre	07 26 22.0	
CLL				i PKPdf	PKPdf	07 26 27.5	+0.9
CLL				i PKiKP	PKiKP	07 26 29.7	+0.9
	comp=Z,28nm,1.2s						
CLL				esPKPdf	sPKPdf	07 27 13.0	-4.4
CLL				e		07 27 25.0	
CLL				ePP	PP	07 29 20.0	+1.3
CLL				eSKPdf	SKPdf	07 29 50.0	+1.6
CLL				ePKSdf	PKSdf	07 30 03.0	+0.5
CLL				e		07 30 43.0	
CLL				e		07 33 55.0	
CLL				eSKKSac	SKKSac	07 36 04.0	+4.5
CLL				e		07 38 24.0	
CLL				eSKSP		07 39 18.0	
CLL				ePPS	PPS	07 41 42.0	
CLL				eSS	SS	07 47 24.0	+2.3
CLL				esSS		07 48 24.0	
CLL				e		07 52 06.0	
CLL				eSSS	SSS	07 52 42.0	
CLL				esSSS		07 54 00.0	
CLL				e		07 58 12.0	
KRUC	Moravsky	138.94	331	ePKP	PKPdf	07 26 20.3	-6.8
SIGR	SIGRI	138.95	313	P	PKPdf	07 26 27.0	-0.3
MODS	Modra-Piesok	139.01	330	ePKIKP	PKPdf	07 26 27.7	+0.5
MODS	Modra-Piesok	139.01	330	ePKP	PKPdf	07 26 27.7	+0.5
GOPC	GO Pecny, Ondr	139.05	333	ePKP	PKPdf	07 26 17.6	-10
GOPC				ePP	PP	07 29 16.1	-4.7
GOPC				AMS	AMS	08 23 40.0	
	comp=Z,700nm,24.2s						
KAVA	Kavala	139.09	316	P	PKPdf	07 26 27.9	+0.3
PRU	Pruhonice	139.10	333	ePKHKP	PKPpre	07 26 20.5	
PRU				e		07 26 28.4	
PRU				MLR	MLR		
	comp=Z,800nm,21.9s						
PRU	Pruhonice	139.10	333	ePKPpre	PKPpre	07 26 20.5	
PRU				ePKPDF	PKPdf	07 26 28.4	+1.1
PRU				eSKKP		07 39 18.6	
PRU				AMS	AMS	08 23 40.0	
	comp=Z,800nm,21.9s						
VTS	Vitosha	139.13	319	⇑iP	PKPdf	07 26 19.9	-7.9
LIA	Limnos Island	139.13	314	P	PKPdf	07 26 26.1	-1.5
CHOS	Chios island	139.14	312	P	PKPdf	07 26 27.7	-0.2
TREC	Trest	139.19	332	ePKHKP	PKPpre	07 26 18.1	
TREC				MLR	MLR		
	comp=Z,700nm,23.0s						
TREC	Trest	139.19	332	ePKPpre	PKPpre	07 26 18.1	
TREC				AMS	AMS	08 32 20.0	
	comp=Z,700nm,23.0s						
ZST	Bratislava	139.21	330	ePKIKP	PKPdf	07 26 28.7	+1.1
ZST	Bratislava	139.21	330	ePKP	PKPdf	07 26 28.7	+1.1
MMB	Musomiste	139.32	317	eP	PKPdf	07 26 27.5	-0.5
NVR	Nevrokopi	139.35	317	P	PKPdf	07 26 26.8	-1.3
EKA	Eskdalemuir Ar	139.44	352	PKhKP	PKPpre	07 26 18.9	
	comp=Z,1.0nm,0.4s,baz=353,slow=2.0,SNR=13						
EKA				SKPbc	SKPbc	07 29 50.1	-0.1
	comp=Z,2.0nm,0.7s,baz=5.1,slow=3.2,SNR=4.8						
MORH	Mrgy, Hungar	139.74	326	eP	PKPdf	07 26 28.0	-0.5
MORH	Mrgy, Hungar	139.74	326	ePKiKP	PKPdf	07 26 28.1	-0.5
FRGS	Fruska Gora	139.76	324	eP	PKPdf	07 26 28.2	-0.5
NKC	Novy Kostel	139.79	335	ePKHKP	PKPpre	07 26 22.8	
NKC				e		07 29 27.0	
NKC				MLR	MLR		
	comp=Z,700nm,21.5s						
NKC	Novy Kostel	139.79	335	ePKPpre	PKPpre	07 26 22.8	
NKC				ePP	PP	07 29 27.0	+1.7
NKC				AMS	AMS	08 29 20.0	
	comp=Z,700nm,21.5s						
SOP	Sopron	139.83	330	⇑ePKiKP	PKPdf	07 26 28.1	-0.6
CONA	Conrad Observa	140.00	330	i PKPdf	PKPdf	07 26 23.6	-5.5
	comp=Z,58nm,2.0s						
KNT	Kendrikon	140.08	317	P	PKPdf	07 26 28.5	-0.9
KHC	Kasperske Hory	140.16	333	ePKHKP	PKPpre	07 26 23.9	
KHC				e		07 26 31.1	
KHC				e		07 27 26.5	
KHC				MLR	MLR		
	comp=Z,600nm,17.9s						
KHC	Kasperske Hory	140.16	333	ePKPpre	PKPpre	07 26 23.9	
KHC				ePKPDF	PKiKP	07 26 31.1	-0.7
KHC				ex	x	07 27 26.5	
KHC				ex	x	07 27 46.5	
KHC				AMS	AMS	08 32 00.0	
	comp=Z,600nm,17.9s						
DIVS	Divibare	140.29	323	eP	PKPdf	07 26 29.7	-0.1
THE	Thessaloniki	140.29	316	P	PKPdf	07 26 28.1	-1.6
GERES	GERESS Array B	140.32	333	PKhKP	PKPpre	07 26 21.7	
	comp=Z,2.4nm,0.7s,baz=45,slow=4.0,SNR=14						
GERES				SKPbc	SKPbc	07 29 53.8	+0.8
	comp=Z,2.2nm,0.6s,baz=37,slow=2.7,SNR=4.6						
BEHE	Becsehely	140.55	328	ePKiKP	PKPdf	07 26 26.0	-4.0
ARSA	Arzberg	140.64	330	i PKPdf	PKPdf	07 26 25.1	-5.1
	comp=Z,22nm,1.8s						
XOR	Xorichti	140.74	315	P	PKPdf	07 26 29.0	-1.7
BBLS	Lazići	140.77	323	eP	PKPdf	07 26 30.1	-0.5
MOA	Molln	140.80	331	i PKPdf	PKPdf	07 26 25.4	-5.1
	comp=Z,20nm,1.3s,SNR=8.6						
PTL	Penteli	140.85	312	P	PKPdf	07 26 29.6	-1.3
HAPS	Han Pijesak,BI	140.90	324	eP	PKPdf	07 26 24.0	-6.9
ATAL	Atalanti	141.17	314	P	PKPdf	07 26 27.0	-4.4
IDI	Anoyia	141.19	308	PKhKP	PKPdf	07 26 27.2	-4.4
	comp=Z,14nm,0.6s,baz=140,slow=13,SNR=8.0						
LKR	Lokris	141.20	314	P	PKPdf	07 26 30.5	-1.0
KZN	Kozani	141.25	317	P	PKPdf	07 26 30.5	-1.1
PERS	Pernice	141.27	329	i PKPdf	PKPdf	07 26 26.1	-5.3
PERS				i		07 26 32.1	
PERS				e		07 27 28.1	
PERS				ePP	PP	07 29 35.5	+1.0
PERS				e		07 30 05.3	
PERS				eSKKSac	SKKSac	07 36 13.3	-1.4
PERS				eSS	SS	07 47 55.0	+3.0
SOKA	Soboth	141.28	330	i PKPdf	PKPdf	07 26 26.2	-5.2
	comp=Z,21nm,1.0s						
THL	Klokotos Trika	141.45	316	P	PKPdf	07 26 29.2	-2.7
UPM	Unac-Piva	141.45	322	eP	PKPdf	07 26 25.8	-6.2
BLY	Banja Luka	141.47	326	⇑iP	PKPdf	07 26 27.1	-4.7
BLY	Banja Luka	141.47	326	eP	PKPdf	07 26 26.2	-5.6
AGG	Agios Georgios	141.49	315	P	PKPdf	07 26 28.0	-4.0
OBKA	Obir	141.63	330	i PKPdf	PKPdf	07 26 28.1	-4.1
	comp=Z,7.7nm,0.8s						
DSF	Desfina	141.64	314	P	PKPdf	07 26 31.1	-1.2
CRES	Cresnjev	141.66	328	eP	PKPdf	07 26 25.3	-6.8
PDG	Podgorica	141.70	321	⇓iP	PKPdf	07 26 28.0	-4.2
PDG	Podgorica	141.70	321	eP	PKPdf	07 26 31.8	-0.4
MEM	Membach	141.79	341	⇑PKP	PKPdf	07 26 32.5	+0.4
KBA	Koelnbreinsper	141.79	331	i PKPdf	PKPdf	07 26 28.4	-4.1
	comp=Z,20nm,1.2s,SNR=14						
BRY	Bratogost	141.85	322	eP	PKPdf	07 26 27.5	-5.2
DRME	Dracevica, Mon	141.88	321	eP	PKPdf	07 26 26.0	-6.6
SERG	Sergoula	141.97	314	P	PKiKP	07 26 37.9	+2.0
LJU	Ljubljana	141.97	329	eP	PKPdf	07 26 26.4	-6.2
ANX	Ano Chora	141.98	314	P	PKPdf	07 26 27.5	-5.5
TRIZ	Trizonia	141.98	314	P	PKPdf	07 26 29.4	-3.4
MYKA	Terra Mystica	141.98	331	i PKPdf	PKPdf	07 26 28.0	-4.8
	comp=Z,18nm,1.0s,SNR=8.8						
GUR	Goura	141.98	313	P	PKPdf	07 26 23.3	-10
BOJS	Bojanci	141.99	328	i PKPdf	PKPdf	07 26 29.0	-3.7
BOJS				i		07 26 33.3	
VISS	Visnje	141.99	329	i PKPdf	PKPdf	07 26 27.9	-4.8
VISS				i		07 26 33.8	
KLV	Kalavryta, Ach	142.07	313	P	PKPdf	07 26 28.4	-4.7
LAKA	Lakka	142.10	314	P	PKPdf	07 26 21.4	-12
UCC	Uccle	142.12	343	⇑PKP	PKPdf	07 26 32.6	-0.1
ANKY	Antikythira Is	142.16	309	P	PKPdf	07 26 28.9	-4.4
BCLA	Clavier	142.18	342	⇓PKP	PKPdf	07 26 33.0	+0.1
TRIP	Tripoli	142.22	312	P	PKPdf	07 26 29.0	-4.4
PVO	Paravola	142.24	314	P	PKPdf	07 26 29.2	-4.1
CEY	Cerknica	142.24	329	eP	PKPdf	07 26 28.4	-4.8
JAVS	Javornik	142.31	329	i PKPdf	PKPdf	07 26 28.7	-4.7
JAVS				i		07 26 33.9	
STON	Ston	142.36	323	eP	PKPdf	07 26 28.9	-4.5
WATA	Walderalm	142.40	333	i PKPdf	PKPdf	07 26 31.7	-1.9
	comp=Z,8.6nm,0.5s						
SNF	Seneffe	142.40	343	⇑PKP	PKPdf	07 26 30.1	-3.1
ABTA	Abfaltersbach	142.42	332	i PKPdf	PKPdf	07 26 29.1	-4.4
	comp=Z,46nm,1.6s,SNR=18						
WTTA	Wattenberg	142.42	333	i PKPdf	PKPdf	07 26 30.2	-3.4
	comp=Z,50nm,1.0s,SNR=18						
WLF	Walferdange	142.57	340	⇑PKP	PKPdf	07 26 30.2	-3.3
MOTA	Moosalm	142.59	334	i PKPdf	PKPdf	07 26 31.2	-2.7
	comp=Z,52nm,1.1s,SNR=19						
ITM	Ithomi	142.62	312	P	PKPdf	07 26 26.7	-7.4
RETA	Reutte	142.63	334	i PKPdf	PKPdf	07 26 30.8	-3.1
	comp=Z,25nm,1.0s,SNR=11						
SQTA	Sankt Quirin	142.64	333	i PKPdf	PKPdf	07 26 30.8	-3.2
	comp=Z,56nm,1.1s,SNR=20						
DOU	Dourbes	142.68	342	⇑PKP	PKPdf	07 26 29.9	-3.9
LKD2	Lefkada island	142.75	315	P	PKPdf	07 26 29.7	-4.6
KEK	Kerkira	142.85	317	P	PKPdf	07 26 29.6	-4.8
PYL	PYLOS	142.88	312	P	PKPdf	07 26 30.3	-4.2
BFO	Black Forest	142.93	337	ePKPdf	PKPdf	07 26 30.4	-3.9
KFL	Anninata	142.99	314	P	PKPdf	07 26 30.3	-4.4
FETA	Feichten	143.01	333	i PKPdf	PKPbc	07 26 32.3	+0.5
	comp=Z,63nm,1.0s,SNR=60						
DAVA	Damuels	143.16	335	i PKPdf	PKPbc	07 26 32.8	+0.6
	comp=Z,67nm,1.1s,SNR=21						
DAVOX	Davos/Dischmat	143.56	334	PKP	PKPbc	07 26 34.3	+0.9
	comp=Z,62nm,0.6s,baz=37,slow=2.4,SNR=72						
MATE	Matera	144.29	321	⇓iP	PKPbc	07 26 36.0	+0.5
TIP	Timpagrande	145.11	319	ePKPbc	PKPdf	07 26 38.7	+0.2
TIP	Timpagrande	145.11	319	⇓iP	PKPdf	07 26 39.4	+1.0
AQU	L'Aquila	145.11	326	eP	PKPdf	07 26 38.5	+0.2
VAE	Valguarnera	147.60	318	PKPbc	PKPbc	07 26 45.0	-0.5
	comp=Z,16nm,0.4s,baz=60,slow=0.3,SNR=8.6						
SHEL	Horse Pasture	148.24	192	ePKPbc	PKPbc	07 26 47.5	-0.3
SHEL	Horse Pasture	148.24	192	ePKP2	PKPbc	07 26 47.5	-0.3
H07N1	FLORES T-PHASE	150.70	30	ePKP	PKPbc	07 26 53.3	+0.1
H07S1	FLORES T-PHASE	150.90	31	ePKP	PKiKP	07 26 54.8	+0.6
MAHO	Mahon	151.52	332	i PKP	PKPdf	07 26 49.1	+0.4
MAHO	Mahon	151.52	332	i PKS	SKPdf	07 30 00.9	-8.2
KEST	Kesra	151.88	320	PKP	PKPdf	07 26 49.8	+0.3
	comp=Z,9.1nm,0.9s,baz=193,slow=3.1,SNR=8.5						
KEST				PKPbc	PKiKP	07 26 56.8	+0.4
	comp=Z,32nm,0.6s,baz=72,slow=0.4,SNR=28						
KEST	Kesra	151.88	320	ePKPdf	PKPdf	07 26 50.5	+0.9
KEST				ePKPbc	PKiKP	07 26 57.1	+0.7
CMAH	Djebel Manchou	152.41	324	P	PKPdf	07 26 51.3	+1.0
CAEH	'Ain El Ouahch	152.62	325	P	PKPdf	07 26 51.8	+1.3
ABSA	Djebel Ababsia	152.63	323	P	PKPdf	07 26 51.6	+0.9
ROSA	Rosais	152.83	28	ePKP	PKiKP	07 26 58.7	+0.5
ROSA	Rosais	152.83	28	ePKPbc	PKiKP	07 26 58.3	+0.1
PICO	Pico	152.92	28	ePKP	PKiKP	07 26 58.6	+0.1
PCAN	Candelaria	152.92	29	ePKP	PKiKP	07 26 59.3	+0.9
PMAN	Manadas	152.97	28	ePKP	PKiKP	07 26 59.3	+0.8
CKFL	Kef-Lekhel	152.97	324	P	PKPdf	07 26 52.3	+1.1
CASM	Ain Smara	153.20	325	P	PKPdf	07 26 52.5	+1.1
PGAV	Gavieira, Arco	153.21	353	ePKPdf	PKPdf	07 26 51.8	+0.5
PGAV	Gavieira, Arco	153.21	353	ePKPab	PKPab	07 27 12.1	+1.1
DFRA	Djebel Bou Aff	153.33	326	P	PKPdf	07 26 53.3	+1.6
PCAB	Cabril	153.44	353	ePKPdf	PKPdf	07 26 52.6	+1.0
PCAB	Cabril	153.44	353	ePKPab	PKPab	07 27 12.9	+1.0
POLO	Lamas de Olo	153.74	352	ePKPdf	PKPdf	07 26 52.3	+0.2
POLO	Lamas de Olo	153.74	352	ePP	PP	07 30 49.5	+2.5
MVO	Moncorvo	153.83	351	ePKPdf	PKPdf	07 26 52.3	+0.1
MVO	Moncorvo	153.83	351	ePKPab	PKPab	07 27 14.5	+0.9
SET	Setif	153.84	326	P	PKPdf	07 26 56.0	+3.6
UCM	Universidad Co	153.86	344	i PKP	PKPdf	07 26 53.3	+1.1
UCM	Universidad Co	153.86	344	i PKS	PKSdf	07 30 33.0	+6.5
PVIS	Viseu	154.40	352	ePKPdf	PKPdf	07 26 53.9	+0.9
PVIS	Viseu	154.40	352	ePKPab	PKPab	07 27 16.9	+0.9
ESDC	Sonseca Array	154.64	345	PKP	PKPdf	07 26 53.5	+0.2
	comp=Z,1.2nm,0.5s,baz=9.9,slow=3.1,SNR=12						
ESDC				PKPbc	PKiKP	07 27 02.0	+0.1
	comp=Z,2.6nm,0.7s,baz=22,slow=2.5,SNR=8.1						
ESDC				PKPab	PKPab	07 27 16.9	-0.3
	comp=Z,3.7nm,0.6s,baz=15,slow=4.2,SNR=11						
ESLA	Sonseca Array	154.64	345	ePKPdf	PKPdf	07 26 54.8	+1.4
ESLA				ePKPbc	PKiKP	07 27 03.4	+1.4
ESLA				ePKPab	PKPab	07 27 18.0	+0.9
MTE	Manteigas	154.66	351	ePKPdf	PKPdf	07 26 53.8	+0.4
MTE	Manteigas	154.66	351	ePKPab	PKPab	07 27 18.7	+1.5
MTE	Manteigas	154.66	351	ePP	PP	07 30 54.2	+2.1
PAB	San Pablo	154.86	345	ePKPdf	PKPdf	07 26 54.0	+0.3
PAB				ePKPab	PKPab	07 27 19.2	+1.1
PAB	San Pablo	154.86	345	ePKIKP	PKPdf	07 26 54.0	+0.3
PAB				e		07 27 19.2	
COI	Coimbra	154.96	353	ePKPab	PKPab	07 27 19.3	+0.9
COI	Coimbra	154.96	353	ePP	PP	07 30 56.4	+2.7
PCAS	Casmilo, Conde	155.13	353	ePKPdf	PKPdf	07 26 54.6	+0.7
PCAS	Casmilo, Conde	155.13	353	ePKPab	PKPab	07 27 20.0	+0.9
PCAS	Casmilo, Conde	155.13	353	ePP	PP	07 30 57.8	+3.2
PCBR	Castelo Branco	155.20	351	ePKPdf	PKPdf	07 26 54.8	+0.8
PCBR	Castelo Branco	155.20	351	ePKPab	PKPab	07 27 20.3	+0.9
PCBR	Castelo Branco	155.20	351	ePP	PP	07 30 58.4	+3.4
PTOM	Tomar	155.54	353	ePKPdf	PKPdf	07 26 55.7	+1.2
PTOM	Tomar	155.54	353	ePKPab	PKPab	07 27 21.9	+1.0
PMRV	Marv??o	155.59	351	ePKPdf	PKPdf	07 26 54.7	+0.1
PMRV	Marv??o	155.59	351	ePKPab	PKPab	07 27 22.2	+1.1
ALMR	Almeirim	156.02	353	ePKPdf	PKPdf	07 26 54.2	-0.9
ALMR	Almeirim	156.02	353	ePKPdf	PKPdf	07 26 56.6	+1.5
ALMR	Almeirim	156.02	353	ePKPab	PKPab	07 27 25.1	+2.2
PMTG	Montargil	156.06	352	ePKPdf	PKPdf	07 26 55.3	+0.1
PMTG	Montargil	156.06	352	ePKPab	PKPab	07 27 24.1	+1.0
PMTG	Montargil	156.06	352	ePP	PP	07 31 00.2	+0.4

LIS	Lisbon	156.52	354	ePKPdf	PKPdf	07 26 54.8	-1.0
LIS				ePP	PP	07 31 03.4	+1.2
PBEJ	Beja	157.03	351	ePKPdf	PKPdf	07 26 58.6	+2.1
PBEJ	Beja	157.03	351	ePKPab	PKPab	07 27 29.4	+2.1
PBEJ	Beja	157.03	351	ePP	PP	07 31 07.6	+2.4
PNCL	Nicolau / Gran	157.04	352	ePKPdf	PKPdf	07 26 56.6	+0.1
PNCL	Nicolau / Gran	157.04	352	ePKPab	PKPab	07 27 28.5	+1.2
PCVE	Castro Verde	157.45	351	ePKPdf	PKPdf	07 26 57.6	+0.6
PCVE	Castro Verde	157.45	351	ePKPab	PKPab	07 27 30.4	+1.3
PCVE	Castro Verde	157.45	351	ePP	PP	07 31 10.4	+3.0
PVAQ	Vaqueiros	157.62	350	ePKPdf	PKPdf	07 26 57.6	+0.4
PVAQ	Vaqueiros	157.62	350	ePKPab	PKPab	07 27 31.3	+1.5
PVAQ	Vaqueiros	157.62	350	ePP	PP	07 31 11.2	+2.8
LIJA	Lijar	157.62	345	ePKP	PKPdf	07 26 59.0	+1.6
PTEO	Sao Teotonio	157.63	352	ePKPab	PKPab	07 27 30.6	+0.7
PBDV	Barranco-do-Ve	157.81	351	ePKPdf	PKPdf	07 26 58.2	+0.7
PBDV	Barranco-do-Ve	157.81	351	ePKPab	PKPab	07 27 32.7	+2.0
PBDV	Barranco-do-Ve	157.81	351	ePP	PP	07 31 12.7	+3.2
MORF	Marmelete	157.85	352	ePKPdf	PKPdf	07 26 56.6	-1.0
MORF				ePP	PP	07 31 11.0	+1.3
MORF	Marmelete	157.85	352	ePKPdf	PKPdf	07 26 57.8	+0.2
MORF	Marmelete	157.85	352	ePKPab	PKPab	07 27 32.4	+1.5
MORF	Marmelete	157.85	352	ePP	PP	07 31 12.2	+2.5
PFVI	Vila Bisbo	158.05	352	ePKPdf	PKPdf	07 26 58.2	+0.4
PFVI	Vila Bisbo	158.05	352	ePKPab	PKPab	07 27 33.5	+1.8
PFVI	Vila Bisbo	158.05	352	ePP	PP	07 31 13.7	+3.0
SFS	San Fernando	158.23	346	ePKP	PKPdf	07 26 56.2	-1.8
MELI	Melilla	158.38	339	i PKP	PKPdf	07 26 58.5	+0.2
MELI	Melilla	158.38	339	i PKS	PP	07 31 12.3	-0.5
CEU	Ceuta	158.57	344	i PKS	PP	07 31 13.5	-0.2
TAF	Taforalt	158.62	337	P	PKPdf	07 27 01.2	+2.5
PVLZ	Peæn de	158.94	341	i PKP	PKPdf	07 26 57.0	-1.9
PVLZ	Peæn de	158.94	341	i PKS	PKSdf	07 30 49.8	+17
JBK	JBK	159.10	337	P	PKPdf	07 27 02.0	+2.6
JBK	JBK	159.10	337	P	PKPab	07 27 39.0	+2.3
TDRA	Tendrara	160.01	334	P	PKPdf	07 27 03.0	+2.5
LCRM	LCR	160.49	341	P	PKPdf	07 27 04.0	+3.0
LCRM	LCR	160.49	341	P	PKPdf	07 27 04.1	+3.1
IFR	Ifrane	160.73	341	i PKP	PKPdf	07 27 02.6	+1.4
IFR	Ifrane	160.73	341	i PKS	PP	07 31 24.4	-1.2
CZD	Col de Zad	161.15	341	P	PKPdf	07 27 05.0	+3.1
MDT	Midelt	161.21	339	PKP	PKPdf	07 27 01.8	+0.2
	comp=Z,7.6nm,1.1s,baz=104,slow=1.0,SNR=15						
MDT				PKPab	PKPab	07 27 46.8	+1.1
	comp=Z,8.0nm,0.8s,baz=36,slow=5.5,SNR=12						
MDT	Midelt	161.21	339	P	PKPdf	07 27 03.9	+2.2
MDT	Midelt	161.21	339	P	PKPab	07 27 49.0	+3.3
ZHG	ZHG	161.22	345	P	PKPdf	07 27 04.0	+2.4
ZHG	ZHG	161.22	345	P	PKPab	07 27 48.0	+2.3
PMPST	Porto Santo, M	161.96	11	ePKPdf	PKPdf	07 27 02.5	+0.2
PMPST	Porto Santo, M	161.96	11	ePKPab	PKPab	07 27 50.1	+1.2
PMOZ	Porto Moniz, M	162.03	13	ePKPdf	PKPdf	07 27 03.2	+0.7
PMAR	Madeira	162.19	13	ePKPdf	PKPdf	07 27 02.7	-0.1
ARF	Arif	162.31	336	P	PKPdf	07 27 05.1	+2.2
ARF	Arif	162.31	336	P	PKPab	07 27 53.1	+2.5
GOLM	Goulmima	162.34	339	P	PKPab	07 27 55.0	+4.2
SRHM	Skhour des Reh	162.45	347	P	PKPdf	07 27 05.0	+2.1
SRHM	Skhour des Reh	162.45	347	P	PKPab	07 27 53.0	+2.0
OUZM	OUZ	163.65	343	P	PKPdf	07 27 06.0	+1.8
OUZM	OUZ	163.65	343	P	PKPab	07 27 59.0	+2.5
OUZM	OUZ	163.65	343	P	PKPab	07 28 00.1	+3.6
OUK	Oukaimeden	163.66	346	P	PKPdf	07 27 07.0	+2.5
OUK	Oukaimeden	163.66	346	P	PKPab	07 27 60.0	+3.2
TOA0	Torodi Ar. Sit	166.19	263	ePKPdf	PKPdf	07 27 07.0	+0.4
TOA0	Torodi Ar. Sit	166.19	263	P	PKPdf	07 27 06.3	-0.3
	SNR=7.3						
TORD	Torodi Ar. Bea	166.19	263	PKP	PKPdf	07 27 06.0	-0.6
	comp=Z,13nm,0.9s,baz=356,slow=0.7,SNR=28						
TORD				PKPab	PKPab	07 28 08.1	-0.1
	comp=Z,5.1nm,0.7s,baz=111,slow=6.6,SNR=5.6						
KIC	Kosan Boka	168.36	221	ePKP1	PKPdf	07 27 06.7	-1.5
	comp=Z,250nm,1.9s						
KIC	Kosan Boka	168.36	221	eP	PKPab	07 28 17.8	+0.2
	comp=Z,117nm,1.2s						
LIC	Lamto	168.43	219	ePKP1	PKPdf	07 27 06.7	-1.6
	comp=Z,60nm,1.0s						
LIC	Lamto	168.43	219	eP	PKPab	07 28 18.1	+0.2
	comp=Z,142nm,1.1s						
DBIC	Dimbokro	168.67	221	PKP	PKPdf	07 27 07.7	-0.7
	comp=Z,16nm,1.1s,baz=217,slow=3.2,SNR=4.4						
DBIC				PKPab	PKPab	07 28 19.4	+0.5
	comp=Z,15nm,0.9s,baz=80,slow=2.7,SNR=5.4						
DBIC	Dimbokro	168.67	221	ePKPab	PKPab	07 28 19.7	+0.7
TIC	Toumodi	168.75	221	ePKP1	PKPdf	07 27 07.8	-0.7
TIC	Toumodi	168.75	221	eP	PKPab	07 28 19.6	+0.2

NNC 26 07:07:30.8±1.2, 41°.80N×78°.21E, h0km, mb3.6, mpv3.3, 6C, Error ellipse: s-maj=8.4km s-min=4.5km az=168.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	1.26	7	P	Pb	07 07 55.4	-0.3
	5.7nm,0.1s						
SATY				S	Sb	07 08 12.9	+0.4
	17nm,0.1s						
UZB	Uzynbulak	1.47	24	P	Pn	07 07 58.5	-0.3
	1.9nm,0.2s						
UZB				S	Sg	07 08 18.3	+0.2
	2.5nm,0.1s						
TNSS	Tian-Shan	1.55	323	P	Pn	07 07 59.7	-0.3
	10nm,0.2s						
TNSS				S	Sg	07 08 20.6	0.0
	5.8nm,0.4s						
MDOK	Medeo	1.61	328	Pg	Pn	07 08 00.7	0.0
	4.4nm,0.2s						
MDOK				Lg	Lg	07 08 22.0	
	3.0nm,0.2s						
KOTS	Kotyrbulak	1.64	331	P	Pn	07 08 01.5	+0.4
	6.6nm,0.2s						
KOTS				S	Sb	07 08 23.3	-0.2
	9.2nm,0.3s						
KURS	Kuram	1.68	359	P	Pb	07 08 02.9	+0.2
	3.0nm,0.3s						
KURS				S	Sg	07 08 25.9	+0.9
	6.1nm,0.3s						
IZV	Izvestkoviy	1.71	317	P	Pn	07 08 02.4	+0.4
	4.9nm,0.1s						
IZV				S	Sn	07 08 24.9	+0.2
	11nm,0.2s						
PDGK	Podgornoye	1.79	31	⇑Pg	Pn	07 08 02.1	-1.1
	1.5nm,0.3s						
PDGK				⇑Lg	Lg	07 08 28.5	
	4.7nm,0.6s						
MTBS	Maitube	1.87	316	P	Pn	07 08 05.0	+0.8
	7.9nm,0.3s						
MTBS				S	Sb	07 08 29.4	-0.5
	6.5nm,0.3s						
KST	Kastek	2.07	307	Pg	Pb	07 08 08.8	-0.7
	8.3nm,0.2s						
KST				Lg	Lg	07 08 35.9	
	6.0nm,0.4s						
KTBS	Karatobe	2.21	330	Pg	Pb	07 08 11.3	-0.5
	13nm,0.3s						
KTBS				Lg	Lg	07 08 40.3	
	13nm,0.6s						
TKM2	Tokmak 2	2.23	301	⇑Pg	Pb	07 08 11.4	-0.8
	3.8nm,0.3s						
TKM2				⇑Lg	Lg	07 08 41.8	
	9.0nm,0.5s						
CHKK	Chushkaly	2.24	337	Pg	Pb	07 08 11.8	-0.3
	33nm,0.3s						
CHKK				Lg	Lg	07 08 41.0	
	19nm,0.3s						
KTMS	Ketmen	2.28	43	Pg	Pb	07 08 12.9	-0.1
	6.2nm,0.2s						
KTMS				Lg	Lg	07 08 43.0	
	7.3nm,0.3s						
ARXS	Arharly	2.42	354	Pg	Pb	07 08 13.7	-1.7
	12nm,0.2s						
ARXS				Lg	Lg	07 08 44.2	
	10.0nm,0.5s						
KUU	Kurty	2.50	327	Pg	Pb	07 08 15.8	-0.8
	7.6nm,0.3s						
KUU				Lg	Lg	07 08 48.0	
	9.5nm,0.4s						
DJR	Jarkent	2.78	24	Pg	Pb	07 08 19.6	-1.8
	4.8nm,0.2s						
DJR				Lg	Lg	07 08 54.3	
	8.1nm,0.4s						
AAK	Ala-Archa	2.88	288	⇑Pg	Pb	07 08 22.2	-1.0
	2.4nm,0.7s						
AAK				⇑Lg	Lg	07 09 01.1	
	5.1nm,0.6s						

MEX 26 07:12:46.4±0.5, 18°.17N×103°.21W, h3km±4km, MD3.6, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.18	312	eP	Pg	07 12 49.7	-0.2
MMIG				i S	Sg	07 12 52.4	+0.2
EZ5V		1.36	344	eP	Pg	07 13 08.5	-4.0
EZ5V				i S	Sg	07 13 26.2	-3.9
CJM	Chamela	2.19	308	i P	Pn	07 13 20.4	-3.4
CJM				eS	Sn	07 13 47.8	-3.6

IDC 26 07:22:43.9±3.0, 32°.36S×178°.26W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/27, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=73.8km s-min=46.0km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.00	211	Pn	Pn	07 24 27.4	-0.3
	0.5nm,0.3s,baz=266,slow=5.2,SNR=7.2						
URZ				Sn	Sn	07 25 43.1	-4.9
	0.8nm,0.3s,baz=230,slow=23,SNR=7.3						
ASAR	Alice Springs	42.82	269	P	P	07 30 43.8	0.0
	0.2nm,0.5s,baz=109,slow=7.3,SNR=5.0						
WRA	Warramunga Arr	43.99	274	P	P	07 30 53.1	-0.2
	1.1nm,0.7s,baz=110,slow=8.6,SNR=13						
FINES	FINESS Array B	146.89	339	PKPbc	PKPbc	07 42 26.6	-0.8
	0.5nm,0.4s,baz=50,slow=4.3,SNR=6.8						

MAN 26 07:45:58.2, 5°.41N×124°.42E, h23km, mb5.5, ML4.5, MS4.8
DJA 26 07:46:01.4±0.2, 6°N±2°×12°5E±°, h10km, M5.1/19, mB5.7/6, mb4.8/19, MLv5.2/7, Mw(mB)5.2/6
MOS 26 07:46:01.1±1.2, 5°.71N×124°.64E, h35km, mb5.0/22, Error ellipse: s-maj=11.5km s-min=6.9km az=111.8
ISCJB 26 07:46:03.9±0.4, 5°.57N±0°.02×124°.67E±0°.03, h62km±3km, mb4.7/90, Error ellipse: s-maj=4.9km s-min=3.3km az=5.1
BJI 26 07:46:03.9±0.0, 5°.60N×124°.60E, h50km, mb4.8/30, mB5.2/21, Ms4.5/10, Ms7 4.3/10
NEIC 26 07:46:05.9±2.7, 5°.63N×124°.62E, h65km±6km, mb4.8/46, Error ellipse: s-maj=11.9km s-min=5.2km az=94.0
NEIC Felt [II PIVS] at Cotabato. Also felt at Polomolok.
IDC 26 07:46:06.9±1.7, 5°.65N×124°.60E, h75km±15km, mb3.9/22, mb1 3.9/22, mb1mx3.9/40, mbtmp4.2/22, MS4.0/8, Ms1 4.0/8, ms1mx3.7/39, Error ellipse: s-maj=17.6km s-min=10.9km az=91.0

ISC 26 07:46:03.2±1.1, 5°.66N±0°.03×124°.50E±0°.03, h32km±8km, n180, σ1s89/186, mb4.8/88, MS4.0/9, 9C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.61	46	eP	Pn	07 46 16.0	+0.1
SKMP	Bagumbayan, Su	0.86	3	eP	Pn	07 46 16.9	-2.2
SKMP				eS	Sb	07 46 27.2	-3.7
DDMP	Don Marcelino,	1.28	70	eP	Pn	07 46 24.1	-0.9
DDMP				eS	Sn	07 46 41.4	+0.3
KCP	Kidapawan	1.46	23	⇑eP	Pn	07 46 27.1	-0.4
KCP				eS	Sn	07 46 45.4	-0.3
CTBH	Cotabato--PC H	1.57	351	⇓eP	Pn	07 46 28.1	-0.8
CTBH				i S	Sn	07 46 49.4	+1.1
DMPH	Davao City--Mi	1.73	35	⇑eP	Pb	07 46 33.5	-1.0
DMPH				eS	Sb	07 46 59.3	+3.4
DAV	Davao City (W)	1.76	37	P	Pn	07 46 32.9	+1.3
	535nm,0.3s,baz=220,slow=2.6,SNR=78						
DAV				S	Sb	07 46 56.4	-0.3
	1µm,0.3s,baz=101,slow=9.6,SNR=10						
MATI	Mati	2.16	54	eP	Pn	07 46 36.9	-0.2
MATI				eS	Sn	07 47 03.0	+0.1
SGSI	Sangihe	2.21	152	P	Pn	07 46 36.6	-1.2
SGSI				S	Sn	07 47 02.2	-1.8
BUKP	Musuan	2.27	14	eP	Pn	07 46 39.1	+0.4
BUKP				eS	Sb	07 47 09.9	-1.6
PAGZ	Pagadian	2.44	333	eP	Pn	07 46 40.5	-0.5
PAGZ				eS	Sb	07 47 15.4	-0.9
ZCP	Zamboanga City	2.73	298	⇑iP	Pn	07 46 41.8	-3.0
ZCP				i S	Sn	07 47 13.7	-3.0
CGP	Cagayan de Oro	2.79	4	⇓eP	Pn	07 46 48.5	+2.9
CGP				eS	Sb	07 47 24.0	-2.0
DCPH	Dipolog City	3.12	339	⇑eP	Pb	07 46 55.1	-3.0
DCPH				eS	Sb	07 47 38.0	+2.2
BUTP	Butuan	3.47	19	eP	Pb	07 47 00.7	-3.4
BUTP				eS	Sb	07 47 49.5	+3.7
SNPH	Sibulan	3.87	341	eP	Pb	07 47 06.5	-4.4
SNPH				eS	Sb	07 47 58.4	+1.0
MSLP	Maasin	4.46	5	eP	Pb	07 47 18.8	-2.1
MSLP				eS	Sn	07 48 04.1	+4.6
TNTI	Ternate	5.63	149	P	Pb	07 47 36.6	-4.3
LUWI	Luwuk	6.88	195	ePn	Pn	07 47 43.1	+1.2
LUWI				eSn	Sn	07 48 60.0	+0.8
LUWI	Luwuk	6.88	195	P	Pn	07 47 42.7	+0.8
SANI	Sanana	7.80	169	P	Pn	07 47 52.6	-2.0
NLAI	Namlea	9.21	164	P	Pn	07 48 13.0	-1.0
	84nm,0.9s						
SIJI	Sorong	9.36	134	P	Pn	07 48 13.8	-2.2
	4.1nm,0.3s,baz=345,slow=20,SNR=4.5						
TTSI	Tana Toraja	9.83	209	P	Pn	07 48 21.5	-1.0
SPSI	Sidrap Palu	10.66	206	P	Pn	07 48 34.0	+0.1
BNSI	Bone	10.91	204	P	Pn	07 48 38.2	+0.9
FAKI	Fak Fak	11.51	138	ePn	Pn	07 48 45.1	-0.4
KAPI	Kappang	11.62	204	P	Pn	07 48 47.4	+0.5
	1.7nm,0.3s,baz=60,slow=8.1,SNR=3.7						
KAPI				LR	LR	07 53 50.4	
	comp=Z,832nm,18.3s,baz=300,slow=40						
SBUM	Sibu	12.66	256	ePn	Pn	07 49 03.9	+2.7
MMRI	Maumere	14.38	189	P	P	07 49 35.3	+4.0
KSM	Kuching	14.76	254	eP	P	07 49 38.0	+2.5
SOEI	Soe	15.31	181	ePn	Pn	07 49 38.6	+1.2
	162nm,1.5s						
SOEI	Soe	15.31	181	P	P	07 49 53.8	+12
BATI	Baumata	15.78	183	LR	LR	07 56 17.1	
	comp=Z,456nm,21.2s,baz=270,slow=39						
GENI	Genyem	17.66	117	P	P	07 50 09.3	+1.5
NGJI	Ngawi	18.35	225	P	Pn	07 50 19.8	+4.3
PWJI	Pagerwojo	18.58	223	P	Pn	07 50 27.2	+9.0
TPI	Tanjungpandan	18.79	244	P	Pn	07 50 21.5	+0.7
SMRI	Semarang	18.87	228	P	Pn	07 50 38.6	+17
WOJI	Wonogiri, Jawa	19.06	225	P	Pn	07 50 25.5	+1.5
PPBI	Pangkal Pinang	19.92	248	P	P	07 50 33.2	+0.6
KPJI	Karang Pucung	20.20	230	P	Pn	07 50 39.5	+1.9
LEM	Lembang	20.92	234	P	Pn	07 50 45.6	-0.7
	42nm,0.7s,baz=300,slow=20,SNR=3.2						
LEM				LR	LR	07 59 57.7	
	comp=Z,422nm,18.3s,baz=63,slow=40						
MYKOM	Kota Tinggi	20.96	260	eP	Pn	07 50 45.7	-0.8
	50nm,0.9s						
CBJI	Citeko	21.32	236	P	P	07 51 04.9	+17
JOW	Kunigami	21.36	9	P	P	07 50 49.8	+1.8
	3.9nm,0.8s,baz=185,slow=14,SNR=5.9						
JOW	Kunigami	21.36	9	eP	P	07 50 50.7	+2.7
	45nm,1.2s						
GUMO	Guam	21.55	67	eP	P	07 50 50.0	-0.2
	174nm,1.3s						
GUMO	Guam	21.55	67	eP	P	07 50 50.0	-0.2
GUMO				pmax	pmax		
	comp=Z,174nm,1.3s						
KLI	Kotabumi	22.23	242	P	P	07 51 07.5	+10
KLSI		22.26	243	P	P	07 50 59.9	+2.1
	comp=Z,56nm,1.1s						
PANO	Nakornpanom	22.57	302	P	P	07 51 03.5	+2.4
	comp=Z,0.7nm,1.3s						
MDSI	Maura Dua	22.66	244	P	P	07 51 03.7	+1.6
	comp=Z,24nm,1.1s						
LHSI	Lahat	22.97	246	P	P	07 51 21.9	+17
LWLI	Liwa	23.00	243	P	P	07 51 09.5	+3.7
ANA2	Anatahan	23.34	61	eP	P	07 51 08.8	-0.2
	comp=Z,102nm,0.9s						
IPM	Ipoh	23.41	268	eP	P	07 51 09.8	0.0
	comp=Z,22nm,0.9s						
KULM	Kulim	23.75	270	eP	P	07 51 13.7	+0.7
	comp=Z,108nm,1.3s						
SKLT	Songkhla	23.78	275	P	P	07 51 14.7	+1.4
	comp=Z,23nm,1.1s						
BKNI	Bangkinang	24.01	258	eP	P	07 51 17.0	+1.5
	comp=Z,165nm,1.2s						
MANU	Manus Island	24.08	108	eP	P	07 51 16.3	+0.1
	comp=Z,209nm,1.2s						
CHAI	Chaiyaphum	24.32	297	P	P	07 51 19.1	+0.8
	comp=Z,20µm,0.8s						
TRTT	Trang	24.73	276	P	P	07 51 24.2	+2.1
	comp=Z,23nm,1.0s						
PDSI	Padang	24.88	256	P	P	07 51 26.0	+2.6
	comp=Z,83nm,1.4s,comp=Z,4µm						
SLVN	Son La	25.32	310	eP	P	07 51 29.5	+2.1
	comp=Z,10nm,1.0s						
PBKT	Sadao Pong	25.48	297	P	P	07 51 30.5	+1.8
	comp=Z,8.2nm,1.1s						
PSI	Prapat	25.66	265	P	P	07 51 31.4	+0.7
	comp=Z,11nm,0.9s,baz=58,slow=4.0,SNR=8.5						
PSI	Prapat	25.66	265	eP	P	07 51 31.4	+0.7
	comp=Z,30nm,1.0s						
PSI	Prapat	25.66	265	eP	P	07 51 31.4	+0.7
PSI				pmax	pmax		
	comp=Z,30nm,1.0s						
KCSI	Kotacane, Aceh	26.73	267	P	P	07 51 40.8	+0.6
NJ2	Nanjing	26.78	349	eP	P	07 51 42.5	+2.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
PMG	Port Moresby	27.09	123	ceP	P	07 51 39.8	-3.6
PMG				pmax	pmax		
	comp=Z,177nm,1.2s						
WRAB	Tennant Creek	27.21	159	eP	P	07 51 44.3	-0.1
	comp=Z,20nm,0.9s						
WRAB	Tennant Creek	27.21	159	eP	P	07 51 44.3	-0.1
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s						
GSI	Gunungsitoli	27.22	262	eP	P	07 51 47.2	+2.6
	comp=Z,25nm,0.8s						
GSI	Gunungsitoli	27.22	262	P	P	07 51 59.4	+15
WR1	Warramunga Arr	27.22	159	eP	P	07 51 43.3	-1.2
WRA	Warramunga Arr	27.22	159	P	P	07 51 43.3	-1.2
	comp=Z,4.7nm,0.9s,baz=343,slow=11,SNR=23						
WB2	Warramunga Arr	27.22	159	eP	P	07 51 43.2	-1.3
	comp=Z,22nm,0.9s						
PSA00	Pilbara Seismi	27.45	189	eP	P	07 51 47.5	+1.1
	comp=Z,15nm,1.1s						
JNU	Nakatsue	27.96	11	P	P	07 51 51.2	+0.1
	comp=Z,9.1nm,1.1s,baz=221,slow=9.3,SNR=2.2						
JNU				LR	LR	08 01 42.8	
	comp=Z,473nm,21.9s,baz=182,slow=34						
CMAR	Chiang Mai Arr	27.99	299	P	P	07 51 51.7	+0.3
	comp=Z,0.7nm,0.4s,baz=118,slow=8.7,SNR=6.1						
KMI	Kunming	28.45	315	P	P	07 51 59.0	+3.2
KMI				pP	pwP	07 52 12.3	+2.9
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
AS31	Alice Springs	30.56	163	eP	P	07 52 14.7	+0.5
	comp=Z,2.3nm,0.9s						
ASAR	Alice Springs	30.56	163	P	P	07 52 12.8	-1.4
	comp=Z,1.3nm,0.5s,baz=340,slow=6.8,SNR=25						
ASAR				PcP	PcP	07 55 10.5	-2.2
	comp=Z,0.5nm,0.7s,baz=346,slow=2.6,SNR=3.1						
XAN	Xi'an	31.72	335	eP	P	07 52 24.3	-0.1
	comp=Z,11nm,0.9s						
XAN	Xi'an	31.72	335	P	P	07 52 27.0	+2.6
XAN	Xi'an	31.72	335	eP	P	07 52 24.3	-0.1
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
KS15	Wonju Array Si	31.79	5	eP	P	07 52 24.1	-0.7
	comp=Z,13nm,1.3s						
CD2	Chengdu	31.79	325	P	P	07 52 25.5	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KSRS	Korea Array	31.80	5	P	P	07 52 24.1	-0.8
	comp=Z,1.0nm,0.6s,baz=177,slow=10,SNR=3.0						
KSRS				LR	LR	08 07 52.5	
	comp=Z,221nm,18.7s,baz=198,slow=41						
MAJO	Matsushiro	33.21	20	eP	P	07 52 35.7	-1.6
	comp=Z,8.1nm,0.7s						
MAJO	Matsushiro	33.21	20	⇑eP	P	07 52 36.5	-0.8
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAT	Matsushiro	33.21	20	P	P	07 52 36.2	-1.1
MJAR	Matsushiro Arr	33.21	20	P	P	07 52 34.8	-2.5
	comp=Z,4.9nm,1.0s,baz=196,slow=9.5,SNR=7.9						
MJAR				LR	LR	08 07 55.0	
	comp=Z,202nm,18.0s,baz=195,slow=39						
LZH	Lanzhou	35.74	331	eP	P	07 53 03.3	+3.9
LZH				pP	pwP	07 53 16.0	+2.9
LZH				sP	sP	07 53 20.3	+10
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				LR	LR		
	comp=Z,270nm,15.2s						
LZH				LR	LR		
	comp=Z,620nm,16.8s						
LZH				LR	LR		
	comp=Z,690nm,19.0s						
HHC	Hu-ho-hao-te	36.91	344	P	P	07 53 12.0	+2.7
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,350nm,6.0s						
SHL	Shillong	36.95	306	P	P	07 53 11.1	+1.1
SHL				pmax	pmax		
	comp=Z,67nm,1.0s						
CN2	Changchun	38.00	1	eP	P	07 53 20.3	+2.0
USRK	Ussuriysk Ar.	38.95	9	P	P	07 53 26.9	+0.6
	comp=Z,1.8nm,0.7s,baz=174,slow=5.7,SNR=5.6						
USRK				LR	LR	08 08 43.1	
	comp=Z,217nm,21.7s,baz=208,slow=35						
BBOO	Buckleboo	39.80	165	eP	P	07 53 33.5	0.0
	comp=Z,29nm,1.2s						
GTA	Gaotai	40.32	330	eP	P	07 53 49.8	+12
GTA				pP	pwP	07 53 54.3	+2.6
GTA				sP	sP	07 53 56.8	+7.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,370nm,5.1s						
GTA				LR	LR		
	comp=N,270nm,17.1s						
GTA				LR	LR		
	comp=E,210nm,17.8s						
GTA				LR	LR		
	comp=Z,440nm,17.1s						
STKA	Stephens Creek	40.73	157	P	P	07 53 40.3	-1.0
	comp=Z,3.4nm,0.6s,baz=335,slow=8.1,SNR=9.3						
STKA	Stephens Creek	40.73	157	eP	P	07 53 40.4	-0.9
	comp=Z,2.6nm,0.9s						
STKA	Stephens Creek	40.73	157	eP	P	07 53 40.4	-0.9
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLR	Kul'dur	43.85	7	P	P	07 54 06.8	+0.3
	comp=Z,0.7nm,0.7s,baz=202,slow=11,SNR=3.2						
KLR				LR	LR	08 11 06.2	
	comp=Z,292nm,21.8s,baz=206,slow=34						
KLR	Kul'dur	43.85	7	⇓eP	P	07 54 05.8	-0.7
SONM	Songino Array	44.79	343	P	P	07 54 13.7	-0.4
	comp=Z,1.9nm,1.0s,baz=161,slow=7.8,SNR=5.3						
CAN	Canberra	46.83	152	eP	P	07 54 31.6	+1.3
	comp=Z,13nm,1.0s						
CAN	Canberra	46.83	152	eP	P	07 54 31.6	+1.3
CAN				pmax	pmax		
	comp=Z,13nm,1.0s						
WMQ	Urumqi	49.88	325	eP	P	07 54 56.5	+2.7
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,300nm,11.9s						
WMQ				LR	LR		
	comp=Z,1µm,28.8s						
WMQ				LR	LR		
	comp=Z,980nm,28.9s						
WMQ				LR	LR		
	comp=Z,240nm,28.9s						
DGZ	Jazzator, Alta	53.84	331	⇓eP	P	07 55 22.3	-1.0
PDGK	Podgornoye	54.52	321	P	P	07 55 30.7	+2.3
PDGK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PETK	Petropavlovsk-	54.53	24	P	P	07 55 27.3	-0.8
	comp=Z,6.2nm,0.8s,baz=165,slow=3.7,SNR=9.7						
PEA1	Petropavlovsk-	54.54	24	eP	P	07 55 27.3	-0.8
MK31	Makanchi Array	54.72	326	eP	P	07 55 29.2	-0.4
	comp=Z,4.7nm,0.8s						
MK31	Makanchi Array	54.72	326	eP	P	07 55 29.2	-0.4
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	54.72	326	P	P	07 55 29.3	-0.3
	comp=Z,1.1nm,0.7s,baz=117,slow=7.8,SNR=9.0						
KSH	Kashi	55.12	315	eP	P	07 55 36.5	+3.7
KSH				pP	pwP	07 55 49.5	+2.4
KSH				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KSH				pmax	pmax		

	comp=Z,99nm,4.9s						
KDJ	Kajisay	55.44	318	eP	P	07 55 36.4	+1.3
	comp=Z,8.8nm,0.9s						
KDJ	Kajisay	55.44	318	eP	P	07 55 36.4	+1.3
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MA2	Magadan	57.42	16	⇓eP	P	07 55 48.2	-0.4
MA2				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AAK	Ala-Archa	57.45	318	⇑eP	P	07 55 48.5	-0.9
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZALV	Zalesovo Beam	57.88	334	P	P	07 55 51.1	-0.8
	comp=Z,0.7nm,0.3s,baz=145,slow=5.3,SNR=2.4						
ZAA1	Zalesovo Array	57.88	334	eP	P	07 55 51.1	-0.8
KURBB	Kurchatov Arra	58.93	328	P	P	07 55 58.2	-1.2
	baz=128,slow=5.4						
KURK	Kurchatov	58.93	328	eP	P	07 55 59.0	-0.3
	comp=Z,19nm,1.1s						
KURK	Kurchatov	58.93	328	eP	P	07 55 59.1	-0.3
KURK				pmax	pmax		
	comp=Z,19nm,1.1s						
GAR	Garm	58.99	313	eP	P	07 56 01.2	+1.0
	comp=Z,14nm,0.8s						
GAR	Garm	58.99	313	eP	P	07 56 01.2	+1.0
GAR				pmax	pmax		
	comp=Z,14nm,0.8s						
KK31	Karatay Array	60.32	317	eP	P	07 56 09.5	+0.4
	comp=Z,6.5nm,0.9s						
KK31	Karatay Array	60.32	317	eP	P	07 56 09.5	+0.4
KK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KKAR	Karatay Array	60.32	317	eP	P	07 56 09.7	+0.6
	comp=Z,6.5nm,0.9s						
KKAR	Karatay Array	60.32	317	eP	P	07 56 09.7	+0.6
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SEY	Seymchan	60.69	14	⇓eP	P	07 56 10.6	-0.6
QRZ	Quartz Range	63.81	141	eP	P	07 56 30.2	-2.3
	comp=Z,112nm,1.5s						
BRVK	Borovoye	64.58	327	eP	P	07 56 36.8	-0.6
	comp=Z,17nm,1.2s						
BRVK	Borovoye	64.58	327	eP	P	07 56 36.8	-0.6
BRVK				pmax	pmax		
	comp=Z,17nm,1.2s						
BILL	Bilibino	68.29	16	i P	P	07 56 59.9	-0.9
BILL				i		07 57 26.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	69.26	321	eP	P	07 57 06.7	-0.6
	comp=Z,4.5nm,0.9s						
ARU	Arti	72.13	328	d iP	P	07 57 34.4	+10
ARU				pmax	pmax		
	comp=Z,15nm,1.4s						
ZEI	Tsey	79.28	312	eP	P	07 58 05.5	-0.6
PRGR	Permogore	79.76	332	eP	P	07 58 11.5	+3.5
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KIV	Kislovodsk	80.21	313	eP	P	07 58 09.0	-1.9
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
CAST	Castle Rocks	82.02	27	eP	P	07 58 18.3	-1.8
	comp=Z,9.3nm,0.9s						
BPAW	Bear Paw Mtn.	82.54	26	eP	P	07 58 20.5	-2.3
	comp=Z,15nm,1.1s						
KTH	Kantishna Hill	82.55	27	eP	P	07 58 21.7	-1.2
	comp=Z,12nm,1.1s						
KLMR	Klimovskoe	82.65	331	eP	P	07 58 20.3	-3.0
KLMR				pmax	pmax		
	comp=Z,28nm,1.2s						
MLY	Manley	82.69	25	eP	P	07 58 22.8	-0.8
	comp=Z,8.8nm,1.0s						
MCK	McKinley	83.44	27	eP	P	07 58 25.0	-2.5
	comp=Z,21nm,1.2s						
MCK	McKinley	83.44	27	eP	P	07 58 25.0	-2.5
MCK				pmax	pmax		
	comp=Z,21nm,1.2s						
RND	Reindeer	83.47	27	eP	P	07 58 26.8	-0.9
	comp=Z,16nm,1.2s						
RND	Reindeer	83.47	27	eP	P	07 58 26.8	-0.9
RND				pmax	pmax		
	comp=Z,16nm,1.2s						
KNK	Knik Glacier	83.65	29	eP	P	07 58 27.1	-1.5
	comp=Z,29nm,1.3s						
WRH	Wood River Hil	83.81	26	eP	P	07 58 26.8	-2.5
	comp=Z,21nm,1.2s						
COLA	College	83.91	25	⇑eP	P	07 58 27.9	-1.9
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CCB	Clear Creek Bu	83.94	26	eP	P	07 58 27.7	-2.2
	comp=Z,14nm,1.2s						
ANN	Anapa	83.97	314	eP	P	07 58 30.8	+0.3
ANN				eS	S	08 08 48.6	-3.9
ANN				pmax	pmax		
	comp=Z,88nm,1.7s						
OBN	Obninsk	84.22	325	i P	P	07 58 30.6	-0.9
OBN				i		07 58 38.2	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HDA	Harding Lake	84.31	26	eP	P	07 58 29.5	-2.3
	comp=Z,8.1nm,0.9s						
GLI	Glacier Island	84.32	29	eP	P	07 58 29.6	-2.3
	comp=Z,15nm,0.9s						
ILAR	Eielson Array	84.33	26	P	P	07 58 29.9	-2.1
	comp=Z,1.1nm,0.8s,baz=254,slow=5.3,SNR=10.0						
ILB	Eielson Array	84.33	26	eP	P	07 58 29.7	-2.2
	comp=Z,12nm,1.4s						
MAW	Mawson	84.80	200	P	P	07 58 34.3	+0.2
	comp=Z,0.4nm,0.4s,baz=348,slow=8.6,SNR=2.1						
RIDG	Independent Ri	85.26	27	eP	P	07 58 34.7	-2.0
	comp=Z,15nm,1.1s						
BR101	Keskin Array S	87.09	309	eP	P	07 58 44.2	-2.2
BRTR	Keskin Array B	87.09	309	P	P	07 58 44.2	-2.2
	comp=Z,0.6nm,0.5s,baz=108,slow=6.6,SNR=3.7						
AKASG	Malin Array Be	89.00	321	P	P	07 58 52.4	-2.6
	comp=Z,0.4nm,0.3s,baz=68,slow=5.1,SNR=4.2						
AKASG	Malin Array Be	89.00	321	ceP	P	07 58 56.0	+1.0
AKBB	Malin Array Si	89.00	321	eP	P	07 58 52.4	-2.6
	comp=Z,1.9nm,0.8s						
AKBB	Malin Array Si	89.00	321	eP	P	07 58 52.4	-2.6
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FIA0	FINESS Array S	89.09	332	eP	P	07 58 52.5	-2.7
FIA0	FINESS Array S	89.09	332	eP	P	07 58 52.5	-2.7
FINES	FINESS Array B	89.09	332	P	P	07 58 52.5	-2.7
	comp=Z,1.9nm,0.9s,baz=101,slow=9.9,SNR=6.0						
VYHS	Vyhne	96.06	320	eP	P	07 59 29.4	+1.6
VYHS	Vyhne	96.06	320	eP	P	07 59 29.4	+1.6
NB200	NORSAR Array S	96.08	333	eP	P	07 59 24.5	-3.1
NOA	NORSAR Array B	96.08	333	P	P	07 59 24.5	-3.1
	comp=Z,0.4nm,0.8s,baz=65,slow=4.5,SNR=2.0						
TORD	Torodi Ar. Bea	120.21	289	PKP	PKPdf	08 04 50.7	-1.5
	comp=Z,0.3nm,0.8s,baz=51,slow=2.0,SNR=2.5						
TOA1	Torodi Ar. Sit	120.21	289	ePKPdf	PKPdf	08 04 50.7	-1.5

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*IDC **26** 07:47:34.2±4.6, 36°.25N×70°.51E, h170^{km}±40^{km}, mb3.6/9, mb1 3.7/12, mb1mx3.3/52, mbtmp4.1/12, Error ellipse: s-maj=31.3km s-min=17.7km az=26.0*

*NNC **26** 07:47:36.4±3.9, 36°.90N×70°.25E, h0^{km}, mb4.4, mpv4.3, Error ellipse: s-maj=33.2km s-min=26.9km az=165.0*

*MOS **26** 07:47:37.7±0.8, 36°.52N×70°.42E, h217^{km}, mb4.0/7, Error ellipse: s-maj=14.0km s-min=5.6km az=76.7*

*ISCJB **26** 07:47:37.6±0.3, 36°.52N±0°.02×70°.41E±0°.05, h204^{km}, mb3.8/18, Error ellipse: s-maj=6.1km s-min=3.5km az=0.9*

*BJI **26** 07:47:38.4±0.0, 36°.50N×70°.50E, h202^{km}, mb4.3/2, mB4.0/1*

*NEIC **26** 07:47:38.9±2.4, 36°.54N×70°.46E, h202^{km}±4^{km}, mb4.0/12, Error ellipse: s-maj=14.1km s-min=8.3km az=79.0*

ISC 26 07:47:38.9±0.6, **36°.51N**±0°.05×**70°.50E**±0°.06, **h204^{km}, n93, σ1^{s}59**/105, **mb4.0**/18, **8C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.30	212	ePn	Pn	07 48 20.6	-0.5
KBL				eSn	S	07 48 51.0	-2.4
KBL	Kabul	2.30	212	ePN	Pn	07 48 20.6	-0.5
KBL				e		07 48 51.0	
GAR	Garm	2.49	357	ePn	Pn	07 48 22.8	-0.2
GAR				eSn	S	07 48 55.3	-1.7
GAR	Garm	2.49	357	ePN	Pn	07 48 22.8	-0.2
GAR				e		07 48 55.3	
CEP	Cherat	2.92	156	⇑P	Pn	07 48 28.6	+0.6
CEP				S	S	07 49 05.0	-0.7
BTK	Batken	3.55	4	ePn	Pn	07 48 36.1	+0.9
BTK				eSn	S	07 49 19.9	+0.8
BTK	Batken	3.55	4	ePN	Pn	07 48 36.2	+0.9
BTK				e		07 49 19.9	
CHCP	Chirah Chowk	3.64	141	P	Pn	07 48 37.7	+1.3
NIL	Nilore	3.64	141	ePn	Pn	07 48 37.6	+1.2
NIL				eSn	S	07 49 21.1	+0.1
NIL	Nilore	3.64	141	ePN	Pn	07 48 37.6	+1.2
NIL				e		07 49 21.1	
THW	Thamme Wali	3.85	164	P	Pn	07 48 39.1	+0.1
SARP	Sargodha	4.92	158	P	Pn	07 48 51.9	-0.5
ARSB	Arslanbob	5.18	21	ePn	Pn	07 48 55.1	-0.6
KSH	Kashi	5.26	54	P	Pn	07 48 52.8	-3.9
KSH				S	S	07 49 46.5	-11
KSH				smax	smax		
	comp=N,97nm,0.4s						
KSH				smax	smax		
	comp=E,74nm,0.4s						
AML	Almayashu	6.13	23	P	Pn	07 49 08.1	0.0
	SNR=247						
UCH	Uchtor	6.50	27	P	Pn	07 49 13.1	+0.1
	SNR=67						
NRN	Naryn	6.52	39	ePn	Pn	07 49 11.9	-1.2
NRN	Naryn	6.52	39	ePN	Pn	07 49 11.9	-1.2
KK31	Karatay Array	6.58	0	eSn	S	07 50 25.1	-3.5
KK31	Karatay Array	6.58	0	⇓Pn	Pn	07 49 09.7	-3.9
	2.1nm,0.2s,baz=189,slow=13,SNR=75						
KK31				⇓Pg		07 49 27.8	
	8.3nm,0.6s,baz=183,slow=14,SNR=3.8						
KK31				⇑Sn	S	07 50 23.4	-5.3
	6.2nm,0.4s,baz=183,slow=23,SNR=6.2						
KK31	Karatay Array	6.58	0	PN	Pn	07 49 12.9	-0.7
KK31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KKAR	Karatay Array	6.58	0	eSn	S	07 50 25.1	-3.6
EKS2	Erkin-Say	6.64	21	P	Pn	07 49 14.8	+0.3
	SNR=26						
KZA	Kyzart	6.67	32	P	Pn	07 49 14.8	-0.3
	SNR=20						
AAK	Ala-Archa	6.85	26	P	Pn	07 49 17.2	0.0
	comp=Z,6.4nm,0.3s,baz=193,slow=5.4,SNR=31						
AAK				S	S	07 50 32.1	-3.1
	comp=Z,2.2nm,0.3s,baz=354,slow=20,SNR=12						
AAK	Ala-Archa	6.85	26	ePn	Pn	07 49 17.4	+0.2
AAK				eSn	S	07 50 35.0	-0.2
AAK	Ala-Archa	6.85	26	⇑Pn	Pn	07 49 16.7	-0.5
	comp=Z,20nm,0.6s						
AAK				⇓Sn	S	07 50 31.5	-3.6
	comp=Z,22nm,0.6s						
AAK	Ala-Archa	6.85	26	ePN	Pn	07 49 17.4	+0.2
AAK				e		07 50 35.0	
AAK	Ala-Archa	6.85	26	P	Pn	07 49 17.6	+0.4
	SNR=6.5						
KBK	Karagaybulak	7.03	28	P	Pn	07 49 20.3	+0.7
	SNR=13						
FRU1	Bishkek	7.05	26	ePn	Pn	07 49 20.3	+0.6
FRU1				eSn	S	07 50 40.0	+0.3
FRU1	Bishkek	7.05	26	ePN	Pn	07 49 20.3	+0.6
FRU1				e		07 50 40.0	
ULHL	Ulahol	7.25	36	P	Pn	07 49 22.3	-0.1
	SNR=13						
CHMS	Chumysh	7.26	25	P	Pn	07 49 22.6	+0.3
	SNR=12						
BOOM	Boomskoye usch	7.30	33	ePn	Pn	07 49 23.0	-0.1
BOOM	Boomskoye usch	7.30	33	ePN	Pn	07 49 23.0	-0.1
USP	Ospenovka	7.41	23	P	Pn	07 49 24.1	-0.3
	SNR=14						
TKM2	Tokmak 2	7.51	30	⇓Pn	Pn	07 49 25.7	-0.1
	comp=Z,49nm,0.5s						
TKM2				⇑Sn	S	07 50 46.6	-4.2
	comp=Z,9.3nm,0.8s						
TKM2	Tokmak 2	7.51	30	PN	Pn	07 49 25.7	-0.1
TKM2				pmax	pmax		
	comp=Z,49nm,0.5s						
TKM2	Tokmak 2	7.51	30	P	Pn	07 49 25.9	+0.1
	SNR=56						
KDJ	Kajisay	7.63	41	ePn	Pn	07 49 27.4	+0.1
KDJ	Kajisay	7.63	41	ePN	Pn	07 49 27.5	+0.1
PRZ	Przheval'sk	8.53	43	ePn	Pn	07 49 39.9	+0.8
PRZ	Przheval'sk	8.53	43	ePN	Pn	07 49 39.9	+0.8
PDGK	Podgornoye	9.69	43	⇑Pn	Pn	07 49 53.5	-0.6
	comp=Z,4.2nm,0.6s						
PDGK	Podgornoye	9.69	43	P	Pn	07 49 53.4	-0.6
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OTUK	Ortayu	11.80	6	⇓Pn	Pn	07 50 20.2	-0.8
	comp=Z,1.1nm,0.5s						
OTUK	Ortayu	11.80	6	P	Pn	07 50 19.7	-1.3
OTUK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MAKZ	Makanchi	13.38	36	ePn	Pn	07 50 40.6	-0.2
MAKZ	Makanchi	13.38	36	eP	Pn	07 50 40.6	-0.2
MK31	Makanchi Array	13.52	37	ePn	Pn	07 50 42.1	-0.4
MK31	Makanchi Array	13.52	37	⇑Pn	P	07 50 45.8	+0.8
	comp=Z,1.3nm,0.6s,baz=223,slow=12,SNR=13						
MK31	Makanchi Array	13.52	37	eP	Pn	07 50 42.4	-0.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	13.52	37	P	Pn	07 50 43.3	+0.8
	comp=Z,0.4nm,0.3s,baz=221,slow=12,SNR=11						
MKAR	Makanchi Array	13.52	37	i P	Pn	07 50 40.9	-1.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AB31	Akbulak array	14.88	332	⇑Pn	P	07 51 01.5	+1.6
	comp=Z,1.9nm,0.4s,baz=147,slow=10,SNR=82						
AB31	Akbulak array	14.88	332	P	Pn	07 50 57.5	-1.8
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ABKAR	Akbulak array	14.88	332	ePn	Pn	07 50 57.5	-1.7
WMQ	Urumqi	15.02	56	eP	P	07 51 02.5	+0.8
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				LR	LR		
	comp=Z,360nm,20.3s						
WMQ				LR	LR		
	comp=Z,360nm,20.3s						
WMQ				LR	LR		
	comp=Z,1µm,28.5s						
KURBB	Kurchatov Arra	15.24	20	P	Pn	07 51 02.9	-0.7
	comp=Z,0.1nm,0.3s,baz=208,slow=10.0,SNR=4.9						
KURK	Kurchatov	15.35	20	eP	P	07 51 05.3	+0.2
	comp=Z,1.6nm,1.0s						
KURK	Kurchatov	15.35	20	eP	P	07 51 05.3	+0.2
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	16.51	360	P	Pn	07 51 18.6	-0.2
	comp=Z,0.4nm,0.3s,baz=188,slow=9.0,SNR=7.7						
BRVK	Borovoye	16.55	360	eP	P	07 51 17.1	-1.2
	comp=Z,2.9nm,0.6s						
BRVK	Borovoye	16.55	360	eP	P	07 51 17.1	-1.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	16.57	331	P	Pn	07 51 19.0	-0.6
	comp=Z,1.5nm,0.3s,baz=141,slow=10,SNR=43						
AKTO	Aktyubinsk	16.57	331	⇓Pn	Pn	07 51 23.6	+3.9
	comp=Z,14nm,0.8s						
AKTO	Aktyubinsk	16.57	331	P	Pn	07 51 19.0	-0.6
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAA0	Zalesovo Array	20.07	25	eP	P	07 51 57.2	+0.7
	comp=Z,3.3nm,0.9s						
ZAA0				ePcP	PcP	07 56 02.4	-0.2
ZALV	Zalesovo Beam	20.07	25	P	P	07 51 56.9	+0.5
	comp=Z,2.2nm,0.3s,baz=222,slow=9.8,SNR=7.3						
ARU	Arti	21.49	342	P	P	07 52 12.6	+1.2
	comp=Z,2.9nm,0.2s,baz=157,slow=7.8,SNR=8.7						
ARU	Arti	21.49	342	eP	P	07 52 13.3	+1.9
	comp=Z,6.5nm,0.7s						
ARU	Arti	21.49	342	c iP	P	07 52 12.8	+1.4
ARU				S	S	07 56 00.7	+4.7
ARU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI	Kunming	29.79	103	P	P	07 53 30.5	+3.6
KLMR	Klimovskoe	31.27	331	eP	P	07 53 37.7	-1.6
KLMR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC	Hu-ho-hao-te	32.13	70	eP	P	07 53 53.5	+6.3
FIA1	FINESS Array S	37.25	326	eP	P	07 54 30.7	+0.2
	comp=Z,3.8nm,0.9s						
FINES	FINESS Array B	37.25	326	P	P	07 54 31.2	+0.7
	comp=Z,2.3nm,0.7s,baz=101,slow=9.9,SNR=12						
ARCES	ARCESS Array B	40.98	338	P	P	07 55 02.2	+0.9
	comp=Z,3.1nm,0.6s,baz=112,slow=8.5,SNR=25						
ARE0	ARCESS Array S	40.98	338	eP	P	07 55 01.9	+0.6
	comp=Z,0.7nm,1.5s						
NC303	NORSAR Array S	44.07	323	eP	P	07 55 27.9	+1.6
	comp=Z,1.8nm,0.8s						
NB201	NORSAR Array S	44.09	323	eP	P	07 55 27.4	+0.9
	comp=Z,9.9nm,1.5s						
NB2	NORSAR Subarra	44.13	323	P	P	07 55 26.3	-0.5
	comp=Z,0.7nm,0.6s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.13	323	P	P	07 55 26.3	-0.5
	comp=Z,1.2nm,0.7s,baz=97,slow=7.8,SNR=9.7						
YAK	Yakutsk	44.19	36	eP	P	07 55 25.4	-1.8
YAK				pmax	pmax		
	comp=Z,12nm,0.5s						
NC204	NORSAR Array S	44.37	323	eP	P	07 55 30.0	+1.3
	comp=Z,3.9nm,1.1s						
SPA0	Spitsbergen Ar	47.39	347	eP	P	07 55 54.0	+2.0
	comp=Z,7.2nm,1.0s						
PETK	Petropavlovsk-	60.24	44	P	P	07 57 25.4	+0.1
	comp=Z,1.9nm,1.0s,baz=275,slow=6.9,SNR=2.4						
TOA0	Torodi Ar. Sit	65.32	268	eP	P	07 57 57.0	-2.3
	comp=Z,5.0nm,1.3s						
TORD	Torodi Ar. Bea	65.32	268	P	P	07 57 58.0	-1.4
	comp=Z,0.5nm,0.6s,baz=50,slow=6.0,SNR=7.8						
WRA	Warramunga Arr	82.34	122	P	P	07 59 36.5	-1.5
	comp=Z,1.2nm,0.9s,baz=314,slow=5.5,SNR=3.9						
WB2	Warramunga Arr	82.35	122	eP	P	07 59 37.1	-0.9
	comp=Z,12nm,1.5s						
ASAR	Alice Springs	84.59	125	P	P	07 59 47.7	-1.7
	comp=Z,0.4nm,0.6s,baz=316,slow=5.0,SNR=5.8						

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*JMA **26** 07:57:18.1±0.2, 46°.81N×141°.62E, h0^{km}, M3.0*

*SKHL **26** 07:57:19.6±0.8, 46°.76N×141°.75E, h10^{km}, mb3.8/2*

ISC 26 07:57:17.9±3.5, **46°.8N**±0°.2×**141°.6E**±0°.2, **h9^{km}, n3, σ0^{s}46**/6, **Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.81	81	ePg	Pb	07 57 34.4	+0.3
YSS				AMB	AMB	07 57 35.7	
	40nm,0.3s						
YSS				eSg	Sg	07 57 43.5	-0.6
YSS				A	A	07 57 44.6	
	100nm,0.4s						
YSS				A	A	07 57 44.6	
	120nm,0.4s						
JRBN	Rebuntou	1.46	195	P	Pb	07 57 45.1	-0.1
JRBN				eS	Sb	07 58 04.0	+0.2
JWK2	Keihoku	1.54	172	P	Pb	07 57 46.4	-0.1
JWK2				eS	Sb	07 58 06.5	+0.5

IDC 26 08:01:23.9±2.8, **46°.37N**×**108°.51E, h0^{km}, mb4.2**/1, **mb1 4.5**/1, **mb1mx3.1**/44, **mbtmp4.2**/1, **ML1.4**/1, **Error ellipse: s-maj=34.0km s-min=22.1km az=25.0, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	2.03	316	i		08 14 20.0	
	baz=135,slow=319,SNR=2.4						
SONM	Songino Array	2.06	316	Pn	Pn	08 01 60.0	+0.1
	0.1nm,0.3s,baz=135,slow=15,SNR=8.1						
SONM				Lg	Lg	08 02 29.3	
	0.6nm,0.3s,baz=133,slow=30,SNR=8.1						
YKA	Yellowknife Ar	66.15	20	P	P	08 12 12.6	0.0
	1.6nm,0.8s,baz=330,slow=5.9,SNR=3.7						

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*IDC **26** 08:08:50.4±1.1, 5°.58N×124°.44E, h0^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.7/37, mbtmp3.9/6, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.9/41, Error ellipse: s-maj=29.2km s-min=13.3km az=109.0*

*MAN **26** 08:08:52.7, 5°.57N×124°.43E, h25^{km}, MS3.5*

*ISCJB **26** 08:08:54.4±0.7, 5°.56N±0°.04×124°.43E±0°.06, h41^{km}±9^{km}, mb4.1/9, MS3.4/1, Error ellipse: s-maj=10.5km s-min=5.6km az=166.9*

*DJA **26** 08:08:54.5±1.8, 6°N±3°×12°4E±°, h22^{km}±16^{km}, M4.7/6, mb4.9/3, mB5.2/3, MLv4.6/6, Mw(mB)4.5/3*

*NEIC **26** 08:08:57.5±1.9, 5°.64N×124°.55E, h48^{km}±7^{km}, mb4.4/6, Error ellipse: s-maj=17.8km s-min=11.4km az=104.0*

ISC 26 08:08:54.5±0.8, **5°.59N**±0°.04×**124°.44E**±0°.05, **h22^{km}**±8^{km}, **n34, σ1^{s}79**/40, **mb4.1**/9, **2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.70	46	eP	Pb	08 09 10.1	+1.9
SKMP	Bagumbayan, Su	0.93	6	eP	Pb	08 09 09.0	-2.9
SKMP				eS	Sb	08 09 20.3	-3.5
DDMP	Don Marcelino,	1.36	68	eP	Pn	08 09 16.8	-1.5
DDMP				eS	Sn	08 09 34.5	-1.2
CTBH	Cotabato--PC H	1.63	353	⇑eP	Pn	08 09 20.6	-1.2
CTBH				i S	Sn	08 09 41.8	-0.4
DMPH	Davao City--Mi	1.82	36	⇓iP	Pn	08 09 26.8	+2.3
DMPH				i S	Sb	08 09 51.9	+2.3
DAV	Davao City (W)	1.85	38	Pn	Pn	08 09 25.7	+0.7
	290nm,0.3s,baz=93,slow=1.9,SNR=23						
DAV				Lg	Lg	08 09 49.3	
	398nm,0.3s,baz=100,slow=13,SNR=6.9						
DAV	Davao City (W)	1.85	38	ePn	Pn	08 09 25.8	+0.8
SGSI	Sangihe	2.19	150	P	Pn	08 09 29.5	0.0
SGSI				S	Sn	08 09 54.8	-1.1
MATI	Mati	2.25	53	eP	Pn	08 09 28.4	-2.0
MATI				eS	Sn	08 09 56.6	-1.0
BUKP	Musuan	2.35	15	eP	Pn	08 09 31.8	-0.1
BUKP				eS	Sn	08 10 02.6	+2.5
PAGZ	Pagadian	2.47	335	eP	Pn	08 09 32.2	-1.3
CGP	Cagayan de Oro	2.85	5	eP	Pn	08 09 41.5	+2.7
DCPH	Dipolog City	3.16	340	⇑eP	Pb	08 09 49.5	-0.5
DCPH				eS	Sb	08 10 31.1	+3.0
TNTI	Ternate	5.61	149	ePn	Pn	08 10 17.9	+1.2
TNTI	Ternate	5.61	149	P	Pn	08 10 15.8	-0.9
LUWI	Luwuk	6.80	194	ePn	Pn	08 10 35.2	+2.2
LUWI	Luwuk	6.80	194	P	Pn	08 10 31.5	-1.5
TTSI	Tana Toraja	9.74	208	P	Pn	08 11 19.7	+6.3
FAKI	Fak Fak	11.51	137	ePn	Pn	08 11 37.8	+0.1
KAPI	Kappang	11.53	204	Pn	Pn	08 11 35.3	-2.6
	0.6nm,0.3s,baz=112,slow=16,SNR=2.5						
KSM	Kuching	14.68	254	eP	P	08 12 31.2	+4.1
PSI	Prapat	25.59	265	LR	LR	08 25 24.2	
	comp=Z,106nm,19.7s,baz=33,slow=39						
COEN	Coen	26.89	136	eP	P	08 14 34.3	+0.2
	28nm,1.4s						
WRA	Warramunga Arr	27.18	159	P	P	08 14 35.7	-0.9
	2.2nm,0.4s,baz=342,slow=12,SNR=25						
WR1	Warramunga Arr	27.18	159	eP	P	08 14 35.8	-0.9
WB2	Warramunga Arr	27.19	159	eP	P	08 14 36.2	-0.5
	5.4nm,0.8s						
ASAR	Alice Springs	30.52	163	P	P	08 15 05.7	-0.6
	0.9nm,0.5s,baz=339,slow=7.1,SNR=16						
BBOO	Buckleboo	39.76	165	eP	P	08 16 26.5	+0.7
	29nm,1.4s						
STKA	Stephens Creek	40.69	157	P	P	08 16 33.0	-0.5
	2.0nm,0.5s,baz=340,slow=7.5,SNR=9.0						
STKA	Stephens Creek	40.69	157	eP	P	08 16 34.9	+1.4
	1.4nm,1.0s						
MK32	Makanchi Array	54.73	326	eP	P	08 18 22.4	+0.1
MKAR	Makanchi Array	54.73	326	P	P	08 18 22.4	+0.1
	0.3nm,0.4s,baz=114,slow=8.2,SNR=3.0						
KURK	Kurchatov	58.95	328	eP	P	08 18 51.8	-0.4
	4.1nm,1.3s						
ILAR	Eielson Array	84.41	26	P	P	08 21 22.9	-2.2
	0.5nm,1.0s,baz=271,slow=4.3,SNR=3.2						

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*SOME **26** 08:18:24.4, 44°.07N×82°.03E, h25^{km}*

*NNC **26** 08:18:24.0±1.7, 44°.10N×81°.86E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=13.6km s-min=7.5km az=128.0*

ISC 26 08:18:22.1±2.2, **44°.18N**±0°.06×**82°.04E**±0°.09, **h7^{km}**±17^{km}, **n22, σ0^{s}86**/33, **2C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.43	240	eP	Pg	08 18 49.7	+0.2
	26nm,0.1s						
KTMS				eS	Sg	08 19 08.1	+0.1
	21nm,0.3s						
DJR	Jarkent	1.63	276	P	Pg	08 18 53.0	-0.3
	52nm,0.1s						
DJR				S	Sb	08 19 13.3	0.0
	34nm,0.3s						
DJR	Jarkent	1.63	276	eP	Pg	08 18 53.1	-0.2
	52nm,0.3s						
DJR				eS	Sg	08 19 13.8	-0.6
	34nm,0.4s						
PDGK	Podgornoye	2.04	246	⇓Pg	Pb	08 18 59.2	-0.3
	5.4nm,0.3s						

PDGK				Lg	Lg	08 19 25.1	
	33nm,0.8s						
KAPS	Kapalarasan	2.21	301	Pg	Pg	08 19 04.7	+0.2
	30nm,0.2s						
KAPS				Lg	Lg	08 19 33.3	
	41nm,0.5s						
KAPS	Kapalarasan	2.21	301	eP	Pg	08 19 04.6	0.0
	30nm,0.3s						
KAPS				eS	Sg	08 19 33.4	+0.3
	55nm,0.4s						
UZB	Uzynbulak	2.42	246	Pg	Pb	08 19 05.5	-0.6
	18nm,0.3s						
UZB				Lg	Lg	08 19 35.4	
	37nm,0.5s						
UZB	Uzynbulak	2.42	246	eP	Pb	08 19 06.0	-0.1
	17nm,0.2s						
UZB				eS	Sb	08 19 36.0	-0.2
KPKS	Kokpek	2.53	255	eP	Pb	08 19 07.3	-0.6
	178nm,0.1s						
KPKS				eS	Sb	08 19 38.3	-1.1
	110nm,0.7s						
MNBS	Baschi	2.62	269	Pg	Pb	08 19 08.1	-1.5
	21nm,0.3s						
MNBS				Lg	Lg	08 19 39.6	
	63nm,0.3s						
MNBS	Baschi	2.62	269	eP	Pb	08 19 09.2	-0.4
	17nm,0.2s						
MNBS				eS	Sb	08 19 41.2	-0.8
MAKZ	Makanchi	2.63	359	⇑Pg	Pg	08 19 12.4	-0.2
	4.4nm,0.5s						
MAKZ				⇑Lg	Lg	08 19 47.7	
	8.5nm,0.6s						
SATY	Saty	2.87	248	Pg	Pb	08 19 12.1	-1.6
	19nm,0.2s						
SATY				Lg	Lg	08 19 46.3	
	29nm,0.2s						
SATY	Saty	2.87	248	eP	Pb	08 19 13.4	-0.3
	14nm,0.1s						
SATY				eS	Sb	08 19 48.7	-0.4
	33nm,0.3s						
KURS	Kuram	2.89	258	Pg	Pb	08 19 14.4	+0.4
	4.7nm,0.3s						
KURS				Lg	Lg	08 19 50.3	
	15nm,0.4s						
KURS	Kuram	2.89	258	eP	Pb	08 19 14.3	+0.4
KURS				eS	Sb	08 19 50.1	+0.6
ARXS	Arharly	3.03	272	Pg	Pb	08 19 16.6	+0.1
	5.3nm,0.2s						
ARXS				Lg	Lg	08 19 53.7	
	40nm,0.3s						
ARXS	Arharly	3.03	272	eP	Pb	08 19 16.2	-0.2
	3.7nm,0.1s						
ARXS				eS	Sb	08 19 53.3	-0.4
	40nm,0.4s						
CHKK	Chushkaly	3.66	267	eP	Pb	08 19 27.3	+0.1
	2.7nm,0.3s						
CHKK				eS	Sb	08 20 12.3	+0.5
	23nm,0.3s						
TNSS	Tian-Shan	3.87	255	Pg	Pb	08 19 33.1	+2.1
	9.1nm,0.4s						
TNSS				Lg	Lg	08 20 22.3	
	6.2nm,0.5s						
KTBS	Karatobe	3.90	265	Pg	Pb	08 19 32.2	+0.9
	4.9nm,0.4s						
KTBS				Lg	Lg	08 20 20.7	
	13nm,0.5s						
DGS	Degeres	4.64	261	Pg	Pb	08 19 46.4	+2.5
	3.3nm,0.3s						
DGS				Lg	Lg	08 20 45.0	
	13nm,0.6s						

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*SJA **26** 08:27:45.9±0.6, 22°.17S×70°.23W, h42^{km}±4^{km}, ML2.4, MW3.7*

*ISCJB **26** 08:27:47.1±1.2, 22°.17S±0°.04×70°.27W±0°.09, h39^{km}±12^{km}, Error ellipse: s-maj=13.9km s-min=6.2km az=11.6*

*GUC **26** 08:27:47.1±0.4, 22°.19S×70°.21W, h39^{km}±2^{km}, ML2.8*

ISC 26 08:27:47.0±1.5**, 22°.16S**±0°.04×**70°.28W**±0°.08**, h34**^{km}±2^{km}**, n14, σ0^{s}.79**/23**, 2C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB04	IPOC Station P	0.21	145	i P	Pb	08 27 54.2	+0.1
PB04				i S	Sb	08 27 59.8	+0.8
PB04	IPOC Station P	0.21	145	⇑iP	Pb	08 27 54.2	+0.1
PB04				eS	Sb	08 27 59.4	+0.4
PB03	IPOC Station P	0.50	77	i P	Pb	08 27 57.3	-0.6
PB03	IPOC Station P	0.50	77	⇓iP	Pb	08 27 57.3	-0.6
PB03				eS	Sb	08 28 04.6	-0.7
PB03				IAML		08 28 05.0	
	comp=E,2µm,0.1s						
PB07	IPOC Station P	0.57	40	i P	Pn	08 27 58.2	-0.6
PB07	IPOC Station P	0.57	40	i P	Pn	08 27 58.3	-0.4
PB07				eS	Sb	08 28 06.5	-0.5
PB07				IAML		08 28 07.3	
	comp=N,1µm,0.2s						
PB05	IPOC Station P	0.69	174	⇑iP	Pn	08 28 00.1	-0.4
PB05				eS	Sn	08 28 09.7	-0.4
PB05				IAML		08 28 11.8	
	comp=E,673nm,0.2s						
PB06	IPOC Station P	0.85	130	i P	Pn	08 28 02.0	-0.7
PB06				i S	Sn	08 28 13.8	-0.2
PB06	IPOC Station P	0.85	130	⇓iP	Pn	08 28 02.0	-0.7
PB06				eS	Sn	08 28 13.2	-0.9
PB06				IAML		08 28 13.5	
	comp=E,702nm,0.2s						
PB02	IPOC Station P	0.91	23	i P	Pn	08 28 03.1	-0.3
PB02				i S	Sn	08 28 16.6	+1.2
PB02	IPOC Station P	0.91	23	⇓iP	Pn	08 28 03.2	-0.3
PB02				IAML		08 28 18.1	
	comp=E,835nm,0.6s						
PB09	IPOC Station P	1.03	70	⇓iP	Pn	08 28 05.4	+0.2
PB09				eS	Sn	08 28 19.0	+0.5
PB09				IAML		08 28 20.0	
	comp=N,371nm,0.3s						
PB15	IPOC Station P	1.28	145	i P	Pn	08 28 08.6	-0.1
HJA	Humahuaca	4.62	104	i P	Pn	08 28 56.9	+2.2
HJA				IAML		08 29 03.0	
	comp=Z,3.0nm,0.5s						

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*KRSC **26** 08:31:30.8±1.4, 51°.88N×160°.72E, h43^{km}±19^{km}, ML5.1*

*IDC **26** 08:31:31.4±0.4, 52°.13N×160°.22E, h0^{km}, mb4.7/38, mb1 4.8/41, mb1mx4.7/63, mbtmp4.7/41, ML4.4/3, MS4.2/19, Ms1 4.2/19, ms1mx4.0/46, Error ellipse: s-maj=13.5km s-min=8.5km az=162.0*

*MOS **26** 08:31:33.4±1.2, 51°.90N×160°.42E, h32^{km}, mb5.1/95, MS4.6/23, Error ellipse: s-maj=5.7km s-min=2.9km az=96.8*

*NEIC **26** 08:31:35.0±1.9, 52°.04N×160°.34E, h26^{km}±5^{km}, mb5.1/352, Error ellipse: s-maj=12.0km s-min=5.2km az=208.0*

*ISCJB **26** 08:31:34.7±0.4, 51°.98N±0°.03×160°.47E±0°.02, h39^{km}±3^{km}, mb4.9/196, MS4.6/48, Error ellipse: s-maj=4.4km s-min=2.3km az=171.6*

*BJI **26** 08:31:35.6±0.0, 52°.43N×159°.79E, h27^{km}, mb4.8/47, mB5.0/37, Ms5.0/44, Ms7 4.8/44*

ISC 26 08:31:35.5±0.5**, 52°.00N**±0°.04×**160°.44E**±0°.03**, h31**^{km}±2^{km}**, h30**^{km}**:pP-P, n923, σ1^{s}.13**/947**, mb5.0**/204**, MS4.7**/48**, 48C-12D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.13	347	eP	Pn	08 31 54.3	-1.0
SPN	Mys Shipunski	1.13	347	PN	Pn	08 31 54.3	-1.0
RUS	Russkaya	1.27	291	eP	Pn	08 31 56.5	-0.5
RUS				eS	Sb	08 32 14.5	-0.1
RUS	Russkaya	1.27	291	PN	Pn	08 31 56.5	-0.5
RUS				S	Sb	08 32 14.5	-0.1
NLC	Nalytchevo	1.35	331	i P	Pn	08 31 58.1	-0.2
NLC	Nalytchevo	1.35	331	PN	Pn	08 31 58.1	-0.2
DALK	Dalny	1.46	316	i P	Pn	08 31 59.4	-0.4
DALK				eS	Sb	08 32 19.6	-0.7
DALK	Dalny	1.46	316	PN	Pn	08 31 59.4	-0.4
DALK				S	Sb	08 32 19.6	-0.7
MTVR	Mutnovka	1.47	290	i P	Pn	08 31 59.4	-0.6
MTVR	Mutnovka	1.47	290	PN	Pn	08 31 59.4	-0.6
KDTR	Khodutka, Kamc	1.48	264	eP	Pn	08 31 58.3	-1.6
KDTR				eS	Sn	08 32 17.7	-0.5
KDTR	Khodutka, Kamc	1.48	264	PN	Pn	08 31 58.3	-1.6
KDTR				S	Sn	08 32 17.7	-0.5
PET	Petropavlovsk	1.50	314	ePn	Pn	08 31 59.9	-0.4
PET	Petropavlovsk	1.50	314	PN	Pn	08 32 00.1	-0.2
PET				S	Sb	08 32 20.9	-0.5
UGLR	Uglovaya	1.57	322	eP	Pn	08 32 01.6	+0.3
UGLR	Uglovaya	1.57	322	PN	Pn	08 32 01.6	+0.3
ASAK	Asacha	1.61	285	eP	Pn	08 32 01.6	-0.3
ASAK	Asacha	1.61	285	PN	Pn	08 32 01.6	-0.3
SMAR	Somma	1.62	322	eP	Pn	08 32 01.8	-0.3
SMAR	Somma	1.62	322	PN	Pn	08 32 01.8	-0.3
AVH	Avacha	1.64	321	eP	Pn	08 32 02.6	+0.3
AVH	Avacha	1.64	321	PN	Pn	08 32 02.6	+0.3
KRMR	Karymshinskiy	1.65	301	eP	Pn	08 32 01.7	-0.6
KRMR				eS	Sn	08 32 23.8	+1.5
KRMR	Karymshinskiy	1.65	301	PN	Pn	08 32 01.7	-0.6
KRMR				S	Sn	08 32 23.8	+1.5
KRER	Koryakskii	1.67	322	eP	Pn	08 32 03.2	+0.4
KRER	Koryakskii	1.67	322	PN	Pn	08 32 03.2	+0.4
KOK	Koryaka	1.70	320	eP	Pn	08 32 03.0	-0.2
KOK	Koryaka	1.70	320	PN	Pn	08 32 03.0	-0.2
KRX	Arik	1.75	322	eP	Pn	08 32 04.1	+0.3
KRX	Arik	1.75	322	PN	Pn	08 32 04.1	+0.3
I44RU	PETROPAVLOVSK-	2.00	305	Pn	Pb	08 32 12.4	+1.2
	baz=95,slow=30,SNR=2.0						
PEA0B	Petropavlovsk-	2.01	305	ePn	Pn	08 32 07.9	+0.6
PETK	Petropavlovsk-	2.01	305	Pn	Pn	08 32 07.5	+0.2
	38nm,0.3s,baz=109,slow=19,SNR=543						
PETK				Sn	Sn	08 32 33.1	+1.7
	105nm,0.3s,baz=103,slow=19,SNR=8.3						
PEA1	Petropavlovsk-	2.02	305	ePn	Pn	08 32 07.5	+0.2
PEA1				eSg	Sn	08 32 33.1	+1.6
APC	Apacha	2.21	296	eP	Pn	08 32 10.9	+0.8
APC				eS	Sb	08 32 40.1	-1.7
APC	Apacha	2.21	296	PN	Pn	08 32 10.9	+0.8
APC				S	Sb	08 32 40.1	-1.7
GNL	Ganaly	2.28	319	eP	Pn	08 32 12.1	+1.0
GNL	Ganaly	2.28	319	PN	Pn	08 32 12.1	+1.0
PAU	Pauzhetka	2.32	258	eP	Pn	08 32 11.7	+0.2
PAU	Pauzhetka	2.32	258	PN	Pn	08 32 11.7	+0.2
MKZ	Mys Kozlova	2.68	16	eP	Pn	08 32 15.4	-1.1
MKZ				eS	Sn	08 32 47.6	-0.2
MKZ	Mys Kozlova	2.68	16	PN	Pn	08 32 15.4	-1.1
MKZ				S	Sn	08 32 47.6	-0.2
SKR	Severo-Kuril’s	3.01	246	eP	Pn	08 32 20.0	-1.1
SKR	Severo-Kuril’s	3.01	246	ePN	Pn	08 32 19.7	-1.4
SKR				eS	Sn	08 32 55.1	-1.0
SKR				pmax	pmax		
	comp=Z,438nm,0.9s						
SKR				smax	smax		
	comp=N,4µm,1.0s						
SKR				smax	smax		
	comp=E,3µm,0.8s						
KZV	Kizimen	3.12	358	eP	Pn	08 32 23.0	+0.2
KZV	Kizimen	3.12	358	PN	Pn	08 32 23.0	+0.2
TUMD	Tumrok D	3.21	360	eP	Pn	08 32 24.1	+0.2
TUMR	Tumrok	3.30	357	eP	Pn	08 32 26.1	+1.0
TUMR	Tumrok	3.30	357	PN	Pn	08 32 26.1	+1.0
BZGR	Bezymyannyi-Gr	3.96	2	eP	Pn	08 32 35.0	+0.9
BZGR	Bezymyannyi-Gr	3.96	2	PN	Pn	08 32 35.0	+0.9
BZWR	Bezymyannyi-We	3.98	0	eP	Pn	08 32 35.8	+1.3
BZWR	Bezymyannyi-We	3.98	0	PN	Pn	08 32 35.8	+1.3
KPT	Kopyto	3.98	358	eP	Pn	08 32 36.5	+2.0
KPT	Kopyto	3.98	358	PN	Pn	08 32 36.5	+2.0
ESO	Esso	4.07	346	eP	Pn	08 32 36.5	+0.9
ESO	Esso	4.07	346	PN	Pn	08 32 36.5	+0.9
KOZ	Kozyrevsk	4.08	356	eP	Pn	08 32 36.6	+0.8
KOZ	Kozyrevsk	4.08	356	PN	Pn	08 32 36.6	+0.8
LGNR	Loginova	4.10	2	eP	Pn	08 32 37.6	+1.4
LGNR	Loginova	4.10	2	PN	Pn	08 32 37.6	+1.4
CIRR	Tsirk	4.13	2	eP	Pn	08 32 35.2	-1.4
CIRR	Tsirk	4.13	2	PN	Pn	08 32 35.2	-1.4
KRSR	Krestovskiy	4.23	1	eP	Pn	08 32 38.7	+0.8
KRSR	Krestovskiy	4.23	1	PN	Pn	08 32 38.7	+0.8
KLY	Klyuchi	4.33	2	eP	Pn	08 32 40.4	+1.3
KLY	Klyuchi	4.33	2	PN	Pn	08 32 40.4	+1.3
SRDR	Sredinnyy	4.35	355	eP	Pn	08 32 40.3	+0.8
SRDR	Sredinnyy	4.35	355	PN	Pn	08 32 40.3	+0.8
KBTR	Krutoberegovo	4.45	17	eP	Pn	08 32 40.6	-0.1
KBTR	Krutoberegovo	4.45	17	PN	Pn	08 32 40.6	-0.1
KBG	Krutoberegovo	4.47	16	eP	Pn	08 32 40.6	-0.5
KBG	Krutoberegovo	4.47	16	PN	Pn	08 32 40.6	-0.5
BKI	Bering	4.60	44	i P	Pn	08 32 41.3	-1.5
BKI				eS	Sn	08 33 31.0	-4.2
BKI	Bering	4.60	44	PN	Pn	08 32 41.3	-1.5
SMKR	Semkarok	4.64	7	eP	Pn	08 32 45.0	+1.6
SMKR	Semkarok	4.64	7	PN	Pn	08 32 45.0	+1.6
SRKR	Sorokina	4.69	5	eP	Pn	08 32 45.1	+1.0
SRKR	Sorokina	4.69	5	PN	Pn	08 32 45.1	+1.0
OSSR	Ossora	7.42	10	eP	Pn	08 33 22.1	+0.6
OSSR	Ossora	7.42	10	PN	Pn	08 33 22.1	+0.6
SMY	Shemya	8.39	80	ePn	Pn	08 33 34.3	-0.6
SMY	Shemya	8.39	80	ePN	Pn	08 33 34.3	-0.6
MA2	Magadan	9.34	328	Pn	Pn	08 33 48.8	+1.0
	comp=E,0.5nm,0.3s,baz=148,slow=13,SNR=3.8						
MA2				LR	LR	08 37 53.1	
	comp=E,1µm,18.8s,baz=142,slow=42						
MA2	Magadan	9.34	328	ePn	Pn	08 33 47.2	-0.6
KUR	Kuril'sk	10.72	236	PN	Pn	08 34 05.9	-0.8
KUR				pmax	pmax		
	comp=Z,46nm,1.0s						
KUR				MLR	MLR		
	comp=E,4µm,13.0s						
KUR				MLR	MLR		
	comp=Z,3µm,13.0s						
KMSK	Kamenskaya	10.95	14	eP	Pn	08 34 10.9	+1.1
KMSK	Kamenskaya	10.95	14	PN	Pn	08 34 10.9	+1.1
TYV	Tymovskoe	11.16	271	ePN	Pn	08 34 22.7	+10
TYV				pmax	pmax		
	comp=Z,21nm,1.3s						
TYV				pmax	pmax		
	comp=Z,300nm,3.1s						
TYV				MLR	MLR		
	comp=Z,3µm,16.0s						
SEY	Seymchan	11.78	342	Pn	Pn	08 34 22.9	+1.7
	comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=12						
UGL	Uglegorsk	12.05	263	ePN	P	08 34 36.4	-1.0
UGL				pmax	pmax		
	comp=Z,132nm,1.0s						
UGL				MLR	MLR		
	comp=Z,3µm,12.0s						
UGL				MLR	MLR		
	comp=N,1µm,11.0s						
UGL				MLR	MLR		
	comp=E,3µm,15.0s						
NKL	Nikolayevsk	12.08	283	ePN	P	08 34 37.0	-0.7
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
YSS	Yuzh-Sakhalins	12.55	253	ePn	Pn	08 34 33.6	+1.9
YSS	Yuzh-Sakhalins	12.55	253	⇑ePN	Pn	08 34 33.7	+1.9
YSS				eSS	Sn	08 36 54.0	+3.6
YSS				pmax	pmax		
	comp=Z,30nm,1.4s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS				MLR	MLR		
	comp=N,4µm,14.0s						
YSS				MLR	MLR		
	comp=E,900nm,11.0s						
ADK	Adak	14.10	81	ePn	Pn	08 34 53.1	+0.2
ADK	Adak	14.10	81	eP	Pn	08 34 53.1	+0.2
ASAJ	Asahikawa	14.28	244	Pn	Pn	08 34 53.5	-1.8
	comp=E,2.9nm,0.3s,baz=69,slow=14,SNR=19						
ASAJ				LR	LR	08 41 00.9	
	comp=E,668nm,19.4s,baz=54,slow=40						
ERM	Erimo	15.41	236	ePn	Pn	08 35 06.6	-3.9
	comp=E,50nm,0.8s						
ERM	Erimo	15.41	236	eP	Pn	08 35 06.6	-3.9
ERM				pmax	pmax		
	comp=Z,50nm,0.8s						
BILL	Bilibino	16.34	8	eP	Pn	08 35 21.8	-0.6
	comp=Z,117nm,1.1s						
BILL	Bilibino	16.34	8	i P	Pn	08 35 21.9	-0.4
BILL				pmax	pmax		
	comp=Z,192nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1µm,15.0s						
TEY	Ternei	17.21	256	⇑eP	P	08 35 35.6	+0.9
TEY				pmax	pmax		
	comp=Z,20nm,2.5s						
TEY				pmax	pmax		
	comp=E,40nm,0.9s						
SPIA	Saint Paul Isl	17.68	61	eP	P	08 35 39.9	+0.1
	comp=E,74nm,1.1s						
KLR	Kul'dur	18.37	273	P	P	08 35 46.6	-0.8
	comp=E,0.4nm,0.3s,baz=68,slow=10,SNR=15						
KLR				LR	LR	08 43 56.1	
	comp=E,794nm,19.0s,baz=75,slow=41						
KLR	Kul'dur	18.37	273	⇓eP	P	08 35 47.2	-0.2
NIKH	Nikolski High	18.66	75	eP	Pn	08 35 50.8	-0.3
	comp=E,65nm,1.0s						
GAMB	Gambell	18.74	40	eP	Pn	08 35 52.9	+1.0
	comp=E,50nm,1.3s						
YAK	Yakutsk	19.33	313	eP	P	08 35 54.8	-3.2
	comp=E,152nm,0.7s						
YAK	Yakutsk	19.33	313	eP	P	08 35 54.7	-3.2
YAK				eS	S	08 39 32.7	-2.0
YAK				pmax	pmax		
	comp=Z,118nm,1.0s						
YAK				pmax	pmax		
	comp=E,56nm,1.3s						
YAK				pmax	pmax		
	comp=N,27nm,1.1s						
YAK				smax	smax		
	comp=N,115nm,2.3s						
YAK				smax	smax		
	comp=E,89nm,1.5s						
YAK				MLR	MLR		
	comp=Z,1µm,16.0s						
YAK				MLR	MLR		
	comp=N,334nm,15.0s						
YAK				MLR	MLR		
	comp=E,901nm,16.0s						
UNV	Unalaska Valle	19.92	72	eP	P	08 36 04.5	+0.1
	comp=E,70nm,1.2s						
ZEA	Zeya	20.02	288	eP	P	08 36 03.4	-2.0
ZEA				eS	S	08 39 46.0	-2.6
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
ZEA				smax	smax		
	comp=N,300nm,10.0s						
ZEA				MLR	MLR		
	comp=N,1µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,4µm,13.0s						
ZEA				MLR	MLR		
	comp=E,3µm,14.0s						
AKUT	Akutan	20.31	71	eP	P	08 36 08.6	+0.1
	comp=E,77nm,1.1s						
USA0B	Ussuriysk Arra	20.44	259	eP	P	08 36 09.7	-0.4
	comp=E,62nm,1.2s						
USRK	Ussuriysk Ar.	20.44	259	P	P	08 36 08.6	-1.5
	comp=E,13nm,0.9s,baz=56,slow=15,SNR=21						
USRK				LR	LR	08 45 06.7	
	comp=E,505nm,18.1s,baz=59,slow=40						
FALS	False Pass	21.57	68	eP	P	08 36 22.9	+0.7
	comp=E,59nm,0.8s						
ANM	Nome	21.60	41	eP	P	08 36 23.3	+0.8
	comp=E,59nm,1.0s						
ANM	Nome	21.60	41	eP	P	08 36 23.3	+0.8
ANM				pmax	pmax		
	comp=Z,59nm,1.0s						
MDJ	Mudanjiang	21.68	262	eP	P	08 36 20.7	-2.8
	comp=Z,44nm,1.1s						
MDJ	Mudanjiang	21.68	262	P	P	08 36 19.3	-4.2
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,320nm,4.1s						
MDJ				LR	LR		
	comp=Z,2µm,15.2s						
MDJ				LR	LR		
	comp=Z,1µm,14.5s						
MDJ				LR	LR		
	comp=Z,1µm,16.4s						
MSHR	Mys Shultsa	21.85	256	⇓eP	P	08 36 22.5	-2.8
MJAR	Matsushiro Arr	22.05	234	P	P	08 36 27.4	-0.2
	comp=Z,19nm,0.8s,baz=36,slow=8.0,SNR=38						
MJAR				LR	LR	08 45 33.2	
	comp=Z,914nm,19.4s,baz=45,slow=38						
MJB9	Matsu-Tunnel	22.05	234	eP	P	08 36 28.8	+1.2
	comp=Z,95nm,1.0s						
MAJO	Matsushiro	22.05	234	eP	P	08 36 28.2	+0.6
	comp=Z,102nm,1.0s						
MAJO	Matsushiro	22.05	234	eP	P	08 36 28.2	+0.6
MAJO				pmax	pmax		
	comp=Z,102nm,1.0s						
MAT	Matsushiro	22.05	234	P	P	08 36 27.8	+0.2
MAT				S	Sn	08 40 36.0	-4.5
JHJ	Hachijo jima 2	24.09	227	P	P	08 36 48.8	+0.7
	comp=Z,66nm,0.7s,baz=41,slow=9.3,SNR=3.2						
TIXI	Tiksi	24.17	336	P	P	08 36 47.2	-1.3
	comp=Z,49nm,0.8s,baz=125,slow=10,SNR=16						
TIXI				LR	LR	08 46 18.6	
	comp=Z,699nm,19.4s,baz=131,slow=37						
TIXI	Tiksi	24.17	336	eP	P	08 36 47.4	-1.1
	comp=Z,59nm,0.8s						
TIXI	Tiksi	24.17	336	c iP	P	08 36 46.8	-1.7
TIXI				pmax	pmax		
	comp=Z,110nm,1.3s						
CN2	Changchun	24.65	265	eP	P	08 36 50.8	-2.4
CN2				epP	pP	08 36 59.0	-1.9
CN2				eS	S	08 41 07.0	-5.6
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
HIA	Hailar	25.72	280	eP	P	08 37 01.1	-1.8
	comp=Z,26nm,0.8s						
HIA	Hailar	25.72	280	eP	P	08 37 01.1	-1.8
HIA				pmax	pmax		
	comp=Z,26nm,0.8s						
BOD	Bodaibo	26.88	301	eP	P	08 37 10.6	-2.6
BOD				pmax	pmax		
	comp=Z,21nm,1.3s						
KSRS	Korea Array	27.02	250	P	P	08 37 15.7	+1.1
	comp=Z,3.9nm,0.6s,baz=45,slow=9.2,SNR=16						
KDAK	Kodiak Island	27.17	59	P	P	08 37 15.0	-0.8
	comp=Z,38nm,0.9s,baz=311,slow=2.8,SNR=22						
KDAK	Kodiak Island	27.17	59	eP	P	08 37 14.8	-1.0
	comp=Z,47nm,0.9s						
KDAK	Kodiak Island	27.17	59	P	P	08 37 15.0	-0.8
KDAK				pmax	pmax		
	comp=Z,38nm,0.9s						
BPAW	Bear Paw Mtn.	27.65	45	eP	P	08 37 20.9	+0.8
	comp=Z,15nm,1.0s						
TJN	Taejon	28.09	249	⇓eP	P	08 37 21.2	-3.0
COLD	Coldfoot	28.27	39	eP	P	08 37 29.7	+4.1
	comp=Z,3.7nm,1.0s						
JNU	Nakatsue	28.51	240	P	P	08 37 27.1	-0.9
	comp=Z,6.4nm,1.0s,baz=122,slow=8.4,SNR=1.8						
JNU				LR	LR	08 50 36.3	
	comp=Z,531nm,18.5s,baz=36,slow=40						
PMR	Palmer	28.52	51	eP	P	08 37 28.1	+0.3
	comp=Z,8.4nm,1.0s						
RND	Reindeer	28.59	47	eP	P	08 37 28.0	-0.5
	comp=Z,32nm,1.1s						
RND	Reindeer	28.59	47	eP	P	08 37 28.0	-0.5
RND				pmax	pmax		
	comp=Z,32nm,1.1s						
TOLK	Toolik Lake Re	28.72	36	eP	P	08 37 29.8	+0.2
	comp=Z,21nm,1.3s						
TOLK	Toolik Lake Re	28.72	36	P	P	08 37 29.1	-0.5
	baz=260						
SML	Sawmill	28.89	50	eP	P	08 37 31.4	+0.2
	comp=Z,69nm,1.0s						
SML	Sawmill	28.89	50	eP	P	08 37 31.4	+0.2
SML				pmax	pmax		
	comp=Z,69nm,1.0s						
TCOL	CIGO, UAF Yank	29.03	44	P	P	08 37 32.4	+0.1
	baz=269						
COLA	College	29.04	44	eP	P	08 37 32.2	-0.1
	comp=Z,16nm,0.8s						
COLA	College	29.04	44	ceP	P	08 37 32.3	-0.1
COLA				pmax	pmax		
	comp=Z,14nm,1.1s						
POKR	Poker Plat Res	29.22	43	P	P	08 37 34.4	+0.4
	baz=269						
HDA	Harding Lake	29.42	45	eP	P	08 37 35.5	-0.4
	comp=Z,6.9nm,0.6s						
HDA	Harding Lake	29.42	45	P	P	08 37 34.9	-1.0
	baz=270						
ILAR	Eielson Array	29.45	44	P	P	08 37 35.2	-0.9
	comp=Z,3.9nm,0.9s,baz=250,slow=8.2,SNR=34						
ILAR				LR	LR	08 48 42.6	
	comp=Z,162nm,21.6s,baz=291,slow=35						
DL2	Dalian	29.83	259	P	P	08 37 48.0	+8.3
DL2				eS	S	08 42 46.3	+12
DL2				pmax	pmax		
	comp=Z,19nm,0.6s						

DL2				LR	LR		
	comp=N,900nm,15.3s						
DL2				LR	LR		
	comp=E,520nm,15.2s						
DL2				LR	LR		
	comp=Z,700nm,12.1s						
PAX	**Paxson**	**30.14**	**47**	*e*P	**P**	**08 37 42.5**	**+0.2**
	comp=Z,15nm,1.3s						
PAX	**Paxson**	**30.14**	**47**	*e*P	**P**	**08 37 42.5**	**+0.2**
PAX				pmax	pmax		
	comp=Z,15nm,1.3s						
DOT	**Dot Lake**	**30.72**	**46**	*e*P	**P**	**08 37 46.2**	**-1.2**
	comp=Z,5.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**32.59**	**169**	T	T	09 14 19.2	
	baz=350,slow=74,SNR=86						
H11N3	**WAKE ISLAND Hy**	**32.61**	**169**	T	T	09 14 19.6	
	baz=284,slow=74,SNR=71						
H11N1	**WAKE ISLAND Hy**	**32.61**	**169**	T	T	09 12 31.6	
	SNR=84						
DAWY	**Dawson**	**32.74**	**45**	*e*P	**P**	**08 38 05.2**	**+0.1**
	comp=Z,6.3nm,0.8s						
EPYK	**Eagle Plains**	**33.59**	**40**	P	**P**	**08 38 12.9**	**+0.4**
	baz=276						
H11S3	**WAKE ISLAND Hy**	**33.79**	**169**	T	T	09 13 49.0	
	baz=352,slow=74,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	**33.80**	**169**	T	T	09 13 55.8	
	baz=217,slow=74,SNR=3.6						
TIA	**Tai'an**	**34.30**	**260**	P	**P**	**08 38 19.5**	**+0.6**
TIA				pP	**pwP**	**08 38 31.0**	**-0.7**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIA				pmax	pmax		
	comp=Z,52nm,3.2s						
TIA				LR	LR		
	comp=Z,870nm,14.2s						
TIA				LR	LR		
	comp=Z,430nm,15.0s						
TIA				LR	LR		
	comp=Z,970nm,13.5s						
TLY	**Talaya**	**34.33**	**293**	*e*P	**P**	**08 38 18.5**	**-0.5**
TLY				pmax	pmax		
	comp=Z,39nm,1.3s						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s						
SONM	**Songino Array**	**34.38**	**285**	P	**P**	**08 38 18.3**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=79,slow=7.5,SNR=3.3						
SONM				PcP	**PcP**	**08 40 54.9**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=48,slow=2.1,SNR=2.8						
SONM				LR	LR	08 53 13.3	
	comp=Z,768nm,18.8s,baz=62,slow=38						
INK	**Inuvik**	**34.62**	**37**	P	**P**	**08 38 21.0**	**-0.2**
	comp=Z,12nm,1.1s,baz=275,slow=4.9,SNR=11						
INK	**Inuvik**	**34.62**	**37**	*e*P	**P**	**08 38 21.6**	**+0.3**
	comp=Z,9.3nm,0.8s						
INK	**Inuvik**	**34.62**	**37**	P	**P**	**08 38 21.0**	**-0.2**
INK				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC	**Hu-ho-hao-te**	**34.86**	**271**	P	**P**	**08 38 24.8**	**+1.0**
HHC				sP	pwP	08 38 38.0	+1.3
HHC				PP	**PP**	**08 39 44.3**	**+1.3**
HHC				S	**S**	**08 43 54.8**	**+2.0**
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,63nm,6.0s						
HHC				LR	LR		
	comp=Z,2µm,12.3s						
ZAK	**Zakamensk**	**35.07**	**291**	*e*P	**P**	**08 38 23.7**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
NJ2	**Nanjing**	**36.12**	**253**	*e*P	**P**	**08 38 34.5**	**-0.1**
NJ2				pP	**pP**	**08 38 43.0**	**+0.5**
NJ2				sP	**sP**	**08 38 45.5**	**-0.3**
NJ2				PcP	**PcP**	**08 41 00.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,110nm,3.5s						
NJ2				LR	LR		
	comp=Z,470nm,18.9s						
NJ2				LR	LR		
	comp=Z,400nm,13.7s						
NJ2				LR	LR		
	comp=Z,700nm,18.9s						
DLBC	**Dease Lake**	**38.54**	**52**	P	**P**	**08 38 57.0**	**+2.2**
	comp=Z,19nm,1.0s,baz=289,slow=9.4,SNR=39						
WHN	**Wuhan**	**39.88**	**256**	P	P	08 39 24.0	+18
WHN				S	S	08 44 54.5	-14
WHN				LR	LR		
	comp=N,2µm,15.8s						
WHN				LR	LR		
	comp=E,2µm,15.1s						
WHN				LR	LR		
	comp=Z,1µm,14.7s						
XAN	**Xi'an**	**40.77**	**265**	P	P	08 39 22.3	+8.6
XAN				pP	pwP	08 39 37.8	+11
XAN				S	**S**	**08 45 28.0**	**+5.8**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,110nm,3.8s						
XAN				LR	LR		
	comp=N,950nm,18.1s						
XAN				LR	LR		
	comp=E,860nm,18.6s						
XAN				LR	LR		
	comp=Z,960nm,14.9s						
BBB	**Bella Bella**	**42.23**	**60**	P	**P**	**08 39 26.9**	**+1.5**
	comp=Z,22nm,1.1s,baz=260,slow=6.8,SNR=6.3						
LZH	**Lanzhou**	**42.56**	**271**	*e*P	**P**	**08 39 28.3**	**-0.1**
LZH				pP	pP	08 39 36.8	+0.4
LZH				sP	sP	08 39 39.8	+0.1
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				LR	LR		
	comp=Z,1µm,17.6s						
LZH				LR	LR		
	comp=Z,1µm,16.5s						
LZH				LR	LR		
	comp=Z,830nm,18.7s						
GTA	**Gaotai**	**42.95**	**278**	*e*P	P	08 39 38.8	+7.2
GTA				pP	pwP	08 39 48.8	+5.0
GTA				sP	sP	08 39 52.3	+9.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,55nm,5.1s						
GTA				LR	LR		
	comp=N,740nm,16.8s						
GTA				LR	LR		
	comp=E,600nm,15.9s						
GTA				LR	LR		
	comp=Z,730nm,16.8s						
ENH	**Enshi**	**43.02**	**260**	*e*P	**P**	**08 39 32.2**	**+0.2**
	comp=Z,72nm,0.9s						
ZAA0	**Zalesovo Array**	**43.56**	**304**	*e*P	**P**	**08 39 32.9**	**-3.2**
	comp=Z,4.1nm,1.0s						
ZALV	**Zalesovo Beam**	**43.56**	**304**	P	**P**	**08 39 33.0**	**-3.1**
	comp=Z,2.5nm,0.7s,baz=55,slow=6.4,SNR=8.3						
ZALV				LR	LR	08 59 07.5	
	comp=Z,663nm,19.4s,baz=66,slow=38						
ZALV	**Zalesovo Beam**	**43.56**	**304**	P	**P**	**08 39 33.0**	**-3.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV				MLR	MLR		
	comp=Z,663nm,19.4s						
YKA	**Yellowknife Ar**	**43.83**	**42**	P	**P**	**08 39 38.1**	**0.0**
	comp=Z,6.8nm,1.0s,baz=299,slow=7.9,SNR=7.7						
RES	**Resolute Bay**	**44.27**	**22**	P	**P**	**08 39 42.0**	**+0.5**
	comp=Z,13nm,0.8s,baz=305,slow=7.7,SNR=9.4						
RES				PcP	**PcP**	**08 41 26.6**	**+1.3**
	comp=Z,7.3nm,0.8s,baz=303,slow=6.6,SNR=3.7						
RES	**Resolute Bay**	**44.27**	**22**	*e*P	**P**	**08 39 42.3**	**+0.8**
	comp=Z,20nm,0.9s						
DGZ	**Jazzator, Alta**	**44.35**	**297**	*c* *i*P	**P**	**08 39 41.3**	**-1.4**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CD2	**Chengdu**	**46.08**	**266**	P	**P**	**08 39 55.3**	**-1.2**
CD2				S	**S**	**08 46 38.0**	**-2.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,19.1s						
CD2				LR	LR		
	comp=Z,1µm,18.6s						
CD2				LR	LR		
	comp=Z,1µm,14.2s						
LLLB	**Lillooet**	**46.38**	**59**	*e*P	**P**	**08 39 59.6**	**+1.0**
	comp=Z,18nm,1.0s						
A04D	**Lummi Island**	**47.00**	**62**	P	**P**	**08 40 03.6**	**+0.2**
	baz=305						
NLWA	**Neilton Lookou**	**47.12**	**64**	*e*P	**P**	**08 40 05.8**	**+1.4**
	comp=Z,31nm,1.0s						
D03D	**Eldon**	**47.47**	**63**	P	**P**	**08 40 08.4**	**+1.3**
	baz=306,SNR=7.4						
GYA	**Guiyang**	**47.48**	**259**	⇑ *i*P	P	08 40 16.5	+8.9
GYA				pP	pwP	08 40 25.5	+5.0
GYA				PP	**PP**	**08 42 06.0**	**+6.9**
GYA				S	**S**	**08 47 09.0**	**+8.7**
GYA				sS	sS	08 47 27.0	+13
GYA	**Guiyang**	**47.48**	**259**	SS	SS	08 50 24.8	-3.3
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,80nm,3.9s						
GYA				LR	LR		
	comp=N,440nm,20.0s						
GYA				LR	LR		
	comp=E,360nm,18.1s						
GYA				LR	LR		
	comp=Z,210nm,15.4s						
WMQ	**Urumqi**	**47.54**	**290**	*e*P	**P**	**08 40 08.0**	**+0.1**
WMQ				pP	pP	08 40 16.3	+0.2
WMQ				S	**S**	**08 46 59.3**	**-1.4**
WMQ				ScS	**ScS**	**08 49 58.3**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,59nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,12.5s						
WMQ				LR	LR		
	comp=Z,1µm,14.9s						
WMQ				LR	LR		
	comp=Z,930nm,14.9s						
B05A	**Bryant**	**47.59**	**62**	P	**P**	**08 40 09.0**	**+0.9**
	baz=305,SNR=7.0						
D04E	**Lakebay**	**47.85**	**64**	P	**P**	**08 40 11.5**	**+1.5**
	baz=306						
KBS	**Kingsbay**	**47.99**	**352**	*e*P	**P**	**08 40 11.0**	**+0.2**
	comp=Z,31nm,1.0s						
KBS	**Kingsbay**	**47.99**	**352**	*e*P	**P**	**08 40 11.0**	**+0.2**
KBS				pmax	pmax		
	comp=Z,31nm,1.0s						
SPA0	**Spitsbergen Ar**	**48.26**	**351**	*e*P	**P**	**08 40 12.9**	**0.0**
	comp=Z,93nm,1.1s						
E04D	**Cinebar**	**48.33**	**64**	P	**P**	**08 40 14.9**	**+1.2**
	baz=306,SNR=14						
F04D	**Rainier, OR**	**48.36**	**65**	P	**P**	**08 40 14.5**	**+0.4**
	baz=307						
KURK	**Kurchatov**	**48.50**	**303**	*e*P	**P**	**08 40 12.6**	**-2.4**
	comp=Z,22nm,0.8s						
KURK	**Kurchatov**	**48.50**	**303**	*c* *i*P	**P**	**08 40 12.3**	**-2.7**
KURK				pmax	pmax		
	comp=Z,37nm,1.3s						
G03D	**McMinnville, O**	**48.74**	**66**	P	**P**	**08 40 16.4**	**-0.6**
	baz=307						
MK31	**Makanchi Array**	**48.83**	**297**	*i* P	**P**	**08 40 14.9**	**-2.8**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	**48.83**	**297**	P	**P**	**08 40 15.3**	**-2.4**
	comp=Z,2.6nm,0.7s,baz=56,slow=5.9,SNR=27						
MAKZ	**Makanchi**	**48.99**	**297**	P	**P**	**08 40 15.4**	**-3.6**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
I02D	**Swisshome**	**49.08**	**68**	P	**P**	**08 40 20.9**	**+1.3**
	baz=308						
F05D	**White Salmon**	**49.34**	**64**	P	**P**	**08 40 22.4**	**+0.7**
	baz=307						
HSPB	**Hornsund (broa**	**49.38**	**350**	*e*P	**P**	**08 40 21.7**	**+0.2**
HSPB	**Hornsund (broa**	**49.38**	**350**	*e*P	**P**	**08 40 21.7**	**+0.2**
H04D	**Lebanon**	**49.45**	**66**	P	**P**	**08 40 23.8**	**+1.4**
	baz=308						
J01E	**Myrtle Point**	**49.61**	**69**	P	**P**	**08 40 24.5**	**+0.9**
	baz=308						
G05D	**Wamic, OR**	**49.81**	**65**	P	**P**	**08 40 26.5**	**+1.3**
	baz=308						
C09A	**Chrisman Ranch**	**49.94**	**61**	*e*P	**P**	**08 40 26.7**	**+0.6**
	comp=Z,31nm,1.3s						
K02D	**Willamette Mer**	**50.05**	**69**	P	**P**	**08 40 28.2**	**+1.1**
	baz=309						
I04A	**Tendick Farm,**	**50.09**	**67**	P	**P**	**08 40 28.5**	**+1.1**
	baz=308,SNR=12						
NEW	**Newport**	**50.27**	**59**	P	**P**	**08 40 29.4**	**+0.7**
	comp=Z,8.9nm,1.0s,baz=304,slow=6.5,SNR=14						
NEW	**Newport**	**50.27**	**59**	P	**P**	**08 40 29.1**	**+0.4**
	baz=307,SNR=13						
I05D	**Terrebonne, OR**	**50.36**	**66**	P	**P**	**08 40 30.2**	**+0.8**
	baz=308,SNR=8.5						
L02E	**Cave Junction**	**50.42**	**69**	P	**P**	**08 40 31.4**	**+1.6**
	baz=309,SNR=8.2						
J04D	**Umpqua Nationa**	**50.60**	**67**	P	**P**	**08 40 32.8**	**+1.4**
	baz=309,SNR=10.0						
KMI	**Kunming**	**50.85**	**261**	P	**P**	**08 40 34.5**	**+1.0**
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
KMI				LR	LR		
	comp=Z,500nm,13.0s						
KMI				LR	LR		
	comp=Z,480nm,12.1s						
KMI				LR	LR		
	comp=Z,490nm,14.8s						
J05D	**Fort Rock, OR**	**51.07**	**67**	P	**P**	**08 40 36.6**	**+1.7**
	baz=309,SNR=27						
L04D	**Klamath Falls**	**51.13**	**69**	P	**P**	**08 40 36.8**	**+1.4**
	baz=309,SNR=15						
K04D	**Chiloquin, OR**	**51.19**	**68**	P	**P**	**08 40 37.0**	**+1.2**
	baz=309						
YBH	**Yreka Blue Hor**	**51.21**	**69**	P	**P**	**08 40 37.7**	**+1.8**
	comp=Z,26nm,1.0s,baz=322,slow=2.6,SNR=24						
QIZ	**Qiongzhong**	**51.24**	**250**	P	**P**	**08 40 36.8**	**+0.5**
QIZ				S	**S**	**08 47 54.8**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,250nm,2.9s						
QIZ				LR	LR		
	comp=Z,500nm,15.2s						
QIZ				LR	LR		
	comp=Z,570nm,15.2s						
QIZ				LR	LR		
	comp=Z,450nm,18.1s						
BRVK	**Borovoye**	**51.27**	**309**	*e*P	**P**	**08 40 33.8**	**-2.3**
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**51.27**	**309**	*d* *i*P	**P**	**08 40 34.0**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s						
M02C	**Callahan**	**51.34**	**70**	P	**P**	**08 40 38.9**	**+2.0**
	baz=310,SNR=11						
M04C	**Macdoel**	**51.68**	**69**	P	**P**	**08 40 41.0**	**+1.6**
	baz=310,SNR=15						
N02D	**Trinity Center**	**51.69**	**70**	P	**P**	**08 40 41.5**	**+2.0**
	baz=310,SNR=10						
O02D	**Mt. Diablo Mer**	**52.16**	**71**	P	**P**	**08 40 44.9**	**+1.9**
	baz=310,SNR=9.1						
PDGK	**Podgornoye**	**52.53**	**295**	P	**P**	**08 40 44.5**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
O03E	**Paynes Creek**	**52.66**	**70**	P	**P**	**08 40 47.7**	**+1.0**
	baz=311,SNR=22						
MSO	**Missoula**	**52.85**	**59**	P	**P**	**08 40 48.7**	**+0.6**
	baz=310,SNR=21						
OTUK	**Ortayu**	**53.26**	**304**	P	**P**	**08 40 49.4**	**-1.5**
OTUK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
FFC	**Flin Flon**	**53.64**	**46**	*e*P	**P**	**08 40 54.2**	**+0.6**
	comp=Z,136nm,1.1s						
FFC	**Flin Flon**	**53.64**	**46**	*i* P	**P**	**08 40 54.4**	**+0.8**
LVZ	**Lovozero**	**53.80**	**338**	*e*P	**P**	**08 40 53.7**	**-0.9**
	comp=Z,23nm,0.8s						
LVZ	**Lovozero**	**53.80**	**338**	*d* *i*P	**P**	**08 40 54.0**	**-0.6**
LVZ				pmax	pmax		
	comp=Z,24nm,1.7s						
FCC	**Fort Churchill**	**54.21**	**38**	*e*P	**P**	**08 40 58.0**	**+0.4**
	comp=Z,22nm,1.0s						
EGMT	**Eagleton**	**54.27**	**56**	P	**P**	**08 40 58.5**	**+0.1**
	baz=311						
APA	**Apatity**	**54.35**	**338**	⇑ *i*P	**P**	**08 40 57.0**	**-1.6**
APA				*i*		08 42 07.0	
APA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,100nm,13.0s						
ARU	**Arti**	**54.35**	**318**	*e*P	**P**	**08 40 57.2**	**-1.6**
	comp=Z,19nm,0.6s						
ARU	**Arti**	**54.35**	**318**	*d* *i*P	**P**	**08 40 57.8**	**-0.9**
ARU				S	**S**	**08 48 35.2**	**+0.8**
ARU				pmax	pmax		
	comp=Z,15nm,0.6s						
ARCES	**ARCESS Array B**	**54.40**	**342**	P	**P**	**08 40 58.7**	**-0.2**
	comp=Z,13nm,0.7s,baz=34,slow=8.8,SNR=40						
ARCES				LR	LR	09 07 16.2	
	comp=Z,235nm,19.7s,baz=27,slow=40						
ARE0	**ARCESS Array S**	**54.40**	**342**	*e*P	**P**	**08 40 58.6**	**-0.3**
	comp=Z,1.1nm,0.9s						
ARE0	**ARCESS Array S**	**54.40**	**342**	*e*P	**P**	**08 40 58.9**	**-0.1**
KDJ	**Kajisay**	**54.60**	**295**	*e*P	**P**	**08 40 58.8**	**-2.2**
	comp=Z,15nm,1.3s						
KDJ	**Kajisay**	**54.60**	**295**	*e*P	**P**	**08 40 58.8**	**-2.2**
KDJ				pmax	pmax		
	comp=Z,15nm,1.3s						
HLID	**Hailey**	**54.71**	**63**	P	**P**	**08 41 03.0**	**+1.2**
	baz=311,SNR=15						
BOZ	**Bozeman (W)**	**54.88**	**59**	*e*P	**P**	**08 41 03.2**	**+0.3**
	comp=Z,11nm,0.8s						
BOOM	**Boomskoye usch**	**55.06**	**296**	*e*P	**P**	**08 41 02.6**	**-1.7**
	comp=Z,11nm,1.0s						
BOOM	**Boomskoye usch**	**55.06**	**296**	*e*P	**P**	**08 41 02.6**	**-1.7**
BOOM				pmax	pmax		
	comp=Z,11nm,1.0s						
KTK1	**Kautokeino**	**55.27**	**343**	*e*P	**P**	**08 41 05.2**	**0.0**
TRO	**Tromso**	**55.48**	**345**	*e*P	**P**	**08 41 06.9**	**+0.3**
PRGR	**Permogore**	**55.48**	**328**	*e*P	**P**	**08 41 05.1**	**-1.7**
PRGR				pmax	pmax		
	comp=Z,17nm,0.4s						
AAK	**Ala-Archa**	**55.76**	**297**	*e*P	**P**	**08 41 08.2**	**-1.1**
	comp=Z,7.7nm,0.9s						
AAK	**Ala-Archa**	**55.76**	**297**	*e*P	**P**	**08 41 08.2**	**-1.1**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PANO	**Nakornpanom**	**55.78**	**253**	P	P	08 41 14.5	+5.0
	comp=Z,0.9nm,0.9s						
NVAR	**Mina Array Bea**	**55.92**	**70**	P	**P**	**08 41 12.2**	**+1.6**
	comp=Z,14nm,0.7s,baz=298,slow=7.2,SNR=129						
NONG	**Nongkai**	**55.94**	**255**	P	**P**	**08 41 12.8**	**+2.1**
	comp=Z,0.9nm,0.9s						
ELK	**Elko**	**56.12**	**66**	P	**P**	**08 41 13.6**	**+1.5**
	comp=Z,8.5nm,0.8s,baz=311,slow=6.4,SNR=41						
MLAC	**Mammoth, Mammo**	**56.15**	**71**	P	**P**	**08 41 14.4**	**+2.1**
	baz=313						
H17A	**Grant Village**	**56.23**	**60**	P	**P**	**08 41 15.5**	**+2.7**
	baz=312,SNR=20						
RLMT	**Red Lodge**	**56.44**	**58**	P	**P**	**08 41 15.7**	**+1.5**
	baz=312,SNR=23						
MSF	**Maaselka**	**56.71**	**338**	P	**P**	**08 41 15.7**	**+0.1**
MSF				pmax	pmax		
	comp=Z,92nm,1.2s						
VOG	**Valley Oaks Go**	**56.72**	**72**	P	**P**	**08 41 16.8**	**+0.7**
	baz=313						
DGMT	**Dagmar**	**56.76**	**52**	P	**P**	**08 41 16.7**	**+0.5**
	baz=313						
TIN	**Tinemaha, Big**	**56.90**	**71**	P	**P**	**08 41 19.0**	**+1.6**
	baz=313						
ILULI	**Ilulissat**	**56.90**	**13**	*e*P	**P**	**08 41 16.7**	**-0.1**
	comp=Z,27nm,1.0s						
ILULI	**Ilulissat**	**56.90**	**13**	*e*P	**P**	**08 41 16.7**	**-0.1**
ILULI				pmax	pmax		
	comp=Z,27nm,1.0s						
PAYA	**Payao**	**56.92**	**259**	P	**P**	**08 41 19.2**	**+1.5**
	comp=Z,66µm,0.8s						
LAO	**LASA Array**	**56.95**	**55**	P	**P**	**08 41 18.9**	**+1.2**
	baz=313,SNR=10						
KSH	**Kashi**	**57.03**	**293**	*e*P	**P**	**08 41 22.0**	**+3.6**
KSH				sP	pwP	08 41 36.5	+5.1
KSH				pmax	pmax		
	comp=Z,2.0nm,0.2s						
SMMC	**Simmler**	**57.05**	**73**	P	**P**	**08 41 20.1**	**+1.6**
	baz=314,SNR=5.7						
JMIC	**Jan Mayen**	**57.07**	**356**	LR	LR	09 04 20.1	
	comp=Z,121nm,20.4s,baz=48,slow=35						
VES	**Vestal, Richgr**	**57.23**	**72**	P	**P**	**08 41 20.3**	**+0.6**
	baz=314,SNR=10.0						
PHRA	**Phrae**	**57.36**	**258**	P	**P**	**08 41 22.5**	**+1.7**
	comp=Z,6.9nm,1.1s						
CWC	**Cottonwood Cre**	**57.41**	**71**	P	**P**	**08 41 22.2**	**+1.1**
	baz=314						
GRAC	**Grapevine Rang**	**57.44**	**70**	P	**P**	**08 41 22.8**	**+1.6**
	baz=314,SNR=7.7						
PKM	**Mcpherson Peak**	**57.45**	**74**	P	**P**	**08 41 22.8**	**+1.3**
	baz=314						
R11A	**Troy Canyon, C**	**57.54**	**68**	P	**P**	**08 41 23.1**	**+1.1**
	baz=313,SNR=35						
KK31	**Karatay Array**	**57.61**	**300**	*e*P	**P**	**08 41 20.4**	**-1.9**
	comp=Z,4.9nm,0.7s						
KK31	**Karatay Array**	**57.61**	**300**	*i* P	**P**	**08 41 20.4**	**-1.9**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	**Karatay Array**	**57.61**	**300**	*e*P	**P**	**08 41 20.4**	**-1.9**
	comp=Z,4.9nm,0.7s						
KKAR	**Karatay Array**	**57.61**	**300**	*e*P	**P**	**08 41 20.4**	**-1.9**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LOF	**Lofoten**	**57.68**	**346**	*e*P	**P**	**08 41 22.2**	**-0.1**
ISA	**Isabella, Lake**	**57.71**	**72**	P	**P**	**08 41 23.6**	**+0.4**
	baz=314,SNR=8.1						
UTTA	**Uttaradit**	**57.74**	**257**	P	**P**	**08 41 25.2**	**+1.7**
	comp=Z,38µm,1.0s,comp=Z,315µm						
DUG	**Dugway, Tooele**	**57.85**	**65**	P	**P**	**08 41 25.7**	**+1.5**
	baz=313,SNR=35						
BW06	**Boulder Array**	**57.88**	**60**	P	**P**	**08 41 25.5**	**+1.1**
	baz=313,SNR=38						
PD31	**Pinedale Array**	**57.88**	**60**	*e*P	**P**	**08 41 25.0**	**+0.6**
	comp=Z,37nm,1.4s						
PDAR	**Pinedale Array**	**57.88**	**60**	P	**P**	**08 41 25.7**	**+1.3**
	comp=Z,11nm,0.8s,baz=304,slow=3.0,SNR=105						
CMMT	**Chiang Mai**	**57.90**	**259**	P	**P**	**08 41 25.4**	**+0.8**
	comp=Z,26nm,1.1s,comp=Z,267nm						
CHTO	**Chiang Mai**	**57.90**	**259**	*e*P	**P**	**08 41 24.8**	**+0.2**
	comp=Z,46nm,1.0s						
CHTO	**Chiang Mai**	**57.90**	**259**	*e*P	**P**	**08 41 24.8**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,46nm,1.0s						
KLMR	**Klimovskoe**	**58.01**	**330**	*e*P	P	08 41 19.6	-5.1
KLMR				pmax	pmax		
	comp=Z,41nm,1.5s						
MPMC	**Manual Prospec**	**58.01**	**71**	P	**P**	**08 41 26.5**	**+1.1**
	baz=314,SNR=22						
FURC	**Furnace Creek,**	**58.10**	**70**	P	**P**	**08 41 27.2**	**+1.5**
	baz=314,SNR=40						
TPNV	**Topopah Spring**	**58.12**	**70**	P	**P**	**08 41 27.4**	**+1.3**
	baz=314,SNR=29						
CMAR	**Chiang Mai Arr**	**58.17**	**259**	P	**P**	**08 41 27.3**	**+0.8**
	comp=Z,6.2nm,0.7s,baz=24,slow=7.3,SNR=22						
CMAR	**Chiang Mai Arr**	**58.17**	**259**	P	**P**	**08 41 27.3**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OSI	**Osito Audit: C**	**58.29**	**73**	P	**P**	**08 41 28.3**	**+1.1**
	baz=314						
LRMC	**Laurel Mtn Rad**	**58.30**	**72**	P	**P**	**08 41 28.2**	**+0.8**
	baz=314,SNR=8.9						
CHAI	**Chaiyaphum**	**58.31**	**255**	P	P	08 41 37.3	+10
PBKT	**Sadao Pong**	**58.40**	**256**	P	P	08 41 38.2	+10
BLG	**Laguna Peak, P**	**58.44**	**74**	P	**P**	**08 41 28.7**	**+0.5**
	baz=314						
EDW2	**Edwards Air Fo**	**58.53**	**72**	P	**P**	**08 41 30.1**	**+1.2**
	baz=314,SNR=11						
AB31	**Akbulak array**	**58.67**	**311**	*i* P	**P**	**08 41 27.6**	**-2.0**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**58.67**	**311**	*e*P	**P**	**08 41 27.6**	**-1.9**
	comp=Z,3.9nm,0.8s						
AKTO	**Aktyubinsk**	**58.73**	**313**	P	**P**	**08 41 27.1**	**-2.8**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DECC	**Green Verdugo**	**58.77**	**73**	P	**P**	**08 41 31.4**	**+0.8**
	baz=315						
SHOC	**Shoshone, Teco**	**58.83**	**70**	P	**P**	**08 41 32.1**	**+1.2**
	baz=314,SNR=11						
GSC	**Goldstone, Bar**	**58.94**	**71**	P	**P**	**08 41 32.8**	**+1.1**
	baz=314,SNR=15						
BFSC	**Mount Baldy Ra**	**59.18**	**73**	P	**P**	**08 41 34.4**	**+0.9**
	baz=315,SNR=6.0						
CIS	**Catalina Islan**	**59.32**	**74**	P	**P**	**08 41 35.0**	**+0.6**
	baz=315						
MOR8	**Moi Rana**	**59.34**	**345**	*e*P	**P**	**08 41 32.2**	**-1.8**
TUQ	**Turquoise Moun**	**59.36**	**71**	P	**P**	**08 41 35.8**	**+1.1**
	baz=315,SNR=12						
MDND	**Maddock**	**59.41**	**50**	P	**P**	**08 41 35.5**	**+0.7**
	baz=315						
ULM	**Lac du Bonnet**	**59.42**	**46**	P	**P**	**08 41 35.0**	**+0.2**
	comp=Z,8.1nm,0.8s,baz=332,slow=4.4,SNR=6.6						
SCI2	**San Clemente I**	**59.53**	**74**	P	**P**	**08 41 36.7**	**+0.9**
	baz=315						

BTK	Batken	59.54	297	*e*P	P	08 41 34.3	-1.6
	comp=Z,14nm,0.8s						
BTK	Batken	59.54	297	*e*P	P	08 41 34.3	-1.6
BTK				pmax	pmax		
	comp=Z,14nm,0.8s						
HEC	Hector,Ludlow	59.54	71	P	P	08 41 37.1	+1.1
	baz=315,SNR=11						
K22A	Casper	59.57	59	P	P	08 41 36.9	+0.7
	baz=314,SNR=5.6						
BBRC	Big Bear Solar	59.60	72	P	P	08 41 37.6	+1.1
	baz=315,SNR=9.9						
RSSD	Black Hills	59.84	56	*e*P	P	08 41 38.8	+0.7
	comp=Z,36nm,0.8s						
RSSD	Black Hills	59.84	56	*e*P	P	08 41 38.8	+0.7
RSSD				pmax	pmax		
	comp=Z,36nm,0.8s						
RSSD	Black Hills	59.84	56	P	P	08 41 38.7	+0.7
	baz=315						
MURC	Murrieta	59.90	73	P	P	08 41 39.2	+0.9
	baz=315,SNR=9.7						
GMRC	Granite Mounta	59.97	71	P	P	08 41 40.1	+1.2
	baz=315,SNR=17						
PKCU	Pink Cliffs	60.04	67	*e*P	P	08 41 41.7	+2.1
	comp=Z,16nm,1.0s						
SUF	Sumiainen	60.09	338	P	P	08 41 39.3	+0.1
SUF				pmax	pmax		
	comp=Z,71nm,0.8s						
UTHA	Uthaitani	60.10	256	P	P	08 41 50.7	+11
BELC	Belle Mtn. Jos	60.32	72	P	P	08 41 42.0	+0.7
	baz=315,SNR=11						
PFO	Pinyon Flats O	60.33	72	P	P	08 41 42.0	+0.7
	comp=Z,4.5nm,0.8s,baz=306,slow=5.4,SNR=7.6						
PFO	Pinyon Flats O	60.33	72	*e*P	P	08 41 42.0	+0.7
	comp=Z,5.9nm,0.9s						
PFO	Pinyon Flats O	60.33	72	P	P	08 41 42.1	+0.7
	baz=315						
O20A	White River Ci	60.41	62	P	P	08 41 43.1	+1.1
	baz=315,SNR=12						
109C	Camp Elliot, M	60.46	73	P	P	08 41 42.7	+0.6
	baz=315						
GAR	Garm	60.56	297	*e*P	P	08 41 40.8	-2.1
	comp=Z,21nm,0.8s						
GAR	Garm	60.56	297	*e*P	P	08 41 40.8	-2.1
GAR				pmax	pmax		
	comp=Z,21nm,0.8s						
IRM	Iron Mountain	60.71	71	P	P	08 41 45.0	+1.1
	baz=315,SNR=24						
AGMN	Agassiz Nation	60.84	48	*e*P	P	08 41 44.3	-0.2
	comp=Z,19nm,1.3s						
AGMN	Agassiz Nation	60.84	48	P	P	08 41 44.6	+0.1
	baz=317						
MONP2	Monument Peak	60.86	73	P	P	08 41 45.6	+0.5
	baz=316						
BAR	Barrett	60.86	73	*e*P	P	08 41 45.6	+0.7
	comp=Z,11nm,1.0s						
BC3	Big Chuckawall	60.89	72	P	P	08 41 45.7	+0.5
	baz=316,SNR=8.7						
PV09	Paradox Valley	61.08	64	*e*P	P	08 41 47.9	+1.3
N23A	Red Feather La	61.12	60	P	P	08 41 48.0	+1.2
	baz=315,SNR=15						
SWSC	Sam W. Stewart	61.19	73	P	P	08 41 47.5	+0.4
	baz=316						
PDMCI	Parker Dam,Lak	61.20	70	P	P	08 41 48.3	+1.2
	baz=316,SNR=12						
FINES	FINESS Array B	61.22	337	P	P	08 41 46.5	-0.3
	comp=Z,19nm,0.7s,baz=42,slow=8.8,SNR=76						
IKP	In-Ko-Pah, Jac	61.22	73	P	P	08 41 48.2	+0.8
	baz=316						
Y12C	Blythe	61.37	71	P	P	08 41 49.4	+1.1
	baz=316,SNR=9.7						
CHGR	Chuyangaron	61.44	297	*e*P	P	08 41 50.1	+1.2
	comp=Z,14nm,0.7s						
GLA	Glamis	61.69	72	*e*P	P	08 41 51.7	+1.2
	comp=Z,27nm,0.9s						
GLA	Glamis	61.69	72	*e*P	P	08 41 51.7	+1.2
GLA				pmax	pmax		
	comp=Z,27nm,0.9s						
GLA	Glamis	61.69	72	P	P	08 41 51.5	+1.0
	baz=316,SNR=8.0						
WUAZ	Wupatki	61.93	68	P	P	08 41 53.5	+1.3
	baz=316,SNR=16						
SUSD	Miller	62.16	53	P	P	08 41 53.2	-0.3
	baz=317						
MVCO	Mesa Verde	62.34	64	P	P	08 41 56.1	+0.9
	baz=316,SNR=14						
NIL	Nilore	62.69	290	*e*P	P	08 41 56.7	-0.6
	comp=Z,26nm,0.9s						
NIL	Nilore	62.69	290	*e*P	P	08 41 56.7	-0.6
NIL				pmax	pmax		
	comp=Z,26nm,0.9s						
MOS	Moscow	62.70	328	*e*P	P	08 41 55.2	-1.7
MOS				*e*		08 42 10.0	
MOS				pmax	pmax		
	comp=Z,38nm,0.9s						
MOS				MLR	MLR		
	comp=Z,600nm,17.0s						
S22A	4UR Ranch, Cre	62.88	63	P	P	08 42 00.2	+1.4
	baz=316,SNR=18						
Q24A	Divide	62.92	61	P	P	08 42 00.1	+1.1
	baz=316						
EYMN	Ely	63.07	46	P	P	08 41 59.6	+0.1
	baz=319						
OGNE	Ogallala	63.14	57	*e*P	P	08 42 01.8	+1.6
	comp=Z,33nm,1.1s						
OGNE	Ogallala	63.14	57	P	P	08 42 01.5	+1.3
	baz=317,SNR=5.3						
W18A	Petrified Fore	63.15	67	P	P	08 42 01.5	+1.1
	baz=316						
OBN	Obninsk	63.56	328	LR	LR	09 11 30.4	
	comp=Z,50nm,18.0s,baz=351,slow=38						
OBN	Obninsk	63.56	328	*i* P	P	08 42 02.1	-0.4
OBN				pmax	pmax		
	comp=Z,26nm,1.6s						
OBN				MLR	MLR		
	comp=Z,656nm,17.0s						
BORG	Borgarnes	63.59	1	LR	LR	09 11 11.1	
	comp=Z,108nm,18.6s,baz=130,slow=38						
BORG	Borgarnes	63.59	1	*e*P	P	08 42 04.6	+2.0
	comp=Z,20nm,1.0s						
BORG	Borgarnes	63.59	1	*e*P	P	08 42 04.6	+2.0
BORG				pmax	pmax		
	comp=Z,20nm,1.0s						
SDCO	Great Sand Dun	63.61	62	*e*P	P	08 42 04.3	+0.7
	comp=Z,6.5nm,1.0s						
SDCO	Great Sand Dun	63.61	62	P	P	08 42 04.8	+1.2
	baz=317,SNR=12						
VSU	Vasula	63.64	335	*e*P	P	08 42 02.7	-0.4
VSU				IAmb	IAmb	08 42 03.7	
	comp=Z,78nm,0.9s						
VSU	Vasula	63.64	335*c*	*i*P	P	08 42 02.9	-0.1
VSU				pmax	pmax		
	comp=Z,87nm,0.8s						
214A	Organ Pipe Nat	63.65	71	P	P	08 42 04.7	+1.1
	baz=317,SNR=18						
ECSD	EROS Data Cent	63.83	52	P	P	08 42 04.4	-0.2
	baz=318,SNR=7.2						
E38A	The Farm, Brul	64.05	47	P	P	08 42 05.7	-0.3
	baz=319,SNR=6.1						
DOMB	Dombas	64.06	345	*e*P	P	08 42 05.5	-0.3
C40A	Isle Royale Na	64.12	44	P	P	08 42 07.1	+0.7
	baz=320						
KSCO	Kaye Shedlock'	64.24	59	P	P	08 42 08.2	+0.7
	baz=317						
AKN	Aaknes	64.24	347	*e*P	P	08 42 07.3	+0.3
KBL	Kabul	64.46	294	*e*P	P	08 42 06.5	-2.6
	comp=Z,8.1nm,0.9s						
KBL	Kabul	64.46	294	*e*P	P	08 42 06.5	-2.6
KBL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SPMN	Marine on St.	64.53	49	P	P	08 42 09.2	+0.1
	baz=319,SNR=6.7						
TUC	Tucson	64.58	70	*e*P	P	08 42 10.3	+0.6
	comp=Z,12nm,1.2s						
TUC	Tucson	64.58	70	*e*P	P	08 42 10.4	+0.6
TUC				pmax	pmax		
	comp=Z,12nm,1.2s						
TUC	Tucson	64.58	70	P	P	08 42 10.7	+1.0
	baz=317						
T25A	Trinidad	64.65	62	P	P	08 42 11.1	+0.8
	baz=317,SNR=7.4						
NB2	NORSAR Subarra	64.66	344	P	P	08 42 09.2	-0.6
	comp=Z,12nm,0.7s,baz=20,slow=6.9						
NB2	NORSAR Subarra	64.66	344	P	P	08 42 09.2	-0.6
	baz=20,slow=6.9						
NOA	NORSAR Array B	64.66	344	P	P	08 42 09.5	-0.3
	comp=Z,9.4nm,0.7s,baz=20,slow=6.7,SNR=62						
NOA				LR	LR	09 13 48.7	
	comp=Z,208nm,19.6s,baz=210,slow=39						
NOA	NORSAR Array B	64.66	344	P	P	08 42 09.5	-0.3
NOA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,209nm,19.6s						
BGNE	Belgrade	64.79	55	P	P	08 42 10.6	-0.4
	baz=318						
LPSR	Galich'ya Gora	64.81	325	*e*P	P	08 42 08.9	-1.9
LPSR				*e**SP	pP	08 42 18.5	-0.4
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
NC602	NORSAR Array S	64.89	344	*e*P	P	08 42 10.7	-0.5
VRH	Novokhopyorsk	64.91	322	*e*P	P	08 42 09.8	-1.7
VRH				*e**SP	pP	08 42 18.8	-0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
D41A	Chassel	65.03	45	P	P	08 42 12.0	-0.3
	baz=321						
ANMO	Albuquerque	65.12	65	P	P	08 42 14.4	+0.9
	comp=Z,3.5nm,0.8s,baz=316,slow=7.9,SNR=13						
ANMO	Albuquerque	65.12	65	*e*P	P	08 42 14.3	+0.9
	comp=Z,12nm,1.3s						
ANMO	Albuquerque	65.12	65	*e*P	P	08 42 14.3	+0.9
ANMO				pmax	pmax		
	comp=Z,12nm,1.3s						
ANMO	Albuquerque	65.12	65	P	P	08 42 14.2	+0.8
	baz=317						
G39A	Holcombe	65.23	48	P	P	08 42 13.6	-0.1
	baz=320						
SKAR	Skarslia	65.47	345	*e*P	P	08 42 15.0	-0.1
SLIT	Slitere, Latvi	65.50	337	*e*P	P	08 42 14.5	-0.6
SLIT				IAmb	IAmb	08 42 15.6	
	comp=Z,210nm,0.7s						
Y22D	IRIS PASSCAL I	65.50	66	P	P	08 42 16.2	+0.4
	baz=318						
SUE	Sulen	65.63	347	*e*P	P	08 42 15.3	-0.6
G40A	Rib Lake	65.68	47	P	P	08 42 16.4	-0.2
	baz=320						
VSR	Storozhevoye	65.85	324	*e*P	P	08 42 16.5	-1.1
VSR				*e**SP	pP	08 42 25.3	-0.4
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
CBKS	Cedar Bluff	65.91	57	P	P	08 42 18.0	-0.3
	baz=318,SNR=6.5						
VORD	Divnogorie	66.01	324	*e*P	P	08 42 17.8	-0.8
VORD				*e**SP	pP	08 42 25.9	-0.8
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASK	Askoy	66.12	347	*e*P	P	08 42 19.6	+0.5
IZAR	Zarasai	66.14	334	*e*P	P	08 42 18.8	-0.5
IZAR				IAmb	IAmb	08 42 20.6	
	comp=Z,8.3nm,0.7s						
121A	Cookes Peak, D	66.14	67	P	P	08 42 21.3	+1.3
	baz=318,SNR=5.7						
BER	Bergen	66.20	347	*e*P	P	08 42 19.8	+0.1
E43A	Lone Tree Farm	66.24	44	P	P	08 42 20.0	-0.2
	baz=322						
KONO	Kongsberg	66.24	344	*e*P	P	08 42 19.9	-0.1
	comp=Z,20nm,1.2s						
KONO	Kongsberg	66.24	344	*e*P	P	08 42 19.9	-0.1
KONO				pmax	pmax		
	comp=Z,20nm,1.2s						
KONO	Kongsberg	66.24	344	*e*P	P	08 42 19.8	-0.1
ISAL	Salakas	66.33	334	*e*P	P	08 42 20.0	-0.6
ISAL				IAmb	IAmb	08 42 22.1	
	comp=Z,16nm,1.2s						
ODD1	Odda	66.46	346	*e*P	P	08 42 22.1	+0.6
IIGN	Ignalina	66.49	333	*e*P	P	08 42 21.8	+0.2
IIGN				IAmb	IAmb	08 42 23.1	
	comp=Z,20nm,0.6s						
SCHQ	Schefferville	66.53	28	P	P	08 42 22.0	+0.1
	comp=Z,14nm,0.8s,baz=332,slow=5.1,SNR=5.2						
MICGM	Minsk	66.77	332	*e*	P	08 42 24.0	+0.6
MICGM				*e*LR	LR	09 14 06.0	
MNK	Minsk	66.77	332	*e*P	P	08 42 24.0	+0.6
SCIA	State Center	66.85	51	*e*P	P	08 42 24.3	+0.2
	comp=Z,38nm,0.7s						
SCIA	State Center	66.85	51	P	P	08 42 24.4	+0.2
	baz=320,SNR=6.6						
HSIG		66.89	72	*e*P	P	08 42 25.4	+0.8
	comp=Z,14nm,1.1s						
BLS5	Blasjo	66.96	346	*e*P	P	08 42 24.6	0.0
D46A	Sault St. Mari	67.09	42	P	P	08 42 24.2	-1.4
	baz=323						
MATQ	Matagami	67.28	37	P	P	08 42 25.5	-1.3
	baz=326						
I42A	Draeger Farm,	67.33	47	P	P	08 42 26.8	-0.4
	baz=321						
D47A	Chapleau	67.34	42	P	P	08 42 26.0	-1.2
	baz=323						
H43A	Windswept, Lux	67.39	46	P	P	08 42 27.0	-0.5
	baz=322						
E46A	Sault Ste Mari	67.39	43	P	P	08 42 26.3	-1.3
	baz=323						
JFWS	Jewell Farm	67.48	49	P	P	08 42 26.9	-1.3
	baz=321						
L40A	Anamosa	67.68	50	P	P	08 42 28.9	-0.6
	baz=321						
E47A	Iron Bridge	67.75	42	P	P	08 42 28.8	-0.9
	baz=323						
AMTX	Amarillo	67.80	62	P	P	08 42 30.1	-0.3
	baz=319						
GEYT	Alibeck	67.87	303	LR	LR	09 14 56.7	
	comp=Z,425nm,19.5s,baz=30,slow=38						
G45A	Suttons Bay	67.87	44	P	P	08 42 29.9	-0.7
	baz=323						
D49A	Beulah Townshi	67.88	40	P	P	08 42 29.5	-1.1
	baz=324						
MSTX	Muleshoe	67.89	63	*e*P	P	08 42 31.6	+0.6
	comp=Z,21nm,1.0s						
MSTX	Muleshoe	67.89	63	P	P	08 42 30.7	-0.3
	baz=319,SNR=7.8						
G46A	Petoskey	67.99	44	P	P	08 42 30.4	-0.9
	baz=323						
LSQQ	Lebel-sur-Quev	68.10	37	P	P	08 42 30.9	-1.0
	baz=326						
E48A	Lockeyer	68.19	41	P	P	08 42 31.6	-1.0
	baz=324						
CHGQ	Chibougamau	68.33	35	P	P	08 42 32.4	-1.0
	baz=327						
N40A	Mertquake, Sal	68.42	51	P	P	08 42 33.8	-0.2
	baz=321,SNR=5.5						
L42A	Oliver, Polo	68.46	49	P	P	08 42 33.5	-0.8
	baz=322						
H46A	Fife Lake	68.47	44	P	P	08 42 33.9	-0.4
	baz=323						
K43A	Burlington	68.53	48	P	P	08 42 34.2	-0.5
	baz=322						
F48A	Evansville	68.53	42	P	P	08 42 33.7	-0.9
	baz=324						
M41A	Milan	68.54	50	P	P	08 42 34.2	-0.6
	baz=321,SNR=6.1						
VLDQ	Val d'Or	68.71	38	*e*P	P	08 42 33.2	-2.5
	comp=Z,20nm,0.9s						
KLNR	Kaliningrad	68.73	336⇓	*e*P	P	08 42 34.8	-0.9
KLNR				pmax	pmax		
	comp=Z,23nm,0.9s						
E50A	Wahnapitae	68.81	41	P	P	08 42 35.1	-1.3
	baz=325						
F49A	Sandfield	68.82	42	P	P	08 42 35.8	-0.7
	baz=324						
I46A	Reed City	68.84	45	P	P	08 42 36.2	-0.4
	baz=323						
N41A	Harden Midland	68.91	51	P	P	08 42 36.8	-0.3
	baz=321,SNR=11						
I47A	Gladwin	69.18	44	P	P	08 42 38.1	-0.7
	baz=323						
E51A	G1948 Merrick	69.22	40	P	P	08 42 37.7	-1.3
	baz=325,SNR=6.2						
J46A	Howard City	69.22	46	P	P	08 42 38.7	-0.3
	baz=323						
D52A	ZEK Kipawa Sen	69.28	39	P	P	08 42 38.2	-1.1
	baz=326						
MUD	Monsted U'grnd	69.35	343	*i* P	P	08 42 40.3	+0.8
MUD				pmax	pmax		
	comp=Z,12nm,0.7s						
MUD	Monsted U'grnd	69.35	343	*i* P	P	08 42 40.3	+0.8
	comp=Z,12nm,0.7s						
D53A	Lac Vacive, Po	69.47	38	*e*P	P	08 42 39.3	-1.2
	comp=Z,10nm,1.0s						
D53A	Lac Vacive, Po	69.47	38	P	P	08 42 39.7	-0.8
	baz=326						
TOBO	Tobermory, Bru	69.47	42	P	P	08 42 39.4	-1.2
	baz=324						
WMOK	Wichita Mounta	69.47	60	P	P	08 42 41.1	+0.3
	baz=320,SNR=23						
F51A	Arnstein	69.55	40	P	P	08 42 39.7	-1.3
	baz=325						
AKASG	Malin Array Be	69.67	329	P	P	08 42 40.9	-0.7
	comp=Z,18nm,0.6s,baz=30,slow=6.3,SNR=46						
J47A	Sunmer	69.67	45	P	P	08 42 41.5	-0.3
	baz=323						
K46A	Dorr	69.69	46	P	P	08 42 41.5	-0.4
	baz=323						
M44A	Midewin, Midew	69.69	48	P	P	08 42 41.0	-0.9
	baz=322						
E52A	Mattawa	69.75	39	P	P	08 42 41.2	-1.1
	baz=326						
HDIL	Hopedale	69.77	50	P	P	08 42 41.9	-0.6
	baz=322,SNR=8.4						
D54A	Lac Fusel, La	69.81	38	P	P	08 42 41.7	-0.9
	baz=327						
F52A	Sundridge	69.89	40	P	P	08 42 42.2	-0.9
	baz=326,SNR=5.1						
KLBO	Killbear Provi	69.90	41	P	P	08 42 42.1	-1.1
	baz=325						
L46A	Eue Claire	70.00	47	P	P	08 42 43.1	-0.7
	baz=323						
K47A	Vermontville	70.05	46	P	P	08 42 43.8	-0.3
	baz=323						
E53A	Dumoine, Ponti	70.06	39	P	P	08 42 43.1	-1.1
	baz=326,SNR=5.4						
J48A	Bridge Port	70.07	44	P	P	08 42 44.3	0.0
	baz=324						
BMRO	Meriville Lake	70.11	42	P	P	08 42 43.6	-0.8
	baz=325						
TUL1	Leonard	70.15	57	P	P	08 42 44.9	0.0
	baz=320,SNR=6.4						
BUKO	Buck Lake	70.16	40	P	P	08 42 43.7	-1.1
	baz=326						
AKT	Akhty	70.17	313	*e*P	P	08 42 45.8	+0.8
AKT				*e*		08 43 09.0	
AKT				*e*		08 45 22.1	
AKT				pmax	pmax		
	comp=Z,12nm,0.9s						
E54A	Lac Daplat, Po	70.20	38	P	P	08 42 43.8	-1.2
	baz=326						
ALGO	Algonquin Park	70.27	39	P	P	08 42 44.4	-1.0
	baz=326						
K48A	Perry	70.33	45	P	P	08 42 45.5	-0.3
	baz=324						
P43A	Skaggs, Pawnee	70.38	50	P	P	08 42 45.4	-0.7
	baz=322						
KIV	Kislovodsk	70.39	317	*e*P	P	08 42 45.0	-1.3
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
KIV				MLR	MLR		
	comp=Z,696nm,18.0s						
BASO	Ashfield	70.40	43	P	P	08 42 45.4	-0.8
	baz=325						
O44A	Mansfield	70.47	49	P	P	08 42 46.1	-0.7
	baz=322						
KBZ	Khabaz	70.48	317	P	P	08 42 47.0	+0.3
	comp=Z,13nm,0.9s,baz=50,slow=2.6,SNR=20						
L47A	Sherwood	70.52	46	P	P	08 42 46.1	-0.8
	baz=324						
CLWO	Collingwood	70.61	41	P	P	08 42 46.7	-0.9
	baz=325						
H52A	Wyevale	70.61	41	P	P	08 42 46.5	-1.0
	baz=326						
ABTX	Abilene, Hawle	70.62	62	P	P	08 42 47.7	-0.2
	baz=320,SNR=7.0						
K49A	Clarkson	70.63	44	P	P	08 42 47.5	-0.2
	baz=324,SNR=8.8						
G53A	Haliburton	70.73	40	P	P	08 42 47.5	-0.8
	baz=326,SNR=5.3						
CCM	Cathedral Cave	70.79	53	*e*P	P	08 42 48.3	-0.4
	comp=Z,17nm,1.3s						
CCM	Cathedral Cave	70.79	53	*e*P	P	08 42 48.3	-0.4
CCM				pmax	pmax		
	comp=Z,17nm,1.3s						
CCM	Cathedral Cave	70.79	53	P	P	08 42 48.5	-0.2
	baz=322						
PEMO	Pembroke	70.81	39	P	P	08 42 47.3	-1.4
	baz=327						
ZEI	Tsey	70.82	316	*e*P	P	08 42 47.7	-1.4
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHAR	Hobbs	70.82	55	*e*P	P	08 42 48.2	-0.8
	comp=Z,46nm,1.5s						
M47A	Cromwell	70.82	47	P	P	08 42 48.4	-0.5
	baz=323						
I51A	Listowel	70.84	42	P	P	08 42 48.3	-0.6
	baz=325						
TXAR	Lajitas Array	70.87	67	P	P	08 42 50.1	+0.7
	comp=Z,7.4nm,0.8s,baz=299,slow=4.2,SNR=89						
L48A	N Adams	70.88	46	P	P	08 42 48.7	-0.5
	baz=324						
SFIN	Lafayette	70.93	48	P	P	08 42 49.4	-0.1
	baz=323						
AAM	Ann Arbor	70.93	45	P	P	08 42 49.1	-0.4
	baz=324						
NEY	Neytrino	70.95	317⇑	*e*P	P	08 42 51.2	+1.4
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
F55A	Otter Lake	71.02	38	P	P	08 42 49.0	-1.0
	baz=327						
LATQ	La Tuque	71.03	35	P	P	08 42 48.5	-1.5
	baz=329						
L49A	Milan	71.04	45	P	P	08 42 49.8	-0.4
	baz=324						
BANO	Bancroft	71.09	40	P	P	08 42 49.7	-0.8
	baz=326						
M48A	Edgerton	71.12	46	P	P	08 42 50.1	-0.6
	baz=324						
N47A	Urbana	71.17	47	P	P	08 42 50.3	-0.7
	baz=324						
FVM	French Village	71.24	52	*e*P	P	08 42 51.1	-0.4
	comp=Z,7.7nm,0.8s						
FVM	French Village	71.24	52	*e*P	P	08 42 51.1	-0.4
FVM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
U40A	Yellville	71.31	55	P	P	08 42 51.5	-0.4
	baz=322,SNR=18						
G55A	Calabogie	71.37	39	P	P	08 42 50.9	-1.2
	baz=327						
TRQ	Mont Tremblant	71.37	37	*e*P	P	08 42 51.4	-0.8
ACTO	Acton	71.39	42	P	P	08 42 52.2	-0.1
	baz=326						
PLVO	Plevna	71.41	39	P	P	08 42 51.4	-1.0
	baz=327						
M49A	Liberty Center	71.46	46	P	P	08 42 52.5	-0.3
	baz=324						
P46A	Rosedale	71.48	49	P	P	08 42 52.4	-0.5
	baz=323						
N48A	Decatur	71.49	47	P	P	08 42 52.3	-0.6
	baz=324						
PKRO	Pickering	71.51	41	P	P	08 42 52.1	-0.8
	baz=326						
HYB	Hyderabad	71.51	275	*i* P	P	08 42 53.5	+0.1
HYB				*e*pP	pP	08 43 02.0	0.0
L50A	Kingsville	71.51	45	P	P	08 42 52.6	-0.4
	baz=325						
K51A	Iona Station	71.52	43	P	P	08 42 52.9	-0.1
	baz=325						
J52A	Paris	71.53	42	P	P	08 42 52.6	-0.5
	baz=325						
DELO	Deloro Mine	71.63	40	P	P	08 42 52.4	-1.3
	baz=327						
ORIO	Orleans, Innes	71.66	38	P	P	08 42 52.5	-1.3
	baz=328						
DRWO	Darlington Wes	71.72	41	P	P	08 42 53.7	-0.6
	baz=326						
DRCO	St. Marys Ceme	71.73	41	P	P	08 42 54.0	-0.2
	baz=326						
W39A	Magazine	71.74	56	P	P	08 42 53.9	-0.6
	baz=321						
OLIL	Olney	71.77	50	*e*P	P	08 42 55.1	+0.5
	comp=Z,18nm,0.9s						
H55A	Tweed	71.77	39	P	P	08 42 53.7	-0.8
	baz=327						
K52A	Tillsonburg	71.80	43	P	P	08 42 54.1	-0.7
	baz=325						
WLVO	Wesleyville	71.81	41	P	P	08 42 54.2	-0.6
	baz=326						
N49A	Columbus Grove	71.82	46	P	P	08 42 54.6	-0.3
	baz=324						
I55A	Frankford	71.86	40	P	P	08 42 54.0	-1.0
	baz=327						
TYNO	Tyneside	71.90	42	P	P	08 42 54.3	-1.0
	baz=326						
O48A	Farmland	71.92	47	P	P	08 42 55.0	-0.5
	baz=324						
M50A	Fremont	71.93	45	P	P	08 42 55.3	-0.3

	baz=325						
LVV	**L'vov**	**72.02**	**332**	*e*P	P	08 42 50.7	-5.2
LVV				*e*		08 43 19.3	
S44A	**Carbondale**	**72.04**	**51**	P	**P**	**08 42 55.8**	**-0.5**
	baz=323						
H56A	**Elgin**	**72.10**	**39**	P	**P**	**08 42 55.5**	**-1.0**
	baz=327						
AKH	**Akhalkalaki**	**72.11**	**315**	⇑*i*P	**P**	**08 42 58.1**	**+1.2**
AKH	**Akhalkalaki**	**72.11**	**315**	P	**P**	**08 42 58.1**	**+1.2**
JCT	**Junction City**	**72.17**	**63**	*e*P	**P**	**08 42 57.1**	**-0.1**
	comp=Z,20nm,1.2s						
JCT	**Junction City**	**72.17**	**63**	*e*P	**P**	**08 42 57.1**	**-0.1**
JCT				pmax	pmax		
	comp=Z,20nm,1.2s						
JCT	**Junction City**	**72.17**	**63**	P	**P**	**08 42 57.2**	**0.0**
	baz=320,SNR=6.3						
ESK	**Eskdalemuir**	**72.20**	**350**	*i* P	**P**	**08 42 58.0**	**+1.1**
J54A	**Appleton**	**72.25**	**41**	P	**P**	**08 42 56.9**	**-0.6**
	baz=326						
WHTX	**Lake Whitney,**	**72.29**	**61**	P	**P**	**08 42 57.5**	**-0.3**
	baz=321						
O49A	**Covington**	**72.34**	**47**	P	**P**	**08 42 57.2**	**-0.8**
	baz=324						
MIAR	**Mount Ida**	**72.35**	**56**	P	**P**	**08 42 58.3**	**+0.1**
	baz=322,SNR=6.3						
PECO	**Prince Edward**	**72.36**	**40**	P	**P**	**08 42 57.3**	**-0.8**
	baz=327						
N50A	**Nevada**	**72.40**	**46**	P	**P**	**08 42 57.9**	**-0.5**
	baz=325						
MEDO	**Medina**	**72.42**	**41**	P	**P**	**08 42 57.9**	**-0.6**
	baz=326						
P48A	**Milroy**	**72.43**	**48**	P	**P**	**08 42 57.9**	**-0.7**
	baz=324						
W41B	**Gary Mavity, V**	**72.54**	**55**	P	**P**	**08 42 59.0**	**-0.3**
	baz=322,SNR=7.2						
M52A	**Chesterland**	**72.55**	**44**	P	**P**	**08 42 58.9**	**-0.3**
	baz=325						
KWP	**Kalwaria Pacla**	**72.57**	**333**	*e*P	**P**	**08 43 00.2**	**+0.9**
KWP	**Kalwaria Pacla**	**72.57**	**333**	*e*P	**P**	**08 43 00.2**	**+0.9**
GNI	**Garni**	**72.59**	**314**	⇑*e*P	**P**	**08 43 00.2**	**+0.5**
GNI				pmax	pmax		
	comp=Z,42nm,1.1s						
N51A	**Ashland**	**72.62**	**45**	P	**P**	**08 42 59.4**	**-0.3**
	baz=325,SNR=5.4						
L53A	**Girard**	**72.67**	**43**	P	**P**	**08 42 59.7**	**-0.3**
	baz=326						
O50A	**Cable**	**72.70**	**46**	P	**P**	**08 42 59.8**	**-0.4**
	baz=325						
P49A	**Miami Univ. Ec**	**72.70**	**47**	P	**P**	**08 42 59.6**	**-0.6**
	baz=324						
LONY	**Lake Ozonia**	**72.72**	**38**	P	**P**	**08 42 58.6**	**-1.6**
	baz=328						
BATM	**Batumi**	**72.73**	**316**	⇑*i*P	**P**	**08 43 00.5**	**+0.2**
X40A	**Basin Creek Fa**	**72.78**	**56**	P	**P**	**08 43 00.3**	**-0.5**
	baz=322						
K54A	**Basiliko Farm,**	**72.78**	**42**	P	**P**	**08 43 00.2**	**-0.5**
	baz=326						
OJC	**Ojcow**	**72.83**	**335**	*e*P	**P**	**08 43 01.3**	**+0.5**
OJC	**Ojcow**	**72.83**	**335**	*e*P	**P**	**08 43 01.3**	**+0.5**
CTA	**Charters Tower**	**72.84**	**194**	P	**P**	**08 43 01.5**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=352,slow=14,SNR=4.2						
BCA	**Borcka**	**72.89**	**316**	⇑*i*P	**P**	**08 43 01.6**	**+0.3**
ACSO	**Alum Creek Sta**	**72.91**	**46**	P	**P**	**08 43 00.8**	**-0.6**
	baz=325						
M53A	**WI Miller and**	**72.92**	**44**	P	**P**	**08 43 01.4**	**0.0**
	baz=326,SNR=5.4						
K55A	**Perry**	**72.94**	**41**	P	**P**	**08 43 01.0**	**-0.5**
	baz=327,SNR=5.8						
DBOC	**Borcka**	**72.95**	**316**	*i* P	**P**	**08 43 02.5**	**+0.8**
MMNY	**Mt. Morris Dam**	**73.00**	**41**	*e*P	**P**	**08 43 01.5**	**-0.4**
	comp=Z,21nm,0.8s						
N52A	**McGinn's Farm,**	**73.00**	**45**	P	**P**	**08 42 59.6**	**-2.3**
	baz=325						
WCI	**Wyandotte Cave**	**73.02**	**49**	*e*P	**P**	**08 43 02.1**	**0.0**
	comp=Z,12nm,0.8s						
WCI	**Wyandotte Cave**	**73.02**	**49**	*e*P	**P**	**08 43 02.1**	**0.0**
WCI				pmax	pmax		
	comp=Z,12nm,0.8s						
WCI	**Wyandotte Cave**	**73.02**	**49**	P	**P**	**08 43 01.7**	**-0.4**
	baz=324						
KIS	**Kishinev**	**73.03**	**328**	*e*P	**P**	**08 43 00.0**	**-2.0**
KIS				LRM	MLR	09 19 00.0	
	comp=Z,400nm,19.0s						
KIS	**Kishinev**	**73.03**	**328**	*e*P	**P**	**08 43 00.0**	**-2.0**
KIS				*e*		08 43 25.0	
Q49A	**Aurora**	**73.04**	**48**	P	**P**	**08 43 01.3**	**-0.9**
	baz=324						
P50A	**Jamestown**	**73.05**	**47**	P	**P**	**08 43 01.8**	**-0.5**
	baz=325						
DAGI	**Agillar**	**73.07**	**316**	*i* P	**P**	**08 43 03.4**	**+0.9**
DAGI				IAML_P			
	comp=Z,294nm,0.7s						
KSP	**Ksiaz**	**73.14**	**337**	*e*P	**P**	**08 43 02.8**	**+0.2**
KSP	**Ksiaz**	**73.14**	**337**	*e*P	**P**	**08 43 02.8**	**+0.2**
O51A	**Pataskala**	**73.15**	**46**	P	**P**	**08 43 02.5**	**-0.4**
	baz=325,SNR=5.5						
DBAD	**Bademkaya**	**73.21**	**316**	*i* P	**P**	**08 43 03.9**	**+0.6**
DBAD				IAML_P			
	comp=Z,693nm,0.7s						
L55A	**Hinsdale**	**73.24**	**42**	P	**P**	**08 43 02.7**	**-0.7**
	baz=327						
M54A	**Oil Creek Stat**	**73.29**	**43**	P	**P**	**08 43 03.6**	**-0.1**
	baz=326						
KOLS	**Kolonicke sedl**	**73.32**	**333**	*e*P	**P**	**08 43 04.1**	**+0.4**
KOLS				pmax	pmax		
	comp=Z,13nm,0.9s						
KOLS	**Kolonicke sedl**	**73.32**	**333**	*e*P	**P**	**08 43 04.1**	**+0.4**
N53A	**Lisbon**	**73.38**	**44**	P	**P**	**08 43 04.1**	**-0.1**
	baz=326						
OSTC	**Ostas**	**73.42**	**337**	AMS	AMS	09 20 30.0	
	comp=Z,500nm,15.2s						
NIE	**Niedzica**	**73.43**	**334**	*e*P	**P**	**08 43 05.1**	**+0.7**
NIE	**Niedzica**	**73.43**	**334**	*e*P	**P**	**08 43 05.1**	**+0.7**
CHVC	**Chvalec**	**73.43**	**337**	*e*P	**P**	**08 43 04.6**	**+0.2**
CHVC				AMS	AMS	09 20 40.0	
	comp=Z,600nm,14.4s						
CLL	**Collm**	**73.46**	**339**	*e*P	**P**	**08 43 04.5**	**+0.1**
	comp=Z,32nm,1.3s						
CLL	**Collm**	**73.46**	**339**	⇑*i*P	**P**	**08 43 04.6**	**+0.1**
CLL				*e*		08 43 14.0	
CLL				pmax	pmax		
	comp=Z,18nm,0.9s						
CLL	**Collm**	**73.46**	**339**	⇑*i*P	**P**	**08 43 04.6**	**+0.1**
	comp=Z,18nm,0.9s						
CLL				*e*pP	**pP**	**08 43 14.0**	**+0.8**
CLL				*e*		08 43 26.0	
CLL				*i*		08 43 33.9	
	comp=Z,28nm,1.1s						
R49A	**Shelbyville**	**73.49**	**48**	P	**P**	**08 43 04.8**	**-0.1**
	baz=324						
O52A	**Adamsville**	**73.51**	**45**	P	**P**	**08 43 04.8**	**-0.2**
	baz=325,SNR=6.6						
UPC	**Upice**	**73.52**	**337**	*e*P	**P**	**08 43 05.7**	**+0.9**
UPC				*e*		08 43 15.9	
UPC				MLR	MLR		
	comp=Z,700nm,14.9s						
UPC	**Upice**	**73.52**	**337**	*e*P	**P**	**08 43 05.7**	**+0.9**
UPC				*e*pP	**sP**	**08 43 15.9**	**-0.4**
UPC				AMS	AMS	09 20 40.0	
	comp=Z,700nm,14.9s						
UZH	**Uzhgorod**	**73.59**	**333**	*e*P	**P**	**08 43 05.4**	**+0.2**
UZH				*e*		08 43 16.0	
DPC	**Dobruska-Polom**	**73.59**	**337**	*e*P	**P**	**08 43 06.0**	**+0.7**
DPC				*e*		08 43 16.6	
DPC				MLR	MLR		
	comp=Z,400nm,14.8s						
DPC	**Dobruska-Polom**	**73.59**	**337**	*e*P	**P**	**08 43 06.0**	**+0.7**
DPC				*e*pP	**sP**	**08 43 16.6**	**-0.2**
DPC				AMS	AMS	09 20 40.0	
	comp=Z,400nm,14.8s						
Q50A	**Georgetown**	**73.59**	**47**	P	**P**	**08 43 05.1**	**-0.3**
	baz=325						
OKC	**Ostrava-Krasne**	**73.61**	**336**	*e*P	**P**	**08 43 06.6**	**+1.2**
OKC				MLR	MLR		
	comp=Z,400nm,14.2s						
OKC	**Ostrava-Krasne**	**73.61**	**336**	*e*P	**P**	**08 43 06.6**	**+1.2**
OKC				AMS	AMS	09 19 50.0	
	comp=Z,400nm,14.2s						
N54A	**Moraine State**	**73.61**	**43**	P	**P**	**08 43 05.3**	**-0.3**
	baz=326,SNR=7.3						
BURAR	**Bucovina Array**	**73.63**	**330**	⇓*i*P	**P**	**08 43 05.5**	**-0.2**
T47A	**Sharon Grove**	**73.63**	**50**	P	**P**	**08 43 04.7**	**-1.1**
	baz=324,SNR=11						
BRG	**Berggiesshubel**	**73.66**	**339**	*i* P	**P**	**08 43 06.0**	**+0.4**
	comp=Z,14nm,1.2s						
BRG				*i*		08 43 17.6	
	comp=Z,12nm,1.1s						
	comp=N,460nm,12.9s						
	comp=E,191nm,15.8s						
	comp=Z,531nm,14.7s						
BRG	**Berggiesshubel**	**73.66**	**339**	*i* P	**P**	**08 43 06.0**	**+0.4**
BRG				*i*		08 43 17.6	
BRG				pmax	pmax		
	comp=Z,14nm,1.2s						
BRG				MLR	MLR		
	comp=N,460nm,12.9s						
BRG				MLR	MLR		
	comp=E,191nm,15.8s						
BRG				MLR	MLR		
	comp=Z,531nm,14.7s						
O53A	**New Philadelph**	**73.67**	**45**	P	**P**	**08 43 05.7**	**-0.2**
	baz=326,SNR=5.6						
M55A	**Ridgway**	**73.70**	**42**	P	**P**	**08 43 05.7**	**-0.4**
	baz=327,SNR=5.5						
Q51A	**Peebles**	**73.73**	**47**	P	**P**	**08 43 06.2**	**-0.1**
	baz=325						
X43A	**Marvell**	**73.75**	**55**	P	**P**	**08 43 06.7**	**+0.3**
	baz=323						
P52A	**Corning**	**73.77**	**46**	P	**P**	**08 43 06.0**	**-0.5**
	baz=325						
MORC	**Moravsky Berou**	**73.82**	**336**	⇑*i*P	**P**	**08 43 07.2**	**+0.5**
MORC	**Moravsky Berou**	**73.82**	**336**	*e*P	**P**	**08 43 07.1**	**+0.4**
EATA	**Eleskirt**	**73.82**	**315**	*i* P	**P**	**08 43 09.0**	**+1.8**
EATA				IAML_P			
	comp=Z,97nm,0.4s						
PVCC	**Panska Ves**	**73.84**	**338**	AMS	AMS	09 21 00.0	
	comp=Z,700nm,14.1s						
S49A	**Springfield**	**73.85**	**49**	P	**P**	**08 43 07.1**	**+0.1**
	baz=324,SNR=6.2						
R50A	**Paris**	**73.89**	**48**	P	**P**	**08 43 06.8**	**-0.4**
	baz=325						
LANS	**Liptovska Anna**	**73.89**	**335**	*e*P	**P**	**08 43 08.3**	**+1.2**
LANS				pmax	pmax		
	comp=Z,13nm,0.8s						
LANS	**Liptovska Anna**	**73.89**	**335**	*e*P	**P**	**08 43 08.3**	**+1.2**
M56A	**Emporium**	**73.93**	**42**	P	**P**	**08 43 06.5**	**-0.9**
	baz=327						
BIZ	**Bicaz**	**73.96**	**329**	⇑*i*P	**P**	**08 43 07.5**	**0.0**
NATX	**Nacogdoches**	**73.96**	**59**	P	**P**	**08 43 07.8**	**+0.1**
	baz=322						
TRPA	**Tarpa**	**73.97**	**332**	⇑*i*P	**P**	**08 43 08.1**	**+0.6**
WVT	**Waverly**	**73.97**	**51**	*e*P	**P**	**08 43 07.9**	**+0.2**
	comp=Z,7.4nm,0.9s						
WVT	**Waverly**	**73.97**	**51**	*e*P	**P**	**08 43 07.9**	**+0.2**
WVT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WVT	**Waverly**	**73.97**	**51**	P	**P**	**08 43 07.6**	**-0.1**
	baz=324						
LBNH	**Lisbon**	**74.03**	**36**	P	**P**	**08 43 07.7**	**-0.2**
	baz=330						
833A	**Chaparral WMA,**	**74.05**	**64**	P	**P**	**08 43 08.7**	**+0.4**
	baz=321						
PKME	**Peaks-Kenny Pk**	**74.08**	**34**	P	**P**	**08 43 07.8**	**-0.5**
	baz=331						
O54A	**Avella**	**74.09**	**44**	P	**P**	**08 43 08.1**	**-0.3**
	baz=326						
V46A	**Holladay**	**74.10**	**52**	P	**P**	**08 43 08.3**	**-0.2**
	baz=323,SNR=6.6						
KRIK	**Erzurum-spir**	**74.10**	**316**	*i* P	**P**	**08 43 10.6**	**+1.9**
KRIK				IAML_P			
	comp=Z,169nm,0.2s						
TESR	**Tescani**	**74.17**	**329**	⇑*i*P	**P**	**08 43 09.1**	**+0.4**
N55A	**Marion Center**	**74.18**	**43**	P	**P**	**08 43 08.5**	**-0.4**
	baz=327,SNR=6.5						
R51A	**Hillsboro**	**74.21**	**47**	P	**P**	**08 43 08.8**	**-0.3**
	baz=325,SNR=5.3						
BINY	**Binghamton**	**74.22**	**40**	P	**P**	**08 43 08.7**	**-0.4**
	baz=328						
P53A	**Whipple**	**74.22**	**45**	P	**P**	**08 43 08.6**	**-0.5**
	baz=326						
Q52A	**Bidwell**	**74.27**	**46**	P	**P**	**08 43 09.2**	**-0.2**
	baz=325						
T49A	**Edmonton**	**74.28**	**49**	P	**P**	**08 43 09.3**	**-0.3**
	baz=324,SNR=7.0						
S50A	**Richmond**	**74.35**	**48**	P	**P**	**08 43 09.6**	**-0.3**
	baz=325						
PRU	**Pruhonice**	**74.35**	**338**	*e*P	**P**	**08 43 10.5**	**+0.8**
PRU				MLR	MLR		
	comp=Z,700nm,14.6s						
PRU	**Pruhonice**	**74.35**	**338**	*e*P	**P**	**08 43 10.5**	**+0.8**
PRU				AMS	AMS	09 22 00.0	
	comp=Z,700nm,14.6s						
N56A	**West Decatur**	**74.36**	**42**	P	**P**	**08 43 09.9**	**-0.1**
	baz=327,SNR=8.3						
GOPC	**GO Pecny, Ondr**	**74.36**	**338**	*e*P	**P**	**08 43 10.8**	**+1.0**
GOPC				*e*		08 43 19.4	
GOPC				MLR	MLR		
	comp=Z,600nm,12.7s						
GOPC	**GO Pecny, Ondr**	**74.36**	**338**	*e*P	**P**	**08 43 10.8**	**+1.0**
GOPC				*e*pP	**pP**	**08 43 19.4**	**+1.3**
GOPC				AMS	AMS	09 22 00.0	
	comp=Z,600nm,12.7s						
V47A	**Nunnelly**	**74.37**	**51**	P	**P**	**08 43 09.8**	**-0.2**
	baz=324						
ARCR	**ARCALIA**	**74.37**	**331**	⇑*i*P	**P**	**08 43 10.7**	**+0.8**
L58A	**Harry Jones Me**	**74.41**	**40**	P	**P**	**08 43 09.6**	**-0.6**
	baz=328						
VRAC	**Vranov**	**74.49**	**336**	⇑*i*P	**P**	**08 43 12.1**	**+1.6**
VRAC	**Vranov**	**74.49**	**336**	*e*P	**P**	**08 43 11.3**	**+0.8**
OXF	**Oxford**	**74.49**	**54**	P	**P**	**08 43 10.4**	**-0.4**
	baz=323						
W46A	**Michie**	**74.50**	**52**	P	**P**	**08 43 10.8**	**-0.1**
	baz=324						
O55A	**Ligonier**	**74.53**	**43**	P	**P**	**08 43 10.3**	**-0.7**
	baz=326						
KOPT	**Kop Dagi**	**74.55**	**316**	*i* P	**P**	**08 43 13.1**	**+1.7**
KOPT				IAML_P			
	comp=Z,753nm,0.3s						
NKC	**Novy Kostel**	**74.59**	**339**	*e*P	**P**	**08 43 12.3**	**+1.2**
NKC				MLR	MLR		
	comp=Z,400nm,14.0s						
NKC	**Novy Kostel**	**74.59**	**339**	*e*P	**P**	**08 43 12.3**	**+1.2**
NKC				AMS	AMS	09 22 10.0	
	comp=Z,400nm,14.0s						
R52A	**Catlettsburg**	**74.61**	**47**	P	**P**	**08 43 10.4**	**-1.0**
	baz=325						
JAVC	**Velka Javorina**	**74.63**	**336**	*e*P	**P**	**08 43 12.9**	**+1.5**
U49A	**Red Boiling Sp**	**74.65**	**50**	P	**P**	**08 43 11.6**	**-0.1**
	baz=324,SNR=5.8						
VYHS	**Vyhne**	**74.66**	**335**	*e*P	**P**	**08 43 12.3**	**+0.7**
VYHS				pmax	pmax		
	comp=Z,16nm,1.3s						
VYHS	**Vyhne**	**74.66**	**335**	*e*P	**P**	**08 43 12.3**	**+0.7**
T50A	**Nancy**	**74.68**	**49**	P	**P**	**08 43 11.7**	**-0.1**
	baz=325,SNR=5.7						
Q53A	**Leroy**	**74.68**	**46**	P	**P**	**08 43 11.6**	**-0.3**
	baz=326						
VRI	**Vrincioaia**	**74.71**	**328**	⇑*i*P	**P**	**08 43 12.3**	**+0.4**
M58A	**Price's Panora**	**74.73**	**41**	P	**P**	**08 43 11.5**	**-0.6**
	baz=328						
S51A	**Beattyville**	**74.75**	**48**	P	**P**	**08 43 11.9**	**-0.3**
	baz=325						
MCWV	**Mont Chateau**	**74.75**	**44**	P	**P**	**08 43 12.0**	**-0.2**
	baz=326						
PLOR	**Plostina**	**74.75**	**328**	⇑*i*P	**P**	**08 43 13.1**	**+0.9**
SSPA	**Standing Stone**	**74.76**	**42**	*e*P	**P**	**08 43 12.1**	**-0.1**
	comp=Z,21nm,1.0s						
SSPA	**Standing Stone**	**74.76**	**42**	P	**P**	**08 43 11.5**	**-0.8**
	baz=327						
KRUC	**Moravsky**	**74.77**	**336**	*e*P	**P**	**08 43 12.8**	**+0.7**
TREC	**Trest**	**74.77**	**337**	*e*P	**P**	**08 43 13.1**	**+0.9**
TREC				MLR	MLR		
	comp=Z,400nm,16.4s						
TREC	**Trest**	**74.77**	**337**	*e*P	**P**	**08 43 13.1**	**+0.9**
TREC				AMS	AMS	09 21 30.0	
	comp=Z,400nm,16.4s						
PLAL	**Pickwick Lake**	**74.77**	**52**	*e*P	**P**	**08 43 11.7**	**-0.7**
	comp=Z,9.3nm,1.0s						
V48A	**Smith Brothers**	**74.77**	**51**	P	**P**	**08 43 12.3**	**-0.1**
	baz=324,SNR=6.3						
O56A	**Blue Knob Stat**	**74.79**	**43**	P	**P**	**08 43 11.3**	**-1.2**
	baz=327						
W47A	**Westpoint**	**74.79**	**52**	P	**P**	**08 43 12.3**	**-0.2**
	baz=324						
N57A	**Milroy**	**74.80**	**42**	P	**P**	**08 43 12.1**	**-0.4**
	baz=327,SNR=8.3						
CFR	**Carcaliu**	**74.86**	**327**	⇑*i*P	**P**	**08 43 12.7**	**0.0**
Q54A	**Coxs Mills**	**74.88**	**45**	P	**P**	**08 43 13.3**	**+0.3**
	baz=326						
P55A	**Reedsville**	**74.88**	**44**	P	**P**	**08 43 13.1**	**+0.1**
	baz=326,SNR=7.4						
PSZ	**Piszkesteto**	**74.91**	**334**	⇑*i*P	**P**	**08 43 13.7**	**+0.6**
PSZ	**Piszkesteto**	**74.91**	**334**	*e*P	**P**	**08 43 14.0**	**+1.0**
R53A	**Hurricane**	**74.92**	**46**	P	**P**	**08 43 12.7**	**-0.6**
	baz=326						
S52A	**Salyersville**	**74.95**	**47**	P	**P**	**08 43 13.2**	**-0.3**
	baz=325,SNR=6.1						
M59A	**Waymart**	**75.00**	**40**	P	**P**	**08 43 13.1**	**-0.5**
	baz=328						
SMOL	**Smolenice**	**75.01**	**336**	*e*P	**P**	**08 43 14.5**	**+0.9**
SMOL				pmax	pmax		
	comp=Z,17nm,1.0s						
SMOL	**Smolenice**	**75.01**	**336**	*e*P	**P**	**08 43 14.5**	**+0.9**
N58A	**Sunbury**	**75.07**	**41**	P	**P**	**08 43 13.6**	**-0.4**
	baz=328						
DRGR		**75.13**	**331**	⇑*i*P	**P**	**08 43 14.4**	**0.0**
DRGR		**75.13**	**331**	P	**P**	**08 43 14.4**	**0.0**
T51A	**Gray**	**75.14**	**48**	P	**P**	**08 43 14.3**	**-0.2**
	baz=325						
U50A	**Jamestown**	**75.17**	**49**	P	**P**	**08 43 14.5**	**-0.2**
	baz=325,SNR=5.6						
WRA	**Warramunga Arr**	**75.17**	**205**	P	**P**	**08 43 15.6**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=25,slow=6.4,SNR=1.9						
MODS	**Modra-Piesok**	**75.18**	**336**	*e*P	**P**	**08 43 15.2**	**+0.6**
MODS				pmax	pmax		
	comp=Z,18nm,1.2s						
MODS	**Modra-Piesok**	**75.18**	**336**	*e*P	**P**	**08 43 15.1**	**+0.5**
V49A	**McMinnville**	**75.19**	**50**	P	**P**	**08 43 14.2**	**-0.6**
	baz=324						
Q55A	**Buckhannon**	**75.20**	**45**	P	**P**	**08 43 14.4**	**-0.4**
	baz=326						
W48A	**Pulaski**	**75.20**	**51**	P	**P**	**08 43 14.8**	**-0.1**
	baz=324,SNR=7.9						
O57A	**Amberson**	**75.22**	**42**	P	**P**	**08 43 14.6**	**-0.4**
	baz=327,SNR=7.1						
X47A	**Russelville**	**75.25**	**52**	P	**P**	**08 43 14.8**	**-0.4**
	baz=324						
MLR	**Muntele Rosu**	**75.30**	**329**	*e*P	**P**	**08 43 16.1**	**+0.6**
	comp=Z,16nm,0.7s						
MLR	**Muntele Rosu**	**75.30**	**329**	⇑*i*P	**P**	**08 43 16.3**	**+0.9**
P56A	**Dayton Farm, R**	**75.31**	**43**	P	**P**	**08 43 15.6**	**+0.2**
	baz=327,SNR=7.8						
DIKM	**Dikmen**	**75.32**	**321**	⇑*i*P	**P**	**08 43 16.0**	**+0.5**
KHC	**Kasperske Hory**	**75.37**	**338**	*e*P	**P**	**08 43 15.7**	**0.0**
	comp=Z,5.5nm,1.0s						
KHC	**Kasperske Hory**	**75.37**	**338**	*c* *i*P	**P**	**08 43 16.1**	**+0.4**
KHC				pmax	pmax		
	comp=Z,29nm,1.1s						
KHC	**Kasperske Hory**	**75.37**	**338**	*e*P	**P**	**08 43 16.7**	**+1.0**
KHC				*e*pP	**pP**	**08 43 25.7**	**+1.7**
KHC				AMS	AMS	09 22 00.0	
	comp=Z,700nm,16.5s						
S53A	**Williamson**	**75.38**	**47**	P	**P**	**08 43 15.5**	**-0.4**
	baz=326						
ZST	**Bratislava**	**75.39**	**336**	*e*P	**P**	**08 43 16.2**	**+0.5**
ZST				pmax	pmax		
	comp=Z,14nm,1.1s						
ZST	**Bratislava**	**75.39**	**336**	*e*P	**P**	**08 43 16.2**	**+0.5**
N59A	**State Game Lan**	**75.39**	**41**	P	**P**	**08 43 15.5**	**-0.4**
	baz=328						
TIRR	**Tirgusor**	**75.40**	**327**	*e*P	**P**	**08 43 15.8**	**0.0**
	comp=Z,57nm,0.9s						
TIRR	**Tirgusor**	**75.40**	**327**	⇑*i*P	**P**	**08 43 15.8**	**0.0**
TIRR	**Tirgusor**	**75.40**	**327**	*e*P	**P**	**08 43 15.8**	**0.0**
TIRR				pmax	pmax		
	comp=Z,57nm,0.9s						
TLB	**Topalu**	**75.41**	**327**	⇑*i*P	**P**	**08 43 16.4**	**+0.5**
T52A	**Hallie**	**75.46**	**48**	P	**P**	**08 43 16.4**	**0.0**
	baz=325						
R54A	**Victor**	**75.47**	**46**	P	**P**	**08 43 15.9**	**-0.5**
	baz=326						
MEM	**Membach**	**75.50**	**344**	P	**P**	**08 43 16.8**	**+0.5**
	comp=Z,25nm,1.1s						
MEM				⇑pP	**pP**	**08 43 26.0**	**+1.4**
MEM				⇓sP	**PcP**	**08 43 29.6**	**+0.4**
W49A	**Belvidere**	**75.54**	**51**	P	**P**	**08 43 16.7**	**-0.1**
	baz=324						
Q56A	**Snyder Ridge,**	**75.55**	**44**	P	**P**	**08 43 16.3**	**-0.5**
	baz=327						
U51A	**La Follette**	**75.58**	**49**	P	**P**	**08 43 17.0**	**-0.1**
	baz=325						
O58A	**Lewisberry**	**75.59**	**42**	P	**P**	**08 43 16.6**	**-0.4**
	baz=328						
GERES	**GERESS Array B**	**75.61**	**338**	P	**P**	**08 43 17.9**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=39,slow=5.1,SNR=16						
GERES				LR	LR	09 21 13.9	
	comp=Z,353nm,18.5s,baz=25,slow=40						
VOIR		**75.63**	**329**	⇑*i*P	**P**	**08 43 17.8**	**+0.5**
V50A	**Pikevile**	**75.65**	**50**	P	**P**	**08 43 17.2**	**-0.3**
	baz=325,SNR=7.0						
TZTN	**Tazewell**	**75.66**	**48**	P	**P**	**08 43 16.3**	**-1.2**
	baz=325						
P57A	**Homestead Farm**	**75.68**	**43**	P	**P**	**08 43 17.1**	**-0.4**
	baz=327						
N60A	**Cedar Hill Far**	**75.70**	**40**	P	**P**	**08 43 17.2**	**-0.5**
	baz=328						
X48A	**Hartselle**	**75.70**	**52**	P	**P**	**08 43 17.3**	**-0.4**
	baz=324						
O59A	**Robesonia**	**75.73**	**41**	P	**P**	**08 43 17.6**	**-0.2**
	baz=328						
T53A	**Wise**	**75.77**	**47**	P	**P**	**08 43 17.7**	**-0.5**
	baz=326						
R55A	**Marlinton**	**75.77**	**45**	P	**P**	**08 43 17.7**	**-0.5**
	baz=326						
BCLA	**Clavier**	**75.81**	**344**	⇑P	**P**	**08 43 18.5**	**+0.4**
	comp=Z,9.9nm,1.3s						
BCLA				⇑pP	**pP**	**08 43 27.7**	**+1.3**
ARR	**Arges**	**75.82**	**330**	⇓*i*P	**P**	**08 43 19.5**	**+1.1**
CSKK	**Cskako**	**75.86**	**335**	*e*P	**P**	**08 43 20.1**	**+1.7**
U52A	**Thorn Hill**	**75.87**	**48**	P	**P**	**08 43 18.5**	**-0.2**
	baz=325						
V51A	**Loudon**	**75.89**	**49**	P	**P**	**08 43 18.7**	**-0.1**
	baz=325						
ICOR	**Ion Corvin**	**75.90**	**327**	⇑*i*P	**P**	**08 43 20.0**	**+1.3**
SIRR	**Siria**	**75.91**	**332**	⇑*i*P	**P**	**08 43 19.9**	**+1.1**
W50A	**Signal Mountai**	**75.93**	**50**	P	**P**	**08 43 18.6**	**-0.5**
	baz=325						
CONA	**Conrad Observa**	**75.95**	**336**	*i* P	**P**	**08 43 20.2**	**+1.1**
	comp=Z,17nm,1.4s,SNR=9.9						
P58A	**Pank, Wackersv**	**75.97**	**42**	P	**P**	**08 43 18.9**	**-0.3**
	baz=328,SNR=5.3						
R56A	**Bull Pasture M**	**75.98**	**44**	P	**P**	**08 43 18.9**	**-0.5**
	baz=327						
X49A	**Woodville**	**76.00**	**51**	P	**P**	**08 43 19.3**	**-0.2**
	baz=324,SNR=5.8						
Y48A	**Jasper**	**76.08**	**52**	P	**P**	**08 43 19.3**	**-0.6**
	baz=324						
T54A	**Tazewell**	**76.14**	**47**	P	**P**	**08 43 20.0**	**-0.3**
	baz=326						
V52A	**Sevierville**	**76.22**	**49**	P	**P**	**08 43 20.6**	**-0.1**
	baz=325						
W51A	**Cleveland**	**76.23**	**50**	P	**P**	**08 43 20.3**	**-0.5**
	baz=325						
P59A	**Jarrettsville**	**76.23**	**42**	P	**P**	**08 43 20.5**	**-0.2**
	baz=328						
DOU	**Dourbes**	**76.24**	**344**	⇑P	**P**	**08 43 20.9**	**+0.4**
DOU				⇑pP	**pP**	**08 43 30.5**	**+1.6**
U53A	**Fall Branch**	**76.26**	**48**	P	**P**	**08 43 20.6**	**-0.3**
	baz=326						
Q58A	**Fox Den Farm,**	**76.27**	**43**	P	**P**	**08 43 20.8**	**-0.2**
	baz=328						
TKL	**Tuckaleechee C**	**76.28**	**49**	P	**P**	**08 43 21.2**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=175,slow=2.7,SNR=6.4						
X50B	**Fort Payne**	**76.37**	**51**	P	**P**	**08 43 21.5**	**-0.1**
	baz=325,SNR=5.1						
GZR	**Gura Zlata**	**76.37**	**331**	⇓*i*P	**P**	**08 43 21.7**	**+0.2**
MOA	**Molln**	**76.41**	**337**	*i* P	**P**	**08 43 22.5**	**+0.9**
	comp=Z,10nm,1.3s						
ILGA	**Ilgaz**	**76.43**	**321**	*e*P	**P**	**08 43 23.4**	**+1.3**
	comp=Z,32nm,0.9s						
T55A	**Pulaski**	**76.45**	**46**	P	**P**	**08 43 21.3**	**-0.7**
	baz=326						
R57A	**Stanardsville**	**76.45**	**44**	P	**P**	**08 43 21.6**	**-0.4**
	baz=327						
U54A	**Nelsons Funny**	**76.47**	**47**	P	**P**	**08 43 21.8**	**-0.4**
	baz=326						
Y49A	**Blount Mountai**	**76.49**	**52**	P	**P**	**08 43 21.8**	**-0.4**
	baz=324						
BZS	**Buzias**	**76.51**	**332**	⇑*i*P	**P**	**08 43 22.8**	**+0.6**
S56A	**Natural Bridge**	**76.52**	**45**	P	**P**	**08 43 21.9**	**-0.5**
	baz=327						
BLA	**Blacksburg**	**76.53**	**46**	P	**P**	**08 43 22.0**	**-0.5**
	baz=326						
ARSA	**Arzberg**	**76.66**	**336**	*i* P	**P**	**08 43 24.1**	**+1.1**
	comp=Z,13nm,1.1s						
X51A	**Calhoun**	**76.66**	**50**	P	**P**	**08 43 23.0**	**-0.2**
	baz=325						
R58A	**Rapidan**	**76.67**	**44**	P	**P**	**08 43 23.1**	**-0.1**
	baz=327						
W52A	**Murphy**	**76.67**	**49**	P	**P**	**08 43 23.4**	**0.0**

	baz=325						
S57A	Dark Hollow, R	76.72	45	P	P	08 43 23.8	+0.3
	baz=327						
V53A	Saluda	76.72	48	P	P	08 43 23.1	-0.5
	baz=326						
Q59A	Harwood	76.77	42	P	P	08 43 23.5	-0.1
	baz=328						
Y50A	Piedmont	76.79	51	P	P	08 43 23.3	-0.7
	baz=325						
MORH	Mrgy, Hungar	76.81	334⇑	eP	P	08 43 22.0	-1.8
U55A	TA2, Sparta	76.84	47	P	P	08 43 23.8	-0.5
	baz=326						
LRAL	Lakeview Retre	76.87	53	P	P	08 43 23.4	-0.9
	baz=324						
W53A	Cullowhee	76.97	49	P	P	08 43 24.7	-0.4
	baz=326						
Z49A	Columbiana	76.97	52	P	P	08 43 24.8	-0.2
	baz=324						
R58B	Mineral	77.01	44	P	P	08 43 24.6	-0.5
	baz=328						
V54A	Nebo	77.03	48	P	P	08 43 24.8	-0.6
	baz=326						
X52A	Dahlonega	77.09	50	P	P	08 43 25.7	0.0
	baz=325,SNR=5.6						
Y51A	Rockmart	77.11	51	P	P	08 43 25.1	-0.6
	baz=325,SNR=5.5						
R59A	King George, V	77.13	43	P	P	08 43 25.3	-0.5
	baz=328						
Z50A	Ashland	77.22	52	P	P	08 43 25.9	-0.5
	baz=325,SNR=8.2						
T57A	Hurt	77.22	45	P	P	08 43 25.4	-0.9
	baz=327						
S58A	Poland Farm, P	77.23	44	P	P	08 43 26.1	-0.2
	baz=328						
BFO	Black Forest	77.25	341	eP	P	08 43 26.8	+0.4
	comp=Z,12nm,1.1s						
BFO	Black Forest	77.25	341	eP	P	08 43 26.8	+0.4
BFO				pmax	pmax		
	comp=Z,12nm,1.1s						
U56A	King	77.27	46	P	P	08 43 26.7	+0.1
	baz=327						
V55A	Taylorsville	77.30	47	P	P	08 43 26.4	-0.4
	baz=326						
SOKA	Soboth	77.32	336	i P	P	08 43 27.7	+0.8
	comp=Z,19nm,1.4s,SNR=12						
149A	Jones	77.32	53	P	P	08 43 26.5	-0.5
	baz=324						
KBA	Koelnbreinsper	77.35	338	i pP	P	08 43 28.5	+1.4
	comp=Z,28nm,0.8s,SNR=27						
S59A	Mechanicsville	77.43	43	P	P	08 43 27.8	+0.4
	baz=328						
X53A	Estanollee	77.45	49	P	P	08 43 27.4	-0.2
	baz=326						
W54A	Cherokee Point	77.49	48	P	P	08 43 27.5	-0.4
	baz=326						
Z51A	Franklin	77.53	51	P	P	08 43 27.1	-1.0
	baz=325						
RETA	Reutte	77.55	339	i P	P	08 43 29.0	+0.9
	comp=Z,9.8nm,1.2s						
WTTA	Wattenberg	77.57	339	i pP	P	08 43 29.5	+1.2
	comp=Z,27nm,1.4s,SNR=7.7						
T58A	Grand View Acr	77.58	45	P	P	08 43 28.1	-0.2
	baz=327						
ECH	Echery	77.59	342	eP	P	08 43 28.5	+0.3
	comp=Z,12nm,1.0s						
ECH	Echery	77.59	342	eP	P	08 43 28.5	+0.3
ECH				pmax	pmax		
	comp=Z,12nm,1.0s						
OBKA	Obir	77.60	337	i P	P	08 43 29.2	+0.8
	comp=Z,18nm,1.6s,SNR=7.2						
PLVB	Pleven	77.60	329⇑	iP	P	08 43 29.1	+0.8
BR131	Keskin Array S	77.61	321	eP	P	08 43 28.7	+0.1
	comp=Z,11nm,1.0s						
BRTR	Keskin Array B	77.61	321	P	P	08 43 28.4	-0.3
	comp=Z,6.6nm,1.0s,baz=46,slow=3.6,SNR=21						
MOTA	Moosalm	77.61	339	i pP	P	08 43 30.3	+1.8
	comp=Z,20nm,1.2s						
Y52A	Lilburn	77.61	50	P	P	08 43 28.4	-0.2
	baz=325						
U57A	Blanch	77.66	46	P	P	08 43 28.6	-0.2
	baz=327						
V56A	Mocksville	77.66	47	P	P	08 43 28.4	-0.4
	baz=327						
249A	Camden	77.66	54	P	P	08 43 28.6	-0.2
	baz=324						
150A	Eclectic	77.69	52	P	P	08 43 28.4	-0.6
	baz=325						
MYKA	Terra Mystica	77.70	337	i P	P	08 43 29.6	+0.7
	comp=Z,2.7nm,0.5s						
SQTA	Sankt Quirin	77.71	339	i pP	P	08 43 30.3	+1.3
	comp=Z,17nm,0.9s,SNR=5.4						
ANTO	Ankara	77.81	321	eP	P	08 43 30.1	+0.4
	comp=Z,14nm,0.9s						
ANTO	Ankara	77.81	321	eP	P	08 43 30.1	+0.4
ANTO				pmax	pmax		
	comp=Z,14nm,0.9s						
KMSC	Kings Mountain	77.83	48	P	P	08 43 28.9	-0.9
	baz=326						
X54A	Belton	77.85	49	P	P	08 43 29.7	-0.1
	baz=326						
ABTA	Abfaltersbach	77.86	338	i P	P	08 43 30.5	+0.7
	comp=Z,8.5nm,0.7s,SNR=5.7						
SILT	Sile	77.87	324⇑	iP	P	08 43 30.6	+0.8
V57A	Coltrane Farms	77.92	46	P	P	08 43 29.9	-0.3
	baz=327						
DAVA	Damuels	77.93	340	i P	P	08 43 31.2	+0.9
	comp=Z,12nm,1.2s						
T59A	Double "B" Far	77.98	44	P	P	08 43 30.9	+0.3
	baz=328						
Z52A	Williamson	78.00	51	P	P	08 43 30.4	-0.3
	baz=325						
FETA	Feichten	78.00	339	i P	P	08 43 31.7	+1.0
	comp=Z,12nm,1.0s,SNR=7.4						
U58A	Oxford	78.04	45	P	P	08 43 30.4	-0.4
	baz=327						
151A	Opelika	78.10	52	P	P	08 43 30.6	-0.7
	baz=325						
W56A	Indian Trail	78.18	47	P	P	08 43 31.4	-0.3
	baz=327						
PHSR	Pinarhisar	78.20	326⇑	iP	P	08 43 32.7	+1.0
X55A	Gracelyn & Ava	78.25	48	P	P	08 43 31.7	-0.4
	baz=326						
Y54A	Tignall	78.27	49	P	P	08 43 32.2	0.0
	baz=326,SNR=7.9						
GOGA	Godfrey	78.27	50	P	P	08 43 32.0	-0.2
	baz=326						
152A	Waverly Hall	78.28	51	P	P	08 43 32.0	-0.3
	baz=325						
V58A	Windy Hill, Pi	78.29	46	P	P	08 43 31.5	-0.8
	baz=327						
Z53A	Monticello	78.33	50	P	P	08 43 32.3	-0.2
	baz=326						
U59A	Littleton	78.40	44	P	P	08 43 32.8	-0.1
	baz=328						
251A	Midway	78.41	52	P	P	08 43 32.8	-0.3
	baz=325						
W57A	Gilead	78.43	47	P	P	08 43 32.7	-0.4
	baz=327						
350A	Dozier	78.50	53	P	P	08 43 34.0	+0.5
	baz=325						
X56A	White Oak	78.51	48	P	P	08 43 33.0	-0.5
	baz=326						
U60A	Pendleton	78.57	44	P	P	08 43 33.6	-0.2
	baz=328						
Y55A	Saluda	78.59	49	P	P	08 43 34.3	+0.3
	baz=326						
V59A	Middlesex	78.70	45	P	P	08 43 34.5	-0.1
	baz=328						
Z54A	Sparta	78.71	50	P	P	08 43 34.5	-0.1
	baz=326						
VTS	Vitosha	78.74	329	eP	P	08 43 34.3	-0.5
	comp=Z,9.7nm,0.9s						
VTS	Vitosha	78.74	329⇑	iP	P	08 43 35.7	+0.9
VTS	Vitosha	78.74	329	eP	P	08 43 34.3	-0.5
VTS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VTS	Vitosha	78.74	329	eP	P	08 43 29.6	-5.2
TUE	Stuetta	78.82	340	eP	P	08 43 35.8	+0.5
	comp=Z,10nm,0.7s						
252A	Lumpkin	78.82	52	P	P	08 43 34.9	-0.4
	baz=325						
AS31	Alice Springs	78.84	205	eP	P	08 43 35.8	+0.5
	comp=Z,2.2nm,1.0s						
ASAR	Alice Springs	78.84	205	P	P	08 43 36.1	+0.8
	comp=Z,2.7nm,0.7s,baz=11,slow=5.4,SNR=4.1						
W58A	Raeford	78.89	46	P	P	08 43 35.6	+0.1
	baz=327						
UOSS	Minazif	78.95	296	eP	P	08 43 35.7	-0.4
	comp=Z,35nm,1.3s						
Z55A	Blythe	79.05	49	P	P	08 43 36.7	+0.1
	baz=326						
253A	Americus	79.06	51	P	P	08 43 36.4	-0.2
	baz=326						
154A	Montrose	79.10	50	P	P	08 43 36.2	-0.5
	baz=326						
ALN	Alexandroupoli	79.36	327	eP	P	08 43 37.4	-0.7
	comp=Z,9.4nm,1.0s						
ALN	Alexandroupoli	79.36	327	eP	P	08 43 37.4	-0.7
ALN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SSF	Saint Saulge	79.36	344	eP	P	08 43 41.8	+3.8
SSF				pmax	pmax		
	comp=Z,16nm,1.4s						
155A	Kite	79.39	50	P	P	08 43 38.6	+0.3
	baz=326						
KKB	Krupnik	79.46	329	eP	P	08 43 35.0	-3.7
MMB	Musomiste	79.51	328	eP	P	08 43 39.0	+0.1
254A	Abbeville	79.56	51	P	P	08 43 39.5	+0.2
	baz=326						
353A	Camilla	79.60	52	P	P	08 43 40.1	+0.5
	baz=326						
X60A	Albert Glenn T	79.81	46	P	P	08 43 40.2	-0.4
	baz=328						
156A	Sylvania	79.82	49	P	P	08 43 40.9	+0.1
	baz=326						
TIGA	Tifton	79.83	51	P	P	08 43 40.9	+0.1
	baz=326						
255A	Hazlehurst	79.96	50	P	P	08 43 41.5	+0.1
	baz=326						
PDG	Podgorica	80.12	332⇑	iP	P	08 43 42.5	+0.4
LPL	La Plagne	80.26	342	eP	P	08 43 44.3	+1.1
LPL				pmax	pmax		
	comp=Z,19nm,1.1s						
455A	Stateville	80.68	51	P	P	08 43 45.3	0.0
	baz=326						
BNI	Bardonecchia	80.72	341	eP	P	08 43 46.4	+0.8
	comp=Z,7.7nm,1.0s						
BNI	Bardonecchia	80.72	341	eP	P	08 43 46.4	+0.8
BNI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LFF	La Frestale	81.87	346	eP	P	08 43 52.5	+1.1
LFF				pmax	pmax		
	comp=Z,6.0nm,0.4s						
557A	Orange Park	81.90	51	P	P	08 43 51.7	-0.1
	baz=327						
RAYN	Ar Rayn	85.84	303	eP	P	08 44 10.6	-1.5
	comp=Z,9.3nm,0.8s						
RAYN	Ar Rayn	85.84	303	eP	P	08 44 10.6	-1.5
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
POLO	Lamas de Olo	86.45	351	eP	P	08 44 16.2	+1.3
	comp=Z,8.1nm,1.5s						
PVRL	Vila Real	86.54	351	eP	P	08 44 16.6	+1.3
MVO	Moncorvo	86.58	351	eP	P	08 44 16.7	+1.1
	comp=Z,20nm,1.4s						
MTE	Manteigas	87.39	351	eP	P	08 44 25.9	+6.4
	comp=Z,20nm,1.7s						
ESDC	Sonseca Array	87.70	348	P	P	08 44 20.1	-0.8
	comp=Z,1.0nm,0.5s,baz=2.7,slow=4.6,SNR=9.5						
ESDC				LR	LR	09 28 39.7	
	comp=Z,153nm,19.1s,baz=150,slow=39						
KEST	Kesra	89.05	337	LR	LR	09 29 54.5	
	comp=Z,152nm,18.6s,baz=321,slow=39						
LPAZ	La Paz	127.73	66	PKP	PKPdf	08 50 38.6	+0.1
	comp=Z,0.3nm,0.5s,baz=315,slow=5.7,SNR=3.2						
LPAZ	La Paz	127.73	66	ePKPdf	PKiKP	08 50 39.4	+0.3
LPAZ	La Paz	127.73	66	ePKIKP	PKiKP	08 50 39.4	+0.3
SYO	Syowa Base	147.93	216⇑	ePKPdf	PKPdf	08 51 13.4	+0.5
SYO	Syowa Base	147.93	216⇓	ePKPbc	PKPbc	08 51 16.8	+0.8

ISCJB 26 08:32:11.1±0.7, 40°.40N±0°.04×127°.11W±0°.06, h16^{km}, mb3.9/5, Error ellipse: s-maj=7.2km s-min=4.8km az=155.9

ANF 26 08:32:11.7±0.9, 40°.41N×127°.10W, h10^{km}, ML3.6/12, Error ellipse: s-maj=9.3km s-min=6.5km az=69.0

NCEDC 26 08:32:12.7, 40°.42N×127°.09W, h17^{km}, ML3.5, MB4.0(NEIC)

NEIC 26 08:32:12.7±0.0, 40°.42N×127°.09W, h17^{km}, mb4.0/10, ML3.5(NCEDC), After NCEDC.

IDC 26 08:32:24.1±10.0, 40°.58N×125°.78W, h0^{km}, mb3.2/1, mb1 3.6/5, mb1mx3.4/53, mbtmp3.2/5, ML3.4/4, Error ellipse: s-maj=122.6km s-min=28.7km az=91.0

ISC 26 08:32:13.4±1.5, **40°.35N**±0°.07×**127°.1W**±0°.1, **h16^{km}, n80,**
σ**1^{s}.92**/88, **mb4.0**/5, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCC	Jacoby Creek,	2.41	78	ePn	Pn	08 32 49.2	-2.9
KMRM	Mail Ridge	2.62	92	ePn	Pn	08 32 53.3	-1.8
KHMM	Horse Mountain	2.64	78	ePn	Pn	08 32 52.7	-2.8
KRMB	Red Mountain	2.71	63	ePn	Pn	08 32 53.7	-2.7
KCPM	Cahto Peak	2.81	103	ePn	Pn	08 32 55.7	-2.0
KCPM				eSn	Sn	08 33 28.8	-2.6
L02E	Cave Junction	3.21	55	P	Pn	08 33 01.0	-2.2
	baz=238,SNR=13						
L02E				S	Sn	08 33 40.2	-1.0
	baz=238						
KEBM	Edson Butte	3.28	39	ePn	Pn	08 33 01.0	-3.1
O02D	Mt. Diablo Mer	3.33	92	P	Pn	08 33 03.2	-1.6
	baz=276,SNR=55						
O02D				S	Sn	08 33 43.8	-0.4
	baz=276						
M02C	Callahan	3.41	71	P	Pn	08 33 03.7	-2.3
	baz=255,SNR=8.7						
M02C				S	Sn	08 33 45.1	-0.9
	baz=255						
HOPS	Hopland Field	3.42	112	ePn	Pn	08 33 04.3	-1.7
N02D	Trinity Center	3.43	78	P	Pn	08 33 03.7	-2.4
	baz=262,SNR=9.7						
N02D				S	Sn	08 33 45.3	-1.2
	baz=262						
K02D	Willamette Mer	3.50	47	P	Pn	08 33 04.6	-2.7
	baz=230,SNR=15						
WDC	Whiskeytown Da	3.51	85	ePn	Pn	08 33 05.8	-1.5
YBH	Yreka Blue Hor	3.62	66	Pn	Pn	08 33 07.6	-1.2
	11nm,0.3s,baz=275,slow=11,SNR=123						
YBH				Sn	Sn	08 33 49.6	-1.6
	baz=214,slow=8.5,SNR=1.9						
YBH	Yreka Blue Hor	3.62	66	ePn	Pn	08 33 07.5	-1.3
J01E	Myrtle Point	3.69	39	P	Pn	08 33 06.4	-3.3
	baz=222						
GDXM	Geysers	3.69	113	ePn	Pn	08 33 08.3	-1.6
HUMO	Hull Mountain	3.86	53	ePn	Pn	08 33 09.8	-2.4
MCCM	Marconi Confer	3.97	122	ePn	Pn	08 33 11.4	-2.2
MCCM				eSn	Sn	08 33 54.7	-5.0
O03E	Paynes Creek	4.08	89	P	Pn	08 33 13.1	-2.0
	baz=274,SNR=25						
O03E				S	Sn	08 34 02.1	-0.5
	baz=274						
L04D	Klamath Falls	4.09	61	P	Pn	08 33 14.8	-0.5
	baz=245,SNR=46						
M04C	Macdoel	4.25	69	P	Pn	08 33 16.9	-0.7
	baz=253,SNR=36						
ORV	Oroville	4.40	99	ePn	Pn	08 33 18.6	-0.9
I02D	Swisshome	4.47	32	P	Pn	08 33 18.4	-2.1
	baz=214						
K04D	Chiloquin, OR	4.63	59	P	Pn	08 33 21.3	-1.5
	baz=243						
J04D	Umpqua Nationa	4.74	51	P	Pn	08 33 23.0	-1.3
	baz=234,SNR=18						
I04A	Tendick Farm,	4.92	44	P	Pn	08 33 24.8	-1.8
	baz=227,SNR=7.6						
AFDM	Forest Hills D	4.96	104	ePn	Pn	08 33 26.4	-0.8
COR	Corvallis	5.09	33	ePn	Pn	08 33 27.6	-1.3
BEKR	Beckworth	5.22	93	ePn	Pn	08 33 31.2	+0.3
J05D	Fort Rock, OR	5.29	54	P	Pn	08 33 30.7	-1.2
	baz=239,SNR=40						
MOD	Modoc Plateau	5.39	71	ePn	Pn	08 33 31.6	-1.6
RUBR	Rubicon Trail	5.54	101	ePn	Pn	08 33 36.1	+0.7
H04A	Detroit Lake	5.67	39	ePn	Pn	08 33 34.4	-2.5
SAO	San Andreas Ge	5.72	127	ePn	Pn	08 33 35.1	-2.5
SAO				eSn	Sn	08 34 40.4	-2.5
CMB	Columbia Colle	5.73	112	ePn	Pn	08 33 38.4	+0.6
I05D	Terrebonne, OR	5.86	45	P	Pn	08 33 38.0	-1.6
	baz=229						
VCNR	Virginia City	5.86	98	ePn	Pn	08 33 39.2	-0.5
PNTR	Pine Nut	5.95	100	ePn	Pn	08 33 40.9	0.0
PAHR	Pah Rah Range	5.98	94	ePn	Pn	08 33 40.1	-1.3
WAKR	Walker	6.24	105	ePn	Pn	08 33 46.5	+1.5
YERR	Yerington	6.24	100	ePn	Pn	08 33 45.5	+0.5
WVOR	Wild Horse Val	6.72	69	ePn	Pn	08 33 49.9	-1.6
I07A	Izee	6.78	54	ePn	Pn	08 33 52.0	-0.3
MDPB	Devils Postpil	6.84	111	ePn	Pn	08 33 54.6	+1.4
RYN	Ryan	6.88	102	ePn	Pn	08 33 51.0	-2.7
OMMB	Old Mammoth Mi	6.90	111	ePn	Pn	08 33 55.7	+1.5
E04D	Cinebar	7.03	27	P	Pn	08 33 55.1	-0.5
	baz=210						
KVN	Kaiserville	7.09	98	ePn	Pn	08 33 55.7	-0.9
NVAR	Mina Array Bea	7.10	103	Pn	Pn	08 33 57.4	+0.5
	0.5nm,0.3s,baz=287,slow=13,SNR=16						
NV11	Mina Array Sit	7.21	103	ePn	Pn	08 33 59.1	+0.8
PKM	Mcpherson Peak	7.97	131	P	Pn	08 34 07.1	-1.5
	baz=316						
ISA	Isabella, Lake	8.28	122	P	Pn	08 34 12.7	-0.2
	baz=308,SNR=14						
LTY	Liberty	8.33	32	ePn	Pn	08 34 14.5	+1.0
ELK	Elko	9.07	84	Pn	Pn	08 34 23.6	-0.2
	0.1nm,0.3s,baz=250,slow=12,SNR=2.7						
B08A	Colville Reser	9.76	32	ePn	Pn	08 34 34.5	+1.5
HLID	Hailey	10.00	67	ePn	Pn	08 34 36.7	+0.2
SHPR	Sheep Range	10.15	108	ePn	Pn	08 34 42.1	+3.5
HEC	Hector,Ludlow	10.19	119	P	Pn	08 34 38.8	-0.2
	baz=306						
BGU	Big Grassy Mou	10.74	82	ePn	Pn	08 34 48.2	+1.6
DUG	Dugway, Tooele	10.95	86	ePn	Pn	08 34 51.5	+2.0
MCMT	McKenzie Canyo	11.44	62	ePn	Pn	08 34 56.2	0.0
MSO	Missoula	11.54	52	ePn	Pn	08 34 58.7	+1.1
U15A	North Rim	12.29	104	ePn	Pn	08 35 12.1	+4.2
HRY	Holter Researc	12.79	55	ePn	Pn	08 35 14.4	-0.1
PDAR	Pinedale Array	13.38	74	Pn	Pn	08 35 24.8	+1.9
	0.1nm,0.3s,baz=265,slow=9.9,SNR=2.9						
PV07	Paradox Valley	14.43	92	eP	P	08 35 41.1	-2.8
TUC	Tucson	15.41	116	eP	P	08 35 57.5	+2.7
	2.9nm,0.8s						
PHWY	Pilot Hill	16.43	80	eP	Pn	08 36 03.8	+0.3
	4.2nm,1.0s						
SDCO	Great Sand Dun	17.00	92	eP	P	08 36 13.0	+0.5
	11nm,1.2s						
LENM	Lemitar	17.18	105	eP	P	08 36 17.2	+2.7
BNM	Barren Site	17.45	104	eP	P	08 36 20.5	+3.0
KSCO	Kaye Shedlock'	18.90	86	eP	Pn	08 36 36.1	+2.2
	50nm,1.1s						
MSTX	Muleshoe	20.40	100	eP	Pn	08 36 52.0	+0.2
	4.7nm,0.8s						
CBKS	Cedar Bluff	21.14	85	eP	P	08 36 58.8	+1.2
	19nm,1.2s						
TX31	Lajitas Ar. Si	22.11	113	eP	P	08 37 11.4	+3.3
	4.9nm,1.0s						
TXAR	Lajitas Array	22.11	113	P	P	08 37 11.7	+3.6
	1.1nm,0.9s,baz=304,slow=8.9,SNR=14						
ECSD	EROS Data Cent	22.85	71	eP	P	08 37 15.5	-0.3
MENT	Mentasta	24.70	342	eP	P	08 37 32.9	-0.5
	7.1nm,0.8s						
DAWY	Dawson	24.82	347	eP	P	08 37 33.8	-0.7
	4.6nm,1.3s						

IDC 26 08:36:22.1±0.9, 5°.64S×151°.08E, h0^{km}, mb4.2/5, mb1 4.5/6, mb1mx3.9/40, mbtmp4.3/6, ML2.5/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/28, Error ellipse: s-maj=63.8km s-min=19.5km az=127.0

ISCJB 26 08:36:26.4±0.6, 5°.7S±0°.1×151°.0E±0°.1, h35^{km}, mb4.1/11, MS4.0/1, Error ellipse: s-maj=22.5km s-min=7.5km az=135.0

NEIC 26 08:36:29.5±2.5, 5°.77S×151°.04E, h53^{km}±8^{km}, mb4.3/8, Error ellipse: s-maj=24.6km s-min=4.5km az=138.0

ISC 26 08:36:27.7±0.6, **5°.7S**±0°.1×**151°.0E**±0°.1, **h35^{km}, n31,**
σ**2^{s}.37**/32, **mb4.2**/11, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.94	38	ePn	Pn	08 36 58.2	0.0
RABL				eSn	Sn	08 37 29.9	+8.6
PMG	Port Moresby	5.25	226	Pn	Pn	08 37 46.1	+2.3
	11nm,0.3s,baz=64,slow=7.0,SNR=18						
PMG				Sn	Sn	08 38 47.0	+3.8
	4.7nm,0.3s,baz=282,slow=19,SNR=6.7						
PMG	Port Moresby	5.25	226	ePn	Pn	08 37 46.8	+3.0
PMG				eSn	Sn	08 38 47.0	+3.8
HNR	Honiara	9.62	113	LR	LR	08 41 46.7	
	comp=Z,306nm,21.9s,baz=54,slow=34						
COEN	Coen	11.21	223	ePn	Pn	08 39 07.4	+1.8
CTA	Charters Tower	14.99	197	Pn	P	08 40 01.0	-1.2
	0.2nm,0.3s,baz=24,slow=14,SNR=3.8						
CTAO	Charters Tower	14.99	197	eP	P	08 40 02.1	-0.1
EIDS	Eidsvold	19.53	180	eP	P	08 40 49.4	-2.9
	30nm,1.4s						
WRAB	Tennant Creek	21.46	227	eP	P	08 41 14.1	+0.9
	8.8nm,0.8s						
WB2	Warramunga Arr	21.46	227	eP	P	08 41 13.8	+0.5
	12nm,1.0s						
WR1	Warramunga Arr	21.47	227	eP	P	08 41 14.3	+0.9
WRA	Warramunga Arr	21.47	227	P	P	08 41 14.3	+0.9
	5.4nm,0.5s,baz=54,slow=10,SNR=77						
AS31	Alice Springs	24.25	221	eP	P	08 41 42.6	+0.9
	3.6nm,0.6s						
ASAR	Alice Springs	24.25	221	P	P	08 41 41.4	-0.3
	9.3nm,0.7s,baz=58,slow=8.7,SNR=44						
STKA	Stephens Creek	27.45	198	P	P	08 42 11.1	+0.5
	2.8nm,0.8s,baz=339,slow=7.6,SNR=5.6						
STKA	Stephens Creek	27.45	198	eP	P	08 42 09.2	-1.3
	1.0nm,0.9s						
QRZ	Quartz Range	39.92	154	eP	P	08 44 01.4	+2.8
SNZO	South Karori	41.28	153	eP	P	08 44 09.3	-0.4
	78nm,1.1s						
COCO	West Island	53.79	259	eP	P	08 45 46.2	-1.1
	0.1nm,0.9s						
MDRS	Chennai	72.68	286	ex	P	08 47 49.5	-3.1
MDRS				ex	x	08 52 45.5	
MDRS				ex	x	08 57 25.5	
MKAR	Makanchi Array	79.84	319	LR	LR	09 24 57.3	
	comp=Z,68nm,19.9s,baz=284,slow=36						
ILAR	Eielson Array	83.70	22	P	P	08 48 51.3	-1.4
	1.5nm,0.8s,baz=251,slow=5.2,SNR=15						
QSPA	South Pole Qui	84.23	180	eP	P	08 48 53.9	-1.7
	6.0nm,1.4s						
NV01	Mina Array Sit	94.09	52	eP	P	08 49 43.5	+0.3
NVAR	Mina Array Bea	94.09	52	P	P	08 49 43.5	+0.3
	0.4nm,0.7s,baz=266,slow=4.3,SNR=4.3						
GERES	GERESS Array B	123.87	327	PKP	PKiKP	08 55 23.1	+0.5
	0.5nm,0.3s,baz=90,slow=2.7,SNR=6.8						
PTGA	Pitinga	148.45	101	ePKPbc	PKPbc	08 56 10.8	-1.0
TOA0	Torodi Ar. Sit	148.84	286	ePKPbc	PKPbc	08 56 13.4	+0.7
TORD	Torodi Ar. Bea	148.84	286	PKPbc	PKPbc	08 56 11.9	-0.8
	2.4nm,0.6s,baz=50,slow=3.2,SNR=10						
TOA1	Torodi Ar. Sit	148.84	286	ePKPbc	PKPbc	08 56 11.9	-0.8
BDFB	Brasilia	151.63	139	PKPbc	PKPbc	08 56 18.9	-0.7
	1.5nm,0.3s,baz=252,slow=3.2,SNR=3.5						

IDC 26 08:37:01.2±0.8, 1°.97N×126°.50E, h0^{km}, mb4.2/10, mb1 4.4/10, mb1mx4.0/40, mbtmp4.2/10, MS3.6/4, Ms1 3.7/4, ms1mx3.2/38, Error ellipse: s-maj=50.6km s-min=14.8km az=77.0

MAN 26 08:37:03.7, 1°.89N×126°.45E, h3^{km}, MS3.6

NEIC 26 08:37:05.2±2.0, 2°.19N×127°.20E, h35^{km}±5^{km}, mb4.6/21, Error ellipse: s-maj=17.4km s-min=8.9km az=68.0

DJA 26 08:37:05.7±0.4, 2°N±5°×12°7E±°, h10^{km}, M4.6/11, mb4.6/6, mB5.8/1, MLv4.5/11, Mw(mB)5.4/1

BJI 26 08:37:07.1±0.0, 2°.33N×126°.70E, h34^{km}, mb4.6/23, mB4.9/19, Ms4.9/10, Ms7 4.7/10

ISCJB 26 08:37:07.2±0.3, 1°.99N±0°.03×126°.82E±0°.06, h63^{km}, mb4.6/33, Error ellipse: s-maj=8.6km s-min=3.6km az=163.7

ISC 26 08:37:08.9±0.5, **1°.95N**±0°.05×**126°.94E**±0°.07, **h63^{km}, n65,**
σ**1^{s}.57**/65, **mb4.5**/33, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.24	160	ePn	Pn	08 37 29.3	-1.0
TNTI				eSn	Sn	08 37 46.9	+0.7
TNTI	Ternate	1.24	160	P	Pn	08 37 29.3	-1.0
SGSI	Sangihe	2.23	321	P	Pn	08 37 40.4	-3.1
LBMI	Labuha	2.63	168	P	Pn	08 37 51.5	+2.5
SANI	Sanana	4.08	193	P	Pn	08 38 09.2	+0.3
DDMP	Don Marcelino,	4.31	344	eP	Pn	08 38 10.9	-1.1
DDMP				eS	Sn	08 39 01.5	+0.6
MATI	Mati	5.01	352	eP	Pn	08 38 23.8	+2.1
MATI				eS	Sn	08 39 27.4	+9.1
LUWI	Luwuk	5.11	235	ePn	Pn	08 38 25.1	+2.1
LUWI	Luwuk	5.11	235	P	Pn	08 38 21.7	-1.3
SKMP	Bagumbayan, Su	5.13	332	eP	Pn	08 38 20.9	-2.4
SKMP				eS	Sn	08 39 20.2	-1.0

SIJI	Sorong	5.16	123	LR	LR	08 40 50.6	
	comp=Z,1µm,21.9s,baz=308,slow=41						
CTBH	Cotabato--PC H	5.88	333	⇑iP	Pn	08 38 33.7	+0.1
BUKP	Musuan	6.18	343	eP	Pn	08 38 41.3	+3.6
BUKP				eS	Sn	08 39 56.5	+9.5
PAGZ	Pagadian	6.85	329	eP	Pn	08 38 44.8	-2.0
PAGZ				eS	Sn	08 39 52.9	-10
KDI	Kendari	7.28	216	P	Pn	08 38 51.3	-1.4
	50nm,0.9s						
TTSI	Tana Toraja	8.67	235	P	Pn	08 39 11.8	+0.1
SPSI	Sidrap Palu	9.26	231	P	Pn	08 39 18.9	-0.9
KKM	Kota Kinabalu	11.44	291	ePn	Pn	08 39 48.7	-1.0
SBUM	Sibu	14.71	272	ePn	Pn	08 40 34.8	+1.1
MTN	Manton Dam	15.27	164	eP	Pn	08 40 42.2	+1.3
	50nm,1.5s						
KSM	Kuching	16.63	269	eP	P	08 41 00.3	+0.8
	18nm,1.0s						
GUMO	Guam	21.18	56	LR	LR	08 49 19.3	
	comp=Z,77nm,21.4s,baz=244,slow=34						
WRAB	Tennant Creek	22.93	162	eP	P	08 42 06.8	-1.1
	17nm,0.8s						
WR1	Warramunga Arr	22.93	162	eP	P	08 42 07.7	-0.3
WRA	Warramunga Arr	22.93	162	P	P	08 42 07.7	-0.3
	15nm,0.8s,baz=337,slow=12,SNR=17						
WB2	Warramunga Arr	22.94	162	eP	P	08 42 07.1	-0.9
	19nm,0.6s						
PMG	Port Moresby	23.09	120	LR	LR	08 52 10.0	
	comp=Z,253nm,18.8s,baz=138,slow=39						
AS31	Alice Springs	26.35	165	eP	P	08 42 41.5	+2.3
	3.4nm,0.8s						
ASAR	Alice Springs	26.35	165	P	P	08 42 41.7	+2.5
	7.4nm,0.8s,baz=340,slow=11,SNR=14						
CTAO	Charters Tower	28.96	140	eP	P	08 43 02.4	-0.2
	27nm,1.3s						
NJ2	Nanjing	30.90	347	eP	P	08 43 17.8	-1.8
NJ2				S	S	08 48 24.5	+5.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,200nm,4.9s						
NJ2				LR	LR		
	comp=N,800nm,14.7s						
NJ2				LR	LR		
	comp=E,1µm,13.8s						
NJ2				LR	LR		
	comp=Z,940nm,15.6s						
CMAR	Chiang Mai Arr	31.97	303	LR	LR	08 56 30.6	
	comp=Z,77nm,21.8s,baz=110,slow=37						
FORT	Forrest	32.56	178	eP	P	08 43 35.4	+1.2
	31nm,1.0s						
KMI	Kunming	32.79	317	P	P	08 43 36.5	-0.1
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KSRS	Korea Array	35.35	1	P	P	08 43 59.1	+0.8
	2.7nm,0.7s,baz=178,slow=9.7,SNR=7.1						
BBOO	Buckleboo	35.63	167	eP	P	08 44 01.4	+0.5
	27nm,1.4s						
MAJO	Matsushiro	35.97	16	eP	P	08 44 03.6	0.0
MAT	Matsushiro	35.97	16	P	P	08 44 04.1	+0.4
MJAR	Matsushiro Arr	35.97	16	P	P	08 44 03.6	0.0
	3.3nm,0.8s,baz=181,slow=7.8,SNR=9.3						
XAN	Xi'an	36.09	334	P	P	08 44 05.0	+0.2
XAN				pP	pP	08 44 12.8	-7.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
STKA	Stephens Creek	36.40	159	P	P	08 44 08.3	+0.9
	3.8nm,0.8s,baz=313,slow=8.2,SNR=5.9						
STKA	Stephens Creek	36.40	159	eP	P	08 44 08.0	+0.6
	1.8nm,1.1s						
ARMA	Armidale	39.88	146	eP	P	08 44 39.2	+2.4
	6.1nm,0.8s						
HHC	Hu-ho-hao-te	41.15	342	P	P	08 44 47.3	+0.2
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,7.1s						
CN2	Changchun	41.70	358	eP	P	08 44 49.8	-1.7
USRK	Ussuriysk Ar.	42.31	5	P	P	08 44 56.8	+0.3
	4.4nm,0.9s,baz=142,slow=4.9,SNR=7.4						
GTA	Gaotai	44.73	330	eP	P	08 45 16.3	+0.1
GTA				pP	pP	08 45 24.8	-6.7
GTA				sP	pwP	08 45 28.5	-6.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,81nm,5.4s						
GTA				LR	LR		
	comp=N,740nm,16.2s						
GTA				LR	LR		
	comp=E,630nm,14.3s						
GTA				LR	LR		
	comp=Z,1µm,14.6s						
KLR	Kul'dur	47.29	4	P	P	08 45 36.8	+0.9
	1.9nm,0.5s,baz=275,slow=6.7,SNR=9.0						
SONA0	Songino Array	49.04	342	eP	P	08 45 49.2	-0.6
SONM	Songino Array	49.04	342	P	P	08 45 49.2	-0.6
	0.8nm,0.5s,baz=148,slow=4.2,SNR=3.8						
WMQ	Urumqi	54.30	326	eP	P	08 46 28.5	-0.4
WMQ				sP	pP	08 46 42.0	-2.7
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.7s						
WMQ				LR	LR		
	comp=N,1µm,13.7s						
WMQ				LR	LR		
	comp=E,1µm,13.7s						
WMQ				LR	LR		
	comp=Z,950nm,13.7s						
MK31	Makanchi Array	59.13	326	eP	P	08 47 02.0	-1.1
	1.9nm,0.8s						
MKAR	Makanchi Array	59.13	326	P	P	08 47 02.2	-0.9
	1.0nm,0.4s,baz=122,slow=8.4,SNR=16						
MAKZ	Makanchi	59.32	326	eP	P	08 47 03.3	-1.1
	5.9nm,1.3s						
ZALV	Zalesovo Beam	62.26	333	P	P	08 47 22.1	-2.1
	0.7nm,0.3s,baz=149,slow=11,SNR=2.5						
KBL	Kabul	62.77	308	eP	P	08 47 27.1	-1.1
	5.5nm,0.8s						
GAR	Garm	63.28	313	eP	P	08 47 29.9	-1.5
	16nm,1.2s						
KURK	Kurchatov	63.35	328	eP	P	08 47 30.3	-1.2
	7.4nm,0.7s						
BRVK	Borovoye	68.99	327	eP	P	08 48 07.2	-0.3
	5.8nm,1.1s						
ABKAR	Akbulak array	73.65	321	eP	P	08 48 34.7	-1.1
	2.6nm,0.8s						
ARU	Arti	76.55	328	eP	P	08 48 51.6	-0.7
	22nm,1.4s						
AKH	Akhalkalaki	83.80	311	eP	P	08 49 31.6	-0.3
	10nm,1.1s						
RC01	Rabbit Creek A	85.07	29	eP	P	08 49 34.9	-2.8
	26nm,1.2s						
TXAR	Lajitas Array	122.51	53	PKP	PKiKP	08 56 00.7	+2.4
	0.2nm,0.7s,baz=215,slow=1.5,SNR=3.6						
CCIG	Comitan	137.37	63	ePKPdf	PKPdf	08 56 24.0	-2.6

WEL 26 08:38:32.7, 42°S±1°×17°4E±°, h17^{km}±2^{km}, M3.3/26, ML3.5/18, MLv3.3/26, Error ellipse: s-maj=0.0km s-min=0.0km az=145.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.16	226	P	Pb	08 38 37.4	+0.2
BSWZ	Blackbirch Sta	0.37	259	P	Pb	08 38 41.1	+0.2
BSWZ				S	Sb	08 38 46.5	+0.1
TUWZ	Tuamarina	0.38	304	P	Pb	08 38 41.0	0.0
TUWZ				S	Sb	08 38 46.9	+0.3
TCW	Tory Channel	0.44	351	P	Pb	08 38 41.8	-0.2
BHW	Baring Head	0.45	59	P	Pb	08 38 42.3	+0.2
BHW				S	Sb	08 38 49.7	+1.3
PLWZ	Palliser	0.67	84	P	Pn	08 38 46.8	-0.7
MSWZ	Moikau Station	0.70	72	P	Pg	08 38 47.1	+0.6
CAW	Cannon Point	0.75	45	P	Pg	08 38 47.5	+0.1
PAWZ	Paruwai Farm	0.84	72	P	Pn	08 38 49.5	-0.2
NNZ	Nelson	0.85	299	P	Pg	08 38 49.5	+0.1
NNZ				S	Sg	08 39 01.3	+0.6
DUWZ	D'Urville Isla	0.90	338	P	Pg	08 38 50.3	0.0
MTW	Mount Morrison	0.98	61	P	Pg	08 38 52.0	+0.2
KHZ	Kahutara	0.99	218	P	Pg	08 38 52.9	+0.9
TRWZ	Traveller	1.02	77	P	Pg	08 38 52.4	-0.1
OGWZ	Otaki Gorge	1.02	37	P	Pn	08 38 52.2	-0.1
THZ	Tophouse	1.10	263	P	Pg	08 38 54.2	+0.2
HOWZ	Holdsworth Sta	1.14	50	P	Pg	08 38 54.5	-0.3
TMWZ	Te Maipa	1.27	66	P	Pb	08 38 56.0	-0.1
MRZ	Mangatainoka R	1.34	43	P	Pb	08 38 57.7	+0.3
TIWZ	Tintock	1.44	53	P	Pn	08 38 58.4	+0.4
OHWZ	Ohakea	1.60	27	P	Pg	08 39 02.9	-0.8
QRZ	Quartz Range	1.61	300	P	Pg	08 39 03.0	-0.7
PRWZ	Pori Road	1.63	49	P	Pn	08 39 01.3	+0.7
POWZ	Post Office Ro	1.64	41	P	Pb	08 39 01.6	-0.8
GVZ	Greta Valley S	1.65	216	P	Pn	08 39 01.8	+0.9
BFZ	Birch Farm	1.71	57	P	Pn	08 39 01.6	-0.2
DVHZ	Dannevirke	1.91	46	P	Pn	08 39 04.7	+0.2
DSZ	Denniston Nort	1.92	266	P	Pb	08 39 07.1	-0.2
LTZ	Lake Taylor	1.93	233	P	Pn	08 39 05.8	+1.0
WAZ	Wanganui	1.94	14	P	Pg	08 39 09.1	-1.0
TSZ	Takapari Road	1.99	38	P	Pn	08 39 06.5	+0.9
PNHZ	Pukenui	2.22	40	P	Pn	08 39 09.4	+0.6
WPHZ	Waipukurau	2.23	46	P	Pn	08 39 09.0	+0.1
OKCZ	Okains Bay	2.29	204	P	Pn	08 39 09.4	-0.3
PREZ	Palmer Road	2.30	356	P	Pb	08 39 14.8	+1.0
KHEZ	Kahui Hut	2.36	353	P	Pb	08 39 15.0	+0.2
NBEZ	Newall Road No	2.40	351	P	Pb	08 39 16.2	+0.7
OXZ	Oxford	2.41	225	P	Pn	08 39 11.4	0.0
MQZ	McQueen's Vall	2.42	211	P	Pn	08 39 10.7	-0.8
INZ	Inchbonnie	2.43	243	P	Pn	08 39 13.2	+1.6
DREZ	Durham Road	2.45	357	P	Pg	08 39 19.0	-0.8
PKE	Pukeiti	2.46	353	P	Pg	08 39 19.9	0.0
PKVZ	Pokaka	2.47	18	P	Pb	08 39 17.6	+1.0
MOVZ	Moawhango	2.47	26	P	Pb	08 39 17.3	+0.7
BHHZ	Black Hill Sta	2.51	32	P	Pn	08 39 14.4	+1.7
KRHZ	Kereru	2.51	38	P	Pn	08 39 13.2	+0.4
VRZ	Vera Road	2.53	7	P	Pb	08 39 17.1	-0.6
DRZ	Dome Shelter	2.53	22	P	Pg	08 39 21.2	-0.2
WHVZ	Whangaehu Hut	2.53	22	P	Pb	08 39 16.0	-1.9
FWVZ	Far West T-bar	2.55	21	P	Pb	08 39 19.5	+1.4
TUVZ	Tukino	2.57	23	P	Pb	08 39 16.1	-2.3
NGZ	Ngauruhoe	2.64	21	P	Pb	08 39 20.6	+1.0
KAHZ	Kahuranaki	2.66	47	P	Pn	08 39 14.5	-0.2
WTVZ	West Tongariro	2.69	21	P	Pb	08 39 22.3	+1.8
TWVZ	Taurewa	2.69	18	P	Pg	08 39 22.5	-1.9
KWHZ	Kaweka Forest	2.71	36	P	Pn	08 39 15.8	+0.2
KRVZ	Karewarewa	2.72	21	P	Pb	08 39 21.9	+0.9
KATZ	Kakaramea	2.85	21	P	Pg	08 39 25.4	-2.0
RITZ	Rihia Road	2.90	24	P	Pb	08 39 25.8	+1.9
BKZ	Black Stump Fm	2.96	34	P	Pn	08 39 19.5	+0.5
RATZ	Rangitukua	2.97	22	P	Pb	08 39 27.3	+2.1
WVZ	Waitaha Valley	3.05	241	P	Pb	08 39 24.3	-2.1
HIZ	Hauiti	3.15	7	P	Pb	08 39 26.6	-1.6
RPZ	Rata Peaks	3.20	229	P	Pb	08 39 27.1	-2.1
MRHZ	Matea Rd	3.21	30	P	Pb	08 39 30.6	+1.2
TLZ	Tolley Road	3.43	16	P	Pb	08 39 33.4	+0.4
TOZ	Tahuroa Road	4.00	13	P	Pb	08 39 41.1	-1.6
MWZ	Matawai	4.10	37	P	Pn	08 39 33.8	-0.8
ODZ	Otahua Downs	4.35	217	P	Pn	08 39 40.0	+2.0
MKAZ	Moumakai	4.57	8	P	Pb	08 39 48.6	-3.9
JCZ	Jackson Bay	4.77	237	P	Pb	08 39 51.3	-4.6

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*IDC **26** 08:53:44.2±0.9, 19°.39S×67°.40W, h219^{km}±16^{km}, mb3.4/1, mb1 3.4/6, mb1mx3.2/34, mbtmp3.9/6, Error ellipse: s-maj=31.0km s-min=9.3km az=97.0*

*ISCJB **26** 08:53:45.3±0.6, 19°.39S±0°.05×67°.30W±0°.06, h211^{km}, mb3.4/1, Error ellipse: s-maj=8.4km s-min=5.9km az=156.3*

ISC 26 08:53:45.3±1.0, 19°.37S±0°.05×67°.33W±0°.07, h211^{km}, n14, σ1^{s}17/19, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMCX	Minye Minye	2.16	276	iP	Pn	08 54 27.0	+0.5
MNMCX				iS	S	08 55 00.1	+1.8
PB11	IPOC Station P	2.23	260	iP	Pn	08 54 27.2	+0.1
PB16	IPOC Station P	2.31	296	iP	Pn	08 54 29.0	+0.5
PB02	IPOC Station P	3.10	231	iP	Pn	08 54 36.9	+0.2
LPAZ	La Paz	3.16	346	P	Pn	08 54 39.2	+1.1
	13nm,0.3s,baz=199,slow=8.5,SNR=87						
LPAZ				S	S	08 55 19.1	+0.3
	1.8nm,0.3s,baz=274,slow=16,SNR=3.1						
LPAZ	La Paz	3.16	346	iP	Pn	08 54 38.3	+0.2
PB07	IPOC Station P	3.36	225	iP	Pn	08 54 39.7	-0.2
LVC	Limon Verde	3.55	204	P	Pn	08 54 43.0	+0.6
	1.0nm,0.3s,baz=34,slow=10.0,SNR=11						
LVC				S	S	08 55 25.3	-1.5
	2.3nm,0.3s,baz=114,slow=21,SNR=15						
HJA	Humahuaca	4.22	155	iP	Pn	08 54 52.4	+1.9
HJA				IAML		08 54 54.0	
	comp=Z,47nm,0.6s						
HJA				iS	S	08 55 44.2	+2.5
AZAP	Zapla	5.27	157	iP	Pn	08 55 04.0	+0.3
AZAP				IAML		08 55 04.7	
	comp=Z,25nm,0.4s						
AZAP				iS	S	08 56 05.3	0.0
SIV	San Ignacio	6.84	62	P	Pn	08 55 23.0	-0.6
	comp=Z,10nm,0.3s,baz=264,slow=11,SNR=231						
CPUP	Villa Florida	11.53	129	P	Pn	08 56 23.9	-0.1
	comp=Z,0.1nm,0.3s,baz=312,slow=14,SNR=2.8						
CFA	Coronel Fontan	12.21	184	P	Pn	08 56 31.9	-0.7
	comp=Z,0.6nm,0.3s,baz=350,slow=13,SNR=6.2						
TORD	Torodi Ar. Bea	75.24	70	P	P	09 05 03.6	-1.8
	comp=Z,0.4nm,0.4s,baz=243,slow=5.3,SNR=8.2						

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*ISCJB **26** 09:00:58.7±0.9, 64°.73N±0°.05×30°.7E±0°.2, h0^{km}, Error ellipse: s-maj=11.0km s-min=5.2km az=33.5*

*IDC **26** 09:00:58.2±2.9, 64°.51N×31°.67E, h0^{km}, mb1 2.5/3, mb1mx2.5/38, mbtmp2.4/3, ML1.9/3, Error ellipse: s-maj=39.3km s-min=10.2km az=104.0*

*KOLA **26** 09:01:00.9, 64°.74N×30°.53E, h0^{km}*

*HEL **26** 09:01:00.4±0.3, 64°.72N×30°.67E, h0^{km}, ML2.0, Explosion*

ISC 26 09:00:59.8±1.5, 64°.72N±0°.07×30°.65E±0°.08, h0^{km}, n15, σ0^{s}80/17, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSF	Maaselka	1.38	331	eP	Pn	09 01 25.2	-1.0
OUL	Oulu	2.06	282	eP	Pb	09 01 36.7	-1.3
OUL				eS	Sn	09 02 02.7	+0.7
OBF4	Vikkela, Lumij	2.38	275	eP	Pn	09 01 40.7	+0.7
OBF4				MSG		09 02 21.6	
	comp=Z,5.2nm,0.1s						
OUF	Merijarvi	2.58	265	eP	Pn	09 01 43.2	+0.4
OBF0	Syolatti, Pyha	2.77	268	MSG		09 02 31.8	
	comp=Z,5.6nm,0.1s						
SUF	Sumiainen	2.83	227	eP	Pn	09 01 47.1	+0.9
APA0	Apatity Array	3.05	17	P	Pn	09 01 49.6	+0.3
APA0				S	Sn	09 02 26.1	-0.4
APA	Apatity	3.08	20	P	Pn	09 01 50.0	+0.4
APA				S	Sn	09 02 26.7	-0.3
KEF	Keuruu	3.65	228	eP	Pn	09 01 58.2	+0.8
FINES	FINESS Array B	3.89	214	Pn	Pn	09 02 00.5	-0.2
	comp=Z,0.1nm,0.3s,baz=39,slow=14,SNR=2.2						
FINES				Lg	Lg	09 03 01.3	
	comp=Z,1.3nm,0.3s,baz=40,slow=26,SNR=9.6						
ERTU	Ertsjaerv	3.96	302	eP	Pn	09 02 02.5	+0.7
BURU	Burvik	3.99	272	eP	Pn	09 02 02.6	+0.5
ARCES	ARCESS Array B	5.24	340	Pn	Pn	09 02 19.3	+0.1
	comp=Z,0.1nm,0.3s,baz=150,slow=15,SNR=4.7						
ARCES				Sn	Sn	09 03 21.6	+1.4
	comp=Z,0.2nm,0.3s,baz=134,slow=18,SNR=3.1						
ARCES				Lg	Lg	09 03 46.3	
	comp=Z,0.4nm,0.3s,baz=143,slow=23,SNR=4.2						
HFS	Hagfors	9.09	247	Lg	Lg	09 05 45.8	
	comp=Z,0.2nm,0.3s,baz=58,slow=38,SNR=6.5						
NOA	NORSAR Array B	9.59	256	Pn	Pn	09 03 19.5	+0.5
	comp=Z,0.0nm,0.3s,baz=65,slow=13,SNR=2.5						
NOA				Lg	Lg	09 06 03.2	
	comp=Z,0.0nm,0.3s,baz=339,slow=6.6,SNR=6.0						

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*IDC **26** 09:03:06.6±0.8, 31°.36S×178°.85W, h0^{km}, mb4.5/5, mb1 4.6/6, mb1mx4.1/26, mbtmp4.5/6, ML3.5/1, Error ellipse: s-maj=28.1km s-min=25.9km az=63.0*

*ISCJB **26** 09:03:07.1±0.7, 31°.28S±0°.04×179°.1W±0°.1, h10^{km}, mb4.4/16, Error ellipse: s-maj=14.2km s-min=5.9km az=179.1*

*NEIC **26** 09:03:08.0±2.2, 31°.31S×178°.97W, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=18.8km s-min=2.7km az=113.0*

ISC 26 09:03:08.1±0.6, 31°.35S±0°.06×179°.1W±0°.1, h10^{km}, n83, σ2^{s}36/83, mb4.5/16, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.31	26	P	Pg	09 04 06.6	+14
GLKZ				S	Sg	09 04 38.7	+16
RAO	Raoul Island	2.32	26	ePn	Pn	09 03 44.9	-1.5
RAO				eSg	Sb	09 04 16.6	-2.1
MXZ	Matakaoa Point	6.57	198	ePn	Pn	09 04 46.0	+1.3
MXZ				eSn	Sn	09 06 01.4	+1.7
MXZ	Matakaoa Point	6.57	198	P	Pn	09 04 51.8	+7.1
MXZ				S	Sn	09 05 56.0	-3.6
WMGZ	Waiomatatini S	6.78	197	P	Pn	09 04 51.8	+4.1
WMGZ				S	Sn	09 05 60.0	-4.9
HAZ	Te Kaha	6.90	201	P	Pn	09 04 53.2	+3.9
HAZ				S	Sn	09 06 05.6	-2.2
PKGZ	Pakihiroa	6.93	199	P	Pn	09 04 52.5	+2.6
PKGZ				S	Sn	09 06 02.9	-5.9
PUZ	Puketiti	7.06	197	P	Pn	09 04 54.2	+2.7
RUGZ	Raukumara Rang	7.12	201	P	Pn	09 04 56.2	+3.7
TWGZ	Tauwhareparae	7.23	199	P	Pn	09 04 56.7	+2.8
OUZ	Omahuta	7.25	236	ePn	Pn	09 04 55.5	+1.4
OUZ	Omahuta	7.25	236	P	Pb	09 05 07.1	-6.9
CNGZ	Carnagh Statio	7.46	197	P	Pn	09 04 59.8	+2.8
MKAZ	Moumakai	7.46	218	P	Pn	09 05 06.9	+10
MWZ	Matawai	7.51	201	P	Pn	09 04 59.9	+2.2
TKGZ	Te Karaka	7.51	199	P	Pn	09 05 02.9	+5.2
URZ	Urewera	7.57	203	Pn	Pn	09 05 01.0	+2.4
	0.8nm,0.3s,baz=283,slow=4.1,SNR=19						
URZ				Sn	Sn	09 06 17.8	-6.7
	8.0nm,0.3s,baz=218,slow=20,SNR=9.0						
URZ	Urewera	7.57	203	ePn	Pn	09 05 00.7	+2.2
URZ	Urewera	7.57	203	P	Pn	09 05 01.9	+3.3
RAGZ	Rawiri	7.69	201	P	Pn	09 05 03.5	+3.3
RIGZ	Rimuhau	7.79	199	P	Pn	09 05 05.9	+4.4
RTZ	Ruatahuna	7.94	203	P	Pn	09 05 05.4	+1.7
SNGZ	Shannon Statio	7.98	201	P	Pn	09 05 06.5	+2.4
RAHZ	Arahi	8.18	202	P	Pn	09 05 11.1	+4.2
MTHZ	Maungataniwha	8.20	203	P	Pn	09 05 12.5	+5.3
MRHZ	Matea Rd	8.33	205	P	Pn	09 05 14.9	+5.8
ARHZ	Aropaoanui	8.53	201	P	Pn	09 05 15.6	+4.0
BKZ	Black Stump Fm	8.60	204	ePn	Pn	09 05 14.2	+1.4
BKZ				eSn	Sn	09 06 45.8	-4.1
HIZ	Hauiti	8.71	213	ePn	Pn	09 05 15.7	+1.5
MCHZ	McNeill Hill	8.78	202	P	Pn	09 05 19.5	+4.3
TUVZ	Tukino	9.00	207	P	Pn	09 05 23.4	+5.1
BHHZ	Black Hill Sta	9.04	205	P	Pn	09 05 20.9	+2.2
KAHZ	Kahuranaki	9.05	200	P	Pn	09 05 18.5	-0.3
KRHZ	Kereru	9.07	203	P	Pn	09 05 21.0	+1.8
PNHZ	Pukenui	9.37	203	P	Pn	09 05 25.3	+2.0
TSZ	Takapari Road	9.58	204	P	Pn	09 05 27.6	+1.5
BFZ	Birch Farm	10.05	201	ePn	Pn	09 05 29.5	-3.0
BFZ	Birch Farm	10.05	201	P	Pn	09 05 30.3	-2.3
SNZO	South Karori	11.13	205	ePn	Pn	09 05 46.5	-0.8
QRZ	Quartz Range	11.64	213	ePn	Pn	09 05 56.0	+1.8
THZ	Tophouse	12.22	210	ePn	Pn	09 06 02.5	+0.2
KHZ	Kahutara	12.52	206	ePn	Pn	09 06 05.3	-1.1
KHZ	Kahutara	12.52	206	P	Pn	09 06 04.6	-1.7
GVZ	Greta Valley S	13.19	206	P	Pn	09 06 12.5	-3.0
OXZ	Oxford	13.88	208	ePn	Pn	09 06 25.0	+0.2
FOZ	Fox Glacier	15.01	213	ePn	Pn	09 06 42.7	+2.5
	58nm,1.1s						
CTA	Charters Tower	33.05	281	P	P	09 09 47.2	+3.2
	4.4nm,0.8s,baz=106,slow=6.4,SNR=4.1						
CTAO	Charters Tower	33.05	281	eP	P	09 09 43.6	-0.5
	5.2nm,0.8s						
STKA	Stephens Creek	33.37	259	P	P	09 09 47.0	+0.3
	1.7nm,0.3s,baz=101,slow=11,SNR=2.9						
BBOO	Buckleboo	37.83	256	eP	P	09 10 25.7	+0.8
	9.3nm,1.0s						
COEN	Coen	38.66	288	eP	P	09 10 31.6	-0.5
	4.5nm,0.8s						
AS31	Alice Springs	42.14	268	eP	P	09 11 02.2	+1.2
	1.9nm,0.6s						
ASAR	Alice Springs	42.15	268	P	P	09 11 02.2	+1.3
	6.1nm,0.7s,baz=104,slow=7.5,SNR=70						
ASAR				PcP	PcP	09 12 54.0	-1.5
	0.3nm,0.4s,baz=113,slow=4.2,SNR=2.9						
WC3	Warramunga Arr	43.19	274	eP	P	09 11 10.8	+1.3
	9.1nm,0.8s						
WB2	Warramunga Arr	43.21	274	eP	P	09 11 10.9	+1.2
	8.6nm,0.8s						
WRAB	Tennant Creek	43.21	274	eP	P	09 11 11.0	+1.3
	7.5nm,0.7s						
WR1	Warramunga Arr	43.22	274	eP	P	09 11 11.3	+1.5
WRA	Warramunga Arr	43.22	274	P	P	09 11 11.3	+1.5
	7.1nm,0.6s,baz=115,slow=8.1,SNR=52						
FORT	Forrest	44.92	256	eP	P	09 11 23.2	0.0
	12nm,0.8s						
SBA	Scott Base	47.03	184	eP	P	09 11 42.2	+3.0
	1.2nm,0.8s						
MTN	Manton Dam	49.23	280	eP	P	09 11 57.4	+0.4
	12nm,0.8s						
QSPA	South Pole Qui	58.77	180	P	P	09 13 06.6	+0.4
	4.7nm,0.6s,baz=200,slow=1.7,SNR=42						
QSPA	South Pole Qui	58.77	180	eP	P	09 13 06.8	+0.6
	7.1nm,0.8s						
MAW	Mawson	71.10	201	eP	P	09 14 24.7	-1.5
	0.3nm,0.9s						
SNAA	Sanae	77.23	179	eP	P	09 15 01.2	-0.9
	4.3nm,0.9s						
MK32	Makanchi Array	117.67	310	ePKPdf	PKiKP	09 21 54.4	+0.1
MKAR	Makanchi Array	117.67	310	PKP	PKiKP	09 21 54.4	+0.1
	0.7nm,0.7s,baz=194,slow=4.3,SNR=6.6						
KURBB	Kurchatov Arra	121.06	313	PKP	PKiKP	09 22 01.2	+0.5
	1.2nm,0.3s,baz=106,slow=1.8,SNR=8.1						
BVAR	Borovoye Array	126.43	315	PKP	PKiKP	09 22 12.1	+0.8
	1.5nm,0.4s,baz=122,slow=1.6,SNR=6.5						
AKTO	Aktyubinsk	134.04	312	PKP	PKiKP	09 22 26.4	-0.3
	0.3nm,0.3s,baz=38,slow=3.6,SNR=4.4						
ARCES	ARCESS Array B	139.31	347	PKhKP	PKPpre	09 22 29.8	
	1.4nm,0.8s,baz=64,slow=2.1,SNR=4.0						
KBZ	Khabaz	144.85	303	PKPbc	PKPdf	09 22 45.1	0.0
	3.5nm,0.8s,baz=188,slow=6.1,SNR=5.3						
FIA0	FINESS Array S	145.70	339	ePKPdf	PKPbc	09 22 46.5	0.0
FINES	FINESS Array B	145.70	339	PKPbc	PKPbc	09 22 46.5	0.0
	6.7nm,0.5s,baz=55,slow=3.2,SNR=63						
NB2	NORSAR Subarra	149.53	350	PKP	PKPbc	09 22 56.8	-0.3
	comp=Z,1.6nm,0.6s,baz=16,slow=4.3						
NB200	NORSAR Array S	149.53	350	ePKPbc	PKPbc	09 22 57.2	+0.1
NOA	NORSAR Array B	149.53	350	PKPbc	PKPbc	09 22 57.2	+0.1
	comp=Z,0.8nm,0.5s,baz=16,slow=4.1,SNR=13						
AKASG	Malin Array Be	151.47	321	PKPbc	PKPbc	09 23 01.5	-0.4
	comp=Z,1.7nm,0.5s,baz=59,slow=2.6,SNR=8.0						
AKBB	Malin Array Si	151.47	321	ePKPbc	PKiKP	09 23 03.1	+0.8
BR101	Keskin Array S	152.21	297	ePKPbc	PKPbc	09 23 04.0	-0.2
BRTR	Keskin Array B	152.21	297	PKPbc	PKPbc	09 23 04.0	-0.2
	comp=Z,1.8nm,0.5s,baz=142,slow=3.8,SNR=11						
TORD	Torodi Ar. Bea	161.87	182	PKPab	PKPab	09 23 54.5	-1.2
	comp=Z,0.5nm,0.4s,baz=168,slow=6.0,SNR=8.3						
TOA1	Torodi Ar. Sit	161.88	182	ePKPab	PKPab	09 23 54.5	-1.3

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*ISCJB **26** 09:40:01.3±1.8, 25°.17S±0°.03×27°.49E±0°.05, h15^{km}±12^{km}, Error ellipse: s-maj=7.6km s-min=5.2km az=7.5*

*PRE **26** 09:40:01.4±1.1, 25°.25S×27°.42E, h2^{km}, ML2.8*

ISC 26 09:39:59.4±1.6, 25°.23S±0°.04×27°.51E±0°.05, h3^{km}±11^{km}, n17, σ2^{s}01/34, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSR	Koster	0.83	221	eP	Pg	09 40 15.7	+0.3
KSR				eS	Sg	09 40 26.8	+0.6
KSR				AML	AML	09 40 31.1	
	comp=Z,140nm,0.4s						
KLOF	Kloof	1.12	175	eP	Pn	09 40 22.6	+0.4
KLOF				eS	Sn	09 40 38.9	+0.7
KLOF				AML	AML	09 40 44.6	
	comp=Z,607nm,0.1s						
WDLM	Western Deep L	1.20	184	eP	Pn	09 40 24.4	+1.2
WDLM				eS	Sn	09 40 40.8	+0.8
WDLM				AML	AML	09 40 44.7	
	comp=Z,507nm,0.2s						
ERPM	east rand prop	1.29	149	eP	Pn	09 40 25.1	+0.5
ERPM				eS	Sb	09 40 41.8	+0.3
ERPM				AML	AML	09 40 42.1	
	comp=Z,126nm,0.3s						
PRYS	Parys	1.70	184	eP	Pg	09 40 32.5	+0.6
PRYS				eS	Sg	09 40 54.8	+0.8
PRYS				AML	AML	09 40 57.8	
	comp=Z,117nm,0.3s						
LBTB	Lobatse	1.75	277	eP	Pg	09 40 32.7	-0.1
LBTB				eS	Sg	09 40 54.9	-0.6
LBTB				AML	AML	09 40 58.0	
	comp=Z,184nm,0.4s						
SWZ	Schweizer	2.76	225	eP	Pn	09 40 46.1	+1.5
SWZ				eS	Sn	09 41 18.4	-0.2
SWZ				AML	AML	09 41 29.7	
	comp=Z,52nm,0.2s						
MSNA	Messina	3.68	39	iP	Pn	09 40 57.6	+0.4

MSNA				i S	Sn	09 41 36.4	-4.7
MSNA	Messina	3.68	39	eP	Pn	09 40 59.2	+2.0
MSNA				eS	Sn	09 41 42.7	+1.6
MSNA				AML	AML	09 42 02.1	
	comp=Z,27nm,0.4s						
MSNA	Messina	3.68	39	i P	Pn	09 40 57.6	+0.4
MSNA				i S	Sn	09 41 36.4	-4.7
BOSA	Boshof	3.93	210	i P	Pg	09 41 13.3	-1.3
BOSA				i S	Sg	09 42 03.2	-2.4
BOSA	Boshof	3.93	210	eP	Pn	09 41 02.2	+1.6
BOSA				eS	Sn	09 41 47.4	0.0
BOSA				AML	AML	09 42 06.7	
	comp=Z,32nm,0.3s						
BOSA	Boshof	3.93	210	i P	Pg	09 41 13.3	-1.3
BOSA				i S	Sg	09 42 03.2	-2.4
MATP	Matopo	4.87	11	i P	Pn	09 41 16.4	+2.8
MATP				i S	Sn	09 42 08.9	-1.6
MATP	Matopo	4.87	11	i P	Pn	09 41 16.4	+2.8
MATP				i S	Sn	09 42 08.9	-1.6
HVD	Gariep Dam	5.65	198	eP	Pn	09 41 27.1	+2.7
HVD				eS	Sn	09 42 28.2	-1.5
HVD				AML	AML	09 42 33.8	
	comp=Z,6.2nm,0.3s						
UPI	Upington	6.40	239	eP	Pn	09 41 37.0	+2.3
UPI				eS	Sn	09 42 45.1	-3.2
UPI				AML	AML	09 42 46.3	
	comp=Z,12nm,0.6s						

*IDC **26** 09:49:10.2±5.2, 15.°40N×97.°04W, h0km, mb3.6/5, mb1 4.0/8, mb1mx3.7/44, mbtmp3.7/8, ML3.8/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/31, Error ellipse: s-maj=92.3km s-min=28.0km az=0.0*

*ISCJB **26** 09:49:16.6±0.9, 16.°01N±0.°06×97.°16W±0.°03, h30km±9km, mb3.9/23, MS3.0/1, Error ellipse: s-maj=10.1km s-min=4.4km az=13.2*

*NEIC **26** 09:49:18.7±0.0, 15.°94N×97.°25W, h36km, mb4.0/23, MD3.9(MEX), After MEX.*

*MEX **26** 09:49:18.7±0.5, 15.°94N×97.°25W, h36km±3km, MD3.9*

ISC 26 09:49:17.4±2.4, **15.°98N**±0.°06×**97.°16W**±0.°06, **h25**km±19km, **n58**, σ**1.s45**/75, **mb4.0**/23, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PANG	Puerto Angel	0.73	115	i P	Pn	09 49 31.8	-0.3
PANG				i S	Sb	09 49 41.2	+0.2
HUIG	Huatulco	1.03	102	ePn	Pn	09 49 36.4	+0.1
HUIG				eSn	Sn	09 49 48.8	-1.1
HUIG	Huatulco	1.03	102	eP	Pn	09 49 36.4	+0.1
HUIG				eS	Sn	09 49 48.8	-1.1
VHO	Vista Hermosa	1.16	20	ePn	Pn	09 49 37.9	-0.4
VHO				eSn	Sn	09 49 52.6	-0.8
VHO	Vista Hermosa	1.16	20	eP	Pn	09 49 37.9	-0.4
VHO				eS	Sn	09 49 52.6	-0.8
TLIG	Tlapa	2.07	320	ePn	Pn	09 49 50.0	-0.8
TLIG				eSn	Sn	09 50 13.4	-2.5
CMIG	Matias Romero	2.44	63	Pn	Pn	09 49 56.1	+0.3
	6.1nm,0.3s,baz=227,slow=14,SNR=107						
CMIG				Sn	Sn	09 50 24.7	-0.2
	14nm,0.3s,baz=262,slow=19,SNR=6.0						
CMIG	Matias Romero	2.44	63	ePn	Pn	09 49 56.0	+0.3
CMIG				eSn	Sn	09 50 25.0	+0.2
CMIG	Matias Romero	2.44	63	eP	Pn	09 49 56.0	+0.3
CMIG				i S	Sn	09 50 25.0	+0.2
ACP2	Acapulco	2.77	289	i P	Pn	09 49 57.5	-2.7
TUIG	Tuzandepetl	3.32	52	ePn	Pn	09 50 08.2	+0.4
TUIG				eSn	Sn	09 50 46.9	+0.4
TUIG	Tuzandepetl	3.32	52	eP	Pn	09 50 08.2	+0.4
TUIG				eS	Sn	09 50 46.9	+0.4
LVIG	Laguna Verde	3.79	11	ePn	Pn	09 50 12.5	-1.7
PCIG		3.80	94	ePn	Pn	09 50 14.2	-0.2
PCIG				eSn	Sn	09 50 58.7	+0.4
PCIG		3.80	94	i P	Pn	09 50 14.2	-0.2
PCIG				eS	Sn	09 50 58.7	+0.4
TGIG		3.95	78	eSn	Sn	09 51 03.4	+1.2
TGIG		3.95	78	eS	Sn	09 51 03.4	+1.2
CCIG	Comitan	4.83	86	ePn	Pn	09 50 29.9	+1.1
CCIG				ePn	Pn	09 50 34.7	+5.9
CCIG				eSn	Sn	09 51 25.6	+1.5
CCIG				eSn	Sn	09 51 27.7	+3.6
CCIG	Comitan	4.83	86	i P	Pn	09 50 29.9	+1.1
CCIG				eS	Sn	09 51 25.6	+1.5
APG	El Apazote	6.52	98	Sn	Sn	09 51 56.6	-9.3
	0.2nm,0.3s,baz=16,slow=15,SNR=2.6						
MYIG	Mrida	8.60	54	ePn	Pn	09 51 20.9	+0.5
MYIG				eSn	Sn	09 52 57.1	+0.4
TEIG	Tepich	9.44	62	Pn	Pn	09 51 30.8	-1.1
	4.1nm,0.3s,baz=7.1,slow=0.7,SNR=43						
TEIG				Sn	Sn	09 53 10.8	-6.5
	4.2nm,0.3s,baz=341,slow=21,SNR=12						
TEIG	Tepich	9.44	62	ePn	Pn	09 51 32.5	+0.6
TEIG				eSn	Sn	09 53 11.5	-5.8
TGUH	Tegucigalpa,Un	9.74	100	ePn	Pn	09 51 35.0	-1.1
ACON	Acoyapa	12.29	107	ePn	Pn	09 52 10.7	-0.3
TXAR	Lajitas Array	14.58	337	Pn	P	09 52 49.5	+0.9
	0.1nm,0.3s,baz=155,slow=14,SNR=11						
TXAR				LR	LR	09 58 45.7	
	comp=Z,113nm,19.1s,baz=0.0,slow=38						
BNM	Barren Site	20.00	336	eP	P	09 53 48.1	-0.4
LPM	Los Pinos Moun	20.15	337	eP	P	09 53 50.7	+0.6
LENM	Lemitar	20.15	336	eP	P	09 53 49.3	-0.7
Y49A	Blount Mountai	20.27	27	eP	P	09 53 50.7	-0.5
	8.6nm,0.8s						
LAZ	Ladron	20.42	336	eP	P	09 53 51.2	-1.9
ANMO	Albuquerque	20.65	338	P	P	09 53 56.9	+1.4
	1.1nm,0.8s,baz=140,slow=13,SNR=5.0						
ANMO				LR	LR	10 02 47.7	
	comp=Z,67nm,21.1s,baz=150,slow=38						
ANMO	Albuquerque	20.65	338	eP	P	09 53 55.3	-0.2
	1.0nm,0.8s						
PBMO	Poplar Bluff	21.56	15	eP	P	09 54 05.5	+0.4
	5.2nm,0.8s						
SWET	Sewanee	21.63	26	eP	P	09 54 04.3	-1.6
	10nm,0.9s						
WVT	Waverly	21.72	21	eP	P	09 54 07.8	+1.0
	3.3nm,0.8s						
V48A	Smith Brothers	21.74	23	eP	P	09 54 05.5	-1.4
	4.7nm,0.6s						
W50A	Signal Mountai	21.88	27	eP	P	09 54 07.0	-1.6
	5.5nm,0.8s						
X16A	Lo Mia Camp, P	22.41	328	eP	P	09 54 16.4	+2.0
	3.0nm,1.1s						
CCM	Cathedral Cave	22.60	12	eP	P	09 54 16.2	0.0
	4.9nm,0.9s						
T47A	Sharon Grove	22.75	21	eP	P	09 54 17.7	0.0
	10nm,1.0s						
SIUC	Southern Illin	22.76	16	eP	P	09 54 18.2	+0.4
	8.2nm,1.0s						
Y14A	Wickenburg	22.88	324	eP	P	09 54 18.7	-0.6
	1.6nm,0.8s						
SDCO	Great Sand Dun	22.90	343	eP	P	09 54 20.3	+0.6
	3.2nm,1.1s						
TKL	Tuckaleechee C	22.96	29	P	P	09 54 19.3	-0.7
	2.2nm,0.7s,baz=195,slow=12,SNR=3.1						
WUAZ	Wupatki	23.24	329	eP	P	09 54 23.4	+0.3
	3.7nm,0.9s						
MVCO	Mesa Verde	23.41	337	eP	P	09 54 26.1	+1.2
	5.2nm,1.0s						
WCI	Wyandotte Cave	24.14	21	eP	P	09 54 30.6	-0.9
	7.2nm,0.8s						
PV13	Radium Mtn., P	24.37	337	eP	P	09 54 34.3	+0.4
	2.2nm,0.9s						
PV02	Paradox Valley	24.38	337	eP	P	09 54 34.6	+0.7
	7.6nm,1.2s						
U15A	North Rim	24.41	329	eP	P	09 54 33.8	-0.6
	4.6nm,1.1s						
PV12	Saucer Basin,	24.50	337	eP	P	09 54 35.1	0.0
	9.1nm,1.1s						
S51A	Beattyville	24.68	26	eP	P	09 54 35.6	-0.9
	5.7nm,0.9s						
PDAR	Pinedale Array	28.73	341	P	P	09 55 15.3	+2.1
	0.2nm,0.5s,baz=116,slow=12,SNR=2.4						
NV01	Mina Array Sit	29.08	324	eP	P	09 55 18.1	+1.8
NVAR	Mina Array Bea	29.08	324	P	P	09 55 18.1	+1.8
	0.8nm,0.7s,baz=140,slow=9.0,SNR=6.7						
ILAR	Eielson Array	59.09	338	P	P	09 59 15.8	+0.4
	0.8nm,0.8s,baz=137,slow=5.7,SNR=6.9						
ILB	Eielson Array	59.09	338	eP	P	09 59 15.8	+0.4
	2.2nm,1.3s						

*SJA **26** 09:50:11.1±0.3, 34.°73S×72.°64W, h10km, ML3.9, MW4.1*

*IDC **26** 09:50:16.1±1.6, 34.°57S×71.°97W, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.7/29, mbtmp3.6/6, ML4.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.7/13, Error ellipse: s-maj=41.7km s-min=29.0km az=107.0*

*ISCJB **26** 09:50:18.5±0.8, 34.°64S±0.°04×72.°21W±0.°08, h40km±9km, mb4.0/6, Error ellipse: s-maj=11.7km s-min=5.4km az=13.1*

*NEIC **26** 09:50:20.0±0.0, 34.°75S×71.°94W, h44km, mb4.4/6, ML4.3(GUC), After GUC.*

NEIC Felt [II] at Curico, Navidad, Peumo, Rancagua, Romeral, Rio Claro and San Fernando.

*GUC **26** 09:50:20.4±0.6, 34.°75S×71.°94W, h44km±3km, ML4.3*

ISC 26 09:50:19.5±1.3, **34.°67S**±0.°04×**72.°07W**±0.°08, **h31**km±10km, **n36**, σ**1.s24**/51, **mb4.1**/6, **3C-1D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.36	162	ePn	Pn	09 50 28.6	-0.1
GO05				eSn	Sb	09 50 33.8	0.0
GO05	Huala	0.36	162	⇑iP	Pn	09 50 28.6	-0.1
GO05				eS	Sb	09 50 34.2	+0.4
ANTU	Antumapu	1.61	48	i P	Pn	09 50 46.9	+0.9
ANTU				eS	Sn	09 51 06.5	+0.8
ANTU				IAML		09 51 11.6	
	comp=E,7µm,0.3s						
STL	Santa Lucia	1.70	44	i P	Pn	09 50 48.1	+1.0
STL				eS	Sn	09 51 09.0	+1.1
STL				IAML		09 51 13.0	
	comp=N,5µm,0.3s						
LMEL	Las Melosas	1.75	63	⇑eP	Pn	09 50 48.3	+0.5
LMEL				eS	Sn	09 51 09.6	+0.5
LMEL				IAML		09 51 12.7	
	comp=N,8µm,0.2s						
CLCH	Cerro Calan	1.79	46	⇑iP	Pn	09 50 49.1	+0.7
CLCH				eS	Sn	09 51 10.7	+0.6
CLCH				IAML		09 51 14.9	
	comp=E,6µm,0.1s						
PEL	Peldehue	1.90	38	ePn	Pn	09 50 51.2	+1.3
PEL				eSn	Sn	09 51 12.7	-0.2
PEL	Peldehue	1.90	38	eP	Pn	09 50 51.2	+1.3
PEL				eS	Sb	09 51 15.8	-1.2
PEL	Peldehue	1.90	38	eP	Pn	09 50 51.2	+1.3
PEL				eS	Sn	09 51 13.9	+1.1
PEL				IAML		09 51 21.2	
	comp=N,3µm,0.2s						
FCH	Farellones	1.99	48	⇓eP	Pn	09 50 51.9	+0.6
FCH				eS	Sn	09 51 16.2	+0.9
FCH				IAML		09 51 21.5	
	comp=E,3µm,0.2s						
EDS3	Malargue	2.45	118	i P	Pn	09 50 59.4	+1.9
RFA	San Rafael	2.97	93	eP	Pn	09 51 04.8	+0.3
AAGR	Agrelo	3.12	61	i P	Pn	09 51 08.6	+1.9
ARCO	CERRO ARCO	3.18	56	i P	Pn	09 51 10.6	+3.0
ARCO				IAML		09 51 22.4	
	comp=Z,176nm,0.5s						
ASAL	Salagasta	3.40	53	i P	Pn	09 51 13.1	+2.6
ASAL				eS	Sb	09 51 59.3	-0.7
RTLS	Leoncito	3.68	40	i P	Pn	09 51 17.1	+2.5
RTLS				eS	Sb	09 52 07.8	-0.6
RTLS				IAML		09 52 15.4	
	comp=Z,179nm,0.7s						
RTCV	Cerro Valdivia	4.07	48	i P	Pn	09 51 21.0	+1.4
CFA	Coronel Fontan	4.43	48	Pn	Pn	09 51 23.4	-1.3
	comp=Z,4.7nm,0.3s,baz=222,slow=12,SNR=54						
CFA				Lg	Lg	09 52 23.6	
	comp=Z,20nm,0.3s,baz=330,slow=16,SNR=8.8						
CFA				LR	LR	09 52 36.4	
	comp=Z,168nm,22.0s,baz=106,slow=32						
GO04	Tololo Observa	4.61	14	ePn	Pn	09 51 28.6	+1.3
GO04				eSn	Sn	09 52 20.4	+0.6
LCO	Las Campanas	5.76	12	ePn	Pn	09 51 42.4	-0.7
LCO				eSn	Sn	09 52 46.4	-1.8
PLCA	Paso Flores	6.17	169	Pn	Pn	09 51 49.9	+1.3
	comp=Z,0.9nm,0.3s,baz=0.5,slow=11,SNR=26						
PLCA				Lg	Lg	09 53 26.7	
	comp=Z,0.3nm,0.3s,baz=307,slow=15,SNR=2.4						
PLCA	Paso Flores	6.17	169	ePn	Pn	09 51 48.8	+0.2
GO03	Copiap	7.22	13	ePn	Pn	09 52 02.9	-0.2
GO03				eSn	Sn	09 53 24.9	+0.9
GO02	Mina Guanaco	9.71	13	ePn	Pn	09 52 36.9	-0.5
GO01	Chusmiza	15.15	10	ePn	Pn	09 53 50.5	-1.3
	comp=Z,16nm,1.8s						
MNMC	Minye Minye	15.63	9	ePn	Pn	09 53 57.1	-0.7
	comp=Z,8.1nm,0.9s						
LPAZ	La Paz	18.64	12	P	P	09 54 35.5	+0.2
	comp=Z,0.3nm,0.3s,baz=90,slow=3.7,SNR=9.3						
LPAZ	La Paz	18.64	12	eP	Pn	09 54 36.1	+0.3
EFI	East Falkland	19.77	154	eP	P	09 54 44.5	-2.3
	comp=Z,260nm,1.6s						
SIV	San Ignacio	21.05	31	P	P	09 54 59.7	-1.3
	comp=Z,4.2nm,0.9s,baz=217,slow=11,SNR=17						
PTGA	Pitinga	35.60	21	eP	P	09 57 13.5	-0.9
	comp=Z,3.7nm,0.8s						
SNAA	Sanae	50.98	158	eP	P	09 59 16.7	-1.2
	comp=Z,14nm,1.8s						
QSPA	South Pole Qui	55.57	180	eP	P	09 59 52.0	+0.2
	comp=Z,9.3nm,1.5s						
TXAR	Lajitas Array	70.30	331	P	P	10 01 31.3	+1.3
	comp=Z,0.1nm,0.4s,baz=155,slow=8.6,SNR=6.4						
NV01	Mina Array Sit	84.42	325	eP	P	10 02 50.2	+1.2
NVAR	Mina Array Bea	84.42	325	P	P	10 02 50.2	+1.2
	comp=Z,0.1nm,0.3s,baz=158,slow=5.7,SNR=3.2						

JMA 26 09:54:07.6±0.2, **37.°51N**×**144.°52E**, **h42**km, **M3.7**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.54	289	P	Pn	09 54 47.9	+1.6
JIKH				S	Sn	09 55 17.5	+1.4
JIO	Ouri	2.68	292	P	Pn	09 54 49.8	+1.6
JIO				S	Sn	09 55 21.0	+1.7
JKMT	Kesennumamotoy	2.73	299	P	Pn	09 54 50.6	+1.7
JKMT				eS	Sn	09 55 22.2	+1.6
OFUJ	Ofunato	2.74	306	P	Pn	09 54 50.4	+1.4
JMK	Ichinoseki	2.97	300	P	Pn	09 54 53.9	+1.7
JMK				eS	Sn	09 55 28.3	+1.7
JOM	Ohasama	3.20	309	P	Pn	09 54 57.4	+2.0
JOM				S	Sn	09 55 34.5	+2.2
JFT	Otama	3.33	271	P	Pn	09 54 59.8	+2.7
JFT				eS	Sn	09 55 37.7	+2.3
JYK	Kaneyama	3.57	294	P	Pn	09 55 02.8	+2.4
JYK				S	Sn	09 55 44.7	+3.4
JRY	Ryogami san	4.75	253	P	Pn	09 55 17.7	+1.0
JRY				eS	Sn	09 56 10.6	+0.1
JCH	Churui	5.17	350	P	Pn	09 55 22.0	-0.5
JCH				eS	Sn	09 56 17.2	-3.7
JHJ2	Mitsune	5.83	223	eS	Sn	09 56 35.0	-2.1
NEM2	Nemuro 2	5.92	9	P	Pn	09 55 29.6	-3.1
NEM2				eS	Sn	09 56 32.4	-6.8
JTKR	Abashiri--Toko	6.47	356	P	Pn	09 55 39.3	-0.9
JTKR				eS	Sn	09 56 48.2	-4.5

*KRNET **26** 09:55:14.6±0.1, 42.°89N×78.°51E, h21km, mb2.3*

*NNC **26** 09:55:14.3±1.8, 42.°93N×78.°56E, h0km, mb2.8, mpv2.8, Error ellipse: s-maj=14.0km s-min=5.2km az=1.0*

*SOME **26** 09:55:15.3, 42.°95N×78.°45E, h10km*

ISC 26 09:55:14.3±1.0, **42.°91N**±0.°04×**78.°49E**±0.°03, **h10**km±7km, **n22**, σ**0.s61**/42, **10C-2D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.16	338	P	Pg	09 55 18.1	+0.1
	36nm,0.1s						
SATY				S	Sg	09 55 20.3	-0.3
	407nm,0.1s						
SATY	Saty	0.16	338	eP	Pg	09 55 18.1	+0.1
	36nm,0.1s						
SATY				eS	Sg	09 55 20.3	-0.3
	407nm,0.1s						
UZB	Uzynbulak	0.46	58	P	Pg	09 55 23.6	+0.3
	2.9nm,0.1s						
UZB				S	Sg	09 55 29.7	+0.3
	19nm,0.2s						
UZB	Uzynbulak	0.46	58	eP	Pg	09 55 23.6	+0.3
	baz=56						
UZB				eS	Sg	09 55 29.7	+0.3
	baz=56						
UZB	Uzynbulak	0.46	58	eP	Pg	09 55 23.6	+0.3
	2.9nm,0.1s						
UZB				eS	Sg	09 55 29.7	+0.3
	19nm,0.2s						
KPKS	Kokpek	0.58	14	eP	Pg	09 55 25.8	+0.3
	baz=12						
KPKS				eS	Sg	09 55 33.4	+0.2
	baz=12						
KPKS	Kokpek	0.58	14	eP	Pg	09 55 25.8	+0.3
	15nm,0.1s						
KPKS				eS	Sg	09 55 33.4	+0.2
	18nm,0.2s						
PDGK	Podgornoye	0.84	60	⇓P	Pg	09 55 30.6	+0.1
	1.2nm,0.4s						
PDGK				⇑S	Sg	09 55 39.7	-2.0
	1.8nm,0.4s						
PDGK	Podgornoye	0.84	60	⇑iP	Pg	09 55 30.7	+0.1
	baz=58						
PDGK				⇑iS	Sb	09 55 42.0	-0.6
	baz=58						
MNBS	Baschi	1.17	357	eP	Pn	09 55 37.2	+0.3
	1.7nm,0.1s						
MNBS				eS	Sn	09 55 52.9	0.0
	5.0nm,0.1s						
KDJ	Kajisay	1.24	232	⇑iP	Pn	09 55 37.9	+0.1
	baz=32						
KDJ				⇑iS	Sb	09 55 53.6	-0.4
	baz=32						
ARXS	Arharly	1.39	340	P	Pb	09 55 40.2	-0.2
	1.7nm,0.3s						
ARXS				S	Sb	09 55 58.1	-0.1
	4.2nm,0.1s						
ARXS	Arharly	1.39	340	eP	Pb	09 55 40.2	-0.2
	1.7nm,0.3s						
ARXS				eS	Sb	09 55 58.1	-0.1
	4.2nm,0.1s						
CHKK	Chushkaly	1.45	311	P	Pn	09 55 41.1	+0.6
	0.9nm,0.1s						
CHKK				S	Sn	09 55 59.7	+0.1
	3.7nm,0.2s						
CHKK	Chushkaly	1.45	311	eP	Pn	09 55 41.1	+0.6
	0.9nm,0.1s						
CHKK				eS	Sn	09 55 59.7	+0.1
	3.7nm,0.2s						
DJR	Jarkent	1.71	33	P	Pg	09 55 46.5	-0.6
	8.3nm,0.2s						
DJR				S	Sg	09 56 08.9	-0.4
	10nm,0.5s						
DJR	Jarkent	1.71	33	eP	Pg	09 55 46.5	-0.6
	8.3nm,0.2s						
DJR				eS	Sg	09 56 08.9	-0.4
	10nm,0.5s						
ULHL	Ulahol	1.79	249	⇑iP	Pb	09 55 47.2	0.0
	baz=50						
ULHL				⇑iS	Sb	09 56 10.7	+1.0
	baz=50						
BOOM	Boomskoye usch	1.93	258	⇑iP	Pb	09 55 49.3	-0.3
	baz=59						
BOOM				⇑iS	Sb	09 56 13.9	+0.2
	baz=59						
TKM2	Tokmak 2	2.12	271	⇑Pg	Pb	09 55 52.5	-0.5
	0.6nm,0.6s						
TKM2				⇓Lg	Lg	09 56 22.6	
	1.4nm,0.5s						
KAPS	Kapalarasan	2.46	14	Pg	Pb	09 55 59.0	+0.4
	1.0nm,0.1s						
KAPS				Lg	Lg	09 56 30.3	
	0.4nm,0.1s						
KAPS	Kapalarasan	2.46	14	eP	Pb	09 55 59.6	+1.0
	1.0nm,0.2s						
KAPS				eS	Sg	09 56 31.2	-2.0
	0.3nm,0.1s						

ISC 26 10:26:19.8±1.1, **49.°69N**±0.°07×**17.°81E**±0.°07, **h0**km, **n7**, σ**0.s40**/10, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.19	297	ePG	Pg	10 26 23.1	-0.4
MORC				eSG	Sg	10 26 25.7	-0.2
JAVC	Velka Javorina	0.84	186	ePG	Pb	10 26 37.5	+0.3
VRAC	Vranov	0.88	245	ePG	Pg	10 26 36.6	0.0
KRUC	Moravsky	1.12	236	ePG	Pg	10 26 40.8	-0.3
LANS	Liptovska Anna	1.21	116	eSG	Sn	10 27 01.8	+0.6
VYHS	Vyhne	1.38	150	ePG	Pg	10 26 45.6	-0.5
VYHS				eSG	Sb	10 27 04.2	-0.3
KSP	Ksiaz	1.51	321	ePg	Pn	10 26 48.2	+0.1
KSP				eSg	Sg	10 27 08.2	0.0

*IGIL **26** 10:31:08.8, 33.°11N×12.°81W, h10km, ML3.1*

*MDD **26** 10:31:11.1±0.2, 33.°10N×12.°85W, h94km±14km, mb3.6/17, Error ellipse: s-maj=2.8km s-min=1.2km az=125.0, PRXIMO*

*INMG **26** 10:31:14.5±2.2, 33.°22N×12.°88W, h10km, ML2.9, Error ellipse: s-maj=7.2km s-min=4.7km az=127.0*

*CNRM **26** 10:31:21.5, 33.°40N×11.°93W, h30km, ml3.5*

ISC 26 10:31:02.8±0.8, **33.°13N**±0.°05×**12.°79W**±0.°04, **h10**km, **n66**, σ**3.s17**/82, **Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPS	Porto Santo	2.97	270	P	Pb	10 31 55.0	-0.8
PMPS				S	Sn	10 32 26.1	+0.4
	16nm,0.3s						
PMPST	Porto Santo, M	2.97	270	ePn	Pb	10 31 55.0	-0.8
PMPST				eSn	Sn	10 32 26.1	+0.4
PMPST				A	A	10 32 30.2	
	33nm,0.3s						
PMAR	Madeira	3.49	264	ePn	Pb	10 32 02.3	-2.5
PMAR				A	A	10 32 44.6	
	33nm,0.2s						
PMAR	Madeira	3.49	264	P	Pb	10 32 02.3	-2.5
PMOZ	Porto Moniz, M	3.72	266	ePn	Pn	10 32 04.9	+4.6
PMOZ				A	A	10 32 48.2	
	24nm,0.5s						
PMOZ	Porto Moniz, M	3.72	266	P	Pn	10 32 04.3	+4.0
	14nm,0.2s,SNR=7.9						
PMOZ				S	Sn	10 32 43.9	-0.3
	82nm,0.6s,SNR=7.9						
EFAM	Famara	4.04	189	P	Pn	10 32 08.6	+3.9
	2.8nm,0.1s,SNR=7.9						
EFAM				S	Sn	10 32 51.8	-0.3
	4.0nm,0.2s,SNR=7.9						
SRHM	Skhour des Reh	4.17	98	P	Pb	10 32 14.2	-2.1
CFUE	Fuerteventura	4.58	193	P	Pn	10 32 15.4	+3.3
	9.5nm,0.1s,SNR=7.9						
CFUE				S	Sn	10 33 03.3	-2.0
	24nm,0.2s,SNR=7.9						
OUK	Oukaimeden	4.60	113	P	Pb	10 32 20.7	-3.0
OUK				S	Sn	10 33 08.3	+2.1
CFTV	Fuerteventura	4.83	194	P	Pn	10 32 18.3	+2.7
	SNR=7.9						
CFTV				S	Sn	10 33 09.5	-2.2
	2.0nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	5.14	38	ePn	Pb	10 32 27.0	-5.8
PFVI				eSn	Sn	10 33 17.4	-1.9
PFVI				A	A	10 33 20.8	
	9.0nm,0.2s						
PFVI	Vila Bisbo	5.14	38	P	Pn	10 32 24.2	+4.3
	8.4nm,0.0s,SNR=4.0						
PFVI				S	Sn	10 33 19.1	-0.2
	10.0nm,0.2s,SNR=6.9						
ZHG	ZHG	5.16	85	P	Pb	10 32 27.0	-6.1
MORF	Marmelete	5.37	38	eP	Pn	10 32 27.3	+4.4
MORF				eS	Sn	10 33 24.6	-0.3
MORF				AML	AML	10 33 28.0	
	comp=N,25nm,0.2s						
MORF	Marmelete	5.37	38	ePn	Pn	10 32 28.1	+5.1
MORF				eSn	Sn	10 33 23.6	-1.3
MORF				A	A	10 33 28.5	
	comp=N,17nm,0.2s						
MORF	Marmelete	5.37	38	P	Pn	10 32 28.1	+5.1
MORF				S	Sn	10 33 23.6	-1.3
	comp=N,17nm,0.2s						
EBAJ	Bajamar	5.50	215	P	Pn	10 32 27.8	+3.0
	comp=N,3.7nm,0.3s,SNR=7.9						
EBAJ				S	Sn	10 33 24.8	-3.3
	comp=N,16nm,1.0s,SNR=7.9						
PTEO	Sao Teotonio	5.52	36	eSn	Sn	10 33 25.4	-3.0
PTEO				A	A	10 33 33.2	
	comp=N,8.9nm,0.5s						
EOSO	Osorio	5.58	206	S	Sn	10 33 27.4	-2.7
	comp=N,5.0nm,0.3s,SNR=7.9						
OUZM	OUZ	5.58	112	P	Pb	10 32 33.8	-6.5
OUZM				S	Sn	10 33 31.2	+1.0
PBDV	Barranco-do-Ve	5.71	43	ePn	Pn	10 32 33.3	+5.6

PBDV				*e*Sn	**Sn**	**10 33 31.2**	**-2.1**
PBDV				A	A	10 33 39.7	
	comp=N,8.2nm,0.3s						
PBDV	**Barranco-do-Ve**	**5.71**	**43**	P	Pn	10 32 33.3	+5.6
PBDV				S	**Sn**	**10 33 31.2**	**-2.1**
	comp=N,8.2nm,0.3s						
CCAN	**Las Canadas**	**5.89**	**215**	P	**Pn**	**10 32 34.9**	**+4.5**
	comp=N,1.6nm,0.6s,SNR=7.9						
CCAN				S	**Sn**	**10 33 36.2**	**-2.0**
	comp=N,1.0nm,0.2s,SNR=7.9						
PCVE	**Castro Verde**	**5.93**	**40**	*e*Pn	Pn	10 32 36.2	+5.5
PCVE				*e*Sn	**Sn**	**10 33 37.8**	**-0.9**
PCVE				A	A	10 33 44.5	
	comp=N,8.8nm,0.3s						
PCVE	**Castro Verde**	**5.93**	**40**	P	Pn	10 32 36.2	+5.5
PCVE				S	**Sn**	**10 33 37.8**	**-0.9**
	comp=N,8.8nm,0.3s						
PVAQ	**Vaqueiros**	**5.95**	**43**	*e*Pn	Pn	10 32 36.0	+5.1
PVAQ				*e*Sn	**Sn**	**10 33 35.6**	**-3.4**
PVAQ				A	A	10 33 46.3	
	comp=N,9.3nm,0.2s						
PVAQ	**Vaqueiros**	**5.95**	**43**	P	Pn	10 32 36.0	+5.1
PVAQ	**Vaqueiros**	**5.95**	**43**	P	Pn	10 32 36.0	+5.2
PVAQ				S	**Sn**	**10 33 38.3**	**-0.7**
PNCL	**Nicolau / Gran**	**6.06**	**34**	*e*Pn	**Pn**	**10 32 36.8**	**+4.4**
PNCL				*e*Sn	**Sn**	**10 33 39.4**	**-2.4**
PNCL				A	A	10 33 43.0	
	comp=N,6.2nm,0.3s						
PNCL	**Nicolau / Gran**	**6.06**	**34**	P	**Pn**	**10 32 36.8**	**+4.4**
PNCL				S	**Sn**	**10 33 39.4**	**-2.4**
	comp=N,6.2nm,0.3s						
EGRO	**El Granado**	**6.17**	**43**	P	Pn	10 32 39.2	+5.2
	comp=N,1.5nm,0.1s,SNR=21						
EGRO				S	**Sn**	**10 33 43.0**	**-1.6**
	comp=N,12nm,0.2s,SNR=6.5						
PMAFR	**Mafra**	**6.47**	**25**	*e*Sn	**Sn**	**10 33 49.8**	**-2.1**
PMAFR				A	A	10 33 55.6	
	comp=N,15nm,0.2s						
CZD	**Col de Zad**	**6.51**	**89**	P	Pn	10 32 45.8	+7.0
CZD				S	**Sn**	**10 33 53.0**	**-0.2**
ECEU	**Ceuta**	**6.71**	**64**	P	Pn	10 32 46.8	+5.4
	comp=N,3.7nm,0.2s,SNR=4.0						
ECEU				S	**Sn**	**10 33 57.3**	**-0.6**
	comp=N,4.6nm,0.5s,SNR=7.9						
MD31	**MD31**	**6.75**	**90**	P	Pn	10 32 49.2	+7.1
MD31				S	**Sn**	**10 33 56.8**	**-2.2**
ESPR	**Espera**	**6.80**	**55**	P	Pn	10 32 47.9	+5.4
	comp=N,3.5nm,0.4s,SNR=7.9						
ESPR				S	**Sn**	**10 33 59.1**	**-1.0**
	comp=N,9.4nm,0.2s						
EMIN	**Mina Concepcio**	**6.80**	**45**	P	Pn	10 32 47.7	+5.1
	comp=N,1.2nm,0.1s,SNR=17						
EMIN				S	**Sn**	**10 33 58.5**	**-1.6**
	comp=N,13nm,1.3s,SNR=7.9						
MDT	**Midelt**	**6.88**	**90**	P	Pn	10 32 51.3	+7.4
MDT				S	**Sn**	**10 34 00.3**	**-2.0**
CTIG	**El Hierro**	**6.93**	**221**	S	**Sn**	**10 33 58.3**	**-4.9**
	comp=N,4.1nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**6.98**	**31**	*e*Pn	**Pn**	**10 32 49.6**	**+4.6**
PMTG				*e*Sn	**Sn**	**10 34 02.9**	**-1.6**
PMTG				A	A	10 34 05.6	
	comp=N,3.3nm,0.2s						
PMTG	**Montargil**	**6.98**	**31**	P	**Pn**	**10 32 49.6**	**+4.6**
PMTG				S	**Sn**	**10 34 02.9**	**-1.6**
	comp=N,3.3nm,0.2s						
CTAN	**El Hierro**	**7.03**	**222**	S	**Sn**	**10 34 00.4**	**-5.3**
	comp=N,9.4nm,0.1s,SNR=7.9						
CMCL	**Mercadel, El H**	**7.04**	**221**	S	**Sn**	**10 34 02.0**	**-4.1**
	comp=N,8.4nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**7.43**	**60**	P	Pn	10 32 56.8	+5.5
	comp=N,1.8nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**10 34 13.8**	**-1.7**
	comp=N,1.5nm,0.2s,SNR=7.9						
AKLM	**AKL**	**7.56**	**77**	P	Pn	10 33 00.1	+7.0
PMRV	**Marv??o**	**7.64**	**33**	*e*Pn	Pn	10 33 00.6	+6.4
PMRV				*e*Sn	**Sn**	**10 34 17.6**	**-3.3**
PMRV				A	A	10 34 23.5	
	comp=N,2.6nm,0.2s						
PMRV	**Marv??o**	**7.64**	**33**	P	Pn	10 33 00.6	+6.4
PMRV				S	**Sn**	**10 34 17.6**	**-3.3**
	comp=N,2.6nm,0.2s						
ECAB	**El Cabril**	**7.77**	**49**	P	Pn	10 33 01.1	+5.2
	comp=N,0.7nm,0.1s,SNR=12						
ECAB				S	**Sn**	**10 34 22.0**	**-1.9**
	comp=N,17nm,1.8s,SNR=7.9						
EGOR	**Sierra Gorda,**	**8.14**	**58**	P	Pn	10 33 06.3	+5.2
	comp=N,1.1nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**10 34 31.0**	**-2.3**
	comp=N,2.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**8.36**	**51**	P	Pn	10 33 09.2	+5.2
	comp=N,1.5nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**10 34 35.2**	**-3.3**
	comp=N,6.8nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**8.67**	**59**	P	Pn	10 33 13.3	+5.1
	comp=N,2.1nm,0.8s,SNR=7.9						
EQUE				S	**Sn**	**10 34 43.7**	**-2.4**
	comp=N,0.9nm,0.2s,SNR=4.0						
EPLA	**Plasencia**	**8.77**	**36**	S	**Sn**	**10 34 45.0**	**-3.5**
	comp=N,2.1nm,0.1s,SNR=7.9						
EBER	**Berja**	**8.95**	**62**	P	**Pn**	**10 33 16.5**	**+4.3**
	comp=N,0.5nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**10 34 49.9**	**-3.2**
	comp=N,0.7nm,0.3s,SNR=7.9						
EQES	**Quesada**	**9.19**	**57**	P	Pn	10 33 20.9	+5.3
	comp=N,1.4nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**10 34 55.6**	**-3.5**
	comp=N,1.5nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**9.24**	**28**	S	**Sn**	**10 34 56.1**	**-4.0**
	comp=N,1.4nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**9.34**	**44**	P	**Pn**	**10 33 21.8**	**+4.3**
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**10 34 58.6**	**-4.1**
	comp=N,1.0nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**9.49**	**22**	S	**Sn**	**10 35 01.5**	**-4.8**
	comp=N,1.1nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**9.52**	**21**	*e*Sn	**Sn**	**10 35 04.0**	**-3.0**
PGAV				A	A	10 35 12.8	
	comp=N,2.9nm,0.8s						
PGAV	**Gavieira, Arco**	**9.52**	**21**	S	**Sn**	**10 35 04.0**	**-3.0**
	comp=N,2.9nm,0.8s						
ESDC	**Sonseca Array**	**9.65**	**45**	P	**Pn**	**10 33 25.7**	**+3.9**
	SNR=7.9						
SESP	**Santiago Espad**	**9.71**	**56**	P	**Pn**	**10 33 26.3**	**+3.7**
	comp=N,4.4nm,2.6s,SNR=7.9						
SESP				S	**Sn**	**10 35 09.1**	**-2.7**
	comp=N,42nm,11.1s,SNR=7.9						
ECAL	**Calabor**	**10.02**	**27**	S	**Sn**	**10 35 13.9**	**-5.3**
	comp=N,7.4nm,0.5s,SNR=7.9						
EMAZ	**Mazaricos**	**10.25**	**16**	S	**Sn**	**10 35 19.5**	**-5.4**
	comp=N,5.0nm,1.1s,SNR=7.9						
ETOB	**Tobarra**	**10.65**	**56**	P	**Pn**	**10 33 39.9**	**+4.5**
	comp=N,1.0nm,0.1s,SNR=6.9						
ETOB				S	**Sn**	**10 35 29.7**	**-5.0**
	comp=N,2.3nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**11.10**	**22**	S	**Sn**	**10 35 39.8**	**-5.8**
	comp=N,0.7nm,0.3s,SNR=7.9						

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*IDC **26** 10:48:02.7±1.9, 55°.91N×164°.60E, h0^{km}, mb3.3/3, mb1 3.7/4, mb1mx3.3/33, mbtmp3.3/4, ML2.4/1, Error ellipse: s-maj=136.9km s-min=31.9km az=148.0*
*KRSC **26** 10:48:04.6±1.2, 55°.55N×164°.46E, h50^{km}±22^{km}, ML4.0*
ISC 26 10:48:02.3±1.3**, 55°.68N**±0°.05×**164°.43E**±0°.04**, h3**^{km}±10^{km}**, n44,** σ**2^s.03**/59**, mb3.4**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.00**	**118**	*e*P	**Pg**	**10 48 21.9**	**+0.5**
BKI				*e*S	**Sg**	**10 48 33.9**	**-0.4**
KBTR	**Krutoberegovo**	**1.05**	**301**	*e*P	**Pn**	**10 48 24.1**	**+0.2**
KBTR				*e*S	**Sn**	**10 48 38.6**	**-0.5**
KBG	**Krutoberegovo**	**1.13**	**302**	*e*P	**Pn**	**10 48 25.5**	**+0.5**
KBG				*e*S	**Sn**	**10 48 40.9**	**-0.1**
SMKR	**Semkarok**	**1.89**	**300**	*e*P	**Pg**	**10 48 38.0**	**-0.5**
SMKR				*e*S	**Sg**	**10 49 01.9**	**-1.1**
MKZ	**Mys Kozlova**	**1.92**	**235**	*i* P	**Pn**	**10 48 36.8**	**+1.0**
MKZ				*e*S	**Sn**	**10 48 58.6**	**-1.7**
BDR	**Baidarnaya**	**2.01**	**298**	*e*P	**Pb**	**10 48 39.9**	**+0.3**
BDR				*e*S	**Sg**	**10 49 05.8**	**-1.2**
SRKR	**Sorokina**	**2.07**	**300**	*e*P	**Pb**	**10 48 40.5**	**-0.1**
SRKR				*e*S	**Sb**	**10 49 05.8**	**-0.9**
CIRR	**Tsirk**	**2.12**	**284**	*e*P	**Pb**	**10 48 42.0**	**+0.6**
LGNR	**Loginova**	**2.15**	**282**	*e*P	**Pb**	**10 48 42.3**	**+0.3**
KLY	**Klyuchi**	**2.22**	**288**	*e*P	**Pn**	**10 48 41.3**	**+1.4**
KLY				*e*S	**Sn**	**10 49 07.3**	**-0.5**
BZWR	**Bezymyannyi-We**	**2.24**	**279**	*e*P	**Pb**	**10 48 43.8**	**+0.3**
TUMD	**Tumrok D**	**2.35**	**260**	*e*P	**Pn**	**10 48 44.7**	**+3.0**
TUMD				*e*S	**Sn**	**10 49 12.4**	**+1.4**
KPT	**Kopyto**	**2.39**	**279**	*e*P	**Pb**	**10 48 45.2**	**-0.8**
KZV	**Kizimen**	**2.43**	**258**	*e*P	**Pn**	**10 48 45.3**	**+2.3**
KZV				*e*S	**Sn**	**10 49 14.7**	**+1.5**
TUMR	**Tumrok**	**2.47**	**263**	*e*P	**Pn**	**10 48 46.8**	**+3.3**
SRDR	**Sredinnyy**	**2.73**	**286**	*e*P	**Pb**	**10 48 50.3**	**-1.4**
SRDR				*e*S	**Sn**	**10 49 23.1**	**+2.7**
ESO	**Esso**	**3.25**	**277**	*e*P	**Pn**	**10 48 56.9**	**+2.8**
SPN	**Mys Shipunski**	**3.65**	**227**	*e*P	**Pn**	**10 49 00.8**	**+1.2**
SPN				*e*S	**Sn**	**10 49 39.6**	**-3.5**
NLC	**Nalytchevo**	**3.89**	**232**	*e*P	**Pn**	**10 49 04.1**	**+1.2**
NLC				*e*S	**Sn**	**10 49 47.1**	**-1.9**
KRER	**Koryakskii**	**4.08**	**237**	*e*P	**Pn**	**10 49 08.6**	**+2.9**
SMAR	**Somma**	**4.08**	**236**	*e*P	**Pn**	**10 49 08.5**	**+2.8**
SMAR				*e*S	**Sn**	**10 49 53.3**	**-0.7**
KRX	**Arik**	**4.09**	**238**	*e*P	**Pn**	**10 49 09.2**	**+3.4**
UGLR	**Uglovaya**	**4.10**	**235**	*e*P	**Pn**	**10 49 08.4**	**+2.5**
UGLR				*e*S	**Sn**	**10 49 53.4**	**-1.0**
AVH	**Avacha**	**4.11**	**236**	*e*P	**Pn**	**10 49 09.0**	**+3.0**
AVH				*e*S	**Sn**	**10 49 53.9**	**-0.6**
KOK	**Koryaka**	**4.14**	**237**	*e*P	**Pn**	**10 49 09.6**	**+3.2**
DALK	**Dalny**	**4.25**	**234**	*e*P	**Pn**	**10 49 09.8**	**+2.0**
DALK				*e*S	**Sn**	**10 49 56.4**	**-1.5**
GNL	**Ganaly**	**4.26**	**245**	*e*P	**Pn**	**10 49 11.5**	**+3.4**
KRMR	**Karymshinskiy**	**4.67**	**235**	*e*P	**Pn**	**10 49 16.7**	**+3.1**
KRMR				*e*S	**Sn**	**10 50 07.5**	**-0.7**
PETK	**Petropavlovsk-**	**4.70**	**240**	Pn	**Pn**	**10 49 17.6**	**+3.5**
	0.8nm,0.3s,baz=63,slow=16,SNR=5.6						
PETK				Sn	**Sn**	**10 50 10.0**	**+0.9**
	0.4nm,0.3s,baz=78,slow=30,SNR=3.1						
RUS	**Russkaya**	**4.76**	**229**	*e*P	**Pn**	**10 49 16.9**	**+2.0**
RUS				*e*S	**Sn**	**10 50 09.3**	**-1.3**
TILK	**Tilichiki**	**4.87**	**10**	*e*P	Pb	10 49 18.9	-9.2
MTVR	**Mutnovka**	**4.87**	**232**	*e*P	**Pn**	**10 49 18.8**	**+2.2**
MTVR				*e*S	**Sn**	**10 50 11.4**	**-2.1**
ASAK	**Asacha**	**5.07**	**232**	*e*P	**Pn**	**10 49 22.3**	**+3.1**
APC	**Apacha**	**5.07**	**240**	*e*P	**Pn**	**10 49 22.6**	**+3.5**
KDTR	**Khodutka, Kamc**	**5.41**	**227**	*e*P	**Pn**	**10 49 25.2**	**+1.5**
KDTR				*e*S	**Sn**	**10 50 22.8**	**-3.6**
ILAR	**Eielson Array**	**25.20**	**49**	P	**P**	**10 53 27.3**	**-1.4**
	0.5nm,0.6s,baz=251,slow=8.0,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**35.94**	**176**	T	T	11 33 05.4	
	baz=358,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**35.95**	**176**	T	T	11 33 09.6	
	baz=358,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**35.95**	**176**	T	T	11 33 13.1	
	baz=358,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**37.14**	**176**	T	T	11 34 32.9	
	baz=359,slow=76,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**37.16**	**176**	T	T	11 34 30.6	
	baz=359,slow=76,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**37.16**	**176**	T	T	11 34 35.4	
	baz=359,slow=76,SNR=4.3						
NVAR	**Mina Array Bea**	**52.54**	**75**	P	**P**	**10 57 17.4**	**+0.4**
	0.3nm,0.6s,baz=302,slow=8.2,SNR=3.6						
TXAR	**Lajitas Array**	**67.34**	**71**	P	**P**	**10 58 58.1**	**-0.5**
	0.2nm,0.5s,baz=292,slow=4.8,SNR=5.4						

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*SJA **26** 11:08:43.7±0.8, 21°.75S×68°.43W, h135^{km}±9^{km}, ML2.3, MW3.9*
*GUC **26** 11:08:45.5±0.6, 21°.79S×68°.53W, h125^{km}±4^{km}, ML3.3*
ISC 26 11:08:45.8±1.9**, 21°.80S**±0°.04×**68°.49W**±0°.07**, h127**^{km}±15^{km}**, n20,** σ**0^s.52**/37**, 7C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.69**	**270**	*i* P	**Pn**	**11 09 05.5**	**-0.7**
PB09				*i* S	**Sn**	**11 09 22.0**	**+0.5**
PB09	**IPOC Station P**	**0.69**	**270**	*e*P	**Pn**	**11 09 06.3**	**+0.1**
PB09				*e*S	**Sn**	**11 09 21.0**	**-0.4**
LVC	**Limon Verde**	**0.90**	**205**	*i* P	**Pn**	**11 09 07.4**	**-0.6**
LVC	**Limon Verde**	**0.90**	**205**	*e*P	**Pn**	**11 09 07.7**	**-0.3**
LVC				*e*S	**Sn**	**11 09 24.7**	**-0.1**
PB01	**IPOC Station P**	**1.19**	**309**	⇑*e*P	**Pn**	**11 09 10.2**	**-0.3**
PB01				*e*S	**Sn**	**11 09 29.1**	**-0.1**
PB01				IAML		11 09 30.8	
	comp=N,482nm,0.2s						
PB03	**IPOC Station P**	**1.20**	**258**	*i* P	**Pn**	**11 09 10.4**	**-0.2**
PB03				*i* S	**Sn**	**11 09 30.8**	**+1.3**
PB03	**IPOC Station P**	**1.20**	**258**	*e*P	**Pn**	**11 09 10.6**	**0.0**
PB03				*e*S	**Sn**	**11 09 29.0**	**-0.4**
PB03				IAML		11 09 30.0	
	comp=N,803nm,0.2s						
PB07	**IPOC Station P**	**1.30**	**273**	*i* P	**Pn**	**11 09 11.5**	**-0.2**
PB07				*i* S	**Sn**	**11 09 32.2**	**+0.9**
PB07	**IPOC Station P**	**1.30**	**273**	⇓*e*P	**Pn**	**11 09 11.7**	**0.0**
PB07				*e*S	**Sn**	**11 09 31.2**	**-0.1**
PB07				IAML		11 09 32.3	
	comp=N,544nm,0.4s						
PB06	**IPOC Station P**	**1.35**	**228**	*i* P	**Pn**	**11 09 12.1**	**-0.1**
PB06				*i* S	**Sn**	**11 09 33.7**	**+1.3**
PB06	**IPOC Station P**	**1.35**	**228**	⇑*e*P	**Pn**	**11 09 12.3**	**0.0**
PB06				*e*S	**Sn**	**11 09 32.3**	**0.0**
PB06				IAML		11 09 33.4	
	comp=N,533nm,0.5s						
PB02	**IPOC Station P**	**1.39**	**290**	*i* P	**Pn**	**11 09 12.1**	**-0.5**
PB02				*i* S	**Sn**	**11 09 33.7**	**+0.7**
PB02	**IPOC Station P**	**1.39**	**290**	⇑*e*P	**Pn**	**11 09 12.5**	**-0.1**
PB02				*e*S	**Sn**	**11 09 33.0**	**0.0**
PB02				IAML		11 09 38.0	
	comp=E,516nm,0.1s						
PB04	**IPOC Station P**	**1.62**	**251**	⇑*e*P	**Pn**	**11 09 15.1**	**-0.3**
PB04				*e*S	**Sn**	**11 09 37.8**	**-0.1**
PB04				IAML		11 09 39.4	
	comp=E,394nm,0.3s						
PB15	**IPOC Station P**	**1.67**	**213**	*i* P	**Pn**	**11 09 15.8**	**-0.2**
PB15	**IPOC Station P**	**1.67**	**213**	⇑*e*P	**Pn**	**11 09 16.0**	**0.0**
PB15				*e*S	**Sn**	**11 09 39.6**	**+0.7**
PB08	**IPOC Station P**	**1.76**	**339**	⇑*e*P	**Pn**	**11 09 17.6**	**+0.4**
PB08				*e*S	**Sn**	**11 09 41.8**	**+0.7**
PB08				IAML		11 09 43.4	
	comp=E,263nm,0.3s						
PB05	**IPOC Station P**	**1.90**	**236**	⇓*e*P	**Pn**	**11 09 18.4**	**-0.1**
PB05				*e*S	**Sn**	**11 09 42.9**	**-0.7**
PB05				IAML		11 09 43.4	
	comp=N,200nm,0.3s						
PB11	**IPOC Station P**	**2.30**	**332**	⇑*e*P	**Pn**	**11 09 22.9**	**-0.7**
PB11				*e*S	**Sn**	**11 09 52.5**	**-0.1**
HJA	**Humahuaca**	**3.18**	**117**	*i* P	**Pn**	**11 09 35.0**	**-0.1**
HJA				IAmb	IAmb	11 09 36.5	
	comp=Z,36nm,0.4s						
HJA				IAML		11 09 36.8	
	comp=Z,7.0nm,0.5s						

IDC 26 11:13:02.5±2.1**, 2°.07N**×**126°.58E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/27**, mbtmp3.6**/3**, Error ellipse: s-maj=171.3km s-min=25.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.16**	**161**	P	P	11 18 10.8	-0.1
	1.0nm,0.4s,baz=339,slow=12,SNR=22						
ASAR	**Alice Springs**	**26.55**	**165**	P	P	11 18 42.5	+0.1
	0.3nm,0.4s,baz=353,slow=7.6,SNR=9.7						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	11 23 03.0	-0.1
	0.4nm,0.4s,baz=117,slow=7.3,SNR=6.4						

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*MAN **26** 11:39:23.5, 7°.68N×124°.49E, h1^{km}, mb4.9, ML3.9, MS3.9*
*ISCJB **26** 11:39:24.8±0.8, 7°.57N±0°.03×124°.61E±0°.04, h6^{km}±6^{km}, mb4.0/15, MS3.1/6, Error ellipse: s-maj=6.7km s-min=4.5km az=178.5*
*IDC **26** 11:39:25.6±0.8, 7°.23N×124°.40E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/50, mbtmp3.8/8, MS3.2/8, Ms1 3.3/8, ms1mx3.0/32, Error ellipse: s-maj=24.0km s-min=11.2km az=23.0*
*NEIC **26** 11:39:27.1±1.8, 7°.54N×124°.66E, h10^{km}, mb4.2/10, Error ellipse: s-maj=15.1km s-min=7.5km az=345.0*
ISC 26 11:39:24.9±1.2**, 7°.70N**±0°.02×**124°.56E**±0°.03**, h1**^{km}±8^{km}**, n44,** σ**2^s.39**/52**, mb3.9**/15**, MS3.2**/6**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.53**	**70**	*e*P	**Pg**	**11 39 35.6**	**+0.5**
BUKP				*e*S	**Sg**	**11 39 40.9**	**-1.1**
CTBH	**Cotabato--PC H**	**0.56**	**213**	⇑*i*P	**Pg**	**11 39 34.9**	**-0.8**
CGP	**Cagayan de Oro**	**0.77**	**10**	⇑*i*P	**Pg**	**11 39 38.9**	**-0.7**
CGP				*i* S	**Sn**	**11 39 54.7**	**-0.5**
KCP	**Kidapawan**	**0.86**	**142**	⇓*i*P	**Pg**	**11 39 39.9**	**-1.6**
KCP				*i* S	**Sg**	**11 39 51.9**	**-0.8**
DMPH	**Davao City--Mi**	**1.12**	**123**	⇓*i*P	**Pn**	**11 39 48.2**	**+0.4**
DMPH				*i* S	**Sn**	**11 40 09.8**	**+5.9**
SKMP	**Bagumbayan, Su**	**1.17**	**181**	*e*P	**Pb**	**11 39 45.1**	**-2.9**
SKMP				*e*S	**Sn**	**11 40 05.2**	**+0.1**
PAGZ	**Pagadian**	**1.18**	**277**	*e*P	**Pb**	**11 39 44.1**	**-4.0**
PAGZ				*e*S	**Sn**	**11 40 06.1**	**+0.8**
DAV	**Davao City (W)**	**1.19**	**121**	Pg	**Pb**	**11 39 46.9**	**-1.3**
	246nm,0.3s,baz=343,slow=3.9,SNR=10						
DAV				Lg	Lg	11 40 05.3	
	431nm,0.3s,baz=330,slow=20,SNR=20						
DAV				LR	LR	11 40 09.9	
	comp=Z,172nm,21.2s,baz=128,slow=38						
DAV	**Davao City (W)**	**1.19**	**121**	*e*Pn	**Pg**	**11 39 48.1**	**+0.4**
DCPH	**Dipolog City**	**1.48**	**307**	⇑*e*P	**Pn**	**11 39 51.9**	**-1.0**
DCPH				*e*S	**Sg**	**11 40 18.2**	**+5.5**
GSPH	**General Santos**	**1.64**	**166**	*e*P	**Pg**	**11 39 57.8**	**+1.4**
BUTP	**Butuan**	**1.65**	**40**	*e*P	**Pb**	**11 39 54.8**	**-1.3**
BUTP				*e*S	**Sn**	**11 40 13.3**	**-3.6**
MATI	**Mati**	**1.84**	**114**	*e*P	**Pg**	**11 40 00.5**	**+0.2**
MATI				*e*S	**Sg**	**11 40 26.4**	**+2.2**
DDMP	**Don Marcelino,**	**1.95**	**144**	*e*P	**Pb**	**11 39 59.4**	**-2.0**
DDMP				*e*S	**Sg**	**11 40 32.2**	**+4.5**
SNPH	**Sibulan**	**2.10**	**321**	*e*P	**Pn**	**11 40 00.5**	**-0.8**
SNPH				*e*S	**Sg**	**11 40 34.4**	**+2.1**
LLP	**Lapu-Lapu**	**2.67**	**347**	*e*P	**Pn**	**11 40 08.2**	**-0.9**
LLP				*e*S	**Sb**	**11 40 46.2**	**-0.7**
PLP	**Palo**	**3.47**	**7**	⇑*e*P	**Pn**	**11 40 19.5**	**-0.7**
PLP				*e*S	**Sb**	**11 41 07.0**	**-3.0**
TGY	**Tagaytay City**	**7.29**	**331**	LR	LR	11 44 22.9	
	comp=Z,182nm,19.3s,baz=108,slow=39						
LUWI	**Luwuk**	**8.86**	**192**	*e*Pn	**Pn**	**11 41 34.3**	**0.0**
LUWI				*e*Sn	**Sn**	**11 43 12.1**	**-2.8**
YHNB	**Yeheng**	**17.15**	**350**	*e*P	**P**	**11 43 29.4**	**+1.5**
	11nm,1.0s						
BATI	**Baumata**	**17.81**	**183**	LR	LR	11 50 24.1	
	comp=Z,141nm,19.9s,baz=227,slow=38						
GUMO	**Guam**	**20.79**	**72**	LR	LR	11 53 10.1	
	comp=Z,17nm,18.3s,baz=241,slow=39						
MTN	**Manton Dam**	**21.43**	**162**	*e*P	**P**	**11 44 13.9**	**-0.8**
	32nm,1.3s						
CMAR	**Chiang Mai Arr**	**27.11**	**296**	P	**P**	**11 45 11.3**	**+1.6**
	0.3nm,0.3s,baz=140,slow=9.1,SNR=4.1						
CMAR				LR	LR	11 56 15.1	
	comp=Z,43nm,18.3s,baz=134,slow=37						
WR1	**Warramunga Arr**	**29.10**	**161**	*e*P	**P**	**11 45 24.0**	**-3.5**
WRA	**Warramunga Arr**	**29.10**	**161**	P	**P**	**11 45 24.0**	**-3.5**
	1.1nm,0.9s,baz=343,slow=11,SNR=5.4						
WB2	**Warramunga Arr**	**29.11**	**161**	*e*P	**P**	**11 45 25.7**	**-1.8**
	3.3nm,0.9s						
KSRS	**Korea Array**	**29.78**	**5**	LR	LR	11 58 48.9	
	comp=Z,22nm,20.5s,baz=186,slow=38						
AS31	**Alice Springs**	**32.48**	**164**	*e*P	**P**	**11 45 55.1**	**-2.2**
	1.9nm,1.4s						
ASAR	**Alice Springs**	**32.48**	**164**	P	**P**	**11 45 54.6**	**-2.7**
	0.7nm,0.6s,baz=343,slow=7.2,SNR=11						
MORW	**Morawa**	**37.46**	**192**	*e*P	**P**	**11 46 39.7**	**-0.5**
	29nm,1.3s						
FORT	**Forrest**	**38.40**	**175**	*e*P	**P**	**11 46 47.0**	**-1.1**
	28nm,1.2s						
BBOO	**Buckleboo**	**41.74**	**165**	*e*P	**P**	**11 47 15.3**	**-0.6**
	17nm,1.3s						
STKA	**Stephens Creek**	**42.58**	**158**	P	**P**	**11 47 21.0**	**-1.7**
	3.6nm,0.8s,baz=35,slow=3.1,SNR=3.4						
STKA				LR	LR	12 06 26.1	
	comp=Z,59nm,18.2s,baz=22,slow=38						
STKA	**Stephens Creek**	**42.58**	**158**	*e*P	**P**	**11 47 21.5**	**-1.3**
	1.6nm,0.9s						
SONM	**Songino Array**	**42.88**	**342**	LR	LR	12 06 19.1	
	comp=Z,64nm,18.9s,baz=150,slow=37						
MK31	**Makanchi Array**	**53.09**	**325**	*e*P	**P**	**11 48 46.9**	**+2.8**
	1.3nm,0.8s						
MK32	**Makanchi Array**	**53.09**	**325**	*e*P	**P**	**11 48 47.2**	**+3.0**
MKAR	**Makanchi Array**	**53.09**	**325**	P	**P**	**11 48 47.2**	**+3.0**
	0.6nm,0.7s,baz=141,slow=7.8,SNR=4.2						
KURBB	**Kurchatov Arra**	**57.26**	**327**	P	**P**	**11 49 16.3**	**+2.2**
	0.6nm,0.5s,baz=129,slow=6.2,SNR=7.1						
BVAR	**Borovoye Array**	**62.84**	**327**	P	**P**	**11 49 54.3**	**+1.9**
	0.4nm,0.4s,baz=142,slow=7.5,SNR=4.0						
BR101	**Keskin Array S**	**85.85**	**309**	*e*P	**P**	**11 52 10.0**	**+3.1**
BRTR	**Keskin Array B**	**85.85**	**309**	P	**P**	**11 52 10.0**	**+3.1**
	0.4nm,0.5s,baz=82,slow=2.2,SNR=2.3						
NOA	**NORSAR Array B**	**94.30**	**333**	LR	LR	12 38 11.9	
	comp=Z,14nm,19.8s,baz=220,slow=37						

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*ISCJB **26** 11:43:26.2±0.5, 23°.55S±0°.08×179°.9W±0°.1, h600^{km}, mb3.9/16, Error ellipse: s-maj=12.7km s-min=10.3km az=28.4*
*IDC **26** 11:43:26.1±1.9, 23°.42S×179°.94W, h584^{km}±22^{km}, mb3.5/16, mb1 3.7/17, mb1mx3.5/27, mbtmp4.4/17, Error ellipse: s-maj=15.0km s-min=11.0km az=153.0*
ISC 26 11:43:26.7±0.5**, 23°.5S**±0°.1×**179°.9W**±0°.1**, h600**^{km}**, n43,** σ**1^s.57**/51**, mb3.8**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.72**	**274**	P	**P**	**11 46 13.0**	**+0.2**
	0.4nm,0.3s,baz=90,slow=20,SNR=4.2						
URZ	**Urewera**	**14.94**	**189**	S	**S**	**11 49 02.7**	**-4.2**
	0.4nm,0.3s,baz=212,slow=19,SNR=3.3						
RPZ	**Rata Peaks**	**21.51**	**198**	P	**P**	**11 47 32.9**	**-0.9**
	28nm,0.5s,baz=321,slow=1.7,SNR=23						
STKA	**Stephens Creek**	**35.00**	**248**	P	**P**	**11 49 30.9**	**+0.4**
	1.4nm,0.6s,baz=74,slow=8.8,SNR=4.3						
STKA				PcP	**PcP**	**11 51 47.5**	**+2.2**
	1.0nm,0.5s,baz=101,slow=7.5,SNR=4.7						
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**11 50 28.7**	**-0.3**
	4.2nm,0.8s,baz=94,slow=7.2,SNR=69						
ASAR				PcP	**PcP**	**11 52 09.0**	**+0.3**
	1.4nm,0.7s,baz=98,slow=4.9,SNR=5.5						
ASAR				S	**S**	**11 56 07.5**	**+0.2**
	1.4nm,0.7s,baz=98,slow=15,SNR=12						
WRA	**Warramunga Arr**	**42.57**	**266**	P	**P**	**11 50 30.7**	**-0.9**
	5.9nm,0.5s,baz=95,slow=9.3,SNR=50						
WRA				S	**S**	**11 56 11.5**	**-0.7**
	1.3nm,0.9s,baz=337,slow=14,SNR=4.1						
BATI	**Baumata**	**55.34**	**274**	P	**P**	**11 52 07.0**	**+1.4**
	13nm,0.3s,baz=204,slow=2.7,SNR=3.5						
MJAR	**Matsushiro Arr**	**71.65**	**325**	P	**P**	**11 53 46.9**	**-2.0**
	1.4nm,0.5s,baz=160,slow=5.8,SNR=7.0						
KSRS	**Korea Array**	**78.03**	**320**	P	**P**	**11 54 25.4**	**+1.1**
	1.5nm,0.7s,baz=136,slow=6.4,SNR=8.1						
MAW	**Mawson**	**78.17**	**200**	P	**P**	**11 54 26.1**	**+1.5**
	1.9nm,0.6s,baz=130,slow=6.3,SNR=8.8						
PETK	**Petropavlovsk-**	**78.75**	**346**	P	**P**	**11 54 27.8**	**0.0**
	4.2nm,0.7s,baz=125,slow=6.5,SNR=11						
USRK	**Ussuriysk Ar.**	**80.50**	**327**	P	**P**	**11 54 38.5**	**+1.3**
	2.2nm,0.7s,baz=145,slow=4.9,SNR=7.2						
NVAR	**Mina Array Bea**	**84.37**	**44**	P	**P**	**11 54 58.1**	**+1.0**
	0.5nm,0.6s,baz=220,slow=7.3,SNR=7.2						
PLCA	**Paso Flores**	**88.44**	**134**	P	**P**	**11 55 18.4**	**+2.1**
	1.4nm,0.8s,baz=248,slow=5.4,SNR=3.0						
CMAR	**Chiang Mai Arr**	**89.52**	**290**	P	**P**	**11 55 23.6**	**+2.1**
	2.1nm,0.7s,baz=144,slow=3.6,SNR=11						
TXAR	**Lajitas Array**	**90.11**	**58**	P	**P**	**11 55 25.8**	**+1.6**
	1.2nm,0.8s,baz=216,slow=7.0,SNR=21						
ILAR	**Eielson Array**	**91.61**	**13**	P	**P**	**11 55 28.6**	**-1.5**
	0.3nm,0.5s,baz=221,slow=6.7,SNR=4.3						
PDAR	**Pinedale Array**	**92.31**	**44**	P	**P**	**11 55 34.1**	**-0.1**
	0.6nm,0.7s,baz=204,slow=4.2,SNR=5.5						
MKAR	**Makanchi Array**	**111.98**	**313**	PKiKP	**PKiKP**	**12 00 54.7**	**+0.1**
	0.7nm,0.5s,baz=220,slow=1.2,SNR=11						
KURBB	**Kurchatov Arra**	**115.05**	**316**	PKP	**PKiKP**	**12 01 00.1**	**-0.2**
	1.0nm,0.5s,baz=105,slow=1.9,SNR=8.9						
BVAR	**Borovoye Array**	**120.23**	**319**	PKP	**PKiKP**	**12 01 10.4**	**+0.1**
	1.5nm,0.4s,baz=112,slow=1.3,SNR=8.5						
BOSA	**Boshof**	**122.82**	**206**	PKP	**PKiKP**	**12 01 17.4**	**+0.9**
	2.6nm,0.8s,baz=76,slow=4.2,SNR=3.7						
AKTO	**Aktyubinsk**	**128.10**	**317**	PKP	**PKiKP**	**12 01 26.2**	**+0.2**
	2.4nm,0.6s,baz=104,slow=4.2,SNR=4.0						
ARCES	**ARCESS Array B**	**131.53**	**348**	PKP	**PKiKP**	**12 01 31.6**	**-0.7**
	1.9nm,0.5s,baz=23,slow=1.2,SNR=19						
FINES	**FINESS Array B**	**138.11**	**342**	PKhKP	PKPpre	12 01 34.3	
	0.4nm,0.3s,baz=72,slow=2.4,SNR=5.4						
FINES				PKP	**PKiKP**	**12 01 45.0**	**-0.9**
	0.9nm,0.5s,baz=90,slow=2.8,SNR=5.7						
NB2	**NORSAR Subarra**	**141.71**	**351**	PKP	**PKPdf**	**12 01 46.2**	**-4.1**
	comp=Z,1.0nm,0.5s,baz=13,slow=3.1						
NOA	**NORSAR Array B**	**141.71**	**351**	PKhKP	**PKPdf**	**12 01 46.5**	**-3.8**
	comp=Z,2.0nm,0.6s,baz=15,slow=4.6,SNR=13						
HFS	**Hagfors**	**142.18**	**349**	PKhKP	**PKPdf**	**12 01 47.7**	**-3.4**
	comp=Z,9.9nm,0.3s,baz=66,slow=3.6,SNR=168						

AKASG	**Malin Array Be**	**144.71**	**328**	PKP	**PKPab**	**12 01 56.1**	**-1.1**
	comp=Z,6.4nm,0.5s,baz=44,slow=4.2,SNR=25						
BRTR	**Keskin Array B**	**147.44**	**308**	PKPbc	**PKiKP**	**12 02 05.0**	**-1.0**
	comp=Z,3.0nm,0.6s,baz=142,slow=4.3,SNR=10						
EKA	**Eskdalemuir Ar**	**148.11**	**4**	PKPbc	**PKiKP**	**12 02 05.7**	**-1.0**
	comp=Z,1.9nm,0.4s,baz=341,slow=2.4,SNR=23						
OSTC	**Ostas**	**150.24**	**339**	*e*PKP	**PKiKP**	**12 02 12.2**	**+0.9**
CHVC	**Chvalec**	**150.26**	**339**	*e*PKP	**PKiKP**	**12 02 12.0**	**+0.7**
UPC	**Upice**	**150.35**	**339**	*e*PKP	**PKiKP**	**12 02 12.1**	**+0.6**
DPC	**Dobruska-Polom**	**150.38**	**339**	*e*PKP	**PKiKP**	**12 02 12.4**	**+0.8**
CLL	**Collm**	**150.51**	**344**	*i* PKPbc	**PKiKP**	**12 02 12.1**	**+0.3**
	comp=Z,16nm,0.8s						
CLL				*i* PKPab	**PKPab**	**12 02 20.3**	**-0.5**
	comp=Z,7.0nm,0.5s						
CLL				*e*pPKPbc	**pPKPbc**	**12 04 25.0**	**-2.8**
BRG	**Berggiesshubel**	**150.65**	**342**	*i* PKP	**PKiKP**	**12 02 12.7**	**+0.7**
	comp=Z,11nm,0.6s						
PVCC	**Panska Ves**	**150.78**	**341**	*e*PKP	**PKiKP**	**12 02 13.4**	**+1.1**
VRAC	**Vranov**	**151.17**	**337**	PKPab	**PKPab**	**12 02 24.9**	**+1.2**
	comp=Z,1.5nm,0.4s,baz=0.0,slow=5.1,SNR=4.5						
KHC	**Kasperske Hory**	**152.31**	**341**	*e*PKP	**PKiKP**	**12 02 15.2**	**-0.4**
KHC				*e*x	x	12 02 29.6	
GERES	**GERESS Array B**	**152.53**	**340**	PKPbc	**PKPbc**	**12 02 15.0**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=58,slow=3.3,SNR=7.5						
GERES				PKPab	**PKPab**	**12 02 30.2**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=108,slow=1.2,SNR=4.0						
ESDC	**Sonseca Array**	**163.50**	**11**	PKPab	**PKPab**	**12 03 16.4**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=1.5,slow=5.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**169.60**	**188**	PKP	**PKPdf**	**12 02 26.1**	**-0.9**
	comp=Z,0.8nm,1.0s,baz=213,slow=0.5,SNR=3.5						
TORD				PKPab	**PKPab**	**12 03 46.2**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=193,slow=5.9,SNR=3.6						

WEL 26 11:45:24.3,37°S±11°×17°9E±°,h105^{km}±27^{km},M3.3/32, ML3.7/12,MLv3.3/32,Error ellipse: s-maj=0.0km s-min=0.0km az=8.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.00**	**202**	P	Pn	11 45 43.2	-1.9
WMGZ	**Waiomatatini S**	**1.22**	**194**	P	Pn	11 45 48.5	+1.0
PKGZ	**Pakihiroa**	**1.38**	**204**	P	Pn	11 45 49.3	-0.1
PUZ	**Puketiti**	**1.50**	**196**	P	Pn	11 45 51.4	+0.6
RUGZ	**Raukumara Rang**	**1.60**	**213**	P	Pn	11 45 53.4	+1.3
TWGZ	**Tauwhareparae**	**1.67**	**202**	P	Pn	11 45 54.2	+1.2
CNGZ	**Carnagh Statio**	**1.91**	**194**	P	Pn	11 45 56.9	+1.0
TKGZ	**Te Karaka**	**1.95**	**202**	P	Pn	11 45 57.4	+0.9
MWZ	**Matawai**	**1.97**	**210**	P	Pn	11 45 58.1	+1.4
URZ	**Urewera**	**2.10**	**219**	P	Pn	11 45 59.5	+1.2
URZ				S	Sn	11 46 26.9	+2.5
OPRZ	**Ohinepanea**	**2.15**	**235**	P	Pn	11 46 01.4	+2.4
RAGZ	**Rawiri**	**2.16**	**210**	P	Pn	11 46 00.5	+1.3
MARZ	**Manawahe**	**2.16**	**231**	P	Pn	11 46 00.0	+0.9
RIGZ	**Rimuhau**	**2.23**	**201**	P	Pn	11 46 00.7	+0.7
RIGZ				S	Sn	11 46 30.0	+2.7
TGRZ	**Tauranga**	**2.29**	**241**	P	Pn	11 46 02.1	+1.2
TGRZ				S	Sn	11 46 28.7	-0.1
TARZ	**Mount Tarawera**	**2.42**	**228**	P	Pn	11 46 04.8	+2.3
OMRZ	**Omania**	**2.42**	**232**	P	Pn	11 46 04.9	+2.3
SNGZ	**Shannon Statio**	**2.43**	**208**	P	Pn	11 46 03.6	+0.9
MUGZ	**Murupara**	**2.44**	**220**	P	Pn	11 46 04.2	+1.4
RTZ	**Ruatahuna**	**2.44**	**215**	P	Pn	11 46 04.0	+1.1
KARZ	**Kaharoa**	**2.45**	**235**	P	Pn	11 46 04.9	+1.9
KUZ	**Kuaotunu**	**2.46**	**266**	P	Pn	11 46 02.9	-0.2
KUZ				S	Sn	11 46 31.4	-1.3
RAHZ	**Arahi**	**2.65**	**210**	P	Pn	11 46 07.1	+1.5
PRRZ	**Plateau Road**	**2.66**	**225**	P	Pn	11 46 06.9	+1.2
MTHZ	**Maungataniwha**	**2.70**	**214**	P	Pn	11 46 06.8	+0.6
ALRZ	**Allen Road**	**2.73**	**224**	P	Pn	11 46 07.7	+1.0
TOZ	**Tahuroa Road**	**2.84**	**246**	P	Pn	11 46 09.3	+1.3
MRHZ	**Matea Rd**	**2.89**	**220**	P	Pn	11 46 09.6	+0.9
WIAZ	**Waiheke Island**	**2.94**	**266**	P	Pn	11 46 09.6	+0.4
KUTZ	**Kaahu Road**	**3.00**	**231**	P	Pn	11 46 11.5	+1.4
TLZ	**Tolley Road**	**3.09**	**236**	P	Pn	11 46 12.9	+1.5
ETAZ	**East Tamaki Re**	**3.11**	**263**	P	Pn	11 46 13.0	+1.4
BKZ	**Black Stump Fm**	**3.11**	**215**	P	Pn	11 46 12.6	+0.9
MBAZ	**Motutapu North**	**3.12**	**266**	P	Pn	11 46 13.1	+1.3
KBAZ	**Karaka Road Bo**	**3.16**	**260**	P	Pn	11 46 14.2	+2.0
ABAZ	**Army Bay**	**3.18**	**269**	P	Pn	11 46 13.9	+1.4
EPAZ	**Eden Park BICE**	**3.25**	**264**	P	Pn	11 46 14.9	+1.5
MCHZ	**McNeill Hill**	**3.26**	**210**	P	Pn	11 46 13.4	-0.1
AWAZ	**Awhitu Peninsu**	**3.35**	**261**	P	Pn	11 46 16.3	+1.6
RVAZ	**Riverhead Bore**	**3.38**	**266**	P	Pn	11 46 17.1	+1.9
WTAZ	**Waiatarua**	**3.39**	**264**	P	Pn	11 46 17.5	+2.1
KAHZ	**Kahuranaki**	**3.50**	**205**	P	Pn	11 46 16.6	-0.2

*IDC **26** 11:46:48.9±2.7,67°.75N×33°.63E,h0^{km},mb1 3.1/4, mb1mx3.0/42,mbtmp3.1/4,ML2.8/4,Error ellipse: s-maj=29.6km s-min=10.3km az=73.0*

*NAO **26** 11:46:49.4±0.7,67°.58N×33°.13E,ML2.9*

ISC 26 11:46:45.6±2.3,67°.57N±0°.06×34°.0E±0°.1,h12^{km}±9^{km},n20, σ1^{s}54/31,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ9	**Apatity**	**0.24**	**271**	Pg	**Pg**	**11 46 50.8**	**+0.1**
APZ9				Lg	Lg	11 46 53.5	
APZ9	**Apatity**	**0.24**	**271**	Pg	**Pg**	**11 46 50.8**	**+0.1**
APZ9				Sg	**Sg**	**11 46 53.5**	**-0.5**
ARA0	**ARCESS Array S**	**3.70**	**306**	Pn	**Pn**	**11 47 43.7**	**+1.2**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**11 48 25.7**	**-0.2**
	baz=122,slow=28						
ARA0				Lg	Lg	11 48 37.3	
	baz=118,slow=37						
ARA0	**ARCESS Array S**	**3.70**	**306**	Pn	**Pn**	**11 47 43.7**	**+1.2**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**11 48 25.7**	**-0.2**
	baz=122,slow=28						
ARCES	**ARCESS Array B**	**3.70**	**306**	Pn	**Pn**	**11 47 43.9**	**+1.4**
	5.5nm,0.3s,baz=122,slow=15,SNR=307						
ARCES				Sn	**Sn**	**11 48 25.6**	**-0.3**
	3.7nm,0.3s,baz=119,slow=25,SNR=17						
ARCES				Lg	Lg	11 48 36.7	
	6.8nm,0.3s,baz=115,slow=36,SNR=11						
ARE0	**ARCESS Array S**	**3.70**	**306**	*e*P	**Pn**	**11 47 44.1**	**+1.6**
ARE0				*e*S	**Sn**	**11 48 26.8**	**+0.8**
HEF	**Hetta**	**4.00**	**287**	*e*P	**Pn**	**11 47 48.2**	**+1.7**
HEF				*e*S	**Sn**	**11 48 33.9**	**+0.8**
KTK1	**Kautokeino**	**4.26**	**295**	*e*P	**Pn**	**11 47 51.3**	**+1.1**
KTK1				*e*S	**Sn**	**11 48 39.2**	**-0.6**
KTK1				IAML		11 48 56.1	
	comp=Z,17nm,0.4s						
KIF	**Kilpisjarvi**	**5.12**	**292**	*e*P	**Pn**	**11 48 02.2**	**+0.3**
KIF				*e*S	**Sn**	**11 48 59.7**	**-1.0**
FIA0	**FINESS Array S**	**7.04**	**213**	Pn	**Pn**	**11 48 30.5**	**+2.3**
	baz=30,slow=12						
FIA0				Sn	**Sn**	**11 49 45.0**	**-3.0**
	baz=37,slow=22						
FIA0				Lg	Lg	11 50 23.2	
	baz=25,slow=28						
FIA0	**FINESS Array S**	**7.04**	**213**	Pn	**Pn**	**11 48 30.5**	**+2.3**
	baz=30,slow=12						
FIA0				Sn	**Sn**	**11 49 45.0**	**-3.0**
	baz=37,slow=22						
FIA0				Sg	Sb	11 50 23.2	+12
	baz=25,slow=28						
FINES	**FINESS Array B**	**7.04**	**213**	Pn	**Pn**	**11 48 30.8**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=26,slow=14,SNR=4.9						
FINES				Sn	**Sn**	**11 49 51.0**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=39,slow=25,SNR=3.6						
FINES				Lg	Lg	11 50 22.1	
	comp=Z,0.8nm,0.3s,baz=19,slow=22,SNR=6.7						
HFS	**Hagfors**	**11.61**	**240**	Pn	**Pn**	**11 49 31.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=5.7						
SPA0	**Spitsbergen Ar**	**11.77**	**342**	Pn	**Pn**	**11 49 31.8**	**-1.1**
	baz=142,slow=16						
SPA0	**Spitsbergen Ar**	**11.77**	**342**	Pn	**Pn**	**11 49 31.8**	**-1.1**
	baz=142,slow=16						
NB2	**NORSAR Subarra**	**11.81**	**247**	Pn	**Pn**	**11 49 32.5**	**-1.0**
NB2	**NORSAR Subarra**	**11.81**	**247**	Pn	**Pn**	**11 49 32.5**	**-1.0**
NOA	**NORSAR Array B**	**11.81**	**247**	Pn	**Pn**	**11 49 33.2**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=40,slow=10,SNR=5.2						
NRA0	**NORESS Array S**	**11.90**	**246**	Pn	**Pn**	**11 49 34.5**	**-0.3**
	baz=59,slow=10						
NRA0	**NORESS Array S**	**11.90**	**246**	Pn	**Pn**	**11 49 34.5**	**-0.3**
	baz=59,slow=10						

*IDC **26** 12:10:29.0±1.8,0°.78N×97°.13E,h0^{km},mb3.8/6,mb1 3.8/8, mb1mx3.6/31,mbtmp3.7/8,ML3.8/2,MS2.3/1,Ms1 2.3/1, ms1mx2.2/47,Error ellipse: s-maj=48.5km s-min=20.8km az=63.0*

*ISCJB **26** 12:10:30.8±0.8,0°.81N±0°.08×97°.16E±0°.09,h25^{km}, mb3.9/10,Error ellipse: s-maj=14.4km s-min=9.2km az=145.0*

*NEIC **26** 12:10:33.2±0.8,0°.82N×97°.17E,h29^{km}±9^{km},mb4.3/4, Error ellipse: s-maj=20.4km s-min=11.9km az=58.0*

ISC 26 12:10:32.3±1.1,0°.77N±0°.09×97°.11E±0°.10,h25^{km},n26, σ0^{s}78/21,mb3.9/10,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.71**	**41**	*e*Pn	**Pb**	**12 10 45.4**	**-0.6**
PSI	**Prapat**	**2.71**	**42**	Pn	**Pn**	**12 11 12.7**	**-1.8**
	3.5nm,0.3s,baz=280,slow=6.7,SNR=16						
PSI				Sn	**Sb**	**12 11 55.4**	**+2.2**
	2.5nm,0.3s,baz=333,slow=18,SNR=2.3						
PSI				LR	LR	12 12 12.8	
	comp=Z,63nm,20.4s,baz=58,slow=40						
BKNI	**Bangkinang**	**3.95**	**96**	*e*Pn	**Pn**	**12 11 30.9**	**-0.5**
LHMI	**Lhok Sumawe**	**4.44**	**358**	*e*Pn	**Pn**	**12 11 38.2**	**+0.1**
IPM	**Ipoh**	**5.38**	**47**	*e*Pn	**Pn**	**12 11 50.7**	**-0.3**
KULM	**Kulim**	**5.72**	**38**	*e*Pn	**Pn**	**12 11 54.5**	**-1.2**
MYKOM	**Kota Tinggi**	**6.81**	**81**	*e*Pn	**Pn**	**12 12 10.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**17.67**	**6**	Pn	**Pn**	**12 14 36.7**	**-0.3**
	0.3nm,0.3s,baz=181,slow=13,SNR=3.1						
H08S2	**Diego Garcia H**	**25.93**	**251**	T	T	12 42 56.2	
	baz=72,slow=75,SNR=593						
H08S3	**Diego Garcia H**	**25.94**	**251**	T	T	12 42 57.1	
	baz=72,slow=75,SNR=600						
H08S1	**Diego Carcia H**	**25.95**	**251**	T	T	12 42 58.2	
	baz=72,slow=75,SNR=648						
LSA	**Lhasa**	**29.33**	**349**	*e*P	**P**	**12 16 33.6**	**0.0**
	4.7nm,0.4s						
H01W3	**Cape Leeuwin H**	**38.88**	**157**	T	T	12 59 11.1	
	baz=333,slow=76,SNR=39						
H01W2	**Cape Leeuwin H**	**38.89**	**157**	T	T	12 59 12.9	
	baz=333,slow=76,SNR=52						
H01W1	**Cape Leeuwin H**	**38.90**	**157**	T	T	12 59 13.5	
	baz=333,slow=76,SNR=33						
WR1	**Warramunga Arr**	**41.88**	**122**	*e*P	**P**	**12 18 21.0**	**+0.1**
WRA	**Warramunga Arr**	**41.88**	**122**	P	**P**	**12 18 21.0**	**+0.1**
	1.0nm,0.8s,baz=289,slow=11,SNR=6.6						
WB2	**Warramunga Arr**	**41.90**	**122**	*e*P	**P**	**12 18 20.9**	**-0.2**
	6.1nm,1.4s						
ASAR	**Alice Springs**	**43.21**	**127**	P	**P**	**12 18 32.2**	**+0.5**
	0.2nm,0.4s,baz=298,slow=8.0,SNR=7.3						
KSRS	**Korea Array**	**46.25**	**34**	P	**P**	**12 18 55.7**	**0.0**
	0.5nm,0.6s,baz=213,slow=8.7,SNR=3.6						
SONA0	**Songino Array**	**47.57**	**8**	*e*P	**P**	**12 19 05.9**	**-0.1**
SONM	**Songino Array**	**47.57**	**8**	P	**P**	**12 19 05.9**	**-0.1**
	0.3nm,0.4s,baz=198,slow=9.1,SNR=2.4						
MK31	**Makanchi Array**	**47.64**	**346**	*e*P	**P**	**12 19 06.7**	**+0.3**
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**47.64**	**346**	P	**P**	**12 19 07.1**	**+0.6**
	0.8nm,0.5s,baz=155,slow=8.5,SNR=11						
ZAA0	**Zalesovo Array**	**53.97**	**351**	*e*P	**P**	**12 19 54.1**	**+0.2**
	4.1nm,1.1s						
ZALV	**Zalesovo Beam**	**53.97**	**351**	P	**P**	**12 19 54.1**	**+0.2**
	1.9nm,0.3s,baz=175,slow=6.6,SNR=7.4						

DDA 26 12:27:46.6,38°.02N×36°.36E,h7^{km}±3^{km},ML2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIM	**ADANA**	**0.22**	**259**	*i* P	Pg	12 27 52.7	+1.7
SAIM				*i* S	Sg	12 27 57.4	+3.4
SAIM				IAML_P			
	comp=Z,4μm,0.2s						
ANDN	**Andirin**	**0.44**	**181**	*i* P	Pg	12 27 55.9	+0.8
ANDN				*i* S	Sb	12 28 03.3	-0.2
ELBS	**KAHRAMANMARAS**	**0.68**	**63**	*i* P	Pb	12 28 00.4	-0.5
ELBS				*i* S	Sg	12 28 09.5	+0.8
YAHY	**KAYSERI_Yahyal**	**0.79**	**276**	*i* P	Pb	12 28 02.5	-0.3
YAHY				*i* S	Sb	12 28 14.1	+0.4
HCB	**Kahramanmara**	**0.80**	**147**	*i* P	Pb	12 28 02.8	-0.1
HCB				*i* S	Sg	12 28 12.2	-0.3
HCB				IAML_P			
	comp=Z,652nm,0.1s						
KAMA	**Osmaniye**	**0.87**	**163**	*i* P	Pn	12 28 05.6	+0.3
KAMA				*i* S	Sb	12 28 15.6	-0.3
GZT	**Gaziantep**	**1.16**	**124**	*i* P	Pb	12 28 09.1	-0.1
GZT				*i* S	Sn	12 28 26.7	+1.0

*ISCJB **26** 12:41:05.0±0.6,22°.01N±0°.04×121°.29E±0°.03,h22^{km}±4^{km}, Error ellipse: s-maj=6.4km s-min=4.2km az=166.6*

*TAP **26** 12:41:05.9,21°.99N×121°.21E,h20^{km}±1^{km},ML3.0,C*

*JMA **26** 12:41:06.4±0.4,22°.31N×121°.55E,h0^{km},M3.5*

ISC 26 12:41:06.0±0.9,22°.10N±0°.04×121°.22E±0°.03,h18^{km}±8^{km}, n66,σ1^{s}33/82,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	**0.32**	**101**	P	**Pg**	**12 41 12.7**	**-0.1**
	baz=82						
LAY				S	**Sg**	**12 41 18.1**	**+0.6**
	baz=82						
TSEB	**Hengchuen, Pin**	**0.35**	**236**	P	**Pg**	**12 41 13.0**	**-0.4**
	baz=254						
TSEB				*e*S	**Sg**	**12 41 18.5**	**0.0**
	baz=254						
TAW	**Tawu**	**0.39**	**311**	P	**Pb**	**12 41 15.1**	**+0.6**
	baz=321						
TAW				*e*S	**Sb**	**12 41 21.5**	**+1.3**
	baz=321						
TWKBT	**Hengchun**	**0.41**	**247**	P	**Pg**	**12 41 13.4**	**-1.0**
	baz=261						
TWKBT				S	**Sg**	**12 41 19.3**	**-0.7**
	baz=261						
TWK1	**Hengchun**	**0.41**	**248**	*i* P	**Pg**	**12 41 13.4**	**-1.0**
	baz=261						
TWK1				*i* S	**Sg**	**12 41 19.4**	**-0.8**
	baz=261						
EAST	**Anshuo**	**0.44**	**310**	P	**Pb**	**12 41 15.8**	**+0.4**
	baz=319						
EAST				*e*S	**Sb**	**12 41 23.2**	**+1.5**
	baz=319						
HEN	**Hengchun**	**0.45**	**258**	P	**Pg**	**12 41 14.7**	**-0.5**
	baz=271						
HEN				*e*S	**Sg**	**12 41 21.3**	**-0.1**
	baz=271						
ECL	**Taimali**	**0.55**	**334**	*e*P	**Pb**	**12 41 17.3**	**+0.2**
	baz=338						
ECL				*e*S	**Sb**	**12 41 26.0**	**+1.3**
	baz=338						
SCZT	**Fangliau**	**0.62**	**296**	P	**Pb**	**12 41 18.5**	**+0.3**
	baz=304						
SCZT				S	**Sb**	**12 41 27.7**	**+1.2**
	baz=304						
TTN	**Taitung**	**0.66**	**354**	*e*S	**Sb**	**12 41 30.7**	**+3.0**
	baz=355						
TWGBT	**Beinan**	**0.73**	**350**	*e*P	**Pg**	**12 41 19.8**	**-0.5**
	baz=351						
TWG	**Pinlang**	**0.73**	**350**	*e*P	**Pg**	**12 41 19.9**	**-0.5**
	baz=351						
MASBT	**Mashibuluo**	**0.74**	**314**	P	**Pb**	**12 41 20.8**	**+0.4**
	baz=318						
WLCH	**Liuqiu**	**0.82**	**288**	*e*P	**Pb**	**12 41 22.7**	**+1.1**
	baz=294						
SSD	**Sandimen**	**0.84**	**320**	*e*P	**Pg**	**12 41 22.3**	**-0.1**
	baz=324						
SGLT	**Jiouru**	**0.92**	**313**	*e*P	**Pb**	**12 41 24.0**	**+0.6**
	baz=317						
CHKT	**Chengkung**	**1.01**	**8**	*e*P	**Pg**	**12 41 25.5**	**0.0**
	baz=7.0						
SLGT	**Liugui**	**1.04**	**330**	*e*P	**Pb**	**12 41 26.2**	**+0.8**
	baz=332						
ELDTW	**Lidau**	**1.10**	**350**	*e*P	**Pg**	**12 41 25.4**	**-2.0**
	baz=351						
ELDTW				*e*S	**Sg**	**12 41 40.1**	**-1.8**
	baz=351						
SGST	**Jiashian**	**1.14**	**329**	*e*P	**Pg**	**12 41 27.5**	**-0.6**
	baz=331						
STYT	**Tauyuan**	**1.14**	**338**	*e*P	**Pg**	**12 41 27.0**	**-1.1**
	baz=340						
TWF1	**Yuli**	**1.25**	**3**	*e*P	**Pg**	**12 41 28.8**	**-1.4**
	baz=3.0						
CHN1	**Nanshi**	**1.25**	**330**	*e*P	**Pg**	**12 41 29.7**	**-0.5**
	baz=331						
WTP	**Ta-pu**	**1.27**	**334**	*e*P	**Pb**	**12 41 30.5**	**+1.0**
	baz=336						
YULB	**Yu-li**	**1.29**	**3**	*e*P	**Pg**	**12 41 27.4**	**-3.5**
	baz=3.0						
TPUB	**Ta-pu**	**1.31**	**336**	*e*P	**Pg**	**12 41 30.8**	**-0.6**
	baz=337						
TWK	**Hsinying**	**1.34**	**330**	*e*P	**Pb**	**12 41 32.4**	**+1.7**
	baz=332						
CHN4	**Tsaushan**	**1.37**	**335**	*e*P	**Pb**	**12 41 32.2**	**+1.1**
	baz=337						
HGSD	**Ruisui**	**1.40**	**8**	*e*P	**Pn**	**12 41 30.8**	**+0.2**
	baz=7.0						
EHY	**Hungye**	**1.41**	**4**	*e*P	**Pn**	**12 41 32.1**	**+1.4**
	baz=4.0						
YUS	**Yu-Shan**	**1.41**	**350**	*e*P	**Pg**	**12 41 30.7**	**-2.5**
	baz=350						
ALS	**Alishan**	**1.46**	**345**	*e*P	**Pn**	**12 41 32.4**	**+0.7**
	baz=346						
CHN5	**Tsauling**	**1.57**	**342**	*e*P	**Pb**	**12 41 35.4**	**+0.8**
	baz=342						
CHY	**Chiayi**	**1.57**	**332**	*e*P	**Pb**	**12 41 35.1**	**+0.6**
	baz=334						
EGFH	**Guangfu**	**1.58**	**7**	*e*P	**Pn**	**12 41 34.4**	**+1.4**
	baz=6.0						
WHYT	**Xinyi Township**	**1.63**	**348**	*e*P	**Pn**	**12 41 35.3**	**+1.5**
	baz=348						
VWDT	**VWDT**	**1.65**	**358**	*e*P	**Pn**	**12 41 34.1**	**0.0**
	baz=357						
SSLB	**Suanglung**	**1.70**	**352**	*e*P	**Pn**	**12 41 36.2**	**+1.4**
	baz=352						
WDLH	**Douliu**	**1.70**	**339**	*e*P	**Pn**	**12 41 36.1**	**+1.3**
	baz=339						
ESL	**Shilin**	**1.72**	**7**	*e*P	**Pn**	**12 41 35.5**	**+0.5**
	baz=6.0						
SMLT	**Sun Moon Lake**	**1.80**	**351**	*e*P	**Pn**	**12 41 38.6**	**+2.3**
	baz=351						
TYC	**Yuchr**	**1.83**	**350**	*e*P	**Pn**	**12 41 38.5**	**+2.0**
	baz=350						
WNT	**Mingjian**	**1.84**	**345**	*e*P	**Pn**	**12 41 39.1**	**+2.5**
	baz=345						
WDGT	**Dungji**	**1.84**	**309**	*e*P	**Pn**	**12 41 35.7**	**-1.0**
	baz=311						
DPDB	**Guoxing**	**1.94**	**352**	*e*P	**Pn**	**12 41 40.3**	**+2.1**
	baz=352						
CHGB	**Renai**	**1.95**	**359**	*e*P	**Pn**	**12 41 38.8**	**+0.3**
	baz=358						
VCHM	**Qimei**	**1.99**	**304**	*e*P	**Pn**	**12 41 37.1**	**-1.6**
	baz=306						
WHF	**Hehuan Shan**	**2.04**	**1**	*e*P	**Pn**	**12 41 39.6**	**-0.2**
	baz=1.0						
PHUB	**P'eng-hu**	**2.07**	**313**	*e*P	**Pn**	**12 41 38.7**	**-1.1**
	baz=314						
NACB	**Ninganchiao**	**2.10**	**9**	*e*P	**Pn**	**12 41 39.6**	**-0.6**
	baz=9.0						
ETLH	**Xiulin Townshi**	**2.11**	**7**	*e*P	**Pn**	**12 41 40.8**	**+0.3**
	baz=6.0						
TWT	**Tachien**	**2.15**	**359**	*e*P	**Pn**	**12 41 42.5**	**+1.4**
	baz=358						
NNSB	**Datong**	**2.33**	**4**	*e*P	**Pn**	**12 41 46.3**	**+2.8**
	baz=3.0						
NANB	**Nanao**	**2.37**	**12**	*e*P	**Pn**	**12 41 44.7**	**+0.7**
	baz=11						
NDT	**Datong Townshi**	**2.51**	**6**	*e*P	**Pn**	**12 41 48.1**	**+2.2**
	baz=6.0						
YHNB	**Yeheng**	**2.56**	**3**	*e*P	**Pn**	**12 41 47.7**	**+1.0**
	baz=3.0						
NSK	**Sanguang**	**2.57**	**3**	*e*P	**Pn**	**12 41 48.3**	**+1.5**
	baz=3.0						
EOS1	**EOS1**	**2.58**	**19**	*e*P	**Pn**	**12 41 48.7**	**+1.9**
	baz=18						
JYNG	**Yonagunijimaku**	**2.83**	**34**	P	**Pn**	**12 41 49.8**	**-0.5**
JYNG				*e*S	**Sn**	**12 42 23.8**	**-0.2**
TIPB	**Shuangxi**	**2.92**	**11**	*e*P	**Pn**	**12 41 53.5**	**+2.0**
	baz=10.0						
HATJ	**Hateruma jima**	**3.08**	**50**	*e*S	**Sn**	**12 42 27.9**	**-2.2**
IRIF	**Iriomote-Funau**	**3.21**	**46**	P	**Pn**	**12 41 55.6**	**+0.1**
IRIF				*e*S	**Sn**	**12 42 31.4**	**-1.9**
JKRS	**Kuro-shima**	**3.34**	**50**	P	**Pn**	**12 41 57.7**	**+0.4**
JKRS				*e*S	**Sn**	**12 42 35.1**	**-1.4**
JIJ	**Ishigaki jima**	**3.51**	**49**	P	**Pn**	**12 41 59.8**	**+0.1**
JIJ				S	**Sn**	**12 42 38.8**	**-2.0**
JISG	**Ishigakijimahi**	**3.77**	**48**	P	**Pn**	**12 42 02.8**	**-0.4**
JISG				S	**Sn**	**12 42 46.8**	**-0.4**
JTJ	**Tarama**	**4.08**	**51**	P	**Pn**	**12 42 07.3**	**-0.2**
JTJ				S	**Sn**	**12 42 53.7**	**-1.1**

MAN 26 12:43:02.3,7°.85N×124°.52E,h17^{km},mb3.8,ML2.6,MS2.1, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**0.54**	**87**	*e*P	Pn	12 43 14.5	-0.9
BUKP				*e*S	Sn	12 43 24.5	+0.4
CTBH	**Cotabato--PC H**	**0.68**	**203**	⇓ *i*P	Pg	12 43 14.5	-1.2
CTBH				*i* S	Sg	12 43 22.8	-1.9
PAGZ	**Pagadian**	**1.12**	**270**	*e*P	Pb	12 43 23.6	+0.3
PAGZ				*e*S	Sg	12 43 39.4	+0.6
SKMP	**Bagumbayan, Su**	**1.32**	**179**	*e*P	Pn	12 43 25.1	-0.9
SKMP				*e*S	Sn	12 43 42.1	-1.1

*NIED **26** 12:44:00,47°.10N×152°.90E,h65^{km},Mw4.4 Best double couple: M$_0$3.83000×10^{15} NP1:φ$_s$341.00000°,δ14.00000°, λ4.00000°. NP2:φ$_s$247.00000°,δ89.00000°,λ104.00000°.*

*ISCJB **26** 12:44:01.7±0.5,46°.53N±0°.07×153°.24E±0°.08,h35^{km}, mb3.8/15,MS3.0/3,Error ellipse: s-maj=11.4km s-min=3.7km az=143.0*

*SKHL **26** 12:44:02.5±0.8,46°.26N×153°.56E,h64^{km}±2^{km},mb4.4/10*

*MOS **26** 12:44:03.9±0.9,46°.70N×153°.06E,h56^{km},mb4.2/8,Error ellipse: s-maj=12.7km s-min=8.0km az=56.0*

*IDC **26** 12:44:07.8±2.5,46°.84N×152°.96E,h68^{km}±22^{km},mb3.5/15, mb1 3.7/20,mb1mx3.5/59,mbtmp3.8/20,MS3.0/5, Ms1 3.0/5,ms1mx2.8/30,Error ellipse: s-maj=21.7km s-min=14.1km az=150.0*

ISC 26 12:44:03.2±0.7,46°.49N±0°.08×153°.27E±0°.07,h35^{km},n67, σ1^{s}94/73,mb3.8/15,MS3.0/3,3C-2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.98**	**254**	*d i*PN	**Pn**	**12 45 02.6**	**+1.0**
KUR				*i* S	**Sn**	**12 45 47.6**	**+0.7**
KUR				pmax	pmax		
	comp=Z,156nm,0.5s						
KUR				pmax	pmax		
	comp=E,78nm,0.2s						
KUR				pmax	pmax		
	comp=N,50nm,0.3s						
KUR				smax	smax		
	comp=N,427nm,0.5s						
KUR				smax	smax		
	comp=E,425nm,0.5s						
KUR	**Kuril'sk**	**3.98**	**254**	*i* P	**Pn**	**12 45 02.7**	**+1.1**
KUR				AMB	AMB	12 45 03.3	
	comp=E,50nm,0.5s						
KUR				AMB	AMB	12 45 03.3	
	comp=E,30nm,0.5s						
KUR				*i* S	**Sn**	**12 45 48.2**	**+1.3**
KUR				A	A	12 45 59.1	
	comp=E,210nm,0.5s						
KUR				A	A	12 45 59.1	
	comp=E,120nm,0.5s						
SKR	**Severo-Kuril's**	**4.61**	**23**	*e*PN	**Pn**	**12 45 10.3**	**0.0**
SKR				*e*S	**Sn**	**12 45 58.8**	**-3.7**
SKR				pmax	pmax		
	comp=Z,100nm,1.1s						
SKR				pmax	pmax		
	comp=Z,109nm,0.4s						
SKR				smax	smax		
	comp=E,396nm,0.7s						
SKR				smax	smax		
	comp=N,220nm,0.5s						
SKR	**Severo-Kuril's**	**4.61**	**23**	*e*P	**Pn**	**12 45 11.4**	**+1.1**
SKR				AMB	AMB	12 45 12.0	
	comp=N,30nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.77**	**248**	*d i*PN	**Pn**	**12 45 29.0**	**+2.7**
YUK				*e*S	**Sn**	**12 46 33.1**	**+1.9**
YUK				pmax	pmax		
	comp=E,141nm,0.5s						
YUK				pmax	pmax		
	comp=Z,172nm,0.5s						
YUK				pmax	pmax		
	comp=N,99nm,0.3s						
YUK				smax	smax		
	comp=N,218nm,0.5s						
YUK				smax	smax		
	comp=E,291nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.77**	**248**	*i* P	**Pn**	**12 45 29.0**	**+2.7**
YUK				AMB	AMB	12 45 32.0	
	comp=E,30nm,0.5s						

YUK				AMB	AMB	12 45 32.0	
	comp=E,50nm,0.5s						
YUK				AMB	AMB	12 45 32.0	
	comp=E,40nm,0.5s						
YUK				eS	Sn	12 46 33.1	+1.9
YUK				A	A	12 46 51.0	
	comp=E,90nm,0.5s						
YUK				A	A	12 46 51.0	
	comp=E,110nm,0.5s						
LAGR	Lagunnoye	5.81	248	ePN	Pn	12 45 30.1	+3.2
LAGR				eS	Sn	12 46 35.5	+3.3
LAGR				pmax	pmax		
	comp=E,190nm,0.6s						
LAGR				pmax	pmax		
	comp=Z,177nm,0.6s						
LAGR				pmax	pmax		
	comp=N,184nm,0.4s						
LAGR				smax	smax		
	comp=E,483nm,0.6s						
LAGR				smax	smax		
	comp=N,422nm,0.8s						
LAGR	Lagunnoye	5.81	248	eP	Pn	12 45 30.0	+3.2
LAGR				AMB	AMB	12 45 40.0	
	comp=N,30nm,0.6s						
LAGR				AMB	AMB	12 45 40.0	
	comp=N,40nm,0.6s						
LAGR				eS	Sn	12 46 35.0	+2.8
LAGR				A	A	12 46 46.0	
	comp=N,130nm,0.8s						
LAGR				A	A	12 46 46.0	
	comp=N,120nm,0.8s						
GRPR	Tuman	5.85	247	⇑iPN	Pn	12 45 29.8	+2.4
GRPR				eS	Sn	12 46 34.3	+1.2
GRPR				pmax	pmax		
	comp=E,79nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,129nm,0.3s						
GRPR				pmax	pmax		
	comp=N,73nm,0.2s						
GRPR				smax	smax		
	comp=E,183nm,0.4s						
GRPR				smax	smax		
	comp=N,149nm,0.3s						
GRPR	Tuman	5.85	247	i P	Pn	12 45 29.0	+1.6
GRPR				AMB	AMB	12 45 37.0	
	comp=N,20nm,0.5s						
GRPR				AMB	AMB	12 45 37.0	
	comp=N,30nm,0.5s						
GRPR				AMB	AMB	12 45 37.0	
	comp=N,40nm,0.5s						
GRPR				eS	Sn	12 46 34.0	+0.9
GRPR				A	A	12 46 47.0	
	comp=N,110nm,0.5s						
GRPR				A	A	12 46 47.0	
	comp=N,100nm,0.5s						
GLVR	Golovnino	6.13	246	⇑iPN	Pn	12 45 32.7	+1.5
GLVR				pmax	pmax		
	comp=N,154nm,0.7s						
GLVR				pmax	pmax		
	comp=E,108nm,0.7s						
GLVR				pmax	pmax		
	comp=Z,270nm,0.7s						
GLVR	Golovnino	6.13	246	i P	Pn	12 45 32.0	+0.8
GLVR				AMB	AMB	12 45 34.0	
	comp=Z,30nm,0.7s						
GLVR				AMB	AMB	12 45 34.0	
	comp=Z,20nm,0.7s						
GLVR				AMB	AMB	12 45 34.0	
	comp=Z,40nm,0.7s						
GLVR				eS	Sn	12 46 40.0	-0.1
GLVR				A	A	12 46 58.0	
	comp=Z,110nm,0.5s						
GLVR				A	A	12 46 58.0	
	comp=Z,90nm,0.5s						
NEM2	Nemuro 2	6.18	242	P	Pn	12 45 31.9	-0.1
NEM2				eS	Sn	12 46 38.4	-3.0
NMR	Nemuro--Hokkai	6.19	243	c iPN	Pn	12 45 31.9	-0.1
NMR	Nemuro--Hokkai	6.19	243	i P	Pn	12 45 32.0	-0.1
NMR				i S	Sn	12 46 39.3	-2.3
JRA	Rausu	6.29	249	P	Pn	12 45 35.6	+2.2
JAK	Akkeshi	7.03	243	P	Pn	12 45 43.2	-0.3
JAK				eS	Sn	12 46 58.7	-3.4
JTKR	Abashiri--Toko	7.07	253	P	Pn	12 45 46.1	+2.0
PETK	Petropavlovsk-	7.22	22	P	Pn	12 45 46.4	+0.2
	comp=Z,0.9nm,0.3s,baz=185,slow=12,SNR=18						
PETK				S	Sn	12 47 19.6	+13
	comp=Z,0.4nm,0.3s,baz=221,slow=31,SNR=2.4						
YSS	Yuzh-Sakhalins	7.24	278	ePN	Pn	12 45 47.4	+0.9
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS	Yuzh-Sakhalins	7.24	278	eP	Pn	12 45 49.8	+3.4
PET	Petropavlovsk	7.42	26	ePN	Pn	12 45 55.1	+6.3
PET				pmax	pmax		
	comp=Z,22nm,0.5s						
PET	Petropavlovsk	7.42	26	eP	Pn	12 45 50.2	+1.4
PET				AMB	AMB	12 45 56.2	
	comp=Z,10.0nm,0.6s						
JMP	Maruseppu	7.42	254	P	Pn	12 45 50.4	+1.5
JAR	Ashorobuto	7.46	248	P	Pn	12 45 51.1	+1.6
JAR				eS	Sn	12 47 12.6	-0.2
JKK2	Kamakawa 2	7.88	254	P	Pn	12 45 57.9	+2.7
JKA	Kamikawa-asahi	7.88	256	eP	Pn	12 45 58.4	+3.1
ASAJ	Asahikawa	7.89	256	P	Pn	12 45 58.4	+3.1
	comp=Z,1.4nm,0.3s,baz=66,slow=7.8,SNR=16						
ASAJ				S	Sn	12 47 42.3	+19
	baz=56,slow=18,SNR=2.1						
JCH	Churui	8.06	245	P	Pn	12 45 58.2	+0.5
JCH				eS	Sn	12 47 23.1	-4.5
TYV	Tymovskoe	8.28	306	eP	Pn	12 46 04.6	+4.0
TYV				AMB	AMB	12 46 05.4	
	comp=Z,5.0nm,0.6s						
JFR	Furan	8.28	250	P	Pn	12 46 02.8	+2.1
JNBK	Urakawa-nobuka	8.62	245	P	Pn	12 46 05.0	-0.4
MA2	Magadan	13.20	354	P	Pn	12 47 07.4	-0.5
	comp=Z,0.7nm,0.3s,baz=161,slow=12,SNR=4.7						
MA2				LR	LR	12 51 49.3	
	comp=Z,37nm,21.1s,baz=138,slow=36						
EKMR	Ekimchan	14.66	304	eP	Pn	12 47 29.2	+1.3
EKMR				AMB	AMB	12 47 35.8	
	comp=Z,4.0nm,0.7s						
MJAR	Matsushiro Arr	15.01	234	P	P	12 47 38.1	+0.5
	comp=Z,0.1nm,0.3s,baz=49,slow=6.1,SNR=3.4						
USRK	Ussuriysk Ar.	15.13	269	P	Pn	12 47 34.3	+0.1
	comp=Z,0.2nm,0.3s,baz=84,slow=15,SNR=5.0						
USRK				LR	LR	12 53 46.4	
	comp=Z,50nm,20.8s,baz=72,slow=39						
SEY	Seymchan	16.49	359	P	Pn	12 47 52.3	+0.8
	comp=Z,0.2nm,0.3s,baz=174,slow=15,SNR=4.1						
BMKR	Bomnak	17.48	307	eP	Pn	12 48 04.0	0.0
KROS	Kirovskiy	18.45	305	eP	Pn	12 48 16.0	+0.1
KROS				AMB	AMB	12 48 17.0	
	comp=Z,2.0nm,0.8s						
KSRS	Korea Array	20.82	253	P	P	12 48 42.5	+1.0
	comp=Z,1.0nm,0.5s,baz=59,slow=11,SNR=5.8						
KSRS				LR	LR	12 55 27.3	
	comp=Z,38nm,19.9s,baz=76,slow=33						
KSRS	Korea Array	20.82	253	P	P	12 48 42.5	+1.0
KSRS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS				MLR	MLR		
	comp=Z,38nm,19.9s						
H11N2	WAKE ISLAND Hy	28.93	153	T	T	13 21 28.5	
	baz=340,slow=76,SNR=716						
H11N1	WAKE ISLAND Hy	28.95	153	T	T	13 21 34.9	
	baz=340,slow=76,SNR=682						
H11N3	WAKE ISLAND Hy	28.95	153	T	T	13 21 35.0	
	baz=340,slow=76,SNR=407						
H11S1	WAKE ISLAND Hy	30.02	154	T	T	13 22 54.2	
	baz=340,slow=76,SNR=946						
H11S3	WAKE ISLAND Hy	30.03	154	T	T	13 23 14.8	
	baz=340,slow=76,SNR=710						
H11S2	WAKE ISLAND Hy	30.04	154	T	T	13 22 54.8	
	baz=340,slow=76,SNR=691						
SONM	Songino Array	31.52	290	LR	LR	13 03 59.7	
	comp=Z,34nm,18.7s,baz=58,slow=38						
ILAR	Eielson Array	36.69	38	P	P	12 51 06.2	-0.1
	comp=Z,0.3nm,0.7s,baz=274,slow=6.6,SNR=5.1						
INK	Inuvik	41.82	32	P	P	12 51 48.9	-0.1
	comp=Z,0.9nm,0.6s,baz=296,slow=5.5,SNR=6.1						
ZALV	Zalesovo Beam	42.85	306	LR	LR	13 10 50.0	
	comp=Z,32nm,21.2s,baz=70,slow=38						
MKAR	Makanchi Array	47.16	298	P	P	12 52 32.2	+0.2
	comp=Z,0.4nm,0.6s,baz=58,slow=6.2,SNR=3.8						
KURK	Kurchatov	47.60	304	P	P	12 52 33.3	-2.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	47.60	304	eP	P	12 52 33.3	-2.0
KURBB	Kurchatov Arra	47.69	304	P	P	12 52 33.2	-2.7
	comp=Z,0.9nm,0.4s,baz=54,slow=33,SNR=4.1						
ARCES	ARCESS Array B	58.14	341	P	P	12 53 51.3	-1.5
	comp=Z,0.6nm,0.7s,baz=58,slow=8.6,SNR=3.6						
NVAR	Mina Array Bea	62.46	62	P	P	12 54 24.5	+1.4
	comp=Z,0.4nm,0.6s,baz=302,slow=8.1,SNR=4.7						
FINES	FINESS Array B	64.33	335	P	P	12 54 32.0	-2.7
	comp=Z,0.5nm,0.4s,baz=42,slow=8.8,SNR=4.9						
PDAR	Pinedale Array	64.82	54	P	P	12 54 39.4	+0.8
	comp=Z,0.7nm,0.8s,baz=267,slow=3.0,SNR=5.0						
ULM	Lac du Bonnet	66.65	41	P	P	12 54 50.4	+0.5
	comp=Z,1.7nm,0.4s,baz=352,slow=7.1,SNR=2.4						
NB2	NORSAR Subarra	68.51	341	P	P	12 54 59.8	-1.8
	comp=Z,1.1nm,0.8s,baz=26,slow=6.5						
NOA	NORSAR Array B	68.51	341	P	P	12 54 59.9	-1.6
	comp=Z,1.3nm,0.7s,baz=27,slow=6.2,SNR=8.8						
AKASG	Malin Array Be	71.83	326	P	P	12 55 20.2	-1.8
	comp=Z,0.4nm,0.3s,baz=33,slow=5.8,SNR=2.9						
ASAR	Alice Springs	71.99	199	P	P	12 55 25.2	+2.0
	comp=Z,0.3nm,0.7s,baz=15,slow=5.5,SNR=7.0						
TXAR	Lajitas Array	77.53	61	P	P	12 55 56.1	+0.6
	comp=Z,1.0nm,0.6s,baz=304,slow=4.5,SNR=19						
BRTR	Keskin Array B	78.66	317	P	P	12 56 00.4	-1.2
	comp=Z,0.6nm,0.6s,baz=350,slow=1.5,SNR=4.4						
PLCA	Paso Flores	148.08	96	PKPbc	PKPbc	13 03 46.0	+1.4
	comp=Z,1.8nm,0.7s,baz=278,slow=4.0,SNR=4.9						

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*IDC **26** 12:44:43.6±1.1, 28°.47N×51°.93E, h0^{km}, mb3.7/7, mb1 3.8/9, mb1mx3.6/43, mbtmp3.7/9, ML3.7/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/34, Error ellipse: s-maj=31.4km s-min=21.6km az=44.0*

*ISCJB **26** 12:44:44.9±0.5, 28°.35N±0°.03×51°.64E±0°.05, h15^{km}, mb3.7/7, Error ellipse: s-maj=6.3km s-min=3.9km az=152.8*

*THR **26** 12:44:44.8, 28°.35N×51°.54E, h27^{km}, ML3.4*

*TEH **26** 12:44:45.6, 28°.41N×51°.64E, h11^{km}, ML3.6*

*DSN **26** 12:44:50.9±0.9, 28°.49N×52°.34E, h10^{km}, ML3.7/7, Error ellipse: s-maj=19.2km s-min=7.7km az=36.0*

ISC 26 12:44:46.2±0.8, **28°.37N**±0°.05×**51°.72E**±0°.06, **h15**^{km}, **n49**, σ**1^{s}59**/52, **mb3.7**/7, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.12	94	AML	AML	12 45 30.0	
	comp=E,803nm,0.4s						
GHIR				Pg	Pb	12 45 08.2	+0.9
GHIR				Sg	Sn	12 45 25.4	+2.8
GHIR				AML	AML	12 45 43.0	
	comp=N,672nm,0.5s						
IKAZ	Kazeroun	1.41	4	ePg	Pb	12 45 12.9	+0.5
IKAZ				IAMB	IAmb	12 45 43.0	
	comp=Z,14μm,0.6s						
SHI	Shiraz	1.44	29	ePg	Pb	12 45 13.4	+0.5
SHI				eSg	Sg	12 45 33.9	+1.1
SHI				IAMB	IAmb	12 45 38.2	
	comp=Z,8μm,0.7s						
JHRM	Jahrom	1.64	85	ePn	Pb	12 45 17.2	+1.0
LMD1	Lamerd	1.64	129	ePn	Pb	12 45 18.2	+2.0
LMD1				IAMB	IAmb	12 45 50.4	
	comp=Z,0.0nm,0.3s						
IPAR	Pars	1.87	38	ePn	Pb	12 45 20.7	+0.5
IRAM	Ramesheh	3.47	9	ePn	Pn	12 45 40.2	+0.3
IRAM				IAMB	IAmb	12 45 56.0	
	comp=Z,768nm,0.5s						
IMEH	Mehriz	3.92	39	ePn	Pn	12 45 49.0	+2.9
IMEH				IAMB	IAmb	12 45 51.5	
	comp=Z,2μm,0.6s						
ISAD	Sadrabad	3.92	25	ePn	Pn	12 45 48.7	+2.6
ISAD				IAMB	IAmb	12 46 40.8	
	comp=N,423nm,0.4s						
JHBN	Jahan bin	3.95	347	ePn	Pn	12 45 47.5	+0.9
ROKH	ROKH	4.00	352	ePn	Pn	12 45 49.3	+2.1
IPIR	Pirpir	4.36	351	ePn	Pn	12 45 52.3	+0.2
IPIR				IAMB	IAmb	12 46 50.1	
	comp=Z,243nm,0.6s						
SHME	Shamm	4.57	119	P	Pn	12 45 54.2	-0.6
KHGB	Koh Gabri	4.60	63	ePn	Pn	12 45 57.3	+1.8
IBAF	Bafgh	4.63	45	ePn	Pn	12 45 58.1	+2.4
YZKH	Yazd	4.71	31	ePn	Pn	12 45 58.0	+1.2
YZKH	Yazd	4.71	31	Pn	Pn	12 45 58.0	+1.2
BANOM	Banah	4.75	120	i P	Pn	12 45 58.2	+0.8
	SNR=18						
NAZ	Nazwa, Dubai	4.88	133	i P	Pn	12 46 00.9	+1.9
	SNR=6.3						
NAZ	Nazwa, Dubai	4.88	133	ePn	Pn	12 46 00.7	+1.7
IKLH	Kolahrood	4.93	359	IAMB	IAmb	12 46 04.9	
	comp=Z,233nm,0.3s						
IKLH				ePn	Pn	12 46 01.2	+1.2
ASUD	Al Ashush, Dub	4.94	138	P	Pn	12 46 02.0	+2.2
MSFE	Esma-Masafi	4.97	126	P	Pn	12 46 00.9	+0.5
MSFE				S	Sn	12 46 55.8	-1.9
MSFE	Esma-Masafi	4.97	126	ePn	Pn	12 46 01.4	+1.0
ANAR	Anarak	5.10	19	ePn	Pn	12 46 03.6	+1.4
UOSS	Minazif	5.27	129	i P	Pn	12 46 04.9	+0.6
	SNR=10						
UOSS	Minazif	5.27	129	ePn	Pn	12 46 05.0	+0.6
HATD	Hatta, Dubai	5.30	131	P	Pn	12 46 05.9	+1.1
HATD	Hatta, Dubai	5.30	131	ePn	Pn	12 46 06.0	+1.1
ASHO	Ashiyiah	5.35	132	i P	Pn	12 46 06.7	+1.2
	SNR=19						
ASHO	Ashiyiah	5.35	132	ePn	Pn	12 46 06.6	+1.1
MZR	Muzera	5.58	163	ePn	Pn	12 46 12.1	+3.4
KRSH	Karshahi	5.59	4	ePn	Pn	12 46 09.2	+0.2
ALNE	Al Ain	5.62	139	i P	Pn	12 46 10.8	+1.6
	SNR=9.5						
ALNE	Al Ain	5.62	139	ePn	Pn	12 46 10.7	+1.4
ASAO	Ashtian	6.32	347	ePn	Pn	12 46 18.9	-0.2
ASAO	Ashtian	6.32	347	Pn	Pn	12 46 18.9	-0.2
HOQ	Hoqain	6.93	132	ePn	Pn	12 46 28.6	+1.3
HSRG	Sareghieh	7.45	338	ePn	Pn	12 46 35.3	+0.7
WSAR	Wadi Sarin	8.05	128	Pn	Pn	12 46 42.5	-0.2
	comp=Z,1.1nm,0.3s,baz=319,slow=11,SNR=21						
WSAR				Sn	Sn	12 48 09.2	-4.3
	comp=Z,0.6nm,0.3s,baz=84,slow=14,SNR=5.7						
GEYT	Alibeck	10.93	28	LR	LR	12 52 07.1	
	comp=Z,44nm,21.9s,baz=265,slow=41						
BRTR	Keskin Array B	18.74	312	P	P	12 49 05.4	+0.8
	comp=Z,0.2nm,0.3s,baz=136,slow=11,SNR=3.1						
AKTO	Aktyubinsk	22.55	11	P	P	12 49 44.7	-0.8
	comp=Z,1.4nm,0.6s,baz=196,slow=10,SNR=4.9						
MKAR	Makanchi Array	30.14	44	P	P	12 50 52.6	-2.9
	comp=Z,0.1nm,0.4s,baz=243,slow=9.0,SNR=2.4						
FINES	FINESS Array B	37.22	340	P	P	12 51 56.5	-0.2
	comp=Z,1.7nm,0.7s,baz=149,slow=15,SNR=7.6						
NOA	NORSAR Array B	42.35	332	P	P	12 52 38.9	-0.5
	comp=Z,0.3nm,0.6s,baz=122,slow=8.1,SNR=3.0						
TORD	Torodi Ar. Bea	48.83	263	P	P	12 53 32.1	+0.8
	comp=Z,0.5nm,0.7s,baz=52,slow=7.5,SNR=2.2						
WRA	Warramunga Arr	93.08	111	P	P	12 57 58.7	-1.2
	comp=Z,0.5nm,0.7s,baz=302,slow=5.1,SNR=4.6						
ASAR	Alice Springs	94.52	114	P	P	12 58 05.7	-0.7
	comp=Z,0.8nm,0.6s,baz=305,slow=4.6,SNR=21						

IDC 26 12:47:20.9±8.7, 64°.41S×178°.00E, h0^{km}, mb4.0/4, mb1 4.1/4, mb1mx3.9/20, mbtmp4.0/4, MS3.7/6, Ms1 3.7/6, ms1mx3.5/21, Error ellipse: s-maj=341.3km s-min=26.3km az=65.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	21.11	346	LR	LR	12 59 14.4	
	comp=Z,257nm,18.9s,baz=176,slow=34						
QSPA	South Pole Qui	25.68	180	P	P	12 52 52.2	-0.1
	4.4nm,0.8s,baz=28,slow=3.7,SNR=13						
URZ	Urewera	26.19	358	LR	LR	13 01 18.9	
	comp=Z,262nm,21.6s,baz=130,slow=32						
STKA	Stephens Creek	39.58	308	P	P	12 54 54.8	+1.2
	1.8nm,0.9s,baz=143,slow=15,SNR=3.4						
STKA				LR	LR	13 07 23.9	
	comp=Z,63nm,20.8s,baz=206,slow=30						
MAW	Mawson	40.42	212	LR	LR	13 11 41.8	
	comp=Z,194nm,18.7s,baz=158,slow=36						
DZM	Mont Dzumac	43.01	344	LR	LR	13 11 15.5	
	comp=Z,57nm,19.8s,baz=214,slow=33						
RAR	Rarotonga	45.64	30	LR	LR	13 10 42.9	
	comp=Z,82nm,18.4s,baz=200,slow=31						
H01W1	Cape Leeuwin H	47.91	276	T	T	13 47 22.2	
	baz=149,slow=76,SNR=58						
H01W2	Cape Leeuwin H	47.91	276	T	T	13 47 21.8	
	baz=149,slow=76,SNR=44						
H01W3	Cape Leeuwin H	47.92	276	T	T	13 47 09.0	
	baz=149,slow=76,SNR=42						
ASAR	Alice Springs	49.79	303	P	P	12 56 14.6	-0.6
	0.7nm,0.6s,baz=155,slow=7.1,SNR=14						
WRA	Warramunga Arr	53.06	306	P	P	12 56 38.5	-1.1
	1.5nm,0.9s,baz=162,slow=8.2,SNR=2.4						
KBZ	Khabaz	147.51	252	PKPbc	PKPbc	13 07 05.8	+0.1
	2.1nm,0.8s,baz=224,slow=1.0,SNR=3.9						

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*PGC **26** 12:57:22.6±2.8, 50°.24N×130°.22W, h10^{km}, MLSn4.3/44, Mw5.2, 205km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **26** 12:57:23.5±0.5, 50°.30N×130°.16W, h0^{km}, mb4.6/26, mb1 4.7/37, mb1mx4.6/50, mbtmp4.5/37, ML4.0/11, MS4.6/43, Ms1 4.6/43, ms1mx4.6/44, Error ellipse: s-maj=12.4km s-min=7.6km az=51.0*

*MOS **26** 12:57:23.6±1.4, 50°.20N×130°.12W, h10^{km}, mb5.2/44, MS4.9/12, Error ellipse: s-maj=11.4km s-min=5.8km az=111.1*

*NEIC **26** 12:57:24.8±1.8, 50°.39N×129°.97W, h10^{km}, mb5.0/235, MW5.1(OTT), Error ellipse: s-maj=10.0km s-min=6.9km az=209.0*

NEIC Felt at Nanaimo and Prince Rupert. Also felt at Port Angeles, Washington.

*ISCJB **26** 12:57:24.1±0.1, 50°.44N±0°.02×129°.90W±0°.03, h11^{km}, mb4.8/105, MS4.8/63, Error ellipse: s-maj=2.8km s-min=1.5km az=138.0*

*GCMT **26** 12:57:26.8±0.2, 50°.28N±0°.01×130°.27W±0°.01, h20^{km}, MW5.3/120, Moment Tensor Solution. s71,c104; s120,c228; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.25±.02; $M_{\theta\theta}$-0.32±.02; $M_{\phi\phi}$0.06±.02; $M_{r\theta}$-0.00±.04; $M_{\theta\phi}$1.07±.02; $M_{\phi r}$-0.22±.04; Best double couple: $M_0$1.11400×10^{17} NP1:ϕ_s174.00000°, δ85.00000°, λ167.00000°. NP2:ϕ_s265.00000°, δ77.00000°, λ5.00000°. Principal axes: T 1.0000, Plg13.0000°, Azm129.0000°; N 0.2280, Plg76.0000°, Azm333.0000°; P -1.2280, Plg5.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **26** 12:57:26.3±0.0, 51°.17N×130°.52W, h6^{km}, mb4.9/44, mB5.2/34, Ms5.1/34, Ms7 4.9/29*

ISC 26 12:57:24.9±0.8, **50°.32N**±0°.04×**130°.04W**±0°.03, **h8**^{km}±4^{km}, **n803**, σ**1^{s}49**/790, **mb5.0**/108, **MS4.8**/64, **9C-3D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.26	74	P	Pb	12 57 46.2	-2.8
HOLB				S	Sb	12 58 01.8	-3.6
BPBC	Brooks Peninsu	1.47	95	ePn	Pn	12 57 48.2	-3.5
BPBC	Brooks Peninsu	1.47	95	Pn	Pn	12 57 48.2	-3.5
PHC	Port Hardy	1.71	76	Pn	Pn	12 57 52.7	-2.3
PHC				Sn	Sn	12 58 14.4	-2.7
MAYB	Maynard	1.84	86	ePn	Pn	12 57 54.1	-2.9
MAYB	Maynard	1.84	86	Pn	Pn	12 57 54.1	-2.9
EDB	Eliza Dome	1.93	102	ePn	Pn	12 57 55.0	-3.1
EDB	Eliza Dome	1.93	102	Pn	Pn	12 57 55.0	-3.1
TLCB	Telegraph Cove	2.06	82	Pn	Pn	12 57 58.1	-1.7
TLCB				Sn	Sn	12 58 23.3	-2.4
HG4B	Hotspring	2.11	340	Pn	Pn	12 57 56.2	-4.2
HG4B				Sn	Sn	12 58 22.0	-4.9
BBB	Bella Bella	2.23	32	Pn	Pn	12 58 00.8	-1.4
	100nm,0.3s,baz=225,slow=4.9,SNR=2253						
BBB				Sn	Sn	12 58 26.0	-3.8
	258nm,0.3s,baz=302,slow=23,SNR=11						
BBB				LR	LR	12 58 37.9	
	comp=Z,4μm,21.5s,baz=186,slow=33						
BBB	Bella Bella	2.23	32	ePn	Pn	12 58 00.1	-2.0
BBB				eSn	Sn	12 58 27.6	-2.3
BBB	Bella Bella	2.23	32	Pn	Pn	12 58 00.0	-2.0
BBB				Sn	Sn	12 58 26.0	-3.8
NTKA	Nootka	2.33	107	Pn	Pn	12 58 00.6	-2.9
NTKA				Sn	Sn	12 58 28.5	-3.7
HG3B	Hotspring	2.43	339	Pn	Pn	12 58 01.1	-3.7
ETB	Estevan Point	2.46	111	ePn	Pn	12 58 02.4	-2.9
ETB	Estevan Point	2.46	111	Pn	Pn	12 58 02.4	-2.9
BNB	Barry Inlet	2.50	335	ePn	Pn	12 58 01.7	-4.2
BNB	Barry Inlet	2.50	335	Pn	Pn	12 58 01.7	-4.2
NCRB	Newcastle Ridg	2.56	87	Pn	Pn	12 58 04.8	-1.9
GDR	Gold River	2.64	100	ePn	Pn	12 58 05.6	-2.1
GDR	Gold River	2.64	100	Pn	Pn	12 58 05.6	-2.1
NC89	ODP889	2.66	127	Pn	Pn	12 58 04.9	-2.9
NC89				Sn	Sn	12 58 34.8	-5.3
SPLB	Strathcona Par	2.86	97	Pn	Pn	12 58 09.2	-1.6
TOFB	Tofino	2.92	112	Pn	Pn	12 58 10.2	-1.4
HG1B	Mitchell Dam	2.93	334	Pn	Pn	12 58 07.5	-4.1
CBB	Campbell River	3.02	94	Pn	Pn	12 58 11.3	-1.7
BTB	Buttle Lake	3.04	104	Pn	Pn	12 58 11.3	-2.1
BTB				Sn	Sn	12 58 46.7	-3.5
MOBC	Moresby Island	3.08	338	ePn	Pn	12 58 10.5	-3.3
MOBC	Moresby Island	3.08	338	Pn	Pn	12 58 10.5	-3.3
MWAB	Mount Washingt	3.11	99	Pn	Pn	12 58 12.9	-1.5
B012	Ucluelet	3.24	114	Pn	Pn	12 58 14.0	-2.0
B012				Sn	Sn	12 58 51.6	-3.1
OZB	Mount Ozzard	3.25	113	Pn	Pn	12 58 14.3	-1.9
OZB				Sn	Sn	12 58 52.6	-2.6
DIB	Dawson Inlet,	3.26	333	ePn	Pn	12 58 13.2	-3.1
DIB	Dawson Inlet,	3.26	333	Pn	Pn	12 58 13.1	-3.3
H02S1	DAWSON INLET T	3.26	333	Pn	Pn	12 58 12.8	-3.5
H02S1				T	T	13 01 24.8	
B928	Bamfield	3.52	113	Pn	Pn	12 58 18.0	-1.8
B927	Port Alberni	3.56	106	Pn	Pn	12 58 19.2	-1.3
TXB	Texada	3.67	98	Pn	Pn	12 58 20.5	-1.4
MGB	Mount Grey	3.72	109	Pn	Pn	12 58 21.5	-1.2
MASB	Masset	3.90	343	Pn	Pn	12 58 22.4	-2.6
YOUB	Youbou, Lake C	4.02	108	Pn	Pn	12 58 25.4	-1.4
RUBB	Prince Rupert	4.02	358	Pn	Pn	12 58 24.5	-2.1
SHB	Sechelt	4.05	98	Pn	Pn	12 58 26.0	-1.2
PFB	Port Renfrew	4.05	113	Pn	Pn	12 58 25.8	-1.4
NDB	Naden	4.06	335	Pn	Pn	12 58 24.6	-2.8
NLLB	Nanaimo Lost L	4.07	103	Pn	Pn	12 58 26.4	-1.1
OCP	Olym-Cheeka Pk	4.08	118	Pn	Pn	12 58 27.1	-0.5
B926	Mesachie Lake	4.13	109	Pn	Pn	12 58 27.3	-0.9
LZB	Mount Lazard	4.40	110	Pn	Pn	12 58 31.6	-0.4
GOBB	Galiano Island	4.46	105	Pn	Pn	12 58 31.9	-0.9
UBRB	Upper Baezaeko	4.52	53	Pn	Pn	12 58 33.9	+0.1
OBC	Olympics--Boni	4.53	118	Pn	Pn	12 58 33.5	-0.4
WSLR	Whistler	4.58	90	Pn	Pn	12 58 33.6	-0.8
SOKB	Sooke	4.58	112	Pn	Pn	12 58 33.7	-0.8
B009	North Saanich	4.61	109	Pn	Pn	12 58 34.8	-0.1
B010	North Saanich	4.61	109	Pn	Pn	12 58 34.6	-0.2
PGC	Sidney	4.61	109	ePn	Pn	12 58 34.0	-0.8
PGC	Sidney	4.61	109	Pn	Pn	12 58 33.6	-1.2
PA02	PA02 Ocean	4.61	109	Pn	Pn	12 58 34.4	-0.4
B011	North Saanich	4.61	109	Pn	Pn	12 58 34.1	-0.7
PA12	PA12 Sannich	4.61	109	Pn	Pn	12 58 34.3	-0.5
PA03	PA03 Flamable	4.61	109	Pn	Pn	12 58 33.9	-1.0
PA04	PA04 Cage	4.61	109	Pn	Pn	12 58 34.2	-0.7
PA05	PA05 Willingdo	4.61	109	Pn	Pn	12 58 33.4	-1.5
SNB	Saturna Island	4.73	106	Pn	Pn	12 58 36.5	0.0
VGZ	Gonzales	4.79	111	Pn	Pn	12 58 36.3	-1.0
MCW	Mount Constitu	4.98	106	Pn	Pn	12 58 40.2	+0.3
NLWA	Neilton Lookou	5.02	123	ePn	Pn	12 58 40.4	-0.1
A04D	Lummi Island	5.04	106	P	Pn	12 58 40.2	-0.5
	baz=292,SNR=17						
BLN	Blyn Mountain	5.18	114	Pn	Pn	12 58 42.9	+0.2
LLLB	Lillooet	5.22	84	ePn	Pn	12 58 42.8	-0.5
LLLB	Lillooet	5.22	84	Pn	Pn	12 58 43.0	-0.3
WISH	Wishkah	5.24	125	Pn	Pn	12 58 42.5	-1.0
VDB	Vedder Mountai	5.32	101	Pn	Pn	12 58 44.4	-0.1
HDW	Hoodsport	5.32	117	Pn	Pn	12 58 45.0	+0.3
D03D	Eldon	5.36	119	P	Pn	12 58 44.5	-0.7
	baz=305,SNR=8.8						
FSB	Fort Saint Jam	5.44	38	Pn	Pn	12 58 46.2	-0.1
CRAG	Craig	5.49	341	ePn	Pn	12 58 44.7	-2.1
GNW	Green Mountain	5.50	117	Pn	Pn	12 58 46.9	-0.1
MBW	Mount Baker	5.52	103	Pn	Pn	12 58 47.4	-0.1
B05A	Bryant	5.59	109	P	Pn	12 58 47.4	-0.8
	baz=296,SNR=27						
HOPB	Hope	5.65	96	Pn	Pn	12 58 49.2	0.0
CPW	Capitol Peak	5.67	124	Pn	Pn	12 58 48.3	-1.1
JCW	Jim Creek	5.72	109	Pn	Pn	12 58 50.8	+0.6
D04E	Lakebay	5.74	120	P	Pn	12 58 50.3	-0.1
	baz=307						
D05A	Enumclaw	6.18	117	ePn	Pn	12 58 55.6	-0.8
D05A	Enumclaw	6.18	117	Pn	Pn	12 58 56.1	-0.2
E04D	Cinebar	6.24	124	P	Pn	12 58 57.5	+0.3

	baz=311						
WRAK	Wrangell Islan	6.27	348	*e*Pn	Pn	12 58 56.1	-1.5
F04D	Rainier, OR	6.33	129	P	Pn	12 58 59.6	+1.2
	baz=316						
C06D	Leavenworth	6.46	108	P	Pn	12 58 60.0	-0.4
	baz=296						
LON	Longmire	6.53	120	*e*Pn	Pn	12 59 01.9	+0.6
LON	Longmire	6.53	120	*e*P	Pn	12 59 01.9	+0.6
PNT	Penticton	6.82	94	Pn	Pn	12 59 05.2	-0.1
G03D	McMinnville, O	6.85	136	P	Pn	12 59 06.9	+1.3
	baz=321,SNR=10						
LTY	Liberty	6.91	113	*e*Pn	Pn	12 59 07.0	+0.6
F05D	White Salmon	7.26	124	P	Pn	12 59 12.5	+1.3
	baz=312						
B08A	Colville Reser	7.27	102	*e*Pn	Pn	12 59 11.2	-0.2
B08A	Colville Reser	7.27	102	Pn	Pn	12 59 11.4	0.0
COR	Corvallis	7.33	139	*e*Pn	Pn	12 59 13.4	+1.2
SIT	Sitka	7.44	337	*e*Pn	Pn	12 59 12.1	-1.6
SIT	Sitka	7.44	337	*e*P	Pn	12 59 12.1	-1.6
BMBC	Bull Mountain	7.45	37	Pn	Pn	12 59 14.6	+0.7
I02D	Swisshome	7.51	143	P	Pn	12 59 17.1	+2.5
	baz=329						
SLEB	Sale Mountain	7.61	79	Pn	Pn	12 59 16.4	+0.3
H04D	Lebanon	7.62	137	P	Pn	12 59 17.9	+1.7
	baz=323,SNR=27						
H04A	Detroit Lake	7.75	134	*e*Pn	Pn	12 59 18.7	+0.7
G05D	Wamic, OR	7.76	127	P	Pn	12 59 19.4	+1.2
	baz=315						
HAWA	Hanford	8.02	115	*e*Pn	Pn	12 59 21.8	+0.1
D08A	Wollman Farm,	8.05	110	*e*Pn	Pn	12 59 21.7	-0.4
C09A	Chrisman Ranch	8.13	104	*e*Pn	Pn	12 59 22.9	-0.3
C09A	Chrisman Ranch	8.13	104	Pn	Pn	12 59 22.6	-0.6
DLBC	Dease Lake	8.14	0	Pn	Pn	12 59 24.1	+0.8
	3.9nm,0.3s,baz=204,slow=12,SNR=51						
DLBC				Sn	Sn	13 00 55.7	+0.3
	baz=76,slow=18,SNR=1.7						
DLBC				Lg	Lg	13 01 41.5	
	baz=262,slow=17,SNR=3.8						
DLBC				LR	LR	13 02 19.7	
	comp=Z,6µm,18.2s,baz=185,slow=36						
DLBC	Dease Lake	8.14	0	*e*Pn	Pn	12 59 22.7	-0.6
DLBC	Dease Lake	8.14	0	Pn	Pn	12 59 23.6	+0.3
E08A	Dider Farm, El	8.25	113	*e*Pn	Pn	12 59 24.5	-0.3
J01E	Myrtle Point	8.29	147	P	Pn	12 59 27.8	+2.4
	baz=332						
I04A	Tendick Farm,	8.35	139	P	Pn	12 59 27.9	+1.7
	baz=325,SNR=24						
NEW	Newport	8.69	99	Pn	Pn	12 59 31.0	+0.1
	1.3nm,0.3s,baz=294,slow=11,SNR=21						
NEW				Sn	Sn	13 01 26.8	+18
	0.3nm,0.3s,baz=345,slow=18,SNR=1.8						
NEW				Lg	Lg	13 01 59.0	
	0.1nm,0.3s,baz=345,slow=13,SNR=2.2						
NEW	Newport	8.69	99	*e*Pn	Pn	12 59 30.7	-0.2
NEW	Newport	8.69	99	*e*P	Pn	12 59 30.7	-0.2
NEW	Newport	8.69	99	P	Pn	12 59 30.8	-0.2
	baz=289,SNR=21						
BESE	Bessie Mountai	8.74	343	Pn	Pn	12 59 30.1	-1.4
K02D	Willamette Mer	8.80	148	P	Pn	12 59 35.0	+2.6
	baz=333,SNR=19						
J04D	Umpqua Nationa	8.92	139	P	Pn	12 59 37.0	+2.7
	baz=326,SNR=39						
J05D	Fort Rock, OR	9.27	136	P	Pn	12 59 41.1	+2.2
	baz=323,SNR=50						
L02E	Cave Junction	9.30	149	P	Pn	12 59 42.6	+3.4
	baz=334,SNR=39						
FNBB	Fort Nelson	9.51	23	Pn	Pn	12 59 41.6	-0.4
K04D	Chiloquin, OR	9.58	140	P	Pn	12 59 45.4	+2.3
	baz=327,SNR=9.6						
L04D	Klamath Falls	9.71	144	P	Pn	12 59 47.9	+3.0
	baz=330,SNR=36						
PLBC	Pleasant Camp	9.85	341	Pn	Pn	12 59 46.0	-0.7
YBH	Yreka Blue Hor	9.98	147	Pn	Pn	12 59 53.4	+4.8
	0.4nm,0.3s,baz=332,slow=13,SNR=57						
YBH				LR	LR	13 03 13.4	
	comp=Z,9µm,19.2s,baz=333,slow=35						
YBH	Yreka Blue Hor	9.98	147	*e*Pn	Pn	12 59 48.9	+0.3
YBH	Yreka Blue Hor	9.98	147	*e*P	Pn	12 59 48.9	+0.3
PRDA	Priddis	10.04	81	Pn	Pn	12 59 50.3	+1.0
BMO	Blue Mountains	10.19	118	*e*Pn	Pn	12 59 51.3	-0.2
BMO	Blue Mountains	10.19	118	*e*P	Pn	12 59 51.3	-0.2
M02C	Callahan	10.23	148	P	Pn	12 59 55.8	+3.8
	baz=334,SNR=35						
M04C	Macdoel	10.26	143	P	Pn	12 59 56.0	+3.6
	baz=330,SNR=30						
BSMT	Bassoo Peak	10.31	98	Pn	Pn	12 59 54.2	+1.0
WALA	Waterton Lakes	10.53	91	Pn	Pn	12 59 57.2	+1.1
N02D	Trinity Center	10.65	148	P	Pn	13 00 02.3	+4.5
	baz=334,SNR=34						
JTMT	Jette	10.66	98	Pn	Pn	12 59 59.0	+1.0
WHY	Whitehorse	10.72	347	Pn	Pn	12 59 58.5	-0.2
WDC	Whiskeytown Da	11.06	149	*e*Pn	Pn	13 00 04.6	+1.3
WDC	Whiskeytown Da	11.06	149	*e*P	Pn	13 00 04.6	+1.3
HILA	High Level	11.19	37	Pn	Pn	13 00 04.0	-1.0
MSO	Missoula	11.22	102	*e*Pn	Pn	13 00 04.8	-0.9
MSO	Missoula	11.22	102	P	Pn	13 00 05.6	0.0
	baz=294,SNR=27						
HYT	Haines Junctio	11.34	341	Pn	Pn	13 00 05.6	-1.5
SLMT	Seeley Lake	11.34	99	Pn	Pn	13 00 07.3	0.0
O02D	Mt. Diablo Mer	11.35	151	P	Pn	13 00 11.4	+4.0
	baz=336,SNR=41						
PCA	Pinnacle	11.39	333	*e*Pn	Pn	13 00 06.4	-1.4
PCA	Pinnacle	11.39	333	Pn	Pn	13 00 05.8	-2.0
SAMH	Samovar Hills	11.57	332	Pn	Pn	13 00 09.3	-1.0
O03E	Paynes Creek	11.57	147	P	Pn	13 00 13.4	+3.0
	baz=333,SNR=38						
YUK5	Granite Creek	11.69	341	Pn	Pn	13 00 11.0	-1.0
BPMT	Black Pine Rid	11.70	103	Pn	Pn	13 00 12.5	+0.2
OVMT	Ovando	11.72	100	Pn	Pn	13 00 12.4	-0.1
ORV	Oroville	12.34	147	*e*Pn	Pn	13 00 21.7	+1.0
ORV	Oroville	12.34	147	*e*P	Pn	13 00 21.7	+1.0
HOPS	Hopland Field	12.35	154	*e*Pn	Pn	13 00 21.4	+0.4
HLID	Hailey	12.62	116	*e*Pn	Pn	13 00 24.5	-0.3
HLID	Hailey	12.62	116	P	Pn	13 00 26.3	+1.5
	baz=308,SNR=13						
YUK3	Moose Creek	12.85	337	Pn	Pn	13 00 29.1	+1.2
YUK2	White River	12.96	337	Pn	Pn	13 00 31.2	+2.0
EGMT	Eagleton	13.47	92	P	Pn	13 00 37.1	+0.9
	baz=288,SNR=24						
BVCY	Beaver Creek	13.50	338	Pn	Pn	13 00 38.8	+2.2
EYAK	Cordova Ski Ar	13.54	325	*e*Pn	Pn	13 00 36.2	-0.9
ELK	Elko	14.09	127	Pn	Pn	13 00 46.7	+1.8
	0.1nm,0.3s,baz=318,slow=13,SNR=13						
ELK				LR	LR	13 06 16.2	
	comp=Z,3µm,18.6s,baz=326,slow=38						
H17A	Grant Village	14.45	107	P	Pn	13 00 50.9	+1.1
	baz=302,SNR=9.2						
NVAR	Mina Array Bea	14.53	140	Pn	Pn	13 00 54.1	+3.2
	0.2nm,0.3s,baz=319,slow=11,SNR=98						
NVAR				LR	LR	13 06 10.8	
	comp=Z,4µm,21.6s,baz=336,slow=36						
DAWY	Dawson	14.66	344	Pn	Pn	13 00 51.3	-1.1
MENT	Mentasta	14.67	335	*e*Pn	Pn	13 00 53.0	+0.5
SEW	Seward	14.73	319	*e*Pn	Pn	13 00 52.3	-1.0
YKA	Yellowknife Ar	14.84	29	Pn	Pn	13 00 53.0	-1.7
	0.4nm,0.3s,baz=223,slow=12,SNR=20						
YKA				LR	LR	13 07 24.4	
	comp=Z,193nm,20.8s,baz=222,slow=40						
YKB5	Yellowknife Ar	14.84	29	*e*Pn	Pn	13 00 53.0	-1.7
YKW1	Yellowknife Ar	14.87	29	Pn	Pn	13 00 53.8	-1.4
YKW3	Yellowknife Ar	14.89	29	*e*Pn	Pn	13 00 54.3	-1.1
YKW3	Yellowknife Ar	14.89	29	Pn	Pn	13 00 55.1	-0.3
RLMT	Red Lodge	14.90	102	P	Pn	13 00 57.4	+1.5
	baz=298,SNR=55						
MLAC	Mammoth, Mammo	15.01	143	P	Pn	13 00 59.9	+2.5
	baz=332						
KDAK	Kodiak Island	15.15	308	Pn	Pn	13 00 57.0	-2.0
	0.1nm,0.3s,baz=113,slow=16,SNR=2.8						
KDAK				LR	LR	13 05 18.7	
	comp=Z,8µm,20.3s,baz=85,slow=32						
KDAK	Kodiak Island	15.15	308	*e*Pn	Pn	13 00 59.3	+0.3
	61nm,1.1s						
KDAK	Kodiak Island	15.15	308	*e*P	Pn	13 00 59.3	+0.3
KDAK				pmax	pmax		
	comp=Z,61nm,1.1s						
HWUT	Hardware Ranch	15.49	117	*e*Pn	Pn	13 01 04.2	+0.4
	comp=Z,28nm,1.1s						
TIN	Tinemaha, Big	15.74	143	P	P	13 01 09.7	-1.3
	baz=332,SNR=20						
DUG	Dugway, Tooele	15.76	123	P	Pn	13 01 08.0	+0.8
	baz=316,SNR=13						
R11A	Troy Canyon, C	15.78	134	P	Pn	13 01 09.1	+1.5
	baz=324,SNR=47						
BW06	Boulder Array	15.96	110	P	P	13 01 11.9	-1.6
	baz=306,SNR=24						
PDAR	Pinedale Array	15.96	110	Pn	P	13 01 13.1	-0.4
	comp=Z,0.3nm,0.3s,baz=316,slow=10,SNR=68						
PDAR				LR	LR	13 07 05.3	
	comp=Z,2µm,18.7s,baz=312,slow=36						
VOG	Valley Oaks Go	15.97	147	P	Pn	13 01 11.5	+1.7
	baz=335						
GRAC	Grapevine Rang	16.14	141	P	P	13 01 14.2	-1.1
	baz=330,SNR=9.5						
LAO	LASA Array	16.18	94	P	Pn	13 01 12.8	+0.3
	baz=292,SNR=17						
RSO	Redoubt South	16.33	317	*e*P	P	13 01 15.8	-1.7
CWC	Cottonwood Cre	16.34	144	P	P	13 01 17.6	-0.1
	baz=332						
EPYK	Eagle Plains	16.46	350	P	P	13 01 17.1	-1.6
	baz=165,SNR=14						
VES	Vestal, Richgr	16.51	147	P	Pn	13 01 18.0	+1.3
	baz=335,SNR=13						
TPNV	Topopah Spring	16.64	138	P	P	13 01 20.7	-0.3
	baz=328,SNR=90						
SMMC	Simmler	16.68	150	P	P	13 01 20.7	-0.7
	baz=337,SNR=11						
HDA	Harding Lake	16.72	334	P	P	13 01 19.9	-1.8
	baz=139,SNR=15						
FURC	Furnace Creek,	16.80	141	P	P	13 01 23.2	+0.7
	baz=330,SNR=34						
ISA	Isabella, Lake	16.88	146	P	P	13 01 23.9	+0.3
	baz=334,SNR=94						
DGMT	Dagmar	16.90	86	P	P	13 01 22.5	-1.2
	baz=286,SNR=23						
MPMC	Manual Prospec	16.90	143	P	P	13 01 24.1	+0.2
	baz=332,SNR=88						
ILAR	Eielson Array	16.98	335	Pn	P	13 01 23.0	-1.5
	comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=41						
ILAR				LR	LR	13 07 24.3	
	comp=Z,3µm,18.7s,baz=144,slow=35						
PKM	Mcpherson Peak	17.13	150	P	P	13 01 26.8	+0.3
	baz=338,SNR=12						
ARVC	Arvin	17.24	147	P	P	13 01 27.4	-0.1
	baz=336						
COLA	College	17.33	334	*e*P	P	13 01 27.8	-0.5
	comp=Z,119nm,1.6s						
COLA	College	17.33	334	*e*P	P	13 01 27.8	-0.5
COLA				pmax	pmax		
	comp=Z,119nm,1.6s						
TCOL	CIGO, UAF Yank	17.33	334	P	P	13 01 27.0	-1.3
	baz=139,SNR=6.6						
LRMC	Laurel Mtn Rad	17.34	144	P	P	13 01 29.8	+1.0
	baz=333,SNR=39						
POKR	Poker Plat Res	17.40	335	P	P	13 01 27.9	-1.2
	baz=140						
SHOC	Shoshone, Teco	17.52	140	P	P	13 01 31.4	+0.7
	baz=330,SNR=24						
SBC	Santa Barbara	17.57	151	P	P	13 01 31.9	+0.7
	baz=338						
FFC	Flin Flon	17.58	65	*e*P	Pn	13 01 28.9	-1.1
	comp=Z,81nm,0.9s						
FFC	Flin Flon	17.58	65	*e*P	Pn	13 01 28.9	-1.1
FFC				pmax	pmax		
	comp=Z,81nm,0.9s						
DHRN	Dharma Camp	17.59	14	P	P	13 01 29.6	-1.6
OSI	Osito Audit: C	17.74	148	*e*P	P	13 01 33.5	+0.3
	comp=Z,103nm,1.4s						
OSI	Osito Audit: C	17.74	148	P	P	13 01 33.4	+0.3
	baz=336						
EDW2	Edwards Air Fo	17.76	146	P	P	13 01 34.2	+0.9
	baz=334,SNR=17						
GSC	Goldstone, Bar	17.83	142	P	P	13 01 35.8	+1.7
	baz=332,SNR=68						
K22A	Casper	17.87	106	P	P	13 01 33.7	-0.9
	baz=304,SNR=38						
SCZ2	Santa Cruz Isl	18.01	151	P	P	13 01 36.5	+0.5
	baz=338						
TUQ	Turquoise Moun	18.07	140	P	P	13 01 38.9	+2.1
	baz=330,SNR=33						
BLG	Laguna Peak, P	18.09	149	P	P	13 01 37.7	+0.9
	baz=337						
INK	Inuvik	18.13	356	P	P	13 01 37.4	+0.4
	comp=Z,0.1nm,0.3s,baz=151,slow=8.7,SNR=9.7						
INK				LR	LR	13 08 05.2	
	comp=Z,2µm,18.1s,baz=172,slow=35						
INK	Inuvik	18.13	356	P	P	13 01 36.6	-0.4
RRX	Edison Barstow	18.13	143	P	P	13 01 39.3	+2.0
	baz=333						
DECC	Green Verdugo	18.20	147	P	P	13 01 39.1	+0.9
	baz=336						
O20A	White River Ci	18.36	115	P	P	13 01 40.8	+0.8
	baz=311						
HEC	Hector,Ludlow	18.43	142	P	Pn	13 01 43.1	+2.4
	baz=332,SNR=45						
BFSC	Mount Baldy Ra	18.45	146	P	Pn	13 01 42.9	+1.8
	baz=335,SNR=26						
RSSD	Black Hills	18.66	99	*e*P	Pn	13 01 43.6	-0.1
	comp=Z,26nm,0.8s						
RSSD	Black Hills	18.66	99	*e*P	Pn	13 01 43.6	-0.1
RSSD				pmax	pmax		
	comp=Z,26nm,0.8s						
RSSD	Black Hills	18.66	99	P	P	13 01 42.6	-0.8
	baz=299						
BBRC	Big Bear Solar	18.70	144	P	Pn	13 01 45.9	+1.7
	baz=333,SNR=13						
FMP	Fort Macarthur	18.71	148	P	Pn	13 01 44.7	+0.7
	baz=336						
GMRC	Granite Mounta	18.74	140	P	Pn	13 01 46.5	+1.9
	baz=331,SNR=38						
CIS	Catalina Islan	18.95	149	P	Pn	13 01 47.6	+0.6
	baz=337						
KUKN	Kugluktuk,NWT	19.06	17	P	Pn	13 01 47.5	-0.6
MURC	Murrieta	19.20	146	P	Pn	13 01 50.8	+0.8
	baz=335,SNR=11						
N23A	Red Feather La	19.24	110	P	Pn	13 01 50.9	+0.2
	baz=308,SNR=18						
BELC	Belle Mtn. Jos	19.29	142	P	Pn	13 01 52.7	+1.5
	baz=332,SNR=90						
SCI2	San Clemente I	19.29	150	P	Pn	13 01 51.8	+0.7
	baz=338						
PFO	Pinyon Flats O	19.46	144	P	Pn	13 01 53.8	+0.6
	comp=Z,0.3nm,0.3s,baz=329,slow=10.0,SNR=42						
PFO				LR	LR	13 08 44.4	
	comp=Z,815nm,18.5s,baz=321,slow=35						
PFO	Pinyon Flats O	19.46	144	*e*P	Pn	13 01 52.6	-0.6
	comp=Z,137nm,1.4s						
PFO	Pinyon Flats O	19.46	144	*e*P	Pn	13 01 52.6	-0.6
PFO				pmax	pmax		
	comp=Z,137nm,1.4s						
PFO	Pinyon Flats O	19.46	144	P	Pn	13 01 53.5	+0.3
	baz=334,SNR=46						
IRM	Iron Mountain	19.49	140	P	Pn	13 01 54.8	+1.3
	baz=331,SNR=42						
PDMCI	Parker Dam,Lak	19.79	138	P	Pn	13 01 58.0	+1.0
	baz=329,SNR=17						
BC3	Big Chuckawall	19.81	142	P	Pn	13 01 57.7	+0.4
	baz=332,SNR=69						
109C	Camp Elliot, M	19.87	146	P	Pn	13 01 58.2	+0.2
	baz=335						
MDND	Maddock	20.02	85	*e*P	Pn	13 01 59.1	-0.7
	comp=Z,485nm,1.4s						
MDND	Maddock	20.02	85	P	Pn	13 01 58.9	-0.9
	baz=289,SNR=8.5						
WUAZ	Wupatki	20.06	130	P	Pn	13 02 00.4	0.0
	baz=324,SNR=12						
Y12C	Blythe	20.10	140	P	Pn	13 02 01.4	+0.6
	baz=330,SNR=18						
MONP2	Monument Peak	20.11	145	P	Pn	13 02 01.5	+0.4
	baz=334,SNR=41						
BAR	Barrett	20.21	146	*e*P	Pn	13 02 01.1	-0.9
	comp=Z,159nm,1.4s						
SWSC	Sam W. Stewart	20.30	143	P	Pn	13 02 03.0	0.0
	baz=333,SNR=30						
IKP	In-Ko-Pah, Jac	20.45	144	P	Pn	13 02 05.0	+0.1
	baz=334,SNR=47						
GLA	Glamis	20.59	141	P	Pn	13 02 06.1	-0.4
	baz=332,SNR=38						
FALS	False Pass	20.66	296	*e*P	P	13 02 04.5	-0.3
	comp=Z,46nm,0.8s						
TOLK	Toolik Lake Re	20.70	340	*e*P	Pn	13 02 05.3	-2.2
	comp=Z,41nm,1.0s						
TOLK	Toolik Lake Re	20.70	340	P	Pn	13 02 05.6	-1.9
	baz=142,SNR=44						
S22A	4UR Ranch, Cre	20.79	118	P	Pn	13 02 08.8	-0.3
	baz=315,SNR=12						
Q24A	Divide	20.93	113	P	Pn	13 02 10.3	-0.5
	baz=311,SNR=9.6						
W18A	Petrified Fore	21.19	128	P	P	13 02 13.1	+2.2
	baz=322,SNR=16						
SDCO	Great Sand Dun	21.55	116	P	P	13 02 16.3	+1.5
	baz=314,SNR=25						
OGNE	Ogallala	21.60	105	P	P	13 02 16.6	+1.4
	baz=306,SNR=20						
ULM	Lac du Bonnet	21.73	77	P	P	13 02 16.5	+0.2
	comp=Z,84nm,1.2s,baz=288,slow=12,SNR=23						
ULM				LR	LR	13 10 50.4	
	comp=Z,4µm,21.5s,baz=282,slow=37						
ULM	Lac du Bonnet	21.73	77	*e*P	P	13 02 15.9	-0.5
	comp=Z,182nm,1.0s						
ULM	Lac du Bonnet	21.73	77	*e*P	P	13 02 15.9	-0.5
ULM				pmax	pmax		
	comp=Z,182nm,1.0s						
ULM	Lac du Bonnet	21.73	77	P	P	13 02 15.4	-1.0
SUSD	Miller	21.75	94	P	P	13 02 16.9	+0.2
	baz=297						
FCC	Fort Churchill	22.26	54	*e*P	P	13 02 21.8	-0.2
	comp=Z,121nm,1.1s						
FCC	Fort Churchill	22.26	54	*e*P	P	13 02 21.8	-0.2
FCC				pmax	pmax		
	comp=Z,121nm,1.1s						
FCC	Fort Churchill	22.26	54	P	P	13 02 21.3	-0.7
AGMN	Agassiz Nation	22.27	82	P	P	13 02 22.9	+0.7
	baz=288,SNR=34						
214A	Organ Pipe Nat	22.37	139	P	P	13 02 24.7	+1.2
	baz=330,SNR=9.3						
KSCO	Kaye Shedlock’	22.41	110	P	P	13 02 25.3	+1.4
	baz=310,SNR=23						
T25A	Trinidad	22.59	116	P	P	13 02 27.2	+1.3
	baz=314,SNR=17						
TUC	Tucson	22.97	134	*e*P	P	13 02 30.1	+0.3
	comp=Z,123nm,1.4s						
TUC	Tucson	22.97	134	*e*P	P	13 02 30.1	+0.3
TUC				pmax	pmax		
	comp=Z,123nm,1.4s						
TUC	Tucson	22.97	134	P	P	13 02 31.0	+1.2
	baz=328						
ANMO	Albuquerque	23.03	123	P	P	13 02 31.9	+1.3
	comp=Z,21nm,1.0s,baz=321,slow=9.6,SNR=18						
ANMO				LR	LR	13 11 45.3	
	comp=Z,717nm,18.8s,baz=310,slow=37						
ANMO	Albuquerque	23.03	123	*e*P	P	13 02 30.8	+0.2
	comp=Z,39nm,1.2s						
ANMO	Albuquerque	23.03	123	*c i*P	P	13 02 31.8	+1.2
ANMO				pmax	pmax		
	comp=Z,100nm,2.5s						
ANMO	Albuquerque	23.03	123	P	P	13 02 31.5	+0.9
	baz=319						
EPLO	Experimental L	23.21	77	P	P	13 02 31.1	-1.1
Y22D	IRIS PASSCAL I	23.45	125	P	P	13 02 36.4	+1.6
	baz=321						
ECSD	EROS Data Cent	23.58	93	*e*P	P	13 02 35.5	-0.4
	comp=Z,28nm,0.8s						
ECSD	EROS Data Cent	23.58	93	P	P	13 02 35.8	0.0
	baz=298,SNR=19						
BGNE	Belgrade	23.77	100	P	P	13 02 37.9	+0.1
	baz=303						
NIKH	Nikolski High	24.03	291	*e*P	P	13 02 39.8	-0.3
	comp=Z,46nm,1.2s						
SOLO	Sioux Lookout	24.15	76	P	P	13 02 40.0	-1.2
121A	Cookes Peak, D	24.22	129	P	P	13 02 43.5	+1.3
	baz=324,SNR=17						
CBKS	Cedar Bluff	24.29	107	*e*P	P	13 02 42.5	-0.1
	comp=Z,50nm,1.1s						
CBKS	Cedar Bluff	24.29	107	*e*P	P	13 02 42.5	-0.1
CBKS				pmax	pmax		
	comp=Z,50nm,1.1s						
CBKS	Cedar Bluff	24.29	107	P	P	13 02 43.0	+0.3
	baz=308						
SPIA	Saint Paul Isl	24.45	302	*e*P	P	13 02 43.2	-0.7
	comp=Z,99nm,1.0s						
ATKO	Atikokan Iron	24.79	78	P	P	13 02 46.7	-0.4
PKLO	Pickle Lake	24.85	72	P	P	13 02 46.0	-1.5
EYMN	Ely	25.15	80	*e*P	P	13 02 50.0	-0.3
	comp=Z,49nm,1.0s						
EYMN	Ely	25.15	80	P	P	13 02 51.0	+0.7
	baz=290,SNR=14						
SPMN	Marine on St.	25.35	87	P	P	13 02 53.3	+1.1
	baz=295,SNR=12						
E38A	The Farm, Brul	25.59	83	P	P	13 02 54.5	+0.1
	baz=293,SNR=6.2						
AMTX	Amarillo	25.75	116	P	P	13 02 57.0	+1.0
	baz=316						
MSTX	Muleshoe	25.79	119	P	P	13 02 56.9	+0.5
	baz=318,SNR=13						
KSU1	Kansas State U	26.06	103	P	P	13 02 59.0	+0.4
	baz=307						
TBO	Thunder Bay	26.23	78	P	P	13 02 59.5	-0.6
G39A	Holcombe	26.37	86	P	P	13 03 02.1	+0.7
	baz=295,SNR=14						
C40A	Isle Royale Na	26.64	79	P	P	13 03 03.9	+0.1
	baz=291						
SCIA	State Center	26.65	94	P	P	13 03 03.5	-0.5
	baz=301						
G40A	Rib Lake	27.00	85	P	P	13 03 07.3	+0.2
	baz=295,SNR=12						
D41A	Chassel	27.32	81	P	P	13 03 10.3	+0.4
	baz=292						
GTO	Geraldton	27.40	74	P	P	13 03 09.1	-1.5
WMOK	Wichita Mounta	27.55	112	P	P	13 03 13.0	+0.9
	baz=314,SNR=41						
I41A	Arkdale	27.75	87	P	P	13 03 14.4	+0.6
	baz=298						
L40A	Anamosa	27.85	92	P	P	13 03 14.8	+0.1
	baz=301,SNR=6.0						
JFWS	Jewell Farm	28.05	90	P	P	13 03 17.2	+0.7
	baz=300,SNR=6.0						
F42A	Maple Grove Fa	28.11	83	P	P	13 03 17.5	+0.5
	baz=295						
N40A	Mertquake, Sal	28.23	95	P	P	13 03 18.6	+0.4
	baz=303						
I42A	Draeger Farm,	28.44	87	P	P	13 03 19.0	-0.9
	baz=298						
RES	Resolute Bay	28.46	19	P	P	13 03 23.2	+3.4
	comp=Z,4.0nm,1.0s,baz=230,slow=7.9,SNR=2.8						
RES				LR	LR	13 15 47.7	
	comp=Z,583nm,19.8s,baz=226,slow=39						
ABTX	Abilene, Hawle	28.55	117	P	P	13 03 21.3	+0.2
	baz=318						
TUL1	Leonard	28.56	107	P	P	13 03 22.2	+1.1
	baz=311,SNR=14						
E43A	Lone Tree Farm	28.58	81	P	P	13 03 21.4	+0.2
	baz=294,SNR=5.7						
M41A	Milan	28.64	93	P	P	13 03 21.3	-0.4
	baz=302						
N41A	Harden Midland	28.79	94	P	P	13 03 23.8	+0.6
	baz=303,SNR=7.0						
L42A	Oliver, Polo	28.87	91	P	P	13 03 23.8	0.0
	baz=301,SNR=14						
TXAR	Lajitas Array	28.89	127	P	P	13 03 25.9	+1.7
	comp=Z,9.3nm,0.9s,baz=327,slow=6.6,SNR=46						
TXAR				PcP	PcP	13 06 33.3	0.0
	comp=Z,0.3nm,0.6s,baz=3.0,slow=3.1,SNR=2.0						
TXAR				LR	LR	13 15 46.3	
	comp=Z,3µm,18.1s,baz=0.0,slow=38						
H43A	Windswept, Lux	28.90	85	P	P	13 03 23.7	-0.4
	baz=297						
E44A	Grand Marais A	29.16	80	P	P	13 03 26.4	+0.1
	baz=294						
K43A	Burlington	29.38	89	P	P	13 03 27.0	-1.3
	baz=300						
F45A	CMU Biological	29.81	81	P	P	13 03 30.5	-1.6
	baz=296						
HDIL	Hopedale	29.88	93	P	P	13 03 31.7	-1.0
	baz=303						
L44A	Lake County Fo	29.91	89	P	P	13 03 32.3	-0.7
	baz=301						
G45A	Suttons Bay	30.00	83	P	P	13 03 33.8	0.0
	baz=296						
CCM	Cathedral Cave	30.06	99	*e*P	P	13 03 32.8	-1.5
	comp=Z,29nm,1.4s						
CCM	Cathedral Cave	30.06	99	*e*P	P	13 03 32.8	-1.5
CCM				pmax	pmax		
	comp=Z,29nm,1.4s						
CCM	Cathedral Cave	30.06	99	P	P	13 03 33.3	-1.1
	baz=307						
JCT	Junction City	30.06	120	P	P	13 03 34.4	-0.1
	baz=320,SNR=14						
I45A	Fountain	30.08	85	P	P	13 03 33.8	-0.7
	baz=298						
U40A	Yellville	30.09	103	P	P	13 03 34.8	+0.2
	baz=310,SNR=15						
M44A	Midewin, Midew	30.23	91	P	P	13 03 36.2	+0.3
	baz=302,SNR=6.4						
KAPO	Kapuskasing	30.23	73	P	P	13 03 35.9	+0.1
P43A	Skaggs, Pawnee	30.23	95	P	P	13 03 36.4	+0.5
	baz=304,SNR=6.0						
D46A	Sault St. Mari	30.24	78	P	P	13 03 36.3	+0.4
	baz=294						
W39A	Magazine	30.26	106	P	P	13 03 37.2	+1.1
	baz=312,SNR=10						
WHTX	Lake Whitney,	30.27	115	P	P	13 03 36.8	+0.4

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      baz=317,SNR=6.0
E46A  Sault Ste Mari    30.28  80  P       P       13 03 36.2 -0.1
      baz=295
H46A  Fife Lake         30.51  83  P       P       13 03 38.6 +0.3
      baz=297,SNR=5.3
O44A  Mansfield         30.62  93  P       P       13 03 39.4  0.0
      baz=304
I46A  Reed City         30.63  85  P       P       13 03 39.2 -0.2
      baz=298
D47A  Chapleau          30.76  78  P       P       13 03 40.8 +0.3
      baz=294,SNR=7.6
J46A  Howard City       30.78  86  P       P       13 03 40.7 -0.1
      baz=299
MIAR  Mount Ida         30.82 107  P       P       13 03 42.3 +1.2
      baz=312,SNR=14
E47A  Iron Bridge       30.89  79  P       P       13 03 42.2 +0.5
      baz=295
K46A  Dorr              31.02  87  P       P       13 03 42.4 -0.4
      baz=300
G47A  Hillman           31.08  81  P       P       13 03 43.5 +0.2
      baz=297
435B  Jarrell           31.09 117  P       P       13 03 44.1 +0.6
      baz=318
H47A  Mio               31.12  83  P       P       13 03 43.5 -0.2
      baz=297
I47A  Gladwin           31.19  84  P       P       13 03 44.4 +0.1
      baz=298
W41B  Gary Mavity, V    31.23 104  P       P       13 03 45.1 +0.4
      baz=311,SNR=11
X40A  Basin Creek Fa    31.31 106  P       P       13 03 46.3 +0.8
      baz=312
SFIN  Lafayette         31.38  92  P       P       13 03 44.9 -1.1
      baz=303
K47A  Vermontville      31.53  86  P       P       13 03 47.4  0.0
      baz=300
S44A  Carbondale        31.53  98  P       P       13 03 47.4  0.0
      baz=307,SNR=5.5
F48A  Evansville        31.58  80  P       P       13 03 48.2 +0.5
      baz=296
E48A  Lockeyer          31.58  78  P       P       13 03 47.0 -0.7
      baz=295,SNR=6.1
I48A  Sherman Twp       31.63  83  P       P       13 03 48.3 +0.2
      baz=298
H48A  Harrisville       31.63  82  P       P       13 03 48.5 +0.3
      baz=297
P46A  Rosedale          31.73  93  P       P       13 03 49.4 +0.3
      baz=304
L47A  Sherwood          31.75  88  P       P       13 03 49.3 +0.1
      baz=301
D49A  Beulah Townshi    31.76  76  P       P       13 03 49.4  0.0
      baz=294
M47A  Cromwell          31.80  89  P       P       13 03 50.3 +0.5
      baz=302
833A  Chaparral WMA,    31.95 122  P       P       13 03 52.3 +1.1
      baz=322
F49A  Sandfield         31.97  79  P       P       13 03 50.9 -0.2
      baz=296
N47A  Urbana            32.01  90  P       P       13 03 51.5  0.0
      baz=302,SNR=9.5
SUNO  Sudbury Onapin    32.03  77  P       P       13 03 52.4 +0.7
NATX  Nacogdoches       32.09 112  P       P       13 03 53.2 +0.9
      baz=316
Z41A  Richland Creek    32.16 108  P       P       13 03 53.6 +0.7
      baz=314
L48A  N Adams           32.26  87  P       P       13 03 53.4 -0.3
      baz=301
KILO  Kirkland Lake     32.29  73  P       P       13 03 55.2 +1.3
I49A  Point Hope        32.30  83  P       P       13 03 54.2 +0.2
      baz=298
M48A  Edgerton          32.31  88  P       P       13 03 53.6 -0.6
      baz=302
N48A  Decatur           32.45  89  P       P       13 03 55.2 -0.1
      baz=303,SNR=12
E50A  Wahnapitae        32.50  77  P       P       13 03 55.6 -0.2
      baz=295
TOBO  Tobermory, Bru    32.53  80  P       P       13 03 55.8 -0.2
      baz=297
O48A  Farmland          32.69  90  P       P       13 03 57.4 -0.1
      baz=303,SNR=24
HKT   Hockley           32.72 115  eP      P       13 03 57.5 -0.2
      comp=Z,40nm,1.5s
HKT   Hockley           32.72 115  eP      P       13 03 57.5 -0.2
HKT                                pmax    pmax
      comp=Z,40nm,1.5s
M49A  Liberty Center    32.80  88  P       P       13 03 57.9 -0.5
      baz=302,SNR=6.5
N49A  Columbus Grove    32.95  89  P       P       13 03 59.6 -0.2
      baz=302,SNR=7.2
P48A  Milroy            32.96  92  P       P       13 03 59.8 -0.1
      baz=304,SNR=8.5
BMRO  Meriville Lake    33.01  81  P       P       13 03 59.6 -0.7
      baz=298
Q48A  North Vernon      33.06  93  P       P       13 04 00.9 +0.2
      baz=305,SNR=6.8
WCI   Wyandotte Cave    33.10  94  P       P       13 04 01.5 +0.3
      baz=306
F51A  Arnstein          33.23  78  P       P       13 04 02.2  0.0
      baz=296
E51A  G1948 Merrick     33.23  77  P       P       13 04 01.3 -0.9
      baz=296
L50A  Kingsville        33.25  86  P       P       13 04 02.1 -0.2
      baz=301
O49A  Covington         33.25  90  P       P       13 04 01.8 -0.6
      baz=303,SNR=8.5
KLBO  Killbear Provi    33.30  79  P       P       13 04 02.0 -0.7
      baz=297
T47A  Sharon Grove      33.33  97  P       P       13 04 02.8 -0.3
      baz=308
P49A  Miami Univ. Ec    33.37  91  P       P       13 04 02.7 -0.8
      baz=304
WVT   Waverly           33.39  99  eP      P       13 04 02.8 -0.9
      comp=Z,23nm,1.1s
WVT   Waverly           33.39  99  eP      P       13 04 02.8 -0.9
WVT                                pmax    pmax
      comp=Z,23nm,1.1s
WVT   Waverly           33.39  99  P       P       13 04 03.1 -0.6
      baz=309
V46A  Holladay          33.41  99  P       P       13 04 03.5 -0.3
      baz=309
OXF   Oxford            33.42 103  P       P       13 04 04.3 +0.3
      baz=311,SNR=11
M50A  Fremont           33.43  87  P       P       13 04 03.1 -0.9
      baz=302
EEO   Eldee             33.45  76  P       P       13 04 03.6 -0.5
PLIO  Pelee Island,     33.51  86  P       P       13 04 03.7 -1.0
      baz=302
Q49A  Aurora            33.55  92  P       P       13 04 04.2 -0.9
      baz=305
F52A  Sundridge         33.66  78  P       P       13 04 06.2 +0.2
      baz=297,SNR=5.2
CLWO  Collingwood       33.66  80  P       P       13 04 05.6 -0.4
      baz=298
W46A  Michie            33.67 101  P       P       13 04 06.1 -0.1
      baz=310
N50A  Nevada            33.70  88  P       P       13 04 06.2 -0.1
      baz=303
D52A  ZEK Kipawa Sen    33.72  75  P       P       13 04 05.8 -0.6
      baz=295
K51A  Iona Station      33.73  84  P       P       13 04 06.3 -0.3
      baz=300
O50A  Cable             33.73  89  P       P       13 04 06.6 -0.1
      baz=304,SNR=8.6
LSQQ  Lebel-sur-Quev    33.75  71  P       P       13 04 07.0 +0.4
      baz=293
BUKO  Buck Lake         33.77  78  P       P       13 04 06.6 -0.3
      baz=297
V47A  Nunnelly          33.78  99  P       P       13 04 07.0  0.0
      baz=309,SNR=9.8
R49A  Shelbyville       33.79  93  P       P       13 04 06.9 -0.2
      baz=306
VLDQ  Val d'Or          33.84  73  P       P       13 04 05.2 -2.2
E52A  Mattawa           33.86  77  P       P       13 04 07.2 -0.5
      baz=296
LG4Q  La Grande 4       33.87  62  P       P       13 04 06.4 -1.3
X46A  Booneville        33.91 102  P       P       13 04 08.4 +0.2
      baz=311
P50A  Jamestown         33.92  90  P       P       13 04 07.9 -0.3
      baz=304,SNR=13
S49A  Springfield       34.01  94  P       P       13 04 08.9 -0.2
      baz=306
W47A  Westpoint         34.09 100  P       P       13 04 09.2 -0.6
      baz=310,SNR=6.9
ACSO  Alum Creek Sta    34.10  89  P       P       13 04 09.2 -0.6
      baz=303,SNR=7.0
D53A  Lac Vacive, Po    34.11  75  eP      P       13 04 09.2 -0.6
      comp=Z,51nm,1.3s
D53A  Lac Vacive, Po    34.11  75  P       P       13 04 10.0 +0.2
      baz=295,SNR=9.8
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N51A  Ashland           34.11  87  P       P       13 04 09.6 -0.4
      baz=303
Q50A  Georgetown        34.23  92  P       P       13 04 10.5 -0.5
      baz=305
T49A  Edmonton          34.26  95  P       P       13 04 10.8 -0.4
      baz=307
V48A  Smith Brothers    34.27  98  P       P       13 04 11.1 -0.3
      baz=309
VBMS  Vicksburg         34.27 107  P       P       13 04 10.9 -0.4
      baz=314
R50A  Paris             34.33  93  P       P       13 04 12.1 +0.2
      baz=306,SNR=12
O51A  Pataskala         34.38  89  P       P       13 04 12.2 -0.1
      baz=304
ALGO  Algonquin Park    34.38  77  P       P       13 04 12.2  0.0
      baz=297,SNR=9.1
G53A  Haliburton        34.41  78  P       P       13 04 12.1 -0.3
      baz=298
E53A  Dumoine, Ponti    34.44  76  P       P       13 04 12.9 +0.2
      baz=296,SNR=7.0
U49A  Red Boiling Sp    34.46  96  P       P       13 04 12.8 -0.1
      baz=308
P51A  Williamsport      34.46  90  P       P       13 04 12.4 -0.5
      baz=304,SNR=5.5
Q51A  Peebles           34.53  91  P       P       13 04 13.4 -0.2
      baz=305,SNR=6.7
FRB   Frobisher Bay     34.57  44  P       P       13 04 13.6  0.0
W48A  Pulaski           34.58  99  P       P       13 04 13.9 -0.2
      baz=310,SNR=5.2
S50A  Richmond          34.64  94  P       P       13 04 14.8 +0.2
      baz=306,SNR=11
E54A  Lac Daplat, Po    34.71  76  P       P       13 04 14.9 -0.2
      baz=296,SNR=6.2
D54A  Lac Fusel, La     34.73  74  P       P       13 04 14.7 -0.4
      baz=296
T50A  Nancy             34.75  95  P       P       13 04 15.1 -0.4
      baz=307
R51A  Hillsboro         34.80  92  P       P       13 04 16.0 +0.1
      baz=306,SNR=10.0
V49A  McMinnville       34.84  98  P       P       13 04 16.2 -0.1
      baz=309,SNR=5.7
M53A  WI Miller and     34.92  85  P       P       13 04 16.4 -0.6
      baz=302
X48A  Hartselle         34.95 100  P       P       13 04 16.8 -0.5
      baz=310
P52A  Corning           34.97  89  P       P       13 04 16.7 -0.7
      baz=304
W49A  Belvidere         35.02  99  P       P       13 04 17.7 -0.1
      baz=310
BILL  Bilibino          35.12 324c iP      P       13 04 20.1 +1.8
BILL                               pmax    pmax
      comp=Z,32nm,1.7s
U50A  Jamestown         35.12  96  P       P       13 04 18.4 -0.3
      baz=308,SNR=5.6
N53A  Lisbon            35.16  86  P       P       13 04 18.7 -0.3
      baz=303
S51A  Beattyville       35.18  93  P       P       13 04 19.2  0.0
      baz=306,SNR=8.5
O53A  New Philadelph    35.22  87  P       P       13 04 19.2 -0.3
      baz=303
Y48A  Jasper            35.22 101  P       P       13 04 19.5 -0.1
      baz=311
Q52A  Bidwell           35.26  90  P       P       13 04 19.6 -0.3
      baz=305
T51A  Gray              35.35  94  P       P       13 04 20.8 +0.1
      baz=307,SNR=8.7
X49A  Woodville         35.37 100  P       P       13 04 21.0 +0.2
      baz=310
L54A  Sinclairville     35.38  83  P       P       13 04 20.8 -0.1
      baz=301
R52A  Catlettsburg      35.38  91  P       P       13 04 20.9  0.0
      baz=306
PLVO  Plevna            35.41  78  P       P       13 04 21.1  0.0
      baz=298
I55A  Frankford         35.43  79  P       P       13 04 20.9 -0.3
      baz=299
MEDO  Medina            35.45  81  P       P       13 04 21.2 -0.3
      baz=300
P53A  Whipple           35.53  89  P       P       13 04 21.8 -0.4
      baz=304
M54A  Oil Creek Stat    35.53  85  P       P       13 04 21.7 -0.5
      baz=302
G55A  Calabogie         35.54  77  P       P       13 04 21.8 -0.4
      baz=298
W50A  Signal Mountai    35.57  98  P       P       13 04 22.5 -0.1
      baz=309,SNR=6.1
H55A  Tweed             35.58  78  P       P       13 04 21.7 -0.8
      baz=299
K54A  Basiliko Farm,    35.58  82  P       P       13 04 22.0 -0.7
      baz=301
N54A  Moraine State     35.62  86  P       P       13 04 22.2 -0.7
      baz=303
U51A  La Follette       35.66  95  P       P       13 04 22.8 -0.6
      baz=308
Y49A  Blount Mountai    35.73 101  P       P       13 04 23.7 -0.3
      baz=311
O54A  Avella            35.79  87  P       P       13 04 23.7 -0.8
      baz=304
Q53A  Leroy             35.80  90  P       P       13 04 23.7 -0.8
      baz=305
V51A  Loudon            35.80  96  P       P       13 04 24.0 -0.6
      baz=309
X50B  Fort Payne        35.83  99  P       P       13 04 24.7 -0.1
      baz=310,SNR=11
R53A  Hurricane         35.83  91  P       P       13 04 23.7 -1.0
      baz=306
TZTN  Tazewell          35.86  94  P       P       13 04 25.2 +0.1
      baz=308,SNR=5.6
T52A  Hallie            35.88  93  P       P       13 04 24.9 -0.4
      baz=307,SNR=8.7
LRAL  Lakeview Retre    35.91 102  P       P       13 04 25.4 -0.1
      baz=312,SNR=8.4
K55A  Perry             35.92  82  P       P       13 04 24.9 -0.6
      baz=301
VABQ  Val Des Bois      35.93  75  P       P       13 04 25.3 -0.2
W51A  Cleveland         35.95  97  P       P       13 04 26.0 +0.2
      baz=309
L55A  Hinsdale          35.96  83  P       P       13 04 25.7 -0.2
      baz=301
U52A  Thorn Hill        36.07  94  P       P       13 04 27.1 +0.2
      baz=308
Z49A  Columbiana        36.09 101  P       P       13 04 27.1  0.0
      baz=312
GAC   Glen Almond       36.10  76  P       P       13 04 27.0  0.0
M55A  Ridgway           36.13  84  P       P       13 04 27.3 -0.1
      baz=302
H56A  Elgin             36.14  78  P       P       13 04 27.0 -0.3
      baz=299
Y50A  Piedmont          36.14 100  P       P       13 04 27.6 +0.2
      baz=311,SNR=6.9
Q54A  Coxs Mills        36.17  89  P       P       13 04 27.5 -0.1
      baz=305,SNR=10
T53A  Wise              36.25  93  P       P       13 04 28.4  0.0
      baz=307
X51A  Calhoun           36.26  98  P       P       13 04 28.6 +0.1
      baz=310,SNR=11
TKL   Tuckaleechee C    36.26  96  P       P       13 04 28.3 -0.2
      comp=Z,8.2nm,0.8s,baz=200,slow=3.8,SNR=9.6
V52A  Sevierville       36.26  95  P       P       13 04 28.5  0.0
      baz=308,SNR=16
149A  Jones             36.33 102  P       P       13 04 29.3 +0.3
      baz=312,SNR=8.3
N55A  Marion Center     36.36  85  P       P       13 04 29.2 -0.1
      baz=303
TRQ   Mont Tremblant    36.43  74  P       P       13 04 30.5 +0.6
Z50A  Ashland           36.44 101  P       P       13 04 30.1 +0.1
      baz=312,SNR=11
O55A  Ligonier          36.47  86  P       P       13 04 29.8 -0.4
      baz=304
M56A  Emporium          36.49  84  P       P       13 04 30.0 -0.4
      baz=302
W52A  Murphy            36.52  97  P       P       13 04 30.6 -0.1
      baz=309,SNR=7.3
R54A  Victor            36.53  90  P       P       13 04 30.6 -0.1
      baz=306,SNR=8.1
249A  Camden            36.54 104  P       P       13 04 31.3 +0.5
      baz=313
S54A  Dingess, Beckl    36.55  91  P       P       13 04 30.7 -0.3
      baz=306
Y51A  Rockmart          36.56  99  P       P       13 04 31.2 +0.1
      baz=311
U53A  Fall Branch       36.59  94  P       P       13 04 31.4 +0.1
      baz=308,SNR=7.1
N56A  West Decatur      36.72  84  P       P       13 04 32.1 -0.3
      baz=303
150A  Eclectic          36.80 102  P       P       13 04 33.3 +0.1
      baz=312,SNR=7.1
T54A  Tazewell          36.81  92  P       P       13 04 33.1 -0.1
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      baz=307
X52A  Dahlonega         36.85  97  P       P       13 04 33.6 +0.1
      baz=310,SNR=5.7
V53A  Saluda            36.87  95  P       P       13 04 34.0 +0.3
      baz=309,SNR=18
O56A  Blue Knob Stat    36.90  86  P       P       13 04 33.2 -0.8
      baz=304
349A  Repton            36.92 104  P       P       13 04 34.9 +0.8
      baz=314
W53A  Cullowhee         36.96  96  P       P       13 04 34.7 +0.1
      baz=309,SNR=21
U54A  Nelsons Funny     36.98  93  P       P       13 04 34.7  0.0
      baz=308
R55A  Marlinton         37.03  89  P       P       13 04 35.1  0.0
      baz=306,SNR=11
250A  Grady             37.07 103  P       P       13 04 35.5 +0.1
      baz=313
S55A  Lewisburg         37.08  90  P       P       13 04 36.0 +0.5
      baz=306,SNR=7.6
P56A  Dayton Farm, R    37.15  87  P       P       13 04 35.6 -0.4
      baz=304
LONY  Lake Ozonia       37.17  77  P       P       13 04 35.6 -0.6
      baz=299
Q56A  Snyder Ridge,     37.19  88  P       P       13 04 36.3 -0.1
      baz=305
Y52A  Lilburn           37.22  98  P       P       13 04 36.6  0.0
      baz=311,SNR=6.8
N57A  Milroy            37.28  84  P       P       13 04 37.3 +0.2
      baz=303
T55A  Pulaski           37.29  91  P       P       13 04 36.9 -0.4
      baz=307
X53A  Estanollee        37.29  97  P       P       13 04 37.2  0.0
      baz=310
151A  Opelika           37.29 101  P       P       13 04 37.6 +0.3
      baz=312
V54A  Nebo              37.36  94  P       P       13 04 38.1 +0.3
      baz=308,SNR=6.0
350A  Dozier            37.41 103  P       P       13 04 38.6 +0.3
      baz=314
Z52A  Williamson        37.43 100  P       P       13 04 38.5 +0.1
      baz=311,SNR=8.3
BLA   Blacksburg        37.47  91  P       P       13 04 37.8 -1.0
      baz=307
U55A  TA2, Sparta       37.49  92  P       P       13 04 38.7 -0.3
      baz=308
BINY  Binghamton        37.51  81  P       P       13 04 38.7 -0.4
      baz=302
SCHQ  Schefferville     37.52  58  LR      LR      13 20 28.2
      comp=Z,4μm,20.9s,baz=292,slow=37
Y53A  Monroe            37.52  98  P       P       13 04 39.6 +0.3
      baz=310,SNR=7.7
O57A  Amberson          37.53  85  P       P       13 04 38.8 -0.4
      baz=304
251A  Midway            37.53 102  P       P       13 04 39.2 -0.1
      baz=313,SNR=5.9
152A  Waverly Hall      37.58 100  P       P       13 04 39.6 -0.1
      baz=312,SNR=12
W54A  Cherokee Point    37.63  95  P       P       13 04 39.9 -0.2
      baz=309
M58A  Price’s Panora    37.65  83  P       P       13 04 39.8 -0.5
      baz=303
DAQ   Lac Daran         37.67  70  P       P       13 04 41.5 +1.1
P57A  Homestead Farm    37.69  86  P       P       13 04 40.5 -0.1
      baz=304
S56A  Natural Bridge    37.74  90  P       P       13 04 41.7 +0.6
      baz=306
N58A  Sunbury           37.77  83  P       P       13 04 40.8 -0.4
      baz=303
V55A  Taylorsville      37.78  93  P       P       13 04 41.2 -0.2
      baz=308
T56A  Rocky Mt          37.82  91  P       P       13 04 41.5 -0.2
      baz=307
X54A  Belton            37.85  96  P       P       13 04 41.9 -0.1
      baz=310,SNR=5.3
GOGA  Godfrey           37.89  98  P       P       13 04 42.2 -0.1
      baz=311,SNR=10
Z53A  Monticello        37.91  99  P       P       13 04 42.4 -0.1
      baz=311,SNR=5.7
O58A  Lewisberry        38.03  85  P       P       13 04 43.1 -0.4
      baz=304
R57A  Stanardsville     38.04  88  P       P       13 04 43.4 -0.2
      baz=306
S57A  Dark Hollow, R    38.08  89  P       P       13 04 44.2 +0.3
      baz=306
Y54A  Tignall           38.09  97  P       P       13 04 44.0  0.0
      baz=310,SNR=9.5
KMSC  Kings Mountain    38.14  94  P       P       13 04 44.2 -0.2
      baz=309
P58A  Pank, Wackersv    38.15  86  P       P       13 04 44.0 -0.5
      baz=304
M59A  Waymart           38.21  82  P       P       13 04 44.4 -0.6
      baz=302
Q58A  Fox Den Farm,     38.21  87  P       P       13 04 44.7 -0.3
      baz=305
352A  Blakely           38.25 102  P       P       13 04 45.7 +0.4
      baz=313
V56A  Mocksville        38.26  93  P       P       13 04 45.5 +0.1
      baz=308
MOQ   Mont Orford       38.28  74  P       P       13 04 46.2 +0.6
N59A  State Game Lan    38.33  83  P       P       13 04 45.5 -0.5
      baz=303
253A  Americus          38.36 101  P       P       13 04 45.9 -0.4
      baz=312
X55A  Gracelyn & Ava    38.37  96  P       P       13 04 46.2 -0.2
      baz=310,SNR=9.8
Z54A  Sparta            38.40  98  P       P       13 04 46.4 -0.2
      baz=311
O59A  Robesonia         38.40  84  P       P       13 04 46.0 -0.5
      baz=304
Y55A  Saluda            38.57  96  P       P       13 04 47.8 -0.3
      baz=310
W56A  Indian Trail      38.63  94  P       P       13 04 48.6 +0.1
      baz=309
U57A  Blanch            38.63  91  P       P       13 04 48.3 -0.2
      baz=308
R58B  Mineral           38.65  88  P       P       13 04 49.3 +0.6
      baz=306
V57A  Coltrane Farms    38.68  92  P       P       13 04 49.0  0.0
      baz=308
X56A  White Oak         38.74  95  P       P       13 04 49.1 -0.4
      baz=310,SNR=5.1
S58A  Poland Farm, P    38.75  89  P       P       13 04 49.3 -0.2
      baz=306
353A  Camilla           38.78 102  P       P       13 04 49.1 -0.8
      baz=313
N60A  Cedar Hill Far    38.78  82  P       P       13 04 49.8  0.0
      baz=303
552A  Lynn Haven        38.94 104  P       P       13 04 51.4 +0.2
      baz=314
254A  Abbeville         38.96 100  P       P       13 04 51.1 -0.3
      baz=312
W57A  Gilead            38.99  93  P       P       13 04 51.3 -0.2
      baz=309
155A  Kite              39.04  98  P       P       13 04 51.8 -0.2
      baz=312
U58A  Oxford            39.16  91  P       P       13 04 52.8 -0.1
      baz=308,SNR=6.7
V58A  Windy Hill, Pi    39.16  92  P       P       13 04 53.1 +0.2
      baz=308
T59A  Double "B" Far    39.45  89  P       P       13 04 55.9 +0.5
      baz=307
W58A  Raeford           39.56  93  P       P       13 04 56.5 +0.2
      baz=309
U59A  Littleton         39.67  90  P       P       13 04 57.4 +0.2
      baz=308
Z57A  Bowman            39.72  96  P       P       13 04 57.3 -0.4
      baz=311
V59A  Middlesex         39.74  91  P       P       13 04 57.7 -0.1
      baz=308
256A  Glennville        39.83  99  P       P       13 04 57.5 -1.1
      baz=312
554A  Perry             39.98 103  P       P       13 04 59.7 -0.2
      baz=314
Z58A  St. Stephen       40.26  95  P       P       13 05 02.4 +0.3
      baz=311
W60A  Pink Hill         40.52  92  P       P       13 05 04.7 +0.5
      baz=309
X60A  Albert Glenn T    40.64  92  P       P       13 05 05.8 +0.5
      baz=309
655A  Horseshoe Beac    40.65 103  P       P       13 05 05.4 +0.1
      baz=314
656A  Willston          41.20 102  eP      P       13 05 09.5 -0.4
      comp=Z,48nm,0.8s
656A  Willston          41.20 102  P       P       13 05 10.5 +0.6
      baz=314
TLIG  Tlapa             41.26 131  eP      P       13 05 09.1 -1.6
      comp=Z,51nm,1.6s
657A  Interlachen       41.47 101  P       P       13 05 12.6 +0.5
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            baz=314
757A  Oxford           41.78 102  P      P      13 05 15.0 +0.3
            baz=315
SEY   Seymchan         41.79 318  P      P      13 05 14.8 +0.4
            comp=Z,13nm,1.0s,baz=85,slow=6.6,SNR=22
SEY   Seymchan         41.79 318⇑iP     P      13 05 16.0 +1.6
658A  Bunnell          41.96 101  P      P      13 05 16.4 +0.2
            baz=314
758A  Lake Helen       42.31 101  P      P      13 05 19.2 +0.2
            baz=314
PET   Petropavlovsk    42.63 302 eP      P      13 05 18.6 -2.7
PET                              eS      S      13 11 37.7 -6.5
PET                               pmax   pmax
            comp=Z,300nm,4.9s
PET                               pmax   pmax
            comp=Z,29nm,1.1s
PET                               pmax   pmax
            comp=Z,100nm,6.5s
PEA0B Petropavlovsk-   43.11 303 eP      P      13 05 22.9 -2.4
            comp=Z,31nm,1.1s
PETK  Petropavlovsk-   43.11 303  P      P      13 05 24.5 -0.8
            comp=Z,11nm,0.9s,baz=72,slow=14,SNR=15
PETK                              LR     LR     13 20 37.3
            comp=Z,632nm,21.2s,baz=67,slow=32
058A  Arcadia          43.28 104  P      P      13 05 27.5 +0.6
            baz=316
CMIG  Matias Romero    43.49 127  P      P      13 05 28.5 -0.2
            comp=Z,4.0nm,0.7s,baz=337,slow=7.7,SNR=6.0
MA2   Magadan          43.79 314c iP     P      13 05 32.5 +1.8
MA2                               pmax   pmax
            comp=Z,15nm,1.2s
060A  Indiantown       44.19 103  P      P      13 05 34.0 -0.2
            baz=316
TEIG  Tepich           44.54 117  P      P      13 05 37.8 +0.8
            comp=Z,23nm,0.9s,baz=308,slow=6.8,SNR=9.7
TEIG  Tepich           44.54 117 eP      P      13 05 35.8 -1.3
            comp=Z,25nm,0.9s
SPA0  Spitsbergen Ar   50.14   9 eP      P      13 06 18.2 -1.9
            comp=Z,24nm,1.0s
YAK   Yakutsk          51.47 324 eP      P      13 06 30.3 +0.1
YAK                              e*PP    pwP    13 06 36.1 +1.4
YAK                              e              13 07 45.8
YAK                              e              13 08 33.1
YAK                              eS      S      13 13 49.9 -0.1
YAK                              e*SS    sS     13 14 04.4  +11
YAK                               pmax   pmax
            comp=Z,14nm,0.9s
YAK                               pmax   pmax
            comp=N,3.0nm,1.0s
YAK                               pmax   pmax
            comp=E,6.0nm,1.1s
YAK                               pmax   pmax
            comp=Z,10.0nm,0.7s
YAK                               pmax   pmax
            comp=N,29nm,1.8s
YAK                               pmax   pmax
            comp=E,30nm,2.0s
YAK                               smax   smax
            comp=N,61nm,16.3s
YAK                               MLR    MLR
            comp=Z,1µm,19.0s
YAK                               MLR    MLR
            comp=E,691nm,18.0s
YAK                               MLR    MLR
            comp=N,276nm,17.0s
TYV   Tymovskoe        52.21 307 eP      P      13 06 35.2 -0.7
TYV                               pmax   pmax
            comp=Z,11nm,1.1s
TYV                               pmax   pmax
            comp=Z,200nm,5.3s
BORG  Borgarnes        52.77  31 i P     P      13 06 44.7 +4.9
JTS   Las Juntas de    54.43 121  LR     LR     13 32 39.1
            comp=Z,259nm,18.5s,baz=30,slow=39
YSS   Yuzh-Sakhalins   54.51 303 eP      P      13 06 52.4 -0.5
YSS                              e*SP    pwP    13 07 00.7 +3.1
YSS                              e              13 09 00.4
YSS                              eS      S      13 14 28.9 -3.0
YSS                              ePS     PnS    13 14 37.9 -2.8
YSS                              eSS     SS     13 18 09.3 -4.4
YSS                               pmax   pmax
            comp=Z,10.0nm,1.4s
YSS                               MLR    MLR
            comp=Z,400nm,17.0s
GRNR  Gornyy           55.41 310 eP      P      13 06 59.0 -0.3
GRNR                              pmax   pmax
            comp=Z,26nm,1.0s
ERM   Erimo            57.42 298ceP      P      13 07 16.2 +2.4
ERM                               pmax   pmax
            comp=Z,27nm,1.3s
ZEA   Zeya             57.75 317 eP      P      13 07 16.0 +0.1
ZEA                              eS      S      13 15 20.0 +5.2
ZEA                               pmax   pmax
            comp=Z,84nm,2.0s
ZEA                               smax   smax
            comp=E,300nm,14.0s
ZEA                               MLR    MLR
            comp=Z,1µm,15.0s
ZEA                               MLR    MLR
            comp=E,600nm,16.0s
ZEA                               MLR    MLR
            comp=N,600nm,15.0s
H11N2 WAKE ISLAND Hy   57.92 262  T      T      14 09 51.5
            baz=42,slow=75,SNR=1386
H11N3 WAKE ISLAND Hy   57.92 262  T      T      14 09 50.9
            baz=42,slow=75,SNR=1101
H11N1 WAKE ISLAND Hy   57.93 262  T      T      14 09 52.7
            baz=42,slow=75,SNR=1166
KLR   Kul'dur          58.70 311⇓eP      P      13 07 23.4 +0.8
KLR                               pmax   pmax
            comp=Z,3.0nm,1.1s
H11S1 WAKE ISLAND Hy   58.94 262  T      T      14 11 10.9
            baz=41,slow=75,SNR=212
H11S2 WAKE ISLAND Hy   58.95 262  T      T      14 11 11.8
            baz=41,slow=75,SNR=124
H11S3 WAKE ISLAND Hy   58.96 262  T      T      14 11 25.1
            baz=41,slow=75,SNR=74
ARCES ARCESS Array B   59.12  10  P      P      13 07 24.8 -0.5
            comp=Z,3.6nm,0.9s,baz=357,slow=7.3,SNR=7.0
ARCES                             LR     LR     13 32 29.9
            comp=Z,562nm,21.9s,baz=332,slow=36
TAOE  Nuku Hiva Isla   59.58 192 eS      S      13 15 40.9 +1.5
            comp=Z,77nm,26.4s
TAOE                             eLR     LR     13 25 02.8
            comp=Z,1µm,25.7s
BOD   Bodaibo          60.12 326 eP      P      13 07 32.1 -0.2
BOD                               pmax   pmax
            comp=Z,28nm,1.5s
LVZ   Lovozero         61.55   7⇑eP      P      13 07 43.9 +1.9
LVZ                               pmax   pmax
            comp=Z,11nm,0.9s
USRK  Ussuriysk Ar.    62.01 306  P      P      13 07 44.9 -0.5
            comp=Z,6.8nm,0.9s,baz=52,slow=7.7,SNR=11
USRK                              LR     LR     13 34 20.3
            comp=Z,346nm,21.0s,baz=36,slow=36
MSF   Maaselka         63.00   9  P      P      13 07 54.4 +2.8
MSF                               pmax   pmax
            comp=Z,13nm,1.0s
SDV   Santo Domingo    63.89 109 eP      P      13 07 57.6 -0.8
            comp=Z,8.2nm,0.8s
MAJO  Matsushiro       63.95 296 eP      P      13 07 56.9 -1.5
            comp=Z,15nm,1.4s
MAJO  Matsushiro       63.95 296 eP      P      13 07 56.9 -1.5
MAJO                              pmax   pmax
            comp=Z,15nm,1.4s
MJAR  Matsushiro Arr   63.95 296  P      P      13 07 56.8 -1.5
            comp=Z,1.5nm,0.8s,baz=26,slow=7.2,SNR=5.4
MJAR                              LR     LR     13 31 43.5
            comp=Z,152nm,21.5s,baz=70,slow=32
MJB9  Matsu-Tunnel     63.95 296 eP      P      13 07 56.9 -1.5
            comp=Z,16nm,1.4s
NC204 NORSAR Array S   64.41  20 eP      P      13 08 00.5 -0.6
            comp=Z,23nm,1.4s
NB2   NORSAR Subarra   64.72  20  P      P      13 08 03.4 +0.3
            comp=Z,61nm,3.3s,baz=334,slow=6.5
NB2   NORSAR Subarra   64.72  20  P      P      13 08 03.4 +0.3
            baz=334,slow=6.5
NOA   NORSAR Array B   64.72  20  P      P      13 08 03.5 +0.5
            comp=Z,3.0nm,1.0s,baz=335,slow=6.4,SNR=6.8
NOA                               LR     LR     13 35 13.7
            comp=Z,651nm,20.1s,baz=335,slow=35
ROSC  El Rosal         64.91 115  P      P      13 08 06.4 +1.0
            comp=Z,15nm,0.5s,baz=58,slow=18,SNR=4.2
ROSC                              LR     LR     13 40 58.4
            comp=Z,260nm,18.6s,baz=314,slow=40
ROSC  El Rosal         64.91 115 eP      P      13 08 04.5 -0.9
            comp=Z,36nm,1.6s
NC602 NORSAR Array S   65.06  20 eP      P      13 08 04.8 -0.5
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            comp=Z,15nm,1.5s
JHJ   Hachijo jima 2   65.44 293  LR     LR     13 30 07.2
            comp=Z,199nm,20.3s,baz=80,slow=30
CN2   Changchun        65.60 310 eP      P      13 08 11.3 +2.3
SUF   Sumiainen        65.74  12  P      P      13 08 12.8 +3.2
SUF                               pmax   pmax
            comp=Z,6.0nm,1.2s
PMOR  Pomariorio Ree   66.91 199 eT      T      14 20 47.7
            comp=Z,20nm,0.3s
FIA1  FINESS Array S   66.96  12 eP      P      13 08 16.9 -0.5
            comp=Z,19nm,1.3s
FINES FINESS Array B   66.96  12  P      P      13 08 17.4  0.0
            comp=Z,6.6nm,0.8s,baz=0.0,slow=6.3,SNR=22
FINES                             LR     LR     13 38 37.1
            comp=Z,610nm,18.2s,baz=348,slow=37
IRK   Irkutsk          67.96 327 eP      P      13 08 24.9 +1.0
IRK                               pmax   pmax
            comp=Z,55nm,2.1s
TLY   Talaya           68.64 327  LR     LR     13 39 47.7
            comp=Z,855nm,18.8s,baz=0.0,slow=37
TLY   Talaya           68.64 327 eP      P      13 08 27.5 -0.7
            comp=Z,20nm,1.3s
TLY   Talaya           68.64 327 eP      P      13 08 29.0 +0.7
TLY                               pmax   pmax
            comp=Z,45nm,1.3s
TLY                               MLR    MLR
            comp=Z,2µm,16.0s
KLMR  Klimovskoe       68.86   5 eP      P      13 08 30.6 +1.2
KLMR                              pmax   pmax
            comp=Z,25nm,1.1s
KSRS  Korea Array      69.00 304  P      P      13 08 31.0 +0.4
            comp=Z,1.7nm,0.9s,baz=41,slow=5.5,SNR=6.7
KSRS                              LR     LR     13 39 51.6
            comp=Z,150nm,18.1s,baz=31,slow=37
KS15  Wonju Array Si   69.03 304 eP      P      13 08 29.9 -1.0
            comp=Z,12nm,1.4s
PPT   Papeete          69.75 200  LR     LR     13 31 37.3
            comp=Z,422nm,20.8s,baz=12,slow=30
PPT2  Papeete2         69.77 200 eS      S      13 17 45.4 +0.5
            comp=Z,87nm,27.2s
PPT2  Papeete2         69.77 200 eLR     LR     13 29 48.6
            comp=Z,1µm,28.0s
PPT2  Papeete2         69.77 200 eT      T      14 24 13.6
            comp=Z,4.8nm,0.3s
PAE   Paea             69.84 200 eT      T      14 24 13.2
            comp=Z,1.8nm,0.3s
TVO   Taravao          69.89 200 eT      T      14 24 26.6
            comp=Z,2.6nm,0.4s
VSU   Vasula           69.93  13 eP      P      13 08 37.1 +1.1
VSU                               IAmb   IAmb   13 08 40.6
            comp=Z,34nm,1.0s
VSU   Vasula           69.93  13⇓eP      P      13 08 37.5 +1.5
VSU                               pmax   pmax
            comp=Z,42nm,1.0s
JNU   Nakatsue         70.58 299  LR     LR     13 35 49.8
            comp=Z,272nm,21.6s,baz=32,slow=33
SONM  Songino Array    70.83 324  P      P      13 08 41.5 -0.4
            comp=Z,1.4nm,0.7s,baz=48,slow=6.6,SNR=11
SONM                              LR     LR     13 40 06.1
            comp=Z,981nm,20.2s,baz=26,slow=36
DL2   Dalian           71.17 309  P      P      13 08 44.3 +0.3
DL2                               S      S      13 18 03.3 +2.4
DL2                               pmax   pmax
            comp=Z,9.0nm,0.7s
DL2                               LR     LR
            comp=Z,470nm,15.7s
DL2                               LR     LR
            comp=Z,450nm,18.0s
DL2                               LR     LR
            comp=Z,680nm,20.3s
ZAA0  Zalesovo Array   72.06 339 eP      P      13 08 48.1 -0.9
            comp=Z,22nm,1.3s
ZALV  Zalesovo Beam    72.06 339  P      P      13 08 48.4 -0.6
            comp=Z,4.9nm,0.8s,baz=15,slow=6.2,SNR=12
ZALV                              LR     LR     13 42 18.6
            comp=Z,513nm,21.6s,baz=60,slow=37
IZAR  Zarasai          72.47  14 eP      P      13 08 52.7 +1.2
IZAR                              IAmb   IAmb   13 08 54.4
            comp=Z,8.6nm,0.7s
ISAL  Salakas          72.63  14 eP      P      13 08 53.9 +1.5
ISAL                              IAmb   IAmb   13 08 59.5
            comp=Z,16nm,1.3s
IIGN  Ignalina         72.86  14 eP      P      13 08 55.0 +1.2
IIGN                              IAmb   IAmb   13 08 57.6
            comp=Z,5.6nm,0.8s
SVE   Sverdlovsk       72.86 354 eP      P      13 08 55.5 +1.7
SVE                               pmax   pmax
            comp=Z,21nm,1.5s
SVE                               MLR    MLR
            comp=Z,436nm,21.0s
RKT   Rikitea          73.24 185 eT      T      14 28 53.4
            comp=Z,3.9nm,0.3s
ARU   Arti             73.38 355 eP      P      13 08 56.5 -0.3
            comp=Z,19nm,1.3s
ARU   Arti             73.38 355c iP     P      13 08 58.0 +1.1
ARU                                             13 11 38.4
ARU                               S      SKiKP  13 18 27.9 +0.1
ARU                               pmax   pmax
            comp=Z,17nm,1.6s
MOS   Moscow           73.81   7 eP      P      13 09 01.5 +2.1
MOS                              e              13 09 12.3
MOS                               MLR    MLR
            comp=Z,400nm,17.0s
MICGM Minsk            73.92  13 e       P      13 09 02.0 +1.9
MICGM                            eLR     LR     13 37 00.0
MNK   Minsk            73.92  13 eP      P      13 09 02.0 +1.9
CLL   Collm            73.99  23 eP      P      13 09 04.0 +3.5
CLL                              eS      S      13 18 34.0 +1.3
CLL                               MLR    MLR
            comp=Z,400nm,19.0s
CLL   Collm            73.99  23 e(P)    P      13 09 04.0 +3.5
CLL                              eS      S      13 18 34.0 +1.3
CLL                              ePPS    PPS    13 19 16.0
CLL                              eSS     SS     13 23 19.0 +3.2
CLL                              e              13 24 34.0
CLL                              eSSSS          13 28 06.0
CLL                               LmH           13 42 00.0
            comp=N,400nm,18.9s
CLL                               LmH           13 42 00.0
            comp=E,200nm,21.0s
CLL                               LmV           13 42 00.0
            comp=Z,400nm,19.0s
MFF   Saint Martin d   74.19  33 eP      P      13 09 03.9 +2.1
MFF                               pmax   pmax
            comp=Z,9.0nm,1.0s
MOX   Moxa             74.23  24  P      P      13 09 05.0 +3.0
MOX                               pmax   pmax
            comp=Z,6.0nm,0.9s
OBN   Obninsk          74.34   8 i P     P      13 09 03.2 +0.7
OBN                              i              13 09 08.8
OBN                              i              13 09 18.3
OBN                               pmax   pmax
            comp=Z,28nm,1.0s
OBN                               MLR    MLR
            comp=Z,519nm,17.0s
HHC   Hu-ho-hao-te     74.41 316  P      P      13 09 02.5 -0.8
HHC                               S      S      13 18 36.8 -1.2
HHC                               sS     sS     13 18 44.5 +3.4
HHC                               pmax   pmax
            comp=Z,5.0nm,0.9s
HHC                               LR     LR
            comp=Z,410nm,16.7s
HHC                               LR     LR
            comp=Z,400nm,14.1s
BRG   Berggiesshubel   74.62  23 eP      P      13 09 06.2 +1.9
            comp=Z,6.4nm,1.1s
BRG                               S      S      13 18 44.0 +4.2
BRG                               SS     SS     13 23 30.0 +4.5
            comp=N,490nm,16.5s
            comp=E,319nm,17.1s
            comp=Z,648nm,16.8s
BRG   Berggiesshubel   74.62  23 eP      P      13 09 06.2 +1.9
BRG                               S      S      13 18 44.0 +4.2
BRG                               SS     SS     13 23 30.0 +4.5
BRG                               pmax   pmax
            comp=Z,6.0nm,1.1s
BRG                               MLR    MLR
            comp=N,490nm,16.5s
BRG                               MLR    MLR
            comp=E,319nm,17.1s
BRG                               MLR    MLR
            comp=Z,648nm,16.8s
NKC   Novy Kostel      74.83  24  AMS    AMS    13 45 10.0
            comp=Z,500nm,14.5s
PGAV  Gavieira, Arco   74.96  41 eLR     LR     13 32 59.8
            comp=Z,466nm,16.0s
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CDF   Champ du Feu     75.03  28 eP      P      13 09 07.8 +1.0
CDF                               pmax   pmax
            comp=Z,6.0nm,0.7s
SSF   Saint Saulge     75.04  31 eP      P      13 09 08.2 +1.5
SSF                               pmax   pmax
            comp=Z,18nm,1.2s
PVCC  Panska Ves       75.09  22  AMS    AMS    13 44 20.0
            comp=Z,800nm,15.8s
KSP   Ksiaz            75.21  21 eP      P      13 09 14.0 +6.3
KSP   Ksiaz            75.21  21 eP      P      13 09 14.0 +6.3
DGZ   Jazzator, Alta   75.33 336d iP     P      13 09 08.8 +0.3
DGZ                               pmax   pmax
            comp=Z,7.0nm,1.0s
TBI   Tubuai           75.33 198 eS      S      13 18 48.8 +0.8
            comp=Z,355nm,35.0s
TBI   Tubuai           75.33 198 eLR     LR     13 32 16.0
            comp=Z,715nm,32.0s,baz=12
TBI   Tubuai           75.33 198 eT      T      14 31 30.4
            comp=Z,5.1nm,0.3s
CHVC  Chvalec          75.39  22  AMS    AMS    13 43 30.0
            comp=Z,500nm,15.9s
BFO   Black Forest     75.42  27 eP      P      13 09 08.2 -0.7
            comp=Z,8.9nm,1.1s
BFO   Black Forest     75.42  27 eP      P      13 09 08.2 -0.7
BFO                               pmax   pmax
            comp=Z,9.0nm,1.1s
UPC   Upice            75.46  22 eS      S      13 18 56.4 +7.2
UPC                               AMS    AMS    13 43 10.0
            comp=Z,600nm,17.8s
OSTC  Ostas            75.46  21 eS      S      13 18 56.5 +7.2
OSTC                              AMS    AMS    13 43 20.0
            comp=Z,600nm,17.9s
BRVK  Borovoye         75.58 347 eP      P      13 09 08.9 -0.8
            comp=Z,13nm,1.1s
BRVK  Borovoye         75.58 347 eP      P      13 09 08.9 -0.8
BRVK                              pmax   pmax
            comp=Z,13nm,1.1s
PRU   Pruhonice        75.58  23 eS      S      13 18 59.9 +9.3
PRU                               AMS    AMS    13 44 40.0
            comp=Z,800nm,16.6s
POLO  Lamas de Olo     75.65  41 eP      P      13 09 11.4 +1.0
            comp=Z,9.9nm,1.1s
DPC   Dobruska-Polom   75.68  21 eP      P      13 09 11.6 +1.2
DPC                              eS      S      13 18 55.0 +3.3
DPC                               MLR    MLR
            comp=Z,600nm,19.1s
DPC   Dobruska-Polom   75.68  21 eP      P      13 09 11.6 +1.2
DPC                              eS      S      13 18 55.0 +3.3
DPC                               AMS    AMS    13 43 40.0
            comp=Z,600nm,19.1s
GOPC  GO Pecny, Ondr   75.71  23 eS      S      13 18 56.7 +4.6
GOPC                              AMS    AMS    13 44 40.0
            comp=Z,700nm,17.0s
KHC   Kasperske Hory   76.13  24 eP      P      13 09 14.8 +1.8
KHC                              eS      S      13 19 02.7 +5.9
KHC                               MLR    MLR
            comp=Z,500nm,16.2s
KHC   Kasperske Hory   76.13  24 eP      P      13 09 14.8 +1.8
KHC                              eS      S      13 19 02.7 +5.9
KHC                               AMS    AMS    13 45 40.0
            comp=Z,500nm,16.2s
MVO   Moncorvo         76.14  41 eLR     LR     13 33 22.1
            comp=Z,520nm,16.0s
PVIS  Viseu            76.15  42 eP      P      13 09 13.9 +0.6
            comp=Z,18nm,1.6s
KURK  Kurchatov        76.42 342 eP      P      13 09 14.0 -0.5
            comp=Z,24nm,1.4s
KURK  Kurchatov        76.42 342 eP      P      13 09 14.0 -0.5
KURK                              pmax   pmax
            comp=Z,24nm,1.4s
CAF   Calviac          76.42  33 eP      P      13 09 16.0 +1.3
CAF                               pmax   pmax
            comp=Z,36nm,1.8s
GERES GERESS Array B   76.43  24  P      P      13 09 15.0 +0.2
            comp=Z,0.9nm,0.6s,baz=347,slow=4.1,SNR=7.0
GERES                             LR     LR     13 44 34.5
            comp=Z,518nm,19.2s,baz=340,slow=37
PCAS  Casmilo, Conde   76.44  42 eP      P      13 09 15.6 +0.7
            comp=Z,30nm,1.3s
TREC  Trest            76.46  22  AMS    AMS    13 45 00.0
            comp=Z,900nm,15.3s
MORC  Moravsky Berou   76.50  21 eP      P      13 09 17.1 +2.0
GUMO  Guam             76.55 275  LR     LR     13 35 38.9
            comp=Z,116nm,20.6s,baz=48,slow=30
MTE   Manteigas        76.56  41 eP      P      13 09 16.0 +0.4
            comp=Z,23nm,1.7s
MTE   Manteigas        76.56  41 eLR     LR     13 33 58.5
            comp=Z,528nm,18.0s
OKC   Ostrava-Krasne   76.58  21 eS      S      13 19 07.0 +5.5
OKC                               AMS    AMS    13 45 00.0
            comp=Z,500nm,15.4s
VRAC  Vranov           76.71  22 eP      P      13 09 18.2 +1.9
KRUC  Moravsky         76.90  22 eP      P      13 09 18.7 +1.4
PMTG  Montargil        77.37  43 eP      P      13 09 21.4 +1.3
            comp=Z,20nm,1.5s
PMRV  Marv??o          77.43  42 eLR     LR     13 33 54.6
            comp=Z,521nm,18.0s
NIE   Niedzica         77.44  19 eP      P      13 09 14.9 -5.5
NIE   Niedzica         77.44  19 eP      P      13 09 14.9 -5.5
LPG   La Plagne        77.47  30 eP      P      13 09 26.3 +5.3
MODS  Modra-Piesok     77.75  22 eP      P      13 09 23.8 +1.7
MODS  Modra-Piesok     77.75  22 eP      P      13 09 23.8 +1.7
AKASG Malin Array Be   77.82  13  P      P      13 09 21.5 -0.9
            comp=Z,6.9nm,0.9s,baz=352,slow=5.3,SNR=14
AKASG                             LR     LR     13 44 24.6
            comp=Z,676nm,19.2s,baz=5.0,slow=36
NJ2   Nanjing          77.92 306 eP      P      13 09 21.5 -1.8
NJ2                               pmax   pmax
            comp=Z,13nm,0.6s
VYHS  Vyhne            78.00  21 eP      P      13 09 25.8 +2.3
VYHS  Vyhne            78.00  21 eP      P      13 09 25.8 +2.3
PNCL  Nicolau / Gran   78.03  43 eP      P      13 09 24.4 +0.6
            comp=Z,27nm,1.9s
PMOZ  Porto Moniz, M   78.20  52 eLR     LR     13 34 41.9
            comp=Z,292nm,16.0s
PAB   San Pablo        78.61  40 eP      P      13 09 26.4 -0.7
            comp=Z,9.0nm,1.2s
PAB   San Pablo        78.61  40 eP      P      13 09 26.4 -0.7
PAB                               pmax   pmax
            comp=Z,9.0nm,1.2s
ESDC  Sonseca Array    78.66  40  P      P      13 09 27.6 +0.3
            comp=Z,1.4nm,0.5s,baz=320,slow=4.9,SNR=16
ESDC                              LR     LR     13 42 24.1
            comp=Z,316nm,20.3s,baz=335,slow=34
PVAQ  Vaqueiros        78.98  43 eP      P      13 09 29.5 +0.5
PVAQ  Vaqueiros        78.98  43 eLR     LR     13 34 35.3
            comp=Z,563nm,16.0s
MKAR  Makanchi Array   79.31 338  P      P      13 09 29.9 -0.8
            comp=Z,7.0nm,0.8s,baz=31,slow=4.8,SNR=21
MKAR                              LR     LR     13 48 54.0
            comp=Z,569nm,18.6s,baz=12,slow=39
MAKZ  Makanchi         79.37 338 eP      P      13 09 30.1 -1.0
            comp=Z,38nm,1.1s
MAKZ  Makanchi         79.37 338 eP      P      13 09 30.1 -1.0
MAKZ                              pmax   pmax
            comp=Z,39nm,1.1s
GTA   Gaotai           80.50 323 ⇑P      P      13 09 40.8 +3.3
GTA                               pP     PcP    13 09 45.0 +0.6
GTA                               sP     pwP    13 09 47.8 +5.6
GTA                               S      S      13 19 45.5 +1.3
GTA                               pmax   pmax
            comp=Z,5.0nm,1.7s
GTA                               pmax   pmax
            comp=Z,140nm,5.2s
GTA                               LR     LR
            comp=Z,340nm,17.8s
GTA                               LR     LR
            comp=Z,390nm,18.7s
GTA                               LR     LR
            comp=Z,740nm,18.4s
WMQ   Urumqi           80.64 333 eP      P      13 09 40.5 +2.4
WMQ                               pP     pwP    13 09 43.0 +0.2
WMQ                               pmax   pmax
            comp=Z,21nm,1.7s
WMQ                               pmax   pmax
            comp=Z,92nm,3.9s
WMQ                               LR     LR
            comp=Z,300nm,23.9s
WMQ                               LR     LR
            comp=Z,200nm,19.1s
WMQ                               LR     LR
            comp=Z,510nm,23.9s
XAN   Xi'an            81.19 314  P      P      13 09 41.0 -0.1
XAN                               pmax   pmax
            comp=Z,7.0nm,1.1s
LZH   Lanzhou          81.72 319 eP      P      13 09 43.5 -0.6
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LZH				pP	sP	13 09 47.0	+0.4
LZH				sP	PcP	13 09 49.3	-0.6
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,90nm,4.3s						
LZH				LR	LR		
	comp=Z,890nm,16.0s						
LZH				LR	LR		
	comp=Z,530nm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
HNR	Honiara	84.76	249	LR	LR	13 39 15.5	
	comp=Z,183nm,20.4s,baz=38,slow=30						
AAK	Ala-Archa	84.97	342	LR	LR	13 51 50.7	
	comp=Z,216nm,18.2s,baz=6.0,slow=38						
AAK	Ala-Archa	84.97	342	*e*P	P	13 09 59.8	-1.0
	comp=Z,11nm,1.0s						
AAK	Ala-Archa	84.97	342	⇑*e*P	P	13 10 01.8	+1.1
AAK				pmax	pmax		
	comp=Z,19nm,1.7s						
LPAZ	La Paz	85.64	122	P	P	13 10 03.4	-1.4
	comp=Z,3.9nm,0.7s,baz=315,slow=4.1,SNR=13						
LPAZ	La Paz	85.64	122	*e*P	P	13 10 03.3	-1.4
	comp=Z,14nm,1.2s						
LPAZ	La Paz	85.64	122	*e*P	P	13 10 03.3	-1.4
LPAZ				pmax	pmax		
	comp=Z,14nm,1.2s						
KIV	Kislovodsk	85.90	5	*e*P	P	13 10 07.2	+2.0
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
KIV				MLR	MLR		
	comp=Z,663nm,20.0s						
KBZ	Khabaz	86.13	5	P	P	13 10 07.4	+1.2
	comp=Z,5.8nm,0.9s,baz=354,slow=7.1,SNR=7.1						
KBZ				LR	LR	13 52 03.8	
	comp=Z,297nm,18.1s,baz=344,slow=38						
CD2	Chengdu	86.17	316	P	P	13 10 05.0	-1.7
CD2				S	S	13 20 38.8	-2.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,610nm,12.8s						
CD2				LR	LR		
	comp=Z,540nm,16.2s						
CD2				LR	LR		
	comp=Z,640nm,16.7s						
KEST	Kesra	87.12	32	P	P	13 10 11.3	0.0
	comp=Z,6.2nm,1.1s,baz=231,slow=3.7,SNR=4.4						
KEST				LR	LR	13 50 11.0	
	comp=Z,560nm,18.0s,baz=274,slow=36						
MNMC	Minye Minye	87.19	125	*e*P	P	13 10 10.7	-1.2
	comp=Z,15nm,1.0s						
KSH	Kashi	87.67	340	P	P	13 10 14.5	+0.5
KSH				PP	PP	13 13 42.8	+4.6
KSH				S	S	13 20 53.8	-2.3
KSH				sS	ScS	13 21 01.0	-1.9
KSH				pmax	pmax		
	comp=Z,69nm,3.5s						
KSH				LR	LR		
	comp=Z,380nm,15.4s						
KSH				LR	LR		
	comp=Z,230nm,9.7s						
PB11	IPOC Station P	87.68	125	*e*P	P	13 10 12.8	-1.4
	comp=Z,14nm,1.0s						
GYA	Guiyang	88.59	311	*e*P	P	13 10 20.0	+1.5
GYA				PP	PP	13 13 50.3	+4.2
GYA				SKS	SKSac	13 20 47.8	-0.4
GYA				S	S	13 21 03.5	-1.7
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.7s						
BRTR	Keskin Array B	89.20	13	P	P	13 10 19.8	-1.5
	comp=Z,1.5nm,1.1s,baz=297,slow=1.1,SNR=6.1						
BRTR				LR	LR	13 51 24.2	
	comp=Z,205nm,21.3s,baz=340,slow=36						
DZM	Mont Dzumac	91.23	236	*e*PS	PS	13 22 41.2	+2.6
	comp=Z,114nm,25.4s						
DZM	Mont Dzumac	91.23	236	*e*LR	LR	13 39 38.5	
	comp=Z,478nm,30.2s						
KMI	Kunming	91.57	314	P	P	13 10 33.3	+0.7
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
GEYT	Alibeck	91.84	354	P	P	13 10 34.2	+0.8
	comp=Z,1.5nm,0.5s,baz=22,slow=0.8,SNR=2.9						
KBL	Kabul	93.84	344	*e*P	P	13 10 41.8	-1.2
	comp=Z,6.6nm,0.9s						
NIL	Nilore	93.89	341	*e*P	P	13 10 41.4	-1.6
	comp=Z,16nm,0.9s						
NIL	Nilore	93.89	341	*e*P	P	13 10 41.4	-1.6
NIL				pmax	pmax		
	comp=Z,16nm,0.9s						
BDFB	Brasilia	96.89	106	LR	LR	13 59 30.2	
	comp=Z,214nm,19.1s,baz=300,slow=38						
CMAR	Chiang Mai Arr	99.08	314	LR	LR	13 58 55.3	
	comp=Z,254nm,18.7s,baz=31,slow=37						
CPUP	Villa Florida	99.65	120	LR	LR	14 00 48.2	
	comp=Z,103nm,18.4s,baz=360,slow=38						
KMBO	Kilima Mbogo	129.81	17	PKP	PKiKP	13 16 35.2	-1.0
	comp=Z,0.8nm,0.3s,baz=315,slow=19,SNR=2.9						
QSPA	South Pole Qui	140.12	180	*e*PKPdf	PKPdf	13 16 52.9	+0.2
CASY	Casey	146.02	219	*e*PKPdf	PKPdf	13 17 02.5	-0.5
VNA3	Neumayer Olymp	146.21	150	PKPdf	PKPdf	13 17 03.0	-0.2
VNA1	Neumayer--Stat	146.73	149	PKPdf	PKPbc	13 17 05.2	-0.6
SNAA	Sanae	148.29	151	PKPdf	PKPbc	13 17 08.5	-1.7
SNAA	Sanae	148.29	151	*e*PKPdf	PKPdf	13 17 07.6	+0.9
SNAA	Sanae	148.29	151	*e*PKIKP	PKPdf	13 17 07.6	+0.9
BOSA	Boshof	151.37	50	PKPbc	PKiKP	13 17 18.8	-0.8
	comp=Z,11nm,0.7s,baz=324,slow=2.5,SNR=24						
BOSA	Boshof	151.37	50	*e*PKPbc	PKPbc	13 17 17.8	-1.3
BOSA	Boshof	151.37	50	*e*PKIKP	PKPbc	13 17 17.8	-1.3
MAW	Mawson	161.50	196	PKPab	PKPab	13 18 09.9	+0.5
	comp=Z,0.8nm,0.5s,baz=330,slow=3.2,SNR=4.6						

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*IDC **26** 13:00:39.7±8.7, 24°.88S×178°.77W, h323^{km}±81^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.4/28, mbtmp4.4/7, Error ellipse: s-maj=40.1km s-min=23.8km az=43.0*

*ISCJB **26** 13:00:45.1±0.8, 25°.33S±0°.07×178°.6W±0°.2, h400^{km}, mb3.8/6, Error ellipse: s-maj=19.3km s-min=9.4km az=2.3*

ISC 26 13:00:46.9±0.9**, 25°.32S**±0°.09×**178°.6W**±0°.2**, h400^{km}, n56,** σ**1^{s}.29**/60**, mb4.0**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.95	171	P	Pn	13 01 58.2	-0.2
GLKZ	Green Lake	3.97	171	P	Pn	13 01 58.2	-0.4
GLKZ				S	S	13 02 46.7	-10
WCZ	Waipu Caves	12.20	208	P	Pn	13 03 31.8	+1.6
KUZ	Kuaotunu	12.38	202	P	Pn	13 03 33.5	+1.1
MXZ	Matakaoa Point	12.48	191	P	P	13 03 31.8	0.0
MXZ				S	S	13 05 45.2	-2.9
WIAZ	Waiheke Island	12.63	204	P	Pn	13 03 36.2	+1.0
HAZ	Te Kaha	12.77	193	P	Pn	13 03 35.7	-1.1
HAZ				S	S	13 05 52.7	-1.2
PKGZ	Pakihiroa	12.84	192	P	P	13 03 36.0	+0.2
ETAZ	East Tamaki Re	12.85	204	P	Pn	13 03 39.0	+1.3
MKAZ	Moumakai	12.89	203	P	Pn	13 03 39.6	+1.3
KBAZ	Karaka Road Bo	12.98	204	P	Pn	13 03 40.9	+1.6
PUZ	Puketiti	12.99	191	P	P	13 03 36.1	-1.2
RUGZ	Raukumara Rang	12.99	193	P	P	13 03 37.6	0.0
RUGZ				S	S	13 05 56.0	-2.6
TWGZ	Tauwhareparae	13.14	192	P	P	13 03 38.7	-0.3
OPRZ	Ohinepanea	13.14	197	P	Pn	13 03 40.5	-0.7
MWZ	Matawai	13.38	193	P	P	13 03 41.6	-0.1
CNGZ	Carnagh Statio	13.40	191	P	P	13 03 41.7	-0.1
URZ	Urewera	13.40	195	P	P	13 03 41.4	-0.5
	3.8nm,0.3s,baz=268,slow=4.2,SNR=44						
URZ				S	S	13 06 07.6	+1.1
	3.7nm,0.3s,baz=58,slow=22,SNR=18						
URZ	Urewera	13.40	195	P	P	13 03 41.6	-0.2
TKGZ	Te Karaka	13.42	192	P	P	13 03 38.9	-3.1
RAGZ	Rawiri	13.56	193	P	P	13 03 43.0	-0.7
MUGZ	Murupara	13.69	196	P	P	13 03 45.4	+0.4
RIGZ	Rimuhau	13.69	192	P	P	13 03 45.7	+0.6
SNGZ	Shannon Statio	13.85	193	P	P	13 03 47.2	+0.5
TLZ	Tolley Road	13.89	200	P	Pn	13 03 50.3	+0.4
KUTZ	Kaahu Road	13.95	198	P	Pn	13 03 50.7	+0.1
MTHZ	Maungataniwha	14.03	195	P	P	13 03 49.8	+1.0
RAHZ	Arahi	14.03	194	P	P	13 03 49.6	+0.9
MRHZ	Matea Rd	14.11	196	P	P	13 03 49.7	0.0
HIZ	Hauiti	14.27	201	P	P	13 03 53.9	+2.6
ARHZ	Aropaoanui	14.39	194	P	P	13 03 53.6	+1.1
BKZ	Black Stump Fm	14.41	196	P	P	13 03 52.3	-0.6
OTVZ	Oturere	14.62	198	P	P	13 03 56.9	+1.5
MCHZ	McNeill Hill	14.63	195	P	P	13 03 55.2	0.0
NGZ	Ngauruhoe	14.65	198	P	P	13 03 57.3	+1.6
FWVZ	Far West T-bar	14.74	198	P	P	13 03 56.1	-0.6
BHHZ	Black Hill Sta	14.82	196	P	P	13 03 56.8	-0.6
VRZ	Vera Road	14.86	201	P	P	13 03 59.8	+2.1
KRHZ	Kereru	14.89	195	P	P	13 03 57.4	-0.7
KAHZ	Kahuranaki	14.92	194	P	P	13 03 58.5	0.0
PXZ	Pawanui	15.15	193	P	P	13 04 00.3	-0.6
PNHZ	Pukenui	15.19	195	P	P	13 04 00.6	-0.8
TSZ	Takapari Road	15.38	196	P	P	13 04 01.9	-1.6
PRHZ	Porangahau	15.43	194	P	P	13 04 03.8	0.0
BFZ	Birch Farm	15.91	194	P	P	13 04 08.9	-0.2
HOWZ	Holdsworth Sta	16.29	196	P	P	13 04 11.9	-1.2
OGWZ	Otaki Gorge	16.30	197	P	P	13 04 12.2	-1.0
STKA	Stephens Creek	35.41	250	P	P	13 07 06.7	-0.4
	3.5nm,0.4s,baz=93,slow=9.6,SNR=19						
ASAR	Alice Springs	43.08	262	P	P	13 08 08.0	-1.9
	3.6nm,0.4s,baz=92,slow=6.9,SNR=170						
WRA	Warramunga Arr	43.60	267	P	P	13 08 11.6	-2.3
	7.0nm,0.4s,baz=95,slow=8.9,SNR=18						
QSPA	South Pole Qui	64.77	180	P	P	13 10 47.1	+3.1
	0.9nm,0.6s,baz=9.4,slow=5.0,SNR=9.1						
MAW	Mawson	76.86	200	P	P	13 11 57.8	+2.1
	1.8nm,0.8s,baz=93,slow=2.9,SNR=4.2						
NVAR	Mina Array Bea	84.90	43	P	P	13 12 38.4	0.0
	0.3nm,0.8s,baz=209,slow=7.2,SNR=2.7						
ARCES	ARCESS Array B	133.53	349	PKP	PKPdf	13 19 15.2	-0.5
	1.5nm,1.0s,baz=141,slow=0.6,SNR=1.3						
FINES	FINESS Array B	140.19	342	PKP	PKPdf	13 19 27.0	-1.2
	0.3nm,0.5s,baz=101,slow=7.2,SNR=1.5						
BRTR	Keskin Array B	149.45	306	PKPbc	PKiKP	13 19 50.0	-0.7
	0.5nm,0.6s,baz=143,slow=0.7,SNR=3.3						

MAN 26 13:01:00.2, 7°.79N×124°.48E, h5^{km}, mb4.4, ML3.2, MS3.0, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.59	81	*e*P	Pb	13 01 12.8	-0.2
BUKP				*e*S	Sn	13 01 24.3	-1.0
CTBH	Cotabato--PC H	0.61	202	⇑*i*P	Pg	13 01 12.0	0.0
CTBH				*i* S	Sg	13 01 20.2	+0.3
CGP	Cagayan de Oro	0.69	18	⇑*i*P	Pb	13 01 15.7	+0.9
CGP				*i* S	Sn	13 01 26.6	-1.3
KCP	Kidapawan	0.99	142	⇓*e*P	Pg	13 01 18.8	-0.3
KCP				*i* S	Sn	13 01 46.0	+11
PAGZ	Pagadian	1.08	273	*e*P	Pg	13 01 21.1	+0.1
PAGZ				*e*S	Sn	13 01 36.9	-0.6
SKMP	Bagumbayan, Su	1.26	177	*e*P	Pg	13 01 24.0	-0.5
SKMP				*e*S	Sn	13 01 42.0	+0.1
DDMP	Don Marcelino,	2.08	144	*e*P	Pn	13 01 36.5	+0.7
DDMP				*e*S	Sb	13 02 04.6	+0.1

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*ISCJB **26** 13:02:39.7±0.3, 33°.64N±0°.03×34°.41E±0°.03, h13^{km}, Error ellipse: s-maj=4.3km s-min=2.8km az=27.7*

*NSSC **26** 13:02:42.3±0.3, 33°.56N×34°.47E, h22^{km}±2^{km}, MD1.4, ML2.5*

*HLW **26** 13:02:42.3, 33°.45N×34°.32E, h10^{km}±22^{km}, Md3.4*

*NIC **26** 13:02:43.3±0.2, 33°.92N×34°.53E, h17^{km}, ML2.7*

*GRAL **26** 13:02:44.9±0.3, 33°.74N×34°.63E, h27^{km}±3^{km}, MD2.9*

*GII **26** 13:02:44.0±0.2, 33°.71N×34°.46E, h32^{km}, MD1.9/8*

ISC 26 13:02:39.9±0.9**, 33°.67N**±0°.03×**34°.41E**±0°.03**, h13^{km}, n34,** σ**1^{s}.02**/49**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNTI	Hanita	0.86	132	Pg	Pg	13 02 57.7	+1.1
HNTI				Sg	Sg	13 03 09.0	+1.1
DQRL	Deir Qamar	0.97	87	*e*P	Pg	13 02 58.8	+0.3
DQRL				*e*S	Sg	13 03 09.3	-1.9
MMA0B	Mount Meron ar	1.05	128	Pg	Pb	13 03 00.6	+0.6
MMA0B				Sg	Sb	13 03 13.3	-0.4
QRWL	Qaraoun	1.07	96	*e*P	Pb	13 03 00.8	+0.5
QRWL				*e*S	Sb	13 03 12.4	-1.8
BLGI	Bet Lehem HaGe	1.14	145	Pg	Pb	13 03 01.8	+0.4
GEM	Giv'at Ha'Em	1.14	113	Pg	Pb	13 03 01.7	+0.3
GEM				Sg	Sb	13 03 15.0	-1.2
OFRI	\`Ofer	1.15	155	Pg	Pb	13 03 01.5	-0.1
NATI	Neve Ativ	1.18	110	Pg	Pb	13 03 02.1	0.0
NATI				Sg	Sb	13 03 16.6	-0.6
RCY	Rachaya	1.20	98	*e*P	Pb	13 03 02.9	+0.3
BRBR	Barbar	1.31	101	*e*P	Pn	13 03 04.5	+0.4
BRBR				*e*S	Sb	13 03 20.6	-0.6
BRBR				AML	AML	13 03 22.7	
	comp=E,68nm,0.1s						
BRBR				AML	AML	13 03 22.9	
	comp=N,136nm,0.2s						
KSHT	Keshet	1.36	120	Pn	Pn	13 03 05.7	+1.2
HWQ	Hawqa	1.42	64	*e*P	Pn	13 03 05.4	0.0
MMLI	Mount Malkishu	1.49	145	Pn	Pn	13 03 06.7	+0.3
MMLI				Sn	Sn	13 03 25.0	-0.7
SLTI	Sal'it	1.52	159	Pn	Pn	13 03 06.8	+0.1
QASN	Qassioun	1.56	94	*e*P	Pn	13 03 08.8	+1.4
QASN				*e*S	Sn	13 03 27.1	-0.5
QASN				AML	AML	13 03 30.0	
	comp=E,199nm,0.4s						
QASN				AML	AML	13 03 35.5	
	comp=N,117nm,0.5s						
CSS	Mathiatis	1.57	326	P	Pn	13 03 08.0	+0.5
	baz=135						
CSS				S	Sn	13 03 26.2	-1.6
CSS	Mathiatis	1.57	326	Pn	Pn	13 03 07.6	+0.1
SZAC	Souni	1.67	311	P	Pn	13 03 09.8	+0.9
	baz=120						
SZAC				S	Sn	13 03 30.9	+0.7
HMDT	Nahal Hemdat	1.69	146	Pn	Pn	13 03 10.2	+1.1
TOTH	TOTAH	1.71	100	*e*P	Pn	13 03 10.8	+1.4
TOTH				*e*S	Sn	13 03 30.4	-0.9
TOTH				AML	AML	13 03 33.5	
	comp=N,63nm,0.2s						
PPCY	Paphos	2.10	306	P	Pn	13 03 15.9	+1.2
	baz=117						
ALFC	Alefka	2.11	315	P	Pn	13 03 15.9	+1.0
	baz=127						
ALFC				S	Sn	13 03 40.9	-0.2
AMAZ	Amatzia	2.17	169	Pn	Pn	13 03 16.6	+0.9
DSI	Dead Sea	2.24	158	Pn	Pn	13 03 18.0	+1.3
YTIR	Yattir	2.37	165	Pn	Pn	13 03 19.7	+1.2
YTIR				Sn	Sn	13 03 47.7	+0.2
RSH		2.76	192	P	Pn	13 03 23.9	+0.1
	baz=192						
RSH				S	Sn	13 03 53.7	-3.3
	baz=192						
PRNI	Paran	3.34	171	Pn	Pn	13 03 32.9	+1.1
HRFI	Mount Harif	3.66	171	Pn	Pn	13 03 37.3	+1.1
MBRI	Mt Berech	3.88	174	Pn	Pn	13 03 40.3	+1.0
EIL	Elat	4.01	173	Pn	Pn	13 03 42.2	+1.2
HHAG	Hagoal	4.19	209	P	Pn	13 03 44.0	+0.4
	baz=210						
KOT	Kottamia	4.33	211	P	Pn	13 03 45.0	-0.4
	baz=212						
GLL	Jalalah	4.68	210	P	Pn	13 03 50.5	+0.2
	baz=211						
GRB	Gharib	5.55	195	P	Pn	13 04 02.1	-0.2
	baz=195						

BEO 26 13:06:26.9±0.6**, 42°.54N×21°.29E, h9^{km}**±6^{km}**, ML1.4**/8**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARS	Barje	0.47	55	*e*Pg	Pg	13 06 34.8	-1.3
BARS				*e*Sg	Sg	13 06 43.3	+0.9
SELS	Selova	0.69	349	*e*Pg	Pg	13 06 38.3	-1.9
SELS				*e*Sg	Sg	13 06 49.9	+0.7
BOVS	Bovan	1.13	15	*e*Pg	Pb	13 06 47.9	-0.8
BOVS				*e*Sg	Sg	13 07 02.3	-1.1
SJES	Sjenica	1.21	307	*e*Pg	Pb	13 06 48.3	-1.7
SJES				*e*Sg	Sb	13 07 05.1	-0.6
ZAPS	Zavoj	1.23	53	*e*Pg	Pn	13 06 49.4	-0.9
ZAPS				*e*Sg	Sb	13 07 05.8	-0.5
GRUS	Gruza	1.41	343	*e*Pg	Pn	13 06 52.8	+0.1
GRUS				*e*Sg	Sg	13 07 12.6	+0.4
VTS	Vitosha	1.44	86	*e*Pg	Pn	13 06 53.1	-0.2
VTS				*e*Sg	Sn	13 07 11.9	-0.5
DIVS	Divibare	1.82	329	*e*Pg	Pn	13 06 59.3	+0.8
DIVS				*e*Sg	Sg	13 07 24.9	-0.5

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*ISCJB **26** 13:19:47.0±0.5, 15°.66S±0°.06×71°.75W±0°.08, h10^{km}, mb3.7/6, MS3.8/7, Error ellipse: s-maj=12.3km s-min=5.6km az=148.5*

*IDC **26** 13:19:47.0±1.1, 15°.47S×71°.62W, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.8/25, mbtmp3.6/6, ML3.8/1, MS3.8/12, Ms1 3.8/12, ms1mx3.7/23, Error ellipse: s-maj=42.3km s-min=22.9km az=35.0*

ISC 26 13:19:47.9±0.6**, 15°.57S**±0°.06×**71°.73W**±0°.06**, h10^{km}, n37,** σ**2^{s}.32**/32**, mb3.7**/6**, MS3.8**/7**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	3.31	156	*e*P	Pn	13 20 39.4	-0.5
PB12				*e*S	Sb	13 21 28.7	+1.5
PB12				IVMs_BB	IVMs_BB	13 22 01.6	
	comp=N,10µm,3.6s						
PB16	IPOC Station P	3.48	143	*e*P	Pn	13 20 42.5	-0.2
PB16				*e*S	Sg	13 21 39.0	-0.7
PB16				IVMs_BB	IVMs_BB	13 22 37.0	
	comp=N,13µm,3.9s						
LPAZ	La Paz	3.54	102	Pg	Pg	13 20 51.4	-4.4
	comp=N,0.8nm,0.3s,baz=277,slow=13,SNR=20						
LPAZ				LR	LR	13 22 20.6	
	comp=N,277nm,21.6s,baz=260,slow=44						
LPAZ	La Paz	3.54	102	*e*P	Pb	13 20 49.2	-1.8
LPAZ				*e*S	Sg	13 21 46.9	+5.2
MNMC	Minye Minye	4.08	150	*e*P	Pn	13 20 50.5	-0.2
MNMC				IVMs_BB	IVMs_BB	13 22 58.1	
	comp=E,22µm,4.3s						
NNA	Nana	6.11	305	Pn	Pn	13 21 16.3	-2.1
	comp=E,1.0nm,0.3s,baz=216,slow=18,SNR=2.5						
NNA				Sn	Sn	13 22 31.7	+3.2
	comp=E,1.6nm,0.3s,baz=100,slow=17,SNR=2.4						
NNA				LR	LR	13 23 46.9	
	comp=E,1µm,18.4s,baz=140,slow=39						
LVC	Limon Verde	7.49	160	Sn	Sn	13 23 08.1	+5.3
	baz=152,slow=7.2,SNR=3.3						
SIV	San Ignacio	10.27	94	Pn	Pn	13 22 17.7	+2.2
	comp=E,0.6nm,0.3s,baz=282,slow=12,SNR=14						
SIV				LR	LR	13 26 46.8	
	comp=E,649nm,18.2s,baz=282,slow=41						
ATAH	Atahualpa	10.63	321	Pn	Pn	13 22 25.1	+4.4
	comp=E,0.3nm,0.3s,baz=342,slow=19,SNR=2.6						
CFA	Coronel Fontan	16.28	169	Pn	Pn	13 23 36.5	-0.3
	comp=E,0.4nm,0.3s,baz=336,slow=13,SNR=4.4						
CFA				LR	LR	13 29 35.9	
	comp=E,348nm,20.4s,baz=267,slow=36						
CPUP	Villa Florida	17.17	131	LR	LR	13 31 54.1	
	comp=E,563nm,18.1s,baz=357,slow=42						
SOTA	Rioblanco	18.24	344	*e*P	P	13 24 05.3	+3.2
PCON	Cinco Dias	18.37	345	*e*P	P	13 24 05.3	+1.6
POPC	Popayan, Colom	18.65	344	*e*P	Pn	13 24 07.9	+1.3
PTGA	Pitinga	18.77	39	P	Pn	13 24 11.0	+3.2
	comp=E,0.1nm,0.3s,baz=213,slow=14,SNR=5.9						
PRAC	Prado	19.41	350	*e*P	Pn	13 24 16.6	+0.9
ORTC	Ortega, Tolima	19.67	350	*e*P	Pn	13 24 17.9	-0.8
YOTC	Yotoco, Valle	19.96	346	*e*P	P	13 24 17.9	-2.6
ROSC	El Rosal	20.44	353	*e*P	Pn	13 24 31.2	+3.0
RREF	El Recreo	20.65	350	*e*P	Pn	13 24 31.2	+0.3
GUY2C	Guyana, Caldas	20.97	350	*e*P	Pn	13 24 35.2	+0.7
RUSC	La Rusia	21.37	356	*e*P	P	13 24 32.5	-3.6
HELC	Santa Helena	21.95	350	*e*P	P	13 24 41.9	-0.4
BDFB	Brasilia	22.84	93	LR	LR	13 34 24.5	
	comp=E,91nm,21.6s,baz=271,slow=39						
SDV	Santo Domingo	24.32	3	P	P	13 25 05.1	-1.1
	comp=E,2.2nm,0.4s,baz=343,slow=19,SNR=2.7						
SDV				LR	LR	13 35 24.0	
	comp=E,460nm,19.1s,baz=272,slow=39						
PLCA	Paso Flores	25.09	178	P	P	13 25 11.5	-1.4
	comp=E,15nm,1.2s,baz=35,slow=12,SNR=6.0						
PLCA				LR	LR	13 33 25.6	
	comp=E,227nm,21.8s,baz=2.0,slow=32						
MDP	Montagnes des	27.92	44	LR	LR	13 37 36.5	
	comp=E,420nm,21.8s,baz=219,slow=38						
TXAR	Lajitas Array	54.26	325	P	P	13 29 14.2	-0.2
	comp=E,0.2nm,0.6s,baz=147,slow=7.6,SNR=4.4						
TXAR				LR	LR	13 50 19.8	
	comp=E,80nm,20.6s,baz=0.0,slow=34						
PDAR	Pinedale Array	67.66	331	P	P	13 30 45.9	+0.4
	comp=E,0.2nm,0.4s,baz=130,slow=4.6,SNR=4.1						
NVAR	Mina Array Bea	69.19	322	P	P	13 30 57.0	+1.8
	comp=E,0.3nm,0.7s,baz=147,slow=5.4,SNR=3.7						
SCHQ	Schefferville	70.25	3	LR	LR	14 03 49.7	
	comp=E,45nm,18.4s,baz=186,slow=38						
TORD	Torodi Ar. Bea	78.02	73	P	P	13 31 46.6	-0.7
	comp=E,0.7nm,0.9s,baz=265,slow=6.8,SNR=3.1						
NOA	NORSAR Array B	100.11	29	LR	LR	14 16 40.5	
	comp=E,39nm,18.3s,baz=245,slow=34						
ZALV	Zalesovo Beam	137.54	20	PKP	PKiKP	13 39 13.8	0.0
	comp=E,0.6nm,0.4s,baz=291,slow=4.6,SNR=3.7						
MJAR	Matsushiro Arr	146.17	314	PKPbc	PKPbc	13 39 28.1	-0.9
	comp=E,3.0nm,0.8s,baz=101,slow=0.5,SNR=15						
SONM	Songino Array	147.79	2	PKPbc	PKPab	13 39 34.3	-1.4
	comp=E,3.7nm,1.0s,baz=339,slow=2.5,SNR=14						
KSRS	Korea Array	152.11	325	PKPbc	PKiKP	13 39 44.9	+0.6
	comp=E,1.9nm,1.0s,baz=33,slow=2.0,SNR=7.2						

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*SJA **26** 13:21:12.4±0.4, 21°.78S×68°.63W, h116^{km}±4^{km}, ML2.0, MW2.8*

*ISCJB **26** 13:21:13.3±1.1, 21°.78S±0°.06×68°.64W±0°.08, h116^{km}±14^{km}, Error ellipse: s-maj=12.7km s-min=8.8km az=156.2*

*GUC **26** 13:21:13.4±0.6, 21°.79S×68°.60W, h104^{km}±4^{km}, ML2.8*

ISC 26 13:21:14.1±2.0**, 21°.80S**±0°.06×**68°.65W**±0°.07**, h111^{km}**±16^{km}**, n17,** σ**0^{s}.60**/28**, 5C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.55	270	*e*P	Pn	13 21 31.4	-0.2
PB09				*e*S	Sn	13 21 45.3	+0.6
PB09	IPOC Station P	0.55	270	⇑*i*P	Pn	13 21 31.6	0.0
PB09				*i* S	Sn	13 21 45.0	+0.3
PB09				IAML		13 21 46.1	
	comp=N,276nm,0.3s						
LVC	Limon Verde	0.84	196	*e*P	Pn	13 21 34.0	-0.3
LVC	Limon Verde	0.84	196	*e*P	Pn	13 21 33.8	-0.4
LVC				*i* S	Sn	13 21 48.5	-0.9
PB03	IPOC Station P	1.05	256	*e*P	Pn	13 21 35.8	-0.3
PB03				*e*S	Sn	13 21 53.0	+0.3
PB03	IPOC Station P	1.05	256	⇑*i*P	Pn	13 21 35.9	-0.2
PB03				*i* S	Sn	13 21 53.0	+0.3
PB03				IAML		13 21 56.4	
	comp=N,208nm,0.2s						
PB01	IPOC Station P	1.08	314	⇑*i*P	Pn	13 21 35.9	-0.4
PB01				*i* S	Sn	13 21 53.0	-0.1
PB01				IAML		13 21 56.3	
	comp=E,282nm,0.2s						
PB07	IPOC Station P	1.15	273	⇑*i*P	Pn	13 21 36.9	-0.2
PB07				*i* S	Sn	13 21 54.9	+0.4
PB07				IAML		13 21 56.8	
	comp=N,258nm,0.2s						
PB06	IPOC Station P	1.24	223	*e*P	Pn	13 21 38.1	-0.1
PB06				*e*S	Sn	13 21 56.9	+0.6
PB06	IPOC Station P	1.24	223	⇑*i*P	Pn	13 21 38.1	-0.1
PB06				*i* S	Sn	13 21 56.9	+0.6
PB06				IAML		13 21 58.8	
	comp=N,215nm,0.2s						
PB02	IPOC Station P	1.25	292	*i* P	Pn	13 21 38.0	-0.2
PB02				*i* S	Sn	13 21 56.5	+0.1
PB02				IAML		13 22 01.8	
	comp=E,333nm,0.2s						
PB15	IPOC Station P	1.59	208	*e*P	Pn	13 21 42.4	+0.1
PB15	IPOC Station P	1.59	208	*e*P	Pn	13 21 40.2	-2.2
PB15	IPOC Station P	1.59	208	⇓*i*P	Pn	13 21 42.4	+0.1
PB15				*i* S	Sn	13 22 04.8	+1.0
PB05	IPOC Station P	1.78	234	*i* P	Pn	13 21 44.3	-0.2
YJA	Yavi	2.94	98	*e*P	Pn	13 21 59.8	0.0
YJA				IAML		13 22 02.7	
	comp=Z,3.2nm,0.5s						
HJA	Humahuaca	3.31	116	*e*P	Pn	13 22 04.7	0.0
HJA				IAML		13 22 06.4	
	comp=Z,4.6nm,0.6s						

MEX 26 13:21:55.1±0.3**, 16°.96N×100°.15W, h5^{km}, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.14	307	*e*P	Pg	13 21 57.6	-0.4
CAIG				*i* S	Sg	13 21 59.6	-0.2

MEIG	Mezcala	1.08	28	*i* P	Pg	13 22 13.1	-2.8
MEIG				*i* S	Sg	13 22 26.6	-3.3
ARIG	Puente Sto Nin	1.32	352	*e*P	Pn	13 22 16.8	-3.5
ARIG				*i* S	Sg	13 22 33.3	-4.4
ZIIG	Zihuatanejo	1.41	297	*e*P	Pn	13 22 18.0	-3.4
ZIIG				*e*S	Sb	13 22 35.6	-4.6
PLIG	Platanillo	1.55	23	*i* P	Pn	13 22 19.5	-4.0
PLIG				*i* S	Sn	13 22 38.7	-5.3
TLIG	Tlapa	1.63	68	*i* P	Pn	13 22 20.9	-3.6
TLIG				*i* S	Sn	13 22 41.1	-4.9

NIED ***26*** *13:28:00, 25°.60N×125°.00E, h89^{km}, Mw4.2 Best double couple: M$_0$2.18000×10^{15} NP1:φ$_s$7.00000°, δ54.00000°, λ-33.00000°. NP2:φ$_s$118.00000°, δ64.00000°, λ-139.00000°.*

BJI ***26*** *13:28:33.2±0.0, 25°.13N×125°.27E, h110^{km}, mb4.4/31, mB4.6/20*

ISCJB ***26*** *13:28:36.0±0.2, 25°.52N±0°.04×125°.04E±0°.03, h110^{km}±3^{km}, mb4.3/45, Error ellipse: s-maj=7.0km s-min=3.3km az=148.5*

IDC ***26*** *13:28:37.0±2.4, 25°.56N×124°.95E, h104^{km}±22^{km}, mb3.8/19, mb1 3.9/23, mb1mx3.8/41, mbtmp4.1/23, Error ellipse: s-maj=18.1km s-min=13.7km az=64.0*

JMA ***26*** *13:28:37.2±0.1, 25°.58N×124°.96E, h96^{km}±5^{km}, M4.2*

NEIC ***26*** *13:28:37.4±1.6, 25°.56N×125°.01E, h108^{km}±5^{km}, mb4.5/33, Error ellipse: s-maj=14.8km s-min=9.1km az=145.0*

ISC 26 13:28:37.4±0.5**, 25°.47N**±0°.06×**125°.04E**±0°.04**, h109**^{km}±6^{km}**, n97, σ1^{s}09**/118**, mb4.3**/47**, 1C, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	Ikemajima	0.58	161	P	Pn	13 28 54.6	0.0
JIKM				S	Sn	13 29 07.4	-0.2
JIRB	Irabujima	0.65	169	P	Pn	13 28 54.9	-0.3
JIRB				S	Sn	13 29 07.7	-0.9
JMJ2	Miyako jima3	0.77	160	P	Pn	13 28 56.5	+0.2
JMJ2				S	Sn	13 29 10.4	0.0
JOGS	Gusukube	0.78	155	P	Pn	13 28 56.6	+0.2
JOGS				S	Sn	13 29 10.9	+0.3
JTJ	Tarama	0.88	200	P	Pn	13 28 57.1	-0.2
JTJ				S	Sn	13 29 11.6	-0.6
JISG	Ishigakijimahi	1.10	217	P	Pn	13 28 59.4	-0.1
JISG				S	Sn	13 29 15.3	-0.9
JIJ	Ishigaki jima	1.37	217	P	Pn	13 29 02.2	-0.4
JIJ				S	Sn	13 29 19.9	-1.8
JKRS	Kuro-shima	1.54	218	P	Pn	13 29 04.4	-0.3
JKRS				S	Sn	13 29 25.1	-0.2
IRIF	Iriomote-Funau	1.64	227	P	Pn	13 29 05.5	-0.3
IRIF				S	Sn	13 29 26.3	-1.1
JKE	Kume jima 2	1.79	61	P	Pn	13 29 07.2	-0.5
JKE				*e*S	Sn	13 29 29.8	-0.9
HATJ	Hateruma jima	1.80	219	P	Pn	13 29 07.6	-0.2
HATJ				S	Sn	13 29 30.8	-0.2
YOJ	Yonaguni jima	2.10	242	*e*Pn	Pn	13 29 11.9	+0.3
YOJ	Yonaguni jima	2.10	242	P	Pn	13 29 11.8	+0.3
YOJ				S	Sn	13 29 37.5	-0.2
JYNG	Yonagunijimaku	2.15	242	P	Pn	13 29 12.6	+0.3
JYNG				S	Sn	13 29 39.2	+0.2
JAGN	Aguni-jima	2.27	60	P	Pn	13 29 13.4	-0.4
JAGN				S	Sn	13 29 40.5	-1.2
JJT3	Tamagusuku3	2.56	74	P	Pn	13 29 17.3	-0.3
JJT3				S	Sn	13 29 47.7	-0.8
JOW	Kunigami	3.21	64	P	Pn	13 29 25.5	-0.6
	10nm,0.3s,baz=180,slow=14,SNR=195						
JOW				S	Sn	13 30 00.9	-2.9
	3.9nm,0.3s,baz=66,slow=20,SNR=3.0						
JOW	Kunigami	3.21	64	*e*Pn	Pn	13 29 25.0	-1.2
TATO	Taipei	3.25	262	*e*Pn	Pn	13 29 27.6	+0.9
NACB	Ninganchiao	3.38	248	*e*Pn	Pn	13 29 28.1	-0.4
YHNB	Yeheng	3.42	257	*e*Pn	Pn	13 29 30.8	+1.8
YULB	Yu-li	3.99	240	*e*Pn	Pn	13 29 35.0	-1.6
SSLB	Suanglung	4.08	247	*e*Pn	Pn	13 29 37.5	-0.3
TWG	Pinlang	4.48	235	*e*Pn	Pn	13 29 40.9	-2.3
TPUB	Ta-pu	4.56	243	*e*Pn	Pn	13 29 44.7	+0.3
NJ2	Nanjing	8.51	322	*e*P	Pn	13 30 38.8	+1.0
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
JNU	Nakatsue	9.17	32	P	Pn	13 30 46.6	-0.2
	0.9nm,0.3s,baz=289,slow=3.4,SNR=6.1						
KS15	Wonju Array Si	12.18	11	*e*Pn	Pn	13 31 26.2	-0.9
KSRS	Korea Array	12.20	11	P	Pn	13 31 26.2	-1.1
	0.0nm,0.3s,baz=189,slow=13,SNR=11						
DL2	Dalian	13.70	349	P	P	13 31 53.5	+1.5
DL2				pmax	pmax		
	comp=Z,42nm,0.8s						
QIZ	Qiongzhong	15.45	249	P	Pn	13 32 07.8	-1.7
QIZ				S	Sn	13 34 58.3	-2.2
QIZ				LR	LR		
	comp=N,280nm,19.6s						
QIZ				LR	LR		
	comp=E,380nm,22.6s						
QIZ				LR	LR		
	comp=Z,280nm,16.2s						
MAJO	Matsushiro	15.77	42	*e*P	P	13 32 16.2	+1.2
MJAR	Matsushiro Arr	15.77	42	P	P	13 32 16.2	+1.2
	0.0nm,0.3s,baz=225,slow=9.9,SNR=7.0						
CN2	Changchun	18.29	1	*e*P	Pn	13 32 45.8	+1.8
HHC	Hu-ho-hao-te	19.00	327	P	Pn	13 32 53.5	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
USRK	Ussuriysk Ar.	19.52	15	P	P	13 32 56.0	-0.2
	0.3nm,0.3s,baz=192,slow=8.5,SNR=9.2						
KMI	Kunming	20.16	274	P	P	13 33 04.3	+0.8
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
LZH	Lanzhou	21.02	305	*e*P	P	13 33 16.8	+4.2
LZH				pP	pP	13 33 37.0	+4.0
LZH				sP	sP	13 33 51.8	+5.2
LZH				SS	Sn	13 37 46.5	+32
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				LR	LR		
	comp=N,890nm,16.0s						
LZH				LR	LR		
	comp=E,530nm,16.3s						
LZH				LR	LR		
	comp=Z,1μm,18.4s						
KKM	Kota Kinabalu	21.08	205	*e*P	P	13 33 14.8	+1.5
	20nm,0.7s						
ASAJ	Asahikawa	23.45	33	P	P	13 33 35.1	-1.8
	1.7nm,0.3s,baz=242,slow=9.6,SNR=7.8						
GTA	Gaotai	25.32	309	⇑P	P	13 33 53.8	-0.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,33nm,5.6s						
GTA				LR	LR		
	comp=N,340nm,17.8s						
GTA				LR	LR		
	comp=E,390nm,17.1s						
GTA				LR	LR		
	comp=Z,740nm,18.7s						
SBUM	Sibu	26.00	210	*e*P	P	13 34 01.8	+1.4
	8.1nm,0.7s						
SONA0	Songino Array	26.73	331	*e*P	P	13 34 06.2	-0.6
SONM	Songino Array	26.73	331	P	P	13 34 06.2	-0.6
	1.9nm,0.5s,baz=150,slow=10.0,SNR=9.0						
SMKI	Samarinda	26.85	198	P	P	13 34 11.7	+3.7
TLY	Talaya	30.83	334	P	P	13 34 42.6	-0.4
	1.9nm,0.6s,baz=168,slow=2.0,SNR=4.0						
WMQ	Urumqi	35.39	311	*e*P	P	13 35 24.0	+1.2
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,71nm,5.1s						
WMQ				LR	LR		
	comp=N,300nm,18.9s						
WMQ				LR	LR		
	comp=E,170nm,19.9s						
WMQ				LR	LR		
	comp=Z,500nm,21.9s						
PETK	Petropavlovsk-	36.87	33	P	P	13 35 35.5	+0.3
	0.9nm,0.5s,baz=203,slow=3.1,SNR=2.2						
PEA1	Petropavlovsk-	36.87	33	*e*P	P	13 35 35.5	+0.3
MK31	Makanchi Array	39.93	313	*e*P	P	13 36 00.5	-0.4
	2.3nm,0.6s						
MK32	Makanchi Array	39.93	313	*e*P	P	13 36 00.5	-0.4
MK32				*e*PcP	PcP	13 38 03.5	-0.8
MKAR	Makanchi Array	39.93	313	P	P	13 36 00.5	-0.4
	2.5nm,0.4s,baz=100,slow=11,SNR=42						
MKAR				PcP	PcP	13 38 03.5	-0.8
	0.7nm,0.7s,baz=86,slow=3.8,SNR=4.5						
MAKZ	Makanchi	40.14	313	*e*P	P	13 36 00.8	-1.9
	3.2nm,0.6s						
ZAA0	Zalesovo Array	41.15	325	*e*P	P	13 36 09.2	-1.6
	5.5nm,0.6s						
ZALV	Zalesovo Beam	41.15	325	P	P	13 36 09.4	-1.4
	5.4nm,0.5s,baz=115,slow=8.3,SNR=21						
ZAA1	Zalesovo Array	41.15	325	*e*P	P	13 36 09.4	-1.4
KDJ	Kajisay	42.52	305	*e*P	P	13 36 22.6	+0.2
	7.4nm,0.6s						
NRN	Naryn	43.32	304	*e*P	P	13 36 29.0	0.0
	7.1nm,0.6s						
KURK	Kurchatov	43.42	318	*e*P	P	13 36 28.1	-1.2
	2.6nm,0.6s						
KURBB	Kurchatov Arra	43.45	318	P	P	13 36 28.5	-1.0
	1.7nm,0.6s,baz=109,slow=9.1,SNR=25						
KURBB				PcP	PcP	13 38 14.5	-1.2
	0.5nm,0.7s,baz=114,slow=4.0,SNR=4.7						
WR1	Warramunga Arr	46.04	168	*e*P	P	13 36 50.9	+0.6
WRA	Warramunga Arr	46.04	168	P	P	13 36 50.9	+0.6
	1.3nm,0.7s,baz=9.7,slow=10,SNR=5.4						
WRA				pP	pP	13 37 15.0	-0.6
	2.1nm,0.8s,baz=350,slow=9.4,SNR=4.0						
AS31	Alice Springs	49.59	169	*e*P	P	13 37 18.8	+1.0
	0.9nm,0.7s						
ASAR	Alice Springs	49.60	169	P	P	13 37 18.8	+1.0
	0.8nm,0.5s,baz=355,slow=13,SNR=25						
ASAR				pP	pP	13 37 43.9	+0.5
	1.0nm,0.9s,baz=356,slow=7.3,SNR=3.5						
ARU	Arti	56.22	322	*e*P	P	13 38 04.8	-1.2
	11nm,0.7s						
STKA	Stephens Creek	59.18	164	pP	pP	13 38 54.5	+1.1
	2.4nm,0.8s,baz=349,slow=13,SNR=2.8						
TTA	Tatalina	62.64	30	*e*P	P	13 38 50.8	+0.6
	3.6nm,0.7s						
MLY	Manley	64.79	28	*e*P	P	13 39 05.2	+0.9
	11nm,0.7s						
SKT	Skwentna	64.80	31	*e*P	P	13 39 03.5	-0.8
	3.6nm,0.8s						
TOLK	Toolik Lake Re	64.88	24	*e*P	P	13 39 04.4	-0.3
	5.7nm,0.7s						
KTH	Kantishna Hill	64.88	29	*e*P	P	13 39 04.7	-0.1
	5.0nm,0.8s						
SUA	Susitna One	65.23	32	*e*P	P	13 39 06.8	-0.4
	13nm,0.6s						
MCK	McKinley	65.74	29	*e*P	P	13 39 09.0	-1.3
	8.1nm,0.7s						
RND	Reindeer	65.82	29	*e*P	P	13 39 09.5	-1.5
	20nm,0.8s						
CCB	Clear Creek Bu	66.09	28	*e*P	P	13 39 12.1	-0.4
	2.8nm,0.6s						
ILAR	Eielson Array	66.46	28	P	P	13 39 14.4	-0.4
	1.6nm,0.6s,baz=253,slow=4.8,SNR=27						
ILB	Eielson Array	66.46	28	*e*P	P	13 39 14.0	-0.9
	2.1nm,0.8s						
RIDG	Independent Ri	67.53	29	*e*P	P	13 39 21.4	-0.4
	6.3nm,0.6s						
SCRK	Sand Creek	67.85	28	*e*P	P	13 39 23.2	-0.6
	5.4nm,0.9s						
MENT	Mentasta	68.20	30	*e*P	P	13 39 25.7	-0.2
	5.6nm,0.8s						
ARCES	ARCESS Array B	69.65	338	P	P	13 39 34.1	-0.7
	0.8nm,0.6s,baz=78,slow=8.5,SNR=3.8						
EPYK	Eagle Plains	70.17	25	*e*P	P	13 39 37.8	-0.3
	13nm,0.6s						
INK	Inuvik	70.71	23	P	P	13 39 41.5	+0.4
	3.9nm,0.7s,baz=326,slow=9.3,SNR=10.0						
INK	Inuvik	70.71	23	*e*P	P	13 39 40.3	-0.9
	5.7nm,1.1s						
FIA0	FINESS Array S	72.10	330	*e*P	P	13 39 49.0	-0.6
FINES	FINESS Array B	72.10	330	P	P	13 39 49.0	-0.6
	2.1nm,0.6s,baz=66,slow=5.8,SNR=20						
AKASG	Malin Array Be	74.23	319	P	P	13 40 02.1	-0.3
	1.0nm,0.4s,baz=61,slow=6.7,SNR=4.4						
BR101	Keskin Array S	75.21	307	*e*P	P	13 40 08.3	-0.2
BRTR	Keskin Array B	75.21	307	P	P	13 40 08.3	-0.2
	0.8nm,0.5s,baz=76,slow=5.2,SNR=6.5						
NB2	NORSAR Subarra	78.70	333	P	P	13 40 26.8	-0.7
	comp=Z,0.4nm,0.5s,baz=54,slow=5.3						
NB200	NORSAR Array S	78.70	333	*e*P	P	13 40 26.9	-0.7
NOA	NORSAR Array B	78.70	333	P	P	13 40 26.9	-0.7
	comp=Z,0.5nm,0.5s,baz=56,slow=5.7,SNR=7.2						
YKA	Yellowknife Ar	80.40	24	P	P	13 40 37.0	+0.4
	comp=Z,5.0nm,0.7s,baz=302,slow=5.6,SNR=12						
CLL	Collm	83.10	324	*e*P	P	13 40 52.0	+1.0
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	84.04	322	P	P	13 40 54.6	-1.4
	comp=Z,0.5nm,0.6s,baz=29,slow=3.0,SNR=6.1						
NV01	Mina Array Sit	93.08	45	*e*P	P	13 41 40.7	+1.2
NVAR	Mina Array Bea	93.08	45	P	P	13 41 40.7	+1.2
	comp=Z,0.2nm,0.7s,baz=309,slow=5.7,SNR=3.7						

NSSC ***26*** *13:46:33.7±0.3, 33°.48N×35°.56E, h7^{km}±5^{km}, ML2.4*

ISCJB ***26*** *13:46:35.4±0.6, 33°.49N±0°.03×35°.65E±0°.05, h6^{km}±5^{km}, Error ellipse: s-maj=7.3km s-min=4.0km az=150.5*

GRAL ***26*** *13:46:35.9±0.2, 33°.47N×35°.69E, h1^{km}±6^{km}, MD3.0*

JSO ***26*** *13:46:45.0±4.2, 33°N±30°×3°6E±1°2, h10^{km}, M2.3/6, Mjma2.1/6, ML2.2/2, MLv2.3/6*

ISC 26 13:46:33.8±1.0**, 33°.48N**±0°.03×**35°.68E**±0°.05**, h16**^{km}±6^{km}**, n13, σ0^{s}69**/21**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRWL	Qaraoun	0.07	1	*e*P	Pg	13 46 37.3	+0.2
RCY	Rachaya	0.13	84	*e*P	Pb	13 46 38.2	+0.1
RCY				*e*S	Sg	13 46 39.8	-0.6
SHBL	Chebaa	0.14	159	*e*P	Pb	13 46 38.3	0.0
SHBL				*e*S	Sg	13 46 40.2	-0.4
BRBR	Barbar	0.24	107	*e*P	Pb	13 46 40.2	+0.4
BRBR				*e*S	Sb	13 46 45.4	+1.5
BRBR				AML	AML	13 46 45.7	
	comp=E,224nm,0.4s						
BRBR				AML	AML	13 46 47.8	
	comp=N,813nm,0.4s						
DQRL	Deir Qamar	0.24	337	*e*P	Pb	13 46 40.5	+0.6
DQRL				*e*S	Sb	13 46 43.9	-0.1
BEYL	Beirut	0.42	338	*e*P	Pb	13 46 43.2	+0.3
BHL	Bhannes	0.42	357	*e*P	Pb	13 46 43.6	+0.7
BHL				*e*S	Sb	13 46 49.4	+0.2
QASN	Qassioun	0.50	84	*e*P	Pn	13 46 45.9	-0.6
QASN				*e*S	Sn	13 46 53.7	-1.0
QASN				AML	AML	13 46 59.6	
	comp=E,415nm,0.4s						
QASN				AML	AML	13 47 03.6	
	comp=N,334nm,0.5s						
TOTH	TOTAH	0.64	101	*e*P	Pn	13 46 48.4	+0.2
TOTH				*e*S	Sn	13 46 57.9	-0.2
TOTH				AML	AML	13 47 09.5	
	comp=E,76nm,0.6s						
TOTH				AML	AML	13 47 10.4	
	comp=N,79nm,0.8s						
SHMJ	Saham	0.76	175	P	Pn	13 46 50.6	+0.7
HWQ	Hawqa	0.82	15	*e*P	Pn	13 46 50.9	0.0
HWQ				*e*S	Sn	13 47 01.8	-1.0
ASF	Jabal al Asfar	1.66	142	P	Pg	13 47 06.3	+0.5
WALJ	Wala	1.92	177	P	Pg	13 47 09.7	-1.0

WEL 26 13:54:33.0, 42°S±1°×**17°4E**±°**, h11**^{km}±1^{km}**, M3.4**/28**, ML3.6**/22**, MLv3.4**/28**, Error ellipse: s-maj=0.0km s-min=0.0km az=155.3, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.03	264	P	Pg	13 54 35.5	+0.4
CMWZ				S	Sg	13 54 37.3	+0.8
BSWZ	Blackbirch Sta	0.28	276	P	Pb	13 54 39.7	-0.4
BSWZ				S	Sb	13 54 44.4	-0.5
TUWZ	Tuamarina	0.39	324	P	Pb	13 54 41.4	-0.6
TUWZ				S	Sb	13 54 47.2	-0.8
TCW	Tory Channel	0.54	2	P	Pg	13 54 43.7	+0.3
BHW	Baring Head	0.57	54	P	Pb	13 54 45.5	+0.4
PLWZ	Palliser	0.77	77	P	Pn	13 54 50.2	+0.2
PLWZ				S	Sn	13 55 03.5	+1.9
MSWZ	Moikau Station	0.82	67	P	Pn	13 54 50.8	+0.3
NNZ	Nelson	0.84	309	P	Pg	13 54 49.4	+0.2
KHZ	Kahutara	0.85	218	P	Pn	13 54 52.1	+1.1
CAW	Cannon Point	0.89	44	P	Pb	13 54 50.7	+0.3
PAWZ	Paruwai Farm	0.95	68	P	Pn	13 54 52.9	+0.5
DUWZ	D’Urville Isla	0.98	345	P	Pg	13 54 51.7	-0.1
THZ	Tophouse	1.01	269	P	Pn	13 54 53.2	0.0
MTW	Mount Morrison	1.11	58	P	Pn	13 54 55.0	+0.5
TRWZ	Traveller	1.13	73	P	Pn	13 54 55.2	+0.3
OGWZ	Otaki Gorge	1.16	37	P	Pg	13 54 55.4	+0.1
HOWZ	Holdsworth Sta	1.27	49	P	Pg	13 54 57.5	-0.1
TMWZ	Te Maipa	1.39	63	P	Pn	13 54 58.6	+0.2
MRZ	Mangatainoka R	1.48	43	P	Pb	13 55 00.3	-0.2
GVZ	Greta Valley S	1.52	216	P	Pb	13 55 01.3	+0.1
QRZ	Quartz Range	1.59	305	P	Pb	13 55 02.8	+0.4
OHWZ	Ohakea	1.74	28	P	Pg	13 55 05.8	-0.5
PRWZ	Pori Road	1.76	48	P	Pn	13 55 04.0	+0.5
POWZ	Post Office Ro	1.77	41	P	Pn	13 55 04.5	+0.9
LTZ	Lake Taylor	1.80	234	P	Pb	13 55 05.4	-0.6
DSZ	Denniston Nort	1.83	269	P	Pb	13 55 07.0	+0.4
BFZ	Birch Farm	1.84	55	P	Pn	13 55 04.5	-0.1
AMCZ	Amberley	1.86	219	P	Pn	13 55 05.2	+0.4
DVHZ	Dannevirke	2.05	46	P	Pn	13 55 07.3	-0.1
WAZ	Wanganui	2.07	16	P	Pb	13 55 11.2	+0.6
TSZ	Takapari Road	2.13	38	P	Pn	13 55 09.4	+0.9
OKCZ	Okains Bay	2.16	204	P	Pn	13 55 09.1	+0.1
CRLZ	Canterbury Las	2.19	213	P	Pn	13 55 09.2	-0.1
OXZ	Oxford	2.27	225	P	Pn	13 55 10.5	-0.1
MQZ	McQueen’s Vall	2.29	210	P	Pn	13 55 10.1	-0.6
INZ	Inchbonnie	2.30	244	P	Pn	13 55 12.7	+1.8
PNHZ	Pukenui	2.35	40	P	Pn	13 55 12.1	+0.4
WPHZ	Waipukurau	2.36	45	P	Pn	13 55 13.2	+1.4
PREZ	Palmer Road	2.40	358	P	Pb	13 55 16.5	+0.2
KHEZ	Kahui Hut	2.46	356	P	Pb	13 55 17.8	+0.6
NBEZ	Newall Road No	2.49	353	P	Pb	13 55 19.1	+1.3
MTVZ	Mangateitei	2.54	22	P	Pb	13 55 19.5	+0.9
DREZ	Durham Road	2.56	359	P	Pb	13 55 18.4	-0.5
PKVZ	Pokaka	2.59	19	P	Pb	13 55 20.4	+0.8
MOVZ	Moawhango	2.60	27	P	Pb	13 55 17.8	-1.9
BHHZ	Black Hill Sta	2.64	32	P	Pn	13 55 17.6	+1.9
KRHZ	Kereru	2.65	38	P	Pn	13 55 15.9	+0.2
VRZ	Vera Road	2.65	9	P	Pb	13 55 18.8	-1.7
WHVZ	Whangaehu Hut	2.66	23	P	Pb	13 55 18.6	-2.3
FWVZ	Far West T-bar	2.68	22	P	Pb	13 55 21.0	-0.1
TUVZ	Tukino	2.70	24	P	Pb	13 55 20.0	-1.4
NGZ	Ngauruhoe	2.77	22	P	Pb	13 55 22.4	-0.2
KAHZ	Kahuranaki	2.79	46	P	Pn	13 55 19.1	+1.4
WTVZ	West Tongariro	2.82	22	P	Pb	13 55 24.2	+0.7
TWVZ	Taurewa	2.82	19	P	Pb	13 55 25.0	+1.5
KRVZ	Karewarewa	2.85	22	P	Pb	13 55 25.3	+1.2
WVZ	Waitaha Valley	2.92	242	P	Pb	13 55 24.6	-0.6
RITZ	Rihia Road	3.03	24	P	Pb	13 55 28.9	+2.0
RPZ	Rata Peaks	3.07	229	P	Pn	13 55 22.3	+0.8
HIZ	Hauiti	3.26	8	P	Pb	13 55 29.1	-1.9
TLZ	Tolley Road	3.55	17	P	Pb	13 55 34.5	-1.5
ODZ	Otahua Downs	4.22	217	P	Pn	13 55 37.4	+0.2
MWZ	Matawai	4.24	37	P	Pn	13 55 39.4	+1.9
MKAZ	Moumakai	4.69	9	P	Pb	13 55 50.0	-5.3
ETAZ	East Tamaki Re	4.81	6	P	Pb	13 55 52.2	-5.2
RVAZ	Riverhead Bore	4.98	3	P	Pn	13 55 52.1	+4.4

MAN 26 13:55:58.2, 7°.41N×124°.86E, h1^{km}**, mb4.7, ML3.5, MS3.4, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.46	151	⇓*e*P	Pg	13 56 07.6	+0.6
BUKP	Musuan	0.51	23	*e*P	Pg	13 56 08.2	+0.3
BUKP				*e*S	Sb	13 56 17.1	-0.7
BUKP	Musuan	0.51	23	*e*P	Pg	13 56 08.5	+0.6
BUKP				*e*S	Sb	13 56 17.1	-0.7
CTBH	Cotabato--PC H	0.64	253	⇓*i*P	Pg	13 56 10.9	+0.4
CTBH				*i* S	Sb	13 56 20.7	-0.9
DMPH	Davao City--Mi	0.72	117	⇑*i*P	Pn	13 56 18.5	+3.0
DMPH				*i* S	Sb	13 56 24.5	+0.7
SKMP	Bagumbayan, Su	0.94	200	*e*P	Pg	13 56 15.1	-1.1
SKMP				*e*S	Sb	13 56 29.8	-0.4
SKMP	Bagumbayan, Su	0.94	200	*e*P	Pg	13 56 15.1	-1.1
SKMP				*e*S	Sb	13 56 29.8	-0.4
CGP	Cagayan de Oro	1.05	351	⇑*e*P	Pg	13 56 18.1	-0.3
CGP				*e*S	Sg	13 56 32.6	+0.6
MATI	Mati	1.46	108	*e*P	Pg	13 56 27.8	+1.7
MATI				*e*S	Sg	13 56 40.7	-4.4
MATI	Mati	1.46	108	*e*P	Pg	13 56 37.0	+11
MATI				*e*S	Sg	13 56 40.8	-4.3
PAGZ	Pagadian	1.53	287	*e*P	Pn	13 56 26.2	-0.4
PAGZ				*e*S	Sg	13 56 48.3	+0.9
DDMP	Don Marcelino,	1.55	147	*e*P	Pn	13 56 26.4	-0.4
DDMP				*e*S	Sg	13 56 48.3	+0.4
BUTP	Butuan	1.72	26	*e*S	Sg	13 56 58.5	+5.0

ISCJB ***26*** *14:05:08.8±0.8, 52°.7S±0°.1×26°.3E±0°.3, h10^{km}, mb3.7/5, Error ellipse: s-maj=25.4km s-min=16.2km az=179.3*

IDC ***26*** *14:05:08.2±0.8, 52°.87S×25°.96E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.7/22, mbtmp3.9/6, Error ellipse: s-maj=36.9km s-min=21.4km az=65.0*

ISC 26 14:05:09.5±1.1**, 52°.7S**±0°.2×**26°.2E**±0°.2**, h10**^{km}**, n11, σ1^{s}75**/10**, mb3.8**/5**, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	20.67	347	P	Pn	14 09 52.5	+0.7
	4.8nm,0.7s,baz=168,slow=14,SNR=3.4						
SNAA	Sanae	22.92	203	P	P	14 10 15.1	+1.9
SNAA	Sanae	22.92	203	P	P	14 10 10.3	-2.9
	3.4nm,1.1s,baz=53,slow=5.1,SNR=4.6						
MAW	Mawson	23.09	144	P	P	14 10 13.9	-1.0
	0.8nm,0.4s,baz=291,slow=8.6,SNR=2.9						
VNA1	Neumayer--Stat	23.74	208	P	P	14 10 23.0	+1.6
VNA3	Neumayer Olymp	24.45	207	P	P	14 10 27.5	-0.5
TORD	Torodi Ar. Bea	68.88	334	P	P	14 16 13.5	-0.7
	0.4nm,0.5s,baz=171,slow=7.0,SNR=2.8						
ASAR	Alice Springs	81.56	118	P	P	14 17 28.0	+0.6
	0.6nm,0.6s,baz=219,slow=5.2,SNR=14						
WRA	Warramunga Arr	84.81	116	P	P	14 17 44.9	+0.7
	1.0nm,0.8s,baz=239,slow=4.7,SNR=3.3						
PDAR	Pinedale Array	149.07	269	PKPbc	PKPbc	14 24 56.4	-1.0
	0.1nm,0.3s,baz=99,slow=4.7,SNR=2.1						
NVAR	Mina Array Bea	151.67	254	PKPbc	PKiKP	14 25 05.9	+1.7
	0.2nm,0.6s,baz=150,slow=2.0,SNR=3.1						

KRSC ***26*** *14:28:59.5±1.6, 51°.97N×160°.19E, h43^{km}±21^{km}, ML4.3*

MOS ***26*** *14:29:02.9±0.8, 52°.06N×159°.94E, h54^{km}, mb4.1/4, Error ellipse: s-maj=10.3km s-min=4.2km az=95.4*

IDC ***26*** *14:29:06.5±3.1, 52°.08N×159°.85E, h62^{km}±25^{km}, mb3.2/9, mb1 3.4/9, mb1mx3.3/44, mbtmp3.5/9, Error ellipse: s-maj=23.3km s-min=20.3km az=113.0*

ISC 26 14:29:01.4±2.2**, 52°.00N**±0°.04×**160°.10E**±0°.04**, h23**^{km}±15^{km}**, n88, σ1^{s}30**/112**, mb3.5**/9**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	1.07	295	*e*P	Pn	14 29 19.5	-1.4
RUS				*e*S	Sb	14 29 33.5	-1.1
RUS	Russkaya	1.07	295	PN	Pn	14 29 19.5	-1.4
RUS				S	Sb	14 29 33.5	-1.1
SPN	Mys Shipunski	1.10	358	*i* P	Pn	14 29 21.0	-0.4
SPN				*e*S	Sb	14 29 36.0	+0.4
SPN	Mys Shipunski	1.10	358	PN	Pn	14 29 21.0	-0.4
SPN				S	Sb	14 29 36.0	+0.4
NLC	Nalytchevo	1.26	339	*e*P	Pn	14 29 22.9	-0.7
NLC				*e*S	Sn	14 29 39.2	-0.6
NLC	Nalytchevo	1.26	339	PN	Pn	14 29 22.9	-0.7
NLC				S	Sn	14 29 39.2	-0.6
KDTR	Khodutka, Kamc	1.27	262	*e*P	Pn	14 29 23.2	-0.4
KDTR				*e*S	Sn	14 29 39.9	0.0
KDTR	Khodutka, Kamc	1.27	262	PN	Pn	14 29 23.2	-0.4
KDTR				S	Sn	14 29 39.9	0.0
MTVR	Mutnovka	1.27	293	*e*P	Pn	14 29 23.1	-0.8
MTVR				*e*S	Sn	14 29 39.1	-1.3
MTVR	Mutnovka	1.27	293	PN	Pn	14 29 23.1	-0.8
MTVR				S	Sn	14 29 39.1	-1.3
DALK	Dalny	1.32	322	*e*P	Pn	14 29 23.2	-1.2
DALK				*e*S	Sn	14 29 39.7	-1.6
DALK	Dalny	1.32	322	PN	Pn	14 29 23.2	-1.2
DALK				S	Sn	14 29 39.7	-1.6
PET	Petropavlovsk	1.35	320	PN	Pn	14 29 24.2	-0.7
PET				S	Sn	14 29 41.4	-0.7
ASAK	Asacha	1.41	287	*i* P	Pn	14 29 25.7	0.0
ASAK				*e*S	Sn	14 29 43.7	+0.1
ASAK	Asacha	1.41	287	PN	Pn	14 29 25.7	0.0
ASAK				S	Sn	14 29 43.7	+0.1
UGLR	Uglovaya	1.44	328	*e*P	Pn	14 29 26.1	-0.1
UGLR				*e*S	Sn	14 29 44.3	-0.1
UGLR	Uglovaya	1.44	328	PN	Pn	14 29 26.1	-0.1

UGLR				S	**Sn**	**14 29 44.3**	**-0.1**
KRMR	**Karymshinskiy**	**1.46**	**305**	*e*P	**Pn**	**14 29 25.9**	**-0.5**
KRMR				*e*S	**Sn**	**14 29 43.8**	**-1.0**
KRMR	**Karymshinskiy**	**1.46**	**305**	PN	**Pn**	**14 29 25.9**	**-0.5**
KRMR				S	**Sn**	**14 29 43.8**	**-1.0**
SDLR	**Sedlovina**	**1.48**	**330**	*e*P	**Pn**	**14 29 26.2**	**-0.5**
SDLR	**Sedlovina**	**1.48**	**330**	PN	**Pn**	**14 29 26.2**	**-0.5**
SMAR	**Somma**	**1.49**	**329**	*e*P	**Pn**	**14 29 26.5**	**-0.5**
SMAR	**Somma**	**1.49**	**329**	PN	**Pn**	**14 29 26.5**	**-0.5**
AVH	**Avacha**	**1.51**	**327**	*i* P	**Pn**	**14 29 27.2**	**0.0**
AVH	**Avacha**	**1.51**	**327**	PN	**Pn**	**14 29 27.2**	**0.0**
KRER	**Koryakskii**	**1.54**	**328**	*e*P	**Pn**	**14 29 27.8**	**+0.1**
KRER	**Koryakskii**	**1.54**	**328**	PN	**Pn**	**14 29 27.8**	**+0.1**
KOK	**Koryaka**	**1.57**	**326**	*e*P	**Pn**	**14 29 28.7**	**+0.7**
KOK	**Koryaka**	**1.57**	**326**	PN	**Pn**	**14 29 28.7**	**+0.7**
KRX	**Arik**	**1.62**	**328**	*e*P	**Pn**	**14 29 28.5**	**-0.2**
KRX	**Arik**	**1.62**	**328**	PN	**Pn**	**14 29 28.5**	**-0.2**
PETK	**Petropavlovsk-**	**1.84**	**308**	P	**Pn**	**14 29 32.2**	**+0.6**
	43nm,0.3s,baz=114,slow=20,SNR=563						
PETK				S	**Sn**	**14 29 54.2**	**+0.1**
	43nm,0.3s,baz=94,slow=29,SNR=7.0						
PETK				LR	LR	14 30 03.6	
	comp=Z,81nm,20.9s,baz=70,slow=34						
PETK	**Petropavlovsk-**	**1.84**	**308**	PN	**Pn**	**14 29 32.2**	**+0.6**
PETK				S	**Sn**	**14 29 54.2**	**+0.1**
PETK				pmax	pmax		
	comp=Z,43nm,0.3s						
PETK				smax	smax		
	comp=N,43nm,0.3s						
APC	**Apacha**	**2.02**	**298**	*e*P	**Pn**	**14 29 35.2**	**+1.1**
APC				*e*S	**Sn**	**14 30 00.7**	**+2.1**
APC	**Apacha**	**2.02**	**298**	PN	**Pn**	**14 29 35.2**	**+1.1**
APC				S	**Sn**	**14 30 00.7**	**+2.1**
PAU	**Pauzhetka**	**2.11**	**257**	*e*P	**Pn**	**14 29 36.1**	**+0.8**
PAU	**Pauzhetka**	**2.11**	**257**	PN	**Pn**	**14 29 36.1**	**+0.8**
GNL	**Ganaly**	**2.14**	**323**	*e*P	**Pn**	**14 29 36.5**	**+0.7**
GNL	**Ganaly**	**2.14**	**323**	PN	**Pn**	**14 29 36.5**	**+0.7**
MKZ	**Mys Kozlova**	**2.74**	**20**	*e*P	**Pn**	**14 29 44.0**	**+0.1**
MKZ				*e*S	**Sn**	**14 30 15.7**	**-0.6**
MKZ	**Mys Kozlova**	**2.74**	**20**	PN	**Pn**	**14 29 44.0**	**+0.1**
MKZ				S	**Sn**	**14 30 15.7**	**-0.6**
SKR	**Severo-Kuril's**	**2.82**	**244**	*e*P	**Pn**	**14 29 45.3**	**+0.3**
SKR				*e*S	**Sn**	**14 30 18.3**	**0.0**
SKR	**Severo-Kuril's**	**2.82**	**244**	PN	**Pn**	**14 29 45.3**	**+0.3**
SKR				S	**Sn**	**14 30 18.3**	**0.0**
KZV	**Kizimen**	**3.12**	**2**	*e*P	**Pn**	**14 29 50.7**	**+1.4**
KZV	**Kizimen**	**3.12**	**2**	PN	**Pn**	**14 29 50.7**	**+1.4**
TUMD	**Tumrok D**	**3.21**	**3**	*e*P	**Pn**	**14 29 51.3**	**+0.8**
TUMD				*e*S	**Sn**	**14 30 28.3**	**+0.3**
TUMR	**Tumrok**	**3.29**	**0**	*e*P	**Pn**	**14 29 53.5**	**+1.9**
TUMR	**Tumrok**	**3.29**	**0**	PN	**Pn**	**14 29 51.3**	**-0.3**
TUMR				S	**Sn**	**14 30 28.3**	**-1.7**
ESO	**Esso**	**4.02**	**349**	*e*P	**Pn**	**14 30 04.4**	**+2.9**
ESO	**Esso**	**4.02**	**349**	PN	**Pn**	**14 30 04.4**	**+2.9**
LGNR	**Loginova**	**4.11**	**5**	*e*P	**Pn**	**14 30 04.7**	**+1.7**
LGNR	**Loginova**	**4.11**	**5**	PN	**Pn**	**14 30 04.7**	**+1.7**
CIRR	**Tsirk**	**4.14**	**5**	*e*P	**Pn**	**14 30 05.3**	**+2.0**
CIRR	**Tsirk**	**4.14**	**5**	PN	**Pn**	**14 30 05.3**	**+2.0**
KRSR	**Krestovskiy**	**4.24**	**4**	*e*P	**Pn**	**14 30 05.8**	**+1.2**
KRSR	**Krestovskiy**	**4.24**	**4**	PN	**Pn**	**14 30 05.8**	**+1.2**
SRDR	**Sredinnyy**	**4.33**	**357**	*e*P	**Pn**	**14 30 08.0**	**+2.2**
SRDR	**Sredinnyy**	**4.33**	**357**	PN	**Pn**	**14 30 08.0**	**+2.2**
KLY	**Klyuchi**	**4.33**	**4**	*e*P	**Pn**	**14 30 08.6**	**+2.8**
KLY	**Klyuchi**	**4.33**	**4**	PN	**Pn**	**14 30 08.6**	**+2.8**
KBTR	**Krutoberegovo**	**4.51**	**20**	*e*P	**Pn**	**14 30 09.0**	**+0.8**
KBTR	**Krutoberegovo**	**4.51**	**20**	PN	**Pn**	**14 30 09.0**	**+0.8**
KBG	**Krutoberegovo**	**4.53**	**19**	*e*P	**Pn**	**14 30 09.7**	**+1.2**
KBG	**Krutoberegovo**	**4.53**	**19**	PN	**Pn**	**14 30 09.7**	**+1.2**
BDR	**Baidarnaya**	**4.62**	**8**	*e*P	**Pn**	**14 30 12.8**	**+2.9**
BDR	**Baidarnaya**	**4.62**	**8**	PN	**Pn**	**14 30 12.8**	**+2.9**
SMKR	**Semkarok**	**4.66**	**9**	*e*P	**Pn**	**14 30 12.7**	**+2.3**
SMKR	**Semkarok**	**4.66**	**9**	PN	**Pn**	**14 30 12.7**	**+2.3**
SRKR	**Sorokina**	**4.71**	**7**	*e*P	**Pn**	**14 30 13.6**	**+2.6**
SRKR	**Sorokina**	**4.71**	**7**	PN	**Pn**	**14 30 13.6**	**+2.6**
BKI	**Bering**	**4.75**	**45**	*e*P	**Pn**	**14 30 11.3**	**-0.2**
BKI				*e*S	**Sn**	**14 31 01.9**	**-3.8**
BKI	**Bering**	**4.75**	**45**	PN	**Pn**	**14 30 11.3**	**-0.2**
MJAR	**Matsushiro Arr**	**21.88**	**234**	P	**P**	**14 33 53.2**	**+0.6**
	comp=N,0.4nm,0.5s,baz=12,slow=9.9,SNR=3.2						
ILAR	**Eielson Array**	**29.59**	**44**	P	**P**	**14 35 05.1**	**+0.8**
	comp=N,0.3nm,0.7s,baz=260,slow=6.9,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**32.64**	**168**	T	T	15 11 21.3	
	baz=352,slow=76,SNR=65						
H11N3	**WAKE ISLAND Hy**	**32.66**	**168**	T	T	15 11 24.7	
	baz=352,slow=76,SNR=59						
H11N1	**WAKE ISLAND Hy**	**32.66**	**168**	T	T	15 11 22.7	
	baz=352,slow=76,SNR=57						
H11S1	**WAKE ISLAND Hy**	**33.82**	**169**	T	T	15 12 47.4	
	baz=351						
H11S3	**WAKE ISLAND Hy**	**33.83**	**169**	T	T	15 12 32.9	
	baz=351						
H11S2	**WAKE ISLAND Hy**	**33.84**	**169**	T	T	15 12 58.8	
	baz=351						
MKAR	**Makanchi Array**	**48.64**	**297**	P	**P**	**14 37 40.9**	**-2.4**
	comp=N,0.2nm,0.4s,baz=55,slow=7.6,SNR=5.0						
ARCES	**ARCESS Array B**	**54.33**	**342**	P	**P**	**14 38 24.8**	**-0.7**
	comp=N,1.3nm,0.8s,baz=41,slow=9.8,SNR=3.5						
FINES	**FINESS Array B**	**61.13**	**337**	P	**P**	**14 39 12.4**	**-0.8**
	comp=N,1.0nm,0.5s,baz=37,slow=6.6,SNR=9.8						
NB2	**NORSAR Subarra**	**64.59**	**344**	P	**P**	**14 39 36.5**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=23,slow=6.9						
NOA	**NORSAR Array B**	**64.59**	**344**	P	**P**	**14 39 36.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=21,slow=6.9,SNR=8.0						
TXAR	**Lajitas Array**	**71.07**	**67**	P	**P**	**14 40 19.1**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=321,slow=8.4,SNR=3.0						
BRTR	**Keskin Array B**	**77.47**	**321**	P	**P**	**14 40 54.4**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=46,slow=4.6,SNR=2.9						
ASAR	**Alice Springs**	**78.76**	**204**	P	**P**	**14 41 02.8**	**+0.9**
	comp=Z,0.1nm,0.8s,baz=16,slow=5.2,SNR=2.9						

*BJI **26** 14:36:14.4±0.0, 1°.04S×99°.14E, h59^{km}, mb4.7/42, mB4.9/26, Ms4.1/17, Ms7 4.0/15*
*MOS **26** 14:36:17.3±1.0, 0°.34S×99°.36E, h43^{km}, mb5.2/40, Error ellipse: s-maj=10.0km s-min=5.1km az=114.8*
*ISCJB **26** 14:36:19.8±0.3, 0°.42S±0°.02×99°.24E±0°.03, h63^{km}±3^{km}, mb4.8/97, Error ellipse: s-maj=5.6km s-min=3.1km az=143.7*
*DJA **26** 14:36:20.8±0.2, 0°S±2°×9°9E±°, h49^{km}±3^{km}, M5.0/37, mb5.1/37, mB5.5/18, MLv5.2/30, Mw(mB)4.9/18*
*NEIC **26** 14:36:20.2±2.2, 0°.37S×99°.22E, h56^{km}±5^{km}, mb4.9/44, Error ellipse: s-maj=12.7km s-min=5.2km az=195.0*
NEIC Felt [IV] at Pariaman and [II] at Padangpanjang.
*IDC **26** 14:36:21.1±1.9, 0°.33S×99°.35E, h59^{km}±16^{km}, mb4.4/27, mb1 4.5/29, mb1mx4.5/34, mbtmp4.7/29, MS3.7/17, Ms1 3.7/17, ms1mx3.6/22, Error ellipse: s-maj=13.7km s-min=9.7km az=63.0*
ISC 26 14:36:20.7±0.5**, 0°.43S**±0°.04×**99°.23E**±0°.04**, h59**^{km}±4^{km}**,**
h59^{km}:pP-P, n477, σ1^{s}**48**/507**, mb4.9**/109**, MS3.8**/24**,**
28C-15D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.90**	**189**	P	**Pn**	**14 36 36.3**	**-1.1**
SISI				S	**Sn**	**14 36 49.3**	**-0.4**
PPI	**Padang Panjang**	**1.17**	**91**	P	**Pn**	**14 36 42.1**	**+1.1**
PDSI	**Padang**	**1.32**	**111**	P	**Pn**	**14 36 44.3**	**+1.2**
PDSI				S	**Sn**	**14 36 57.9**	**-1.9**
BKNI	**Bangkinang**	**1.96**	**67**	*e*Pn	**Pn**	**14 36 52.8**	**+1.1**
BKNI				*e*Sn	**Sn**	**14 37 08.5**	**-6.8**
BKNI	**Bangkinang**	**1.96**	**67**	P	**Pn**	**14 36 52.8**	**+1.1**
SBSI	**Sibolga**	**2.00**	**350**	P	**Pn**	**14 36 50.8**	**-1.4**
SBSI				S	**Sn**	**14 37 13.1**	**-3.0**
SDSI	**Sungai Dareh**	**2.26**	**103**	P	**Pn**	**14 36 57.1**	**+1.4**
GSI	**Gunungsitoli**	**2.39**	**316**	*e*Pn	**Pn**	**14 36 57.9**	**+0.3**
GSI				*e*Sn	**Sn**	**14 37 21.1**	**-4.5**
GSI	**Gunungsitoli**	**2.39**	**316**	P	**Pn**	**14 36 57.8**	**+0.3**
PPSI	**Pulau Pagai**	**2.44**	**161**	P	**Pn**	**14 36 58.0**	**-0.3**
KRJI	**Kerinci**	**2.78**	**126**	P	**Pn**	**14 37 03.2**	**+0.3**
RGRI	**Rengat**	**3.11**	**88**	P	**Pn**	**14 37 08.6**	**+1.2**
PSI	**Prapat**	**3.23**	**355**	P	**Pn**	**14 37 08.6**	**-0.5**
	39nm,0.3s,baz=244,slow=1.7,SNR=61						
PSI				S	Sn	14 37 28.6	-18
	82nm,0.3s,baz=161,slow=15,SNR=14						
TSI	**Tuntungan**	**3.96**	**350**	P	**Pn**	**14 37 19.8**	**+0.7**
SNSI	**Sinabang, Aceh**	**4.05**	**314**	P	**Pn**	**14 37 19.5**	**-0.7**
KCSI	**Kotacane, Aceh**	**4.19**	**340**	P	**Pn**	**14 37 21.4**	**-0.8**
TPTI		**4.20**	**331**	P	**Pn**	**14 37 22.1**	**-0.2**
JMBI	**JAMBI**	**4.57**	**105**	P	**Pn**	**14 37 28.5**	**+1.1**
MYKOM	**Kota Tinggi**	**5.12**	**64**	*e*Pn	**Pn**	**14 37 36.0**	**+1.0**
DSRI	**Dabo**	**5.35**	**91**	P	**Pn**	**14 37 39.3**	**+1.2**
MNAI	**Manna**	**5.39**	**136**	P	**Pn**	**14 37 38.7**	**0.0**
MLSI	**Meulaboh, Aceh**	**5.45**	**329**	P	**Pn**	**14 37 39.7**	**+0.2**
LHSI	**Lahat**	**5.46**	**128**	P	**Pn**	**14 37 40.9**	**+1.3**
TPRI	**Tanjung Pinang**	**5.47**	**76**	P	**Pn**	**14 37 41.3**	**+1.6**
KULM	**Kulim**	**5.86**	**14**	*e*Pn	**Pn**	**14 37 46.1**	**+1.0**
LHMI	**Lhok Sumawe**	**6.07**	**338**	P	**Pn**	**14 37 48.9**	**+1.0**
PMBI	**Palembang**	**6.07**	**114**	P	**Pn**	**14 37 47.6**	**-0.4**
MDSI	**Maura Dua**	**6.38**	**129**	P	**Pn**	**14 37 53.1**	**+0.9**
LWLI	**Liwa**	**6.64**	**133**	P	**Pn**	**14 37 56.9**	**+1.1**
KLSI		**6.94**	**128**	P	**Pn**	**14 38 00.8**	**+1.0**
PPBI	**Pangkal Pinang**	**7.12**	**104**	P	**Pn**	**14 38 03.6**	**+1.3**
KLI	**Kotabumi**	**7.14**	**128**	P	**Pn**	**14 38 03.3**	**+0.7**
KASI	**Kota Agung**	**7.30**	**134**	P	**Pn**	**14 38 04.9**	**+0.1**
SKLT	**Songkhla**	**7.68**	**10**	P	**Pn**	**14 38 12.4**	**+2.4**
	77nm,1.2s,795nm0.3nm						
BLSI	**Bandar Lampung**	**7.75**	**129**	P	**Pn**	**14 38 11.6**	**+0.5**
TRTT	**Trang**	**8.23**	**3**	P	**Pn**	**14 38 19.2**	**+1.7**
	122nm,1.0s,1µm0.3nm						
PKDT	**Phuket**	**8.32**	**354**	P	**Pn**	**14 38 22.1**	**+3.3**
	91nm,1.0s,0.3nm						
TPI	**Tanjungpandan**	**8.73**	**105**	P	**Pn**	**14 38 25.7**	**+1.2**
	28nm,0.7s						
CGJI	**Cibinong**	**8.91**	**134**	P	**Pn**	**14 38 27.3**	**+0.5**
LEM	**Lembang**	**10.51**	**127**	LR	LR	14 43 20.9	
	comp=Z,364nm,19.2s,baz=266,slow=40						
LEM	**Lembang**	**10.51**	**127**	P	**Pn**	**14 38 50.0**	**+1.1**
JCJI	**Jatiwangi**	**10.85**	**124**	P	**Pn**	**14 38 57.0**	**+3.7**
KSM	**Kuching**	**11.24**	**80**	*e*Pn	**Pn**	**14 39 01.2**	**+2.5**
SBUM	**Sibu**	**13.30**	**78**	*e*Pn	**Pn**	**14 39 30.0**	**+3.0**
NGJI	**Ngawi**	**14.01**	**120**	P	P	14 39 49.4	+6.8
DLV	**T Lat**	**15.36**	**36**	*e*P	**P**	**14 39 57.7**	**-0.1**
	22nm,0.7s						
UTHA	**Uthaitani**	**15.89**	**1**	P	**P**	**14 40 08.9**	**+5.4**
PBKT	**Sadao Pong**	**16.98**	**6**	P	P	14 40 25.3	+10
KKM	**Kota Kinabalu**	**18.14**	**69**	*e*P	**P**	**14 40 26.1**	**-2.4**
	37nm,1.0s						
KKM				*e*PcP	**PcP**	**14 44 59.3**	**-0.8**
PANO	**Nakornpanom**	**18.26**	**17**	P	**Pn**	**14 40 32.8**	**+2.7**
	0.8nm,1.0s						
CM31	**Chiang Mai Arr**	**18.77**	**359**	*e*P	**P**	**14 40 33.9**	**-1.5**
	11nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.77**	**359**	P	**P**	**14 40 34.5**	**-0.9**
	0.4nm,0.3s,baz=188,slow=11,SNR=8.0						
CMAR				PcP	**PcP**	**14 45 02.4**	**+1.4**
	baz=211,slow=3.1,SNR=10						
CMAR				LR	LR	14 48 16.3	
	comp=Z,416nm,18.7s,baz=177,slow=38						
NONG	**Nongkai**	**18.78**	**12**	P	**Pn**	**14 40 37.1**	**+0.7**
	0.2nm,0.9s						
PHRA	**Phrae**	**18.84**	**3**	P	**Pn**	**14 40 42.5**	**+5.4**
	1.9nm,1.1s,573nm						
CMMT	**Chiang Mai**	**19.13**	**359**	P	**Pn**	**14 40 46.4**	**+5.8**
	5.5nm,0.7s						
CHTO	**Chiang Mai**	**19.13**	**359**	*e*P	**P**	**14 40 39.1**	**-0.1**
	6.3nm,0.9s						
CHTO	**Chiang Mai**	**19.13**	**359**	*e*P	**P**	**14 40 39.1**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PAYA	**Payao**	**19.68**	**2**	P	**Pn**	**14 40 54.1**	**+7.0**
PALK	**Pallekele**	**20.00**	**293**	P	**Pn**	**14 40 51.2**	**+0.2**
	comp=Z,15nm,0.9s,baz=116,slow=12,SNR=4.0						
PALK	**Pallekele**	**20.00**	**293**	*e*P	**P**	**14 40 47.5**	**-1.2**
	comp=Z,20nm,1.0s						
PALK	**Pallekele**	**20.00**	**293**	P	**Pn**	**14 40 51.5**	**+0.5**
PALK	**Pallekele**	**20.00**	**293**	*e*P	**P**	**14 40 47.6**	**-1.2**
TTSI	**Tana Toraja**	**20.75**	**97**	P	Pn	14 41 04.8	+5.1
SPSI	**Sidrap Palu**	**20.82**	**100**	P	Pn	14 41 05.6	+4.9
KAPI	**Kappang**	**21.00**	**103**	P	**P**	**14 41 02.4**	**+2.9**
	comp=Z,29nm,0.7s,baz=293,slow=4.9,SNR=13						
KAPI	**Kappang**	**21.00**	**103**	*e*P	**P**	**14 40 59.6**	**+0.1**
	comp=Z,33nm,0.8s						
KAPI	**Kappang**	**21.00**	**103**	*e*P	**P**	**14 40 59.6**	**+0.1**
KAPI				pmax	pmax		
	comp=Z,33nm,0.8s						
BNSI	**Bone**	**21.23**	**101**	P	**P**	**14 41 04.2**	**+2.2**
	comp=Z,66nm,1.1s,comp=Z,789nm						
BKSI	**Bulukumba**	**21.42**	**103**	P	**P**	**14 41 05.7**	**+1.6**
	comp=Z,57nm,0.8s,comp=Z,524nm						
QIZ	**Qiongzhong**	**21.97**	**28**	P	**P**	**14 41 10.0**	**+0.1**
QIZ				S	**S**	**14 45 12.5**	**+3.2**
QIZ				pmax	pmax		
	comp=Z,190nm,2.8s						
QIZ				LR	LR		
	comp=Z,420nm,20.6s						
QIZ				LR	LR		
	comp=Z,260nm,22.6s						
QIZ				LR	LR		
	comp=Z,300nm,23.0s						
LUWI	**Luwuk**	**23.55**	**92**	*e*P	**P**	**14 41 26.1**	**-0.1**
	comp=Z,99nm,0.9s						
LUWI	**Luwuk**	**23.55**	**92**	P	P	14 41 42.0	+16
BBSI	**Bau Bau**	**23.84**	**103**	P	**P**	**14 41 30.2**	**+1.4**
	comp=Z,46nm,0.8s,comp=Z,430nm						
KMI	**Kunming**	**25.63**	**7**	P	**P**	**14 41 46.5**	**+1.3**
KMI				pP	pP	14 42 02.0	+2.4
KMI				sP	sP	14 42 07.8	+1.2
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
KMI				LR	LR		
	comp=Z,200nm,15.0s						
KMI				LR	LR		
	comp=Z,230nm,22.2s						
KMI				LR	LR		
	comp=Z,250nm,26.6s						
BATI	**Baumata**	**26.17**	**113**	P	**P**	**14 41 49.3**	**-0.7**
	comp=Z,8.5nm,0.3s,baz=226,slow=7.1,SNR=4.1						
SHL	**Shillong**	**26.80**	**345**	*e*P	**P**	**14 41 56.2**	**+0.4**
	comp=Z,78nm,1.2s						
SHL	**Shillong**	**26.80**	**345**	*e*P	**P**	**14 41 56.2**	**+0.4**
SHL				pmax	pmax		
	comp=Z,78nm,1.2s						
SHL	**Shillong**	**26.80**	**345**	*e*P	**P**	**14 41 56.0**	**+0.2**
H08S2	**Diego Garcia H**	**27.59**	**254**	T	T	15 10 00.5	
	baz=76,slow=75,SNR=850						
H08S3	**Diego Garcia H**	**27.60**	**254**	T	T	15 10 07.3	
	baz=76,slow=75,SNR=1074						
H08S1	**Diego Carcia H**	**27.61**	**254**	T	T	15 10 13.2	
	baz=76,slow=75,SNR=1011						
GYA	**Guiyang**	**27.68**	**14**	*e*P	**P**	**14 42 07.3**	**+3.8**
GYA				pP	pP	14 42 21.5	+3.5
GYA				PP	**PP**	**14 42 59.8**	**-7.3**
GYA				S	**S**	**14 46 46.0**	**+4.2**
GYA				sS	sS	14 47 10.0	+3.9
GYA				SS	**SnSn**	**14 48 10.8**	**+12**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.0s						
GYA				LR	LR		
	comp=Z,230nm,17.2s						
GYA				LR	LR		
	comp=Z,200nm,16.9s						
GYA				LR	LR		
	comp=Z,280nm,17.5s						
LSA	**Lhasa**	**30.94**	**346**	*e*P	**P**	**14 42 33.2**	**+0.4**
	comp=Z,8.8nm,0.5s						
LSA	**Lhasa**	**30.94**	**346**	P	**P**	**14 42 33.5**	**+0.7**
LSA	**Lhasa**	**30.94**	**346**	P	**P**	**14 42 33.6**	**+0.7**
LSA	**Lhasa**	**30.94**	**346**	*e*P	**P**	**14 42 33.2**	**+0.4**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CD2	**Chengdu**	**31.47**	**7**	P	**P**	**14 42 37.5**	**+0.5**
MEEK	**Meekatharra**	**32.05**	**146**	P	**P**	**14 42 43.9**	**+1.8**
	baz=32,SNR=3.2						
KNRA	**Kununurra**	**32.85**	**119**	P	**P**	**14 42 47.3**	**-1.9**
	baz=33,SNR=3.7						
WHN	**Wuhan**	**34.00**	**24**	*e*P	P	14 43 08.5	+9.5
WHN				S	S	14 48 33.0	+13
WHN				LR	LR		
	comp=Z,540nm,19.9s						
XAN	**Xi'an**	**35.48**	**14**	P	P	14 43 05.8	-6.0
XAN				pP	pP	14 43 18.5	-8.1
XAN				PP	**PP**	**14 44 25.3**	**-8.1**
XAN				S	S	14 48 31.8	-11
XAN				SS	SnSn	14 50 47.3	-21
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,79nm,6.8s						
XAN				LR	LR		
	comp=N,290nm,14.1s						
XAN				LR	LR		
	comp=E,150nm,12.6s						
XAN				LR	LR		
	comp=Z,220nm,16.7s						
LZH	**Lanzhou**	**36.59**	**6**	*e*P	**P**	**14 43 21.8**	**+0.4**
LZH				pP	pP	14 43 38.3	+2.1
LZH				sP	sP	14 43 44.3	+1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,4.6s						
LZH				LR	LR		
	comp=Z,1µm,13.3s						
LZH				LR	LR		
	comp=Z,1µm,14.9s						
LZH				LR	LR		
	comp=Z,1µm,19.8s						
WRKA	**Warakurna**	**37.25**	**133**	P	**P**	**14 43 27.6**	**+0.5**
	baz=37,SNR=9.5						
NJ2	**Nanjing**	**37.27**	**28**	*e*P	**P**	**14 43 28.5**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KMBL	**Kambalda**	**37.51**	**147**	P	**P**	**14 43 31.0**	**+1.8**
	baz=38,SNR=12						
WRA	**Warramunga Arr**	**39.46**	**122**	P	**P**	**14 43 44.1**	**-1.6**
	comp=Z,20nm,0.5s,baz=291,slow=10,SNR=226						
WRA				PcP	**PcP**	**14 45 53.4**	**+0.6**
	comp=Z,3.2nm,0.6s,baz=280,slow=5.0,SNR=5.2						
WRA				S	**S**	**14 49 36.5**	**-7.4**
	comp=Z,3.6nm,0.9s,baz=292,slow=18,SNR=3.6						
WR1	**Warramunga Arr**	**39.46**	**122**	*e*P	**P**	**14 43 44.1**	**-1.6**
WR1				*e*PcP	**PcP**	**14 45 53.4**	**+0.6**
WRAB	**Tennant Creek**	**39.46**	**122**	*e*P	**P**	**14 43 44.5**	**-1.2**
	comp=Z,26nm,0.6s						
WRAB	**Tennant Creek**	**39.46**	**122**	*e*P	**P**	**14 43 44.5**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,26nm,0.6s						
WB2	**Warramunga Arr**	**39.47**	**122**	*e*P	**P**	**14 43 44.3**	**-1.5**
	comp=Z,25nm,0.6s						
WB2				*e*PcP	**PcP**	**14 45 53.3**	**+0.5**
GTA	**Gaotai**	**39.66**	**1**	⇓P	**P**	**14 43 47.0**	**-0.2**
GTA				pP	pP	14 44 00.8	-1.3
GTA				sP	sP	14 44 09.5	+0.6
GTA				PcP	**PcP**	**14 45 54.0**	**+0.8**
GTA				S	**S**	**14 49 42.0**	**-4.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,28nm,4.6s						
GTA				LR	LR		
	comp=Z,86nm,17.1s						
GTA				LR	LR		
	comp=Z,130nm,17.8s						
GTA				LR	LR		
	comp=Z,160nm,18.7s						
FORT	**Forrest**	**40.73**	**140**	*e*P	**P**	**14 43 57.9**	**+1.9**
	comp=Z,91nm,0.6s						
FORT	**Forrest**	**40.73**	**140**	P	**P**	**14 43 57.7**	**+1.7**
	baz=41,SNR=19						
AS31	**Alice Springs**	**40.80**	**127**	*e*P	**P**	**14 43 56.2**	**-0.6**
	comp=Z,6.1nm,0.6s						
AS31				*e*PcP	**PcP**	**14 45 57.5**	**+0.4**
ASAR	**Alice Springs**	**40.80**	**127**	P	**P**	**14 43 56.0**	**-0.8**
	comp=Z,20nm,0.8s,baz=303,slow=7.9,SNR=241						
ASAR				PcP	**PcP**	**14 45 57.5**	**+0.4**
	comp=Z,7.4nm,0.8s,baz=314,slow=2.9,SNR=15						
ASAR				S	**S**	**14 49 57.0**	**-6.8**
	comp=Z,4.9nm,1.2s,baz=302,slow=14,SNR=6.3						
NIL	**Nilore**	**41.78**	**327**	*e*P	**P**	**14 44 04.5**	**-0.1**
	comp=Z,39nm,0.8s						
NIL	**Nilore**	**41.78**	**327**	*e*P	**P**	**14 44 04.5**	**-0.1**
NIL				pmax	pmax		
	comp=Z,39nm,0.8s						
HHC	**Hu-ho-hao-te**	**42.59**	**14**	P	**P**	**14 44 13.3**	**+2.0**
HHC				S	**S**	**14 50 34.8**	**+4.8**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,14nm,5.1s						
HHC				LR	LR		
	comp=Z,230nm,16.7s						
HHC				LR	LR		
	comp=Z,200nm,12.4s						
QIS	**Mount Isa**	**44.24**	**120**	P	**P**	**14 44 23.7**	**-1.1**
	baz=44,SNR=4.6						
JNU	**Nakatsue**	**44.74**	**39**	P	**P**	**14 44 27.3**	**-1.3**
	comp=Z,9.4nm,0.8s,baz=194,slow=5.6,SNR=3.9						
JNU	**Nakatsue**	**44.74**	**39**	*e*P	**P**	**14 44 27.3**	**-1.3**
	comp=Z,13nm,0.9s						
KSH	**Kashi**	**45.10**	**334**	P	**P**	**14 44 30.0**	**-1.4**
KSH				sP	sP	14 44 52.8	-0.5
KSH				S	**S**	**14 51 02.3**	**-4.2**
KSH				sS	sS	14 51 28.5	-3.2
KSH				ScS	**ScS**	**14 54 21.8**	**-1.5**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,55nm,3.9s						
KSH				LR	LR		
	comp=Z,76nm,4.5s						
KSH				LR	LR		
	comp=Z,90nm,4.2s						
KSH				LR	LR		
	comp=Z,97nm,5.4s						
WMQ	**Urumqi**	**45.25**	**348**	*e*P	**P**	**14 44 33.5**	**+1.0**
WMQ				pP	pP	14 44 46.0	-1.6
WMQ				sP	sP	14 44 52.5	-1.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,37nm,4.7s						
WMQ				LR	LR		
	comp=Z,160nm,29.3s						
WMQ				LR	LR		
	comp=Z,180nm,29.0s						
WMQ				LR	LR		
	comp=Z,96nm,27.3s						
KS15	**Wonju Array Si**	**46.06**	**32**	*e*P	**P**	**14 44 36.5**	**-2.4**
	comp=Z,5.0nm,0.8s						
KSRS	**Korea Array**	**46.09**	**32**	P	**P**	**14 44 37.6**	**-1.4**
	comp=Z,4.3nm,0.7s,baz=224,slow=8.2,SNR=22						
KSRS				PcP	**PcP**	**14 46 14.8**	**+0.3**
	comp=Z,2.1nm,1.0s,baz=206,slow=2.7,SNR=5.4						
KSRS				LR	LR	15 04 47.5	
	comp=Z,95nm,18.4s,baz=220,slow=37						
NRN	**Naryn**	**46.68**	**336**	*e*PcP	**PcP**	**14 46 18.6**	**+1.6**
KDJ	**Kajisay**	**46.81**	**337**	*e*PcP	**PcP**	**14 46 18.0**	**+0.8**
PDGK	**Podgornoye**	**47.02**	**340**	P	**P**	**14 44 46.1**	**-0.4**
PDGK				pmax	pmax		
	comp=Z,24nm,1.2s						
ULHL	**Ulahol**	**47.27**	**337**	P	**P**	**14 44 49.4**	**+0.8**
	SNR=14						
BBOO	**Buckleboo**	**47.31**	**137**	P	**P**	**14 44 49.2**	**+0.5**
	baz=48,SNR=8.1						
KZA	**Kyzart**	**47.53**	**336**	P	**P**	**14 44 51.8**	**+1.0**
	SNR=11						
MTSU	**Mount Surprise**	**47.65**	**114**	P	**P**	**14 44 50.9**	**-0.8**
	baz=48,SNR=7.6						
UCH	**Uchtor**	**47.96**	**335**	P	**P**	**14 44 55.0**	**+0.8**
	SNR=27						
TKM2	**Tokmak 2**	**48.10**	**337**	P	**P**	**14 44 55.7**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,43nm,1.0s						
TKM2	**Tokmak 2**	**48.10**	**337**	P	**P**	**14 44 55.7**	**+0.8**
	SNR=40						
KBK	**Karagaybulak**	**48.14**	**336**	P	**P**	**14 44 57.0**	**+1.8**
	SNR=12						
AML	**Almayashu**	**48.23**	**335**	P	**P**	**14 44 57.2**	**+1.0**
	SNR=26						
AAK	**Ala-Archa**	**48.31**	**336**	P	**P**	**14 44 57.7**	**+1.2**
AAK	**Ala-Archa**	**48.31**	**336**	*d i*P	**P**	**14 44 57.5**	**+1.0**
AAK				pmax	pmax		
	comp=Z,15nm,1.3s						
SONA0	**Songino Array**	**48.48**	**6**	*e*PcP	**PcP**	**14 46 23.0**	**0.0**
SONM	**Songino Array**	**48.48**	**6**	P	**P**	**14 44 58.0**	**+0.4**
	comp=Z,12nm,0.8s,baz=189,slow=8.8,SNR=49						
SONM				PcP	**PcP**	**14 46 23.0**	**0.0**
	comp=Z,5.8nm,0.7s,baz=191,slow=3.8,SNR=5.5						
SONM				LR	LR	15 07 32.9	
	comp=Z,120nm,19.6s,baz=199,slow=39						
CHMS	**Chumysh**	**48.50**	**336**	P	**P**	**14 44 58.2**	**+0.4**
	SNR=11						
ULN	**Ulaanbaatar**	**48.59**	**7**	*e*P	**P**	**14 44 59.0**	**+0.5**
	comp=Z,9.0nm,0.9s						
ULN				*e*PcP	**PcP**	**14 46 24.5**	**+1.1**
ULN	**Ulaanbaatar**	**48.59**	**7**	*e*P	**P**	**14 44 59.0**	**+0.5**
ULN				*e*		14 46 24.5	
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						

EKS2	Erkin-Say	48.63	335	P	P	14 45 00.2	+1.3
	SNR=11						
UOSS	Minazif	48.66	304	P	P	14 45 01.4	+2.0
HATD	Hatta, Dubai	48.67	304	P	P	14 45 00.5	+1.1
ALNE	Al Ain	48.68	303	i P	P	14 45 00.8	+1.3
	SNR=7.5						
USP	Ospenovka	48.83	336	P	P	14 45 01.1	+0.8
	SNR=30						
ASUD	Al Ashush, Dub	49.26	304	P	P	14 45 05.3	+1.5
MK31	Makanchi Array	49.32	345	i P	P	14 45 03.4	-0.6
MK31				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MKAR	Makanchi Array	49.32	345	P	P	14 45 04.0	0.0
	comp=Z,4.4nm,0.5s,baz=154,slow=7.8,SNR=59						
MKAR				S	S	14 52 06.1	-0.2
	comp=Z,0.3nm,0.7s,baz=134,slow=8.3,SNR=2.7						
MKAR				LR	LR	15 09 48.6	
	comp=Z,70nm,18.0s,baz=154,slow=41						
MAKZ	Makanchi	49.42	344	eP	P	14 45 04.7	-0.1
	comp=Z,8.1nm,0.9s						
MAKZ				ePcP	PcP	14 46 24.6	-1.7
MAKZ	Makanchi	49.42	344	eP	P	14 45 04.7	-0.1
MAKZ				e		14 46 24.6	
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HTT	Hallett	49.64	135	P	P	14 45 07.7	+0.9
	baz=50,SNR=8.6						
CN2	Changchun	49.88	25	eP	P	14 45 10.3	+2.0
KK31	Karatay Array	50.42	333	P	P	14 45 12.1	-0.3
KK31				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ZAK	Zakamensk	50.74	3	eP	P	14 45 14.5	-0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	Stephens Creek	50.77	132	P	P	14 45 15.3	+0.1
	comp=Z,13nm,0.6s,baz=308,slow=7.1,SNR=30						
STKA				LR	LR	15 09 01.4	
	comp=Z,64nm,20.4s,baz=222,slow=39						
STKA	Stephens Creek	50.77	132	eP	P	14 45 15.3	+0.1
	comp=Z,2.8nm,0.6s						
STKA	Stephens Creek	50.77	132	P	P	14 45 15.4	+0.1
	baz=51,SNR=29						
STKA	Stephens Creek	50.77	132	eP	P	14 45 15.3	+0.1
STKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DGZ	Jazzator, Alta	50.96	350	d iP	P	14 45 16.6	+0.1
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAJO	Matsushiro	51.57	40	eP	P	14 45 19.7	-1.5
MAJO	Matsushiro	51.57	40	⇓eP	P	14 45 20.0	-1.2
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	Matsushiro Arr	51.57	40	P	P	14 45 19.7	-1.5
	comp=Z,3.8nm,0.9s,baz=220,slow=7.1,SNR=11						
MOY	Mondy	51.93	1	eP	P	14 45 24.4	+0.7
MOY				pmax	pmax		
	comp=Z,16nm,2.3s						
TLY	Talaya	52.06	3	eP	P	14 45 25.4	+0.9
TLY				pmax	pmax		
	comp=Z,19nm,1.0s						
USRK	Ussuriysk Ar.	53.16	29	P	P	14 45 32.0	-0.8
	comp=Z,9.9nm,0.8s,baz=222,slow=5.7,SNR=25						
USRK				LR	LR	15 11 10.5	
	comp=Z,145nm,18.4s,baz=209,slow=39						
USRK	Ussuriysk Ar.	53.16	29	P	P	14 45 32.0	-0.8
CMSA	Cobar Meteorol	53.70	130	P	P	14 45 37.4	+0.4
	baz=54,SNR=32						
GEYT	Alibeck	53.76	320	P	P	14 45 37.2	-0.2
	comp=Z,6.3nm,0.9s,baz=142,slow=7.5,SNR=13						
GEYT				LR	LR	15 10 17.8	
	comp=Z,54nm,20.1s,baz=225,slow=38						
OTUK	Ortayu	53.80	338	P	P	14 45 35.8	-1.7
OTUK				pmax	pmax		
	comp=Z,21nm,0.9s						
KURK	Kurchatov	53.90	344	eP	P	14 45 38.1	+0.1
	comp=Z,21nm,0.9s						
KURK	Kurchatov	53.90	344	eP	P	14 45 38.1	+0.1
KURK				pmax	pmax		
	comp=Z,21nm,0.9s						
RMQ	Roma	54.20	123	P	P	14 45 40.3	-0.5
	baz=54,SNR=6.9						
ZALV	Zalesovo Beam	55.50	350	P	P	14 45 49.4	-0.2
	comp=Z,15nm,0.6s,baz=171,slow=5.8,SNR=57						
ZALV				S	S	14 53 30.1	-0.3
	comp=Z,0.3nm,0.3s,baz=160,slow=9.2,SNR=3.2						
ZALV				LR	LR	15 12 02.8	
	comp=Z,52nm,21.0s,baz=70,slow=39						
EIDS	Eidsvold	55.81	121	eP	P	14 45 51.5	-0.9
	comp=Z,11nm,0.6s						
EIDS	Eidsvold	55.81	121	P	P	14 45 52.2	-0.2
	baz=56,SNR=4.0						
KLR	Kul'dur	56.84	25	d iP	P	14 45 57.9	-1.3
KLR				i *PP	pP	14 46 12.1	-2.8
KLR				pmax	pmax		
	comp=Z,11nm,0.9s						
RAYN	Ar Rayn	57.31	298	eP	P	14 46 01.9	-1.2
	comp=Z,13nm,1.0s						
RAYN	Ar Rayn	57.31	298	i P	P	14 46 03.3	+0.2
	SNR=9.5						
RAYN	Ar Rayn	57.31	298	eP	P	14 46 02.0	-1.2
RAYN				pmax	pmax		
	comp=Z,13nm,1.0s						
CAN	Canberra	57.83	132	eP	P	14 46 05.0	-1.6
	comp=Z,21nm,1.0s						
CAN	Canberra	57.83	132	eP	P	14 46 05.0	-1.6
CAN				pmax	pmax		
	comp=Z,21nm,1.0s						
ARMA	Armidale	57.94	126	eP	P	14 46 06.7	-0.9
	comp=Z,9.8nm,0.8s						
ARMA	Armidale	57.94	126	P	P	14 46 07.3	-0.3
	baz=58,SNR=8.1						
BRVK	Borovoye	58.52	340	eP	P	14 46 10.3	-0.7
	comp=Z,8.2nm,0.8s						
BRVK				ePcP	PcP	14 47 00.3	-0.6
BRVK	Borovoye	58.52	340	eP	P	14 46 10.3	-0.7
BRVK				e		14 47 00.3	
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZEA	Zeya	58.78	19	eP	P	14 46 11.8	-1.0
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
AB31	Akbulak array	59.90	331	P	P	14 46 19.6	-1.0
AB31				pmax	pmax		
	comp=Z,11nm,0.7s						
YSS	Yuzh-Sakhalins	60.58	33	eP	P	14 46 24.8	-0.5
YSS				pmax	pmax		
	comp=Z,14nm,1.0s						
KMBO	Kilima Mbogo	61.97	269	P	P	14 46 37.2	+1.6
	comp=Z,1.3nm,0.3s,baz=60,slow=13,SNR=4.8						
AKT	Akhty	62.43	318	eP	P	14 46 38.1	+0.1
AKT				e		14 47 15.5	
AKT				pmax	pmax		
	comp=Z,32nm,1.1s						
SVE	Sverdlovsk	64.95	338	⇓eP	P	14 46 54.2	0.0
SVE				pmax	pmax		
	comp=Z,26nm,1.1s						
ARU	Arti	65.47	337	d iP	P	14 46 56.4	-1.1
ARU				*PP	pP	14 47 10.8	-2.7
ARU						14 47 26.2	
ARU				S	S	14 55 38.9	+1.1
ARU				SS	SS	14 59 48.9	-3.4
ARU				pmax	pmax		
	comp=Z,13nm,1.0s						
ZEI	Tsey	65.56	318	eP	P	14 46 57.0	-1.7
NCK	Nalchik	66.07	319	⇑eP	P	14 47 02.2	+0.5
NCK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CASY	Casey	66.20	175	eP	P	14 47 04.2	+2.2
	comp=Z,8.7nm,0.9s						
YAK	Yakutsk	66.44	15	eP	P	14 47 02.1	-1.5
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
NEY	Neytrino	66.54	318	⇑eP	P	14 47 05.3	+0.4
KBZ	Khabaz	66.62	319	P	P	14 47 05.3	+0.2
	comp=Z,10nm,0.9s,baz=124,slow=5.7,SNR=16						
KBZ				LR	LR	15 19 15.4	
	comp=Z,30nm,18.7s,baz=142,slow=39						
KIV	Kislovodsk	66.86	319	P	P	14 47 07.5	+0.7
KIV	Kislovodsk	66.86	319	eP	P	14 47 06.7	-0.1
KIV				pmax	pmax		
	comp=Z,55nm,1.0s						
SOC	Sochi	68.68	318	eP	P	14 47 16.4	-1.8
SOC				e		14 49 53.6	
SOC				ePPP	PPP	14 51 27.8	
SOC				eS	S	14 56 15.1	-1.8
SOC				pmax	pmax		
	comp=Z,34nm,0.8s						
MAW	Mawson	71.61	194	P	P	14 47 36.8	+1.3
	comp=Z,3.2nm,0.8s,baz=23,slow=3.8,SNR=6.8						
MAW				LR	LR	15 11 59.8	
	comp=Z,80nm,21.0s,baz=47,slow=30						
BR131	Keskin Array S	71.70	312	eP	P	14 47 36.1	-0.9
	comp=Z,6.0nm,0.8s						
BR131	Keskin Array S	71.70	312	eP	P	14 47 36.1	-0.9
BR131				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	71.70	312	P	P	14 47 36.0	-0.9
	comp=Z,4.7nm,0.8s,baz=127,slow=7.9,SNR=24						
PETK	Petropavlovsk-	71.99	33	P	P	14 47 37.4	-0.8
	comp=Z,2.7nm,0.9s,baz=251,slow=4.5,SNR=4.8						
PETK				LR	LR	15 19 06.4	
	comp=Z,35nm,21.5s,baz=231,slow=36						
PEA1	Petropavlovsk-	71.99	33	eP	P	14 47 37.4	-0.8
SIM	Simferopol'	72.93	318	c iP	P	14 47 44.6	+0.6
SIM				e		14 48 00.3	
SIM				pmax	pmax		
	comp=Z,25nm,0.9s						
PRGR	Permogore	73.93	336	eP	P	14 47 47.2	-2.3
PRGR				pmax	pmax		
	comp=Z,28nm,0.6s						
TIXI	Tiksi	74.44	9	⇑eP	P	14 47 53.0	+0.7
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s						
SEY	Seymchan	74.48	22	⇓iP	P	14 47 52.2	-0.4
MOS	Moscow	74.77	329	eP	P	14 47 53.1	-1.3
MOS				e		14 48 05.9	
MOS				pmax	pmax		
	comp=Z,55nm,0.9s						
OBN	Obninsk	75.06	328	d iP	P	14 47 55.5	-0.7
OBN				i		14 48 10.1	
OBN				pmax	pmax		
	comp=Z,26nm,1.0s						
BOSA	Boshof	75.74	241	P	P	14 48 01.9	+1.0
	comp=Z,5.2nm,0.6s,baz=90,slow=4.9,SNR=13						
BOSA				LR	LR	15 14 02.3	
	comp=Z,105nm,20.4s,baz=84,slow=30						
KLMR	Klimovskoe	76.09	334	eP	P	14 48 00.6	-1.3
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
RPZ	Rata Peaks	76.63	135	P	P	14 48 05.9	+0.5
	comp=Z,22nm,1.0s,baz=336,slow=7.6,SNR=3.9						
TIRR	Tirgusor	76.70	316	⇑iP	P	14 48 04.2	-1.5
TIRR	Tirgusor	76.70	316	⇑P	P	14 48 04.2	-1.5
THZ	Tophouse	77.57	133	eP	P	14 48 11.6	+0.8
	comp=Z,23nm,1.0s						
AKASG	Malin Array Be	77.78	322	P	P	14 48 10.2	-1.5
	comp=Z,0.5nm,0.4s,baz=86,slow=4.5,SNR=13						
VRI	Vrincioaia	78.19	317	⇑iP	P	14 48 14.6	+0.5
VRI	Vrincioaia	78.19	317	⇑P	P	14 48 14.6	+0.5
PLOR	Plostina	78.23	317	⇑iP	P	14 48 15.3	+0.9
PLOR	Plostina	78.23	317	⇑P	P	14 48 15.3	+0.9
TESR	Tescani	78.38	318	⇑iP	P	14 48 15.6	+0.5
MLR	Muntele Rosu	78.64	317	⇑iP	P	14 48 17.3	+0.6
MLR	Muntele Rosu	78.64	317	⇑P	P	14 48 17.3	+0.6
SYO	Syowa Base	79.10	198	⇓eX	P	14 48 13.6	-4.9
DOPR	Dopca	79.12	317	⇑iP	P	14 48 19.2	0.0
PLVB	Pleven	79.14	314	⇑iP	P	14 48 19.8	+0.5
VOIR		79.24	316	⇑iP	P	14 48 19.5	-0.5
VOIR		79.24	316	⇑P	P	14 48 19.5	-0.5
BURAR	Bucovina Array	79.58	319	⇓iP	P	14 48 22.6	+0.8
BURAR	Bucovina Array	79.58	319	⇓P	P	14 48 22.6	+0.8
BKZ	Black Stump Fm	79.86	130	eP	P	14 48 23.9	+0.5
	comp=Z,19nm,0.9s						
VTS	Vitosha	80.00	313	eP	P	14 48 23.9	-0.3
	comp=Z,10nm,0.9s						
VTS	Vitosha	80.00	313	⇑iP	P	14 48 23.8	-0.4
VTS	Vitosha	80.00	313	eP	P	14 48 23.9	-0.3
VTS				pmax	pmax		
	comp=Z,11nm,0.9s						
IIGN	Ignalina	80.75	326	eS	P	14 48 26.9	-0.9
IZAR	Zarasai	80.83	327	eS	P	14 48 28.6	+0.4
ISAL	Salakas	80.86	327	eS	P	14 48 27.9	-0.4
DRGR		81.10	317	⇑iP	P	14 48 30.3	+0.4
DRGR		81.10	317	⇑P	P	14 48 30.3	+0.4
VSU	Vasula	81.27	330	ceP	P	14 48 30.5	+0.1
VSU				pmax	pmax		
	comp=Z,22nm,1.0s						
BZS	Buzias	81.65	316	⇑iP	P	14 48 33.0	+0.2
BZS	Buzias	81.65	316	⇑P	P	14 48 33.0	+0.2
SIRR	Siria	81.72	317	⇑iP	P	14 48 33.4	+0.2
KOLS	Kolonicke sedl	81.77	320	eP	P	14 48 34.2	+0.9
KOLS				e		14 48 50.2	
KOLS	Kolonicke sedl	81.77	320	eP	P	14 48 34.2	+0.9
KOLS				epP	pP	14 48 50.1	+0.4
FIA0	FINESS Array S	82.37	332	eP	P	14 48 36.1	-0.1
FIA0	FINESS Array S	82.37	332	eP	P	14 48 36.1	-0.1
FINES	FINESS Array B	82.37	332	P	P	14 48 36.1	-0.1
	comp=Z,5.3nm,0.8s,baz=107,slow=6.4,SNR=18						
FINES				LR	LR	15 29 47.4	
	comp=Z,42nm,18.6s,baz=170,slow=39						
FINES	FINESS Array B	82.37	332	i P	P	14 48 36.0	-0.2
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PDG	Podgorica	82.88	313	⇑iP	P	14 48 39.0	-0.3
TTG	Podgorica	82.88	313	eP	P	14 48 38.7	-0.5
	comp=Z,12nm,0.8s						
TTG	Podgorica	82.88	313	eP	P	14 48 38.7	-0.5
TTG				pmax	pmax		
	comp=Z,12nm,0.8s						
NIE	Niedzica	83.12	320	eP	P	14 48 41.0	+0.6
NIE	Niedzica	83.12	320	eP	P	14 48 41.0	+0.6
OJC	Ojcow	83.56	321	eP	P	14 48 43.0	+0.4
OJC	Ojcow	83.56	321	eP	P	14 48 43.0	+0.4
VYHS	Vyhne	83.95	319	eP	P	14 48 46.1	+1.5
VYHS				e		14 49 00.9	
VYHS	Vyhne	83.95	319	eP	P	14 48 46.1	+1.5
VYHS				epP	pP	14 49 00.9	-0.2
KLNR	Kaliningrad	83.99	325	⇑eP	P	14 48 44.8	+0.2
KLNR				pmax	pmax		
	comp=Z,31nm,0.9s						
CSKK	Cskako	84.19	318	eP	pP	14 49 04.1	+1.7
TIH	Tihany	84.38	317	eP	pP	14 49 00.1	-3.3
BLY	Banja Luka	84.64	315	⇑iP	P	14 48 48.9	+0.7
ARCES	ARCESS Array B	84.75	340	P	P	14 48 48.2	-0.1
	comp=Z,5.9nm,0.9s,baz=100,slow=5.5,SNR=20						
ARCES				LR	LR	15 30 04.1	
	comp=Z,43nm,20.2s,baz=104,slow=38						
JAVC	Velka Javorina	84.76	319	eP	P	14 48 49.3	+0.5
MORC	Moravsky Berou	84.95	320	eP	P	14 48 49.7	0.0
MODS	Modra-Piesok	84.96	318	eP	P	14 48 49.6	-0.2
MODS	Modra-Piesok	84.96	318	eP	P	14 48 49.6	-0.2
DPC	Dobruska-Polom	85.79	320	eP	P	14 48 54.9	+1.0
DPC	Dobruska-Polom	85.79	320	eP	P	14 48 54.9	+1.0
KSP	Ksiaz	85.86	321	eP	P	14 48 55.4	+1.2
KSP	Ksiaz	85.86	321	eP	P	14 48 55.4	+1.2
CONA	Conrad Observa	85.86	318	eP	P	14 48 54.5	+0.1
	comp=Z,3.0nm,0.9s						
CONA				epP	pP	14 49 10.0	-0.9
	comp=Z,2.7nm,0.9s						
CHVC	Chvalec	85.99	321	eP	P	14 48 55.6	+0.8
UPC	Upice	86.00	321	eP	P	14 48 56.0	+1.1
UPC	Upice	86.00	321	eP	P	14 48 56.0	+1.1
ARSA	Arzberg	86.03	317	eP	P	14 48 55.5	+0.3
	comp=Z,8.8nm,1.1s						
SOKA	Soboth	86.32	317	i PcP	P	14 48 57.3	+0.7
	comp=Z,9.0nm,1.0s,SNR=8.0						
SOKA				i pP	pP	14 49 13.0	-0.2
	comp=Z,7.3nm,0.9s						
OBKA	Obir	86.64	316	i PcP	P	14 48 59.0	+0.7
	comp=Z,4.7nm,0.9s						
PRU	Pruhonice	86.90	320	eP	P	14 48 59.8	+0.5
PRU	Pruhonice	86.90	320	eP	P	14 48 59.8	+0.5
MOA	Molln	86.93	318	i PcP	P	14 48 59.8	+0.2
	comp=Z,2.4nm,0.8s						
MYKA	Terra Mystica	87.27	317	i PcP	P	14 49 01.7	+0.4
	comp=Z,2.8nm,0.7s						
BRG	Berggiesshubel	87.35	321	i P	P	14 49 01.3	-0.1
	comp=Z,1.8nm,0.8s						
BRG				i PCP	PcP	14 49 02.3	-1.1
	comp=Z,7.7nm,1.1s						
BRG				i pP	pP	14 49 17.7	-0.3
	comp=Z,5.7nm,0.9s						
BRG	Berggiesshubel	87.35	321	i P	P	14 49 01.3	-0.1
BRG				i *PP	pP	14 49 17.7	-0.3
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	87.37	319	P	P	14 49 02.4	+0.6
	comp=Z,5.5nm,1.0s,baz=86,slow=4.1,SNR=26						
KHC	Kasperske Hory	87.47	319	⇓iP	P	14 49 02.0	-0.1
KHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KHC	Kasperske Hory	87.47	319	eP	P	14 49 02.3	+0.2
KHC				epP	pP	14 49 15.8	-2.9
KBA	Koelnbreinsper	87.50	317	i PcP	P	14 49 02.5	0.0
	comp=Z,5.6nm,1.6s						
CLL	Collm	87.97	321	⇓iP	P	14 49 04.5	+0.1
CLL				i *PP	pP	14 49 20.8	-0.2
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CLL	Collm	87.97	321	⇓iP	P	14 49 04.5	+0.1
	comp=Z,10.0nm,1.2s						
CLL				i pP	pP	14 49 20.8	-0.2
	comp=Z,10.0nm,1.2s						
ABTA	Abfaltersbach	88.05	317	i PcP	P	14 49 05.0	0.0
	comp=Z,3.4nm,0.7s						
ABTA				i pP	pP	14 49 20.4	-1.3
	comp=Z,3.6nm,1.0s						
WTTA	Wattenberg	88.67	317	i PcP	P	14 49 08.1	0.0
	comp=Z,7.6nm,1.1s						
WTTA				i pP	pP	14 49 23.6	-1.1
	comp=Z,7.4nm,0.9s						
SQTA	Sankt Quirin	88.96	317	i PcP	P	14 49 09.5	+0.1
	comp=Z,4.9nm,0.8s						
SQTA				i pP	pP	14 49 25.0	-1.0
	comp=Z,6.4nm,0.8s						
MOTA	Moosalm	89.04	317	i PcP	P	14 49 09.5	-0.3
	comp=Z,4.2nm,0.8s						
MOTA				i pP	pP	14 49 25.5	-0.9
	comp=Z,6.5nm,0.9s						
RETA	Reutte	89.27	317	i PcP	P	14 49 10.7	0.0
	comp=Z,8.3nm,0.9s						
FETA	Feichten	89.28	317	i PcP	P	14 49 11.4	+0.5
	comp=Z,5.1nm,1.0s						
FETA				i pP	pP	14 49 27.4	-0.2
	comp=Z,5.0nm,1.1s						
NB2	NORSAR Subarra	89.41	331	P	P	14 49 11.0	0.0
	comp=Z,11nm,1.7s,baz=92,slow=5.3						
NB200	NORSAR Array S	89.41	331	eP	P	14 49 10.6	-0.4
NOA	NORSAR Array B	89.41	331	P	P	14 49 10.6	-0.4
	comp=Z,1.9nm,1.0s,baz=92,slow=5.9,SNR=5.2						
NOA				LR	LR	15 33 59.3	
	comp=Z,16nm,20.9s,baz=115,slow=39						
QSPA	South Pole Qui	89.52	180	eP	P	14 49 13.3	+1.7
	comp=Z,10nm,0.8s						
DAVA	Damuels	89.87	317	i PcP	P	14 49 14.5	+0.9
	comp=Z,16nm,1.0s,SNR=5.8						
DAVA				i pP	pP	14 49 30.5	+0.2
	comp=Z,9.1nm,0.8s						
KEST	Kesra	90.15	306	P	P	14 49 16.7	+1.6
	comp=Z,15nm,1.0s,baz=307,slow=0.5,SNR=14						
BFO	Black Forest	90.92	318	i P	P	14 49 19.0	+0.7
TORD	Torodi Ar. Bea	97.43	283	P	P	14 49 48.8	-0.1
	comp=Z,1.4nm,0.9s,baz=76,slow=5.7,SNR=5.8						
TORD				LR	LR	15 30 57.6	
	comp=Z,60nm,20.2s,baz=280,slow=34						
TOLK	Toolik Lake Re	98.02	20	P	P	14 49 50.4	0.0
	baz=290						
EPYK	Eagle Plains	103.45	20	P	Pdif	14 50 14.7	0.0
	baz=302						
B05A	Bryant	120.49	31	P	PKPdf	14 55 05.7	-0.2
	baz=310						
I04A	Tendick Farm,	123.12	35	P	PKPdf	14 55 11.0	-0.2
	baz=308						
J04D	Umpqua Nationa	123.63	35	P	PKiKP	14 55 12.6	0.0
	baz=308						
N02D	Trinity Center	124.62	38	P	PKPdf	14 55 14.2	+0.1
	baz=306						
O02D	Mt. Diablo Mer	125.03	39	P	PKiKP	14 55 15.5	+0.2
	baz=305						
EGMT	Eagleton	126.36	24	P	PKPdf	14 55 17.4	+0.1
	baz=323						
BOZ	Bozeman (W)	127.45	27	P	PKPdf	14 55 19.4	-0.1
	baz=320						
HLID	Hailey	127.61	31	P	PKiKP	14 55 20.5	0.0
	baz=316						
DGMT	Dagmar	128.04	20	P	PKPdf	14 55 20.6	+0.2
	baz=330						
NV01	Mina Array Sit	128.87	38	ePKPdf	PKiKP	14 55 23.8	+0.5
NVAR	Mina Array Bea	128.87	38	PKP	PKiKP	14 55 23.8	+0.5
	comp=Z,1.1nm,0.8s,baz=274,slow=2.3,SNR=8.2						
CHGQ	Chibougamau	130.41	355	P	PKPdf	14 55 25.1	+0.3
	baz=8.4						
R11A	Troy Canyon, C	130.56	36	P	PKiKP	14 55 26.2	-0.4
	baz=312						
PDAR	Pinedale Array	130.58	28	PKP	PKiKP	14 55 26.2	-0.3
	comp=Z,0.5nm,0.7s,baz=48,slow=2.2,SNR=5.3						
DUG	Dugway, Tooele	130.85	32	P	PKiKP	14 55 26.8	-0.3
	baz=316						
D52A	ZEK Kipawa Sen	133.60	358	P	PKPdf	14 55 31.1	+0.1
	baz=3.3						
E48A	Lockeyer	134.12	1	P	PKPdf	14 55 32.1	+0.1
	baz=358						
E46A	Sault Ste Mari	134.15	3	P	PKPdf	14 55 32.1	+0.1
	baz=355						
E53A	Dumoine, Ponti	134.16	357	P	PKPdf	14 55 32.5	+0.5
	baz=4.3						
E52A	Mattawa	134.30	358	P	PKPdf	14 55 32.8	+0.5
	baz=3.0						
G39A	Holcombe	134.40	10	P	PKPdf	14 55 33.0	+0.5
	baz=345						
G40A	Rib Lake	134.58	9	P	PKPdf	14 55 33.2	+0.3
	baz=347						
ECSD	EROS Data Cent	134.63	16	P	PKPdf	14 55 33.3	+0.3
	baz=338						
F52A	Sundridge	134.81	359	P	PKPdf	14 55 33.5	+0.2
	baz=2.0						
WUAZ	Wupatki	134.95	36	P	PKiKP	14 55 34.8	-0.7
	baz=314						
BUKO	Buck Lake	135.16	359	P	PKiKP	14 55 35.1	-0.4
	baz=2.0						
G55A	Calabogie	135.23	356	P	PKPdf	14 55 34.6	+0.6
	baz=5.8						
G47A	Hillman	135.37	3	P	PKiKP	14 55 35.7	-0.1
	baz=356						
G53A	Haliburton	135.46	358	P	PKPdf	14 55 35.2	+0.7
	baz=3.1						
BANO	Bancroft	135.53	357	P	PKPdf	14 55 35.2	+0.6
	baz=4.1						
Q24A	Divide	135.63	27	P	PKiKP	14 55 36.6	-0.5
	baz=324						
ANMO	Albuquerque	138.12	32	c iPKIKP	PKPdf	14 55 40.6	+0.6
ANMO				pmax	pmax		
	comp=Z,4.0nm,2.5s						
M59A	Waymart	138.80	354	P	PKiKP	14 55 42.4	-0.6
	baz=8.1						
M58A	Price’s Panora	139.06	355	P	PKiKP	14 55 43.4	-0.2
	baz=6.6						
N54A	Moraine State	139.65	359	P	PKiKP	14 55 44.5	-0.3
	baz=1.2						
N53A	Lisbon	139.81	0	P	PKiKP	14 55 44.6	-0.5
	baz=360						
SSPA	Standing Stone	139.90	357	P	PKiKP	14 55 44.8	-0.5
	baz=4.5						
W41B	Gary Mavity, V	143.82	16	P	PKPab	14 55 47.2	+0.3
	baz=340						
WVT	Waverly	143.88	10	P	PKPab	14 55 47.1	-0.1
	baz=348						
TXAR	Lajitas Array	143.91	35	PKP	PKPbc	14 55 48.4	+0.1
	comp=Z,5.0nm,0.9s,baz=272,slow=1.9,SNR=49						
BDFB	Brasilia	143.92	242	PKP	PKPbc	14 55 49.7	+1.0
	comp=Z,2.1nm,0.5s,baz=136,slow=7.3,SNR=3.7						
TZTN	Tazewell	143.98	4	P	PKPab	14 55 47.5	-0.1
	baz=355						
U50A	Jamestown	144.00	6	P	PKPab	14 55 47.1	-0.5
	baz=353						
MIAR	Mount Ida	144.01	18	ePKPdf	PKPbc	14 55 48.2	-0.1
MIAR	Mount Ida	144.01	18	ePKIKP	PKPbc	14 55 48.2	-0.1
MIAR	Mount Ida	144.01	18	P	PKPab	14 55 47.6	-0.1
	baz=338,SNR=10						
U51A	La Follette	144.11	4	P	PKPab	14 55 47.7	-0.3
	baz=354						
U55A	TA2, Sparta	144.11	0	P	PKPab	14 55 47.5	-0.6
	baz=360						
U52A	Thorn Hill	144.14	4	P	PKPab	14 55 47.8	-0.4
	baz=356						
V46A	Holladay	144.15	10	P	PKPab	14 55 48.0	-0.2
	baz=348						
U53A	Fall Branch	144.21	2	P	PKPab	14 55 48.0	-0.5
	baz=357						
V47A	Nunnelly	144.23	9	P	PKPab	14 55 48.1	-0.4
	baz=348						
U56A	King	144.26	359	P	PKPab	14 55 48.4	-0.2
	baz=0.7						
X40A	Basin Creek Fa	144.29	17	P	PKPab	14 55 48.6	-0.1
	baz=339						
V48A	Smith Brothers	144.42	8	P	PKPab	14 55 48.3	-0.9
	baz=350,SNR=5.5						
V49A	McMinnville	144.52	7	P	PKPab	14 55 48.7	-0.9

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         baz=351
V61A  Roper              144.60 354  P         PKPbc   14 55 50.1 +0.1
         baz=7.2
V51A  Loudon             144.65   5  P         PKPab   14 55 48.8 -1.3
         baz=354
V50A  Pikevile           144.71   6  P         PKPab   14 55 49.1 -1.2
         baz=353,SNR=9.7
V57A  Coltrane Farms     144.71 359  P         PKPab   14 55 49.4 -0.9
         baz=1.7
W46A  Michie             144.76  11  P         PKPab   14 55 49.6 -0.9
         baz=347
V55A  Taylorsville       144.76   1  P         PKPab   14 55 49.4 -1.1
         baz=359
W47A  Westpoint          144.78  10  P         PKPab   14 55 49.5 -1.1
         baz=348,SNR=19
V58A  Windy Hill, Pi     144.78 358  P         PKPab   14 55 49.9 -0.7
         baz=2.9
V56A  Mocksville         144.80 360  P         PKPab   14 55 49.8 -0.8
         baz=0.5
V54A  Nebo               144.82   2  P         PKPab   14 55 49.8 -0.9
         baz=358,SNR=6.1
WHTX  Lake Whitney,      144.88  25  P         PKPab   14 55 50.0 -1.0
         baz=330
V53A  Saluda             144.89   3 ePKPdf     PKPab   14 55 50.5 -0.5
V53A  Saluda             144.89   3  P         PKPab   14 55 50.1 -0.9
         baz=356,SNR=10
PLAL  Pickwick Lake      144.96  10 ePKPbc     PKPab   14 55 50.4 -0.8
CPCT  Cooper Cave        144.99   5 ePKPbc     PKPab   14 55 50.8 -0.5
JCT   Junction City      145.07  29  P         PKPbc   14 55 51.3 -0.5
         baz=326
CPUP  Villa Florida      145.09 219  PKPbc     PKPdf   14 55 52.6 +0.2
         comp=Z,16nm,0.8s,baz=109,slow=2.6,SNR=22
CPUP  Villa Florida      145.09 219 ePKPbc     PKPdf   14 55 52.8 +0.4
CPUP  Villa Florida      145.09 219 ePKIKP     PKPdf   14 55 52.8 +0.4
W49A  Belvidere          145.11   8  P         PKPbc   14 55 50.5 -1.2
         baz=350,SNR=18
OXF   Oxford             145.15  13 ePKPbc     PKPbc   14 55 51.5 -0.3
OXF   Oxford             145.15  13 ePKIKP     PKPbc   14 55 51.5 -0.3
OXF   Oxford             145.15  13  P         PKPbc   14 55 50.9 -1.0
         baz=345
W50A  Signal Mountai     145.15   7 ePKPbc     PKPbc   14 55 51.2 -0.7
W50A  Signal Mountai     145.15   7  P         PKPbc   14 55 51.4 -0.5
         baz=352
W51A  Cleveland          145.25   6  P         PKPbc   14 55 51.3 -0.9
         baz=353,SNR=10.0
W61A  Ground Anchor      145.25 355  P         PKPbc   14 55 51.4 -0.8
         baz=6.6
X46A  Booneville         145.28  11  P         PKPbc   14 55 51.3 -1.0
         baz=346
W53A  Cullowhee          145.37   3  P         PKPbc   14 55 51.6 -1.1
         baz=356,SNR=13
W52A  Murphy             145.39   5  P         PKPbc   14 55 51.7 -1.0
         baz=354,SNR=6.6
W60A  Pink Hill          145.44 356  P         PKPdf   14 55 52.2 -0.6
         baz=5.4
Z41A  Richland Creek     145.44  18  P         PKPdf   14 55 52.4 -0.4
         baz=339
X47A  Russelville        145.45  10  P         PKPdf   14 55 51.5 -1.4
         baz=348,SNR=17
W57A  Gilead             145.45 359 ePKPdf     PKPdf   14 55 52.5 -0.3
W57A  Gilead             145.45 359  P         PKPdf   14 55 52.3 -0.5
         baz=1.4,SNR=8.1
KMSC  Kings Mountain     145.47   1  P         PKPdf   14 55 51.8 -1.1
         baz=359,SNR=12
W56A  Indian Trail       145.48 360  P         PKPdf   14 55 52.0 -0.9
         baz=0.3,SNR=5.5
W54A  Cherokee Point     145.50   2  P         PKPdf   14 55 52.0 -0.9
         baz=358,SNR=6.0
W58A  Raeford            145.56 358  P         PKPdf   14 55 52.7 -0.2
         baz=2.7,SNR=6.6
X48A  Hartselle          145.65   9 ePKPdf     PKPdf   14 55 52.3 -0.9
X48A  Hartselle          145.65   9  P         PKPdf   14 55 52.2 -0.9
         baz=349,SNR=24
X49A  Woodville          145.70   8  P         PKPdf   14 55 52.7 -0.6
         baz=350,SNR=29
X51A  Calhoun            145.83   6  P         PKPdf   14 55 53.3 -0.1
         baz=353,SNR=11
X50B  Fort Payne         145.84   7  P         PKPdf   14 55 52.9 -0.7
         baz=351,SNR=7.9
435B  Jarrell            145.86  26  P         PKPdf   14 55 53.4 -0.2
         baz=329
X52A  Dahlonega          145.88   5  P         PKPdf   14 55 53.3 -0.3
         baz=354,SNR=10
X60A  Albert Glenn T     145.93 356  P         PKPdf   14 55 53.8 +0.2
         baz=5.0
X59A  McDuffie Farm,     145.98 357  P         PKPdf   14 55 53.9 +0.2
         baz=3.9
X53A  Estanollee         146.02   4  P         PKPdf   14 55 53.7 -0.1
         baz=356,SNR=9.9
X54A  Belton             146.03   2  P         PKPdf   14 55 53.7 -0.1
         baz=357,SNR=12
X58A  Rowland            146.03 358  P         PKPdf   14 55 53.8 +0.1
         baz=2.6
X56A  White Oak          146.12   0  P         PKPdf   14 55 54.0  0.0
         baz=360,SNR=5.6
X55A  Gracelyn & Ava     146.13   1  P         PKPdf   14 55 54.0  0.0
         baz=358,SNR=6.1
Y48A  Jasper             146.16  10  P         PKPdf   14 55 53.8 -0.3
         baz=349
NATX  Nacogdoches        146.19  22  P         PKPdf   14 55 54.7 +0.5
         baz=335
Y49A  Blount Mountai     146.33   8  P         PKPdf   14 55 54.5 +0.2
         baz=350,SNR=20
Y50A  Piedmont           146.39   7  P         PKPdf   14 55 54.6 +0.2
         baz=351,SNR=5.8
Y51A  Rockmart           146.47   6  P         PKPdf   14 55 55.0 +0.3
         baz=352,SNR=5.6
Y60A  Bolivia            146.52 356  P         PKPbc   14 55 55.6 -0.5
         baz=4.6
Y59A  Loris              146.57 357  P         PKPbc   14 55 55.5 -0.7
         baz=3.5
Y57A  Sumter             146.59 359  P         PKPbc   14 55 55.8 -0.5
         baz=0.7
Y52A  Lilburn            146.60   5  P         PKPbc   14 55 56.2 -0.2
         baz=354,SNR=10
Y53A  Monroe             146.65   4  P         PKPbc   14 55 55.9 -0.6
         baz=355,SNR=8.9
Y55A  Saluda             146.66   2  P         PKPbc   14 55 55.8 -0.7
         baz=358
Y58A  Scranton           146.69 358  P         PKPbc   14 55 56.1 -0.5
         baz=2.0
Y54A  Tignall            146.70   3  P         PKPdf   14 55 55.8 +0.8
         baz=357,SNR=7.4
Y56A  Pelion             146.81   1  P         PKPbc   14 55 56.4 -0.5
         baz=359
Z49A  Columbiana         146.97   9  P         PKPdf   14 55 56.2 +0.8
         baz=350,SNR=13
Z50A  Ashland            147.00   8  P         PKPdf   14 55 56.4 +0.9
         baz=351,SNR=11
Z51A  Franklin           147.03   7  P         PKPdf   14 55 56.5 +1.0
         baz=352
833A  Chaparral WMA,     147.03  31  P         PKPbc   14 55 57.1 -0.7
         baz=324
LRAL  Lakeview Retre     147.05  10  P         PKPdf   14 55 56.5 +0.9
         baz=349,SNR=7.2
GOGA  Godfrey            147.10   4  P         PKPbc   14 55 57.2 -0.5
         baz=355
Z53A  Monticello         147.22   4  P         PKPbc   14 55 57.4 -0.7
         baz=355,SNR=11
Z52A  Williamson         147.24   6  P         PKPbc   14 55 57.6 -0.6
         baz=353,SNR=9.6
Z58A  St. Stephen        147.26 359  P         PKPbc   14 55 57.7 -0.5
         baz=1.8
Z57A  Bowman             147.31 360  P         PKPbc   14 55 57.7 -0.7
         baz=0.1
Z54A  Sparta             147.31   3  P         PKPbc   14 55 57.9 -0.5
         baz=356,SNR=11
148A  Greensboro         147.32  11  P         PKPbc   14 55 57.7 -0.7
         baz=347
NHSC  New Hope           147.50 359  P         PKPbc   14 55 58.2 -0.6
         baz=1.1
149A  Jones              147.51   9  P         PKPbc   14 55 58.1 -0.9
         baz=349
150A  Eclectic           147.62   8  P         PKPbc   14 55 58.4 -0.8
         baz=350,SNR=6.6
152A  Waverly Hall       147.72   6  P         PKPbc   14 55 59.1 -0.4
         baz=353
151A  Opelika            147.79   7  P         PKPbc   14 55 59.1 -0.6
         baz=352
158A  Hollywood          147.86 359  P         PKPbc   14 55 59.2 -0.7
         baz=1.1
157A  Early Branch       147.93   0  P         PKPbc   14 55 59.5 -0.6
         baz=360
155A  Kite               147.94   3  P         PKPbc   14 55 59.9 -0.2
         baz=357,SNR=7.7
249A  Camden             148.06  10  P         PKPbc   14 56 00.1 -0.4
         baz=348
251A  Midway             148.21   7  P         PKPbc   14 56 00.7 -0.1
         baz=351
253A  Americus           148.38   5  P         PKPbc   14 56 01.0 -0.3
         baz=354
252A  Lumpkin            148.38   6  P         PKPbc   14 56 01.0 -0.3
         baz=352
254A  Abbeville          148.57   4  P         PKPbc   14 56 01.3 -0.4
         baz=355
256A  Glennville         148.60   2  P         PKPbc   14 56 01.6 -0.2
         baz=358
255A  Hazlehurst         148.63   3  P         PKPbc   14 56 01.8 -0.1
         baz=357
349A  Repton             148.66  11  P         PKPbc   14 56 01.7 -0.3
         baz=348
350A  Dozier             148.73   9  P         PKPbc   14 56 02.0 -0.2
         baz=349
BRAL  Brewton            148.86  10  P         PKPbc   14 56 01.6 -0.9
         baz=348
352A  Blakely            148.87   7  P         PKPbc   14 56 02.3 -0.2
         baz=352
TIGA  Tifton             149.05   5  P         PKPbc   14 56 02.8 -0.2
         baz=355
353A  Camilla            149.08   6  P         PKPbc   14 56 02.8 -0.3
         baz=353
452A  Marianna           149.46   7  P         PKPbc   14 56 04.0 -0.1
         baz=351
453A  Whigham            149.56   6  P         PKPbc   14 56 04.5 +0.3
         baz=353
451A  Vernon             149.61   8  P         PKPbc   14 56 04.8 +0.4
         baz=350
454A  Quitman            149.76   5  P         PKPbc   14 56 05.0 +0.2
         baz=354
455A  Stateville         149.78   4  P         PKPbc   14 56 05.0 +0.2
         baz=356
555A  McAlpin            150.40   4  P         PKPbc   14 56 06.5 +0.2
         baz=356
556A  Lake Butler        150.55   3  P         PKPbc   14 56 06.7  0.0
         baz=357
557A  Orange Park        150.57   2  P         PKPbc   14 56 06.8 +0.1
         baz=358
655A  Horseshoe Beac     150.99   4  P         PKPbc   14 56 07.5 -0.3
         baz=355
657A  Interlachen        150.99   2  P         PKPbc   14 56 07.4 -0.4
         baz=358
658A  Bunnell            151.17   1  P         PKPbc   14 56 08.0 -0.2
         baz=359
656A  Willston           151.18   3  P         PKPbc   14 56 08.2  0.0
         baz=356
757A  Oxford             151.62   2  P         PKPbc   14 56 09.0 -0.3
         baz=357
758A  Lake Helen         151.63   1  P         PKPbc   14 56 08.7 -0.5
         baz=359
060A  Indiantown         153.55 359  P         PKPbc   14 56 13.1 -0.5
         baz=0.9
061Z  Ochoppi            154.72   0  P         PKPbc   14 56 15.1 -1.0
         baz=360
LPAZ  La Paz             159.22 216  PKP       PKPdf   14 56 15.0 +0.7
         comp=Z,1.5nm,0.7s,baz=151,slow=2.4,SNR=4.9
```

SNET 26 14:40:02.9±1.1**, 12°.06N×89°.29W, h33**km±43km**, ML3.9,**
Off coast of central America

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
LOMA  Loma Larga          1.58   4  eP       Pn        14 40 29.5 +0.7
LOMA                                eS       Sb        14 40 50.1 -1.4
LOMA                                 IAML              14 40 51.5
         comp=Z,1µm,0.2s
SNET  Serv Nac Est T      1.62   2   IAML              14 40 51.8
         comp=N,2µm,0.4s
OPAM  Oficina de Pla      1.65   3   IAML              14 40 48.1
         comp=Z,2µm,0.1s
UEES  Universidad Ev      1.65   2   IAML              14 40 56.0
         comp=Z,957nm,0.2s
PAVA  Las Pavas           1.68  12  eP       Pn        14 40 30.4 +0.2
PAVA                                eS       Sn        14 40 52.2 +1.5
PAVA                                 IAML              14 40 58.7
         comp=Z,490nm,0.3s
PACA  Pacayal             1.69  34  eP       Pn        14 40 30.2 -0.1
LFU   La Fuente           1.69   6  eP       Pn        14 40 31.0 +0.7
CEVE  Cerro Verde         1.79 349  eP       Pn        14 40 32.1 +0.3
CEVE                                eS       Sn        14 40 54.8 +1.3
CEVE                                 IAML              14 41 01.7
         comp=Z,2µm,0.5s
SBLS  San Blas            1.80 350  eP       Pn        14 40 32.6 +0.7
SNJE  San Jose            1.83 350  eS       Sn        14 40 55.8 +1.3
LCND  La Caada            1.85  47  eP       Pn        14 40 31.8 -0.5
RTR   El Retiro           1.86 349  eP       Pn        14 40 33.4 +0.7
MTO3  Montecristo         2.33 358  eP       Pn        14 40 40.3 +1.1
```

SOME ***26*** *15:10:52.5, 41°.45N×77°.60E, h15km*
KRNET ***26*** *15:10:52.6±0.1, 41°.50N×77°.54E, h15km, mb3.1*
ISCJB ***26*** *15:10:54.2±0.8, 41°.44N±0°.04×77°.61E±0°.04, h10km, Error ellipse: s-maj=6.4km s-min=3.4km az=156.7*
NNC ***26*** *15:10:54.3±0.7, 41°.57N×77°.60E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=5.0km s-min=3.4km az=172.0*
KNET ***26*** *15:10:55.8±0.6, 41°.88N×77°.60E, h0km, ml2.6, Error ellipse: s-maj=8.2km s-min=4.5km az=41.0*
ISC 26 15:10:51.7±1.2**, 41°.43N**±0°.05×**77°.53E**±0°.03**, h10**km**, n65,**
σ**1s.08**/107**, 33C-23D, Kyrgyzstan-Xinjiang border region**

```
Code  Station Name         Δ°  AZ°   Phase ID            Time     Res
                                     Op      ISC       h  m  s    ISC
KDJ   Kajisay             0.75 340⇑iP       Pg        15 11 05.9 -0.4
         baz=38
KDJ                               ⇑iS       Sg        15 11 14.5 -1.6
         baz=38
NRN   Naryn               1.15 271⇑iP       Pn        15 11 14.7 +0.5
         baz=67
NRN                               ⇑iS       Sn        15 11 30.5 +0.3
         baz=67
PRZ   Przheval'sk         1.24  31⇑iP       Pn        15 11 14.4 -0.9
         baz=33
PRZ                               ⇑iS       Sb        15 11 30.6 -0.9
         baz=33
ULHL  Ulahol              1.26 311⇑eP       Pn        15 11 15.6 -0.1
         baz=8.0
ULHL                              ⇑eS       Sg        15 11 32.2 -0.3
         baz=8.0
ULHL  Ulahol              1.26 311 ⇑P       Pn        15 11 15.6 -0.1
         27nm,0.1s,SNR=59
ULHL                               ⇓S       Sg        15 11 32.2 -0.3
         104nm,0.2s
ANVS  Anan'yevo           1.36   4⇑eP       Pn        15 11 16.9 -0.1
         baz=4.0
ANVS                              ⇑iS       Sb        15 11 34.3 -0.6
         baz=4.0
BOOM  Boomskoye usch      1.59 312⇑iP       Pb        15 11 21.4  0.0
         baz=10.0
BOOM                              ⇑eS       Sb        15 11 42.1 +0.5
         baz=10.0
TNSS  Tian-Shan           1.67 345  P       Pb        15 11 22.3 -0.4
         49nm,0.2s
TNSS                                S       Sb        15 11 43.6 -0.3
         93nm,0.3s
TNSS  Tian-Shan           1.67 345 eP       Pb        15 11 22.4 -0.4
         49nm,0.2s
TNSS                               eS       Sb        15 11 43.6 -0.3
         93nm,0.3s
IZV   Izvestkoviy         1.75 337  P       Pb        15 11 24.0  0.0
         23nm,0.2s
IZV                                 S       Sb        15 11 46.5 +0.5
         117nm,0.3s
IZV   Izvestkoviy         1.75 337 eP       Pb        15 11 24.1  0.0
         23nm,0.2s
IZV                                eS       Sb        15 11 46.5 +0.5
         117nm,0.3s
SATY  Saty                1.76  21  P       Pb        15 11 23.5 -0.7
         107nm,0.4s
SATY                                S       Sb        15 11 45.4 -0.9
         128nm,0.1s
SATY  Saty                1.76  21 eP       Pb        15 11 23.5 -0.7
         107nm,0.4s
SATY                               eS       Sb        15 11 45.4 -0.9
         128nm,0.1s
MDOK  Medeo               1.77 349  Pg      Pb        15 11 24.1 -0.3
         69nm,0.3s
MDOK                                Lg      Lg        15 11 46.4
         50nm,0.3s
MDOK  Medeo               1.77 349 eP       Pb        15 11 24.1 -0.3
         69nm,0.3s
MDOK                               eS       Sb        15 11 46.4 -0.3
         50nm,0.3s
KZA   Kyzart              1.83 292⇑eP       Pb        15 11 25.7 +0.2
         baz=89
KZA                               ⇑iS       Sg        15 11 49.7 -0.8
         baz=89
KOTS  Kotyrbulak          1.83 350  P       Pb        15 11 25.2 -0.3
         39nm,0.1s
KOTS                                S       Sb        15 11 48.8 +0.3
         107nm,0.3s
KOTS  Kotyrbulak          1.83 350 eP       Pb        15 11 25.2 -0.3
         39nm,0.1s
KOTS                               eS       Sb        15 11 48.8 +0.3
         107nm,0.3s
KNDC  Almaty              1.84 347 ⇓P       Pb        15 11 25.6 +0.1
         25nm,0.5s
KNDC                               ⇑S       Sg        15 11 49.6 -1.2
         293nm,0.6s
KST   Kastek              1.99 325  Pg      Pb        15 11 28.4 +0.3
         20nm,0.2s
KST                                 Lg      Lg        15 11 54.6
         147nm,0.3s
KST   Kastek              1.99 325 eP       Pb        15 11 28.4 +0.3
         20nm,0.2s
KST                                eS       Sg        15 11 54.6 -1.2
         147nm,0.3s
TKM2  Tokmak 2            2.07 317 ⇓Pn      Pb        15 11 29.7 +0.2
         13nm,0.5s
TKM2                               ⇓Sn      Sg        15 11 57.0 -1.4
         115nm,0.3s
TKM2  Tokmak 2            2.07 317⇓iP       Pb        15 11 29.9 +0.3
         baz=15
TKM2                              ⇓iS       Sb        15 11 56.5 +1.0
         baz=15
TKM2  Tokmak 2            2.07 317 ⇑P       Pb        15 11 30.0 +0.4
         15nm,0.2s,SNR=14
TKM2                               ⇓S       Sg        15 11 57.2 -1.2
         170nm,0.2s
KURS  Kuram               2.11  13  Pg      Pb        15 11 30.0 -0.1
         13nm,0.3s
KURS                                Lg      Lg        15 11 56.3
         23nm,0.4s
KURS  Kuram               2.11  13 eP       Pb        15 11 30.0 -0.1
         13nm,0.3s
KURS                               eS       Sb        15 11 56.3 -0.2
         23nm,0.4s
KPKS  Kokpek              2.21  22 eP       Pb        15 11 31.3 -0.5
         81nm,0.2s
KPKS                               eS       Sb        15 11 59.7 +0.4
         220nm,0.5s
DGS   Degeres             2.23 325  Pg      Pb        15 11 32.8 +0.5
         38nm,0.5s
DGS                                 Lg      Lg        15 12 01.6
         101nm,0.5s
DGS   Degeres             2.23 325 eP       Pb        15 11 32.8 +0.5
         38nm,0.5s
DGS                                eS       Sg        15 12 01.6 -1.9
         101nm,0.5s
KBK   Karagaybulak        2.28 303⇑iP       Pg        15 11 34.8 -0.7
         baz=2.0
KBK                               ⇑eS       Sg        15 12 03.3 -1.8
         baz=2.0
KBK   Karagaybulak        2.28 303 ⇓P       Pg        15 11 34.7 -0.7
         11nm,0.3s,SNR=8.8
KTBS  Karatobe            2.37 345  Pg      Pb        15 11 34.4 -0.2
         65nm,0.4s
KTBS                                Lg      Lg        15 12 05.2
         194nm,0.3s
KTBS  Karatobe            2.37 345 eP       Pb        15 11 34.4 -0.2
         65nm,0.4s
KTBS                               eS       Sb        15 12 05.2 +1.4
         194nm,0.3s
PDGK  Podgornoye          2.39  37 ⇑Pn      Pb        15 11 34.0 -1.0
         18nm,0.6s
PDGK                               ⇑Lg      Lg        15 12 05.1
         85nm,0.7s
PDGK  Podgornoye          2.39  37⇑iP       Pb        15 11 34.2 -0.8
         baz=38
PDGK                              ⇑eS       Sb        15 12 04.4 -0.2
         baz=38
UCH   Uchtor              2.39 291⇑eP       Pg        15 11 37.1 -0.5
         baz=89
UCH                               ⇑iS       Sg        15 12 07.1 -1.6
         baz=89
ARLS  Aral                2.44 281⇓iP       Pb        15 11 35.1 -0.8
         baz=80
ARLS                              ⇓iS       Sb        15 12 06.2 +0.1
         baz=80
CHKK  Chushkaly           2.46 351  Pg      Pb        15 11 36.2 +0.2
         25nm,0.3s
CHKK                                Lg      Lg        15 12 07.8
         89nm,0.3s
CHKK  Chushkaly           2.46 351 eP       Pb        15 11 36.2 +0.2
         25nm,0.3s
CHKK                               eS       Sb        15 12 07.8 +1.4
         89nm,0.3s
AAK   Ala-Archa           2.56 299 ⇓Pg      Pg        15 11 39.9 -1.0
         6.4nm,0.6s
AAK                                ⇓Lg      Lg        15 12 15.1
         13nm,0.5s
AAK   Ala-Archa           2.56 299⇓iP       Pg        15 11 39.9 -1.0
         baz=98
AAK                               ⇓iS       Sg        15 12 12.7 -1.4
         baz=98
CHMS  Chumysh             2.59 308⇓iP       Pb        15 11 38.7 +0.3
         baz=7.0
CHMS                              ⇓iS       Sb        15 12 12.5 +2.2
         baz=7.0
CHMS  Chumysh             2.59 308 ⇑P       Pb        15 11 39.0 +0.6
         8.2nm,0.4s,SNR=6.3
KUU   Kurty               2.62 341  Pg      Pb        15 11 38.8  0.0
         5.7nm,0.3s
KUU                                 Lg      Lg        15 12 12.0
         68nm,0.5s
KUU   Kurty               2.62 341 eP       Pb        15 11 38.8  0.0
         5.7nm,0.3s
KUU                                eS       Sb        15 12 11.9 +1.0
         68nm,0.5s
MNBS  Baschi              2.73  13  Pg      Pb        15 11 40.9 +0.2
         6.7nm,0.2s
MNBS                                Lg      Lg        15 12 16.0
         112nm,0.3s
MNBS  Baschi              2.73  13 eP       Pb        15 11 40.9 +0.2
         6.7nm,0.2s
MNBS                               eS       Sb        15 12 16.0 +1.7
         112nm,0.3s
ARXS  Arharly             2.79   4  Pg      Pb        15 11 42.1 +0.3
         5.3nm,0.2s
ARXS                                Lg      Lg        15 12 17.5
         49nm,0.2s
ARXS  Arharly             2.79   4 eP       Pb        15 11 42.1 +0.3
         5.3nm,0.2s
ARXS                               eS       Sb        15 12 17.5 +1.4
         49nm,0.2s
USP   Ospenovka           2.90 310⇑iP       Pb        15 11 42.9 -0.7
         baz=9.0
USP                               ⇑iS       Sb        15 12 21.9 +2.7
         baz=9.0
KTMS  Ketmen              2.90  45  Pg      Pb        15 11 43.9 +0.2
         15nm,0.2s
KTMS                                Lg      Lg        15 12 20.6
         24nm,0.4s
KTMS  Ketmen              2.90  45 eP       Pb        15 11 43.9 +0.2
         15nm,0.2s
KTMS                               eS       Sb        15 12 20.6 +1.3
         24nm,0.4s
AML   Almayashu           2.95 285⇑iP       Pg        15 11 46.9 -1.4
         baz=84
AML                               ⇑iS       Sg        15 12 24.9 -1.8
         baz=84
AML   Almayashu           2.95 285 ⇓P       Pg        15 11 47.0 -1.4
         6.4nm,0.2s,SNR=10
EKS2  Erkin-Say           3.06 295⇓iP       Pg        15 11 49.1 -1.2
         baz=94
EKS2                              ⇓iS       Sg        15 12 30.8 +0.9
         baz=94
EKS2  Erkin-Say           3.06 295 ⇓del               15 11 49.3
         4.0nm,0.3s,SNR=6.4
DJR   Jarkent             3.34  29  Pg      Pb        15 11 50.9 -0.3
         5.4nm,0.3s
DJR                                 Lg      Lg        15 12 32.5
         22nm,0.4s
DJR   Jarkent             3.34  29 eP       Pb        15 11 50.9 -0.3
         5.4nm,0.3s
DJR                                eS       Sb        15 12 32.5 +0.5
         22nm,0.4s
MRKS  Merke               3.46 294  Pg      Pg        15 11 57.6 -0.5
         3.5nm,0.4s
MRKS                                Lg      Lg        15 12 43.5
         13nm,0.2s
MRKS  Merke               3.46 294 eP       Pb        15 11 55.2 +2.0
         3.5nm,0.4s
MRKS                               eS       Sg        15 12 40.0 -3.0
         13nm,0.2s
```

KAPS	**Kapalarasan**	**4.08**	**18**	Pg	**Pb**	**15 12 05.1**	**+1.4**
	2.6nm,0.3s						
KAPS				Lg	Lg	15 12 57.2	
	9.4nm,0.5s						
KAPS	**Kapalarasan**	**4.08**	**18**	*e*P	**Pb**	**15 12 05.1**	**+1.4**
	2.6nm,0.3s						
KAPS				*e*S	**Sb**	**15 12 57.1**	**+4.1**
	9.4nm,0.5s						
KK31	**Karatay Array**	**5.47**	**290**	⇓Pg	**Pg**	**15 12 35.9**	**-0.6**
	0.8nm,0.5s,baz=100,slow=16,SNR=3.5						
KK31				⇑Lg	Lg	15 13 49.6	
	1.8nm,0.6s,baz=95,slow=26,SNR=6.0						
MAKZ	**Makanchi**	**6.26**	**29**	⇑Pn	**Pn**	**15 12 27.8**	**+3.7**
	1.6nm,1.2s						
MAKZ				⇑Lg	Lg	15 14 09.9	
	1.4nm,0.6s						
MK31	**Makanchi Array**	**6.37**	**31**	⇓Pn	**Pn**	**15 12 27.7**	**+2.1**
	0.2nm,0.4s,baz=199,slow=12,SNR=3.6						
MK31				⇓Lg	Lg	15 14 12.7	
	1.2nm,0.5s						

*ISCJB **26** 15:12:18.2±0.8,33°.78N±0°.04×35°.78E±0°.09,h5^{km}±11^{km}, Error ellipse: s-maj=13.1km s-min=5.9km az=162.4*

*GRAL **26** 15:12:18.6±0.3,33°.78N×35°.77E,h3^{km}±7^{km},MD2.9*

ISC 26 15:12:16.6±1.2,**33°.81N**±0°.05×**35°.88E**±0°.06,**h8**^{km}±12^{km}, **n8**,σ**1**^{s}**.23**/13,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	**Bhannes**	**0.21**	**298**	*e*P	**Pg**	**15 12 21.5**	**+0.6**
BHL				*e*S	**Sg**	**15 12 23.7**	**-0.1**
DQRL	**Deir Qamar**	**0.27**	**249**	*e*P	**Pg**	**15 12 21.8**	**-0.3**
DQRL				*e*S	**Sg**	**15 12 24.4**	**-1.3**
RCY	**Rachaya**	**0.31**	**186**	*e*P	**Pg**	**15 12 23.6**	**+0.9**
RCY				*e*S	**Sg**	**15 12 27.6**	**+0.8**
BEYL	**Beirut**	**0.33**	**282**	*e*P	**Pg**	**15 12 23.0**	**0.0**
BRBR	**Barbar**	**0.40**	**171**	*e*P	**Pg**	**15 12 25.7**	**+1.3**
BRBR				*e*S	**Sb**	**15 12 31.8**	**-0.6**
QASN	**Qassioun**	**0.43**	**129**	*e*P	Pg	15 12 20.5	-4.5
QASN				*e*S	**Sg**	**15 12 27.9**	**-2.8**
HWQ	**Hawqa**	**0.48**	**7**	*e*P	**Pb**	**15 12 28.1**	**+0.7**
TOTH	**TOTAH**	**0.64**	**134**	*e*P	**Pn**	**15 12 31.9**	**-0.2**
TOTH				*e*S	**Sn**	**15 12 42.4**	**-0.1**

*DDA **26** 15:12:54.1,41°.40N×43°.35E,h7^{km}±5^{km},ML2.5*

ISC 26 15:12:54.7±1.5,**41°.45N**±0°.10×**43°.32E**±0°.03,**h1**^{km}±12^{km}, **n8**,σ**1**^{s}**.04**/13,**Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKH	**Akhalkalaki**	**0.14**	**105**	P	**Pg**	**15 12 56.6**	**-0.8**
AKH				S	**Sg**	**15 12 59.0**	**-0.2**
BGD	**Bogdanovka**	**0.28**	**130**	P	**Pg**	**15 12 59.7**	**-0.3**
BGD				S	**Sg**	**15 13 05.3**	**+1.7**
EPOS	**Posof**	**0.45**	**278**	*i* P	**Pg**	**15 13 03.2**	**0.0**
DAGI	**Agillar**	**1.12**	**251**	*i* P	**Pn**	**15 13 17.1**	**-0.5**
DAGI				*i* S	**Sn**	**15 13 34.5**	**+0.8**
DAGI				IAML_P			
	comp=Z,245nm,0.2s						
BTNK	**Botanikuri**	**1.14**	**77**	P	Pn	15 13 24.9	+7.1
BTNK				S	**Sn**	**15 13 35.7**	**+1.6**
DBOC	**Borcka**	**1.25**	**266**	*i* P	**Pg**	**15 13 18.6**	**+0.1**
DBOC				IAML_P			
	comp=Z,375nm,0.2s						
DBAD	**Bademkaya**	**1.29**	**251**	*i* P	**Pg**	**15 13 19.7**	**+0.2**
DBAD				*i* S	**Sb**	**15 13 35.8**	**-1.3**
DBAD				IAML_P			
	comp=Z,540nm,0.2s						
DDEM	**Demirkent**	**1.30**	**245**	*i* P	**Pg**	**15 13 20.3**	**+0.6**
DDEM				*i* S	**Sn**	**15 13 37.5**	**-0.7**
DDEM				IAML_P			
	comp=Z,637nm,0.3s						

MEX 26 15:24:28.3±0.3,**14°.92N**×**93°.33W**,**h44**^{km}±18^{km},**MD3.7**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.78**	**8**	*e*P	Pn	15 24 41.4	-1.6
PCIG				*e*S	Sn	15 24 51.6	-2.1
TGIG		**1.85**	**6**	*i* P	Pn	15 24 55.7	-2.0
TGIG				*i* S	Sn	15 25 18.5	-1.5
CMIG	**Matias Romero**	**2.62**	**325**	*e*P	Pn	15 25 07.3	-0.9
CMIG				*i* S	Sn	15 25 36.6	-2.2

MEX 26 15:38:34.2±0.3,**18°.44N**×**104°.63W**,**h17**^{km}±20^{km},**MD3.5**, **Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**1.12**	**339**	*i* P	Pn	15 38 51.6	-3.6
CJM				*i* S	Sb	15 39 04.9	-4.6
MMIG	**Aquila**	**1.23**	**97**	*e*P	Pn	15 38 52.9	-3.7
MMIG				*e*S	Sb	15 39 07.8	-4.7
ARIG	**Puente Sto Nin**	**4.07**	**92**	*e*P	Pn	15 39 33.2	-2.5
ARIG				*i* S	Sn	15 40 19.5	-3.5

*SJA **26** 15:56:38.3±0.7,28°.79S×71°.34W,h54^{km}±43^{km},ML3.0, MW3.5*

*GUC **26** 15:56:39.1±0.5,28°.98S×71°.21W,h70^{km}±6^{km},ML3.0*

ISC 26 15:56:36.5±3.0,**28°.79S**±0°.06×**71°.6W**±0°.1,**h30**^{km}±16^{km}, **n12**,σ**1**^{s}**.32**/19,**1C-4D**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.84**	**106**	⇓*i*P	**Pb**	**15 56 52.6**	**-0.1**
LCO				*i* S	**Sb**	**15 57 03.2**	**-0.5**
LCO				IAML		15 57 03.8	
	comp=E,2μm,0.3s						
LSCH	**La Serena**	**1.17**	**164**	⇓*i*P	**Pn**	**15 56 57.6**	**+0.8**
LSCH				*i* S	**Sn**	**15 57 11.2**	**-0.5**
LSCH				IAML		15 57 13.2	
	comp=N,342nm,0.5s						
GO04	**Tololo Observa**	**1.56**	**153**	⇓*i*P	**Pn**	**15 57 02.8**	**+0.3**
GO04				*i* S	**Sn**	**15 57 20.3**	**-1.5**
GO03	**Copiap**	**1.70**	**46**	*e*P	**Pn**	**15 57 04.7**	**+0.4**
GO03				*e*S	**Sn**	**15 57 24.8**	**-0.3**
GO03	**Copiap**	**1.70**	**46**	⇑*i*P	**Pn**	**15 57 04.5**	**+0.2**
GO03				*i* S	**Sn**	**15 57 24.0**	**-1.1**
GO03				IAML		15 57 25.9	
	comp=E,330nm,0.1s						
CO02	**Combarbal**	**2.47**	**168**	⇓*i*P	**Pn**	**15 57 15.2**	**+0.4**
CO02				*i* S	**Sn**	**15 57 42.8**	**-1.3**
VCA	**Vinchina**	**3.00**	**90**	*e*P	**Pn**	**15 57 25.1**	**+3.0**
VCA				IAML		15 58 05.0	
	comp=Z,71nm,0.2s						
ACLC	**CERRO LA CRUZ**	**4.13**	**100**	*e*P	**Pn**	**15 57 38.8**	**+1.0**
ASAL	**Salagasta**	**4.49**	**148**	*e*P	**Pn**	**15 57 45.3**	**+2.7**
ASAL				*e*S	**Sn**	**15 58 33.7**	**-0.1**
APLL	**PUNTA DE LOS L**	**4.71**	**111**	*e*P	**Pn**	**15 57 46.4**	**+0.7**
APLL				IAML		15 57 46.8	
	comp=Z,14nm,0.2s						
CYA	**Choya**	**5.12**	**88**	*e*P	**Pn**	**15 57 51.7**	**+0.4**
CYA				IAML		15 57 53.0	
	comp=Z,8.0nm,0.2s						
TCA	**Tanti**	**6.60**	**114**	*e*P	**Pn**	**15 58 10.4**	**-1.1**

*IDC **26** 15:56:44.1±0.5,51°.84N×176°.46W,h0^{km},mb4.2/25, mb1 4.3/27,mb1mx4.2/58,mbtmp4.2/27,ML4.6/2,MS3.0/6, Ms1 3.0/6,ms1mx2.8/43,Error ellipse: s-maj=16.7km s-min=9.2km az=156.0*

*AEIC **26** 15:56:50.2,51°.47N×176°.32W,h26^{km},ML4.6, MB4.5(NEIC)*

*NEIC **26** 15:56:50.2±0.0,51°.47N×176°.32W,h26^{km},mb4.5/66, ML4.6(AEIC),After AEIC.*

NEIC Felt on Adak.

*ISCJB **26** 15:56:51.1±0.3,51°.86N±0°.05×176°.49W±0°.04,h69^{km}±2^{km}, mb4.2/48,Error ellipse: s-maj=9.3km s-min=3.7km az=170.2*

ISC 26 15:56:51.2±0.9,**51°.66N**±0°.10×**176°.47W**±0°.04,**h53**^{km}±7^{km}, **n357**,σ**0**^{s}**.92**/358,**mb4.3**/48,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETKA	**Kagalaska Isla**	**0.21**	**10**	*e*Pg	**Pn**	**15 56 59.4**	**-0.5**
ADK	**Adak**	**0.26**	**329**	*e*Pg	**Pn**	**15 56 59.7**	**-0.6**
ADK				*e*		15 57 00.2	
ADK				*e*Sg	**Sn**	**15 57 07.2**	**+0.4**
ADAG	**Mount Adagdak**	**0.33**	**345**	*e*Pn	**Pn**	**15 57 01.6**	**+0.7**
GSCK	**Great Sitkin C**	**0.40**	**28**	*e*Pn	**Pn**	**15 57 01.7**	**+0.2**
GSCK				*e*Sg	**Sn**	**15 57 09.9**	**+0.9**
GSTD	**Great Sitkin T**	**0.44**	**26**	*e*Pn	**Pn**	**15 57 02.2**	**+0.1**
GSMY	**Great Sitkin M**	**0.46**	**33**	*e*Pn	**Pn**	**15 57 02.1**	**-0.1**
KIWB	**Kanaga Island**	**0.47**	**295**	*e*Pn	**Pn**	**15 57 02.7**	**+0.5**
KIKV	**Kanaga Island**	**0.49**	**297**	*e*Pn	**Pn**	**15 57 03.0**	**+0.5**
KIMD	**Kanaga Island**	**0.49**	**282**	*e*Pn	**Pn**	**15 57 02.7**	**+0.2**
GSTR	**Great Sitkin T**	**0.50**	**30**	*e*Pn	**Pn**	**15 57 03.0**	**+0.3**
KICM	**Kanaga Island**	**0.52**	**300**	*e*Pn	**Pn**	**15 57 03.6**	**+0.7**
TAFP	**Tanaga Falls P**	**0.97**	**285**	*e*Pn	**Pn**	**15 57 09.6**	**+1.0**
TASE	**Tanaga Southea**	**0.99**	**281**	*e*Pn	**Pn**	**15 57 09.9**	**+1.0**
TANO	**Tanaga North**	**1.06**	**285**	*e*Pn	**Pn**	**15 57 11.1**	**+1.3**
GAEA	**Gareloi East**	**1.43**	**276**	*e*Pn	**Pn**	**15 57 15.9**	**+1.2**
ATKA	**Atka Island**	**1.51**	**68**	*e*Pn	**Pn**	**15 57 14.8**	**-0.9**
ATKA				*e*Sn	**Sn**	**15 57 34.8**	**+0.6**
NIKH	**Nikolski High**	**4.85**	**71**	*e*Pn	**Pn**	**15 58 02.5**	**+1.0**
NIKH				*e*Sn	**Sn**	**15 58 59.3**	**+3.0**
OKAK	**Okmok**	**5.30**	**66**	*e*Pn	**Pn**	**15 58 08.8**	**+1.1**
OKWR	**Okmok West Rim**	**5.34**	**67**	*e*Pn	**Pn**	**15 58 09.8**	**+1.5**
OKTU	**Okmok Mt. Tuli**	**5.43**	**68**	*e*Pn	**Pn**	**15 58 11.2**	**+1.7**
OKER	**Okmok East Rim**	**5.44**	**67**	*e*Pn	**Pn**	**15 58 11.6**	**+1.9**
MREP	**Makushin Rep't**	**6.29**	**66**	*e*Pn	**Pn**	**15 58 22.7**	**+1.5**
MSW	**Makushin Switc**	**6.29**	**65**	*e*Pn	**Pn**	**15 58 22.7**	**+1.4**
UNV	**Unalaska Valle**	**6.43**	**66**	*e*Pn	**Pn**	**15 58 25.7**	**+2.5**
SPIA	**Saint Paul Isl**	**6.61**	**31**	*e*Pn	**Pn**	**15 58 27.3**	**+1.7**
AKUT	**Akutan**	**6.93**	**65**	*e*Pn	**Pn**	**15 58 28.0**	**-1.9**
FALS	**False Pass**	**8.45**	**63**	*e*Pn	**Pn**	**15 58 52.4**	**+1.6**
OHAK	**Old Harbor**	**14.55**	**58**	*e*Pn	**Pn**	**16 00 11.4**	**-2.3**
SVW2	**Sparrevohn**	**14.87**	**42**	*e*P	**P**	**16 00 22.3**	**-0.2**
KDAK	**Kodiak Island**	**15.05**	**57**	Pn	**Pn**	**16 00 17.1**	**-3.1**
	2.1nm,0.3s,baz=237,slow=5.6,SNR=31						
KDAK				LR	LR	16 06 39.9	
	comp=Z,188nm,21.1s,baz=236,slow=40						
KDAK	**Kodiak Island**	**15.05**	**57**	*e*P	**Pn**	**16 00 23.0**	**+2.8**
	55nm,0.4s						
TTA	**Tatalina**	**15.71**	**36**	*e*Pn	**Pn**	**16 00 31.4**	**+2.6**
	7.7nm,0.8s						
PETK	**Petropavlovsk-**	**15.82**	**285**	Pn	**P**	**16 00 34.0**	**+0.9**
	baz=81,slow=18,SNR=3.7						
PETK				LR	LR	16 06 15.2	
	comp=Z,72nm,20.8s,baz=88,slow=36						
CNPM	**China Poot**	**16.21**	**51**	*e*Pn	**Pn**	**16 00 35.4**	**+0.3**
	22nm,0.7s						
BRLK	**Bradley Lake**	**16.45**	**50**	*e*P	**Pn**	**16 00 37.9**	**-0.2**
	9.5nm,0.6s						
SKT	**Skwentna**	**17.00**	**43**	*e*P	**P**	**16 00 47.4**	**+1.3**
	14nm,0.6s						
SUA	**Susitna One**	**17.12**	**45**	*e*P	**P**	**16 00 48.2**	**+0.6**
	7.2nm,0.9s						
SEW	**Seward**	**17.24**	**50**	*e*Pn	**Pn**	**16 00 46.2**	**-1.7**
	26nm,0.3s						
KTH	**Kantishna Hill**	**17.98**	**39**	*e*P	**Pn**	**16 00 58.5**	**+1.4**
	30nm,0.8s						
SML	**Sawmill**	**18.32**	**45**	*e*P	**P**	**16 00 59.8**	**-0.9**
	8.4nm,0.6s						
GLI	**Glacier Island**	**18.59**	**49**	*e*P	**P**	**16 01 01.8**	**-1.8**
	14nm,0.6s						
SCM	**Sheep Creek Mo**	**18.77**	**46**	*e*P	**P**	**16 01 04.0**	**-1.7**
	18nm,1.1s						
MLY	**Manley**	**18.82**	**35**	*e*P	**P**	**16 01 06.5**	**+0.3**
	15nm,0.7s						
FID	**Port Fidalgo**	**18.84**	**49**	*e*P	**P**	**16 01 05.2**	**-1.2**
	15nm,0.5s						
MCK	**McKinley**	**18.85**	**40**	*e*P	**P**	**16 01 07.1**	**+0.6**
	17nm,0.7s						
WRH	**Wood River Hil**	**19.52**	**38**	*e*P	**P**	**16 01 10.6**	**-3.1**
	9.8nm,0.5s						
CCB	**Clear Creek Bu**	**19.71**	**38**	*e*P	**P**	**16 01 14.7**	**-1.1**
	9.2nm,0.7s						
TCOL	**CIGO, UAF Yank**	**19.80**	**37**	P	**P**	**16 01 17.8**	**+1.1**
	baz=241						
HMT	**Hamilton**	**19.81**	**51**	*e*P	**P**	**16 01 14.4**	**-2.5**
	9.6nm,0.6s						
HDA	**Harding Lake**	**19.93**	**39**	*e*P	**P**	**16 01 19.8**	**+1.5**
	26nm,0.6s						
MA2	**Magadan**	**19.95**	**306**	LR	LR	16 10 05.4	
	comp=Z,38nm,18.2s,baz=108,slow=40						
PAX	**Paxson**	**19.98**	**44**	*e*P	**P**	**16 01 20.1**	**+1.3**
	9.3nm,0.6s						
SEY	**Seymchan**	**20.03**	**316**	P	**P**	**16 01 21.5**	**+2.2**
	0.3nm,0.3s,baz=98,slow=11,SNR=11						
POKR	**Poker Plat Res**	**20.07**	**37**	P	**P**	**16 01 20.3**	**+0.5**
	baz=241						
ILAR	**Eielson Array**	**20.12**	**38**	P	**P**	**16 01 18.5**	**-1.8**
	1.8nm,0.3s,baz=237,slow=9.7,SNR=37						
ILAR				S	**S**	**16 05 03.4**	**+0.4**
	0.1nm,0.3s,baz=229,slow=12,SNR=3.7						
ILAR				PcP	**PcP**	**16 05 33.0**	**0.0**
	0.2nm,0.3s,baz=272,slow=2.9,SNR=6.0						
ILB	**Eielson Array**	**20.12**	**38**	*e*P	**P**	**16 01 20.5**	**+0.3**
	8.8nm,0.5s						
SCRK	**Sand Creek**	**20.95**	**41**	*e*P	**P**	**16 01 28.7**	**-0.7**
	19nm,0.6s						
TOLK	**Toolik Lake Re**	**21.34**	**27**	P	**P**	**16 01 34.3**	**+0.9**
	baz=230,SNR=7.7						
EPYK	**Eagle Plains**	**24.63**	**38**	P	**P**	**16 02 05.2**	**-1.1**
	baz=252						
INK	**Inuvik**	**26.39**	**35**	P	**P**	**16 02 20.6**	**-1.4**
	1.4nm,0.4s,baz=248,slow=8.5,SNR=4.1						
INK				PcP	**PcP**	**16 05 45.6**	**-0.5**
	4.3nm,0.6s,baz=178,slow=3.1,SNR=6.6						
INK	**Inuvik**	**26.39**	**35**	*e*P	**P**	**16 02 20.6**	**-1.4**
	2.7nm,1.0s						
DLBC	**Dease Lake**	**26.98**	**57**	LR	LR	16 12 31.4	
	comp=Z,45nm,18.5s,baz=331,slow=35						
ASAJ	**Asahikawa**	**28.16**	**271**	P	**P**	**16 02 38.9**	**+0.7**
	4.4nm,0.8s,baz=88,slow=32,SNR=4.6						
BBB	**Bella Bella**	**29.39**	**70**	P	**P**	**16 02 50.5**	**+1.6**
	6.4nm,0.8s,baz=304,slow=6.5,SNR=6.3						
YKA	**Yellowknife Ar**	**33.98**	**47**	P	**P**	**16 03 27.6**	**-1.5**
	0.8nm,0.5s,baz=275,slow=8.7,SNR=3.4						
YKA				PcP	**PcP**	**16 06 06.2**	**+0.3**
	3.0nm,0.7s,baz=287,slow=3.6,SNR=6.1						
YKA				LR	LR	16 18 04.7	
	comp=Z,5.1nm,19.0s,baz=247,slow=38						
YKB5	**Yellowknife Ar**	**33.98**	**47**	*e*PcP	**PcP**	**16 06 06.2**	**+0.3**
D03D	**Eldon**	**34.20**	**75**	P	**P**	**16 03 32.5**	**+1.2**
	baz=297						
H11N2	**WAKE ISLAND Hy**	**34.44**	**208**	T	T	16 40 03.9	
	baz=18,slow=76,SNR=1761						
H11N3	**WAKE ISLAND Hy**	**34.45**	**208**	T	T	16 40 09.3	
	baz=18,slow=76,SNR=2156						
H11N1	**WAKE ISLAND Hy**	**34.45**	**208**	T	T	16 40 03.6	
	baz=18,slow=76,SNR=1455						
B05A	**Bryant**	**34.46**	**74**	P	**P**	**16 03 34.7**	**+1.2**
	baz=296						
USRK	**Ussuriysk Ar.**	**34.70**	**278**	P	**P**	**16 03 35.6**	**0.0**
	1.8nm,0.7s,baz=52,slow=7.5,SNR=7.3						
E04D	**Cinebar**	**34.97**	**77**	P	**P**	**16 03 39.5**	**+1.6**
	baz=298						
MJAR	**Matsushiro Arr**	**35.27**	**263**	P	**P**	**16 03 40.9**	**+0.3**
	1.1nm,0.6s,baz=54,slow=7.3,SNR=5.8						
MJAR				LR	LR	16 16 04.5	
	comp=Z,22nm,21.5s,baz=25,slow=33						
H11S1	**WAKE ISLAND Hy**	**35.65**	**208**	T	T	16 41 32.7	
	baz=18,slow=76,SNR=1390						
H11S2	**WAKE ISLAND Hy**	**35.67**	**208**	T	T	16 41 34.0	
	baz=18,slow=76,SNR=738						
H11S3	**WAKE ISLAND Hy**	**35.67**	**208**	T	T	16 41 34.3	
	baz=18,slow=76,SNR=466						
I04A	**Tendick Farm,**	**36.46**	**81**	P	**P**	**16 03 51.8**	**+1.0**
	baz=302						
HAWA	**Hanford**	**36.88**	**75**	*e*P	**P**	**16 03 55.5**	**+1.2**
J04D	**Umpqua Nationa**	**36.94**	**81**	P	**P**	**16 03 56.1**	**+1.1**
	baz=302						
NEW	**Newport**	**37.41**	**71**	*e*P	**P**	**16 03 59.3**	**+0.5**
	8.7nm,0.7s						
NEW	**Newport**	**37.41**	**71**	P	**P**	**16 03 59.2**	**+0.4**
	baz=298,SNR=9.4						
J05D	**Fort Rock, OR**	**37.45**	**81**	P	**P**	**16 04 00.4**	**+1.1**
	baz=302						
O02D	**Mt. Diablo Mer**	**38.24**	**86**	P	**P**	**16 04 07.2**	**+1.2**
	baz=306						
O03E	**Paynes Creek**	**38.78**	**85**	P	**P**	**16 04 10.8**	**+0.3**
	baz=306						
CN2	**Changchun**	**38.92**	**282**	*e*P	**P**	**16 04 12.5**	**+1.0**
WVOR	**Wild Horse Val**	**39.52**	**80**	*e*P	**P**	**16 04 17.4**	**+0.8**
	7.0nm,0.8s						
MSO	**Missoula**	**40.00**	**71**	*e*P	**P**	**16 04 20.9**	**+0.3**
	5.4nm,0.7s						
MSO	**Missoula**	**40.00**	**71**	P	**P**	**16 04 20.6**	**+0.1**
	baz=300						
KSRS	**Korea Array**	**41.09**	**272**	P	**P**	**16 04 30.8**	**+1.3**
	3.7nm,0.8s,baz=55,slow=8.0,SNR=14						
HLID	**Hailey**	**41.46**	**76**	*e*P	**P**	**16 04 33.4**	**+0.7**
	3.6nm,0.9s						
HLID	**Hailey**	**41.46**	**76**	P	**P**	**16 04 33.2**	**+0.5**
	baz=304,SNR=7.1						
MCMT	**McKenzie Canyo**	**41.70**	**73**	*e*P	**P**	**16 04 34.8**	**+0.1**
EGMT	**Eagleton**	**41.83**	**68**	P	**P**	**16 04 36.0**	**+0.5**
	baz=301						
BOZ	**Bozeman (W)**	**42.01**	**72**	P	**P**	**16 04 37.1**	**0.0**
	baz=302,SNR=14						
NV01	**Mina Array Sit**	**42.07**	**85**	*e*PcP	**PcP**	**16 06 32.8**	**+1.1**
NVAR	**Mina Array Bea**	**42.07**	**85**	P	**P**	**16 04 38.7**	**+0.9**
	2.0nm,0.8s,baz=293,slow=7.8,SNR=15						
NVAR				PcP	**PcP**	**16 06 32.8**	**+1.1**
	0.9nm,0.7s,baz=289,slow=2.3,SNR=6.6						
ELK	**Elko**	**42.57**	**80**	P	**P**	**16 04 42.8**	**+0.9**
	2.9nm,0.7s,baz=294,slow=10.0,SNR=16						
ELK	**Elko**	**42.57**	**80**	*e*P	**P**	**16 04 42.7**	**+0.9**
	3.9nm,0.9s						
YHH	**Holmes Hill**	**42.91**	**72**	*e*P	**P**	**16 04 45.0**	**+0.3**
	7.7nm,0.7s						
H17A	**Grant Village**	**43.30**	**73**	P	**P**	**16 04 48.8**	**+1.1**
	baz=304						
CWC	**Cottonwood Cre**	**43.45**	**87**	P	**P**	**16 04 49.4**	**+0.5**
	baz=309						
HVU	**Hansel Valley**	**43.47**	**77**	*e*P	**P**	**16 04 49.7**	**+0.7**
	4.4nm,0.7s						
GRAC	**Grapevine Rang**	**43.54**	**86**	P	**P**	**16 04 50.6**	**+1.1**
	baz=309						
RLMT	**Red Lodge**	**43.66**	**71**	*e*P	**P**	**16 04 50.8**	**+0.1**
	9.8nm,0.8s						
RLMT	**Red Lodge**	**43.66**	**71**	P	**P**	**16 04 50.9**	**+0.3**
	baz=304,SNR=9.3						
R11A	**Troy Canyon, C**	**43.80**	**83**	*e*P	**P**	**16 04 52.0**	**+0.2**
	3.7nm,1.1s						
R11A	**Troy Canyon, C**	**43.80**	**83**	P	**P**	**16 04 52.1**	**+0.3**
	baz=308,SNR=7.5						
FURC	**Furnace Creek,**	**44.19**	**86**	P	**P**	**16 04 55.8**	**+1.1**
	baz=309						
TPNV	**Topopah Spring**	**44.27**	**85**	*e*P	**P**	**16 04 56.3**	**+0.8**
	6.1nm,0.8s						
TPNV	**Topopah Spring**	**44.27**	**85**	P	**P**	**16 04 56.0**	**+0.6**
	baz=309,SNR=10						
DUG	**Dugway, Tooele**	**44.38**	**79**	*e*P	**P**	**16 04 55.9**	**-0.5**
	3.4nm,0.7s						
DUG	**Dugway, Tooele**	**44.38**	**79**	P	**P**	**16 04 57.0**	**+0.7**
	baz=307						
LAO	**LASA Array**	**44.57**	**67**	P	**P**	**16 04 58.2**	**+0.5**
	baz=303						
PSUT	**Pine Spring**	**44.76**	**81**	*e*P	**P**	**16 04 59.7**	**+0.3**
	2.2nm,0.6s						
BW06	**Boulder Array**	**44.83**	**74**	P	**P**	**16 05 00.2**	**+0.2**
	baz=305,SNR=16						
PDAR	**Pinedale Array**	**44.83**	**74**	P	**P**	**16 05 00.2**	**+0.3**
	7.0nm,0.7s,baz=309,slow=4.3,SNR=42						
BFSC	**Mount Baldy Ra**	**45.14**	**89**	P	**P**	**16 05 02.8**	**+0.4**
	baz=311						
HEC	**Hector,Ludlow**	**45.57**	**87**	P	**P**	**16 05 06.2**	**+0.4**
	baz=311						
GMRC	**Granite Mounta**	**46.02**	**87**	P	**P**	**16 05 09.9**	**+0.5**
	baz=311						
PFO	**Pinyon Flats O**	**46.30**	**89**	P	**P**	**16 05 12.3**	**+0.7**
	baz=312						
BELC	**Belle Mtn. Jos**	**46.33**	**88**	P	**P**	**16 05 11.9**	**+0.1**
	baz=311						
K22A	**Casper**	**46.71**	**72**	P	**P**	**16 05 14.4**	**-0.3**
	baz=306						
IRM	**Iron Mountain**	**46.76**	**87**	P	**P**	**16 05 15.4**	**+0.4**
	baz=311						
BC3	**Big Chuckawall**	**46.90**	**88**	P	**P**	**16 05 16.0**	**-0.2**
	baz=312						
U15A	**North Rim**	**47.05**	**83**	*e*P	**P**	**16 05 18.6**	**+1.1**
	6.2nm,0.8s						
O20A	**White River Ci**	**47.20**	**76**	P	**P**	**16 05 18.6**	**0.0**
	baz=308,SNR=8.7						
PDMCI	**Parker Dam,Lak**	**47.28**	**86**	P	**P**	**16 05 19.5**	**+0.4**
	baz=311						
Y12C	**Blythe**	**47.41**	**87**	P	**P**	**16 05 20.4**	**+0.3**
	baz=312						
SONA0	**Songino Array**	**47.82**	**298**	*e*P	**P**	**16 05 23.5**	**+0.3**
SONA0				*e*PcP	**PcP**	**16 06 50.5**	**-0.8**
SONM	**Songino Array**	**47.82**	**298**	P	**P**	**16 05 23.5**	**+0.3**
	0.5nm,0.5s,baz=40,slow=7.5,SNR=3.1						
SONM				PcP	**PcP**	**16 06 50.5**	**-0.8**
	1.3nm,0.4s,baz=56,slow=2.8,SNR=7.5						
WUAZ	**Wupatki**	**48.20**	**83**	*e*P	**P**	**16 05 26.5**	**+0.1**
	7.0nm,0.8s						
WUAZ	**Wupatki**	**48.20**	**83**	P	**P**	**16 05 27.2**	**+0.8**
	baz=311,SNR=6.8						
HHC	**Hu-ho-hao-te**	**49.01**	**287**	P	**P**	**16 05 31.5**	**-0.9**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,11nm,5.3s						
S22A	**4UR Ranch, Cre**	**49.55**	**78**	P	**P**	**16 05 37.2**	**+0.3**
	baz=310						
214A	**Organ Pipe Nat**	**49.68**	**88**	P	**P**	**16 05 37.7**	**+0.1**
	baz=313						
NJ2	**Nanjing**	**50.26**	**273**	*e*P	**P**	**16 05 38.8**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SDCO	**Great Sand Dun**	**50.36**	**77**	*e*P	**P**	**16 05 43.5**	**+0.5**
	comp=Z,2.2nm,0.8s						
SDCO	**Great Sand Dun**	**50.36**	**77**	P	**P**	**16 05 43.3**	**+0.3**
	baz=310						
TUC	**Tucson**	**50.70**	**86**	P	**P**	**16 05 45.9**	**+0.6**
	baz=313						
T25A	**Trinidad**	**51.42**	**77**	P	**P**	**16 05 51.4**	**+0.5**
	baz=311,SNR=5.2						
ANMO	**Albuquerque**	**51.61**	**80**	P	**P**	**16 05 51.5**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=292,slow=13,SNR=3.2						
ANMO	**Albuquerque**	**51.61**	**80**	P	**P**	**16 05 52.1**	**-0.1**
	baz=312						
ECSD	**EROS Data Cent**	**51.80**	**65**	P	**P**	**16 05 52.3**	**-1.0**
	baz=309						
BGNE	**Belgrade**	**52.38**	**68**	P	**P**	**16 05 57.7**	**-0.1**
	baz=310						
121A	**Cookes Peak, D**	**52.41**	**83**	P	**P**	**16 05 58.7**	**+0.4**
	baz=313						
E38A	**The Farm, Brul**	**52.79**	**60**	P	**P**	**16 05 59.3**	**-1.3**
	baz=309						
CBKS	**Cedar Bluff**	**53.13**	**72**	P	**P**	**16 06 03.6**	**+0.3**
	baz=311						
G40A	**Rib Lake**	**54.37**	**60**	P	**P**	**16 06 11.4**	**-0.8**
	baz=310						
MSTX	**Muleshoe**	**54.52**	**78**	P	**P**	**16 06 13.1**	**-0.5**
	baz=313						
KSU1	**Kansas State U**	**54.78**	**70**	P	**P**	**16 06 14.5**	**-0.8**
	baz=311						
ZAA1	**Zalesovo Array**	**54.88**	**314**	*e*PcP	**PcP**	**16 07 17.2**	**0.0**
ZALV	**Zalesovo Beam**	**54.89**	**314**	PcP	**PcP**	**16 07 17.2**	**0.0**
	comp=Z,0.9nm,0.5s,baz=49,slow=4.1,SNR=4.9						
E43A	**Lone Tree Farm**	**55.36**	**57**	P	**P**	**16 06 18.4**	**-0.9**
	baz=311						
WMOK	**Wichita Mounta**	**56.41**	**75**	P	**P**	**16 06 26.9**	**-0.2**
	baz=313						
LZH	**Lanzhou**	**56.70**	**288**	*e*P	**P**	**16 06 29.8**	**+0.6**
LZH				pP	pP	16 06 45.0	+1.3
LZH				sP	sP	16 06 53.5	+3.7
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
TXAR	**Lajitas Array**	**57.17**	**83**	P	**P**	**16 06 32.6**	**0.0**
	comp=Z,4.2nm,0.8s,baz=296,slow=4.8,SNR=46						
ABTX	**Abilene, Hawle**	**57.34**	**77**	P	**P**	**16 06 33.7**	**0.0**
	baz=314						
D49A	**Beulah Townshi**	**57.65**	**53**	P	**P**	**16 06 34.5**	**-1.1**
	baz=313						
MATQ	**Matagami**	**57.76**	**49**	P	**P**	**16 06 35.3**	**-1.0**
	baz=313						
ARCES	**ARCESS Array B**	**58.05**	**351**	P	**P**	**16 06 37.0**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=43,slow=7.3,SNR=6.2						
P43A	**Skaggs, Pawnee**	**58.48**	**65**	P	**P**	**16 06 40.5**	**-1.1**
	baz=313						
E50A	**Wahnapitae**	**58.54**	**54**	P	**P**	**16 06 40.7**	**-1.1**
	baz=313						
LSQQ	**Lebel-sur-Quev**	**58.55**	**50**	P	**P**	**16 06 39.9**	**-2.0**
	baz=314						
CCM	**Cathedral Cave**	**58.59**	**67**	P	**P**	**16 06 41.3**	**-1.0**
	baz=313						
JCT	**Junction City**	**58.74**	**79**	P	**P**	**16 06 42.4**	**-1.2**
	baz=315						
U40A	**Yellville**	**58.82**	**70**	P	**P**	**16 06 42.3**	**-1.7**
	baz=314,SNR=6.3						
TOBO	**Tobermory, Bru**	**58.96**	**55**	P	**P**	**16 06 44.4**	**-0.4**
	baz=313						
W39A	**Magazine**	**59.08**	**71**	P	**P**	**16 06 45.6**	**-0.1**
	baz=314						
WHTX	**Lake Whitney,**	**59.11**	**76**	P	**P**	**16 06 46.6**	**+0.6**
	baz=314						

CHGQ	Chibougamau baz=315	59.17	47	P	P	16 06 44.1	-2.0
D52A	ZEK Kipawa Sen baz=314	59.31	52	P	P	16 06 46.1	-1.1
SFIN	Lafayette baz=314	59.33	63	P	P	16 06 46.4	-1.0
D53A	Lac Vacive, Po baz=314	59.59	52	P	P	16 06 47.7	-1.3
MIAR	Mount Ida comp=Z,4.9nm,0.8s	59.65	72	*e*P	P	16 06 48.8	-0.9
MIAR	Mount Ida baz=314	59.65	72	P	P	16 06 49.6	-0.1
E52A	Mattawa baz=314	59.67	53	P	P	16 06 48.2	-1.4
F52A	Sundridge baz=314	59.68	54	P	P	16 06 48.5	-1.3
N47A	Urbana baz=314	59.76	61	P	P	16 06 49.4	-0.9
KURK	Kurchatov comp=Z,2.9nm,0.6s	59.87	315	*e*P	P	16 06 50.0	-0.9
S44A	Carbondale baz=314	59.98	66	P	P	16 06 51.4	-0.5
W41B	Gary Mavity, V baz=314	60.00	70	P	P	16 06 51.2	-0.8
X40A	Basin Creek Fa baz=314	60.13	71	P	P	16 06 52.5	-0.5
H06N1	SOCORRO T-PHAS SNR=5.9	60.25	97	T	T	17 12 30.0	
E54A	Lac Daplat, Po baz=315	60.29	52	P	P	16 06 52.4	-1.5
WMQ	Urumqi	60.40	304	*e*P	P	16 06 55.0	+0.2
WMQ	comp=N,2µm,15.7s			LR	LR		
WMQ	comp=E,1µm,17.1s			LR	LR		
WMQ	comp=Z,700nm,21.3s			LR	LR		
O48A	Farmland baz=314	60.48	62	P	P	16 06 53.9	-1.4
G53A	Haliburton baz=315	60.51	54	P	P	16 06 54.6	-0.8
P48A	Milroy baz=314	60.89	62	P	P	16 06 56.9	-1.2
MK32	Makanchi Array	60.99	310	*e*P	P	16 06 57.4	-1.3
MKAR	Makanchi Array comp=Z,0.3nm,0.3s,baz=57,slow=5.7,SNR=6.1	60.99	310	P	P	16 06 57.4	-1.3
Q48A	North Vernon baz=314	61.10	63	P	P	16 06 58.3	-1.2
P49A	Miami Univ. Ec baz=315	61.23	62	P	P	16 06 59.1	-1.3
WCI	Wyandotte Cave baz=315	61.27	64	P	P	16 07 00.2	-0.5
DRWO	Darlington Wes baz=315	61.34	55	P	P	16 07 00.6	-0.4
O50A	Cable baz=315	61.40	61	P	P	16 07 00.7	-0.9
Q49A	Aurora baz=315	61.51	62	P	P	16 07 01.1	-1.1
N51A	Ashland baz=315	61.53	59	P	P	16 07 01.7	-0.7
H55A	Tweed baz=316	61.63	53	P	P	16 07 02.0	-1.1
P50A	Jamestown baz=315	61.68	61	P	P	16 07 02.5	-0.9
T47A	Sharon Grove baz=315,SNR=5.0	61.69	65	P	P	16 07 03.0	-0.5
J54A	Appleton baz=315	61.81	55	P	P	16 07 03.6	-0.6
WVT	Waverly baz=315	61.88	67	P	P	16 07 04.0	-0.9
O51A	Pataskala baz=315	61.95	60	P	P	16 07 04.3	-0.9
V46A	Holladay baz=315	61.95	67	P	P	16 07 04.7	-0.6
N52A	McGinn’s Farm, baz=315	61.97	59	P	P	16 07 04.2	-1.1
M53A	WI Miller and baz=315	62.06	58	P	P	16 07 05.3	-0.6
H56A	Elgin baz=316	62.06	53	P	P	16 07 05.2	-0.7
OXF	Oxford baz=315	62.12	69	P	P	16 07 05.9	-0.6
Q50A	Georgetown baz=315	62.12	62	P	P	16 07 05.9	-0.5
S49A	Springfield baz=315	62.15	64	P	P	16 07 06.1	-0.5
PECO	Prince Edward baz=316	62.17	54	P	P	16 07 05.9	-0.7
V47A	Nunnelly baz=315	62.27	67	P	P	16 07 06.8	-0.6
R50A	Paris baz=315	62.33	63	P	P	16 07 07.4	-0.4
Q51A	Peebles baz=315	62.34	61	P	P	16 07 07.5	-0.4
O52A	Adamsville baz=315	62.38	60	P	P	16 07 07.1	-1.1
K55A	Perry baz=316	62.49	55	P	P	16 07 08.0	-0.8
T49A	Edmonton baz=315	62.49	64	P	P	16 07 08.5	-0.4
M54A	Oil Creek Stat baz=316	62.54	57	P	P	16 07 08.6	-0.5
PLAL	Pickwick Lake comp=Z,9.2nm,0.9s	62.56	68	*e*P	P	16 07 08.7	-0.6
X46A	Booneville baz=315	62.57	68	P	P	16 07 09.1	-0.4
O53A	New Philadelph baz=316	62.62	59	P	P	16 07 09.2	-0.6
W47A	Westpoint baz=315	62.64	67	P	P	16 07 09.6	-0.3
L55A	Hinsdale baz=316	62.70	56	P	P	16 07 09.7	-0.5
S50A	Richmond baz=315	62.72	63	P	P	16 07 09.9	-0.5
R51A	Hillsboro baz=316,SNR=7.3	62.73	62	P	P	16 07 10.0	-0.4
V48A	Smith Brothers baz=315	62.74	66	P	P	16 07 10.3	-0.2
N54A	Moraine State baz=316	62.76	58	P	P	16 07 09.8	-0.8
U49A	Red Boiling Sp baz=315	62.78	65	P	P	16 07 10.4	-0.4
T50A	Nancy baz=316	62.95	64	P	P	16 07 11.5	-0.4
Q52A	Bidwell baz=316	62.98	61	P	P	16 07 11.4	-0.7
X47A	Russelville baz=316	63.01	68	P	P	16 07 12.0	-0.4
P53A	Whipple baz=316	63.08	60	P	P	16 07 12.3	-0.4
O54A	Avella baz=316	63.12	59	P	P	16 07 12.6	-0.4
S51A	Beattyville baz=316	63.20	63	P	P	16 07 13.0	-0.6
R52A	Catlettsburg baz=316	63.22	62	P	P	16 07 13.1	-0.6
V49A	McMinnville baz=316	63.24	66	P	P	16 07 13.3	-0.6
N55A	Marion Center baz=316	63.42	57	P	P	16 07 13.8	-1.3
Q53A	Leroy baz=316	63.45	60	P	P	16 07 14.7	-0.5
T51A	Gray baz=316	63.48	63	P	P	16 07 14.9	-0.6
W49A	Belvidere baz=316	63.50	66	P	P	16 07 14.9	-0.7
X48A	Hartselle baz=316	63.53	67	P	P	16 07 14.9	-0.9
R53A	Hurricane baz=316	63.60	61	P	P	16 07 16.1	-0.2
Q54A	Coxs Mills baz=316	63.74	60	P	P	16 07 16.9	-0.2
V50A	Pikevile baz=316	63.76	65	P	P	16 07 16.6	-0.7
Y48A	Jasper baz=316	63.84	68	P	P	16 07 17.4	-0.5
U51A	La Follette baz=316	63.86	64	P	P	16 07 17.5	-0.6
X49A	Woodville baz=316	63.90	67	P	P	16 07 17.7	-0.5
T52A	Hallie baz=316	63.91	63	P	P	16 07 18.4	+0.1
W50A	Signal Mountai baz=316	63.98	66	P	P	16 07 18.4	-0.5
TZTN	Tazewell baz=316	64.01	63	P	P	16 07 18.6	-0.3
O56A	Blue Knob Stat baz=316	64.01	57	P	P	16 07 17.6	-1.3
V51A	Loudon baz=316	64.09	65	P	P	16 07 19.1	-0.4
L58A	Harry Jones Me baz=317	64.12	54	P	P	16 07 18.6	-1.0
Q55A	Buckhannon baz=316	64.13	59	P	P	16 07 18.9	-0.9
N57A	Milroy baz=317	64.19	56	P	P	16 07 19.5	-0.6
U52A	Thorn Hill baz=316	64.22	63	P	P	16 07 20.1	-0.2
R54A	Victor baz=316	64.23	61	P	P	16 07 20.2	-0.2
T53A	Wise baz=316	64.25	62	P	P	16 07 20.5	-0.1
Y49A	Blount Mountai baz=316	64.32	67	P	P	16 07 20.0	-1.0
X50B	Fort Payne baz=316,SNR=5.7	64.32	66	P	P	16 07 20.2	-0.9
W51A	Cleveland baz=316	64.32	65	P	P	16 07 20.3	-0.7
S54A	Dingess, Beckl baz=316	64.33	61	P	P	16 07 20.9	-0.2
V52A	Sevierville baz=316	64.49	64	P	P	16 07 21.9	-0.2
TKL	Tuckaleechee C comp=Z,6.0nm,0.8s,baz=310,slow=4.4,SNR=6.5	64.52	64	P	P	16 07 21.1	-1.2
O57A	Amberson baz=317	64.54	57	P	P	16 07 21.5	-0.9
N58A	Sunbury baz=317	64.56	56	P	P	16 07 21.8	-0.7
LRAL	Lakeview Retre baz=316	64.58	68	P	P	16 07 22.3	-0.4
U53A	Fall Branch baz=316	64.68	63	P	P	16 07 23.2	-0.2
Y50A	Piedmont baz=316	64.69	67	P	P	16 07 22.5	-0.9
X51A	Calhoun baz=316	64.70	66	P	P	16 07 22.4	-1.1
M59A	Waymart baz=317	64.70	55	P	P	16 07 22.6	-0.8
T54A	Tazewell baz=317,SNR=6.0	64.72	62	P	P	16 07 23.8	+0.1
Z49A	Columbiana baz=316	64.73	68	P	P	16 07 22.8	-0.9
S55A	Lewisburg baz=317	64.79	61	P	P	16 07 23.7	-0.5
P57A	Homestead Farm baz=317	64.88	58	P	P	16 07 23.8	-0.8
R56A	Bull Pasture M baz=317	64.92	59	P	P	16 07 24.6	-0.4
U54A	Nelsons Funny baz=317	64.98	62	P	P	16 07 25.4	0.0
N59A	State Game Lan baz=317	64.99	55	P	P	16 07 24.9	-0.4
Q57A	Strasburg baz=317	64.99	58	P	P	16 07 24.7	-0.6
149A	Jones baz=316,SNR=5.1	65.01	69	P	P	16 07 25.3	-0.2
Z50A	Ashland comp=Z,16nm,0.9s	65.04	68	*e*P	P	16 07 24.9	-0.8
Z50A	Ashland baz=316,SNR=7.4	65.04	68	P	P	16 07 24.9	-0.8
V53A	Saluda baz=317	65.05	64	P	P	16 07 25.5	-0.3
Y51A	Rockmart baz=316	65.06	66	P	P	16 07 24.9	-0.9
T55A	Pulaski baz=317	65.12	61	P	P	16 07 26.1	-0.1
KMI	Kunming	65.12	279	P	P	16 07 26.3	-0.3
KMI	comp=Z,27nm,0.6s			pmax	pmax		
W53A	Cullowhee baz=317	65.22	64	P	P	16 07 27.0	0.0
X52A	Dahlonega baz=317,SNR=5.6	65.22	65	P	P	16 07 26.3	-0.6
BLA	Blacksburg baz=317	65.25	61	P	P	16 07 26.9	-0.2
P58A	Pank, Wackersv baz=317	65.25	57	P	P	16 07 26.6	-0.3
N60A	Cedar Hill Far baz=318	65.36	55	P	P	16 07 27.2	-0.5
S56A	Natural Bridge baz=317	65.37	60	P	P	16 07 28.0	+0.2
U55A	TA2, Sparta baz=317,SNR=5.3	65.42	62	P	P	16 07 28.2	-0.1
Z51A	Franklin baz=317	65.42	67	P	P	16 07 27.6	-0.6
Q58A	Fox Den Farm, baz=317	65.45	58	P	P	16 07 27.8	-0.4
150A	Eclectic baz=317	65.45	68	P	P	16 07 28.0	-0.4
V54A	Nebo baz=317	65.45	63	P	P	16 07 28.4	0.0
R57A	Stanardsville baz=317	65.47	59	P	P	16 07 28.2	-0.3
X53A	Estanollee baz=317	65.62	65	P	P	16 07 28.9	-0.6
Y52A	Lilburn baz=317	65.66	66	P	P	16 07 29.0	-0.7
V55A	Taylorsville baz=317	65.80	62	P	P	16 07 30.4	-0.3
FIA0	FINESS Array S	65.82	348	*e*P	P	16 07 28.9	-1.4
FINES	FINESS Array B comp=Z,1.5nm,1.0s,baz=28,slow=6.3,SNR=4.5	65.82	348	P	P	16 07 28.8	-1.4
W54A	Cherokee Point baz=317	65.83	64	P	P	16 07 30.6	-0.1
U56A	King baz=317	65.90	62	P	P	16 07 30.7	-0.5
Y53A	Monroe baz=317	65.94	66	P	P	16 07 31.1	-0.4
Z52A	Williamson baz=317	65.95	67	P	P	16 07 31.1	-0.5
T57A	Hurt baz=317	66.04	60	P	P	16 07 32.0	-0.1
X54A	Belton baz=317	66.11	64	P	P	16 07 32.5	-0.1
152A	Waverly Hall baz=317	66.16	67	P	P	16 07 32.0	-0.9
251A	Midway baz=317	66.18	68	P	P	16 07 32.3	-0.8
V56A	Mocksville baz=317	66.23	62	P	P	16 07 32.9	-0.4
KMSC	Kings Mountain baz=317	66.26	63	P	P	16 07 33.5	-0.1
GOGA	Godfrey baz=317	66.33	66	P	P	16 07 33.8	-0.2
Z53A	Monticello baz=317	66.36	66	P	P	16 07 33.5	-0.7
U57A	Blanch baz=318	66.41	61	P	P	16 07 34.1	-0.3
Y54A	Tignall baz=317,SNR=5.7	66.44	65	P	P	16 07 34.2	-0.5
T58A	Grand View Acr baz=318	66.46	60	P	P	16 07 34.4	-0.4
V57A	Coltrane Farms baz=318	66.57	62	P	P	16 07 35.2	-0.3
X55A	Gracelyn & Ava baz=317,SNR=6.6	66.58	64	P	P	16 07 35.3	-0.3
W56A	Indian Trail baz=318	66.68	63	P	P	16 07 36.3	+0.1
Z54A	Sparta baz=317	66.81	65	P	P	16 07 36.6	-0.5
Y55A	Saluda baz=317	66.85	64	P	P	16 07 37.1	-0.2
X56A	White Oak baz=318	66.90	63	P	P	16 07 37.6	0.0
S60A	Water View baz=318	66.91	58	P	P	16 07 38.7	+1.1
352A	Blakely baz=317	66.91	68	P	P	16 07 37.6	-0.1
W57A	Gilead baz=318	66.99	62	P	P	16 07 37.8	-0.4
452A	Marianna baz=317	67.22	69	P	P	16 07 39.5	-0.2
155A	Kite baz=318	67.48	66	P	P	16 07 40.9	-0.4
NB2	NORSAR Subarra comp=Z,0.3nm,0.5s,baz=7.4,slow=6.9	67.48	356	P	P	16 07 40.6	-0.4
NB200	NORSAR Array S	67.48	356	*e*P	P	16 07 41.3	+0.4
NOA	NORSAR Array B comp=Z,0.2nm,0.5s,baz=6.6,slow=6.6,SNR=4.2	67.48	356	P	P	16 07 41.3	+0.4
V59A	Middlesex baz=318	67.50	61	P	P	16 07 41.0	-0.3
W58A	Raeford baz=318	67.51	62	P	P	16 07 41.1	-0.3
Z57A	Bowman baz=318	67.97	64	P	P	16 07 44.6	+0.2
HFS	Hagfors comp=Z,0.7nm,0.4s,baz=15,slow=1.7,SNR=14	68.26	355	P	P	16 07 44.4	-1.4
NHSC	New Hope baz=318	68.41	64	P	P	16 07 47.6	+0.4
Z58A	St. Stephen baz=318	68.44	63	P	P	16 07 47.1	-0.3
556A	Lake Butler baz=318	69.45	68	P	P	16 07 53.9	+0.2
CMAR	Chiang Mai Arr comp=Z,1.8nm,0.6s,baz=27,slow=7.4,SNR=11	72.43	278	P	P	16 08 12.7	+0.8
EKA	Eskdalemuir Ar comp=Z,0.4nm,0.5s,baz=3.7,slow=4.4,SNR=3.6	73.23	4	P	P	16 08 15.3	-0.8
WRA	Warramunga Arr comp=Z,2.6nm,0.9s,baz=45,slow=5.2,SNR=14	83.24	226	P	P	16 09 11.3	-0.4
PSI	Prapat comp=Z,2.9nm,0.4s,baz=58,slow=9.0,SNR=4.9	84.47	268	P	P	16 09 20.6	+2.3
BR101	Keskin Array S	85.27	337	*e*P	P	16 09 21.8	-0.4
BRTR	Keskin Array B comp=Z,0.7nm,0.6s,baz=49,slow=2.6,SNR=5.5	85.27	337	P	P	16 09 21.8	-0.4
ASAR	Alice Springs comp=Z,2.8nm,0.7s,baz=28,slow=4.7,SNR=37	86.69	224	P	P	16 09 29.4	+0.4
STKA	Stephens Creek comp=Z,3.0nm,0.7s,baz=350,slow=4.9,SNR=8.5	90.97	215	P	P	16 09 50.0	+1.1
STKA	Stephens Creek comp=Z,1.3nm,1.1s	90.97	215	*e*P	P	16 09 50.0	+1.1
TOA1	Torodi Ar. Sit	115.44	2	*e*PKiKP	PKiKP	16 15 26.4	-0.8
TORD	Torodi Ar. Bea comp=Z,0.9nm,0.6s,baz=357,slow=2.8,SNR=8.4	115.45	2	PKP	PKiKP	16 15 26.4	-0.8
DBIC	Dimbokro comp=Z,1.9nm,0.4s,baz=32,slow=1.5,SNR=9.2	121.46	10	PKP	PKPdf	16 15 38.3	-0.4
PLCA	Paso Flores comp=Z,4.4nm,1.2s,baz=279,slow=5.0,SNR=3.0	129.66	108	PKP	PKPdf	16 15 53.7	+0.1
MATP	Matopo comp=Z,1.1nm,0.5s,baz=31,slow=5.9,SNR=4.2	143.23	319	PKhKP	PKPbc	16 16 16.8	+0.3
MAW	Mawson comp=Z,5.5nm,0.8s,baz=285,slow=1.6,SNR=14	147.60	218	PKPbc	PKPbc	16 16 28.6	+0.7
LBTB	Lobatse comp=Z,6.1nm,0.5s,baz=12,slow=1.2,SNR=18	148.51	319	PKPbc	PKPbc	16 16 31.6	-0.2
BOSA	Boshof comp=Z,9.3nm,0.5s,baz=19,slow=2.3,SNR=30	151.82	316	PKPbc	PKPbc	16 16 39.7	-0.1

IDC ***26*** *15:57:23.4±4.2, 18°.03N×101°.28W, h0^{km}, mb3.7/2, mb1 4.0/6, mb1mx3.6/48, mbtmp3.8/6, ML3.3/4, Error ellipse: s-maj=88.3km s-min=27.2km az=28.0*

ISCJB ***26*** *15:57:28.2±0.4, 18°.21N±0°.06×101°.04W±0°.03, h57^{km}±9^{km}, mb3.4/2, Error ellipse: s-maj=9.2km s-min=5.0km az=178.2*

NEIC ***26*** *15:57:30.3±0.0, 18°.20N×101°.06W, h57^{km}, mb3.8/1, MD4.1(MEX), After MEX.*

NEIC Felt at Ciudad Altamirano.

MEX ***26*** *15:57:30.2±0.5, 18°.20N×101°.04W, h60^{km}±6^{km}, MD4.1*

ISC 26 15:57:29.0±0.8**, 18°.18N**±0°.05×**101°.02W**±0°.04**, h53**^{km}±14^{km}**, n29,** σ1^{s}.**25**/41**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.65	81	*e*P	Pn	15 57 42.2	-0.1
ARIG				*i* S	Sn	15 57 52.4	+0.6
ZIIG	Zihuatanejo	0.71	217	*e*Pn	Pn	15 57 43.0	-0.1
ZIIG				*e*Sn	Sn	15 57 53.7	+0.4
ZIIG	Zihuatanejo	0.71	217	*e*P	Pn	15 57 43.0	-0.1
ZIIG				*e*S	Sn	15 57 53.7	+0.4
CAIG	El Cayaco	1.34	147	*e*Pn	Pn	15 57 51.3	-0.1
CAIG				*e*Sn	Sn	15 58 05.8	-2.4
CAIG	El Cayaco	1.34	147	*e*P	Pn	15 57 51.3	-0.1
CAIG				*e*S	Sn	15 58 08.2	+0.1
MEIG	Mezcala	1.36	101	*e*Pn	Pn	15 57 52.3	+0.6
MEIG				*e*Sn	Sn	15 58 08.9	+0.2
MEIG	Mezcala	1.36	101	*e*P	Pn	15 57 52.3	+0.6
MEIG				*e*S	Sn	15 58 08.6	-0.1
PLIG	Platanillo	1.46	82	*e*Pn	Pn	15 57 53.5	+0.4
PLIG	Platanillo	1.46	82	*e*P	Pn	15 57 53.5	+0.4
PLIG				*i* S	Sn	15 58 11.2	0.0
YAIG	Yautepec	1.97	70	*e*Pn	Pn	15 58 01.0	+0.8
YAIG	Yautepec	1.97	70	*e*P	Pn	15 58 01.0	+0.8
YAIG				*e*S	Sn	15 58 23.4	-0.4
MMIG	Aquila	2.21	273	*e*Pn	Pn	15 58 02.5	-0.9
MMIG	Aquila	2.21	273	*e*P	Pn	15 58 02.5	-0.9
MMIG				*i* S	Sn	15 58 28.6	-0.9
TLIG	Tlapa	2.42	104	*e*Pn	Pn	15 58 07.8	+1.5
TLIG	Tlapa	2.42	104	*e*P	Pn	15 58 07.0	+0.7
TLIG				*i* S	Sn	15 58 35.5	+0.8
LVIG	Laguna Verde	4.62	70	*e*Pn	Pn	15 58 37.3	+1.0
ZAIG	Zacatecas	4.79	343	*e*Pn	Pn	15 58 38.6	-0.4
CMIG	Matias Romero 1.7nm,0.3s,baz=271,slow=14,SNR=12	5.95	100	Pn	Pn	15 58 56.6	+2.0
CMIG	3.1nm,0.3s,baz=166,slow=20,SNR=7.3			Sn	Sn	15 59 59.5	-1.9
CMIG	1.9nm,0.3s,baz=317,slow=19,SNR=2.7			Lg	Lg	16 00 33.1	
LNIG	Linares	6.84	12	*e*Pn	Pn	15 59 05.7	-1.1
CCIG	Comitan	8.70	101	*e*Pn	Pn	15 59 32.3	-0.1
APG	El Apazote 1.6nm,0.3s,baz=214,slow=18,SNR=2.4	10.60	106	Lg	Lg	16 03 05.4	
MYIG	Mrida	10.98	74	*e*Pn	Pn	16 00 02.3	-1.2
TXAR	Lajitas Array 0.0nm,0.3s,baz=164,slow=14,SNR=7.9	11.36	348	Pn	Pn	16 00 10.9	+2.1
TX31	Lajitas Ar. Si	11.36	348	*e*Pn	Pn	16 00 06.5	-2.3
TEIG	Tepich 0.3nm,0.3s,baz=313,slow=9.1,SNR=2.5	12.21	78	Pn	Pn	16 00 22.1	+1.8
TEIG	0.1nm,0.3s,baz=294,slow=20,SNR=2.5			Sn	Sn	16 02 31.2	-3.7
MSTX	Muleshoe 5.2nm,0.7s	15.80	355	*e*Pn	Pn	16 01 07.0	-1.2
ANMO	Albuquerque 0.1nm,0.3s,baz=154,slow=14,SNR=4.4	17.38	345	P	P	16 01 29.9	+1.1
NVAR	Mina Array Bea 1.2nm,0.6s,baz=156,slow=8.1,SNR=12	25.18	327	P	P	16 02 50.9	+0.9
PDAR	Pinedale Array 0.8nm,0.8s,baz=153,slow=13,SNR=4.3	25.56	345	P	P	16 02 54.1	+0.9

MEX 26 16:07:50.0±0.6**, 16°.35N**×**96°.13W, h66**^{km}±8^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.58	178	*e*P	Pn	16 08 02.0	-1.3
HUIG				*i* S	Sn	16 08 11.3	-1.7
VHO	Vista Hermosa	0.92	321	*e*P	Pn	16 08 06.2	-1.3
VHO				*e*S	Sn	16 08 18.7	-1.9
CMIG	Matias Romero	1.41	58	*e*P	Pn	16 08 11.8	-1.8
CMIG				*i* S	Sn	16 08 29.4	-2.0
PCIG		2.87	102	*i* P	Pn	16 08 32.9	-0.6
PCIG				*i* S	Sn	16 09 05.8	-1.0

DJA ***26*** *16:08:04.8±0.2, 9°S±2°×12°2E±°, h10^{km}, M4.5/17, mb4.6/11, mB5.0/3, MLv4.4/17, Mw(mB)4.4/3*

IDC ***26*** *16:08:07.7±2.2, 9°.36S×121°.95E, h106^{km}±17^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.5/45, mbtmp4.0/7, MS2.9/1, Ms1 2.9/1, ms1mx2.5/23, Error ellipse: s-maj=40.5km s-min=14.6km az=52.0*

ISC 26 16:08:04.9±0.9**, 9°.42S**±0°.06×**121°.82E**±0°.05**, h68**^{km}±9^{km}**, n27,** σ2^{s}.**76**/32**, mb3.9**/5**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.67	349	P	Pn	16 08 18.1	-1.4
EDFI				S	Sn	16 08 28.6	-1.7
MMRI	Maumere	0.88	28	P	Pn	16 08 21.9	+0.1
MMRI				S	Sn	16 08 35.0	+0.7
WSI	Waingapu	1.52	260	P	Pn	16 08 31.5	+1.4
WSI				S	Sn	16 08 52.5	+3.4
BATI	Baumata 28nm,0.3s,baz=286,slow=5.5,SNR=23	1.98	114	P	Pn	16 08 39.0	+2.8
BATI	42nm,0.3s,baz=254,slow=13,SNR=6.5			S	Sn	16 09 03.5	+3.3
BATI	comp=Z,240nm,20.5s,baz=38,slow=47			LR	LR	16 09 37.3	
BATI	Baumata	1.98	114	P	Pn	16 08 38.1	+1.8
BATI				Pg		16 08 42.8	
BATI				S	Sn	16 09 04.0	+3.8
WBSI	Waikabubak, Su	2.41	264	P	Pn	16 08 43.7	+1.6
SOEI	Soe	2.44	98	P	Pn	16 08 44.8	+2.2
BBSI	Bau Bau	3.97	11	P	Pn	16 09 06.4	+3.0
PLAI	Plampang	4.04	278	P	Pn	16 09 06.6	+2.4
BKSI	Bulukumba	4.40	337	P	Pn	16 09 11.9	+2.6
KAPI	Kappang 18nm,0.3s,baz=162,slow=8.9,SNR=34	4.83	335	P	Pn	16 09 18.6	+3.5
KAPI	baz=199,slow=18,SNR=1.4			S	Sn	16 10 10.3	+0.5
KAPI				LR	LR	16 11 16.1	

	comp=Z,136nm,18.5s,baz=284,slow=39						
BNSI	Bone	5.26	341	P	Pn	16 09 24.1	+3.0
KDI	Kendari	5.48	8	P	Pn	16 09 27.7	+3.7
SPSI	Sidrap Palu	5.79	339	P	Pn	16 09 31.4	+3.2
DNP	Denpasar	6.57	276	P	Pn	16 09 41.8	+2.9
TTSI	Tana Toraja	6.63	342	P	Pn	16 09 42.7	+2.9
JAGI	Jajag, Banyuwa	7.63	276	P	Pn	16 09 53.8	+0.3
KBKI	Kotabaru	8.27	317	P	Pn	16 10 05.1	+2.9
LUWI	Luwuk	8.37	7	P	Pn	16 10 08.0	+4.4
	47nm,1.2s,1μm						
SANI	Sanana	8.41	30	P	Pn	16 10 08.0	+3.9
	19nm,0.7s						
WRA	Warramunga Arr	15.99	132	P	Pn	16 11 41.8	-4.0
	0.4nm,0.3s,baz=306,slow=13,SNR=18						
WRA				S	Sn	16 14 25.6	-17
	0.2nm,0.3s,baz=287,slow=23,SNR=4.8						
ASAR	Alice Springs	18.28	142	P	P	16 12 14.6	+1.2
	0.5nm,0.3s,baz=325,slow=13,SNR=34						
ASAR				S	Sn	16 15 23.6	-14
	0.1nm,0.3s,baz=316,slow=23,SNR=7.6						
STKA	Stephens Creek	28.91	143	P	P	16 13 56.1	-1.5
	1.0nm,0.3s,baz=325,slow=8.2,SNR=12						
CMAR	Chiang Mai Arr	35.73	321	P	P	16 14 56.9	-0.5
	0.6nm,0.6s,baz=147,slow=7.2,SNR=4.5						
USRK	Ussuriysk Ar.	54.15	9	P	P	16 17 21.9	-1.1
	1.1nm,0.5s,baz=195,slow=7.3,SNR=6.0						
SONM	Songino Array	58.62	348	P	P	16 17 52.4	-2.6
	0.7nm,0.5s,baz=162,slow=6.5,SNR=4.1						
PETK	Petropavlovsk-	69.37	22	P	P	16 19 03.4	-1.9
	0.5nm,0.5s,baz=206,slow=4.0,SNR=3.1						

DDA ***26*** *16:11:44.2, 39°.73N×35°.33E, h7^{km}±2^{km}, ML2.5*

ISK ***26*** *16:11:45.9, 39°.84N×35°.27E, h10^{km}, ML1.9/4*

ISC 26 16:11:44.3±1.5**, 39°.84N**±0°.06×**35°.38E**±0°.05**, h20**^{km}±3^{km}**,**
n11, σ**0^s.90**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOZ	Yozgat	0.21	193	PG	Pb	16 11 50.7	+0.5
YOZ				SG	Sb	16 11 53.9	-0.4
COAL	Corum-Alaca	0.51	324	*i* P	Pn	16 11 56.3	-0.2
SIRC	Yozgat	0.54	200	*i* P	Pb	16 11 56.1	+1.0
SIRC				*i* S	Sb	16 12 02.1	-0.4
CORM	Corum	0.67	300	PG	Pb	16 11 57.9	+0.5
CORM				SG	Sb	16 12 06.9	+0.6
CUSAR	Sarkisla-SIVAS	0.79	122	*i* P	Pb	16 11 59.2	-0.2
CDAG	Cicekdag	0.81	255	*i* P	Pb	16 11 58.9	-0.8
CDAG				*i* S	Sb	16 12 08.4	-1.8
AVNS	Nevsehir-Avano	1.12	202	*i* P	Pn	16 11 52.9	-12
DELI	KIRIKKALE	1.14	278	*i* P	Pn	16 12 05.3	+0.3
DELI				IAML_P			
	comp=Z,382nm,0.1s						
KIRS	Kırehir-Merke	1.34	238	*i* P	Pb	16 12 08.6	-0.1
KIRS				IAML_P			
	comp=Z,220nm,0.1s						
YAYX	Yaylak	1.52	234	PN	Pb	16 12 12.7	+1.0
SERE	Sereflikochisa	1.67	238	PN	Pb	16 12 15.2	+0.8

NNC ***26*** *16:13:57.9±1.9, 36°.66N×69°.67E, h0^{km}, mb5.3, mpv5.3, Error ellipse: s-maj=19.6km s-min=9.9km az=158.0*

ISCJB ***26*** *16:14:00.3±0.3, 36°.28N±0°.02×70°.02E±0°.02, h145^{km}±3^{km}, mb4.4/86, Error ellipse: s-maj=3.3km s-min=2.6km az=157.9*

BJI ***26*** *16:14:00.1±0.0, 36°.38N×69°.89E, h144^{km}, mb4.6/31, mB4.7/22*

IDC ***26*** *16:14:02.0±0.7, 36°.25N×70°.10E, h153^{km}±5^{km}, mb3.9/31, mb1 4.1/37, mb1mx3.9/57, mbtmp4.5/37, MS3.2/2, Ms1 3.2/2, ms1mx2.6/35, Error ellipse: s-maj=8.9km s-min=7.9km az=178.0*

MOS ***26*** *16:14:01.1±1.0, 36°.30N×70°.05E, h151^{km}, mb4.4/47, Error ellipse: s-maj=6.4km s-min=4.2km az=92.0*

NEIC ***26*** *16:14:02.2±2.8, 36°.26N×69°.94E, h155^{km}±6^{km}, mb4.4/51, Error ellipse: s-maj=7.8km s-min=6.9km az=134.0*

ISC 26 16:14:01.3±0.3**, 36°.27N**±0°.03×**69°.99E**±0°.03**, h145**^{km}±3^{km}**,**
h145^{km}:pP-P, n277, σ**1^s.87**/337**, mb4.4**/86**, 23C-12D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.89	204	*e*Pn	Pn	16 14 36.0	+0.9
KBL				*e*Sn	Sn	16 15 01.9	+1.0
KBL	Kabul	1.89	204	*e*PN	Pn	16 14 36.0	+0.9
KBL				*e*		16 15 01.9	
CEP	Cherat	2.90	147	P	Pn	16 14 48.4	+1.0
CEP				S	Sn	16 15 24.0	+1.1
NIL	Nilore	3.74	133	*e*Pn	Pn	16 14 59.6	+1.5
NIL				*e*Sn	Sn	16 15 40.2	-1.9
NIL	Nilore	3.74	133	*e*PN	Pn	16 14 59.6	+1.5
CHCP	Chirah Chowk	3.74	133	P	Pn	16 14 59.5	+1.4
THW	Thamme Wali	3.75	157	P	Pn	16 14 58.5	+0.2
BTK	Batken	3.84	10	*e*Pn	Pn	16 15 00.8	+1.4
BTK				*e*Sn	Sn	16 15 47.1	+2.6
BTK	Batken	3.84	10	*e*PN	Pn	16 15 00.8	+1.4
BTK				*e*		16 15 47.1	
SARP	Sargodha	4.87	152	P	Pn	16 15 12.2	-0.7
TAS	Tashkent	5.08	354	PN	Pn	16 15 15.2	-0.5
ARSB	Arslanbob	5.56	24	*e*Pn	Pn	16 15 21.6	-0.6
KSH	Kashi	5.74	54	P	Pn	16 15 22.0	-2.5
KSH				S	Sn	16 16 22.3	-7.1
KSH				smax	smax		
	comp=N,710nm,0.7s						
KSH				smax	smax		
	comp=E,520nm,0.5s						
AML	Almayashu	6.52	25	P	Pn	16 15 35.5	+0.3
	SNR=681						
DHRM	DHARAMSHALA	6.58	126	*e*P	Pn	16 15 35.7	-0.3
DHRM				*e*S	Sn	16 16 47.7	-2.3
KK31	Karatay Array	6.84	3	*e*Pn	Pn	16 15 39.1	0.0
KK31	Karatay Array	6.84	3	⇑P	Pn	16 15 35.4	-3.7
	136nm,0.5s,baz=187,slow=12,SNR=2498						
KK31				⇑S	Sn	16 16 52.6	-3.2
	82nm,0.4s,baz=190,slow=21,SNR=7.2						
KK31	Karatay Array	6.84	3	PN	Pn	16 15 39.1	0.0
KK31				pmax	pmax		
	comp=Z,100nm,0.4s						
KKAR	Karatay Array	6.84	3	*e*Pn	Pn	16 15 39.0	-0.1
KKAR				*e*Sn	Sn	16 16 53.9	-1.9
KKAR	Karatay Array	6.84	3	*e*PN	Pn	16 15 39.0	-0.1
UCH	Uchtor	6.91	29	P	Pn	16 15 40.6	+0.2
	SNR=189						
NRN	Naryn	6.97	40	*e*Pn	Pn	16 15 39.9	-1.3
NRN	Naryn	6.97	40	*e*PN	Pn	16 15 39.9	-1.3
EKS2	Erkin-Say	7.02	23	P	Pn	16 15 42.0	+0.3
	SNR=215						
KZA	Kyzart	7.09	34	P	Pn	16 15 42.7	-0.2
	SNR=119						
BHK	Bhakra	7.21	130	*e*P	Pn	16 15 45.2	+1.1
BHK				*e*S	Sn	16 17 03.0	-1.8
AAK	Ala-Archa	7.25	27	P	Pn	16 15 45.3	+0.6
	comp=Z,55nm,0.3s,baz=165,slow=5.3,SNR=114						
AAK				S	Sn	16 17 04.8	-1.1
	comp=Z,22nm,0.3s,baz=10,slow=22,SNR=15						
AAK	Ala-Archa	7.25	27	⇓P	Pn	16 15 42.8	-2.0
	comp=Z,52nm,0.3s						
AAK				⇓S	Sn	16 17 03.9	-2.0
	comp=Z,332nm,0.8s						
AAK	Ala-Archa	7.25	27	*i* P	Pn	16 15 45.3	+0.6
	SNR=26						
AAK	Ala-Archa	7.25	27	PN	Pn	16 15 44.2	-0.6
AAK				pmax	pmax		
	comp=Z,52nm,0.3s						
AAK	Ala-Archa	7.25	27	P	Pn	16 15 45.4	+0.6
	SNR=82						
KBK	Karagaybulak	7.44	29	P	Pn	16 15 48.0	+0.7
	SNR=56						
FRU1	Bishkek	7.45	27	*e*Pn	Pn	16 15 48.4	+1.0
FRU1	Bishkek	7.45	27	*e*PN	Pn	16 15 48.4	+1.0
CHMS	Chumysh	7.66	27	P	Pn	16 15 50.1	0.0
	SNR=296						
ULHL	Ulahol	7.69	37	P	Pn	16 15 50.6	-0.1
	SNR=31						
BOOM	Boomskoye usch	7.73	35	*e*Pn	Pn	16 15 51.1	0.0
BOOM	Boomskoye usch	7.73	35	*e*PN	Pn	16 15 51.2	0.0
USP	Ospenovka	7.80	25	P	Pn	16 15 51.8	-0.2
	SNR=128						
SMLA	Simla	7.87	129	*e*P	Pn	16 15 52.2	-0.8
SMLA				*e*S	Sn	16 17 15.5	-5.2
SMLA				IAML		16 17 19.6	
	comp=N,468nm,0.2s						
SMLA				IAML		16 17 19.7	
	comp=E,548nm,0.1s						
TKM2	Tokmak 2	7.93	31	⇑P	Pn	16 15 53.7	-0.1
	comp=E,151nm,1.0s						
TKM2				⇑S	Sn	16 17 18.8	-3.3
	comp=E,96nm,1.1s						
TKM2	Tokmak 2	7.93	31	PN	Pn	16 15 53.7	-0.1
TKM2				pmax	pmax		
	comp=Z,151nm,1.0s						
TKM2	Tokmak 2	7.93	31	P	Pn	16 15 53.9	+0.1
	SNR=205						
KDJ	Kajisay	8.09	41	*e*Pn	Pn	16 15 55.4	-0.5
KDJ	Kajisay	8.09	41	*e*PN	Pn	16 15 55.4	-0.5
DDI	Dehra Dun	8.98	129	*e*P	Pn	16 16 07.0	-0.9
DDI				*e*S	Sn	16 17 41.8	-5.7
PRZ	Przheval'sk	8.99	44	*e*Pn	Pn	16 16 08.6	+0.5
PRZ	Przheval'sk	8.99	44	*e*PN	Pn	16 16 08.6	+0.5
JASL	Jaisalmer	9.35	175	*e*P	Pn	16 16 10.6	-2.1
JASL				*e*S	Sn	16 17 50.6	-5.7
GEYT	Alibeck	9.63	283	P	Pn	16 16 14.5	-1.9
	comp=Z,9.8nm,0.3s,baz=105,slow=11,SNR=85						
GEYT				S	Sn	16 17 57.6	-5.4
	comp=Z,5.4nm,0.3s,baz=110,slow=12,SNR=5.9						
GYA0B	ALIBECK ARRAY	9.63	283	*e*Pn	Pn	16 16 14.2	-2.2
GYA0B	ALIBECK ARRAY	9.63	283	⇑P	Pn	16 16 14.0	-2.5
GYA0B				⇑S	Sn	16 17 58.0	-5.0
NDI	New Delhi	9.71	139	*e*P	Pn	16 16 18.0	+0.4
NDI				*e*S	Sn	16 17 59.0	-6.2
JOSI	Joshimath	9.81	123	*e*P	Pn	16 16 18.6	-0.5
JOSI				*e*S	Sn	16 18 02.7	-5.2
SONA	Sohna	9.99	141	*e*P	Pn	16 16 18.9	-2.4
SONA				*e*S	Sn	16 18 03.2	-8.7
SONA				IAML		16 18 06.7	
SONA				IAML		16 18 09.7	
	comp=E,170nm,0.6s						
PDGK	Podgornoye	10.15	43	⇓P	Pn	16 16 22.3	-1.1
	comp=E,31nm,0.9s						
PDGK				⇑S	Sn	16 18 16.9	+1.2
	comp=E,44nm,1.1s						
PDGK	Podgornoye	10.15	43	P	Pn	16 16 22.3	-1.1
PDGK				S	Sn	16 18 16.9	+1.2
OTUK	Ortayu	12.09	8	⇓P	Pn	16 16 47.7	-1.1
	comp=E,76nm,1.1s						
OTUK				⇑S	Sn	16 18 59.6	-2.7
	comp=E,60nm,1.2s						
OTUK	Ortayu	12.09	8	P	Pn	16 16 47.7	-1.1
OTUK				S	Sn	16 18 59.6	-2.7
BHJ	Bhuj	12.97	181	*e*P	Pn	16 16 58.4	-2.0
MAKZ	Makanchi	13.82	37	*e*Pn	Pn	16 17 10.2	-0.8
MAKZ	Makanchi	13.82	37	⇓P	P	16 17 13.8	-0.8
	comp=E,32nm,0.6s						
MAKZ	Makanchi	13.82	37	*e*P	Pn	16 17 10.2	-0.8
MK31	Makanchi Array	13.96	37	*e*Pn	Pn	16 17 12.0	-0.8
MK31	Makanchi Array	13.96	37	⇓P	P	16 17 15.7	-0.5
	comp=E,25nm,0.5s,baz=184,slow=6.2,SNR=337						
MK31	Makanchi Array	13.96	37	*e*P	Pn	16 17 12.0	-0.8
MKAR	Makanchi Array	13.96	37	P	Pn	16 17 11.6	-1.2
	comp=E,0.9nm,0.3s,baz=228,slow=14,SNR=33						
MKAR				S	Sn	16 19 48.3	+1.0
	baz=224,slow=18,SNR=1.9						
DANN	Dangsing	14.06	120	*e*P	Pn	16 17 11.7	-2.7
	comp=E,119nm,0.4s						
KOLN	Koldanda	14.31	122	*e*P	Pn	16 17 14.9	-2.6
	comp=E,53nm,0.3s						
BHPL	Bhopal	14.49	152	*e*x	Pn	16 17 17.7	-1.9
GKN	Gorkha	14.88	119	*e*P	Pn	16 17 22.5	-2.1
	comp=E,152nm,0.2s						
AB31	Akbulak array	14.91	334	⇑P	Pn	16 17 23.6	-1.0
	comp=E,11nm,0.3s,baz=148,slow=11,SNR=650						
AB31				S	Sn	16 20 03.0	-7.1
	comp=E,29nm,0.5s,baz=157,slow=25,SNR=23						
AB31	Akbulak array	14.91	334	P	Pn	16 17 23.7	-1.0
AB31				S	Sn	16 20 02.9	-7.1
ABKAR	Akbulak array	14.91	334	*e*Pn	Pn	16 17 23.9	-0.7
DMN	Daman	15.45	120	*e*P	Pn	16 17 30.4	-1.4
	comp=E,39nm,0.3s						
KKN	Kakani	15.46	119	*e*P	Pn	16 17 30.3	-1.6
	comp=E,280nm,0.6s						
WMQ	Urumqi	15.50	55	*e*P	Pn	16 17 32.3	+0.2
WMQ				pmax	pmax		
	comp=E,17nm,0.9s						
WMQ				pmax	pmax		
	comp=E,54nm,3.7s						
BANOM	Banah	15.60	232	P	Pn	16 17 33.3	-0.1
SHME	Shamm	15.61	233	P	P	16 17 35.4	+0.8
KURBB	Kurchatov Arra	15.61	21	P	Pn	16 17 31.6	-1.8
	comp=E,0.3nm,0.3s,baz=210,slow=11,SNR=36						
KURBB				S	S	16 20 29.1	-0.3
	comp=E,0.0nm,0.3s,baz=220,slow=28,SNR=3.4						
KURBB	Kurchatov Arra	15.61	21	⇑P	P	16 17 35.5	+1.0
	comp=E,28nm,0.7s						
PKIN	Phulchoki	15.68	119	*e*P	Pn	16 17 32.4	-2.2
	comp=E,39nm,0.2s						
PKI	Pulchoki	15.69	119	*e*P	Pn	16 17 32.8	-2.0
	comp=E,92nm,0.5s						
KURK	Kurchatov	15.72	21	*e*Pn	Pn	16 17 32.4	-2.3
	comp=E,14nm,0.8s						
KURK	Kurchatov	15.72	21	⇑P	P	16 17 35.7	+0.1
	comp=E,14nm,0.8s						
KURK	Kurchatov	15.72	21	P	Pn	16 17 31.6	-3.1
KURK				S	Sn	16 20 29.2	-0.2
MDH	Madha	16.04	231	P	Pn	16 17 38.9	+0.1
MSFE	Esma-Masafi	16.09	231	P	Pn	16 17 39.4	0.0
JIRN	Jiri	16.19	117	*e*P	Pn	16 17 39.3	-1.7
	comp=E,262nm,0.6s						
WSAR	Wadi Sarin	16.29	220	P	P	16 17 42.1	-0.1
	comp=E,0.5nm,0.3s,baz=53,slow=9.1,SNR=6.8						
UOSS	Minazif	16.36	230	P	P	16 17 42.8	0.0
HATD	Hatta, Dubai	16.49	230	P	P	16 17 46.1	+1.7
AKTO	Aktyubinsk	16.59	332	P	Pn	16 17 45.5	+0.2
	comp=E,2.7nm,0.3s,baz=138,slow=14,SNR=117						
AKTO				S	S	16 20 38.5	-11
	comp=E,2.5nm,0.3s,baz=217,slow=20,SNR=6.9						
AKTO	Aktyubinsk	16.59	332	⇑P	P	16 17 45.0	-0.3
	comp=E,63nm,0.9s						
AKTO				⇑S	S	16 20 44.2	-5.7
	comp=E,34nm,0.7s						
ASHO	Ashiyiah	16.64	230	*i* P	Pn	16 17 47.0	+0.9
	SNR=13						
NAZ	Nazwa, Dubai	16.67	232	P	Pn	16 17 47.4	+1.0
BVAR	Borovoye Array	16.76	1	P	P	16 17 46.5	-0.6
	comp=E,5.1nm,0.3s,baz=171,slow=12,SNR=66						
BVAR				S	S	16 20 53.5	-0.3
	comp=E,0.7nm,0.3s,baz=184,slow=18,SNR=3.8						
BRVK	Borovoye	16.79	1	*e*P	P	16 17 47.0	-0.4
	comp=E,39nm,0.9s						
BRVK	Borovoye	16.79	1	⇑P	P	16 17 46.7	-0.6
	comp=E,42nm,1.0s						
BRVK	Borovoye	16.79	1	P	P	16 17 46.3	-1.1
BRVK				pmax	pmax		
	comp=Z,42nm,1.0s						
ASUD	Al Ashush, Dub	17.14	231	P	Pn	16 17 53.2	+1.2
ALNE	Al Ain	17.29	229	*i* P	Pn	16 17 54.7	+0.8
	SNR=11						
AKT	Akhty	18.08	293	*e*P	Pn	16 18 03.9	+0.6
AKT				*e*S	Sn	16 21 26.1	-0.1
AKT				pmax	pmax		
	comp=Z,7.0nm,0.4s						
AKT				smax	smax		
	comp=N,6.0nm,0.3s						
AKT				smax	smax		
	comp=E,17nm,0.4s						
GTK	Tadong	18.14	114	*e*P	Pn	16 18 04.9	+0.7
DGZ	Jazzator, Alta	18.46	38 *c*	*i*P	Pn	16 18 08.0	+0.2
BOK	Bokaro	18.51	128	*e*P	Pn	16 18 07.7	-0.7
MAK	Makhachkala	18.54	298	*e*P	P	16 18 05.7	-0.9
MAK				*e*S	S	16 21 30.0	-0.4
MAK				pmax	pmax		
	comp=Z,55nm,0.7s						
LSA	Lhasa	18.90	104	*e*Pn	Pn	16 18 14.5	+1.0
	comp=Z,23nm,0.9s						
LSA	Lhasa	18.90	104	P	Pn	16 18 14.5	+1.0
LSA				pmax	pmax		
	comp=Z,60nm,1.0s						
LSA	Lhasa	18.90	104	*e*P	Pn	16 18 14.5	+1.0
LSA				pmax	pmax		
	comp=Z,23nm,0.9s						
GROC	Groznyy	19.82	298	P	Pn	16 18 23.1	-0.4
GROC				pmax	pmax		
	comp=Z,40nm,0.8s						
GNI	Garni	20.19	289	P	Pn	16 18 26.7	-1.5
	comp=Z,37nm,0.7s,baz=312,slow=2.1,SNR=12						
GNI	Garni	20.19	289	P	Pn	16 18 27.6	-0.6
GNI	Garni	20.19	289 *d*	*i*P	P	16 18 26.2	+1.4
GNI				pmax	pmax		
	comp=Z,130nm,0.8s						
HYB	Hyderabad	20.25	156	*i* P	P	16 18 26.0	+0.6
HYB				*e*S	S	16 22 03.0	-1.8
HYB	Hyderabad	20.25	156	*e*P	P	16 18 26.6	+1.2
TURI	Tura	20.42	116	*e*P	Pn	16 18 29.2	-1.7
TAWA	Tawang	20.45	109	*e*x	Pn	16 18 31.2	-0.3
ZAA0	Zalesovo Array	20.47	26	*e*P	P	16 18 28.1	+0.7
	comp=Z,34nm,0.5s						
ZALV	Zalesovo Beam	20.47	26	P	P	16 18 27.9	+0.6
	comp=Z,27nm,0.5s,baz=217,slow=11,SNR=77						
ZALV				S	S	16 22 06.5	-1.9
	comp=Z,1.6nm,0.8s,baz=215,slow=18,SNR=2.2						
ZAA1	Zalesovo Array	20.47	26	*e*P	P	16 18 27.9	+0.6
ZEI	Tsey	21.10	296	*e*P	P	16 18 37.7	+3.2
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SVE	Sverdlovsk	21.51	346	⇑*e*P	P	16 18 39.6	+1.1
SVE				*e*S	S	16 22 31.0	+3.3
SVE				pmax	pmax		
	comp=Z,47nm,1.3s						
SHL	Shillong	21.55	114	P	P	16 18 39.8	+0.4
SHL				pmax	pmax		
	comp=Z,50nm,1.1s						
SHL	Shillong	21.55	114	*e*x	P	16 18 42.0	+2.6
SHL				*i* x	S	16 22 30.0	+0.6
ARU	Arti	21.60	343	P	P	16 18 40.0	+0.6
	comp=Z,6.4nm,0.6s,baz=158,slow=9.3,SNR=43						
ARU	Arti	21.60	343	*e*P	P	16 18 40.0	+0.6
	comp=Z,51nm,1.0s						
ARU	Arti	21.60	343 *c*	*i*P	P	16 18 40.4	+1.0
ARU						16 19 13.5	
ARU				S	S	16 22 32.4	+3.1
ARU				*SS	sS	16 23 13.2	-1.9
ARU				pmax	pmax		
	comp=Z,98nm,1.4s						
TEZP	TEZPUR	21.66	110	*e*P	P	16 18 41.1	+0.7
KBZ	Khabaz	21.99	298	P	P	16 18 44.8	+1.2
	comp=Z,4.7nm,1.0s,baz=94,slow=5.2,SNR=6.6						
ZIRO	ZIRO	22.01	107	*e*P	P	16 18 44.5	+0.3
NEY	Neytrino	22.03	297	⇑*e*P	P	16 18 42.4	-1.9
KVAR	Kislovodsk Arr	22.17	299	S	S	16 22 44.5	+5.0
	comp=Z,3.2nm,0.7s,baz=72,slow=20,SNR=2.8						
KIV	Kislovodsk	22.18	299	*e*P	P	16 18 47.4	+1.7
KIV				*e*S	S	16 22 42.9	+3.3
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,55nm,14.0s						
MOKO	MOKOCHONG	23.13	108	*e*P	P	16 18 56.6	+1.7
KOHI	KOHIMA	23.14	110	*e*P	P	16 18 56.9	+2.0
GTA	Gaotai	23.71	73	⇑P	P	16 19 01.0	+0.9
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,52nm,5.2s						
GTA				LR	LR		
	comp=Z,3μm,14.9s						
GTA				LR	LR		
	comp=Z,4μm,14.3s						
GTA				LR	LR		
	comp=Z,1μm,14.6s						
RAYN	Ar Rayn	24.66	246	*e*P	P	16 19 09.7	+1.0
	comp=Z,5.5nm,1.0s						
RAYN	Ar Rayn	24.66	246	P	P	16 19 10.6	+2.0
RAYN	Ar Rayn	24.66	246	*e*P	P	16 19 09.7	+1.0
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANN	Anapa	26.03	299	*e*P	P	16 19 21.8	+1.0
ANN				pmax	pmax		
	comp=Z,23nm,0.7s						
KIRV	Kirov	26.10	335	P	P	16 19 23.3	+2.0
	comp=Z,18nm,0.5s,baz=131,slow=11,SNR=9.7						
MOY	Mondy	26.85	45	*e*P	P	16 19 30.6	+2.4
LZH	Lanzhou	27.25	80	*e*P	P	16 19 33.5	+1.5
LZH				pP	pP	16 20 00.8	-2.9
LZH				sP	sP	16 20 16.0	-4.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
CD2	Chengdu	28.54	91	P	P	16 19 43.5	+0.1
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
ILGA	Ilgaz	28.59	291	*e*P	P	16 19 44.5	+0.6
	comp=Z,16nm,0.4s						
BR101	Keskin Array S	28.73	288	*e*P	P	16 19 46.9	+1.8
BR131	Keskin Array S	28.73	288	*e*P	P	16 19 45.2	+0.1
	comp=Z,2.6nm,0.9s						
BRTR	Keskin Array B	28.73	288	P	P	16 19 46.9	+1.8
	comp=Z,1.6nm,0.8s,baz=105,slow=8.6,SNR=9.1						
SONA0	Songino Array	29.14	55	*e*P	P	16 19 50.1	+1.4
SONA0				*e*PcP	PcP	16 22 52.6	0.0
SONM	Songino Array	29.14	55	P	P	16 19 50.1	+1.4
	comp=Z,2.0nm,0.8s,baz=259,slow=9.5,SNR=11						
SONM				PcP	PcP	16 22 52.6	0.0
	comp=Z,1.4nm,0.8s,baz=226,slow=4.4,SNR=5.0						
OBN	Obninsk	29.59	320	*i* P	P	16 19 53.5	+1.2
OBN				*i* *PP	pP	16 20 27.0	+3.8
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PRGR	Permogore	29.65	337	*e*P	P	16 19 49.9	-2.9
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI	Kunming	30.14	102	P	P	16 20 00.0	+2.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PALK	Pallekele	30.48	159	*e*P	P	16 20 01.2	+0.6
	comp=Z,14nm,1.1s						
PALK	Pallekele	30.48	159	*e*P	P	16 20 01.2	+0.6
PALK				pmax	pmax		
	comp=Z,14nm,1.1s						
CHTO	Chiang Mai	30.84	117	*e*P	P	16 20 05.2	+1.5
	comp=Z,2.7nm,0.6s						
CHTO	Chiang Mai	30.84	117	*e*P	P	16 20 05.2	+1.5
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CM31	Chiang Mai Arr	31.07	117	*e*P	P	16 20 06.0	+0.2
	comp=Z,9.8nm,1.0s						
CM31				*e*PcP	PcP	16 22 58.1	+0.2
CM31				*e*ScP	ScP	16 26 23.6	-3.5
CMAR	Chiang Mai Arr	31.07	117	P	P	16 20 06.5	+0.8
	comp=Z,5.6nm,0.8s,baz=295,slow=8.1,SNR=28						
CMAR				PcP	PcP	16 22 58.1	+0.2
	comp=Z,1.5nm,0.8s,baz=283,slow=3.6,SNR=6.1						
CMAR				ScP	ScP	16 26 23.6	-3.5
	comp=Z,0.5nm,0.3s,baz=316,slow=5.0,SNR=4.6						
KLMR	Klimovskoe	31.29	331	*e*P	P	16 20 06.5	-0.7
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	Xi'an	31.77	82	P	P	16 20 12.5	+0.7
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AKASG	Malin Array Be	32.46	309	P	P	16 20 18.3	+0.7
	comp=Z,3.4nm,0.7s,baz=87,slow=7.4,SNR=9.0						
AKASG				pP	pP	16 20 51.0	+2.2
	comp=Z,0.6nm,0.3s,baz=89,slow=6.7,SNR=3.2						
AKBB	Malin Array Si	32.46	309	*e*P	P	16 20 15.1	-2.5
	comp=Z,2.8nm,0.4s						
AKBB	Malin Array Si	32.46	309	*e*P	P	16 20 15.1	-2.5
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HHC	Hu-ho-hao-te	32.61	69	P	P	16 20 21.3	+2.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,9.0nm,5.0s						
UTTA	Uttaradit	32.69	116	P	P	16 20 21.4	+1.5
	comp=Z,42μm,0.8s,comp=Z,360μm						
UTHA	Uthaitani	33.36	120	P	P	16 20 28.3	+2.5
	comp=Z,26μm,0.8s						
ENH	Enshi	33.39	89	*e*P	P	16 20 27.5	+1.5
	comp=Z,16nm,1.1s						
PBKT	Sadao Pong	33.76	117	P	P	16 20 31.0	+1.8
	comp=Z,10nm,0.9s						
MLR	Muntele Rosu	34.18	299	P	P	16 20 35.3	+2.5
	comp=Z,11nm,0.9s,baz=82,slow=3.7,SNR=17						
NONG	Nongkai	34.40	113	P	P	16 20 35.6	+0.9
	comp=Z,0.5nm,1.0s,comp=Z,142nm						
CHAI	Chaiyaphum	34.93	117	P	P	16 20 41.0	+1.7
	comp=Z,34μm,0.9s,comp=Z,315μm						
VSU	Vasula	35.86	322 *d*	*e*P	P	16 20 47.8	+1.0
VSU				pmax	pmax		
	comp=Z,16nm,0.7s						
PANO	Nakornpanom	36.06	113	P	P	16 20 49.9	+1.0
	comp=Z,0.6nm,1.4s						
DRGR		36.42	302	P	P	16 20 54.2	+2.3
DRGR				pmax	pmax		
	comp=Z,11nm,1.1s						
FIA1	FINESS Array S	37.22	327	*e*P	P	16 20 59.0	+0.7

	comp=Z,8.2nm,0.8s						
FIA0	**FINESS Array S**	**37.23**	**327**	*e*P	**P**	**16 20 58.1**	**-0.2**
FIA0	**FINESS Array S**	**37.23**	**327**	*e*P	**P**	**16 20 58.1**	**-0.2**
FINES	**FINESS Array B**	**37.23**	**327**	P	**P**	**16 20 58.1**	**-0.2**
	comp=Z,5.3nm,0.8s,baz=111,slow=10,SNR=23						
FINES				pP	**pP**	**16 21 31.8**	**+1.8**
	comp=Z,3.2nm,0.8s,baz=120,slow=12,SNR=2.7						
FINES				LR	LR	16 37 52.2	
	comp=Z,49nm,18.5s,baz=75,slow=38						
SUF	**Sumiainen**	**37.69**	**329**	P	**P**	**16 21 03.5**	**+1.3**
SUF				pmax	pmax		
	comp=Z,20nm,1.0s						
NIE	**Niedzica**	**38.05**	**306**	*e*P	**P**	**16 21 07.7**	**+2.2**
NIE	**Niedzica**	**38.05**	**306**	*e*P	**P**	**16 21 07.7**	**+2.2**
OJC	**Ojcow**	**38.40**	**307**	*e*P	**P**	**16 21 09.8**	**+1.5**
OJC	**Ojcow**	**38.40**	**307**	*e*P	**P**	**16 21 09.8**	**+1.5**
VYHS	**Vyhne**	**39.02**	**305**	*e*P	**P**	**16 21 16.0**	**+2.4**
VYHS	**Vyhne**	**39.02**	**305**	*e*P	**P**	**16 21 16.0**	**+2.4**
TRTT	**Trang**	**39.17**	**129**	P	**P**	**16 21 16.7**	**+1.6**
	comp=Z,28nm,1.1s						
MORC	**Moravsky Berou**	**39.85**	**307**	P	**P**	**16 21 22.7**	**+2.3**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NJ2	**Nanjing**	**40.31**	**81**	*e*P	P	16 21 19.5	-4.9
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
VRAC	**Vranov**	**40.48**	**306**	P	**P**	**16 21 26.6**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=87,slow=4.7,SNR=5.9						
ARCES	**ARCESS Array B**	**41.05**	**338**	P	**P**	**16 21 30.9**	**+0.9**
	comp=Z,10nm,0.8s,baz=104,slow=7.8,SNR=35						
ARCES				pP	**pP**	**16 22 03.8**	**+1.7**
	comp=Z,1.8nm,0.5s,baz=114,slow=8.1,SNR=2.8						
ARE0	**ARCESS Array S**	**41.05**	**338**	*e*P	**P**	**16 21 31.5**	**+1.5**
	comp=Z,0.6nm,0.9s						
ARE0	**ARCESS Array S**	**41.05**	**338**	*e*P	**P**	**16 21 31.6**	**+1.6**
TPTI		**41.33**	**136**	P	**P**	**16 21 33.5**	**+0.7**
KCSI	**Kotacane, Aceh**	**41.44**	**135**	P	**P**	**16 21 34.6**	**+0.8**
KTK1	**Kautokeino**	**41.50**	**337**	*e*P	**P**	**16 21 34.4**	**+0.6**
BRG	**Berggiesshubel**	**42.13**	**308**	*e*P	**P**	**16 21 40.3**	**+1.3**
	comp=Z,4.9nm,0.9s						
BRG				*e*pP	**pP**	**16 22 11.9**	**+0.6**
	comp=Z,7.0nm,1.0s						
BRG	**Berggiesshubel**	**42.13**	**308**	*e*P	**P**	**16 21 40.3**	**+1.3**
BRG				*e**PP	**pP**	**16 22 11.9**	**+0.6**
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HAMF	**Hammerfest**	**42.15**	**339**	*e*P	**P**	**16 21 39.9**	**+1.0**
GERES	**GERESS Array B**	**42.40**	**305**	P	**P**	**16 21 41.8**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=88,slow=6.0,SNR=8.0						
GERES				pP	**pP**	**16 22 17.4**	**+3.7**
	comp=Z,0.4nm,0.5s,baz=113,slow=10,SNR=2.2						
GERES				PcP	**PcP**	**16 23 31.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=74,slow=4.2,SNR=4.5						
IPM	**Ipoh**	**42.60**	**131**	*e*P	**P**	**16 21 43.8**	**+0.6**
	comp=Z,31nm,0.8s						
PSI	**Prapat**	**42.69**	**135**	P	**P**	**16 21 44.1**	**+0.1**
	comp=Z,13nm,0.6s,baz=317,slow=6.0,SNR=13						
PSI	**Prapat**	**42.69**	**135**	*e*P	**P**	**16 21 44.2**	**+0.1**
	comp=Z,19nm,0.8s						
CLL	**Collm**	**42.70**	**309**	*e*P	**P**	**16 21 45.0**	**+1.3**
CLL				*e**PP	**pP**	**16 22 19.0**	**+3.0**
CLL				*e**SP	**sP**	**16 22 36.0**	**+3.6**
CLL	**Collm**	**42.70**	**309**	*e*P	**P**	**16 21 45.0**	**+1.3**
CLL				*e*pP	**pP**	**16 22 19.0**	**+3.0**
CLL				*e*sP	**sP**	**16 22 36.0**	**+3.6**
CLL				*e*sPcP		16 24 29.0	
CLL				*e*SS	SS	16 31 24.0	+12
CLL				*e*		16 34 54.0	
ZEA	**Zeya**	**42.83**	**47**	*e*P	**P**	**16 21 47.0**	**+2.4**
TRO	**Tromso**	**43.15**	**337**	*e*P	**P**	**16 21 47.1**	**+0.1**
GSI	**Gunungsitoli**	**43.16**	**137**	P	**P**	**16 21 49.5**	**+1.8**
	comp=Z,96nm,0.7s						
MOR8	**Moi Rana**	**43.62**	**331**	*e*P	**P**	**16 21 50.4**	**-0.4**
STEI	**Steigen**	**43.82**	**334**	*e*P	**P**	**16 21 52.5**	**+0.2**
NC405	**NORSAR Array S**	**43.84**	**323**	*e*P	**P**	**16 21 53.2**	**+0.5**
	comp=Z,19nm,1.0s						
NC602	**NORSAR Array S**	**43.88**	**323**	*e*P	**P**	**16 21 52.5**	**-0.5**
	comp=Z,8.6nm,1.0s						
GRA1	**Grafenberg Arr**	**43.95**	**307**	*e*P	**P**	**16 21 54.3**	**+0.6**
	comp=Z,4.4nm,0.8s						
GRF	**Grafenberg Arr**	**43.95**	**307**	*e*P	**P**	**16 21 54.3**	**+0.6**
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NC303	**NORSAR Array S**	**44.02**	**324**	*e*P	**P**	**16 21 54.3**	**+0.2**
NB201	**NORSAR Array S**	**44.04**	**323**	*e*P	**P**	**16 21 54.6**	**+0.4**
	comp=Z,12nm,1.1s						
NB2	**NORSAR Subarra**	**44.08**	**323**	P	**P**	**16 21 54.2**	**-0.4**
	comp=Z,9.6nm,1.0s,baz=98,slow=7.9						
NB2	**NORSAR Subarra**	**44.08**	**323**	P	**P**	**16 21 54.2**	**-0.4**
	baz=98,slow=7.9						
NB200	**NORSAR Array S**	**44.08**	**323**	*e*P	**P**	**16 21 54.7**	**+0.1**
NOA	**NORSAR Array B**	**44.08**	**323**	P	**P**	**16 21 54.7**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=104,slow=7.3,SNR=28						
NOA				pP	**pP**	**16 22 27.2**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=96,slow=7.9,SNR=4.2						
NOA				LR	LR	16 42 37.1	
	comp=Z,17nm,20.4s,baz=225,slow=39						
NBO00	**NORSAR Array S**	**44.29**	**323**	*e*P	**P**	**16 21 56.6**	**+0.4**
	comp=Z,7.3nm,0.9s						
LOF	**Lofoten**	**44.49**	**334**	*e*P	**P**	**16 21 57.6**	**-0.1**
YAK	**Yakutsk**	**44.63**	**35**	*e*P	**P**	**16 21 59.3**	**+0.5**
	comp=Z,26nm,1.0s						
YAK	**Yakutsk**	**44.63**	**35**	*e*P	**P**	**16 21 58.8**	**0.0**
YAK				*e**PP	**pP**	**16 22 31.8**	**-0.4**
YAK				*e*S	**S**	**16 28 24.0**	**+0.4**
YAK				*e**SS	**sS**	**16 29 21.6**	**+0.4**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				smax	smax		
	comp=N,14nm,1.4s						
YAK				smax	smax		
	comp=E,29nm,1.9s						
YAK				MLR	MLR		
	comp=Z,263nm,18.0s						
MNSI	**Mandailing Nat**	**44.70**	**135**	P	**P**	**16 22 01.2**	**+1.2**
KONO	**Kongsberg**	**44.75**	**321**	*e*P	**P**	**16 22 00.6**	**+0.7**
	comp=Z,4.8nm,0.9s						
KONO	**Kongsberg**	**44.75**	**321**	*e*P	**P**	**16 22 00.6**	**+0.7**
KONO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KONO	**Kongsberg**	**44.75**	**321**	*e*P	**P**	**16 21 60.0**	**+0.1**
DAVOX	**Davos/Dischmat**	**45.20**	**303**	P	**P**	**16 22 04.1**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=124,slow=5.6,SNR=4.4						
DOMB	**Dombas**	**45.21**	**325**	*e*P	**P**	**16 22 02.3**	**-1.2**
BJO1	**Bjornoya**	**45.25**	**343**	*e*P	**P**	**16 22 03.6**	**+0.4**
SKAR	**Skarslia**	**45.46**	**323**	*e*P	**P**	**16 22 04.7**	**-0.8**
KS15	**Wonju Array Si**	**45.70**	**70**	*e*P	**P**	**16 22 06.9**	**-0.8**
	comp=Z,3.2nm,0.9s						
KS15				*e*PcP	**PcP**	**16 23 41.3**	**-1.8**
KSRS	**Korea Array**	**45.73**	**70**	P	**P**	**16 22 06.9**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=271,slow=7.5,SNR=7.1						
KSRS				PcP	**PcP**	**16 23 41.3**	**-1.9**
	comp=Z,1.6nm,0.9s,baz=292,slow=3.9,SNR=5.4						
KLR	**Kul'dur**	**45.94**	**53**	⇑*i*P	**P**	**16 22 09.5**	**+0.1**
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BFO	**Black Forest**	**46.00**	**305**	*i* P	**P**	**16 22 14.2**	**+4.3**
TIXI	**Tiksi**	**46.29**	**22**	*e*P	**P**	**16 22 13.0**	**+1.2**
	comp=Z,11nm,0.9s						
TIXI	**Tiksi**	**46.29**	**22**	⇓*i*P	**P**	**16 22 12.7**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,12nm,0.9s						
BLS5	**Blasjo**	**46.34**	**321**	*e*P	**P**	**16 22 11.0**	**-1.5**
HYA	**Hoyanger**	**46.52**	**323**	*e*P	**P**	**16 22 12.9**	**-0.8**
SENIN	**Lac Senin/Sane**	**47.03**	**303**	*e*P	**P**	**16 22 18.8**	**+0.6**
	comp=Z,4.3nm,1.0s						
HSPB	**Hornsund (broa**	**47.15**	**345**	*e*P	**P**	**16 22 18.4**	**0.0**
KEST	**Kesra**	**48.34**	**288**	P	**P**	**16 22 29.5**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=355,slow=20,SNR=4.8						
KBS	**Kingsbay**	**48.66**	**347**	*de*P	**P**	**16 22 31.8**	**+1.8**
KBS	**Kingsbay**	**48.66**	**347**	*e*P	**P**	**16 22 30.1**	**+0.1**
KSM	**Kuching**	**50.87**	**124**	*e*P	**P**	**16 22 48.4**	**+0.8**
	comp=Z,7.4nm,0.9s						
EKA	**Eskdalemuir Ar**	**51.89**	**316**	P	**P**	**16 22 54.5**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=90,slow=8.3,SNR=6.1						
MJAR	**Matsushiro Arr**	**53.80**	**68**	P	**P**	**16 23 08.8**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=287,slow=9.7,SNR=5.0						
DAG	**Danmarks Havn**	**54.72**	**344**	⇑*i*P	**P**	**16 23 15.3**	**+0.3**
DAG				pmax	pmax		
	comp=Z,11nm,1.0s						
DAG	**Danmarks Havn**	**54.72**	**344**	⇑*i*P	**P**	**16 23 15.3**	**+0.3**
	comp=Z,11nm,1.0s						
SEY	**Seymchan**	**55.06**	**34**	⇓*e*P	**P**	**16 23 19.2**	**+1.6**
ESDC	**Sonseca Array**	**56.84**	**298**	P	**P**	**16 23 31.0**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=62,slow=7.7,SNR=7.7						
BILL	**Bilibino**	**59.17**	**26**	*i* P	**P**	**16 23 47.1**	**+0.7**
BILL				*i* *PP	**pP**	**16 24 19.2**	**-1.9**
BILL				*i*		16 25 56.8	
BILL				pmax	pmax		
	comp=Z,11nm,1.1s						
GTOI	**Gorontalo**	**60.49**	**113**	P	P	16 24 03.8	+7.7
TOA1	**Torodi Ar. Sit**	**64.90**	**268**	*e*P	**P**	**16 24 24.0**	**-1.4**
TORD	**Torodi Ar. Bea**	**64.90**	**268**	P	**P**	**16 24 24.0**	**-1.4**
	comp=Z,4.3nm,0.8s,baz=41,slow=6.6,SNR=16						
TORD				pP	**pP**	**16 25 00.3**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=33,slow=6.2,SNR=2.5						
DBIC	**Dimbokro**	**73.87**	**266**	P	**P**	**16 25 19.5**	**-1.1**
	comp=Z,3.2nm,0.9s,baz=7.0,slow=12,SNR=3.0						
DBIC	**Dimbokro**	**73.87**	**266**	*e*P	**P**	**16 25 19.5**	**-1.1**
	comp=Z,10nm,1.0s						
INK	**Inuvik**	**74.26**	**9**	P	**P**	**16 25 22.0**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=355,slow=7.0,SNR=11						
TTA	**Tatalina**	**74.52**	**20**	*e*P	**P**	**16 25 24.7**	**+1.1**
	comp=Z,2.9nm,1.1s						
TTA	**Tatalina**	**74.52**	**20**	*e*P	**P**	**16 25 24.7**	**+1.1**
TTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
COLA	**College**	**74.92**	**16**	*d* *i*P	**P**	**16 25 26.6**	**+0.8**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ILAR	**Eielson Array**	**75.22**	**15**	P	**P**	**16 25 26.9**	**-0.6**
	comp=Z,2.5nm,0.9s,baz=318,slow=4.9,SNR=21						
SCRK	**Sand Creek**	**76.53**	**15**	*e*P	**P**	**16 25 36.1**	**+0.9**
	comp=Z,6.0nm,1.0s						
BOSA	**Boshof**	**77.05**	**219**	P	**P**	**16 25 38.1**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=19,slow=4.7,SNR=6.0						
KDAK	**Kodiak Island**	**79.72**	**22**	P	**P**	**16 25 51.8**	**-0.7**
	comp=Z,4.6nm,0.8s,baz=355,slow=3.5,SNR=4.5						
KDAK	**Kodiak Island**	**79.72**	**22**	*e*P	**P**	**16 25 51.9**	**-0.7**
	comp=Z,6.8nm,0.9s						
KDAK	**Kodiak Island**	**79.72**	**22**	*e*P	**P**	**16 25 51.9**	**-0.7**
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YKA	**Yellowknife Ar**	**81.51**	**2**	P	**P**	**16 26 02.6**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=348,slow=5.3,SNR=8.8						
WRA	**Warramunga Arr**	**82.56**	**121**	P	**P**	**16 26 06.9**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=302,slow=5.4,SNR=14						
WR1	**Warramunga Arr**	**82.56**	**121**	*e*P	**P**	**16 26 06.9**	**-1.3**
WRAB	**Tennant Creek**	**82.56**	**121**	⇑*e*P	**P**	**16 26 06.8**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AS31	**Alice Springs**	**84.79**	**124**	*e*P	**P**	**16 26 18.2**	**-1.3**
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**84.79**	**124**	P	**P**	**16 26 18.2**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=311,slow=4.8,SNR=27						
FFC	**Flin Flon**	**89.11**	**355**	*i* P	**P**	**16 26 41.1**	**+1.2**
PLCA	**Paso Flores**	**148.98**	**250**	PKPbc	**PKPbc**	**16 33 30.5**	**-1.6**
	comp=Z,7.6nm,1.2s,baz=252,slow=0.6,SNR=5.0						

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*ISCJB **26** 16:25:03.3±0.1, 32°.97N±0°.02×104°.97E±0°.02, h10^{km}, mb4.6/105, MS4.0/39, Error ellipse: s-maj=3.0km s-min=2.5km az=172.1*

*IDC **26** 16:25:03.3±0.5, 32°.98N×104°.99E, h0^{km}, mb4.4/27, mb1 4.5/31, mb1mx4.4/44, mbtmp4.4/31, ML3.6/4, MS3.8/26, Ms1 3.8/26, ms1mx3.8/35, Error ellipse: s-maj=13.9km s-min=9.7km az=25.0*

*MOS **26** 16:25:04.6±0.9, 32°.94N×104°.96E, h21^{km}, mb4.8/51, MS4.1/20, Error ellipse: s-maj=6.6km s-min=4.6km az=120.6*

*BJI **26** 16:25:04.6±0.0, 33°.00N×104°.90E, h10^{km}, mb4.7/44, mB4.7/28, ML4.8/27, Ms4.5/65, Ms7 4.3/61*

*NEIC **26** 16:25:06.1±2.0, 33°.00N×104°.92E, h19^{km}±4^{km}, mb4.6/53, Error ellipse: s-maj=10.5km s-min=10.2km az=134.0*

ISC 26 16:25:04.9±0.3**, 32°.99N**±0°.02×**104°.91E**±0°.03**, h10^{km}, n302, σ1^{s}.75**/321**, mb4.7**/110**, MS4.0**/40**, 23C-16D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.29**	**206**	Pn	**Pb**	**16 25 47.0**	**+0.7**
CD2				Pg	**Pg**	**16 25 47.8**	**-1.0**
CD2				Sn	**Sb**	**16 26 14.0**	**-0.7**
CD2				Sg	**Sg**	**16 26 17.8**	**-0.7**
CD2				smax	smax		
	comp=N,9µm,0.8s						
CD2				smax	smax		
	comp=E,9µm,0.8s						
CD2	**Chengdu**	**2.29**	**206**	⇑Pn	**Pn**	**16 25 44.0**	**+1.2**
CD2				Pg	**Pg**	**16 25 49.3**	**+0.5**
CD2				Sn	**Sb**	**16 26 13.3**	**-1.4**
CD2				Sg	**Sg**	**16 26 17.8**	**-0.7**
CD2				smax	smax		
	comp=E,9µm,0.9s						
CD2				smax	smax		
	comp=E,9µm,0.8s						
LZH	**Lanzhou**	**3.22**	**344**	*e*Pn	**Pn**	**16 25 57.3**	**+1.7**
LZH				Pg	**Pb**	**16 26 03.0**	**+0.8**
LZH				Sn	**Sb**	**16 26 37.5**	**-4.0**
LZH				Sg	**Sg**	**16 26 44.0**	**-4.2**
LZH				smax	smax		
	comp=E,12µm,1.0s						
LZH				smax	smax		
	comp=E,14µm,1.0s						
LZH				LR	LR		
	comp=E,7µm,4.9s						
LZH				LR	LR		
	comp=E,9µm,5.4s						
XAN	**Xi'an**	**3.51**	**71**	*e*Pn	**Pn**	**16 25 59.9**	**+0.4**
XAN	**Xi'an**	**3.51**	**71**	Pn	**Pn**	**16 26 00.0**	**+0.4**
XAN				Pg	**Pb**	**16 26 07.8**	**+0.7**
XAN				Sg	**Sb**	**16 26 52.8**	**+3.0**
XAN				smax	smax		
	comp=E,7µm,0.8s						
XAN				smax	smax		
	comp=E,7µm,0.8s						
XAN	**Xi'an**	**3.51**	**71**	*e*P	**Pn**	**16 25 59.9**	**+0.4**
ENH	**Enshi**	**4.75**	**124**	*e*Pn	**Pn**	**16 26 18.4**	**+1.9**
GYA	**Guiyang**	**6.68**	**166**	⇑*i*Pn	**Pn**	**16 26 43.0**	**-0.2**
GYA				Pg	Pg	16 27 08.0	-4.8
GYA				Sn	**Sn**	**16 28 00.0**	**+0.6**
GYA				Sg	**Sg**	**16 28 31.5**	**-7.8**
GYA				smax	smax		
	comp=E,610nm,0.9s						
GYA				smax	smax		
	comp=E,950nm,0.8s						
GYA				LR	LR		
	comp=E,1µm,12.0s						
GYA				LR	LR		
	comp=E,3µm,9.8s						
GYA				LR	LR		
	comp=E,2µm,10.0s						
TIY	**Taiyuan**	**7.75**	**50**	*e*Pn	**Pn**	**16 26 57.8**	**+0.1**
TIY				Pg	Pb	16 27 25.3	+6.0
TIY				Sg	Sg	16 29 03.0	-10
TIY				smax	smax		
	comp=E,640nm,0.9s						
TIY				smax	smax		
	comp=E,1µm,0.8s						
KMI	**Kunming**	**8.06**	**194**	P	**Pn**	**16 27 03.0**	**+0.8**
KMI				S	**Sn**	**16 28 33.0**	**-0.6**
KMI				smax	smax		
	comp=E,77nm,0.9s						
KMI				smax	smax		
	comp=E,120nm,1.0s						
WHN	**Wuhan**	**8.39**	**104**	⇓P	**Pn**	**16 27 05.5**	**-1.1**
WHN				S	**Sn**	**16 28 36.3**	**-5.1**
WHN				LR	LR		
	comp=E,5µm,4.4s						
WHN				LR	LR		
	comp=E,7µm,5.3s						
WHN				LR	LR		
	comp=E,7µm,16.0s						
BTO	**Baotou**	**8.64**	**27**	*e*P	Pn	16 27 01.5	-8.5
BTO				S	**Sn**	**16 28 45.5**	**-2.0**
BTO				LR	LR		
	comp=N,366µm,0.6s						
BTO				LR	LR		
	comp=E,440µm,0.9s						
BTO				LR	LR		
	comp=Z,544µm,0.8s						
HHC	**Hu-ho-hao-te**	**9.48**	**32**	P	**Pn**	**16 27 25.5**	**+3.9**
HHC				S	**Sn**	**16 29 15.0**	**+6.7**
HHC				SS	**SnSn**	**16 29 24.5**	**+4.4**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,14nm,5.0s						
HHC				LR	LR		
	comp=Z,4µm,6.2s						
HHC				LR	LR		
	comp=Z,4µm,7.3s						
BJT	**Baijiatuau**	**11.45**	**49**	*e*Pn	**Pn**	**16 27 48.1**	**-0.3**
BJT	**Baijiatuau**	**11.45**	**49**	*e*P	**Pn**	**16 27 48.1**	**-0.3**
BJI	**Beijing**	**11.47**	**49**	P	**Pn**	**16 27 51.0**	**+2.4**
BJI				S	**Sn**	**16 29 51.8**	**-5.0**
BJI				LR	LR		
	comp=Z,1µm,11.0s						
SLVN	**Son La**	**11.64**	**185**	*e*Pn	**Pn**	**16 27 50.8**	**-0.4**
NJ2	**Nanjing**	**11.81**	**91**	*e*P	**Pn**	**16 27 54.0**	**+0.7**
NJ2				S	**Sn**	**16 30 07.5**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,56nm,0.8s						
NJ2				LR	LR		
	comp=Z,1µm,5.1s						
NJ2				LR	LR		
	comp=Z,2µm,9.8s						
LSA	**Lhasa**	**12.21**	**258**	*e*Pn	**Pn**	**16 27 59.9**	**+0.6**
LSA	**Lhasa**	**12.21**	**258**	P	**Pn**	**16 28 00.5**	**+1.2**
LSA	**Lhasa**	**12.21**	**258**	*e*P	**Pn**	**16 27 59.9**	**+0.6**
GZH	**Guangzhou**	**12.35**	**141**	P	**Pn**	**16 27 57.5**	**-3.3**
GZH				S	**Sn**	**16 30 11.5**	**-7.0**
GZH				LR	LR		
	comp=N,1µm,4.1s						
GZH				LR	LR		
	comp=E,1µm,3.8s						
SHL	**Shillong**	**13.56**	**240**	P	**Pn**	**16 28 18.5**	**+1.1**
SHL	**Shillong**	**13.56**	**240**	*e*P	**Pn**	**16 28 19.0**	**+1.6**
PAYA	**Payao**	**14.30**	**200**	P	**Pn**	**16 28 28.0**	**+0.5**
	comp=E,42µm,0.8s,comp=E,382µm						
QIZ	**Qiongzhong**	**14.58**	**161**	P	**Pn**	**16 28 32.8**	**+1.4**
QIZ				S	**Sn**	**16 31 13.0**	**-0.1**
QIZ				LR	LR		
	comp=E,2µm,10.3s						
QIZ				LR	LR		
	comp=E,1µm,10.8s						
DL2	**Dalian**	**14.77**	**62**	P	**Pn**	**16 28 36.3**	**+2.6**
DL2				S	**Sn**	**16 31 21.8**	**+4.5**
DL2				pmax	pmax		
	comp=E,24nm,0.8s						
DL2				pmax	pmax		
	comp=E,130nm,7.4s						
DL2				LR	LR		
	comp=E,1µm,15.2s						
DL2				LR	LR		
	comp=E,850nm,17.6s						
DL2				LR	LR		
	comp=E,1µm,14.3s						
SONA0	**Songino Array**	**14.88**	**4**	*e*Pn	**Pn**	**16 28 33.2**	**-2.1**
SONM	**Songino Array**	**14.88**	**4**	Pn	**Pn**	**16 28 33.2**	**-2.1**
	comp=E,0.6nm,0.3s,baz=186,slow=15,SNR=33						
SONM				Lg	Lg	16 32 55.9	
	comp=E,0.2nm,0.3s,baz=202,slow=31,SNR=2.9						
SONM				LR	LR	16 34 48.6	
	comp=E,936nm,19.8s,baz=176,slow=39						
NONG	**Nongkai**	**14.94**	**187**	P	**Pn**	**16 28 36.9**	**+0.7**
	comp=E,0.8nm,2.0s						
ULN	**Ulaanbaatar**	**14.95**	**6**	*e*Pn	**Pn**	**16 28 36.3**	**-0.1**
ULN				*e*P	**Pn**	**16 28 36.8**	**+0.4**
ULN	**Ulaanbaatar**	**14.95**	**6**	*e*P	**Pn**	**16 28 36.3**	**-0.1**
PHRA	**Phrae**	**15.03**	**197**	P	**P**	**16 28 43.0**	**+0.2**
	comp=E,2.5nm,1.3s						
CMMT	**Chiang Mai**	**15.09**	**202**	P	**P**	**16 28 41.1**	**-2.4**
	comp=E,7.1nm,1.2s						
CHTO	**Chiang Mai**	**15.09**	**202**	*e*Pn	**Pn**	**16 28 37.3**	**-0.9**
	comp=E,14nm,1.1s						
CHTO	**Chiang Mai**	**15.09**	**202**	*e*P	**Pn**	**16 28 37.3**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,14nm,1.1s						
LAMP	**Lampang**	**15.16**	**200**	P	**P**	**16 28 48.0**	**+3.7**
CM31	**Chiang Mai Arr**	**15.43**	**202**	*e*Pn	**Pn**	**16 28 41.7**	**-1.0**
	comp=Z,18nm,1.1s						
CMAR	**Chiang Mai Arr**	**15.43**	**202**	Pn	**Pn**	**16 28 42.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=14,slow=12,SNR=18						
UTTA	**Uttaradit**	**15.68**	**196**	P	**Pn**	**16 28 47.0**	**+1.1**
	comp=Z,21µm,0.8s,comp=Z,180µm						
PANO	**Nakornpanom**	**15.77**	**181**	P	**Pn**	**16 28 47.8**	**+0.7**
	comp=Z,1.0nm,1.3s						
YHNB	**Yeheng**	**16.62**	**116**	*e*P	**P**	**16 28 59.8**	**-0.7**
	comp=Z,51nm,1.0s						
PBKT	**Sadao Pong**	**16.73**	**193**	P	**P**	**16 29 01.0**	**-0.6**
	comp=Z,20nm,1.4s						
SSLB	**Suanglung**	**16.81**	**119**	*e*Pn	**Pn**	**16 29 00.3**	**-0.1**
	comp=Z,48nm,1.1s						
TPUB	**Ta-pu**	**16.87**	**121**	*e*Pn	**Pn**	**16 28 58.6**	**-2.5**
	comp=Z,27nm,0.8s						
JIRN	**Jiri**	**17.01**	**257**	*e*P	**P**	**16 29 04.7**	**-0.4**
CHAI	**Chaiyaphum**	**17.21**	**190**	P	**Pn**	**16 29 04.7**	**-0.8**
	comp=Z,53µm,0.8s,comp=Z,585µm						
WMQ	**Urumqi**	**17.26**	**314**	*e*P	**P**	**16 29 11.0**	**+3.5**
WMQ				pP	sP	16 29 17.3	+5.0
WMQ				sP	pP	16 29 21.0	+10
WMQ				S	**S**	**16 32 23.3**	**-3.9**
WMQ				sS	sS	16 32 25.5	-6.9
WMQ				PcP	**PcP**	**16 33 46.0**	**-2.9**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,63nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,17.1s						
WMQ				LR	LR		
	comp=Z,720nm,21.3s						
YULB	**Yu-li**	**17.30**	**119**	*e*Pn	**Pn**	**16 29 04.1**	**-2.5**
	comp=Z,23nm,1.0s						
UMPA	**Umpang Tak**	**17.58**	**200**	P	**P**	**16 29 15.4**	**+4.3**
	comp=Z,47µm,0.9s						
PKI	**Pulchoki**	**17.68**	**257**	*e*P	**Pn**	**16 29 11.3**	**-0.3**
	comp=Z,21nm,0.7s						
PKIN	**Phulchoki**	**17.69**	**257**	*e*P	**Pn**	**16 29 11.2**	**-0.5**
	comp=Z,15nm,0.7s						
KKN	**Kakani**	**17.71**	**258**	*e*P	**P**	**16 29 14.0**	**+1.3**
	comp=Z,27nm,0.8s						
DMN	**Daman**	**17.92**	**258**	*e*P	**P**	**16 29 14.5**	**-0.6**
	comp=Z,38nm,0.8s						
UTHA	**Uthaitani**	**18.05**	**197**	P	**P**	**16 29 18.9**	**+2.7**
	comp=Z,34µm,0.7s						
GKN	**Gorkha**	**18.16**	**259**	*e*P	**P**	**16 29 17.7**	**+0.1**
	comp=Z,90nm,1.0s						
TLY	**Talaya**	**18.71**	**358**	P	**Pn**	**16 29 23.5**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=171,slow=14,SNR=8.6						
TLY				Lg	Lg	16 34 56.1	
	baz=198,slow=20,SNR=2.4						
TLY				LR	LR	16 37 15.1	
	comp=Z,918nm,19.0s,baz=180,slow=39						
TJN	**Taejon**	**18.77**	**73**	⇓*i*P	**Pn**	**16 29 25.5**	**+1.0**
MOY	**Mondy**	**18.89**	**352**	*e*P	**Pn**	**16 29 27.2**	**+1.2**
MOY				pmax	pmax		
	comp=Z,23nm,1.5s						
SRAK	**Srakaew**	**19.07**	**189**	P	**Pn**	**16 29 28.8**	**+0.5**
	comp=Z,196µm,0.8s						
KOLN	**Koldanda**	**19.10**	**260**	*e*P	**P**	**16 29 27.5**	**-0.5**
	comp=Z,44nm,0.8s						
IRK	**Irkutsk**	**19.25**	**359**	*e*P	**Pn**	**16 29 30.9**	**+0.6**
IRK				pmax	pmax		
	comp=Z,33nm,0.7s						
KS15	**Wonju Array Si**	**19.28**	**70**	*e*Pn	**Pn**	**16 29 31.6**	**+0.9**
	comp=Z,26nm,0.9s						
SRDT	**SRDT**	**19.29**	**197**	P	**Pn**	**16 29 33.7**	**+2.8**
	comp=Z,16nm,1.0s						
KSRS	**Korea Array**	**19.31**	**70**	P	**P**	**16 29 29.9**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=259,slow=10,SNR=52						
KSRS				Lg	Lg	16 35 15.6	
	comp=Z,0.1nm,0.3s,baz=258,slow=28,SNR=4.4						
KSRS				LR	LR	16 37 05.3	
	comp=Z,400nm,19.1s,baz=267,slow=38						
CN2	**Changchun**	**19.33**	**50**	*e*P	**Pn**	**16 29 34.0**	**+2.7**
PHET	**Kaeng Krachan**	**20.56**	**195**	P	Pn	16 29 45.5	-0.5
	comp=Z,76µm,0.8s,comp=Z,607µm						
DGZ	**Jazzator, Alta**	**21.15**	**327**	*c* *i*P	**P**	**16 29 51.7**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,22nm,1.0s						
DLV	**T Lat**	**21.20**	**170**	*e*P	**P**	**16 29 52.3**	**+1.4**
	comp=Z,30nm,0.9s						
JNU	**Nakatsue**	**21.75**	**83**	P	**P**	**16 29 56.2**	**-0.4**
	comp=Z,8.8nm,0.9s,baz=333,slow=2.3,SNR=3.3						
JNU				LR	LR	16 39 52.3	
	comp=Z,88nm,18.1s,baz=303,slow=41						
JNU	**Nakatsue**	**21.75**	**83**	*e*P	**P**	**16 29 56.2**	**-0.4**
	comp=Z,18nm,1.1s						
MK31	**Makanchi Array**	**22.07**	**315**	*e*P	**P**	**16 29 59.9**	**0.0**
	comp=Z,14nm,0.9s						

MK31	Makanchi Array	22.07	315	eP	P	16 29 59.9	0.0
MK31				pmax	pmax		
	comp=Z,14nm,0.9s						
MKAR	Makanchi Array	22.07	315	P	P	16 30 00.1	+0.3
	comp=Z,18nm,0.9s,baz=115,slow=13,SNR=49						
MKAR				S	S	16 34 06.5	+3.3
	comp=Z,1.1nm,0.8s,baz=112,slow=23,SNR=2.6						
MKAR				Lg	Lg	16 36 53.2	
	comp=Z,0.7nm,1.1s,baz=131,slow=17,SNR=2.1						
MKAR				LR	LR	16 38 10.1	
	comp=Z,492nm,20.3s,baz=110,slow=36						
MAKZ	Makanchi	22.26	315	eP	P	16 30 02.5	+0.5
	comp=Z,33nm,1.1s						
MAKZ	Makanchi	22.26	315	eP	P	16 30 02.5	+0.5
MAKZ				pmax	pmax		
	comp=Z,33nm,1.1s						
MDJ	Mudanjiang	22.38	52	P	P	16 30 06.8	+3.6
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.8s						
MDJ				LR	LR		
	comp=Z,670nm,10.5s						
MDJ				LR	LR		
	comp=Z,530nm,13.9s						
PDGK	Podgornoye	22.42	305	P	P	16 30 03.5	-0.3
PDGK				pmax	pmax		
	comp=Z,53nm,1.0s						
KDJ	Kajisay	23.72	301	eP	P	16 30 17.2	0.0
	comp=Z,27nm,1.1s						
KDJ	Kajisay	23.72	301	eP	P	16 30 17.2	0.0
KDJ				pmax	pmax		
	comp=Z,27nm,1.1s						
TGY	Tagaytay City	23.80	138	LR	LR	16 39 40.0	
	comp=Z,253nm,18.4s,baz=345,slow=37						
USRK	Ussuriysk Ar.	23.84	54	P	P	16 30 17.6	-0.4
	comp=Z,9.9nm,0.9s,baz=250,slow=9.7,SNR=16						
USRK				LR	LR	16 40 00.7	
	comp=Z,132nm,19.2s,baz=244,slow=38						
KSH	Kashi	24.17	294	P	P	16 30 24.3	+2.9
KSH				sP	sP	16 30 38.5	+12
KSH				S	S	16 34 39.3	-0.2
KSH				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH				pmax	pmax		
	comp=Z,77nm,4.6s						
KSH				LR	LR		
	comp=Z,450nm,16.1s						
KSH				LR	LR		
	comp=Z,510nm,9.0s						
KSH				LR	LR		
	comp=Z,350nm,9.4s						
ULHL	Ulahol	24.43	301	P	P	16 30 27.7	+3.8
	SNR=14						
NRN	Naryn	24.44	299	eP	P	16 30 24.6	+0.5
	comp=Z,37nm,1.1s						
NRN	Naryn	24.44	299	eP	P	16 30 24.6	+0.5
NRN				pmax	pmax		
	comp=Z,37nm,1.1s						
TKM2	Tokmak 2	25.04	302	P	P	16 30 29.5	+0.1
TKM2				pmax	pmax		
	comp=Z,24nm,1.0s						
TKM2	Tokmak 2	25.04	302	P	P	16 30 30.8	+1.3
	SNR=32						
KZA	Kyzart	25.11	300	P	P	16 30 32.4	+2.1
	SNR=27						
ZAA0	Zalesovo Array	25.36	332	eP	P	16 30 31.7	-0.2
	comp=Z,14nm,0.8s						
ZALV	Zalesovo Beam	25.36	332	P	P	16 30 32.2	+0.3
	comp=Z,20nm,0.9s,baz=133,slow=8.8,SNR=43						
ZALV				Lg	Lg	16 38 22.3	
	comp=Z,0.3nm,0.4s,baz=350,slow=40,SNR=2.0						
KBK	Karagaybulak	25.45	301	P	P	16 30 36.6	+3.5
	SNR=25						
CHMS	Chumysh	25.67	302	P	P	16 30 38.2	+3.4
	SNR=8.1						
UCH	Uchtor	25.68	300	P	P	16 30 37.3	+1.8
	SNR=26						
KLR	Kul'dur	25.74	43	P	P	16 30 36.5	+1.1
	comp=Z,15nm,0.9s,baz=249,slow=9.5,SNR=29						
KLR				Lg	Lg	16 38 30.6	
	comp=Z,0.2nm,0.3s,baz=82,slow=15,SNR=1.7						
KLR				LR	LR	16 42 16.9	
	comp=Z,141nm,19.1s,baz=242,slow=40						
AAK	Ala-Archa	25.77	301	P	P	16 30 37.7	+1.7
	comp=Z,9.7nm,0.9s,baz=82,slow=9.6,SNR=14						
AAK				LR	LR	16 42 02.0	
	comp=Z,613nm,19.6s,baz=84,slow=39						
USP	Ospenovka	25.91	302	P	P	16 30 40.3	+3.2
	SNR=24						
ZEA	Zeya	26.14	31	eP	P	16 30 40.2	+1.2
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
ZEA				MLR	MLR		
	comp=N,500nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,11.0s						
ZEA				MLR	MLR		
	comp=E,500nm,12.0s						
KURBB	Kurchatov Arra	26.19	320	P	P	16 30 39.3	-0.2
	comp=E,9.0nm,0.8s,baz=129,slow=9.1,SNR=57						
KURK	Kurchatov	26.20	320	eP	P	16 30 39.4	-0.2
	comp=E,17nm,0.9s						
KURK	Kurchatov	26.20	320	deP	P	16 30 39.1	-0.4
KURK				pmax	pmax		
	comp=Z,21nm,1.0s						
AML	Almayashu	26.26	299	P	P	16 30 42.8	+2.1
	SNR=22						
NIL	Nilore	26.42	280	eP	P	16 30 40.5	-1.3
	comp=Z,20nm,0.8s						
NIL	Nilore	26.42	280	eP	P	16 30 40.5	-1.3
NIL				pmax	pmax		
	comp=Z,20nm,0.8s						
MAJO	Matsushiro	27.50	73	eP	P	16 30 51.0	-0.5
MAJO	Matsushiro	27.50	73	eP	P	16 30 51.0	-0.5
MAT	Matsushiro	27.50	73	P	P	16 30 50.9	-0.6
MAT				S	S	16 35 30.0	-2.4
MJAR	Matsushiro Arr	27.50	73	P	P	16 30 51.0	-0.5
	comp=Z,3.0nm,0.5s,baz=279,slow=8.3,SNR=11						
MJAR				LR	LR	16 41 49.8	
	comp=Z,160nm,20.7s,baz=295,slow=37						
KULM	Kulim	27.84	189	eP	P	16 30 53.8	-0.8
	comp=Z,9.6nm,0.8s						
IPM	Ipoh	28.59	188	eP	P	16 31 00.1	-1.2
	comp=Z,11nm,0.7s						
KK31	Karatay Array	28.74	301	eP	P	16 31 01.1	-1.3
	comp=Z,6.0nm,0.9s						
KK31	Karatay Array	28.74	301	eP	P	16 31 01.1	-1.3
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KKAR	Karatay Array	28.74	301	eP	P	16 31 01.1	-1.3
	comp=Z,6.0nm,0.9s						
KKAR	Karatay Array	28.74	301	eP	P	16 31 01.1	-1.3
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OTUK	Ortayu	28.79	312	P	P	16 31 02.4	-0.4
OTUK				pmax	pmax		
	comp=Z,21nm,1.0s						
GRNR	Gornyy	29.12	43	eP	P	16 31 08.0	+2.2
JHJ	Hachijo jima 2	29.15	80	LR	LR	16 43 31.3	
	comp=Z,298nm,19.2s,baz=300,slow=38						
KCSI	Kotacane, Aceh	30.06	194	P	P	16 31 16.6	+2.2
MYKOM	Kota Tinggi	31.05	182	eP	P	16 31 23.0	0.0
	comp=Z,15nm,0.9s						
SBUM	Sibu	31.14	166	eP	P	16 31 24.1	+0.2
	comp=Z,3.3nm,0.9s						
ASAJ	Asahikawa	31.24	58	P	P	16 31 24.4	-0.2
	comp=Z,9.3nm,0.8s,baz=278,slow=14,SNR=5.5						
BRVK	Borovoye	31.85	319	eP	P	16 31 29.6	-0.3
	comp=Z,7.2nm,0.7s						
BRVK	Borovoye	31.85	319	P	P	16 31 29.0	-0.8
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GSI	Gunungsitoli	32.26	194	eP	P	16 31 31.6	-2.1
	comp=Z,17nm,0.8s						
YAK	Yakutsk	33.11	21	eP	P	16 31 41.5	+0.8
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDSI	Maura Dua	37.27	181	P	P	16 32 17.7	+0.7
	comp=Z,17nm,1.0s						
GEYT	Alibeck	38.12	291	P	P	16 32 25.8	+1.6
	comp=Z,8.3nm,0.9s,baz=64,slow=10,SNR=13						
GEYT				LR	LR	16 51 39.2	
	comp=Z,193nm,18.4s,baz=85,slow=42						
SVE	Sverdlovsk	38.42	322	⇑eP	P	16 32 27.8	+1.4
SVE				pmax	pmax		
	comp=Z,32nm,1.1s						
ARU	Arti	39.39	321	eP	P	16 32 34.9	+0.4
	comp=Z,35nm,0.9s						
ARU	Arti	39.39	321	diP	P	16 32 34.9	+0.4
ARU						16 34 36.9	
ARU				S	S	16 38 35.3	-0.5
ARU				SS	SS	16 41 19.9	-10
ARU				pmax	pmax		
	comp=Z,46nm,1.0s						
ARU				MLR	MLR		
	comp=Z,169nm,19.0s						
KPJI	Karang Pucung	40.28	174	P	P	16 32 44.5	+2.3
	comp=Z,55nm,0.8s						
TIXI	Tiksi	40.78	11	eP	P	16 32 44.7	-1.1
	comp=Z,9.3nm,0.7s						
TIXI	Tiksi	40.78	11	eP	P	16 32 44.7	-1.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GUMO	Guam	41.15	108	LR	LR	16 49 45.6	
	comp=Z,114nm,19.5s,baz=288,slow=36						
PETK	Petropavlovsk-	42.37	45	P	P	16 32 58.7	-0.4
	comp=Z,2.1nm,0.9s,baz=190,slow=4.4,SNR=4.7						
PEA1	Petropavlovsk-	42.38	45	eP	P	16 32 58.7	-0.4
AKT	Akhty	45.59	298	eP	P	16 33 26.6	+1.3
AKT				e		16 35 00.7	
AKT				pmax	pmax		
	comp=Z,12nm,1.0s						
PRGR	Permogore	47.07	326	eP	P	16 33 35.6	-0.8
PRGR				pmax	pmax		
	comp=Z,14nm,0.6s						
VRH	Novokhopyorsk	48.73	312	eP	P	16 33 50.0	+0.6
VRH				pmax	pmax		
	comp=Z,60nm,0.9s						
KBZ	Khabaz	48.77	302	P	P	16 33 50.2	+0.4
	comp=Z,3.1nm,0.9s,baz=106,slow=6.4,SNR=4.8						
KBZ				LR	LR	16 57 00.9	
	comp=Z,228nm,18.8s,baz=56,slow=39						
KIV	Kislovodsk	48.88	302	eP	P	16 33 51.5	+0.6
KIV				pmax	pmax		
	comp=Z,44nm,1.1s						
KIV				MLR	MLR		
	comp=Z,389nm,16.0s						
NEY	Neytrino	48.97	301	⇑eP	P	16 33 54.0	+2.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BILL	Bilibino	49.19	26	⇑eP	P	16 33 53.3	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLMR	Klimovskoe	49.92	324	eP	P	16 33 58.2	-0.2
KLMR				pmax	pmax		
	comp=Z,24nm,0.8s						
VORD	Divnogorie	50.27	312	eP	P	16 34 01.6	+0.4
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	50.33	312	eP	P	16 34 01.7	+0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	Galich'ya Gora	50.36	314	eP	P	16 34 02.4	+0.6
LPSR				pmax	pmax		
	comp=Z,70nm,1.8s						
MOS	Moscow	50.92	318	eP	P	16 34 07.2	+1.2
MOS				pmax	pmax		
	comp=Z,67nm,0.9s						
MOS				pmax	pmax		
	comp=Z,100nm,1.0s						
OBN	Obninsk	51.56	317	⇑eP	P	16 34 11.4	+0.6
OBN				pmax	pmax		
	comp=Z,21nm,1.1s						
OBN				MLR	MLR		
	comp=Z,169nm,18.0s						
MTN	Manton Dam	52.00	147	eP	P	16 34 15.9	+1.4
	comp=Z,11nm,0.9s						
ANN	Anapa	52.43	304	eP	P	16 34 18.9	+1.4
ANN				eS	S	16 41 40.7	-2.8
ANN				pmax	pmax		
	comp=Z,36nm,1.0s						
SIM	Simferopol'	54.70	305	diP	P	16 34 35.8	+1.6
SIM				pmax	pmax		
	comp=Z,13nm,0.8s						
SIM				pmax	pmax		
	comp=Z,19nm,7.3s						
SIM				MLR	MLR		
	comp=Z,41nm,17.5s						
ARCES	ARCESS Array B	55.84	335	P	P	16 34 42.0	0.0
	comp=Z,6.9nm,0.7s,baz=82,slow=8.7,SNR=28						
ARCES				LR	LR	16 59 43.6	
	comp=Z,91nm,19.9s,baz=92,slow=37						
ARE0	ARCESS Array S	55.84	335	eP	P	16 34 42.3	+0.3
	comp=Z,0.7nm,1.0s						
ARE0	ARCESS Array S	55.84	335	eP	P	16 34 41.9	-0.1
SUF	Sumiainen	56.20	327	P	P	16 34 46.8	+2.2
SUF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HAMF	Hammerfest	56.39	337	eP	P	16 34 43.6	-2.3
FIA1	FINESS Array S	56.40	326	eP	P	16 34 45.7	-0.4
	comp=Z,6.8nm,1.1s						
FIA0	FINESS Array S	56.40	326	eP	P	16 34 45.8	-0.3
FIA0	FINESS Array S	56.40	326	eP	P	16 34 45.8	-0.3
FINES	FINESS Array B	56.40	326	P	P	16 34 45.8	-0.3
	comp=Z,1.6nm,0.5s,baz=80,slow=7.1,SNR=18						
FINES				LR	LR	16 59 21.5	
	comp=Z,82nm,19.7s,baz=94,slow=36						
BR101	Keskin Array S	56.43	299	eP	P	16 34 47.6	+0.7
BR131	Keskin Array S	56.43	299	eP	P	16 34 47.9	+1.0
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	56.43	299	P	P	16 34 47.6	+0.7
	comp=Z,3.0nm,0.8s,baz=97,slow=7.0,SNR=15						
BRTR				LR	LR	17 02 57.2	
	comp=Z,63nm,18.8s,baz=64,slow=40						
VSU	Vasula	56.53	322	⇓eP	P	16 34 47.4	+0.3
VSU				pmax	pmax		
	comp=Z,48nm,1.3s						
AKASG	Malin Array Be	56.61	312	P	P	16 34 47.7	-0.1
	comp=Z,5.0nm,0.7s,baz=67,slow=6.7,SNR=11						
AKASG				PP	PP	16 36 53.3	-0.2
	comp=Z,1.3nm,0.5s,baz=64,slow=9.7,SNR=4.1						
AKBB	Malin Array Si	56.61	312	eP	P	16 34 48.4	+0.6
	comp=Z,9.1nm,1.1s						
AKBB	Malin Array Si	56.61	312	eP	P	16 34 48.4	+0.6
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KTK1	Kautokeino	56.68	335	eP	P	16 34 48.1	+0.1
SPA0	Spitsbergen Ar	57.68	346	eP	P	16 34 53.4	-1.6
TRO	Tromso	58.12	336	eP	P	16 34 58.8	+0.7
KBS	Kingsbay	58.45	347	eP	P	16 35 00.1	-0.3
CFR	Carcaliu	58.73	306	⇑iP	P	16 35 03.6	+0.8
CFR	Carcaliu	58.73	306	⇑P	P	16 35 03.6	+0.8
VRI	Vrincioaia	59.48	307	⇑iP	P	16 35 09.8	+1.8
VRI	Vrincioaia	59.48	307	⇑P	P	16 35 09.8	+1.8
PLOR	Plostina	59.53	307	⇓iP	P	16 35 09.6	+1.2
PLOR	Plostina	59.53	307	⇓P	P	16 35 09.7	+1.3
BIZ	Bicaz	59.57	309	⇓iP	P	16 35 09.9	+1.2
BISRR	Bisoca	59.59	307	⇑iP	P	16 35 10.9	+2.1
WRAB	Tennant Creek	59.67	148	eP	P	16 35 09.2	-0.3
	comp=Z,15nm,1.0s						
WRAB	Tennant Creek	59.67	148	eP	P	16 35 09.2	-0.3
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WR1	Warramunga Arr	59.67	148	eP	P	16 35 09.0	-0.6
WRA	Warramunga Arr	59.67	148	P	P	16 35 09.0	-0.5
	comp=Z,9.4nm,0.8s,baz=331,slow=7.9,SNR=42						
WRA	Warramunga Arr	59.67	148	P	P	16 35 09.0	-0.5
WRA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WB2	Warramunga Arr	59.68	148	eP	P	16 35 09.3	-0.2
	comp=Z,12nm,0.8s						
STEI	Steigen	59.77	334	eP	P	16 35 08.3	-1.3
BURAR	Bucovina Array	59.95	310	⇓iP	P	16 35 12.7	+1.3
BURAR	Bucovina Array	59.95	310	⇓P	P	16 35 12.7	+1.3
MLR	Muntele Rosu	60.12	307	⇑iP	P	16 35 13.9	+1.4
MLR	Muntele Rosu	60.12	307	⇑P	P	16 35 13.9	+1.4
LOF	Lofoten	60.34	334	eP	P	16 35 13.4	-0.1
MOR8	Moi Rana	60.51	332	eP	P	16 35 12.9	-1.8
VOIR		60.73	307	⇑iP	P	16 35 17.6	+0.9
VOIR		60.73	307	⇑P	P	16 35 17.6	+0.9
KWP	Kalwaria Pacla	60.94	313	eP	P	16 35 19.4	+1.5
KWP	Kalwaria Pacla	60.94	313	eP	P	16 35 19.4	+1.5
KOLS	Kolonicke sedl	61.42	312	eP	P	16 35 22.1	+0.8
KOLS	Kolonicke sedl	61.42	312	eP	P	16 35 22.1	+0.8
TRPA	Tarpa	61.51	311	⇑iP	P	16 35 24.3	+2.5
LOT	Lotru	61.58	308	⇑iP	P	16 35 23.7	+1.2
DRGR		61.83	309	⇑iP	P	16 35 25.3	+1.2
DRGR		61.83	309	⇑P	P	16 35 25.3	+1.2
NSS	Namsos	61.97	331	eP	P	16 35 22.6	-2.0
NIE	Niedzica	62.49	313	eP	P	16 35 30.0	+1.6
NIE	Niedzica	62.49	313	eP	P	16 35 30.0	+1.6
OJC	Ojcow	62.53	314	eP	P	16 35 29.5	+0.9
OJC	Ojcow	62.53	314	eP	P	16 35 29.6	+0.9
	comp=Z,12nm,1.0s						
OJC	Ojcow	62.53	314	eP	P	16 35 29.6	+0.9
OJC				pmax	pmax		
	comp=Z,12nm,1.0s						
HERR	Herculane	62.67	307	⇑iP	P	16 35 31.0	+1.3
AS31	Alice Springs	62.76	150	eP	P	16 35 30.4	0.0
	comp=Z,1.5nm,0.8s						
ASAR	Alice Springs	62.76	150	P	P	16 35 30.1	-0.3
	comp=Z,4.5nm,0.8s,baz=332,slow=6.7,SNR=42						
VTS	Vitosha	62.91	305	⇓iP	P	16 35 31.4	-0.1
VTS	Vitosha	62.91	305	⇓P	P	16 35 31.4	-0.1
NC303	NORSAR Array S	63.32	327	eP	P	16 35 34.1	+0.4
	comp=Z,12nm,1.1s						
NC303	NORSAR Array S	63.32	327	eP	P	16 35 33.4	-0.3
NB201	NORSAR Array S	63.41	327	eP	P	16 35 34.6	+0.3
	comp=Z,12nm,1.0s						
NB2	NORSAR Subarra	63.45	327	P	P	16 35 33.7	-0.9
	comp=Z,8.2nm,1.1s,baz=71,slow=6.9						
NB2	NORSAR Subarra	63.45	327	P	P	16 35 33.7	-0.9
	baz=71,slow=6.9						
NOA	NORSAR Array B	63.45	327	P	P	16 35 34.0	-0.7
	comp=Z,2.6nm,0.7s,baz=70,slow=6.7,SNR=23						
NOA	NORSAR Array B	63.45	327	P	P	16 35 34.0	-0.7
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NC204	NORSAR Array S	63.57	327	eP	P	16 35 35.2	-0.2
	comp=Z,13nm,0.8s						
OKC	Ostrava-Krasne	63.66	314	eP	P	16 35 37.4	+1.2
OKC				MLR	MLR		
	comp=Z,200nm,18.4s						
OKC	Ostrava-Krasne	63.66	314	eP	P	16 35 37.4	+1.2
OKC				AMS	AMS	17 04 00.0	
	comp=Z,200nm,18.4s						
VYHS	Vyhne	63.72	312	eP	P	16 35 37.9	+1.3
VYHS				pmax	pmax		
	comp=Z,23nm,1.9s						
VYHS	Vyhne	63.72	312	eP	P	16 35 37.9	+1.3
MORC	Moravsky Berou	64.05	314	⇓iP	P	16 35 40.2	+1.4
MORC	Moravsky Berou	64.05	314	⇓P	P	16 35 40.2	+1.4
MORC	Moravsky Berou	64.05	314	eP	P	16 35 39.9	+1.1
DOMB	Dombas	64.05	329	eP	P	16 35 37.7	-0.9
JAVC	Velka Javorina	64.31	313	eP	P	16 35 42.8	+2.3
MOL	Molde	64.51	329	eP	P	16 35 41.8	+0.3
OSTC	Ostas	64.56	315	AMS	AMS	17 03 40.0	
	comp=Z,200nm,14.9s						
DPC	Dobruska-Polom	64.58	315	eP	P	16 35 44.1	+1.9
DPC				MLR	MLR		
	comp=Z,200nm,20.5s						
DPC	Dobruska-Polom	64.58	315	eP	P	16 35 44.1	+1.9
DPC				AMS	AMS	17 04 00.0	
	comp=Z,200nm,20.5s						
CHVC	Chvalec	64.65	315	eP	P	16 35 44.4	+1.7
CHVC				AMS	AMS	17 03 50.0	
	comp=Z,200nm,15.0s						
UPC	Upice	64.70	315	eP	P	16 35 43.7	+0.7
UPC				MLR	MLR		
	comp=Z,200nm,16.4s						
UPC	Upice	64.70	315	eP	P	16 35 43.7	+0.7
UPC				AMS	AMS	17 03 50.0	
	comp=Z,200nm,16.4s						
KONO	Kongsberg	64.71	326	eP	P	16 35 43.9	+1.0
MODS	Modra-Piesok	64.73	313	eP	P	16 35 43.6	+0.4
MODS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MODS	Modra-Piesok	64.73	313	eP	P	16 35 43.6	+0.4
VRAC	Vranov	64.80	314	eP	P	16 35 45.1	+1.4
AKN	Aaknes	64.90	329	eP	P	16 35 42.8	-1.3
SKAR	Skarslia	64.91	327	eP	P	16 35 43.5	-0.8
KRUC	Moravsky	65.01	313	eP	P	16 35 46.5	+1.5
TREC	Trest	65.47	314	AMS	AMS	17 04 30.0	
	comp=Z,200nm,23.2s						
GOPC	GO Pecny, Ondr	65.66	315	AMS	AMS	17 05 20.0	
	comp=Z,200nm,17.7s						
HYA	Hoyanger	65.66	328	eP	P	16 35 48.5	-0.5
CONA	Conrad Observa	65.77	312	i P	P	16 35 51.3	+1.2
	comp=Z,7.7nm,1.5s						
PRU	Pruhonice	65.77	315	eP	P	16 35 51.0	+1.1
PRU				MLR	MLR		
	comp=Z,300nm,24.4s						
PRU	Pruhonice	65.77	315	eP	P	16 35 51.0	+1.1
PRU				AMS	AMS	17 04 40.0	
	comp=Z,300nm,24.4s						
BRG	Berggiesshubel	65.78	316	eP	P	16 35 51.1	+1.1
	comp=Z,3.9nm,0.8s						
	comp=N,107nm,12.8s						
	comp=E,94nm,18.4s						
	comp=Z,127nm,13.8s						
BRG	Berggiesshubel	65.78	316	eP	P	16 35 51.1	+1.1
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRG				MLR	MLR		
	comp=N,107nm,12.8s						
BRG				MLR	MLR		
	comp=E,94nm,18.4s						
BRG				MLR	MLR		
	comp=Z,127nm,13.8s						
CLL	Collm	66.16	317	⇑iP	P	16 35 54.4	+2.0
CLL				i		16 35 56.5	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CLL	Collm	66.16	317	i P	P	16 35 51.1	-1.3
CLL				⇑iPmax		16 35 54.4	
	comp=Z,7.0nm,1.0s						
CLL				e		16 47 50.0	
CLL				LmH		17 01 00.0	
	comp=N,300nm,20.7s						
CLL				LmH		17 01 00.0	
	comp=E,100nm,21.8s						
ARSA	Arzberg	66.25	312	i P	P	16 35 53.9	+0.8
	comp=E,4.0nm,1.1s						
BLS5	Blasjo	66.27	326	eP	P	16 35 53.0	0.0
ASK	Askoy	66.39	328	eP	P	16 35 53.7	0.0
BPAW	Bear Paw Mtn.	66.62	28	eP	P	16 35 55.7	+0.6
	comp=E,5.7nm,1.2s						
KHC	Kasperske Hory	66.69	314	eP	P	16 35 56.3	+0.4
KHC				e		16 36 00.0	
KHC				MLR	MLR		
	comp=Z,200nm,20.4s						
KHC	Kasperske Hory	66.69	314	eP	P	16 35 56.3	+0.4
KHC				epP	sP	16 36 00.0	-1.0
KHC				AMS	AMS	17 05 10.0	
	comp=Z,200nm,20.4s						
GERES	GERESS Array B	66.73	314	P	P	16 35 56.6	+0.4
	comp=Z,1.4nm,0.8s,baz=71,slow=5.8,SNR=13						
GERES				LR	LR	17 05 53.4	
	comp=Z,135nm,18.4s,baz=64,slow=37						
SOKA	Soboth	66.79	311	i P	P	16 35 57.4	+0.8
	comp=Z,9.3nm,1.0s						
MOA	Molln	66.79	313	i pP	P	16 35 58.7	+2.1
	comp=Z,6.1nm,0.9s						
OBKA	Obir	67.16	311	i P	P	16 35 59.9	+0.9
	comp=Z,5.5nm,1.0s						
KBA	Koelnbreinsper	67.68	312	i P	P	16 36 03.2	+0.9
	comp=Z,8.7nm,1.0s						
ILAR	Eielson Array	67.85	26	P	P	16 36 02.0	-0.9
	comp=Z,2.0nm,0.9s,baz=290,slow=6.3,SNR=16						
ILAR	Eielson Array	67.85	26	P	P	16 36 02.0	-0.9
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SUA	Susitna One	67.96	30	eP	P	16 36 02.6	-1.2
	comp=Z,9.9nm,1.0s						
ABTA	Abfaltersbach	68.33	312	i pP	P	16 36 08.7	+2.3
	comp=Z,4.8nm,1.5s						
WTTA	Wattenberg	68.65	313	i P	P	16 36 09.1	+0.6
	comp=Z,8.0nm,1.1s						
WATA	Walderalm	68.66	313	i pP	P	16 36 11.1	+2.6
	comp=Z,5.3nm,0.9s						
KDAK	Kodiak Island	68.90	34	P	P	16 36 09.3	-0.2
	comp=Z,8.1nm,0.9s,baz=345,slow=4.6,SNR=5.5						
KDAK	Kodiak Island	68.90	34	eP	P	16 36 09.3	-0.2
	comp=Z,13nm,1.1s						
SQTA	Sankt Quirin	68.93	313	i P	P	16 36 10.8	+0.6
	comp=Z,8.2nm,1.0s						
MOTA	Moosalm	68.94	313	i P	P	16 36 11.4	+1.1
	comp=Z,2.9nm,0.7s						
RETA	Reutte	69.09	314	i pP	P	16 36 15.8	+4.7
	comp=Z,2.2nm,0.4s						
FETA	Feichten	69.32	313	i P	P	16 36 13.1	+0.5
	comp=Z,11nm,1.2s						
SCRK	Sand Creek	69.34	26	eP	P	16 36 12.0	-0.4
	comp=Z,4.7nm,1.1s						
DAVA	Damuels	69.72	314	i pP	P	16 36 18.0	+2.9
	comp=Z,7.3nm,1.3s						
INK	Inuvik	70.16	20	P	P	16 36 16.6	-0.5

	comp=Z,3.5nm,0.8s,baz=53,slow=6.9,SNR=5.6						
BFO	Black Forest	70.17	315	*i* P	P	16 36 20.6	+2.9
CDF	Champ du Feu	70.75	316	*e*P	P	16 36 25.1	+3.8
CDF				pmax	pmax		
	comp=Z,8.0nm,1.2s						
WLF	Walferdange	70.81	317	⇓P	P	16 36 23.1	+1.5
	comp=Z,9.7nm,1.4s						
KMBO	Kilima Mbogo	72.01	256	P	P	16 36 30.1	+0.5
	comp=Z,2.0nm,0.7s,baz=54,slow=9.1,SNR=6.5						
LPL	La Plagne	72.47	313	*e*P	P	16 36 32.7	+0.8
LPL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
STKA	Stephens Creek	73.22	148	P	P	16 36 36.3	+0.3
	comp=Z,2.2nm,0.8s,baz=59,slow=5.5,SNR=3.3						
STKA	Stephens Creek	73.22	148	*e*P	P	16 36 36.3	+0.3
	comp=Z,1.0nm,1.1s						
SSF	Saint Saulge	73.63	316	*e*P	P	16 36 39.7	+1.2
SSF				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CAF	Calviac	75.61	314	*e*P	P	16 36 50.8	+0.8
CAF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MFF	Saint Martin d	76.00	317	*e*P	P	16 36 52.8	+0.6
MFF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YKA	Yellowknife Ar	79.70	17	P	P	16 37 12.4	0.0
	comp=Z,2.0nm,0.7s,baz=332,slow=5.6,SNR=5.2						
YKA				LR	LR	17 16 43.9	
	comp=Z,6.7nm,18.0s,baz=305,slow=39						
ESDC	Sonseca Array	82.26	313	P	P	16 37 27.6	+1.0
	comp=Z,1.3nm,0.7s,baz=46,slow=5.2,SNR=9.3						
ESDC				LR	LR	17 16 45.8	
	comp=Z,60nm,18.8s,baz=120,slow=38						
FFC	Flin Flon	89.63	15	*i* P	P	16 38 03.1	+0.4
MATP	Matopo	90.16	246	LR	LR	17 13 03.7	
	comp=Z,25nm,20.0s,baz=5.0,slow=32						
SCHQ	Schefferville	92.25	355	LR	LR	17 23 24.1	
	comp=Z,39nm,18.8s,baz=80,slow=38						
TORD	Torodi Ar. Bea	93.71	288	LR	LR	17 24 49.1	
	comp=Z,67nm,22.0s,baz=240,slow=38						
LBTB	Lobatse	94.96	243	LR	LR	17 18 49.3	
	comp=Z,44nm,19.6s,baz=55,slow=34						
ULM	Lac du Bonnet	95.11	13	LR	LR	17 28 03.5	
	comp=Z,58nm,18.4s,baz=56,slow=40						
TSUM	Tsumeb	98.06	252	LR	LR	17 22 08.4	
	comp=Z,32nm,20.6s,baz=52,slow=35						
PTGA	Pitinga	144.90	333	*e*PKPdf	PKPab	16 44 40.0	-2.0
LPAZ	La Paz	162.22	338	PKP	PKPdf	16 45 05.7	-2.4
	comp=Z,1.8nm,0.3s,baz=343,slow=7.3,SNR=10						

JMA ***26*** *16:28:31.8±0.4, 33.°92N×137.°34E, h365^{km}±4^{km}, M3.0*
ISCJB ***26*** *16:28:32.6±0.7, 33.°99N±0.°07×137.°27E±0.°06, h358^{km}±4^{km}, mb3.2/3, Error ellipse: s-maj=11.8km s-min=7.8km az=159.5*
IDC ***26*** *16:28:34.1±1.2, 34.°07N×137.°35E, h357^{km}±16^{km}, mb2.9/3, mb1 2.9/5, mb1mx2.7/40, mbtmp3.5/5, Error ellipse: s-maj=48.8km s-min=15.8km az=68.0*
ISC 26 16:28:33.3±1.1**, 33.°98N**±0.°08×**137.°28E**±0.°06**, h354**^{km}±7^{km}**, n24,** σ0.^{s}**90**/37**, mb3.4**/3**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO3	TONANKAI O.B.S	0.15	142	P	Pn	16 29 17.9	+0.5
TTO4	TONANKAI O.B.S	0.21	84	P	Pn	16 29 17.9	+0.7
TTO2	TONANKAI O.B.S	0.33	221	P	Pn	16 29 17.9	+0.5
TK02	Tokai 2	0.40	95	P	Pn	16 29 17.9	+0.4
TTO1	TONANKAI O.B.S	0.55	229	P	Pn	16 29 18.0	+0.2
JIE	Ise	0.63	311	P	Pn	16 29 18.6	+0.4
JIE				*e*S	S	16 29 54.3	0.0
JTNC	Tanabenakahech	1.40	264	P	Pn	16 29 21.1	-0.2
JTNC				*e*S	S	16 29 58.7	-1.2
JWY	Kouya	1.42	280	P	Pn	16 29 21.6	+0.1
JWY				*e*S	S	16 29 59.2	-1.0
JYTA	Yamagatataniai	1.67	344	P	Pn	16 29 23.4	+0.7
JYTA				*e*S	S	16 30 02.6	+0.1
JOD2	Odawara 2	1.96	49	P	Pn	16 29 24.8	+0.1
JWT	Wachi	2.02	310	P	Pn	16 29 25.6	+0.5
JWT				*e*S	S	16 30 06.0	-0.7
JHJ	Hachijo jima 2	2.26	112	P	Pn	16 29 27.4	+0.5
	4.5nm,0.3s,baz=297,slow=24,SNR=7.7						
JHJ				S	S	16 30 11.8	+1.9
	7.3nm,0.3s,baz=253,slow=19,SNR=4.3						
JAI	Aioi	2.36	266	P	Pn	16 29 27.3	-0.3
JAI				*e*S	S	16 30 09.8	-1.5
JRY	Ryogami san	2.42	33	P	Pn	16 29 28.9	+0.8
JRY				*e*S	S	16 30 12.7	+0.5
MAT	Matsushiro	2.66	16	P	Pn	16 29 30.8	+0.8
MAT				S	S	16 30 15.7	+0.1
MAT	Matsushiro	2.66	16	P	Pn	16 29 30.2	+0.2
MAT				*e*S	S	16 30 15.6	0.0
MJAR	Matsushiro Arr	2.66	16	P	Pn	16 29 30.2	+0.2
	0.4nm,0.3s,baz=198,slow=8.4,SNR=29						
MJAR				S	S	16 30 15.8	+0.1
	0.1nm,0.3s,baz=195,slow=16,SNR=5.5						
JMN	Monobe	2.84	266	P	Pn	16 29 31.4	-0.3
JAG	Ashikaga	3.02	36	P	Pn	16 29 32.3	-0.7
JAG				*e*S	S	16 30 18.5	-2.6
BSO1	Boso 1	3.13	77	P	Pn	16 29 31.9	-1.6
BSO1				*e*S	S	16 30 20.2	-1.8
JHS	Saijyo	3.59	288	P	Pn	16 29 38.6	+0.2
MKAR	Makanchi Array	42.96	304	P	P	16 35 59.2	+0.5
	0.4nm,0.7s,baz=93,slow=7.2,SNR=2.5						
ARCES	ARCESS Array B	65.64	339	P	P	16 38 40.5	+0.5
	1.3nm,1.1s,baz=61,slow=7.5,SNR=2.8						
FINES	FINESS Array B	69.91	332	P	P	16 39 06.3	-0.2
	0.3nm,0.4s,baz=70,slow=4.6,SNR=7.0						

JMA 26 16:36:38.6±0.1**, 39.°05N**×**142.°40E, h34**^{km}±1^{km}**, M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.57	273	P	Pn	16 36 50.2	0.0
OFUJ				S	Sb	16 36 58.1	-0.3
MIYJ	Miyakonagasawa	0.69	320	P	Pn	16 36 51.6	-0.4
MIYJ				S	Sn	16 37 00.8	-0.7
JKMT	Kesennumamotoy	0.76	252	P	Pn	16 36 52.7	-0.2
JKMT				S	Sn	16 37 02.7	-0.5
JMK	Ichinoseki	0.93	264	P	Pn	16 36 55.4	+0.2
JMK				S	Sn	16 37 07.2	0.0
JOM	Ohasama	0.96	297	P	Pn	16 36 56.0	+0.4
JOM				S	Sn	16 37 08.5	+0.4
JTH	Tanohata	0.98	335	P	Pn	16 36 55.9	-0.1
JIO	Ouri	1.01	234	P	Pn	16 36 56.1	-0.3
JIO				S	Sn	16 37 08.2	-1.3
JKZ	Kuzumaki	1.25	319	P	Pn	16 37 00.4	+0.7
JKZ				S	Sb	16 37 16.4	-1.1
JRG	Rokugo	1.42	285	P	Pn	16 37 03.1	+1.2
JANG	Nango	1.49	333	P	Pn	16 37 04.3	+1.4
JOU	Okura	1.52	244	P	Pn	16 37 04.2	+0.8

IDC 26 16:39:09.7±6.6**, 1.°50S**×**132.°65E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.3**/27**, mbtmp3.4**/3**, ML3.1**/1**, Error ellipse: s-maj=408.4km s-min=30.4km az=75.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.40	175	P	P	16 43 27.5	+0.9
	0.1nm,0.3s,baz=354,slow=13,SNR=1.9						
ASAR	Alice Springs	22.07	177	P	P	16 44 05.8	-0.6
	0.9nm,0.8s,baz=1.5,slow=13,SNR=5.7						
MKAR	Makanchi Array	65.21	324	P	P	16 49 53.0	0.0
	0.3nm,0.5s,baz=124,slow=8.2,SNR=2.2						

IDC ***26*** *16:41:21.7±8.2, 17.°51S×178.°61W, h531^{km}±96^{km}, mb3.2/7, mb1 3.5/7, mb1mx3.1/32, mbtmp4.1/7, Error ellipse: s-maj=51.7km s-min=29.9km az=148.0*
ISCJB ***26*** *16:41:22.2±1.3, 17.°5S±0.°4×178.°7W±0.°3, h547^{km}, mb3.6/7, Error ellipse: s-maj=59.4km s-min=17.9km az=146.6*
ISC 26 16:41:22.9±1.4**, 17.°5S**±0.°4×**178.°7W**±0.°3**, h547**^{km}**, n9,** σ**0.^{s}36**/9**, mb3.5**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.61	241	P	P	16 47 59.5	-0.1
	2.5nm,0.9s,baz=88,slow=11,SNR=4.3						
WRA	Warramunga Arr	44.47	259	P	P	16 48 46.2	+0.1
	1.2nm,0.5s,baz=89,slow=8.0,SNR=11						
ASAR	Alice Springs	44.67	254	P	P	16 48 47.7	+0.1
	6.7nm,0.6s,baz=88,slow=8.4,SNR=150						
PETK	Petropavlovsk-	73.25	345	P	P	16 51 58.9	+0.4
	1.1nm,0.6s,baz=132,slow=7.2,SNR=3.8						
NVAR	Mina Array Bea	79.31	44	P	P	16 52 32.3	-0.1
	0.6nm,0.6s,baz=226,slow=7.8,SNR=6.8						
ILAR	Eielson Array	85.56	13	P	P	16 53 02.6	-0.4
	0.5nm,0.5s,baz=220,slow=4.8,SNR=6.1						
TXAR	Lajitas Array	85.99	58	P	P	16 53 06.5	+0.4
	0.5nm,0.7s,baz=224,slow=5.0,SNR=7.4						
BRTR	Keskin Array B	144.34	315	PKP	PKPab	16 59 57.4	-0.3
	0.9nm,0.7s,baz=48,slow=1.8,SNR=5.3						
GERES	GERESS Array B	147.18	345	PKPbc	PKPbc	17 00 04.7	-0.3
	0.9nm,0.6s,baz=28,slow=3.5,SNR=7.8						

MEX 26 16:53:20.2±0.3**, 14.°90N**×**93.°33W, h30**^{km}±8^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.80	8	*i* P	Pn	16 53 33.2	-2.2
PCIG				*e*S	Sb	16 53 42.9	-3.3
CCIG	Comitan	1.79	40	*i* P	Pn	16 53 47.0	-2.1
CCIG				*i* S	Sn	16 54 08.2	-2.7
TGIG		1.87	6	*e*P	Pn	16 53 49.2	-1.1
TGIG				*i* S	Sn	16 54 09.5	-3.4
CMIG	Matias Romero	2.64	326	*i* P	Pn	16 53 58.7	-2.0
CMIG				*e*S	Sn	16 54 29.6	-2.2

MAN 26 17:07:50.4, 7.°39N×**124.°75E, h1**^{km}**, mb5.1, ML4.0, MS4.1, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.51	138	⇑*e*P	Pb	17 08 01.3	-0.9
KCP				*i* S	Sn	17 08 28.1	+14
CTBH	Cotabato--PC H	0.53	251	⇓*i*P	Pb	17 08 02.3	-0.1
CTBH				*i* S	Sb	17 08 11.7	+1.2
BUKP	Musuan	0.57	33	*e*P	Pg	17 08 00.9	-0.5
BUKP				*e*S	Sg	17 08 09.9	+1.1
DMPH	Davao City--Mi	0.81	112	⇓*i*P	Pn	17 08 08.4	-0.6
DMPH				*i* S	Sn	17 08 30.1	+8.4
SKMP	Bagumbayan, Su	0.89	193	*e*P	Pg	17 08 06.1	-1.4
SKMP				*e*S	Sn	17 08 23.6	0.0
CGP	Cagayan de Oro	1.05	357	⇑*i*P	Pb	17 08 11.3	-0.1
CGP				*i* S	Sg	17 08 24.4	+0.1
GSPH	General Santos	1.31	171	*e*P	Pn	17 08 19.7	+3.7
PAGZ	Pagadian	1.43	288	*e*P	Pn	17 08 17.2	-0.3
PAGZ				*e*S	Sn	17 08 38.9	+2.1
MATI	Mati	1.56	106	*e*P	Pn	17 08 17.9	-1.4
MATI				*e*S	Sg	17 08 44.0	+3.4
DDMP	Don Marcelino,	1.60	143	*e*P	Pn	17 08 20.1	+0.3
DDMP				*e*S	Sg	17 08 47.5	+5.7
BUTP	Butuan	1.79	29	*e*P	Pb	17 08 23.2	-0.8
BUTP				*e*S	Sg	17 08 50.8	+3.0
DCPH	Dipolog City	1.82	311	⇑*e*P	Pg	17 08 26.8	+1.5
SNPH	Sibulan	2.45	322	*e*P	Pg	17 08 36.5	-0.8

JMA ***26*** *17:11:54.5±0.2, 30.°09N×139.°18E, h471^{km}, M3.6*
ISCJB ***26*** *17:11:55.2±0.5, 30.°03N±0.°05×139.°0E±0.°1, h450^{km}, mb3.1/7, Error ellipse: s-maj=11.9km s-min=5.9km az=167.7*
IDC ***26*** *17:11:56.1±1.0, 30.°00N×138.°66E, h428^{km}±11^{km}, mb2.8/7, mb1 3.0/10, mb1mx2.8/50, mbtmp3.6/10, Error ellipse: s-maj=22.1km s-min=14.4km az=80.0*
ISC 26 17:11:56.8±0.8, **30.°03N**±0.°07×**139.°0E**±0.°1**, h450**^{km}**, n23,** σ**1.^{s}60**/28**, mb3.1**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	3.11	12	P	P	17 13 04.4	-0.2
JHJ2	Mitsune	3.15	13	P	P	17 13 04.6	-0.3
JHJ	Hachijo jima 2	3.15	12	P	P	17 13 04.7	-0.2
	11nm,0.3s,baz=300,slow=23,SNR=17						
JHJ				S	S	17 13 57.8	-2.6
	12nm,0.3s,baz=233,slow=20,SNR=4.3						
CBIJ	Chichi jima	4.05	135	P	P	17 13 11.3	-1.2
CBIJ				S	S	17 14 11.0	-2.9
JHH2	Haha-jima-NKT2	4.39	140	P	P	17 13 14.9	-0.7
JHH2				S	S	17 14 16.8	-2.7
JIE	Ise	4.76	336	P	P	17 13 19.9	+1.1
BSO1	Boso 1	4.91	19	P	P	17 13 19.6	+0.1
BSO1				*e*S	S	17 14 25.6	-1.6
BSO3	Boso 3	4.93	15	P	P	17 13 19.3	-0.8
BSO3				*e*S	S	17 14 27.0	-1.1
BSO4	Boso 4	5.07	12	*e*S	S	17 14 28.2	-2.8
JOD2	Odawara 2	5.22	1	P	P	17 13 22.2	-1.0
JHU	Hanno	5.81	2	P	P	17 13 27.7	-1.4
JRY	Ryogami san	5.97	359	P	P	17 13 30.3	-0.5
JAG	Ashikaga	6.39	3	P	P	17 13 33.2	-1.8
MJAR	Matsushiro Arr	6.53	354	P	P	17 13 34.9	-1.6
	0.1nm,0.3s,baz=170,slow=11,SNR=5.2						
JHO	Hitachi	6.69	11	P	P	17 13 37.5	-0.7
KSRS	Korea Array	11.82	312	P	P	17 14 32.6	-1.0
	0.3nm,0.3s,baz=126,slow=10,SNR=8.6						
MKAR	Makanchi Array	46.46	308	P	P	17 19 40.9	-0.9
	0.3nm,0.6s,baz=108,slow=9.3,SNR=3.3						
KURBB	Kurchatov Arra	49.00	313	P	P	17 20 00.1	-0.7
	0.4nm,0.3s,baz=95,slow=7.4,SNR=9.0						
WRA	Warramunga Arr	49.88	186	P	P	17 20 07.9	+0.2
	0.6nm,0.3s,baz=355,slow=7.0,SNR=20						
ASAR	Alice Springs	53.61	186	P	P	17 20 35.4	+0.6
	0.4nm,0.4s,baz=359,slow=6.0,SNR=14						
ILAR	Eielson Array	56.52	30	P	P	17 20 56.4	+1.8
	0.4nm,0.5s,baz=253,slow=5.4,SNR=4.6						
NVAR	Mina Array Bea	80.88	51	P	P	17 23 26.7	+3.4
	0.2nm,0.5s,baz=294,slow=4.8,SNR=2.9						
BRTR	Keskin Array B	81.97	311	P	P	17 23 28.6	-0.2
	0.5nm,0.8s,baz=64,slow=3.4,SNR=3.2						

NIED ***26*** *17:12:00, 27.°30N×128.°90E, h32^{km}, Mw4.0 Best double couple: $M_0$1.03000×10^{15} NP1:ϕ_s355.00000°, δ23.00000°, λ-125.00000°. NP2:ϕ_s212.00000°, δ71.00000°, λ-76.00000°.*
ISCJB ***26*** *17:12:42.8±0.3, 27.°27N±0.°03×128.°94E±0.°03, h45^{km}±4^{km}, mb3.8/13, MS3.2/2, Error ellipse: s-maj=5.5km s-min=3.1km az=38.3*
JMA ***26*** *17:12:44.0, 27.°32N×128.°86E, h33^{km}±1^{km}, M3.7*
JMA Felt I J1.
IDC ***26*** *17:12:46.1±1.1, 27.°25N×128.°47E, h53^{km}±9^{km}, mb3.7/13, mb1 3.7/15, mb1mx3.5/53, mbtmp3.9/15, MS3.2/3, Ms1 3.2/3, ms1mx2.6/35, Error ellipse: s-maj=29.3km s-min=14.7km az=87.0*
ISC 26 17:12:43.2±0.6**, 27.°26N**±0.°03×**128.°91E**±0.°04**, h35**^{km}±4^{km}**, n48,** σ**1.^{s}22**/60**, mb3.9**/13**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOKE	Okinoerabujima	0.32	289	P	Pn	17 12 51.1	-0.3
JOKE				*e*S	Sn	17 12 56.0	-1.4
JYRO	Yoronjima	0.47	241	P	Pn	17 12 53.9	+0.5
JYRO				*e*S	Sn	17 13 00.4	-0.2
JTK	Tokunoshima	0.53	4	P	Pn	17 12 53.8	-0.5
JTK				*e*S	Sn	17 13 00.4	-1.5
JOW	Kunigami	0.71	234	P	Pn	17 12 58.0	+1.3
	baz=90,slow=16						
JOW				S	Sn	17 13 07.3	+0.8
	baz=232,slow=19						
JOW	Kunigami	0.71	234	P	Pn	17 12 57.6	+0.8
JOW				*e*S	Sn	17 13 07.0	+0.5
JIH	Iheya	0.87	255	P	Pn	17 12 59.6	+0.6
JIH				*e*S	Sn	17 13 10.8	+0.4
JAMN	Amaminishikomi	1.01	13	P	Pn	17 13 01.1	+0.3
JAMN				*e*S	Sn	17 13 13.9	+0.1
JNTH	Nagotoyohara	1.08	227	P	Pn	17 13 03.4	+1.5
JNTH				*e*S	Sn	17 13 17.4	+1.7
JAM	Amami Oshima	1.30	28	P	Pn	17 13 06.0	+1.1
JAM				*e*S	Sn	17 13 22.7	+1.7
JZK	Kikaishima	1.41	41	P	Pn	17 13 08.1	+1.8
JAGN	Aguni-jima	1.64	246	P	Pn	17 13 10.7	+1.3
JAGN				*e*S	Sn	17 13 30.1	+0.9
JTAJ	Takarajima	1.91	8	P	Pn	17 13 13.6	+0.4
JTAJ				*e*S	Sn	17 13 35.8	-0.1
JKE	Kume jima 2	2.12	244	P	Pn	17 13 17.2	+1.1
JKE				*e*S	Sn	17 13 42.4	+1.3
JKDJ	Kitadaitoujima	2.50	121	P	Pn	17 13 21.8	+0.5
JKDJ				*e*S	Sn	17 13 50.0	-0.6
JMZ	Minamidaito 2	2.52	124	P	Pn	17 13 21.8	+0.3
JMZ				*e*S	Sn	17 13 50.0	-1.0
JNN	Nakanoshima	2.71	18	*e*S	Sn	17 13 56.8	+1.0
JYAK	Yakushimahirau	3.28	25	P	Pn	17 13 32.6	+0.5
JYAK				*e*S	Sn	17 14 10.7	+0.8
JKC	Kuchinoerabu	3.38	19	P	Pn	17 13 35.1	+1.6
JKC				*e*S	Sn	17 14 13.7	+1.3
JMTN	Minamitane	3.58	29	P	Pn	17 13 37.3	+1.1
JMTN				*e*S	Sn	17 14 17.3	0.0
JTN	Tanegashima 3	3.84	28	*e*S	Sn	17 14 24.3	+0.7
JNU	Nakatsue	6.09	16	P	Pn	17 14 13.6	+2.9
	1.0nm,0.3s,baz=223,slow=5.7,SNR=7.7						
JNU				S	Sn	17 15 21.1	+2.0
	0.9nm,0.3s,baz=180,slow=20,SNR=4.4						
KSRS	Korea Array	10.20	356	P	Pn	17 15 10.7	+3.7
	0.1nm,0.3s,baz=174,slow=15,SNR=2.5						
KSRS				LR	LR	17 19 20.0	
	comp=Z,73nm,18.4s,baz=172,slow=39						
GUMO	Guam	20.18	129	LR	LR	17 23 41.7	
	comp=Z,34nm,18.6s,baz=350,slow=32						
CMAR	Chiang Mai Arr	28.91	259	P	P	17 18 35.3	-3.8
	0.5nm,0.6s,baz=63,slow=8.2,SNR=4.0						
H11N2	WAKE ISLAND Hy	35.53	94	T	T	17 57 26.0	
	baz=290,slow=74,SNR=47						
H11N1	WAKE ISLAND Hy	35.53	94	T	T	17 57 26.3	
	baz=290,slow=74,SNR=31						
H11N3	WAKE ISLAND Hy	35.54	94	T	T	17 57 26.2	
	baz=290,slow=74,SNR=37						
H11S3	WAKE ISLAND Hy	35.77	96	T	T	17 57 46.5	
	baz=292,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	35.77	96	T	T	17 57 47.9	
	baz=292,slow=75,SNR=7.1						
H11S2	WAKE ISLAND Hy	35.78	96	T	T	17 57 48.4	
	baz=292,slow=75,SNR=5.2						
PKI	Pulchoki	38.47	281	*e*P	P	17 20 02.4	0.0
	6.8nm,0.2s						
PKIN	Phulchoki	38.48	281	*e*P	P	17 20 02.3	-0.1
	12nm,0.4s						
KKN	Kakani	38.55	281	*e*P	P	17 20 03.1	+0.2
	14nm,0.2s						
GKN	Gorkha	39.07	282	*e*P	P	17 20 07.4	+0.2
	39nm,0.3s						
DANN	Dangsing	39.78	282	*e*P	P	17 20 13.7	+0.5
	12nm,0.3s						
MKAR	Makanchi Array	41.32	311	P	P	17 20 24.4	-1.0
	0.5nm,0.4s,baz=90,slow=9.7,SNR=8.2						
MKAR				PcP	PcP	17 22 23.9	+0.5
	0.3nm,0.5s,baz=95,slow=3.0,SNR=3.8						
ZALV	Zalesovo Beam	41.81	322	P	P	17 20 28.5	-0.8
	0.7nm,0.3s,baz=107,slow=9.5,SNR=2.9						
KURBB	Kurchatov Arra	44.54	316	P	P	17 20 50.9	-0.5
	2.3nm,0.4s,baz=102,slow=8.9,SNR=35						
WRA	Warramunga Arr	47.22	173	P	P	17 21 14.3	+1.5
	1.6nm,1.0s,baz=350,slow=8.2,SNR=2.8						
ASAR	Alice Springs	50.86	174	P	P	17 21 41.9	+1.3
	0.4nm,0.7s,baz=5.5,slow=14,SNR=6.3						
ARCES	ARCESS Array B	69.28	339	P	P	17 23 46.4	0.0
	0.4nm,0.3s,baz=69,slow=8.2,SNR=9.8						
FINES	FINESS Array B	72.27	331	P	P	17 24 04.6	-0.1
	1.2nm,0.3s,baz=58,slow=5.7,SNR=28						
FINES				LR	LR	17 58 27.2	
	comp=Z,40nm,18.9s,baz=143,slow=38						
AKASG	Malin Array Be	75.15	320	P	P	17 24 21.5	-0.2
	1.6nm,0.4s,baz=59,slow=6.6,SNR=4.0						
BRTR	Keskin Array B	76.89	308	P	P	17 24 32.1	0.0
	0.7nm,0.6s,baz=117,slow=3.8,SNR=5.3						
HFS	Hagfors	78.20	332	P	P	17 24 38.6	-0.2
	0.9nm,0.3s,baz=91,slow=2.9,SNR=24						
NB2	NORSAR Subarra	78.66	334	P	P	17 24 41.2	-0.2
	comp=Z,0.7nm,0.5s,baz=48,slow=5.9						
NOA	NORSAR Array B	78.66	334	P	P	17 24 41.2	-0.2
	comp=Z,0.7nm,0.5s,baz=56,slow=5.5,SNR=13						
EKA	Eskdalemuir Ar	88.11	335	P	P	17 25 29.1	-0.9
	comp=Z,0.1nm,0.3s,baz=52,slow=3.7,SNR=4.4						

ISCJB ***26*** *17:31:25.8±0.5, 50.°22N±0.°03×19.°18E±0.°03, h0^{km}, Error ellipse: s-maj=4.9km s-min=2.3km az=19.7*
IPEC ***26*** *17:31:27.5±0.1, 50.°26N×19.°27E, h0^{km}±1^{km}, ML2.6/2, Error ellipse: s-maj=2.7km s-min=0.7km az=170.0*
PRU ***26*** *17:31:27.1±0.0, 50.°27N×19.°23E, h0^{km}*
BGR ***26*** *17:31:28.0±0.4, 50.°16N×19.°26E, h1^{km}, ML3.0/13, Error ellipse: s-maj=13.3km s-min=5.6km az=175.0*
ISC 26 17:31:27.8±0.8**, 50.°12N**±0.°03×**19.°28E**±0.°02**, h0**^{km}**, n39,** σ**1.^{s}39**/63**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.35	73	*e*Pg	Pg	17 31 34.0	-0.4
OJC				*e*Sg	Sg	17 31 38.5	-0.5
OJC	Ojcow	0.35	73	*e*Pg	Pg	17 31 34.1	-0.4
OJC				*e*Sg	Sg	17 31 38.8	-0.3
OKC	Ostrava-Krasne	0.78	249	*e*Pg	Pb	17 31 44.7	+0.4
OKC				*e*Sg	Sb	17 31 55.6	+0.3
OKC	Ostrava-Krasne	0.78	249	*e*PG	Pb	17 31 44.1	-0.2
OKC				*e*SG	Sb	17 31 54.7	-0.7
	comp=Z,61nm,0.5s						
NIE	Niedzica	0.96	136	*e*Pg	Pg	17 31 46.8	+0.5
NIE				*e*Sg	Sb	17 32 01.8	+1.0
LANS	Liptovska Anna	0.98	173	*e*PG	Pb	17 31 48.0	+0.4
LANS				*e*SG	Sn	17 32 02.6	-0.8
LANS				*e*LG	Lg	17 32 06.7	
MORC	Moravsky Berou	1.17	254	*e*PG	Pb	17 31 50.8	-0.1
MORC				*e*SG	Sg	17 32 05.3	-0.1
MORC	Moravsky Berou	1.17	254	*e*Pg	Pb	17 31 50.8	-0.1
	baz=66						
MORC				*e*Sg	Sg	17 32 05.2	-0.1
	65nm,0.3s,baz=66						
MORC	Moravsky Berou	1.17	254	*e*Pg	Pb	17 31 50.6	-0.4
MORC				*e*Sg	Sn	17 32 07.3	-0.9
JAVC	Velka Javorina	1.64	220	*e*PN	Pb	17 31 58.8	-0.1
JAVC	Velka Javorina	1.64	220	*e*Pn	Pb	17 31 58.8	-0.1
	baz=36						
VYHS	Vyhne	1.65	190	*e*PN	Pn	17 31 58.2	+0.1
VYHS				*e*SN	Sb	17 32 20.6	+0.2
KECS	Kecovo	1.82	154	*e*SN	Sn	17 32 22.8	-1.3
KECS				*e*LG	Lg	17 32 30.6	
DPC	Dobruska-Polom	1.91	278	*e*Sg	Sn	17 32 26.7	+0.3
DPC	Dobruska-Polom	1.91	278	*e*PG	Pn	17 32 01.2	-0.5
DPC				*e*SG	Sn	17 32 26.5	+0.1
	comp=Z,55nm,0.9s						
VRAC	Vranov	1.92	246	*e*PN	Pn	17 32 02.4	+0.6
VRAC				*e*SG	Sg	17 32 29.2	-0.3
VRAC	Vranov	1.92	246	*e*Pn	Pn	17 32 02.3	+0.5
	baz=60						
VRAC				*e*Sg	Sg	17 32 29.2	-0.3
	34nm,0.5s,baz=60						
OSTC	Ostas	2.01	284	*e*PG	Pn	17 32 03.2	+0.2
OSTC				*e*SG	Sn	17 32 29.4	+0.6
KSP	Ksiaz	2.04	292	*e*Pb	Pn	17 32 03.8	+0.5
KSP				*e*Pg	Pg	17 32 06.4	-0.4
KSP				*e*Sg	Sg	17 32 32.7	-0.6
KSP	Ksiaz	2.04	292	*e*Pg	Pg	17 32 06.3	-0.6
KSP				*e*Sg	Sg	17 32 33.4	+0.1
CHVC	Chvalec	2.12	284	*e*PG	Pn	17 32 04.2	-0.3
UPC	Upice	2.13	282	*e*SG	Sb	17 32 33.6	-0.6
	comp=Z,23nm,0.5s						
KRUC	Moravsky	2.15	242	*e*PN	Pn	17 32 05.5	+0.6
KRUC				*e*SG	Sg	17 32 36.8	-0.2
KRUC	Moravsky	2.15	242	*e*Pn	Pn	17 32 05.5	+0.6
	baz=56						
KRUC				*e*Sg	Sg	17 32 36.7	-0.2
	baz=56						
MODS	Modra-Piesok	2.18	218	*e*SN	Sn	17 32 32.0	-1.1
MODS				*e*LG	Lg	17 32 46.6	
KOLS	Kolonicke sedl	2.29	120	*e*PG	Pg	17 32 11.8	+0.2
KOLS				*e*SN	Sn	17 32 35.2	-0.4
KOLS				*e*LG	Lg	17 32 57.5	
TREC	Trest	2.59	253	*e*SG	Sg	17 32 50.8	-0.3
	comp=Z,12nm,0.2s						
PVCC	Panska Ves	3.04	280	*e*SG	Sg	17 33 03.7	-1.9
	comp=Z,25nm,0.4s						
PRU	Pruhonice	3.05	269	*e*SG	Sb	17 33 02.9	+2.1
	comp=Z,12nm,0.4s						
BRG	Berggiesshubel	3.49	285	PG	Pg	17 32 35.1	+0.4
BRG				SG	Sg	17 33 18.1	-1.7
	7.5nm,0.4s						
KHC	Kasperske Hory	3.83	257	*e*PN	Pn	17 32 29.0	+0.9
KHC				*e*PG	Pb	17 32 37.0	+0.7
KHC				*e*SG	Sg	17 33 28.8	-2.1
	comp=Z,6.8nm,0.3s						
GEC2	GERESS Array S	3.85	253	*e*Sg	Sg	17 33 28.7	-2.7
CLL	Collm	4.16	289	*e*Pg	Pg	17 32 50.0	+2.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLL				eSg	Sg	17 33 38.0	-3.4
	comp=Z,8.0nm,0.6s						
CLL	Collm	4.16	289	eSg	Sg	17 33 40.8	-0.6
WET	Wettzell	4.27	259	eSg	Sg	17 33 40.7	-4.3
TANN	Tannenbergstha	4.38	276	eSg	Sg	17 33 45.8	-2.7
ROTZ	Rotzenmuhle	4.58	268	eSg	Sb	17 33 49.4	+4.7
MANZ	Manzenberg	4.62	271	eSg	Sg	17 33 52.7	-3.4
MOX	Moxa	4.93	279	eSg	Sg	17 34 04.6	-1.5

*NIC **26** 17:34:10.9±0.2, 35°.34N×33°.18E, h51^{km}, ML3.1*
*ISK **26** 17:34:12.6, 35°.32N×33°.25E, h13^{km}±1^{km}, ML2.1/8*
*ISCJB **26** 17:34:13.0±0.7, 35°.28N±0°.07×33°.22E±0°.07, h27^{km}±8^{km}, Error ellipse: s-maj=11.2km s-min=9.5km az=7.9*
*DDA **26** 17:34:14.1, 35°.45N×33°.01E, h7^{km}±2^{km}, ML2.0*
ISC 26 17:34:13.3±1.3, **35°.30N**±0°.04×**33°.18E**±0°.05, **h21**^{km}±1^{km}, **n15**, σ**1^{s}07**/20, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAMC	Mammari	0.14	166	P	Pb	17 34 19.0	-0.2
	baz=348						
AKDN	Akdeniz- Kıbrı	0.17	268	PG	Pb	17 34 17.2	-1.8
AKDN				SG	Sb	17 34 23.5	+0.4
LEF	Lefka	0.30	232	PG	Pb	17 34 19.2	-0.8
LEF				SG	Sb	17 34 26.8	+2.3
LEF	Lefka	0.30	232	i P	Pb	17 34 20.4	+0.5
LEF				i S	Sn	17 34 27.4	-0.9
LEF				IAML_P			
	comp=Z,1µm,0.1s						
CSS	Mathiatis	0.36	160	PG	Pb	17 34 20.9	0.0
CSS	Mathiatis	0.36	160	P	Pb	17 34 21.1	+0.2
	baz=341						
ALFC	Alefka	0.50	253	P	Pb	17 34 22.4	-0.9
	baz=69						
ALFC				S	Sb	17 34 31.3	+1.1
SZAC	Souni	0.60	204	P	Pb	17 34 24.2	-1.0
	baz=22						
TEKE	Tekeli-Mersin	0.84	356	PG	Pb	17 34 28.9	-0.3
AKKU	Akkuyu-Mersin	0.91	19	PG	Pb	17 34 30.1	-0.2
GULN	MERSIN_Gulnar	0.93	19	i P	Pn	17 34 31.2	0.0
GULN				IAML_P			
	comp=Z,224nm,0.3s						
IKL	Isikli	1.02	24	PG	Pb	17 34 31.6	-0.7
BERE	Bereket-Mersin	1.04	2	PG	Pn	17 34 32.6	-0.3
GAZI	Gazipasa	1.16	323	i P	Pn	17 34 33.3	-1.2
GAZI				i S	Sn	17 34 51.3	+1.5
GAZI				IAML_P			
	comp=Z,132nm,0.2s						
KEBE	Keben-Mersin	1.22	21	PN	Pb	17 34 35.4	-0.3

*ISCJB **26** 17:38:59.2±0.7, 47°.64N±0°.08×92°.7W±0°.1, h0^{km}, Error ellipse: s-maj=12.4km s-min=8.0km az=38.7*
*IDC **26** 17:39:00.3±3.8, 47°.46N×92°.61W, h0^{km}, mb1 2.6/1, mb1mx2.6/30, mbtmp2.6/1, ML0.9/1, Error ellipse: s-maj=76.5km s-min=28.3km az=54.0*
*NEIC **26** 17:39:00.4±0.8, 47°.60N×92°.64W, h0^{km}, MN2.1, Error ellipse: s-maj=12.4km s-min=9.7km az=30.0, Suspected Mining explosion.*
NEIC 11 km [7 miles] NW of Virginia.
ISC 26 17:38:58.9±1.1, **47°.71N**±0°.06×**92°.42W**±0°.06, **h0**^{km}, **n10**, σ**0^{s}81**/9, **Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	Ely	0.67	69	ePg	Pn	17 39 16.4	+0.7
E38A	The Farm, Brul	1.25	151	Pn	Pg	17 39 22.8	-0.1
C40A	Isle Royale Na	2.21	83	Pn	Pg	17 39 40.8	-0.6
AGMN	Agassiz Nation	2.38	286	Pn	Pn	17 39 39.5	+0.3
SPMN	Marine on St.	2.50	186	Pn	Pn	17 39 40.9	+0.1
COWI	Conover	2.77	124	Pn	Pb	17 39 48.6	-0.6
G40A	Rib Lake	2.88	147	Pn	Pn	17 39 47.4	+1.3
ULM	Lac du Bonnet	3.41	320	Pn	Pn	17 39 54.2	+0.9
	0.2nm,0.3s,baz=135,slow=8.6,SNR=1.5						
ULM				Pg	Pg	17 40 04.0	-0.3
	0.3nm,0.3s,baz=144,slow=14,SNR=3.3						
ULM				Lg	Lg	17 40 48.5	
	1.3nm,0.3s,baz=223,slow=22,SNR=9.7						
I10CA	LAC DU BONNET	3.44	318	i		17 59 20.0	
	baz=139,slow=322,SNR=3.1						
I56US	NEWPORT INFRAS	16.53	281	i		19 21 50.0	
	baz=85,slow=315,SNR=3.0						

*DJA **26** 17:39:00.6±1.4, 6°S±14°×9°9E±1°1, h21^{km}±25^{km}, M4.8/15, mb4.8/7, mB5.3/5, MLv4.8/15, Mw(mB)4.8/5*
*ISCJB **26** 17:39:45.4±0.7, 2°.64S±0°.06×99°.53E±0°.08, h10^{km}, mb4.2/14, Error ellipse: s-maj=13.6km s-min=6.9km az=149.4*
*IDC **26** 17:39:47.0±1.9, 2°.49S×99°.74E, h0^{km}, mb4.0/9, mb1 4.1/9, mb1mx3.8/38, mbtmp4.0/9, Error ellipse: s-maj=67.2km s-min=17.1km az=62.0*
*NEIC **26** 17:39:48.1±1.2, 2°.63S×99°.52E, h15^{km}±7^{km}, mb4.3/7, Error ellipse: s-maj=24.9km s-min=13.7km az=218.0*
ISC 26 17:39:47.2±0.9, **2°.6S**±0°.1×**99°.56E**±0°.09, **h10**^{km}, **n41**, σ**0^{s}93**/35, **mb4.2**/14, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.47	106	P	Pg	17 39 54.1	-2.3
SISI	Saibi	1.38	340	P	Pn	17 40 12.8	+0.3
PDSI	Padang	1.94	28	P	Pn	17 40 19.6	-0.6
PPI	Padang Panjang	2.32	21	P	Pn	17 40 24.9	-0.6
BKNI	Bangkinang	3.29	27	ePn	Pn	17 40 39.3	+0.4
BKNI	Bangkinang	3.29	27	P	Pn	17 40 38.5	-0.4
MNSI	Mandailing Nat	3.41	0	P	Pn	17 40 41.4	+1.0
SBSI	Sibolga	4.21	351	P	Pn	17 40 49.8	-1.7
GSI	Gunungsitoli	4.39	333	ePn	Pn	17 40 53.3	-0.6
GSI	Gunungsitoli	4.39	333	P	Pn	17 40 51.5	-2.4
MYKOM	Kota Tinggi	6.14	44	ePn	Pn	17 41 18.2	+0.1
IPM	Ipoh	7.22	12	ePn	Pn	17 41 34.2	+1.4
KULM	Kulim	7.95	8	ePn	Pn	17 41 43.1	+0.2
SBUM	Sibu	13.63	68	ePn	P	17 43 09.4	-0.2
CMAR	Chiang Mai Arr	20.97	358	P	P	17 44 29.8	-0.9
	1.3nm,0.6s,baz=190,slow=9.8,SNR=10						
H08S2	Diego Garcia H	27.40	259	T	T	18 14 26.1	
	baz=80,slow=75,SNR=337						
H08S3	Diego Garcia H	27.41	259	T	T	18 14 26.5	
	baz=80,slow=75,SNR=238						
H08S1	Diego Carcia H	27.42	259	T	T	18 14 23.4	
	baz=80,slow=75,SNR=265						
H01W3	Cape Leeuwin H	34.83	159	T	T	18 23 28.6	
	baz=336,slow=76,SNR=11						
H01W2	Cape Leeuwin H	34.85	159	T	T	18 23 25.6	
	baz=336,slow=76,SNR=11						
H01W1	Cape Leeuwin H	34.85	159	T	T	18 23 29.4	
	baz=336,slow=76,SNR=9.0						
WRA	Warramunga Arr	38.06	119	P	P	17 47 06.5	+0.2
	1.6nm,0.4s,baz=291,slow=9.9,SNR=26						
WR1	Warramunga Arr	38.06	119	eP	P	17 47 06.5	+0.2
WB2	Warramunga Arr	38.07	119	eP	P	17 47 06.4	0.0
	25nm,1.6s						
AS31	Alice Springs	39.24	125	eP	P	17 47 16.6	+0.4
	2.6nm,1.4s						
ASAR	Alice Springs	39.24	125	P	P	17 47 16.5	+0.3
	1.6nm,0.9s,baz=297,slow=7.5,SNR=14						
KSRS	Korea Array	47.79	31	P	P	17 48 24.5	-0.3
	1.0nm,0.8s,baz=217,slow=8.3,SNR=6.8						
STKA	Stephens Creek	49.06	131	P	P	17 48 36.1	+1.3
	2.9nm,1.0s,baz=308,slow=12,SNR=2.3						
STKA	Stephens Creek	49.06	131	eP	P	17 48 36.6	+1.8
	5.5nm,1.7s						
SONA0	Songino Array	50.62	6	eP	P	17 48 47.0	+0.5
SONM	Songino Array	50.62	6	P	P	17 48 47.0	+0.5
	1.2nm,0.4s,baz=187,slow=10.0,SNR=9.9						
MK31	Makanchi Array	51.52	345	eP	P	17 48 53.7	+0.5
	1.0nm,0.8s						
MK32	Makanchi Array	51.52	345	eP	P	17 48 53.9	+0.8
MKAR	Makanchi Array	51.52	345	P	P	17 48 53.9	+0.7
	1.1nm,0.7s,baz=149,slow=8.8,SNR=13						
USA0B	Ussuriysk Arra	54.92	28	eP	P	17 49 18.8	+0.6
	21nm,1.5s						
USRK	Ussuriysk Ar.	54.92	28	P	P	17 49 17.8	-0.4
	2.8nm,0.6s,baz=216,slow=6.1,SNR=11						
ZAA0	Zalesovo Array	57.71	350	eP	P	17 49 38.2	+0.3
	2.5nm,0.9s						
ZALV	Zalesovo Beam	57.71	350	P	P	17 49 37.7	-0.2
	1.7nm,0.7s,baz=181,slow=4.1,SNR=6.6						
ZAA1	Zalesovo Array	57.71	350	eP	P	17 49 37.7	-0.3
ABKAR	Akbulak array	61.98	332	eP	P	17 50 07.2	-0.2
	1.8nm,0.9s						
TXAR	Lajitas Array	145.47	37	PKPbc	PKPbc	17 59 27.3	+0.8
	2.0nm,0.6s,baz=272,slow=0.9,SNR=28						

*IDC **26** 17:49:49.4±10.0, 20°.45S×178°.38W, h578^{km}±89^{km}, mb3.0/4, mb1 3.3/5, mb1mx2.9/35, mbtmp4.1/5, Error ellipse: s-maj=174.5km s-min=38.5km az=139.0*
ISC 26 17:49:49.9±2.9, **20°.4S**±0°.9×**178°.4W**±0°.5, **h587**^{km}, **n9**, σ**0^{s}27**/9, **mb3.5**/4, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.22	261	P	P	17 52 51.4	+0.1
	0.4nm,0.3s,baz=75,slow=18,SNR=3.9						
CTA	Charters Tower	33.12	264	P	P	17 55 39.4	+0.3
	2.4nm,0.3s,baz=86,slow=8.1,SNR=7.2						
ASAR	Alice Springs	44.17	257	P	P	17 57 07.9	-0.2
	0.6nm,0.3s,baz=89,slow=8.9,SNR=16						
ASAR				PcP	PcP	17 58 39.9	0.0
	0.5nm,0.5s,baz=105,slow=4.2,SNR=7.3						
WRA	Warramunga Arr	44.23	262	P	P	17 57 08.1	-0.5
	0.5nm,0.3s,baz=94,slow=7.3,SNR=16						
ILAR	Eielson Array	88.32	13	P	P	18 01 39.3	-0.1
	0.5nm,0.7s,baz=226,slow=5.3,SNR=3.4						
ARCES	ARCESS Array B	128.77	349	PKP	PKPdf	18 07 50.8	+0.1
	0.8nm,0.9s,baz=295,slow=2.6,SNR=4.4						
AKASG	Malin Array Be	142.75	331	PKhKP	PKPpre	18 08 13.1	
	1.2nm,0.4s,baz=36,slow=3.8,SNR=6.3						
BRTR	Keskin Array B	146.50	312	PKPbc	PKPbc	18 08 26.5	-0.1
	0.5nm,0.6s,baz=131,slow=3.6,SNR=3.4						
GERES	GERESS Array B	150.01	344	PKPbc	PKPbc	18 08 35.2	+0.2
	0.3nm,0.5s,baz=64,slow=4.5,SNR=5.5						

*MOS **26** 17:55:19.2±0.8, 45°.81N×150°.39E, h121^{km}, mb4.3/1, Error ellipse: s-maj=19.7km s-min=10.5km az=53.0*
*IDC **26** 17:55:20.9±5.3, 45°.81N×150°.38E, h118^{km}±53^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.2/33, mbtmp3.7/7, Error ellipse: s-maj=58.8km s-min=25.1km az=84.0*
*SKHL **26** 17:55:20.2±0.9, 45°.59N×150°.50E, h123^{km}±5^{km}, mb4.2/1, msh5.3/5*
ISC 26 17:55:18.0±1.2, **45°.6N**±0°.1×**150°.7E**±0°.1, **h100**^{km}, **n29**, σ**1^{s}54**/39, **mb3.5**/6, **3C-4D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.02	261	d iPN	Pn	17 55 52.6	+1.8
KUR				i S	Sn	17 56 17.4	+1.6
KUR				pmax	pmax		
	comp=Z,338nm,0.1s						
KUR				pmax	pmax		
	comp=E,96nm,0.2s						
KUR				pmax	pmax		
	comp=N,81nm,0.1s						
KUR				smax	smax		
	comp=N,1µm,1.0s						
KUR				smax	smax		
	comp=E,777nm,1.1s						
KUR				smax	smax		
	comp=N,907nm,0.2s						
KUR				smax	smax		
	comp=E,279nm,0.2s						
KUR	Kuril'sk	2.02	261	i P	Pn	17 55 52.6	+1.8
KUR				AMB	AMB	17 55 53.2	
	comp=E,10.0nm,0.2s						
KUR				AMB	AMB	17 55 53.2	
	comp=E,30nm,0.2s						
KUR				i S	Sn	17 56 16.5	+0.7
KUR				A	A	17 56 18.0	
	comp=E,100nm,0.4s						
KUR				A	A	17 56 18.0	
	comp=E,270nm,0.4s						
YUK	Yuzh-Kuril'sk	3.77	247	⇓iPN	Pn	17 56 15.4	+1.4
YUK				i S	Sn	17 56 58.0	+0.5
YUK				smax	smax		
	comp=E,177nm,0.4s						
YUK				smax	smax		
	comp=N,192nm,0.9s						
YUK	Yuzh-Kuril'sk	3.77	247	i P	Pn	17 56 15.5	+1.4
YUK				i S	Sn	17 56 57.5	0.0
YUK				A	A	17 56 58.6	
	comp=N,190nm,0.5s						
YUK				A	A	17 56 58.6	
	comp=N,180nm,0.5s						
LAGR	Lagunnoye	3.81	248	PN	Pn	17 56 17.4	+2.8
LAGR				eS	Sn	17 56 58.3	-0.1
LAGR				smax	smax		
	comp=N,167nm,0.2s						
LAGR				smax	smax		
	comp=E,214nm,0.6s						
LAGR	Lagunnoye	3.81	248	eP	Pn	17 56 17.4	+2.8
LAGR				eS	Sn	17 56 58.3	-0.1
LAGR				A	A	17 57 09.0	
	comp=E,170nm,0.6s						
LAGR				A	A	17 57 09.0	
	comp=E,210nm,0.6s						
GRPR	Tuman	3.85	247	ePN	Pn	17 56 16.6	+1.5
GRPR				eS	Sn	17 56 58.1	-1.2
GRPR				smax	smax		
	comp=E,183nm,0.3s						
GRPR				smax	smax		
	comp=N,85nm,0.1s						
GRPR	Tuman	3.85	247	eP	Pn	17 56 16.6	+1.5
GRPR				eS	Sn	17 56 58.1	-1.2
GRPR				A	A	17 57 02.0	
	comp=N,90nm,0.5s						
GRPR				A	A	17 57 02.0	
	comp=N,180nm,0.5s						
GLVR	Golovnino	4.13	245	⇑iPN	Pn	17 56 20.2	+1.4
GLVR				i S	Sn	17 57 05.1	-1.0
GLVR				smax	smax		
	comp=N,168nm,0.4s						
GLVR				smax	smax		
	comp=E,86nm,0.3s						
GLVR	Golovnino	4.13	245	i P	Pn	17 56 20.0	+1.2
GLVR				i S	Sn	17 57 05.1	-1.0
GLVR				A	A	17 57 09.0	
	comp=E,170nm,0.5s						
GLVR				A	A	17 57 09.0	
	comp=E,90nm,0.5s						
NMR	Nemuro--Hokkai	4.19	240	⇓iPN	Pn	17 56 19.5	-0.2
NMR				i S	Sn	17 57 03.5	-4.1
NMR	Nemuro--Hokkai	4.19	240	eP	Pn	17 56 19.5	-0.2
ERM	Erimo	6.52	239	⇑ePN	Pn	17 56 53.0	+1.7
PETK	Petropavlovsk-	8.79	29	P	Pn	17 57 24.1	+1.9
	comp=E,0.3nm,0.3s,baz=210,slow=11,SNR=15						
SEY	Seymchan	17.40	3	⇓eP	P	17 59 11.7	-2.2
SEY	Seymchan	17.40	3	eP	P	17 59 11.7	-2.2
MKAR	Makanchi Array	45.97	297	P	P	18 03 29.5	-1.3
	comp=E,0.4nm,0.6s,baz=72,slow=8.1,SNR=5.7						
MKAR	Makanchi Array	45.97	297	i P	P	18 03 30.2	-0.6
MKAR	Makanchi Array	45.97	297	eP	P	18 03 30.2	-0.6
KURK	Kurchatov	46.60	304	⇑eP	P	18 03 34.8	-0.8
KURK	Kurchatov	46.60	304	eP	P	18 03 34.8	-0.8
FINES	FINESS Array B	64.35	334	P	P	18 05 41.5	-1.0
	comp=E,0.7nm,0.5s,baz=38,slow=9.6,SNR=7.5						
NB2	NORSAR Subarra	68.75	340	P	P	18 06 09.9	-0.8
	comp=Z,0.3nm,0.3s,baz=26,slow=6.5						
NOA	NORSAR Array B	68.75	340	P	P	18 06 09.7	-1.0
	comp=Z,0.3nm,0.4s,baz=28,slow=6.6,SNR=7.4						
NOA	NORSAR Array B	68.75	340	eP	P	18 06 10.3	-0.4
ASAR	Alice Springs	70.61	196	P	P	18 06 24.2	+1.8
	comp=Z,0.4nm,0.8s,baz=13,slow=5.7,SNR=3.5						
AKASG	Malin Array Be	71.55	325	P	P	18 06 27.2	-0.5
	comp=Z,0.4nm,0.3s,baz=38,slow=6.0,SNR=3.5						
ESK	Eskdalemuir	77.06	345	i P	P	18 06 53.6	-6.1
GERES	GERESS Array B	78.73	333	P	P	18 07 08.9	-0.3
	comp=Z,0.2nm,0.3s,baz=35,slow=3.6,SNR=4.6						

*MDD **26** 18:02:08.8±1.8, 33°.88N×4°.82W, h25^{km}, mb3.9/9, Error ellipse: s-maj=16.0km s-min=11.3km az=180.0, PRXIMO SOLUCIN POBRE*
*SFS **26** 18:02:08.0, 33°.80N×4°.80W, h20^{km}, ML3.8, BIR TAMTAM (MARRUECOS)*
*ISCJB **26** 18:02:11.4±0.7, 34°.37N±0°.02×4°.68W±0°.03, h1^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=2.7km az=16.1*
*CNRM **26** 18:02:14.3, 34°.20N×4°.60W, h2^{km}, ml2.9*
ISC 26 18:02:11.4±1.3, **34°.25N**±0°.02×**4°.69W**±0°.02, **h9**^{km}±11^{km}, **n40**, σ**2^{s}42**/71, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SICH	Sidi Chahed	0.54	254	S	Sb	18 02 32.3	+1.5
LCRM	LCR	0.58	194	S	Sn	18 02 35.6	0.0
AKLM	AKL	0.73	69	P	Pb	18 02 25.7	-0.6
AKLM				S	Sb	18 02 37.3	+0.8
IFR	Ifrane	0.82	206	ePn	Pg	18 02 25.5	-1.6
IFR	Ifrane	0.82	206	i Pg	Pb	18 02 27.4	-0.5
IFR				eS	Sb	18 02 38.0	-1.0
PVLZ	Peæn de	0.97	19	Pg	Pn	18 02 32.9	+1.7
PVLZ				Sn	Sn	18 02 46.8	+1.6
PVLZ	Peæn de	0.97	19	eP	Pn	18 02 32.9	+1.7
PVLZ				eS	Sn	18 02 46.8	+1.6
CHEFC	Chefchaouen	1.01	328	P	Pn	18 02 32.4	+0.7
CHEFC				S	Sn	18 02 51.3	+5.3
RSA	Sarsar	1.12	304	P	Pn	18 02 37.2	+3.8
RSA				S	Sn	18 02 56.4	+7.4
PALE	Palemas	1.15	33	P	Pn	18 02 35.0	+1.4
PALE				S	Sn	18 02 53.9	+4.5
CZD	Col de Zad	1.25	194	P	Pn	18 02 35.5	+0.2
CZD				S	Sn	18 02 54.0	+1.6
MD31	MD31	1.38	182	P	Pb	18 02 39.1	+1.7
MD31				S	Sn	18 02 58.9	+3.6
MDT	Midelt	1.44	177	P	Pg	18 02 39.3	+0.3
MDT				S	Sn	18 03 00.5	+3.8
ECEU	Ceuta	1.74	341	Pn	Pn	18 02 40.1	-1.6
	2.1nm,0.1s,SNR=7.9						
ECEU				Sn	Sb	18 03 04.8	-0.5
	2.1nm,0.1s,SNR=7.9						
JBK	JBK	1.76	87	P	Pn	18 02 42.5	+0.3
JBK				S	Sn	18 03 05.0	+0.2
EMEL	Melilla	1.77	53	Pn	Pn	18 02 40.4	-1.8
	55nm,0.1s,SNR=7.9						
EMEL				Sn	Sb	18 03 06.2	-0.1
	69nm,0.4s,SNR=7.9						
MELI	Melilla	1.78	54	Sn	Sn	18 03 04.8	-0.3
MELI	Melilla	1.78	54	eS	Sn	18 03 04.8	-0.3
ZHG	ZHG	1.81	244	S	Sg	18 03 17.0	+7.4
EALB	Alboran	2.17	38	Sn	Sb	18 03 16.0	-1.6
	10nm,0.2s,SNR=7.9						
EMIJ	Mijas	2.31	358	Pn	Pn	18 02 48.4	-1.2
	0.4nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	18 03 17.5	-0.6
	1.9nm,0.3s,SNR=7.9						
TDRA	Tendrara	2.53	118	P	Pb	18 02 57.4	+0.4
TDRA				S	Sb	18 03 27.0	-1.3
EGOR	Sierra Gorda,	2.89	9	Pn	Pn	18 02 57.5	-0.2
	0.2nm,0.1s,SNR=7.9						
EGOR				Sn	Sn	18 03 33.7	+1.1
	1.3nm,0.4s,SNR=7.9						
EBER	Berja	3.02	29	Pn	Pn	18 02 58.6	-0.9
	1.3nm,0.3s,SNR=5.0						
EBER				Sn	Sn	18 03 36.6	+0.7
	6.5nm,0.3s,SNR=6.4						
EQUE	Quentar	3.12	19	Pn	Pn	18 03 01.2	+0.4
	0.4nm,0.1s,SNR=4.8						
EQUE				Sn	Sn	18 03 39.9	+1.7
	2.4nm,0.3s,SNR=7.9						
SRHM	Skhour des Reh	3.22	237	P	Pg	18 03 10.2	-2.8
SRHM				S	Sg	18 03 54.7	0.0
ENIJ	Nijar	3.39	36	Pn	Pn	18 03 04.5	+0.1
	2.9nm,0.3s,SNR=7.9						
ENIJ				Sn	Sn	18 03 45.7	+1.0
	8.9nm,0.4s,SNR=7.9						
FIGM	Figuig	3.57	125	P	Pn	18 03 08.8	+1.8
FIGM				S	Sb	18 03 54.4	-3.8
OUZM	OUZ	3.76	208	P	Pb	18 03 17.9	-0.2
OUZM				S	Sb	18 04 02.5	-1.3
EQES	Quesada	3.78	20	Pn	Pn	18 03 09.8	-0.1
	1.0nm,0.2s,SNR=7.9						
EQES				Sn	Sn	18 03 55.1	+0.5
	3.4nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.86	336	Pn	Pn	18 03 10.4	-0.4
	0.9nm,0.4s,SNR=7.9						
EMIN				Sn	Sn	18 03 55.1	-1.2
	0.6nm,0.3s,SNR=7.9						
ECAB	El Cabril	3.86	351	Pn	Pn	18 03 10.7	-0.2
	0.3nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	18 03 56.2	-0.3
	4.1nm,0.2s,SNR=7.9						
EADA	Adamuz	3.91	1	Pn	Pn	18 03 12.2	+0.6
	0.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	18 03 57.4	-0.2
	1.3nm,0.3s,SNR=7.9						
EGRO	El Granado	3.98	326	Pn	Pn	18 03 11.2	-1.3
	1.7nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	18 03 56.9	-2.5
	1.1nm,0.3s,SNR=4.6						
OUK	Oukaimeden	4.05	222	P	Pb	18 03 18.7	-4.3
OUK				S	Sb	18 04 08.5	-3.6
SESP	Santiago Espad	4.23	24	Pn	Pn	18 03 17.1	+0.9
	1.6nm,0.2s,SNR=7.9						
SESP				Sn	Sn	18 04 06.3	+0.5
	7.2nm,0.2s,SNR=4.0						
SESP	Santiago Espad	4.23	24	P	Pb	18 03 20.7	-5.4
SESP				S	Sn	18 04 11.2	+5.4
TTIG	Tnine Tigouga,	4.87	222	P	Pn	18 03 30.0	+5.1
TTIG				S	Sb	18 04 28.9	-6.7
ETOB	Tobarra	5.06	29	Pn	Pn	18 03 27.9	+0.4
	0.8nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	18 04 25.9	-0.3
	1.8nm,0.3s,SNR=7.9						
PAB	San Pablo	5.29	3	Pn	Pn	18 03 31.4	+0.8
	1.3nm,3.2s,SNR=7.9						
PAB				Sn	Sn	18 04 30.1	-1.7
	1.3nm,0.7s,SNR=7.9						

JMA 26 18:02:26.6±0.2, **24°.76N**×**123°.10E**, **h23**^{km}, **M1.0**, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.31	195	P	Pb	18 02 33.3	-0.3
YOJ				eS	Sb	18 02 38.4	+0.1
JYNG	Yonagunijimaku	0.34	205	P	Pb	18 02 34.0	-0.1
JYNG				eS	Sb	18 02 38.9	-0.2
IRIF	Iriomote-Funau	0.71	126	P	Pb	18 02 40.0	-0.4
IRIF				eS	Sb	18 02 49.8	+0.1
JKRS	Kuro-shima	0.98	122	eS	Sb	18 02 57.5	+0.2

TAP 26 18:02:54.5, **24°.43N**×**121°.96E**, **h10**^{km}±1^{km}, **ML1.6**, **1C**, **C**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao	0.19	270	i P	Pg	18 02 59.7	+1.2
	baz=269						
NANB				S	Sg	18 03 02.9	+1.6
	baz=269						
EOS1	EOS1	0.20	52	eP	Pg	18 02 58.9	+0.3
	baz=52						
EOS1				eS	Sg	18 03 02.5	+1.1
	baz=52						
ENA	Nanau	0.20	270	P	Pg	18 02 59.7	+1.1
	baz=269						
ENA				i S	Sg	18 03 02.8	+1.3
	baz=269						
TWC	Suao	0.20	331	⇑iP	Pg	18 02 59.4	+0.6
	baz=333						
TWC				S	Sg	18 03 03.3	+1.6
	baz=333						
TWE	Neicheng	0.39	318	P	Pb	18 03 03.4	-0.2
	baz=318						
TWE				S	Sb	18 03 09.3	-0.5
	baz=318						
NACB	Ninganchiao	0.42	233	eP	Pb	18 03 03.5	-0.5
	baz=232						
NACB				eS	Sb	18 03 10.3	-0.2
	baz=232						
NDT	Datong Townshi	0.44	293	eP	Pb	18 03 04.3	-0.2
	baz=293						
NDT				eS	Sb	18 03 10.6	-0.5
	baz=293						
ETLH	Xiulin Townshi	0.49	243	eP	Pb	18 03 04.8	-0.5
	baz=243						
ETLH				eS	Sb	18 03 12.3	-0.2
	baz=243						
NNSB	Datong	0.53	270	eP	Pb	18 03 06.0	+0.1
	baz=269						
NNSB				eS	Sb	18 03 13.4	-0.3
	baz=269						
NNS	Nan Shan	0.53	271	P	Pb	18 03 06.0	-0.1
	baz=270						
NNS				S	Sb	18 03 13.3	-0.6
	baz=270						
TIPB	Shuangxi	0.55	347	P	Pb	18 03 06.3	0.0
	baz=347						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIPB	baz=347			*e*S	Sg	18 03 13.4	+0.8
YHNB	Yeheng baz=294	0.58	294	*e*P	Pb	18 03 06.9	0.0
YHNB	baz=294			*e*S	Sb	18 03 16.1	+0.8
WHF	Hehuan Shan baz=245	0.69	246	P	Pb	18 03 08.5	-0.5
WHF	baz=245			S	Sb	18 03 19.3	+0.5
YM01	YM01 baz=333	0.80	334	*e*P	Pb	18 03 11.1	+0.5
YM01	baz=333			*e*S	Sn	18 03 23.1	-0.9
CHGB	Renai baz=242	0.81	243	*e*P	Pb	18 03 10.9	+0.1
CHGB	baz=242			*e*S	Sb	18 03 22.7	+0.8
YM10	YM10 baz=333	0.81	334	*e*P	Pb	18 03 11.0	+0.3
YM10	baz=333			*e*S	Sn	18 03 23.7	-0.6

NNC 26 18:17:38.1±4.5,36°.93N×70°.89E,h0km,mb4.0,mpv3.7, 4C-2D,Error ellipse: s-maj=35.0km s-min=30.1km az=164.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu SNR=23	5.63	22	P	Pn	18 19 03.7	+0.3
UCH	Uchtor SNR=6.9	5.99	27	P	Pn	18 19 08.7	+0.3
EKS2	Erkin-Say SNR=7.5	6.14	20	P	Pn	18 19 10.0	-0.2
KZA	Kyzart SNR=5.1	6.15	32	P	Pn	18 19 14.0	+3.5
KK31	Karatay Array 2.0nm,0.2s,baz=175,slow=12,SNR=135	6.18	357	⇓Pn	Pn	18 19 11.0	+0.5
KK31	1.7nm,0.4s,baz=180,slow=23,SNR=5.2			⇑Sn	Sn	18 20 23.4	+1.5
AAK	Ala-Archa 2.7nm,0.4s	6.34	25	⇑Pn	Pn	18 19 13.7	+0.7
AAK	3.2nm,0.5s			⇑Sn	Sn	18 20 26.8	+0.6
AAK	Ala-Archa SNR=5.0	6.34	25	P	Pn	18 19 14.2	+1.2
USP	Ospenovka SNR=6.4	6.91	22	P	Pn	18 19 20.8	+0.2
TKM2	Tokmak 2 1.8nm,0.5s	6.99	30	⇑Pn	Pn	18 19 20.8	-1.1
TKM2	3.6nm,0.9s			⇓Sn	Sn	18 20 43.5	+1.3

IDC 26 18:18:19.7±5.3,3°.31S×100°.96E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/31,mbtmp3.4/4,Error ellipse: s-maj=271.1km s-min=23.0km az=51.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 1.2nm,0.9s,baz=294,slow=9.7,SNR=5.8	36.51	120	P	P	18 25 26.8	-0.4
ASAR	Alice Springs 0.1nm,0.4s,baz=302,slow=7.8,SNR=4.8	37.71	125	P	P	18 25 37.6	+0.2
MKAR	Makanchi Array 0.6nm,0.7s,baz=152,slow=8.0,SNR=6.7	52.55	344	P	P	18 27 34.6	-0.3
KURBB	Kurchatov Arra 0.1nm,0.4s,baz=159,slow=7.2,SNR=3.3	57.07	343	P	P	18 28 07.7	+0.1

IDC 26 18:27:16.6±5.5,39°.42N×110°.55E,h0km,mb3.6/3, mb1 3.7/4,mb1mx3.3/39,mbtmp3.6/4,ML2.8/1,Error ellipse: s-maj=116.4km s-min=24.1km az=84.0

ISC 26 18:27:15.2±4.0,39°.25N±0°.09×110°.8E±0°.6,h10km,n6, σ1s.92/6,mb3.6/3,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	Baotou	1.49	335	*e*P	Pg	18 27 43.5	-0.3
XAN	Xi'an	5.43	197	P	Pb	18 28 48.5	-1.6
XAN				pP	Pg	18 28 54.5	-4.6
XAN	comp=Z,12nm,0.9s			pmax	pmax		
SONM	Songino Array comp=Z,0.1nm,0.3s,baz=161,slow=13,SNR=11	9.16	341	Pn	Pn	18 29 27.1	-0.4
SONM	comp=Z,0.2nm,0.3s,baz=162,slow=28,SNR=3.5			Lg	Lg	18 31 58.4	
MKAR	Makanchi Array comp=Z,2.3nm,0.9s,baz=96,slow=12,SNR=19	22.11	299	P	P	18 32 10.6	0.0
CMAR	Chiang Mai Arr comp=Z,1.7nm,0.8s,baz=13,slow=9.8,SNR=11	23.15	210	P	P	18 32 24.6	+2.8
KURBB	Kurchatov Arra comp=Z,1.2nm,0.9s,baz=106,slow=9.4,SNR=6.7	25.34	307	P	P	18 32 42.7	+0.7

TAP 26 19:00:22.4,22°.86N×121°.61E,h3km,ML1.9,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung baz=318	0.33	317	P	Pb	19 00 30.0	-1.0
CHKT	baz=318			S	Sb	19 00 35.3	-1.4
TTN	Taitung baz=256	0.44	257	P	Pb	19 00 32.4	-0.4
TTN	baz=256			S	Sb	19 00 39.5	-0.3
TTN	Taitung baz=153	0.44	257	*e*S	Sb	19 00 39.4	-0.3
TWGBT	Beinan baz=265	0.49	266	*e*S	Sb	19 00 41.5	+0.3
TWG	Pinlang baz=265	0.50	266	S	Sb	19 00 41.6	+0.1
TWF1	Yuli baz=331	0.57	330	*e*P	Pg	19 00 33.9	+0.5
TWF1	baz=331			*e*S	Sb	19 00 43.3	-0.3
TWF1	Yuli baz=51	0.57	330	*e*P	Pg	19 00 33.7	+0.3
YULB	Yu-li baz=332	0.60	332	*e*P	Pg	19 00 34.7	+0.7
YULB	baz=332			*e*S	Sb	19 00 43.9	-0.7
YULB	Yu-li baz=46	0.60	332	*e*P	Pb	19 00 35.0	-0.7
ELDTW	Lidau baz=302	0.64	301	*e*S	Sb	19 00 44.4	-1.2
HGSD	Ruisui baz=345	0.66	345	*e*S	Sb	19 00 45.9	-0.1
ECL	Taimali baz=246	0.66	247	*e*S	Sg	19 00 44.2	+0.6
EHY	Hungye baz=339	0.70	338	P	Pb	19 00 36.7	-0.6
EHY	baz=339			*e*S	Sb	19 00 46.9	-0.4
EHY	Hungye baz=39	0.70	338	*e*P	Pb	19 00 36.7	-0.5
EGFH	Guangfu baz=5.0	0.82	348	*e*S	Sg	19 00 49.6	+0.7
EGFH	Guangfu baz=36	0.82	348	*e*S	Sg	19 00 49.7	+0.7
EAST	Anshuo baz=235	0.85	236	*e*S	Sg	19 00 49.3	-0.4
SLGT	Liugui baz=278	0.90	279	*e*S	Sb	19 00 52.9	-0.1
SSD	Sandimen baz=262	0.91	263	*e*S	Sn	19 00 54.8	-0.9
MASBT	Mashibuluo baz=239	0.93	255	*e*S	Sn	19 00 56.2	-0.1
ESL	Shilin baz=8.0	0.97	350	*e*P	Pg	19 00 40.8	-0.2
ALS	Alishan baz=312	0.98	311	*e*S	Sb	19 00 55.3	-0.5
VWDT	VWDT baz=350	0.99	334	*e*P	Pg	19 00 40.5	-0.9
WTP	Ta-pu baz=293	0.99	293	*e*S	Sn	19 00 58.5	+0.5
TPUB	Ta-pu baz=309	1.00	296	*e*S	Sn	19 00 57.2	-0.9
CHN1	Nanshi baz=288	1.05	288	*e*S	Sn	19 00 59.8	+0.6
CHN4	Tsaushan baz=310	1.06	298	*e*S	Sn	19 00 59.8	+0.4
SNST	Tainan City baz=289	1.09	290	*e*S	Sn	19 01 02.1	+2.0
WHYT	Xinyi Township baz=321	1.09	320	*e*S	Sb	19 00 59.3	+0.8
TWK	Hsinying baz=292	1.11	292	S	Sn	19 01 01.5	+0.8
NACB	Ninganchiao baz=16	1.31	359	*e*S	Sg	19 01 01.8	-2.7
WHF	Hehuan Shan baz=347	1.32	346	*e*S	Sg	19 01 02.5	-2.5

TAP 26 19:00:25.4,23°.10N×120°.97E,h17km±1km,ML1.4,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau baz=32	0.10	28	P	Pg	19 00 30.1	+0.9
ELDTW	baz=32			S	Sg	19 00 32.3	+0.7
STYT	Tauyuan baz=287	0.20	287	P	Pg	19 00 30.5	+0.1
STYT	baz=287			*e*S	Sg	19 00 32.7	-1.1
TWG	Pinlang baz=159	0.30	161	*e*P	Pb	19 00 33.0	+0.7
TWGBT	Beinan baz=159	0.30	160	*e*P	Pb	19 00 33.0	+0.6
TWGBT	baz=159			*e*S	Sb	19 00 38.2	+1.1
SLGT	Liugui baz=249	0.32	250	*e*P	Pb	19 00 32.7	+0.1
SGST	Jiashian baz=266	0.35	267	*e*S	Sb	19 00 38.8	+0.2
WTP	Ta-pu baz=293	0.36	294	*e*P	Pb	19 00 33.9	+0.6
WTP	baz=293			*e*S	Sb	19 00 38.7	+0.1
CHKT	Chengkung baz=90	0.37	91	*e*P	Pb	19 00 33.6	+0.2
TPUB	Ta-pu baz=302	0.37	302	P	Pb	19 00 34.3	+0.8
TPUB	baz=302			*e*S	Sb	19 00 39.1	+0.1
TWF1	Yuli baz=51	0.39	51	*e*S	Sb	19 00 39.8	+0.2
CHN1	Nanshi baz=281	0.41	281	*e*P	Pb	19 00 34.4	+0.1
CHN1	baz=281			*e*S	Sb	19 00 41.2	+1.0
CHN4	Tsaushan baz=305	0.42	306	*e*P	Pn	19 00 35.6	-1.1
CHN4	baz=305			*e*S	Sb	19 00 41.9	+1.4
ALS	Alishan baz=340	0.43	340	*e*S	Sb	19 00 42.2	+1.1
SSD	Sandimen baz=220	0.47	221	*e*P	Pb	19 00 35.6	+0.4
SSD	baz=220			*e*S	Sb	19 00 43.2	+1.3
ECL	Taimali baz=180	0.50	181	*e*P	Pg	19 00 34.9	-0.6
HGSD	Ruisui baz=47	0.57	47	*e*S	Sb	19 00 45.4	+0.6
WHYT	Xinyi Township baz=349	0.60	350	*e*S	Sn	19 00 47.6	-0.9
SCZT	Fangliau baz=203	0.80	204	*e*P	Pb	19 00 40.5	-0.2
SCZT	baz=203			*e*S	Sg	19 00 52.3	+0.8
ESL	Shilin baz=31	0.83	31	*e*S	Sb	19 00 52.2	0.0

MOS 26 19:08:28.4±0.8,23°.00S×179°.11E,h535km,mb5.2/53, Error ellipse: s-maj=9.6km s-min=7.5km az=80.3

IDC 26 19:08:29.0±0.8,23°.17S×179°.32E,h540km±8km,mb4.5/27, mb1 4.6/29,mb1mx4.5/35,mbtmp5.3/29,Error ellipse: s-maj=11.5km s-min=9.0km az=85.0

BJI 26 19:08:30.9±0.0,23°.01S×179°.33E,h572km,mb4.9/43, mB4.9/28

ISCJB 26 19:08:30.2±0.4,23°.14S±0°.03×179°.05E±0°.03,h560km±5km, mb5.0/297,Error ellipse: s-maj=4.4km s-min=3.3km az=153.6

NEIC 26 19:08:31.4±1.9,23°.17S×179°.18E,h568km±3km, mb5.1/281,Error ellipse: s-maj=13.1km s-min=11.4km az=116.0

GCMT 26 19:08:33.5±0.4,22°.84S±0°.04×178°.99E±0°.04,h560km±2km, MW5.3/59,Moment Tensor Solution. s59,c71; Duration: 1s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.74±.04; $M_{\theta\theta}$0.46±.07; $M_{\phi\phi}$0.28±.07; $M_{r\theta}$-0.85±.08; $M_{\theta\phi}$-0.27±.07; $M_{\phi r}$0.60±.09; Best double couple: $M_0$1.24600×10^{17} NP1:ϕ_s125.00000°,δ73.00000°,λ-90.00000°. NP2: ϕ_s306.00000°,δ17.00000°,λ-89.00000°. Principal axes: T 1.2020, Plg28.0000°, Azm216.0000°; N 0.0890, Plg0.0000°, Azm125.0000°; P -1.2910, Plg62.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function

ISC 26 19:08:30.6±0.4,23°.18S±0°.04×179°.24E±0°.04,h559km±4km, h561km:pP-P,n1257,σ1s.36/1388,mb5.1/297,61C-68D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	6.56	158	*e*P	P	19 10 16.3	+1.6
RAO	Raoul Island	6.56	158	*e*P	P	19 10 16.3	+1.6
GLKZ	Green Lake	6.57	158	P	P	19 10 17.1	+2.4
GLKZ				S	S	19 11 39.0	-1.1
MARNC	Mare, Loyalty	10.52	277	*e*P	P	19 10 52.6	-1.4
PINNC	Pines Island,	10.89	271	*e*P	P	19 10 57.5	-0.3
NIUE	Niue	10.90	70	*e*P	P	19 10 57.5	-0.4
NIUE	Niue baz=11,SNR=23	10.90	70	P	P	19 10 58.0	0.0
NIUE	baz=11			S	S	19 12 58.4	-0.7
NFK	Norfolk Island baz=12,SNR=6.9	11.71	238	P	P	19 11 08.2	+2.1
DZM	Mont Dzumac 94nm,0.9s	11.87	273	*e*P	P	19 11 07.6	-0.4
DZM	Mont Dzumac 3.7nm,0.3s,baz=99,slow=17,SNR=14	11.87	273	P	P	19 11 07.4	-0.7
DZM	baz=323,slow=20,SNR=1.8			S	S	19 13 20.3	+2.9
DZM	Mont Dzumac	11.87	273	*e*P	P	19 11 07.3	-0.7
DZM				*e*S	S	19 13 24.5	+7.0
OUZ	Omahuta	12.96	201	*e*P	P	19 11 20.8	+1.9
OUZ	Omahuta	12.96	201	P	P	19 11 21.2	+2.2
WCZ	Waipu Caves	13.40	197	P	P	19 11 25.2	+1.8
GRZ	Great Barrier	13.43	193	P	P	19 11 24.9	+1.2
KUZ	Kuaotunu	13.86	192	P	P	19 11 29.0	+0.9
WIAZ	Waiheke Island	14.02	194	P	P	19 11 30.8	+1.0
MKAZ	Moumakai	14.31	193	P	P	19 11 34.0	+1.2
MXZ	Matakaoa Point	14.36	183	*e*P	P	19 11 31.6	-1.6
MXZ				*e*S	S	19 14 00.2	-3.2
MXZ	Matakaoa Point	14.36	183	P	P	19 11 33.1	-0.1
HAZ	Te Kaha	14.58	185	P	P	19 11 34.5	-1.0
TGRZ	Tauranga	14.72	189	P	P	19 11 39.9	+3.0
OPRZ	Ohinepanea	14.80	188	P	P	19 11 40.2	+2.5
TOZ	Tahuroa Road	14.85	192	P	P	19 11 39.2	+1.0
TOZ	Tahuroa Road	14.85	192	P	P	19 11 38.7	+0.5
KMRZ	Kaimai	14.89	190	P	P	19 11 40.8	+2.2
MARZ	Manawahe	14.92	188	P	P	19 11 41.3	+2.4
KARZ	Kaharoa	15.01	189	P	P	19 11 42.4	+2.5
EDRZ	Edgecumbe	15.03	188	P	P	19 11 43.3	+3.2
OMRZ	Omania	15.08	189	P	P	19 11 42.1	+1.5
NGRZ	Ngongotaha	15.10	189	P	P	19 11 44.1	+3.3
URZ	Urewera 14nm,0.3s,baz=264,slow=2.7,SNR=51	15.14	186	P	P	19 11 38.0	-3.1
URZ	3.4nm,0.3s,baz=16,slow=18,SNR=8.6			S	S	19 14 09.1	-8.5
URZ	Urewera 330nm,0.8s	15.14	186	*e*P	P	19 11 38.1	-3.0
URZ	Urewera	15.14	186	P	P	19 11 38.2	-2.9
UTU	Utuhina	15.17	189	P	P	19 11 44.2	+2.7
TARZ	Mount Tarawera	15.19	188	P	P	19 11 43.5	+1.8
HLRZ	Highlands Stat	15.22	189	P	P	19 11 44.1	+2.0
TKGZ	Te Karaka	15.26	184	P	P	19 11 43.0	+0.7
CNGZ	Carnagh Statio	15.28	183	P	P	19 11 42.1	-0.4
RRRZ	Republican Roa	15.29	188	P	P	19 11 43.9	+1.3
HSRZ	Hossack Road	15.30	189	P	P	19 11 48.9	+6.2
RAGZ	Rawiri	15.35	185	P	P	19 11 40.3	-3.0
GRRZ	Galatos Road	15.36	189	P	P	19 11 46.2	+2.8
HRRZ	Handcock Road	15.37	189	P	P	19 11 44.8	+1.3
MUGZ	Murupara	15.39	187	P	P	19 11 43.5	-0.1
TLZ	Tolley Road	15.43	191	P	P	19 11 45.7	+1.6
PRRZ	Plateau Road	15.46	188	P	P	19 11 45.0	+0.6
RIGZ	Rimuhau	15.53	184	P	P	19 11 44.0	-1.0
ALRZ	Allen Road	15.53	189	P	P	19 11 46.1	+1.0
KUTZ	Kaahu Road	15.54	190	P	P	19 11 47.7	+2.6
SNGZ	Shannon Statio	15.63	186	P	P	19 11 44.8	-1.3
SNGZ	Shannon Statio	15.63	186	P	P	19 11 42.2	-3.9
WHTZ	Whakaora	15.69	190	P	P	19 11 49.8	+3.1
PRGZ	Paritu Road	15.73	184	P	P	19 11 51.0	+4.0
HIZ	Hauiti 166nm,1.1s	15.74	193	*e*P	P	19 11 47.0	-0.1
HIZ	Hauiti	15.74	193	P	P	19 11 48.3	+1.3
MTHZ	Maungataniwha	15.76	187	P	P	19 11 46.1	-1.2
MTHZ	Maungataniwha	15.76	187	P	P	19 11 44.7	-2.6
MTHZ				S	S	19 14 25.6	-2.4
WATZ	Wairara	15.77	190	P	P	19 11 50.1	+2.7
MRHZ	Matea Rd	15.79	188	P	P	19 11 47.5	-0.2
RAHZ	Arahi	15.79	186	P	P	19 11 43.6	-4.1
RAHZ				S	S	19 14 25.2	-3.5
RATZ	Rangitukua	15.91	190	P	P	19 11 48.3	-0.5
WHHZ	Waihua	15.94	186	P	P	19 11 49.6	+0.6
MHGZ	Mahia Peninsul	15.96	184	P	P	19 11 49.7	+0.4
RITZ	Rihia Road	16.01	190	P	P	19 11 49.3	-0.4
BKZ	Black Stump Fm 55nm,0.5s	16.11	188	*e*P	P	19 11 47.4	-3.2
BKZ	Black Stump Fm	16.11	188	P	P	19 11 47.9	-2.8
BKZ	Black Stump Fm	16.11	188	P	P	19 11 47.5	-3.2
KRVZ	Karewarewa	16.16	190	P	P	19 11 51.2	0.0
TWVZ	Taurewa	16.17	191	P	P	19 11 51.9	+0.6
WTVZ	West Tongariro	16.19	190	P	P	19 11 51.6	+0.1
NGZ	Ngauruhoe	16.24	190	P	P	19 11 51.5	-0.5
TUVZ	Tukino	16.32	190	P	P	19 11 51.4	-1.4
FWVZ	Far West T-bar	16.33	190	P	P	19 11 52.2	-0.8
VRZ	Vera Road	16.34	192	P	P	19 11 54.1	+1.3
DRZ	Dome Shelter	16.35	190	P	P	19 11 53.4	+0.2
WHVZ	Whangaehu Hut	16.35	190	P	P	19 11 52.2	-1.0
MCHZ	McNeill Hill	16.36	187	P	P	19 11 51.5	-1.5
MCHZ	McNeill Hill	16.36	187	P	P	19 11 50.5	-2.4
KWHZ	Kaweka Forest	16.37	188	P	P	19 11 52.4	-0.7
MHEZ	Mangahewa	16.39	194	P	P	19 11 57.6	+4.4
PKVZ	Pokaka	16.40	191	P	P	19 11 53.1	-0.3
MOVZ	Moawhango	16.45	190	P	P	19 11 52.7	-1.1
MTVZ	Mangateitei	16.47	190	P	P	19 11 55.9	+1.9
BHHZ	Black Hill Sta	16.48	189	P	P	19 11 51.3	-2.8
BHHZ	Black Hill Sta	16.48	189	P	P	19 11 50.7	-3.4
PKE	Pukeiti	16.58	194	P	P	19 11 58.4	+3.4
KRHZ	Kereru	16.59	188	P	P	19 11 52.9	-2.2
KRHZ	Kereru	16.59	188	P	P	19 11 51.4	-3.6
KHEZ	Kahui Hut	16.67	194	P	P	19 11 59.6	+3.8
NBEZ	Newall Road No	16.68	195	P	P	19 12 00.6	+4.8
PREZ	Palmer Road	16.68	194	P	P	19 11 60.0	+4.1
KAHZ	Kahuranaki	16.68	186	P	P	19 11 54.5	-1.4
LREZ	Lake Rotokare	16.74	193	P	P	19 11 58.8	+2.5
NMEZ	Namu Road	16.81	195	P	P	19 12 00.9	+3.9
PNHZ	Pukenui	16.88	188	P	P	19 11 55.8	-1.9
PNHZ	Pukenui	16.88	188	P	P	19 11 55.1	-2.5
WAZ	Wanganui	16.91	191	P	P	19 11 58.3	+0.4
PXZ	Pawanui	16.92	186	P	P	19 11 56.8	-1.1
PXZ	Pawanui	16.92	186	P	P	19 11 54.9	-3.0
TSZ	Takapari Road	17.05	189	P	P	19 11 57.9	-1.3
DVHZ	Dannevirke	17.26	188	P	P	19 11 59.6	-1.5
DVHZ	Dannevirke	17.26	188	P	P	19 11 58.6	-2.5
PRWZ	Pori Road	17.54	188	P	P	19 12 02.5	-1.1
PRWZ	Pori Road	17.54	188	P	P	19 12 01.4	-2.3
BFZ	Birch Farm 128nm,0.9s	17.63	188	*e*P	P	19 12 02.0	-2.5
BFZ	Birch Farm	17.63	188	P	P	19 12 02.8	-1.6
BFZ	Birch Farm	17.63	188	P	P	19 12 03.0	-1.5
MRZ	Mangatainoka R	17.70	189	P	P	19 12 03.4	-1.7
MRZ	Mangatainoka R	17.70	189	P	P	19 12 03.2	-1.9
OGWZ	Otaki Gorge	17.91	190	P	P	19 12 05.6	-1.4
OGWZ	Otaki Gorge	17.91	190	P	P	19 12 05.3	-1.8
HOWZ	Holdsworth Sta	17.94	189	P	P	19 12 05.7	-1.6
HOWZ	Holdsworth Sta	17.94	189	P	P	19 12 05.8	-1.6
TMWZ	Te Maipa	18.09	188	P	P	19 12 07.7	-1.1
TMWZ	Te Maipa	18.09	188	P	P	19 12 07.4	-1.3
DUWZ	D'Urville Isla	18.13	193	P	P	19 12 08.9	-0.1
MTW	Mount Morrison	18.20	189	P	P	19 12 08.3	-1.3
MTW	Mount Morrison	18.20	189	P	P	19 12 07.5	-2.2
CAW	Cannon Point	18.21	190	P	P	19 12 09.3	-0.5
CAW	Cannon Point	18.21	190	P	P	19 12 08.5	-1.3
TRWZ	Traveller	18.41	188	P	P	19 12 11.3	-0.3
TRWZ	Traveller	18.41	188	P	P	19 12 10.1	-1.4
PAWZ	Paruwai Farm	18.43	189	P	P	19 12 10.8	-1.0
PAWZ	Paruwai Farm	18.43	189	P	P	19 12 09.7	-2.1
WEL	Wellington	18.44	191	P	P	19 12 15.1	+3.3
TCW	Tory Channel	18.45	192	P	P	19 12 11.9	-0.1
TCW	Tory Channel	18.45	192	P	P	19 12 10.7	-1.3
SNZO	South Karori 226nm,0.8s	18.47	191	*e*P	P	19 12 10.7	-1.5
QRZ	Quartz Range 531nm,0.8s	18.48	196	*e*P	P	19 12 12.6	+0.4
MSWZ	Moikau Station	18.49	190	P	P	19 12 12.8	+0.5
BHW	Baring Head	18.54	190	P	P	19 12 12.5	-0.3
PLWZ	Palliser	18.64	189	P	P	19 12 12.7	-1.0
PLWZ	Palliser	18.64	189	P	P	19 12 11.8	-1.9
NNZ	Nelson	18.65	194	P	P	19 12 13.2	-0.5
NNZ	Nelson	18.65	194	P	P	19 12 12.9	-0.8
TUWZ	Tuamarina	18.73	192	P	P	19 12 13.6	-0.8
TUWZ	Tuamarina	18.73	192	P	P	19 12 13.2	-1.3
CMWZ	Cape Campbell	18.99	192	P	P	19 12 18.9	+2.0
CMWZ	Cape Campbell	18.99	192	P	P	19 12 18.1	+1.3
BSWZ	Blackbirch Sta	19.02	192	P	P	19 12 17.4	+0.3
BSWZ	Blackbirch Sta	19.02	192	P	P	19 12 16.1	-1.0
THZ	Tophouse 133nm,0.6s	19.27	194	*e*P	P	19 12 19.1	-0.4
THZ				*e*S	S	19 15 20.8	-4.5
LHI	Lord Howe Isla 191nm,0.8s	19.73	241	*e*P	P	19 12 25.4	+1.6
LHI	Lord Howe Isla baz=20,SNR=14	19.73	241	P	P	19 12 25.5	+1.7
KHZ	Kahutara 143nm,0.8s	19.76	193	*e*P	P	19 12 22.5	-1.3
KHZ				*e*S	S	19 15 29.8	-3.1
KHZ	Kahutara	19.76	193	P	P	19 12 22.7	-1.1
LTZ	Lake Taylor 169nm,0.7s	20.39	195	*e*P	P	19 12 28.3	-1.3
LTZ				*e*S	S	19 15 38.5	-4.5
LTZ	Lake Taylor	20.39	195	P	P	19 12 28.0	-1.5
GVZ	Greta Valley S	20.39	193	P	P	19 12 27.9	-1.7
INZ	Inchbonnie	20.54	197	P	P	19 12 30.1	-0.7
OXZ	Oxford 292nm,0.7s	20.96	195	*e*P	P	19 12 33.1	-1.6
OXZ				*e*S	S	19 15 50.1	-1.8
OXZ	Oxford	20.96	195	P	P	19 12 33.0	-1.7
CRLZ	Canterbury Las 71nm,0.8s	21.06	193	*e*P	P	19 12 34.7	-0.8
MQZ	McQueen's Vall 73nm,0.6s	21.18	193	*e*P	P	19 12 35.3	-1.3
RPZ	Rata Peaks 69nm,0.7s,baz=334,slow=0.8,SNR=31	21.57	196	P	P	19 12 39.4	-0.7
RPZ	18nm,0.9s,baz=242,slow=15,SNR=3.5			S	S	19 15 58.3	-3.2
RPZ	Rata Peaks 65nm,0.6s	21.57	196	*e*P	P	19 12 38.9	-1.2
FOZ	Fox Glacier 282nm,0.8s	21.74	199	*e*P	P	19 12 41.2	-0.4
KNTN	Kanton 58nm,1.1s	22.10	25	*e*P	P	19 12 44.1	-1.2
LBZ	Lake Benmore 74nm,0.6s	22.42	197	*e*P	P	19 12 46.2	-1.6
ODZ	Otahua Downs 27nm,0.8s	22.91	196	*e*P	P	19 12 50.7	-1.4
WKZ	Wanaka 144nm,0.6s	23.16	199	*e*P	P	19 12 53.3	-1.1
WKZ	Wanaka	23.16	199	P	P	19 12 53.2	-1.1
MLZ	Mavora Lakes 344nm,0.7s	23.92	200	*e*P	P	19 13 01.1	0.0
DCZ	Deep Cove 146nm,0.8s	24.31	201	*e*P	P	19 13 04.4	-0.1
WHZ	Wether Hill Ro 471nm,0.8s	24.44	199	*e*P	P	19 13 06.1	+0.4
TARA	Tarawa 158nm,0.9s	25.15	345	*e*P	P	19 13 11.8	-0.6
ARMA	Armidale 136nm,0.7s	25.64	248	*e*P	P	19 13 17.7	+1.1
ARMA	Armidale baz=26,SNR=188	25.64	248	P	P	19 13 17.9	+1.2
EIDS	Eidsvold 90nm,0.8s	25.75	259	*e*P	P	19 13 17.4	-0.2

EIDS	Eidsvold	25.75	259	P	P	19 13 17.7	+0.2
	baz=26,SNR=34						
MGCD	Mangrove Creek	26.66	242	P	P	19 13 26.8	+1.4
	baz=27,SNR=188						
RIV	Riverview	26.78	240	P	P	19 13 27.7	+1.2
	baz=27,SNR=7.1						
RMQ	Roma	27.83	257	P	P	19 13 37.0	+1.2
	baz=28,SNR=53						
CNB	Canberra Magne	28.62	238	P	P	19 13 43.8	+1.2
	baz=29,SNR=229						
CAN	Canberra	28.91	238	*e*P	P	19 13 45.8	+0.7
	273nm,0.8s						
CAN	Canberra	28.91	238	*e*P	P	19 13 45.8	+0.7
YNG	Young	29.12	241	P	P	19 13 47.8	+0.9
	baz=29,SNR=9.5						
MILA	Mila	29.33	235	P	P	19 13 49.2	+0.5
	baz=29,SNR=18						
PPT2	Papeete2	29.72	85	*e*P	P	19 13 54.0	+1.6
	30nm,0.8s						
TVO	Taravao	29.96	86	*e*P	P	19 13 56.2	+1.7
	9.4nm,0.5s						
CTA	Charters Tower	30.78	269	ScP	ScP	19 19 33.1	+1.8
	baz=117,slow=4.0						
CTAO	Charters Tower	30.78	269	*e*P	P	19 14 01.5	+0.1
	232nm,0.6s						
CTAO	Charters Tower	30.78	269	*e*P	P	19 14 01.5	+0.1
CTAO				pmax	pmax		
	comp=Z,232nm,0.6s						
CMSA	Cobar Meteorol	30.84	247	P	P	19 14 02.2	+0.4
	baz=31,SNR=60						
PMOR	Pomariorio Ree	32.05	81	*e*P	P	19 14 13.5	+1.3
	comp=Z,66nm,0.8s						
RABL	Rabaul	32.26	302	*e*P	P	19 14 14.2	+0.1
	comp=Z,41nm,0.4s						
TOO	Toolangi	32.26	236	*e*P	P	19 14 14.5	+0.6
	comp=Z,322nm,1.3s						
TOO	Toolangi	32.26	236	P	P	19 14 14.6	+0.7
	baz=32,SNR=95						
TOO	Toolangi	32.26	236	*e*P	P	19 14 14.5	+0.6
TOO				pmax	pmax		
	comp=Z,322nm,1.3s						
TAU	Tasmania Unive	32.93	226	*e*P	P	19 14 19.8	+0.5
	comp=Z,101nm,0.6s						
TAU	Tasmania Unive	32.93	226	*e*P	P	19 14 19.8	+0.5
TAU				pmax	pmax		
	comp=Z,101nm,0.6s						
MTSU	Mount Surprise	33.01	272	P	P	19 14 20.6	+0.2
	baz=33,SNR=180						
PMG	Port Moresby	33.60	289	*e*P	P	19 14 23.7	-1.7
	comp=Z,103nm,0.8s						
PMG	Port Moresby	33.60	289	*ce*P	P	19 14 25.0	-0.4
PMG				pmax	pmax		
	comp=Z,397nm,0.7s						
STKA	Stephens Creek	34.35	247	P	P	19 14 31.9	+0.5
	comp=Z,101nm,0.8s,baz=94,slow=10,SNR=197						
STKA				ScP	ScP	19 19 46.3	+2.7
	comp=Z,15nm,0.9s,baz=135,slow=4.7,SNR=6.8						
STKA	Stephens Creek	34.35	247	*e*P	P	19 14 31.0	-0.5
	comp=Z,33nm,1.0s						
STKA				*e*ScP	ScP	19 19 46.3	+2.7
STKA	Stephens Creek	34.35	247	P	P	19 14 32.0	+0.5
	baz=34,SNR=174						
STKA	Stephens Creek	34.35	247	P	P	19 14 32.0	+0.5
STKA				pmax	pmax		
	comp=Z,101nm,0.8s						
ARPS	Mount Arapiles	34.89	239	P	P	19 14 36.0	+0.1
	baz=35,SNR=9.7						
COEN	Coen	35.32	279	*e*P	P	19 14 38.1	-1.6
	comp=Z,52nm,0.9s						
COEN	Coen	35.32	279	P	P	19 14 40.1	+0.4
	baz=35,SNR=20						
HTT	Hallett	36.74	245	P	P	19 14 51.2	-0.1
	baz=37,SNR=62						
QIS	Mount Isa	36.80	266	P	P	19 14 51.2	-0.7
	baz=37,SNR=14						
BBOO	Buckleboo	39.09	246	*e*P	P	19 15 09.5	-0.8
	comp=Z,100nm,0.6s						
BBOO	Buckleboo	39.09	246	P	P	19 15 09.7	-0.6
	baz=39,SNR=13						
TAOE	Nuku Hiva Isla	41.39	77	*e*P	P	19 15 29.9	+0.9
	comp=Z,158nm,0.8s						
AS31	Alice Springs	41.47	260	*e*P	P	19 15 28.9	-0.6
	comp=Z,44nm,1.0s						
AS31				*e*ScP	ScP	19 20 13.8	+2.7
AS31				*e*ScS	PKiKP	19 24 17.9	-1.3
ASAR	Alice Springs	41.47	260	P	P	19 15 29.1	-0.5
	comp=Z,128nm,0.8s,baz=98,slow=7.1,SNR=766						
ASAR				ScP	ScP	19 20 13.8	+2.7
	comp=Z,23nm,0.8s,baz=107,slow=4.1,SNR=26						
ASAR				S	S	19 21 02.6	-2.5
	comp=Z,5.5nm,0.8s,baz=96,slow=15,SNR=8.0						
ASAR				PKiKP	PKiKP	19 24 17.9	-1.3
	comp=Z,0.6nm,0.6s,baz=104,slow=1.6,SNR=4.3						
WB2	Warramunga Arr	41.75	266	*e*P	P	19 15 30.5	-1.2
	comp=Z,108nm,0.8s						
WRAB	Tennant Creek	41.76	266	*e*P	P	19 15 30.4	-1.4
	comp=Z,87nm,0.8s						
WRAB	Tennant Creek	41.76	266	*ce*P	P	19 15 30.5	-1.3
WRAB				pmax	pmax		
	comp=Z,107nm,0.9s						
WR1	Warramunga Arr	41.76	266	*e*ScP	ScP	19 20 14.9	+2.7
WRA	Warramunga Arr	41.76	266	P	P	19 15 30.7	-1.1
	comp=Z,70nm,0.6s,baz=95,slow=9.3,SNR=543						
WRA				ScP	ScP	19 20 14.9	+2.7
	comp=Z,18nm,1.0s,baz=100,slow=4.3,SNR=12						
WRA				S	S	19 21 03.8	-5.6
	comp=Z,5.3nm,0.7s,baz=29,slow=18,SNR=6.4						
GENI	Genyem	43.01	293	P	P	19 15 41.1	-0.5
WAKE	Wake Island	43.96	343	*e*P	P	19 15 48.3	-0.5
	comp=Z,242nm,1.3s						
KDU	Kakadu	45.53	275	P	P	19 15 59.9	-1.1
	baz=46,SNR=13						
FORT	Forrest	45.91	249	*e*P	P	19 16 02.9	-0.8
	comp=Z,462nm,0.6s						
FORT	Forrest	45.91	249	P	P	19 16 03.0	-0.8
	baz=46,SNR=125						
WRKA	Warakurna	46.32	257	P	P	19 16 06.4	-0.5
	baz=46,SNR=68						
MTN	Manton Dam	46.71	274	*e*P	P	19 16 08.5	-1.4
	comp=Z,24nm,0.6s						
MTN	Manton Dam	46.71	274	P	P	19 16 08.7	-1.3
	baz=47,SNR=36						
BAKI	Biak	47.20	291	P	P	19 16 12.7	-1.0
KNRA	Kununurra	48.00	269	P	P	19 16 19.1	-0.5
	baz=48,SNR=46						
KKO	Keanakako`i	49.09	33	*e*P	P	19 16 28.1	+0.4
	comp=Z,156nm,1.2s						
NPH	North Pit	49.10	32	*e*P	P	19 16 27.7	-0.1
	comp=Z,37nm,0.8s						
NPH	North Pit	49.10	32	*e*P	P	19 16 27.7	-0.1
NPH				pmax	pmax		
	comp=Z,37nm,0.8s						
PUH	Pauahi	49.10	33	*e*P	P	19 16 27.8	+0.1
	comp=Z,111nm,0.9s						
UWB	Uwekahuna B	49.11	32	*e*P	P	19 16 28.4	+0.5
	comp=Z,82nm,1.2s						
MLH	Mauna Loa	49.12	32	*e*P	P	19 16 28.4	+0.3
	comp=Z,95nm,0.8s						
MLH	Mauna Loa	49.12	32	*e*P	P	19 16 28.4	+0.3
MLH				pmax	pmax		
	comp=Z,95nm,0.8s						
HMH	Humu‘ula Sheep	49.16	32	*e*P	P	19 16 28.5	+0.1
	comp=Z,193nm,0.9s						
MHA	Mahukona	49.46	31	*e*P	P	19 16 31.2	+1.0
MHA	Mahukona	49.46	31	*e*P	P	19 16 31.2	+1.0
GUMO	Guam	49.67	314	P	P	19 16 31.1	-0.8
	comp=Z,78nm,0.7s,baz=131,slow=10,SNR=7.7						
GUMO	Guam	49.67	314	*e*P	P	19 16 31.4	-0.5
	comp=Z,95nm,0.9s						
GUMO	Guam	49.67	314	*e*P	P	19 16 31.4	-0.5
GUMO				pmax	pmax		
	comp=Z,95nm,0.9s						
FAKI	Fak Fak	49.71	287	*e*P	P	19 16 31.5	-0.8
	comp=Z,78nm,1.2s						
HLK	Haleakala	49.78	31	*e*P	P	19 16 33.5	+0.5
	comp=Z,281nm,1.5s						
KMBL	Kambalda	51.15	248	P	P	19 16 41.5	-1.0
	baz=51,SNR=17						
SARN	Sarigan	51.40	317	*e*P	P	19 16 42.4	-2.1
	comp=Z,100nm,1.8s						
SOEI	Soe	54.09	275	*e*P	P	19 17 04.4	+0.4
	comp=Z,119nm,1.0s						
PSA00	Pilbara Seismi	54.61	259	*e*P	P	19 17 06.2	-1.2
	comp=Z,156nm,1.6s						
KLBR	Kellerberrin	54.63	247	P	P	19 17 06.6	-0.7
	baz=55,SNR=50						
MEEK	Meekatharra	54.65	253	P	P	19 17 06.4	-1.3
	baz=55,SNR=23						
NWAO	Narrogin (SRO)	54.90	245	*e*P	P	19 17 08.6	-0.6
	comp=Z,131nm,1.4s						
NWAO	Narrogin (SRO)	54.90	245	*e*P	P	19 17 08.6	-0.6
NWAO				pmax	pmax		
	comp=Z,131nm,1.4s						
SBA	Scott Base	55.05	183	*e*P	P	19 17 12.2	+2.8
	comp=Z,65nm,0.9s						
SBA	Scott Base	55.05	183	*e*P	P	19 17 12.3	+2.8
SBA				pmax	pmax		
	comp=Z,65nm,0.9s						
BLDU	Ballidu	55.65	248	P	P	19 17 13.6	-0.8
	baz=56,SNR=46						
MUN	Mundaring	55.88	246	P	P	19 17 15.7	-0.3
	baz=56,SNR=29						
MMRI	Maumere	56.36	275	*e*P	P	19 17 18.2	-1.4
	comp=Z,46nm,0.9s						
MORW	Morawa	56.47	250	*e*P	P	19 17 19.2	-0.9
	comp=Z,79nm,0.9s						
MORW	Morawa	56.47	250	P	P	19 17 19.4	-0.7
	baz=56,SNR=30						
GIRL	Giralia	59.40	257	*e*P	P	19 17 40.9	+0.8
	comp=Z,280nm,1.2s						
GIRL	Giralia	59.40	257	P	P	19 17 40.8	+0.8
	baz=59,SNR=9.4						
CASY	Casey	60.45	206	*e*P	P	19 17 46.0	-0.2
	comp=Z,98nm,0.8s						
JAGI	Jajag, Banyuwa	63.85	272	*e*P	P	19 18 07.8	-1.3
	comp=Z,44nm,0.9s						
QSPA	South Pole Qui	66.90	180	P	P	19 18 29.0	+1.5
	comp=Z,23nm,0.6s,baz=347,slow=0.4,SNR=220						
QSPA	South Pole Qui	66.90	180	*e*P	P	19 18 28.9	+1.5
	comp=Z,25nm,0.8s						
UGM	Wanagama	67.39	271	*e*P	P	19 18 30.6	-0.7
	comp=Z,1µm,1.9s						
JHJ2	Mitsune	67.43	325	*e*P	P	19 18 30.5	-0.5
	comp=Z,535nm,1.5s						
JHJ	Hachijo jima 2	67.46	325	P	P	19 18 30.6	-0.7
	comp=Z,81nm,0.6s,baz=250,slow=20,SNR=6.0						
KKM	Kota Kinabalu	68.03	287	*e*P	P	19 18 34.9	-0.4
	comp=Z,21nm,1.1s						
SBUM	Sibu	69.98	282	*e*P	P	19 18 46.6	-0.3
	comp=Z,1.8nm,1.0s						
JOW	Kunigami	70.00	312	P	P	19 18 46.9	+0.2
	comp=Z,4.9nm,0.7s,baz=166,slow=12,SNR=8.1						
JOW	Kunigami	70.00	312	*e*P	P	19 18 46.7	0.0
	comp=Z,21nm,0.6s						
CISI	Cisompet, Garu	70.02	270	*e*P	P	19 18 45.7	-1.5
	comp=Z,45nm,0.6s						
MJAR	Matsushiro Arr	70.92	326	P	P	19 18 50.7	-1.2
	comp=Z,27nm,0.8s,baz=165,slow=5.8,SNR=79						
MJAR	Matsushiro Arr	70.92	326	P	P	19 18 50.7	-1.2
MJAR				pmax	pmax		
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	70.92	326	*e*P	P	19 18 51.5	-0.4
	comp=Z,40nm,0.9s						
MAJO	Matsushiro	70.92	326	*d i*P	P	19 18 51.4	-0.5
MAJO				*i* *PP	pP	19 20 45.0	-1.4
MAJO				pmax	pmax		
	comp=Z,38nm,0.9s						
MAT	Matsushiro	70.92	326	P	P	19 18 51.3	-0.6
MAT				S	S	19 27 22.0	-1.2
MJB9	Matsu-Tunnel	70.92	326	*e*P	P	19 18 51.6	-0.3
	comp=Z,41nm,0.9s						
KSM	Kuching	71.30	280	*e*P	P	19 18 53.5	-1.1
	comp=Z,16nm,0.7s						
JNU	Nakatsue	72.53	319	P	P	19 19 01.0	-0.4
	comp=Z,22nm,0.7s,baz=104,slow=4.0,SNR=17						
JNU	Nakatsue	72.53	319	*e*P	P	19 19 00.4	-1.0
	comp=Z,26nm,0.7s						
YULB	Yu-li	72.89	305	*e*P	P	19 19 01.8	-1.8
	comp=Z,21nm,1.4s						
ERM	Erimo	72.95	333	*de*P	P	19 19 04.4	+0.9
ERM				pmax	pmax		
	comp=Z,26nm,0.9s						
NACB	Ninganchiao	73.12	306	*e*P	P	19 19 04.0	-0.9
	comp=Z,29nm,1.0s						
TPUB	Ta-pu	73.34	305	*e*P	P	19 19 03.7	-2.5
	comp=Z,33nm,0.9s						
SSLB	Suanglung	73.38	306	*e*P	P	19 19 04.8	-1.6
	comp=Z,28nm,1.0s						
YHNB	Yeheng	73.57	307	*e*P	P	19 19 06.4	-1.2
	comp=Z,29nm,0.9s						
KIWB	Kanaga Island	74.78	2	*e*P	P	19 19 13.4	-0.2
ADK	Adak	74.83	3	*e*P	P	19 19 14.0	+0.1
	comp=Z,106nm,0.8s						
ADK	Adak	74.83	3	*e*P	P	19 19 14.0	+0.1
ADK				pmax	pmax		
	comp=Z,106nm,0.8s						
ASAJ	Asahikawa	74.91	334	P	P	19 19 16.1	+1.5
	comp=Z,40nm,0.8s,baz=219,slow=5.5,SNR=24						
ATKA	Atka Island	75.28	4	*e*P	P	19 19 15.6	-0.7
	comp=Z,137nm,0.8s						
NIKH	Nikolski High	76.54	7	*e*P	P	19 19 22.9	-0.4
	comp=Z,262nm,0.7s						
TJN	Taejon	76.86	319	*ce*P	P	19 19 25.7	+0.2
YSS	Yuzh-Sakhalins	77.19	335	*e*P	P	19 19 28.3	+1.3
	comp=Z,55nm,0.7s						
YSS	Yuzh-Sakhalins	77.19	335	⇓*i*P	P	19 19 28.3	+1.3
YSS				pmax	pmax		
	comp=Z,70nm,0.7s						
KSRS	Korea Array	77.25	320	P	P	19 19 28.2	+0.7
	comp=Z,14nm,0.8s,baz=135,slow=5.8,SNR=56						
KS15	Wonju Array Si	77.27	320	*e*P	P	19 19 28.3	+0.6
	comp=Z,22nm,0.9s						
MYKOM	Kota Tinggi	77.30	277	*e*P	P	19 19 28.5	0.0
	comp=Z,8.3nm,0.6s						
UNV	Unalaska Valle	77.69	9	*e*P	P	19 19 28.9	-0.6
	comp=Z,61nm,0.6s						
PET	Petropavlovsk	77.97	347	*e*P	P	19 19 30.8	-0.3
	comp=Z,22nm,0.6s						
PET	Petropavlovsk	77.97	347	*e*P	P	19 19 30.5	-0.6
PET				pmax	pmax		
	comp=Z,36nm,0.7s						
AKUT	Akutan	78.08	9	*e*P	P	19 19 31.3	-0.3
	comp=Z,41nm,0.6s						
MAW	Mawson	78.18	201	P	P	19 19 33.1	+1.0
	comp=Z,31nm,0.7s,baz=126,slow=6.5,SNR=68						
MAW	Mawson	78.18	201	*e*P	P	19 19 32.7	+0.6
	comp=Z,7.6nm,0.8s						
MAW	Mawson	78.18	201	P	P	19 19 33.1	+1.0
	baz=78,SNR=32						
PEA0B	Petropavlovsk-	78.24	347	*e*P	P	19 19 32.5	-0.1
	comp=Z,58nm,0.8s						
PETK	Petropavlovsk-	78.24	347	P	P	19 19 32.7	+0.1
	comp=Z,59nm,0.9s,baz=123,slow=7.2,SNR=79						
COCO	West Island	78.40	262	*e*P	P	19 19 37.4	+3.1
COCO	West Island	78.40	262	*e*P	P	19 19 37.4	+3.1
VLA	Vladivostok	79.06	327	⇑*e*P	P	19 19 36.8	-0.3
VLA				pmax	pmax		
	comp=Z,16nm,1.1s						
FALS	False Pass	79.13	10	*e*P	P	19 19 36.6	-0.6
	comp=Z,47nm,0.8s						
NJ2	Nanjing	79.67	311	⇑P	P	19 19 41.5	+0.9
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
USA0B	Ussuriysk Arra	79.79	328	*e*P	P	19 19 42.0	+1.0
	comp=Z,36nm,1.0s						
USRK	Ussuriysk Ar.	79.79	328	P	P	19 19 41.8	+0.9
	comp=Z,20nm,0.8s,baz=130,slow=3.7,SNR=40						
SDPT	Sand Point	80.11	12	*e*P	P	19 19 41.1	-1.2
	comp=Z,67nm,0.6s						
TYV	Tymovskoe	80.47	337	*e*P	P	19 19 45.2	+0.8
TYV				pmax	pmax		
	comp=Z,46nm,1.0s						
SPIA	Saint Paul Isl	80.53	6	*e*P	P	19 19 44.7	+0.2
	comp=Z,148nm,0.9s						
IPM	Ipoh	80.97	279	*e*P	P	19 19 46.5	-1.4
	comp=Z,14nm,0.6s						
MDJ	Mudanjiang	81.28	327	*e*P	P	19 19 48.6	-0.1
	comp=Z,42nm,1.0s						
MDJ	Mudanjiang	81.28	327	P	P	19 19 49.8	+1.1
MDJ				pmax	pmax		
	comp=Z,48nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.1s						
SCZ2	Santa Cruz Isl	81.29	47	P	P	19 19 50.7	+1.6
	baz=234						
CHGN	Chignik	81.41	12	*e*P	P	19 19 49.0	0.0
	comp=Z,62nm,0.8s						
CHIA	Chirikof Islan	81.57	14	*e*P	P	19 19 50.4	+0.5
	comp=Z,230nm,1.4s						
KULM	Kulim	81.64	279	*e*P	P	19 19 50.8	-0.5
	comp=Z,44nm,1.9s						
PKM	Mcpherson Peak	81.69	47	P	P	19 19 52.8	+1.5
	baz=234						
SAO	San Andreas Ge	81.73	44	*e*P	P	19 19 52.4	+1.2
	comp=Z,33nm,0.9s						
SAO	San Andreas Ge	81.73	44	*e*P	P	19 19 52.4	+1.2
SAO				pmax	pmax		
	comp=Z,33nm,0.9s						
SMMC	Simmler	81.82	46	P	P	19 19 53.5	+1.8
	baz=234						
PAGB	Antelope Grade	81.89	46	*e*P	P	19 19 53.5	+1.4
	comp=Z,21nm,0.7s						
DL2	Dalian	81.97	318	P	P	19 19 52.5	+0.2
DL2				pmax	pmax		
	comp=Z,17nm,0.7s						
FMP	Fort Macarthur	82.05	48	P	P	19 19 53.9	+1.0
	baz=235						
HOPS	Hopland Field	82.07	42	*e*P	P	19 19 54.2	+1.3
	comp=Z,58nm,1.1s						
GDXM	Geysers	82.12	42	*e*P	P	19 19 54.5	+1.2
	comp=Z,24nm,1.1s						
KCPM	Cahto Peak	82.19	41	*e*P	P	19 19 55.4	+1.7
	comp=Z,61nm,1.0s						
OSI	Osito Audit: C	82.27	47	P	P	19 19 55.5	+1.4
	baz=235						
DECC	Green Verdugo	82.33	48	P	P	19 19 55.3	+1.0
	baz=235						
109C	Camp Elliot, M	82.41	50	P	P	19 19 55.7	+1.0
	baz=236						
KMRM	Mail Ridge	82.45	40	*e*P	P	19 19 56.4	+1.5
	comp=Z,94nm,1.1s						
ARVC	Arvin	82.49	47	P	P	19 19 56.3	+1.2
	baz=235						
MWC	Mount Wilson	82.50	48	*e*P	P	19 19 55.6	+0.3
	comp=Z,43nm,1.3s						
MWC	Mount Wilson	82.50	48	*e*P	P	19 19 55.7	+0.3
MWC				pmax	pmax		
	comp=Z,43nm,1.3s						
SII	Sitkinak Islan	82.55	14	*e*P	P	19 19 54.9	0.0
	comp=Z,91nm,0.8s						
BAR	Barrett	82.60	50	*e*P	P	19 19 56.7	+0.9
	comp=Z,80nm,1.9s						
VES	Vestal, Richgr	82.73	46	P	P	19 19 57.0	+0.7
	baz=235,SNR=9.2						
MURC	Murrieta	82.74	49	P	P	19 19 57.7	+1.2
	baz=236						
BFSC	Mount Baldy Ra	82.78	48	P	P	19 19 57.6	+0.9
	baz=236,SNR=8.6						
VOG	Valley Oaks Go	82.81	46	P	P	19 19 57.1	+0.5
	baz=234						
KHMM	Horse Mountain	82.84	40	*e*P	P	19 19 58.9	+2.0
	comp=Z,68nm,1.1s						
GSI	Gunungsitoli	82.85	274	*e*P	P	19 19 57.1	-0.3
	comp=Z,17nm,0.7s						
MONP2	Monument Peak	82.89	50	P	P	19 19 58.9	+1.4
	baz=237,SNR=19						
CN2	Changchun	82.90	324	*e*P	P	19 19 57.5	+0.6
CN2				*e*pP	pP	19 21 55.5	-0.4
CN2				*e*S	S	19 29 30.8	+1.2
CN2				pmax	pmax		
	comp=Z,60nm,1.0s						
CN2				pmax	pmax		
	comp=Z,130nm,3.0s						
EDW2	Edwards Air Fo	82.91	47	P	P	19 19 58.6	+1.3
	baz=236,SNR=22						
O02D	Mt. Diablo Mer	82.97	41	P	P	19 19 59.7	+2.2
	baz=232,SNR=38						
IKP	In-Ko-Pah, Jac	82.98	50	P	P	19 19 59.4	+1.7
	baz=237,SNR=15						
ISA	Isabella, Lake	83.03	47	*e*P	P	19 19 59.1	+1.2
	comp=Z,75nm,0.9s						
ISA	Isabella, Lake	83.03	47	*e*P	P	19 19 59.1	+1.2
ISA				pmax	pmax		
	comp=Z,75nm,0.9s						
ISA	Isabella, Lake	83.03	47	P	P	19 19 59.3	+1.4
	baz=235,SNR=46						
KRMB	Red Mountain	83.15	39	*e*P	P	19 20 00.0	+1.6
	comp=Z,46nm,1.1s						
CMB	Columbia Colle	83.16	44	*e*P	P	19 19 59.2	+0.7
	comp=Z,41nm,0.9s						
CMB	Columbia Colle	83.16	44	*e*P	P	19 19 59.2	+0.7
CMB				pmax	pmax		
	comp=Z,41nm,0.9s						
PANO	Nakornpanom	83.19	292	P	P	19 20 00.0	+1.0
TIA	Tai'an	83.23	314	P	P	19 19 59.5	+0.7
TIA				pmax	pmax		
	comp=Z,33nm,0.5s						
PFO	Pinyon Flats O	83.26	49	*e*P	P	19 20 00.3	+1.1
	comp=Z,26nm,1.3s						
PFO	Pinyon Flats O	83.26	49	P	P	19 20 00.1	+0.9
	baz=236,SNR=5.5						
BBRC	Big Bear Solar	83.30	48	P	P	19 20 00.7	+1.2
	baz=236						
AFDM	Forest Hills D	83.34	43	*e*P	P	19 20 00.2	+0.9
	comp=Z,38nm,0.9s						
OHAK	Old Harbor	83.36	15	*e*P	P	19 19 59.1	+0.3
	comp=Z,54nm,0.9s						
SWSC	Sam W. Stewart	83.36	50	P	P	19 20 00.9	+1.4
	baz=237,SNR=7.2						
WDC	Whiskeytown Da	83.37	41	*e*P	P	19 20 00.6	+1.2
	comp=Z,37nm,1.0s						
ORV	Oroville	83.37	42	*e*P	P	19 20 00.1	+0.7
	comp=Z,36nm,1.0s						
ORV	Oroville	83.37	42	*e*P	P	19 20 00.1	+0.7
ORV				pmax	pmax		
	comp=Z,36nm,1.0s						
LRMC	Laurel Mtn Rad	83.46	47	P	P	19 20 01.1	+1.0
	baz=236,SNR=12						
N02D	Trinity Center	83.51	40	P	P	19 20 02.1	+2.0
	baz=232,SNR=15						
SYO	Syowa Base	83.54	194	⇓*e*P	P	19 19 58.2	-1.6
SYO	Syowa Base	83.54	194	⇑*i*PcP	P	19 20 01.0	+1.2
KLR	Kul'dur	83.57	331	P	P	19 20 01.0	+0.8
	comp=Z,5.2nm,0.6s,baz=98,slow=3.8,SNR=20						
KLR	Kul'dur	83.57	331	*d i*P	P	19 20 00.6	+0.5
KLR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RRX	Edison Barstow	83.59	48	P	P	19 20 01.8	+1.2
	baz=236						
O03E	Paynes Creek	83.64	41	P	P	19 20 01.8	+1.0
	baz=232,SNR=21						
M02C	Callahan	83.68	40	P	P	19 20 03.1	+2.1
	baz=232,SNR=21						
L02E	Cave Junction	83.72	39	P	P	19 20 02.9	+1.8
	baz=231						
CWC	Cottonwood Cre	83.74	46	P	P	19 20 02.6	+1.1
	baz=235						
KEBM	Edson Butte	83.75	38	*e*P	P	19 20 03.0	+1.7
	comp=Z,107nm,1.2s						
BELC	Belle Mtn. Jos	83.79	49	P	P	19 20 03.3	+1.4
	baz=237,SNR=27						
OMMB	Old Mammoth Mi	83.81	45	*e*P	P	19 20 03.1	+1.0
	comp=Z,23nm,1.2s						
MPMC	Manual Prospec	83.92	47	P	P	19 20 03.6	+1.1
	baz=236,SNR=34						
MLAC	Mammoth, Mammo	83.92	45	P	P	19 20 04.1	+1.6
	baz=235						
GSC	Goldstone, Bar	83.95	48	*e*P	P	19 20 03.5	+1.0
	comp=Z,31nm,1.0s						
GSC	Goldstone, Bar	83.95	48	P	P	19 20 03.5	+1.0
	baz=236,SNR=11						
DAC	Darwin (Calif)	83.97	46	*e*P	P	19 20 03.5	+0.8
YBH	Yreka Blue Hor	83.98	40	*e*P	P	19 20 04.0	+1.5
	comp=Z,30nm,0.9s						
BC3	Big Chuckawall	83.99	50	P	P	19 20 04.4	+1.7
	baz=237,SNR=15						
TIN	Tinemaha, Big	83.99	46	P	P	19 20 04.0	+1.4
	baz=235						
HEC	Hector,Ludlow	84.02	48	P	P	19 20 03.9	+1.0
	baz=236,SNR=23						
K02D	Willamette Mer	84.02	38	P	P	19 20 04.2	+1.5
	baz=231,SNR=5.9						
KDAK	Kodiak Island	84.03	15	*e*P	P	19 20 02.7	+0.5
	comp=Z,35nm,1.0s						
KDAK	Kodiak Island	84.03	15	*e*P	P	19 20 02.7	+0.5
KDAK				pmax	pmax		
	comp=Z,35nm,1.0s						
WAKR	Walker	84.04	44	*e*P	P	19 20 04.2	+1.2
	comp=Z,45nm,1.1s						
GLA	Glamis	84.10	50	*e*P	P	19 20 04.9	+1.6
	comp=Z,58nm,0.8s						
GLA	Glamis	84.10	50	*e*P	P	19 20 04.9	+1.6
GLA				pmax	pmax		
	comp=Z,58nm,0.8s						
GLA	Glamis	84.10	50	P	P	19 20 05.2	+1.9
	baz=238,SNR=15						
J01E	Myrtle Point	84.17	38	P	P	19 20 05.0	+1.8
	baz=231						
BEKR	Beckworth	84.26	42	*e*P	P	19 20 04.9	+0.8
	comp=Z,17nm,0.7s						
PNTR	Pine Nut	84.28	43	*e*P	P	19 20 05.3	+1.1
	comp=Z,48nm,0.8s						

VCNR	**Virginia City**	**84.37**	**43**	*e*P	**P**	**19 20 05.8**	**+1.2**
	comp=Z,12nm,0.7s						
HUMO	**Hull Mountain**	**84.38**	**39**	*e*P	**P**	**19 20 06.1**	**+1.8**
	comp=Z,52nm,1.1s						
YERR	**Yerington**	**84.45**	**43**	*e*P	**P**	**19 20 05.4**	**+0.4**
	comp=Z,49nm,1.3s						
GMRC	**Granite Mounta**	**84.45**	**49**	P	**P**	**19 20 06.3**	**+1.2**
	baz=237,SNR=15						
IRM	**Iron Mountain**	**84.47**	**49**	P	**P**	**19 20 06.6**	**+1.6**
	baz=237,SNR=21						
L04D	**Klamath Falls**	**84.52**	**39**	P	**P**	**19 20 06.4**	**+1.3**
	baz=232,SNR=13						
M04C	**Macdoel**	**84.52**	**40**	P	**P**	**19 20 06.6**	**+1.4**
	baz=232,SNR=11						
GRAC	**Grapevine Rang**	**84.52**	**46**	P	**P**	**19 20 06.6**	**+1.3**
	baz=236,SNR=6.7						
FURC	**Furnace Creek,**	**84.56**	**47**	P	**P**	**19 20 06.4**	**+1.1**
	baz=236,SNR=6.4						
TUQ	**Turquoise Moun**	**84.63**	**48**	P	**P**	**19 20 07.1**	**+1.2**
	baz=237						
SHOC	**Shoshone, Teco**	**84.64**	**47**	P	**P**	**19 20 06.9**	**+1.1**
	baz=236						
Y12C	**Blythe**	**84.69**	**50**	*e*P	**P**	**19 20 07.3**	**+1.3**
	comp=Z,32nm,0.9s						
Y12C	**Blythe**	**84.69**	**50**	P	**P**	**19 20 07.3**	**+1.3**
	baz=238,SNR=6.8						
RYN	**Ryan**	**84.70**	**44**	*e*P	**P**	**19 20 06.9**	**+0.7**
	comp=Z,9.4nm,0.8s						
113A	**Mohawk Valley,**	**84.71**	**51**	*e*P	**P**	**19 20 07.2**	**+1.0**
	comp=Z,34nm,1.1s						
NVAR	**Mina Array Bea**	**84.72**	**44**	P	**P**	**19 20 07.4**	**+1.0**
	comp=Z,12nm,0.7s,baz=224,slow=8.5,SNR=102						
PAHR	**Pah Rah Range**	**84.78**	**43**	*e*P	**P**	**19 20 07.4**	**+0.9**
	comp=Z,20nm,0.9s						
I02D	**Swisshome**	**84.81**	**37**	P	**P**	**19 20 08.5**	**+2.1**
	baz=231						
NV11	**Mina Array Sit**	**84.82**	**44**	*e*P	**P**	**19 20 07.4**	**+0.6**
	comp=Z,2.6nm,1.3s						
NONG	**Nongkai**	**84.85**	**292**	P	**P**	**19 20 07.9**	**+0.8**
HSIG		**84.88**	**56**	*e*P	**P**	**19 20 07.9**	**+0.8**
	comp=Z,50nm,0.9s						
214A	**Organ Pipe Nat**	**84.98**	**52**	P	**P**	**19 20 09.5**	**+1.9**
	baz=239						
K04D	**Chiloquin, OR**	**85.09**	**39**	P	**P**	**19 20 09.4**	**+1.4**
	baz=232						
KVN	**Kaiserville**	**85.21**	**44**	*e*P	**P**	**19 20 08.8**	**+0.1**
	comp=Z,23nm,0.6s						
TPNV	**Topopah Spring**	**85.24**	**47**	*e*P	**P**	**19 20 09.6**	**+0.7**
	comp=Z,18nm,0.8s						
TPNV	**Topopah Spring**	**85.24**	**47**	P	**P**	**19 20 09.9**	**+1.0**
	baz=236,SNR=20						
PDMCI	**Parker Dam,Lak**	**85.25**	**50**	P	**P**	**19 20 10.2**	**+1.5**
	baz=238,SNR=8.0						
J04D	**Umpqua Nationa**	**85.26**	**39**	P	**P**	**19 20 10.3**	**+1.5**
	baz=232,SNR=15						
SNAA	**Sanae**	**85.39**	**179**	P	**P**	**19 20 08.8**	**-0.1**
SNAA				SKS	SKSac	19 29 21.1	-19
SNAA	**Sanae**	**85.39**	**179**	*e*P	**P**	**19 20 08.6**	**-0.3**
	comp=Z,13nm,1.6s						
SNAA	**Sanae**	**85.39**	**179**	*e*P	**P**	**19 20 08.6**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,13nm,1.6s						
I04A	**Tendick Farm,**	**85.43**	**38**	P	**P**	**19 20 10.3**	**+0.9**
	baz=232						
ENH	**Enshi**	**85.46**	**305**	*e*P	**P**	**19 20 10.1**	**+0.2**
	comp=Z,21nm,0.9s						
MOD	**Modoc Plateau**	**85.51**	**41**	*e*P	**P**	**19 20 10.9**	**+0.9**
	comp=Z,28nm,0.8s						
VNA3	**Neumayer Olymp**	**85.62**	**177**	P	**P**	**19 20 09.9**	**-0.1**
VNA3				S	**S**	**19 29 55.1**	**-0.2**
H04D	**Lebanon**	**85.69**	**37**	P	**P**	**19 20 12.1**	**+1.5**
	baz=232						
MA2	**Magadan**	**85.71**	**346**	P	**P**	**19 20 10.1**	**-0.3**
	comp=Z,33nm,0.8s,baz=141,slow=4.6,SNR=22						
MA2	**Magadan**	**85.71**	**346**	*e*P	**P**	**19 20 09.8**	**-0.5**
	comp=Z,44nm,0.9s						
MA2	**Magadan**	**85.71**	**346**	*de*P	**P**	**19 20 10.0**	**-0.3**
MA2				*i* *PP	**pP**	**19 22 09.1**	**-1.1**
MA2				pmax	pmax		
	comp=Z,48nm,0.9s						
SHPR	**Sheep Range**	**85.73**	**47**	*e*P	**P**	**19 20 12.1**	**+0.8**
	comp=Z,16nm,1.1s						
J05D	**Fort Rock, OR**	**85.79**	**39**	P	**P**	**19 20 13.0**	**+1.7**
	baz=233,SNR=22						
G03D	**McMinnville, O**	**85.83**	**37**	P	**P**	**19 20 12.7**	**+1.5**
	baz=231						
W13A	**Hualapai Mount**	**85.85**	**49**	*e*P	**P**	**19 20 12.9**	**+1.0**
	comp=Z,14nm,0.8s						
Y14A	**Wickenburg**	**85.86**	**50**	*e*P	**P**	**19 20 12.7**	**+0.9**
	comp=Z,38nm,1.5s						
CNPM	**China Poot**	**85.91**	**15**	*e*P	**P**	**19 20 11.3**	**0.0**
	comp=Z,62nm,0.8s						
H04A	**Detroit Lake**	**86.10**	**38**	*e*P	**P**	**19 20 13.3**	**+0.7**
	comp=Z,38nm,1.0s						
BRLK	**Bradley Lake**	**86.20**	**15**	*e*P	**P**	**19 20 12.3**	**-0.4**
	comp=Z,65nm,1.2s						
PINE	**Pine Mountain**	**86.27**	**39**	*e*P	**P**	**19 20 14.9**	**+1.3**
	comp=Z,154nm,1.5s						
VNA1	**Neumayer--Stat**	**86.28**	**178**	P	**P**	**19 20 14.5**	**+1.5**
VNA1				S	**S**	**19 30 05.2**	**+3.8**
I05D	**Terrebonne, OR**	**86.37**	**38**	P	**P**	**19 20 15.2**	**+1.3**
	baz=232,SNR=7.1						
RSO	**Redoubt South**	**86.41**	**13**	*e*P	**P**	**19 20 13.1**	**-0.8**
SVW2	**Sparrevohn**	**86.42**	**12**	*e*P	**P**	**19 20 13.2**	**-0.5**
	comp=Z,10nm,0.8s						
R11A	**Troy Canyon, C**	**86.45**	**46**	*e*P	**P**	**19 20 15.2**	**+0.6**
	comp=Z,6.3nm,1.1s						
R11A	**Troy Canyon, C**	**86.45**	**46**	P	**P**	**19 20 15.2**	**+0.6**
	baz=237,SNR=10						
F04D	**Rainier, OR**	**86.52**	**36**	P	**P**	**19 20 16.5**	**+2.0**
	baz=231						
BMN	**Battle Mountai**	**86.55**	**43**	*e*P	**P**	**19 20 16.0**	**+1.0**
	comp=Z,31nm,1.0s						
BMN	**Battle Mountai**	**86.55**	**43**	*e*P	**P**	**19 20 16.0**	**+1.0**
BMN				pmax	pmax		
	comp=Z,31nm,1.0s						
TUC	**Tucson**	**86.64**	**53**	*e*P	**P**	**19 20 17.2**	**+1.7**
	comp=Z,44nm,1.4s						
TUC	**Tucson**	**86.64**	**53**	P	**P**	**19 20 17.5**	**+2.0**
	baz=240						
DIB	**Dawson Inlet,**	**86.81**	**27**	*e*P	**P**	**19 20 17.0**	**+1.4**
	comp=Z,64nm,1.3s						
WVOR	**Wild Horse Val**	**86.82**	**41**	*e*P	**P**	**19 20 17.0**	**+0.8**
	comp=Z,62nm,1.2s						
WVOR	**Wild Horse Val**	**86.82**	**41**	*e*P	**P**	**19 20 17.0**	**+0.8**
WVOR				pmax	pmax		
	comp=Z,62nm,1.2s						
SEW	**Seward**	**86.84**	**15**	*e*P	**P**	**19 20 15.3**	**-0.3**
	comp=Z,29nm,0.8s						
NLWA	**Neilton Lookou**	**86.89**	**35**	*e*P	**P**	**19 20 17.9**	**+1.7**
	comp=Z,42nm,1.1s						
MOBC	**Moresby Island**	**86.98**	**27**	*e*P	**P**	**19 20 17.4**	**+0.8**
	comp=Z,83nm,1.6s						
E04D	**Cinebar**	**87.05**	**36**	P	**P**	**19 20 18.7**	**+1.8**
	baz=232,SNR=8.8						
X16A	**Lo Mia Camp, P**	**87.22**	**51**	*e*P	**P**	**19 20 19.9**	**+1.6**
	comp=Z,18nm,0.9s						
F05D	**White Salmon**	**87.24**	**37**	P	**P**	**19 20 19.2**	**+1.2**
	baz=232						
I07A	**Izee**	**87.27**	**39**	*e*P	**P**	**19 20 19.3**	**+1.0**
	comp=Z,36nm,0.9s						
LCMT	**Little Creek M**	**87.30**	**48**	*e*P	**P**	**19 20 19.6**	**+1.0**
	comp=Z,16nm,0.9s						
D04E	**Lakebay**	**87.33**	**35**	P	**P**	**19 20 20.3**	**+2.0**
	baz=231,SNR=5.6						
D03D	**Eldon**	**87.39**	**35**	P	**P**	**19 20 20.0**	**+1.5**
	baz=231						
J08A	**Circle Bar Ran**	**87.46**	**40**	*e*P	**P**	**19 20 20.1**	**+1.0**
	comp=Z,93nm,1.3s						
CCUT	**Cedar City**	**87.50**	**47**	*e*P	**P**	**19 20 21.1**	**+1.4**
	comp=Z,44nm,1.6s						
LON	**Longmire**	**87.58**	**36**	*e*P	**P**	**19 20 19.9**	**+0.3**
	comp=Z,18nm,0.8s						
LON	**Longmire**	**87.58**	**36**	*e*P	**P**	**19 20 19.9**	**+0.3**
LON				pmax	pmax		
	comp=Z,18nm,0.8s						
KNB	**Kanab**	**87.59**	**48**	*e*P	**P**	**19 20 21.5**	**+1.5**
	comp=Z,77nm,1.7s						
RC01	**Rabbit Creek A**	**87.64**	**15**	*e*P	**P**	**19 20 19.0**	**-0.4**
	comp=Z,69nm,1.0s						
U15A	**North Rim**	**87.65**	**49**	*e*P	**P**	**19 20 21.9**	**+1.5**
	comp=Z,43nm,0.8s						
PSUT	**Pine Spring**	**87.69**	**46**	*e*P	**P**	**19 20 21.6**	**+1.1**
	comp=Z,7.5nm,0.7s						
SUA	**Susitna One**	**87.75**	**14**	*e*P	**P**	**19 20 19.4**	**-0.6**
	comp=Z,56nm,0.8s						
XAN	**Xi'an**	**87.75**	**309**	*e*P	**P**	**19 20 21.6**	**+0.9**
	comp=Z,26nm,1.1s						
XAN	**Xi'an**	**87.75**	**309**	P	**P**	**19 20 21.5**	**+0.9**
XAN				pmax	pmax		
	comp=Z,21nm,1.0s						
XAN				pmax	pmax		
	comp=Z,120nm,5.2s						
D05A	**Enumclaw**	**87.75**	**36**	*e*P	**P**	**19 20 21.8**	**+1.5**
	comp=Z,135nm,1.0s						
WUAZ	**Wupatki**	**87.83**	**50**	*e*P	**P**	**19 20 22.3**	**+1.2**
WUAZ	**Wupatki**	**87.83**	**50**	P	**P**	**19 20 22.7**	**+1.6**
	baz=240						
PGC	**Sidney**	**87.90**	**34**	*e*P	**P**	**19 20 21.7**	**+0.9**
	comp=Z,65nm,0.8s						
BBB	**Bella Bella**	**87.98**	**29**	*e*P	**P**	**19 20 22.1**	**+1.0**
	comp=Z,50nm,0.9s						
ELK	**Elko**	**87.98**	**44**	*e*P	**P**	**19 20 22.5**	**+0.7**
	comp=Z,22nm,0.9s						
KAIM	**Kayak Island**	**87.98**	**17**	*e*P	**P**	**19 20 21.8**	**+0.7**
	comp=Z,66nm,1.0s						
HPIG		**88.00**	**60**	*e*P	**P**	**19 20 22.9**	**+0.8**
	comp=Z,27nm,0.8s						
TTA	**Tatalina**	**88.03**	**11**	*e*P	**P**	**19 20 21.3**	**0.0**
TTA	**Tatalina**	**88.03**	**11**	*e*P	**P**	**19 20 21.3**	**0.0**
SKT	**Skwentna**	**88.04**	**13**	*e*P	**P**	**19 20 19.4**	**-1.9**
	comp=Z,13nm,0.8s						
LAMP	**Lampang**	**88.06**	**291**	P	**P**	**19 20 25.4**	**+3.1**
GLI	**Glacier Island**	**88.09**	**16**	*e*P	**P**	**19 20 21.3**	**-0.2**
	comp=Z,134nm,0.7s						
FID	**Port Fidalgo**	**88.14**	**16**	*e*P	**P**	**19 20 21.4**	**-0.3**
	comp=Z,56nm,1.0s						
EYAK	**Cordova Ski Ar**	**88.16**	**16**	*e*P	**P**	**19 20 21.4**	**-0.3**
	comp=Z,49nm,0.9s						
PKCU	**Pink Cliffs**	**88.16**	**48**	*e*P	**P**	**19 20 24.8**	**+2.0**
	comp=Z,109nm,1.4s						
CRAG	**Craig**	**88.20**	**25**	*e*P	**P**	**19 20 23.5**	**+1.4**
KNK	**Knik Glacier**	**88.23**	**15**	*e*P	**P**	**19 20 21.9**	**-0.3**
	comp=Z,63nm,0.8s						
PMR	**Palmer**	**88.23**	**15**	*e*P	**P**	**19 20 21.8**	**-0.3**
	comp=Z,47nm,0.9s						
PMR	**Palmer**	**88.23**	**15**	*e*P	**P**	**19 20 21.8**	**-0.3**
PMR				pmax	pmax		
	comp=Z,47nm,0.9s						
G08A	**Pilot Rock**	**88.30**	**38**	*e*P	**P**	**19 20 23.7**	**+0.7**
	comp=Z,32nm,0.8s						
RAGM	**Ragged Mountai**	**88.30**	**17**	*e*P	**P**	**19 20 22.7**	**+0.1**
	comp=Z,48nm,1.0s						
KMI	**Kunming**	**88.31**	**298**	P	**P**	**19 20 22.5**	**-1.2**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
A04D	**Lummi Island**	**88.33**	**34**	P	**P**	**19 20 24.4**	**+1.5**
	baz=231						
B05A	**Bryant**	**88.36**	**35**	P	**P**	**19 20 24.3**	**+1.2**
	baz=232,SNR=16						
HMT	**Hamilton**	**88.37**	**17**	*e*P	**P**	**19 20 23.1**	**+0.3**
	comp=Z,48nm,0.8s						
SEY	**Seymchan**	**88.42**	**348**	P	**P**	**19 20 23.3**	**+0.3**
	comp=Z,37nm,0.8s,baz=148,slow=5.1,SNR=85						
LTY	**Liberty**	**88.51**	**36**	*e*P	**P**	**19 20 24.4**	**+0.5**
	comp=Z,36nm,0.9s						
MTPU	**Mount Pierson**	**88.56**	**47**	*e*P	**P**	**19 20 26.4**	**+1.7**
	comp=Z,87nm,1.5s						
SIT	**Sitka**	**88.57**	**23**	*e*P	**P**	**19 20 24.9**	**+1.2**
	comp=Z,23nm,1.0s						
SML	**Sawmill**	**88.60**	**15**	*e*P	**P**	**19 20 23.7**	**-0.2**
	comp=Z,22nm,1.0s						
SML	**Sawmill**	**88.60**	**15**	*e*P	**P**	**19 20 23.7**	**-0.2**
SML				pmax	pmax		
	comp=Z,22nm,1.0s						
HAWA	**Hanford**	**88.62**	**37**	*e*P	**P**	**19 20 25.7**	**+1.4**
	comp=Z,53nm,1.0s						
CM31	**Chiang Mai Arr**	**88.62**	**291**	*e*P	**P**	**19 20 26.3**	**+1.3**
	comp=Z,16nm,1.4s						
CMAR	**Chiang Mai Arr**	**88.62**	**291**	P	**P**	**19 20 26.1**	**+1.2**
	comp=Z,4.8nm,1.1s,baz=120,slow=3.3,SNR=16						
CMAR				PKKPbc	**PKKPbc**	**19 38 03.0**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=290,slow=4.5,SNR=11						
TCRU	**Three Creeks R**	**88.67**	**47**	*e*P	**P**	**19 20 27.2**	**+2.1**
	comp=Z,41nm,1.4s						
ZAIG	**Zacatecas**	**88.67**	**65**	*e*P	**P**	**19 20 27.1**	**+1.6**
	comp=Z,23nm,0.9s						
PPLA	**Purkeypile**	**88.73**	**13**	*e*P	**P**	**19 20 23.1**	**-1.5**
	comp=Z,38nm,1.6s						
ZEA	**Zeya**	**88.75**	**332**	*e*P	**P**	**19 20 25.2**	**+0.5**
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
CMMT	**Chiang Mai**	**88.77**	**291**	P	**P**	**19 20 27.4**	**+1.7**
CHTO	**Chiang Mai**	**88.77**	**291**	*e*P	**P**	**19 20 26.4**	**+0.7**
	comp=Z,11nm,1.3s						
CHTO				*e*pwP	**pwP**	**19 22 33.2**	**+1.1**
W18A	**Petrified Fore**	**88.79**	**51**	*e*P	**P**	**19 20 26.6**	**+0.9**
	comp=Z,23nm,1.0s						
W18A	**Petrified Fore**	**88.79**	**51**	P	**P**	**19 20 26.8**	**+1.1**
	baz=240						
C06D	**Leavenworth**	**88.79**	**36**	P	**P**	**19 20 25.7**	**+0.6**
	baz=233						
WAX	**Waxell Ridge**	**88.86**	**18**	*e*P	**P**	**19 20 25.5**	**+0.4**
	comp=Z,72nm,0.8s						
SCM	**Sheep Creek Mo**	**88.86**	**15**	*e*P	**P**	**19 20 24.7**	**-0.5**
	comp=Z,93nm,0.8s						
SCM	**Sheep Creek Mo**	**88.86**	**15**	*e*P	**P**	**19 20 24.7**	**-0.5**
SCM				pmax	pmax		
	comp=Z,93nm,0.8s						
E08A	**Dider Farm, El**	**88.94**	**37**	*e*P	**P**	**19 20 26.6**	**+0.9**
	comp=Z,41nm,1.1s						
121A	**Cookes Peak, D**	**88.96**	**54**	P	**P**	**19 20 28.4**	**+1.9**
	baz=242						
BMO	**Blue Mountains**	**89.00**	**40**	*e*P	**P**	**19 20 26.5**	**+0.2**
	comp=Z,32nm,1.5s						
BMO	**Blue Mountains**	**89.00**	**40**	*e*P	**P**	**19 20 26.5**	**+0.2**
BMO				pmax	pmax		
	comp=Z,32nm,1.5s						
CRQM	**Cirque**	**89.03**	**17**	*e*P	**P**	**19 20 26.7**	**+0.6**
	comp=Z,73nm,1.1s						
MFID	**Camas Ranch**	**89.08**	**41**	*e*P	**P**	**19 20 27.7**	**+1.0**
	comp=Z,34nm,0.9s						
TGL	**Tana Glacier**	**89.12**	**18**	*e*P	**P**	**19 20 26.7**	**+0.3**
	comp=Z,46nm,0.9s						
WRAK	**Wrangell Islan**	**89.20**	**25**	*e*P	**P**	**19 20 27.9**	**+1.1**
	comp=Z,33nm,0.8s						
CAST	**Castle Rocks**	**89.22**	**12**	*e*P	**P**	**19 20 24.9**	**-1.8**
	comp=Z,47nm,0.8s						
GO06	**Curarrehue**	**89.22**	**133**	*e*P	**P**	**19 20 29.2**	**+1.6**
	comp=Z,12nm,0.9s						
DUG	**Dugway, Tooele**	**89.25**	**45**	*e*P	**P**	**19 20 28.0**	**+0.4**
	comp=Z,15nm,1.1s						
DUG	**Dugway, Tooele**	**89.25**	**45**	P	**P**	**19 20 28.6**	**+1.0**
	baz=238						
PLCA	**Paso Flores**	**89.26**	**135**	P	**P**	**19 20 29.6**	**+1.9**
	comp=Z,7.2nm,0.8s,baz=288,slow=5.3,SNR=14						
PLCA	**Paso Flores**	**89.26**	**135**	*e*P	**P**	**19 20 29.8**	**+2.1**
	comp=Z,16nm,1.1s						
PCA	**Pinnacle**	**89.32**	**19**	*e*P	**P**	**19 20 27.3**	**0.0**
	comp=Z,36nm,0.9s						
D08A	**Wollman Farm,**	**89.35**	**37**	*e*P	**P**	**19 20 28.7**	**+1.0**
	comp=Z,41nm,1.0s						
BCPM	**Bancas Point**	**89.39**	**19**	*e*P	**P**	**19 20 28.0**	**+0.5**
	comp=Z,176nm,1.6s						
HIA	**Hailar**	**89.42**	**326**	*e*P	**P**	**19 20 27.1**	**-0.9**
	comp=Z,10nm,1.2s						
HIA	**Hailar**	**89.42**	**326**	*e*P	**P**	**19 20 27.1**	**-0.9**
HIA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**89.42**	**315**	P	**P**	**19 20 29.5**	**+1.2**
HHC				S	**S**	**19 30 34.5**	**+2.9**
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,15nm,5.1s						
E09A	**Wood Farm, Sta**	**89.47**	**38**	*e*P	**P**	**19 20 29.0**	**+0.7**
	comp=Z,24nm,1.0s						
BALM	**Baldy**	**89.48**	**18**	*e*P	**P**	**19 20 28.4**	**+0.4**
	comp=Z,45nm,1.0s						
BALM	**Baldy**	**89.48**	**18**	*e*P	**P**	**19 20 28.5**	**+0.4**
BALM				pmax	pmax		
	comp=Z,45nm,1.0s						
BGU	**Big Grassy Mou**	**89.49**	**45**	*e*P	**P**	**19 20 29.7**	**+0.9**
	comp=Z,26nm,1.4s						
KTH	**Kantishna Hill**	**89.57**	**13**	*e*P	**P**	**19 20 26.9**	**-1.5**
	comp=Z,33nm,0.9s						
NLU	**North Lily Min**	**89.61**	**46**	*e*P	**P**	**19 20 30.4**	**+1.0**
	comp=Z,16nm,0.9s						
F10A	**Beach Ranch, E**	**89.68**	**39**	*e*P	**P**	**19 20 29.6**	**+0.2**
	comp=Z,25nm,0.8s						
JIS	**Juneau Island**	**89.82**	**22**	*e*P	**P**	**19 20 29.5**	**0.0**
	comp=Z,16nm,1.1s						
TMUT	**Trail Mountain**	**89.85**	**47**	*e*P	**P**	**19 20 31.8**	**+1.1**
	comp=Z,68nm,0.8s						
RND	**Reindeer**	**89.88**	**14**	*e*P	**P**	**19 20 29.6**	**-0.3**
	comp=Z,55nm,1.0s						
RND	**Reindeer**	**89.88**	**14**	*e*P	**P**	**19 20 29.6**	**-0.3**
RND				pmax	pmax		
	comp=Z,55nm,1.0s						
BESE	**Bessie Mountai**	**89.88**	**22**	*e*P	**P**	**19 20 30.9**	**+0.9**
	comp=Z,26nm,1.1s						
B08A	**Colville Reser**	**89.89**	**36**	*e*P	**P**	**19 20 30.2**	**0.0**
	comp=Z,23nm,0.9s						
TLIG	**Tlapa**	**89.89**	**71**	*e*P	**P**	**19 20 33.0**	**+1.9**
	comp=Z,32nm,0.9s						
LLLB	**Lillooet**	**89.92**	**33**	*e*P	**P**	**19 20 31.0**	**+0.7**
	comp=Z,21nm,1.1s						
DHY	**Denali Highway**	**89.93**	**15**	*e*P	**P**	**19 20 29.5**	**-0.6**
	comp=Z,17nm,1.2s						
MPU	**Maple Canyon**	**89.94**	**46**	*e*P	**P**	**19 20 32.0**	**+1.1**
	comp=Z,29nm,0.9s						
HLID	**Hailey**	**90.02**	**42**	*e*P	**P**	**19 20 32.1**	**+0.9**
	comp=Z,14nm,1.1s						
HLID	**Hailey**	**90.02**	**42**	P	**P**	**19 20 32.3**	**+1.1**
	baz=237						
BPAW	**Bear Paw Mtn.**	**90.05**	**13**	*e*P	**P**	**19 20 29.1**	**-1.4**
	comp=Z,6.0nm,0.8s						
SPUT	**South Promonto**	**90.07**	**44**	*e*P	**P**	**19 20 32.6**	**+1.2**
	comp=Z,36nm,0.9s						
HVU	**Hansel Valley**	**90.10**	**44**	*e*P	**P**	**19 20 32.5**	**+0.9**
	comp=Z,39nm,0.7s						
CD2	**Chengdu**	**90.11**	**304**	P	**P**	**19 20 33.0**	**+1.3**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
C09A	**Chrisman Ranch**	**90.14**	**37**	*e*P	**P**	**19 20 31.6**	**+0.3**
	comp=Z,27nm,1.2s						
MCK	**McKinley**	**90.15**	**14**	*e*P	**P**	**19 20 30.6**	**-0.5**
	comp=Z,24nm,0.8s						
MCK	**McKinley**	**90.15**	**14**	*e*P	**P**	**19 20 30.6**	**-0.5**
MCK				pmax	pmax		
	comp=Z,24nm,0.8s						
CTU	**Camp Tracy**	**90.20**	**45**	*e*P	**P**	**19 20 33.2**	**+1.2**
	comp=Z,34nm,0.9s						
SRU	**San Rafael Swe**	**90.22**	**47**	*e*P	**P**	**19 20 33.0**	**+0.9**
	comp=Z,60nm,0.8s						
P17A	**Butcher Ranch,**	**90.25**	**47**	*e*P	**P**	**19 20 33.8**	**+1.4**
	comp=Z,24nm,0.9s						
PAX	**Paxson**	**90.29**	**15**	*e*P	**P**	**19 20 31.2**	**-0.6**
	comp=Z,15nm,1.2s						
PAX	**Paxson**	**90.29**	**15**	*e*P	**P**	**19 20 31.2**	**-0.6**
PAX				pmax	pmax		
	comp=Z,15nm,1.2s						
LAZ	**Ladron**	**90.32**	**52**	*e*P	**P**	**19 20 33.9**	**+1.1**
LENM	**Lemitar**	**90.33**	**53**	*e*P	**P**	**19 20 33.9**	**+1.1**
JLU	**Jordanelle**	**90.35**	**45**	*e*P	**P**	**19 20 33.8**	**+1.0**
	comp=Z,19nm,0.9s						
BNM	**Barren Site**	**90.58**	**53**	*e*P	**P**	**19 20 34.9**	**+0.9**
TCUT	**Toone Canyon**	**90.64**	**45**	*e*P	**P**	**19 20 35.4**	**+1.2**
	comp=Z,70nm,0.9s						
TXAR	**Lajitas Array**	**90.65**	**58**	P	**P**	**19 20 35.9**	**+1.6**
	comp=Z,13nm,0.8s,baz=212,slow=6.4,SNR=111						
TXAR				PKKPbc	**PKKPbc**	**19 37 57.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=75,slow=4.8,SNR=4.5						
PV05	**Paradox Valley**	**90.68**	**49**	*e*P	**P**	**19 20 35.8**	**+1.4**
MENT	**Mentasta**	**90.69**	**16**	*e*P	**P**	**19 20 33.5**	**-0.1**
	comp=Z,13nm,0.9s						
HYT	**Haines Junctio**	**90.73**	**20**	*e*P	**P**	**19 20 34.0**	**0.0**
	comp=Z,10nm,0.9s						
HWUT	**Hardware Ranch**	**90.79**	**45**	*e*P	**P**	**19 20 35.1**	**+0.4**
	comp=Z,16nm,0.8s						
PV09	**Paradox Valley**	**90.86**	**48**	*e*P	**P**	**19 20 36.2**	**+0.9**
PV10	**Paradox Valley**	**90.87**	**48**	*e*P	**P**	**19 20 35.9**	**+0.6**
PV19	**Morning Glory**	**90.87**	**48**	*e*P	**P**	**19 20 35.7**	**+0.4**
PV17	**East Wray Mesa**	**90.88**	**48**	*e*P	**P**	**19 20 35.8**	**+0.6**
PV14	**Lion Creek, Pa**	**90.88**	**48**	*e*P	**P**	**19 20 35.4**	**+0.1**
PV18	**Skein Mesa, Pa**	**90.89**	**48**	*e*P	**P**	**19 20 35.5**	**+0.1**
PV20	**West Nyswonger**	**90.90**	**48**	*e*P	**P**	**19 20 35.5**	**+0.2**
PV13	**Radium Mtn., P**	**90.91**	**49**	*e*P	**P**	**19 20 35.9**	**+0.4**
PV16	**Nyswonger Mesa**	**90.92**	**48**	*e*P	**P**	**19 20 36.3**	**+0.8**
PV23	**Carpenter Ridg**	**90.92**	**48**	*e*P	**P**	**19 20 36.3**	**+0.8**
MLY	**Manley**	**90.93**	**12**	*e*P	**P**	**19 20 33.0**	**-1.6**
	comp=Z,11nm,1.0s						
PV03	**Paradox Valley**	**90.94**	**48**	*e*P	**P**	**19 20 36.4**	**+0.8**
PV11	**David Mesa, Pa**	**90.94**	**48**	*e*P	**P**	**19 20 36.4**	**+0.8**
PV04	**Paradox Valley**	**90.97**	**48**	*e*P	**P**	**19 20 36.5**	**+0.9**
WRH	**Wood River Hil**	**90.98**	**14**	*e*P	**P**	**19 20 34.0**	**-0.8**
	comp=Z,46nm,1.3s						
PV02	**Paradox Valley**	**90.99**	**49**	*e*P	**P**	**19 20 36.4**	**+0.5**
PV12	**Saucer Basin,**	**91.00**	**48**	*e*P	**P**	**19 20 36.7**	**+0.8**
PV21	**Cone Mtn., Par**	**91.00**	**48**	*e*P	**P**	**19 20 36.2**	**+0.4**
NEW	**Newport**	**91.04**	**37**	*e*P	**P**	**19 20 35.8**	**+0.3**
	comp=Z,4.4nm,0.8s						
NEW	**Newport**	**91.04**	**37**	*e*P	**P**	**19 20 35.8**	**+0.3**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEW	**Newport**	**91.04**	**37**	P	**P**	**19 20 35.7**	**+0.1**
	baz=236						
ANMO	**Albuquerque**	**91.07**	**52**	*e*P	**P**	**19 20 36.9**	**+0.6**
	comp=Z,16nm,1.0s						
ANMO	**Albuquerque**	**91.07**	**52**	*d i*P	**P**	**19 20 36.8**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO	**Albuquerque**	**91.07**	**52**	P	**P**	**19 20 37.2**	**+1.0**
	baz=242						
PV01	**Paradox Valley**	**91.07**	**49**	*e*P	**P**	**19 20 36.5**	**+0.3**
RIDG	**Independent Ri**	**91.09**	**15**	*e*P	**P**	**19 20 35.0**	**-0.4**
	comp=Z,14nm,0.8s						
PV22	**Blue Mesa, Par**	**91.12**	**48**	*e*P	**P**	**19 20 36.8**	**+0.4**
PV07	**Paradox Valley**	**91.17**	**48**	*e*P	**P**	**19 20 37.2**	**+0.6**
HDA	**Harding Lake**	**91.17**	**14**	*e*P	**P**	**19 20 34.8**	**-1.0**
	comp=Z,70nm,1.7s						
CCB	**Clear Creek Bu**	**91.19**	**14**	*e*P	**P**	**19 20 34.7**	**-1.1**
	comp=Z,39nm,1.4s						
DOT	**Dot Lake**	**91.20**	**15**	*e*P	**P**	**19 20 35.7**	**-0.2**
	comp=Z,17nm,1.0s						
GDL2	**Guadalupe Moun**	**91.38**	**56**	*e*P	**P**	**19 20 39.1**	**+1.5**
COLA	**College**	**91.38**	**13**	*d i*P	**P**	**19 20 35.6**	**-1.0**
COLA				pmax	pmax		
	comp=Z,21nm,1.2s						
WHY	**Whitehorse**	**91.44**	**21**	*e*P	**P**	**19 20 37.6**	**+0.5**
BILL	**Bilibino**	**91.45**	**355**	*e*P	**P**	**19 20 37.1**	**+0.2**
	comp=Z,28nm,0.8s						
BILL	**Bilibino**	**91.45**	**355**	*d i*P	**P**	**19 20 36.9**	**0.0**
BILL				pmax	pmax		
	comp=Z,25nm,0.7s						
SCRK	**Sand Creek**	**91.50**	**15**	*e*P	**P**	**19 20 37.3**	**0.0**
	comp=Z,9.5nm,1.0s						
ILAR	**Eielson Array**	**91.50**	**14**	P	**P**	**19 20 36.5**	**-0.8**
	comp=Z,5.2nm,0.6s,baz=232,slow=5.0,SNR=46						
ILB	**Eielson Array**	**91.50**	**14**	*e*P	**P**	**19 20 36.0**	**-1.2**
	comp=Z,35nm,1.7s						
DLBC	**Dease Lake**	**91.52**	**24**	*e*P	**P**	**19 20 38.5**	**+0.9**
	comp=Z,6.5nm,0.8s						
MCMT	**McKenzie Canyo**	**91.65**	**41**	*e*P	**P**	**19 20 39.6**	**+0.9**
POKR	**Poker Plat Res**	**91.68**	**13**	P	**P**	**19 20 37.1**	**-1.0**
	baz=210						
RDOG	**Red Dog Mine**	**91.92**	**7**	*e*P	**P**	**19 20 38.8**	**-0.3**
	comp=Z,23nm,0.8s						
MSO	**Missoula**	**92.05**	**39**	*e*P	**P**	**19 20 40.1**	**-0.3**
	comp=Z,3.3nm,0.7s						
MSO	**Missoula**	**92.05**	**39**	P	**P**	**19 20 40.3**	**0.0**
	baz=238						
DLMT	**Dillon**	**92.08**	**41**	*e*P	**P**	**19 20 41.3**	**+0.7**
	comp=Z,25nm,1.6s						
S22A	**4UR Ranch, Cre**	**92.10**	**50**	P	**P**	**19 20 42.3**	**+1.2**
	baz=242						
LNIG	**Linares**	**92.14**	**64**	*e*P	**P**	**19 20 41.1**	**0.0**
	comp=Z,16nm,1.0s						
O20A	**White River Ci**	**92.26**	**47**	*e*P	**P**	**19 20 42.1**	**+0.6**
	comp=Z,15nm,0.9s						
O20A	**White River Ci**	**92.26**	**47**	P	**P**	**19 20 42.3**	**+0.8**
	baz=241						
LZH	**Lanzhou**	**92.39**	**308**	*e*P	**P**	**19 20 43.0**	**+0.8**
LZH				pP	pP	19 22 43.0	-0.4
LZH				*e*S	**S**	**19 31 02.3**	**+4.1**
LZH				pmax	pmax		
	comp=Z,33nm,1.0s						
LZH				pmax	pmax		
	comp=Z,82nm,5.4s						
LRM	**Limekiln Ridge**	**92.40**	**41**	*e*P	**P**	**19 20 43.2**	**+1.0**
QLMT	**Earthquake Lak**	**92.52**	**42**	*e*P	**P**	**19 20 43.8**	**+1.2**
YPP	**Pitchstone Pla**	**92.62**	**42**	*e*P	**P**	**19 20 45.8**	**+2.6**
	comp=Z,4.6nm,0.7s						
LVIG	**Laguna Verde**	**92.63**	**70**	*e*P	**P**	**19 20 44.5**	**+1.0**
	comp=Z,21nm,0.8s						
BW06	**Boulder Array**	**92.66**	**44**	*e*P	**P**	**19 20 43.5**	**+0.1**
	comp=Z,6.9nm,0.8s						
BW06	**Boulder Array**	**92.66**	**44**	P	**P**	**19 20 43.8**	**+0.4**
	baz=241						
PDAR	**Pinedale Array**	**92.66**	**44**	P	**P**	**19 20 43.8**	**+0.4**
	comp=Z,6.2nm,0.7s,baz=204,slow=3.1,SNR=29						

SMCO	Snowmass	92.67	48	*e*P	P	19 20 44.0	+0.3
	comp=Z,11nm,0.7s						
DAWY	Dawson	92.74	17	*e*P	P	19 20 43.1	+0.1
	comp=Z,18nm,0.8s						
BOZ	Bozeman (W)	92.78	41	*e*P	P	19 20 43.0	-0.8
	comp=Z,4.9nm,0.8s						
BOZ	Bozeman (W)	92.78	41	*e*P	P	19 20 43.0	-0.8
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOZ	Bozeman (W)	92.78	41	P	P	19 20 44.4	+0.7
	baz=239						
H17A	Grant Village	92.82	42	*e*P	P	19 20 45.7	+1.5
	comp=Z,5.4nm,0.8s						
H17A	Grant Village	92.82	42	P	P	19 20 46.3	+2.1
	baz=240						
YHH	Holmes Hill	92.85	42	*e*P	P	19 20 45.4	+1.1
	comp=Z,3.5nm,0.7s						
EGAK	Eagle	92.86	16	*e*P	P	19 20 43.2	-0.3
	comp=Z,15nm,0.8s						
CMIG	Matias Romero	92.92	73	P	P	19 20 44.8	0.0
	comp=Z,2.6nm,0.8s,baz=236,slow=4.2,SNR=4.3						
COLD	Coldfoot	92.98	11	*e*P	P	19 20 44.1	+0.2
	comp=Z,5.6nm,1.3s						
SDCO	Great Sand Dun	93.04	50	*e*P	P	19 20 45.6	+0.3
	comp=Z,9.5nm,0.8s						
SDCO	Great Sand Dun	93.04	50	P	P	19 20 45.8	+0.5
	baz=243						
HRY	Holter Researc	93.23	40	*e*P	P	19 20 45.9	+0.1
MSTX	Muleshoe	93.35	55	P	P	19 20 47.2	+0.6
	baz=244						
T25A	Trinidad	93.54	51	P	P	19 20 48.1	+0.5
	baz=244						
833A	Chaparral WMA,	93.61	61	P	P	19 20 48.4	+0.7
	baz=246						
YAK	Yakutsk	93.66	339	*e*P	P	19 20 46.7	-0.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RWWY	Rawlins	93.68	46	*e*P	P	19 20 47.6	-0.5
	comp=Z,8.3nm,1.1s						
RLMT	Red Lodge	93.99	42	*e*P	P	19 20 49.9	+0.5
	comp=Z,3.6nm,0.8s						
RLMT	Red Lodge	93.99	42	P	P	19 20 50.1	+0.8
	baz=241						
N23A	Red Feather La	94.16	47	P	P	19 20 51.2	+0.9
	baz=243						
TOLK	Toolik Lake Re	94.35	11	P	P	19 20 50.4	+0.1
	baz=209						
K22A	Casper	94.58	45	P	P	19 20 51.9	-0.1
	baz=243						
ABTX	Abilene, Hawle	95.17	57	P	P	19 20 55.1	+0.3
	baz=246						
EPYK	Eagle Plains	95.25	16	*e*P	P	19 20 53.9	-0.4
	comp=Z,13nm,0.8s						
EPYK	Eagle Plains	95.25	16	P	P	19 20 54.1	-0.2
	baz=220						
KSCO	Kaye Shedlock'	95.62	50	P	P	19 20 57.5	+0.7
	baz=245						
ULN	Ulaanbaatar	95.73	320	*e*P	P	19 20 57.8	+0.7
	comp=Z,9.9nm,1.3s						
ULN	Ulaanbaatar	95.73	320	*e*P	P	19 20 57.8	+0.7
ULN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
APG	El Apazote	96.04	76	P	P	19 21 00.3	+1.0
	comp=Z,5.0nm,0.7s,baz=244,slow=8.6,SNR=4.0						
SONM	Songino Array	96.11	320	P	P	19 20 57.5	-1.2
	comp=Z,4.0nm,1.1s,baz=131,slow=5.4,SNR=14						
SONM				PKKPbc	PKKPbc	19 37 44.0	-0.4
	comp=Z,1.0nm,0.5s,baz=264,slow=2.4,SNR=7.1						
LAO	LASA Array	96.60	42	P	P	19 21 02.2	+1.2
	baz=243						
GTA	Gaotai	96.70	310	⇑P	P	19 21 02.3	+0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
OGNE	Ogallala	96.85	48	P	P	19 21 02.9	+0.6
	baz=245						
RSSD	Black Hills	96.85	45	*e*P	P	19 21 02.3	0.0
	comp=Z,20nm,1.3s						
RSSD	Black Hills	96.85	45	*e*P	P	19 21 02.3	0.0
RSSD				pmax	pmax		
	comp=Z,20nm,1.3s						
RSSD	Black Hills	96.85	45	P	P	19 21 02.8	+0.5
	baz=244						
CBKS	Cedar Bluff	97.59	51	P	P	19 21 06.3	+0.7
	baz=246						
BGNE	Belgrade	99.72	49	P	Pdif	19 21 15.3	+0.4
	baz=248						
YKA	Yellowknife Ar	100.02	26	P	Pdif	19 21 15.4	-0.2
	comp=Z,2.0nm,0.8s,baz=254,slow=3.8,SNR=4.7						
T49A	Edmonton	107.58	57	P	PKiKP	19 25 52.8	-1.7
	baz=254						
Y54A	Tignall	108.94	61	P	PKiKP	19 25 55.4	-1.8
	baz=254						
X54A	Belton	109.37	60	P	PKiKP	19 25 56.9	-1.0
	baz=255						
U53A	Fall Branch	109.68	58	P	PKiKP	19 25 57.1	-1.4
	baz=255						
Q51A	Peebles	109.75	55	P	PKiKP	19 25 57.7	-0.8
	baz=256						
I48A	Sherman Twp	110.68	50	P	PKiKP	19 25 58.6	-1.5
	baz=258						
U55A	TA2, Sparta	110.91	58	P	PKiKP	19 25 59.6	-1.3
	baz=256						
PLIO	Pelee Island,	110.92	52	P	PKiKP	19 26 00.1	-0.5
	baz=257						
ZALV	Zalesovo Beam	110.96	321	PKiKP	PKiKP	19 25 59.0	-1.3
	comp=Z,2.2nm,0.6s,baz=205,slow=0.9,SNR=9.5						
ZALV				PP	PP	19 26 52.6	+2.6
	comp=Z,1.4nm,0.8s,baz=123,slow=5.3,SNR=3.6						
S54A	Dingess, Beckl	111.01	57	P	PKiKP	19 26 00.2	-0.8
	baz=256						
RES	Resolute Bay	111.08	17	PKiKP	PKiKP	19 25 58.8	-1.1
	comp=Z,6.1nm,0.9s,baz=308,slow=4.4,SNR=3.8						
Q53A	Leroy	111.09	56	P	PKiKP	19 25 59.7	-1.3
	baz=257						
MKAR	Makanchi Array	111.16	313	Pdiff	Pdif	19 22 06.8	+1.2
	comp=Z,0.6nm,0.7s,baz=104,slow=5.9,SNR=6.5						
MKAR				PKiKP	PKiKP	19 25 59.9	-1.1
	comp=Z,1.8nm,0.5s,baz=213,slow=0.4,SNR=28						
MKAR				SKP		19 28 43.9	
	comp=Z,0.7nm,0.6s,baz=120,slow=0.5,SNR=4.1						
MKAR				PKKPbc	PKKPbc	19 36 59.3	-0.4
	comp=Z,1.0nm,0.6s,baz=271,slow=3.8,SNR=8.8						
MKAR				PKKPab	PKKPab	19 37 10.0	+0.3
	comp=Z,2.2nm,0.6s,baz=280,slow=3.7,SNR=14						
V56A	Mocksville	111.18	59	P	PKiKP	19 25 59.9	-1.4
	baz=256						
P53A	Whipple	111.34	55	P	PKiKP	19 26 00.3	-1.2
	baz=257						
W57A	Gilead	111.42	60	P	PKiKP	19 26 00.4	-1.3
	baz=256						
Q54A	Coxs Mills	111.64	56	P	PKiKP	19 26 00.7	-1.4
	baz=257						
V57A	Coltrane Farms	111.77	59	P	PKiKP	19 26 01.1	-1.3
	baz=257						
F48A	Evansville	111.77	48	P	PKiKP	19 26 01.0	-1.1
	baz=259						
N53A	Lisbon	112.03	54	P	PKiKP	19 26 01.8	-1.0
	baz=258						
R55A	Marlinton	112.04	57	P	PKiKP	19 26 01.9	-1.1
	baz=257						
F49A	Sandfield	112.16	48	P	PKiKP	19 26 01.7	-1.2
	baz=259						
V58A	Windy Hill, Pi	112.27	59	P	PKiKP	19 26 01.8	-1.6
	baz=257						
TOBO	Tobermory, Bru	112.41	49	P	PKiKP	19 26 02.5	-0.8
	baz=259						
T57A	Hurt	112.42	58	P	PKiKP	19 26 02.3	-1.4
	baz=257						
Y60A	Bolivia	112.58	61	P	PKiKP	19 26 02.5	-1.5
	baz=257						
R56A	Bull Pasture M	112.61	57	P	PKiKP	19 26 02.7	-1.3
	baz=258						
Q56A	Snyder Ridge,	112.91	56	P	PKiKP	19 26 02.8	-1.7
	baz=258						
T58A	Grand View Acr	112.98	58	P	PKiKP	19 26 03.3	-1.4
	baz=258						
M54A	Oil Creek Stat	113.04	53	P	PKiKP	19 26 03.3	-1.4
	baz=259						
CLWO	Collingwood	113.13	50	P	PKiKP	19 26 03.9	-0.9
	baz=260						
N55A	Marion Center	113.41	54	P	PKiKP	19 26 04.0	-1.4
	baz=259						
S58A	Poland Farm, P	113.49	58	P	PKiKP	19 26 04.1	-1.6
	baz=258						
Q57A	Strasburg	113.50	56	P	PKiKP	19 26 04.3	-1.3
	baz=259						
O56A	Blue Knob Stat	113.62	55	P	PKiKP	19 26 04.8	-1.1
	baz=259						
M55A	Ridgway	113.70	53	P	PKiKP	19 26 04.2	-1.7
	baz=259						
T59A	Double "B" Far	113.75	58	P	PKiKP	19 26 04.7	-1.5
	baz=258						
K54A	Basiliko Farm,	113.96	52	P	PKiKP	19 26 04.9	-1.6
	baz=260						
E51A	G1948 Merrick	114.03	48	P	PKPdf	19 26 05.1	-1.3
	baz=261						
J54A	Appleton	114.11	51	P	PKPdf	19 26 05.0	-1.6
	baz=260						
M56A	Emporium	114.13	53	P	PKPdf	19 26 05.3	-1.5
	baz=260						
SSPA	Standing Stone	114.20	54	P	PKPdf	19 26 05.6	-1.4
	baz=260						
KURK	Kurchatov	114.20	317	PKIKP	PKPdf	19 26 05.7	-0.9
KURK						19 27 17.9	
KURK						19 36 49.6	
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MEDO	Medina	114.22	52	P	PKPdf	19 26 05.6	-1.2
	baz=260						
KURBB	Kurchatov Arra	114.25	317	PKP	PKPdf	19 26 05.7	-1.0
	comp=Z,6.3nm,0.8s,baz=98,slow=1.8,SNR=14						
KURBB				PP	PP	19 27 17.9	+4.7
	comp=Z,0.5nm,0.7s,baz=100,slow=6.6,SNR=4.4						
KURBB				PKKPbc	PKKPbc	19 36 49.6	+0.1
	comp=Z,0.9nm,0.2s,baz=277,slow=3.9,SNR=5.4						
V61A	Roper	114.28	60	P	PKPdf	19 26 06.1	-1.1
	baz=258						
WLVO	Wesleyville	114.39	51	P	PKPdf	19 26 05.7	-1.5
	baz=261						
G53A	Haliburton	114.42	49	P	PKPdf	19 26 05.7	-1.5
	baz=261						
E52A	Mattawa	114.57	48	P	PKPdf	19 26 06.4	-1.1
	baz=262						
NRN	Naryn	114.62	306	*e*PKPdf	PKPdf	19 26 07.8	-0.4
NRN	Naryn	114.62	306	*e*PKIKP	PKPdf	19 26 07.8	-0.3
D52A	ZEK Kipawa Sen	114.83	47	P	PKPdf	19 26 06.6	-1.3
	baz=262						
O58A	Lewisberry	114.83	55	P	PKPdf	19 26 06.9	-1.3
	baz=260						
BOOM	Boomskoye usch	114.84	308	*e*PKPdf	PKPdf	19 26 08.1	-0.3
BOOM	Boomskoye usch	114.84	308	*e*PKIKP	PKPdf	19 26 08.1	-0.2
BANO	Bancroft	114.89	50	P	PKPdf	19 26 06.5	-1.6
	baz=262						
ALGO	Algonquin Park	114.94	49	P	PKPdf	19 26 07.1	-1.1
	baz=262						
I55A	Frankford	114.94	51	P	PKPdf	19 26 06.7	-1.5
	baz=261						
DELO	Deloro Mine	115.03	50	P	PKPdf	19 26 07.0	-1.4
	baz=262						
N58A	Sunbury	115.11	54	P	PKPdf	19 26 07.4	-1.3
	baz=260						
D53A	Lac Vacive, Po	115.33	47	P	PKPdf	19 26 07.8	-1.1
	baz=263						
H55A	Tweed	115.35	50	P	PKPdf	19 26 07.9	-1.1
	baz=262						
S61A	Accomac	115.36	58	P	PKPdf	19 26 08.5	-0.7
	baz=260						
M58A	Price's Panora	115.39	54	P	PKPdf	19 26 08.3	-0.9
	baz=261						
PECO	Prince Edward	115.39	51	P	PKPdf	19 26 07.5	-1.6
	baz=262						
PEMO	Pembroke	115.46	49	P	PKPdf	19 26 07.8	-1.4
	baz=262						
PLVO	Plevna	115.49	50	P	PKPdf	19 26 08.4	-0.9
	baz=262						
E54A	Lac Daplat, Po	115.60	48	P	PKPdf	19 26 08.0	-1.5
	baz=263						
MATQ	Matagami	115.69	44	P	PKPdf	19 26 08.3	-1.1
	baz=264						
G55A	Calabogie	115.77	50	P	PKPdf	19 26 08.5	-1.3
	baz=262						
N59A	State Game Lan	115.83	54	P	PKPdf	19 26 08.5	-1.6
	baz=261						
Q61A	Milford	115.84	57	P	PKPdf	19 26 09.1	-1.0
	baz=260						
BINY	Binghamton	115.87	53	P	PKPdf	19 26 09.1	-1.0
	baz=262						
AAK	Ala-Archa	115.91	307	PKKPbc	PKKPbc	19 36 43.8	-0.1
	comp=Z,6.0nm,0.9s,baz=214,slow=1.4,SNR=6.6						
AAK	Ala-Archa	115.91	307	*d i*PKIKP	PKPdf	19 26 09.8	-0.6
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
L58A	Harry Jones Me	115.94	53	P	PKPdf	19 26 09.4	-0.9
	baz=262						
H56A	Elgin	116.01	50	P	PKPdf	19 26 08.8	-1.5
	baz=262						
O60A	Telford	116.01	55	P	PKPdf	19 26 08.7	-1.7
	baz=261						
LSQQ	Lebel-sur-Quev	116.04	45	P	PKPdf	19 26 08.8	-1.4
	baz=264						
D54A	Lac Fusel, La	116.05	47	P	PKPdf	19 26 08.7	-1.6
	baz=263						
F55A	Otter Lake	116.10	49	P	PKPdf	19 26 08.8	-1.6
	baz=263						
PAL	Palisades	117.24	55	P	PKPdf	19 26 11.2	-1.5
	baz=262						
PTGA	Pitinga	117.78	104	PKP	PKPdf	19 26 14.0	-0.6
	comp=Z,5.5nm,0.7s,baz=215,slow=1.8,SNR=9.5						
PTGA	Pitinga	117.78	104	*e*PKPdf	PKPdf	19 26 14.1	-0.6
CHGQ	Chibougamau	117.80	45	P	PKPdf	19 26 11.8	-1.8
	baz=266						
BTK	Batken	118.30	304	*e*PKPdf	PKPdf	19 26 13.2	-1.8
BTK	Batken	118.30	304	*e*PKIKP	PKPdf	19 26 13.2	-1.8
KK31	Karatay Array	118.88	308	*e*PKPdf	PKPdf	19 26 15.0	-0.9
KK31	Karatay Array	118.88	308	*e*PKIKP	PKPdf	19 26 15.0	-0.9
KKAR	Karatay Array	118.88	308	*e*PKPdf	PKPdf	19 26 15.0	-0.9
KKAR	Karatay Array	118.88	308	*e*PKIKP	PKPdf	19 26 15.0	-0.9
KBL	Kabul	118.89	298	*e*PKPdf	PKPdf	19 26 16.0	-0.5
KBL	Kabul	118.89	298	*e*PKIKP	PKPdf	19 26 16.0	-0.5
LBNH	Lisbon	119.06	51	P	PKPdf	19 26 15.9	-0.3
	baz=265						
HRV	Adam Dziewonsk	119.16	53	P	PKPdf	19 26 15.6	-0.8
	baz=264						
BVAR	Borovoye Array	119.44	319	PKP	PKPdf	19 26 15.9	-0.8
	comp=Z,7.9nm,0.5s,baz=132,slow=1.2,SNR=60						
BRVK	Borovoye	119.51	319	*e*PKPdf	PKPdf	19 26 16.1	-0.7
BRVK	Borovoye	119.51	319	*d i*PKIKP	PKPdf	19 26 15.9	-0.8
BDFB	Brasilia	119.79	125	PKP	PKPdf	19 26 18.0	-0.6
	comp=Z,5.5nm,0.6s,baz=208,slow=4.3,SNR=6.3						
BDFB	Brasilia	119.79	125	PKIKP	PKPdf	19 26 18.0	-0.6
BDFB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PKME	Peaks-Kenny Pk	120.99	50	P	PKPdf	19 26 19.2	-0.6
	baz=268						
SCHQ	Schefferville	122.36	39	PKP	PKPdf	19 26 20.1	-2.0
	comp=Z,5.9nm,0.5s,baz=250,slow=12,SNR=4.8						
SCHQ	Schefferville	122.36	39	*e*PKPdf	PKPdf	19 26 21.1	-1.1
BOSA	Boshof	122.72	207	PKP	PKiKP	19 26 24.1	-0.2
	comp=Z,7.2nm,0.8s,baz=221,slow=2.1,SNR=8.7						
BOSA				PKKPbc	PKKPbc	19 36 18.8	-1.3
	comp=Z,4.4nm,0.8s,baz=328,slow=4.0,SNR=8.5						
LMN	Caledonia Moun	124.15	49	*e*PKPdf	PKPdf	19 26 25.1	-0.8
SPA0	Spitsbergen Ar	124.36	356	*e*PKPdf	PKPdf	19 26 24.8	-0.7
SPA0	Spitsbergen Ar	124.36	356	*e*PKPdf	PKPdf	19 26 25.1	-0.4
SPITS	Spitsbergen Ar	124.36	356	PKP	PKPdf	19 26 24.9	-0.6
	comp=Z,26nm,0.7s,baz=79,slow=3.1,SNR=15						
SVE	Sverdlovsk	124.69	324	*e*PKIKP	PKPdf	19 26 26.4	-0.2
SVE				pmax	pmax		
	comp=Z,20nm,0.9s						
ILULI	Ilulissat	125.12	20	*i* PKIKP	PKPdf	19 26 26.0	-1.0
ILULI				pmax	pmax		
	comp=Z,45nm,1.1s						
ILULI	Ilulissat	125.12	20	*i* P	PKPdf	19 26 26.0	-1.0
	comp=Z,45nm,1.1s						
DAG	Danmarks Havn	125.63	5	*i* PKIKP	PKPdf	19 26 26.8	-1.1
DAG				MLR	MLR		
	comp=Z,3µm,20.0s						
DAG	Danmarks Havn	125.63	5	*i* P	PKPdf	19 26 26.8	-1.1
	comp=Z,2µm,20.0s						
ARU	Arti	125.89	324	PKP	PKPdf	19 26 28.6	-0.3
	comp=Z,6.8nm,0.5s,baz=71,slow=0.8,SNR=42						
ARU	Arti	125.89	324	*e*PKPdf	PKPdf	19 26 28.2	-0.7
ARU	Arti	125.89	324	*i* PKIKP	PKPdf	19 26 28.7	-0.2
ARU						19 28 28.2	
ARU						19 32 46.7	
ABKAR	Akbulak array	126.21	315	*e*PKPdf	PKPdf	19 26 28.8	-0.9
SUMG	Summit	126.34	13	*i* PKIKP	PKPdf	19 26 29.9	+0.1
SUMG				MLR	MLR		
	comp=Z,12µm,17.0s						
SUMG	Summit	126.34	13	*i* P	PKPdf	19 26 29.9	+0.1
	comp=Z,12µm,17.0s						
GBN	Guysborough	126.48	50	*e*PKPdf	PKPdf	19 26 30.1	-0.2
MDP	Montagnes des	126.90	101	PKP	PKPdf	19 26 32.1	-0.1
	comp=Z,8.1nm,0.6s,baz=258,slow=5.3,SNR=10						
AKTO	Aktyubinsk	127.30	317	PKP	PKPdf	19 26 31.6	-0.1
	comp=Z,8.2nm,0.7s,baz=82,slow=2.6,SNR=29						
GEYT	Alibeck	128.00	301	PKP	PKiKP	19 26 34.2	0.0
	comp=Z,9.2nm,0.7s,baz=243,slow=1.7,SNR=20						
GEYT				SKPbc	SKPbc	19 29 01.1	
	comp=Z,2.8nm,0.8s,baz=45,slow=4.4,SNR=6.1						
GYA0B	ALIBECK ARRAY	128.00	301	*e*PKPdf	PKiKP	19 26 34.0	-0.3
KIRV	Kirov	129.95	328	PKP	PKPdf	19 26 36.2	-0.3
	comp=Z,24nm,0.5s,baz=127,slow=2.3,SNR=12						
KIRV				SKPbc	SKPbc	19 29 06.5	-0.8
	comp=Z,17nm,0.7s,baz=98,slow=1.5,SNR=8.0						
PRGR	Permogore	130.32	333	*e*PKIKP	PKPdf	19 26 35.0	-2.1
PRGR				*e*		19 28 54.3	
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HAMF	Hammerfest	130.42	350	*e*PKPdf	PKPdf	19 26 36.9	-0.2
ARCES	ARCESS Array B	131.04	348	PKP	PKPdf	19 26 37.8	-0.6
	comp=Z,18nm,0.7s,baz=27,slow=1.4,SNR=45						
ARCES				SKPbc	SKPab	19 29 11.9	0.0
	comp=Z,10nm,0.8s,baz=48,slow=3.9,SNR=18						
ARE0	ARCESS Array S	131.04	348	*e*PKPdf	PKPdf	19 26 37.5	-0.9
ARE0	ARCESS Array S	131.04	348	*e*PKPdf	PKPdf	19 26 38.0	-0.3
KTK1	Kautokeino	131.91	349	*e*PKPdf	PKPdf	19 26 40.2	+0.2
TRO	Tromso	132.07	351	*e*PKPdf	PKPdf	19 26 40.3	+0.1
LSZ	Lusaka	132.43	219	*e*PKPdf	PKPdf	19 26 42.9	+0.2
LSZ	Lusaka	132.43	219	*e*PKIKP	PKPdf	19 26 42.9	+0.2
KLMR	Klimovskoe	133.24	334	*e*PKIKP	PKPdf	19 26 41.4	-1.3
KLMR				*e*		19 29 15.9	
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
STEI	Steigen	134.16	352	*e*PKPdf	PKPdf	19 26 44.5	+0.3
LOF	Lofoten	134.19	353	*e*PKPdf	PKPdf	19 26 43.2	-1.0
AKT	Akhty	135.77	306	*e*PKIKP	PKPdf	19 26 48.2	0.0
AKT				*e*		19 29 33.6	
AKT				pmax	pmax		
	comp=Z,15nm,1.0s						
KMBO	Kilima Mbogo	135.83	242	PKP	PKPdf	19 26 49.6	+0.3
	comp=Z,4.4nm,1.0s,baz=41,slow=5.5,SNR=6.0						
KMBO				SKPbc	SKPbc	19 29 30.1	+1.2
	comp=Z,8.1nm,1.0s,baz=131,slow=1.5,SNR=11						
MOR8	Moi Rana	135.93	351	*e*PKPdf	PKPdf	19 26 46.2	-1.4
BORG	Borgarnes	136.31	13	PKP	PKPdf	19 26 48.4	+0.1
	comp=Z,1.6nm,0.5s,baz=218,slow=2.0,SNR=4.4						
BORG	Borgarnes	136.31	13	PKIKP	PKPdf	19 26 48.4	+0.1
BORG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MOS	Moscow	136.95	329	*e*PKIKP	PKPdf	19 26 49.0	-0.7
VRH	Novokhopyorsk	136.99	321	*e*PKIKP	PKPdf	19 26 49.2	-0.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
FIA1	FINESS Array S	137.54	341	*e*PKPpre	PKPpre	19 26 40.2	
FIA1				*e*PKPdf	PKPdf	19 26 50.7	0.0
FINES	FINESS Array B	137.55	341	PKhKP	PKPpre	19 26 38.2	
	comp=Z,2.6nm,0.7s,baz=85,slow=3.1,SNR=20						
FINES				PKP	PKPdf	19 26 50.4	-0.2
	comp=Z,7.6nm,0.7s,baz=83,slow=6.0,SNR=18						
FINES				SKPbc	SKPbc	19 29 32.2	+0.2
	comp=Z,11nm,0.8s,baz=64,slow=4.4,SNR=15						
RAYN	Ar Rayn	137.67	280	*e*PKPdf	PKPdf	19 26 51.0	-1.1
RAYN	Ar Rayn	137.67	280	*e*PKIKP	PKPdf	19 26 51.0	-1.1
OBN	Obninsk	137.80	329	PKP	PKPdf	19 26 51.4	+0.1
	comp=Z,4.3nm,0.5s,baz=52,slow=4.8,SNR=4.9						
OBN	Obninsk	137.80	329	*e*PKPdf	PKPdf	19 26 51.8	+0.5
OBN	Obninsk	137.80	329	*i* PKIKP	PKPdf	19 26 51.0	-0.3
OBN				pmax	pmax		
	comp=Z,15nm,0.9s						
NSS	Namsos	137.82	352	*e*PKPdf	PKPdf	19 26 43.2	-7.9
LPSR	Galich'ya Gora	137.91	324	*e*PKIKP	PKPdf	19 26 51.2	-0.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GNI	Garni	138.22	305	PKP	PKPdf	19 26 53.3	+0.4
	comp=Z,4.5nm,0.6s,baz=310,slow=3.8,SNR=4.4						
ZEI	Tsey	138.31	309	*i* PKIKP	PKPdf	19 26 52.4	-0.6
ZEI				pmax	pmax		
	comp=Z,11nm,0.7s						
VSR	Storozhevoye	138.43	323	*e*PKIKP	PKPdf	19 26 51.7	-0.9
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
VORD	Divnogorie	138.47	322	*e*PKIKP	PKPdf	19 26 52.0	-0.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBZ	Khabaz	138.79	311	PKP	PKPdf	19 26 52.2	-1.3
	comp=Z,2.9nm,0.8s,baz=90,slow=4.0,SNR=3.3						
KBZ				SKPbc	SKiKP	19 29 37.5	-1.7
	comp=Z,2.2nm,0.8s,baz=138,slow=2.5,SNR=3.4						
AKH	Akhalkalaki	138.91	307	*e*PKPdf	PKPdf	19 26 54.4	+0.3
AKH	Akhalkalaki	138.91	307	⇑*i*P	PKPdf	19 26 55.0	+0.9
AKH	Akhalkalaki	138.91	307	*e*PKIKP	PKPdf	19 26 54.4	+0.3
VSU	Vasula	139.65	338	*e*P	PKPdf	19 26 53.2	-1.4
VSU				IAmb	IAmb	19 26 55.1	
	comp=Z,40nm,0.6s						
MOL	Molde	140.23	354	*e*PKPdf	PKPdf	19 26 54.4	-1.1
DOMB	Dombas	140.58	353	*e*PKPdf	PKPdf	19 26 49.8	-6.5
AKN	Aaknes	140.66	354	*e*PKPdf	PKPdf	19 26 50.7	-5.7
NC303	NORSAR Array S	141.06	351	*e*PKPpre	PKPdf	19 26 51.4	-5.7
NC303	NORSAR Array S	141.06	351	*e*PKPdf	PKPdf	19 26 51.5	-5.6
NC204	NORSAR Array S	141.10	351	*e*PKPpre	PKPdf	19 26 50.9	-6.3
NC405	NORSAR Array S	141.12	350	*e*PKPpre	PKPdf	19 26 51.2	-6.0
NB201	NORSAR Array S	141.24	351	*e*PKPpre	PKPdf	19 26 51.7	-5.7
NB2	NORSAR Subarra	141.26	351	PKP	PKPdf	19 26 51.8	-5.7
	comp=Z,3.1nm,0.6s,baz=10,slow=3.2						
NB2	NORSAR Subarra	141.26	351	PKPab	PKPdf	19 26 51.8	-5.7
	baz=10,slow=3.2						
NOA	NORSAR Array B	141.26	351	PKhKP	PKPdf	19 26 52.2	-5.3
	comp=Z,10nm,0.7s,baz=16,slow=4.7,SNR=89						
NOA				SKPbc	SKPbc	19 29 42.1	+0.1
	comp=Z,4.5nm,1.0s,baz=14,slow=4.3,SNR=5.8						
NOA				SKPab	SKPab	19 29 57.6	+0.4
	comp=Z,2.0nm,0.8s,baz=19,slow=3.2,SNR=4.0						
NBO00	NORSAR Array S	141.34	351	*e*PKPpre	PKPdf	19 26 52.3	-5.3
NAO01	NORSAR Array S	141.50	351	*e*PKPpre	PKPdf	19 26 53.2	-4.6
HFS	Hagfors	141.71	348	PKhKP	PKPpre	19 26 53.3	
	comp=Z,14nm,0.5s,baz=60,slow=3.6,SNR=170						
HFS				SKPbc	SKPbc	19 29 43.3	+0.2
	comp=Z,4.6nm,0.8s,baz=149,slow=3.5,SNR=5.4						
HYA	Hoyanger	141.74	355	*e*PKPdf	PKPdf	19 26 53.1	-5.1
SLIT	Slitere, Latvi	141.76	340	*e*P	PKPdf	19 26 53.3	-5.1
SLIT				IAmb	IAmb	19 26 54.7	
	comp=Z,41nm,0.5s						
IZAR	Zarasai	141.85	335	*e*P	PKPdf	19 26 54.2	-4.4
IZAR				IAmb	IAmb	19 26 56.0	
	comp=Z,15nm,0.8s						
SUE	Sulen	141.96	356	*e*PKPdf	PKPdf	19 26 54.6	-4.0
SKAR	Skarslia	142.00	353	*e*PKPdf	PKPdf	19 26 55.2	-3.6
ISAL	Salakas	142.03	335	*e*P	PKPdf	19 26 55.6	-3.3
ISAL				IAmb	IAmb	19 26 56.6	
	comp=Z,6.6nm,0.7s						
IIGN	Ignalina	142.15	335	*e*P	PKPdf	19 26 55.7	-3.5
IIGN				IAmb	IAmb	19 26 59.7	
	comp=Z,12nm,0.7s						
ASK	Askoy	142.49	355	*e*PKPdf	PKPdf	19 26 56.5	-3.1
BER	Bergen	142.58	355	*e*PKPdf	PKPdf	19 26 56.7	-3.1
KONO	Kongsberg	142.83	351	*e*PKPdf	PKPdf	19 26 57.2	-3.0
KONO	Kongsberg	142.83	351	*e*PKPdf	PKPdf	19 26 57.5	-2.8
ODD1	Odda	142.93	354	*e*PKPdf	PKPdf	19 26 57.9	-2.6
LRW	Lerwick	143.07	0	*e*P	PKPab	19 26 57.9	-0.5
BLS5	Blasjo	143.43	354	*e*PKPab	PKPab	19 26 59.7	-0.1
KMY	Karmoy	143.75	355	*e*PKPab	PKPbc	19 27 00.9	0.0
AKASG	Malin Array Be	143.99	327	PKP	PKPbc	19 27 01.2	-0.8
	comp=Z,42nm,0.6s,baz=43,slow=4.3,SNR=194						
AKASG				SKPbc	SKiKP	19 29 49.6	0.0
	comp=Z,2.6nm,0.5s,baz=44,slow=3.1,SNR=8.2						
AKASG	Malin Array Be	143.99	327	PKIKP	PKPbc	19 27 01.2	-0.8
AKASG				pmax	pmax		
	comp=Z,30nm,0.6s						
AKBB	Malin Array Si	143.99	327	*e*PKPbc	PKPbc	19 27 01.1	-0.8
AKBB	Malin Array Si	143.99	327	*e*PKIKP	PKPbc	19 27 01.1	-0.9
SIM	Simferopol'	144.26	316	*d*PKIKP	PKPab	19 27 03.8	+0.4
SIM				pmax	pmax		
	comp=Z,59nm,0.8s						
HOMB	Homborsund	144.32	352	*e*PKPdf	PKPbc	19 27 02.7	0.0
SUW	Suwalki	144.33	336	*e*P	PKPbc	19 27 02.6	-0.3
SUW	Suwalki	144.33	336	*e*PKPbc	PKPbc	19 27 02.5	-0.4
SUW	Suwalki	144.33	336	*e*PKIKP	PKPbc	19 27 02.6	-0.3
SNART	Snartemo	144.41	353	*e*PKPab	PKPdf	19 27 03.1	+0.1
KAC	Achnashellach	145.56	4	*e*P	PKPbc	19 27 06.4	-0.1
ASF	Jabal al Asfar	145.61	293	PKPbc	PKPbc	19 27 08.1	+0.5
	comp=Z,13nm,0.8s,baz=72,slow=1.7,SNR=28						
ASF				SKPbc	SKiKP	19 29 55.2	+1.4
	comp=Z,1.8nm,0.7s,baz=27,slow=2.3,SNR=4.3						
KPL	Plockton	145.69	5	*e*P	PKPdf	19 27 05.6	+0.4
YAHY	KAYSERI_Yahyal	145.79	304	*i* P	PKPbc	19 27 08.2	+0.2

YAHY				IAML_P			
	comp=Z,9.3nm,0.4s						
MUD	Monsted U'grnd	145.97	350	⇓*i*PKIKP	PKPbc	19 27 07.6	-0.1
MUD				MLR	MLR		
	comp=Z,3µm,23.0s						
MUD	Monsted U'grnd	145.97	350	⇓*i*P	PKPbc	19 27 07.6	-0.1
	comp=Z,3µm,23.0s						
ILGA	Ilgaz	146.08	310	*e*PKPdf	PKPdf	19 27 07.3	+0.5
CDAG	Cicekdag	146.09	307	*i* P	PKPbc	19 27 09.4	+0.7
CDAG				IAML_P			
	comp=Z,345nm,0.5s						
COP	Copenhagen	146.10	347	⇓*i*PKP2	PKPbc	19 27 08.0	0.0
COP				MLR	MLR		
	comp=Z,2µm,18.0s						
COP	Copenhagen	146.10	347	⇓*i*P	PKPbc	19 27 08.0	0.0
	comp=Z,2µm,18.0s						
DELI	KIRIKKALE	146.30	308	*i* P	PKPbc	19 27 09.8	+0.5
DELI				IAML_P			
	comp=Z,853nm,0.9s						
GULE	Gulek	146.45	303	*i* P	PKiKP	19 27 10.9	-1.1
GULE				IAML_P			
	comp=Z,9µm,0.7s						
MILM	Milestii Mici	146.47	322	⇑*i*P	PKPdf	19 27 07.2	+0.3
DED	Mersin	146.51	302	*i* P	PKPbc	19 27 10.2	+0.3
DED				IAML_P			
	comp=Z,2µm,0.5s						
BR131	Keskin Array S	146.59	308	*e*PKPdf	PKPdf	19 27 07.2	-0.4
BR131				*e*PKPbc	PKPbc	19 27 09.8	-0.4
BR131				*e*PKPab	PKPab	19 27 13.0	+0.1
BRTR	Keskin Array B	146.59	308	PKPbc	PKPbc	19 27 09.7	-0.4
	comp=Z,14nm,0.7s,baz=115,slow=3.1,SNR=58						
MMAI	Mount Meron Ar	146.77	295	PKPbc	PKPbc	19 27 11.5	+0.7
	comp=Z,54nm,0.7s,baz=69,slow=4.6,SNR=96						
MMAI				SKPbc	SKiKP	19 29 57.9	+1.8
	comp=Z,2.1nm,0.6s,baz=66,slow=7.0,SNR=3.8						
AKSY	AKSARAY - Alti	146.84	306	*i* P	PKPbc	19 27 10.9	+0.1
AKSY				IAML_P			
	comp=Z,612nm,1.0s						
EAB	Aberfoyle	146.93	4	*e*P	PKPdf	19 27 07.3	-0.1
BEL	Belsk	146.93	335	*e*P	PKPbc	19 27 10.9	+0.5
BEL	Belsk	146.93	335	*e*PKP2	PKPbc	19 27 10.9	+0.5
RGN	Rugen	146.94	345	*e*PKPdf	PKPbc	19 27 09.4	-0.9
GKP	Gorka Klasztor	147.00	340	*e*P	PKPbc	19 27 10.8	+0.2
GKP	Gorka Klasztor	147.00	340	*e*PKP2	PKPbc	19 27 10.8	+0.2
LVV	L'vov	147.07	330	*e*PKP2	PKPbc	19 27 10.7	-0.2
KIZK	Mersin	147.14	302	*i* P	PKiKP	19 27 12.4	-0.8
KIZK				IAML_P			
	comp=Z,2µm,0.8s						
ANTO	Ankara	147.16	308	*e*PKPdf	PKPdf	19 27 08.2	-0.1
ANTO	Ankara	147.16	308	⇓*i*P	PKPbc	19 27 12.0	+0.4
ANTO	Ankara	147.16	308	⇓PKP2	PKPbc	19 27 12.0	+0.4
BR231	Keskin MP Arra	147.18	308	*e*PKPbc	PKPbc	19 27 11.4	-0.2
EDI	Edinburgh	147.25	3	*e*P	PKPdf	19 27 08.4	+0.5
ESY	Stoneypath	147.28	2	*e*P	PKPdf	19 27 08.2	+0.2
PGBU	Glenifferbraes	147.29	4	*e*P	PKPdf	19 27 09.1	+1.1
KKUL	Konya-Kulu	147.30	307	*i* P	PKiKP	19 27 13.1	-0.6
KKUL				IAML_P			
	comp=Z,539nm,0.8s						
TLCR		147.43	320	⇑*i*P	PKPbc	19 27 12.4	+0.5
TLCR		147.43	320	⇑PKP2	PKPbc	19 27 12.4	+0.5
EIL	Elat	147.47	289	PKPbc	PKPbc	19 27 12.7	+0.1
	comp=Z,16nm,0.9s,baz=333,slow=1.7,SNR=11						
PHNC	Paralimni	147.56	299	P	PKPbc	19 27 12.6	0.0
GULN	MERSIN_Gulnar	147.68	301	*i* P	PKPbc	19 27 13.5	+0.6
GULN				IAML_P			
	comp=Z,1µm,0.5s						
YIGI	Dzce	147.70	311	*i* P	PKPbc	19 27 12.2	-0.6
YIGI				IAML_P			
	comp=Z,1µm,0.8s						
CFR	Carcaliu	147.84	320	⇓*i*P	PKPbc	19 27 12.9	-0.1
CFR	Carcaliu	147.84	320	⇓PKP2	PKPbc	19 27 12.9	-0.1
EKA	Eskdalemuir Ar	147.84	3	PKPbc	PKPbc	19 27 12.3	-0.4
	comp=Z,10nm,0.4s,baz=356,slow=2.1,SNR=98						
ESK	Eskdalemuir	147.85	3	*e*PKPdf	PKPdf	19 27 09.3	+0.4
ESK				*e*PKPbc	PKPbc	19 27 12.1	-0.7
ESK	Eskdalemuir	147.85	3	*e*P	PKPdf	19 27 08.6	-0.3
CLGH	Cloghs, Cushen	147.89	6	*e*P	PKPdf	19 27 08.5	-0.5
TESR	Tescani	147.92	323	⇓*i*P	PKPbc	19 27 13.2	0.0
BIZ	Bicaz	147.95	324	⇓*i*P	PKPdf	19 27 10.4	+1.0
BUR08	Bucovina Ar. S	147.98	326	*e*PKPdf	PKPdf	19 27 09.9	+0.4
BUR08				*e*PKPbc	PKiKP	19 27 14.1	-0.7
ERMK	Ermenek	148.05	303	*i* P	PKiKP	19 27 14.7	-0.7
ERMK				IAML_P			
	comp=Z,3µm,0.7s						
TIRR	Tirgusor	148.06	319	*e*PKPbc	PKPbc	19 27 13.3	-0.3
TIRR				*e*PKPab	PKPab	19 27 18.6	+0.1
TIRR	Tirgusor	148.06	319	⇑*i*P	PKPbc	19 27 13.9	+0.4
TIRR	Tirgusor	148.06	319	⇑PKP2	PKPbc	19 27 14.0	+0.4
MDUB	Mudurnu	148.07	310	*e*PKPdf	PKPdf	19 27 09.1	-0.8
MDUB				*e*PKPbc	PKPbc	19 27 13.4	-0.5
BHH	Howats Hill	148.08	3	*e*P	PKPbc	19 27 13.2	-0.1
KDHN	Kadinhani	148.10	306	*i* P	PKPbc	19 27 13.7	-0.4
KDHN				IAML_P			
	comp=Z,2µm,0.7s						
CSS	Mathiatis	148.13	299	*e*PKPbc	PKPbc	19 27 13.8	-0.3
CSS	Mathiatis	148.13	299	P	PKPbc	19 27 14.0	-0.1
ODBI	Odobesti	148.13	322	⇑*i*P	PKiKP	19 27 14.7	-0.3
KMER	Konya-Meram	148.15	305	*i* P	PKiKP	19 27 14.8	-0.7
KMER				IAML_P			
	comp=Z,33nm,0.2s						
MAMC	Mammari	148.17	300	P	PKPbc	19 27 14.3	+0.1
MFTR	Murfatlar	148.20	318	⇓*i*P	PKPbc	19 27 14.3	+0.4
TLB	Topalu	148.22	319	⇓*i*P	PKiKP	19 27 14.5	-0.7
TLB	Topalu	148.22	319	⇓PKP2	PKiKP	19 27 14.5	-0.7
HARR	Harsova	148.23	319	⇓*i*P	PKPbc	19 27 13.9	-0.1
HARR	Harsova	148.23	319	⇓PKP2	PKPbc	19 27 13.9	-0.1
VRI	Vrincioaia	148.26	322	⇑*i*P	PKPbc	19 27 14.3	+0.2
VRI	Vrincioaia	148.26	322	⇑PKP2	PKPbc	19 27 14.3	+0.2
PLOR	Plostina	148.31	322	⇑*i*P	PKPbc	19 27 13.7	-0.6
CVDA	Cernavoda	148.35	319	⇓*i*P	PKiKP	19 27 15.1	-0.4
EDMD	Edmundbyers	148.38	1	*e*P	PKPdf	19 27 10.0	+0.2
LEF	Lefka	148.44	300	⇑*i*P	PKPbc	19 27 15.1	+0.2
LEF	Lefka	148.44	300	*i* P	PKPbc	19 27 14.8	-0.1
LEF				IAML_P			
	comp=Z,5µm,0.5s						
BISRR	Bisoca	148.46	322	⇑*i*P	PKiKP	19 27 15.2	-0.6
KOLS	Kolonicke sedl	148.51	330	*e*PKP	PKPdf	19 27 10.5	+0.3
KOLS				*e*		19 27 15.5	
SZAC	Souni	148.53	299	P	PKPbc	19 27 14.9	-0.3
DOGA	KONYA_Doganhis	148.57	306	*i* P	PKPbc	19 27 15.3	0.0
DOGA				IAML_P			
	comp=Z,580nm,0.5s						
KESW	Keswick, Cumbr	148.59	3	*e*P	PKPbc	19 27 13.1	-1.5
OJC	Ojcow	148.59	334	*e*P	PKPbc	19 27 14.9	+0.2
OJC	Ojcow	148.59	334	*e*PKPdf	PKPdf	19 27 09.7	-0.6
OJC				*e*PKPbc	PKPbc	19 27 13.9	-0.9
OJC	Ojcow	148.59	334	*e*PKIKP	PKPdf	19 27 09.7	-0.6
ICOR	Ion Corvin	148.61	319	⇑*i*P	PKPbc	19 27 15.2	+0.2
GAZI	Gazipasa	148.63	302	*i* P	PKPbc	19 27 14.9	-0.4
GAZI				IAML_P			
	comp=Z,3µm,0.8s						
OZUR		148.64	323	⇑*i*P	PKPbc	19 27 14.0	-1.1
ALFC	Alefka	148.67	300	P	PKPbc	19 27 15.0	-0.5
UZH	Uzhgorod	148.72	330	⇑*i*PKHKP	PKPbc	19 27 15.1	0.0
GMM	Mts of Mourne	148.74	6	*e*P	PKPdf	19 27 11.3	+1.0
ARCR	ARCALIA	148.78	326	⇓*i*P	PKiKP	19 27 15.8	-0.5
BMR	Baia Mare	148.82	328	⇓*i*P	PKPbc	19 27 14.4	-1.0
IOMK	Kirk Michael	148.83	4	*e*P	PKPdf	19 27 10.2	-0.3
SILT	Sile	148.86	312	⇑*i*P	PKiKP	19 27 16.2	-0.4
MLR	Muntele Rosu	148.92	322	PKP	PKPdf	19 27 10.2	-0.9
	comp=Z,5.6nm,1.0s,baz=62,slow=1.3,SNR=5.5						
MLR				PKPbc	PKPbc	19 27 15.7	-0.2
	comp=Z,17nm,0.6s,baz=30,slow=3.2,SNR=31						
MLR	Muntele Rosu	148.92	322	⇑*i*P	PKPdf	19 27 10.5	-0.6
PPCY	Paphos	148.93	300	P	PKPbc	19 27 15.2	-0.9
WIM	Isle of Man	148.94	4	*e*P	PKPdf	19 27 10.3	-0.4
DOPR	Dopca	148.94	323	⇑*i*P	PKPbc	19 27 16.0	+0.2
TRPA	Tarpa	148.96	329	⇓*i*P	PKPbc	19 27 15.5	-0.2
TRPA	Tarpa	148.96	329	⇓*e*P	PKPbc	19 27 15.1	-0.6
KEPZ	Antalya-Kepez	148.99	304	*i* P	PKPbc	19 27 14.1	-2.1
KEPZ				IAML_P			
	comp=Z,1µm,0.5s						
NIE	Niedzica	149.01	333	*e*P	PKiKP	19 27 16.6	-0.1
NIE	Niedzica	149.01	333	*e*PKP2	PKiKP	19 27 16.6	-0.1
SECR		149.12	321	⇓*i*P	PKiKP	19 27 16.6	-0.5
SULR		149.22	321	⇑*i*P	PKPbc	19 27 16.3	-0.1
KLYT	Kilyos	149.23	313	⇑*i*P	PKPbc	19 27 15.9	-0.6
HPK	Haverah Park	149.26	1	*e*P	PKPbc	19 27 15.6	-0.6
BAGO	Egridir - ISPA	149.26	306	*i* P	PKPab	19 27 23.0	-0.8
BAGO				IAML_P			
	comp=Z,564nm,0.8s						
YLV	Yalova	149.30	311	⇑*i*P	PKPbc	19 27 16.8	-0.1
PRD	Provadia	149.35	317	P	PKPbc	19 27 17.0	+0.2
KSP	Ksiaz	149.37	339	*e*P	PKiKP	19 27 17.2	-0.1
MDB	Medias	149.38	325	⇓*i*P	PKiKP	19 27 17.8	+0.2
MDB	Medias	149.38	325	⇓PKP2	PKiKP	19 27 17.8	+0.2
CJR	Cluj-Napoca	149.41	326	⇓*i*P	PKiKP	19 27 17.6	-0.1
VOIR		149.46	323	⇑*i*P	PKPbc	19 27 17.2	+0.1
ISP	Isparta	149.52	306	*e*PKPbc	PKPbc	19 27 15.6	-1.9
ISP	Isparta	149.52	306	⇑*i*P	PKPbc	19 27 15.9	-1.6
OKC	Ostrava-Krasne	149.54	336	⇑*e*PKP	PKPbc	19 27 17.3	+0.3
LANS	Liptovska Anna	149.56	333	*e*PKP2	PKiKP	19 27 18.7	+0.8
LANS	Liptovska Anna	149.56	333	*e*PKP	PKiKP	19 27 18.7	+0.8
OSTC	Ostas	149.64	338	⇑*e*PKP	PKiKP	19 27 17.8	-0.2
OSTC				*e*PKPAB	PKPab	19 27 26.2	+1.3
KECS	Kecovo	149.64	332	*e*PKP	PKiKP	19 27 17.9	-0.1
KECS				*e*		19 27 24.8	
ULDT	Uludag	149.64	311	*i* P	PKiKP	19 27 18.4	-0.2
ULDT				IAML_P			
	comp=Z,2µm,0.8s						
KZIL	AFYON_Kizioren	149.65	307	*i* P	PKiKP	19 27 18.8	+0.2
KZIL				IAML_P			
	comp=Z,2µm,0.5s						
CHVC	Chvalec	149.66	339	⇑*e*PKP	PKiKP	19 27 17.9	-0.2
WPS	Cemaes, Angles	149.69	4	*e*P	PKPdf	19 27 11.7	-0.1
RAZG	Razgrad	149.70	319	⇑*i*P	PKPbc	19 27 17.5	-0.1
WME	Myndd Eilian	149.71	4	*e*P	PKPdf	19 27 11.3	-0.6
ARR	Arges	149.73	323	⇓*i*P	PKiKP	19 27 18.4	0.0
UPC	Upice	149.75	339	⇑*e*PKP	PKiKP	19 27 18.1	-0.1
DPC	Dobruska-Polom	149.78	338	*e*PKIKP	PKPdf	19 27 12.4	+0.2
DPC				*e*		19 27 26.3	
DPC	Dobruska-Polom	149.78	338	*e*PKPDF	PKPdf	19 27 12.4	+0.2
DPC				⇑*e*PKP	PKiKP	19 27 18.3	0.0
DPC				*e*PKPAB	PKPab	19 27 26.3	+0.8
LTVH	Ltavrtes, Hu	149.79	329	⇓*e*P	PKPbc	19 27 17.1	-0.6
DRGR		149.81	327	⇑*i*P	PKPdf	19 27 12.3	-0.1
DRGR		149.81	327	⇑PKIKP	PKPdf	19 27 12.3	-0.1
WLF1	Llynfaes	149.81	4	*e*P	PKPdf	19 27 11.7	-0.3
MORC	Moravsky Berou	149.82	336	*e*PKPdf	PKPdf	19 27 11.7	-0.6
MORC				*e*PKPbc	PKPbc	19 27 18.0	+0.2
MORC				*e*PKPab	PKPab	19 27 25.5	-0.2
MORC	Moravsky Berou	149.82	336	⇑*i*P	PKPdf	19 27 12.4	+0.1
MORC	Moravsky Berou	149.82	336	*e*PKIKP	PKPdf	19 27 11.7	-0.6
MORC				*e*		19 27 25.5	
MORC	Moravsky Berou	149.82	336	*e*PKP	PKPdf	19 27 12.4	+0.1
MORC				*e*		19 27 18.1	
GDZ	Gediz	149.82	309	*i* P	PKPbc	19 27 18.5	+0.2
GDZ				IAML_P			
	comp=Z,2µm,0.6s						
YRC	Rhoscolyn	149.84	5	*e*P	PKPdf	19 27 11.0	-1.1
BRDR	BURDUR-Merkez	149.91	306	*i* P	PKPbc	19 27 18.1	-0.3
BRDR				IAML_P			
	comp=Z,2µm,0.8s						
KORT	Korkueli	149.92	304	*i* P	PKPbc	19 27 18.3	-0.3
KORT				IAML_P			
	comp=Z,4µm,0.5s						
CLL	Collm	149.97	343	*e*PKPdf	PKPdf	19 27 12.4	0.0
CLL				*e*PKPbc	PKPbc	19 27 18.1	+0.2
CLL				*e*PKPab	PKPab	19 27 26.0	-0.1
CLL	Collm	149.97	343	*e*PKPdf	PKPdf	19 27 13.0	+0.6
CLL				⇓*i*PKPbc	PKPbc	19 27 18.2	+0.2
	comp=Z,150nm,0.9s						
CLL				*i* PKPab	PKPab	19 27 25.7	-0.5
	comp=Z,32nm,0.8s						
CLL				*e*pPKPbc	pPKPbc	19 29 26.0	-0.2
HUMR	Humele	150.05	322	⇓*i*P	PKPbc	19 27 17.8	-0.6
PHSR	Pinarhisar	150.06	315	⇓*i*P	PKPbc	19 27 18.7	+0.2
BRG	Berggiesshubel	150.09	341	*e*PKP	PKPdf	19 27 12.8	+0.2
	comp=Z,9.3nm,1.4s						
BRG	Berggiesshubel	150.09	341	*i* PKP	PKiKP	19 27 18.8	-0.1
	comp=Z,100nm,1.0s						
BRG	Berggiesshubel	150.09	341	*i* PKP	PKPab	19 27 25.4	-1.2
	comp=Z,26nm,1.0s						
BRG				*e*pPKP	pPKPbc	19 29 25.1	-1.4
	comp=Z,3.5nm,0.8s						
BRG	Berggiesshubel	150.09	341	*e*PKIKP	PKPdf	19 27 12.8	+0.2
BRG				*i*		19 27 25.5	
BRG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BRG				pmax	pmax		
	comp=Z,26nm,1.0s						
KHAL	Karahalli	150.09	307	*i* P	PKiKP	19 27 19.4	0.0
KHAL				IAML_P			
	comp=Z,690nm,0.8s						
STNC	Stoke	150.12	2	*e*P	PKPbc	19 27 18.1	-0.2
AKUM	Antalya-Kumluc	150.13	303	*i* P	PKPbc	19 27 18.8	-0.1
AKUM				IAML_P			
	comp=Z,720nm,0.6s						
LOT	Lotru	150.15	324	⇑*i*P	PKPbc	19 27 18.5	-0.3
PVCC	Panska Ves	150.20	340	⇑*e*PKP	PKiKP	19 27 19.1	0.0
FOEL	Foel Wylfa	150.28	3	*e*P	PKPdf	19 27 12.6	-0.3
USAK	Uak-Merkez	150.30	308	*i* P	PKPbc	19 27 19.1	-0.2
USAK				IAML_P			
	comp=Z,634nm,0.6s						
DEV	Deva	150.32	326	⇓*i*P	PKiKP	19 27 19.2	-0.3
DEV	Deva	150.32	326	⇓PKIKP	PKiKP	19 27 19.2	-0.3
PSZ	Piszkesteto	150.32	331	*e*PKPdf	PKPdf	19 27 12.8	-0.4
PSZ				*e*PKPbc	PKPbc	19 27 18.4	-0.7
PSZ	Piszkesteto	150.32	331	⇑*i*P	PKiKP	19 27 19.4	-0.2
PSZ	Piszkesteto	150.32	331	*e*PKIKP	PKPdf	19 27 12.8	-0.4
PSZ	Piszkesteto	150.32	331	⇓*e*P	PKPbc	19 27 18.1	-1.0
DURS	Dursunbey	150.33	310	*i* P	PKPbc	19 27 19.3	-0.1
DURS				IAML_P			
	comp=Z,769nm,0.9s						
ZIMR		150.33	320	⇑*i*P	PKiKP	19 27 19.4	-0.2
ZIMR		150.33	320	⇑PKIKP	PKiKP	19 27 19.4	-0.2
VYHS	Vyhne	150.34	333	*e*PKIKP	PKPdf	19 27 12.9	-0.2
VYHS	Vyhne	150.34	333	*e*PKP	PKPdf	19 27 12.8	-0.3
VYHS				*e*		19 27 19.2	
DEMI	Demirci	150.39	309	*i* P	PKPbc	19 27 19.3	-0.2
DEMI				IAML_P			
	comp=Z,1µm,0.7s						
ELND	Elena	150.43	318	⇓*i*P	PKPdf	19 27 13.6	+0.2
GOLH	Golhisar	150.44	305	*i* P	PKPbc	19 27 19.8	+0.1
GOLH				IAML_P			
	comp=Z,744nm,0.6s						
JAVC	Velka Javorina	150.51	335	*e*PKP	PKPdf	19 27 14.6	+1.2
JAVC				*e*		19 27 20.8	
JAVC				*e*		19 27 30.1	
VRAC	Vranov	150.55	337	PKP	PKPdf	19 27 12.5	-0.9
	comp=Z,1.4nm,0.3s,baz=146,slow=3.0,SNR=4.3						
VRAC				PKPbc	PKPbc	19 27 19.2	-0.2
	comp=Z,12nm,0.7s,baz=62,slow=1.2,SNR=25						
VRAC				PKPab	PKPab	19 27 29.1	+0.4
	comp=Z,31nm,0.8s,baz=30,slow=2.2,SNR=17						
VRAC	Vranov	150.55	337	⇑*i*P	PKiKP	19 27 20.1	+0.2
VRAC	Vranov	150.55	337	*e*PKP	PKPdf	19 27 13.2	-0.2
VRAC				*e*		19 27 19.5	
VRAC				*e*		19 27 29.3	
GOPC	GO Pecny, Ondr	150.66	339	*e*PKIKP	PKPbc	19 27 19.8	+0.1
GOPC				*e*		19 27 29.0	
GOPC				MLR	MLR		
	comp=Z,3µm,19.3s						
GOPC	GO Pecny, Ondr	150.66	339	⇑*e*PKP	PKPbc	19 27 19.8	+0.1
GOPC				*e*PKPAB	PKPab	19 27 29.0	-0.2
HLM1	Long Mynd	150.66	3	*e*P	PKPdf	19 27 13.2	-0.2
PRU	Pruhonice	150.68	340	*e*PKIKP	PKiKP	19 27 19.9	-0.2
PRU				*e*		19 27 29.8	
PRU	Pruhonice	150.68	340	⇑*e*PKP	PKiKP	19 27 19.9	-0.2
PRU				*e*PKPAB	PKPab	19 27 29.8	+0.6
WTSB	Winterswijk	150.68	350	*e*PKPbc	PKPbc	19 27 18.6	-1.0
	comp=Z,156nm,0.6s						
SIRR	Siria	150.70	327	⇓*i*P	PKiKP	19 27 20.3	0.0
GZR	Gura Zlata	150.72	325	⇓*i*P	PKPdf	19 27 13.5	-0.4
GZR	Gura Zlata	150.72	325	⇓PKIKP	PKPdf	19 27 13.5	-0.4
AKAS	Kas	150.73	303	*i* P	PKiKP	19 27 20.6	-0.3
AKAS				IAML_P			
	comp=Z,4µm,0.8s						
BALB	Balikesir	150.73	311	*e*PKPbc	PKPbc	19 27 19.5	-0.6
KRUC	Moravsky	150.83	337	*e*PKP	PKPdf	19 27 13.6	-0.2
KRUC				*e*		19 27 20.2	
KRUC				*e*		19 27 30.4	
CRAR	CRAIOVA	150.84	322	⇓*i*P	PKiKP	19 27 20.4	-0.2
CRAR	CRAIOVA	150.84	322	⇓PKIKP	PKiKP	19 27 20.4	-0.2
TAVA	DENIZLI_Tavas	150.84	306	*i* P	PKiKP	19 27 21.7	+0.7
TAVA				IAML_P			
	comp=Z,2µm,0.8s						
SMOL	Smolenice	150.89	335	*e*PKIKP	PKiKP	19 27 21.0	+0.4
SMOL	Smolenice	150.89	335	*e*PKP	PKiKP	19 27 21.0	+0.4
SMOL				*e*		19 27 31.3	
PLVB	Pleven	150.93	320	⇓*i*P	PKiKP	19 27 20.7	-0.2
STEP	BALIKESIR_Sava	150.96	310	*i* P	PKPbc	19 27 20.8	+0.1
STEP				IAML_P			
	comp=Z,1µm,0.6s						
TREC	Trest	150.96	338	*e*PKIKP	PKPbc	19 27 20.5	+0.1
TREC	Trest	150.96	338	⇑*e*PKP	PKPbc	19 27 20.5	+0.1
SRE	Strehaia	150.96	323	⇓*i*P	PKiKP	19 27 21.0	+0.1
SRE	Strehaia	150.96	323	⇓PKIKP	PKiKP	19 27 21.0	+0.1
FETY	Fethiye	151.00	304	*i* P	PKPbc	19 27 20.7	-0.2
FETY				IAML_P			
	comp=Z,1µm,0.5s						
BUD	Budapest	151.04	332	⇓*e*P	PKPbc	19 27 20.1	-0.5
MODS	Modra-Piesok	151.06	335	*e*PKIKP	PKPbc	19 27 20.6	-0.1
MODS				*e*		19 27 31.0	
MODS	Modra-Piesok	151.06	335	*e*PKP	PKPbc	19 27 20.5	-0.1
MODS				*e*		19 27 31.0	
SRO	Srobarova	151.09	333	*e*PKIKP	PKiKP	19 27 20.9	-0.1
SRO	Srobarova	151.09	333	*e*PKP	PKiKP	19 27 20.9	-0.1
NKC	Novy Kostel	151.09	342	*e*PKIKP	PKiKP	19 27 21.0	0.0
NKC				*e*		19 27 31.6	
NKC	Novy Kostel	151.09	342	⇑*e*PKP	PKiKP	19 27 21.0	0.0
NKC				*e*PKPAB	PKPab	19 27 31.6	+0.7
AMBH	Ambrzfalva	151.10	328	⇓*e*P	PKiKP	19 27 21.1	0.0
AKHS	Akhisar	151.10	309	*i* P	PKPbc	19 27 20.5	-0.6
AKHS				IAML_P			
	comp=Z,1µm,0.3s						
BZS	Buzias	151.17	326	⇓*i*P	PKPbc	19 27 20.1	-0.8
BZS	Buzias	151.17	326	⇓PKIKP	PKPbc	19 27 20.1	-0.8
HERR	Herculane	151.25	324	⇓*i*P	PKPbc	19 27 20.8	-0.3
ZST	Bratislava	151.27	335	*e*PKIKP	PKPbc	19 27 20.6	-0.5
ZST				*e*		19 27 31.8	
ZST	Bratislava	151.27	335	*e*PKP	PKPbc	19 27 20.6	-0.5
ZST				*e*		19 27 31.8	
TURN	Turunc	151.28	305	*i* P	PKiKP	19 27 21.8	+0.1
TURN				IAML_P			
	comp=Z,1µm,0.5s						
MONM	Monmouth	151.35	3	*e*P	PKPdf	19 27 14.2	-0.3
ALN	Alexandroupoli	151.39	314	*e*PKPbc	PKPbc	19 27 20.5	-1.1
KDZ	Kurdzhali	151.41	316	P	PKPbc	19 27 21.0	-0.7
STRD	Stroud	151.43	2	*e*P	PKPbc	19 27 19.9	-1.4
AYDN	Tasoluk	151.53	307	*i* P	PKiKP	19 27 23.0	+0.6
AYDN				IAML_P			
	comp=Z,2µm,0.5s						
BANR	Banloc	151.57	326	⇓*i*P	PKiKP	19 27 22.5	+0.4
ZEDA	zmir-Bergama	151.58	310	*i* P	PKiKP	19 27 22.6	+0.2
ZEDA				IAML_P			
	comp=Z,1µm,0.8s						
BAYC	CANAKKALE_Bayr	151.61	312	*i* P	PKPbc	19 27 21.5	-0.6
BAYC				IAML_P			
	comp=Z,863nm,0.5s						
EZN	Ezine	151.72	312	⇑*i*P	PKPbc	19 27 21.7	-0.6
EZN	Ezine	151.72	312	⇑PKIKP	PKPbc	19 27 21.7	-0.6
KHC	Kasperske Hory	151.73	340	*e*PKPdf	PKPdf	19 27 14.5	-0.7
KHC				*e*PKPbc	PKPbc	19 27 22.2	0.0
KHC				*e*PKPab	PKPab	19 27 34.3	+0.6
KHC	Kasperske Hory	151.73	340	*e*PKIKP	PKPdf	19 27 15.1	-0.1
KHC				*e*		19 27 34.3	
KHC	Kasperske Hory	151.73	340	*e*PKPDF	PKPdf	19 27 15.1	-0.1
KHC				⇑*e*PKP	PKiKP	19 27 22.4	0.0
KHC				*e*PKPAB	PKPab	19 27 34.3	+0.6
SOP	Sopron	151.90	335	⇓*e*P	PKPbc	19 27 22.0	-0.5
GRA1	Grafenberg Arr	151.91	343	*e*PKPdf	PKPdf	19 27 14.5	-0.9
GRA1				*e*PKPbc	PKPbc	19 27 22.2	-0.3
GRA1				*e*PKPab	PKPab	19 27 34.8	+0.4
GRF	Grafenberg Arr	151.91	343	*e*PKIKP	PKPdf	19 27 14.5	-0.9
GRF				*e*		19 27 34.8	
WOL	Wolverton	151.92	1	*e*P	PKPdf	19 27 17.4	+2.0
GEC2	GERESS Array S	151.94	339	*e*PKPdf	PKPdf	19 27 14.8	-0.8
GEC2				*e*PKPbc	PKPbc	19 27 21.8	-0.9
GEC2				*e*PKPab	PKPab	19 27 34.9	+0.2
GEC2	GERESS Array S	151.94	339	*e*PKIKP	PKPdf	19 27 14.9	-0.8
GEC2				*e*		19 27 21.8	
GEC2				*e*		19 27 34.9	
GERES	GERESS Array B	151.94	339	PKP	PKPdf	19 27 14.6	-1.1
	comp=Z,1.2nm,0.7s,baz=90,slow=1.3,SNR=15						
GERES				PKPbc	PKPbc	19 27 22.4	-0.3
	comp=Z,14nm,0.8s,baz=45,slow=2.1,SNR=69						
GERES				PKPab	PKPab	19 27 34.4	-0.3
	comp=Z,5.6nm,0.7s,baz=24,slow=4.0,SNR=13						
CONA	Conrad Observa	151.97	336	*i* PKPdf	PKPdf	19 27 15.3	-0.3
	comp=Z,6.0nm,1.2s						
CONA				*i* PKiKP	PKiKP	19 27 23.0	0.0
	comp=Z,21nm,0.7s,SNR=15						
CONA				*i* PKPab	PKPab	19 27 35.9	+1.0
	comp=Z,24nm,0.8s						
HGN	Heimansgroeve	151.98	351	*e*PKPbc	PKPbc	19 27 22.4	-0.1
	comp=Z,27nm,1.0s						
HGN				*e*PKPab	PKPab	19 27 34.5	-0.1
	comp=Z,62nm,1.1s						
TIH	Tihany	151.98	332	⇓*e*P	PKPbc	19 27 22.0	-0.7
BEBN	Eben Emael	151.98	351	⇑PKPab	PKPab	19 27 34.5	-0.1
DAT	Datca	152.10	305	*i* P	PKPbc	19 27 22.0	-1.5
DAT				IAML_P			
	comp=Z,444nm,0.8s						
MEM	Membach	152.12	351	⇑PKPbc	PKPbc	19 27 22.5	-0.4
MEM				⇑PKPab	PKPab	19 27 35.1	-0.1
UCC	Uccle	152.15	353	⇓PKPbc	PKPbc	19 27 22.7	-0.2
UCC				⇑PKPab	PKPab	19 27 35.1	-0.2
MORH	Mrgy, Hungar	152.17	330	⇓*e*P	PKPbc	19 27 22.1	-1.1
URLA	Izmir	152.18	309	*i* P	PKiKP	19 27 23.7	0.0
URLA				IAML_P			
	comp=Z,2µm,0.8s						
VTS	Vitosha	152.21	320	*e*PKPdf	PKPdf	19 27 15.5	-0.8
VTS				*e*PKPbc	PKPbc	19 27 23.1	-0.5
VTS				*e*PKPab	PKPab	19 27 37.0	+0.9
VTS	Vitosha	152.21	320	⇓*i*P	PKiKP	19 27 23.8	+0.1
VTS	Vitosha	152.21	320	*e*PKIKP	PKPdf	19 27 15.5	-0.8
VTS	Vitosha	152.21	320	P	PKPbc	19 27 22.9	-0.7
BCLA	Clavier	152.40	352	⇓PKPbc	PKPbc	19 27 23.2	-0.3
BCLA				⇓PKPab	PKPab	19 27 35.7	-0.7
SNF	Seneffe	152.44	353	⇑PKPbc	PKPbc	19 27 23.1	-0.5
SNF				⇑PKPab	PKPab	19 27 36.5	-0.1
MMB	Musomiste	152.50	318	P	PKPbc	19 27 23.0	-1.1
MOA	Molln	152.62	338	*i* PKPdf	PKPdf	19 27 16.0	-0.6
	comp=Z,2.6nm,0.8s						
MOA				*i* PKiKP	PKiKP	19 27 24.2	-0.1
	comp=Z,6.8nm,0.6s						
MOA				*i* PKPab	PKPab	19 27 38.2	+0.7
	comp=Z,13nm,1.1s						
ARSA	Arzberg	152.66	335	*i* PKPdf	PKPdf	19 27 16.1	-0.6
	comp=Z,2.1nm,0.9s						
ARSA				*i* PKiKP	PKPbc	19 27 24.0	-0.3
	comp=Z,6.9nm,1.1s						
ARSA				*i* PKPab	PKPab	19 27 36.3	-1.4
	comp=Z,5.4nm,0.7s						
KKB	Krupnik	152.74	319	P	PKPbc	19 27 23.5	-1.1
BEHE	Becsehely	152.79	333	⇓*e*P	PKPbc	19 27 23.1	-1.4
DOU	Dourbes	152.81	352	⇑PKPbc	PKPbc	19 27 24.0	-0.4
DOU				⇑PKPab	PKPab	19 27 37.9	-0.3
WLF	Walferdange	153.01	350	*e*PKPdf	PKPdf	19 27 17.0	0.0
WLF				*e*PKPbc	PKiKP	19 27 25.0	+0.1
WLF				*e*PKPab	PKPab	19 27 38.9	-0.2
WLF	Walferdange	153.01	350	⇑PKPbc	PKiKP	19 27 25.4	+0.5
WLF				⇓PKPab	PKPab	19 27 39.3	+0.2
STU	Stuttgart	153.27	345	*e*PKPdf	PKPdf	19 27 16.6	-0.7
STU				*e*PKPbc	PKiKP	19 27 25.5	0.0
STU				*e*PKPab	PKPab	19 27 39.9	-0.3
STU	Stuttgart	153.27	345	*e*PKIKP	PKPdf	19 27 16.7	-0.7
STU				*e*		19 27 39.9	
SOKA	Soboth	153.32	335	*i* PKPdf	PKPdf	19 27 17.0	-0.7
	comp=Z,8.0nm,1.3s,SNR=4.9						
SOKA				*i* PKiKP	PKPbc	19 27 25.4	-0.4
	comp=Z,12nm,1.0s						
SOKA				*i* PKPab	PKPab	19 27 40.9	+0.2
	comp=Z,21nm,1.2s						
PERS	Pernice	153.32	335	*i* PKPdf	PKPdf	19 27 16.5	-1.1
PERS				*i* PKPbc	PKPbc	19 27 24.9	-0.8
PERS				*i* PKPab	PKPab	19 27 40.3	-0.3
KBA	Koelnbreinsper	153.60	338	*i* PKPdf	PKPdf	19 27 17.1	-1.0
	comp=Z,4.5nm,1.2s						
KBA				*i* PKPbc	PKPbc	19 27 25.6	-0.9
	comp=Z,6.3nm,0.9s						
OBKA	Obir	153.65	336	*i* PKPdf	PKPdf	19 27 17.5	-0.6
	comp=Z,3.7nm,1.1s						
OBKA				*i* PKiKP	PKPbc	19 27 26.0	-0.4
	comp=Z,2.9nm,0.8s						
OBKA				*i* PKPab	PKPab	19 27 41.9	-0.2
	comp=Z,9.6nm,0.7s						
MYKA	Terra Mystica	153.88	337	*i* PKPdf	PKPdf	19 27 17.4	-1.1
	comp=Z,3.3nm,1.0s						
MYKA				*i* PKiKP	PKPbc	19 27 26.3	-0.7
	comp=Z,5.6nm,0.5s,SNR=4.7						
MYKA				*i* PKPab	PKPab	19 27 42.7	-0.3
	comp=Z,12nm,0.6s						
BFO	Black Forest	153.88	346	*e*PKPdf	PKPdf	19 27 17.4	-0.9
BFO				*e*PKPbc	PKPbc	19 27 26.6	-0.2
BFO				*e*PKPab	PKPab	19 27 42.2	-0.7

BFO	**Black Forest**	**153.88**	**346**	*e*PKIKP	**PKPdf**	**19 27 17.4**	**-0.9**
BFO				*e*		19 27 42.2	
WATA	**Walderalm**	**153.95**	**341**	*i* PKPdf	**PKPdf**	**19 27 18.8**	**+0.2**
	comp=Z,2.0nm,0.6s						
WATA				*i* PKiKP	**PKPbc**	**19 27 26.8**	**-0.3**
	comp=Z,5.3nm,0.4s,SNR=5.3						
WATA				*i* PKPab	**PKPab**	**19 27 43.8**	**+0.4**
	comp=Z,7.6nm,0.5s						
BLY	**Banja Luka**	**153.95**	**330**	*e*PKPdf	**PKPdf**	**19 27 17.8**	**-0.7**
BLY				*e*PKPbc	**PKiKP**	**19 27 27.0**	**0.0**
BLY				*e*PKPab	**PKPab**	**19 27 42.4**	**-0.9**
WTTA	**Wattenberg**	**153.99**	**341**	*i* PKPdf	**PKPdf**	**19 27 18.4**	**-0.4**
	comp=Z,8.6nm,0.9s						
WTTA				*i* PKiKP	**PKPbc**	**19 27 27.2**	**-0.1**
	comp=Z,13nm,0.5s,SNR=6.7						
WTTA				*i* PKPab	**PKPab**	**19 27 44.1**	**+0.5**
	comp=Z,20nm,0.6s						
RETA	**Reutte**	**154.05**	**342**	*i* PKPdf	**PKPdf**	**19 27 18.3**	**-0.3**
	comp=Z,4.4nm,1.0s						
RETA				*i* PKPab	**PKPab**	**19 27 44.3**	**+0.6**
	comp=Z,18nm,1.0s,SNR=6.0						
MOTA	**Moosalm**	**154.08**	**341**	*i* PKPdf	**PKPdf**	**19 27 18.2**	**-0.6**
	comp=Z,5.1nm,1.0s						
MOTA				*i* PKiKP	**PKPbc**	**19 27 27.1**	**-0.3**
	comp=Z,5.5nm,0.7s						
MOTA				*i* PKPab	**PKPab**	**19 27 44.6**	**+0.7**
	comp=Z,24nm,1.1s						
LIT	**Litokhoron**	**154.11**	**316**	*e*PKPdf	**PKPdf**	**19 27 17.7**	**-1.2**
LIT				*e*PKPbc	**PKPbc**	**19 27 26.5**	**-1.0**
LIT				*e*PKPab	**PKPab**	**19 27 43.7**	**-0.5**
LIT	**Litokhoron**	**154.11**	**316**	*e*PKIKP	**PKPdf**	**19 27 17.7**	**-1.2**
LIT				*e*		19 27 43.7	
VISS	**Visnje**	**154.12**	**334**	*i* PKPdf	**PKPdf**	**19 27 17.9**	**-0.8**
VISS				*i* PKPbc	**PKPbc**	**19 27 27.2**	**-0.2**
VISS				*i* PKPab	**PKPab**	**19 27 43.3**	**-0.7**
SQTA	**Sankt Quirin**	**154.16**	**341**	*i* PKPdf	**PKPdf**	**19 27 18.6**	**-0.3**
	comp=Z,7.9nm,1.1s						
SQTA				*i* PKiKP	**PKiKP**	**19 27 27.6**	**0.0**
	comp=Z,14nm,0.9s						
SQTA				*i* PKPab	**PKPab**	**19 27 44.7**	**+0.5**
	comp=Z,17nm,0.9s						
ABTA	**Abfaltersbach**	**154.17**	**339**	*i* PKPdf	**PKPdf**	**19 27 18.1**	**-0.8**
	comp=Z,17nm,1.4s,SNR=11						
ABTA				*i* PKiKP	**PKPbc**	**19 27 27.1**	**-0.5**
	comp=Z,11nm,0.6s						
ABTA				*i* PKPab	**PKPab**	**19 27 44.0**	**-0.2**
	comp=Z,16nm,0.7s						
BOJS	**Bojanci**	**154.20**	**334**	*i* PKPdf	**PKPdf**	**19 27 18.4**	**-0.4**
BOJS				*i* PKPbc	**PKPbc**	**19 27 27.4**	**-0.1**
BOJS				*i* PKPab	**PKPab**	**19 27 44.2**	**-0.1**
ECH	**Echery**	**154.23**	**348**	*e*PKPdf	**PKPdf**	**19 27 17.9**	**-0.9**
ECH				*e*PKPab	**PKPab**	**19 27 43.9**	**-0.5**
ECH	**Echery**	**154.23**	**348**	*e*PKIKP	**PKPdf**	**19 27 17.9**	**-0.9**
ECH				*e*		19 27 43.9	
JAVS	**Javornik**	**154.35**	**336**	*i* PKPdf	**PKPdf**	**19 27 18.1**	**-1.1**
JAVS				*i* PKPbc	**PKiKP**	**19 27 27.2**	**-0.8**
JAVS				*i* PKPab	**PKPab**	**19 27 44.0**	**-1.0**
FNA	**Florina**	**154.42**	**319**	*e*PKPbc	**PKiKP**	**19 27 27.9**	**-0.3**
DAVA	**Damuels**	**154.48**	**343**	*i* PKPdf	**PKPdf**	**19 27 19.3**	**0.0**
	comp=Z,6.1nm,1.0s						
DAVA				*i* PKiKP	**PKPbc**	**19 27 29.8**	**+1.6**
	comp=Z,11nm,1.4s						
DAVA				*i* PKPab	**PKPab**	**19 27 46.2**	**+0.5**
	comp=Z,26nm,0.8s,SNR=5.7						
FETA	**Feichten**	**154.48**	**342**	*i* PKPdf	**PKPdf**	**19 27 19.3**	**-0.1**
	comp=Z,11nm,0.9s,SNR=7.4						
FETA				*i* PKiKP	**PKPbc**	**19 27 28.5**	**+0.2**
	comp=Z,16nm,1.2s						
FETA				*i* PKPab	**PKPab**	**19 27 46.5**	**+0.8**
	comp=Z,14nm,1.1s						
TTG	**Podgorica**	**154.59**	**324**	*e*PKPdf	**PKPdf**	**19 27 19.1**	**-0.3**
TTG				*e*PKPbc	**PKiKP**	**19 27 27.6**	**-0.8**
TTG				*e*PKPab	**PKPab**	**19 27 45.7**	**-0.4**
TTG	**Podgorica**	**154.59**	**324**	*e*PKIKP	**PKPdf**	**19 27 19.1**	**-0.3**
TTG				*e*		19 27 27.6	
TTG				*e*		19 27 45.7	
IDI	**Anoyia**	**154.65**	**304**	PKPbc	**PKiKP**	**19 27 28.8**	**-0.2**
	comp=Z,13nm,0.9s,baz=10,slow=15,SNR=5.2						
AGG	**Agios Georgios**	**154.80**	**314**	*e*PKPdf	**PKPdf**	**19 27 19.9**	**0.0**
AGG				*e*PKPdif	**PKiKP**	**19 27 27.5**	**-1.6**
AGG	**Agios Georgios**	**154.80**	**314**	*e*PKIKP	**PKPdf**	**19 27 19.9**	**0.0**
AGG				*e*		19 27 27.5	
DAVOX	**Davos/Dischmat**	**154.94**	**343**	PKP	**PKPdf**	**19 27 19.6**	**-0.4**
	comp=Z,4.3nm,0.7s,baz=42,slow=2.4,SNR=8.6						
DAVOX				PKPbc	**PKPbc**	**19 27 29.5**	**+0.2**
	comp=Z,6.7nm,0.5s,baz=300,slow=8.5,SNR=12						
DAVOX				PKPab	**PKPab**	**19 27 47.8**	**+0.1**
	comp=Z,20nm,0.7s,baz=347,slow=2.2,SNR=13						
FUORN	**Ofenpass-Fuorn**	**154.98**	**342**	*e*PKPdf	**PKPdf**	**19 27 19.9**	**-0.3**
FUORN				*e*PKPdif	**PKiKP**	**19 27 28.8**	**-0.6**
FUORN				*e*PKPab	**PKPab**	**19 27 48.3**	**+0.4**
CLF	**Chambon-Foret**	**155.09**	**355**	*e*PKPdf	**PKPdf**	**19 27 20.2**	**+0.2**
CLF				*e*PKPab	**PKPab**	**19 27 48.1**	**+0.1**
TUE	**Stuetta**	**155.37**	**343**	*e*PKPdf	**PKPdf**	**19 27 19.8**	**-0.8**
TUE				*e*PKPdif	PKPdf	19 27 30.0	+9.4
TUE				*e*PKPab	**PKPab**	**19 27 49.6**	**+0.1**
SENIN	**Lac Senin/Sane**	**155.97**	**346**	*e*PKPdf	**PKPdf**	**19 27 20.4**	**-1.1**
SENIN				*e*PKPab	**PKPab**	**19 27 51.8**	**-0.4**
BNI	**Bardonecchia**	**157.35**	**346**	*e*PKPdf	**PKPdf**	**19 27 22.8**	**-0.4**
BNI				*e*PKPdif	PKPdf	19 27 34.0	+11
BNI				*e*PKPab	**PKPab**	**19 27 57.5**	**-0.6**
BNI	**Bardonecchia**	**157.35**	**346**	*e*PKIKP	**PKPdf**	**19 27 22.8**	**-0.4**
PGAV	**Gavieira, Arco**	**160.25**	**17**	*e*PKPab	**PKPab**	**19 28 11.1**	**+0.4**
PCAB	**Cabril**	**160.55**	**17**	*e*PKPab	**PKPab**	**19 28 12.5**	**+0.5**
POLO	**Lamas de Olo**	**160.92**	**16**	*e*PKPdf	**PKPdf**	**19 27 28.1**	**+0.8**
POLO	**Lamas de Olo**	**160.92**	**16**	*e*PKPab	**PKPab**	**19 28 13.9**	**+0.2**
PVRL	**Vila Real**	**161.04**	**16**	*e*PKPab	**PKPab**	**19 28 14.5**	**+0.4**
MVO	**Moncorvo**	**161.31**	**15**	*e*PKPdf	**PKPdf**	**19 27 28.4**	**+0.7**
MVO	**Moncorvo**	**161.31**	**15**	*e*PKPdf	**PKPdf**	**19 27 29.2**	**+1.5**
MVO	**Moncorvo**	**161.31**	**15**	*e*PKPab	**PKPab**	**19 28 15.6**	**+0.2**
PVIS	**Viseu**	**161.51**	**17**	*e*PKPdf	**PKPdf**	**19 27 28.6**	**+0.7**
PVIS	**Viseu**	**161.51**	**17**	*e*PKPab	**PKPab**	**19 28 16.5**	**+0.2**
MTE	**Manteigas**	**161.90**	**17**	*e*PKPdf	**PKPdf**	**19 27 28.7**	**+0.4**
MTE	**Manteigas**	**161.90**	**17**	*e*PKPdf	**PKPdf**	**19 27 29.2**	**+0.9**
MTE	**Manteigas**	**161.90**	**17**	*e*PKPab	**PKPab**	**19 28 16.9**	**-1.1**
MTE	**Manteigas**	**161.90**	**17**	*e*PKPdf	**PKPdf**	**19 27 27.5**	**-0.8**
MTE				*e*PKPab	**PKPab**	**19 28 17.5**	**-0.5**
PCAS	**Casmilo, Conde**	**161.95**	**19**	*e*PKPdf	**PKPdf**	**19 27 29.2**	**+0.9**
PCAS	**Casmilo, Conde**	**161.95**	**19**	*e*PKPab	**PKPab**	**19 28 18.1**	**0.0**
PTOM	**Tomar**	**162.37**	**20**	*e*PKPdf	**PKPdf**	**19 27 29.2**	**+0.5**
PTOM	**Tomar**	**162.37**	**20**	*e*PKPab	**PKPab**	**19 28 20.3**	**+0.3**
PCBR	**Castelo Branco**	**162.44**	**17**	*e*PKPdf	**PKPdf**	**19 27 28.7**	**0.0**
PCBR	**Castelo Branco**	**162.44**	**17**	*e*PKPdf	**PKPdf**	**19 27 29.7**	**+1.0**
PCBR	**Castelo Branco**	**162.44**	**17**	*e*PKPab	**PKPab**	**19 28 20.6**	**+0.3**
LIC	**Lamto**	**162.65**	**166**	*e*PKIKP	**PKPdf**	**19 27 29.0**	**-0.7**
	comp=Z,124nm,1.8s						
PMAFR	**Mafra**	**162.68**	**23**	*e*PKPab	**PKPab**	**19 28 21.2**	**-0.2**
KIC	**Kosan Boka**	**162.84**	**166**	*e*PKIKP	**PKPdf**	**19 27 29.0**	**-0.9**
	comp=Z,35nm,1.0s						
PMRV	**Marv??o**	**162.85**	**18**	*e*PKPdf	**PKPdf**	**19 27 29.7**	**+0.5**
PMRV	**Marv??o**	**162.85**	**18**	*e*PKPab	**PKPab**	**19 28 22.4**	**+0.3**
PMTG	**Montargil**	**162.93**	**20**	*e*PKPab	**PKPab**	**19 28 22.3**	**-0.2**
TIC	**Toumodi**	**163.05**	**165**	*e*PKIKP	**PKPdf**	**19 27 29.4**	**-0.7**
DBIC	**Dimbokro**	**163.12**	**166**	PKP	**PKPdf**	**19 27 29.8**	**-0.3**
	comp=Z,9.4nm,0.7s,baz=127,slow=1.6,SNR=17						
DBIC				PKPab	**PKPab**	**19 28 23.6**	**-0.2**
	comp=Z,8.1nm,1.0s,baz=219,slow=8.2,SNR=4.1						
DBIC	**Dimbokro**	**163.12**	**166**	*e*PKPdf	**PKPdf**	**19 27 29.3**	**-0.9**
DBIC				*e*PKPab	**PKPab**	**19 28 23.2**	**-0.6**
ESDC	**Sonseca Array**	**163.33**	**9**	PKP	**PKPdf**	**19 27 29.9**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=1.2,slow=1.8,SNR=7.4						
ESDC				PKPab	**PKPab**	**19 28 24.0**	**-0.3**
	comp=Z,4.9nm,0.6s,baz=347,slow=4.2,SNR=29						
ESDC				PP	**PP**	**19 32 13.6**	**+3.3**
	comp=Z,0.1nm,0.2s,baz=331,slow=6.4,SNR=4.7						
ESLA	**Sonseca Array**	**163.33**	**9**	*e*PKPdf	**PKPdf**	**19 27 31.1**	**+1.4**
ESLA				*e*PKPab	**PKPab**	**19 28 24.0**	**-0.2**
PAB	**San Pablo**	**163.40**	**10**	*e*PKPdf	**PKPdf**	**19 27 29.6**	**-0.2**
PAB				*e*PKPab	**PKPab**	**19 28 24.2**	**-0.4**
PAB	**San Pablo**	**163.40**	**10**	*e*PKIKP	**PKPdf**	**19 27 29.6**	**-0.2**
PAB				*e*		19 28 24.2	
PNCL	**Nicolau / Gran**	**163.70**	**22**	*e*PKPdf	**PKPdf**	**19 27 29.2**	**-0.8**
PNCL	**Nicolau / Gran**	**163.70**	**22**	*e*PKPdf	**PKPdf**	**19 27 30.9**	**+0.9**
PNCL	**Nicolau / Gran**	**163.70**	**22**	*e*PKPab	**PKPab**	**19 28 26.1**	**+0.2**
PBEJ	**Beja**	**164.00**	**21**	*e*PKPdf	**PKPdf**	**19 27 32.6**	**+2.3**
PBEJ	**Beja**	**164.00**	**21**	*e*PKPab	**PKPab**	**19 28 28.3**	**+1.1**
PTEO	**Sao Teotonio**	**164.13**	**24**	*e*PKPdf	**PKPdf**	**19 27 31.9**	**+1.5**
PTEO	**Sao Teotonio**	**164.13**	**24**	*e*PKPab	**PKPab**	**19 28 28.0**	**+0.2**
PCVE	**Castro Verde**	**164.30**	**22**	*e*PKPdf	**PKPdf**	**19 27 31.8**	**+1.3**
PCVE	**Castro Verde**	**164.30**	**22**	*e*PKPab	**PKPab**	**19 28 29.0**	**+0.5**
MORF	**Marmelete**	**164.37**	**24**	*e*PKPdf	**PKPdf**	**19 27 31.9**	**+1.2**
MORF	**Marmelete**	**164.37**	**24**	*e*PKPab	**PKPab**	**19 28 28.8**	**-0.1**
PFVI	**Vila Bisbo**	**164.45**	**25**	*e*PKPdf	**PKPdf**	**19 27 32.3**	**+1.6**
PFVI	**Vila Bisbo**	**164.45**	**25**	*e*PKPab	**PKPab**	**19 28 26.5**	**-2.7**
PVAQ	**Vaqueiros**	**164.61**	**21**	*e*PKPdf	**PKPdf**	**19 27 31.9**	**+1.1**
PVAQ	**Vaqueiros**	**164.61**	**21**	*e*PKPab	**PKPab**	**19 28 30.5**	**+0.6**
PVAQ	**Vaqueiros**	**164.61**	**21**	*e*PKPdf	**PKPdf**	**19 27 31.3**	**+0.5**
PVAQ				*e*PKPab	**PKPab**	**19 28 29.4**	**-0.5**
PBDV	**Barranco-do-Ve**	**164.68**	**22**	*e*PKPdf	**PKPdf**	**19 27 32.3**	**+1.4**
PBDV	**Barranco-do-Ve**	**164.68**	**22**	*e*PKPab	**PKPab**	**19 28 28.0**	**-2.3**
KEST	**Kesra**	**164.72**	**327**	PKP	**PKPdf**	**19 27 30.4**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=70,slow=6.1,SNR=3.8						
KEST				PKPab	**PKPab**	**19 28 30.5**	**-0.2**
	comp=Z,5.0nm,0.9s,baz=51,slow=1.6,SNR=6.3						
KEST	**Kesra**	**164.72**	**327**	*e*PKPdf	**PKPdf**	**19 27 29.9**	**-1.2**
KEST				*e*PKPab	**PKPab**	**19 28 29.8**	**-0.8**
CHEFC	**Chefchaouen**	**167.46**	**18**	P	**PKPab**	**19 28 45.0**	**+2.3**
RSA	**Sarsar**	**167.53**	**20**	P	**PKPdf**	**19 27 36.0**	**+2.7**
RSA	**Sarsar**	**167.53**	**20**	P	**PKPab**	**19 28 45.0**	**+2.0**
JBK	**JBK**	**168.78**	**8**	P	**PKPdf**	**19 27 36.0**	**+1.7**
JBK	**JBK**	**168.78**	**8**	P	**PKPab**	**19 28 49.0**	**+0.3**
LCRM	**LCR**	**168.93**	**18**	P	**PKPdf**	**19 27 36.0**	**+1.6**
CZD	**Col de Zad**	**169.49**	**20**	P	**PKPdf**	**19 27 37.0**	**+2.1**
CZD	**Col de Zad**	**169.49**	**20**	P	**PKPab**	**19 28 54.0**	**+2.0**
TOA0	**Torodi Ar. Sit**	**169.75**	**194**	*e*PKPdf	**PKPdf**	**19 27 34.3**	**-0.8**
TOA0				*e*PKPab	**PKPab**	**19 28 53.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**169.75**	**194**	PKP	**PKPdf**	**19 27 34.3**	**-0.8**
	comp=Z,9.5nm,1.1s,baz=347,slow=1.3,SNR=19						
TORD				PKPab	**PKPab**	**19 28 54.0**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=172,slow=4.6,SNR=5.1						
OUK	**Oukaimeden**	**169.81**	**37**	P	**PKPdf**	**19 27 37.0**	**+1.8**
MDT	**Midelt**	**169.82**	**19**	P	**PKPdf**	**19 27 36.2**	**+1.4**
MDT	**Midelt**	**169.82**	**19**	P	**PKPab**	**19 28 54.4**	**+1.2**
FIGM	**Figuig**	**171.07**	**3**	P	**PKPab**	**19 29 00.0**	**+1.2**
TAM	**Tamanrasset**	**174.20**	**267**	*e*PKPdf	**PKPdf**	**19 27 37.6**	**+0.5**
TAM	**Tamanrasset**	**174.20**	**267**	*e*PKIKP	**PKPdf**	**19 27 37.6**	**+0.5**

NEIC ***26*** *19:20:09.2±1.7, 15°.65S×171°.43W, h22^{km}±6^{km}, mb4.6/12, Error ellipse: s-maj=29.6km s-min=6.6km az=76.0*

IDC ***26*** *19:20:11.0±1.0, 15°.44S×172°.23W, h0^{km}, mb4.1/8, mb1 4.3/8, mb1mx3.9/43, mbtmp4.1/8, MS3.4/4, Ms1 3.4/4, ms1mx3.0/31, Error ellipse: s-maj=43.6km s-min=20.9km az=125.0*

ISCJB ***26*** *19:20:12.0±0.7, 15°.46S±0°.08×172°.2W±0°.1, h23^{km}, mb4.3/18, MS3.3/4, Error ellipse: s-maj=22.0km s-min=7.1km az=24.3*

ISC 26 19:20:13.0±0.8**, 15°.51S**±0°.10×**172°.0W**±0°.2**, h23**^{km}**, n35, σ1^{s}.16**/26**, mb4.4**/18**, MS3.3**/4**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.61**	**9**	*e*Pn	**Pn**	**19 20 38.9**	**-1.1**
AFI				*e*Sn	**Sn**	**19 20 59.0**	**-1.2**
NIUE	**Niue**	**4.08**	**151**	*e*Pn	Pn	19 21 06.2	-7.7
NIUE				*e*Sn	Sn	19 21 46.4	-14
DZM	**Mont Dzumac**	**21.38**	**249**	LR	LR	19 31 40.2	
	comp=Z,186nm,19.0s,baz=124,slow=32						
PPT	**Papeete**	**21.62**	**99**	LR	LR	19 31 06.6	
	comp=Z,30nm,18.6s,baz=358,slow=30						
OUZ	**Omahuta**	**23.48**	**211**	*e*P	**P**	**19 25 20.8**	**-0.2**
	14nm,1.3s						
URZ	**Urewera**	**24.60**	**201**	P	**P**	**19 25 32.8**	**+1.4**
	3.8nm,0.6s,baz=214,slow=3.6,SNR=3.9						
URZ				S	**S**	**19 29 49.9**	**-1.4**
	1.9nm,0.4s,baz=241,slow=19,SNR=1.9						
URZ	**Urewera**	**24.60**	**201**	*e*P	**P**	**19 25 28.4**	**-3.1**
	23nm,1.5s						
HNR	**Honiara**	**28.00**	**279**	LR	LR	19 35 25.6	
	comp=Z,57nm,18.7s,baz=187,slow=33						
ARMA	**Armidale**	**36.42**	**240**	*e*P	**P**	**19 27 16.0**	**-0.1**
	18nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**39.75**	**327**	T	T	20 09 56.8	
	baz=145,slow=76,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**39.77**	**327**	T	T	20 09 57.8	
	baz=145,slow=76,SNR=6.9						
H11S1	**WAKE ISLAND Hy**	**39.77**	**327**	T	T	20 09 57.3	
	baz=145,slow=76,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**40.68**	**329**	T	T	20 11 04.8	
	baz=145,slow=76,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**40.68**	**329**	T	T	20 11 05.2	
	baz=145,slow=76,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**40.69**	**329**	T	T	20 11 04.0	
	baz=145,slow=76,SNR=3.6						
TOO	**Toolangi**	**43.42**	**231**	*e*P	**P**	**19 28 12.5**	**-1.6**
	35nm,1.6s						
STKA	**Stephens Creek**	**45.13**	**240**	P	**P**	**19 28 27.8**	**0.0**
	4.4nm,1.1s,baz=103,slow=14,SNR=3.1						
STKA	**Stephens Creek**	**45.13**	**240**	*e*P	**P**	**19 28 28.7**	**+0.9**
	1.4nm,1.2s						
BBOO	**Buckleboo**	**49.90**	**240**	*e*P	**P**	**19 29 05.3**	**+0.3**
	14nm,1.0s						
WC3	**Warramunga Arr**	**51.07**	**257**	*e*P	**P**	**19 29 13.7**	**-0.3**
	4.6nm,1.0s						
WB2	**Warramunga Arr**	**51.09**	**257**	*e*P	**P**	**19 29 14.5**	**+0.4**
	9.9nm,1.4s						
WRAB	**Tennant Creek**	**51.09**	**257**	*e*P	**P**	**19 29 14.6**	**+0.4**
	19nm,1.6s						
WR1	**Warramunga Arr**	**51.10**	**257**	*e*P	**P**	**19 29 14.5**	**+0.2**
WRA	**Warramunga Arr**	**51.10**	**257**	P	**P**	**19 29 14.5**	**+0.2**
	1.6nm,0.7s,baz=87,slow=7.7,SNR=8.0						
AS31	**Alice Springs**	**51.33**	**252**	*e*P	**P**	**19 29 16.6**	**+0.7**
	1.0nm,0.6s						
ASAR	**Alice Springs**	**51.33**	**252**	P	**P**	**19 29 16.4**	**+0.4**
	4.7nm,0.7s,baz=89,slow=7.7,SNR=36						
SOEI	**Soe**	**62.24**	**267**	*e*P	**P**	**19 30 34.4**	**+0.7**
	37nm,1.4s						
PETK	**Petropavlovsk-**	**73.15**	**341**	P	**P**	**19 31 41.2**	**-0.2**
	1.4nm,0.6s,baz=126,slow=7.3,SNR=4.2						
NVAR	**Mina Array Bea**	**73.53**	**41**	P	**P**	**19 31 46.6**	**+2.2**
	0.4nm,0.7s,baz=214,slow=9.6,SNR=4.6						
QSPA	**South Pole Qui**	**74.53**	**180**	*e*P	**P**	**19 31 48.4**	**-1.3**
	5.5nm,1.4s						
ILAR	**Eielson Array**	**82.31**	**11**	P	**P**	**19 32 33.5**	**+1.2**
	0.3nm,0.4s,baz=232,slow=6.9,SNR=4.3						
MAW	**Mawson**	**88.11**	**198**	P	**P**	**19 33 02.3**	**+0.9**
	1.8nm,0.8s,baz=114,slow=12,SNR=3.7						
ULM	**Lac du Bonnet**	**93.19**	**39**	LR	LR	20 08 05.2	
	comp=Z,30nm,19.9s,baz=41,slow=31						
GERES	**GERESS Array B**	**146.43**	**353**	PKPbc	**PKiKP**	**19 39 54.2**	**-1.1**
	0.9nm,0.8s,baz=7.6,slow=4.0,SNR=8.2						
BRTR	**Keskin Array B**	**147.06**	**322**	PKPbc	**PKiKP**	**19 39 56.8**	**-0.1**
	2.1nm,0.9s,baz=98,slow=2.5,SNR=11						

NIED ***26*** *19:26:00, 46°.50N×147°.80E, h220^{km}, Mw4.2 Best double couple: $M_0$1.91000×10^{15} NP1:ϕ_s17.00000°, δ47.00000°, λ-125.00000°. NP2:ϕ_s243.00000°, δ53.00000°, λ-58.00000°.*

SKHL ***26*** *19:26:29.8±0.6, 42°.98N×151°.83E, h57^{km}±1^{km}, mb4.0/4*

ISCJB ***26*** *19:26:34.1±0.4, 47°.11N±0°.04×147°.2E±0°.1, h346^{km}, mb3.3/13, Error ellipse: s-maj=9.7km s-min=5.2km az=20.7*

IDC ***26*** *19:26:36.4±1.4, 47°.14N×147°.13E, h354^{km}±15^{km}, mb3.1/13, mb1 3.2/21, mb1mx3.0/61, mbtmp3.8/21, Error ellipse: s-maj=15.5km s-min=11.1km az=142.0*

ISC 26 19:26:34.9±0.6**, 46°.95N**±0°.07×**147°.11E**±0°.08**, h346**^{km}**, n35, σ2^{s}.18**/44**, mb3.3**/13**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.79**	**163**	*i* P	**Pn**	**19 27 24.2**	**-0.3**
KUR				AMB	AMB	19 27 25.0	
	10.0nm,0.5s						
KUR				AMB	AMB	19 27 25.0	
	20nm,0.5s						
KUR				*e*S	**S**	**19 28 04.5**	**+0.3**
KUR				A	A	19 28 15.0	
	50nm,0.3s						
KUR				A	A	19 28 15.0	
	40nm,0.3s						
LAGR	**Lagunnoye**	**3.04**	**198**	*e*P	**Pn**	**19 27 36.3**	**+2.0**
LAGR				*e*S	**S**	**19 28 26.9**	**+4.8**
YUK	**Yuzh-Kuril'sk**	**3.04**	**197**	*i* P	**Pn**	**19 27 35.2**	**+0.8**
YUK				AMB	AMB	19 27 36.0	
	10.0nm,0.4s						
YUK				*i* S	**S**	**19 28 24.5**	**+2.3**
YUK				A	A	19 28 28.0	
	70nm,0.5s						
YUK				A	A	19 28 28.0	
	100nm,0.5s						
GRPR	**Tuman**	**3.10**	**198**	AMB	AMB	19 27 36.0	
	20nm,0.4s						
GRPR				*i* P	**Pn**	**19 27 36.2**	**+1.3**
GRPR				*i* S	**S**	**19 28 26.3**	**+3.1**
GRPR				A	A	19 28 29.0	
	120nm,0.4s						
GRPR				A	A	19 28 29.0	
	80nm,0.4s						
GLVR	**Golovnino**	**3.40**	**200**	*e*P	**Pn**	**19 27 38.7**	**+1.0**
GLVR				AMB	AMB	19 27 39.0	
	10.0nm,0.4s						
GLVR				*e*S	**S**	**19 28 29.8**	**+1.5**
GLVR				A	A	19 28 35.0	
	120nm,0.5s						
GLVR				A	A	19 28 35.0	
	70nm,0.5s						
JSE	**Soyaes**	**3.73**	**239**	P	**Pn**	**19 27 43.2**	**+2.3**
JTKR	**Abashiri--Toko**	**3.73**	**218**	P	**Pn**	**19 27 42.4**	**+1.4**
ASAJ	**Asahikawa**	**4.25**	**230**	P	**Pn**	**19 27 48.9**	**+2.6**
	9.2nm,0.3s,baz=64,slow=10.0,SNR=76						
JAK	**Akkeshi**	**4.31**	**204**	P	**Pn**	**19 27 45.6**	**-1.3**
JAK				*e*S	**S**	**19 28 42.2**	**-2.7**
JKK2	**Kamakawa 2**	**4.35**	**227**	P	**Pn**	**19 27 49.2**	**+1.9**
JAR	**Ashorobuto**	**4.35**	**214**	P	**Pn**	**19 27 48.2**	**+0.9**
JSS	**Shosan**	**4.48**	**237**	P	**Pn**	**19 27 52.0**	**+3.3**
JKB	**Kayabe**	**6.67**	**223**	P	**Pn**	**19 28 12.9**	**-0.4**
JKB				*e*S	**S**	**19 29 28.4**	**-4.9**
JOT	**Ohata**	**7.07**	**220**	P	**Pn**	**19 28 16.6**	**-1.4**
JOT				*e*S	**S**	**19 29 35.4**	**-6.3**
JMK	**Ichinoseki**	**9.08**	**210**	P	**Pn**	**19 28 41.5**	**-0.4**
JMK				*e*S	**S**	**19 30 22.1**	**-3.6**
PETK	**Petropavlovsk-**	**9.18**	**44**	P	**Pn**	**19 28 41.3**	**-1.6**
	0.3nm,0.3s,baz=233,slow=8.3,SNR=4.6						
KLR	**Kul'dur**	**10.53**	**288**	P	**P**	**19 29 01.1**	**+0.9**
	0.2nm,0.3s,baz=110,slow=12,SNR=10.0						
USRK	**Ussuriysk Ar.**	**10.95**	**261**	P	**P**	**19 29 06.2**	**+1.2**
	0.3nm,0.3s,baz=63,slow=13,SNR=7.4						
MJAR	**Matsushiro Arr**	**12.33**	**216**	P	**Pn**	**19 29 23.3**	**+2.6**
	0.1nm,0.3s,baz=25,slow=9.3,SNR=9.8						
MA2	**Magadan**	**12.84**	**8**	P	**P**	**19 29 24.1**	**-1.5**
	0.9nm,0.3s,baz=190,slow=9.8,SNR=5.3						
SEY	**Seymchan**	**16.29**	**9**	P	**P**	**19 30 03.0**	**-0.3**
	0.6nm,0.3s,baz=204,slow=15,SNR=11						
KSRS	**Korea Array**	**17.05**	**243**	P	**Pn**	**19 30 14.2**	**-1.1**
	0.3nm,0.3s,baz=45,slow=10,SNR=10						
SONM	**Songino Array**	**27.36**	**287**	P	**P**	**19 31 50.5**	**+1.1**
	0.5nm,0.6s,baz=59,slow=8.2,SNR=4.4						
ILAR	**Eielson Array**	**38.96**	**39**	P	**P**	**19 33 27.7**	**-0.6**
	0.8nm,0.6s,baz=273,slow=8.2,SNR=11						
MKAR	**Makanchi Array**	**43.15**	**295**	P	**P**	**19 34 02.9**	**+0.6**
	1.0nm,0.5s,baz=47,slow=4.9,SNR=20						
KURBB	**Kurchatov Arra**	**43.87**	**301**	P	**P**	**19 34 07.6**	**-0.3**
	1.5nm,0.5s,baz=67,slow=8.1,SNR=5.4						
YKA	**Yellowknife Ar**	**53.18**	**35**	P	**P**	**19 35 17.9**	**0.0**
	0.8nm,0.5s,baz=301,slow=7.3,SNR=3.2						
FINES	**FINESS Array B**	**62.02**	**332**	P	**P**	**19 36 17.5**	**-1.4**
	0.6nm,0.6s,baz=45,slow=8.4,SNR=4.5						
GEYT	**Alibeck**	**62.91**	**297**	P	**P**	**19 36 25.8**	**+0.6**
	1.8nm,0.6s,baz=35,slow=5.3,SNR=3.8						
NVAR	**Mina Array Bea**	**65.93**	**59**	P	**P**	**19 36 45.3**	**+0.5**
	0.3nm,0.7s,baz=312,slow=5.7,SNR=2.9						
NOA	**NORSAR Array B**	**66.61**	**338**	P	**P**	**19 36 47.1**	**-1.4**
	0.1nm,0.4s,baz=32,slow=6.6,SNR=5.2						
HFS	**Hagfors**	**66.74**	**337**	P	**P**	**19 36 47.8**	**-1.4**
	0.4nm,0.3s,baz=46,slow=6.4,SNR=7.4						
WRA	**Warramunga Arr**	**67.57**	**193**	P	**P**	**19 36 56.2**	**+1.3**
	1.2nm,0.8s,baz=14,slow=8.0,SNR=2.8						
ASAR	**Alice Springs**	**71.29**	**193**	P	**P**	**19 37 19.3**	**+1.9**
	0.4nm,0.7s,baz=5.0,slow=5.9,SNR=4.5						
TXAR	**Lajitas Array**	**80.90**	**57**	P	**P**	**19 38 11.8**	**+0.5**
	0.2nm,0.4s,baz=297,slow=4.1,SNR=4.4						

IDC 26 19:31:57.1±3.3**, 4°.73S**×**135°.94E, h0**^{km}**, mb3.5**/1**, mb1 3.6**/3**, mb1mx3.3**/23**, mbtmp3.4**/3**, ML3.0**/2**, Error ellipse: s-maj=135.4km s-min=32.8km az=81.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.20**	**186**	Pn	Pn	19 35 31.1	-2.2
	0.1nm,0.3s,baz=4.8,slow=12,SNR=3.1						
WRA				Sn	Sn	19 38 11.3	-11
	0.1nm,0.3s,baz=12,slow=27,SNR=2.8						
ASAR	**Alice Springs**	**18.93**	**186**	P	Pn	19 36 20.6	+0.3
	0.1nm,0.3s,baz=15,slow=10.0,SNR=7.2						
MKAR	**Makanchi Array**	**69.73**	**324**	P	P	19 43 09.1	0.0
	0.3nm,0.5s,baz=111,slow=7.9,SNR=4.7						

ROM ***26*** *19:38:18.3±0.3, 43°.61N±0°.02×13°.80E±0°.02, h10^{km}±1^{km}, ML2.2/8, Error ellipse: s-maj=2.3km s-min=1.5km az=2.0*

ISCJB ***26*** *19:38:20.5±0.4, 43°.54N±0°.03×13°.73E±0°.04, h7^{km}±4^{km}, Error ellipse: s-maj=6.1km s-min=3.5km az=137.6*

ISC 26 19:38:20.0±0.9**, 43°.54N**±0°.04×**13°.76E**±0°.03**, h11**^{km}±6^{km}**, n19, σ1^{s}.23**/30**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.11**	**276**	P	**Pg**	**19 38 22.4**	**-0.6**
AOI				S	**Sg**	**19 38 24.5**	**-0.6**
AOI				AML	AML		
	comp=E,1685µm,0.6s						
AOI				AML	AML		
	comp=N,1890µm,1.0s						
AOI				AML	AML		
	comp=N,1890µm,1.0s						
AOI				AML	AML		
	comp=E,1685µm,0.6s						
AOI				AML	AML		
	comp=N,1890µm,1.0s						
AOI				AML	AML		
	comp=E,1685µm,0.6s						
PCRO	**Pietralacroce**	**0.18**	**293**	P	**Pb**	**19 38 23.4**	**-1.9**
PCRO				S	**Sg**	**19 38 27.4**	**+0.8**
PP3	**Marolino**	**0.19**	**214**	P	**Pg**	**19 38 23.9**	**-0.2**
PP3				AML	AML		
	comp=E,1125µm,1.1s						
PP3				AML	AML		
	comp=N,1800µm,0.2s						
PP3				AML	AML		
	comp=E,1109µm,0.3s						
PP3				AML	AML		
	comp=N,1765µm,0.2s						
PP3				AML	AML		
	comp=N,1800µm,0.2s						
PP3				AML	AML		
	comp=N,1765µm,0.2s						
PP3				AML	AML		
	comp=E,1124µm,1.1s						
PP3				AML	AML		
	comp=E,1114µm,0.3s						
PP3				AML	AML		
	comp=N,1800µm,0.2s						
PP3				AML	AML		
	comp=N,1765µm,0.2s						
PP3				AML	AML		
	comp=E,1124µm,1.1s						
PP3				AML	AML		
	comp=E,1114µm,0.3s						
CIMA	**Civitanova Mar**	**0.24**	**195**	P	**Pb**	**19 38 25.4**	**-1.0**
CIMA				S	**Sb**	**19 38 30.4**	**+2.0**
CADA	**Capodarco di F**	**0.34**	**180**	P	**Pb**	**19 38 27.1**	**-1.0**
CING	**Cingoli**	**0.44**	**249**	P	**Pg**	**19 38 28.2**	**-0.5**
CING				S	**Sg**	**19 38 35.1**	**+0.6**
CING				AML	AML		
	comp=E,124µm,0.6s						
CING				AML	AML		
	comp=N,104µm,0.2s						
CING				AML	AML		
	comp=E,124µm,0.6s						
CING				AML	AML		
	comp=N,104µm,0.2s						
CING				AML	AML		
	comp=E,124µm,0.6s						
CING				AML	AML		
	comp=N,104µm,0.2s						
EL6	**Elcito**	**0.52**	**247**	P	**Pg**	**19 38 29.7**	**-0.5**
CSP1	**Cessapalombo**	**0.60**	**222**	P	**Pg**	**19 38 31.2**	**-0.5**
CSP1				S	**Sb**	**19 38 41.7**	**+0.6**
SNTG	**Esanatoglia**	**0.66**	**245**	AML	AML		
	comp=E,87µm,0.3s						
SNTG				AML	AML		
	comp=N,108µm,0.2s						
SNTG				AML	AML		
	comp=E,87µm,0.3s						
SNTG				AML	AML		
	comp=N,108µm,0.2s						
SNTG				AML	AML		
	comp=E,87µm,0.3s						
SNTG				AML	AML		

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         comp=N,108µm,0.2s
FDMO  Fiordimonte        0.70 225  P      Pg      19 38 32.7  -0.9
FDMO                               S      Sg      19 38 43.6  +0.8
FDMO                               AML    AML
         comp=E,136µm,0.2s
FDMO                               AML    AML
         comp=N,111µm,1.4s
FDMO                               AML    AML
         comp=N,111µm,1.4s
FDMO                               AML    AML
         comp=E,136µm,0.2s
FDMO                               AML    AML
         comp=N,111µm,1.4s
FDMO                               AML    AML
         comp=E,136µm,0.2s
SSFR  Montelago di S     0.72 262  AML    AML
         comp=N,180µm,1.1s
SSFR                               AML    AML
         comp=E,1110µm,0.1s
SSFR                               AML    AML
         comp=N,564µm,0.1s
SSFR                               AML    AML
         comp=E,342µm,0.1s
SSFR                               AML    AML
         comp=N,180µm,1.1s
SSFR                               AML    AML
         comp=E,1115µm,0.1s
SSFR                               AML    AML
         comp=N,563µm,0.0s
SSFR                               AML    AML
         comp=E,342µm,0.1s
SSFR                               AML    AML
         comp=E,1115µm,0.1s
SSFR                               AML    AML
         comp=N,563µm,0.0s
SSFR                               AML    AML
         comp=N,180µm,1.1s
SSFR                               AML    AML
         comp=E,342µm,0.1s
CESI  CESI - Serrava     0.82 230  P      Pg      19 38 35.2  -0.6
CESI                               S      Sb      19 38 47.7  +0.3
CESI                               AML    AML
         comp=E,42µm,0.3s
CESI                               AML    AML
         comp=N,85µm,0.3s
CESI                               AML    AML
         comp=N,85µm,0.3s
CESI                               AML    AML
         comp=E,42µm,0.3s
CESI                               AML    AML
         comp=N,85µm,0.3s
CESI                               AML    AML
         comp=E,42µm,0.3s
NRCA  Norcia             0.85 214  P      Pg      19 38 35.2  -1.1
NRCA                               S      Sb      19 38 48.8  +0.6
NRCA                               AML    AML
         comp=E,341µm,0.2s
NRCA                               AML    AML
         comp=N,192µm,0.4s
NRCA                               AML    AML
         comp=E,341µm,0.2s
NRCA                               AML    AML
         comp=N,192µm,0.4s
NRCA                               AML    AML
         comp=E,341µm,0.2s
NRCA                               AML    AML
         comp=N,192µm,0.4s
DUGI  Dugi Otok          1.04  64 ePg     Pn      19 38 40.7  +0.1
DUGI                                Sg    Sn      19 38 57.0  +1.8
NVLJ  Novalja            1.30  38 ePn     Pg      19 38 44.7  -0.3
NVLJ                                Sn    Sn      19 39 03.9  +2.5
ZIRJ  Zirje              1.38  85 ePn     Pg      19 38 45.5  -0.9
ZIRJ                                Sn    Sg      19 39 05.1  +0.9
MORI  Morici             1.45  76 ePn     Pg      19 38 47.4  -0.5
MORI                                Sn    Sg      19 39 07.8  +1.2
UDBI  Udbina             1.75  55 ePn     Pg      19 38 52.6  -1.0
UDBI                                Sn    Sg      19 39 16.7  +0.3
HVAR  Hvar               2.00  99  Sn     Sg      19 39 21.0  -3.1
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ROM 26 19:38:58.9±0.0, 43°.278N±0°.002×12°.740E±0°.003, h13^{km}, ML1.3/4, Error ellipse: s-maj=0.3km s-min=0.0km az=220.0, Central Italy

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                   Op     ISC      h  m  s      ISC
FOSV  Fossato di Vic     0.02  42  P      Pg      19 39 01.5  +0.2
FOSV                               S      Sg      19 39 03.0  +0.1
FOSV                               AML    AML
         comp=E,228µm,0.4s
FOSV                               AML    AML
         comp=N,342µm,0.5s
ATCC  AVT- Casa Cast     0.12 218  P      Pg      19 39 02.5  +0.4
ATCC                               S      Sb      19 39 05.1  -0.6
ATCC                               AML    AML
         comp=E,374µm,0.1s
ATCC                               AML    AML
         comp=N,401µm,0.1s
ATCC                               AML    AML
         comp=E,374µm,0.1s
ATCC                               AML    AML
         comp=N,400µm,0.1s
ATCC                               AML    AML
         comp=N,400µm,0.1s
ATCC                               AML    AML
         comp=E,374µm,0.1s
SNTG  Esanatoglia        0.15  99  P      Pg      19 39 02.9  +0.3
SNTG                               S      Sg      19 39 05.8  +0.6
SNTG                               AML    AML
         comp=E,87µm,0.3s
SNTG                               AML    AML
         comp=N,108µm,0.2s
SNTG                               AML    AML
         comp=E,87µm,0.3s
SNTG                               AML    AML
         comp=N,108µm,0.2s
SNTG                               AML    AML
         comp=E,87µm,0.3s
SNTG                               AML    AML
         comp=N,108µm,0.2s
ATFO  Monte Foce - G     0.15 306  P      Pg      19 39 03.0  +0.4
ATFO                               S      Sg      19 39 06.0  +0.7
MURB  Monte Urbino       0.16 265  P      Pg      19 39 03.1  +0.4
FRON  Frontone           0.24 357  P      Pg      19 39 04.3  +0.2
FRON                               S      Sg      19 39 08.3  +0.8
FRON                               AML    AML
         comp=E,110µm,0.4s
FRON                               AML    AML
         comp=N,140µm,0.3s
FRON                               AML    AML
         comp=E,110µm,0.4s
FRON                               AML    AML
         comp=N,140µm,0.3s
ASSB  Assisi San Ben     0.24 194  P      Pg      19 39 04.3  +0.2
ASSB                               S      Sg      19 39 08.4  +0.8
ARVD  Arcevia            0.27  34  P      Pg      19 39 05.0  +0.5
ARVD                               S      Sb      19 39 09.3  -0.7
ATVO  AVT- Monte Val     0.27 293  P      Pg      19 39 04.9  +0.4
ATVO                               S      Sb      19 39 09.2  -0.9
PIEI  Pieia              0.30 330  P      Pg      19 39 05.4  +0.3
PIEI                               S      Sb      19 39 10.2  -0.8
PIEI                               AML    AML
         comp=E,101µm,0.2s
PIEI                               AML    AML
         comp=N,61µm,0.8s
PIEI                               AML    AML
         comp=E,101µm,0.2s
PIEI                               AML    AML
         comp=N,61µm,0.8s
PIEI                               AML    AML
         comp=N,61µm,0.8s
PIEI                               AML    AML
         comp=E,101µm,0.2s
FDMO  Fiordimonte        0.35 133  P      Pg      19 39 06.4  +0.4
FDMO                               S      Sb      19 39 12.1  -0.4
NARO  Abbazia di Nar     0.35 341  P      Pg      19 39 06.2  +0.1
NARO                               S      Sb      19 39 12.1  -0.4
NARO                               AML    AML
         comp=E,43µm,0.6s
NARO                               AML    AML
         comp=N,32µm,1.0s
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*IDC **26** 19:46:59.9±1.0, 37°.26N×142°.00E, h0^{km}, mb3.6/7, mb1 3.6/11, mb1mx3.5/37, mbtmp3.6/11, ML3.3/3, MS2.8/5, Ms1 2.8/5, ms1mx2.5/35, Error ellipse: s-maj=24.1km s-min=17.4km az=97.0*

*ISCJB **26** 19:47:00.8±1.0, 37°.32N±0°.03×141°.99E±0°.05, h16^{km}±6^{km}, mb3.5/7, MS3.8/2, Error ellipse: s-maj=7.5km s-min=4.6km az=26.2*

*NIED **26** 19:47:00, 37°.30N×141°.90E, h41^{km}, Mw3.7 Best double couple: M$_0$4.11000×10^{14} NP1:ϕ_s221.00000°, δ11.00000°, λ32.00000°. NP2:ϕ_s99.00000°, δ84.00000°, λ99.00000°.*

*JMA **26** 19:47:04.1±0.1, 37°.34N×141°.84E, h42^{km}±3^{km}, M3.9*

JMA Felt I J1.

ISC 26 19:47:00.1±1.7, 37°.31N±0°.04×141°.93E±0°.05, h3^{km}±10^{km}, n35, σ1^{s}27/42, mb3.5/7, Near east coast of eastern Honshu

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                   Op     ISC      h  m  s      ISC
JFK   Kawauchi           0.84 275  P      Pn      19 47 18.7  -0.2
JFK                                S      Sb      19 47 28.5  -0.6
ONAJ  Iwakimizuishiy     0.92 258  P      Pn      19 47 19.8  -0.2
ONAJ                               S      Sb      19 47 30.9  -0.6
JMST  Minamisoumatoc     0.93 297  P      Pn      19 47 19.6  -0.4
JMST                               S      Sg      19 47 30.2  +0.3
JMM   Marumori           1.06 302  P      Pn      19 47 21.6  -0.3
JMM                               eS      Sg      19 47 33.8  -0.4
JIKH  Ishinomakikobu     1.07 340  P      Pn      19 47 21.7  -0.3
JIKH                              eS      Sg      19 47 34.0  -0.5
JFFD  Fukushimafurud     1.11 259  P      Pn      19 47 22.6   0.0
JFFD                               S      Sb      19 47 35.7  -1.1
JIO   Ouri               1.24 338  P      Pg      19 47 24.2  +0.4
JIO                                S      Sb      19 47 38.0  -2.4
JFT   Otama              1.28 280  P      Pg      19 47 25.8  +1.1
JFT                                S      Sb      19 47 40.9  -0.9
JHO   Hitachi            1.29 238  P      Pg      19 47 24.8   0.0
JHO                                S      Sb      19 47 40.1  -1.8
JOU   Okura              1.46 317  P      Pg      19 47 27.9  -0.1
JOU                                S      Sn      19 47 45.2  -1.7
JYS   Shirataka          1.74 302  P      Pb      19 47 32.7  +0.1
JYS                                S      Sb      19 47 53.7  -1.1
JMK   Ichinoseki         1.74 341  P      Pb      19 47 31.8  -0.8
JMK                               eS      Sn      19 47 52.2  -1.6
JFY   Yanaizu            1.77 274  P      Pb      19 47 32.7  -0.6
JFY                                S      Sn      19 47 54.1  -0.6
MJAR  Matsushiro Arr     3.08 257  Pn     Pn      19 47 51.5  +2.0
      0.4nm,0.3s,baz=148,slow=21,SNR=22
MJAR                               Sn     Sn      19 48 29.0  +2.2
      0.7nm,0.3s,baz=272,slow=33,SNR=5.2
MJAR                               LR     LR      19 49 18.3
      comp=Z,67nm,18.0s,baz=100,slow=45
MAT   Matsushiro         3.08 257  P      Pb      19 47 53.4  -2.1
MAT                                S      Sb      19 48 30.2  -3.2
JHJ   Hachijo jima 2     4.53 203  Pn     Pn      19 48 09.8  +0.2
      16nm,0.3s,baz=170,slow=23,SNR=12
JHJ                                Sn     Sn      19 49 00.4  -2.3
      21nm,0.3s,baz=71,slow=24,SNR=5.7
ASAJ  Asahikawa          6.82   4  Pn     Pn      19 48 41.6  +0.6
      0.9nm,0.3s,baz=206,slow=15,SNR=9.2
ASAJ                               Sn     Sn      19 49 59.5  +0.2
      0.4nm,0.3s,baz=319,slow=19,SNR=3.3
JNU   Nakatsue           9.95 248  LR     LR      19 53 31.8
      comp=Z,40nm,20.1s,baz=166,slow=39
USRK  Ussuriysk Ar.     10.21 316  Pn     Pn      19 49 29.9  +2.4
      0.1nm,0.3s,baz=122,slow=14,SNR=2.6
USRK                               LR     LR      19 52 44.0
      comp=Z,37nm,18.3s,baz=190,slow=34
KLR   Kul'dur           14.02 331  LR     LR      19 54 56.0
      comp=Z,39nm,19.0s,baz=144,slow=34
SEY   Seymchan          26.45  11  P      P       19 52 39.0  +1.1
      1.4nm,0.7s,baz=190,slow=12,SNR=4.0
H11N2 WAKE ISLAND Hy    27.94 122  T      T       20 22 19.3
      baz=314,slow=75,SNR=44
H11N1 WAKE ISLAND Hy    27.95 122  T      T       20 22 20.5
      baz=314,slow=75,SNR=53
H11N3 WAKE ISLAND Hy    27.96 122  T      T       20 22 21.4
      baz=314,slow=75,SNR=44
SONM  Songino Array     27.98 303  P      P       19 52 53.5  +1.5
      0.3nm,0.5s,baz=87,slow=10,SNR=2.1
H11S1 WAKE ISLAND Hy    28.67 124  T      T       20 23 18.5
      baz=316,slow=75,SNR=50
H11S3 WAKE ISLAND Hy    28.67 124  T      T       20 23 13.5
      baz=316,slow=75,SNR=28
H11S2 WAKE ISLAND Hy    28.68 124  T      T       20 23 15.7
      baz=316,slow=75,SNR=26
ZALV  Zalesovo Beam     42.04 312  P      P       19 54 52.4  -0.2
      0.4nm,0.4s,baz=92,slow=7.5,SNR=2.7
MKAR  Makanchi Array    44.32 302  P      P       19 55 10.9  -0.4
      0.2nm,0.6s,baz=88,slow=7.4,SNR=2.8
ILAR  Eielson Array     49.05  32  P      P       19 55 48.5  +0.6
      0.4nm,0.7s,baz=273,slow=6.8,SNR=5.3
WRA   Warramunga Arr    57.39 188  P      P       19 56 49.5  -0.3
      0.9nm,0.5s,baz=0.3,slow=6.9,SNR=8.5
ASAR  Alice Springs     61.11 188  P      P       19 57 15.7  +0.1
      0.4nm,0.9s,baz=24,slow=6.0,SNR=5.2
AKASG Malin Array Be    74.33 322  LR     LR      20 31 55.8
      comp=Z,20nm,19.9s,baz=245,slow=36
URZ   Urewera           81.90 153  LR     LR      20 36 30.6
      comp=Z,89nm,18.1s,baz=85,slow=36
```

WEL 26 19:55:05.0, 38°S±2°×17°9E±°, h26^{km}±6^{km}, M3.3/26, ML3.5/19, MLv3.3/26, Error ellipse: s-maj=0.0km s-min=0.0km az=59.7, Off east coast of North Island

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                   Op     ISC      h  m  s      ISC
CNGZ  Carnagh Statio     0.46 269  P      Pb      19 55 15.0  +0.4
PUZ   Puketiti           0.59 313  P      Pb      19 55 15.8  -0.9
PUZ                                S      Sb      19 55 23.2  -1.5
TWGZ  Tauwhareparae      0.71 295  P      Pb      19 55 18.2  -0.6
TWGZ                               S      Sb      19 55 28.6  +0.4
WMGZ  Waiomatatini S     0.72 335  P      Pb      19 55 18.9  -0.1
WMGZ                               S      Sn      19 55 29.3  -0.5
TKGZ  Te Karaka          0.74 273  P      Pb      19 55 19.2  -0.2
TKGZ                               S      Sn      19 55 30.0  -0.4
PKGZ  Pakihiroa          0.82 316  P      Pb      19 55 19.9  -0.8
PKGZ                               S      Sb      19 55 31.0  -0.3
PRGZ  Paritu Road        0.84 238  P      Pn      19 55 21.3  +0.1
RIGZ  Rimuhau            0.84 254  P      Pb      19 55 21.1   0.0
MHGZ  Mahia Peninsul     0.97 226  P      Pb      19 55 23.5  +0.3
MXZ   Matakaoa Point     0.99 337  P      Pn      19 55 23.0  -0.3
MWZ   Matawai            1.01 278  P      Pn      19 55 22.8  -0.7
RUGZ  Raukumara Rang     1.02 300  P      Pn      19 55 22.7  -1.0
KNZ   Kokohu             1.03 238  P      Pn      19 55 23.5  -0.3
HAZ   Te Kaha            1.08 312  P      Pn      19 55 23.6  -0.8
RAGZ  Rawiri             1.08 269  P      Pn      19 55 24.5  -0.1
SNGZ  Shannon Statio     1.18 255  P      Pn      19 55 25.9   0.0
URZ   Urewera            1.34 279  P      Pn      19 55 27.8  -0.3
RAHZ  Arahi              1.41 251  P      Pb      19 55 30.0  -0.7
RTZ   Ruatahuna          1.43 264  P      Pn      19 55 28.8  -0.6
MTHZ  Maungataniwha      1.58 256  P      Pn      19 55 31.7  +0.3
MUGZ  Murupara           1.59 269  P      Pn      19 55 31.7  +0.2
ARHZ  Aropaoanui         1.61 240  P      Pn      19 55 32.5  +0.7
EDRZ  Edgecumbe          1.66 282  P      Pb      19 55 35.2  +0.2
MARZ  Manawahe           1.74 286  P      Pb      19 55 36.9  +0.6
RRRZ  Republican Roa     1.80 274  P      Pb      19 55 37.2  -0.1
TARZ  Mount Tarawera     1.82 277  P      Pn      19 55 35.0  +0.3
MRHZ  Matea Rd           1.90 258  P      Pn      19 55 35.9  +0.2
MCHZ  McNeill Hill       1.90 239  P      Pn      19 55 36.5  +0.7
BHHZ  Black Hill Sta     2.36 244  P      Pn      19 55 41.7  -0.4
PNHZ  Pukenui            2.48 234  P      Pn      19 55 43.0  -0.7
KRVZ  Karewarewa         2.54 255  P      Pn      19 55 44.7  +0.1
MOVZ  Moawhango          2.55 248  P      Pn      19 55 45.6  +0.9
TUVZ  Tukino             2.58 251  P      Pn      19 55 46.5  +1.3
NGZ   Ngauruhoe          2.59 253  P      Pn      19 55 46.2  +0.8
FWVZ  Far West T-bar     2.65 252  P      Pn      19 55 46.4  +0.1
DVHZ  Dannevirke         2.73 227  P      Pn      19 55 46.2  -1.0
BFZ   Birch Farm         2.96 221  P      Pn      19 55 48.5  -1.7
KUZ   Kuaotunu           2.99 304  P      Pn      19 55 50.1  -0.7
PRWZ  Pori Road          3.01 226  P      Pn      19 55 50.1  -0.9
MTW   Mount Morrison     3.69 222  P      Pn      19 55 57.7  -2.6
KHEZ  Kahui Hut          3.82 256  P      Pn      19 56 03.2  +1.0
THZ   Tophouse           5.58 232  P      Pn      19 56 25.5  -0.9
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*ISCJB **26** 19:59:29.8±0.5, 9°.49N±0°.03×122°.34E±0°.04, h57^{km}±5^{km}, mb4.2/30, MS2.7/7, Error ellipse: s-maj=6.5km s-min=5.6km az=166.6*

*NEIC **26** 19:59:31.2±1.7, 9°.48N×122°.40E, h52^{km}±9^{km}, mb4.4/12, Error ellipse: s-maj=16.8km s-min=7.2km az=80.0*

NEIC Felt [III PIVS] at Sipalay.

*IDC **26** 19:59:33.5±6.5, 9°.53N×122°.49E, h75^{km}±59^{km}, mb3.6/17, mb1 3.7/17, mb1mx3.5/49, mbtmp3.9/17, MS2.9/8, Ms1 2.9/8, ms1mx2.7/32, Error ellipse: s-maj=30.1km s-min=12.0km az=73.0*

ISC 26 19:59:31.0±1.1, 9°.52N±0°.04×122°.38E±0°.05, h51^{km}±10^{km}, n51, σ1^{s}07/53, mb4.1/30, MS2.7/7, 2C-4D, Negros

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                   Op     ISC      h  m  s      ISC
SNPH  Sibulan            0.86 102⇓iP      Pn      19 59 45.5  -1.4
SNPH                              i S     Sn      19 59 57.7  -0.9
JAP   San Jose, Anti     1.29 341⇓eP      Pn      19 59 51.8  -1.0
TBP   Tagbilaran         1.47  83 eP      Pn      19 59 54.9  -0.2
TBP                               i S     Sn      20 00 14.1  +0.9
LLP   Lapu-Lapu          1.75  63⇓eP      Pn      19 59 58.3  -0.7
LLP                               eS      Sn      20 00 20.0  -0.1
PAGZ  Pagadian           1.93 149 eP      Pn      20 00 01.4  -0.1
PAGZ                              eS      Sn      20 00 27.1  +2.5
RCP   Roxas              2.06  10⇑eP      Pn      20 00 02.9  -0.3
RCP                               eS      Sn      20 00 30.0  +2.3
CTBH  Cotabato--PC H     2.94 141⇓iP      Pn      20 00 16.8  +1.6
BUKP  Musuan             3.11 121 eP      Pn      20 00 19.1  +1.5
BUKP                              eS      Sn      20 00 54.6  +1.0
KCP   Kidapawan          3.66 133⇑eP      Pn      20 00 36.7  +12
KCP                               i S     Sn      20 01 20.1  +13
SKMP  Bagumbayan, Su     3.67 144 eP      Pn      20 00 25.3   0.0
SKMP                              eS      Sn      20 01 03.9  -3.4
DAV   Davao City (W)     3.99 127  LR     LR      20 02 24.3
      comp=Z,161nm,18.3s,baz=326,slow=44
KKM   Kota Kinabalu      7.02 241 ePn     Pn      20 01 11.3   0.0
KKM                               eSn     Sn      20 02 28.8  -1.1
SBUM  Sibu              12.30 236 ePn     Pn      20 02 24.5  +0.9
GUMO  Guam              22.39  77  LR     LR      20 12 00.4
      comp=Z,23nm,21.1s,baz=238,slow=34
KMI   Kunming           24.29 312  P      P       20 04 43.3  -0.7
KMI                                pmax   pmax
      comp=Z,6.0nm,0.5s
CMAR  Chiang Mai Arr    24.39 294  LR     LR      20 14 56.9
      comp=Z,17nm,18.0s,baz=205,slow=38
JNU   Nakatsue          24.76  17  LR     LR      20 13 35.1
      comp=Z,24nm,21.9s,baz=211,slow=34
KS15  Wonju Array Si    28.24   9 eP      P       20 05 20.2  +1.1
      comp=Z,9.5nm,0.8s
KSRS  Korea Array       28.26   9  LR     LR      20 17 34.0
      comp=Z,20nm,18.9s,baz=152,slow=38
JHJ   Hachijo jima 2    28.45  32  LR     LR      20 16 12.1
      comp=Z,16nm,18.4s,baz=63,slow=35
MJAR  Matsushiro Arr    30.49  26  LR     LR      20 16 28.4
      comp=Z,18nm,21.3s,baz=145,slow=33
LZH   Lanzhou           31.36 330 eP      P       20 05 48.3  +1.2
LZH                                pP     sP      20 06 02.5  -3.0
LZH                                sP     pwP     20 06 08.5  +6.1
LZH                                pmax   pmax
      comp=Z,16nm,1.1s
WRA   Warramunga Arr    31.55 158  P      P       20 05 47.7  -1.0
      comp=Z,0.6nm,0.3s,baz=341,slow=10,SNR=31
WRA                                PcP    PcP     20 08 39.8  -0.7
      comp=Z,1.8nm,1.0s,baz=305,slow=2.5,SNR=5.0
WB2   Warramunga Arr    31.56 158 eP      P       20 05 47.1  -1.6
      comp=Z,6.7nm,1.3s
AS31  Alice Springs     34.85 161 eP      P       20 06 17.4  -0.1
      comp=Z,1.1nm,0.5s
ASAR  Alice Springs     34.85 161  P      P       20 06 17.6  +0.1
      comp=Z,2.5nm,0.5s,baz=340,slow=7.0,SNR=57
ASAR                               PcP    PcP     20 08 49.1  -0.7
      comp=Z,0.5nm,0.7s,baz=336,slow=3.0,SNR=5.0
USRK  Ussuriysk Ar.     35.54  12  P      P       20 06 23.3  +0.1
      comp=Z,1.9nm,0.7s,baz=195,slow=9.8,SNR=4.9
ASAJ  Asahikawa         38.68  23  P      P       20 06 50.2  +0.5
      comp=Z,3.3nm,0.7s,baz=216,slow=8.7,SNR=3.7
KLR   Kul'dur           40.35   9  P      P       20 07 03.8  +0.2
      comp=Z,1.3nm,0.6s,baz=226,slow=2.1,SNR=6.2
FORT  Forrest           40.44 172 eP      P       20 07 05.2  +0.7
      comp=Z,40nm,1.0s
SONM  Songino Array     40.51 343  P      P       20 07 04.7  -0.4
      comp=Z,1.1nm,0.7s,baz=162,slow=9.5,SNR=6.1
SONM                               LR     LR      20 26 05.2
      comp=Z,30nm,18.3s,baz=228,slow=39
STKA  Stephens Creek    45.08 157  P      P       20 07 42.2   0.0
      comp=Z,3.3nm,0.7s,baz=324,slow=8.4,SNR=9.4
STKA  Stephens Creek    45.08 157 eP      P       20 07 42.3  +0.1
      comp=Z,0.7nm,0.8s
ARMA  Armidale          48.65 146 eP      P       20 08 10.8  +0.7
      comp=Z,18nm,1.6s
MK31  Makanchi Array    50.37 325 eP      P       20 08 24.4  +1.4
      comp=Z,1.8nm,1.2s
MKAR  Makanchi Array    50.37 325  P      P       20 08 24.1  +1.1
      comp=Z,0.7nm,0.7s,baz=120,slow=7.4,SNR=7.8
CAN   Canberra          51.20 152 eP      P       20 08 30.4  +1.0
      comp=Z,25nm,1.5s
PETK  Petropavlovsk-    51.95  26  P      P       20 08 34.1  -0.6
      comp=Z,0.9nm,0.5s,baz=215,slow=3.1,SNR=4.8
ZALV  Zalesovo Beam     53.51 333  P      P       20 08 46.1  -0.1
      comp=Z,1.0nm,0.4s,baz=133,slow=6.3,SNR=5.0
KURBB Kurchatov Arra    54.57 327  P      P       20 08 54.1  +0.2
      comp=Z,1.0nm,0.6s,baz=121,slow=9.1,SNR=12
KURK  Kurchatov         54.57 327 eP      P       20 08 54.3  +0.3
      comp=Z,2.2nm,0.8s
BVAR  Borovoye Array    60.14 327  P      P       20 09 33.7  +0.5
      comp=Z,0.2nm,0.5s,baz=132,slow=12,SNR=4.3
BRVK  Borovoye          60.22 327 eP      P       20 09 34.2  +0.4
      comp=Z,1.8nm,0.9s
ABKAR Akbulak array     64.97 320 eP      P       20 10 06.2  +0.7
      comp=Z,4.6nm,1.5s
AKTO  Aktyubinsk        66.47 321  P      P       20 10 16.1  +1.0
      comp=Z,0.6nm,0.5s,baz=136,slow=9.9,SNR=3.7
BKZ   Black Stump Fm    69.75 138 eP      P       20 10 34.8  -1.1
      comp=Z,19nm,1.3s
ILAR  Eielson Array     81.78  26  P      P       20 11 42.9  -1.2
      comp=Z,0.2nm,0.3s,baz=268,slow=2.7,SNR=2.9
ARCES ARCESS Array B    83.55 339  P      P       20 11 53.1  -0.2
      comp=Z,0.7nm,0.6s,baz=77,slow=5.4,SNR=5.5
FINES FINESS Array B    84.72 331  P      P       20 11 59.0  -0.4
      comp=Z,0.9nm,0.7s,baz=56,slow=4.8,SNR=5.6
NOA   NORSAR Array B    91.71 333  P      P       20 12 32.1  -0.8
      comp=Z,0.2nm,0.6s,baz=73,slow=4.5,SNR=3.0
PLCA  Paso Flores      146.86 162  PKPbc  PKPbc   20 19 08.3  +0.2
      comp=Z,0.9nm,0.8s,baz=308,slow=4.9,SNR=4.3
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*IDC **26** 20:02:32.2±1.2, 34°.18N×25°.14E, h0^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.3/44, mbtmp3.6/8, ML3.7/3, Error ellipse: s-maj=23.4km s-min=18.3km az=66.0*

*ISCJB **26** 20:02:33.8±1.0, 34°.11N±0°.04×25°.18E±0°.03, h24^{km}±7^{km}, mb3.4/5, Error ellipse: s-maj=7.3km s-min=4.3km az=14.9*

*THE **26** 20:02:33.9, 34°.16N×25°.15E, h2^{km}±3^{km}, ML3.0/6, Error ellipse: s-maj=4.2km s-min=1.5km az=160.0*

*ATH **26** 20:02:34.4, 34°.24N×25°.12E, h23^{km}±2^{km}, ML3.0/3, Error ellipse: s-maj=4.5km s-min=1.7km az=6.0*

*DDA **26** 20:03:31.7, 35°.70N×27°.20E, h3^{km}±3^{km}, ML2.7*

ISC 26 20:02:33.0±1.6, 34°.16N±0°.06×25°.20E±0°.03, h9^{km}±9^{km}, n48, σ1^{s}85/68, mb3.6/5, Crete

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Code  Station Name        Δ°   AZ°   Phase ID          Time       Res
                                   Op     ISC      h  m  s      ISC
SIVA  Sivas              0.91 339  P      Pg      20 02 50.4  -0.3
SIVA                               S      Sn      20 03 05.9  +0.5
      3µm,0.6s
SIVA  Sivas              0.91 339  P      Pg      20 02 50.3  -0.3
SIVA                               S      Sg      20 03 02.0  -0.6
TMBK  Timbaki Herakl     0.98 339  P      Pb      20 02 52.0  -0.2
TMBK                               S      Sb      20 03 05.6  +0.4
LAST  Lasithi            1.02  13  P      Pb      20 02 53.1  +0.1
LAST                               S      Sb      20 03 07.2  +0.6
      390nm,0.6s
LAST  Lasithi            1.02  13  P      Pb      20 02 53.1  +0.1
GVD   Gavdhos            1.14 307  P      Pb      20 02 54.4  -0.6
GVD                                S      Sn      20 03 10.8  -0.2
      2µm,0.4s
GVD   Gavdhos            1.14 307  P      Pb      20 02 54.0  -1.0
GVD                                S      Sg      20 03 08.2  -1.6
GVD                                AML    AML     20 03 16.5
      comp=E,3438µm,0.4s
GVD                                AML    AML     20 03 16.7
      comp=N,3004µm,0.4s
GVDS  Gavdos             1.14 307  P      Pb      20 02 54.6  -0.4
GVDS                               S      Sn      20 03 11.3  +0.3
KSTL  Kastelli Herak     1.15 355  P      Pb      20 02 54.1  -0.9
KSTL                               S      Sb      20 03 09.8  -0.2
NPS   Neapolis           1.15  17  P      Pn      20 02 55.6  +0.2
NPS                                S      Sn      20 03 12.5  +1.3
      comp=N,442nm,0.7s
NPS   Neapolis           1.15  17  P      Pg      20 02 55.3  +0.1
IDI   Anoyia             1.15 347  Pg     Pb      20 02 54.5  -0.7
      comp=N,4.9nm,0.3s,baz=166,slow=18,SNR=6.2
IDI                                Lg     Lg      20 03 10.6
      comp=N,26nm,0.3s,baz=229,slow=20,SNR=10
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IDI	Anoyia	1.15	347	P	Pb	20 02 54.6	-0.7
IDI				AML	AML	20 03 16.5	
	comp=E,1018µm,0.5s						
IDI				AML	AML	20 03 18.2	
	comp=N,987µm,0.4s						
ZKR	Zakros	1.27	41	P	Pg	20 02 58.0	+0.6
ZKR	Zakros	1.27	41	P	Pg	20 02 57.6	+0.2
STIA	Sitia Lasithi	1.27	35	P	Pn	20 02 56.9	-0.1
PRNS	Prines Rethymn	1.33	335	P	Pn	20 02 57.7	-0.1
PRNS				S	Sg	20 03 16.1	+0.1
VAM	Vamos	1.49	327	P	Pn	20 03 00.0	0.0
VAM				S	Sg	20 03 21.0	-0.1
	comp=N,640nm,0.6s						
VAM	Vamos	1.49	327	P	Pn	20 03 00.2	+0.2
VAM				S	Sn	20 03 18.6	-1.0
IMMV	Iera Moni Meta	1.64	323	P	Pb	20 03 03.0	-0.4
IMMV				S	Sn	20 03 22.5	-0.8
	comp=N,380nm,0.6s						
IMMV	Iera Moni Meta	1.64	323	P	Pb	20 03 03.1	-0.4
IMMV				AML	AML	20 03 38.2	
	comp=N,767µm,0.6s						
IMMV				AML	AML	20 03 40.8	
	comp=E,773µm,0.6s						
ANKY	Antikythira Is	2.31	318	P	Pn	20 03 12.3	+1.0
IOSP	Ios island	2.56	2	P	Pn	20 03 15.2	+0.6
MHLO	Agia Marina, M	2.61	346	P	Pn	20 03 15.3	-0.1
MHLO	Agia Marina, M	2.61	346	P	Pn	20 03 15.5	+0.2
KTHA	Kythira Island	2.73	321	P	Pn	20 03 18.3	+1.3
KTHA	Kythira Island	2.73	321	P	Pn	20 03 17.9	+0.8
VLI	Veliai	3.15	325	P	Pn	20 03 22.8	-0.1
DID	Didima	3.70	335	P	Pn	20 03 30.0	-0.4
DID	Didima	3.70	335	P	Pn	20 03 29.6	-0.8
DALY	Dalyan (Mula)	3.87	46	*i* P	Pn	20 03 35.9	+3.3
DALY				*i* S	Sn	20 04 19.2	+1.0
TURN	Turunc	3.88	45	*i* P	Pn	20 03 28.6	-4.2
TURN				IAML_P			
	comp=Z,177nm,0.3s						
FETY	Fethiye	4.02	51	*i* P	Pn	20 03 37.5	+2.7
FETY				IAML_P			
	comp=Z,230nm,0.3s						
AYDN	Tasoluk	4.11	31	*i* P	Pn	20 03 39.3	+3.2
AYDN				IAML_P			
	comp=Z,191nm,0.2s						
AKAS	Kas	4.16	59	*i* P	Pn	20 03 39.9	+3.1
AKAS				*i* S	Sn	20 04 26.4	+0.8
AKAS				IAML_P			
	comp=Z,991nm,0.1s						
TAVA	DENIZLI_Tavas	4.47	41	*i* P	Pn	20 03 42.1	+1.1
GOLH	Golhisar	4.69	48	*i* P	Pn	20 03 46.0	+1.9
GOLH				*i* S	Sn	20 04 40.1	+1.4
GOLH				IAML_P			
	comp=Z,225nm,0.3s						
AKUM	Antalya-Kumluc	4.73	61	*i* P	Pn	20 03 47.0	+2.5
AKUM				*i* S	Sn	20 04 32.9	-6.5
AKUM				IAML_P			
	comp=Z,528nm,0.2s						
KEPZ	Antalya-Kepez	5.89	61	*i* P	Pn	20 04 03.5	+2.9
KEPZ				*i* S	Sn	20 05 08.5	+0.3
KEPZ				IAML_P			
	comp=Z,134nm,0.2s						
GAZI	Gazipasa	6.18	68	*i* P	Pn	20 04 06.6	+2.1
GAZI				*i* S	Sn	20 05 08.5	-6.8
MMAI	Mount Meron Ar	8.59	95	Pn	Pn	20 04 38.8	+1.1
	comp=Z,0.4nm,0.3s,baz=276,slow=13,SNR=3.3						
MMAI				Sn	Sn	20 06 10.0	-4.7
	comp=Z,0.3nm,0.3s,baz=266,slow=13,SNR=2.6						
EIL	Elat	9.42	116	Pn	Pn	20 04 50.6	+1.7
	comp=Z,0.3nm,0.3s,baz=307,slow=16,SNR=3.9						
GERES	GERESS Array B	16.98	333	Pn	P	20 06 32.8	+0.1
	comp=Z,0.2nm,0.3s,baz=146,slow=12,SNR=13						
HFS	Hagfors	27.06	347	P	P	20 08 16.3	+0.8
	comp=Z,0.4nm,0.7s,baz=161,slow=9.2,SNR=3.8						
TORD	Torodi Ar. Bea	29.88	231	P	P	20 08 41.5	+0.4
	comp=Z,0.7nm,0.5s,baz=32,slow=9.5,SNR=7.9						
ARCES	ARCESS Array B	35.43	0	P	P	20 09 27.4	-1.7
	comp=Z,0.8nm,0.9s,baz=166,slow=8.1,SNR=2.9						
KURBB	Kurchatov Arra	41.73	50	P	P	20 10 23.2	+1.0
	comp=Z,0.2nm,0.4s,baz=276,slow=8.7,SNR=3.1						
MKAR	Makanchi Array	44.30	56	P	P	20 10 44.1	+1.0
	comp=Z,0.6nm,0.7s,baz=283,slow=6.1,SNR=5.7						

IDC 26 20:25:37.5±13.0, 20°.58S×177°.84W, h111km±107km, mb3.4/3, mb1 3.7/5, mb1mx3.4/33, mbtmp4.0/5, ML3.7/2, Error ellipse: s-maj=78.0km s-min=48.0km az=36.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.72	261	P	Pn	20 29 00.0	-0.3
	0.1nm,0.3s,baz=128,slow=19,SNR=2.7						
URZ	Urewera	18.15	193	P	P	20 29 41.4	+0.2
	0.9nm,0.3s,baz=6.3,slow=9.2,SNR=5.5						
STKA	Stephens Creek	37.89	244	P	P	20 32 43.4	-0.5
	1.4nm,0.5s,baz=90,slow=8.1,SNR=4.8						
ASAR	Alice Springs	44.64	257	P	P	20 33 39.0	-0.3
	0.5nm,0.7s,baz=102,slow=8.3,SNR=5.0						
WRA	Warramunga Arr	44.74	262	P	P	20 33 40.5	+0.4
	1.6nm,1.1s,baz=99,slow=7.6,SNR=8.3						
ARCES	ARCESS Array B	129.03	350	PKP	PKPdf	20 44 31.2	-0.4
	1.5nm,0.8s,baz=48,slow=1.3,SNR=3.6						

ISC 26 20:28:10.4±1.3, 50°.13N±0°.06×19°.25E±0°.04, h0km, n5, $\sigma 1^{s}.06$/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.36	76	*e*Pg	Pg	20 28 17.6	+0.2
OJC				*e*Sg	Sg	20 28 22.7	+0.5
NIE	Niedzica	0.99	136	*e*Pg	Pb	20 28 30.6	+0.1
NIE				*e*Sg	Sb	20 28 44.6	+0.6
LANS	Liptovska Anna	0.99	172	*e*PG	Pg	20 28 30.2	+0.8
LANS				*e*SG	Sg	20 28 43.1	+0.8
LANS				*e*LG	Lg	20 28 46.5	
MORC	Moravsky Berou	1.16	253	*e*PG	Pg	20 28 33.4	+0.8
MORC				*e*SG	Sb	20 28 49.1	+0.2
VYHS	Vyhne	1.66	189	*e*PN	Pn	20 28 40.1	-0.7
VYHS				*e*SN	Sn	20 29 00.7	-2.2

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*IDC **26** 20:37:14.9±0.4, 58°.34N×152°.08W, h0km, mb4.3/29, mb1 4.5/32, mb1mx4.5/36, mbtmp4.3/32, ML4.1/3, MS3.7/18, Ms1 3.7/18, ms1mx3.5/33, Error ellipse: s-maj=9.8km s-min=5.0km az=115.0*

*BJI **26** 20:37:15.0±0.0, 58°.00N×151°.70W, h33km, mb4.8/29, mB4.9/22, Ms4.5/8, Ms7 4.2/6*

*ISCJB **26** 20:37:17.9±0.2, 58°.17N±0°.02×151°.91W±0°.03, h34km±2km, mb4.6/242, MS3.8/24, Error ellipse: s-maj=2.7km s-min=2.3km az=2.9*

*MOS **26** 20:37:17.7±1.0, 58°.15N×152°.09W, h34km, mb5.0/61, Error ellipse: s-maj=9.7km s-min=4.5km az=92.6*

*NEIC **26** 20:37:20.0±1.9, 58°.07N×151°.85W, h39km±5km, mb4.7/184, MW4.6, ML4.4(AEIC), Error ellipse: s-maj=7.2km s-min=5.1km az=136.0, Moment Tensor Solution. s30 Moment tensor: Scale 10^{15}Nm; M_{rr}-7.74; $M_{\theta\theta}$2.11; $M_{\phi\phi}$5.63; $M_{r\theta}$-1.46; $M_{\theta\phi}$4.58; $M_{\phi r}$-0.62; Best double couple: $M_0$8.50000×10^{15} NP1:ϕ_s207.00000°, δ41.00000°, λ-101.00000°. NP2:ϕ_s41.00000°, δ50.00000°, λ-81.00000°. Principal axes: T 8.8900, Plg5.0000°, Azm125.0000°; N -0.9400, Plg7.0000°, Azm215.0000°; P -7.9600, Plg82.0000°, Azm1.0000°;*

NEIC Felt [III] at Kodiak. Also felt at Ouzinkie.

*AEIC **26** 20:37:21.2±0.0, 57°.99N×151°.75W, h29km*

ISC 26 20:37:19.2±0.5, 58°.11N±0°.04×151°.86W±0°.04, h34km±1km, h35km:pP-P, n799, $\sigma 1^{s}.19$/836, mb4.7/244, MS3.7/24, 25C-6D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	0.51	230	Pg	Pb	20 37 29.3	-0.7
	baz=52,slow=13						
KDAK				Lg	Lg	20 37 35.9	
	4µm,0.3s,baz=306,slow=18,SNR=165						
KDAK				LR	LR	20 37 54.6	
	comp=Z,2µm,20.1s,baz=82,slow=64						
KDAK	Kodiak Island	0.51	230	*e*Pn	Pb	20 37 29.4	-0.5
KDAK				*e*Sn	Sb	20 37 36.5	-0.8
KDAK	Kodiak Island	0.51	230	*e*P	Pb	20 37 29.4	-0.5
KDAK				*e*		20 37 36.5	
OHAK	Old Harbor	1.18	222	*e*Pn	Pn	20 37 38.3	-0.9
FONW	Fourpeaked Sta	1.31	305	*e*Pn	Pn	20 37 41.8	+0.7
CNPM	China Poot	1.46	12	*e*Pn	Pn	20 37 44.4	+1.3
KAHG	Katmai Hook Gl	1.47	286	*e*Pn	Pn	20 37 44.0	+0.7
AUI	Augustine Isla	1.48	327	*e*Pn	Pn	20 37 44.6	+1.2
AUH	Augustine H	1.51	327	*e*Pn	Pn	20 37 45.3	+1.5
AUL	Augustine Lava	1.52	328	*e*Pn	Pn	20 37 45.4	+1.5
AUW	Augustine West	1.52	327	*e*Pn	Pn	20 37 45.4	+1.4
HOM	Homer	1.56	4	*e*Pn	Pb	20 37 46.2	-1.3
BRLK	Bradley Lake	1.74	16	*e*Pn	Pn	20 37 47.6	+0.7
KAHC	Katmai Hardscr	1.75	289	*e*Pn	Pn	20 37 47.7	+0.5
KABU	Katmai Buttres	1.82	277	*e*Pn	Pn	20 37 49.0	+0.8
ILS	Iliamna Low So	1.96	342	*e*Pn	Pn	20 37 51.1	+1.0
SII	Sitkinak Islan	2.00	220	*e*Pn	Pn	20 37 49.6	-1.0
IVE	Iliamna Volcan	2.01	343	*e*Pn	Pn	20 37 51.6	+0.9
KELA	Mount Kelaz	2.08	281	*e*Pn	Pn	20 37 52.1	+0.4
SEW	Seward	2.35	31	*e*Pn	Pn	20 37 55.6	+0.3
SEW				*e*Sn	Sn	20 38 21.9	-1.2
RSO	Redoubt South	2.41	349	*e*Pn	Pn	20 37 57.4	+1.1
RDJH	Redoubt Jeurge	2.54	349	*e*Pn	Pn	20 37 59.2	+1.2
RDJH				*e*Sn	Sn	20 38 30.5	+2.7
CHIA	Chirikof Islan	3.06	223	*e*Pn	Pn	20 38 03.7	-1.3
CHIR	Chirikof Islan	3.08	224	*e*Pn	Pn	20 38 03.9	-1.5
RC01	Rabbit Creek A	3.18	19	*e*Pn	Pn	20 38 07.5	+0.8
RC01				*e*Sn	Sn	20 38 43.0	-0.4
SPWE	Spurr West	3.20	354	*e*Pn	Pn	20 38 08.5	+1.5
SUA	Susitna One	3.41	9	*e*Pn	Pn	20 38 10.6	+0.5
SVW2	Sparrevohn	3.55	329	*e*Pn	Pn	20 38 12.0	+0.3
ANNW	Aniakchak Nort	3.61	254	*e*Pn	Pn	20 38 13.1	+0.3
AZAC	Aniakchak	3.65	253	*e*Pn	Pn	20 38 13.8	+0.6
GLI	Glacier Island	3.69	39	*e*Pn	Pn	20 38 13.6	-0.2
GLI				*e*Sn	Sn	20 38 53.3	-2.6
KNK	Knik Glacier	3.73	26	*e*Pn	Pn	20 38 14.7	+0.4
PMR	Palmer	3.76	20	*e*Pn	Pn	20 38 14.8	+0.2
PMR				*e*Sn	Sn	20 38 56.5	-1.0
PMR	Palmer	3.76	20	*e*P	Pn	20 38 14.8	+0.2
PMR				*e*		20 38 56.6	
FID	Port Fidalgo	3.82	44	*e*Pn	Pn	20 38 15.0	-0.4
FID				*e*Pn	Pn	20 38 15.1	-0.4
SKT	Skwentna	3.89	2	*e*Pn	Pn	20 38 17.2	+0.8
EYAK	Cordova Ski Ar	3.97	49	*e*Pn	Pn	20 38 17.9	+0.3
EYAK				*e*Sn	Sn	20 39 00.7	-2.1
JPK	Jack Peak	3.98	40	*e*Pn	Pn	20 38 18.2	+0.4
CHGN	Chignik	4.00	246	*e*Pn	Pn	20 38 17.4	-0.5
VMT	TAPS TI Valdez	4.08	41	*e*Pn	Pn	20 38 19.8	+0.7
SGAM	Sherman Glacie	4.17	52	*e*Pn	Pn	20 38 20.8	+0.5
KAIM	Kayak Island	4.25	61	*e*Pn	Pn	20 38 22.1	+0.7
RAGM	Ragged Mountai	4.34	55	*e*Pn	Pn	20 38 22.9	+0.3
SCM	Sheep Creek Mo	4.38	29	*e*Pn	Pn	20 38 24.1	+0.9
SCM	Sheep Creek Mo	4.38	29	*e*P	Pn	20 38 24.1	+0.9
HMT	Hamilton	4.50	57	*e*Pn	Pn	20 38 25.3	+0.4
PS12	TAPS Pump St12	4.79	42	*e*Pn	Pn	20 38 29.4	+0.6
PS12				*e*Sn	Sn	20 39 21.6	-1.4
PPLA	Purkeypile	4.81	358	*e*Pn	Pn	20 38 29.9	+0.7
SNH	Sunshine Point	5.09	62	*e*Pn	Pn	20 38 34.0	+1.1
PS11	TAPS Pump St11	5.11	36	*e*Pn	Pn	20 38 34.2	+1.0
WAX	Waxell Ridge	5.18	59	*e*Pn	Pn	20 38 35.1	+0.9
CRQM	Cirque	5.18	55	*e*Pn	Pn	20 38 34.5	+0.2
TT01	Tatalina	5.24	339	*e*Pn	Pn	20 38 35.2	+0.3
TTA	Tatalina	5.25	339	*e*Pn	Pn	20 38 35.4	+0.1
TTA	Tatalina	5.25	339	*e*P	Pn	20 38 35.4	+0.1
CAST	Castle Rocks	5.33	359	*e*Pn	Pn	20 38 36.4	+0.1
DHY	Denali Highway	5.45	22	*e*Pn	Pn	20 38 38.8	+0.7
KTH	Kantishna Hill	5.48	4	*e*Pn	Pn	20 38 39.0	+0.6
SDPT	Sand Point	5.49	243	*e*Pn	Pn	20 38 38.6	+0.2
RND	Reindeer	5.52	14	*e*Pn	Pn	20 38 39.4	+0.5
RND	Reindeer	5.52	14	*e*P	Pn	20 38 39.4	+0.5
BALM	Baldy	5.66	55	*e*Pn	Pn	20 38 41.4	+0.6
BALM	Baldy	5.66	55	*e*P	Pn	20 38 41.4	+0.6
PAX	Paxson	5.80	30	*e*Pn	Pn	20 38 43.4	+0.6
PAX	Paxson	5.80	30	*e*P	Pn	20 38 43.4	+0.6
MCK	McKinley	5.82	13	*e*Pn	Pn	20 38 44.0	+1.0
MCK	McKinley	5.82	13	*e*P	Pn	20 38 44.0	+1.0
CHX	Chaix Hills	5.87	66	*e*Pn	Pn	20 38 44.8	+1.0
BPAW	Bear Paw Mtn.	6.03	4	*e*Pn	Pn	20 38 45.9	+0.1
PS4A	Pavlof South-4	6.16	248	*e*Pn	Pn	20 38 48.8	+1.2
BWN	Browne	6.19	10	*e*Pn	Pn	20 38 48.8	+0.7
MENT	Mentasta	6.29	36	*e*Pn	Pn	20 38 49.8	+0.4
PCA	Pinnacle	6.30	67	*e*Pn	Pn	20 38 50.6	+1.0
BCPM	Bancas Point	6.57	68	*e*Pn	Pn	20 38 54.0	+0.7
RIDG	Independent Ri	6.60	28	*e*Pn	Pn	20 38 54.5	+0.9
WRH	Wood River Hil	6.64	14	*e*Pn	Pn	20 38 54.4	+0.3
PNL	Peninsula	6.64	71	*e*Pn	Pn	20 38 54.7	+0.4
DOT	Dot Lake	6.73	31	*e*Pn	Pn	20 38 55.9	+0.4
HDA	Harding Lake	6.75	18	*e*Pn	Pn	20 38 56.1	+0.4
HDA	Harding Lake	6.75	18	P	Pn	20 38 56.1	+0.4
	baz=202						
CCB	Clear Creek Bu	6.84	15	*e*Pn	Pn	20 38 56.8	-0.1
MLY	Manley	6.97	4	*e*Pn	Pn	20 38 59.2	+0.5
SCRK	Sand Creek	7.01	30	*e*Pn	Pn	20 38 59.7	+0.3
BCA3	Beaver Creek A	7.02	41	*e*Pn	Pn	20 39 00.8	+1.3
TCOL	CIGO, UAF Yank	7.05	14	P	Pn	20 39 00.2	+0.4
	baz=197						
COLA	College	7.05	14	*e*Pn	Pn	20 39 00.2	+0.3
COLA	College	7.05	14*c*	*i*P	Pn	20 39 00.1	+0.3
MDM	Murphy Dome	7.09	13	*e*Pn	Pn	20 39 00.8	+0.4
MDM				*e*Sn	Sn	20 40 14.8	-4.8
ILAR	Eielson Array	7.10	17	Pn	Pn	20 38 59.8	-0.6
	4.5nm,0.3s,baz=202,slow=14,SNR=50						
ILAR				Sn	Sn	20 40 16.6	-3.2
	13nm,0.3s,baz=206,slow=23,SNR=6.0						
ILAR				LR	LR	20 42 02.0	
	comp=Z,631nm,20.5s,baz=218,slow=42						
ILB	Eielson Array	7.10	17	*e*Pn	Pn	20 39 00.2	-0.2
ILB				*e*Sn	Sn	20 40 16.3	-3.5
FALS	False Pass	7.18	248	*e*Pn	Pn	20 39 02.8	+1.2
POKR	Poker Plat Res	7.34	15	P	Pn	20 39 04.3	+0.5
	baz=198						
SSBA	Shishaldin	7.58	249	*e*Pn	Pn	20 39 06.9	-0.2
HYT	Haines Junctio	7.80	64	*e*Pn	Pn	20 39 11.1	+0.9
HYT				*e*Sn	Sn	20 40 33.5	-3.7
IM3	Indian Mountai	7.96	354	*e*Pn	Pn	20 39 12.2	0.0
PRP	Porcupine Dome	8.01	19	*e*Pn	Pn	20 39 14.4	+1.3
EGAK	Eagle	8.42	33	*e*Pn	Pn	20 39 18.9	+0.4
DAWY	Dawson	8.48	40	*e*Pn	Pn	20 39 20.9	+1.4
SKAG	Skagway	8.69	74	*e*Pn	Pn	20 39 22.9	+0.6
SKAG				*e*Sn	Sn	20 40 54.9	-4.0
AKSA	Akutan Strait	8.69	249	*e*Pn	Pn	20 39 22.9	+0.6
AKUT	Akutan	8.73	249	*e*Pn	Pn	20 39 23.9	+1.1
AKRB	Akutan Reef Bi	8.88	249	*e*Pn	Pn	20 39 24.8	-0.1
SIT	Sitka	8.94	90	*e*Pn	Pn	20 39 23.3	-2.5
SIT				*e*Sn	Sn	20 40 56.3	-8.8
SIT	Sitka	8.94	90	*e*P	Pn	20 39 23.3	-2.5
BESE	Bessie Mountai	8.95	80	*e*Pn	Pn	20 39 24.7	-1.3
FYU	Fort Yukon	9.02	17	*e*Pn	Pn	20 39 28.4	+1.6
WHY	Whitehorse	9.03	66	*e*Pn	Pn	20 39 27.7	+0.7
WHY				*e*Sn	Sn	20 41 03.7	-3.7
ANM	Nome	9.16	321	*e*Pn	Pn	20 39 30.2	+1.5
ANM	Nome	9.16	321	*e*P	Pn	20 39 30.2	+1.5
COLD	Coldfoot	9.19	4	*e*Pn	Pn	20 39 29.1	0.0
JIS	Juneau Island	9.23	82	*e*Pn	Pn	20 39 28.9	-0.8
JIS				*e*Sn	Sn	20 41 08.9	-3.2
UNV	Unalaska Valle	9.25	249	*e*Pn	Pn	20 39 29.6	-0.4
MSW	Makushin Switc	9.35	250	*e*Pn	Pn	20 39 31.0	-0.4
MCIR	Makushin Cirqu	9.39	250	*e*Pn	Pn	20 39 32.1	+0.2
MREP	Makushin Rep't	9.39	249	*e*Pn	Pn	20 39 31.9	0.0
SPIA	Saint Paul Isl	9.90	272	*e*Pn	Pn	20 39 39.4	+0.5
BM3	Burnt Mountain	9.91	16	*e*Pn	Pn	20 39 38.0	-0.9
TOLK	Toolik Lake Re	10.62	5	*e*Pn	Pn	20 39 50.0	+1.3
EPYK	Eagle Plains	10.85	34	*e*Pn	Pn	20 39 53.1	+1.2
NIKH	Nikolski High	10.91	249	*e*Pn	Pn	20 39 51.5	-1.2
RDOG	Red Dog Mine	11.14	338	*e*Pn	Pn	20 39 56.8	+1.0
GAMB	Gambell	11.17	309	*e*Pn	Pn	20 39 57.1	+1.0
DLBC	Dease Lake	11.49	79	Pn	Pn	20 40 01.5	+0.9
	1.6nm,0.3s,baz=277,slow=12,SNR=11						
DLBC				Sn	Sn	20 42 03.1	-4.6
	1.4nm,0.3s,baz=210,slow=20,SNR=4.4						
DLBC				LR	LR	20 44 32.6	
	comp=Z,406nm,19.1s,baz=294,slow=38						
DLBC	Dease Lake	11.49	79	*e*Pn	Pn	20 40 01.2	+0.5
DLBC				*e*Sn	Sn	20 42 03.5	-4.1
DIB	Dawson Inlet,	11.98	106	*e*Pn	Pn	20 40 06.9	-0.4
DIB				*e*Sn	Sn	20 42 15.6	-3.9
MOBC	Moresby Island	12.27	105	*e*Pn	Pn	20 40 11.2	0.0
INK	Inuvik	13.08	31	Pn	Pn	20 40 22.9	+0.7
	0.2nm,0.3s,baz=203,slow=14,SNR=5.9						
INK	Inuvik	13.08	31	*e*Pn	Pn	20 40 23.2	+1.0
BBB	Bella Bella	14.77	103	LR	LR	20 45 44.1	
	comp=Z,299nm,18.5s,baz=322,slow=34						
BBB	Bella Bella	14.77	103	*e*Pn	Pn	20 40 43.9	-1.4
ADK	Adak	15.49	257	*e*Pn	Pn	20 40 52.0	-2.8
	55nm,1.3s						
ADK	Adak	15.49	257	*e*P	Pn	20 40 52.0	-2.8
ADK				pmax	pmax		
	comp=Z,55nm,1.3s						
KIWB	Kanaga Island	15.75	257	*e*Pn	Pn	20 40 57.7	-0.5
YKW3	Yellowknife Ar	18.77	61	*e*P	Pn	20 41 36.0	+0.4
	comp=Z,24nm,0.9s						
YKA	Yellowknife Ar	18.78	61	P	Pn	20 41 35.8	0.0
	comp=Z,0.7nm,0.3s,baz=270,slow=9.3,SNR=26						
YKA				LR	LR	20 49 45.8	
	comp=Z,18nm,19.5s,baz=278,slow=40						
B05A	Bryant	20.21	106	P	P	20 41 51.4	+0.6
	baz=310						
D04E	Lakebay	20.59	109	P	P	20 41 55.6	+0.7
	baz=313						
BILL	Bilibino	20.95	315	*e*P	P	20 41 57.9	-0.8
	comp=Z,24nm,0.6s						
BILL	Bilibino	20.95	315*c*	*i*P	P	20 41 56.9	-1.8
BILL				*i*		20 42 07.1	
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,546nm,17.0s						
D05A	Enumclaw	20.97	108	*e*P	Pn	20 42 01.6	-0.2
	comp=Z,16nm,0.9s						
LON	Longmire	21.36	109	*e*P	P	20 42 04.4	+1.1
	comp=Z,3.2nm,0.8s						
LON	Longmire	21.36	109	*e*P	P	20 42 04.4	+1.1
LON				pmax	pmax		
	comp=Z,3.0nm,0.8s						
B08A	Colville Reser	21.57	103	*e*P	P	20 42 07.5	+2.0
	comp=Z,6.5nm,0.8s						
LTY	Liberty	21.59	107	*e*P	P	20 42 07.5	+1.7
	comp=Z,17nm,1.4s						
C09A	Chrisman Ranch	22.47	103	*e*P	P	20 42 17.0	+1.8
	comp=Z,8.6nm,1.4s						
D08A	Wollman Farm,	22.62	105	*e*P	P	20 42 18.2	+1.4
	comp=Z,9.1nm,1.0s						
H04A	Detroit Lake	22.64	113	*e*P	P	20 42 18.3	+1.3
	comp=Z,9.9nm,0.9s						
HAWA	Hanford	22.75	107	*e*P	P	20 42 18.9	+0.7
	comp=Z,4.6nm,1.0s						
NEW	Newport	22.78	100	P	P	20 42 21.2	+2.8
	comp=Z,3.7nm,0.7s,baz=300,slow=9.5,SNR=6.4						
NEW				LR	LR	20 50 36.6	
	comp=Z,197nm,18.6s,baz=320,slow=35						
NEW	Newport	22.78	100	*e*P	P	20 42 20.5	+2.1
	comp=Z,6.0nm,0.7s						
NEW	Newport	22.78	100	*e*P	P	20 42 20.5	+2.1
NEW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NEW	Newport	22.78	100	P	P	20 42 17.7	-0.7
	baz=308						
E08A	Dider Farm, El	22.93	106	*e*P	P	20 42 21.0	+1.0
	comp=Z,11nm,1.0s						
E09A	Wood Farm, Sta	23.38	105	*e*P	P	20 42 25.1	+0.6
	comp=Z,5.0nm,1.0s						
G08A	Pilot Rock	23.81	108	*e*P	P	20 42 30.1	+1.3
	comp=Z,4.3nm,0.6s						
PINE	Pine Mountain	23.90	113	*e*P	P	20 42 31.0	+1.3
	comp=Z,6.9nm,0.8s						
WALA	Waterton Lakes	23.98	96	*e*P	P	20 42 31.4	+1.1
	comp=Z,9.7nm,1.1s						
F10A	Beach Ranch, E	24.22	105	*e*P	P	20 42 33.8	+1.3
	comp=Z,3.7nm,0.8s						
YBH	Yreka Blue Hor	24.63	119	P	P	20 42 39.2	+2.9
	comp=Z,4.5nm,0.6s,baz=94,slow=13,SNR=3.8						
YBH				LR	LR	20 50 02.6	
	comp=Z,180nm,22.0s,baz=349,slow=31						
M02C	Callahan	24.83	120	P	P	20 42 40.0	+2.0
	baz=322						
BMO	Blue Mountains	24.95	107	*e*P	P	20 42 41.7	+2.5
	comp=Z,4.4nm,0.9s						
BMO	Blue Mountains	24.95	107	*e*P	P	20 42 41.7	+2.5
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
M04C	Macdoel	25.00	118	P	P	20 42 41.5	+1.9
	baz=321						
MSO	Missoula	25.35	100	*e*P	P	20 42 44.7	+1.9
	comp=Z,5.8nm,1.1s						
MSO	Missoula	25.35	100	P	P	20 42 43.6	+0.8
	baz=310						
J08A	Circle Bar Ran	25.43	111	*e*P	P	20 42 43.9	+0.3
	comp=Z,4.7nm,0.8s						
J08A				*e*PcP	PcP	20 46 15.1	+0.4
WDC	Whiskeytown Da	25.62	120	*e*P	P	20 42 47.8	+2.7
	comp=Z,4.7nm,0.9s						
WDC	Whiskeytown Da	25.62	120	*e*P	P	20 42 47.8	+2.7
WDC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOD	Modoc Plateau	25.63	115	*e*P	P	20 42 47.6	+2.1
	comp=Z,3.7nm,0.6s						
O02D	Mt. Diablo Mer	25.83	121	P	P	20 42 49.6	+2.5
	baz=324						
WVOR	Wild Horse Val	26.04	112	*e*P	P	20 42 50.6	+1.5
	comp=Z,13nm,1.1s						
WVOR	Wild Horse Val	26.04	112	*e*P	P	20 42 50.6	+1.5
WVOR				pmax	pmax		
	comp=Z,13nm,1.1s						
O03E	Paynes Creek	26.18	120	P	P	20 42 52.5	+2.1
	baz=323						
HRY	Holter Researc	26.54	98	*e*P	P	20 42 54.9	+1.4
RES	Resolute Bay	26.63	30	P	P	20 42 53.9	-0.1
	comp=Z,6.6nm,1.0s,baz=290,slow=14,SNR=3.5						
RES	Resolute Bay	26.63	30	*e*P	P	20 42 54.0	0.0
	comp=Z,14nm,1.1s						
RES	Resolute Bay	26.63	30	*e*P	P	20 42 54.0	0.0
RES				pmax	pmax		
	comp=Z,14nm,1.1s						
LRM	Limekiln Ridge	26.79	100	*e*P	P	20 42 51.1	-4.9
EGMT	Eagleton	26.81	94	P	P	20 42 57.6	+1.7
	baz=308						
DLMT	Dillon	27.02	101	*e*P	P	20 42 58.0	+0.1
	comp=Z,8.1nm,1.4s						
DLMT				*e*PcP	PcP	20 46 18.9	+0.5
SEY	Seymchan	27.10	304	P	P	20 42 56.3	-2.0
	comp=Z,1.7nm,0.7s,baz=44,slow=6.6,SNR=5.1						
SEY	Seymchan	27.10	304⇑	*e*P	P	20 42 58.7	+0.4
HLID	Hailey	27.33	106	*e*P	P	20 43 02.9	+2.1
	comp=Z,1.8nm,0.9s						
HLID				*e*PcP	PcP	20 46 19.4	+0.2
HLID	Hailey	27.33	106	P	P	20 43 03.6	+2.8
	baz=315						
BOZ	Bozeman (W)	27.37	100	P	P	20 43 03.2	+2.1
	baz=312						
PNTR	Pine Nut	28.17	118	*e*P	P	20 43 06.2	-2.1
	comp=Z,6.5nm,0.7s						
GCMT	Greycliff	28.27	97	*e*P	P	20 43 11.8	+2.6
YHH	Holmes Hill	28.32	100	*e*P	P	20 43 12.1	+2.3
	comp=Z,3.4nm,0.7s						
PEA1	Petropavlovsk-	28.36	282	*e*PcP	PcP	20 46 21.4	+0.1
PETK	Petropavlovsk-	28.37	282	P	P	20 43 07.8	-1.9
	comp=Z,2.8nm,0.6s,baz=73,slow=13,SNR=6.0						
PETK				PcP	PcP	20 46 21.4	+0.1
	comp=Z,1.5nm,0.7s,baz=77,slow=3.1,SNR=3.5						
YPP	Pitchstone Pla	28.70	101	*e*P	P	20 43 15.7	+2.6
	comp=Z,1.8nm,0.8s						
WAKR	Walker	28.71	119	*e*P	P	20 43 14.2	+1.0
	comp=Z,2.2nm,0.8s						
H17A	Grant Village	28.74	100	P	P	20 43 14.9	+1.5
	baz=313						
KVN	Kaiserville	28.91	116	*e*P	P	20 43 16.1	+1.3
	comp=Z,4.3nm,1.2s						
KVN				*e*PcP	PcP	20 46 23.6	+0.4
KVN	Kaiserville	28.91	116	*e*P	P	20 43 16.1	+1.3
KVN				*e*		20 46 23.6	
KVN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
RLMT	Red Lodge	28.93	98	*e*P	P	20 43 17.2	+2.2
	comp=Z,6.1nm,0.8s						
RLMT	Red Lodge	28.93	98	P	P	20 43 16.9	+1.8
	baz=312						
MA2	Magadan	28.94	298	P	P	20 43 13.9	-0.8
	comp=Z,2.5nm,0.3s,baz=144,slow=19,SNR=2.9						
MA2				LR	LR	20 55 36.3	
	comp=Z,200nm,21.1s,baz=97,slow=38						
ELK	Elko	28.99	111	P	P	20 43 17.8	+2.2
	comp=Z,0.6nm,0.4s,baz=299,slow=9.5,SNR=5.4						
ELK				LR	LR	20 53 27.0	
	comp=Z,118nm,20.7s,baz=322,slow=33						
NV01	Mina Array Sit	29.30	118	*e*PcP	PcP	20 46 24.8	+0.5
NVAR	Mina Array Bea	29.30	118	P	P	20 43 20.8	+2.4
	comp=Z,1.5nm,0.6s,baz=310,slow=9.6,SNR=13						
NVAR				PcP	PcP	20 46 24.8	+0.5
	comp=Z,2.3nm,0.6s,baz=294,slow=2.5,SNR=15						
NVAR				LR	LR	20 53 00.1	
	comp=Z,138nm,22.0s,baz=284,slow=32						

NV11	**Mina Array Sit**	**29.37**	**117**	*e*P	**P**	**20 43 20.0**	**+1.0**
	comp=Z,0.3nm,1.1s						
NV11				*e*PcP	**PcP**	**20 46 24.6**	**+0.3**
OMMB	**Old Mammoth Mi**	**29.64**	**119**	*e*P	**P**	**20 43 23.6**	**+2.2**
	comp=Z,5.0nm,1.0s						
HWUT	**Hardware Ranch**	**30.20**	**105**	*e*P	**P**	**20 43 27.9**	**+1.6**
	comp=Z,11nm,1.3s						
BW06	**Boulder Array**	**30.40**	**102**	*e*P	**P**	**20 43 29.6**	**+1.4**
	comp=Z,5.9nm,0.6s						
BW06	**Boulder Array**	**30.40**	**102**	P	**P**	**20 43 29.9**	**+1.8**
	baz=315						
PD31	**Pinedale Array**	**30.40**	**102**	*e*PcP	**PcP**	**20 46 26.5**	**-0.6**
PDAR	**Pinedale Array**	**30.40**	**102**	P	**P**	**20 43 29.8**	**+1.7**
	comp=Z,5.5nm,0.6s,baz=309,slow=5.0,SNR=44						
PDAR				PcP	**PcP**	**20 46 26.5**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=166,slow=0.6,SNR=4.5						
DUG	**Dugway, Tooele**	**30.61**	**109**	*e*P	**P**	**20 43 30.6**	**+0.7**
	comp=Z,2.1nm,0.8s						
DUG				*e*PcP	**PcP**	**20 46 27.9**	**+0.4**
DUG	**Dugway, Tooele**	**30.61**	**109**	*e*P	**P**	**20 43 30.6**	**+0.7**
DUG				*e*		20 46 28.0	
DUG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DUG	**Dugway, Tooele**	**30.61**	**109**	P	**P**	**20 43 31.5**	**+1.6**
	baz=319						
TCUT	**Toone Canyon**	**30.64**	**106**	*e*P	**P**	**20 43 31.5**	**+1.3**
	comp=Z,13nm,0.6s						
R11A	**Troy Canyon, C**	**30.66**	**114**	*e*P	**P**	**20 43 32.6**	**+2.2**
	comp=Z,5.5nm,1.1s						
R11A				*e*PcP	**PcP**	**20 46 28.1**	**+0.3**
R11A	**Troy Canyon, C**	**30.66**	**114**	P	**P**	**20 43 32.7**	**+2.2**
	baz=322,SNR=8.6						
CWC	**Cottonwood Cre**	**31.02**	**120**	P	**P**	**20 43 35.5**	**+2.0**
	baz=325						
VES	**Vestal, Richgr**	**31.05**	**121**	P	**P**	**20 43 36.1**	**+2.5**
	baz=326						
SMMC	**Simmler**	**31.08**	**123**	P	**P**	**20 43 36.5**	**+2.6**
	baz=327						
NLU	**North Lily Min**	**31.17**	**108**	*e*P	**P**	**20 43 32.2**	**-2.7**
	comp=Z,3.8nm,1.2s						
NLU				*e*PcP	**PcP**	**20 46 29.8**	**+0.7**
PSUT	**Pine Spring**	**31.37**	**112**	*e*P	**P**	**20 43 35.1**	**-1.5**
	comp=Z,3.8nm,1.0s						
TPNV	**Topopah Spring**	**31.46**	**117**	*e*P	**P**	**20 43 39.7**	**+2.3**
	comp=Z,4.9nm,0.8s						
TPNV	**Topopah Spring**	**31.46**	**117**	P	**P**	**20 43 40.1**	**+2.7**
	baz=324,SNR=5.6						
ISA	**Isabella, Lake**	**31.48**	**121**	*e*P	**P**	**20 43 38.9**	**+1.4**
	comp=Z,4.4nm,0.8s						
ISA	**Isabella, Lake**	**31.48**	**121**	*e*P	**P**	**20 43 38.9**	**+1.4**
ISA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ISA	**Isabella, Lake**	**31.48**	**121**	P	**P**	**20 43 40.1**	**+2.6**
	baz=326						
PKM	**Mcpherson Peak**	**31.52**	**123**	P	**P**	**20 43 40.3**	**+2.3**
	baz=327						
FURC	**Furnace Creek,**	**31.56**	**118**	P	**P**	**20 43 40.5**	**+2.5**
	baz=324						
MPMC	**Manual Prospec**	**31.60**	**119**	P	**P**	**20 43 40.8**	**+2.1**
	baz=325						
SBC	**Santa Barbara**	**31.94**	**124**	P	**P**	**20 43 42.9**	**+1.4**
	baz=328						
LRMC	**Laurel Mtn Rad**	**31.99**	**120**	P	**P**	**20 43 43.7**	**+1.7**
	baz=326						
K22A	**Casper**	**32.07**	**99**	*e*P	**P**	**20 43 43.3**	**+0.6**
	comp=Z,4.4nm,0.7s						
K22A	**Casper**	**32.07**	**99**	P	**P**	**20 43 44.4**	**+1.7**
	baz=315						
TMUT	**Trail Mountain**	**32.10**	**108**	*e*P	**P**	**20 43 44.5**	**+1.3**
	comp=Z,3.5nm,0.7s						
TMUT				*e*PcP	**PcP**	**20 46 32.1**	**+0.3**
RSSD	**Black Hills**	**32.37**	**94**	*e*P	**P**	**20 43 46.9**	**+1.5**
	comp=Z,15nm,0.6s						
RSSD	**Black Hills**	**32.37**	**94**	*e*P	**P**	**20 43 46.9**	**+1.5**
RSSD				pmax	pmax		
	comp=Z,15nm,0.6s						
RSSD	**Black Hills**	**32.37**	**94**	P	**P**	**20 43 47.3**	**+1.9**
	baz=313						
RWWY	**Rawlins**	**32.39**	**101**	*e*P	**P**	**20 43 47.0**	**+1.3**
	comp=Z,16nm,0.8s						
GSC	**Goldstone, Bar**	**32.54**	**119**	*e*P	**P**	**20 43 49.2**	**+2.4**
	comp=Z,6.6nm,1.0s						
GSC	**Goldstone, Bar**	**32.54**	**119**	*e*P	**P**	**20 43 49.2**	**+2.4**
GSC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GSC	**Goldstone, Bar**	**32.54**	**119**	P	**P**	**20 43 49.4**	**+2.6**
	baz=326						
SRU	**San Rafael Swe**	**32.59**	**107**	*e*P	**P**	**20 43 49.9**	**+2.5**
	comp=Z,15nm,1.0s						
ULM	**Lac du Bonnet**	**32.81**	**79**	P	**P**	**20 43 49.8**	**+0.9**
	comp=Z,7.0nm,0.6s,baz=313,slow=9.9,SNR=7.9						
ULM				LR	LR	20 57 23.8	
	comp=Z,171nm,20.1s,baz=296,slow=37						
ULM	**Lac du Bonnet**	**32.81**	**79**	*e*P	**P**	**20 43 49.5**	**+0.6**
	comp=Z,11nm,0.8s						
ULM	**Lac du Bonnet**	**32.81**	**79**	*e*P	**P**	**20 43 49.5**	**+0.6**
ULM				pmax	pmax		
	comp=Z,11nm,0.8s						
LCMT	**Little Creek M**	**32.86**	**113**	*e*P	**P**	**20 43 52.0**	**+2.4**
	comp=Z,2.6nm,0.8s						
O20A	**White River Ci**	**32.99**	**104**	*e*P	**P**	**20 43 52.4**	**+1.6**
	comp=Z,13nm,0.6s						
O20A	**White River Ci**	**32.99**	**104**	P	**P**	**20 43 52.7**	**+1.8**
	baz=318						
BFSC	**Mount Baldy Ra**	**33.03**	**121**	P	**P**	**20 43 53.3**	**+2.2**
	baz=327						
GMRC	**Granite Mounta**	**33.50**	**118**	P	**P**	**20 43 57.5**	**+2.2**
	baz=325						
N23A	**Red Feather La**	**33.62**	**100**	P	**P**	**20 43 58.1**	**+1.7**
	baz=316						
SCI2	**San Clemente I**	**33.69**	**124**	P	**P**	**20 43 59.3**	**+2.5**
	baz=328						
PV09	**Paradox Valley**	**33.76**	**107**	*e*P	**P**	**20 43 59.2**	**+1.6**
U15A	**North Rim**	**33.79**	**113**	*e*P	**P**	**20 43 59.6**	**+1.7**
	comp=Z,4.7nm,1.1s						
U15A				*e*PcP	**PcP**	**20 46 37.3**	**+0.8**
PV21	**Cone Mtn., Par**	**33.79**	**106**	*e*P	**P**	**20 43 59.4**	**+1.5**
	comp=Z,5.5nm,0.6s						
PV23	**Carpenter Ridg**	**33.86**	**107**	*e*P	**P**	**20 44 00.2**	**+1.7**
	comp=Z,7.7nm,0.7s						
PV22	**Blue Mesa, Par**	**33.91**	**106**	*e*P	**P**	**20 44 00.0**	**+1.2**
	comp=Z,9.1nm,1.0s						
PV22				*e*PcP	**PcP**	**20 46 37.2**	**+0.6**
PV04	**Paradox Valley**	**33.95**	**107**	*e*P	**P**	**20 44 00.3**	**+1.1**
	comp=Z,8.4nm,0.7s						
BELC	**Belle Mtn. Jos**	**33.99**	**119**	P	**P**	**20 44 01.5**	**+2.0**
	baz=326						
AGMN	**Agassiz Nation**	**33.99**	**82**	*e*P	**P**	**20 44 00.3**	**+1.1**
	comp=Z,12nm,0.6s						
AGMN	**Agassiz Nation**	**33.99**	**82**	P	**P**	**20 44 00.2**	**+0.9**
	baz=308						
PV16	**Nyswonger Mesa**	**34.01**	**107**	*e*P	**P**	**20 44 00.6**	**+0.9**
	comp=Z,5.4nm,0.9s						
PV17	**East Wray Mesa**	**34.01**	**107**	*e*P	**P**	**20 44 01.6**	**+1.8**
	comp=Z,20nm,1.4s						
PV11	**David Mesa, Pa**	**34.04**	**107**	*e*P	**P**	**20 44 02.0**	**+2.0**
	comp=Z,13nm,1.1s						
PV07	**Paradox Valley**	**34.05**	**106**	*e*P	**P**	**20 44 01.8**	**+1.6**
	comp=Z,18nm,1.4s						
PV12	**Saucer Basin,**	**34.06**	**107**	*e*P	**P**	**20 44 01.8**	**+1.5**
	comp=Z,7.9nm,1.1s						
PV18	**Skein Mesa, Pa**	**34.06**	**107**	*e*P	**P**	**20 44 01.6**	**+1.4**
	comp=Z,13nm,1.2s						
W13A	**Hualapai Mount**	**34.08**	**116**	*e*P	**P**	**20 44 02.6**	**+2.2**
	comp=Z,4.7nm,0.7s						
PV03	**Paradox Valley**	**34.09**	**107**	*e*P	**P**	**20 44 01.8**	**+1.4**
	comp=Z,8.3nm,1.0s						
PV05	**Paradox Valley**	**34.10**	**107**	*e*P	**P**	**20 44 02.0**	**+1.5**
	comp=Z,5.6nm,0.9s						
PFO	**Pinyon Flats O**	**34.10**	**120**	P	**P**	**20 44 02.5**	**+2.0**
	baz=327						
PV13	**Radium Mtn., P**	**34.18**	**107**	*e*P	**P**	**20 44 02.9**	**+1.7**
	comp=Z,27nm,1.5s						
PV02	**Paradox Valley**	**34.18**	**107**	*e*P	**P**	**20 44 03.5**	**+2.2**
	comp=Z,7.1nm,0.9s						
IRM	**Iron Mountain**	**34.25**	**118**	P	**P**	**20 44 04.1**	**+2.5**
	baz=326						
PV01	**Paradox Valley**	**34.32**	**106**	*e*P	**P**	**20 44 03.3**	**+0.8**
	comp=Z,7.3nm,0.9s						
SMCO	**Snowmass**	**34.35**	**104**	*e*P	**P**	**20 44 03.8**	**+0.8**
	comp=Z,11nm,1.4s						
BC3	**Big Chuckawall**	**34.53**	**119**	P	**P**	**20 44 05.4**	**+1.3**
	baz=326						
PDMCI	**Parker Dam,Lak**	**34.61**	**117**	P	**P**	**20 44 06.9**	**+2.2**
	baz=325						
MONP2	**Monument Peak**	**34.72**	**121**	P	**P**	**20 44 07.0**	**+1.1**
	baz=327						
SUSD	**Miller**	**34.84**	**90**	P	**P**	**20 44 07.9**	**+1.3**
	baz=312						
Y12C	**Blythe**	**34.88**	**118**	*e*P	**P**	**20 44 08.6**	**+1.6**
	comp=Z,11nm,0.8s						
Y12C	**Blythe**	**34.88**	**118**	P	**P**	**20 44 09.6**	**+2.5**
	baz=326						
WUAZ	**Wupatki**	**34.96**	**112**	*e*P	**P**	**20 44 09.5**	**+1.5**
	comp=Z,7.8nm,0.8s						
WUAZ	**Wupatki**	**34.96**	**112**	P	**P**	**20 44 10.5**	**+2.6**
	baz=323,SNR=5.3						
MVCO	**Mesa Verde**	**35.07**	**107**	P	**P**	**20 44 10.4**	**+1.5**
	baz=321						
Y14A	**Wickenburg**	**35.45**	**116**	*e*P	**P**	**20 44 12.7**	**+0.7**
	comp=Z,4.6nm,0.7s						
S22A	**4UR Ranch, Cre**	**35.51**	**105**	P	**P**	**20 44 14.5**	**+1.7**
	baz=320						
OGNE	**Ogallala**	**35.64**	**97**	P	**P**	**20 44 15.3**	**+1.7**
	baz=316						
X16A	**Lo Mia Camp, P**	**35.81**	**114**	*e*P	**P**	**20 44 18.1**	**+2.8**
	comp=Z,3.7nm,0.9s						
W18A	**Petrified Fore**	**36.09**	**111**	P	**P**	**20 44 19.6**	**+2.0**
	baz=323						
SDCO	**Great Sand Dun**	**36.19**	**104**	*e*P	**P**	**20 44 20.8**	**+2.2**
	comp=Z,6.0nm,1.1s						
SDCO	**Great Sand Dun**	**36.19**	**104**	P	**P**	**20 44 20.3**	**+1.7**
	baz=319						
EYMN	**Ely**	**36.50**	**79**	*e*P	**P**	**20 44 21.3**	**+0.5**
	comp=Z,19nm,0.7s						
EYMN	**Ely**	**36.50**	**79**	P	**P**	**20 44 21.6**	**+0.8**
	baz=309						
ECSD	**EROS Data Cent**	**36.56**	**89**	*e*P	**P**	**20 44 21.8**	**+0.4**
	comp=Z,5.7nm,0.6s						
ECSD	**EROS Data Cent**	**36.56**	**89**	P	**P**	**20 44 22.2**	**+0.7**
	baz=313						
KSCO	**Kaye Shedlock'**	**36.74**	**99**	*e*P	**P**	**20 44 24.9**	**+1.9**
	comp=Z,15nm,0.6s						
KSCO	**Kaye Shedlock'**	**36.74**	**99**	P	**P**	**20 44 25.0**	**+1.9**
	baz=318						
YAK	**Yakutsk**	**37.12**	**310**	*i* P	**P**	**20 44 23.6**	**-2.2**
214A	**Organ Pipe Nat**	**37.17**	**118**	P	**P**	**20 44 28.8**	**+2.1**
	baz=326						
T25A	**Trinidad**	**37.22**	**103**	P	**P**	**20 44 29.0**	**+1.8**
	baz=320						
E38A	**The Farm, Brul**	**37.33**	**81**	*e*P	**P**	**20 44 28.0**	**+0.2**
	comp=Z,53nm,1.5s						
E38A	**The Farm, Brul**	**37.33**	**81**	P	**P**	**20 44 28.3**	**+0.5**
	baz=310						
BGNE	**Belgrade**	**37.37**	**93**	*e*P	**P**	**20 44 28.1**	**-0.2**
	comp=Z,56nm,0.7s						
BGNE	**Belgrade**	**37.37**	**93**	P	**P**	**20 44 29.8**	**+1.5**
	baz=315						
SPMN	**Marine on St.**	**37.58**	**84**	*e*P	**P**	**20 44 31.1**	**+1.1**
	comp=Z,14nm,0.6s						
SPMN	**Marine on St.**	**37.58**	**84**	P	**P**	**20 44 31.4**	**+1.4**
	baz=312						
C40A	**Isle Royale Na**	**37.74**	**78**	P	**P**	**20 44 32.2**	**+0.9**
	baz=310						
TUC	**Tucson**	**37.84**	**115**	*e*P	**P**	**20 44 34.5**	**+2.0**
	comp=Z,5.3nm,1.1s						
TUC	**Tucson**	**37.84**	**115**	P	**P**	**20 44 34.8**	**+2.3**
	baz=325						
ANMO	**Albuquerque**	**37.87**	**108**	*e*P	**P**	**20 44 34.2**	**+1.4**
	comp=Z,2.0nm,0.6s						
ANMO				*e*PcP	**PcP**	**20 46 49.1**	**+0.6**
ANMO	**Albuquerque**	**37.87**	**108**	*e*P	**P**	**20 44 34.2**	**+1.4**
ANMO				*e*		20 46 49.1	
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ANMO	**Albuquerque**	**37.87**	**108**	P	**P**	**20 44 34.4**	**+1.6**
	baz=322						
LAZ	**Ladron**	**37.95**	**109**	*e*P	**P**	**20 44 35.5**	**+2.1**
LENM	**Lemitar**	**38.22**	**109**	*e*P	**P**	**20 44 37.9**	**+2.1**
G39A	**Holcombe**	**38.40**	**82**	P	**P**	**20 44 37.8**	**+0.9**
	baz=312						
CBKS	**Cedar Bluff**	**38.40**	**97**	P	**P**	**20 44 38.6**	**+1.6**
	baz=318						
BNM	**Barren Site**	**38.41**	**109**	*e*P	**P**	**20 44 39.0**	**+1.6**
G40A	**Rib Lake**	**38.92**	**82**	P	**P**	**20 44 42.0**	**+0.7**
	baz=312						
121A	**Cookes Peak, D**	**39.13**	**111**	P	**P**	**20 44 46.0**	**+2.6**
	baz=324,SNR=7.3						
KSU1	**Kansas State U**	**39.84**	**94**	P	**P**	**20 44 49.5**	**+0.5**
	baz=317						
I41A	**Arkdale**	**39.91**	**83**	*e*P	**P**	**20 44 50.7**	**+1.2**
I41A	**Arkdale**	**39.91**	**83**	P	**P**	**20 44 50.5**	**+1.0**
	baz=313						
AMTX	**Amarillo**	**40.36**	**103**	P	**P**	**20 44 55.4**	**+1.9**
	baz=321						
JFWS	**Jewell Farm**	**40.50**	**84**	*e*P	**P**	**20 44 54.8**	**+0.4**
	comp=Z,19nm,0.7s						
JFWS	**Jewell Farm**	**40.50**	**84**	*e*P	**P**	**20 44 54.8**	**+0.4**
JFWS				pmax	pmax		
	comp=Z,19nm,0.7s						
JFWS	**Jewell Farm**	**40.50**	**84**	P	**P**	**20 44 54.8**	**+0.4**
	baz=314						
GRNR	**Gornyy**	**40.50**	**292**	*e*P	P	20 44 46.2	-8.2
MSTX	**Muleshoe**	**40.51**	**105**	*e*P	**P**	**20 44 55.9**	**+1.1**
	comp=Z,11nm,1.0s						
MSTX	**Muleshoe**	**40.51**	**105**	P	**P**	**20 44 56.2**	**+1.4**
	baz=322						
I42A	**Draeger Farm,**	**40.53**	**82**	P	**P**	**20 44 56.0**	**+1.3**
	baz=313						
L40A	**Anamosa**	**40.58**	**86**	*e*P	**P**	**20 44 55.4**	**+0.3**
	comp=Z,19nm,0.8s						
L40A	**Anamosa**	**40.58**	**86**	P	**P**	**20 44 55.9**	**+0.8**
	baz=315						
GDL2	**Guadalupe Moun**	**41.10**	**108**	*e*P	**P**	**20 45 02.0**	**+2.4**
N40A	**Mertquake, Sal**	**41.22**	**88**	P	**P**	**20 45 01.1**	**+0.7**
	baz=316						
D47A	**Chapleau**	**41.41**	**74**	P	**P**	**20 45 02.5**	**+0.5**
	baz=312						
M41A	**Milan**	**41.43**	**86**	P	**P**	**20 45 02.7**	**+0.7**
	baz=315						
L42A	**Oliver, Polo**	**41.44**	**85**	P	**P**	**20 45 02.2**	**0.0**
	baz=315						
K43A	**Burlington**	**41.66**	**83**	P	**P**	**20 45 03.9**	**0.0**
	baz=314						
G46A	**Petoskey**	**41.67**	**78**	P	**P**	**20 45 04.3**	**+0.3**
	baz=313						
E47A	**Iron Bridge**	**41.73**	**75**	P	**P**	**20 45 04.9**	**+0.5**
	baz=312						
N41A	**Harden Midland**	**41.73**	**87**	P	**P**	**20 45 05.4**	**+0.8**
	baz=316						
SUMG	**Summit**	**41.88**	**24**	*e*P	**P**	**20 45 06.9**	**+1.0**
	comp=Z,8.7nm,0.7s						
SUMG	**Summit**	**41.88**	**24**	*i* P	**P**	**20 45 06.8**	**+0.9**
SUMG				*i*		20 45 17.9	
SUMG				pmax	pmax		
	comp=Z,16nm,0.7s						
SUMG	**Summit**	**41.88**	**24**	*i* P	**P**	**20 45 06.8**	**+0.9**
	comp=Z,16nm,0.7s						
SUMG				*i*		20 45 17.9	
WMOK	**Wichita Mounta**	**41.98**	**100**	*e*P	**P**	**20 45 07.5**	**+0.8**
WMOK	**Wichita Mounta**	**41.98**	**100**	*e*P	**P**	**20 45 07.5**	**+0.8**
WMOK	**Wichita Mounta**	**41.98**	**100**	P	**P**	**20 45 07.8**	**+1.1**
	baz=321						
H46A	**Fife Lake**	**42.03**	**79**	P	**P**	**20 45 08.0**	**+1.0**
	baz=313						
D49A	**Beulah Townshi**	**42.16**	**73**	P	**P**	**20 45 08.3**	**+0.3**
	baz=312						
DAG	**Danmarks Havn**	**42.19**	**14**	⇓*i*P	**P**	**20 45 08.1**	**+0.3**
DAG				*e*		20 45 19.1	
DAG				pmax	pmax		
	comp=Z,13nm,0.9s						
DAG	**Danmarks Havn**	**42.19**	**14**	⇓*i*P	**P**	**20 45 08.1**	**+0.3**
	comp=Z,15nm,0.9s						
DAG				*e*		20 45 19.1	
F48A	**Evansville**	**42.49**	**75**	P	**P**	**20 45 10.9**	**+0.2**
	baz=313						
HDIL	**Hopedale**	**42.67**	**86**	*e*P	**P**	**20 45 12.6**	**+0.3**
	comp=Z,26nm,0.8s						
HDIL	**Hopedale**	**42.67**	**86**	P	**P**	**20 45 12.3**	**+0.1**
	baz=316						
M44A	**Midewin, Midew**	**42.74**	**84**	P	**P**	**20 45 13.1**	**+0.4**
	baz=315						
F49A	**Sandfield**	**42.83**	**75**	P	**P**	**20 45 13.6**	**+0.2**
	baz=313						
K46A	**Dorr**	**43.01**	**81**	P	**P**	**20 45 14.4**	**-0.5**
	baz=315						
E50A	**Wahnapitae**	**43.05**	**74**	P	**P**	**20 45 15.5**	**+0.3**
	baz=312						
I48A	**Sherman Twp**	**43.05**	**78**	P	**P**	**20 45 16.0**	**+0.8**
	baz=314						
LSQQ	**Lebel-sur-Quev**	**43.16**	**68**	P	**P**	**20 45 15.8**	**-0.3**
	baz=311						
ABTX	**Abilene, Hawle**	**43.18**	**103**	P	**P**	**20 45 17.6**	**+1.1**
	baz=322						
P43A	**Skaggs, Pawnee**	**43.21**	**87**	P	**P**	**20 45 17.2**	**+0.6**
	baz=317						
HHAR	**Hobbs**	**43.35**	**94**	*e*P	**P**	**20 45 17.7**	**-0.1**
	comp=Z,5.5nm,0.8s						
CCM	**Cathedral Cave**	**43.46**	**90**	P	**P**	**20 45 18.8**	**+0.1**
	baz=318						
E51A	**G1948 Merrick**	**43.60**	**73**	P	**P**	**20 45 20.2**	**+0.5**
	baz=313						
J48A	**Bridge Port**	**43.63**	**79**	P	**P**	**20 45 21.9**	**+2.0**
	baz=314						
TX31	**Lajitas Ar. Si**	**43.77**	**110**	*e*P	**P**	**20 45 22.8**	**+1.4**
	comp=Z,5.2nm,1.1s						
TXAR	**Lajitas Array**	**43.77**	**110**	P	**P**	**20 45 23.0**	**+1.6**
	comp=Z,2.3nm,0.9s,baz=325,slow=6.4,SNR=15						
TXAR				PcP	**PcP**	**20 47 08.5**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=323,slow=1.4,SNR=3.5						
TXAR				LR	LR	21 02 14.0	
	comp=Z,81nm,20.8s,baz=0.0,slow=34						
KLR	**Kul'dur**	**43.80**	**293**	*c* *i*P	**P**	**20 45 19.8**	**-1.4**
KLR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
L47A	**Sherwood**	**43.82**	**81**	P	**P**	**20 45 21.5**	**+0.1**
	baz=315						
D52A	**ZEK Kipawa Sen**	**43.85**	**71**	P	**P**	**20 45 22.4**	**+0.7**
	baz=313						
CHGQ	**Chibougamau**	**43.87**	**66**	P	**P**	**20 45 21.6**	**-0.2**
	baz=312						
U40A	**Yellville**	**43.87**	**93**	P	**P**	**20 45 22.5**	**+0.6**
	baz=319						
J49A	**Marlette**	**43.92**	**78**	P	**P**	**20 45 22.9**	**+0.6**
	baz=314						
FVM	**French Village**	**43.95**	**90**	*e*P	**P**	**20 45 22.8**	**+0.2**
	comp=Z,18nm,1.5s						
FVM	**French Village**	**43.95**	**90**	*e*P	**P**	**20 45 22.8**	**+0.2**
FVM				pmax	pmax		
	comp=Z,18nm,1.5s						
SFIN	**Lafayette**	**43.96**	**85**	*e*P	**P**	**20 45 23.1**	**+0.4**
	comp=Z,26nm,1.1s						
SFIN	**Lafayette**	**43.96**	**85**	P	**P**	**20 45 23.0**	**+0.4**
	baz=316						
KLBO	**Killbear Provi**	**44.04**	**74**	P	**P**	**20 45 23.3**	**+0.1**
	baz=314						
BMRO	**Meriville Lake**	**44.05**	**76**	P	**P**	**20 45 23.2**	**-0.1**
	baz=314						
SCHQ	**Schefferville**	**44.12**	**56**	P	**P**	**20 45 24.5**	**+0.8**
	comp=Z,6.4nm,0.4s,baz=291,slow=7.8,SNR=5.4						
SCHQ				LR	LR	21 05 14.6	
	comp=Z,131nm,18.2s,baz=300,slow=38						
D53A	**Lac Vacive, Po**	**44.13**	**71**	P	**P**	**20 45 24.2**	**+0.2**
	baz=313						
K49A	**Clarkson**	**44.16**	**79**	P	**P**	**20 45 24.8**	**+0.6**
	baz=315						
F52A	**Sundridge**	**44.19**	**73**	P	**P**	**20 45 24.6**	**+0.2**
	baz=313						
E52A	**Mattawa**	**44.20**	**72**	P	**P**	**20 45 23.7**	**-0.7**
	baz=313						
L48A	**N Adams**	**44.24**	**81**	P	**P**	**20 45 25.9**	**+1.0**
	baz=315						
W39A	**Magazine**	**44.26**	**95**	P	**P**	**20 45 25.6**	**+0.5**
	baz=320						
N47A	**Urbana**	**44.34**	**83**	P	**P**	**20 45 25.7**	**+0.1**
	baz=316,SNR=5.5						
BUKO	**Buck Lake**	**44.40**	**74**	P	**P**	**20 45 26.7**	**+0.7**
	baz=314						
CLWO	**Collingwood**	**44.62**	**75**	P	**P**	**20 45 28.6**	**+0.7**
	baz=314						
E53A	**Dumoine, Ponti**	**44.63**	**71**	P	**P**	**20 45 28.4**	**+0.5**
	baz=313						
I51A	**Listowel**	**44.70**	**76**	P	**P**	**20 45 29.8**	**+1.2**
	baz=314						
N48A	**Decatur**	**44.71**	**82**	P	**P**	**20 45 28.8**	**+0.2**
	baz=316,SNR=6.3						
ALGO	**Algonquin Park**	**44.73**	**72**	P	**P**	**20 45 28.5**	**-0.2**
	baz=314						
JCT	**Junction City**	**44.80**	**105**	*e*P	**P**	**20 45 30.9**	**+1.4**
	comp=Z,19nm,0.6s						
JCT	**Junction City**	**44.80**	**105**	*e*P	**P**	**20 45 30.9**	**+1.4**
JCT				pmax	pmax		
	comp=Z,19nm,0.6s						
JCT	**Junction City**	**44.80**	**105**	P	**P**	**20 45 31.0**	**+1.4**
	baz=324,SNR=9.9						
WHTX	**Lake Whitney,**	**44.81**	**101**	P	**P**	**20 45 30.7**	**+1.2**
	baz=322						
M49A	**Liberty Center**	**44.82**	**81**	P	**P**	**20 45 29.5**	**+0.1**
	baz=316						
E54A	**Lac Daplat, Po**	**44.83**	**71**	P	**P**	**20 45 29.8**	**+0.3**
	baz=313						
MIAR	**Mount Ida**	**44.87**	**96**	P	**P**	**20 45 30.4**	**+0.5**
	baz=320						
G53A	**Haliburton**	**45.01**	**73**	P	**P**	**20 45 31.3**	**+0.3**
	baz=314						
O48A	**Farmland**	**45.07**	**83**	P	**P**	**20 45 31.3**	**-0.3**
	baz=316						
N49A	**Columbus Grove**	**45.11**	**82**	*e*P	**P**	**20 45 32.2**	**+0.5**
	comp=Z,23nm,0.7s						
N49A	**Columbus Grove**	**45.11**	**82**	P	**P**	**20 45 32.1**	**+0.3**
	baz=316,SNR=5.6						
PEMO	**Pembroke**	**45.33**	**72**	P	**P**	**20 45 33.1**	**-0.3**
	baz=314						
ACTO	**Acton**	**45.34**	**76**	P	**P**	**20 45 34.5**	**+0.9**
	baz=315						
BANO	**Bancroft**	**45.44**	**73**	P	**P**	**20 45 35.0**	**+0.6**
	baz=314						
P48A	**Milroy**	**45.51**	**84**	P	**P**	**20 45 34.8**	**-0.2**
	baz=317						
O49A	**Covington**	**45.56**	**83**	P	**P**	**20 45 34.8**	**-0.5**
	baz=316						
N50A	**Nevada**	**45.76**	**81**	P	**P**	**20 45 37.0**	**+0.1**
	baz=316						
TYNO	**Tyneside**	**45.80**	**76**	P	**P**	**20 45 37.3**	**+0.1**
	baz=315						
P49A	**Miami Univ. Ec**	**45.83**	**83**	P	**P**	**20 45 37.4**	**-0.1**
	baz=317						
PLVO	**Plevna**	**45.86**	**72**	P	**P**	**20 45 37.9**	**+0.3**
	baz=314						
G55A	**Calabogie**	**45.89**	**72**	P	**P**	**20 45 37.7**	**-0.2**
	baz=314						
DELO	**Deloro Mine**	**45.95**	**73**	P	**P**	**20 45 38.7**	**+0.3**
	baz=315						
O50A	**Cable**	**45.96**	**82**	P	**P**	**20 45 38.8**	**+0.2**
	baz=317,SNR=5.6						
WLVO	**Wesleyville**	**45.97**	**74**	P	**P**	**20 45 39.0**	**+0.5**
	baz=315						
N51A	**Ashland**	**46.06**	**80**	P	**P**	**20 45 39.2**	**-0.1**
	baz=316						
I55A	**Frankford**	**46.13**	**74**	P	**P**	**20 45 40.1**	**+0.3**
	baz=315						
H55A	**Tweed**	**46.15**	**73**	P	**P**	**20 45 40.5**	**+0.5**
	baz=315						
ACSO	**Alum Creek Sta**	**46.24**	**81**	P	**P**	**20 45 40.5**	**-0.2**
	baz=317						
P50A	**Jamestown**	**46.26**	**83**	P	**P**	**20 45 40.9**	**0.0**
	baz=317						
TRQ	**Mont Tremblant**	**46.30**	**70**	*e*P	**P**	**20 45 41.1**	**-0.1**
L53A	**Girard**	**46.41**	**78**	P	**P**	**20 45 42.4**	**+0.4**
	baz=316						
ERPA	**Erie**	**46.44**	**77**	P	**P**	**20 45 42.7**	**+0.5**
	baz=316						
T47A	**Sharon Grove**	**46.45**	**88**	*e*P	**P**	**20 45 42.7**	**+0.3**
	comp=Z,24nm,0.8s						
T47A	**Sharon Grove**	**46.45**	**88**	P	**P**	**20 45 42.5**	**+0.1**
	baz=318						
MEDO	**Medina**	**46.48**	**75**	P	**P**	**20 45 42.4**	**-0.2**
	baz=315						
N52A	**McGinn's Farm,**	**46.49**	**80**	P	**P**	**20 45 42.9**	**+0.2**
	baz=316						
O51A	**Pataskala**	**46.49**	**81**	P	**P**	**20 45 43.3**	**+0.6**
	baz=317						
M53A	**WI Miller and**	**46.57**	**79**	P	**P**	**20 45 43.9**	**+0.6**
	baz=316						
H56A	**Elgin**	**46.58**	**72**	P	**P**	**20 45 43.2**	**-0.2**
	baz=315						
PECO	**Prince Edward**	**46.68**	**73**	P	**P**	**20 45 44.8**	**+0.7**
	baz=315						
L54A	**Sinclairville**	**46.70**	**77**	P	**P**	**20 45 44.7**	**+0.3**
	baz=316						
Q50A	**Georgetown**	**46.73**	**84**	P	**P**	**20 45 44.8**	**+0.3**
	baz=318						
P51A	**Williamsport**	**46.74**	**82**	P	**P**	**20 45 45.0**	**+0.4**
	baz=317						
K54A	**Basiliko Farm,**	**46.75**	**76**	P	**P**	**20 45 44.7**	**-0.1**
	baz=316						
V46A	**Holladay**	**46.80**	**90**	P	**P**	**20 45 45.7**	**+0.5**
	baz=319,SNR=7.7						
O52A	**Adamsville**	**46.92**	**81**	*e*P	**P**	**20 45 46.1**	**0.0**
	comp=Z,19nm,1.0s						
O52A	**Adamsville**	**46.92**	**81**	P	**P**	**20 45 46.0**	**-0.1**
	baz=317						
Q51A	**Peebles**	**46.93**	**83**	*e*P	**P**	**20 45 46.6**	**+0.5**

	comp=Z,26nm,0.8s						
Q51A	**Peebles**	**46.93**	**83**	P	**P**	**20 45 46.4**	**+0.3**
	baz=317,SNR=5.3						
N53A	**Lisbon**	**46.94**	**79**	P	**P**	**20 45 46.7**	**+0.5**
	baz=316						
R50A	**Paris**	**46.96**	**84**	P	**P**	**20 45 46.9**	**+0.5**
	baz=318,SNR=5.8						
K55A	**Perry**	**46.99**	**75**	P	**P**	**20 45 46.9**	**+0.3**
	baz=316						
M54A	**Oil Creek Stat**	**47.04**	**78**	P	**P**	**20 45 47.2**	**+0.2**
	baz=316						
OXF	**Oxford**	**47.10**	**92**	*e*P	**P**	**20 45 48.1**	**+0.6**
	comp=Z,22nm,0.6s						
OXF	**Oxford**	**47.10**	**92**	*e*P	**P**	**20 45 48.1**	**+0.6**
OXF				pmax	pmax		
	comp=Z,21nm,0.6s						
OXF	**Oxford**	**47.10**	**92**	P	**P**	**20 45 48.1**	**+0.6**
	baz=320						
P52A	**Corning**	**47.12**	**81**	P	**P**	**20 45 46.9**	**-0.7**
	baz=317						
USRK	**Ussuriysk Ar.**	**47.15**	**288**	P	**P**	**20 45 45.2**	**-2.6**
	comp=Z,1.3nm,0.8s,baz=25,slow=3.8,SNR=4.2						
USRK				LR	LR	21 06 32.4	
	comp=Z,66nm,19.1s,baz=50,slow=37						
W46A	**Michie**	**47.17**	**90**	P	**P**	**20 45 49.2**	**+1.2**
	baz=320						
L55A	**Hinsdale**	**47.19**	**76**	P	**P**	**20 45 48.6**	**+0.4**
	baz=316						
N54A	**Moraine State**	**47.27**	**78**	*e*P	**P**	**20 45 49.1**	**+0.3**
	comp=Z,41nm,1.3s						
N54A	**Moraine State**	**47.27**	**78**	P	**P**	**20 45 49.0**	**+0.3**
	baz=317						
R51A	**Hillsboro**	**47.34**	**84**	P	**P**	**20 45 50.0**	**+0.7**
	baz=318,SNR=14						
S50A	**Richmond**	**47.37**	**85**	P	**P**	**20 45 50.2**	**+0.7**
	baz=318						
W47A	**Westpoint**	**47.50**	**90**	P	**P**	**20 45 51.5**	**+0.9**
	baz=320,SNR=7.8						
U49A	**Red Boiling Sp**	**47.51**	**87**	P	**P**	**20 45 51.1**	**+0.5**
	baz=319						
CLTN	**Cedars of Leba**	**47.53**	**88**	*e*P	**P**	**20 45 51.7**	**+0.9**
	comp=Z,10nm,0.9s						
M55A	**Ridgway**	**47.54**	**77**	P	**P**	**20 45 51.6**	**+0.7**
	baz=316,SNR=5.3						
V48A	**Smith Brothers**	**47.54**	**89**	P	**P**	**20 45 51.5**	**+0.6**
	baz=319						
Q52A	**Bidwell**	**47.54**	**82**	P	**P**	**20 45 50.8**	**-0.1**
	baz=318						
P53A	**Whipple**	**47.62**	**81**	*e*P	**P**	**20 45 51.8**	**+0.3**
	comp=Z,16nm,0.6s						
P53A	**Whipple**	**47.62**	**81**	P	**P**	**20 45 51.7**	**+0.2**
	baz=317						
O54A	**Avella**	**47.63**	**79**	P	**P**	**20 45 51.7**	**+0.1**
	baz=317,SNR=5.3						
S51A	**Beattyville**	**47.82**	**84**	*e*P	**P**	**20 45 52.6**	**-0.5**
	comp=Z,45nm,0.7s						
S51A	**Beattyville**	**47.82**	**84**	P	**P**	**20 45 53.1**	**0.0**
	baz=318,SNR=6.0						
M56A	**Emporium**	**47.83**	**77**	P	**P**	**20 45 53.5**	**+0.3**
	baz=316						
X47A	**Russelville**	**47.92**	**91**	P	**P**	**20 45 53.3**	**-0.5**
	baz=320						
N55A	**Marion Center**	**47.92**	**78**	*e*P	**P**	**20 45 54.2**	**+0.3**
	comp=Z,27nm,1.3s						
N55A	**Marion Center**	**47.92**	**78**	P	**P**	**20 45 54.1**	**+0.3**
	baz=317						
P54A	**Burton**	**48.01**	**80**	P	**P**	**20 45 54.5**	**0.0**
	baz=317						
Q53A	**Leroy**	**48.01**	**82**	P	**P**	**20 45 54.9**	**+0.3**
	baz=318						
U50A	**Jamestown**	**48.08**	**86**	P	**P**	**20 45 55.2**	**+0.1**
	baz=319						
T51A	**Gray**	**48.14**	**85**	P	**P**	**20 45 55.4**	**-0.2**
	baz=319						
O55A	**Ligonier**	**48.18**	**79**	P	**P**	**20 45 55.5**	**-0.4**
	baz=317						
N56A	**West Decatur**	**48.18**	**77**	P	**P**	**20 45 56.5**	**+0.7**
	baz=317,SNR=5.6						
Q54A	**Coxs Mills**	**48.28**	**81**	P	**P**	**20 45 55.7**	**-0.9**
	baz=318						
MCWV	**Mont Chateau**	**48.30**	**80**	*e*P	**P**	**20 45 56.8**	**+0.1**
	comp=Z,9.9nm,0.8s						
MCWV	**Mont Chateau**	**48.30**	**80**	P	**P**	**20 45 56.4**	**-0.3**
	baz=317						
W49A	**Belvidere**	**48.30**	**89**	P	**P**	**20 45 57.6**	**+0.8**
	baz=320,SNR=12						
SWET	**Sewanee**	**48.41**	**88**	*e*P	**P**	**20 45 57.7**	**0.0**
	comp=Z,20nm,0.5s						
P55A	**Reedsville**	**48.42**	**80**	P	**P**	**20 45 58.0**	**+0.3**
	baz=318						
BINY	**Binghamton**	**48.44**	**74**	P	**P**	**20 45 57.7**	**-0.1**
	baz=316						
V50A	**Pikevile**	**48.50**	**87**	P	**P**	**20 45 59.0**	**+0.6**
	baz=319						
O56A	**Blue Knob Stat**	**48.52**	**78**	*e*P	**P**	**20 45 58.5**	**0.0**
	comp=Z,14nm,1.0s						
O56A	**Blue Knob Stat**	**48.52**	**78**	P	**P**	**20 45 58.4**	**0.0**
	baz=317						
T52A	**Hallie**	**48.54**	**84**	P	**P**	**20 45 59.6**	**+0.9**
	baz=319						
U51A	**La Follette**	**48.54**	**86**	P	**P**	**20 45 59.2**	**+0.5**
	baz=319						
SSPA	**Standing Stone**	**48.60**	**77**	*e*P	**P**	**20 45 59.6**	**+0.6**
	comp=Z,24nm,1.1s						
SSPA	**Standing Stone**	**48.60**	**77**	P	**P**	**20 45 59.8**	**+0.7**
	baz=317						
L58A	**Harry Jones Me**	**48.62**	**74**	P	**P**	**20 45 59.6**	**+0.4**
	baz=317						
Q55A	**Buckhannon**	**48.66**	**80**	P	**P**	**20 46 00.0**	**+0.4**
	baz=318						
TZTN	**Tazewell**	**48.67**	**85**	*e*P	**P**	**20 46 00.3**	**+0.7**
	comp=Z,16nm,0.6s						
TZTN	**Tazewell**	**48.67**	**85**	P	**P**	**20 45 59.4**	**-0.2**
	baz=319						
N57A	**Milroy**	**48.68**	**77**	P	**P**	**20 45 60.0**	**+0.2**
	baz=317						
W50A	**Signal Mountai**	**48.75**	**88**	*e*P	**P**	**20 46 01.1**	**+0.8**
	comp=Z,26nm,1.4s						
W50A	**Signal Mountai**	**48.75**	**88**	P	**P**	**20 46 00.4**	**+0.1**
	baz=320						
R54A	**Victor**	**48.79**	**82**	P	**P**	**20 46 00.7**	**+0.1**
	baz=318,SNR=5.5						
M58A	**Price’s Panora**	**48.80**	**75**	P	**P**	**20 46 00.8**	**+0.2**
	baz=317						
T53A	**Wise**	**48.87**	**84**	P	**P**	**20 46 01.2**	**-0.1**
	baz=319						
P56A	**Dayton Farm, R**	**48.94**	**79**	P	**P**	**20 46 02.1**	**+0.4**
	baz=318						
LBNH	**Lisbon**	**49.01**	**70**	P	**P**	**20 46 01.7**	**-0.5**
	baz=316						
O57A	**Amberson**	**49.04**	**77**	P	**P**	**20 46 03.2**	**+0.8**
	baz=317,SNR=7.1						
N58A	**Sunbury**	**49.05**	**76**	P	**P**	**20 46 02.5**	**0.0**
	baz=317						
W51A	**Cleveland**	**49.07**	**87**	P	**P**	**20 46 03.1**	**+0.4**
	baz=320						
Q56A	**Snyder Ridge,**	**49.10**	**80**	P	**P**	**20 46 03.2**	**+0.3**
	baz=318						
V52A	**Sevierville**	**49.17**	**86**	*e*P	**P**	**20 46 04.1**	**+0.6**
	comp=Z,9.3nm,0.6s						
V52A	**Sevierville**	**49.17**	**86**	P	**P**	**20 46 04.1**	**+0.6**
	baz=319						
R55A	**Marlinton**	**49.17**	**81**	*e*P	**P**	**20 46 04.6**	**+1.1**
	comp=Z,10nm,0.9s						
R55A	**Marlinton**	**49.17**	**81**	P	**P**	**20 46 03.8**	**+0.3**
	baz=318						
M59A	**Waymart**	**49.20**	**75**	P	**P**	**20 46 03.6**	**-0.1**
	baz=317						
S55A	**Lewisburg**	**49.35**	**82**	P	**P**	**20 46 05.3**	**+0.4**
	baz=318						
P57A	**Homestead Farm**	**49.38**	**78**	P	**P**	**20 46 05.6**	**+0.6**
	baz=318,SNR=8.6						
R56A	**Bull Pasture M**	**49.45**	**80**	P	**P**	**20 46 05.7**	**0.0**
	baz=318						
O58A	**Lewisberry**	**49.47**	**77**	P	**P**	**20 46 06.4**	**+0.6**
	baz=318,SNR=7.4						
N59A	**State Game Lan**	**49.48**	**75**	P	**P**	**20 46 06.2**	**+0.3**
	baz=317						
PAGS	**Pennsylvania G**	**49.50**	**77**	*e*P	**P**	**20 46 06.3**	**+0.4**
	comp=Z,17nm,0.8s						
Q57A	**Strasburg**	**49.51**	**79**	P	**P**	**20 46 06.4**	**+0.4**
	baz=318,SNR=6.1						
Y50A	**Piedmont**	**49.52**	**89**	P	**P**	**20 46 06.8**	**+0.5**
	baz=320						
MAJO	**Matsushiro**	**49.53**	**276**	*e*P	**P**	**20 46 05.4**	**-0.9**
MAJO	**Matsushiro**	**49.53**	**276**	*e*P	**P**	**20 46 05.4**	**-0.9**
MJAR	**Matsushiro Arr**	**49.53**	**276**	P	**P**	**20 46 05.4**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=315,slow=30,SNR=3.5						
U54A	**Nelsons Funny**	**49.60**	**84**	P	**P**	**20 46 07.4**	**+0.6**
	baz=319						
V53A	**Saluda**	**49.72**	**85**	*e*P	**P**	**20 46 08.4**	**+0.7**
	comp=Z,25nm,0.6s						
V53A	**Saluda**	**49.72**	**85**	P	**P**	**20 46 08.7**	**+0.9**
	baz=319,SNR=10.0						
P58A	**Pank, Wackersv**	**49.75**	**78**	P	**P**	**20 46 08.1**	**+0.3**
	baz=318						
BLA	**Blacksburg**	**49.81**	**82**	*e*P	**P**	**20 46 09.0**	**+0.5**
	comp=Z,25nm,0.8s						
BLA	**Blacksburg**	**49.81**	**82**	*e*P	**P**	**20 46 09.0**	**+0.5**
BLA				pmax	pmax		
	comp=Z,25nm,0.8s						
BLA	**Blacksburg**	**49.81**	**82**	P	**P**	**20 46 09.0**	**+0.5**
	baz=319,SNR=8.2						
N60A	**Cedar Hill Far**	**49.86**	**75**	P	**P**	**20 46 08.7**	**0.0**
	baz=317						
Y51A	**Rockmart**	**49.87**	**89**	P	**P**	**20 46 09.0**	**+0.1**
	baz=320						
W53A	**Cullowhee**	**49.91**	**86**	P	**P**	**20 46 09.1**	**-0.2**
	baz=320						
S56A	**Natural Bridge**	**49.91**	**81**	P	**P**	**20 46 09.6**	**+0.4**
	baz=319						
Z50A	**Ashland**	**49.91**	**90**	*e*P	**P**	**20 46 09.2**	**0.0**
	comp=Z,15nm,0.6s						
Z50A	**Ashland**	**49.91**	**90**	P	**P**	**20 46 09.5**	**+0.3**
	baz=321						
LUPA	**Lehigh Univers**	**49.92**	**75**	*e*P	**P**	**20 46 09.6**	**+0.5**
	comp=Z,2.2nm,1.0s						
Q58A	**Fox Den Farm,**	**49.95**	**79**	P	**P**	**20 46 09.6**	**+0.2**
	baz=318,SNR=9.7						
X52A	**Dahlonega**	**49.95**	**87**	P	**P**	**20 46 10.0**	**+0.5**
	baz=320,SNR=8.8						
149A	**Jones**	**49.96**	**91**	P	**P**	**20 46 09.5**	**0.0**
	baz=321,SNR=5.6						
R57A	**Stanardsville**	**50.00**	**80**	P	**P**	**20 46 09.8**	**+0.1**
	baz=318						
SDMD	**Soldier’s Deli**	**50.04**	**77**	*e*P	**P**	**20 46 10.8**	**+0.7**
	comp=Z,8.3nm,0.8s						
V54A	**Nebo**	**50.09**	**85**	P	**P**	**20 46 09.7**	**-0.8**
	baz=319						
P59A	**Jarrettsville**	**50.11**	**77**	P	**P**	**20 46 10.7**	**+0.2**
	baz=318						
O60A	**Telford**	**50.11**	**76**	P	**P**	**20 46 10.6**	**0.0**
	baz=318						
T56A	**Rocky Mt**	**50.16**	**82**	P	**P**	**20 46 11.5**	**+0.5**
	baz=319						
BG3	**Lake Jocassee**	**50.17**	**86**	*e*P	**P**	**20 46 12.1**	**+1.0**
	comp=Z,8.7nm,0.7s						
S57A	**Dark Hollow, R**	**50.17**	**81**	P	**P**	**20 46 11.3**	**+0.2**
	baz=319						
M61A	**Granite Spring**	**50.22**	**74**	P	**P**	**20 46 12.2**	**+0.8**
	baz=317						
R58A	**Rapidan**	**50.27**	**79**	P	**P**	**20 46 12.2**	**+0.5**
	baz=318						
249A	**Camden**	**50.27**	**92**	P	**P**	**20 46 12.5**	**+0.7**
	baz=321						
X53A	**Estanollee**	**50.35**	**87**	P	**P**	**20 46 13.3**	**+0.9**
	baz=320						
PAL	**Palisades**	**50.37**	**74**	P	**P**	**20 46 13.3**	**+0.7**
	baz=318						
V55A	**Taylorsville**	**50.42**	**84**	P	**P**	**20 46 13.7**	**+0.7**
	baz=319						
Y52A	**Lilburn**	**50.43**	**88**	*e*P	**P**	**20 46 14.2**	**+1.1**
	comp=Z,14nm,1.0s						
Y52A	**Lilburn**	**50.43**	**88**	P	**P**	**20 46 13.9**	**+0.8**
	baz=320						
U56A	**King**	**50.49**	**83**	P	**P**	**20 46 13.9**	**+0.4**
	baz=319						
W54A	**Cherokee Point**	**50.49**	**85**	P	**P**	**20 46 14.0**	**+0.5**
	baz=320						
R58B	**Mineral**	**50.58**	**80**	*e*P	**P**	**20 46 15.5**	**+1.3**
	comp=Z,23nm,1.1s						
R58B	**Mineral**	**50.58**	**80**	P	**P**	**20 46 15.0**	**+0.8**
	baz=319						
T57A	**Hurt**	**50.59**	**81**	P	**P**	**20 46 14.7**	**+0.5**
	baz=319						
Y53A	**Monroe**	**50.69**	**88**	P	**P**	**20 46 15.3**	**+0.3**
	baz=320						
349A	**Repton**	**50.72**	**93**	P	**P**	**20 46 16.5**	**+1.2**
	baz=322						
S58A	**Poland Farm, P**	**50.76**	**80**	P	**P**	**20 46 16.0**	**+0.5**
	baz=319						
R59A	**King George, V**	**50.80**	**79**	P	**P**	**20 46 16.5**	**+0.7**
	baz=319						
X54A	**Belton**	**50.80**	**86**	P	**P**	**20 46 16.5**	**+0.6**
	baz=320,SNR=5.0						
V56A	**Mocksville**	**50.83**	**83**	*e*P	**P**	**20 46 16.6**	**+0.4**
	comp=Z,17nm,0.9s						
V56A	**Mocksville**	**50.83**	**83**	P	**P**	**20 46 16.5**	**+0.4**
	baz=320						
KMSC	**Kings Mountain**	**50.90**	**85**	*e*P	**P**	**20 46 16.9**	**+0.3**
	comp=Z,15nm,0.9s						
KMSC	**Kings Mountain**	**50.90**	**85**	P	**P**	**20 46 17.3**	**+0.7**
	baz=320						
U57A	**Blanch**	**50.97**	**82**	P	**P**	**20 46 17.4**	**+0.3**
	baz=319						
152A	**Waverly Hall**	**51.01**	**89**	*e*P	**P**	**20 46 17.2**	**-0.3**
	comp=Z,5.7nm,0.8s						
T58A	**Grand View Acr**	**51.01**	**81**	P	**P**	**20 46 17.4**	**0.0**
	baz=319,SNR=6.5						
S59A	**Mechanicsville**	**51.04**	**79**	P	**P**	**20 46 18.3**	**+0.7**
	baz=319						
GOGA	**Godfrey**	**51.10**	**88**	P	**P**	**20 46 17.2**	**-0.9**
	baz=321						
HODGE	**Hodges**	**51.11**	**86**	*e*P	**P**	**20 46 18.5**	**+0.3**
	comp=Z,19nm,0.7s						
Z53A	**Monticello**	**51.14**	**88**	P	**P**	**20 46 18.6**	**+0.2**
	baz=321						
V57A	**Coltrane Farms**	**51.15**	**83**	P	**P**	**20 46 18.4**	**-0.1**
	baz=320						
Y54A	**Tignall**	**51.16**	**87**	P	**P**	**20 46 19.0**	**+0.4**
	baz=320,SNR=9.6						
X55A	**Gracelyn & Ava**	**51.26**	**85**	P	**P**	**20 46 19.7**	**+0.4**
	baz=320,SNR=6.8						
W56A	**Indian Trail**	**51.30**	**84**	P	**P**	**20 46 19.8**	**+0.2**
	baz=320						
U58A	**Oxford**	**51.41**	**81**	P	**P**	**20 46 21.1**	**+0.6**
	baz=319						
T59A	**Double "B" Far**	**51.50**	**80**	*e*P	**P**	**20 46 21.7**	**+0.6**
	comp=Z,12nm,0.8s						
T59A	**Double "B" Far**	**51.50**	**80**	P	**P**	**20 46 21.4**	**+0.4**
	baz=319						
252A	**Lumpkin**	**51.52**	**90**	P	**P**	**20 46 20.9**	**-0.4**
	baz=321						
Y55A	**Saluda**	**51.54**	**86**	P	**P**	**20 46 21.8**	**+0.4**
	baz=320,SNR=5.4						
X56A	**White Oak**	**51.56**	**85**	P	**P**	**20 46 22.0**	**+0.5**
	baz=320,SNR=5.0						
Z54A	**Sparta**	**51.56**	**87**	P	**P**	**20 46 21.5**	**-0.1**
	baz=321						
V58A	**Windy Hill, Pi**	**51.57**	**82**	P	**P**	**20 46 21.9**	**+0.3**
	baz=320						
JSC	**Jenkinsville**	**51.60**	**85**	*e*P	**P**	**20 46 21.9**	**+0.1**
	comp=Z,13nm,0.8s						
JSC	**Jenkinsville**	**51.60**	**85**	*e*P	**P**	**20 46 21.9**	**+0.1**
JSC				pmax	pmax		
	comp=Z,13nm,0.8s						
W57A	**Gilead**	**51.60**	**84**	*e*P	**P**	**20 46 21.9**	**+0.1**
	comp=Z,18nm,1.1s						
W57A	**Gilead**	**51.60**	**84**	P	**P**	**20 46 21.7**	**-0.2**
	baz=320						
BIRD	**Birdtown, Kers**	**51.74**	**84**	*e*P	**P**	**20 46 23.1**	**+0.2**
	comp=Z,11nm,0.9s						
U59A	**Littleton**	**51.84**	**81**	P	**P**	**20 46 23.8**	**+0.1**
	baz=320						
V59A	**Middlesex**	**52.06**	**82**	P	**P**	**20 46 25.3**	**+0.1**
	baz=320						
X57A	**Johnson Farm,**	**52.07**	**84**	P	**P**	**20 46 25.5**	**+0.1**
	baz=320						
U60A	**Pendleton**	**52.08**	**80**	P	**P**	**20 46 26.1**	**+0.6**
	baz=320						
W58A	**Raeford**	**52.10**	**83**	P	**P**	**20 46 26.2**	**+0.6**
	baz=320,SNR=5.3						
Z56A	**Williston**	**52.27**	**86**	P	**P**	**20 46 27.1**	**+0.2**
	baz=321						
254A	**Abbeville**	**52.33**	**89**	P	**P**	**20 46 26.7**	**-0.6**
	baz=321						
X58A	**Rowland**	**52.40**	**84**	P	**P**	**20 46 29.1**	**+1.3**
	baz=320						
U61A	**Possum Corner**	**52.56**	**80**	P	**P**	**20 46 29.2**	**+0.3**
	baz=320						
ARCES	**ARCESS Array B**	**52.64**	**1**	P	**P**	**20 46 28.4**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=2.4,slow=6.9,SNR=17						
ARCES				LR	LR	21 11 02.0	
	comp=Z,36nm,18.8s,baz=346,slow=39						
Z57A	**Bowman**	**52.65**	**86**	P	**P**	**20 46 29.6**	**-0.1**
	baz=321						
255A	**Hazlehurst**	**52.77**	**88**	P	**P**	**20 46 30.3**	**-0.3**
	baz=321						
V61A	**Roper**	**52.91**	**80**	P	**P**	**20 46 32.3**	**+0.8**
	baz=320						
157A	**Early Branch**	**52.97**	**86**	P	**P**	**20 46 32.2**	**+0.2**
	baz=321						
KSRS	**Korea Array**	**54.20**	**285**	P	**P**	**20 46 40.5**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=32,slow=7.2,SNR=6.7						
KSRS				LR	LR	21 11 33.2	
	comp=Z,30nm,18.4s,baz=40,slow=38						
KS15	**Wonju Array Si**	**54.23**	**285**	*e*P	**P**	**20 46 40.4**	**-0.8**
	comp=Z,6.9nm,1.0s						
SONA0	**Songino Array**	**56.40**	**308**	*e*P	**P**	**20 46 56.8**	**-0.1**
SONA0				*e*PcP	**PcP**	**20 47 54.8**	**+1.2**
SONM	**Songino Array**	**56.40**	**308**	P	**P**	**20 46 56.8**	**-0.1**
	comp=Z,5.3nm,0.8s,baz=42,slow=7.1,SNR=38						
SONM				PcP	**PcP**	**20 47 54.8**	**+1.2**
	comp=Z,3.4nm,0.8s,baz=44,slow=4.3,SNR=2.9						
SONM				LR	LR	21 13 34.1	
	comp=Z,77nm,18.1s,baz=41,slow=39						
ZAA0	**Zalesovo Array**	**59.26**	**325**	*e*P	**P**	**20 47 15.7**	**-0.9**
	comp=Z,13nm,0.8s						
ZALV	**Zalesovo Beam**	**59.26**	**325**	P	**P**	**20 47 16.0**	**-0.7**
	comp=Z,4.6nm,0.7s,baz=31,slow=6.0,SNR=10						
ZALV				LR	LR	21 14 14.1	
	comp=Z,59nm,21.9s,baz=70,slow=38						
ZALV	**Zalesovo Beam**	**59.26**	**325**	P	**P**	**20 47 16.0**	**-0.7**
SUF	**Sumiainen**	**59.49**	**1**	P	**P**	**20 47 19.9**	**+1.8**
SUF				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC	**Hu-ho-hao-te**	**59.60**	**299**	P	**P**	**20 47 21.0**	**+1.6**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				LR	LR		
	comp=Z,120nm,12.7s						
HHC				LR	LR		
	comp=Z,120nm,14.7s						
PRGR	**Permogore**	**59.82**	**350**	*e*P	**P**	**20 47 20.7**	**+0.4**
PRGR				pmax	pmax		
	comp=Z,34nm,0.6s						
NC204	**NORSAR Array S**	**60.18**	**10**	*e*P	**P**	**20 47 22.5**	**-0.5**
	comp=Z,6.5nm,0.9s						
NC303	**NORSAR Array S**	**60.28**	**9**	*e*P	**P**	**20 47 23.6**	**0.0**
	comp=Z,32nm,1.6s						
NC405	**NORSAR Array S**	**60.42**	**9**	*e*P	**P**	**20 47 24.3**	**-0.3**
	comp=Z,8.2nm,0.8s						
NB2	**NORSAR Subarra**	**60.45**	**9**	P	**P**	**20 47 24.4**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=349,slow=6.9						
NOA	**NORSAR Array B**	**60.45**	**9**	P	**P**	**20 47 24.5**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=350,slow=6.8,SNR=15						
FIA1	**FINESS Array S**	**60.77**	**1**	*e*P	**P**	**20 47 26.4**	**-0.5**
	comp=Z,16nm,1.0s						
FINES	**FINESS Array B**	**60.77**	**1**	P	**P**	**20 47 26.8**	**-0.1**
	comp=Z,3.4nm,0.6s,baz=360,slow=8.0,SNR=35						
KLMR	**Klimovskoe**	**61.04**	**354**	*e*P	P	20 47 36.5	+7.8
KLMR				pmax	pmax		
	comp=Z,21nm,1.0s						
KONO	**Kongsberg**	**61.68**	**11**	*e*P	**P**	**20 47 33.2**	**+0.2**
	comp=Z,6.6nm,0.9s						
KONO	**Kongsberg**	**61.68**	**11**	*e*P	**P**	**20 47 33.2**	**+0.2**
KONO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DGZ	**Jazzator, Alta**	**62.07**	**321**⇑	*e*P	**P**	**20 47 36.8**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SVE	**Sverdlovsk**	**62.50**	**341**	*e*P	P	20 47 48.3	+10
SVE				pmax	pmax		
	comp=Z,27nm,0.9s						
NJ2	**Nanjing**	**63.05**	**288**	*e*P	**P**	**20 47 41.5**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
ARU	**Arti**	**63.24**	**342**	*e*P	**P**	**20 47 42.9**	**-0.5**
	comp=Z,24nm,0.7s						
ARU	**Arti**	**63.24**	**342***d*	*i*P	**P**	**20 47 43.0**	**-0.5**
ARU				*PP	**pP**	**20 47 52.9**	**-1.1**
ARU						20 50 00.1	
ARU				S	**S**	**20 56 14.0**	**+1.7**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VSU	**Vasula**	**63.77**	**1**	*e*P	**P**	**20 47 47.5**	**+0.5**
VSU				IAmb	IAmb	20 47 58.5	
	comp=Z,77nm,0.6s						
VSU	**Vasula**	**63.77**	**1**⇑	*e*P	**P**	**20 47 47.5**	**+0.5**
VSU				pmax	pmax		
	comp=Z,32nm,0.8s						
KURK	**Kurchatov**	**63.94**	**327**	*e*P	**P**	**20 47 47.4**	**-0.8**
	comp=Z,12nm,0.8s						
KURK	**Kurchatov**	**63.94**	**327**	*e*P	**P**	**20 47 47.4**	**-0.8**
KURK				pmax	pmax		
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**64.02**	**333**	*e*P	**P**	**20 47 48.0**	**-0.8**
	comp=Z,18nm,0.8s						
BRVK	**Borovoye**	**64.02**	**333**	*e*P	**P**	**20 47 48.0**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,18nm,0.8s						
GTA	**Gaotai**	**66.01**	**306**	*e*P	**P**	**20 48 01.3**	**-0.8**
GTA				pP	pP	20 48 08.3	-4.4
GTA				sP	sP	20 48 12.0	-4.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,52nm,6.2s						
GTA				LR	LR		
	comp=Z,49nm,18.1s						
GTA				LR	LR		
	comp=Z,52nm,19.0s						
GTA				LR	LR		
	comp=Z,130nm,19.0s						
MOS	**Moscow**	**66.25**	**354**	*e*P	P	20 48 10.6	+7.5
MK31	**Makanchi Array**	**66.29**	**323**	*e*P	**P**	**20 48 02.4**	**-1.2**
	comp=Z,6.5nm,0.9s						
MK31	**Makanchi Array**	**66.29**	**323**	*e*P	**P**	**20 48 02.4**	**-1.2**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	**Makanchi Array**	**66.29**	**323**	P	**P**	**20 48 02.5**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=41,slow=6.4,SNR=14						
MKAR				LR	LR	21 18 37.9	
	comp=Z,52nm,20.0s,baz=6.5,slow=38						
MAKZ	**Makanchi**	**66.38**	**323**	*e*P	**P**	**20 48 03.7**	**-0.5**
	comp=Z,8.8nm,0.8s						
MAKZ	**Makanchi**	**66.38**	**323**	*e*P	**P**	**20 48 03.7**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
IZAR	**Zarasai**	**66.48**	**1**	*e*P	**P**	**20 48 04.8**	**+0.1**
IZAR				IAmb	IAmb	20 48 17.3	
	comp=Z,7.0nm,0.6s						
WHN	**Wuhan**	**66.53**	**290**	P	P	20 48 18.3	+13
ISAL	**Salakas**	**66.66**	**1**	*e*P	**P**	**20 48 06.1**	**+0.3**
ISAL				IAmb	IAmb	20 48 16.8	
	comp=Z,5.0nm,0.8s						
IIGN	**Ignalina**	**66.88**	**1**	*e*P	**P**	**20 48 07.4**	**+0.2**
IIGN				IAmb	IAmb	20 48 19.0	
	comp=Z,5.9nm,0.4s						
OBN	**Obninsk**	**66.93**	**355**	*i* P	**P**	**20 48 10.8**	**+3.4**
OBN				*i*		20 48 16.0	
OBN				*i*		20 48 35.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,44nm,24.0s						
LZH	**Lanzhou**	**67.00**	**301**	*e*P	**P**	**20 48 08.0**	**-0.5**
LZH				pP	pP	20 48 20.3	+1.2
LZH				sP	sP	20 48 26.0	+3.0
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
WMQ	**Urumqi**	**67.05**	**317**	*e*P	**P**	**20 48 10.5**	**+2.0**
WMQ				LR	LR		
	comp=Z,270nm,29.0s						
WMQ				LR	LR		
	comp=Z,310nm,28.9s						
WMQ				LR	LR		
	comp=Z,94nm,28.9s						
TAOE	**Nuku Hiva Isla**	**67.41**	**167**	*e*LR	LR	21 08 31.3	
	comp=Z,185nm,25.2s						
KLNR	**Kaliningrad**	**67.46**	**5***c*	*e*P	**P**	**20 48 11.1**	**+0.3**
KLNR				pmax	pmax		
	comp=Z,25nm,0.9s						
OTUK	**Ortayu**	**67.92**	**330**	*i* P	**P**	**20 48 11.9**	**-2.0**
OTUK				pmax	pmax		
	comp=Z,15nm,0.6s						
AKTO	**Aktyubinsk**	**69.08**	**340**	*i* P	**P**	**20 48 21.7**	**+0.6**
AKTO				pmax	pmax		
	comp=Z,22nm,0.9s						
LPSR	**Galich'ya Gora**	**69.30**	**353**	*e*P	P	20 48 32.4	+10
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						

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AB31  Akbulak array    69.84 338  eP      P       20 48 25.4  -0.4
AB31                                pmax    pmax
      comp=Z,14nm,0.6s
ABKAR Akbulak array    69.84 338  eP      P       20 48 25.6  -0.2
      comp=Z,19nm,0.6s
CLL   Collm            70.24  10  eP      P       20 48 28.1  -0.1
      comp=Z,4.8nm,0.9s
CLL   Collm            70.24  10  i P     P       20 48 28.6  +0.4
CLL                               i               20 48 39.4
CLL                               e               20 58 12.0
CLL                                 pmax    pmax
      comp=Z,3.0nm,0.7s
CLL                                 pmax    pmax
      comp=Z,111nm,2.6s
CLL   Collm            70.24  10  i P     P       20 48 28.6  +0.4
      comp=Z,3.0nm,0.7s
CLL                               i pP    pP      20 48 39.4  +0.6
CLL                               ePP     PP      20 51 08.0  +4.8
PDGK  Podgornoye       70.28 323  i P     P       20 48 26.0  -2.8
PDGK                                pmax    pmax
      comp=Z,15nm,0.8s
VRH   Novokhopyorsk    70.48 351  eP      P       20 48 38.9  +9.2
VRH                                 pmax    pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye     70.66 353  eP      P       20 48 39.9  +9.1
VSR                                 pmax    pmax
      comp=Z,10.0nm,0.6s
BRG   Berggiesshubel   70.76   9  eP      P       20 48 31.8  +0.4
      comp=Z,2.7nm,0.8s
BRG                               e               20 48 41.9
      comp=Z,8.3nm,1.1s
BRG   Berggiesshubel   70.76   9  eP      P       20 48 31.8  +0.4
BRG                               e               20 48 41.9
BRG                                 pmax    pmax
      comp=Z,3.0nm,0.8s
MOX   Moxa             70.76  11   P      P       20 48 33.1  +1.7
VORD  Divnogorie       70.90 353  eP      P       20 48 40.8  +8.6
VORD                                pmax    pmax
      comp=Z,10.0nm,0.6s
PVCC  Panska Ves       71.15   9  eP      P       20 48 34.5  +0.7
PVCC  Panska Ves       71.15   9  eP      P       20 48 34.5  +0.7
CHVC  Chvalec          71.21   8  eP      P       20 48 34.5  +0.3
CHVC                              ex      x       20 48 44.0
OSTC  Ostas            71.26   8  eP      P       20 48 33.3  -1.1
OSTC                              ex      x       20 48 45.3
UPC   Upice            71.29   8  eP      P       20 48 35.4  +0.8
UPC                               e               20 48 45.2
UPC                               e               20 58 18.6
UPC                                 MLR     MLR
      comp=Z,3µm,19.6s
UPC   Upice            71.29   8  eP      P       20 48 35.4  +0.8
UPC                               epP     pP      20 48 45.2  -0.1
DPC   Dobruska-Polom   71.47   8  eP      P       20 48 36.8  +1.0
DPC                               e               20 48 46.6
DPC   Dobruska-Polom   71.47   8  eP      P       20 48 36.8  +1.0
DPC                               epP     pP      20 48 46.6  +0.2
AKASG Malin Array Be   71.55 359   P      P       20 48 35.6  -0.5
      comp=Z,5.5nm,0.7s,baz=5.7,slow=6.2,SNR=14
AKASG                               LR      LR    21 19 00.3
      comp=Z,30nm,21.6s,baz=240,slow=35
AKBB  Malin Array Si   71.55 359  eP      P       20 48 35.6  -0.6
      comp=Z,38nm,1.4s
AKBB  Malin Array Si   71.55 359  eP      P       20 48 35.6  -0.6
AKBB                                pmax    pmax
      comp=Z,38nm,1.4s
PRU   Pruhonice        71.69   9  eP      P       20 48 37.4  +0.4
PRU                               e               20 48 48.8
PRU   Pruhonice        71.69   9  eP      P       20 48 37.4  +0.4
PRU                               epP     pP      20 48 48.8  +1.1
TKM2  Tokmak 2         71.86 325  i P     P       20 48 36.5  -2.0
TKM2                                pmax    pmax
      comp=Z,8.0nm,0.8s
MPR   Mayaguez         71.96  85  eP      P       20 48 38.6  -0.5
      comp=Z,77nm,1.5s
KDJ   Kajisay          72.09 324  eP      P       20 48 40.1  +0.3
      comp=Z,11nm,0.6s
KDJ   Kajisay          72.09 324  eP      P       20 48 40.1  +0.3
KDJ                                 pmax    pmax
      comp=Z,11nm,0.6s
MORC  Moravsky Berou   72.12   7⇑iP      P       20 48 40.5  +0.8
BOOM  Boomskoye usch   72.15 325  eP      P       20 48 40.3  +0.1
      comp=Z,6.6nm,0.6s
BOOM  Boomskoye usch   72.15 325  eP      P       20 48 40.3  +0.1
BOOM                                pmax    pmax
      comp=Z,7.0nm,0.6s
FRU1  Bishkek          72.25 326  eP      P       20 48 42.0  +1.4
      comp=Z,15nm,0.9s
FRU1  Bishkek          72.25 326  eP      P       20 48 42.0  +1.4
FRU1                                pmax    pmax
      comp=Z,15nm,0.9s
LVV   L'vov            72.38   3  eP      P       20 48 52.6   +11
AAK   Ala-Archa        72.45 326  eP      P       20 48 42.7  +0.8
      comp=Z,7.4nm,0.8s
AAK   Ala-Archa        72.45 326⇑eP      P       20 48 43.1  +1.2
AAK                                 pmax    pmax
      comp=Z,2.0nm,1.0s
KHC   Kasperske Hory   72.45  10  eP      P       20 48 42.5  +0.8
      comp=Z,1.6nm,0.7s
KHC   Kasperske Hory   72.45  10⇑eP      P       20 48 42.9  +1.2
KHC                                 pmax    pmax
      comp=Z,5.0nm,0.9s
KHC   Kasperske Hory   72.45  10  eP      P       20 48 42.8  +1.1
KHC                               ex      x       20 48 53.4
CDF   Champ du Feu     72.45  14  eP      P       20 48 41.8   0.0
CDF                                 pmax    pmax
      comp=Z,5.0nm,1.0s
VRAC  Vranov           72.53   8⇓iP      P       20 48 43.0  +0.9
ECH   Echery           72.63  15  eP      P       20 48 43.2  +0.5
      comp=Z,5.0nm,0.8s
ECH   Echery           72.63  15  eP      P       20 48 43.2  +0.5
ECH                                 pmax    pmax
      comp=Z,5.0nm,0.8s
GEC2  GERESS Array S   72.75  10  eP      P       20 48 43.7  +0.2
      comp=Z,1.9nm,0.7s
GEC2  GERESS Array S   72.75  10  eP      P       20 48 43.7  +0.2
GEC2                                pmax    pmax
      comp=Z,2.0nm,0.7s
GERES GERESS Array B   72.75  10   P      P       20 48 44.0  +0.5
      comp=Z,1.1nm,0.6s,baz=352,slow=4.9,SNR=16
GERES GERESS Array B   72.75  10   P      P       20 48 44.0  +0.5
LANS  Liptovska Anna   72.87   6  eP      P       20 48 45.7  +1.6
LANS                              e               20 48 56.2
LANS                                pmax    pmax
      comp=Z,6.0nm,0.7s
LANS  Liptovska Anna   72.87   6  eP      P       20 48 45.7  +1.6
LANS                              epP     pP      20 48 56.2  +1.4
PMOR  Pomariorio Ree   72.92 176  eT      T       22 07 43.8
      comp=Z,14nm,0.3s
MFF   Saint Martin d   73.05  20  eP      P       20 48 45.3  +0.1
MFF                                 pmax    pmax
      comp=Z,7.0nm,0.8s
NRN   Naryn            73.09 324  eP      P       20 48 46.1  +0.2
      comp=Z,7.2nm,0.8s
KK31  Karatay Array    73.16 329  eP      P       20 48 45.9  -0.1
      comp=Z,6.9nm,0.8s
KK31  Karatay Array    73.16 329  eP      P       20 48 45.9  -0.1
KK31                                pmax    pmax
      comp=Z,7.0nm,0.8s
KKAR  Karatay Array    73.16 329  eP      P       20 48 46.4  +0.5
      comp=Z,6.9nm,0.8s
KKAR  Karatay Array    73.16 329  eP      P       20 48 46.4  +0.5
KKAR                                pmax    pmax
      comp=Z,7.0nm,0.8s
KOLS  Kolonicke sedl   73.21   4  eP      P       20 48 47.0  +0.9
KOLS                              e               20 48 59.5
KOLS                                pmax    pmax
      comp=Z,6.0nm,1.1s
KOLS  Kolonicke sedl   73.21   4  eP      P       20 48 47.0  +0.9
KOLS                              epP     sP      20 48 59.5  -1.3
VYHS  Vyhne            73.48   6  eP      P       20 48 48.5  +0.7
VYHS                              e               20 48 58.2
VYHS                                pmax    pmax
      comp=Z,10.0nm,1.3s
VYHS  Vyhne            73.48   6  eP      P       20 48 48.5  +0.7
VYHS                              epP     pP      20 48 58.2  -0.2
MODS  Modra-Piesok     73.50   8  eP      P       20 48 48.2  +0.3
MODS                              e               20 48 58.1
MODS                                pmax    pmax
      comp=Z,13nm,1.4s
MODS  Modra-Piesok     73.50   8  eP      P       20 48 48.2  +0.3
MODS                              epP     pP      20 48 58.1  -0.5
MOA   Molln            73.78  10  i P     PcP     20 49 05.6  +0.6
      comp=Z,4.2nm,1.2s
CONA  Conrad Observa   73.84   9  i P     P       20 48 50.7  +0.8
      comp=Z,3.0nm,0.9s
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CONA                              i PcP   pP      20 49 02.4  +1.8
      comp=Z,6.4nm,1.1s
DAVA  Damuels          73.89  13  i pP    pP      20 49 01.6  +0.6
      comp=Z,5.4nm,1.2s
MOTA  Moosalm          73.97  12  i PcP   PcP     20 49 02.8  -3.2
      comp=Z,4.8nm,1.1s
TRPA  Tarpa            74.03   4⇑iP      P       20 48 51.8  +0.9
WATA  Walderalm        74.03  12  i P     P       20 48 52.1  +1.0
      comp=Z,2.0nm,0.5s
WATA                              i PcP   pP      20 49 03.5  +1.7
      comp=Z,3.2nm,0.5s
SQTA  Sankt Quirin     74.10  12  i P     P       20 48 52.8  +1.3
      comp=Z,6.8nm,1.2s
SQTA                              i PcP   pP      20 49 03.7  +1.5
      comp=Z,8.4nm,0.9s
WTTA  Wattenberg       74.11  12  i P     P       20 48 52.5  +0.9
      comp=Z,2.7nm,0.5s
WTTA                              i PcP   pP      20 49 04.1  +1.8
      comp=Z,7.9nm,0.7s
PSZ   Piszkesteto      74.12   6  eP      P       20 48 52.5  +0.9
      comp=Z,11nm,1.0s
PSZ   Piszkesteto      74.12   6⇓iP      P       20 48 52.7  +1.1
PSZ   Piszkesteto      74.12   6  eP      P       20 48 52.5  +0.9
PSZ                                 pmax    pmax
      comp=Z,11nm,1.0s
FETA  Feichten         74.25  12  i P     P       20 48 53.2  +0.8
      comp=Z,1.3nm,0.6s
FETA                              i PcP   sP      20 49 05.1  -1.9
      comp=Z,3.9nm,0.9s
KBA   Koelnbreinsper   74.46  10  i P     P       20 48 54.8  +1.1
      comp=Z,5.6nm,0.8s
KBA                               i PcP   PcP     20 49 06.5  -1.7
      comp=Z,7.4nm,0.6s
ARSA  Arzberg          74.49   9  i P     P       20 48 54.9  +1.2
      comp=Z,1.2nm,0.6s
ARSA                              i PcP   pP      20 49 05.5  +1.1
      comp=Z,5.7nm,1.4s
BUR08 Bucovina Ar. S   74.58   2  eP      P       20 48 54.5  +0.2
      comp=Z,4.5nm,0.5s
FUORN Ofenpass-Fuorn   74.59  13  eP      P       20 48 55.1  +0.5
      comp=Z,4.1nm,0.9s
BURAR Bucovina Array   74.61   2⇑iP      P       20 48 55.0  +0.5
SOKA  Soboth           75.02   9  i P     P       20 48 58.0  +1.3
      comp=Z,1.1nm,0.5s
SOKA                              i PcP   PcP     20 49 09.5  -1.0
      comp=Z,2.6nm,0.5s
ARCR  ARCALIA          75.12   3⇑iP      P       20 48 58.6  +1.3
OBKA  Obir             75.14  10  i P     P       20 48 58.2  +0.7
      comp=Z,7.6nm,0.6s
OBKA                              i PcP   PcP     20 49 09.9  -1.0
      comp=Z,11nm,0.5s
BIZ   Bicaz            75.30   1⇑iP      P       20 48 59.2  +0.9
DRGR                   75.37   4⇑iP      P       20 48 59.3  +0.5
PPT2  Papeete2         75.44 178  eLR     LR      21 12 17.5
      comp=Z,84nm,23.0s
BTK   Batken           75.90 328  eP      P       20 49 01.8  -0.2
      comp=Z,8.7nm,0.8s
BTK   Batken           75.90 328  eP      P       20 49 01.8  -0.2
BTK                                 pmax    pmax
      comp=Z,9.0nm,0.8s
VRI   Vrincioaia       76.38   1⇑iP      P       20 49 05.6  +1.1
PLOR  Plostina         76.40   1⇑iP      P       20 49 06.2  +1.6
GOF   Gofitskoye       76.45 349⇑eP      P       20 49 15.7   +11
GOF                                 pmax    pmax
      comp=Z,32nm,0.6s
PVRL  Vila Real        76.55  27  eP      P       20 49 05.9  +0.3
      comp=Z,22nm,1.7s
MLR   Muntele Rosu     76.75   2  eP      P       20 49 08.0  +1.2
      comp=Z,11nm,1.3s
MLR   Muntele Rosu     76.75   2⇑iP      P       20 49 07.2  +0.4
MLR   Muntele Rosu     76.75   2  eP      P       20 49 08.0  +1.2
MLR                                 pmax    pmax
      comp=Z,11nm,1.3s
GZR   Gura Zlata       76.77   4⇑iP      P       20 49 07.4  +0.6
VOIR                   76.79   2⇑iP      P       20 49 07.5  +0.6
MVO   Moncorvo         76.82  27  eP      P       20 49 07.7  +0.6
      comp=Z,16nm,1.5s
PVIS  Viseu            77.03  27  eP      P       20 49 09.2  +0.9
CFR   Carcaliu         77.08   0⇑iP      P       20 49 08.8  +0.4
MTE   Manteigas        77.42  27  eP      P       20 49 11.4  +0.9
      comp=Z,14nm,1.6s
PCAS  Casmilo, Conde   77.51  28  eP      P       20 49 12.0  +1.0
      comp=Z,29nm,1.6s
KIV   Kislovodsk       77.58 349  eP      P       20 49 11.5  +0.1
      comp=Z,11nm,0.7s
KIV   Kislovodsk       77.58 349⇑iP      P       20 49 11.8  +0.4
KIV   Kislovodsk       77.58 349  eP      P       20 49 17.4  +6.0
KIV                                 pmax    pmax
      comp=Z,41nm,1.0s
KIV                                 MLR     MLR
      comp=Z,47nm,18.0s
KBZ   Khabaz           77.79 349   P      P       20 49 13.0  +0.7
      comp=Z,1.9nm,0.8s,baz=330,slow=3.3,SNR=4.7
NCK   Nalchik          77.94 349⇓eP      P       20 49 14.6  +1.3
NCK                                 pmax    pmax
      comp=Z,6.0nm,1.0s
PCBR  Castelo Branco   77.97  27  eP      P       20 49 14.3  +0.8
LSA   Lhasa            77.99 308  eP      P       20 49 14.6  +0.2
      comp=Z,4.3nm,0.7s
LSA   Lhasa            77.99 308  eP      P       20 49 14.6  +0.2
LSA                                 pmax    pmax
      comp=Z,4.0nm,0.7s
PMAFR Mafra            78.35  29  eP      P       20 49 16.8  +1.2
      comp=Z,58nm,1.3s
ESDC  Sonseca Array    78.94  25   P      P       20 49 19.8  +0.9
      comp=Z,3.1nm,0.7s,baz=341,slow=5.3,SNR=19
PNCL  Nicolau / Gran   79.34  29  eP      P       20 49 22.1  +1.1
      comp=Z,32nm,1.4s
SLVN  Son La           79.35 293  eP      P       20 49 21.0  -0.5
      comp=Z,6.9nm,0.9s
AKT   Akhty            79.43 345  eP      P       20 49 23.4  +1.7
AKT                               e               20 49 31.0
AKT                                 pmax    pmax
      comp=Z,5.0nm,0.8s
VTS   Vitosha          79.56   4  eP      P       20 49 22.0  -0.3
      comp=Z,4.3nm,0.9s
VTS   Vitosha          79.56   4⇑iP      P       20 49 22.6  +0.2
VTS   Vitosha          79.56   4  eP      P       20 49 22.0  -0.3
VTS                                 pmax    pmax
      comp=Z,4.0nm,0.9s
TBLG  Delisi           79.56 347  eP      P       20 49 22.5  +0.2
      comp=Z,18nm,0.6s
TBLG  Delisi           79.56 347  eP      P       20 49 22.5  +0.2
TBLG                                pmax    pmax
      comp=Z,18nm,0.6s
PBDV  Barranco-do-Ve   80.31  28  eP      P       20 49 28.0  +1.6
      comp=Z,40nm,1.5s
GEYT  Alibeck          81.08 336   P      P       20 49 30.1  -0.4
      comp=Z,2.2nm,0.8s,baz=338,slow=3.4,SNR=4.0
GYA0B ALIBECK ARRAY    81.08 336  eP      P       20 49 31.2  +0.7
      comp=Z,11nm,1.3s
NIL   Nilore           81.09 323  eP      P       20 49 30.8  +0.2
      comp=Z,19nm,1.3s
NIL   Nilore           81.09 323  eP      P       20 49 30.8  +0.2
NIL                                 pmax    pmax
      comp=Z,19nm,1.3s
LIT   Litokhoron       82.04   4  eP      P       20 49 35.7  +0.2
      comp=Z,8.1nm,0.8s
LIT   Litokhoron       82.04   4  eP      P       20 49 35.7  +0.2
LIT                                 pmax    pmax
      comp=Z,8.0nm,0.8s
BR131 Keskin Array S   82.42 356  eP      P       20 49 38.1  +0.4
      comp=Z,5.1nm,0.9s
BR131 Keskin Array S   82.42 356  eP      P       20 49 38.1  +0.4
BR131                               pmax    pmax
      comp=Z,5.0nm,0.9s
BRTR  Keskin Array B   82.42 356   P      P       20 49 37.6   0.0
      comp=Z,1.5nm,0.8s,baz=61,slow=1.9,SNR=10
BRTR  Keskin Array B   82.42 356ceP      P       20 49 38.0  +0.3
BRTR                                pmax    pmax
      comp=Z,2.0nm,0.8s
CMAR  Chiang Mai Arr   84.21 296   P      P       20 49 46.5  -0.5
      comp=Z,2.7nm,0.8s,baz=17,slow=4.9,SNR=15
KEST  Kesra            85.19  15   P      P       20 49 52.5  +0.7
      comp=Z,8.7nm,0.8s,baz=297,slow=3.7,SNR=14
KEST  Kesra            85.19  15  eP      P       20 49 52.6  +0.7
      comp=Z,8.4nm,0.8s
RAYN  Ar Rayn          97.40 344  eP      Pdif    20 50 49.3  +0.2
      comp=Z,3.9nm,0.8s
RAYN  Ar Rayn          97.40 344  eP      Pdif    20 50 49.3  +0.2
RAYN                                pmax    pmax
      comp=Z,4.0nm,0.8s
QSPA  South Pole Qui  147.90 180  ePKPbc  PKPbc   20 56 58.6  -0.5
BOSA  Boshof          150.45   5  PKP     PKPdf   20 57 00.4  -1.0
      comp=Z,9.2nm,0.8s,baz=285,slow=12,SNR=3.3
BOSA                              PKPbc   PKPbc   20 57 06.6  -0.1
      comp=Z,9.2nm,0.8s,baz=10,slow=2.2,SNR=18
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VNA3  Neumayer Olymp  159.65 145  PKPab   PKPab   20 58 02.8   +12
SNAA  Sanae           161.43 149  PKPab   PKPab   20 57 57.7  -1.4
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ISCJB ***26*** *20:58:39.0±1.0, 11°.72S±0°.08×116°.49E±0°.05, h33^{km}, mb3.6/1, Error ellipse: s-maj=11.2km s-min=6.0km az=18.7*

DJA ***26*** *20:58:39.8±1.6, 12°S±11°×11°7E±°, h15^{km}±18^{km}, M4.5/13, mb4.4/4, mB5.6/2, MLv4.6/13, Mw(mB)5.1/2*

IDC ***26*** *20:58:41.5±2.0, 11°.03S×116°.55E, h0^{km}, mb3.3/2, mb1 3.7/3, mb1mx3.4/24, mbtmp3.5/3, ML4.1/1, Error ellipse: s-maj=59.7km s-min=25.8km az=35.0*

ISC 26 20:58:42.9±1.3, **11°.6S**±0°.1×**116°.51E**±0°.07, **h35**^{km}**, n14,** σ**2**^{s}**.66**/18**, South of Sumbawa**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s    ISC
PLAI  Plampang          3.04  24  P       Pn      20 59 27.4  -1.1
PLAI                              S       Sn      21 00 04.4  +0.8
IGBI  Denpasar          3.09 334  P       Pn      20 59 28.0  -1.2
DNP   Denpasar          3.19 336  P       Pn      20 59 29.0  -1.6
WBSI  Waikabubak, Su    3.44  56  P       Pn      20 59 32.9  -1.2
WBSI                              S       Sn      21 00 14.1  +0.4
SRBI  Singaraja         3.73 340  P       Pn      20 59 37.4  -0.7
JAGI  Jajag, Banyuwa    3.89 323  P       Pn      20 59 39.0  -1.3
KMMI  Kalianget         5.18 331  P       Pn      20 59 57.6  -0.4
EDFI  Ende, Flores      5.84  61  P       Pn      21 00 05.7  -1.4
PWJI  Pagerwojo         5.85 307  P       Pn      21 00 04.9  -2.3
MMRI  Maumere           6.37  63  P       Pn      21 00 13.0  -1.3
BATI  Baumata           7.16  79  Pn      Pn      21 00 26.6  +1.3
      baz=259,slow=18
BATI                              Sn      Sn      21 01 45.5  +0.1
      baz=285,slow=16
WRA   Warramunga Arr   19.04 118  P       Pn      21 03 08.1  +5.0
      0.6nm,0.3s,baz=283,slow=13,SNR=22
WRA                               S       Sn      21 06 27.8  -7.6
      0.2nm,0.3s,baz=304,slow=21,SNR=4.1
ASAR  Alice Springs    20.43 128  P       Pn      21 03 24.5  +4.9
      1.0nm,0.4s,baz=305,slow=10,SNR=10
ASAR                              S       S       21 07 05.7  +1.4
      1.4nm,1.0s,baz=300,slow=22,SNR=5.6
MKAR  Makanchi Array   65.71 335  P       P       21 09 24.6  +0.6
      0.3nm,0.5s,baz=138,slow=5.9,SNR=4.8
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TAP ***26*** *21:05:46.8, 25°.75N×122°.81E, h229^{km}, ML3.1, D*

ISCJB ***26*** *21:05:47.7±0.7, 25°.57N±0°.08×122°.69E±0°.03, h229^{km}±5^{km}, Error ellipse: s-maj=12.7km s-min=4.0km az=169.2*

JMA ***26*** *21:05:49.1±0.3, 25°.41N×122°.71E, h230^{km}±4^{km}, M2.8*

ISC 26 21:05:47.8±2.5, **25°.6N**±0°.1×**122°.67E**±0°.04, **h229**^{km}±14^{km}, **n48,** σ**0**^{s}**.78**/82**, Taiwan region**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op      ISC       h  m  s    ISC
PCYT  Pengchaiyu        0.55 275  eP      Pn      21 06 17.6  -0.7
      baz=260
PCYT                              S       S       21 06 40.2  -2.1
      baz=260
TIPB  Shuangxi          0.98 232  i P     Pn      21 06 21.5  +0.9
      baz=232
TIPB                              eS      S       21 06 44.2  -1.9
      baz=232
EOS1  EOS1              1.14 206  P       Pn      21 06 22.2  +0.7
      baz=218
EOS1                              S       S       21 06 49.3  +1.5
      baz=218
YOJ   Yonaguni jima     1.16 165  P       Pn      21 06 21.8  +0.1
      baz=170
YOJ                               S       S       21 06 47.2  -0.9
      baz=170
YOJ   Yonaguni jima     1.16 165  P       Pn      21 06 22.1  +0.5
TWE   Neicheng          1.25 227  eP      Pn      21 06 23.8  +1.6
      baz=234
NANB  Nanao             1.42 216  P       Pn      21 06 24.0  +0.5
      baz=217
NANB                              S       S       21 06 51.9  +0.5
      baz=217
ENA   Nanau             1.43 217  eP      Pn      21 06 23.1  -0.5
      baz=217
ENA                               eS      S       21 06 51.8  +0.3
      baz=217
NDT   Datong Townshi    1.44 227  eP      Pn      21 06 24.4  +0.7
      baz=230
YHNB  Yeheng            1.49 233  eP      Pn      21 06 24.0  -0.1
      baz=231
YHNB                              eS      S       21 06 52.7  +0.2
      baz=231
NSK   Sanguang          1.50 233  eP      Pn      21 06 24.1  -0.1
      baz=232
NSK                               eS      S       21 06 52.6   0.0
      baz=232
IRIF  Iriomote-Funau    1.57 142  P       Pn      21 06 24.7   0.0
NNS   Nan Shan          1.64 226  eP      Pn      21 06 25.9  +0.4
      baz=233
NNS                               eS      S       21 06 55.2  +0.4
      baz=233
NNSB  Datong            1.64 226  eP      Pn      21 06 25.7  +0.2
      baz=233
NNSB                              eS      S       21 06 55.3  +0.5
      baz=233
NACB  Ninganchiao       1.71 215  eP      Pn      21 06 25.4  -0.6
      baz=222
NACB                              eS      S       21 06 55.1  -0.6
      baz=222
ETLH  Xiulin Townshi    1.75 219  eP      Pn      21 06 26.7  +0.4
      baz=219
ETLH                              eS      S       21 06 56.4   0.0
      baz=219
LIOB  Emei              1.77 238  eP      Pn      21 06 27.2  +0.8
      baz=230
LIOB                              eS      S       21 06 57.3  +0.7
      baz=230
JISG  Ishigakijimahi    1.79 123  P       Pn      21 06 27.0  +0.4
JISG                              S       S       21 06 56.8   0.0
NSTT  Nanjuang          1.79 238  eP      Pn      21 06 26.6   0.0
      baz=231
NSTT                              eS      S       21 06 57.3  +0.4
      baz=231
TWD   Chiawan           1.79 213  eP      Pn      21 06 25.9  -0.7
      baz=212
TWD                               eS      S       21 06 57.5  +0.6
      baz=212
JIJ   Ishigaki jima     1.80 132  P       Pn      21 06 26.8  +0.1
JIJ                               S       S       21 06 55.8  -1.3
JKRS  Kuro-shima        1.81 138  P       Pn      21 06 27.2  +0.4
JKRS                              S       S       21 06 57.0  -0.2
HATJ  Hateruma jima     1.83 146  P       Pn      21 06 27.5  +0.5
TDCB  Techi             1.91 226  eP      Pn      21 06 28.1  +0.2
      baz=221
TDCB                              eS      S       21 06 59.3  +0.2
      baz=221
WHF   Hehuan Shan       1.92 222  eP      Pn      21 06 28.2  -0.1
      baz=215
WHF                               eS      S       21 06 59.9   0.0
      baz=215
CHGB  Renai             2.04 222  P       Pn      21 06 30.3  +1.1
      baz=226
CHGB                              S       S       21 07 01.9  +0.4
      baz=226
JTJ   Tarama            2.06 117  P       Pn      21 06 29.9  +0.8
JTJ                               eS      S       21 07 01.0  -0.4
DPDB  Guoxing           2.21 226  eP      Pn      21 06 32.2  +1.5
      baz=231
VWDT  VWDT              2.29 218  eP      Pn      21 06 32.2  +0.7
      baz=218
VWDT                              eS      S       21 07 06.0  +0.4
      baz=218
SMLT  Sun Moon Lake     2.34 224  eP      Pn      21 06 31.4  -0.6
      baz=230
SMLT                              eS      S       21 07 07.4  +0.8
      baz=230
TYC   Yuchr             2.35 225  eP      Pn      21 06 32.0   0.0
      baz=231
TYC                               eS      S       21 07 06.5  -0.1
      baz=231
HGSD  Ruisui            2.37 209  eP      Pn      21 06 30.7  -1.6
      baz=217
HGSD                              eS      S       21 07 07.8  +0.7
      baz=217
SSLB  Suanglung         2.38 222  eP      Pn      21 06 32.2  -0.1
      baz=230
SSLB                              eS      S       21 07 06.8  -0.4
      baz=230
JIRB  Irabujima         2.39 108  P       Pn      21 06 32.9  +0.5
```

JIRB				S	**S**	**21 07 06.7**	**-0.5**
JIKM	**Ikemajima**	**2.42**	**105**	P	**Pn**	**21 06 33.8**	**+1.1**
JIKM				*e*S	**S**	**21 07 08.8**	**+1.0**
JMJ	**Miyako jima 2**	**2.49**	**107**	*e*P	**Pn**	**21 06 34.1**	**+0.7**
	baz=112						
JMJ				*e*S	**S**	**21 07 06.5**	**-2.7**
	baz=112						
WHYT	**Xinyi Township**	**2.50**	**222**	*e*P	**Pn**	**21 06 33.3**	**-0.4**
	baz=216						
WHYT				*e*S	**S**	**21 07 09.8**	**+0.2**
	baz=216						
YULB	**Yu-li**	**2.52**	**210**	*e*P	**Pn**	**21 06 33.3**	**-0.5**
	baz=215						
JMJ2	**Miyako jima3**	**2.55**	**109**	P	**Pn**	**21 06 35.0**	**+0.9**
TWF1	**Yuli**	**2.55**	**210**	*e*P	**Pn**	**21 06 33.4**	**-0.8**
	baz=215						
JOGS	**Gusukube**	**2.61**	**108**	P	**Pn**	**21 06 35.6**	**+0.9**
JOGS				S	**S**	**21 07 11.1**	**-0.3**
CHN5	**Tsauling**	**2.69**	**223**	*e*P	**Pn**	**21 06 35.4**	**-0.3**
	baz=218						
CHN4	**Tsaushan**	**2.92**	**221**	*e*P	**Pn**	**21 06 38.1**	**-0.1**
	baz=216						
CHN4				*e*S	**S**	**21 07 17.9**	**+0.2**
	baz=216						
TPUB	**Ta-pu**	**2.94**	**220**	*e*P	**Pn**	**21 06 38.1**	**-0.3**
	baz=220						
TPUB				*e*S	**S**	**21 07 17.0**	**-1.1**
	baz=220						
WTP	**Ta-pu**	**2.99**	**219**	*e*P	**Pn**	**21 06 38.4**	**-0.6**
	baz=224						
TWK	**Hsinying**	**3.05**	**221**	*e*P	**Pn**	**21 06 39.1**	**-0.5**
	baz=222						
CHN1	**Nanshi**	**3.09**	**220**	*e*P	**Pn**	**21 06 39.6**	**-0.5**
	baz=220						
MASBT	**Mashibuluo**	**3.50**	**213**	*e*P	**Pn**	**21 06 44.4**	**-0.3**
	baz=214						

IDC ***26*** *21:06:42.4±2.0, 6°.43S×103°.64E, h0^{km}, mb3.7/8, mb1 3.8/9, mb1mx3.6/31, mbtmp3.7/9, ML3.8/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/40, Error ellipse: s-maj=55.4km s-min=19.3km az=47.0*

ISCJB ***26*** *21:06:44.5±0.6, 6°.53S±0°.04×103°.54E±0°.05, h35^{km}, mb4.3/12, Error ellipse: s-maj=8.1km s-min=5.6km az=147.8*

NEIC ***26*** *21:06:47.9±1.5, 6°.40S×103°.77E, h36^{km}±11^{km}, mb4.6/6, Error ellipse: s-maj=9.3km s-min=6.1km az=162.0*

DJA ***26*** *21:06:53.1±0.7, 6°S±3°×10°4E±°, h10^{km}, M3.5/7, MLv3.5/7*

ISC 26 21:06:47.5±0.8, **6°.43S**±0°.06×**103°.71E**±0°.08, **h35**^{km}, **n37**, σ**1^s.76**/39, **mb4.0**/12, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.19**	**41**	P	**Pn**	**21 07 07.5**	**-0.2**
KASI				S	**Sn**	**21 07 17.5**	**-5.1**
LWLI	**Liwa**	**1.44**	**14**	P	**Pn**	**21 07 14.3**	**+3.0**
LWLI				S	**Sn**	**21 07 30.3**	**+1.2**
BLSI	**Bandar Lampung**	**1.85**	**55**	P	**Pn**	**21 07 18.5**	**+1.7**
KLI	**Kotabumi**	**1.93**	**36**	P	**Pn**	**21 07 20.3**	**+2.5**
CGJI	**Cibinong**	**1.98**	**95**	P	**Pn**	**21 07 21.9**	**+3.4**
MDSI	**Maura Dua**	**1.98**	**14**	P	**Pn**	**21 07 21.0**	**+2.4**
MDSI				S	**Sn**	**21 07 43.8**	**+1.5**
KLSI		**2.00**	**30**	P	**Pn**	**21 07 21.4**	**+2.5**
KLSI				S	**Sn**	**21 07 42.4**	**-0.3**
MNAI	**Manna**	**2.19**	**340**	*e*Pn	**Pn**	**21 07 23.3**	**+1.8**
LHSI	**Lahat**	**2.59**	**356**	P	Pn	21 07 31.8	+4.8
CBJI	**Citeko**	**3.12**	**90**	P	Pn	21 07 38.9	+4.7
LEM	**Lembang**	**3.90**	**96**	Pn	**Pn**	**21 07 46.8**	**+1.7**
	6.5nm,0.3s,baz=186,slow=17,SNR=3.9						
LEM				Sn	**Sn**	**21 08 34.1**	**+4.3**
	4.5nm,0.3s,baz=319,slow=19,SNR=4.0						
LEM				LR	LR	21 09 05.4	
	comp=Z,118nm,18.9s,baz=228,slow=36						
CISI	**Cisompet, Garu**	**4.22**	**106**	*e*Pn	**Pn**	**21 07 49.8**	**+0.3**
XMIS	**Christmas Isla**	**4.46**	**155**	*e*Pn	**Pn**	**21 07 53.7**	**+1.0**
SMRI	**Semarang**	**6.71**	**96**	*e*Pn	**Pn**	**21 08 23.3**	**-0.4**
UGM	**Wanagama**	**6.92**	**103**	*e*Pn	**Pn**	**21 08 26.7**	**+0.2**
GSI	**Gunungsitoli**	**9.82**	**321**	*e*Pn	**Pn**	**21 09 04.6**	**-1.8**
IPM	**Ipoh**	**11.16**	**346**	*e*Pn	**Pn**	**21 09 24.5**	**-0.2**
KAPI	**Kappang**	**16.02**	**86**	LR	LR	21 18 31.5	
	comp=Z,73nm,18.1s,baz=121,slow=44						
LUWI	**Luwuk**	**19.75**	**75**	*e*P	**P**	**21 11 13.9**	**-0.7**
	87nm,1.2s						
SOEI	**Soe**	**20.61**	**101**	*e*P	**P**	**21 11 22.7**	**-1.5**
	34nm,1.0s						
CM31	**Chiang Mai Arr**	**25.17**	**349**	*e*P	**P**	**21 12 09.5**	**-0.3**
	25nm,1.8s						
CMAR	**Chiang Mai Arr**	**25.17**	**349**	P	**P**	**21 12 09.5**	**-0.3**
	0.7nm,0.6s,baz=181,slow=9.5,SNR=7.5						
SAUI	**Saumlaki**	**27.41**	**95**	*e*P	**P**	**21 12 30.0**	**-0.1**
	515nm,0.9s						
WR1	**Warramunga Arr**	**32.62**	**117**	*e*P	**P**	**21 13 17.0**	**+0.7**
WRA	**Warramunga Arr**	**32.62**	**117**	P	**P**	**21 13 17.0**	**+0.7**
	1.1nm,0.8s,baz=281,slow=13,SNR=4.9						
ASAR	**Alice Springs**	**33.70**	**124**	P	**P**	**21 13 24.8**	**-0.9**
	0.4nm,0.8s,baz=291,slow=16,SNR=4.2						
NACB	**Ninganchiao**	**35.06**	**29**	*e*P	**P**	**21 13 35.7**	**-1.6**
	12nm,0.7s						
KS15	**Wonju Array Si**	**49.13**	**26**	*e*P	**P**	**21 15 31.6**	**-0.3**
	43nm,1.9s						
KSRS	**Korea Array**	**49.16**	**26**	P	**P**	**21 15 31.6**	**-0.4**
	0.9nm,0.6s,baz=223,slow=7.5,SNR=6.1						
SONA0	**Songino Array**	**54.08**	**2**	*e*P	**P**	**21 16 09.4**	**+0.5**
SONM	**Songino Array**	**54.08**	**2**	P	**P**	**21 16 09.4**	**+0.5**
	1.2nm,0.7s,baz=179,slow=8.0,SNR=10						
MK32	**Makanchi Array**	**56.30**	**342**	*e*P	**P**	**21 16 25.1**	**+0.4**
MKAR	**Makanchi Array**	**56.30**	**342**	P	**P**	**21 16 25.1**	**+0.4**
	0.6nm,0.7s,baz=149,slow=7.4,SNR=6.3						
USRK	**Ussuriysk Ar.**	**56.48**	**24**	P	**P**	**21 16 25.1**	**-0.9**
	1.2nm,0.6s,baz=197,slow=6.7,SNR=4.9						
ZALV	**Zalesovo Beam**	**62.22**	**348**	P	**P**	**21 17 05.5**	**0.0**
	0.4nm,0.3s,baz=160,slow=4.6,SNR=3.3						
ZAA1	**Zalesovo Array**	**62.23**	**348**	*e*P	**P**	**21 17 05.5**	**-0.1**
TXAR	**Lajitas Array**	**145.56**	**45**	PKPbc	**PKPab**	**21 26 24.4**	**+1.0**
	0.4nm,0.5s,baz=272,slow=3.4,SNR=2.4						

ISCJB ***26*** *21:07:52.9±0.6, 35°.00N±0°.04×35°.69E±0°.07, h10^{km}, Error ellipse: s-maj=8.4km s-min=6.4km az=170.4*

DDA ***26*** *21:08:09.0, 36°.18N×36°.09E, h7^{km}±3^{km}, ML2.5*

NSSC ***26*** *21:08:13.1±0.4, 33°.65N×36°.06E, h44^{km}±4^{km}, ML1.7*

ISC 26 21:07:52.6±1.1, **35°.00N**±0°.03×**35°.69E**±0°.06, **h10**^{km}, **n26**, σ**0^s.69**/26, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**1.09**	**18**	*i* P	**Pg**	**21 08 13.1**	**-0.4**
YAYL				IAML_P			
	comp=Z,32nm,0.2s						
QASN	**Qassioun**	**1.54**	**162**	*e*P	**Pb**	**21 08 21.3**	**-0.1**
QASN				*e*S	Sn	21 08 26.8	-14
QASN				AML	AML	21 08 29.8	
	comp=N,100nm,0.2s						
QASN				AML	AML	21 08 32.1	
	comp=E,107nm,0.3s						
QASN	**Qassioun**	**1.54**	**162**	*e*P	**Pb**	**21 08 21.2**	**-0.1**
QASN				*e*S	Sn	21 08 24.8	-16
QASN				AML	AML	21 08 25.8	
	comp=E,74nm,0.2s						
KRTS	**Karatas**	**1.59**	**351**	*e*P	**Pb**	**21 08 22.2**	**+0.1**
BRBR	**Barbar**	**1.60**	**172**	*e*P	**Pn**	**21 08 21.6**	**+0.4**
BRBR				*e*S	Sn	21 08 27.4	-15
BRBR				AML	AML	21 08 29.1	
	comp=E,50nm,0.3s						
BRBR				AML	AML	21 08 31.2	
	comp=N,29nm,0.3s						
BRBR	**Barbar**	**1.60**	**172**	*e*P	**Pn**	**21 08 21.1**	**-0.1**
BRBR				*e*S	Sn	21 08 26.2	-16
BRBR				AML	AML	21 08 29.1	
	comp=E,50nm,0.3s						
BRBR				AML	AML	21 08 31.2	
	comp=N,29nm,0.3s						
TOTH	**TOTAH**	**1.75**	**159**	*e*P	**Pn**	**21 08 23.6**	**+0.6**
TOTH				*e*S	Sn	21 08 30.2	-15
TOTH				AML	AML	21 08 32.0	
	comp=N,30nm,0.2s						
TOTH				AML	AML	21 08 33.6	
	comp=E,33nm,0.2s						
TOTH	**TOTAH**	**1.75**	**159**	*e*P	**Pn**	**21 08 23.6**	**+0.6**
TOTH				AML	AML	21 08 27.2	
	comp=E,26nm,0.2s						
TOTH				*e*S	Sn	21 08 28.8	-17
YURE	**YUREGIR**	**1.82**	**359**	*e*P	**Pb**	**21 08 25.7**	**-0.4**
YURE	**YUREGIR**	**1.82**	**359**	*i* P	**Pb**	**21 08 26.2**	**+0.2**
CEYT	**Ceyhan**	**2.01**	**1**	*e*P	**Pb**	**21 08 28.1**	**-1.1**
IKL	**Isikli**	**2.05**	**308**	*e*P	**Pn**	**21 08 27.4**	**+0.3**
MERS	**Mersin**	**2.09**	**333**	*e*P	**Pb**	**21 08 29.9**	**-0.8**
AKKU	**Akkuyu-Mersin**	**2.09**	**304**	*e*P	**Pn**	**21 08 27.9**	**+0.2**
KUZU	**Kuzuini**	**2.10**	**32**	*i* P	**Pn**	**21 08 28.1**	**+0.3**
KEBE	**Keben-Mersin**	**2.16**	**312**	*e*P	**Pn**	**21 08 29.8**	**+1.1**
KARA	**Karaisali**	**2.31**	**347**	*e*P	**Pn**	**21 08 32.5**	**+1.7**
KAMA	**Osmaniye**	**2.32**	**20**	*i* P	**Pn**	**21 08 31.7**	**+0.8**
KAMA				IAML_P			
	comp=Z,744nm,0.2s						
TEVE	**Tevekalti-Mers**	**2.32**	**309**	*e*P	**Pn**	**21 08 31.9**	**+0.9**
TEKE	**Tekeli-Mersin**	**2.39**	**299**	*e*P	**Pn**	**21 08 31.8**	**0.0**
BERE	**Bereket-Mersin**	**2.42**	**304**	*e*P	**Pn**	**21 08 32.6**	**+0.3**
GAZ	**Gaziantep**	**2.49**	**29**	*e*P	**Pn**	**21 08 33.9**	**+0.6**
HCB	**Kahramanmara**	**2.54**	**22**	*i* P	**Pn**	**21 08 34.9**	**+1.0**
HCB				IAML_P			
	comp=Z,514nm,0.2s						
ANDN	**Andirin**	**2.63**	**11**	*i* P	**Pn**	**21 08 35.9**	**+0.7**
KMRS	**Kahramanmaras**	**2.68**	**21**	*e*P	**Pn**	**21 08 35.6**	**-0.3**
SURC	**SANLIURFA_SURC**	**3.02**	**51**	*i* P	**Pb**	**21 08 46.1**	**-0.4**

IDC ***26*** *21:32:55.8±0.3, 58°.03S×24°.15W, h0^{km}, mb5.5/15, mb1 5.5/17, mb1mx5.5/18, mbtmp5.5/17, ML5.7/2, MS6.0/20, Ms1 5.9/20, ms1mx5.9/20, Error ellipse: s-maj=12.9km s-min=10.4km az=170.0*

ISCJB ***26*** *21:32:57.9±0.1, 57°.89S±0°.03×24°.09W±0°.06, h10^{km}, mb6.1/123, MS6.0/546, Error ellipse: s-maj=5.2km s-min=4.0km az=146.1*

BJI ***26*** *21:32:58.0±0.0, 57°.72S×24°.20W, h10^{km}, mB6.1/52, Ms6.3/76, Ms7 6.2/72*

NEIC ***26*** *21:32:60.0±2.7, 57°.92S×23°.84W, h13^{km}, mb6.2/126, ME6.6, MS6.0/519, MW6.2, MW6.2, MW6.3, Error ellipse: s-maj=14.9km s-min=11.5km az=28.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.09; M$_{\theta\theta}$-2.23; M$_{\phi\phi}$2.13; M$_{r\theta}$-0.20; M$_{\theta\phi}$1.01; M$_{\phi r}$0.58; Best double couple: M$_0$2.50000×10^{18} NP1:φ$_s$58.00000°, δ76.00000°, λ4.00000°. NP2:φ$_s$327.00000°, δ86.00000°, λ166.00000°. Principal axes: T 2.4700, Plg13.0000°, Azm282.0000°; N 0.0200, Plg75.0000°, Azm132.0000°; P -2.4900, Plg7.0000°, Azm13.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$67.00000°, δ70.00000°, λ5.00000°. NP2:φ$_s$335.00000°, δ85.00000°, λ160.00000°. Principal axes: T Plg18.0000°, Azm289.0000°; N Plg0.0000°, Azm0.0000°; P Plg10.0000°, Azm23.0000°; Apparent Stress 2.68 MPa. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC ***26*** *21:32:59.0±0.0, 57°.69S×23°.40W, h23^{km}, Moment Tensor Solution. s28 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.06; M$_{\theta\theta}$-2.60; M$_{\phi\phi}$2.66; M$_{r\theta}$0.74; M$_{\theta\phi}$1.06; M$_{\phi r}$0.55; Best double couple: M$_0$3.00000×10^{18} NP1:φ$_s$56.00000°, δ90.00000°, λ18.00000°. NP2:φ$_s$326.00000°, δ72.00000°, λ180.00000°. Principal axes: T 3.0200, Plg12.0000°, Azm282.0000°; N -0.0800, Plg72.0000°, Azm56.0000°; P -2.9400, Plg12.0000°, Azm189.0000°;*

MOS ***26*** *21:33:01.9±1.8, 57°.85S×24°.05W, h33^{km}, mb6.0/38, MS5.9/47 Error ellipse: s-maj=17.3km s-min=9.2km az=93.8*

GCMT ***26*** *21:33:05.0±0.0, 58°.12S×23°.51W, h17^{km}, MW6.3/145, Moment Tensor Solution. s143,c318; s145,c588; Duration: 3^s.3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.29±.01; M$_{\theta\theta}$-2.45±.01; M$_{\phi\phi}$2.75±.01; M$_{r\theta}$-0.78±.04; M$_{\theta\phi}$1.13±.01; M$_{\phi r}$1.12±.04; Best double couple: M$_0$3.15200×10^{18} NP1:φ$_s$148.00000°, δ87.00000°, λ-154.00000°. NP2:φ$_s$56.00000°, δ64.00000°, λ-4.00000°. Principal axes: T 3.2460, Plg16.0000°, Azm279.0000°; N -0.1810, Plg64.0000°, Azm155.0000°; P -3.0590, Plg21.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *21:33:18.9±0.0, 57°.53S×23°.66W, h10^{km}, Moment Tensor Solution. s61 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.46; M$_{\theta\theta}$-2.12; M$_{\phi\phi}$2.58; M$_{r\theta}$0.27; M$_{\theta\phi}$1.17; M$_{\phi r}$-0.17; Best double couple: M$_0$2.60000×10^{18} NP1:φ$_s$329.00000°, δ85.00000°, λ-172.00000°. NP2:φ$_s$238.00000°, δ83.00000°, λ-5.00000°. Principal axes: T 2.8600, Plg2.0000°, Azm103.0000°; N -0.4200, Plg81.0000°, Azm1.0000°; P -2.4400, Plg9.0000°, Azm193.0000°;*

ISC 26 21:33:00.1±0.3, **58°.04S**±0°.04×**24°.28W**±0°.03, **h17**^{km}±1^{km}, **h17**^{km}**:pP-P**, **n1418**, σ**2^s.48**/1182, **mb6.2**/121, **MS6.0**/552, **18C-10D**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.78**	**294**	*e*Pn	**Pn**	**21 34 55.1**	**+2.8**
VNA1	**Neumayer--Stat**	**14.36**	**158**	P	**Pn**	**21 36 19.9**	**-2.2**
VNA1	**Neumayer--Stat**	**14.36**	**158**	S	Sn	21 38 50.6	-10
VNA3	**Neumayer Olymp**	**14.59**	**161**	P	**Pn**	**21 36 22.4**	**-2.9**
VNA3	**Neumayer Olymp**	**14.59**	**161**	S	Sn	21 38 55.8	-11
SNAA	**Sanae**	**16.27**	**156**	P	**Pn**	**21 36 45.1**	**-2.4**
SNAA	**Sanae**	**16.27**	**156**	S	Sn	21 39 30.9	-17
SNAA	**Sanae**	**16.27**	**156**	Pn	**Pn**	**21 36 44.1**	**-3.4**
	17nm,0.3s,baz=317,slow=14,SNR=351						
SNAA				Sn	Sn	21 39 31.0	-16
	16nm,0.3s,baz=322,slow=18,SNR=6.7						
SNAA				LR	LR	21 41 21.5	
	comp=Z,34μm,20.3s,baz=319,slow=31						
SNAA				ScP	**ScP**	**21 45 17.3**	**+3.5**
	baz=329,slow=10,SNR=4.0						
SNAA	**Sanae**	**16.27**	**156**	*e*Pn	**Pn**	**21 36 47.2**	**-0.3**
	6μm,1.6s						
SNAA				*e*ScP	**ScP**	**21 45 17.3**	**+3.5**
SNAA	**Sanae**	**16.27**	**156**	*e*P	**Pn**	**21 36 47.3**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,6μm,1.6s						
PMSA	**Palmer Station**	**19.90**	**234**	P	**P**	**21 37 30.3**	**+0.1**
	comp=Z,44nm,0.3s,baz=83,slow=8.1,SNR=150						
PMSA				S	**Sn**	**21 41 14.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=111,slow=17,SNR=2.4						
PMSA				LR	LR	21 44 29.3	
	comp=Z,68μm,19.4s,baz=78,slow=35						
PMSA	**Palmer Station**	**19.90**	**234**	*e*P	**Pn**	**21 37 31.8**	**-0.1**
	comp=Z,1μm,0.8s						
PMSA				LR	LR		
	comp=Z,78μm,19.0s						
PMSA	**Palmer Station**	**19.90**	**234**	*e*P	**Pn**	**21 37 32.3**	**+0.4**
EFI	**East Falkland**	**20.30**	**274**	*e*P	Pn	21 37 36.4	-0.4
	comp=Z,6μm,1.1s						
EFI				*e*Sn	Sn	21 41 31.5	+6.8
EFI	**East Falkland**	**20.30**	**274**	*e*P	Pn	21 37 36.4	-0.4
EFI				pmax	pmax		
	comp=Z,6μm,1.1s						
TRIS	**Tristan da Cun**	**22.41**	**26**	*e*P	**P**	**21 37 57.1**	**-0.4**
	comp=Z,2μm,1.8s						
TRIS				LR	LR		
	comp=Z,42μm,19.0s						
USHA	**Ushuaia**	**24.29**	**258**	P	**P**	**21 38 15.1**	**-1.0**
	comp=Z,264nm,0.7s,baz=108,slow=12,SNR=53						
USHA				S	**S**	**21 42 34.9**	**+0.9**
	comp=Z,24nm,0.9s,baz=60,slow=20,SNR=2.1						
USHA				LR	LR	21 45 48.3	
	comp=Z,59μm,21.2s,baz=111,slow=32						
GO09	**Cerro Castillo**	**28.09**	**263**	*e*P	**P**	**21 38 49.1**	**-1.4**
	comp=Z,3μm,1.8s						
GO09				LR	LR		
	comp=Z,43μm,18.0s						
SYO	**Syowa Base**	**29.04**	**138**	⇓*e*P	**P**	**21 38 57.6**	**-1.1**
SYO	**Syowa Base**	**29.04**	**138**	⇓*i*P	**P**	**21 39 03.0**	**+4.3**
OGAUY	**Aigu**	**31.25**	**306**	*e*P	**P**	**21 39 18.1**	**-0.4**
TRQA	**Tornquist**	**31.56**	**293**	*e*P	**P**	**21 39 22.4**	**+1.0**
LPA	**La Plata**	**32.19**	**301**	c*e*P	**P**	**21 39 28.0**	**+1.2**
LPA				*e*PP	**PnPn**	**21 40 31.0**	**-1.7**
LPA				*e*pPP		21 40 37.0	
LPA				*e*PP	**PP**	**21 40 40.0**	**+0.6**
LPA				*e*PCP	**PcP**	**21 42 17.0**	**+1.8**
LPA				*e*S	**S**	**21 44 41.0**	**+2.3**
LPA				*e*sS	**sS**	**21 44 47.0**	**+1.9**
LPA				*e*PSP	PSP	21 45 02.0	
LPA				*e*SS	**SnSn**	**21 46 30.0**	**+0.4**
LPA				*e*SSS	SSS	21 46 49.0	
LPA				*e*SS	**SS**	**21 47 02.0**	**+5.2**
QSPA	**South Pole Qui**	**32.21**	**180**	S	**S**	**21 44 35.3**	**-3.6**
	comp=Z,12nm,0.9s,baz=199,slow=16,SNR=2.0						
QSPA				LR	LR	21 51 48.7	
	comp=Z,27μm,19.1s,baz=193,slow=35						
QSPA	**South Pole Qui**	**32.21**	**180**	*e*P	**P**	**21 39 28.4**	**+1.4**
	comp=Z,574nm,1.3s						
QSPA				LR	LR		
	comp=Z,25μm,20.0s						
PLTB	**Pedras Altas**	**33.00**	**310**	*e*P	**P**	**21 39 34.1**	**+0.1**
GO07	**Milladeo Hill,**	**33.88**	**274**	*e*P	**P**	**21 39 41.2**	**-0.3**
	comp=Z,372nm,0.6s						
GO07				LR	LR		
	comp=Z,24μm,19.0s						
PLCA	**Paso Flores**	**33.92**	**280**	P	**P**	**21 39 39.5**	**-2.5**
	comp=Z,264nm,1.1s,baz=167,slow=7.8,SNR=74						
PLCA				LR	LR	21 54 20.1	
	comp=Z,24μm,18.6s,baz=144,slow=38						
PLCA	**Paso Flores**	**33.92**	**280**	*e*P	**P**	**21 39 41.9**	**-0.1**
	comp=Z,939nm,1.4s						
PLCA	**Paso Flores**	**33.92**	**280**	*e*P	**P**	**21 39 41.9**	**-0.1**
PLCA				pmax	pmax		
	comp=Z,939nm,1.4s						
PLCA	**Paso Flores**	**33.92**	**280**	*e*P	**P**	**21 39 41.0**	**-1.0**
CNLB	**Canela**	**34.11**	**316**	*e*P	**P**	**21 39 43.8**	**+0.1**
CPSB	**Cacapava Do Su**	**34.13**	**311**	*e*P	**P**	**21 39 44.3**	**+0.5**
GO06	**Curarrehue**	**35.24**	**281**	*e*P	**P**	**21 39 52.0**	**-1.5**
	comp=Z,114nm,0.9s						
GO06				LR	LR		
	comp=Z,18μm,20.0s						
ITAB	**Concordia**	**36.46**	**316**	*e*P	**P**	**21 40 03.7**	**-0.2**
MAW	**Mawson**	**37.60**	**141**	P	**P**	**21 40 10.4**	**-2.7**
	comp=Z,22nm,0.9s,baz=226,slow=9.6,SNR=12						
MAW				S	**S**	**21 45 56.9**	**-4.5**
	comp=Z,6.4nm,0.9s,baz=258,slow=9.3,SNR=2.6						
MAW				LR	LR	21 53 23.2	
	comp=Z,18μm,21.2s,baz=253,slow=33						
MAW	**Mawson**	**37.60**	**141**	*e*P	**P**	**21 40 12.1**	**-1.0**
	comp=Z,126nm,1.7s						
MAW	**Mawson**	**37.60**	**141**	*e*P	**P**	**21 40 12.1**	**-1.0**
MAW				pmax	pmax		
	comp=Z,126nm,1.7s						
ESAR	**Angra dos Reis**	**37.88**	**329**	*e*P	**P**	**21 40 15.6**	**-0.3**
SPB	**Sao Paulo**	**38.21**	**324**	*e*P	**P**	**21 40 19.0**	**+0.3**
	comp=Z,694nm,1.1s						
SPB				LR	LR		
	comp=Z,15μm,19.0s						
SPB	**Sao Paulo**	**38.21**	**324**	*e*P	**P**	**21 40 18.6**	**-0.2**
DUB01	**Friburgo-RJ**	**38.23**	**332**	*e*P	**P**	**21 40 18.6**	**-0.4**
VAS01	**Vassouras-RJ**	**38.31**	**331**	*e*P	**P**	**21 40 19.2**	**-0.5**
VAO	**Valinhos**	**38.62**	**325**	*e*P	**P**	**21 40 22.0**	**-0.3**
PTGB	**Pitanga**	**38.73**	**317**	*e*P	**P**	**21 40 23.4**	**+0.2**
GO05	**Huala**	**38.94**	**285**	*e*P	**P**	**21 40 24.9**	**+0.1**
	comp=Z,122nm,0.8s						
GO05				LR	LR		
	comp=Z,24μm,18.0s						
CPUP	**Villa Florida**	**39.31**	**309**	P	**P**	**21 40 26.8**	**-1.2**
	comp=Z,169nm,1.1s,baz=155,slow=8.0,SNR=65						
CPUP				S	S	21 46 18.6	-9.5
	comp=Z,4.6nm,0.8s,baz=174,slow=19,SNR=2.4						
CPUP				LR	LR	21 56 13.9	
	comp=Z,16μm,20.8s,baz=156,slow=36						
CPUP	**Villa Florida**	**39.31**	**309**	*e*P	**P**	**21 40 27.0**	**-0.9**
SUR	**Sutherland**	**39.73**	**70**	LR	LR	21 52 30.5	
	comp=Z,24μm,20.8s,baz=216,slow=30						
SUR	**Sutherland**	**39.73**	**70**	*e*P	**P**	**21 40 28.1**	**-3.5**
	comp=Z,174nm,1.1s						
SUR				LR	LR		
	comp=Z,24μm,20.0s						
PEL	**Peldehue**	**39.78**	**288**	PFAKE		21 40 50.0	+18
PEL				LR	LR		
	comp=Z,24μm,22.0s						
BSCB	**Bom Sucesso**	**39.89**	**329**	*e*P	**P**	**21 40 32.2**	**-0.7**
RIB01	**Linhares ES**	**40.44**	**336**	*e*P	**P**	**21 40 37.7**	**+0.3**
BB19B	**Bebedouro**	**40.92**	**324**	*e*P	**P**	**21 40 41.3**	**-0.2**
BSFB	**Barra de Sao F**	**41.01**	**336**	*e*P	**P**	**21 40 41.6**	**-0.5**
SJMB	**Sao Joao De Ma**	**41.21**	**335**	*e*P	**P**	**21 40 43.3**	**-0.4**
GO04	**Tololo Observa**	**42.23**	**291**	*e*P	**P**	**21 40 52.1**	**-0.2**
	comp=Z,130nm,0.9s						
GO04				LR	LR		
	comp=Z,20μm,19.0s						
ITRB	**Iturama**	**42.78**	**322**	*e*P	**P**	**21 40 56.3**	**-0.3**
LCO	**Las Campanas**	**43.13**	**292**	PFAKE		21 41 10.0	+10
LCO				LR	LR		
	comp=Z,21μm,20.0s						
LCO	**Las Campanas**	**43.13**	**292**	*e*P	**P**	**21 40 58.0**	**-1.7**
AQDB	**Aquidauana**	**43.94**	**315**	*e*P	**P**	**21 41 05.3**	**-0.6**
GO03	**Copiap**	**44.08**	**294**	PFAKE		21 41 20.0	+13
GO03				LR	LR		
	comp=Z,13μm,20.0s						
SBA	**Scott Base**	**44.20**	**183**	*e*P	**P**	**21 41 10.1**	**+2.8**
	comp=Z,1μm,1.8s						
SBA	**Scott Base**	**44.20**	**183**	*e*P	**P**	**21 41 10.1**	**+2.8**
SBA				pmax	pmax		
	comp=Z,1μm,1.8s						
SHEL	**Horse Pasture**	**44.23**	**26**	*e*P	**P**	**21 41 06.0**	**-2.3**
	comp=Z,530nm,1.0s						
SHEL				LR	LR		
	comp=Z,16μm,22.0s						
SHEL	**Horse Pasture**	**44.23**	**26**	*e*P	**P**	**21 41 06.0**	**-2.3**
SHEL				pmax	pmax		
	comp=Z,530nm,1.0s						
SHEL				MLR	MLR		
	comp=Z,16μm,22.0s						
BOSA	**Boshof**	**45.01**	**71**	*i* P	**P**	**21 41 12.3**	**-2.3**
BOSA	**Boshof**	**45.01**	**71**	P	**P**	**21 41 10.8**	**-3.7**
	comp=Z,117nm,0.7s,baz=211,slow=6.9,SNR=73						
BOSA				S	S	21 47 41.3	-11
	comp=Z,9.7nm,1.2s,baz=207,slow=14,SNR=2.2						
BOSA				LR	LR	21 55 36.4	
	comp=Z,26μm,20.9s,baz=216,slow=30						
BOSA	**Boshof**	**45.01**	**71**	*e*P	**P**	**21 41 10.7**	**-3.9**
	comp=Z,169nm,0.8s						
BOSA	**Boshof**	**45.01**	**71**	*i* P	**P**	**21 41 12.3**	**-2.3**
CRZF	**Crozet Islands**	**45.60**	**110**	*e*P	**P**	**21 41 16.6**	**-2.3**
	comp=Z,340nm,1.6s						
CRZF				LR	LR		
	comp=Z,14μm,22.0s						
GO02	**Mina Guanaco**	**45.81**	**296**	PFAKE		21 41 30.0	+8.9
GO02				LR	LR		
	comp=Z,14μm,19.0s						
BDFB	**Brasilia**	**45.89**	**327**	P	**P**	**21 41 21.3**	**-0.3**
	comp=Z,42nm,0.8s,baz=157,slow=9.4,SNR=16						
BDFB				S	**S**	**21 48 05.4**	**+0.2**
	comp=Z,5.3nm,0.9s,baz=180,slow=20,SNR=1.5						
BDFB				LR	LR	22 01 05.1	
	comp=Z,13μm,18.2s,baz=154,slow=37						
BDFB	**Brasilia**	**45.89**	**327**	*e*P	**P**	**21 41 21.3**	**-0.3**
BDFB				*e*P	**P**	**21 41 21.8**	**+0.2**
BDFB				LR	LR		
	comp=Z,17μm,21.0s						
WIN	**Windhoek**	**46.21**	**58**	*e*P	**P**	**21 41 21.2**	**-3.0**
	comp=Z,259nm,1.6s						
WIN	**Windhoek**	**46.21**	**58**	*e*P	**P**	**21 41 21.2**	**-3.0**
WIN				pmax	pmax		
	comp=Z,259nm,1.6s						
LVC	**Limon Verde**	**47.66**	**299**	*e*P	**P**	**21 41 35.0**	**-0.7**
	comp=Z,176nm,0.7s						
LVC				LR	LR		
	comp=Z,15μm,18.0s						
LVC	**Limon Verde**	**47.66**	**299**	*e*P	**P**	**21 41 35.0**	**-0.7**
LVC				pmax	pmax		
	comp=Z,175nm,0.7s						
LVC				MLR	MLR		
	comp=Z,15μm,18.0s						
LVC	**Limon Verde**	**47.66**	**299**	*e*P	**P**	**21 41 34.3**	**-1.4**
PB10	**IPOC Station P**	**47.67**	**296**	*e*P	**P**	**21 41 33.5**	**-1.9**
	comp=Z,102nm,0.9s						
SALV	**Santo Antonio**	**48.13**	**318**	*e*P	**P**	**21 41 39.3**	**+0.4**
LBTB	**Lobatse**	**48.16**	**69**	*e*P	**P**	**21 41 36.1**	**-3.1**
	comp=Z,212nm,0.9s						
LBTB	**Lobatse**	**48.16**	**69**	*e*P	**P**	**21 41 36.1**	**-3.1**
LBTB				pmax	pmax		
	comp=Z,212nm,0.9s						
PB04	**IPOC Station P**	**48.48**	**297**	PFAKE		21 42 00.0	+18
PB04				LR	LR		
	comp=Z,8μm,18.0s						
PB01	**IPOC Station P**	**49.28**	**299**	PFAKE		21 42 00.0	+12
PB01				LR	LR		
	comp=Z,12μm,20.0s						
PEXB	**Peixe**	**49.33**	**328**	*e*P	**P**	**21 41 49.3**	**+1.1**
TSUM	**Tsumeb**	**49.37**	**56**	*i* P	**P**	**21 41 49.1**	**+0.5**
TSUM	**Tsumeb**	**49.37**	**56**	*e*P	**P**	**21 41 43.8**	**-4.8**
	comp=Z,344nm,1.8s						
TSUM	**Tsumeb**	**49.37**	**56**	*i* P	**P**	**21 41 49.1**	**+0.5**
H10S2	**ASCENSION HYDR**	**49.52**	**13**	T	T	22 35 26.4	
	baz=186,slow=74,SNR=76						
H10S3	**ASCENSION HYDR**	**49.53**	**13**	T	T	22 35 26.7	
	baz=34,slow=74,SNR=99						
GO01	**Chusmiza**	**50.33**	**300**	PFAKE		21 42 10.0	+14
GO01				LR	LR		

	comp=Z,11µm,21.0s						
PB11	IPOC Station P	50.47	300	PFAKE		21 42 10.0	+13
PB11				LR	LR		
	comp=Z,7µm,20.0s						
ASCN	Ascension	50.57	13	eP	P	21 41 53.0	-4.6
	comp=Z,194nm,1.0s						
ASCN				LR	LR		
	comp=Z,10µm,20.0s						
H10N1	ASCENSION HYDR	50.64	13	P	P	21 41 56.8	-0.9
	baz=182,slow=9.0,SNR=5.0						
H10N1				T	T	22 36 43.1	
	baz=189,slow=71,SNR=33						
H10N3	ASCENSION HYDR	50.64	13	P	P	21 42 00.3	+2.6
	baz=182,slow=9.0,SNR=4.4						
H10N3				T	T	22 36 44.5	
	baz=189,slow=71,SNR=44						
H10N2	ASCENSION HYDR	50.66	13	P	P	21 42 00.7	+2.8
	baz=182,slow=9.0,SNR=4.0						
H10N2				T	T	22 36 43.2	
	baz=189,slow=71,SNR=26						
MNMC	Minye Minye	50.98	300	PFAKE		21 42 10.0	+9.0
MNMC				LR	LR		
	comp=Z,6µm,18.0s						
CASY	Casey	51.49	158	eP	P	21 42 03.5	-0.4
	comp=Z,175nm,1.1s						
CASY				LR	LR		
	comp=Z,24µm,18.0s						
NBLI	Livramento-PB	51.49	344	eP	P	21 42 02.6	-1.9
MSNA	Messina	52.59	71	i P	P	21 42 10.5	-2.3
MSNA	Messina	52.59	71	i P	P	21 42 10.5	-2.3
LPAZ	La Paz	52.81	303	P	P	21 42 14.1	-1.0
	comp=Z,119nm,0.8s,baz=146,slow=5.8,SNR=49						
LPAZ				S	S	21 49 38.2	-5.0
	comp=Z,18nm,1.1s,baz=169,slow=19,SNR=3.9						
LPAZ				LR	LR	22 02 43.8	
	comp=Z,4µm,19.7s,baz=144,slow=34						
LPAZ	La Paz	52.81	303	eP	P	21 42 14.5	-0.5
CLDB	Colider	52.83	320	eP	P	21 42 14.1	-0.4
RCBR	Riachuelo	52.86	345	eP	P	21 42 15.9	+1.2
	comp=Z,425nm,1.7s						
RCBR				LR	LR		
	comp=Z,14µm,21.0s						
RCBR	Riachuelo	52.86	345	eP	P	21 42 15.9	+1.2
RCBR				pmax	pmax		
	comp=Z,425nm,1.7s						
RCBR				MLR	MLR		
	comp=Z,14µm,21.0s						
RCBR	Riachuelo	52.86	345	eP	P	21 42 15.5	+0.8
NBPA	Parau_RN	53.10	344	eP	P	21 42 15.8	-0.7
MATP	Matopo	53.45	68	i P	P	21 42 17.2	-2.0
MATP	Matopo	53.45	68	i P	P	21 42 17.2	-2.0
BLWY	Bulawayo	53.74	68	i P	P	21 42 18.8	-2.6
BLWY	Bulawayo	53.74	68	i P	P	21 42 18.8	-2.6
NBMO	Morrinhos-CE	55.97	341	eP	P	21 42 36.9	-0.3
ITZ	Itezhi-Tezhi	56.25	63	i P	P	21 42 37.0	-2.5
ITZ	Itezhi-Tezhi	56.25	63	i P	S	21 50 20.6	-7.9
ITZ				i	S	21 50 23.4	-5.1
	baz=141,slow=9.3						
LSZ	Lusaka	57.69	65	eP	P	21 42 46.6	-3.0
	comp=Z,244nm,0.9s						
LSZ	Lusaka	57.69	65	eP	P	21 42 46.7	-3.0
LSZ				pmax	pmax		
	comp=Z,244nm,0.9s						
NNA	Nana	60.58	297	eP	P	21 43 10.4	+0.7
	comp=Z,137nm,1.3s						
NNA				LR	LR		
	comp=Z,11µm,20.0s						
NNA	Nana	60.58	297	eP	P	21 43 10.4	+0.7
NNA				pmax	pmax		
	comp=Z,137nm,1.3s						
NNA				MLR	MLR		
	comp=Z,11µm,20.0s						
PTGA	Pitinga	63.72	319	eP	P	21 43 30.0	-0.6
	comp=Z,179nm,1.1s						
PTGA				LR	LR		
	comp=Z,13µm,18.0s						
PTGA	Pitinga	63.72	319	eP	P	21 43 30.3	-0.3
ABPO	Ambohimpanom	64.28	85	eP	P	21 43 34.4	-0.1
	comp=Z,51nm,1.0s						
ABPO				LR	LR		
	comp=Z,14µm,19.0s						
ABPO	Ambohimpanom	64.28	85	eP	P	21 43 34.4	-0.1
ABPO				pmax	pmax		
	comp=Z,51nm,1.0s						
ABPO				MLR	MLR		
	comp=Z,14µm,19.0s						
OPO	Ambohidratompo	64.63	84	S	S	21 52 15.2	-0.7
	comp=Z,1.7nm,0.7s,baz=287,slow=19,SNR=1.6						
RPN	Rapa Nui	64.86	259	eP	P	21 43 39.9	+1.9
	comp=Z,951nm,1.7s						
RPN	Rapa Nui	64.86	259	eP	P	21 43 39.9	+1.9
RPN				pmax	pmax		
	comp=Z,951nm,1.7s						
LIC	Lamto	65.92	21	eP	P	21 43 42.7	-2.1
	comp=Z,670nm,0.8s						
KIC	Kosan Boka	66.10	21	eP	P	21 43 43.4	-2.6
	comp=Z,441nm,0.8s						
TIC	Toumodi	66.33	21	eP	P	21 43 45.0	-2.5
DBIC	Dimbokro	66.38	21	P	P	21 43 45.9	-1.9
	comp=Z,101nm,0.6s,baz=169,slow=7.2,SNR=74						
DBIC				S	S	21 52 25.2	-12
	comp=Z,4.4nm,1.0s,baz=198,slow=6.4,SNR=2.1						
DBIC				LR	LR	22 06 54.1	
	comp=Z,9µm,18.6s,baz=170,slow=31						
DBIC	Dimbokro	66.38	21	P	P	21 43 45.9	-1.9
DBIC				S	S	21 52 25.2	-12
DBIC				pmax	pmax		
	comp=Z,101nm,0.6s						
DBIC				smax	smax		
	comp=N,4.0nm,1.0s						
DBIC				MLR	MLR		
	comp=Z,9µm,18.6s						
RER	Riviere de l'E	67.05	93	eP	P	21 43 50.5	-1.7
	comp=Z,211nm,0.9s						
RER				LR	LR		
	comp=Z,11µm,19.0s						
MCQ	Macquarie Isla	67.79	182	eP	P	21 43 58.6	+2.3
	comp=Z,611nm,1.7s						
MCQ	Macquarie Isla	67.79	182	eP	P	21 43 58.6	+2.3
MCQ				pmax	pmax		
	comp=Z,611nm,1.7s						
MRIV	Mauritius Mete	68.69	94	eP	P	21 44 02.0	-0.5
	comp=Z,94nm,1.4s						
PTLC	Puerto Leguiza	70.38	305	eP	P	21 44 09.2	-3.7
MBAR	Mbarara	71.71	60	eP	P	21 44 21.1	-0.1
	comp=Z,263nm,1.5s						
MBAR				LR	LR		
	comp=Z,14µm,18.0s						
MBAR	Mbarara	71.71	60	eP	P	21 44 21.1	-0.1
MBAR				pmax	pmax		
	comp=Z,263nm,1.5s						
MBAR				MLR	MLR		
	comp=Z,14µm,18.0s						
MACC	Macarena, Meta	71.74	307	eP	P	21 44 21.2	0.0
FLOC	Florencia	72.02	305	eP	P	21 44 21.9	-1.0
CRUC	La Cruz	72.58	304	eP	P	21 44 28.6	+2.0
SACV	Santiago Islan	72.74	1	eP	P	21 44 26.8	-0.2
	comp=Z,142nm,1.3s						
SACV				LR	LR		
	comp=Z,10µm,20.0s						
BETC	Betania	72.91	306	eP	P	21 44 27.2	-1.0
BBAC	Balboa, Cauca	73.11	304	eP	P	21 44 29.9	+0.3
MARP	Paez Belalcaza	73.28	305	eP	P	21 44 31.2	+0.6
POPC	Popayan, Colom	73.32	304	eP	P	21 44 30.6	-0.3
VILC	Villavicencio,	73.45	308	eP	P	21 44 31.9	+0.4
PRAC	Prado	73.59	306	eP	P	21 44 33.2	+1.0
ORTC	Ortega, Tolima	73.92	306	eP	P	21 44 33.2	-1.0
CHIC	Chingaza	73.93	308	eP	P	21 44 33.9	-0.8
YOPC	Yopal, Colombi	74.04	310	eP	P	21 44 35.9	+1.0
ORIV	Oritupano	74.04	320	eP	P	21 44 36.8	+2.1
TOC4	Torodi Ar. Sit	74.05	26	PFAKE		21 44 50.0	+15
TOC4				LR	LR		
	comp=Z,7µm,22.0s						
TOC5	Torodi Ar. Sit	74.05	26	PFAKE		21 44 50.0	+15
TOC5				LR	LR		
	comp=Z,9µm,22.0s						
TOB4	Torodi Ar. Sit	74.06	26	PFAKE		21 44 50.0	+15
TOB4				LR	LR		
	comp=Z,4µm,20.0s						
TOB3	Torodi Ar. Sit	74.06	26	PFAKE		21 44 50.0	+15
TOB3				LR	LR		
	comp=Z,4µm,20.0s						
TOA3	Torodi Ar. Sit	74.06	26	PFAKE		21 44 50.0	+15
TOA3				LR	LR		
	comp=Z,4µm,21.0s						
TOC3	Torodi Ar. Sit	74.07	26	PFAKE		21 44 50.0	+15
TOC3				LR	LR		
	comp=Z,7µm,22.0s						
TOA0	Torodi Ar. Sit	74.07	26	PFAKE		21 44 50.0	+15
TOA0				LR	LR		
	comp=Z,7µm,22.0s						
TORD	Torodi Ar. Bea	74.07	26	P	P	21 44 32.3	-2.6
	comp=Z,45nm,0.6s,baz=190,slow=6.4,SNR=157						
TORD				S	SKiKP	21 53 57.9	-4.0
	comp=Z,1.3nm,1.1s,baz=180,slow=6.6,SNR=3.5						
TORD				LR	LR	22 11 50.3	
	comp=Z,3µm,20.2s,baz=285,slow=32						
TOA2	Torodi Ar. Sit	74.07	26	PFAKE		21 44 50.0	+15
TOA2				LR	LR		
	comp=Z,8µm,18.0s						
TOB5	Torodi Ar. Sit	74.07	26	PFAKE		21 44 50.0	+15
TOB5				LR	LR		
	comp=Z,8µm,22.0s						
TOA1	Torodi Ar. Sit	74.07	26	PFAKE		21 44 50.0	+15
TOA1				LR	LR		
	comp=Z,7µm,22.0s						
TOC7	Torodi Ar. Sit	74.08	26	PFAKE		21 44 50.0	+15
TOC7				LR	LR		
	comp=Z,8µm,22.0s						
KMBO	Kilima Mbogo	74.33	66	P	P	21 44 36.9	+0.1
	comp=Z,10nm,1.0s,baz=202,slow=5.9,SNR=18						
KMBO				S	S	21 54 16.6	+6.2
	comp=Z,0.5nm,0.3s,baz=204,slow=20,SNR=2.0						
KMBO				LR	LR	22 14 50.2	
	comp=Z,16µm,18.1s,baz=198,slow=34						
KMBO	Kilima Mbogo	74.33	66	eP	P	21 44 36.5	-0.4
KMBO				epP	P	21 44 37.2	+0.4
KMBO				LR	LR		
	comp=Z,16µm,18.0s						
ELOV	Elorza	74.36	313	eP	P	21 44 36.5	-0.1
ROSC	El Rosal	74.37	308	P	P	21 44 37.7	+0.5
	comp=Z,28nm,0.7s,baz=134,slow=4.7,SNR=32						
ROSC				LR	LR	22 19 01.3	
	comp=Z,5µm,19.4s,baz=184,slow=37						
ROSC	El Rosal	74.37	308	eP	P	21 44 38.5	+1.4
GRGC	Isla de Gorgon	74.39	303	eP	P	21 44 38.5	+1.7
YOTC	Yotoco, Valle	74.47	305	eP	P	21 44 36.5	-0.9
CTAB	Cerro Tablazo,	74.47	308	eP	P	21 44 38.5	+0.7
TPP	Pointe-a-Pierr	74.55	322	eP	P	21 44 42.8	+5.1
TAMC	Tame, Arauca	74.76	311	eP	P	21 44 39.2	+0.2
RUSC	La Rusia	74.80	309	eP	P	21 44 39.2	-0.6
TRN	Trinidad (W)	74.84	322	eP	P	21 44 41.0	+1.7
SPBC	San Pablo de B	74.99	308	eP	P	21 44 38.5	-1.9
GUIV	Guiria	75.11	321	eP	P	21 44 43.0	+2.1
GUY2C	Guyana, Caldas	75.16	307	eP	P	21 44 41.9	0.0
TOSP	Speyside	75.17	323	eP	P	21 44 43.0	+1.8
TOSP	Speyside	75.17	323	eP	P	21 44 43.1	+1.8
NORC	Norcasia	75.25	307	eP	P	21 44 39.9	-2.0
PLMC	San Jos del P	75.26	306	eP	P	21 44 41.9	-0.1
BARC	Barichara	75.47	309	eP	P	21 44 40.5	-2.8
BAUV	El Baul	75.59	315	eP	P	21 44 43.1	-0.7
GIRC	Giron, Santand	75.92	310	eP	P	21 44 44.5	-1.3
WHZ	Wether Hill Ro	75.94	189	eP	P	21 44 47.1	+1.7
	comp=Z,212nm,1.1s						
WHZ				LR	LR		
	comp=Z,9µm,18.0s						
PAMC	Pamplona, Colo	75.95	310	eP	P	21 44 45.2	-1.2
PTBC	PUERTO BERRIO,	75.95	308	eP	P	21 44 43.2	-2.6
HELC	Santa Helena	76.09	307	eP	P	21 44 45.9	-1.2
BRRC	Barranca, Sant	76.16	309	eP	P	21 44 44.5	-2.4
CAPV	Capacho	76.27	311	eP	P	21 44 47.9	0.0
GRGR	Grenville	76.31	322	PFAKE		21 45 00.0	+12
GRGR				LR	LR		
	comp=Z,7µm,21.0s						
GRGR	Grenville	76.31	322	eP	P	21 44 49.3	+1.5
GRHS	Sauteurs	76.40	322	eP	P	21 44 51.3	+3.1
DCZ	Deep Cove	76.43	188	eP	P	21 44 51.2	+3.0
	comp=Z,225nm,1.2s						
MLZ	Mavora Lakes	76.45	189	eP	P	21 44 50.4	+2.0
	comp=Z,324nm,1.3s						
GRSS	Sisters	76.46	322	eP	P	21 44 52.1	+3.5
BBSP	Saint Philip	76.53	325	eP	P	21 44 51.1	+2.1
SDV	Santo Domingo	76.53	313	eP	P	21 44 49.4	+0.1
	comp=Z,278nm,1.0s						
SDV				LR	LR		
	comp=Z,22µm,21.0s						
SDV	Santo Domingo	76.53	313	eP	P	21 44 49.0	-0.3
ODZ	Otahua Downs	76.54	191	eP	P	21 44 50.8	+2.0
	comp=Z,290nm,1.4s						
BBGH	Gun Hill	76.60	325	eP	P	21 44 49.2	-0.2
	comp=Z,843nm,1.3s						
BBGH				LR	LR		
	comp=Z,15µm,22.0s						
BBGH	Gun Hill	76.60	325	eP	P	21 44 53.4	+4.0
WKZ	Wanaka	76.91	190	eP	P	21 44 52.7	+1.8
	comp=Z,1µm,1.9s						
PAYG	Puerto Ayora	76.93	290	eP	P	21 44 52.1	+0.7
	comp=Z,161nm,1.4s						
PAYG				LR	LR		
	comp=Z,8µm,20.0s						
SOLC	Bahia Solano	76.93	305	eP	P	21 44 52.5	+1.2
ZARC	Zaragoza, Cauc	76.98	308	eP	P	21 44 49.2	-2.5
OCAC	Ocana	77.02	310	eP	P	21 44 50.5	-1.5
FCV	Fort Charlotte	77.14	323	eP	P	21 44 54.5	+2.0
SVCV	St. Vincent, C	77.22	323	eP	P	21 44 54.5	+1.6
LBZ	Lake Benmore	77.23	191	eP	P	21 44 53.6	+0.8
	comp=Z,296nm,1.2s						
SVB	Belmont	77.25	323	eP	P	21 44 55.1	+2.0
SVV	Soufriere Volc	77.29	323	eP	P	21 44 55.0	+1.7
SSV	Crater Summit	77.29	323	eP	P	21 44 54.5	+1.1
SFAN	Fancy Village	77.33	323	eP	P	21 44 54.6	+1.1
UREC	San Jos de Ur	77.50	308	eP	P	21 44 53.8	-0.7
MCLT	Moule a Chique	77.57	324	eP	P	21 44 53.1	-1.8
	comp=Z,530nm,1.1s						
MCLT	Moule a Chique	77.57	324	eP	P	21 44 56.8	+1.9
MQZ	McQueen's Vall	77.64	192	eP	P	21 44 55.9	+0.8
	comp=Z,578nm,1.6s						
SLB	Belfond	77.71	323	eP	P	21 44 56.4	+0.7
CRLZ	Canterbury Las	77.78	192	eP	P	21 44 57.9	+2.1
	comp=Z,728nm,1.6s						
RPZ	Rata Peaks	77.81	191	P	P	21 44 58.0	+2.0
	comp=Z,64nm,0.9s,baz=168,slow=4.0,SNR=1.8						
RPZ	Rata Peaks	77.81	191	eP	P	21 44 57.2	+1.2
	comp=Z,1µm,1.9s						
SMLC	San Martn de	77.84	309	eP	P	21 44 54.5	-1.9
SLBI	Saint Lucia, B	77.87	324	eP	P	21 44 58.1	+1.6
OXZ	Oxford	78.09	192	eP	P	21 44 59.2	+1.7
	comp=Z,464nm,1.5s						
FOZ	Fox Glacier	78.12	190	eP	P	21 44 59.5	+1.8
	comp=Z,328nm,1.5s						
MVM	Montagne Vaucl	78.35	324	eP	P	21 45 00.6	+1.4
BIM	Bigot	78.37	324	eP	P	21 45 01.0	+1.7
TRMF	Trois Ilets	78.38	324	eP	P	21 45 01.1	+1.8
LPMF	Morne Lapointe	78.39	324	eP	P	21 45 01.0	+1.7
ZAM	Aeronautique	78.41	324	eP	P	21 45 00.8	+1.4
ILAM	Ilet Lapin Mar	78.55	324	eP	P	21 45 02.1	+1.9
FDF	Fort de France	78.59	324	eP	P	21 45 02.0	+1.4
	comp=Z,1µm,1.3s						
FDF	Fort de France	78.59	324	eP	P	21 45 02.0	+1.4
FDF	Fort de France	78.59	324	eP	P	21 45 02.6	+2.1
FDF	Fort de France	78.59	324	eP	P	21 45 02.0	+1.4
FDF				pmax	pmax		
	comp=Z,1µm,1.3s						
LTZ	Lake Taylor	78.60	192	eP	P	21 45 02.6	+2.1
	comp=Z,348nm,1.2s						
PML	Morne Lenard	78.65	324	eP	P	21 45 03.2	+2.4
GBMF	Grand Be	78.66	324	eP	P	21 45 02.2	+1.3
BAMF	Morne Balai	78.67	324	eP	P	21 45 01.8	+0.8
CXM	Morne La Croix	78.67	324	eP	P	21 45 03.2	+2.1
PCM	Pelee Case Pet	78.69	324	eP	P	21 45 03.3	+2.3
KHZ	Kahutara	78.81	193	eP	P	21 45 03.3	+1.8
	comp=Z,353nm,1.5s						
ARGC	Ariguani, Magd	78.86	310	eP	P	21 45 01.2	-0.9
DBCT	Belle View Cho	79.16	324	eP	P	21 45 07.8	+4.2
DPMT	Pointe Michel	79.16	324	eP	P	21 45 07.9	+4.3
TAU	Tasmania Unive	79.17	174	eP	P	21 45 04.0	+0.5
	comp=Z,178nm,0.9s						
TAU				LR	LR		
	comp=Z,13µm,18.0s						
TAU	Tasmania Unive	79.17	174	eP	P	21 45 04.0	+0.5
TAU				pmax	pmax		
	comp=Z,178nm,0.9s						
TAU				MLR	MLR		
	comp=Z,13µm,18.0s						
DLPL	La Plaine	79.19	324	eP	P	21 45 07.1	+3.3
MDN	Morne-Daniel	79.22	324	eP	P	21 45 08.1	+4.1
SJCC	San Jacinto, C	79.28	309	eP	P	21 45 03.2	-1.3
DWS	Wesley	79.43	324	eP	P	21 45 07.1	+2.1
MDPO	Dominica; Chan	79.48	324	eP	P	21 45 08.3	+3.0
THZ	Tophouse	79.53	193	PFAKE		21 45 20.0	+14
THZ				LR	LR		
	comp=Z,11µm,19.0s						
URIC	Uribia, Colomb	79.63	313	eP	P	21 45 05.8	-0.4
SNZO	South Karori	79.75	194	eP	P	21 45 08.6	+1.9
	comp=Z,412nm,1.1s						
SNZO				LR	LR		
	comp=Z,10µm,20.0s						
MAGL	Barre de l'ile	79.78	324	eP	P	21 45 08.5	+1.5
SMRC	Santa Marta, M	80.03	310	eP	P	21 45 09.2	+0.7
BFZ	Birch Farm	80.16	196	eP	P	21 45 08.0	-0.9
	comp=Z,245nm,1.0s						
QRZ	Quartz Range	80.50	193	eP	P	21 45 10.9	+0.1
	comp=Z,195nm,1.3s						
QRZ				LR	LR		
	comp=Z,8µm,19.0s						
BCIP	Isla Barro Col	80.61	304	PFAKE		21 45 20.0	+8.4
BCIP				LR	LR		
	comp=Z,5µm,20.0s						
MSEY	Mahe Island	80.63	84	eP	P	21 45 06.2	-5.6
	comp=Z,134nm,1.4s						
MSEY				LR	LR		
	comp=Z,7µm,19.0s						
MSEY	Mahe Island	80.63	84	eP	P	21 45 06.3	-5.5
MSEY				pmax	pmax		
	comp=Z,134nm,1.4s						
MSEY				MLR	MLR		
	comp=Z,7µm,19.0s						
MLYT	Lee's Yard	80.79	323	eP	P	21 45 14.2	+1.8
RKT	Rikitea	80.94	241	eS	S	21 55 14.1	-7.1
	comp=Z,4µm,37.5s						
RKT	Rikitea	80.94	241	eLQ	LQ	22 06 59.0	
	comp=Z,21µm,36.2s						
RKT				eLR	LR	22 10 23.6	
	comp=Z,25µm,27.0s						
BPA	Boggy Peak	80.99	324	eP	P	21 45 14.9	+1.4
SKI	Saint Kitts	81.54	323	eP	P	21 45 16.7	+0.3
	comp=Z,245nm,0.9s						
SKI	Saint Kitts	81.54	323	eP	P	21 45 17.9	+1.5
SKI	Saint Kitts	81.54	323	eP	P	21 45 16.7	+0.3
SKI				pmax	pmax		
	comp=Z,245nm,0.9s						
ANWB	Willy Bob	81.55	324	eP	P	21 45 14.8	-1.7
	comp=Z,241nm,0.8s						
ANWB	Willy Bob	81.55	324	eP	P	21 45 18.0	+1.6
BRU2	Volcan	81.56	302	eP	P	21 45 18.1	+1.2
BKZ	Black Stump Fm	81.61	196	eP	P	21 45 18.8	+2.1
	comp=Z,413nm,1.5s						
BKZ				LR	LR		
	comp=Z,9µm,21.0s						
SEUS	St. Eustatius	81.77	323	eP	P	21 45 19.8	+2.2
SABA	Saba	81.97	323	eP	P	21 45 18.3	-0.3
	comp=Z,431nm,1.2s						
SABA	Saba	81.97	323	eP	P	21 45 21.0	+2.3
SMRT	St. Maarten	82.32	323	eP	P	21 45 21.4	+1.0
URZ	Urewera	82.40	197	eP	P	21 45 22.8	+2.0
	comp=Z,462nm,1.5s						
URZ				LR	LR		
	comp=Z,7µm,18.0s						
HIZ	Hauiti	82.48	195	eP	P	21 45 22.6	+1.4
	comp=Z,452nm,1.5s						
HIZ				LR	LR		
	comp=Z,9µm,22.0s						
MXZ	Matakaoa Point	82.89	198	eP	P	21 45 25.4	+2.0
	comp=Z,243nm,1.3s						
MXZ				LR	LR		
	comp=Z,8µm,19.0s						
LCR2	La Lucha 2	82.99	301	eP	P	21 45 23.7	-0.6
CVTR	Volcan Turrial	83.12	301	eP	P	21 45 25.3	0.0
HDC	Heredia	83.27	301	eP	P	21 45 27.1	+1.4
	comp=Z,399nm,1.6s						
HDC				LR	LR		
	comp=Z,4µm,22.0s						
HDC	Heredia	83.27	301	eP	P	21 45 28.2	+2.5
CUPR	Culebra, Puert	83.28	321	eP	P	21 45 25.9	+0.5
	comp=Z,232nm,1.0s						
ABVI	Anegada Island	83.36	322	eP	P	21 45 26.4	+0.6
	comp=Z,208nm,1.0s						
SJG	San Juan	83.39	320	eP	P	21 45 26.6	+0.6
	comp=Z,106nm,0.9s						
SJG				LR	LR		
	comp=Z,8µm,22.0s						
SJG	San Juan	83.39	320	eP	P	21 45 26.6	+0.6
SJG				pmax	pmax		
	comp=Z,106nm,0.9s						
SJG				MLR	MLR		
	comp=Z,8µm,22.0s						
CBYP	Canovanas	83.44	321	eP	P	21 45 26.1	-0.3
	comp=Z,811nm,1.8s						
NWAO	Narrogin (SRO)	83.81	148	eP	P	21 45 29.2	+1.0
	comp=Z,223nm,1.6s						
NWAO				LR	LR		
	comp=Z,6µm,18.0s						
NWAO	Narrogin (SRO)	83.81	148	eP	P	21 45 29.2	+1.0
NWAO				pmax	pmax		
	comp=Z,223nm,1.6s						
NWAO				MLR	MLR		
	comp=Z,6µm,18.0s						
MPR	Mayaguez	83.82	319	eP	P	21 45 28.5	+0.3
	comp=Z,102nm,0.9s						
EMPR	Esperanza - Ma	83.86	320	eP	P	21 45 26.8	-1.6
	comp=Z,234nm,1.1s						
JTS	Las Juntas de	83.91	300	eP	P	21 45 31.3	+2.5
	comp=Z,545nm,2.0s						
JTS				LR	LR		
	comp=Z,4µm,21.0s						
JTS	Las Juntas de	83.91	300c	iP	P	21 45 30.6	+1.8
JTS				pmax	pmax		
	comp=Z,62nm,1.4s						
JTS	Las Juntas de	83.91	300	eP	P	21 45 26.1	-2.7
ARE1	Arenal 1	83.95	301	eP	P	21 45 30.3	+1.2
CEDE	Laguna Cedeo	83.97	301	eP	P	21 45 30.8	+1.6
AGP	Aguadilla	84.00	320	eP	P	21 45 28.2	-0.9
	comp=Z,255nm,1.3s						
PLVR	Palo Verde	84.14	300	eP	P	21 45 30.8	+0.6
TAM	Tamanrasset	84.27	27	eP	P	21 45 30.6	0.0
TAM				LR	LR		
	comp=Z,4µm,19.0s						
TAM	Tamanrasset	84.27	27	eP	P	21 45 30.6	0.0
TAM				MLR	MLR		
	comp=Z,4µm,19.0s						
TOO	Toolangi	84.37	172	eP	P	21 45 31.6	+0.6
	comp=Z,100nm,1.2s						
TOO				LR	LR		
	comp=Z,12µm,18.0s						
TOO	Toolangi	84.37	172	eP	P	21 45 31.7	+0.6
TOO				pmax	pmax		
	comp=Z,101nm,1.2s						
TOO				MLR	MLR		
	comp=Z,12µm,18.0s						
BUEV	Buena Vista	84.56	300	eP	P	21 45 32.7	+0.4
PRVC	Isla de Provid	85.03	305	eP	P	21 45 33.8	-0.6
BANI	BANI	85.13	317	eP	P	21 45 35.4	+0.3
ESPN	Las Esperanzas	85.29	302	PFAKE		21 45 50.0	+14
ESPN				LR	LR		
	comp=Z,4µm,20.0s						
ESPN	Las Esperanzas	85.29	302	eP	P	21 45 36.0	+0.2
ACON	Acoyapa	85.48	301	PFAKE		21 45 50.0	+13
ACON				LR	LR		
	comp=Z,3µm,22.0s						
ACON	Acoyapa	85.48	301	eP	P	21 45 35.6	-1.1
OUZ	Omahuta	85.89	195	PFAKE		21 45 50.0	+11
OUZ				LR	LR		
	comp=Z,10µm,20.0s						
SDDR	Presa de Saban	86.02	316	eP	P	21 45 40.5	+1.2
	comp=Z,443nm,2.0s						
SDDR				LR	LR		
	comp=Z,4µm,20.0s						
LGNH	Logne	86.08	315	eP	P	21 45 41.2	+1.6
	comp=Z,399nm,1.1s						
DESE	Dese	86.14	62	i P	P	21 45 43.0	+2.6
DESE	Dese	86.14	62	eP	P	21 45 44.5	+4.1
DESE	Dese	86.14	62	i P	P	21 45 43.0	+2.6
MACI	Morro de la Ar	86.20	7	eP	P	21 45 39.1	-1.1
	comp=Z,73nm,1.0s						
CNGN	Cerro Negro	86.65	300	eP	P	21 45 37.9	-4.7
MATN	Matagalpa	86.67	301	eP	P	21 45 40.8	-1.9
CAN	Canberra	86.83	174	eP	P	21 45 44.4	+1.0
	comp=Z,251nm,1.6s						
CAN				LR	LR		
	comp=Z,7µm,18.0s						
CAN	Canberra	86.83	174	eP	P	21 45 44.4	+1.0
CAN				pmax	pmax		
	comp=Z,251nm,1.6s						
CAN				MLR	MLR		
	comp=Z,7µm,18.0s						
TBI	Tubuai	87.02	229	ePP	PP	21 49 03.0	-4.0

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         comp=Z,312nm,28.0s
TBI                                 eS      S        21 56 17.1  -5.2
         comp=Z,6µm,28.0s
TBI                                 eSS     SS       22 02 03.5  -0.6
         comp=Z,2µm,27.1s
TBI                                 eLQ     LQ       22 09 29.5
         comp=Z,11µm,38.8s
TBI                                 eLR     LR       22 13 07.3
         comp=Z,8µm,32.8s,baz=153
ESTN     Estel            87.03 300 eP      P        21 45 44.6 +0.2
         comp=Z,446nm,2.0s
ESTN     Estel            87.03 300 eP      P        21 45 43.2  -1.2
MORW     Morawa           87.08 146 eP      P        21 45 45.3 +0.7
         comp=Z,74nm,1.2s
MORW                                 LR     LR
         comp=Z,4µm,20.0s
PCJ      Portland Cotta   87.16 310 i P     P        21 45 44.6  -0.3
CMJ      Castle Mountai   87.20 311 i P     P        21 45 48.7 +3.6
RCON     San Juan de Ri   87.26 301 eP      P        21 45 44.6  -1.1
STH      Stony Hill       87.32 311⇑iP      P        21 45 49.0 +3.2
DGAR     Diego Garcia     87.33 100  PFAKE           21 46 00.0  +14
DGAR                                 LR     LR
         comp=Z,8µm,18.0s
H08N3    Diego Garcia H   87.46  98  T      T        23 22 51.7
         baz=217,slow=76,SNR=12
H08N1    Diego Carcia H   87.47  98  T      T        23 22 52.3
         baz=217,slow=76,SNR=12
H08N2    Diego Garcia H   87.48  98  T      T        23 22 50.1
         baz=217,slow=76,SNR=18
MCJ      Malvern          87.54 310 i P     P        21 45 50.7 +3.8
MTDJ     Mount Denham     87.75 310 eP      P        21 45 48.7 +0.9
         comp=Z,247nm,1.3s
MTDJ                                 LR     LR
         comp=Z,6µm,18.0s
BBJ      Bamboo Saint A   87.78 311 i P     P        21 45 49.1 +1.1
SFNM     Sidi Ifni        87.84  12  P      P        21 45 53.0 +5.1
BBOO     Buckleboo        88.01 164 eP      P        21 45 50.8 +1.8
         comp=Z,56nm,1.0s
BBOO                                 LR     LR
         comp=Z,7µm,20.0s
ATD      Arta Tunnel      88.02  65  PFAKE           21 46 00.0  +11
ATD                                  LR     LR
         comp=Z,16µm,18.0s
GRTK     Grand Turk       88.28 317 eP      P        21 45 50.9 +0.8
         comp=Z,844nm,1.8s
GRTK                                 LR     LR
         comp=Z,5µm,18.0s
TGUH     Tegucigalpa,Un   88.28 300 eP      P        21 45 50.3  -0.2
         comp=Z,288nm,1.6s
TGUH                                 LR     LR
         comp=Z,5µm,22.0s
GTBY     Guantanamo Bay   88.33 313 eP      P        21 45 50.5 +0.1
         comp=Z,169nm,1.0s
GTBY                                 LR     LR
         comp=Z,7µm,20.0s
FORT     Forrest          88.53 156 eP      P        21 45 52.2 +0.7
         comp=Z,1µm,1.9s
FORT                                 LR     LR
         comp=Z,7µm,22.0s
TTIG     Tnine Tigouga,   89.24  14  P      P        21 46 01.0 +6.3
STKA     Stephens Creek   89.65 168  P      P        21 45 56.9 +0.2
         comp=Z,6.6nm,0.7s,baz=162,slow=4.4,SNR=15
STKA                                 S      SKSac    21 56 24.8  -1.6
         comp=Z,0.7nm,0.7s,baz=192,slow=12,SNR=2.1
STKA                                 PKKP   PKKPdf   22 03 18.6  -2.6
         comp=Z,1.4nm,0.7s,baz=331,slow=18,SNR=3.0
STKA                                 LR     LR       22 23 47.5
         comp=Z,13µm,19.5s,baz=184,slow=34
STKA     Stephens Creek   89.65 168 eP      P        21 45 58.3 +1.6
         comp=Z,93nm,1.8s
OUZM     OUZ              89.82  15  P      P        21 46 02.0 +4.6
OUK      Oukaimeden       89.96  14  P      P        21 46 04.0 +5.7
CBCY     The Bluff, Cay   90.02 309 eP      P        21 45 58.6 +0.2
         comp=Z,844nm,1.8s
EAH      EAH              90.19  12  P      P        21 46 06.0 +7.1
FSCY     Frank Sound, G   90.23 308 eP      P        21 45 60.0 +0.6
         comp=Z,174nm,1.1s
FUL      Funchal          90.55   6 eP      P        21 46 05.9 +5.4
         comp=Z,158nm,1.9s
PMAR     Madeira          90.62   6 eP      P        21 46 02.4 +1.3
         comp=Z,198nm,1.8s
PMOZ     Porto Moniz, M   90.71   6 eP      P        21 46 05.5 +4.1
         comp=Z,133nm,1.6s
PMOZ     Porto Moniz, M   90.71   6 eSKS    SKSac    21 56 40.5 +8.7
PMOZ     Porto Moniz, M   90.71   6 eLR     LR       22 14 28.6
         comp=Z,4µm,22.0s
PMOZ     Porto Moniz, M   90.71   6 eP      P        21 46 01.2  -0.2
LHI      Lord Howe Isla   90.75 183 eP      P        21 46 04.0 +2.2
         comp=Z,327nm,1.5s
GOLM     Goulmima         90.86  16  P      P        21 46 07.0 +4.8
PMPST    Porto Santo, M   91.01   7 eP      P        21 46 05.5 +2.8
         comp=Z,248nm,1.6s
SRHM     Skhour des Reh   91.20  14  P      P        21 46 08.0 +4.3
ARMA     Armidale         91.82 176 eP      P        21 46 08.6 +1.6
         comp=Z,130nm,1.6s
ARMA                                 LR     LR
         comp=Z,7µm,18.0s
FIGM     Figuig           91.88  19  P      P        21 46 12.0 +5.1
MDT      Midelt           92.00  16  P      P        21 46 12.3 +4.9
MDT      Midelt           92.00  16  P      P        21 46 12.6 +5.2
CZD      Col de Zad       92.15  16  P      P        21 46 14.0 +5.7
PPTF     Pamatai, Papee   92.22 231 eP      P        21 46 10.2 +1.2
         comp=Z,544nm,1.9s
PPTF                                 LR     LR
         comp=Z,14µm,22.0s
PPT2     Papeete2         92.23 231 ePP     PP       21 49 42.0  -6.7
         comp=Z,358nm,24.5s
PPT2                                eS      S        21 57 04.4  -6.7
         comp=Z,6µm,26.0s
PPT2                                eSS     SS       22 03 14.1  -5.9
         comp=Z,3µm,33.8s
PPT2                                eLQ     LQ       22 11 41.0
         comp=Z,4µm,24.2s
PPT2                                eLR     LR       22 15 33.0
         comp=Z,26µm,23.2s,baz=152
PPT      Papeete          92.25 231  LR     LR       22 18 03.0
         comp=Z,13µm,21.9s,baz=146,slow=29
PPT      Papeete          92.25 231 eP      P        21 46 10.3 +1.3
PPT      Papeete          92.25 231 eP      P        21 46 10.3 +1.3
ZHG      ZHG              92.33  15  P      P        21 46 13.1 +4.2
GIRL     Giralia          92.52 142 eP      P        21 46 10.2  0.0
         comp=Z,755nm,1.6s
IFR      Ifrane           92.61  16  Pdif   P        21 46 14.1 +3.8
IFR                                 eSKS    SKSac    21 56 46.9 +4.1
TDRA     Tendrara         92.63  19  P      P        21 46 16.0 +5.5
LCRM     LCR              92.82  16  P      P        21 46 17.0 +5.7
RAR      Rarotonga        92.83 221 eP      P        21 46 13.4 +1.8
         comp=Z,420nm,1.7s
RAR      Rarotonga        92.83 221 eP      P        21 46 13.5 +1.8
RAR                                  pmax   pmax
         comp=Z,420nm,1.7s
RTC      Rabat Centre     92.83  14  PFAKE           21 46 20.0 +8.9
RTC                                  LR     LR
         comp=Z,44µm,21.0s
TEIG     Tepich           94.13 302  S      SKSac    21 56 47.0  -4.3
         comp=Z,1.3nm,0.4s,baz=135,slow=2.9,SNR=2.4
TEIG     Tepich           94.13 302 eP      P        21 46 17.7 +0.3
         comp=Z,87nm,0.9s
TEIG                                 LR     LR
         comp=Z,4µm,19.0s
KAAM     Kaadhehdhoo      94.28  96 eP      P        21 46 17.0  -1.3
         comp=Z,295nm,1.5s
PVLZ     Peæn de          94.36  16  Pdif   P        21 46 19.8 +1.7
PVLZ                                i SKS   SKSac    21 56 50.4  -1.4
CMIG     Matias Romero    94.50 295  S      SKSac    21 56 51.6  -1.9
         comp=Z,1.5nm,0.9s,baz=176,slow=15,SNR=1.7
PSMA     Santa Maria      94.67 359 eP      P        21 46 23.5 +4.0
         comp=Z,150nm,1.7s
PSMN     Pico do Norte,   94.68 359 eP      P        21 46 20.3 +0.8
         comp=Z,181nm,1.6s
MELI     Melilla          94.69  17  Pdif   P        21 46 21.7 +2.1
CEU      Ceuta            94.92  15  Pdif   P        21 46 22.4 +1.8
CEU                                 i SKS   SKSac    21 56 56.6 +1.9
PSAA1    Pilbara Seismi   95.25 147  PFAKE           21 46 30.0 +7.2
PSAA1                                LR     LR
         comp=Z,5µm,19.0s
PSAA2    Pilbara Seismi   95.27 147  PFAKE           21 46 30.0 +7.1
PSAA2                                LR     LR
         comp=Z,5µm,18.0s
SFS      San Fernando     95.36  15  PFAKE           21 46 30.0 +7.4
SFS                                  LR     LR
         comp=Z,7µm,18.0s
SFS      San Fernando     95.36  15  Pdif   P        21 46 25.2 +2.6
SFS                                 i SKS   SKSac    21 57 01.4 +4.3
CMLA     Cha da Macela    95.44 359  PFAKE           21 46 30.0 +7.0
CMLA                                 LR     LR

         comp=Z,4µm,20.0s
BART     Pico Bartolome   95.46 359 eP      P        21 46 23.6 +0.4
         comp=Z,445nm,1.3s
MBWA     Marble Bar       95.62 147  PFAKE           21 46 40.0  +16
MBWA                                 LR     LR
         comp=Z,6µm,18.0s
PFVI     Vila Bisbo       95.69  12 eP      P        21 46 26.6 +2.5
         comp=Z,97nm,1.8s
PFVI     Vila Bisbo       95.69  12  PFAKE           21 46 40.0  +16
PFVI                                 LR     LR
         comp=Z,5µm,21.0s
TAOE     Nuku Hiva Isla   95.73 243 eS      S        21 57 33.8  -8.2
         comp=Z,958nm,26.9s
TAOE     Nuku Hiva Isla   95.73 243 eLQ     LQ       22 13 10.3
         comp=Z,9µm,37.2s
TAOE                                eLR     LR       22 17 13.9
         comp=Z,15µm,26.7s,baz=164
TAOE     Nuku Hiva Isla   95.73 243  PFAKE           21 46 40.0  +15
TAOE                                 LR     LR
         comp=Z,7µm,20.0s
MORF     Marmelete        95.89  12 eP      P        21 46 23.9  -1.3
MORF                                eSKSac  SKSac    21 57 00.7 +0.7
MORF                                 AMS    AMS      22 27 55.3
         comp=E,4µm,19.1s
MORF     Marmelete        95.89  12 eP      P        21 46 29.5 +4.4
         comp=E,79nm,1.9s
MORF     Marmelete        95.89  12 eP      P        21 46 23.8  -1.3
MORF                                e                21 57 00.6
LIJA     Lijar            95.90  15  Pdif   P        21 46 27.0 +1.8
061Z     Ochoppi          95.96 311  PFAKE           21 46 40.0  +14
061Z                                 LR     LR
         comp=Z,4µm,20.0s
061Z     Ochoppi          95.96 311  P      P        21 46 27.1 +1.5
         baz=153
PVAQ     Vaqueiros        96.09  13 eSKS    SKSac    21 57 03.7 +2.7
PVAQ                                eSS     SS       22 04 23.8 +7.6
PVAQ     Vaqueiros        96.09  13 eLR     LR       22 19 02.3
         comp=Z,5µm,18.0s
PVAQ     Vaqueiros        96.09  13  PFAKE           21 46 40.0  +14
PVAQ                                 LR     LR
         comp=Z,5µm,19.0s
BBSR     BB Station       96.23 327  PFAKE           21 46 40.0  +13
BBSR                                 LR     LR
         comp=Z,4µm,19.0s
PICO     Pico             96.24 357 eP      P        21 46 27.2 +0.5
         comp=Z,346nm,1.6s
060Z     West Palm Beac   96.30 311  P      P        21 46 28.2 +1.0
         baz=153
ROSA     Rosais           96.45 357  PFAKE           21 46 40.0  +12
ROSA                                 LR     LR
         comp=Z,6µm,22.0s
059Z     Ave Maria        96.59 311  P      P        21 46 29.9 +1.4
         baz=153
ASAR     Alice Springs    96.59 160  P      P        21 46 27.5  -1.4
         comp=Z,3.7nm,0.8s,baz=188,slow=3.9,SNR=16
ASAR                                 PP     PP       21 50 37.0  +15
         comp=Z,5.5nm,1.0s,baz=190,slow=8.0,SNR=5.1
ASAR                                 PKKPbc PKKPdf   22 03 08.1  -1.2
         comp=Z,2.2nm,0.8s,baz=21,slow=2.3,SNR=5.9
ASAR                                 PKPPKP          22 11 15.9
         comp=Z,1.1nm,1.1s,baz=100,slow=1.4,SNR=4.1
ASAR                                 LR     LR       22 28 37.2
         comp=Z,6µm,18.2s,baz=192,slow=35
AS31     Alice Springs    96.59 160 eP      P        21 46 30.6 +1.6
         comp=Z,6.8nm,0.7s
AS31                                 LR     LR
         comp=Z,200nm,18.0s
PNCL     Nicolau / Gran   96.69  12 eP      P        21 46 32.3 +3.6
         comp=Z,46nm,1.6s
060A     Indiantown       96.78 312  PFAKE           21 46 40.0  +11
060A                                 LR     LR
         comp=Z,8µm,22.0s
EIDS     Eidsvold         96.83 176  PFAKE           21 46 40.0  +10
EIDS                                 LR     LR
         comp=Z,7µm,20.0s
059A     Moore Haven      97.03 311  PFAKE           21 46 40.0 +9.4
059A                                 LR     LR
         comp=Z,7µm,20.0s
LIS      Lisbon           97.22  12 eP      P        21 46 29.5  -1.5
LIS                                 eSKSac  SKSac    21 57 07.5 +0.7
LIS                                 eSS     SS       22 04 30.4  -1.7
LIS                                  AMS    AMS      22 24 01.9
         comp=E,6µm,23.4s
LIS      Lisbon           97.22  12 eP      P        21 46 29.5  -1.5
LIS                                 e                21 57 07.4
LIS                                 eSS     SS       22 04 30.3  -1.8
H07S1    FLORES T-PHASE   97.23 355 eP      P        21 46 30.7  -0.4
058A     Arcadia          97.38 311  P      Pdif     21 46 33.4 +1.3
         baz=153
959A     Okeechobee       97.42 312  P      Pdif     21 46 34.1 +1.8
         baz=153
KEST     Kesra            97.58  27  P      P        21 46 32.1  -0.7
         comp=E,8.1nm,1.0s,baz=171,slow=3.6,SNR=7.3
KEST                                 PP     PP       21 50 28.6  -2.5
         comp=E,9.4nm,1.0s,baz=193,slow=6.2,SNR=6.0
KEST                                 S      SKSac    21 57 09.5 +0.5
         comp=E,1.2nm,0.6s,baz=79,slow=5.2,SNR=2.5
KEST                                 LR     LR       22 27 04.2
         comp=E,6µm,18.0s,baz=146,slow=33
KEST     Kesra            97.58  27 eP      P        21 46 32.5  -0.3
         comp=E,23nm,1.3s
KEST                                 LR     LR
         comp=Z,8µm,19.0s
ALMR     Almeirim         97.72  12 eP      P        21 46 31.8  -1.5
ALMR                                eSKSac  SKSac    21 57 10.2 +0.8
ALMR                                eSS     SS       22 04 37.7  -1.5
ALMR                                 AMS    AMS      22 24 47.4
         comp=Z,5µm,21.4s
ALMR     Almeirim         97.72  12 eP      P        21 46 31.8  -1.5
ALMR                                e                21 57 10.1
ALMR                                eSS     SS       22 04 37.6  -1.5
957A     Wimauma          98.10 311  PFAKE           21 46 50.0  +15
957A                                 LR     LR
         comp=Z,4µm,20.0s
PMRV     Marv??o          98.13  13 eP      Pdif     21 46 43.9 +8.7
         comp=Z,42nm,1.6s
PMRV     Marv??o          98.13  13 eSKS    SKSac    21 57 12.4 +0.9
PMRV                                eSS     SS       22 05 03.0  +18
PMRV     Marv??o          98.13  13 eLR     LR       22 19 38.3
         comp=Z,4µm,16.0s
DWPF     Disney Wildern   98.16 311  PFAKE           21 46 50.0  +14
DWPF                                 LR     LR
         comp=Z,8µm,21.0s
PCBR     Castelo Branco   98.53  13 eP      Pdif     21 46 44.0 +7.1
         comp=Z,21nm,1.8s
PAB      San Pablo        98.64  15  PFAKE           21 46 50.0  +12
PAB                                  LR     LR
         comp=Z,4µm,19.0s
COI      Coimbra          98.78  12  PFAKE           21 46 50.0  +12
COI                                  LR     LR
         comp=Z,8µm,22.0s
ESDC     Sonseca Array    98.83  16  P      P        21 46 37.7  -0.7
         comp=Z,0.6nm,0.6s,baz=184,slow=3.8,SNR=6.7
ESDC                                 S      SKSac    21 57 10.9  -4.2
         comp=Z,0.1nm,0.3s,baz=288,slow=30,SNR=2.4
ESDC                                 PKKP   PKKPdf   22 03 11.2 +2.2
         comp=Z,0.1nm,0.4s,baz=9.9,slow=3.0,SNR=2.9
ESDC                                 LR     LR       22 27 50.5
         comp=Z,4µm,19.1s,baz=185,slow=33
WDD      Wied Dalam       99.02  31  PFAKE           21 46 50.0  +11
WDD                                  LR     LR
         comp=Z,4µm,20.0s
PINNC    Pines Island,    99.07 191  PFAKE           21 46 50.0  +10
PINNC                                LR     LR
         comp=Z,6µm,19.0s
MTE      Manteigas        99.07  13 eP      Pdif     21 46 48.1 +8.7
MTE      Manteigas        99.07  13 eSKS    SKSac    21 57 18.0 +1.8
MTE                                 eSS     SS       22 05 00.6 +2.4
MTE      Manteigas        99.07  13 eLR     LR       22 19 36.6
         comp=Z,6µm,20.0s
658A     Bunnell          99.26 312  PFAKE           21 46 50.0  +10
658A                                 LR     LR
         comp=Z,6µm,21.0s
UCM      Universidad Co   99.55  16  Pdif   Pdif     21 46 43.8 +2.3
UCM                                 i SKS   SKSac    21 57 18.9 +0.3
RAYN     Ar Rayn          99.63  61  PFAKE           21 46 50.0 +7.7
RAYN                                 LR     LR
         comp=Z,11µm,18.0s
657A     Interlachen      99.65 312  P      Pdif     21 46 44.2 +2.0
         baz=153
DZM      Mont Dzumac      99.70 190 ePP     PP       21 50 44.5  -1.6
         comp=Z,660nm,29.8s
DZM                                 eSKSac  SKSac    21 57 15.3  -5.6
         comp=Z,2µm,28.4s
DZM      Mont Dzumac      99.70 190 ePS     PS       21 59 37.9  -6.1
         comp=Z,2µm,27.2s

DZM                                 eSS     SS       22 05 01.4  -3.8
         comp=Z,2µm,23.9s
DZM      Mont Dzumac      99.70 190 eLR     LR       22 19 06.0
         comp=Z,8µm,22.6s
DZM      Mont Dzumac      99.70 190  PFAKE           21 47 00.0  +17
DZM                                  LR     LR
         comp=Z,6µm,21.0s
656A     Willston         99.72 311  PFAKE           21 46 50.0 +7.5
656A                                 LR     LR
         comp=Z,8µm,20.0s
656A     Willston         99.72 311  P      Pdif     21 46 44.4 +1.9
         baz=153
MVO      Moncorvo         99.89  13 eSKS    SKSac    21 57 22.7 +2.4
MVO                                 eSS     SS       22 05 12.3 +2.7
MVO      Moncorvo         99.89  13 eLR     LR       22 20 15.7
         comp=Z,4µm,20.0s
MARNC    Mare, Loyalty   100.12 192  PFAKE           21 47 00.0  +15
MARNC                                LR     LR
         comp=Z,6µm,21.0s
556A     Lake Butler     100.23 312  P      Pdif     21 46 46.7 +1.9
         baz=152
CLTB     Caltabellotta   100.31  29  PFAKE           21 47 00.0  +15
CLTB                                 LR     LR
         comp=Z,6µm,18.0s
WR1      Warramunga Arr  100.31 160 ePdif   Pdif     21 46 46.9 +1.3
WRA      Warramunga Arr  100.31 160  Pdiff  Pdif     21 46 46.9 +1.3
         comp=Z,2.6nm,0.9s,baz=198,slow=5.0,SNR=5.3
WRA                                  PKKP   PKKPbc   22 03 00.2 +0.9
         comp=Z,3.1nm,1.1s,baz=5.7,slow=2.9,SNR=5.5
WB2      Warramunga Arr  100.31 160  PFAKE           21 47 00.0  +14
WB2                                  LR     LR
         comp=Z,7µm,21.0s
WRAB     Tennant Creek   100.32 160  PFAKE           21 47 00.0  +14
WRAB                                 LR     LR
         comp=Z,7µm,21.0s
WC1      Warramunga Arr  100.32 160  PFAKE           21 47 00.0  +14
WC1                                  LR     LR
         comp=Z,5µm,21.0s
EIL      Elat            100.38  49  S      SKSac    21 57 22.1  -1.0
         comp=Z,1.4nm,0.6s,baz=288,slow=6.4,SNR=2.1
MAHO     Mahon           100.45  22  Pdif   Pdif     21 46 48.1 +2.6
MAHO                                i SKS            21 57 25.8
PGAV     Gavieira, Arco  100.53  12 eSKS    SKSac    21 57 24.9 +1.4
PGAV                                eSS     SS       22 05 20.2 +1.5
PGAV     Gavieira, Arco  100.53  12 eLR     LR       22 20 14.1
         comp=Z,7µm,22.0s
555A     McAlpin         100.56 311  PFAKE           21 47 00.0  +14
555A                                 LR     LR
         comp=Z,9µm,21.0s
456A     Hilliard        100.72 312  PFAKE           21 47 00.0  +13
456A                                 LR     LR
         comp=Z,7µm,19.0s
553A     Crawfordville   101.21 310  P      Pdif     21 46 51.0 +2.0
         baz=152
257A     Skidaway Islan  101.44 314  PFAKE           21 47 00.0  +10
257A                                 LR     LR
         comp=Z,5µm,21.0s
IDI      Anoyia          101.68  39  S      SKSac    21 57 28.3  -1.0
         comp=Z,6.1nm,1.1s,baz=238,slow=15,SNR=1.9
453A     Whigham         101.75 310  PFAKE           21 47 00.0 +8.5
453A                                 LR     LR
         comp=Z,7µm,20.0s
CTAO     Charters Tower  101.78 171  PFAKE           21 47 00.0 +7.9
CTAO                                 LR     LR
         comp=Z,9µm,21.0s
KTHR     Kythira         101.95  37  P      PP       21 51 01.3  -2.8
255A     Hazlehurst      101.96 312  PFAKE           21 47 00.0 +7.6
255A                                 LR     LR
         comp=Z,4µm,21.0s
KTHA     Kythira Island  101.96  37  P      PP       21 51 01.9  -2.4
TIGA     Tifton          101.97 311  PFAKE           21 47 00.0 +7.6
TIGA                                 LR     LR
         comp=Z,8µm,22.0s
NHSC     New Hope        102.12 315  PFAKE           21 47 10.0  +17
NHSC                                 LR     LR
         comp=Z,4µm,20.0s
451A     Vernon          102.12 309  PFAKE           21 47 10.0  +17
451A                                 LR     LR
         comp=Z,4µm,18.0s
PYL      PYLOS           102.13  36  P      PP       21 51 01.9  -3.6
353A     Camilla         102.14 311  P      Pdif     21 46 54.8 +1.6
         baz=152
DYR      Agios Nikonas   102.19  37  P      PP       21 51 01.9  -4.1
Y60A     Bolivia         102.19 317  PFAKE           21 47 10.0  +17
Y60A                                 LR     LR
         comp=Z,3µm,19.0s
VLI      Veliai          102.34  37  P      PP       21 51 04.7  -2.4
ITM      Ithomi          102.44  36  P      PP       21 51 04.4  -3.5
352A     Blakely         102.55 310  PFAKE           21 47 10.0  +15
352A                                 LR     LR
         comp=Z,7µm,20.0s
ZKS      Zakynthos       102.57  35  P      PP       21 51 05.0  -3.8
155A     Kite            102.57 313  P      Pdif     21 46 56.9 +1.8
         baz=152
Y58A     Scranton        102.64 315  PFAKE           21 47 10.0  +15
Y58A                                 LR     LR
         comp=Z,5µm,20.0s
KARP     Karpathos       102.69  41  PFAKE           21 47 10.0  +14
KARP                                 LR     LR
         comp=Z,4µm,19.0s
253A     Americus        102.74 311  PFAKE           21 47 10.0  +14
253A                                 LR     LR
         comp=Z,7µm,21.0s
VLX      Vlachokerasia   102.76  36  P      PP       21 51 08.1  -2.3
TIP      Timpagrande     102.76  32  PFAKE           21 47 10.0  +14
TIP                                  LR     LR
         comp=Z,5µm,22.0s
154A     Montrose        102.81 312  PFAKE           21 47 10.0  +14
154A                                 LR     LR
         comp=Z,3µm,20.0s
252A     Lumpkin         102.92 311  P      Pdif     21 46 58.8 +2.1
         baz=152
KFL      Anninata        102.95  35  P      PP       21 51 08.7  -2.9
VLS      Valsamata       102.95  35  P      PP       21 51 08.4  -3.3
Y57A     Sumter          103.01 315  PFAKE           21 47 10.0  +13
Y57A                                 LR     LR
         comp=Z,3µm,20.0s
KRND     KRANIDI         103.02  37  P      PP       21 51 08.4  -3.8
X58A     Rowland         103.10 316  PFAKE           21 47 10.0  +13
X58A                                 LR     LR
         comp=Z,3µm,20.0s
RLS      Riolos of Patr  103.11  35  P      PP       21 51 11.1  -1.7
DID      Didima          103.16  37  P      PP       21 51 09.0  -4.3
FSK      Fiskardo        103.20  35  P      PP       21 51 09.6  -3.9
V61A     Roper           103.21 319  PFAKE           21 47 10.0  +12
V61A                                 LR     LR
         comp=Z,4µm,22.0s
GUR      Goura           103.27  36  P      PP       21 51 11.4  -2.8
KLV      Kalavryta, Ach  103.31  36  P      PP       21 51 11.4  -3.0
LNIG     Linares         103.36 296 ePdif   Pdif     21 46 59.6 +0.8
ASF      Jabal al Asfar  103.37  50  PP     PP       21 51 15.3 +0.4
         comp=Z,2.7nm,0.8s,baz=174,slow=5.6,SNR=5.1
ASF                                  S      SKSac    21 57 37.9 +0.4
         comp=Z,0.4nm,0.4s,baz=156,slow=20,SNR=1.6
V60A     Jim Taylor Roa  103.43 318  PFAKE           21 47 10.0  +11
V60A                                 LR     LR
         comp=Z,3µm,19.0s
LAKA     Lakka           103.43  36  P      PP       21 51 10.1  -5.2
TRAZ     Trapeza         103.44  36  P      PP       21 51 11.1  -4.3
W58A     Raeford         103.48 316  P      Pdif     21 47 00.4 +1.4
         baz=153
Y55A     Saluda          103.50 314  P      Pdif     21 47 01.0 +1.8
         baz=152
152A     Waverly Hall    103.50 311  PFAKE           21 47 10.0  +11
152A                                 LR     LR
         comp=Z,7µm,21.0s
152A     Waverly Hall    103.50 311  P      Pdif     21 47 01.0 +1.8
         baz=151
LOUT     Loutraki        103.52  37  P      PP       21 51 11.4  -4.5
250A     Grady           103.53 309  PFAKE           21 47 10.0  +11
250A                                 LR     LR
         comp=Z,5µm,22.0s
250A     Grady           103.53 309  P      Pdif     21 47 01.1 +1.8
         baz=151
LKD2     Lefkada island  103.53  35  P      PP       21 51 11.4  -4.6
Z53A     Monticello      103.59 312  P      Pdif     21 47 01.4 +1.8
         baz=152
SERG     Sergoula        103.62  36  P      PP       21 51 11.4  -5.3
KALE     Kalithea        103.62  36  P      PP       21 51 13.3  -3.5
PVO      Paravola        103.64  35  P      PP       21 51 14.5  -2.3
U61A     Possum Corner   103.65 319  P      Pdif     21 47 02.1 +2.3
         baz=154
VLY      Voula,Athens    103.66  37  P      PP       21 51 12.7  -4.2
GOGA     Godfrey         103.66 312  PFAKE           21 47 10.0  +10
GOGA                                 LR     LR
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	comp=Z,5µm,22.0s						
GOGA	Godfrey	103.66	312	P	Pdif	21 47 01.7	+1.8
	baz=152						
ATH	Athens Observa	103.74	37	P	PP	21 51 13.0	-4.5
ANX	Ano Chora	103.74	36	P	PP	21 51 13.9	-3.8
PROD	Prodromos	103.74	36	P	PP	21 51 14.2	-3.4
Y54A	Tignall	103.75	313	P	Pdif	21 47 02.6	+2.2
	baz=152						
ATHU	Athens Univers	103.75	37	P	PP	21 51 14.2	-3.5
DSF	Desfina	103.76	36	P	PP	21 51 10.5	-7.3
VILL	Villia	103.78	37	P	PP	21 51 13.6	-4.3
Z52A	Williamson	103.84	312	P	Pdif	21 47 02.6	+1.9
	baz=152						
PTL	Penteli	103.86	37	P	PP	21 51 14.5	-4.0
W57A	Gilead	103.87	316	PFAKE		21 47 10.0	+9.2
W57A				LR	LR		
	comp=Z,4µm,20.0s						
W57A	Gilead	103.87	316	P	Pdif	21 47 03.0	+2.2
	baz=153						
249A	Camden	103.88	309	P	Pdif	21 47 03.2	+2.2
	baz=151						
X55A	Gracelyn & Ava	103.89	314	P	Pdif	21 47 03.1	+2.3
	baz=152						
150A	Eclectic	103.98	310	P	Pdif	21 47 03.5	+2.1
	baz=151						
EVR	Evrytania	104.00	35	P	PKiKP	21 51 17.0	-1.6
PALK	Pallekele	104.06	99	PFAKE		21 47 10.0	+7.7
PALK				LR	LR		
	comp=Z,6µm,18.0s						
CISI	Cisompet, Garu	104.06	131	PFAKE		21 47 10.0	+7.6
CISI				LR	LR		
	comp=Z,4µm,20.0s						
KSL	Kastellorizon	104.09	42	P	PKiKP	21 51 16.6	-2.1
KEK	Kerkira	104.13	34	P	PKiKP	21 51 17.6	-1.1
LKR	Lokris	104.13	36	P	PKiKP	21 51 17.6	-1.1
U59A	Littleton	104.14	318	PFAKE		21 47 10.0	+8.0
U59A				LR	LR		
	comp=Z,4µm,20.0s						
ATAL	Atalanti	104.17	36	P	PKiKP	21 51 17.9	-0.9
EREA	Eretria	104.22	37	P	PKiKP	21 51 13.6	-5.3
AGG	Agios Georgios	104.26	36	P	PKiKP	21 51 18.8	-0.2
Y52A	Lilburn	104.29	312	PFAKE		21 47 20.0	+17
Y52A				LR	LR		
	comp=Z,5µm,21.0s						
Y52A	Lilburn	104.29	312	P	Pdif	21 47 04.6	+1.9
	baz=152						
SRN	Sarande	104.34	34	P	PKiKP	21 51 19.1	0.0
MRKA	Markates	104.37	37	P	PKiKP	21 51 18.5	-0.7
JAN	Janina	104.39	34	P	PKiKP	21 51 20.3	+1.1
CSS	Mathiatis	104.42	46	PFAKE		21 47 10.0	+6.7
CSS				LR	LR		
	comp=Z,3µm,21.0s						
T60A	Surry	104.48	319	PFAKE		21 47 20.0	+17
T60A				LR	LR		
	comp=Z,4µm,22.0s						
Z50A	Ashland	104.50	310	P	Pdif	21 47 05.1	+1.4
	baz=151						
T59A	Double "B" Far	104.61	318	PFAKE		21 47 20.0	+16
T59A				LR	LR		
	comp=Z,4µm,20.0s						
W54A	Cherokee Point	104.64	314	P	Pdif	21 47 05.8	+1.6
	baz=152						
V56A	Mocksville	104.64	316	PFAKE		21 47 20.0	+16
V56A				LR	LR		
	comp=Z,3µm,20.0s						
V56A	Mocksville	104.64	316	P	Pdif	21 47 06.6	+2.4
	baz=153						
THL	Klokotos Trika	104.66	35	P	PKiKP	21 51 22.2	+2.5
Z49A	Columbiana	104.70	310	P	Pdif	21 47 06.6	+2.0
	baz=151						
SKIA	Skiathos	104.75	37	P	PKiKP	21 51 21.6	+1.7
LRAL	Lakeview Retre	104.75	309	PFAKE		21 47 20.0	+15
LRAL				LR	LR		
	comp=Z,5µm,22.0s						
LRAL	Lakeview Retre	104.75	309	P	Pdif	21 47 06.2	+1.5
	baz=151						
U57A	Blanch	104.77	317	P	Pdif	21 47 06.6	+1.8
	baz=153						
UGM	Wanagama	104.81	133	PFAKE		21 47 20.0	+14
UGM				LR	LR		
	comp=Z,4µm,22.0s						
KPRO	Kipourio	104.82	35	P	PKiKP	21 51 23.4	+3.3
XOR	Xorichti	104.84	36	P	PKiKP	21 51 21.6	+1.5
KVTX	Kingsville	104.85	298	PFAKE		21 51 30.0	+10
KVTX				LR	LR		
	comp=Z,5µm,20.0s						
AQU	L'Aquila	104.85	28	PFAKE		21 47 20.0	+15
AQU				LR	LR		
	comp=Z,7µm,20.0s						
X52A	Dahlonega	104.88	313	P	PKiKP	21 51 21.8	+1.6
	baz=152						
MNAI	Manna	104.89	125	PFAKE		21 47 20.0	+14
MNAI				LR	LR		
	comp=Z,5µm,18.0s						
T58A	Grand View Acr	104.94	318	P	PKiKP	21 51 22.3	+2.0
	baz=153						
V55A	Taylorsville	104.95	315	P	PKiKP	21 51 22.4	+2.1
	baz=152						
PENT	Pentalofos	104.97	34	P	PKiKP	21 51 24.9	+4.5
Y50A	Piedmont	104.98	311	P	PKiKP	21 51 22.5	+2.0
	baz=151						
W53A	Cullowhee	105.09	313	P	PKiKP	21 51 22.3	+1.6
	baz=152						
NEST	Nestorio	105.15	34	P	PKiKP	21 51 27.1	+6.4
V54A	Nebo	105.16	315	P	PKiKP	21 51 22.8	+2.0
	baz=152						
X51A	Calhoun	105.22	312	PFAKE		21 51 30.0	+9.1
X51A				LR	LR		
	comp=Z,3µm,22.0s						
Y49A	Blount Mountai	105.23	310	PFAKE		21 51 30.0	+9.1
Y49A				LR	LR		
	comp=Z,8µm,20.0s						
T57A	Hurt	105.25	317	PFAKE		21 51 30.0	+9.2
T57A				LR	LR		
	comp=Z,3µm,22.0s						
T57A	Hurt	105.25	317	P	PKiKP	21 51 22.6	+1.8
	baz=153						
KZN	Kozani	105.27	35	P	PKiKP	21 51 24.0	+3.1
LIT	Litokhoron	105.30	35	P	PKiKP	21 51 26.1	+5.2
W52A	Murphy	105.32	313	PFAKE		21 51 30.0	+8.9
W52A				LR	LR		
	comp=Z,4µm,20.0s						
S58A	Poland Farm, P	105.36	318	PFAKE		21 51 30.0	+9.0
S58A				LR	LR		
	comp=Z,6µm,21.0s						
V53A	Saluda	105.39	314	PFAKE		21 51 30.0	+8.8
V53A				LR	LR		
	comp=Z,5µm,19.0s						
V53A	Saluda	105.39	314	P	PKiKP	21 51 21.5	+0.2
	baz=152						
X50B	Fort Payne	105.45	311	P	PKiKP	21 51 22.7	+1.3
	baz=151						
U55A	TA2, Sparta	105.46	316	P	PKiKP	21 51 22.0	+0.6
	baz=152						
PAIG	Paliouri	105.51	36	P	PP	21 51 27.4	-3.3
VBMS	Vicksburg	105.52	306	PFAKE		21 51 30.0	+8.5
VBMS				LR	LR		
	comp=Z,2µm,22.0s						
R58B	Mineral	105.62	319	PFAKE		21 51 30.0	+8.5
R58B				LR	LR		
	comp=Z,4µm,20.0s						
R58B	Mineral	105.62	319	P	PKiKP	21 51 22.4	+0.9
	baz=153						
JAGI	Jajag, Banyuwa	105.65	137	PFAKE		21 51 30.0	+7.6
JAGI				LR	LR		
	comp=Z,3µm,22.0s						
TIR	Tirane	105.66	33	PFAKE		21 51 30.0	+8.5
TIR				LR	LR		
	comp=Z,4µm,22.0s						
W51A	Cleveland	105.70	312	P	PKiKP	21 51 22.3	+0.6
	baz=151						
TKL	Tuckaleechee C	105.75	313	PP	PP	21 51 26.2	-6.3
	comp=Z,10nm,1.0s,baz=129,slow=9.2,SNR=5.4						
TKL				S	SKSac	21 57 44.2	-3.8
	comp=Z,0.7nm,0.5s,baz=218,slow=19,SNR=1.9						
U54A	Nelsons Funny	105.77	315	PFAKE		21 51 30.0	+8.1
U54A				LR	LR		
	comp=Z,4µm,19.0s						
S57A	Dark Hollow, R	105.82	318	PFAKE		21 51 30.0	+8.1
S57A				LR	LR		
	comp=Z,4µm,22.0s						
VLC	Villacollemand	105.84	25	PFAKE		21 51 30.0	+8.3
VLC				LR	LR		
	comp=Z,7µm,22.0s						
PLG	Polygyros	105.84	36	P	PP	21 51 30.1	-3.1
V52A	Sevierville	105.85	313	PFAKE		21 51 30.0	+8.0
V52A				LR	LR		
	comp=Z,5µm,22.0s						
V52A	Sevierville	105.85	313	P	PKiKP	21 51 22.8	+0.8
	baz=151						
BLA	Blacksburg	105.86	316	PFAKE		21 51 30.0	+8.0
BLA				LR	LR		
	comp=Z,3µm,21.0s						
KULA	Kula-Manisa	105.88	41	P	PP	21 51 30.8	-2.7
BNI	Bardonecchia	105.90	22	PFAKE		21 51 30.0	+8.0
BNI				LR	LR		
	comp=Z,8µm,22.0s						
ISP	Isparta	105.92	42	PFAKE		21 51 30.0	+7.8
ISP				LR	LR		
	comp=Z,3µm,18.0s						
THE	Thessaloniki	105.93	36	P	PKiKP	21 51 30.4	+8.5
HKT	Hockley	105.93	301	PFAKE		21 51 30.0	+7.8
HKT				LR	LR		
	comp=Z,2µm,22.0s						
HORT	Hortiatis	105.94	36	P	PP	21 51 31.1	-2.9
W50A	Signal Mountai	105.96	312	PFAKE		21 51 30.0	+7.7
W50A				LR	LR		
	comp=Z,3µm,21.0s						
W50A	Signal Mountai	105.96	312	P	PKiKP	21 51 23.6	+1.3
	baz=151						
R58A	Rapidan	105.96	319	P	PKiKP	21 51 23.4	+1.3
	baz=153						
LIA	Limnos Island	105.96	37	P	PP	21 51 29.2	-4.8
OUR	Ouranopolis	105.97	36	P	PP	21 51 31.1	-3.0
UOSS	Minazif	105.98	69	PFAKE		21 51 30.0	+7.4
UOSS				LR	LR		
	comp=Z,6µm,18.0s						
X48A	Hartselle	106.00	310	PFAKE		21 51 30.0	+7.7
X48A				LR	LR		
	comp=Z,6µm,20.0s						
V51A	Loudon	106.11	313	PFAKE		21 51 30.0	+7.5
V51A				LR	LR		
	comp=Z,4µm,21.0s						
PHP	Peshkopia	106.14	33	P	PP	21 51 31.1	-4.2
T54A	Tazewell	106.15	316	P	PKiKP	21 51 24.6	+2.0
	baz=152						
W49A	Belvidere	106.27	311	P	PKiKP	21 51 24.2	+1.4
	baz=151						
KNT	Kendrikon	106.39	35	P	PP	21 51 33.2	-4.0
VAY	Valandovo	106.44	35	*i* P	PP	21 51 44.2	+6.7
TZTN	Tazewell	106.44	314	PFAKE		21 51 40.0	+17
TZTN				LR	LR		
	comp=Z,3µm,18.0s						
THAS	Thassos island	106.46	37	P	PP	21 51 31.7	-5.9
TTG	Podgorica	106.48	32	PFAKE		21 51 30.0	+7.1
TTG				LR	LR		
	comp=Z,2µm,19.0s						
MTN	Manton Dam	106.54	155	PFAKE		21 51 40.0	+16
MTN				LR	LR		
	comp=Z,7µm,21.0s						
PSUB	Penn St. - Bra	106.55	321	PFAKE		21 51 40.0	+17
PSUB				LR	LR		
	comp=Z,5µm,21.0s						
SRS	Serrai	106.56	36	P	PP	21 51 33.8	-4.7
SMTH	Samothraki Isl	106.59	37	P	PP	21 51 34.4	-4.3
SKO	Skopje	106.69	34	*i* P	PP	21 51 37.8	-1.6
R55A	Marlinton	106.70	317	PFAKE		21 51 40.0	+16
R55A				LR	LR		
	comp=Z,4µm,22.0s						
T52A	Hallie	106.72	314	PFAKE		21 51 40.0	+16
T52A				LR	LR		
	comp=Z,4µm,18.0s						
KAVA	Kavala	106.75	36	P	PP	21 51 36.9	-2.9
NVR	Nevrokopi	106.86	36	P	PP	21 51 37.5	-3.2
PLAL	Pickwick Lake	106.88	310	PFAKE		21 51 40.0	+16
PLAL				LR	LR		
	comp=Z,7µm,21.0s						
NATX	Nacogdoches	106.94	303	PFAKE		21 51 40.0	+16
NATX				LR	LR		
	comp=Z,2µm,19.0s						
YLE	Yale	106.99	324	PFAKE		21 51 40.0	+16
YLE				LR	LR		
	comp=Z,5µm,19.0s						
PAL	Palisades	107.02	323	PFAKE		21 51 40.0	+16
PAL				LR	LR		
	comp=Z,4µm,21.0s						
OXF	Oxford	107.03	308	PFAKE		21 51 40.0	+16
OXF				LR	LR		
	comp=Z,6µm,22.0s						
V48A	Smith Brothers	107.03	311	PFAKE		21 51 40.0	+16
V48A				LR	LR		
	comp=Z,4µm,21.0s						
V48A	Smith Brothers	107.03	311	P	PKiKP	21 51 25.2	+1.0
	baz=150						
MMB	Musomiste	107.04	36	P	PP	21 51 35.0	-7.0
Q56A	Snyder Ridge,	107.04	318	P	PKiKP	21 51 26.1	+1.9
	baz=153						
KKB	Krupnik	107.09	35	P	PP	21 51 37.0	-5.3
BRYW	Bryant College	107.11	325	PFAKE		21 51 40.0	+16
BRYW				LR	LR		
	comp=Z,6µm,18.0s						
ALN	Alexandroupoli	107.15	38	P	PP	21 51 37.8	-4.9
RDO	Rodhopi	107.21	37	P	PP	21 51 38.4	-4.7
SENIN	Lac Senin/Sane	107.28	22	PFAKE		21 51 40.0	+15
SENIN				LR	LR		
	comp=Z,9µm,21.0s						
R53A	Hurricane	107.41	316	PFAKE		21 51 40.0	+15
R53A				LR	LR		
	comp=Z,4µm,22.0s						
S51A	Beattyville	107.42	314	PFAKE		21 51 40.0	+15
S51A				LR	LR		
	comp=Z,5µm,22.0s						
RZN	Rozhen	107.44	36	P	PP	21 51 35.0	-10
GSI	Gunungsitoli	107.45	117	PFAKE		21 51 40.0	+14
GSI				LR	LR		
	comp=Z,8µm,18.0s						
WES	Weston	107.47	325	PFAKE		21 51 40.0	+15
WES				LR	LR		
	comp=Z,6µm,19.0s						
COEN	Coen	107.53	167	PFAKE		21 51 40.0	+14
COEN				LR	LR		
	comp=Z,11µm,18.0s						
N59A	State Game Lan	107.55	322	PFAKE		21 51 40.0	+15
N59A				LR	LR		
	comp=Z,4µm,18.0s						
Q54A	Coxs Mills	107.58	317	PFAKE		21 51 40.0	+15
Q54A				LR	LR		
	comp=Z,4µm,22.0s						
HRV	Adam Dziewonsk	107.65	325	PFAKE		21 51 40.0	+15
HRV				LR	LR		
	comp=Z,5µm,19.0s						
QUA2	Belchertown	107.68	325	PFAKE		21 51 40.0	+15
QUA2				LR	LR		
	comp=Z,6µm,19.0s						
T49A	Edmonton	107.70	313	PFAKE		21 51 40.0	+15
T49A				LR	LR		
	comp=Z,4µm,20.0s						
SOEI	Soe	107.75	147	PFAKE		21 51 40.0	+14
SOEI				LR	LR		
	comp=Z,8µm,21.0s						
WVT	Waverly	107.77	310	PFAKE		21 51 40.0	+14
WVT				LR	LR		
	comp=Z,5µm,22.0s						
TUE	Stuetta	107.81	24	PFAKE		21 51 40.0	+14
TUE				LR	LR		
	comp=Z,6µm,20.0s						
MCWV	Mont Chateau	107.82	318	PFAKE		21 51 40.0	+14
MCWV				LR	LR		
	comp=Z,2µm,22.0s						
VTS	Vitosha	107.82	35	PFAKE		21 51 40.0	+14
VTS				LR	LR		
	comp=Z,3µm,21.0s						
VTS	Vitosha	107.82	35	⇑*i*P	PKiKP	21 51 41.6	+16
VTS	Vitosha	107.82	35	P	PKiKP	21 51 39.0	+13
O56A	Blue Knob Stat	107.91	319	PFAKE		21 51 40.0	+14
O56A				LR	LR		
	comp=Z,4µm,19.0s						
CLF	Chambon-Foret	107.95	18	PFAKE		21 51 40.0	+15
CLF				LR	LR		
	comp=Z,4µm,19.0s						
SSPA	Standing Stone	108.01	320	PFAKE		21 51 40.0	+14
SSPA				LR	LR		
	comp=Z,5µm,19.0s						
SSPA	Standing Stone	108.01	320	P	PKiKP	21 51 27.0	+1.1
	baz=153						
BLY	Banja Luka	108.06	30	PFAKE		21 51 40.0	+14
BLY				LR	LR		
	comp=Z,4µm,18.0s						
HPIG		108.08	292	PFAKE		21 51 40.0	+13
HPIG				LR	LR		
	comp=Z,4µm,19.0s						
Q52A	Bidwell	108.09	316	P	PKiKP	21 51 26.5	+0.4
	baz=152						
O55A	Ligonier	108.12	319	P	PKiKP	21 51 26.9	+0.8
	baz=152						
FUORN	Ofenpass-Fuorn	108.15	24	PFAKE		21 51 40.0	+14
FUORN				LR	LR		
	comp=Z,5µm,20.0s						
JCT	Junction City	108.21	298	PFAKE		21 51 40.0	+13
JCT				LR	LR		
	comp=Z,3µm,22.0s						
T47A	Sharon Grove	108.22	311	PFAKE		21 51 40.0	+14
T47A				LR	LR		
	comp=Z,3µm,21.0s						
T47A	Sharon Grove	108.22	311	P	PKiKP	21 51 27.4	+1.0
	baz=150						
P53A	Whipple	108.23	317	PFAKE		21 51 40.0	+14
P53A				LR	LR		
	comp=Z,4µm,22.0s						
P53A	Whipple	108.23	317	P	PKiKP	21 51 27.5	+1.2
	baz=152						
R50A	Paris	108.26	314	PFAKE		21 51 40.0	+14
R50A				LR	LR		
	comp=Z,5µm,22.0s						
BOJS	Bojanci	108.27	28	*i* Pdiff	Pdif	21 47 21.7	+1.6
BOJS				*e*PP	PP	21 51 48.2	-2.7
BOJS				*e*SKSac	SKSac	21 57 57.4	-1.0
BOJS				*e*SP	SP	22 01 13.6	+1.5
BOJS				*e*		22 07 13.7	
ISK	Istanbul-Kandi	108.30	40	P	PKiKP	21 51 46.1	+20
JAVS	Javornik	108.34	27	*e*Pdiff	Pdif	21 47 21.9	+1.4
JAVS				*e*PP	PP	21 51 49.7	-1.9
JAVS				*e*SKSac	SKSac	21 57 54.8	-4.2
JAVS				*i* SP	SP	22 01 10.7	-2.1
JAVS				*e*		22 07 12.7	
N56A	West Decatur	108.40	320	P	PKiKP	21 51 28.0	+1.4
	baz=153						
WHTX	Lake Whitney,	108.40	301	PFAKE		21 51 40.0	+13
WHTX				LR	LR		
	comp=Z,2µm,22.0s						
VISS	Visnje	108.45	28	*e*Pdiff	Pdif	21 47 27.0	+6.1
VISS				*e*PP	PP	21 51 49.3	-2.8
VISS				*e*SKSac	SKSac	21 57 58.0	-1.3
VISS				*e*SP	SP	22 01 12.0	-1.8
VISS				*e*		22 07 15.2	
X40A	Basin Creek Fa	108.46	306	PFAKE		21 51 40.0	+13
X40A				LR	LR		
	comp=Z,4µm,22.0s						
X40A	Basin Creek Fa	108.46	306	P	PKiKP	21 51 28.3	+1.4
	baz=148						
EMMW	East Machias	108.49	329	PFAKE		21 51 40.0	+13
EMMW				LR	LR		
	comp=Z,4µm,21.0s						
TRY	Troy	108.50	324	PFAKE		21 51 40.0	+13
TRY				LR	LR		
	comp=Z,4µm,20.0s						
MDUB	Mudurnu	108.51	42	PFAKE		21 51 40.0	+13
MDUB				LR	LR		
	comp=Z,8µm,18.0s						
N55A	Marion Center	108.52	319	PFAKE		21 51 40.0	+13
N55A				LR	LR		
	comp=Z,4µm,19.0s						
Q51A	Peebles	108.54	315	PFAKE		21 51 40.0	+13
Q51A				LR	LR		
	comp=Z,4µm,22.0s						
Q51A	Peebles	108.54	315	P	PKiKP	21 51 28.3	+1.4
	baz=151						
ANTO	Ankara	108.55	43	PFAKE		21 51 40.0	+13
ANTO				LR	LR		
	comp=Z,3µm,18.0s						
FFD	Franklin Falls	108.56	326	PFAKE		21 51 40.0	+13
FFD				LR	LR		
	comp=Z,5µm,21.0s						
R49A	Shelbyville	108.60	314	PFAKE		21 51 40.0	+13
R49A				LR	LR		
	comp=Z,2µm,20.0s						
R49A	Shelbyville	108.60	314	P	PKiKP	21 51 28.4	+1.3
	baz=150						
DAVA	Damuels	108.70	24	*i* Pdiff	Pdif	21 47 23.5	+1.3
	comp=Z,4.8nm,0.9s						
DAVA				*i* PKiKP	PKiKP	21 51 29.2	+2.1
	comp=Z,12nm,1.3s						
DAVA				*i* PKKPdf	PKKPdf	22 02 50.2	-0.6
	comp=Z,6.4nm,1.0s						
GGN	Saint George	108.70	330	PFAKE		21 51 40.0	+13
GGN				LR	LR		
	comp=Z,6µm,22.0s						
BRTR	Keskin Array B	108.73	44	PP	PP	21 51 42.9	-12
	comp=Z,3.4nm,1.0s,baz=194,slow=7.6,SNR=8.1						
BRTR				PKKPbc	PKKPbc	22 02 38.3	+3.3
	comp=Z,1.8nm,0.8s,baz=96,slow=2.0,SNR=9.1						
BRTR				PKKP	PKKPdf	22 02 51.9	+1.5
	comp=Z,2.2nm,0.7s,baz=112,slow=1.9,SNR=6.4						
BINY	Binghamton	108.77	322	PFAKE		21 51 40.0	+13
BINY				LR	LR		
	comp=Z,3µm,19.0s						
ABTA	Abfaltersbach	108.78	26	*i* PP	PP	21 51 52.4	-2.2
	comp=Z,22nm,1.6s						
W41B	Gary Mavity, V	108.79	307	P	PKiKP	21 51 28.1	+0.7
	baz=148						
MIAR	Mount Ida	108.83	305	PFAKE		21 51 40.0	+12
MIAR				LR	LR		
	comp=Z,3µm,22.0s						
O53A	New Philadelph	108.83	317	P	PKiKP	21 51 28.8	+1.4
	baz=152						
P51A	Williamsport	108.84	316	PFAKE		21 51 40.0	+13
P51A				LR	LR		
	comp=Z,4µm,21.0s						
SQTA	Sankt Quirin	108.92	25	*i* PKKPbc	PKKPbc	22 02 38.4	+3.8
	comp=Z,9.9nm,1.9s						
MYKA	Terra Mystica	108.93	27	*e*P	Pdif	21 47 29.1	+6.0
	comp=Z,3.7nm,1.5s						
MYKA				*i* PP	PP	21 51 55.9	+0.2
	comp=Z,19nm,1.3s						
O52A	Adamsville	108.94	317	PFAKE		21 51 40.0	+12
O52A				LR	LR		
	comp=Z,4µm,21.0s						
HNH	Hanover	108.96	325	PFAKE		21 51 40.0	+12
HNH				LR	LR		
	comp=Z,6µm,20.0s						
WVL	Waterville	108.97	327	PFAKE		21 51 40.0	+13
WVL				LR	LR		
	comp=Z,6µm,19.0s						
WCI	Wyandotte Cave	108.98	313	PFAKE		21 51 40.0	+12
WCI				LR	LR		
	comp=Z,4µm,22.0s						
MOTA	Moosalm	109.02	25	*e*sPKiKP	PKiKP	21 51 34.7	+7.0
	comp=Z,2.2nm,0.9s						
MOTA				*i* PKKPab	PKKPab	22 02 42.0	-1.9
	comp=Z,3.7nm,1.0s						
ECH	Echery	109.02	22	PFAKE		21 51 40.0	+12
ECH				LR	LR		
	comp=Z,6µm,22.0s						
N54A	Moraine State	109.03	319	PFAKE		21 51 40.0	+12
N54A				LR	LR		
	comp=Z,4µm,20.0s						
OBKA	Obir	109.03	27	*i* PP	PP	21 51 55.0	-1.5
	comp=Z,14nm,1.3s						
WTTA	Wattenberg	109.06	25	*i* Pdiff	Pdif	21 47 22.1	-1.7
	comp=Z,6.1nm,1.6s						
WTTA				*i* pPKiKP	PKiKP	21 51 31.3	+3.5
	comp=Z,10nm,1.4s						
DSRI	Dabo	109.07	125	P	Pdif	21 47 42.6	+18
RETA	Reutte	109.08	24	*i* pPdiff	pPdif	21 47 28.5	+0.6
	comp=Z,4.4nm,1.1s						
RETA				*i* PKKPdf	PKKPdf	22 02 49.1	-0.8
	comp=Z,5.6nm,1.0s						
TXAR	Lajitas Array	109.10	295	PKiKP	PKiKP	21 51 25.5	-2.9
	comp=Z,1.6nm,1.0s,baz=146,slow=5.1,SNR=2.8						
TXAR				PP	PP	21 51 44.0	-13
	comp=Z,3.2nm,1.0s,baz=167,slow=4.1,SNR=5.2						
TXAR				PKKP	PKKPdf	22 02 51.1	+2.1
	comp=Z,1.0nm,0.9s,baz=306,slow=4.5,SNR=5.0						
N53A	Lisbon	109.19	318	P	PKiKP	21 51 29.9	+1.8
	baz=152						
O51A	Pataskala	109.25	316	P	PKiKP	21 51 29.3	+1.1
	baz=151						
KBA	Koelnbreinsper	109.28	26	Pdiff	Pdif	21 47 23.8	-0.9
	comp=Z,4.1nm,1.1s						
KBA				*i* PKKPbc	PKKPbc	22 02 33.3	-0.2
	comp=Z,5.5nm,1.0s						
PERS	Pernice	109.29	28	*e*Pdiff	Pdif	21 47 30.8	+6.1
PERS				*e*PP	PP	21 51 57.6	-0.7
PERS				*e*SKSac	SKSac	21 58 01.5	-1.4
PERS				*e*SP	SP	22 01 25.8	+3.3
PERS				*e*		22 07 28.5	

SOKA	**Soboth**	**109.31**	**28**	*e*P	**Pdif**	**21 47 30.8**	**+6.0**
	comp=Z,3.3nm,1.1s						
SOKA				*i* PKiKP	**PKiKP**	**21 51 26.2**	**-2.0**
	comp=Z,2.9nm,1.1s						
SOKA				*i* PKKPab	**PKKPdf**	**22 02 46.3**	**-3.2**
	comp=Z,7.1nm,1.1s						
LBNH	**Lisbon**	**109.34**	**326**	PFAKE		21 51 40.0	+12
LBNH				LR	LR		
	comp=Z,5µm,21.0s						
BFO	**Black Forest**	**109.37**	**22**	PFAKE		21 51 40.0	+12
BFO				LR	LR		
	comp=Z,6µm,21.0s						
PSI	**Prapat**	**109.39**	**118**	PKKPbc	PKKPbc	22 02 35.4	+3.3
	comp=Z,3.8nm,0.4s,baz=203,slow=7.7,SNR=3.1						
PSI	**Prapat**	**109.39**	**118**	*e*Pdif	**Pdif**	**21 47 25.6**	**-0.5**
PSI	**Prapat**	**109.39**	**118**	*e*P	**Pdif**	**21 47 25.6**	**-0.5**
M54A	**Oil Creek Stat**	**109.40**	**319**	PFAKE		21 51 40.0	+12
M54A				LR	LR		
	comp=Z,3µm,20.0s						
PBMO	**Poplar Bluff**	**109.40**	**309**	PFAKE		21 51 40.0	+11
PBMO				LR	LR		
	comp=Z,6µm,22.0s						
ACSO	**Alum Creek Sta**	**109.46**	**316**	PFAKE		21 51 40.0	+11
ACSO				LR	LR		
	comp=Z,4µm,21.0s						
W39A	**Magazine**	**109.47**	**306**	PFAKE		21 51 40.0	+11
W39A				LR	LR		
	comp=Z,4µm,22.0s						
PKME	**Peaks-Kenny Pk**	**109.51**	**328**	PFAKE		21 51 40.0	+12
PKME				LR	LR		
	comp=Z,4µm,22.0s						
BEHE	**Becsehely**	**109.56**	**29**	*e*PKiKP	**PP**	**21 51 57.0**	**-3.2**
L55A	**Hinsdale**	**109.57**	**320**	P	**PKiKP**	**21 51 30.0**	**+1.2**
	baz=153						
PRD	**Provadia**	**109.66**	**38**	P	**PP**	**21 51 54.0**	**-7.0**
VT1	**Waterbury**	**109.67**	**325**	PFAKE		21 51 40.0	+11
VT1				LR	LR		
	comp=Z,6µm,20.0s						
P48A	**Milroy**	**109.71**	**314**	PFAKE		21 51 40.0	+11
P48A				LR	LR		
	comp=Z,4µm,20.0s						
MORH	**Mrgy, Hungar**	**109.81**	**30**	*e*PKiKP	**PP**	**21 51 57.1**	**-5.0**
MORH				*e*SP	SP	22 01 52.0	+24
MORH				⇑*e*SS	**SS**	**22 07 33.0**	**+7.8**
N51A	**Ashland**	**109.84**	**317**	PFAKE		21 51 40.0	+11
N51A				LR	LR		
	comp=Z,4µm,22.0s						
N51A	**Ashland**	**109.84**	**317**	P	**PKiKP**	**21 51 30.7**	**+1.4**
	baz=151						
BLO	**Bloomington**	**109.88**	**313**	PFAKE		21 51 40.0	+11
BLO				LR	LR		
	comp=Z,3µm,21.0s						
O49A	**Covington**	**109.93**	**315**	PFAKE		21 51 40.0	+11
O49A				LR	LR		
	comp=Z,6µm,22.0s						
ABTX	**Abilene, Hawle**	**109.93**	**300**	PFAKE		21 51 40.0	+10
ABTX				LR	LR		
	comp=Z,2µm,19.0s						
STU	**Stuttgart**	**109.97**	**23**	PFAKE		21 51 40.0	+11
STU				LR	LR		
	comp=Z,5µm,20.0s						
M52A	**Chesterland**	**110.02**	**318**	PFAKE		21 51 40.0	+10
M52A				LR	LR		
	comp=Z,4µm,22.0s						
ERPA	**Erie**	**110.05**	**319**	PFAKE		21 51 40.0	+10
ERPA				LR	LR		
	comp=Z,4µm,20.0s						
U40A	**Yellville**	**110.05**	**307**	P	**PKiKP**	**21 51 31.1**	**+1.3**
	baz=148						
WLF	**Walferdange**	**110.22**	**21**	⇑PP	**PP**	**21 52 03.2**	**-1.7**
MOA	**Molln**	**110.22**	**27**	*i* PKKPbc	PKKPbc	22 02 30.5	+0.2
	comp=Z,9.3nm,1.9s						
TIH	**Tihany**	**110.24**	**29**	*e*PKiKP	**PP**	**21 52 01.1**	**-4.1**
TIH				*e*SP	SP	22 01 47.0	+15
TIH				*e*SS	**SS**	**22 07 38.0**	**+7.0**
O48A	**Farmland**	**110.30**	**315**	P	**PKiKP**	**21 51 31.3**	**+1.1**
	baz=150						
DOU	**Dourbes**	**110.35**	**19**	⇓PP	**PP**	**21 52 04.3**	**-1.6**
FVM	**French Village**	**110.42**	**310**	PFAKE		21 51 40.0	+10
FVM				LR	LR		
	comp=Z,6µm,22.0s						
PQI	**Presque Isle**	**110.45**	**329**	PFAKE		21 51 40.0	+10
PQI				LR	LR		
	comp=Z,5µm,20.0s						
LONY	**Lake Ozonia**	**110.49**	**324**	PFAKE		21 51 40.0	+10
LONY				LR	LR		
	comp=Z,5µm,19.0s						
M50A	**Fremont**	**110.51**	**317**	PFAKE		21 51 40.0	+9.5
M50A				LR	LR		
	comp=Z,5µm,22.0s						
N49A	**Columbus Grove**	**110.51**	**316**	PFAKE		21 51 40.0	+9.5
N49A				LR	LR		
	comp=Z,4µm,21.0s						
N49A	**Columbus Grove**	**110.51**	**316**	P	**PKiKP**	**21 51 31.2**	**+0.7**
	baz=150						
P46A	**Rosedale**	**110.54**	**313**	P	**PKiKP**	**21 51 32.0**	**+1.3**
	baz=149						
LHMI	**Lhok Sumawe**	**110.57**	**115**	PFAKE		21 51 40.0	+8.5
LHMI				LR	LR		
	comp=Z,6µm,18.0s						
J54A	**Appleton**	**110.61**	**321**	PFAKE		21 51 40.0	+9.4
J54A				LR	LR		
	comp=Z,4µm,19.0s						
SOP	**Sopron**	**110.63**	**28**	*e*PKiKP	**PP**	**21 52 06.1**	**-1.9**
SOP				*e*SP	SP	22 01 51.0	+16
SOP				*e*SS	SS	22 07 49.1	+13
PECO	**Prince Edward**	**110.65**	**322**	P	**PKiKP**	**21 51 32.3**	**+1.6**
	baz=153						
CONA	**Conrad Observa**	**110.68**	**28**	pPdiff	pPdif	21 47 33.8	-1.3
	comp=Z,1.4nm,1.1s						
MYKOM	**Kota Tinggi**	**110.77**	**123**	PFAKE		21 51 40.0	+8.1
MYKOM				LR	LR		
	comp=Z,3µm,18.0s						
CCM	**Cathedral Cave**	**110.82**	**309**	PFAKE		21 51 40.0	+8.8
CCM				LR	LR		
	comp=Z,6µm,22.0s						
SLM	**Saint Louis**	**110.90**	**310**	PFAKE		21 51 40.0	+8.7
SLM				LR	LR		
	comp=Z,5µm,21.0s						
TUL1	**Leonard**	**110.95**	**304**	PFAKE		21 51 40.0	+8.5
TUL1				LR	LR		
	comp=Z,3µm,22.0s						
H56A	**Elgin**	**111.00**	**323**	P	**PKiKP**	**21 51 32.9**	**+1.6**
	baz=153						
GERES	**GERESS Array B**	**111.02**	**26**	PP	**PP**	**21 52 06.1**	**-4.8**
	comp=Z,2.3nm,0.8s,baz=190,slow=6.6,SNR=4.4						
GERES				PKKPbc	**PKKPbc**	**22 02 30.1**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=33,slow=3.2,SNR=4.4						
GERES				PKKP	**PKKPab**	**22 02 40.1**	**+5.0**
	comp=Z,0.8nm,0.7s,baz=11,slow=2.9,SNR=5.6						
TIRR	**Tirgusor**	**111.11**	**38**	PFAKE		21 51 40.0	+8.5
TIRR				LR	LR		
	comp=Z,5µm,21.0s						
SFIN	**Lafayette**	**111.15**	**313**	PFAKE		21 51 40.0	+8.3
SFIN				LR	LR		
	comp=Z,3µm,22.0s						
DRCO	**St. Marys Ceme**	**111.16**	**321**	P	**PKiKP**	**21 51 33.1**	**+1.5**
	baz=152						
DRWO	**Darlington Wes**	**111.17**	**321**	P	**PKiKP**	**21 51 33.0**	**+1.4**
	baz=152						
M48A	**Edgerton**	**111.20**	**315**	PFAKE		21 51 40.0	+8.2
M48A				LR	LR		
	comp=Z,5µm,22.0s						
M48A	**Edgerton**	**111.20**	**315**	P	**PKiKP**	**21 51 33.4**	**+1.6**
	baz=150						
MLR	**Muntele Rosu**	**111.25**	**35**	PP	**PP**	**21 52 16.1**	**+3.4**
	baz=200,slow=10.0						
MLR	**Muntele Rosu**	**111.25**	**35**	PFAKE		21 51 40.0	+8.0
MLR				LR	LR		
	comp=Z,4µm,20.0s						
MLR	**Muntele Rosu**	**111.25**	**35**	⇑*i*P	**PP**	**21 52 05.4**	**-7.3**
KHC	**Kasperske Hory**	**111.26**	**26**	*e*PKIKP	**PKiKP**	**21 51 28.8**	**-2.9**
KHC				*e*		21 52 08.7	
KHC				*e*		21 58 08.9	
KHC				MLR	MLR		
	comp=Z,4µm,19.9s						
KHC	**Kasperske Hory**	**111.26**	**26**	*e*PKP	**PKiKP**	**21 51 28.8**	**-2.9**
KHC				*e*PP	**PP**	**21 52 08.7**	**-3.9**
KHC				*e*SKS	**SKSac**	**21 58 08.9**	**-2.0**
KHC				PKKP	**PKKPab**	**22 02 31.0**	**-3.0**
KHC				AMS	AMS	22 33 50.0	
	comp=Z,4µm,19.9s						
GRA1	**Grafenberg Arr**	**111.26**	**24**	PFAKE		21 51 40.0	+8.3
GRA1				LR	LR		
	comp=Z,4µm,21.0s						
WMOK	**Wichita Mounta**	**111.30**	**302**	PFAKE		21 51 40.0	+7.7
WMOK				LR	LR		
	comp=Z,2µm,20.0s						
MODS	**Modra-Piesok**	**111.45**	**28**	*e*PP	**PP**	**21 52 12.2**	**-1.7**
AAM	**Ann Arbor**	**111.52**	**317**	PFAKE		21 51 40.0	+7.6
AAM				LR	LR		
	comp=Z,3µm,19.0s						
K50A	**Casco**	**111.56**	**318**	PFAKE		21 51 40.0	+7.6
K50A				LR	LR		
	comp=Z,4µm,22.0s						
PLVO	**Plevna**	**111.66**	**323**	P	**PKiKP**	**21 51 34.6**	**+2.1**
	baz=153						
CFR	**Carcaliu**	**111.66**	**37**	⇓*i*P	PKiKP	21 51 48.0	+15
SRIG	**Santa Rosalia**	**111.70**	**287**	PFAKE		21 51 50.0	+17
SRIG				LR	LR		
	comp=Z,6µm,18.0s						
PSZ	**Piszkesteto**	**111.71**	**30**	PFAKE		21 51 40.0	+7.3
PSZ				LR	LR		
	comp=Z,4µm,20.0s						
PSZ	**Piszkesteto**	**111.71**	**30**	*e*PKiKP	PP	21 52 06.0	-10
PSZ				*e*SP	SP	22 02 00.0	+15
PSZ				*e*SS	**SS**	**22 07 53.0**	**+2.2**
LTVH	**Ltavrtes, Hu**	**111.77**	**32**	*e*PKiKP	PP	21 52 05.1	-11
LTVH				*e*SP	SP	22 01 52.0	+6.2
LTVH				*e*SS	**SS**	**22 07 58.0**	**+6.6**
VRI	**Vrincioaia**	**111.83**	**36**	⇓*i*P	**PP**	**21 52 14.7**	**-2.0**
IPM	**Ipoh**	**111.85**	**119**	PFAKE		21 51 50.0	+16
IPM				LR	LR		
	comp=Z,5µm,21.0s						
TREC	**Trest**	**111.86**	**27**	*e*PP	**PP**	**21 52 14.6**	**-2.3**
TREC				AMS	AMS	22 35 40.0	
	comp=Z,4µm,18.9s						
KRUC	**Moravsky**	**111.87**	**28**	*e*PKIKP	**PKiKP**	**21 51 33.8**	**+1.0**
KRUC				*e*PP	**PP**	**21 52 14.2**	**-2.6**
KRUC				*e*SKS	**SKSac**	**21 58 10.9**	**-2.4**
KRUC				*e*PS	**SP**	**22 01 50.8**	**+4.1**
KRUC				*e*SS	**SS**	**22 07 55.7**	**+3.0**
VYHS	**Vyhne**	**111.96**	**29**	*e*PKIKP	PKiKP	21 51 44.8	+12
VYHS	**Vyhne**	**111.96**	**29**	*e*PKP	PKiKP	21 51 44.8	+12
VYHS				*e*PKKPpB		22 02 36.9	
JAVC	**Velka Javorina**	**112.00**	**28**	*e*PP	**PP**	**21 52 16.2**	**-1.7**
JAVC				*e*SKS	**SKSac**	**21 58 13.6**	**-0.3**
JAVC				*e*PS	PKKPbc	22 01 52.4	-32
JAVC				*e*SS	SS	22 08 08.8	+14
NKC	**Novy Kostel**	**112.04**	**24**	*e*PP	**PP**	**21 52 10.9**	**-7.2**
NKC				AMS	AMS	22 35 20.0	
	comp=Z,4µm,18.6s						
VRAC	**Vranov**	**112.14**	**28**	⇓*i*P	PKiKP	21 51 45.2	+12
VRAC	**Vranov**	**112.14**	**28**	⇓PKIKP	PKiKP	21 51 45.2	+12
VRAC	**Vranov**	**112.14**	**28**	*e*PP	**PP**	**21 52 16.2**	**-2.7**
VRAC				*e*SKS	**SKSac**	**21 58 13.1**	**-1.3**
VRAC				*e*PS	**SP**	**22 01 50.8**	**+1.6**
VRAC				*e*SS	**SS**	**22 07 58.8**	**+2.4**
L46A	**Eue Claire**	**112.25**	**315**	PFAKE		21 51 50.0	+16
L46A				LR	LR		
	comp=Z,5µm,21.0s						
GOPC	**GO Pecny, Ondr**	**112.27**	**26**	*e*PP	**PP**	**21 52 16.5**	**-3.3**
GOPC				*e*SKS	**SKSac**	**21 58 15.5**	**+0.6**
GOPC				AMS	AMS	22 36 40.0	
	comp=Z,3µm,19.3s						
PRU	**Pruhonice**	**112.29**	**26**	*e*PP	**PP**	**21 52 16.4**	**-3.4**
PRU				*e*SKS	**SKSac**	**21 58 15.1**	**+0.2**
PRU				AMS	AMS	22 32 50.0	
	comp=Z,4µm,21.4s						
M44A	**Midewin, Midew**	**112.38**	**313**	PFAKE		21 51 50.0	+16
M44A				LR	LR		
	comp=Z,4µm,20.0s						
KULM	**Kulim**	**112.39**	**118**	PFAKE		21 51 50.0	+15
KULM				LR	LR		
	comp=Z,6µm,20.0s						
J48A	**Bridge Port**	**112.43**	**317**	PFAKE		21 51 50.0	+16
J48A				LR	LR		
	comp=Z,4µm,21.0s						
PMG	**Port Moresby**	**112.43**	**171**	PFAKE		21 51 50.0	+15
PMG				LR	LR		
	comp=Z,10µm,18.0s						
HSIG		**112.43**	**289**	PFAKE		21 51 50.0	+15
HSIG				LR	LR		
	comp=Z,2µm,20.0s						
MSTX	**Muleshoe**	**112.50**	**298**	P	**PKiKP**	**21 51 36.8**	**+2.1**
	baz=146						
TRPA	**Tarpa**	**112.63**	**32**	⇓*i*P	PKiKP	21 51 44.0	+10
TRPA	**Tarpa**	**112.63**	**32**	*e*PKiKP	PP	21 52 05.0	-17
TRPA				*e*SP	SP	22 02 00.0	+6.3
TRPA				*e*SS	**SS**	**22 08 08.1**	**+5.2**
I49A	**Point Hope**	**112.64**	**318**	PFAKE		21 51 50.0	+16
I49A				LR	LR		
	comp=Z,4µm,19.0s						
HNR	**Honiara**	**112.68**	**185**	PFAKE		21 51 50.0	+14
HNR				LR	LR		
	comp=Z,5µm,19.0s						
AMTX	**Amarillo**	**112.75**	**300**	PFAKE		21 51 50.0	+15
AMTX				LR	LR		
	comp=Z,3µm,19.0s						
AMTX	**Amarillo**	**112.75**	**300**	P	**PKiKP**	**21 51 37.2**	**+2.1**
	baz=146						
J47A	**Sunmer**	**112.76**	**316**	PFAKE		21 51 50.0	+15
J47A				LR	LR		
	comp=Z,4µm,20.0s						
PVCC	**Panska Ves**	**112.80**	**26**	*e*SKS	**SKSac**	**21 58 17.5**	**+0.6**
PVCC				AMS	AMS	22 35 20.0	
	comp=Z,4µm,18.8s						
MORC	**Moravsky Berou**	**112.81**	**28**	*e*PP	**PP**	**21 52 21.6**	**-2.1**
MORC				*e*SKS	**SKSac**	**21 58 17.4**	**+0.3**
MORC				*e*PS	**SP**	**22 01 58.9**	**+3.5**
MORC				*e*SS	**SS**	**22 08 11.9**	**+6.5**
N41A	**Harden Midland**	**112.92**	**311**	PFAKE		21 51 50.0	+15
N41A				LR	LR		
	comp=Z,4µm,20.0s						
BURAR	**Bucovina Array**	**112.94**	**34**	⇑*i*P	PKiKP	21 51 45.1	+10
BURAR	**Bucovina Array**	**112.94**	**34**	⇑PKIKP	PKiKP	21 51 45.1	+10
BRG	**Berggiesshubel**	**112.98**	**25**	*e*PKP	PKiKP	21 51 17.7	-17
	comp=Z,2.7nm,1.2s						
BRG				*e*sPKP		21 51 41.5	
	comp=Z,60nm,2.3s						
BRG				*e*PKKP	**PKKPbc**	**22 02 19.4**	**-1.8**
	comp=Z,4.8nm,1.0s						
BRG				*e*PKPPKP		22 10 28.7	
	comp=Z,1.0nm,0.7s						
	comp=N,2µm,19.1s						
	comp=E,2µm,19.2s						
	comp=Z,4µm,18.9s						
UZH	**Uzhgorod**	**113.02**	**32**	*e*PKIKP	**PKiKP**	**21 51 40.8**	**+5.8**
UZH				*e*		22 01 59.0	
UZH				*i*		22 03 03.0	
UZH				*e*		22 08 02.0	
OKC	**Ostrava-Krasne**	**113.02**	**28**	*e*PP	**PP**	**21 52 20.2**	**-4.9**
OKC				*e*SKS	**SKSac**	**21 58 19.1**	**+1.3**
OKC				AMS	AMS	22 39 10.0	
	comp=Z,4µm,17.1s						
E53A	**Dumoine, Ponti**	**113.04**	**323**	P	**PKiKP**	**21 51 36.9**	**+1.7**
	baz=152						
DPC	**Dobruska-Polom**	**113.05**	**27**	*e*PP	**PP**	**21 52 22.2**	**-3.1**
DPC				*e*SKS	**SKSac**	**21 58 18.2**	**+0.2**
DPC				AMS	AMS	22 36 20.0	
	comp=Z,2µm,18.5s						
UPC	**Upice**	**113.12**	**27**	*e*PP	**PP**	**21 52 21.3**	**-4.5**
UPC				*e*SKS	**SKSac**	**21 58 18.6**	**+0.4**
UPC				AMS	AMS	22 35 50.0	
	comp=Z,3µm,19.6s						
CLL	**Collm**	**113.17**	**24**	PFAKE		21 51 50.0	+15
CLL				LR	LR		
	comp=Z,3µm,20.0s						
CLL	**Collm**	**113.17**	**24**	*e*Pdif	**Pdif**	**21 47 41.0**	**-0.7**
CLL				*i*		21 51 46.7	
CLL				*e*		21 51 54.0	
CLL				*e*PP	**PP**	**21 52 25.0**	**-1.1**
	comp=Z,111nm,2.6s						
CLL				*e*PPP	PPP	21 54 49.0	
	comp=Z,35nm,1.8s						
CLL				*e*SKSac	**SKSac**	**21 58 18.0**	**-0.3**
CLL				*e*SKKSac	**SKKSac**	**21 59 27.0**	**+1.1**
CLL				*e*Sdif	Sdif	22 00 12.0	+6.0
CLL				*e*SP	SP	22 01 55.0	-3.5
CLL				*e*PS	**PS**	**22 02 04.0**	**+3.4**
CLL				*e*PKKPbc	**PKKPab**	**22 02 24.0**	**-1.4**
CLL				*e*PKKPab	**PKKPdf**	**22 02 36.0**	**-6.1**
CLL				*e*RPKKPdf		22 02 42.0	
CLL				*e*PPS	PPS	22 03 12.0	
CLL				*e*SKKPdf	**SKKPbc**	**22 06 15.0**	**+8.4**
CLL				*e*SS	**SS**	**22 08 12.0**	**+2.0**
CLL				*e*		22 08 36.0	
CLL				*e*SSS	SSS	22 12 12.0	
CLL				*e*		22 13 30.0	
CLL				*e*		22 14 12.0	
CLL				*e*SKPPKPdf		22 14 35.0	
XMAS	**Kiritimati**	**113.19**	**232**	PFAKE		21 51 50.0	+13
XMAS				LR	LR		
	comp=Z,8µm,20.0s						
NIE	**Niedzica**	**113.19**	**30**	*e*PKP	PKiKP	21 51 53.0	+18
NIE				*e*PP	**PP**	**21 52 25.5**	**-0.9**
NIE				*e*SKS		22 02 03.2	
NIE				*e*PS	PKKPbc	22 02 05.4	-15
NIE				*e*SS	**SS**	**22 08 15.3**	**+4.8**
NIE				LMZ	LR	22 27 38.1	
	comp=Z,3µm,42.3s						
CHVC	**Chvalec**	**113.20**	**27**	*e*PP	**PP**	**21 52 21.0**	**-5.4**
CHVC				AMS	AMS	22 35 50.0	
	comp=Z,3µm,20.1s						
OSTC	**Ostas**	**113.21**	**27**	*e*PP	**PP**	**21 52 21.2**	**-5.3**
OSTC				AMS	AMS	22 36 00.0	
	comp=Z,3µm,18.9s						
KSM	**Kuching**	**113.26**	**129**	PFAKE		21 51 50.0	+13
KSM				LR	LR		
	comp=Z,3µm,18.0s						
KOLS	**Kolonicke sedl**	**113.29**	**31**	*e*PKP	PKiKP	21 51 49.3	+14
I47A	**Gladwin**	**113.32**	**317**	PFAKE		21 51 50.0	+14
I47A				LR	LR		
	comp=Z,3µm,19.0s						
GNI	**Garni**	**113.44**	**51**	PFAKE		21 51 50.0	+14
GNI				LR	LR		
	comp=Z,4µm,19.0s						
SIM	**Simferopol'**	**113.47**	**41**	*i* PKIKP	**PKiKP**	**21 51 37.6**	**+1.6**
SIM				*e*		21 52 38.0	
SIM				*e*PPP	PPP	21 54 59.0	
SIM				pmax	pmax		
	comp=Z,72nm,9.1s						
SIM				pmax	pmax		
	comp=Z,140nm,9.3s						
H48A	**Harrisville**	**113.48**	**318**	PFAKE		21 51 50.0	+14
H48A				LR	LR		
	comp=Z,3µm,18.0s						
KSP	**Ksiaz**	**113.49**	**27**	*e*PS	PS	22 02 06.6	+3.1
KIS	**Kishinev**	**113.50**	**37**	*e*PKP	**PKiKP**	**21 51 41.0**	**+5.0**
KIS				*e*pPKP	**PP**	**21 52 28.0**	**-0.5**
KIS	**Kishinev**	**113.50**	**37**	*i* PP	**PP**	**21 52 34.0**	**+5.5**
	comp=Z,400nm,7.0s						
KIS				*e*SKS	**SKSac**	**21 58 18.0**	**-1.8**
KIS				*e*SKKS	**SKKSac**	**21 59 23.0**	**-5.3**
KIS	**Kishinev**	**113.50**	**37**	*e*PS	PS	22 02 05.0	+1.4
KIS				LRM	MLR	22 39 00.0	
	comp=Z,1µm,20.0s						
KIS	**Kishinev**	**113.50**	**37**	*e*PKIKP	**PKiKP**	**21 51 41.0**	**+5.0**
KIS				*i*		21 52 34.0	
KIS				*e*		21 58 18.0	
KIS				*e*PS	**PS**	**22 02 05.0**	**+1.4**
KIS				pmax	pmax		
	comp=N,400nm,7.0s						
J45A	**Montague**	**113.51**	**315**	PFAKE		21 51 50.0	+14
J45A				LR	LR		
	comp=Z,5µm,21.0s						
L42A	**Oliver, Polo**	**113.54**	**312**	PFAKE		21 51 50.0	+14
L42A				LR	LR		
	comp=Z,3µm,20.0s						
K43A	**Burlington**	**113.62**	**314**	PFAKE		21 51 50.0	+14
K43A				LR	LR		
	comp=Z,5µm,22.0s						
D53A	**Lac Vacive, Po**	**113.67**	**323**	PFAKE		21 51 50.0	+14
D53A				LR	LR		
	comp=Z,5µm,19.0s						
OJC	**Ojcow**	**113.80**	**29**	*e*PKP	**PKiKP**	**21 51 43.5**	**+7.0**
OJC				*e*PP	**PP**	**21 52 27.2**	**-3.4**
OJC				*e*PS	**PKKPbc**	**22 02 18.7**	**+0.3**
OJC				LMZ	LR	22 34 56.6	
	comp=Z,4µm,22.4s						
OJC	**Ojcow**	**113.80**	**29**	*e*PKIKP	**PKiKP**	**21 51 43.5**	**+7.0**
OJC				*e*		21 52 27.2	
OJC				MLR	MLR		
	comp=Z,4µm,22.4s						
D52A	**ZEK Kipawa Sen**	**113.81**	**323**	P	**PKiKP**	**21 51 37.8**	**+1.2**
	baz=152						
I45A	**Fountain**	**113.96**	**316**	PFAKE		21 51 50.0	+13
I45A				LR	LR		
	comp=Z,4µm,21.0s						
KSU1	**Kansas State U**	**113.97**	**306**	PFAKE		21 51 50.0	+13
KSU1				LR	LR		
	comp=Z,4µm,20.0s						
KNTN	**Kanton**	**114.02**	**216**	PFAKE		21 51 50.0	+12
KNTN				LR	LR		
	comp=Z,4µm,19.0s						
KWP	**Kalwaria Pacla**	**114.04**	**31**	PFAKE		21 51 50.0	+13
KWP				LR	LR		
	comp=Z,42µm,19.0s						
GLMI	**Grayling**	**114.05**	**317**	PFAKE		21 51 50.0	+13
GLMI				LR	LR		
	comp=Z,3µm,18.0s						
L40A	**Anamosa**	**114.21**	**311**	PFAKE		21 51 50.0	+12
L40A				LR	LR		
	comp=Z,3µm,22.0s						
ESK	**Eskdalemuir**	**114.27**	**13**	PFAKE		21 51 50.0	+13
ESK				LR	LR		
	comp=Z,7µm,21.0s						
SOC	**Sochi**	**114.34**	**46**	*i* PKIKP	PKPdf	21 51 26.9	-11
SOC				*e*PS	**PKKPbc**	**22 02 09.8**	**-6.5**
SOC				*e*SS	SS	22 08 39.3	+14
ANN	**Anapa**	**114.53**	**44**	*i* PKIKP	PKPdf	21 51 36.7	-1.3
ANN				*e*		21 58 15.4	
ANN				pmax	pmax		
	comp=Z,52nm,1.4s						
JFWS	**Jewell Farm**	**114.54**	**312**	PFAKE		21 51 50.0	+12
JFWS				LR	LR		
	comp=Z,3µm,19.0s						
JFWS	**Jewell Farm**	**114.54**	**312**	P	**PKiKP**	**21 51 39.8**	**+1.7**
	baz=148						
Y22D	**IRIS PASSCAL I**	**114.56**	**295**	PFAKE		21 51 50.0	+11
Y22D				LR	LR		
	comp=Z,4µm,18.0s						
LVV	**L'vov**	**114.58**	**32**	*i* PKIKP	**PKiKP**	**21 51 45.0**	**+7.0**
LVV				*e*		21 52 33.0	
LVV				*e*PPP	PPP	21 55 10.0	
LVV				*e*		21 58 20.0	
LVV				MLR	MLR		
	comp=Z,1µm,20.0s						
E48A	**Lockeyer**	**114.62**	**320**	P	**PKiKP**	**21 51 39.4**	**+1.2**
	baz=150						
I42A	**Draeger Farm,**	**114.85**	**314**	PFAKE		21 51 50.0	+11
I42A				LR	LR		
	comp=Z,5µm,22.0s						
SCIA	**State Center**	**114.88**	**310**	PFAKE		21 51 50.0	+11
SCIA				LR	LR		
	comp=Z,5µm,19.0s						
H43A	**Windswept, Lux**	**114.91**	**315**	PFAKE		21 51 50.0	+11
H43A				LR	LR		
	comp=Z,3µm,21.0s						
SBUM	**Sibu**	**114.93**	**131**	PFAKE		21 51 50.0	+10
SBUM				LR	LR		
	comp=Z,3µm,22.0s						
E47A	**Iron Bridge**	**114.98**	**319**	P	**PKiKP**	**21 51 40.9**	**+2.1**
	baz=150						
TUC	**Tucson**	**115.02**	**291**	PFAKE		21 51 50.0	+10
TUC				LR	LR		
	comp=Z,5µm,22.0s						
TUC	**Tucson**	**115.02**	**291**	P	**PKiKP**	**21 51 40.6**	**+1.0**
	baz=144						
ANMO	**Albuquerque**	**115.05**	**296**	PKP	**PKPdf**	**21 51 39.6**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=122,slow=6.9,SNR=5.6						
ANMO				PKKPab	**PKKPab**	**22 02 17.6**	**-1.5**
	comp=Z,2.2nm,0.9s,baz=176,slow=2.8,SNR=7.2						
ANMO				PKKP	**PKKPdf**	**22 02 31.0**	**-7.0**
	comp=Z,6.4nm,1.2s,baz=311,slow=5.2,SNR=3.5						
ANMO	**Albuquerque**	**115.05**	**296**	PFAKE		21 51 50.0	+10
ANMO				LR	LR		
	comp=Z,5µm,21.0s						
ANMO	**Albuquerque**	**115.05**	**296**	P	**PKiKP**	**21 51 40.7**	**+1.0**
	baz=144						
CBKS	**Cedar Bluff**	**115.10**	**303**	PFAKE		21 51 50.0	+11
CBKS				LR	LR		
	comp=Z,4µm,21.0s						
CBKS	**Cedar Bluff**	**115.10**	**303**	P	**PKiKP**	**21 51 41.2**	**+1.7**
	baz=145						
CHGQ	**Chibougamau**	**115.17**	**327**	P	**PKiKP**	**21 51 41.2**	**+2.1**
	baz=153						
LSQQ	**Lebel-sur-Quev**	**115.20**	**325**	P	**PKiKP**	**21 51 40.9**	**+1.7**
	baz=152						
E46A	**Sault Ste Mari**	**115.27**	**318**	PFAKE		21 51 50.0	+11
E46A				LR	LR		
	comp=Z,4µm,22.0s						
E46A	**Sault Ste Mari**	**115.27**	**318**	P	**PKiKP**	**21 51 41.4**	**+2.0**

	baz=149						
I41A	**Arkdale**	**115.36**	**313**	PFAKE		21 51 50.0	+10
I41A				LR	LR		
	comp=Z,5µm,22.0s						
I41A	**Arkdale**	**115.36**	**313**	P	**PKiKP**	**21 51 41.5**	**+1.8**
	baz=147						
D47A	**Chapleau**	**115.44**	**320**	P	**PKiKP**	**21 51 41.6**	**+1.8**
	baz=150						
BEL	**Belsk**	**115.53**	**29**	*e*PKP	**PP**	**21 52 41.2**	**-1.6**
BEL				*e*SKS		22 02 27.7	
BEL				LMZ	LR	22 29 02.7	
	comp=Z,4µm,39.1s						
LUWI	**Luwuk**	**115.53**	**143**	PFAKE		21 51 50.0	+9.0
LUWI				LR	LR		
	comp=Z,2µm,19.0s						
D46A	**Sault St. Mari**	**115.62**	**319**	P	**PKiKP**	**21 51 41.9**	**+1.8**
	baz=149						
KBZ	**Khabaz**	**115.70**	**48**	PKP	**PKPdf**	**21 51 37.8**	**-2.6**
	comp=Z,0.8nm,0.7s,baz=88,slow=11,SNR=2.0						
KBZ				PP	**PP**	**21 52 36.4**	**-7.7**
	comp=Z,4.0nm,1.0s,baz=210,slow=8.6,SNR=4.3						
KBZ				PKKPab	**PKKPab**	**22 02 16.6**	**+1.4**
	comp=Z,5.0nm,0.9s,baz=45,slow=1.4,SNR=6.7						
KBZ				PKKP	**PKKPdf**	**22 02 34.3**	**-2.6**
	comp=Z,2.6nm,0.9s,baz=63,slow=2.3,SNR=2.8						
AKT	**Akhty**	**115.80**	**53**	*e*PKIKP	**PKiKP**	**21 51 41.9**	**+1.1**
AKT				*e*		21 52 42.1	
AKT				*e*		21 55 15.0	
AKT				pmax	pmax		
	comp=Z,12nm,0.7s						
KIV	**Kislovodsk**	**115.81**	**48**	*e*PKPdf	**PKiKP**	**21 51 40.7**	**+0.1**
KIV				LR	LR		
	comp=Z,3µm,18.0s						
KIV	**Kislovodsk**	**115.81**	**48**	*i* PKIKP	**PKiKP**	**21 51 40.9**	**+0.2**
KIV				*e*		21 52 46.6	
KIV				*e*PS	**PS**	**22 02 28.6**	**+3.5**
KIV				*e*SS	SS	22 08 51.7	+6.6
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KVAR	**Kislovodsk Arr**	**115.81**	**48**	PP	**PP**	**21 52 40.8**	**-4.3**
	comp=Z,3.9nm,0.9s,baz=222,slow=15,SNR=3.4						
T25A	**Trinidad**	**115.86**	**299**	P	**PKiKP**	**21 51 42.4**	**+1.3**
	baz=144						
GKP	**Gorka Klasztor**	**115.96**	**26**	*e*PKP	**PKiKP**	**21 51 46.9**	**+6.4**
GKP				*e*PP	**PP**	**21 52 45.5**	**-0.3**
GKP				*e*SKS		22 02 28.6	
GKP				LMZ	LR	22 30 20.6	
	comp=Z,4µm,31.2s						
GKP	**Gorka Klasztor**	**115.96**	**26**	*e*PKIKP	**PKiKP**	**21 51 46.9**	**+6.4**
GKP				*e*		21 52 45.5	
GKP				*e*		22 02 28.6	
GKP				MLR	MLR		
	comp=Z,4µm,31.3s						
MATQ	**Matagami**	**116.02**	**325**	P	**PKiKP**	**21 51 42.4**	**+1.7**
	baz=151						
E44A	**Grand Marais A**	**116.06**	**318**	PFAKE		21 51 50.0	+9.1
E44A				LR	LR		
	comp=Z,5µm,21.0s						
E43A	**Lone Tree Farm**	**116.24**	**317**	PFAKE		21 51 50.0	+8.7
E43A				LR	LR		
	comp=Z,6µm,19.0s						
E43A	**Lone Tree Farm**	**116.24**	**317**	P	**PKiKP**	**21 51 43.1**	**+1.8**
	baz=148						
RGN	**Rugen**	**116.27**	**23**	PFAKE		21 51 50.0	+9.0
RGN				LR	LR		
	comp=Z,2µm,21.0s						
GROC	**Groznyy**	**116.43**	**50**	*i* PKIKP	**PKPdf**	**21 51 40.6**	**-1.2**
GROC				*e*		21 52 47.8	
GROC				*e*		21 58 48.2	
GROC				pmax	pmax		
	comp=Z,15nm,0.7s						
G40A	**Rib Lake**	**116.50**	**314**	PFAKE		21 51 50.0	+8.1
G40A				LR	LR		
	comp=Z,5µm,22.0s						
G40A	**Rib Lake**	**116.50**	**314**	P	**PKiKP**	**21 51 43.8**	**+1.9**
	baz=147						
KSCO	**Kaye Shedlock'**	**116.56**	**301**	PFAKE		21 51 50.0	+7.6
KSCO				LR	LR		
	comp=Z,4µm,22.0s						
KSCO	**Kaye Shedlock'**	**116.56**	**301**	P	**PKiKP**	**21 51 43.7**	**+1.4**
	baz=144						
W18A	**Petrified Fore**	**116.77**	**294**	PFAKE		21 52 00.0	+17
W18A				LR	LR		
	comp=Z,5µm,18.0s						
COWI	**Conover**	**116.80**	**315**	PFAKE		21 51 50.0	+7.6
COWI				LR	LR		
	comp=Z,4µm,22.0s						
SDCO	**Great Sand Dun**	**116.86**	**299**	PFAKE		21 52 00.0	+17
SDCO				LR	LR		
	comp=Z,6µm,20.0s						
SDCO	**Great Sand Dun**	**116.86**	**299**	P	**PKiKP**	**21 51 44.3**	**+1.1**
	baz=144						
GOF	**Gofitskoye**	**116.87**	**47⇑**	*e*PKIKP	PKiKP	21 51 54.7	+12
113A	**Mohawk Valley,**	**116.88**	**289**	PFAKE		21 52 00.0	+17
113A				LR	LR		
	comp=Z,2µm,18.0s						
AKASG	**Malin Array Be**	**116.89**	**35**	PKP	**PKPdf**	**21 51 39.4**	**-3.0**
	comp=Z,0.4nm,0.4s,baz=239,slow=2.2,SNR=4.3						
AKASG				PP	**PP**	**21 52 46.2**	**-6.1**
	comp=Z,3.0nm,0.8s,baz=212,slow=6.4,SNR=12						
AKASG				PKKPab	**PKKPab**	**22 02 11.8**	**+2.4**
	comp=Z,0.4nm,0.4s,baz=37,slow=4.7,SNR=5.3						
AKBB	**Malin Array Si**	**116.89**	**35**	PFAKE		21 51 50.0	+7.6
AKBB				LR	LR		
	comp=Z,2µm,21.0s						
G39A	**Holcombe**	**116.89**	**313**	P	**PKiKP**	**21 51 44.4**	**+1.8**
	baz=146						
MAK	**Makhachkala**	**116.93**	**51**	*e*P	**Pdif**	**21 47 55.3**	**-3.4**
MAK				*i*		21 51 42.7	
MAK				*e*		21 52 53.7	
MAK				*e*PPP	PPP	21 55 22.5	
MAK				*e*		21 58 29.9	
MAK				*e*PS	**PKKPdf**	**22 02 36.7**	**+2.2**
MAK				*e*SS	SS	22 08 59.2	-0.4
MAK				*e*SSS	SSS	22 13 22.1	
MAK				pmax	pmax		
	comp=Z,148nm,1.1s						
MAK				MLR	MLR		
	comp=Z,3µm,18.0s						
X16A	**Lo Mia Camp, P**	**117.04**	**292**	PFAKE		21 52 00.0	+16
X16A				LR	LR		
	comp=Z,4µm,21.0s						
D41A	**Chassel**	**117.40**	**316**	PFAKE		21 52 00.0	+16
D41A				LR	LR		
	comp=Z,4µm,19.0s						
D41A	**Chassel**	**117.40**	**316**	P	**PKiKP**	**21 51 45.5**	**+2.0**
	baz=147						
Y14A	**Wickenburg**	**117.43**	**291**	PFAKE		21 52 00.0	+16
Y14A				LR	LR		
	comp=Z,2µm,20.0s						
SPMN	**Marine on St.**	**117.48**	**312**	PFAKE		21 52 00.0	+16
SPMN				LR	LR		
	comp=Z,3µm,19.0s						
SPMN	**Marine on St.**	**117.48**	**312**	P	**PKiKP**	**21 51 45.9**	**+2.2**
	baz=146						
S22A	**4UR Ranch, Cre**	**117.48**	**298**	P	**PKiKP**	**21 51 46.0**	**+1.5**
	baz=143						
GEYT	**Alibeck**	**117.56**	**62**	PKP	**PKPdf**	**21 51 42.1**	**-2.1**
	comp=Z,1.0nm,0.6s,baz=228,slow=52,SNR=2.5						
GEYT				PP	**PP**	**21 52 53.5**	**-3.7**
	comp=Z,2.5nm,0.9s,baz=248,slow=7.4,SNR=3.1						
GEYT				PKKPab	**PKKPab**	**22 02 09.0**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=350,slow=15,SNR=4.9						
GYA0B	**ALIBECK ARRAY**	**117.56**	**62**	PFAKE		21 52 00.0	+16
GYA0B				LR	LR		
	comp=Z,6µm,22.0s						
GLA	**Glamis**	**117.64**	**289**	P	**PKiKP**	**21 51 46.1**	**+1.5**
	baz=143						
SCHQ	**Schefferville**	**117.64**	**334**	PKP	**PKPdf**	**21 51 41.4**	**-2.4**
	comp=Z,6.2nm,0.6s,baz=136,slow=8.1,SNR=4.0						
SCHQ				PP	**PP**	**21 52 55.8**	**-1.7**
	comp=Z,3.9nm,0.6s,baz=207,slow=6.5,SNR=2.0						
SCHQ	**Schefferville**	**117.64**	**334**	*e*PKPdf	**PKiKP**	**21 51 44.2**	**+0.5**
ECSD	**EROS Data Cent**	**117.80**	**309**	PFAKE		21 52 00.0	+16
ECSD				LR	LR		
	comp=Z,4µm,22.0s						
ECSD	**EROS Data Cent**	**117.80**	**309**	P	**PKiKP**	**21 51 46.1**	**+1.6**
	baz=145						
MVCO	**Mesa Verde**	**117.85**	**296**	PFAKE		21 52 00.0	+15
MVCO				LR	LR		
	comp=Z,5µm,18.0s						
MVCO	**Mesa Verde**	**117.85**	**296**	P	**PKiKP**	**21 51 46.3**	**+1.3**
	baz=143						
OGNE	**Ogallala**	**117.86**	**303**	PFAKE		21 52 00.0	+15
OGNE				LR	LR		
	comp=Z,4µm,19.0s						
OGNE	**Ogallala**	**117.86**	**303**	P	**PKiKP**	**21 51 46.6**	**+1.8**
	baz=144						
WUAZ	**Wupatki**	**117.89**	**293**	*e*PKPdf	**PKiKP**	**21 51 46.6**	**+1.5**
WUAZ				LR	LR		
	comp=Z,3µm,22.0s						
WUAZ	**Wupatki**	**117.89**	**293**	P	**PKiKP**	**21 51 46.3**	**+1.2**
	baz=143						
IKP	**In-Ko-Pah, Jac**	**117.97**	**287**	P	**PKiKP**	**21 51 46.5**	**+1.2**
	baz=143						
Y12C	**Blythe**	**118.04**	**289**	*e*PKPdf	**PKiKP**	**21 51 46.6**	**+1.4**
Y12C				LR	LR		
	comp=Z,2µm,18.0s						
Y12C	**Blythe**	**118.04**	**289**	P	**PKiKP**	**21 51 46.8**	**+1.6**
	baz=143						
SWSC	**Sam W. Stewart**	**118.05**	**288**	P	**PKiKP**	**21 51 46.5**	**+1.3**
	baz=143						
SUW	**Suwalki**	**118.12**	**30**	*e*PKPdf	**PKiKP**	**21 51 46.0**	**+1.4**
SUW				*e*PP	**PP**	**21 52 59.9**	**-0.9**
SUW				LMZ	LR	22 30 03.9	
	comp=Z,4µm,36.2s						
SUW	**Suwalki**	**118.12**	**30**	PFAKE		21 52 00.0	+15
SUW				LR	LR		
	comp=Z,2µm,20.0s						
SUW	**Suwalki**	**118.12**	**30**	*e*PKIKP	**PKiKP**	**21 51 46.0**	**+1.4**
SUW				*e*		21 52 59.9	
SUW				MLR	MLR		
	comp=Z,4µm,36.2s						
E38A	**The Farm, Brul**	**118.14**	**314**	PFAKE		21 52 00.0	+15
E38A				LR	LR		
	comp=Z,3µm,22.0s						
BAR	**Barrett**	**118.28**	**287**	PFAKE		21 52 00.0	+14
BAR				LR	LR		
	comp=Z,4µm,20.0s						
PDMCI	**Parker Dam,Lak**	**118.29**	**290**	P	**PKiKP**	**21 51 47.5**	**+1.8**
	baz=143						
MONP2	**Monument Peak**	**118.32**	**287**	P	**PKiKP**	**21 51 47.6**	**+1.5**
	baz=143						
C40A	**Isle Royale Na**	**118.33**	**316**	PFAKE		21 52 00.0	+15
C40A				LR	LR		
	comp=Z,3µm,19.0s						
BC3	**Big Chuckawall**	**118.44**	**288**	P	**PKiKP**	**21 51 47.5**	**+1.3**
	baz=143						
CPE	**Camp Elliot**	**118.67**	**287**	PFAKE		21 52 00.0	+14
CPE				LR	LR		
	comp=Z,4µm,20.0s						
IRM	**Iron Mountain**	**118.68**	**289**	P	**PKiKP**	**21 51 48.1**	**+1.6**
	baz=143						
PV13	**Radium Mtn., P**	**118.76**	**296**	*e*PKPdf	**PKiKP**	**21 51 48.4**	**+1.6**
W13A	**Hualapai Mount**	**118.80**	**291**	PFAKE		21 52 00.0	+13
W13A				LR	LR		
	comp=Z,3µm,19.0s						
HOMB	**Homborsund**	**118.85**	**19**	*e*pPKPdf	**pPKPdf**	**21 51 52.0**	**+1.9**
HOMB				*e*PP	**PP**	**21 53 04.6**	**-1.2**
HOMB				*e*SP	SP	22 02 51.1	+1.2
HOMB				*e*SS	**SS**	**22 09 24.3**	**+0.3**
HOMB				IVMs_BB	IVMs_BB	22 30 47.0	
	comp=Z,2µm,33.3s						
PV07	**Paradox Valley**	**118.90**	**297**	*e*PKPdf	**PKiKP**	**21 51 49.1**	**+2.0**
PFO	**Pinyon Flats O**	**118.91**	**288**	PKP	**PKiKP**	**21 51 47.2**	**+0.1**
	comp=Z,4.1nm,0.9s,baz=76,slow=0.3,SNR=3.6						
PFO	**Pinyon Flats O**	**118.91**	**288**	*e*PKPdf	**PKiKP**	**21 51 47.9**	**+0.8**
PFO				LR	LR		
	comp=Z,4µm,21.0s						
PFO	**Pinyon Flats O**	**118.91**	**288**	*e*PKIKP	**PKiKP**	**21 51 47.9**	**+0.8**
PFO				MLR	MLR		
	comp=Z,4µm,21.0s						
PFO	**Pinyon Flats O**	**118.91**	**288**	P	**PKiKP**	**21 51 48.1**	**+1.0**
	baz=142						
BELC	**Belle Mtn. Jos**	**118.98**	**288**	P	**PKiKP**	**21 51 48.9**	**+1.6**
	baz=142						
U15A	**North Rim**	**119.06**	**293**	PFAKE		21 52 00.0	+12
U15A				LR	LR		
	comp=Z,3µm,18.0s						
KMY	**Karmoy**	**119.21**	**17**	*e*pPKPdf	**pPKPdf**	**21 51 52.7**	**+1.9**
KMY				*e*PP	**PP**	**21 53 06.5**	**-1.8**
EYMN	**Ely**	**119.23**	**315**	PFAKE		21 52 00.0	+13
EYMN				LR	LR		
	comp=Z,5µm,21.0s						
EYMN	**Ely**	**119.23**	**315**	P	**PKiKP**	**21 51 48.6**	**+1.5**
	baz=146						
LDFC	**Landfair**	**119.39**	**290**	PFAKE		21 52 00.0	+12
LDFC				LR	LR		
	comp=Z,2µm,20.0s						
GMRC	**Granite Mounta**	**119.44**	**289**	P	**PKiKP**	**21 51 48.9**	**+0.8**
	baz=142						
SRDT	**SRDT**	**119.50**	**112**	PKP	PKiKP	21 52 05.2	+17
N23A	**Red Feather La**	**119.59**	**300**	P	**PKiKP**	**21 51 48.9**	**+0.5**
	baz=143						
BLS5	**Blasjo**	**119.60**	**17**	*e*pPKPdf	**pPKPdf**	**21 51 53.2**	**+1.5**
BLS5				*e*SKSac	**SKSac**	**21 58 42.8**	**+0.8**
BLS5				*e*PS	**PS**	**22 02 58.7**	**-0.2**
BLS5				*e*SS	**SS**	**22 09 33.3**	**-0.5**
BLS5				IVMs_BB	IVMs_BB	22 37 16.9	
	comp=Z,1µm,22.4s						
PHWY	**Pilot Hill**	**119.69**	**301**	PFAKE		21 52 00.0	+11
PHWY				LR	LR		
	comp=Z,3µm,19.0s						
MANU	**Manus Island**	**119.73**	**170**	*e*PKPdf	**PKiKP**	**21 51 50.3**	**+1.0**
CIS	**Catalina Islan**	**119.74**	**286**	P	**PKiKP**	**21 51 49.7**	**+1.1**
	baz=142						
KKM	**Kota Kinabalu**	**119.79**	**133**	PFAKE		21 52 00.0	+11
KKM				LR	LR		
	comp=Z,2µm,21.0s						
HEC	**Hector,Ludlow**	**119.81**	**289**	P	**PKiKP**	**21 51 49.8**	**+1.1**
	baz=142						
MICGM	**Minsk**	**119.83**	**32**	*e*PKP	**PKPdf**	**21 51 47.0**	**-0.9**
MICGM				*e*PP	**PP**	**21 53 15.0**	**+2.3**
MICGM				*e*SKS	**SKSac**	**21 58 42.0**	**-0.9**
MICGM				*e*LR	LR	22 30 00.0	
MICGM				LRM	MLR	22 37 46.0	
	comp=Z,3.7nm,24.0s						
MNK	**Minsk**	**119.83**	**32**	*e*PKIKP	**PKPdf**	**21 51 47.0**	**-0.9**
MNK				*e*		21 53 15.0	
MNK				*e*		21 58 42.0	
PKCU	**Pink Cliffs**	**119.87**	**293**	*e*PKPdf	**PKiKP**	**21 51 51.0**	**+1.9**
NACGM	**Naroch**	**119.88**	**31**	*e*PKP	**PKiKP**	**21 51 48.0**	**-0.1**
NACGM				*e*PP	**PP**	**21 53 10.0**	**-3.0**
NACGM				*e*PPP	PPP	21 54 30.0	
NACGM				*e*SKKKS		22 00 08.0	
NACGM				*e*PS	PKKPdf	22 02 49.0	+20
NACGM				*e*SSS	SSS	22 13 24.0	
NACGM				*e*LQ	LQ	22 22 50.0	
NACGM				*e*LR	LR	22 30 12.0	
NACGM				LRM	MLR	22 39 48.0	
	comp=Z,3.5nm,23.0s						
NRS	**Narsarsuaq**	**120.00**	**348**	PFAKE		21 52 00.0	+12
NRS				LR	LR		
	comp=Z,5µm,20.0s						
BFSC	**Mount Baldy Ra**	**120.01**	**287**	P	**PKiKP**	**21 51 50.3**	**+1.0**
	baz=142						
O20A	**White River Ci**	**120.05**	**298**	*e*PKPdf	**PKiKP**	**21 51 50.2**	**+1.0**
O20A	**White River Ci**	**120.05**	**298**	P	**PKiKP**	**21 51 49.9**	**+0.6**
	baz=142,SNR=6.2						
IIGN	**Ignalina**	**120.12**	**31**	*e*P	**PKiKP**	**21 51 52.1**	**+3.6**
MWC	**Mount Wilson**	**120.21**	**287**	PFAKE		21 52 00.0	+10
MWC				LR	LR		
	comp=Z,3µm,18.0s						
KBL	**Kabul**	**120.22**	**73**	PFAKE		21 52 00.0	+10
KBL				LR	LR		
	comp=Z,3µm,22.0s						
PASC	**Pasadena Art C**	**120.23**	**287**	PFAKE		21 52 00.0	+10
PASC				LR	LR		
	comp=Z,4µm,18.0s						
MTPU	**Mount Pierson**	**120.28**	**294**	*e*PKPdf	**PKiKP**	**21 51 51.8**	**+1.8**
ISAL	**Salakas**	**120.29**	**30**	*e*P	**PKiKP**	**21 51 54.3**	**+5.5**
KONO	**Kongsberg**	**120.34**	**19**	PFAKE		21 52 00.0	+11
KONO				LR	LR		
	comp=Z,3µm,22.0s						
KONO	**Kongsberg**	**120.34**	**19***c*	*i*PKIKP	**PKiKP**	**21 51 50.0**	**+1.2**
KONO	**Kongsberg**	**120.34**	**19**	*e*PKPdf	**PKiKP**	**21 51 49.7**	**+0.9**
KONO				*e*PP	**PP**	**21 53 13.9**	**-2.2**
KONO				*e*SKSac	**SKSac**	**21 58 45.1**	**+0.6**
KONO				*e*PS	**PS**	**22 03 06.4**	**+1.0**
KONO				*e*SS	**SS**	**22 09 44.6**	**+1.4**
KONO				IVMs_BB	IVMs_BB	22 31 27.4	
	comp=Z,1µm,39.4s						
BER	**Bergen**	**120.35**	**17**	*e*pPKPdf	**pPKPdf**	**21 51 54.2**	**+1.2**
BER				*e*PP	**PP**	**21 53 12.4**	**-3.6**
BER				*e*SKSac	**SKSac**	**21 58 46.8**	**+2.4**
BER				*e*SP	SP	22 03 03.9	+0.7
BER				*e*SS	**SS**	**22 09 43.7**	**+0.5**
BER				IVMs_BB	IVMs_BB	22 43 04.4	
	comp=Z,1µm,17.6s						
IVI	**Ivigtut**	**120.36**	**347**	PFAKE		21 52 00.0	+11
IVI				LR	LR		
	comp=Z,5µm,19.0s						
VORD	**Divnogorie**	**120.42**	**41**	*e*PKIKP	**PKiKP**	**21 51 50.2**	**+1.0**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GSC	**Goldstone, Bar**	**120.42**	**289**	PFAKE		21 52 00.0	+10
GSC				LR	LR		
	comp=Z,3µm,22.0s						
GSC	**Goldstone, Bar**	**120.42**	**289**	P	**PKiKP**	**21 51 51.2**	**+1.2**
	baz=142						
ASK	**Askoy**	**120.42**	**16**	*e*PKPdf	**PKiKP**	**21 51 50.5**	**+1.6**
ASK				*e*pPKPdf	**sPKPdf**	**21 51 55.0**	**+0.4**
ASK				*e*PP	**PP**	**21 53 15.0**	**-1.6**
IZAR	**Zarasai**	**120.48**	**30**	*e*P	PKiKP	21 51 57.0	+7.8
VSR	**Storozhevoye**	**120.58**	**41**	*e*PKIKP	**PKiKP**	**21 51 50.2**	**+0.6**
VSR				*e*		21 53 15.4	
VSR				*e*SP	SP	22 03 08.1	+2.3
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,3µm,20.0s						
BLG	**Laguna Peak, P**	**120.63**	**286**	P	**PKiKP**	**21 51 51.8**	**+1.5**
	baz=142						
UTHA	**Uthaitani**	**120.69**	**111**	PKP	PKiKP	21 52 07.6	+17
EDW2	**Edwards Air Fo**	**120.69**	**287**	P	**PKiKP**	**21 51 51.0**	**+0.5**
	baz=142,SNR=27						
SCZ2	**Santa Cruz Isl**	**120.83**	**286**	P	**PKiKP**	**21 51 52.0**	**+1.3**
	baz=142						
OSI	**Osito Audit: C**	**120.85**	**287**	PFAKE		21 52 00.0	+9.2
OSI				LR	LR		
	comp=Z,2µm,20.0s						
SUE	**Sulen**	**120.91**	**16**	*e*PKPdf	**PKiKP**	**21 51 50.8**	**+0.9**
SUE				*e*PP	**PP**	**21 53 18.5**	**-1.4**
SUE				*e*SP	SP	22 03 07.3	-0.8
SUE				*e*SS	**SS**	**22 09 51.4**	**+1.1**
SUE				IVMs_BB	IVMs_BB	22 40 58.3	
	comp=Z,2µm,20.3s						
UMPA	**Umpang Tak**	**120.95**	**110**	PKP	PKiKP	21 52 07.0	+16
LRMC	**Laurel Mtn Rad**	**121.00**	**288**	P	**PKiKP**	**21 51 52.1**	**+1.0**
	baz=142						
SKAR	**Skarslia**	**121.10**	**18**	*e*PKPdf	**PKiKP**	**21 51 51.9**	**+1.5**
SKAR				*e*PP	**PP**	**21 53 19.1**	**-2.2**
SKAR				*e*SKSac	**SKSac**	**21 58 49.2**	**+2.0**
SKAR				*e*SP	SP	22 03 10.8	+0.8
SKAR				*e*SS	**SS**	**22 09 54.6**	**+1.6**
SKAR				IVMs_BB	IVMs_BB	22 38 14.2	
	comp=Z,2µm,20.8s						
SLIT	**Slitere, Latvi**	**121.14**	**27**	*e*P	**PKPdf**	**21 51 46.7**	**-3.6**
SLIT				*e*PP	**PP**	**21 53 16.7**	**-4.8**
SIMRM	**Sittwe**	**121.19**	**102**	PFAKE		21 52 00.0	+8.2
SIMRM				LR	LR		
	comp=Z,2µm,18.0s						
AGMN	**Agassiz Nation**	**121.20**	**312**	PFAKE		21 52 00.0	+9.1
AGMN				LR	LR		
	comp=Z,5µm,22.0s						
AGMN	**Agassiz Nation**	**121.20**	**312**	P	**PKiKP**	**21 51 52.2**	**+1.3**
	baz=144						
HYA	**Hoyanger**	**121.22**	**17**	*e*PKPdf	**PKiKP**	**21 51 52.0**	**+1.6**
HYA				*e*PP	**PP**	**21 53 20.9**	**-1.2**
K22A	**Casper**	**121.24**	**301**	PFAKE		21 52 00.0	+8.6
K22A				LR	LR		
	comp=Z,3µm,21.0s						
K22A	**Casper**	**121.24**	**301**	P	**PKiKP**	**21 51 51.9**	**+0.5**
	baz=142,SNR=9.5						
RSSD	**Black Hills**	**121.29**	**304**	PFAKE		21 52 00.0	+8.5
RSSD				LR	LR		
	comp=Z,7µm,21.0s						
RSSD	**Black Hills**	**121.29**	**304**	P	**PKiKP**	**21 51 52.4**	**+0.9**
	baz=142						
MPMC	**Manual Prospec**	**121.36**	**289**	P	**PKiKP**	**21 51 53.1**	**+1.2**
	baz=141,SNR=17						
FURC	**Furnace Creek,**	**121.36**	**289**	P	**PKiKP**	**21 51 53.1**	**+1.5**
	baz=141						
TPNV	**Topopah Spring**	**121.43**	**290**	PFAKE		21 52 00.0	+8.0
TPNV				LR	LR		
	comp=Z,2µm,19.0s						
TPNV	**Topopah Spring**	**121.43**	**290**	P	**PKiKP**	**21 51 52.9**	**+0.9**
	baz=141,SNR=15						
VRH	**Novokhopyorsk**	**121.47**	**42**	*e*PKIKP	**PKiKP**	**21 51 53.1**	**+1.8**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRH				MLR	MLR		
	comp=Z,2µm,18.0s						
ISA	**Isabella, Lake**	**121.55**	**288**	P	**PKiKP**	**21 51 53.5**	**+1.4**
	baz=141,SNR=12						
DAC	**Darwin (Calif)**	**121.58**	**289**	PFAKE		21 52 00.0	+7.7
DAC				LR	LR		
	comp=Z,2µm,19.0s						
PKM	**Mcpherson Peak**	**121.62**	**286**	P	**PKiKP**	**21 51 53.8**	**+1.4**
	baz=142,SNR=10						
LPSR	**Galich'ya Gora**	**121.65**	**40**	*e*PKIKP	**PKiKP**	**21 51 52.3**	**+0.7**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,1µm,21.0s						
NIL	**Nilore**	**121.68**	**76**	*e*PKPdf	**PKiKP**	**21 51 53.2**	**+0.8**
NIL				LR	LR		
	comp=Z,2µm,21.0s						
NIL	**Nilore**	**121.68**	**76**	*e*PKIKP	**PKiKP**	**21 51 53.2**	**+0.8**
NIL				MLR	MLR		
	comp=Z,2µm,21.0s						
NAO01	**NORSAR Array S**	**121.69**	**19**	*e*PKPdf	**PKiKP**	**21 51 52.9**	**+1.4**
NAO01				*e*PP	**PP**	**21 53 24.7**	**-0.6**
NAO01				*e*SKSac	**SKSac**	**21 58 50.2**	**+1.1**
NAO01				*e*SS	**SS**	**22 10 02.1**	**+1.6**
NAO01				IVMs_BB	IVMs_BB	22 42 47.1	
	comp=Z,1µm,18.0s						
DLV	**T Lat**	**121.84**	**122**	PFAKE		21 52 10.0	+17
DLV				LR	LR		
	comp=Z,5µm,18.0s						
TARA	**Tarawa**	**121.86**	**200**	PFAKE		21 52 10.0	+17
TARA				LR	LR		
	comp=Z,2µm,21.0s						
NB2	**NORSAR Subarra**	**121.93**	**19**	PKPdf	**PKPdf**	**21 51 50.0**	**-1.8**
	comp=Z,33nm,1.2s,baz=202,slow=1.9						
NB2	**NORSAR Subarra**	**121.93**	**19**	PKPdf	**PKPdf**	**21 51 50.0**	**-1.8**
	baz=202,slow=1.9						
NOA	**NORSAR Array B**	**121.93**	**19**	PKP	**PKPdf**	**21 51 49.7**	**-2.2**
	comp=Z,1.4nm,0.7s,baz=197,slow=1.8,SNR=15						
NOA				SKP		21 55 30.7	
	comp=Z,1.1nm,1.0s,baz=204,slow=2.0,SNR=2.5						
NOA				PKKPbc	**PKKPbc**	**22 01 48.9**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=22,slow=2.8,SNR=17						
CWC	**Cottonwood Cre**	**121.95**	**289**	P	**PKiKP**	**21 51 54.2**	**+1.2**
	baz=141						
NB201	**NORSAR Array S**	**121.96**	**19**	*e*PKPdf	**PKPdf**	**21 51 50.6**	**-1.2**
VES	**Vestal, Richgr**	**121.99**	**287**	P	**PKiKP**	**21 51 54.0**	**+1.1**
	baz=141						
GRAC	**Grapevine Rang**	**122.03**	**289**	P	**PKiKP**	**21 51 54.2**	**+1.2**
	baz=141						
SMMC	**Simmler**	**122.05**	**286**	P	**PKiKP**	**21 51 54.3**	**+1.2**
	baz=141						
R11A	**Troy Canyon, C**	**122.19**	**292**	P	**PKiKP**	**21 51 54.4**	**+1.0**
	baz=141,SNR=11						
DUG	**Dugway, Tooele**	**122.27**	**295**	PFAKE		21 52 10.0	+16
DUG				LR	LR		
	comp=Z,5µm,19.0s						
DUG	**Dugway, Tooele**	**122.27**	**295**	P	**PKiKP**	**21 51 54.3**	**+0.8**
	baz=141,SNR=41						
PBKT	**Sadao Pong**	**122.31**	**112**	PKP	**PKiKP**	**21 51 58.2**	**+4.2**
AKN	**Aaknes**	**122.31**	**17**	*e*PKPdf	**PKiKP**	**21 51 54.6**	**+2.0**
AKN				*e*PP	**PP**	**21 53 27.2**	**-2.2**
AKN				*e*SKSac	**SKSac**	**21 58 52.7**	**+1.6**
AKN				*e*SP	SP	22 03 21.7	+1.0
AKN				*e*SS	**SS**	**22 10 07.6**	**-0.8**
AKN				IVMs_BB	IVMs_BB	22 35 02.7	
	comp=Z,1µm,22.4s						
MDND	**Maddock**	**122.35**	**310**	PFAKE		21 52 10.0	+17
MDND				LR	LR		
	comp=Z,5µm,20.0s						
MDND	**Maddock**	**122.35**	**310**	P	**PKiKP**	**21 51 54.6**	**+1.4**
	baz=142						
BORG	**Borgarnes**	**122.48**	**2**	PFAKE		21 52 00.0	+7.1
BORG				LR	LR		
	comp=Z,5µm,21.0s						
TIN	**Tinemaha, Big**	**122.50**	**289**	P	**PKiKP**	**21 51 54.5**	**+0.5**
	baz=141						
DOMB	**Dombas**	**122.51**	**18**	*e*PKPdf	**PKiKP**	**21 51 54.6**	**+1.5**
DOMB				*e*PP	**PP**	**21 53 26.2**	**-4.7**
DOMB				*e*SKSac	**SKSac**	**21 58 53.6**	**+1.8**
DOMB				*e*PS	PS	22 03 25.0	+0.2
DOMB				IVMs_BB	IVMs_BB	22 34 34.8	
	comp=Z,1µm,25.6s						
BW06	**Boulder Array**	**122.73**	**299**	P	**PKiKP**	**21 51 54.7**	**+0.3**
	baz=141						

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PDAR  Pinedale Array     122.73 299  PKP      PKPdf    21 51 52.6  -1.6
      comp=Z,7.7nm,0.6s,baz=130,slow=4.6,SNR=14
MOL   Molde              122.76  17 epPKPdf   pPKPdf   21 51 59.0 +1.5
MOL                                 ePS       PS       22 03 28.6 +1.6
MOL                                  IVMs_BB  IVMs_BB  22 42 10.7
      comp=Z,1µm,17.9s
HWUT  Hardware Ranch     122.77 297  PFAKE             21 52 10.0  +16
HWUT                                 LR       LR
      comp=Z,3µm,21.0s
ULM   Lac du Bonnet      122.78 314  PKP      PKPdf    21 51 52.6  -1.1
      comp=Z,30nm,0.9s,baz=128,slow=2.6,SNR=9.7
ULM                                  PP       PP       21 53 27.4  -5.4
      comp=Z,11nm,0.8s,baz=139,slow=9.3,SNR=3.6
ULM   Lac du Bonnet      122.78 314  PFAKE             21 52 10.0  +16
ULM                                  LR       LR
      comp=Z,4µm,20.0s
ULM   Lac du Bonnet      122.78 314  PKIKP    PKPdf    21 51 52.6  -1.1
ULM                                  pmax     pmax
      comp=Z,12nm,0.8s
CM31  Chiang Mai Arr     122.90 109 ePKPdf    PKPdf    21 51 54.2  -0.8
CMAR  Chiang Mai Arr     122.90 109  PKP      PKPdf    21 51 53.4  -1.6
      comp=Z,4.1nm,0.8s,baz=233,slow=4.4,SNR=18
CMAR                                 PKKPbc   PKKPab   22 01 47.9 +0.5
      comp=Z,2.7nm,0.6s,baz=8.8,slow=2.1,SNR=15
CMAR  Chiang Mai Arr     122.90 109  PKIKP    PKPdf    21 51 53.4  -1.6
CMAR                                 pmax     pmax
      comp=Z,5.0nm,0.8s
OBN   Obninsk            122.97  37  PFAKE             21 52 10.0  +16
OBN                                  LR       LR
      comp=Z,3µm,19.0s
OBN   Obninsk            122.97  37 i PKIKP   PKiKP    21 51 55.6 +1.5
OBN                                 i                  21 52 05.6
OBN                                 i                  21 52 09.4
OBN                                 i                  21 53 35.2
OBN                                 i                  21 58 47.3
OBN                                  pmax     pmax
      comp=Z,44nm,2.5s
OBN                                  MLR      MLR
      comp=Z,2µm,17.0s
VSU   Vasula             122.99  29 eP        PKPdf    21 51 53.8  -0.1
VSU                                 ePP       PP       21 53 28.5  -5.6
DANN  Dangsing           123.04  89 eP        PKiKP    21 51 55.7 +0.1
      comp=Z,172nm,0.8s
UTTA  Uttaradit          123.10 111  PKP      PKiKP    21 51 58.0 +2.4
DMN   Daman              123.17  90 eP        PKPdf    21 51 55.4  -0.2
      comp=Z,117nm,1.1s
CHTO  Chiang Mai         123.20 109  PFAKE             21 52 10.0  +14
CHTO                                 LR       LR
      comp=Z,4µm,19.0s
CMMT  Chiang Mai         123.20 109  PKP      PKiKP    21 52 00.9 +5.1
GKN   Gorkha             123.23  90 eP        PKPdf    21 51 55.0  -0.6
      comp=Z,66nm,0.8s
PKIN  Phulchoki          123.29  91 eP        PKPdf    21 51 55.2  -0.7
      comp=Z,42nm,0.8s
PKI   Pulchoki           123.30  91 eP        PKPdf    21 51 55.4  -0.5
      comp=Z,56nm,0.8s
LAMP  Lampang            123.30 110  PKP      PKiKP    21 52 12.0  +16
KKN   Kakani             123.40  90 eP        PKPdf    21 51 55.7  -0.3
      comp=Z,48nm,0.9s
AHID  Auburn Hatcher     123.44 298  PFAKE             21 52 10.0  +14
AHID                                 LR       LR
      comp=Z,4µm,19.0s
NV11  Mina Array Sit     123.53 290  PFAKE             21 52 10.0  +14
NV11                                 LR       LR
      comp=Z,200nm,21.0s
NVAR  Mina Array Bea     123.61 290  PKP      PKPdf    21 51 54.8  -1.3
      comp=Z,3.4nm,0.6s,baz=54,slow=19,SNR=3.1
NVAR                                 PKKP     PKKPdf   22 02 17.6  -4.2
      comp=Z,1.8nm,0.3s,baz=356,slow=5.4,SNR=5.9
ANGG  Ammassalik, Gr     123.74 353  PFAKE             21 52 10.0  +15
ANGG                                 LR       LR
      comp=Z,4µm,18.0s
JIRN  Jiri               123.78  91 eP        PKPdf    21 51 57.0 +0.1
      comp=Z,197nm,0.9s
REDW  Red Top Meadow     123.79 299  PFAKE             21 52 10.0  +13
REDW                                 LR       LR
      comp=Z,4µm,20.0s
SNOW  Snow King Moun     123.82 299  PFAKE             21 52 10.0  +13
SNOW                                 LR       LR
      comp=Z,3µm,20.0s
MOS   Moscow             123.83  37 i PKIKP   PKiKP    21 51 57.8 +2.0
MOS                                 e                  21 53 38.1
MOS                                 i PS      PS       22 03 33.7  -2.8
MOS                                  pmax     pmax
      comp=Z,48nm,1.1s
MOS                                  MLR      MLR
      comp=E,1µm,19.0s
MOS                                  MLR      MLR
      comp=Z,2µm,19.0s
MOS                                  MLR      MLR
      comp=N,1µm,20.0s
TBLU  Trondheim          123.84  18 epPKPdf   pPKPdf   21 52 01.4 +1.8
TBLU                                ePS       PS       22 03 38.4 +1.9
TBLU                                eSS       SS       22 10 31.4 +3.7
TBLU                                 IVMs_BB  IVMs_BB  22 40 10.0
      comp=Z,1µm,18.4s
ELK   Elko               123.87 294  PKP      PKiKP    21 51 56.8   0.0
      comp=Z,6.9nm,0.9s,baz=118,slow=1.8,SNR=17
ELK                                  PP       PP       21 53 34.5  -6.2
      comp=Z,1.6nm,0.7s,baz=162,slow=16,SNR=1.9
ELK   Elko               123.87 294  PFAKE             21 52 10.0  +13
ELK                                  LR       LR
      comp=Z,3µm,21.0s
SAO   San Andreas Ge     123.91 286  PFAKE             21 52 10.0  +13
SAO                                  LR       LR
      comp=Z,3µm,19.0s
TPAW  Teton Pass         123.93 299  PFAKE             21 52 10.0  +13
TPAW                                 LR       LR
      comp=Z,4µm,19.0s
MOOW  Moose Ponds        124.04 299  PFAKE             21 52 10.0  +13
MOOW                                 LR       LR
      comp=Z,4µm,20.0s
PAYA  Payao              124.12 109  PKP      PKiKP    21 52 01.9 +4.3
IMW   Indian Meadow      124.24 299  PFAKE             21 52 10.0  +13
IMW                                  LR       LR
      comp=Z,4µm,20.0s
LAO   LASA Array         124.25 304  PFAKE             21 52 10.0  +13
LAO                                  LR       LR
      comp=Z,4µm,20.0s
LAO   LASA Array         124.25 304  P        PKiKP    21 51 58.0 +0.9
      baz=140
FLWY  Flagg Ranch        124.27 299  PFAKE             21 52 10.0  +13
FLWY                                 LR       LR
      comp=Z,5µm,22.0s
CMB   Columbia Colle     124.35 288  PFAKE             21 52 10.0  +12
CMB                                  LR       LR
      comp=Z,3µm,21.0s
RLMT  Red Lodge          124.41 301  PFAKE             21 52 10.0  +12
RLMT                                 LR       LR
      comp=Z,5µm,19.0s
RLMT  Red Lodge          124.41 301  P        PKiKP    21 51 58.2 +0.5
      baz=140
H17A  Grant Village      124.45 300  P        PKiKP    21 51 58.9 +1.0
      baz=140
PANO  Nakornpanom        124.57 115  PKP      PKiKP    21 52 07.8 +9.3
BMN   Battle Mountai     124.60 292  PFAKE             21 52 10.0  +12
BMN                                  LR       LR
      comp=Z,3µm,19.0s
NONG  Nongkai            124.65 113  PKP      PKiKP    21 52 12.7  +14
DGMT  Dagmar             124.75 307  PFAKE             21 52 10.0  +12
DGMT                                 LR       LR
      comp=Z,6µm,21.0s
DGMT  Dagmar             124.75 307  P        PKiKP    21 51 59.0 +1.0
      baz=140
SHL   Shillong           125.12  98 ePKPdf    PKiKP    21 52 00.1 +0.5
SHL   Shillong           125.12  98 ePKIKP    PKiKP    21 52 00.1 +0.5
NSS   Namsos             125.31  18 ePdif     Pdif     21 48 36.3 +1.0
NSS                                 epPKPdf   sPKPdf   21 52 03.9 +0.1
NSS                                 ePP       PP       21 53 47.9  -1.7
NSS                                 ePS       PS       22 03 50.5 +1.1
NSS                                  IVMs_BB  IVMs_BB  22 35 25.2
      comp=Z,1µm,33.6s
FINES FINESS Array B     125.42  27  PKP      PKPdf    21 51 56.5  -1.9
      comp=Z,8.8nm,0.5s,baz=157,slow=2.2,SNR=78
FIA1  FINESS Array S     125.42  27 ePKPdf    PKPdf    21 51 56.6  -1.8
HLID  Hailey             125.62 297  PFAKE             21 52 10.0  +10
HLID                                 LR       LR
      comp=Z,3µm,22.0s
HLID  Hailey             125.62 297  P        PKiKP    21 52 01.3 +1.2
      baz=139
MCCM  Marconi Confer     125.70 286  PFAKE             21 52 10.0  +10
MCCM                                 LR       LR
      comp=Z,2µm,22.0s
BOZ   Bozeman (W)        125.85 300  PFAKE             21 52 10.0  +10
BOZ                                  LR       LR
      comp=Z,4µm,20.0s
BOZ   Bozeman (W)        125.85 300  P        PKiKP    21 52 01.6 +1.1
      baz=139
ORV   Oroville           126.07 288  PFAKE             21 52 10.0 +9.1
ORV                                  LR       LR
      comp=Z,4µm,22.0s
DLMT  Dillon             126.12 299  PFAKE             21 52 10.0 +9.0
DLMT                                 LR       LR
      comp=Z,4µm,21.0s
MFID  Camas Ranch        126.18 296  PFAKE             21 52 10.0 +8.9
MFID                                 LR       LR
      comp=Z,3µm,21.0s
SFJD  Kangerlussuaq      126.25 348  PFAKE             21 52 10.0  +10
SFJD                                 LR       LR
      comp=Z,6µm,18.0s
HOPS  Hopland Field      126.44 287  PFAKE             21 52 10.0 +8.4
HOPS                                 LR       LR
      comp=Z,3µm,19.0s
O03E  Paynes Creek       126.78 289  P        PKiKP    21 52 03.2 +0.8
      baz=139
WVOR  Wild Horse Val     126.81 293  PFAKE             21 52 10.0 +7.6
WVOR                                 LR       LR
      comp=Z,3µm,20.0s
EGMT  Eagleton           126.83 303  PFAKE             21 52 10.0 +7.8
EGMT                                 LR       LR
      comp=Z,4µm,21.0s
EGMT  Eagleton           126.83 303  P        PKiKP    21 52 03.3 +1.1
      baz=138
JBG   Jabagly            127.03  68 ePKIKP    PKPdf    21 52 02.1  -0.3
JBG                                 i                  21 54 01.9
STOK  Stokkvaagen        127.15  18 ePKPdf    PKiKP    21 52 03.3 +1.2
O02D  Mt. Diablo Mer     127.19 288  P        PKiKP    21 52 04.3 +1.1
      baz=139
MOD   Modoc Plateau      127.23 291  PFAKE             21 52 20.0  +17
MOD                                  LR       LR
      comp=Z,3µm,21.0s
MOR8  Moi Rana           127.24  19 ePKPdf    PKiKP    21 52 03.2 +0.9
MOR8                                ePP       PP       21 53 58.5  -3.8
MOR8                                eSKSdf    SKSdf    21 59 15.2 +3.2
MOR8                                eSS       SS       22 11 13.3 +3.0
MOR8                                 IVMs_BB  IVMs_BB  22 42 11.3
      comp=Z,2µm,20.2s
AKTO  Aktyubinsk         127.26  53  PKP      PKPdf    21 52 00.6  -1.7
      comp=Z,7.7nm,0.8s,baz=193,slow=3.7,SNR=20
KONS  Konsvik            127.32  18 ePKPdf    PKiKP    21 52 03.7 +1.3
WDC   Whiskeytown Da     127.37 288  PFAKE             21 52 20.0  +17
WDC                                  LR       LR
      comp=Z,2µm,21.0s
KSH   Kashi              127.58  74  PKP      PKPdf    21 52 02.8  -0.7
KSH                                  PP       PP       21 54 04.0  -1.2
KSH                                  SS       SS       22 11 07.8  -7.8
KSH                                  AMB      AMB
      comp=Z,210nm,3.8s
KSH                                  LR       LR
      comp=Z,1µm,14.6s
KSH                                  LR       LR
      comp=Z,720nm,14.8s
KSH                                  LR       LR
      comp=Z,2µm,18.8s
N02D  Trinity Center     127.74 289  P        PKiKP    21 52 05.3 +1.1
      baz=138
MLOA  Mauna Loa Obse     127.78 244  PFAKE             21 52 20.0  +15
MLOA                                 LR       LR
      comp=Z,6µm,22.0s
SLVN  Son La             127.80 112  PFAKE             21 52 20.0  +15
SLVN                                 LR       LR
      comp=Z,4µm,18.0s
MSO   Missoula           127.84 300  PFAKE             21 52 20.0  +16
MSO                                  LR       LR
      comp=Z,5µm,20.0s
MSO   Missoula           127.84 300  P        PKiKP    21 52 05.3 +1.0
      baz=138
M04C  Macdoel            127.91 290  P        PKiKP    21 52 05.6 +1.0
      baz=138
POHA  Pohakuloa          127.94 244  PFAKE             21 52 20.0  +15
POHA                                 LR       LR
      comp=Z,7µm,22.0s
BMO   Blue Mountains     127.96 296  PFAKE             21 52 20.0  +15
BMO                                  LR       LR
      comp=Z,4µm,21.0s
KHLU  Kahalu`u           127.97 243  PFAKE             21 52 20.0  +15
KHLU                                 LR       LR
      comp=Z,6µm,22.0s
LSA   Lhasa              128.04  94 ePKPdf    PKiKP    21 52 05.8   0.0
LSA                                  LR       LR
      comp=Z,6µm,22.0s
LSA   Lhasa              128.04  94  PKP      PKiKP    21 52 06.5 +0.8
LSA                                  PP       PP       21 54 07.5  -1.1
LSA                                  LR       LR
      comp=Z,6µm,19.2s
LSA                                  LR       LR
      comp=Z,6µm,16.4s
LSA                                  LR       LR
      comp=Z,12µm,17.1s
M02C  Callahan           128.13 289  P        PKiKP    21 52 05.9 +0.8
      baz=138
HPAH  Hawaii Prepara     128.26 244  PFAKE             21 52 20.0  +14
HPAH                                 LR       LR
      comp=Z,6µm,22.0s
JCC   Jacoby Creek,      128.30 288  PFAKE             21 52 20.0  +15
JCC                                  LR       LR
      comp=Z,3µm,20.0s
YBH   Yreka Blue Hor     128.31 289  PFAKE             21 52 20.0  +15
YBH                                  LR       LR
      comp=Z,2µm,20.0s
ILULI Ilulissat          128.43 348  PFAKE             21 52 20.0  +15
ILULI                                LR       LR
      comp=Z,7µm,20.0s
ILULI Ilulissat          128.43 348 ePKIKP    PKiKP    21 52 04.4  -0.2
ILULI Ilulissat          128.43 348 i P       PKiKP    21 52 04.4  -0.2
L04D  Klamath Falls      128.47 290  P        PKiKP    21 52 06.7 +1.0
      baz=138
KLMR  Klimovskoe         128.56  34 ePKIKP    PKPdf    21 52 01.9  -2.5
KLMR                                e                  21 54 07.4
KLMR                                 pmax     pmax
      comp=Z,106nm,1.2s
FFC   Flin Flon          128.61 314 ePKPdf    PKPdf    21 52 04.6  -0.2
FFC                                  LR       LR
      comp=Z,4µm,20.0s
FFC   Flin Flon          128.61 314 i PKIKP   PKPdf    21 52 05.0 +0.2
QIZ   Qiongzhong         128.67 120  PFAKE             21 52 20.0  +13
QIZ                                  LR       LR
      comp=Z,5µm,21.0s
QIZ   Qiongzhong         128.67 120  PKP      PKiKP    21 52 09.3 +2.6
QIZ                                  PP       PP       21 54 15.0 +3.1
QIZ                                  SS       SS       22 11 32.5 +4.2
QIZ                                  AMB      AMB
      comp=Z,660nm,9.0s
QIZ                                  LR       LR
      comp=Z,2µm,18.6s
QIZ                                  LR       LR
      comp=Z,2µm,17.7s
QIZ                                  LR       LR
      comp=Z,5µm,27.5s
J05D  Fort Rock, OR      128.72 292  P        PKiKP    21 52 07.6 +1.4
      baz=137
FCC   Fort Churchill     128.83 321 ePKPdf    PKPdf    21 52 03.8  -1.2
FCC                                  LR       LR
      comp=Z,5µm,19.0s
FCC   Fort Churchill     128.83 321 ePKIKP    PKPdf    21 52 03.8  -1.2
FCC                                  MLR      MLR
      comp=Z,5µm,19.0s
LOF   Lofoten            128.88  17 ePKPdf    PKiKP    21 52 06.5 +0.9
LOF                                 epPKPdf   sPKPdf   21 52 10.5   0.0
LOF                                 eSKSac    SKSac    21 59 13.0 +1.7
LOF                                  IVMs_BB  IVMs_BB  22 40 31.1
      comp=Z,1µm,21.5s
PINE  Pine Mountain      128.95 292 ePKPdf    PKiKP    21 52 08.0 +1.3
STEI  Steigen            128.97  18 ePKPdf    PKiKP    21 52 06.3 +0.6
STEI                                ePP       PP       21 54 12.1  -1.6
STEI                                ePS       PS       22 04 21.6 +0.3
STEI                                eSS       SS       22 11 33.5 +1.9
STEI                                 IVMs_BB  IVMs_BB  22 43 33.1
      comp=Z,2µm,21.9s
NRN   Naryn              129.02  72  PFAKE             21 52 20.0  +13
NRN                                  LR       LR
      comp=Z,5µm,18.0s
L02E  Cave Junction      129.07 289  P        PKiKP    21 52 07.7 +0.9
      baz=137
HUMO  Hull Mountain      129.08 290 ePKPdf    PKiKP    21 52 08.4 +1.6
HUMO                                 LR       LR
      comp=Z,3µm,21.0s
J04D  Umpqua Nationa     129.12 291  P        PKiKP    21 52 08.0 +0.9
      baz=137
HLK   Haleakala          129.14 244  PFAKE             21 52 20.0  +12
HLK                                  LR       LR
      comp=Z,7µm,22.0s
AAK   Ala-Archa          129.15  70  PKP      PKPdf    21 52 04.7  -1.7
      comp=Z,6.9nm,0.7s,baz=206,slow=3.8,SNR=12
AAK                                  SKP               21 55 34.0
      comp=Z,1.3nm,0.3s,baz=211,slow=5.9,SNR=2.9
AAK   Ala-Archa          129.15  70 ePKPdf    PKPdf    21 52 06.4  -0.1
AAK                                  LR       LR
      comp=Z,4µm,19.0s
AAK   Ala-Archa          129.15  70d iPKIKP   PKPdf    21 52 06.2  -0.2
AAK                                  pmax     pmax
      comp=Z,24nm,1.7s
JMIC  Jan Mayen          129.21   7 epPKPdf   pPKPdf   21 52 11.8 +2.1
JMIC                                ePP       PP       21 54 14.9  -0.3
JMIC                                eSKPdf    SKiKP    21 55 42.3 +1.4
JMIC                                eSP       SP       22 04 22.3 +1.4
JMIC                                 IVMs_BB  IVMs_BB  22 36 55.6
      comp=Z,1µm,26.2s
FRU1  Bishkek            129.34  70  PFAKE             21 52 20.0  +13
FRU1                                 LR       LR
      comp=Z,4µm,19.0s
KHLH  Kahului Airpor     129.35 244  PFAKE             21 52 20.0  +12
KHLH                                 LR       LR
      comp=Z,7µm,21.0s
WALA  Waterton Lakes     129.46 302  PFAKE             21 52 20.0  +13
WALA                                 LR       LR
      comp=Z,4µm,19.0s
K02D  Willamette Mer     129.50 290  P        PKiKP    21 52 09.1 +1.4
      baz=137
I05D  Terrebonne, OR     129.54 293  P        PKiKP    21 52 08.7 +1.0
      baz=137
I04A  Tendick Farm,      129.68 291  P        PKiKP    21 52 09.1 +1.1
      baz=137
BOOM  Boomskoye usch129.77  71  PFAKE             21 52 20.0  +12
BOOM                                 LR       LR
      comp=Z,6µm,18.0s
SGDS  Sogindy            129.81  69 ePKP      PKPdf    21 52 06.4  -1.1
SGDS                                ePP       PP       21 54 20.0 +0.2
J01E  Myrtle Point       129.97 290  P        PKiKP    21 52 09.5 +1.0
      baz=137
KIRV  Kirov              130.02  41  PKP      PKPdf    21 52 05.5  -1.7
      comp=Z,8.3nm,0.6s,baz=234,slow=1.5,SNR=1.6
KWAJ  Kwajalein Atol     130.03 195  PFAKE             21 52 20.0  +10
KWAJ                                 LR       LR
      comp=Z,3µm,21.0s
HAWA  Hanford            130.16 296  PFAKE             21 52 20.0  +11
HAWA                                 LR       LR
      comp=Z,3µm,20.0s
H04A  Detroit Lake       130.21 292 ePKPdf    PKiKP    21 52 09.4 +0.3
NEW   Newport            130.36 299  PKP      PKPdf    21 52 07.3  -1.1
      comp=Z,3.2nm,0.7s,baz=112,slow=5.2,SNR=10
NEW                                  SKPbc    SKPab    21 55 29.4  -1.1
      comp=Z,8.7nm,1.1s,baz=97,slow=1.4,SNR=2.5
NEW   Newport            130.36 299  PFAKE             21 52 20.0  +11
NEW                                  LR       LR
      comp=Z,5µm,19.0s
NEW   Newport            130.36 299  P        PKiKP    21 52 10.3 +1.1
      baz=136
H04D  Lebanon            130.37 292  P        PKiKP    21 52 10.1 +0.8
      baz=136
KMI   Kunming            130.38 108  PFAKE             21 52 20.0  +10
KMI                                  LR       LR
      comp=Z,3µm,21.0s
KMI   Kunming            130.38 108  PKP      PKiKP    21 52 10.5 +0.3
KMI                                  PP       PP       21 54 25.5 +2.0
KMI                                  SKKS              22 01 19.3
KMI                                  SS       SS       22 11 52.0 +1.9
KMI                                  LR       LR
      comp=Z,1µm,16.1s
KMI                                  LR       LR
      comp=Z,2µm,17.6s
KMI                                  LR       LR
      comp=Z,3µm,17.6s
HON   Honolulu           130.46 242  PFAKE             21 52 20.0  +10
HON                                  LR       LR
      comp=Z,6µm,22.0s
KIP   Kipapa             130.55 242  PFAKE             21 52 20.0  +10
KIP                                  LR       LR
      comp=Z,6µm,21.0s
C09A  Chrisman Ranch     130.57 298 ePKPdf    PKiKP    21 52 10.4 +0.8
BTLS  Baital             130.68  68 ePKIKP    PKPdf    21 52 08.6  -0.4
BTLS                                i                  21 54 24.7
BTLS  Baital             130.68  68 ePKP      PKPdf    21 52 08.7  -0.4
BTLS                                i PP      PP       21 54 24.7  -0.6
BTLS                                eLR       LR       22 50 15.8
COR   Corvallis          130.69 291  PFAKE             21 52 20.0  +10
COR                                  LR       LR
      comp=Z,3µm,20.0s
SUMG  Summit             130.70 354  PFAKE             21 52 20.0  +10
SUMG                                 LR       LR
      comp=Z,5µm,19.0s
SUMG  Summit             130.70 354 i PKIKP   PKiKP    21 52 11.0 +1.4
SUMG  Summit             130.70 354 i P       PKiKP    21 52 11.0 +1.4
F05D  White Salmon       130.72 294  P        PKiKP    21 52 11.1 +1.2
      baz=136
OPA   Opana              130.78 243  PFAKE             21 52 20.0 +9.2
OPA                                  LR       LR
      comp=Z,4µm,20.0s
AAA   Alma-Ata           130.78  71 ePKIKP    PKPdf    21 52 09.0  -0.4
AAA                                 e                  21 54 25.4
AAA                                  MLR      MLR
      comp=Z,3µm,21.0s
AAA   Alma-Ata           130.78  71 ePKP      PKPdf    21 52 09.0  -0.4
AAA                                 ePP       PP       21 54 25.4  -0.6
AAA                                 eLR       LR       22 50 40.4
      comp=Z,3µm,20.6s
MDOK  Medeo              130.82  71 ePKIKP    PKiKP    21 52 11.9 +1.4
MDOK                                 MLR      MLR
      comp=E,2µm,18.0s
MDOK  Medeo              130.82  71 ePKP      PKiKP    21 52 11.9 +1.4
MDOK                                eLR       LR       22 51 13.1
      comp=E,2µm,18.3s
KUU   Kurty              130.99  70 ePKIKP    PKPdf    21 52 09.8 +0.1
KUU                                 e                  21 54 24.4
KUU   Kurty              130.99  70 ePKP      PKPdf    21 52 09.9 +0.1
KUU                                 ePP       PP       21 54 24.5  -2.9
PRGR  Permogore          131.05  36 ePKIKP    PKPdf    21 52 06.3  -2.8
PRGR                                 pmax     pmax
      comp=Z,85nm,1.1s
TRO   Tromso             131.10  19 ePKPdf    PKPdf    21 52 08.2  -0.8
TRO                                 ePP       PP       21 54 25.4  -2.1
TRO                                 eSS       SS       22 11 58.9 +1.1
TRO                                  IVMs_BB  IVMs_BB  22 44 58.5
      comp=Z,2µm,20.0s
G03D  McMinnville, O     131.12 292  P        PKiKP    21 52 12.1 +1.4
      baz=136
LTY   Liberty            131.32 296 ePKPdf    PKiKP    21 52 10.8  -0.4
KTK1  Kautokeino         131.34  21 ePKPdf    PKiKP    21 52 10.5   0.0
KTK1                                ePP       PP       21 54 27.8  -1.3
JOHN  Johnston Islan     131.38 227  PFAKE             21 52 20.0 +7.9
JOHN                                 LR       LR
      comp=Z,4µm,20.0s
SATY  Saty               131.43  72 ePKIKP    PKiKP    21 52 12.1 +0.5
SATY                                e                  21 54 30.4
SATY                                 MLR      MLR
      comp=Z,1µm,17.0s
SATY  Saty               131.43  72 ePKP      PKiKP    21 52 12.1 +0.5
SATY                                ePP       PP       21 54 30.5 +0.2
SATY                                eLR       LR       22 50 44.3
      comp=Z,1µm,17.4s
F04D  Rainier, OR        131.62 293  P        PKiKP    21 52 12.6 +0.9
      baz=135
E04D  Cinebar            131.74 294  P        PKiKP    21 52 12.6 +0.7
      baz=135
UZB   Uzynbulak          131.80  73 ePKIKP    PKPdf    21 52 11.1  -0.3
UZB   Uzynbulak          131.80  73 ePKP      PKPdf    21 52 11.1  -0.3
KEKH  Kekaha             131.83 241  PFAKE             21 52 20.0 +7.1
KEKH                                 LR       LR
      comp=Z,4µm,19.0s
ARU   Arti               131.85  48  PKP      PKPdf    21 52 09.9  -1.0
      comp=Z,1.5nm,0.6s,baz=209,slow=3.0,SNR=8.4
ARU                                  PP       PP       21 54 30.6  -2.1
      comp=Z,2.7nm,0.9s,baz=214,slow=7.7,SNR=3.0
ARU                                  SKPbc    SKPbc    21 55 35.6   0.0
      comp=Z,3.5nm,1.1s,baz=215,slow=9.2,SNR=1.7
ARU   Arti               131.85  48 ePKPdf    PKPdf    21 52 10.5  -0.3
ARU                                  LR       LR
      comp=Z,3µm,21.0s
ARU   Arti               131.85  48 i PKIKP   PKPdf    21 52 09.0  -1.9
ARU                                  SP       SP       22 04 35.1  -9.5
ARU                                  MLR      MLR
      comp=Z,3µm,23.0s
KPKS  Kokpek             131.86  72 eLR       LR       22 51 13.7
      comp=Z,3µm,18.9s
D05A  Enumclaw           131.91 295 ePKPdf    PKiKP    21 52 13.4 +1.1
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ARCES ARCESS Array B 132.21  21   PKhKP    PKPpre   21 51 55.1
      comp=Z,1.2nm,0.7s,baz=304,slow=0.9,SNR=6.2
ARCES                             PKP      PKPdf    21 52 09.0 -2.1
      comp=Z,7.9nm,0.6s,baz=193,slow=1.9,SNR=29
ARCES                             PP       PP       21 54 32.5 -2.2
      comp=Z,19nm,1.0s,baz=202,slow=6.1,SNR=6.9
ARCES                             SKP               21 55 50.6
      comp=Z,8.5nm,0.8s,baz=195,slow=3.0,SNR=4.5
ARE0  ARCESS Array S 132.21  21   PFAKE             21 52 20.0 +7.8
ARE0                              LR       LR
      comp=Z,200nm,21.0s
ARE0  ARCESS Array S 132.21  21  ePKPdf    PKiKP    21 52 12.5 +0.2
ARE0                             ePP       PP       21 54 34.4 -0.3
ARE0                             eSS       SS       22 12 11.0 -0.5
ARE0                              IVMs_BB  IVMs_BB  22 43 10.1
      comp=Z,1µm,19.6s
APA   Apatity        132.28  26⇑iPKIKP    PKPdf    21 52 10.6 -0.7
APA                              i SS      SS       22 12 07.0 -5.3
APA                               pmax     pmax
      comp=Z,3.0nm,0.8s
D03D  Eldon          132.68 294   P        PKiKP    21 52 14.7 +0.8
      baz=134
B05A  Bryant         132.71 296   P        PKiKP    21 52 14.6 +0.8
      baz=134
HAMF  Hammerfest     132.81  20  epPKPdf   pPKPdf   21 52 17.1 +0.6
HAMF                             ePP       PP       21 54 37.5 -1.0
HAMF                             eSKPdf    SKiKP    21 55 47.7 -0.5
HAMF                             eSS       SS       22 12 19.6 +1.0
HAMF                              IVMs_BB  IVMs_BB  22 43 38.4
      comp=Z,1µm,19.4s
TDK   Taldyqorghan   132.82  71  ePKIKP    PKPdf    21 52 13.4 +0.3
TDK                              e                  21 54 41.8
TDK                               MLR      MLR
      comp=Z,2µm,19.0s
TDK   Taldyqorghan   132.82  71  ePKP      PKPdf    21 52 13.5 +0.3
TDK                              ePP       PP       21 54 41.9 +2.8
TDK                              eLR       LR       22 51 41.5
      comp=Z,2µm,18.6s
LVZ   Lovozero       132.84  26  ePKPdf    PKiKP    21 52 13.1 -0.5
LVZ                               LR       LR
      comp=Z,4µm,21.0s
LVZ   Lovozero       132.84  26  ePKIKP    PKiKP    21 52 13.1 -0.5
LVZ                               MLR      MLR
      comp=Z,4µm,21.0s
SVE   Sverdlovsk     132.96  48  i PKIKP   PKiKP    21 52 15.5 +1.4
SVE                              e                  21 54 35.9
SVE                               pmax     pmax
      comp=Z,61nm,1.6s
SVE                               MLR      MLR
      comp=Z,3µm,21.0s
NLWA  Neilton Lookou 132.96 294   PFAKE             21 52 30.0  +16
NLWA                              LR       LR
      comp=Z,4µm,22.0s
A04D  Lummi Island   133.32 296   P        PKiKP    21 52 15.8 +0.7
      baz=134
HKPS  Hong Kong Po S 133.45 122   PFAKE             21 52 30.0  +14
HKPS                              LR       LR
      comp=Z,4µm,20.0s
GYA   Guiyang        133.45 111   PKP      PKPdf    21 52 14.8 -0.2
GYA                               PP       PP       21 54 45.0 +1.9
GYA                               PKS               21 55 47.5
GYA                               SKKS              22 01 36.8
GYA                               SS       SS       22 12 28.3 +1.0
GYA                               AMB      AMB
      comp=Z,510nm,8.5s
GYA                               LR       LR
      comp=Z,3µm,25.1s
GYA                               LR       LR
      comp=Z,2µm,24.9s
GYA                               LR       LR
      comp=Z,4µm,25.6s
BRZS  Berezniki      133.50  62  ePP       PP       21 54 44.2 +0.9
BRZS                             eLR       LR       22 52 40.1
GZH   Guangzhou      133.79 121   PKP      PKiKP    21 52 22.3 +5.4
GZH                               PP       PP       21 54 54.8  +10
GZH                               PKS      PKSdf    21 55 58.0 +6.0
GZH                               SKS      SKSdf    21 59 30.3 +4.5
GZH   Guangzhou      133.79 121   SS       SS       22 12 50.8  +20
GZH                               LR       LR
      comp=N,4µm,16.7s
GZH                               LR       LR
      comp=E,3µm,17.5s
BRVK  Borovoye       134.48  57  ePKPdf    PKiKP    21 52 17.6 +0.3
BRVK                              LR       LR
      comp=Z,4µm,20.0s
BRVK  Borovoye       134.48  57  ePKIKP    PKiKP    21 52 17.6 +0.3
BRVK                              MLR      MLR
      comp=Z,4µm,20.0s
BVAR  Borovoye Array 134.51  58   PKP      PKPdf    21 52 14.3 -1.7
      comp=Z,2.2nm,0.4s,baz=208,slow=2.5,SNR=11
DAG   Danmarks Havn  134.59   2  i PKIKP   PKiKP    21 52 17.2 +0.3
DAG   Danmarks Havn  134.59   2  i P       PKiKP    21 52 17.2 +0.3
GUMO  Guam           134.89 165   PFAKE             21 52 30.0  +11
GUMO                              LR       LR
      comp=Z,2µm,18.0s
BJO1  Bjornoya       135.35  15  ePKPdf    PKiKP    21 52 18.8 +0.3
BJO1                              IVMs_BB  IVMs_BB  22 39 13.0
      comp=Z,918nm,28.1s
CD2   Chengdu        135.61 105   PKP      PKiKP    21 52 21.5 +1.1
CD2                               SKS      SKSdf    21 59 30.0 +1.2
CD2                               SKKS     SKKSac   22 01 53.5 +2.9
CD2                               SS       SS       22 12 56.3 +3.1
CD2                               AMB      AMB
      comp=Z,970nm,8.5s
CD2                               LR       LR
      comp=Z,2µm,15.7s
CD2                               LR       LR
      comp=Z,3µm,17.6s
CD2                               LR       LR
      comp=Z,4µm,16.7s
MAKZ  Makanchi       135.86  71  ePKPdf    PKPdf    21 52 18.5 -0.3
MAKZ                              LR       LR
      comp=Z,4µm,20.0s
MK31  Makanchi Array 136.01  71  ePKPdf    PKPdf    21 52 17.6 -1.4
MK31  Makanchi Array 136.01  71  ePKIKP    PKPdf    21 52 17.6 -1.4
MKAR  Makanchi Array 136.01  71   PKhKP    PKPpre   21 52 05.8
      comp=Z,0.8nm,0.7s,baz=236,slow=4.6,SNR=7.6
MKAR                              PKP      PKPdf    21 52 14.8 -4.2
      comp=Z,2.8nm,0.8s,baz=242,slow=5.2,SNR=8.8
KURBB Kurchatov Arra 136.71  65   PKP      PKPdf    21 52 16.0 -4.1
      comp=Z,3.2nm,0.8s,baz=234,slow=3.4,SNR=7.2
KURBB                             PP       PP       21 55 07.0 +3.3
      comp=Z,19nm,1.4s,baz=232,slow=6.2,SNR=9.6
KURBB                             SKP               21 55 56.1
      comp=Z,1.5nm,0.8s,baz=261,slow=2.6,SNR=3.4
WMQ   Urumqi         136.75  78   PFAKE             21 52 30.0 +7.7
WMQ                               LR       LR
      comp=Z,3µm,20.0s
WMQ   Urumqi         136.75  78  ePKP      PKiKP    21 52 23.8 +1.5
WMQ                               PP       PP       21 55 08.0 +4.0
WMQ                               PKS               21 55 58.3
WMQ                               SKKS              22 01 59.5
WMQ                               SS       SS       22 13 12.3 +5.3
WMQ                               LR       LR
      comp=Z,2µm,29.0s
WMQ                               LR       LR
      comp=Z,2µm,28.1s
WMQ                               LR       LR
      comp=Z,4µm,29.3s
KURK  Kurchatov      136.81  65  ePKPdf    PKPdf    21 52 20.3 -0.1
KURK                              LR       LR
      comp=Z,3µm,18.0s
KURK  Kurchatov      136.81  65⇓iPKIKP    PKPdf    21 52 19.1 -1.2
KURK                              pmax     pmax
      comp=Z,13nm,1.7s
HSPB  Hornsund (broa 137.08  12  ePKPdf    PKiKP    21 52 21.3 -0.6
HSPB                             ePP       PP       21 55 05.8 +0.4
HSPB                             eSS       SS       22 13 11.2 +1.5
HSPB                              IVMs_BB  IVMs_BB  22 40 04.7
      comp=Z,972nm,23.7s
TPUB  Ta-pu          137.16 129   PFAKE             21 52 30.0 +6.2
TPUB                              LR       LR
      comp=Z,2µm,19.0s
KNMB  Chin-men Tao   137.24 126   PFAKE             21 52 30.0 +6.2
KNMB                              LR       LR
      comp=Z,3µm,18.0s
TULEG Thule          137.25 346  ePKPdf    PKPdf    21 52 20.8 +0.4
TULEG                             LR       LR
      comp=Z,6µm,22.0s
SSLB  Suanglung      137.73 129   PFAKE             21 52 40.0  +15
SSLB                              LR       LR
      comp=Z,2µm,22.0s
QZH   Quanzhou       137.74 125⇑iPKP      PKiKP    21 52 28.0 +3.2
QZH                               PP       PP       21 55 14.3 +4.5
QZH                               LR       LR
      comp=Z,830nm,19.3s
QZH                               LR       LR
      comp=Z,1µm,19.0s
QZH                               LR       LR
      comp=Z,3µm,26.3s
ZSN   Zaisan         137.76  72  ePKIKP    PKPdf    21 52 19.9 -2.3
ZSN                              e                  21 55 15.1
ZSN   Zaisan         137.76  72  ePKP      PKPdf    21 52 20.0 -2.3
ZSN                              ePP       PP       21 55 15.1 +4.9
HOPEN Hopen          137.87  15  ePKPdf    PKiKP    21 52 23.3 -0.2
HOPEN                            ePP       PP       21 55 10.3  0.0
ENH   Enshi          137.99 111   PFAKE             21 52 40.0  +15
ENH                               LR       LR
      comp=Z,5µm,20.0s
SPA0  Spitsbergen Ar 138.19  12  epPKPdf   pPKPdf   21 52 28.2 +1.8
SPA0                             ePP       PP       21 55 12.4 +0.1
BBB   Bella Bella    138.21 296   PKP      PKPdf    21 52 19.1 -3.7
      comp=Z,9.6nm,1.0s,baz=134,slow=7.1,SNR=3.3
BBB                               SKPbc    SKPbc    21 55 54.7 -1.2
      comp=Z,12nm,1.1s,baz=193,slow=1.9,SNR=3.3
BBB   Bella Bella    138.21 296   PFAKE             21 52 40.0  +15
BBB                               LR       LR
      comp=Z,4µm,21.0s
NACB  Ninganchiao    138.33 130   PFAKE             21 52 40.0  +14
NACB                              LR       LR
      comp=Z,3µm,22.0s
KBS   Kingsbay       138.40  10   PFAKE             21 52 30.0 +5.4
KBS                               LR       LR
      comp=Z,4µm,22.0s
KBS   Kingsbay       138.40  10⇑iPKIKP    PKiKP    21 52 26.3 +1.7
KBS   Kingsbay       138.40  10  ePKPdf    PKiKP    21 52 24.5 -0.1
KBS                              ePP       PP       21 55 13.8 +0.2
KBS                               IVMs_BB  IVMs_BB  22 42 04.5
      comp=Z,1µm,23.3s
YHNB  Yeheng         138.68 129   PFAKE             21 52 40.0  +13
YHNB                              LR       LR
      comp=Z,2µm,19.0s
YKA   Yellowknife Ar 138.71 315   PKhKP    PKPpre   21 52 12.8
      comp=Z,4.3nm,0.7s,baz=117,slow=3.1,SNR=4.9
YKA                               PKP      PKPdf    21 52 20.3 -3.1
      comp=Z,9.5nm,0.7s,baz=115,slow=2.3,SNR=13
YKA                               PP       PP       21 55 17.0 +1.2
      comp=Z,25nm,1.1s,baz=122,slow=6.2,SNR=8.1
YKA                               SKPbc    SKiKP    21 56 01.3 +0.7
      comp=Z,14nm,0.8s,baz=128,slow=2.4,SNR=8.4
YKW3  Yellowknife Ar 138.75 315  ePKPdf    PKiKP    21 52 24.9 -0.8
TATO  Taipei         139.00 129   PFAKE             21 52 40.0  +13
TATO                              LR       LR
      comp=Z,3µm,19.0s
LZH   Lanzhou        139.69 100  ePKP      PKPdf    21 52 21.0 -5.4
LZH                               sPKP              21 52 35.5
LZH                               PP       PP       21 55 26.5 +4.1
LZH                               SKKS              22 02 13.3
LZH                               SS       SS       22 13 37.8 -4.1
LZH                               AMB      AMB
      comp=Z,980nm,4.6s
LZH                               LR       LR
      comp=Z,1µm,17.9s
LZH                               LR       LR
      comp=Z,2µm,20.6s
LZH                               LR       LR
      comp=Z,3µm,21.1s
GTA   Gaotai         140.04  93  ePKP      PKPdf    21 52 20.8 -6.0
GTA                               pPKP     pPKPdf   21 52 30.8 -0.3
GTA                               sPKP              21 52 35.0
GTA                               PP       PP       21 55 25.8 +1.3
GTA                               PKS               21 55 56.8
GTA                               SKS               22 02 14.8
GTA   Gaotai         140.04  93   SS       SS       22 13 45.0 -1.0
GTA                               AMB      AMB
      comp=Z,510nm,8.3s
GTA                               LR       LR
      comp=N,1µm,23.5s
GTA                               LR       LR
      comp=E,2µm,20.3s
GTA                               LR       LR
      comp=Z,2µm,21.9s
RES   Resolute Bay   140.30 337   PFAKE             21 52 40.0  +11
RES                               LR       LR
      comp=Z,4µm,19.0s
WAKE  Wake Island    140.47 196   PFAKE             21 52 40.0 +9.4
WAKE                              LR       LR
      comp=Z,3µm,22.0s
WHN   Wuhan          140.59 116 ⇑PKP      PKPdf    21 52 21.5 -6.4
WHN                               PP       PP       21 55 28.8 +1.3
WHN                               PKS               21 55 54.5
WHN                               SKKS              22 02 04.8
XAN   Xi'an          140.73 107  ePKPdf    PKiKP    21 52 29.9 -0.9
XAN                               LR       LR
      comp=Z,3µm,22.0s
XAN   Xi'an          140.73 107   PKP      PKPdf    21 52 26.0 -2.2
XAN                               PP       PP       21 55 27.5 -1.1
XAN                               SKKS              22 02 19.8
XAN                               SS       SS       22 13 54.3 +0.5
XAN                               AMB      AMB
      comp=Z,2µm,13.1s
XAN                               LR       LR
      comp=Z,2µm,20.1s
XAN                               LR       LR
      comp=Z,980nm,18.6s
XAN                               LR       LR
      comp=Z,3µm,19.2s
XAN   Xi'an          140.73 107  ePKIKP    PKiKP    21 52 29.9 -0.9
XAN                               MLR      MLR
      comp=Z,3µm,22.0s
DIB   Dawson Inlet,  140.93 295  ePKPdf    PKiKP    21 52 29.9 -0.5
DIB                               LR       LR
      comp=Z,4µm,19.0s
ZAA0  Zalesovo Array 141.80  65  ePKPdf    PKPdf    21 52 29.3  0.0
ZAA0                              LR       LR
      comp=Z,3µm,20.0s
ZALV  Zalesovo Beam  141.80  65   PKhKP    PKPpre   21 52 23.6
      comp=Z,3.4nm,0.4s,baz=235,slow=3.9,SNR=16
WRAK  Wrangell Islan 142.72 299   PFAKE             21 52 40.0 +6.0
WRAK                              LR       LR
      comp=Z,3µm,20.0s
DLBC  Dease Lake     142.76 303   PKP      PKPdf    21 52 27.9 -3.1
      comp=Z,7.6nm,0.7s,baz=129,slow=3.0,SNR=19
DLBC  Dease Lake     142.76 303   PFAKE             21 52 40.0 +5.8
DLBC                              LR       LR
      comp=Z,5µm,20.0s
NJ2   Nanjing        143.96 120  ePKP      PKPdf    21 52 33.3 -0.6
NJ2                               pPKP     PKiKP    21 52 36.5 -0.9
NJ2                               SKKS              22 02 38.8
NJ2                               AMB      AMB
      comp=Z,1µm,9.1s
NJ2                               LR       LR
      comp=Z,2µm,18.0s
NJ2                               LR       LR
      comp=Z,3µm,17.5s
NJ2                               LR       LR
      comp=Z,3µm,18.4s
SSE   Sheshan        144.20 124   PFAKE             21 52 50.0  +12
SSE                               LR       LR
      comp=Z,6µm,19.0s
SSE   Sheshan        144.20 124   PKP      PKPbc    21 52 32.5  0.0
SSE                               PP       PP       21 55 54.5 +5.2
SSE                               AMB      AMB
      comp=Z,340nm,8.4s
SSE                               LR       LR
      comp=Z,2µm,16.3s
SSE                               LR       LR
      comp=Z,1µm,17.4s
JIS   Juneau Island  144.64 301   PFAKE             21 52 50.0  +12
JIS                               LR       LR
      comp=Z,4µm,19.0s
MIDW  Midway         144.77 224  ePKPbc    PKPdf    21 52 37.0 +1.7
MIDW                              LR       LR
      comp=Z,3µm,18.0s
TIY   Taiyuan        145.38 107  ePKPbc    PKPab    21 52 36.5 +0.1
WHY   Whitehorse     146.01 304   PFAKE             21 52 50.0 +9.2
WHY                               LR       LR
      comp=Z,3µm,18.0s
BTO   Baotou         146.29 101  ePKPbc    PKPdf    21 52 36.8 -1.0
TIA   Tai'an         146.54 114   PKPbc    PKPdf    21 52 37.5 -0.7
TIA                               LR       LR
      comp=Z,1µm,19.2s
TIA                               LR       LR
      comp=Z,380nm,12.8s
TIA                               LR       LR
      comp=Z,760nm,15.7s
HHC   Hu-ho-hao-te   147.27 102   PKPbc    PKPab    21 52 43.0 -0.6
HHC                               PP       PP       21 56 14.0 +6.1
HHC                               SKS      SKSdf    21 59 45.0 -2.0
HHC                               SKKS     SKKSac   22 03 01.8 +3.7
HHC                               LR       LR
      comp=Z,3µm,19.4s
HHC                               LR       LR
      comp=Z,1µm,18.8s
INK   Inuvik         148.35 318   PKPbc    PKPbc    21 52 43.0 -0.6
      comp=Z,61nm,0.8s,baz=90,slow=3.6,SNR=38
INK   Inuvik         148.35 318   PFAKE             21 52 50.0 +3.1
INK                               LR       LR
      comp=Z,6µm,22.0s
INK   Inuvik         148.35 318   PKP2     PKPbc    21 52 43.0 -0.6
INK                               pmax     pmax
      comp=Z,61nm,0.8s
MOY   Mondy          148.63  78  ePKIKP    PKPdf    21 52 42.2 +0.9
MOY                               pmax     pmax
      comp=Z,656nm,3.0s
EPYK  Eagle Plains   148.96 314   PFAKE             21 52 50.0 +0.4
EPYK                              LR       LR
      comp=Z,5µm,20.0s
EPYK  Eagle Plains   148.96 314   P        PKPbc    21 52 44.0 -1.3
      baz=107
BJT   Baijiatuau     149.02 108  ePKPdf    PKPbc    21 52 44.3 -2.0
BJT                               LR       LR
      comp=Z,2µm,19.0s
BJT   Baijiatuau     149.02 108  ePKIKP    PKPbc    21 52 44.3 -2.0
BJT                               MLR      MLR
      comp=Z,2µm,19.0s
BJI   Beijing        149.04 108   PKPbc    PKPbc    21 52 45.5 -0.8
BJI                               LR       LR
      comp=Z,820nm,22.9s
BJI                               LR       LR
      comp=Z,660nm,19.8s
BJI                               LR       LR
      comp=Z,1µm,31.9s
ZAK   Zakamensk      149.10  81  ePKIKP    PKPdf    21 52 42.9 +0.8
ZAK                               pmax     pmax
      comp=Z,115nm,1.4s
SONM  Songino Array  149.24  88   PKPbc    PKPdf    21 52 42.7 +0.3
      comp=Z,13nm,0.6s,baz=232,slow=2.3,SNR=42
SONM                              PKKP     PKKPdf   22 01 35.3 +2.8
      comp=Z,1.8nm,1.1s,baz=270,slow=3.0,SNR=3.5
BALM  Baldy          149.49 302   PFAKE             21 52 50.0 -2.0
BALM                              LR       LR
      comp=Z,3µm,21.0s
WAX   Waxell Ridge   149.49 301   PFAKE             21 52 50.0 -2.0
WAX                               LR       LR
      comp=Z,3µm,20.0s
TGL   Tana Glacier   149.60 302   PFAKE             21 52 50.0 +1.8
TGL                               LR       LR
      comp=Z,3µm,19.0s
ULN   Ulaanbaatar    149.61  88   PFAKE             21 52 50.0 +1.3
ULN                               LR       LR
      comp=Z,4µm,19.0s
JNU   Nakatsue       149.95 135  ePKPbc    PKiKP    21 52 49.4 -0.3
TLY   Talaya         150.02  79   PKP      PKPdf    21 52 40.2 -3.2
      comp=Z,3.3nm,0.5s,baz=295,slow=18,SNR=2.3
TLY                               PKPbc    pPKPdf   21 52 46.3 -1.4
      comp=Z,23nm,1.0s,baz=218,slow=4.9,SNR=13
TLY   Talaya         150.02  79   PFAKE             21 52 50.0 +0.7
TLY                               LR       LR
      comp=Z,4µm,18.0s
TLY   Talaya         150.02  79  i PKHKP   PKPpre   21 52 44.3
TLY                              e                  21 56 23.5
TLY                              eSS       SS       22 15 40.8 +1.0
TLY                               pmax     pmax
      comp=Z,207nm,1.1s
HMT   Hamilton       150.09 300  ePKPbc    PKiKP    21 52 50.6 +1.5
HMT                              ePKPab    sPKPab   21 53 00.4 +0.4
EGAK  Eagle          150.24 310  ePKPdf    PKPdf    21 52 42.1 -1.2
EGAK                             ePKPbc    PKiKP    21 52 50.5 +1.3
EGAK                              LR       LR
      comp=Z,2µm,19.0s
RAGM  Ragged Mountai 150.30 300  ePKPbc    PKiKP    21 52 51.3 +1.7
IRK   Irkutsk        150.65  79  ePKIKP    PKPdf    21 52 46.0 +1.6
IRK                               pmax     pmax
      comp=Z,600nm,2.9s
MENT  Mentasta       150.76 305  ePKPdf    PKPdf    21 52 44.2  0.0
MENT                             ePKPbc    pPKPbc   21 52 52.3 -1.7
DL2   Dalian         150.85 116   PKPbc    PKPdf    21 52 46.3 +1.2
DL2                               PKPab    pPKPab   21 53 01.5 -0.6
DL2                               PP       PP       21 56 30.5 +2.1
DL2                               SS       SS       22 15 55.5 +6.9
DL2                               AMB      AMB
      comp=Z,1µm,3.7s
DL2                               LR       LR
      comp=Z,2µm,18.2s
DL2                               LR       LR
      comp=Z,2µm,16.6s
DL2                               LR       LR
      comp=Z,3µm,17.4s
SCRK  Sand Creek     151.19 307  ePKPdf    PKPdf    21 52 47.9 +2.9
FID   Port Fidalgo   151.26 300  ePKPbc    PKiKP    21 52 53.6 +2.1
RIDG  Independent Ri 151.49 307  ePKPbc    PKiKP    21 52 54.0 +2.0
PAX   Paxson         151.53 305  ePKPbc    PKPab    21 52 57.7 -2.7
PAX                               LR       LR
      comp=Z,3µm,20.0s
GLI   Glacier Island 151.59 300  eP        PKPab    21 52 58.7 -1.9
GLI                               LR       LR
      comp=Z,3µm,20.0s
SCM   Sheep Creek Mo 152.01 302  ePKPbc    PKPab    21 52 59.7 -2.7
SCM                              ePKPab    pPKPab   21 53 05.8 -0.7
PRP   Porcupine Dome 152.22 310   PFAKE             21 53 00.0 -3.2
PRP                               LR       LR
      comp=Z,5µm,20.0s
FYU   Fort Yukon     152.32 312  ePKPbc    PKiKP    21 52 56.3 +2.9
FYU                               LR       LR
      comp=Z,4µm,20.0s
DHY   Denali Highway 152.40 305  ePKPbc    PKiKP    21 52 57.6 +3.6
DHY                              ePKPab    PKPab    21 53 04.8 +0.7
SEW   Seward         152.42 298  ePKPbc    PKiKP    21 52 55.5 +1.7
KS15  Wonju Array Si 152.50 126  eP        PKiKP    21 52 59.3 +4.5
KS15                             ePKPab    pPKPab   21 53 07.8 -1.2
KSRS  Korea Array    152.53 126   PKPbc    PKPdf    21 52 50.8 +3.1
      comp=Z,2.9nm,0.7s,baz=193,slow=1.6,SNR=11
HDA   Harding Lake   152.55 308  ePKPbc    PKiKP    21 52 56.1 +2.0
HDA                               LR       LR
      comp=Z,3µm,21.0s
HDA   Harding Lake   152.55 308   P        PKPdf    21 52 49.0 +2.2
      baz=103
ILAR  Eielson Array  152.61 308   PKP      PKPdf    21 52 43.4 -3.5
      comp=Z,2.8nm,0.9s,baz=326,slow=0.9,SNR=15
ILAR                              PKPbc    pPKPdf   21 52 50.2 -1.0
      comp=Z,16nm,1.0s,baz=309,slow=0.6,SNR=21
ILB   Eielson Array  152.61 308  ePKPbc    PKiKP    21 52 56.3 +2.2
RC01  Rabbit Creek A 152.88 300  ePKPdf    PKPdf    21 52 47.7 +0.3
RC01                              LR       LR
      comp=Z,3µm,20.0s
POKR  Poker Plat Res 152.91 309   P        PKPdf    21 52 49.3 +1.9
      baz=102
BRLK  Bradley Lake   152.98 297  ePKPbc    PKPbc    21 52 57.2 +2.3
BRLK                             ePKPab    PKPab    21 53 08.9 +2.4
COLA  College        153.04 308  ePKPbc    PKiKP    21 52 57.0 +2.0
COLA                             ePKPab    pPKPab   21 53 08.6 -2.1
COLA                              LR       LR
      comp=Z,4µm,19.0s
TCOL  CIGO, UAF Yank 153.04 308   P        PKPdf    21 52 49.3 +1.7
      baz=102
WRH   Wood River Hil 153.05 307  ePKPbc    PKPbc    21 53 01.2 +6.3
WRH                              ePKPab    PKPab    21 53 09.6 +3.0
KDAK  Kodiak Island  153.08 292   PKPbc    PKPbc    21 52 54.4 -0.7
      comp=Z,30nm,0.6s,baz=179,slow=4.4,SNR=17
KDAK  Kodiak Island  153.08 292  ePKPbc    PKiKP    21 52 56.3 +0.9
KDAK                              LR       LR
      comp=Z,4µm,21.0s
RND   Reindeer       153.13 305  ePKPbc    PKPbc    21 53 01.9 +6.6
RND                              ePKPab    PKPab    21 53 10.6 +3.6
RND                               LR       LR
      comp=Z,5µm,19.0s
OHAK  Old Harbor     153.21 290  eP        PKPab    21 53 02.1 -5.3
MCK   McKinley       153.24 306  ePKPbc    PKiKP    21 53 01.3 +5.8
MCK                              epPKPab   pPKPab   21 53 10.8 -0.9
MCK                               LR       LR
      comp=Z,4µm,20.0s
SII   Sitkinak Islan 153.39 289  eP        PKPab    21 53 02.5 -5.8
BWN   Browne         153.57 306   PFAKE             21 53 00.0 +3.8
BWN                               LR       LR
      comp=Z,3µm,19.0s
SKT   Skwentna       153.96 301   PFAKE             21 53 00.0 +2.9
SKT                               LR       LR
      comp=Z,4µm,20.0s
SNY   Shenyang       154.06 115 ⇑PKPbc    PKPbc    21 52 54.5 -3.3
SNY                               AMB      AMB
      comp=Z,860nm,11.0s
SNY                               LR       LR
      comp=Z,3µm,17.5s
SNY                               LR       LR
```

	comp=Z,1µm,18.9s						
SNY				LR	LR		
	comp=Z,3µm,19.4s						
KTH	**Kantishna Hill**	**154.07**	**305**	*e*P	**PKiKP**	**21 53 02.9**	**+5.6**
KTH				*e*PKPab	**PKPab**	**21 53 12.4**	**+1.4**
KTH				LR	LR		
	comp=Z,4µm,22.0s						
BPAW	**Bear Paw Mtn.**	**154.21**	**306**	*e*PKPbc	**PKiKP**	**21 53 00.1**	**+2.5**
BPAW				*e*PKPab	**PKPab**	**21 53 13.3**	**+1.7**
TOLK	**Toolik Lake Re**	**154.22**	**317**	*e*P	**PKiKP**	**21 53 03.6**	**+6.2**
TOLK				*e*PKPab	**pPKPab**	**21 53 14.0**	**-1.7**
TOLK				LR	LR		
	comp=Z,6µm,22.0s						
TOLK	**Toolik Lake Re**	**154.22**	**317**	P	**PKPdf**	**21 52 51.4**	**+2.2**
	baz=93						
MLY	**Manley**	**154.27**	**308**	*e*PKPab	**PKPab**	**21 53 11.8**	**-0.1**
MLY				LR	LR		
	comp=Z,4µm,19.0s						
PPLA	**Purkeypile**	**154.48**	**303**	*e*PKPab	**PKPab**	**21 53 12.2**	**-0.7**
CIT	**Chita**	**155.42**	**86**	*e*PKIKP	PKPdf	21 53 01.6	+10
CIT				*e*		21 53 13.1	
CHGN	**Chignik**	**155.44**	**286**	*e*PKPab	**PKPab**	**21 53 13.9**	**-3.0**
CHGN				LR	LR		
	comp=Z,4µm,21.0s						
MAJO	**Matsushiro**	**155.58**	**144**	*e*PKPdf	**PKPdf**	**21 52 50.1**	**-1.9**
MAJO				*e*pPKPdf	**pPKPdf**	**21 52 54.1**	**-2.2**
MAJO				LR	LR		
	comp=Z,3µm,22.0s						
MAJO	**Matsushiro**	**155.58**	**144**	*e*PKIKP	**PKPdf**	**21 52 50.1**	**-1.9**
MAJO				MLR	MLR		
	comp=Z,3µm,22.0s						
MAT	**Matsushiro**	**155.58**	**144**	PKP	**PKPdf**	**21 52 53.2**	**+1.2**
MJAR	**Matsushiro Arr**	**155.58**	**144**	PKP	**PKPdf**	**21 52 50.1**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=189,slow=2.2,SNR=2.6						
MJAR				PKPbc	**sPKPdf**	**21 52 57.4**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=208,slow=1.8,SNR=6.6						
MJB9	**Matsu-Tunnel**	**155.58**	**144**	PFAKE		21 53 00.0	+7.9
MJB9				LR	LR		
	comp=Z,2µm,20.0s						
SVW2	**Sparrevohn**	**155.60**	**298**	PFAKE		21 53 00.0	+8.7
SVW2				LR	LR		
	comp=Z,3µm,20.0s						
SDPT	**Sand Point**	**156.11**	**282**	*e*PKPab	**PKPab**	**21 53 18.1**	**-1.8**
TTA	**Tatalina**	**156.20**	**302**	*e*P	PKPab	21 53 08.8	-11
TTA				*e*PKPab	pPKPab	21 53 21.4	-2.9
CN2	**Changchun**	**156.45**	**114**	*e*PKP	**PKPdf**	**21 52 52.3**	**-0.6**
CN2				*e*PP	**PP**	**21 57 02.0**	**+2.0**
CN2				LR	LR		
	comp=Z,2µm,18.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
CN2				LR	LR		
	comp=Z,4µm,18.0s						
HIA	**Hailar**	**157.19**	**97**	PFAKE		21 53 10.0	-15
HIA				LR	LR		
	comp=Z,4µm,22.0s						
BOD	**Bodaibo**	**158.10**	**73**	*e*PKIKP	**PKPdf**	**21 52 54.6**	**+0.1**
BOD				pmax	pmax		
	comp=Z,89nm,1.7s						
MDJ	**Mudanjiang**	**159.03**	**118**	PFAKE		21 53 10.0	+14
MDJ				LR	LR		
	comp=Z,5µm,21.0s						
MDJ	**Mudanjiang**	**159.03**	**118**	PKP	**PKPdf**	**21 53 00.5**	**+4.4**
MDJ				PP	**PP**	**21 57 15.3**	**+1.2**
MDJ				SS	SS	22 17 23.8	+6.5
MDJ				LR	LR		
	comp=Z,3µm,19.2s						
MDJ				LR	LR		
	comp=Z,3µm,19.8s						
MDJ				LR	LR		
	comp=Z,6µm,21.0s						
RDOG	**Red Dog Mine**	**159.18**	**316**	PFAKE		21 53 10.0	+14
RDOG				LR	LR		
	comp=Z,4µm,21.0s						
NIKH	**Nikolski High**	**159.47**	**271**	PFAKE		21 53 10.0	+14
NIKH				LR	LR		
	comp=Z,3µm,20.0s						
USA0B	**Ussuriysk Arra**	**159.81**	**123**	*e*PKPdf	**PKPdf**	**21 52 59.5**	**+2.5**
USA0B				*e*pPKPab	**PKPab**	**21 53 37.6**	**+1.4**
USA0B				LR	LR		
	comp=Z,4µm,21.0s						
USRK	**Ussuriysk Ar.**	**159.81**	**123**	PKPab	**PKPab**	**21 53 35.6**	**-0.5**
	comp=Z,7.3nm,0.8s,baz=228,slow=2.3,SNR=8.4						
TEY	**Ternei**	**162.46**	**130**	*e*PKIKP	PKPdf	21 53 12.2	+12
TIXI	**Tiksi**	**162.46**	**28**	PP	PP	21 57 33.2	+1.2
	comp=Z,4.8nm,0.7s,baz=338,slow=2.2,SNR=4.4						
KLR	**Kul'dur**	**163.35**	**112**	PKP	**PKPdf**	**21 52 59.1**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=248,slow=11,SNR=2.6						
KLR				PKPab	**PKPab**	**21 53 51.5**	**-0.1**
	comp=Z,12nm,0.9s,baz=272,slow=5.0,SNR=6.9						
KLR				PP	**PP**	**21 57 38.5**	**+1.1**
	comp=Z,2.0nm,1.0s,baz=237,slow=9.5,SNR=5.0						
ZEA	**Zeya**	**163.53**	**93**	*i* PKIKP	**PKPdf**	**21 53 04.2**	**+3.7**
ZEA				*e*		21 57 42.5	
ZEA				*e*		22 01 37.0	
ZEA				pmax	pmax		
	comp=Z,170nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,900nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,11.0s						
ZEA				pmax	pmax		
	comp=E,500nm,12.0s						
KUR	**Kuril'sk**	**166.30**	**156***c*	*i*PKIKP	**PKPdf**	**21 53 08.9**	**+5.7**
KUR				*e*SSS	SSS	22 24 58.1	
YSS	**Yuzh-Sakhalins**	**166.41**	**139**	⇑*i*PKIKP	**PKPdf**	**21 53 05.8**	**+2.6**
YSS				*e*		21 59 58.2	
YSS				*e*SS	SS	22 18 32.7	-0.6
YSS				pmax	pmax		
	comp=Z,1µm,5.4s						
YSS				MLR	MLR		
	comp=E,1µm,18.0s						
YAK	**Yakutsk**	**166.43**	**62**	*e*PKIKP	**PKPdf**	**21 53 01.2**	**-1.5**
YAK				*e*		21 57 52.8	
YAK				*e*PPP	PPP	22 01 54.6	
YAK				pmax	pmax		
	comp=Z,141nm,2.2s						
YAK				pmax	pmax		
	comp=E,67nm,1.8s						
YAK				pmax	pmax		
	comp=N,62nm,1.9s						
GRNR	**Gornyy**	**166.64**	**115**	*e*PKIKP	**PKPdf**	**21 53 06.0**	**+2.7**
GRNR				*e*		21 57 56.8	
BILL	**Bilibino**	**168.90**	**339**	*i* PKIKP	**PKPdf**	**21 53 02.6**	**-1.7**
BILL				*i*		21 58 09.8	
BILL				*i*		22 02 03.7	
BILL				pmax	pmax		
	comp=Z,12nm,1.2s						
NKL	**Nikolayevsk**	**170.19**	**113**	*e*PKIKP	**PKPdf**	**21 53 09.0**	**+3.5**
NKL				*e*		21 54 23.5	
NKL				*e*		21 58 13.0	
NKL				pmax	pmax		
	comp=Z,145nm,2.0s						
PET	**Petropavlovsk**	**174.71**	**200**	*i* PKIKP	**PKPdf**	**21 53 10.4**	**+2.9**
PET				MLR	MLR		
	comp=Z,3µm,21.0s						
SEY	**Seymchan**	**174.82**	**17**	PP	PP	21 58 36.0	+1.3
	comp=Z,1.6nm,0.7s,baz=1.8,slow=7.6,SNR=3.6						
PETK	**Petropavlovsk-**	**174.94**	**194**	PKP	**PKPdf**	**21 53 07.2**	**-0.5**
	comp=Z,10.0nm,1.1s,baz=95,slow=3.3,SNR=9.6						
PETK				PKPab	**PKPab**	**21 54 42.5**	**-0.1**
	comp=Z,21nm,1.1s,baz=119,slow=5.2,SNR=5.3						
PETK				PP	PP	21 58 43.7	+8.4
	comp=Z,5.1nm,1.0s,baz=103,slow=6.4,SNR=3.9						
PEA1	**Petropavlovsk-**	**174.94**	**194**	*e*PKPdf	**PKPdf**	**21 53 07.2**	**-0.4**
PEA1				*e*PKPab	**PKPab**	**21 54 42.5**	**-0.1**

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*ISCJB **26** 22:00:26.0±0.6, 41°.87N±0°.06×142°.91E±0°.06, h71^{km}±4^{km}, mb3.5/6, Error ellipse: s-maj=9.7km s-min=6.4km az=155.3*

*JMA **26** 22:00:27.6±0.1, 41°.92N×142°.89E, h59^{km}±1^{km}, M3.4*

*IDC **26** 22:00:27.6±2.8, 41°.94N×143°.05E, h77^{km}±18^{km}, mb3.3/6, mb1 3.4/9, mb1mx3.2/36, mbtmp3.6/9, MS4.2/2, Ms1 4.2/2, ms1mx3.5/19, Error ellipse: s-maj=30.2km s-min=17.2km az=115.0*

ISC 26 22:00:26.7±1.0**, 41°.88N**±0°.07×**142°.91E**±0°.05**, h64**^{km}±7^{km}**, n31, σ0^{s}89**/33**, mb3.5**/6**, 4C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.23**	**53**	⇓P	**Pn**	**22 00 37.2**	**+0.4**
JEM				*e*S	**Sn**	**22 00 44.0**	**-0.2**
JNBK	**Urakawa-nobuka**	**0.42**	**344**	⇓P	**Pn**	**22 00 38.2**	**0.0**
JNBK				*e*S	**Sn**	**22 00 46.4**	**-0.2**
JTHR	**Tokachihiroo**	**0.51**	**35**	⇓P	**Pn**	**22 00 39.4**	**+0.3**
JTHR				*e*S	**Sn**	**22 00 47.9**	**-0.2**
JSHD	**Hidakashinhida**	**0.62**	**329**	⇓P	**Pn**	**22 00 40.5**	**+0.2**
JCH	**Churui**	**0.81**	**25**	⇑P	**Pn**	**22 00 42.9**	**+0.4**
JCH				*e*S	**Sn**	**22 00 54.4**	**+0.2**
JBT2	**Biratori 2**	**0.99**	**336**	⇓P	**Pn**	**22 00 45.0**	**+0.3**
JBT2				*e*S	**Sn**	**22 00 58.7**	**+0.6**
JOB	**Onbets**	**1.23**	**34**	⇑P	**Pn**	**22 00 48.8**	**+0.9**
JOB				S	**Sn**	**22 01 05.2**	**+1.4**
JKB	**Kayabe**	**1.40**	**271**	⇓P	**Pn**	**22 00 50.5**	**+0.4**
JKB				*e*S	**Sn**	**22 01 07.4**	**-0.3**
JEW	**Eniwo**	**1.45**	**312**	P	**Pn**	**22 00 51.5**	**+0.7**
JEW				S	**Sn**	**22 01 10.1**	**+1.2**
JOT	**Ohata**	**1.48**	**251**	⇑P	**Pn**	**22 00 51.8**	**+0.6**
JNB	**Noboribetsu**	**1.51**	**294**	⇓P	**Pn**	**22 00 51.4**	**-0.2**
JNB				S	**Sn**	**22 01 09.9**	**-0.5**
JAR	**Ashorobuto**	**1.56**	**24**	⇑P	**Pn**	**22 00 52.3**	**+0.1**
ASAJ	**Asahikawa**	**2.25**	**354**	P	**Pn**	**22 01 02.4**	**+0.8**
	3.2nm,0.3s,baz=204,slow=17,SNR=27						
ASAJ				S	**Sn**	**22 01 29.1**	**+0.8**
	5.2nm,0.3s,baz=210,slow=20,SNR=8.7						
MJAR	**Matsushiro Arr**	**6.46**	**216**	P	**Pn**	**22 02 02.1**	**+3.0**
	0.1nm,0.3s,baz=33,slow=14,SNR=4.1						
USRK	**Ussuriysk Ar.**	**8.33**	**290**	P	**Pn**	**22 02 25.7**	**+1.1**
	0.1nm,0.3s,baz=98,slow=14,SNR=3.0						
SONM	**Songino Array**	**26.38**	**296**	P	**P**	**22 05 56.5**	**-0.5**
	0.7nm,0.8s,baz=75,slow=9.8,SNR=3.4						
GUMO	**Guam**	**28.24**	**176**	LR	LR	22 15 27.8	
	comp=Z,434nm,19.5s,baz=256,slow=32						
TLY	**Talaya**	**28.31**	**304**	LR	LR	22 17 08.8	
	comp=Z,606nm,19.0s,baz=0.0,slow=35						
H11N2	**WAKE ISLAND Hy**	**30.01**	**130**	T	T	22 38 03.5	
	baz=324,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**30.02**	**130**	T	T	22 38 06.8	
	baz=324,slow=75,SNR=28						
H11N3	**WAKE ISLAND Hy**	**30.03**	**130**	T	T	22 38 04.8	
	baz=324,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**30.88**	**132**	T	T	22 38 58.4	
	baz=324,slow=76,SNR=41						
H11S3	**WAKE ISLAND Hy**	**30.88**	**132**	T	T	22 38 58.5	
	baz=324,slow=76,SNR=47						
H11S2	**WAKE ISLAND Hy**	**30.89**	**132**	T	T	22 39 00.2	
	baz=324,slow=76,SNR=41						
ZALV	**Zalesovo Beam**	**39.67**	**308**	P	**P**	**22 07 52.5**	**+0.4**
	1.0nm,0.4s,baz=102,slow=9.0,SNR=3.8						
MKAR	**Makanchi Array**	**42.70**	**298**	P	**P**	**22 08 17.8**	**+0.7**
	0.6nm,0.6s,baz=76,slow=9.4,SNR=4.4						
KURBB	**Kurchatov Arra**	**44.08**	**304**	P	**P**	**22 08 28.1**	**0.0**
	baz=78,slow=9.1						
ILAR	**Eielson Array**	**44.83**	**35**	P	**P**	**22 08 32.3**	**-1.6**
	0.2nm,0.2s,baz=283,slow=8.0,SNR=4.0						
FINES	**FINESS Array B**	**65.08**	**332**	P	**P**	**22 11 00.1**	**+0.2**
	0.8nm,0.6s,baz=51,slow=10.0,SNR=6.0						
NB2	**NORSAR Subarra**	**70.17**	**337**	P	**P**	**22 11 32.6**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**70.17**	**337**	P	**P**	**22 11 30.9**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=36,slow=6.2,SNR=4.0						

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*IDC **26** 22:08:57.4±2.0, 43°.42N×146°.59E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.4/29, mbtmp3.6/6, ML2.3/1, Error ellipse: s-maj=56.2km s-min=28.6km az=86.0*

*ISCJB **26** 22:09:04.0±0.8, 43°.25N±0°.05×146°.16E±0°.08, h50^{km}±5^{km}, mb3.5/5, Error ellipse: s-maj=10.7km s-min=6.7km az=28.0*

*JMA **26** 22:09:04.9±0.1, 43°.23N×146°.11E, h45^{km}±1^{km}, M3.6*

JMA Felt I J1.

*SKHL **26** 22:09:05.5±0.4, 43°.26N×145°.88E, h55^{km}±5^{km}, mb4.1/5*

*MOS **26** 22:09:05.0±1.0, 43°.32N×145°.78E, h53^{km}, mb4.4/1, Error ellipse: s-maj=25.7km s-min=12.2km az=88.3*

ISC 26 22:09:05.7±1.0**, 43°.29N**±0°.06×**146°.02E**±0°.06**, h43**^{km}±6^{km}**, n27, σ1^{s}17**/44**, mb3.5**/5**, 2C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.22**	**290**	P	**Pn**	**22 09 13.5**	**+0.1**
NEM2				*e*S	**Sn**	**22 09 19.5**	**+0.7**
NMR	**Nemuro--Hokkai**	**0.23**	**290***d*	*i*PN	**Pn**	**22 09 13.6**	**+0.1**
NMR				*i* S	**Sn**	**22 09 19.5**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.23**	**290**	*i* P	**Pn**	**22 09 13.6**	**+0.1**
NMR				*i* S	**Sn**	**22 09 19.5**	**+0.5**
GLVR	**Golovnino**	**0.58**	**321**	⇓*i*PN	**Pn**	**22 09 18.0**	**+0.4**
GLVR				*i* S	**Sn**	**22 09 27.4**	**+1.4**
GLVR				pmax	pmax		
	comp=Z,865nm,0.5s						
GLVR				pmax	pmax		
	comp=N,354nm,0.3s						
GLVR				pmax	pmax		
	comp=E,210nm,0.2s						
GLVR				smax	smax		
	comp=N,3µm,0.3s						
GLVR				smax	smax		
	comp=E,6µm,0.3s						
GLVR	**Golovnino**	**0.58**	**321**	*i* P	**Pn**	**22 09 18.0**	**+0.4**
GLVR				AMB	AMB	22 09 19.0	
	comp=E,70nm,0.4s						
GLVR				AMB	AMB	22 09 19.0	
	comp=E,120nm,0.4s						
GLVR				AMB	AMB	22 09 19.0	
	comp=E,180nm,0.4s						
GLVR				*i* S	**Sn**	**22 09 27.0**	**+1.0**
GLVR				A	A	22 09 28.0	
	comp=E,1µm,0.3s						
GLVR				A	A	22 09 28.0	
	comp=E,1µm,0.3s						
JKHN	**Kushirohamanak**	**0.67**	**252**	P	**Pn**	**22 09 18.9**	**+0.2**
JKHN				*e*S	**Sn**	**22 09 29.1**	**+1.1**
GRPR	**Tuman**	**0.72**	**345**	⇓*i*PN	**Pn**	**22 09 19.3**	**-0.2**
GRPR				*i* S	**Sn**	**22 09 29.6**	**+0.1**
GRPR				pmax	pmax		
	comp=Z,3µm,0.3s						
GRPR				pmax	pmax		
	comp=E,1µm,0.2s						
GRPR				pmax	pmax		
	comp=N,2µm,0.4s						
GRPR				smax	smax		
	comp=N,8µm,0.5s						
GRPR				smax	smax		
	comp=E,10µm,0.4s						
GRPR	**Tuman**	**0.72**	**345**	*i* P	**Pn**	**22 09 19.0**	**-0.5**
GRPR				AMB	AMB	22 09 20.0	
	comp=E,100nm,0.3s						
GRPR				AMB	AMB	22 09 20.0	
	comp=E,80nm,0.3s						
GRPR				AMB	AMB	22 09 20.0	
	comp=E,130nm,0.3s						
GRPR				*i* S	**Sn**	**22 09 29.0**	**-0.5**
GRPR				A	A	22 09 30.0	
	comp=E,1µm,0.3s						
GRPR				A	A	22 09 30.0	
	comp=E,980nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.75**	**351**	⇑*i*PN	**Pn**	**22 09 19.7**	**-0.2**
YUK				*i* S	**Sn**	**22 09 30.5**	**+0.3**
YUK				pmax	pmax		
	comp=Z,665nm,0.2s						
YUK				pmax	pmax		
	comp=N,106nm,0.3s						
YUK				pmax	pmax		
	comp=E,263nm,0.3s						
YUK				smax	smax		
	comp=E,2µm,0.6s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.75**	**351**	*i* P	**Pn**	**22 09 19.0**	**-0.9**
YUK				AMB	AMB	22 09 20.0	
	comp=N,100nm,0.4s						
YUK				AMB	AMB	22 09 20.0	
	comp=N,120nm,0.4s						
YUK				AMB	AMB	22 09 20.0	
	comp=N,160nm,0.4s						
YUK				*i* S	**Sn**	**22 09 30.0**	**-0.1**
YUK				A	A	22 09 33.0	
	comp=N,860nm,0.3s						
YUK				A	A	22 09 33.0	
	comp=N,950nm,0.3s						
LAGR	**Lagunnoye**	**0.78**	**347**	⇑*i*PN	**Pn**	**22 09 20.2**	**-0.1**
LAGR				*i* S	**Sn**	**22 09 31.3**	**+0.4**
LAGR				pmax	pmax		
	comp=Z,2µm,0.5s						
LAGR				pmax	pmax		
	comp=E,396nm,0.4s						
LAGR				pmax	pmax		
	comp=N,461nm,0.5s						
LAGR				smax	smax		
	comp=N,5µm,0.2s						
LAGR				smax	smax		
	comp=E,9µm,0.5s						
LAGR	**Lagunnoye**	**0.78**	**347**	*i* P	**Pn**	**22 09 20.0**	**-0.3**
LAGR				AMB	AMB	22 09 20.0	
	comp=E,70nm,0.3s						
LAGR				AMB	AMB	22 09 20.0	
	comp=E,30nm,0.3s						
LAGR				AMB	AMB	22 09 20.0	
	comp=E,130nm,0.3s						
LAGR				*i* S	**Sn**	**22 09 31.0**	**+0.1**
LAGR				A	A	22 09 32.0	
	comp=E,970nm,0.3s						
LAGR				A	A	22 09 32.0	
	comp=E,890nm,0.3s						
JNSB	**Nemuroshibetsu**	**0.89**	**304**	P	**Pn**	**22 09 22.2**	**+0.5**
JRA	**Rausu**	**0.92**	**315**	P	**Pn**	**22 09 22.9**	**+0.7**
JRA				*e*S	**Sn**	**22 09 36.0**	**+1.8**
JNK	**Nakash**	**0.99**	**288**	P	**Pn**	**22 09 23.4**	**+0.2**
JNK				S	**Sn**	**22 09 37.4**	**+1.3**
JAK	**Akkeshi**	**1.01**	**254**	P	**Pn**	**22 09 23.2**	**-0.2**
JAR	**Ashorobuto**	**1.65**	**271**	P	**Pn**	**22 09 32.7**	**+0.6**
JAR				*e*S	**Sn**	**22 09 53.7**	**+1.7**
JOB	**Onbets**	**1.65**	**257**	P	**Pn**	**22 09 32.4**	**+0.3**
JTKR	**Abashiri--Toko**	**1.68**	**295**	P	**Pn**	**22 09 34.1**	**+1.6**
JTKR				*e*S	**Sn**	**22 09 56.0**	**+3.2**
KUR	**Kuril'sk**	**2.35**	**34**	⇓*i*PN	Pn	22 09 45.1	+3.4
KUR				*i* S	**Sn**	**22 10 12.9**	**+3.6**
KUR				pmax	pmax		
	comp=Z,43nm,0.4s						
KUR				pmax	pmax		
	comp=N,37nm,0.2s						
KUR				pmax	pmax		
	comp=E,34nm,0.3s						
KUR				smax	smax		
	comp=E,49nm,0.3s						
KUR				smax	smax		
	comp=N,130nm,0.4s						
KUR	**Kuril'sk**	**2.35**	**34**	*e*P	**Pn**	**22 09 43.8**	**+2.1**
KUR				AMB	AMB	22 09 45.0	
	comp=N,40nm,0.5s						
KUR				AMB	AMB	22 09 45.0	
	comp=N,30nm,0.5s						
KUR				AMB	AMB	22 09 45.0	
	comp=N,20nm,0.5s						
KUR				*i* S	**Sn**	**22 10 11.4**	**+2.1**
KUR				A	A	22 10 18.0	
	comp=N,290nm,0.5s						
KUR				A	A	22 10 18.0	
	comp=N,160nm,0.5s						
MJAR	**Matsushiro Arr**	**9.02**	**224**	Pn	**Pn**	**22 11 14.6**	**+1.2**
	comp=N,0.0nm,0.3s,baz=28,slow=11,SNR=3.2						
SONM	**Songino Array**	**27.89**	**293**	P	**P**	**22 14 51.8**	**+0.3**
	comp=N,0.4nm,0.5s,baz=89,slow=9.0,SNR=3.9						
MKAR	**Makanchi Array**	**44.07**	**298**	P	**P**	**22 17 09.2**	**0.0**
	comp=N,0.3nm,0.5s,baz=78,slow=9.6,SNR=3.6						
FINES	**FINESS Array B**	**64.91**	**333**	P	**P**	**22 19 38.9**	**-1.2**
	comp=N,0.7nm,0.5s,baz=52,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**67.55**	**192**	P	**P**	**22 19 56.8**	**-0.7**
	comp=N,0.4nm,0.8s,baz=355,slow=5.6,SNR=4.6						
AKASG	**Malin Array Be**	**71.46**	**323**	P	**P**	**22 20 20.1**	**-1.2**
	comp=N,0.2nm,0.3s,baz=42,slow=5.6,SNR=6.2						

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*LDG **26** 22:17:21.9±0.1, 48°.17N×6°.87E, h2^{km}, Md1.5/3, Ml1.5/5, Error ellipse: s-maj=1.3km s-min=1.1km az=153.0*

STR 26 22:17:22.2±0.5**, 48°N**±2°×°±°**, h10**^{km}**, MLv0.9**/6**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	**Echery**	**0.19**	**76**	Pg	Pg	22 17 26.2	-0.1
ECH				Sg	Sg	22 17 29.0	0.0
HINF	**Hinteralfeld**	**0.35**	**183**	*e*Pg	Pg	22 17 29.0	-0.2
HINF				*e*Sg	Sg	22 17 33.7	-0.2
	1.6nm,0.2s						
CDF	**Champ du Feu**	**0.36**	**47**	*e*Pg	Pg	22 17 29.0	-0.3
CDF				*e*Sg	Sg	22 17 33.7	-0.4
	3.3nm,0.3s						
MOF	**Molkenrain**	**0.36**	**152**	Pg	Pg	22 17 29.5	+0.1
MOF				Sg	Sg	22 17 34.6	+0.5
HAU	**Haudompre**	**0.39**	**245**	*e*Pg	Pg	22 17 29.4	-0.6
HAU				*e*Sg	Sg	22 17 33.8	-1.4
	3.1nm,0.2s						
WLS	**Welschbruch**	**0.40**	**52**	Pg	Pg	22 17 29.8	-0.3
WLS				Sg	Sg	22 17 34.9	-0.4
KIZ	**Kirchzarten**	**0.73**	**107**	Pg	Pg	22 17 36.3	0.0
KIZ				Sg	Sg	22 17 46.1	+0.4
PAGF	**Fort de Pagny**	**0.86**	**297**	*e*Pg	Pg	22 17 38.1	-0.7
	baz=118						
PAGF				*e*Sg	Sg	22 17 49.5	-0.5
	0.6nm,0.1s,baz=114						
OPP	**Oppenau**	**0.93**	**69**	Sg	Sg	22 17 52.5	+0.3
CHMF	**Charmoille**	**0.94**	**190**	Pg	Pg	22 17 40.1	-0.1
CHMF				Sg	Sb	22 17 52.7	-0.3
SUBF	**Surbourg**	**0.98**	**40**	Pg	Pg	22 17 41.2	+0.1
SFTF	**Sexfontaines**	**1.23**	**272**	*e*Pg	Pn	22 17 45.1	-0.4
SFTF				*e*Sg	Sb	22 18 00.7	-0.8
	1.1nm,0.2s						
MEZF	**Maizieres J'vi**	**1.26**	**286**	*e*Pg	Pn	22 17 45.4	-0.5
	baz=105						
MEZF				*e*Sg	Sb	22 18 02.3	-0.1
	1.2nm,0.4s,baz=109						
CABF	**La Chapelle**	**1.65**	**199**	*e*Pn	Pn	22 17 50.3	-1.0
CABF				*e*Sn	Sn	22 18 10.8	-1.8
	0.8nm,0.3s						
LOR	**Lormes**	**2.23**	**247**	*e*Sg	Sb	22 18 31.7	+1.4
	0.6nm,0.3s						

IDC 26 22:22:12.8±1.6**, 4°.23S**×**154°.22E, h0**^{km}**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/21**, mbtmp3.6**/4**, Error ellipse: s-maj=58.1km s-min=27.7km az=123.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.88**	**229**	P	P	22 27 36.4	-1.1
	0.7nm,0.5s,baz=54,slow=9.0,SNR=6.3						
ASAR	**Alice Springs**	**27.53**	**224**	P	P	22 28 02.4	+0.9
	0.4nm,0.4s,baz=50,slow=8.1,SNR=8.1						
SONM	**Songino Array**	**66.61**	**327**	P	P	22 33 05.5	+0.3
	0.2nm,0.4s,baz=117,slow=5.0,SNR=2.3						
NVAR	**Mina Array Bea**	**90.62**	**52**	P	P	22 35 17.4	-0.4
	0.1nm,0.3s,baz=260,slow=4.9,SNR=2.4						

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*SKHL **26** 22:38:53.4±0.4, 43°.03N×146°.18E, h57^{km}±2^{km}, mb3.9/3*

*ISCJB **26** 22:38:54.1±1.0, 43°.43N±0°.06×145°.70E±0°.08, h101^{km}±6^{km}, Error ellipse: s-maj=13.4km s-min=5.6km az=138.8*

*JMA **26** 22:38:54.7±0.1, 43°.42N×145°.69E, h98^{km}±1^{km}, M2.8*

ISC 26 22:38:54.4±1.8**, 43°.43N**±0°.07×**145°.71E**±0°.07**, h101**^{km}±10^{km}**, n16, σ0^{s}43**/30**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.07**	**156**	P	**Pn**	**22 39 08.4**	**0.0**
NEM2				S	**Sn**	**22 39 18.7**	**0.0**
GLVR	**Golovnino**	**0.34**	**337**	*i* P	**Pn**	**22 39 09.0**	**-0.3**
GLVR				AMB	AMB	22 39 10.0	
	10.0nm,0.2s						
GLVR				AMB	AMB	22 39 10.0	
	20nm,0.2s						
GLVR				AMB	AMB	22 39 10.0	
	50nm,0.2s						
GLVR				*i* S	**Sn**	**22 39 21.0**	**+0.7**
GLVR				A	A	22 39 22.0	
	690nm,0.2s						
GLVR				A	A	22 39 22.0	
	630nm,0.2s						
JKHN	**Kushirohamanak**	**0.53**	**230**	P	**Pn**	**22 39 10.6**	**+0.2**
JKHN				*e*S	**Sn**	**22 39 22.4**	**0.0**
GRPR	**Tuman**	**0.57**	**5**	*i* P	**Pn**	**22 39 10.0**	**-0.8**
GRPR				AMB	AMB	22 39 11.0	
	40nm,0.3s						
GRPR				AMB	AMB	22 39 11.0	
	50nm,0.3s						
GRPR				*i* S	**Sn**	**22 39 22.0**	**-1.0**
GRPR				A	A	22 39 24.0	
	650nm,0.3s						
GRPR				A	A	22 39 24.0	
	570nm,0.3s						
JNSB	**Nemuroshibetsu**	**0.62**	**305**	P	**Pn**	**22 39 11.5**	**+0.3**
JNSB				S	**Sn**	**22 39 23.2**	**-0.5**

YUK	Yuzh-Kuril'sk	0.62	10	AMB	AMB	22 39 11.0	
	20nm,0.3s						
YUK				AMB	AMB	22 39 11.0	
	30nm,0.3s						
YUK				*i* P	Pn	22 39 11.2	0.0
YUK				*i* S	Sn	22 39 24.0	+0.3
YUK				A	A	22 39 24.0	
	290nm,0.3s						
YUK				A	A	22 39 24.0	
	460nm,0.3s						
LAGR	Lagunnoye	0.63	5	*i* P	Pn	22 39 11.7	+0.4
LAGR				*i* S	Sn	22 39 24.6	+0.7
LAGR				A	A	22 39 25.0	
	460nm,0.3s						
LAGR				A	A	22 39 25.0	
	370nm,0.3s						
JRA	Rausu	0.67	321	P	Pn	22 39 11.7	+0.2
JRA				S	Sn	22 39 24.4	0.0
JNK	Nakash	0.74	283	P	Pn	22 39 12.1	-0.1
JNK				S	Sn	22 39 25.1	-0.4
JAK	Akkeshi	0.85	240	P	Pn	22 39 13.5	+0.2
JAK				*e*S	Sn	22 39 27.5	0.0
JTKR	Abashiri--Toko	1.41	293	P	Pn	22 39 19.7	+0.1
JAR	Ashorobuto	1.42	265	P	Pn	22 39 20.1	+0.4
JAR				*e*S	Sn	22 39 39.1	+0.3
JOB	Onbets	1.47	250	P	Pn	22 39 20.5	+0.3
JOB				*e*S	Sn	22 39 39.8	0.0
JMP	Maruseppu	1.80	290	P	Pn	22 39 24.5	+0.1
JCH	Churui	1.90	246	P	Pn	22 39 25.7	0.0
JCH				S	Sn	22 39 48.6	-1.0
KUR	Kuril'sk	2.38	40	*e*P	Pn	22 39 32.0	+0.1
KUR				*e*S	Sn	22 40 00.6	-0.1
KUR				A	A	22 40 03.0	
	60nm,0.4s						
KUR				A	A	22 40 03.0	
	130nm,0.4s						

IDC ***26*** *22:54:57.7±0.8, 22.°94S×169.°51E, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.4/24, mbtmp4.3/15, ML4.0/2, Error ellipse: s-maj=23.0km s-min=15.9km az=180.0*

ISCJB ***26*** *22:54:59.4±0.2, 22.°99S±0.°04×169.°50E±0.°04, h23^{km}, mb4.9/51, Error ellipse: s-maj=6.1km s-min=4.9km az=17.3*

NEIC ***26*** *22:55:03.3±1.3, 22.°97S×169.°45E, h41^{km}±5^{km}, mb4.8/49, Error ellipse: s-maj=12.0km s-min=10.3km az=60.0*

ISC 26 22:55:01.0±0.4**, 22.°95S**±0.°06×**169.°52E**±0.°06**, h23**^{km}**, n135, σ0.s85**/132**, mb4.9**/51**, 2D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	1.94	280	*e*Pn	Pn	22 55 32.6	0.0
PINNC				*e*Sn	Sn	22 55 56.0	-0.3
MARNC	Mare, Loyalty	2.01	316	*e*Pn	Pn	22 55 33.4	-0.1
ONTNC	Ouen Toro	2.91	282	*e*Pn	Pn	22 55 45.8	0.0
DZM	Mont Dzumac	2.98	287	Pn	Pn	22 55 47.0	+0.1
	92nm,0.3s,baz=108,slow=13,SNR=935						
DZM				Sn	Sn	22 56 22.9	+0.9
	128nm,0.3s,baz=127,slow=20,SNR=7.8						
DZM				Lg	Lg	22 56 31.4	
	120nm,0.3s,baz=139,slow=20,SNR=8.3						
LHI	Lord Howe Isla	12.62	225	*e*Pn	Pn	22 58 00.1	+1.1
OUZ	Omahuta	12.73	165	*e*Pn	Pn	22 58 02.5	+2.0
HIZ	Hauiti	16.17	165	*e*Pn	Pn	22 58 46.7	0.0
	121nm,1.4s						
URZ	Urewera	16.58	159	Pn	P	22 58 53.6	-0.7
	0.2nm,0.3s,baz=356,slow=15,SNR=2.4						
URZ	Urewera	16.58	159	*e*Pn	Pn	22 58 52.0	0.0
	34nm,1.3s						
BKZ	Black Stump Fm	17.22	161	*e*P	P	22 59 01.0	-0.4
	27nm,1.3s						
ARMA	Armidale	17.62	241	*e*P	P	22 59 06.2	+0.2
	37nm,1.6s						
OXZ	Oxford	20.43	175	*e*P	P	22 59 36.6	+0.1
	163nm,1.9s						
FOZ	Fox Glacier	20.53	179	*e*P	P	22 59 36.3	-1.3
	243nm,1.6s						
CTA	Charters Tower	21.83	273	P	P	22 59 52.1	+0.3
	14nm,0.7s,baz=98,slow=12,SNR=12						
CTAO	Charters Tower	21.83	273	*e*P	P	22 59 53.3	+1.4
	18nm,0.8s						
STKA	Stephens Creek	26.28	244	P	P	23 00 34.9	+0.2
	3.4nm,0.8s,baz=95,slow=13,SNR=4.5						
COEN	Coen	26.51	285	*e*P	P	23 00 37.3	+0.4
	137nm,1.9s						
BBOO	Buckleboo	31.05	244	*e*P	P	23 01 17.7	+0.4
	101nm,1.9s						
KWAJ	Kwajalein Atol	31.61	356	*e*P	P	23 01 23.0	+0.8
	284nm,1.5s						
MCQ	Macquarie Isla	32.49	191	*e*P	P	23 01 30.1	+0.6
	234nm,1.3s						
AS31	Alice Springs	32.67	262	*e*P	P	23 01 31.4	-0.3
	2.3nm,0.6s						
ASAR	Alice Springs	32.67	262	P	P	23 01 31.5	-0.2
	7.1nm,0.8s,baz=87,slow=9.2,SNR=49						
WB2	Warramunga Arr	32.83	268	*e*P	P	23 01 32.4	-0.6
	36nm,1.8s						
WRAB	Tennant Creek	32.83	269	*e*P	P	23 01 33.3	+0.2
	32nm,1.9s						
WR1	Warramunga Arr	32.84	268	*e*P	P	23 01 32.1	-1.0
WRA	Warramunga Arr	32.84	268	P	P	23 01 32.1	-1.0
	2.4nm,0.9s,baz=98,slow=10,SNR=12						
FORT	Forrest	37.63	249	*e*P	P	23 02 13.7	-0.6
	191nm,2.0s						
MTN	Manton Dam	37.79	279	*e*P	P	23 02 14.7	-1.0
	30nm,1.4s						
SAUI	Saumlaki	39.58	286	*e*P	P	23 02 29.7	-1.1
	687nm,1.1s						
H11S2	WAKE ISLAND Hy	41.28	356	T	T	23 44 38.9	
	baz=194,slow=74						
H11S3	WAKE ISLAND Hy	41.29	356	T	T	23 44 37.0	
	baz=194,slow=74						
H11S1	WAKE ISLAND Hy	41.30	356	T	T	23 44 38.8	
	baz=194						
H11N1	WAKE ISLAND Hy	42.48	356	T	T	23 46 07.1	
	baz=188,slow=76						
H11N3	WAKE ISLAND Hy	42.49	356	T	T	23 46 20.4	
	baz=188						
H11N2	WAKE ISLAND Hy	42.50	356	T	T	23 46 19.1	
	baz=188,slow=76						
PSA00	Pilbara Seismi	45.82	262	*e*P	P	23 03 21.2	-0.2
	65nm,1.8s						
KAPI	Kappang	51.19	283	*e*P	P	23 04 02.6	-0.3
	29nm,1.1s						
HON	Honolulu	54.21	38	*e*P	P	23 04 26.7	+1.7
	113nm,0.9s						
TPUB	Ta-pu	66.13	311	*e*P	P	23 05 46.2	-0.6
	94nm,1.9s						
MJAR	Matsushiro Arr	66.15	333	P	P	23 05 46.8	+0.2
	1.2nm,0.4s,baz=168,slow=7.5,SNR=6.0						
MAJO	Matsushiro	66.15	333	*e*P	P	23 05 46.8	+0.1
YHNB	Yeheng	66.51	312	*e*P	P	23 05 49.1	-0.1
	44nm,1.5s						
MNAI	Manna	66.75	275	*e*P	P	23 05 49.5	-1.5
	230nm,1.1s						
JNU	Nakatsue	66.84	325	*e*P	P	23 05 51.1	0.0
	36nm,1.5s						
QSPA	South Pole Qui	67.12	180	*e*P	P	23 05 52.9	+0.3
	22nm,1.7s						
KSRS	Korea Array	71.72	326	P	P	23 06 22.1	+0.9
	1.7nm,0.8s,baz=152,slow=5.8,SNR=6.4						
NJ2	Nanjing	73.06	317	*e*P	P	23 06 32.3	+3.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
MAW	Mawson	75.11	202	P	P	23 06 40.8	0.0
	comp=Z,1.2nm,0.7s,baz=71,slow=5.9,SNR=3.5						
MAW	Mawson	75.11	202	*e*P	P	23 06 40.8	0.0
	comp=Z,2.2nm,1.5s						
USRK	Ussuriysk Ar.	75.15	333	P	P	23 06 41.2	+0.1
	comp=Z,3.4nm,0.9s,baz=179,slow=4.0,SNR=6.4						
PEA0B	Petropavlovsk-	76.44	353	*e*P	P	23 06 47.7	-0.6
	comp=Z,20nm,1.3s						
PETK	Petropavlovsk-	76.44	353	P	P	23 06 48.7	+0.3
	comp=Z,4.8nm,0.8s,baz=152,slow=7.6,SNR=9.7						
PEA1	Petropavlovsk-	76.44	353	*e*P	P	23 06 48.7	+0.3
NIKH	Nikolski High	77.91	13	*e*P	P	23 06 56.2	-0.5
	comp=Z,16nm,0.8s						
CMAR	Chiang Mai Arr	80.28	295	P	P	23 07 11.6	+1.2
	comp=Z,3.1nm,0.9s,baz=132,slow=3.8,SNR=14						
CHTO	Chiang Mai	80.44	295	*e*P	P	23 07 10.8	-0.5
	comp=Z,7.0nm,0.9s						
XAN	Xi'an	80.81	313	*e*P	P	23 07 13.4	+0.3
	comp=Z,7.9nm,0.8s						
XAN	Xi'an	80.81	313	P	P	23 07 14.0	+1.0
XAN				pP	pP	23 07 20.3	+0.2
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SII	Sitkinak Islan	84.93	19	*e*P	P	23 07 34.5	+0.7
	comp=Z,51nm,1.0s						
SNAA	Sanae	85.48	182	P	P	23 07 35.4	-1.2
SNAA	Sanae	85.48	182	*e*P	P	23 07 35.4	-1.2
	comp=Z,8.7nm,1.2s						
VNA3	Neumayer Olymp	86.06	180	P	P	23 07 38.0	-1.4
VNA1	Neumayer--Stat	86.64	181	P	P	23 07 41.3	-1.0
MCCM	Marconi Confer	87.80	47	*e*P	P	23 07 49.0	+0.8
	comp=Z,20nm,0.8s						
SAO	San Andreas Ge	88.06	49	*e*P	P	23 07 49.9	+0.2
	comp=Z,7.2nm,1.1s						
KHMM	Horse Mountain	88.67	44	*e*P	P	23 07 52.6	0.0
	comp=Z,34nm,1.5s						
ORV	Oroville	89.44	46	*e*P	P	23 07 54.8	-1.3
	comp=Z,7.5nm,0.8s						
AFDM	Forest Hills D	89.49	47	*e*P	P	23 07 56.9	+0.5
	comp=Z,9.5nm,1.3s						
ISA	Isabella, Lake	89.61	51	*e*P	P	23 07 57.2	+0.1
	comp=Z,11nm,1.1s						
WAKR	Walker	90.31	48	*e*P	P	23 08 00.7	+0.3
	comp=Z,7.7nm,1.3s						
SONA0	Songino Array	90.33	323	*e*P	P	23 08 01.1	+0.9
SONM	Songino Array	90.33	323	P	P	23 08 01.1	+0.9
	comp=Z,2.0nm,0.8s,baz=142,slow=4.1,SNR=11						
PNTR	Pine Nut	90.49	47	*e*P	P	23 08 01.0	-0.3
	comp=Z,6.8nm,1.0s						
DIB	Dawson Inlet,	90.91	31	*e*P	P	23 08 02.4	-0.2
	comp=Z,29nm,1.5s						
PAHR	Pah Rah Range	90.94	47	*e*P	P	23 08 03.4	+0.2
	comp=Z,7.8nm,1.3s						
RYN	Ryan	91.00	48	*e*P	P	23 08 03.7	+0.2
	comp=Z,5.2nm,1.0s						
NV01	Mina Array Sit	91.06	48	*e*P	P	23 08 04.8	+0.9
NVAR	Mina Array Bea	91.06	48	P	P	23 08 04.8	+0.9
	comp=Z,2.2nm,0.9s,baz=226,slow=8.3,SNR=8.8						
NV11	Mina Array Sit	91.16	48	*e*P	P	23 08 04.0	-0.3
	comp=Z,0.3nm,1.0s						
KVN	Kaiserville	91.49	48	*e*P	P	23 08 05.8	-0.1
	comp=Z,4.9nm,1.1s						
ILAR	Eielson Array	93.68	17	P	P	23 08 13.8	-1.4
	comp=Z,1.1nm,0.9s,baz=237,slow=6.0,SNR=7.4						
PV14	Lion Creek, Pa	97.59	52	*e*P	P	23 08 33.9	-0.1
ARCES	ARCESS Array B	128.71	345	PKP	PKPdf	23 14 05.5	-0.1
	comp=Z,2.1nm,0.7s,baz=39,slow=4.7,SNR=7.0						
FIA0	FINESS Array S	134.09	337	*e*PKPdf	PKiKP	23 14 17.1	-0.3
FINES	FINESS Array B	134.09	337	PKP	PKiKP	23 14 17.0	-0.3
	comp=Z,0.9nm,0.9s,baz=48,slow=2.1,SNR=3.5						
NB200	NORSAR Array S	139.08	344	*e*PKPdf	PKPdf	23 14 24.3	-1.0
NOA	NORSAR Array B	139.08	344	PKP	PKPdf	23 14 24.3	-1.0
	comp=Z,0.5nm,0.8s,baz=67,slow=1.5,SNR=3.6						
KOLS	Kolonicke sedl	143.39	323	*e*PKP	PKPdf	23 14 32.0	-1.4
LTVH	Ltavrtes, Hu	144.44	321	*e*PKiKP	PKPbc	23 14 34.1	+0.3
ALN	Alexandroupoli	144.53	309	*e*PKPdf	PKPab	23 14 33.5	-0.5
KECS	Kecovo	144.62	324	*e*PKP	PKPdf	23 14 35.7	+0.1
OKC	Ostrava-Krasne	145.02	327	*e*PKP	PKPdf	23 14 36.8	+0.6
PSZ	Piszkesteto	145.27	323	*e*PKiKP	PKPbc	23 14 32.1	-4.5
MORC	Moravsky Berou	145.36	328	*e*PKP	PKPab	23 14 37.8	+0.9
OSTC	Ostas	145.48	330	*e*PKP	PKPab	23 14 38.4	+1.1
VYHS	Vyhne	145.50	325	*e*PKP	PKPab	23 14 38.5	+1.1
CHVC	Chvalec	145.53	330	*e*PKP	PKPab	23 14 38.1	+0.6
DPC	Dobruska-Polom	145.57	329	*e*PKP	PKPab	23 14 38.5	+0.8
UPC	Upice	145.61	330	*e*PKP	PKPab	23 14 38.7	+1.0
UPC				*e*x	x	23 14 48.8	
AMBH	Ambrzfalva	145.67	320	⇓*e*PKiKP	PKPab	23 14 39.0	+1.0
JAVC	Velka Javorina	145.88	326	*e*PKP	PKiKP	23 14 40.8	-1.1
VRAC	Vranov	146.14	328	*e*PKP	PKPab	23 14 40.4	+0.6
SMOL	Smolenice	146.23	326	*e*PKP	PKPab	23 14 40.8	+0.7
PVCC	Panska Ves	146.25	331	*e*PKP	PKPab	23 14 40.4	+0.2
BRG	Berggiesshubel	146.28	332	*i* PKP	PKPab	23 14 40.2	0.0
	comp=Z,13nm,1.0s						
CLL	Collm	146.36	333	*e*PKPdf	PKPdf	23 14 37.0	-1.4
CLL				⇓*i*PKPbc	PKPbc	23 14 39.8	+0.1
	comp=Z,10.0nm,1.0s						
CLL				*i* PKPab	PKiKP	23 14 41.8	-0.9
MODS	Modra-Piesok	146.40	326	*e*PKP	PKPab	23 14 40.4	-0.4
KRUC	Moravsky	146.40	328	*e*PKP	PKPab	23 14 41.0	+0.2
GOPC	GO Pecny, Ondr	146.59	330	*e*PKP	PKPab	23 14 41.3	-0.2
PRU	Pruhonice	146.65	330	*e*PKP	PKPab	23 14 41.5	-0.2
TREC	Trest	146.69	329	*e*PKP	PKPab	23 14 41.8	-0.1
MORH	Mrgy, Hungar	146.95	322	*e*PKiKP	PKPbc	23 14 41.1	-0.5
LIT	Litokhoron	147.35	309	*e*PKPbc	PKPbc	23 14 43.0	0.0
NKC	Novy Kostel	147.40	332	*e*PKP	PKPab	23 14 43.9	-0.8
CONA	Conrad Observa	147.41	326	*i* PKiKP	PKPab	23 14 44.2	-0.7
	comp=Z,4.8nm,0.8s,SNR=5.5						
KHC	Kasperske Hory	147.70	330	*e*PKP	PKiKP	23 14 44.6	-1.0
KHC				*e*x	x	23 14 53.2	
GEC2	GERESS Array S	147.84	329	*e*PKPbc	PKiKP	23 14 44.9	-1.1
GERES	GERESS Array B	147.84	329	PKPbc	PKPbc	23 14 44.5	+0.4
	comp=Z,3.3nm,0.9s,baz=54,slow=2.3,SNR=29						
ARSA	Arzberg	148.02	326	PKiKP	PKiKP	23 14 45.8	-0.6
	comp=Z,1.5nm,0.6s						
MOA	Molln	148.26	328	*i* PKiKP	PKiKP	23 14 45.8	-1.0
	comp=Z,2.3nm,0.7s						
SOKA	Soboth	148.65	325	*i* PKiKP	PKPbc	23 14 46.6	+0.3
	comp=Z,4.6nm,0.8s,SNR=7.4						
OBKA	Obir	149.01	325	*i* PKiKP	PKPbc	23 14 47.4	+0.2
	comp=Z,3.7nm,1.1s						
KBA	Koelnbreinsper	149.25	327	*i* PKiKP	PKPbc	23 14 47.5	-0.4
	comp=Z,6.8nm,1.1s						
MYKA	Terra Mystica	149.40	326	*i* PKiKP	PKPbc	23 14 48.1	-0.1
	comp=Z,3.2nm,0.6s						
ABTA	Abfaltersbach	149.89	328	*i* PKiKP	PKPbc	23 14 49.4	0.0
	comp=Z,5.8nm,0.7s						
WTTA	Wattenberg	149.94	329	*i* PKiKP	PKiKP	23 14 50.1	-0.5
	comp=Z,15nm,1.2s,SNR=7.3						
MOTA	Moosalm	150.13	330	*i* PKiKP	PKiKP	23 14 50.4	-0.4
	comp=Z,7.6nm,0.8s,SNR=7.4						
SQTA	Sankt Quirin	150.18	330	*e*PKiKP	PKiKP	23 14 50.3	-0.6
	comp=Z,10nm,0.7s,SNR=7.5						
RETA	Reutte	150.19	330	*i* PKiKP	PKiKP	23 14 50.4	-0.5
	comp=Z,5.6nm,1.1s						
FETA	Feichten	150.54	330	*i* PKiKP	PKiKP	23 14 51.5	-0.2
	comp=Z,7.9nm,0.8s,SNR=6.3						
BFO	Black Forest	150.58	334	*e*PKPbc	PKPbc	23 14 50.5	-0.4
DAVA	Damuels	150.73	331	*i* PKiKP	PKiKP	23 14 52.1	-0.1
	comp=Z,6.2nm,1.2s						
FUORN	Ofenpass-Fuorn	151.06	330	*e*PKPbc	PKiKP	23 14 53.1	+0.2
TORD	Torodi Ar. Bea	164.88	232	PKP	PKPdf	23 15 03.7	-0.3
	comp=Z,0.6nm,0.8s,baz=158,slow=1.6,SNR=3.2						
TOA1	Torodi Ar. Sit	164.88	232	*e*PKPdf	PKPdf	23 15 03.7	-0.3

ISCJB ***26*** *23:11:46.9±0.6, 1.°99N±0.°09×89.°58W±0.°07, h10^{km}, mb4.5/54, Error ellipse: s-maj=12.8km s-min=8.9km az=19.3*

IDC ***26*** *23:11:47.7±2.4, 1.°99N×89.°62W, h0^{km}, mb3.5/7, mb1 3.9/8, mb1mx3.8/40, mbtmp3.6/8, ML3.4/1, MS3.9/2, Ms1 3.9/2, ms1mx3.4/25, Error ellipse: s-maj=96.2km s-min=41.1km az=45.0*

NEIC ***26*** *23:11:48.4±1.4, 1.°95N×89.°64W, h10^{km}±1^{km}, mb4.3/54, Error ellipse: s-maj=17.1km s-min=7.1km az=115.0*

ISC 26 23:11:47.9±0.7**, 1.°86N**±0.°08×**89.°7W**±0.°1**, h10**^{km}**, n75, σ1.s08**/74**, mb4.5**/54**, Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAYG	Puerto Ayora	2.59	193	*e*Pn	Pn	23 12 27.6	-2.3
JTS	Las Juntas de	9.61	29	LR	LR	23 17 05.2	
	comp=Z,816nm,19.2s,baz=293,slow=34						
ACON	Acoyapa	11.00	24	*e*Pn	Pn	23 14 24.2	-1.2
APG	El Apazote	13.08	357	LR	LR	23 18 31.2	
	comp=Z,364nm,19.4s,baz=120,slow=31						
CMIG	Matias Romero	15.97	342	Pn	Pn	23 15 31.0	-1.8
	0.1nm,0.3s,baz=142,slow=12,SNR=3.1						
TLIG	Tlapa	17.87	331	*e*P	P	23 15 57.7	+0.1
	31nm,1.7s						
TEIG	Tepich	18.30	4	*e*P	P	23 16 02.3	+0.1
	45nm,1.8s						
MYIG	Mrida	18.98	360	*e*P	P	23 16 08.5	-1.1
	63nm,0.8s						
GRTK	Grand Turk	26.62	41	*e*P	P	23 17 24.0	-2.8
	145nm,1.3s						
EMPR	Esperanza - Ma	28.09	52	*e*P	P	23 17 41.8	+1.8
	118nm,0.9s						
CBYP	Canovanas	28.51	54	*e*P	P	23 17 44.3	+0.4
	32nm,1.3s						
MTP	Monte Pirata	28.67	54	*e*P	P	23 17 45.5	+0.3
	16nm,1.0s						
STVI	Saint Thomas	29.28	54	*e*P	P	23 17 51.2	+0.6
	20nm,0.9s						
ABVI	Anegada Island	29.98	54	*e*P	P	23 17 55.3	-1.6
	101nm,1.1s						
250A	Grady	30.13	6	*e*P	P	23 17 57.5	-0.5
	31nm,1.5s						
LTX	Lajitas	30.38	335	*e*P	P	23 18 01.7	+1.3
TXAR	Lajitas Array	30.38	335	P	P	23 18 01.7	+1.3
	0.4nm,0.8s,baz=154,slow=8.9,SNR=3.8						
SKI	Saint Kitts	30.63	58	*e*P	P	23 18 02.4	-0.3
	110nm,1.2s						
WHTX	Lake Whitney,	30.85	347	*e*P	P	23 18 05.0	+0.6
	46nm,2.0s						
ANWB	Willy Bob	31.59	58	*e*P	P	23 18 09.2	-1.8
	64nm,0.8s						
WMOK	Wichita Mounta	33.79	346	*e*P	P	23 18 30.2	+0.1
	4.5nm,1.1s						
BNM	Barren Site	35.81	336	*e*P	P	23 18 48.2	+0.4
FVM	French Village	35.95	359	*e*P	P	23 18 48.9	+0.2
	5.2nm,0.9s						
LAZ	Ladron	36.24	335	*e*P	P	23 18 49.1	-2.4
ANMO	Albuquerque	36.43	336	*e*P	P	23 18 54.0	+0.8
	19nm,1.9s						
X16A	Lo Mia Camp, P	38.22	330	*e*P	P	23 19 08.0	-0.3
	3.0nm,0.9s						
PV02	Paradox Valley	40.16	337	*e*P	P	23 19 24.8	+0.2
	7.4nm,1.1s						
PV05	Paradox Valley	40.20	336	*e*P	P	23 19 25.1	+0.2
	18nm,1.5s						
U15A	North Rim	40.24	331	*e*P	P	23 19 25.9	+0.6
	16nm,1.8s						
PV03	Paradox Valley	40.25	336	*e*P	P	23 19 25.8	+0.6
	15nm,1.8s						
PV18	Skein Mesa, Pa	40.27	336	*e*P	P	23 19 24.9	-0.6
	4.0nm,0.9s						
PV12	Saucer Basin,	40.28	337	*e*P	P	23 19 26.4	+0.8
	8.3nm,1.1s						
PV17	East Wray Mesa	40.32	336	*e*P	P	23 19 25.2	-0.6
	8.0nm,1.2s						
PV16	Nyswonger Mesa	40.33	336	*e*P	P	23 19 26.2	+0.3
	3.9nm,0.8s						
PV19	Morning Glory	40.35	336	*e*P	P	23 19 25.6	-0.6
	11nm,1.4s						
PV04	Paradox Valley	40.39	336	*e*P	P	23 19 26.3	-0.2
	9.1nm,1.2s						
PV10	Paradox Valley	40.43	336	*e*P	P	23 19 24.9	-2.0
	39nm,1.9s						
PV23	Carpenter Ridg	40.48	336	*e*P	P	23 19 28.1	+0.8
	8.1nm,1.1s						
I42A	Draeger Farm,	41.85	1	*e*P	P	23 19 38.0	-0.2
	30nm,1.2s						
ECSD	EROS Data Cent	42.14	353	*e*P	P	23 19 41.1	+0.6
	7.2nm,0.8s						
H43A	Windswept, Lux	42.46	2	*e*P	P	23 19 42.2	-0.9
	38nm,0.8s						
G45A	Suttons Bay	43.15	4	*e*P	P	23 19 48.2	-0.4
	55nm,0.8s						
DUG	Dugway, Tooele	43.54	334	*e*P	P	23 19 52.3	+0.2
	2.4nm,1.0s						
HWUT	Hardware Ranch	44.20	336	*e*P	P	23 19 57.8	+0.4
	22nm,1.9s						
BGU	Big Grassy Mou	44.23	335	*e*P	P	23 19 57.8	+0.1
	2.7nm,1.1s						
SPUT	South Promonto	44.31	335	*e*P	P	23 19 58.7	+0.4
	4.2nm,0.9s						
PDAR	Pinedale Array	44.43	339	P	P	23 19 58.5	-0.9
	0.3nm,0.6s,baz=137,slow=11,SNR=2.6						
NV11	Mina Array Sit	44.76	328	*e*P	P	23 20 02.0	+0.1
	0.3nm,1.1s						
NV01	Mina Array Sit	44.83	328	*e*P	P	23 20 03.9	+1.3
NV01				*e*PcP	PcP	23 21 45.3	+0.8
NVAR	Mina Array Bea	44.83	328	P	P	23 20 03.9	+1.3
	0.9nm,0.7s,baz=154,slow=9.4,SNR=5.4						
NVAR				PcP	PcP	23 21 45.3	+0.8
	1.1nm,0.7s,baz=138,slow=3.8,SNR=6.3						
ELK	Elko	45.08	332	P	P	23 20 06.0	+1.5
	0.4nm,0.4s,baz=153,slow=9.0,SNR=2.3						
TPAW	Teton Pass	45.57	338	*e*P	P	23 20 08.3	-0.1
	3.4nm,0.7s						
YERR	Yerington	45.74	328	*e*P	P	23 20 09.8	+0.1
	7.8nm,0.8s						
BMN	Battle Mountai	45.78	331	*e*P	P	23 20 09.8	-0.2
	11nm,1.8s						
HLID	Hailey	46.99	335	*e*P	P	23 20 20.9	+1.4
	18nm,1.9s						
GO07	Milladeo Hill,	47.04	164	*e*P	P	23 20 21.1	+1.5
	160nm,1.6s						
MCCM	Marconi Confer	47.20	324	*e*P	P	23 20 21.3	+0.3
	70nm,1.6s						
MCMT	McKenzie Canyo	47.42	338	*e*P	P	23 20 21.1	-1.8
HOPS	Hopland Field	47.88	325	*e*P	P	23 20 26.0	-0.3
	47nm,1.6s						
LRM	Limekiln Ridge	48.12	339	*e*P	P	23 20 34.5	+6.3
ULM	Lac du Bonnet	48.50	355	*e*P	P	23 20 30.3	-0.5
	12nm,1.4s						
PLID	Pearl Lake	48.89	335	*e*P	P	23 20 35.5	+1.2
	2.7nm,0.9s						
YKA	Yellowknife Ar	63.29	347	P	P	23 22 17.2	+0.5
	0.7nm,0.8s,baz=147,slow=6.3,SNR=3.0						
YKB5	Yellowknife Ar	63.29	347	*e*P	P	23 22 17.2	+0.5
WHY	Whitehorse	67.97	338	*e*P	P	23 22 47.0	-0.1
	2.2nm,0.6s						
ILAR	Eielson Array	74.85	338	P	P	23 23 29.6	+1.1
	1.0nm,0.7s,baz=150,slow=4.3,SNR=8.6						
RSO	Redoubt South	75.38	333	*e*P	P	23 23 30.7	-1.1
SKT	Skwentna	75.45	335	*e*P	P	23 23 32.4	+0.5
	5.2nm,1.2s						
BWN	Browne	75.55	337	*e*P	P	23 23 29.4	-3.1
	65nm,0.9s						
ESDC	Sonseca Array	85.53	51	P	P	23 24 28.0	+1.3
	0.0nm,0.3s,baz=271,slow=5.9,SNR=2.6						
GSTR	Great Sitkin T	86.30	322	*e*P	P	23 24 30.2	+0.1
SPA0	Spitsbergen Ar	91.46	11	*e*P	P	23 24 55.7	+1.7
	31nm,1.4s						
ZAA1	Zalesovo Array	124.19	4	*e*PKPdf	PKiKP	23 30 47.5	+0.4
ZALV	Zalesovo Beam	124.20	4	PKP	PKiKP	23 30 47.5	+0.4
	0.8nm,0.5s,baz=295,slow=2.9,SNR=4.1						
CMAR	Chiang Mai Arr	158.09	338	PKPab	PKPab	23 32 19.4	-0.1
	0.6nm,0.4s,baz=19,slow=5.7,SNR=4.0						

ISCJB ***26*** *23:13:02.3±0.7, 29.°68S±0.°02×72.°34W±0.°06, h44^{km}±7^{km}, mb4.1/9, Error ellipse: s-maj=9.4km s-min=3.9km az=176.8*

IDC ***26*** *23:13:02.2±0.8, 29.°71S×72.°04W, h0^{km}, mb4.1/8, mb1 4.2/14, mb1mx4.0/38, mbtmp4.0/14, ML4.0/6, Error ellipse: s-maj=19.6km s-min=13.9km az=61.0*

GUC ***26*** *23:13:03.5±0.6, 29.°77S×72.°09W, h41^{km}±3^{km}, ML4.1*

NEIC ***26*** *23:13:03.0±0.0, 29.°77S×72.°09W, h41^{km}, mb4.3/37, ML4.1(GUC), After GUC.*

ISC 26 23:13:03.7±0.4**, 29.°73S**±0.°04×**72.°34W**±0.°08**, h39**^{km}±4^{km}**, n100, σ1.s94**/111**, mb4.1**/9**, 6C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.96	101	⇓*i*P	Pn	23 13 18.5	-2.2
LSCH				*i* S	Sn	23 13 29.4	-3.8
LSCH				IAML		23 13 33.6	
	comp=E,8µm,0.4s						
GO04	Tololo Observa	1.40	109	*e*Pn	Pn	23 13 26.2	-0.8
GO04	Tololo Observa	1.40	109	⇓*i*P	Pn	23 13 25.9	-1.1
GO04				*i* S	Sn	23 13 43.1	-1.3
LCO	Las Campanas	1.60	64	*e*Pn	Pn	23 13 29.6	0.0
LCO	Las Campanas	1.60	64	*e*P	Pn	23 13 28.6	-1.0
LCO				*e*S	Sn	23 13 53.8	+4.6
LCO				IAML		23 14 00.1	
	comp=Z,23µm,0.4s						
LCO	Las Campanas	1.60	64	⇑*i*P	Pn	23 13 29.8	+0.1
LCO				*i* S	Sn	23 13 49.6	+0.4
LCO				IAML		23 13 56.5	
	comp=N,3µm,0.3s						
CO02	Combarbal	1.87	142	⇑*i*P	Pn	23 13 33.6	+0.3
CO02				*i* S	Sn	23 13 55.6	-0.1
GO03	Copiap	2.82	41	*e*Pn	Pn	23 13 46.8	+0.5
GO03	Copiap	2.82	41	⇑*i*P	Pn	23 13 46.9	+0.6
RTLS	Leoncito	3.33	129	*e*P	Pn	23 13 56.8	+3.2
RTLS				*e*S	Sn	23 14 42.9	+11
RTLS				IAML		23 14 55.7	
	comp=Z,650nm,0.6s						
PEL	Peldehue	3.68	158	*e*Pn	Pn	23 13 59.0	+0.9
PEL	Peldehue	3.68	158	⇑*i*P	Pn	23 13 58.8	+0.7
PEL				*i* S	Sn	23 14 41.3	+0.9
PEL				IAML		23 15 04.4	
	comp=E,537nm,1.1s						
RTCV	Cerro Valdivia	3.90	124	*e*P	Pn	23 14 03.7	+2.6
CLCH	Cerro Calan	3.96	158	*e*P	Pn	23 14 03.1	+1.1
CLCH				*i* S	Sn	23 14 48.1	+0.8
RCDM	Rinconada Maip	3.97	161	*e*P	Pn	23 14 03.8	+1.7

FCH	Farellones	3.99	155	⇑*i*P	Pn	23 14 03.8	+1.2
FCH				*i* S	Sn	23 14 50.2	+1.9
CFA	Coronel Fontan	3.99	119	Pn	Pn	23 14 03.8	+1.4
	comp=E,16nm,0.3s,baz=304,slow=12,SNR=105						
CFA				Sn	Sn	23 14 49.5	+1.5
	comp=E,36nm,0.3s,baz=92,slow=3.6,SNR=4.3						
CFA				Lg	Lg	23 15 01.9	
	comp=E,41nm,0.3s,baz=233,slow=20,SNR=7.3						
LMEL	Las Melosas	4.49	157	⇑*i*P	Pn	23 14 10.8	+1.4
LMEL				*i* S	Sn	23 15 00.2	-0.2
ACLC	CERRO LA CRUZ	4.70	88	*e*P	Pn	23 14 13.4	+1.1
ACLC				*e*S	Sn	23 15 13.0	+7.4
ACAN	Cantantal	5.09	121	*e*P	Pn	23 14 19.9	+2.4
GO02	Mina Guanaco	5.16	29	*e*Pn	Pn	23 14 19.4	+0.6
GO05	Huala	5.28	176	*e*Pn	Pn	23 14 20.2	+0.1
PB10	IPOC Station P	6.39	15	*e*Pn	Pn	23 14 36.4	+1.0
PB04	IPOC Station P	7.62	15	*e*Pn	Pn	23 14 53.8	+1.4
LVC	Limon Verde	7.73	24	Pn	Pn	23 14 53.4	-0.7
	comp=E,0.6nm,0.3s,baz=210,slow=8.1,SNR=5.6						
LVC				Sn	Sn	23 16 19.6	-0.9
	comp=E,2.0nm,0.3s,baz=202,slow=20,SNR=3.1						
LVC				Lg	Lg	23 17 02.7	
	comp=E,2.6nm,0.3s,baz=220,slow=19,SNR=5.3						
LVC	Limon Verde	7.73	24	*e*Pn	Pn	23 14 53.6	-0.5
PB01	IPOC Station P	9.02	17	*e*Pn	Pn	23 15 11.4	-0.2
GO06	Curarrehue	9.86	176	*e*Pn	Pn	23 15 23.5	+0.6
PB11	IPOC Station P	10.22	14	*e*Pn	Pn	23 15 27.3	-0.7
GO01	Chusmiza	10.41	17	*e*Pn	Pn	23 15 30.6	-0.4
MNMC	Minye Minye	10.84	14	*e*Pn	Pn	23 15 35.2	-1.4
PLCA	Paso Flores	11.07	173	Pn	Pn	23 15 40.1	+0.6
	comp=E,0.9nm,0.3s,baz=14,slow=11,SNR=16						
PLCA				Lg	Lg	23 18 54.0	
	comp=E,0.1nm,0.3s,baz=73,slow=19,SNR=1.8						
PLCA	Paso Flores	11.07	173	*e*Pn	Pn	23 15 39.2	-0.4
CPUP	Villa Florida	13.68	79	Pn	Pn	23 16 14.7	-0.4
	comp=E,0.1nm,0.3s,baz=270,slow=3.0,SNR=2.4						
CPUP	Villa Florida	13.68	79	*e*Pn	Pn	23 16 10.8	-4.3
LPAZ	La Paz	13.93	17	Pn	Pn	23 16 21.6	+2.5
	comp=E,0.2nm,0.3s,baz=214,slow=11,SNR=4.1						
LPAZ	La Paz	13.93	17	*e*Pn	Pn	23 16 20.0	+0.9
SIV	San Ignacio	17.15	40	Pn	P	23 17 01.6	-0.1
	comp=E,0.5nm,0.3s,baz=230,slow=10,SNR=14						
NNA	Nana	18.15	346	*e*P	P	23 17 10.9	-1.9
	comp=E,19nm,1.1s						
EFI	East Falkland	24.36	158	*e*P	P	23 18 15.6	-2.3
	comp=E,243nm,1.4s						
BDFB	Brasilia	26.39	63	P	P	23 18 37.4	+0.7
	comp=E,1.6nm,0.4s,baz=260,slow=4.6,SNR=3.6						
BDFB	Brasilia	26.39	63	*e*P	P	23 18 34.5	-2.2
	comp=E,6.6nm,0.8s						
BDFB				*e*P	P	23 18 37.4	+0.7
HOPE	Hope Point	35.60	144	*e*P	P	23 19 55.1	-2.2
	comp=E,230nm,1.4s						
RCBR	Riachuelo	41.76	63	P	P	23 20 50.2	+0.8
	comp=E,120nm,1.0s,baz=297,slow=0.3,SNR=3.8						
SKI	Saint Kitts	47.70	12	*e*P	P	23 21 36.1	-0.5
CUPR	Culebra, Puert	48.24	9	*e*P	P	23 21 38.9	-1.8
EMPR	Esperanza - Ma	48.25	7	*e*P	P	23 21 37.5	-3.3
STVI	Saint Thomas	48.33	9	*e*P	P	23 21 40.5	-0.9
GTBY	Guantanamo Bay	49.44	357	*e*P	P	23 21 48.6	-1.3
	comp=E,26nm,1.0s						
FSCY	Frank Sound, G	49.50	349	*e*P	P	23 21 50.3	-0.1
	comp=E,291nm,1.6s						
CBCY	The Bluff, Cay	49.70	351	*e*P	P	23 21 50.9	-1.0
	comp=E,69nm,1.0s						
GRTK	Grand Turk	50.96	1	*e*P	P	23 22 01.4	0.0
	comp=E,278nm,1.6s						
TEIG	Tepich	51.99	341	P	P	23 22 13.3	+4.2
	comp=E,4.7nm,0.6s,baz=185,slow=4.3,SNR=7.5						
TEIG	Tepich	51.99	341	*e*P	P	23 22 10.1	+1.0
	comp=E,42nm,1.8s						
VNA3	Neumayer Olymp	53.41	159	P	P	23 22 22.7	+3.6
VNA1	Neumayer--Stat	53.70	158	P	P	23 22 26.6	+5.4
SNAA	Sanae	55.64	159	P	P	23 22 38.0	+2.6
SNAA	Sanae	55.64	159	P	P	23 22 38.6	+3.3
	comp=E,1.8nm,0.6s,baz=266,slow=6.3,SNR=22						
061Z	Ochoppi	55.89	351	*e*P	P	23 22 37.3	-0.2
	comp=E,102nm,1.0s						
060A	Indiantown	56.97	351	*e*P	P	23 22 45.6	+0.5
	comp=E,381nm,1.8s						
ASCN	Ascension	58.36	81	*e*P	P	23 22 52.5	-2.9
	comp=E,384nm,1.4s						
257A	Skidaway Islan	61.92	352	*e*P	P	23 23 18.9	-0.3
	comp=E,117nm,1.0s						
SHEL	Horse Pasture	62.14	93	*e*P	P	23 23 18.2	-3.1
	comp=E,279nm,1.4s						
TXAR	Lajitas Array	65.91	330	P	P	23 23 51.3	+5.6
	comp=E,0.4nm,0.6s,baz=157,slow=9.1,SNR=5.3						
T60A	Surry	66.65	356	*e*P	P	23 23 49.4	-0.7
	comp=E,80nm,1.6s						
PAL	Palisades	70.39	359	*e*P	P	23 24 13.3	-0.1
	comp=E,80nm,1.8s						
MEDO	Medina	72.75	355	*e*P	P	23 24 29.2	+1.6
I49A	Point Hope	73.94	352	*e*P	P	23 24 33.5	-1.1
	comp=E,44nm,0.8s						
DBIC	Dimbokro	74.10	73	P	P	23 24 39.9	+3.7
	comp=E,3.7nm,0.8s,baz=267,slow=8.2,SNR=4.3						
HAL	Halifax	74.44	6	*e*P	P	23 24 36.7	-0.8
	comp=E,172nm,2.0s						
I45A	Fountain	74.50	350	*e*P	P	23 24 38.0	+0.1
	comp=E,105nm,0.8s						
WUAZ	Wupatki	74.59	328	*e*P	P	23 24 39.6	+0.8
	comp=E,5.5nm,0.8s						
MOQ	Mont Orford	74.68	0	*e*P	P	23 24 38.2	-0.8
I42A	Draeger Farm,	74.82	348	*e*P	P	23 24 39.9	+0.1
	comp=E,20nm,1.0s						
H43A	Windswept, Lux	75.18	349	*e*P	P	23 24 41.5	-0.3
	comp=E,49nm,0.9s						
G45A	Suttons Bay	75.40	350	*e*P	P	23 24 42.2	-0.8
	comp=E,49nm,0.8s						
LMN	Caledonia Moun	75.53	5	*e*P	P	23 24 43.0	-0.8
	comp=E,20nm,1.1s						
TRQ	Mont Tremblant	75.62	358	*e*P	P	23 24 43.9	-0.4
ECSD	EROS Data Cent	76.42	342	*e*P	P	23 24 49.8	+0.9
	comp=E,4.4nm,1.0s						
PDAR	Pinedale Array	79.85	333	P	P	23 25 12.0	+3.7
	comp=E,0.2nm,0.4s,baz=147,slow=5.4,SNR=2.9						
NV01	Mina Array Sit	80.25	325	*e*P	P	23 25 16.4	+5.9
NVAR	Mina Array Bea	80.25	325	P	P	23 25 16.4	+5.9
	comp=E,0.4nm,0.7s,baz=141,slow=7.6,SNR=3.9						
RYN	Ryan	80.51	325	*e*P	P	23 25 12.3	+0.5
	comp=E,3.3nm,0.9s						
SAO	San Andreas Ge	80.61	322	*e*P	P	23 25 11.0	-1.2
	comp=E,6.1nm,1.0s						
TSUM	Tsumeb	80.65	107	*e*P	P	23 25 12.5	-0.5
	comp=E,24nm,1.6s						
PMOZ	Porto Moniz, M	81.23	44	*e*P	P	23 25 12.1	-3.6
MCCM	Marconi Confer	82.40	322	*e*P	P	23 25 21.7	+0.2
	comp=E,107nm,1.9s						
TORD	Torodi Ar. Bea	83.02	71	P	P	23 25 29.1	+3.8
	comp=E,1.7nm,0.9s,baz=279,slow=3.9,SNR=6.1						
TOA1	Torodi Ar. Sit	83.02	71	*e*P	P	23 25 29.1	+3.8
WVOR	Wild Horse Val	83.50	327	*e*P	P	23 25 28.0	+0.6
	comp=E,13nm,1.9s						
CASY	Casey	84.27	181	*e*P	P	23 25 32.1	+1.2
	comp=E,6.3nm,1.0s						
SCHQ	Schefferville	84.35	3	*e*P	P	23 25 30.8	-0.4
	comp=E,38nm,1.8s						
MXZ	Matakaoa Point	85.96	229	*e*P	P	23 25 40.5	+0.5
	comp=E,123nm,1.5s						
AFI	Afiamalu	91.19	253	*e*P	P	23 26 04.4	-0.8
	comp=E,160nm,1.5s						
PUH	Pauahi	93.49	290	*e*P	P	23 26 15.2	-0.6
	comp=E,93nm,0.9s						
HLP	Hilina Pali	93.53	290	*e*P	P	23 26 14.9	-1.0
	comp=E,269nm,1.0s						
WR1	Warramunga Arr	124.33	211	*e*PKPdf	PKiKP	23 32 03.3	+4.0
WRA	Warramunga Arr	124.33	211	PKP	PKiKP	23 32 03.3	+4.0
	comp=E,1.7nm,1.0s,baz=194,slow=2.3,SNR=3.2						
ZAA1	Zalesovo Array	150.66	28	*e*PKPbc	PKPbc	23 32 49.2	-1.9
ZAA1				*e*PKPab	pPKPdf	23 32 56.5	+0.2
ZALV	Zalesovo Beam	150.67	28	PKP	PKPbc	23 32 49.2	-1.9
	comp=E,0.3nm,0.3s,baz=29,slow=30,SNR=2.1						
ZALV				PKPbc	pPKPdf	23 32 56.5	+0.2
	comp=E,3.8nm,0.7s,baz=300,slow=2.9,SNR=13						

NNC 26 23:15:25.4±8.0**, 36°.66N**×**70°.57E, h0**km**, mb3.7, mpv3.6, 3C-2D, Error ellipse: s-maj=66.4km s-min=50.4km az=156.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.97	23	P	Pn	23 16 56.5	+1.0
	SNR=39						
UCH	Uchtor	6.34	28	P	Pn	23 17 00.7	+0.1
	SNR=10.0						
KK31	Karatay Array	6.43	360	Pn	Pn	23 17 02.0	+0.5
	1.4nm,0.5s,baz=176,slow=13,SNR=29						
KK31				⇓Sn	Sn	23 18 17.7	+2.1
	3.4nm,0.5s,baz=186,slow=23,SNR=9.2						
EKS2	Erkin-Say	6.48	21	P	Pn	23 17 03.9	+1.6
	SNR=11						
KZA	Kyzart	6.51	32	P	Pn	23 17 03.3	+0.4
	SNR=7.6						
AAK	Ala-Archa	6.69	26	Pn	Pn	23 17 04.8	-0.3
AAK				⇓Sn	Sn	23 18 23.7	+1.5
	5.7nm,0.7s						
AAK	Ala-Archa	6.69	26	P	Pn	23 17 06.2	+1.1
	SNR=6.1						
CHMS	Chumysh	7.10	26	P	Pn	23 17 11.2	+0.6
	SNR=5.5						
TKM2	Tokmak 2	7.35	30	⇑Pn	Pn	23 17 13.9	-0.3
	3.6nm,0.5s						
TKM2				⇑Sn	Sn	23 18 37.5	-0.9
	2.6nm,0.9s						
TKM2	Tokmak 2	7.35	30	P	Pn	23 17 14.1	-0.1
	SNR=11						
AB31	Akbulak array	14.78	332	⇑Pn	Pn	23 18 56.9	+1.3
	0.1nm,0.2s,baz=159,slow=12,SNR=15						

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*ISCJB **26** 23:38:18.1±0.3, 14°.36N±0°.04×90°.69W±0°.03, h195km±2km, mb4.4/38, Error ellipse: s-maj=7.5km s-min=4.2km az=27.9*

*IDC **26** 23:38:18.9±0.9, 14°.50N×90°.52W, h183km±4km, mb3.5/7, mb1 3.6/11, mb1mx3.3/39, mbtmp4.0/11, Error ellipse: s-maj=21.5km s-min=14.7km az=61.0*

*MEX **26** 23:38:18.7±0.5, 14°.39N×90°.70W, h211km±7km, MD4.0*

*GCG **26** 23:38:19.8±0.8, 14°.58N×90°.67W, h182km±9km, MD3.7*

*SNET **26** 23:38:19.1±1.1, 14°.58N×90°.61W, h172km±14km, ML3.6*

*NEIC **26** 23:38:19.3±0.0, 14°.58N×90°.57W, h199km, mb4.4/47, MD3.8(MEX), After MEX.*

ISC 26 23:38:19.0±0.7**, 14°.43N**±0°.06×**90°.65W**±0°.04**, h188**km±6km**, n235,** σ1ˢ.04/253**, mb4.4**/38**, 2C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.05	128	*e*P	Pn	23 38 44.7	+0.5
FUG	Fuego 3	0.19	277	⇑*e*P	Pn	23 38 44.3	+0.2
NBG	Las Nubes	0.34	61	*e*P	Pn	23 38 45.4	+0.8
NBG				*e*S	Sn	23 39 05.5	+1.2
APG	El Apazote	0.60	17	P	Pn	23 38 45.5	0.0
	23nm,0.3s,baz=125,slow=12,SNR=67						
APG				S	Sn	23 39 04.9	-1.2
	64nm,0.3s,baz=233,slow=20,SNR=78						
ERG	Entre ros, C	0.89	271	*e*P	Pn	23 38 47.5	+0.6
STG3	Santiaguito 3,	0.94	288	⇑*i*P	Pn	23 38 47.7	+0.3
RTR	El Retiro	1.11	118	*e*P	Pn	23 38 48.6	0.0
RTR				*e*S	Sn	23 39 11.7	+0.3
MRL	Marmol	1.14	55	*e*P	Pn	23 38 49.8	+0.9
MRL				*e*S	Sn	23 39 12.1	+0.1
SBLS	San Blas	1.15	120	*e*P	Pn	23 38 48.9	-0.1
SBLS				*e*S	Sn	23 39 12.7	+0.5
SNJE	San Jose	1.16	119	*e*P	Pn	23 38 48.8	-0.2
SNJE				*e*S	Sn	23 39 11.0	-1.1
UNIC	Universidad Ca	1.16	112	*e*P	Pn	23 38 48.1	-0.7
CEVE	Cerro Verde	1.16	121	*e*P	Pn	23 38 48.9	-0.2
CEVE				*e*S	Sn	23 39 12.4	+0.1
CEVE				IAML		23 39 28.4	
	comp=Z,532nm,0.3s						
PMON	Piamonte	1.48	118	*e*P	Pn	23 38 51.5	-0.2
THIG		1.64	287	*e*Pn	Pn	23 38 53.0	0.0
THIG				*e*Sn	Sn	23 39 19.7	+0.4
THIG		1.64	287	*e*P	Pn	23 38 53.0	0.0
THIG				*e*S	Sn	23 39 19.7	+0.4
PAVA	Las Pavas	1.81	113	*e*P	Pn	23 38 54.7	-0.2
VICT	Victoria	2.00	103	*e*P	Pn	23 38 56.2	-0.7
CCIG	Comitan	2.34	322	*e*Pn	Pn	23 39 01.1	+0.5
CCIG	Comitan	2.34	322	*e*P	Pn	23 39 00.5	-0.1
CCIG				*e*S	Sn	23 39 33.3	+0.3
PACA	Pacayal	2.45	113	*e*P	Pn	23 39 02.0	+0.2
PCIG		2.79	297	*e*Pn	Pn	23 39 05.3	-0.2
PCIG				*e*Sn	Sn	23 39 40.5	-1.4
PCIG		2.79	297	*e*P	Pn	23 39 05.3	-0.2
PCIG				*e*S	Sn	23 39 40.5	-1.4
TGUH	Tegucigalpa,Un	3.29	96	*e*Pn	Pn	23 39 12.0	+0.3
TGIG		3.34	315	*e*Pn	Pn	23 39 11.3	-0.9
TGIG				*e*Sn	Sn	23 39 51.6	-2.3
TGIG		3.34	315	*e*P	Pn	23 39 11.3	-0.9
TGIG				*i* S	Sn	23 39 53.1	-0.8
ESTN	Estel	4.36	107	*e*Pn	Pn	23 39 25.9	+0.7
CMIG	Matias Romero	4.86	304	P	Pn	23 39 30.5	-0.9
	comp=Z,8.2nm,0.3s,baz=141,slow=9.8,SNR=79						
CMIG				S	Sn	23 40 23.2	-5.1
	comp=Z,15nm,0.3s,baz=73,slow=20,SNR=24						
CMIG	Matias Romero	4.86	304	*e*Pn	Pn	23 39 31.1	-0.3
CMIG	Matias Romero	4.86	304	*e*P	Pn	23 39 30.5	-0.9
CMIG				*i* S	Sn	23 40 25.9	-2.4
ACON	Acoyapa	5.87	114	*e*Pn	Pn	23 39 44.7	+0.2
TEIG	Tepich	6.20	21	P	Pn	23 39 47.1	-1.7
	comp=Z,10nm,0.3s,baz=213,slow=1.3,SNR=51						
TEIG				S	Sn	23 40 56.9	-2.7
	baz=171,slow=17,SNR=3.1						
TEIG	Tepich	6.20	21	*e*Pn	Pn	23 39 48.0	-0.7
JTS	Las Juntas de	6.92	126	P	Pn	23 39 58.2	-0.1
	comp=Z,3.4nm,0.3s,baz=339,slow=14,SNR=11						
JTS				S	Sn	23 41 10.9	-5.8
	comp=Z,1.4nm,0.3s,baz=342,slow=20,SNR=5.6						
JTS	Las Juntas de	6.92	126	*e*Pn	Pn	23 39 59.1	+0.9
JTS				*e*Sn	Sn	23 41 15.1	-1.7
TLIG	Tlapa	8.23	293	*e*Pn	Pn	23 40 16.9	+1.5
552A	Lynn Haven	16.39	17	P	Pn	23 42 01.0	+2.4
	baz=198						
656A	Willston	16.66	25	P	Pn	23 42 03.9	+2.1
	baz=208						
553A	Crawfordville	16.70	19	P	Pn	23 42 04.9	+2.5
	baz=201						
758A	Lake Helen	16.91	30	P	Pn	23 42 04.7	-0.1
	baz=213						
555A	McAlpin	17.15	23	P	Pn	23 42 08.2	+0.6
	baz=206						
454A	Quitman	17.45	21	P	Pn	23 42 12.1	+0.9
	baz=203						
NATX	Nacogdoches	17.64	349	P	P	23 42 12.2	+0.5
	baz=167						
352A	Blakely	17.77	16	P	Pn	23 42 15.1	+0.1
	baz=198						
353A	Camilla	17.85	18	P	Pn	23 42 16.1	+0.2
	baz=201						
251A	Midway	18.23	14	P	Pn	23 42 20.3	0.0
	baz=196						
148A	Greensboro	18.36	8	P	Pn	23 42 21.6	-0.2
	baz=189						
149A	Jones	18.43	10	P	Pn	23 42 22.4	-0.2
	baz=192						
WHTX	Lake Whitney,	18.56	342	*e*P	P	23 42 22.3	+0.5
	comp=Z,8.6nm,0.6s						
WHTX	Lake Whitney,	18.56	342	P	P	23 42 19.7	-2.0
	baz=159						
150A	Eclectic	18.59	12	P	Pn	23 42 24.5	0.0
	baz=194,SNR=16						
151A	Opelika	18.66	14	P	Pn	23 42 25.0	-0.4
	baz=196,SNR=7.3						
LRAL	Lakeview Retre	18.82	10	P	Pn	23 42 26.9	-0.4
	baz=191						
152A	Waverly Hall	18.95	16	P	Pn	23 42 28.0	-0.8
	baz=198						
Z49A	Columbiana	19.06	11	P	Pn	23 42 29.7	-0.4
	baz=192,SNR=7.5						
TXAR	Lajitas Array	19.11	323	P	P	23 42 29.6	+1.8
	comp=Z,0.1nm,0.3s,baz=142,slow=8.6,SNR=4.3						
256A	Glennville	19.22	23	P	Pn	23 42 31.2	-0.9
	baz=206						
Z50A	Ashland	19.23	12	*e*P	P	23 42 30.6	+1.6
	comp=Z,14nm,0.8s						
Z50A	Ashland	19.23	12	P	P	23 42 30.9	+1.9
	baz=194,SNR=12						
Z52A	Williamson	19.52	16	P	P	23 42 33.6	+1.6
	baz=198						
155A	Kite	19.59	21	P	P	23 42 34.2	+1.4
	baz=204						
Y49A	Blount Mountai	19.73	10	*e*P	P	23 42 35.2	+0.9
	comp=Z,24nm,1.4s						
Y49A	Blount Mountai	19.73	10	P	P	23 42 36.5	+2.2
	baz=192						
Z53A	Monticello	19.84	18	P	P	23 42 37.6	+2.0
	baz=200						
Y50A	Piedmont	19.89	12	P	P	23 42 37.6	+1.6
	baz=194						
GOGA	Godfrey	20.00	18	*e*P	P	23 42 37.5	+0.3
GOGA	Godfrey	20.00	18	P	P	23 42 39.6	+2.5
	baz=201						
Y51A	Rockmart	20.04	14	P	P	23 42 39.0	+1.4
	baz=196,SNR=5.7						
X46A	Booneville	20.13	5	P	P	23 42 40.6	+2.0
	baz=186						
X48A	Hartselle	20.20	9	P	P	23 42 41.3	+1.9
	baz=190						
MIAR	Mount Ida	20.21	353	P	P	23 42 39.8	+0.4
	baz=172						
Y52A	Lilburn	20.25	16	*e*P	P	23 42 41.0	+1.1
	comp=Z,7.1nm,0.7s						
Y52A	Lilburn	20.25	16	P	P	23 42 42.1	+2.2
	baz=199						
Y53A	Monroe	20.38	17	P	P	23 42 43.3	+2.1
	baz=200,SNR=6.9						
X50B	Fort Payne	20.45	12	P	P	23 42 44.2	+2.1
	baz=194						
Y54A	Tignall	20.65	19	P	P	23 42 45.6	+1.5
	baz=202						
X51A	Calhoun	20.73	14	P	P	23 42 46.8	+1.9
	baz=196						
WHAR	Wooly Hollow	20.83	356	*e*P	P	23 42 45.5	-0.5
	comp=Z,16nm,1.7s						
W39A	Magazine	20.87	353	*e*P	P	23 42 46.8	+0.3
	comp=Z,24nm,1.9s						
W47A	Westpoint	20.92	7	P	P	23 42 48.1	+1.1
	baz=188						
W49A	Belvidere	20.98	10	P	P	23 42 48.1	+0.4
	baz=192						
X52A	Dahlonega	21.00	16	P	P	23 42 48.3	+0.5
	baz=198,SNR=5.6						
Y55A	Saluda	21.00	21	P	P	23 42 48.6	+0.8
	baz=204						
X53A	Estanollee	21.07	17	P	P	23 42 49.2	+0.7
	baz=200,SNR=5.1						
HODGE	Hodges	21.13	20	*e*P	P	23 42 49.4	+0.2
	comp=Z,33nm,1.8s						
SWET	Sewanee	21.13	11	*e*P	P	23 42 50.3	+1.0
	comp=Z,9.5nm,0.7s						
W50A	Signal Mountai	21.24	12	P	P	23 42 51.0	+0.6
	baz=194						
Z58A	St. Stephen	21.25	26	P	P	23 42 50.5	0.0
	baz=210						
W51A	Cleveland	21.32	13	P	P	23 42 51.4	+0.2
	baz=196,SNR=6.0						
X54A	Belton	21.39	19	P	P	23 42 52.3	+0.3
	baz=202						
V46A	Holladay	21.41	6	P	P	23 42 52.4	+0.3
	baz=186						
V47A	Nunnelly	21.50	7	P	P	23 42 53.4	+0.3
	baz=188						
V48A	Smith Brothers	21.50	9	*e*P	P	23 42 53.3	+0.1
	comp=Z,32nm,1.9s						
V48A	Smith Brothers	21.50	9	P	P	23 42 53.7	+0.6
	baz=190						
JSC	Jenkinsville	21.52	22	*e*P	P	23 42 53.4	+0.1
	comp=Z,25nm,1.6s						
X55A	Gracelyn & Ava	21.56	21	P	P	23 42 54.3	+0.6
	baz=204						
CPCT	Cooper Cave	21.65	14	*e*P	P	23 42 54.8	+0.2
	comp=Z,18nm,1.5s						
V49A	McMinnville	21.68	10	P	P	23 42 55.3	+0.4
	baz=192,SNR=5.8						
W53A	Cullowhee	21.73	17	P	P	23 42 56.4	+0.8
	baz=200						
V50A	Pikevile	21.74	12	P	P	23 42 56.5	+0.9
	baz=194						
WVT	Waverly	21.76	6	*e*P	P	23 42 55.8	0.0
	comp=Z,3.6nm,0.9s						
WVT	Waverly	21.76	6	P	P	23 42 56.7	+0.9
	baz=187						
X56A	White Oak	21.79	22	P	P	23 42 56.6	+0.5
	baz=206						
TUL1	Leonard	21.89	349	*e*P	P	23 42 56.3	-0.7
	comp=Z,5.6nm,0.6s						
TUL1	Leonard	21.89	349	P	P	23 42 56.0	-1.1
	baz=166						
CLTN	Cedars of Leba	21.92	9	*e*P	P	23 42 57.5	+0.2
	comp=Z,7.8nm,1.2s						
W54A	Cherokee Point	21.94	19	P	P	23 42 58.6	+1.0
	baz=202,SNR=5.6						
V51A	Loudon	22.03	14	*e*P	P	23 43 00.1	+1.7
	comp=Z,5.0nm,0.9s						
V51A	Loudon	22.03	14	P	P	23 43 00.6	+2.2
	baz=196						
TKL	Tuckaleechee C	22.03	15	P	P	23 42 59.2	+0.8
	comp=Z,7.3nm,0.7s,baz=194,slow=12,SNR=10						
CPRX	Cap Rock	22.08	329	*e*P	P	23 42 57.6	-1.5
V52A	Sevierville	22.25	15	*e*P	P	23 43 00.2	-0.3
	comp=Z,9.8nm,1.1s						
V52A	Sevierville	22.25	15	P	P	23 43 01.6	+1.1
	baz=198						
KMSC	Kings Mountain	22.27	20	P	P	23 43 01.6	+0.9
	baz=204						
V53A	Saluda	22.30	17	*e*P	P	23 43 01.3	+0.2
	comp=Z,4.9nm,0.8s						
V53A	Saluda	22.30	17	P	P	23 43 02.3	+1.2
	baz=200						
U49A	Red Boiling Sp	22.42	10	P	P	23 43 03.1	+0.9
	baz=192						
U50A	Jamestown	22.51	12	P	P	23 43 04.0	+1.0
	baz=195						
Y60A	Bolivia	22.51	28	*e*P	P	23 43 02.8	-0.1
	comp=Z,47nm,1.1s						
W56A	Indian Trail	22.53	22	P	P	23 43 03.4	+0.3
	baz=206						
V54A	Nebo	22.65	19	P	P	23 43 05.3	+1.1
	baz=202						
U51A	La Follette	22.66	14	P	P	23 43 05.5	+1.2
	baz=197						
T47A	Sharon Grove	22.69	7	*e*P	P	23 43 04.9	+0.4
	comp=Z,8.0nm,0.6s						
T47A	Sharon Grove	22.69	7	P	P	23 43 05.0	+0.4
	baz=189,SNR=5.5						
U52A	Thorn Hill	22.83	15	P	P	23 43 07.1	+1.3
	baz=198						
TZTN	Tazewell	22.93	15	P	P	23 43 07.7	+1.0
	baz=198						
W58A	Raeford	22.94	25	P	P	23 43 07.5	+0.7
	baz=209						
V55A	Taylorsville	22.96	20	P	P	23 43 07.8	+0.8
	baz=204						
U53A	Fall Branch	23.01	17	P	P	23 43 08.5	+1.0
	baz=200,SNR=6.8						
T49A	Edmonton	23.04	10	*e*P	P	23 43 07.7	0.0
	comp=Z,9.2nm,0.8s						
T49A	Edmonton	23.04	10	P	P	23 43 08.3	+0.6
	baz=193,SNR=6.3						
T50A	Nancy	23.09	12	P	P	23 43 08.8	+0.6
	baz=194						
X60A	Albert Glenn T	23.10	27	P	P	23 43 08.3	+0.1
	baz=213						
V56A	Mocksville	23.16	21	*e*P	P	23 43 09.2	+0.4
	comp=Z,17nm,1.4s						
V56A	Mocksville	23.16	21	P	P	23 43 09.3	+0.4
	baz=206						
S44A	Carbondale	23.21	3	P	P	23 43 09.5	+0.3
	baz=183						
SIUC	Southern Illin	23.23	3	*e*P	P	23 43 09.6	+0.2
	comp=Z,9.9nm,0.8s						
T51A	Gray	23.23	14	P	P	23 43 10.1	+0.7
	baz=196,SNR=5.3						
U54A	Nelsons Funny	23.38	18	P	P	23 43 11.6	+0.7
	baz=202						
V57A	Coltrane Farms	23.49	23	P	P	23 43 12.6	+0.7
	baz=207						
CCM	Cathedral Cave	23.54	359	*e*P	P	23 43 12.4	+0.2
	comp=Z,4.9nm,1.1s						
CCM	Cathedral Cave	23.54	359	P	P	23 43 13.1	+0.9
	baz=178						
U55A	TA2, Sparta	23.60	20	P	P	23 43 13.5	+0.6
	baz=204						
V58A	Windy Hill, Pi	23.66	24	P	P	23 43 13.7	+0.3
	baz=209						
S50A	Richmond	23.82	12	P	P	23 43 16.1	+1.3
	baz=195						
S51A	Beattyville	23.96	14	*e*P	P	23 43 17.0	+0.9
	comp=Z,6.7nm,0.9s						
S51A	Beattyville	23.96	14	P	P	23 43 16.7	+0.7
	baz=197						
V59A	Middlesex	23.99	25	P	P	23 43 16.9	+0.6
	baz=211						
WCI	Wyandotte Cave	24.02	8	*e*P	P	23 43 17.4	+0.8
WCI	Wyandotte Cave	24.02	8	P	P	23 43 17.4	+0.8
	baz=190						
W61A	Ground Anchor	24.05	28	P	P	23 43 16.3	-0.6

	baz=214						
U57A	Blanch	24.14	23	P	P	23 43 18.5	+0.8
	baz=208						
R51A	Hillsboro	24.59	13	P	P	23 43 22.8	+1.0
	baz=196						
STVI	Saint Thomas	24.95	77	eP	P	23 43 24.4	-0.8
	comp=Z,35nm,1.2s						
Q49A	Aurora	25.00	11	P	P	23 43 26.4	+0.9
	baz=193						
R54A	Victor	25.16	18	P	P	23 43 27.1	+0.1
	baz=202						
S56A	Natural Bridge	25.17	21	P	P	23 43 27.6	+0.6
	baz=206						
Q51A	Peebles	25.34	13	eP	P	23 43 28.8	+0.2
	comp=Z,12nm,0.6s						
Q51A	Peebles	25.34	13	P	P	23 43 29.6	+1.0
	baz=197						
P48A	Milroy	25.36	9	P	P	23 43 29.7	+0.9
	baz=192						
Q52A	Bidwell	25.54	15	P	P	23 43 31.1	+0.8
	baz=199						
Q53A	Leroy	25.64	17	P	P	23 43 33.0	+1.7
	baz=201						
S58A	Poland Farm, P	25.67	24	P	P	23 43 32.5	+1.0
	baz=209						
P51A	Williamsport	25.84	14	P	P	23 43 33.7	+0.7
	baz=197						
Q54A	Coxs Mills	25.95	18	P	P	23 43 34.6	+0.5
	baz=202						
Q55A	Buckhannon	26.19	19	P	P	23 43 36.0	-0.3
	baz=204						
O50A	Cable	26.36	12	P	P	23 43 38.1	+0.4
	baz=195						
ACSO	Alum Creek Sta	26.57	13	eP	P	23 43 40.2	+0.6
	comp=Z,9.7nm,0.6s						
ACSO	Alum Creek Sta	26.57	13	P	P	23 43 40.2	+0.6
	baz=197						
P54A	Burton	26.63	18	P	P	23 43 40.6	+0.5
	baz=202						
O52A	Adamsville	26.73	15	P	P	23 43 41.9	+0.8
	baz=199						
O54A	Avella	27.19	17	P	P	23 43 45.6	+0.5
	baz=202						
P57A	Homestead Farm	27.32	22	P	P	23 43 47.3	+1.0
	baz=207						
N52A	McGinn's Farm,	27.43	15	P	P	23 43 47.6	+0.3
	baz=199						
N53A	Lisbon	27.64	16	P	P	23 43 49.3	+0.2
	baz=201						
N54A	Moraine State	28.02	17	eP	P	23 43 53.2	+0.7
	comp=Z,54nm,1.8s						
N54A	Moraine State	28.02	17	P	P	23 43 52.7	+0.2
	baz=202						
SSPA	Standing Stone	28.39	21	P	P	23 43 55.7	-0.1
	baz=207						
N56A	West Decatur	28.51	20	P	P	23 43 57.0	+0.1
	baz=206						
I42A	Draeger Farm,	29.40	3	eP	P	23 44 04.5	-0.2
	comp=Z,23nm,1.0s						
N59A	State Game Lan	29.41	23	P	P	23 44 04.9	+0.1
	baz=210						
J52A	Paris	30.02	15	P	P	23 44 09.7	-0.4
	baz=200						
M59A	Waymart	30.08	23	P	P	23 44 10.7	0.0
	baz=210						
L58A	Harry Jones Me	30.36	22	P	P	23 44 13.6	+0.4
	baz=209						
BINY	Binghamton	30.44	22	P	P	23 44 14.2	+0.3
	baz=209						
MEDO	Medina	30.50	18	eP	P	23 44 14.8	+0.5
	comp=Z,19nm,1.0s						
TMUT	Trail Mountain	30.68	328	ePcP	PcP	23 47 09.6	-0.1
GLMI	Grayling	30.73	8	P	P	23 44 15.8	-0.6
	baz=191						
G39A	Holcombe	30.77	359	P	P	23 44 16.2	-0.4
	baz=179						
CLWO	Collingwood	31.20	14	P	P	23 44 20.5	0.0
	baz=200						
WLVO	Wesleyville	31.21	17	P	P	23 44 20.2	-0.4
	baz=203						
I55A	Frankford	31.69	18	P	P	23 44 24.8	+0.1
	baz=204						
DELO	Deloro Mine	31.98	18	P	P	23 44 27.4	+0.1
	baz=204						
G53A	Haliburton	32.25	16	P	P	23 44 29.4	-0.2
	baz=202						
BANO	Bancroft	32.35	17	P	P	23 44 30.5	-0.1
	baz=203						
BUKO	Buck Lake	32.35	15	P	P	23 44 30.4	-0.1
	baz=201						
H56A	Elgin	32.47	19	P	P	23 44 31.6	+0.1
	baz=206						
PLVO	Plevna	32.62	18	P	P	23 44 32.8	0.0
	baz=205						
D46A	Sault St. Mari	32.84	8	P	P	23 44 34.3	-0.5
	baz=192						
G55A	Calabogie	32.92	18	P	P	23 44 34.8	-0.6
	baz=205						
E50A	Wahnapitae	32.97	13	P	P	23 44 35.3	-0.6
	baz=198						
LONY	Lake Ozonia	33.05	21	P	P	23 44 36.7	0.0
	baz=209						
D47A	Chapleau	33.14	9	P	P	23 44 37.0	-0.4
	baz=193						
PEMO	Pembroke	33.15	17	P	P	23 44 37.6	+0.2
	baz=204						
ALGO	Algonquin Park	33.17	16	P	P	23 44 37.9	+0.2
	baz=203						
E52A	Mattawa	33.32	15	P	P	23 44 38.9	-0.1
	baz=201						
E51A	G1948 Merrick	33.35	14	P	P	23 44 39.1	-0.1
	baz=200						
REDW	Red Top Meadow	33.64	333	eP	P	23 44 42.5	+0.5
	comp=Z,6.9nm,1.5s						
E53A	Dumoine, Ponti	33.67	16	P	P	23 44 41.7	-0.3
	baz=203						
E54A	Lac Daplat, Po	33.85	17	P	P	23 44 43.8	+0.3
	baz=204						
D52A	ZEK Kipawa Sen	34.03	15	P	P	23 44 45.6	+0.5
	baz=201						
NVAR	Mina Array Bea	34.18	320	P	P	23 44 48.5	+1.7
	comp=Z,0.4nm,0.6s,baz=134,slow=8.0,SNR=4.4						
D53A	Lac Vacive, Po	34.31	16	eP	P	23 44 47.7	+0.3
	comp=Z,8.1nm,0.8s						
D53A	Lac Vacive, Po	34.31	16	P	P	23 44 47.9	+0.5
	baz=202						
TRQ	Mont Tremblant	34.47	20	eP	P	23 44 49.8	+0.9
MOQ	Mont Orford	34.50	23	eP	P	23 44 50.0	+0.8
D54A	Lac Fusel, La	34.66	17	P	P	23 44 50.8	+0.4
	baz=204						
MCMT	McKenzie Canyo	35.68	333	eP	P	23 45 01.2	+1.7
RUBR	Rubicon Trail	35.72	319	eP	P	23 45 00.3	+0.4
	comp=Z,63nm,0.8s						
ULM	Lac du Bonnet	35.98	354	P	P	23 45 00.8	-0.9
	comp=Z,3.8nm,0.6s,baz=153,slow=9.6,SNR=3.3						
ULM	Lac du Bonnet	35.98	354	eP	P	23 45 01.3	-0.4
	comp=Z,28nm,1.9s						
LATQ	La Tuque	36.08	21	P	P	23 45 02.7	+0.2
	baz=210						
LSQQ	Lebel-sur-Quev	36.32	15	P	P	23 45 04.8	+0.2
	baz=203						
MATQ	Matagami	36.81	14	P	P	23 45 08.6	-0.1
	baz=201						
O03E	Paynes Creek	37.47	319	P	P	23 45 05.3	-9.2
	baz=124						
CHGQ	Chibougamau	37.80	17	P	P	23 45 16.9	-0.2
	baz=206						
SIV	San Ignacio	42.04	135	P	P	23 45 51.8	-0.6
	comp=Z,0.9nm,0.5s,baz=293,slow=12,SNR=4.3						
SCHQ	Schefferville	44.38	20	P	P	23 46 10.0	-0.6
	comp=Z,11nm,0.5s,baz=232,slow=8.1,SNR=5.4						
SCHQ	Schefferville	44.38	20	eP	P	23 46 10.8	+0.1
	comp=Z,13nm,0.6s						
YKA	Yellowknife Ar	50.92	346	P	P	23 46 59.7	-1.0
	comp=Z,0.6nm,0.7s,baz=148,slow=7.0,SNR=3.1						
WHY	Whitehorse	56.13	336	eP	P	23 47 39.5	+0.7
	comp=Z,16nm,1.9s						
PUH	Pauahi	61.68	284	eP	P	23 48 17.3	-0.4
	comp=Z,64nm,0.8s						
BYL	Byron's Ledge	61.71	284	eP	P	23 48 18.8	+0.9
KKO	Keanakako`i	61.72	284	eP	P	23 48 19.0	+1.0
	comp=Z,77nm,0.9s						
HON	Honolulu	64.06	287	eP	P	23 48 34.6	+1.4
	comp=Z,139nm,0.9s						
ARCES	ARCESS Array B	85.32	18	P	P	23 50 33.7	-0.8
	comp=Z,0.8nm,0.9s,baz=302,slow=5.6,SNR=4.2						

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*MEX **26** 23:41:01.5±0.4, 13°.36N×92°.53W, h15^{km}, MD3.9*

*GCG **26** 23:41:03.9±0.3, 14°.42N×92°.36W, h147^{km}±66^{km}, MD3.8*

ISC 26 23:41:03.0±2.8**, 13°.8N**±0°.1×**92°.48W**±0°.09**, h10**^{km}**, n7, σ1^s.55**/12**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.15	10	iP	Pn	23 41 26.0	+0.9
THIG				iS	Sn	23 41 43.4	+2.5
STG3	Santiaguito 3,	1.28	43	eP	Pg	23 41 27.8	+0.1
FUG	Fuego 3	1.73	67	eP	Pb	23 41 33.9	-1.0
FUG				eS	Sg	23 41 57.2	-1.4
PCG	Pacaya	1.92	71	eP	Pn	23 41 36.6	+0.6
PCG				eS	Sb	23 42 02.3	-0.1
PCIG		2.05	340	iP	Pn	23 41 37.6	+0.1
PCIG				iS	Sg	23 42 06.0	-2.9
CCIG	Comitan	2.51	8	iP	Pn	23 41 45.0	+0.9
CCIG				iS	Sb	23 42 19.6	+0.1
TGIG		3.05	348	eP	Pn	23 41 52.9	+1.5

IDC 26 23:45:55.7±6.2**, 24°.94N×109°.41W, h0**^{km}**, mb1 3.6**/5**, mb1mx3.4**/39**, mbtmp3.2**/5**, ML3.4**/5**, Error ellipse: s-maj=71.7km s-min=25.4km az=171.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	Lajitas Array	6.74	48	Pn	Pn	23 47 37.9	+2.0
	0.2nm,0.3s,baz=228,slow=14,SNR=6.0						
TXAR				Sn	Sn	23 48 53.8	+0.3
	0.8nm,0.3s,baz=224,slow=17,SNR=5.1						
TXAR				Lg	Lg	23 49 27.2	
	1.4nm,0.3s,baz=224,slow=35,SNR=7.6						
ANMO	Albuquerque	10.30	14	Pn	Pn	23 48 24.9	0.0
	0.1nm,0.3s,baz=200,slow=16,SNR=2.4						
NVAR	Mina Array Bea	15.43	333	Pn	P	23 49 39.3	-0.3
	0.1nm,0.3s,baz=149,slow=15,SNR=4.6						
ELK	Elko	16.50	344	Pn	Pn	23 49 49.3	+0.4
	0.1nm,0.3s,baz=182,slow=9.3,SNR=4.0						
PDAR	Pinedale Array	17.79	360	P	Pn	23 50 04.3	-0.6
	0.1nm,0.3s,baz=169,slow=10,SNR=4.6						

WEL 26 23:47:42.3, 41°S±329°×**17°4E**±6°5**, h24**^{km}±144^{km}**, M3.2**/7**, ML3.6**/6**, MLv3.2**/7**, Error ellipse: s-maj=0.5km s-min=0.1km az=1.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WPHZ	Waipukurau	1.82	64	P	Pn	23 48 11.9	-0.3
FWVZ	Far West T-bar	1.89	30	P	Pn	23 48 14.0	+0.6
KATZ	Kakaramea	2.19	29	P	Pn	23 48 15.7	-1.7
KAHZ	Kahuranaki	2.25	61	P	Pn	23 48 19.5	+1.5
RITZ	Rihia Road	2.25	32	P	Pn	23 48 18.5	+0.4
RATZ	Rangitukua	2.32	29	P	Pn	23 48 19.7	+0.7
MCHZ	McNeill Hill	2.33	52	P	Pn	23 48 20.2	+1.1
WATZ	Wairara	2.44	27	P	Pn	23 48 22.0	+1.3
KUTZ	Kaahu Road	2.67	26	P	Pb	23 48 26.9	-2.5
TLZ	Tolley Road	2.73	21	P	Pn	23 48 24.5	-0.2

KRSC 26 23:52:30.1±1.1**, 52°.07N×159°.87E, h23**^{km}±19^{km}**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.91	294	eP	Pb	23 52 47.1	-0.1
RUS				eS	Sb	23 52 58.9	0.0
SPN	Mys Shipunski	1.04	5	eP	Pb	23 52 49.9	+0.6
SPN				eS	Sn	23 53 03.9	+1.0
MTVR	Mutnovka	1.12	292	eP	Pb	23 52 50.7	-0.1
MTVR				eS	Sn	23 53 05.1	0.0
KDTR	Khodutka, Kamc	1.14	258	eP	Pb	23 52 50.9	-0.1
KDTR				eS	Sn	23 53 05.7	+0.3
NLC	Nalytchevo	1.15	344	eP	Pb	23 52 51.1	-0.1
NLC				eS	Sb	23 53 06.0	+0.3
DALK	Dalny	1.18	325	eP	Pb	23 52 51.5	-0.3
DALK				eS	Sn	23 53 06.5	+0.1
ASAK	Asacha	1.25	285	eP	Pb	23 52 53.1	+0.1
ASAK				eS	Sb	23 53 09.2	+0.4
UGLR	Uglovaya	1.31	331	eP	Pb	23 52 53.9	-0.1
UGLR				eS	Sb	23 53 10.9	+0.5
KRMR	Karymshinskiy	1.31	306	eP	Pn	23 52 53.3	+0.4
KRMR				eS	Sn	23 53 09.7	+0.1
SDLR	Sedlovina	1.35	334	eP	Pb	23 52 54.8	0.0
AVH	Avacha	1.38	331	eP	Pb	23 52 56.0	+0.7
AVH				eS	Sb	23 53 14.2	+1.7
KRER	Koryakskii	1.41	332	eP	Pb	23 52 56.4	+0.5
KOK	Koryaka	1.44	329	eP	Pb	23 52 56.1	-0.1
KRX	Arik	1.49	331	eP	Pb	23 52 56.9	-0.2
APC	Apacha	1.87	298	eP	Pb	23 53 02.6	-0.8
APC				eS	Sb	23 53 25.9	-0.4
GNL	Ganaly	2.01	325	eP	Pb	23 53 04.4	-1.5
GNL				eS	Sb	23 53 29.1	-1.3
MKZ	Mys Kozlova	2.73	23	eP	Pn	23 53 13.0	+0.6
KZV	Kizimen	3.06	5	eP	Pb	23 53 20.6	-3.3
TUMD	Tumrok D	3.16	5	eP	Pn	23 53 21.2	+2.9

SJA 26 23:54:56.0±0.3**, 31°.22S×68°.50W, h109**^{km}±2^{km}**, ML2.9, MW3.6, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMOG	MOGNA	0.28	1	eP	Pn	23 55 12.3	+0.6
AMOG				eS	Sn	23 55 24.3	+1.0
RTCV	Cerro Valdivia	0.64	183	eP	Pn	23 55 14.6	+0.7
RTCV				eS	Sn	23 55 28.1	+0.8
ACCO	Cerro Coronel	0.79	322	eP	Pn	23 55 16.7	+1.2
ACCO				eS	Sn	23 55 31.9	+1.9
ACCO				IAML		23 55 32.8	
	comp=Z,1μm,0.3s						
RTLS	Leoncito	0.89	229	eP	Pn	23 55 17.7	+1.4
RTLS				IAML		23 55 35.2	
	comp=Z,27nm,0.2s						
AROD	Rodeo	1.34	321	eP	Pn	23 55 22.6	+1.4
ACAN	Cantantal	1.54	134	eP	Pn	23 55 24.3	+1.0
APLL	PUNTA DE LOS L	1.89	65	eP	Pn	23 55 28.6	+1.0

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*SJA **27** 00:02:07.4±0.5, 29°.45S×72°.50W, h13^{km}±27^{km}, ML3.7, MW3.8*

*GUC **27** 00:02:13.4±0.6, 29°.77S×72°.07W, h48^{km}±5^{km}, ML3.3*

ISC 27 00:02:09.7±2.9**, 29°.70S**±0°.05×**72°.3W**±0°.1**, h2**^{km}±14^{km}**, n17, σ2^s.07**/25**, 4C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	0.96	103	eP	Pg	00 02 28.1	0.0
LSCH				iS	Sg	00 02 39.0	-1.4
LSCH				IAML		00 02 42.5	
	comp=N,1μm,0.3s						
GO04	Tololo Observa	1.40	110	⇑iP	Pn	00 02 35.6	-0.9
GO04				iS	Sb	00 02 52.5	-2.8
LCO	Las Campanas	1.57	64	eP	Pn	00 02 38.4	-0.6
LCO	Las Campanas	1.57	64	⇑iP	Pn	00 02 39.0	+0.1
LCO				iS	Sn	00 02 58.8	-1.2
LCO				IAML		00 03 09.7	
	comp=E,633nm,0.5s						
CO02	Combarbal	1.88	143	⇑iP	Pn	00 02 42.9	-0.2
CO02				iS	Sn	00 03 04.8	-2.7
AROD	Rodeo	2.52	101	eP	Pn	00 02 54.2	+2.2
AROD				eS	Sb	00 03 28.7	+1.4
GO03	Copiap	2.79	42	eP	Pn	00 02 56.5	+1.1
GO03				iS	Sn	00 03 29.4	-0.4
ACCO	Cerro Coronel	2.96	108	eP	Pn	00 03 00.8	+2.7
ACCO				eS	Sb	00 03 40.7	+0.6
RTLS	Leoncito	3.34	130	eP	Pn	00 03 06.8	+3.5
RTLS				eS	Sb	00 03 50.9	-0.2
RTLS				IAML		00 03 55.4	
	comp=Z,177nm,0.7s						
AGUA	GUANDACOL	3.34	87	eP	Pn	00 03 04.5	+1.4
AMOG	MOGNA	3.53	111	eP	Pn	00 03 08.4	+2.7
PEL	Peldehue	3.71	158	⇑iP	Pn	00 03 08.4	+0.3
PEL				IAML		00 04 13.5	
	comp=E,104nm,0.4s						
RTCV	Cerro Valdivia	3.90	124	eP	Pn	00 03 14.0	+3.2
CLCH	Cerro Calan	3.99	158	eP	Pn	00 03 12.4	+0.4
ARCO	CERRO ARCO	4.27	138	eP	Pn	00 03 20.2	+4.3
ARCO				IAML		00 04 38.8	
	comp=Z,57nm,0.7s						
LMEL	Las Melosas	4.51	157	eP	Pn	00 03 20.1	+0.8
ACLC	CERRO LA CRUZ	4.68	88	eP	Pn	00 03 23.6	+2.0

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*ISCJB **27** 00:26:56.5±1.0, 35°.77S±0°.05×72°.0W±0°.1, h113^{km}±11^{km}, Error ellipse: s-maj=19.0km s-min=5.5km az=20.9*

*SJA **27** 00:26:56.1±0.5, 35°.69S×71°.86W, h98^{km}±7^{km}, ML3.5, MW3.4*

*GUC **27** 00:26:59.6±0.8, 35°.84S×71°.82W, h84^{km}±4^{km}, ML3.9*

ISC 27 00:26:58.0±1.9**, 35°.79S**±0°.06×**71°.9W**±0°.1**, h99**^{km}±19^{km}**, n16, σ1^s.11**/24**, 1C-5D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	Huala	0.78	359	⇑iP	Pn	00 27 17.1	+0.9
GO05				iS	Sn	00 27 29.7	0.0
GO05				IAML		00 27 33.0	
	comp=E,4μm,0.3s						
COCH	Cobquecura	0.79	244	eP	Pn	00 27 15.9	-0.3
COCH				eS	Sn	00 27 30.3	+0.5
COCH	Cobquecura	0.79	244	iP	Pn	00 27 17.0	+0.8
COCH				iS	Sn	00 27 29.8	0.0
CCHI	Chillan	0.82	190	eP	Pn	00 27 16.0	-0.5
CCHI				eS	Sn	00 27 31.5	+1.1
CCHI	Chillan	0.82	190	⇓iP	Pn	00 27 16.4	-0.1
CCHI				iS	Sn	00 27 29.2	-1.2
CCHI				IAML		00 27 30.9	
	comp=N,4μm,0.1s						
CCSP	San Pedro de C	1.43	222	eS	Sn	00 27 42.5	-0.1
CCSP				IAML		00 27 44.5	
	comp=N,4μm,0.6s						
CANA	Caviahue	2.20	162	eP	Pn	00 27 33.9	+0.6
LMEL	Las Melosas	2.39	36	⇓iP	Pn	00 27 37.2	+1.4
LMEL				iS	Sn	00 28 05.4	+0.6
LMEL				IAML		00 28 10.0	
	comp=N,773nm,0.1s						
ANTU	Antumapu	2.45	26	IAML		00 28 08.0	
	comp=E,628nm,0.3s						
CLCH	Cerro Calan	2.64	26	⇓iP	Pn	00 27 39.7	+0.6
CLCH				iS	Sn	00 28 10.1	-0.5
CLCH				IAML		00 28 13.4	
	comp=E,562nm,0.3s						
FCH	Farellones	2.79	29	⇓iP	Pn	00 27 42.0	+0.6
FCH				iS	Sn	00 28 14.1	-0.5
FCH				IAML		00 28 17.2	
	comp=N,504nm,0.5s						
PEL	Peldehue	2.83	21	⇓iP	Pn	00 27 42.2	+0.7
PEL				iS	Sn	00 28 15.1	+0.2
PEL				IAML		00 28 18.3	
	comp=N,628nm,0.3s						
PLCA	Paso Flores	5.05	168	eP	Pn	00 28 12.1	+0.6
PLCA				IAML		00 28 13.4	
	comp=Z,18nm,0.3s						
AGUA	GUANDACOL	6.91	26	eP	Pn	00 28 34.7	-2.1
APLL	PUNTA DE LOS L	7.02	42	eP	Pn	00 28 35.7	-2.5
APLL				IAML		00 28 38.5	
	comp=Z,10.0nm,0.2s						
ACLC	CERRO LA CRUZ	7.60	35	eP	Pn	00 28 44.2	-2.0

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*ISCJB **27** 00:52:49.9±0.3, 56°.54N±0°.04×157°.65W±0°.06, h103^{km}±3^{km}, mb3.4/9, Error ellipse: s-maj=7.5km s-min=4.7km az=158.8*

*IDC **27** 00:52:50.8±3.9, 56°.83N×157°.72W, h81^{km}±30^{km}, mb3.2/9, mb1 3.6/12, mb1mx3.4/43, mbtmp3.7/12, MS3.5/1, Ms1 3.5/1, ms1mx2.6/21, Error ellipse: s-maj=32.1km s-min=18.6km az=34.0*

*NEIC **27** 00:52:52.5±0.0, 56°.46N×157°.56W, h85^{km}, ML3.4(AEIC), After AEIC.*

ISC 27 00:52:51.3±0.7**, 56°.60N**±0°.06×**157°.61W**±0°.04**, h94**^{km}±7^{km}**, n56, σ1^s.43**/66**, mb3.4**/9**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZAC	Aniakchak	0.46	311	ePn	Pn	00 53 06.6	+0.4
ANNW	Aniakchak Nort	0.50	318	ePn	Pn	00 53 07.1	+0.6
ANNW				eSn	Sn	00 53 20.0	+2.1
CHGN	Chignik	0.54	237	ePn	Pn	00 53 06.1	-0.6
CHGN				eSn	Sn	00 53 16.8	-1.4
VNHG	Veniaminof 1	0.94	247	ePn	Pn	00 53 10.8	0.0
VNHG				eSn	Sn	00 53 24.2	-1.1
CHIR	Chirikof Islan	1.35	124	ePn	Pn	00 53 14.6	-0.7
CHIR				eSn	Sn	00 53 32.1	-1.4
CHIA	Chirikof Islan	1.36	123	ePn	Pn	00 53 17.7	+2.2
CHIA				eSn	Sn	00 53 33.2	-0.6
SII	Sitkinak Islan	1.89	90	ePn	Pn	00 53 22.0	-0.2
SII				eSn	Sn	00 53 46.0	+0.2
KABU	Katmai Buttres	2.10	36	ePn	Pn	00 53 26.2	+1.3
KELA	Mount Kelaz	2.10	28	ePn	Pn	00 53 26.1	+1.1
KAHC	Katmai Hardscr	2.49	33	ePn	Pn	00 53 31.2	+1.2
KDAK	Kodiak Island	2.98	64	P	Pn	00 53 36.6	+0.1
	9.3nm,0.3s,baz=246,slow=7.2,SNR=109						
KDAK				S	Sn	00 54 09.7	-1.7
	22nm,0.3s,baz=72,slow=23,SNR=65						
KDAK	Kodiak Island	2.98	64	ePn	Pn	00 53 36.5	-0.1
KDAK				e		00 53 36.7	
KDAK				eSn	Sn	00 54 09.4	-1.9
FONW	Fourpeaked Sta	2.99	40	ePn	Pn	00 53 38.1	+1.4
AUW	Augustine West	3.55	37	ePn	Pn	00 53 45.8	+1.7
CNPM	China Poot	4.48	46	ePn	Pn	00 53 57.6	+0.9
CNPM				eSn	Sn	00 54 45.2	-2.5
RSO	Redoubt South	4.63	31	ePn	Pn	00 54 00.7	+1.6
AKSA	Akutan Strait	5.23	245	ePn	Pn	00 54 07.0	0.0
MSW	Makushin Switc	5.90	247	ePn	Pn	00 54 15.2	-0.8
MREP	Makushin Rep't	5.93	246	ePn	Pn	00 54 15.4	-1.1
SUA	Susitna One	6.03	33	ePn	Pn	00 54 18.4	+0.6
RC01	Rabbit Creek A	6.08	39	ePn	Pn	00 54 21.7	+3.3
SKT	Skwentna	6.23	27	ePn	Pn	00 54 21.9	+1.4
TT01	Tatalina	6.38	7	ePn	Pn	00 54 23.7	+1.2
KNK	Knik Glacier	6.75	41	ePn	Pn	00 54 29.0	+1.4
OKTU	Okmok Mt. Tuli	6.81	246	ePn	Pn	00 54 27.6	-0.9
GLI	Glacier Island	6.95	48	ePn	Pn	00 54 29.7	-0.6
SML	Sawmill	7.06	38	ePn	Pn	00 54 31.6	-0.3
FID	Port Fidalgo	7.14	50	ePn	Pn	00 54 31.9	-0.9
FID				ePn	Pn	00 54 32.4	-0.4
CAST	Castle Rocks	7.38	20	ePn	Pn	00 54 37.7	+1.6
SCM	Sheep Creek Mo	7.44	41	ePn	Pn	00 54 37.7	+0.7
RAGM	Ragged Mountai	7.76	55	ePn	Pn	00 54 42.2	+0.8
HMT	Hamilton	7.93	56	ePn	Pn	00 54 44.6	+1.0
DHY	Denali Highway	8.28	34	ePn	Pn	00 54 47.9	-0.6
BWN	Browne	8.59	25	ePn	Pn	00 54 55.2	+2.6
CRQM	Cirque	8.61	55	ePn	Pn	00 54 54.7	+1.7
GLB	Gilahina Butte	8.61	50	ePn	Pn	00 54 53.4	+0.6
WAX	Waxell Ridge	8.63	57	ePn	Pn	00 54 53.3	+0.2
TGL	Tana Glacier	8.75	55	ePn	Pn	00 54 56.5	+1.7
BALM	Baldy	9.07	54	ePn	Pn	00 54 59.7	+0.5
MLY	Manley	9.10	19	ePn	Pn	00 55 00.6	+1.2
CTGM	Chitina Glacie	9.51	56	ePn	Pn	00 55 06.1	+0.9
ILAR	Eielson Array	9.72	28	P	Pn	00 55 06.1	-1.9
	1.6nm,0.3s,baz=217,slow=13,SNR=58						
ILAR				S	Sn	00 56 52.2	-2.9
	0.3nm,0.3s,baz=221,slow=22,SNR=9.0						
BCPM	Bancas Point	10.04	63	ePn	Pn	00 55 14.7	+2.4
DAWY	Dawson	11.69	43	ePn	Pn	00 55 34.8	+0.2
WHY	Whitehorse	12.49	62	ePn	Pn	00 55 48.8	+3.4
DLBC	Dease Lake	14.89	71	LR	LR	01 01 35.9	
	comp=Z,183nm,21.1s,baz=147,slow=35						
INK	Inuvik	16.03	33	P	Pn	00 56 28.7	-2.0
	1.8nm,0.3s,baz=222,slow=11,SNR=22						
YKA	Yellowknife Ar	22.23	57	P	P	00 57 40.0	+0.3
	0.8nm,0.7s,baz=273,slow=9.8,SNR=4.7						
NVAR	Mina Array Bea	31.59	108	P	P	00 59 06.8	+1.9
	0.1nm,0.3s,baz=324,slow=4.5,SNR=3.6						
TXAR	Lajitas Array	46.34	103	P	P	01 01 09.5	+1.7
	0.3nm,0.6s,baz=297,slow=4.0,SNR=2.9						
ARCES	ARCESS Array B	54.15	359	P	P	01 02 04.8	-1.2
	0.8nm,0.6s,baz=18,slow=7.3,SNR=9.6						
ARCES				PcP	PcP	01 03 09.1	-0.2
	0.7nm,0.5s,baz=358,slow=6.1,SNR=5.1						
SONM	Songino Array	54.78	305	P	P	01 02 10.2	-0.8
	0.5nm,0.5s,baz=43,slow=6.7,SNR=3.0						
FINES	FINESS Array B	62.26	358	P	P	01 03 01.7	-0.8
	0.3nm,0.5s,baz=9.3,slow=6.1,SNR=8.1						
NOA	NORSAR Array B	62.37	6	P	P	01 03 02.7	-0.6
	0.1nm,0.6s,baz=355,slow=6.9,SNR=3.3						
MKAR	Makanchi Array	65.50	319	P	P	01 03 23.4	-0.6
	0.3nm,0.4s,baz=50,slow=4.8,SNR=2.7						
ESDC	Sonseca Array	81.53	20	P	P	01 04 58.7	+0.6
	0.3nm,0.5s,baz=341,slow=5.3,SNR=8.3						

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*IDC **27** 01:01:27.8±0.7, 10°.18S×107°.58E, h0^{km}, mb4.1/13,* *mb1 4.3/14, mb1mx4.1/38, mbtmp4.1/14, ML4.4/1, MS4.4/5, Ms1 4.3/5, ms1mx3.8/42, Error ellipse: s-maj=27.2km s-min=14.3km az=61.0*

*ISCJB **27** 01:01:28.5±0.4, 10°.21S±0°.04×107°.44E±0°.04, h23^{km}, mb4.5/29, Error ellipse: s-maj=6.7km s-min=5.2km az=26.2*

*DJA **27** 01:01:28.1±0.4, 10°S±4°×10°7E±°, h10^{km}, M5.1/18, mb4.9/12, mB5.8/5, MLv5.1/18, Mw(mB)5.3/5*

*NEIC **27** 01:01:28.3±1.3, 10°.23S×107°.42E, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=8.9km s-min=6.4km az=205.0*

ISC 27 01:01:30.7±0.6**, 10°.22S**±0°.06×**107°.42E**±0°.06**, h23^{km}, n74,** σ1.^{s}**74**/70**, mb4.4**/29**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XMIS	**Christmas Isla**	**1.76**	**261**	*e*Pn	**Pn**	**01 01 57.0**	**-2.8**
CMJI	**Cimerak**	**2.63**	**23**	P	**Pn**	**01 02 09.4**	**-2.4**
CMJI				S	Sn	01 02 29.4	-14
CISI	**Cisompet, Garu**	**2.68**	**8**	*e*Pn	**Pn**	**01 02 10.2**	**-2.4**
CISI	**Cisompet, Garu**	**2.68**	**8**	P	**Pn**	**01 02 10.3**	**-2.2**
CISI				S	Sn	01 02 32.8	-12
KPJI	**Karang Pucung**	**3.24**	**28**	P	**Pn**	**01 02 19.3**	**-0.8**
KPJI				S	**Sn**	**01 02 56.8**	**-1.2**
LEM	**Lembang**	**3.38**	**3**	Pn	**Pn**	**01 02 21.9**	**-0.3**
	43nm,0.3s,baz=154,slow=20,SNR=42						
LEM				Sn	**Sn**	**01 03 03.8**	**+2.0**
	294nm,0.3s,baz=179,slow=10,SNR=20						
UGM	**Wanagama**	**3.83**	**53**	*e*Pn	**Pn**	**01 02 26.2**	**-2.1**
UGM	**Wanagama**	**3.83**	**53**	P	**Pn**	**01 02 27.3**	**-1.0**
CGJI	**Cibinong**	**3.97**	**334**	P	**Pn**	**01 02 27.7**	**-2.6**
WOJI	**Wonogiri, Jawa**	**4.20**	**56**	P	**Pn**	**01 02 33.0**	**-0.3**
SBJI	**Serang**	**4.27**	**343**	P	**Pn**	**01 02 34.8**	**+0.4**
SMRI	**Semarang**	**4.34**	**44**	*e*Pn	**Pn**	**01 02 32.9**	**-2.6**
SMRI	**Semarang**	**4.34**	**44**	P	**Pn**	**01 02 35.1**	**-0.3**
PWJI	**Pagerwojo**	**4.85**	**64**	P	**Pn**	**01 02 40.8**	**-1.5**
NGJI	**Ngawi**	**4.90**	**55**	P	**Pn**	**01 02 45.4**	**+2.4**
KASI	**Kota Agung**	**5.49**	**328**	P	**Pn**	**01 02 49.1**	**-2.1**
	84nm,0.5s,3µm0.9nm						
KLSI		**6.11**	**334**	P	**Pn**	**01 02 57.9**	**-1.8**
	74nm,0.7s,0.3nm						
LWLI	**Liwa**	**6.15**	**327**	P	**Pn**	**01 02 58.2**	**-2.1**
	64nm,0.7s,18µm0.7nm						
MDSI	**Maura Dua**	**6.54**	**330**	P	**Pn**	**01 03 03.2**	**-2.4**
	32nm,0.5s,720nm0.2nm						
JAGI	**Jajag, Banyuwa**	**6.87**	**76**	*e*Pn	**Pn**	**01 03 08.0**	**-2.1**
JAGI	**Jajag, Banyuwa**	**6.87**	**76**	P	**Pn**	**01 03 09.2**	**-0.9**
	154nm,0.7s,2.7nm						
SRBI	**Singaraja**	**7.98**	**75**	P	**Pn**	**01 03 25.2**	**-0.2**
	48nm,0.7s						
PPBI	**Pangkal Pinang**	**8.11**	**351**	P	Pn	01 03 21.3	-5.9
	20nm,0.6s,8µm0.4nm						
PLAI	**Plampang**	**10.31**	**83**	P	**Pn**	**01 03 55.7**	**-1.6**
	109nm,0.8s						
WSI	**Waingapu**	**12.70**	**89**	P	**Pn**	**01 04 31.1**	**+1.1**
	1µm,0.5s						
KAPI	**Kappang**	**13.27**	**68**	LR	LR	01 10 29.3	
	comp=Z,167nm,19.0s,baz=119,slow=41						
BNSI	**Bone**	**13.85**	**66**	P	**Pn**	**01 04 48.5**	**+2.8**
	20nm,1.8s						
TTSI	**Tana Toraja**	**14.23**	**61**	P	**P**	**01 04 54.9**	**-3.2**
PSI	**Prapat**	**15.46**	**326**	Pn	**P**	**01 05 10.4**	**-1.5**
	0.7nm,0.3s,baz=138,slow=10,SNR=12						
PSI				LR	LR	01 11 27.5	
	comp=Z,445nm,21.9s,baz=146,slow=39						
PSI	**Prapat**	**15.46**	**326**	*e*Pn	**Pn**	**01 05 05.4**	**-2.2**
	14nm,0.7s						
IPM	**Ipoh**	**15.93**	**336**	*e*Pn	**Pn**	**01 05 11.5**	**-2.2**
	34nm,0.7s						
SOEI	**Soe**	**16.60**	**90**	*e*Pn	**Pn**	**01 05 20.5**	**-1.8**
	58nm,0.9s						
SOEI	**Soe**	**16.60**	**90**	P	**P**	**01 05 28.1**	**+3.5**
KCSI	**Kotacane, Aceh**	**16.70**	**324**	P	**Pn**	**01 05 18.8**	**-4.6**
	19nm,0.8s						
MLSI	**Meulaboh, Aceh**	**18.10**	**322**	P	**P**	**01 05 43.2**	**+2.1**
TRTT	**Trang**	**19.52**	**337**	P	**Pn**	**01 05 58.5**	**+0.5**
	18nm,0.8s						
CHAI	**Chaiyaphum**	**26.51**	**348**	P	**P**	**01 07 08.8**	**+2.1**
	34µm,0.7s						
WR1	**Warramunga Arr**	**27.69**	**114**	*e*P	**P**	**01 07 16.9**	**-0.5**
WRA	**Warramunga Arr**	**27.69**	**114**	P	**P**	**01 07 16.9**	**-0.5**
	4.4nm,0.7s,baz=282,slow=12,SNR=39						
ASAR	**Alice Springs**	**28.58**	**121**	P	**P**	**01 07 24.3**	**-1.0**
	2.5nm,1.1s,baz=299,slow=8.6,SNR=16						
ASAR				LR	LR	01 19 08.3	
	comp=Z,156nm,21.4s,baz=330,slow=37						
AS31	**Alice Springs**	**28.58**	**121**	*e*P	**P**	**01 07 24.3**	**-1.0**
	1.9nm,0.6s						
PHRA	**Phrae**	**29.41**	**346**	P	P	01 07 45.7	+13
CM31	**Chiang Mai Arr**	**29.70**	**344**	*e*P	**P**	**01 07 36.2**	**+1.0**
	6.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**29.70**	**344**	P	**P**	**01 07 36.2**	**+1.0**
	1.7nm,0.6s,baz=183,slow=7.5,SNR=4.5						
KMI	**Kunming**	**35.43**	**353**	P	**P**	**01 08 27.0**	**+1.5**
KMI				pmax	pmax		
	comp=Z,17nm,0.6s						
STKA	**Stephens Creek**	**38.23**	**129**	P	**P**	**01 08 49.4**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=304,slow=8.4,SNR=9.0						
STKA				LR	LR	01 24 06.2	
	comp=Z,162nm,21.1s,baz=323,slow=36						
LSA	**Lhasa**	**42.67**	**339**	*e*P	**P**	**01 09 26.4**	**+0.1**
	comp=Z,8.0nm,0.6s						
NJ2	**Nanjing**	**43.44**	**14**	*e*P	**P**	**01 09 32.3**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
XAN	**Xi'an**	**44.04**	**2**	*e*P	**P**	**01 09 35.5**	**-1.3**
	comp=Z,8.5nm,0.9s						
LZH	**Lanzhou**	**46.18**	**356**	*e*P	P	01 09 59.0	+5.0
LZH				pP	sP	01 10 03.3	+2.2
LZH				sP	pwP	01 10 05.8	-1.8
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA	**Gaotai**	**49.88**	**352**	*e*P	P	01 10 27.5	+5.0
GTA				pP	pwP	01 10 34.5	-1.7
GTA				sP	sP	01 10 38.3	+8.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.96**	**4**	P	**P**	**01 10 28.5**	**-2.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,14nm,4.6s						
NIL	**Nilore**	**54.40**	**325**	*e*P	**P**	**01 10 55.6**	**-0.5**
	comp=Z,8.1nm,0.9s						
WMQ	**Urumqi**	**56.70**	**343**	*e*P	**P**	**01 11 14.8**	**+2.3**
WMQ				pP	pP	01 11 17.5	-0.2
WMQ				sP	pwP	01 11 23.5	-2.8
WMQ				PcP	**PcP**	**01 12 06.3**	**-2.2**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,72nm,5.1s						
WMQ				LR	LR		
	comp=N,3µm,19.1s						
WMQ				LR	LR		
	comp=E,3µm,15.9s						
WMQ				LR	LR		
	comp=Z,2µm,14.3s						
SONA0	**Songino Array**	**57.81**	**359**	*e*P	**P**	**01 11 20.3**	**-0.1**
SONM	**Songino Array**	**57.81**	**359**	P	**P**	**01 11 20.3**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=171,slow=9.1,SNR=6.4						
USRK	**Ussuriysk Ar.**	**58.58**	**21**	P	**P**	**01 11 24.8**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=202,slow=1.6,SNR=5.6						
MK31	**Makanchi Array**	**61.04**	**341**	*e*P	**P**	**01 11 42.3**	**-0.3**
	comp=Z,2.4nm,0.7s						
MKAR	**Makanchi Array**	**61.04**	**341**	P	**P**	**01 11 42.9**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=142,slow=7.7,SNR=29						
MKAR				LR	LR	01 40 45.7	
	comp=Z,2µm,18.2s,baz=82,slow=39						
MAW	**Mawson**	**64.43**	**197**	P	**P**	**01 12 05.6**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=52,slow=18,SNR=3.4						
MAW	**Mawson**	**64.43**	**197**	*e*P	**P**	**01 12 05.6**	**+0.8**
	comp=Z,3.4nm,1.7s						
KURK	**Kurchatov**	**65.65**	**340**	*e*P	**P**	**01 12 13.0**	**0.0**
	comp=Z,6.5nm,0.9s						
GEYT	**Alibeck**	**66.44**	**319**	P	**P**	**01 12 20.9**	**+2.4**
	comp=Z,1.2nm,0.7s,baz=347,slow=4.4,SNR=1.8						
ZALV	**Zalesovo Beam**	**66.74**	**346**	P	**P**	**01 12 19.1**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=152,slow=6.5,SNR=3.4						
BRVK	**Borovoye**	**70.55**	**337**	*e*P	**P**	**01 12 43.8**	**+0.1**
	comp=Z,3.0nm,0.8s						
ABKAR	**Akbulak array**	**72.38**	**330**	*e*P	**P**	**01 12 54.5**	**-0.3**
	comp=Z,15nm,1.4s						
ARU	**Arti**	**77.69**	**335**	LR	LR	01 51 07.0	
	comp=Z,1µm,19.0s,baz=69,slow=38						
KBZ	**Khabaz**	**79.31**	**318**	P	**P**	**01 13 37.5**	**+2.9**
	comp=Z,1.1nm,0.7s,baz=222,slow=11,SNR=1.8						
SEY	**Seymchan**	**80.69**	**19**	P	**P**	**01 13 42.6**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=13,slow=16,SNR=2.9						
BR101	**Keskin Array S**	**84.27**	**312**	*e*P	**P**	**01 14 01.1**	**0.0**
BRTR	**Keskin Array B**	**84.27**	**312**	P	**P**	**01 14 01.1**	**0.0**
	comp=Z,0.6nm,0.6s,baz=119,slow=6.2,SNR=5.1						
LON	**Longmire**	**124.75**	**39**	*e*PKPpre	PKPpre	01 20 17.7	
KCPM	**Cahto Peak**	**126.17**	**48**	*e*PKPdf	**PKPdf**	**01 20 31.2**	**-0.7**
TXAR	**Lajitas Array**	**145.29**	**52**	PKPbc	**PKPdf**	**01 21 08.3**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=329,slow=3.4,SNR=5.2						

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*IDC **27** 01:08:57.8±0.3, 32°.98N×141°.66E, h0^{km}, mb4.9/43, mb1 5.0/48, mb1mx5.0/57, mbtmp4.9/48, ML3.6/4, MS5.1/28, Ms1 5.1/28, ms1mx4.9/47, Error ellipse: s-maj=10.7km s-min=7.5km az=90.0*

*ISCJB **27** 01:08:58.1±0.7, 32°.94N±0°.02×141°.76E±0°.02, h14^{km}±3^{km}, mb5.3/206, MS5.3/428, Error ellipse: s-maj=3.1km s-min=2.5km az=179.5*

*NEIC **27** 01:08:59.3±1.4, 33°.02N×141°.72E, h10^{km}±2^{km}, mb5.4/260, MS5.3/394, Error ellipse: s-maj=10.3km s-min=9.1km az=129.0*

*BJI **27** 01:08:59.3±0.0, 32°.93N×141°.78E, h38^{km}, mb5.4/76, mB5.4/66, Ms5.6/93, Ms7 5.6/84*

*JMA **27** 01:09:00.6±0.2, 33°.07N×141°.83E, h44^{km}, M5.5*

*NIED **27** 01:09:00, 33°.10N×141°.80E, h5^{km}, Mw5.2 Best double couple: M$_0$6.49000×10^{16} NP1:φ$_s$358.00000°, δ45.00000°, λ78.00000°. NP2:φ$_s$194.00000°, δ46.00000°, λ102.00000°.*

*MOS **27** 01:09:00.0±0.9, 32°.96N×141°.68E, h26^{km}, mb5.5/106, MS5.3/58, Error ellipse: s-maj=7.1km s-min=3.7km az=113.5*

*GCMT **27** 01:09:03.3±0.1, 32°.88N±0°.01×141°.94E±0°.01, h15^{km}, MW5.3/125, Moment Tensor Solution. s76,c109; s125,c233; Duration: 1.^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.95±.02; M$_{\theta\theta}$-0.01±.01; M$_{\phi\phi}$-0.93±.02; M$_{r\theta}$0.02±.03; M$_{\theta\phi}$-0.04±.01; M$_{\phi r}$0.47±.03; Best double couple: M$_0$1.05300×10^{17} NP1:φ$_s$2.00000°, δ58.00000°, λ90.00000°. NP2:φ$_s$183.00000°, δ32.00000°, λ90.00000°. Principal axes: T 1.0570, Plg77.0000°, Azm272.0000°; N -0.0090, Plg0.0000°, Azm3.0000°; P -1.0480, Plg13.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 01:09:02.5±0.5**, 33°.00N**±0°.03×**141°.69E**±0°.03**, h33^{km}**±2^{km}**, h33^{km}:pP-P, n1144,** σ1.^{s}**64**/925**, mb5.3**/229**, MS5.3**/431**, 70C-29D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.58**	**275**	*e*Pn	**Pn**	**01 09 28.3**	**+0.1**
JHJ2	**Mitsune**	**1.58**	**275**	⇑P	**Pn**	**01 09 28.7**	**+0.5**
JHJ2				S	**Sn**	**01 09 48.1**	**+0.6**
JHCJ	**Hachijojimakas**	**1.59**	**273**	P	**Pn**	**01 09 28.6**	**+0.2**
JHCJ				*e*S	**Sn**	**01 09 49.1**	**+1.2**
JHJ	**Hachijo jima 2**	**1.61**	**275**	Pn	**Pn**	**01 09 28.0**	**-0.6**
	308nm,0.3s,baz=158,slow=8.2,SNR=116						
JAOM	**Aogashimamukai**	**1.71**	**252**	⇑P	**Pn**	**01 09 30.8**	**+0.8**
JAOM				*e*S	**Sb**	**01 09 53.1**	**-1.4**
JMKN	**Mikurajimanish**	**1.97**	**297**	⇑P	**Pn**	**01 09 33.7**	**+0.1**
BSO3	**Boso 3**	**2.05**	**332**	P	**Pn**	**01 09 34.0**	**-0.5**
BSO4	**Boso 4**	**2.29**	**331**	P	**Pn**	**01 09 37.9**	**+0.1**
JKO	**Kozu shima**	**2.44**	**300**	P	**Pn**	**01 09 40.5**	**+0.4**
JKUC	**kamogawauchiur**	**2.49**	**331**	P	**Pn**	**01 09 40.9**	**+0.2**
JIM2	**Oshima 3**	**2.55**	**313**	P	**Pn**	**01 09 40.9**	**-0.6**
JIZS	**Izushimoda**	**2.90**	**307**	⇑P	**Pn**	**01 09 46.7**	**+0.3**
JIZS				*e*S	**Sn**	**01 10 21.3**	**+1.1**
JHTM	**Izuhatsuma**	**2.97**	**312**	⇑P	**Pn**	**01 09 47.1**	**-0.2**
AJI	**Ajiro2**	**2.97**	**314**	⇑P	**Pn**	**01 09 47.0**	**-0.4**
JOD2	**Odawara 2**	**3.13**	**317**	⇑P	**Pn**	**01 09 49.0**	**-0.5**
JSGW	**Sagamiharawaka**	**3.31**	**322**	⇑P	**Pn**	**01 09 51.3**	**-0.8**
TK02	**Tokai 2**	**3.42**	**287**	P	**Pn**	**01 09 54.9**	**+1.5**
JYN	**Shimob**	**3.61**	**315**	⇑P	**Pn**	**01 09 56.6**	**+0.4**
JRY	**Ryogami san**	**3.79**	**323**	⇑P	**Pn**	**01 09 58.2**	**-0.5**
JYZW	**Yoshizawa**	**3.85**	**302**	P	**Pn**	**01 10 00.3**	**+0.9**
JAG	**Ashikaga**	**3.89**	**332**	P	**Pn**	**01 09 59.9**	**0.0**
JAG				S	**Sn**	**01 10 44.3**	**-0.1**
JNT	**Takato**	**4.11**	**315**	P	**Pn**	**01 10 04.5**	**+1.4**
JFFD	**Fukushimafurud**	**4.19**	**347**	P	**Pn**	**01 10 02.5**	**-1.6**
JAO	**Obara**	**4.32**	**303**	P	**Pn**	**01 10 07.3**	**+1.4**
JIE	**Ise**	**4.38**	**290**	⇑P	**Pn**	**01 10 07.9**	**+1.1**
JGF	**Kuroka**	**4.43**	**307**	⇑P	**Pn**	**01 10 09.5**	**+2.0**
JNG	**Nsakai**	**4.51**	**320**	⇑P	**Pn**	**01 10 09.6**	**+1.0**
MJAR	**Matsushiro Arr**	**4.55**	**322**	Pn	**Pn**	**01 10 09.5**	**+0.4**
	1.2nm,0.3s,baz=151,slow=11,SNR=325						
MJAR				Sn	**Sn**	**01 10 57.9**	**-3.0**
	1.3nm,0.3s,baz=161,slow=12,SNR=4.9						
MAJO	**Matsushiro**	**4.55**	**322**	*e*Pn	**Pn**	**01 10 09.6**	**+0.5**
MAJO				*e*Sn	**Sn**	**01 10 57.9**	**-3.0**
MAJO	**Matsushiro**	**4.55**	**322**	*e*P	**Pn**	**01 10 09.6**	**+0.5**
MAJO				*e*		01 10 57.9	
MAT	**Matsushiro**	**4.55**	**322**	P	**Pn**	**01 10 09.8**	**+0.7**
MAT				S	**Sn**	**01 10 57.2**	**-3.7**
MAT	**Matsushiro**	**4.55**	**322**	P	**Pn**	**01 10 09.9**	**+0.8**
MJB9	**Matsu-Tunnel**	**4.56**	**322**	*e*Pn	**Pn**	**01 10 09.7**	**+0.5**
JFT	**Otama**	**4.64**	**347**	⇑P	**Pn**	**01 10 09.3**	**-1.1**
JFT				S	**Sn**	**01 11 00.5**	**-2.7**
JKN2	**Miekihoku**	**4.69**	**287**	P	**Pn**	**01 10 12.2**	**+1.3**
JFY	**Yanaizu**	**4.69**	**340**	P	**Pn**	**01 10 10.5**	**-0.5**
JGN	**Niukaw**	**4.84**	**313**	P	**Pn**	**01 10 15.0**	**+1.9**
JYTA	**Yamagatataniai**	**4.85**	**304**	P	**Pn**	**01 10 15.0**	**+1.8**
JSD	**Sado**	**5.75**	**332**	⇑P	**Pn**	**01 10 24.9**	**-0.7**
JYA	**Atsumi**	**5.81**	**344**	P	**Pn**	**01 10 25.9**	**-0.5**
CBIJ	**Chichi jima**	**5.90**	**176**	⇓P	**Pn**	**01 10 25.8**	**-1.8**
JYK	**Kaneyama**	**6.01**	**350**	⇑P	**Pn**	**01 10 27.6**	**-1.5**
ERM	**Erimo**	**9.08**	**7**	*e*Pn	**Pn**	**01 11 07.5**	**-3.6**
ERM	**Erimo**	**9.08**	**7**	*ce*P	**Pn**	**01 11 07.3**	**-3.8**
JNU	**Nakatsue**	**9.08**	**274**	Pn	**Pn**	**01 11 15.0**	**+3.7**
	0.7nm,0.3s,baz=82,slow=10,SNR=8.7						
JNU				LR	LR	01 14 45.3	
	comp=Z,5µm,19.8s,baz=95,slow=38						
JNU	**Nakatsue**	**9.08**	**274**	*e*Pn	**Pn**	**01 11 10.3**	**-1.0**
NMR	**Nemuro--Hokkai**	**10.83**	**16**	⇑*i*P	Pn	01 11 28.9	-6.2
ASAJ	**Asahikawa**	**11.12**	**3**	Pn	**Pn**	**01 11 36.4**	**-2.8**
	2.2nm,0.3s,baz=200,slow=18,SNR=14						
ASAJ				Sn	Sn	01 13 30.8	-12
	0.6nm,0.3s,baz=0.0,slow=20,SNR=2.1						
GLVR	**Golovnino**	**11.13**	**15**	*e*P	**Pn**	**01 11 36.9**	**-2.4**
GLVR				pmax	pmax		
	comp=N,157nm,0.7s						
GLVR				pmax	pmax		
	comp=Z,217nm,0.7s						
GLVR				pmax	pmax		
	comp=E,76nm,1.1s						
GRPR	**Tuman**	**11.43**	**15**	*e*P	Pn	01 11 38.2	-5.2
GRPR				pmax	pmax		
	comp=N,85nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,148nm,0.4s						
GRPR				pmax	pmax		
	comp=E,83nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**11.49**	**15**	*ce*P	**Pn**	**01 11 42.4**	**-1.8**
KSRS	**Korea Array**	**12.11**	**295**	Pn	**Pn**	**01 11 56.2**	**+3.6**
	comp=E,0.2nm,0.3s,baz=107,slow=14,SNR=20						
KSRS				LR	LR	01 16 59.3	
	comp=E,8µm,18.5s,baz=104,slow=40						
KS15	**Wonju Array Si**	**12.13**	**295**	*e*Pn	Pn	01 11 58.4	+5.4
TJN	**Taejon**	**12.27**	**290**	*i* P	**Pn**	**01 11 58.1**	**+3.2**
TEY	**Ternei**	**12.65**	**343**	⇑*e*P	Pn	01 12 05.2	+5.2
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
TEY				MLR	MLR		
	comp=N,700nm,14.0s						
TEY				MLR	MLR		
	comp=E,200nm,14.0s						
TEY				MLR	MLR		
	comp=Z,900nm,14.0s						
MSHR	**Mys Shultsa**	**12.68**	**322**	⇓*e*P	**Pn**	**01 12 01.6**	**+1.2**
VLA	**Vladivostok**	**12.71**	**325**	⇑*e*P	**Pn**	**01 12 00.8**	**-0.1**
KUR	**Kuril'sk**	**13.12**	**20**	*c i*P	**Pn**	**01 12 08.3**	**+1.9**
KUR				*e*S	**Sn**	**01 14 30.1**	**-1.0**
KUR				MLR	MLR		
	comp=Z,9µm,11.0s						
KUR				MLR	MLR		
	comp=E,12µm,10.0s						
KUR				MLR	MLR		
	comp=N,7µm,9.0s						
JOW	**Kunigami**	**13.16**	**246**	Pn	**Pn**	**01 12 06.2**	**-0.9**
	comp=N,0.1nm,0.3s,baz=110,slow=14,SNR=4.0						
JOW	**Kunigami**	**13.16**	**246**	*e*Pn	**Pn**	**01 12 06.8**	**-0.2**
USA0B	**Ussuriysk Arra**	**13.50**	**329**	*e*Pn	**Pn**	**01 12 10.5**	**-1.2**
USRK	**Ussuriysk Ar.**	**13.50**	**329**	Pn	**Pn**	**01 12 10.7**	**-1.0**
	comp=N,0.1nm,0.3s,baz=139,slow=11,SNR=16						
YSS	**Yuzh-Sakhalins**	**13.96**	**3**	*e*Pn	**Pn**	**01 12 16.7**	**-1.2**
YSS	**Yuzh-Sakhalins**	**13.96**	**3**	*e*P	**Pn**	**01 12 14.0**	**-3.9**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				pmax	pmax		
	comp=Z,400nm,4.3s						
YSS				pmax	pmax		
	comp=N,300nm,4.2s						
YSS				MLR	MLR		
	comp=Z,11µm,14.0s						
YSS				MLR	MLR		
	comp=N,8µm,15.0s						
MDJ	**Mudanjiang**	**14.93**	**324**	*e*Pn	**Pn**	**01 12 29.7**	**-1.4**
MDJ	**Mudanjiang**	**14.93**	**324**	P	**Pn**	**01 12 30.5**	**-0.6**
MDJ				pP	P	01 12 37.8	+1.5
MDJ				pmax	pmax		
	comp=N,850nm,9.4s						
MDJ				LR	LR		
	comp=N,11µm,15.7s						
MDJ				LR	LR		
	comp=N,6µm,16.0s						
MDJ				LR	LR		
	comp=N,14µm,16.0s						
UGL	**Uglegorsk**	**16.07**	**1**	P	**P**	**01 12 51.3**	**+2.4**
UGL				pmax	pmax		
	comp=Z,184nm,0.6s						
UGL				pmax	pmax		
	comp=Z,1µm,3.7s						
UGL				MLR	MLR		
	comp=Z,11µm,14.0s						
UGL				MLR	MLR		
	comp=N,8µm,16.0s						
UGL				MLR	MLR		
	comp=E,6µm,12.0s						
SARN	**Sarigan**	**16.64**	**166**	*e*Pn	**Pn**	**01 12 51.1**	**-2.2**
	comp=E,476nm,2.0s						
SNY	**Shenyang**	**16.85**	**307**	⇓P	**P**	**01 12 58.3**	**+0.7**
SNY				S	**S**	**01 16 08.3**	**-3.4**
SNY				pmax	pmax		
	comp=E,71nm,1.7s						
SNY				pmax	pmax		
	comp=E,3µm,12.0s						
SNY				LR	LR		
	comp=E,9µm,16.7s						
SNY				LR	LR		
	comp=E,4µm,17.2s						
SNY				LR	LR		
	comp=E,15µm,15.2s						
ANA2	**Anatahan**	**16.98**	**167**	*e*P	**Pn**	**01 12 57.8**	**+0.2**
	comp=E,166nm,1.2s						
DL2	**Dalian**	**17.27**	**296**	P	**Pn**	**01 12 59.5**	**-1.6**
DL2				sP	**sP**	**01 13 12.8**	**+0.2**
DL2				S	**Sn**	**01 16 12.0**	**-0.2**
DL2				SS	**SnSn**	**01 16 29.0**	**+3.4**
DL2				pmax	pmax		
	comp=E,1µm,7.3s						
DL2				LR	LR		
	comp=E,8µm,15.0s						
DL2				LR	LR		
	comp=E,22µm,13.2s						
DL2				LR	LR		
	comp=E,28µm,13.2s						
SSE	**Sheshan**	**17.49**	**269**	P	**Pn**	**01 13 02.8**	**-1.0**
SSE				S	**Sn**	**01 16 16.8**	**-0.8**
SSE				pmax	pmax		
	comp=E,810nm,6.8s						
SSE				LR	LR		
	comp=E,6µm,14.4s						
SSE				LR	LR		
	comp=E,5µm,15.5s						
KLR	**Kul'dur**	**17.84**	**338**	P	**Pn**	**01 13 06.3**	**-1.7**
	comp=E,0.7nm,0.3s,baz=140,slow=11,SNR=18						
KLR				LR	LR	01 19 52.6	
	comp=E,4µm,20.9s,baz=149,slow=37						
KLR	**Kul'dur**	**17.84**	**338**	P	**Pn**	**01 13 06.3**	**-1.7**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLR				MLR	MLR		
	comp=Z,4µm,20.9s						
TYV	**Tymovskoe**	**17.87**	**2**	*e*P	**Pn**	**01 13 08.2**	**-0.1**
TYV				*e*S	**Sn**	**01 16 26.7**	**+0.3**
TYV				pmax	pmax		
	comp=Z,49nm,1.6s						
TYV				pmax	pmax		
	comp=Z,500nm,2.9s						
TYV				smax	smax		
	comp=E,17nm,1.3s						
TYV				MLR	MLR		
	comp=E,10µm,15.0s						
TYV				MLR	MLR		
	comp=Z,9µm,15.0s						
GRNR	**Gornyy**	**18.18**	**349**	*e*P	**Pn**	**01 13 08.2**	**-4.0**
GRNR				*e*		01 16 40.2	
GRNR				pmax	pmax		
	comp=Z,25nm,1.1s						
YOJ	**Yonaguni jima**	**18.44**	**247**	*e*P	**P**	**01 13 14.9**	**-0.3**
	comp=Z,348nm,1.0s						
YOJ	**Yonaguni jima**	**18.44**	**247**	*e*P	**P**	**01 13 15.0**	**-0.3**
YOJ				pmax	pmax		
	comp=Z,348nm,1.0s						
NJ2	**Nanjing**	**19.28**	**273**	*e*P	**P**	**01 13 23.8**	**-0.7**
NJ2				pP	**pP**	**01 13 31.3**	**-0.4**
NJ2				sP	**pwP**	**01 13 37.5**	**-0.7**
NJ2				S	**Sn**	**01 16 56.0**	**-4.9**
NJ2				pmax	pmax		
	comp=Z,42nm,1.4s						
NJ2				pmax	pmax		
	comp=Z,2µm,9.7s						
NJ2				LR	LR		
	comp=Z,10µm,14.2s						
NJ2				LR	LR		
	comp=Z,6µm,15.2s						
NJ2				LR	LR		
	comp=Z,8µm,15.2s						
TATO	**Taipei**	**19.38**	**251**	*e*P	**P**	**01 13 25.4**	**-0.2**
	comp=Z,832nm,2.0s						
TATO	**Taipei**	**19.38**	**251**	P	**P**	**01 13 25.4**	**-0.2**
	SNR=8.7						
GUMO	**Guam**	**19.54**	**171**	P	**Pn**	**01 13 27.9**	**-0.8**
	comp=Z,9.4nm,0.3s,baz=332,slow=2.2,SNR=13						
GUMO				S	**Sn**	**01 17 09.0**	**+1.9**
	comp=Z,1.5nm,0.3s,baz=343,slow=20,SNR=3.7						
GUMO	**Guam**	**19.54**	**171**	*e*P	**Pn**	**01 13 28.2**	**-0.6**
	comp=Z,2µm,1.4s						
YHNB	**Yeheng**	**19.62**	**250**	*e*P	**P**	**01 13 27.3**	**-1.0**
	comp=Z,153nm,1.3s						
NKL	**Nikolayevsk**	**20.16**	**358**	*e*P	**P**	**01 13 34.0**	**+0.2**
NKL				pmax	pmax		
	comp=Z,22nm,1.0s						
YULB	**Yu-li**	**20.34**	**247**	PFAKE		01 13 50.0	+12
YULB				LR	LR		
	comp=Z,3µm,19.0s						
SSLB	**Suanglung**	**20.39**	**249**	*e*P	**P**	**01 13 35.9**	**-0.8**
	comp=Z,104nm,1.0s						
SSLB				LR	LR		
	comp=Z,4µm,19.0s						
TIA	**Tai'an**	**20.46**	**286**	P	**P**	**01 13 37.0**	**-0.4**
TIA				S	**S**	**01 17 25.5**	**+0.8**
TIA				pmax	pmax		
	comp=Z,26nm,0.9s						
TIA				pmax	pmax		
	comp=Z,940nm,11.8s						
TIA				LR	LR		
	comp=Z,10µm,13.7s						
TIA				LR	LR		
	comp=Z,19µm,18.1s						
TIA				LR	LR		
	comp=Z,24µm,17.2s						
SKR	**Severo-Kuril's**	**20.62**	**27**	*e*P	Pn	01 13 39.7	-1.5
SKR				*e*S	**S**	**01 17 24.3**	**-3.1**
SKR				pmax	pmax		
	comp=Z,800nm,3.4s						
SKR				pmax	pmax		
	comp=Z,183nm,1.1s						
SKR				MLR	MLR		
	comp=Z,6µm,13.0s						
SKR				MLR	MLR		
	comp=Z,6µm,12.0s						
TWG	**Pinlang**	**20.82**	**246**	*e*P	**P**	**01 13 41.6**	**+0.3**
	comp=Z,610nm,1.1s						
TPUB	**Ta-pu**	**20.90**	**248**	PFAKE		01 13 50.0	+5.2
TPUB				LR	LR		

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       comp=Z,4µm,18.0s
BJI    Beijing          21.64 296 eP     P      01 13 47.5 -2.4
BJI                                S     S      01 17 46.5 -1.3
BJI                                pmax  pmax
       comp=Z,440nm,12.4s
BJI                                LR    LR
       comp=Z,2µm,14.6s
BJI                                LR    LR
       comp=Z,2µm,17.6s
BJI                                LR    LR
       comp=Z,2µm,17.1s
BJT    Baijiatuau       21.64 296  PFAKE        01 14 00.0 +10
BJT                                LR    LR
       comp=Z,6µm,18.0s
QZH    Quanzhou         21.72 254 i P    P      01 13 48.0 -2.9
QZH                                S     S      01 17 45.5 -4.0
QZH                                LR    LR
       comp=Z,2µm,12.0s
QZH                                LR    LR
       comp=Z,4µm,14.9s
QZH                                LR    LR
       comp=Z,5µm,16.5s
KNMB   Chin-men Tao     22.10 253  PFAKE        01 14 10.0 +15
KNMB                               LR    LR
       comp=Z,5µm,18.0s
HIA    Hailar           23.06 321 eP     P      01 14 04.1 -0.9
       comp=Z,245nm,1.7s
HIA                                LR    LR
       comp=Z,4µm,18.0s
HIA    Hailar           23.06 321 eP     P      01 14 04.1 -0.9
HIA                                pmax  pmax
       comp=Z,245nm,1.7s
HIA                                MLR   MLR
       comp=Z,4µm,18.0s
ZEA    Zeya             23.15 338ceP     P      01 14 06.2 +0.4
ZEA                               e             01 14 39.0
ZEA                               eS     S      01 18 20.5 +5.5
ZEA                               eSS    SnSn   01 19 03.0 +13
ZEA                                pmax  pmax
       comp=N,540nm,1.0s
ZEA                                pmax  pmax
       comp=E,240nm,1.0s
ZEA                                pmax  pmax
       comp=Z,940nm,1.0s
ZEA                                pmax  pmax
       comp=N,3µm,6.0s
ZEA                                pmax  pmax
       comp=Z,4µm,6.0s
ZEA                                pmax  pmax
       comp=E,1µm,4.0s
ZEA                                pmax  pmax
       comp=Z,2µm,3.0s
ZEA                                smax  smax
       comp=E,2µm,10.0s
ZEA                                smax  smax
       comp=N,4µm,11.0s
ZEA                                MLR   MLR
       comp=Z,8µm,17.0s
ZEA                                MLR   MLR
       comp=N,6µm,15.0s
PEA0B  Petropavlovsk-   23.16  25 eP     P      01 14 06.2 +0.4
       comp=N,262nm,1.7s
PEA0B                              LR    LR
       comp=Z,6µm,20.0s
PETK   Petropavlovsk-   23.16  25  P     P      01 14 05.7 -0.2
       comp=Z,10.0nm,0.7s,baz=202,slow=6.2,SNR=7.6
PETK                               LR    LR     01 26 07.9
       comp=Z,5µm,18.2s,baz=198,slow=44
WHN    Wuhan            23.35 271 ⇑P     P      01 14 06.3 -1.7
WHN                                sP    pwP    01 14 21.0 -0.8
WHN                                S     S      01 18 18.5 -0.2
WHN                                pmax  pmax
       comp=Z,2µm,2.5s
WHN                                LR    LR
       comp=Z,21µm,16.1s
WHN                                LR    LR
       comp=Z,12µm,13.9s
WHN                                LR    LR
       comp=Z,20µm,12.9s
PET    Petropavlovsk    23.43  26 eP     P      01 14 08.0 -0.6
       comp=Z,244nm,1.7s
PET                                LR    LR
       comp=Z,3µm,18.0s
PET    Petropavlovsk    23.43  26κ iP    P      01 14 07.6 -1.0
PET                               eS     S      01 18 15.0 -4.6
PET                                pmax  pmax
       comp=Z,55nm,1.3s
PET                                pmax  pmax
       comp=Z,1µm,12.8s
PET                                pmax  pmax
       comp=Z,2µm,13.6s
PET                                MLR   MLR
       comp=Z,4µm,15.0s
PET                                MLR   MLR
       comp=Z,4µm,15.0s
TIY    Taiyuan          24.27 289 eP     P      01 14 17.5 +0.7
TIY                                S     S      01 18 32.0 -1.6
TIY                                pmax  pmax
       comp=Z,42nm,0.5s
TIY                                pmax  pmax
       comp=Z,960nm,6.8s
TIY                                LR    LR
       comp=Z,5µm,13.1s
TIY                                LR    LR
       comp=Z,14µm,14.9s
TIY                                LR    LR
       comp=Z,15µm,14.6s
HHC    Hu-ho-hao-te     25.24 297  P     P      01 14 25.5 -0.1
HHC                                S     S      01 18 44.0 -5.1
HHC                                PcS   PcS    01 21 31.5 -7.3
HHC                                pmax  pmax
       comp=Z,13nm,0.9s
HHC                                pmax  pmax
       comp=Z,100nm,5.2s
HHC                                LR    LR
       comp=Z,6µm,14.1s
HHC                                LR    LR
       comp=Z,8µm,14.1s
H11N2  WAKE ISLAND Hy   26.08 114  T     T      01 41 39.0
       baz=305,slow=74,SNR=32
H11N1  WAKE ISLAND Hy   26.09 114  T     T      01 41 33.7
       baz=305,slow=74,SNR=38
H11N3  WAKE ISLAND Hy   26.10 114  T     T      01 41 40.3
       baz=305,slow=74,SNR=25
WAKE   Wake Island      26.16 115  PFAKE        01 14 50.0 +16
WAKE                               LR    LR
       comp=Z,4µm,20.0s
BTO    Baotou           26.37 296 eP     P      01 14 36.0 +0.2
BTO                                S     S      01 19 09.3 +2.3
H11S3  WAKE ISLAND Hy   26.66 117  T     T      01 43 09.9
       baz=144,slow=71,SNR=5.8
H11S1  WAKE ISLAND Hy   26.66 117  T     T      01 42 43.8
       baz=144,slow=71,SNR=6.6
TGY    Tagaytay City    26.66 230  LR    LR     01 24 14.7
       comp=Z,831nm,18.4s,baz=19,slow=34
H11S2  WAKE ISLAND Hy   26.67 117  T     T      01 42 40.3
       baz=144,slow=71,SNR=6.0
GZH    Guangzhou        26.83 256  P     P      01 14 36.5 -3.4
GZH                                S     S      01 19 07.5 -6.7
GZH                                LR    LR
       comp=Z,6µm,14.5s
GZH                                LR    LR
       comp=Z,5µm,14.4s
MA2    Magadan          27.26  10  P     P      01 14 44.1 +0.7
       comp=Z,35nm,0.9s,baz=188,slow=7.7,SNR=11
MA2                                LR    LR     01 27 47.6
       comp=Z,3µm,18.8s,baz=190,slow=41
MA2    Magadan          27.26  10 eP     P      01 14 43.2 -0.2
       comp=Z,49nm,1.0s
MA2                                LR    LR
       comp=Z,3µm,20.0s
MA2    Magadan          27.26  10⇓eP     P      01 14 43.8 +0.3
MA2                                pmax  pmax
       comp=Z,52nm,1.0s
XAN    Xi'an            27.28 281 eP     P      01 14 42.9 -1.1
       comp=Z,274nm,1.8s
XAN                                LR    LR
       comp=Z,1µm,21.0s
XAN    Xi'an            27.28 281  P     P      01 14 42.5 -1.5
XAN                                sP    sP     01 14 55.3 +0.5
XAN                                PP    PnPn   01 15 26.5 -1.9
XAN                                S     S      01 19 17.5 -3.9
XAN                                pmax  pmax
       comp=Z,71nm,1.4s
XAN                                pmax  pmax
       comp=Z,920nm,7.3s
XAN                                LR    LR
       comp=Z,4µm,15.3s
XAN                                LR    LR
       comp=Z,9µm,14.7s
XAN                                LR    LR
       comp=Z,11µm,14.7s
XAN    Xi'an            27.28 281 eP     P      01 14 42.9 -1.1
XAN                                pmax  pmax
       comp=Z,275nm,1.8s
XAN                                MLR   MLR
       comp=Z,1µm,21.0s
ENH    Enshi            27.50 273  PFAKE        01 15 00.0 +14
ENH                                LR    LR
       comp=Z,5µm,18.0s
CIT    Chita            27.86 321 eP     P      01 14 52.8 +3.8
CIT                               e             01 14 59.4
CIT                               e             01 15 02.2
CIT                               e             01 15 43.0
CIT                                pmax  pmax
       comp=Z,461nm,1.7s
DAV    Davao City (W)   29.82 214  LR    LR     01 26 23.9
       comp=Z,3µm,19.3s,baz=58,slow=35
DAV    Davao City (W)   29.82 214  PFAKE        01 15 20.0 +13
DAV                                LR    LR
       comp=Z,4µm,19.0s
DAV    Davao City (W)   29.82 214⇓eP     P      01 15 06.1 -0.6
ULN    Ulaanbaatar      29.97 310 eP     P      01 15 09.4 +1.5
       comp=Z,307nm,1.8s
ULN                                LR    LR
       comp=Z,5µm,22.0s
ULN    Ulaanbaatar      29.97 310  P     P      01 15 10.5 +2.6
       SNR=79
ULN                                P     P      01 15 10.5 +2.6
       SNR=79
YAK    Yakutsk          30.06 349 eP     P      01 15 07.9 -0.4
       comp=Z,54nm,1.0s
YAK                                LR    LR
       comp=Z,3µm,18.0s
YAK    Yakutsk          30.06 349 eP     P      01 15 07.6 -0.7
YAK                               e*PP   pwP    01 15 22.8 -1.1
YAK                               eS     S      01 20 04.5 +0.3
YAK                                pmax  pmax
       comp=Z,34nm,0.9s
YAK                                pmax  pmax
       comp=N,20nm,0.9s
YAK                                pmax  pmax
       comp=E,8.0nm,1.0s
YAK                                smax  smax
       comp=E,542nm,5.0s
YAK                                smax  smax
       comp=N,285nm,4.7s
YAK                                MLR   MLR
       comp=Z,4µm,13.0s
YAK                                MLR   MLR
       comp=N,3µm,12.0s
SONM   Songino Array    30.39 310  P     P      01 15 12.7 +1.1
       comp=N,25nm,0.8s,baz=113,slow=8.9,SNR=40
SEY    Seymchan         30.71  10  P     P      01 15 14.8 +0.8
       comp=N,11nm,0.9s,baz=207,slow=6.5,SNR=14
GYA    Guiyang          31.01 267  P     P      01 15 15.3 -2.0
GYA                                pP    pP     01 15 24.8 -0.4
GYA                                sP    pwP    01 15 29.5 -2.3
GYA                                PP    PP     01 16 19.5 -8.0
GYA                                PcP   PcP    01 18 10.3 -2.5
GYA                                S     S      01 20 17.5 -2.7
GYA                                sS    pS     01 20 30.8 +0.9
GYA                                ScP   ScP    01 21 50.8 -2.4
GYA                                SS    SnSn   01 22 07.3 +5.1
GYA                                pmax  pmax
       comp=N,30nm,0.9s
GYA                                pmax  pmax
       comp=N,330nm,9.0s
GYA                                LR    LR
       comp=N,4µm,11.7s
GYA                                LR    LR
       comp=N,4µm,13.9s
GYA                                LR    LR
       comp=N,5µm,13.4s
BOD    Bodaibo          31.12 331 eP     P      01 15 24.2 +6.5
BOD                                pmax  pmax
       comp=Z,105nm,1.6s
LZH    Lanzhou          31.20 286 eP     P      01 15 18.0 -0.9
LZH                                pP    pP     01 15 26.8 +0.2
LZH                                sP    sP     01 15 30.3 +0.6
LZH                                PP    PP     01 16 24.3 -5.3
LZH                               eS     S      01 20 23.0 -0.1
LZH                                SS    SnSn   01 22 04.0 -2.7
LZH                                pmax  pmax
       comp=Z,32nm,1.1s
LZH                                pmax  pmax
       comp=Z,160nm,4.9s
LZH                                LR    LR
       comp=Z,6µm,13.3s
LZH                                LR    LR
       comp=Z,11µm,15.5s
LZH                                LR    LR
       comp=Z,13µm,16.8s
QIZ    Qiongzhong       31.68 252  PFAKE        01 15 40.0 +17
QIZ                                LR    LR
       comp=Z,2µm,18.0s
QIZ    Qiongzhong       31.68 252  P     P      01 15 21.5 -1.6
QIZ                                S     S      01 20 29.0 -1.6
QIZ                                sS    sS     01 20 45.8 +1.3
QIZ                                pmax  pmax
       comp=Z,380nm,3.3s
QIZ                                LR    LR
       comp=Z,3µm,13.7s
QIZ                                LR    LR
       comp=Z,2µm,15.7s
QIZ                                LR    LR
       comp=Z,2µm,13.7s
CD2    Chengdu          32.14 277 ⇑P     P      01 15 25.5 -1.6
CD2                                sP    sP     01 15 37.0 -0.9
CD2                                S     S      01 20 33.5 -4.2
CD2                                sS    sS     01 20 53.0 +1.8
CD2                                pmax  pmax
       comp=Z,100nm,0.9s
CD2                                pmax  pmax
       comp=Z,690nm,12.0s
CD2                                LR    LR
       comp=Z,18µm,14.3s
CD2                                LR    LR
       comp=Z,18µm,15.3s
CD2                                LR    LR
       comp=Z,24µm,15.7s
ZAK    Zakamensk        33.08 313 eP     P      01 15 35.6 +0.4
ZAK                                pmax  pmax
       comp=Z,40nm,2.2s
IRK    Irkutsk          33.09 317 eP     P      01 15 35.3 +0.2
IRK                                pmax  pmax
       comp=Z,87nm,2.1s
TLY    Talaya           33.26 316  LR    LR     01 29 57.5
       comp=Z,3µm,18.0s,baz=180,slow=38
TLY    Talaya           33.26 316 eP     P      01 15 37.6 +0.9
       comp=Z,122nm,1.6s
TLY                                LR    LR
       comp=Z,3µm,19.0s
TLY    Talaya           33.26 316 eP     P      01 15 37.6 +0.9
TLY                                pmax  pmax
       comp=Z,122nm,1.6s
TLY                                MLR   MLR
       comp=Z,3µm,19.0s
TLY    Talaya           33.26 316  P     P      01 15 37.1 +0.4
       SNR=20
TLY                                P     P      01 15 37.1 +0.4
       SNR=20
KWAJ   Kwajalein Atol   33.96 129  PFAKE        01 16 00.0 +17
KWAJ                               LR    LR
       comp=Z,3µm,18.0s
GTA    Gaotai           34.16 293 ⇑P     P      01 15 44.3 -0.5
GTA                                pP    sP     01 15 56.8 +1.2
GTA                                sP    pwP    01 16 00.5 +0.4
GTA                                S     S      01 21 09.0  0.0
GTA                                SS    SnSn   01 23 21.0 +2.6
GTA                                pmax  pmax
       comp=Z,98nm,1.3s
GTA                                pmax  pmax
       comp=Z,590nm,5.2s
GTA                                LR    LR
       comp=Z,3µm,14.3s
GTA                                LR    LR
       comp=Z,4µm,13.6s
GTA                                LR    LR
       comp=Z,7µm,15.2s
TNTI   Ternate          34.77 206  PFAKE        01 16 00.0 +10
TNTI                               LR    LR
       comp=Z,2µm,19.0s
KMI    Kunming          34.79 267  PFAKE        01 16 00.0 +10
KMI                                LR    LR
       comp=Z,2µm,20.0s
MOY    Mondy            34.83 315 eP     P      01 15 51.5 +1.1
MOY                                pmax  pmax
       comp=Z,44nm,1.6s
SIJI   Sorong           35.09 198  P     P      01 15 51.2 -1.6
       comp=Z,24nm,1.0s,baz=349,slow=16,SNR=2.9
MANU   Manus Island     35.26 170  PFAKE        01 16 10.0 +16
MANU                               LR    LR
       comp=Z,2µm,18.0s
SLVN   Son La           35.39 261  PFAKE        01 16 10.0 +15
SLVN                               LR    LR
       comp=Z,4µm,19.0s
MIDW   Midway           35.40  87  PFAKE        01 16 10.0 +15
MIDW                               LR    LR
       comp=Z,3µm,21.0s
GENI   Genyem           35.43 183  P     P      01 16 04.6 +9.0
       comp=Z,118nm,1.1s
ADK    Adak             35.44  45  PFAKE        01 16 10.0 +15
ADK                                LR    LR
       comp=Z,2µm,20.0s
KKM    Kota Kinabalu    35.79 227  PFAKE        01 16 10.0 +11
KKM                                LR    LR
       comp=Z,3µm,19.0s
FAKI   Fak Fak          36.82 196  PFAKE        01 16 20.0 +12
FAKI                               LR    LR
       comp=Z,2µm,20.0s
DLV    T  Lat           36.91 243 eP     P      01 16 08.9 +0.3
       comp=Z,84nm,1.5s
ATKA   Atka Island      37.01  45  PFAKE        01 16 20.0 +11
ATKA                               LR    LR
       comp=Z,4µm,20.0s
NONG   Nongkai          37.60 256  P     P      01 16 14.1 -0.1
       comp=Z,0.6nm,1.6s
BILL   Bilibino         37.84  15 eP     P      01 16 16.5 +0.8
       comp=Z,20nm,0.9s
BILL                               LR    LR
       comp=Z,2µm,18.0s
BILL   Bilibino         37.84  15ceP     P      01 16 17.1 +1.4
BILL                              e*PP   sP     01 16 26.5 +0.2
BILL                              ePPP   PPP    01 17 52.1
BILL                              eS     S      01 22 03.2 -1.3
BILL                               pmax  pmax
       comp=Z,25nm,1.0s
BILL                               MLR   MLR
       comp=Z,4µm,16.0s
SANI   Sanana           37.89 206  P     P      01 16 14.8 -1.8
       comp=Z,45nm,0.8s,comp=Z,939nm
TIXI   Tiksi            39.32 354  P     P      01 16 27.4 -0.6
       comp=Z,4.7nm,0.6s,baz=129,slow=12,SNR=5.3
TIXI   Tiksi            39.32 354  PFAKE        01 16 40.0 +12
TIXI                               LR    LR
       comp=Z,2µm,18.0s
TIXI   Tiksi            39.32 354⇓eP     P      01 16 28.3 +0.3
TIXI                               pmax  pmax
       comp=Z,19nm,1.7s
PAYA   Payao            39.66 261  P     P      01 16 32.7 +1.1
       comp=Z,24µm,1.3s
CHAI   Chaiyaphum       39.68 254  P     P      01 16 31.0 -0.7
       comp=Z,45µm,1.1s,comp=Z,607µm
LKP    Lekhapani        39.80 274 eP     P      01 16 32.3 -0.3
PBKT   Sadao Pong       40.15 256  P     P      01 16 35.2 -0.4
       comp=Z,18nm,1.3s,comp=Z,640nm
NIKH   Nikolski High    40.35  45 eP     P      01 16 35.8 -1.1
       comp=Z,95nm,1.0s
SPIA   Saint Paul Isl   40.49  39 eP     P      01 16 38.3 +0.4
       comp=Z,276nm,1.5s
CMMT   Chiang Mai       40.68 260  P     P      01 16 39.6 -0.5
       comp=Z,13nm,1.0s
CHTO   Chiang Mai       40.69 260 eP     P      01 16 39.4 -0.7
       comp=Z,37nm,1.2s
CHTO                               LR    LR
       comp=Z,3µm,18.0s
CHTO   Chiang Mai       40.69 260 eP     P      01 16 39.4 -0.7
CHTO                               pmax  pmax
       comp=Z,37nm,1.2s
CHTO                               MLR   MLR
       comp=Z,3µm,18.0s
CHTO   Chiang Mai       40.69 260  P     P      01 16 39.0 -1.1
       SNR=6.0
CHTO                               P     P      01 16 39.0 -1.1
       SNR=6.0
CM31   Chiang Mai Arr   40.86 260 eP     P      01 16 41.0 -0.6
       comp=Z,17nm,1.1s
CM31                              ePcP   PcP    01 18 43.9 +1.9
CMAR   Chiang Mai Arr   40.86 260  P     P      01 16 41.0 -0.6
       comp=Z,5.1nm,0.8s,baz=48,slow=6.8,SNR=21
CMAR                               PcP   PcP    01 18 43.9 +1.9
       comp=Z,1.8nm,0.4s,baz=18,slow=2.1,SNR=7.0
CMAR                               LR    LR     01 36 10.0
       comp=Z,2µm,19.2s,baz=60,slow=40
SBUM   Sibu             41.07 228  PFAKE        01 16 50.0 +6.8
SBUM                               LR    LR
       comp=Z,2µm,18.0s
JORH   JORHAT           41.34 274 eP     P      01 16 44.8 -0.5
ZIRO   ZIRO             41.41 275 eP     P      01 16 45.6 -0.5
KOHI   KOHIMA           41.82 273 eP     P      01 16 46.9 -2.6
KOHI                               IAmb  IAmb   01 16 48.3
       comp=Z,71nm,1.7s
UTHA   Uthaitani        41.92 256  P     P      01 17 03.3 +13
SPSI   Sidrap Palu      42.23 214  P     P      01 16 52.8 +0.2
       comp=Z,15nm,1.1s
BBSI   Bau Bau          42.36 209  P     P      01 17 04.0 +10
       comp=Z,20nm,1.1s,comp=Z,300nm
BNSI   Bone             42.45 213  P     P      01 16 55.3 +0.8
       comp=Z,46nm,1.1s
TEZP   TEZPUR           42.60 275 eP     P      01 16 54.5 -1.1
TEZP                               IAmb  IAmb   01 16 56.5
       comp=Z,132nm,1.1s
SRDT   SRDT             42.84 255  P     P      01 17 11.0 +13
LSA    Lhasa            42.96 280  PFAKE        01 17 10.0 +11
LSA                                LR    LR
       comp=Z,1µm,18.0s
LSA    Lhasa            42.96 280  P     P      01 16 59.5 +0.4
LSA                                pmax  pmax
       comp=Z,120nm,1.1s
LSA    Lhasa            42.96 280  P     P      01 16 59.7 +0.6
WMQ    Urumqi           42.98 301  PFAKE        01 17 10.0 +11
WMQ                                LR    LR
       comp=Z,2µm,19.0s
WMQ    Urumqi           42.98 301 eP     P      01 16 59.8 +1.1
WMQ                                sP    pwP    01 17 12.5 -1.4
WMQ                                S     S      01 23 24.5 +2.6
WMQ                                sS    sS     01 23 36.5 +0.6
WMQ                                pmax  pmax
       comp=Z,86nm,2.2s
WMQ                                pmax  pmax
       comp=Z,770nm,3.7s
WMQ                                LR    LR
       comp=Z,3µm,18.3s
WMQ                                LR    LR
       comp=Z,3µm,13.3s
WMQ                                LR    LR
       comp=Z,2µm,14.9s
TARA   Tarawa           43.02 131 eP     P      01 16 59.5 +0.4
       comp=Z,72nm,0.9s
TARA                               LR    LR
       comp=Z,2µm,19.0s
KSM    Kuching          43.03 230  PFAKE        01 17 10.0 +11
KSM                                LR    LR
       comp=Z,2µm,19.0s
DGZ    Jazzator, Alta   43.04 309c iP    P      01 17 00.2 +1.1
DGZ                                pmax  pmax
       comp=Z,35nm,1.0s
TAWA   Tawang           43.04 276 eP     P      01 16 59.9 +0.2
KAPI   Kappang          43.16 213  P     P      01 16 59.6 -0.5
       comp=Z,21nm,1.0s,baz=34,slow=10.0,SNR=3.8
KAPI   Kappang          43.16 213 eP     P      01 17 00.5 +0.3
       comp=Z,52nm,1.2s
KAPI   Kappang          43.16 213 eP     P      01 17 00.5 +0.3
KAPI                               pmax  pmax
       comp=Z,52nm,1.2s
PHET   Kaeng Krachan    43.23 253  P     P      01 17 04.6 +3.8
       comp=Z,43µm,1.0s,comp=Z,809µm
GUWA   GUWAHATI         43.67 275 eP     P      01 17 03.1 -1.3
GUWA                               IAmb  IAmb   01 17 04.6
       comp=Z,71nm,1.1s
SHL    Shillong         43.74 274 eP     P      01 17 03.7 -1.4
ZAA0   Zalesovo Array   44.88 315 eP     P      01 17 13.4 -0.1
       comp=Z,59nm,1.4s
ZAA0                               LR    LR
       comp=Z,2µm,19.0s
ZAA1   Zalesovo Array   44.88 315 eP     P      01 17 13.7 +0.1
ZAA1                              ePcP   PcP    01 18 54.7 -0.1
ZALV   Zalesovo Beam    44.88 315  P     P      01 17 13.7 +0.1
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	comp=Z,15nm,0.9s,baz=98,slow=6.3,SNR=43						
ZALV				PcP	**PcP**	**01 18 54.7**	**-0.1**
	comp=Z,6.1nm,1.0s,baz=29,slow=3.3,SNR=2.1						
ZALV				LR	LR	01 36 50.6	
	comp=Z,2µm,18.1s,baz=75,slow=37						
ANM	**Nome**	**44.96**	**29**	*e*P	**P**	**01 17 14.6**	**+0.5**
	comp=Z,47nm,1.1s						
ANM				LR	LR		
	comp=Z,1µm,19.0s						
ANM	**Nome**	**44.96**	**29**	*e*P	**P**	**01 17 14.6**	**+0.5**
ANM				pmax	pmax		
	comp=Z,47nm,1.1s						
ANM				MLR	MLR		
	comp=Z,1µm,19.0s						
MMRI	**Maumere**	**45.36**	**208**	P	**P**	**01 17 19.2**	**+1.4**
	comp=Z,74nm,1.1s						
HNR	**Honiara**	**45.64**	**154**	LR	LR	01 36 10.2	
	comp=Z,863nm,20.7s,baz=330,slow=36						
HNR	**Honiara**	**45.64**	**154**	PFAKE		01 17 30.0	+10
HNR				LR	LR		
	comp=Z,1µm,18.0s						
SOEI	**Soe**	**45.65**	**204**	*e*P	**P**	**01 17 19.5**	**-0.7**
	comp=Z,124nm,0.9s						
SOEI	**Soe**	**45.65**	**204**	P	**P**	**01 17 20.3**	**+0.1**
	comp=Z,160nm,1.1s,comp=Z,2µm						
EDFI	**Ende, Flores**	**45.68**	**208**	P	**P**	**01 17 19.4**	**-1.1**
	comp=Z,47nm,1.2s						
TRTT	**Trang**	**46.20**	**247**	P	**P**	**01 17 27.5**	**+3.0**
	comp=Z,9.0nm,1.1s						
MK31	**Makanchi Array**	**46.55**	**305**	*e*P	**P**	**01 17 27.0**	**0.0**
	comp=Z,23nm,0.9s						
MK31	**Makanchi Array**	**46.55**	**305**	*i* P	**P**	**01 17 27.1**	**+0.1**
MK31				pmax	pmax		
	comp=Z,27nm,0.9s						
MKAR	**Makanchi Array**	**46.55**	**305**	P	**P**	**01 17 27.5**	**+0.5**
	comp=Z,19nm,0.8s,baz=91,slow=9.5,SNR=97						
MTN	**Manton Dam**	**46.69**	**194**	*e*P	**P**	**01 17 27.4**	**-0.8**
	comp=Z,110nm,1.0s						
COEN	**Coen**	**46.71**	**178**	*e*P	**P**	**01 17 28.4**	**0.0**
	comp=Z,76nm,1.3s						
MAKZ	**Makanchi**	**46.76**	**305**	*e*P	**P**	**01 17 28.9**	**+0.3**
	comp=Z,51nm,1.3s						
MAKZ				LR	LR		
	comp=Z,2µm,20.0s						
MAKZ	**Makanchi**	**46.76**	**305**	*e*P	**P**	**01 17 28.9**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,51nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,2µm,20.0s						
MYKOM	**Kota Tinggi**	**47.15**	**237**	PFAKE		01 17 40.0	+8.1
MYKOM				LR	LR		
	comp=Z,1µm,18.0s						
IPM	**Ipoh**	**47.35**	**242**	PFAKE		01 17 50.0	+16
IPM				LR	LR		
	comp=Z,900nm,20.0s						
PLAI	**Plampang**	**47.42**	**213**	P	**P**	**01 17 33.9**	**-0.1**
	comp=Z,79nm,1.1s						
JIRN	**Jiri**	**47.74**	**279**	*e*P	**P**	**01 17 37.4**	**+0.4**
	comp=Z,574nm,1.1s						
TPI	**Tanjungpandan**	**47.96**	**229**	P	**P**	**01 17 38.7**	**+0.5**
	comp=Z,32nm,1.3s,comp=Z,513nm						
SRBI	**Singaraja**	**48.00**	**216**	P	**P**	**01 17 39.6**	**+1.1**
	comp=Z,59nm,1.1s						
CHIR	**Chirikof Islan**	**48.31**	**42**	PFAKE		01 17 50.0	+10
CHIR				LR	LR		
	comp=Z,4µm,20.0s						
PKI	**Pulchoki**	**48.42**	**279**	*e*P	**P**	**01 17 41.8**	**-0.4**
	comp=Z,229nm,1.3s						
PKIN	**Phulchoki**	**48.43**	**279**	*e*P	**P**	**01 17 41.7**	**-0.4**
	comp=Z,160nm,1.3s						
KKN	**Kakani**	**48.45**	**280**	*e*P	**P**	**01 17 42.2**	**-0.1**
	comp=Z,216nm,1.1s						
DGPR	**DIGLIPUR**	**48.52**	**258**	*e*x	P	01 17 37.6	-5.0
SVW2	**Sparrevohn**	**48.63**	**35**	*e*P	**P**	**01 17 43.3**	**+0.4**
	comp=Z,43nm,1.6s						
DMN	**Daman**	**48.66**	**279**	*e*P	**P**	**01 17 43.8**	**-0.1**
	comp=Z,177nm,1.2s						
KURK	**Kurchatov**	**48.67**	**311**	*e*P	**P**	**01 17 43.3**	**0.0**
	comp=Z,89nm,1.0s						
KURK				LR	LR		
	comp=Z,5µm,21.0s						
KURK	**Kurchatov**	**48.67**	**311**	*e*P	**P**	**01 17 43.3**	**0.0**
KURK				pmax	pmax		
	comp=Z,89nm,1.0s						
KURK				MLR	MLR		
	comp=Z,5µm,21.0s						
KURK	**Kurchatov**	**48.67**	**311**	P	**P**	**01 17 43.5**	**+0.1**
	SNR=38						
KURK				P	**P**	**01 17 43.5**	**+0.1**
	SNR=38						
JAGI	**Jajag, Banyuwa**	**48.87**	**217**	*e*P	**P**	**01 17 44.4**	**-0.8**
	comp=Z,104nm,1.1s						
JAGI	**Jajag, Banyuwa**	**48.87**	**217**	P	**P**	**01 17 47.9**	**+2.7**
	comp=Z,68nm,0.7s,comp=Z,2µm						
GKN	**Gorkha**	**48.91**	**280**	*e*P	**P**	**01 17 45.8**	**+0.1**
	comp=Z,488nm,1.4s						
PDGK	**Podgornoye**	**48.96**	**301**	P	**P**	**01 17 44.0**	**-1.9**
PDGK				pmax	pmax		
	comp=Z,128nm,1.4s						
BOK	**Bokaro**	**49.45**	**274**	*e*P	**P**	**01 17 50.0**	**+0.3**
BOK				IAmb	IAmb	01 17 51.4	
	comp=Z,61nm,0.6s						
BOK				IAMs_20	IAMs_20	01 42 11.1	
	comp=Z,2µm,9.3s						
DANN	**Dangsing**	**49.51**	**281**	*e*P	**P**	**01 17 50.9**	**+0.4**
	comp=Z,512nm,1.2s						
OHAK	**Old Harbor**	**49.62**	**40**	*e*P	**P**	**01 17 50.5**	**+0.1**
	comp=Z,115nm,1.8s						
PRZ	**Przheval'sk**	**49.90**	**300**	PFAKE		01 18 10.0	+17
PRZ				LR	LR		
	comp=Z,4µm,18.0s						
KDAK	**Kodiak Island**	**50.00**	**40**	P	**P**	**01 17 53.4**	**+0.1**
	comp=Z,24nm,0.9s,baz=346,slow=2.6,SNR=11						
KDAK				LR	LR	01 37 02.0	
	comp=Z,3µm,21.8s,baz=260,slow=34						
KDAK	**Kodiak Island**	**50.00**	**40**	*e*P	**P**	**01 17 53.1**	**-0.2**
	comp=Z,341nm,2.0s						
KDAK				LR	LR		
	comp=Z,4µm,20.0s						
PSI	**Prapat**	**50.02**	**242**	P	**P**	**01 17 53.3**	**-1.0**
	comp=Z,6.5nm,0.7s,baz=295,slow=4.6,SNR=7.2						
PSI	**Prapat**	**50.02**	**242**	*e*P	**P**	**01 17 53.6**	**-0.6**
	comp=Z,28nm,1.2s						
PSI	**Prapat**	**50.02**	**242**	*e*P	**P**	**01 17 53.6**	**-0.6**
PSI				pmax	pmax		
	comp=Z,28nm,1.2s						
UGM	**Wanagama**	**50.35**	**222**	*e*P	**P**	**01 17 56.0**	**-0.5**
	comp=Z,314nm,1.2s						
CAST	**Castle Rocks**	**50.47**	**32**	PFAKE		01 18 10.0	+13
CAST				LR	LR		
	comp=Z,1µm,20.0s						
HOM	**Homer**	**50.51**	**37**	PFAKE		01 18 10.0	+13
HOM				LR	LR		
	comp=Z,2µm,20.0s						
KDJ	**Kajisay**	**50.86**	**300**	PFAKE		01 18 10.0	+10
KDJ				LR	LR		
	comp=Z,4µm,18.0s						
BRLK	**Bradley Lake**	**50.89**	**37**	PFAKE		01 18 10.0	+10
BRLK				LR	LR		
	comp=Z,2µm,19.0s						
BWNR	**Bhubaneshwar**	**51.00**	**270**	*e*P	**P**	**01 18 00.9**	**-0.5**
BWNR				IAmb	IAmb	01 18 03.1	
	comp=Z,68nm,1.3s						
RC01	**Rabbit Creek A**	**51.47**	**35**	PFAKE		01 18 20.0	+16
RC01				LR	LR		
	comp=Z,2µm,20.0s						
CISI	**Cisompet, Garu**	**51.62**	**225**	PFAKE		01 18 20.0	+14
CISI				LR	LR		
	comp=Z,900nm,19.0s						
PMR	**Palmer**	**51.76**	**35**	*e*P	**P**	**01 18 06.6**	**+0.1**
	comp=Z,105nm,1.8s						
PMR	**Palmer**	**51.76**	**35**	*e*P	**P**	**01 18 06.6**	**+0.1**
PMR				pmax	pmax		
	comp=Z,105nm,1.8s						
TKM2	**Tokmak 2**	**51.84**	**301**	P	**P**	**01 18 08.4**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,21nm,1.1s						
RND	**Reindeer**	**51.92**	**32**	PFAKE		01 18 20.0	+12
RND				LR	LR		
	comp=Z,1µm,18.0s						
TOLK	**Toolik Lake Re**	**51.98**	**26**	P	**P**	**01 18 07.8**	**-0.3**
	baz=264						
GSI	**Gunungsitoli**	**52.02**	**242**	*e*P	**P**	**01 18 08.3**	**-0.8**
	comp=Z,147nm,1.2s						
KNK	**Knik Glacier**	**52.09**	**35**	PFAKE		01 18 20.0	+11
KNK				LR	LR		
	comp=Z,2µm,20.0s						
SML	**Sawmill**	**52.15**	**34**	PFAKE		01 18 20.0	+11
SML				LR	LR		
	comp=Z,2µm,19.0s						
MDM	**Murphy Dome**	**52.24**	**30**	*e*P	**P**	**01 18 10.6**	**+0.5**
	comp=Z,35nm,1.1s						
KSH	**Kashi**	**52.35**	**297**	P	**P**	**01 18 15.5**	**+4.0**
KSH				PP	**PP**	**01 20 15.3**	**+5.2**
KSH				S	**S**	**01 25 38.3**	**+3.2**
KSH				pmax	pmax		
	comp=Z,18nm,0.7s						
KSH				pmax	pmax		
	comp=Z,650nm,9.1s						
KSH				LR	LR		
	comp=Z,3µm,17.8s						
KSH				LR	LR		
	comp=Z,3µm,13.3s						
KSH				LR	LR		
	comp=Z,4µm,14.1s						
TCOL	**CIGO, UAF Yank**	**52.39**	**31**	P	**P**	**01 18 11.2**	**0.0**
	baz=268						
COLA	**College**	**52.40**	**31**	PFAKE		01 18 20.0	+8.8
COLA				LR	LR		
	comp=Z,1µm,18.0s						
COLA	**College**	**52.40**	**31***c*	*e*P	**P**	**01 18 12.7**	**+1.5**
COLA				pmax	pmax		
	comp=Z,12nm,0.9s						
KEKH	**Kekaha**	**52.54**	**86**	PFAKE		01 18 20.0	+7.1
KEKH				LR	LR		
	comp=Z,3µm,19.0s						
FRU1	**Bishkek**	**52.55**	**301**	PFAKE		01 18 30.0	+17
FRU1				LR	LR		
	comp=Z,2µm,18.0s						
POKR	**Poker Plat Res**	**52.58**	**30**	P	**P**	**01 18 12.9**	**+0.3**
	baz=268						
SCM	**Sheep Creek Mo**	**52.62**	**34**	PFAKE		01 18 30.0	+17
SCM				LR	LR		
	comp=Z,2µm,20.0s						
AAK	**Ala-Archa**	**52.69**	**301**	*e*P	**P**	**01 18 14.4**	**+0.4**
	comp=Z,29nm,1.0s						
AAK				LR	LR		
	comp=Z,1µm,19.0s						
AAK	**Ala-Archa**	**52.69**	**301**	*i* P	**P**	**01 18 14.6**	**+0.6**
	SNR=10						
AAK	**Ala-Archa**	**52.69**	**301**	P	**P**	**01 18 13.1**	**-0.9**
AAK				pmax	pmax		
	comp=Z,28nm,1.2s						
AAK	**Ala-Archa**	**52.69**	**301**	P	**P**	**01 18 14.6**	**+0.6**
	SNR=11						
HDA	**Harding Lake**	**52.78**	**31**	PFAKE		01 18 30.0	+16
HDA				LR	LR		
	comp=Z,1µm,21.0s						
HDA	**Harding Lake**	**52.78**	**31**	P	**P**	**01 18 12.9**	**-1.2**
	baz=270						
ILAR	**Eielson Array**	**52.81**	**31**	P	**P**	**01 18 13.8**	**-0.5**
	comp=Z,23nm,1.0s,baz=268,slow=6.1,SNR=62						
ILAR				LR	LR	01 40 40.8	
	comp=Z,612nm,20.9s,baz=277,slow=36						
CTA	**Charters Tower**	**52.97**	**175**	P	**P**	**01 18 15.1**	**-0.8**
	comp=Z,4.8nm,0.8s,baz=320,slow=9.2,SNR=4.8						
CTAO	**Charters Tower**	**52.97**	**175**	*e*P	**P**	**01 18 16.1**	**+0.2**
	comp=Z,125nm,1.8s						
CTAO	**Charters Tower**	**52.97**	**175**	*e*P	**P**	**01 18 16.1**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,125nm,1.8s						
OTUK	**Ortayu**	**53.05**	**308**	P	**P**	**01 18 13.1**	**-3.2**
OTUK				pmax	pmax		
	comp=Z,88nm,1.2s						
WRAB	**Tennant Creek**	**53.10**	**189**	*e*P	**P**	**01 18 16.6**	**-0.3**
	comp=Z,46nm,0.9s						
WRAB	**Tennant Creek**	**53.10**	**189***c*	*i*P	**P**	**01 18 15.9**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,62nm,1.0s						
WB2	**Warramunga Arr**	**53.11**	**189**	*e*P	**P**	**01 18 16.2**	**-0.8**
	comp=Z,51nm,0.9s						
WRA	**Warramunga Arr**	**53.11**	**189**	P	**P**	**01 18 16.8**	**-0.2**
	comp=Z,25nm,0.6s,baz=6.3,slow=8.4,SNR=75						
DDI	**Dehra Dun**	**53.49**	**285**	*e*P	**P**	**01 18 20.3**	**+0.4**
FYU	**Fort Yukon**	**53.51**	**28**	PFAKE		01 18 30.0	+11
FYU				LR	LR		
	comp=Z,1µm,18.0s						
BRVK	**Borovoye**	**53.57**	**315**	*e*P	**P**	**01 18 20.3**	**+0.2**
	comp=Z,111nm,1.4s						
BRVK				LR	LR		
	comp=Z,2µm,19.0s						
BRVK	**Borovoye**	**53.57**	**315**	*e*P	**P**	**01 18 20.3**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,111nm,1.4s						
BRVK				MLR	MLR		
	comp=Z,2µm,19.0s						
BRVK	**Borovoye**	**53.57**	**315**	P	**P**	**01 18 20.8**	**+0.7**
	SNR=34						
SMLA	**Simla**	**53.93**	**287**	*e*P	**P**	**01 18 23.2**	**+0.2**
SMLA				IAMs_20	IAMs_20	01 43 51.6	
	comp=Z,3µm,10.9s						
RAGM	**Ragged Mountai**	**53.98**	**36**	PFAKE		01 18 40.0	+17
RAGM				LR	LR		
	comp=Z,3µm,20.0s						
SCRK	**Sand Creek**	**54.08**	**32**	PFAKE		01 18 40.0	+16
SCRK				LR	LR		
	comp=Z,1µm,20.0s						
OPA	**Opana**	**54.10**	**86**	PFAKE		01 18 40.0	+16
OPA				LR	LR		
	comp=Z,2µm,20.0s						
KAIM	**Kayak Island**	**54.15**	**37**	PFAKE		01 18 40.0	+16
KAIM				LR	LR		
	comp=Z,2µm,19.0s						
HMT	**Hamilton**	**54.19**	**36**	PFAKE		01 18 40.0	+15
HMT				LR	LR		
	comp=Z,2µm,20.0s						
KIP	**Kipapa**	**54.21**	**86**	PFAKE		01 18 40.0	+15
KIP				LR	LR		
	comp=Z,3µm,19.0s						
HON	**Honolulu**	**54.26**	**86**	PFAKE		01 18 40.0	+14
HON				LR	LR		
	comp=Z,3µm,20.0s						
JBP	**Jabalpur**	**54.65**	**276**⇑	*e*P	**P**	**01 18 28.5**	**+0.1**
JBP				AMB	AMB	01 18 29.4	
	comp=Z,146nm,1.6s						
JBP				*e*S	**S**	**01 26 12.2**	**+5.9**
BALM	**Baldy**	**55.06**	**35**	PFAKE		01 18 40.0	+9.1
BALM				LR	LR		
	comp=Z,1µm,20.0s						
EGAK	**Eagle**	**55.26**	**31**	PFAKE		01 18 40.0	+7.8
EGAK				LR	LR		
	comp=Z,800nm,18.0s						
KK31	**Karatay Array**	**55.42**	**303**	*e*P	**P**	**01 18 34.9**	**+1.2**
	comp=Z,161nm,1.4s						
KK31	**Karatay Array**	**55.42**	**303**	*e*P	**P**	**01 18 34.9**	**+1.2**
KK31				pmax	pmax		
	comp=Z,161nm,1.4s						
KKAR	**Karatay Array**	**55.42**	**303**	*e*P	**P**	**01 18 34.1**	**+0.4**
	comp=Z,161nm,1.4s						
KKAR	**Karatay Array**	**55.42**	**303**	*e*P	**P**	**01 18 34.1**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,161nm,1.4s						
KHLH	**Kahului Airpor**	**55.77**	**86**	PFAKE		01 18 50.0	+14
KHLH				LR	LR		
	comp=Z,2µm,19.0s						
HLK	**Haleakala**	**55.98**	**86**	PFAKE		01 18 50.0	+12
HLK				LR	LR		
	comp=Z,2µm,20.0s						
BTK	**Batken**	**56.03**	**299**	*e*P	**P**	**01 18 38.9**	**+0.7**
	comp=Z,162nm,1.7s						
BTK	**Batken**	**56.03**	**299**	*e*P	**P**	**01 18 38.9**	**+0.7**
BTK				pmax	pmax		
	comp=Z,162nm,1.7s						
DAWY	**Dawson**	**56.09**	**31**	PFAKE		01 18 50.0	+12
DAWY				LR	LR		
	comp=Z,2µm,20.0s						
NIL	**Nilore**	**56.19**	**291**	*e*P	**P**	**01 18 40.0**	**+0.6**
	comp=Z,281nm,1.7s						
NIL				LR	LR		
	comp=Z,500nm,19.0s						
NIL	**Nilore**	**56.19**	**291**	*e*P	**P**	**01 18 40.0**	**+0.6**
NIL				pmax	pmax		
	comp=Z,281nm,1.7s						
NIL				MLR	MLR		
	comp=Z,500nm,19.0s						
NGP	**Nagpur**	**56.30**	**275**	*e*P	**P**	**01 18 39.9**	**-0.3**
BHPL	**Bhopal**	**56.75**	**278**	*e*P	**P**	**01 18 43.0**	**-0.5**
BHPL				IAmb	IAmb	01 18 44.9	
	comp=Z,106nm,1.4s						
HPAH	**Hawaii Prepara**	**56.77**	**86**	PFAKE		01 19 00.0	+16
HPAH				LR	LR		
	comp=Z,3µm,19.0s						
KHLU	**Kahalu`u**	**56.80**	**87**	PFAKE		01 19 00.0	+16
KHLU				LR	LR		
	comp=Z,3µm,20.0s						
ASAR	**Alice Springs**	**56.84**	**189**	P	**P**	**01 18 43.6**	**-0.2**
	comp=Z,10nm,0.8s,baz=13,slow=8.3,SNR=45						
ASAR				S	**S**	**01 26 34.1**	**-1.1**
	comp=Z,1.2nm,1.0s,baz=23,slow=21,SNR=4.3						
ASAR				LR	LR	01 41 32.6	
	comp=Z,759nm,21.7s,baz=8.5,slow=34						
ASAR	**Alice Springs**	**56.84**	**189**	P	**P**	**01 18 43.7**	**-0.2**
ASAR				S	**S**	**01 26 34.1**	**-1.1**
ASAR				pmax	pmax		
	comp=Z,12nm,0.9s						
ASAR				smax	smax		
	comp=N,1.0nm,1.0s						
EPYK	**Eagle Plains**	**56.93**	**28**	PFAKE		01 19 00.0	+16
EPYK				LR	LR		
	comp=Z,1µm,18.0s						
EPYK	**Eagle Plains**	**56.93**	**28**	P	**P**	**01 18 42.4**	**-1.8**
	baz=277						
POHA	**Pohakuloa**	**57.03**	**87**	PFAKE		01 19 00.0	+14
POHA				LR	LR		
	comp=Z,3µm,19.0s						
MLOA	**Mauna Loa Obse**	**57.09**	**87**	PFAKE		01 19 00.0	+14
MLOA				LR	LR		
	comp=Z,4µm,19.0s						
HYT	**Haines Junctio**	**57.43**	**35**	PFAKE		01 19 00.0	+12
HYT				LR	LR		
	comp=Z,2µm,21.0s						
INK	**Inuvik**	**57.89**	**26**	P	**P**	**01 18 51.1**	**+0.4**
	comp=Z,5.1nm,0.7s,baz=203,slow=12,SNR=4.0						
INK	**Inuvik**	**57.89**	**26**	PFAKE		01 19 00.0	+9.3
INK				LR	LR		
	comp=Z,2µm,18.0s						
PSA00	**Pilbara Seismi**	**58.14**	**204**	*e*P	**P**	**01 18 52.9**	**-0.1**
	comp=Z,108nm,1.3s						
SVE	**Sverdlovsk**	**58.36**	**320***d*	*i*P	**P**	**01 18 54.9**	**+0.6**
SVE				*e*S	**S**	**01 26 52.1**	**-2.4**
SVE				pmax	pmax		
	comp=Z,72nm,1.3s						
SVE				MLR	MLR		
	comp=Z,3µm,15.0s						
HYB	**Hyderabad**	**58.42**	**271**	*i* P	**P**	**01 18 54.0**	**-1.3**
HYB				*e*PcP	**PcP**	**01 19 50.5**	**+4.6**
HYB	**Hyderabad**	**58.42**	**271**	*e*x	P	01 18 48.2	-7.1
HYB				IAmb	IAmb	01 18 57.4	
	comp=Z,57nm,1.3s						
EIDS	**Eidsvold**	**58.73**	**170**	*e*P	**P**	**01 18 58.4**	**+1.3**
	comp=Z,119nm,2.0s						
WHY	**Whitehorse**	**58.73**	**35**	*e*P	**P**	**01 18 57.7**	**+0.8**
	comp=Z,36nm,1.1s						
WHY				LR	LR		
	comp=Z,2µm,21.0s						
KBL	**Kabul**	**59.15**	**293**	*e*P	**P**	**01 19 00.6**	**+0.2**
	comp=Z,42nm,1.0s						
KBL				LR	LR		
	comp=Z,900nm,18.0s						
KBL	**Kabul**	**59.15**	**293**	*e*P	**P**	**01 19 00.6**	**+0.2**
KBL				pmax	pmax		
	comp=Z,42nm,1.0s						
KBL				MLR	MLR		
	comp=Z,900nm,18.0s						
ARU	**Arti**	**59.57**	**320**	*e*P	**P**	**01 19 02.5**	**-0.1**
	comp=Z,63nm,1.0s						
ARU				LR	LR		
	comp=Z,2µm,19.0s						
ARU	**Arti**	**59.57**	**320***c*	*i*P	**P**	**01 19 02.8**	**+0.1**
ARU						01 19 45.4	
ARU				S	**S**	**01 27 11.4**	**+1.2**
ARU						01 28 49.2	
ARU				SS	**SS**	**01 31 03.2**	**-2.1**
ARU				pmax	pmax		
	comp=Z,69nm,1.0s						
ARU				MLR	MLR		
	comp=Z,3µm,16.0s						
DZM	**Mont Dzumac**	**59.64**	**153**	*e*S	**S**	**01 27 13.2**	**+1.3**
	comp=Z,2µm,31.4s						
DZM				*e*LQ	LQ	01 34 01.2	
	comp=Z,2µm,40.0s						
DZM				*e*LR	LR	01 36 42.0	
	comp=Z,2µm,20.5s						
DZM	**Mont Dzumac**	**59.64**	**153**	P	**P**	**01 19 05.1**	**+1.5**
	comp=Z,16nm,1.1s,baz=28,slow=11,SNR=4.3						
AB31	**Akbulak array**	**60.76**	**312**	*i* P	**P**	**01 19 10.9**	**0.0**
AB31				pmax	pmax		
	comp=Z,20nm,1.0s						
ABKAR	**Akbulak array**	**60.76**	**312**	*e*P	**P**	**01 19 10.9**	**-0.1**
	comp=Z,25nm,1.0s						
WRAK	**Wrangell Islan**	**61.08**	**39**	PFAKE		01 19 30.0	+17
WRAK				LR	LR		
	comp=Z,2µm,21.0s						
AKTO	**Aktyubinsk**	**61.58**	**314**	S	**S**	**01 27 36.5**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=307,slow=22,SNR=4.2						
AKTO	**Aktyubinsk**	**61.58**	**314**	P	**P**	**01 19 12.3**	**-4.2**
AKTO				pmax	pmax		
	comp=Z,19nm,0.9s						
DLBC	**Dease Lake**	**61.69**	**37**	P	**P**	**01 19 18.4**	**+1.3**
	comp=Z,8.9nm,1.0s,baz=296,slow=7.3,SNR=11						
DLBC	**Dease Lake**	**61.69**	**37**	*e*P	**P**	**01 19 17.9**	**+0.7**
	comp=Z,91nm,1.8s						
DLBC				LR	LR		
	comp=Z,1µm,20.0s						
PALK	**Pallekele**	**61.81**	**260**	*e*P	**P**	**01 19 18.9**	**+0.3**
	comp=Z,103nm,1.6s						
PALK	**Pallekele**	**61.81**	**260**	P	**P**	**01 19 16.7**	**-1.8**
PALK	**Pallekele**	**61.81**	**260**	*e*P	**P**	**01 19 18.9**	**+0.3**
PALK				pmax	pmax		
	comp=Z,103nm,1.6s						
DIB	**Dawson Inlet,**	**61.98**	**43**	*e*P	**P**	**01 19 19.2**	**+0.1**
	comp=Z,34nm,1.2s						
DIB				LR	LR		
	comp=Z,2µm,20.0s						
MOBC	**Moresby Island**	**62.29**	**43**	PFAKE		01 19 30.0	+8.7
MOBC				LR	LR		
	comp=Z,2µm,20.0s						
GOA	**Goa**	**63.31**	**272**	*e*P	**P**	**01 19 27.7**	**-0.9**
ARMA	**Armidale**	**63.77**	**170**	*e*P	**P**	**01 19 32.2**	**+0.9**
	comp=Z,65nm,1.6s						
HOPEN	**Hopen**	**64.01**	**347**	*e*P	**P**	**01 19 32.7**	**+0.5**
TRD	**Trivandrum**	**64.25**	**263**	*e*P	**P**	**01 19 34.9**	**+0.1**
TRD				IAMs_20	IAMs_20	01 43 15.0	
	comp=Z,4µm,3.1s						
PRGR	**Permogore**	**64.29**	**328**	*e*P	**P**	**01 19 32.0**	**-2.3**
PRGR				pmax	pmax		
	comp=Z,50nm,1.1s						
SPA0	**Spitsbergen Ar**	**64.52**	**349**	*e*P	**P**	**01 19 36.0**	**+0.4**
STKA	**Stephens Creek**	**64.53**	**180**	P	**P**	**01 19 35.9**	**-0.2**
	comp=Z,6.6nm,0.8s,baz=338,slow=9.0,SNR=8.6						
STKA	**Stephens Creek**	**64.53**	**180**	*e*P	**P**	**01 19 36.4**	**+0.3**
	comp=Z,3.7nm,1.0s						
KBS	**Kingsbay**	**64.67**	**351**	PFAKE		01 19 50.0	+14
KBS				LR	LR		
	comp=Z,600nm,19.0s						
KBS	**Kingsbay**	**64.67**	**351**	*e*P	**P**	**01 19 37.3**	**+0.8**
BBB	**Bella Bella**	**64.83**	**43**	P	**P**	**01 19 37.9**	**-0.1**
	comp=Z,14nm,1.0s,baz=277,slow=9.5,SNR=3.0						
BBB	**Bella Bella**	**64.83**	**43**	PFAKE		01 19 50.0	+12
BBB				LR	LR		
	comp=Z,2µm,19.0s						
HSPB	**Hornsund (broa**	**65.44**	**348**	*e*P	**P**	**01 19 42.2**	**+0.7**
HSPB	**Hornsund (broa**	**65.44**	**348**	*e*P	**P**	**01 19 42.2**	**+0.7**
HSPB	**Hornsund (broa**	**65.44**	**348**	*e*P	**P**	**01 19 42.3**	**+0.7**
BBOO	**Buckleboo**	**65.67**	**185**	*e*P	**P**	**01 19 44.8**	**+1.3**
	comp=Z,122nm,1.6s						
LVZ	**Lovozero**	**65.89**	**337**	PFAKE		01 20 00.0	+15
LVZ				LR	LR		
	comp=Z,3µm,19.0s						
LVZ	**Lovozero**	**65.89**	**337**⇑	*e*P	**P**	**01 19 44.0**	**-0.6**
LVZ				pmax	pmax		
	comp=Z,28nm,2.5s						
GEYT	**Alibeck**	**66.04**	**301**	P	**P**	**01 19 45.2**	**-0.9**
	comp=Z,23nm,1.1s,baz=79,slow=3.2,SNR=27						
RES	**Resolute Bay**	**66.45**	**14**	P	**P**	**01 19 48.9**	**+0.8**
	comp=Z,16nm,1.1s,baz=330,slow=6.1,SNR=5.8						
RES	**Resolute Bay**	**66.45**	**14**	PFAKE		01 20 00.0	+12
RES				LR	LR		
	comp=Z,900nm,22.0s						
APA	**Apatity**	**66.46**	**337**⇑	*i*P	**P**	**01 19 47.0**	**-1.3**
APA				*i* S	**S**	**01 28 31.0**	**-5.1**
APA				*i*		01 29 36.0	
APA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,800nm,17.0s						
YKA	**Yellowknife Ar**	**67.19**	**29**	P	**P**	**01 19 53.3**	**+0.4**
	comp=Z,9.7nm,1.0s,baz=294,slow=6.2,SNR=18						
YKA				LR	LR	01 49 13.4	

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             comp=Z,48nm,21.9s,baz=285,slow=36
KLMR  Klimovskoe         67.30 329  eP     P       01 19 51.3  -2.4
KLMR                                e              01 22 18.5
KLMR                                 pmax  pmax
             comp=Z,33nm,1.1s
HAMF  Hammerfest         67.70 341  eP     P       01 19 56.2  +0.2
ARCES ARCESS Array B     67.85 340   P     P       01 19 58.0  +0.9
             comp=Z,6.9nm,0.9s,baz=47,slow=8.8,SNR=15
ARCES                                LR    LR      01 53 06.6
             comp=Z,2µm,21.2s,baz=74,slow=39
ARCES ARCESS Array B     67.85 340   P     P       01 19 58.0  +0.9
ARCES                                pmax  pmax
             comp=Z,7.0nm,0.9s
ARCES                                MLR   MLR
             comp=Z,2µm,21.2s
ARE0  ARCESS Array S     67.86 340   PFAKE         01 20 10.0   +13
ARE0                                 LR    LR
             comp=Z,100nm,18.0s
ARE0  ARCESS Array S     67.86 340  eP     P       01 19 57.2  +0.1
KTK1  Kautokeino         68.82 340  eP     P       01 20 03.6  +0.5
PGC   Sidney             68.99  45   PFAKE         01 20 20.0   +16
PGC                                  LR    LR
             comp=Z,700nm,19.0s
LLLB  Lillooet           69.03  43   PFAKE         01 20 20.0   +15
LLLB                                 LR    LR
             comp=Z,1µm,20.0s
TULEG Thule              69.06   7   PFAKE         01 20 20.0   +16
TULEG                                LR    LR
             comp=Z,1µm,20.0s
NLWA  Neilton Lookou     69.30  46   PFAKE         01 20 20.0   +14
NLWA                                 LR    LR
             comp=Z,800nm,20.0s
A04D  Lummi Island       69.40  45   P     P       01 20 05.4  -1.6
             baz=297
NWAO  Narrogin (SRO)     69.51 202  eP     P       01 20 07.9  +0.2
             comp=Z,99nm,0.8s
NWAO  Narrogin (SRO)     69.51 202  eP     P       01 20 07.9  +0.2
NWAO                                 pmax  pmax
             comp=Z,99nm,0.8s
TRO   Tromso             69.61 342  eP     P       01 20 07.8  -0.1
D03D  Eldon              69.71  46   P     P       01 20 08.7  -0.3
             baz=297
DAG   Danmarks Havn      69.81 355⇑iP     P       01 20 09.2  +0.1
DAG                                  pmax  pmax
             comp=Z,14nm,1.0s
DAG                                  MLR   MLR
             comp=Z,730nm,14.0s
DAG   Danmarks Havn      69.81 355⇑iP     P       01 20 09.2  +0.1
             comp=Z,14nm,1.0s
             comp=Z,720nm,14.0s
B05A  Bryant             69.97  45   P     P       01 20 10.3  -0.2
             baz=297
D04E  Lakebay            70.06  46   P     P       01 20 10.2  -0.9
             baz=297
TOO   Toolangi           70.30 177  eP     P       01 20 13.4  +0.9
             comp=Z,96nm,1.8s
TOO   Toolangi           70.30 177  eP     P       01 20 13.4  +0.9
TOO                                  pmax  pmax
             comp=Z,96nm,1.8s
F04D  Rainier, OR        70.42  47   P     P       01 20 12.6  -0.7
             baz=297
E04D  Cinebar            70.47  47   P     P       01 20 14.2  +0.5
             baz=298
MOS   Moscow             70.64 324  eP     P       01 20 12.8  -1.7
MOS                                 e              01 20 34.8
MOS                                 ePPP   PPP     01 24 34.7
MOS                                 eS     S       01 29 24.1  -1.9
MOS                                 e              01 30 12.2
MOS                                 eSS    SS      01 33 56.5  -0.7
MOS                                 eSSS   SSS     01 37 10.0
MOS                                  pmax  pmax
             comp=Z,86nm,1.6s
MOS                                  pmax  pmax
             comp=Z,300nm,2.2s
MOS                                  smax  smax
             comp=E,600nm,3.5s
MOS                                  smax  smax
             comp=N,500nm,3.6s
MOS                                  MLR   MLR
             comp=E,1µm,18.0s
MOS                                  MLR   MLR
             comp=Z,2µm,18.0s
G03D  McMinnville, O     70.66  48   P     P       01 20 14.1  -0.7
             baz=298
VRH   Novokhopyorsk      70.75 319  eP     P       01 20 14.5  -0.7
VRH                                  pmax  pmax
             comp=Z,30nm,1.0s
VRH                                  MLR   MLR
             comp=Z,2µm,14.0s
I02D  Swisshome          70.80  50   P     P       01 20 16.2  +0.6
             baz=298
C06D  Leavenworth        70.84  45   P     P       01 20 15.3  -0.7
             baz=298
COR   Corvallis          70.92  49   PFAKE         01 20 30.0   +14
COR                                  LR    LR
             comp=Z,1µm,21.0s
MAK   Makhachkala        71.16 309  eP     P       01 20 16.6  -1.3
MAK                                 e              01 22 54.5
MAK                                 ePPP   PPP     01 24 37.8
MAK                                 eS     S       01 29 30.8  -1.7
MAK                                  pmax  pmax
             comp=Z,117nm,1.2s
MAK                                  MLR   MLR
             comp=Z,3µm,16.0s
J01E  Myrtle Point       71.18  50   P     P       01 20 17.9  -0.1
             baz=298
H04D  Lebanon            71.31  49   P     P       01 20 19.1  +0.3
             baz=298
F05D  White Salmon       71.46  47   P     P       01 20 20.6  +0.8
             baz=298
OBN   Obninsk            71.48 324   LR    LR      01 54 33.0
             comp=Z,635nm,18.9s,baz=52,slow=38
OBN   Obninsk            71.48 324  eP     P       01 20 19.4  -0.1
             comp=Z,52nm,1.1s
OBN                                  LR    LR
             comp=Z,4µm,18.0s
OBN   Obninsk            71.48 324c iP     P       01 20 19.6   0.0
OBN                                 e              01 20 24.3
OBN                                 e*SP   pwP     01 20 34.6  -1.6
OBN                                 e              01 20 38.9
OBN                                 e              01 22 55.7
OBN                                 ePPP   PPP     01 24 39.3
OBN                                 i S    S       01 29 36.5  +0.8
OBN                                 ePS    PnS     01 30 20.6   +13
OBN                                 eSS    SS      01 34 12.2  +2.1
OBN                                  pmax  pmax
             comp=Z,87nm,1.7s
OBN                                  MLR   MLR
             comp=Z,3µm,17.0s
LPSR  Galich'ya Gora     71.56 321  eP     P       01 20 19.9  -0.3
LPSR                                 pmax  pmax
             comp=Z,70nm,1.6s
K02D  Willamette Mer     71.57  51   P     P       01 20 21.3  +0.7
             baz=298
AKT   Akhty              71.70 308  eP     P       01 20 21.9  +0.5
AKT                                 e              01 20 38.4
AKT                                 e              01 22 56.7
AKT                                  pmax  pmax
             comp=Z,78nm,1.4s
STEI  Steigen            71.75 341  eP     P       01 20 21.3  +0.3
I04A  Tendick Farm,      71.86  49   P     P       01 20 19.9  -2.3
             baz=298
L02E  Cave Junction      71.87  51   P     P       01 20 21.7  -0.5
             baz=298
LOF   Lofoten            72.06 342  eP     P       01 20 22.8   0.0
HUMO  Hull Mountain      72.08  51   PFAKE         01 20 40.0   +16
HUMO                                 LR    LR
             comp=Z,2µm,21.0s
VSR   Storozhevoye       72.14 320c iP     P       01 20 23.4  -0.2
VSR                                  pmax  pmax
             comp=Z,50nm,1.1s
GROC  Groznyy            72.15 310  eP     P       01 20 23.5  -0.3
GROC                                e              01 20 39.4
GROC                                eS     S       01 29 43.5  -0.4
GROC                                 pmax  pmax
             comp=Z,45nm,1.3s
SEKA  Sheki              72.18 308   P     P       01 20 25.4  +1.2
JCC   Jacoby Creek,      72.22  53   PFAKE         01 20 40.0   +16
JCC                                  LR    LR
             comp=Z,1µm,18.0s
I05D  Terrebonne, OR     72.28  48   P     P       01 20 23.2  -1.5
             baz=299
LKRN  Lenkeran, Azer     72.29 305   P     P       01 20 26.7  +1.9
J04D  Umpqua Nationa     72.32  50   P     P       01 20 24.3  -0.9
             baz=299
ZKTA  Zakatala           72.36 308   P     P       01 20 26.8  +1.6
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HAWA  Hanford            72.39  46   PFAKE         01 20 40.0   +15
HAWA                                 LR    LR
             comp=Z,900nm,19.0s
BIDO  Bidbid             72.45 287   P     P       01 20 27.6  +1.6
             SNR=7.7
MNGR  Mingechevir, A     72.46 307   P     P       01 20 27.6  +1.8
FIA1  FINESS Array S     72.50 333  eP     P       01 20 25.8  +0.3
             comp=Z,55nm,1.1s
FINES FINESS Array B     72.50 333   P     P       01 20 25.8  +0.2
             comp=Z,18nm,0.8s,baz=71,slow=8.3,SNR=65
FINES                                LR    LR      01 56 10.0
             comp=Z,2µm,18.2s,baz=52,slow=39
YBH   Yreka Blue Hor     72.66  51   P     P       01 20 27.7  +0.7
             comp=Z,15nm,1.0s,baz=275,slow=1.2,SNR=10
YBH   Yreka Blue Hor     72.66  51   PFAKE         01 20 40.0   +13
YBH                                  LR    LR
             comp=Z,2µm,20.0s
L04D  Klamath Falls      72.69  51   P     P       01 20 25.5  -1.8
             baz=299,SNR=6.7
M02C  Callahan           72.72  52   P     P       01 20 27.3  -0.2
             baz=299,SNR=7.9
SHME  Shamm              72.82 290  i P    P       01 20 28.8  +0.5
             SNR=10
K04D  Chiloquin, OR      72.85  50   P     P       01 20 28.4  +0.2
             baz=299
J05D  Fort Rock, OR      72.86  49   P     P       01 20 28.3   0.0
             baz=299
NEW   Newport            72.88  43   P     P       01 20 29.4  +1.2
             comp=Z,17nm,0.9s,baz=305,slow=5.1,SNR=14
NEW   Newport            72.88  43   PFAKE         01 20 40.0   +12
NEW                                  LR    LR
             comp=Z,900nm,20.0s
NEW   Newport            72.88  43   P     P       01 20 28.4  +0.2
             baz=300
GOF   Gofitskoye         72.98 313⇑iP     P       01 20 29.6  +0.8
GOF                                 eS     S       01 29 54.8  +1.5
GOF                                  pmax  pmax
             comp=Z,67nm,0.9s
GOF                                  smax  smax
             comp=E,71nm,1.6s
N02D  Trinity Center     73.03  52   P     P       01 20 28.5  -0.7
             baz=299,SNR=6.0
GANJ  Ganja              73.03 308   P     P       01 20 30.4  +1.2
M04C  Macdoel            73.20  51   P     P       01 20 28.8  -1.5
             baz=299
MOR8  Moi Rana           73.23 340  eP     P       01 20 29.1  -0.8
UOSS  Minazif            73.30 289  eP     P       01 20 31.7  +0.6
             comp=E,84nm,1.5s
UOSS                                 LR    LR
             comp=Z,500nm,21.0s
UOSS  Minazif            73.30 289   P     P       01 20 31.6  +0.6
WDC   Whiskeytown Da     73.33  52   PFAKE         01 20 40.0  +9.1
WDC                                  LR    LR
             comp=Z,1µm,20.0s
O02D  Mt. Diablo Mer     73.36  53   P     P       01 20 31.5  +0.3
             baz=299,SNR=11
NCK   Nalchik            73.41 311⇑eP     P       01 20 31.9  +0.5
NCK                                  pmax  pmax
             comp=Z,20nm,1.0s
HATD  Hatta, Dubai       73.42 289  i P    P       01 20 33.1  +1.4
             SNR=8.0
ZEI   Tsey               73.56 310  eP     P       01 20 31.7  -0.8
ZEI                                  pmax  pmax
             comp=Z,22nm,1.1s
NAZ   Nazwa, Dubai       73.71 289   P     P       01 20 34.4  +0.9
KBZ   Khabaz             73.73 312   P     P       01 20 34.3  +1.1
             comp=Z,32nm,0.9s,baz=72,slow=4.5,SNR=53
KBZ                                  LR    LR      01 55 54.6
             comp=Z,1µm,18.3s,baz=65,slow=38
KBZ   Khabaz             73.73 312   P     P       01 20 34.3  +1.1
KBZ                                  pmax  pmax
             comp=Z,32nm,0.9s
KBZ                                  MLR   MLR
             comp=Z,1µm,18.3s
HOPS  Hopland Field      73.74  54   PFAKE         01 20 50.0   +17
HOPS                                 LR    LR
             comp=Z,4µm,19.0s
KIV   Kislovodsk         73.75 312  eP     P       01 20 34.3  +0.9
             comp=Z,97nm,1.3s
KIV                                  LR    LR
             comp=Z,800nm,18.0s
KIV   Kislovodsk         73.75 312  i P    P       01 20 34.9  +1.5
             SNR=8.9
KIV   Kislovodsk         73.75 312  eP     P       01 20 32.9  -0.6
KIV                                 e              01 20 49.2
KIV                                 eS     SKiKP   01 29 59.4  -1.0
KIV                                 eSS    SS      01 34 42.6  -2.9
KIV                                  pmax  pmax
             comp=Z,148nm,1.0s
KIV                                  pmax  pmax
             comp=Z,479nm,4.7s
KIV   Kislovodsk         73.75 312   P     P       01 20 34.7  +1.2
             SNR=20
O03E  Paynes Creek       73.96  52   P     P       01 20 33.9  -0.9
             baz=300
VSU   Vasula             74.06 330  eP     P       01 20 35.0  +0.1
VSU                                  IAmb  IAmb    01 20 36.0
             comp=Z,159nm,1.3s
VSU   Vasula             74.06 330c iP     P       01 20 35.1  +0.3
VSU                                  pmax  pmax
             comp=Z,170nm,1.3s
NEY   Neytrino           74.08 311⇓eP     P       01 20 37.1  +1.6
NEY                                  pmax  pmax
             comp=Z,7.0nm,1.5s
ALNE  Al Ain             74.09 289   P     P       01 20 36.7  +1.0
MOD   Modoc Plateau      74.14  50   PFAKE         01 20 50.0   +14
MOD                                  LR    LR
             comp=Z,1µm,20.0s
ASUD  Al Ashush, Dub     74.15 289   P     P       01 20 37.0  +0.9
WALA  Waterton Lakes     74.29  41   PFAKE         01 20 50.0   +13
WALA                                 LR    LR
             comp=Z,1µm,21.0s
MCCM  Marconi Confer     74.29  55   PFAKE         01 20 50.0   +13
MCCM                                 LR    LR
             comp=Z,1µm,20.0s
NAX   Nakhchivan         74.31 307   P     P       01 20 38.5  +1.7
GNI   Garni              74.33 308   LR    LR      01 57 27.5
             comp=Z,2µm,19.1s,baz=66,slow=39
GNI   Garni              74.33 308  eP     P       01 20 38.2  +1.2
             comp=Z,160nm,1.5s
GNI                                  LR    LR
             comp=Z,1µm,18.0s
GNI   Garni              74.33 308  i P    P       01 20 39.0  +2.0
             SNR=6.3
GNI   Garni              74.33 308  eP     P       01 20 38.2  +1.2
GNI                                  pmax  pmax
             comp=Z,160nm,1.5s
GNI                                  MLR   MLR
             comp=Z,1µm,18.0s
GNI   Garni              74.33 308   P     P       01 20 36.5  -0.5
             SNR=5.4
AKH   Akhalkalaki        74.52 309⇑iP     P       01 20 39.8  +1.7
AKH   Akhalkalaki        74.52 309   P     P       01 20 39.7  +1.7
BMO   Blue Mountains     74.52  46   PFAKE         01 20 50.0   +12
BMO                                  LR    LR
             comp=Z,600nm,18.0s
ORV   Oroville           74.53  53   PFAKE         01 20 50.0   +12
ORV                                  LR    LR
             comp=Z,2µm,20.0s
SUMG  Summit             74.71   0  eP     P       01 20 39.5  +0.6
             comp=Z,78nm,1.3s
SUMG                                 LR    LR
             comp=Z,1µm,20.0s
SUMG  Summit             74.71   0  eP     P       01 20 39.5  +0.6
SUMG                                 pmax  pmax
             comp=Z,78nm,1.3s
SUMG                                 MLR   MLR
             comp=Z,1µm,20.0s
SUMG  Summit             74.71   0  i P    P       01 20 40.2  +1.3
             comp=Z,168nm,1.3s
WVOR  Wild Horse Val     74.94  49   PFAKE         01 20 50.0   +10
WVOR                                 LR    LR
             comp=Z,1µm,20.0s
BEKR  Beckworth          75.13  52   PFAKE         01 20 50.0  +8.3
BEKR                                 LR    LR
             comp=Z,2µm,20.0s
MSO   Missoula           75.47  43   PFAKE         01 21 00.0   +17
MSO                                  LR    LR
             comp=Z,700nm,19.0s
MSO   Missoula           75.47  43   P     P       01 20 42.7  -0.7
             baz=303,SNR=17
SOC   Sochi              75.78 313c iP     P       01 20 45.2  +0.1
SOC                                 e*SP   PcP     01 20 58.4  +0.7
SOC                                 e              01 23 33.4
SOC                                 eS     S       01 30 26.3  +1.5
SOC                                 eSSS   SSS     01 38 27.4
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SOC                                  pmax  pmax
             comp=Z,30nm,0.6s
PAHR  Pah Rah Range      75.86  52   PFAKE         01 21 00.0   +14
PAHR                                 LR    LR
             comp=Z,2µm,21.0s
IZAR  Zarasai            75.94 328  eP     P       01 20 46.1  +0.3
IZAR                                 IAmb  IAmb    01 20 48.3
             comp=Z,18nm,1.3s
SAO   San Andreas Ge     75.97  55   PFAKE         01 21 00.0   +14
SAO                                  LR    LR
             comp=Z,2µm,19.0s
MICGM Minsk              75.97 327  eP     P       01 20 46.0   0.0
MICGM                               ePcP   pwP     01 21 06.0  +3.5
MICGM                               ePP    PP      01 23 36.0  -0.1
MICGM                               ePPP   PPP     01 25 30.0
MICGM                               eS     S       01 30 24.0  -2.5
MICGM                               eSS    SS      01 35 20.0  +1.5
MICGM                               eLQ    LQ      01 49 02.0
MICGM                               eLR    LR      01 55 20.0
MICGM                                LRM   MLR     01 58 50.0
             comp=Z,4.4nm,14.0s
MNK   Minsk              75.97 327  eP     P       01 20 46.0   0.0
MNK                                 e              01 21 06.0
MNK                                 e              01 23 36.0
MNK                                 e              01 25 30.0
MNK                                 eS     S       01 30 24.0  -2.5
MNK                                 e              01 35 20.0
MNK                                  MLR   MLR
             comp=Z,4µm,14.0s
CMB   Columbia Colle     76.05  54   PFAKE         01 21 00.0   +13
CMB                                  LR    LR
             comp=Z,2µm,20.0s
ISAL  Salakas            76.11 328  eP     P       01 20 47.4  +0.7
ISAL                                 IAmb  IAmb    01 21 05.2
             comp=Z,26nm,1.2s
SCO   Scoresbysund       76.14 354   PFAKE         01 21 00.0   +13
SCO                                  LR    LR
             comp=Z,500nm,20.0s
MFID  Camas Ranch        76.18  47   PFAKE         01 21 00.0   +12
MFID                                 LR    LR
             comp=Z,700nm,19.0s
IIGN  Ignalina           76.20 328  eP     P       01 20 47.6  +0.3
IIGN                                 IAmb  IAmb    01 21 05.8
             comp=Z,15nm,1.2s
SLIT  Slitere, Latvi     76.41 331  eP     P       01 20 47.8  -0.6
SLIT                                 IAmb  IAmb    01 20 49.1
             comp=Z,251nm,1.2s
WAKR  Walker             76.44  53   PFAKE         01 21 00.0   +11
WAKR                                 LR    LR
             comp=Z,3µm,20.0s
ANN   Anapa              76.51 315  eP     P       01 20 49.5  +0.3
ANN                                 eS     S       01 30 33.2  +0.5
ANN                                  pmax  pmax
             comp=Z,91nm,1.1s
TBLU  Trondheim          76.60 340  eP     P       01 20 49.0  -0.4
BMN   Battle Mountai     76.89  50   PFAKE         01 21 00.0  +8.3
BMN                                  LR    LR
             comp=Z,2µm,19.0s
HLID  Hailey             76.97  46   PFAKE         01 21 00.0  +7.9
HLID                                 LR    LR
             comp=Z,800nm,19.0s
HLID  Hailey             76.97  46   P     P       01 20 52.4  +0.3
             baz=303
FFC   Flin Flon          76.98  32  eP     P       01 20 52.0  +0.4
             comp=Z,30nm,1.0s
FFC                                  LR    LR
             comp=Z,1µm,20.0s
FFC   Flin Flon          76.98  32  eP     P       01 20 52.1  +0.4
FFC                                  pmax  pmax
             comp=Z,30nm,1.0s
FFC                                  MLR   MLR
             comp=Z,1µm,20.0s
RYN   Ryan               76.99  52   PFAKE         01 21 00.0  +7.7
RYN                                  LR    LR
             comp=Z,2µm,19.0s
DLMT  Dillon             77.06  44   PFAKE         01 21 00.0  +7.5
DLMT                                 LR    LR
             comp=Z,600nm,18.0s
EGMT  Eagleton           77.16  41   PFAKE         01 21 00.0  +7.1
EGMT                                 LR    LR
             comp=Z,1µm,21.0s
EGMT  Eagleton           77.16  41   P     P       01 20 53.2  +0.2
             baz=305
OMMB  Old Mammoth Mi     77.20  53   PFAKE         01 21 10.0   +16
OMMB                                 LR    LR
             comp=Z,2µm,20.0s
NVAR  Mina Array Bea     77.24  52   P     P       01 20 54.5  +0.8
             comp=Z,9.9nm,0.9s,baz=281,slow=5.8,SNR=56
NVAR                                 LR    LR      01 54 52.0
             comp=Z,2µm,18.0s,baz=279,slow=36
MLAC  Mammoth, Mammo77.30  53        P     P       01 20 53.9  -0.3
             baz=302
NV11  Mina Array Sit     77.34  52   PFAKE         01 21 10.0   +16
NV11                                 LR    LR
             comp=Z,200nm,19.0s
FCC   Fort Churchill     77.51  26   PFAKE         01 21 10.0   +15
FCC                                  LR    LR
             comp=Z,700nm,20.0s
VOG   Valley Oaks Go     77.62  55   P     P       01 20 54.3  -1.3
             baz=302
AKASG Malin Array Be     77.64 323   P     P       01 20 55.5  +0.1
             comp=Z,9.6nm,0.8s,baz=45,slow=6.2,SNR=64
AKASG Malin Array Be     77.64 323   P     P       01 20 55.5  +0.1
AKASG                                pmax  pmax
             comp=Z,12nm,0.9s
AKBB  Malin Array Si     77.64 323  eP     P       01 20 55.2  -0.2
             comp=Z,61nm,1.5s
AKBB  Malin Array Si     77.64 323  eP     P       01 20 55.2  -0.2
AKBB                                 pmax  pmax
             comp=Z,61nm,1.5s
ILULI Ilulissat          77.66   5  eP     P       01 20 56.5  +1.3
             comp=Z,68nm,1.5s
ILULI                                LR    LR
             comp=Z,1µm,19.0s
ILULI Ilulissat          77.66   5  eP     P       01 20 56.5  +1.3
ILULI                                pmax  pmax
             comp=Z,68nm,1.5s
ILULI                                MLR   MLR
             comp=Z,1µm,19.0s
SMMC  Simmler            77.73  56   P     P       01 20 56.8  +0.5
             baz=302
NC405 NORSAR Array S     77.78 338  eP     P       01 20 56.0  -0.1
             comp=Z,274nm,1.6s
HFS   Hagfors            77.86 336   LR    LR      01 59 08.3
             comp=Z,3µm,20.0s,baz=45,slow=39
DOMB  Dombas             77.89 339  eP     P       01 20 57.0  +0.3
MOL   Molde              77.92 340  eP     P       01 20 57.5  +0.7
ELK   Elko               77.99  49   PFAKE         01 21 10.0   +12
ELK                                  LR    LR
             comp=Z,1µm,18.0s
NB2   NORSAR Subarra     78.00 338   P     P       01 20 57.3   0.0
             comp=Z,62nm,1.2s,baz=40,slow=5.6
NB2   NORSAR Subarra     78.00 338   P     P       01 20 57.3   0.0
             baz=40,slow=5.6
NOA   NORSAR Array B     78.00 338   P     P       01 20 57.5  +0.1
             comp=Z,13nm,0.9s,baz=40,slow=5.6,SNR=78
NOA                                  LR    LR      02 00 04.9
             comp=Z,2µm,19.5s,baz=30,slow=39
TIN   Tinemaha, Big      78.02  54   P     P       01 20 58.4  +0.5
             baz=302
PKM   Mcpherson Peak     78.08  56   P     P       01 20 57.5  -1.0
             baz=302
VES   Vestal, Richgr     78.08  55   P     P       01 20 57.7  -0.5
             baz=302
NC602 NORSAR Array S     78.12 337  eP     P       01 20 57.7  -0.3
URZ   Urewera            78.18 152   P     P       01 20 57.7  -0.7
             comp=Z,6.6nm,0.9s,baz=216,slow=3.6,SNR=4.2
NAO01 NORSAR Array S     78.25 338  eP     P       01 20 58.9  +0.3
             comp=Z,124nm,1.4s
SIM   Simferopol'        78.38 316ceP     P       01 21 00.4  +0.7
SIM                                 e              01 23 56.0
SIM                                 i S    S       01 30 56.0  +3.0
SIM                                  pmax  pmax
             comp=Z,20nm,0.9s
SBC   Santa Barbara      78.38  57   P     P       01 20 59.2  -0.7
             baz=302
AKN   Aaknes             78.38 340  eP     P       01 20 60.0  +0.5
SUW   Suwalki            78.42 328  eP     P       01 20 59.7   0.0
SUW                                 eS     S       01 30 53.1   0.0
SUW   Suwalki            78.42 328  ePKP   P       01 20 59.6   0.0
SUW   Suwalki            78.42 328   PFAKE         01 21 10.0   +10
SUW                                  LR    LR
             comp=Z,1µm,18.0s
SUW   Suwalki            78.42 328  eP     P       01 20 59.7   0.0
SUW                                 eS     S       01 30 53.1   0.0
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CWC   Cottonwood Cre  78.45  54  P       P       01 20 59.7 -0.8
      baz=302
ISA   Isabella, Lake  78.59  55  P       P       01 21 01.0 -0.2
      baz=302
GRAC  Grapevine Rang  78.63  53  P       P       01 21 02.2 +0.9
      baz=303
ARVC  Arvin           78.63  56  P       P       01 21 01.1 -0.2
      baz=302
SCZ2  Santa Cruz Isl  78.67  57  P       P       01 21 00.9 -0.7
      baz=302
BKZ   Black Stump Fm  78.72 153 eP       P       01 21 02.2 +0.8
      comp=Z,95nm,1.9s
H17A  Grant Village   78.79  44  P       P       01 21 05.1 +2.8
      baz=305
LKWY  Lake            78.79  44  PFAKE           01 21 10.0 +7.7
LKWY                             LR      LR
      comp=Z,1µm,19.0s
IMW   Indian Meadow   78.86  45  PFAKE           01 21 10.0 +7.2
IMW                              LR      LR
      comp=Z,900nm,18.0s
DAC   Darwin (Calif)  78.87  54  PFAKE           01 21 10.0 +7.2
DAC                              LR      LR
      comp=Z,1µm,20.0s
FLWY  Flagg Ranch     78.90  44  PFAKE           01 21 10.0 +7.2
FLWY                             LR      LR
      comp=Z,700nm,18.0s
OSI   Osito Audit: C  78.98  56  PFAKE           01 21 10.0 +6.7
OSI                              LR      LR
      comp=Z,3µm,19.0s
OSI   Osito Audit: C  78.98  56  P       P       01 21 03.1 -0.1
      baz=302
BLG   Laguna Peak, P  79.01  57  P       P       01 21 03.0 -0.4
      baz=302
MPMC  Manual Prospec  79.06  54  P       P       01 21 04.3 +0.5
      baz=303
MOOW  Moose Ponds     79.06  45  PFAKE           01 21 20.0  +16
MOOW                             LR      LR
      comp=Z,900nm,19.0s
R11A  Troy Canyon, C  79.08  51  PFAKE           01 21 20.0  +16
R11A                             LR      LR
      comp=Z,2µm,20.0s
R11A  Troy Canyon, C  79.08  51  P       P       01 21 04.1 +0.2
      baz=304
TPAW  Teton Pass      79.09  45  PFAKE           01 21 20.0  +16
TPAW                             LR      LR
      comp=Z,700nm,20.0s
RLMT  Red Lodge       79.12  43  PFAKE           01 21 20.0  +16
RLMT                             LR      LR
      comp=Z,700nm,19.0s
RLMT  Red Lodge       79.12  43  P       P       01 21 05.4 +1.3
      baz=306,SNR=33
SKAR  Skarslia        79.18 339 eP       P       01 21 04.4 +0.5
REDW  Red Top Meadow  79.22  45  PFAKE           01 21 20.0  +15
REDW                             LR      LR
      comp=Z,800nm,20.0s
SNOW  Snow King Moun  79.22  45  PFAKE           01 21 20.0  +15
SNOW                             LR      LR
      comp=Z,800nm,20.0s
LRMC  Laurel Mtn Rad  79.24  55  P       P       01 21 04.7  0.0
      baz=303
FURC  Furnace Creek,  79.26  54  P       P       01 21 04.7 +0.1
      baz=303
KLNR  Kaliningrad     79.31 330ceP       P       01 21 04.2 -0.4
KLNR                             pmax    pmax
      comp=Z,28nm,1.0s
EDW2  Edwards Air Fo  79.34  55  P       P       01 21 04.0 -1.2
      baz=303,SNR=9.2
TPNV  Topopah Spring  79.41  53  PFAKE           01 21 20.0  +14
TPNV                             LR      LR
      comp=Z,2µm,20.0s
TPNV  Topopah Spring  79.41  53  P       P       01 21 05.9 +0.1
      baz=303
AHID  Auburn Hatcher  79.42  46  PFAKE           01 21 20.0  +14
AHID                             LR      LR
      comp=Z,700nm,18.0s
HYA   Hoyanger        79.43 340 eP       P       01 21 05.7 +0.6
DECC  Green Verdugo   79.45  56  P       P       01 21 05.2 -0.6
      baz=303
KONO  Kongsberg       79.58 337 eP       P       01 21 06.2 +0.3
      comp=Z,17nm,1.1s
KONO                             LR      LR
      comp=Z,3µm,18.0s
KONO  Kongsberg       79.58 337 eP       P       01 21 06.3 +0.3
KONO                             pmax    pmax
      comp=Z,17nm,1.1s
KONO                             MLR     MLR
      comp=Z,3µm,18.0s
KONO  Kongsberg       79.58 337 eP       P       01 21 05.7 -0.3
PASC  Pasadena Art C  79.59  56  PFAKE           01 21 20.0  +13
PASC                             LR      LR
      comp=Z,3µm,20.0s
MWC   Mount Wilson    79.66  56  PFAKE           01 21 20.0  +13
MWC                              LR      LR
      comp=Z,3µm,20.0s
THZ   Tophouse        79.74 157 eP       P       01 21 07.3 +0.4
      comp=Z,38nm,1.0s
FMP   Fort Macarthur  79.77  57  P       P       01 21 07.3 -0.2
      baz=303
HWUT  Hardware Ranch  79.80  47  PFAKE           01 21 20.0  +12
HWUT                             LR      LR
      comp=Z,800nm,19.0s
DUG   Dugway, Tooele  79.83  49  PFAKE           01 21 20.0  +12
DUG                              LR      LR
      comp=Z,1µm,18.0s
DUG   Dugway, Tooele  79.83  49  P       P       01 21 06.1 -1.8
      baz=305
CIS   Catalina Islan  79.85  57  P       P       01 21 07.5 -0.4
      baz=303
DGMT  Dagmar          79.86  38  PFAKE           01 21 20.0  +12
DGMT                             LR      LR
      comp=Z,1µm,19.0s
DGMT  Dagmar          79.86  38  P       P       01 21 07.8  0.0
      baz=309
SFJD  Kangerlussuaq   79.88   5  PFAKE           01 21 20.0  +13
SFJD                             LR      LR
      comp=Z,1µm,20.0s
LAO   LASA Array      79.88  40  PFAKE           01 21 20.0  +12
LAO                              LR      LR
      comp=Z,1µm,20.0s
LAO   LASA Array      79.88  40  P       P       01 21 08.1 +0.1
      baz=308
BFSC  Mount Baldy Ra  79.92  56  P       P       01 21 08.6 +0.1
      baz=303
SUE   Sulen           79.92 340 eP       P       01 21 07.7 -0.1
GSC   Goldstone, Bar  79.93  54  P       P       01 21 09.0 +0.5
      baz=303
SHOC  Shoshone, Teco  79.97  54  P       P       01 21 08.8 +0.2
      baz=304
SCI2  San Clemente I  79.98  57  P       P       01 21 07.9 -0.7
      baz=303
RRX   Edison Barstow  80.04  55  P       P       01 21 09.3 +0.3
      baz=303
KIS   Kishinev        80.12 320 eP       P       01 21 09.0 -0.1
KIS                             eL       L       01 48 55.0
KIS                              LRM     MLR     01 59 00.0
      comp=Z,2µm,17.0s
KIS   Kishinev        80.12 320 eP       P       01 21 09.0 -0.1
KIS                             e                01 21 21.0
KIS                              MLR     MLR
      comp=N,2µm,17.0s
MILM  Milestii Mici   80.17 320⇑iP       P       01 21 08.7 -0.7
ASK   Askoy           80.27 340 eP       P       01 21 10.1 +0.4
BER   Bergen          80.31 340 eP       P       01 21 10.7 +0.8
BW06  Boulder Array   80.34  45  PFAKE           01 21 20.0 +9.3
BW06                             LR      LR
      comp=Z,600nm,19.0s
BW06  Boulder Array   80.34  45  P       P       01 21 11.1 +0.3
      baz=306
PDAR  Pinedale Array  80.34  45  P       P       01 21 11.5 +0.8
      comp=Z,4.2nm,0.9s,baz=298,slow=3.2,SNR=28
BBRC  Big Bear Solar  80.42  55  P       P       01 21 11.3  0.0
      baz=304
TUQ   Turquoise Moun  80.46  54  P       P       01 21 11.5 +0.1
      baz=304
HEC   Hector,Ludlow   80.52  55  P       P       01 21 11.8 +0.1
      baz=304
MURC  Murrieta        80.60  56  P       P       01 21 11.8 -0.2
      baz=303
BLS5  Blasjo          80.75 339 eP       P       01 21 12.9 +0.6
LVV   L'vov           80.78 324 eP       P       01 21 13.2 +0.6
LVV                             e                01 24 17.7
LVV                             ePPP     PPP     01 26 04.4
LVV                             eS       S       01 31 18.8 +0.5
LVV                             eSS      SS      01 36 32.6 +1.7
LVV                             eSSS     SSS     01 39 59.5
LVV                              MLR     MLR
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      comp=E,2µm,16.0s
LVV                              MLR     MLR
      comp=Z,2µm,16.0s
LVV                              MLR     MLR
      comp=N,1µm,15.0s
ILGA  Ilgaz           80.88 313 eP       P       01 21 14.5 +0.8
RPZ   Rata Peaks      80.92 159  P       P       01 21 13.9 +0.7
      comp=N,6.5nm,0.8s,baz=16,slow=15,SNR=2.7
BEL   Belsk           80.95 327 eP       P       01 21 14.7 +1.2
BEL                             eS       S       01 31 21.8 +1.8
BEL   Belsk           80.95 327 ePKP     P       01 21 14.4 +1.0
BEL   Belsk           80.95 327 eP       P       01 21 14.7 +1.2
BEL                             eS       S       01 31 21.8 +1.8
GMRC  Granite Mounta  81.00  54  P       P       01 21 12.2 -2.1
      baz=304,SNR=15
109C  Camp Elliot, M  81.05  57  P       P       01 21 13.9 -0.5
      baz=304
CPE   Camp Elliot     81.05  57  PFAKE           01 21 30.0  +16
CPE                              LR      LR
      comp=Z,1µm,19.0s
PFO   Pinyon Flats O  81.10  56 eP       P       01 21 15.5 +0.6
      comp=Z,47nm,1.1s
PFO                              LR      LR
      comp=Z,3µm,20.0s
PFO   Pinyon Flats O  81.10  56 eP       P       01 21 15.5 +0.6
PFO                              pmax    pmax
      comp=Z,47nm,1.1s
PFO                              MLR     MLR
      comp=Z,3µm,20.0s
PFO   Pinyon Flats O  81.10  56  P       P       01 21 14.1 -0.8
      baz=304,SNR=9.8
BELC  Belle Mtn. Jos  81.21  55  P       P       01 21 15.3 -0.1
      baz=304,SNR=8.8
LDFC  Landfair        81.21  54  PFAKE           01 21 30.0  +15
LDFC                             LR      LR
      comp=Z,2µm,21.0s
TLCR                  81.25 319⇑iP       P       01 21 16.3 +1.1
TLCR                  81.25 319  P       P       01 21 16.3 +1.1
PRAR  RASCA           81.27 322⇓iP       P       01 21 15.9 +0.6
SNART Snartemo        81.38 338 eP       P       01 21 15.8 +0.1
GKP   Gorka Klasztor  81.50 330 eP       P       01 21 16.7 +0.3
GKP                             eS       S       01 31 25.5 -0.1
GKP   Gorka Klasztor  81.50 330 ePKP     P       01 21 16.6 +0.3
GKP   Gorka Klasztor  81.50 330 eP       P       01 21 16.7 +0.3
GKP                             eS       S       01 31 25.5 -0.1
MONP2 Monument Peak   81.53  56  P       P       01 21 17.2  0.0
      baz=304
KWP   Kalwaria Pacla  81.55 325 eP       P       01 21 17.5 +0.8
KWP                             eS       S       01 31 27.9 +1.6
KWP   Kalwaria Pacla  81.55 325 ePKP     P       01 21 17.7 +0.9
KWP   Kalwaria Pacla  81.55 325  PFAKE           01 21 30.0  +13
KWP                              LR      LR
      comp=Z,22µm,18.0s
KWP   Kalwaria Pacla  81.55 325 eP       P       01 21 17.7 +0.9
KWP                             eS       S       01 31 27.9 +1.6
TESR  Tescani         81.59 321⇑iP       P       01 21 16.8 -0.2
BUR08 Bucovina Ar. S  81.61 322 eP       P       01 21 17.4 +0.2
      comp=Z,16nm,1.0s
BURAR Bucovina Array  81.63 322⇑iP       P       01 21 18.2 +0.9
CFR   Carcaliu        81.63 319⇑iP       P       01 21 17.0 -0.2
COP   Copenhagen      81.63 334⇑iP       P       01 21 17.2 +0.2
COP   Copenhagen      81.63 334⇑iP       P       01 21 17.2 +0.2
BORG  Borgarnes       81.67 353  PFAKE           01 21 30.0  +13
BORG                             LR      LR
      comp=Z,300nm,21.0s
IRM   Iron Mountain   81.70  55  P       P       01 21 18.1 +0.2
      baz=304,SNR=18
BR131 Keskin Array S  81.71 312 eP       P       01 21 18.7 +0.8
      comp=Z,15nm,0.9s
BR131 Keskin Array S  81.71 312  P       P       01 21 18.9 +0.9
      SNR=14
BRTR  Keskin Array B  81.71 312  P       P       01 21 18.5 +0.5
      comp=Z,11nm,0.8s,baz=112,slow=3.6,SNR=60
BC3   Big Chuckawall  81.77  55  P       P       01 21 18.6 +0.2
      baz=304,SNR=18
IKP   In-Ko-Pah, Jac  81.88  56  P       P       01 21 19.0 +0.1
      baz=304
KIRS  Kırehir-Merke   81.89 312 i P      P       01 21 20.7 +1.8
KIRS                             IAML_P
      comp=Z,109nm,0.6s
SWSC  Sam W. Stewart  81.93  56  P       P       01 21 19.3 +0.3
      baz=304
VRI   Vrincioaia      81.96 320⇓iP       P       01 21 20.4 +1.4
PLOR  Plostina        82.01 320⇑iP       P       01 21 20.1 +0.8
PLOR  Plostina        82.01 320  P       P       01 21 20.1 +0.8
W13A  Hualapai Mount  82.03  53  PFAKE           01 21 30.0  +10
W13A                             LR      LR
      comp=Z,1µm,19.0s
TLB   Topalu          82.05 319⇑iP       P       01 21 20.5 +1.1
RGN   Rugen           82.15 333  PFAKE           01 21 30.0  +10
RGN                              LR      LR
      comp=Z,2µm,18.0s
ANTO  Ankara          82.15 313 eP       P       01 21 20.7 +0.5
      comp=Z,126nm,2.0s
ANTO  Ankara          82.15 313 eP       P       01 21 20.7 +0.5
ANTO                             pmax    pmax
      comp=Z,126nm,2.0s
ANTO  Ankara          82.15 313  P       P       01 21 21.4 +1.2
      SNR=5.0
BR231 Keskin MP Arra  82.18 313 eP       P       01 21 20.7 +0.3
      comp=Z,24nm,1.0s
K22A  Casper          82.19  44  PFAKE           01 21 30.0  +10
K22A                             LR      LR
      comp=Z,600nm,18.0s
K22A  Casper          82.19  44  P       P       01 21 21.1 +0.6
      baz=308,SNR=5.6
MUD   Monsted U'grnd  82.21 336⇑eP       P       01 21 20.5 +0.5
MUD                              pmax    pmax
      comp=Z,16nm,1.1s
MUD                              MLR     MLR
      comp=Z,2µm,15.0s
MUD   Monsted U'grnd  82.21 336⇑iP       P       01 21 20.5 +0.5
      comp=Z,16nm,1.1s
      comp=Z,2µm,15.0s
KOLS  Kolonicke sedl  82.23 325 eP       P       01 21 21.0 +0.7
KOLS                             pmax    pmax
      comp=Z,18nm,1.3s
KOLS  Kolonicke sedl  82.23 325 eP       P       01 21 21.0 +0.7
KOLS  Kolonicke sedl  82.23 325 eS       S       01 31 34.1 +0.8
KOLS                            eSS      SS      01 37 01.2 +8.7
KOLS                            eL       L       02 02 05.9
AKSY  AKSARAY - Alti  82.27 311 i P      P       01 21 23.1 +2.3
AKSY                             IAML_P
      comp=Z,124nm,0.7s
PDMCI Parker Dam,Lak  82.31  54  P       P       01 21 20.3 -0.7
      baz=305
OZUR                  82.31 321⇑iP       P       01 21 22.4 +1.5
Y12C  Blythe          82.36  55  PFAKE           01 21 30.0 +8.7
Y12C                             LR      LR
      comp=Z,3µm,20.0s
Y12C  Blythe          82.36  55  P       P       01 21 22.0 +0.7
      baz=305,SNR=8.8
PMOR  Pomariorio Ree  82.37 113 eT       T       02 51 01.3
      comp=Z,4.3nm,0.4s
RWWY  Rawlins         82.38  45  PFAKE           01 21 30.0 +8.4
RWWY                             LR      LR
      comp=Z,600nm,18.0s
ARCR  ARCALIA         82.42 322⇓iP       P       01 21 23.4 +2.1
RAYN  Ar Rayn         82.42 293 eP       P       01 21 22.1 +0.3
      comp=Z,70nm,1.1s
RAYN  Ar Rayn         82.42 293 i P      P       01 21 22.7 +0.9
      SNR=42
RAYN  Ar Rayn         82.42 293 eP       P       01 21 22.1 +0.3
RAYN                             pmax    pmax
      comp=Z,70nm,1.1s
UZH   Uzhgorod        82.42 324⇓iP       P       01 21 22.4 +1.1
UZH                             i                01 21 31.4
UZH                             e                01 26 22.7
UZH                             i S      S       01 31 32.3 -2.9
UZH                             i                01 31 41.8
UZH                             e                01 32 21.7
UZH                              MLR     MLR
      comp=N,400nm,15.0s
UZH                              MLR     MLR
      comp=E,620nm,15.0s
UZH                              MLR     MLR
      comp=Z,250nm,15.0s
KKUL  Konya-Kulu      82.49 312 i P      P       01 21 24.2 +2.1
KKUL                             IAML_P
      comp=Z,7.9nm,0.4s
OJC   Ojcow           82.52 327 eP       P       01 21 22.6 +0.7
OJC                             eS       S       01 31 36.6 +0.4
OJC   Ojcow           82.52 327 ePKP     P       01 21 22.3 +0.5
OJC   Ojcow           82.52 327 eP       P       01 21 22.6 +0.7
OJC                             eS       S       01 31 36.6 +0.4
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PSN   Preselentsi     82.54 318  P       P       01 21 21.1 -0.9
GLA   Glamis          82.55  55  PFAKE           01 21 30.0 +7.6
GLA                              LR      LR
      comp=Z,2µm,20.0s
GLA   Glamis          82.55  55  P       P       01 21 22.8 +0.5
      baz=305,SNR=7.9
MDND  Maddock         82.60  37  P       P       01 21 21.7 -0.6
      baz=312
DOPR  Dopca           82.61 321⇑iP       P       01 21 23.8 +1.4
MLR   Muntele Rosu    82.62 320  P       P       01 21 23.7 +1.1
      comp=Z,16nm,1.2s,baz=10,slow=5.0,SNR=18
MLR   Muntele Rosu    82.62 320⇓iP       P       01 21 23.4 +0.8
PPT   Papeete         82.63 116  LR      LR      01 57 52.4
      comp=Z,786nm,18.3s,baz=306,slow=36
TRPA  Tarpa           82.64 324⇓iP       P       01 21 23.6 +1.2
TRPA  Tarpa           82.64 324⇑eP       P       01 21 23.1 +0.6
TRPA  Tarpa           82.64 324 eS       S       01 31 38.1 +0.6
PPT2  Papeete2        82.65 116 eS       S       01 31 40.5 +2.1
      comp=Z,455nm,27.2s
PPT2  Papeete2        82.65 116 eLR      LR      01 47 01.4
      comp=Z,858nm,22.5s,baz=300
RSSD  Black Hills     82.69  41 eP       P       01 21 23.5 +0.4
      comp=Z,52nm,1.5s
RSSD                             LR      LR
      comp=Z,700nm,21.0s
RSSD  Black Hills     82.69  41 eP       P       01 21 23.5 +0.4
RSSD                             pmax    pmax
      comp=Z,52nm,1.5s
RSSD                             MLR     MLR
      comp=Z,700nm,21.0s
RSSD  Black Hills     82.69  41  P       P       01 21 22.1 -1.1
      baz=310
O20A  White River Ci  82.70  47  PFAKE           01 21 30.0 +6.7
O20A                             LR      LR
      comp=Z,700nm,20.0s
O20A  White River Ci  82.70  47  P       P       01 21 23.4 +0.1
      baz=307
ULM   Lac du Bonnet   82.75  33  P       P       01 21 22.2 -0.8
      comp=Z,4.4nm,0.9s,baz=305,slow=7.1,SNR=6.8
ULM                              LR      LR      01 57 00.5
      comp=Z,1µm,21.1s,baz=308,slow=35
ULM   Lac du Bonnet   82.75  33  PFAKE           01 21 30.0 +7.0
ULM                              LR      LR
      comp=Z,2µm,21.0s
NIE   Niedzica        82.84 326 eP       P       01 21 24.7 +1.1
NIE                             eS       S       01 31 41.5 +1.8
NIE   Niedzica        82.84 326 ePKP     P       01 21 24.4 +0.9
NIE   Niedzica        82.84 326 eP       P       01 21 24.7 +1.1
NIE                             eS       S       01 31 41.5 +1.8
SECR                  82.85 320⇓iP       P       01 21 24.9 +1.3
SULR                  82.98 320⇓iP       P       01 21 25.7 +1.4
CJR   Cluj-Napoca     83.05 322⇓iP       P       01 21 26.1 +1.4
VOIR                  83.13 321⇑iP       P       01 21 26.0 +0.8
Y14A  Wickenburg      83.29  54  PFAKE           01 21 40.0  +14
Y14A                             LR      LR
      comp=Z,2µm,19.0s
SRCK  Saricakaya, Es  83.37 314 i P      P       01 21 27.2 +0.7
SRCK                             IAML_P
      comp=Z,34nm,0.1s
KDHN  Kadinhani       83.38 312 i P      P       01 21 27.2 +0.5
KDHN                             IAML_P
      comp=Z,260nm,0.9s
ARR   Arges           83.40 321⇑iP       P       01 21 28.4 +1.8
KECS  Kecovo          83.40 325 eP       P       01 21 27.5 +1.1
KECS                             pmax    pmax
      comp=Z,17nm,1.5s
KECS  Kecovo          83.40 325 eP       P       01 21 27.5 +1.1
LANS  Liptovska Anna  83.42 326 eP       P       01 21 28.2 +1.6
LANS                             pmax    pmax
      comp=Z,16nm,1.3s
LANS  Liptovska Anna  83.42 326 eP       P       01 21 28.2 +1.6
DRGR                  83.45 323⇑iP       P       01 21 27.7 +0.9
LTVH  Ltavrtes, Hu    83.46 324⇑eP       P       01 21 28.1 +1.4
LTVH  Ltavrtes, Hu    83.46 324 eS       S       01 31 52.1 +6.3
WUAZ  Wupatki         83.46  52  PFAKE           01 21 40.0  +13
WUAZ                             LR      LR
      comp=Z,1µm,20.0s
WUAZ  Wupatki         83.46  52  P       P       01 21 27.4 +0.2
      baz=306
OKC   Ostrava-Krasne  83.55 327 eP       P       01 21 27.8 +0.7
OKC                             e                01 24 44.4
OKC                             e                01 31 47.8
OKC                              MLR     MLR
      comp=Z,2µm,15.4s
OKC   Ostrava-Krasne  83.55 327 eP       P       01 21 27.8 +0.7
OKC                             ePP      PP      01 24 44.4 +5.4
OKC                             eSKS     S       01 31 47.8 +1.1
OKC                              AMS     AMS     02 05 20.0
      comp=Z,2µm,15.4s
RAZG  Razgrad         83.55 319⇓iP       P       01 21 28.7 +1.4
N23A  Red Feather La  83.62  45  P       P       01 21 28.9 +0.8
      baz=309,SNR=12
KSP   Ksiaz           83.65 329 eP       P       01 21 28.4 +0.7
KSP                             eS       S       01 31 48.1 +0.4
KSP   Ksiaz           83.65 329 ePKP     P       01 21 28.4 +0.7
KSP   Ksiaz           83.65 329 eP       P       01 21 28.4 +0.7
KSP                             eS       S       01 31 48.1 +0.4
PHWY  Pilot Hill      83.65  44  PFAKE           01 21 40.0  +12
PHWY                             LR      LR
      comp=Z,600nm,21.0s
KMER  Konya-Meram     83.67 311 i P      P       01 21 22.4 -5.8
KMER                             IAML_P
      comp=Z,244nm,0.1s
LOT   Lotru           83.80 321⇓iP       P       01 21 29.7 +1.0
MORC  Moravsky Berou  83.87 327 eP       P       01 21 28.9 +0.1
      comp=Z,48nm,1.4s
MORC  Moravsky Berou  83.87 327⇓iP       P       01 21 29.5 +0.7
MORC  Moravsky Berou  83.87 327 eP       P       01 21 28.9 +0.1
MORC                             pmax    pmax
      comp=Z,48nm,1.4s
MORC  Moravsky Berou  83.87 327 eP       P       01 21 29.2 +0.4
COPA  Copaceanca      83.89 320⇓iP       P       01 21 29.5 +0.5
OSTC  Ostas           83.90 329 eP       P       01 21 30.1 +1.2
OSTC                            eSKS     S       01 31 48.3 -1.9
OSTC                             AMS     AMS     02 03 20.0
      comp=Z,2µm,15.4s
DOGA  KONYA_Doganhis  83.91 312 i P      P       01 21 31.1 +1.7
DOGA                             IAML_P
      comp=Z,30nm,0.1s
CHVC  Chvalec         83.94 329 eP       P       01 21 29.9 +0.7
CHVC                            ex       x       01 21 48.6
CHVC                            eSKS     S       01 31 49.5 -1.2
CHVC                             AMS     AMS     02 02 30.0
      comp=Z,2µm,14.9s
BOLV  Bolvadin        83.98 313 i P      P       01 21 31.7 +1.9
BOLV                             IAML_P
      comp=Z,25nm,0.1s
DPC   Dobruska-Polom  84.00 328 eP       P       01 21 30.5 +1.0
DPC                             e                01 24 42.8
DPC                             e                01 31 49.8
DPC                              MLR     MLR
      comp=Z,2µm,16.4s
DPC   Dobruska-Polom  84.00 328 eP       P       01 21 30.5 +1.0
DPC                             ePP      PP      01 24 42.8  0.0
DPC                             eSKS     S       01 31 49.8 -1.5
DPC                              AMS     AMS     02 03 30.0
      comp=Z,2µm,16.4s
UPC   Upice           84.02 329 eP       P       01 21 30.0 +0.4
UPC                             e                01 31 50.7
UPC                              MLR     MLR
      comp=Z,2µm,15.5s
UPC   Upice           84.02 329 eP       P       01 21 30.0 +0.4
UPC                             eSKS     S       01 31 50.7 -0.7
UPC                              AMS     AMS     02 03 30.0
      comp=Z,2µm,15.5s
X16A  Lo Mia Camp, P  84.06  53  PFAKE           01 21 40.0  +10
X16A                             LR      LR
      comp=Z,1µm,20.0s
PSZ   Piszkesteto     84.08 325 eP       P       01 21 29.8 -0.2
      comp=Z,83nm,1.2s
PSZ   Piszkesteto     84.08 325⇑iP       P       01 21 30.0  0.0
PSZ   Piszkesteto     84.08 325 eP       P       01 21 29.8 -0.2
PSZ                              pmax    pmax
      comp=Z,83nm,1.2s
PSZ   Piszkesteto     84.08 325 eP       P       01 21 28.1 -1.9
PSZ   Piszkesteto     84.08 325 eS       S       01 31 54.1 +1.9
AGMN  Agassiz Nation  84.12  35  PFAKE           01 21 40.0  +10
AGMN                             LR      LR
      comp=Z,2µm,21.0s
AGMN  Agassiz Nation  84.12  35  P       P       01 21 29.3 -0.8
      baz=315
VYHS  Vyhne           84.18 326 eP       P       01 21 31.4 +1.0
VYHS                             pmax    pmax
      comp=Z,79nm,1.5s
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VYHS  Vyhne            84.18 326  eP     P       01 21 31.4 +1.0
VYHS  Vyhne            84.18 326  eS     S       01 31 57.0 +3.9
PHSR  Pinarhisar       84.22 317⇓iP     P       01 21 31.8 +1.1
MVCO  Mesa Verde       84.32  49   PFAKE         01 21 40.0 +8.4
MVCO                               LR     LR
      comp=Z,1µm,19.0s
MVCO  Mesa Verde       84.32  49   P      P      01 21 31.2 -0.4
      baz=308
ELND  Elena            84.32 318⇑iP     P       01 21 32.0 +0.8
GZR   Gura Zlata       84.36 322⇓iP     P       01 21 32.2 +0.7
JAVC  Velka Javorina   84.46 327  eP     P       01 21 33.1 +1.2
BAGO  Egridir - ISPA   84.53 312  i P    P       01 21 34.8 +2.3
BAGO                               IAML_P
      comp=Z,436nm,0.9s
214A  Organ Pipe Nat   84.57  55   P      P      01 21 32.8  0.0
      baz=306
GAZI  Gazipasa         84.63 310  i P    P       01 21 32.2 -0.7
GAZI                               IAML_P
      comp=Z,315nm,0.8s
PVCC  Panska Ves       84.63 329  eP     P       01 21 33.6 +1.0
PVCC                               MLR    MLR
      comp=Z,3µm,14.9s
PVCC  Panska Ves       84.63 329  eP     P       01 21 33.6 +1.0
PVCC                              ex     x       01 21 49.9
PVCC                               AMS    AMS    02 03 10.0
      comp=Z,3µm,14.9s
VRAC  Vranov           84.63 327⇑iP     P       01 21 33.6 +0.9
VRAC  Vranov           84.63 327  eP     P       01 21 32.8 +0.1
BRG   Berggiesshubel   84.64 330  i P    P       01 21 33.0 +0.3
      comp=Z,26nm,1.2s
BRG                               ePP    PP      01 24 45.9 -2.0
      comp=Z,26nm,1.8s
BRG                                S      S      01 31 55.0 -2.6
BRG                                SS     SS     01 37 27.0 -1.0
      comp=N,2µm,15.0s
      comp=E,1µm,13.3s
      comp=Z,2µm,16.8s
BRG   Berggiesshubel   84.64 330  i P    P       01 21 33.0 +0.3
BRG                               e              01 24 45.9
BRG                                S      S      01 31 55.0 -2.6
BRG                                SS     SS     01 37 27.0 -1.0
BRG                                pmax   pmax
      comp=Z,27nm,1.2s
BRG                                pmax   pmax
      comp=Z,26nm,1.8s
BRG                                MLR    MLR
      comp=N,2µm,15.0s
BRG                                MLR    MLR
      comp=E,1µm,13.3s
BRG                                MLR    MLR
      comp=Z,2µm,16.8s
CLL   Collm            84.71 331   PFAKE         01 21 40.0 +7.0
CLL                                LR     LR
      comp=Z,1µm,18.0s
CLL   Collm            84.71 331⇑iP     P       01 21 33.1 +0.1
CLL                               eS     S       01 32 00.0 +1.8
CLL                                pmax   pmax
      comp=Z,43nm,1.2s
CLL   Collm            84.71 331⇑iP     P       01 21 33.1 +0.1
      comp=Z,43nm,1.2s
CLL                               i              01 21 50.2
CLL                               ePP    PP      01 24 45.0 -3.4
CLL                               e              01 25 02.0
CLL                               eS     S       01 32 00.0 +1.8
CLL                               ePS            01 32 57.0
CLL                               eSS    SS      01 37 30.0 +1.1
CLL                               eSSS   SSS     01 40 56.0
PLVB  Pleven           84.71 319⇓iP     P       01 21 34.5 +1.3
CSS   Mathiatis        84.74 308   PFAKE         01 21 40.0 +6.5
CSS                                LR     LR
      comp=Z,2µm,18.0s
CSS   Mathiatis        84.74 308   P      P      01 21 33.9 +0.4
      comp=Z,6.2nm,1.2s
AMBH  Ambrzfalva       84.75 323  eP     P       01 21 34.0 +0.7
W18A  Petrified Fore   84.78  51   PFAKE         01 21 50.0  +16
W18A                               LR     LR
      comp=Z,2µm,19.0s
W18A  Petrified Fore   84.78  51   P      P      01 21 32.8 -1.1
      baz=307
ISP   Isparta          84.80 312   PFAKE         01 21 50.0  +16
ISP                                LR     LR
      comp=Z,800nm,18.0s
BUD   Budapest         84.80 325  eP     P       01 21 34.0 +0.5
BZS   Buzias           84.81 322⇓iP     P       01 21 34.1 +0.5
SMOL  Smolenice        84.82 327  eP     P       01 21 34.9 +1.2
SMOL                               pmax   pmax
      comp=Z,56nm,1.2s
SMOL  Smolenice        84.82 327  eP     P       01 21 34.9 +1.2
HERR  Herculane        84.89 321⇓iP     P       01 21 34.5 +0.4
KRUC  Moravsky         84.90 327  eP     P       01 21 34.2 +0.2
SRO   Srobarova        84.91 326  eP     P       01 21 35.3 +1.2
SRO                                pmax   pmax
      comp=Z,33nm,1.1s
SRO   Srobarova        84.91 326  eP     P       01 21 35.3 +1.2
TAOE  Nuku Hiva Isla   84.98 104  eS     S       01 32 03.8 +1.6
      comp=Z,2µm,30.8s
TAOE  Nuku Hiva Isla   84.98 104  eLR    LR      01 48 22.0
      comp=Z,2µm,21.4s
GOPC  GO Pecny, Ondr   84.99 329  eP     P       01 21 35.2 +0.7
GOPC                              e              01 32 00.5
GOPC                               MLR    MLR
      comp=Z,2µm,14.9s
GOPC  GO Pecny, Ondr   84.99 329  eP     P       01 21 35.2 +0.7
GOPC                              eSKS   S       01 32 00.5 -0.7
GOPC                               AMS    AMS    02 03 20.0
      comp=Z,2µm,14.9s
MODS  Modra-Piesok     84.99 326  eP     P       01 21 34.8 +0.3
MODS                               pmax   pmax
      comp=Z,65nm,1.4s
MODS  Modra-Piesok     84.99 326  eP     P       01 21 34.8 +0.3
MODS  Modra-Piesok     84.99 326  eS     S       01 31 58.3 -2.9
MODS                              eSS    SS      01 37 40.8 +7.4
MODS                              eL     L       02 08 57.3
PRU   Pruhonice        85.04 329  eP     P       01 21 35.2 +0.5
PRU                               e              01 32 02.2
PRU                                MLR    MLR
      comp=Z,2µm,14.2s
PRU   Pruhonice        85.04 329  eP     P       01 21 35.2 +0.5
PRU                               ex     x       01 21 52.1
PRU                               eSKS   S       01 32 02.2 +0.6
PRU                                AMS    AMS    02 07 40.0
      comp=Z,2µm,14.2s
KHAL  Karahalli        85.10 313  i P    P       01 21 36.6 +1.3
KHAL                               IAML_P
      comp=Z,12nm,0.1s
TREC  Trest            85.14 328  eP     P       01 21 36.1 +0.8
TREC                              e              01 32 02.5
TREC                               MLR    MLR
      comp=Z,2µm,16.4s
TREC  Trest            85.14 328  eP     P       01 21 36.1 +0.8
TREC                              ePP    PP      01 24 42.8 -9.2
TREC                              eSKS   S       01 32 02.5 -0.2
TREC                               AMS    AMS    02 03 50.0
      comp=Z,2µm,16.4s
ZST   Bratislava       85.20 326  eP     P       01 21 35.9 +0.3
ZST                                pmax   pmax
      comp=Z,43nm,1.5s
ZST   Bratislava       85.20 326  eP     P       01 21 35.9 +0.3
ZST   Bratislava       85.20 326  eS     S       01 32 06.5 +3.3
ZST                               eSS    SS      01 37 43.7 +7.3
ZST                               eL     L       02 07 04.4
SUSD  Miller           85.23  39   P      P      01 21 34.8 -1.0
      baz=313
CSKK  Cskako           85.25 325⇑eP     P       01 21 42.1 +6.2
CSKK                              eS     S       01 32 10.1 +6.3
KDZ   Kurdzhali        85.41 318   P      P      01 21 35.7 -1.0
KORT  Korkueli         85.42 312  i P    P       01 21 37.8 +0.7
KORT                               IAML_P
      comp=Z,106nm,0.1s
TUC   Tucson           85.75  54  eP     P       01 21 39.3 +0.6
      comp=Z,25nm,1.3s
TUC                                LR     LR
      comp=Z,2µm,20.0s
TUC   Tucson           85.75  54  eP     P       01 21 39.3 +0.6
TUC                                pmax   pmax
      comp=Z,25nm,1.3s
TUC                                MLR    MLR
      comp=Z,2µm,20.0s
TUC   Tucson           85.75  54   P      P      01 21 39.0 +0.3
      baz=307
NKC   Novy Kostel      85.75 330  eP     P       01 21 39.0 +0.7
NKC                               e              01 32 10.1
NKC                                MLR    MLR
      comp=Z,2µm,15.3s
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NKC   Novy Kostel      85.75 330  eP     P       01 21 39.0 +0.7
NKC                               eSKS   S       01 32 10.1 +1.4
NKC                                AMS    AMS    02 04 20.0
      comp=Z,2µm,15.3s
TIH   Tihany           85.76 325  eP     P       01 21 38.0 -0.3
TIH                               ePP    PP      01 25 03.0 +6.0
TIH   Tihany           85.76 325  eS     S       01 31 54.0  -15
GOLH  Golhisar         85.76 312  i P    P       01 21 37.1 -1.6
GOLH                               IAML_P
      comp=Z,229nm,0.6s
SOP   Sopron           85.83 326  eP     P       01 21 40.0 +1.4
SOP                               ePP    PP      01 25 04.0 +6.4
SOP                               eS     S       01 32 06.1 -3.3
SDCO  Great Sand Dun   85.86  47   PFAKE         01 21 50.0  +11
SDCO                               LR     LR
      comp=Z,800nm,20.0s
SDCO  Great Sand Dun   85.86  47   P      P      01 21 40.3 +0.9
      baz=309,SNR=7.8
OGNE  Ogallala         85.87  43   PFAKE         01 21 50.0  +11
OGNE                               LR     LR
      comp=Z,1µm,18.0s
OGNE  Ogallala         85.87  43   P      P      01 21 37.6 -1.5
      baz=311
MORH  Mrgy, Hungar     85.88 324  i P    P       01 21 38.8 -0.2
MORH  Mrgy, Hungar     85.88 324  eP     P       01 21 39.0 +0.1
MORH                              ePP    PP      01 25 04.0 +5.9
MORH                              eS     S       01 32 10.1 +0.1
CONA  Conrad Observa   85.97 327  i PcP  P       01 21 40.5 +1.0
      comp=Z,33nm,1.5s,SNR=28
VTS   Vitosha          85.98 319   P      P      01 21 40.2 +0.5
FRGS  Fruska Gora      86.05 323  i P    P       01 21 40.0 +0.2
KHC   Kasperske Hory   86.10 329   PFAKE         01 21 50.0  +10
KHC                                LR     LR
      comp=Z,700nm,18.0s
KHC   Kasperske Hory   86.10 329  eP     P       01 21 40.4 +0.3
KHC                               e              01 21 49.5
KHC                               e              01 32 12.1
KHC                                MLR    MLR
      comp=Z,2µm,15.1s
KHC   Kasperske Hory   86.10 329  eP     P       01 21 40.4 +0.3
KHC                               ex     x       01 21 49.5
KHC                               ex     x       01 25 12.9
KHC                               eSKS   S       01 32 12.1 -0.1
KHC                                AMS    AMS    02 04 00.0
      comp=Z,2µm,15.1s
GEC2  GERESS Array S   86.26 329   PFAKE         01 21 50.0 +9.1
GEC2                               LR     LR
      comp=Z,2µm,18.0s
GERES GERESS Array B   86.26 329   P      P      01 21 41.3 +0.4
      comp=Z,0.8nm,0.6s,baz=46,slow=5.8,SNR=19
GERES                              PP     PP     01 25 04.1 +2.9
      comp=Z,0.3nm,0.5s,baz=52,slow=8.6,SNR=4.0
GERES                              LR     LR     02 05 07.3
      comp=Z,2µm,18.1s,baz=42,slow=39
GERES GERESS Array B   86.26 329   P      P      01 21 41.3 +0.4
GERES                                            01 25 04.1
GERES                              pmax   pmax
      comp=Z,2.0nm,0.9s
TBI   Tubuai           86.27 121  eS     S       01 32 14.8 +0.6
      comp=Z,343nm,26.2s
TBI   Tubuai           86.27 121  eLR    LR      01 49 06.5
      comp=Z,1µm,22.5s,baz=306
MMB   Musomiste        86.40 318   P      P      01 21 40.0 -1.7
EYMN  Ely              86.40  33   PFAKE         01 21 50.0 +8.5
EYMN                               LR     LR
      comp=Z,1µm,21.0s
EYMN  Ely              86.40  33   P      P      01 21 40.2 -1.3
      baz=318
BEHE  Becsehely        86.60 325  i P    P       01 21 42.6 +0.1
BEHE  Becsehely        86.60 325  eP     P       01 21 43.0 +0.5
BEHE  Becsehely        86.60 325  eS     S       01 32 23.0 +6.0
ARSA  Arzberg          86.62 327  i PcP  P       01 21 43.3 +0.7
      comp=Z,14nm,1.4s,SNR=11
GRA1  Grafenberg Arr   86.68 330   PFAKE         01 21 50.0 +7.1
GRA1                               LR     LR
      comp=Z,2µm,18.0s
DIVS  Divibare         86.69 322  i P    P       01 21 42.8 -0.3
MOA   Molln            86.75 328  i PcP  P       01 21 43.9 +0.6
      comp=Z,12nm,1.3s,SNR=7.6
EIL   Elat             86.78 303   P      P      01 21 44.0 +0.3
KSCO  Kaye Shedlock'   86.78  45   P      P      01 21 43.2 -0.5
      baz=311
T25A  Trinidad         86.91  47   P      P      01 21 43.9 -0.6
      baz=310
ECSD  EROS Data Cent   86.94  38   PFAKE         01 22 00.0  +16
ECSD                               LR     LR
      comp=Z,2µm,20.0s
ECSD  EROS Data Cent   86.94  38   P      P      01 21 42.5 -1.8
      baz=314
ANMO  Albuquerque      87.01  50  eP     P       01 21 44.6 -0.4
      comp=Z,32nm,1.4s
ANMO                               LR     LR
      comp=Z,2µm,20.0s
ANMO  Albuquerque      87.01  50deP     P       01 21 45.6 +0.6
ANMO                               pmax   pmax
      comp=Z,17nm,1.7s
ANMO  Albuquerque      87.01  50   P      P      01 21 44.0 -1.0
      baz=309
ESK   Eskdalemuir      87.03 341  eP     P       01 21 44.5 +0.1
      comp=Z,24nm,1.3s
ESK                                LR     LR
      comp=Z,1µm,18.0s
ESK   Eskdalemuir      87.03 341  eP     P       01 21 44.6 +0.1
ESK                                pmax   pmax
      comp=Z,24nm,1.3s
ESK                                MLR    MLR
      comp=Z,1µm,18.0s
BBLS  Lazi&#263;i      87.16 322  i P    P       01 21 45.5 +0.1
VAY   Valandovo        87.22 319  i P    P       01 21 46.0 +0.3
HAPS  Han Pijesak,Bl   87.23 323  i P    P       01 21 44.2 -1.6
Y22D  IRIS PASSCAL I   87.25  51   PFAKE         01 22 00.0  +14
Y22D                               LR     LR
      comp=Z,2µm,21.0s
SOKA  Soboth           87.27 326  i PcP  P       01 21 45.9  0.0
      comp=Z,23nm,1.4s,SNR=22
E38A  The Farm, Brul   87.37  34   PFAKE         01 22 00.0  +14
E38A                               LR     LR
      comp=Z,2µm,20.0s
SKO   Skopje           87.40 320  i P    P       01 21 47.5 +1.0
OBKA  Obir             87.62 327  i PcP  P       01 21 47.2 -0.4
      comp=Z,4.1nm,1.1s
121A  Cookes Peak, D   87.64  52   P      P      01 21 46.7 -1.3
      baz=308
BLY   Banja Luka       87.65 324   PFAKE         01 22 00.0  +12
BLY                                LR     LR
      comp=Z,2µm,18.0s
BLY   Banja Luka       87.65 324  i P    P       01 21 47.6  0.0
CRES  Cresnjev         87.70 326  i P    P       01 21 47.4 -0.5
BGNE  Belgrade         87.73  41   P      P      01 21 47.1 -1.0
      baz=314
KBA   Koelnbreinsper   87.75 328  i PcP  P       01 21 47.9 -0.4
      comp=Z,2.4nm,0.8s,SNR=5.3
SPMN  Marine on St.    87.79  35   P      P      01 21 46.3 -2.0
      baz=317
MYKA  Terra Mystica    87.95 327  i P    P       01 21 48.5 -0.6
      comp=Z,5.7nm,1.0s
LJU   Ljubljana        87.98 326  i P    P       01 21 48.8 -0.4
LJU                               eS     S       01 32 28.7 -1.6
LJU   Ljubljana        87.98 326  i P    P       01 21 48.8 -0.4
BOJS  Bojanci          88.03 326  i P    P       01 21 49.4 -0.1
BOJS                              eS     S       01 32 29.8 -1.0
STU   Stuttgart        88.23 331  eP     P       01 21 50.7 +0.4
      comp=Z,92nm,2.0s
STU                                LR     LR
      comp=Z,1µm,19.0s
STU   Stuttgart        88.23 331  eP     P       01 21 50.7 +0.4
STU                                pmax   pmax
      comp=Z,92nm,2.0s
STU                                MLR    MLR
      comp=Z,1µm,19.0s
PDG   Podgorica        88.25 321⇑iP     P       01 21 50.3 -0.2
PDG   Podgorica        88.25 321  i P    P       01 21 49.9 -0.6
TTG   Podgorica        88.25 321   PFAKE         01 22 00.0  +10
TTG                                LR     LR
      comp=Z,1µm,18.0s
CEY   Cerknica         88.25 326  i P    P       01 21 50.0 -0.5
CEY   Cerknica         88.25 326  i P    P       01 21 49.7 -0.8
WTTA  Wattenberg       88.36 329  i PcP  P       01 21 50.8 -0.4
      comp=Z,4.5nm,1.0s
ABTA  Abfaltersbach    88.37 328  i P    P       01 21 50.1 -1.1
      comp=Z,9.8nm,1.4s,SNR=6.0
D41A  Chassel          88.38  32   PFAKE         01 22 00.0 +8.9
D41A                               LR     LR
      comp=Z,900nm,20.0s
D41A  Chassel          88.38  32   P      P      01 21 49.8 -1.2
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      baz=320
DRME  Dracevica, Mon   88.45 321  i P    P       01 21 50.8 -0.7
G39A  Holcombe         88.52  34   P      P      01 21 51.0 -0.8
      baz=318
RIY   Rijeka           88.53 326  i P    P       01 21 50.7 -1.1
MOTA  Moosalm          88.53 329  i PcP  P       01 21 52.6 +0.6
      comp=Z,1.5nm,0.6s
RETA  Reutte           88.57 329  i PcP  P       01 21 52.3 +0.2
      comp=Z,7.0nm,1.2s,SNR=6.7
TRI   Trieste          88.58 326  eP     P       01 21 51.8 -0.2
      comp=Z,13nm,1.1s
TRI   Trieste          88.58 326  eP     P       01 21 51.8 -0.2
TRI                                pmax   pmax
      comp=Z,13nm,1.1s
SQTA  Sankt Quirin     88.58 329  i PcP  P       01 21 52.9 +0.7
      comp=Z,4.8nm,1.1s
CBKS  Cedar Bluff      88.60  43   PFAKE         01 22 00.0 +7.7
CBKS                               LR     LR
      comp=Z,1µm,19.0s
CBKS  Cedar Bluff      88.60  43   P      P      01 21 50.5 -1.8
      baz=312
TIR   Tirane           88.68 320   PFAKE         01 22 00.0 +7.4
TIR                                LR     LR
      comp=Z,2µm,18.0s
WLF   Walferdange      88.72 333  eP     P       01 21 52.9 +0.3
      comp=Z,393nm,2.0s
WLF   Walferdange      88.72 333  eP     P       01 21 52.9 +0.3
COWI  Conover          88.86  33   PFAKE         01 22 00.0 +6.6
COWI                               LR     LR
      comp=Z,1µm,20.0s
BFO   Black Forest     88.93 331  eP     P       01 21 54.0 +0.4
      comp=Z,12nm,1.1s
BFO                                LR     LR
      comp=Z,1µm,18.0s
BFO   Black Forest     88.93 331  eP     P       01 21 54.1 +0.4
BFO                                pmax   pmax
      comp=Z,12nm,1.1s
BFO                                MLR    MLR
      comp=Z,1µm,18.0s
FETA  Feichten         88.95 329  i PcP  P       01 21 54.4 +0.5
      comp=Z,6.9nm,1.1s,SNR=5.3
G40A  Rib Lake         88.99  34   PFAKE         01 22 10.0  +16
G40A                               LR     LR
      comp=Z,1µm,21.0s
G40A  Rib Lake         88.99  34   P      P      01 21 54.0  0.0
      baz=319
DAVA  Damuels          89.11 330  i PcP  P       01 21 54.7  0.0
      comp=Z,8.7nm,1.2s
SCHQ  Schefferville    89.14  16   P      P      01 21 55.8 +1.2
      comp=Z,6.9nm,0.8s,baz=320,slow=7.8,SNR=3.0
SCHQ                               LR     LR     02 09 22.1
      comp=Z,386nm,18.1s,baz=340,slow=41
SCHQ  Schefferville    89.14  16   PFAKE         01 22 10.0  +15
SCHQ                               LR     LR
      comp=Z,700nm,19.0s
FUORN Ofenpass-Fuorn   89.46 329   PFAKE         01 22 10.0  +14
FUORN                              LR     LR
      comp=Z,2µm,18.0s
ECH   Echery           89.50 332  eP     P       01 21 56.2 -0.1
      comp=Z,35nm,2.0s
ECH                                LR     LR
      comp=Z,800nm,21.0s
ECH   Echery           89.50 332  eP     P       01 21 56.2 -0.1
ECH                                pmax   pmax
      comp=Z,35nm,2.0s
ECH                                MLR    MLR
      comp=Z,800nm,21.0s
DAVOX Davos/Dischmat   89.50 329   P      P      01 21 56.2 -0.4
      comp=Z,2.7nm,0.6s,baz=0.0,slow=1.0,SNR=3.7
F42A  Maple Grove Fa   89.57  32   P      P      01 21 56.9 +0.2
      baz=320
E43A  Lone Tree Farm   89.60  31   PFAKE         01 22 10.0  +13
E43A                               LR     LR
      comp=Z,800nm,21.0s
E44A  Grand Marais A   89.87  31   PFAKE         01 22 10.0  +12
E44A                               LR     LR
      comp=Z,1µm,21.0s
IDI   Anoyia           89.90 313   P      P      01 21 57.8 -0.7
      comp=Z,4.4nm,0.8s,baz=82,slow=15,SNR=2.6
TUE   Stuetta          89.97 329  eP     P       01 21 58.8 -0.1
      comp=Z,28nm,1.4s
TUE                                LR     LR
      comp=Z,2µm,19.0s
MSTX  Muleshoe         89.98  49   P      P      01 21 58.7 -0.3
      baz=311
SCIA  State Center     90.00  38   PFAKE         01 22 10.0  +11
SCIA                               LR     LR
      comp=Z,1µm,20.0s
I41A  Arkdale          90.06  34   PFAKE         01 22 10.0  +11
I41A                               LR     LR
      comp=Z,2µm,20.0s
AMTX  Amarillo         90.06  47   PFAKE         01 22 10.0  +11
AMTX                               LR     LR
      comp=Z,1µm,18.0s
AMTX  Amarillo         90.06  47   P      P      01 21 59.5 +0.2
      baz=311
KSU1  Kansas State U   90.18  41   PFAKE         01 22 10.0  +10
KSU1                               LR     LR
      comp=Z,700nm,19.0s
KSU1  Kansas State U   90.18  41   P      P      01 21 59.5 -0.2
      baz=314
D46A  Sault St. Mari   90.45  29   P      P      01 22 00.6 -0.1
      baz=323
MATQ  Matagami         90.51  24   P      P      01 21 59.9 -1.1
      baz=328
I42A  Draeger Farm,    90.64  34   PFAKE         01 22 10.0 +8.3
I42A                               LR     LR
      comp=Z,2µm,20.0s
D47A  Chapleau         90.70  29   P      P      01 22 02.4 +0.4
      baz=324
H43A  Windswept, Lux   90.72  33   PFAKE         01 22 10.0 +7.9
H43A                               LR     LR
      comp=Z,1µm,21.0s
JFWS  Jewell Farm      90.74  35   PFAKE         01 22 10.0 +7.8
JFWS                               LR     LR
      comp=Z,1µm,20.0s
JFWS  Jewell Farm      90.74  35   P      P      01 21 59.7 -2.4
      baz=319
E46A  Sault Ste Mari   90.76  30   PFAKE         01 22 10.0 +7.8
E46A                               LR     LR
      comp=Z,1µm,19.0s
L40A  Anamosa          90.89  36   PFAKE         01 22 10.0 +7.1
L40A                               LR     LR
      comp=Z,1µm,20.0s
SENIN Lac Senin/Sane   90.92 330  eP     P       01 22 03.0 -0.2
      comp=Z,49nm,1.9s
D49A  Beulah Townshi   91.22  28   P      P      01 22 03.8 -0.5
      baz=325
G45A  Suttons Bay      91.23  31   PFAKE         01 22 20.0  +16
G45A                               LR     LR
      comp=Z,1µm,18.0s
AQU   L'Aquila         91.27 324  eP     P       01 22 05.4 +0.7
      comp=Z,38nm,1.4s
AQU                                LR     LR
      comp=Z,2µm,19.0s
AQU   L'Aquila         91.27 324  eP     P       01 22 05.4 +0.7
AQU                                pmax   pmax
      comp=Z,38nm,1.4s
AQU                                MLR    MLR
      comp=Z,2µm,19.0s
AQU   L'Aquila         91.27 324  i P    P       01 22 04.6 -0.1
VLC   Villacollemand   91.32 327   PFAKE         01 22 20.0  +15
VLC                                LR     LR
      comp=Z,2µm,19.0s
LSQQ  Lebel-sur-Quev   91.34  24   P      P      01 22 05.0 +0.2
      baz=328
CHGQ  Chibougamau      91.47  22   P      P      01 22 05.5  0.0
      baz=330
CLF   Chambon-Foret    91.53 334   PFAKE         01 22 20.0  +14
CLF                                LR     LR
      comp=Z,2µm,19.0s
N40A  Mertquake, Sal   91.58  37   P      P      01 22 06.3 +0.2
      baz=318
L42A  Oliver, Polo     91.70  36   PFAKE         01 22 20.0  +13
L42A                               LR     LR
      comp=Z,1µm,21.0s
L42A  Oliver, Polo     91.70  36   P      P      01 22 05.8 -0.8
      baz=319
M41A  Milan            91.74  37   P      P      01 22 05.7 -1.2
      baz=318
I45A  Fountain         91.76  32   PFAKE         01 22 20.0  +13
I45A                               LR     LR
      comp=Z,1µm,21.0s
K43A  Burlington       91.82  34   PFAKE         01 22 20.0  +13
K43A                               LR     LR
      comp=Z,1µm,20.0s
LPL   La Plagne        91.84 330  eP     P       01 22 06.9 -0.6
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LPL                                  pmax    pmax
      comp=Z,15nm,1.2s
GLMI  Grayling        91.85  31      PFAKE            01 22 20.0  +13
GLMI                                 LR      LR
      comp=Z,900nm,20.0s
SSF   Saint Saulge    91.87 333     eP       P        01 22 06.7  -0.7
SSF                                  pmax    pmax
      comp=Z,16nm,1.4s
F48A  Evansville      91.89  29      P       P        01 22 07.4  -0.1
      baz=324
TIP   Timpagrande     91.89 320      PFAKE            01 22 20.0  +12
TIP                                  LR      LR
      comp=Z,2µm,18.0s
G47A  Hillman         91.90  30      P       P        01 22 08.2  +0.7
      baz=323
WMOK  Wichita Mounta  91.93  46      PFAKE            01 22 20.0  +12
WMOK                                 LR      LR
      comp=Z,700nm,20.0s
WMOK  Wichita Mounta  91.93  46      P       P        01 22 08.1  +0.2
      baz=313
VLDQ  Val d'Or        91.97  25      PFAKE            01 22 20.0  +12
VLDQ                                 LR      LR
      comp=Z,1µm,19.0s
N41A  Harden Midland  92.08  37      PFAKE            01 22 20.0  +12
N41A                                 LR      LR
      comp=Z,1µm,20.0s
TXAR  Lajitas Array   92.39  53      P       P        01 22 11.1  +0.8
      comp=Z,8.2nm,1.0s,baz=298,slow=2.7,SNR=9.4
TXAR                                 LR      LR       02 00 53.5
      comp=Z,1µm,19.5s,baz=0.0,slow=34
H48A  Harrisville     92.50  30      PFAKE            01 22 20.0  +10
H48A                                 LR      LR
      comp=Z,1µm,21.0s
E51A  G1948 Merrick   92.55  27      P       P        01 22 09.6  -0.9
      baz=326
D53A  Lac Vacive, Po  92.76  26      PFAKE            01 22 20.0  +8.5
D53A                                 LR      LR
      comp=Z,1µm,19.0s
D53A  Lac Vacive, Po  92.76  26      P       P        01 22 12.9  +1.5
      baz=328
ABTX  Abilene, Hawle  92.83  48      P       P        01 22 09.9  -2.2
      baz=313
TUL1  Leonard         92.88  43      PFAKE            01 22 20.0  +7.8
TUL1                                 LR      LR
      comp=Z,800nm,19.0s
TUL1  Leonard         92.88  43      P       P        01 22 12.2   0.0
      baz=315
F51A  Arnstein        92.89  28      P       P        01 22 10.9  -1.2
      baz=326
M44A  Midewin, Midew  92.96  35      PFAKE            01 22 20.0  +7.5
M44A                                 LR      LR
      comp=Z,1µm,20.0s
M44A  Midewin, Midew  92.96  35      P       P        01 22 12.2  -0.3
      baz=320
HDIL  Hopedale        92.98  36      PFAKE            01 22 20.0  +7.4
HDIL                                 LR      LR
      comp=Z,900nm,20.0s
J47A  Sunmer          93.02  32      PFAKE            01 22 20.0  +7.3
J47A                                 LR      LR
      comp=Z,1µm,20.0s
L46A  Eue Claire      93.31  34      PFAKE            01 22 30.0  +16
L46A                                 LR      LR
      comp=Z,1µm,21.0s
I49A  Point Hope      93.33  30      PFAKE            01 22 30.0  +16
I49A                                 LR      LR
      comp=Z,1µm,18.0s
J48A  Bridge Port     93.43  31      PFAKE            01 22 30.0  +15
J48A                                 LR      LR
      comp=Z,900nm,19.0s
CCM   Cathedral Cave  93.85  39     eP       P        01 22 17.1  +0.5
      comp=Z,15nm,1.0s
CCM                                  LR      LR
      comp=Z,900nm,21.0s
CCM   Cathedral Cave  93.85  39     eP       P        01 22 17.1  +0.5
CCM                                  pmax    pmax
      comp=Z,15nm,1.0s
CCM                                  MLR     MLR
      comp=Z,900nm,21.0s
CCM   Cathedral Cave  93.85  39      P       P        01 22 17.9  +1.3
      baz=318
JCT   Junction City   94.17  50      PFAKE            01 22 30.0  +12
JCT                                  LR      LR
      comp=Z,1µm,21.0s
JCT   Junction City   94.17  50      P       P        01 22 17.7  -0.6
      baz=312
I51A  Listowel        94.20  30      P       P        01 22 17.4  -0.7
      baz=325
CAF   Calviac         94.21 333     eP       P        01 22 18.2   0.0
CAF                                  pmax    pmax
      comp=Z,12nm,1.3s
U40A  Yellville       94.22  41      P       P        01 22 17.2  -1.2
      baz=317
AAM   Ann Arbor       94.28  32      PFAKE            01 22 30.0  +11
AAM                                  LR      LR
      comp=Z,900nm,21.0s
K50A  Casco           94.36  31      PFAKE            01 22 30.0  +11
K50A                                 LR      LR
      comp=Z,800nm,19.0s
M48A  Edgerton        94.45  33      PFAKE            01 22 30.0  +11
M48A                                 LR      LR
      comp=Z,1µm,20.0s
W39A  Magazine        94.53  43      PFAKE            01 22 30.0  +10
W39A                                 LR      LR
      comp=Z,1µm,19.0s
WHTX  Lake Whitney,   94.61  47      P       P        01 22 18.4  -1.9
      baz=314
PLVO  Plevna          94.72  26      PFAKE            01 22 30.0  +9.5
PLVO                                 LR      LR
      comp=Z,1µm,18.0s
MIAR  Mount Ida       95.12  43      PFAKE            01 22 30.0  +7.5
MIAR                                 LR      LR
      comp=Z,1µm,20.0s
N49A  Columbus Grove  95.14  33      PFAKE            01 22 30.0  +7.5
N49A                                 LR      LR
      comp=Z,1µm,19.0s
M50A  Fremont         95.28  32      PFAKE            01 22 30.0  +6.9
M50A                                 LR      LR
      comp=Z,900nm,21.0s
W41B  Gary Mavity, V  95.42  42      P       P        01 22 23.8  -0.1
      baz=317
WDD   Wied Dalam      95.54 319      PFAKE            01 22 40.0  +16
WDD                                  LR      LR
      comp=Z,800nm,20.0s
X40A  Basin Creek Fa  95.58  43      PFAKE            01 22 40.0  +15
X40A                                 LR      LR
      comp=Z,1µm,20.0s
X40A  Basin Creek Fa  95.58  43      P       P        01 22 24.6  -0.1
      baz=317
J54A  Appleton        95.61  28      PFAKE            01 22 40.0  +15
J54A                                 LR      LR
      comp=Z,900nm,20.0s
O49A  Covington       95.66  34      PFAKE            01 22 40.0  +15
O49A                                 LR      LR
      comp=Z,2µm,21.0s
P48A  Milroy          95.72  35      PFAKE            01 22 40.0  +15
P48A                                 LR      LR
      comp=Z,1µm,21.0s
M52A  Chesterland     95.91  31      PFAKE            01 22 40.0  +14
M52A                                 LR      LR
      comp=Z,800nm,21.0s
N51A  Ashland         95.97  32      PFAKE            01 22 40.0  +14
N51A                                 LR      LR
      comp=Z,900nm,20.0s
LONY  Lake Ozonia     95.99  25      PFAKE            01 22 40.0  +14
LONY                                 LR      LR
      comp=Z,900nm,18.0s
ERPA  Erie            96.02  30      PFAKE            01 22 40.0  +14
ERPA                                 LR      LR
      comp=Z,1µm,20.0s
ACSO  Alum Creek Sta  96.25  33      PFAKE            01 22 40.0  +12
ACSO                                 LR      LR
      comp=Z,900nm,18.0s
WCI   Wyandotte Cave  96.25  36      PFAKE            01 22 40.0  +12
WCI                                  LR      LR
      comp=Z,800nm,19.0s
PQI   Presque Isle    96.29  20      PFAKE            01 22 40.0  +12
PQI                                  LR      LR
      comp=Z,900nm,18.0s
NATX  Nacogdoches     96.47  46      PFAKE            01 22 40.0  +11
NATX                                 LR      LR
      comp=Z,1µm,19.0s
N53A  Lisbon          96.73  31      PFAKE            01 22 40.0  +10
N53A                                 LR      LR
      comp=Z,700nm,20.0s
R49A  Shelbyville     96.76  35      PFAKE            01 22 40.0  +10
R49A                                 LR      LR
      comp=Z,1µm,21.0s
T47A  Sharon Grove    96.81  37      PFAKE            01 22 40.0  +10
T47A                                 LR      LR
      comp=Z,1µm,19.0s
P51A  Williamsport    96.81  33      PFAKE            01 22 40.0  +10
P51A                                 LR      LR
      comp=Z,1µm,20.0s
O52A  Adamsville      96.86  32      PFAKE            01 22 40.0  +10
O52A                                 LR      LR
      comp=Z,1µm,20.0s
VT1   Waterbury       96.88  24      PFAKE            01 22 40.0  +10
VT1                                  LR      LR
      comp=Z,900nm,18.0s
N54A  Moraine State   96.97  30      PFAKE            01 22 40.0  +9.1
N54A                                 LR      LR
      comp=Z,1µm,20.0s
HKT   Hockley         97.03  48      PFAKE            01 22 40.0  +8.7
HKT                                  LR      LR
      comp=Z,2µm,20.0s
Q51A  Peebles         97.04  34      PFAKE            01 22 40.0  +8.7
Q51A                                 LR      LR
      comp=Z,2µm,20.0s
WVT   Waverly         97.09  38      PFAKE            01 22 40.0  +8.4
WVT                                  LR      LR
      comp=Z,1µm,18.0s
R50A  Paris           97.17  35      PFAKE            01 22 40.0  +8.1
R50A                                 LR      LR
      comp=Z,1µm,21.0s
LBNH  Lisbon          97.25  24      PFAKE            01 22 40.0  +7.9
LBNH                                 LR      LR
      comp=Z,900nm,21.0s
KVTX  Kingsville      97.38  51      PFAKE            01 22 40.0  +7.0
KVTX                                 LR      LR
      comp=Z,1µm,18.0s
OXF   Oxford          97.47  40      PFAKE            01 22 40.0  +6.7
OXF                                  LR      LR
      comp=Z,800nm,20.0s
N55A  Marion Center   97.54  30      PFAKE            01 22 40.0  +6.5
N55A                                 LR      LR
      comp=Z,1µm,20.0s
BINY  Binghamton      97.55  27      PFAKE            01 22 40.0  +6.5
BINY                                 LR      LR
      comp=Z,1µm,20.0s
P53A  Whipple         97.57  32      PFAKE            01 22 40.0  +6.4
P53A                                 LR      LR
      comp=Z,900nm,20.0s
PLAL  Pickwick Lake   97.83  39      PFAKE            01 22 50.0  +15
PLAL                                 LR      LR
      comp=Z,1µm,20.0s
V48A  Smith Brothers  97.91  38      PFAKE            01 22 50.0  +15
V48A                                 LR      LR
      comp=Z,1µm,20.0s
LMN   Caledonia Moun  97.93  18      PFAKE            01 22 50.0  +15
LMN                                  LR      LR
      comp=Z,900nm,20.0s
TRY   Troy            97.96  26      PFAKE            01 22 50.0  +15
TRY                                  LR      LR
      comp=Z,1µm,19.0s
FFD   Franklin Falls  98.02  24      PFAKE            01 22 50.0  +14
FFD                                  LR      LR
      comp=Z,1µm,19.0s
S51A  Beattyville     98.03  35      PFAKE            01 22 50.0  +14
S51A                                 LR      LR
      comp=Z,1µm,21.0s
MCWV  Mont Chateau    98.11  31      PFAKE            01 22 50.0  +14
MCWV                                 LR      LR
      comp=Z,500nm,22.0s
SSPA  Standing Stone  98.12  29      PFAKE            01 22 50.0  +14
SSPA                                 LR      LR
      comp=Z,1µm,20.0s
Q54A  Coxs Mills      98.23  32      PFAKE            01 22 50.0  +13
Q54A                                 LR      LR
      comp=Z,900nm,18.0s
EMMW  East Machias    98.24  21      PFAKE            01 22 50.0  +14
EMMW                                 LR      LR
      comp=Z,900nm,20.0s
R53A  Hurricane       98.25  33      PFAKE            01 22 50.0  +13
R53A                                 LR      LR
      comp=Z,1µm,21.0s
KEST  Kesra           98.36 323      LR      LR       02 12 25.9
      comp=Z,1µm,18.1s,baz=354,slow=39
KEST  Kesra           98.36 323      PFAKE            01 22 50.0  +13
KEST                                 LR      LR
      comp=Z,1µm,18.0s
VBMS  Vicksburg       98.56  43      PFAKE            01 22 50.0  +12
VBMS                                 LR      LR
      comp=Z,2µm,19.0s
N59A  State Game Lan  98.73  28      PFAKE            01 22 50.0  +11
N59A                                 LR      LR
      comp=Z,900nm,19.0s
X48A  Hartselle       98.79  39      PFAKE            01 22 50.0  +11
X48A                                 LR      LR
      comp=Z,1µm,20.0s
QUA2  Belchertown     98.83  25      PFAKE            01 22 50.0  +11
QUA2                                 LR      LR
      comp=Z,800nm,19.0s
TZTN  Tazewell        98.93  35      PFAKE            01 22 50.0  +10
TZTN                                 LR      LR
      comp=Z,900nm,20.0s
PAGS  Pennsylvania G  98.94  29      PFAKE            01 22 50.0  +10
PAGS                                 LR      LR
      comp=Z,1µm,20.0s
W50A  Signal Mountai  99.11  37      PFAKE            01 22 50.0  +9.4
W50A                                 LR      LR
      comp=Z,900nm,20.0s
V51A  Loudon          99.12  36      PFAKE            01 22 50.0  +9.4
V51A                                 LR      LR
      comp=Z,1µm,18.0s
R55A  Marlinton       99.12  32      PFAKE            01 22 50.0  +9.4
R55A                                 LR      LR
      comp=Z,1µm,18.0s
GBN   Guysborough     99.17  16      PFAKE            01 22 50.0  +9.4
GBN                                  LR      LR
      comp=Z,900nm,20.0s
HAL   Halifax         99.38  18      PFAKE            01 22 50.0  +8.5
HAL                                  LR      LR
      comp=Z,700nm,21.0s
V52A  Sevierville     99.46  36      PFAKE            01 22 50.0  +7.9
V52A                                 LR      LR
      comp=Z,900nm,18.0s
YLE   Yale            99.46  26      PFAKE            01 22 50.0  +8.0
YLE                                  LR      LR
      comp=Z,800nm,19.0s
Y49A  Blount Mountai  99.58  39      PFAKE            01 22 50.0  +7.3
Y49A                                 LR      LR
      comp=Z,1µm,20.0s
U54A  Nelsons Funny   99.77  34      PFAKE            01 23 00.0  +16
U54A                                 LR      LR
      comp=Z,1µm,21.0s
X51A  Calhoun         99.83  37      PFAKE            01 23 00.0  +16
X51A                                 LR      LR
      comp=Z,1µm,20.0s
BLA   Blacksburg      99.86  33      PFAKE            01 23 00.0  +16
BLA                                  LR      LR
      comp=Z,1µm,21.0s
W52A  Murphy          99.89  37      PFAKE            01 23 00.0  +16
W52A                                 LR      LR
      comp=Z,1µm,19.0s
LRAL  Lakeview Retre  99.90  40      PFAKE            01 23 00.0  +16
LRAL                                 LR      LR
      comp=Z,900nm,19.0s
V53A  Saluda          99.98  35      PFAKE            01 23 00.0  +15
V53A                                 LR      LR
      comp=Z,1µm,20.0s
S57A  Dark Hollow, R 100.07  32      PFAKE            01 23 00.0  +15
S57A                                 LR      LR
      comp=Z,900nm,18.0s
Z50A  Ashland        100.30  39      PFAKE            01 23 00.0  +14
Z50A                                 LR      LR
      comp=Z,900nm,20.0s
R58B  Mineral        100.37  31      PFAKE            01 23 00.0  +14
R58B                                 LR      LR
      comp=Z,800nm,20.0s
CBN   Corbin Frederi 100.38  30      PFAKE            01 23 00.0  +14
CBN                                  LR      LR
      comp=Z,1µm,20.0s
S58A  Poland Farm, P 100.59  31      PFAKE            01 23 00.0  +13
S58A                                 LR      LR
      comp=Z,800nm,19.0s
Y52A  Lilburn        100.79  37      PFAKE            01 23 00.0  +12
Y52A                                 LR      LR
      comp=Z,1µm,20.0s
V56A  Mocksville     100.97  34      PFAKE            01 23 00.0  +11
V56A                                 LR      LR
      comp=Z,2µm,19.0s
ESLA  Sonseca Array  101.00 334      PFAKE            01 23 00.0  +11
ESLA                                 LR      LR
      comp=Z,2µm,21.0s
PAB   San Pablo      101.26 334      PFAKE            01 23 00.0  +10
PAB                                  LR      LR
      comp=Z,1µm,19.0s
BRAL  Brewton        101.30  41      PFAKE            01 23 00.0  +10
BRAL                                 LR      LR
      comp=Z,900nm,19.0s
152A  Waverly Hall   101.39  39      PFAKE            01 23 00.0  +9.2
152A                                 LR      LR
      comp=Z,1µm,18.0s
GOGA  Godfrey        101.45  37      PFAKE            01 23 00.0  +9.0
GOGA                                 LR      LR
      comp=Z,1µm,20.0s
T60A  Surry          101.55  30      PFAKE            01 23 00.0  +8.7
T60A                                 LR      LR
      comp=Z,900nm,20.0s
W57A  Gilead         101.75  34      PFAKE            01 23 00.0  +7.7
W57A                                 LR      LR
      comp=Z,1µm,20.0s
U59A  Littleton      101.75  32      PFAKE            01 23 00.0  +7.7
U59A                                 LR      LR
      comp=Z,700nm,19.0s
COI   Coimbra        102.09 337      PFAKE            01 23 10.0  +16
COI                                  LR      LR
      comp=Z,1µm,20.0s
253A  Americus       102.18  39      PFAKE            01 23 10.0  +16
253A                                 LR      LR
      comp=Z,1µm,19.0s
352A  Blakely        102.21  39      PFAKE            01 23 10.0  +16
352A                                 LR      LR
      comp=Z,600nm,20.0s
154A  Montrose       102.27  37      PFAKE            01 23 10.0  +15
154A                                 LR      LR
      comp=Z,800nm,19.0s
451A  Vernon         102.44  41      PFAKE            01 23 10.0  +15
451A                                 LR      LR
      comp=Z,2µm,20.0s
Y57A  Sumter         102.49  35      PFAKE            01 23 10.0  +14
Y57A                                 LR      LR
      comp=Z,2µm,21.0s
X58A  Rowland        102.54  34      PFAKE            01 23 10.0  +14
X58A                                 LR      LR
      comp=Z,1µm,20.0s
CNNC  Cliffs of the  102.64  32      PFAKE            01 23 10.0  +14
CNNC                                 LR      LR
      comp=Z,1µm,20.0s
Y58A  Scranton       102.92  34      PFAKE            01 23 10.0  +12
Y58A                                 LR      LR
      comp=Z,1µm,20.0s
453A  Whigham        103.02  39      PFAKE            01 23 10.0  +12
453A                                 LR      LR
      comp=Z,900nm,20.0s
255A  Hazlehurst     103.14  37      PFAKE            01 23 10.0  +11
255A                                 LR      LR
      comp=Z,1µm,19.0s
NHSC  New Hope       103.33  35      PFAKE            01 23 10.0  +11
NHSC                                 LR      LR
      comp=Z,900nm,20.0s
Y60A  Bolivia        103.52  33      PFAKE            01 23 10.0  +10
Y60A                                 LR      LR
      comp=Z,1µm,20.0s
257A  Skidaway Islan 103.83  36      PFAKE            01 23 10.0  +8.4
257A                                 LR      LR
      comp=Z,1µm,19.0s
555A  McAlpin        104.31  39      PFAKE            01 23 20.0  +16
555A                                 LR      LR
      comp=Z,800nm,20.0s
456A  Hilliard       104.33  38      PFAKE            01 23 20.0  +16
456A                                 LR      LR
      comp=Z,1µm,20.0s
656A  Willston       105.14  39      PFAKE            01 27 30.0  +8.2
656A                                 LR      LR
      comp=Z,1µm,21.0s
658A  Bunnell        105.77  38      PFAKE            01 27 30.0  +7.0
658A                                 LR      LR
      comp=Z,1µm,20.0s
957A  Wimauma        106.64  40      PFAKE            01 27 40.0  +15
957A                                 LR      LR
      comp=Z,900nm,19.0s
DWPF  Disney Wildern 106.72  39      PFAKE            01 27 40.0  +15
DWPF                                 LR      LR
      comp=Z,1µm,21.0s
MBAR  Mbarara        107.83 281      PFAKE            01 27 40.0  +13
MBAR                                 LR      LR
      comp=Z,500nm,20.0s
060A  Indiantown     108.15  39      PFAKE            01 27 40.0  +13
060A                                 LR      LR
      comp=Z,1µm,21.0s
TEIG  Tepich         108.74  49      PFAKE            01 27 40.0  +11
TEIG                                 LR      LR
      comp=Z,600nm,18.0s
061Z  Ochoppi        108.79  40      PFAKE            01 27 40.0  +11
061Z                                 LR      LR
      comp=Z,900nm,19.0s
TAM   Tamanrasset    110.53 317      PFAKE            01 27 40.0  +7.7
TAM                                  LR      LR
      comp=Z,500nm,19.0s
GTBY  Guantanamo Bay 116.71  39      PFAKE            01 28 00.0  +16
GTBY                                 LR      LR
      comp=Z,800nm,21.0s
ACON  Acoyapa        116.78  53      PFAKE            01 28 00.0  +16
ACON                                 LR      LR
      comp=Z,800nm,21.0s
GRTK  Grand Turk     117.39  35      PFAKE            01 28 00.0  +15
GRTK                                 LR      LR
      comp=Z,900nm,19.0s
SDDR  Presa de Saban 119.46  36      PFAKE            01 28 00.0  +11
SDDR                                 LR      LR
      comp=Z,1µm,19.0s
TOC1  Torodi Ar. Sit 120.28 314      PFAKE            01 28 00.0  +9.0
TOC1                                 LR      LR
      comp=Z,700nm,19.0s
TOC2  Torodi Ar. Sit 120.28 313      PFAKE            01 28 00.0  +9.0
TOC2                                 LR      LR
      comp=Z,600nm,18.0s
TOC3  Torodi Ar. Sit 120.30 313      PFAKE            01 28 00.0  +9.0
TOC3                                 LR      LR
      comp=Z,600nm,19.0s
TOA1  Torodi Ar. Sit 120.30 314     ePKPdf   PKPdf    01 27 50.0  -1.0
TOA1                                 LR      LR
      comp=Z,600nm,19.0s
TOC7  Torodi Ar. Sit 120.30 314      PFAKE            01 28 00.0  +9.0
TOC7                                 LR      LR
      comp=Z,600nm,18.0s
TOA0  Torodi Ar. Sit 120.30 314      PFAKE            01 28 00.0  +9.0
TOA0                                 LR      LR
      comp=Z,600nm,19.0s
TORD  Torodi Ar. Bea 120.30 314      PKP     PKPdf    01 27 50.0  -1.0
      comp=Z,0.7nm,0.7s,baz=15,slow=2.7,SNR=8.6
TORD                                 PP      PP       01 29 15.1  -1.0
      comp=Z,5.4nm,1.2s,baz=50,slow=7.7,SNR=6.1
TOB3  Torodi Ar. Sit 120.31 313      PFAKE            01 28 00.0  +8.9
TOB3                                 LR      LR
      comp=Z,600nm,19.0s
TOB5  Torodi Ar. Sit 120.31 314      PFAKE            01 28 00.0  +8.9
TOB5                                 LR      LR
      comp=Z,600nm,19.0s
TOA3  Torodi Ar. Sit 120.31 314      PFAKE            01 28 00.0  +8.9
TOA3                                 LR      LR
      comp=Z,600nm,19.0s
TOB4  Torodi Ar. Sit 120.32 314      PFAKE            01 28 00.0  +8.9
TOB4                                 LR      LR
      comp=Z,600nm,19.0s
TOC4  Torodi Ar. Sit 120.32 313      PFAKE            01 28 00.0  +8.9
TOC4                                 LR      LR
      comp=Z,600nm,19.0s
TOC5  Torodi Ar. Sit 120.33 314      PFAKE            01 28 00.0  +8.9
TOC5                                 LR      LR
      comp=Z,600nm,18.0s
SJG   San Juan       122.63  32      PFAKE            01 28 10.0  +14
SJG                                  LR      LR
      comp=Z,400nm,21.0s
QSPA  South Pole Qui 122.75 180     ePKPdf   PKPdf    01 27 53.9  -0.2
ANWB  Willy Bob      124.84  28      PFAKE            01 28 10.0  +10
ANWB                                 LR      LR
      comp=Z,700nm,22.0s
FDF   Fort de France 127.76  28      PFAKE            01 28 20.0  +14
FDF                                  LR      LR
      comp=Z,700nm,20.0s
ROSC  El Rosal       129.19  49      PKP     PKiKP    01 28 09.7  +0.5
      comp=Z,3.0nm,0.4s,baz=41,slow=19,SNR=4.0
GRGR  Grenville      129.89  30      PFAKE            01 28 20.0  +10
GRGR                                 LR      LR
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	comp=Z,500nm,18.0s						
SNAA	Sanae	136.95	196	PKPdf	PKiKP	01 28 22.9	+0.1
VNA3	Neumayer Olymp	138.72	194	PKPdf	PKiKP	01 28 26.6	+0.3
VNA1	Neumayer--Stat	138.90	195	PKPdf	PKiKP	01 28 27.1	+0.5
PTGA	Pitinga	141.98	37	*e*PKPdf	PKPdf	01 28 30.2	-1.6
ASCN	Ascension	146.62	313	PFAKE		01 28 50.0	+5.8
ASCN				LR	LR		
	comp=Z,295µm,18.0s						
LPAZ	La Paz	148.35	66	PKPbc	PKiKP	01 28 48.4	0.0
	comp=Z,14nm,0.8s,baz=344,slow=4.3,SNR=25						
LPAZ	La Paz	148.35	66	*e*PKPbc	PKPbc	01 28 46.0	-0.8
MNMC	Minye Minye	148.82	72	*e*PKPbc	PKPbc	01 28 48.0	+0.5
PB11	IPOC Station P	149.10	73	*e*PKPbc	PKiKP	01 28 48.9	-0.4
GO01	Chusmiza	149.43	72	*e*PKPbc	PKiKP	01 28 50.2	-0.2
PB01	IPOC Station P	149.89	75	*e*PKPbc	PKiKP	01 28 52.2	+1.4
GO03	Copiap	151.97	87	PFAKE		01 29 00.0	-4.0
GO03				LR	LR		
	comp=Z,800nm,19.0s						
PEL	Peldehue	152.92	99	*e*PKPab	PKPab	01 29 09.3	+1.5
PLCA	Paso Flores	153.18	116	PKPbc	PKiKP	01 28 58.9	+1.8
	comp=Z,2.2nm,0.8s,baz=38,slow=0.6,SNR=3.8						
PLCA	Paso Flores	153.18	116	*e*PKPbc	PKiKP	01 28 58.9	+1.8
PLCA				*e*PKPab	PKPab	01 29 10.0	+1.2
CPUP	Villa Florida	162.19	73	PKPab	PKPab	01 29 46.8	-1.1
	comp=Z,5.2nm,1.0s,baz=320,slow=7.9,SNR=4.0						

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*IDC **27** 01:14:41.6±0.5, 32°.96N×141°.87E, h0^{km}, mb4.3/35, mb1 4.4/41, mb1mx4.3/66, mbtmp4.3/41, ML3.7/4, Error ellipse: s-maj=12.6km s-min=11.8km az=73.0*
*JMA **27** 01:14:42.6±0.2, 33°.04N×141°.92E, h20^{km}, M4.3*
*BJI **27** 01:14:43.6±0.0, 32°.75N×141°.78E, h30^{km}, mb4.6/32, mB5.2/11, Ms5.5/7, Ms7 5.3/7*
*ISCJB **27** 01:14:45.9±0.3, 32°.94N±0°.04×141°.79E±0°.04, h40^{km}, mb4.5/70, Error ellipse: s-maj=5.4km s-min=4.2km az=8.3*
*MOS **27** 01:14:45.2±1.1, 32°.90N×141°.86E, h37^{km}, mb4.6/37, Error ellipse: s-maj=11.8km s-min=6.1km az=113.1*
*NEIC **27** 01:14:47.8±1.6, 33°.00N×141°.77E, h38^{km}±6^{km}, mb4.6/27, Error ellipse: s-maj=15.1km s-min=11.6km az=152.0*
ISC 27 01:14:47.7±0.5**, 33°.05N**±0°.05×**141°.87E**±0°.06**, h40^{km}, n149, σ1^{s}58**/154**, mb4.5**/70**, 4C-7D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	1.73	273	*e*Pn	Pn	01 15 12.6	-2.6
JHJ2	Mitsune	1.73	273	P	Pn	01 15 13.0	-2.2
JHJ2				*e*S	Sn	01 15 35.3	-0.8
JHCJ	Hachijojimakas	1.74	271	P	Pn	01 15 12.6	-2.9
JHCJ				*e*S	Sn	01 15 34.8	-1.7
JHJ	Hachijo jima 2	1.76	273	Pn	Pn	01 15 13.1	-2.6
	156nm,0.3s,baz=129,slow=18,SNR=18						
JHJ				Sn	Sn	01 15 35.8	-1.0
	259nm,0.3s,baz=255,slow=22,SNR=9.6						
JAOM	Aogashimamukai	1.87	252	P	Pn	01 15 15.0	-2.2
JOD2	Odawara 2	3.20	315	P	Pn	01 15 33.3	-2.2
JOD2				*e*S	Sn	01 16 11.5	-0.9
JYN	Shimob	3.69	312	P	Pn	01 15 41.6	-0.6
JAG	Ashikaga	3.92	330	P	Pn	01 15 44.2	-1.1
JIE	Ise	4.51	289	P	Pn	01 15 52.2	-1.3
MJAR	Matsushiro Arr	4.61	320	Pn	Pn	01 15 54.3	-0.6
	0.8nm,0.3s,baz=160,slow=12,SNR=12						
MAJO	Matsushiro	4.61	320	*e*Pn	Pn	01 15 54.8	-0.1
MAJO	Matsushiro	4.61	320	*e*P	Pn	01 15 54.8	-0.1
MAT	Matsushiro	4.61	320	P	Pn	01 15 54.3	-0.6
MAT				*e*S	Sn	01 16 44.4	-2.8
MAT	Matsushiro	4.61	320	P	Pn	01 15 54.3	-0.6
MJB9	Matsu-Tunnel	4.62	320	*e*Pn	Pn	01 15 54.6	-0.3
JFT	Otama	4.63	345	*e*S	Sn	01 16 46.0	-1.8
JNU	Nakatsue	9.23	273	Pn	Pn	01 16 57.6	-0.6
	0.3nm,0.3s,baz=24,slow=18,SNR=2.7						
NMR	Nemuro--Hokkai	10.74	15	⇓*i*P	Pn	01 17 14.3	-4.6
GLVR	Golovnino	11.05	14	P	Pn	01 17 19.3	-3.8
ASAJ	Asahikawa	11.07	3	Pn	Pn	01 17 20.4	-2.9
	2.0nm,0.3s,baz=211,slow=11,SNR=5.1						
ASAJ				Sn	Sn	01 19 20.1	-5.6
	0.4nm,0.3s,baz=118,slow=18,SNR=2.4						
GRPR	Tuman	11.35	14	*e*P	Pn	01 17 23.4	-3.7
YUK	Yuzh-Kuril'sk	11.40	15	⇓*e*P	Pn	01 17 31.1	+3.2
KSRS	Korea Array	12.22	295	Pn	Pn	01 17 42.7	+3.5
	0.4nm,0.3s,baz=108,slow=13,SNR=9.7						
KS15	Wonju Array Si	12.25	295	*e*Pn	Pn	01 17 42.7	+3.2
USRK	Ussuriysk Ar.	13.54	328	Pn	Pn	01 17 57.0	-0.1
	0.1nm,0.3s,baz=123,slow=10,SNR=3.0						
USRK	Ussuriysk Ar.	13.54	328	P	Pn	01 17 57.0	-0.1
KLR	Kul'dur	17.85	338	P	Pn	01 18 50.8	-2.0
	0.3nm,0.3s,baz=139,slow=10,SNR=7.6						
NJ2	Nanjing	19.43	273	*e*P	P	01 19 10.3	-0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GUMO	Guam	19.56	171	P	P	01 19 11.8	-0.3
	2.6nm,0.3s,baz=333,slow=18,SNR=4.2						
GUMO				S	S	01 22 36.3	-15
	11nm,0.3s,baz=345,slow=23,SNR=7.1						
PETK	Petropavlovsk-	23.05	25	P	P	01 19 50.2	+0.9
	2.0nm,0.9s,baz=158,slow=9.2,SNR=2.4						
PEA1	Petropavlovsk-	23.05	25	*e*P	P	01 19 50.2	+0.9
ZEA	Zeya	23.16	338	*e*P	P	01 19 51.4	+0.9
ZEA				pmax	pmax		
	comp=N,49nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.6s						
HHC	Hu-ho-hao-te	25.35	297	P	P	01 20 10.5	-0.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
H11N2	WAKE ISLAND Hy	25.96	114	T	T	01 46 08.9	
	baz=310,slow=75,SNR=59						
H11N1	WAKE ISLAND Hy	25.97	115	T	T	01 46 11.6	
	baz=310,slow=75,SNR=53						
H11N3	WAKE ISLAND Hy	25.98	114	T	T	01 46 10.2	
	baz=310,slow=75,SNR=59						
H11S3	WAKE ISLAND Hy	26.54	117	T	T	01 46 53.9	
	baz=312,slow=76,SNR=77						
H11S1	WAKE ISLAND Hy	26.55	117	T	T	01 46 54.0	
	baz=312,slow=76,SNR=82						
H11S2	WAKE ISLAND Hy	26.56	117	T	T	01 46 55.1	
	baz=312,slow=76,SNR=119						
XAN	Xi'an	27.42	281	P	P	01 20 26.8	-2.9
XAN				pP	pP	01 20 35.0	-3.8
XAN				pmax	pmax		
	comp=Z,11nm,2.0s						
ULN	Ulaanbaatar	30.05	310	*e*P	P	01 20 54.7	+1.6
	comp=Z,11nm,0.6s						
ULN	Ulaanbaatar	30.05	310	*e*P	P	01 20 54.7	+1.6
ULN				pmax	pmax		
	comp=Z,11nm,0.6s						
SONA0	Songino Array	30.47	310	*e*P	P	01 20 58.2	+1.4
SONM	Songino Array	30.47	310	P	P	01 20 58.2	+1.4
	comp=Z,5.4nm,0.6s,baz=108,slow=9.0,SNR=10						
SONM	Songino Array	30.47	310	P	P	01 20 58.2	+1.4
SONM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SEY	Seymchan	30.64	9	P	P	01 20 58.4	+0.5
	comp=Z,2.3nm,0.9s,baz=168,slow=14,SNR=4.2						
LZH	Lanzhou	31.33	286	*e*P	P	01 21 06.0	+1.5
LZH				pP	pP	01 21 12.3	-1.4
LZH				sP	sP	01 21 15.3	-2.4
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
CD2	Chengdu	32.29	277	*e*P	P	01 21 11.0	-1.8
GTA	Gaotai	34.28	293	*e*P	P	01 21 28.8	-1.4
GTA				pP	sP	01 21 41.5	-2.0
GTA				sP	pwP	01 21 45.8	-1.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,180nm,4.6s						
GTA				LR	LR		
	comp=Z,3µm,11.7s						
GTA				LR	LR		
	comp=Z,3µm,12.7s						
GTA				LR	LR		
	comp=Z,3µm,13.0s						
KMI	Kunming	34.94	267	P	P	01 21 36.0	-0.2
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
CM31	Chiang Mai Arr	41.02	260	*e*P	P	01 22 26.9	-0.3
	comp=Z,14nm,0.4s						
CMAR	Chiang Mai Arr	41.02	260	P	P	01 22 26.9	-0.3
	comp=Z,1.1nm,0.3s,baz=53,slow=7.2,SNR=4.6						
WMQ	Urumqi	43.09	301	*e*P	P	01 22 46.3	+2.4
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,200nm,7.9s						
WMQ				LR	LR		
	comp=Z,2µm,13.7s						
WMQ				LR	LR		
	comp=Z,3µm,14.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.5s						
DGZ	Jazzator, Alta	43.12	309	*c* *i*P	P	01 22 44.4	+0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA1	Zalesovo Array	44.95	315	*e*P	P	01 22 57.5	-1.0
ZALV	Zalesovo Beam	44.95	315	P	P	01 22 57.5	-1.0
	comp=Z,1.7nm,0.6s,baz=99,slow=6.1,SNR=3.8						
MK31	Makanchi Array	46.65	305	*e*P	P	01 23 12.0	-0.1
	comp=Z,3.9nm,0.8s						
MK31	Makanchi Array	46.65	305	*e*P	P	01 23 12.0	-0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK32	Makanchi Array	46.65	305	*e*P	P	01 23 11.7	-0.5
MKAR	Makanchi Array	46.65	305	P	P	01 23 11.7	-0.5
	comp=Z,4.2nm,0.6s,baz=87,slow=7.2,SNR=16						
MTN	Manton Dam	46.77	194	*e*P	P	01 23 11.3	-1.9
	comp=Z,24nm,1.0s						
KURK	Kurchatov	48.76	311	*e*P	P	01 23 29.4	+1.0
	comp=Z,11nm,0.7s						
KURK	Kurchatov	48.76	311	*e*P	P	01 23 29.4	+1.0
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
KURBB	Kurchatov Arra	48.82	311	P	P	01 23 28.1	-0.7
	comp=Z,2.7nm,0.6s,baz=92,slow=8.5,SNR=2.8						
KDAK	Kodiak Island	49.87	40	P	P	01 23 36.1	-0.6
	comp=Z,4.4nm,0.7s,baz=279,slow=16,SNR=2.9						
KDAK	Kodiak Island	49.87	40	*e*P	P	01 23 36.1	-0.6
	comp=Z,30nm,1.5s						
COLA	College	52.28	31	⇓*e*P	P	01 23 57.7	+3.0
COLA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSH	Kashi	52.47	297	*e*P	P	01 24 00.5	+3.8
KSH				pP	pwP	01 24 12.5	-2.7
KSH				S	S	01 31 26.0	+5.7
KSH				LR	LR		
	comp=Z,3µm,18.4s						
KSH				LR	LR		
	comp=Z,4µm,14.2s						
HDA	Harding Lake	52.66	31	*e*P	P	01 23 59.5	+1.9
	comp=Z,3.7nm,0.7s						
ILAR	Eielson Array	52.69	31	P	P	01 23 57.9	+0.1
	comp=Z,1.7nm,0.7s,baz=262,slow=5.7,SNR=12						
ILB	Eielson Array	52.69	31	*e*P	P	01 23 58.2	+0.4
	comp=Z,2.9nm,0.6s						
AAK	Ala-Archa	52.79	301	P	P	01 24 00.1	+1.0
	comp=Z,2.0nm,0.5s,baz=294,slow=1.5,SNR=2.3						
AAK	Ala-Archa	52.79	301	⇓*e*P	P	01 24 01.9	+2.8
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CTA	Charters Tower	53.00	175	P	P	01 23 58.7	-1.8
	comp=Z,6.7nm,1.0s,baz=338,slow=16,SNR=2.4						
WRAB	Tennant Creek	53.17	189	⇑*e*P	P	01 24 00.2	-1.6
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	53.18	189	*e*P	P	01 24 00.5	-1.4
	comp=Z,62nm,1.7s						
WR1	Warramunga Arr	53.18	189	*e*P	P	01 23 59.8	-2.0
WRA	Warramunga Arr	53.18	189	P	P	01 23 59.8	-2.0
	comp=Z,10nm,0.7s,baz=357,slow=9.2,SNR=76						
BRVK	Borovoye	53.64	315	⇑*e*P	P	01 24 05.2	+0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	55.52	303	*e*P	P	01 24 19.8	+1.0
	comp=Z,4.9nm,0.7s						
KK31	Karatay Array	55.52	303	*e*P	P	01 24 19.8	+1.0
KK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KKAR	Karatay Array	55.52	303	*e*P	P	01 24 20.0	+1.2
	comp=Z,4.9nm,0.7s						
KKAR	Karatay Array	55.52	303	*e*P	P	01 24 20.0	+1.2
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NIL	Nilore	56.31	291	*e*P	P	01 24 25.1	+0.5
	comp=Z,17nm,0.6s						
NIL	Nilore	56.31	291	*e*P	P	01 24 25.1	+0.5
NIL				pmax	pmax		
	comp=Z,17nm,0.6s						
EPYK	Eagle Plains	56.82	28	*e*P	P	01 24 29.3	+1.6
	comp=Z,6.0nm,0.8s						
AS31	Alice Springs	56.91	189	*e*P	P	01 24 28.3	-0.4
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	56.91	189	P	P	01 24 27.6	-1.2
	comp=Z,2.9nm,0.6s,baz=17,slow=12,SNR=22						
ASAR	Alice Springs	56.91	189	P	P	01 24 27.6	-1.2
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	57.78	26	P	P	01 24 34.5	+0.2
	comp=Z,1.7nm,0.5s,baz=278,slow=5.6,SNR=4.1						
INK	Inuvik	57.78	26	*e*P	P	01 24 34.5	+0.2
	comp=Z,2.7nm,0.8s						
ARU	Arti	59.63	320	P	P	01 24 46.8	-0.6
	comp=Z,2.8nm,0.6s,baz=80,slow=6.0,SNR=4.5						
ARU	Arti	59.63	320	*e*P	P	01 24 47.0	-0.4
	comp=Z,7.7nm,0.7s						
ARU	Arti	59.63	320	*d* *i*P	P	01 24 46.8	-0.6
ARU						01 25 30.8	
ARU				S	S	01 32 56.7	+2.0
ARU				SS	SS	01 36 46.5	-3.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ABKAR	Akbulak array	60.84	312	*e*P	P	01 24 55.2	-0.7
AKTO	Aktyubinsk	61.66	314	P	P	01 25 01.8	+0.5
	comp=Z,2.1nm,0.7s,baz=72,slow=18,SNR=4.0						
KIRV	Kirov	63.67	324	P	P	01 25 14.1	-0.5
	comp=Z,8.4nm,0.5s,baz=135,slow=1.4,SNR=3.3						
STKA	Stephens Creek	64.58	180	P	P	01 25 19.8	-1.0
	comp=Z,2.9nm,0.7s,baz=334,slow=10,SNR=4.2						
STKA	Stephens Creek	64.58	180	*e*P	P	01 25 19.8	-1.0
	comp=Z,10nm,1.8s						
GEYT	Alibeck	66.14	301	P	P	01 25 31.6	+0.5
	comp=Z,1.4nm,0.9s,baz=208,slow=5.9,SNR=3.9						
YKA	Yellowknife Ar	67.07	29	P	P	01 25 36.7	+0.1
	comp=Z,0.4nm,0.6s,baz=305,slow=6.3,SNR=4.8						
YKB5	Yellowknife Ar	67.07	29	*e*P	P	01 25 36.7	+0.1
ARCES	ARCESS Array B	67.86	340	P	P	01 25 41.7	+0.3
	comp=Z,1.1nm,0.6s,baz=64,slow=11,SNR=3.9						
VSR	Storozhevoye	72.20	320	⇓*e*P	P	01 26 08.4	+0.1
VSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FIA0	FINESS Array S	72.52	333	*e*P	P	01 26 09.8	-0.3
FIA0	FINESS Array S	72.52	333	*e*P	P	01 26 09.8	-0.3
FINES	FINESS Array B	72.52	333	P	P	01 26 09.8	-0.3
	comp=Z,2.3nm,0.7s,baz=101,slow=6.0,SNR=5.6						
KBZ	Khabaz	73.81	312	P	P	01 26 18.4	+0.4
	comp=Z,3.0nm,0.7s,baz=80,slow=6.2,SNR=6.0						
KVAR	Kislovodsk Arr	73.82	312	P	P	01 26 19.9	+1.6
	comp=Z,2.8nm,0.7s,baz=281,slow=19,SNR=3.2						
KIV	Kislovodsk	73.83	312	*e*P	P	01 26 18.5	+0.2
	comp=Z,6.7nm,0.7s						
KIV	Kislovodsk	73.83	312	*e*P	P	01 26 16.5	-1.7
KIV				pmax	pmax		
	comp=Z,26nm,0.9s						
BEKR	Beckworth	74.98	52	*e*P	P	01 26 26.3	+1.1
	comp=Z,6.4nm,1.1s						
NVAR	Mina Array Bea	77.09	53	P	P	01 26 38.4	+1.2
	comp=Z,1.7nm,0.7s,baz=289,slow=5.9,SNR=10						
BOZ	Bozeman (W)	77.35	44	*e*P	P	01 26 39.2	+0.7
	comp=Z,3.3nm,1.0s						
BOZ	Bozeman (W)	77.35	44	*e*P	P	01 26 39.2	+0.7
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	Malin Array Be	77.69	323	P	P	01 26 39.2	-0.8
	comp=Z,2.0nm,0.7s,baz=47,slow=6.4,SNR=5.9						
AKBB	Malin Array Si	77.69	323	*e*P	P	01 26 39.2	-0.8
	comp=Z,3.9nm,0.5s						
AKBB	Malin Array Si	77.69	323	*e*P	P	01 26 39.3	-0.8
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HFS	Hagfors	77.88	336	P	P	01 26 40.7	-0.2
	comp=Z,3.5nm,0.9s,baz=122,slow=1.9,SNR=9.7						
NC204	NORSAR Array S	77.97	338	*e*P	P	01 26 41.5	0.0
	comp=Z,34nm,1.6s						
NB2	NORSAR Subarra	78.01	338	P	P	01 26 41.4	-0.3
	comp=Z,0.8nm,0.6s,baz=41,slow=5.6						
NB200	NORSAR Array S	78.01	338	*e*P	P	01 26 41.4	-0.3
NOA	NORSAR Array B	78.01	338	P	P	01 26 41.4	-0.3
	comp=Z,1.2nm,0.6s,baz=40,slow=5.6,SNR=11						
KLNR	Kaliningrad	79.34	330	⇓*e*P	P	01 26 49.1	+0.1
KLNR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KONO	Kongsberg	79.59	338	⇑*e*P	P	01 26 51.6	+1.3
KONO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
DUG	Dugway, Tooele	79.69	49	*e*P	P	01 26 52.6	+1.1
	comp=Z,4.8nm,1.0s						
DUG	Dugway, Tooele	79.69	49	*e*P	P	01 26 52.6	+1.1
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PD31	Pinedale Array	80.20	45	*e*P	P	01 26 54.8	+0.5
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	80.20	45	P	P	01 26 54.8	+0.5
	comp=Z,0.8nm,0.6s,baz=279,slow=2.8,SNR=4.2						
SHPR	Sheep Range	80.23	53	*e*P	P	01 26 55.8	+1.3
	comp=Z,2.2nm,0.8s						
P17A	Butcher Ranch,	81.41	48	*e*P	P	01 27 02.0	+1.2
	comp=Z,6.3nm,1.0s						
BR101	Keskin Array S	81.79	312	*e*P	P	01 27 03.2	+0.5
BRTR	Keskin Array B	81.79	312	P	P	01 27 03.2	+0.5
	comp=Z,2.1nm,0.7s,baz=119,slow=5.3,SNR=6.3						
RAYN	Ar Rayn	82.54	293	*e*P	P	01 27 06.7	-0.1
	comp=Z,7.4nm,0.8s						
RAYN	Ar Rayn	82.54	293	*e*P	P	01 27 06.7	-0.1
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PV18	Skein Mesa, Pa	83.28	48	*e*P	P	01 27 11.9	+1.3
PV13	Radium Mtn., P	83.39	48	*e*P	P	01 27 12.5	+1.3
ASF	Jabal al Asfar	84.06	305	P	P	01 27 15.0	+0.5
	comp=Z,1.3nm,0.4s,baz=355,slow=8.3,SNR=3.6						
MMAI	Mount Meron Ar	84.59	306	P	P	01 27 17.7	+0.5
	comp=Z,4.2nm,0.9s,baz=38,slow=4.2,SNR=5.0						
CLL	Collm	84.74	331	*e*P	P	01 27 17.9	+0.5
CLL	Collm	84.74	331	*e*P	P	01 27 17.0	-0.5
CLL				*e**SP	sP	01 27 30.0	-0.9
CLL	Collm	84.74	331	*e*P	P	01 27 17.0	-0.5
CLL				*e*pP	sP	01 27 30.0	-0.9
EKA	Eskdalemuir Ar	87.01	341	P	P	01 27 28.8	+0.2
	comp=Z,0.4nm,0.6s,baz=18,slow=5.3,SNR=3.0						
EKA	Eskdalemuir Ar	87.01	341	P	P	01 27 28.8	+0.2
EKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	92.24	53	P	P	01 27 54.6	+0.8
	comp=Z,0.9nm,0.6s,baz=325,slow=3.5,SNR=6.3						
VAE	Valguarnera	94.45	321	P	P	01 28 05.4	+1.6
	comp=Z,1.5nm,0.3s,baz=351,slow=7.8,SNR=6.2						
TOA1	Torodi Ar. Sit	120.38	314	*e*PKPdf	PKPdf	01 33 34.4	-0.9
TORD	Torodi Ar. Bea	120.38	314	PKP	PKPdf	01 33 34.4	-0.9
	comp=Z,0.3nm,0.5s,baz=2.8,slow=2.3,SNR=4.7						
LPAZ	La Paz	148.19	66	PKPbc	PKPbc	01 34 31.3	+0.6
	comp=Z,3.0nm,0.6s,baz=285,slow=3.0,SNR=12						

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*ISCJB **27** 01:15:17.3±0.9, 36°.1N±0°.2×70°.8E±0°.2, h102^{km}, mb3.6/7, Error ellipse: s-maj=28.4km s-min=19.5km az=138.1*
*IDC **27** 01:15:26.9±10.0, 36°.20N×70°.79E, h176^{km}±96^{km}, mb3.3/8, mb1 3.4/9, mb1mx3.1/54, mbtmp3.8/9, Error ellipse: s-maj=49.5km s-min=18.0km az=27.0*
ISC 27 01:15:18.9±1.2**, 36°.1N**±0°.2×**70°.8E**±0°.2**, h102^{km}, n9, σ0^{s}23**/9**, mb3.7**/7**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	13.77	35	P	P	01 18 34.8	+0.1
	baz=207,slow=13,SNR=2.0						
ZALV	Zalesovo Beam	20.40	24	P	P	01 19 47.1	-0.3
	4.1nm,0.4s,baz=214,slow=11,SNR=11						
FINES	FINESS Array B	37.74	326	P	P	01 22 24.2	-0.2
	2.1nm,0.8s,baz=113,slow=11,SNR=1.9						
ARCES	ARCESS Array B	41.47	338	P	P	01 22 55.3	0.0
	0.7nm,0.5s,baz=116,slow=8.4,SNR=4.6						
HFS	Hagfors	43.29	322	P	P	01 23 10.2	+0.1
	0.9nm,0.4s,baz=96,slow=12,SNR=5.7						
NOA	NORSAR Array B	44.61	323	P	P	01 23 20.7	0.0
	0.8nm,0.7s,baz=96,slow=7.7,SNR=3.7						
TORD	Torodi Ar. Bea	65.50	269	P	P	01 25 51.6	0.0
	0.2nm,0.7s,baz=24,slow=6.6,SNR=2.5						
WRA	Warramunga Arr	81.93	122	P	P	01 27 27.7	+0.3
	0.6nm,0.4s,baz=310,slow=5.3,SNR=4.2						
ASAR	Alice Springs	84.17	125	P	P	01 27 38.6	-0.3
	0.4nm,0.8s,baz=317,slow=5.3,SNR=3.5						

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*TIR **27** 01:24:22.3, 42°.18N×23°.27E, h7^{km}, Md4.1/4*
*ISK **27** 01:24:23.2, 42°.05N×23°.05E, h8^{km}, ML4.2/28*
*ISCJB **27** 01:24:24.8±0.3, 41°.962N±0°.008×23°.19E±0°.01, h5^{km}±2^{km}, mb3.3/6, Error ellipse: s-maj=1.6km s-min=1.3km az=144.1*
*NEIC **27** 01:24:24.7±0.0, 41°.94N×23°.20E, h2^{km}, mb4.0/4, ML3.9(THE), ML3.9(SOF), After SOF.*
NEIC Felt at Bansko.
*SOF **27** 01:24:25.5, 41°.97N×23°.28E, h2^{km}*
*PDG **27** 01:24:25.7±0.6, 41°.95N×23°.19E, h13^{km}, ML3.5/10, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*SKO **27** 01:24:25.2, 41°.93N×23°.23E, h19^{km}, M3.7, ML4.0*
*IDC **27** 01:24:26.1±0.9, 41°.99N×23°.26E, h0^{km}, mb3.3/7, mb1 3.5/13, mb1mx3.3/50, mbtmp3.4/13, ML3.2/7, Error ellipse: s-maj=13.7km s-min=10.5km az=32.0*
*ATH **27** 01:24:26.2, 41°.89N×23°.24E, h26^{km}, ML3.9/14, Error ellipse: s-maj=1.4km s-min=0.7km az=173.0*
*BEO **27** 01:24:26.3±0.2, 41°.95N×23°.21E, h12^{km}±2^{km}, ML3.9/21*
*PRU **27** 01:24:27.4±0.0, 42°.23N×23°.22E, h0^{km}*
*THE **27** 01:24:27.2, 41°.85N×23°.21E, h6^{km}, ML3.6/18, Error ellipse: s-maj=0.9km s-min=0.6km az=176.0*
*SIK **27** 01:24:56.8, 42°.39N×20°.44E, h0^{km}, M2.4*
ISC 27 01:24:26.2±0.9**, 41°.95N**±0°.01×**23°.23E**±0°.01**, h8^{km}**±**6^{km}, n398, σ1^{s}38**/499**, mb3.5**/6**, 38C-27D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	Krupnik	0.13	234	⇑*i*Pg	Pg	01 24 29.1	0.0
KKB				*i* Sg	Sg	01 24 31.3	+0.1
KKB	Krupnik	0.13	234	P	Pg	01 24 29.1	0.0
MMB	Musomiste	0.52	133	⇑*i*Pg	Pg	01 24 36.7	+0.5
MMB				*i* Sg	Sb	01 24 44.5	-0.7
MMB	Musomiste	0.52	133	P	Pg	01 24 36.7	+0.5
VTS	Vitosha	0.67	0	*e*Pg	Pg	01 24 37.7	-1.5
VTS	Vitosha	0.67	0	*e*Pg	Pg	01 24 37.9	-1.3
VTS				*e*Sg	Sg	01 24 47.2	-0.8
VTS	Vitosha	0.67	0	⇓*i*P	Pg	01 24 38.4	-0.8
VTS				S	Sg	01 24 47.3	-0.8
VTS	Vitosha	0.67	0	⇑*i*Pg	Pg	01 24 38.6	-0.7
VTS				*i* Sg	Sg	01 24 47.4	-0.6
VTS	Vitosha	0.67	0	P	Pg	01 24 38.5	-0.8
NVR	Nevrokopi	0.76	141	P	Pg	01 24 40.4	-0.5
NVR				S	Sg	01 24 50.3	-0.5
	6µm,0.2s						
NVR	Nevrokopi	0.76	141	P	Pg	01 24 40.4	-0.5
NVR				S	Sg	01 24 50.3	-0.5
NVR				AML	AML	01 24 50.6	
	comp=E,12940µm,0.4s						
NVR				AML	AML	01 24 56.3	
	comp=N,10736µm,0.3s						
VAY	Valandovo	0.80	219	*e*Pg	Pg	01 24 41.2	-0.3
VAY				*e*Sg	Sg	01 24 51.7	-0.1
VAY	Valandovo	0.80	219	⇑*i*Pg	Pg	01 24 41.1	-0.4
VAY				*i* Sg	Sg	01 24 52.0	+0.1
VAY				*e*Lg	Lg	01 24 52.1	
	comp=E,4µm,0.6s						
VAY				*e*Lg	Lg	01 24 55.1	
	comp=N,4µm,0.4s						
KNT	Kendrikon	0.82	198	PG	Pg	01 24 41.3	-0.7
KNT	Kendrikon	0.82	198	P	Pg	01 24 41.1	-0.9
KNT				S	Sg	01 24 51.7	-1.0
	comp=N,9µm,0.3s						
KNT	Kendrikon	0.82	198	⇑*i*Pg	Pg	01 24 41.3	-0.7
KNT				*i* Sg	Sg	01 24 51.7	-1.0
KNT	Kendrikon	0.82	198	P	Pg	01 24 41.3	-0.7
KNT				S	Sg	01 24 51.4	-1.3
KNT				AML	AML	01 24 56.4	
	comp=E,15287µm,0.2s						
KNT				AML	AML	01 24 56.8	
	comp=N,19931µm,0.4s						
SRS	Serrai	0.87	162	*e*Pg	Pg	01 24 42.4	-0.5
SRS				*e*Sg	Sg	01 24 54.3	0.0
SRS	Serrai	0.87	162	P	Pg	01 24 42.4	-0.5
SRS				S	Sg	01 24 53.9	-0.4
	comp=N,7µm,0.6s						
SRS	Serrai	0.87	162	⇑*i*Pg	Pg	01 24 42.5	-0.5
SRS				*i* Sg	Sg	01 24 54.3	0.0
SRS	Serrai	0.87	162	P	Pg	01 24 42.4	-0.5
SRS				S	Sg	01 24 54.4	0.0
SRS				AML	AML	01 24 58.4	

	comp=N,14600µm,0.3s						
SRS				AML	AML	01 24 59.5	
	comp=E,11670µm,0.4s						
PGB	Panagyurishte	0.92	49	P	Pg	01 24 42.9	-1.1
PLD	Plovdiv	1.11	81	PN	Pg	01 24 47.0	-0.6
PLD				SN	Sn	01 25 04.6	+1.1
PLD	Plovdiv	1.11	81	*e*Pg	Pg	01 24 46.9	-0.6
PLD				*e*Sg	Sn	01 25 03.3	-0.2
PLD	Plovdiv	1.11	81	⇓*i*Pg	Pg	01 24 46.8	-0.7
PLD				*i* Sg	Sn	01 25 03.8	+0.3
PLD	Plovdiv	1.11	81	P	Pg	01 24 46.9	-0.7
SOH	Sokhos	1.13	175	*e*Pn	Pg	01 24 47.0	-0.8
SOH	Sokhos	1.13	175	P	Pg	01 24 47.0	-0.8
SOH				S	Sg	01 25 01.9	-0.6
	comp=E,11µm,0.5s						
SOH	Sokhos	1.13	175	⇑*i*Pg	Pg	01 24 47.1	-0.8
SOH				*i* Sg	Sg	01 25 02.6	+0.1
SOH	Sokhos	1.13	175	P	Pg	01 24 47.0	-0.8
SOH				S	Sg	01 25 02.0	-0.5
SOH				AML	AML	01 25 04.5	
	comp=N,33203µm,0.5s						
SOH				AML	AML	01 25 07.4	
	comp=E,11936µm,0.4s						
RZN	Rozhen	1.14	103	P	Pg	01 24 47.4	-0.7
THE	Thessaloniki	1.33	189	P	Pn	01 24 50.3	-0.7
THE				S	Sb	01 25 07.6	-0.9
	comp=E,5µm,0.5s						
THE	Thessaloniki	1.33	189	*i* Pg	Pn	01 24 50.4	-0.6
THE				*i* Sg	Sb	01 25 08.6	+0.1
THE	Thessaloniki	1.33	189	P	Pn	01 24 50.6	-0.4
THE				S	Sb	01 25 08.3	-0.2
THE				AML	AML	01 25 10.2	
	comp=E,13509µm,0.5s						
THE				AML	AML	01 25 12.3	
	comp=N,6078µm,0.5s						
KVLA	Kavala	1.33	139	P	Pn	01 24 50.5	-0.6
KVLA				S	Sb	01 25 08.4	-0.2
KVLA				AML	AML	01 25 10.8	
	comp=N,18435µm,0.5s						
KVLA				AML	AML	01 25 11.6	
	comp=E,12580µm,0.4s						
SKO	Skopje	1.33	272	*e*Pg	Pn	01 24 50.6	-0.5
SKO				*e*Sg	Sb	01 25 08.8	+0.1
SKO	Skopje	1.33	272	*i* Pg	Pn	01 24 50.6	-0.5
SKO				*i* Sg	Sb	01 25 08.8	+0.1
HORT	Hortiatis	1.35	184	PN	Pn	01 24 49.8	-1.6
HORT	Hortiatis	1.35	184	P	Pn	01 24 50.6	-0.8
HORT				S	Sb	01 25 08.2	-1.0
	comp=E,3µm,0.4s						
HORT	Hortiatis	1.35	184	P	Pn	01 24 50.9	-0.5
HORT				S	Sb	01 25 08.4	-0.8
HORT				AML	AML	01 25 11.7	
	comp=N,6490µm,0.5s						
HORT				AML	AML	01 25 11.7	
	comp=E,5180µm,0.3s						
KAVA	Kavala	1.35	134	P	Pn	01 24 50.3	-1.1
KAVA				S	Sb	01 25 08.9	-0.3
	comp=E,7µm,0.6s						
KAVA	Kavala	1.35	134	P	Pn	01 24 50.5	-0.9
KAVA				S	Sb	01 25 09.4	+0.2
KAVA				AML	AML	01 25 14.7	
	comp=E,15676µm,0.7s						
KAVA				AML	AML	01 25 15.7	
	comp=N,13146µm,0.5s						
BARS	Barje	1.36	310	*e*Pg	Pn	01 24 50.7	-0.8
BARS	Barje	1.36	310	*e*Pn	Pg	01 25 02.9	+11
BARS				*e*Sg	Sb	01 25 09.6	+0.1
BARS				*e*Sn	Sg	01 25 31.2	+21
ZAPS	Zavoj	1.40	342	*e*Pg	Pn	01 24 52.1	0.0
ZAPS				*e*Sg	Sb	01 25 10.6	0.0
PLG	Polygyros	1.58	174	P	Pn	01 24 54.1	-0.4
PLG				S	Sn	01 25 14.5	-0.6
	comp=N,3µm,0.5s						
PLG	Polygyros	1.58	174	P	Pn	01 24 54.3	-0.2
PLG				S	Sn	01 25 14.7	-0.5
PLG				AML	AML	01 25 18.7	
	comp=E,5605µm,0.4s						
PLG				AML	AML	01 25 19.2	
	comp=N,6248µm,0.5s						
KDZ	Kurdzhali	1.66	99	PN	Pn	01 24 54.7	-0.9
KDZ				SN	Sb	01 25 17.9	-0.3
KDZ	Kurdzhali	1.66	99	P	Pn	01 24 54.8	-0.9
OUR	Ouranopolis	1.71	160	PN	Pn	01 24 56.0	-0.2
OUR				SN	Sb	01 25 19.9	+0.5
OUR	Ouranopolis	1.71	160	P	Pn	01 24 55.6	-0.6
OUR				S	Sn	01 25 17.6	-0.6
OUR	Ouranopolis	1.71	160	P	Pn	01 24 55.6	-0.6
OUR				AML	AML	01 25 21.5	
	comp=E,10502µm,0.5s						
OUR				AML	AML	01 25 21.9	
	comp=N,18881µm,0.6s						
DIM	Dimitrovgrad	1.72	86	P	Pb	01 24 58.1	0.0
BLKB	Belogradchik	1.73	347	S	Sg	01 25 22.0	+0.3
THAS	Thassos island	1.75	139	P	Pn	01 24 56.4	-0.4
THAS				S	Sb	01 25 20.4	-0.2
	comp=N,3µm,0.6s						
THAS	Thassos island	1.75	139	P	Pn	01 24 56.2	-0.6
PLVB	Pleven	1.77	35	⇑*i*P	Pn	01 24 57.2	+0.1
PLVB	Pleven	1.77	35	S	Sg	01 25 23.7	+0.6
FNA	Florina	1.81	231	*e*Pg	Pn	01 24 57.5	-0.3
FNA				*e*Sg	Sg	01 25 23.6	-0.9
FNA	Florina	1.81	231	P	Pn	01 24 57.5	-0.3
FNA				S	Sn	01 25 21.3	+0.3
FNA	Florina	1.81	231	⇑*i*Pn	Pn	01 24 57.6	-0.3
FNA	Florina	1.81	231	P	Pn	01 24 57.5	-0.3
FNA				AML	AML	01 25 26.4	
	comp=E,13509µm,0.5s						
FNA				AML	AML	01 25 34.0	
	comp=N,22759µm,0.5s						
RDO	Rodhopi	1.91	114	PN	Pn	01 24 59.4	+0.4
RDO				SN	Sb	01 25 25.8	+0.6
RDO	Rodhopi	1.91	114	P	Pn	01 24 59.2	+0.2
RDO				S	Sb	01 25 25.8	+0.6
	comp=N,3µm,0.3s						
RDO	Rodhopi	1.91	114	P	Pn	01 24 59.4	+0.4
RDO				S	Sn	01 25 22.4	-0.8
RDO				AML	AML	01 25 30.4	
	comp=E,6207µm,0.4s						
RDO				AML	AML	01 25 32.4	
	comp=N,6419µm,0.3s						
LIT	Litokhoron	1.93	197	*e*Pn	Pn	01 24 58.1	-1.1
LIT	Litokhoron	1.93	197	P	Pn	01 24 57.8	-1.5
LIT				S	Sn	01 25 22.8	-0.9
	comp=N,428nm,0.4s						
LIT	Litokhoron	1.93	197	P	Pn	01 24 58.0	-1.3
LIT				S	Sn	01 25 21.9	-1.8
LIT				AML	AML	01 25 31.2	
	comp=N,762µm,0.5s						
LIT				AML	AML	01 25 33.3	
	comp=E,985µm,0.4s						
KZN	Kozani	1.97	214	P	Pn	01 24 58.3	-1.7
KZN	Kozani	1.97	214	P	Pn	01 24 59.5	-0.5
ZAGS	Zajecar	2.00	339	*e*Pn	Pn	01 24 59.7	-0.7
ZAGS				*e*Sn	Sn	01 25 24.6	-1.0
PVL	Pavlikeni	2.01	50	P	Pn	01 25 01.0	+0.6
SELS	Selova	2.01	310	*e*Pn	Pn	01 24 59.5	-1.0
SELS				*e*Sn	Sn	01 25 25.6	-0.2
BOVS	Bovan	2.03	327	*e*Pn	Pn	01 24 59.8	-0.9
BOVS				*e*Sn	Sn	01 25 25.9	-0.3
PAIG	Paliouri	2.04	170	P	Pn	01 25 00.2	-0.7
PAIG	Paliouri	2.04	170	P	Pn	01 25 00.3	-0.7
PAIG				AML	AML	01 25 33.1	
	comp=E,2410µm,0.5s						
PAIG				AML	AML	01 25 33.6	
	comp=N,2404µm,0.5s						
BAIL	Bailesti	2.08	2	⇑*i*P	Pn	01 25 01.2	-0.1
PHP	Peshkopia	2.10	264	P	Pn	01 25 01.4	-0.3
PHP	Peshkopia	2.10	264	*i* PN	Pn	01 25 01.5	-0.3
PHP				*i* SN	Sb	01 25 31.4	+0.6
ELND	Elena	2.19	62	⇑*i*P	Pn	01 25 02.9	0.0
ELND	Elena	2.19	62	S	Sg	01 25 35.7	-0.9
VLAD	Vladila	2.23	22	⇑*i*P	Pn	01 25 03.0	-0.4
NEST	Nestorio	2.25	228	P	Pn	01 25 03.8	0.0
NEST				S	Sn	01 25 31.3	-0.4
	comp=N,410nm,0.8s						
NEST	Nestorio	2.25	228	P	Pn	01 25 03.8	0.0
SMTH	Samothraki Isl	2.28	130	P	Pn	01 25 03.6	-0.5
SMTH				S	Sb	01 25 34.4	-1.5
	comp=N,445nm,0.5s						
SMTH	Samothraki Isl	2.28	130	P	Pn	01 25 03.5	-0.6
SMTH				S	Sn	01 25 31.0	-1.4
PENT	Pentalofos	2.36	223	P	Pn	01 25 05.2	-0.1
PENT	Pentalofos	2.36	223	P	Pn	01 25 05.2	-0.1
ALN	Alexandroupoli	2.36	115	PN	Pn	01 25 05.8	+0.5
ALN	Alexandroupoli	2.36	115	*e*Pn	Pn	01 25 04.7	-0.6
ALN	Alexandroupoli	2.36	115	P	Pn	01 25 05.8	+0.5
ALN				S	Sb	01 25 36.9	-1.4
	comp=N,822nm,1.1s						
ALN	Alexandroupoli	2.36	115	P	Pn	01 25 05.5	+0.3
BCI	Bajram Curri	2.39	281	*i* PN	Pn	01 25 05.7	0.0
BCI				*i* SN	Sg	01 25 43.9	+1.0
CRAR	CRAIOVA	2.42	10	⇑*i*P	Pn	01 25 05.3	-0.7
KPRO	Kipourio	2.44	216	P	Pn	01 25 06.4	0.0
KPRO	Kipourio	2.44	216	P	Pn	01 25 06.4	0.0
PUK	Puka	2.49	273	*i* PN	Pn	01 25 07.7	+0.6
PUK				*i* SN	Sg	01 25 47.1	+1.0
ENEZ	Enez	2.51	118	PN	Pn	01 25 08.1	+0.8
PVY	Plav	2.51	286	⇓*i*Pn	Pn	01 25 07.0	-0.5
PVY				*e*Sn	Sn	01 25 39.3	+1.0
LIA	Limnos Island	2.52	143	P	Pn	01 25 07.0	-0.5
LIA	Limnos Island	2.52	143	P	Pn	01 25 06.9	-0.5
THL	Klokotos Trika	2.55	202	P	Pn	01 25 07.3	-0.5
THL	Klokotos Trika	2.55	202	P	Pn	01 25 07.5	-0.3
XOR	Xorichti	2.58	181	P	Pn	01 25 07.5	-0.8
XOR	Xorichti	2.58	181	P	Pn	01 25 07.5	-0.8
TIR	Tirane	2.59	258	*e*Pg	Pb	01 25 11.1	-1.8
TIR	Tirane	2.59	258	*e*Pn	Pn	01 25 07.9	-0.5
TIR				*e*Sn	Sn	01 25 39.7	-0.3
TIR	Tirane	2.59	258	P	Pn	01 25 08.7	+0.3
TIR				S	Sb	01 25 43.4	-1.5
TIR	Tirane	2.59	258	⇑*i*P	Pb	01 25 11.1	-1.8
TIR	Tirane	2.59	258	*i* Pn	Pn	01 25 09.2	+0.8
TIR	Tirane	2.59	258	*i* PN	Pb	01 25 10.9	-1.9
TIR				*i* SN	Sb	01 25 46.9	+2.1
EDRB	Edirne	2.63	91	PN	Pn	01 25 09.1	+0.2
EDRB	Edirne	2.63	91	P	Pn	01 25 08.6	-0.3
COPA	Copaceanca	2.63	33	⇑*i*P	Pn	01 25 08.5	-0.4
NEO	Neokhori	2.64	180	P	Pn	01 25 08.2	-0.9
NEO	Neokhori	2.64	180	P	Pn	01 25 08.3	-0.7
BEY	Berane	2.64	292	*i* Pn	Pn	01 25 09.5	+0.3
IVA	Berane	2.64	292	⇑*i*Pn	Pn	01 25 09.2	+0.1
IVA				*e*Sn	Sn	01 25 42.1	+0.7
GRUS	Gruza	2.68	317	*e*Pn	Pn	01 25 09.3	-0.3
GRUS				*e*Sn	Sn	01 25 42.1	-0.2
KUBS	Kucevo	2.71	336	*e*Pn	Pn	01 25 08.6	-1.5
KUBS				*e*Sn	Sn	01 25 41.3	-1.9
SRE	Strehaia	2.72	360	⇓*i*P	Pn	01 25 09.5	-0.6
SJES	Sjenica	2.74	300	*e*Pn	Pn	01 25 09.9	-0.7
SJES				*e*Sn	Sn	01 25 43.3	-0.6
SVIS	Svilajnac	2.75	328	*e*Pn	Pn	01 25 09.8	-0.8
SVIS				*e*Sn	Sn	01 25 44.0	+0.1
DJES	Djerdap	2.77	349	*e*Pn	Pn	01 25 11.1	+0.2
SKIA	Skiathos	2.78	176	P	Pn	01 25 10.0	-1.0
SKIA	Skiathos	2.78	176	P	Pn	01 25 10.2	-0.9
IVAS	Ivanjica	2.79	307	*e*Pn	Pn	01 25 10.0	-1.2
KESN	Edirne-Kesan	2.83	112	*i* P	Pn	01 25 12.7	+0.7
ALNA	Alonissos	2.84	170	P	Pn	01 25 10.5	-1.2
HUMR	Humele	2.88	26	⇑*i*P	Pn	01 25 12.5	+0.1
KIRK	Kırklareli	2.90	92	*i* P	Pn	01 25 12.3	-0.3
KIRK				IAML_P			
	comp=Z,179nm,0.2s						
KOME	Kolasin	2.90	289	⇑*i*Pn	Pn	01 25 12.3	-0.4
KOME				*e*Sn	Sn	01 25 49.2	+1.5
RAZG	Razgrad	2.91	55	⇓*i*P	Pn	01 25 13.4	+0.6
RAZG	Razgrad	2.91	55	S	Sg	01 25 58.0	-1.6
JAN	Janina	2.91	219	P	Pn	01 25 13.5	+0.6
JAN				S	Sn	01 25 49.1	+1.0
	comp=Z,178nm,0.7s						
JAN	Janina	2.91	219	P	Pn	01 25 13.5	+0.6
ULC	Ulcinj	2.97	272	⇓*i*Pn	Pn	01 25 14.2	+0.5
ULC				*e*Sn	Sn	01 25 50.9	+1.4
ULC	Ulcinj	2.97	272	*i* Pn	Pn	01 25 15.1	+1.4
PDG	Podgorica	2.99	281	*e*Pn	Pn	01 25 14.6	+0.7
PDG	Podgorica	2.99	281	⇑*i*P	Pn	01 25 14.6	+0.7
PDG	Podgorica	2.99	281	*e*Pn	Pn	01 25 14.6	+0.7
TTG	Podgorica	2.99	281	⇓*i*Pn	Pn	01 25 14.4	+0.5
TTG				*e*Sn	Sn	01 25 51.3	+1.4
TTG	Podgorica	2.99	281	*e*Pn	Pn	01 25 13.3	-0.6
HERR	Herculane	2.99	349	⇑*i*P	Pn	01 25 12.6	-1.4
AGG	Agios Georgios	3.00	193	*e*Pn	Pn	01 25 13.4	-0.6
AGG	Agios Georgios	3.00	193	P	Pn	01 25 13.5	-0.6
AGG	Agios Georgios	3.00	193	P	Pn	01 25 13.6	-0.5
BOZC	Bozcaada	3.00	134	PN	Pn	01 25 14.8	+0.8
BOZC	Bozcaada	3.00	134	*i* P	Pn	01 25 14.3	+0.3
BOZC				IAML_P			
	comp=Z,1µm,0.3s						
DRME	Dracevica, Mon	3.02	276	⇑*i*Pn	Pn	01 25 15.3	+1.0
DRME				*e*Sn	Sn	01 25 52.2	+1.5
DRME	Dracevica, Mon	3.02	276	*e*Pn	Pn	01 25 16.2	+1.9
SGRR	Singureni	3.04	41	⇓*i*P	Pn	01 25 15.3	+0.8
SGRR	Singureni	3.04	41	S	Sg	01 26 02.0	-1.8
TRUS	Trudelj	3.08	319	*e*Pn	Pn	01 25 14.8	-0.3
LPK	Lapseki	3.10	119	PN	Pn	01 25 16.4	+1.1
PLE	Pljevlja	3.15	297	⇑*i*Pn	Pn	01 25 15.9	-0.4
PLE				*e*Sn	Sn	01 25 54.5	+0.4
GOLR		3.16	23	⇓*i*P	Pg	01 25 27.0	+0.3
SRN	Sarande	3.20	231	P	Pn	01 25 18.5	+1.7
SRN				S	Sn	01 25 55.6	+0.5
	comp=Z,168nm,1.1s						
DIVS	Divibare	3.20	313	*e*Pn	Pn	01 25 16.2	-0.7
DIVS				*e*Sn	Sn	01 25 53.2	-2.1
DIVS	Divibare	3.20	313	*e*Pn	Pn	01 25 16.0	-0.9
AXAR	Agios Charalam	3.21	188	P	Pn	01 25 16.5	-0.3
EVR	Evrytania	3.21	200	P	Pn	01 25 16.7	-0.4
EVR	Evrytania	3.21	200	P	Pn	01 25 16.7	-0.4
SKY	Skiros Island	3.23	161	P	Pn	01 25 16.9	-0.3
PHSR	Pinarhisar	3.23	94	PN	Pn	01 25 17.8	+0.6
RKY	Sarkoy-Tekirda	3.23	112	PN	Pn	01 25 17.9	+0.7
SART	Tekirdag	3.23	112	*i* P	Pn	01 25 20.3	+3.0
BUM	Brajici-Budva	3.24	278	⇓*i*Pn	Pn	01 25 18.0	+0.5
BUM				*e*Sn	Sn	01 25 57.3	+1.0
MRKA	Markates	3.25	175	P	Pn	01 25 16.3	-1.2
MRKA	Markates	3.25	175	P	Pn	01 25 16.7	-0.7
ATAL	Atalanti	3.25	183	P	Pn	01 25 16.6	-0.9
ATAL	Atalanti	3.25	183	P	Pn	01 25 16.7	-0.9
NKY	Niksic	3.25	287	⇑*i*Pn	Pn	01 25 17.1	-0.6
NKY				*e*Sn	Sn	01 25 57.3	+0.7
CEME	Cevo	3.26	282	⇓*i*Pn	Pn	01 25 18.3	+0.7
CEME				*e*Sn	Sn	01 25 56.9	+0.3
IGT	Igoumenitsa	3.26	223	*e*Pn	Pn	01 25 18.4	+0.7
IGT	Igoumenitsa	3.26	223	P	Pn	01 25 19.6	+2.0
IGT	Igoumenitsa	3.26	223	P	Pn	01 25 19.7	+2.0
NKME	Niksic	3.27	286	⇑*i*Pn	Pn	01 25 17.2	-0.6
NKME				*e*Sn	Sn	01 25 57.0	0.0
RUDO	Rudo	3.29	302	*e*Pn	Pn	01 25 17.0	-1.1
LKR	Lokris	3.30	183	P	Pn	01 25 17.8	-0.3
LKR	Lokris	3.30	183	P	Pn	01 25 17.4	-0.7
BAYC	CANAKKALE_Bayr	3.34	130	*i* P	Pn	01 25 19.5	+0.7
TKR	Tekirdag	3.38	105	PN	Pn	01 25 19.7	+0.5
SIGR	SIGRI	3.38	143	PN	Pn	01 25 20.2	+0.9
SIGR	SIGRI	3.38	143	P	Pn	01 25 19.1	-0.2
SIGR	SIGRI	3.38	143	P	Pn	01 25 19.3	0.0
BBLS	Lazići	3.40	306	*e*Pn	Pn	01 25 19.3	-0.3
BBLS	Lazići	3.40	306	*e*Pn	Pn	01 25 19.9	+0.3
KEK	Kerkira	3.43	231	P	Pn	01 25 20.9	+1.0
UPM	Unac-Piva	3.43	293	⇑*i*Pn	Pn	01 25 20.2	+0.1
UPM				*e*Sn	Sn	01 26 01.5	+0.4
UPM	Unac-Piva	3.43	293	*e*Pn	Pn	01 25 20.5	+0.4
GZR	Gura Zlata	3.46	355	⇑*i*P	Pn	01 25 19.0	-1.5
CRLT	Corlu	3.48	102	PN	Pn	01 25 21.7	+1.1
ANX	Ano Chora	3.49	197	P	Pn	01 25 20.8	-0.1
ANX	Ano Chora	3.49	197	P	Pn	01 25 20.9	0.0
LOT	Lotru	3.52	6	⇑*i*P	Pn	01 25 20.5	-0.9
HCY	Herceg Novi	3.55	280	⇓*i*Pn	Pn	01 25 22.2	+0.6
HCY				*e*Sn	Sn	01 26 04.5	+0.7
HCY	Herceg Novi	3.55	280	*e*Pn	Pn	01 25 22.1	+0.5
MRMT	Marmara Adasi	3.55	111	PN	Pn	01 25 22.6	+0.9
PRK	Paraskevi	3.56	138	P	Pn	01 25 23.0	+1.4
PRK	Paraskevi	3.56	138	P	Pn	01 25 23.0	+1.4
EREA	Eretria	3.56	171	P	Pn	01 25 21.4	-0.4
EREA	Eretria	3.56	171	P	Pn	01 25 21.3	-0.4
ARR	Arges	3.57	16	⇓*i*P	Pn	01 25 21.9	0.0
PVO	Paravola	3.57	202	P	Pn	01 25 22.3	+0.4
PVO	Paravola	3.57	202	P	Pn	01 25 21.3	-0.6
DSF	Desfina	3.57	189	P	Pn	01 25 20.9	-1.0
DSF	Desfina	3.57	189	P	Pn	01 25 21.3	-0.6
BRY	Bratogost	3.60	287	⇓*i*Pn	Pn	01 25 22.5	+0.1
BRY				*e*Sn	Sn	01 26 05.4	+0.2
BRY	Bratogost	3.60	287	*e*Pn	Pn	01 25 23.1	+0.7
SERG	Sergoula	3.64	195	P	Pn	01 25 22.3	-0.6
SERG				S	Sn	01 26 06.2	+0.2
	comp=Z,140nm,0.4s						
SERG	Sergoula	3.64	195	P	Pn	01 25 22.2	-0.6
LEHL	Lehliu	3.64	45	⇓*i*P	Pn	01 25 23.8	+0.9
KALE	Kalithea	3.65	194	P	Pn	01 25 22.7	-0.3
KALE	Kalithea	3.65	194	P	Pn	01 25 22.7	-0.3
RASA	Rasa	3.66	50	⇑*i*P	Pn	01 25 25.1	+2.0
TRIZ	Trizonia	3.68	194	P	Pn	01 25 23.1	-0.3
TRIZ	Trizonia	3.68	194	P	Pn	01 25 22.9	-0.5
TSLK	Tsoukalades, L	3.68	213	P	Pn	01 25 24.6	+1.1
PROD	Prodromos	3.69	184	P	Pn	01 25 23.3	-0.3
TREB	Trebinje	3.70	284	*e*Pn	Pn	01 25 23.4	-0.2
TREB	Trebinje	3.70	284	*e*Pn	Pn	01 25 24.1	+0.5
LKD2	Lefkada island	3.71	213	P	Pn	01 25 24.7	+0.8
VIL2	Platees	3.73	180	P	Pn	01 25 24.3	+0.2
VOIR		3.73	20	⇑*i*P	Pn	01 25 24.0	-0.2
VILL	Villia	3.78	179	P	Pn	01 25 24.2	-0.6
VILL				S	Sn	01 26 07.8	-1.6
	comp=Z,162nm,0.8s						
HAPS	Han Pijesak,BI	3.80	306	*e*Pn	Pn	01 25 24.2	-0.9
HAPS	Han Pijesak,BI	3.80	306	*e*Pn	Pn	01 25 23.8	-1.3
CTYL	Yalikoy Yolu	3.82	95	PN	Pn	01 25 26.6	+1.3
LAKA	Lakka	3.82	195	P	Pn	01 25 24.2	-1.2
PSRA	Psara	3.84	152	P	Pn	01 25 26.9	+1.4
EDC	Edincik	3.85	113	PN	Pn	01 25 26.7	+1.0
BZS	Buzias	3.85	343	⇓*i*P	Pn	01 25 24.5	-1.2
BZS	Buzias	3.85	343	S	Sg	01 26 27.3	-2.6
EVGI	Lefkada island	3.86	211	P	Pn	01 25 26.8	+0.9
GONE	Gonen-Balikesi	3.87	118	PN	Pn	01 25 27.4	+1.4
PTL	Penteli	3.92	173	P	Pn	01 25 26.8	+0.1
LOUT	Loutraki	3.96	183	P	Pn	01 25 26.8	-0.5
ISR	Istrita	3.98	36	⇑*i*P	Pn	01 25 29.1	+1.5
KLV	Kalavryta, Ach	3.98	192	P	Pn	01 25 27.3	-0.4
ATHU	Athens Univers	4.00	174	P	Pn	01 25 26.9	-0.8
DKL	Dikili	4.01	134	PN	Pn	01 25 29.3	+1.4
CTKS	Kestanelik-??a	4.02	98	PN	Pn	01 25 28.2	+0.1
FSK	Fiskardo	4.04	211	P	Pn	01 25 28.7	+0.4
MLR	Muntele Rosu	4.05	28	Pn	Pn	01 25 29.9	+1.2
	comp=Z,12nm,0.3s,baz=182,slow=2.7,SNR=61						
MLR				Sn	Sn	01 26 18.1	+1.7
	comp=Z,7.4nm,0.3s,baz=274,slow=16,SNR=5.2						
MLR				Lg	Lg	01 26 39.9	
	comp=Z,10.0nm,0.3s,baz=1.6,slow=13,SNR=6.6						
MLR	Muntele Rosu	4.05	28	*e*Pn	Pn	01 25 28.5	-0.2
MLR	Muntele Rosu	4.05	28	⇓*i*P	Pn	01 25 29.9	+1.2
ACOR	Acrocorinthos	4.06	184	P	Pn	01 25 28.2	-0.4
SCTE	Santa Cesarea	4.06	244	P	Pn	01 25 27.6	-1.0
FRGS	Fruska Gora	4.06	323	*e*Pn	Pn	01 25 27.5	-1.1
FRGS				*e*Sn	Sn	01 26 13.8	-2.5
FRGS	Fruska Gora	4.06	323	*e*Pn	Pn	01 25 27.7	-0.9
GUR	Goura	4.06	190	P	Pn	01 25 28.8	+0.1
RLS	Riolos of Patr	4.11	200	P	Pn	01 25 31.2	+1.9
VLY	Voula,Athens	4.11	174	P	Pn	01 25 28.6	-0.7
CHOS	Chios island	4.16	148	PN	Pn	01 25 31.2	+1.1
CHOS	Chios island	4.16	148	P	Pn	01 25 30.1	0.0
ZEDA	zmir-Bergama	4.18	134	*i* P	Pn	01 25 30.2	0.0
ZEDA				IAML_P			
	comp=Z,283nm,0.1s						
STON	Ston	4.20	285	*e*Pn	Pn	01 25 30.9	+0.4
STON	Ston	4.20	285	*e*Pn	Pn	01 25 31.6	+1.1
STON	Ston	4.20	285	*e*Pn	Pn	01 25 31.1	+0.6
BALB	Balikesir	4.21	122	PN	Pn	01 25 31.8	+1.1
BALB	Balikesir	4.21	122	*e*Pn	Pn	01 25 31.1	+0.4
KCTX	Karacabey (Bur	4.22	112	PN	Pn	01 25 32.1	+1.2
KFL	Anninata	4.26	207	P	Pn	01 25 31.8	+0.4
STEP	BALIKESIR_Sava	4.27	125	*i* P	Pn	01 25 32.2	+0.7
VLS	Valsamata	4.27	209	P	Pn	01 25 32.4	+0.8
DOPR	Dopca	4.31	20	⇓*i*P	Pn	01 25 32.7	+0.6
EPID	Epidavros	4.33	181	P	Pn	01 25 31.8	-0.5
GRER		4.38	37	⇓*i*P	Pn	01 25 34.6	+1.6
BISRR	Bisoca	4.40	34	⇓*i*P	Pn	01 25 34.7	+1.4
MFTR	Murfatlar	4.41	58	⇑*i*P	Pn	01 25 34.7	+1.3
URLA	Izmir	4.41	143	PN	Pn	01 25 35.2	+1.7
URLA	Izmir	4.41	143	*i* P	Pn	01 25 34.9	+1.4
URLA				IAML_P			
	comp=Z,1µm,0.3s						
KLYT	Kilyos	4.41	97	PN	Pn	01 25 34.8	+1.4
DID	Didima	4.43	180	P	Pn	01 25 33.3	-0.5
DID	Didima	4.43	180	P	Pn	01 25 33.2	-0.5
ARMT	Armutlu	4.46	106	PN	Pn	01 25 35.5	+1.3
ISK	Istanbul-Kandi	4.47	99	PN	Pn	01 25 35.8	+1.6
SIRR	Siria	4.47	346	⇑*i*P	Pn	01 25 33.8	-0.4
TRIP	Tripoli	4.47	190	P	Pn	01 25 35.1	+0.7
OZUR		4.54	23	⇓*i*P	Pn	01 25 36.0	+0.7
TIRR	Tirgusor	4.55	55	*e*Pg	Pg	01 25 50.1	-3.1
MDNY	Mudanya-Bursa	4.55	108	PN	Pn	01 25 37.1	+1.8
KRND	KRANIDI	4.56	181	P	Pn	01 25 35.1	-0.3
BUY	Buyukada	4.56	102	PN	Pn	01 25 37.1	+1.6
BUY	Buyukada	4.56	102	*i* P	Pn	01 25 37.6	+2.1
VLX	Vlachokerasia	4.62	188	P	Pn	01 25 36.7	+0.3
DURS	Dursunbey	4.62	119	*i* P	Pn	01 25 39.5	+3.1
DURS				IAML_P			
	comp=Z,553nm,0.2s						
PLOR	Plostina	4.62	31	⇓*i*P	Pn	01 25 37.8	+1.4
DOB	Doboj	4.66	308	*e*Pn	Pn	01 25 36.6	-0.3
VRI	Vrincioaia	4.66	32	⇓*i*P	Pn	01 25 38.3	+1.4
PETR	Petresti	4.76	36	⇓*i*P	Pn	01 25 38.6	+0.4
MAKA	Makarska	4.77	288	*e*Pn	Pn	01 25 38.8	+0.4
MAKA				Sn	Sn	01 26 34.3	+0.4
CJR	Cluj-Napoca	4.78	3	⇓*i*P	Pn	01 25 38.0	-0.5
NOCI	Noci	4.78	258	P	Pn	01 25 37.9	-0.6
DGB	zmir	4.79	143	*i* P	Pn	01 25 39.9	+1.2
DGB				IAML_P			
	comp=Z,299nm,0.2s						
CFR	Carcaliu	4.81	46	⇓*i*P	Pn	01 25 39.0	+0.1
DRGR		4.86	356	⇑*i*P	Pn	01 25 38.6	-1.1
SILT	Sile	4.88	97	PN	Pn	01 25 41.2	+1.4
HRT	Hereke	4.97	101	PN	Pn	01 25 42.8	+1.6
SMG	Samos	5.06	146	P	Pn	01 25 42.6	+0.3
DEMI	Demirci	5.09	123	*i* P	Pn	01 25 44.6	+1.8
DEMI				IAML_P			
	comp=Z,280nm,0.1s						
MGRS	Mrkonjic Grad	5.13	301	*e*Pn	Pn	01 25 43.3	0.0
HVAR	Hvar	5.16	286	*e*Pn	Pn	01 25 44.1	+0.5
HVAR				Sn	Sn	01 26 41.7	-1.6
PYL	PYLOS	5.17	193	P	Pn	01 25 43.1	-0.8
TESR	Tescani	5.18	27	⇑*i*P	Pn	01 25 45.0	+0.9
TLCR		5.19	50	⇑*i*P	Pn	01 25 44.8	+0.7
ARCR	ARCALIA	5.20	9	⇑*i*P	Pn	01 25 43.9	-0.4
BLY	Banja Luka	5.22	304	*e*Pn	Pn	01 25 44.0	-0.6
BLY	Banja Luka	5.22	304	⇑*i*P	Pn	01 25 44.7	+0.1
BLY	Banja Luka	5.22	304	*e*Pn	Pn	01 25 44.1	-0.5
DYR	Agios Nikonas	5.22	188	P	Pn	01 25 45.4	+0.8
VLI	Veliai	5.22	183	P	Pn	01 25 44.2	-0.4
KAND	Kocaeli-Kandir	5.30	97	*i* P	Pn	01 25 47.0	+1.4
KAND				IAML_P			
	comp=Z,0.1nm,0.1s						
TVSB	Tavsanli	5.35	116	PN	Pn	01 25 48.2	+1.7
AYDB	Zeytinkoy-Aydi	5.37	137	PN	Pn	01 25 48.5	+1.8
KULA	Kula-Manisa	5.39	128	PN	Pn	01 25 48.8	+1.9
MORH	Mrgy, Hungar	5.40	324	*e*Pn	Pn	01 25 45.5	-1.4
MORH	Mrgy, Hungar	5.40	324	*e*Pn	Pn	01 25 45.1	-1.9
MORH				Sn	Sn	01 26 43.0	-6.1
BIZ	Bicaz	5.40	21	⇓*i*P	Pn	01 25 48.0	+1.0
USAK	Uak-Merkez	5.48	124	*i* P	Pn	01 25 49.3	+1.2
USAK				IAML_P			
	comp=Z,249nm,0.2s						
LTVH	Ltavrtes, Hu	5.52	351	*e*Pn	Pn	01 25 48.1	-0.6
LTVH				Sn	Sn	01 26 53.1	+0.8
LTVH				*e*Sg	Sg	01 27 28.0	+4.6
GEYV	SAKARYA_Geyve	5.53	103	*i* P	Pn	01 25 52.1	+3.3
GEYV				IAML_P			
	comp=Z,41nm,0.2s						
GDZ	Gediz	5.55	119	*i* P	Pn	01 25 50.0	+0.8
GDZ				IAML_P			
	comp=Z,29nm,0.1s						
AYDN	Tasoluk	5.58	139	*i* P	Pn	01 25 50.7	+1.2
AYDN				IAML_P			
	comp=Z,595nm,0.2s						
ZIRJ	Zirje	5.83	290	*e*Pn	Pn	01 25 53.5	+0.5
ZIRJ				Sn	Sn	01 26 59.3	-0.7
SAHE	Sakarya_HENDEK	5.84	98	*i* P	Pn	01 25 54.0	+0.9
SAHE				IAML_P			
	comp=Z,102nm,0.4s						
BURAR	Bucovina Array	5.84	13	⇑*i*P	Pn	01 25 54.0	+0.8
MORI	Morici	5.85	292	*e*Pn	Pn	01 25 54.4	+1.2
MORI				Sn	Sn	01 26 58.7	-1.6
BUR08	Bucovina Ar. S	5.87	13	*e*Pn	Pn	01 25 52.8	-0.7
SRCK	Saricakaya, Es	5.91	106	*i* P	Pn	01 25 56.3	+2.2
SRCK				IAML_P			
	comp=Z,102nm,0.2s						
KHAL	Karahalli	5.98	125	*i* P	Pn	01 25 57.4	+2.3
KHAL				IAML_P			
	comp=Z,229nm,0.4s						

UDBI	Udbina	6.03	298	ePn	Pn	01 25 58.1	+2.3
TRPA	Tarpa	6.20	356	ePn	Pn	01 25 59.0	+1.0
TRPA				Sn	Sn	01 27 11.0	+1.9
TRPA				eSg	Sg	01 27 46.0	+0.7
TIH	Tihany	6.25	324	ePn	Pn	01 25 58.1	-0.7
TIH				Sn	Sn	01 27 07.0	-3.3
YIGI	Dzce	6.25	96	i P	Pn	01 26 00.5	+1.8
YIGI				IAML_P			
	comp=Z,159nm,0.3s						
DUGI	Dugi Otok	6.33	292	i Pn	Pn	01 26 00.5	+0.7
DUGI				Sn	Sn	01 27 08.3	-4.0
PSZ	Piszkesteto	6.42	340	ePn	Pn	01 26 00.1	-1.0
PSZ	Piszkesteto	6.42	340	ePn	Pn	01 26 06.1	+5.0
PSZ				Sn	Sn	01 27 13.1	-1.6
KALN	Kalnik	6.43	313	ePn	Pn	01 26 00.8	-0.4
KALN				Sn	Sn	01 27 08.3	-6.4
CSKK	Cskako	6.47	329	eSg	Pb	01 26 14.1	-4.9
CSKK				Sn	Sn	01 27 13.0	-2.7
BEHE	Becsehely	6.48	316	ePn	Pn	01 25 58.7	-3.1
BEHE	Becsehely	6.48	316	ePn	Pn	01 26 01.1	-0.7
BEHE				Sn	Sn	01 27 18.1	+2.2
CIFT	Cifteler, Eski	6.49	111	i P	Pn	01 26 05.7	+3.6
CIFT				IAML_P			
	comp=Z,571nm,0.2s						
PTJ	Puntijarka	6.57	310	ePn		01 26 02.8	
NVLJ	Novalja	6.64	296	ePn	Pn	01 26 04.3	+0.4
KIBS	BOLU	6.68	100	i P	Pn	01 26 05.4	+0.6
KIBS				IAML_P			
	comp=Z,129nm,0.2s						
BOLV	Bolvadin	6.72	116	i P	Pn	01 26 10.7	+5.4
BOLV				IAML_P			
	comp=Z,1µm,0.4s						
KOGS	Kog	6.74	314	i Pn	Pn	01 26 06.3	+0.9
BCAM	Yenicaga	6.74	97	i P	Pn	01 26 06.2	+0.6
BCAM				IAML_P			
	comp=Z,109nm,0.3s						
IDI	Anoyia	6.77	168	Pn	Pn	01 26 08.8	+2.9
	comp=Z,1.4nm,0.3s,baz=341,slow=9.3,SNR=8.6						
BOJS	Bojanci	6.78	304	i Pn	Pn	01 26 08.3	+2.3
CRES	Cresnjev	6.82	307	ePn	Pn	01 26 05.3	-1.3
SRO	Srobarova	6.83	331	eSN	Sn	01 27 20.8	-3.6
KOLS	Kolonicke sedl	7.02	355	ePN	Pn	01 26 09.7	+0.4
KOLS				ePG	Pg	01 26 42.8	+2.2
KOLS				eSG	Sg	01 28 12.3	+0.8
CMDR	Camlidere-ANKA	7.12	99	i P	Pn	01 26 15.1	+4.3
CMDR				IAML_P			
	comp=Z,1µm,0.3s						
VISS	Visnje	7.18	305	i Pn	Pn	01 26 13.1	+1.6
RIY	Rijeka	7.19	301	ePn		01 26 13.2	
RIY	Rijeka	7.19	301	ePn	Pn	01 26 12.8	+1.3
VYHS	Vyhne	7.24	336	ePN	Pn	01 26 13.1	+0.8
VYHS				eSN	Sn	01 27 33.3	-1.4
AQU	L'Aquila	7.31	276	ePn	Pn	01 26 12.7	-0.6
AQU	L'Aquila	7.31	276	ePn	Pn	01 26 12.7	-0.6
CEY	Cerknica	7.41	304	ePn	Pn	01 26 15.1	+0.5
SOP	Sopron	7.44	323	ePn	Pn	01 26 15.1	0.0
SOP				Sn	Sn	01 27 32.1	-7.5
LJU	Ljubljana	7.49	306	ePn	Pn	01 26 16.2	+0.5
SOKA	Soboth	7.54	312	ePn	Pn	01 26 17.3	+0.8
	comp=Z,1.2nm,0.5s						
ZST	Bratislava	7.61	327	eSN	Sn	01 27 36.8	-6.8
KDHN	Kadinhani	7.61	114	i P	Pn	01 26 18.7	+1.2
KDHN				IAML_P			
	comp=Z,44nm,0.1s						
ARSA	Arzberg	7.64	317	i Pn	Pn	01 26 18.2	+0.4
	comp=Z,2.6nm,0.3s						
ARSA				i Sn	Sn	01 27 38.9	-5.6
	comp=Z,6.4nm,0.4s						
MODS	Modra-Piesok	7.68	329	ePN	Pn	01 26 18.1	-0.2
MODS				eSN	Sn	01 27 39.2	-6.2
OBKA	Obir	7.72	309	Pn	Pn	01 26 25.1	+6.2
	comp=Z,1.7nm,0.3s						
OBKA				Sn	Sn	01 27 43.7	-2.9
	comp=Z,5.9nm,0.3s						
SMOL	Smolenice	7.74	330	ePN	Pn	01 26 19.5	+0.4
CONA	Conrad Observa	7.94	321	ePn	Pn	01 26 22.3	+0.3
	comp=Z,1.2nm,0.3s						
CONA				eSn	Sn	01 27 47.4	-4.6
	comp=Z,9.3nm,0.6s						
BRTR	Keskin Array B	8.20	102	Pn	Pn	01 26 28.9	+3.3
	comp=Z,0.1nm,0.3s,baz=281,slow=14,SNR=5.9						
MOA	Molln	8.68	316	ePn	Pn	01 26 35.9	+3.9
	comp=Z,2.4nm,0.7s						
MOA				i Sn	Sn	01 28 06.8	-3.1
	comp=Z,5.6nm,0.3s						
KBA	Koelnbreinsper	8.73	309	Pn	Pn	01 26 38.0	+5.2
	comp=Z,1.5nm,0.4s						
KBA				i Sn	Sn	01 28 07.1	-4.3
	comp=Z,3.1nm,0.3s						
MORC	Moravsky Berou	8.78	335	ePn	Pn	01 26 33.7	+0.3
GERES	GERESS Array B	9.61	319	Pn	Pn	01 26 47.5	+2.6
	comp=Z,0.1nm,0.3s,baz=123,slow=15,SNR=4.4						
GERES				Sn	Sn	01 28 34.9	+1.8
	comp=Z,0.3nm,0.3s,baz=124,slow=26,SNR=3.8						
WTTA	Wattenberg	9.82	307	ePn	Pn	01 26 51.0	+3.1
	comp=Z,2.5nm,0.3s						
KHC	Kasperske Hory	9.87	320	ePN	Pn	01 26 48.2	-0.1
KHC				ex	x	01 26 54.9	
KHC				eSN	Sn	01 28 29.8	-9.4
KHC				ex	x	01 28 58.0	
SQTA	Sankt Quirin	10.06	306	ePn	Pn	01 26 56.8	+5.7
	comp=Z,5.7nm,0.4s						
MOTA	Moosalm	10.18	306	ePn	Pn	01 26 56.9	+4.1
	comp=Z,6.6nm,0.5s						
FETA	Feichten	10.27	304	Pn	Pn	01 26 59.7	+5.8
	comp=Z,4.5nm,0.7s						
DAVOX	Davos/Dischmat	10.71	301	Pn	Pn	01 27 02.7	+2.7
	comp=Z,0.2nm,0.3s,baz=109,slow=18,SNR=3.3						
HFS	Hagfors	19.14	345	P	P	01 28 49.7	+0.2
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=4.5						
FINES	FINESS Array B	19.60	4	P	Pn	01 28 55.4	-0.5
	comp=Z,0.1nm,0.3s,baz=179,slow=22,SNR=3.4						
NC602	NORSAR Array S	20.12	343	eP	P	01 28 58.3	-2.0
	comp=Z,24nm,1.8s						
NC405	NORSAR Array S	20.43	344	eP	P	01 29 02.6	-1.1
	comp=Z,8.0nm,1.1s						
NB2	NORSAR Subarra	20.47	343	P	P	01 29 02.6	-1.5
	comp=Z,0.7nm,0.6s,baz=159,slow=11						
NOA	NORSAR Array B	20.47	343	P	P	01 29 02.9	-1.2
	comp=Z,0.5nm,0.6s,baz=144,slow=10,SNR=10						
NBO00	NORSAR Array S	20.56	343	eP	P	01 29 04.7	-0.3
	comp=Z,43nm,1.8s						
NC204	NORSAR Array S	20.78	343	eP	P	01 29 05.8	-1.6
	comp=Z,8.9nm,0.9s						
EKA	Eskdalemuir Ar	21.82	317	P	P	01 29 19.6	+1.0
	comp=Z,0.1nm,0.4s,baz=112,slow=15,SNR=2.6						
AKTO	Aktyubinsk	25.34	58	P	P	01 29 53.6	+0.2
	comp=Z,0.9nm,0.8s,baz=25,slow=17,SNR=2.0						
TORD	Torodi Ar. Bea	34.26	219	P	P	01 31 12.9	+0.1
	comp=Z,1.0nm,0.6s,baz=29,slow=8.6,SNR=8.1						
MKAR	Makanchi Array	41.64	62	P	P	01 32 16.3	+1.5
	comp=Z,0.5nm,0.7s,baz=262,slow=6.0,SNR=3.6						
ZALV	Zalesovo Beam	41.67	51	P	P	01 32 16.1	+1.1
	comp=Z,0.3nm,0.3s,baz=270,slow=4.3,SNR=3.1						
YKA	Yellowknife Ar	70.55	341	P	P	01 35 40.4	-0.8
	comp=Z,0.2nm,0.6s,baz=44,slow=5.6,SNR=3.2						

MOS ***27*** *01:27:09.5±0.8, 27°.49N×139°.71E, h466^{km}, mb4.0/41, Error ellipse: s-maj=12.8km s-min=6.5km az=108.4*

ISCJB ***27*** *01:27:10.3±0.3, 27°.55N±0°.04×139°.85E±0°.05, h474^{km}±3^{km}, mb4.0/70, Error ellipse: s-maj=7.7km s-min=5.3km az=164.4*

JMA ***27*** *01:27:10.5±0.2, 27°.60N×140°.15E, h486^{km}±4^{km}, M4.4*

NEIC ***27*** *01:27:11.5±1.5, 27°.59N×139°.79E, h475^{km}±3^{km}, mb4.1/29, Error ellipse: s-maj=21.9km s-min=19.0km az=82.0*

IDC ***27*** *01:27:12.1±1.1, 27°.59N×139°.81E, h481^{km}±12^{km}, mb3.5/27, mb1 3.6/34, mb1mx3.5/48, mbtmp4.4/34, Error ellipse: s-maj=11.4km s-min=8.8km az=82.0*

ISC 27 01:27:11.4±0.6**, 27°.62N**±0°.06×**139°.94E**±0°.07**, h475**^{km}±6^{km}**, n141, σ1^{s}25**/169**, mb4.0**/72**, 4C-3D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.06	104	P	P	01 28 13.9	-0.7
CBIJ				eS	S	01 29 03.9	-1.9
JHH2	Haha-jima-NKT2	2.22	116	P	P	01 28 15.3	-0.2
JHH2				eS	S	01 29 06.2	-1.2
JAOM	Aogashimamukai	4.83	358	P	P	01 28 36.5	+1.2
JAOM				eS	S	01 29 43.9	0.0
JHCJ	Hachijojimakas	5.43	359	P	P	01 28 41.9	+0.9
JHJ2	Mitsune	5.47	359	eP	P	01 28 41.4	0.0
JHJ2				eS	S	01 29 51.6	-3.3
JHJ2	Mitsune	5.47	359	P	P	01 28 42.2	+0.8
JHJ	Hachijo jima 2	5.48	359	P	P	01 28 42.0	+0.5
	58nm,0.3s,baz=113,slow=7.7,SNR=17						
JHJ				S	S	01 29 53.4	-1.8
	67nm,0.3s,baz=91,slow=21,SNR=8.5						
JMKN	Mikurajimanish	6.26	357	P	P	01 28 50.0	+0.9
JMKN				S	S	01 30 08.6	-0.5
JMMH	Miemihama	7.04	332	P	P	01 28 59.3	+2.3
JMMH				S	S	01 30 24.9	+1.3
BSO1	Boso 1	7.07	7	P	P	01 28 57.8	+1.1
BSO1				S	S	01 30 22.5	-0.7
JIM2	Oshima 3	7.09	357	S	S	01 30 23.7	-0.9
JIE	Ise	7.30	338	P	P	01 29 02.5	+2.8
JIE				S	S	01 30 29.7	+1.1
JOD2	Odawara 2	7.65	355	P	P	01 29 04.6	+1.2
JOD2				eS	S	01 30 34.1	-1.3
JTO	Tosashimizu	8.08	312	P	P	01 29 10.5	+2.5
JRY	Ryogami san	8.41	354	P	P	01 29 11.5	0.0
JRY				eS	S	01 30 47.6	-2.6
MJAR	Matsushiro Arr	9.01	351	P	P	01 29 17.4	-0.4
	0.8nm,0.3s,baz=181,slow=12,SNR=20						
MJAR				S	S	01 30 55.8	-6.1
	0.2nm,0.3s,baz=128,slow=11,SNR=4.8						
MAJO	Matsushiro	9.01	351	eP	P	01 29 17.5	-0.4
MAJO	Matsushiro	9.01	351	eP	P	01 29 17.5	-0.4
MAT	Matsushiro	9.01	351	P	P	01 29 17.7	-0.2
MAT				S	S	01 30 57.6	-4.3
MJB9	Matsu-Tunnel	9.02	351	eP	P	01 29 17.8	-0.1
JHS	Saijyo	9.39	323	P	P	01 29 24.2	+2.3
JAMN	Amaminishikomi	9.54	276	P	P	01 29 26.0	+2.4
JNU	Nakatsue	9.55	307	P	P	01 29 25.4	+1.7
	2.9nm,0.3s,baz=87,slow=3.4,SNR=9.0						
JOW	Kunigami	10.41	268	P	P	01 29 34.3	+1.3
	5.2nm,0.3s,baz=110,slow=15,SNR=64						
JOW	Kunigami	10.41	268	eP	P	01 29 33.8	+0.7
JOW	Kunigami	10.41	268	P	P	01 29 34.7	+1.7
JMK	Ichinoseki	11.35	5	P	P	01 29 44.4	+1.6
JOT	Ohata	13.76	4	P	P	01 30 10.3	+1.7
KSRS	Korea Array	14.09	317	P	P	01 30 11.8	-0.3
	0.4nm,0.3s,baz=130,slow=10,SNR=8.6						
JKB	Kayabe	14.26	3	P	P	01 30 15.1	+1.2
JOSM	Okushiri--Mats	14.43	359	P	P	01 30 16.9	+1.1
ERM	Erimo	14.60	10	⇑eP	P	01 30 19.8	+2.3
ASAJ	Asahikawa	16.60	7	P	P	01 30 39.9	+1.3
	1.0nm,0.3s,baz=219,slow=15,SNR=6.6						
USA0B	Ussuriysk Arra	17.74	341	eP	P	01 30 51.4	+1.2
	8.3nm,0.8s						
USRK	Ussuriysk Ar.	17.74	341	P	P	01 30 50.9	+0.7
	1.3nm,0.3s,baz=152,slow=9.6,SNR=22						
YSS	Yuzh-Sakhalins	19.42	6	eP	P	01 31 07.6	+1.8
KLR	Kul'dur	22.48	346	P	P	01 31 34.6	+1.1
	1.5nm,0.3s,baz=166,slow=11,SNR=6.6						
KLR	Kul'dur	22.48	346	⇑eP	P	01 31 34.3	+0.7
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC	Hu-ho-hao-te	26.78	307	P	P	01 32 09.0	-3.1
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,57nm,5.7s						
LZH	Lanzhou	31.66	295	eP	P	01 32 54.3	-0.4
LZH				pP	pP	01 34 15.3	-0.9
LZH				sP	sP	01 35 11.8	+1.0
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
SONM	Songino Array	32.96	317	P	P	01 33 04.0	-1.6
	comp=Z,0.4nm,0.3s,baz=116,slow=6.6,SNR=1.9						
KMI	Kunming	33.34	274	P	P	01 33 09.3	0.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	Seymchan	36.25	10	P	P	01 33 34.4	+1.6
	comp=Z,0.9nm,0.5s,baz=145,slow=13,SNR=4.5						
CMAR	Chiang Mai Arr	38.67	265	P	P	01 33 53.2	-0.2
	comp=Z,0.9nm,0.4s,baz=79,slow=4.9,SNR=3.6						
CMAR				PcP	PcP	01 35 54.7	+1.0
	comp=Z,0.8nm,0.4s,baz=0.0,slow=0.2,SNR=4.9						
BILL	Bilibino	43.41	14	⇓eP	P	01 34 32.8	+2.3
BILL				*PP	pP	01 35 57.0	-1.3
BILL				e		01 36 08.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WMQ	Urumqi	44.65	305	eP	P	01 34 43.3	+2.7
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,660nm,11.8s						
WMQ				LR	LR		
	comp=N,780nm,14.9s						
WMQ				LR	LR		
	comp=E,660nm,14.9s						
WMQ				LR	LR		
	comp=Z,370nm,12.7s						
DGZ	Jazzator, Alta	45.46	314	i P	P	01 34 47.4	+0.5
DGZ				i *PP	PcP	01 36 14.7	-1.5
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PSI	Prapat	46.28	245	P	P	01 34 53.6	0.0
PSI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRAB	Tennant Creek	47.58	187	eP	P	01 35 02.2	-1.0
	comp=Z,23nm,1.2s						
WRAB	Tennant Creek	47.58	187	eP	P	01 35 02.2	-1.0
WRAB				pmax	pmax		
	comp=Z,23nm,1.2s						
WB2	Warramunga Arr	47.59	187	eP	P	01 35 02.4	-0.9
	comp=Z,22nm,1.3s						
WRA	Warramunga Arr	47.59	187	P	P	01 35 02.7	-0.5
	comp=Z,6.8nm,0.3s,baz=12,slow=9.4,SNR=178						
WRA				PcP	PcP	01 36 24.3	+0.3
	comp=Z,1.2nm,0.6s,baz=218,slow=5.3,SNR=5.4						
ZALV	Zalesovo Beam	47.78	319	P	P	01 35 03.7	-0.6
	comp=Z,1.7nm,0.3s,baz=110,slow=6.5,SNR=12						
ZALV				PcP	PcP	01 36 23.7	-0.5
	comp=Z,2.1nm,0.4s,baz=120,slow=2.1,SNR=8.9						
ZALV				ScP	ScP	01 39 30.8	-1.9
	comp=Z,0.7nm,0.5s,baz=131,slow=6.8,SNR=3.6						
CTAO	Charters Tower	47.82	172	P	P	01 35 05.0	0.0
CTAO				pmax	pmax		
	comp=Z,14nm,0.5s						
MK31	Makanchi Array	48.60	309	eP	P	01 35 10.2	-0.4
	comp=Z,3.8nm,1.3s						
MK31	Makanchi Array	48.60	309	eP	P	01 35 10.2	-0.4
MK31				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MKAR	Makanchi Array	48.60	309	P	P	01 35 10.7	+0.1
	comp=Z,0.6nm,0.3s,baz=88,slow=11,SNR=28						
MKAR				PcP	PcP	01 36 27.4	0.0
	comp=Z,1.8nm,0.8s,baz=89,slow=5.1,SNR=8.6						
MKAR				ScP	ScP	01 39 35.8	-0.6
	comp=Z,1.2nm,0.6s,baz=90,slow=3.5,SNR=7.0						
MAKZ	Makanchi	48.82	309	eP	P	01 35 12.1	-0.1
	comp=Z,5.5nm,1.2s						
MAKZ	Makanchi	48.82	309	eP	P	01 35 12.1	-0.1
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PDGK	Podgornoye	50.61	305	P	P	01 35 25.6	0.0
PDGK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	Kurchatov	51.19	314	eP	P	01 35 29.0	-0.6
	comp=Z,8.8nm,1.0s						
KURK	Kurchatov	51.19	314	P	P	01 35 29.9	+0.4
KURK						01 36 36.6	
KURK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KURBB	Kurchatov Arra	51.24	314	P	P	01 35 29.9	-0.1
	comp=Z,5.0nm,0.2s,baz=103,slow=7.9,SNR=112						
KURBB				PcP	PcP	01 36 36.6	-0.5
	comp=Z,1.1nm,0.6s,baz=96,slow=3.9,SNR=7.5						
AS31	Alice Springs	51.32	187	eP	P	01 35 30.8	0.0
	comp=Z,1.9nm,0.6s						
ASAR	Alice Springs	51.32	187	P	P	01 35 30.2	-0.6
	comp=Z,3.0nm,0.5s,baz=16,slow=13,SNR=50						
ASAR				PcP	PcP	01 36 38.6	+0.9
	comp=Z,1.6nm,0.7s,baz=21,slow=3.8,SNR=7.3						
PRZ	Przheval'sk	51.46	304	eP	P	01 35 32.5	+0.6
	comp=Z,8.7nm,0.8s						
PRZ	Przheval'sk	51.46	304	eP	P	01 35 32.5	+0.6
PRZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	54.31	304	PcP	PcP	01 36 48.3	-0.9
	comp=Z,1.5nm,0.3s,baz=184,slow=3.9,SNR=4.0						
AAK	Ala-Archa	54.31	304	⇑eP	P	01 35 52.8	+0.5
AAK				i *PP	pP	01 37 25.8	+0.7
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KDAK	Kodiak Island	55.14	37	P	P	01 35 57.9	+0.3
	comp=Z,5.4nm,1.1s,baz=338,slow=2.8,SNR=11						
OTUK	Ortayu	55.32	311	P	P	01 35 59.4	+0.3
OTUK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BVAR	Borovoye Array	56.30	317	P	P	01 36 06.1	+0.2
	comp=Z,8.1nm,0.4s,baz=96,slow=8.1,SNR=98						
BVAR				PcP	PcP	01 36 56.5	-0.1
	comp=Z,1.1nm,0.5s,baz=93,slow=3.0,SNR=4.4						
BRVK	Borovoye	56.37	317	eP	P	01 36 06.1	-0.2
	comp=Z,7.2nm,0.7s						
BRVK	Borovoye	56.37	317	i P	P	01 36 06.3	0.0
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KK31	Karatay Array	57.16	305	eP	P	01 36 11.8	-0.1
	comp=Z,4.9nm,0.7s						
KK31	Karatay Array	57.16	305	eP	P	01 36 11.8	-0.1
KK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KKAR	Karatay Array	57.16	305	eP	P	01 36 12.1	+0.2
	comp=Z,4.9nm,0.7s						
KKAR	Karatay Array	57.16	305	eP	P	01 36 12.1	+0.2
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ILAR	Eielson Array	58.21	29	P	P	01 36 20.1	+1.4
	comp=Z,0.2nm,0.2s,baz=260,slow=5.0,SNR=3.6						
ILAR				PcP	PcP	01 37 03.2	-0.7
	comp=Z,0.3nm,0.6s,baz=287,slow=4.6,SNR=4.1						
STKA	Stephens Creek	59.19	178	P	P	01 36 24.9	-0.8
	comp=Z,3.0nm,0.5s,baz=360,slow=9.6,SNR=9.7						
KBL	Kabul	60.00	296	eP	P	01 36 30.7	-0.9
	comp=Z,3.3nm,0.8s						
KBL	Kabul	60.00	296	eP	P	01 36 30.7	-0.9
KBL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	Arti	62.78	322	P	P	01 36 49.0	-0.2
	comp=Z,2.3nm,0.3s,baz=76,slow=3.6,SNR=12						
ARU	Arti	62.78	322	eP	P	01 36 48.6	-0.6
	comp=Z,5.0nm,0.7s						
ARU	Arti	62.78	322	d iP	P	01 36 49.0	-0.2
ARU				S	S	01 44 41.9	+1.5
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABKAR	Akbulak array	63.30	314	eP	P	01 36 52.2	-0.4
	comp=Z,3.8nm,0.8s						
AKTO	Aktyubinsk	64.26	315	P	P	01 36 58.3	-0.5
	comp=Z,2.6nm,0.7s,baz=66,slow=13,SNR=7.2						
GEYT	Alibeck	67.54	302	P	P	01 37 19.8	+0.2
	comp=Z,1.2nm,0.8s,baz=210,slow=8.6,SNR=3.6						
PRGR	Permogore	68.08	329	eP	P	01 37 20.1	-2.3
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARCES	ARCESS Array B	72.38	340	P	P	01 37 48.3	+0.4
	comp=Z,3.0nm,0.7s,baz=72,slow=7.8,SNR=17						
YKA	Yellowknife Ar	72.62	28	P	P	01 37 49.8	+0.4
	comp=Z,1.5nm,0.6s,baz=298,slow=5.7,SNR=8.5						
MSF	Maaselka	73.10	336	P	P	01 37 52.4	+0.3
MSF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN	Obninsk	74.95	325	⇓eP	P	01 38 03.3	+0.5
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSR	Storozhevoye	75.27	320	i P	P	01 38 04.4	-0.3
VSR				pmax	pmax		
	comp=Z,13nm,1.1s						
SUF	Sumiainen	75.85	334	P	P	01 38 07.5	-0.2
SUF				pmax	pmax		
	comp=Z,11nm,0.7s						
KBZ	Khabaz	76.18	312	P	P	01 38 10.3	+0.4
	comp=Z,3.7nm,0.8s,baz=109,slow=3.6,SNR=8.4						
FIA1	FINESS Array S	76.58	333	eP	P	01 38 11.3	-0.5
	comp=Z,7.1nm,0.6s						
FINES	FINESS Array B	76.59	333	P	P	01 38 11.6	-0.2
	comp=Z,4.1nm,0.3s,baz=66,slow=5.0,SNR=124						
PINE	Pine Mountain	77.51	47	eP	P	01 38 18.9	+1.4
BEKR	Beckworth	79.66	50	eP	P	01 38 29.9	+0.8
	comp=Z,3.8nm,0.6s						
IZAR	Zarasai	79.70	328	eP	P	01 38 29.6	+0.9
IZAR				IAmb	IAmb	01 38 31.1	
	comp=Z,4.1nm,0.6s						
ISAL	Salakas	79.86	328	eP	P	01 38 30.2	+0.7
IIGN	Ignalina	79.94	328	eP	P	01 38 30.7	+0.8
SLIT	Slitere, Latvi	80.37	331	eP	P	01 38 31.2	-0.9
SLIT				IAmb	IAmb	01 38 31.8	
	comp=Z,32nm,0.8s						
MFID	Camas Ranch	80.97	46	eP	P	01 38 37.1	+1.3
	comp=Z,3.3nm,0.8s						
AKASG	Malin Array Be	81.01	323	P	P	01 38 35.0	-0.6
	comp=Z,0.5nm,0.2s,baz=48,slow=6.0,SNR=7.2						
KVN	Kaiserville	81.59	50	eP	P	01 38 40.1	+0.9
	comp=Z,2.2nm,0.6s						
KVN	Kaiserville	81.59	50	eP	P	01 38 40.1	+0.9
KVN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NVAR	Mina Array Bea	81.75	51	P	P	01 38 41.6	+1.5
	comp=Z,1.2nm,0.5s,baz=294,slow=5.8,SNR=14						
HLID	Hailey	81.79	45	eP	P	01 38 41.5	+1.4
	comp=Z,1.3nm,0.6s						
NC405	NORSAR Array S	82.15	337	eP	P	01 38 40.4	-0.9
	comp=Z,13nm,0.6s						
NC303	NORSAR Array S	82.19	338	eP	P	01 38 40.8	-0.7
	comp=Z,7.1nm,0.8s						
NC204	NORSAR Array S	82.36	338	eP	P	01 38 41.8	-0.6
	comp=Z,9.8nm,0.8s						
NB2	NORSAR Subarra	82.37	337	P	P	01 38 41.2	-1.3
	comp=Z,1.8nm,0.6s,baz=49,slow=4.6						
NOA	NORSAR Array B	82.37	337	P	P	01 38 41.6	-0.9
	comp=Z,2.6nm,0.7s,baz=47,slow=4.8,SNR=33						
BOZ	Bozeman (W)	82.44	42	eP	P	01 38 44.3	+0.9
	comp=Z,12nm,1.9s						
BOZ	Bozeman (W)	82.44	42	eP	P	01 38 44.3	+0.9
BOZ				pmax	pmax		
	comp=Z,12nm,1.9s						
NBO00	NORSAR Array S	82.53	338	eP	P	01 38 42.9	-0.4
	comp=Z,6.2nm,0.8s						
ELK	Elko	82.68	48	eP	P	01 38 45.9	+1.2
	comp=Z,2.6nm,1.0s						
ELK	Elko	82.68	48	eP	P	01 38 45.9	+1.2
ELK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	83.11	293	eP	P	01 38 47.2	+0.2
	comp=Z,14nm,0.8s						
RAYN	Ar Rayn	83.11	293	eP	P	01 38 47.2	+0.2
RAYN				pmax	pmax		
	comp=Z,14nm,0.8s						
RLMT	Red Lodge	84.10	42	eP	P	01 38 52.9	+1.1
	comp=Z,3.7nm,0.5s						
BR131	Keskin Array S	84.17	312	eP	P	01 38 51.4	-0.8
	comp=Z,10nm,1.8s						
BRTR	Keskin Array B	84.17	312	P	P	01 38 51.5	-0.7
	comp=Z,1.2nm,0.7s,baz=109,slow=4.2,SNR=8.7						
BUR08	Bucovina Ar. S	84.91	322	eP	P	01 38 55.0	-0.5
	comp=Z,1.8nm,0.9s						
PDAR	Pinedale Array	85.23	44	P	P	01 38 58.2	+0.8
	comp=Z,0.4nm,0.4s,baz=299,slow=6.1,SNR=4.0						
VYHS	Vyhne	87.74	325	eP	P	01 39 08.7	-0.2
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VYHS	Vyhne	87.74	325	eP	P	01 39 08.7	-0.2
CLL	Collm	88.61	330	i P	P	01 39 11.5	-1.3
CLL	Collm	88.61	330	i P	P	01 39 11.5	-1.3
GERES	GERESS Array B	90.02	328	P	P	01 39 18.8	-0.8
	comp=Z,0.4nm,0.5s,baz=38,slow=5.0,SNR=7.3						
ANMO	Albuquerque	91.65	49	ceP	P	01 39 30.1	+2.5
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	Lajitas Array	96.87	52	P	P	01 39 52.4	+1.2
	comp=Z,0.7nm,0.8s,baz=302,slow=3.6,SNR=5.9						
TORD	Torodi Ar. Bea	122.72	310	PKP	PKPdf	01 45 11.6	-1.8
	comp=Z,1.3nm,0.7s,baz=11,slow=2.6,SNR=16						
TORD				PKKPbc	PKKPbc	01 55 07.9	0.0
	comp=Z,0.4nm,0.6s,baz=231,slow=3.6,SNR=5.5						
SNAA	Sanae	131.38	195	PKPdf	PKPdf	01 45 26.8	-1.4
VNA3	Neumayer Olymp	133.16	193	PKPdf	PKPdf	01 45 31.2	-0.3
PTGA	Pitinga	147.15	39	ePKPbc	PKPbc	01 46 01.3	0.0
LPAZ	La Paz	151.69	72	PKPbc	PKiKP	01 46 13.8	+0.7
	comp=Z,6.0nm,0.6s,baz=321,slow=2.8,SNR=26						
LPAZ	La Paz	151.69	72	ePKPbc	PKiKP	01 46 13.6	+0.4
PLCA	Paso Flores	151.74	125	PKPbc	PKiKP	01 46 12.6	+0.7
	comp=Z,4.1nm,0.4s,baz=321,slow=1.9,SNR=12						

SKO 27 01:31:53.8, 41°.94N×23°.21E, h25^{km}**, M0.9, ML1.3, 1C-1D, Greece-Bulgaria border region**

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

KKB	Krupnik	0.12	232	⇑iPg	Pb	01 31 57.5	-1.1
KKB				i Sg	Sb	01 31 59.2	-2.7
KKB	Krupnik	0.12	232	i Pg	Pb	01 31 57.5	-1.1
KKB				i Sg	Sb	01 31 59.1	-2.7
MMB	Musomiste	0.52	132	i Pg	Pb	01 32 05.0	+0.6
MMB				i Sg	Sb	01 32 12.7	+1.1
MMB	Musomiste	0.52	132	i Pg	Pb	01 32 04.5	+0.1
MMB				i Sg	Sb	01 32 12.7	+1.1
VTS	Vitosha	0.68	2	i Pg	Pb	01 32 07.2	+0.1
VTS				i Sg	Sb	01 32 16.1	0.0
VAY	Valandovo	0.78	218	i Pg	Pn	01 32 09.5	+0.3
VAY				i Sg	Sn	01 32 20.5	+0.3
VAY				eLg	Lg	01 32 20.8	
	comp=E,6.9nm,0.4s						
VAY	Valandovo	0.78	218	i Pg	Pn	01 32 09.5	+0.3
VAY				i Sg	Sn	01 32 20.5	+0.4
VAY				eLg	Lg	01 32 20.6	
	comp=N,7.4nm,0.6s						
VAY				eLg	Lg	01 32 20.8	
	comp=E,6.9nm,0.4s						
KNT	Kendrikon	0.81	197	i Pg	Pn	01 32 10.0	+0.3
KNT				i Sg	Sn	01 32 20.9	-0.1
KNT	Kendrikon	0.81	197	i Pg	Pn	01 32 10.7	+1.0
KNT				i Sg	Sn	01 32 20.9	-0.1
SRS	Serrai	0.87	161	⇓iPg	Pn	01 32 11.0	+0.5
SRS				i Sg	Sn	01 32 22.7	+0.3
SRS	Serrai	0.87	161	i Pg	Pn	01 32 11.0	+0.5
SRS				i Sg	Sn	01 32 22.4	0.0
SOH	Sokhos	1.12	174	ePg	Pb	01 32 15.7	+1.1
SOH				i Sg	Sb	01 32 30.8	+2.1

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*SKO **27** 01:32:48.9, 41°.94N×23°.19E, h22^{km}, M1.7, ML1.9*

*ISCJB **27** 01:32:48.8±0.4, 41°.96N±0°.02×23°.20E±0°.03, h2^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.0km az=162.0*

*ATH **27** 01:32:49.8, 41°.90N×23°.22E, h22^{km}±2^{km}, ML1.8/5, Error ellipse: s-maj=3.4km s-min=1.5km az=172.0*

*SOF **27** 01:32:49.0, 41°.96N×23°.25E, h12^{km}*

*BEO **27** 01:32:50.7±0.3, 41°.95N×23°.15E, h5^{km}, ML1.8/7*

*THE **27** 01:32:50.8, 41°.88N×23°.23E, h4^{km}, ML1.7/5, Error ellipse: s-maj=1.0km s-min=0.5km az=192.0*

ISC 27 01:32:49.5±0.9**, 41°.95N**±0°.02×**23°.19E**±0°.02**, h12**^{km}±6^{km}**, n45, σ0^{s}.52**/73**, 3C-1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.11	223	⇑iPg	Pg	01 32 52.7	+0.1
KKB				i Sg	Sg	01 32 54.9	+0.1
KKB	Krupnik	0.11	223	P	Pg	01 32 52.7	+0.1
MMB	Musomiste	0.54	132	⇑iPg	Pg	01 33 00.4	+0.2
MMB				i Sg	Sb	01 33 08.0	-0.8
MMB	Musomiste	0.54	132	P	Pg	01 33 00.3	+0.2
VTS	Vitosha	0.67	3	ePg	Pg	01 33 02.1	-0.5
VTS				eSg	Sg	01 33 10.9	-0.5
VTS	Vitosha	0.67	3	P	Pg	01 33 02.1	-0.5
VTS				S	Sg	01 33 10.9	-0.5
VTS	Vitosha	0.67	3	⇑iPg	Pg	01 33 02.1	-0.5
VTS				i Sg	Sg	01 33 11.0	-0.5
VTS	Vitosha	0.67	3	P	Pg	01 33 02.0	-0.5
VAY	Valandovo	0.78	217	ePg	Pg	01 33 04.3	-0.3
VAY				eSg	Sg	01 33 15.2	+0.4
VAY	Valandovo	0.78	217	⇓iPg	Pg	01 33 04.7	0.0
VAY				i Sg	Sg	01 33 15.4	+0.5
VAY				eLg	Lg	01 33 15.9	
	comp=E,23nm,0.3s						
VAY				eLg	Lg	01 33 18.9	
	comp=N,38nm,0.3s						
NVR	Nevrokopi	0.78	140	P	Pg	01 33 04.0	-0.7
NVR				S	Sg	01 33 14.6	-0.4
	comp=N,70nm,0.2s						
NVR	Nevrokopi	0.78	140	P	Pg	01 33 04.2	-0.5
NVR				S	Sg	01 33 14.6	-0.4
NVR				AML	AML	01 33 18.7	
	comp=N,153µm,0.1s						
NVR				AML	AML	01 33 19.6	
	comp=E,123µm,0.3s						
KNT	Kendrikon	0.82	195	P	Pg	01 33 04.8	-0.6
KNT				S	Sg	01 33 16.2	+0.2
	comp=E,88nm,0.2s						
KNT	Kendrikon	0.82	195	i Pg	Pg	01 33 04.9	-0.5
KNT				i Sg	Sg	01 33 15.3	-0.7
KNT	Kendrikon	0.82	195	P	Pg	01 33 04.8	-0.6
KNT				S	Sg	01 33 15.2	-0.8
KNT				AML	AML	01 33 19.9	
	comp=N,175µm,0.2s						
KNT				AML	AML	01 33 19.9	
	comp=E,165µm,0.2s						
SRS	Serrai	0.89	160	ePg	Pg	01 33 06.2	-0.4
SRS				eSg	Sb	01 33 19.0	+0.3
SRS	Serrai	0.89	160	P	Pg	01 33 06.0	-0.6
SRS				S	Sg	01 33 17.8	-0.4
	comp=E,55nm,0.3s						
SRS	Serrai	0.89	160	i Pg	Pg	01 33 06.0	-0.6
SRS				i Sg	Sg	01 33 18.0	-0.2
SRS	Serrai	0.89	160	P	Pg	01 33 06.1	-0.5
SRS				S	Sg	01 33 17.9	-0.3
SRS				AML	AML	01 33 21.9	
	comp=N,125µm,0.3s						
SRS				AML	AML	01 33 22.1	
	comp=E,96µm,0.3s						
SOH	Sokhos	1.13	174	P	Pb	01 33 10.6	-0.5
SOH				S	Sb	01 33 25.9	0.0
SOH	Sokhos	1.13	174	i Pg	Pb	01 33 10.8	-0.4
SOH				i Sg	Sg	01 33 26.2	0.0
SOH	Sokhos	1.13	174	P	Pb	01 33 10.8	-0.4
SOH				S	Sg	01 33 26.1	0.0
SOH				AML	AML	01 33 28.2	
	comp=E,86µm,0.4s						
SOH				AML	AML	01 33 28.5	
	comp=N,214µm,0.6s						
PLD	Plovdiv	1.14	82	ePg	Pg	01 33 12.4	+0.9
PLD				eSg	Sn	01 33 27.7	+0.8
PLD	Plovdiv	1.14	82	i Pg	Pn	01 33 11.3	0.0
PLD				i Sg	Sg	01 33 26.2	-0.1
THE	Thessaloniki	1.33	187	P	Pn	01 33 14.1	+0.1
BARS	Barje	1.33	311	ePg	Pn	01 33 14.3	+0.2
BARS				eSg	Sb	01 33 32.0	+0.4
HORT	Hortiatis	1.35	183	P	Pn	01 33 14.6	+0.2
HORT	Hortiatis	1.35	183	P	Pb	01 33 15.0	+0.1
KAVA	Kavala	1.38	133	P	Pb	01 33 14.9	-0.4
KAVA				S	Sg	01 33 33.7	-0.2
	comp=N,28nm,0.4s						
KAVA	Kavala	1.38	133	P	Pb	01 33 14.8	-0.4
KAVA				S	Sn	01 33 32.9	+0.1
KAVA				AML	AML	01 33 35.6	
	comp=N,68µm,0.2s						
KAVA				AML	AML	01 33 38.4	
	comp=E,93µm,0.3s						
ZAPS	Zavoj	1.39	343	ePg	Pb	01 33 16.0	+0.6
ZAPS				eSg	Sn	01 33 33.4	+0.4
PLG	Polygyros	1.59	173	P	Pn	01 33 17.7	+0.2
OUR	Ouranopolis	1.72	159	P	Pn	01 33 19.8	+0.5
OUR	Ouranopolis	1.72	159	P	Pn	01 33 19.6	+0.3
THAS	Thassos island	1.77	139	P	Pn	01 33 20.3	+0.3
THAS				S	Sb	01 33 43.2	-0.9
	comp=E,20nm,0.4s						
THAS	Thassos island	1.77	139	P	Pn	01 33 20.7	+0.7
THAS				S	Sb	01 33 43.5	-0.6
FNA	Florina	1.79	230	ePn	Pb	01 33 22.6	+0.2
RDO	Rodhopi	1.94	114	P	Pn	01 33 22.9	+0.6
RDO				S	Sn	01 33 47.3	+0.7
SELS	Selova	1.98	310	ePn	Pb	01 33 25.0	-0.6
ZAGS	Zajecar	1.99	340	ePn	Pb	01 33 25.1	-0.6
BOVS	Bovan	2.01	328	ePn	Pb	01 33 25.6	-0.4
PAIG	Paliouri	2.06	169	P	Pn	01 33 24.2	+0.3
ALN	Alexandroupoli	2.39	115	P	Pn	01 33 30.4	+1.8
XOR	Xorichti	2.58	180	P	Pn	01 33 31.9	+0.7
XOR	Xorichti	2.58	180	P	Pn	01 33 31.8	+0.6

SKO 27 01:37:22.1, 41°.95N×23°.23E, h15^{km}**, M0.8, ML1.4, 1C-1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.14	233	⇑iPg	Pg	01 37 25.5	-0.3
KKB				i Sg	Sg	01 37 27.7	-0.6
MMB	Musomiste	0.52	134	i Pg	Pb	01 37 33.2	+0.3
MMB				i Sg	Sb	01 37 40.7	+0.4
VTS	Vitosha	0.67	0	⇓iPg	Pg	01 37 35.0	-0.3
VTS				i Sg	Sg	01 37 43.6	-0.5
VAY	Valandovo	0.80	218	i Pg	Pb	01 37 38.2	+0.5
VAY				i Sg	Sb	01 37 48.5	+0.1
VAY				eLg	Lg	01 37 49.0	
	comp=N,8.9nm,0.6s						
VAY				eLg	Lg	01 37 49.2	
	comp=E,2.0nm,0.2s						
KNT	Kendrikon	0.83	198	i Pg	Pg	01 37 38.1	0.0
KNT				i Sg	Sg	01 37 48.2	-0.9
SRS	Serrai	0.88	162	i Pg	Pg	01 37 39.4	+0.3
SRS				i Sg	Sg	01 37 51.0	+0.4

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*ISCJB **27** 01:45:42.1±1.6, 37°.5N±0°.1×71°.50E±0°.10, h109^{km}, mb3.6/3, Error ellipse: s-maj=16.1km s-min=9.0km az=151.5*

*NNC **27** 01:45:46.6±3.3, 37°.90N×71°.83E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=27.2km s-min=22.8km az=40.0*

*IDC **27** 01:45:48.9±25.0, 37°.30N×71°.64E, h188^{km}±153^{km}, mb3.1/3, mb1 3.0/5, mb1mx2.7/44, mbtmp3.6/5, ML3.1/2, Error ellipse: s-maj=280.3km s-min=75.8km az=2.0*

ISC 27 01:45:42.6±1.9**, 37°.5N**±0°.1×**71°.61E**±0°.09**, h109**^{km}**, n9, σ2^{s}.58**/12**, mb3.6**/3**, 1C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.60	22	⇓P	Pn	01 47 05.3	+1.6
	4.0nm,0.3s						
AAK				⇓S	Sn	01 48 06.9	+0.2
	12nm,0.6s						
KK31	Karatay Array	5.67	352	P	Pn	01 47 07.8	+3.4
	4.9nm,0.3s,baz=162,slow=12,SNR=182						
KK31				⇑S	Sn	01 48 09.4	+1.1
	13nm,0.4s,baz=164,slow=13,SNR=28						
TKM2	Tokmak 2	6.22	28	⇓P	Pn	01 47 12.9	+0.8
	3.0nm,0.8s						
GEYT	Alibeck	10.70	276	S	Sn	01 50 09.7	-0.7
	0.4nm,0.3s,baz=73,slow=20,SNR=2.9						
MKAR	Makanchi Array	12.21	37	P	P	01 48 38.4	-2.2
	0.0nm,0.3s,baz=218,slow=16,SNR=2.9						
AKTO	Aktyubinsk	16.19	327	P	P	01 49 27.1	+2.4
	0.2nm,0.3s,baz=143,slow=12,SNR=5.5						
AKTO				S	Sn	01 52 17.2	-5.7
	0.1nm,0.3s,baz=137,slow=19,SNR=4.6						
FINES	FINESS Array B	36.94	325	P	P	01 52 41.1	+0.4
	0.5nm,0.6s,baz=110,slow=12,SNR=4.6						
ARCES	ARCESS Array B	40.42	337	P	P	01 53 09.5	-0.2
	0.9nm,0.9s,baz=98,slow=5.7,SNR=4.5						
HFS	Hagfors	42.59	321	P	P	01 53 27.2	-0.4
	0.8nm,0.7s,baz=111,slow=7.9,SNR=5.6						

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*SKO **27** 01:48:31.8, 41°.94N×23°.25E, h18^{km}, M3.4, ML3.8*

*ISCJB **27** 01:48:32.0±0.3, 41°.952N±0°.009×23°.16E±0°.01, h8^{km}±2^{km}, mb3.6/1, Error ellipse: s-maj=1.8km s-min=1.4km az=153.3*

*IDC **27** 01:48:31.5±1.0, 41°.99N×23°.04E, h0^{km}, mb3.3/2, mb1 3.3/9, mb1mx3.1/42, mbtmp3.3/9, ML3.0/8, Error ellipse: s-maj=13.5km s-min=12.5km az=109.0*

*THE **27** 01:48:32.5, 41°.91N×23°.23E, h2^{km}, ML3.5/18, Error ellipse: s-maj=1.0km s-min=0.6km az=53.0*

*SOF **27** 01:48:32.2, 41°.96N×23°.28E, h2^{km}*

*BEO **27** 01:48:33.0±0.2, 41°.95N×23°.23E, h11^{km}±2^{km}, ML3.6/21*

*ISK **27** 01:48:33.2, 41°.87N×23°.20E, h6^{km}, ML3.8/28*

*ATH **27** 01:48:33.8, 41°.84N×23°.24E, h27^{km}, ML3.6/14, Error ellipse: s-maj=1.8km s-min=0.8km az=172.0*

*PRU **27** 01:48:35.8±0.0, 42°.08N×23°.17E, h10^{km}*

ISC 27 01:48:32.6±0.8**, 41°.95N**±0°.01×**23°.20E**±0°.02**, h12**^{km}±6^{km}**, n284, σ1^{s}.60**/368**, 26C-6D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.12	225	⇑iPg	Pg	01 48 35.8	+0.1
KKB				i Sg	Sg	01 48 38.0	0.0
KKB	Krupnik	0.12	225	P	Pg	01 48 35.7	0.0
MMB	Musomiste	0.54	132	⇑iPg	Pg	01 48 43.3	+0.2
MMB				i Sg	Sg	01 48 50.6	+0.4
MMB	Musomiste	0.54	132	P	Pg	01 48 43.1	0.0
VTS	Vitosha	0.67	2	ePg	Pg	01 48 44.8	-0.8
VTS				eSg	Sg	01 48 54.1	-0.3
VTS	Vitosha	0.67	2	P	Pg	01 48 44.6	-1.0
VTS				S	Sg	01 48 54.3	-0.2
VTS	Vitosha	0.67	2	⇑iP	Pg	01 48 45.2	-0.4
VTS				S	Sg	01 48 54.4	0.0
VTS	Vitosha	0.67	2	i Pg	Pg	01 48 44.7	-1.0
VTS				i Sg	Sg	01 48 54.2	-0.2
VTS	Vitosha	0.67	2	P	Pg	01 48 45.2	-0.4
NVR	Nevrokopi	0.78	140	P	Pg	01 48 46.9	-0.8
NVR				S	Sg	01 48 56.8	-1.1
	4µm,0.3s						
NVR	Nevrokopi	0.78	140	P	Pg	01 48 46.8	-0.8
NVR				S	Sg	01 48 56.7	-1.2
NVR				AML	AML	01 48 57.0	
	comp=E,7545µm,0.3s						
NVR				AML	AML	01 49 02.7	
	comp=N,6891µm,0.3s						
VAY	Valandovo	0.79	217	ePg	Pg	01 48 48.0	+0.3
VAY				eSg	Sb	01 48 58.6	-0.2
VAY	Valandovo	0.79	217	i Pg	Pg	01 48 48.1	+0.3
VAY				i Sg	Sb	01 48 58.5	-0.2
VAY				eLg	Lg	01 48 58.8	
	comp=E,3µm,0.6s						
VAY				eLg	Lg	01 48 58.8	
	comp=N,3µm,0.6s						
KNT	Kendrikon	0.82	196	PG	Pg	01 48 48.2	-0.2
KNT				SG	Sg	01 48 58.4	-0.7
KNT	Kendrikon	0.82	196	P	Pg	01 48 47.9	-0.5
KNT				S	Sg	01 48 58.4	-0.7
	comp=N,5µm,0.2s						
KNT	Kendrikon	0.82	196	i Pg	Pg	01 48 48.0	-0.5
KNT				i Sg	Sg	01 48 58.4	-0.7
KNT	Kendrikon	0.82	196	P	Pg	01 48 48.1	-0.4
KNT				S	Sg	01 48 58.5	-0.7
KNT				AML	AML	01 48 58.6	
	comp=E,7018µm,0.2s						
KNT				AML	AML	01 49 03.3	
	comp=N,11589µm,0.3s						
SRS	Serrai	0.88	160	ePg	Pg	01 48 48.6	-1.0
SRS				eSg	Sg	01 49 00.7	-0.5
SRS	Serrai	0.88	160	P	Pg	01 48 48.9	-0.7
SRS				S	Sg	01 49 00.4	-0.8
	comp=N,3µm,0.4s						
SRS	Serrai	0.88	160	i Pg	Pg	01 48 49.1	-0.6
SRS				i Sg	Sg	01 49 00.7	-0.5
SRS	Serrai	0.88	160	P	Pg	01 48 49.1	-0.6
SRS				S	Sg	01 49 00.4	-0.8
SRS				AML	AML	01 49 05.0	
	comp=N,5366µm,0.4s						
SRS				AML	AML	01 49 06.0	
	comp=E,6306µm,0.4s						
PGB	Panagyurishte	0.94	50	P	Pg	01 48 49.5	-1.2
PLD	Plovdiv	1.13	82	PN	Pg	01 48 55.4	+1.0
PLD	Plovdiv	1.13	82	ePg	Pb	01 48 53.3	-0.7
PLD				eSg	Sb	01 49 08.6	-0.1
PLD	Plovdiv	1.13	82	i Pg	Pb	01 48 53.4	-0.7
PLD				i Sg	Sn	01 49 10.5	+0.9
PLD	Plovdiv	1.13	82	P	Pb	01 48 53.4	-0.7
SOH	Sokhos	1.13	174	P	Pb	01 48 53.5	-0.6
SOH				S	Sb	01 49 08.5	-0.3
	comp=E,6µm,0.5s						
SOH	Sokhos	1.13	174	i Pg	Pb	01 48 53.7	-0.4
SOH				i Sg	Sb	01 49 08.9	+0.1
SOH	Sokhos	1.13	174	P	Pb	01 48 53.6	-0.6
SOH				S	Sb	01 49 08.3	-0.5
SOH				AML	AML	01 49 10.5	
	comp=E,6757µm,0.5s						
SOH				AML	AML	01 49 11.1	
	comp=N,17051µm,0.5s						
RZN	Rozhen	1.17	103	P	Pb	01 48 54.0	-0.7
SKO	Skopje	1.31	272	ePg	Pn	01 48 56.9	+0.2
SKO				eSg	Sg	01 49 15.5	+0.7
SKO	Skopje	1.31	272	i Pg	Pb	01 48 57.5	+0.3
SKO				i Sg	Sg	01 49 16.1	+1.3
THE	Thessaloniki	1.33	188	P	Pn	01 48 56.9	0.0
THE				S	Sn	01 49 14.6	+0.1
	comp=N,3µm,0.5s						
THE	Thessaloniki	1.33	188	i Pg	Pn	01 48 57.3	+0.4
THE				i Sg	Sg	01 49 15.8	+0.5
THE	Thessaloniki	1.33	188	P	Pb	01 48 57.5	+0.1
THE				AML	AML	01 49 16.8	
	comp=E,7893µm,0.5s						
THE				AML	AML	01 49 18.6	
	comp=N,3946µm,0.6s						
BARS	Barje	1.34	311	ePg	Pb	01 48 57.8	+0.2
BARS	Barje	1.34	311	ePn	Pg	01 49 10.1	+12
BARS				eSg	Sg	01 49 16.5	+0.7
BARS				eSn	Sn	01 49 38.3	+23
KVLA	Kavala	1.35	138	P	Pn	01 48 57.1	-0.1
KVLA				S	Sb	01 49 14.4	-0.6
KVLA				AML	AML	01 49 17.7	
	comp=N,8505µm,0.5s						
KVLA				AML	AML	01 49 18.2	
	comp=E,8446µm,0.4s						
HORT	Hortiatis	1.35	183	PN	Pb	01 48 58.0	+0.1
HORT				SN	Sg	01 49 16.2	0.0
HORT	Hortiatis	1.35	183	P	Pn	01 48 57.2	-0.1
HORT				S	Sg	01 49 15.9	-0.3
	comp=E,2µm,0.6s						
HORT	Hortiatis	1.35	183	P	Pb	01 48 57.8	-0.1
HORT				S	Sb	01 49 13.9	-1.3
HORT				AML	AML	01 49 17.7	
	comp=E,4597µm,0.6s						
HORT				AML	AML	01 49 18.2	
	comp=N,4843µm,0.5s						
KAVA	Kavala	1.37	134	P	Pn	01 48 57.5	0.0
KAVA				S	Sb	01 49 15.7	+0.1
	comp=N,4µm,0.4s						
KAVA	Kavala	1.37	134	P	Pn	01 48 57.8	+0.3
KAVA				S	Sn	01 49 15.5	-0.1
KAVA				AML	AML	01 49 17.3	
	comp=E,7357µm,0.4s						
KAVA				AML	AML	01 49 22.1	
	comp=N,8494µm,0.5s						
ZAPS	Zavoj	1.39	343	ePg	Pg	01 48 59.2	0.0
ZAPS				eSg	Sg	01 49 17.1	-0.1
PLG	Polygyros	1.59	173	P	Pn	01 49 00.6	+0.1
PLG				S	Sn	01 49 20.9	0.0
	comp=N,2µm,0.4s						
PLG	Polygyros	1.59	173	P	Pn	01 49 00.9	+0.4
PLG				AML	AML	01 49 25.3	
	comp=E,4222µm,0.4s						
PLG				AML	AML	01 49 25.6	
	comp=N,4333µm,0.4s						
KDZ	Kurdzhali	1.69	100	PN	Pn	01 49 02.5	+0.7
KDZ				SN	Sb	01 49 24.7	0.0
OUR	Ouranopolis	1.72	160	PN	Pb	01 49 03.3	-0.8
OUR	Ouranopolis	1.72	160	P	Pn	01 49 02.5	+0.2
OUR				S	Sb	01 49 25.2	-0.4
OUR	Ouranopolis	1.72	160	P	Pn	01 49 02.4	+0.2
OUR				AML	AML	01 49 28.0	
	comp=E,7396µm,0.5s						
OUR				AML	AML	01 49 28.7	
	comp=N,13196µm,0.7s						
DIM	Dimitrovgrad	1.74	86	P	Pb	01 49 05.0	+0.5
THAS	Thassos island	1.77	139	P	Pn	01 49 02.9	0.0
THAS				S	Sb	01 49 27.1	+0.2
	comp=N,1µm,0.4s						
THAS	Thassos island	1.77	139	P	Pn	01 49 03.1	+0.2
THAS				AML	AML	01 49 30.1	
	comp=E,2902µm,0.5s						
THAS				AML	AML	01 49 30.6	
	comp=N,2496µm,0.3s						
PLVB	Pleven	1.78	36	⇑iP	Pb	01 49 04.3	-0.8
PLVB	Pleven	1.78	36	S	Sg	01 49 30.4	+0.6
FNA	Florina	1.80	230	ePn	Pn	01 49 04.0	+0.6
FNA				eSn	Sn	01 49 26.9	+0.7
FNA	Florina	1.80	230	P	Pn	01 49 04.3	+0.9
FNA				S	Sb	01 49 28.6	+0.6
	comp=N,4µm,0.7s						
FNA	Florina	1.80	230	i Pn	Pn	01 49 04.4	+1.0
FNA	Florina	1.80	230	P	Pn	01 49 04.3	+0.9
LIT	Litokhoron	1.92	196	P	Pn	01 49 04.3	-0.8
LIT				S	Sn	01 49 28.9	-0.3
	comp=N,222nm,0.5s						
LIT	Litokhoron	1.92	196	i Sg	Sn	01 49 30.3	+1.1
LIT	Litokhoron	1.92	196	P	Pn	01 49 04.9	-0.3
LIT				S	Sn	01 49 28.7	-0.6
LIT				AML	AML	01 49 37.3	
	comp=N,344µm,0.5s						
LIT				AML	AML	01 49 39.9	
	comp=E,522µm,0.7s						
RDO	Rodhopi	1.93	114	PN	Pb	01 49 06.6	-1.0
RDO	Rodhopi	1.93	114	P	Pn	01 49 06.3	+1.1
RDO				S	Sb	01 49 31.4	-0.3
	comp=E,1µm,0.3s						
RDO	Rodhopi	1.93	114	P	Pb	01 49 06.7	-1.0
RDO				AML	AML	01 49 37.0	
	comp=E,2734µm,0.3s						
RDO				AML	AML	01 49 38.6	
	comp=N,2747µm,0.4s						
KZN	Kozani	1.96	214	P	Pn	01 49 05.6	-0.1
KZN				S	Sb	01 49 32.2	-0.5
	comp=N,230nm,0.6s						
KZN	Kozani	1.96	214	P	Pn	01 49 06.1	+0.4
SELS	Selova	1.99	310	ePn	Pn	01 49 06.6	+0.5
SELS				eSn	Sn	01 49 31.3	+0.4
ZAGS	Zajecar	1.99	339	ePn	Pn	01 49 06.9	+0.9
BOVS	Bovan	2.01	327	ePn	Pn	01 49 07.0	+0.7
BOVS				eSn	Sn	01 49 32.3	+1.0
PVL	Pavlikeni	2.02	51	P	Pn	01 49 07.7	+1.3
PAIG	Paliouri	2.05	170	P	Pn	01 49 06.6	-0.3
PAIG				S	Sn	01 49 32.1	-0.3
	comp=N,848nm,0.5s						
PAIG	Paliouri	2.05	170	P	Pn	01 49 06.9	+0.1
PAIG				S	Sn	01 49 31.7	-0.7
PAIG				AML	AML	01 49 39.6	
	comp=E,1697µm,0.4s						
PAIG				AML	AML	01 49 41.4	
	comp=N,1649µm,0.5s						
PHP	Peshkopia	2.08	264	P	Pn	01 49 08.0	+0.7
PHP				S	Sb	01 49 36.5	+0.5
ELND	Elena	2.21	63	S	Sn	01 49 37.1	+0.8
VLAD	Vladila	2.23	23	⇓iP	Pn	01 49 10.2	+0.9
NEST	Nestorio	2.23	227	P	Pn	01 49 09.9	+0.5
NEST	Nestorio	2.23	227	P	Pn	01 49 10.7	+1.2
SMTH	Samothraki Isl	2.30	129	P	Pn	01 49 10.7	+0.4
SMTH				S	Sn	01 49 38.9	+0.4
	comp=N,238nm,0.8s						
SMTH	Samothraki Isl	2.30	129	P	Pn	01 49 10.2	-0.1
PENT	Pentalofos	2.34	222	P	Pn	01 49 12.0	+1.1
PENT	Pentalofos	2.34	222	P	Pn	01 49 12.1	+1.1
ALN	Alexandroupoli	2.39	115	PN	Pb	01 49 13.7	-1.7
ALN	Alexandroupoli	2.39	115	P	Pn	01 49 13.2	+1.8
CRAR	CRAIOVA	2.41	10	⇑iP	Pn	01 49 12.3	+0.5
KPRO	Kipourio	2.43	215	P	Pn	01 49 13.1	+1.0
KPRO	Kipourio	2.43	215	P	Pn	01 49 13.2	+1.0
ENEZ	Enez	2.54	118	PN	Pn	01 49 15.4	+1.9
LIA	Limnos Island	2.54	143	P	Pn	01 49 15.2	+1.6
LIA	Limnos Island	2.54	143	P	Pn	01 49 13.9	+0.3
THL	Klokotos Trika	2.55	201	P	Pn	01 49 13.7	0.0
THL	Klokotos Trika	2.55	201	P	Pn	01 49 14.2	+0.5
JMB	Yambol	2.57	77	P	Pn	01 49 14.2	+0.3
TIR	Tirane	2.57	258	ePn	Pn	01 49 14.9	+0.9
TIR				eSn	Sb	01 49 48.1	-2.0
TIR	Tirane	2.57	258	⇑iP	Pb	01 49 17.3	-1.2
TIR	Tirane	2.57	258	i Pn	Pb	01 49 17.4	-1.2
XOR	Xorichti	2.58	180	P	Pn	01 49 14.0	-0.2
XOR	Xorichti	2.58	180	P	Pn	01 49 14.3	+0.1
BEY	Berane	2.61	292	i Pn	Pn	01 49 16.9	+2.3
COPA	Copaceanca	2.64	33	⇑iP	Pn	01 49 15.9	+1.0
NEO	Neokhori	2.64	180	P	Pn	01 49 15.0	0.0
NEO				S	Sn	01 49 47.0	+0.1
	comp=N,295nm,0.6s						
NEO	Neokhori	2.64	180	P	Pn	01 49 15.0	0.0
EDRB	Edirne	2.65	91	PN	Pb	01 49 17.6	-2.3
EDRB	Edirne	2.65	91	P	Pn	01 49 15.6	+0.5
EDRB				S	Sn	01 49 47.6	+0.5
GRUS	Gruza	2.66	318	ePn	Pn	01 49 15.7	+0.5
GRUS				eSn	Sn	01 49 49.1	+1.7
KUBS	Kucevo	2.70	336	ePn	Pn	01 49 15.5	-0.3
KUBS				eSn	Sn	01 49 49.5	+1.1
SJES	Sjenica	2.72	300	ePn	Pn	01 49 17.5	+1.4
DJES	Djerdap	2.76	350	ePn	Pn	01 49 17.1	+0.5
DJES	Djerdap	2.76	350	ePn	Pn	01 49 18.2	+1.6
IVAS	Ivanjica	2.77	307	ePn	Pn	01 49 16.9	+0.1
IVAS				eSn	Sn	01 49 50.7	+0.6
SKIA	Skiathos	2.79	176	P	Pn	01 49 16.5	-0.5
KESN	Edirne-Kesan	2.85	112	i P	Pn	01 49 18.5	+0.3
KESN				IAML_P			
	comp=Z,111nm,0.2s						
HUMR	Humele	2.89	26	⇓iP	Pn	01 49 18.8	+0.5
JAN	Janina	2.90	219	P	Pn	01 49 20.2	+1.6
KIRK	Kırklareli	2.92	92	i P	Pn	01 49 19.4	+0.6
KIRK				IAML_P			

	comp=Z,137nm,0.2s						
RAZG	Razgrad	2.92	55	⇑iP	Pb	01 49 26.4	+1.8
PDG	Podgorica	2.97	281	ePn	Pn	01 49 20.1	+0.7
PDG				eSn	Sn	01 49 56.5	+1.6
PDG	Podgorica	2.97	281	⇑iP	Pn	01 49 21.2	+1.8
PDG	Podgorica	2.97	281	ePn	Pn	01 49 19.9	+0.5
HERR	Herculane	2.98	349	⇑iP	Pn	01 49 19.5	-0.2
DRME	Dracevica, Mon	3.00	276	ePn	Pb	01 49 23.7	-2.1
AGG	Agios Georgios	3.00	193	P	Pn	01 49 20.4	+0.5
AGG	Agios Georgios	3.00	193	P	Pn	01 49 20.4	+0.5
BOZC	Bozcaada	3.02	133	PN	Pn	01 49 22.3	+2.1
BOZC	Bozcaada	3.02	133	i P	Pn	01 49 22.6	+2.4
BOZC				IAML_P			
	comp=Z,709nm,0.3s						
SGRR	Singureni	3.05	41	⇑iP	Pn	01 49 21.7	+1.2
TRUS	Trudelj	3.06	319	ePn	Pn	01 49 21.2	+0.5
TRUS				eSn	Sn	01 49 58.2	+1.1
LPK	Lapseki	3.12	119	PN	Pn	01 49 23.9	+2.4
DIVS	Divibare	3.18	313	ePn	Pn	01 49 22.9	+0.4
DIVS				eSn	Sn	01 49 59.7	-0.7
DIVS	Divibare	3.18	313	ePn	Pn	01 49 22.9	+0.4
SRN	Sarande	3.19	231	P	Pn	01 49 25.3	+2.9
EVR	Evrytania	3.21	200	P	Pn	01 49 23.2	+0.3
EVR				S	Sn	01 50 01.1	0.0
	comp=Z,78nm,1.5s						
EVR	Evrytania	3.21	200	P	Pn	01 49 23.7	+0.8
SKY	Skiros Island	3.24	161	P	Pn	01 49 24.3	+1.1
IGT	Igoumenitsa	3.25	223	ePn	Pn	01 49 24.2	+0.8
IGT				eSn	Sn	01 50 03.0	+1.0
PHSR	Pinarhisar	3.25	94	PN	Pn	01 49 25.7	+2.4
RKY	Sarkoy-Tekirda	3.25	112	PN	Pn	01 49 26.2	+2.8
SART	Tekirdag	3.25	111	i P	Pb	01 49 28.0	-2.2
SART				IAML_P			
	comp=Z,408nm,0.2s						
MRKA	Markates	3.25	175	P	Pn	01 49 23.4	0.0
ATAL	Atalanti	3.26	182	P	Pn	01 49 23.1	-0.3
ATAL	Atalanti	3.26	182	P	Pn	01 49 23.4	0.0
RUDO	Rudo	3.27	302	ePn	Pn	01 49 23.7	0.0
BAYC	CANAKKALE_Bayr	3.37	130	i P	Pn	01 49 26.5	+1.5
BAYC				IAML_P			
	comp=Z,420nm,0.2s						
BBLS	Lazići	3.38	306	ePn	Pn	01 49 27.2	+2.0
BBLS				eSn	Sn	01 50 05.4	+0.2
BBLS	Lazići	3.38	306	ePn	Pb	01 49 34.0	+1.6
TKR	Tekirdag	3.40	105	PN	Pn	01 49 28.4	+3.0
SIGR	SIGRI	3.40	143	PN	Pn	01 49 28.4	+3.0
SIGR	SIGRI	3.40	143	P	Pn	01 49 26.2	+0.8
SIGR	SIGRI	3.40	143	P	Pn	01 49 26.2	+0.8
UPM	Unac-Piva	3.41	293	ePn	Pn	01 49 27.2	+1.5
KEK	Kerkira	3.41	230	P	Pn	01 49 27.3	+1.7
GZR	Gura Zlata	3.46	355	⇑iP	Pn	01 49 25.7	-0.5
ANX	Ano Chora	3.49	197	P	Pn	01 49 27.5	+0.7
ANX				S	Sn	01 50 08.1	0.0
	comp=Z,135nm,0.6s						
ANX	Ano Chora	3.49	197	P	Pn	01 49 27.4	+0.7
CRLT	Corlu	3.50	102	PN	Pn	01 49 29.6	+2.8
LOT	Lotru	3.52	7	⇓iP	Pn	01 49 27.2	0.0
HCY	Herceg Novi	3.53	280	ePn	Pn	01 49 29.5	+2.3
PVO	Paravola	3.57	202	P	Pn	01 49 29.2	+1.5
PVO	Paravola	3.57	202	P	Pn	01 49 29.2	+1.5
EREA	Eretria	3.57	171	P	Pn	01 49 27.9	+0.1
EREA	Eretria	3.57	171	P	Pn	01 49 27.7	-0.1
PRK	Paraskevi	3.57	138	P	Pn	01 49 29.3	+1.5
PRK	Paraskevi	3.57	138	P	Pn	01 49 29.5	+1.8
BRY	Bratogost	3.58	287	ePn	Pn	01 49 30.2	+2.2
MRMT	Marmara Adasi	3.58	111	PN	Pn	01 49 30.0	+2.1
SERG	Sergoula	3.64	194	P	Pn	01 49 29.1	+0.4
SERG				S	Sn	01 50 11.6	0.0
SERG	Sergoula	3.64	194	P	Pn	01 49 29.0	+0.3
KALE	Kalithea	3.65	193	P	Pn	01 49 29.3	+0.5
KALE	Kalithea	3.65	193	P	Pn	01 49 29.4	+0.6
TREB	Trebinje	3.67	284	ePn	Pn	01 49 30.5	+1.3
TREB				eSn	Sn	01 50 12.8	+0.4
TREB	Trebinje	3.67	284	ePn	Pn	01 49 31.5	+2.3
TRIZ	Trizonia	3.68	194	P	Pn	01 49 30.0	+0.8
PROD	Prodromos	3.69	184	P	Pn	01 49 29.9	+0.4
LKD2	Lefkada island	3.71	212	P	Pn	01 49 31.6	+2.0
VIL2	Platees	3.73	179	P	Pn	01 49 30.9	+0.9
VOIR		3.73	20	⇑iP	Pn	01 49 30.9	+0.8
AYVA	Ayvalik	3.75	134	i P	Pn	01 49 32.9	+2.8
AYVA				IAML_P			
	comp=Z,239nm,0.3s						
HAPS	Han Pijesak,Bl	3.77	306	ePn	Pn	01 49 31.3	+0.6
HAPS	Han Pijesak,Bl	3.77	306	ePn	Pn	01 49 32.4	+1.7
DBRK	Dubrovnik	3.81	283	ePn	Pn	01 49 33.8	+2.7
DBRK				Sn	Sn	01 50 19.9	+4.1
LAKA	Lakka	3.82	195	P	Pn	01 49 32.3	+1.1
BZS	Buzias	3.84	343	ePn	Pn	01 49 31.7	+0.3
BZS	Buzias	3.84	343	⇑iP	Pn	01 49 31.7	+0.3
CTYL	Yalikoy Yolu	3.84	95	PN	Pn	01 49 34.3	+2.9
EVGI	Lefkada island	3.85	211	P	Pn	01 49 33.3	+1.7
TRAZ	Trapeza	3.85	192	P	Pn	01 49 31.8	+0.1
EDC	Edincik	3.87	113	PN	Pn	01 49 34.5	+2.6
PTL	Penteli	3.93	172	P	Pn	01 49 33.2	+0.4
KLV	Kalavryta, Ach	3.98	192	P	Pn	01 49 34.0	+0.6
ISR	Istrita	3.99	36	⇑iP	Pn	01 49 35.9	+2.3
BALY	Balya	4.02	122	i P	Pn	01 49 37.4	+3.5
BALY				IAML_P			
	comp=Z,189nm,0.3s						
DKL	Dikili	4.03	134	PN	Pn	01 49 36.7	+2.6
FRGS	Fruska Gora	4.04	324	ePn	Pn	01 49 34.6	+0.4
FRGS	Fruska Gora	4.04	324	ePn	Pn	01 49 35.6	+1.4
CTKS	Kestanelik-??a	4.04	98	PN	Pn	01 49 37.3	+3.1
MLR	Muntele Rosu	4.06	28	Pn	Pn	01 49 36.6	+2.0
	comp=Z,7.5nm,0.3s,baz=187,slow=5.5,SNR=36						
MLR				Sn	Sn	01 50 26.9	+4.8
	comp=Z,6.0nm,0.3s,baz=294,slow=20,SNR=3.0						
MLR				Lg	Lg	01 50 42.5	
	comp=Z,4.9nm,0.3s,baz=75,slow=20,SNR=3.6						
MLR	Muntele Rosu	4.06	28	⇑iP	Pn	01 49 36.4	+1.8
ACOR	Acrocorinthos	4.06	184	P	Pn	01 49 35.1	+0.6
RLS	Riolos of Patr	4.11	199	P	Pn	01 49 37.8	+2.7
VLY	Voula,Athens	4.12	173	P	Pn	01 49 35.2	0.0
STON	Ston	4.17	285	ePn	Pn	01 49 36.7	+0.7
STON	Ston	4.17	285	⇑iPn	Pn	01 49 38.7	+2.7
STON				Sn	Sn	01 50 27.1	+2.5
STON	Ston	4.17	285	ePn	Pn	01 49 38.4	+2.4
CHOS	Chios island	4.18	147	PN	Pn	01 49 38.6	+2.4
ZEDA	zmir-Bergama	4.20	134	i P	Pn	01 49 38.5	+2.1
ZEDA				IAML_P			
	comp=Z,146nm,0.2s						
BALB	Balikesir	4.24	121	PN	Pn	01 49 39.7	+2.8
KCTX	Karacabey (Bur	4.25	112	PN	Pn	01 49 40.0	+3.0
VLS	Valsamata	4.27	209	P	Pn	01 49 38.8	+1.5
STEP	BALIKESIR_Sava	4.29	125	i P	Pn	01 49 41.2	+3.5
STEP				IAML_P			
	comp=Z,520nm,0.2s						
DOPR	Dopca	4.32	21	⇑iP	Pn	01 49 39.5	+1.5
EPID	Epidavros	4.33	181	P	Pn	01 49 38.6	+0.4
BISRR	Bisoca	4.41	34	⇑iP	Pn	01 49 41.2	+1.9
URLA	Izmir	4.43	143	PN	Pn	01 49 42.7	+3.1
KLYT	Kilyos	4.44	97	PN	Pn	01 49 42.7	+3.1
DID	Didima	4.44	180	P	Pn	01 49 40.0	+0.3
SIRR	Siria	4.46	346	⇑iP	Pn	01 49 40.7	+0.8
ARMT	Armutlu	4.49	106	PN	Pn	01 49 42.9	+2.5
ISK	Istanbul-Kandi	4.49	99	PN	Pn	01 49 43.9	+3.5
KAVV	Kandilli-Istan	4.49	99	PN	Pn	01 49 43.7	+3.3
OZUR		4.54	23	⇑iP	Pn	01 49 42.7	+1.5
KRND	KRANIDI	4.56	180	P	Pn	01 49 41.8	+0.5
MDNY	Mudanya-Bursa	4.57	108	PN	Pn	01 49 45.1	+3.6
BUY	Buyukada	4.59	102	PN	Pn	01 49 45.1	+3.4
BUY	Buyukada	4.59	102	i P	Pn	01 49 45.0	+3.3
BUY				IAML_P			
	comp=Z,228nm,0.2s						
PLOR	Plostina	4.63	31	⇓iP	Pn	01 49 44.6	+2.3
DURS	Dursunbey	4.64	119	i P	Pn	01 49 46.6	+4.1
DURS				IAML_P			
	comp=Z,209nm,0.3s						
VRI	Vrincioaia	4.67	32	⇑iP	Pn	01 49 45.1	+2.2
MAKA	Makarska	4.75	288	ePn	Pn	01 49 46.5	+2.6
MAKA				Sn	Sn	01 50 41.6	+2.7
DRGR		4.85	356	ePn	Pn	01 49 45.1	-0.3
DRGR		4.85	356	⇑iP	Pn	01 49 45.1	-0.3
SILT	Sile	4.90	97	PN	Pn	01 49 49.4	+3.4
HRT	Hereke	5.00	101	PN	Pn	01 49 51.0	+3.6
DEMI	Demirci	5.11	123	i P	Pn	01 49 51.9	+2.9
DEMI				IAML_P			
	comp=Z,214nm,0.3s						
HVAR	Hvar	5.13	286	ePn	Pn	01 49 50.8	+1.6
TESR	Tescani	5.19	27	⇑iP	Pn	01 49 51.3	+1.3
BLY	Banja Luka	5.20	305	ePn	Pn	01 49 51.8	+1.7
BLY	Banja Luka	5.20	305	ePn	Pn	01 49 51.5	+1.4
TLCR		5.21	50	⇓iP	Pn	01 49 52.2	+2.0
VLI	Veliai	5.23	182	P	Pn	01 49 52.0	+1.5
KAND	Kocaeli-Kandir	5.32	97	i P	Pn	01 49 54.0	+2.2
KAND				IAML_P			
	comp=Z,89nm,0.3s						
MORH	Mrgy, Hungar	5.38	324	ePn	Pn	01 49 52.6	+0.1
MORH	Mrgy, Hungar	5.38	324	ePn	Pn	01 49 52.1	-0.5
MORH				Sn	Sn	01 50 51.1	-3.3
BIZ	Bicaz	5.40	22	⇓iP	Pn	01 49 54.8	+1.9
LTVH	Ltavrtes, Hu	5.51	351	ePn	Pn	01 49 55.1	+0.7
LTVH				ePg	Pg	01 50 15.1	-3.0
LTVH				Sn	Sn	01 51 02.1	+4.4
LTVH				eSg	Sg	01 51 30.1	+0.7
GDZ	Gediz	5.58	119	i P	Pn	01 49 56.4	+1.0
GDZ				IAML_P			
	comp=Z,105nm,0.2s						
ZIRJ	Zirje	5.81	290	ePn	Pn	01 50 00.6	+2.1
ZIRJ				Sn	Sn	01 51 06.1	+1.0
MORI	Morici	5.82	292	ePn	Pn	01 50 01.2	+2.6
BURAR	Bucovina Array	5.84	14	⇑iP	Pn	01 50 00.6	+1.6
TRPA	Tarpa	6.20	356	ePn	Pn	01 50 06.1	+2.3
TRPA				eSg	Pg	01 50 27.0	-4.1
TRPA				Sn	Sn	01 51 16.1	+1.6
TRPA				eSg	Sg	01 51 50.0	-1.4
TIH	Tihany	6.24	324	ePn	Pn	01 50 07.1	+2.7
TIH				Sn	Sn	01 51 12.1	-3.4
DUGI	Dugi Otok	6.31	292	⇑iPn	Pn	01 50 07.2	+1.8
KALN	Kalnik	6.41	313	ePn	Pn	01 50 08.2	+1.5
PSZ	Piszkesteto	6.41	340	ePn	Pn	01 50 08.1	+1.3
PSZ				Sn	Sn	01 51 17.0	-2.9
CSKK	Cskako	6.45	329	ePn	Pn	01 50 08.0	+0.7
CSKK				Sn	Sn	01 51 20.0	-0.8
BEHE	Becsehely	6.46	317	ePn	Pn	01 50 10.0	+2.6
PTJ	Puntijarka	6.55	310	ePn		01 50 10.6	
NVLJ	Novalja	6.62	296	ePn	Pn	01 50 11.6	+2.1
KOGS	Kog	6.72	314	i Pn	Pn	01 50 12.4	+1.5
KOGS				i Sn	Sn	01 51 25.4	-1.9
BOJS	Bojanci	6.76	304	i Pn	Pn	01 50 18.1	+6.5
IDI	Anoyia	6.78	168	Pn	Pn	01 50 14.1	+2.2
	comp=Z,0.4nm,0.3s,baz=101,slow=4.9,SNR=3.3						
CRES	Cresnjev	6.80	307	ePn	Pn	01 50 13.1	+1.0
SRO	Srobarova	6.81	331	eSN	Sn	01 51 28.0	-1.6
KOLS	Kolonicke sedl	7.01	355	ePN	Pn	01 50 17.9	+2.9
KOLS				eSG	Sg	01 52 13.8	-3.7
VYHS	Vyhne	7.23	336	ePN	Pn	01 50 19.8	+1.8
VYHS				eSN	Sn	01 51 35.7	-4.3
AQU	L'Aquila	7.29	276	ePn	Pn	01 50 20.6	+1.7
CEY	Cerknica	7.38	304	ePn	Pn	01 50 21.3	+1.2
SOP	Sopron	7.42	323	ePn	Pn	01 50 22.0	+1.4
SOP				Sn	Sn	01 51 42.0	-2.6
PERS	Pernice	7.45	312	i Pn	Pn	01 50 23.2	+2.2
PERS				i Sn	Sn	01 51 42.1	-3.3
SOKA	Soboth	7.52	312	i Pn	Pn	01 50 27.9	+5.9
	comp=Z,0.6nm,0.3s						
SOKA				i Sn	Sn	01 51 43.9	-3.4
	comp=Z,2.9nm,0.6s						
ZST	Bratislava	7.59	327	eSN	Sn	01 51 43.8	-4.9
ARSA	Arzberg	7.62	317	i Pn	Pn	01 50 24.7	+1.4
ARSA				i Sn	Sn	01 51 46.1	-3.4
	comp=Z,1.9nm,0.4s						
MODS	Modra-Piesok	7.66	329	ePN	Pn	01 50 24.7	+0.8
MODS				eSN	Sn	01 51 46.2	-4.4
OBKA	Obir	7.70	309	i Sn	Sn	01 51 50.1	-1.6
	comp=Z,4.5nm,0.6s						
BRTR	Keskin Array B	8.22	102	Pn	Pn	01 50 34.9	+3.1
	comp=Z,0.1nm,0.3s,baz=280,slow=16,SNR=3.0						
GERES	GERESS Array B	9.59	319	Pn	Pn	01 50 49.8	-0.6
	comp=Z,0.1nm,0.3s,baz=142,slow=16,SNR=2.6						
AKASG	Malin Array Be	9.69	23	Pn	Pn	01 50 51.8	+0.1
	comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=3.0						
KHC	Kasperske Hory	9.85	320	ePN	Pn	01 50 55.1	+1.2
DAVOX	Davos/Dischmat	10.68	301	Pn	Pn	01 51 06.5	+1.0
	comp=Z,0.1nm,0.3s,baz=78,slow=19,SNR=1.9						
NACGM	Naroch	13.18	9	eLQ	LQ	01 51 24.0	
NACGM				eLR	LR	01 57 04.0	
NACGM				LRM	MLR	01 59 32.0	
	comp=E,2.2nm,14.0s						
HFS	Hagfors	19.12	345	P	P	01 52 54.9	-0.2
	comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=6.4						
FINES	FINESS Array B	19.60	4	P	P	01 52 59.0	-1.3
	comp=E,0.0nm,0.3s,baz=138,slow=15,SNR=3.6						
NB2	NORSAR Subarra	20.46	343	P	P	01 53 09.1	-0.6
	comp=Z,0.6nm,0.5s,baz=150,slow=11						
NOA	NORSAR Array B	20.46	343	P	P	01 53 09.5	-0.3
	comp=Z,0.5nm,0.5s,baz=152,slow=11,SNR=9.4						
TORD	Torodi Ar. Bea	34.25	219	P	P	01 55 19.9	+1.6
	comp=Z,0.4nm,0.6s,baz=33,slow=9.7,SNR=6.0						

NNC 27 01:54:51.4±2.6, 42°.30N×85°.32E, h0^{km}, mb3.8, mpv3.4, 3C-8D, Error ellipse: s-maj=19.7km s-min=11.2km az=127.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KTMS	Ketmen	3.83	289	Pg	Pb	01 56 00.2	+0.3
	2.0nm,0.2s						
KTMS				Lg	Lg	01 57 00.3	
	15nm,0.3s						
PDGK	Podgornoye	4.41	285	⇓Pg	Pb	01 56 12.3	+2.4
	2.1nm,0.6s						
PDGK				⇓Lg	Lg	01 57 15.5	
	11nm,0.6s						
DJR	Jarkent	4.52	299	Pg	Pb	01 56 12.3	+0.7
	2.5nm,0.2s						
DJR				Lg	Lg	01 57 20.8	
	3.8nm,0.2s						
UZB	Uzynbulak	4.72	282	Pg	Pb	01 56 16.3	+1.3
	0.8nm,0.2s						
UZB				Lg	Lg	01 57 27.8	
	4.3nm,0.3s						
MK31	Makanchi Array	4.99	335	⇓Pn	Pn	01 56 09.6	+2.1
	0.4nm,0.3s,baz=154,slow=13,SNR=16						
MK31				Pg	Pb	01 56 22.9	+3.3
	0.7nm,0.3s,baz=143,slow=16,SNR=7.7						
MK31				⇑Sn	Sn	01 57 05.4	-0.5
	7.8nm,0.4s,baz=152,slow=28,SNR=5.2						
MK31				Lg	Lg	01 57 25.6	
	8.2nm,0.8s,baz=142,slow=32,SNR=11						
MAKZ	Makanchi	5.10	333	⇓Pn	Pn	01 56 10.3	+1.2
	2.8nm,0.7s						
MAKZ				⇓Pg	Pb	01 56 24.4	+2.9
	3.2nm,0.8s						
MAKZ				⇑Sn	Sn	01 57 09.3	+0.7
	2.5nm,0.5s						
MAKZ				⇓Lg	Lg	01 57 30.9	
	7.8nm,0.7s						
SATY	Saty	5.16	281	Pg	Pb	01 56 24.4	+2.0
	4.2nm,0.2s						
SATY				Lg	Lg	01 57 41.8	
	12nm,0.3s						
ZSN	Zaisan	5.16	357	Pg	Pb	01 56 17.5	-4.9
	1.3nm,0.2s						
ZSN				Lg	Lg	01 57 29.8	
	3.2nm,0.8s						
KAPS	Kapalarasan	5.25	307	Pg	Pb	01 56 25.9	+1.9
	0.9nm,0.3s						
KAPS				Lg	Lg	01 57 44.1	
	4.3nm,0.5s						
MNBS	Baschi	5.36	292	Pg	Pb	01 56 27.9	+1.9
	1.2nm,0.1s						
MNBS				Lg	Lg	01 57 47.5	
	5.8nm,0.2s						
KURS	Kuram	5.39	285	Pg	Pb	01 56 28.8	+2.4
	3.8nm,0.4s						
KURS				Lg	Lg	01 57 49.2	
	4.4nm,0.5s						
ARXS	Arharly	5.80	292	Pg	Pb	01 56 36.6	+3.2
	1.7nm,0.5s						
ARXS				Lg	Lg	01 58 02.6	
	6.3nm,0.4s						
KOTS	Kotyrbulak	6.12	282	Pg	Pb	01 56 41.5	+2.7
	8.0nm,0.5s						
KOTS				Lg	Lg	01 58 11.1	
	16nm,0.4s						
CHKK	Chushkaly	6.30	287	Pg	Pb	01 56 45.7	+3.8
	0.8nm,0.1s						
CHKK				Lg	Lg	01 58 18.4	
	3.2nm,0.3s						
KTBS	Karatobe	6.49	285	Pg	Pg	01 56 50.7	-5.0
	0.8nm,0.4s						
KTBS				Lg	Lg	01 58 27.3	
	5.6nm,0.4s						
KURBB	Kurchatov Arra	9.55	333	⇓Pn	Pn	01 57 10.4	+0.4
	0.9nm,0.6s						
KURBB				⇑Sn	Sn	01 58 59.0	+1.0
	2.4nm,0.7s						
KURBB				⇓Lg	Lg	01 59 54.9	
	6.6nm,0.8s						

PGC 27 02:04:09.3±0.0, 61°.59N×141°.26W, h1^{km}, ML2.3/12, 220km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
YUK2	White River	0.28	45	P	Pg	02 04 14.3	-0.3
YUK2				S	Sg	02 04 18.2	-0.1
YUK3	Moose Creek	0.42	63	P	Pg	02 04 16.8	-0.7
YUK3				S	Sg	02 04 22.0	-0.9
CTGM	Chitina Glacie	0.63	183	P	Pg	02 04 20.0	-1.3
CTGM				S	Sg	02 04 28.1	-1.3
YUK1	Sand Pete Hill	0.66	31	P	Pg	02 04 21.1	-0.9
YUK1				S	Sg	02 04 29.7	-0.9
PTPK	Patty Peak	0.71	236	P	Pg	02 04 22.1	-0.7
PTPK				S	Sg	02 04 30.6	-1.3
BALM	Baldy	0.76	224	P	Pg	02 04 22.7	-1.2
BALM				S	Sg	02 04 32.6	-1.1
BVCY	Beaver Creek	0.85	13	P	Pg	02 04 25.0	-0.5
KIAG	Kiagna River	0.85	219	P	Pg	02 04 24.2	-1.4
KIAG				S	Sg	02 04 35.4	-1.2
GRNC	Granite Creek	0.89	196	P	Pg	02 04 24.7	-1.7
GRNC				S	Sg	02 04 36.9	-1.0
TABL	Table Mountain	1.15	177	P	Pg	02 04 29.6	-1.7
TABL				S	Sg	02 04 44.9	-1.5
YUK4	Talbot Arm	1.28	100	P	Pg	02 04 32.3	-1.4
YUK4				S	Sg	02 04 49.4	-0.9
MESA	MESA	1.46	194	Pn	Pn	02 04 36.1	-0.8
MESA				Sg	Sg	02 04 55.7	-0.3
SAMH	Samovar Hills	1.48	171	Pn	Pn	02 04 36.2	-1.0
SAMH				Sg	Sg	02 04 56.3	-0.5
YUK6	Outpost Mounta	1.54	114	Pn	Pn	02 04 36.3	-1.8
YUK6				Sg	Sg	02 04 57.9	-0.9
PCA	Pinnacle	1.58	161	Pn	Pn	02 04 37.7	-0.7
PCA				Sg	Sn	02 04 58.7	-0.7
YUK5	Granite Creek	1.70	104	Pg	Pn	02 04 38.8	-1.4
YUK5				Sg	Sn	02 05 02.1	-0.6
YUK7	Dusty Glacier	1.85	124	Pn	Pn	02 04 42.5	+0.2
YUK7				Sg	Sb	02 05 07.8	+0.1
HYT	Haines Junctio	1.97	111	Pn	Pn	02 04 43.5	-0.4
HYT				Sg	Sn	02 05 09.6	+0.3
PNL	Peninsula	2.13	154	Pn	Pn	02 04 46.1	+0.1
PNL				Sg	Sb	02 05 15.0	-0.7
DOT	Dot Lake	2.44	329	Pn	Pn	02 04 49.3	-0.9
DOT				Sg	Sb	02 05 24.9	+0.5
DAWY	Dawson	2.63	18	Pn	Pn	02 04 51.9	-0.9
DAWY				Sg	Sb	02 05 29.6	-0.3
PLBC	Pleasant Camp	3.23	129	Sg	Sb	02 05 49.5	+2.4
WHY	Whitehorse	3.23	104	Sg	Sb	02 05 50.0	+2.7

MEX 27 02:09:46.4±0.5, 15°.62N×98°.75W, h16^{km}±6^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TLIG	Tlapa	1.94	5	i P	Pn	02 10 15.5	-3.3
TLIG				i S	Sn	02 10 37.2	-5.8
CAIG	El Cayaco	2.04	314	eP	Pn	02 10 16.0	-4.1
CAIG				i S	Sn	02 10 40.0	-5.1
VHO	Vista Hermosa	2.42	53	i P	Pn	02 10 22.5	-2.9
VHO				i S	Sn	02 10 50.9	-3.9
MEIG	Mezcala	2.44	340	eP	Pn	02 10 22.7	-3.0
MEIG				i S	Sn	02 10 50.6	-4.6
HUIG	Huatulco	2.55	86	eP	Pn	02 10 24.2	-2.9
HUIG				i S	Sn	02 10 52.7	-5.1
ARIG	Puente Sto Nin	3.06	330	i P	Pn	02 10 31.8	-2.3
ARIG				i S	Sn	02 11 07.0	-3.4
CMIG	Matias Romero	3.99	68	eP	Pn	02 10 44.2	-2.7
CMIG				eS	Sn	02 11 30.4	-3.0

SJA 27 02:13:17.2±0.5, 31°.22S×68°.86W, h100^{km}±3^{km}, ML3.1, MW3.8, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AMOG	MOGNA	0.42	48	eP	Pn	02 13 33.5	+0.9
AMOG				eS	Sn	02 13 44.9	+0.8
ACCO	Cerro Coronel	0.66	344	eP	Pn	02 13 35.8	+1.1
ACCO				eS	Sn	02 13 49.8	+2.0
ACCO				IAML		02 13 51.0	
	comp=Z,2µm,0.3s						
RTLS	Leoncito	0.69	213	eP	Pn	02 13 36.0	+1.1
RTLS				IAML		02 13 50.8	
	comp=Z,264nm,0.2s						
RTCV	Cerro Valdivia	0.69	157	eP	Pn	02 13 35.4	+0.7
RTCV				eS	Sn	02 13 48.8	+1.0
AROD	Rodeo	1.18	333	eP	Pn	02 13 41.3	+1.3
ASAL	Salagasta	1.36	179	eP	Pn	02 13 42.9	+0.9
ARCO	CERRO ARCO	1.61	182	eP	Pn	02 13 46.1	+1.0
ARCO				IAML		02 14 10.6	
	comp=Z,50nm,0.4s						
AGUA	GUANDACOL	1.76	10	eP	Pn	02 13 48.3	+1.4
VCA	Vinchina	2.54	13	eP	Pn	02 13 58.0	+0.9
VCA				IAML		02 14 35.0	
	comp=Z,56nm,0.3s						

MEX 27 02:21:58.8±0.4, 15°.83N×95°.78W, h57^{km}±3^{km}, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HUIG	Huatulco	0.32	259	eP	Pn	02 22 07.7	-1.1
HUIG				eS	Sn	02 22 14.0	-2.0
CMIG	Matias Romero	1.52	34	eP	Pn	02 22 22.0	-1.7
CMIG				i S	Sn	02 22 40.8	-1.7
VHO	Vista Hermosa	1.53	324	eP	Pn	02 22 22.6	-1.5
VHO				i S	Sn	02 22 41.0	-2.1
PCIG		2.47	93	i P	Pn	02 22 35.8	-0.8
PCIG				i S	Sn	02 23 03.3	-2.4
TGIG		2.72	69	i P	Pn	02 22 39.1	-1.1
TGIG				i S	Sn	02 23 09.4	-2.5

*NIED **27** 02:40:00, 20°.90N×120°.80E, h35^{km}, Mw3.9 Best double couple: $M_0$9.20000×10^{14} NP1:ϕ_s8.00000°, δ28.00000°, λ122.00000°. NP2:ϕ_s153.00000°, δ66.00000°, λ74.00000°.*

*JMA **27** 02:40:52.0±0.5, 20°.95N×120°.81E, h0^{km}, M4.4*

*TAP **27** 02:40:57.6, 21°.17N×120°.99E, h88^{km}, ML4.0, C*

ISC 27 02:41:00.6±2.9, 21°.2N±0°.2×120°.79E±0°.06, h67^{km}±12^{km}, n54, σ1^s.25/84, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.70	8	eP	Pn	02 41 15.2	-0.1
	baz=345						
TSEB				S	Sn	02 41 27.5	+1.4
	baz=345						
TWKBT	Hengchun	0.74	2	⇓P	Pn	02 41 15.3	-0.4
	baz=344						
TWKBT				S	Sn	02 41 28.4	+1.5
	baz=344						
TWK1	Hengchun	0.74	1	⇓iP	Pn	02 41 15.2	-0.5
	baz=348						
TWK1				S	Sn	02 41 28.3	+1.4
	baz=348						
HEN	Hengchun	0.80	357	eP	Pn	02 41 16.4	-0.1
	baz=339						
LAY	Lan-yu	1.09	40	P	Pn	02 41 17.6	-2.5
	baz=31						
LAY				eS	Sn	02 41 32.5	-2.2
	baz=31						
TAW	Tawu	1.16	5	eP	Pn	02 41 19.9	-1.1
	baz=348						
TAW				S	Sn	02 41 36.7	+0.6
	baz=348						
SCZT	Fangliau	1.18	352	eP	Pn	02 41 20.5	-0.7
	baz=344						
SCZT				eS	Sn	02 41 37.4	+0.8
	baz=344						
EAST	Anshuo	1.18	3	P	Pn	02 41 20.7	-0.6
	baz=354						
EAST				S	Sn	02 41 37.4	+0.7
	baz=354						
ECL	Taimali	1.40	6	eP	Pn	02 41 22.8	-1.3

	baz=6.0						
ECL				eS	Sn	02 41 40.9	-0.8
	baz=6.0						
MASBT	Mashibuluo	1.41	354	eP	Pn	02 41 24.6	+0.3
	baz=351						
SSD	Sandimen	1.54	355	eP	Pn	02 41 25.9	-0.2
	baz=340						
TWGBT	Beinan	1.63	9	eP	Pn	02 41 26.1	-1.1
	baz=3.0						
TWG	Pinlang	1.63	9	eP	Pn	02 41 25.6	-1.6
	baz=3.0						
SLGT	Liugui	1.79	356	eP	Pn	02 41 29.7	+0.4
	baz=341						
STYT	Tauyuan	1.95	359	eP	Pn	02 41 32.4	+0.8
	baz=354						
CHKT	Chengkung	1.96	16	eP	Pn	02 41 30.5	-1.1
	baz=3.0						
CHN1	Nanshi	1.99	353	eP	Pn	02 41 32.3	+0.2
	baz=338						
CHN1				eS	Sn	02 41 56.9	+0.9
	baz=338						
ELDTW	Lidau	1.99	6	eP	Pn	02 41 32.2	0.0
	baz=9.0						
WTP	Ta-pu	2.04	355	eP	Pn	02 41 33.3	+0.5
WTP				eS	Sn	02 41 58.4	+1.1
TWK	Hsinying	2.08	352	eP	Pn	02 41 32.7	-0.5
	baz=339						
TWK				eS	Sn	02 41 58.8	+0.7
	baz=339						
TPUB	Ta-pu	2.10	356	eP	Pn	02 41 33.6	+0.1
TPUB				eS	Sn	02 41 58.5	-0.1
CHN4	Tsaushan	2.15	355	eP	Pn	02 41 34.6	+0.4
	baz=1.0						
CHN4				eS	Sn	02 42 00.2	+0.4
	baz=1.0						
YULB	Yu-li	2.23	12	eP	Pn	02 41 34.0	-1.3
	baz=7.0						
YULB				eS	Sn	02 41 59.3	-2.6
	baz=7.0						
ALS	Alishan	2.30	0	eP	Pn	02 41 36.6	+0.1
	baz=5.0						
WDGT	Dungji	2.30	333	eP	Pn	02 41 35.7	-0.5
	baz=330						
WDGT				eS	Sn	02 42 03.6	+0.1
	baz=330						
EHY	Hungye	2.35	12	eP	Pn	02 41 35.9	-1.0
	baz=8.0						
HGSD	Ruisui	2.35	14	eP	Pn	02 41 37.5	+0.5
	baz=4.0						
VCHM	Qimei	2.36	328	eP	Pn	02 41 36.3	-0.7
	baz=332						
VCHM				eS	Sn	02 42 05.7	+0.7
	baz=332						
WHYT	Xinyi Township	2.48	1	eP	Pn	02 41 38.5	-0.3
	baz=357						
WDLH	Douliu	2.49	355	eP	Pn	02 41 37.9	-0.9
	baz=360						
WDLH				eS	Sn	02 42 08.4	+0.4
	baz=360						
VWDT	VWDT	2.56	7	eP	Pn	02 41 40.2	+0.5
	baz=3.0						
VWDT				eS	Sn	02 42 07.9	-2.0
	baz=3.0						
PHUB	P'eng-hu	2.56	334	eP	Pn	02 41 38.4	-1.4
	baz=331						
SSLB	Suanglung	2.58	3	eP	Pn	02 41 40.0	0.0
	baz=8.0						
SSLB				eS	Sn	02 42 09.8	-0.5
	baz=8.0						
ESL	Shilin	2.67	13	eP	Pn	02 41 40.3	-0.9
	baz=4.0						
TYC	Yuchr	2.69	1	eP	Pn	02 41 42.5	+1.0
	baz=7.0						
TYC				eS	Sn	02 42 12.1	-0.9
	baz=7.0						
CHGB	Renai	2.87	7	eP	Pn	02 41 44.1	0.0
	baz=3.0						
CHGB				eS	Sn	02 42 16.0	-1.6
	baz=3.0						
TWD	Chiawan	2.96	14	eP	Pn	02 41 44.9	-0.3
	baz=11						
WHF	Hehuan Shan	2.96	8	eP	Pn	02 41 43.9	-1.7
	baz=356						
NACB	Ninganchiao	3.05	14	eP	Pn	02 41 44.7	-1.8
	baz=11						
TDCB	Techi	3.06	6	eP	Pn	02 41 46.8	+0.1
	baz=3.0						
ETLH	Xiulin Townshi	3.06	12	eP	Pn	02 41 46.1	-0.6
	baz=9.0						
ETLH				eS	Sn	02 42 20.1	-2.1
	baz=9.0						
LIOB	Emei	3.44	3	eP	Pn	02 41 51.4	-0.3
NDT	Datong Townshi	3.45	11	eP	Pn	02 41 52.3	+0.4
	baz=8.0						
YHNB	Yeheng	3.50	9	eP	Pn	02 41 52.2	-0.4
	baz=357						
NSK	Sanguang	3.50	9	eP	Pn	02 41 52.6	0.0
	baz=358						
JYNG	Yonagunijimaku	3.80	31	P	Pn	02 41 55.7	-0.9
JYNG				eS	Sn	02 42 44.0	+3.9
YOJ	Yonaguni jima	3.84	32	eP	Pn	02 41 56.2	-1.0
	baz=38						
YOJ	Yonaguni jima	3.84	32	P	Pn	02 41 57.0	-0.2
YOJ				eS	Sn	02 42 44.3	+3.2
HATJ	Hateruma jima	3.98	44	P	Pn	02 41 59.2	+0.1
HATJ				eS	Sn	02 42 48.5	+4.0
IRIF	Iriomote-Funau	4.13	40	P	Pn	02 42 01.1	-0.1
IRIF				S	Sn	02 42 50.9	+2.6
JKRS	Kuro-shima	4.24	44	P	Pn	02 42 02.6	0.0
JKRS				eS	Sn	02 42 53.0	+2.1
JIJ	Ishigaki jima	4.41	44	P	Pn	02 42 04.0	-1.0
JIJ				eS	Sn	02 42 54.9	-0.3
JISG	Ishigakijimahi	4.68	43	P	Pn	02 42 08.9	+0.2
JISG				S	Sn	02 43 02.4	+0.7
JTJ	Tarama	4.97	46	P	Pn	02 42 11.8	-0.9
JTJ				S	Sn	02 43 08.3	-0.6

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*ISCJB **27** 03:05:18.2±0.5, 20°.50S±0°.05×178°.6W±0°.1, h587^{km}, mb3.8/12, Error ellipse: s-maj=15.2km s-min=7.0km az=0.8*

*IDC **27** 03:05:19.7±2.4, 20°.67S×178°.62W, h596^{km}±29^{km}, mb3.4/12, mb1 3.7/14, mb1mx3.5/23, mbtmp4.3/14, Error ellipse: s-maj=21.7km s-min=14.3km az=152.0*

ISC 27 03:05:18.6±0.6**, 20°.53S**±0°.10×**178°.6W**±0°.1**, h587**^{km}**, n53,** σ1^{s}**88**/54**, mb3.9**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	8.71	176	S	S	03 09 07.6	+0.3
DZM	Mont Dzumac	14.07	261	P	P	03 08 19.2	+0.7
	1.1nm,0.3s,baz=109,slow=22,SNR=11						
OUZ	Omahuta	16.19	204	P	P	03 08 40.7	+2.6
WCZ	Waipu Caves	16.57	201	P	P	03 08 44.1	+2.5
KUZ	Kuaotunu	16.91	196	P	P	03 08 46.5	+1.8
WIAZ	Waiheke Island	17.12	197	P	P	03 08 48.2	+1.7
MXZ	Matakaoa Point	17.19	188	P	P	03 08 48.6	+1.4
MKAZ	Moumakai	17.40	197	P	P	03 08 50.6	+1.5
WTAZ	Waiatarua	17.41	199	P	P	03 08 51.6	+2.4
WMGZ	Waiomatatini S	17.43	188	P	P	03 08 49.6	+0.2
HAZ	Te Kaha	17.46	190	P	P	03 08 49.7	+0.1
PKGZ	Pakihiroa	17.54	189	P	P	03 08 50.3	-0.2
RUGZ	Raukumara Rang	17.68	190	P	P	03 08 51.0	-0.8
PUZ	Puketiti	17.70	188	P	P	03 08 52.3	+0.5
TWGZ	Tauwhareparae	17.84	189	P	P	03 08 54.0	+0.8
TOZ	Tahuroa Road	17.90	196	P	P	03 08 55.2	+1.5
URZ	Urewera	18.06	191	P	P	03 08 52.7	-2.4
	3.7nm,0.3s,baz=285,slow=3.1,SNR=25						
URZ	Urewera	18.06	191	P	P	03 08 52.7	-2.4
MWZ	Matawai	18.06	190	P	P	03 08 53.8	-1.5
CNGZ	Carnagh Statio	18.11	188	P	P	03 08 56.5	+0.9
RAGZ	Rawiri	18.24	190	P	P	03 08 56.6	-0.3
RIGZ	Rimuhau	18.39	189	P	P	03 08 58.1	-0.1
MTHZ	Maungataniwha	18.69	191	P	P	03 09 00.5	-0.4
BKZ	Black Stump Fm	19.06	192	P	P	03 09 03.1	-1.2
TUVZ	Tukino	19.33	194	P	P	03 09 07.1	+0.2
WHVZ	Whangaehu Hut	19.36	194	P	P	03 09 07.4	+0.2
RPZ	Rata Peaks	24.70	198	P	P	03 09 54.8	+0.2
	3.2nm,0.5s,baz=0.0,slow=6.1,SNR=1.7						
ASAR	Alice Springs	44.01	257	P	P	03 12 35.6	+0.1
	4.0nm,0.5s,baz=94,slow=7.6,SNR=47						
ASAR				PcP	PcP	03 14 08.3	+0.4
	1.1nm,0.5s,baz=101,slow=3.9,SNR=10						
ASAR				S	S	03 18 23.4	-2.7
	0.5nm,0.8s,baz=88,slow=16,SNR=3.5						
WRA	Warramunga Arr	44.09	262	P	P	03 12 35.9	-0.3
	2.5nm,0.3s,baz=92,slow=7.5,SNR=86						
MJAR	Matsushiro Arr	69.93	324	P	P	03 15 32.0	+0.2
	1.2nm,0.6s,baz=168,slow=5.8,SNR=5.0						
PETK	Petropavlovsk-	76.17	346	P	P	03 16 07.5	+0.5
	2.4nm,0.6s,baz=112,slow=8.8,SNR=10						
KSRS	Korea Array	76.57	319	P	P	03 16 10.4	+0.8
	0.9nm,0.5s,baz=122,slow=6.2,SNR=4.7						
USRK	Ussuriysk Ar.	78.70	326	P	P	03 16 22.0	+1.1
	2.4nm,0.9s,baz=131,slow=6.6,SNR=4.7						
NVAR	Mina Array Bea	81.40	44	P	P	03 16 36.7	+1.3
	1.4nm,0.7s,baz=221,slow=10,SNR=7.7						
TXAR	Lajitas Array	87.50	58	P	P	03 17 05.7	+0.5
	1.2nm,0.9s,baz=214,slow=6.2,SNR=9.1						
ILAR	Eielson Array	88.46	13	P	P	03 17 08.7	0.0
	1.1nm,0.5s,baz=221,slow=5.6,SNR=12						
PDAR	Pinedale Array	89.34	43	P	P	03 17 14.6	+1.0
	0.8nm,0.6s,baz=212,slow=2.3,SNR=6.9						
CMAR	Chiang Mai Arr	89.64	290	P	P	03 17 15.7	+0.4
	1.4nm,0.6s,baz=136,slow=3.3,SNR=6.0						
MKAR	Makanchi Array	110.85	313	PKiKP	PKiKP	03 22 45.5	-0.2
	0.3nm,0.4s,baz=126,slow=3.7,SNR=3.5						
ARU	Arti	124.94	325	PKP	PKPdf	03 23 11.9	-0.4
	2.6nm,0.2s,baz=327,slow=5.0,SNR=3.9						
AKTO	Aktyubinsk	126.75	318	PKP	PKPdf	03 23 15.9	-0.1
	1.4nm,0.7s,baz=93,slow=1.7,SNR=4.9						
ARCES	ARCESS Array B	128.86	349	PKP	PKPdf	03 23 19.9	+0.4
	0.8nm,0.5s,baz=6.5,slow=1.8,SNR=14						
FINES	FINESS Array B	135.66	343	PKhKP	PKPpre	03 23 24.3	
	0.6nm,0.8s,baz=38,slow=2.5,SNR=3.1						
FINES				PKP	PKPdf	03 23 33.4	+0.9
	0.3nm,0.3s,baz=29,slow=3.2,SNR=6.4						
NB2	NORSAR Subarra	138.95	353	PKP	PKPdf	03 23 31.3	-7.3
	comp=Z,0.2nm,0.5s,baz=11,slow=3.1						
NOA	NORSAR Array B	138.95	353	PKhKP	PKPdf	03 23 31.3	-7.3
	comp=Z,0.3nm,0.5s,baz=15,slow=4.7,SNR=3.9						
NOA				PKP	PKiKP	03 23 38.9	-2.2
	comp=Z,0.1nm,0.4s,baz=14,slow=4.0,SNR=3.8						
HFS	Hagfors	139.49	351	PKhKP	PKPpre	03 23 31.3	
	comp=Z,1.1nm,0.3s,baz=67,slow=5.0,SNR=22						
AKASG	Malin Array Be	142.79	331	PKhKP	PKPpre	03 23 42.8	
	comp=Z,3.6nm,0.4s,baz=42,slow=4.3,SNR=19						
EKA	Eskdalemuir Ar	145.08	5	PKPbc	PKPdf	03 23 50.3	+0.8
	comp=Z,1.2nm,0.6s,baz=344,slow=2.7,SNR=6.4						
BRTR	Keskin Array B	146.48	312	PKPbc	PKPdf	03 23 53.8	+1.1
	comp=Z,1.5nm,0.6s,baz=92,slow=3.1,SNR=9.8						
MMAI	Mount Meron Ar	147.38	299	PKPbc	PKPbc	03 23 58.7	+1.0
	comp=Z,2.8nm,0.4s,baz=74,slow=6.2,SNR=16						
BRG	Berggiesshubel	148.16	345	i PKP	PKPbc	03 23 59.6	+0.6
	comp=Z,3.3nm,0.9s						
KHC	Kasperske Hory	149.86	344	eP	PKiKP	03 24 04.0	+0.2
KHC				ex	x	03 24 12.5	
GERES	GERESS Array B	150.09	344	PKPbc	PKPbc	03 24 04.2	+0.3
	comp=Z,1.0nm,0.6s,baz=45,slow=2.1,SNR=13						

ROM 27 03:16:32.0±0.1**, 43°.03N**±0°.01×**12°.966E**±0°.004**, h12**^{km}±1^{km}**, ML0.2**/2**, Error ellipse: s-maj=1.2km s-min=0.3km az=176.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESI	CESI - Serrava	0.05	242	P	Pg	03 16 34.7	+0.3
CESI				S	Sg	03 16 36.4	+0.3
CESI				AML	AML		
	comp=E,14µm,0.1s						
CESI				AML	AML		
	comp=N,19µm,0.4s						
CESI				AML	AML		
	comp=N,19µm,0.4s						
CESI				AML	AML		
	comp=E,14µm,0.1s						
CESI				AML	AML		
	comp=N,19µm,0.4s						
CESI				AML	AML		
	comp=E,14µm,0.1s						
FDMO	Fiordimonte	0.09	85	P	Pg	03 16 35.0	+0.3
FDMO				S	Sg	03 16 37.2	+0.5
FDMO				AML	AML		
	comp=E,20µm,0.3s						
FDMO				AML	AML		
	comp=N,31µm,0.1s						
FDMO				AML	AML		
	comp=E,20µm,0.3s						
FDMO				AML	AML		
	comp=N,31µm,0.1s						
FDMO				AML	AML		
	comp=E,20µm,0.3s						
FDMO				AML	AML		
	comp=N,31µm,0.1s						
CSP1	Cessapalombo	0.19	70	P	Pg	03 16 36.6	+0.4
CSP1				S	Sg	03 16 40.0	+0.9
SNTG	Esanatoglia	0.23	355	P	Pg	03 16 37.1	+0.3
SNTG				S	Sg	03 16 41.2	+1.1

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*SOF **27** 03:17:00.7, 41°.97N×23°.27E, h2^{km}*

*ISK **27** 03:17:00.2, 41°.93N×23°.20E, h7^{km}, ML4.0/27*

*IDC **27** 03:17:00.7±0.9, 41°.96N×23°.23E, h0^{km}, mb3.2/5, mb1 3.4/12, mb1mx3.3/59, mbtmp3.3/12, ML3.2/8, Error ellipse: s-maj=11.8km s-min=10.5km az=22.0*

*SKO **27** 03:17:00.5, 41°.93N×23°.24E, h20^{km}, M3.6, ML3.9*

*BEO **27** 03:17:01.7±0.2, 41°.95N×23°.21E, h12^{km}±2^{km}, ML3.9/16*

*THE **27** 03:17:01.2, 41°.92N×23°.23E, h3^{km}, ML3.6/16, Error ellipse: s-maj=1.0km s-min=0.6km az=63.0*

*ISCJB **27** 03:17:01.4±0.3, 41°.97N±0°.01×23°.22E±0°.01, h15^{km}±3^{km}, Error ellipse: s-maj=1.9km s-min=1.5km az=35.5*

*ATH **27** 03:17:01.6, 41°.88N×23°.23E, h25^{km}±1^{km}, ML3.8/12, Error ellipse: s-maj=2.6km s-min=1.4km az=186.0*

*PDG **27** 03:17:01.2±0.5, 41°.94N×23°.20E, h16^{km}, ML3.5/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*PRU **27** 03:17:04.3±0.0, 42°.13N×23°.00E, h0^{km}*

*SIK **27** 03:17:28.7, 42°.40N×20°.85E, h34^{km}, M2.5*

ISC 27 03:17:01.3±0.8**, 41°.96N**±0°.01×**23°.20E**±0°.02**, h11**^{km}±6^{km}**, n306,** σ1^{s}**66**/401**, 54C-20D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.12	224	⇑iPg	Pg	03 17 04.3	0.0
KKB				i Sg	Sg	03 17 06.5	-0.1
KKB	Krupnik	0.12	224	P	Pg	03 17 04.3	0.0
MMB	Musomiste	0.54	133	⇑iPg	Pg	03 17 11.9	+0.1
MMB				i Sg	Sb	03 17 19.7	-0.9
MMB	Musomiste	0.54	133	P	Pg	03 17 11.9	+0.1
VTS	Vitosha	0.66	2	ePg	Pg	03 17 13.8	-0.4
VTS				eSg	Sg	03 17 22.5	-0.4
VTS	Vitosha	0.66	2	P	Pg	03 17 13.8	-0.4
VTS				S	Sg	03 17 22.7	-0.2
VTS	Vitosha	0.66	2	⇑iP	Pg	03 17 14.0	-0.1
VTS	Vitosha	0.66	2	⇑iPg	Pg	03 17 13.8	-0.4
VTS				i Sg	Sg	03 17 22.7	-0.2
VTS	Vitosha	0.66	2	P	Pg	03 17 13.7	-0.4
NVR	Nevrokopi	0.78	140	P	Pg	03 17 15.7	-0.7
NVR				S	Sg	03 17 25.6	-1.0
	6µm,0.4s						
NVR	Nevrokopi	0.78	140	P	Pg	03 17 15.7	-0.7
NVR				S	Sg	03 17 25.4	-1.2
NVR				AML	AML	03 17 25.9	
	comp=E,12105µm,0.3s						
NVR				AML	AML	03 17 31.5	
	comp=N,9072µm,0.2s						
VAY	Valandovo	0.79	217	ePg	Pg	03 17 16.4	-0.1
VAY				eSg	Sg	03 17 27.2	+0.3
VAY	Valandovo	0.79	217	⇑iPg	Pg	03 17 16.4	-0.1
VAY				i Sg	Sg	03 17 27.0	+0.2
VAY				eLg	Lg	03 17 27.3	
	comp=E,3µm,0.6s						
VAY				eLg	Lg	03 17 30.4	
	comp=N,3µm,0.4s						
KNT	Kendrikon	0.83	196	PG	Pg	03 17 16.5	-0.7
KNT				SG	Sg	03 17 27.0	-1.0
KNT	Kendrikon	0.83	196	P	Pg	03 17 16.5	-0.7
KNT				S	Sg	03 17 27.4	-0.6
	comp=N,7µm,0.3s						
KNT	Kendrikon	0.83	196	⇑iPg	Pg	03 17 16.5	-0.7
KNT	Kendrikon	0.83	196	P	Pg	03 17 16.5	-0.7
KNT				AML	AML	03 17 31.9	
	comp=E,11984µm,0.3s						
KNT				AML	AML	03 17 31.9	
	comp=N,16759µm,0.3s						
SRS	Serrai	0.89	160	ePg	Pg	03 17 17.7	-0.7
SRS				eSg	Sg	03 17 29.6	-0.4
SRS	Serrai	0.89	160	P	Pg	03 17 17.7	-0.7
SRS				S	Sg	03 17 29.4	-0.6
	comp=N,5µm,0.3s						
SRS	Serrai	0.89	160	⇑iPg	Pg	03 17 17.7	-0.7
SRS	Serrai	0.89	160	P	Pg	03 17 17.7	-0.7
SRS				S	Sg	03 17 29.3	-0.7
SRS				AML	AML	03 17 33.6	
	comp=N,12836µm,0.3s						
SRS				AML	AML	03 17 34.8	
	comp=E,8821µm,0.4s						
PGB	Panagyurishte	0.93	50	P	Pg	03 17 18.2	-1.0
PLD	Plovdiv	1.13	82	PN	Pb	03 17 22.2	-0.6
PLD				SN	Sn	03 17 38.7	+0.2
PLD	Plovdiv	1.13	82	ePg	Pb	03 17 22.2	-0.6
PLD				eSg	Sn	03 17 38.7	+0.2
PLD	Plovdiv	1.13	82	⇓iPg	Pb	03 17 22.1	-0.7
PLD				i Sg	Sn	03 17 39.9	+1.4
PLD	Plovdiv	1.13	82	P	Pb	03 17 22.1	-0.7
SOH	Sokhos	1.14	174	P	Pb	03 17 22.2	-0.8
SOH				S	Sb	03 17 37.2	-0.6
	comp=E,9µm,0.5s						
SOH	Sokhos	1.14	174	i Pg	Pb	03 17 22.4	-0.6
SOH				i Sg	Sn	03 17 39.0	+0.2
SOH	Sokhos	1.14	174	P	Pb	03 17 22.2	-0.8
SOH				S	Sb	03 17 37.0	-0.8
SOH				AML	AML	03 17 39.7	
	comp=N,28048µm,0.5s						
SOH				AML	AML	03 17 42.7	
	comp=E,8162µm,0.3s						
RZN	Rozhen	1.17	103	P	Pb	03 17 23.1	-0.4
SKO	Skopje	1.31	271	ePg	Pn	03 17 25.6	+0.1
SKO				eSg	Sg	03 17 43.9	+0.4
SKO	Skopje	1.31	271	i Pg	Pb	03 17 25.8	-0.1
SKO				i Sg	Sg	03 17 44.4	+0.9
THE	Thessaloniki	1.33	188	P	Pn	03 17 25.6	-0.2
THE				S	Sn	03 17 43.4	-0.2
	comp=E,4µm,0.7s						
THE	Thessaloniki	1.33	188	⇑ePg	Pn	03 17 25.6	-0.2
THE				i Sg	Sg	03 17 44.1	-0.2
THE	Thessaloniki	1.33	188	P	Pn	03 17 25.5	-0.3
THE				S	Sb	03 17 42.5	-0.8
THE				AML	AML	03 17 45.5	
	comp=E,10511µm,0.5s						
THE				AML	AML	03 17 47.2	
	comp=N,4827µm,0.8s						
BARS	Barje	1.34	310	ePg	Pb	03 17 26.3	-0.1
BARS	Barje	1.34	310	ePn	Pg	03 17 38.3	+11
BARS				eSg	Sg	03 17 44.2	-0.1
KVLA	Kavala	1.35	138	P	Pn	03 17 25.9	-0.2
KVLA				S	Sb	03 17 42.8	-1.1
KVLA				AML	AML	03 17 46.0	
	comp=N,14200µm,0.6s						
KVLA				AML	AML	03 17 46.8	
	comp=E,10092µm,0.3s						
HORT	Hortiatis	1.36	183	PN	Pb	03 17 26.5	-0.3
HORT	Hortiatis	1.36	183	P	Pn	03 17 26.0	-0.2
HORT				S	Sb	03 17 44.1	-0.1
	comp=E,3µm,0.4s						
HORT	Hortiatis	1.36	183	P	Pn	03 17 26.0	-0.2
HORT				S	Sb	03 17 44.0	-0.2
HORT				AML	AML	03 17 47.1	
	comp=N,5405µm,0.5s						
HORT				AML	AML	03 17 47.4	
	comp=E,4691µm,0.3s						
KAVA	Kavala	1.38	134	P	Pn	03 17 25.8	-0.6
KAVA				S	Sn	03 17 44.2	-0.4
	comp=E,5µm,0.7s						
KAVA	Kavala	1.38	134	P	Pn	03 17 25.9	-0.6
KAVA				S	Sb	03 17 44.7	+0.1
KAVA				AML	AML	03 17 49.9	
	comp=E,9639µm,0.5s						
KAVA				AML	AML	03 17 51.2	
	comp=N,9995µm,0.5s						
ZAPS	Zavoj	1.38	343	ePg	Pg	03 17 27.8	0.0
ZAPS				eSg	Sg	03 17 45.9	+0.2
PLG	Polygyros	1.59	173	P	Pn	03 17 29.1	-0.3
PLG				S	Sn	03 17 49.6	-0.4
	comp=N,3µm,0.6s						
PLG	Polygyros	1.59	173	P	Pn	03 17 29.4	0.0
PLG				S	Sn	03 17 49.2	-0.8
PLG				AML	AML	03 17 54.0	
	comp=E,4409µm,0.4s						
PLG				AML	AML	03 17 54.4	
	comp=N,4891µm,0.4s						
KDZ	Kurdzhali	1.69	100	PN	Pn	03 17 29.9	-0.8
KDZ				SN	Sn	03 17 52.0	-0.3
KDZ	Kurdzhali	1.69	100	P	Pn	03 17 29.9	-0.8
OUR	Ouranopolis	1.73	160	PN	Pn	03 17 31.0	-0.2
OUR	Ouranopolis	1.73	160	P	Pn	03 17 30.4	-0.8
OUR				S	Sb	03 17 54.6	0.0
OUR	Ouranopolis	1.73	160	P	Pn	03 17 31.3	+0.1
OUR				S	Sn	03 17 51.4	-1.8
OUR				AML	AML	03 17 56.7	
	comp=E,8961µm,0.4s						
OUR				AML	AML	03 17 57.5	
	comp=N,15697µm,0.6s						
THAS	Thassos island	1.77	139	P	Pn	03 17 30.7	-1.1
THAS				S	Sn	03 17 54.0	-0.3
	comp=N,2µm,0.6s						
THAS	Thassos island	1.77	139	P	Pn	03 17 31.8	0.0
THAS				S	Sb	03 17 55.0	-0.8
THAS				AML	AML	03 17 59.2	
	comp=E,5158µm,0.5s						
THAS				AML	AML	03 18 00.8	
	comp=N,2764µm,0.3s						
PLVB	Pleven	1.77	36	⇑iP	Pn	03 17 32.6	+0.7
FNA	Florina	1.80	230	ePg	Pn	03 17 32.9	+0.5
FNA				eSg	Sg	03 17 59.2	-0.1
FNA	Florina	1.80	230	P	Pn	03 17 32.8	+0.4
FNA				S	Sb	03 17 56.3	-0.7
FNA	Florina	1.80	230	⇑iPn	Pn	03 17 32.9	+0.4
FNA	Florina	1.80	230	P	Pn	03 17 32.7	+0.4
LIT	Litokhoron	1.93	196	P	Pn	03 17 33.2	-0.9
LIT				S	Sn	03 17 58.6	+0.3
	comp=N,358nm,0.6s						
RDO	Rodhopi	1.93	114	PN	Pn	03 17 34.2	+0.2
RDO	Rodhopi	1.93	114	P	Pn	03 17 34.2	+0.2
RDO				S	Sb	03 18 01.4	+0.8
	comp=N,2µm,0.4s						
RDO	Rodhopi	1.93	114	P	Pn	03 17 34.7	+0.6
RDO				S	Sn	03 17 58.2	-0.1
RDO				AML	AML	03 18 05.8	
	comp=E,4571µm,0.4s						
RDO				AML	AML	03 18 07.7	
	comp=N,4276µm,0.4s						
KZN	Kozani	1.97	214	P	Pn	03 17 34.6	-0.1
KZN				S	Sn	03 17 59.8	+0.4
	comp=N,380nm,0.6s						
KZN	Kozani	1.97	214	P	Pn	03 17 33.9	-0.7
ZAGS	Zajecar	1.99	339	ePn	Pn	03 17 35.4	+0.6
ZAGS				eSn	Sn	03 18 00.7	+1.0
SELS	Selova	1.99	310	ePn	Pn	03 17 34.8	-0.1
BOVS	Bovan	2.01	327	ePn	Pn	03 17 35.3	+0.2
BOVS				eSn	Sn	03 18 01.1	+0.9
PAIG	Paliouri	2.06	170	P	Pn	03 17 35.6	-0.2
PAIG				S	Sn	03 18 01.4	-0.1
	comp=N,972nm,0.4s						
BAIL	Bailesti	2.06	3	⇓iP	Pg	03 17 40.8	-0.1
PHP	Peshkopia	2.08	263	P	Pn	03 17 36.8	+0.7
PHP				S	Sb	03 18 04.5	-0.4
ELND	Elena	2.21	63	⇑iP	Pn	03 17 36.8	-1.0
VLAD	Vladila	2.22	23	⇑iP	Pg	03 17 44.2	+0.3
NEST	Nestorio	2.24	227	P	Pn	03 17 39.1	+0.7
NEST				S	Sb	03 18 08.4	-1.1
	comp=N,340nm,0.8s						
SMTH	Samothraki Isl	2.30	129	P	Pn	03 17 39.3	+0.1
SMTH	Samothraki Isl	2.30	129	P	Pn	03 17 39.2	+0.1
ZIMR		2.33	42	⇑iP	Pg	03 17 44.9	-1.0
PENT	Pentalofos	2.35	222	P	Pn	03 17 40.4	+0.5
PENT				S	Sb	03 18 11.6	-1.1
	comp=N,252nm,0.8s						
ALN	Alexandroupoli	2.39	115	PN	Pn	03 17 41.1	+0.8
ALN	Alexandroupoli	2.39	115	P	Pn	03 17 41.4	+1.1
CRAR	CRAIOVA	2.41	10	⇑iP	Pg	03 17 47.7	+0.3
KPRO	Kipourio	2.44	215	P	Pn	03 17 41.5	+0.5
KPRO				S	Sb	03 18 13.0	-2.2
	comp=N,325nm,1.5s						
PVY	Plav	2.49	286	⇓iPn	Pn	03 17 42.8	+1.0
PVY				eSn	Sn	03 18 13.8	+1.6
ENEZ	Enez	2.54	118	PN	Pn	03 17 42.5	+0.2
LIA	Limnos Island	2.55	143	P	Pn	03 17 42.4	-0.1
THL	Klokotos Trika	2.55	201	P	Pn	03 17 42.6	0.0
TIR	Tirane	2.57	257	ePn	Pn	03 17 43.5	+0.7

TIR				eSn	Sn	03 18 15.1	+1.0
TIR	**Tirane**	2.57	257	⇓iP	Pb	03 17 46.7	-0.7
TIR	**Tirane**	2.57	257	i Pn	Pb	03 17 45.3	-2.1
XOR	**Xorichti**	2.59	180	P	Pn	03 17 42.6	-0.5
IVA	**Berane**	2.61	292	⇑iPn	Pn	03 17 44.5	+1.0
IVA				eSn	Sn	03 18 17.1	+1.8
COPA	**Copaceanca**	2.63	34	⇑iP	Pb	03 17 49.0	+0.6
EDRB	**Edirne**	2.65	91	PN	Pn	03 17 44.6	+0.7
EDRB	**Edirne**	2.65	91	P	Pn	03 17 43.6	-0.3
GRUS	**Gruza**	2.66	317	ePn	Pn	03 17 44.1	+0.1
GRUS				eSn	Sn	03 18 17.0	+0.8
KUBS	**Kucevo**	2.70	336	ePn	Pn	03 17 44.0	-0.6
SRE	**Strehaia**	2.71	0	⇓iP	Pn	03 17 45.0	+0.3
SJES	**Sjenica**	2.71	300	ePn	Pn	03 17 45.7	+0.8
DJES	**Djerdap**	2.75	350	ePn	Pn	03 17 46.1	+0.7
DJES				eSn	Sn	03 18 18.1	-0.5
IVAS	**Ivanjica**	2.77	307	ePn	Pn	03 17 45.7	+0.1
SKIA	**Skiathos**	2.79	176	P	Pn	03 17 45.3	-0.6
KESN	**Edirne-Kesan**	2.85	112	i P	Pn	03 17 47.9	+0.8
KESN				IAML_P			
	comp=Z,159nm,0.2s						
KOME	**Kolasin**	2.87	289	⇑iPn	Pn	03 17 47.9	+0.8
KOME				eSn	Sn	03 18 22.9	+1.3
HUMR	**Humele**	2.88	26	⇑iP	Pg	03 17 57.0	+0.5
KIRK	**Kırklareli**	2.92	92	i P	Pn	03 17 47.6	0.0
KIRK				IAML_P			
	comp=Z,144nm,0.3s						
RAZG	**Razgrad**	2.92	55	⇑iP	Pb	03 17 53.8	+0.5
ULC	**Ulcinj**	2.95	271	⇑iPn	Pn	03 17 48.8	+0.7
ULC				eSn	Sn	03 18 24.8	+1.3
PDG	**Podgorica**	2.97	280	⇑iP	Pn	03 17 50.0	+1.7
PDG	**Podgorica**	2.97	280	ePn	Pn	03 17 47.7	-0.6
TTG	**Podgorica**	2.97	280	⇓iPn	Pn	03 17 49.2	+0.9
TTG				eSn	Sn	03 18 25.2	+1.3
HERR	**Herculane**	2.98	349	⇑iP	Pn	03 17 48.0	-0.4
DRME	**Dracevica, Mon**	3.00	276	⇓iPn	Pn	03 17 49.8	+1.1
DRME				eSn	Sn	03 18 26.2	+1.6
DRME	**Dracevica, Mon**	3.00	276	ePn	Pn	03 17 47.0	-1.7
AGG	**Agios Georgios**	3.00	193	P	Pn	03 17 48.5	-0.3
BOZC	**Bozcaada**	3.02	133	PN	Pn	03 17 49.5	+0.4
BOZC	**Bozcaada**	3.02	133	i P	Pn	03 17 50.4	+1.4
BOZC				IAML_P			
	comp=Z,1µm,0.3s						
SGRR	**Singureni**	3.04	41	⇑iP	Pb	03 17 52.7	-2.7
TRUS	**Trudelj**	3.05	319	ePn	Pn	03 17 49.5	0.0
LPK	**Lapseki**	3.12	119	PN	Pn	03 17 50.9	+0.5
PLE	**Pljevlja**	3.13	297	⇑iPn	Pn	03 17 52.0	+1.4
PLE				eSn	Sn	03 18 29.4	+1.4
GOLR		3.16	23	⇓iP	Pb	03 17 56.0	-1.3
BUC1	**Bucharest**	3.16	40	⇑iP	Pb	03 17 57.0	-0.4
DIVS	**Divibare**	3.18	313	ePn	Pn	03 17 51.5	+0.2
DIVS	**Divibare**	3.18	313	ePn	Pn	03 17 51.5	+0.2
SRN	**Sarande**	3.19	230	P	Pn	03 17 53.6	+2.3
EVR	**Evrytania**	3.22	200	P	Pn	03 17 52.2	+0.4
BUM	**Brajici-Budva**	3.22	278	⇑iPn	Pn	03 17 53.1	+1.3
BUM				eSn	Sn	03 18 31.9	+1.7
NKY	**Niksic**	3.23	287	⇑iPn	Pn	03 17 52.5	+0.5
NKY				eSn	Sn	03 18 32.1	+1.6
CEME	**Cevo**	3.23	282	⇑iPn	Pn	03 17 53.4	+1.4
CEME				eSn	Sn	03 18 31.6	+1.1
NKME	**Niksic**	3.25	286	⇓iPn	Pn	03 17 53.4	+1.2
NKME				eSn	Sn	03 18 32.7	+1.8
PHSR	**Pinarhisar**	3.25	94	PN	Pn	03 17 53.0	+0.8
PHSR	**Pinarhisar**	3.25	94	⇑iP	Pn	03 17 53.7	+1.5
RKY	**Sarkoy-Tekirda**	3.25	112	PN	Pn	03 17 52.8	+0.5
SART	**Tekirdag**	3.25	112	i P	Pn	03 17 53.5	+1.2
SART				IAML_P			
	comp=Z,375nm,0.1s						
IGT	**Igoumenitsa**	3.26	223	P	Pn	03 17 54.8	+2.5
MRKA	**Markates**	3.26	175	P	Pn	03 17 51.9	-0.4
ATAL	**Atalanti**	3.26	182	P	Pn	03 17 52.1	-0.3
RUDO	**Rudo**	3.27	302	ePn	Pn	03 17 52.3	-0.2
LKR	**Lokris**	3.31	183	P	Pn	03 17 54.2	+1.3
BAYC	**CANAKKALE_Bayr**	3.37	130	i P	Pn	03 17 55.4	+1.6
BAYC				IAML_P			
	comp=Z,712nm,0.1s						
BBLS	**Lazići**	3.38	306	ePn	Pn	03 17 54.0	0.0
BBLS	**Lazići**	3.38	306	ePn	Pn	03 17 54.5	+0.5
SIGR	**SIGRI**	3.41	143	PN	Pn	03 17 54.9	+0.6
SIGR	**SIGRI**	3.41	143	P	Pn	03 17 54.3	0.0
UPM	**Unac-Piva**	3.41	293	⇑iPn	Pn	03 17 55.2	+0.7
UPM				eSn	Sn	03 18 36.0	+1.0
UPM	**Unac-Piva**	3.41	293	ePn	Pn	03 17 55.5	+1.0
GZR	**Gura Zlata**	3.45	355	⇑iP	Pn	03 17 54.4	-0.6
ANX	**Ano Chora**	3.50	197	P	Pn	03 17 56.0	+0.3
CRLT	**Corlu**	3.50	102	PN	Pn	03 17 56.7	+1.0
LOT	**Lotru**	3.52	7	⇑iP	Pn	03 17 55.8	-0.1
SULR		3.52	38	⇓iP	Pb	03 18 01.9	-1.6
HCY	**Herceg Novi**	3.53	280	⇑iPn	Pn	03 17 57.5	+1.5
HCY				eSn	Sn	03 18 39.1	+1.3
HCY	**Herceg Novi**	3.53	280	ePn	Pn	03 17 58.4	+2.4
MTUR	**Matau**	3.54	22	⇑iP	Pg	03 18 10.6	+1.6
ARR	**Arges**	3.56	16	⇓iP	Pn	03 17 57.0	+0.4
BRY	**Bratogost**	3.58	287	⇓iPn	Pn	03 17 57.8	+1.0
BRY				eSn	Sn	03 18 40.8	+1.7
BRY	**Bratogost**	3.58	287	ePn	Pn	03 17 58.7	+1.9
EREA	**Eretria**	3.58	171	P	Pn	03 17 56.2	-0.5
MRMT	**Marmara Adasi**	3.58	111	PN	Pn	03 17 57.3	+0.5
PRK	**Paraskevi**	3.58	138	P	Pn	03 17 58.3	+1.6
SERG	**Sergoula**	3.65	194	P	Pn	03 17 58.1	+0.5
LEHL	**Lehliu**	3.65	45	⇓iP	Pn	03 18 01.6	+3.9
KALE	**Kalithea**	3.65	193	P	Pn	03 17 57.9	+0.1
RASA	**Rasa**	3.67	51	⇓iP	Pb	03 18 04.2	-1.9
TREB	**Trebinje**	3.67	284	ePn	Pn	03 17 59.2	+1.2
TREB	**Trebinje**	3.67	284	ePn	Pn	03 17 59.8	+1.8
TRIZ	**Trizonia**	3.69	194	P	Pn	03 17 59.0	+0.8
VOIR		3.73	20	⇑iP	Pn	03 18 00.0	+1.2
BANR	**Banloc**	3.74	337	⇑iP	Pn	03 18 00.0	+1.2
AYVA	**Ayvalik**	3.75	134	i P	Pn	03 18 00.2	+1.2
AYVA				IAML_P			
	comp=Z,342nm,0.1s						
HAPS	**Han Pijesak,BI**	3.77	306	ePn	Pn	03 18 00.0	+0.5
HAPS	**Han Pijesak,BI**	3.77	306	ePn	Pn	03 17 58.9	-0.6
DBRK	**Dubrovnik**	3.81	282	i Pn	Pn	03 18 01.9	+2.0
DBRK				Sn	Sn	03 18 45.1	+0.4
LAKA	**Lakka**	3.83	195	P	Pn	03 18 01.1	+0.9
CTYL	**Yalikoy Yolu**	3.84	96	PN	Pn	03 18 01.5	+1.2
EDC	**Edincik**	3.87	113	PN	Pn	03 18 01.6	+0.9
GONE	**Gonen-Balikesi**	3.89	118	PN	Pn	03 18 02.3	+1.3
DEV	**Deva**	3.93	357	⇑iP	Pn	03 18 02.1	+0.6
ISR	**Istrita**	3.99	36	⇓iP	Pn	03 18 04.2	+1.8
KLV	**Kalavryta, Ach**	3.99	192	P	Pn	03 18 02.2	-0.2
ICOR	**Ion Corvin**	4.00	56	⇑iP	Pn	03 18 03.5	+1.0
ELBA	**Catalca**	4.01	100	i P	Pn	03 18 02.1	-0.5
ELBA				IAML_P			
	comp=Z,532nm,0.1s						
DKL	**Dikili**	4.04	134	PN	Pn	03 18 04.2	+1.3
FRGS	**Fruska Gora**	4.04	324	ePn	Pn	03 18 02.8	-0.3
FRGS				eSn	Sn	03 18 48.9	-1.4
FRGS	**Fruska Gora**	4.04	324	ePn	Pn	03 18 02.7	-0.3
CTKS	**Kestanelik-??a**	4.04	98	PN	Pn	03 18 03.9	+0.8
MLR	**Muntele Rosu**	4.05	28	Pn	Pn	03 18 05.1	+1.8
	comp=Z,14nm,0.3s,baz=186,slow=3.5,SNR=48						
MLR				Sn	Sn	03 18 53.1	+2.2
	comp=Z,7.7nm,0.3s,baz=276,slow=18,SNR=5.0						
MLR				Lg	Lg	03 19 10.7	
	comp=Z,12nm,0.3s,baz=88,slow=22,SNR=2.2						
MLR	**Muntele Rosu**	4.05	28	⇑iP	Pn	03 18 05.2	+1.8
STON	**Ston**	4.17	284	ePn	Pn	03 18 05.2	+0.4
STON	**Ston**	4.17	284	i Pn	Pn	03 18 06.7	+1.9
STON				Sn	Sn	03 18 55.6	+2.0
STON	**Ston**	4.17	284	ePn	Pn	03 18 06.7	+1.9
CHOS	**Chios island**	4.18	148	PN	Pn	03 18 06.1	+1.0
ZEDA	**zmir-Bergama**	4.20	134	i P	Pn	03 18 07.0	+1.7
ZEDA				IAML_P			
	comp=Z,360nm,0.1s						
BALB	**Balikesir**	4.24	122	PN	Pn	03 18 06.6	+0.8
KCTX	**Karacabey (Bur**	4.25	112	PN	Pn	03 18 06.8	+0.9
MDB	**Medias**	4.27	11	⇑iP	Pn	03 18 07.8	+1.6
STEP	**BALIKESIR_Sava**	4.29	125	i P	Pn	03 18 09.1	+2.5
STEP				IAML_P			
	comp=Z,682nm,0.2s						
DOPR	**Dopca**	4.31	21	⇑iP	Pn	03 18 07.8	+1.0
GRER		4.38	37	⇑iP	Pn	03 18 11.4	+3.7
BISRR	**Bisoca**	4.40	34	⇑iP	Pn	03 18 10.3	+2.3
HARR	**Harsova**	4.40	50	⇑iP	Pn	03 18 08.9	+0.9
MFTR	**Murfatlar**	4.42	58	⇑iP	Pn	03 18 09.8	+1.5
URLA	**Izmir**	4.43	143	PN	Pn	03 18 09.6	+1.1
URLA	**Izmir**	4.43	143	i P	Pn	03 18 09.4	+0.9
URLA				IAML_P			
	comp=Z,885nm,0.3s						
KLYT	**Kilyos**	4.44	97	PN	Pn	03 18 10.0	+1.5
DID	**Didima**	4.45	180	P	Pn	03 18 08.4	-0.2
SIRR	**Siria**	4.45	346	⇓iP	Pn	03 18 09.4	+0.7
ARMT	**Armutlu**	4.49	106	PN	Pn	03 18 10.4	+1.2
ISK	**Istanbul-Kandi**	4.49	99	PN	Pn	03 18 10.4	+1.2
KAVV	**Kandilli-Istan**	4.49	100	PN	Pn	03 18 10.2	+1.0
OZUR		4.54	23	⇑iP	Pn	03 18 08.5	-1.4
TIRR	**Tirgusor**	4.56	55	⇓iP	Pn	03 18 10.6	+0.5
MDNY	**Mudanya-Bursa**	4.58	108	PN	Pn	03 18 12.3	+1.9
BUY	**Buyukada**	4.59	102	PN	Pn	03 18 11.9	+1.4
BUY	**Buyukada**	4.59	102	i P	Pn	03 18 11.2	+0.6
BUY				IAML_P			
	comp=Z,159nm,0.1s						
PLOR	**Plostina**	4.62	31	⇓iP	Pn	03 18 12.8	+1.7
DURS	**Dursunbey**	4.64	119	i P	Pn	03 18 13.4	+2.0
DURS				IAML_P			
	comp=Z,437nm,0.2s						
VRI	**Vrincioaia**	4.67	32	⇑iP	Pn	03 18 13.6	+2.0
MAKA	**Makarska**	4.75	288	ePn	Pn	03 18 15.5	+2.7
MAKA				Sn	Sn	03 19 09.7	+2.0
CJR	**Cluj-Napoca**	4.76	3	⇑iP	Pn	03 18 15.4	+2.4
ULDT	**Uludag**	4.84	110	i P	Pn	03 18 16.1	+1.8
ULDT				IAML_P			
	comp=Z,48nm,0.2s						
DRGR		4.85	356	ePn	Pn	03 18 13.8	-0.4
DRGR		4.85	356	⇑iP	Pn	03 18 14.2	0.0
YLV	**Yalova**	4.86	105	PN	Pn	03 18 16.1	+1.8
HRT	**Hereke**	5.00	101	PN	Pn	03 18 17.9	+1.7
MGRS	**Mrkonjic Grad**	5.10	301	ePn	Pn	03 18 19.3	+1.6
DEMI	**Demirci**	5.11	123	i P	Pn	03 18 19.6	+1.7
DEMI				IAML_P			
	comp=Z,186nm,0.2s						
HVAR	**Hvar**	5.13	286	ePn	Pn	03 18 19.4	+1.4
HVAR				Sn	Sn	03 19 15.4	-1.9
TESR	**Tescani**	5.18	27	⇑iP	Pn	03 18 21.3	+2.5
ARCR	**ARCALIA**	5.19	9	⇑iP	Pn	03 18 18.7	-0.2
BLY	**Banja Luka**	5.20	304	ePn	Pn	03 18 20.3	+1.4
BLY	**Banja Luka**	5.20	304	⇑iP	Pn	03 18 22.0	+3.1
BLY	**Banja Luka**	5.20	304	ePn	Pn	03 18 19.4	+0.5
TLCR		5.20	50	⇓iP	Pn	03 18 20.1	+1.1
KAND	**Kocaeli-Kandir**	5.32	97	i P	Pn	03 18 20.8	+0.2
KAND				IAML_P			
	comp=Z,76nm,0.2s						
MORH	**Mrgy, Hungar**	5.37	324	ePn	Pn	03 18 20.8	-0.5
MORH	**Mrgy, Hungar**	5.37	324	ePn	Pn	03 18 20.0	-1.3
MORH				Sn	Sn	03 19 21.1	-2.1
TVSB	**Tavsanli**	5.38	116	PN	Pn	03 18 23.2	+1.7
BIZ	**Bicaz**	5.40	22	⇑iP	Pn	03 18 23.3	+1.6
KULA	**Kula-Manisa**	5.41	128	PN	Pn	03 18 23.8	+1.8
LTVH	**Ltavrtes, Hu**	5.51	351	ePn	Pn	03 18 22.1	-1.1
LTVH				Sn	Sg	03 19 52.1	-5.9
GEYV	**SAKARYA_Geyve**	5.55	103	i P	Pn	03 18 25.3	+1.5
GEYV				IAML_P			
	comp=Z,213nm,0.2s						
GDZ	**Gediz**	5.58	119	i P	Pn	03 18 25.3	+1.0
GDZ				IAML_P			
	comp=Z,167nm,0.2s						
AYDN	**Tasoluk**	5.60	138	i P	Pn	03 18 26.2	+1.6
AYDN				IAML_P			
	comp=Z,513nm,0.3s						
ZIRJ	**Zirje**	5.81	290	ePn	Pn	03 18 28.7	+1.4
ZIRJ				Sn	Sn	03 19 34.3	+0.3
MORI	**Morici**	5.82	292	i Pn	Pn	03 18 30.0	+2.5
BURAR	**Bucovina Array**	5.84	14	⇑iP	Pn	03 18 29.5	+1.7
SAHE	**Sakarya_HENDEK**	5.86	98	i P	Pn	03 18 28.2	+0.1
SAHE				IAML_P			
	comp=Z,65nm,0.2s						
KHAL	**Karahalli**	6.00	125	i P	Pn	03 18 32.3	+2.2
KHAL				IAML_P			
	comp=Z,123nm,0.3s						
TRPA	**Tarpa**	6.19	356	ePn	Pn	03 18 34.0	+1.5
TRPA				ePg	Pg	03 18 56.1	-3.7
TRPA				eSg	Sg	03 20 23.0	+3.1
TIH	**Tihany**	6.23	324	ePn	Pn	03 18 32.1	-1.0
TIH	**Tihany**	6.23	324	Sn	Sn	03 19 43.1	-1.3
BUD	**Budapest**	6.28	333	eSn	Sn	03 19 44.1	-1.3
YIGI	**Dzce**	6.28	96	i P	Pn	03 18 34.7	+0.9
YIGI				IAML_P			
	comp=Z,124nm,0.3s						
DUGI	**Dugi Otok**	6.31	292	ePn	Pn	03 18 35.6	+1.4
PSZ	**Piszkesteto**	6.41	340	⇓iP	Pn	03 18 37.3	+1.7
PSZ	**Piszkesteto**	6.41	340	ePn	Pn	03 18 39.0	+3.5
PSZ				Sn	Sn	03 19 48.1	-0.6
KIS	**Kishinev**	6.45	37	eP	Pg	03 19 11.0	+6.4
CSKK	**Cskako**	6.45	329	ePn	Pn	03 18 38.0	+1.9
CSKK				Sn	Sn	03 19 47.1	-2.6
BEHE	**Becsehely**	6.45	317	ePn	Pn	03 18 37.9	+1.7
BEHE	**Becsehely**	6.45	317	ePn	Pn	03 18 40.0	+3.9
BEHE				Sn	Sn	03 19 48.1	-1.7
KIBS	**BOLU**	6.71	100	i P	Pn	03 18 41.4	+1.6
KIBS				IAML_P			
	comp=Z,171nm,0.3s						
KOGS	**Kog**	6.71	314	i Pn	Pn	03 18 42.0	+2.3
KOGS				i Sn	Sn	03 19 48.6	-7.6
BOJS	**Bojanci**	6.76	304	i Pn	Pn	03 18 44.0	+3.7
BOJS				i Sn	Sn	03 19 57.5	+0.1
BCAM	**Yenicaga**	6.76	97	i P	Pn	03 18 41.1	+0.5
BCAM				IAML_P			
	comp=Z,81nm,0.3s						
IDI	**Anoyia**	6.79	168	Pn	Pn	03 18 43.0	+2.1
	comp=Z,0.9nm,0.3s,baz=12,slow=12,SNR=5.8						
CRES	**Cresnjev**	6.80	307	i Pn	Pn	03 18 42.2	+1.2
CRES				i Sn	Sn	03 19 54.2	-4.1
CRES	**Cresnjev**	6.80	307	ePn	Pn	03 18 41.6	+0.7
SRO	**Srobarova**	6.81	331	eSN	Sn	03 19 56.1	-2.3
KOLS	**Kolonicke sedl**	7.01	355	ePN	Pn	03 18 45.1	+1.3
KOLS				ePG	Pg	03 19 15.1	-0.3
KOLS				eSG	Sg	03 20 43.2	-2.8
VISS	**Visnje**	7.16	305	i Pn	Pn	03 18 48.4	+2.5
VISS				i Sn	Sn	03 20 04.7	-2.5
VYHS	**Vyhne**	7.22	336	ePN	Pn	03 18 48.3	+1.5
VYHS				eSN	Sn	03 20 03.7	-5.1
AQU	**L'Aquila**	7.29	276	ePn	Pn	03 18 48.9	+1.2
CEY	**Cerknica**	7.38	304	ePn	Pn	03 18 48.5	-0.4
SOP	**Sopron**	7.42	323	ePn	Pn	03 18 51.0	+1.6
SOP				Sn	Sn	03 20 08.1	-5.4
SOKA	**Soboth**	7.52	312	eSn	Sn	03 20 13.7	-2.4
	comp=Z,3.3nm,0.4s						
ZST	**Bratislava**	7.58	327	eSN	Sn	03 20 11.8	-5.8
ARSA	**Arzberg**	7.62	317	ePn	Pn	03 18 52.2	0.0
	comp=Z,2.2nm,0.3s						
ARSA				Sn	Sn	03 20 14.1	-4.3
	comp=Z,5.1nm,0.4s						
MODS	**Modra-Piesok**	7.66	329	ePN	Pn	03 18 53.2	+0.5
MODS				eSN	Sn	03 20 14.1	-5.4
OBKA	**Obir**	7.70	309	Pn	Pn	03 18 55.6	+2.3
	comp=Z,0.5nm,0.2s						
OBKA				Sn	Sn	03 20 18.4	-2.2
	comp=Z,3.4nm,0.3s						
CONA	**Conrad Observa**	7.92	321	ePn	Pn	03 18 57.2	+0.9
	comp=Z,1.7nm,0.4s						
CONA				Sn	Sn	03 20 22.8	-3.1
	comp=Z,7.9nm,0.9s						
JAVC	**Velka Javorina**	7.92	333	eSN	Sn	03 20 32.5	+6.5
VAE	**Valguarnera**	8.11	239	Sn	Sn	03 20 35.5	+4.8
	baz=254,slow=21,SNR=1.2						
BRTR	**Keskin Array B**	8.22	102	Pn	Pn	03 19 03.4	+2.8
	comp=Z,0.1nm,0.3s,baz=294,slow=11,SNR=2.8						
BRTR				Sn	Sn	03 20 33.4	-0.1
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=3.7						
KRUC	**Moravsky**	8.56	328	eSN	Sn	03 20 36.5	-5.0
MOA	**Molln**	8.65	316	ePn	Pn	03 19 09.5	+3.2
	comp=Z,0.5nm,0.3s						
MOA				eSn	Sn	03 20 41.8	-2.1
	comp=Z,5.4nm,0.5s						
VRAC	**Vranov**	8.68	330	eSN	Sn	03 20 38.8	-5.8
MORC	**Moravsky Berou**	8.76	335	eSN	Sn	03 20 42.3	-4.2
ABTA	**Abfaltersbach**	9.03	306	ePn	Pn	03 19 14.9	+3.4
	comp=Z,3.7nm,0.6s						
GERES	**GERESS Array B**	9.59	319	Pn	Pn	03 19 23.0	+3.7
	comp=Z,0.1nm,0.3s,baz=133,slow=15,SNR=4.8						
GERES				Sn	Sn	03 21 03.6	-3.4
	comp=Z,0.2nm,0.3s,baz=134,slow=22,SNR=3.7						
AKASG	**Malin Array Be**	9.68	23	Pn	Pn	03 19 20.7	+0.2
	comp=Z,0.6nm,0.3s,baz=208,slow=12,SNR=3.5						
WTTA	**Wattenberg**	9.80	307	ePn	Pn	03 19 24.9	+2.7
	comp=Z,1.0nm,0.3s						
KHC	**Kasperske Hory**	9.84	320	ePN	Pn	03 19 27.2	+4.5
KHC				ex	x	03 21 04.0	
KHC				ex	x	03 21 34.0	
WATA	**Walderalm**	9.87	307	ePn	Pn	03 19 28.9	+5.7
	comp=Z,2.0nm,0.3s						
SQTA	**Sankt Quirin**	10.04	306	ePn	Pn	03 19 28.8	+3.3
	comp=Z,2.3nm,0.4s						
MOTA	**Moosalm**	10.16	306	ePn	Pn	03 19 31.0	+3.9
	comp=Z,1.8nm,0.4s						
FETA	**Feichten**	10.24	304	ePn	Pn	03 19 31.0	+2.7
	comp=Z,1.2nm,0.4s						
RETA	**Reutte**	10.43	306	Pn	Pn	03 19 34.6	+3.8
	comp=Z,1.7nm,0.5s						
DAVOX	**Davos/Dischmat**	10.68	301	Pn	Pn	03 19 36.5	+2.2
	comp=Z,0.2nm,0.3s,baz=159,slow=14,SNR=3.6						
HFS	**Hagfors**	19.12	345	P	P	03 21 23.4	-0.6
	comp=Z,0.1nm,0.3s,baz=161,slow=11,SNR=8.3						
FINES	**FINESS Array B**	19.59	4	P	P	03 21 28.7	-0.4
	comp=Z,0.0nm,0.3s,baz=187,slow=9.5,SNR=3.4						
NB2	**NORSAR Subarra**	20.45	343	P	P	03 21 37.3	-1.2
	comp=Z,0.7nm,0.6s,baz=154,slow=11						
NOA	**NORSAR Array B**	20.45	343	P	P	03 21 37.9	-0.7
	comp=Z,0.9nm,0.8s,baz=158,slow=9.5,SNR=10						
ESDC	**Sonseca Array**	20.66	273	P	P	03 21 40.9	-0.1
	comp=Z,0.2nm,0.6s,baz=66,slow=11,SNR=3.7						
EKA	**Eskdalemuir Ar**	21.80	317	P	P	03 21 54.2	+1.2
	comp=Z,0.1nm,0.4s,baz=121,slow=11,SNR=3.2						
TORD	**Torodi Ar. Bea**	34.25	219	P	P	03 23 47.8	+0.4
	comp=Z,0.9nm,0.6s,baz=32,slow=8.5,SNR=9.1						
MKAR	**Makanchi Array**	41.65	62	P	P	03 24 50.9	+1.4
	comp=Z,0.5nm,0.7s,baz=270,slow=8.6,SNR=2.2						

ATH 27 03:17:01.2, 38°.23N×22°.10E, h11^{km}±1^{km}, ML1.0/8, Error ellipse: s-maj=1.6km s-min=0.7km az=251.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AIG3	**Aigion**	0.02	3	P	Pg	03 17 03.2	-0.1
AIG3				S	Sg	03 17 04.8	+0.2
AIG2	**Aigio**	0.03	291	P	Pg	03 17 03.2	-0.1
AIG2				S	Sg	03 17 04.3	-0.3
AIG4	**Aigion**	0.03	315	P	Pg	03 17 03.3	0.0
AIG4				S	Sg	03 17 04.8	+0.1
AIG1	**Aigion**	0.04	127	P	Pg	03 17 03.3	0.0
AIG1				S	Sg	03 17 04.7	-0.1
LAKA	**Lakka**	0.10	274	P	Pg	03 17 04.0	0.0
LAKA				S	Sg	03 17 05.8	-0.2
LAKA				AML	AML	03 17 05.8	
	comp=N,60µm,0.3s						
LAKA				AML	AML	03 17 06.3	
	comp=E,79µm,0.2s						
TRAZ	**Trapeza**	0.11	127	P	Pg	03 17 04.3	+0.2
TRAZ				S	Sg	03 17 06.5	+0.3
TRAZ				AML	AML	03 17 07.1	
	comp=E,275µm,0.2s						
TRAZ				AML	AML	03 17 07.2	
	comp=N,455µm,0.1s						
TRIZ	**Trizonia**	0.14	350	P	Pg	03 17 04.5	0.0
TRIZ				S	Sg	03 17 06.9	+0.1
KALE	**Kalithea**	0.16	10	P	Pg	03 17 05.0	+0.1
KALE				S	Sg	03 17 07.8	+0.2
KALE				AML	AML	03 17 08.1	
	comp=N,348µm,0.2s						
KALE				AML	AML	03 17 08.2	
	comp=E,173µm,0.2s						
SERG	**Sergoula**	0.18	349	P	Pg	03 17 05.3	0.0
SERG				S	Sg	03 17 08.1	0.0
SERG				AML	AML	03 17 09.4	
	comp=E,159µm,0.2s						
SERG				AML	AML	03 17 09.4	
	comp=N,187µm,0.2s						
KLV	**Kalavryta, Ach**	0.19	169	P	Pg	03 17 05.4	0.0
KLV				S	Sg	03 17 08.5	+0.2
KLV				AML	AML	03 17 09.3	
	comp=E,48µm,0.1s						
KLV				AML	AML	03 17 09.6	
	comp=N,45µm,0.1s						
GUR	**Goura**	0.35	147	P	Pg	03 17 08.1	-0.2
GUR				S	Sg	03 17 13.5	+0.5
GUR				AML	AML	03 17 14.0	
	comp=E,51µm,0.3s						
GUR				AML	AML	03 17 14.1	
	comp=N,78µm,0.4s						
DSF	**Desfina**	0.38	62	P	Pg	03 17 08.5	-0.3
DSF				S	Sg	03 17 13.8	-0.1
DSF				AML	AML	03 17 15.2	
	comp=E,145µm,0.2s						
DSF				AML	AML	03 17 15.3	
	comp=N,87µm,0.1s						
ANX	**Ano Chora**	0.39	338	P	Pg	03 17 08.8	-0.2
ANX				S	Sg	03 17 14.7	+0.5
ANX				AML	AML	03 17 17.8	
	comp=N,47µm,0.3s						
ANX				AML	AML	03 17 18.0	
	comp=E,44µm,0.2s						

IDC ***27*** *03:20:07.9±1.5, 41°.77N×23°.20E, h0^{km}, mb3.0/2, mb1 3.0/4, mb1mx2.9/54, mbtmp3.0/4, ML3.2/2, Error ellipse: s-maj=24.2km s-min=16.2km az=110.0*

ISCJB ***27*** *03:20:09.7±0.3, 41°.95N±0°.01×23°.15E±0°.02, h5^{km}±2^{km}, mb3.5/1, Error ellipse: s-maj=2.6km s-min=2.0km az=155.4*

SOF ***27*** *03:20:10.2, 41°.97N×23°.27E, h2^{km}*

THE ***27*** *03:20:10.6, 41°.92N×23°.20E, h3^{km}±1^{km}, ML3.4/10, Error ellipse: s-maj=1.2km s-min=0.7km az=70.0*

SKO ***27*** *03:20:10.3, 41°.93N×23°.20E, h15^{km}, M3.3, ML3.6*

ATH ***27*** *03:20:10.6, 41°.91N×23°.22E, h22^{km}, ML3.2/19, Error ellipse: s-maj=1.9km s-min=1.0km az=172.0*

BEO ***27*** *03:20:11.0±0.2, 41°.95N×23°.18E, h11^{km}±2^{km}, ML3.5/17*

ISK ***27*** *03:20:12.3, 41°.83N×23°.15E, h16^{km}, ML3.5/12*

ISC 27 03:20:10.6±0.8, 41°.94N±0°.01×23°.19E±0°.02, h12^{km}±5^{km}, n128, σ1^{s}.09/177, 6C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	0.11	231	⇑iPg	Pg	03 20 13.8	+0.1
KKB				i Sg	Sg	03 20 16.0	+0.2
KKB	**Krupnik**	0.11	231	P	Pg	03 20 13.7	+0.1
MMB	**Musomiste**	0.53	131	⇑iPg	Pb	03 20 21.4	-0.4
MMB				i Sg	Sb	03 20 28.9	-0.5
MMB	**Musomiste**	0.53	131	P	Pb	03 20 21.2	-0.6
VTS	**Vitosha**	0.68	3	ePg	Pg	03 20 23.0	-0.8
VTS				eSg	Sg	03 20 32.2	-0.8
VTS	**Vitosha**	0.68	3	P	Pg	03 20 23.1	-0.8
VTS				S	Sg	03 20 31.9	-1.1
VTS	**Vitosha**	0.68	3	⇑iPg	Pg	03 20 23.2	-0.8
VTS				i Sg	Sg	03 20 32.0	-0.9
VTS	**Vitosha**	0.68	3	P	Pg	03 20 23.1	-0.8
NVR	**Nevrokopi**	0.77	139	P	Pg	03 20 25.0	-0.5
NVR				S	Sg	03 20 35.4	-0.2
	2µm,0.5s						
NVR	**Nevrokopi**	0.77	139	P	Pg	03 20 25.1	-0.4
NVR				S	Sb	03 20 35.6	-0.7
NVR				AML	AML	03 20 40.9	
	comp=N,3981µm,0.3s						
NVR				AML	AML	03 20 42.1	
	comp=E,4173µm,0.7s						
VAY	**Valandovo**	0.77	218	ePg	Pb	03 20 25.8	-0.1
VAY				eSg	Sb	03 20 36.4	+0.1
VAY	**Valandovo**	0.77	218	⇑iPg	Pb	03 20 25.8	-0.1
VAY				i Sg	Sb	03 20 36.6	+0.3
VAY				eLg	Lg	03 20 36.7	
	comp=E,2µm,0.6s						
VAY				eLg	Lg	03 20 39.7	
	comp=N,2µm,0.4s						
KNT	**Kendrikon**	0.80	196	PG	Pb	03 20 26.2	-0.3
KNT				SG	Sg	03 20 36.3	-0.4
KNT	**Kendrikon**	0.80	196	P	Pg	03 20 25.9	-0.2
KNT				S	Sg	03 20 36.6	-0.1
	comp=N,4µm,0.3s						
KNT	**Kendrikon**	0.80	196	⇑iPg	Pg	03 20 25.9	-0.2
KNT				i Sg	Sg	03 20 36.3	-0.4
KNT	**Kendrikon**	0.80	196	P	Pg	03 20 25.9	-0.2
KNT				S	Sg	03 20 36.5	-0.2
KNT				AML	AML	03 20 41.2	
	comp=E,5426µm,0.2s						
KNT				AML	AML	03 20 41.2	
	comp=N,8889µm,0.4s						
SRS	**Serrai**	0.87	160	ePg	Pg	03 20 27.1	-0.3
SRS				eSg	Sb	03 20 38.8	-0.4
SRS	**Serrai**	0.87	160	P	Pg	03 20 27.2	-0.2
SRS				S	Sb	03 20 39.1	-0.1
	comp=N,2µm,0.4s						
SRS	**Serrai**	0.87	160	⇑iPg	Pg	03 20 27.1	-0.3
SRS				i Sg	Sb	03 20 38.8	-0.4
SRS	**Serrai**	0.87	160	P	Pg	03 20 27.0	-0.3
SRS				S	Sb	03 20 39.0	-0.1

SRS				AML	AML	03 20 44.3	
	comp=N,4377μm,0.3s						
SRS				AML	AML	03 20 44.3	
	comp=E,3028μm,0.4s						
PGB	**Panagyurishte**	**0.95**	**49**	P	**Pg**	**03 20 27.7**	**-1.2**
SOH	**Sokhos**	**1.12**	**174**	P	**Pg**	**03 20 31.8**	**-0.4**
SOH				S	**Sg**	**03 20 46.4**	**-0.3**
	comp=E,4μm,0.5s						
SOH	**Sokhos**	**1.12**	**174**	*i* Pg	**Pg**	**03 20 31.8**	**-0.4**
SOH				*i* Sg	**Sn**	**03 20 47.2**	**-0.2**
SOH	**Sokhos**	**1.12**	**174**	P	**Pg**	**03 20 31.7**	**-0.4**
SOH				S	**Sg**	**03 20 46.6**	**-0.1**
SOH				AML	AML	03 20 49.6	
	comp=N,10265μm,0.5s						
SOH				AML	AML	03 20 52.0	
	comp=E,4032μm,0.4s						
PLD	**Plovdiv**	**1.14**	**81**	PN	**Pg**	**03 20 33.7**	**+1.2**
PLD	**Plovdiv**	**1.14**	**81**	*e*Pg	**Pb**	**03 20 32.2**	**+0.1**
PLD				*e*Sg	**Sn**	**03 20 48.1**	**+0.4**
PLD	**Plovdiv**	**1.14**	**81**	*e*Pg	**Pg**	**03 20 32.7**	**+0.2**
PLD				*i* Sg	**Sn**	**03 20 48.1**	**+0.4**
SKO	**Skopje**	**1.31**	**272**	*e*Pg	**Pb**	**03 20 35.1**	**0.0**
SKO				*e*Sg	**Sb**	**03 20 51.9**	**+0.1**
SKO	**Skopje**	**1.31**	**272**	*i* Pg	**Pb**	**03 20 35.4**	**+0.3**
SKO				*i* Sg	**Sg**	**03 20 54.1**	**+1.3**
THE	**Thessaloniki**	**1.31**	**188**	P	**Pb**	**03 20 34.9**	**-0.2**
THE				S	**Sg**	**03 20 52.8**	**-0.1**
	comp=E,2μm,0.6s						
THE	**Thessaloniki**	**1.31**	**188**	*e*Pg	**Pb**	**03 20 35.1**	**0.0**
THE				*i* Sg	**Sg**	**03 20 53.2**	**+0.3**
THE	**Thessaloniki**	**1.31**	**188**	P	**Pg**	**03 20 35.4**	**-0.4**
THE				S	**Sg**	**03 20 52.8**	**-0.1**
THE				AML	AML	03 20 54.8	
	comp=E,4304μm,0.4s						
THE				AML	AML	03 20 54.9	
	comp=N,2462μm,0.4s						
HORT	**Hortiatis**	**1.34**	**183**	PN	**Pb**	**03 20 35.5**	**-0.1**
HORT	**Hortiatis**	**1.34**	**183**	P	**Pb**	**03 20 35.5**	**-0.1**
HORT				S	**Sg**	**03 20 53.3**	**-0.4**
	comp=N,1μm,0.4s						
HORT	**Hortiatis**	**1.34**	**183**	P	**Pg**	**03 20 36.1**	**-0.2**
KVLA	**Kavala**	**1.34**	**138**	P	**Pb**	**03 20 35.3**	**-0.3**
KVLA				S	**Sn**	**03 20 52.8**	**0.0**
KVLA				AML	AML	03 20 55.4	
	comp=N,5503μm,0.5s						
KVLA				AML	AML	03 20 58.8	
	comp=E,3921μm,0.7s						
BARS	**Barje**	**1.35**	**311**	*e*Pg	**Pn**	**03 20 35.4**	**+0.2**
BARS	**Barje**	**1.35**	**311**	*e*Pn	Pg	03 20 47.6	+11
BARS				*e*Sg	**Sn**	**03 20 53.6**	**+0.6**
KAVA	**Kavala**	**1.36**	**133**	P	**Pb**	**03 20 35.8**	**-0.2**
KAVA				S	**Sg**	**03 20 53.8**	**-0.8**
	comp=E,2μm,0.5s						
KAVA	**Kavala**	**1.36**	**133**	P	**Pb**	**03 20 36.1**	**+0.1**
KAVA				S	**Sg**	**03 20 53.7**	**-0.8**
KAVA				AML	AML	03 20 59.4	
	comp=E,5177μm,0.6s						
KAVA				AML	AML	03 21 00.7	
	comp=N,2802μm,0.5s						
ZAPS	**Zavoj**	**1.40**	**343**	*e*Pg	**Pb**	**03 20 36.8**	**+0.1**
ZAPS				*e*Sg	**Sn**	**03 20 54.6**	**+0.2**
PLG	**Polygyros**	**1.57**	**173**	P	**Pb**	**03 20 39.0**	**-0.6**
PLG				S	**Sb**	**03 20 59.3**	**-0.1**
	comp=N,972nm,0.5s						
PLG	**Polygyros**	**1.57**	**173**	P	**Pb**	**03 20 38.8**	**-0.7**
PLG				S	**Sb**	**03 20 59.5**	**+0.1**
PLG				AML	AML	03 21 03.4	
	comp=E,1945μm,0.4s						
PLG				AML	AML	03 21 03.9	
	comp=N,1929μm,0.6s						
KDZ	**Kurdzhali**	**1.69**	**99**	PN	**Pb**	**03 20 41.3**	**-0.2**
KDZ				SN	**Sb**	**03 21 02.7**	**0.0**
OUR	**Ouranopolis**	**1.71**	**159**	PN	**Pb**	**03 20 40.9**	**-0.9**
OUR	**Ouranopolis**	**1.71**	**159**	P	**Pn**	**03 20 40.3**	**+0.2**
OUR				S	**Sg**	**03 21 04.2**	**-1.3**
	comp=N,2μm,0.7s						
OUR	**Ouranopolis**	**1.71**	**159**	P	**Pn**	**03 20 40.2**	**+0.2**
OUR				S	**Sb**	**03 21 03.9**	**+0.7**
THAS	**Thassos island**	**1.76**	**139**	P	**Pn**	**03 20 41.4**	**+0.6**
THAS				S	**Sb**	**03 21 05.3**	**+0.7**
	comp=N,972nm,0.5s						
THAS	**Thassos island**	**1.76**	**139**	P	**Pn**	**03 20 41.0**	**+0.3**
THAS				S	**Sn**	**03 21 03.3**	**+0.3**
THAS				AML	AML	03 21 08.5	
	comp=E,2498μm,0.4s						
THAS				AML	AML	03 21 11.2	
	comp=N,1420μm,0.4s						
FNA	**Florina**	**1.79**	**231**	*e*Pg	**Pn**	**03 20 42.3**	**+1.0**
FNA				*e*Sg	**Sg**	**03 21 07.4**	**-0.7**
FNA	**Florina**	**1.79**	**231**	P	**Pn**	**03 20 41.6**	**+0.3**
FNA				S	**Sb**	**03 21 05.6**	**0.0**
FNA	**Florina**	**1.79**	**231**	*i* Pn	**Pn**	**03 20 42.1**	**+0.9**
FNA	**Florina**	**1.79**	**231**	P	**Pn**	**03 20 42.2**	**+0.9**
FNA				AML	AML	03 21 18.7	
	comp=N,6563μm,0.6s						
FNA				AML	AML	03 21 22.0	
	comp=E,4249μm,0.5s						
LIT	**Litokhoron**	**1.91**	**196**	P	**Pn**	**03 20 42.5**	**-0.4**
LIT				S	**Sb**	**03 21 08.5**	**-0.6**
RDO	**Rodhopi**	**1.93**	**113**	PN	**Pb**	**03 20 45.1**	**-0.5**
RDO	**Rodhopi**	**1.93**	**113**	P	**Pb**	**03 20 44.9**	**-0.7**
RDO	**Rodhopi**	**1.93**	**113**	P	**Pb**	**03 20 44.6**	**-1.0**
RDO				S	**Sb**	**03 21 09.4**	**-0.2**
RDO				AML	AML	03 21 15.2	
	comp=E,1588μm,0.4s						
RDO				AML	AML	03 21 17.0	
	comp=N,1377μm,0.3s						
KZN	**Kozani**	**1.95**	**214**	P	**Pn**	**03 20 44.1**	**+0.6**
KZN				AML	AML	03 21 23.2	
	comp=N,262μm,0.6s						
KZN				AML	AML	03 21 23.6	
	comp=E,436μm,0.5s						
SELS	**Selova**	**2.00**	**311**	*e*Pn	**Pn**	**03 20 44.8**	**+0.6**
ZAGS	**Zajecar**	**2.00**	**340**	*e*Pn	**Pn**	**03 20 44.9**	**+0.7**
BOVS	**Bovan**	**2.02**	**328**	*e*Pn	**Pn**	**03 20 44.9**	**+0.5**
BOVS				*e*Sn	**Sn**	**03 21 10.2**	**+0.6**
PAIG	**Paliouri**	**2.04**	**169**	P	**Pn**	**03 20 44.9**	**+0.2**
PAIG				S	**Sn**	**03 21 10.9**	**+0.9**
NEST	**Nestorio**	**2.22**	**228**	P	**Pn**	**03 20 48.4**	**+1.2**
NEST				AML	AML	03 21 31.4	
	comp=N,248μm,0.8s						
NEST				AML	AML	03 21 31.4	
	comp=E,276μm,0.6s						
SMTH	**Samothraki Isl**	**2.29**	**129**	P	**Pn**	**03 20 48.9**	**+0.7**
SMTH				AML	AML	03 21 26.2	
	comp=E,235μm,0.6s						
SMTH				AML	AML	03 21 29.9	
	comp=N,303μm,0.6s						
PENT	**Pentalofos**	**2.33**	**222**	P	**Pn**	**03 20 49.9**	**+1.1**
PENT				AML	AML	03 21 35.4	
	comp=E,171μm,1.0s						
PENT				AML	AML	03 21 44.7	
	comp=N,182μm,1.0s						
ALN	**Alexandroupoli**	**2.38**	**115**	PN	**Pb**	**03 20 51.8**	**-1.6**
ALN	**Alexandroupoli**	**2.38**	**115**	P	**Pn**	**03 20 50.8**	**+1.4**
KPRO	**Kipourio**	**2.42**	**216**	P	**Pn**	**03 20 51.0**	**+1.1**
KPRO	**Kipourio**	**2.42**	**216**	P	**Pn**	**03 20 51.0**	**+1.1**
ENEZ	**Enez**	**2.53**	**117**	PN	**Pb**	**03 20 53.8**	**-2.1**
LIA	**Limnos Island**	**2.53**	**143**	P	**Pn**	**03 20 51.7**	**+0.3**
THL	**Klokotos Trika**	**2.53**	**201**	P	**Pn**	**03 20 52.1**	**+0.7**
THL	**Klokotos Trika**	**2.53**	**201**	P	**Pn**	**03 20 52.3**	**+0.8**
THL				S	**Sn**	**03 21 22.7**	**+0.5**
THL				AML	AML	03 21 38.7	
	comp=E,207μm,0.8s						
THL				AML	AML	03 21 40.6	
	comp=N,94μm,0.6s						
TIR	**Tirane**	**2.56**	**258**	*e*Pn	**Pn**	**03 20 53.0**	**+1.1**
TIR	**Tirane**	**2.56**	**258**	P	**Pn**	**03 20 53.6**	**+1.7**
TIR	**Tirane**	**2.56**	**258**	*i* Pn	**Pb**	**03 20 55.4**	**-1.0**
XOR	**Xorichti**	**2.57**	**180**	P	**Pn**	**03 20 52.4**	**+0.4**
EDRB	**Edirne**	**2.65**	**91**	PN	**Pb**	**03 20 56.6**	**-1.4**
GRUS	**Gruza**	**2.67**	**318**	*e*Pn	**Pn**	**03 20 53.6**	**+0.2**
GRUS				*e*Sn	**Sn**	**03 21 26.8**	**+1.2**
KUBS	**Kucevo**	**2.71**	**336**	*e*Pn	**Pn**	**03 20 53.1**	**-0.9**
SJES	**Sjenica**	**2.72**	**300**	*e*Pn	**Pn**	**03 20 54.6**	**+0.4**
SVIS	**Svilajnac**	**2.74**	**329**	*e*Pn	**Pn**	**03 20 53.6**	**-0.7**
SKIA	**Skiathos**	**2.77**	**176**	P	**Pn**	**03 20 54.7**	**-0.1**
DJES	**Djerdap**	**2.77**	**350**	*e*Pn	**Pn**	**03 20 54.0**	**-0.8**
IVAS	**Ivanjica**	**2.78**	**307**	*e*Pn	**Pn**	**03 20 55.0**	**+0.1**
KESN	**Edirne-Kesan**	**2.85**	**112**	*i* P	**Pn**	**03 20 56.7**	**+0.6**
KESN				IAML_P			
	comp=Z,76nm,0.3s						
KIRK	**Kırklareli**	**2.92**	**92**	*i* P	**Pb**	**03 21 04.0**	**+1.4**
KIRK				IAML_P			
	comp=Z,247nm,0.3s						
PDG	**Podgorica**	**2.97**	**281**	*e*Pn	**Pn**	**03 20 58.0**	**+0.6**
AGG	**Agios Georgios**	**2.98**	**193**	P	**Pn**	**03 20 58.2**	**+0.5**
AGG	**Agios Georgios**	**2.98**	**193**	P	**Pn**	**03 20 57.8**	**+0.1**
AGG				AML	AML	03 22 04.9	
	comp=N,130μm,1.1s						
AGG				AML	AML	03 22 05.4	
	comp=E,178μm,1.2s						
BOZC	**Bozcaada**	**3.01**	**133**	PN	**Pn**	**03 21 00.2**	**+2.2**
BOZC	**Bozcaada**	**3.01**	**133**	*i* P	**Pn**	**03 20 59.9**	**+1.9**
BOZC				IAML_P			
	comp=Z,456nm,0.3s						
TRUS	**Trudelj**	**3.07**	**319**	*e*Pn	**Pn**	**03 20 59.3**	**+0.5**
SRN	**Sarande**	**3.17**	**231**	P	**Pn**	**03 21 02.4**	**+2.1**
DIVS	**Divibare**	**3.19**	**314**	*e*Pn	**Pn**	**03 21 00.7**	**+0.1**
IGT	**Igoumenitsa**	**3.24**	**223**	*e*Pn	**Pn**	**03 21 02.3**	**+1.1**
IGT	**Igoumenitsa**	**3.24**	**223**	P	**Pn**	**03 21 04.2**	**+3.0**
MRKA	**Markates**	**3.24**	**175**	P	**Pn**	**03 21 01.3**	**+0.1**
RKY	**Sarkoy-Tekirda**	**3.25**	**111**	PN	**Pn**	**03 21 04.3**	**+2.9**
SART	**Tekirdag**	**3.25**	**111**	*i* P	**Pg**	**03 21 11.2**	**-1.7**
SART				IAML_P			
	comp=Z,72nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**3.36**	**130**	*i* P	**Pn**	**03 21 05.0**	**+2.1**
BAYC				IAML_P			
	comp=Z,337nm,0.2s						
BBLS	**Lazići**	**3.39**	**306**	*e*Pn	**Pn**	**03 21 04.1**	**+0.8**
SIGR	**SIGRI**	**3.39**	**142**	PN	**Pn**	**03 21 05.5**	**+2.2**
SIGR	**SIGRI**	**3.39**	**142**	P	**Pn**	**03 21 04.1**	**+0.8**
ANX	**Ano Chora**	**3.48**	**197**	P	**Pn**	**03 21 05.4**	**+0.9**
ANX	**Ano Chora**	**3.48**	**197**	P	**Pn**	**03 21 05.5**	**+1.0**
ANX				S	**Sn**	**03 21 46.3**	**+0.7**
ANX				AML	AML	03 21 46.8	
	comp=N,175μm,0.7s						
ANX				AML	AML	03 21 47.5	
	comp=E,264μm,0.7s						
CRLT	**Corlu**	**3.50**	**102**	PN	**Pn**	**03 21 08.0**	**+3.2**
PVO	**Paravola**	**3.55**	**202**	P	**Pn**	**03 21 07.0**	**+1.5**
PVO				AML	AML	03 21 55.7	
	comp=E,71μm,0.4s						
PVO				AML	AML	03 21 56.5	
	comp=N,80μm,0.7s						
PRK	**Paraskevi**	**3.56**	**138**	P	**Pn**	**03 21 06.5**	**+0.9**
MRMT	**Marmara Adasi**	**3.57**	**110**	PN	**Pn**	**03 21 08.7**	**+2.9**
KALE	**Kalithea**	**3.63**	**193**	P	**Pn**	**03 21 07.6**	**+1.0**
TREB	**Trebinje**	**3.68**	**284**	*e*Pn	**Pn**	**03 21 08.3**	**+1.1**
HAPS	**Han Pijesak,Bl**	**3.78**	**306**	*e*Pn	**Pn**	**03 21 09.5**	**+0.8**
EDC	**Edincik**	**3.87**	**113**	PN	**Pn**	**03 21 12.7**	**+2.9**
DKL	**Dikili**	**4.02**	**134**	PN	**Pn**	**03 21 14.7**	**+2.8**
CTKS	**Kestanelik-??a**	**4.04**	**98**	PN	**Pn**	**03 21 15.8**	**+3.6**
FRGS	**Fruska Gora**	**4.05**	**324**	*e*Pn	**Pn**	**03 21 12.2**	**-0.2**
MLR	**Muntele Rosu**	**4.08**	**28**	Pn	**Pn**	**03 21 14.4**	**+1.6**
	comp=N,4.6nm,0.3s,baz=227,slow=17,SNR=2.9						
MLR				Sn	**Sn**	**03 22 06.3**	**+5.9**
	comp=N,3.2nm,0.3s,baz=293,slow=23,SNR=2.0						
MLR				Lg	Lg	03 22 22.0	
	comp=N,3.0nm,0.3s,baz=264,slow=21,SNR=1.7						
CHOS	**Chios island**	**4.17**	**147**	PN	**Pn**	**03 21 16.2**	**+2.2**
STON	**Ston**	**4.17**	**285**	*e*Pn	**Pn**	**03 21 15.0**	**+1.0**
DID	**Didima**	**4.42**	**180**	P	**Pn**	**03 21 17.6**	**+0.1**
DRGR		**4.87**	**356**	*e*Pn	**Pn**	**03 21 24.2**	**+0.6**
BLY	**Banja Luka**	**5.21**	**305**	*e*Pn	**Pn**	**03 21 28.4**	**+0.2**
BRTR	**Keskin Array B**	**8.22**	**102**	Pn	**Pn**	**03 22 09.4**	**-0.3**
	baz=282,slow=12,SNR=1.5						
HFS	**Hagfors**	**19.14**	**345**	P	**Pn**	**03 24 35.0**	**+0.8**
	comp=N,0.1nm,0.3s,baz=172,slow=14,SNR=1.5						
NB2	**NORSAR Subarra**	**20.47**	**343**	P	**P**	**03 24 47.1**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=148,slow=11						
NOA	**NORSAR Array B**	**20.47**	**343**	P	**P**	**03 24 47.0**	**-0.8**
	comp=Z,0.4nm,1.0s,baz=147,slow=10,SNR=2.0						
TORD	**Torodi Ar. Bea**	**34.23**	**219**	P	**P**	**03 26 55.1**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=40,slow=7.9,SNR=2.4						

ISCJB ***27*** *03:21:54.6±0.3, 41.°975N±0.°008×23.°18E±0.°01, h4^{km}±2^{km}, mb3.7/8, MS3.0/3, Error ellipse: s-maj=1.8km s-min=1.3km az=146.5*

IDC ***27*** *03:21:54.8±0.9, 41.°94N×23.°11E, h0^{km}, mb3.5/9, mb1 3.6/14, mb1mx3.5/57, mbtmp3.5/14, ML3.4/6, MS3.1/7, Ms1 3.1/7, ms1mx2.8/40, Error ellipse: s-maj=17.5km s-min=11.8km az=131.0*

NEIC ***27*** *03:21:54.9±0.0, 41.°91N×23.°20E, h2^{km}, mb4.1/7, ML3.8(THE), ML4.0(SOF), After SOF.*

NEIC Felt at Bansko.

PDG ***27*** *03:21:55.9±0.6, 41.°94N×23.°18E, h15^{km}, ML3.7/11, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*

THE ***27*** *03:21:55.8, 41.°93N×23.°20E, h2^{km}, ML3.8/24, Error ellipse: s-maj=0.7km s-min=0.4km az=74.0*

SOF ***27*** *03:21:55.2, 41.°95N×23.°24E, h2^{km}*

SKO ***27*** *03:21:55.0, 41.°93N×23.°24E, h17^{km}, M3.9, ML4.3*

ATH ***27*** *03:21:55.7, 41.°92N×23.°21E, h22^{km}, ML3.8/32, Error ellipse: s-maj=1.6km s-min=0.9km az=176.0*

BEO ***27*** *03:21:56.2±0.2, 41.°96N×23.°19E, h13^{km}±2^{km}, ML4.1/19*

PRU ***27*** *03:21:58.5±0.0, 42.°05N×23.°01E, h2^{km}, M4.1*

ISC 27 03:21:55.6±0.9, **41.°97N**±0.°01×**23.°21E**±0.°01, **h9**^{km}±6^{km}, **n348,** σ1.^{s}**63**/466, **mb3.7**/8, **MS3.0**/3, **29C-15D,**
Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.14**	**222**⇑	*i*Pg	**Pg**	**03 21 58.9**	**+0.2**
KKB				*i* Sg	**Sg**	**03 22 01.7**	**+0.9**
KKB	**Krupnik**	**0.14**	**222**	P	**Pg**	**03 21 57.8**	**-0.9**
MMB	**Musomiste**	**0.54**	**134**⇑	*i*Pg	**Pg**	**03 22 06.4**	**+0.2**
MMB				*i* Sg	**Sb**	**03 22 14.2**	**-1.1**
MMB	**Musomiste**	**0.54**	**134**	P	**Pg**	**03 22 06.3**	**+0.1**
VTS	**Vitosha**	**0.65**	**2**	*e*Pg	**Pg**	**03 22 08.1**	**-0.1**
VTS				*e*Pg	**Pg**	**03 22 08.2**	**0.0**
VTS				*e*Sg	**Sg**	**03 22 17.4**	**+0.7**
VTS	**Vitosha**	**0.65**	**2**	*e*Pg	**Pg**	**03 22 08.4**	**+0.2**
VTS				*e*Sg	**Sg**	**03 22 17.1**	**+0.4**
VTS	**Vitosha**	**0.65**	**2**	P	**Pg**	**03 22 08.2**	**0.0**
VTS				S	**Sg**	**03 22 17.2**	**+0.5**
VTS	**Vitosha**	**0.65**	**2**⇓	*i*P	**Pg**	**03 22 08.5**	**+0.2**
VTS				S	**Sg**	**03 22 17.4**	**+0.7**
VTS	**Vitosha**	**0.65**	**2**	*i* Pg	**Pg**	**03 22 08.2**	**0.0**
VTS				*i* Sg	**Sg**	**03 22 17.4**	**+0.7**
VTS	**Vitosha**	**0.65**	**2**	P	**Pg**	**03 22 08.6**	**+0.4**
NVR	**Nevrokopi**	**0.79**	**141**	P	**Pg**	**03 22 10.0**	**-0.8**
NVR				S	**Sg**	**03 22 20.9**	**-0.2**
	6μm,0.6s						
NVR	**Nevrokopi**	**0.79**	**141**	P	**Pg**	**03 22 10.1**	**-0.7**
NVR				S	**Sg**	**03 22 20.6**	**-0.6**
NVR				AML	AML	03 22 24.6	
	comp=E,8573μm,0.2s						
NVR				AML	AML	03 22 24.8	
	comp=N,11257μm,0.2s						
VAY	**Valandovo**	**0.80**	**217**	*e*Pn	**Pg**	**03 22 11.4**	**+0.3**
VAY				*e*Sg	**Sg**	**03 22 22.0**	**+0.5**
VAY	**Valandovo**	**0.80**	**217**	*e*Pg	**Pg**	**03 22 11.0**	**-0.1**
VAY				*e*Sg	**Sg**	**03 22 21.6**	**+0.1**
VAY	**Valandovo**	**0.80**	**217**	*e*Pg	**Pg**	**03 22 11.1**	**-0.1**
VAY				*e*Lg	Lg	03 22 22.1	
	comp=N,7μm,0.4s						
VAY				*i* Sg	**Sb**	**03 22 22.2**	**-0.6**
VAY				*e*Lg	Lg	03 22 22.3	
	comp=E,10μm,0.5s						
KNT	**Kendrikon**	**0.84**	**196**	P	**Pg**	**03 22 11.1**	**-0.7**
KNT				S	**Sg**	**03 22 22.0**	**-0.7**
	comp=E,10μm,0.4s						
KNT	**Kendrikon**	**0.84**	**196**	*i* Pg	**Pg**	**03 22 11.0**	**-0.8**
KNT				*i* Sg	**Sg**	**03 22 22.0**	**-0.7**
KNT	**Kendrikon**	**0.84**	**196**	P	**Pg**	**03 22 11.0**	**-0.7**
KNT				S	**Sg**	**03 22 22.2**	**-0.4**
KNT				AML	AML	03 22 23.0	
	comp=E,21133μm,0.3s						
KNT				AML	AML	03 22 26.2	
	comp=N,18105μm,0.2s						
SRS	**Serrai**	**0.90**	**161**	*e*Pg	**Pg**	**03 22 12.2**	**-0.7**
SRS				*e*Sg	**Sg**	**03 22 24.6**	**0.0**
SRS	**Serrai**	**0.90**	**161**	P	**Pg**	**03 22 12.0**	**-0.9**
SRS				S	**Sg**	**03 22 24.3**	**-0.3**
	comp=N,8μm,0.7s						
SRS	**Serrai**	**0.90**	**161**	*i* Pg	**Pg**	**03 22 12.2**	**-0.7**
SRS				*i* Sg	**Sb**	**03 22 24.7**	**-0.8**
SRS	**Serrai**	**0.90**	**161**	P	**Pg**	**03 22 12.2**	**-0.7**
SRS				S	**Sg**	**03 22 24.6**	**0.0**
SRS				AML	AML	03 22 27.8	
	comp=E,12248μm,0.4s						
SRS				AML	AML	03 22 30.7	
	comp=N,16523μm,0.7s						
PGB	**Panagyurishte**	**0.92**	**51**	P	**Pg**	**03 22 13.0**	**-0.3**
PLD	**Plovdiv**	**1.12**	**83**	*e*Pn	**Pn**	**03 22 17.7**	**+0.1**
PLD	**Plovdiv**	**1.12**	**83**	*e*Pg	**Pg**	**03 22 17.0**	**-0.3**
PLD				*e*Sg	**Sn**	**03 22 33.2**	**0.0**
PLD	**Plovdiv**	**1.12**	**83**	*e*Pg	**Pg**	**03 22 16.9**	**-0.3**
PLD				*i* Sg	**Sn**	**03 22 33.6**	**+0.5**
PLD	**Plovdiv**	**1.12**	**83**	P	**Pg**	**03 22 16.9**	**-0.3**
SOH	**Sokhos**	**1.15**	**174**	*e*Pn	**Pg**	**03 22 16.8**	**-0.9**
SOH	**Sokhos**	**1.15**	**174**	P	**Pg**	**03 22 16.8**	**-0.9**
SOH				S	**Sg**	**03 22 32.3**	**-0.4**
	comp=N,12μm,0.5s						
SOH	**Sokhos**	**1.15**	**174**	*i* Pg	**Pg**	**03 22 16.9**	**-0.8**
SOH				*i* Sg	**Sb**	**03 22 32.7**	**-0.1**
SOH	**Sokhos**	**1.15**	**174**	P	**Pg**	**03 22 16.5**	**-1.3**
SOH				S	**Sb**	**03 22 32.9**	**+0.1**
SOH				AML	AML	03 22 33.3	
	comp=E,20741μm,0.4s						
SOH				AML	AML	03 22 35.1	
	comp=N,28270μm,0.5s						
RZN	**Rozhen**	**1.16**	**103**	P	**Pb**	**03 22 17.9**	**-0.1**
SKO	**Skopje**	**1.32**	**271**	*e*Pg	**Pn**	**03 22 20.2**	**-0.1**
SKO				*e*Sg	**Sg**	**03 22 38.8**	**+0.8**
SKO	**Skopje**	**1.32**	**271**	*i* Pg	**Pb**	**03 22 20.8**	**+0.3**
SKO				*i* Sg	**Sg**	**03 22 39.0**	**+1.0**
BARS	**Barje**	**1.33**	**310**	*e*Pg	**Pb**	**03 22 20.9**	**+0.1**
BARS	**Barje**	**1.33**	**310**	*e*Pn	**Sb**	**03 22 32.7**	**-5.4**
BARS				*e*Sg	**Sn**	**03 22 38.3**	**-0.1**
THE	**Thessaloniki**	**1.35**	**188**	P	**Pn**	**03 22 20.2**	**-0.4**
THE				S	**Sg**	**03 22 38.6**	**-0.4**
	comp=N,11μm,0.7s						
THE	**Thessaloniki**	**1.35**	**188**	*i* Pg	**Pn**	**03 22 20.5**	**-0.1**
THE				*i* Sg	**Sg**	**03 22 38.6**	**-0.4**
THE	**Thessaloniki**	**1.35**	**188**	P	**Pb**	**03 22 20.8**	**-0.3**
THE				S	**Sg**	**03 22 38.6**	**-0.4**
THE				AML	AML	03 22 40.4	
	comp=E,29690μm,0.8s						
THE				AML	AML	03 22 40.5	
	comp=N,15686μm,0.7s						
KVLA	**Kavala**	**1.36**	**139**	P	**Pb**	**03 22 20.9**	**-0.3**
KVLA				S	**Sb**	**03 22 38.3**	**-0.5**
KVLA				AML	AML	03 22 41.0	
	comp=N,25269μm,0.8s						
KVLA				AML	AML	03 22 44.5	
	comp=E,12118μm,0.8s						
ZAPS	**Zavoj**	**1.37**	**342**	*e*Pg	**Pg**	**03 22 22.3**	**+0.4**
HORT	**Hortiatis**	**1.37**	**183**	P	**Pn**	**03 22 20.4**	**-0.7**
HORT				S	**Sg**	**03 22 39.5**	**-0.3**
	comp=E,6μm,1.0s						
HORT	**Hortiatis**	**1.37**	**183**	P	**Pn**	**03 22 20.8**	**-0.3**
HORT				S	**Sb**	**03 22 38.7**	**-0.6**
HORT				AML	AML	03 22 41.4	
	comp=E,8073μm,0.6s						
HORT				AML	AML	03 22 42.5	
	comp=N,9611μm,0.7s						
KAVA	**Kavala**	**1.38**	**134**	P	**Pn**	**03 22 20.5**	**-0.6**
KAVA				S	**Sg**	**03 22 39.9**	**-0.2**
	comp=N,10μm,0.6s						
KAVA	**Kavala**	**1.38**	**134**	P	**Pb**	**03 22 21.3**	**-0.4**
KAVA				S	**Sg**	**03 22 40.5**	**+0.5**
KAVA				AML	AML	03 22 45.9	
	comp=E,19966μm,0.8s						
KAVA				AML	AML	03 22 46.5	
	comp=N,11836μm,0.4s						
PLG	**Polygyros**	**1.60**	**173**	P	**Pn**	**03 22 24.1**	**-0.1**
PLG	**Polygyros**	**1.60**	**173**	P	**Pn**	**03 22 24.2**	**-0.1**
PLG				S	**Sn**	**03 22 44.9**	**-0.2**
PLG				AML	AML	03 22 48.8	
	comp=N,9332μm,0.8s						
PLG				AML	AML	03 22 49.0	
	comp=E,8465μm,0.6s						
KDZ	**Kurdzhali**	**1.68**	**100**	P	**Pn**	**03 22 25.3**	**0.0**
OUR	**Ouranopolis**	**1.73**	**160**	P	**Pn**	**03 22 25.1**	**-0.9**
OUR				S	**Sb**	**03 22 49.4**	**-0.1**
OUR	**Ouranopolis**	**1.73**	**160**	P	**Pn**	**03 22 25.7**	**-0.3**
OUR				S	**Sb**	**03 22 49.5**	**0.0**
OUR				AML	AML	03 22 51.9	
	comp=E,21037μm,0.8s						
OUR				AML	AML	03 22 52.5	
	comp=N,35406μm,0.6s						
DIM	**Dimitrovgrad**	**1.74**	**87**	P	**Pg**	**03 22 28.3**	**-0.6**
PLVB	**Pleven**	**1.76**	**36**⇑	*i*P	**Pg**	**03 22 29.1**	**-0.3**
KTI	**Kastanea**	**1.78**	**208**	P	**Pn**	**03 22 25.7**	**-1.0**
THAS	**Thassos island**	**1.78**	**140**	P	**Pn**	**03 22 26.1**	**-0.4**
THAS				S	**Sb**	**03 22 50.8**	**+0.1**
	comp=N,2μm,0.5s						
THAS	**Thassos island**	**1.78**	**140**	P	**Pn**	**03 22 26.8**	**+0.3**
THAS				S	**Sb**	**03 22 50.3**	**-0.4**
THAS				AML	AML	03 22 54.3	
	comp=E,4191μm,0.4s						
THAS				AML	AML	03 22 55.0	
	comp=N,4810μm,0.3s						
FNA	**Florina**	**1.82**	**230**	*e*Pn	**Pn**	**03 22 27.6**	**+0.4**
FNA	**Florina**	**1.82**	**230**	*e*Pg	**Pn**	**03 22 27.5**	**+0.3**
FNA				*e*Sg	**Sb**	**03 22 51.9**	**-0.1**
FNA	**Florina**	**1.82**	**230**	P	**Pn**	**03 22 27.6**	**+0.4**
FNA				S	**Sb**	**03 22 51.7**	**-0.3**
FNA	**Florina**	**1.82**	**230**	*i* Pn	**Pn**	**03 22 27.6**	**+0.4**
FNA	**Florina**	**1.82**	**230**	P	**Pn**	**03 22 28.0**	**+0.8**
FNA				S	**Sb**	**03 22 51.3**	**-0.7**
FNA				AML	AML	03 23 01.2	
	comp=E,16897μm,0.5s						
FNA				AML	AML	03 23 02.3	
	comp=N,27127μm,0.4s						
RDO	**Rodhopi**	**1.93**	**114**	P	**Pb**	**03 22 30.4**	**-0.6**
RDO				S	**Sb**	**03 22 55.8**	**+0.5**
	comp=N,4μm,0.5s						
RDO	**Rodhopi**	**1.93**	**114**	P	**Pb**	**03 22 29.7**	**-1.4**
RDO				S	**Sb**	**03 22 53.8**	**-1.5**
RDO				AML	AML	03 23 00.9	
	comp=E,6960μm,0.4s						
RDO				AML	AML	03 23 01.9	
	comp=N,6523μm,0.2s						
LIT	**Litokhoron**	**1.94**	**196**	*e*Pn	**Pn**	**03 22 28.6**	**-0.2**
LIT	**Litokhoron**	**1.94**	**196**	P	**Pn**	**03 22 27.9**	**-1.0**
LIT				S	**Sn**	**03 22 53.3**	**-0.1**
LIT	**Litokhoron**	**1.94**	**196**	*i* Pn	**Pn**	**03 22 28.1**	**-0.8**
LIT	**Litokhoron**	**1.94**	**196**	P	**Pn**	**03 22 27.8**	**-1.0**
LIT				S	**Sb**	**03 22 54.4**	**-1.2**
LIT				AML	AML	03 23 04.1	
	comp=N,958μm,0.7s						
LIT				AML	AML	03 23 05.8	
	comp=E,914μm,0.6s						
ZAGS	**Zajecar**	**1.98**	**339**	*e*Pn	**Pn**	**03 22 29.8**	**+0.5**
ZAGS				*e*Sn	**Sn**	**03 22 54.8**	**+0.6**
KZN	**Kozani**	**1.98**	**214**	P	**Pn**	**03 22 29.1**	**-0.4**
KZN				S	**Sb**	**03 22 56.0**	**-0.8**
	comp=E,802nm,0.6s						
KZN	**Kozani**	**1.98**	**214**	P	**Pn**	**03 22 29.4**	**-0.1**
KZN				S	**Sn**	**03 22 54.1**	**-0.3**
KZN				AML	AML	03 23 04.5	
	comp=E,2114μm,0.5s						
KZN				AML	AML	03 23 05.9	
	comp=N,1060μm,0.8s						
SELS	**Selova**	**1.98**	**310**	*e*Pn	**Pn**	**03 22 29.6**	**+0.1**
SELS				*e*Sn	**Sn**	**03 22 53.7**	**-0.8**
BOVS	**Bovan**	**2.00**	**327**	*e*Pn	**Pn**	**03 22 30.1**	**+0.5**
BOVS				*e*Sn	**Sn**	**03 22 53.7**	**-1.1**
PVL	**Pavlikeni**	**2.01**	**51**	P	**Pn**	**03 22 30.7**	**+1.0**
BAIL	**Bailesti**	**2.05**	**3**⇑	*i*P	**Pn**	**03 22 31.7**	**+1.4**
PAIG	**Paliouri**	**2.07**	**170**	P	**Pn**	**03 22 30.0**	**-0.6**
PAIG	**Paliouri**	**2.07**	**170**	P	**Pn**	**03 22 30.0**	**-0.6**
PAIG				S	**Sn**	**03 22 55.7**	**-0.8**
PAIG				AML	AML	03 23 02.1	
	comp=E,3470μm,0.6s						
PAIG				AML	AML	03 23 04.5	
	comp=N,3337μm,0.5s						
PHP	**Peshkopia**	**2.09**	**263**	P	**Pn**	**03 22 31.6**	**+0.7**
PHP				S	**Sn**	**03 22 58.3**	**+1.3**
ELND	**Elena**	**2.20**	**63**⇓	*i*P	**Pb**	**03 22 36.0**	**+0.5**
VLAD	**Vladila**	**2.21**	**23**⇑	*i*P	**Pb**	**03 22 35.0**	**-0.8**
NEST	**Nestorio**	**2.25**	**227**	P	**Pn**	**03 22 33.7**	**+0.6**
NEST				S	**Sn**	**03 23 01.3**	**+0.2**
	comp=N,702nm,1.8s						
NEST	**Nestorio**	**2.25**	**227**	P	**Pn**	**03 22 33.8**	**+0.6**
NEST				AML	AML	03 23 12.1	
	comp=N,1134μm,0.6s						
NEST				AML	AML	03 23 16.3	
	comp=E,1147μm,0.9s						
SMTH	**Samothraki Isl**	**2.31**	**130**	P	**Pn**	**03 22 34.5**	**+0.7**
SMTH				S	**Sb**	**03 23 04.5**	**-1.5**
	comp=E,750nm,0.8s						
SMTH	**Samothraki Isl**	**2.31**	**130**	P	**Pn**	**03 22 34.6**	**+0.7**
SMTH				S	**Sn**	**03 23 02.1**	**-0.2**

SMTH				AML	AML	03 23 11.8	
	comp=E,1453µm,0.7s						
SMTH				AML	AML	03 23 15.5	
	comp=N,1405µm,0.6s						
ZIMR		2.32	43	⇑iP	Pg	03 22 39.3	-0.7
PENT	Pentalofos	2.36	222	P	Pn	03 22 35.2	+0.5
PENT	Pentalofos	2.36	222	P	Pn	03 22 35.1	+0.5
PENT				AML	AML	03 23 20.2	
	comp=N,1042µm,0.8s						
PENT				AML	AML	03 23 21.3	
	comp=E,753µm,0.5s						
ALN	Alexandroupoli	2.39	116	*e*Pn	Pb	03 22 37.9	-0.9
ALN	Alexandroupoli	2.39	116	P	Pb	03 22 36.9	-1.9
ALN				S	Sb	03 23 06.8	-1.6
	comp=E,1µm,1.1s						
CRAR	CRAIOVA	2.40	10	⇓iP	Pn	03 22 35.3	+0.2
KPRO	Kipourio	2.45	215	P	Pn	03 22 36.5	+0.6
KPRO				S	Sn	03 23 05.9	-0.1
	comp=E,702nm,0.9s						
KPRO	Kipourio	2.45	215	P	Pn	03 22 36.5	+0.6
KPRO				AML	AML	03 23 24.7	
	comp=E,1242µm,0.7s						
KPRO				AML	AML	03 23 28.7	
	comp=N,1479µm,1.3s						
PVY	Plav	2.49	286	⇓iPn	Pn	03 22 36.9	+0.4
PVY				*e*Sn	Sn	03 23 08.8	+1.7
LIA	Limnos Island	2.55	143	P	Pn	03 22 37.4	+0.2
LIA				S	Sn	03 23 10.3	+1.9
	comp=N,2µm,0.7s						
LIA	Limnos Island	2.55	143	P	Pn	03 22 37.5	+0.2
LIA				S	Sn	03 23 08.9	+0.5
LIA				AML	AML	03 23 21.5	
	comp=N,4269µm,0.8s						
LIA				AML	AML	03 23 21.7	
	comp=E,4452µm,0.7s						
THL	Klokotos Trika	2.57	201	P	Pn	03 22 37.3	-0.1
THL				S	Sn	03 23 09.0	+0.3
	comp=E,410nm,1.1s						
THL	Klokotos Trika	2.57	201	P	Pn	03 22 37.3	-0.1
THL				AML	AML	03 23 20.9	
	comp=N,522µm,0.7s						
THL				AML	AML	03 23 24.3	
	comp=E,1029µm,1.0s						
TIR	Tirane	2.58	257	*e*Pn	Pn	03 22 38.6	+1.0
TIR	Tirane	2.58	257	*e*Pn	Pn	03 22 39.0	+1.4
TIR				*e*Sg	Sg	03 23 18.0	-0.5
TIR	Tirane	2.58	257	P	Pn	03 22 39.4	+1.8
TIR				S	Sn	03 23 10.2	+1.1
	comp=E,318nm,1.6s						
TIR	Tirane	2.58	257	⇑iP	Pb	03 22 40.9	-1.2
TIR	Tirane	2.58	257	*i* Pn	Pn	03 22 39.2	+1.6
XOR	Xorichti	2.60	180	P	Pn	03 22 37.3	-0.6
XOR	Xorichti	2.60	180	P	Pn	03 22 37.4	-0.6
XOR				S	Sn	03 23 08.1	-1.5
XOR				AML	AML	03 23 16.9	
	comp=E,1986µm,0.6s						
XOR				AML	AML	03 23 19.1	
	comp=N,2104µm,0.5s						
IVA	Berane	2.61	291	⇑iPn	Pn	03 22 38.7	+0.5
IVA				*e*Sn	Sn	03 23 11.7	+1.6
COPA	Copaceanca	2.62	34	⇑iP	Pb	03 22 42.4	-0.3
MEV	Metsovon	2.65	215	P	Pn	03 22 40.2	+1.5
GRUS	Gruza	2.65	317	*e*Pn	Pn	03 22 38.9	+0.3
GRUS				*e*Sg	Sg	03 23 21.4	+0.6
NEO	Neokhori	2.66	180	P	Pn	03 22 38.6	-0.1
KUBS	Kucevo	2.69	336	*e*Pn	Pn	03 22 38.4	-0.7
KUBS				*e*Sg	Sg	03 23 21.0	-0.9
SRE	Strehaia	2.69	360	⇑iP	Pb	03 22 42.0	-2.0
SJES	Sjenica	2.71	300	*e*Pn	Pn	03 22 40.4	+0.9
SJES				*e*Sg	Sg	03 23 21.1	-1.7
SVIS	Svilajnac	2.72	328	*e*Pn	Pn	03 22 38.6	-0.9
SVIS				*e*Sg	Sg	03 23 21.3	-1.7
DJES	Djerdap	2.74	350	*e*Pn	Pn	03 22 39.4	-0.5
DJES				*e*Sg	Sg	03 23 23.7	0.0
IVAS	Ivanjica	2.76	307	*e*Pn	Pn	03 22 40.5	+0.3
IVAS				*e*Sg	Sg	03 23 24.5	+0.1
SKIA	Skiathos	2.81	176	P	Pn	03 22 40.1	-0.6
SKIA	Skiathos	2.81	176	P	Pn	03 22 39.7	-1.1
SKIA				S	Sn	03 23 14.4	-0.3
SKIA				AML	AML	03 23 26.9	
	comp=N,959µm,0.7s						
SKIA				AML	AML	03 23 27.8	
	comp=E,824µm,0.6s						
KESN	Edirne-Kesan	2.85	112	*i* P	Pb	03 22 45.9	-1.0
KESN				IAML_P			
	comp=Z,415nm,0.2s						
HUMR	Humele	2.87	26	⇓iP	Pn	03 22 42.0	+0.4
KOME	Kolasin	2.87	289	⇑iPn	Pn	03 22 42.1	+0.4
KOME				*e*Sn	Sn	03 23 17.6	+1.2
RAZG	Razgrad	2.91	56	⇑iP	Pb	03 22 46.3	-1.4
JAN	Janina	2.92	219	P	Pn	03 22 43.8	+1.5
TPE	Tepelena	2.94	236	P	Pn	03 22 44.3	+1.8
TPE				S	Sn	03 23 20.7	+2.8
	comp=Z,465nm,0.8s						
ULC	Ulcinj	2.95	271	⇓iPn	Pn	03 22 43.6	+0.8
ULC				*e*Sn	Sn	03 23 19.8	+1.4
HERR	Herculane	2.97	349	⇑iP	Pn	03 22 42.7	-0.2
PDG	Podgorica	2.97	280	*e*Pn	Pn	03 22 43.3	+0.3
PDG				*e*Sg	Sg	03 23 31.5	+0.5
PDG	Podgorica	2.97	280	⇓iP	Pn	03 22 44.9	+1.9
PDG	Podgorica	2.97	280	*e*Pn	Pn	03 22 43.6	+0.6
TTG	Podgorica	2.97	280	⇑iPn	Pn	03 22 43.4	+0.4
TTG				*e*Sn	Sn	03 23 20.7	+2.0
TTG	Podgorica	2.97	280	*e*Pn	Pn	03 22 43.5	+0.6
DRME	Dracevica, Mon	3.00	276	⇓iPn	Pn	03 22 44.5	+1.1
DRME				*e*Sn	Sn	03 23 20.2	+0.7
DRME	Dracevica, Mon	3.00	276	*e*Pn	Pn	03 22 44.3	+0.9
AGG	Agios Georgios	3.02	193	*e*Pn	Pn	03 22 44.1	+0.4
AGG	Agios Georgios	3.02	193	P	Pn	03 22 43.8	+0.1
AGG				S	Sn	03 23 20.0	0.0
	comp=Z,595nm,1.6s						
AGG	Agios Georgios	3.02	193	P	Pn	03 22 43.7	+0.1
BOZC	Bozcaada	3.03	134	*i* P	Pn	03 22 44.2	+0.4
BOZC				IAML_P			
	comp=Z,819nm,0.2s						
TRUS	Trudelj	3.05	319	*e*Pn	Pn	03 22 43.9	-0.1
TRUS				*e*Sg	Sg	03 23 33.0	-0.5
PLE	Pljevlja	3.13	297	⇑iPn	Pn	03 22 46.0	+0.8
PLE				*e*Sn	Sn	03 23 24.3	+1.5
DIVS	Divibare	3.17	313	*e*Pn	Pn	03 22 45.8	-0.1
DIVS				*e*Sg	Sg	03 23 36.7	-0.9
DIVS	Divibare	3.17	313	*e*Pn	Pn	03 22 46.1	+0.2
SRN	Sarande	3.20	230	P	Pn	03 22 48.3	+2.2
SRN				S	Sn	03 23 25.3	+0.9
	comp=Z,250nm,1.2s						
BUM	Brajici-Budva	3.22	277	⇑iPn	Pn	03 22 47.4	+0.9
BUM				*e*Sn	Sn	03 23 25.8	+0.7
EVR	Evrytania	3.23	200	P	Pn	03 22 47.4	+0.8
EVR				S	Sn	03 23 26.2	+0.9
	comp=Z,310nm,1.8s						
EVR	Evrytania	3.23	200	P	Pn	03 22 47.6	+1.0
EVR				AML	AML	03 23 55.0	
	comp=N,602µm,0.9s						
EVR				AML	AML	03 23 55.8	
	comp=E,536µm,0.8s						
NKY	Niksic	3.23	287	⇓iPn	Pn	03 22 47.5	+0.8
NKY				*e*Sn	Sn	03 23 26.2	+0.8
CEME	Cevo	3.23	282	⇑iPn	Pn	03 22 47.7	+1.0
CEME				*e*Sn	Sn	03 23 26.2	+0.8
PHSR	Pinarhisar	3.25	95	⇑iP	Pb	03 22 51.0	-2.4
NKME	Niksic	3.25	286	⇓iPn	Pn	03 22 48.0	+1.1
NKME				*e*Sn	Sn	03 23 27.3	+1.6
SART	Tekirdag	3.25	112	*i* P	Pb	03 22 54.9	+1.2
SART				IAML_P			
	comp=Z,10µm,0.7s						
IGT	Igoumenitsa	3.27	223	*e*Pn	Pn	03 22 48.1	+1.0
IGT	Igoumenitsa	3.27	223	P	Pn	03 22 48.9	+1.8
IGT				S	Sn	03 23 28.9	+2.8
	comp=Z,212nm,1.3s						
IGT	Igoumenitsa	3.27	223	P	Pn	03 22 49.5	+2.5
IGT				AML	AML	03 23 45.2	
	comp=E,302µm,0.6s						
IGT				AML	AML	03 23 56.9	
	comp=N,427µm,1.8s						
RUDO	Rudo	3.27	302	*e*Pn	Pn	03 22 49.2	+2.1
MRKA	Markates	3.27	175	P	Pn	03 22 46.5	-0.7
MRKA				S	Sn	03 23 24.5	-1.7
MRKA				AML	AML	03 23 48.5	
	comp=E,786µm,1.9s						
MRKA				AML	AML	03 23 58.6	
	comp=N,553µm,1.1s						
ATAL	Atalanti	3.28	183	P	Pn	03 22 46.7	-0.5
ATAL				S	Sn	03 23 28.0	+1.7
	comp=N,272nm,1.1s						
LKR	Lokris	3.32	183	P	Pn	03 22 47.4	-0.4
BAYC	CANAKKALE_Bayr	3.37	130	*i* P	Pn	03 22 49.3	+0.8
BAYC				IAML_P			
	comp=Z,562nm,0.1s						
BBLS	Lazići	3.37	305	*e*Pn	Pn	03 22 49.4	+0.8
BBLS	Lazići	3.37	305	*e*Pn	Pb	03 22 52.6	-3.1
UPM	Unac-Piva	3.41	293	⇓iPn	Pn	03 22 50.0	+0.8
UPM				*e*Sn	Sn	03 23 31.2	+1.4
UPM	Unac-Piva	3.41	293	*e*Pn	Pn	03 22 50.6	+1.4
SIGR	SIGRI	3.41	143	P	Pn	03 22 49.8	+0.7
SIGR				S	Sn	03 23 30.8	+1.1
	comp=Z,902nm,0.9s						
KEK	Kerkira	3.43	230	P	Pn	03 22 51.2	+1.9
GZR	Gura Zlata	3.44	355	⇓iP	Pn	03 22 49.6	+0.1
LOT	Lotru	3.50	7	⇑iP	Pn	03 22 50.4	0.0
SULR		3.50	38	⇓iP	Pg	03 23 01.6	-1.2
ANX	Ano Chora	3.51	197	P	Pn	03 22 50.8	+0.3
ANX	Ano Chora	3.51	197	P	Pn	03 22 50.9	+0.3
ANX				S	Sn	03 23 30.8	-1.5
ANX				AML	AML	03 23 33.0	
	comp=E,848µm,1.4s						
ANX				AML	AML	03 23 40.8	
	comp=N,808µm,0.5s						
HCY	Herceg Novi	3.53	279	⇓iPn	Pn	03 22 52.0	+1.3
HCY				*e*Sn	Sn	03 23 33.6	+1.0
HCY	Herceg Novi	3.53	279	*e*Pn	Pn	03 22 53.0	+2.3
BRY	Bratogost	3.58	287	⇑iPn	Pn	03 22 52.6	+1.1
BRY				*e*Sn	Sn	03 23 34.8	+0.9
BRY	Bratogost	3.58	287	*e*Pn	Pn	03 22 53.4	+1.9
PRK	Paraskevi	3.58	138	P	Pn	03 22 53.8	+2.4
PVO	Paravola	3.59	202	P	Pn	03 22 52.2	+0.8
EREA	Eretria	3.59	171	P	Pn	03 22 50.9	-0.6
EREA	Eretria	3.59	171	P	Pn	03 22 51.3	-0.2
EREA				S	Sn	03 23 31.9	-2.1
EREA				AML	AML	03 24 01.6	
	comp=N,913µm,0.9s						
EREA				AML	AML	03 24 04.7	
	comp=E,518µm,1.0s						
DSF	Desfina	3.59	189	P	Pn	03 22 51.3	-0.2
DSF	Desfina	3.59	189	P	Pn	03 22 51.4	-0.2
SERG	Sergoula	3.66	194	P	Pn	03 22 52.2	-0.3
SERG	Sergoula	3.66	194	P	Pn	03 22 52.6	+0.2
KALE	Kalithea	3.67	193	P	Pn	03 22 52.8	+0.2
KALE	Kalithea	3.67	193	P	Pn	03 22 52.8	+0.2
KALE				AML	AML	03 23 58.2	
	comp=N,360µm,1.3s						
KALE				AML	AML	03 24 11.3	
	comp=E,289µm,0.9s						
TREB	Trebinje	3.68	283	*e*Pn	Pn	03 22 52.5	-0.2
TREB	Trebinje	3.68	283	*e*Pn	Pn	03 22 55.9	+3.2
TSLK	Tsoukalades, L	3.69	213	P	Pn	03 22 53.8	+0.9
TSLK	Tsoukalades, L	3.69	213	P	Pn	03 22 54.4	+1.4
TRIZ	Trizonia	3.70	194	P	Pn	03 22 53.0	0.0
TRIZ	Trizonia	3.70	194	P	Pn	03 22 52.0	-1.0
VOIR		3.72	20	⇑iP	Pn	03 22 53.8	+0.5
LKD2	Lefkada island	3.73	212	P	Pn	03 22 54.9	+1.5
VIL2	Platees	3.75	179	P	Pn	03 22 54.2	+0.4
AYVA	Ayvalik	3.75	134	*i* P	Pn	03 22 55.3	+1.6
AYVA				IAML_P			
	comp=Z,316nm,0.2s						
HAPS	Han Pijesak,Bl	3.77	306	*e*Pn	Pn	03 22 55.0	+0.9
HAPS	Han Pijesak,Bl	3.77	306	*e*Pn	Pn	03 22 57.4	+3.3
DBRK	Dubrovnik	3.82	282	*e*Pn	Pn	03 22 58.5	+3.9
DBRK				Sn	Sn	03 23 41.2	+1.6
LAKA	Lakka	3.84	195	P	Pn	03 22 56.6	+1.6
LAKA				AML	AML	03 24 16.2	
	comp=N,147µm,1.2s						
LAKA				AML	AML	03 24 24.3	
	comp=E,104µm,1.6s						
TRAZ	Trapeza	3.87	192	P	Pn	03 22 54.8	-0.6
PTL	Penteli	3.95	172	P	Pn	03 22 55.5	-0.9
KLV	Kalavryta, Ach	4.00	192	P	Pn	03 22 57.7	+0.4
ELBA	Catalca	4.01	100	*i* P	Pg	03 23 12.8	+0.5
ELBA				IAML_P			
	comp=Z,2µm,0.3s						
FRGS	Fruska Gora	4.03	323	*e*Pn	Pn	03 22 57.5	-0.1
FRGS	Fruska Gora	4.03	323	*e*Pn	Pn	03 22 57.2	-0.4
MLR	Muntele Rosu	4.04	28	Pn	Pn	03 23 00.1	+2.3
	comp=Z,12nm,0.3s,baz=195,slow=16,SNR=7.0						
MLR				Sn	Sn	03 23 50.5	+5.1
	comp=Z,9.0nm,0.3s,baz=177,slow=20,SNR=2.0						
MLR				Lg	Lg	03 24 05.2	
	comp=Z,13nm,0.3s,baz=270,slow=22,SNR=6.6						
MLR				LR	LR	03 24 59.7	
	comp=Z,525nm,20.6s,baz=278,slow=45						
MLR	Muntele Rosu	4.04	28	*e*Pn	Pn	03 22 58.2	+0.4
MLR	Muntele Rosu	4.04	28	⇑iP	Pn	03 23 00.1	+2.3
FSK	Fiskardo	4.05	211	P	Pn	03 22 57.2	-0.6
FSK	Fiskardo	4.05	211	P	Pn	03 22 57.5	-0.3
ACOR	Acrocorinthos	4.08	184	P	Pn	03 22 57.7	-0.5
ACOR				AML	AML	03 24 14.3	
	comp=E,209µm,1.0s						
ACOR				AML	AML	03 24 27.8	
	comp=N,265µm,1.4s						
GUR	Goura	4.08	190	P	Pn	03 22 58.6	+0.2
GUR	Goura	4.08	190	P	Pn	03 22 58.3	-0.1
VLY	Voula,Athens	4.14	174	P	Pn	03 22 58.9	-0.1
VLY	Voula,Athens	4.14	174	P	Pn	03 22 59.0	0.0
STON	Ston	4.17	284	*e*Pn	Pn	03 22 59.7	+0.2
STON	Ston	4.17	284	*e*Pn	Pn	03 23 01.5	+2.0
STON				Sn	Sn	03 23 50.5	+2.1
STON	Ston	4.17	284	*e*Pn	Pn	03 23 01.5	+2.0
ZEDA	zmir-Bergama	4.21	134	*i* P	Pn	03 23 01.5	+1.5
ZEDA				IAML_P			
	comp=Z,464nm,0.1s						
BALB	Balikesir	4.24	122	*e*Pn	Pn	03 23 02.5	+2.1
STEP	BALIKESIR_Sava	4.30	126	*i* P	Pb	03 23 06.8	-4.5
STEP				IAML_P			
	comp=Z,652nm,0.1s						
SIRR	Siria	4.44	346	⇓iP	Pn	03 23 04.6	+1.4
URLA	Izmir	4.44	143	*i* P	Pn	03 23 04.6	+1.4
URLA				IAML_P			
	comp=Z,1µm,0.3s						
DID	Didima	4.46	180	P	Pn	03 23 03.1	-0.3
OZUR		4.53	23	⇑iP	Pn	03 23 05.8	+1.4
TIRR	Tirgusor	4.55	55	*e*Pn	Pn	03 23 06.2	+1.6
KRND	KRANIDI	4.58	181	P	Pn	03 23 05.2	+0.1
BUY	Buyukada	4.58	102	*i* P	Pg	03 23 21.5	-2.0
BUY				IAML_P			
	comp=Z,413nm,0.3s						
PLOR	Plostina	4.61	31	⇑iP	Pn	03 23 08.0	+2.5
DOB	Doboj	4.64	308	*e*Pn	Pn	03 23 04.1	-1.7
VLX	Vlachokerasia	4.64	188	P	Pn	03 23 06.6	+0.6
VRI	Vrincioaia	4.65	32	⇑iP	Pn	03 23 07.1	+1.0
PETR	Petresti	4.75	36	⇑iP	Pn	03 23 09.8	+2.4
MAKA	Makarska	4.75	288	*e*Pn	Pn	03 23 11.9	+4.5
DRGR		4.83	356	*e*Pn	Pn	03 23 08.1	-0.6
ULDT	Uludag	4.84	110	*i* P	Pg	03 23 26.0	-2.4
ULDT				IAML_P			
	comp=Z,440nm,0.5s						
ITM	Ithomi	4.88	192	*e*Pn	Pn	03 23 11.0	+1.7
ITM	Ithomi	4.88	192	P	Pn	03 23 11.2	+1.9
MATE	Matera	5.07	257	⇑iP	Pn	03 23 13.2	+1.4
MGRS	Mrkonjic Grad	5.10	301	*e*Pn	Pn	03 23 13.4	+1.1
DEMI	Demirci	5.12	123	*i* P	Pn	03 23 17.4	+4.8
DEMI				IAML_P			
	comp=Z,812nm,0.2s						
HVAR	Hvar	5.13	286	*e*Pn	Pn	03 23 14.4	+1.7
HVAR				Sn	Sn	03 24 12.4	+0.4
TESR	Tescani	5.17	27	⇑iP	Pn	03 23 15.8	+2.6
BLY	Banja Luka	5.20	304	*e*Pn	Pn	03 23 13.0	-0.5
BLY	Banja Luka	5.20	304	*e*Pn	Pn	03 23 13.3	-0.2
BLY	Banja Luka	5.20	304	*e*Pn	Pn	03 23 13.7	+0.2
VLI	Veliai	5.25	182	P	Pn	03 23 14.8	+0.5
KAND	Kocaeli-Kandir	5.32	97	*i* P	Pn	03 23 16.6	+1.4
KAND				IAML_P			
	comp=Z,126nm,0.3s						
MORH	Mrgy, Hungar	5.37	324	*e*Pn	Pn	03 23 15.3	-0.6
MORH	Mrgy, Hungar	5.37	324	*e*Pn	Pn	03 23 15.1	-0.8
MORH				Sn	Sn	03 24 14.1	-3.7
MANT	Manisa	5.37	129	*e*Pn	Pn	03 23 18.9	+2.7
LTVH	Ltavrtes, Hu	5.50	351	*e*Pn	Pn	03 23 19.0	+1.4
LTVH				*e*Sg	Sg	03 24 53.0	+1.1
USAK	Uak-Merkez	5.50	124	*i* P	Pn	03 23 20.1	+2.2
USAK				IAML_P			
	comp=Z,201nm,0.3s						
GEYV	SAKARYA_Geyve	5.55	103	*i* P	Pn	03 23 21.7	+3.3
GEYV				IAML_P			
	comp=Z,501nm,0.2s						
GDZ	Gediz	5.58	119	*i* P	Pn	03 23 21.0	+2.0
GDZ				IAML_P			
	comp=Z,173nm,0.2s						
AYDN	Tasoluk	5.61	139	*i* P	Pn	03 23 21.3	+2.0
AYDN				IAML_P			
	comp=Z,1µm,0.3s						
TIP	Timpagrande	5.64	243	⇑iP	Pn	03 23 22.7	+2.9
KTHA	Kythira Island	5.71	181	P	Pn	03 23 22.3	+1.8
ZIRJ	Zirje	5.81	289	*e*Pn	Pn	03 23 23.9	+2.0
ZIRJ				Sn	Sn	03 24 28.6	-0.2
MORI	Morici	5.82	292	*e*Pn	Pn	03 23 24.9	+2.8
MORI				Sn	Sn	03 24 28.6	-0.5
BUR08	Bucovina Ar. S	5.85	13	*e*Pn	Pn	03 23 23.3	+0.6
SAHE	Sakarya_HENDEK	5.86	98	*i* P	Pn	03 23 24.0	+1.3
SAHE				IAML_P			
	comp=Z,88nm,0.4s						
BORA	Eskisehir	5.87	108	*i* P	Pn	03 23 27.7	+4.8
BORA				IAML_P			
	comp=Z,275nm,0.1s						
SRCK	Saricakaya, Es	5.93	106	*i* P	Pn	03 23 24.8	+1.1
SRCK				IAML_P			
	comp=Z,194nm,0.3s						
UDBI	Udbina	6.01	298	*e*Pn	Pn	03 23 28.9	+4.1
KHAL	Karahalli	6.01	125	*i* P	Pn	03 23 27.1	+2.3
KHAL				IAML_P			
	comp=Z,29nm,0.2s						
BTAS	Taskesti	6.04	101	*i* P	Pn	03 23 27.0	+1.9
BTAS				IAML_P			
	comp=Z,289nm,0.4s						
TRPA	Tarpa	6.18	356	*e*Pn	Pn	03 23 28.1	+1.0
TRPA				*e*Pg	Pg	03 23 51.1	-2.8
TRPA				*e*Sg	Sg	03 25 16.1	+2.1
MDUB	Mudurnu	6.21	101	*e*Pn	Pn	03 23 30.5	+2.9
TIH	Tihany	6.22	324	*e*Pn	Pn	03 23 27.1	-0.6
TIH				*e*Sg	Sg	03 25 16.1	+0.7
BUD	Budapest	6.27	333	*e*Sn	Sn	03 24 38.0	-1.9
DUGI	Dugi Otok	6.31	291	*e*Pn	Pn	03 23 30.4	+1.5
PSZ	Piszkesteto	6.40	340	*e*Pn	Pn	03 23 29.6	-0.5
PSZ	Piszkesteto	6.40	340	*e*Pn	Pn	03 23 36.1	+6.0
PSZ				Sn	Sn	03 24 40.1	-3.2
CSKK	Cskako	6.44	329	*e*Pn	Pn	03 23 30.1	-0.6
CSKK				Sn	Sn	03 24 42.1	-2.2
BEHE	Becsehely	6.45	316	*e*Pn	Pn	03 23 34.2	+3.5
BEHE	Becsehely	6.45	316	*e*Pn	Pn	03 23 36.0	+5.3
BEHE				Sn	Sn	03 24 45.1	+0.6
NVLJ	Novalja	6.61	296	*e*Pn	Pn	03 23 37.5	+4.5
KIBS	BOLU	6.70	100	*i* P	Pn	03 23 36.8	+2.4
KIBS				IAML_P			
	comp=Z,235nm,0.2s						
KOGS	Kog	6.71	314	*i* Pn	Pn	03 23 36.9	+2.6
KOGS				*i* Sn	Sn	03 24 53.9	+3.1
BOLV	Bolvadin	6.75	116	*i* P	Pn	03 23 41.0	+6.0
BOLV				IAML_P			
	comp=Z,1µm,0.3s						
BOJS	Bojanci	6.76	304	*i* Pn	Pn	03 23 38.7	+3.7
BCAM	Yenicaga	6.76	97	*i* P	Pn	03 23 37.1	+1.9
BCAM				IAML_P			
	comp=Z,20nm,0.2s						
CRES	Cresnjev	6.80	307	*i* Pn	Pn	03 23 36.7	+1.2
CRES				*i* Sn	Sn	03 24 50.4	-2.6
CRES	Cresnjev	6.80	307	*e*Pn	Pn	03 23 35.4	-0.1
SRO	Srobarova	6.80	331	*e*PN	Pn	03 23 38.6	+3.1
SRO				*e*SN	Sn	03 24 47.9	-5.1
IDI	Anoyia	6.80	168	Pn	Pn	03 23 35.8	+0.1
	comp=Z,0.4nm,0.3s,baz=3.2,slow=18,SNR=2.8						
KOLS	Kolonicke sedl	7.00	355	*e*PN	Pn	03 23 41.2	+2.9
KOLS				*e*SG	Sg	03 25 38.0	-2.1
VISS	Visnje	7.16	305	*i* Sn	Sn	03 25 00.0	-1.8
RIY	Rijeka	7.16	301	ePn		03 23 43.7	
RIY	Rijeka	7.16	301	*e*Pn	Pn	03 23 42.7	+2.2
VYHS	Vyhne	7.22	336	*e*PN	Pn	03 23 42.9	+1.6
VYHS				*e*SN	Sn	03 25 00.7	-2.7
AQU	L'Aquila	7.29	276	*e*Pn	Pn	03 23 42.8	+0.4
AQU	L'Aquila	7.29	276	*e*Pn	Pn	03 23 43.2	+0.8
CEY	Cerknica	7.38	304	*e*Pn	Pn	03 23 41.2	-2.4
SOP	Sopron	7.41	323	*e*Pn	Pn	03 23 43.1	-0.9
SOP				Sn	Sn	03 25 07.1	-1.1
SOKA	Soboth	7.51	312	Sn	Sn	03 25 06.8	-4.0
	comp=Z,5.5nm,0.4s						
ZST	Bratislava	7.58	327	*e*SN	Sn	03 25 05.7	-6.5
ARSA	Arzberg	7.61	317	*e*Pn	Pn	03 23 48.0	+1.3
	comp=Z,3.4nm,0.4s						
ARSA				Sn	Sn	03 25 09.1	-4.0
	comp=Z,4.4nm,0.4s						
MODS	Modra-Piesok	7.65	329	*e*PN	Pn	03 23 48.0	+0.7
MODS				*e*SN	Sn	03 25 09.2	-4.8
OBKA	Obir	7.70	309	*e*Pn	Pn	03 23 49.8	+1.8
	comp=Z,1.1nm,0.3s						
OBKA				Sn	Sn	03 25 11.6	-3.7
	comp=Z,5.3nm,0.5s						
SMOL	Smolenice	7.71	330	*e*PN	Pn	03 23 50.7	+2.7
SMOL				*e*SN	Sn	03 25 11.6	-3.8
CONA	Conrad Observa	7.91	321	Pn	Pn	03 23 52.0	+1.1
	comp=Z,6.0nm,0.6s						
CONA				Sn	Sn	03 25 16.8	-3.8
	comp=Z,8.0nm,0.5s						
JAVC	Velka Javorina	7.91	332	*e*PN	Pn	03 23 53.4	+2.5
JAVC				*e*SN	Sn	03 25 22.2	+1.7
BR131	Keskin Array S	8.22	102	*e*Pn	Pn	03 23 55.1	-0.1
BRTR	Keskin Array B	8.22	102	Sn	Sn	03 25 23.0	-5.3
	comp=Z,0.1nm,0.3s,baz=282,slow=14,SNR=2.8						
MYKA	Terra Mystica	8.29	307	*e*Pn	Pn	03 23 58.5	+2.5
	comp=Z,1.1nm,0.4s						
MYKA				Sn	Sn	03 25 27.1	-2.8
	comp=Z,2.4nm,0.4s						
KRUC	Moravsky	8.55	328	*e*PN	Pn	03 24 02.0	+2.4
KRUC				*e*SN	Sn	03 25 31.1	-5.0
OKC	Ostrava-Krasne	8.62	338	AMS	AMS	03 27 50.0	
	comp=Z,400nm,10.6s						
MOA	Molln	8.65	316	Sn	Sn	03 25 36.4	-2.1
	comp=Z,7.5nm,0.5s						
VRAC	Vranov	8.68	330	*e*PN	Pn	03 24 08.0	+6.7
VRAC				*e*SN	Sn	03 25 37.2	-2.0
MORC	Moravsky Berou	8.75	335	*e*PN	Pn	03 24 13.9	+12
MORC				*e*SN	Sn	03 25 41.7	+0.6
ABTA	Abfaltersbach	9.03	306	*i* Pn	Pn	03 24 08.6	+2.5
	comp=Z,1.9nm,0.3s						
ABTA				Sn	Sn	03 25 45.5	-2.5
	comp=Z,1.8nm,0.5s						
GERES	GERESS Array B	9.58	319	Pn	Pn	03 24 15.9	+2.1
	comp=Z,0.3nm,0.3s,baz=139,slow=15,SNR=4.5						
GERES				Sn	Sn	03 25 56.6	-5.0
	comp=Z,0.2nm,0.3s,baz=141,slow=25,SNR=2.5						
GERES				LR	LR	03 28 06.7	
	comp=Z,41nm,21.1s,baz=245,slow=39						
VLC	Villacollemand	9.64	287	*e*Pn	Pn	03 24 14.2	-0.3
DPC	Dobruska-Polom	9.64	333	AMS	AMS	03 28 30.0	
	comp=Z,200nm,11.1s						
AKASG	Malin Array Be	9.67	23	Pn	Pn	03 24 15.2	+0.3
	comp=Z,0.6nm,0.3s,baz=210,slow=13,SNR=3.8						
WTTA	Wattenberg	9.80	307	*e*Pn	Pn	03 24 21.7	+4.9
	comp=Z,2.3nm,0.4s						
WTTA				Sn	Sn	03 26 07.8	+0.7
	comp=Z,7.3nm,0.6s						
KHC	Kasperske Hory	9.84	320	*e*PN	Pn	03 24 17.7	+0.4
KHC				*e*x	x	03 24 25.0	
KHC				*e*SN	Sn	03 26 12.5	+4.7
KHC				AMS	AMS	03 28 20.0	
	comp=Z,200nm,8.4s						
WATA	Walderalm	9.87	307	*e*Pn	Pn	03 24 22.5	+4.7
	comp=Z,9.3nm,0.5s						
UPC	Upice	9.88	332	AMS	AMS	03 28 40.0	
	comp=Z,100nm,15.4s						
CHVC	Chvalec	9.94	333	AMS	AMS	03 28 40.0	
	comp=Z,100nm,15.2s						
PRU	Pruhonice	10.03	326	AMS	AMS	03 28 30.0	
SQTA	Sankt Quirin	10.04	306	*e*Pn	Pn	03 24 24.5	+4.5
	comp=Z,7.2nm,0.7s						
SQTA				Sn	Sn	03 26 14.3	+1.5
	comp=Z,1.3nm,0.3s						
MOTA	Moosalm	10.16	306	*e*Pn	Pn	03 24 26.0	+4.2
	comp=Z,9.1nm,0.5s						
FETA	Feichten	10.24	304	*e*Pn	Pn	03 24 27.7	+4.8
	comp=Z,2.1nm,0.4s						
FETA				Sn	Sn	03 26 17.4	-0.5
	comp=Z,2.1nm,0.6s						
FUORN	Ofenpass-Fuorn	10.38	301	*e*Pn	Pn	03 24 24.5	-0.3
RETA	Reutte	10.43	306	*e*Pn	Pn	03 24 29.6	+4.3
	comp=Z,3.9nm,0.4s						
PVCC	Panska Ves	10.44	328	AMS	AMS	03 29 10.0	
	comp=Z,200nm,12.4s						
DAVOX	Davos/Dischmat	10.68	301	LR	LR	03 29 22.6	
	comp=Z,66nm,18.4s,baz=255,slow=42						
DAVA	Damuels	10.88	304	Pn	Pn	03 24 36.8	+5.1
	comp=Z,4.5nm,0.5s						
HFS	Hagfors	19.11	345	P	P	03 26 17.6	-1.0

	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=11						
HFS				LR	LR	03 34 00.8	
	comp=Z,39nm,18.9s,baz=166,slow=38						
FINES	**FINESS Array B**	19.58	4	P	P	03 26 24.4	+0.7
	comp=Z,0.1nm,0.3s,baz=191,slow=8.9,SNR=4.1						
NC602	**NORSAR Array S**	20.10	343	*e*P	P	03 26 28.6	-0.7
	comp=Z,9.1nm,1.1s						
NAO01	**NORSAR Array S**	20.34	343	*e*P	P	03 26 30.9	-1.0
	comp=Z,9.1nm,0.9s						
NC405	**NORSAR Array S**	20.40	344	*e*P	P	03 26 30.9	-1.8
	comp=Z,6.6nm,0.9s						
NB201	**NORSAR Array S**	20.43	343	*e*P	P	03 26 31.8	-1.2
	comp=Z,12nm,1.0s						
NB2	**NORSAR Subarra**	20.44	343	P	P	03 26 32.0	-1.1
	comp=Z,1.2nm,0.5s,baz=157,slow=12						
NOA	**NORSAR Array B**	20.44	343	P	P	03 26 32.1	-1.0
	comp=Z,1.3nm,0.6s,baz=152,slow=11,SNR=22						
NOA				LR	LR	03 36 42.6	
	comp=Z,30nm,18.7s,baz=215,slow=43						
NBO00	**NORSAR Array S**	20.53	343	*e*P	P	03 26 32.9	-1.2
	comp=Z,42nm,1.9s						
NC303	**NORSAR Array S**	20.57	344	*e*P	P	03 26 33.8	-0.7
	comp=Z,11nm,1.3s						
ESDC	**Sonseca Array**	20.66	273	P	P	03 26 34.7	-1.0
	comp=Z,0.3nm,0.6s,baz=76,slow=10,SNR=3.7						
NC204	**NORSAR Array S**	20.75	343	*e*P	P	03 26 36.2	-0.3
	comp=Z,14nm,0.8s						
EKA	**Eskdalemuir Ar**	21.79	317	P	P	03 26 47.2	-0.5
	comp=Z,0.7nm,0.7s,baz=107,slow=11,SNR=3.4						
KIRV	**Kirov**	23.37	36	LR	LR	03 36 31.2	
	comp=Z,100nm,18.3s,baz=183,slow=37						
AKTO	**Aktyubinsk**	25.34	59	P	P	03 27 23.6	+0.8
	comp=Z,0.7nm,0.7s,baz=254,slow=13,SNR=3.1						
ARCES	**ARCESS Array B**	27.66	2	P	P	03 27 45.1	+1.7
	comp=Z,1.9nm,1.0s,baz=185,slow=9.8,SNR=3.6						
ARCES				LR	LR	03 38 31.1	
	comp=Z,40nm,19.4s,baz=270,slow=36						
TORD	**Torodi Ar. Bea**	34.27	219	P	P	03 28 42.8	+0.6
	comp=Z,1.1nm,0.6s,baz=32,slow=8.8,SNR=12						
MKAR	**Makanchi Array**	41.64	63	P	P	03 29 44.9	+0.8
	comp=Z,0.4nm,0.4s,baz=290,slow=5.8,SNR=2.9						
ZALV	**Zalesovo Beam**	41.67	51	P	P	03 29 45.6	+1.3
	comp=Z,0.6nm,0.4s,baz=264,slow=7.2,SNR=2.7						
HHC	**Hu-ho-hao-te**	63.24	58	P	P	03 32 27.8	+3.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,13nm,4.6s						
YKA	**Yellowknife Ar**	70.52	341	P	P	03 33 10.4	+0.1
	comp=Z,0.5nm,0.8s,baz=38,slow=5.9,SNR=3.0						
WRH	**Wood River Hil**	73.68	356	*e*P	P	03 33 28.3	-0.9

*IDC **27** 03:23:16.8±1.1, 7°.70N×126°.05E, h0^{km}, mb3.9/5, mb1 3.9/5, mb1mx3.6/45, mbtmp3.9/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=66.0km s-min=22.9km az=75.0*

*ISCJB **27** 03:23:19.9±1.5, 7°.81N±0°.04×126°.92E±0°.07, h23^{km}±10^{km}, mb3.9/5, MS2.8/1, Error ellipse: s-maj=12.1km s-min=7.4km az=170.1*

*MAN **27** 03:23:21.7, 7°.78N×126°.66E, h2^{km}, MS3.0*

ISC 27 03:23:21.5±1.9, **7°.79N**±0°.04×**126°.7E**±0°.1, **h30**^{km}±13^{km}, **n17**, σ1^{s}**25**/15, **mb4.0**/5, **1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	0.54	317	⇓*i*P	Pn	03 23 33.5	+0.4
BIPH				*i* S	Sb	03 23 39.8	-0.4
MATI	**Mati**	0.96	209	*e*P	Pb	03 23 39.8	0.0
MATI				*e*S	Sn	03 23 53.4	+1.7
BUTP	**Butuan**	1.60	317	*e*P	Pb	03 23 50.6	0.0
BUTP				*e*S	Sb	03 24 10.9	+0.5
BUKP	**Musuan**	1.66	273	*e*P	Pb	03 23 50.6	-0.8
BUKP				*e*S	Sb	03 24 13.4	+1.4
DDMP	**Don Marcelino,**	1.96	211	*e*P	Pb	03 23 56.3	-0.3
DDMP				*e*S	Sb	03 24 19.5	-1.2
JNU	**Nakatsue**	25.50	8	LR	LR	03 38 05.6	
	comp=Z,31nm,20.0s,baz=353,slow=35						
WRA	**Warramunga Arr**	28.56	165	P	P	03 29 15.3	+0.4
	1.9nm,1.2s,baz=339,slow=11,SNR=1.7						
ASAR	**Alice Springs**	32.04	168	P	P	03 29 46.2	+0.5
	0.2nm,0.3s,baz=339,slow=7.2,SNR=5.9						
ASAJ	**Asahikawa**	38.74	18	P	P	03 30 45.0	+1.9
	4.1nm,0.9s,baz=207,slow=2.3,SNR=2.4						
H11S3	**WAKE ISLAND Hy**	40.25	71	T	T	04 14 20.9	
	baz=262,slow=74,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	40.26	71	T	T	04 14 08.2	
	baz=262,slow=74,SNR=6.1						
H11S2	**WAKE ISLAND Hy**	40.26	71	T	T	04 14 13.2	
	baz=262,slow=74,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	40.66	69	T	T	04 14 36.5	
	baz=259,slow=75,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	40.67	69	T	T	04 14 35.3	
	baz=259,slow=75,SNR=3.4						
H11N3	**WAKE ISLAND Hy**	40.68	69	T	T	04 14 36.1	
	baz=259,slow=75,SNR=5.4						
MKAR	**Makanchi Array**	54.27	324	P	P	03 32 43.3	-1.6
	0.8nm,0.4s,baz=116,slow=7.7,SNR=8.1						
FINES	**FINESS Array B**	88.28	332	P	P	03 36 08.1	-1.8
	0.4nm,0.5s,baz=66,slow=4.6,SNR=8.4						

*ISCJB **27** 03:30:54.9±0.3, 41°.96N±0°.01×23°.13E±0°.02, h4^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.0km az=159.3*

*SOF **27** 03:30:55.4, 41°.98N×23°.27E, h2^{km}*

*SKO **27** 03:30:55.4, 41°.94N×23°.18E, h15^{km}, M2.5, ML2.9*

*ATH **27** 03:30:56.6, 41°.88N×23°.21E, h26^{km}±1^{km}, ML3.0/19, Error ellipse: s-maj=2.2km s-min=1.4km az=170.0*

*BEO **27** 03:30:56.1±0.2, 41°.95N×23°.19E, h11^{km}±2^{km}, ML2.9/13*

*THE **27** 03:30:57.1, 41°.85N×23°.19E, h4^{km}, ML3.1/13, Error ellipse: s-maj=1.4km s-min=0.9km az=174.0*

*ISK **27** 03:30:57.4, 41°.84N×23°.12E, h5^{km}, ML3.5/16*

ISC 27 03:30:54.9±0.9, **41°.95N**±0°.01×**23°.23E**±0°.02, **h18**^{km}±4^{km}, **n125**, σ1^{s}**49**/173, **21C-3D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	0.14	234	⇑*i*Pg	Pg	03 30 59.0	0.0
KKB				*i* Sg	Sg	03 31 01.2	-0.6
KKB	**Krupnik**	0.14	234	P	Pg	03 30 59.0	0.0
MMB	**Musomiste**	0.52	134	⇑*i*Pg	Pn	03 31 06.7	-0.7
MMB				*i* Sg	Sn	03 31 14.7	-1.0
MMB	**Musomiste**	0.52	134	P	Pn	03 31 06.6	-0.7
VTS	**Vitosha**	0.67	0	*e*Pg	Pb	03 31 08.1	0.0
VTS				*e*Sg	Sb	03 31 17.1	0.0
VTS	**Vitosha**	0.67	0	⇑*i*P	Pb	03 31 08.3	+0.2
VTS	**Vitosha**	0.67	0	⇑*i*Pg	Pb	03 31 08.3	+0.2
VTS				*i* Sg	Sb	03 31 17.1	0.0
VTS	**Vitosha**	0.67	0	P	Pb	03 31 08.2	+0.2
NVR	**Nevrokopi**	0.76	142	P	Pg	03 31 10.3	+0.5
NVR				S	Sg	03 31 20.5	+0.6
	850nm,0.2s						
NVR	**Nevrokopi**	0.76	142	P	Pg	03 31 10.3	+0.5
NVR				S	Sg	03 31 20.6	+0.6
NVR				AML	AML	03 31 20.7	
	comp=E,1791µm,0.4s						
NVR				AML	AML	03 31 26.9	
	comp=N,1634µm,0.2s						
VAY	**Valandovo**	0.80	219	*e*Pg	Pg	03 31 10.9	+0.4
VAY				*e*Sg	Sg	03 31 21.6	+0.5
VAY	**Valandovo**	0.80	219	⇑*i*Pg	Pn	03 31 11.2	0.0
VAY				*i* Sg	Sg	03 31 22.1	+1.0
VAY				*e*Lg	Lg	03 31 22.3	
	comp=N,535nm,0.7s						
VAY				*e*Lg	Lg	03 31 22.9	
	comp=E,207nm,0.3s						
KNT	**Kendrikon**	0.82	198	PG	Pg	03 31 11.2	+0.2
KNT				SG	Sb	03 31 21.8	+0.4
KNT	**Kendrikon**	0.82	198	P	Pg	03 31 11.0	0.0
KNT				S	Sb	03 31 21.2	-0.2
KNT	**Kendrikon**	0.82	198	*i* Pg	Pg	03 31 11.0	0.0
KNT				*i* Sg	Sb	03 31 21.6	+0.2
KNT	**Kendrikon**	0.82	198	P	Pg	03 31 11.1	+0.2
KNT				S	Sg	03 31 22.3	+0.3
KNT				AML	AML	03 31 22.7	
	comp=E,839µm,0.2s						
KNT				AML	AML	03 31 26.2	
	comp=N,1146µm,0.2s						
SRS	**Serrai**	0.87	162	*e*Pg	Pn	03 31 12.3	0.0
SRS				*e*Sg	Sn	03 31 24.5	0.0
SRS	**Serrai**	0.87	162	P	Pn	03 31 12.3	0.0
SRS				S	Sg	03 31 23.9	+0.5
	comp=N,752nm,0.5s						
SRS	**Serrai**	0.87	162	⇑*i*Pg	Pn	03 31 12.3	0.0
SRS				*i* Sg	Sn	03 31 24.6	0.0
SRS	**Serrai**	0.87	162	P	Pn	03 31 12.4	+0.2
SRS				S	Sn	03 31 24.5	0.0
SRS				AML	AML	03 31 27.0	
	comp=E,1086µm,0.2s						
SRS				AML	AML	03 31 27.8	
	comp=N,1549µm,0.5s						
PGB	**Panagyurishte**	0.92	49	P	Pg	03 31 12.8	0.0
PLD	**Plovdiv**	1.11	81	*e*Pg	Pg	03 31 16.7	+0.4
PLD				*e*Sg	Sg	03 31 32.8	+2.0
PLD	**Plovdiv**	1.11	81	*i* Pg	Pg	03 31 18.7	+2.4
SOH	**Sokhos**	1.13	175	P	Pg	03 31 16.5	-0.2
SOH				S	Sg	03 31 32.0	+0.5
	comp=N,1µm,0.6s						
SOH	**Sokhos**	1.13	175	*i* Pg	Pg	03 31 16.5	-0.2
SOH				*i* Sg	Sg	03 31 32.4	+0.8
SOH	**Sokhos**	1.13	175	P	Pg	03 31 16.7	0.0
SOH				S	Sg	03 31 32.3	+0.8
SOH				AML	AML	03 31 33.6	
	comp=E,1435µm,0.6s						
SOH				AML	AML	03 31 34.8	
	comp=N,3754µm,0.6s						
RZN	**Rozhen**	1.14	103	P	Pg	03 31 17.7	+0.7
KVLA	**Kavala**	1.33	139	P	Pg	03 31 20.8	+0.2
KVLA				S	Sg	03 31 38.3	+0.3
KVLA				AML	AML	03 31 40.7	
	comp=N,2707µm,0.6s						
KVLA				AML	AML	03 31 41.5	
	comp=E,1334µm,0.4s						
THE	**Thessaloniki**	1.33	189	P	Pg	03 31 20.1	-0.5
THE				S	Sg	03 31 38.1	+0.2
	comp=E,908nm,0.6s						
THE	**Thessaloniki**	1.33	189	P	Pg	03 31 20.7	+0.1
THE				S	Sg	03 31 38.1	+0.2
THE				AML	AML	03 31 40.0	
	comp=E,2726µm,0.6s						
THE				AML	AML	03 31 40.1	
	comp=N,914µm,0.5s						
SKO	**Skopje**	1.34	272	*e*Pg	Pb	03 31 20.0	+0.6
SKO	**Skopje**	1.34	272	*i* Pg	Pg	03 31 20.7	0.0
KAVA	**Kavala**	1.35	134	P	Pg	03 31 20.6	-0.4
KAVA				S	Sg	03 31 39.3	+0.7
	comp=N,815nm,0.5s						
KAVA	**Kavala**	1.35	134	P	Pg	03 31 21.1	+0.1
KAVA				S	Sg	03 31 39.4	+0.8
KAVA				AML	AML	03 31 42.0	
	comp=N,1589µm,0.3s						
KAVA				AML	AML	03 31 44.9	
	comp=E,1533µm,0.6s						
HORT	**Hortiatis**	1.35	184	PN	Pg	03 31 21.7	+0.7
HORT				SN	Sg	03 31 39.1	+0.4
HORT	**Hortiatis**	1.35	184	P	Pg	03 31 20.8	-0.2
HORT				S	Sg	03 31 38.4	-0.3
	comp=E,360nm,0.8s						
HORT	**Hortiatis**	1.35	184	P	Pg	03 31 21.4	+0.4
HORT				S	Sg	03 31 38.8	+0.1
HORT				AML	AML	03 31 41.0	
	comp=N,855µm,0.6s						
HORT				AML	AML	03 31 41.1	
	comp=E,570µm,0.3s						
BARS	**Barje**	1.36	310	*e*Pg	Pg	03 31 20.7	-0.5
BARS	**Barje**	1.36	310	*e*Pn	Sn	03 31 32.6	-4.0
BARS				*e*Sg	Sg	03 31 38.5	-0.5
ZAPS	**Zavoj**	1.40	342	*e*Pg	Pg	03 31 22.2	+0.3
ZAPS				*e*Sg	Sg	03 31 39.3	-0.8
PLG	**Polygyros**	1.58	174	P	Pb	03 31 23.8	+0.2
PLG				S	Sb	03 31 44.4	+1.2
	comp=E,358nm,0.7s						
PLG	**Polygyros**	1.58	174	P	Pb	03 31 23.9	+0.2
PLG				S	Sb	03 31 44.2	+1.0
PLG				AML	AML	03 31 48.6	
	comp=E,657µm,0.8s						
PLG				AML	AML	03 31 49.1	
	comp=N,755µm,0.6s						
KDZ	**Kurdzhali**	1.66	100	PN	Pg	03 31 26.4	-0.4
OUR	**Ouranopolis**	1.71	160	PN	Pg	03 31 27.9	+0.2
OUR	**Ouranopolis**	1.71	160	P	Pb	03 31 25.6	-0.1
OUR				S	Sb	03 31 47.8	+1.0
	comp=N,1µm,0.6s						
OUR	**Ouranopolis**	1.71	160	P	Pb	03 31 25.3	-0.5
OUR				S	Sn	03 31 46.2	+1.2
OUR				AML	AML	03 31 52.1	
	comp=N,2931µm,0.5s						
OUR				AML	AML	03 31 52.2	
	comp=E,1716µm,0.8s						
DIM	**Dimitrovgrad**	1.72	86	P	Pg	03 31 28.4	+0.5
THAS	**Thassos island**	1.75	140	P	Pb	03 31 26.2	-0.1
THAS				S	Sg	03 31 50.1	-1.1
	comp=E,482nm,0.3s						
THAS	**Thassos island**	1.75	140	P	Pb	03 31 26.3	-0.1
THAS				S	Sb	03 31 47.8	-0.2
THAS				AML	AML	03 31 53.5	
	comp=E,830µm,0.4s						
THAS				AML	AML	03 31 54.0	
	comp=N,1086µm,0.3s						
PLVB	**Pleven**	1.77	35	⇑*i*P	Sg	03 31 53.4	+1.6
FNA	**Florina**	1.82	231	*e*Pg	Pb	03 31 27.3	-0.4
FNA				*e*Sg	Sg	03 31 52.5	-1.0
FNA	**Florina**	1.82	231	P	Pn	03 31 25.9	+0.6
FNA				S	Sb	03 31 50.9	+0.8
	comp=N,628nm,0.8s						
FNA	**Florina**	1.82	231	P	Pb	03 31 27.5	-0.2
FNA				AML	AML	03 32 00.3	
	comp=E,1136µm,0.6s						
FNA				AML	AML	03 32 03.3	
	comp=N,935µm,0.6s						
RDO	**Rodhopi**	1.91	114	PN	Pg	03 31 31.5	0.0
RDO	**Rodhopi**	1.91	114	P	Pb	03 31 30.1	+1.0
RDO				S	Sg	03 31 55.8	-0.5
	comp=N,600nm,0.3s						
RDO	**Rodhopi**	1.91	114	P	Pb	03 31 30.2	+1.2
RDO				S	Sb	03 31 54.2	+1.7
RDO				AML	AML	03 31 58.4	
	comp=N,1155µm,0.5s						
RDO				AML	AML	03 31 59.7	
	comp=E,1235µm,0.2s						
LIT	**Litokhoron**	1.93	197	P	Pn	03 31 28.1	+1.3
LIT	**Litokhoron**	1.93	197	P	Pn	03 31 28.3	+1.4
LIT				AML	AML	03 32 03.6	
	comp=N,64µm,0.7s						
LIT				AML	AML	03 32 06.7	
	comp=E,52µm,0.5s						
PVL	**Pavlikeni**	2.00	50	P	Pb	03 31 30.7	-0.1
ZAGS	**Zajecar**	2.00	339	*e*Pn	Pb	03 31 29.4	-1.4
SELS	**Selova**	2.01	310	*e*Pn	Pb	03 31 29.8	-1.2
SELS				*e*Sn	Sb	03 31 54.4	-1.3
BOVS	**Bovan**	2.03	327	*e*Pn	Pb	03 31 30.3	-0.9
PAIG	**Paliouri**	2.05	170	P	Pn	03 31 29.2	+0.8
PAIG				AML	AML	03 32 01.7	
	comp=E,310µm,0.6s						
PAIG				AML	AML	03 32 02.8	
	comp=N,236µm,0.5s						
ELND	**Elena**	2.19	62	⇑*i*P	Pg	03 31 36.1	-0.8
NEST	**Nestorio**	2.25	228	P	Pb	03 31 33.7	-1.4
NEST				S	Sb	03 32 02.7	+0.1
NEST	**Nestorio**	2.25	228	P	Pb	03 31 33.4	-1.7
NEST				AML	AML	03 32 15.1	
	comp=N,92µm,1.5s						
NEST				AML	AML	03 32 15.5	
	comp=E,71µm,0.9s						
SMTH	**Samothraki Isl**	2.28	130	P	Pb	03 31 34.9	-0.5
SMTH	**Samothraki Isl**	2.28	130	P	Pb	03 31 34.6	-0.8
SMTH				AML	AML	03 32 12.0	
	comp=N,196µm,0.3s						
SMTH				AML	AML	03 32 13.6	
	comp=E,126µm,0.3s						
ALN	**Alexandroupoli**	2.36	115	PN	Pg	03 31 38.6	-1.6
ALN	**Alexandroupoli**	2.36	115	P	Pb	03 31 36.7	-0.1
ALN				S	Sg	03 32 08.6	-2.2
	comp=E,158nm,0.5s						
ALN	**Alexandroupoli**	2.36	115	P	Pb	03 31 36.7	-0.1
ALN				AML	AML	03 32 15.5	
	comp=E,298µm,0.5s						
ALN				AML	AML	03 32 17.5	
	comp=N,327µm,0.4s						
PENT	**Pentalofos**	2.36	223	P	Pn	03 31 34.0	+1.2
ENEZ	**Enez**	2.51	118	PN	Pb	03 31 40.4	+1.0
LIA	**Limnos Island**	2.52	144	P	Pb	03 31 38.6	-1.0
LIA				S	Sb	03 32 08.5	-1.8
	comp=N,162nm,0.8s						
LIA	**Limnos Island**	2.52	144	P	Pb	03 31 38.7	-1.0
LIA				S	Sn	03 32 07.2	+2.0
LIA				AML	AML	03 32 19.6	
	comp=N,294µm,0.9s						
LIA				AML	AML	03 32 21.3	
	comp=E,329µm,0.8s						
XOR	**Xorichti**	2.58	181	P	Pn	03 31 37.3	+1.5
XOR	**Xorichti**	2.58	181	P	Pn	03 31 37.1	+1.4
XOR				S	Sn	03 32 08.0	+1.3
EDRB	**Edirne**	2.62	91	PN	Pb	03 31 42.9	+1.6
GRUS	**Gruza**	2.68	317	*e*Pn	Pn	03 31 38.7	+1.6
SRE	**Strehaia**	2.71	360	⇑*i*P	Pg	03 31 46.8	-0.1
KUBS	**Kucevo**	2.71	336	*e*Pn	Pn	03 31 38.4	+0.8
SJES	**Sjenica**	2.74	300	*e*Pn	Pn	03 31 39.7	+1.6
IVAS	**Ivanjica**	2.79	307	*e*Pn	Pn	03 31 40.8	+2.1
IVAS				*e*Sn	Sn	03 32 14.3	+2.3
KESN	**Edirne-Kesan**	2.83	112	*i* P	Pg	03 31 49.4	+0.3
KESN				IAML_P			
	comp=Z,249nm,0.3s						
RAZG	**Razgrad**	2.90	55	⇑*i*P	Pg	03 31 49.5	-1.0
HERR	**Herculane**	2.99	349	⇑*i*P	Pn	03 31 42.3	+0.9
PDG	**Podgorica**	3.00	281	⇑*i*P	Pb	03 31 47.2	-0.5
BOZC	**Bozcaada**	3.00	134	PN	Pb	03 31 47.1	-0.6
BOZC	**Bozcaada**	3.00	134	*i* P	Pg	03 31 51.0	-1.3
BOZC				IAML_P			
	comp=Z,329nm,0.3s						
TRUS	**Trudelj**	3.08	319	*e*Pn	Pn	03 31 44.1	+1.5
LPK	**Lapseki**	3.09	119	PN	Pb	03 31 49.1	-0.2
DIVS	**Divibare**	3.21	313	*e*Pn	Pn	03 31 45.6	+1.2
DIVS				*e*Sn	Sn	03 32 24.4	+2.2
PHSR	**Pinarhisar**	3.22	94	⇑*i*P	Pb	03 31 51.2	-0.4
RKY	**Sarkoy-Tekirda**	3.23	112	PN	Pb	03 31 51.3	-0.4
SART	**Tekirdag**	3.23	112	*i* P	Pg	03 31 55.3	-1.4
SART				IAML_P			
	comp=Z,1µm,0.4s						
BAYC	**CANAKKALE_Bayr**	3.34	130	*i* P	Pb	03 31 50.3	-3.3
BAYC				IAML_P			
	comp=Z,137nm,0.1s						
SIGR	**SIGRI**	3.38	143	PN	Pb	03 31 52.7	-1.6
SIGR	**SIGRI**	3.38	143	P	Pn	03 31 49.4	+2.6
BBLS	**Lazići**	3.40	306	*e*Pn	Pn	03 31 49.1	+2.0
GZR	**Gura Zlata**	3.46	355	⇓*i*P	Pn	03 31 49.4	+1.5
ANX	**Ano Chora**	3.50	197	P	Pn	03 31 49.5	+1.0
LOT	**Lotru**	3.52	6	⇑*i*P	Pn	03 31 50.3	+1.5
MRMT	**Marmara Adasi**	3.55	111	PN	Pb	03 31 55.6	-1.6
ARR	**Arges**	3.57	16	⇑*i*P	Pn	03 31 51.7	+2.3
AYVA	**Ayvalik**	3.72	134	*i* P	Pn	03 31 48.6	-2.9
AYVA				IAML_P			
	comp=Z,185nm,0.3s						
VOIR		3.73	20	⇑*i*P	Pn	03 31 54.7	+3.1
HAPS	**Han Pijesak,Bl**	3.80	306	*e*Pn	Pn	03 31 54.9	+2.3
CTYL	**Yalikoy Yolu**	3.81	95	PN	Pb	03 32 00.2	-1.4
EDC	**Edincik**	3.84	113	PN	Pb	03 31 59.8	-2.4
BZS	**Buzias**	3.85	343	⇑*i*P	Pn	03 31 54.6	+1.4
CTKS	**Kestanelik-??a**	4.02	98	PN	Pb	03 32 02.5	-2.6
MLR	**Muntele Rosu**	4.05	28	⇑*i*P	Pn	03 31 58.7	+2.6
ZEDA	**zmir-Bergama**	4.18	134	*i* P	Pn	03 32 02.5	+4.7
ZEDA				IAML_P			
	comp=Z,187nm,0.2s						
KCTX	**Karacabey (Bur**	4.22	112	PN	Pb	03 32 04.7	-3.9
DOPR	**Dopca**	4.31	20	⇑*i*P	Pn	03 32 01.5	+2.0
HARR	**Harsova**	4.39	50	⇓*i*P	Pb	03 32 07.2	-4.2
TLB	**Topalu**	4.39	51	⇓*i*P	Pn	03 32 04.1	+3.5
KLYT	**Kilyos**	4.41	97	PN	Pb	03 32 08.5	-3.3
ARMT	**Armutlu**	4.46	106	PN	Pb	03 32 08.7	-4.0
BUY	**Buyukada**	4.56	102	PN	Pb	03 32 10.0	-4.3
PLOR	**Plostina**	4.62	31	⇑*i*P	Pn	03 32 07.3	+3.5
VRI	**Vrincioaia**	4.66	32	⇑*i*P	Pn	03 32 06.9	+2.6
BLY	**Banja Luka**	5.22	304	*e*Pn	Pn	03 32 13.7	+1.6
KOLS	**Kolonicke sedl**	7.02	355	*e*SG	Sg	03 34 38.5	-1.4
MODS	**Modra-Piesok**	7.68	329	*e*SN	Sn	03 34 08.0	-4.3

*ATH **27** 03:38:36.2, 35°.73N×23°.50E, h51^{km}±4^{km}, ML2.0/3, Error ellipse: s-maj=17.8km s-min=1.9km az=222.0*

THE 27 03:38:31.8, 35°.31N×22°.98E, h3^{km}±1^{km}**, ML2.1**/5**, Error ellipse: s-maj=1.5km s-min=0.5km az=61.0, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	0.62	25	P	Pg	03 38 43.5	-0.2
ANKY				S	Sg	03 38 53.0	+1.2
	148nm,0.4s						
ANKY	**Antikythira Is**	0.62	25	P	Pb	03 38 44.7	-0.6
ANKY				S	Sg	03 38 52.7	+0.9
ANKY				AML	AML	03 38 56.8	
	comp=N,305µm,0.6s						
ANKY				AML	AML	03 38 57.0	
	comp=E,284µm,0.5s						
IMMV	**Iera Moni Meta**	0.83	79	P	Pg	03 38 47.6	-0.2
IMMV				S	Sb	03 38 59.9	-0.6
	comp=E,278nm,0.9s						
IMMV	**Iera Moni Meta**	0.83	79	P	Pg	03 38 47.8	0.0
IMMV				S	Sg	03 38 55.0	-3.6
IMMV				AML	AML	03 39 01.0	
	comp=N,463µm,0.8s						
IMMV				AML	AML	03 39 02.4	
	comp=E,628µm,1.0s						
KTHA	**Kythira Island**	0.95	4	P	Pg	03 38 49.8	-0.3
KTHA				S	Sg	03 39 03.2	+0.8
	comp=E,112nm,0.8s						
KTHA	**Kythira Island**	0.95	4	P	Pg	03 38 49.8	-0.2
KTHA				S	Sg	03 38 58.8	-3.6
KTHR	**Kythira**	0.95	1	P	Pg	03 38 49.7	-0.4
KTHR				S	Sb	03 39 03.5	-0.5
VAM	**Vamos**	1.00	84	P	Pg	03 38 50.5	-0.5
VAM				S	Sb	03 39 05.4	0.0
	comp=E,258nm,0.6s						
VAM	**Vamos**	1.00	84	P	Pg	03 38 50.7	-0.3
VAM				S	Sg	03 39 00.2	-3.9
VAM				AML	AML	03 39 10.5	
	comp=N,241µm,0.5s						
VAM				AML	AML	03 39 12.2	
	comp=E,254µm,0.4s						
VLI	**Veliai**	1.41	359	P	Pn	03 38 57.3	-1.1
VLI				S	Sb	03 39 17.2	0.0
	comp=E,35nm,0.6s						
VLI	**Veliai**	1.41	359	P	Pn	03 38 57.2	-1.2
DYR	**Agios Nikonas**	1.54	340	P	Pn	03 38 59.8	-0.4
IDI	**Anoyia**	1.56	90	P	Pn	03 38 58.4	-2.1

*ISCJB **27** 03:40:02.1±0.3, 41°.95N±0°.01×23°.16E±0°.02, h7^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=1.9km az=167.7*

*SOF **27** 03:40:02.6, 41°.97N×23°.27E, h2^{km}*

*SKO **27** 03:40:02.4, 41°.94N×23°.28E, h15^{km}, M2.5, ML2.8*

*BEO **27** 03:40:03.3±0.2, 41°.95N×23°.20E, h14^{km}±2^{km}, ML2.7/13*

*ATH **27** 03:40:04.1, 41°.85N×23°.23E, h25^{km}±2^{km}, ML2.6/4, Error ellipse: s-maj=4.0km s-min=1.3km az=162.0*

*THE **27** 03:40:04.9, 41°.84N×23°.26E, h7^{km}, ML2.7/14, Error ellipse: s-maj=1.1km s-min=0.7km az=168.0*

ISC 27 03:40:02.9±0.8, **41°.95N**±0°.01×**23°.18E**±0°.02, **h12**^{km}±6^{km}, **n100**, σ1^{s}**08**/135, **13C-8D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	0.11	221	⇑*i*Pg	Pg	03 40 06.2	+0.3
KKB				*i* Sg	Sg	03 40 08.5	+0.4
KKB	**Krupnik**	0.11	221	P	Pg	03 40 06.1	+0.2
MMB	**Musomiste**	0.55	131	⇑*i*Pg	Pg	03 40 13.8	+0.2
MMB				*i* Sg	Sb	03 40 21.4	-0.8
MMB	**Musomiste**	0.55	131	P	Pg	03 40 13.7	+0.1
VTS	**Vitosha**	0.67	4	*e*Pg	Pg	03 40 15.5	-0.6
VTS				*e*Sg	Sg	03 40 24.2	-0.7
VTS	**Vitosha**	0.67	4	⇓*i*P	Pg	03 40 15.4	-0.6
VTS				S	Sg	03 40 24.1	-0.8
VTS	**Vitosha**	0.67	4	⇑*i*Pg	Pg	03 40 15.6	-0.6
VTS				*i* Sg	Sg	03 40 24.4	-0.5
VTS	**Vitosha**	0.67	4	P	Pg	03 40 15.5	-0.6
VAY	**Valandovo**	0.77	216	*e*Pg	Pb	03 40 18.5	+0.2
VAY				*e*Sg	Sb	03 40 28.7	0.0
VAY	**Valandovo**	0.77	216	*i* Pg	Pb	03 40 18.8	+0.5
VAY				*i* Sg	Sb	03 40 29.0	+0.3
VAY				*e*Lg	Lg	03 40 29.3	
	comp=E,215nm,0.3s						
VAY				*e*Lg	Lg	03 40 29.7	
	comp=N,204nm,0.4s						
NVR	**Nevrokopi**	0.79	139	P	Pg	03 40 17.5	-0.7
NVR				S	Sg	03 40 27.2	-1.3
	comp=N,455nm,0.2s						
NVR	**Nevrokopi**	0.79	139	P	Pg	03 40 17.5	-0.7
NVR				S	Sg	03 40 27.6	-1.0
NVR				AML	AML	03 40 31.7	

	comp=N,904µm,0.2s						
NVR				AML	AML	03 40 31.8	
	comp=E,816µm,0.2s						
KNT	**Kendrikon**	**0.81**	**195**	P	**Pg**	**03 40 18.3**	**-0.3**
KNT				S	**Sg**	**03 40 28.9**	**-0.4**
	comp=E,588nm,0.3s						
KNT	**Kendrikon**	**0.81**	**195**	⇑*i*Pg	**Pg**	**03 40 18.4**	**-0.3**
KNT				*i* Sg	**Sg**	**03 40 28.9**	**-0.4**
KNT	**Kendrikon**	**0.81**	**195**	P	**Pg**	**03 40 18.3**	**-0.3**
KNT				S	**Sg**	**03 40 28.8**	**-0.5**
KNT				AML	AML	03 40 33.5	
	comp=E,1101µm,0.2s						
KNT				AML	AML	03 40 33.5	
	comp=N,1227µm,0.4s						
SRS	**Serrai**	**0.89**	**159**	*e*Pg	**Pg**	**03 40 19.7**	**-0.4**
SRS				*e*Sg	**Sg**	**03 40 31.3**	**-0.3**
SRS	**Serrai**	**0.89**	**159**	P	**Pg**	**03 40 19.5**	**-0.5**
SRS				S	**Sg**	**03 40 30.7**	**-0.9**
	comp=N,460nm,0.2s						
SRS	**Serrai**	**0.89**	**159**	⇑*i*Pg	**Pg**	**03 40 19.6**	**-0.5**
SRS				*i* Sg	**Sg**	**03 40 31.4**	**-0.3**
SRS	**Serrai**	**0.89**	**159**	P	**Pg**	**03 40 19.5**	**-0.5**
SRS				S	**Sg**	**03 40 31.2**	**-0.3**
SRS				AML	AML	03 40 34.4	
	comp=N,1070µm,0.2s						
SRS				AML	AML	03 40 35.5	
	comp=E,718µm,0.3s						
PGB	**Panagyurishte**	**0.95**	**50**	P	**Pg**	**03 40 20.0**	**-1.3**
SOH	**Sokhos**	**1.13**	**173**	P	**Pb**	**03 40 24.1**	**-0.3**
SOH				S	**Sb**	**03 40 39.0**	**-0.1**
	comp=E,550nm,0.5s						
SOH	**Sokhos**	**1.13**	**173**	*i* Pg	**Pb**	**03 40 23.8**	**-0.6**
SOH	**Sokhos**	**1.13**	**173**	P	**Pb**	**03 40 24.2**	**-0.3**
SOH				S	**Sb**	**03 40 38.4**	**-0.7**
SOH				AML	AML	03 40 41.9	
	comp=N,1583µm,0.5s						
SOH				AML	AML	03 40 44.3	
	comp=E,574µm,0.3s						
PLD	**Plovdiv**	**1.15**	**82**	*e*Pg	**Pb**	**03 40 24.4**	**-0.3**
PLD				*e*Sg	**Sg**	**03 40 39.6**	**-0.4**
RZN	**Rozhen**	**1.18**	**102**	P	**Pb**	**03 40 25.0**	**-0.4**
SKO	**Skopje**	**1.29**	**272**	*e*Pg	**Pn**	**03 40 26.5**	**-0.3**
SKO				*e*Sg	**Sg**	**03 40 45.2**	**+0.5**
SKO	**Skopje**	**1.29**	**272**	*i* Pg	**Pg**	**03 40 28.5**	**+0.7**
THE	**Thessaloniki**	**1.32**	**187**	P	**Pb**	**03 40 27.6**	**-0.1**
THE				S	**Sn**	**03 40 44.8**	**+0.1**
	comp=E,352nm,0.4s						
THE	**Thessaloniki**	**1.32**	**187**	P	**Pb**	**03 40 27.8**	**+0.2**
BARS	**Barje**	**1.33**	**311**	*e*Pg	**Pb**	**03 40 28.1**	**+0.3**
BARS	**Barje**	**1.33**	**311**	*e*Pn	**Sb**	**03 40 40.2**	**-4.6**
BARS				*e*Sg	**Sn**	**03 40 45.6**	**+0.7**
HORT	**Hortiatis**	**1.35**	**182**	P	**Pb**	**03 40 28.1**	**-0.1**
HORT				S	**Sn**	**03 40 45.7**	**+0.2**
	comp=E,128nm,0.6s						
HORT	**Hortiatis**	**1.35**	**182**	P	**Pn**	**03 40 27.7**	**+0.1**
KVLA	**Kavala**	**1.36**	**138**	P	**Pn**	**03 40 27.8**	**+0.2**
KAVA	**Kavala**	**1.38**	**133**	P	**Pb**	**03 40 28.4**	**-0.3**
KAVA				S	**Sn**	**03 40 45.9**	**-0.3**
	comp=E,390nm,0.4s						
KAVA	**Kavala**	**1.38**	**133**	P	**Pb**	**03 40 28.5**	**-0.3**
ZAPS	**Zavoj**	**1.39**	**343**	*e*Pg	**Pb**	**03 40 29.2**	**+0.4**
PLG	**Polygyros**	**1.58**	**173**	P	**Pn**	**03 40 31.1**	**+0.3**
PLG				S	**Sn**	**03 40 51.5**	**+0.3**
	comp=E,192nm,0.4s						
PLG	**Polygyros**	**1.58**	**173**	P	**Pn**	**03 40 31.2**	**+0.4**
BLKB	**Belogradchik**	**1.71**	**348**	S	**Sn**	**03 40 54.6**	**+0.1**
OUR	**Ouranopolis**	**1.72**	**159**	P	**Pn**	**03 40 32.5**	**-0.2**
OUR				S	**Sn**	**03 40 54.7**	**+0.2**
	comp=E,580nm,0.7s						
OUR	**Ouranopolis**	**1.72**	**159**	P	**Pn**	**03 40 32.8**	**+0.2**
THAS	**Thassos island**	**1.77**	**139**	P	**Pn**	**03 40 33.3**	**-0.1**
THAS				S	**Sn**	**03 40 55.4**	**-0.4**
	comp=E,210nm,0.3s						
THAS	**Thassos island**	**1.77**	**139**	P	**Pn**	**03 40 33.5**	**+0.1**
FNA	**Florina**	**1.79**	**230**	*e*Pg	**Pb**	**03 40 34.8**	**-0.8**
FNA				*e*Sg	**Sg**	**03 41 00.8**	**+0.5**
FNA	**Florina**	**1.79**	**230**	P	**Pn**	**03 40 34.5**	**+0.9**
FNA				S	**Sg**	**03 40 59.7**	**-0.6**
	comp=E,350nm,0.5s						
FNA	**Florina**	**1.79**	**230**	*i* Pn	**Pb**	**03 40 36.0**	**+0.3**
FNA	**Florina**	**1.79**	**230**	P	**Pb**	**03 40 35.9**	**+0.3**
PLVB	**Pleven**	**1.79**	**36**	⇑*i*P	**Pb**	**03 40 34.9**	**-0.7**
PLVB	**Pleven**	**1.79**	**36**	S	**Sg**	**03 41 00.0**	**-0.5**
LIT	**Litokhoron**	**1.92**	**196**	P	**Pn**	**03 40 34.9**	**-0.5**
LIT				S	**Sn**	**03 41 00.1**	**+0.7**
RDO	**Rodhopi**	**1.94**	**114**	P	**Pn**	**03 40 36.2**	**+0.5**
RDO	**Rodhopi**	**1.94**	**114**	P	**Pb**	**03 40 37.1**	**-1.2**
SELS	**Selova**	**1.98**	**311**	*e*Pn	**Pn**	**03 40 37.1**	**+0.8**
SELS				*e*Sn	**Sn**	**03 41 01.6**	**+0.6**
ZAGS	**Zajecar**	**1.99**	**340**	*e*Pn	**Pn**	**03 40 35.5**	**-0.8**
BOVS	**Bovan**	**2.00**	**328**	*e*Pn	**Pn**	**03 40 37.2**	**+0.6**
BOVS				*e*Sn	**Sn**	**03 41 02.4**	**+0.9**
PAIG	**Paliouri**	**2.05**	**169**	P	**Pn**	**03 40 37.2**	**0.0**
BAIL	**Bailesti**	**2.08**	**3**	S	**Sn**	**03 41 04.8**	**+1.5**
ELND	**Elena**	**2.23**	**63**	⇑*i*P	**Pn**	**03 40 40.0**	**+0.4**
VLAD	**Vladila**	**2.24**	**23**	S	**Sb**	**03 41 10.3**	**-0.6**
SMTH	**Samothraki Isl**	**2.31**	**129**	P	**Pn**	**03 40 41.1**	**+0.3**
SMTH				S	**Sn**	**03 41 08.6**	**-0.5**
	comp=E,30nm,0.9s						
SMTH	**Samothraki Isl**	**2.31**	**129**	P	**Pn**	**03 40 42.1**	**+1.3**
ALN	**Alexandroupoli**	**2.40**	**115**	P	**Pn**	**03 40 43.0**	**+1.0**
ALN				S	**Sn**	**03 41 12.4**	**+1.1**
	comp=E,40nm,0.6s						
ALN	**Alexandroupoli**	**2.40**	**115**	P	**Pn**	**03 40 43.7**	**+1.8**
LIA	**Limnos Island**	**2.55**	**143**	P	**Pn**	**03 40 44.0**	**0.0**
LIA				S	**Sn**	**03 41 15.6**	**+0.6**
	comp=E,75nm,0.9s						
LIA	**Limnos Island**	**2.55**	**143**	P	**Pn**	**03 40 45.6**	**+1.6**
XOR	**Xorichti**	**2.58**	**180**	P	**Pn**	**03 40 44.6**	**+0.1**
COPA	**Copaceanca**	**2.65**	**34**	S	**Sb**	**03 41 21.0**	**-1.7**
GRUS	**Gruza**	**2.65**	**318**	*e*Pn	**Pn**	**03 40 45.3**	**-0.2**
KUBS	**Kucevo**	**2.70**	**336**	*e*Pn	**Pn**	**03 40 45.8**	**-0.3**
SJES	**Sjenica**	**2.70**	**300**	*e*Pn	**Pn**	**03 40 45.8**	**-0.5**
SRE	**Strehaia**	**2.71**	**0**	⇓*i*P	**Pn**	**03 40 46.2**	**-0.1**
IVAS	**Ivanjica**	**2.76**	**307**	*e*Pn	**Pn**	**03 40 48.0**	**+1.0**
KESN	**Edirne-Kesan**	**2.87**	**112**	*i* P	**Pg**	**03 40 56.4**	**-1.5**
KESN				IAML_P			
	comp=Z,74nm,0.2s						
RAZG	**Razgrad**	**2.94**	**55**	S	**Sb**	**03 41 29.3**	**-1.8**
PDG	**Podgorica**	**2.95**	**281**	⇑*i*P	**Pn**	**03 40 50.2**	**+0.6**
HERR	**Herculane**	**2.98**	**350**	⇓*i*P	**Pn**	**03 40 49.5**	**-0.5**
HERR	**Herculane**	**2.98**	**350**	S	**Sn**	**03 41 26.3**	**+0.6**
TRUS	**Trudelj**	**3.05**	**319**	*e*Pn	**Pn**	**03 40 52.3**	**+1.4**
SGRR	**Singureni**	**3.06**	**41**	S	**Sn**	**03 41 30.6**	**+3.0**
DIVS	**Divibare**	**3.17**	**314**	*e*Pn	**Pn**	**03 40 52.4**	**-0.3**
SART	**Tekirdag**	**3.27**	**111**	*i* P	**Pb**	**03 41 02.0**	**+1.2**
SART				IAML_P			
	comp=Z,230nm,0.2s						
BBLS	**Lazići**	**3.37**	**306**	*e*Pn	**Pn**	**03 40 55.4**	**0.0**
BAYC	**CANAKKALE_Bayr**	**3.38**	**130**	*i* P	**Pn**	**03 40 58.2**	**+2.8**
BAYC				IAML_P			
	comp=Z,136nm,0.1s						
GZR	**Gura Zlata**	**3.46**	**355**	⇓*i*P	**Pn**	**03 40 56.9**	**+0.3**
GZR	**Gura Zlata**	**3.46**	**355**	S	**Sn**	**03 41 37.8**	**+0.3**
LOT	**Lotru**	**3.53**	**7**	⇓*i*P	**Pn**	**03 40 57.5**	**-0.1**
ARR	**Arges**	**3.58**	**17**	⇓*i*P	**Pn**	**03 40 58.9**	**+0.6**
VOIR		**3.74**	**21**	⇑*i*P	**Pn**	**03 41 01.5**	**+0.9**
BZS	**Buzias**	**3.84**	**343**	⇑*i*P	**Pn**	**03 41 01.6**	**-0.2**
BZS	**Buzias**	**3.84**	**343**	S	**Sn**	**03 41 46.7**	**-0.1**
MLR	**Muntele Rosu**	**4.07**	**29**	⇑*i*P	**Pn**	**03 41 06.9**	**+1.8**
MLR	**Muntele Rosu**	**4.07**	**29**	S	**Sn**	**03 41 55.0**	**+2.3**
TLB	**Topalu**	**4.42**	**52**	⇑*i*P	**Pn**	**03 41 12.5**	**+2.7**
TLB	**Topalu**	**4.42**	**52**	S	**Sn**	**03 42 04.7**	**+3.5**
SIRR	**Siria**	**4.46**	**346**	⇓*i*P	**Pn**	**03 41 10.2**	**-0.1**
TIRR	**Tirgusor**	**4.58**	**55**	S	**Sn**	**03 42 08.6**	**+3.6**
VRI	**Vrincioaia**	**4.68**	**32**	⇑*i*P	**Pn**	**03 41 14.7**	**+1.3**
CFR	**Carcaliu**	**4.84**	**46**	S	**Sn**	**03 42 15.7**	**+4.3**
DRGR		**4.86**	**356**	⇓*i*P	**Pn**	**03 41 16.8**	**+1.0**

WEL 27 03:41:24.3, 42°S±1°×174°.3E±0°.9, h12km±3km, M3.8/32, ML4.0/20, MLv3.8/32, Error ellipse: s-maj=0.0km s-min=0.0km az=145.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.16**	**216**	P	Pg	03 41 28.2	+0.1
CMWZ				S	Sg	03 41 31.9	+1.2
TUWZ	**Tuamarina**	**0.35**	**303**	P	Pg	03 41 31.9	+0.5
TUWZ				S	Sb	03 41 37.7	-0.3
BSWZ	**Blackbirch Sta**	**0.36**	**255**	P	Pg	03 41 31.9	+0.4
BSWZ				S	Sb	03 41 38.1	-0.1
TCW	**Tory Channel**	**0.41**	**354**	P	Pb	03 41 33.1	-0.5
TCW				S	Sb	03 41 39.7	-0.1
BHW	**Baring Head**	**0.46**	**62**	P	Pb	03 41 34.2	0.0
PLWZ	**Palliser**	**0.69**	**86**	P	Pb	03 41 38.8	+0.5
MSWZ	**Moikau Station**	**0.72**	**74**	P	Pb	03 41 39.2	+0.5
CAW	**Cannon Point**	**0.75**	**47**	P	Pb	03 41 39.4	0.0
NNZ	**Nelson**	**0.83**	**299**	P	Pg	03 41 40.3	0.0
PAWZ	**Paruwai Farm**	**0.85**	**74**	P	Pb	03 41 41.6	+0.5
DUWZ	**D'Urville Isla**	**0.88**	**339**	P	Pb	03 41 41.4	-0.1
KHZ	**Kahutara**	**0.99**	**217**	P	Pn	03 41 44.2	+0.2
MTW	**Mount Morrison**	**0.99**	**62**	P	Pn	03 41 44.1	+0.1
OGWZ	**Otaki Gorge**	**1.02**	**38**	P	Pb	03 41 43.9	0.0
TRWZ	**Traveller**	**1.04**	**78**	P	Pn	03 41 44.8	+0.1
THZ	**Tophouse**	**1.08**	**262**	P	Pb	03 41 45.0	0.0
HOWZ	**Holdsworth Sta**	**1.15**	**51**	P	Pg	03 41 46.3	-0.1
TMWZ	**Te Maipa**	**1.28**	**67**	P	Pn	03 41 48.1	+0.1
MRZ	**Mangatainoka R**	**1.34**	**45**	P	Pb	03 41 49.5	+0.1
TIWZ	**Tintock**	**1.44**	**55**	P	Pb	03 41 50.7	-0.4
QRZ	**Quartz Range**	**1.58**	**300**	P	Pb	03 41 53.6	+0.2
OHWZ	**Ohakea**	**1.60**	**28**	P	Pg	03 41 54.6	-0.4
PRWZ	**Pori Road**	**1.63**	**50**	P	Pn	03 41 53.1	+0.3
POWZ	**Post Office Ro**	**1.64**	**42**	P	Pn	03 41 53.6	+0.7
GVZ	**Greta Valley S**	**1.66**	**215**	P	Pn	03 41 53.2	0.0
BFZ	**Birch Farm**	**1.72**	**58**	P	Pn	03 41 54.0	-0.1
DSZ	**Denniston Nort**	**1.90**	**265**	P	Pb	03 41 58.8	-0.2
DVHZ	**Dannevirke**	**1.92**	**47**	P	Pn	03 41 56.7	0.0
LTZ	**Lake Taylor**	**1.92**	**232**	P	Pn	03 41 57.2	+0.4
WAZ	**Wanganui**	**1.93**	**15**	P	Pg	03 42 00.5	-0.9
TSZ	**Takapari Road**	**1.99**	**39**	P	Pn	03 41 58.3	+0.5
PNHZ	**Pukenui**	**2.22**	**40**	P	Pn	03 42 01.0	+0.1
WPHZ	**Waipukurau**	**2.23**	**46**	P	Pn	03 42 01.2	+0.2
NMEZ	**Namu Road**	**2.23**	**351**	P	Pb	03 42 04.6	+0.1
PREZ	**Palmer Road**	**2.28**	**357**	P	Pb	03 42 05.7	+0.3
OKCZ	**Okains Bay**	**2.30**	**204**	P	Pn	03 42 00.7	-1.3
KHEZ	**Kahui Hut**	**2.34**	**354**	P	Pb	03 42 06.5	+0.1
INZ	**Inchbonnie**	**2.42**	**242**	P	Pn	03 42 04.4	+0.9
MQZ	**McQueen's Vall**	**2.42**	**210**	P	Pn	03 42 01.8	-1.8
DREZ	**Durham Road**	**2.43**	**358**	P	Pb	03 42 06.9	-1.0
PKE	**Pukeiti**	**2.44**	**354**	P	Pb	03 42 07.1	-1.0
PKVZ	**Pokaka**	**2.46**	**19**	P	Pb	03 42 06.9	-1.5
MOVZ	**Moawhango**	**2.46**	**26**	P	Pn	03 42 05.6	+1.3
BHHZ	**Black Hill Sta**	**2.50**	**32**	P	Pn	03 42 06.5	+1.7
KRHZ	**Kereru**	**2.51**	**39**	P	Pn	03 42 04.8	-0.1
VRZ	**Vera Road**	**2.52**	**8**	P	Pb	03 42 08.6	-0.8
DRZ	**Dome Shelter**	**2.52**	**22**	P	Pb	03 42 10.0	+0.3
WHVZ	**Whangaehu Hut**	**2.52**	**23**	P	Pb	03 42 07.6	-2.1
FWVZ	**Far West T-bar**	**2.54**	**22**	P	Pb	03 42 07.8	-2.2
NGZ	**Ngauruhoe**	**2.63**	**22**	P	Pb	03 42 09.1	-2.3
KAHZ	**Kahuranaki**	**2.66**	**47**	P	Pn	03 42 06.5	-0.4
WTVZ	**West Tongariro**	**2.68**	**21**	P	Pb	03 42 10.5	-1.8
TWVZ	**Taurewa**	**2.69**	**19**	P	Pb	03 42 11.1	-1.2
KWHZ	**Kaweka Forest**	**2.71**	**37**	P	Pb	03 42 14.2	+1.4
KRVZ	**Karewarewa**	**2.71**	**22**	P	Pb	03 42 12.9	0.0
KATZ	**Kakaramea**	**2.84**	**22**	P	Pb	03 42 15.5	+0.5
RITZ	**Rihia Road**	**2.89**	**24**	P	Pb	03 42 15.9	+0.2
BKZ	**Black Stump Fm**	**2.96**	**35**	P	Pn	03 42 13.1	+2.0
RATZ	**Rangitukua**	**2.96**	**22**	P	Pb	03 42 17.7	+0.6
WVZ	**Waitaha Valley**	**3.04**	**240**	P	Pn	03 42 13.6	+1.5
WATZ	**Wairara**	**3.10**	**21**	P	Pb	03 42 21.0	+1.6
HIZ	**Hauiti**	**3.13**	**7**	P	Pb	03 42 17.0	-2.8
RPZ	**Rata Peaks**	**3.20**	**228**	P	Pn	03 42 14.4	0.0
MRHZ	**Matea Rd**	**3.21**	**30**	P	Pn	03 42 15.3	+0.7
KUTZ	**Kaahu Road**	**3.33**	**21**	P	Pb	03 42 25.1	+1.8
TLZ	**Tolley Road**	**3.42**	**16**	P	Pb	03 42 21.7	-3.0
FOZ	**Fox Glacier**	**3.84**	**239**	P	Pb	03 42 28.3	-3.7
URZ	**Urewera**	**3.98**	**33**	P	Pb	03 42 30.0	-4.3
TOZ	**Tahuroa Road**	**3.99**	**13**	P	Pb	03 42 31.8	-2.7
MWZ	**Matawai**	**4.10**	**38**	P	Pn	03 42 27.2	+0.4
ODZ	**Otahua Downs**	**4.35**	**217**	P	Pn	03 42 29.9	-0.3
MKAZ	**Moumakai**	**4.56**	**8**	P	Pn	03 42 36.4	+3.4
AWAZ	**Awhitu Peninsu**	**4.56**	**3**	P	Pn	03 42 37.2	+4.2
ETAZ	**East Tamaki Re**	**4.69**	**6**	P	Pb	03 42 40.6	-5.8
JCZ	**Jackson Bay**	**4.76**	**237**	P	Pn	03 42 40.2	+4.3
WIAZ	**Waiheke Island**	**4.86**	**8**	P	Pn	03 42 42.6	+5.4

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*SKO **27** 03:51:21.5, 41°.93N×23°.23E, h18km, M2.0, ML3.2*
*ISCJB **27** 03:51:21.4±0.3, 41°.95N±0°.01×23°.10E±0°.02, h8km±2km, Error ellipse: s-maj=2.3km s-min=1.7km az=169.0*
*SOF **27** 03:51:21.7, 41°.96N×23°.25E, h6km*
*BEO **27** 03:51:22.4±0.2, 41°.95N×23°.14E, h11km±2km, ML3.2/17*
*ISK **27** 03:51:22.6, 41°.88N×23°.09E, h10km, ML3.6/19*
*ATH **27** 03:51:22.5, 41°.88N×23°.21E, h26km±1km, ML3.0/3, Error ellipse: s-maj=4.2km s-min=1.4km az=167.0*
*THE **27** 03:51:23.4, 41°.86N×23°.21E, h8km, ML3.0/21, Error ellipse: s-maj=0.8km s-min=0.5km az=172.0*
ISC 27 03:51:21.9±0.8**, 41°.95N**±0°.01×**23°.16E**±0°.02**, h14**km±5km**, n169, σ1s61**/217**, 16C-9D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.10**	**215**	⇑*i*Pg	**Pg**	**03 51 25.2**	**0.0**
KKB				*i* Sg	**Sg**	**03 51 27.4**	**+0.1**
KKB	**Krupnik**	**0.10**	**215**	P	**Pg**	**03 51 25.1**	**0.0**
MMB	**Musomiste**	**0.56**	**131**	*i* Pg	**Pb**	**03 51 32.9**	**-0.6**
MMB				*i* Sg	**Sb**	**03 51 40.8**	**-0.6**
MMB	**Musomiste**	**0.56**	**131**	P	**Pb**	**03 51 32.8**	**-0.7**
VTS	**Vitosha**	**0.67**	**5**	*e*Pg	**Pg**	**03 51 34.5**	**-0.5**
VTS				*e*Sg	**Sg**	**03 51 42.9**	**-1.0**
VTS	**Vitosha**	**0.67**	**5**	⇑*i*P	**Pg**	**03 51 34.7**	**-0.3**
VTS				S	**Sg**	**03 51 42.5**	**-1.4**
VTS	**Vitosha**	**0.67**	**5**	⇑*i*Pg	**Pg**	**03 51 34.7**	**-0.3**
VTS				*i* Sg	**Sg**	**03 51 43.4**	**-0.5**
VTS	**Vitosha**	**0.67**	**5**	P	**Pg**	**03 51 34.7**	**-0.3**
VAY	**Valandovo**	**0.77**	**215**	*e*Pg	**Pb**	**03 51 36.9**	**-0.2**
VAY				*e*Sg	**Sb**	**03 51 47.7**	**+0.2**
VAY	**Valandovo**	**0.77**	**215**	*i* Pg	**Pb**	**03 51 37.3**	**+0.1**
VAY				*i* Sg	**Sb**	**03 51 48.1**	**+0.7**
VAY				*e*Lg	Lg	03 51 48.5	
	comp=N,991nm,0.7s						
VAY				*e*Lg	Lg	03 51 48.5	
	comp=E,424nm,0.5s						
NVR	**Nevrokopi**	**0.80**	**139**	P	**Pg**	**03 51 36.5**	**-0.9**
NVR				S	**Sg**	**03 51 46.9**	**-1.0**
	comp=E,2µm,0.2s						
NVR	**Nevrokopi**	**0.80**	**139**	P	**Pg**	**03 51 36.6**	**-0.9**
NVR				S	**Sg**	**03 51 47.3**	**-0.7**
NVR				AML	AML	03 51 51.0	
	comp=E,2543µm,0.2s						
NVR				AML	AML	03 51 51.2	
	comp=N,3239µm,0.2s						
KNT	**Kendrikon**	**0.81**	**194**	PG	**Pg**	**03 51 37.4**	**-0.3**
KNT				SG	**Sg**	**03 51 47.5**	**-0.9**
KNT	**Kendrikon**	**0.81**	**194**	P	**Pg**	**03 51 37.3**	**-0.5**
KNT				S	**Sg**	**03 51 47.9**	**-0.6**
	comp=N,1µm,0.6s						
KNT	**Kendrikon**	**0.81**	**194**	*i* Pg	**Pb**	**03 51 37.7**	**-0.2**
KNT				*i* Sg	**Sg**	**03 51 47.9**	**-0.6**
KNT	**Kendrikon**	**0.81**	**194**	P	**Pg**	**03 51 37.4**	**-0.3**
KNT				S	**Sg**	**03 51 47.6**	**-0.8**
KNT				AML	AML	03 51 52.3	
	comp=E,2113µm,0.2s						
KNT				AML	AML	03 51 52.7	
	comp=N,2788µm,0.3s						
SRS	**Serrai**	**0.90**	**159**	*e*Pg	**Pg**	**03 51 38.6**	**-0.7**
SRS				*e*Sg	**Sb**	**03 51 51.3**	**+0.3**
SRS	**Serrai**	**0.90**	**159**	P	**Pg**	**03 51 38.5**	**-0.7**
SRS				S	**Sb**	**03 51 50.5**	**-0.5**
	comp=N,1µm,0.4s						
SRS	**Serrai**	**0.90**	**159**	*i* Pg	**Pg**	**03 51 38.7**	**-0.7**
SRS	**Serrai**	**0.90**	**159**	P	**Pg**	**03 51 38.6**	**-0.7**
SRS				S	**Sb**	**03 51 50.8**	**-0.2**
SRS				AML	AML	03 51 54.2	
	comp=E,1981µm,0.4s						
SRS				AML	AML	03 51 54.4	
	comp=N,2656µm,0.2s						
PGB	**Panagyurishte**	**0.95**	**51**	P	**Pg**	**03 51 39.0**	**-1.4**
SOH	**Sokhos**	**1.14**	**173**	P	**Pg**	**03 51 43.1**	**-0.8**
SOH				S	**Sb**	**03 51 58.0**	**-0.1**
	comp=N,2µm,0.6s						
SOH	**Sokhos**	**1.14**	**173**	*i* Pg	**Pb**	**03 51 43.5**	**0.0**
SOH				*i* Sg	**Sb**	**03 51 58.2**	**+0.1**
SOH	**Sokhos**	**1.14**	**173**	P	**Pb**	**03 51 43.2**	**-0.2**
PLD	**Plovdiv**	**1.16**	**82**	PN	**Pn**	**03 51 44.6**	**+0.9**
PLD	**Plovdiv**	**1.16**	**82**	*e*Pg	**Pn**	**03 51 44.4**	**+0.7**
PLD				*e*Sg	**Sb**	**03 51 59.2**	**+0.6**
PLD	**Plovdiv**	**1.16**	**82**	P	**Pn**	**03 51 44.6**	**+0.9**
RZN	**Rozhen**	**1.19**	**102**	P	**Pg**	**03 51 43.8**	**-1.1**
SKO	**Skopje**	**1.29**	**271**	*e*Pg	**Pg**	**03 51 45.1**	**-1.6**
SKO	**Skopje**	**1.29**	**271**	*i* Pg	**Pb**	**03 51 47.1**	**+1.2**
SKO				*i* Sg	**Sn**	**03 52 04.9**	**+2.4**
SKO				*e*Lg	Lg	03 52 06.4	
	comp=N,10nm,0.4s						
SKO				*e*Lg	Lg	03 52 06.7	
	comp=E,8.4nm,0.4s						
BARS	**Barje**	**1.32**	**311**	*e*Pg	**Pg**	**03 51 46.9**	**-0.5**
BARS	**Barje**	**1.32**	**311**	*e*Pn	Pb	03 51 59.0	+12
BARS				*e*Sg	**Sg**	**03 52 04.2**	**-0.3**
THE	**Thessaloniki**	**1.33**	**187**	P	**Pg**	**03 51 46.0**	**-1.5**
THE				S	**Sg**	**03 52 03.8**	**-1.0**
	comp=E,2µm,0.6s						
THE	**Thessaloniki**	**1.33**	**187**	P	**Pg**	**03 51 46.3**	**-1.2**
HORT	**Hortiatis**	**1.35**	**182**	PN	**Pg**	**03 51 46.8**	**-1.3**
HORT				SN	**Sb**	**03 52 05.2**	**+0.9**
HORT	**Hortiatis**	**1.35**	**182**	P	**Pg**	**03 51 46.7**	**-1.3**
HORT				S	**Sg**	**03 52 04.4**	**-1.2**
	comp=E,735nm,0.5s						
HORT	**Hortiatis**	**1.35**	**182**	P	**Pg**	**03 51 46.7**	**-1.3**
KVLA	**Kavala**	**1.37**	**137**	P	**Pb**	**03 51 47.6**	**+0.3**
ZAPS	**Zavoj**	**1.38**	**344**	*e*Pg	**Pb**	**03 51 48.4**	**+0.9**
ZAPS				*e*Sg	**Sg**	**03 52 05.6**	**-0.8**
KAVA	**Kavala**	**1.39**	**133**	P	**Pn**	**03 51 47.0**	**+0.1**
KAVA				S	**Sg**	**03 52 04.9**	**-2.0**
	comp=E,2µm,0.5s						
KAVA	**Kavala**	**1.39**	**133**	P	**Pn**	**03 51 46.9**	**-0.1**
PLG	**Polygyros**	**1.59**	**172**	P	**Pn**	**03 51 50.0**	**+0.3**
PLG				S	**Sn**	**03 52 10.1**	**0.0**
	comp=E,668nm,0.7s						
PLG	**Polygyros**	**1.59**	**172**	P	**Pn**	**03 51 50.3**	**+0.6**
BLKB	**Belogradchik**	**1.71**	**348**	S	**Sn**	**03 52 14.8**	**+1.8**
KDZ	**Kurdzhali**	**1.71**	**99**	PN	**Pb**	**03 51 52.6**	**-0.6**
KDZ				SN	**Sb**	**03 52 14.8**	**+0.2**
OUR	**Ouranopolis**	**1.73**	**159**	PN	**Pn**	**03 51 51.9**	**+0.3**
OUR	**Ouranopolis**	**1.73**	**159**	P	**Pn**	**03 51 51.7**	**+0.1**
OUR				S	**Sn**	**03 52 13.8**	**+0.4**
OUR	**Ouranopolis**	**1.73**	**159**	P	**Pn**	**03 51 51.7**	**+0.1**
DIM	**Dimitrovgrad**	**1.77**	**86**	P	**Pb**	**03 51 54.5**	**+0.4**
FNA	**Florina**	**1.78**	**230**	*e*Pg	**Pn**	**03 51 53.5**	**+1.2**
FNA				*e*Sg	**Sb**	**03 52 17.4**	**+0.8**
FNA	**Florina**	**1.78**	**230**	P	**Pn**	**03 51 52.9**	**+0.6**
FNA				S	**Sn**	**03 52 17.0**	**+2.2**
FNA	**Florina**	**1.78**	**230**	P	**Pn**	**03 51 53.6**	**+1.2**
THAS	**Thassos island**	**1.79**	**138**	P	**Pn**	**03 51 52.4**	**+0.1**
THAS				S	**Sn**	**03 52 15.8**	**+1.0**
	comp=E,512nm,0.4s						
PLVB	**Pleven**	**1.79**	**36**	⇑*i*P	**Pg**	**03 51 56.1**	**-0.2**
PLVB	**Pleven**	**1.79**	**36**	S	**Sg**	**03 52 19.7**	**+0.1**
LIT	**Litokhoron**	**1.92**	**196**	P	**Pn**	**03 51 54.0**	**-0.2**
LIT				S	**Sn**	**03 52 18.0**	**-0.2**
LIT	**Litokhoron**	**1.92**	**196**	P	**Pn**	**03 51 54.2**	**0.0**
KZN	**Kozani**	**1.95**	**213**	P	**Pn**	**03 51 55.6**	**+0.9**
KZN				S	**Sn**	**03 52 20.4**	**+1.4**
	comp=E,95nm,0.5s						
RDO	**Rodhopi**	**1.96**	**114**	PN	**Pb**	**03 51 57.3**	**0.0**
RDO				SN	**Sb**	**03 52 22.2**	**+0.7**
RDO	**Rodhopi**	**1.96**	**114**	P	**Pn**	**03 51 55.3**	**+0.6**
RDO				S	**Sn**	**03 52 20.0**	**+1.0**
	comp=E,742nm,0.3s						
RDO	**Rodhopi**	**1.96**	**114**	P	**Pn**	**03 51 55.5**	**+0.8**
SELS	**Selova**	**1.97**	**311**	*e*Pn	**Pn**	**03 51 55.1**	**+0.2**
SELS				*e*Sn	**Sn**	**03 52 20.1**	**+0.7**
ZAGS	**Zajecar**	**1.98**	**340**	*e*Pn	**Pn**	**03 51 55.9**	**+0.9**
BOVS	**Bovan**	**1.99**	**328**	*e*Pn	**Pn**	**03 51 55.7**	**+0.5**
BOVS				*e*Sn	**Sn**	**03 52 22.0**	**+2.0**
PVL	**Pavlikeni**	**2.04**	**51**	P	**Pn**	**03 51 56.9**	**+1.1**
PHP	**Peshkopia**	**2.05**	**263**	P	**Pn**	**03 51 57.6**	**+1.5**
PAIG	**Paliouri**	**2.06**	**169**	P	**Pn**	**03 51 56.2**	**+0.1**
PAIG				S	**Sn**	**03 52 20.9**	**-0.7**
	comp=E,255nm,0.6s						
PAIG	**Paliouri**	**2.06**	**169**	P	**Pn**	**03 51 56.3**	**+0.1**
BAIL	**Bailesti**	**2.07**	**4**	⇓*i*P	**Pn**	**03 51 58.0**	**+1.7**
BAIL	**Bailesti**	**2.07**	**4**	S	**Sn**	**03 52 21.6**	**-0.2**
NEST	**Nestorio**	**2.21**	**227**	P	**Pn**	**03 51 59.6**	**+1.2**
NEST				S	**Sn**	**03 52 27.0**	**+1.4**
	comp=E,92nm,1.4s						
NEST	**Nestorio**	**2.21**	**227**	P	**Pn**	**03 51 59.6**	**+1.2**
VLAD	**Vladila**	**2.24**	**24**	⇓*i*P	**Pb**	**03 52 02.1**	**0.0**
VLAD	**Vladila**	**2.24**	**24**	S	**Sb**	**03 52 29.7**	**0.0**
SMTH	**Samothraki Isl**	**2.32**	**129**	P	**Pn**	**03 52 00.3**	**+0.6**
SMTH				S	**Sn**	**03 52 30.0**	**+2.0**
	comp=E,118nm,0.5s						
SMTH	**Samothraki Isl**	**2.32**	**129**	P	**Pn**	**03 52 00.6**	**+0.9**
ZIMR		**2.35**	**43**	S	**Sb**	**03 52 35.3**	**+2.4**
ALN	**Alexandroupoli**	**2.41**	**115**	PN	**Pb**	**03 52 03.8**	**-1.3**
ALN	**Alexandroupoli**	**2.41**	**115**	P	**Pn**	**03 52 01.8**	**+0.9**
ALN				S	**Sn**	**03 52 32.6**	**+2.4**
	comp=E,200nm,0.7s						
ALN	**Alexandroupoli**	**2.41**	**115**	P	**Pn**	**03 52 01.9**	**+1.0**
CRAR	**CRAIOVA**	**2.42**	**11**	⇓*i*P	**Pn**	**03 52 02.1**	**+1.1**
CRAR	**CRAIOVA**	**2.42**	**11**	S	**Sn**	**03 52 31.1**	**+0.7**
KPRO	**Kipourio**	**2.42**	**215**	P	**Pn**	**03 52 02.3**	**+1.2**
KPRO				S	**Sn**	**03 52 32.2**	**+1.7**
	comp=E,75nm,0.9s						
THL	**Klokotos Trika**	**2.54**	**200**	P	**Pn**	**03 52 02.8**	**+0.1**
THL				S	**Sn**	**03 52 34.5**	**+1.1**
	comp=E,58nm,0.8s						
ENEZ	**Enez**	**2.56**	**117**	PN	**Pb**	**03 52 05.8**	**-1.8**
LIA	**Limnos Island**	**2.56**	**143**	P	**Pn**	**03 52 03.1**	**+0.1**
LIA				S	**Sn**	**03 52 34.9**	**+1.0**
	comp=E,298nm,0.7s						
LIA	**Limnos Island**	**2.56**	**143**	P	**Pn**	**03 52 03.1**	**+0.1**
XOR	**Xorichti**	**2.58**	**180**	P	**Pn**	**03 52 03.4**	**0.0**
XOR				S	**Sn**	**03 52 34.1**	**-0.5**
	comp=E,172nm,0.5s						
XOR	**Xorichti**	**2.58**	**180**	P	**Pn**	**03 52 03.5**	**+0.2**
GRUS	**Gruza**	**2.64**	**318**	*e*Pn	**Pn**	**03 52 04.5**	**+0.4**
COPA	**Copaceanca**	**2.65**	**34**	S	**Sb**	**03 52 41.8**	**+0.3**
EDRB	**Edirne**	**2.67**	**91**	PN	**Pb**	**03 52 07.9**	**-1.7**
EDRB	**Edirne**	**2.67**	**91**	P	**Pn**	**03 52 04.8**	**+0.2**
KUBS	**Kucevo**	**2.69**	**337**	*e*Pn	**Pn**	**03 52 04.5**	**-0.3**
SJES	**Sjenica**	**2.69**	**300**	*e*Pn	**Pn**	**03 52 05.8**	**+0.9**
SRE	**Strehaia**	**2.71**	**1**	⇑*i*P	**Pn**	**03 52 06.4**	**+1.4**
SRE	**Strehaia**	**2.71**	**1**	S	**Sn**	**03 52 36.2**	**-1.4**
IVAS	**Ivanjica**	**2.75**	**307**	*e*Pn	**Pn**	**03 52 06.2**	**+0.6**
DJES	**Djerdap**	**2.75**	**350**	*e*Pn	**Pn**	**03 52 07.3**	**+1.6**
SKIA	**Skiathos**	**2.79**	**175**	P	**Pn**	**03 52 06.1**	**-0.1**
KESN	**Edirne-Kesan**	**2.88**	**112**	*i* P	**Pb**	**03 52 11.3**	**-1.9**
KESN				IAML_P			
	comp=Z,25nm,0.1s						
PDG	**Podgorica**	**2.94**	**281**	*e*Pn	**Pn**	**03 52 08.9**	**+0.7**
PDG	**Podgorica**	**2.94**	**281**	⇑*i*P	**Pn**	**03 52 09.2**	**+1.0**
PDG	**Podgorica**	**2.94**	**281**	S	**Sn**	**03 52 42.1**	**-1.2**
RAZG	**Razgrad**	**2.94**	**56**	⇓*i*P	**Pb**	**03 52 14.3**	**+0.1**
RAZG	**Razgrad**	**2.94**	**56**	S	**Sb**	**03 52 52.3**	**+2.3**
HERR	**Herculane**	**2.98**	**350**	⇑*i*P	**Pn**	**03 52 08.3**	**-0.4**
HERR	**Herculane**	**2.98**	**350**	S	**Sn**	**03 52 41.2**	**-3.0**
AGG	**Agios Georgios**	**3.00**	**193**	P	**Pn**	**03 52 09.3**	**+0.3**
AGG				S	**Sn**	**03 52 46.4**	**+1.7**
	comp=Z,70nm,1.4s						
AGG	**Agios Georgios**	**3.00**	**193**	P	**Pn**	**03 52 09.6**	**+0.5**
TRUS	**Trudelj**	**3.04**	**319**	*e*Pn	**Pn**	**03 52 10.2**	**+0.6**
BOZC	**Bozcaada**	**3.04**	**133**	PN	**Pn**	**03 52 12.4**	**+2.8**
BOZC	**Bozcaada**	**3.04**	**133**	*i* P	**Pn**	**03 52 11.3**	**+1.7**
BOZC				IAML_P			
	comp=Z,239nm,0.3s						
SGRR	**Singureni**	**3.06**	**41**	S	**Sb**	**03 52 53.0**	**-0.4**
LPK	**Lapseki**	**3.14**	**119**	PN	**Pn**	**03 52 13.8**	**+2.8**
DIVS	**Divibare**	**3.16**	**314**	*e*Pn	**Pn**	**03 52 11.9**	**+0.5**
DIVS				*e*Sn	**Sn**	**03 52 48.5**	**-0.4**
IGT	**Igoumenitsa**	**3.24**	**223**	*e*Pn	**Pn**	**03 52 12.6**	**+0.3**
RKY	**Sarkoy-Tekirda**	**3.28**	**111**	PN	**Pn**	**03 52 16.4**	**+3.5**
SART	**Tekirdag**	**3.28**	**111**	*i* P	**Pb**	**03 52 21.2**	**+1.2**
SART				IAML_P			
	comp=Z,285nm,0.1s						
BBLS	**Lazići**	**3.36**	**306**	*e*Pn	**Pn**	**03 52 15.3**	**+1.3**
BAYC	**CANAKKALE_Bayr**	**3.39**	**130**	*i* P	**Pn**	**03 52 16.0**	**+1.7**
BAYC				IAML_P			
	comp=Z,177nm,0.1s						
SIGR	**SIGRI**	**3.42**	**142**	PN	**Pn**	**03 52 17.9**	**+3.1**
SIGR	**SIGRI**	**3.42**	**142**	P	**Pn**	**03 52 15.1**	**+0.3**
GZR	**Gura Zlata**	**3.45**	**355**	⇑*i*P	**Pn**	**03 52 15.6**	**+0.3**
GZR	**Gura Zlata**	**3.45**	**355**	S	**Sn**	**03 52 54.0**	**-2.0**
ANX	**Ano Chora**	**3.49**	**196**	P	**Pn**	**03 52 16.7**	**+0.9**
ANX				S	**Sn**	**03 52 57.5**	**+0.5**
	comp=Z,70nm,0.6s						
LOT	**Lotru**	**3.52**	**7**	⇓*i*P	**Pn**	**03 52 16.5**	**+0.2**
LOT	**Lotru**	**3.52**	**7**	S	**Sn**	**03 52 57.7**	**-0.1**
CRLT	**Corlu**	**3.53**	**102**	PN	**Pn**	**03 52 19.9**	**+3.6**
ARR	**Arges**	**3.58**	**17**	⇑*i*P	**Pn**	**03 52 18.5**	**+1.5**
MRMT	**Marmara Adasi**	**3.60**	**111**	PN	**Pn**	**03 52 20.9**	**+3.5**
TREB	**Trebinje**	**3.65**	**284**	*e*Pn	**Pn**	**03 52 19.1**	**+1.1**
RASA	**Rasa**	**3.69**	**51**	S	**Sb**	**03 53 10.0**	**-1.5**

VOIR		3.74	21	⇑iP	Pn	03 52 20.5	+1.2
HAPS	Han Pijesak,BI	3.75	306	ePn	Pn	03 52 20.5	+1.0
BZS	Buzias	3.83	344	⇑iP	Pn	03 52 20.6	+0.2
BZS	Buzias	3.83	344	S	Sn	03 53 02.7	-2.5
CTYL	Yalikoy Yolu	3.87	95	PN	Pn	03 52 25.1	+4.2
CTYL	Yalikoy Yolu	3.87	95	S	Sb	03 53 20.4	+3.9
EDC	Edincik	3.90	113	PN	Pn	03 52 24.7	+3.4
DEV	Deva	3.93	357	⇑iP	Pn	03 52 22.9	+1.0
ICOR	Ion Corvin	4.03	56	S	Sb	03 53 18.6	-2.6
BALY	Balya	4.04	122	i P	Pn	03 52 27.4	+4.0
BALY				IAML_P			
	comp=Z,186nm,0.3s						
CTKS	Kestanelik-??a	4.07	98	PN	Pn	03 52 27.7	+4.0
MLR	Muntele Rosu	4.07	29	⇑iP	Pn	03 52 26.5	+2.6
MLR	Muntele Rosu	4.07	29	S	Sn	03 53 14.4	+3.0
STON	Ston	4.15	285	ePn	Pn	03 52 25.5	+0.7
ZEDA	zmir-Bergama	4.22	134	i P	Pn	03 52 28.2	+2.4
ZEDA				IAML_P			
	comp=Z,147nm,0.1s						
BALB	Balikesir	4.26	121	PN	Pn	03 52 29.9	+3.5
KCTX	Karacabey (Bur	4.27	112	PN	Pn	03 52 30.6	+4.1
STEP	BALIKESIR_Sava	4.32	125	i P	Pg	03 52 42.2	-2.3
STEP				IAML_P			
	comp=Z,185nm,0.2s						
TLB	Topalu	4.43	52	⇓iP	Pn	03 52 33.4	+4.7
TLB	Topalu	4.43	52	S	Sb	03 53 27.9	-4.8
SIRR	Siria	4.45	346	⇑iP	Pn	03 52 29.1	+0.1
KLYT	Kilyos	4.46	97	S	Sb	03 53 34.7	+1.0
ARMT	Armutlu	4.51	106	PN	Pn	03 52 33.4	+3.5
ISK	Istanbul-Kandi	4.51	99	PN	Pn	03 52 33.9	+4.0
TIRR	Tirgusor	4.58	55	⇑iP	Pn	03 52 36.4	+5.6
TIRR	Tirgusor	4.58	55	S	Sb	03 53 32.0	-5.1
BUY	Buyukada	4.61	102	PN	Pn	03 52 35.2	+4.0
PLOR	Plostina	4.64	32	⇑iP	Pn	03 52 34.1	+2.5
DURS	Dursunbey	4.67	118	i P	Pn	03 52 34.9	+2.9
DURS				IAML_P			
	comp=Z,387nm,0.4s						
VRI	Vrincioaia	4.68	32	⇓iP	Pn	03 52 34.5	+2.3
CFR	Carcaliu	4.84	47	⇓iP	Pn	03 52 39.0	+4.7
DRGR		4.85	356	⇓iP	Pn	03 52 35.2	+0.7
BLY	Banja Luka	5.18	305	ePn	Pn	03 52 39.0	0.0
KOLS	Kolonicke sedl	7.01	355	eSG	Sg	03 55 03.9	-2.8
VYHS	Vyhne	7.22	336	ePN	Pn	03 53 08.6	+1.6
VYHS				eSN	Sn	03 54 29.0	+0.3
NB2	NORSAR Subarra	20.45	343	P	P	03 55 58.2	-0.5
	comp=Z,0.2nm,0.5s,baz=149,slow=12						

BEO 27 03:56:53.9±0.3, 41°.96N×23°.19E, h5^{km}, ML1.4/5, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	0.66	3	ePg	Pg	03 57 05.5	-1.0
VTS				eSg	Sg	03 57 14.6	-0.5
VAY	Valandovo	0.79	216	ePg	Pg	03 57 08.5	-0.6
VAY				eSg	Sg	03 57 18.9	-0.4
SRS	Serrai	0.90	160	ePg	Pg	03 57 09.7	-1.4
SRS				eSg	Sg	03 57 23.4	+0.7
PLD	Plovdiv	1.14	82	ePg	Pg	03 57 14.4	-1.3
PLD				eSg	Sg	03 57 29.5	-0.9
BARS	Barje	1.33	310	ePg	Pn	03 57 18.0	-1.1
BARS				eSg	Sg	03 57 35.8	-0.8

SKO 27 03:57:30.9, 41°.94N×23°.28E, h15^{km}, M1.5, ML1.8, 1C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.16	244	⇑iPg	Pg	03 57 34.5	-0.6
KKB				i Sg	Sg	03 57 36.6	-1.2
MMB	Musomiste	0.48	136	i Pg	Pb	03 57 42.1	+0.9
MMB				i Sg	Sn	03 57 49.9	-1.7
VTS	Vitosha	0.68	357	i Pg	Pg	03 57 44.0	-0.3
VTS				i Sg	Sg	03 57 52.8	-0.5
VAY	Valandovo	0.82	221	i Pg	Pb	03 57 47.3	+0.5
VAY				i Sg	Sg	03 57 57.4	-0.1
VAY				eLg	Lg	03 57 57.7	
	comp=E,23nm,0.3s						
VAY				eLg	Lg	03 57 57.9	
	comp=N,18nm,0.5s						
KNT	Kendrikon	0.83	200	i Pg	Pb	03 57 47.1	0.0
KNT				i Sg	Sg	03 57 57.2	-0.8
SRS	Serrai	0.85	164	i Pg	Pg	03 57 47.9	+0.3

*MDD **27** 04:04:57.2±1.4, 34°.03N×4°.80W, h9^{km}±16^{km}, mb3.5/19, Error ellipse: s-maj=22.1km s-min=7.4km az=179.0, PRXIMO*

*SFS **27** 04:04:57.0, 34°.10N×4°.70W, ML3.4, FEZ (MARRUECOS)*

*ISCJB **27** 04:04:59.0±0.6, 34°.38N±0°.01×4°.77W±0°.02, h5^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=2.3km az=9.8*

*INMG **27** 04:04:59.1±1.6, 34°.25N×4°.82W, h6^{km}±10^{km}, ML2.2, Error ellipse: s-maj=5.1km s-min=3.5km az=87.0*

*CNRM **27** 04:05:00.5, 34°.30N×4°.73W, h5^{km}, ml3.3*

ISC 27 04:04:59.4±1.1, **34°.28N**±0°.02×**4°.76W**±0°.02, **h9^{km}**±9^{km}, **n68**, σ**1^{s}.61**/123, **1D, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SICH	Sidi Chahed	0.49	249	P	Pg	04 05 09.3	+0.3
SICH				S	Sb	04 05 18.0	+0.4
LCRM	LCR	0.60	188	S	Sn	04 05 23.4	-0.8
AKLM	AKL	0.78	73	P	Pg	04 05 13.9	-0.5
AKLM				S	Sg	04 05 23.2	-1.3
IFR	Ifrane	0.82	202	⇓eP	Pg	04 05 13.0	-2.3
IFR				eS	Sg	04 05 25.5	-0.5
CHEFC	Chefchaouen	0.95	330	P	Pb	04 05 18.4	+0.3
CHEFC				S	Sb	04 05 30.9	+0.1
PVLZ	Peæn de	0.96	23	P	Pn	04 05 19.0	-0.1
PVLZ				S	Sn	04 05 35.4	+2.5
PVLZ	Peæn de	0.96	23	eP	Pn	04 05 19.0	-0.1
PVLZ				eS	Sn	04 05 35.4	+2.5
RSA	Sarsar	1.06	305	P	Pn	04 05 21.0	+0.6
RSA				S	Sb	04 05 34.9	+1.0
PALE	Palemas	1.15	36	P	Pg	04 05 21.5	-0.1
PALE				S	Sb	04 05 36.7	+0.2
CZD	Col de Zad	1.27	191	P	Pn	04 05 25.3	+1.8
CZD				S	Sn	04 05 42.9	+2.0
MD31	MD31	1.41	180	P	Pg	04 05 27.5	+0.9
MD31				S	Sg	04 05 45.8	+1.0
MDT	Midelt	1.47	175	P	Pn	04 05 25.1	-1.0
MDT				S	Sg	04 05 47.4	+0.7
SMIR	Smir Dam	1.48	340	P	Pg	04 05 28.7	+0.8
SMIR				S	Sg	04 05 48.9	+1.7
CEUT	Ceuta	1.66	344	P	Pb	04 05 30.3	+0.2
CEUT				S	Sg	04 05 52.6	-0.2
ECEU	Ceuta	1.69	343	P	Pn	04 05 28.5	-0.6
	4.9nm,0.3s,SNR=7.9						
ZHG	ZHG	1.77	242	P	Pg	04 05 34.3	+0.9
ZHG				S	Sg	04 06 00.7	+4.2
EMEL	Melilla	1.80	55	P	Pn	04 05 29.7	-0.9
	11nm,0.2s,SNR=7.9						
EMEL				S	Sn	04 05 53.8	+0.3
	39nm,0.2s,SNR=7.9						
MELI	Melilla	1.81	56	S	Sn	04 05 53.4	-0.3
	2.8nm,2.4s						
MELI	Melilla	1.81	56	eS	Sn	04 05 52.8	-0.9
JBK	JBK	1.82	88	P	Pn	04 05 30.8	-0.2
JBK				S	Sn	04 05 54.3	0.0
TAF	Taforalt	2.01	74	P	Pn	04 05 34.6	+1.1
TAF				S	Sb	04 06 01.2	-0.1
EALB	Alboran	2.17	40	S	Sn	04 06 02.3	-0.5
	32nm,0.3s,SNR=7.9						
EMIJ	Mijas	2.28	360	P	Pn	04 05 35.9	-1.3
	6.2nm,0.7s,SNR=11						
EMIJ				S	Sn	04 06 06.2	+0.9
	5.6nm,0.3s,SNR=6.0						
GOLM	Goulmima	2.58	184	P	Pn	04 05 43.6	+2.1
GOLM				S	Sb	04 06 17.4	-0.3
TDRA	Tendrara	2.59	118	P	Pn	04 05 43.0	+1.3
TDRA				S	Sb	04 06 16.6	-1.6
EGOR	Sierra Gorda,	2.87	10	P	Pn	04 05 45.6	+0.2
	0.5nm,0.1s,SNR=7.9						
EGOR				S	Sn	04 06 21.2	+1.0
	20nm,0.5s,SNR=7.9						
ARF	Arif	2.88	171	P	Pn	04 05 48.1	+2.5
ARF				S	Sb	04 06 24.8	-1.6
EBER	Berja	3.02	30	P	Pn	04 05 46.6	-1.0
	2.7nm,0.4s,SNR=13						
EBER				S	Sn	04 06 24.6	+0.6
	21nm,0.5s,SNR=7.9						
EQUE	Quentar	3.11	20	P	Pn	04 05 49.0	+0.3
	3.3nm,0.3s,SNR=11						
EQUE				S	Sn	04 06 26.7	+0.8
	6.9nm,0.4s,SNR=5.1						
SRHM	Skhour des Reh	3.19	236	P	Pb	04 05 55.6	-0.6
SRHM				S	Sb	04 06 38.0	+2.8
ENIJ	Nijar	3.39	37	P	Pn	04 05 52.4	-0.1
	3.1nm,3.0s,SNR=7.9						
ENIJ				S	Sn	04 06 31.9	-1.1
	15nm,0.3s,SNR=7.9						
GORA	Gorafe	3.48	23	P	Pn	04 05 53.4	-0.4
	17nm,2.3s,SNR=7.9						
GORA				S	Sn	04 06 35.5	+0.4
	26nm,3.1s,SNR=7.9						
HORN	Hornachuelos	3.58	354	P	Pn	04 05 58.8	+3.8
HORN				S	Sn	04 06 40.1	+2.6
FIGM	Figuig	3.63	125	P	Pn	04 05 57.6	+1.7
FIGM				S	Sn	04 06 42.2	+3.2
OUZM	OUZ	3.77	207	P	Pb	04 06 02.3	-3.8
OUZM				S	Sb	04 06 51.0	-0.9
EQES	Quesada	3.77	21	P	Pn	04 05 58.5	+0.7
	2.8nm,0.3s,SNR=21						
EQES				S	Sn	04 06 43.4	+1.1
	4.6nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.81	337	P	Pn	04 05 57.8	-0.4
	1.1nm,0.4s,SNR=8.1						
EMIN				S	Sn	04 06 42.7	-0.3
	0.3nm,0.1s,SNR=7.9						
ECAB	El Cabril	3.82	352	P	Pn	04 05 59.1	+0.7
	0.8nm,0.3s,SNR=9.3						
ECAB				S	Sn	04 06 44.1	+0.6
	2.5nm,0.3s,SNR=7.9						
EADA	Adamuz	3.88	2	P	Pn	04 05 59.4	+0.2
	1.1nm,0.3s,SNR=15						
EADA				S	Sn	04 06 45.1	+0.2
	2.8nm,0.3s,SNR=7.9						
PBDV	Barranco-do-Ve	3.92	320	ePn	Pn	04 05 58.7	-1.1
PBDV				eSn	Sn	04 06 42.3	-3.6
PBDV	Barranco-do-Ve	3.92	320	P	Pn	04 05 58.7	-1.1
EGRO	El Granado	3.92	327	P	Pn	04 05 59.1	-0.7
	2.7nm,0.3s,SNR=12						
EGRO				S	Sn	04 06 45.0	-0.9
	2.1nm,0.1s,SNR=7.9						
PVAQ	Vaqueiros	3.93	323	ePn	Pn	04 05 58.6	-1.3
PVAQ				eSn	Sn	04 06 42.5	-3.7
PVAQ				A	A	04 06 49.1	
	4.5nm,0.4s						
PVAQ	Vaqueiros	3.93	323	P	Pn	04 05 58.6	-1.3
SESP	Santiago Espad	4.23	24	P	Pn	04 06 04.5	+0.4
	14nm,1.4s,SNR=7.9						
SESP				S	Sn	04 06 53.9	+0.3
	7.3nm,4.8s,SNR=7.9						
SESP	Santiago Espad	4.23	24	P	Pn	04 06 05.4	+1.3
SESP				S	Sn	04 06 56.6	+3.0
PCVE	Castro Verde	4.27	322	ePn	Pn	04 06 03.8	-0.8
PCVE				eSn	Sn	04 06 53.3	-1.2
PCVE				A	A	04 07 04.9	
	2.6nm,0.4s						
PCVE	Castro Verde	4.27	322	P	Pn	04 06 03.8	-0.8
PCVE				S	Sn	04 06 53.3	-1.2
	2.6nm,0.4s						
PFVI	Vila Bisbo	4.36	312	ePn	Pn	04 06 05.6	-0.2
PFVI	Vila Bisbo	4.36	312	P	Pn	04 06 04.8	-1.0
	9.5nm,1.8s,SNR=7.9						
MORF	Marmelete	4.37	315	ePn	Pn	04 06 05.3	-0.7
MORF				eSn	Sn	04 06 54.2	-2.8
MORF				A	A	04 06 57.0	
	1.9nm,0.2s						
MORF	Marmelete	4.37	315	P	Pn	04 06 05.3	-0.7
MORF				S	Sn	04 06 54.2	-2.8
	1.9nm,0.2s						
EMUR	La Murta	4.55	38	P	Pn	04 06 07.9	-0.6
	4.0nm,2.5s,SNR=7.9						
EMUR				S	Sn	04 07 00.6	-1.0
	6.8nm,3.4s,SNR=7.9						
EAH	EAH	4.83	238	P	Pn	04 06 14.7	+2.4
EAH				S	Sn	04 07 12.7	+4.3
TTIG	Tnine Tigouga,	4.86	221	P	Pn	04 06 14.9	+2.2
TTIG				S	Sn	04 07 13.7	+4.6
PNCL	Nicolau / Gran	4.89	323	ePn	Pn	04 06 12.3	-0.7
PNCL				eSn	Sn	04 07 07.1	-2.6
PNCL				A	A	04 07 21.5	
	2.8nm,0.5s						
PNCL	Nicolau / Gran	4.89	323	P	Pn	04 06 12.3	-0.7
PNCL				S	Sn	04 07 07.1	-2.6
	2.8nm,0.5s						
ETOB	Tobarra	5.06	30	P	Pn	04 06 15.9	+0.4
	1.6nm,0.3s,SNR=11						
ETOB				S	Sn	04 07 13.4	-0.8
	1.8nm,0.3s,SNR=7.9						
PAB	San Pablo	5.26	3	P	Pn	04 06 18.5	+0.2
	9.0nm,2.3s,SNR=7.9						
PAB				S	Sn	04 07 18.1	-1.0
	12nm,1.6s,SNR=7.9						
ESDC	Sonseca Array	5.42	7	P	Pn	04 06 20.8	+0.4
	0.1nm,0.2s,baz=182,slow=12,SNR=3.7						
ESDC				S	Sn	04 07 22.0	-0.9
	0.3nm,0.3s,baz=188,slow=23,SNR=6.8						
PMTG	Montargil	5.53	331	ePn	Pn	04 06 22.1	+0.3
PMTG				eSn	Sn	04 07 22.8	-2.7
PMTG				A	A	04 07 32.7	
	1.5nm,0.4s						
PMTG	Montargil	5.53	331	P	Pn	04 06 22.1	+0.3
PMTG				S	Sn	04 07 22.8	-2.7
	1.5nm,0.4s						
PMRV	Marv??o	5.55	338	ePn	Pn	04 06 22.0	-0.2
PMRV				eSn	Sn	04 07 23.6	-2.5
PMRV				A	A	04 07 34.6	
	1.4nm,0.7s						
PMRV	Marv??o	5.55	338	P	Pn	04 06 22.0	-0.2
PMRV				S	Sn	04 07 23.6	-2.5
	1.4nm,0.7s						
EPLA	Plasencia	5.87	350	P	Pn	04 06 26.1	-0.4
	0.8nm,0.9s,SNR=7.9						
ETOR	Torete	6.87	17	P	Pn	04 06 40.6	+0.2
	4.5nm,3.6s,SNR=7.9						
ELAN	Lanestosa	8.99	6	P	Pn	04 07 09.9	+0.5
	1.2nm,1.8s,SNR=7.9						
EALK	Alkurruntz	9.28	15	P	Pn	04 07 13.7	+0.3
	2.2nm,3.5s,SNR=7.9						

IDC 27 04:08:22.3±5.0, **21°.79S**×**178°.08W**, **h0^{km}**, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.7**/21, **mbtmp3.9**/3, **MS4.2**/1, **Ms1 4.2**/1, **ms1mx3.0**/27, **Error ellipse: s-maj=184.1km s-min=79.2km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	16.93	193	LR	LR	04 17 01.1	
	comp=Z,914nm,22.0s,baz=9.0,slow=31						
STKA	Stephens Creek	37.17	246	P	P	04 15 34.0	-1.2
	0.8nm,0.3s,baz=90,slow=6.1,SNR=4.2						
ASAR	Alice Springs	44.16	258	P	P	04 16 33.4	+0.3
	0.4nm,0.5s,baz=97,slow=7.6,SNR=5.8						
WRA	Warramunga Arr	44.36	263	P	P	04 16 35.1	+0.3
	0.8nm,0.4s,baz=98,slow=7.5,SNR=8.1						
AKASG	Malin Array Be	144.09	330	PKP	PKPdf	04 27 59.2	-0.6
	0.1nm,0.3s,baz=40,slow=4.6,SNR=5.4						

IDC 27 04:24:35.2±8.4, **15°.05S**×**174°.96W**, **h0^{km}**, **mb4.1**/4, **mb1 4.5**/4, **mb1mx3.8**/56, **mbtmp4.1**/4, **Error ellipse: s-maj=696.4km s-min=27.2km az=151.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.46	257	P	P	04 33 19.9	-0.1
	3.9nm,0.9s,baz=110,slow=16,SNR=1.6						
ASAR	Alice Springs	48.79	252	P	P	04 33 22.4	-0.1
	3.4nm,0.7s,baz=81,slow=8.6,SNR=5.5						
NVAR	Mina Array Bea	75.09	43	P	P	04 36 20.1	+0.7
	1.1nm,0.8s,baz=230,slow=8.0,SNR=7.2						
PDAR	Pinedale Array	83.02	42	P	P	04 37 02.1	-0.8
	1.0nm,0.9s,baz=216,slow=4.3,SNR=6.7						

*IDC **27** 04:24:32.7±0.4, 13°.14N×145°.62E, h0^{km}, mb4.8/40, mb1 4.9/41, mb1mx4.8/56, mbtmp4.8/41, MS4.7/32, Ms1 4.7/32, ms1mx4.6/41, Error ellipse: s-maj=12.6km s-min=9.5km az=82.0*

*ISCJB **27** 04:24:35.2±1.2, 13°.16N±0°.03×145°.47E±0°.03, h23^{km}±8^{km}, mb5.2/150, MS5.0/369, Error ellipse: s-maj=4.9km s-min=4.1km az=159.8*

*BJI **27** 04:24:36.6±0.0, 13°.16N×145°.68E, h45^{km}, mb5.0/48, mB5.2/50, Ms5.1/64, Ms7 4.9/62*

*NEIC **27** 04:24:36.7±1.9, 13°.10N×145°.52E, h22^{km}±3^{km}, mb5.4/145, MS5.0/334, Error ellipse: s-maj=10.7km s-min=8.0km az=163.0*

NEIC Felt [III] at Dededo. Also felt at Barrigada, Hagatna, Hagatna Heights, Santa Rita, Tamuning and Yigo.

*MOS **27** 04:24:37.5±1.0, 13°.17N×145°.44E, h43^{km}, mb5.3/66, MS4.9/35, Error ellipse: s-maj=9.7km s-min=4.9km az=108.7*

*DJA **27** 04:24:38.9±0.5, 13°N±4°×14°5E±°, h10^{km}, M5.4/36, mB5.8/18, mb5.4/36, MLv5.4/1, Mw(mB)5.4/18*

*GCMT **27** 04:24:38.7±0.1, 13°.01N±0°.01×145°.65E±0°.01, h12^{km}, MW5.3/110, Moment Tensor Solution. s87,c126; s110,c187; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.61±.02; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$-0.58±.02; $M_{r\theta}$-0.03±.04; $M_{\theta\phi}$-0.57±.01; $M_{\phi r}$0.57±.04; Best double couple: $M_0$0.99400×10^{17} NP1:ϕ_s7.00000°, δ66.00000°, λ61.00000°. NP2:ϕ_s241.00000°, δ37.00000°, λ138.00000°. Principal axes: T 0.9130, Plg58.0000°, Azm236.0000°; N 0.1610, Plg26.0000°, Azm20.0000°; P -1.0740, Plg16.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 04:24:37.6±0.5, **13°.20N**±0°.04×**145°.56E**±0°.05, **h31^{km}**±2^{km}, **h31^{km}:pP-P, n706**, σ**1^{s}.55**/444, **mb5.2**/149, **MS5.0**/369, **20C-13D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.77	300	Pn	Pn	04 24 53.4	+0.9
	4µm,0.3s,baz=146,slow=10.0,SNR=873						
GUMO	Guam	0.77	300	ePn	Pn	04 24 53.8	+1.3
GUMO	Guam	0.77	300	eP	Pn	04 24 53.8	+1.3
ANA2	Anatahan	3.13	3	ePn	Pb	04 25 28.9	-3.7
SARN	Sarigan	3.49	4	ePn	Pb	04 25 34.3	-4.4
PATS	Pohnpei	14.06	115	ePn	Pn	04 27 49.2	-5.7
GENI	Genyem	16.57	199	P	Pn	04 28 27.6	-0.3
SIJI	Sorong	19.90	226	P	P	04 29 06.8	-0.1
	baz=86,slow=13,SNR=2.2						
SIJI				LR	LR	04 35 30.2	
	comp=Z,1µm,20.8s,baz=260,slow=33						
JHJ	Hachijo jima 2	20.52	346	LR	LR	04 36 15.5	
	comp=Z,2µm,18.5s,baz=210,slow=34						
DAV	Davao City (W)	20.58	255	P	P	04 29 14.3	+0.1
	241nm,0.4s,baz=24,slow=3.9,SNR=3.8						
DAV				LR	LR	04 35 45.6	
	comp=Z,2µm,21.6s,baz=84,slow=33						
DAV	Davao City (W)	20.58	255	eP	P	04 29 12.8	-1.4
	472nm,0.4s						
DAV				LR	LR		
	comp=Z,2µm,21.0s						
FAKI	Fak Fak	20.76	220	eP	Pn	04 29 19.9	+1.2
	comp=Z,289nm,1.1s						
FAKI	Fak Fak	20.76	220	P	P	04 29 17.3	+1.2
H11S3	WAKE ISLAND Hy	20.99	73	T	T	04 51 29.8	
	baz=255,slow=75,SNR=31						
H11S1	WAKE ISLAND Hy	21.01	73	T	T	04 51 25.1	
	baz=255,slow=75,SNR=28						
H11S2	WAKE ISLAND Hy	21.01	73	T	T	04 51 26.1	
	baz=255,slow=75,SNR=19						
CGP	Cagayan de Oro	21.02	259	eP	P	04 29 20.6	+1.6
JOW	Kunigami	21.12	313	P	P	04 29 20.6	+0.6
	comp=Z,3.1nm,0.9s,baz=135,slow=12,SNR=2.4						
JOW	Kunigami	21.12	313	eP	P	04 29 20.6	+0.6
	comp=Z,251nm,1.4s						
WAKE	Wake Island	21.13	71	PFAKE		04 29 30.0	+10
WAKE				LR	LR		
	comp=Z,2µm,20.0s						
H11N1	WAKE ISLAND Hy	21.45	70	T	T	04 52 28.2	
	baz=257,slow=73,SNR=30						
H11N2	WAKE ISLAND Hy	21.46	70	T	T	04 52 36.6	
	baz=257,slow=73,SNR=36						
H11N3	WAKE ISLAND Hy	21.47	70	T	T	04 52 36.9	
	baz=257,slow=73,SNR=46						
TNTI	Ternate	21.84	237	PFAKE		04 29 40.0	+12
TNTI				LR	LR		
	comp=Z,800nm,20.0s						
TNTI	Ternate	21.84	237	P	P	04 29 25.8	-2.0
SGSI	Sangihe	21.93	246	P	P	04 29 28.9	+0.2
KWAJ	Kwajalein Atol	22.08	99	PFAKE		04 29 40.0	+10
KWAJ				LR	LR		
	comp=Z,3µm,18.0s						
RCP	Roxas	22.34	268	⇑eP	P	04 29 32.2	-1.0
PMG	Port Moresby	22.51	176	P	P	04 29 32.9	-2.1
	comp=Z,17nm,0.5s,baz=357,slow=8.9,SNR=3.9						
LBMI	Labuha	22.57	234	P	P	04 29 34.0	-1.6
JNU	Nakatsue	23.93	328	P	P	04 29 49.4	+0.3
	comp=Z,22nm,1.0s,baz=121,slow=8.5,SNR=6.6						
JNU	Nakatsue	23.93	328	eP	P	04 29 50.6	+1.4
	comp=Z,93nm,1.0s						
MJAR	Matsushiro Arr	24.16	345	P	P	04 29 50.3	-0.9
	comp=Z,40nm,1.1s,baz=177,slow=11,SNR=47						
MJAR				LR	LR	04 38 55.2	
	comp=Z,2µm,18.9s,baz=145,slow=36						
MAJO	Matsushiro	24.16	345	eP	P	04 29 50.5	-0.7
	comp=Z,182nm,1.5s						
MAJO				LR	LR		
	comp=Z,3µm,18.0s						
MAJO	Matsushiro	24.16	345	eP	P	04 29 50.5	-0.7
MAJO				pmax	pmax		
	comp=Z,182nm,1.5s						
MAJO				MLR	MLR		
	comp=Z,3µm,18.0s						
MAT	Matsushiro	24.16	345	P	P	04 29 50.0	-1.2
MAT				S	S	04 34 04.1	-3.3
MJB9	Matsu-Tunnel	24.17	345	eP	P	04 29 50.4	-0.9
	comp=Z,186nm,1.5s						
MJB9				LR	LR		
	comp=Z,3µm,18.0s						
SANI	Sanana	24.63	233	P	P	04 30 02.4	+6.8
YULB	Yu-li	25.13	297	eP	P	04 30 00.4	+0.3
	comp=Z,245nm,1.8s						
TWG	Pinlang	25.14	296	eP	P	04 30 01.3	+1.1
	comp=Z,418nm,1.6s						
YHNB	Yeheng	25.51	300	PFAKE		04 30 20.0	+16
YHNB				LR	LR		
	comp=Z,5µm,20.0s						
TATO	Taipei	25.54	301	PFAKE		04 30 20.0	+16
TATO				LR	LR		
	comp=Z,4µm,19.0s						
SSLB	Suanglung	25.56	298	eP	P	04 30 04.2	+0.1
	comp=Z,83nm,1.0s						
TPUB	Ta-pu	25.68	297	eP	P	04 30 04.6	-0.5
	comp=Z,163nm,1.6s						
HNR	Honiara	26.64	147	LR	LR	04 40 47.1	
	comp=Z,3µm,19.4s,baz=316,slow=37						
HNR	Honiara	26.64	147	PFAKE		04 30 30.0	+16
HNR				LR	LR		
	comp=Z,3µm,19.0s						
LUWI	Luwuk	26.66	240	eP	P	04 30 12.9	-1.1
	comp=Z,754nm,1.5s						
LUWI	Luwuk	26.66	240	P	P	04 30 13.9	-0.1
COEN	Coen	27.08	185	eP	P	04 30 17.6	-0.2
	comp=Z,30nm,0.9s						
QZH	Quanzhou	27.97	299	⇑iP	P	04 30 24.8	-0.9
QZH				LR	LR		
	comp=Z,1µm,20.5s						
QZH				LR	LR		
	comp=Z,1µm,19.9s						
QZH				LR	LR		
	comp=Z,1µm,18.3s						
KNMB	Chin-men Tao	27.99	298	PFAKE		04 30 40.0	+14
KNMB				LR	LR		
	comp=Z,2µm,19.0s						
SSE	Sheshan	28.64	312	PFAKE		04 30 40.0	+8.4
SSE				LR	LR		
	comp=Z,2µm,19.0s						
ERM	Erimo	28.79	356	PFAKE		04 30 50.0	+17
ERM				LR	LR		
	comp=Z,2µm,18.0s						
ERM	Erimo	28.79	356	⇑eP	P	04 30 33.4	+0.6
ERM				pmax	pmax		
	comp=Z,26nm,1.0s						
KSRS	Korea Array	28.83	330	P	P	04 30 33.8	+0.5
	comp=Z,3.3nm,0.8s,baz=141,slow=10,SNR=14						
KSRS				PcP	PcP	04 33 43.7	+1.3
	comp=Z,15nm,1.2s,baz=157,slow=2.6,SNR=11						
KSRS				ScP	ScP	04 37 24.8	+3.0
	comp=Z,2.0nm,1.0s,baz=151,slow=2.8,SNR=3.1						
KSRS	Korea Array	28.83	330	P	P	04 30 33.8	+0.5
KSRS						04 33 43.7	
KSRS				pmax	pmax		

	comp=Z,5.0nm,0.8s						
KS15	**Wonju Array Si**	**28.84**	**330**	*e*P	**P**	**04 30 32.3**	**-1.0**
	comp=Z,29nm,1.0s						
KS15				*e*PcP	**PcP**	**04 33 43.7**	**+1.2**
TARA	**Tarawa**	**29.54**	**111**	PFAKE		04 30 50.0	+10
TARA				LR	LR		
	comp=Z,2µm,18.0s						
KKM	**Kota Kinabalu**	**29.77**	**259**	PFAKE		04 30 50.0	+8.1
KKM				LR	LR		
	comp=Z,1µm,19.0s						
BNSI	**Bone**	**30.73**	**237**	P	**P**	**04 30 51.1**	**+0.8**
SPSI	**Sidrap Palu**	**30.76**	**238**	P	P	04 30 58.3	+7.7
NJ2	**Nanjing**	**30.84**	**312**	*e*P	**P**	**04 30 47.5**	**-3.5**
NJ2				PP	**PnPn**	**04 31 52.3**	**+0.4**
NJ2				S	**S**	**04 35 51.3**	**-1.6**
NJ2				sS	sS	04 36 15.0	+8.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,370nm,11.4s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
NJ2				LR	LR		
	comp=Z,1µm,15.6s						
NJ2				LR	LR		
	comp=Z,2µm,18.5s						
ASAJ	**Asahikawa**	**30.92**	**356**	P	**P**	**04 30 52.2**	**+0.6**
	comp=Z,18nm,1.1s,baz=180,slow=19,SNR=3.4						
SOEI	**Soe**	**31.09**	**224**	PFAKE		04 31 10.0	+16
SOEI				LR	LR		
	comp=Z,900nm,21.0s						
SOEI	**Soe**	**31.09**	**224**	P	**P**	**04 30 53.9**	**+0.3**
KAPI	**Kappang**	**31.37**	**236**	LR	LR	04 45 47.6	
	comp=Z,410nm,19.1s,baz=46,slow=41						
MSHR	**Mys Shultsa**	**31.82**	**340**	⇑*e*P	**P**	**04 30 59.7**	**+0.1**
KUR	**Kuril'sk**	**31.99**	**3**	⇑*e*P	**P**	**04 31 01.5**	**+0.5**
VLA	**Vladivostok**	**32.07**	**341**	*de*P	**P**	**04 31 03.2**	**+1.5**
VLA				pmax	pmax		
	comp=Z,62nm,1.0s						
USA0B	**Ussuriysk Arra**	**33.01**	**342**	*e*P	**P**	**04 31 10.3**	**+0.3**
	comp=Z,15nm,0.9s						
USA0B				LR	LR		
	comp=Z,1µm,22.0s						
USRK	**Ussuriysk Ar.**	**33.01**	**342**	P	**P**	**04 31 10.3**	**+0.3**
	comp=Z,7.3nm,0.8s,baz=149,slow=8.4,SNR=15						
USRK				LR	LR	04 43 32.3	
	comp=Z,1µm,18.2s,baz=144,slow=34						
CTA	**Charters Tower**	**33.08**	**179**	P	**P**	**04 31 09.8**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=352,slow=14,SNR=2.1						
CTAO	**Charters Tower**	**33.08**	**179**	PFAKE		04 31 20.0	+9.1
CTAO				LR	LR		
	comp=Z,800nm,18.0s						
WHN	**Wuhan**	**33.55**	**306**	⇓P	**P**	**04 31 18.5**	**+3.6**
WHN				PP	**PnPn**	**04 32 28.0**	**+1.1**
WHN				LR	LR		
	comp=Z,2µm,16.9s						
WHN				LR	LR		
	comp=Z,4µm,17.5s						
WHN				LR	LR		
	comp=Z,5µm,21.0s						
YSS	**Yuzh-Sakhalins**	**33.73**	**357**	PFAKE		04 31 30.0	+14
YSS				LR	LR		
	comp=Z,1µm,22.0s						
YSS	**Yuzh-Sakhalins**	**33.73**	**357**	*e*P	**P**	**04 31 16.2**	**0.0**
YSS				MLR	MLR		
	comp=Z,1µm,18.0s						
MDJ	**Mudanjiang**	**34.16**	**340**	PFAKE		04 31 30.0	+10
MDJ				LR	LR		
	comp=Z,2µm,22.0s						
MDJ	**Mudanjiang**	**34.16**	**340**	P	**P**	**04 31 20.8**	**+0.8**
MDJ				pP	pwP	04 31 33.0	+0.6
MDJ				sP	sP	04 31 39.0	+8.1
MDJ				S	**S**	**04 36 45.8**	**+1.5**
MDJ				sS	sS	04 37 06.8	+8.9
MDJ				PcS	**PcS**	**04 37 42.5**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,18nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,330nm,6.7s						
MDJ				LR	LR		
	comp=Z,1µm,18.9s						
MDJ				LR	LR		
	comp=Z,1µm,20.6s						
MDJ				LR	LR		
	comp=Z,2µm,19.7s						
SBUM	**Sibu**	**34.66**	**255**	*e*P	**P**	**04 31 25.1**	**+0.4**
	comp=Z,47nm,1.2s						
SBUM				LR	LR		
	comp=Z,300nm,20.0s						
WRAB	**Tennant Creek**	**34.72**	**199**	*e*P	**P**	**04 31 23.8**	**-1.3**
	comp=Z,206nm,1.8s						
WRAB	**Tennant Creek**	**34.72**	**199**	*de*P	**P**	**04 31 24.2**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,71nm,1.7s						
WB2	**Warramunga Arr**	**34.73**	**199**	*e*P	**P**	**04 31 23.8**	**-1.4**
	comp=Z,215nm,1.8s						
WRA	**Warramunga Arr**	**34.73**	**199**	P	**P**	**04 31 24.4**	**-0.8**
	comp=Z,14nm,0.7s,baz=15,slow=9.8,SNR=54						
QIZ	**Qiongzhong**	**34.75**	**284**	PFAKE		04 31 40.0	+15
QIZ				LR	LR		
	comp=Z,3µm,20.0s						
QIZ	**Qiongzhong**	**34.75**	**284**	P	**P**	**04 31 24.5**	**-1.0**
QIZ				S	**S**	**04 36 52.0**	**-2.1**
QIZ				sS	**sS**	**04 37 11.3**	**+3.4**
QIZ				pmax	pmax		
	comp=Z,230nm,3.6s						
QIZ				LR	LR		
	comp=Z,660nm,22.6s						
QIZ				LR	LR		
	comp=Z,2µm,18.6s						
QIZ				LR	LR		
	comp=Z,2µm,19.1s						
DLV	**T Lat**	**36.18**	**272**	PFAKE		04 31 50.0	+12
DLV				LR	LR		
	comp=Z,2µm,20.0s						
STKI	**Sintang**	**36.20**	**252**	P	**P**	**04 31 39.0**	**+1.0**
KSM	**Kuching**	**36.78**	**254**	*e*P	**P**	**04 31 42.6**	**-0.4**
	comp=Z,93nm,1.1s						
KSM				LR	LR		
	comp=Z,600nm,21.0s						
BJT	**Baijiatuau**	**37.16**	**321**	PFAKE		04 32 00.0	+14
BJT				LR	LR		
	comp=Z,900nm,20.0s						
PBKI	**Pangkalan Bun**	**37.16**	**247**	P	**P**	**04 31 47.6**	**+1.5**
BJI	**Beijing**	**37.16**	**321**	⇓*i*P	**P**	**04 31 46.5**	**+0.6**
BJI				PP	**PP**	**04 33 11.0**	**+0.1**
BJI				S	**S**	**04 37 30.0**	**-0.6**
BJI				pmax	pmax		
	comp=Z,80nm,3.6s						
BJI				LR	LR		
	comp=Z,330nm,18.5s						
BJI				LR	LR		
	comp=Z,380nm,16.7s						
BJI				LR	LR		
	comp=Z,430nm,20.6s						
ENH	**Enshi**	**37.36**	**303**	PFAKE		04 32 00.0	+12
ENH				LR	LR		
	comp=Z,2µm,20.0s						
MIDW	**Midway**	**37.59**	**61**	PFAKE		04 32 00.0	+10
MIDW				LR	LR		
	comp=Z,2µm,20.0s						
KLR	**Kul'dur**	**37.69**	**345**	P	**P**	**04 31 49.9**	**-0.3**
	comp=Z,7.9nm,1.0s,baz=149,slow=9.2,SNR=15						
KLR				PcP	**PcP**	**04 34 07.8**	**+0.8**
	comp=Z,6.3nm,0.9s,baz=239,slow=1.7,SNR=3.7						
KLR	**Kul'dur**	**37.69**	**345**	*c i*P	**P**	**04 31 49.2**	**-1.0**
KLR				pmax	pmax		
	comp=Z,13nm,1.1s						
GRNR	**Gornyy**	**38.20**	**351**	*e*P	**P**	**04 31 54.1**	**-0.4**
GRNR				*e*		04 34 09.0	
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
TIY	**Taiyuan**	**38.27**	**316**	*e*P	P	04 32 04.0	+8.6
TIY				S	**S**	**04 37 42.8**	**-4.8**
TIY				pmax	pmax		
	comp=Z,230nm,9.3s						
TIY				LR	LR		
	comp=N,990nm,17.1s						
TIY				LR	LR		
	comp=E,2µm,16.1s						
TIY				LR	LR		
	comp=Z,3µm,17.2s						
SKR	**Severo-Kuril’s**	**38.36**	**11**	⇑*e*P	**P**	**04 31 56.6**	**+0.8**
AS31	**Alice Springs**	**38.37**	**197**	*e*P	**P**	**04 31 55.3**	**-0.9**
	comp=Z,5.5nm,0.6s						
ASAR	**Alice Springs**	**38.37**	**197**	P	**P**	**04 31 55.4**	**-0.9**
	comp=Z,7.5nm,0.6s,baz=26,slow=8.3,SNR=86						
ASAR				LR	LR	04 47 57.6	
	comp=Z,656nm,20.3s,baz=20,slow=37						
GYA	**Guiyang**	**38.73**	**296**	P	**P**	**04 32 00.8**	**+1.3**
GYA				pP	pwP	04 32 13.0	+1.1
GYA				sP	sP	04 32 18.5	+7.7
GYA				PP	**PnPn**	**04 33 34.3**	**+3.6**
GYA				S	**S**	**04 37 59.0**	**+4.0**
GYA				sS	sS	04 38 18.5	+10
GYA				pmax	pmax		
	comp=Z,30nm,0.5s						
GYA				pmax	pmax		
	comp=Z,250nm,8.0s						
GYA				LR	LR		
	comp=Z,1µm,17.3s						
GYA				LR	LR		
	comp=Z,2µm,18.1s						
GYA				LR	LR		
	comp=Z,3µm,18.8s						
XAN	**Xi'an**	**39.16**	**308**	PFAKE		04 32 10.0	+7.1
XAN				LR	LR		
	comp=Z,2µm,19.0s						
XAN	**Xi'an**	**39.16**	**308**	P	**P**	**04 32 02.5**	**-0.4**
XAN				pP	pwP	04 32 14.5	-0.8
XAN				PP	**PnPn**	**04 33 37.3**	**+1.6**
XAN				S	**S**	**04 37 59.8**	**-1.3**
XAN				pmax	pmax		
	comp=Z,250nm,7.3s						
XAN				LR	LR		
	comp=Z,380nm,17.2s						
XAN				LR	LR		
	comp=Z,1µm,18.1s						
XAN				LR	LR		
	comp=Z,2µm,18.4s						
NGJI	**Ngawi**	**39.55**	**241**	P	**P**	**04 32 10.8**	**+4.6**
	comp=Z,85nm,1.5s						
PWJI	**Pagerwojo**	**39.60**	**240**	P	**P**	**04 32 05.2**	**-1.4**
PANO	**Nakornpanom**	**39.66**	**281**	P	**P**	**04 32 08.3**	**+1.2**
	comp=Z,1.0nm,1.2s						
SLVN	**Son La**	**40.49**	**287**	*e*P	**P**	**04 32 15.0**	**+0.9**
SLVN				LR	LR		
	comp=Z,3µm,20.0s						
HHC	**Hu-ho-hao-te**	**40.50**	**319**	P	**P**	**04 32 13.3**	**-0.7**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DZM	**Mont Dzumac**	**40.60**	**149**	*e*S	**S**	**04 38 24.8**	**+2.0**
	comp=Z,384nm,30.0s						
DZM				*e*LR	LR	04 43 17.6	
	comp=Z,2µm,24.9s						
DZM	**Mont Dzumac**	**40.60**	**149**	LR	LR	04 49 28.0	
	comp=Z,2µm,18.4s,baz=344,slow=37						
UGM	**Wanagama**	**40.63**	**241**	*e*P	**P**	**04 32 15.7**	**+0.4**
	comp=Z,420nm,1.3s						
UGM	**Wanagama**	**40.63**	**241**	P	**P**	**04 32 17.1**	**+1.9**
	comp=Z,257nm,1.3s						
TPI	**Tanjungpandan**	**40.82**	**250**	P	**P**	**04 32 17.2**	**+0.4**
	comp=Z,55nm,1.6s,comp=Z,955nm						
PEA0B	**Petropavlovsk-**	**40.97**	**11**	*e*P	**P**	**04 32 18.2**	**+0.7**
	comp=Z,70nm,1.3s						
PETK	**Petropavlovsk-**	**40.97**	**11**	P	**P**	**04 32 17.8**	**+0.3**
	comp=Z,16nm,1.0s,baz=194,slow=5.4,SNR=19						
PETK				PcP	**PcP**	**04 34 16.8**	**-0.5**
	comp=Z,5.4nm,0.9s,baz=184,slow=3.5,SNR=3.4						
PEA1	**Petropavlovsk-**	**40.98**	**11**	*e*P	**P**	**04 32 17.8**	**+0.2**
PEA1				*e*PcP	**PcP**	**04 34 16.8**	**-0.5**
NONG	**Nongkai**	**41.06**	**282**	P	P	04 32 31.2	+12
PET	**Petropavlovsk**	**41.08**	**12**	PFAKE		04 32 30.0	+12
PET				LR	LR		
	comp=Z,600nm,20.0s						
PET	**Petropavlovsk**	**41.08**	**12**	*e*P	**P**	**04 32 18.5**	**+0.1**
PET				pmax	pmax		
	comp=Z,46nm,1.2s						
BTO	**Baotou**	**41.37**	**318**	*e*P	**P**	**04 32 21.8**	**+0.7**
KPJI	**Karang Pucung**	**41.71**	**243**	P	**P**	**04 32 24.5**	**+0.5**
	comp=Z,80nm,1.1s						
HIA	**Hailar**	**41.78**	**335**	*e*P	P	04 32 29.2	+5.0
	comp=Z,26nm,1.0s						
HIA				LR	LR		
	comp=Z,1µm,19.0s						
HIA	**Hailar**	**41.78**	**335**	P	**P**	**04 32 23.1**	**-1.2**
HIA				pmax	pmax		
	comp=Z,181nm,1.2s						
JCJI	**Jatiwangi**	**41.88**	**244**	P	**P**	**04 32 27.9**	**+2.4**
	comp=Z,152nm,0.4s						
KMI	**Kunming**	**41.98**	**293**	PFAKE		04 32 40.0	+14
KMI				LR	LR		
	comp=Z,1µm,21.0s						
KMI	**Kunming**	**41.98**	**293**	P	**P**	**04 32 27.0**	**+0.5**
KMI				pP	pwP	04 32 39.8	+0.9
KMI				sP	sP	04 32 44.5	+7.0
KMI				S	**S**	**04 38 41.8**	**-1.9**
KMI				sS	sS	04 39 01.8	+4.2
KMI				SS	**SS**	**04 41 44.3**	**-6.9**
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,280nm,10.9s						
KMI				LR	LR		
	comp=Z,390nm,20.1s						
KMI				LR	LR		
	comp=Z,400nm,14.5s						
KMI				LR	LR		
	comp=Z,590nm,18.2s						
CHAI	**Chaiyaphum**	**42.20**	**279**	P	**P**	**04 32 27.2**	**-0.9**
	comp=Z,43µm,0.5s,comp=Z,607µm						
CD2	**Chengdu**	**42.27**	**302**	P	**P**	**04 32 27.3**	**-1.3**
CD2				sP	pwP	04 32 47.5	+6.5
CD2				PcP	**PcP**	**04 34 20.3**	**-1.9**
CD2				S	**S**	**04 38 48.0**	**+0.5**
CD2				sS	sS	04 39 03.5	+2.1
CD2				SS	**SS**	**04 41 55.5**	**-1.0**
CD2				pmax	pmax		
	comp=Z,20nm,1.2s						
CD2				pmax	pmax		
	comp=Z,300nm,9.4s						
CD2				LR	LR		
	comp=Z,1µm,19.9s						
CD2				LR	LR		
	comp=Z,1µm,19.9s						
CD2				LR	LR		
	comp=Z,2µm,22.8s						
CISI	**Cisompet, Garu**	**42.78**	**243**	*e*P	**P**	**04 32 31.5**	**-1.4**
	comp=Z,196nm,1.4s						
CISI	**Cisompet, Garu**	**42.78**	**243**	P	**P**	**04 32 34.4**	**+1.5**
	comp=Z,104nm,1.2s,comp=Z,6µm						
PSA00	**Pilbara Seismi**	**42.79**	**216**	*e*P	**P**	**04 32 32.6**	**-0.2**
	comp=Z,99nm,1.4s						
MYKOM	**Kota Tinggi**	**42.79**	**258**	PFAKE		04 32 40.0	+7.0
MYKOM				LR	LR		
	comp=Z,900nm,21.0s						
ZEA	**Zeya**	**42.96**	**344**	*e*P	**P**	**04 32 33.0**	**-0.8**
ZEA				*e*		04 42 33.0	
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,18.0s						
PBKT	**Sadao Pong**	**43.16**	**280**	P	**P**	**04 32 36.6**	**+0.8**
	comp=Z,14nm,0.9s						
UTTA	**Uttaradit**	**43.53**	**282**	P	**P**	**04 32 40.0**	**+1.1**
	comp=Z,18µm,0.8s						
ARMA	**Armidale**	**43.76**	**172**	*e*P	**P**	**04 32 39.8**	**-0.7**
	comp=Z,45nm,1.6s						
LZH	**Lanzhou**	**43.78**	**309**	*e*P	**P**	**04 32 41.5**	**+0.6**
LZH				pP	pwP	04 32 55.0	+1.6
LZH				sP	sP	04 33 00.5	+8.2
LZH				PcP	**PcP**	**04 34 29.0**	**+1.7**
LZH				*e*S	**S**	**04 39 02.5**	**-7.3**
LZH				pmax	pmax		
	comp=Z,32nm,1.0s						
LZH				pmax	pmax		
	comp=Z,230nm,6.0s						
LZH				LR	LR		
	comp=Z,600nm,17.9s						
LZH				LR	LR		
	comp=Z,980nm,17.6s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
PHRA	**Phrae**	**43.83**	**283**	P	**P**	**04 32 42.5**	**+1.2**
	comp=Z,0.8nm,1.3s						
PAYA	**Payao**	**44.18**	**284**	P	**P**	**04 32 45.1**	**+1.0**
	comp=Z,37µm,0.8s						
CGJI	**Cibinong**	**44.22**	**246**	P	**P**	**04 32 42.5**	**-1.9**
	comp=Z,165nm,1.2s						
KLI	**Kotabumi**	**44.22**	**249**	P	**P**	**04 32 45.2**	**+0.8**
	comp=Z,96nm,0.7s						
KLSI		**44.27**	**249**	P	**P**	**04 32 44.4**	**-0.4**
	comp=Z,96nm,1.8s,comp=Z,2µm						
MDSI	**Maura Dua**	**44.69**	**250**	P	**P**	**04 32 47.4**	**-0.8**
	comp=Z,86nm,1.3s,comp=Z,2µm						
IPM	**Ipoh**	**44.78**	**263**	PFAKE		04 33 00.0	+11
IPM				LR	LR		
	comp=Z,1µm,21.0s						
KASI	**Kota Agung**	**44.82**	**248**	P	**P**	**04 32 48.9**	**-0.3**
	comp=Z,92nm,1.0s						
KULM	**Kulim**	**44.95**	**264**	PFAKE		04 33 00.0	+10
KULM				LR	LR		
	comp=Z,1µm,21.0s						
STKA	**Stephens Creek**	**44.98**	**185**	P	**P**	**04 32 48.9**	**-1.2**
	comp=Z,5.2nm,0.8s,baz=16,slow=8.8,SNR=5.9						
STKA				LR	LR	04 53 09.7	
	comp=Z,832nm,19.6s,baz=4.7,slow=38						
STKA	**Stephens Creek**	**44.98**	**185**	*e*P	**P**	**04 32 49.7**	**-0.5**
	comp=Z,9.3nm,1.5s						
LHSI	**Lahat**	**45.03**	**251**	P	**P**	**04 32 51.0**	**+0.1**
	comp=Z,159nm,1.3s						
CHTO	**Chiang Mai**	**45.05**	**283**	*e*P	**P**	**04 32 50.5**	**-0.6**
	comp=Z,15nm,1.1s						
CHTO				LR	LR		
	comp=Z,800nm,19.0s						
CHTO	**Chiang Mai**	**45.05**	**283**	*e*P	**P**	**04 32 50.5**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,15nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,800nm,19.0s						
CM31	**Chiang Mai Arr**	**45.05**	**283**	*e*P	**P**	**04 32 51.2**	**+0.1**
CM31				*e*PcP	**PcP**	**04 34 32.7**	**+0.9**
CM31				*e*ScP	**ScP**	**04 38 26.7**	**+4.4**
CMAR	**Chiang Mai Arr**	**45.05**	**283**	P	**P**	**04 32 51.2**	**+0.1**
	comp=Z,6.6nm,0.6s,baz=83,slow=6.4,SNR=25						
CMAR				PcP	**PcP**	**04 34 32.7**	**+0.9**
	comp=Z,4.1nm,0.6s,baz=95,slow=1.8,SNR=5.4						
CMAR				ScP	**ScP**	**04 38 26.7**	**+4.4**
	comp=Z,1.7nm,0.3s,baz=46,slow=2.6,SNR=4.1						
CMAR				LR	LR	04 52 54.8	
	comp=Z,706nm,18.4s,baz=88,slow=38						
CMAR	**Chiang Mai Arr**	**45.05**	**283**	P	**P**	**04 32 51.2**	**+0.1**
CMAR						04 34 32.7	
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,706nm,18.4s						
MNAI	**Manna**	**45.75**	**250**	P	**P**	**04 32 56.6**	**-0.1**
MA2	**Magadan**	**46.46**	**4**	P	**P**	**04 33 01.5**	**0.0**
	comp=Z,19nm,0.8s,baz=162,slow=6.6,SNR=7.0						
MA2	**Magadan**	**46.46**	**4**	*e*P	**P**	**04 33 01.8**	**+0.2**
	comp=Z,40nm,0.8s						
MA2				LR	LR		
	comp=Z,900nm,22.0s						
MA2	**Magadan**	**46.46**	**4**	⇑*e*P	**P**	**04 33 02.2**	**+0.7**
MA2				pmax	pmax		
	comp=Z,97nm,2.5s						
PSI	**Prapat**	**47.23**	**262**	*e*P	**P**	**04 33 08.0**	**-0.5**
PSI	**Prapat**	**47.23**	**262**	*e*P	**P**	**04 33 08.0**	**-0.5**
SONA0	**Songino Array**	**47.44**	**325**	*e*P	**P**	**04 33 09.8**	**+0.3**
SONA0				*e*PcP	**PcP**	**04 34 40.0**	**+0.3**
SONA0				*e*ScP	**ScP**	**04 38 34.4**	**+2.7**
SONM	**Songino Array**	**47.44**	**325**	P	**P**	**04 33 09.8**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=138,slow=7.3,SNR=12						
SONM				PcP	**PcP**	**04 34 40.0**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=154,slow=4.2,SNR=6.4						
SONM				ScP	**ScP**	**04 38 34.4**	**+2.7**
	comp=Z,2.0nm,0.9s,baz=145,slow=2.5,SNR=4.7						
SONM				LR	LR	04 53 05.6	
	comp=Z,2µm,20.1s,baz=116,slow=36						
SONM	**Songino Array**	**47.44**	**325**	P	**P**	**04 33 09.8**	**+0.3**
SONM						04 34 40.0	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,2µm,20.1s						
GTA	**Gaotai**	**47.93**	**312**	⇑P	**P**	**04 33 13.8**	**+0.2**
GTA				pP	pP	04 33 20.8	-0.9
GTA				PcP	**PcP**	**04 34 43.0**	**+1.3**
GTA				S	**S**	**04 40 10.8**	**+1.4**
GTA				pmax	pmax		
	comp=Z,230nm,6.0s						
GTA				LR	LR		
	comp=Z,540nm,18.7s						
GTA				LR	LR		
	comp=Z,610nm,19.7s						
GTA				LR	LR		
	comp=Z,900nm,21.6s						
SEY	**Seymchan**	**49.90**	**4**	P	**P**	**04 33 28.3**	**+0.3**
	comp=Z,14nm,1.1s,baz=196,slow=7.0,SNR=13						
YAK	**Yakutsk**	**50.08**	**350**	*e*P	**P**	**04 33 30.3**	**+0.9**
	comp=Z,45nm,0.7s						
YAK				LR	LR		
	comp=Z,1µm,18.0s						
YAK	**Yakutsk**	**50.08**	**350**	*e*P	**P**	**04 33 29.1**	**-0.3**
YAK				*e**PP	**sP**	**04 33 39.1**	**-1.6**
YAK				*e*		04 35 25.0	
YAK				*e*S	**S**	**04 40 38.7**	**+0.2**
YAK				*e**SS	**sS**	**04 40 51.9**	**-0.2**
YAK				*e*		04 43 13.7	
YAK				pmax	pmax		
	comp=Z,32nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,61nm,2.9s						
YAK				pmax	pmax		
	comp=N,65nm,2.5s						
YAK				pmax	pmax		
	comp=E,55nm,2.8s						
YAK				smax	smax		
	comp=N,33nm,1.7s						
YAK				smax	smax		
	comp=E,32nm,1.8s						
YAK				MLR	MLR		
	comp=Z,954nm,17.0s						
YAK				MLR	MLR		
	comp=N,654nm,16.0s						
YAK				MLR	MLR		
	comp=E,383nm,16.0s						
TOO	**Toolangi**	**50.50**	**180**	*e*pP	pP	04 33 38.0	-2.4
BOD	**Bodaibo**	**50.52**	**339**	*e*P	**P**	**04 33 33.4**	**+0.6**
BOD				pmax	pmax		
	comp=Z,23nm,1.8s						
ZAK	**Zakamensk**	**50.53**	**326**	*e*P	**P**	**04 33 33.9**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,11nm,1.6s						
IRK	**Irkutsk**	**51.03**	**329**	*e*P	**P**	**04 33 37.6**	**+0.8**
IRK				pmax	pmax		
	comp=Z,45nm,1.3s						
TLY	**Talaya**	**51.04**	**328**	P	**P**	**04 33 37.3**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=152,slow=8.1,SNR=4.5						
TLY	**Talaya**	**51.04**	**328**	*e*P	**P**	**04 33 37.9**	**+1.0**
	comp=Z,88nm,2.0s						
TLY				LR	LR		
	comp=Z,800nm,20.0s						
TLY	**Talaya**	**51.04**	**328**	*e*P	**P**	**04 33 38.5**	**+1.6**
TLY				*e*S	**S**	**04 40 56.0**	**+3.7**
TLY				pmax	pmax		
	comp=Z,66nm,1.5s						
TLY				MLR	MLR		
	comp=Z,2µm,15.0s						
SHL	**Shillong**	**51.79**	**292**	*e*P	**P**	**04 33 43.2**	**0.0**
SHL	**Shillong**	**51.79**	**292**	*e*P	**P**	**04 33 43.2**	**0.0**
SHL	**Shillong**	**51.79**	**292**	*e*P	**P**	**04 33 46.0**	**+2.8**
MOY	**Mondy**	**52.44**	**327**	*e*P	**P**	**04 33 48.0**	**+0.5**
MOY				pmax	pmax		
	comp=Z,34nm,1.8s						
LSA	**Lhasa**	**52.77**	**297**	PFAKE		04 34 00.0	+9.3
LSA				LR	LR		
	comp=Z,400nm,19.0s						
LSA	**Lhasa**	**52.77**	**297**	P	**P**	**04 33 51.3**	**+0.6**
LSA	**Lhasa**	**52.77**	**297**	P	**P**	**04 33 52.6**	**+1.9**
LSA				pmax	pmax		
	comp=Z,118nm,0.9s						
UNV	**Unalaska Valle**	**55.30**	**32**	*e*P	**P**	**04 34 10.6**	**+2.5**
	comp=Z,66nm,1.2s						
BILL	**Bilibino**	**56.44**	**9**	PFAKE		04 34 30.0	+14
BILL				LR	LR		
	comp=Z,500nm,20.0s						
BILL	**Bilibino**	**56.44**	**9**	*ce*P	**P**	**04 34 16.2**	**+0.1**
BILL				*e**PP	**sP**	**04 34 26.3**	**-1.2**
BILL				*e**SP	**pwP**	**04 34 35.7**	**+6.5**
BILL				S	S	04 41 54.0	-11
BILL				*e*		04 44 01.1	
BILL				SSS	SSS	04 48 08.0	

BILL				pmax	pmax		
	comp=Z,21nm,1.0s						
BILL				MLR	MLR		
	comp=Z,540nm,19.0s						
JIRN	**Jiri**	**56.98**	**294**	*e*P	**P**	**04 34 21.4**	**+0.3**
	comp=Z,27nm,0.4s						
GUN	**Gumba**	**57.26**	**295**	*e*P	**P**	**04 34 23.3**	**+0.2**
PKI	**Pulchoki**	**57.67**	**294**	*e*P	**P**	**04 34 25.4**	**-0.5**
PKIN	**Phulchoki**	**57.68**	**294**	*e*P	**P**	**04 34 25.5**	**-0.5**
	comp=Z,8.4nm,0.4s						
KKN	**Kakani**	**57.79**	**295**	*e*P	**P**	**04 34 26.4**	**-0.3**
WMQ	**Urumqi**	**57.89**	**314**	PFAKE		04 34 40.0	+13
WMQ				LR	LR		
	comp=Z,1µm,20.0s						
WMQ	**Urumqi**	**57.89**	**314**	*e*P	**P**	**04 34 29.5**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,47nm,5.3s						
WMQ				LR	LR		
	comp=Z,460nm,21.5s						
WMQ				LR	LR		
	comp=Z,580nm,17.5s						
WMQ				LR	LR		
	comp=Z,1µm,21.5s						
DMN	**Daman**	**57.94**	**294**	*e*P	**P**	**04 34 27.7**	**-0.1**
GKN	**Gorkha**	**58.36**	**295**	*e*P	**P**	**04 34 30.5**	**-0.1**
	comp=Z,28nm,0.5s						
URZ	**Urewera**	**59.11**	**151**	P	**P**	**04 34 34.9**	**-0.3**
	comp=Z,13nm,0.9s,baz=148,slow=0.8,SNR=6.2						
DANN	**Dangsing**	**59.15**	**295**	*e*P	**P**	**04 34 36.3**	**+0.1**
	comp=Z,47nm,0.5s						
KOLN	**Koldanda**	**59.28**	**295**	*e*P	**P**	**04 34 36.9**	**-0.1**
TIXI	**Tiksi**	**59.29**	**354**	PFAKE		04 34 50.0	+14
TIXI				LR	LR		
	comp=Z,400nm,20.0s						
DGZ	**Jazzator, Alta**	**59.57**	**320**	*de*P	**P**	**04 34 39.9**	**+1.3**
DGZ				pmax	pmax		
	comp=Z,14nm,1.1s						
RPZ	**Rata Peaks**	**61.24**	**159**	P	**P**	**04 34 48.7**	**-1.1**
	comp=Z,11nm,0.7s,baz=321,slow=5.7,SNR=4.9						
CHIR	**Chirikof Islan**	**61.85**	**33**	PFAKE		04 35 10.0	+16
CHIR				LR	LR		
	comp=Z,400nm,22.0s						
MK31	**Makanchi Array**	**62.23**	**316**	*i* P	**P**	**04 34 57.1**	**+0.5**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MKAR	**Makanchi Array**	**62.23**	**316**	P	**P**	**04 34 57.4**	**+0.8**
	comp=Z,5.2nm,0.5s,baz=93,slow=8.5,SNR=54						
MKAR				LR	LR	05 03 21.4	
	comp=Z,598nm,18.5s,baz=96,slow=37						
MKAR				PKP2ab		05 04 13.6	
	comp=Z,1.3nm,1.0s,baz=261,slow=4.1,SNR=4.6						
ZAA0	**Zalesovo Array**	**62.33**	**324**	PFAKE		04 35 10.0	+13
ZAA0				LR	LR		
	comp=Z,1µm,20.0s						
ZALV	**Zalesovo Beam**	**62.33**	**324**	P	**P**	**04 34 56.7**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=104,slow=6.3,SNR=16						
ZALV				LR	LR	05 02 39.1	
	comp=Z,939nm,20.1s,baz=71,slow=37						
MAKZ	**Makanchi**	**62.45**	**316**	*e*P	**P**	**04 34 58.1**	**+0.1**
	comp=Z,43nm,1.3s						
MAKZ				LR	LR		
	comp=Z,800nm,18.0s						
MAKZ	**Makanchi**	**62.45**	**316**	*e*P	**P**	**04 34 58.1**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,43nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,800nm,18.0s						
SII	**Sitkinak Islan**	**62.85**	**33**	PFAKE		04 35 10.0	+10
SII				LR	LR		
	comp=Z,600nm,19.0s						
PDGK	**Podgornoye**	**63.68**	**312**	P	**P**	**04 35 05.9**	**-0.5**
PDGK				pmax	pmax		
	comp=Z,11nm,1.1s						
RDOG	**Red Dog Mine**	**64.03**	**19**	PFAKE		04 35 20.0	+12
RDOG				LR	LR		
	comp=Z,500nm,20.0s						
KDAK	**Kodiak Island**	**64.05**	**32**	P	**P**	**04 35 08.7**	**+0.3**
	comp=Z,8.5nm,0.6s,baz=234,slow=1.5,SNR=16						
KDAK	**Kodiak Island**	**64.05**	**32**	*e*P	**P**	**04 35 09.7**	**+1.4**
	comp=Z,75nm,1.4s						
KDAK				LR	LR		
	comp=Z,1µm,20.0s						
KDAK	**Kodiak Island**	**64.05**	**32**	*e*P	**P**	**04 35 09.7**	**+1.4**
KDAK				pmax	pmax		
	comp=Z,75nm,1.4s						
KDAK				MLR	MLR		
	comp=Z,1µm,20.0s						
PRZ	**Przheval'sk**	**64.38**	**311**	PFAKE		04 35 20.0	+8.9
PRZ				LR	LR		
	comp=Z,800nm,19.0s						
HYB	**Hyderabad**	**64.48**	**283**	*i* P	**P**	**04 35 11.0**	**-1.0**
HYB				*e*PcP	**PcP**	**04 35 46.5**	**+0.4**
CNPM	**China Poot**	**65.23**	**30**	PFAKE		04 35 30.0	+14
CNPM				LR	LR		
	comp=Z,500nm,18.0s						
KURK	**Kurchatov**	**65.31**	**320**	*e*P	**P**	**04 35 16.4**	**-0.3**
	comp=Z,88nm,1.0s						
KURK				LR	LR		
	comp=Z,2µm,20.0s						
KURK	**Kurchatov**	**65.31**	**320**	*e*P	**P**	**04 35 16.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,88nm,1.0s						
KURK				MLR	MLR		
	comp=Z,2µm,20.0s						
BRLK	**Bradley Lake**	**65.47**	**30**	PFAKE		04 35 30.0	+12
BRLK				LR	LR		
	comp=Z,400nm,20.0s						
KSH	**Kashi**	**66.01**	**307**	*e*P	**P**	**04 35 24.5**	**+2.8**
KSH				S	**S**	**04 44 08.8**	**+1.0**
KSH				LR	LR		
	comp=Z,540nm,16.7s						
KSH				LR	LR		
	comp=Z,490nm,17.4s						
KSH				LR	LR		
	comp=Z,640nm,19.2s						
SUA	**Susitna One**	**66.03**	**28**	PFAKE		04 35 30.0	+8.6
SUA				LR	LR		
	comp=Z,500nm,19.0s						
RC01	**Rabbit Creek A**	**66.39**	**29**	PFAKE		04 35 40.0	+16
RC01				LR	LR		
	comp=Z,500nm,20.0s						
KTH	**Kantishna Hill**	**66.59**	**26**	PFAKE		04 35 40.0	+15
KTH				LR	LR		
	comp=Z,700nm,19.0s						
BPAW	**Bear Paw Mtn.**	**66.74**	**25**	PFAKE		04 35 40.0	+14
BPAW				LR	LR		
	comp=Z,900nm,20.0s						
MLY	**Manley**	**67.14**	**24**	PFAKE		04 35 40.0	+12
MLY				LR	LR		
	comp=Z,700nm,20.0s						
FRU1	**Bishkek**	**67.18**	**311**	PFAKE		04 35 40.0	+11
FRU1				LR	LR		
	comp=Z,900nm,20.0s						
AAK	**Ala-Archa**	**67.27**	**311**	*e*P	**P**	**04 35 29.5**	**-0.2**
AAK				*e*PcP	**PcP**	**04 35 57.6**	**+0.2**
AAK				LR	LR		
	comp=Z,1µm,19.0s						
AAK	**Ala-Archa**	**67.27**	**311**⇓	*e*P	**P**	**04 35 30.5**	**+0.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
BWN	**Browne**	**67.40**	**25**	PFAKE		04 35 40.0	+10
BWN				LR	LR		
	comp=Z,700nm,20.0s						
MCK	**McKinley**	**67.49**	**26**	PFAKE		04 35 40.0	+9.5
MCK				LR	LR		
	comp=Z,800nm,19.0s						
COLD	**Coldfoot**	**68.06**	**22**	PFAKE		04 35 50.0	+16
COLD				LR	LR		
	comp=Z,500nm,21.0s						
NIL	**Nilore**	**68.16**	**301**	*e*P	**P**	**04 35 36.6**	**+1.3**
	comp=Z,53nm,0.3s						
NIL				LR	LR		
	comp=Z,300nm,21.0s						
CCB	**Clear Creek Bu**	**68.22**	**25**	PFAKE		04 35 50.0	+15
CCB				LR	LR		
	comp=Z,800nm,19.0s						
TCOL	**CIGO, UAF Yank**	**68.26**	**25**	P	**P**	**04 35 35.5**	**+0.3**
	baz=254						
COLA	**College**	**68.27**	**25**	*e*P	**P**	**04 35 36.2**	**+1.0**
	comp=Z,59nm,1.4s						
COLA				LR	LR		
	comp=Z,800nm,20.0s						
COLA	**College**	**68.27**	**25**	*e*P	**P**	**04 35 36.3**	**+1.0**
COLA				pmax	pmax		
	comp=Z,59nm,1.4s						
COLA				MLR	MLR		
	comp=Z,800nm,20.0s						
POKR	**Poker Plat Res**	**68.50**	**25**	P	**P**	**04 35 36.8**	**0.0**
	baz=254						
HDA	**Harding Lake**	**68.52**	**26**	PFAKE		04 35 50.0	+13
HDA				LR	LR		
	comp=Z,600nm,20.0s						
HDA	**Harding Lake**	**68.52**	**26**	P	**P**	**04 35 36.7**	**-0.2**
	baz=255						
ILAR	**Eielson Array**	**68.64**	**25**	P	**P**	**04 35 37.5**	**-0.1**
	comp=Z,11nm,0.8s,baz=259,slow=5.0,SNR=37						
ILAR				PKPPKP	**P'P'df**	**05 03 50.9**	**-4.2**
	comp=Z,0.2nm,0.8s,baz=85,slow=1.9,SNR=4.2						
ILAR				LR	LR	05 04 58.0	
	comp=Z,480nm,20.0s,baz=267,slow=35						
TOLK	**Toolik Lake Re**	**68.74**	**21**	PFAKE		04 35 50.0	+12
TOLK				LR	LR		
	comp=Z,600nm,20.0s						
TOLK	**Toolik Lake Re**	**68.74**	**21**	P	**P**	**04 35 39.1**	**+0.8**
	baz=251						
OTUK	**Ortayu**	**69.10**	**317**	P	**P**	**04 35 40.9**	**0.0**
OTUK				pmax	pmax		
	comp=Z,42nm,1.3s						
RIDG	**Independent Ri**	**69.26**	**26**	PFAKE		04 35 50.0	+8.4
RIDG				LR	LR		
	comp=Z,1µm,20.0s						
PRP	**Porcupine Dome**	**69.38**	**25**	PFAKE		04 36 00.0	+18
PRP				LR	LR		
	comp=Z,800nm,20.0s						
CRQM	**Cirque**	**69.46**	**30**	PFAKE		04 36 00.0	+17
CRQM				LR	LR		
	comp=Z,400nm,19.0s						
DOT	**Dot Lake**	**69.58**	**27**	PFAKE		04 36 00.0	+16
DOT				LR	LR		
	comp=Z,1µm,19.0s						
SCRK	**Sand Creek**	**69.68**	**26**	PFAKE		04 36 00.0	+16
SCRK				LR	LR		
	comp=Z,900nm,19.0s						
BALM	**Baldy**	**69.89**	**30**	PFAKE		04 36 00.0	+14
BALM				LR	LR		
	comp=Z,400nm,21.0s						
KK31	**Karatay Array**	**70.21**	**311**	*i* P	**P**	**04 35 48.5**	**+0.7**
KK31				pmax	pmax		
	comp=Z,17nm,1.3s						
CTGM	**Chitina Glacie**	**70.36**	**30**	PFAKE		04 36 00.0	+11
CTGM				LR	LR		
	comp=Z,500nm,20.0s						
GAR	**Garm**	**70.39**	**307**	PFAKE		04 36 00.0	+11
GAR				LR	LR		
	comp=Z,2µm,19.0s						
BRVK	**Borovoye**	**70.71**	**322**	*e*P	**P**	**04 35 50.3**	**-0.3**
	comp=Z,76nm,1.3s						
BRVK				LR	LR		
	comp=Z,1µm,19.0s						
BRVK	**Borovoye**	**70.71**	**322**	P	**P**	**04 35 50.3**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,67nm,1.2s						
PCA	**Pinnacle**	**70.77**	**31**	PFAKE		04 36 00.0	+9.0
PCA				LR	LR		
	comp=Z,700nm,19.0s						
PPT	**Papeete**	**70.94**	**114**	LR	LR	05 03 05.0	
	comp=Z,866nm,18.1s,baz=268,slow=33						
PPT2	**Papeete2**	**70.95**	**114**	*e*S	**S**	**04 45 05.6**	**-1.4**
	comp=Z,1µm,26.8s						
PPT2	**Papeete2**	**70.95**	**114**	*e*LR	LR	04 57 18.0	
	comp=Z,1µm,22.5s,baz=298						
EGAK	**Eagle**	**71.04**	**26**	PFAKE		04 36 10.0	+18
EGAK				LR	LR		
	comp=Z,500nm,20.0s						
BCPM	**Bancas Point**	**71.07**	**31**	PFAKE		04 36 10.0	+17
BCPM				LR	LR		
	comp=Z,700nm,19.0s						
CHGR	**Chuyangaron**	**71.31**	**307**	PFAKE		04 36 10.0	+15
CHGR				LR	LR		
	comp=Z,1µm,22.0s						
KBL	**Kabul**	**71.61**	**302**	PFAKE		04 36 10.0	+13
KBL				LR	LR		
	comp=Z,400nm,19.0s						
DAWY	**Dawson**	**71.69**	**27**	PFAKE		04 36 10.0	+14
DAWY				LR	LR		
	comp=Z,1µm,20.0s						
HYT	**Haines Junctio**	**72.21**	**30**	PFAKE		04 36 10.0	+10
HYT				LR	LR		
	comp=Z,1µm,21.0s						
EPYK	**Eagle Plains**	**73.08**	**24**	PFAKE		04 36 20.0	+15
EPYK				LR	LR		
	comp=Z,700nm,20.0s						
EPYK	**Eagle Plains**	**73.08**	**24**	P	**P**	**04 36 05.0**	**+0.4**
	baz=264						
SIT	**Sitka**	**73.12**	**34**	PFAKE		04 36 20.0	+15
SIT				LR	LR		
	comp=Z,500nm,19.0s						
TBI	**Tubuai**	**73.19**	**120**	*e*S	**S**	**04 45 29.9**	**-2.5**
	comp=Z,642nm,32.2s						
TBI	**Tubuai**	**73.19**	**120**	*e*LR	LR	04 58 09.4	
	comp=Z,950nm,31.8s,baz=296						
BESE	**Bessie Mountai**	**73.42**	**33**	PFAKE		04 36 20.0	+13
BESE				LR	LR		
	comp=Z,500nm,20.0s						
WHY	**Whitehorse**	**73.48**	**30**	PFAKE		04 36 20.0	+13
WHY				LR	LR		
	comp=Z,1µm,20.0s						
INK	**Inuvik**	**74.47**	**22**	P	**P**	**04 36 13.0**	**+0.3**
	comp=Z,32nm,1.1s,baz=256,slow=6.4,SNR=31						
INK	**Inuvik**	**74.47**	**22**	PFAKE		04 36 30.0	+17
INK				LR	LR		
	comp=Z,500nm,21.0s						
DIB	**Dawson Inlet,**	**74.75**	**38**	PFAKE		04 36 30.0	+15
DIB				LR	LR		
	comp=Z,900nm,18.0s						
WRAK	**Wrangell Islan**	**74.75**	**35**	PFAKE		04 36 30.0	+15
WRAK				LR	LR		
	comp=Z,800nm,19.0s						
DLBC	**Dease Lake**	**75.95**	**33**	P	**P**	**04 36 21.5**	**0.0**
	comp=Z,14nm,1.0s,baz=277,slow=5.6,SNR=26						
DLBC	**Dease Lake**	**75.95**	**33**	PFAKE		04 36 30.0	+8.5
DLBC				LR	LR		
	comp=Z,700nm,19.0s						
SVE	**Sverdlovsk**	**76.30**	**326**⇓	*e*P	**P**	**04 36 23.8**	**+0.4**
SVE				*e*S	**S**	**04 46 04.4**	**-1.6**
SVE				pmax	pmax		
	comp=Z,59nm,1.4s						
SVE				MLR	MLR		
	comp=Z,986nm,20.0s						
TAOE	**Nuku Hiva Isla**	**76.95**	**102**	*e*S	**S**	**04 46 16.8**	**+2.0**
	comp=Z,207nm,29.4s						
TAOE	**Nuku Hiva Isla**	**76.95**	**102**	*e*LR	LR	05 00 08.3	
	comp=Z,736nm,21.1s						
AB31	**Akbulak array**	**77.28**	**318**	*i* P	**P**	**04 36 28.8**	**-0.3**
AB31				pmax	pmax		
	comp=Z,34nm,1.2s						
ARU	**Arti**	**77.47**	**325**	LR	LR	05 13 21.0	
	comp=Z,639nm,18.4s,baz=80,slow=38						
ARU	**Arti**	**77.47**	**325**	*e*P	**P**	**04 36 30.4**	**+0.4**
	comp=Z,52nm,1.2s						
ARU				LR	LR		
	comp=Z,700nm,19.0s						
ARU	**Arti**	**77.47**	**325***c*	*i*P	**P**	**04 36 29.9**	**-0.1**
ARU				S	**S**	**04 46 19.4**	**+0.6**
ARU				SS	**SS**	**04 51 12.8**	**-4.8**
ARU				pmax	pmax		
	comp=Z,49nm,1.2s						
ARU				MLR	MLR		
	comp=Z,702nm,19.0s						
AKTO	**Aktyubinsk**	**78.40**	**319**	LR	LR	05 12 13.3	
	comp=Z,937nm,20.2s,baz=77,slow=36						
GEYT	**Alibeck**	**80.02**	**307**	P	**P**	**04 36 45.2**	**+0.7**
	comp=Z,994nm,0.5s,baz=56,slow=3.6,SNR=13						
GEYT				LR	LR	05 14 33.4	
	comp=Z,522nm,21.4s,baz=90,slow=38						
GYA0B	**ALIBECK ARRAY**	**80.02**	**307**	PFAKE		04 37 00.0	+15
GYA0B				LR	LR		
	comp=Z,600nm,20.0s						
NLWA	**Neilton Lookou**	**80.81**	**43**	PFAKE		04 37 00.0	+11
NLWA				LR	LR		
	comp=Z,400nm,18.0s						
D03D	**Eldon**	**81.30**	**43**	P	**P**	**04 36 51.7**	**+0.6**
	baz=280						
A04D	**Lummi Island**	**81.35**	**42**	P	**P**	**04 36 50.8**	**-0.5**
	baz=280						
I02D	**Swisshome**	**81.37**	**47**	P	**P**	**04 36 50.8**	**-0.7**
	baz=280						
J01E	**Myrtle Point**	**81.47**	**48**	P	**P**	**04 36 51.8**	**-0.3**
	baz=280						
LLLB	**Lillooet**	**81.54**	**40**	PFAKE		04 37 00.0	+7.6
LLLB				LR	LR		
	comp=Z,600nm,22.0s						
COR	**Corvallis**	**81.67**	**46**	PFAKE		04 37 10.0	+17
COR				LR	LR		
	comp=Z,1µm,20.0s						
K02D	**Willamette Mer**	**81.75**	**48**	P	**P**	**04 36 54.3**	**+0.6**
	baz=280						
L02E	**Cave Junction**	**81.89**	**49**	P	**P**	**04 36 55.2**	**+0.8**
	baz=280						
H04D	**Lebanon**	**82.08**	**46**	P	**P**	**04 36 56.1**	**+0.8**
	baz=281						
WSAR	**Wadi Sarin**	**82.12**	**292**	LR	LR	05 16 08.0	
	comp=Z,190nm,19.4s,baz=102,slow=38						
HUMO	**Hull Mountain**	**82.28**	**48**	PFAKE		04 37 10.0	+14
HUMO				LR	LR		
	comp=Z,900nm,21.0s						
KCPM	**Cahto Peak**	**82.36**	**51**	*e*P	**P**	**04 36 58.4**	**+1.4**
	comp=Z,52nm,1.0s						
H04A	**Detroit Lake**	**82.44**	**46**	*e*P	**P**	**04 36 58.3**	**+1.1**
I04A	**Tendick Farm,**	**82.45**	**47**	P	**P**	**04 36 57.7**	**+0.4**
	baz=281						
M02C	**Callahan**	**82.58**	**49**	P	**P**	**04 36 59.1**	**+1.0**
	baz=281						
YBH	**Yreka Blue Hor**	**82.62**	**49**	P	**P**	**04 36 58.2**	**-0.1**
	comp=Z,9.0nm,0.9s,baz=359,slow=2.1,SNR=6.2						
YBH	**Yreka Blue Hor**	**82.62**	**49**	PFAKE		04 37 10.0	+12
YBH				LR	LR		
	comp=Z,900nm,21.0s						
F05D	**White Salmon**	**82.71**	**45**	P	**P**	**04 36 59.7**	**+1.1**
	baz=281						
J04D	**Umpqua Nationa**	**82.77**	**47**	P	**P**	**04 36 59.7**	**+0.5**
	baz=281						
N02D	**Trinity Center**	**82.77**	**50**	P	**P**	**04 37 00.4**	**+1.3**
	baz=281						
L04D	**Klamath Falls**	**82.83**	**48**	P	**P**	**04 37 00.6**	**+1.2**
	baz=281						
O02D	**Mt. Diablo Mer**	**82.86**	**51**	P	**P**	**04 37 01.0**	**+1.4**
	baz=281						
YKW3	**Yellowknife Ar**	**82.88**	**27**	PFAKE		04 37 10.0	+11
YKW3				LR	LR		
	comp=Z,600nm,20.0s						
YKA	**Yellowknife Ar**	**82.90**	**27**	P	**P**	**04 36 59.7**	**+0.5**
	comp=Z,3.3nm,0.5s,baz=284,slow=5.1,SNR=31						
YKA				LR	LR	05 13 45.5	
	comp=Z,54nm,19.9s,baz=289,slow=36						
G05D	**Wamic, OR**	**82.94**	**45**	P	**P**	**04 37 00.9**	**+1.1**
	baz=282						
WDC	**Whiskeytown Da**	**82.97**	**50**	*e*P	**P**	**04 37 02.0**	**+2.0**
	comp=Z,34nm,1.2s						
WDC				LR	LR		
	comp=Z,800nm,20.0s						
WDC	**Whiskeytown Da**	**82.97**	**50**	*e*P	**P**	**04 37 02.0**	**+2.0**
WDC				pmax	pmax		
	comp=Z,34nm,1.2s						
WDC				MLR	MLR		
	comp=Z,800nm,20.0s						
I05D	**Terrebonne, OR**	**83.10**	**46**	P	**P**	**04 37 01.8**	**+1.0**
	baz=282						
PRGR	**Permogore**	**83.16**	**332**	*e*P	**P**	**04 36 58.2**	**-2.3**
PRGR				pmax	pmax		
	comp=Z,49nm,0.9s						
MCCM	**Marconi Confer**	**83.19**	**53**	*e*P	**P**	**04 37 01.9**	**+0.8**
	comp=Z,48nm,1.1s						
M04C	**Macdoel**	**83.25**	**49**	P	**P**	**04 37 02.6**	**+0.9**
	baz=282						
CASY	**Casey**	**83.38**	**194**	*e*P	**P**	**04 37 01.7**	**+0.3**
	comp=Z,55nm,1.5s						
J05D	**Fort Rock, OR**	**83.39**	**47**	P	**P**	**04 37 03.6**	**+1.2**
	baz=282						
O03E	**Paynes Creek**	**83.58**	**50**	P	**P**	**04 37 03.8**	**+0.5**
	baz=282						
HAWA	**Hanford**	**83.92**	**44**	PFAKE		04 37 20.0	+15
HAWA				LR	LR		
	comp=Z,500nm,19.0s						
ORV	**Oroville**	**83.96**	**51**	*e*P	**P**	**04 37 05.8**	**+0.6**
	comp=Z,48nm,1.4s						
ORV				LR	LR		
	comp=Z,300nm,19.0s						
ORV	**Oroville**	**83.96**	**51**	*e*P	**P**	**04 37 05.8**	**+0.6**
ORV				pmax	pmax		
	comp=Z,48nm,1.4s						
ORV				MLR	MLR		
	comp=Z,300nm,19.0s						
MOD	**Modoc Plateau**	**84.35**	**48**	PFAKE		04 37 20.0	+13
MOD				LR	LR		
	comp=Z,400nm,21.0s						
AFDM	**Forest Hills D**	**84.49**	**51**	*e*P	**P**	**04 37 09.6**	**+1.7**
	comp=Z,20nm,1.1s						
SPA0	**Spitsbergen Ar**	**84.54**	**351**	*e*P	**P**	**04 37 07.2**	**-0.2**
SAO	**San Andreas Ge**	**84.59**	**54**	*e*pP	**pP**	**04 37 14.6**	**-2.0**
SAO				LR	LR		
	comp=Z,500nm,21.0s						
SAO	**San Andreas Ge**	**84.59**	**54**	*e*P	**pP**	**04 37 14.6**	**-2.0**
SAO				MLR	MLR		
	comp=Z,500nm,21.0s						
KBS	**Kingsbay**	**84.68**	**352**	PFAKE		04 37 20.0	+12
KBS				LR	LR		
	comp=Z,300nm,19.0s						
KBS	**Kingsbay**	**84.68**	**352**	*e*P	**P**	**04 37 09.3**	**+1.3**
RES	**Resolute Bay**	**84.78**	**13**	P	**P**	**04 37 08.7**	**+0.1**
	comp=Z,10nm,0.9s,baz=328,slow=7.3,SNR=7.9						
NEW	**Newport**	**85.08**	**42**	P	**P**	**04 37 11.0**	**+0.4**
	comp=Z,7.3nm,0.9s,baz=272,slow=2.7,SNR=12						
NEW	**Newport**	**85.08**	**42**	PFAKE		04 37 20.0	+9.3
NEW				LR	LR		
	comp=Z,400nm,19.0s						
NEW	**Newport**	**85.08**	**42**	P	**P**	**04 37 11.7**	**+1.1**
	baz=284,SNR=13						
CMB	**Columbia Colle**	**85.14**	**52**	PFAKE		04 37 20.0	+8.8
CMB				LR	LR		
	comp=Z,300nm,20.0s						
WVOR	**Wild Horse Val**	**85.44**	**48**	PFAKE		04 37 20.0	+7.3
WVOR				LR	LR		
	comp=Z,600nm,20.0s						
HSPB	**Hornsund (broa**	**85.46**	**350**	*e*P	**P**	**04 37 13.0**	**+1.1**
LVZ	**Lovozero**	**85.50**	**339**	PFAKE		04 37 20.0	+7.6
LVZ				LR	LR		
	comp=Z,500nm,19.0s						
PAHR	**Pah Rah Range**	**85.52**	**50**	*e*P	**P**	**04 37 14.6**	**+1.4**
	comp=Z,22nm,1.2s						
BMO	**Blue Mountains**	**85.79**	**45**	PFAKE		04 37 30.0	+16
BMO				LR	LR		
	comp=Z,600nm,21.0s						
SMMC	**Simmler**	**86.06**	**55**	P	**P**	**04 37 16.7**	**+0.9**
	baz=283						
KLMR	**Klimovskoe**	**86.21**	**332**	*e*P	**P**	**04 37 13.9**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,59nm,1.5s						
PKM	**Mcpherson Peak**	**86.30**	**55**	P	**P**	**04 37 17.5**	**+0.3**
	baz=283						
NVAR	**Mina Array Bea**	**86.64**	**51**	P	**P**	**04 37 19.8**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=265,slow=6.1,SNR=20						
NVAR				LR	LR	05 12 09.3	
	comp=Z,168nm,19.1s,baz=278,slow=33						
VES	**Vestal, Richgr**	**86.66**	**54**	P	**P**	**04 37 18.8**	**+0.1**
	baz=284						
MAK	**Makhachkala**	**86.91**	**313**	*e*P	**P**	**04 37 19.6**	**-0.1**
MAK				*e*		04 40 41.3	
MAK				*e*S	**SKSac**	**04 47 43.8**	**-1.0**
MAK				pmax	pmax		
	comp=Z,28nm,0.4s						
BMN	**Battle Mountai**	**86.96**	**49**	PFAKE		04 37 30.0	+10
BMN				LR	LR		
	comp=Z,600nm,19.0s						
ARVC	**Arvin**	**87.03**	**55**	P	**P**	**04 37 21.2**	**+0.7**
	baz=284						
ISA	**Isabella, Lake**	**87.18**	**54**	P	**P**	**04 37 22.3**	**+0.9**
	baz=284						
MFID	**Camas Ranch**	**87.19**	**46**	PFAKE		04 37 30.0	+8.7
MFID				LR	LR		
	comp=Z,500nm,20.0s						
CWC	**Cottonwood Cre**	**87.30**	**53**	P	**P**	**04 37 22.7**	**+0.7**
	baz=284						
MSO	**Missoula**	**87.53**	**43**	PFAKE		04 37 30.0	+7.1
MSO				LR	LR		
	comp=Z,400nm,20.0s						
MSO	**Missoula**	**87.53**	**43**	P	**P**	**04 37 23.3**	**+0.4**
	baz=287						
HAMF	**Hammerfest**	**87.57**	**344**	*e*P	**P**	**04 37 22.4**	**+0.1**
ARCES	**ARCESS Array B**	**87.66**	**342**	P	**P**	**04 37 22.6**	**-0.3**
	comp=Z,14nm,0.9s,baz=56,slow=6.3,SNR=31						
ARCES				LR	LR	05 21 07.6	
	comp=Z,449nm,18.3s,baz=68,slow=39						
ARE0	**ARCESS Array S**	**87.66**	**342**	*e*P	**P**	**04 37 24.2**	**+1.4**
DAC	**Darwin (Calif)**	**87.72**	**53**	PFAKE		04 37 40.0	+16
DAC				LR	LR		
	comp=Z,800nm,21.0s						

EDW2	Edwards Air Fo	87.75	55	P	P	04 37 23.9	-0.2
	baz=284						
PASC	Pasadena Art C	87.78	56	PFAKE		04 37 40.0	+16
PASC				LR	LR		
	comp=Z,800nm,20.0s						
LRMC	Laurel Mtn Rad	87.85	54	P	P	04 37 25.1	+0.5
	baz=285,SNR=11						
MPMC	Manual Prospec	87.86	54	P	P	04 37 24.6	-0.2
	baz=285,SNR=30						
MWC	Mount Wilson	87.87	55	eP	P	04 37 26.4	+1.6
	comp=Z,55nm,1.4s						
MWC	Mount Wilson	87.87	55	eP	P	04 37 26.4	+1.6
MWC				pmax	pmax		
	comp=Z,55nm,1.4s						
GROC	Groznyy	88.05	314	eP	P	04 37 24.3	-0.9
GROC				e*PP	pwP	04 37 38.6	0.0
GROC				eS	SKSac	04 47 46.9	-4.9
GROC				e		04 48 06.7	
GROC				pmax	pmax		
	comp=Z,73nm,1.5s						
HLID	Hailey	88.14	46	PFAKE		04 37 40.0	+14
HLID				LR	LR		
	comp=Z,500nm,19.0s						
HLID	Hailey	88.14	46	P	P	04 37 26.6	+0.7
	baz=286,SNR=19						
BFSC	Mount Baldy Ra	88.18	55	P	P	04 37 26.1	-0.1
	baz=285						
FURC	Furnace Creek,	88.24	53	P	P	04 37 26.3	0.0
	baz=285						
VRH	Novokhopyorsk	88.29	322	eP	P	04 37 24.4	-1.8
VRH				pmax	pmax		
	comp=Z,60nm,1.1s						
ELK	Elko	88.33	49	PFAKE		04 37 40.0	+13
ELK				LR	LR		
	comp=Z,600nm,21.0s						
MSF	Maaselka	88.37	338	P	P	04 37 25.2	-1.1
MSF				pmax	pmax		
	comp=Z,16nm,1.8s						
RRX	Edison Barstow	88.55	55	P	P	04 37 28.2	+0.3
	baz=285						
GSC	Goldstone, Bar	88.59	54	P	P	04 37 28.0	-0.1
	baz=285						
TPNV	Topopah Spring	88.59	52	PFAKE		04 37 40.0	+12
TPNV				LR	LR		
	comp=Z,400nm,20.0s						
TPNV	Topopah Spring	88.59	52	P	P	04 37 27.0	-1.2
	baz=285,SNR=17						
KTK1	Kautokeino	88.62	342	eP	P	04 37 27.6	+0.2
MURC	Murrieta	88.72	56	P	P	04 37 28.9	+0.2
	baz=285						
R11A	Troy Canyon, C	88.73	51	PFAKE		04 37 40.0	+11
R11A				LR	LR		
	comp=Z,400nm,20.0s						
R11A	Troy Canyon, C	88.73	51	P	P	04 37 29.0	+0.2
	baz=286,SNR=14						
SHOC	Shoshone, Teco	88.85	53	P	P	04 37 29.5	+0.2
	baz=285						
109C	Camp Elliot, M	88.97	57	P	P	04 37 29.3	-0.5
	baz=285						
CPE	Camp Elliot	88.97	57	PFAKE		04 37 40.0	+10
CPE				LR	LR		
	comp=Z,1µm,20.0s						
MOS	Moscow	89.00	327	eP	P	04 37 27.3	-2.1
MOS				eS	SKSac	04 47 53.3	-3.6
MOS				pmax	pmax		
	comp=Z,67nm,1.1s						
MOS				pmax	pmax		
	comp=Z,100nm,1.3s						
MOS				MLR	MLR		
	comp=Z,700nm,20.0s						
HEC	Hector,Ludlow	89.09	55	P	P	04 37 30.5	0.0
	baz=285						
TUQ	Turquoise Moun	89.25	54	P	P	04 37 31.2	0.0
	baz=286						
PFO	Pinyon Flats O	89.31	56	P	P	04 37 31.1	-0.5
	comp=Z,4.5nm,1.0s,baz=256,slow=8.1,SNR=4.4						
PFO	Pinyon Flats O	89.31	56	eP	P	04 37 33.4	+1.9
	comp=Z,19nm,1.2s						
PFO				LR	LR		
	comp=Z,900nm,20.0s						
PFO	Pinyon Flats O	89.31	56	eP	P	04 37 33.4	+1.9
PFO				pmax	pmax		
	comp=Z,19nm,1.2s						
PFO				MLR	MLR		
	comp=Z,900nm,20.0s						
PFO	Pinyon Flats O	89.31	56	P	P	04 37 30.0	-1.5
	baz=285						
BAR	Barrett	89.38	57	eP	P	04 37 32.7	+0.9
	comp=Z,28nm,1.4s						
GOF	Gofitskoye	89.40	316⇑	iP	P	04 37 30.8	-0.8
GOF				pmax	pmax		
	comp=Z,96nm,1.5s						
BOZ	Bozeman (W)	89.44	43	PFAKE		04 37 40.0	+8.1
BOZ				LR	LR		
	comp=Z,300nm,20.0s						
BOZ	Bozeman (W)	89.44	43	P	P	04 37 32.7	+0.7
	baz=288						
LPSR	Galich'ya Gora	89.44	324	eP	P	04 37 30.2	-1.4
LPSR				pmax	pmax		
	comp=Z,100nm,1.1s						
TRO	Tromso	89.48	344	eP	P	04 37 31.7	+0.3
NCK	Nalchik	89.50	315⇑	iP	P	04 37 32.3	+0.2
NCK				pmax	pmax		
	comp=Z,30nm,1.2s						
ZEI	Tsey	89.50	314	eP	P	04 37 28.5	-3.9
ZEI				pmax	pmax		
	comp=Z,39nm,1.5s						
MONP2	Monument Peak	89.53	56	P	P	04 37 32.9	+0.2
	baz=285						
BELC	Belle Mtn. Jos	89.58	55	P	P	04 37 33.7	+0.8
	baz=286						
GMRC	Granite Mounta	89.63	54	P	P	04 37 34.5	+1.4
	baz=286						
GNI	Garni	89.68	311	LR	LR	05 21 48.7	
	comp=Z,412nm,19.5s,baz=64,slow=38						
GNI	Garni	89.68	311	PFAKE		04 37 40.0	+6.8
GNI				LR	LR		
	comp=Z,500nm,19.0s						
OBN	Obninsk	89.79	327	PFAKE		04 37 50.0	+17
OBN				LR	LR		
	comp=Z,800nm,19.0s						
OBN	Obninsk	89.79	327c	iP	P	04 37 32.0	-1.1
OBN				e*PP	pwP	04 37 45.6	-1.1
OBN				eS	SKSac	04 48 00.1	-1.5
OBN				e		04 50 02.4	
OBN				SSS	SSS	04 58 00.0	
OBN				pmax	pmax		
	comp=Z,65nm,1.2s						
OBN				MLR	MLR		
	comp=Z,744nm,20.0s						
VSR	Storozhevoye	89.80	323	eP	P	04 37 31.9	-1.4
VSR				pmax	pmax		
	comp=Z,80nm,1.2s						
VORD	Divnogorie	89.81	323	eP	P	04 37 30.9	-2.4
VORD				pmax	pmax		
	comp=Z,20nm,0.5s						
IKP	In-Ko-Pah, Jac	89.85	57	P	P	04 37 34.5	+0.4
	baz=286						
EGMT	Eagleton	89.87	40	PFAKE		04 37 50.0	+16
EGMT				LR	LR		
	comp=Z,400nm,22.0s						
EGMT	Eagleton	89.87	40	P	P	04 37 34.2	+0.4
	baz=290						
KBZ	Khabaz	89.91	315	P	P	04 37 33.4	-0.5
	comp=Z,11nm,1.1s,baz=60,slow=1.1,SNR=23						
KBZ				LR	LR	05 22 42.4	
	comp=Z,459nm,18.0s,baz=58,slow=39						
KVAR	Kislovodsk Arr	89.98	315	P	P	04 37 35.5	+1.0
	comp=Z,2.6nm,0.4s,baz=90,slow=20,SNR=7.3						
PSUT	Pine Spring	89.98	50	eP	P	04 37 35.5	+0.8
KIV	Kislovodsk	89.99	315	eP	P	04 37 34.1	-0.4
	comp=Z,23nm,1.1s						
KIV				LR	LR		
	comp=Z,500nm,20.0s						
KIV	Kislovodsk	89.99	315	eP	P	04 37 33.7	-0.8
KIV				e		04 41 07.0	
KIV				ePPP	PPP	04 43 04.1	
KIV				eSS	SS	04 54 23.1	-0.3
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KIV				pmax	pmax		
	comp=Z,53nm,4.8s						
SWSC	Sam W. Stewart	90.02	56	P	P	04 37 35.1	+0.3
	baz=286						
BC3	Big Chuckawall	90.11	55	P	P	04 37 34.4	-0.8
	baz=286						
NEY	Neytrino	90.18	315⇑	eP	P	04 37 35.8	+0.3
NEY				pmax	pmax		
	comp=Z,6.0nm,1.2s						
IRM	Iron Mountain	90.21	55	P	P	04 37 36.1	+0.4
	baz=286						
DUG	Dugway, Tooele	90.26	49	PFAKE		04 37 50.0	+14
DUG				LR	LR		
	comp=Z,500nm,20.0s						
DUG	Dugway, Tooele	90.26	49	P	P	04 37 35.7	-0.3
	baz=288						
IMW	Indian Meadow	90.44	45	PFAKE		04 37 50.0	+13
IMW				LR	LR		
	comp=Z,500nm,21.0s						
H17A	Grant Village	90.53	44	P	P	04 37 36.6	-0.6
	baz=289						
FLWY	Flagg Ranch	90.55	44	PFAKE		04 37 50.0	+13
FLWY				LR	LR		
	comp=Z,600nm,21.0s						
TPAW	Teton Pass	90.56	45	PFAKE		04 37 50.0	+13
TPAW				LR	LR		
	comp=Z,500nm,20.0s						
MOOW	Moose Ponds	90.62	45	PFAKE		04 37 50.0	+12
MOOW				LR	LR		
	comp=Z,500nm,20.0s						
REDW	Red Top Meadow	90.67	45	PFAKE		04 37 50.0	+12
REDW				LR	LR		
	comp=Z,500nm,20.0s						
AHID	Auburn Hatcher	90.69	46	PFAKE		04 37 50.0	+12
AHID				LR	LR		
	comp=Z,600nm,20.0s						
SNOW	Snow King Moun	90.71	45	PFAKE		04 37 50.0	+12
SNOW				LR	LR		
	comp=Z,500nm,19.0s						
HWUT	Hardware Ranch	90.73	47	PFAKE		04 37 50.0	+12
HWUT				LR	LR		
	comp=Z,500nm,22.0s						
GLA	Glamis	90.78	56	P	P	04 37 38.9	+0.6
	baz=286						
Y12C	Blythe	90.82	55	PFAKE		04 37 50.0	+12
Y12C				LR	LR		
	comp=Z,700nm,20.0s						
Y12C	Blythe	90.82	55	P	P	04 37 38.9	+0.4
	baz=286						
PDMCI	Parker Dam,Lak	90.97	55	P	P	04 37 40.6	+1.5
	baz=287						
SUF	Sumiainen	91.09	336	P	P	04 37 37.4	-1.6
SUF				pmax	pmax		
	comp=Z,42nm,1.2s						
RLMT	Red Lodge	91.16	43	PFAKE		04 37 50.0	+10
RLMT				LR	LR		
	comp=Z,400nm,20.0s						
RLMT	Red Lodge	91.16	43	P	P	04 37 40.3	+0.2
	baz=290						
STEI	Steigen	91.61	343	eP	P	04 37 42.4	+1.0
BW06	Boulder Array	91.76	45	PFAKE		04 37 50.0	+7.0
BW06				LR	LR		
	comp=Z,600nm,19.0s						
BW06	Boulder Array	91.76	45	P	P	04 37 42.8	-0.2
	baz=290						
PDAR	Pinedale Array	91.76	45	P	P	04 37 43.9	+0.9
	comp=Z,0.6nm,0.6s,baz=232,slow=4.0,SNR=7.0						
PDAR				LR	LR	05 15 43.5	
	comp=Z,363nm,19.6s,baz=312,slow=34						
FFC	Flin Flon	91.78	32	eP	P	04 37 43.1	+0.7
	comp=Z,165nm,1.1s						
FFC				LR	LR		
	comp=Z,500nm,19.0s						
FFC	Flin Flon	91.78	32	eP	P	04 37 43.1	+0.7
FFC				pmax	pmax		
	comp=Z,165nm,1.1s						
FFC				MLR	MLR		
	comp=Z,500nm,19.0s						
FINES	FINESS Array B	91.80	335	P	P	04 37 41.1	-1.2
	comp=Z,8.3nm,0.9s,baz=64,slow=5.0,SNR=33						
FINES				LR	LR	05 22 38.7	
	comp=Z,220nm,18.7s,baz=59,slow=38						
SOC	Sochi	92.14	316	eP	P	04 37 38.5	-5.8
SOC				ePPP	PPP	04 43 27.5	
SOC				eS	SKSac	04 48 06.1	-9.4
SOC				eSS	SS	04 54 58.8	+4.6
SOC				eSSS	SSS	04 58 27.2	
LAO	LASA Array	92.58	41	PFAKE		04 38 00.0	+14
LAO				LR	LR		
	comp=Z,400nm,19.0s						
LAO	LASA Array	92.58	41	P	P	04 37 47.0	+0.5
	baz=292						
214A	Organ Pipe Nat	92.72	56	P	P	04 37 48.0	+0.7
	baz=287						
WUAZ	Wupatki	92.78	53	PFAKE		04 38 00.0	+12
WUAZ				LR	LR		
	comp=Z,500nm,20.0s						
WUAZ	Wupatki	92.78	53	P	P	04 37 47.7	-0.1
	baz=288						
MOR8	Moi Rana	93.03	342	eP	P	04 37 48.2	+0.2
X16A	Lo Mia Camp, P	93.07	54	PFAKE		04 38 00.0	+11
X16A				LR	LR		
	comp=Z,900nm,18.0s						
VSU	Vasula	93.08	333	eP	P	04 37 47.0	-1.4
VSU				IAmb	IAmb	04 37 49.3	
	comp=Z,98nm,1.3s						
VSU	Vasula	93.08	333c	iP	P	04 37 47.1	-1.2
VSU				pmax	pmax		
	comp=Z,97nm,1.3s						
DGMT	Dagmar	93.15	39	PFAKE		04 38 00.0	+11
DGMT				LR	LR		
	comp=Z,400nm,20.0s						
KONS	Konsvik	93.19	343	eP	P	04 37 49.5	+0.8
O20A	White River Ci	93.59	48	eP	P	04 37 52.3	+0.9
	comp=Z,15nm,1.3s						
O20A				LR	LR		
	comp=Z,700nm,21.0s						
O20A	White River Ci	93.59	48	P	P	04 37 52.0	+0.6
	baz=290						
FCC	Fort Churchill	93.61	27	PFAKE		04 38 00.0	+9.3
FCC				LR	LR		
	comp=Z,400nm,19.0s						
RWWY	Rawlins	93.77	46	PFAKE		04 38 00.0	+7.7
RWWY				LR	LR		
	comp=Z,700nm,21.0s						
RAYN	Ar Rayn	93.78	295	eP	P	04 37 51.7	-0.7
	comp=Z,14nm,1.4s						
RAYN	Ar Rayn	93.78	295	eP	P	04 37 51.7	-0.7
RAYN				pmax	pmax		
	comp=Z,14nm,1.4s						
K22A	Casper	93.90	45	P	P	04 37 53.6	+0.9
	baz=292						
TUC	Tucson	94.25	56	eP	P	04 37 55.5	+1.1
	comp=Z,7.1nm,1.1s						
TUC				LR	LR		
	comp=Z,800nm,19.0s						
TUC	Tucson	94.25	56	eP	P	04 37 55.5	+1.1
TUC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TUC				MLR	MLR		
	comp=Z,800nm,19.0s						
TUC	Tucson	94.25	56	P	P	04 37 55.3	+0.9
	baz=288						
MVCO	Mesa Verde	94.42	50	eP	P	04 37 56.2	+0.9
	comp=Z,13nm,1.3s						
MVCO				LR	LR		
	comp=Z,500nm,20.0s						
MVCO	Mesa Verde	94.42	50	P	P	04 37 55.6	+0.3
	baz=290						
NSS	Namsos	94.92	342	eP	P	04 37 56.4	-0.3
N23A	Red Feather La	94.95	46	P	P	04 37 58.6	+0.9
	baz=292						
RSSD	Black Hills	95.00	43	PFAKE		04 38 10.0	+12
RSSD				LR	LR		
	comp=Z,300nm,20.0s						
PHWY	Pilot Hill	95.14	46	PFAKE		04 38 10.0	+11
PHWY				LR	LR		
	comp=Z,500nm,20.0s						
S22A	4UR Ranch, Cre	95.47	49	P	P	04 38 00.9	+0.7
	baz=291						
AKASG	Malin Array Be	95.72	325	P	P	04 37 58.9	-1.7
	comp=Z,0.9nm,0.5s,baz=58,slow=5.2,SNR=22						
AKASG				LR	LR	05 24 10.8	
	comp=Z,746nm,18.1s,baz=55,slow=37						
AKASG	Malin Array Be	95.72	325	P	P	04 37 58.9	-1.7
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG				MLR	MLR		
	comp=Z,746nm,18.1s						
SDCO	Great Sand Dun	96.45	49	PFAKE		04 38 20.0	+15
SDCO				LR	LR		
	comp=Z,300nm,19.0s						
SDCO	Great Sand Dun	96.45	49	P	P	04 38 04.5	-0.1
	baz=292						
121A	Cookes Peak, D	96.57	55	P	P	04 38 05.8	+0.7
	baz=290						
Y22D	IRIS PASSCAL I	96.71	53	PFAKE		04 38 20.0	+14
Y22D				LR	LR		
	comp=Z,700nm,20.0s						
ANMO	Albuquerque	96.76	52	PFAKE		04 38 20.0	+14
ANMO				LR	LR		
	comp=Z,500nm,18.0s						
SUW	Suwalki	97.16	330	PFAKE		04 38 20.0	+13
SUW				LR	LR		
	comp=Z,600nm,19.0s						
ULM	Lac du Bonnet	97.19	35	LR	LR	05 22 08.7	
	comp=Z,647nm,18.6s,baz=320,slow=36						
ULM	Lac du Bonnet	97.19	35	PFAKE		04 38 20.0	+13
ULM				LR	LR		
	comp=Z,800nm,19.0s						
HFS	Hagfors	97.41	338	P	P	04 38 07.8	-0.3
	comp=Z,2.8nm,0.8s,baz=46,slow=4.2,SNR=7.2						
DOMB	Dombas	97.63	341	eP	P	04 38 07.1	-2.1
NB2	NORSAR Subarra	97.65	339	P	P	04 38 08.0	-1.2
	comp=Z,16nm,1.2s,baz=48,slow=4.6						
NB2	NORSAR Subarra	97.65	339	P	P	04 38 08.0	-1.2
	baz=48,slow=4.6						
NOA	NORSAR Array B	97.65	339	P	P	04 38 07.9	-1.2
	comp=Z,3.8nm,0.9s,baz=52,slow=4.4,SNR=18						
NOA				PP	PP	04 42 07.8	+1.4
	comp=Z,0.5nm,0.8s,baz=48,slow=7.9,SNR=4.0						
NOA				LR	LR	05 25 13.9	
	comp=Z,294nm,20.9s,baz=45,slow=37						
OGNE	Ogallala	97.65	45	PFAKE		04 38 20.0	+10
OGNE				LR	LR		
	comp=Z,500nm,19.0s						
NC602	NORSAR Array S	97.75	339	eP	P	04 38 09.3	-0.4
BRTR	Keskin Array B	97.81	314	P	P	04 38 09.7	-0.8
	comp=Z,12nm,1.2s,baz=79,slow=2.6,SNR=24						
BRTR				LR	LR	05 26 57.4	
	comp=Z,188nm,19.9s,baz=40,slow=38						
AKN	Aaknes	98.17	342	eP	Pdif	04 38 11.9	+0.3
AGMN	Agassiz Nation	98.18	36	PFAKE		04 38 20.0	+8.1
AGMN				LR	LR		
	comp=Z,900nm,20.0s						
ANTO	Ankara	98.35	314	PFAKE		04 38 20.0	+7.1
ANTO				LR	LR		
	comp=Z,400nm,21.0s						
TIRR	Tirgusor	99.20	320	PFAKE		04 38 30.0	+14
TIRR				LR	LR		
	comp=Z,900nm,20.0s						
KONO	Kongsberg	99.21	339	PFAKE		04 38 30.0	+14
KONO				LR	LR		
	comp=Z,500nm,20.0s						
KONO	Kongsberg	99.21	339⇑	eP	Pdif	04 38 15.1	-1.1
KONO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
TESR	Tescani	99.27	322⇓	iP	Pdif	04 38 15.7	-1.1
MAW	Mawson	99.32	203	LR	LR	05 18 54.0	
	comp=Z,188nm,22.0s,baz=62,slow=33						
BUR08	Bucovina Ar. S	99.54	324	ePdif	Pdif	04 38 17.6	-0.5
	comp=Z,11nm,1.1s						
BURAR	Bucovina Array	99.54	324⇓	iP	Pdif	04 38 17.7	-0.4
VRI	Vrincioaia	99.55	322⇓	iP	Pdif	04 38 18.2	+0.2
VRI	Vrincioaia	99.55	322	P	Pdif	04 38 18.5	+0.5
VRI				pmax	pmax		
	comp=Z,11nm,1.5s						
KWP	Kalwaria Pacla	99.85	326	PFAKE		04 38 30.0	+11
KWP				LR	LR		
	comp=Z,8µm,20.0s						
CSS	Mathiatis	99.97	309	PFAKE		04 38 30.0	+10
CSS				LR	LR		
	comp=Z,500nm,20.0s						
ECSD	EROS Data Cent	99.98	41	PFAKE		04 38 30.0	+10
ECSD				LR	LR		
	comp=Z,400nm,21.0s						
OZUR		100.00	322⇑	iP	Pdif	04 38 20.2	+0.1
CBKS	Cedar Bluff	100.16	46	PFAKE		04 38 30.0	+9.0
CBKS				LR	LR		
	comp=Z,500nm,20.0s						
MLR	Muntele Rosu	100.21	322	PFAKE		04 38 30.0	+8.9
MLR				LR	LR		
	comp=Z,600nm,19.0s						
AMTX	Amarillo	100.41	50	PFAKE		04 38 30.0	+7.8
AMTX				LR	LR		
	comp=Z,600nm,19.0s						
KOLS	Kolonicke sedl	100.48	326	eP	Pdif	04 38 22.6	+0.5
KOLS	Kolonicke sedl	100.48	326	ePDIF	Pdif	04 38 22.6	+0.5
ISP	Isparta	100.83	313	PFAKE		04 38 40.0	+16
ISP				LR	LR		
	comp=Z,200nm,21.0s						
EYMN	Ely	100.85	35	PFAKE		04 38 40.0	+16
EYMN				LR	LR		
	comp=Z,700nm,20.0s						
TXAR	Lajitas Array	101.02	56	P	Pdif	04 38 25.2	+0.2
	comp=Z,0.1nm,0.3s,baz=303,slow=1.8,SNR=3.0						
ARR	Arges	101.06	322⇑	iP	Pdif	04 38 25.0	+0.1
RGN	Rugen	101.36	334	PFAKE		04 38 40.0	+14
RGN				LR	LR		
	comp=Z,600nm,18.0s						
DRGR		101.43	324⇑	iP	Pdif	04 38 26.7	+0.3
DRGR		101.43	324	P	Pdif	04 38 26.4	0.0
DRGR				pmax	pmax		
	comp=Z,25nm,1.4s						
LOT	Lotru	101.54	322⇓	iP	Pdif	04 38 27.4	+0.4
E38A	The Farm, Brul	101.56	36	PFAKE		04 38 40.0	+13
E38A				LR	LR		
	comp=Z,1µm,20.0s						
OKC	Ostrava-Krasne	102.13	328	AMS	AMS	05 31 40.0	
	comp=Z,600nm,16.9s						
C40A	Isle Royale Na	102.16	34	PFAKE		04 38 40.0	+10
C40A				LR	LR		
	comp=Z,600nm,20.0s						
KSU1	Kansas State U	102.20	45	PFAKE		04 38 40.0	+10
KSU1				LR	LR		
	comp=Z,500nm,21.0s						
PSZ	Piszkesteto	102.36	326	ePdif	Pdif	04 38 30.6	0.0
PSZ				LR	LR		
	comp=Z,800nm,20.0s						
PSZ	Piszkesteto	102.36	326	eP	Pdif	04 38 30.6	0.0
PSZ				MLR	MLR		
	comp=Z,800nm,20.0s						
VYHS	Vyhne	102.59	327	eP	Pdif	04 38 32.1	+0.6
VYHS	Vyhne	102.59	327	ePDIF	Pdif	04 38 32.1	+0.6
WMOK	Wichita Mounta	102.63	50	PFAKE		04 38 40.0	+8.0
WMOK				LR	LR		
	comp=Z,500nm,19.0s						
OSTC	Ostas	102.66	330	AMS	AMS	05 29 00.0	
	comp=Z,500nm,21.1s						
CHVC	Chvalec	102.72	330	AMS	AMS	05 29 20.0	
	comp=Z,600nm,19.5s						
DPC	Dobruska-Polom	102.73	329	AMS	AMS	05 29 00.0	
	comp=Z,500nm,18.0s						
UPC	Upice	102.79	330	AMS	AMS	05 29 10.0	
	comp=Z,600nm,19.6s						
D41A	Chassel	102.98	35	PFAKE		04 38 50.0	+17
D41A				LR	LR		
	comp=Z,700nm,19.0s						
G40A	Rib Lake	103.08	37	PFAKE		04 38 50.0	+16
G40A				LR	LR		
	comp=Z,800nm,20.0s						
COWI	Conover	103.22	36	PFAKE		04 38 50.0	+16
COWI				LR	LR		
	comp=Z,900nm,19.0s						
VTS	Vitosha	103.38	320	PFAKE		04 38 50.0	+15
VTS				LR	LR		
	comp=Z,400nm,18.0s						
PVCC	Panska Ves	103.48	330	AMS	AMS	05 29 40.0	
	comp=Z,600nm,18.7s						
JCT	Junction City	103.66	54	PFAKE		04 38 50.0	+13
JCT				LR	LR		
	comp=Z,500nm,19.0s						
CLL	Collm	103.70	332	PFAKE		04 38 50.0	+14
CLL				LR	LR		
	comp=Z,700nm,20.0s						
CLL	Collm	103.70	332⇓	iP	Pdif	04 38 36.0	-0.3
CLL				e		04 42 53.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
CLL				MLR	MLR		
	comp=Z,700nm,20.0s						
CLL	Collm	103.70	332⇓	iPdif	Pdif	04 38 36.0	-0.3
	comp=Z,6.0nm,1.4s						
CLL				ePP	PP	04 42 53.0	+0.7
CLL				e		04 43 11.0	
CLL				ePPPP		04 46 48.0	
CLL				eSKSac	SKSac	04 49 18.0	+3.8

CLL				*e*Sdif	**Sdif**	**04 50 18.0**	**-5.4**
CLL				*e*PS	**PS**	**04 52 06.0**	**+2.7**
CLL				*e*PPS	PPS	04 52 54.0	
CLL				*e*SS	SS	04 57 48.0	+12
CLL				*e*		05 03 06.0	
CLL				*e*SSSS		05 05 18.0	
CLL				*e*		05 07 24.0	
CLL				Lm	MLR	05 33 00.0	
	comp=N,400nm,19.2s						
CLL				Lm	MLR	05 33 00.0	
	comp=E,200nm,18.8s						
CLL				Lm	MLR	05 33 00.0	
	comp=Z,700nm,20.0s						
GOPC	**GO Pecny, Ondr**	**103.77**	**330**	*e*P	**Pdif**	**04 38 35.9**	**-0.8**
GOPC				MLR	MLR		
	comp=Z,500nm,18.2s						
GOPC	**GO Pecny, Ondr**	**103.77**	**330**	*e*PDIFF	**Pdif**	**04 38 35.9**	**-0.8**
GOPC				AMS	AMS	05 30 00.0	
	comp=Z,500nm,18.2s						
TREC	**Trest**	**103.83**	**329**	AMS	AMS	05 29 30.0	
	comp=Z,700nm,19.4s						
PRU	**Pruhonice**	**103.84**	**330**	AMS	AMS	05 33 20.0	
	comp=Z,500nm,20.3s						
I41A	**Arkdale**	**103.96**	**38**	PFAKE		04 38 50.0	+12
I41A				LR	LR		
	comp=Z,500nm,22.0s						
L40A	**Anamosa**	**104.24**	**40**	PFAKE		04 38 50.0	+11
L40A				LR	LR		
	comp=Z,500nm,20.0s						
E43A	**Lone Tree Farm**	**104.26**	**35**	PFAKE		04 38 50.0	+11
E43A				LR	LR		
	comp=Z,500nm,20.0s						
KARP	**Karpathos**	**104.26**	**312**	PFAKE		04 38 50.0	+11
KARP				LR	LR		
	comp=Z,37µm,21.0s						
JFWS	**Jewell Farm**	**104.37**	**39**	PFAKE		04 38 50.0	+10
JFWS				LR	LR		
	comp=Z,500nm,20.0s						
I42A	**Draeger Farm,**	**104.62**	**37**	PFAKE		04 38 50.0	+9.4
I42A				LR	LR		
	comp=Z,600nm,22.0s						
E44A	**Grand Marais A**	**104.70**	**34**	PFAKE		04 38 50.0	+9.1
E44A				LR	LR		
	comp=Z,700nm,19.0s						
KHC	**Kasperske Hory**	**104.88**	**330**	*e*P	**Pdif**	**04 38 42.3**	**+0.6**
KHC				MLR	MLR		
	comp=Z,700nm,20.9s						
KHC	**Kasperske Hory**	**104.88**	**330**	*e*PDIFF	**Pdif**	**04 38 42.3**	**+0.6**
KHC				AMS	AMS	05 28 00.0	
	comp=Z,700nm,20.9s						
H43A	**Windswept, Lux**	**104.96**	**36**	PFAKE		04 43 10.0	+13
H43A				LR	LR		
	comp=Z,800nm,19.0s						
GEC2	**GERESS Array S**	**105.01**	**329**	PFAKE		04 43 10.0	+13
GEC2				LR	LR		
	comp=Z,600nm,18.0s						
L42A	**Oliver, Polo**	**105.24**	**39**	PFAKE		04 43 10.0	+12
L42A				LR	LR		
	comp=Z,400nm,20.0s						
GRA1	**Grafenberg Arr**	**105.64**	**331**	PFAKE		04 43 10.0	+12
GRA1				LR	LR		
	comp=Z,600nm,20.0s						
K43A	**Burlington**	**105.65**	**38**	PFAKE		04 43 10.0	+12
K43A				LR	LR		
	comp=Z,500nm,21.0s						
E46A	**Sault Ste Mari**	**105.73**	**33**	PFAKE		04 43 10.0	+12
E46A				LR	LR		
	comp=Z,700nm,20.0s						
BLY	**Banja Luka**	**105.76**	**325**	PFAKE		04 43 10.0	+12
BLY				LR	LR		
	comp=Z,700nm,20.0s						
G45A	**Suttons Bay**	**105.82**	**35**	PFAKE		04 43 10.0	+11
G45A				LR	LR		
	comp=Z,700nm,20.0s						
TTG	**Podgorica**	**105.92**	**322**	PFAKE		04 43 10.0	+11
TTG				LR	LR		
	comp=Z,400nm,20.0s						
W39A	**Magazine**	**106.06**	**47**	PFAKE		04 43 10.0	+11
W39A				LR	LR		
	comp=Z,400nm,20.0s						
I45A	**Fountain**	**106.10**	**36**	PFAKE		04 43 10.0	+11
I45A				LR	LR		
	comp=Z,800nm,19.0s						
TIR	**Tirane**	**106.17**	**320**	PFAKE		04 43 10.0	+11
TIR				LR	LR		
	comp=Z,500nm,21.0s						
HDIL	**Hopedale**	**106.28**	**40**	PFAKE		04 43 10.0	+11
HDIL				LR	LR		
	comp=Z,300nm,20.0s						
CCM	**Cathedral Cave**	**106.36**	**44**	PFAKE		04 43 10.0	+10
CCM				LR	LR		
	comp=Z,300nm,19.0s						
J45A	**Montague**	**106.38**	**37**	PFAKE		04 43 10.0	+10
J45A				LR	LR		
	comp=Z,700nm,20.0s						
KVTX	**Kingsville**	**106.39**	**56**	PFAKE		04 43 10.0	+10
KVTX				LR	LR		
	comp=Z,700nm,18.0s						
MIAR	**Mount Ida**	**106.52**	**48**	PFAKE		04 43 10.0	+10
MIAR				LR	LR		
	comp=Z,700nm,20.0s						
GLMI	**Grayling**	**106.53**	**35**	PFAKE		04 43 10.0	+10
GLMI				LR	LR		
	comp=Z,600nm,20.0s						
M44A	**Midewin, Midew**	**106.59**	**39**	PFAKE		04 43 10.0	+10
M44A				LR	LR		
	comp=Z,600nm,20.0s						
EKA	**Eskdalemuir Ar**	**106.82**	**342**	PP	**PP**	**04 43 15.0**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=41,slow=9.0,SNR=5.5						
ESK	**Eskdalemuir**	**106.85**	**342**	PFAKE		04 43 10.0	+10
ESK				LR	LR		
	comp=Z,300nm,20.0s						
SCHQ	**Schefferville**	**106.91**	**19**	PFAKE		04 43 10.0	+10
SCHQ				LR	LR		
	comp=Z,300nm,20.0s						
HKT	**Hockley**	**106.98**	**53**	PFAKE		04 43 10.0	+9.0
HKT				LR	LR		
	comp=Z,600nm,19.0s						
NATX	**Nacogdoches**	**107.05**	**51**	PFAKE		04 43 10.0	+8.8
NATX				LR	LR		
	comp=Z,500nm,20.0s						
X40A	**Basin Creek Fa**	**107.09**	**47**	PFAKE		04 43 10.0	+8.8
X40A				LR	LR		
	comp=Z,700nm,19.0s						
I47A	**Gladwin**	**107.09**	**35**	PFAKE		04 43 10.0	+9.1
I47A				LR	LR		
	comp=Z,1µm,20.0s						
STU	**Stuttgart**	**107.23**	**331**	PFAKE		04 43 10.0	+9.0
STU				LR	LR		
	comp=Z,500nm,18.0s						
L46A	**Eue Claire**	**107.28**	**38**	PFAKE		04 43 10.0	+8.7
L46A				LR	LR		
	comp=Z,600nm,19.0s						
J47A	**Sunmer**	**107.40**	**36**	PFAKE		04 43 10.0	+8.5
J47A				LR	LR		
	comp=Z,800nm,19.0s						
SFIN	**Lafayette**	**107.76**	**40**	PFAKE		04 43 10.0	+7.8
SFIN				LR	LR		
	comp=Z,600nm,20.0s						
WLF	**Walferdange**	**107.94**	**334**	PFAKE		04 43 10.0	+7.7
WLF				LR	LR		
	comp=Z,2µm,18.0s						
BFO	**Black Forest**	**107.95**	**332**	PFAKE		04 43 10.0	+7.6
BFO				LR	LR		
	comp=Z,500nm,18.0s						
J48A	**Bridge Port**	**107.96**	**36**	PFAKE		04 43 10.0	+7.5
J48A				LR	LR		
	comp=Z,900nm,20.0s						
VLDQ	**Val d'Or**	**107.99**	**29**	PFAKE		04 43 10.0	+7.6
VLDQ				LR	LR		
	comp=Z,600nm,20.0s						
KMBO	**Kilima Mbogo**	**108.07**	**273**	PFAKE		04 43 20.0	+16
KMBO				LR	LR		
	comp=Z,300nm,19.0s						
I49A	**Point Hope**	**108.09**	**35**	PFAKE		04 43 10.0	+7.3
I49A				LR	LR		
	comp=Z,600nm,19.0s						
FUORN	**Ofenpass-Fuorn**	**108.22**	**329**	PFAKE		04 43 20.0	+17
FUORN				LR	LR		
	comp=Z,700nm,18.0s						
D53A	**Lac Vacive, Po**	**108.61**	**30**	PFAKE		04 43 20.0	+16
D53A				LR	LR		
	comp=Z,600nm,20.0s						
AAM	**Ann Arbor**	**108.66**	**36**	PFAKE		04 43 20.0	+16
AAM				LR	LR		
	comp=Z,800nm,19.0s						
K50A	**Casco**	**108.95**	**35**	PFAKE		04 43 20.0	+16
K50A				LR	LR		
	comp=Z,900nm,20.0s						
N49A	**Columbus Grove**	**109.20**	**38**	PFAKE		04 43 20.0	+15
N49A				LR	LR		
	comp=Z,600nm,22.0s						
TIP	**Timpagrande**	**109.36**	**320**	PFAKE		04 43 20.0	+15
TIP				LR	LR		
	comp=Z,300nm,21.0s						
AQU	**L'Aquila**	**109.40**	**324**	PFAKE		04 43 20.0	+15
AQU				LR	LR		
	comp=Z,600nm,21.0s						
OXF	**Oxford**	**109.50**	**46**	PFAKE		04 43 20.0	+14
OXF				LR	LR		
	comp=Z,700nm,20.0s						
WCI	**Wyandotte Cave**	**109.51**	**41**	PFAKE		04 43 20.0	+14
WCI				LR	LR		
	comp=Z,300nm,19.0s						
O49A	**Covington**	**109.56**	**38**	PFAKE		04 43 20.0	+14
O49A				LR	LR		
	comp=Z,600nm,21.0s						
M50A	**Fremont**	**109.58**	**37**	PFAKE		04 43 20.0	+14
M50A				LR	LR		
	comp=Z,600nm,21.0s						
T47A	**Sharon Grove**	**109.70**	**43**	PFAKE		04 43 20.0	+14
T47A				LR	LR		
	comp=Z,400nm,21.0s						
WVT	**Waverly**	**109.70**	**44**	PFAKE		04 43 20.0	+14
WVT				LR	LR		
	comp=Z,500nm,20.0s						
VLC	**Villacollemand**	**109.86**	**327**	PFAKE		04 43 20.0	+14
VLC				LR	LR		
	comp=Z,500nm,20.0s						
VBMS	**Vicksburg**	**109.90**	**48**	PFAKE		04 43 20.0	+14
VBMS				LR	LR		
	comp=Z,700nm,19.0s						
PLAL	**Pickwick Lake**	**110.17**	**45**	PFAKE		04 43 20.0	+13
PLAL				LR	LR		
	comp=Z,400nm,20.0s						
N51A	**Ashland**	**110.28**	**37**	PFAKE		04 43 20.0	+13
N51A				LR	LR		
	comp=Z,600nm,20.0s						
ACSO	**Alum Creek Sta**	**110.35**	**38**	PFAKE		04 43 20.0	+13
ACSO				LR	LR		
	comp=Z,600nm,22.0s						
PLVO	**Plevna**	**110.37**	**31**	PFAKE		04 43 20.0	+13
PLVO				LR	LR		
	comp=Z,700nm,19.0s						
M52A	**Chesterland**	**110.46**	**36**	PFAKE		04 43 20.0	+13
M52A				LR	LR		
	comp=Z,1µm,20.0s						
T49A	**Edmonton**	**110.66**	**42**	PFAKE		04 43 20.0	+12
T49A				LR	LR		
	comp=Z,400nm,19.0s						
R50A	**Paris**	**110.73**	**40**	PFAKE		04 43 20.0	+12
R50A				LR	LR		
	comp=Z,400nm,18.0s						
J54A	**Appleton**	**110.80**	**33**	PFAKE		04 43 20.0	+12
J54A				LR	LR		
	comp=Z,700nm,20.0s						
ERPA	**Erie**	**110.85**	**35**	PFAKE		04 43 20.0	+12
ERPA				LR	LR		
	comp=Z,900nm,20.0s						
CLF	**Chambon-Foret**	**110.86**	**335**	PFAKE		04 43 20.0	+12
CLF				LR	LR		
	comp=Z,800nm,18.0s						
Q51A	**Peebles**	**110.88**	**39**	PFAKE		04 43 20.0	+12
Q51A				LR	LR		
	comp=Z,500nm,20.0s						
BNI	**Bardonecchia**	**111.10**	**330**	PFAKE		04 43 20.0	+11
BNI				LR	LR		
	comp=Z,800nm,18.0s						
X48A	**Hartselle**	**111.17**	**45**	PFAKE		04 43 20.0	+11
X48A				LR	LR		
	comp=Z,600nm,22.0s						
N53A	**Lisbon**	**111.24**	**36**	PFAKE		04 43 20.0	+11
N53A				LR	LR		
	comp=Z,900nm,19.0s						
S51A	**Beattyville**	**111.58**	**40**	PFAKE		04 43 20.0	+10
S51A				LR	LR		
	comp=Z,400nm,20.0s						
N54A	**Moraine State**	**111.62**	**36**	PFAKE		04 43 20.0	+10
N54A				LR	LR		
	comp=Z,1µm,19.0s						
P53A	**Whipple**	**111.77**	**38**	PFAKE		04 43 20.0	+10
P53A				LR	LR		
	comp=Z,600nm,21.0s						
W50A	**Signal Mountai**	**111.91**	**43**	PFAKE		04 43 20.0	+10
W50A				LR	LR		
	comp=Z,400nm,20.0s						
Y49A	**Blount Mountai**	**111.93**	**45**	PFAKE		04 43 20.0	+10
Y49A				LR	LR		
	comp=Z,700nm,20.0s						
LRAL	**Lakeview Retre**	**111.98**	**46**	PFAKE		04 43 20.0	+10
LRAL				LR	LR		
	comp=Z,500nm,20.0s						
R53A	**Hurricane**	**112.17**	**39**	PFAKE		04 43 20.0	+9.4
R53A				LR	LR		
	comp=Z,600nm,20.0s						
V51A	**Loudon**	**112.19**	**42**	PFAKE		04 43 20.0	+9.2
V51A				LR	LR		
	comp=Z,400nm,20.0s						
TZTN	**Tazewell**	**112.27**	**41**	PFAKE		04 43 20.0	+9.1
TZTN				LR	LR		
	comp=Z,400nm,19.0s						
N55A	**Marion Center**	**112.31**	**35**	PFAKE		04 43 20.0	+9.1
N55A				LR	LR		
	comp=Z,900nm,20.0s						
Q54A	**Coxs Mills**	**112.42**	**38**	PFAKE		04 43 20.0	+8.9
Q54A				LR	LR		
	comp=Z,700nm,22.0s						
MCWV	**Mont Chateau**	**112.56**	**37**	PFAKE		04 43 20.0	+8.7
MCWV				LR	LR		
	comp=Z,400nm,20.0s						
X51A	**Calhoun**	**112.59**	**44**	PFAKE		04 43 20.0	+8.5
X51A				LR	LR		
	comp=Z,400nm,20.0s						
Z50A	**Ashland**	**112.61**	**45**	PFAKE		04 43 20.0	+8.4
Z50A				LR	LR		
	comp=Z,600nm,20.0s						
V52A	**Sevierville**	**112.66**	**42**	PFAKE		04 43 20.0	+8.3
V52A				LR	LR		
	comp=Z,300nm,20.0s						
WDD	**Wied Dalam**	**112.78**	**318**	PFAKE		04 43 20.0	+8.2
WDD				LR	LR		
	comp=Z,200nm,19.0s						
W52A	**Murphy**	**112.89**	**43**	PFAKE		04 43 20.0	+7.8
W52A				LR	LR		
	comp=Z,300nm,20.0s						
BINY	**Binghamton**	**112.94**	**32**	PFAKE		04 43 20.0	+8.0
BINY				LR	LR		
	comp=Z,700nm,19.0s						
BRAL	**Brewton**	**112.97**	**48**	PFAKE		04 43 20.0	+7.7
BRAL				LR	LR		
	comp=Z,700nm,22.0s						
SSPA	**Standing Stone**	**113.02**	**35**	PFAKE		04 43 20.0	+7.8
SSPA				LR	LR		
	comp=Z,700nm,19.0s						
250A	**Grady**	**113.08**	**47**	PFAKE		04 43 20.0	+7.5
250A				LR	LR		
	comp=Z,400nm,21.0s						
V53A	**Saluda**	**113.28**	**41**	PFAKE		04 43 30.0	+17
V53A				LR	LR		
	comp=Z,400nm,19.0s						
R55A	**Marlinton**	**113.30**	**38**	PFAKE		04 43 30.0	+17
R55A				LR	LR		
	comp=Z,500nm,20.0s						
U54A	**Nelsons Funny**	**113.38**	**40**	PFAKE		04 43 30.0	+17
U54A				LR	LR		
	comp=Z,500nm,20.0s						
Y52A	**Lilburn**	**113.53**	**44**	PFAKE		04 43 30.0	+17
Y52A				LR	LR		
	comp=Z,300nm,19.0s						
152A	**Waverly Hall**	**113.78**	**45**	PFAKE		04 43 30.0	+16
152A				LR	LR		
	comp=Z,600nm,20.0s						
BLA	**Blacksburg**	**113.81**	**39**	PFAKE		04 43 30.0	+16
BLA				LR	LR		
	comp=Z,500nm,20.0s						
N59A	**State Game Lan**	**113.97**	**33**	PFAKE		04 43 30.0	+16
N59A				LR	LR		
	comp=Z,800nm,20.0s						
GOGA	**Godfrey**	**114.20**	**44**	PFAKE		04 43 30.0	+15
GOGA				LR	LR		
	comp=Z,500nm,19.0s						
MBAR	**Mbarara**	**114.28**	**275**	PFAKE		04 43 30.0	+14
MBAR				LR	LR		
	comp=Z,700nm,21.0s						
352A	**Blakely**	**114.31**	**46**	PFAKE		04 43 30.0	+15
352A				LR	LR		
	comp=Z,400nm,19.0s						
S57A	**Dark Hollow, R**	**114.34**	**38**	PFAKE		04 43 30.0	+15
S57A				LR	LR		
	comp=Z,500nm,19.0s						
253A	**Americus**	**114.53**	**45**	PFAKE		04 43 30.0	+15
253A				LR	LR		
	comp=Z,600nm,20.0s						
V56A	**Mocksville**	**114.66**	**40**	PFAKE		04 43 30.0	+15
V56A				LR	LR		
	comp=Z,600nm,20.0s						
CBN	**Corbin Frederi**	**114.97**	**36**	PFAKE		04 43 30.0	+14
CBN				LR	LR		
	comp=Z,1µm,20.0s						
S58A	**Poland Farm, P**	**114.97**	**37**	PFAKE		04 43 30.0	+14
S58A				LR	LR		
	comp=Z,600nm,20.0s						
JSC	**Jenkinsville**	**115.13**	**42**	PFAKE		04 43 30.0	+14
JSC				LR	LR		
	comp=Z,400nm,20.0s						
YLE	**Yale**	**115.15**	**31**	PFAKE		04 43 30.0	+14
YLE				LR	LR		
	comp=Z,700nm,22.0s						
TIGA	**Tifton**	**115.27**	**46**	PFAKE		04 43 30.0	+13
TIGA				LR	LR		
	comp=Z,500nm,19.0s						
W57A	**Gilead**	**115.40**	**40**	PFAKE		04 43 30.0	+13
W57A				LR	LR		
	comp=Z,500nm,20.0s						
T59A	**Double "B" Far**	**115.70**	**37**	PFAKE		04 43 30.0	+13
T59A				LR	LR		
	comp=Z,500nm,20.0s						
255A	**Hazlehurst**	**115.75**	**45**	PFAKE		04 43 30.0	+12
255A				LR	LR		
	comp=Z,800nm,20.0s						
Y57A	**Sumter**	**115.86**	**42**	PFAKE		04 43 30.0	+12
Y57A				LR	LR		
	comp=Z,300nm,19.0s						
U59A	**Littleton**	**115.97**	**38**	PFAKE		04 43 30.0	+12
U59A				LR	LR		
	comp=Z,700nm,22.0s						
T60A	**Surry**	**116.06**	**37**	PFAKE		04 43 30.0	+12
T60A				LR	LR		
	comp=Z,900nm,19.0s						
KEST	**Kesra**	**116.11**	**321**	PFAKE		04 43 30.0	+12
KEST				LR	LR		
	comp=Z,400nm,20.0s						
X58A	**Rowland**	**116.19**	**40**	PFAKE		04 43 30.0	+12
X58A				LR	LR		
	comp=Z,500nm,19.0s						
Y58A	**Scranton**	**116.40**	**41**	PFAKE		04 43 30.0	+11
Y58A				LR	LR		
	comp=Z,500nm,19.0s						
NHSC	**New Hope**	**116.57**	**42**	PFAKE		04 43 30.0	+11
NHSC				LR	LR		
	comp=Z,400nm,20.0s						
HAL	**Halifax**	**116.64**	**23**	PFAKE		04 43 30.0	+11
HAL				LR	LR		
	comp=Z,800nm,21.0s						
CNNC	**Cliffs of the**	**116.65**	**39**	PFAKE		04 43 30.0	+11
CNNC				LR	LR		
	comp=Z,500nm,20.0s						
257A	**Skidaway Islan**	**116.70**	**44**	PFAKE		04 43 30.0	+11
257A				LR	LR		
	comp=Z,600nm,20.0s						
456A	**Hilliard**	**116.77**	**45**	PFAKE		04 43 30.0	+10
456A				LR	LR		
	comp=Z,600nm,20.0s						
656A	**Willston**	**117.20**	**47**	PFAKE		04 43 30.0	+9.5
656A				LR	LR		
	comp=Z,700nm,21.0s						
Y60A	**Bolivia**	**117.25**	**40**	PFAKE		04 43 30.0	+10
Y60A				LR	LR		
	comp=Z,600nm,20.0s						
TEIG	**Tepich**	**117.50**	**59**	PFAKE		04 43 30.0	+8.7
TEIG				LR	LR		
	comp=Z,400nm,20.0s						
957A	**Wimauma**	**118.39**	**48**	PFAKE		04 43 30.0	+7.1
957A				LR	LR		
	comp=Z,600nm,21.0s						
DWPF	**Disney Wildern**	**118.72**	**47**	PFAKE		04 43 40.0	+16
DWPF				LR	LR		
	comp=Z,400nm,20.0s						
060A	**Indiantown**	**120.12**	**48**	PFAKE		04 43 40.0	+14
060A				LR	LR		
	comp=Z,500nm,20.0s						
ESDC	**Sonseca Array**	**120.23**	**333**	PP	PP	04 44 51.5	+0.7
	comp=Z,2.6nm,1.0s,baz=25,slow=8.2,SNR=6.9						
ESLA	**Sonseca Array**	**120.23**	**333**	PFAKE		04 43 40.0	+14
ESLA				LR	LR		
	comp=Z,500nm,21.0s						
061Z	**Ochoppi**	**120.40**	**49**	PFAKE		04 43 40.0	+13
061Z				LR	LR		
	comp=Z,400nm,20.0s						
PAB	**San Pablo**	**120.51**	**333**	PFAKE		04 43 40.0	+13
PAB				LR	LR		
	comp=Z,500nm,20.0s						
BOSA	**Boshof**	**122.69**	**244**	PKP	**PKiKP**	**04 43 31.8**	**+0.3**
	comp=Z,3.3nm,1.0s,baz=102,slow=4.4,SNR=2.2						
WIN	**Windhoek**	**130.27**	**252**	PFAKE		04 44 00.0	+13
WIN				LR	LR		
	comp=Z,600nm,19.0s						
SDDR	**Presa de Saban**	**131.62**	**49**	PFAKE		04 44 00.0	+11
SDDR				LR	LR		
	comp=Z,300nm,20.0s						
TOA0	**Torodi Ar. Sit**	**135.63**	**305**	*e*PKPdf	**PKiKP**	**04 43 57.3**	**-0.3**
TOA1	**Torodi Ar. Sit**	**135.63**	**305**	*e*PKPpre	PKPpre	04 43 44.0	
TOA1				*e*PKPdf	**PKPdf**	**04 43 56.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**135.63**	**305**	PKhKP	PKPpre	04 43 44.0	
	comp=Z,0.4nm,0.5s,baz=33,slow=1.9,SNR=4.6						
TORD				PKP	**PKPdf**	**04 43 56.0**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=30,slow=1.6,SNR=6.9						
TORD				SKPbc	**SKPbc**	**04 47 27.8**	**+2.5**
	comp=Z,2.5nm,1.0s,baz=38,slow=3.0,SNR=4.6						
SJG	**San Juan**	**135.88**	**46**	PFAKE		04 44 10.0	+12
SJG				LR	LR		
	comp=Z,300nm,19.0s						
PLCA	**Paso Flores**	**138.19**	**138**	PKP	**PKPdf**	**04 44 00.5**	**+0.3**
	comp=Z,3.6nm,1.0s,baz=291,slow=3.2,SNR=4.3						
DBIC	**Dimbokro**	**144.60**	**302**	PKP	PKPbc	04 44 11.4	+0.5
	comp=Z,86nm,1.0s,baz=29,slow=3.3,SNR=60						
DBIC	**Dimbokro**	**144.60**	**302**	*e*PKPdf	**PKPdf**	**04 44 11.7**	**-0.6**
KIC	**Kosan Boka**	**144.67**	**302**	*e*PKP1	**PKPab**	**04 44 11.0**	**-0.1**
	comp=Z,287nm,1.2s						
TIC	**Toumodi**	**144.75**	**302**	*e*PKP1	**PKPab**	**04 44 10.7**	**-0.7**
GO02	**Mina Guanaco**	**144.84**	**115**	*e*PKPdf	PKPbc	04 44 12.3	+0.4
LIC	**Lamto**	**144.98**	**302**	*e*PKP1	**PKPab**	**04 44 12.0**	**-0.2**
	comp=Z,515nm,1.3s						
PB11	**IPOC Station P**	**145.66**	**106**	*e*PKPdf	**PKPab**	**04 44 15.6**	**+0.9**
LVC	**Limon Verde**	**145.97**	**111**	*e*PKPbc	**PKPab**	**04 44 16.2**	**+0.1**
LVC	**Limon Verde**	**145.97**	**111**	*e*PKP2	**PKPab**	**04 44 16.2**	**+0.1**
LPAZ	**La Paz**	**147.30**	**100**	PKPbc	**PKPdf**	**04 44 17.9**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=251,slow=4.2,SNR=10						
LPAZ	**La Paz**	**147.30**	**100**	*e*PKPbc	**PKPbc**	**04 44 19.4**	**-0.5**
PTGA	**Pitinga**	**151.85**	**66**	*e*PKPbc	**PKPbc**	**04 44 29.7**	**-0.9**
CPUP	**Villa Florida**	**154.87**	**125**	PKPbc	**PKiKP**	**04 44 37.1**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=268,slow=9.6,SNR=3.4						
CPUP	**Villa Florida**	**154.87**	**125**	*e*PKPbc	**PKiKP**	**04 44 37.0**	**+0.2**
ASCN	**Ascension**	**159.58**	**283**	PFAKE		04 44 50.0	+16
ASCN				LR	LR		
	comp=Z,66µm,22.0s						

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*IDC **27** 04:25:24.2±1.1, 18°.05N×64°.11W, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.5/64, mbtmp3.7/5, ML3.6/1, MS4.4/1, Ms1 4.4/1, ms1mx2.8/37, Error ellipse: s-maj=29.6km s-min=19.9km az=33.0*

*TRN **27** 04:25:26.1, 18°.23N×64°.27W, h37^{km}*

*NEIC **27** 04:25:28.3±0.0, 18°.19N×64°.27W, h33^{km}, MD3.5(RSPR), After RSPR.*

*RSPR **27** 04:25:28.3, 18°.19N×64°.27W, h33^{km}±3^{km}, MD3.5/19*

ISC 27 04:25:25.2±1.1**, 18°.14N**±0°.03×**64°.27W**±0°.02**, h7**^{km}±8^{km}**, n70, σ1^{s}15**/95**, mb3.9**/4**, 24C-11D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VGBI	**Virgin Gorda,**	**0.37**	**339**⇑	*e*P	**Pb**	**04 25 34.6**	**+0.5**
VGBI	**Virgin Gorda,**	**0.37**	**339**⇑	*e*P	**Pb**	**04 25 34.8**	**+0.7**
VGBI				*e*S	**Sb**	**04 25 41.5**	**+1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
VGBI	Virgin Gorda,	0.37	339	eS	Sb	04 25 40.9	+0.8
ABV	Anegada	0.59	354	⇑eP	Pn	04 25 38.5	-1.5
ABV	Anegada	0.59	354	⇑eP	Pn	04 25 38.5	-1.5
ABV				eS	Sb	04 25 46.3	0.0
ABVI	Anegada Island	0.59	354	ePn	Pn	04 25 38.5	-1.5
ABVI				ePn	Pn	04 25 38.5	-1.5
ABVI				eSg	Sb	04 25 46.3	0.0
ABVI				eSg	Sb	04 25 46.3	0.0
STVI	Saint Thomas	0.69	288	⇑eP	Pb	04 25 39.8	+0.4
STVI	Saint Thomas	0.69	288	⇑eP	Pb	04 25 39.8	+0.4
STVI				eS	Sb	04 25 49.5	+0.4
STVI	Saint Thomas	0.69	288	⇑eP	Pb	04 25 39.8	+0.4
STVI				eS	Sb	04 25 48.9	-0.3
CUPR	Culebra, Puert	0.98	280	⇑eP	Pg	04 25 44.3	+0.3
CUPR	Culebra, Puert	0.98	280	eS	Sg	04 25 56.9	+0.2
SABA	Saba	1.10	118	⇑eP	Pg	04 25 46.5	+0.1
SABA	Saba	1.10	118	ePn	Pg	04 25 46.5	+0.1
SABA				eSn	Sg	04 26 00.8	0.0
SABA	Saba	1.10	118	⇑eP	Pg	04 25 46.5	+0.1
SABA				eS	Sg	04 26 00.8	0.0
SMRT	St. Maarten	1.14	94	⇓eP	Pg	04 25 46.6	-0.4
SMRT	St. Maarten	1.14	94	ePn	Pg	04 25 46.6	-0.4
SMRT				eSn	Sg	04 26 01.1	-0.7
SMRT	St. Maarten	1.14	94	⇓eP	Pg	04 25 46.6	-0.4
SMRT				eS	Sg	04 26 01.1	-0.7
MTP	Monte Pirata	1.22	268	⇑eP	Pb	04 25 47.7	-0.9
MTP	Monte Pirata	1.22	268	⇑eP	Pb	04 25 47.7	-0.9
MTP				eS	Sg	04 26 02.6	-1.9
SEUS	St. Eustatius	1.39	118	eP	Pg	04 25 52.9	+1.1
CBYP	Canovanas	1.52	275	⇓eP	Pn	04 25 53.5	+0.7
CBYP	Canovanas	1.52	275	ePn	Pn	04 25 53.5	+0.7
CBYP				ePn	Pn	04 25 53.5	+0.7
CBYP	Canovanas	1.52	275	⇓eP	Pn	04 25 53.5	+0.7
SKI	Saint Kitts	1.66	119	eP	Pn	04 25 54.8	0.0
PDPR	Patillas Dam,	1.68	266	⇑eP	Pn	04 25 54.9	0.0
IGPR	InterUniversit	1.76	265	⇓eP	Pn	04 25 55.3	-0.8
SJG	San Juan	1.79	269	⇓eP	Pn	04 25 56.9	+0.3
SJG	San Juan	1.79	269	Pn	Pb	04 25 58.4	+0.1
	42nm,0.3s,baz=92,slow=15,SNR=74						
SJG				Sn	Sb	04 26 21.3	+0.3
	51nm,0.3s,baz=290,slow=24,SNR=5.9						
SJG	San Juan	1.79	269	ePn	Pb	04 25 57.9	-0.5
SJG	San Juan	1.79	269	⇓eP	Pn	04 25 56.9	+0.3
SJG				eS	Sb	04 26 21.2	+0.1
EMPR	Esperanza - Ma	2.18	279	⇑eP	Pn	04 26 02.2	+0.4
EMPR	Esperanza - Ma	2.18	279	eS	Sn	04 26 28.9	-0.1
EMPR	Esperanza - Ma	2.18	279	ePn	Pn	04 26 02.2	+0.4
EMPR				eSn	Sn	04 26 28.9	-0.1
CELP	Cerrillos	2.20	269	⇓eP	Pn	04 26 02.4	+0.2
CELP				eS	Sn	04 26 27.3	-2.4
CELP	Cerrillos	2.20	269	ePn	Pn	04 26 02.4	+0.2
CELP				eSn	Sn	04 26 27.3	-2.4
CELP	Cerrillos	2.20	269	⇓eP	Pn	04 26 02.4	+0.2
CELP				eS	Sn	04 26 27.3	-2.4
OBIP	Obispado Ponce	2.23	268	⇑eP	Pn	04 26 02.1	-0.5
OBIP	Obispado Ponce	2.23	268	ePn	Pn	04 26 02.1	-0.5
OBIP				eSn	Sn	04 26 27.8	-2.6
OBIP	Obispado Ponce	2.23	268	⇑eP	Pn	04 26 02.1	-0.5
OBIP				eS	Sn	04 26 27.8	-2.6
ANWB	Willy Bob	2.41	101	ePn	Pn	04 26 05.0	0.0
ANWB	Willy Bob	2.41	101	eP	Pn	04 26 04.8	-0.3
MLPR	Magueyes Islan	2.65	267	⇑eP	Pn	04 26 08.5	+0.2
LSP	Las Mesas	2.68	271	⇑eP	Pn	04 26 09.2	+0.4
LSP	Las Mesas	2.68	271	ePn	Pn	04 26 09.2	+0.4
LSP	Las Mesas	2.68	271	⇑eP	Pn	04 26 09.2	+0.4
CRPR	Cabo Rojo, PR	2.71	268	⇓eP	Pn	04 26 09.2	0.0
CRPR	Cabo Rojo, PR	2.71	268	⇓eP	Pn	04 26 09.2	0.0
AGPR	Aguadilla, PR	2.72	277	⇑eP	Pn	04 26 09.8	+0.5
AGPR	Aguadilla, PR	2.72	277	⇑eP	Pn	04 26 09.8	+0.5
AGPR				eS	Sn	04 26 43.2	+0.7
AGP	Aguadilla	2.74	276	ePn	Pn	04 26 09.8	+0.2
AGP				eSn	Sn	04 26 43.2	+0.1
H05N1	Guadeloupe/Mar	3.56	120	Pn	Pn	04 26 21.4	+0.4
H05N1				Sn	Sn	04 27 03.6	+0.2
MAGL	Barre de l’ile	3.59	127	eP	Pn	04 26 22.6	+1.3
PCDR	Punta Cana, DR	3.93	276	⇑eP	Pn	04 26 25.2	-0.7
PCDR	Punta Cana, DR	3.93	276	ePn	Pn	04 26 25.2	-0.7
PCDR	Punta Cana, DR	3.93	276	⇑eP	Pn	04 26 25.2	-0.7
PCM	Pelee Case Pet	4.42	138	eP	Pn	04 26 32.4	-0.4
BAMF	Morne Balai	4.46	137	eP	Pn	04 26 36.2	+2.8
GBMF	Grand Be	4.46	138	eP	Pn	04 26 33.7	+0.3
BIM	Bigot	4.73	139	eP	Pn	04 26 37.1	0.0
DR12	Loma Pena Alta	4.90	278	⇑eP	Pn	04 26 40.3	+1.0
DR12				eS	Sn	04 27 35.1	-1.2
H05S1	Guadeloupe/Mar	4.95	138	Pn	Pn	04 26 38.7	-1.3
H05S1				Sn	Sn	04 27 33.0	-4.5
PCRV	Puerto La Cruz	7.93	183	Pn	Pn	04 27 19.3	-1.7
	0.9nm,0.3s,baz=7.7,slow=1.7,SNR=5.1						
PCRV				Sn	Sn	04 28 47.0	-4.1
	0.8nm,0.3s,baz=286,slow=11,SNR=3.9						
TKL	Tuckaleechee C	24.56	319	LR	LR	04 42 38.4	
	comp=Z,22nm,18.1s,baz=160,slow=42						
TXAR	Lajitas Array	37.59	295	P	P	04 32 42.7	+2.0
	0.2nm,0.5s,baz=103,slow=11,SNR=3.5						
YKA	Yellowknife Ar	56.23	335	P	P	04 35 05.9	+0.2
	0.7nm,0.7s,baz=102,slow=7.4,SNR=7.2						
YKB5	Yellowknife Ar	56.23	335	eP	P	04 35 05.9	+0.2
TOA1	Torodi Ar. Sit	63.43	84	eP	P	04 35 55.3	-0.9
TORD	Torodi Ar. Bea	63.43	84	P	P	04 35 55.3	-0.9
	1.1nm,0.9s,baz=277,slow=4.9,SNR=4.3						
ARCES	ARCESS Array B	73.08	22	P	P	04 36 56.9	+1.2
	0.9nm,0.8s,baz=290,slow=6.6,SNR=3.5						
KVAR	Kislovodsk Arr	89.21	44	LR	LR	05 17 30.2	
	comp=Z,188nm,19.4s,baz=249,slow=35						

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*ISCJB **27** 04:28:43.4±0.5, 60°.67S±0°.09×26°.8W±0°.2, h19^{km}, mb4.5/14, MS3.3/1, Error ellipse: s-maj=16.7km s-min=8.7km az=138.8*

*IDC **27** 04:28:43.6±0.6, 60°.33S×26°.76W, h0^{km}, mb4.3/10, mb1 4.3/10, mb1mx4.1/33, mbtmp4.3/10, MS3.4/1, Ms1 3.2/1, ms1mx3.0/16, Error ellipse: s-maj=23.5km s-min=16.7km az=37.0*

*NEIC **27** 04:28:47.3±1.1, 60°.34S×26°.83W, h25^{km}±4^{km}, mb4.6/10, Error ellipse: s-maj=24.1km s-min=12.7km az=225.0*

ISC 27 04:28:45.9±0.5, 60°.40S±0°.10×26°.7W±0°.1, h19^{km}, n50, σ1^{s}.40/47, mb4.6/14, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.08	315	ePn	Pn	04 30 38.5	-3.6
VNA1	Neumayer--Stat	12.74	151	P	Pn	04 31 42.9	-2.8
VNA3	Neumayer Olymp	12.86	155	P	Pn	04 31 44.3	-3.1
VNA3				S	Sn	04 33 53.6	-16
SNAA	Sanae	14.74	150	P	Pn	04 32 10.0	-3.1
SNAA				S	Sn	04 34 42.9	-13
SNAA	Sanae	14.74	150	Pn	Pn	04 32 09.5	-3.6
	1.7nm,0.3s,baz=318,slow=17,SNR=67						
SNAA				Sn	Sn	04 34 39.0	-17
	0.1nm,0.3s,baz=21,slow=21,SNR=2.0						
SNAA	Sanae	14.74	150	ePn	Pn	04 32 10.0	-3.1
PMSA	Palmer Station	17.53	240	P	P	04 32 52.1	+2.2
	2.5nm,0.3s,baz=85,slow=7.8,SNR=14						
QSPA	South Pole Qui	29.83	180	P	P	04 34 53.3	+1.7
	8.3nm,0.9s,baz=173,slow=0.3,SNR=55						
QSPA	South Pole Qui	29.83	180	eP	P	04 34 53.3	+1.7
	18nm,1.3s						
MAW	Mawson	36.57	140	P	P	04 35 51.1	+1.2
	1.7nm,0.8s,baz=246,slow=10.0,SNR=3.3						
MAW				LR	LR	04 49 47.2	
	comp=Z,47nm,18.6s,baz=230,slow=34						
MAW	Mawson	36.57	140	eP	P	04 35 51.1	+1.2
	2.7nm,1.7s						
CFA	Coronel Fontan	39.65	298	P	P	04 36 16.4	0.0
	2.6nm,0.4s,baz=156,slow=7.7,SNR=9.8						
CPUP	Villa Florida	39.96	315	P	P	04 36 19.2	+0.3
	9.7nm,1.1s,baz=175,slow=5.3,SNR=8.0						
CPUP	Villa Florida	39.96	315	eP	P	04 36 19.3	+0.4
	12nm,1.0s						
SUR	Sutherland	41.74	70	P	P	04 36 34.2	+0.4
	6.8nm,0.8s,baz=199,slow=19,SNR=2.4						
SUR	Sutherland	41.74	70	eP	P	04 36 34.2	+0.4
	220nm,1.9s						
GO02	Mina Guanaco	45.82	301	eP	P	04 37 07.3	+0.5
	13nm,0.8s						
BOSA	Boshof	46.98	71	P	P	04 37 15.9	+0.3
	4.1nm,1.1s,baz=201,slow=8.6,SNR=3.8						
PB01	IPOC Station P	49.43	303	eP	P	04 37 34.5	0.0
	20nm,1.2s						
GO01	Chusmiza	50.53	305	eP	P	04 37 43.5	+0.1
	49nm,1.9s						
MNMC	Minye Minye	51.18	304	eP	P	04 37 47.8	-0.3
LPAZ	La Paz	53.16	307	P	P	04 38 03.6	+0.5
	1.9nm,0.4s,baz=89,slow=7.5,SNR=23						
LPAZ	La Paz	53.16	307	eP	P	04 38 04.1	+0.9
	8.3nm,1.4s						
H10N1	ASCENSION HYDR	53.25	15	T	T	05 36 49.3	
	baz=193,slow=75						
H10N3	ASCENSION HYDR	53.25	15	T	T	05 36 48.7	
	baz=193,slow=75						
H10N2	ASCENSION HYDR	53.27	15	T	T	05 36 50.7	
	baz=193,slow=75						
PTGA	Pitinga	64.77	323	P	P	04 39 22.6	-0.4
	0.7nm,0.4s,baz=63,slow=4.5,SNR=2.8						
DBIC	Dimbokro	69.06	23	P	P	04 39 50.6	+0.4
	2.8nm,0.9s,baz=174,slow=7.0,SNR=4.4						
DBIC	Dimbokro	69.06	23	eP	P	04 39 50.6	+0.4
	22nm,1.4s						
TOA0	Torodi Ar. Sit	76.76	28	eP	P	04 40 36.3	+0.5
	6.6nm,0.8s						
TORD	Torodi Ar. Bea	76.76	28	P	P	04 40 36.8	+1.0
	4.3nm,0.7s,baz=206,slow=4.0,SNR=21						
TOA1	Torodi Ar. Sit	76.77	28	eP	P	04 40 36.8	+1.0
HFS	Hagfors	124.22	23	PKP	PKPdf	04 47 40.9	-0.8
	1.4nm,1.0s,baz=205,slow=6.4,SNR=2.8						
NB200	NORSAR Array S	124.60	21	ePKPdf	PKiKP	04 47 43.6	+0.9
NOA	NORSAR Array B	124.60	21	PKP	PKiKP	04 47 43.6	+0.9
	0.4nm,0.8s,baz=196,slow=1.6,SNR=3.5						
FIA0	FINESS Array S	128.11	29	ePKPdf	PKPdf	04 47 49.1	+0.1
FINES	FINESS Array B	128.11	29	PKP	PKPdf	04 47 49.1	+0.1
	0.7nm,0.7s,baz=205,slow=6.2,SNR=4.1						
AKTO	Aktyubinsk	129.67	56	PKP	PKPdf	04 47 52.6	+0.3
	1.7nm,0.9s,baz=225,slow=8.6,SNR=2.6						
ARCES	ARCESS Array B	134.89	23	PKP	PKPdf	04 48 01.4	-0.3
	0.5nm,0.7s,baz=241,slow=1.9,SNR=3.7						
YKA	Yellowknife Ar	139.49	314	PKP	PKPdf	04 48 09.9	-0.5
	0.7nm,0.7s,baz=136,slow=2.3,SNR=6.0						
YKB5	Yellowknife Ar	139.49	314	ePKPdf	PKPdf	04 48 09.9	-0.5
INK	Inuvik	149.22	316	PKPbc	PKPbc	04 48 31.5	+0.2
	3.3nm,0.8s,baz=90,slow=3.5,SNR=8.3						
DAWY	Dawson	149.74	306	ePKPbc	PKPbc	04 48 32.8	0.0
SONA0	Songino Array	150.48	94	ePKPbc	PKiKP	04 48 36.1	+0.1
SONM	Songino Array	150.48	94	PKPbc	PKiKP	04 48 36.1	+0.1
	3.0nm,0.8s,baz=235,slow=2.5,SNR=11						
KS15	Wonju Array Si	151.95	134	ePKPbc	PKPbc	04 48 38.4	-0.4
KSRS	Korea Array	151.97	134	PKPbc	PKPbc	04 48 38.4	-0.4
	0.5nm,0.5s,baz=181,slow=2.4,SNR=4.9						
KDAK	Kodiak Island	152.72	289	PKPbc	PKiKP	04 48 41.2	+1.2
	5.9nm,0.9s,baz=80,slow=2.1,SNR=6.4						
ILAR	Eielson Array	153.02	305	PKPbc	PKiKP	04 48 41.0	+0.5
	2.0nm,0.9s,baz=146,slow=1.8,SNR=12						
ILB	Eielson Array	153.02	305	ePKPbc	PKiKP	04 48 41.0	+0.5

JMA 27 04:33:29.5±0.3, 39°.74N×143°.17E, h20^{km}±3^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.02	282	P	Pb	04 33 48.0	-0.6
JTH				eS	Sb	04 34 01.5	-0.1
MIYJ	Miyakonagasawa	1.05	262	P	Pn	04 33 49.5	+0.4
JKEN	Kujiedanarisaw	1.22	293	P	Pn	04 33 51.3	0.0
JANG	Nango	1.42	297	P	Pn	04 33 54.7	+0.5
JANG				eS	Sn	04 34 11.6	-0.7
JOM	Ohasama	1.48	260	P	Pb	04 33 55.6	-0.6
JOM				S	Sb	04 34 15.3	+0.8
JMK	Ichinoseki	1.71	243	P	Pn	04 33 58.5	+0.4
JMK				S	Sn	04 34 20.0	+0.7
JIO	Ouri	1.91	228	P	Pn	04 34 00.9	0.0
JIO				eS	Sn	04 34 23.8	-0.6
JTM	Tenmabayashi	1.92	304	P	Pn	04 34 01.6	+0.6
JTM				eS	Sn	04 34 25.1	+0.5
JRG	Rokugo	1.99	261	P	Pb	04 34 03.6	-1.4
JRG				eS	Sb	04 34 28.1	-1.3
JAH	Hinai	2.00	284	P	Pn	04 34 03.6	+1.5
JAH				eS	Sb	04 34 29.2	-0.4
JEM	Erimo	2.27	360	P	Pn	04 34 06.7	+0.8
JEM				eS	Sn	04 34 34.2	+0.9
JYK	Kaneyama	2.33	250	P	Pn	04 34 08.1	+1.4

IDC 27 04:34:43.5±1.2, 13°.11N×144°.55E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/51, mbtmp3.6/3, Error ellipse: s-maj=47.4km s-min=14.5km az=121.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.56	33	Pn	Pn	04 34 57.9	-0.9
	138nm,0.3s,baz=153,slow=14,SNR=21						
GUMO				Sn	Sn	04 35 10.8	+1.9
	114nm,0.3s,baz=188,slow=21,SNR=6.3						
WRA	Warramunga Arr	34.35	197	P	P	04 41 30.8	-1.5
	1.0nm,0.8s,baz=13,slow=8.0,SNR=1.8						
ASAR	Alice Springs	38.01	196	P	P	04 42 04.0	+0.4
	0.5nm,0.9s,baz=26,slow=9.2,SNR=2.7						
MKAR	Makanchi Array	61.62	316	P	P	04 45 04.8	+1.8
	0.3nm,0.4s,baz=91,slow=8.6,SNR=4.7						

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*SOF **27** 04:38:28.5, 39°.93N×21°.81E, h2^{km}*

*IDC **27** 04:38:29.9±0.7, 40°.03N×21°.75E, h0^{km}, mb3.8/13, mb1 3.9/21, mb1mx3.8/42, mbtmp3.8/21, ML3.7/8, MS3.0/3, Ms1 3.0/3, ms1mx2.6/55, Error ellipse: s-maj=13.7km s-min=11.2km az=45.0*

*ISCJB **27** 04:38:32.0±0.3, 40°.151N±0°.008×21°.87E±0°.01, h6^{km}±2^{km}, mb4.1/22, MS4.0/2, Error ellipse: s-maj=1.6km s-min=1.3km az=151.5*

*ATH **27** 04:38:32.0, 40°.12N×21°.89E, h20^{km}, ML3.8/37, Error ellipse: s-maj=1.0km s-min=0.5km az=342.0*

*TIR **27** 04:38:32.3, 40°.22N×21°.75E, h5^{km}, Md4.2/7*

*THE **27** 04:38:32.6, 40°.11N×21°.89E, h0^{km}±1^{km}, ML3.8/40, Error ellipse: s-maj=1.0km s-min=0.4km az=11.0*

*BEO **27** 04:38:32.7±0.5, 40°.08N×21°.95E, h7^{km}±2^{km}, ML3.5/8*

*PDG **27** 04:38:32.7±0.4, 40°.10N×21°.90E, h12^{km}, ML3.9/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*NEIC **27** 04:38:33.8±0.0, 40°.14N×21°.87E, h10^{km}, mb4.3/5, ML4.1(THE), After THE.*

ISC 27 04:38:32.6±0.9, 40°.11N±0°.01×21°.88E±0°.01, h11^{km}±6^{km}, n378, σ1^{s}.50/490, mb4.1/22, 18C-17D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.22	337	P	Pg	04 38 36.8	-0.4
KZN				S	Sg	04 38 39.9	-0.4
KZN	Kozani	0.22	337	P	Pg	04 38 36.9	-0.4
KZN				S	Sg	04 38 40.3	-0.1
KZN				AML	AML	04 38 40.4	
KZN				AML	AML	04 38 40.5	
KTI	Kastanea	0.34	32	P	Pg	04 38 39.7	+0.3
KPRO	Kipourio	0.43	249	P	Pg	04 38 40.6	-0.4
KPRO				S	Sg	04 38 47.1	+0.5
	30µm,0.6s						
KPRO	Kipourio	0.43	249	P	Pg	04 38 40.7	-0.3
KPRO				S	Sg	04 38 47.1	+0.5
KPRO				AML	AML	04 38 52.9	
	comp=E,57037µm,0.3s						
KPRO				AML	AML	04 38 54.4	
	comp=N,56235µm,0.3s						
LIT	Litokhoron	0.47	91	ePg	Pg	04 38 41.7	0.0
LIT	Litokhoron	0.47	91	P	Pg	04 38 41.7	0.0
LIT				S	Sb	04 38 49.4	-0.4
	comp=N,16µm,0.5s						
LIT	Litokhoron	0.47	91	P	Pg	04 38 41.7	0.0
LIT				S	Sg	04 38 47.9	0.0
LIT				AML	AML	04 38 52.8	
	comp=N,30082µm,0.3s						
LIT				AML	AML	04 38 53.8	
	comp=E,28340µm,0.4s						
THL	Klokotos Trika	0.55	169	P	Pg	04 38 43.3	0.0
THL				S	Sg	04 38 51.2	+0.7
	comp=E,16µm,0.5s						
THL	Klokotos Trika	0.55	169	P	Pg	04 38 43.4	0.0
THL				S	Sg	04 38 51.4	+0.9
THL				AML	AML	04 38 56.3	
	comp=N,29060µm,0.6s						
THL				AML	AML	04 38 56.4	
	comp=E,34295µm,0.3s						
PENT	Pentalofos	0.58	279	P	Pg	04 38 43.0	-0.8
PENT				S	Sg	04 38 52.0	+0.6
	comp=E,21µm,0.6s						
PENT	Pentalofos	0.58	279	P	Pg	04 38 43.1	-0.7
PENT				S	Sg	04 38 52.0	+0.6
PENT				AML	AML	04 38 57.0	
	comp=N,45373µm,0.3s						
PENT				AML	AML	04 38 57.1	
	comp=E,27608µm,0.3s						
MEV	Metsovon	0.60	238	P	Pg	04 38 44.4	+0.2
NEST	Nestorio	0.71	296	P	Pg	04 38 45.2	-1.1
NEST				S	Sb	04 38 57.2	+0.4
	comp=E,16µm,0.5s						
NEST	Nestorio	0.71	296	P	Pg	04 38 45.3	-1.0
NEST				S	Sg	04 38 55.7	+0.1
NEST				AML	AML	04 39 02.0	
	comp=E,35448µm,0.4s						
NEST				AML	AML	04 39 03.5	
	comp=N,24950µm,0.6s						
FNA	Florina	0.78	330	ePg	Pg	04 38 47.0	-0.7
FNA	Florina	0.78	330	ePg	Pg	04 38 47.1	-0.5
FNA				eSg	Sg	04 38 58.3	+0.5
FNA	Florina	0.78	330	P	Pg	04 38 46.6	-1.0
FNA				S	Sg	04 38 58.1	+0.3
FNA	Florina	0.78	330	P	Pg	04 38 46.9	-0.8
FNA				S	Sg	04 38 57.9	+0.1
FNA				AML	AML	04 39 00.3	
FNA				AML	AML	04 39 01.1	
JAN	Janina	0.91	241	P	Pg	04 38 49.0	-1.1
JAN				S	Sg	04 39 02.6	+0.6
	comp=N,4µm,0.6s						
JAN	Janina	0.91	241	P	Pg	04 38 49.3	-0.8
JAN				S	Sg	04 39 02.7	+0.6
JAN				AML	AML	04 39 08.5	
	comp=E,7034µm,0.3s						
JAN				AML	AML	04 39 08.6	
	comp=N,8603µm,0.4s						
THE	Thessaloniki	0.98	57	P	Pb	04 38 51.6	0.0
THE				S	Sb	04 39 05.7	+1.1
THE	Thessaloniki	0.98	57	P	Pg	04 38 51.2	-0.3
THE				S	Sg	04 39 03.5	-0.7
HORT	Hortiatis	1.05	62	P	Pg	04 38 52.7	-0.1
HORT				S	Sb	04 39 07.7	+1.0
HORT	Hortiatis	1.05	62	P	Pg	04 38 52.5	-0.3
HORT				AML	AML	04 39 13.8	
	comp=E,2145µm,0.7s						
HORT				AML	AML	04 39 15.4	
	comp=N,1623µm,0.4s						
AGG	Agios Georgios	1.14	162	ePn	Pg	04 38 54.4	0.0
AGG	Agios Georgios	1.14	162	P	Pg	04 38 53.8	-0.6
AGG				S	Sn	04 39 10.9	+0.8
AGG	Agios Georgios	1.14	162	P	Pg	04 38 53.8	-0.6
AGG				S	Sg	04 39 09.4	+0.2
AGG				AML	AML	04 39 18.2	
	comp=N,18362µm,0.4s						
AGG				AML	AML	04 39 18.2	
	comp=E,13821µm,0.5s						
EVR	Evrytania	1.19	183	P	Pg	04 38 54.3	-1.1
EVR				S	Sn	04 39 12.9	+1.4
	comp=E,11µm,0.5s						
EVR	Evrytania	1.19	183	P	Pg	04 38 54.5	-1.0
EVR				S	Sb	04 39 11.4	+0.8
EVR				AML	AML	04 39 14.6	
	comp=E,20328µm,0.7s						
EVR				AML	AML	04 39 16.5	
	comp=N,22660µm,0.3s						
PLG	Polygyros	1.23	77	P	Pg	04 38 55.2	-0.9
PLG				S	Sb	04 39 12.4	+0.7
	comp=N,1µm,0.7s						
PLG	Polygyros	1.23	77	P	Pg	04 38 55.2	-0.9
PLG				AML	AML	04 39 14.9	
	comp=E,2561µm,0.7s						
PLG				AML	AML	04 39 16.2	
	comp=N,3096µm,0.8s						
XOR	Xorichti	1.25	126	P	Pn	04 38 56.0	-0.1
XOR				S	Sn	04 39 14.2	+1.2
	comp=N,4µm,0.5s						
XOR	Xorichti	1.25	126	P	Pn	04 38 56.3	+0.2
XOR				AML	AML	04 39 16.8	
	comp=N,9776µm,0.4s						
XOR				AML	AML	04 39 17.8	
	comp=E,4954µm,0.5s						
KNT	Kendrikon	1.31	36	P	Pn	04 38 56.8	-0.1
KNT				S	Sn	04 39 15.7	+1.3
	comp=E,1µm,1.0s						
KNT	Kendrikon	1.31	36	P	Pn	04 38 56.9	0.0
KNT				AML	AML	04 39 19.5	
	comp=E,1640µm,0.6s						
KNT				AML	AML	04 39 22.1	
	comp=N,1881µm,0.9s						
NEO	Neokhori	1.31	127	P	Pn	04 38 56.8	-0.1
NEO				S	Sn	04 39 17.2	+2.8
	comp=N,9µm,0.6s						
NEO	Neokhori	1.31	127	P	Pn	04 38 57.1	+0.3
NEO				S	Sb	04 39 14.4	+0.4
NEO				AML	AML	04 39 20.8	
	comp=N,21477µm,0.5s						
NEO				AML	AML	04 39 21.9	
	comp=E,9334µm,0.6s						
VAY	Valandovo	1.32	23	ePg	Pn	04 38 57.0	0.0
VAY				eSg	Sn	04 39 15.6	+0.9
VAY	Valandovo	1.32	23	i Pn	Pn	04 38 57.0	0.0
IGT	Igoumenitsa	1.32	245	ePg	Pn	04 38 57.5	+0.4
IGT				eSg	Sn	04 39 16.8	+2.1
IGT	Igoumenitsa	1.32	245	P	Pn	04 38 56.7	-0.4
IGT				S	Sn	04 39 18.7	+4.0
	comp=E,3µm,0.8s						
IGT	Igoumenitsa	1.32	245	i PN	Pb	04 38 58.0	+0.5
IGT				i SN	Sn	04 39 18.5	+3.8
IGT	Igoumenitsa	1.32	245	P	Pn	04 38 56.6	-0.5
IGT				AML	AML	04 39 20.2	
	comp=N,6234µm,0.9s						
IGT				AML	AML	04 39 22.6	
	comp=E,6505µm,0.6s						
SOH	Sokhos	1.33	57	P	Pg	04 38 58.0	-0.2
SOH				S	Sn	04 39 15.8	+0.8
	comp=E,2µm,0.6s						
SOH	Sokhos	1.33	57	P	Pn	04 38 57.4	+0.2
SOH				AML	AML	04 39 21.4	
	comp=E,4398µm,0.7s						
SOH				AML	AML	04 39 22.6	
	comp=N,2584µm,0.4s						
PAIG	Paliouri	1.39	97	P	Pn	04 38 58.2	+0.2
PAIG	Paliouri	1.39	97	P	Pn	04 38 58.1	+0.2
PAIG				AML	AML	04 39 22.4	
	comp=N,2772µm,0.7s						
PAIG				AML	AML	04 39 23.6	
	comp=E,2191µm,0.8s						
TPE	Tepelena	1.45	278	P	Pn	04 38 59.1	+0.4
TPE				S	Sg	04 39 21.1	+2.0
	comp=E,4µm,0.9s						
TPE	Tepelena	1.45	278	i PN	Pg	04 39 00.7	+0.4
TPE				i SN	Sg	04 39 19.4	+0.3
SRN	Sarande	1.46	262	P	Pb	04 39 00.0	+0.2
SRN	Sarande	1.46	262	i PN	Pb	04 39 00.3	+0.5
SRN				i SN	Sn	04 39 18.9	+0.8
ANX	Ano Chora	1.51	179	P	Pn	04 38 59.9	+0.2
ANX				S	Sb	04 39 20.5	+0.6
	comp=E,8µm,0.4s						
ANX	Ano Chora	1.51	179	P	Pn	04 39 00.5	+0.8
ANX				AML	AML	04 39 24.8	
	comp=N,10313µm,0.4s						
ANX				AML	AML	04 39 27.3	
	comp=E,16575µm,0.5s						
PVO	Paravola	1.51	191	P	Pn	04 39 00.3	+0.6
PVO				S	Sg	04 39 21.7	+0.5
	comp=E,4µm,0.6s						
PVO	Paravola	1.51	191	P	Pn	04 39 00.3	+0.6
PVO				S	Sg	04 39 21.2	0.0
PVO				AML	AML	04 39 33.2	
	comp=E,7299µm,0.7s						
PVO				AML	AML	04 39 34.4	
	comp=N,5154µm,0.5s						
KASA	Kassiopi	1.54	257	P	Pb	04 39 01.3	+0.2
KASA				AML	AML	04 39 25.7	
	comp=E,7371µm,0.6s						
KASA				AML	AML	04 39 26.5	
	comp=N,9740µm,0.5s						
SKIA	Skiathos	1.54	127	P	Pn	04 39 00.0	-0.1
SKIA	Skiathos	1.54	127	P	Pn	04 39 00.0	-0.1
SKIA				S	Sn	04 39 20.8	+0.7
SKIA				AML	AML	04 39 32.6	
	comp=N,7126µm,0.5s						
SKIA				AML	AML	04 39 33.7	
	comp=E,5650µm,0.9s						
TSLK	Tsoukalades, L	1.59	217	P	Pb	04 39 02.3	+0.2
TSLK				S	Sg	04 39 24.9	+1.1
	comp=E,3µm,0.5s						
TSLK	Tsoukalades, L	1.59	217	P	Pn	04 39 01.5	+0.7
TSLK				AML	AML	04 39 31.4	
	comp=N,5512µm,0.6s						

TSLK				AML	AML	04 39 32.6	
	comp=E,7150µm,0.5s						
LKD2	Lefkada island	1.62	216	P	Pb	04 39 02.8	+0.2
LKD2	Lefkada island	1.62	216	P	Pb	04 39 02.5	-0.1
LKD2				AML	AML	04 39 33.0	
	comp=E,7999µm,0.5s						
LKD2				AML	AML	04 39 34.2	
	comp=N,7154µm,0.7s						
OUR	Ouranopolis	1.62	81	P	Pn	04 39 01.3	+0.1
OUR				S	Sg	04 39 24.9	+0.1
	comp=N,1µm,1.0s						
OUR	Ouranopolis	1.62	81	P	Pn	04 39 01.5	+0.3
SRS	Serrai	1.65	52	*e*Pg	Pn	04 39 01.5	0.0
SRS				*e*Sg	Sg	04 39 24.7	-0.9
SRS	Serrai	1.65	52	P	Pn	04 39 01.6	0.0
SRS	Serrai	1.65	52	P	Pn	04 39 01.5	0.0
KEK	Kerkira	1.65	257	P	Pb	04 39 03.3	+0.3
KEK				S	Sg	04 39 25.6	0.0
	comp=N,2µm,0.9s						
KEK	Kerkira	1.65	257	P	Pb	04 39 02.9	-0.1
KEK				AML	AML	04 39 30.6	
	comp=N,3405µm,0.5s						
KEK				AML	AML	04 39 33.5	
	comp=E,2981µm,0.5s						
ATAL	Atalanti	1.67	148	P	Pn	04 39 01.9	+0.1
ATAL				S	Sg	04 39 26.5	+0.4
	comp=E,1µm,1.2s						
ATAL	Atalanti	1.67	148	P	Pn	04 39 02.4	+0.7
ATAL				AML	AML	04 39 40.0	
	comp=E,1990µm,0.8s						
ATAL				AML	AML	04 39 42.9	
	comp=N,2098µm,1.3s						
LKR	Lokris	1.69	149	P	Pn	04 39 02.0	-0.1
LKR				S	Sg	04 39 26.7	-0.3
	comp=N,845nm,0.9s						
LKR	Lokris	1.69	149	P	Pn	04 39 02.7	+0.6
SERG	Sergoula	1.70	175	P	Pn	04 39 02.7	+0.5
SERG				S	Sb	04 39 26.5	+1.3
	comp=N,5µm,0.5s						
SERG	Sergoula	1.70	175	P	Pn	04 39 02.5	+0.3
SERG				AML	AML	04 39 32.7	
	comp=N,9905µm,0.6s						
SERG				AML	AML	04 39 34.3	
	comp=E,9573µm,0.4s						
KALE	Kalithea	1.73	173	P	Pn	04 39 03.0	+0.4
KALE				S	Sb	04 39 26.9	+0.8
	comp=E,6µm,0.7s						
KALE	Kalithea	1.73	173	P	Pn	04 39 03.0	+0.4
KALE				AML	AML	04 39 33.3	
	comp=N,12267µm,0.7s						
KALE				AML	AML	04 39 33.9	
	comp=E,11234µm,0.6s						
TRIZ	Trizonia	1.75	175	P	Pn	04 39 03.0	+0.2
TRIZ				S	Sn	04 39 26.0	+0.9
	comp=E,4µm,0.5s						
TRIZ	Trizonia	1.75	175	P	Pn	04 39 03.4	+0.5
EVGI	Lefkada island	1.76	213	P	Pb	04 39 04.7	-0.2
EVGI	Lefkada island	1.76	213	P	Pn	04 39 04.5	+1.4
DSF	Desfina	1.77	163	P	Pn	04 39 03.2	0.0
DSF				S	Sn	04 39 26.9	+1.2
	comp=E,2µm,0.7s						
DSF	Desfina	1.77	163	P	Pn	04 39 03.3	+0.1
DSF				AML	AML	04 39 33.9	
	comp=E,3333µm,0.7s						
DSF				AML	AML	04 39 34.0	
	comp=N,3096µm,0.7s						
UPR	University Cam	1.82	182	P	Pb	04 39 05.8	-0.1
UPR	University Cam	1.82	182	P	Pn	04 39 04.9	+1.0
ALIK	Aliki, Aigiali	1.85	174	P	Pb	04 39 05.9	-0.6
AIG3	Aigion	1.86	175	P	Pn	04 39 04.7	+0.3
AIG4	Aigion	1.86	175	P	Pn	04 39 05.3	+1.0
LAKA	Lakka	1.86	178	P	Pn	04 39 05.8	+1.3
LAKA				S	Sb	04 39 31.3	+1.2
	comp=N,940nm,0.7s						
LAKA	Lakka	1.86	178	P	Pn	04 39 05.9	+1.3
LAKA				AML	AML	04 39 41.8	
	comp=E,1974µm,0.5s						
LAKA				AML	AML	04 39 41.8	
	comp=N,1790µm,0.5s						
AIG2	Aigio	1.87	175	P	Pn	04 39 05.3	+0.8
SKO	Skopje	1.89	350	*e*Pg	Pb	04 39 06.5	-0.7
SKO				*e*Sg	Sg	04 39 34.2	+0.7
SKO	Skopje	1.89	350	*i* Pn	Pn	04 39 06.2	+1.3
AIG1	Aigion	1.91	174	P	Pn	04 39 06.2	+1.1
PHP	Peshkopia	1.92	326	P	Pn	04 39 06.0	+0.7
PHP				S	Sb	04 39 31.1	-0.5
PHP	Peshkopia	1.92	326	*i* PN	Pn	04 39 06.3	+1.1
PHP				*i* SN	Sg	04 39 36.0	+1.8
MRKA	Markates	1.92	136	P	Pn	04 39 05.6	+0.3
MRKA	Markates	1.92	136	P	Pn	04 39 05.6	+0.3
MRKA				AML	AML	04 39 42.9	
	comp=E,2819µm,0.6s						
MRKA				AML	AML	04 39 45.2	
	comp=N,2299µm,0.8s						
FSK	Fiskardo	1.94	212	P	Pn	04 39 07.1	+1.6
FSK				S	Sb	04 39 32.6	+0.5
	comp=N,2µm,0.6s						
FSK	Fiskardo	1.94	212	P	Pn	04 39 05.8	+0.3
NVR	Nevrokopi	1.95	50	P	Pn	04 39 05.8	+0.1
NVR				S	Sb	04 39 32.1	-0.5
	comp=N,448nm,1.0s						
NVR	Nevrokopi	1.95	50	P	Pn	04 39 06.1	+0.4
TRAZ	Trapeza	1.95	172	P	Pn	04 39 07.0	+1.3
TRAZ				S	Sb	04 39 33.5	+0.9
TRAZ	Trapeza	1.95	172	P	Pn	04 39 06.8	+1.0
TRAZ				AML	AML	04 39 42.4	
	comp=N,3605µm,0.3s						
TRAZ				AML	AML	04 39 44.0	
	comp=E,3658µm,0.3s						
TIR	Tirane	1.97	310	*e*Pn	Pb	04 39 08.1	-0.5
TIR	Tirane	1.97	310	*e*Pg	Pb	04 39 09.0	+0.5
TIR				*e*Sg	Sg	04 39 37.6	+1.7
TIR	Tirane	1.97	310	P	Pn	04 39 07.0	+1.0
TIR				S	Sb	04 39 33.5	+0.4
	comp=E,988nm,0.8s						
TIR	Tirane	1.97	310	⇑*i*P	Pb	04 39 08.4	-0.1
TIR	Tirane	1.97	310	S	Sb	04 39 32.7	-0.4
TIR	Tirane	1.97	310	*i* PN	Pn	04 39 07.3	+1.3
TIR				*i* SN	Sg	04 39 38.1	+2.2
KKB	Krupnik	1.98	27	P	Pn	04 39 06.1	0.0
PROD	Prodromos	2.01	156	P	Pn	04 39 06.6	+0.1
PROD				S	Sn	04 39 33.1	+1.5
PROD	Prodromos	2.01	156	P	Pn	04 39 06.8	+0.3
PROD				AML	AML	04 39 41.0	
	comp=N,2189µm,0.3s						
PROD				AML	AML	04 39 41.3	
	comp=E,2030µm,0.4s						
MMB	Musomiste	2.04	43	P	Pn	04 39 06.5	-0.4
KLV	Kalavryta, Ach	2.07	174	P	Pn	04 39 07.9	+0.5
KLV				S	Sn	04 39 35.3	+2.1
	comp=E,890nm,0.9s						
KLV	Kalavryta, Ach	2.07	174	P	Pn	04 39 08.3	+0.9
RLS	Riolos of Patr	2.07	189	P	Pn	04 39 08.3	+1.0
RLS				AML	AML	04 39 47.3	
	comp=N,2803µm,1.1s						
RLS				AML	AML	04 39 48.2	
	comp=E,2439µm,0.5s						
KFL	Anninata	2.17	203	P	Pn	04 39 10.3	+1.6
KFL	Anninata	2.17	203	P	Pn	04 39 09.0	+0.4
KFL				AML	AML	04 39 51.3	
	comp=N,3652µm,0.4s						
KFL				AML	AML	04 39 51.8	
	comp=E,3373µm,0.5s						
VLS	Valsamata	2.17	208	P	Pn	04 39 10.1	+1.4
VLS				S	Sb	04 39 38.7	-0.2
	comp=E,1µm,0.5s						
VLS	Valsamata	2.17	208	P	Pn	04 39 09.9	+1.1
VIL2	Platees	2.18	150	P	Pn	04 39 09.9	+1.1
KAVA	Kavala	2.19	65	P	Pn	04 39 08.7	-0.3
GUR	Goura	2.20	170	P	Pn	04 39 09.7	+0.6
GUR				S	Sn	04 39 38.5	+2.1
	comp=E,2µm,0.7s						
GUR	Goura	2.20	170	P	Pn	04 39 09.8	+0.6
GUR				AML	AML	04 39 44.7	
	comp=E,2879µm,0.5s						
GUR				AML	AML	04 39 45.9	
	comp=N,3154µm,0.4s						
THAS	Thassos island	2.23	76	P	Pn	04 39 08.8	-0.6
THAS				S	Sn	04 39 37.9	+1.0
	comp=N,288nm,0.9s						
VILL	Villia	2.24	150	P	Pn	04 39 09.6	0.0
VILL				S	Sn	04 39 39.6	+2.3
	comp=N,1µm,0.8s						
LOUT	Loutraki	2.28	158	P	Pn	04 39 10.2	0.0
LOUT				S	Sb	04 39 41.5	-0.5
	comp=N,1µm,0.7s						
LOUT	Loutraki	2.28	158	P	Pn	04 39 10.6	+0.4
ACOR	Acrocorinthos	2.34	161	P	Pn	04 39 11.5	+0.4
ACOR				AML	AML	04 39 48.9	
	comp=N,576µm,0.9s						
ACOR				AML	AML	04 39 49.2	
	comp=E,1104µm,0.7s						
SKY	Skiros Island	2.40	120	P	Pn	04 39 12.8	+1.0
VLMS	Volimes, Zakyn	2.42	203	P	Pn	04 39 13.4	+1.2
PUK	Puka	2.45	323	*i* PN	Pn	04 39 14.7	+2.1
PUK				*i* SN	Sb	04 39 48.0	+1.0
LIA	Limnos Island	2.54	94	P	Pn	04 39 13.9	+0.1
LIA	Limnos Island	2.54	94	P	Pn	04 39 14.6	+0.8
ZKS	Zakynthos	2.55	200	P	Pn	04 39 15.8	+1.8
ZKS	Zakynthos	2.55	200	P	Pn	04 39 15.0	+1.0
ATH	Athens Observa	2.57	146	P	Pn	04 39 15.0	+0.9
ATH				S	Sn	04 39 47.9	+2.6
	comp=E,790nm,0.9s						
ATH	Athens Observa	2.57	146	P	Pn	04 39 15.3	+1.2
PTL	Penteli	2.57	142	P	Pn	04 39 14.9	+0.7
PTL	Penteli	2.57	142	P	Pn	04 39 15.4	+1.2
AMT	Artemida-Makis	2.57	183	P	Pn	04 39 15.6	+1.3
TRIP	Tripoli	2.59	173	P	Pn	04 39 15.4	+0.8
TRIP				S	Sn	04 39 48.2	+2.1
	comp=E,690nm,0.8s						
ATHU	Athens Univers	2.60	145	P	Pn	04 39 15.3	+0.7
ATHU	Athens Univers	2.60	145	P	Pn	04 39 15.3	+0.7
BCI	Bajram Curri	2.64	329	*i* PN	Pn	04 39 16.7	+1.5
BCI				*i* SN	Sg	04 39 56.1	-1.3
RZN	Rozhen	2.67	53	P	Pn	04 39 16.0	+0.3
EPID	Epidavros	2.67	158	P	Pn	04 39 15.9	+0.3
VLY	Voula,Athens	2.70	146	P	Pn	04 39 16.8	+0.8
VLY	Voula,Athens	2.70	146	P	Pn	04 39 16.5	+0.5
BARS	Barje	2.71	359	*e*Pn	Pn	04 39 17.1	+1.0
BARS	Barje	2.71	359	*e*Pn	Pg	04 39 33.2	+8.7
BARS				*e*Sn	Sn	04 39 51.4	+2.5
VTS	Vitosha	2.71	22	*e*Pn	Pn	04 39 16.6	+0.3
VTS				*e*Sn	Sn	04 39 49.7	+0.6
VTS	Vitosha	2.71	22	⇑*i*P	Pn	04 39 16.8	+0.6
VTS	Vitosha	2.71	22	S	Sn	04 39 50.0	+0.9
VTS	Vitosha	2.71	22	P	Pn	04 39 16.5	+0.3
ULC	Ulcinj	2.72	314	⇓*i*Pn	Pn	04 39 17.9	+1.6
ULC				*e*Sn	Sn	04 39 52.2	+2.9
VLX	Vlachokerasia	2.76	172	P	Pn	04 39 17.9	+1.0
VLX				S	Sn	04 39 51.7	+1.4
	comp=E,1µm,0.6s						
VLX	Vlachokerasia	2.76	172	P	Pn	04 39 18.2	+1.3
DID	Didima	2.80	157	P	Pn	04 39 17.7	+0.3
DID	Didima	2.80	157	P	Pn	04 39 17.9	+0.5
SMTH	Samothraki Isl	2.81	81	P	Pn	04 39 17.4	-0.1
KARY	Karystos	2.87	135	P	Pn	04 39 19.8	+1.5
KARY	Karystos	2.87	135	P	Pn	04 39 19.9	+1.6
PVY	Plav	2.88	330	⇓*i*Pn	Pn	04 39 19.9	+1.4
PVY				*e*Sn	Sn	04 39 55.6	+2.4
KRND	KRANIDI	2.90	160	P	Pn	04 39 18.9	+0.3
KRND				S	Sn	04 39 55.9	+2.4
	comp=E,978nm,0.9s						
DRME	Dracevica, Mon	2.91	316	⇑*i*Pn	Pn	04 39 20.3	+1.4
DRME				*e*Sn	Sn	04 39 56.4	+2.5
DRME	Dracevica, Mon	2.91	316	*e*Pn	Pn	04 39 20.2	+1.4
PLD	Plovdiv	2.92	46	*e*Pn	Pn	04 39 19.3	+0.3
ITM	Ithomi	2.92	179	*e*Pn	Pb	04 39 22.5	-2.3
ITM	Ithomi	2.92	179	P	Pn	04 39 20.9	+1.8
ITM	Ithomi	2.92	179	P	Pn	04 39 20.3	+1.2
RDO	Rodhopi	2.97	68	P	Pn	04 39 19.5	-0.2
RDO	Rodhopi	2.97	68	P	Pn	04 39 19.9	+0.2
PDG	Podgorica	3.05	320	*e*Pn	Pn	04 39 21.9	+1.1
PDG				*e*Sn	Sn	04 39 59.2	+1.9
PDG	Podgorica	3.05	320	⇑*i*P	Pn	04 39 22.3	+1.5
PDG	Podgorica	3.05	320	S	Sn	04 39 59.1	+1.8
PDG	Podgorica	3.05	320	*e*Pn	Pn	04 39 22.4	+1.6
TTG	Podgorica	3.05	320	⇓*i*Pn	Pn	04 39 22.4	+1.6
TTG				*e*Sn	Sn	04 39 59.9	+2.6
KDZ	Kurdzhali	3.09	59	P	Pn	04 39 20.5	-0.9
IVA	Berane	3.14	332	⇓*i*Pn	Pn	04 39 23.4	+1.3
IVA				*e*Sn	Sn	04 40 01.9	+2.2
BUM	Brajici-Budva	3.14	315	⇑*i*Pn	Pn	04 39 23.1	+0.9
BUM				*e*Sn	Sn	04 40 02.9	+3.2
SELS	Selova	3.16	350	*e*Pn	Pn	04 39 22.5	+0.1
PYL	PYLOS	3.21	182	P	Pn	04 39 24.8	+1.8
PYL	PYLOS	3.21	182	P	Pn	04 39 24.4	+1.4
ZAPS	Zavoj	3.21	10	*e*Pn	Pn	04 39 24.5	+1.4
BOZC	Bozcaada	3.22	93	*i* P	Pn	04 39 24.3	+1.2
BOZC				IAML_P			
	comp=Z,2µm,0.2s						
KOME	Kolasin	3.27	328	⇑*i*Pn	Pn	04 39 25.8	+1.9
KOME				*e*Sn	Sn	04 40 04.8	+2.0
ALN	Alexandroupoli	3.27	75	*e*Pn	Pn	04 39 24.1	+0.3
ALN	Alexandroupoli	3.27	75	P	Pn	04 39 24.6	+0.8
CEME	Cevo	3.31	318	⇑*i*Pn	Pn	04 39 25.9	+1.5
CEME				*e*Sn	Sn	04 40 06.2	+2.5
DYR	Agios Nikonas	3.36	174	P	Pn	04 39 27.4	+2.3
CGL1	Ceglie Messapi	3.41	281	*e*Pn	Pn	04 39 26.7	+1.0
CGL1				Sn	Sn	04 40 06.1	-0.1
NKME	Niksic	3.45	321	⇓*i*Pn	Pn	04 39 27.9	+1.5
NKME				*e*Sn	Sn	04 40 09.3	+2.0
SJES	Sjenica	3.46	336	*e*Pn	Pn	04 39 27.8	+1.3
HCY	Herceg Novi	3.46	314	⇑*i*Pn	Pn	04 39 27.9	+1.4
HCY				*e*Sn	Sn	04 40 09.9	+2.4
HCY	Herceg Novi	3.46	314	*e*Pn	Pn	04 39 26.3	-0.2
NKY	Niksic	3.47	322	⇑*i*Pn	Pn	04 39 28.2	+1.6
NKY				*e*Sn	Sn	04 40 09.9	+2.1
VLI	Veliai	3.48	166	P	Pn	04 39 26.5	-0.2
FASA	Fasano	3.53	283	*e*Pn	Pn	04 39 27.7	+0.4
BOVS	Bovan	3.53	358	*e*Pn	Pn	04 39 27.9	+0.5
TAR1	Taranto	3.54	278	*e*Pn	Pn	04 39 28.2	+0.7
BAYC	CANAKKALE_Bayr	3.61	94	*i* P	Pn	04 39 30.0	+1.6
BAYC				IAML_P			
	comp=Z,867nm,0.3s						
MASS	Massafra	3.66	280	*e*Pn	Pn	04 39 29.9	+0.8
IVAS	Ivanjica	3.70	340	*e*Pn	Pn	04 39 29.9	+0.1
ZAGS	Zajecar	3.71	4	*e*Pn	Pn	04 39 30.6	+0.7
PLE	Pljevlja	3.72	331	⇑*i*Pn	Pn	04 39 31.8	+1.7
PLE				*e*Sn	Sn	04 40 16.1	+2.0
TREB	Trebinje	3.72	316	*e*Pn	Pn	04 39 31.1	+1.1
TREB	Trebinje	3.72	316	*e*Pn	Pn	04 39 30.8	+0.8
KESN	Edirne-Kesan	3.73	77	*i* P	Pn	04 39 32.1	+1.6
KESN				IAML_P			
	comp=Z,166nm,0.3s						
BRY	Bratogost	3.75	319	⇑*i*Pn	Pn	04 39 32.4	+1.8
BRY				*e*Sn	Sn	04 40 16.8	+1.9
BRY	Bratogost	3.75	319	*e*Pn	Pn	04 39 32.7	+2.1
AYVA	Ayvalik	3.79	101	*i* P	Pn	04 39 33.6	+2.6
AYVA				IAML_P			
	comp=Z,412nm,0.4s						
DBRK	Dubrovnik	3.80	314	*e*Pn	Pn	04 39 31.5	+0.4
UPM	Unac-Piva	3.81	325	⇑*i*Pn	Pn	04 39 32.9	+1.4
UPM				*e*Sn	Sn	04 40 18.6	+2.2
UPM	Unac-Piva	3.81	325	*e*Pn	Pn	04 39 31.9	+0.4
PLVB	Pleven	3.87	31	⇓*i*P	Pn	04 39 33.2	+1.2
GRUS	Gruza	3.88	347	*e*Pn	Pn	04 39 32.9	+0.7
BAI	Bari	3.94	286	*e*Pn	Pn	04 39 33.3	+0.3
BAI				Sn	Sn	04 40 17.0	-2.1
KTHR	Kythira	3.94	167	P	Pn	04 39 34.4	+1.4
KTHA	Kythira Island	3.96	166	P	Pn	04 39 36.1	+2.9
RUDO	Rudo	3.98	333	*e*Pn	Pn	04 39 33.5	-0.1
MATE	Matera	3.99	279	⇓*i*P	Pn	04 39 34.2	+0.5
MATE	Matera	3.99	279	S	Sn	04 40 18.5	-2.0
SG1	Sgolgore (BA)	4.04	282	*e*Pn	Pn	04 39 35.1	+0.7
SG1				Sn	Sn	04 40 21.6	-0.1
URLA	Izmir	4.05	114	*i* P	Pb	04 39 43.1	-0.9
URLA				IAML_P			
	comp=Z,729nm,0.3s						
TIP	Timpagrande	4.06	258	*e*Pn	Pn	04 39 35.3	+0.6
TIP	Timpagrande	4.06	258	⇓*i*P	Pn	04 39 34.8	0.0
TIP	Timpagrande	4.06	258	S	Sn	04 40 20.0	-2.4
SART	Tekirdag	4.09	80	*i* P	Pn	04 39 37.8	+2.6
SART				IAML_P			
	comp=Z,73nm,0.2s						
APE	Apeiranthos	4.17	136	⇓*i*P	Pn	04 39 37.3	+1.1
ZEDA	zmir-Bergama	4.17	104	*i* P	Pn	04 39 37.2	+1.0
ZEDA				IAML_P			
	comp=Z,330nm,0.2s						
STON	Ston	4.18	313	*e*Pn	Pn	04 39 37.3	+1.0
STON				Sn	Sn	04 40 24.3	-0.9
STON	Ston	4.18	313	*e*Pn	Pn	04 39 36.4	+0.1
BBLS	Lazići	4.18	335	*e*Pn	Pn	04 39 37.4	+0.9
BBLS	Lazići	4.18	335	*e*Pn	Pn	04 39 36.4	-0.1
DIVS	Divibare	4.23	341	*e*Pn	Pn	04 39 38.0	+0.9
DIVS	Divibare	4.23	341	*e*Pn	Pn	04 39 38.0	+0.9
TRUS	Trudelj	4.26	346	*e*Pn	Pn	04 39 38.0	+0.6
KIRK	Kırklareli	4.29	65	*i* P	Pn	04 39 39.0	+1.2
KIRK				IAML_P			
	comp=Z,93nm,0.3s						
KUBS	Kucevo	4.31	358	*e*Pn	Pn	04 39 37.6	-0.5
ANKY	Antikythira Is	4.38	165	P	Pn	04 39 41.4	+2.4
DGB	zmir	4.40	116	*i* P	Pn	04 39 41.9	+2.6
DGB				IAML_P			
	comp=Z,160nm,0.2s						
BALY	Balya	4.43	93	*i* P	Pn	04 39 41.4	+1.7
BALY				IAML_P			
	comp=Z,358nm,0.3s						
HAPS	Han Pijesak,BI	4.54	332	*e*Pn	Pn	04 39 42.4	+1.1
HAPS	Han Pijesak,BI	4.54	332	*e*Pn	Pn	04 39 41.2	-0.1
STEP	BALIKESIR_Sava	4.56	97	*i* P	Pn	04 39 44.6	+3.1
STEP				IAML_P			
	comp=Z,567nm,0.1s						
BALB	Balikesir	4.64	94	*e*Pn	Pn	04 39 45.0	+2.3
HERR	Herculane	4.79	5	⇑*i*P	Pn	04 39 45.7	+1.0
MAKA	Makarska	4.83	313	Sn	Sn	04 40 40.5	-0.7
HVAR	Hvar	5.10	309	*e*Pn	Pn	04 39 48.2	-0.7
HVAR				Sn	Sn	04 40 44.7	-3.1
DURS	Dursunbey	5.10	94	*i* P	Pn	04 39 50.3	+1.2
DURS				IAML_P			
	comp=Z,139nm,0.3s						
FRGS	Fruska Gora	5.27	344	*e*Pn	Pn	04 39 51.7	+0.3
FRGS	Fruska Gora	5.27	344	*e*Pn	Pn	04 39 51.4	0.0
AYDN	Tasoluk	5.28	116	*i* P	Pn	04 39 55.6	+4.1
AYDN				IAML_P			
	comp=Z,120nm,0.3s						
GZR	Gura Zlata	5.33	7	⇑*i*P	Pn	04 39 53.0	+0.9
IDI	Anoyia	5.37	153	Pn	Pn	04 39 52.2	-0.5
	comp=Z,2.1nm,0.3s,baz=348,slow=11,SNR=14						
IDI				Sn	Sn	04 40 54.0	-0.6
	comp=Z,2.2nm,0.3s,baz=337,slow=14,SNR=1.4						
DEMI	Demirci	5.39	99	*i* P	Pn	04 39 56.4	+3.4
DEMI				IAML_P			
	comp=Z,1µm,0.4s						
BZS	Buzias	5.51	358	⇓*i*P	Pn	04 39 55.3	+0.7
LOT	Lotru	5.52	14	⇓*i*P	Pn	04 39 55.6	+0.8
ULDT	Uludag	5.56	87	*i* P	Pn	04 39 58.4	+2.9
ULDT				IAML_P			
	comp=Z,326nm,0.5s						
MGRS	Mrkonjic Grad	5.59	322	*e*Pn	Pn	04 40 02.4	+6.7
ARR	Arges	5.63	20	⇑*i*P	Pn	04 39 57.3	+0.9
USAK	Uak-Merkez	5.70	102	*i* P	Pn	04 40 00.7	+3.4
USAK				IAML_P			
	comp=Z,1µm,0.5s						
BLY	Banja Luka	5.80	325	*e*Pn	Pn	04 39 59.9	+1.3
BLY	Banja Luka	5.80	325	*e*Pn	Pn	04 39 59.8	+1.3
BLY	Banja Luka	5.80	325	⇓*i*P	Pn	04 39 59.8	+1.3
BLY	Banja Luka	5.80	325	*e*Pn	Pn	04 39 59.3	+0.8
VOIR		5.81	23	⇑*i*P	Pn	04 40 00.0	+1.1
ZIRJ	Zirje	5.85	309	*e*Pn	Pn	04 39 58.8	-0.5
ZIRJ				Sn	Sn	04 41 03.4	-2.9
MORI	Morici	5.94	311	*e*Pn	Pn	04 40 00.7	+0.2
MORI				Sn	Sn	04 41 05.9	-2.6
GDZ	Gediz	5.96	97	*i* P	Pn	04 40 04.1	+3.3
GDZ				IAML_P			
	comp=Z,7.2nm,0.4s						
MLR	Muntele Rosu	6.16	28	Pn	Pn	04 40 05.6	+2.1
	comp=Z,1.3nm,0.3s,baz=322,slow=2.3,SNR=17						
MLR				Sn	Sn	04 41 19.3	+5.3
	comp=Z,0.2nm,0.3s,baz=299,slow=22,SNR=1.6						
MLR				Lg	Lg	04 41 57.5	
	baz=77,slow=17,SNR=1.9						
MLR	Muntele Rosu	6.16	28	*e*Pn	Pn	04 40 05.9	+2.4
MLR	Muntele Rosu	6.16	28	⇑*i*P	Pn	04 40 05.3	+1.7
KHAL	Karahalli	6.16	104	*i* P	Pn	04 40 07.7	+4.1
KHAL				IAML_P			
	comp=Z,888nm,0.5s						
SIRR	Siria	6.16	359	⇓*i*P	Pn	04 40 05.0	+1.5
UDBI	Udbina	6.33	316	*e*Pn	Pn	04 40 07.0	+1.1
UDBI				Sn	Sn	04 41 17.9	-0.4
DUGI	Dugi Otok	6.39	310	*e*Pn	Pn	04 40 06.8	+0.1
DUGI				Sn	Sn	04 41 18.2	-1.5
DOPR	Dopca	6.40	23	⇓*i*P	Pn	04 40 07.6	+0.8
VAE	Valguarnera	6.40	248	Sn	Sn	04 41 20.4	+0.5
	comp=Z,3.3nm,0.3s,baz=6.6,slow=16,SNR=2.1						
MORH	Mrgy, Hungar	6.55	340	*e*Pn	Pn	04 40 08.6	-0.2
MORH	Mrgy, Hungar	6.55	340	*e*Pn	Pn	04 40 06.1	-2.7
MORH				Sn	Sn	04 41 25.1	+1.6
DRGR		6.71	5	⇑*i*P	Pn	04 40 13.2	+2.1
PLOR	Plostina	6.72	30	⇓*i*P	Pn	04 40 12.8	+1.5
VRI	Vrincioaia	6.76	30	⇓*i*P	Pn	04 40 13.7	+1.9
AQU	L'Aquila	6.78	292	*e*Pn	Pn	04 40 14.0	+2.0
AQU	L'Aquila	6.78	292	*e*Pn	Pn	04 40 13.4	+1.4
NVLJ	Novalja	6.84	313	*e*Pn	Pn	04 40 12.4	-0.5
NVLJ				Sn	Sn	04 41 27.3	-3.3
CRES	Cresnjev	7.41	323	*i* Pn	Pn	04 40 20.7	+0.1
CRES				*i* Sn	Sn	04 41 44.1	-0.5
CRES	Cresnjev	7.41	323	*e*Pn	Pn	04 40 20.1	-0.5
CEY	Cerknica	7.85	318	*e*Pn	Pn	04 40 26.8	+0.1
BUR08	Bucovina Ar. S	7.91	17	*e*Pn	Pn	04 40 27.5	0.0
PSZ	Piszkesteto	7.94	350	*e*Pn	Pn	04 40 28.5	+0.5
PSZ	Piszkesteto	7.94	350	⇓*i*P	Pn	04 40 29.3	+1.3
PSZ	Piszkesteto	7.94	350	*e*Pn	Pn	04 40 29.0	+1.0
PSZ				Sn	Sn	04 41 58.1	+0.2
JAVS	Javornik	8.14	318	*i* Pn	Pn	04 40 30.3	-0.4
JAVS				*i* Sn	Sn	04 41 60.0	-2.8
PERS	Pernice	8.18	325	*i* Pn	Pn	04 40 31.2	0.0
PERS				*i* Sn	Sn	04 42 04.2	+0.6
SOKA	Soboth	8.24	325	Pn	Pn	04 40 32.4	+0.3
	comp=Z,2.3nm,0.3s						
OBKA	Obir	8.34	323	*e*Pn	Pn	04 40 35.3	+1.9
	comp=Z,1.3nm,0.3s						
OBKA				Sn	Sn	04 42 08.5	+0.9
	comp=Z,15nm,0.5s						
ARSA	Arzberg	8.49	329	Pn	Pn	04 40 34.6	-1.0
	comp=Z,2.2nm,0.3s						
ARSA				Sn	Sn	04 42 13.8	+2.3
	comp=Z,2.5nm,0.5s						
VYHS	Vyhne	8.66	346	*e*PN	Pn	04 40 39.4	+1.5
VYHS				*e*SN	Sn	04 42 11.5	-4.1
KOLS	Kolonicke sedl	8.83	2	*e*PN	Pn	04 40 39.6	-0.5
MYKA	Terra Mystica	8.86	320	Pn	Pn	04 40 41.2	+0.6
	comp=Z,0.7nm,0.3s						
MYKA				Sn	Sn	04 42 19.8	-0.6
	comp=Z,2.4nm,0.5s						
MODS	Modra-Piesok	8.90	340	*e*PN	Pn	04 40 41.6	+0.5
MODS				*e*SN	Sn	04 42 15.3	-6.0
CONA	Conrad Observa	8.94	333	Pn	Pn	04 40 44.2	+2.5
	comp=Z,0.5nm,0.2s						
BR101	Keskin Array S	9.04	89	*e*Pn	Pn	04 40 44.5	+1.3
BR131	Keskin Array S	9.04	89	*e*Pn	Pn	04 40 43.3	0.0
BRTR	Keskin Array B	9.04	89	Pn	Pn	04 40 44.5	+1.3
	comp=Z,0.3nm,0.3s,baz=263,slow=12,SNR=8.8						
JAVC	Velka Javorina	9.25	342	*e*PN	Pn	04 40 49.4	+3.4
MOA	Molln	9.48	327	Pn	Pn	04 40 48.9	-0.3
	comp=Z,1.1nm,0.3s						
MOA				Sn	Sn	04 42 36.7	+1.0
	comp=Z,3.8nm,0.5s						
ABTA	Abfaltersbach	9.51	317	Pn	Pn	04 40 47.8	-1.7
	comp=Z,0.1nm,0.1s						
ABTA				Sn	Sn	04 42 31.4	-5.0
	comp=Z,5.3nm,0.6s						
KRUC	Moravsky	9.77	338	*e*PN	Pn	04 40 52.6	-0.4
MORC	Moravsky Berou	10.14	344	*e*PN	Pn	04 40 51.1	-7.1
WTTA	Wattenberg	10.30	317	Pn	Pn	04 40 57.1	-3.4
	comp=Z,2.1nm,0.4s						
WTTA				Sn	Sn	04 42 52.4	-3.5
	comp=Z,22nm,0.7s						
WATA	Walderalm	10.38	318	*e*Pn	Pn	04 41 02.8	+1.3
	comp=Z,2.8nm,0.4s						
SQTA	Sankt Quirin	10.50	316	Pn	Pn	04 41 00.8	-2.3
	comp=Z,2.8nm,0.5s						
SQTA				Sn	Sn	04 42 59.4	-1.3
	comp=Z,16nm,0.7s						
GEC2	GERESS Array S	10.51	329	*e*Pn	Pn	04 41 02.7	-0.5
GERES	GERESS Array B	10.51	329	Pn	Pn	04 41 02.7	-0.5
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=3.0						
GERES				Sn	Sn	04 42 59.0	-1.8
	comp=Z,0.1nm,0.3s,baz=138,slow=21,SNR=2.2						
MOTA	Moosalm	10.63	316	*e*Pn	Pn	04 41 04.5	-0.5
	comp=Z,1.1nm,0.4s						
FETA	Feichten	10.63	314	Pn	Pn	04 41 07.0	+2.0
	comp=Z,1.5nm,0.4s						
FETA				Sn	Sn	04 43 01.0	-3.2
	comp=Z,5.4nm,0.8s						
KHC	Kasperske Hory	10.78	330	*e*Pn	Pn	04 41 08.2	+1.3
KHC	Kasperske Hory	10.78	330	*e*P	Pn	04 41 08.8	+1.9
KHC				*e*x	x	04 43 10.0	
KHC				AMS	AMS	04 45 30.0	
	comp=Z,300nm,10.1s						

KEST	Kesra	10.82	250	Pn	Pn	04 41 07.0	-0.5
	comp=Z,0.1nm,0.3s,baz=59,slow=5.9,SNR=1.7						
KEST	Kesra	10.82	250	*e*Pn	Pn	04 41 07.8	+0.3
RETA	Reutte	10.90	316	Pn	Pn	04 41 10.9	+2.3
	comp=Z,1.0nm,0.4s						
RETA				Sn	Sn	04 43 05.8	-4.7
	comp=Z,4.8nm,0.4s						
DPC	Dobruska-Polom	10.96	341	AMS	AMS	04 46 10.0	
	comp=Z,200nm,10.0s						
DAVOX	Davos/Dischmat	10.98	311	Pn	Pn	04 41 08.8	-1.0
	comp=Z,0.3nm,0.3s,baz=68,slow=19,SNR=2.6						
DAVOX				Sn	Sn	04 43 05.3	-7.2
	comp=Z,0.3nm,0.3s,baz=329,slow=18,SNR=2.0						
DAVOX				LR	LR	04 46 31.5	
	comp=Z,40nm,18.3s,baz=114,slow=44						
GOPC	GO Pecny, Ondr	11.01	335	AMS	AMS	04 45 50.0	
	comp=Z,200nm,8.2s						
PRU	Pruhonice	11.15	335	AMS	AMS	04 45 50.0	
	comp=Z,200nm,8.6s						
DAVA	Damuels	11.26	314	Pn	Pn	04 41 16.0	+2.4
	comp=Z,3.3nm,0.5s						
DAVA				Sn	Sn	04 43 15.9	-3.6
	comp=Z,3.6nm,0.7s						
PVCC	Panska Ves	11.62	336	AMS	AMS	04 46 10.0	
	comp=Z,200nm,6.6s						
MMAI	Mount Meron Ar	12.96	119	Pn	Pn	04 41 35.0	-1.8
	comp=Z,0.3nm,0.3s,baz=308,slow=14,SNR=3.2						
EIL	Elat	14.93	130	Pn	Pn	04 42 02.8	-0.8
	comp=Z,0.1nm,0.3s,baz=297,slow=11,SNR=2.0						
CLF	Chambon-Foret	16.14	306	*e*P	P	04 42 22.4	-0.2
	comp=Z,94nm,2.0s						
OBN	Obninsk	17.93	28	LR	LR	04 50 50.5	
	comp=Z,20nm,19.1s,baz=345,slow=41						
ESDC	Sonseca Array	19.82	277	P	P	04 43 01.3	-2.0
	comp=Z,0.2nm,0.3s,baz=74,slow=10,SNR=6.1						
HFS	Hagfors	20.69	348	P	P	04 43 10.9	-1.6
	comp=Z,2.8nm,0.5s,baz=164,slow=12,SNR=14						
FIA0	FINESS Array S	21.52	5	*e*P	P	04 43 20.3	-1.0
FINES	FINESS Array B	21.52	5	P	P	04 43 20.3	-1.0
	comp=Z,1.8nm,0.7s,baz=179,slow=11,SNR=9.4						
NB2	NORSAR Subarra	21.97	346	P	P	04 43 24.9	-1.4
	comp=Z,3.4nm,0.7s,baz=160,slow=11						
NB200	NORSAR Array S	21.97	346	*e*P	P	04 43 24.9	-1.4
NOA	NORSAR Array B	21.97	346	P	P	04 43 24.9	-1.4
	comp=Z,2.3nm,0.8s,baz=161,slow=10,SNR=17						
TAM	Tamanrasset	22.13	224	*e*P	P	04 43 30.9	+2.4
	comp=Z,24nm,1.6s						
MTE	Manteigas	22.42	280	*e*P	P	04 43 32.7	+1.4
	comp=Z,24nm,1.3s						
PVRL	Vila Real	22.43	283	*e*P	P	04 43 34.3	+2.9
MDT	Midelt	22.46	259	P	P	04 43 29.6	-2.2
	comp=Z,2.7nm,1.0s,baz=79,slow=8.3,SNR=6.7						
PCBR	Castelo Branco	22.46	279	*e*P	P	04 43 33.7	+2.0
	comp=Z,17nm,1.6s						
POLO	Lamas de Olo	22.48	283	*e*P	P	04 43 34.4	+2.4
	comp=Z,11nm,1.7s						
EKA	Eskdalemuir Ar	22.53	321	P	P	04 43 30.7	-1.6
	comp=Z,2.9nm,0.5s,baz=117,slow=10.0,SNR=24						
PBEJ	Beja	23.14	274	*e*P	P	04 43 44.3	+5.4
	comp=Z,17nm,1.6s						
PMTG	Montargil	23.18	277	*e*P	P	04 43 40.6	+1.4
PTOM	Tomar	23.21	279	*e*P	P	04 43 37.2	-2.3
AKTO	Aktyubinsk	27.20	56	LR	LR	04 56 43.9	
	comp=Z,100nm,18.5s,baz=201,slow=40						
ARCES	ARCESS Array B	29.55	3	P	P	04 44 36.1	-0.9
	comp=Z,1.0nm,0.7s,baz=186,slow=8.1,SNR=5.2						
TOA1	Torodi Ar. Sit	32.19	219	*e*P	P	04 44 59.2	-1.5
TORD	Torodi Ar. Bea	32.19	219	P	P	04 44 59.2	-1.5
	comp=Z,2.3nm,0.7s,baz=33,slow=7.7,SNR=9.7						
KKAR	Karatay Array	36.08	69	*e*P	P	04 45 36.3	+2.0
MK31	Makanchi Array	43.41	60	*e*P	P	04 46 35.1	-0.1
	comp=Z,4.7nm,1.3s						
MK32	Makanchi Array	43.41	60	*e*P	P	04 46 35.1	-0.1
MKAR	Makanchi Array	43.41	60	P	P	04 46 35.1	-0.1
	comp=Z,1.3nm,0.6s,baz=278,slow=7.2,SNR=11						
ZAA1	Zalesovo Array	43.63	50	*e*P	P	04 46 36.0	-0.8
ZALV	Zalesovo Beam	43.63	50	P	P	04 46 36.0	-0.8
	comp=Z,1.8nm,0.7s,baz=271,slow=9.6,SNR=4.8						
WMQ	Urumqi	47.92	63	*e*P	P	04 47 14.3	+3.3
LZH	Lanzhou	62.41	65	*e*P	P	04 48 58.3	+2.5
LZH				pP	sP	04 49 02.3	+1.6
LZH				sP	pP	04 49 04.5	+5.0
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC	Hu-ho-hao-te	65.08	57	P	P	04 49 14.8	+1.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,10.0nm,4.3s						
KMI	Kunming	67.58	76	P	P	04 49 31.8	+2.1
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
YKA	Yellowknife Ar	71.94	340	P	P	04 49 56.1	+0.5
	comp=Z,0.4nm,0.7s,baz=37,slow=5.5,SNR=4.5						
YKB5	Yellowknife Ar	71.94	340	*e*P	P	04 49 56.1	+0.5
KS15	Wonju Array Si	77.28	52	*e*P	P	04 50 26.2	-0.9
	comp=Z,36nm,1.8s						
KSRS	Korea Array	77.30	52	P	P	04 50 26.2	-0.9
	comp=Z,2.2nm,0.7s,baz=315,slow=5.1,SNR=9.6						
ASAJ	Asahikawa	80.62	39	LR	LR	05 28 12.4	
	comp=Z,316nm,21.4s,baz=175,slow=37						
PD31	Pinedale Array	86.54	326	*e*P	P	04 51 14.7	-1.3
	comp=Z,5.8nm,1.9s						
PDAR	Pinedale Array	86.54	326	P	P	04 51 14.7	-1.3
	comp=Z,0.2nm,0.6s,baz=69,slow=5.1,SNR=2.2						
TXAR	Lajitas Array	94.39	315	P	P	04 51 51.4	-1.4
	comp=Z,0.4nm,0.8s,baz=70,slow=5.3,SNR=3.4						
AS31	Alice Springs	121.32	96	*e*PKPdf	PKPdf	04 57 24.4	-1.7
ASAR	Alice Springs	121.32	96	PKP	PKPdf	04 57 24.4	-1.7
	comp=Z,0.3nm,0.5s,baz=280,slow=1.2,SNR=5.0						

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*ISCJB **27** 05:08:15.2±0.5, 36°.65N±0°.08×77°.3E±0°.2, h100^{km}, mb3.5/6, Error ellipse: s-maj=20.2km s-min=5.2km az=150.9*

*IDC **27** 05:08:20.8±4.0, 36°.93N×77°.12E, h108^{km}±31^{km}, mb3.3/6, mb1 3.4/10, mb1mx3.2/51, mbtmp3.7/10, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=39.8km s-min=18.2km az=38.0*

*NNC **27** 05:08:21.7±3.2, 36°.79N×76°.86E, h114^{km}±33^{km}, mb2.8, mpv3.4, Error ellipse: s-maj=43.7km s-min=24.4km az=52.0*

ISC 27 05:08:17.7±0.8**, 36°.72N**±0°.08×**77°.3E**±0°.1**, h100^{km}, n23, σ2^{s}.49**/28**, mb3.4**/6**, 4C-2D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.97	340	Pn	Pn	05 09 02.3	-0.9
KSH				Sn	Sn	05 09 35.3	-3.0
KSH				smax	smax		
	comp=N,140nm,0.5s						
KSH				smax	smax		
	comp=E,230nm,0.2s						
AAK	Ala-Archa	6.29	341	P	Pn	05 09 48.8	+0.9
	comp=E,1.7nm,0.3s,baz=134,slow=6.7,SNR=4.8						
AAK				S	Sn	05 10 56.5	-1.9
	comp=E,0.6nm,0.3s,baz=156,slow=20,SNR=3.9						
AAK	Ala-Archa	6.29	341	⇑P	Pn	05 09 50.4	+2.4
	comp=E,1.4nm,0.3s						
AAK				⇓S	Sn	05 10 59.1	+0.7
	comp=E,8.8nm,0.7s						
TKM2	Tokmak 2	6.32	349	⇑P	Pn	05 09 50.1	+1.6
	comp=E,0.8nm,0.3s						
KK31	Karatay Array	8.22	323	P	Pn	05 10 14.6	+0.4
	comp=E,0.8nm,0.3s,baz=124,slow=13,SNR=20						
KK31				⇑S	Sn	05 11 43.3	-2.0
	comp=E,2.6nm,0.6s,baz=140,slow=20,SNR=10.0						
DANN	Dangsing	9.98	145	*e*P	Pn	05 10 34.9	-3.5
	comp=E,8.6nm,0.2s						
KOLN	Koldanda	10.40	147	*e*P	Pn	05 10 41.2	-3.0
	comp=E,5.1nm,0.2s						
WMQ	Urumqi	10.65	45	*e*P	Pn	05 10 50.5	+3.2
GKN	Gorkha	10.69	142	*e*P	Pn	05 10 44.9	-3.1
	comp=E,20nm,0.2s						
MKAR	Makanchi Array	10.73	19	P	Pn	05 10 47.8	-0.5
	comp=E,0.8nm,0.3s,baz=200,slow=13,SNR=14						
MKAR				S	Sn	05 12 41.2	-5.2
	comp=E,0.8nm,0.3s,baz=198,slow=24,SNR=6.6						
PKIN	Phulchoki	11.42	141	*e*P	Pn	05 10 54.9	-3.0
PKI	Pulchoki	11.43	141	*e*P	Pn	05 10 54.9	-3.2
	comp=E,4.9nm,0.3s						
JIRN	Jiri	11.77	138	*e*P	Pn	05 11 00.2	-2.5
AB31	Akbulak array	17.77	320	⇑P	P	05 12 18.5	+0.6
	comp=E,0.2nm,0.3s,baz=122,slow=12,SNR=6.4						
ZALV	Zalesovo Beam	18.00	15	P	P	05 12 19.9	-0.5
	comp=E,0.1nm,0.3s,baz=201,slow=12,SNR=3.1						
ZALV				LR	LR	05 20 16.2	
	comp=E,128nm,19.0s,baz=68,slow=40						
AKTO	Aktyubinsk	19.48	321	P	P	05 12 36.3	-0.2
	comp=E,0.3nm,0.3s,baz=119,slow=9.0,SNR=3.7						
AKTO	Aktyubinsk	19.48	321	⇓P	P	05 12 36.4	-0.2
	comp=E,1.1nm,0.6s						
SONM	Songino Array	24.10	53	P	P	05 13 27.4	+3.3
	comp=E,0.7nm,0.4s,baz=242,slow=10,SNR=5.0						
CMAR	Chiang Mai Arr	26.35	128	P	P	05 13 48.8	+4.3
	comp=E,1.2nm,0.9s,baz=318,slow=13,SNR=5.1						
FINES	FINESS Array B	40.18	325	P	P	05 15 44.8	+1.0
	comp=E,1.3nm,0.3s,baz=114,slow=8.7,SNR=30						
ARCES	ARCESS Array B	42.93	336	P	P	05 16 07.3	+1.1
	comp=E,0.4nm,0.3s,baz=109,slow=9.5,SNR=9.2						
NOA	NORSAR Array B	47.25	323	P	P	05 16 39.5	-1.0
	comp=E,0.3nm,0.6s,baz=82,slow=9.4,SNR=3.2						
YKA	Yellowknife Ar	80.66	6	P	P	05 20 19.7	+0.5
	comp=E,0.2nm,0.5s,baz=343,slow=5.7,SNR=3.5						

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*ISCJB **27** 05:08:22.5±0.6, 21°.67N±0°.08×143°.5E±0°.2, h250^{km}, mb3.8/17, Error ellipse: s-maj=20.7km s-min=10.0km az=167.5*

*IDC **27** 05:08:24.8±3.7, 21°.68N×143°.49E, h257^{km}±36^{km}, mb3.6/18, mb1 3.7/20, mb1mx3.5/52, mbtmp4.2/20, Error ellipse: s-maj=19.2km s-min=9.3km az=82.0*

ISC 27 05:08:24.0±0.6**, 21°.66N**±0°.10×**143°.5E**±0°.2**, h250^{km}, n25, σ0^{s}.78**/23**, mb3.8**/17**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	15.54	344	P	P	05 11 49.2	-0.5
	0.2nm,0.3s,baz=168,slow=11,SNR=8.8						
JNU	Nakatsue	16.00	318	P	Pn	05 11 56.6	+0.5
	1.7nm,0.3s,baz=128,slow=3.6,SNR=13						
KSRS	Korea Array	20.73	323	P	P	05 12 45.3	-0.5
	12nm,0.7s,baz=148,slow=9.0,SNR=54						
H11S3	WAKE ISLAND Hy	21.98	94	T	T	05 36 15.9	
	baz=284						
H11S1	WAKE ISLAND Hy	21.99	94	T	T	05 36 17.8	
	baz=284						
H11S2	WAKE ISLAND Hy	22.00	94	T	T	05 36 18.7	
	baz=284						
USRK	Ussuriysk Ar.	24.43	340	P	P	05 13 19.4	-0.5
	1.8nm,0.7s,baz=164,slow=9.3,SNR=5.5						
KLR	Kul'dur	29.07	344	P	P	05 14 01.8	+0.6
	5.7nm,0.6s,baz=146,slow=6.6,SNR=24						
SONM	Songino Array	39.57	320	P	P	05 15 31.9	+0.6
	1.3nm,0.4s,baz=129,slow=7.7,SNR=9.0						
CTA	Charters Tower	41.58	176	P	P	05 15 48.5	+0.8
	7.4nm,0.6s,baz=4.8,slow=11,SNR=6.8						
WRA	Warramunga Arr	42.31	193	P	P	05 15 53.7	0.0
	1.3nm,0.3s,baz=8.3,slow=7.9,SNR=34						
ASAR	Alice Springs	46.01	192	P	P	05 16 22.7	-0.2
	0.5nm,0.5s,baz=14,slow=13,SNR=8.2						
ASAR				PcP	PcP	05 17 53.6	-1.4
	0.4nm,0.7s,baz=13,slow=3.2,SNR=3.6						
STKA	Stephens Creek	53.26	182	P	P	05 17 16.9	-0.3
	2.3nm,0.4s,baz=13,slow=5.4,SNR=5.7						
ZALV	Zalesovo Beam	54.44	322	P	P	05 17 25.6	+0.1
	3.5nm,0.6s,baz=99,slow=6.9,SNR=13						
MKAR	Makanchi Array	54.95	313	P	P	05 17 30.1	+0.6
	1.3nm,0.5s,baz=89,slow=9.1,SNR=9.0						
KURBB	Kurchatov Arra	57.77	317	P	P	05 17 49.2	+0.1
	3.4nm,0.7s,baz=96,slow=7.6,SNR=24						
ILAR	Eielson Array	61.93	27	P	P	05 18 16.1	-1.1
	1.3nm,0.7s,baz=256,slow=5.2,SNR=12						
BVAR	Borovoye Array	62.91	320	P	P	05 18 22.0	-1.7
	3.1nm,0.6s,baz=93,slow=8.0,SNR=14						
INK	Inuvik	67.48	24	P	P	05 18 52.3	-0.4
	1.2nm,0.6s,baz=284,slow=5.8,SNR=6.9						
YKA	Yellowknife Ar	76.35	28	P	P	05 19 45.5	+0.1
	0.4nm,0.4s,baz=292,slow=5.8,SNR=4.0						
ARCES	ARCESS Array B	79.06	342	P	P	05 20 00.4	+0.2
	1.3nm,0.6s,baz=72,slow=8.4,SNR=15						
NVAR	Mina Array Bea	82.92	52	P	P	05 20 22.7	+1.3
	0.2nm,0.5s,baz=282,slow=4.5,SNR=2.9						
FINES	FINESS Array B	83.35	335	P	P	05 20 22.2	-0.7
	1.7nm,0.5s,baz=70,slow=4.4,SNR=26						
PLCA	Paso Flores	145.50	131	PKPbc	PKPbc	05 27 33.9	+0.7
	3.1nm,0.7s,baz=270,slow=4.3,SNR=13						
LPAZ	La Paz	149.63	85	PKPbc	PKPbc	05 27 44.9	-0.8
	1.0nm,0.5s,baz=355,slow=3.0,SNR=8.9						

MEX 27 05:08:28.8±0.6**, 19°.08N**×**104°.16W, h3^{km}**±3^{km}**, MD3.6, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZ5V		0.66	53	*e*P	Pg	05 08 41.0	-0.5
EZ5V				*i* S	Sg	05 08 50.9	+0.8
CJM	Chamela	0.93	297	*i* P	Pg	05 08 45.3	-1.4
CJM				*e*S	Sg	05 08 57.4	-1.3
MMIG	Aquila	1.10	135	*e*P	Pg	05 08 47.5	-2.5
MMIG				*e*S	Sg	05 09 00.9	-3.4
ANIG	Ahuacatlan	1.99	350	*e*P	Pn	05 09 00.1	-3.4
ANIG				*e*S	Sn	05 09 24.0	-5.1

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*MEX **27** 05:08:33.8±0.7, 14°.13N×92°.24W, h16^{km}±65^{km}, MD3.9*

*SNET **27** 05:08:36.8±1.1, 13°.77N×92°.04W, h29^{km}±999^{km}, ML3.6*

*GCG **27** 05:08:38.9±0.3, 14°.55N×91°.86W, h53^{km}±75^{km}, MD4.0*

ISC 27 05:08:31.1±2.3**, 14°.39N**±0°.09×**92°.18W**±0°.08**, h6^{km}**±13^{km}**, n17, σ1^{s}.39**/27**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.52	351	*e*P	Pn	05 08 46.7	+1.6
THIG				*i* S	Sn	05 08 55.8	+1.5
ERG	Entre ros, C	0.59	85	*e*P	Pn	05 08 48.4	+2.3
STG3	Santiaguito 3,	0.67	61	*e*P	Pn	05 08 49.2	+1.9
FUG	Fuego 3	1.29	87	*e*P	Pg	05 08 57.2	+1.2
PCG	Pacaya	1.52	90	*e*P	Pg	05 09 00.6	+0.3
PCIG		1.65	323	*e*P	Pn	05 09 00.8	+0.2
PCIG				*i* S	Sn	05 09 22.3	+0.2
NBG	Las Nubes	1.78	83	*e*P	Pg	05 09 05.5	+0.2
CCIG	Comitan	1.88	1	*e*P	Pg	05 09 06.6	-0.6
CCIG				*i* S	Sg	05 09 30.3	-1.3
RTR	El Retiro	2.50	101	*e*P	Pn	05 09 13.7	+1.2
RTR				*e*S	Sn	05 09 42.5	-0.9
TGIG		2.54	339	*e*P	Pn	05 09 14.5	+1.5
TGIG				*e*S	Sb	05 09 46.6	-2.1
SNJE	San Jose	2.55	101	*e*P	Pn	05 09 13.9	+0.7
SNJE				*e*S	Sn	05 09 44.5	-0.1
PMON	Piamonte	2.86	103	*e*P	Pn	05 09 17.8	+0.4
PMON				*e*S	Sn	05 09 50.3	-1.8
LOMA	Loma Larga	3.01	104	*e*P	Pn	05 09 20.8	+1.6
LOMA				*e*S	Sn	05 09 53.3	-2.3
LFU	La Fuente	3.04	102	*e*P	Pn	05 09 20.8	+0.9
PAVA	Las Pavas	3.22	102	*e*P	Pn	05 09 23.4	+1.2
PAVA				*e*S	Sn	05 09 59.9	-1.1
CMIG	Matias Romero	3.74	316	*e*P	Pn	05 09 30.2	+0.8
CMIG				*i* S	Sn	05 10 14.8	+1.0
LCND	La Caada	4.30	104	*e*P	Pn	05 09 37.6	+0.6

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*ISCJB **27** 05:21:20.8±0.5, 5°.51S±0°.04×35°.76E±0°.07, h10^{km}, mb4.2/7, MS3.4/1, Error ellipse: s-maj=10.5km s-min=6.1km az=14.0*

*IDC **27** 05:21:21.4±1.0, 5°.70S×35°.66E, h0^{km}, mb4.0/5, mb1 4.2/8, mb1mx3.8/34, mbtmp4.2/8, ML4.6/3, MS3.6/1, Ms1 3.6/1, ms1mx2.8/33, Error ellipse: s-maj=29.6km s-min=20.3km az=120.0*

*NEIC **27** 05:21:23.2±2.7, 5°.47S×35°.64E, h10^{km}, mb4.5/5, Error ellipse: s-maj=21.2km s-min=5.4km az=282.0*

ISC 27 05:21:22.7±0.7**, 5°.44S**±0°.05×**35°.68E**±0°.07**, h10^{km}, n27, σ2^{s}.05**/32**, mb4.3**/7**, 2C, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOND	Kondoa	0.54	12	*i* P	Pg	05 21 32.9	-0.4
KOND				*i* S	Sg	05 21 40.2	-0.3
KIBA	Kibaya	0.91	81	*i* P	Pg	05 21 35.6	-4.6
KIBA				*i* S	Sg	05 21 44.0	-7.9
KMBO	Kilima Mbogo	4.57	20	Pn	Pn	05 22 30.1	-2.0
	24nm,0.3s,baz=180,slow=17,SNR=64						
KMBO				Lg	Lg	05 23 38.8	
	60nm,0.3s,baz=287,slow=17,SNR=15						
KMBO	Kilima Mbogo	4.57	20	*e*Pn	Pn	05 22 29.9	-2.2
MBAR	Mbarara	6.89	314	Pn	Pn	05 23 05.3	+1.4
	33nm,0.3s,baz=112,slow=19,SNR=20						
MBAR				Sn	Sn	05 24 20.9	-1.6
	56nm,0.3s,baz=223,slow=12,SNR=10						
MBAR	Mbarara	6.89	314	*e*Pn	Pn	05 23 05.2	+1.2
MBAR				*e*Sn	Sn	05 24 21.9	-0.7
MBAR	Mbarara	6.89	314	⇑*e*P	Pn	05 23 06.1	+2.2
MBAR				⇑*e*S	Sg	05 25 01.8	-2.1
LSZ	Lusaka	12.23	216	Pn	Pn	05 24 13.7	-3.5
	1.3nm,0.3s,baz=40,slow=10,SNR=11						
LSZ				Sn	Sn	05 26 30.6	-3.3
	0.3nm,0.3s,baz=18,slow=9.4,SNR=3.7						
LSZ				Lg	Lg	05 27 39.1	
	1.4nm,0.3s,baz=66,slow=10.0,SNR=6.0						
LSZ	Lusaka	12.23	216	*e*Pn	Pn	05 24 15.5	-1.7
BLWY	Bulawayo	16.14	205	*i* P	Pn	05 25 08.4	-1.6
BLWY				*i* S	Sn	05 28 12.6	+3.3
BLWY	Bulawayo	16.14	205	*i* P	Pn	05 25 08.4	-1.6
BLWY				*i* S	Sn	05 28 12.6	+3.3
MATP	Matopo	16.45	204	*i* P	Pn	05 25 12.8	-1.0
MATP				*i* S	S	05 28 42.0	+13
MATP	Matopo	16.45	204	Pn	Pn	05 25 09.7	-4.1
	0.4nm,0.3s,baz=23,slow=13,SNR=9.8						
MATP				Lg	Lg	05 29 54.0	
	0.3nm,0.3s,baz=3.4,slow=19,SNR=3.7						
MATP	Matopo	16.45	204	*i* P	Pn	05 25 12.8	-1.0
MATP				*i* S	S	05 28 42.0	+13
LBTB	Lobatse	21.73	205	P	P	05 26 12.9	-1.5
	8.7nm,0.9s,baz=36,slow=11,SNR=7.9						
LBTB				Lg	Lg	05 32 34.9	
	4.4nm,0.9s,baz=86,slow=7.1,SNR=3.6						
LBTB	Lobatse	21.73	205	*e*P	P	05 26 14.0	-0.4
	17nm,1.0s						
TSUM	Tsumeb	22.31	231	Lg	Lg	05 32 53.3	
	5.2nm,0.9s,baz=135,slow=20,SNR=2.1						
TSUM				LR	LR	05 34 53.9	
	comp=Z,146nm,20.4s,baz=81,slow=37						
BOSA	Boshof	25.07	202	P	P	05 26 45.5	-2.2
	4.5nm,1.0s,baz=31,slow=11,SNR=3.0						
BOSA				Lg	Lg	05 34 21.1	
	8.9nm,1.2s,baz=97,slow=19,SNR=3.1						
BOSA	Boshof	25.07	202	*e*P	P	05 26 47.5	-0.2
	19nm,1.4s						
TORD	Torodi Ar. Bea	38.48	299	P	P	05 28 46.9	+1.7
	0.6nm,0.9s,baz=123,slow=10,SNR=2.7						
TOA1	Torodi Ar. Sit	38.48	299	*e*P	P	05 28 46.9	+1.6
PESTR	Estremoz	59.53	322	*e*P	P	05 31 27.4	+0.9
MK31	Makanchi Array	66.33	33	*e*P	P	05 32 12.8	+1.2
	1.2nm,0.8s						
MK32	Makanchi Array	66.33	33	*e*P	P	05 32 13.2	+1.6
MKAR	Makanchi Array	66.33	33	P	P	05 32 13.2	+1.6
	1.3nm,0.7s,baz=232,slow=5.3,SNR=9.7						
CM31	Chiang Mai Arr	66.71	67	*e*P	P	05 32 16.5	+2.0
	6.8nm,0.4s						
CMAR	Chiang Mai Arr	66.71	67	P	P	05 32 15.8	+1.3
	0.9nm,0.4s,baz=266,slow=7.8,SNR=4.6						

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*PGC **27** 05:28:22.2±0.5, 49°.02N×129°.63W, h10^{km}, MLSn3.2/36, Mw3.8/36, 245km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

*ISCJB **27** 05:28:23.3±0.5, 49°.13N±0°.03×129°.29W±0°.04, h10^{km}, mb3.6/3, MS3.5/1, Error ellipse: s-maj=4.4km s-min=3.4km az=135.3*

*IDC **27** 05:28:23.7±1.9, 49°.16N×129°.32W, h0^{km}, mb3.7/3, mb1 3.9/12, mb1mx3.7/39, mbtmp3.7/12, ML3.3/9, MS3.4/4, Ms1 3.4/4, ms1mx2.9/41, Error ellipse: s-maj=32.2km s-min=11.0km az=64.0*

ISC 27 05:28:21.5±0.9**, 49°.03N**±0°.04×**129°.59W**±0°.07**, h10^{km}, n83, σ1^{s}.87**/113**, mb3.7**/3**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMF	NEPTUNE Canada	1.13	163	P	Pb	05 28 41.1	-1.9
KEMF				S	Sb	05 28 54.1	-3.4
BPBC	Brooks Peninsu	1.64	46	Pn	Pn	05 28 49.2	-1.2
BPBC				Sn	Sn	05 29 09.1	-2.4
EDB	Eliza Dome	1.82	61	Pn	Pn	05 28 51.7	-1.2
EDB				Sn	Sn	05 29 13.0	-3.0
NC89	ODP889	1.85	100	Pn	Pn	05 28 52.3	-0.7
HOLB	Holberg	1.87	30	Pn	Pn	05 28 52.0	-1.6
HOLB				Sn	Sn	05 29 14.1	-3.2
NTKA	Nootka	2.03	73	Pn	Pn	05 28 54.6	-1.1
NTKA				Sn	Sn	05 29 18.2	-2.9
ETB	Estevan Point	2.03	79	Pn	Pn	05 28 55.5	-0.3
ETB				Sn	Sn	05 29 18.6	-2.6
MAYB	Maynard	2.09	48	Pn	Pn	05 28 55.7	-1.0
MAYB				Sn	Sn	05 29 21.0	-1.8
PHC	Port Hardy	2.18	39	Pn	Pn	05 28 57.1	-0.8
PHC				Sn	Sn	05 29 21.7	-3.2
TLCB	Telegraph Cove	2.34	49	Pn	Pn	05 28 59.5	-0.5
TLCB				Sn	Sn	05 29 26.4	-2.5
TOFB	Tofino	2.42	86	Pn	Pn	05 29 00.4	-0.8
TOFB				Sn	Sn	05 29 28.2	-2.7
GDR	Gold River	2.44	71	Pn	Pn	05 29 01.0	-0.5
GDR				Sn	Sn	05 29 27.9	-3.4
B012	Ucluelet	2.67	91	Pn	Pn	05 29 03.3	-1.3
B012				Sn	Sn	05 29 34.5	-2.4
NCRB	Newcastle Ridg	2.68	58	Pn	Pn	05 29 05.2	+0.4
NCRB				Sn	Sn	05 29 35.6	-1.7
OZB	Mount Ozzard	2.70	90	Pn	Pn	05 29 04.4	-0.6
OZB				Sn	Sn	05 29 35.0	-2.8
BTB	Buttle Lake	2.70	79	Pn	Pn	05 29 05.1	-0.1
BTB				Sn	Sn	05 29 36.5	-1.5
SPLB	Strathcona Par	2.71	70	Sn	Sn	05 29 35.3	-2.7
MWAB	Mount Washingt	2.89	74	Pn	Pn	05 29 07.9	+0.2
MWAB				Sn	Sn	05 29 41.3	-1.3
CBB	Campbell River	2.93	68	Pn	Pn	05 29 08.6	+0.4
CBB				Sn	Sn	05 29 42.3	-1.1
B928	Bamfield	2.95	92	Pn	Pn	05 29 07.8	-0.5
B928				Sn	Sn	05 29 41.2	-2.4
B927	Port Alberni	3.15	85	Pn	Pn	05 29 11.1	+0.1
MGB	Mount Grey	3.23	89	Pn	Pn	05 29 11.8	-0.5
MGB				Sn	Sn	05 29 48.5	-2.4
BBB	Bella Bella	3.30	16	Pn	Pn	05 29 12.4	-0.7
	7.7nm,0.3s,baz=220,slow=12,SNR=38						
BBB				Sn	Sn	05 29 46.4	-6.0
	5.4nm,0.3s,baz=285,slow=20,SNR=3.2						
BBB	Bella Bella	3.30	16	Pn	Pn	05 29 12.4	-0.7
OCP	Olym-Cheeka Pk	3.37	101	Pn	Pn	05 29 14.6	+0.3
OCP				Sn	Sn	05 29 52.9	-1.4
HG4B	Hotspring	3.42	343	Pn	Pn	05 29 12.8	-2.1
TXB	Texada	3.44	77	Pn	Pn	05 29 15.6	+0.5
TXB				Sn	Sn	05 29 53.5	-2.4
PFB	Port Renfrew	3.44	96	Pn	Pn	05 29 15.2	+0.1
PFB				Sn	Sn	05 29 53.5	-2.4
YOUB	Youbou, Lake C	3.52	90	Pn	Pn	05 29 15.9	-0.3
YOUB				Sn	Sn	05 29 55.9	-2.0
GHNB	Nanoose	3.53	83	Pn	Pn	05 29 16.2	-0.1
GHNB				Sn	Sn	05 29 56.8	-1.2
B926	Mesachie Lake	3.61	91	Pn	Pn	05 29 17.3	-0.1
B926				Sn	Sn	05 29 58.7	-1.3
NLLB	Nanaimo Lost L	3.69	85	Pn	Pn	05 29 19.0	+0.5
NLLB				Sn	Sn	05 30 01.1	-0.8
SHB	Sechelt	3.78	79	Pn	Pn	05 29 20.6	+0.6
SHB				Sn	Sn	05 30 03.8	-0.8
OBC	Olympics--Boni	3.80	103	Pn	Pn	05 29 21.0	+0.8
BCBC	Bella Coola	3.80	27	Pn	Pn	05 29 20.8	+0.8
LZB	Mount Lazard	3.83	94	Pn	Pn	05 29 21.0	+0.4
LZB				Sn	Sn	05 30 04.0	-1.8
BPCB	Bare Point	3.88	89	Sn	Sn	05 30 05.6	-1.1
SOKB	Sooke	3.97	97	Pn	Pn	05 29 22.4	0.0
SOKB				Sn	Sn	05 30 06.6	-2.4
B009	North Saanich	4.07	93	Pn	Pn	05 29 24.6	+0.8
B009				Sn	Sn	05 30 09.0	-2.6
B010	North Saanich	4.07	93	Pn	Pn	05 29 24.5	+0.7
B010				Sn	Sn	05 30 09.1	-2.4
PGC	Sidney	4.07	93	Pn	Pn	05 29 24.5	+0.7
PGC				Sn	Sn	05 30 10.0	-1.5
B011	North Saanich	4.08	93	Pn	Pn	05 29 24.6	+0.8
B011				Sn	Sn	05 30 10.3	-1.2
PA02	PA02 Ocean	4.08	93	Pn	Pn	05 29 24.6	+0.8
PA12	PA12 Sannich	4.08	93	Pn	Pn	05 29 24.3	+0.5
PA12				Sn	Sn	05 30 10.3	-1.3
VGZ	Gonzales	4.20	96	Pn	Pn	05 29 25.9	+0.4
VGZ				Sn	Sn	05 30 12.5	-2.0
SNB	Saturna Island	4.24	91	Pn	Pn	05 29 26.9	+0.8
SNB				Sn	Sn	05 30 14.1	-1.7
WSLR	Whistler	4.48	73	Pn	Pn	05 29 30.6	+1.1
MCW	Mount Constitu	4.48	92	Pn	Pn	05 29 29.1	-0.4
H02S1	DAWSON INLET T	4.55	338	Pn	Pn	05 29 23.0	-7.4
	SNR=7.8						
HDW	Hoodsport	4.58	105	Pn	Pn	05 29 31.6	+0.8

VDB	Vedder Mountai	4.93	87	Pn	Pn	05 29 37.0	+1.4
MBW	Mount Baker	5.08	90	Pn	Pn	05 29 39.4	+1.6
JCW	Jim Creek	5.15	96	Pn	Pn	05 29 39.8	+1.1
UBRB	Upper Baezaeko	5.20	40	Pn	Pn	05 29 41.8	+2.4
LLLB	Lillooet	5.24	70	Pn	Pn	05 29 41.5	+1.7
LLLB				Sn	Sn	05 30 39.3	-0.9
HOPB	Hope	5.37	83	Pn	Pn	05 29 43.4	+1.8
HOPB				Sn	Sn	05 30 42.3	-1.1
LON	Longmire	5.71	111	Pn	Pn	05 29 48.6	+2.3
FMW	Mount Fremont	5.72	109	Pn	Pn	05 29 48.7	+2.1
LTY	Liberty	6.23	103	Pn	Pn	05 29 55.8	+2.3
FSB	Fort Saint Jam	6.36	29	Pn	Pn	05 29 56.4	+1.2
PNT	Penticton	6.55	84	Pn	Pn	05 29 59.3	+1.4
SLEB	Sale Mountain	7.67	70	Pn	Pn	05 30 15.4	+1.9
NEW	Newport	8.30	91	Pn	Pn	05 30 22.6	+0.7
	0.9nm,0.3s,baz=287,slow=12,SNR=14						
NEW				LR	LR	05 33 36.5	
	comp=Z,252nm,19.3s,baz=292,slow=38						
BMBC	Bull Mountain	8.37	30	Pn	Pn	05 30 25.7	+2.9
YBH	Yreka Blue Hor	8.76	144	Pn	Pn	05 30 32.5	+4.3
	0.1nm,0.3s,baz=3.2,slow=13,SNR=5.7						
DLBC	Dease Lake	9.43	359	Pn	Pn	05 30 39.9	+2.6
	0.1nm,0.3s,baz=180,slow=20,SNR=4.3						
WALA	Waterton Lakes	10.30	84	Pn	Pn	05 30 52.0	+2.6
ELK	Elko	13.11	124	LR	LR	05 36 32.7	
	comp=Z,119nm,19.9s,baz=317,slow=38						
NVAR	Mina Array Bea	13.36	138	Pn	P	05 31 37.0	-4.0
	0.1nm,0.3s,baz=288,slow=6.6,SNR=3.9						
NVAR				Sn	Sn	05 34 04.4	+4.5
	0.2nm,0.3s,baz=346,slow=32,SNR=3.3						
PDAR	Pinedale Array	15.27	107	Pn	P	05 32 02.2	0.0
	0.0nm,0.3s,baz=317,slow=11,SNR=11						
YKA	Yellowknife Ar	15.85	26	Pn	Pn	05 32 03.7	-0.7
	0.2nm,0.3s,baz=213,slow=13,SNR=8.3						
KDAK	Kodiak Island	16.20	311	LR	LR	05 36 44.8	
	comp=Z,123nm,18.5s,baz=142,slow=31						
ILAR	Eielson Array	18.28	336	P	P	05 32 38.7	+3.6
	0.1nm,0.3s,baz=148,slow=10,SNR=8.9						
INK	Inuvik	19.43	356	P	Pn	05 32 49.6	+0.7
	0.0nm,0.3s,baz=153,slow=14,SNR=5.8						
ULM	Lac du Bonnet	21.77	74	P	P	05 33 14.4	+1.3
	5.0nm,0.7s,baz=288,slow=9.6,SNR=2.0						
ULM				LR	LR	05 42 37.1	
	comp=Z,190nm,18.5s,baz=296,slow=40						
ANMO	Albuquerque	22.11	121	P	P	05 33 20.5	+3.4
	2.3nm,0.8s,baz=312,slow=11,SNR=11						
TXAR	Lajitas Array	27.89	125	P	P	05 34 13.9	+2.2
	0.7nm,1.1s,baz=312,slow=5.4,SNR=3.5						
H11N2	WAKE ISLAND Hy	58.05	264	T	T	06 41 02.9	
	baz=43,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	58.05	264	T	T	06 41 01.9	
	baz=43,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	58.06	264	T	T	06 41 04.4	
	baz=43,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	59.06	263	T	T	06 42 17.4	
	baz=39,slow=75,SNR=7.7						
H11S2	WAKE ISLAND Hy	59.06	263	T	T	06 42 17.1	
	baz=39,slow=75,SNR=3.7						
H11S3	WAKE ISLAND Hy	59.07	263	T	T	06 42 17.8	
	baz=39,slow=75,SNR=4.1						

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*SJA **27** 05:29:51.4±0.6, 32°.68S×71°.84W, h74^{km}±8^{km}, ML3.6, MW3.6*

*GUC **27** 05:29:52.1±0.8, 32°.52S×71°.38W, h6^{km}±6^{km}, ML3.3*

ISC 27 05:29:50.1±2.2**, 32°.59S**±0°.04×**71°.6W**±0°.1**, h7**^{km}±12^{km}**, n15, σ1^{s}37**/24**, 6C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEL	Peldehue	0.96	125	⇑iP	Pn	05 30 09.7	-0.3
PEL				eS	Sn	05 30 22.0	-2.0
PEL				IAML		05 30 26.6	
	comp=E,2µm,0.3s						
STL	Santa Lucia	1.18	136	⇑iP	Pg	05 30 13.5	+0.8
STL				eS	Sn	05 30 29.5	+0.2
STL				IAML		05 30 33.4	
	comp=N,2µm,0.4s						
CLCH	Cerro Calan	1.21	132	⇑iP	Pg	05 30 13.9	+0.5
CLCH				eS	Sn	05 30 29.8	-0.5
CLCH				IAML		05 30 32.6	
	comp=N,878nm,0.2s						
ANTU	Antumapu	1.28	140	⇑iP	Pg	05 30 14.9	+0.2
ANTU				eS	Sg	05 30 32.0	+0.7
ANTU				IAML		05 30 38.7	
	comp=N,1µm,0.3s						
FCH	Farellones	1.34	124	⇓eP	Pg	05 30 15.4	-0.4
FCH				eS	Sg	05 30 33.8	+0.7
FCH				IAML		05 30 35.5	
	comp=E,1µm,0.2s						
CO02	Combarbal	1.48	21	⇑iP	Pb	05 30 16.8	-1.2
CO02				eS	Sb	05 30 36.5	-0.5
LMEL	Las Melosas	1.73	137	⇑eP	Pg	05 30 21.8	-1.4
LMEL				eS	Sg	05 30 45.1	-0.5
RTLS	Leoncito	2.12	69	eP	Pg	05 30 30.2	-0.5
RTLS				eS	Sg	05 30 58.5	+0.2
RTLS				IAML		05 30 59.9	
	comp=Z,219nm,0.4s						
ARCO	CERRO ARCO	2.28	97	eP	Pb	05 30 31.3	-0.3
ARCO				IAML		05 30 42.7	
	comp=Z,154nm,0.4s						
ASAL	Salagasta	2.35	91	eP	Pb	05 30 32.8	0.0
RTCV	Cerro Valdivia	2.71	75	eP	Pb	05 30 37.6	-1.3
ACCO	Cerro Coronel	2.95	48	eP	Pb	05 30 41.4	-1.9
ACCO				eS	Sb	05 31 18.8	-0.9
ACAN	Cantantal	3.76	86	eP	Pn	05 30 51.0	+2.5
VCA	Vinchina	4.84	38	eP	Pn	05 31 05.9	+2.4
VCA				IAML		05 32 18.8	
	comp=Z,84nm,0.5s						
APLL	PUNTA DE LOS L	4.87	65	eP	Pn	05 31 06.7	+2.9

DJA 27 05:35:43.9±0.7**, 1°S**±5°×**12°0E**±1°2**, h10**^{km}**, M3.8**/6**, MLv3.8**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	2.46	177	P	Pn	05 36 25.0	+0.8
TTSI				S	Sn	05 36 55.4	+1.1
SPSI	Sidrap Palu	3.37	178	P	Pn	05 36 36.8	+0.1

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*SJA **27** 05:58:37.0±0.6, 21°.18S×68°.97W, h119^{km}±5^{km}, ML1.7, MW3.0*

*GUC **27** 05:58:37.7±0.6, 21°.21S×68°.96W, h115^{km}±3^{km}, ML3.1*

*ISCJB **27** 05:58:38.1±0.9, 21°.21S±0°.03×68°.99W±0°.08, h121^{km}±9^{km}, Error ellipse: s-maj=11.8km s-min=4.7km az=180.0*

ISC 27 05:58:39.0±1.6**, 21°.21S**±0°.03×**68°.99W**±0°.07**, h113**^{km}±12^{km}**, n21,** σ**0^{s}44**/36**, 10C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.49	289	eP	Pn	05 58 55.6	-0.7
PB01	IPOC Station P	0.49	289	⇑eP	Pn	05 58 56.0	-0.3
PB01				eS	Sn	05 59 09.2	0.0
PB01				IAML		05 59 10.4	
	comp=E,2µm,0.2s						
PB09	IPOC Station P	0.63	202	eP	Pn	05 58 57.0	-0.3
PB09				eS	Sn	05 59 11.5	+0.4
PB09	IPOC Station P	0.63	202	⇑eP	Pn	05 58 57.0	-0.3
PB09				eS	Sn	05 59 11.5	+0.4
PB02	IPOC Station P	0.85	262	⇑eP	Pn	05 58 59.3	+0.1
PB02				eS	Sn	05 59 14.7	+0.4
PB02				IAML		05 59 15.7	
	comp=N,984nm,0.2s						
PB07	IPOC Station P	0.98	238	eP	Pn	05 58 59.9	-0.6
PB07	IPOC Station P	0.98	238	⇑eP	Pn	05 59 00.4	0.0
PB07				eS	Sn	05 59 17.0	+0.4
PB07				IAML		05 59 19.2	
	comp=E,446nm,0.2s						
PB08	IPOC Station P	1.07	352	⇑eP	Pn	05 59 01.5	-0.1
PB08				eS	Sn	05 59 19.2	+0.6
PB08				IAML		05 59 20.0	
	comp=E,429nm,0.2s						
PB03	IPOC Station P	1.10	220	eP	Pn	05 59 01.5	-0.2
PB03				eS	Sn	05 59 18.7	0.0
PB03	IPOC Station P	1.10	220	⇑iP	Pn	05 59 01.4	-0.2
PB03				eS	Sn	05 59 18.9	+0.2
PB03				IAML		05 59 20.9	
	comp=E,286nm,0.2s						
LVC	Limon Verde	1.40	177	⇓eP	Pn	05 59 04.7	-0.5
LVC				eS	Sn	05 59 25.0	0.0
GO01	Chusmiza	1.54	353	⇑eP	Pn	05 59 06.9	-0.1
GO01				eS	Sn	05 59 28.3	+0.1
GO01				IAML		05 59 30.5	
	comp=N,454nm,0.1s						
PB04	IPOC Station P	1.56	224	⇑iP	Pn	05 59 06.5	-0.3
PB04				eS	Sn	05 59 28.9	+0.9
PB04				IAML		05 59 34.6	
	comp=N,168nm,0.1s						
PB11	IPOC Station P	1.57	336	eP	Pn	05 59 06.6	-0.4
PB11				eS	Sn	05 59 28.5	+0.3
PB11				IAML		05 59 30.1	
	comp=N,346nm,0.3s						
PB06	IPOC Station P	1.59	200	⇑iP	Pn	05 59 06.7	-0.5
PB06				eS	Sn	05 59 28.7	+0.1
PB06				IAML		05 59 30.6	
	comp=E,218nm,0.2s						
PSGCX	Pisagua	1.92	326	eP	Pn	05 59 10.4	-0.9
PB15	IPOC Station P	2.04	193	eP	Pn	05 59 12.6	-0.3
PB15	IPOC Station P	2.04	193	iP	Pn	05 59 12.7	-0.1
PB15				eS	Sn	05 59 39.5	+0.8
MNMC	Minye Minye	2.14	344	⇑iP	Pn	05 59 13.9	-0.3
MNMC				eS	Sn	05 59 41.9	+0.8
YJA	Yavi	3.37	107	eP	Pn	05 59 30.3	-0.1
YJA				IAML		05 59 34.9	
	comp=Z,0.9nm,0.4s						
HJA	Humahuaca	3.87	122	eP	Pn	05 59 36.7	-0.3
HJA				IAML		05 59 47.4	
	comp=Z,1.7nm,0.3s						

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*SOME **27** 06:10:13.7, 44°.68N×82°.27E, h15^{km}*

*NNC **27** 06:10:15.0±0.9, 44°.73N×82°.09E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=9.6km s-min=3.9km az=128.0*

ISC 27 06:10:12.6±1.2**, 44°.73N**±0°.04×**82°.14E**±0°.05**, h10**^{km}**, n43,** σ**1^{s}84**/64**, 3C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.73	258	P	Pg	06 10 46.8	+1.1
	27nm,0.2s						
DJR				S	Sg	06 11 10.9	+2.7
	16nm,0.3s						
DJR	Jarkent	1.73	258	eP	Pg	06 10 46.8	+1.1
	27nm,0.2s						
DJR				eS	Sg	06 11 10.9	+2.7
	16nm,0.3s						
KTMS	Ketmen	1.82	226	P	Pg	06 10 47.9	+0.4
	14nm,0.2s						
KTMS				S	Sg	06 11 13.0	+1.9
	26nm,0.5s						
KTMS	Ketmen	1.82	226	eP	Pg	06 10 47.9	+0.4
	14nm,0.2s						
KTMS				eS	Sg	06 11 13.0	+1.9
	26nm,0.5s						
KAPS	Kapalarasan	2.06	287	Pg	Pg	06 10 51.9	-0.1
	9.0nm,0.4s						
KAPS				Lg	Lg	06 11 19.9	
	34nm,0.5s						
KAPS	Kapalarasan	2.06	287	eP	Pg	06 10 51.9	-0.1
	6.7nm,0.4s						
KAPS				⇓iS	Sg	06 11 19.9	+1.2
	31nm,0.6s						
MK31	Makanchi Array	2.07	3	Pn	Pg	06 10 52.0	-0.4
	7.5nm,0.2s,baz=182,slow=14,SNR=131						
MK31				⇑Lg	Lg	06 11 19.9	
	8.8nm,0.3s,baz=186,slow=27,SNR=26						
MAKZ	Makanchi	2.09	357	⇓Pn	Pg	06 10 52.0	-0.6
	2.7nm,0.3s						
MAKZ				⇑Lg	Lg	06 11 20.0	
	21nm,0.5s						
PDGK	Podgornoye	2.37	235	⇓Pg	Pb	06 10 56.0	+0.5
	2.9nm,0.4s						
PDGK				⇓Lg	Lg	06 11 28.6	
	47nm,0.7s						
TDK	Taldyqorghan	2.67	277	Pg	Pg	06 11 03.3	-0.5
	95nm,0.3s						
TDK				Lg	Lg	06 11 39.5	
	94nm,0.4s						
TDK	Taldyqorghan	2.67	277	eP	Pg	06 11 03.3	-0.5
	95nm,0.3s						
TDK				eS	Sg	06 11 39.5	+1.0
	94nm,0.4s						
UZB	Uzynbulak	2.75	236	Pg	Pb	06 11 03.3	+1.3
	5.5nm,0.2s						
UZB				Lg	Lg	06 11 39.6	
	9.6nm,0.4s						
UZB	Uzynbulak	2.75	236	eP	Pb	06 11 03.3	+1.3
	5.5nm,0.2s						
UZB				eS	Sg	06 11 39.6	-1.4
	9.6nm,0.4s						
MNBS	Baschi	2.76	258	Pg	Pb	06 11 03.6	+1.5
	11nm,0.2s						
MNBS				Lg	Lg	06 11 39.9	
	31nm,0.3s						
MNBS	Baschi	2.76	258	eP	Pb	06 11 03.6	+1.5
	11nm,0.2s						
MNBS				eS	Sg	06 11 39.9	-1.4
	31nm,0.3s						
KPKS	Kokpek	2.79	244	eP	Pg	06 11 04.5	-1.6
	14nm,0.1s						
KPKS				eS	Sg	06 11 41.2	-1.1
	64nm,0.5s						
KURS	Kuram	3.12	248	Pg	Pg	06 11 10.1	-2.2
	2.8nm,0.5s						
KURS				Lg	Lg	06 11 51.0	
	7.5nm,0.5s						
KURS	Kuram	3.12	248	eP	Pg	06 11 10.2	-2.2
	2.8nm,0.5s						
KURS				eS	Sg	06 11 51.0	-1.7
	5.2nm,0.6s						
ARXS	Arharly	3.13	262	Pg	Pg	06 11 11.0	-1.7
	4.2nm,0.3s						
ARXS				Lg	Lg	06 11 52.2	
	22nm,0.5s						
ARXS	Arharly	3.13	262	eP	Pg	06 11 11.0	-1.7
	4.2nm,0.3s						
ARXS				eS	Sg	06 11 52.2	-1.0
	22nm,0.5s						
SATY	Saty	3.17	240	Pg	Pb	06 11 10.4	+1.2
	5.4nm,0.1s						
SATY				Lg	Lg	06 11 51.5	
	22nm,0.3s						
SATY	Saty	3.17	240	eP	Pb	06 11 10.4	+1.2
	5.4nm,0.1s						
SATY				eS	Sg	06 11 51.5	-3.0
	22nm,0.3s						
ZSN	Zaisan	3.32	34	Pg	Pb	06 11 11.5	-0.1
	3.1nm,0.3s						
ZSN				Lg	Lg	06 11 53.1	
	7.4nm,0.3s						
ZSN	Zaisan	3.32	34	eP	Pb	06 11 11.5	-0.1
	1.7nm,0.3s						
ZSN				eS	Sb	06 11 53.1	+1.0
	7.4nm,0.3s						
CHKK	Chushkaly	3.80	259	Pg	Pg	06 11 22.6	-2.9
	2.5nm,0.3s						
CHKK				Lg	Lg	06 12 12.2	
	12nm,0.4s						
CHKK	Chushkaly	3.80	259	eP	Pg	06 11 22.6	-2.9
	2.0nm,0.3s						
CHKK				eS	Sg	06 12 12.2	-2.6
	12nm,0.4s						
KOTS	Kotyrbulak	3.93	249	Pg	Pg	06 11 25.9	-1.9
	6.1nm,0.4s						
KOTS				Lg	Lg	06 12 17.9	
	8.6nm,0.7s						
KOTS	Kotyrbulak	3.93	249	eP	Pg	06 11 25.9	-1.9
	6.1nm,0.4s						
KOTS				eS	Sg	06 12 17.9	-0.8
	8.6nm,0.7s						
KTBS	Karatobe	4.05	257	Pg	Pg	06 11 28.1	-2.2
	3.0nm,0.4s						
KTBS				Lg	Lg	06 12 21.5	
	8.8nm,0.6s						
KTBS	Karatobe	4.05	257	eP	Pb	06 11 26.4	+2.2
	3.0nm,0.4s						
KTBS				eS	Sg	06 12 18.4	-4.5
	8.8nm,0.6s						
TNSS	Tian-Shan	4.12	248	Pg	Pg	06 11 30.6	-1.0
	3.0nm,0.5s						
TNSS				Lg	Lg	06 12 26.0	
	4.7nm,0.8s						
TNSS	Tian-Shan	4.12	248	eP	Pg	06 11 30.6	-1.0
	3.0nm,0.5s						
TNSS				eS	Sg	06 12 26.0	+1.1
	4.7nm,0.8s						
KUU	Kurty	4.25	261	Pg	Pg	06 11 32.4	-1.6
	4.9nm,0.4s						
KUU				Lg	Lg	06 12 29.2	
	17nm,0.6s						
KUU	Kurty	4.25	261	eP	Pg	06 11 32.4	-1.6
	2.3nm,0.3s						
KUU				eS	Sg	06 12 29.2	+0.1
	9.3nm,0.6s						
IZV	Izvestkoviy	4.34	249	Pg	Pg	06 11 35.5	-0.2
	5.3nm,0.5s						
IZV				Lg	Lg	06 12 34.9	
	9.1nm,0.5s						
IZV	Izvestkoviy	4.34	249	eP	Pg	06 11 35.5	-0.2
	5.3nm,0.5s						
IZV				eS	Sg	06 12 34.9	+2.9
	9.1nm,0.5s						
MTBS	Maitube	4.42	251	Pg	Pg	06 11 34.4	-2.9
	4.4nm,0.2s						
MTBS				Lg	Lg	06 12 32.4	
	8.7nm,0.2s						
MTBS	Maitube	4.42	251	eP	Pg	06 11 34.4	-2.9
	4.4nm,0.2s						
MTBS				eS	Sg	06 12 32.4	-2.3
	8.7nm,0.2s						
KST	Kastek	4.77	252	Pg	Pg	06 11 41.1	-2.9
	4.4nm,0.8s						
KST				Lg	Lg	06 12 44.4	
	4.3nm,0.6s						
KST	Kastek	4.77	252	eP	Pg	06 11 41.1	-2.9
	4.4nm,0.8s						
KST				eS	Sg	06 12 44.4	-1.5
	4.3nm,0.6s						
DGS	Degeres	4.83	254	Pg	Pg	06 11 43.0	-2.2
	2.1nm,0.5s						
DGS				Lg	Lg	06 12 47.9	
	7.7nm,0.6s						
DGS	Degeres	4.83	254	eP	Pg	06 11 43.0	-2.2
	2.1nm,0.5s						
DGS				eS	Sg	06 12 47.9	+0.2
	7.7nm,0.6s						
KURBB	Kurchatov Arra	6.38	339	⇑Lg	Lg	06 13 36.6	
	8.4nm,0.7s						

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*IDC **27** 06:10:41.6±0.8, 19°.35N×64°.34W, h0^{km}, mb3.9/13, mb1 4.2/17, mb1mx3.9/38, mbtmp4.0/17, ML3.8/4, MS3.2/4, Ms1 3.2/4, ms1mx2.9/32, Error ellipse: s-maj=19.4km s-min=14.4km az=61.0*

*RSPR **27** 06:10:46.8, 19°.40N×64°.53W, h52^{km}±5^{km}, MD3.5/16*

*NEIC **27** 06:10:46.8±0.0, 19°.40N×64°.53W, h52^{km}, mb4.1/11, MD3.6(RSPR), After RSPR.*

*OSPL **27** 06:10:46.4±3.5, 19°.45N×64°.46W, h0^{km}±276^{km}, ML3.9*

*ISCJB **27** 06:10:48.5±0.7, 19°.16N±0°.02×64°.66W±0°.02, h28^{km}±7^{km}, mb3.8/14, MS3.1/2, Error ellipse: s-maj=4.2km s-min=3.6km az=19.1*

ISC 27 06:10:48.4±0.9**, 19°.28N**±0°.05×**64°.61W**±0°.03**, h44**^{km}±10^{km}**, n183,** σ**2^{s}09**/161**, mb3.8**/14**, 8C-10D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.60	154	⇑eP	Pn	06 10 59.6	-1.0
ABV	Anegada	0.60	154	eS	Sn	06 11 09.8	+0.5
ABVI	Anegada Island	0.60	154	ePn	Pn	06 10 59.6	-1.0
ABVI				eSn	Sn	06 11 09.8	+0.5
VGBI	Virgin Gorda,	0.80	166	⇓eP	Pn	06 11 02.6	-0.7
VGBI				eS	Sn	06 11 14.9	+0.7
VGBI	Virgin Gorda,	0.80	166	⇑eP	Pn	06 11 02.0	-1.3
STVI	Saint Thomas	0.98	200	⇓eP	Pn	06 11 05.4	-0.3
STVI				eS	Sn	06 11 19.1	+0.8
STVI	Saint Thomas	0.98	200	⇓eP	Pn	06 11 04.7	-1.0
CUPR	Culebra, Puert	1.16	214	eS	Sn	06 11 24.2	+1.5
CUPR	Culebra, Puert	1.16	214	⇓eP	Pn	06 11 07.6	-0.5
MTP	Monte Pirata	1.48	218	⇓eP	Pn	06 11 11.6	-0.9
MTP	Monte Pirata	1.48	218	eS	Sn	06 11 31.9	+1.3
CBYP	Canovanas	1.55	230	⇓eP	Pn	06 11 12.8	-0.8
CBYP	Canovanas	1.55	230	eS	Sn	06 11 33.4	+0.9
CBYP	Canovanas	1.55	230	ePn	Pn	06 11 12.8	-0.8
CBYP				eSn	Sn	06 11 33.4	+0.9
PDPR	Patillas Dam,	1.83	227	⇓eP	Pn	06 11 17.2	-0.3
PDPR	Patillas Dam,	1.83	227	eS	Sn	06 11 40.0	+0.6
SJG	San Juan	1.87	232	⇑eP	Pn	06 11 17.0	-0.9
SJG	San Juan	1.87	232	eS	Sn	06 11 41.5	+1.3
SJG	San Juan	1.87	232	Pn	Pn	06 11 17.4	-0.4
	53nm,0.3s,baz=62,slow=12,SNR=73						
SJG				Sn	Sn	06 11 38.7	-1.5
	131nm,0.3s,baz=45,slow=11,SNR=7.7						
SJG				LR	LR	06 12 20.4	
	comp=Z,554nm,18.4s,baz=327,slow=47						
SJG	San Juan	1.87	232	ePn	Pn	06 11 17.2	-0.6
SJG				eSn	Sn	06 11 42.5	+2.3
SMRT	St. Maarten	1.90	130	ePn	Pn	06 11 19.4	+1.1
SMRT	St. Maarten	1.90	130	eP	Pn	06 11 20.9	+2.6
IGPR	InterUniversit	1.93	228	⇓eP	Pn	06 11 18.5	-0.2
IGPR	InterUniversit	1.93	228	eS	Sn	06 11 42.9	+1.1
EMPR	Esperanza - Ma	1.99	247	⇑eP	Pn	06 11 19.1	-0.4
EMPR	Esperanza - Ma	1.99	247	eS	Sn	06 11 43.3	+0.2
EMPR	Esperanza - Ma	1.99	247	ePn	Pn	06 11 19.1	-0.4
EMPR				eSn	Sn	06 11 43.3	+0.2
SABA	Saba	2.09	142	ePn	Pn	06 11 23.0	+2.0
SABA	Saba	2.09	142	eP	Pn	06 11 23.5	+2.5
CELP	Cerrillos	2.22	238	⇓eP	Pn	06 11 22.1	-0.6
CELP				eS	Sn	06 11 49.4	+0.4
CELP	Cerrillos	2.22	238	ePn	Pn	06 11 22.1	-0.6
CELP				eSn	Sn	06 11 49.4	+0.4
OBIP	Obispado Ponce	2.26	237	⇓eP	Pn	06 11 22.4	-0.8
OBIP	Obispado Ponce	2.26	237	eS	Sn	06 11 50.5	+0.6
OBIP	Obispado Ponce	2.26	237	ePn	Pn	06 11 22.4	-0.8
OBIP				eSn	Sn	06 11 50.5	+0.6
AGPR	Aguadilla, PR	2.50	252	⇑eP	Pn	06 11 25.9	-0.7
AGPR	Aguadilla, PR	2.50	252	eS	Sn	06 11 56.2	+0.3
AGP	Aguadilla	2.55	251	ePn	Pn	06 11 25.9	-1.4
AGP				eSn	Sn	06 11 56.2	-0.9
LSP	Las Mesas	2.59	245	⇑eP	Pn	06 11 27.2	-0.7
LSP	Las Mesas	2.59	245	eS	Sn	06 11 58.8	+0.6
LSP	Las Mesas	2.59	245	ePn	Pn	06 11 27.2	-0.7
LSP				eSn	Sn	06 11 58.8	+0.6
SKI	Saint Kitts	2.62	137	eP	Pn	06 11 30.6	+2.3
MLPR	Magueyes Islan	2.65	241	⇑eP	Pn	06 11 28.1	-0.5
MLPR	Magueyes Islan	2.65	241	eS	Sn	06 12 00.3	+0.7
CRPR	Cabo Rojo, PR	2.69	242	⇑eP	Pn	06 11 28.9	-0.2
CRPR	Cabo Rojo, PR	2.69	242	eS	Sn	06 12 01.6	+1.2
ANWB	Willy Bob	3.12	120	ePn	Pn	06 11 35.9	+0.9
ANWB	Willy Bob	3.12	120	eP	Pn	06 11 35.4	+0.3
H05N1	Guadeloupe/Mar	4.48	130	Pn	Pn	06 11 52.8	-1.0
	SNR=17						
H05N1				Sn	Sn	06 12 42.1	-2.7
MAGL	Barre de l’ile	4.58	136	eP	Pn	06 11 56.1	+1.0
SDD	Santo Domingo	5.09	262	iP	Pn	06 12 05.8	+3.6
SDD				eS	Sn	06 13 01.7	+2.0
SDD				IAML		06 13 03.9	
	comp=Z,27nm,0.4s						
BON1	Bonao	5.48	267	iP	Pn	06 12 08.4	+0.8
BON1				eS	Sn	06 13 07.4	-2.0
PCM	Pelee Case Pet	5.50	143	eP	Pn	06 12 09.3	+1.6
BANI	BANI	5.52	262	ePn	Pn	06 12 10.2	+2.0
BANI	BANI	5.52	262	iP	Pn	06 12 10.1	+1.9
BANI				IAML		06 13 23.1	
	comp=Z,24nm,0.4s						
CXM	Morne La Croix	5.52	143	eP	Pn	06 12 10.4	+2.1
BAMF	Morne Balai	5.53	143	eP	Pn	06 12 09.7	+1.4
GBMF	Grand Be	5.54	143	eP	Pn	06 12 08.8	+0.4
SC01	Santiago de lo	5.78	273	iP	Pn	06 12 12.9	+1.2
SC01				eS	Sn	06 13 18.2	+1.5
SC01				IAML		06 13 32.7	
	comp=Z,79nm,0.4s						
ZAM	Aeronautique	5.79	143	eP	Pn	06 12 14.6	+2.7
BIM	Bigot	5.82	144	eP	Pn	06 12 15.4	+3.2
LPMF	Morne Lapointe	5.83	143	eP	Pn	06 12 14.4	+2.0
H05S1	Guadeloupe/Mar	6.02	143	Pn	Pn	06 12 16.4	+1.4
	SNR=10						
H05S1				Sn	Sn	06 13 23.1	+0.4
SDDR	Presa de Saban	6.32	268	ePn	Pn	06 12 19.7	+0.5
SDDR	Presa de Saban	6.32	268	iP	Pn	06 12 19.7	+0.5
SDDR				eS	Sn	06 13 31.6	+1.5
SDDR				IAML		06 13 39.1	
	comp=Z,69nm,0.3s						
GRTK	Grand Turk	6.51	291	ePn	Pn	06 12 18.1	-3.6
LGNH	Logne	7.61	266	ePn	Pn	06 12 36.6	-0.2
LGNH	Logne	7.61	266	iP	Pn	06 12 36.9	+0.1
PCRV	Puerto La Cruz	9.05	180	Pn	Pn	06 12 55.7	-0.8
	comp=Z,0.5nm,0.3s,baz=354,slow=10,SNR=3.3						
PCRV				Sn	Sn	06 14 32.3	-4.9
	comp=Z,0.2nm,0.3s,baz=10,slow=11,SNR=2.3						
GTBY	Guantanamo Bay	9.92	275	ePn	Pn	06 13 04.2	-4.3

MTDJ	Mount Denham	12.29	267	*e*Pn	Pn	06 13 38.8	-2.2
SOCV	Socops	12.49	210	*e*P	Pn	06 13 46.6	+2.9
BBSR	BB Station	13.04	360	*e*Pn	Pn	06 13 47.1	-4.0
OCAC	Ocana	13.85	219	*e*P	Pn	06 14 00.8	-1.5
OCAC				*i*		06 14 13.6	
	comp=Z,14nm,0.3s						
PAMC	Pamplona, Colo	14.23	215	*e*P	Pn	06 14 08.7	+0.9
GIRC	Giron, Santand	14.72	216	*e*P	Pn	06 14 16.0	+2.0
GIRC				*e*S	P	06 14 20.4	+1.1
GIRC				*i*		06 14 21.7	
	comp=Z,12nm,0.3s						
BARC	Barichara	15.12	215	*e*P	Pn	06 14 20.4	+1.0
BARC				*e*S	P	06 14 25.1	+1.2
RUSC	La Rusia	15.65	213	*e*P	Pn	06 14 26.8	+0.2
060Z	West Palm Beac	16.32	299	P	Pn	06 14 34.8	+0.3
	baz=112						
060A	Indiantown	16.41	301	*e*P	P	06 14 37.4	-0.5
	comp=Z,51nm,0.6s						
061Z	Ochoppi	16.41	297	*e*P	Pn	06 14 35.6	-0.1
	comp=Z,63nm,0.8s						
HELC	Santa Helena	16.80	221	*e*P	P	06 14 42.1	-0.6
NORC	Norcasia	16.90	218	*e*P	P	06 14 43.7	+0.2
059A	Moore Haven	17.02	300	*e*P	P	06 14 44.4	-0.2
	comp=Z,35nm,1.0s						
059Z	Ave Maria	17.03	297	P	Pn	06 14 43.6	+0.1
	baz=110						
959A	Okeechobee	17.03	302	P	Pn	06 14 43.7	+0.3
	baz=115						
CHIC	Chingaza	17.06	213	*e*P	Pn	06 14 44.4	+0.1
ROSC	El Rosal	17.19	215	P	P	06 14 46.9	-0.2
	comp=Z,3.4nm,0.3s,baz=108,slow=20,SNR=12						
ROSC	El Rosal	17.19	215	*e*P	P	06 14 48.6	+1.5
	comp=Z,8.2nm,0.6s						
ROSC	El Rosal	17.19	215	*e*P	P	06 14 48.8	+1.7
GUY2C	Guyana, Caldas	17.46	218	*e*P	Pn	06 14 49.0	-0.4
RREF	El Recreo	17.71	218	*e*P	P	06 14 55.0	+1.9
858A	St. Cloud	17.72	303	P	P	06 14 52.9	+0.6
	baz=116,SNR=6.4						
DWPF	Disney Wildern	17.73	303	*e*P	P	06 14 53.4	+0.9
	comp=Z,30nm,0.3s						
DWPF	Disney Wildern	17.73	303	P	P	06 14 53.1	+0.6
	baz=116						
758A	Lake Helen	17.94	306	P	P	06 14 57.0	+2.3
	baz=118,SNR=6.7						
957A	Wimauma	18.19	301	P	Pn	06 14 58.1	+0.5
	baz=113						
658A	Bunnell	18.21	307	P	Pn	06 15 00.6	+2.7
	baz=120						
MDP	Montagnes des	18.29	139	P	P	06 14 56.5	-2.3
	comp=Z,0.5nm,0.3s,baz=325,slow=6.1,SNR=4.5						
MDP				LR	LR	06 23 04.6	
	comp=Z,101nm,19.4s,baz=68,slow=41						
ORTC	Ortega, Tolima	18.47	216	*e*P	P	06 15 00.3	-0.4
757A	Oxford	18.60	304	P	Pn	06 15 05.5	+2.9
	baz=117,SNR=6.2						
657A	Interlachen	18.75	306	P	Pn	06 15 08.0	+3.6
	baz=119,SNR=6.6						
557A	Orange Park	18.86	308	P	Pn	06 15 08.9	+3.1
	baz=120,SNR=11						
457A	Yulee	19.05	310	P	Pn	06 15 12.4	+4.4
	baz=122						
656A	Willston	19.16	305	P	Pn	06 15 13.0	+3.6
	baz=117						
X60A	Albert Glenn T	19.32	325	P	Pn	06 15 16.0	+4.8
	baz=138						
357A	Townsend	19.44	312	P	Pn	06 15 17.2	+4.6
	baz=124,SNR=5.6						
456A	Hilliard	19.44	309	P	Pn	06 15 17.6	+4.9
	baz=122,SNR=6.9						
Z58A	St. Stephen	19.51	319	P	Pn	06 15 19.3	+5.8
	baz=132						
W60A	Pink Hill	19.54	326	P	Pn	06 15 19.4	+5.6
	baz=140						
NHSC	New Hope	19.59	318	P	Pn	06 15 20.0	+5.5
	baz=131						
655A	Horseshoe Beac	19.78	305	P	Pn	06 15 22.1	+5.3
	baz=116						
356A	Blackshear	19.84	311	P	Pn	06 15 22.5	+5.1
	baz=123						
555A	McAlpin	19.84	306	P	Pn	06 15 23.7	+6.2
	baz=118						
157A	Early Branch	19.85	315	P	Pn	06 15 23.2	+5.7
	baz=128						
V60A	Jim Taylor Roa	19.86	328	P	Pn	06 15 25.0	+7.3
	baz=142						
W59A	Clinton	20.01	325	P	Pn	06 15 26.7	+7.2
	baz=138						
256A	Glennville	20.04	313	P	Pn	06 15 25.8	+6.1
	baz=125						
Z57A	Bowman	20.05	317	P	Pn	06 15 25.8	+6.0
	baz=130						
156A	Sylvania	20.16	315	P	Pn	06 15 27.1	+5.9
	baz=127						
455A	Stateville	20.19	308	P	Pn	06 15 27.3	+5.7
	baz=120						
W58A	Raeford	20.34	323	P	Pn	06 15 30.4	+7.1
	baz=136						
V59A	Middlesex	20.36	327	P	Pn	06 15 31.9	+8.3
	baz=140						
355A	Pearson	20.37	310	P	Pn	06 15 30.1	+6.4
	baz=122						
554A	Perry	20.37	306	P	Pn	06 15 31.1	+7.3
	baz=117						
PTGA	Pitinga	20.40	167	P	P	06 15 19.9	-1.8
	comp=Z,3.2nm,0.5s,baz=335,slow=15,SNR=12						
PTGA	Pitinga	20.40	167	*e*P	P	06 15 21.2	-0.6
	comp=Z,3.3nm,1.0s						
255A	Hazlehurst	20.42	312	P	Pn	06 15 30.1	+5.9
	baz=124						
X57A	Johnson Farm,	20.45	321	P	Pn	06 15 31.9	+7.3
	baz=134,SNR=9.9						
Z56A	Williston	20.49	316	P	Pn	06 15 31.5	+6.4
	baz=129						
454A	Quitman	20.63	307	P	Pn	06 15 33.9	+7.1
	baz=119						
T60A	Surry	20.73	332	*e*P	P	06 15 24.2	-1.0
	comp=Z,66nm,0.9s						
Y56A	Pelion	20.75	318	P	Pn	06 15 35.3	+7.2
	baz=130,SNR=8.3						
155A	Kite	20.80	313	P	Pn	06 15 35.4	+6.5
	baz=125						
V58A	Windy Hill, Pi	20.84	325	P	Pn	06 15 38.2	+8.9
	baz=138,SNR=6.3						
W57A	Gilead	20.87	322	P	Pn	06 15 38.1	+8.5
	baz=135						
Z55A	Blythe	20.93	315	P	Pn	06 15 38.0	+7.6
	baz=127						
TIGA	Tifton	20.96	309	P	Pn	06 15 38.0	+7.3
	baz=120						
U58A	Oxford	21.00	327	P	P	06 15 40.1	+12
	baz=140						
254A	Abbeville	21.01	311	P	P	06 15 38.7	+10
	baz=122,SNR=5.9						
X56A	White Oak	21.03	319	P	P	06 15 39.5	+11
	baz=132						
Y55A	Saluda	21.19	317	P	P	06 15 41.8	+12
	baz=129,SNR=11						
453A	Whigham	21.22	307	P	P	06 15 42.0	+12
	baz=118						
154A	Montrose	21.24	312	P	P	06 15 41.4	+11
	baz=124,SNR=5.3						
V57A	Coltrane Farms	21.27	324	P	P	06 15 43.7	+13
	baz=137,SNR=7.8						
X55A	Gracelyn & Ava	21.39	318	P	P	06 15 43.8	+11
	baz=130,SNR=6.8						
Z54A	Sparta	21.42	314	P	P	06 15 45.3	+13
	baz=126						
JTS	Las Juntas de	21.59	248	P	P	06 15 34.6	0.0
	comp=Z,8.0nm,0.9s,baz=57,slow=6.4,SNR=3.8						
JTS	Las Juntas de	21.59	248	*e*P	P	06 15 35.0	+0.4
	comp=Z,15nm,1.0s						
V56A	Mocksville	21.62	323	P	P	06 15 49.0	+14
	baz=135						
KMSC	Kings Mountain	21.65	320	P	P	06 15 47.9	+13
	baz=132						
Y54A	Tignall	21.69	316	P	P	06 15 47.7	+12
	baz=127,SNR=8.3						
S58A	Poland Farm, P	21.72	330	P	P	06 15 49.9	+14
	baz=143						
T57A	Hurt	21.83	327	P	P	06 15 51.5	+15
	baz=140						
452A	Marianna	21.87	306	P	P	06 15 51.8	+14
	baz=117						
CBN	Corbin Frederi	21.89	332	P	P	06 15 53.4	+16
	baz=146						
X54A	Belton	21.91	318	P	P	06 15 51.4	+14
	baz=129,SNR=6.2						
R58B	Mineral	21.92	331	P	P	06 15 53.1	+15
	baz=144						
Z53A	Monticello	21.94	313	P	P	06 15 51.3	+13
	baz=124,SNR=6.0						
GOGA	Godfrey	21.95	314	P	P	06 15 51.2	+13
	baz=125						
U56A	King	21.95	324	P	P	06 15 53.1	+15
	baz=136,SNR=12						
352A	Blakely	21.97	308	P	P	06 15 51.8	+13
	baz=118						
TEIG	Tepich	22.30	276	P	P	06 15 43.5	+1.3
	comp=Z,3.2nm,0.5s,baz=42,slow=1.7,SNR=9.1						
APG	El Apazote	25.06	264	P	P	06 16 11.5	+2.4
	comp=Z,16nm,0.8s,baz=12,slow=20,SNR=14						
APG				LR	LR	06 28 20.8	
	comp=Z,32nm,19.8s,baz=102,slow=42						
WMOK	Wichita Mounta	33.93	304	*e*P	P	06 17 28.5	+1.1
	comp=Z,2.1nm,1.0s						
LPAZ	La Paz	35.51	186	P	P	06 17 42.8	+0.9
	comp=Z,0.6nm,0.6s,baz=325,slow=18,SNR=3.2						
TXAR	Lajitas Array	36.83	293	P	P	06 17 53.9	+1.3
	comp=Z,0.6nm,0.8s,baz=110,slow=11,SNR=7.5						
ULM	Lac du Bonnet	39.65	329	P	P	06 18 15.5	-0.4
	comp=Z,1.6nm,0.4s,baz=57,slow=2.9,SNR=2.9						
PDAR	Pinedale Array	44.41	312	P	P	06 18 55.9	+0.7
	comp=Z,0.8nm,0.6s,baz=118,slow=9.4,SNR=7.2						
CPUP	Villa Florida	45.88	171	P	P	06 19 04.4	-2.1
	comp=Z,3.3nm,1.0s,baz=16,slow=10,SNR=4.7						
CPUP	Villa Florida	45.88	171	*e*P	P	06 19 04.4	-2.1
	comp=Z,4.7nm,1.0s						
NV11	Mina Array Sit	49.92	304	*e*P	P	06 19 35.0	-3.0
	comp=Z,0.2nm,0.9s						
NV01	Mina Array Sit	50.03	304	*e*P	P	06 19 39.2	+0.3
NVAR	Mina Array Bea	50.03	304	P	P	06 19 39.2	+0.3
	comp=Z,0.7nm,0.8s,baz=103,slow=6.4,SNR=6.7						
YKA	Yellowknife Ar	55.07	334	P	P	06 20 14.1	-1.4
	comp=Z,0.7nm,0.6s,baz=61,slow=7.5,SNR=4.2						
YKB5	Yellowknife Ar	55.07	334	*e*P	P	06 20 14.2	-1.4
TOA1	Torodi Ar. Sit	63.63	85	*e*P	P	06 21 13.6	-2.0
TORD	Torodi Ar. Bea	63.64	85	P	P	06 21 13.5	-2.0
	comp=Z,0.3nm,0.7s,baz=273,slow=5.9,SNR=2.8						
NOA	NORSAR Array B	66.47	31	LR	LR	06 47 46.2	
	comp=Z,20nm,18.9s,baz=245,slow=34						
ILAR	Eielson Array	69.46	333	P	P	06 21 52.0	+0.2
	comp=Z,0.3nm,0.5s,baz=96,slow=4.2,SNR=5.9						
WB2	Warramunga Arr	162.13	265	*e*PKPab	PKPab	06 31 28.3	-4.4
WR1	Warramunga Arr	162.14	265	*e*PKPab	PKPab	06 31 33.2	+0.4
WRA	Warramunga Arr	162.14	265	PKPab	PKPab	06 31 33.2	+0.4
	comp=Z,0.9nm,0.8s,baz=86,slow=5.9,SNR=3.0						
ASAR	Alice Springs	162.23	253	PKPab	PKPab	06 31 33.5	+0.4
	comp=Z,1.0nm,0.8s,baz=110,slow=4.1,SNR=5.8						

ISCJB ***27*** *06:11:06.1±0.8, 45°.0N±0°.1×150°.45E±0°.09, h39^{km}, mb3.4/6, Error ellipse: s-maj=17.2km s-min=6.5km az=157.1*

SKHL ***27*** *06:11:06.1±0.7, 45°.17N×150°.53E, h54^{km}±1^{km}, mb4.1/1*

MOS ***27*** *06:11:08.9±1.3, 45°.02N×150°.20E, h68^{km}, mb4.3/1, Error ellipse: s-maj=20.9km s-min=12.0km az=153.1*

IDC ***27*** *06:11:12.4±3.1, 45°.08N×150°.27E, h81^{km}±27^{km}, mb3.1/6, mb1 3.4/8, mb1mx3.2/43, mbtmp3.5/8, Error ellipse: s-maj=28.1km s-min=23.2km az=140.0*

ISC 27 06:11:07.4±1.0**, 45°.0N**±0°.1×**150°.47E**±0°.09**, h39**^{km}**, n30, **σ**1^{s}.33**/36**, mb3.5**/6**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.85	277	*c i*PN	Pn	06 11 35.9	-0.6
KUR				*i* S	Sn	06 11 57.6	-1.1
KUR				pmax	pmax		
	comp=Z,162nm,0.3s						
KUR				pmax	pmax		
	comp=E,39nm,0.4s						
KUR				pmax	pmax		
	comp=N,50nm,0.1s						
KUR				smax	smax		
	comp=E,310nm,0.4s						
KUR				smax	smax		
	comp=N,647nm,0.3s						
KUR	Kuril'sk	1.85	277	*i* P	Pn	06 11 35.0	-1.5
KUR				AMB	AMB	06 11 41.0	
	comp=N,20nm,0.3s						
KUR				AMB	AMB	06 11 41.0	
	comp=N,10.0nm,0.3s						
KUR				AMB	AMB	06 11 41.0	
	comp=N,60nm,0.3s						
KUR				*i* S	Sn	06 11 57.0	-1.7
KUR				A	A	06 11 59.0	
	comp=N,650nm,0.5s						
KUR				A	A	06 11 59.0	
	comp=N,160nm,0.5s						
YUK	Yuzh-Kuril'sk	3.44	255	PN	Pn	06 11 59.3	+0.9
YUK				*e*S	Sn	06 12 38.8	+0.9
YUK				smax	smax		
	comp=E,302nm,0.3s						
YUK				smax	smax		
	comp=N,141nm,0.4s						
YUK	Yuzh-Kuril'sk	3.44	255	*e*P	Pn	06 11 59.3	+0.9
YUK				*e*S	Sn	06 12 38.8	+0.9
YUK				A	A	06 12 42.0	
	comp=N,140nm,0.4s						
YUK				A	A	06 12 42.0	
	comp=N,150nm,0.4s						
LAGR	Lagunnoye	3.49	255	PN	Pn	06 11 59.6	+0.6
LAGR				*e*S	Sn	06 12 41.1	+2.1
LAGR				smax	smax		
	comp=N,443nm,0.4s						
LAGR				smax	smax		
	comp=E,353nm,0.6s						
LAGR	Lagunnoye	3.49	255	*e*P	Pn	06 11 59.0	0.0
LAGR				*e*S	Sn	06 12 39.0	0.0
LAGR				A	A	06 12 48.0	
	comp=E,110nm,0.5s						
LAGR				A	A	06 12 48.0	
	comp=E,170nm,0.5s						
GRPR	Tuman	3.52	254	*e*PN	Pn	06 12 00.7	+1.3
GRPR				*e*S	Sn	06 12 41.4	+1.7
GRPR				smax	smax		
	comp=N,242nm,0.3s						
GRPR				smax	smax		
	comp=E,83nm,0.2s						
GRPR	Tuman	3.52	254	*e*P	Pn	06 12 00.0	+0.6
GRPR				*e*S	Sn	06 12 41.0	+1.3
GRPR				A	A	06 12 48.0	
	comp=E,120nm,0.3s						
GRPR				A	A	06 12 48.0	
	comp=E,80nm,0.3s						
GLVR	Golovnino	3.78	252	*e*PN	Pn	06 12 03.7	+0.7
GLVR				*e*S	Sn	06 12 45.1	-1.1
GLVR				smax	smax		
	comp=E,247nm,0.7s						
GLVR				smax	smax		
	comp=N,247nm,0.5s						
GLVR	Golovnino	3.78	252	*e*P	Pn	06 12 03.0	0.0
GLVR				*e*S	Sn	06 12 45.0	-1.1
GLVR				A	A	06 12 50.0	
	comp=N,120nm,0.7s						
GLVR				A	A	06 12 50.0	
	comp=N,110nm,0.7s						
NMR	Nemuro--Hokkai	3.79	246	⇓ *i*PN	Pn	06 12 01.4	-1.8
NMR				*i* S	Sn	06 12 44.3	-2.2
NMR	Nemuro--Hokkai	3.79	246	*i* P	Pn	06 12 01.4	-1.8
NMR				*i* S	Sn	06 12 44.3	-2.2
JKA	Kamikawa-asahi	5.70	264	*e*P	Pn	06 12 32.1	+2.8
ASAJ	Asahikawa	5.70	264	P	Pn	06 12 32.1	+2.7
	comp=N,1.2nm,0.3s,baz=75,slow=16,SNR=4.1						
PETK	Petropavlovsk-	9.37	28	P	Pn	06 13 25.3	+5.6
	comp=N,0.6nm,0.3s,baz=200,slow=11,SNR=9.3						
H11N2	WAKE ISLAND Hy	28.68	146	T	T	06 47 42.1	
	baz=335,slow=76,SNR=39						
H11N1	WAKE ISLAND Hy	28.69	146	T	T	06 47 40.4	
	baz=335,slow=76,SNR=30						
H11N3	WAKE ISLAND Hy	28.70	146	T	T	06 47 39.8	
	baz=335,slow=76,SNR=31						
H11S1	WAKE ISLAND Hy	29.71	148	T	T	06 48 50.0	
	baz=336,slow=76,SNR=56						
H11S3	WAKE ISLAND Hy	29.72	148	T	T	06 48 48.6	
	baz=336,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	29.73	148	T	T	06 48 47.7	
	baz=336,slow=76,SNR=43						
MKAR	Makanchi Array	46.10	298	P	P	06 19 27.3	-0.1
	comp=N,0.2nm,0.6s,baz=65,slow=8.1,SNR=2.0						
MKAR				PcP	PcP	06 21 03.0	0.0
	comp=N,0.2nm,0.5s,baz=89,slow=4.0,SNR=2.8						
KURK	Kurchatov	46.78	304	P	P	06 19 33.2	+0.5
KURK	Kurchatov	46.78	304	*e*P	P	06 19 33.2	+0.5
KURBB	Kurchatov Arra	46.87	304	P	P	06 19 33.2	-0.2
	comp=N,0.2nm,0.4s,baz=76,slow=8.3,SNR=4.1						
NOA	NORSAR Array B	69.23	340	P	P	06 22 09.3	-0.4
	comp=N,0.3nm,0.5s,baz=30,slow=6.4,SNR=3.6						
ASAR	Alice Springs	70.02	196	P	P	06 22 15.4	+0.4
	comp=N,0.3nm,0.6s,baz=2.3,slow=4.6,SNR=4.3						
GERES	GERESS Array B	79.16	333	P	P	06 23 07.0	-0.9
	comp=N,0.2nm,0.3s,baz=12,slow=5.1,SNR=3.1						
GERES	GERESS Array B	79.16	333	P	P	06 23 07.0	-0.9
TXAR	Lajitas Array	79.95	59	P	P	06 23 13.3	+0.8
	comp=N,0.2nm,0.6s,baz=316,slow=2.5,SNR=2.8						

IDC 27 06:15:01.9±4.1**, 30°.22S**×**137°.96E, h0**^{km}**, mb1 3.2**/3**, mb1mx3.1**/22**, mbtmp2.9**/3**, ML2.6**/3**, Error ellipse: s-maj=101.2km s-min=27.5km az=47.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.53	119	Pn	Pn	06 15 57.8	-0.2
	0.6nm,0.3s,baz=304,slow=14,SNR=5.8						
STKA				Sn	Sn	06 16 36.1	-4.3
	0.8nm,0.3s,baz=351,slow=19,SNR=4.4						
ASAR	Alice Springs	7.46	330	Pn	Pn	06 16 52.5	+0.5
	0.0nm,0.3s,baz=153,slow=12,SNR=3.5						
ASAR				Sn	Sn	06 18 18.3	+0.8
	0.0nm,0.3s,baz=154,slow=22,SNR=2.9						
WRA	Warramunga Arr	10.74	341	Pn	Pn	06 17 37.0	-0.1
	0.1nm,0.3s,baz=165,slow=12,SNR=3.5						

GCG 27 06:23:13.4±0.7**, 14°.96N**×**92°.29W, h145**^{km}±7^{km}**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.74	110	*e*P	Pn	06 23 37.1	+1.2
STG3				*e*S	Sn	06 23 54.2	+1.4
FUG	Fuego 3	1.49	110	*e*P	Pn	06 23 43.2	+0.6
FUG				*e*S	Sn	06 24 06.8	+1.8
PCG	Pacaya	1.72	109	*e*P	Pn	06 23 46.1	+0.8
PCG				*e*S	Sn	06 24 12.1	+2.4

MEX 27 06:31:58.2±0.6**, 17°.08N**×**96°.37W, h68**^{km}±5^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.35	270	*e*P	Pn	06 32 08.4	-1.4
VHO				*i* S	Sn	06 32 16.6	-1.7
HUIG	Huatulco	1.32	169	*i* P	Pn	06 32 19.1	-1.8
HUIG				*i* S	Sn	06 32 35.8	-2.0
CMIG	Matias Romero	1.42	89	*e*P	Pn	06 32 20.8	-1.2
CMIG				*i* S	Sn	06 32 38.7	-1.3
TLIG	Tlapa	2.15	283	*i* P	Pn	06 32 30.8	-1.2
TLIG				*i* S	Sn	06 32 55.8	-2.1
MEIG	Mezcala	3.22	286	*i* P	Pn	06 32 45.5	-1.0
MEIG				*i* S	Sn	06 33 21.4	-2.2
ARIG	Puente Sto Nin	3.98	288	*e*P	Pn	06 32 56.1	-0.7
ARIG				*i* S	Sn	06 33 41.7	-0.6

ISCJB ***27*** *06:46:42.6±0.3, 3°.07S±0°.03×128°.08E±0°.03, h38^{km}, mb4.4/25, MS3.5/8, Error ellipse: s-maj=4.9km s-min=4.4km az=21.4*

NEIC ***27*** *06:46:43.5±1.8, 3°.05S×128°.06E, h36^{km}±3^{km}, mb4.5/12, Error ellipse: s-maj=12.2km s-min=10.2km az=200.0*

NEIC Felt at Ambon.

DJA ***27*** *06:46:43.0±0.2, 3°S±2°×12°8E±°, h10^{km}, M4.5/13, mb4.7/6, mB5.2/3, MLv4.5/13, Mw(mB)4.5/3*

IDC ***27*** *06:46:45.8±1.8, 3°.15S×128°.18E, h58^{km}±15^{km}, mb3.9/11, mb1 4.2/14, mb1mx4.0/31, mbtmp4.3/14, MS3.5/10, Ms1 3.5/10, ms1mx3.2/34, Error ellipse: s-maj=14.7km s-min=10.2km az=81.0*

ISC 27 06:46:44.0±0.4**, 3°.12S**±0°.05×**128°.01E**±0°.05**, h38**^{km}**, n75, **σ**1^{s}.57**/75**, mb4.5**/25**, MS3.3**/9**, 1D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	0.60	162	P	Pn	06 46 55.6	-0.5
NLAI	Namlea	0.92	262	P	Pn	06 46 59.9	-0.5
MSAI	Masohi	0.94	104	P	Pn	06 47 01.7	+1.0
SANI	Sanana	2.28	298	P	Pn	06 47 18.0	-1.1
SANI				S	Sn	06 47 42.4	-3.6
BNDI	Bandanaira	2.35	127	P	Pn	06 47 23.2	+3.2
LBMI	Labuha	2.51	348	P	Pn	06 47 24.0	+1.7
SWI	Sorong	3.94	56	P	Pn	06 47 43.1	+1.1
SIJI	Sorong	3.94	56	P	Pn	06 47 42.9	+0.9
	39nm,0.3s,baz=207,slow=22,SNR=35						
SIJI				S	Sn	06 48 26.4	-0.7
	39nm,0.3s,baz=221,slow=19,SNR=12						
SIJI				LR	LR	06 49 58.8	
	comp=Z,545nm,18.8s,baz=354,slow=50						
FAKI	Fak Fak	4.24	87	*e*Pn	Pn	06 47 46.7	+0.7
FAKI				*e*Sn	Sn	06 48 33.4	-0.8
FAKI	Fak Fak	4.24	87	P	Pn	06 47 47.1	+1.1
KDI	Kendari	5.45	261	P	Pn	06 48 04.9	+2.3
LUWI	Luwuk	5.63	291	*e*Pn	Pn	06 48 05.7	+0.6
LUWI	Luwuk	5.63	291	P	Pn	06 48 21.0	+16
SOEI	Soe	7.57	209	*e*Pn	Pn	06 48 35.7	+3.7
SOEI	Soe	7.57	209	P	Pn	06 48 47.7	+16
BNSI	Bone	7.99	261	P	Pn	06 48 42.9	+5.3
BKSI	Bulukumba	8.17	254	P	Pn	06 48 43.8	+3.8
SPSI	Sidrap Palu	8.27	264	P	Pn	06 48 45.1	+3.7
	23nm,0.5s						
EDFI	Ende, Flores	8.42	228	P	Pn	06 48 48.0	+4.5
KAPI	Kappang	8.45	257	P	Pn	06 48 48.8	+4.9
	16nm,0.3s,baz=103,slow=6.4,SNR=32						
KAPI				LR	LR	06 52 17.9	
	comp=Z,358nm,21.6s,baz=302,slow=39						
MTN	Manton Dam	10.15	162	*e*Pn	Pn	06 49 10.0	+2.9
WRAB	Tennant Creek	17.82	160	*e*P	Pn	06 50 49.3	+0.1
	24nm,0.6s						
WR1	Warramunga Arr	17.83	160	*e*P	Pn	06 50 49.4	+0.2
WR1				*e*ScP	ScP	06 58 55.7	-1.9
WRA	Warramunga Arr	17.83	160	P	Pn	06 50 49.4	+0.2
	6.8nm,0.3s,baz=340,slow=14,SNR=338						
WRA				ScP	ScP	06 58 55.7	-1.9
	0.1nm,0.3s,baz=338,slow=2.0,SNR=3.1						
COEN	Coen	18.45	127	*e*P	P	06 50 56.4	-0.1
	35nm,1.2s						
PMG	Port Moresby	20.02	109	LR	LR	07 00 57.4	
	comp=Z,184nm,18.3s,baz=306,slow=43						
LEM	Lembang	20.65	259	LR	LR	07 00 15.2	
	comp=Z,263nm,18.9s,baz=108,slow=39						
AS31	Alice Springs	21.21	165	*e*P	P	06 51 26.8	+0.2
	22nm,0.3s						
ASAR	Alice Springs	21.21	165	P	P	06 51 26.9	+0.3
	19nm,0.3s,baz=347,slow=12,SNR=338						
ASAR				S	S	06 55 18.4	-2.2
	3.0nm,0.8s,baz=348,slow=20,SNR=9.0						
ASAR				PcP	PcP	06 55 30.9	-0.3
	1.0nm,0.5s,baz=359,slow=1.8,SNR=5.8						
ASAR				ScP	ScP	06 59 02.6	-2.7
	0.4nm,0.7s,baz=326,slow=2.2,SNR=4.0						
GUMO	Guam	23.56	45	LR	LR	07 00 26.2	
	comp=Z,60nm,20.1s,baz=185,slow=35						
CTA	Charters Tower	24.52	135	P	P	06 51 59.5	-0.6
	3.0nm,0.7s,baz=343,slow=11,SNR=3.2						
FORT	Forrest	27.52	180	*e*P	P	06 52 27.1	+0.1
	39nm,1.1s						
PSI	Prapat	29.66	281	P	P	06 52 48.2	+1.7
	8.0nm,1.1s,baz=84,slow=4.9,SNR=3.6						
PSI	Prapat	29.66	281	*e*P	P	06 52 48.4	+1.9
	4.2nm,0.9s						
STKA	Stephens Creek	31.34	157	P	P	06 52 59.4	-1.5
	2.6nm,0.4s,baz=336,slow=9.0,SNR=12						
STKA				LR	LR	07 06 14.4	
	comp=Z,137nm,18.1s,baz=5.7,slow=37						
STKA	Stephens Creek	31.34	157	*e*P	P	06 53 00.3	-0.7
	4.4nm,1.3s						
ARMA	Armidale	35.16	143	*e*P	P	06 53 34.5	0.0
	12nm,1.5s						
CMAR	Chiang Mai Arr	35.76	308	LR	LR	07 09 28.5	
	comp=Z,38nm,19.9s,baz=167,slow=38						
NJ2	Nanjing	36.04	347	*e*P	P	06 53 42.8	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI	Kunming	37.27	320	P	P	06 53 53.5	+0.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CAN	Canberra	37.49	151	*e*P	P	06 53 54.2	0.0

TOO	Toolangi	37.86	157	eP	P	06 53 58.0	+0.8
	comp=Z,12nm,1.4s						
KSRS	Korea Array	40.36	360	P	P	06 54 17.9	-0.1
	comp=Z,0.6nm,0.4s,baz=175,slow=8.5,SNR=4.0						
KSRS				LR	LR	07 08 54.1	
	comp=Z,41nm,21.6s,baz=168,slow=33						
MJAR	Matsushiro Arr	40.58	13	LR	LR	07 09 19.3	
	comp=Z,43nm,20.9s,baz=195,slow=33						
LZH	Lanzhou	45.07	332	eP	P	06 54 55.5	-1.0
LZH				pP	sP	06 55 11.0	+0.9
LZH				sP	pP	06 55 19.5	+12
LZH				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC	Hu-ho-hao-te	46.26	343	P	P	06 55 09.5	+3.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,14nm,4.3s						
USRK	Ussuriysk Ar.	47.24	4	P	P	06 55 13.5	+0.3
	comp=Z,1.4nm,0.6s,baz=186,slow=7.1,SNR=4.4						
USRK				LR	LR	07 14 17.0	
	comp=Z,34nm,20.2s,baz=16,slow=35						
GTA	Gaotai	49.64	331	eP	P	06 55 32.5	+0.5
GTA				pP	sP	06 55 45.5	-0.1
GTA				sP	pP	06 55 50.0	+6.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONA0	Songino Array	54.16	342	eP	P	06 56 05.3	-0.2
SONM	Songino Array	54.16	342	P	P	06 56 05.3	-0.2
	comp=Z,1.3nm,0.8s,baz=155,slow=8.2,SNR=5.3						
LBZ	Lake Benmore	55.37	144	eP	P	06 56 14.2	-0.1
BKZ	Black Stump Fm	56.74	136	eP	P	06 56 23.3	-0.9
	comp=Z,9.4nm,1.2s						
WMQ	Urumqi	59.08	327	eP	P	06 56 41.0	+0.5
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,67nm,7.1s						
WMQ				LR	LR		
	comp=N,640nm,28.9s						
WMQ				LR	LR		
	comp=E,740nm,29.0s						
WMQ				LR	LR		
	comp=Z,370nm,22.7s						
PETK	Petropavlovsk-	61.32	20	P	P	06 56 56.9	+1.3
	comp=Z,2.0nm,0.9s,baz=201,slow=7.7,SNR=3.7						
PEA1	Petropavlovsk-	61.32	20	eP	P	06 56 56.9	+1.2
KSH	Kashi	63.84	317	eP	P	06 57 11.0	-1.9
KSH				sP	sP	06 57 35.8	+8.9
KSH				S	S	07 05 45.5	-0.2
MK31	Makanchi Array	63.91	327	eP	P	06 57 13.0	-0.1
	comp=Z,1.8nm,0.9s						
MKAR	Makanchi Array	63.91	327	P	P	06 57 13.1	0.0
	comp=Z,1.3nm,0.7s,baz=122,slow=7.9,SNR=9.8						
ZALV	Zalesovo Beam	67.25	334	P	P	06 57 33.9	-0.5
	comp=Z,0.9nm,0.3s,baz=141,slow=4.8,SNR=2.4						
KURK	Kurchatov	68.19	329	eP	P	06 57 39.7	-0.7
	comp=Z,4.1nm,0.8s						
BRVK	Borovoye	73.81	328	eP	P	06 58 14.1	-0.4
	comp=Z,2.1nm,1.0s						
SYO	Syowa Base	86.55	201	⇓eX	P	06 59 19.1	-3.6
RSO	Redoubt South	87.39	29	eP	P	06 59 22.6	-4.7
ILAR	Eielson Array	90.70	25	P	P	06 59 40.9	-1.6
	comp=Z,0.5nm,0.6s,baz=243,slow=5.3,SNR=7.0						
TORD	Torodi Ar. Bea	126.03	284	PKP	PKPdf	07 05 43.0	-0.2
	comp=Z,0.5nm,0.7s,baz=106,slow=1.9,SNR=4.4						
TOA1	Torodi Ar. Sit	126.04	284	ePKPdf	PKPdf	07 05 43.0	-0.2
GO03	Copiap	144.77	151	ePKPdf	PKPab	07 06 16.8	+0.3
CBCY	The Bluff, Cay	148.25	57	ePKPdf	PKPdf	07 06 24.1	+0.4
CPUP	Villa Florida	150.28	170	PKPbc	PKPdf	07 06 29.6	+2.8
	comp=Z,4.3nm,1.1s,baz=168,slow=7.8,SNR=3.7						
CPUP	Villa Florida	150.28	170	ePKPbc	PKPbc	07 06 32.2	+0.3
PB01	IPOC Station P	150.50	145	ePKPdf	PKPdf	07 06 25.4	-1.9
GO01	Chusmiza	151.74	144	ePKPbc	PKPbc	07 06 35.6	-0.5
MNMC	Minye Minye	151.92	143	ePKPbc	PKPbc	07 06 36.8	+0.5
LPAZ	La Paz	154.97	141	PKPbc	PKPbc	07 06 42.5	-0.9
	comp=Z,0.3nm,0.4s,baz=177,slow=16,SNR=5.6						
LPAZ				PKPab	pPKPbc	07 06 57.5	+1.8
	comp=Z,1.1nm,0.8s,baz=262,slow=2.3,SNR=4.3						
LPAZ	La Paz	154.97	141	ePKPbc	PKPbc	07 06 43.0	-0.4
LPAZ				ePKPab	pPKPbc	07 06 57.2	+1.5

GCG 27 06:58:14.8±0.4, 13°.87N×91°.98W, h29km±205km, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.93	25	eP	Pb	06 58 32.4	0.0
STG3				eS	Sb	06 58 46.0	+1.5
FUG	Fuego 3	1.25	62	eP	Pn	06 58 36.6	+0.2
PCG	Pacaya	1.43	69	eS	Sb	06 58 59.0	+0.1

NNC 27 07:30:41.5±1.1, 41°.78N×78°.18E, h0km±5km, mb3.8, mpv3.5, Error ellipse: s-maj=8.6km s-min=4.6km az=162.0, Suspected Mining explosion.

ISC 27 07:30:42.3±1.7, 41°.84N±0°.08×78°.21E±0°.05, h0km, n25, σ1s.15/31, 4C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	1.22	7	P	Pg	07 31 05.2	-0.6
	9.4nm,0.2s						
SATY				S	Sg	07 31 22.9	+1.3
	22nm,0.1s						
TNSS	Tian-Shan	1.51	322	P	Pn	07 31 10.5	-0.5
	13nm,0.2s						
TNSS				S	Sn	07 31 32.5	+0.8
	8.0nm,0.3s						
ULHL	Ulahol	1.52	286	P	Pn	07 31 10.3	-0.6
	SNR=9.6						
KOTS	Kotyrbulak	1.61	330	P	Pn	07 31 10.9	-1.2
	11nm,0.2s						
KOTS				S	Sn	07 31 32.9	-0.8
	17nm,0.3s						
KURS	Kuram	1.64	359	P	Pb	07 31 13.5	0.0
	4.9nm,0.3s						
KURS				S	Sg	07 31 37.5	+2.4
	10nm,0.4s						
IZV	Izvestkoviy	1.68	316	P	Pn	07 31 13.4	+0.3
	12nm,0.2s						
IZV				S	Sg	07 31 37.0	+0.9
	15nm,0.2s						
PDGK	Podgornoye	1.76	32	⇑Pg	Pn	07 31 14.6	+0.4
	2.4nm,0.3s						
PDGK				⇓Lg	Lg	07 31 40.1	
	6.2nm,0.5s						
MTBS	Maitube	1.84	315	P	Pn	07 31 14.0	-1.2
	18nm,0.3s						
MTBS				S	Sn	07 31 38.0	-1.2
	18nm,0.3s						
KST	Kastek	2.05	307	Pg	Pb	07 31 19.7	-0.8
	20nm,0.3s						
KST				Lg	Lg	07 31 48.1	
	16nm,0.5s						
KTBS	Karatobe	2.18	330	Pg	Pb	07 31 22.4	-0.2
	23nm,0.3s						
KTBS				Lg	Lg	07 31 52.6	
	26nm,0.4s						
CHKK	Chushkaly	2.20	336	Pg	Pb	07 31 22.8	-0.2
	62nm,0.3s						
CHKK				Lg	Lg	07 31 53.5	
	48nm,0.4s						
TKM2	Tokmak 2	2.21	300	⇑Pg	Pb	07 31 22.8	-0.5
	5.9nm,0.2s						
TKM2				⇑Lg	Lg	07 31 52.9	
	5.8nm,0.5s						
TKM2	Tokmak 2	2.21	300	P	Pb	07 31 22.7	-0.5
	SNR=18						
KZA	Kyzart	2.22	277	P	Pg	07 31 25.3	+0.5
	SNR=12						
MNBS	Baschi	2.24	4	Pg	Pb	07 31 23.8	+0.2
	12nm,0.3s						
MNBS				Lg	Lg	07 31 55.2	
	20nm,0.3s						
KTMS	Ketmen	2.25	44	Pg	Pb	07 31 23.0	-0.9
	16nm,0.5s						
KTMS				Lg	Lg	07 31 55.3	
	7.8nm,0.4s						
DGS	Degeres	2.28	309	Pg	Pb	07 31 24.0	-0.4
	14nm,0.4s						
DGS				Lg	Lg	07 31 55.4	
	13nm,0.3s						
ARXS	Arharly	2.38	353	Pg	Pb	07 31 25.2	-0.9
	25nm,0.2s						
ARXS				Lg	Lg	07 31 57.3	
	8.2nm,0.3s						
KUU	Kurty	2.46	327	Pg	Pb	07 31 26.8	-0.7
	12nm,0.3s						
KUU				Lg	Lg	07 31 60.0	
	15nm,0.4s						
KBK	Karagaybulak	2.55	290	P	Pb	07 31 29.3	+0.3
	SNR=6.5						
DJR	Jarkent	2.74	24	Pg	Pb	07 31 32.4	+0.1
	9.2nm,0.3s						
DJR				Lg	Lg	07 32 10.1	
	8.9nm,0.5s						
UCH	Uchtor	2.78	279	P	Pg	07 31 33.7	-1.8
	SNR=8.4						
AAK	Ala-Archa	2.87	287	⇓Pg	Pb	07 31 33.4	-1.0
	1.8nm,0.3s						
AAK				⇑Lg	Lg	07 32 12.7	
	4.0nm,0.5s						
KAPS	Kapalarasan	3.54	13	Pg	Pb	07 31 46.6	+0.7
	3.9nm,0.4s						
KAPS				Lg	Lg	07 32 34.4	
	1.8nm,0.3s						
KK31	Karatay Array	5.83	285	Pg	Pb	07 32 28.4	+3.7
	0.2nm,0.3s,baz=94,slow=15,SNR=5.7						
KK31				⇓Lg	Lg	07 33 47.0	
	0.3nm,0.4s,baz=236,slow=39,SNR=2.6						

IDC 27 07:37:19.3±0.7, 2°.98S×129°.98E, h0km, mb4.0/12, mb1 4.2/15, mb1mx4.0/41, mbtmp4.1/15, ML4.1/3, MS3.4/12, Ms1 3.4/12, ms1mx3.2/26, Error ellipse: s-maj=25.4km s-min=15.1km az=83.0

ISCJB 27 07:37:21.9±0.3, 2°.95S±0°.03×129°.96E±0°.04, h25km, mb4.4/27, MS3.5/10, Error ellipse: s-maj=5.5km s-min=4.1km az=170.8

NEIC 27 07:37:25.9±3.0, 2°.95S×129°.91E, h34km±4km, mb4.5/19, Error ellipse: s-maj=11.3km s-min=7.0km az=193.0

DJA 27 07:37:25.0±1.3, 3°S±4°×13°0E±°, h24km±13km, M4.6/13, mb4.9/3, mB4.9/1, MLv4.4/13, Mw(mB)4.2/1

ISC 27 07:37:24.5±0.4, 2°.99S±0°.04×129°.97E±0°.05, h25km, n64, σ2s.28/65, mb4.6/27, MS3.3/10, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.09	251	P	Pb	07 37 45.3	+0.5
BNDI	Bandanaira	1.53	182	P	Pb	07 37 53.6	+1.4
AAI	Ambon	1.90	248	P	Pb	07 37 57.6	-0.9
FAKI	Fak Fak	2.28	88	ePn	Pn	07 38 01.7	+1.1
FAKI	Fak Fak	2.28	88	P	Pn	07 38 01.2	+0.6
SIJI	Sorong	2.47	32	Pn	Pn	07 38 00.5	-2.8
	63nm,0.3s,baz=228,slow=22,SNR=33						
SIJI				Sn	Sn	07 38 28.3	-4.4
	44nm,0.3s,baz=325,slow=6.6,SNR=5.1						
SIJI				LR	LR	07 39 29.6	
	comp=Z,1000nm,18.7s,baz=264,slow=53						
SWI	Sorong	2.48	32	P	Pn	07 38 02.0	-1.3
SWI				S	Sn	07 38 30.1	-2.6
NLAI	Namlea	2.87	265	P	Pn	07 38 08.7	-0.1
LBMI	Labuha	3.39	313	P	Pn	07 38 14.7	-1.2
LBMI				S	Sn	07 38 52.5	-2.9
SANI	Sanana	4.08	283	P	Pn	07 38 24.2	-1.2
SAUI	Saumlaki	5.14	165	ePn	Pn	07 38 39.2	-0.7
BAKI	Biak	6.39	74	P	Pn	07 38 57.6	+0.4
LUWI	Luwuk	7.44	285	ePn	Pn	07 39 10.8	-0.9
MTN	Manton Dam	9.86	173	ePn	Pn	07 39 45.3	+0.4
MTN				eSn	Sn	07 41 36.5	+1.7
KAPI	Kappang	10.39	258	Pn	Pn	07 39 51.7	-0.3
	0.7nm,0.3s,baz=120,slow=17,SNR=2.0						
KAPI				LR	LR	07 44 41.7	
	comp=Z,279nm,20.8s,baz=302,slow=42						
DAV	Davao City (W)	10.91	336	LR	LR	07 44 33.1	
	comp=Z,177nm,21.2s,baz=112,slow=40						
COEN	Coen	17.00	131	eP	Pn	07 41 21.6	+0.8
	26nm,1.4s						
WRAB	Tennant Creek	17.38	166	eP	Pn	07 41 25.0	-0.5
	32nm,1.1s						
WR1	Warramunga Arr	17.39	166	eP	Pn	07 41 23.0	-2.6
WRA	Warramunga Arr	17.39	166	P	Pn	07 41 23.0	-2.5
	0.7nm,0.3s,baz=342,slow=13,SNR=29						
WRA				S	Sn	07 44 29.2	-9.3
	0.5nm,0.3s,baz=332,slow=23,SNR=3.7						
WB2	Warramunga Arr	17.39	166	eP	Pn	07 41 23.9	-1.7
	27nm,1.0s						
AS31	Alice Springs	20.91	170	eP	P	07 42 06.2	+0.9
	14nm,1.0s						
ASAR	Alice Springs	20.91	170	P	P	07 42 05.5	+0.1
	33nm,0.8s,baz=347,slow=10,SNR=155						
ASAR				S	S	07 45 53.6	-3.7
	2.6nm,0.8s,baz=346,slow=18,SNR=5.2						
HNR	Honiara	30.47	103	LR	LR	07 57 17.5	
	comp=Z,79nm,19.8s,baz=286,slow=39						
STKA	Stephens Creek	30.75	160	P	P	07 43 35.6	-2.4
	2.0nm,0.5s,baz=333,slow=11,SNR=7.6						
STKA				LR	LR	07 56 18.9	
	comp=Z,100nm,21.9s,baz=351,slow=37						
STKA	Stephens Creek	30.75	160	eP	P	07 43 38.5	+0.5
	1.5nm,1.1s						
GSI	Gunungsitoli	32.66	277	eP	P	07 43 56.1	+1.1
	44nm,1.3s						
NJ2	Nanjing	36.41	344	eP	P	07 44 31.0	+3.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CM31	Chiang Mai Arr	37.25	306	eP	P	07 44 32.6	-1.9
	comp=Z,17nm,1.3s						
CMAR	Chiang Mai Arr	37.25	306	P	P	07 44 32.6	-1.9
	comp=Z,0.6nm,0.3s,baz=134,slow=5.5,SNR=4.2						
CHTO	Chiang Mai	37.43	307	eP	P	07 44 38.4	+2.4
	comp=Z,16nm,1.4s						
KMI	Kunming	38.45	318	P	P	07 44 47.3	+2.4
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
MJAR	Matsushiro Arr	40.07	10	P	P	07 44 55.1	-2.8
	comp=Z,1.0nm,0.8s,baz=187,slow=9.8,SNR=3.7						
MJAR				LR	LR	07 59 24.5	
	comp=Z,32nm,21.2s,baz=240,slow=33						
MAJO	Matsushiro	40.07	10	eP	P	07 44 55.1	-2.8
KSRS	Korea Array	40.28	357	LR	LR	08 00 25.4	
	comp=Z,34nm,20.4s,baz=164,slow=34						
LZH	Lanzhou	45.90	330	eP	P	07 45 45.8	+0.4
LZH				pP	pP	07 45 48.8	-4.2
LZH				sP	sP	07 45 50.3	-5.7
LZH				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC	Hu-ho-hao-te	46.76	341	P	P	07 45 54.5	+2.6
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,14nm,4.7s						
USRK	Ussuriysk Ar.	47.01	2	LR	LR	08 06 44.4	
	comp=Z,32nm,18.6s,baz=153,slow=38						
SONA0	Songino Array	54.66	341	eP	P	07 46 49.6	-1.9
SONM	Songino Array	54.66	341	P	P	07 46 49.6	-1.9
	comp=Z,0.4nm,0.4s,baz=165,slow=6.2,SNR=3.5						
SONM				LR	LR	08 12 35.4	
	comp=Z,31nm,18.8s,baz=104,slow=39						
BKZ	Black Stump Fm	55.48	137	eP	P	07 46 59.7	+2.2
	comp=Z,6.8nm,1.0s						
WMQ	Urumqi	60.05	326	eP	P	07 47 34.0	+4.4
WMQ				LR	LR		
	comp=N,1µm,28.9s						
WMQ				LR	LR		
	comp=E,630nm,29.0s						
WMQ				LR	LR		
	comp=Z,180nm,28.7s						
PETK	Petropavlovsk-	60.55	19	P	P	07 47 33.2	+0.5
	comp=Z,0.7nm,0.8s,baz=178,slow=5.6,SNR=2.4						
PETK				LR	LR	08 10 18.2	
	comp=Z,12nm,21.9s,baz=176,slow=33						
PEA1	Petropavlovsk-	60.56	19	eP	P	07 47 33.2	+0.4
MK31	Makanchi Array	64.89	326	eP	P	07 48 00.5	-1.3
	comp=Z,4.3nm,1.4s						
MKAR	Makanchi Array	64.89	326	P	P	07 48 00.9	-0.9
	comp=Z,0.5nm,0.4s,baz=111,slow=8.0,SNR=7.4						
MAKZ	Makanchi	65.07	326	eP	P	07 48 03.7	+0.7
	comp=Z,6.4nm,1.4s						
ZAA0	Zalesovo Array	68.00	333	eP	P	07 48 21.6	+0.1
	comp=Z,7.4nm,1.2s						
ZALV	Zalesovo Beam	68.00	333	P	P	07 48 19.7	-1.8
	comp=Z,1.1nm,0.3s,baz=114,slow=7.0,SNR=4.6						
ZALV				LR	LR	08 19 00.1	
	comp=Z,18nm,20.0s,baz=240,slow=37						
KURK	Kurchatov	69.11	328	eP	P	07 48 27.9	-0.6
	comp=Z,11nm,1.1s						
BVAR	Borovoye Array	74.68	327	P	P	07 49 01.1	-0.8
	comp=Z,1.1nm,0.8s,baz=132,slow=8.8,SNR=6.0						
BRVK	Borovoye	74.75	327	eP	P	07 49 04.5	+2.1
	comp=Z,8.8nm,1.4s						
UNV	Unalaska Valle	77.17	33	eP	P	07 49 20.6	+4.5
	comp=Z,14nm,1.2s						
MAW	Mawson	78.65	201	P	P	07 49 22.6	-1.4
	comp=Z,0.6nm,0.3s,baz=30,slow=18,SNR=3.3						
MAW	Mawson	78.65	201	eP	P	07 49 25.2	+1.2
	comp=Z,0.5nm,1.0s						
ABKAR	Akbulak array	79.37	321	eP	P	07 49 28.4	0.0
	comp=Z,3.0nm,1.0s						
AKTO	Aktyubinsk	80.90	322	P	P	07 49 35.5	-1.1
	comp=Z,1.8nm,0.7s,baz=119,slow=3.7,SNR=5.6						
TTA	Tatalina	85.43	26	eP	P	07 50 01.4	+1.6
	comp=Z,5.5nm,1.2s						
ILAR	Eielson Array	89.75	25	P	P	07 50 19.7	-0.8
	comp=Z,0.1nm,0.3s,baz=250,slow=2.6,SNR=2.4						
ILB	Eielson Array	89.75	25	eP	P	07 50 19.7	-0.8
	comp=Z,1.6nm,1.0s						
KMBO	Kilima Mbogo	92.65	269	LR	LR	08 29 05.2	
	comp=Z,41nm,20.6s,baz=274,slow=34						
GO01	Chusmiza	150.65	141	ePKPbc	PKiKP	07 57 18.5	+1.7
MNMC	Minye Minye	150.79	140	ePKPbc	PKiKP	07 57 18.7	+1.9
LPAZ	La Paz	153.79	138	PKPbc	PKPbc	07 57 21.4	-1.9
	comp=Z,0.3nm,0.6s,baz=270,slow=1.0,SNR=1.6						

NNC 27 07:40:21.4±0.6, 48°.37N×70°.20E, h0km, mb3.6, mpv3.4, 7C-5D, Error ellipse: s-maj=5.3km s-min=3.6km az=47.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTUK	Ortayu	1.43	94	⇑P	Pn	07 40 48.2	-0.4
	5.4nm,0.4s						
OTUK				⇑S	Sb	07 41 07.8	0.0
	25nm,0.4s						
BTLS	Baital	4.25	140	Pg	Pb	07 41 39.1	+2.1
	2.2nm,0.5s						
BTLS				Lg	Lg	07 42 33.8	
	5.6nm,0.7s						
BRVK	Borovoye	4.69	1	⇓Pn	Pn	07 41 34.3	+1.0
	1.0nm,0.7s						
BRVK				⇓Sn	Sn	07 42 28.4	-0.1
	2.0nm,0.6s						
BRVK				⇑Lg	Lg	07 42 49.6	
	12nm,1.1s						
KK31	Karatay Array	5.27	178	⇑Lg	Lg	07 43 09.4	
	2.1nm,0.6s,baz=358,slow=28,SNR=5.1						
KURBB	Kurchatov Arra	5.87	64	⇓Lg	Lg	07 43 27.2	
	11nm,0.8s						
KUU	Kurty	6.18	134	Pg	Pb	07 42 14.3	+4.4
	1.1nm,0.2s						
KUU				Lg	Lg	07 43 33.7	
	6.9nm,0.8s						
DGS	Degeres	6.44	141	Pg	Pb	07 42 19.4	+5.1
	1.4nm,0.4s						
DGS				Lg	Lg	07 43 42.8	
	7.6nm,0.8s						
KTBS	Karatobe	6.48	134	Pg	Pb	07 42 20.0	+5.0
	2.2nm,1.4s						
KTBS				Lg	Lg	07 43 44.0	
	11nm,0.5s						
CHKK	Chushkaly	6.53	131	Pg	Pb	07 42 20.6	+4.8
CHKK				Lg	Lg	07 43 44.8	
	4.7nm,0.6s						
TKM2	Tokmak 2	6.63	143	⇓Lg	Lg	07 43 51.9	
	6.4nm,0.9s						
ARXS	Arharly	6.72	125	Pg	Pb	07 42 23.9	+4.8
	0.8nm,0.6s						
ARXS				Lg	Lg	07 43 50.2	
	6.1nm,0.8s						
AB31	Akbulak array	6.83	281	Pn	Pn	07 42 02.6	-0.2
	0.6nm,0.8s,baz=104,slow=9.1,SNR=3.6						
AB31				⇑Lg	Lg	07 43 58.6	
	1.9nm,0.9s,baz=86,slow=29,SNR=5.2						
IZV	Izvestkoviy	6.97	138	Pg	Pg	07 42 29.6	-5.3
	3.3nm,0.3s						
IZV				Lg	Lg	07 44 00.2	
	5.8nm,0.6s						
KAPS	Kapalarasan	7.00	113	Pg	Pb	07 42 27.9	+4.1
	0.9nm,0.4s						
KAPS				Lg	Lg	07 43 57.4	
	4.6nm,0.9s						
KOTS	Kotyrbulak	7.05	134	Pg	Pg	07 42 30.8	-5.5
	5.8nm,0.6s						
KOTS				Lg	Lg	07 44 02.5	
	19nm,0.7s						
KURS	Kuram	7.39	128	Pg	Pb	07 42 36.5	+6.0
	2.1nm,0.5s						
KURS				Lg	Lg	07 44 12.0	
	7.3nm,1.1s						
SATY	Saty	7.82	130	Pg	Pb	07 42 44.2	+6.4
	1.9nm,0.1s						
SATY				Lg	Lg	07 44 24.7	
	5.1nm,0.1s						
MAKZ	Makanchi	8.11	97	⇓Lg	Lg	07 44 38.9	
	3.3nm,0.9s						
AKTO	Aktyubinsk	8.21	289	⇑Lg	Lg	07 44 41.7	
	3.4nm,1.0s						
MK31	Makanchi Array	8.32	96	⇑Lg	Lg	07 44 46.8	
	2.5nm,0.9s,baz=293,slow=25,SNR=4.4						

DDA 27 07:55:44.8, 40°.65N×33°.83E, h7km±5km, ML2.5

ISK 27 07:55:46.5, 41°.42N×33°.61E, h21km, ML2.4/6

ISCJB 27 07:55:47.3±0.6, 41°.40N±0°.04×33°.68E±0°.05, h17km±11km, Error ellipse: s-maj=6.4km s-min=5.9km az=19.9

ISC 27 07:55:47.0±1.3, 41°.38N±0°.04×33°.68E±0°.04, h19km±4km, n11, σ0s.58/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILGA	Ilgaz	0.33	175	i P	Pg	07 55 53.9	-0.3
ILGA				i S	Sg	07 55 59.3	+0.2
BZK	Bozkurt	0.63	23	PG	Pb	07 55 59.3	-0.1
BZK				SG	Sg	07 56 08.6	+0.6
KAGI	orum-Kargı	0.65	111	i P	Pb	07 55 58.3	-1.3
KAGI				i S	Sg	07 56 08.6	+0.1
KAGI				IAML_P			
	comp=Z,2µm,0.2s						
SAFT	Safranbolu	0.76	260	PG	Pb	07 56 00.9	-0.7
SAFT				SG	Sb	07 56 12.1	+0.5
CANT	Cankiri	0.77	183	PG	Pn	07 56 02.9	-0.1
CANT				SG	Sn	07 56 14.5	+0.4
KURC	Kurucasile-Bar	0.84	304	PG	Pb	07 56 02.2	-0.9
ELDT	Eldivan	0.91	192	i P	Pg	07 56 04.8	+0.1
ELDT				IAML_P			
	comp=Z,2µm,0.2s						
DIKM	Dikmen	1.22	77	PN	Pb	07 56 09.5	+0.1
BCAM	Yenicaga	1.34	246	i P	Pb	07 56 11.6	-0.1
BCAM				IAML_P			
	comp=Z,777nm,0.2s						
DELI	KIRIKKALE	1.39	172	i P	Pb	07 56 12.6	+0.1
DELI				IAML_P			
	comp=Z,323nm,0.1s						
CORM	Corum	1.40	149	PN	Pb	07 56 12.4	-0.2

IDC 27 08:10:50.8±9.5, 36°.66N×70°.92E, h162km±66km, mb3.1/3, mb1 3.1/9, mb1mx2.9/47, mbtmp3.6/9, MS3.1/2, Ms1 3.2/2, ms1mx2.4/23, Error ellipse: s-maj=85.0km s-min=50.4km az=172.0

NNC 27 08:10:56.9±2.6, 37°.03N×70°.90E, h184km±39km, mb2.7, mpv3.6, Error ellipse: s-maj=25.2km s-min=15.2km az=26.0

ISC 27 08:10:50.2±1.9, 36°.7N±0°.1×70°.8E±0°.1, h150km, n17, σ1s.19/20, mb3.3/3, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.43	358	⇑P	Pn	08 12 25.5	+2.9
	1.3nm,0.5s,baz=179,slow=12,SNR=16						
KK31				S	Sn	08 13 34.5	-0.6
	2.8nm,0.3s,baz=188,slow=19,SNR=18						
AAK	Ala-Archa	6.62	25	P	Pn	08 12 25.0	-0.2
	0.9nm,0.3s,baz=201,slow=8.6,SNR=4.2						
AAK				S	Sn	08 13 39.7	-0.1
	0.5nm,0.3s,baz=306,slow=18,SNR=8.1						
AAK	Ala-Archa	6.62	25	⇓P	Pn	08 12 27.0	+1.7
	2.5nm,0.5s						
AAK				⇑S	Sn	08 13 39.6	-0.1
	10nm,0.9s						
TKM2	Tokmak 2	7.27	29	⇓P	Pn	08 12 35.0	+1.0
	4.4nm,0.6s						
TKM2				⇓S	Sn	08 13 54.8	-0.5
	4.1nm,1.0s						
MKAR	Makanchi Array	13.27	37	P	Pn	08 13 52.7	0.0

	0.1nm,0.3s,baz=218,slow=7.7,SNR=5.1						
AB31	Akbulak array	14.85	331	⇑P	P	08 14 16.0	+1.5
	1.0nm,0.8s,baz=144,slow=12,SNR=6.4						
AB31				⇑S	Sn	08 16 56.1	-1.3
	0.2nm,0.5s,baz=25,slow=43,SNR=3.0						
KURBB	Kurchatov Arra	15.03	19	P	Pn	08 14 15.4	+0.7
	0.0nm,0.3s,baz=208,slow=11,SNR=4.2						
BVAR	Borovoye Array	16.36	359	P	P	08 14 32.4	+1.2
	0.2nm,0.3s,baz=190,slow=14,SNR=4.5						
AKTO	Aktyubinsk	16.55	330	P	P	08 14 33.1	-0.2
	0.3nm,0.3s,baz=128,slow=10,SNR=6.4						
AKTO	Aktyubinsk	16.55	330	⇑P	P	08 14 34.5	+1.2
	2.3nm,0.7s						
ZALV	Zalesovo Beam	19.84	25	P	P	08 15 07.6	-1.6
	1.1nm,0.3s,baz=218,slow=11,SNR=3.3						
SONM	Songino Array	28.39	56	LR	LR	08 27 52.4	
	comp=Z,26nm,20.5s,baz=38,slow=36						
CMAR	Chiang Mai Arr	30.70	119	LR	LR	08 31 18.8	
	comp=Z,45nm,18.3s,baz=326,slow=40						
FINES	FINESS Array B	37.24	326	P	P	08 17 47.2	+0.3
	0.2nm,0.3s,baz=116,slow=16,SNR=2.8						
ARCES	ARCESS Array B	40.92	338	P	P	08 18 17.2	-0.1
	0.5nm,0.5s,baz=104,slow=7.9,SNR=5.3						
NB2	NORSAR Subarra	44.14	323	P	P	08 18 42.7	-0.8
	comp=Z,0.2nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.14	323	P	P	08 18 42.7	-0.8
	comp=Z,0.3nm,0.6s,baz=96,slow=7.8,SNR=4.2						

IDC ***27*** *08:17:04.7±1.1, 5°.76S×151°.50E, h0^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.8/28, mbtmp3.7/7, ML1.5/1, MS3.2/1, Ms1 3.1/1, ms1mx2.5/20, Error ellipse: s-maj=49.5km s-min=22.0km az=121.0*

ISCJB ***27*** *08:17:09.7±1.1, 5°.8S±0°.2×151°.2E±0°.3, h41^{km}, mb3.6/6, MS3.1/1, Error ellipse: s-maj=45.7km s-min=10.4km az=39.9*

ISC 27 08:17:10.9±1.1**, 5°.8S**±0°.2×**151°.4E**±0°.3**, h41^{km}, n9, σ0^{s}83**/11**, mb3.6**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.49	229	Pn	Pn	08 18 30.9	+0.7
	0.9nm,0.3s,baz=82,slow=14,SNR=2.0						
PMG				Sn	Sn	08 19 31.1	-1.1
	4.2nm,0.3s,baz=6.8,slow=19,SNR=4.2						
WRA	Warramunga Arr	21.71	228	P	P	08 21 58.3	-0.3
	1.4nm,0.4s,baz=55,slow=10.0,SNR=15						
WRA				PcP	PcP	08 25 59.5	+0.8
	0.6nm,0.7s,baz=20,slow=2.7,SNR=2.8						
ASAR	Alice Springs	24.45	222	P	P	08 22 26.4	+0.4
	0.9nm,0.6s,baz=57,slow=9.3,SNR=13						
ASAR				PcP	PcP	08 26 04.3	0.0
	0.1nm,0.4s,baz=23,slow=3.0,SNR=3.4						
STKA	Stephens Creek	27.50	198	LR	LR	08 34 04.0	
	comp=Z,45nm,18.0s,baz=30,slow=37						
SONM	Songino Array	66.44	329	P	P	08 27 56.0	-0.1
	0.3nm,0.4s,baz=130,slow=4.7,SNR=2.3						
MKAR	Makanchi Array	80.16	319	P	P	08 29 17.9	+0.9
	0.2nm,0.6s,baz=108,slow=4.7,SNR=2.9						
ILAR	Eielson Array	83.63	22	P	P	08 29 33.4	-1.4
	0.3nm,0.6s,baz=249,slow=5.2,SNR=5.6						
NVAR	Mina Array Bea	93.82	52	P	P	08 30 24.7	+0.4
	0.6nm,0.7s,baz=253,slow=6.2,SNR=4.4						
TORD	Torodi Ar. Bea	149.25	286	PKPbc	PKPbc	08 36 55.9	-0.3
	2.0nm,0.6s,baz=95,slow=2.7,SNR=15						

KRNET 27 08:23:41.4±0.1**, 41°.77N×75°.14E, h35^{km}, mb1.6, 6C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	0.32	15	⇑eP	Pn	08 23 51.7	+1.7
	baz=15						
KZA				⇑eS	Sn	08 23 59.4	+3.5
	baz=15						
BOOM	Boomskoye usch	0.93	39	⇑iP	Pn	08 23 59.3	+1.1
	baz=39						
BOOM				⇑iS	Sn	08 24 12.3	+1.8
	baz=39						
ULHL	Ulahol	0.95	60	⇑iP	Pn	08 23 59.6	+1.1
	baz=60						
ULHL				⇑iS	Sn	08 24 12.5	+1.6
	baz=60						
TKM2	Tokmak 2	1.20	16	⇓eP	Pn	08 24 02.8	+0.9
	baz=16						
TKM2				⇓iS	Sn	08 24 18.6	+1.5
	baz=16						

SOME ***27*** *08:23:41.9, 42°.88N×77°.13E, h15^{km}*

NNC ***27*** *08:23:41.9±0.5, 42°.88N×77°.17E, h0^{km}, mb1.7, mpv2.4, Error ellipse: s-maj=4.3km s-min=2.1km az=10.0*

ISCJB ***27*** *08:23:42.4±1.3, 42°.89N±0°.08×77°.13E±0°.06, h10^{km}, Error ellipse: s-maj=11.6km s-min=5.5km az=11.4*

ISC 27 08:23:42.3±1.4**, 42°.89N**±0°.08×**77°.15E**±0°.05**, h10^{km}, n8, σ0^{s}13**/16**, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.21	316	P	Pg	08 23 46.9	-0.1
	10nm,0.1s						
TNSS				S	Sg	08 23 50.2	0.0
	12nm,0.1s						
TNSS	Tian-Shan	0.21	316	eP	Pg	08 23 46.9	-0.1
	10nm,0.1s						
TNSS				eS	Sg	08 23 50.2	0.0
	12nm,0.1s						
KOTS	Kotyrbulak	0.35	356	P	Pg	08 23 49.2	-0.2
	1.4nm,0.1s						
KOTS				S	Sg	08 23 54.2	+0.2
	12nm,0.2s						
KOTS	Kotyrbulak	0.35	356	eP	Pg	08 23 49.2	-0.2
	1.0nm,0.3s						
KOTS				eS	Sg	08 23 54.2	+0.2
	12nm,0.2s						
IZV	Izvestkoviy	0.42	291	P	Pg	08 23 50.6	-0.1
	2.1nm,0.1s						
IZV				S	Sg	08 23 56.5	+0.2
	6.8nm,0.3s						
IZV	Izvestkoviy	0.42	291	eP	Pg	08 23 50.6	-0.1
	2.1nm,0.1s						
IZV				eS	Sg	08 23 56.5	+0.2
	9.0nm,0.1s						
UZB	Uzynbulak	1.40	79	P	Pn	08 24 08.1	0.0
	0.4nm,0.3s						
UZB				S	Sn	08 24 26.7	0.0
	1.5nm,0.3s						
UZB	Uzynbulak	1.40	79	eP	Pn	08 24 08.1	0.0
	0.2nm,0.2s						
UZB				eS	Sn	08 24 26.7	0.0
	1.6nm,0.4s						

WEL 27 08:25:41.9±1.5**, 32°S**±11°×**18°0E**±4°0**, h12^{km}, M4.2**/14**, mB4.7**/5**, ML4.6**/14**, MLv4.3**/14**, Mw(mB)3.9**/5**, Error ellipse: s-maj=0.1km s-min=0.0km az=99.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	5.50	192	P	Pn	08 27 04.0	+0.3
WMGZ				S	Sn	08 28 07.7	+0.8
HAZ	Te Kaha	5.58	197	P	Pn	08 27 05.7	+1.0
HAZ				S	Sn	08 28 10.7	+2.0
PKGZ	Pakihiroa	5.63	195	P	Pn	08 27 06.5	+0.9
PKGZ				S	Sn	08 28 10.7	+0.5
PUZ	Puketiti	5.78	193	P	Pn	08 27 08.2	+0.8
PUZ				S	Sn	08 28 13.7	0.0
RUGZ	Raukumara Rang	5.80	198	P	Pn	08 27 08.1	+0.2
TWGZ	Tauwhareparae	5.93	195	P	Pn	08 27 10.5	+0.9
CNGZ	Carnagh Statio	6.18	192	P	Pn	08 27 13.8	+0.7
MWZ	Matawai	6.19	197	P	Pn	08 27 13.2	0.0
TKGZ	Te Karaka	6.21	195	P	Pn	08 27 13.0	-0.5
URZ	Urewera	6.23	201	P	Pn	08 27 13.8	+0.1
RAGZ	Rawiri	6.37	198	P	Pn	08 27 15.5	-0.2
RIGZ	Rimuhau	6.49	195	P	Pn	08 27 16.7	-0.6
MUGZ	Murupara	6.54	202	P	Pn	08 27 17.1	-0.9
RTZ	Ruatahuna	6.60	200	P	Pn	08 27 17.5	-1.4
SNGZ	Shannon Statio	6.66	197	P	Pn	08 27 18.3	-1.3
RAHZ	Arahi	6.85	199	P	Pn	08 27 20.7	-1.6
TLZ	Tolley Road	6.87	210	P	Pn	08 27 23.7	+1.2
BKZ	Black Stump Fm	7.25	201	P	Pn	08 27 27.0	-0.8
TSZ	Takapari Road	8.24	202	P	Pn	08 27 35.9	-5.4

ISCJB ***27*** *08:41:55.0±0.6, 32°.10N±0°.02×115°.03W±0°.03, h11^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.7km az=157.9*

PAS ***27*** *08:41:55.5±0.0, 32°.09N×115°.02W, h10^{km}*

SCEDC ***27*** *08:41:55.5, 32°.09N×115°.02W, h10^{km}*

ECX ***27*** *08:41:56.5±0.5, 32°.09N×115°.08W, h10^{km}, MD2.9, ML3.1*

MEX ***27*** *08:41:56.7±1.0, 32°.15N×114°.91W, h12^{km}±8^{km}, MD3.6*

NEIC ***27*** *08:41:56.5±0.0, 32°.09N×115°.08W, h10^{km}, ML3.1(PAS), ML3.1(ECX), After ECX.*

ANF ***27*** *08:41:56.0±1.8, 32°.18N×115°.10W, h3^{km}±9^{km}, ML2.7/7, Error ellipse: s-maj=14.1km s-min=6.3km az=166.0*

ISC 27 08:41:54.0±1.2**, 32°.04N**±0°.03×**115°.01W**±0°.03**, h13^{km}**±9^{km}**, n42, σ1^{s}31**/65**, 3C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.40	337	ePg	Pb	08 42 03.7	+0.8
MBIG	Mexicali	0.40	337	iP	Pb	08 42 03.4	+0.5
MBIG				iS	Sb	08 42 09.2	+0.3
CPBX	Cerro Prieto	0.45	327	iP	Pg	08 42 03.1	+0.2
CPBX				eS	Sg	08 42 08.8	-0.2
CPBX				⇑e		08 42 11.6	
CPBX				IAML		08 42 11.6	
	comp=E,10μm,0.2s						
CPBX				IAML		08 42 11.7	
	comp=N,9μm,0.2s						
CPBX				⇑e		08 42 11.7	
ECBX	El Chinero	0.57	183	eP	Pn	08 42 07.6	-0.1
ECBX				eS	Sn	08 42 16.0	-0.9
DREC	Desert Rsrch C	0.85	335	eP	Pg	08 42 10.5	+0.1
GLA	Glamis	1.02	9	ePg	Pb	08 42 13.1	-0.5
GLA				eSg	Sg	08 42 26.4	-0.7
GLA	Glamis	1.02	9	P	Pg	08 42 13.3	-0.4
	baz=190						
GLA				S	Sn	08 42 26.9	-1.5
	baz=190						
GLA	Glamis	1.02	9	eP	Pb	08 42 13.1	-0.5
SPIG	San Pedro Mart	1.06	201	ePn	Pn	08 42 15.3	+0.4
SPIG				eSg	Sn	08 42 30.9	+1.2
SPIG	San Pedro Mart	1.06	201	eP	Pn	08 42 15.3	+0.4
SPIG				iS	Sn	08 42 30.9	+1.2
SPIG	San Pedro Mart	1.06	201	eP	Pn	08 42 15.2	+0.4
SPIG				eS	Sn	08 42 30.9	+1.2
SPX	San Pedro Mart	1.06	201	eP	Pn	08 42 15.3	+0.4
SPX				iS	Sn	08 42 30.9	+1.2
SPX	San Pedro Mart	1.06	201	eP	Pn	08 42 15.3	+0.4
SPX				eS	Sn	08 42 30.9	+1.2
SPX				e		08 42 31.4	
SPX				IAML		08 42 31.4	
	comp=E,418nm,0.4s						
SPX				IAML		08 42 31.6	
	comp=N,368nm,0.2s						
SPX				⇓e		08 42 31.6	
RMX	La Rumorosa	1.06	302	eP	Pb	08 42 12.8	-1.5
RMX				eS	Sb	08 42 25.2	-3.0
RMX				⇓e		08 42 25.8	
RMX				IAML		08 42 25.8	
	comp=N,361nm,0.2s						
RMX				⇓e		08 42 26.3	
RMX				IAML		08 42 26.3	
	comp=E,361nm,0.2s						
IKP	In-Ko-Pah, Jac	1.11	304	P	Pb	08 42 15.0	-0.1
	baz=121						
IKP				S	Sb	08 42 28.5	-1.0
	baz=121						
IKP	In-Ko-Pah, Jac	1.11	304	eP	Pb	08 42 14.4	-0.6
SWSC	Sam W. Stewart	1.12	324	P	Pb	08 42 13.9	-1.4
	baz=142						
SWSC				S	Sb	08 42 27.6	-2.2
	baz=142						
113A	Mohawk Valley,	1.28	55	ePn	Pg	08 42 18.3	-0.4
113A				eSg	Sg	08 42 35.0	-0.4
CBX	Cerro Bola	1.43	282	ePn	Pn	08 42 19.2	-0.4
CBX				eSn	Sn	08 42 38.1	-0.3
CBX	Cerro Bola	1.43	282	eP	Pn	08 42 19.2	-0.4
CBX				eS	Sn	08 42 38.1	-0.3
CBX	Cerro Bola	1.43	282	eP	Pn	08 42 20.0	+0.3
CBX				eS	Sn	08 42 38.1	-0.3
CBX				IAML		08 42 39.0	
	comp=N,351nm,0.4s						
CBX				⇑e		08 42 39.0	
CBX				⇓e		08 42 39.4	
CBX				IAML		08 42 39.4	
	comp=E,416nm,0.2s						
TJIG	Tijuana	1.46	286	iP	Pb	08 42 20.9	-0.1
TJIG				iS	Sn	08 42 37.9	-1.2
MONP2	Monument Peak	1.46	306	P	Pb	08 42 21.3	+0.1
	baz=124						
MONP2				S	Sn	08 42 39.1	-0.3
	baz=124						
MONP2	Monument Peak	1.46	306	eP	Pn	08 42 20.6	+0.3
BAR	Barrett	1.54	295	ePn	Pn	08 42 20.9	-0.4
BAR				eSn	Sn	08 42 41.0	-0.1
BAR	Barrett	1.54	295	eP	Pb	08 42 21.8	-0.6
BC3	Big Chuckawall	1.65	347	P	Pn	08 42 22.0	-0.8
	baz=167						
Y12C	Blythe	1.76	13	ePn	Pn	08 42 24.1	0.0
Y12C	Blythe	1.76	13	P	Pb	08 42 25.9	-0.2
	baz=194						
Y12C				S	Sg	08 42 49.6	-0.9
	baz=194						
109C	Camp Elliot, M	1.96	296	P	Pb	08 42 28.2	-1.3
	baz=114						
109C				S	Sb	08 42 53.3	-0.6
	baz=114						
CPE	Camp Elliot	1.96	296	ePn	Pb	08 42 29.0	-0.5
CPE				eSn	Sb	08 42 53.4	-0.5
Y14A	Wickenburg	2.54	41	ePn	Pn	08 42 36.0	+1.0
LDFC	Landfair	3.03	359	ePn	Pb	08 42 48.7	+0.8
W13A	Hualapai Mount	3.19	17	ePn	Pn	08 42 44.8	+0.7
GSC	Goldstone, Bar	3.58	336	ePg	Pg	08 43 06.2	+3.5
TUC	Tucson	3.60	85	ePn	Pn	08 42 48.7	-0.8
TUC				ePn	Pb	08 42 51.8	-5.7
TUC	Tucson	3.60	85	eP	Pn	08 42 48.8	-0.8
TUC				iS	Sn	08 43 28.5	-3.4
X16A	Lo Mia Camp, P	3.82	51	ePn	Pn	08 42 54.8	+2.1
U15A	North Rim	4.92	26	ePn	Pn	08 43 10.9	+3.0
W18A	Petrified Fore	5.37	54	ePn	Pn	08 43 17.3	+3.3
R11A	Troy Canyon, C	6.31	356	ePn	Pn	08 43 30.5	+3.5
R11A				e		08 43 59.0	
MVCO	Mesa Verde	7.45	44	ePn	Pn	08 43 47.0	+4.5

MEX 27 08:47:29.3±0.4**, 25°.26N×99°.96W, h16^{km}**±7^{km}**, MD3.8, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.57	129	iP	Pg	08 47 38.7	-2.0
	baz=309,slow=14						
LNIG				eS	Sg	08 47 45.8	-2.5

ISCJB ***27*** *08:49:37.4±0.6, 17°.59S±0°.05×69°.79W±0°.08, h146^{km}±6^{km}, mb3.5/2, Error ellipse: s-maj=13.6km s-min=7.5km az=21.4*

IDC ***27*** *08:49:38.0±1.6, 17°.60S×69°.71W, h135^{km}±14^{km}, mb3.7/2, mb1 3.8/6, mb1mx3.4/29, mbtmp4.2/6, Error ellipse: s-maj=25.1km s-min=18.1km az=115.0*

GUC ***27*** *08:49:38.9±0.4, 17°.60S×69°.78W, h130^{km}±3^{km}, ML3.2*

ISC 27 08:49:37.8±0.9**, 17°.61S**±0°.05×**69°.65W**±0°.08**, h143^{km}**±8^{km}**, n14, σ1^{s}63**/23**, 4C-2D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.74	169	⇓iP	Pn	08 50 01.5	+0.9
PB16				eS	Sn	08 50 18.3	+0.4
PB16				IAML		08 50 20.4	
	comp=E,200nm,0.3s						
PB12	IPOC Station P	1.19	213	eP	Pn	08 50 03.3	-0.5
PB12				eS	Sn	08 50 22.1	-1.6
PB12				IAML		08 50 23.2	
	comp=N,681nm,0.2s						
MNMC	Minye Minye	1.52	178	⇑iP	Pn	08 50 08.6	+1.2
MNMC				eS	Sn	08 50 30.5	+0.5
MNMC				IAML		08 50 33.3	
	comp=E,528nm,0.3s						
LPAZ	La Paz	1.96	48	P	Pn	08 50 14.1	+1.3
	comp=E,20nm,0.3s,baz=228,slow=7.5,SNR=793						
LPAZ				S	Sn	08 50 39.8	+0.4
	comp=E,2.2nm,0.3s,baz=5.8,slow=22,SNR=3.9						
LPAZ	La Paz	1.96	48	⇓iP	Pn	08 50 14.0	+1.3
PSGC	Pisagua	2.03	193	⇑eP	Pn	08 50 13.2	+0.2
PSGC				eS	Sn	08 50 38.7	-1.3
PSGC				IAML		08 50 47.5	
	comp=N,112nm,0.5s						
GO01	Chusmiza	2.10	168	⇑eP	Pn	08 50 16.0	+1.9
GO01				eS	Sn	08 50 44.5	+2.4
GO01				IAML		08 50 49.1	
	comp=N,416nm,0.1s						
PB11	IPOC Station P	2.14	180	⇑eP	Pn	08 50 15.3	+0.9
PB11				eS	Sn	08 50 43.0	+0.5
LVC	Limon Verde	5.03	172	P	Pn	08 50 53.0	+1.2
	comp=N,6.6nm,0.3s,baz=352,slow=8.7,SNR=97						
LVC				S	Sn	08 51 46.9	-2.6
	comp=N,9.7nm,0.3s,baz=327,slow=14,SNR=17						
SIV	San Ignacio	8.37	80	P	Pn	08 51 36.0	-0.3
	comp=N,1.6nm,0.3s,baz=278,slow=8.9,SNR=42						
SIV				S	Sn	08 53 06.0	-3.5
	comp=N,0.2nm,0.3s,baz=36,slow=18,SNR=5.1						
NNA	Nana	8.92	308	P	Pn	08 51 41.8	-1.8
	comp=N,2.7nm,0.3s,baz=138,slow=13,SNR=5.2						
CFA	Coronel Fontan	14.00	175	P	Pn	08 52 49.1	-0.8
	comp=N,0.8nm,0.3s,baz=355,slow=12,SNR=14						
TORD	Torodi Ar. Bea	76.75	71	P	P	09 01 15.1	+1.2
	comp=N,0.2nm,0.5s,baz=253,slow=5.3,SNR=4.6						
YKA	Yellowknife Ar	87.30	341	P	P	09 02 09.6	+1.8
	comp=N,1.0nm,0.5s,baz=133,slow=4.8,SNR=6.7						

NIED ***27*** *09:04:00, 40°.00N×143°.20E, h20^{km}, Mw4.4 Best double couple: M$_0$4.44000×10^{15} NP1:φ$_s$184.00000°, δ17.00000°, λ74.00000°. NP2:φ$_s$21.00000°, δ74.00000°, λ95.00000°.*

IDC ***27*** *09:04:42.5±0.6, 39°.85N×143°.14E, h0^{km}, mb4.2/23, mb1 4.3/28, mb1mx4.2/37, mbtmp4.2/28, ML3.8/4, MS3.7/19, Ms1 3.7/19, ms1mx3.5/38, Error ellipse: s-maj=16.5km s-min=13.2km az=123.0*

ISCJB ***27*** *09:04:44.9±0.9, 39°.93N±0°.03×143°.18E±0°.04, h26^{km}±6^{km}, mb4.5/91, MS4.0/23, Error ellipse: s-maj=6.1km s-min=3.1km az=44.3*

JMA ***27*** *09:04:44.3±0.3, 39°.97N×143°.20E, h17^{km}±3^{km}, M4.5*

JMA Felt I J1.

MOS ***27*** *09:04:46.2±0.9, 39°.95N×143°.17E, h36^{km}, mb4.7/53, Error ellipse: s-maj=7.6km s-min=4.6km az=97.1*

BJI ***27*** *09:04:47.6±0.0, 40°.02N×143°.06E, h45^{km}, mb4.8/47, mB4.8/28, Ms4.2/25, Ms7 4.0/19*

NEIC ***27*** *09:04:47.6±0.9, 39°.90N×143°.13E, h34^{km}±5^{km}, mb4.6/45, Error ellipse: s-maj=11.1km s-min=7.4km az=124.0*

NEIC Recorded [1 JMA] in Iwate.

ISC 27 09:04:45.9±0.6**, 39°.90N**±0°.04×**143°.23E**±0°.05**, h25^{km}**±3^{km}**, h24^{km}:pP-P, n232, σ1^{s}52**/238**, mb4.5**/98**, MS4.0**/26**, 14C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.05	273	P	Pn	09 05 03.4	-1.6
MIYJ	Miyakonagasawa	1.13	254	P	Pn	09 05 05.1	-1.0
MIYJ				eS	Sn	09 05 20.2	-0.6
JKEN	Kujiedanarisaw	1.20	285	P	Pn	09 05 05.3	-1.8
JANG	Nango	1.40	291	P	Pn	09 05 08.3	-1.5
JANG				eS	Sn	09 05 25.8	-1.6
JOM	Ohasama	1.55	255	P	Pn	09 05 11.9	0.0
JOM				eS	Sb	09 05 31.8	-1.3
JMK	Ichinoseki	1.82	239	P	Pn	09 05 15.8	+0.3
JMK				eS	Sn	09 05 37.9	+0.2
JTM	Tenmabayashi	1.87	299	P	Pn	09 05 16.4	+0.1
JAH	Hinai	2.01	279	P	Pn	09 05 18.4	+0.2
JIO	Ouri	2.05	226	P	Pn	09 05 18.3	-0.4
JRG	Rokugo	2.06	257	P	Pn	09 05 19.5	+0.6
ERM	Erimo	2.12	359	ePn	Pn	09 05 20.5	+0.8
ERM				eSn	Sn	09 05 44.6	-0.6
ERM	Erimo	2.12	359	eP	Pn	09 05 20.5	+0.8
ERM				e		09 05 44.6	
JEM	Erimo	2.12	359	P	Pn	09 05 20.3	+0.6
JOT	Ohata	2.23	313	P	Pn	09 05 21.5	+0.3
JNBK	Urakawa-nobuka	2.41	352	P	Pn	09 05 23.9	+0.2
JYK	Kaneyama	2.42	247	P	Pn	09 05 24.7	+0.8
NMR	Nemuro--Hokkai	3.95	28	⇓iP	Pn	09 05 43.7	-1.1
NMR				iS	Sn	09 06 25.7	-4.6
GLVR	Golovnino	4.21	23	⇑iP	Pn	09 05 48.5	+0.1
GLVR				iS	Sn	09 06 33.9	-2.8
GLVR				pmax	pmax		
	comp=Z,348nm,0.9s						
GLVR				pmax	pmax		
	comp=N,232nm,0.8s						
GLVR				pmax	pmax		
	comp=E,240nm,1.0s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,581nm,0.3s						
ASAJ	Asahikawa	4.25	354	Pn	Pn	09 05 49.7	+0.8
	comp=E,4.8nm,0.3s,baz=226,slow=9.4,SNR=25						
ASAJ				Sn	Sn	09 06 37.6	-0.1
	comp=E,6.1nm,0.3s,baz=207,slow=6.5,SNR=7.0						
GRPR	Tuman	4.51	24	⇓iP	Pn	09 05 52.3	-0.3
GRPR				eS	Sn	09 06 39.6	-4.7
GRPR				pmax	pmax		
	comp=Z,172nm,0.4s						
GRPR				pmax	pmax		
	comp=N,18nm,0.1s						
GRPR				pmax	pmax		
	comp=E,76nm,0.2s						
GRPR				smax	smax		
	comp=N,2μm,0.6s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
LAGR	Lagunnoye	4.58	24	⇑iP	Pn	09 05 54.7	+1.3
LAGR				iS	Sn	09 06 44.5	-1.3
LAGR				pmax	pmax		
	comp=N,205nm,0.4s						
LAGR				pmax	pmax		
	comp=E,112nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,326nm,0.4s						
LAGR				smax	smax		
	comp=N,2μm,0.4s						
LAGR				smax	smax		
	comp=E,2μm,0.4s						
YUK	Yuzh-Kuril'sk	4.58	25	⇑iP	Pn	09 05 53.9	+0.4
YUK				iS	Sn	09 06 42.3	-3.6
YUK				pmax	pmax		
	comp=Z,228nm,0.2s						
YUK				pmax	pmax		
	comp=N,158nm,0.3s						
YUK				pmax	pmax		
	comp=E,123nm,0.3s						
YUK				smax	smax		
	comp=E,805nm,0.3s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
MAJO	Matsushiro	5.18	231	ePn	Pn	09 06 03.6	+1.8
MAJO				eSg	Sb	09 07 13.2	-4.3
MAJO	Matsushiro	5.18	231	eP	Pn	09 06 03.6	+1.8
MAT	Matsushiro	5.18	231	P	Pn	09 06 03.5	+1.7
MAT				S	Sn	09 07 02.7	+2.0
MJAR	Matsushiro Arr	5.18	231	Pn	Pn	09 06 03.5	+1.7
	comp=N,1.6nm,0.3s,baz=43,slow=11,SNR=192						
MJAR				Sn	Sb	09 07 13.2	-4.3
	baz=38,slow=12,SNR=2.1						
MJAR				LR	LR	09 08 16.0	
	comp=N,523nm,19.1s,baz=50,slow=42						
MJB9	Matsu-Tunnel	5.18	231	ePn	Pn	09 06 03.5	+1.7
KUR	Kuril'sk	6.34	31	⇑iP	Pn	09 06 18.1	+0.4
KUR				iS	Sn	09 07 25.5	-3.7
KUR				pmax	pmax		
	comp=N,40nm,0.3s						
KUR				pmax	pmax		
	comp=Z,51nm,0.3s						
KUR				pmax	pmax		
	comp=E,37nm,0.4s						
KUR				smax	smax		
	comp=E,191nm,0.4s						
KUR				smax	smax		
	comp=N,118nm,0.5s						
YSS	Yuzh-Sakhalins	7.07	357	ePn	Pn	09 06 28.5	+0.9
YSS	Yuzh-Sakhalins	7.07	357	⇑eP	Pn	09 06 28.9	+1.3
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						

TEY	Ternei	7.09	319⇓	*e*P	Pn	09 06 31.7	+3.7
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,50nm,0.9s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
JHJ2	Mitsune	7.30	203	*e*Pn	Pn	09 06 31.1	+0.2
JHJ	Hachijo jima 2	7.31	203	Pn	Pn	09 06 29.2	-1.8
	comp=E,30nm,0.3s,baz=240,slow=22,SNR=13						
JHJ				Sn	Sn	09 07 45.9	-7.3
	comp=E,29nm,0.3s,baz=114,slow=23,SNR=5.9						
VLA	Vladivostok	9.10	294	*i* P	Pn	09 06 57.9	+2.4
USA0B	Ussuriysk Arra	9.40	301	*e*Pn	Pn	09 06 59.7	0.0
USRK	Ussuriysk Ar.	9.40	301	Pn	Pn	09 07 02.2	+2.6
	comp=E,2.6nm,0.3s,baz=94,slow=14,SNR=59						
USRK				LR	LR	09 10 29.3	
	comp=E,524nm,18.9s,baz=117,slow=37						
MSHR	Mys Shultsa	9.48	290	*i* P	Pn	09 07 02.6	+1.9
TYV	Tymovskoe	10.98	358	*e*P	Pn	09 07 13.8	-7.4
TYV				*e*		09 09 18.6	
TYV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JNU	Nakatsue	12.01	240	Pn	Pn	09 07 35.8	+0.3
	comp=Z,0.3nm,0.3s,baz=122,slow=19,SNR=3.8						
JNU				LR	LR	09 12 32.1	
	comp=Z,427nm,18.6s,baz=14,slow=39						
JNU	Nakatsue	12.01	240	*e*Pn	Pn	09 07 35.3	-0.1
KSRS	Korea Array	12.21	263	Pn	Pn	09 07 41.5	+3.4
	comp=Z,0.6nm,0.3s,baz=82,slow=13,SNR=17						
KSRS				LR	LR	09 12 03.6	
	comp=Z,410nm,18.7s,baz=72,slow=36						
KS15	Wonju Array Si	12.24	263	*e*Pn	Pn	09 07 38.2	-0.3
KLR	Kul'dur	12.40	323	Pn	Pn	09 07 41.4	+0.8
	comp=Z,0.1nm,0.3s,baz=132,slow=13,SNR=5.8						
KLR				LR	LR	09 12 29.5	
	comp=Z,320nm,20.5s,baz=130,slow=38						
CN2	Changchun	13.81	292	*e*P	Pn	09 07 58.8	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	Petropavlovsk-	16.51	32	Pn	Pn	09 08 36.0	+0.4
	comp=Z,0.1nm,0.3s,baz=194,slow=12,SNR=2.6						
PETK				LR	LR	09 14 40.5	
	comp=Z,101nm,20.0s,baz=215,slow=36						
PETK	Petropavlovsk-	16.51	32	P	Pn	09 08 36.0	+0.4
PETK				MLR	MLR		
	comp=Z,101nm,20.0s						
PEA1	Petropavlovsk-	16.51	32	*e*Pn	Pn	09 08 36.0	+0.3
ZEA	Zeya	17.58	327	*e*P	Pn	09 08 46.6	-2.4
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
ZEA				MLR	MLR		
	comp=E,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
HIA	Hailar	19.11	307	*e*P	P	09 09 04.5	-2.2
	comp=Z,9.0nm,0.6s						
HIA	Hailar	19.11	307	*e*P	P	09 09 04.5	-2.2
HIA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MA2	Magadan	20.27	11	P	Pn	09 09 20.8	-0.6
	comp=Z,12nm,0.8s,baz=206,slow=9.2,SNR=8.1						
MA2	Magadan	20.27	11	*e*P	P	09 09 20.0	+0.7
	comp=Z,12nm,0.8s						
MA2	Magadan	20.27	11	*ce*P	P	09 09 19.8	+0.5
MA2				pmax	pmax		
	comp=Z,11nm,0.7s						
BJI	Beijing	20.71	279	*e*P	P	09 09 22.0	-2.2
NJ2	Nanjing	21.18	256	*e*P	P	09 09 29.0	-0.3
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
YAK	Yakutsk	23.65	344	*e*P	P	09 09 53.3	-1.7
	comp=Z,38nm,0.6s						
YAK	Yakutsk	23.65	344	*e*P	P	09 09 52.9	-2.0
YAK				*e**PP	sP	09 10 02.7	-2.0
YAK				*e*S	S	09 14 03.6	-4.3
YAK				*e**SS	pS	09 14 16.7	+2.1
YAK				*e*SSS	SSS	09 15 04.5	
YAK				pmax	pmax		
	comp=Z,32nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.8s						
YAK				smax	smax		
	comp=N,15nm,1.5s						
YAK				smax	smax		
	comp=E,24nm,1.5s						
YAK				MLR	MLR		
	comp=Z,66nm,17.0s						
YAK				MLR	MLR		
	comp=N,85nm,15.0s						
YAK				MLR	MLR		
	comp=E,59nm,16.0s						
SEY	Seymchan	23.72	10	P	P	09 09 55.5	-0.1
	comp=E,15nm,0.9s,baz=199,slow=6.1,SNR=18						
HHC	Hu-ho-hao-te	24.08	283	P	P	09 09 57.3	-2.1
HHC				S	S	09 14 05.5	-10
HHC				pmax	pmax		
	comp=E,8.0nm,0.9s						
HHC				LR	LR		
	comp=E,220nm,12.3s						
HHC				LR	LR		
	comp=E,390nm,18.7s						
WHN	Wuhan	25.28	257	⇓P	P	09 10 10.5	+0.3
BOD	Bodaibo	25.98	323	*e*P	P	09 10 16.1	-0.2
BOD				pmax	pmax		
	comp=Z,15nm,0.8s						
SONA0	Songino Array	27.50	299	*e*P	P	09 10 30.9	+0.5
SONM	Songino Array	27.50	299	P	P	09 10 30.9	+0.5
	comp=Z,6.2nm,0.8s,baz=91,slow=9.2,SNR=26						
SONM				LR	LR	09 22 04.4	
	comp=Z,372nm,18.0s,baz=92,slow=38						
XAN	Xi'an	27.91	269	P	P	09 10 33.0	-1.0
XAN				LR	LR		
	comp=Z,47nm,5.7s						
XAN				LR	LR		
	comp=Z,310nm,15.5s						
XAN				LR	LR		
	comp=Z,250nm,15.9s						
H11N2	WAKE ISLAND Hy	28.58	128	T	T	09 41 36.0	
	baz=318,slow=75,SNR=724						
H11N1	WAKE ISLAND Hy	28.59	128	T	T	09 41 36.6	
	baz=318,slow=75,SNR=634						
H11N3	WAKE ISLAND Hy	28.60	128	T	T	09 41 37.4	
	baz=318,slow=75,SNR=541						
ENH	Enshi	29.09	261	*e*P	P	09 10 44.1	-0.4
	comp=Z,30nm,0.8s						
H11S1	WAKE ISLAND Hy	29.40	130	T	T	09 41 50.4	
	baz=321,slow=76,SNR=63						
H11S3	WAKE ISLAND Hy	29.41	130	T	T	09 41 52.9	
	baz=321,slow=76,SNR=51						
H11S2	WAKE ISLAND Hy	29.42	130	T	T	09 41 53.4	
	baz=321,slow=76,SNR=56						
ZAK	Zakamensk	29.73	304	*e*P	P	09 10 50.1	0.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL	Bilibino	30.88	17⇓	*e*P	P	09 11 01.9	+2.0
BILL				*PP	sP	09 11 11.0	+1.2
BILL				*SP	pP	09 11 15.0	+8.1
BILL						09 12 02.0	
BILL				PPP	PPP	09 12 21.0	
BILL				*e*SS	SS	09 17 49.7	-25
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LZH	Lanzhou	31.10	276	*e*P	P	09 11 04.3	+1.9
LZH				pP	sP	09 11 15.8	+3.6
LZH				sP	pP	09 11 19.5	+10
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				LR	LR		
	comp=Z,170nm,13.9s						
LZH				LR	LR		
	comp=Z,280nm,13.2s						
LZH				LR	LR		
	comp=Z,290nm,14.6s						
TIXI	Tiksi	32.65	352	*i* P	P	09 11 18.3	+3.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CD2	Chengdu	33.17	267	*e*P	P	09 11 19.5	-1.0
GTA	Gaotai	33.18	283	*e*P	P	09 11 21.3	+0.7
GTA				pP	sP	09 11 31.3	+0.8
GTA				sP	pP	09 11 35.0	+7.4
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,45nm,6.8s						
GTA				LR	LR		
	comp=Z,130nm,14.6s						
GTA				LR	LR		
	comp=Z,330nm,15.2s						
GTA				LR	LR		
	comp=Z,460nm,17.1s						
KMI	Kunming	36.85	259	P	P	09 11 53.5	+1.0
KMI				pmax	pmax		
	comp=Z,26nm,0.6s						
DGZ	Jazzator, Alta	39.94	303	*c i*P	P	09 12 19.0	+0.9
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NONG	Nongkai	40.81	250	P	P	09 12 26.3	+0.9
	comp=Z,0.2nm,1.2s						
WMQ	Urumqi	40.89	294	*e*P	P	09 12 27.0	+1.1
WMQ				pP	sP	09 12 35.3	-0.6
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,74nm,3.7s						
WMQ				LR	LR		
	comp=Z,910nm,28.9s						
WMQ				LR	LR		
	comp=Z,640nm,28.8s						
ZAA1	Zalesovo Array	41.10	310	*e*P	P	09 12 27.5	+0.1
ZALV	Zalesovo Beam	41.10	310	P	P	09 12 27.5	+0.1
	comp=Z,7.1nm,0.5s,baz=93,slow=7.3,SNR=13						
ZALV				PcP	PcP	09 14 27.6	+1.0
	comp=Z,1.8nm,0.4s,baz=114,slow=2.7,SNR=5.0						
ZALV				LR	LR	09 30 16.7	
	comp=Z,132nm,19.5s,baz=68,slow=37						
PHRA	Phrae	42.65	253	P	P	09 12 42.1	+1.6
	comp=Z,1.1nm,0.9s						
UTTA	Uttaradit	42.90	252	P	P	09 12 44.7	+2.2
	comp=Z,8µm,0.8s						
CHAI	Chaiyaphum	43.06	248	P	P	09 12 44.6	+0.8
	comp=Z,23µm,0.7s						
CHTO	Chiang Mai	43.41	254	*e*P	P	09 12 45.9	-0.7
	comp=Z,5.2nm,0.8s						
CHTO	Chiang Mai	43.41	254	*e*P	P	09 12 45.9	-0.7
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMAR	Chiang Mai Arr	43.63	254	P	P	09 12 48.4	0.0
	comp=Z,1.3nm,0.4s,baz=46,slow=6.8,SNR=7.7						
CMAR				LR	LR	09 30 31.4	
	comp=Z,29nm,19.8s,baz=42,slow=36						
MK31	Makanchi Array	43.87	300	*e*P	P	09 12 50.0	-0.1
	comp=Z,4.7nm,0.8s						
MK31	Makanchi Array	43.87	300	*e*P	P	09 12 50.0	-0.1
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK32	Makanchi Array	43.87	300	*e*P	P	09 12 50.1	+0.1
MKAR	Makanchi Array	43.87	300	P	P	09 12 50.1	+0.1
	comp=Z,5.6nm,0.9s,baz=82,slow=9.9,SNR=31						
MKAR				LR	LR	09 32 02.3	
	comp=Z,172nm,18.9s,baz=52,slow=37						
KDAK	Kodiak Island	44.04	44	P	P	09 12 51.8	+0.6
	comp=Z,5.5nm,1.1s,baz=327,slow=8.1,SNR=6.6						
KDAK	Kodiak Island	44.04	44	*e*P	P	09 12 51.9	+0.6
	comp=Z,16nm,1.2s						
KDAK	Kodiak Island	44.04	44	*e*P	P	09 12 51.9	+0.6
KDAK				pmax	pmax		
	comp=Z,16nm,1.2s						
MAKZ	Makanchi	44.07	300	*e*P	P	09 12 51.8	+0.1
	comp=Z,6.7nm,0.8s						
MAKZ	Makanchi	44.07	300	*e*P	P	09 12 51.8	+0.1
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KTH	Kantishna Hill	44.59	36	*e*P	P	09 12 55.4	-0.3
	comp=Z,8.9nm,0.9s						
MLY	Manley	44.68	33	*e*P	P	09 12 58.2	+1.9
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	45.34	306	*e*P	P	09 13 01.8	+0.1
	comp=Z,16nm,0.7s						
KURK	Kurchatov	45.34	306	*ce*P	P	09 13 01.5	-0.2
KURK				pmax	pmax		
	comp=Z,22nm,1.3s						
MCK	McKinley	45.47	35	*e*P	P	09 13 03.5	+0.9
	comp=Z,8.2nm,1.1s						
RND	Reindeer	45.52	36	*e*P	P	09 13 03.5	+0.4
	comp=Z,4.8nm,0.7s						
RND	Reindeer	45.52	36	*e*P	P	09 13 03.5	+0.4
RND				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRH	Wood River Hil	45.82	34	*e*P	P	09 13 06.1	+0.8
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	46.33	34	P	P	09 13 10.7	+1.4
	comp=Z,0.7nm,0.7s,baz=264,slow=6.3,SNR=9.2						
ILB	Eielson Array	46.33	34	*e*P	P	09 13 10.1	+0.8
	comp=Z,4.4nm,0.7s						
PDGK	Podgornoye	46.75	296	P	P	09 13 13.2	+0.1
PDGK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
FYU	Fort Yukon	46.93	31	*e*P	P	09 13 17.1	+3.2
	comp=Z,5.9nm,0.7s						
DOT	Dot Lake	47.65	35	*e*P	P	09 13 21.9	+2.2
	comp=Z,2.9nm,0.8s						
DOT				*e*S	S	09 20 15.0	+1.4
MENT	Mentasta	47.88	36	*e*P	P	09 13 24.2	+2.7
	comp=Z,4.0nm,0.9s						
GUN	Gumba	48.33	274	*e*P	P	09 13 26.3	+0.5
	comp=Z,52nm,0.6s						
EGAK	Eagle	48.77	33	*e*pP	pP	09 13 37.5	+2.1
KKN	Kakani	48.85	274	*e*P	P	09 13 30.1	+0.4
	comp=Z,33nm,0.7s						
PKI	Pulchoki	48.86	274	*e*P	P	09 13 29.9	0.0
	comp=Z,13nm,0.8s						
DMN	Daman	49.07	274	*e*P	P	09 13 32.1	+0.7
GKN	Gorkha	49.24	275	*e*P	P	09 13 32.7	+0.1
DANN	Dangsing	49.74	276	*e*P	P	09 13 37.1	+0.6
	comp=Z,53nm,0.6s						
BRVK	Borovoye	49.79	311	*e*P	P	09 13 35.7	-0.5
	comp=Z,11nm,1.0s						
BRVK	Borovoye	49.79	311	*e*P	P	09 13 35.7	-0.5
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
OTUK	Ortayu	49.94	304	P	P	09 13 37.1	-0.4
OTUK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KOLN	Koldanda	50.15	275	*e*P	P	09 13 40.0	+0.4
EPYK	Eagle Plains	50.34	31	*e*P	P	09 13 47.2	+6.9
	comp=Z,7.8nm,0.8s						
AAK	Ala-Archa	50.42	297	*ce*P	P	09 13 41.5	+0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH	Kashi	50.58	293	P	P	09 13 45.0	+2.4
KSH				S	S	09 20 54.3	-1.3
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				LR	LR		
	comp=Z,640nm,18.4s						
KSH				LR	LR		
	comp=Z,150nm,7.9s						
HYT	Haines Junctio	51.16	38	*e*P	P	09 13 47.7	+1.0
	comp=Z,10nm,0.9s						
INK	Inuvik	51.20	28	P	P	09 13 48.0	+1.4
	comp=Z,0.9nm,0.6s,baz=306,slow=6.9,SNR=5.9						
INK	Inuvik	51.20	28	*e*P	P	09 13 47.2	+0.6
	comp=Z,3.3nm,0.7s						
INK	Inuvik	51.20	28	*e*P	P	09 13 47.2	+0.6
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	52.96	299	*e*P	P	09 13 59.6	-0.5
	comp=Z,6.2nm,0.7s						
KK31	Karatay Array	52.96	299	*e*P	P	09 13 59.6	-0.5
KK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KKAR	Karatay Array	52.96	299	*e*P	P	09 13 59.8	-0.4
	comp=Z,6.2nm,0.7s						
KKAR	Karatay Array	52.96	299	*e*P	P	09 13 59.8	-0.4
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SVE	Sverdlovsk	53.97	318⇑	*e*P	P	09 14 08.5	+1.2
SVE				pmax	pmax		
	comp=Z,16nm,1.1s						
SVE				MLR	MLR		
	comp=Z,292nm,15.0s						
NIL	Nilore	55.10	287	*e*P	P	09 14 14.8	-1.2
	comp=Z,12nm,0.6s						
NIL	Nilore	55.10	287	*e*P	P	09 14 14.8	-1.2
NIL				pmax	pmax		
	comp=Z,12nm,0.6s						
ARU	Arti	55.18	318	*e*P	P	09 14 15.3	-0.8
	comp=Z,17nm,1.3s						
ARU	Arti	55.18	318	*c i*P	P	09 14 16.4	+0.3
ARU						09 16 17.1	
ARU				S	S	09 21 58.1	+0.5
ARU				SS	SS	09 25 33.6	-7.6
ARU				pmax	pmax		
	comp=Z,14nm,1.2s						
ARU				MLR	MLR		
	comp=Z,250nm,16.0s						
KBL	Kabul	57.74	290	*e*P	P	09 14 33.9	-1.1
	comp=Z,18nm,0.9s						
KBL	Kabul	57.74	290	*e*P	P	09 14 33.9	-1.1
KBL				pmax	pmax		
	comp=Z,18nm,0.9s						
WR1	Warramunga Arr	60.10	190	*e*P	P	09 14 50.8	-0.2
WRA	Warramunga Arr	60.10	190	P	P	09 14 50.8	-0.2
	comp=Z,5.5nm,1.0s,baz=6.9,slow=7.6,SNR=15						
ARCES	ARCESS Array B	61.83	339	P	P	09 15 02.8	+0.6
	comp=Z,1.2nm,0.7s,baz=44,slow=7.1,SNR=7.0						
ARCES				LR	LR	09 48 03.4	
	comp=Z,41nm,18.5s,baz=68,slow=42						
KLMR	Klimovskoe	62.11	327	*e*P	P	09 15 03.3	-0.9
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MSF	Maaselka	63.05	335	P	P	09 15 10.9	+0.4
MSF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GEYT	Alibeck	63.71	299	P	P	09 15 15.8	+0.4
	comp=Z,5.3nm,0.7s,baz=19,slow=5.0,SNR=7.3						
GEYT				LR	LR	09 44 54.0	
	comp=Z,50nm,18.8s,baz=240,slow=38						
AS31	Alice Springs	63.83	190	*e*P	P	09 15 14.8	-1.2
	comp=Z,1.1nm,1.0s						
ASAR	Alice Springs	63.83	190	P	P	09 15 16.2	+0.1
	comp=Z,1.1nm,0.6s,baz=3.1,slow=5.0,SNR=26						
DZM	Mont Dzumac	65.34	156	*e*LR	LR	09 35 20.7	
	comp=Z,90nm,21.8s						
SUF	Sumiainen	66.07	333	P	P	09 15 30.2	0.0
SUF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FIA1	FINESS Array S	66.95	332	*e*P	P	09 15 35.9	+0.1
	comp=Z,5.7nm,0.8s						
FIA0	FINESS Array S	66.95	332	*e*P	P	09 15 36.2	+0.4
FIA0	FINESS Array S	66.95	332	*e*P	P	09 15 36.2	+0.4
FINES	FINESS Array B	66.95	332	P	P	09 15 36.2	+0.4
	comp=Z,3.6nm,0.6s,baz=55,slow=7.2,SNR=26						
FINES				LR	LR	09 47 35.3	
	comp=Z,131nm,18.3s,baz=40,slow=38						
LPSR	Galich'ya Gora	67.02	320	*e*P	P	09 15 35.4	-1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	Storozhevoye	67.72	319	*i* P	P	09 15 41.3	+0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSU	Vasula	68.71	330	*ce*P	P	09 15 46.7	-0.3
VSU				pmax	pmax		
	comp=Z,19nm,1.3s						
KIV	Kislovodsk	70.11	311	*e*P	P	09 15 57.2	+1.2
	comp=Z,17nm,0.9s						
KIV	Kislovodsk	70.11	311	*e*P	P	09 15 57.2	+1.2
KIV				pmax	pmax		
	comp=Z,58nm,1.0s						
KIV				MLR	MLR		
	comp=Z,224nm,17.0s						
KBZ	Khabaz	70.12	311	P	P	09 15 57.0	+1.0
	comp=Z,8.0nm,0.9s,baz=55,slow=4.9,SNR=10.0						
KBZ	Khabaz	70.12	311	P	P	09 15 57.0	+1.0
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NEY	Neytrino	70.51	310	*i* P	P	09 15 59.0	+0.4
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LRM	Limekiln Ridge	71.12	46	*e*P	P	09 16 05.5	+3.1
BOZ	Bozeman (W)	71.71	46	*e*P	P	09 16 07.5	+1.7
BOZ	Bozeman (W)	71.71	46	*e*P	P	09 16 07.5	+1.7
NC405	NORSAR Array S	71.89	338	*e*P	P	09 16 06.7	+0.3
	comp=Z,6.5nm,0.7s						
NC303	NORSAR Array S	71.90	338	*e*P	P	09 16 06.8	+0.4
	comp=Z,8.2nm,1.0s						
NC204	NORSAR Array S	72.03	338	*e*P	P	09 16 07.4	+0.1
	comp=Z,9.1nm,0.8s						
NB201	NORSAR Array S	72.06	338	*e*P	P	09 16 07.3	-0.2
	comp=Z,5.7nm,0.6s						
NB2	NORSAR Subarra	72.09	338	P	P	09 16 07.6	-0.1
	comp=Z,1.7nm,0.7s,baz=37,slow=6.2						
NB200	NORSAR Array S	72.09	338	*e*P	P	09 16 07.9	+0.2
NOA	NORSAR Array B	72.09	338	P	P	09 16 07.9	+0.2
	comp=Z,3.6nm,0.8s,baz=38,slow=6.0,SNR=21						
NOA				LR	LR	09 51 51.5	
	comp=Z,41nm,18.3s,baz=40,slow=39						
NV01	Mina Array Sit	72.16	55	*e*P	P	09 16 11.1	+2.3
NVAR	Mina Array Bea	72.16	55	P	P	09 16 11.1	+2.3
	comp=Z,0.3nm,0.6s,baz=286,slow=7.0,SNR=4.2						
NBO00	NORSAR Array S	72.23	338	*e*P	P	09 16 08.4	0.0
	comp=Z,10nm,1.0s						
AKASG	Malin Array Be	72.90	323	P	P	09 16 12.7	+0.1
	comp=Z,1.1nm,0.4s,baz=44,slow=6.4,SNR=7.0						
AKBB	Malin Array Si	72.90	323	*e*P	P	09 16 12.6	0.0
	comp=Z,3.4nm,0.8s						
AKBB	Malin Array Si	72.90	323	*e*P	P	09 16 12.6	0.0
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PD31	Pinedale Array	74.66	47	*e*P	P	09 16 24.2	+0.8
	comp=Z,1.0nm,1.1s						
PDAR	Pinedale Array	74.66	47	P	P	09 16 24.1	+0.7
	comp=Z,0.2nm,0.5s,baz=337,slow=2.1,SNR=1.9						
BUR08	Bucovina Ar. S	76.93	322	*e*P	P	09 16 37.0	+0.9
	comp=Z,3.0nm,0.9s						
KOLS	Kolonicke sedl	77.33	325	*e*P	P	09 16 39.1	+0.9
KOLS	Kolonicke sedl	77.33	325	*e*P	P	09 16 39.1	+0.9
BR101	Keskin Array S	78.01	312	*e*P	P	09 16 42.6	+0.3
BRTR	Keskin Array B	78.01	312	P	P	09 16 42.6	+0.3
	comp=Z,1.1nm,0.7s,baz=90,slow=2.8,SNR=5.1						
BRTR				LR	LR	09 57 10.1	
	comp=Z,25nm,18.1s,baz=81,slow=40						
MORC	Moravsky Berou	78.73	328	*e*P	P	09 16 46.9	+0.9
	comp=Z,4.1nm,1.0s						
MORC	Moravsky Berou	78.73	328	*e*P	P	09 16 46.9	+0.9
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DPC	Dobruska-Polom	78.78	329	*e*P	P	09 16 47.7	+1.4
DPC	Dobruska-Polom	78.78	329	*e*P	P	09 16 47.7	+1.4
VYHS	Vyhne	79.17	326	*e*P	P	09 16 49.0	+0.6
VYHS	Vyhne	79.17	326	*e*P	P	09 16 49.0	+0.6
BRG	Berggiesshubel	79.30	330	*e*P	P	09 16 49.2	+0.1
	comp=Z,3.7nm,1.1s						
BRG	Berggiesshubel	79.30	330	*e*P	P	09 16 49.2	+0.1
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CLL	Collm	79.31	331⇑	*i*P	P	09 16 49.4	+0.3
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	79.31	331⇑	*i*P	P	09 16 49.4	+0.3
	comp=Z,4.0nm,0.8s						
CLL				*e*(pP)	pwP	09 16 58.0	+1.4
CLL				Lm	MLR	09 54 00.0	
	comp=Z,100nm,19.1s						
VRAC	Vranov	79.48	328	LR	LR	09 55 23.2	
	comp=Z,97nm,18.2s,baz=48,slow=38						
PRU	Pruhonice	79.77	329	*e*P	P	09 16 52.9	+1.3
PRU	Pruhonice	79.77	329	*e*P	P	09 16 52.9	+1.3
MOX	Moxa	80.36	331	P	P	09 16 55.7	+0.9
MOX				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KHC	Kasperske Hory	80.83	329	*e*P	P	09 16 57.6	+0.2
	comp=Z,1.4nm,0.8s						
KHC	Kasperske Hory	80.83	329	*e*P	P	09 16 57.6	+0.2
KHC				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KHC	Kasperske Hory	80.83	329	*e*P	P	09 16 58.4	+1.0
KHC				*e*pP	sP	09 17 06.9	-0.8
CONA	Conrad Observa	80.86	327	*e*P	P	09 16 58.9	+1.3
	comp=Z,1.2nm,0.5s						
GEC2	GERESS Array S	81.02	329	*e*P	P	09 16 58.7	+0.2
	comp=Z,2.9nm,1.2s						
GEC2	GERESS Array S	81.02	329	*e*P	P	09 16 58.7	+0.2
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GERES	GERESS Array B	81.02	329	P	P	09 16 58.5	0.0
	comp=Z,0.9nm,0.6s,baz=44,slow=5.9,SNR=7.3						
GERES				LR	LR	09 56 10.1	
	comp=Z,47nm,19.9s,baz=3.0,slow=38						
VTS	Vitosha	81.54	320	*e*P	P	09 17 01.6	+0.1
	comp=Z,3.3nm,0.8s						
VTS	Vitosha	81.54	320	*e*P	P	09 17 01.6	+0.1
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANMO	Albuquerque	81.67	51	*e*P	P	09 17 11.0	+8.7
	comp=Z,2.2nm,1.0s						

ANMO	Albuquerque	81.67	51	eP	P	09 17 11.0	+8.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SOKA	Soboth	82.20	327	PcP	P	09 17 05.5	+0.7
	comp=Z,3.2nm,0.6s						
KBA	Koelnbreinsper	82.58	328	PcP	P	09 17 08.0	+1.2
	comp=Z,2.1nm,0.6s						
WATA	Walderalm	83.08	329	ePcP	P	09 17 11.9	+2.6
	comp=Z,2.3nm,0.5s						
MOTA	Moosalm	83.25	329	ePcP	P	09 17 11.8	+1.5
	comp=Z,1.6nm,0.6s						
RETA	Reutte	83.27	330	ePcP	P	09 17 11.1	+0.8
	comp=Z,2.1nm,0.8s						
TTG	Podgorica	83.62	322	eP	P	09 17 11.9	-0.1
	comp=Z,5.4nm,0.7s						
TTG	Podgorica	83.62	322	eP	P	09 17 11.9	-0.1
TTG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FETA	Feichten	83.67	329	ePcP	P	09 17 13.5	+1.0
	comp=Z,3.0nm,1.1s						
DAVA	Damuels	83.78	330	PcP	P	09 17 14.4	+1.4
	comp=Z,4.3nm,1.0s						
PMOR	Pomariorio Ree	84.06	115	eT	T	10 50 02.9	
	comp=Z,4.4nm,0.2s						
FUORN	Ofenpass-Fuorn	84.18	330	eP	P	09 17 15.1	-0.1
	comp=Z,6.6nm,0.9s						
DAVOX	Davos/Dischmat	84.19	330	LR	LR	09 58 02.0	
	comp=Z,56nm,18.9s,baz=78,slow=38						
PPT	Papeete	84.68	118	LR	LR	09 46 20.1	
	comp=Z,30nm,21.9s,baz=310,slow=30						
PPT2	Papeete2	84.69	118	eLR	LR	09 44 03.5	
	comp=Z,76nm,22.8s						
PPT2	Papeete2	84.69	118	eT	T	10 50 51.4	
	comp=Z,2.4nm,0.3s						
TXAR	Lajitas Array	87.27	54	P	P	09 17 32.3	+1.7
	comp=Z,0.1nm,0.6s,baz=321,slow=6.9,SNR=2.3						
TBI	Tubuai	88.80	122	eT	T	10 55 58.6	
	comp=Z,6.7nm,0.3s						
ESDC	Sonseca Array	95.33	335	P	P	09 18 08.4	+0.5
	comp=Z,0.2nm,0.4s,baz=53,slow=3.0,SNR=3.0						
LPAZ	La Paz	144.00	58	PKP	PKPbc	09 24 19.1	+0.9
	comp=Z,0.3nm,0.5s,baz=243,slow=6.8,SNR=3.0						
LPAZ	La Paz	144.00	58	ePKPdf	PKPdf	09 24 19.9	-0.4
LPAZ	La Paz	144.00	58	ePKIKP	PKPdf	09 24 19.9	-0.4

IDC 27 09:20:47.7±3.9, 6°.45S×148°.02E, h0km, mb3.1/1, mb1 3.7/2, mb1mx3.3/19, mbtmp3.4/2, ML3.5/1, Error ellipse: s-maj=134.2km s-min=49.7km az=114.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.88	223	P	P	09 25 09.6	-0.2
	0.2nm,0.3s,baz=50,slow=11,SNR=1.9						
ASAR	Alice Springs	21.84	217	P	P	09 25 42.8	+0.7
	0.5nm,0.4s,baz=50,slow=8.3,SNR=11						
TORD	Torodi Ar. Bea	146.18	284	PKPbc	PKPdf	09 40 29.7	-0.4
	0.4nm,0.6s,baz=92,slow=6.2,SNR=2.3						

ISCJB 27 09:31:12.2±0.9, 58°.0S±0°.1×27°.6W±0°.3, h300km, mb3.6/5, Error ellipse: s-maj=23.4km s-min=13.1km az=142.7

IDC 27 09:31:14.4±4.2, 58°.00S×27°.77W, h306km±40km, mb3.4/5, mb1 3.6/7, mb1mx3.3/22, mbtmp4.2/7, Error ellipse: s-maj=25.4km s-min=17.9km az=43.0

ISC 27 09:31:13.7±0.7, 58°.0S±0°.1×27°.7W±0°.2, h300km, n20, σ0ˢ60/18, mb3.7/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.16	155	P	P	09 34 31.8	-0.2
VNA3	Neumayer Olymp	15.31	158	P	P	09 34 33.9	+0.2
SNAA	Sanae	17.14	153	P	P	09 34 53.6	-0.1
SNAA	Sanae	17.14	153	P	P	09 34 53.7	+0.1
	0.8nm,0.3s,baz=304,slow=12,SNR=53						
PMSA	Palmer Station	18.48	233	P	P	09 35 09.2	+1.2
	0.7nm,0.3s,baz=75,slow=6.7,SNR=5.5						
PLCA	Paso Flores	32.11	284	P	P	09 37 13.8	+0.4
	1.7nm,0.7s,baz=187,slow=9.0,SNR=4.4						
QSPA	South Pole Qui	32.29	180	P	P	09 37 14.0	-0.7
	0.9nm,0.4s,baz=41,slow=1.4,SNR=17						
LPAZ	La Paz	51.27	307	P	P	09 39 46.7	-1.5
	0.5nm,0.7s,baz=45,slow=5.0,SNR=4.7						
TORD	Torodi Ar. Bea	74.86	30	P	P	09 42 22.4	+0.9
	1.6nm,0.5s,baz=202,slow=6.7,SNR=14						
ASAR	Alice Springs	97.25	163	P	P	09 44 12.4	-0.2
	0.7nm,0.8s,baz=183,slow=3.8,SNR=7.8						
FINES	FINESS Array B	126.20	29	PKP	PKPdf	09 49 38.8	-0.1
	1.0nm,0.5s,baz=141,slow=1.9,SNR=12						
ARCES	ARCESS Array B	132.82	23	PKP	PKPdf	09 49 51.2	-0.1
	0.5nm,0.6s,baz=304,slow=2.6,SNR=5.0						
BVAR	Borovoye Array	136.02	59	PKP	PKiKP	09 49 59.8	+0.3
	0.4nm,0.5s,baz=194,slow=3.0,SNR=2.8						
YKA	Yellowknife Ar	137.38	317	PKP	PKPdf	09 50 00.1	+0.1
	0.5nm,0.5s,baz=145,slow=1.7,SNR=6.9						
MKAR	Makanchi Array	137.73	74	PKhKP	PKPpre	09 49 58.1	
	0.2nm,0.6s,baz=101,slow=6.3,SNR=3.4						
ZALV	Zalesovo Beam	143.43	66	PKP	PKPab	09 50 08.7	+0.4
	1.4nm,0.5s,baz=228,slow=4.7,SNR=4.6						
INK	Inuvik	147.07	319	PKPbc	PKPbc	09 50 19.6	0.0
	1.9nm,0.6s,baz=72,slow=3.7,SNR=3.1						
SONM	Songino Array	151.07	90	PKPbc	PKPbc	09 50 30.2	-0.1
	1.0nm,0.4s,baz=204,slow=3.2,SNR=3.7						
ILAR	Eielson Array	151.14	309	PKPbc	PKPbc	09 50 29.6	-0.2
	0.9nm,0.5s,baz=154,slow=1.3,SNR=12						
KDAK	Kodiak Island	151.36	293	PKPbc	PKPbc	09 50 30.6	+0.2
	4.2nm,0.5s,baz=69,slow=5.7,SNR=23						

IDC 27 09:36:37.8±2.5, 6°.20N×125°.46E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/50, mbtmp3.5/3, Error ellipse: s-maj=219.0km s-min=28.4km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.41	162	P	P	09 42 24.8	-0.5
	0.9nm,0.8s,baz=339,slow=13,SNR=1.2						
ASAR	Alice Springs	30.81	165	P	P	09 42 55.9	+0.3
	0.4nm,0.5s,baz=353,slow=7.5,SNR=12						
MKAR	Makanchi Array	54.82	325	P	P	09 46 09.6	-0.1
	0.3nm,0.6s,baz=113,slow=11,SNR=4.0						

KRSC 27 09:42:49.3±1.7, 52°.01N×160°.13E, h46km±20km, ML4.8

BJI 27 09:42:50.2±0.0, 52°.63N×159°.87E, h35km, mb4.7/30, mB4.7/20, Ms4.3/16, Ms7 4.0/15

MOS 27 09:42:52.3±1.1, 52°.07N×159°.84E, h47km, mb4.8/52, MS3.8/22, Error ellipse: s-maj=7.1km s-min=3.1km az=94.6

ISCJB 27 09:42:52.3±0.5, 52°.05N±0°.03×159°.92E±0°.04, h45km±3km, mb4.6/124, MS3.9/33, Error ellipse: s-maj=5.6km s-min=3.3km az=144.5

NEIC 27 09:42:53.4±1.7, 52°.16N×159°.89E, h35km±3km, mb4.6/57, Error ellipse: s-maj=11.4km s-min=8.4km az=199.0

IDC 27 09:42:55.6±2.3, 52°.24N×159°.69E, h51km±20km, mb4.1/42, mb1 4.2/44, mb1mx4.1/59, mbtmp4.4/44, ML3.8/2, MS3.7/20, Ms1 3.7/20, ms1mx3.6/32, Error ellipse: s-maj=14.3km s-min=9.9km az=150.0

ISC 27 09:42:52.6±0.6, 52°.11N±0°.04×159°.87E±0°.03, h33km±2km, h34km:pP-P, n335, σ1ˢ34/359, mb4.6/124, MS4.0/33, 16C-14D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.89	292	i P	Pn	09 43 08.7	-0.1
RUS				eS	Sb	09 43 22.1	+0.9
RUS	Russkaya	0.89	292	PN	Pn	09 43 08.7	-0.1
RUS				S	Sb	09 43 22.1	+0.9
SPN	Mys Shipunski	0.99	5	i P	Pn	09 43 10.2	0.0
SPN				eS	Sb	09 43 24.8	+0.8
SPN	Mys Shipunski	0.99	5	PN	Pn	09 43 10.2	0.0
SPN				S	Sb	09 43 24.8	+0.8
MTVR	Mutnovka	1.10	290	i P	Pn	09 43 12.3	+0.5
MTVR				eS	Sb	09 43 28.0	+0.7
MTVR	Mutnovka	1.10	290	PN	Pn	09 43 12.3	+0.5
MTVR				S	Sb	09 43 28.0	+0.7
NLC	Nalytchevo	1.11	343	eP	Pn	09 43 11.9	+0.2
NLC				eS	Sb	09 43 27.8	+0.5
NLC	Nalytchevo	1.11	343	PN	Pn	09 43 11.9	+0.2
NLC				S	Sb	09 43 27.8	+0.5
DALK	Dalny	1.14	324	i P	Pn	09 43 12.8	+0.5
DALK				eS	Sb	09 43 28.4	0.0
DALK	Dalny	1.14	324	PN	Pn	09 43 12.8	+0.5
DALK				S	Sb	09 43 28.4	0.0
PET	Petropavlovsk	1.18	321	ePn	Pn	09 43 13.2	+0.5
PET				eSn	Sb	09 43 28.4	-0.9
PET	Petropavlovsk	1.18	321	ePN	Pn	09 43 13.2	+0.5
PET				e		09 43 28.4	
ASAK	Asacha	1.24	283	i P	Pb	09 43 14.9	-0.6
ASAK	Asacha	1.24	283	PN	Pb	09 43 14.9	-0.6
UGLR	Uglovaya	1.27	330	eP	Pb	09 43 15.2	-0.8
UGLR	Uglovaya	1.27	330	PN	Pb	09 43 15.2	-0.8
KRMR	Karymshinskiy	1.28	305	i P	Pn	09 43 14.8	+0.6
KRMR				eS	Sb	09 43 32.8	+0.5
KRMR	Karymshinskiy	1.28	305	PN	Pn	09 43 14.8	+0.6
KRMR				S	Sb	09 43 32.8	+0.5
SDLR	Sedlovina	1.31	333	i P	Pn	09 43 15.2	+0.5
SDLR				eS	Sb	09 43 33.6	+0.3
SDLR	Sedlovina	1.31	333	PN	Pn	09 43 15.2	+0.5
SDLR				S	Sb	09 43 33.6	+0.3
SMAR	Somma	1.32	331	eP	Pn	09 43 15.5	+0.6
SMAR	Somma	1.32	331	PN	Pn	09 43 15.5	+0.6
AVH	Avacha	1.34	330	i P	Pb	09 43 16.3	-1.0
AVH	Avacha	1.34	330	PN	Pb	09 43 16.3	-1.0
KRER	Koryakskii	1.37	331	eP	Pb	09 43 16.5	-1.3
KRER	Koryakskii	1.37	331	PN	Pb	09 43 16.5	-1.3
KOK	Koryaka	1.40	328	eP	Pn	09 43 16.8	+0.9
KOK	Koryaka	1.40	328	PN	Pn	09 43 16.8	+0.9
KRX	Arik	1.45	330	eP	Pn	09 43 17.4	+0.8
KRX	Arik	1.45	330	PN	Pn	09 43 17.4	+0.8
PEA0B	Petropavlovsk-	1.66	308	ePn	Pb	09 43 21.1	-1.3
PETK	Petropavlovsk-	1.66	308	P	Pb	09 43 21.3	-1.2
	97nm,0.3s,baz=112,slow=20,SNR=1607						
PETK				S	Sb	09 43 44.1	+1.1
	145nm,0.3s,baz=112,slow=22,SNR=11						
PETK				LR	LR	09 43 52.8	
	comp=Z,602nm,21.1s,baz=105,slow=38						
PEA1	Petropavlovsk-	1.66	308	ePn	Pb	09 43 21.3	-1.2
PEA1				eSn	Sb	09 43 44.1	+1.0
APC	Apacha	1.84	297	i P	Pb	09 43 24.3	-1.4
APC				eS	Sb	09 43 49.8	+1.5
APC	Apacha	1.84	297	PN	Pb	09 43 24.3	-1.4
APC				S	Sb	09 43 49.8	+1.5
GNL	Ganaly	1.97	324	i P	Pb	09 43 25.6	-2.2
GNL	Ganaly	1.97	324	PN	Pb	09 43 25.6	-2.2
MKZ	Mys Kozlova	2.69	24	i P	Pn	09 43 33.3	-0.2
MKZ				eS	Sn	09 44 05.0	+0.2
MKZ	Mys Kozlova	2.69	24	PN	Pn	09 43 33.3	-0.2
MKZ				S	Sn	09 44 05.0	+0.2
SKR	Severo-Kuril's	2.75	240	eP	Pn	09 43 35.1	+0.7
SKR				eS	Sn	09 44 07.1	+0.7
SKR	Severo-Kuril's	2.75	240	PN	Pn	09 43 35.1	+0.7
SKR				S	Sn	09 44 07.1	+0.7
KZV	Kizimen	3.02	5	eP	Pn	09 43 39.7	+1.6
KZV				eS	Sn	09 44 14.4	+1.2
KZV	Kizimen	3.02	5	PN	Pn	09 43 39.7	+1.6
KZV				S	Sn	09 44 14.4	+1.2
TUMR	Tumrok	3.18	3	eP	Pn	09 43 42.1	+1.7
TUMR				eS	Sn	09 44 20.6	+3.5
TUMR	Tumrok	3.18	3	PN	Pn	09 43 42.1	+1.7
TUMR				S	Sn	09 44 20.6	+3.5
KIRR	Kirishev	3.86	4	eP	Pn	09 43 51.5	+1.8
KIRR	Kirishev	3.86	4	PN	Pn	09 43 51.5	+1.8
KPT	Kopyto	3.87	3	eP	Pn	09 43 52.3	+2.5
KPT	Kopyto	3.87	3	PN	Pn	09 43 52.3	+2.5
BZWR	Bezymyannyi-We	3.88	5	eP	Pn	09 43 49.8	-0.2
BZWR	Bezymyannyi-We	3.88	5	PN	Pn	09 43 49.8	-0.2
ESO	Esso	3.88	350	eP	Pn	09 43 52.3	+2.4
ESO	Esso	3.88	350	PN	Pn	09 43 52.3	+2.4
KOZ	Kozyrevsk	3.95	0	eP	Pn	09 43 53.6	+2.7
KOZ	Kozyrevsk	3.95	0	PN	Pn	09 43 53.6	+2.7
LGNR	Loginova	4.01	7	eP	Pn	09 43 54.1	+2.2
LGNR	Loginova	4.01	7	PN	Pn	09 43 54.1	+2.2
CIRR	Tsirk	4.04	7	eP	Pn	09 43 53.8	+1.6
CIRR	Tsirk	4.04	7	PN	Pn	09 43 53.8	+1.6
KRSR	Krestovskiy	4.13	5	eP	Pn	09 43 55.4	+2.0
KRSR	Krestovskiy	4.13	5	PN	Pn	09 43 55.4	+2.0
SRDR	Sredinnyy	4.21	359	eP	Pn	09 43 58.0	+3.5
SRDR	Sredinnyy	4.21	359	PN	Pn	09 43 58.0	+3.5
KLY	Klyuchi	4.23	6	eP	Pn	09 43 58.5	+3.8
KLY	Klyuchi	4.23	6	PN	Pn	09 43 58.5	+3.8
KBTR	Krutoberegovo	4.45	22	eP	Pn	09 43 59.1	+1.4
KBTR	Krutoberegovo	4.45	22	PN	Pn	09 43 59.1	+1.4
KBG	Krutoberegovo	4.47	21	eP	Pn	09 43 58.6	+0.7
KBG				eS	Sn	09 44 50.9	+2.2
KBG	Krutoberegovo	4.47	21	PN	Pn	09 43 58.6	+0.7
KBG				S	Sn	09 44 50.9	+2.2
BDR	Baidarnaya	4.53	9	eP	Pn	09 44 00.1	+1.2
BDR	Baidarnaya	4.53	9	PN	Pn	09 44 00.1	+1.2
SMKR	Semkarok	4.57	11	eP	Pn	09 44 01.7	+2.2
SMKR	Semkarok	4.57	11	PN	Pn	09 44 01.7	+2.2
SRKR	Sorokina	4.61	9	eP	Pn	09 44 02.8	+2.8
SRKR	Sorokina	4.61	9	PN	Pn	09 44 02.8	+2.8
BKI	Bering	4.77	47	eP	Pn	09 44 01.2	-0.8
BKI				eS	Sn	09 44 51.3	-4.8
BKI	Bering	4.77	47	PN	Pn	09 44 01.2	-0.8
PALN	Palana	6.99	0	eP	Pn	09 44 37.0	+4.5
PALN	Palana	6.99	0	PN	Pn	09 44 37.0	+4.5
OSSR	Ossora	7.38	13	eP	Pn	09 44 40.3	+2.5
OSSR	Ossora	7.38	13	PN	Pn	09 44 40.3	+2.5
SMY	Shemya	8.72	80	ePn	Pn	09 44 55.9	-0.4
SMY	Shemya	8.72	80	ePN	Pn	09 44 55.9	-0.4
MA2	Magadan	9.05	329	LR	LR	09 49 10.5	
	comp=Z,621nm,19.0s,baz=142,slow=42						
MA2	Magadan	9.05	329	ePn	Pn	09 44 58.0	-2.8
MA2	Magadan	9.05	329	ePN	Pn	09 44 58.0	-2.8
KUR	Kuril'sk	10.50	234	⇓ePN	Pn	09 45 20.0	-0.6
SEY	Seymchan	11.56	343	P	Pn	09 45 38.8	+3.7
	0.1nm,0.3s,baz=80,slow=14,SNR=4.6						
SEY	Seymchan	11.56	343	i PN	Pn	09 45 34.4	-0.6
UGL	Uglegorsk	11.71	262	ePN	Pn	09 45 33.8	-3.4
UGL				pmax	pmax		
	comp=Z,43nm,0.9s						
UGL				MLR	MLR		
	comp=Z,900nm,17.0s						
YSS	Yuzh-Sakhalins	12.25	252	ePn	Pn	09 45 45.2	+0.7
YSS	Yuzh-Sakhalins	12.25	252	⇑ePN	Pn	09 45 47.8	+3.2
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YUK	Yuzh-Kuril'sk	12.36	235	⇓iPN	Pn	09 45 46.0	0.0
ASAJ	Asahikawa	14.02	242	P	Pn	09 46 09.8	+1.1
	comp=Z,0.7nm,0.3s,baz=92,slow=16,SNR=4.2						
GRNR	Gornyy	14.67	274	eP	Pn	09 46 08.4	-9.2
BILL	Bilibino	16.28	9	eP	P	09 46 40.5	-0.6
	comp=Z,15nm,0.7s						
BILL	Bilibino	16.28	9	⇑eP	P	09 46 42.3	+1.2
BILL				pmax	pmax		
	comp=Z,16nm,0.8s						
BILL				MLR	MLR		
	comp=Z,312nm,19.0s						
TEY	Ternei	16.90	254	⇓eP	Pn	09 46 45.7	-0.7
TEY				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KLR	Kul'dur	18.01	272	P	P	09 47 00.8	+0.5
	comp=Z,0.4nm,0.3s,baz=64,slow=13,SNR=6.0						
KLR				LR	LR	09 54 44.9	
	comp=Z,157nm,18.1s,baz=68,slow=40						
KLR	Kul'dur	18.01	272	eP	Pn	09 46 59.9	-0.2
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YAK	Yakutsk	18.99	313	eP	Pn	09 47 13.9	+2.0
YAK				eS	Sn	09 50 43.5	+0.1
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax	smax		
	comp=N,11nm,2.0s						
YAK				smax	smax		
	comp=E,21nm,2.0s						
YAK				MLR	MLR		
	comp=Z,100nm,12.0s						
YAK				MLR	MLR		
	comp=N,51nm,11.0s						
YAK				MLR	MLR		
	comp=E,44nm,12.0s						
ZEA	Zeya	19.64	288	eP	P	09 47 17.2	-1.0
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,600nm,14.0s						
ZEA				MLR	MLR		
	comp=E,400nm,15.0s						
USRK	Ussuriysk Ar.	20.12	258	P	P	09 47 22.4	-1.1
	comp=E,3.3nm,0.7s,baz=57,slow=11,SNR=10						
USRK				LR	LR	09 56 02.4	
	comp=E,168nm,21.8s,baz=58,slow=39						
MJB9	Matsu-Tunnel	21.84	233	eP	P	09 47 43.9	+1.8
	comp=E,32nm,0.8s						
MAJO	Matsushiro	21.84	233	eP	P	09 47 43.7	+1.6
	comp=E,31nm,0.8s						
MAJO	Matsushiro	21.84	233	eP	P	09 47 43.7	+1.6
MAJO				pmax	pmax		
	comp=Z,31nm,0.8s						
MJAR	Matsushiro Arr	21.84	233	P	P	09 47 43.5	+1.5
	comp=Z,6.4nm,0.8s,baz=18,slow=8.9,SNR=15						
MJAR				LR	LR	09 56 45.3	
	comp=Z,182nm,20.3s,baz=30,slow=38						
TIXI	Tiksi	23.92	336	P	P	09 48 02.6	-0.4
	comp=Z,40nm,0.7s,baz=124,slow=9.0,SNR=23						
TIXI	Tiksi	23.92	336	eP	P	09 48 02.3	-0.7
	comp=Z,40nm,0.7s						
TIXI	Tiksi	23.92	336	d iP	P	09 48 02.4	-0.6
TIXI				pmax	pmax		
	comp=Z,28nm,0.7s						
HIA	Hailar	25.35	280	eP	P	09 48 15.3	-1.0
	comp=Z,22nm,0.7s						
HIA	Hailar	25.35	280	eP	P	09 48 15.3	-1.0
HIA				pmax	pmax		
	comp=Z,22nm,0.7s						
TTA	Tatalina	25.50	48	eP	P	09 48 18.0	+0.4
	comp=Z,2.5nm,0.8s						
TTA	Tatalina	25.50	48	eP	P	09 48 18.0	+0.4
TTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSRS	Korea Array	26.73	249	P	P	09 48 29.8	+0.9
	comp=Z,1.6nm,0.7s,baz=45,slow=9.6,SNR=8.6						
KSRS				LR	LR	10 00 11.1	
	comp=Z,103nm,18.1s,baz=52,slow=39						
KS15	Wonju Array Si	26.76	249	eP	P	09 48 27.2	-1.9
	comp=Z,7.5nm,1.3s						
BPAW	Bear Paw Mtn.	27.82	45	eP	P	09 48 39.1	+0.7
JNU	Nakatsue	28.26	239	P	P	09 48 45.1	+2.5
	comp=Z,7.9nm,0.8s,baz=8.6,slow=22,SNR=6.7						
JNU	Nakatsue	28.26	239	eP	P	09 48 43.4	+0.8
	comp=Z,22nm,0.9s						
WRH	Wood River Hil	29.09	45	eP	P	09 48 50.4	+0.7
	comp=Z,2.8nm,1.0s						
SCM	Sheep Creek Mo	29.56	50	eP	P	09 48 54.3	+0.4
	comp=Z,3.7nm,0.8s						
SCM				eS	S	09 53 46.6	+0.2
SCM	Sheep Creek Mo	29.56	50	eP	P	09 48 54.3	+0.4
SCM				eS	S	09 53 46.6	+0.2
SCM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	29.61	44	P	P	09 48 54.3	0.0
	comp=Z,1.5nm,0.7s,baz=260,slow=7.7,SNR=24						
ILB	Eielson Array	29.61	44	eP	P	09 48 54.5	+0.2
	comp=Z,2.2nm,0.8s						
GLI	Glacier Island	29.77	52	eS	S	09 53 44.4	-5.3
EYAK	Cordova Ski Ar	30.47	52	eP	P	09 49 02.0	+0.1
	comp=Z,25nm,1.3s						
EGAK	Eagle	32.06	44	eP	P	09 49 15.7	-0.1
	comp=Z,3.5nm,0.6s						
H11N2	WAKE ISLAND Hy	32.78	168	T	T	10 24 37.0	
	baz=351,slow=76,SNR=157						
H11N3	WAKE ISLAND Hy	32.80	168	T	T	10 24 38.2	
	baz=351,slow=76,SNR=87						
H11N1	WAKE ISLAND Hy	32.80	168	T	T	10 24 38.3	
	baz=351,slow=76,SNR=79						
DAWY	Dawson	32.91	45	eP	P	09 49 24.0	+0.6
	comp=Z,1.6nm,0.8s						
TLY	Talaya	33.95	292	P	P	09 49 32.6	0.0
	comp=Z,2.2nm,0.8s,baz=360,slow=5.3,SNR=4.2						
TLY	Talaya	33.95	292	eP	P	09 49 31.6	-1.0
	comp=Z,3.0nm,0.8s						
TLY	Talaya	33.95	292	eP	P	09 49 32.7	+0.1
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,508nm,14.0s						
H11S1	WAKE ISLAND Hy	33.96	168	T	T	10 26 01.5	
	baz=351,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	33.98	168	T	T	10 26 04.3	
	baz=351,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	33.98	168	T	T	10 26 03.7	
	baz=351,slow=76,SNR=7.0						
SONA0	Songino Array	34.00	284	eP	P	09 49 32.1	-1.1
SONM	Songino Array	34.00	284	P	P	09 49 32.1	-1.1
	comp=Z,0.6nm,0.5s,baz=69,slow=7.9,SNR=3.4						
SONM				LR	LR	10 05 04.6	
	comp=Z,322nm,18.1s,baz=65,slow=39						
HYT	Haines Junctio	34.39	50	eP	P	09 49 38.0	+1.6
	comp=Z,2.7nm,1.0s						
HHC	Hu-ho-hao-te	34.50	270	P	P	09 49 36.8	-0.7
HHC				S	S	09 55 02.0	-1.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				LR	LR		
	comp=Z,200nm,17.0s						
HHC				LR	LR		
	comp=Z,120nm,15.3s						
ZAK	Zakamensk	34.70	290	eP	P	09 49 38.3	-0.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
INK	Inuvik	34.73	37	P	P	09 49 39.9	+0.9
	comp=Z,3.6nm,0.8s,baz=282,slow=5.9,SNR=11						
SKAG	Skagway	35.81	52	eP	P	09 49 49.0	+0.6
	comp=Z,4.3nm,0.9s						
NJ2	Nanjing	35.82	252	eP	P	09 49 48.8	0.0
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
DLBC	Dease Lake	38.75	52	P	P	09 50 13.0	-0.4
	comp=Z,2.0nm,0.8s,baz=288,slow=7.3,SNR=7.5						
DLBC	Dease Lake	38.75	52	eP	P	09 50 12.9	-0.5
	comp=Z,5.0nm,1.1s						
LZH	Lanzhou	42.20	270	eP	P	09 50 41.3	-1.0
LZH				pP	pP	09 50 49.0	-2.1
LZH				sP	sP	09 50 52.8	-2.2
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				LR	LR		
	comp=Z,220nm,16.0s						
LZH				LR	LR		
	comp=Z,200nm,16.5s						
LZH				LR	LR		
	comp=Z,230nm,16.5s						
ZALV	Zalesovo Beam	43.20	303	LR	LR	10 10 07.7	
	comp=Z,175nm,18.6s,baz=70,slow=38						
YKA	Yellowknife Ar	43.98	42	P	P	09 50 57.5	+1.4
	comp=Z,1.5nm,0.8s,baz=300,slow=8.0,SNR=4.2						
YKA				LR	LR	10 10 40.4	
	comp=Z,5.9nm,19.7s,baz=290,slow=38						
YKB5	Yellowknife Ar	43.98	42	eP	P	09 50 57.5	+1.4
DGZ	Jazzator, Alta	43.98	297	eP	P	09 50 55.8	-0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RES	Resolute Bay	44.28	22	P	P	09 50 59.3	+0.9
	comp=Z,4.7nm,0.6s,baz=263,slow=14,SNR=4.8						
RES	Resolute Bay	44.28	22	eP	P	09 50 57.5	-0.9
	comp=Z,8.0nm,1.0s						
RES	Resolute Bay	44.28	22	eP	P	09 50 57.6	-0.9
RES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMQ	Urumqi	47.17	290	eP	P	09 51 23.5	+1.8
WMQ				pP	pP	09 51 29.5	-1.2
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,75nm,3.7s						
WMQ				LR	LR		
	comp=Z,190nm,29.1s						
WMQ				LR	LR		
	comp=Z,250nm,24.5s						
WMQ				LR	LR		
	comp=Z,290nm,21.9s						
SPA0	Spitsbergen Ar	48.08	351	eP	P	09 51 28.1	-0.1
	comp=Z,30nm,1.1s						
SPITS	Spitsbergen Ar	48.08	351	P	P	09 51 28.6	+0.3
SPITS				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KURK	Kurchatov	48.14	302	eP	P	09 51 26.9	-2.1
	comp=Z,12nm,1.4s						
KURK	Kurchatov	48.14	302	eP	P	09 51 26.9	-2.1
KURK				pmax	pmax		
	comp=Z,12nm,1.4s						
KURBB	Kurchatov Arra	48.24	302	P	P	09 51 28.3	-1.5
	comp=Z,1.5nm,0.5s,baz=59,slow=7.8,SNR=9.1						
MK31	Makanchi Array	48.46	296	eP	P	09 51 29.7	-1.9

	comp=Z,1.6nm,0.8s						
MK31	**Makanchi Array**	**48.46**	**296**	*e*P	**P**	**09 51 29.7**	**-1.9**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	**Makanchi Array**	**48.46**	**296**	*e*P	**P**	**09 51 29.9**	**-1.8**
MKAR	**Makanchi Array**	**48.46**	**296**	P	**P**	**09 51 29.9**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=57,slow=7.7,SNR=16						
MKAR				LR	LR	10 13 07.7	
	comp=Z,89nm,19.2s,baz=45,slow=38						
KMI	**Kunming**	**50.52**	**261**	P	**P**	**09 51 49.3**	**+1.5**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
BVAR	**Borovoye Array**	**50.89**	**309**	P	**P**	**09 51 48.4**	**-1.6**
	comp=Z,5.6nm,0.8s,baz=52,slow=7.9,SNR=29						
BRVK	**Borovoye**	**50.92**	**309**	*e*P	**P**	**09 51 48.4**	**-1.8**
	comp=Z,6.3nm,0.8s						
BRVK	**Borovoye**	**50.92**	**309**	*e*P	**P**	**09 51 48.4**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARU	**Arti**	**54.03**	**318**	P	**P**	**09 52 11.9**	**-1.2**
	comp=Z,2.3nm,0.4s,baz=342,slow=3.4,SNR=10						
ARU	**Arti**	**54.03**	**318**	*e*P	**P**	**09 52 11.5**	**-1.7**
	comp=Z,7.6nm,0.9s						
ARU	**Arti**	**54.03**	**318**	*d i*P	**P**	**09 52 11.8**	**-1.4**
ARU				S	**S**	**09 59 47.6**	**+1.0**
ARU				SS	**SKiKP**	**10 03 19.7**	**-2.6**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU				MLR	MLR		
	comp=Z,95nm,16.0s						
ARCES	**ARCESS Array B**	**54.18**	**342**	P	**P**	**09 52 13.8**	**-0.3**
	comp=Z,6.0nm,0.9s,baz=13,slow=6.6,SNR=15						
ARCES				LR	LR	10 18 16.7	
	comp=Z,57nm,21.1s,baz=284,slow=39						
SUMG	**Summit**	**54.95**	**7**	*e*P	**P**	**09 52 20.7**	**+0.6**
	comp=Z,9.9nm,0.9s						
SUMG	**Summit**	**54.95**	**7**	*i* P	**P**	**09 52 20.7**	**+0.6**
SUMG				pmax	pmax		
	comp=Z,18nm,0.9s						
SUMG	**Summit**	**54.95**	**7**	*i* P	**P**	**09 52 20.7**	**+0.6**
	comp=Z,18nm,0.9s						
AAK	**Ala-Archa**	**55.39**	**297**	*e*P	**P**	**09 52 22.6**	**-0.9**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NONG	**Nongkai**	**55.63**	**254**	P	P	09 52 30.4	+5.2
	comp=Z,0.3nm,0.9s						
NV01	**Mina Array Sit**	**56.21**	**69**	*e*P	**P**	**09 52 31.0**	**+1.6**
NVAR	**Mina Array Bea**	**56.21**	**69**	P	**P**	**09 52 31.0**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=296,slow=7.9,SNR=6.7						
MSF	**Maaselka**	**56.47**	**338**	P	**P**	**09 52 31.0**	**+0.4**
MSF				pmax	pmax		
	comp=Z,28nm,0.9s						
PAYA	**Payao**	**56.60**	**258**	P	**P**	**09 52 34.9**	**+2.7**
	comp=Z,16µm,0.7s						
RLMT	**Red Lodge**	**56.67**	**58**	*e*P	**P**	**09 52 34.4**	**+1.7**
	comp=Z,5.0nm,1.1s						
PHRA	**Phrae**	**57.04**	**257**	P	**P**	**09 52 37.6**	**+2.3**
	comp=Z,1.8nm,1.1s						
KK31	**Karatay Array**	**57.24**	**299**	*e*P	**P**	**09 52 35.2**	**-1.3**
	comp=Z,2.7nm,0.7s						
KK31	**Karatay Array**	**57.24**	**299**	*e*P	**P**	**09 52 35.2**	**-1.3**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
UTTA	**Uttaradit**	**57.43**	**257**	P	**P**	**09 52 40.4**	**+2.4**
	comp=Z,15µm,0.8s						
CMMT	**Chiang Mai**	**57.57**	**259**	P	**P**	**09 52 40.8**	**+1.7**
	comp=Z,7.2nm,0.9s						
CHTO	**Chiang Mai**	**57.57**	**259**	*e*P	**P**	**09 52 40.1**	**+1.0**
	comp=Z,9.8nm,0.9s						
CHTO	**Chiang Mai**	**57.57**	**259**	*e*P	**P**	**09 52 40.1**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KLMR	**Klimovskoe**	**57.73**	**330**	*e*P	**P**	**09 52 38.1**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**57.85**	**258**	P	**P**	**09 52 42.7**	**+1.7**
	comp=Z,3.3nm,0.5s,baz=28,slow=6.5,SNR=13						
CMAR				LR	LR	10 19 40.5	
	comp=Z,41nm,18.2s,baz=190,slow=38						
BW06	**Boulder Array**	**58.12**	**60**	*e*P	**P**	**09 52 44.1**	**+1.2**
	comp=Z,4.0nm,1.0s						
PD31	**Pinedale Array**	**58.12**	**60**	*e*P	**P**	**09 52 44.6**	**+1.6**
	comp=Z,2.6nm,1.0s						
PDAR	**Pinedale Array**	**58.12**	**60**	P	**P**	**09 52 44.5**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=310,slow=3.0,SNR=12						
ABKAR	**Akbulak array**	**58.33**	**311**	*e*P	**P**	**09 52 42.7**	**-1.3**
	comp=Z,2.5nm,0.7s						
AKTO	**Aktyubinsk**	**58.38**	**313**	P	**P**	**09 52 42.4**	**-1.9**
	comp=Z,1.5nm,0.5s,baz=71,slow=8.0,SNR=4.5						
SUF	**Sumiainen**	**59.85**	**337**	P	**P**	**09 52 54.5**	**+0.3**
SUF				pmax	pmax		
	comp=Z,30nm,0.9s						
RSSD	**Black Hills**	**60.07**	**56**	*e*P	**P**	**09 52 57.0**	**+0.7**
	comp=Z,7.6nm,1.0s						
RSSD	**Black Hills**	**60.07**	**56**	*e*P	**P**	**09 52 57.1**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FIA1	**FINESS Array S**	**60.96**	**337**	*e*P	**P**	**09 53 01.4**	**-0.5**
	comp=Z,14nm,0.8s						
FIA0	**FINESS Array S**	**60.97**	**337**	*e*P	**P**	**09 53 01.8**	**-0.1**
FIA0	**FINESS Array S**	**60.97**	**337**	*e*P	**P**	**09 53 01.8**	**-0.1**
FINES	**FINESS Array B**	**60.97**	**337**	P	**P**	**09 53 01.8**	**-0.1**
	comp=Z,8.9nm,0.7s,baz=42,slow=8.9,SNR=52						
FINES				LR	LR	10 23 18.9	
	comp=Z,73nm,18.8s,baz=27,slow=40						
NIL	**Nilore**	**62.32**	**290**	*e*P	**P**	**09 53 11.2**	**-0.3**
	comp=Z,12nm,0.9s						
NIL	**Nilore**	**62.32**	**290**	*e*P	**P**	**09 53 11.2**	**-0.3**
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN	**Obninsk**	**63.27**	**327**	P	**P**	**09 53 16.7**	**-0.7**
	comp=Z,3.5nm,0.4s,baz=10,slow=20,SNR=3.1						
OBN	**Obninsk**	**63.27**	**327**	*e*P	**P**	**09 53 16.9**	**-0.5**
	comp=Z,20nm,0.4s						
OBN	**Obninsk**	**63.27**	**327**	⇓*e*P	**P**	**09 53 16.9**	**-0.5**
OBN				*e**PP	**pP**	**09 53 27.4**	**+0.7**
OBN				S	**S**	**10 01 42.0**	**-4.6**
OBN				*e*		10 03 09.8	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,82nm,17.0s						
VSU	**Vasula**	**63.38**	**335**	*e*P	**P**	**09 53 16.9**	**-1.2**
VSU				pmax	pmax		
	comp=Z,32nm,0.8s						
NC303	**NORSAR Array S**	**64.24**	**344**	*e*P	**P**	**09 53 23.7**	**-0.1**
	comp=Z,8.7nm,0.7s						
NC405	**NORSAR Array S**	**64.29**	**343**	*e*P	**P**	**09 53 24.2**	**+0.1**
	comp=Z,18nm,0.9s						
NC204	**NORSAR Array S**	**64.30**	**344**	*e*P	**P**	**09 53 24.4**	**+0.2**
	comp=Z,15nm,0.8s						
NB201	**NORSAR Array S**	**64.42**	**344**	*e*P	**P**	**09 53 25.2**	**+0.3**
	comp=Z,17nm,0.8s						
NB2	**NORSAR Subarra**	**64.44**	**344**	P	**P**	**09 53 24.9**	**-0.3**
	comp=Z,6.2nm,0.8s,baz=21,slow=6.9						
NB200	**NORSAR Array S**	**64.44**	**344**	*e*P	**P**	**09 53 25.6**	**+0.5**
NOA	**NORSAR Array B**	**64.44**	**344**	P	**P**	**09 53 25.6**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=20,slow=6.7,SNR=44						
NOA				LR	LR	10 27 28.2	
	comp=Z,47nm,18.9s,baz=30,slow=42						
HFS	**Hagfors**	**64.84**	**342**	P	**P**	**09 53 28.0**	**+0.4**
	comp=Z,4.2nm,0.5s,baz=53,slow=5.7,SNR=39						
NRS	**Narsarsuaq**	**65.28**	**13**	*e*P	**P**	**09 53 28.9**	**-1.6**
	comp=Z,39nm,0.7s						
NRS	**Narsarsuaq**	**65.28**	**13**	*e*P	**P**	**09 53 28.9**	**-1.6**
NRS				pmax	pmax		
	comp=Z,39nm,0.7s						
SCIA	**State Center**	**67.05**	**51**	*e*P	**P**	**09 53 43.5**	**+1.3**
GEYT	**Alibeck**	**67.51**	**303**	LR	LR	10 25 57.1	
	comp=Z,112nm,18.8s,baz=355,slow=38						
AKASG	**Malin Array Be**	**69.38**	**329**	P	**P**	**09 53 56.0**	**-0.6**
	comp=Z,14nm,0.6s,baz=30,slow=6.2,SNR=36						
AKASG				LR	LR	10 29 24.8	
	comp=Z,86nm,18.1s,baz=330,slow=40						
AKBB	**Malin Array Si**	**69.38**	**329**	*e*P	**P**	**09 53 56.0**	**-0.6**
	comp=Z,15nm,0.8s						
AKBB	**Malin Array Si**	**69.38**	**329**	*e*P	**P**	**09 53 56.0**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,15nm,0.8s						
WMOK	**Wichita Mounta**	**69.72**	**59**	*e*P	**P**	**09 53 59.8**	**+0.7**
	comp=Z,5.3nm,1.0s						
WMOK	**Wichita Mounta**	**69.72**	**59**	*e*P	**P**	**09 53 59.8**	**+0.7**
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	**70.06**	**317**	*e*P	**P**	**09 54 00.7**	**-0.4**
KIV				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV				MLR	MLR		
	comp=Z,145nm,17.0s						
KBZ	**Khabaz**	**70.15**	**317**	P	**P**	**09 54 01.9**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=49,slow=3.8,SNR=5.2						
KBZ				LR	LR	10 29 28.7	
	comp=Z,48nm,18.4s,baz=32,slow=40						
SHA1	**Shidzhatmaz**	**70.25**	**317**	*e*P	**P**	**09 54 04.0**	**+1.6**
TX31	**Lajitas Ar. Si**	**71.15**	**66**	*e*P	**P**	**09 54 08.2**	**+0.3**
	comp=Z,2.4nm,1.1s						
TXAR	**Lajitas Array**	**71.15**	**66**	P	**P**	**09 54 09.2**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=302,slow=5.2,SNR=13						
EKA	**Eskdalemuir Ar**	**72.00**	**350**	P	**P**	**09 54 12.7**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=23,slow=4.7,SNR=13						
GNI	**Garni**	**72.25**	**313**	*e*P	**P**	**09 54 14.7**	**+0.2**
GNI				pmax	pmax		
	comp=Z,62nm,1.3s						
KOLS	**Kolonicke sedl**	**73.05**	**332**	*e*P	**P**	**09 54 19.3**	**+0.4**
KOLS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KOLS	**Kolonicke sedl**	**73.05**	**332**	*e*P	**P**	**09 54 19.3**	**+0.4**
CLL	**Collm**	**73.22**	**339**	⇓*i*P	**P**	**09 54 20.4**	**+0.6**
CLL				*e**PP	**pP**	**09 54 30.0**	**+0.8**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	**Collm**	**73.22**	**339**	⇓*i*P	**P**	**09 54 20.4**	**+0.6**
	comp=Z,6.0nm,0.9s						
CLL				*e*pP	**pP**	**09 54 30.0**	**+0.8**
CLL				*e*sP	**sP**	**09 54 33.0**	**+0.3**
CLL				*e*PP	**PP**	**09 57 00.0**	**-2.4**
CLL				LmV		10 32 00.0	
	comp=Z,100nm,18.1s						
UPC	**Upice**	**73.27**	**337**	AMS	AMS	10 30 30.0	
	comp=Z,100nm,16.3s						
BUR08	**Bucovina Ar. S**	**73.33**	**330**	*e*P	**P**	**09 54 20.9**	**+0.2**
	comp=Z,6.1nm,0.8s						
DPC	**Dobruska-Polom**	**73.34**	**337**	*e*P	**P**	**09 54 21.8**	**+1.2**
DPC				*e*		09 54 31.9	
DPC				MLR	MLR		
	comp=Z,100nm,18.2s						
DPC	**Dobruska-Polom**	**73.34**	**337**	*e*P	**P**	**09 54 21.8**	**+1.2**
DPC				*e*pP	**pwP**	**09 54 31.9**	**-1.8**
DPC				AMS	AMS	10 30 30.0	
	comp=Z,100nm,18.2s						
OKC	**Ostrava-Krasne**	**73.35**	**335**	AMS	AMS	10 30 30.0	
	comp=Z,200nm,18.2s						
BURAR	**Bucovina Array**	**73.35**	**330**	⇓*i*P	**P**	**09 54 20.8**	**0.0**
BURAR	**Bucovina Array**	**73.35**	**330**	P	**P**	**09 54 20.7**	**-0.1**
MORC	**Moravsky Berou**	**73.56**	**336**	*e*P	**P**	**09 54 22.1**	**+0.2**
	comp=Z,5.4nm,1.0s						
MORC	**Moravsky Berou**	**73.56**	**336**	⇑*i*P	**P**	**09 54 22.3**	**+0.4**
MORC	**Moravsky Berou**	**73.56**	**336**	*e*P	**P**	**09 54 22.1**	**+0.2**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PVCC	**Panska Ves**	**73.59**	**338**	AMS	AMS	10 31 40.0	
	comp=Z,100nm,18.5s						
LANS	**Liptovska Anna**	**73.63**	**334**	*e*P	**P**	**09 54 24.2**	**+1.8**
LANS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LANS	**Liptovska Anna**	**73.63**	**334**	*e*P	**P**	**09 54 24.1**	**+1.7**
BIZ	**Bicaz**	**73.67**	**329**	⇑*i*P	**P**	**09 54 22.6**	**0.0**
TRPA	**Tarpa**	**73.70**	**332**	⇓*i*P	**P**	**09 54 22.9**	**+0.2**
TESR	**Tescani**	**73.88**	**328**	⇓*i*P	**P**	**09 54 23.8**	**0.0**
PRU	**Pruhonice**	**74.10**	**338**	*e*P	**P**	**09 54 25.9**	**+0.9**
PRU				MLR	MLR		
	comp=Z,100nm,13.9s						
PRU	**Pruhonice**	**74.10**	**338**	*e*P	**P**	**09 54 25.9**	**+0.9**
PRU				AMS	AMS	10 32 00.0	
	comp=Z,100nm,13.9s						
GOPC	**GO Pecny, Ondr**	**74.11**	**337**	*e*P	**P**	**09 54 26.0**	**+0.9**
GOPC	**GO Pecny, Ondr**	**74.11**	**337**	*e*P	**P**	**09 54 26.0**	**+0.9**
VRAC	**Vranov**	**74.23**	**336**	P	**P**	**09 54 26.3**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=48,slow=5.4,SNR=6.8						
TLCR		**74.33**	**326**	⇑*i*P	**P**	**09 54 25.8**	**-0.6**
VYHS	**Vyhne**	**74.40**	**334**	*e*P	**P**	**09 54 27.5**	**+0.7**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	**Vyhne**	**74.40**	**334**	*e*P	**P**	**09 54 27.5**	**+0.7**
VRI	**Vrincioaia**	**74.42**	**328**	⇑*i*P	**P**	**09 54 27.2**	**+0.2**
PLOR	**Plostina**	**74.46**	**328**	⇑*i*P	**P**	**09 54 27.3**	**0.0**
TREC	**Trest**	**74.52**	**337**	AMS	AMS	10 31 20.0	
	comp=Z,100nm,17.6s						
CFR	**Carcaliu**	**74.56**	**327**	⇑*i*P	**P**	**09 54 27.6**	**-0.1**
DRGR		**74.85**	**331**	⇓*i*P	**P**	**09 54 29.8**	**+0.3**
DRGR		**74.85**	**331**	P	**P**	**09 54 30.7**	**+1.2**
DRGR				pmax	pmax		
	comp=Z,7.0nm,1.9s						
CLTN	**Cedars of Leba**	**74.92**	**50**	*e*P	**P**	**09 54 29.9**	**-0.1**
MODS	**Modra-Piesok**	**74.92**	**335**	*e*P	**P**	**09 54 29.9**	**0.0**
MODS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MODS	**Modra-Piesok**	**74.92**	**335**	*e*P	**P**	**09 54 29.9**	**0.0**
V48A	**Smith Brothers**	**74.97**	**51**	*e*P	**P**	**09 54 31.1**	**+0.8**
	comp=Z,5.4nm,0.8s						
MLR	**Muntele Rosu**	**75.01**	**328**	P	**P**	**09 54 31.0**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=190,slow=5.0,SNR=9.0						
MLR	**Muntele Rosu**	**75.01**	**328**	*e*P	**P**	**09 54 30.2**	**-0.3**
	comp=Z,7.1nm,0.9s						
MLR	**Muntele Rosu**	**75.01**	**328**	⇑*i*P	**P**	**09 54 30.8**	**+0.3**
MLR	**Muntele Rosu**	**75.01**	**328**	*e*P	**P**	**09 54 30.3**	**-0.3**
MLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TIRR	**Tirgusor**	**75.10**	**326**	⇑*i*P	**P**	**09 54 31.2**	**+0.3**
TLB	**Topalu**	**75.11**	**327**	⇓*i*P	**P**	**09 54 30.5**	**-0.5**
KHC	**Kasperske Hory**	**75.13**	**338**	*e*P	**P**	**09 54 32.2**	**+1.1**
KHC				*e*		09 54 42.7	
KHC				MLR	MLR		
	comp=Z,100nm,17.5s						
KHC	**Kasperske Hory**	**75.13**	**338**	*e*P	**P**	**09 54 32.2**	**+1.1**
KHC				*e*pP	**pwP**	**09 54 42.7**	**-1.4**
KHC				AMS	AMS	10 32 40.0	
	comp=Z,100nm,17.5s						
WR1	**Warramunga Arr**	**75.13**	**205**	*e*P	**P**	**09 54 31.8**	**+0.6**
WRA	**Warramunga Arr**	**75.13**	**205**	P	**P**	**09 54 31.8**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=32,slow=7.9,SNR=3.8						
MEM	**Membach**	**75.28**	**343**	⇑P	**P**	**09 54 32.5**	**+0.6**
	comp=Z,9.7nm,1.0s						
VOIR		**75.34**	**329**	⇑*i*P	**P**	**09 54 32.9**	**+0.5**
GEC2	**GERESS Array S**	**75.37**	**338**	*e*P	**P**	**09 54 32.5**	**0.0**
	comp=Z,3.0nm,0.9s						
GEC2	**GERESS Array S**	**75.37**	**338**	*e*P	**P**	**09 54 32.5**	**0.0**
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	**GERESS Array B**	**75.37**	**338**	P	**P**	**09 54 33.1**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=34,slow=5.3,SNR=15						
GERES				LR	LR	10 32 30.5	
	comp=Z,58nm,18.7s,baz=37,slow=40						
BCLA	**Clavier**	**75.59**	**344**	⇑P	**P**	**09 54 33.5**	**-0.1**
SIRR	**Siria**	**75.64**	**331**	⇓*i*P	**P**	**09 54 34.1**	**+0.1**
CONA	**Conrad Observa**	**75.70**	**336**	*i* P	**P**	**09 54 35.6**	**+1.2**
	comp=Z,2.9nm,0.7s						
SWET	**Sewanee**	**75.82**	**50**	*e*P	**P**	**09 54 35.0**	**-0.2**
MOA	**Molln**	**76.16**	**337**	*i* P	**P**	**09 54 38.2**	**+1.2**
	comp=Z,2.6nm,0.7s						
BZS	**Buzias**	**76.24**	**331**	⇑*i*P	**P**	**09 54 37.8**	**+0.4**
ARSA	**Arzberg**	**76.41**	**336**	*i* P	**P**	**09 54 36.7**	**-1.7**
	comp=Z,3.0nm,0.8s						
SOKA	**Soboth**	**77.07**	**336**	*i* P	**P**	**09 54 42.9**	**+0.8**
	comp=Z,3.8nm,0.7s						
KBA	**Koelnbreinsper**	**77.11**	**337**	*i* P	**P**	**09 54 44.3**	**+1.8**
	comp=Z,18nm,0.8s						
CDF	**Champ du Feu**	**77.16**	**342**	*e*P	**P**	**09 54 42.9**	**+0.3**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WATA	**Walderalm**	**77.28**	**339**	*i* P	**P**	**09 54 45.0**	**+1.6**
	comp=Z,2.2nm,0.5s						
BR101	**Keskin Array S**	**77.29**	**320**	*e*P	**P**	**09 54 44.0**	**+0.3**
BR131	**Keskin Array S**	**77.29**	**320**	*e*P	**P**	**09 54 43.4**	**-0.3**
	comp=Z,4.6nm,0.9s						
BRTR	**Keskin Array B**	**77.29**	**320**	P	**P**	**09 54 44.0**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=56,slow=3.4,SNR=15						
BRTR				LR	LR	10 33 10.5	
	comp=Z,26nm,20.7s,baz=80,slow=39						
BRTR	**Keskin Array B**	**77.29**	**320**	P	**P**	**09 54 44.0**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR				MLR	MLR		
	comp=Z,26nm,20.7s						
RETA	**Reutte**	**77.31**	**339**	*i* P	**P**	**09 54 44.6**	**+1.1**
	comp=Z,3.0nm,0.9s						
WTTA	**Wattenberg**	**77.33**	**338**	*i* P	**P**	**09 54 45.3**	**+1.5**
	comp=Z,7.2nm,1.1s						
ECH	**Echery**	**77.37**	**342**	*e*P	**P**	**09 54 44.5**	**+0.8**
	comp=Z,5.2nm,0.9s						
ECH	**Echery**	**77.37**	**342**	*e*P	**P**	**09 54 44.5**	**+0.8**
ECH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOTA	**Moosalm**	**77.37**	**339**	*i* P	**P**	**09 54 45.5**	**+1.5**
	comp=Z,6.4nm,1.0s						
SQTA	**Sankt Quirin**	**77.47**	**339**	*i* P	**P**	**09 54 45.5**	**+1.1**
	comp=Z,7.5nm,1.0s						
ABTA	**Abfaltersbach**	**77.61**	**338**	*i* P	**P**	**09 54 45.8**	**+0.6**
	comp=Z,4.5nm,0.7s						
DAVA	**Damuels**	**77.70**	**340**	*i* P	**P**	**09 54 47.3**	**+1.5**
	comp=Z,6.3nm,1.1s						
FETA	**Feichten**	**77.76**	**339**	*i* P	**P**	**09 54 47.2**	**+1.0**
	comp=Z,5.8nm,1.0s						
DAVOX	**Davos/Dischmat**	**78.18**	**339**	P	**P**	**09 54 49.3**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=331,slow=13,SNR=3.6						
DAVOX	**Davos/Dischmat**	**78.18**	**339**	P	**P**	**09 54 49.3**	**+0.8**
DAVOX				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VTS	**Vitosha**	**78.45**	**329**	*e*P	**P**	**09 54 49.6**	**-0.4**
	comp=Z,3.7nm,0.7s						
VTS	**Vitosha**	**78.45**	**329**	⇑*i*P	**P**	**09 54 50.0**	**0.0**
VTS	**Vitosha**	**78.45**	**329**	*e*P	**P**	**09 54 49.6**	**-0.4**
VTS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WSAR	**Wadi Sarin**	**78.56**	**293**	P	**P**	**09 54 51.4**	**+0.6**
	comp=Z,14nm,0.8s,baz=193,slow=5.7,SNR=5.9						
TUE	**Stuetta**	**78.58**	**340**	*e*P	**P**	**09 54 52.0**	**+1.2**
	comp=Z,6.2nm,0.9s						
AS31	**Alice Springs**	**78.81**	**204**	*e*P	**P**	**09 54 52.0**	**+0.1**
	comp=Z,2.5nm,1.4s						
ASAR	**Alice Springs**	**78.81**	**204**	P	**P**	**09 54 53.0**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=14,slow=5.1,SNR=9.1						
SSF	**Saint Saulge**	**79.15**	**344**	*e*P	**P**	**09 54 53.8**	**+0.2**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PDG	**Podgorica**	**79.84**	**331**	⇑*i*P	**P**	**09 54 57.1**	**-0.3**
TTG	**Podgorica**	**79.84**	**331**	*e*P	**P**	**09 54 57.5**	**+0.1**
	comp=Z,11nm,0.8s						
TTG	**Podgorica**	**79.84**	**331**	*e*P	**P**	**09 54 57.5**	**+0.1**
TTG				pmax	pmax		
	comp=Z,11nm,0.8s						
CAF	**Calviac**	**81.46**	**344**	*e*P	**P**	**09 55 07.2**	**+1.1**
CAF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PPT	**Papeete**	**82.09**	**132**	LR	LR	10 24 52.4	
	comp=Z,58nm,21.0s,baz=338,slow=31						
MMAI	**Mount Meron Ar**	**82.32**	**316**	P	**P**	**09 55 11.7**	**+0.8**
	comp=Z,9.2nm,0.7s,baz=32,slow=6.4,SNR=13						
ASF	**Jabal al Asfar**	**82.38**	**314**	P	**P**	**09 55 12.1**	**+0.9**
	comp=Z,9.3nm,0.9s,baz=106,slow=1.5,SNR=10						
STKA	**Stephens Creek**	**85.16**	**196**	LR	LR	10 33 27.8	
	comp=Z,18nm,19.8s,baz=24,slow=36						
EIL	**Elat**	**85.38**	**314**	P	**P**	**09 55 27.0**	**+0.5**
	comp=Z,5.8nm,0.7s,baz=4.3,slow=9.2,SNR=6.0						
RAYN	**Ar Rayn**	**85.47**	**303**	*e*P	**P**	**09 55 27.0**	**-0.1**
	comp=Z,8.9nm,1.0s						
RAYN	**Ar Rayn**	**85.47**	**303**	*e*P	**P**	**09 55 27.0**	**-0.1**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VAE	**Valguarnera**	**85.82**	**333**	P	**P**	**09 55 27.8**	**-0.8**
	comp=Z,4.2nm,0.5s,baz=115,slow=4.3,SNR=3.6						
ESDC	**Sonseca Array**	**87.51**	**348**	P	**P**	**09 55 37.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=0.1,slow=4.4,SNR=6.0						
KEST	**Kesra**	**88.80**	**336**	LR	LR	10 41 22.4	
	comp=Z,93nm,18.4s,baz=265,slow=40						

IDC ***27*** *09:47:59.5±1.0, 35.°91N×27.°25E, h0^{km}, mb3.7/7,*
mb1 3.7/11, mb1mx3.5/42, mbtmp3.6/11, ML3.5/4, MS2.9/1,
Ms1 2.9/1, ms1mx2.1/45, Error ellipse: s-maj=24.6km
s-min=14.9km az=157.0
ISK ***27*** *09:48:01.1, 35.°83N×27.°30E, h7^{km}, ML3.5/17*
ISCJB ***27*** *09:48:02.2±0.5, 35.°77N±0.°03×27.°33E±0.°02, h26^{km}±4^{km},*
mb3.5/7, MS2.8/1, Error ellipse: s-maj=4.7km s-min=2.7km
az=148.9
THE ***27*** *09:48:02.3, 35.°80N×27.°34E, h10^{km}±1^{km}, ML3.4/14, Error*
ellipse: s-maj=1.9km s-min=0.6km az=130.0
DDA ***27*** *09:48:09.5, 36.°31N×27.°59E, h37^{km}±2^{km}, ML3.4*
ISC 27 09:48:01.4±0.9**, 35.°82N**±0.°03×**27.°32E**±0.°03**, h17**^{km}±6^{km}**,**
n86, σ1.^{s}61/111**, mb3.6**/7**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.30**	**205**	PG	**Pg**	**09 48 07.9**	**0.0**
KARP				SG	**Sg**	**09 48 12.3**	**0.0**
KARP	**Karpathos**	**0.30**	**205**	P	**Pg**	**09 48 07.8**	**-0.1**
KARP				S	**Sg**	**09 48 12.4**	**+0.1**
	15µm,0.1s						
ARG	**Arkhangelos**	**0.77**	**59**	PG	**Pg**	**09 48 16.3**	**-0.1**
ARG				SG	**Sb**	**09 48 27.5**	**+1.1**
ARG	**Arkhangelos**	**0.77**	**59**	P	**Pg**	**09 48 16.3**	**-0.1**
ARG				S	**Sn**	**09 48 28.0**	**-0.5**
	5µm,0.3s						
NISR	**Nisiros**	**0.81**	**349**	P	**Pn**	**09 48 18.6**	**+0.7**
NISR				S	**Sn**	**09 48 30.3**	**+0.8**
	2µm,0.2s						
DAT	**Datca**	**0.93**	**13**	PG	**Pb**	**09 48 19.1**	**0.0**
DAT				SG	**Sn**	**09 48 33.0**	**+0.2**
DAT	**Datca**	**0.93**	**13**	*i* P	**Pb**	**09 48 19.2**	**0.0**
DAT				IAML_P			
	comp=Z,3µm,0.2s						
DATC	**Datca-Mugla**	**0.98**	**16**	PG	**Pb**	**09 48 19.9**	**0.0**
ZKR	**Zakros**	**1.14**	**232**	PN	**Pn**	**09 48 23.2**	**+0.6**
ZKR	**Zakros**	**1.14**	**232**	P	**Pn**	**09 48 22.8**	**+0.2**
ZKR				S	**Sb**	**09 48 38.4**	**+1.2**
	comp=Z,2µm,0.5s						
MRSB	**Marmaris-Mugla**	**1.14**	**38**	PN	**Pb**	**09 48 22.9**	**+0.2**
STIA	**Sitia Lasithi**	**1.18**	**239**	P	**Pn**	**09 48 23.8**	**+0.8**
STIA				S	**Sb**	**09 48 38.9**	**+0.8**
BODT	**Bodrum**	**1.24**	**360**	PN	**Pn**	**09 48 24.8**	**+0.8**
BODT	**Bodrum**	**1.24**	**360**	P	**Pb**	**09 48 24.2**	**-0.2**
BODT				S	**Sn**	**09 48 40.9**	**+0.6**
ANAF	**Anafi Island**	**1.36**	**294**	P	**Pn**	**09 48 25.9**	**+0.3**
ANAF				S	**Sb**	**09 48 43.8**	**+0.3**
	comp=Z,5µm,0.3s						
DALY	**Dalyan (Mula)**	**1.47**	**47**	PN	**Pg**	**09 48 29.2**	**-0.5**
DALY	**Dalyan (Mula)**	**1.47**	**47**	*i* P	**Pg**	**09 48 29.9**	**+0.2**
DALY				IAML_P			
	comp=Z,5µm,0.2s						
TURN	**Turunc**	**1.48**	**44**	PN	**Pn**	**09 48 24.4**	**-2.8**
TURN	**Turunc**	**1.48**	**44**	*i* P	**Pn**	**09 48 24.1**	**-3.1**
TURN				*i* S	**Sn**	**09 48 41.1**	**-5.0**
TURN				IAML_P			
	comp=Z,10µm,0.1s						
NPS	**Neapolis**	**1.50**	**249**	P	**Pn**	**09 48 28.1**	**+0.6**
NPS				S	**Sn**	**09 48 47.2**	**+0.6**
	comp=Z,2µm,0.3s						
YER	**Yerkesik**	**1.53**	**30**	PN	**Pb**	**09 48 29.5**	**+0.2**
YER	**Yerkesik**	**1.53**	**30**	P	**Pb**	**09 48 29.4**	**+0.2**
YER				S	**Sg**	**09 48 48.9**	**-1.8**
AMGA	**Amorgos Island**	**1.53**	**312**	P	**Pn**	**09 48 28.2**	**+0.3**
THR8	**Santorini-Mono**	**1.60**	**292**	P	**Pn**	**09 48 30.4**	**+1.5**
LAST	**Lasithi**	**1.64**	**247**	P	**Pn**	**09 48 30.4**	**+0.9**
LAST				S	**Sn**	**09 48 50.2**	**0.0**
	comp=Z,448nm,0.7s						
FETY	**Fethiye**	**1.64**	**60**	PN	**Pb**	**09 48 31.4**	**+0.2**
FETY	**Fethiye**	**1.64**	**60**	P	**Pn**	**09 48 29.3**	**-0.2**
FETY	**Fethiye**	**1.64**	**60**	*i* P	**Pg**	**09 48 33.0**	**-0.1**
FETY				IAML_P			
	comp=Z,16µm,0.2s						
THR6	**Thira Island,**	**1.65**	**290**	P	**Pn**	**09 48 30.5**	**+1.0**
THR3	**Thira Island,**	**1.66**	**291**	P	**Pn**	**09 48 30.4**	**+0.7**
THR9	**Santorini-Faro**	**1.68**	**289**	P	**Pn**	**09 48 30.7**	**+0.8**
CMBO	**Columbo, Santo**	**1.68**	**293**	P	**Pn**	**09 48 30.2**	**+0.3**
CMBO				S	**Sn**	**09 48 51.4**	**+0.4**
	comp=Z,1µm,0.5s						
THR5	**Thira Island,**	**1.70**	**291**	P	**Pn**	**09 48 31.1**	**+0.8**
SAP3	**Santorini-Thir**	**1.71**	**292**	P	**Pn**	**09 48 31.3**	**+0.9**
IOSP	**Ios island**	**1.87**	**299**	P	**Pn**	**09 48 32.9**	**+0.3**
AYDN	**Tasoluk**	**1.89**	**14**	*i* P	**Pb**	**09 48 35.5**	**0.0**
AYDN				IAML_P			
	comp=Z,2µm,0.2s						
AKAS	**Kas**	**1.90**	**77**	PN	**Pn**	**09 48 35.2**	**+2.1**
AKAS	**Kas**	**1.90**	**77**	*i* P	**Pn**	**09 48 35.1**	**+2.0**
AKAS				IAML_P			
	comp=Z,7µm,0.2s						
IACM	**Heraklion**	**1.90**	**255**	P	**Pn**	**09 48 33.6**	**+0.6**
KSTL	**Kastelli Herak**	**1.90**	**255**	P	**Pn**	**09 48 32.1**	**-0.9**
KSTL				S	**Sn**	**09 48 53.6**	**-3.0**
APE	**Apeiranthos**	**1.91**	**311**	PN	**Pn**	**09 48 34.1**	**+1.0**
APE	**Apeiranthos**	**1.91**	**311**	P	**Pn**	**09 48 33.4**	**+0.3**
APE				S	**Sn**	**09 48 56.2**	**-0.5**
	comp=Z,552nm,0.2s						
SMG	**Samos**	**1.93**	**349**	P	**Pn**	**09 48 33.7**	**+0.3**
IDI	**Anoyia**	**2.05**	**256**	PN	**Pn**	**09 48 36.0**	**+0.9**

IDI	Anoyia	2.05	256	Pn	Pn	09 48 35.7	+0.6
	comp=Z,18nm,0.3s,baz=33,slow=2.7,SNR=54						
IDI				Sn	Sn	09 49 01.0	+0.7
	comp=Z,42nm,0.3s,baz=282,slow=20,SNR=6.8						
SIVA	Sivas	2.20	249	P	Pn	09 48 38.9	+1.8
SIVA				S	Sn	09 49 05.5	+1.6
	comp=Z,580nm,0.7s						
GOLH	Golhisar	2.29	51	iP	Pb	09 48 43.0	+0.5
GOLH				IAML_P			
	comp=Z,6µm,0.2s						
MHLO	Agia Marina, M	2.51	291	P	Pn	09 48 43.3	+1.9
VAM	Vamos	2.57	262	P	Pn	09 48 42.8	+0.5
VAM				S	Sn	09 49 13.8	+0.7
	comp=Z,280nm,0.4s						
URLA	Izmir	2.60	347	PN	Pn	09 48 44.5	+1.8
SERI	Serifos	2.65	301	P	Pn	09 48 44.5	+1.2
KORT	Korkueli	2.72	63	iP	Pn	09 48 47.2	+2.9
KORT				IAML_P			
	comp=Z,775nm,0.4s						
IMMV	Iera Moni Meta	2.74	263	PN	Pn	09 48 46.2	+1.6
IMMV	Iera Moni Meta	2.74	263	P	Pn	09 48 45.5	+0.9
GVD	Gavdhos	2.82	251	PN	Pn	09 48 47.9	+2.3
KULA	Kula-Manisa	2.90	21	PN	Pn	09 48 49.2	+2.4
KHAL	Karahalli	3.08	34	iP	Pn	09 48 52.0	+2.6
KHAL				IAML_P			
	comp=Z,313nm,0.2s						
ANKY	Antikythira Is	3.26	272	P	Pn	09 48 53.0	+1.3
KTHA	Kythira Island	3.48	278	P	Pn	09 48 56.4	+1.7
KTHA				S	Sn	09 49 36.9	+1.5
	comp=Z,238nm,0.6s						
VLY	Voula,Athens	3.48	307	P	Pn	09 48 56.6	+1.9
KTHR	Kythira	3.52	278	P	Pn	09 48 57.3	+2.0
KTHR				S	Sn	09 49 37.4	+0.8
SIGR	SIGRI	3.58	341	P	Pn	09 48 57.6	+1.5
VLI	Veliai	3.65	286	P	Pn	09 48 58.5	+1.4
VLI				S	Sn	09 49 42.0	+2.3
	comp=Z,122nm,0.7s						
DID	Didima	3.69	298	P	Pn	09 48 59.1	+1.5
DYR	Agios Nikonas	4.13	285	P	Pn	09 49 05.6	+1.9
MRKA	Markates	4.14	315	P	Pn	09 49 05.4	+1.6
ITM	Ithomi	4.55	289	PN	Pn	09 49 12.5	+3.0
DSF	Desfina	4.62	305	P	Pn	09 49 12.4	+1.9
KLV	Kalavryta, Ach	4.70	300	P	Pn	09 49 13.4	+1.9
KLV				S	Sn	09 50 08.3	+2.7
	comp=Z,25nm,1.1s						
AGG	Agios Georgios	5.10	310	PN	Pn	09 49 19.6	+2.6
AGG	Agios Georgios	5.10	310	P	Pn	09 49 19.1	+2.1
ANX	Ano Chora	5.12	304	P	Pn	09 49 19.4	+2.0
BRTR	Keskin Array B	6.34	50	Pn	Pn	09 49 36.8	+2.5
	comp=Z,0.3nm,0.3s,baz=214,slow=16,SNR=6.6						
BRTR				Sn	Sn	09 50 51.4	+5.0
	comp=Z,0.0nm,0.3s,baz=214,slow=26,SNR=2.4						
MMAI	Mount Meron Ar	7.24	110	Pn	Pn	09 49 46.7	+0.2
	comp=Z,1.8nm,0.3s,baz=326,slow=13,SNR=9.5						
MMAI				Sn	Sn	09 51 06.8	-1.6
	comp=Z,3.8nm,0.3s,baz=309,slow=26,SNR=9.9						
ASF	Jabal al Asfar	8.74	112	Sn	Sn	09 51 37.7	-7.6
	comp=Z,0.4nm,0.3s,baz=12,slow=19,SNR=2.2						
EIL	Elat	8.88	132	Pn	Pn	09 50 09.6	+0.7
	comp=Z,0.7nm,0.3s,baz=340,slow=4.5,SNR=8.4						
EIL				Sn	Sn	09 51 43.1	-5.5
	comp=Z,0.9nm,0.3s,baz=12,slow=20,SNR=4.6						
VYHS	Vyhne	14.13	336	ePN	Pn	09 51 17.7	-2.9
ESDC	Sonseca Array	24.96	288	P	P	09 53 24.9	+0.9
	comp=Z,0.2nm,0.3s,baz=74,slow=9.5,SNR=4.2						
FINES	FINESS Array B	25.66	359	P	P	09 53 29.0	-0.9
	comp=Z,1.6nm,0.7s,baz=163,slow=10,SNR=3.4						
AKTO	Aktyubinsk	26.51	47	P	P	09 53 39.1	+1.2
	comp=Z,0.7nm,0.4s,baz=315,slow=2.9,SNR=4.0						
ARU	Arti	29.48	36	LR	LR	10 07 52.4	
	comp=Z,20nm,18.2s,baz=266,slow=40						
TORD	Torodi Ar. Bea	32.27	232	P	P	09 54 29.9	+0.7
	comp=Z,0.5nm,0.3s,baz=39,slow=8.2,SNR=7.3						
ARCES	ARCESS Array B	33.79	359	P	P	09 54 41.3	-0.7
	comp=Z,1.4nm,0.9s,baz=180,slow=12,SNR=4.9						
KURBB	Kurchatov Arra	39.34	52	P	P	09 55 30.6	+1.2
	baz=274,slow=8.8						
MKAR	Makanchi Array	41.94	57	P	P	09 55 52.2	+1.1
	comp=Z,0.7nm,0.6s,baz=282,slow=6.2,SNR=7.2						
ILAR	Eielson Array	79.64	357	P	P	10 00 06.8	-0.6
	comp=Z,0.3nm,0.6s,baz=350,slow=4.6,SNR=4.3						

SKO 27 09:52:57.2, 41°.93N×23°.27E, h15^{km}, M1.2, ML1.5, 4C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.15	246	⇑iPg	Pg	09 53 00.7	-0.4
KKB				iSg	Sg	09 53 02.9	-0.9
MMB	Musomiste	0.48	135	⇑iPg	Pb	09 53 08.3	+0.9
MMB				iSg	Sb	09 53 15.9	+1.6
VTS	Vitosha	0.69	358	⇑iPg	Pg	09 53 10.2	-0.4
VTS				iSg	Sg	09 53 19.1	-0.7
VAY	Valandovo	0.80	221	ePg	Pb	09 53 13.2	+0.3
VAY				iSg	Sb	09 53 23.7	+0.2
VAY				eLg	Lg	09 53 23.9	
	comp=E,12nm,0.3s						
VAY				eLg	Lg	09 53 24.2	
	comp=N,11nm,0.5s						
SRS	Serrai	0.85	163	⇑iPg	Pg	09 53 14.0	+0.4
SRS				iSg	Sn	09 53 25.8	-0.9

KRSC 27 09:53:09.0±1.3, 51°.99N×160°.11E, h60^{km}±20^{km}, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.08	295	iP	Pn	09 53 28.2	+0.2
SPN	Mys Shipunski	1.11	357	iP	Pn	09 53 30.0	+1.6
SPN				eS	Sn	09 53 44.7	+1.9
NLC	Nalytchevo	1.27	339	eP	Pn	09 53 31.8	+1.3
KDTR	Khodutka, Kamc	1.27	263	eP	Pn	09 53 32.3	+1.8
KDTR				eS	Sn	09 53 48.9	+2.2
MTVR	Mutnovka	1.28	293	eP	Pn	09 53 31.4	+0.6
MTVR				eS	Sn	09 53 47.7	+0.5
DALK	Dalny	1.33	322	eP	Pn	09 53 32.7	+1.4
DALK				eS	Sn	09 53 49.4	+1.3
PET	Petropavlovsk	1.36	320	eP	Pn	09 53 32.8	+1.0
PET				eS	Sn	09 53 50.0	+1.1
ASAK	Asacha	1.42	287	P	Pn	09 53 34.3	+1.7
ASAK				eS	Sn	09 53 52.1	+1.8
UGLR	Uglovaya	1.45	328	P	Pn	09 53 35.1	+2.1
UGLR				eS	Sn	09 53 54.6	+3.5
KRMR	Karymshinskiy	1.48	305	eP	Pn	09 53 34.4	+1.1
KRMR				eS	Sn	09 53 52.8	+1.3
SDLR	Sedlovina	1.49	330	iP	Pn	09 53 34.9	+1.3
SDLR				eS	Sn	09 53 53.8	+1.7
SMAR	Somma	1.50	328	iP	Pn	09 53 34.9	+1.0
AVH	Avacha	1.52	327	eP	Pn	09 53 36.9	+2.9
KRER	Koryakskii	1.55	328	eP	Pn	09 53 37.2	+2.7
KOK	Koryaka	1.58	326	P	Pn	09 53 37.6	+2.8
KRX	Arik	1.63	328	iP	Pn	09 53 38.2	+2.7
KRX				eS	Sn	09 53 59.3	+3.7
APC	Apacha	2.03	299	eP	Pn	09 53 43.8	+3.0
APC				eS	Sn	09 54 09.2	+4.1
GNL	Ganaly	2.15	323	eP	Pn	09 53 45.9	+3.3
MKZ	Mys Kozlova	2.75	20	iP	Pn	09 53 52.7	+2.2
MKZ				eS	Sn	09 54 24.5	+2.0
SKR	Severo-Kuril's	2.83	244	eS	Sn	09 54 27.5	+3.0
KZV	Kizimen	3.13	2	eP	Pn	09 53 58.6	+2.7
TUMD	Tumrok D	3.22	3	eS	Sn	09 54 36.6	+2.4

IDC 27 09:59:25.6±6.3, 52°.81N×161°.52E, h0^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.2/33, mbtmp3.4/3, ML2.7/1, Error ellipse: s-maj=96.6km s-min=59.8km az=87.0

KRSC 27 09:59:33.8±1.5, 52°.02N×160°.09E, h51^{km}±21^{km}, ML3.9

ISCJB 27 09:59:36.2±0.8, 52°.04N±0°.04×160°.01E±0°.07, h41^{km}±23^{km}, mb3.4/2, Error ellipse: s-maj=9.2km s-min=4.5km az=135.3

ISC 27 09:59:36.9±2.9, 52°.07N±0°.05×159°.98E±0°.05, h30^{km}±22^{km}, n32, σ1^{s}49/45, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.97	292	eP	Pn	09 59 52.8	-1.7
RUS				eS	Sn	10 00 05.7	-1.5
SPN	Mys Shipunski	1.03	1	eP	Pn	09 59 54.4	-0.9
SPN				eS	Sn	10 00 08.3	-0.4
NLC	Nalytchevo	1.17	341	eP	Pn	09 59 56.8	-0.4
NLC				eS	Sn	10 00 12.3	+0.2
MTVR	Mutnovka	1.18	291	eP	Pn	09 59 56.2	-1.3
MTVR				eS	Sn	10 00 11.6	-1.0
KDTR	Khodutka, Kamc	1.21	258	eP	Pn	09 59 57.1	-0.6
KDTR				eS	Sn	10 00 12.8	-0.2
DALK	Dalny	1.22	323	eP	Pn	09 59 57.2	-0.7
DALK				eS	Sn	10 00 13.0	-0.3
ASAK	Asacha	1.32	285	eP	Pn	09 59 59.0	-0.3
ASAK				eS	Sn	10 00 16.3	+0.4
UGLR	Uglovaya	1.34	329	eP	Pn	09 59 59.4	-0.3
UGLR				eS	Sn	10 00 16.4	-0.1
KRMR	Karymshinskiy	1.36	305	eP	Pn	09 59 59.2	-0.7
KRMR				eS	Sn	10 00 16.5	-0.4
SDLR	Sedlovina	1.38	332	eP	Pn	09 59 59.5	-0.7
SMAR	Somma	1.39	329	eP	Pn	10 00 00.1	-0.4
AVH	Avacha	1.41	328	eP	Pn	10 00 00.6	-0.1
KRER	Koryakskii	1.44	329	eP	Pn	10 00 01.3	+0.1
KOK	Koryaka	1.47	327	eP	Pn	10 00 01.5	0.0
KRX	Arik	1.52	328	eP	Pn	10 00 02.0	-0.2
PETK	Petropavlovsk-	1.74	308	Pn	Pn	10 00 05.2	+0.2
	9.7nm,0.3s,baz=105,slow=19,SNR=128						
PETK				Sn	Sn	10 00 26.4	+0.3
	9.8nm,0.3s,baz=104,slow=21,SNR=11						
APC	Apacha	1.93	297	eP	Pn	10 00 08.6	+1.0
APC				eS	Sb	10 00 33.8	-1.1
GNL	Ganaly	2.04	324	eP	Pn	10 00 09.6	+0.3
PAU	Pauzhetka	2.06	254	eP	Pn	10 00 09.8	+0.4
PAU				eS	Sn	10 00 34.8	+0.7
MKZ	Mys Kozlova	2.70	22	eP	Pn	10 00 17.5	-0.7
MKZ				eS	Sn	10 00 49.1	-0.8
SKR	Severo-Kuril's	2.79	242	eP	Pn	10 00 19.4	-0.1
SKR				eS	Sn	10 00 51.4	-0.7
KZV	Kizimen	3.05	3	eP	Pn	10 00 24.8	+1.6
KZV				eS	Sn	10 01 00.8	+2.0
TUMD	Tumrok D	3.15	4	eP	Pn	10 00 26.0	+1.6
TUMD				eS	Sn	10 01 01.6	+0.6
TUMR	Tumrok	3.22	2	eP	Pn	10 00 27.3	+1.8
KBTR	Krutoberegovo	4.47	21	eP	Pn	10 00 43.1	+0.6
SRKR	Sorokina	4.64	8	eP	Pn	10 00 47.1	+2.1
BKI	Bering	4.75	46	eS	Sn	10 01 35.9	-4.4
MJAR	Matsushiro Arr	21.87	233	P	P	10 04 32.5	+5.4
	1.5nm,0.8s,baz=25,slow=9.6,SNR=4.4						
H11N2	WAKE ISLAND Hy	32.73	168	T	T	10 41 21.3	
	baz=352						
H11N3	WAKE ISLAND Hy	32.74	168	T	T	10 41 25.7	
	baz=352						
H11N1	WAKE ISLAND Hy	32.74	168	T	T	10 41 25.3	
	baz=352						
MKAR	Makanchi Array	48.54	296	P	P	10 08 14.0	-3.0
	0.2nm,0.6s,baz=72,slow=6.1,SNR=2.1						

GCG 27 10:10:19.6±0.5, 15°.61N×92°.45W, h16^{km}±22^{km}, MD3.9

MEX 27 10:10:22.2±0.7, 15°.36N×92°.04W, h5^{km}, MD3.5

ISC 27 10:10:21.6±1.5, 15°.47N±0°.05×92°.24W±0°.04, h0^{km}±14^{km}, n10, σ0^{s}73/18, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.56	183	eP	Pg	10 10 32.1	-0.3
THIG				iS	Sg	10 10 39.5	-0.1
CCIG	Comitan	0.81	7	eP	Pb	10 10 38.4	-0.3
CCIG				iS	Sb	10 10 49.9	-0.4
PCIG		0.98	284	eP	Pn	10 10 42.1	-0.5
PCIG				iS	Sn	10 10 56.7	-0.4
STG3	Santiaguito 3,	0.99	140	eP	Pg	10 10 40.8	+0.2
TGIG		1.56	327	eP	Pn	10 10 50.2	-0.4
TGIG				iS	Sg	10 11 12.0	+0.4
FUG	Fuego 3	1.69	127	eP	Pn	10 10 51.9	-0.6
PCG	Pacaya	1.90	124	eP	Pn	10 10 55.6	0.0
PCG				eS	Sg	10 11 23.7	+0.9
NBG	Las Nubes	2.02	115	eP	Pn	10 10 57.4	+0.2
NBG				eS	Sb	10 11 26.2	+0.9
MRL	Marmol	2.49	99	eP	Pn	10 11 03.3	-0.4
MRL				eS	Sb	10 11 37.4	-1.4
CMIG	Matias Romero	3.01	303	eP	Pn	10 11 11.1	+0.5
CMIG				iS	Sn	10 11 48.9	+1.5

KRSC 27 10:21:10.4±1.4, 52°.02N×160°.10E, h47^{km}±19^{km}, ML4.0

ISCJB 27 10:21:12.6±0.8, 52°.03N±0°.04×160°.05E±0°.06, h38^{km}±10^{km}, mb3.5/4, Error ellipse: s-maj=8.1km s-min=4.3km az=139.4

IDC 27 10:21:15.7±6.3, 52°.11N×159°.96E, h54^{km}±47^{km}, mb3.2/4, mb1 3.3/4, mb1mx3.0/43, mbtmp3.4/4, Error ellipse: s-maj=49.5km s-min=29.2km az=87.0

ISC 27 10:21:11.9±2.8, 52°.02N±0°.05×160°.04E±0°.05, h24^{km}±21^{km}, n40, σ1^{s}32/51, mb3.6/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.03	294	eP	Pn	10 21 29.6	-1.2
RUS				eS	Sb	10 21 42.8	-1.3
SPN	Mys Shipunski	1.08	359	eP	Pn	10 21 31.0	-0.5
SPN				eS	Sn	10 21 43.8	-1.9
NLC	Nalytchevo	1.23	340	eP	Pn	10 21 33.2	-0.4
NLC				eS	Sn	10 21 48.8	-0.6
MTVR	Mutnovka	1.23	293	eP	Pn	10 21 33.1	-0.7
MTVR				eS	Sn	10 21 48.7	-1.0
KDTR	Khodutka, Kamc	1.24	261	eP	Pn	10 21 33.3	-0.3
KDTR				eS	Sn	10 21 50.1	+0.6
DALK	Dalny	1.28	323	eP	Pn	10 21 33.9	-0.4
DALK				eS	Sn	10 21 49.4	-1.3
ASAK	Asacha	1.37	286	eP	Pn	10 21 35.6	0.0
ASAK				eS	Sn	10 21 52.9	0.0
UGLR	Uglovaya	1.40	329	eP	Pn	10 21 36.1	0.0
UGLR				eS	Sn	10 21 53.0	-0.9
KRMR	Karymshinskiy	1.42	305	eP	Pn	10 21 35.8	-0.5
KRMR				eS	Sn	10 21 53.0	-1.2
SMAR	Somma	1.46	329	eP	Pn	10 21 36.8	-0.1
AVH	Avacha	1.48	328	eP	Pn	10 21 37.2	+0.1
KRER	Koryakskii	1.51	329	eP	Pn	10 21 38.6	+1.0
KOK	Koryaka	1.54	327	eP	Pn	10 21 38.7	+0.8
KRX	Arik	1.59	328	eP	Pn	10 21 38.7	+0.1
PETK	Petropavlovsk-	1.80	308	P	Pn	10 21 41.9	+0.5
	11nm,0.3s,baz=112,slow=20,SNR=181						
PETK				S	Sn	10 22 04.0	+0.5
	17nm,0.3s,baz=93,slow=27,SNR=11						
APC	Apacha	1.98	298	eP	Pn	10 21 44.9	+1.0
APC				eS	Sn	10 22 10.0	+2.0
PAU	Pauzhetka	2.08	256	eS	Sn	10 22 10.8	+0.3
GNL	Ganaly	2.11	324	eP	Pn	10 21 47.3	+1.6
GNL				eS	Sn	10 22 13.0	+1.8
MKZ	Mys Kozlova	2.73	21	eP	Pn	10 21 54.4	+0.2
MKZ				eS	Sn	10 22 25.7	-0.8
SKR	Severo-Kuril's	2.80	243	eP	Pn	10 21 56.1	+0.9
SKR				eS	Sn	10 22 28.0	-0.2
KZV	Kizimen	3.10	3	eP	Pn	10 22 01.8	+2.3
KZV				eS	Sn	10 22 37.1	+1.3
TUMD	Tumrok D	3.20	4	eP	Pn	10 22 01.9	+1.3
TUMD				eS	Sn	10 22 38.3	+0.4
TUMR	Tumrok	3.27	1	eP	Pn	10 22 03.8	+2.1
ESO	Esso	3.99	349	eP	Pn	10 22 14.4	+2.8
KBTR	Krutoberegovo	4.50	20	eP	Pn	10 22 19.8	+1.3
BDR	Baidarnaya	4.61	8	eP	Pn	10 22 21.3	+1.2
SMKR	Semkarok	4.65	10	eP	Pn	10 22 23.3	+2.7
SRKR	Sorokina	4.69	8	eP	Pn	10 22 23.1	+1.9
BKI	Bering	4.76	46	eP	Pn	10 22 22.3	+0.3
BKI				eS	Sn	10 23 14.0	-2.3
MAT	Matsushiro	21.87	234	P	P	10 26 04.7	+1.9
MJAR	Matsushiro Arr	21.87	234	P	P	10 26 04.9	+2.1
	1.3nm,0.9s,baz=17,slow=8.9,SNR=4.5						
H11N2	WAKE ISLAND Hy	32.67	168	T	T	11 02 58.0	
	baz=354,slow=74						
H11N3	WAKE ISLAND Hy	32.68	168	T	T	11 02 17.5	
	baz=354						
H11N1	WAKE ISLAND Hy	32.69	168	T	T	11 02 41.1	
	baz=354,slow=74						
H11S1	WAKE ISLAND Hy	33.85	169	T	T	11 04 17.1	
	baz=349						
H11S3	WAKE ISLAND Hy	33.86	169	T	T	11 04 26.3	
	baz=349						
H11S2	WAKE ISLAND Hy	33.87	169	T	T	11 03 33.4	
	baz=349						
MKAR	Makanchi Array	48.60	296	P	P	10 29 50.9	-2.3
	0.2nm,0.4s,baz=35,slow=5.3,SNR=2.7						
NOA	NORSAR Array B	64.56	344	P	P	10 31 46.7	+0.2
	0.4nm,0.7s,baz=20,slow=6.7,SNR=3.7						
HFS	Hagfors	64.96	342	P	P	10 31 48.8	-0.3
	0.2nm,0.4s,baz=43,slow=6.5,SNR=5.9						

NSSC 27 10:24:30.6±0.3, 33°.61N×35°.72E, h1^{km}±3^{km}, ML1.5

ISCJB 27 10:24:31.9±1.3, 33°.52N±0°.09×35°.73E±0°.08, h11^{km}±5^{km}, Error ellipse: s-maj=18.9km s-min=5.2km az=35.7

GRAL 27 10:24:31.5±0.3, 33°.42N×35°.66E, h0^{km}±33^{km}, MD2.6

ISC 27 10:24:30.9±1.6, 33°.5N±0°.1×35°.71E±0°.09, h15^{km}±7^{km}, n8, σ0^{s}37/14, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRWL	Qaraoun	0.04	334	eP	Pg	10 24 33.8	0.0
QRWL				eS	Sg	10 24 35.6	-0.1
RCY	Rachaya	0.11	96	eP	Pb	10 24 34.6	-0.3
RCY				eS	Sb	10 24 36.8	-0.7
BRBR	Barbar	0.23	115	eP	Pg	10 24 36.1	0.0
BRBR				eS	Sb	10 24 41.2	+0.3
BRBR				AML	AML	10 24 44.9	
	comp=N,66nm,0.3s						
BRBR				AML	AML	10 24 46.2	
	comp=E,39nm,0.3s						
DQRL	Deir Qamar	0.23	330	eP	Pb	10 24 36.8	0.0
DQRL				eS	Sb	10 24 40.7	-0.1
BHL	Bhannes	0.40	354	eP	Pb	10 24 40.2	+0.5
QASN	Qassioun	0.48	87	eP	Pg	10 24 40.4	-0.1
QASN				eS	Sg	10 24 47.2	+0.3
QASN				AML	AML	10 24 50.4	
	comp=E,105nm,0.4s						
QASN				AML	AML	10 24 52.4	
	comp=N,77nm,0.3s						
TOTH	TOTAH	0.62	103	eP	Pb	10 24 44.0	+0.4
TOTH				eS	Sb	10 24 52.5	+0.4
TOTH				AML	AML	10 24 57.7	
	comp=E,15nm,0.4s						
TOTH				AML	AML	10 25 01.4	
	comp=N,13nm,0.6s						
HWQ	Hawqa	0.79	15	eP	Pn	10 24 47.5	-0.2

KRSC 27 10:25:27.2±1.1, 52°.03N×160°.08E, h45^{km}±17^{km}, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.04	294	eP	Pn	10 25 45.9	+0.5
RUS				eS	Sn	10 25 59.2	+0.4
SPN	Mys Shipunski	1.07	358	eP	Pn	10 25 47.3	+1.5
SPN				eS	Sn	10 26 01.7	+2.1
NLC	Nalytchevo	1.23	339	eP	Pn	10 25 49.6	+1.6
NLC				eS	Sn	10 26 05.0	+1.6
MTVR	Mutnovka	1.25	292	eP	Pn	10 25 49.7	+1.3
MTVR				eS	Sn	10 26 05.2	+1.1
KDTR	Khodutka, Kamc	1.26	261	eP	Pn	10 25 50.3	+2.0
KDTR				eS	Sn	10 26 06.6	+2.6
DALK	Dalny	1.29	322	eP	Pn	10 25 50.3	+1.5
DALK				eS	Sn	10 26 06.7	+1.9
ASAK	Asacha	1.39	286	eP	Pn	10 25 52.0	+1.8
ASAK				eS	Sn	10 26 09.4	+2.1
UGLR	Uglovaya	1.41	328	eP	Pn	10 25 52.4	+1.9
UGLR				eS	Sn	10 26 10.3	+2.3
KRMR	Karymshinskiy	1.44	305	eP	Pn	10 25 52.4	+1.6
KRMR				eS	Sn	10 26 10.2	+1.7
SDLR	Sedlovina	1.45	330	eP	Pn	10 25 52.5	+1.4
SDLR				eS	Sn	10 26 10.1	+1.2
SMAR	Somma	1.46	328	eP	Pn	10 25 52.8	+1.4
AVH	Avacha	1.48	327	eP	Pn	10 25 53.6	+2.1
KRER	Koryakskii	1.51	328	eP	Pn	10 25 54.7	+2.7
KOK	Koryaka	1.54	326	eP	Pn	10 25 54.9	+2.6
KRX	Arik	1.59	328	eP	Pn	10 25 55.1	+2.0
APC	Apacha	2.00	298	eP	Pn	10 26 01.7	+3.2
APC				eS	Sn	10 26 26.6	+4.4
PAU	Pauzhetka	2.10	256	eP	Pn	10 26 02.6	+2.7
PAU				eS	Sn	10 26 28.3	+3.4
GNL	Ganaly	2.11	323	eP	Pn	10 26 03.0	+2.8
GNL				eS	Sn	10 26 28.3	+3.0
MKZ	Mys Kozlova	2.72	21	eP	Pn	10 26 10.8	+2.4
MKZ				eS	Sn	10 26 42.0	+2.0
SKR	Severo-Kuril's	2.82	243	eP	Pn	10 26 12.3	+2.5
SKR				eS	Sn	10 26 44.4	+1.9
KZV	Kizimen	3.10	2	eP	Pn	10 26 18.4	+4.7
KZV				eS	Sn	10 26 54.1	+4.6
TUMD	Tumrok D	3.19	3	eP	Pn	10 26 17.6	+2.8
TUMD				eS	Sn	10 26 54.5	+2.9
TUMR	Tumrok	3.26	1	eP	Pn	10 26 20.7	+4.7
KBTR	Krutoberegovo	4.49	20	eP	Pn	10 26 36.1	+3.5
SRKR	Sorokina	4.68	7	eP	Pn	10 26 40.5	+5.2
BKI	Bering	4.74	45	eP	Pn	10 26 39.5	+3.5

GUC 27 10:32:06.9±0.5, 36°.41S×74°.01W, h43^{km}±2^{km}, ML3.6

ISC 27 10:32:05.2±3.7, 36°.3S±0°.1×74°.0W±0°.1, h9^{km}±14^{km}, n7, σ1^{s}57/12, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	San Pedro de C	0.91	128	eP	Pg	10 32 22.4	-0.3
CCSP				eS	Sg	10 32 33.5	-1.0
COCH	Cobquecura	0.99	81	eP	Pb	10 32 22.9	-1.6
COCH				eS	Sn	10 32 41.3	+1.8
COCH	Cobquecura	0.99	81	eP	Pb	10 32 24.5	0.0
COCH				eS	Sg	10 32 38.5	+1.3
COCH				IAML		10 32 42.5	
	comp=N,2µm,0.4s						
CCHI	Chillan	1.58	102	eP	Pn	10 32 32.6	-0.9
CCHI				eS	Sg	10 32 57.9	+1.8
CCHI	Chillan	1.58	102	eP	Pn	10 32 32.5	-0.9
CCHI				eS	Sn	10 32 52.3	-1.7
CCHI				IAML		10 33 01.7	
	comp=N,2µm,0.3s						
CANA	Caviahue	2.84	125	eP	Pn	10 32 52.3	+1.4
CANA				IAML		10 33 43.5	
	comp=Z,235nm,0.7s						
PLCA	Paso Flores	5.20	150	eP	Pn	10 33 24.4	+1.2
PLCA				IAML		10 33 50.7	
	comp=Z,17nm,0.5s						

SJA 27 10:33:49.8±0.4, 35°.69S×72°.00W, h30^{km}±31^{km}, ML4.2, MW3.8

ISCJB 27 10:34:01.4±0.5, 34°.81S±0°.04×72°.01W±0°.08, h55^{km}±4^{km}, mb4.3/15, Error ellipse: s-maj=12.5km s-min=4.3km az=27.9

NEIC 27 10:34:01.0±0.0, 34°.77S×71°.93W, h35^{km}, mb4.4/10, ML4.6(GUC), After GUC.

NEIC Felt [III] at Curico, Linares, Longavi, Molina, Mostazal, Nancagua, Peralillo, Peumo, Puente Negro, Romeral, Rio Claro, San Fernando and Santa Cruz; [II] at Calera de Tango, Cauquenes, Constitucion, Duao, Iloca, Navidad, Paredones, Pelarco, Pencahue, Puente Alto, Rancagua, San Bernardo, Santiago and Talca.

GUC 27 10:34:01.7±0.8, 34°.77S×71°.93W, h28^{km}±5^{km}, ML4.6

IDC 27 10:34:04.2±2.9, 34°.73S×71°.73W, h59^{km}±25^{km}, mb3.8/11, mb1 4.0/14, mb1mx3.9/32, mbtmp4.1/14, ML4.3/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/19, Error ellipse: s-maj=28.9km s-min=15.3km az=76.0

ISC 27 10:34:01.8±0.9, 34°.78S±0°.05×72°.00W±0°.08, h44^{km}±8^{km}, n59, σ1^{s}61/63, mb4.3/15, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.24	167	ePn	Pn	10 34 09.9	0.0
GO05				eSn	Sn	10 34 16.2	+0.5
COCH	Cobquecura	1.50	205	eP	Pn	10 34 27.3	+1.0
COCH				eS	Sn	10 34 46.3	+1.7
ANTU	Antumapu	1.65	44	eP	Pn	10 34 29.8	+1.4
ANTU				eS	Sn	10 34 50.8	+2.3
ANTU				IAML		10 34 52.6	
	comp=E,11µm,0.4s						
STL	Santa Lucia	1.75	40	eP	Pn	10 34 31.6	+1.9
STL				eS	Sn	10 34 53.1	+2.4
STL				IAML		10 34 55.2	
	comp=N,13µm,0.4s						
LMEL	Las Melosas	1.75	59	eP	Pn	10 34 29.8	0.0
LMEL				eS	Sn	10 34 51.7	+0.7
LMEL				IAML		10 34 55.5	
	comp=N,12µm,0.1s						
FSR	Penalolen	1.78	44	eP	Pn	10 34 31.6	+1.5
FSR				eS	Sn	10 34 54.1	+2.6
CLCH	Cerro Calan	1.83	42	⇑iP	Pn	10 34 31.3	+0.4
CLCH				eS	Sn	10 34 54.7	+1.8
CLCH				IAML		10 34 59.5	

	comp=E,8µm,0.5s						
PEL	Peldehue	1.96	34	ePn	Pn	10 34 33.7	+1.1
PEL				eSn	Sn	10 34 54.3	-1.7
PEL	Peldehue	1.96	34	⇑iP	Pn	10 34 33.6	+1.0
PEL				eS	Sn	10 34 58.2	+2.2
PEL				IAML		10 35 01.9	
	comp=N,6µm,0.5s						
FCH	Farellones	2.02	45	eP	Pn	10 34 34.1	+0.4
FCH				eS	Sn	10 34 59.2	+1.2
FCH				IAML		10 35 04.4	
	comp=N,5µm,0.2s						
EDS3	Malargue	2.35	116	eP	Pn	10 34 25.8	-12
EDS3				eS	Sn	10 34 52.0	-14
RFA	San Rafael	2.91	91	eP	Pn	10 34 38.5	-7.1
AAGR	Agrelo	3.13	58	eP	Pn	10 34 48.3	-0.5
ARCO	CERRO ARCO	3.20	54	eP	Pn	10 34 49.7	-0.1
ARCO				IAML		10 35 10.7	
	comp=Z,342nm,0.4s						
RTLS	Leoncito	3.73	38	eP	Pn	10 34 59.9	+2.7
RTLS				IAML		10 36 04.5	
	comp=Z,301nm,0.4s						
RTCV	Cerro Valdivia	4.10	46	eP	Pn	10 35 03.5	+1.5
RTCV				eS	Sn	10 35 58.3	+10
CFA	Coronel Fontan	4.46	46	P	Pn	10 35 07.8	+0.8
	comp=Z,8.9nm,0.3s,baz=231,slow=8.6,SNR=45						
CFA				S	Sn	10 36 04.6	+6.9
	comp=Z,32nm,0.3s,baz=87,slow=8.6,SNR=7.8						
CFA				LR	LR	10 36 40.4	
	comp=Z,263nm,21.4s,baz=223,slow=36						
GO04	Tololo Observa	4.70	13	ePn	Pn	10 35 11.0	+0.6
GO06	Curarrehue	4.82	175	ePn	Pn	10 35 11.2	-0.7
LCO	Las Campanas	5.85	11	ePn	Pn	10 35 25.8	-0.5
LCO				eSn	Sn	10 36 30.6	-1.7
PLCA	Paso Flores	6.06	170	P	Pn	10 35 30.8	+1.9
	comp=Z,3.8nm,0.3s,baz=16,slow=11,SNR=7.8						
PLCA				S	Sn	10 36 58.5	+22
	baz=353,slow=16,SNR=1.4						
PLCA	Paso Flores	6.06	170	ePn	Pn	10 35 29.5	+0.6
GO03	Copiap	7.32	12	ePn	Pn	10 35 45.1	-1.1
GO07	Milladeo Hill,	8.43	188	ePn	Pn	10 36 00.8	-0.5
TRQA	Tornquist	8.71	115	ePn	Pn	10 36 02.6	-2.6
GO02	Mina Guanaco	9.80	13	ePn	Pn	10 36 18.7	-1.8
LVC	Limon Verde	12.42	13	S	S	10 39 36.0	-3.6
	comp=Z,0.4nm,0.3s,baz=315,slow=20,SNR=2.4						
MNMC	Minye Minye	15.73	8	ePn	Pn	10 37 40.5	-0.1
	comp=Z,15nm,0.8s						
LPAZ	La Paz	18.73	12	P	P	10 38 17.5	0.0
	comp=Z,0.2nm,0.3s,baz=178,slow=9.0,SNR=5.7						
LPAZ	La Paz	18.73	12	eP	P	10 38 16.5	-1.0
SIV	San Ignacio	21.12	30	P	P	10 38 41.8	-1.1
	comp=Z,5.7nm,0.6s,baz=218,slow=9.6,SNR=16						
PTGA	Pitinga	35.69	21	eP	P	10 40 55.0	-1.0
	comp=Z,10nm,1.1s						
SDV	Santo Domingo	43.44	2	eP	P	10 42 00.0	-0.7
	comp=Z,213nm,0.4s						
SNAA	Sanae	50.86	158	P	P	10 42 57.8	+0.1
	comp=Z,0.6nm,0.3s,baz=248,slow=7.5,SNR=9.4						
SNAA	Sanae	50.86	158	eP	P	10 42 57.6	-0.1
	comp=Z,2.3nm,1.0s						
TXAR	Lajitas Array	70.43	331	P	P	10 45 13.1	+1.6
	comp=Z,0.4nm,0.5s,baz=156,slow=8.2,SNR=6.4						
TKL	Tuckaleechee C	70.93	350	P	P	10 45 14.5	+0.2
	baz=159,slow=8.6,SNR=1.2						
WVT	Waverly	72.07	347	eP	P	10 45 21.8	+0.6
	comp=Z,9.7nm,0.6s						
MAW	Mawson	72.43	163	P	P	10 45 24.1	+1.1
	comp=Z,2.5nm,1.0s,baz=258,slow=9.3,SNR=3.4						
MAW	Mawson	72.43	163	eP	P	10 45 23.5	+0.5
	comp=Z,0.5nm,1.0s						
DBIC	Dimbokro	75.40	71	P	P	10 45 40.9	-0.3
	comp=Z,4.5nm,0.8s,baz=242,slow=9.8,SNR=3.5						
DBIC	Dimbokro	75.40	71	eP	P	10 45 40.1	-1.1
	comp=Z,7.4nm,0.9s						
BOSA	Boshof	79.68	118	P	P	10 46 04.4	-0.8
	comp=Z,2.0nm,0.4s,baz=276,slow=2.0,SNR=7.8						
ECSD	EROS Data Cent	81.30	342	eP	P	10 46 13.5	+0.4
	comp=Z,2.9nm,0.6s						
LBTB	Lobatse	81.95	115	P	P	10 46 17.0	-0.3
	comp=Z,1.6nm,0.5s,baz=259,slow=6.4,SNR=5.5						
TORD	Torodi Ar. Bea	84.44	70	P	P	10 46 29.7	-0.3
	comp=Z,1.6nm,0.9s,baz=271,slow=3.9,SNR=5.1						
TOA1	Torodi Ar. Sit	84.44	70	eP	P	10 46 29.7	-0.3
PD31	Pinedale Array	84.47	333	eP	P	10 46 29.7	-0.2
	comp=Z,0.6nm,1.3s						
PDAR	Pinedale Array	84.47	333	P	P	10 46 29.9	0.0
	comp=Z,0.3nm,0.7s,baz=138,slow=5.5,SNR=4.0						
NV01	Mina Array Sit	84.54	325	eP	P	10 46 32.1	+1.8
NVAR	Mina Array Bea	84.54	325	P	P	10 46 32.1	+1.8
	comp=Z,0.5nm,0.8s,baz=156,slow=6.6,SNR=5.8						
MATP	Matopo	86.77	113	P	P	10 46 42.1	+0.2
	comp=Z,1.0nm,0.5s,baz=214,slow=7.5,SNR=4.1						
VYHS	Vyhne	115.59	48	ePDIF	Pdif	10 48 51.1	0.0
H11S2	WAKE ISLAND Hy	125.79	269	T	T	13 11 37.0	
	baz=113,slow=74						
H11S1	WAKE ISLAND Hy	125.80	269	T	T	13 11 40.4	
	baz=113,slow=74						
H11S3	WAKE ISLAND Hy	125.81	269	T	T	13 11 32.5	
	baz=113						
H11N3	WAKE ISLAND Hy	126.22	270	T	T	13 12 01.7	
	baz=109						
H11N1	WAKE ISLAND Hy	126.24	270	T	T	13 12 00.6	
	baz=109						
H11N2	WAKE ISLAND Hy	126.24	270	T	T	13 12 00.5	
	baz=109						

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*IDC **27** 10:34:44.7±2.4, 5°.38S×129°.28E, h217^{km}±22^{km}, mb3.6/11, mb1 3.9/14, mb1mx3.7/38, mbtmp4.3/14, MS3.3/1, Ms1 3.2/1, ms1mx2.3/29, Error ellipse: s-maj=33.6km s-min=13.0km az=81.0*

*NEIC **27** 10:34:44.3±1.2, 5°.35S×129°.41E, h224^{km}±10^{km}, mb4.3/13, Error ellipse: s-maj=13.3km s-min=11.6km az=102.0*

*ISCJB **27** 10:34:45.0±0.3, 5°.36S±0°.03×129°.40E±0°.06, h250^{km}, mb4.0/23, Error ellipse: s-maj=8.1km s-min=4.5km az=166.6*

*DJA **27** 10:34:45.0±0.4, 5°S±4°×12°9E±°, h239^{km}±7^{km}, M4.5/13, mb4.8/6, mB4.9/5, MLv4.6/13, Mw(mB)4.2/5*

ISC 27 10:34:45.9±0.5**, 5°.38S**±0°.05×**129°.45E**±0°.06**, h250**^{km}**, n49,** σ**2**^{s}**84**/56**, mb4.1**/22**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.96	28	P	Pn	10 35 17.9	-2.8
MSAI	Masohi	2.09	345	P	Pn	10 35 26.1	-3.1
MSAI				S	S	10 35 55.8	-7.6
AAI	Ambon	2.10	323	P	Pn	10 35 27.2	-2.1
NLAI	Namlea	3.17	312	P	Pn	10 35 38.7	-1.5
SAUI	Saumlaki	3.17	145	P	Pn	10 35 41.0	+0.8
FAKI	Fak Fak	3.71	49	ePn	Pn	10 35 44.5	-1.8
FAKI				eS	S	10 36 27.4	-6.9
SANI	Sanana	4.78	314	P	Pn	10 35 56.3	-2.8
SIJI	Sorong	4.83	22	P	Pn	10 35 58.2	-1.4
	31nm,0.3s,baz=63,slow=5.1,SNR=161						
SIJI				S	S	10 36 51.1	-7.4
	56nm,0.3s,baz=261,slow=23,SNR=26						
SWI	Sorong	4.84	22	P	Pn	10 35 57.8	-1.9
LBMI	Labuha	5.10	337	P	Pn	10 36 01.6	-1.3
TNTI	Ternate	6.46	341	ePn	Pn	10 36 17.6	-2.2
SOEI	Soe	6.73	229	ePn	Pn	10 36 21.7	-1.6
SOEI				eS	S	10 37 38.8	-2.7
MTN	Manton Dam	7.60	168	ePn	Pn	10 36 33.1	-1.1
MTN				eS	S	10 37 55.1	-6.2
WRAB	Tennant Creek	15.23	162	eP	Pn	10 38 08.7	-0.2
	24nm,0.8s						
WRAB				eS	S	10 40 56.4	-0.3
WRA	Warramunga Arr	15.24	162	P	Pn	10 38 08.6	-0.4
	6.9nm,0.3s,baz=342,slow=12,SNR=432						
WRA				S	S	10 40 52.1	-4.7
	1.3nm,0.3s,baz=340,slow=22,SNR=4.2						
WB2	Warramunga Arr	15.24	162	eP	Pn	10 38 08.8	-0.3
	34nm,1.0s						
WB2				eS	S	10 40 56.1	-0.8
JAGI	Jajag, Banyuwa	15.49	258	eP	P	10 38 05.6	-5.7
	60nm,0.9s						
JAGI	Jajag, Banyuwa	15.49	258	P	P	10 38 08.5	-2.8
COEN	Coen	15.98	123	ePn	Pn	10 38 19.4	+1.5
	13nm,0.8s						
AS31	Alice Springs	18.68	167	eP	Pn	10 38 48.4	-1.2
	16nm,0.4s						
ASAR	Alice Springs	18.68	167	P	Pn	10 38 48.0	-1.5
	5.1nm,0.3s,baz=349,slow=12,SNR=475						
ASAR				S	S	10 42 06.2	+0.9
	0.7nm,0.3s,baz=349,slow=21,SNR=23						
CTAO	Charters Tower	21.93	133	eP	P	10 39 19.3	0.0
	21nm,1.4s						
STKA	Stephens Creek	28.71	158	LR	LR	10 53 54.6	
	comp=Z,60nm,20.9s,baz=30,slow=40						
KMI	Kunming	39.92	321	P	P	10 41 57.0	+0.6
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
MJAR	Matsushiro Arr	42.50	10	P	P	10 42 17.3	+0.4
	comp=Z,1.5nm,0.6s,baz=189,slow=9.8,SNR=6.1						
KSRS	Korea Array	42.64	358	P	P	10 42 20.5	+2.6
	comp=Z,0.6nm,0.5s,baz=176,slow=9.0,SNR=4.8						
LZH	Lanzhou	47.73	332	eP	P	10 43 01.8	+3.7
LZH				pP	pP	10 43 49.8	-0.9
LZH				sP	sP	10 44 11.3	-7.1
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC	Hu-ho-hao-te	48.84	342	P	P	10 43 06.8	+0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,11nm,4.8s						
USRK	Ussuriysk Ar.	49.40	2	P	P	10 43 12.1	+1.7
	comp=Z,0.9nm,0.5s,baz=174,slow=7.7,SNR=5.8						
SONM	Songino Array	56.74	342	P	P	10 44 06.2	+2.2
	comp=Z,0.6nm,0.5s,baz=154,slow=4.7,SNR=2.9						
WMQ	Urumqi	61.75	327	eP	P	10 44 41.3	+3.1
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,59nm,3.9s						
WMQ				LR	LR		
	comp=N,1µm,29.1s						
WMQ				LR	LR		
	comp=E,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,140nm,28.9s						
PETK	Petropavlovsk-	62.97	19	P	P	10 44 48.9	+3.0
	comp=Z,1.4nm,0.7s,baz=217,slow=7.0,SNR=2.2						
KSH	Kashi	66.46	317	eP	P	10 45 11.5	+2.6
MK31	Makanchi Array	66.58	327	eP	P	10 45 10.4	+1.0
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	66.58	327	P	P	10 45 11.3	+1.9
	comp=Z,2.3nm,0.4s,baz=118,slow=8.6,SNR=31						
MAKZ	Makanchi	66.76	327	eP	P	10 45 12.0	+1.5
	comp=Z,2.7nm,0.4s						
ZAA0	Zalesovo Array	69.90	334	eP	P	10 45 30.4	+0.8
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	69.90	334	P	P	10 45 31.1	+1.4
	comp=Z,2.5nm,0.5s,baz=131,slow=5.1,SNR=7.4						
SEY	Seymchan	70.33	11	P	P	10 45 34.9	+2.8
	comp=Z,3.8nm,0.7s,baz=213,slow=7.2,SNR=8.7						
KURK	Kurchatov	70.86	329	eP	P	10 45 36.6	+1.0
	comp=Z,6.0nm,0.9s						
KK31	Karatay Array	71.77	319	eP	P	10 45 39.2	-2.0
	comp=Z,2.1nm,1.1s						
KKAR	Karatay Array	71.77	319	eP	P	10 45 39.1	-2.2
	comp=Z,2.1nm,1.1s						
ABKAR	Akbulak array	80.91	322	eP	P	10 46 33.5	+1.2
	comp=Z,1.2nm,0.6s						
ARU	Arti	84.05	328	P	P	10 46 51.4	+3.0
	comp=Z,0.9nm,0.3s,baz=288,slow=20,SNR=3.1						
ILAR	Eielson Array	92.12	25	P	P	10 47 30.1	+3.5
	comp=Z,0.2nm,0.5s,baz=251,slow=5.6,SNR=4.5						
ARCES	ARCESS Array B	99.88	340	P	Pdif	10 48 02.3	+0.7
	comp=Z,0.9nm,0.9s,baz=84,slow=8.3,SNR=3.8						
TORD	Torodi Ar. Bea	127.95	282	PKP	PKiKP	10 53 24.1	+0.6
	comp=Z,0.5nm,0.7s,baz=35,slow=5.3,SNR=2.4						
CPUP	Villa Florida	147.80	169	PKPbc	PKiKP	10 54 02.8	-1.0
	comp=Z,2.0nm,0.8s,baz=156,slow=1.8,SNR=4.0						
LPAZ	La Paz	152.32	141	PKPbc	PKiKP	10 54 17.2	+3.0
	comp=Z,0.4nm,0.4s,baz=180,slow=1.0,SNR=4.0						
LPAZ				PKPab	PKPab	10 54 28.4	+3.7
	comp=Z,1.3nm,1.0s,baz=192,slow=8.4,SNR=4.5						

RSNC 27 10:40:53.8±0.9**, 9°.49N**×**73°.24W, h116**^{km}±6^{km}**, ML3.4, Mw3.7, 5C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVALL	Valledupar, Ce	1.01	359	⇑eP	Pn	10 41 15.8	+0.1
CVALL				eS	Sn	10 41 32.5	+0.2
ARGC	Ariguani, Magd	1.06	290	eP	Pn	10 41 17.5	+1.4
ARGC				eS	Sn	10 41 35.2	+2.3
ARGC				i		10 41 36.4	
	comp=Z,260nm,0.4s						
SMLC	San Martn de	1.07	230	eP	Pn	10 41 16.1	-0.2
SMLC				eS	Sn	10 41 32.5	-0.7
SMLC				i		10 41 34.0	
	comp=Z,483nm,0.1s						
OCAC	Ocana	1.25	184	eP	Pn	10 41 18.1	-0.2
OCAC				eS	Sn	10 41 36.5	-0.3
OCAC				i		10 41 37.2	
	comp=N,2µm,0.3s						
SMRC	Santa Marta, M	1.93	330	eP	Pn	10 41 25.8	-0.3
SMRC				eS	Sn	10 41 49.8	-1.1
SMRC				i		10 41 56.2	
	comp=Z,101nm,0.6s						
SJCC	San Jacinto, C	1.95	282	eP	Pn	10 41 26.4	-0.2
SJCC				eS	Sn	10 41 51.0	-0.6
SJCC				i		10 41 53.9	
	comp=Z,276nm,0.4s						
PAMC	Pamplona, Colo	2.20	166	⇑eP	Pn	10 41 29.9	-0.2
PAMC				eS	Sn	10 41 57.4	-0.5
PAMC				i		10 42 01.6	
	comp=Z,95nm,0.2s						
GIRC	Giron, Santand	2.40	179	eP	Pn	10 41 32.1	-0.1
GIRC				eS	Sn	10 42 01.1	-0.6
GIRC				i		10 42 04.5	
	comp=Z,138nm,0.3s						
BRRC	Barranca, Sant	2.41	191	⇑iP	Pn	10 41 32.1	-0.3
BRRC				eS	Sn	10 42 01.4	-0.5
BRRC				i		10 42 03.7	
	comp=N,535nm,0.2s						
URIC	Uribia, Colomb	2.52	29	⇑eP	Pn	10 41 32.5	-1.2
URIC				eS	Sn	10 42 01.9	-2.4
URIC				i		10 42 02.7	
	comp=Z,154nm,0.3s						
ZARC	Zaragoza, Cauc	2.55	219	eP	Pn	10 41 33.4	-0.7
ZARC				eS	Sn	10 42 03.6	-1.4
ZARC				i		10 42 11.0	
	comp=Z,74nm,0.4s						
SDV	Santo Domingo	2.64	103	eP	Pn	10 41 35.4	-0.1
SDV				eS	Sn	10 42 05.7	-1.8
UREC	San Jos de Ur	2.85	233	eP	Pn	10 41 37.1	-0.9
UREC				eS	Sn	10 42 08.9	-3.2
BARC	Barichara	2.88	179	eP	Pn	10 41 38.6	-0.1
BARC				eS	Sn	10 42 12.5	-0.7
BARC				i		10 42 18.0	
	comp=Z,117nm,0.3s						
PTBC	PUERTO BERRIO,	3.17	202	eP	Pn	10 41 42.5	+0.3
PTBC				eS	Sn	10 42 18.4	-1.2
PTBC				i		10 42 22.0	
	comp=Z,60nm,0.3s						
TAMC	Tame, Arauca	3.36	155	⇑eP	Pn	10 41 44.2	-0.6
TAMC				eS	Sn	10 42 22.8	-1.4
TAMC				i		10 42 27.3	
	comp=Z,33nm,0.3s						
RUSC	La Rusia	3.58	177	eP	Pn	10 41 47.6	-0.5
SPBC	San Pablo de B	3.90	192	eP	Pn	10 41 52.2	+0.1
SPBC				eS	Sn	10 42 35.4	-1.8
SPBC				i		10 42 42.0	
	comp=N,131nm,0.3s						
HELC	Santa Helena	3.98	215	eP	Pn	10 41 53.4	-0.1
HELC				i		10 42 52.3	
	comp=E,52nm,0.3s						
YOPC	Yopal, Colombi	4.19	169	eP	Pn	10 41 55.5	-0.4
YOPC				eS	Sn	10 42 41.0	-3.1
NORC	Norcasia	4.22	203	eP	Pn	10 41 55.5	-0.9
NORC				eS	Sn	10 42 40.3	-4.5
NORC				i		10 42 51.9	
	comp=Z,39nm,0.4s						
GUY2C	Guyana, Caldas	4.73	207	eP	Pn	10 42 03.7	+0.1
GUY2C				eS	Sn	10 42 53.0	-4.7
PRAC	Prado	5.96	196	eP	Pn	10 42 19.2	-0.6
PRAC				eS	Sn	10 43 23.5	-3.4
PRAC				i		10 43 27.8	
	comp=N,15nm,0.3s						

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*IDC **27** 10:41:04.0±0.9, 17°.04S×177°.02W, h0^{km}, mb4.3/7, mb1 4.6/7, mb1mx4.1/42, mbtmp4.3/7, Error ellipse: s-maj=44.9km s-min=22.7km az=131.0*

*ISCJB **27** 10:41:07.1±0.8, 17°.0S±0°.2×177°.3W±0°.2, h33^{km}, mb4.2/7, Error ellipse: s-maj=31.5km s-min=15.4km az=135.2*

ISC 27 10:41:09.1±0.8**, 17°.0S**±0°.2×**177°.3W**±0°.2**, h35**^{km}**, n11,** σ**1**^{s}**36**/11**, mb4.3**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.13	249	Pn	Pn	10 44 51.3	-2.0
	0.4nm,0.3s,baz=101,slow=19,SNR=1.4						
URZ	Urewera	21.71	192	P	P	10 45 56.9	-0.2
	4.1nm,0.8s,baz=204,slow=20,SNR=1.3						
STKA	Stephens Creek	39.99	241	P	P	10 48 42.1	+1.5
	5.8nm,0.4s,baz=50,slow=9.0,SNR=24						
PETK	Petropavlovsk-	73.12	345	P	P	10 52 37.0	+1.2
	1.2nm,0.4s,baz=141,slow=9.1,SNR=4.9						
NVAR	Mina Array Bea	78.06	43	P	P	10 53 04.7	0.0
	1.7nm,0.6s,baz=227,slow=8.5,SNR=13						
TXAR	Lajitas Array	84.63	57	P	P	10 53 39.9	+0.3
	2.1nm,0.9s,baz=218,slow=5.8,SNR=12						
ILAR	Eielson Array	84.81	13	P	P	10 53 37.9	-1.6
	2.4nm,0.6s,baz=221,slow=5.8,SNR=35						
PDAR	Pinedale Array	85.99	43	P	P	10 53 44.7	-1.5
	0.4nm,0.5s,baz=226,slow=2.6,SNR=6.1						
ARCES	ARCESS Array B	125.65	350	PKP	PKPdf	11 00 06.3	0.0
	1.6nm,0.5s,baz=15,slow=1.4,SNR=25						
BRTR	Keskin Array B	144.91	316	PKPbc	PKPdf	11 00 44.4	+1.4
	1.3nm,0.7s,baz=125,slow=4.3,SNR=8.5						
GERES	GERESS Array B	147.03	347	PKPbc	PKPbc	11 00 48.5	+0.2
	0.8nm,0.6s,baz=29,slow=3.3,SNR=7.5						

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*ISCJB **27** 10:44:18.4±0.5, 22°.16S±0°.04×68°.71W±0°.06, h120^{km}±5^{km}, mb3.7/4, Error ellipse: s-maj=8.7km s-min=7.2km az=162.7*

*IDC **27** 10:44:18.9±0.7, 22°.24S×68°.65W, h107^{km}±8^{km}, mb3.5/4, mb1 3.5/7, mb1mx3.3/28, mbtmp3.7/7, Error ellipse: s-maj=35.3km s-min=18.1km az=89.0*

*SJA **27** 10:44:18.2±0.4, 22°.16S×68°.67W, h112^{km}±5^{km}, ML3.3, MW2.9*

*GUC **27** 10:44:18.8±0.5, 22°.13S×68°.72W, h112^{km}±4^{km}, ML3.8*

ISC 27 10:44:18.8±0.8**, 22°.21S**±0°.05×**68°.65W**±0°.06**, h109**^{km}±7^{km}**, n28,** σ**1**^{s}**50**/40**, mb3.8**/4**, 8C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.47	211	P	Pn	10 44 36.2	+0.3
	248nm,0.3s,baz=45,slow=6.1,SNR=4662						
LVC				S	Sn	10 44 49.4	+0.7
	421nm,0.3s,baz=218,slow=19,SNR=104						
LVC	Limon Verde	0.47	211	eP	Pn	10 44 36.2	+0.3
PB09	IPOC Station P	0.69	306	i P	Pn	10 44 37.4	+0.2
PB09				eS	Sn	10 44 51.0	0.0
PB09				IAML		10 44 52.2	
	comp=N,4µm,0.2s						
PB06	IPOC Station P	0.99	240	⇑iP	Pn	10 44 40.6	+0.6
PB06				eS	Sn	10 44 57.0	+1.0
PB06				IAML		10 44 57.6	
	comp=E,3µm,0.3s						
PB03	IPOC Station P	1.03	279	eP	Pn	10 44 40.9	+0.3
PB03	IPOC Station P	1.03	279	⇑iP	Pn	10 44 40.6	+0.1
PB03				eS	Sn	10 44 57.5	+0.6
PB03				IAML		10 44 58.6	
	comp=E,3µm,0.2s						
PB07	IPOC Station P	1.24	292	eP	Pn	10 44 42.7	-0.1
PB07	IPOC Station P	1.24	292	⇑iP	Pn	10 44 42.8	0.0
PB07				eS	Sn	10 45 00.7	-0.3
PB07				IAML		10 45 02.1	
	comp=E,3µm,0.2s						
PB15	IPOC Station P	1.25	217	eP	Pn	10 44 43.6	+0.7
PB15				eS	Sn	10 45 02.5	+1.3
PB15	IPOC Station P	1.25	217	⇑iP	Pn	10 44 43.9	+1.0
PB15				eS	Sn	10 45 03.2	+2.0
PB01	IPOC Station P	1.40	326	⇑iP	Pn	10 44 44.0	-0.5
PB01				eS	Sn	10 45 03.0	-1.0
PB01				IAML		10 45 05.0	
	comp=E,1µm,0.4s						
PB04	IPOC Station P	1.40	264	⇑iP	Pn	10 44 44.6	+0.1
PB04				eS	Sn	10 45 04.8	+0.8
PB04				IAML		10 45 08.3	
	comp=N,2µm,0.1s						
PB02	IPOC Station P	1.46	307	⇑iP	Pn	10 44 44.9	-0.3
PB02				eS	Sn	10 45 04.3	-0.9
PB02				IAML		10 45 06.0	
	comp=E,2µm,0.3s						
PB05	IPOC Station P	1.57	246	eP	Pn	10 44 47.1	+0.5
PB05	IPOC Station P	1.57	246	⇑iP	Pn	10 44 46.8	+0.2
PB05				eS	Sn	10 45 08.6	+0.9
PB05				IAML		10 45 15.3	
	comp=E,1µm,0.5s						
PB10	IPOC Station P	2.19	233	eP	Pn	10 44 54.7	+0.5
YJA	Yavi	2.91	90	eP	Pn	10 45 05.6	+1.6
YJA				IAML		10 45 07.2	
	comp=Z,36nm,0.5s						
HJA	Humahuaca	3.15	109	eP	Pn	10 45 08.9	+1.7
HJA				IAML		10 45 10.7	
	comp=Z,134nm,0.5s						
AZAP	Zapla	3.86	122	eP	Pn	10 45 18.1	+1.5
LPAZ	La Paz	5.91	5	P	Pn	10 45 46.0	+1.4
	comp=Z,0.6nm,0.3s,baz=189,slow=4.3,SNR=19						
CFA	Coronel Fontan	9.37	178	P	Pn	10 46 28.5	-2.4
	comp=Z,0.6nm,0.3s,baz=347,slow=18,SNR=6.5						
CFA				S	Sn	10 48 08.6	-5.9
	comp=Z,0.4nm,0.3s,baz=188,slow=15,SNR=2.7						
SIV	San Ignacio	9.46	51	P	Pn	10 46 28.2	-4.0
	comp=Z,2.2nm,0.3s,baz=242,slow=12,SNR=60						
SIV				S	Sn	10 48 06.9	-10
	comp=Z,0.0nm,0.3s,baz=165,slow=20,SNR=2.8						
PLCA	Paso Flores	18.54	185	P	P	10 48 27.3	+0.3
	comp=Z,0.1nm,0.3s,baz=355,slow=11,SNR=4.4						
SNAA	Sanae	61.54	161	P	P	10 54 24.6	+0.6
	comp=Z,0.7nm,0.5s,baz=264,slow=8.7,SNR=11						
DBIC	Dimbokro	68.71	73	P	P	10 55 11.3	+0.2
	comp=Z,2.8nm,0.8s,baz=207,slow=9.0,SNR=2.8						
PDAR	Pinedale Array	74.84	330	P	P	10 55 47.7	+0.1
	comp=Z,0.2nm,0.8s,baz=138,slow=5.6,SNR=2.6						
TORD	Torodi Ar. Bea	77.37	70	P	P	10 56 02.3	+0.1
	comp=Z,0.6nm,0.4s,baz=241,slow=5.5,SNR=9.6						
MKAR	Makanchi Array	146.06	37	PKPbc	PKPab	11 03 46.3	-0.5
	comp=Z,0.9nm,0.8s,baz=29,slow=2.8,SNR=5.3						

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*IDC **27** 10:45:18.4±4.1, 7°.00S×129°.34E, h122^{km}±44^{km}, mb3.9/3, mb1 3.8/6, mb1mx3.4/35, mbtmp4.2/6, Error ellipse: s-maj=62.6km s-min=16.0km az=73.0*

*ISCJB **27** 10:45:19.6±0.5, 6°.76S±0°.04×129°.91E±0°.08, h150^{km}, mb4.1/5, Error ellipse: s-maj=11.3km s-min=5.8km az=165.4*

*NEIC **27** 10:45:22.1±2.2, 6°.81S×129°.95E, h174^{km}±12^{km}, mb4.1/5, Error ellipse: s-maj=17.3km s-min=10.9km az=71.0*

ISC 27 10:45:20.6±0.7**, 6°.79S**±0°.05×**130°.02E**±0°.08**, h150**^{km}**, n22,** σ**2**^{s}**62**/28**, mb4.4**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.74	133	ePn	Pn	10 45 56.7	+3.9
FAKI	Fak Fak	4.44	30	ePn	Pn	10 46 28.1	+1.4
FAKI				eSn	Sn	10 47 14.7	-3.5
SIJI	Sorong	6.01	12	P	Pn	10 46 50.1	+2.6
	1.6nm,0.3s,baz=89,slow=12,SNR=13						
SIJI				S	Sn	10 47 50.3	-5.2
	5.8nm,0.3s,baz=253,slow=22,SNR=8.9						
MTN	Manton Dam	6.12	170	ePn	Pn	10 46 52.0	+3.1
MTN				eSn	Sn	10 47 58.3	+0.3
SOEI	Soe	6.41	242	ePn	Pn	10 46 54.1	+1.2
WRAB	Tennant Creek	13.73	163	ePn	Pn	10 48 28.9	-0.2
WRA	Warramunga Arr	13.73	163	P	Pn	10 48 29.0	-0.2
	0.7nm,0.3s,baz=337,slow=14,SNR=5.4						
WRA				S	Sn	10 50 56.1	-5.3
	1.8nm,0.3s,baz=330,slow=23,SNR=6.7						
WR1	Warramunga Arr	13.73	163	ePn	Pn	10 48 29.0	-0.2
WR1				eSn	Sn	10 50 56.1	-5.3
WB2	Warramunga Arr	13.73	163	ePn	Pn	10 48 28.6	-0.7
COEN	Coen	14.77	120	eP	P	10 48 44.7	+0.4
JAGI	Jajag, Banyuwa	15.82	263	eP	Pn	10 48 54.8	-0.5
	50nm,1.2s						
AS31	Alice Springs	17.19	168	eP	Pn	10 49 11.4	-0.4
	2.3nm,0.7s						
AS31				eS	S	10 52 20.2	-2.5
ASAR	Alice Springs	17.19	168	P	Pn	10 49 11.2	-0.7
	1.1nm,0.3s,baz=348,slow=9.9,SNR=40						
ASAR				S	S	10 52 20.2	-2.5
	0.4nm,0.3s,baz=354,slow=25,SNR=5.7						
CTA	Charters Tower	20.56	132	P	Pn	10 49 50.9	-0.9
	6.9nm,0.9s,baz=293,slow=13,SNR=2.6						
STKA	Stephens Creek	27.20	158	P	P	10 50 52.1	+1.7
	1.7nm,0.5s,baz=334,slow=13,SNR=3.5						

STKA	**Stephens Creek**	**27.20**	**158**	*e*P	**P**	**10 50 52.2**	**+1.9**
	1.4nm,1.1s						
ARMA	**Armidale**	**31.05**	**142**	*e*P	**P**	**10 51 26.9**	**+2.3**
HHC	**Hu-ho-hao-te**	**50.35**	**342**	P	**P**	**10 54 06.0**	**+3.6**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,12nm,5.1s						
MK31	**Makanchi Array**	**68.06**	**327**	*e*P	**P**	**10 56 03.2**	**-0.8**
	comp=Z,1.6nm,0.5s						
MK32	**Makanchi Array**	**68.06**	**327**	*e*P	**P**	**10 56 03.5**	**-0.5**
MKAR	**Makanchi Array**	**68.06**	**327**	P	**P**	**10 56 03.5**	**-0.5**
	comp=Z,2.2nm,0.4s,baz=118,slow=8.4,SNR=15						
MAKZ	**Makanchi**	**68.24**	**327**	*e*P	**P**	**10 56 04.1**	**-1.0**
	comp=Z,2.9nm,0.4s						

IDC 27 10:51:25.6±3.5**, 15°.03S**×**175°.92W, h0km, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/25**, mbtmp3.6**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.6**/16**, Error ellipse: s-maj=196.1km s-min=29.5km az=146.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**23.94**	**194**	LR	LR	11 04 35.2	
	comp=Z,88nm,18.1s,baz=47,slow=33						
WRA	**Warramunga Arr**	**47.56**	**257**	P	P	11 00 03.4	+0.1
	1.1nm,0.9s,baz=82,slow=6.9,SNR=1.7						
ASAR	**Alice Springs**	**47.91**	**252**	P	P	11 00 05.8	-0.3
	0.4nm,0.6s,baz=85,slow=8.1,SNR=7.0						
NVAR	**Mina Array Bea**	**75.71**	**43**	P	P	11 03 13.4	+0.1
	0.1nm,0.5s,baz=224,slow=7.6,SNR=3.6						
ILAR	**Eielson Array**	**82.58**	**12**	P	P	11 03 50.1	0.0
	0.3nm,0.6s,baz=220,slow=5.6,SNR=5.0						

TRN 27 10:58:53.6, 14°.06N×**60°.62W, h26km, MD3.5, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLBI	**Saint Lucia, B**	**0.35**	**264**	*e*P	Pn	10 59 03.1	+0.1
SLBI				*e*S	Sn	10 59 09.6	+0.4
MCLT	**Moule a Chique**	**0.47**	**222**	*e*P	Pn	10 59 04.5	-0.2
MCLT				*e*S	Sn	10 59 12.3	0.0
SLB	**Belfond**	**0.47**	**241**	*e*P	Pn	10 59 06.0	+1.2
SLB				*e*S	Sn	10 59 13.8	+1.4
MVM	**Montagne Vaucl**	**0.56**	**331**	*e*P	Pn	10 59 05.8	-0.2
LPMF	**Morne Lapointe**	**0.61**	**326**	*e*P	Pn	10 59 06.8	+0.1
BIM	**Bigot**	**0.63**	**316**	*e*P	Pn	10 59 07.6	+0.6
TRMF	**Trois Ilets**	**0.63**	**318**	*e*P	Pn	10 59 07.5	+0.6
ZAM	**Aeronautique**	**0.65**	**322**	*e*P	Pn	10 59 07.3	+0.2
ILAM	**Ilet Lapin Mar**	**0.75**	**341**	*e*P	Pn	10 59 09.2	+0.6
FDF	**Fort de France**	**0.84**	**322**	*e*P	Pn	10 59 11.5	+1.5
FDF				*e*S	Sn	10 59 23.1	+1.5
SFAN	**Fancy Village**	**0.86**	**219**	*e*P	Pn	10 59 10.7	+0.6
SFAN				*e*S	Sn	10 59 24.2	+2.3
PML	**Morne Lenard**	**0.90**	**323**	*e*P	Pn	10 59 12.6	+1.9
GBMF	**Grand Be**	**0.90**	**324**	*e*P	Pn	10 59 12.3	+1.5
BAMF	**Morne Balai**	**0.91**	**326**	*e*P	Pn	10 59 12.4	+1.6
CXM	**Morne La Croix**	**0.92**	**324**	*e*P	Pn	10 59 14.6	+3.6
SSV	**Crater Summit**	**0.92**	**218**	*e*P	Pn	10 59 12.2	+1.2
SSV				*e*S	Sn	10 59 25.5	+2.1
SVV	**Soufriere Volc**	**0.94**	**218**	*e*P	Pb	10 59 12.6	+1.3
SVV				*e*S	Sn	10 59 26.4	+2.5
PCM	**Pelee Case Pet**	**0.94**	**323**	*e*P	Pb	10 59 12.9	+1.5
SVB	**Belmont**	**1.00**	**218**	*e*P	Pb	10 59 12.7	+0.4
SVB				*e*S	Sn	10 59 26.6	+1.4
FCV	**Fort Charlotte**	**1.09**	**214**	*e*P	Pb	10 59 14.6	+0.8
FCV				*e*S	Sb	10 59 28.8	+1.3
DLPL	**La Plaine**	**1.40**	**334**	*e*P	Pb	10 59 18.8	-0.4
DLPL				*e*S	Sb	10 59 36.9	+0.2

SOME 27 11:03:16.0, 40°.65N×79°.67E, h5km

NNC 27 11:03:17.6±1.8**, 40°.76N**×**79°.74E, h0km, mb3.5, mpv3.1, 2C-1D, Error ellipse: s-maj=14.3km s-min=11.5km az=61.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**2.45**	**348**	Pg	Pb	11 04 02.3	-0.3
	2.3nm,0.2s						
UZB				Lg	Lg	11 04 35.5	
	4.9nm,0.3s						
UZB	**Uzynbulak**	**2.45**	**348**	*e*P	Pb	11 04 02.3	-0.3
	2.3nm,0.2s						
UZB				*e*S	Sg	11 04 35.5	-0.7
	4.9nm,0.3s						
SATY	**Saty**	**2.51**	**337**	Pg	Pb	11 04 04.1	+0.5
	4.5nm,0.3s						
SATY				Lg	Lg	11 04 38.6	
	13nm,0.6s						
SATY	**Saty**	**2.51**	**337**	*e*P	Pb	11 04 04.0	+0.5
	4.5nm,0.3s						
SATY				*e*S	Sg	11 04 38.6	+0.5
	13nm,0.6s						
PDGK	**Podgornoye**	**2.58**	**356**	⇓Pg	Pb	11 04 04.0	-0.8
	2.5nm,0.4s						
PDGK				⇑Lg	Lg	11 04 38.1	
	3.6nm,0.5s						
KPKS	**Kokpek**	**2.82**	**344**	*e*P	Pb	11 04 09.5	+0.6
	8.4nm,0.3s						
KPKS				*e*S	Sg	11 04 48.2	0.0
	18nm,0.4s						
KURS	**Kuram**	**2.97**	**337**	Pg	Pb	11 04 11.8	+0.4
	1.6nm,0.3s						
KURS				Lg	Lg	11 04 52.0	
	2.5nm,0.4s						
KURS	**Kuram**	**2.97**	**337**	*e*P	Pb	11 04 11.8	+0.4
	1.6nm,0.3s						
KURS				*e*S	Sg	11 04 52.0	-1.0
	2.5nm,0.4s						
CHKK	**Chushkaly**	**3.71**	**327**	Pg	Pb	11 04 24.7	+0.7
	1.1nm,0.2s						
CHKK				Lg	Lg	11 05 14.2	
	6.6nm,0.5s						
CHKK	**Chushkaly**	**3.71**	**327**	*e*P	Pb	11 04 24.7	+0.7
	1.1nm,0.2s						
CHKK				*e*S	Sg	11 05 14.2	-2.5
	6.6nm,0.5s						
KTBS	**Karatobe**	**3.73**	**323**	Pg	Pb	11 04 25.3	+1.0
	1.5nm,0.3s						
KTBS				Lg	Lg	11 05 14.9	
	3.4nm,0.5s						
KTBS	**Karatobe**	**3.73**	**323**	*e*P	Pb	11 04 25.3	+1.0
	1.5nm,0.3s						
KTBS				*e*S	Sg	11 05 14.9	-2.4
	3.4nm,0.5s						
TKM2	**Tokmak 2**	**3.78**	**306**	⇑Lg	Lg	11 05 16.7	
	1.2nm,0.6s						

ISCJB 27 11:12:26.7±0.3, 24°.20N±0°.02×122°.20E±0°.02, h48km±6km, Error ellipse: s-maj=3.5km s-min=2.1km az=158.3

TAP 27 11:12:26.3, 24°.18N×122°.17E, h46km, ML3.0, C

JMA 27 11:12:26.1±0.1, 24°.17N×122°.16E, h56km±2km, M2.3

ISC 27 11:12:26.5±1.0**, 24°.17N**±0°.02×**122°.17E**±0°.02**, h32km**±11km**, n62, σ0ˢ.73**/117**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.38**	**354**	*e*P	**Pn**	**11 12 36.4**	**+0.8**
	baz=353						
EOS1				*e*S	**Sn**	**11 12 43.8**	**+2.0**
	baz=353						
NANB	**Nanao**	**0.46**	**303**	⇑*i*P	**Pn**	**11 12 37.4**	**+0.5**
	baz=302						
NANB				S	**Sn**	**11 12 45.3**	**+1.3**
	baz=302						
ENA	**Nanau**	**0.47**	**303**	P	**Pn**	**11 12 37.4**	**+0.5**
	baz=302						
ENA				S	**Sn**	**11 12 45.7**	**+1.6**
	baz=302						
NACB	**Ninganchiao**	**0.53**	**270**	*e*P	**Pn**	**11 12 38.0**	**+0.3**
	baz=269						
NACB				*e*S	**Sn**	**11 12 46.6**	**+1.0**
	baz=269						
TWD	**Chiawan**	**0.53**	**260**	*e*P	**Pn**	**11 12 38.3**	**+0.4**
	baz=259						
TWD				*e*S	**Sn**	**11 12 46.9**	**+1.2**
	baz=259						
ETLH	**Xiulin Townshi**	**0.63**	**273**	*e*P	**Pn**	**11 12 39.5**	**+0.2**
	baz=272						
ETLH				*e*S	**Sn**	**11 12 49.0**	**+0.7**
	baz=272						
TWE	**Neicheng**	**0.71**	**320**	P	**Pb**	**11 12 40.5**	**-0.1**
	baz=320						
TWE				*e*S	**Sb**	**11 12 49.9**	**-0.2**
	baz=320						
NDT	**Datong Townshi**	**0.74**	**306**	*e*P	**Pb**	**11 12 41.2**	**+0.2**
	baz=305						
NDT				*e*S	**Sn**	**11 12 51.4**	**+0.6**
	baz=305						
NTC	**Toucheng**	**0.74**	**335**	*e*S	**Sn**	**11 12 51.8**	**+0.8**
	baz=335						
JYNG	**Yonagunijimaku**	**0.76**	**69**	P	**Pb**	**11 12 41.1**	**-0.2**
JYNG				S	**Sn**	**11 12 52.1**	**+0.8**
NNSB	**Datong**	**0.76**	**290**	*e*P	**Pn**	**11 12 41.2**	**+0.1**
	baz=289						
NNSB				*e*S	**Sb**	**11 12 51.5**	**-0.1**
	baz=289						
ESL	**Shilin**	**0.76**	**242**	P	**Pb**	**11 12 41.3**	**-0.1**
	baz=241						
ESL				*e*S	**Sn**	**11 12 52.4**	**+0.9**
	baz=241						
NNS	**Nan Shan**	**0.78**	**290**	*e*P	**Pb**	**11 12 41.7**	**0.0**
	baz=289						
NNS				*e*S	**Sn**	**11 12 52.2**	**+0.3**
	baz=289						
YOJ	**Yonaguni jima**	**0.82**	**69**	*e*P	**Pn**	**11 12 41.9**	**+0.1**
	baz=69						
YOJ				*e*S	**Sb**	**11 12 53.3**	**+0.3**
	baz=69						
YOJ	**Yonaguni jima**	**0.82**	**69**	P	**Pn**	**11 12 41.8**	**+0.1**
YOJ				*e*S	**Sb**	**11 12 53.2**	**+0.1**
WHF	**Hehuan Shan**	**0.83**	**268**	*e*P	**Pn**	**11 12 42.4**	**+0.1**
	baz=267						
WHF				*e*S	**Sb**	**11 12 54.0**	**+0.2**
	baz=267						
EGFH	**Guangfu**	**0.85**	**234**	*e*P	**Pb**	**11 12 42.8**	**0.0**
	baz=233						
EGFH				*e*S	**Sb**	**11 12 54.7**	**+0.8**
	baz=233						
TIPB	**Shuangxi**	**0.85**	**338**	P	**Pn**	**11 12 42.0**	**-0.3**
	baz=338						
TIPB				*e*S	**Sb**	**11 12 54.4**	**+0.3**
	baz=338						
YHNB	**Yeheng**	**0.88**	**304**	*e*P	**Pn**	**11 12 42.7**	**0.0**
	baz=303						
YHNB				*e*S	**Sn**	**11 12 53.8**	**-0.6**
	baz=303						
TWT	**Tachien**	**0.91**	**275**	P	**Pb**	**11 12 44.4**	**+0.4**
	baz=274						
TWT				*e*S	**Sb**	**11 12 56.2**	**+0.3**
	baz=274						
CHGB	**Renai**	**0.92**	**263**	*e*P	**Pb**	**11 12 43.8**	**-0.3**
	baz=262						
CHGB				*e*S	**Sb**	**11 12 56.2**	**+0.1**
	baz=262						
TDCB	**Techi**	**0.93**	**275**	*e*P	**Pb**	**11 12 44.1**	**-0.1**
	baz=274						
TDCB				*e*S	**Sb**	**11 12 56.1**	**-0.2**
	baz=274						
HGSD	**Ruisui**	**0.96**	**225**	*e*P	**Pn**	**11 12 44.0**	**+0.2**
	baz=225						
HGSD				*e*S	**Sb**	**11 12 57.3**	**+0.1**
	baz=225						
NHDH	**Xindian Distri**	**0.98**	**323**	*e*S	**Sb**	**11 12 57.8**	**+0.1**
	baz=322						
TATO	**Taipei**	**1.01**	**322**	*e*P	**Pn**	**11 12 44.6**	**+0.2**
	baz=322						
TATO				*e*S	**Sb**	**11 12 58.2**	**-0.3**
	baz=322						
EHY	**Hungye**	**1.02**	**230**	*e*P	**Pn**	**11 12 44.6**	**0.0**
	baz=229						
EHY				*e*S	**Sn**	**11 12 57.9**	**0.0**
	baz=229						
VWDT	**VWDT**	**1.03**	**246**	*e*P	**Pb**	**11 12 45.6**	**-0.3**
	baz=245						
VWDT				*e*S	**Sb**	**11 12 59.5**	**+0.5**
	baz=245						
WLTB	**Daxi**	**1.07**	**309**	*e*P	**Pn**	**11 12 45.6**	**+0.3**
	baz=308						
WLTB				*e*S	**Sb**	**11 13 00.4**	**0.0**
	baz=308						
YM01	**YM01**	**1.11**	**331**	*e*P	**Pn**	**11 12 46.0**	**+0.1**
	baz=330						
YM01				*e*S	**Sb**	**11 13 00.9**	**-0.6**
	baz=330						
YULB	**Yu-li**	**1.12**	**226**	*e*P	**Pn**	**11 12 45.9**	**0.0**
	baz=225						
YULB				*e*S	**Sb**	**11 13 00.9**	**-0.7**
	baz=225						
YM10	**YM10**	**1.12**	**331**	*e*P	**Pn**	**11 12 46.2**	**+0.2**
	baz=330						
YM10				*e*S	**Sn**	**11 13 00.5**	**0.0**
	baz=330						
YM05	**YM05**	**1.13**	**331**	*e*P	**Pn**	**11 12 46.3**	**+0.2**
	baz=330						
YM05				*e*S	**Sn**	**11 13 00.7**	**+0.1**
	baz=330						
YM04	**YM04**	**1.13**	**330**	*e*P	**Pn**	**11 12 46.3**	**+0.2**
	baz=329						
TWF1	**Yuli**	**1.15**	**225**	*e*P	**Pn**	**11 12 46.5**	**+0.2**
	baz=224						
DPDB	**Guoxing**	**1.15**	**263**	*e*P	**Pb**	**11 12 47.4**	**-0.5**
	baz=262						
DPDB				*e*S	**Sb**	**11 13 02.0**	**-0.4**
	baz=262						
LIOB	**Emei**	**1.15**	**294**	P	**Pb**	**11 12 47.2**	**-0.7**
	baz=293						
LIOB				*e*S	**Sn**	**11 13 01.7**	**+0.6**
	baz=293						
NSTT	**Nanjuang**	**1.16**	**293**	*e*P	**Pb**	**11 12 47.4**	**-0.7**
	baz=292						
NSTT				*e*S	**Sb**	**11 13 02.4**	**-0.4**
	baz=292						
ANP	**Anpu**	**1.17**	**330**	*e*S	**Sn**	**11 13 01.8**	**+0.2**
	baz=329						
SSLB	**Suanglung**	**1.18**	**251**	*e*P	**Pn**	**11 12 47.0**	**+0.2**
	baz=250						
SSLB				*e*S	**Sn**	**11 13 02.3**	**+0.6**
	baz=250						
TYC	**Yuchr**	**1.23**	**258**	*e*P	**Pb**	**11 12 49.2**	**0.0**
	baz=257						
TYC				*e*S	**Sn**	**11 13 03.5**	**+0.6**
	baz=257						
WHYT	**Xinyi Township**	**1.30**	**249**	*e*P	**Pb**	**11 12 50.5**	**+0.1**
	baz=248						
WHYT				*e*S	**Sn**	**11 13 05.5**	**+0.8**
	baz=248						
YUS	**Yu-Shan**	**1.31**	**239**	*e*P	**Pb**	**11 12 50.0**	**-0.8**
	baz=238						
YUS				*e*S	**Sn**	**11 13 05.9**	**+0.3**
	baz=238						
WJS	**Zhushan**	**1.36**	**255**	*e*P	**Pb**	**11 12 51.7**	**+0.2**
	baz=254						
WJS				*e*S	**Sb**	**11 13 09.6**	**+1.0**
	baz=254						
IRIF	**Iriomote-Funau**	**1.43**	**83**	P	**Pn**	**11 12 50.1**	**-0.1**
IRIF				S	**Sn**	**11 13 07.8**	**-0.1**
ELDTW	**Lidau**	**1.44**	**227**	*e*P	**Pn**	**11 12 50.7**	**+0.2**
	baz=226						
ELDTW				*e*S	**Sn**	**11 13 09.0**	**+0.6**
	baz=226						
HATJ	**Hateruma jima**	**1.50**	**94**	P	**Pn**	**11 12 52.1**	**+1.0**
HATJ				S	**Sn**	**11 13 10.5**	**+0.9**
TPUB	**Ta-pu**	**1.66**	**239**	*e*P	**Pn**	**11 12 54.7**	**+1.3**
	baz=238						
TPUB				*e*S	**Sb**	**11 13 16.6**	**-0.4**
	baz=238						
CHN4	**Tsaushan**	**1.66**	**241**	*e*P	**Pb**	**11 12 55.8**	**-0.7**
	baz=240						
CHN4				*e*S	**Sb**	**11 13 17.2**	**+0.1**
	baz=240						
JKRS	**Kuro-shima**	**1.68**	**87**	P	**Pn**	**11 12 54.3**	**+0.7**
JKRS				S	**Sn**	**11 13 14.5**	**+0.5**
TWGBT	**Beinan**	**1.68**	**217**	*e*P	**Pn**	**11 12 54.1**	**+0.4**
	baz=216						
TWG	**Pinlang**	**1.68**	**217**	*e*P	**Pn**	**11 12 53.7**	**0.0**
	baz=216						
TWG				*e*S	**Sn**	**11 13 14.3**	**+0.1**
	baz=216						
WTP	**Ta-pu**	**1.70**	**237**	*e*P	**Pb**	**11 12 56.5**	**-0.7**
	baz=236						
WTP				*e*S	**Sb**	**11 13 17.3**	**-1.0**
	baz=236						
TWK	**Hsinying**	**1.79**	**240**	*e*P	**Pb**	**11 12 57.2**	**-1.5**
	baz=239						
TWK				*e*S	**Sb**	**11 13 20.4**	**-0.3**
	baz=239						
CHN1	**Nanshi**	**1.80**	**237**	*e*P	**Pb**	**11 12 57.1**	**-1.8**
	baz=236						
CHN1				*e*S	**Sb**	**11 13 20.0**	**-1.1**
	baz=236						
JIJ	**Ishigaki jima**	**1.81**	**84**	P	**Pn**	**11 12 55.2**	**-0.2**
JIJ				S	**Sn**	**11 13 16.5**	**-0.8**
JISG	**Ishigakijimahi**	**1.99**	**78**	P	**Pn**	**11 12 57.6**	**-0.4**
JISG				S	**Sn**	**11 13 20.8**	**-1.0**
MASBT	**Mashibuluo**	**2.10**	**223**	*e*P	**Pn**	**11 13 01.2**	**+1.8**
	baz=222						
MASBT				*e*S	**Sn**	**11 13 26.0**	**+1.5**
	baz=222						
JTJ	**Tarama**	**2.35**	**78**	P	**Pn**	**11 13 03.2**	**+0.3**
JTJ				S	**Sn**	**11 13 30.1**	**-0.6**
PHUB	**P'eng-hu**	**2.47**	**255**	*e*P	**Pn**	**11 13 04.2**	**-0.3**
	baz=254						
PHUB				*e*S	**Sn**	**11 13 33.0**	**-0.5**
	baz=254						
JIRB	**Irabujima**	**2.81**	**76**	S	**Sn**	**11 13 41.6**	**-0.4**
PTMZ	**Houxiangcun**	**2.91**	**288**	*e*P	**Pn**	**11 13 09.7**	**-0.8**
	baz=287						
PTMZ				*e*S	**Sn**	**11 13 40.8**	**-3.6**
	baz=287						
JMJ2	**Miyako jima3**	**2.93**	**78**	P	**Pn**	**11 13 11.5**	**+0.6**
JMJ2				S	**Sn**	**11 13 46.2**	**+1.2**

IDC 27 11:12:34.5±2.2, 52°.58N×160°.33E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.3/44, mbtmp3.7/5, Error ellipse: s-maj=42.7km s-min=28.6km az=149.0

KRSC 27 11:12:34.4±1.4, 52°.02N×160°.08E, h54km±19km, ML4.0

ISCJB 27 11:12:36.2±0.8, 52°.02N±0°.04×160°.05E±0°.06, h49km±8km, mb3.7/6, Error ellipse: s-maj=8.6km s-min=4.8km az=139.2

ISC 27 11:12:36.5±1.2**, 52°.00N**±0°.06×**160°.08E**±0°.05**, h39km**±4km**, n39, σ1ˢ.20**/50**, mb3.8**/6**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.05**	**295**	*e*P	**Pn**	**11 12 53.4**	**-1.3**
RUS				*e*S	**Sn**	**11 13 06.5**	**-1.6**
SPN	**Mys Shipunski**	**1.10**	**358**	*e*P	**Pn**	**11 12 54.8**	**-0.5**
SPN				*e*S	**Sn**	**11 13 09.0**	**-0.3**
KDTR	**Khodutka, Kamc**	**1.25**	**262**	*e*P	**Pn**	**11 12 57.7**	**+0.3**
KDTR				*e*S	**Sn**	**11 13 13.8**	**+0.8**
NLC	**Nalytchevo**	**1.25**	**339**	*e*P	**Pn**	**11 12 56.7**	**-0.7**
NLC				*e*S	**Sn**	**11 13 11.8**	**-1.2**
MTVR	**Mutnovka**	**1.26**	**293**	*e*P	**Pn**	**11 12 57.1**	**-0.6**
MTVR				*e*S	**Sn**	**11 13 12.7**	**-0.7**
DALK	**Dalny**	**1.31**	**322**	*e*P	**Pn**	**11 12 57.8**	**-0.4**
DALK				*e*S	**Sn**	**11 13 13.9**	**-0.5**
ASAK	**Asacha**	**1.39**	**287**	*e*P	**Pn**	**11 12 59.6**	**+0.2**
ASAK				*e*S	**Sn**	**11 13 16.9**	**+0.3**
UGLR	**Uglovaya**	**1.43**	**328**	*e*P	**Pn**	**11 12 59.9**	**-0.1**
UGLR				*e*S	**Sn**	**11 13 18.0**	**+0.4**
KRMR	**Karymshinskiy**	**1.45**	**306**	*e*P	**Pn**	**11 12 59.8**	**-0.4**
KRMR				*e*S	**Sn**	**11 13 17.8**	**-0.1**
SDLR	**Sedlovina**	**1.47**	**331**	*e*P	**Pn**	**11 12 59.9**	**-0.6**
SMAR	**Somma**	**1.48**	**329**	*e*P	**Pn**	**11 13 00.2**	**-0.6**
AVH	**Avacha**	**1.50**	**328**	*e*P	**Pn**	**11 13 01.0**	**0.0**
AVH				*e*S	**Sn**	**11 13 19.1**	**-0.3**
KRER	**Koryakskii**	**1.54**	**329**	*e*P	**Pn**	**11 13 02.0**	**+0.5**
KOK	**Koryaka**	**1.56**	**326**	*e*P	**Pn**	**11 13 01.8**	**0.0**
KRX	**Arik**	**1.61**	**328**	*e*P	**Pn**	**11 13 02.5**	**0.0**
PETK	**Petropavlovsk-**	**1.83**	**308**	Pn	**Pn**	**11 13 05.7**	**+0.4**
	15nm,0.3s,baz=115,slow=20,SNR=240						
PETK				Sn	**Sn**	**11 13 27.7**	**+0.5**
	12nm,0.3s,baz=129,slow=18,SNR=4.3						
APC	**Apacha**	**2.01**	**299**	*e*P	**Pn**	**11 13 09.1**	**+1.3**
APC				*e*S	**Sn**	**11 13 33.1**	**+1.4**
GNL	**Ganaly**	**2.13**	**324**	*e*P	**Pn**	**11 13 10.6**	**+1.0**
GNL				*e*S	**Sn**	**11 13 35.7**	**+0.8**
MKZ	**Mys Kozlova**	**2.75**	**21**	*e*P	**Pn**	**11 13 17.9**	**0.0**
MKZ				*e*S	**Sn**	**11 13 49.3**	**-0.5**
SKR	**Severo-Kuril's**	**2.81**	**244**	*e*P	**Pn**	**11 13 19.7**	**+0.9**
SKR				*e*S	**Sn**	**11 13 52.2**	**+0.8**
KZV	**Kizimen**	**3.12**	**2**	*e*P	**Pn**	**11 13 25.2**	**+2.0**
KZV				*e*S	**Sn**	**11 14 00.3**	**+1.0**
TUMD	**Tumrok D**	**3.21**	**3**	*e*P	**Pn**	**11 13 26.5**	**+2.1**
TUMD				*e*S	**Sn**	**11 14 02.1**	**+0.7**
TUMR	**Tumrok**	**3.29**	**1**	*e*P	**Pn**	**11 13 28.1**	**+2.6**
ESO	**Esso**	**4.01**	**349**	*e*P	**Pn**	**11 13 38.1**	**+2.7**
KBTR	**Krutoberegovo**	**4.51**	**20**	*e*P	**Pn**	**11 13 43.6**	**+1.4**
SRKR	**Sorokina**	**4.71**	**7**	*e*P	**Pn**	**11 13 47.5**	**+2.6**
BKI	**Bering**	**4.76**	**45**	*e*P	**Pn**	**11 13 46.4**	**+0.9**
BKI				*e*S	**Sn**	**11 14 36.2**	**-3.1**
MJAR	**Matsushiro Arr**	**21.87**	**234**	P	P	11 17 33.9	+8.1
	1.2nm,0.7s,baz=26,slow=8.3,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**32.65**	**168**	T	T	11 54 25.1	
	baz=351,slow=74						
H11N3	**WAKE ISLAND Hy**	**32.66**	**168**	T	T	11 54 25.7	
	baz=351						
H11N1	**WAKE ISLAND Hy**	**32.66**	**168**	T	T	11 54 22.6	
	baz=351,slow=74						
H11S1	**WAKE ISLAND Hy**	**33.83**	**169**	T	T	11 55 51.3	
	baz=356						
H11S3	**WAKE ISLAND Hy**	**33.84**	**169**	T	T	11 55 50.9	
	baz=356						
H11S2	**WAKE ISLAND Hy**	**33.85**	**169**	T	T	11 55 49.1	
	baz=356						
SPITS	**Spitsbergen Ar**	**48.21**	**351**	P	**P**	**11 21 11.8**	**-0.7**
	0.8nm,0.4s,baz=79,slow=9.0,SNR=5.0						
BVAR	**Borovoye Array**	**51.06**	**309**	P	**P**	**11 21 33.2**	**-1.3**
	0.4nm,0.6s,baz=39,slow=7.4,SNR=2.8						
NOA	**NORSAR Array B**	**64.59**	**344**	P	**P**	**11 23 10.7**	**+1.5**
	0.2nm,0.6s,baz=15,slow=11,SNR=2.3						
HFS	**Hagfors**	**64.99**	**342**	P	**P**	**11 23 12.6**	**+0.8**
	0.8nm,0.6s,baz=32,slow=5.8,SNR=6.5						
AKASG	**Malin Array Be**	**69.55**	**329**	P	**P**	**11 23 40.4**	**-0.3**
	0.7nm,0.4s,baz=32,slow=6.3,SNR=2.1						

DDA 27 11:13:48.8, 37°.06N×39°.25E, h7km±2km, ML2.8

ISCJB 27 11:13:49.4±0.9, 37°.01N±0°.06×39°.21E±0°.06, h9km, Error ellipse: s-maj=8.3km s-min=6.5km az=174.6

ISK 27 11:13:49.2, 37°.06N×39°.18E, h8km, ML2.5/5

ISC 27 11:13:49.0±1.4**, 37°.01N**±0°.07×**39°.22E**±0°.06**, h9km, n9, σ0ˢ.43**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SURC	**SANLIURFA_SURC**	**0.51**	**256**	*i* P	**Pb**	**11 14 00.5**	**+0.4**
SURC				IAML_P			
	comp=Z,608nm,0.1s						
URFA	**Urfa**	**0.54**	**324**	PG	**Pg**	**11 13 58.8**	**-0.7**
URFA				SG	**Sg**	**11 14 06.3**	**-0.4**
ATAB	**Bozova**	**0.87**	**302**	*i* P	**Pg**	**11 14 05.3**	**-0.5**
MAZI	**Mazidag**	**1.07**	**65**	PN	**Pn**	**11 14 10.5**	**+0.1**
DYBB	**Diyarbakir**	**1.19**	**37**	PN	**Pn**	**11 14 12.3**	**+0.3**
DYBB				SN	**Sn**	**11 14 28.8**	**+0.4**
MARD	**Mardin**	**1.28**	**76**	*i* P	**Pn**	**11 14 12.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.37**	**3**	PN	**Pn**	**11 14 14.6**	**+0.1**
SVRC				SN	**Sn**	**11 14 32.9**	**0.0**
ELZG	**Elazig**	**1.50**	**353**	*i* P	**Pg**	**11 14 17.8**	**-0.1**
ELZG				*i* S	**Sg**	**11 14 37.6**	**+0.2**
GAZ	**Gaziantep**	**1.62**	**276**	PN	**Pn**	**11 14 18.2**	**+0.4**

KRSC 27 11:31:51.1±1.1**, 52°.03N**×**160°.09E, h41km**±16km**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.05**	**293**	*e*P	Pn	11 32 09.5	+0.1
RUS				*e*S	Sn	11 32 23.4	+0.5
SPN	**Mys Shipunski**	**1.07**	**358**	*e*P	Pn	11 32 11.2	+1.5
SPN				*e*S	Sn	11 32 26.1	+2.7
NLC	**Nalytchevo**	**1.23**	**339**	*e*P	Pn	11 32 13.5	+1.7
NLC				*e*S	Sn	11 32 29.8	+2.5
MTVR	**Mutnovka**	**1.26**	**292**	*e*P	Pn	11 32 13.2	+0.8
MTVR				*e*S	Sn	11 32 28.9	+0.7
KDTR	**Khodutka, Kamc**	**1.27**	**261**	*e*P	Pn	11 32 13.8	+1.5
KDTR				*e*S	Sn	11 32 29.5	+1.4
DALK	**Dalny**	**1.30**	**321**	*e*P	Pn	11 32 14.0	+1.3
DALK				*e*S	Sn	11 32 30.3	+1.5
ASAK	**Asacha**	**1.40**	**286**	*e*P	Pn	11 32 15.7	+1.5
ASAK				*e*S	Sn	11 32 33.5	+2.1
UGLR	**Uglovaya**	**1.42**	**327**	*e*P	Pn	11 32 16.1	+1.6
UGLR				*e*S	Sn	11 32 34.6	+2.7
KRMR	**Karymshinskiy**	**1.45**	**305**	*e*P	Pn	11 32 15.8	+1.0
KRMR				*e*S	Sn	11 32 33.8	+1.3
SDLR	**Sedlovina**	**1.45**	**330**	*e*P	Pn	11 32 16.4	+1.4
SDLR				*e*S	Sn	11 32 35.2	+2.3

SMAR	**Somma**	1.47	328	eP	Pn	11 32 16.9	+1.6
AVH	**Avacha**	1.49	327	eP	Pn	11 32 17.3	+1.8
AVH				eS	Sn	11 32 36.0	+2.3
KRER	**Koryakskii**	1.52	328	eP	Pn	11 32 18.4	+2.4
KOK	**Koryaka**	1.55	326	eP	Pn	11 32 18.2	+1.9
KRX	**Arik**	1.60	327	eP	Pn	11 32 19.1	+2.1
APC	**Apacha**	2.01	298	eP	Pn	11 32 24.7	+2.2
APC				eS	Sn	11 32 49.6	+3.3
PAU	**Pauzhetka**	2.12	256	eS	Sn	11 32 53.4	+4.4
GNL	**Ganaly**	2.12	323	eP	Pn	11 32 26.6	+2.5
GNL				eS	Sn	11 32 51.7	+2.4
MKZ	**Mys Kozlova**	2.72	21	eP	Pn	11 32 34.3	+2.1
MKZ				eS	Sn	11 33 06.1	+2.3
KZV	**Kizimen**	3.10	2	eP	Pn	11 32 41.5	+4.0
KZV				eS	Sn	11 33 16.6	+3.3
TUMD	**Tumrok D**	3.19	3	eP	Pn	11 32 42.8	+4.1
TUMR	**Tumrok**	3.26	1	eP	Pn	11 32 44.2	+4.4
ESO	**Esso**	3.99	349	eP	Pn	11 32 54.3	+4.6
KBTR	**Krutoberegovo**	4.49	20	eP	Pn	11 32 59.7	+3.2

ROM 27 11:37:44.9±0.1**, 43°.185N**±0°.008×**11°.00E**±0°.01**, h10**^{km}**,**
ML1.6/2**, Error ellipse: s-maj=1.2km s-min=0.2km**
az=315.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIF	**Trifonti**	0.10	226	P	Pg	11 37 48.0	+0.6
TRIF				S	Sg	11 37 49.7	+0.3
TRIF				AML	AML		
	comp=E,515µm,0.8s						
TRIF				AML	AML		
	comp=N,589µm,1.1s						
TRIF				AML	AML		
	comp=N,589µm,1.1s						
TRIF				AML	AML		
	comp=E,515µm,0.8s						
TRIF				AML	AML		
	comp=N,589µm,1.1s						
TRIF				AML	AML		
	comp=E,515µm,0.8s						
FROS	**Frosini**	0.12	78	P	Pg	11 37 48.2	+0.6
FROS				S	Sg	11 37 50.2	+0.6
FROS				AML	AML		
	comp=E,358µm,0.2s						
FROS				AML	AML		
	comp=N,303µm,0.2s						
FROS				AML	AML		
	comp=N,303µm,0.2s						
FROS				AML	AML		
	comp=E,358µm,0.2s						
FROS				AML	AML		
	comp=N,303µm,0.2s						
FROS				AML	AML		
	comp=E,358µm,0.2s						
OSSC	**Osservatorio P**	0.38	28	P	Pg	11 37 53.0	+0.6
OSSC				S	Sb	11 37 58.7	-1.1
CASP	**Castiglione de**	0.41	194	P	Pb	11 37 53.8	-0.4
CASP				S	Sb	11 37 59.5	-1.0
ARCI	**Arcidosso**	0.48	134	P	Pb	11 37 55.1	-0.4
ARCI				S	Sg	11 38 01.6	+1.0

ROM 27 11:38:41.1±0.2**, 42°.659N**±0°.010×**11°.94E**±0°.01**, h3**^{km}±1^{km}**,**
ML2.1/7**, Error ellipse: s-maj=1.0km s-min=0.8km**
az=316.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SACS	**San Casciano d**	0.19	354	P	Pg	11 38 45.7	+0.8
SACS				S	Sg	11 38 48.8	+1.4
SACS				AML	AML		
	comp=E,1765µm,0.3s						
SACS				AML	AML		
	comp=N,926µm,1.3s						
SACS				AML	AML		
	comp=E,1765µm,0.3s						
SACS				AML	AML		
	comp=N,926µm,1.3s						
SACS				AML	AML		
	comp=E,1765µm,0.3s						
SACS				AML	AML		
	comp=N,926µm,1.3s						
SACS				AML	AML		
	comp=E,1765µm,0.3s						
SACS				AML	AML		
	comp=N,926µm,1.3s						
MCIV	**Monte Civitell**	0.23	302	P	Pg	11 38 46.3	+0.8
MCIV				S	Sg	11 38 50.2	+1.8
MCIV				AML	AML		
	comp=E,583µm,1.0s						
MCIV				AML	AML		
	comp=N,448µm,1.0s						
MCIV				AML	AML		
	comp=E,584µm,1.0s						
MCIV				AML	AML		
	comp=N,447µm,1.0s						
MCIV				AML	AML		
	comp=E,583µm,1.0s						
MCIV				AML	AML		
	comp=N,448µm,1.0s						
MCIV				AML	AML		
	comp=E,583µm,1.0s						
MCIV				AML	AML		
	comp=N,448µm,1.0s						
MGAB	**Montegabbione**	0.28	27	P	Pg	11 38 47.3	+0.7
MGAB				S	Sg	11 38 52.1	+1.7
MGAB				AML	AML		
	comp=E,860µm,0.5s						
MGAB				AML	AML		
	comp=N,742µm,1.3s						
MGAB				AML	AML		
	comp=E,896µm,0.5s						
MGAB				AML	AML		
	comp=N,806µm,1.3s						
MGAB				AML	AML		
	comp=E,858µm,0.5s						
MGAB				AML	AML		
	comp=N,742µm,1.3s						
MGAB				AML	AML		
	comp=E,896µm,0.5s						
MGAB				AML	AML		
	comp=N,806µm,1.3s						
MGAB				AML	AML		
	comp=N,806µm,1.3s						
MGAB				AML	AML		
	comp=N,742µm,1.3s						
MGAB				AML	AML		
	comp=E,896µm,0.5s						
MGAB				AML	AML		
	comp=E,860µm,0.5s						
MGAB				AML	AML		
	comp=N,806µm,1.3s						
MGAB				AML	AML		
	comp=N,742µm,1.3s						
MGAB				AML	AML		
	comp=E,860µm,0.5s						
MGAB				AML	AML		
	comp=E,896µm,0.5s						
ARCI	**Arcidosso**	0.39	300	P	Pg	11 38 49.5	+0.9
ARCI				S	Sb	11 38 55.6	-1.6
ARCI				AML	AML		
	comp=E,154µm,0.5s						
ARCI				AML	AML		
	comp=N,146µm,1.1s						
ARCI				AML	AML		
	comp=E,154µm,0.5s						
ARCI				AML	AML		
	comp=N,146µm,1.1s						
ARCI				AML	AML		
	comp=N,146µm,1.1s						
ARCI				AML	AML		
	comp=E,154µm,0.5s						
ARCI				AML	AML		
	comp=N,146µm,1.1s						
ARCI				AML	AML		
	comp=E,154µm,0.5s						
CESX	**Cesi**	0.48	96	P	Pb	11 38 52.6	+0.4
MOMA	**Monte Martano**	0.49	73	P	Pb	11 38 51.9	-0.5
MOMA				S	Sb	11 39 00.5	+0.4
TOLF	**Tolfa**	0.60	175	P	Pg	11 38 53.1	+0.6
ATTE	**AVT- Monte Tez**	0.62	30	P	Pg	11 38 53.7	+0.6
ATTE				S	Sb	11 39 03.4	-0.4
MAON	**Monte Argentar**	0.64	249	P	Pb	11 38 55.1	+0.2
ASSB	**Assisi San Ben**	0.66	54	P	Pb	11 38 54.9	-0.4
ATCC	**AVT- Casa Cast**	0.74	44	P	Pg	11 38 55.8	+0.5
MURB	**Monte Urbino**	0.74	35	P	Pg	11 38 55.9	+0.5
MURB				AML	AML		
	comp=E,682µm,0.3s						
MURB				AML	AML		
	comp=N,854µm,0.3s						
MURB				AML	AML		
	comp=E,682µm,0.3s						
MURB				AML	AML		
	comp=N,854µm,0.3s						
MURB				AML	AML		
	comp=E,682µm,0.3s						
MURB				AML	AML		
	comp=N,854µm,0.3s						
MURB				AML	AML		
	comp=E,682µm,0.3s						
MURB				AML	AML		
	comp=N,854µm,0.3s						
CESI	**CESI - Serrava**	0.79	64	AML	AML		
	comp=N,32µm,0.5s						
CESI				AML	AML		
	comp=E,17µm,0.5s						
CESI				AML	AML		
	comp=N,32µm,0.5s						
CESI				AML	AML		
	comp=E,17µm,0.5s						
CESI				AML	AML		
	comp=N,32µm,0.5s						
CESI				AML	AML		
	comp=E,17µm,0.5s						
CESI				AML	AML		
	comp=N,32µm,0.5s						
CESI				AML	AML		
	comp=E,17µm,0.5s						
ATVO	**AVT- Monte Val**	0.80	25	P	Pg	11 38 56.8	+0.3
ATVO				S	Sb	11 39 09.9	+0.9
ATFO	**Monte Foce - G**	0.85	33	P	Pg	11 38 57.8	+0.5
ATFO				AML	AML		
	comp=E,142µm,0.7s						
ATFO				AML	AML		
	comp=N,154µm,0.6s						
ATFO				AML	AML		
	comp=E,142µm,0.7s						
ATFO				AML	AML		
	comp=N,154µm,0.6s						
ATFO				AML	AML		
	comp=E,142µm,0.7s						
ATFO				AML	AML		
	comp=N,154µm,0.6s						
ATFO				AML	AML		
	comp=E,142µm,0.7s						
ATFO				AML	AML		
	comp=N,154µm,0.6s						
PIEI	**Pieia**	0.98	26	P	Pg	11 39 00.3	+0.4

TRN ***27*** *11:39:00.6, 18°.19N×64°.28W, h18^{km}*
ISCJB ***27*** *11:39:02.9±0.6, 18°.21N±0°.08×64°.24W±0°.03, h30^{km}±7^{km},*
Error ellipse: s-maj=13.1km s-min=3.4km az=12.6
NEIC ***27*** *11:39:04.4±0.0, 18°.23N×64°.24W, h17^{km}, MD3.6(RSPR),*
After RSPR.
RSPR ***27*** *11:39:04.4, 18°.23N×64°.24W, h17^{km}±4^{km}, MD3.6/17*
ISC 27 11:39:03.3±1.0**, 18°.26N**±0°.05×**64°.25W**±0°.03**, h27**^{km}±10^{km}**,**
n57, σ0^s.90/68**, 20C-8D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VGBI	**Virgin Gorda,**	0.27	327	⇑iP	**Pb**	**11 39 10.1**	**-0.1**
VGBI	**Virgin Gorda,**	0.27	327	eS	**Sb**	**11 39 16.2**	**+1.3**
ABV	**Anegada**	0.47	350	⇑eP	**Pn**	**11 39 14.2**	**-0.1**
ABV	**Anegada**	0.47	350	⇑eP	**Pn**	**11 39 14.2**	**-0.1**
ABVI	**Anegada Island**	0.47	350	ePg	**Pn**	**11 39 14.2**	**-0.1**
STVI	**Saint Thomas**	0.68	278	⇑eP	**Pb**	**11 39 15.3**	**-1.3**
STVI	**Saint Thomas**	0.68	278	⇑eP	**Pb**	**11 39 15.3**	**-1.3**
STVI				eS	**Sb**	**11 39 25.7**	**+0.1**
CUPR	**Culebra, Puert**	0.98	273	⇑eP	**Pn**	**11 39 20.4**	**-1.0**
CUPR	**Culebra, Puert**	0.98	273	eS	**Sb**	**11 39 33.9**	**-0.5**
SMRT	**St. Maarten**	1.13	100	⇓eP	**Pn**	**11 39 22.3**	**-1.2**
SMRT	**St. Maarten**	1.13	100	ePn	**Pn**	**11 39 22.1**	**-1.3**
SMRT				eSn	**Sb**	**11 39 37.9**	**-0.8**
SMRT	**St. Maarten**	1.13	100	⇓eP	**Pn**	**11 39 22.3**	**-1.2**
SMRT				eS	**Sb**	**11 39 37.5**	**-1.2**
SABA	**Saba**	1.15	124	⇓eP	**Pn**	**11 39 22.4**	**-1.2**
SABA	**Saba**	1.15	124	ePn	**Pn**	**11 39 22.7**	**-0.9**
SABA	**Saba**	1.15	124	eP	**Pn**	**11 39 22.4**	**-1.2**
MTP	**Monte Pirata**	1.25	263	⇑eP	**Pn**	**11 39 24.1**	**-0.9**
MTP	**Monte Pirata**	1.25	263	⇑eP	**Pn**	**11 39 24.1**	**-0.9**
MTP				eS	**Sn**	**11 39 41.5**	**+0.5**
SEUS	**St. Eustatius**	1.43	122	ePn	**Pb**	**11 39 28.7**	**-0.6**
SEUS	**St. Eustatius**	1.43	122	eP	**Pb**	**11 39 32.7**	**+3.4**
CBYP	**Canovanas**	1.53	271	⇑eP	**Pn**	**11 39 28.8**	**-0.1**
CBYP	**Canovanas**	1.53	271	ePn	**Pn**	**11 39 28.8**	**-0.1**
CBYP	**Canovanas**	1.53	271	⇑eP	**Pn**	**11 39 28.8**	**-0.1**
PDPR	**Patillas Dam,**	1.71	262	⇑eP	**Pn**	**11 39 31.3**	**+0.1**
PDPR	**Patillas Dam,**	1.71	262	eS	**Sn**	**11 39 51.4**	**-0.8**
SKI	**Saint Kitts**	1.71	122	eP	**Pn**	**11 39 31.0**	**-0.3**
IGPR	**InterUniversit**	1.79	261	⇑eP	**Pn**	**11 39 32.8**	**+0.3**
IGPR	**InterUniversit**	1.79	261	eS	**Sn**	**11 39 55.7**	**+1.4**
SJG	**San Juan**	1.81	266	⇑eP	**Pn**	**11 39 32.2**	**-0.5**
SJG	**San Juan**	1.81	266	ePn	**Pn**	**11 39 33.9**	**+1.1**
SJG				eSn	**Sb**	**11 39 57.1**	**-1.1**
SJG	**San Juan**	1.81	266	⇑eP	**Pn**	**11 39 32.2**	**-0.5**
EMPR	**Esperanza - Ma**	2.18	276	⇑eP	**Pn**	**11 39 38.3**	**+0.5**
EMPR	**Esperanza - Ma**	2.18	276	eS	**Sn**	**11 40 04.7**	**+0.9**
EMPR	**Esperanza - Ma**	2.18	276	ePn	**Pn**	**11 39 38.3**	**+0.5**
EMPR				eSn	**Sn**	**11 40 04.7**	**+0.9**
CELP	**Cerrillos**	2.23	266	⇑eP	**Pn**	**11 39 38.8**	**+0.3**
CELP	**Cerrillos**	2.23	266	ePn	**Pn**	**11 39 38.8**	**+0.3**
CELP	**Cerrillos**	2.23	266	⇑eP	**Pn**	**11 39 38.8**	**+0.3**
OBIP	**Obispado Ponce**	2.25	265	⇓eP	**Pn**	**11 39 39.1**	**+0.3**
OBIP	**Obispado Ponce**	2.25	265	ePn	**Pn**	**11 39 39.1**	**+0.3**
OBIP				eSn	**Sn**	**11 40 06.5**	**+0.8**
OBIP	**Obispado Ponce**	2.25	265	⇓eP	**Pn**	**11 39 39.1**	**+0.3**
OBIP				eS	**Sn**	**11 40 06.5**	**+0.8**
ANWB	**Willy Bob**	2.42	104	ePn	**Pn**	**11 39 40.6**	**-0.4**
ANWB	**Willy Bob**	2.42	104	eP	**Pn**	**11 39 40.9**	**-0.1**
MLPR	**Magueyes Islan**	2.68	264	⇓eP	**Pn**	**11 39 44.2**	**-0.5**
MLPR	**Magueyes Islan**	2.68	264	eS	**Sn**	**11 40 16.6**	**+0.4**
LSP	**Las Mesas**	2.70	269	⇑eP	**Pn**	**11 39 45.6**	**+0.6**
LSP	**Las Mesas**	2.70	269	ePn	**Pn**	**11 39 45.6**	**+0.6**
LSP	**Las Mesas**	2.70	269	⇑eP	**Pn**	**11 39 45.6**	**+0.6**
AGPR	**Aguadilla, PR**	2.73	275	⇓eP	**Pn**	**11 39 46.4**	**+1.1**
AGPR	**Aguadilla, PR**	2.73	275	⇓eP	**Pn**	**11 39 46.4**	**+1.1**
AGPR				eS	**Sn**	**11 40 17.7**	**+0.2**
CRPR	**Cabo Rojo, PR**	2.73	265	⇑eP	**Pn**	**11 39 45.6**	**+0.2**
CRPR	**Cabo Rojo, PR**	2.73	265	⇑eP	**Pn**	**11 39 45.6**	**+0.2**
CRPR				eS	**Sn**	**11 40 17.7**	**+0.1**
AGP	**Aguadilla**	2.75	273	ePn	**Pn**	**11 39 46.4**	**+0.7**
AGP				eSn	**Sn**	**11 40 17.7**	**-0.4**
MAGL	**Barre de l’ile**	3.65	129	eP	**Pn**	**11 39 59.8**	**+1.7**
PCM	**Pelee Case Pet**	4.50	139	eP	**Pn**	**11 40 08.7**	**-1.0**
BAMF	**Morne Balai**	4.54	139	eP	**Pn**	**11 40 10.1**	**-0.2**
FDF	**Fort de France**	4.60	139	ePn	**Pn**	**11 40 11.6**	**+0.5**
GRGR	**Grenville**	6.59	157	ePn	**Pn**	**11 40 40.0**	**+1.5**
GRTK	**Grand Turk**	7.24	298	ePn	**Pn**	**11 40 47.6**	**+0.2**

MAN 27 12:07:07.8, 7°.39N×124°.87E, h1^{km}**, MS3.8, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	0.52	21	eP	Pg	12 07 18.1	+0.3
BUKP				eS	Sb	12 07 26.6	-1.4
SKMP	**Bagumbayan, Su**	0.92	201	eP	Pg	12 07 23.6	-1.8
SKMP				eS	Sn	12 07 43.5	+1.6
CGP	**Cagayan de Oro**	1.07	351	⇑iP	Pg	12 07 27.2	-1.2
CGP				i S	Sg	12 07 41.6	-0.8
GSPH	**General Santos**	1.29	177	eP	Pn	12 07 39.2	+6.1
MATI	**Mati**	1.44	108	eP	Pn	12 07 33.8	-1.3
MATI				eS	Sn	12 07 56.9	+2.1
DDMP	**Don Marcelino,**	1.52	147	eP	Pn	12 07 35.0	-1.2
DDMP				eS	Sg	12 07 57.8	+1.0
PAGZ	**Pagadian**	1.54	287	eP	Pn	12 07 35.3	-1.2
PAGZ				eS	Sg	12 07 57.8	+0.3
BUTP	**Butuan**	1.74	25	eP	Pn	12 07 39.6	+0.4
BUTP				eS	Sg	12 08 07.3	+3.6
DCPH	**Dipolog City**	1.92	308	⇑eP	Pg	12 07 44.3	-0.3
DCPH				eS	Sg	12 08 10.6	+1.1
SNPH	**Sibulan**	2.53	320	eP	Pb	12 07 54.4	+0.4

ROM 27 12:12:54.8±0.2**, 40°.13N**±0°.01×**15°.63E**±0°.01**, h10**^{km}**,**
ML0.6/4**, Error ellipse: s-maj=1.8km s-min=0.6km**
az=152.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGR	**Morigerati**	0.06	274	P	Pg	12 12 57.2	+0.3
MGR				S	Sg	12 12 58.9	+0.4
MGR				AML	AML		
	comp=E,39µm,0.2s						
MGR				AML	AML		
	comp=N,59µm,0.2s						
MGR				AML	AML		
	comp=E,39µm,0.2s						
MGR				AML	AML		
	comp=N,59µm,0.2s						
MGR				AML	AML		
	comp=E,39µm,0.2s						
MGR				AML	AML		
	comp=N,59µm,0.2s						
MTSN	**Montesano sull**	0.16	35	P	Pg	12 12 59.0	+0.6
MTSN				S	Sg	12 13 02.5	+1.5
MTSN				AML	AML		
	comp=E,27µm,0.3s						
MTSN				AML	AML		
	comp=N,32µm,0.3s						
MTSN				AML	AML		
	comp=N,32µm,0.3s						
MTSN				AML	AML		
	comp=E,27µm,0.3s						
MTSN				AML	AML		
	comp=N,32µm,0.3s						
MTSN				AML	AML		
	comp=E,27µm,0.3s						
SIRI	**Monte Sirino -**	0.19	75	P	Pg	12 12 59.3	+0.4
SIRI				AML	AML		
	comp=E,36µm,0.9s						
SIRI				AML	AML		
	comp=N,21µm,1.4s						
SIRI				AML	AML		
	comp=N,21µm,1.4s						
SIRI				AML	AML		
	comp=E,36µm,0.9s						
SIRI				AML	AML		
	comp=N,21µm,1.4s						
SIRI				AML	AML		
	comp=E,36µm,0.9s						
BULG	**Bulgheria - Ca**	0.20	254	P	Pg	12 12 59.8	+0.7
BULG				S	Sg	12 13 03.7	+1.8
BULG				AML	AML		
	comp=E,26µm,0.2s						
BULG				AML	AML		
	comp=N,41µm,1.4s						
BULG				AML	AML		
	comp=E,26µm,0.2s						
BULG				AML	AML		
	comp=N,41µm,1.4s						
BULG				AML	AML		
	comp=E,26µm,0.2s						
BULG				AML	AML		
	comp=N,41µm,1.4s						
MCEL	**Monticello**	0.23	35	P	Pg	12 13 00.1	+0.4
MCEL				S	Sg	12 13 04.4	+1.4
CMPR	**Campora**	0.31	307	P	Pg	12 13 01.3	+0.3
CMPR				S	Sb	12 13 06.8	-0.7
CDRU	**Civita di Ruta**	0.43	325	P	Pg	12 13 02.8	-0.5

SKO ***27*** *12:14:31.6, 41°.93N×23°.28E, h15^{km}, M2.5, ML2.9*
ATH ***27*** *12:14:31.9, 41°.91N×23°.22E, h22^{km}±2^{km}, ML2.7/7, Error*
ellipse: s-maj=3.9km s-min=1.2km az=170.0
SOF ***27*** *12:14:31.6, 41°.97N×23°.26E, h2^{km}*
ISCJB ***27*** *12:14:31.5±0.3, 41°.94N±0°.01×23°.16E±0°.02, h7^{km}±2^{km},*
Error ellipse: s-maj=2.9km s-min=1.9km az=162.1
BEO ***27*** *12:14:32.6±0.2, 41°.93N×23°.18E, h11^{km}±2^{km}, ML2.8/12*
THE ***27*** *12:14:34.0, 41°.83N×23°.25E, h7^{km}, ML2.6/13, Error*
ellipse: s-maj=1.0km s-min=0.6km az=161.0
ISC 27 12:14:31.9±0.8**, 41°.95N**±0°.01×**23°.20E**±0°.02**, h11**^{km}±6^{km}**,**
n84, σ1^s.01/120**, 9C-5D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	0.12	228	⇑iPg	**Pg**	**12 14 34.9**	**+0.1**
KKB				i Sg	**Sg**	**12 14 37.7**	**+0.8**
KKB	**Krupnik**	0.12	228	P	**Pg**	**12 14 34.9**	**+0.1**
MMB	**Musomiste**	0.53	132	⇑iPg	**Pg**	**12 14 42.5**	**+0.2**
MMB				i Sg	**Sb**	**12 14 50.6**	**-0.4**
MMB	**Musomiste**	0.53	132	P	**Pb**	**12 14 42.7**	**-0.6**
VTS	**Vitosha**	0.67	2	ePg	**Pg**	**12 14 44.5**	**-0.5**
VTS				eSg	**Sg**	**12 14 54.2**	**+0.3**
VTS	**Vitosha**	0.67	2	⇑iP	**Pg**	**12 14 44.7**	**-0.3**
VTS				S	**Sg**	**12 14 53.2**	**-0.7**
VTS	**Vitosha**	0.67	2	i Pg	**Pg**	**12 14 44.8**	**-0.3**
VTS				i Sg	**Sg**	**12 14 53.5**	**-0.4**
VTS	**Vitosha**	0.67	2	P	**Pg**	**12 14 44.5**	**-0.5**
NVR	**Nevrokopi**	0.77	140	P	**Pg**	**12 14 46.5**	**-0.4**
NVR				S	**Sg**	**12 14 56.5**	**-0.5**
	405nm,0.2s						
NVR	**Nevrokopi**	0.77	140	P	**Pg**	**12 14 46.1**	**-0.7**
NVR				S	**Sg**	**12 14 56.7**	**-0.2**
NVR				AML	AML	12 15 00.7	
	comp=E,746µm,0.2s						
NVR				AML	AML	12 15 00.9	
	comp=N,857µm,0.1s						
VAY	**Valandovo**	0.78	217	ePg	**Pg**	**12 14 47.2**	**+0.2**
VAY				eSg	**Sg**	**12 14 57.4**	**+0.2**
VAY	**Valandovo**	0.78	217	i Pg	**Pb**	**12 14 47.6**	**+0.1**
VAY				i Sg	**Sb**	**12 14 58.1**	**0.0**
VAY				eLg	Lg	12 14 58.4	
	comp=E,269nm,0.4s						
VAY				eLg	Lg	12 14 58.5	
	comp=N,412nm,0.6s						
KNT	**Kendrikon**	0.81	196	P	**Pg**	**12 14 47.4**	**-0.2**
KNT				S	**Sg**	**12 14 57.7**	**-0.5**
	comp=N,495nm,0.4s						
KNT	**Kendrikon**	0.81	196	P	**Pg**	**12 14 47.4**	**-0.2**
KNT				S	**Sg**	**12 14 57.8**	**-0.5**
KNT				AML	AML	12 15 00.4	
	comp=E,628µm,0.2s						
KNT				AML	AML	12 15 02.7	
	comp=N,1234µm,0.3s						
SRS	**Serrai**	0.88	160	ePg	**Pg**	**12 14 48.5**	**-0.4**
SRS				eSg	**Sb**	**12 15 00.5**	**-0.5**
SRS	**Serrai**	0.88	160	P	**Pg**	**12 14 48.4**	**-0.4**
SRS				S	**Sg**	**12 14 59.9**	**-0.4**
	comp=N,412nm,0.4s						
SRS	**Serrai**	0.88	160	i Pg	**Pg**	**12 14 48.4**	**-0.5**
SRS				i Sg	**Sb**	**12 15 01.1**	**+0.2**
SRS	**Serrai**	0.88	160	P	**Pg**	**12 14 48.4**	**-0.5**
SRS				S	**Sg**	**12 15 00.0**	**-0.2**
SRS				AML	AML	12 15 03.3	
	comp=E,651µm,0.2s						
SRS				AML	AML	12 15 04.5	
	comp=N,756µm,0.3s						
PGB	**Panagyurishte**	0.94	50	P	**Pg**	**12 14 48.9**	**-1.1**
SOH	**Sokhos**	1.13	174	P	**Pb**	**12 14 53.3**	**-0.2**
SOH				S	**Sb**	**12 15 08.3**	**+0.1**
	comp=N,720nm,0.5s						
PLD	**Plovdiv**	1.13	81	ePg	**Pb**	**12 14 53.4**	**-0.1**
PLD				eSg	**Sn**	**12 15 09.5**	**+0.2**
RZN	**Rozhen**	1.16	102	P	**Pb**	**12 14 54.0**	**-0.2**
SKO	**Skopje**	1.31	272	ePg	**Pn**	**12 14 55.9**	**-0.4**
SKO				eSg	**Sb**	**12 15 13.9**	**+0.4**
THE	**Thessaloniki**	1.32	188	P	**Pb**	**12 14 56.9**	**+0.1**
THE				S	**Sb**	**12 15 13.8**	**+0.1**
	comp=N,505nm,0.7s						
THE	**Thessaloniki**	1.32	188	P	**Pn**	**12 14 56.3**	**-0.1**
THE				AML	AML	12 15 16.3	
	comp=E,1460µm,0.6s						
THE				AML	AML	12 15 16.5	
	comp=N,525µm,0.5s						
BARS	**Barje**	1.35	311	ePg	**Pb**	**12 14 57.2**	**0.0**
BARS	**Barje**	1.35	311	ePn	**Sn**	**12 15 11.6**	**-3.0**
BARS				eSg	**Sg**	**12 15 15.4**	**+0.2**
BARS				eSn	Sb	12 15 38.2	+24
HORT	**Hortiatis**	1.35	183	P	**Pb**	**12 14 57.1**	**-0.2**
HORT				S	**Sn**	**12 15 14.8**	**0.0**
	comp=N,228nm,0.5s						
HORT	**Hortiatis**	1.35	183	P	**Pb**	**12 14 57.0**	**-0.2**
HORT				S	**Sg**	**12 15 15.4**	**+0.1**
HORT				AML	AML	12 15 17.9	
	comp=E,436µm,0.4s						
HORT				AML	AML	12 15 18.0	
	comp=N,475µm,0.4s						
KAVA	**Kavala**	1.37	133	P	**Pb**	**12 14 57.3**	**-0.3**
KAVA				S	**Sn**	**12 15 15.2**	**+0.1**

	comp=N,408nm,0.6s						
KAVA	Kavala	1.37	133	P	Pb	12 14 57.3	-0.3
KAVA				S	Sg	12 15 15.8	-0.2
KAVA				AML	AML	12 15 17.7	
	comp=N,706µm,0.2s						
KAVA				AML	AML	12 15 21.0	
	comp=E,764µm,0.6s						
ZAPS	Zavoj	1.39	343	ePg	Pn	12 14 57.7	+0.3
ZAPS				eSg	Sg	12 15 18.0	+1.3
PLG	Polygyros	1.58	173	P	Pn	12 15 00.2	+0.3
PLG				S	Sn	12 15 20.3	-0.1
	comp=E,215nm,0.5s						
PLG	Polygyros	1.58	173	P	Pn	12 15 00.3	+0.3
KDZ	Kurdzhali	1.68	99	P	Pb	12 15 02.1	-0.9
OUR	Ouranopolis	1.71	160	P	Pn	12 15 01.9	+0.2
OUR				S	Sn	12 15 23.9	+0.3
OUR	Ouranopolis	1.71	160	P	Pn	12 15 01.8	0.0
BLKB	Belogradchik	1.72	347	S	Sn	12 15 24.6	+0.7
DIM	Dimitrovgrad	1.74	86	P	Pb	12 15 04.1	+0.2
THAS	Thassos island	1.76	139	P	Pn	12 15 02.4	0.0
THAS				S	Sn	12 15 24.6	-0.2
	comp=E,162nm,0.5s						
THAS	Thassos island	1.76	139	P	Pn	12 15 02.5	+0.1
THAS				AML	AML	12 15 30.1	
	comp=E,357µm,0.5s						
THAS				AML	AML	12 15 31.4	
	comp=N,279µm,0.6s						
PLVB	Pleven	1.78	36	⇓iP	Pg	12 15 05.5	-0.6
PLVB	Pleven	1.78	36	S	Sg	12 15 29.5	+0.3
FNA	Florina	1.80	230	ePn	Pn	12 15 03.6	+0.6
SELS	Selova	2.00	310	ePn	Pn	12 15 05.1	-0.6
SELS				eSn	Sn	12 15 30.5	-0.2
ZAGS	Zajecar	2.00	339	ePn	Pn	12 15 05.7	0.0
ZAGS				eSn	Sb	12 15 32.5	-0.7
BOVS	Bovan	2.02	327	ePn	Pn	12 15 06.7	+0.8
BOVS				eSn	Sn	12 15 32.5	+1.4
PAIG	Paliouri	2.05	170	P	Pn	12 15 06.2	-0.2
PAIG				S	Sn	12 15 32.1	+0.2
	comp=N,88nm,0.7s						
PAIG	Paliouri	2.05	170	P	Pn	12 15 06.2	-0.2
BAIL	Bailesti	2.08	3	S	Sb	12 15 34.8	-0.7
VLAD	Vladila	2.23	23	⇑iP	Pb	12 15 10.7	-1.6
VLAD	Vladila	2.23	23	S	Sb	12 15 38.8	-1.2
SMTH	Samothraki Isl	2.29	129	P	Pn	12 15 10.6	+0.9
SMTH				S	Sn	12 15 38.9	+0.9
	comp=N,40nm,0.7s						
SMTH	Samothraki Isl	2.29	129	P	Pn	12 15 10.7	+1.0
ALN	Alexandroupoli	2.38	115	P	Pb	12 15 13.2	-1.6
ALN				S	Sn	12 15 40.9	+0.8
	comp=N,52nm,1.0s						
ALN	Alexandroupoli	2.38	115	P	Pn	12 15 12.5	+1.6
LIA	Limnos Island	2.54	143	P	Pn	12 15 14.1	+1.0
LIA				S	Sn	12 15 44.8	+0.8
	comp=N,75nm,0.7s						
TIR	Tirane	2.57	258	ePn	Pn	12 15 12.7	-0.8
COPA	Copaceanca	2.64	33	⇓iP	Pb	12 15 18.0	-1.3
COPA	Copaceanca	2.64	33	S	Sb	12 15 49.8	-1.9
GRUS	Gruza	2.67	318	ePn	Pn	12 15 16.3	+1.5
GRUS				eSn	Sn	12 15 48.6	+1.5
KUBS	Kucevo	2.71	336	ePn	Pn	12 15 14.9	-0.5
SRE	Strehaia	2.72	0	⇓iP	Pn	12 15 17.1	+1.6
SRE	Strehaia	2.72	0	S	Sn	12 15 49.8	+1.4
SJES	Sjenica	2.72	300	eSn	Sn	12 15 49.8	+1.1
SVIS	Svilajnac	2.74	329	ePn	Pn	12 15 17.3	+1.5
IVAS	Ivanjica	2.77	307	ePn	Pn	12 15 16.8	+0.4
HUMR	Humele	2.89	26	S	Sn	12 15 54.5	+1.8
RAZG	Razgrad	2.93	55	S	Sb	12 15 57.8	-2.1
HERR	Herculane	2.99	349	⇓iP	Pn	12 15 18.8	-0.5
HERR	Herculane	2.99	349	S	Sn	12 15 56.0	+0.8
SGRR	Singureni	3.05	41	S	Sb	12 16 01.1	-2.4
TRUS	Trudelj	3.06	319	ePn	Pn	12 15 20.5	+0.2
DIVS	Divibare	3.19	314	ePn	Pn	12 15 22.6	+0.5
GZR	Gura Zlata	3.46	355	⇓iP	Pn	12 15 27.4	+1.6
GZR	Gura Zlata	3.46	355	S	Sn	12 16 07.1	+0.2
VOIR		3.74	20	⇑iP	Pn	12 15 30.4	+0.7
BZS	Buzias	3.84	343	⇑iP	Pn	12 15 30.8	-0.3
BZS	Buzias	3.84	343	S	Sn	12 16 16.1	-0.1
MLR	Muntele Rosu	4.07	28	⇑iP	Pn	12 15 37.0	+2.8
MLR	Muntele Rosu	4.07	28	S	Sn	12 16 25.6	+3.7
TLB	Topalu	4.41	52	S	Sn	12 16 33.9	+3.7
VRI	Vrincioaia	4.68	32	⇑iP	Pn	12 15 44.6	+2.1
CFR	Carcaliu	4.83	46	⇑iP	Pn	12 15 46.5	+2.0

*IDC **27** 12:29:46.0±1.5, 27°.30N×54°.83E, h0^{km}, mb3.5/7, mb1 3.6/8, mb1mx3.4/40, mbtmp3.5/8, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/21, Error ellipse: s-maj=30.9km s-min=26.4km az=179.0*
*ISCJB **27** 12:29:47.8±0.4, 27°.30N±0°.04×55°.03E±0°.05, h10^{km}, mb3.5/7, MS3.3/1, Error ellipse: s-maj=7.3km s-min=4.1km az=146.5*
*THR **27** 12:29:47.1, 27°.30N×55°.26E, h18^{km}, ML3.4*
*TEH **27** 12:29:49.1, 27°.25N×55°.03E, h20^{km}, ML3.4*
ISC 27 12:29:46.9±0.6**, 27°.33N**±0°.03×**55°.18E**±0°.04**, h10^{km}, n38, σ1^{s}85**/37**, mb3.4**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.89	85	ePg	Pg	12 30 02.9	-1.2
BNDS	Bandar-Abbas	0.89	85	Pg	Pg	12 30 02.9	-1.2
GENO	Geno	0.89	85	IAMB	IAmb	12 30 28.2	
	comp=N,0.0nm,0.4s						
GENO				ePg	Pn	12 30 09.2	+3.5
NIAN	Nian	1.49	81	ePn	Pg	12 30 19.3	+3.7
NIAN				IAMB	IAmb	12 30 45.8	
	comp=Z,0.0nm,0.5s						
SHME	Shamm	1.54	146	ePn	Pg	12 30 16.5	0.0
JHRM	Jahrom	1.84	310	ePn	Pn	12 30 20.6	+2.0
MSFE	Esma-Masafi	2.15	156	ePn	Pb	12 30 25.8	-0.2
GHIR	Ghir-Karzin	2.16	297	ePn	Pn	12 30 25.3	+2.2
GHIR	Ghir-Karzin	2.16	297	AML	AML	12 31 02.8	
	comp=Z,176nm,0.4s						
GHIR				AML	AML	12 31 04.0	
	comp=Z,234nm,0.5s						
GHIR	Ghir-Karzin	2.16	297	Pn	Pn	12 30 25.3	+2.2
GHIR				Sg	Sg	12 30 57.5	+1.1
MDH	Madha	2.26	153	ePn	Pb	12 30 27.3	-0.6
NAZ	Nazwa, Dubai	2.37	169	ePn	Pn	12 30 25.8	-0.1
UOSS	Minazif	2.55	158	ePn	Pb	12 30 30.8	-2.0
HATD	Hatta, Dubai	2.64	161	ePn	Pb	12 30 32.2	-2.1
NGRK	Negar Kerman	2.68	30	ePn	Pb	12 30 34.4	-0.9
ASUD	Al Ashush, Dub	2.70	177	ePn	Pb	12 30 33.3	-2.0
ASHO	Ashiyiah	2.75	163	ePn	Pn	12 30 31.4	+0.2
KRBR	Kerman	2.99	27	ePn	Pn	12 30 35.8	+1.2
KRBR	Kerman	2.99	27	Pn	Pn	12 30 35.8	+1.2
IPAR	Pars	3.12	324	ePn	Pn	12 30 39.2	+2.7
KHGB	Koh Gabri	3.24	20	ePn	Pb	12 30 42.4	-2.3
KHGB				IAMB	IAmb	12 30 55.2	
	comp=Z,0.0nm,0.5s						
CHMN	Cheshme madani	3.27	39	ePn	Pb	12 30 42.9	-2.4
CHMN				IAMB	IAmb	12 31 36.6	
	comp=Z,0.0nm,0.3s						
IMEH	Mehriz	4.08	353	ePn	Pn	12 30 52.7	+3.1
ISAD	Sadrabad	4.75	345	IAMB	IAmb	12 31 07.0	
	comp=N,240nm,0.2s						
ISAD				ePn	Pn	12 31 01.8	+2.9
IRAM	Ramesheh	5.08	332	IAMB	IAmb	12 31 06.4	
	comp=Z,269nm,0.3s						
IRAM				ePn	Pn	12 31 04.8	+1.4
WSAR	Wadi Sarin	5.14	142	Pn	Pn	12 31 06.2	+2.2
	comp=Z,0.6nm,0.3s,baz=320,slow=7.3,SNR=8.3						
WSAR				Sn	Sn	12 32 04.0	+0.7
	comp=Z,0.4nm,0.3s,baz=54,slow=18,SNR=2.0						
IGAR	Gharneh	5.74	332	ePn	Pn	12 31 14.3	+1.8
IGAR				IAMB	IAmb	12 31 15.0	
	comp=Z,430nm,0.2s						
IZEF	Zefreh	6.07	337	ePn	Pn	12 31 17.6	+0.6
KRSH	Karshahi	7.12	339	ePn	Pn	12 31 32.6	+1.3
KBZ	Khabaz	19.14	332	P	Pn	12 34 12.6	+1.6
	comp=Z,0.1nm,0.3s,baz=140,slow=10,SNR=3.8						
BRTR	Keskin Array B	21.73	310	P	P	12 34 37.6	-0.9
	comp=Z,1.3nm,0.9s,baz=126,slow=12,SNR=4.7						
BVAR	Borovoye Array	28.05	20	P	P	12 35 39.8	+1.5
	comp=Z,0.3nm,0.4s,baz=176,slow=5.6,SNR=3.3						
ZALV	Zalesovo Beam	34.37	31	P	P	12 36 36.7	+2.8
	comp=Z,0.6nm,0.5s,baz=250,slow=8.4,SNR=2.7						
FINES	FINESS Array B	39.28	338	P	P	12 37 15.0	-0.6
	comp=Z,0.5nm,0.4s,baz=139,slow=11,SNR=5.8						
KEST	Kesra	39.66	294	LR	LR	12 59 01.1	
	comp=Z,42nm,18.2s,baz=256,slow=45						
NOA	NORSAR Array B	44.72	331	P	P	12 37 58.8	-1.3
	comp=Z,0.4nm,0.7s,baz=124,slow=7.9,SNR=3.4						
ESDC	Sonseca Array	50.01	300	P	P	12 38 40.2	-1.5
	comp=Z,0.2nm,0.4s,baz=68,slow=8.2,SNR=3.2						
TORD	Torodi Ar. Bea	51.76	265	P	P	12 38 53.6	-1.5
	comp=Z,0.5nm,0.7s,baz=54,slow=7.3,SNR=3.9						

*IDC **27** 12:38:06.2±3.9, 38°.23N×19°.71E, h0^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.4/39, mbtmp3.5/6, ML3.3/2, Error ellipse: s-maj=69.1km s-min=26.6km az=55.0*
*ISCJB **27** 12:38:10.5±0.5, 38°.67N±0°.02×20°.45E±0°.03, h4^{km}±3^{km}, mb3.4/4, Error ellipse: s-maj=3.9km s-min=2.8km az=155.3*
*ATH **27** 12:38:11.7, 38°.66N×20°.62E, h13^{km}±1^{km}, ML3.1/12, Error ellipse: s-maj=1.6km s-min=0.9km az=279.0*
*THE **27** 12:38:11.9, 38°.67N×20°.57E, h0^{km}±1^{km}, ML3.2/18, Error ellipse: s-maj=1.5km s-min=0.6km az=247.0*
ISC 27 12:38:11.8±0.8**, 38°.67N**±0°.02×**20°.55E**±0°.02**, h8^{km}**±5^{km}**, n83, σ1^{s}46**/117**, mb3.6**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.10	120	P	Pg	12 38 13.8	-0.3
EVGI				S	Sg	12 38 15.0	-0.7
EVGI	Lefkada island	0.10	120	P	Pg	12 38 13.9	-0.2
EVGI				S	Sg	12 38 15.9	+0.2
LKD2	Lefkada island	0.15	35	P	Pg	12 38 14.3	-0.7
LKD2				S	Sg	12 38 16.8	-0.3
LKD2	Lefkada island	0.15	35	P	Pg	12 38 14.4	-0.6
LKD2				S	Sg	12 38 16.5	-0.6
LKD2				AML	AML	12 38 17.7	
	comp=N,17840µm,0.4s						
LKD2				AML	AML	12 38 18.7	
	comp=E,15149µm,0.3s						
TSLK	Tsoukalades, L	0.18	28	P	Pg	12 38 15.1	-0.3
TSLK				S	Sg	12 38 18.0	+0.1
TSLK	Tsoukalades, L	0.18	28	P	Pg	12 38 15.2	-0.3
TSLK				S	Sg	12 38 18.1	+0.2
TSLK				AML	AML	12 38 19.2	
	comp=E,22645µm,0.2s						
TSLK				AML	AML	12 38 19.2	
	comp=N,27459µm,0.3s						
MGNA	Meganis	0.19	94	P	Pg	12 38 15.3	-0.3
MGNA				S	Sg	12 38 18.4	+0.1
MGNA				AML	AML	12 38 19.8	
	comp=N,18817µm,0.3s						
MGNA				AML	AML	12 38 19.9	
	comp=E,17233µm,0.2s						
FSK	Fiskardo	0.21	177	P	Pg	12 38 16.1	0.0
FSK				S	Sg	12 38 20.0	+1.1
FSK	Fiskardo	0.21	177	P	Pg	12 38 16.1	0.0
FSK				S	Sg	12 38 20.2	+1.3
VLS	Valsamata	0.49	176	P	Pg	12 38 20.9	-0.4
VLS				S	Sb	12 38 29.2	-0.9
	comp=E,6µm,0.4s						
VLS	Valsamata	0.49	176	P	Pg	12 38 21.0	-0.4
VLS				S	Sg	12 38 28.6	+0.8
VLS				AML	AML	12 38 29.4	
	comp=E,14817µm,0.5s						
VLS				AML	AML	12 38 30.1	
	comp=N,10552µm,0.4s						
KFL	Anninata	0.59	161	P	Pg	12 38 22.6	-0.6
KFL				S	Sb	12 38 32.5	-0.4
	comp=N,5µm,0.4s						
KFL	Anninata	0.59	161	P	Pg	12 38 22.6	-0.6
KFL				S	Sg	12 38 30.8	-0.1
PVO	Paravola	0.77	94	P	Pg	12 38 26.4	-0.2
PVO				S	Sb	12 38 38.0	0.0
	comp=N,7µm,0.4s						
PVO	Paravola	0.77	94	P	Pg	12 38 26.3	-0.3
VLMS	Volimes, Zakyn	0.80	174	P	Pg	12 38 26.1	-1.1
IGT	Igoumenitsa	0.88	349	P	Pg	12 38 28.0	-0.7
IGT				S	Sb	12 38 42.5	+1.2
	comp=N,918nm,0.5s						
VTN	Vitineika	0.90	146	P	Pg	12 38 29.1	-0.1
VTN	Vitineika	0.90	146	P	Pg	12 38 29.1	-0.1
RLS	Riolos of Patr	0.94	130	P	Pg	12 38 29.4	-0.6
RLS				S	Sg	12 38 42.5	+0.3
	comp=N,968nm,0.7s						
RLS	Riolos of Patr	0.94	130	P	Pg	12 38 29.2	-0.7
RLS				AML	AML	12 38 50.9	
	comp=N,2086µm,0.8s						
RLS				AML	AML	12 38 51.3	
	comp=E,1794µm,0.6s						
ZKS	Zakynthos	0.99	169	P	Pg	12 38 29.5	-1.3
ZKS				S	Sb	12 38 44.3	-0.1
	comp=E,2µm,0.9s						
ZKS	Zakynthos	0.99	169	P	Pg	12 38 29.4	-1.3
JAN	Janina	1.01	13	P	Pg	12 38 31.5	+0.2
JAN	Janina	1.01	13	P	Pg	12 38 31.5	+0.2
JAN				AML	AML	12 38 50.4	
	comp=N,1509µm,0.4s						
JAN				AML	AML	12 38 52.1	
	comp=E,1727µm,0.8s						
EVR	Evrytania	1.01	76	P	Pg	12 38 30.4	-1.0
EVR				S	Sg	12 38 44.7	+0.2
	comp=E,645nm,0.7s						
EVR	Evrytania	1.01	76	P	Pg	12 38 30.3	-1.0
EVR				AML	AML	12 38 55.1	
	comp=N,1447µm,0.7s						
EVR				AML	AML	12 38 58.7	
	comp=E,1199µm,0.8s						
ANX	Ano Chora	1.08	94	P	Pg	12 38 31.4	-1.1
ANX				S	Sn	12 38 48.8	+0.3
	comp=E,3µm,0.6s						
ANX	Ano Chora	1.08	94	P	Pg	12 38 31.3	-1.2
ANX				AML	AML	12 38 55.4	
	comp=N,5400µm,0.5s						
ANX				AML	AML	12 38 56.6	
	comp=E,6828µm,0.6s						
KASA	Kassiopi	1.18	336	P	Pg	12 38 34.6	+0.2
KEK	Kerkira	1.19	331	P	Pg	12 38 35.0	+0.2
KEK				S	Sb	12 38 51.7	+1.3
	comp=E,380nm,0.6s						
KEK	Kerkira	1.19	331	P	Pb	12 38 35.3	+0.5
LAKA	Lakka	1.20	110	P	Pg	12 38 33.6	-1.3
LAKA				S	Sb	12 38 51.6	+1.0
	comp=E,798nm,0.8s						
LAKA	Lakka	1.20	110	P	Pg	12 38 33.5	-1.4
LAKA				AML	AML	12 38 57.7	
	comp=E,1761µm,0.7s						
LAKA				AML	AML	12 39 01.4	
	comp=N,1319µm,1.0s						
SERG	Sergoula	1.21	102	P	Pg	12 38 33.5	-1.5
SERG				S	Sn	12 38 52.6	+0.9
	comp=N,928nm,0.9s						
SERG	Sergoula	1.21	102	P	Pg	12 38 33.3	-1.7
TRIZ	Trizonia	1.23	104	P	Pg	12 38 33.8	-1.7
TRIZ	Trizonia	1.23	104	P	Pg	12 38 33.8	-1.7
KALE	Kalithea	1.28	102	P	Pg	12 38 34.7	-1.6
KALE				S	Sn	12 38 54.1	+0.6
	comp=N,578nm,0.5s						
KALE	Kalithea	1.28	102	P	Pg	12 38 34.3	-2.0
SRN	Sarande	1.28	341	P	Pb	12 38 36.9	+0.7
SRN				S	Sn	12 38 54.7	+1.2
	comp=N,280nm,0.7s						
TRAZ	Trapeza	1.40	110	P	Pg	12 38 36.6	-2.0
TRAZ				S	Sn	12 38 58.7	+2.3
	comp=N,875nm,1.4s						
TRAZ	Trapeza	1.40	110	P	Pg	12 38 35.7	-2.9
TRAZ				AML	AML	12 39 06.3	
	comp=E,1333µm,0.3s						
TRAZ				AML	AML	12 39 09.2	
	comp=N,1561µm,0.8s						
KLV	Kalavryta, Ach	1.41	116	P	Pg	12 38 36.4	-2.4
KLV	Kalavryta, Ach	1.41	116	P	Pg	12 38 36.3	-2.4
KLV				AML	AML	12 39 06.6	
	comp=E,913µm,1.4s						
KLV				AML	AML	12 39 11.6	
	comp=N,772µm,0.8s						
KPRO	Kipourio	1.43	26	P	Pb	12 38 39.2	+0.4
AGG	Agios Georgios	1.43	75	P	Pn	12 38 38.1	-0.1
AGG				S	Sn	12 38 58.9	+1.6
	comp=N,678nm,0.8s						
THL	Klokotos Trika	1.45	51	P	Pn	12 38 38.6	+0.2
THL				S	Sn	12 38 59.1	+1.5
	comp=N,588nm,1.2s						
THL	Klokotos Trika	1.45	51	P	Pn	12 38 38.4	0.0
AMT	Artemida-Makis	1.46	141	P	Pn	12 38 38.4	-0.1
AMT				S	Sn	12 38 58.8	+1.0
	comp=N,718nm,0.9s						
AMT	Artemida-Makis	1.46	141	P	Pn	12 38 38.2	-0.3
AMT				AML	AML	12 39 07.1	
	comp=E,1344µm,0.8s						
AMT				AML	AML	12 39 13.8	
	comp=N,1391µm,1.0s						
DSF	Desfina	1.57	99	P	Pn	12 38 39.5	-0.6
DSF	Desfina	1.57	99	P	Pn	12 38 39.2	-0.9
GUR	Goura	1.59	117	P	Pn	12 38 39.7	-0.7
GUR				S	Sg	12 39 02.7	-0.2
	comp=N,908nm,0.8s						
GUR	Goura	1.59	117	P	Pn	12 38 39.5	-0.9
PENT	Pentalofos	1.59	16	P	Pb	12 38 42.0	+0.4
PENT	Pentalofos	1.59	16	P	Pg	12 38 42.3	-0.1
AXAR	Agios Charalam	1.65	86	P	Pg	12 38 43.0	-0.6
TRIP	Tripoli	1.77	129	P	Pn	12 38 43.3	+0.4
TRIP	Tripoli	1.77	129	P	Pn	12 38 43.1	+0.2
ITM	Ithomi	1.84	143	P	Pn	12 38 44.8	+1.0
PROD	Prodromos	1.89	102	P	Pb	12 38 46.1	-0.5
LKR	Lokris	1.92	90	P	Pn	12 38 46.0	+1.2
ATAL	Atalanti	1.93	89	P	Pb	12 38 47.4	+0.1
VLX	Vlachokerasia	1.94	131	P	Pb	12 38 46.8	-0.7
PYL	PYLOS	2.01	152	P	Pn	12 38 46.6	+0.5
LIT	Litokhoron	2.07	46	P	Pb	12 38 49.2	-0.6
XOR	Xorichti	2.17	71	P	Pn	12 38 49.5	+1.1
NEO	Neokhori	2.18	72	P	Pn	12 38 50.2	+1.8
VIL2	Platees	2.18	101	P	Pn	12 38 50.0	+1.5
VILL	Villia	2.23	102	P	Pn	12 38 50.5	+1.4
DBRK	Dubrovnik	4.39	336	i Pn	Pn	12 39 18.1	-0.7
DBRK				Sn	Sn	12 40 05.6	-4.6
STON	Ston	4.72	334	ePn	Pn	12 39 22.4	-0.9
STON				Sn	Sn	12 40 11.6	-6.7
IDI	Anoyia	4.84	133	Pn	Pn	12 39 25.5	+0.4
	comp=N,0.2nm,0.3s,baz=299,slow=12,SNR=3.1						
IDI				Sn	Sn	12 40 22.7	+1.3
HVAR	Hvar	5.47	327	ePn	Pn	12 39 31.5	-2.1
HVAR				Sn	Sn	12 40 31.4	-5.4
ZIRJ	Zirje	6.20	325	ePn	Pn	12 39 42.2	-1.5
ZIRJ				Sn	Sn	12 40 50.6	-4.2
MORI	Morici	6.34	326	ePn	Pn	12 39 45.2	-0.4
MORI				Sn	Sn	12 40 54.6	-3.6
DUGI	Dugi Otok	6.73	324	ePn	Pn	12 39 50.4	-0.6
MLR	Muntele Rosu	7.91	29	Pn	Pn	12 40 14.2	+7.0
	comp=N,0.2nm,0.3s,baz=195,slow=16,SNR=2.2						
FINES	FINESS Array B	23.06	7	P	P	12 43 16.9	-0.5
	comp=N,2.9nm,0.9s,baz=168,slow=9.8,SNR=7.9						
NOA	NORSAR Array B	23.14	348	P	P	12 43 17.9	-0.4
	comp=N,0.4nm,0.8s,baz=161,slow=9.7,SNR=2.9						
MKAR	Makanchi Array	45.03	59	P	P	12 46 28.5	+0.6
	comp=N,0.2nm,0.4s,baz=267,slow=10,SNR=1.2						
ZALV	Zalesovo Beam	45.35	48	P	P	12 46 32.6	+2.3
	comp=N,0.9nm,0.6s,baz=281,slow=9.6,SNR=1.9						

IDC 27 12:50:51.3±3.2**, 1°.66S**×**128°.20E, h0^{km}, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.3**/30**, mbtmp3.5**/3**, ML3.2**/1**, Error ellipse: s-maj=168.0km s-min=32.1km az=87.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.14	162	P	P	12 55 15.4	-0.9
	0.1nm,0.3s,baz=342,slow=11,SNR=1.1						
ASAR	Alice Springs	22.57	166	P	P	12 55 53.6	+0.2
	0.5nm,0.5s,baz=348,slow=12,SNR=17						
ILAR	Eielson Array	89.31	25	P	P	13 03 49.5	+0.1
	0.4nm,0.7s,baz=279,slow=6.2,SNR=6.0						

*CRAAG **27** 12:55:16.5, 36°.41N×7°.33E, Ml3.5*
*LDG **27** 12:55:20.3±0.2, 36°.66N×7°.66E, h10^{km}, Ml3.1/8, Error ellipse: s-maj=5.2km s-min=3.9km az=43.0*
ISC 27 12:55:15.0±1.3**, 36°.51N**±0°.05×**7°.55E**±0°.07**, h17^{km}, n20, σ3^{s}13**/23**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAH	Djebel Manchou	0.16	319	P	Pg	12 55 22.8	+3.4
ABSA	Djebel Ababsia	0.24	194	P	Pg	12 55 21.3	+0.8
CAEH	'Ain El Ouahch	0.62	296	P	Pg	12 55 28.2	+0.8
CKFL	Kef-Lekhel	0.68	261	P	Pg	12 55 27.0	-1.4
CASM	Ain Smara	0.89	254	P	Pb	12 55 31.1	-0.9
DFRA	Djebel Bou Aff	1.35	272	P	Pn	12 55 40.3	+1.1
CKHR	Kef el Ahmar	1.72	254	P	Pn	12 55 36.6	-7.7
SET	Setif	1.76	261	P	Pg	12 55 52.0	+3.1
LMR	La Mourre	6.87	354	ePn	Pn	12 56 56.8	+1.9
LMR				eSn	Sn	12 58 08.4	-4.2
	2.2nm,0.2s						
FRF	La Foret Royal	7.08	355	ePn	Pn	12 57 00.3	+2.5
FRF				eSn	Sn	12 58 14.2	-3.7
	2.0nm,0.3s						
SBF	Sospel	7.35	359	ePn	Pn	12 57 02.8	+1.2
SBF				eSn	Sn	12 58 20.2	-4.4
	6.5nm,0.5s						
SMRF	Simiane la Rot	7.61	349	ePn	Pn	12 57 07.6	+2.4
SMRF				eSn	Sn	12 58 24.9	-6.2
	1.5nm,0.3s						
MTLF	Montolieu	7.96	331	ePn	Pn	12 57 11.7	+1.8
LASF	Ste Croix	8.07	341	ePn	Pn	12 57 13.6	+2.2
MBDF	Montbardon	8.23	356	ePn	Pn	12 57 16.1	+2.3
MBDF	Montbardon	8.23	356	eP	Pn	12 57 20.9	+7.1
MBDF				eSn	Sn	12 58 41.1	-5.4
	1.7nm,0.4s						
EPF	Esparros	8.56	322	eP	Pn	12 57 26.9	+8.8
VIVF	Saint-Julien-l	8.62	346	ePn	Pn	12 57 21.2	+2.2
ETSF	Etsaut	8.93	318	ePn	Pn	12 57 27.4	+4.1
ETSF				eSn	Sn	12 58 59.9	-3.6
	0.8nm,0.3s						
SJPF	Ste Jean	9.44	317	ePn	Pn	12 57 33.8	+3.6
SJPF				eSn	Sn	12 59 12.5	-3.3
	0.3nm,0.3s						

*ISCJB **27** 13:08:11.2±0.7, 38°.60N±0°.07×43°.25E±0°.07, h30^{km}±6^{km}, Error ellipse: s-maj=12.4km s-min=8.2km az=150.9*
*DDA **27** 13:08:11.4, 38°.68N×43°.17E, h7^{km}±1^{km}, ML2.5*
*ISK **27** 13:08:11.1, 38°.55N×43°.26E, h26^{km}, ML1.9/4*
ISC 27 13:08:10.6±1.3**, 38°.58N**±0°.07×**43°.27E**±0°.09**, h32^{km}**±10^{km}**, n8, σ0^{s}38**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.10	82	PG	Pb	13 08 16.2	-0.1
VANB				SG	Sb	13 08 20.1	-0.1
TVAN	Van	0.12	116	i P	Pb	13 08 16.8	+0.2
TVAN				i S	Sb	13 08 21.0	+0.3
GEVA	Gevas	0.32	212	i P	Pn	13 08 19.1	-0.1
GEVA				IAML_P			
	comp=Z,2µm,0.2s						
AKDM	Akdamar-Van	0.34	222	PG	Pb	13 08 18.8	-0.1
AKDM				SG	Sb	13 08 24.4	-0.2
ERCV	ERCIS-VAN	0.44	7	PG	Pn	13 08 21.6	+0.6
VMUR	Van-Muradiye	0.47	30	i P	Pb	13 08 20.4	-0.4
TUTA	Tutak	0.89	337	i P	Pn	13 08 26.8	-0.4
TUTA				IAML_P			
	comp=Z,838nm,0.2s						
GURO	Guroymak-BITLI	0.97	269	PG	Pb	13 08 29.3	+0.3

*NSSC **27** 13:21:40.6±0.3, 33°.64N×35°.58E, h36^{km}±1^{km}, ML1.6*
*GRAL **27** 13:21:41.9±0.3, 33°.80N×35°.78E, h2^{km}±10^{km}, MD2.6*
ISC 27 13:21:41.5±1.1**, 33°.80N**±0°.04×**35°.77E**±0°.08**, h8^{km}**±18^{km}**, n7, σ0^{s}64**/13**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.14	317	eP	Pg	13 21 44.6	+0.1
BHL				eS	Sg	13 21 46.7	+0.1
DQRL	Deir Qamar	0.19	239	eP	Pg	13 21 45.4	-0.1
DQRL				eS	Sg	13 21 48.1	0.0
RCY	Rachaya	0.31	169	eP	Pg	13 21 47.3	-0.4
RCY				eS	Sg	13 21 51.4	-0.5
BRBR	Barbar	0.42	159	eP	Pg	13 21 49.6	-0.2
BRBR				eS	Sg	13 21 56.4	+1.1
BRBR				AML	AML	13 21 59.6	
	comp=N,37nm,0.8s						
BRBR				AML	AML	13 21 59.6	
	comp=E,30nm,0.3s						
HWQ	Hawqa	0.50	17	eP	Pg	13 21 50.8	-0.4
QASN	Qassioun	0.50	122	eP	Pb	13 21 53.0	+0.3
QASN				eS	Sb	13 22 01.3	+1.0
QASN				AML	AML	13 22 05.2	
	comp=E,84nm,0.6s						
QASN				AML	AML	13 22 06.1	
	comp=N,92nm,0.4s						
TOTH	TOTAH	0.71	128	eP	Pb	13 21 55.7	-0.4
TOTH				eS	Sb	13 22 05.4	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOTH				AML	AML	13 22 12.3	
	comp=E,12nm,0.5s						
TOTH				AML	AML	13 22 14.1	
	comp=N,10nm,0.6s						

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*SJA **27** 13:31:17.9±0.6, 20°.43S×69°.49W, h109^{km}±3^{km}, ML2.6, MW2.9*

*ISCJB **27** 13:31:19.8±0.8, 20°.17S±0°.03×69°.31W±0°.08, h117^{km}±7^{km}, Error ellipse: s-maj=11.9km s-min=5.1km az=177.0*

*GUC **27** 13:31:19.5±0.6, 20°.15S×69°.26W, h112^{km}±2^{km}, ML3.7*

ISC 27 13:31:20.7±1.6**, 20°.16S**±0°.04×**69°.29W**±0°.07**, h108**^{km}±10^{km}**, n22, σ0^{s}.59**/33**, 6C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.13	81	eP	Pn	13 31 35.5	-0.7
PB08				eS	Sn	13 31 48.1	+0.3
PB08	IPOC Station P	0.13	81	⇓iP	Pn	13 31 36.1	-0.1
PB08				i S	Sn	13 31 48.1	+0.3
PB08				IAML		13 31 48.8	
	comp=N,8μm,0.2s						
GO01	Chusmiza	0.50	10	⇓iP	Pn	13 31 37.5	-0.4
GO01				i S	Sn	13 31 51.0	+0.1
GO01				IAML		13 31 52.7	
	comp=N,11μm,0.1s						
PB11	IPOC Station P	0.53	319	eP	Pn	13 31 36.9	-0.9
PB11				eS	Sn	13 31 51.3	+0.8
PB11	IPOC Station P	0.53	319	⇑iP	Pn	13 31 37.5	-0.3
PB11				i S	Sn	13 31 51.1	+0.6
PB11				IAML		13 31 52.1	
	comp=N,6μm,0.3s						
PB01	IPOC Station P	0.90	192	eS	Sn	13 31 56.0	0.0
PB01	IPOC Station P	0.90	192	⇓iP	Pn	13 31 40.8	0.0
PB01				i S	Sn	13 31 56.2	+0.2
PB01				IAML		13 31 56.8	
	comp=E,5μm,0.2s						
PSGC	Pisagua	0.96	306	⇑iP	Pn	13 31 41.0	-0.6
PSGC				i S	Sn	13 31 57.4	+0.2
PSGC				IAML		13 31 59.6	
	comp=N,949nm,0.4s						
PSGCX	Pisagua	0.96	306	eP	Pn	13 31 40.3	-1.2
MNMC	Minye Minye	1.07	344	⇑iP	Pn	13 31 42.6	-0.2
MNMC				i S	Sn	13 32 00.0	+0.7
MNMC				IAML		13 32 02.1	
	comp=N,5μm,0.3s						
MNMCX	Minye Minye	1.07	344	eP	Pn	13 31 43.1	+0.3
PB02	IPOC Station P	1.28	206	⇑iP	Pn	13 31 45.0	0.0
PB02				i S	Sn	13 32 04.0	+0.6
PB02				IAML		13 32 06.2	
	comp=E,2μm,0.1s						
PB09	IPOC Station P	1.63	178	⇓iP	Pn	13 31 49.2	+0.1
PB09				i S	Sn	13 32 11.6	+0.8
PB09				IAML		13 32 13.4	
	comp=N,562nm,0.3s						
PB07	IPOC Station P	1.65	200	⇑iP	Pn	13 31 49.2	-0.3
PB07				i S	Sn	13 32 10.7	-0.7
PB07				IAML		13 32 14.8	
	comp=E,781nm,0.1s						
PB12	IPOC Station P	1.83	327	IAML		13 32 18.5	
	comp=E,553nm,0.4s						
PB16	IPOC Station P	1.83	354	⇓iP	Pn	13 31 52.1	0.0
PB16				i S	Sn	13 32 16.4	+0.6
PB16				IAML		13 32 18.4	
	comp=N,180nm,0.5s						
PB03	IPOC Station P	1.93	193	⇓iP	Pn	13 31 52.6	-0.3
PB03				IAML		13 32 20.1	
	comp=E,440nm,0.2s						
PB04	IPOC Station P	2.30	200	⇑iP	Pn	13 31 57.3	-0.4
PB04				IAML		13 32 26.0	
	comp=N,500nm,0.2s						
LVC	Limon Verde	2.46	172	eP	Pn	13 32 00.3	+0.3
LVC				i S	Sn	13 32 30.9	+0.9
PB06	IPOC Station P	2.54	186	IAML		13 32 32.6	
	comp=N,260nm,0.3s						
YJA	Yavi	4.05	120	eP	Pn	13 32 20.8	-0.4
YJA				IAML		13 32 22.3	
	comp=Z,4.6nm,0.6s						
HJA	Humahuaca	4.71	131	eP	Pn	13 32 28.8	-1.2
HJA				IAML		13 32 30.7	
	comp=Z,6.8nm,0.4s						

MEX 27 13:56:35.0±0.5**, 16°.03N×96°.52W, h57**^{km}±8^{km}**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.47	123	eP	Pn	13 56 44.9	-1.5
HUIG				i S	Sn	13 56 52.9	-1.8
VHO	Vista Hermosa	1.06	349	eP	Pn	13 56 52.7	-1.2
VHO				i S	Sn	13 57 05.6	-2.2
CMIG	Matias Romero	1.89	56	i P	Pn	13 57 03.4	-1.5
CMIG				eS	Sn	13 57 26.6	-1.1

JMA 27 14:00:08.9±0.1**, 39°.93N×142°.51E, h34**^{km}±1^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.50	271	P	Pb	14 00 19.5	0.0
JTH				S	Sb	14 00 26.8	0.0
MIYJ	Miyakonagasawa	0.64	237	P	Pn	14 00 21.3	-0.2
MIYJ				eS	Sn	14 00 29.9	-0.5
JKEN	Kujiedanarisaw	0.67	294	P	Pn	14 00 21.7	-0.3
JKEN				S	Sn	14 00 31.2	-0.1
JANG	Nango	0.88	300	P	Pn	14 00 24.7	-0.2
JKZ	Kuzumaki	0.91	274	P	Pb	14 00 25.8	-0.5
JKZ				eS	Sn	14 00 37.5	+0.3
JOM	Ohasama	1.04	244	P	Pn	14 00 27.6	+0.5
JOM				eS	Sn	14 00 41.0	+0.5
OFUJ	Ofunato	1.07	218	P	Pn	14 00 27.6	+0.1
JTM	Tenmabayashi	1.40	308	P	Pn	14 00 32.9	+1.0
JTM				S	Sb	14 00 50.9	-1.0
JMK	Ichinoseki	1.40	226	P	Pn	14 00 32.8	+0.8
JAH	Hinai	1.46	281	P	Pb	14 00 34.3	-1.2
JRG	Rokugo	1.54	250	P	Pb	14 00 35.6	-1.3

NNC 27 14:19:01.6±11.0**, 37°.73N×71°.73E, h0**^{km}**, mb3.7, mpv3.3, 2C-2D, Error ellipse: s-maj=89.2km s-min=66.3km az=162.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.34	22	⇑S	Sn	14 21 26.5	+1.5
	8.3nm,0.7s						
KK31	Karatay Array	5.45	351	⇓P	Pn	14 20 24.5	+0.3
	1.6nm,0.3s,baz=0.6,slow=41,SNR=38						
KK31				S	Sn	14 21 28.8	+1.3
	1.3nm,0.3s,baz=186,slow=26,SNR=16						
TKM2	Tokmak 2	5.97	28	⇓P	Pn	14 20 31.3	-0.1
	1.7nm,0.9s						
TKM2				⇑S	Sn	14 21 40.9	+0.3
	1.8nm,0.8s						

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*MAN **27** 14:22:00.2, 7°.34N×124°.77E, h1^{km}, MS3.5*

*IDC **27** 14:22:01.9±1.1, 7°.12N×124°.60E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/27, mbtmp3.7/5, MS3.1/4, Ms1 3.2/4, ms1mx2.8/21, Error ellipse: s-maj=74.4km s-min=20.4km az=72.0*

ISC 27 14:22:03.3±1.1**, 7°.4N**±0°.1×**124°.8E**±0°.2**, h10**^{km}**, n14, σ2^{s}.39**/10**, mb3.6**/5**, MS2.9**/4**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	1.02	353	⇑iP	Pb	14 22 21.0	-2.1
CGP						14 22 35.9	
GSPH	General Santos	1.35	174	eP	Pg	14 22 31.4	+2.1
DCPH	Dipolog City	1.84	308	⇑eP	Pg	14 22 38.4	-0.3
DCPH						14 23 08.7	
SNPH	Sibulan	2.45	321	eP	Pg	14 22 46.9	-3.5
LLP	Lapu-Lapu	2.98	344	eP	Pn	14 22 51.5	+0.7
LLP						14 23 31.4	
RCP	Roxas	4.58	334	⇑eP	Pn	14 23 15.2	+2.5
CMAR	Chiang Mai Arr	27.44	296	LR	LR	14 39 07.5	
	comp=Z,33nm,18.2s,baz=210,slow=37						
WRA	Warramunga Arr	28.78	161	P	P	14 28 00.1	-1.5
	1.5nm,1.1s,baz=339,slow=11,SNR=3.2						
KSRS	Korea Array	30.02	5	LR	LR	14 43 09.9	
	comp=Z,26nm,18.1s,baz=208,slow=42						
MJAR	Matsushiro Arr	31.45	21	LR	LR	14 39 36.9	
	comp=Z,27nm,21.7s,baz=215,slow=33						
ASAR	Alice Springs	32.16	164	P	P	14 28 29.1	-2.4
	0.5nm,0.6s,baz=340,slow=7.2,SNR=11						
SONM	Songino Array	43.20	342	P	P	14 30 06.7	+2.0
	0.4nm,0.5s,baz=165,slow=6.0,SNR=2.6						
SONM				LR	LR	14 49 07.5	
	comp=Z,54nm,19.8s,baz=146,slow=37						
MKAR	Makanchi Array	53.44	325	P	P	14 31 24.8	+1.1
	0.7nm,0.7s,baz=134,slow=8.3,SNR=6.4						
ILAR	Eielson Array	82.60	26	P	P	14 34 28.4	+1.9
	0.3nm,0.7s,baz=241,slow=4.8,SNR=3.0						

DJA 27 14:39:05.1±0.3**, 6°S**±4°×**10°6E**±°**, h12**^{km}±4^{km}**, M3.6**/7**, MLv3.6**/7**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.36	150	P	Pb	14 39 13.2	-0.3
CGJI				S	Sb	14 39 19.1	0.0
BLSI	Bandar Lampung	0.96	344	P	Pg	14 39 23.7	0.0
BLSI				S	Sb	14 39 37.1	+0.6
KASI	Kota Agung	1.27	307	P	Pn	14 39 28.1	-0.6
KASI				S	Sb	14 39 45.3	0.0
CBJI	Citeko	1.34	95	P	Pg	14 39 30.8	0.0
KLI	Kotabumi	1.57	335	P	Pn	14 39 32.8	0.0
KLSI		1.78	334	P	Pn	14 39 35.7	0.0
KLSI				S	Sn	14 39 58.3	+0.1
LWLI	Liwa	1.93	311	P	Pn	14 39 37.7	-0.1
MDSI	Maura Dua	2.24	324	P	Pn	14 39 42.4	+0.4
CISI	Cisompet, Garu	2.61	119	P	Pn	14 39 47.5	+0.4

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*NEIC **27** 14:52:42.4±0.0, 19°.40N×64°.84W, h25^{km}, MD2.9(RSPR), After RSPR.*

RSPR 27 14:52:42.4, 19°.40N×64°.84W, h25^{km}±39^{km}**, MD2.9**/3**, 3C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.82	144	⇑eP	Pb	14 52 55.4	-2.6
ABV	Anegada	0.82	144	eS	Sb	14 53 07.2	-1.6
ABVI	Anegada Island	0.82	144	ePn	Pb	14 52 55.4	-2.6
ABVI				ePn	Pb	14 52 55.4	-2.6
ABVI				eSg	Sb	14 53 07.2	-1.6
ABVI				eSg	Sb	14 53 07.2	-1.6
CUPR	Culebra, Puert	1.17	201	⇑eP	Pn	14 53 00.7	-2.4
CUPR	Culebra, Puert	1.17	201	eS	Sn	14 53 15.1	-3.2
CUPR	Culebra, Puert	1.17	201	ePn	Pn	14 53 00.7	-2.4
CUPR				eSn	Sn	14 53 15.1	-3.2
MTP	Monte Pirata	1.46	208	eS	Sn	14 53 22.6	-3.0
MTP	Monte Pirata	1.46	208	⇑eP	Pn	14 53 05.8	-1.4
SEUS	St. Eustatius	2.59	137	ePn	Pn	14 53 21.5	-1.3
SDDR	Presa de Saban	6.11	267	ePn	Pn	14 54 09.9	-1.3

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*IDC **27** 14:57:27.6±2.9, 26°.92N×143°.61E, h0^{km}, mb3.5/4, mb1 3.7/7, mb1mx3.5/38, mbtmp3.6/7, ML3.2/3, Error ellipse: s-maj=118.1km s-min=20.6km az=77.0*

*ISCJB **27** 14:57:29.0±1.1, 27°.10N±0°.08×143°.84E±0°.09, h33^{km}, mb3.5/4, Error ellipse: s-maj=12.9km s-min=9.8km az=135.3*

*JMA **27** 14:57:30.2±0.1, 27°.14N×143°.73E, h35^{km}, M3.6*

ISC 27 14:57:32.1±1.4**, 27°.11N**±0°.08×**143°.7E**±0°.1**, h35**^{km}**, n10, σ1^{s}.43**/13**, mb3.4**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.34	270	P	Pn	14 57 54.0	-0.3
CBIJ				eS	Sn	14 58 11.2	+0.3
JHH2	Haha-jima-NKT2	1.43	251	P	Pn	14 57 55.3	-0.3
JHH2				eS	Sn	14 58 13.6	+0.4
JHJ	Hachijo jima 2	6.88	331	Pn	Pn	14 59 11.2	+0.8
	3.2nm,0.3s,baz=56,slow=23,SNR=2.7						
JHJ				Sn	Sn	15 00 24.2	-3.2
	3.9nm,0.3s,baz=84,slow=21,SNR=3.4						
JHU	Hanno	9.49	338	P	Pn	14 59 46.2	0.0
MJAR	Matsushiro Arr	10.49	335	Pn	Pn	15 00 00.0	+0.1
	0.1nm,0.3s,baz=156,slow=7.9,SNR=9.6						
KSRS	Korea Array	16.83	312	Pn	P	15 01 27.9	+1.1
	0.1nm,0.3s,baz=124,slow=10,SNR=4.1						
KLR	Kul'dur	23.94	340	P	P	15 02 44.7	+2.0
	0.6nm,0.5s,baz=139,slow=5.0,SNR=3.8						
WRA	Warramunga Arr	47.65	192	P	P	15 06 04.1	-0.9
	1.0nm,0.5s,baz=359,slow=7.7,SNR=6.3						
ASAR	Alice Springs	51.36	192	P	P	15 06 32.0	-1.3
	0.5nm,1.1s,baz=5.1,slow=6.1,SNR=4.4						
MKAR	Makanchi Array	51.50	310	P	P	15 06 35.5	+1.3
	0.2nm,0.6s,baz=101,slow=6.0,SNR=2.8						

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*IDC **27** 15:04:19.8±3.1, 38°.19N×142°.52E, h67^{km}±22^{km}, mb3.3/2, mb1 3.3/6, mb1mx3.1/35, mbtmp3.6/6, Error ellipse: s-maj=40.4km s-min=13.6km az=119.0*

*ISCJB **27** 15:04:21.4±0.8, 38°.22N±0°.04×141°.95E±0°.08, h65^{km}±6^{km}, mb3.5/2, Error ellipse: s-maj=10.8km s-min=5.6km az=16.9*

*JMA **27** 15:04:22.8±0.1, 38°.24N×141°.86E, h62^{km}±1^{km}, M3.7*
JMA Felt I J1.

ISC 27 15:04:22.6±1.6**, 38°.23N**±0°.05×**141°.92E**±0°.10**, h53**^{km}±10^{km}**, n27, σ1^{s}.74**/39**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.37	283	P	Pn	15 04 33.4	+0.8
JIKH				S	Sn	15 04 40.8	+1.0
JIO	Ouri	0.51	297	P	Pn	15 04 34.6	+0.5
JIO				S	Sn	15 04 42.9	+0.5
JKMT	Kesennumamotoy	0.68	329	P	Pn	15 04 36.7	+0.5
JKMT				S	Sn	15 04 46.5	+0.4
OFUJ	Ofunato	0.87	347	P	Pn	15 04 39.1	+0.3
OFUJ				S	Sn	15 04 50.8	+0.2
JOFO	Osakifurukawao	0.88	295	P	Pn	15 04 39.0	+0.2
JOFO				eS	Sn	15 04 51.2	+0.5
JMK	Ichinoseki	0.91	323	P	Pn	15 04 39.6	+0.4
JMK				S	Sn	15 04 51.6	+0.2
JMM	Marumori	0.96	248	P	Pn	15 04 39.7	-0.2
JMM				S	Sn	15 04 52.1	-0.6
JOU	Okura	1.00	278	P	Pn	15 04 40.5	+0.1
JOU				S	Sn	15 04 53.7	+0.1
JFK	Kawauchi	1.20	224	P	Pn	15 04 43.0	-0.1
JFK				eS	Sn	15 04 57.8	-0.5
JOM	Ohasama	1.34	339	P	Pn	15 04 45.2	+0.2
JOM				S	Sn	15 05 02.0	+0.3
JYK	Kaneyama	1.41	300	P	Pn	15 04 46.0	+0.1
JYK				eS	Sn	15 05 03.2	-0.1
JFT	Otama	1.44	241	P	Pn	15 04 46.8	+0.4
JFT				S	Sn	15 05 04.3	0.0
JYS	Shirataka	1.46	270	P	Pn	15 04 46.9	+0.2
JYS				S	Sn	15 05 04.9	+0.1
JRG	Rokugo	1.54	320	P	Pn	15 04 48.0	+0.3
JRG				S	Sn	15 05 07.3	+0.7
JYA	Atsumi	1.77	283	P	Pn	15 04 51.0	+0.1
JYA				eS	Sn	15 05 12.7	+0.4
MJAR	Matsushiro Arr	3.40	241	P	Pn	15 05 15.3	+2.0
	0.1nm,0.3s,baz=58,slow=7.8,SNR=13						
MJAR				S	Sn	15 06 00.3	+7.9
	0.2nm,0.3s,baz=173,slow=25,SNR=4.7						
JHJ	Hachijo jima 2	5.39	199	P	Pn	15 05 38.9	-1.5
	1.4nm,0.3s,baz=241,slow=15,SNR=2.9						
JHJ				S	Sn	15 06 36.3	-4.9
	3.9nm,0.3s,baz=53,slow=20,SNR=2.6						
ASAJ	Asahikawa	5.90	5	P	Pn	15 05 46.6	-0.8
	0.6nm,0.3s,baz=224,slow=14,SNR=9.9						
ASAJ				S	Sn	15 06 51.6	-2.1
	0.3nm,0.3s,baz=104,slow=19,SNR=3.2						
USRK	Ussuriysk Ar.	9.57	312	P	Pn	15 06 38.5	+0.8
	0.3nm,0.3s,baz=125,slow=14,SNR=7.7						
H11N2	WAKE ISLAND Hy	28.44	123	T	T	15 40 32.2	
	baz=316,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	28.45	123	T	T	15 40 30.8	
	baz=316,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	28.46	123	T	T	15 40 34.2	
	baz=316,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	29.19	125	T	T	15 41 25.9	
	baz=318,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.20	125	T	T	15 41 27.6	
	baz=318,slow=76,SNR=29						
H11S2	WAKE ISLAND Hy	29.21	125	T	T	15 41 27.8	
	baz=318,slow=76,SNR=27						
ZALV	Zalesovo Beam	41.42	311	P	P	15 12 01.8	-1.8
	0.5nm,0.5s,baz=90,slow=7.5,SNR=2.8						
MKAR	Makanchi Array	43.84	301	P	P	15 12 23.1	-0.4
	0.4nm,0.4s,baz=90,slow=7.8,SNR=5.9						

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*SFS **27** 15:05:23.0, 34°.10N×4°.90W, ML3.6, L'OULFA (MARRUECOS)*

*MDD **27** 15:05:24.6±1.9, 34°.10N×4°.90W, h20^{km}, mb3.6/8, Error ellipse: s-maj=17.7km s-min=10.4km az=170.0, PRXIMO*

*INMG **27** 15:05:24.4±1.2, 34°.23N×4°.93W, h5^{km}, ML2.1, Error ellipse: s-maj=5.8km s-min=2.8km az=86.0*

*CNRM **27** 15:05:26.1, 34°.14N×4°.76W, h50^{km}, ml3.0*

ISC 27 15:05:25.0±1.1**, 34°.18N**±0°.02×**4°.75W**±0°.03**, h25**^{km}±12^{km}**, n37, σ1^{s}.64**/67**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SICH	Sidi Chahed	0.48	261	P	Pb	15 05 34.0	-0.8
SICH				S	Sn	15 05 46.7	+2.9
LCRM	LCR	0.51	190	P	Pb	15 05 34.2	-1.2
LCRM				S	Sb	15 05 42.8	+0.4
IFR	Ifrane	0.73	205	ePn	Pb	15 05 38.4	-0.8
IFR	Ifrane	0.73	205	i Pg	Pn	15 05 39.9	0.0
IFR				eS	Sn	15 05 50.3	-0.2
AKLM	AKL	0.80	66	P	Pb	15 05 38.5	-1.8
AKLM				S	Sn	15 05 53.2	+1.2
CHEFC	Chefchaouen	1.04	332	P	Pn	15 05 43.3	-0.8
CHEFC				S	Sn	15 06 02.8	+5.0
PVLZ	Peæn de	1.05	20	P	Pb	15 05 45.7	+1.1
PVLZ				S	Sn	15 05 59.7	+1.7
PVLZ	Peæn de	1.05	20	eP	Pb	15 05 45.7	+1.1
PVLZ				eS	Sn	15 05 59.7	+1.7
RSA	Sarsar	1.13	309	P	Pb	15 05 45.8	0.0
RSA				S	Sn	15 06 02.9	+2.9
CZD	Col de Zad	1.17	192	P	Pb	15 05 47.4	+0.6
CZD				S	Sn	15 06 04.4	+3.0
PALE	Palemas	1.23	33	P	Pn	15 05 46.3	-0.4
PALE				S	Sb	15 06 05.5	+2.5
MD31	MD31	1.31	180	P	Pb	15 05 48.5	-0.5
MD31				S	Sb	15 06 07.3	+1.9
MDT	Midelt	1.37	175	P	Pb	15 05 49.4	-0.6
MDT				S	Sb	15 06 08.7	+1.5
ZHG	ZHG	1.74	245	P	Pn	15 05 53.2	-0.4
ZHG				S	Sb	15 06 18.2	+0.5
JBK	JBK	1.82	85	P	Pn	15 05 54.0	-0.9
JBK				S	Sn	15 06 14.0	-3.2
MELI	Melilla	1.86	53	S	Sb	15 06 19.7	-1.4
	352nm,7.2s						
MELI	Melilla	1.86	53	eS	Sn	15 06 18.0	0.0
TAF	Taforalt	2.03	71	P	Pn	15 05 56.6	-1.1
TAF				S	Sb	15 06 26.6	+0.5
EMIJ	Mijas	2.38	360	P	Pn	15 06 01.9	-0.5
	1.4nm,0.2s,SNR=6.1						
EMIJ				S	Sn	15 06 30.7	0.0
	15nm,0.5s,SNR=7.9						
EGOR	Sierra Gorda,	2.97	10	P	Pn	15 06 10.8	+0.2
	1.4nm,0.2s,SNR=7.9						
EGOR				S	Sn	15 06 46.5	+1.1
	4.9nm,0.3s,SNR=7.9						
EBER	Berja	3.10	29	P	Pn	15 06 13.2	+0.6
	1.4nm,0.2s,SNR=4.0						
EBER				S	Sn	15 06 49.3	+0.4
	19nm,0.4s,SNR=5.8						
EQUE	Quentar	3.20	19	P	Pn	15 06 14.2	+0.4
	2.6nm,0.3s,SNR=7.9						
EQUE				S	Sn	15 06 51.6	+0.5
	0.4nm,0.1s,SNR=7.9						
EQES	Quesada	3.86	20	P	Pn	15 06 24.4	+1.6
	1.1nm,0.1s,SNR=10.0						
EQES				S	Sn	15 07 08.1	+0.7
	5.2nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.90	337	P	Pn	15 06 22.9	-0.4
	0.4nm,0.1s,SNR=7.9						
EMIN				S	Sn	15 07 05.8	-2.5
	0.8nm,0.2s,SNR=7.9						
ECAB	El Cabril	3.92	352	P	Pn	15 06 24.3	+0.7
	0.1nm,0.2s,SNR=7.9						
ECAB				S	Sn	15 07 08.0	-0.9
	2.1nm,0.3s,SNR=7.9						
EADA	Adamuz	3.98	2	P	Pn	15 06 25.4	+1.0
	2.0nm,0.3s,SNR=7.9						
EADA				S	Sn	15 07 09.6	-0.7
	2.0nm,0.3s,SNR=7.9						
PBDV	Barranco-do-Ve	4.00	321	ePn	Pn	15 06 24.6	-0.1
PBDV				eSn	Sn	15 07 07.8	-3.0
PBDV	Barranco-do-Ve	4.00	321	P	Pn	15 06 24.6	-0.1
PBDV				S	Sn	15 07 07.8	-3.0
EGRO	El Granado	4.01	327	P	Pn	15 06 24.4	-0.4
	0.7nm,0.1s,SNR=5.3						
EGRO				S	Sn	15 07 08.1	-2.9
	3.1nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	4.02	324	ePn	Pn	15 06 23.3	-1.6
PVAQ				eSn	Sn	15 07 08.0	-3.2
PVAQ				A	A	15 07 14.4	
	3.8nm,0.3s						
PVAQ	Vaqueiros	4.02	324	P	Pn	15 06 23.3	-1.6
PVAQ				S	Sn	15 07 08.0	-3.2
	3.8nm,0.3s						
PCVE	Castro Verde	4.35	323	ePn	Pn	15 06 28.9	-0.6
PCVE	Castro Verde	4.35	323	P	Pn	15 06 28.9	-0.6
ETOB	Tobarra	5.15	29	P	Pn	15 06 42.1	+1.6
	1.7nm,0.2s,SNR=11						
ETOB				S	Sn	15 07 38.3	-0.8
	2.2nm,0.5s,SNR=7.9						
PAB	San Pablo	5.36	3	P	Pn	15 06 43.6	+0.1
	0.5nm,0.3s,SNR=7.9						
PAB				S	Sn	15 07 42.5	-1.9
	0.9nm,0.3s,SNR=7.9						
PMTG	Montargil	5.62	331	ePn	Pn	15 06 46.1	-0.8
PMTG	Montargil	5.62	331	P	Pn	15 06 46.1	-0.8

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*IDC **27** 15:18:19.7±1.2, 6°.51S×104°.93E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.6/34, mbtmp3.9/7, ML4.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/34, Error ellipse: s-maj=58.4km s-min=18.6km az=36.0*

*ISCJB **27** 15:18:22.6±0.8, 6°.51S±0°.07×105°.28E±0°.06, h10^{km}, mb3.8/6, Error ellipse: s-maj=12.2km s-min=4.9km az=41.6*

*DJA **27** 15:18:24.6±0.3, 6°S±4°×10°5E±°, h10^{km}, M4.0/9, MLv4.0/9*

ISC 27 15:18:21.6±0.9**, 6°.45S**±0°.07×**105°.12E**±0°.07**, h10**^{km}**, n26, σ1^{s}.76**/21**, mb3.9**/6**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.59	106	P	Pg	15 18 32.8	-0.4
CGJI				S	Sg	15 18 38.3	-2.7
BLSI	Bandar Lampung	1.08	7	P	Pg	15 18 42.7	+0.2
BLSI				S	Sb	15 18 56.8	+0.1
KASI	Kota Agung	1.11	326	P	Pn	15 18 47.4	+4.2
KASI				S	Sn	15 19 04.7	+6.1
TNG	Tangerang	1.54	80	P	Pn	15 18 47.2	-2.0
KLI	Kotabumi	1.60	351	P	Pg	15 18 53.1	+0.8
CBJI	Citeko	1.72	89	P	Pn	15 18 51.9	+0.2
LWLI	Liwa	1.77	323	P	Pg	15 18 57.2	+1.6
KLSI		1.79	348	P	Pg	15 18 56.0	0.0
MDSI	Maura Dua	2.16	334	P	Pg	15 19 01.4	-1.8
LEM	Lembang	2.51	99	Pn	Pn	15 19 05.0	+2.3
	32nm,0.3s,baz=9.5,slow=23,SNR=42						
LEM				Sn	Sn	15 19 38.4	+4.9
	31nm,0.3s,baz=313,slow=19,SNR=6.6						
LEM	Lembang	2.51	99	P	Pn	15 19 01.1	-1.6
CISI	Cisompet, Garu	2.89	112	P	Pn	15 19 06.9	-1.0
PSI	Prapat	11.08	326	LR	LR	15 25 52.3	
	comp=Z,78nm,19.9s,baz=104,slow=41						
H01W3	Cape Leeuwin H	29.49	165	T	T	15 54 53.9	
	baz=344,slow=76						
H01W1	Cape Leeuwin H	29.51	165	T	T	15 54 54.6	
	baz=344,slow=76						
H01W2	Cape Leeuwin H	29.51	165	T	T	15 54 54.1	
	baz=344,slow=76						
WRA	Warramunga Arr	31.38	118	P	P	15 24 42.9	-0.1
	0.8nm,0.3s,baz=297,slow=11,SNR=24						
H08S2	Diego Garcia H	32.40	266	T	T	15 59 17.9	
	baz=90,slow=76,SNR=19						
H08S3	Diego Garcia H	32.41	266	T	T	15 59 14.4	
	baz=90,slow=76,SNR=22						
H08S1	Diego Carcia H	32.41	266	T	T	15 59 18.8	
	baz=90,slow=76,SNR=5.8						
ASAR	Alice Springs	32.53	125	P	P	15 24 53.5	+0.4
	0.2nm,0.3s,baz=303,slow=7.9,SNR=3.1						
STKA	Stephens Creek	42.40	131	P	P	15 26 17.8	+1.2
	2.1nm,0.6s,baz=306,slow=10,SNR=6.2						
MKAR	Makanchi Array	56.76	341	P	P	15 28 05.1	-0.7
	0.1nm,0.3s,baz=139,slow=8.6,SNR=4.1						

BRTR	**Keskin Array B**	**80.07**	**312**	P	**P**	**15 30 30.6**	**-1.5**
	0.9nm,0.8s,baz=155,slow=4.4,SNR=4.3						
FINES	**FINESS Array B**	**90.41**	**332**	P	**P**	**15 31 23.7**	**+0.6**
	1.1nm,0.8s,baz=109,slow=6.5,SNR=4.8						
TXAR	**Lajitas Array**	**144.58**	**47**	PKP	**PKPdf**	**15 37 59.1**	**-0.3**
	0.5nm,0.8s,baz=318,slow=1.2,SNR=3.7						

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*IDC **27** 15:23:01.8±1.0, 19.°14N×121.°28E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/32, mbtmp3.6/8, ML3.7/1, MS3.0/6, Ms1 3.1/6, ms1mx2.7/33, Error ellipse: s-maj=29.8km s-min=18.0km az=74.0*

*MAN **27** 15:23:03.5, 19.°27N×121.°12E, h1km, MS3.0*

*ISCJB **27** 15:23:05.7±0.7, 19.°24N±0.°09×121.°2E±0.°1, h39km, mb3.4/7, MS2.9/5, Error ellipse: s-maj=19.5km s-min=11.6km az=165.5*

ISC 27 15:23:07.4±0.9, **19.°2N**±0.°1×**121.°3E**±0.°2, **h39**km, **n18**, σ**1s.05**/9, **mb3.7**/7, **MS2.8**/5, **1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**1.62**	**161** ⇓	*i*P	**Pn**	**15 23 34.5**	**+1.1**
CVP						15 23 55.5	
DAV	**Davao City (W)**	**12.80**	**160**	LR	LR	15 31 40.9	
	comp=Z,109nm,20.3s,baz=335,slow=41						
KSRS	**Korea Array**	**19.05**	**16**	P	**Pn**	**15 27 26.4**	**-0.9**
	0.2nm,0.3s,baz=196,slow=12,SNR=7.9						
CMAR	**Chiang Mai Arr**	**21.15**	**272**	P	**P**	**15 27 48.7**	**-0.6**
	0.4nm,0.5s,baz=83,slow=10,SNR=4.9						
CMAR				LR	LR	15 36 59.7	
	comp=Z,25nm,18.2s,baz=140,slow=40						
MJAR	**Matsushiro Arr**	**22.76**	**37**	P	**P**	**15 28 07.0**	**+0.6**
	0.5nm,0.7s,baz=220,slow=8.2,SNR=2.8						
GUMO	**Guam**	**23.31**	**100**	LR	LR	15 35 20.0	
	comp=Z,31nm,19.1s,baz=268,slow=32						
SONM	**Songino Array**	**30.98**	**340**	P	**P**	**15 29 21.5**	**+0.4**
	0.4nm,0.5s,baz=139,slow=6.8,SNR=3.1						
WRA	**Warramunga Arr**	**40.99**	**161**	P	**P**	**15 30 45.5**	**-1.3**
	0.8nm,0.5s,baz=343,slow=12,SNR=21						
MKAR	**Makanchi Array**	**42.05**	**320**	P	**P**	**15 30 56.4**	**+1.2**
	0.9nm,0.6s,baz=114,slow=10,SNR=12						
MKAR				LR	LR	15 51 32.4	
	comp=Z,11nm,18.4s,baz=162,slow=41						
H11S3	**WAKE ISLAND Hy**	**42.88**	**83**	T	T	16 16 43.8	
	baz=275,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**42.89**	**83**	T	T	16 16 49.1	
	baz=275,slow=75,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**42.90**	**83**	T	T	16 16 52.3	
	baz=275,slow=75,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**42.91**	**81**	T	T	16 16 46.1	
	baz=277,slow=75,SNR=31						
H11N2	**WAKE ISLAND Hy**	**42.91**	**81**	T	T	16 16 45.6	
	baz=277,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**42.92**	**81**	T	T	16 16 47.2	
	baz=277,slow=75,SNR=15						
ASAR	**Alice Springs**	**44.39**	**163**	P	**P**	**15 31 13.6**	**-0.8**
	0.4nm,0.3s,baz=349,slow=7.2,SNR=12						
ZALV	**Zalesovo Beam**	**44.49**	**330**	P	**P**	**15 31 14.6**	**-0.2**
	0.8nm,0.6s,baz=116,slow=6.9,SNR=3.6						
ZALV				LR	LR	15 53 01.2	
	comp=Z,16nm,19.2s,baz=70,slow=40						
AAK	**Ala-Archa**	**45.69**	**311**	LR	LR	15 52 47.2	
	comp=Z,41nm,19.1s,baz=123,slow=39						

IDC 27 15:48:35.0±11.0, **3.°44S**×**131.°50E**, **h0**km, **mb3.7**/2, **mb1 4.0**/3, **mb1mx3.4**/25, **mbtmp3.8**/3, **ML3.5**/1, **Error ellipse: s-maj=814.3km s-min=28.6km az=73.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.63**	**171**	Pn	Pn	15 52 27.5	-2.1
	0.2nm,0.3s,baz=346,slow=13,SNR=10						
WRA				Sn	Sn	15 55 23.3	-12
	0.1nm,0.3s,baz=155,slow=32,SNR=6.5						
ASAR	**Alice Springs**	**20.24**	**174**	P	P	15 53 12.9	+0.9
	2.6nm,0.4s,baz=351,slow=10.0,SNR=41						
ASAR				S	S	15 56 45.0	-15
	0.4nm,0.9s,baz=0.2,slow=23,SNR=3.0						
MKAR	**Makanchi Array**	**66.13**	**325**	P	P	15 59 24.2	0.0
	0.5nm,0.6s,baz=122,slow=8.2,SNR=7.1						

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*IDC **27** 16:03:05.2±0.6, 15.°48S×173.°18W, h0km, mb4.5/15, mb1 4.7/15, mb1mx4.4/44, mbtmp4.5/15, MS3.6/15, Ms1 3.6/15, ms1mx3.5/19, Error ellipse: s-maj=29.1km s-min=14.8km az=131.0*

*NEIC **27** 16:03:06.8±2.2, 15.°38S×173.°13W, h10km±1km, mb4.8/46, Error ellipse: s-maj=11.1km s-min=8.9km az=136.0*

*ISCJB **27** 16:03:08.9±0.1, 15.°43S±0.°03×172.°96W±0.°06, h29km, mb4.7/48, MS3.6/18, Error ellipse: s-maj=8.5km s-min=3.0km az=27.5*

*BJI **27** 16:03:08.3±0.0, 15.°68S×173.°07W, h30km, mb4.9/14, mB5.2/7, Ms4.7/4, Ms7 4.3/3*

ISC 27 16:03:09.7±0.3, **15.°57S**±0.°06×**172.°93W**±0.°07, **h29**km, **n260**, σ**1s.52**/243, **mb4.7**/48, **MS3.7**/19, **7C-8D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.51**	**141**	*e*Pn	**Pn**	**16 04 17.3**	**+1.2**
NIUE				*e*Sn	**Sn**	**16 05 05.2**	**-2.5**
KNTN	**Kanton**	**12.77**	**5**	*e*Pn	Pn	16 06 04.6	-4.8
KNTN				*e*Sn	Sn	16 08 17.6	-13
RAR	**Rarotonga**	**13.69**	**116**	Pn	**Pn**	**16 06 21.0**	**-0.9**
	1.0nm,0.3s,baz=285,slow=11,SNR=4.6						
RAR				Sn	Sn	16 08 42.2	-11
	0.8nm,0.3s,baz=131,slow=22,SNR=2.2						
RAR				LR	LR	16 10 40.4	
	comp=Z,78nm,20.3s,baz=286,slow=33						
RAR	**Rarotonga**	**13.69**	**116**	*e*Pn	**Pn**	**16 06 24.0**	**+2.1**
DZM	**Mont Dzumac**	**20.56**	**249**	*e*P	Pn	16 07 50.9	+2.3
	124nm,1.1s						
DZM				*e*LR	LR	16 12 49.6	
	comp=Z,635nm,27.4s						
DZM	**Mont Dzumac**	**20.56**	**249**	P	Pn	16 07 47.8	-0.8
	24nm,0.9s,baz=80,slow=16,SNR=7.0						
DZM				LR	LR	16 13 37.2	
	comp=Z,156nm,18.2s,baz=74,slow=31						
DZM	**Mont Dzumac**	**20.56**	**249**	*e*P	**P**	**16 07 44.0**	**-2.3**
	28nm,0.9s						
PAE	**Paea**	**22.47**	**99**	*e*T	T	16 31 19.8	
	3.1nm,0.3s						
PPT	**Papeete**	**22.47**	**98**	LR	LR	16 14 53.1	
	comp=Z,29nm,18.4s,baz=213,slow=31						
PPT2	**Papeete2**	**22.47**	**98**	*e*S	**S**	**16 12 07.7**	**-4.4**
	54nm,23.5s						
PPT2				*e*LQ	LQ	16 12 41.5	
	268nm,28.2s						
PPT2				*e*LR	LR	16 13 15.6	
	comp=Z,88nm,28.0s						
PPT2	**Papeete2**	**22.47**	**98**	*e*T	T	16 31 21.4	
	5.4nm,0.4s						
TIAR	**Tiarei**	**22.69**	**98**	*e*T	T	16 31 36.9	
	3.8nm,0.3s						
TVO	**Taravao**	**22.79**	**99**	*e*T	T	16 31 44.0	
	2.6nm,0.4s						
OUZ	**Omahuta**	**23.00**	**209**	*e*P	**P**	**16 08 11.5**	**-0.6**
	20nm,0.9s						
OUZ	**Omahuta**	**23.00**	**209**	P	**P**	**16 08 11.3**	**-0.9**
MXZ	**Matakaoa Point**	**23.24**	**198**	P	**P**	**16 08 17.1**	**+2.5**
WCZ	**Waipu Caves**	**23.25**	**207**	P	**P**	**16 08 15.0**	**+0.2**
KUZ	**Kuaotunu**	**23.38**	**203**	P	**P**	**16 08 16.9**	**+0.9**
TBI	**Tubuai**	**23.42**	**113**	*e*S	**S**	**16 12 25.8**	**-2.2**
	97nm,32.1s						
TBI				*e*LQ	LQ	16 13 06.4	
	236nm,30.0s						
TBI				*e*LR	LR	16 13 57.6	
	comp=Z,154nm,29.8s						
TBI	**Tubuai**	**23.42**	**113**	*e*T	T	16 32 35.3	
	17nm,0.3s						
WMGZ	**Waiomatatini S**	**23.45**	**197**	P	**P**	**16 08 19.5**	**+2.9**
WMGZ				S	**S**	**16 12 29.5**	**+1.3**
HAZ	**Te Kaha**	**23.58**	**199**	P	**P**	**16 08 19.7**	**+1.8**
HAZ				S	**S**	**16 12 28.3**	**-2.0**
PKGZ	**Pakihiroa**	**23.61**	**198**	P	**P**	**16 08 21.8**	**+3.5**
WIAZ	**Waiheke Island**	**23.65**	**204**	P	**P**	**16 08 19.0**	**+0.3**
PUZ	**Puketiti**	**23.73**	**197**	P	**P**	**16 08 20.2**	**+0.9**
RUGZ	**Raukumara Rang**	**23.80**	**199**	P	**P**	**16 08 22.7**	**+2.5**
RUGZ				S	**S**	**16 12 34.4**	**+0.3**
ETAZ	**East Tamaki Re**	**23.87**	**205**	P	**P**	**16 08 22.4**	**+1.7**
TWGZ	**Tauwhareparae**	**23.91**	**198**	P	**P**	**16 08 23.5**	**+2.4**
MKAZ	**Moumakai**	**23.91**	**204**	P	**P**	**16 08 21.6**	**+0.5**
WTAZ	**Waiatarua**	**24.00**	**205**	P	**P**	**16 08 23.6**	**+1.7**
OPRZ	**Ohinepanea**	**24.06**	**201**	P	**P**	**16 08 25.6**	**+3.2**
CNGZ	**Carnagh Statio**	**24.12**	**197**	P	**P**	**16 08 27.5**	**+4.5**
PMOR	**Pomariorio Ree**	**24.15**	**92**	*e*T	T	16 33 24.3	
	4.8nm,0.4s						
MWZ	**Matawai**	**24.19**	**199**	P	**P**	**16 08 23.9**	**+0.2**
TKGZ	**Te Karaka**	**24.19**	**198**	P	**P**	**16 08 25.2**	**+1.6**
URZ	**Urewera**	**24.25**	**199**	P	**P**	**16 08 24.4**	**+0.2**
	19nm,0.4s,baz=286,slow=2.9,SNR=28						
URZ				S	**S**	**16 12 41.0**	**0.0**
	7.6nm,0.9s,baz=240,slow=20,SNR=6.0						
URZ	**Urewera**	**24.25**	**199**	*e*P	**P**	**16 08 24.5**	**+0.3**
	26nm,0.5s						
URZ	**Urewera**	**24.25**	**199**	P	**P**	**16 08 25.1**	**+0.9**
KARZ	**Kaharoa**	**24.32**	**201**	P	**P**	**16 08 28.0**	**+3.1**
TOZ	**Tahuroa Road**	**24.33**	**203**	P	**P**	**16 08 27.2**	**+2.3**
OMRZ	**Omania**	**24.35**	**201**	P	**P**	**16 08 26.3**	**+1.1**
RAGZ	**Rawiri**	**24.37**	**199**	P	**P**	**16 08 26.7**	**+1.3**
VAH	**Vaihoa**	**24.39**	**93**	*e*T	T	16 33 41.7	
	6.8nm,0.3s						
RIGZ	**Rimuhau**	**24.46**	**198**	P	**P**	**16 08 28.5**	**+2.3**
UTU	**Utuhina**	**24.48**	**201**	P	**P**	**16 08 28.0**	**+1.7**
MUGZ	**Murupara**	**24.56**	**200**	P	**P**	**16 08 28.5**	**+1.5**
HRRZ	**Handcock Road**	**24.64**	**201**	P	**P**	**16 08 29.7**	**+1.9**
SNGZ	**Shannon Statio**	**24.66**	**198**	P	**P**	**16 08 30.5**	**+2.6**
PRRZ	**Plateau Road**	**24.70**	**200**	P	**P**	**16 08 29.3**	**+1.0**
ALRZ	**Allen Road**	**24.77**	**200**	P	**P**	**16 08 30.3**	**+1.3**
TLZ	**Tolley Road**	**24.85**	**202**	P	**P**	**16 08 31.8**	**+2.1**
RAHZ	**Arahi**	**24.86**	**199**	P	**P**	**16 08 31.1**	**+1.3**
RATZ	**Rangitukua**	**25.24**	**201**	P	**P**	**16 08 33.4**	**+0.1**
HIZ	**Hauiti**	**25.26**	**203**	*e*P	**P**	**16 08 36.8**	**+3.5**
	90nm,1.2s						
HIZ	**Hauiti**	**25.26**	**203**	P	**P**	**16 08 34.8**	**+1.5**
BKZ	**Black Stump Fm**	**25.27**	**200**	*e*P	**P**	**16 08 33.8**	**+0.3**
	12nm,0.6s						
BKZ	**Black Stump Fm**	**25.27**	**200**	P	**P**	**16 08 33.4**	**-0.1**
MOVZ	**Moawhango**	**25.73**	**200**	P	**P**	**16 08 40.4**	**+2.7**
BFZ	**Birch Farm**	**26.73**	**199**	*e*P	**P**	**16 08 47.9**	**+1.3**
	50nm,1.2s						
HNR	**Honiara**	**27.16**	**280**	LR	LR	16 17 54.7	
	comp=Z,155nm,22.0s,baz=128,slow=33						
DUWZ	**D’Urville Isla**	**27.61**	**202**	P	**P**	**16 08 59.5**	**+4.9**
QRZ	**Quartz Range**	**28.16**	**204**	*e*P	**P**	**16 09 00.8**	**+1.4**
	29nm,0.5s						
QRZ	**Quartz Range**	**28.16**	**204**	P	**P**	**16 09 01.3**	**+1.9**
TUWZ	**Tuamarina**	**28.16**	**201**	P	**P**	**16 09 02.7**	**+3.2**
NNZ	**Nelson**	**28.17**	**202**	P	**P**	**16 09 01.7**	**+2.1**
THZ	**Tophouse**	**28.82**	**202**	*e*P	**P**	**16 09 06.3**	**+0.8**
	9.7nm,0.9s						
THZ	**Tophouse**	**28.82**	**202**	P	**P**	**16 09 07.8**	**+2.3**
KHZ	**Kahutara**	**29.17**	**201**	P	**P**	**16 09 11.0**	**+2.6**
DSZ	**Denniston Nort**	**29.22**	**204**	P	**P**	**16 09 10.9**	**+1.9**
GVZ	**Greta Valley S**	**29.83**	**201**	P	P	16 09 21.5	+7.1
LTZ	**Lake Taylor**	**29.94**	**202**	*e*P	**P**	**16 09 16.6**	**+1.3**
	14nm,0.7s						
LTZ	**Lake Taylor**	**29.94**	**202**	P	**P**	**16 09 19.2**	**+3.8**
OXZ	**Oxford**	**30.50**	**202**	*e*P	**P**	**16 09 20.1**	**-0.1**
	15nm,0.6s						
OXZ	**Oxford**	**30.50**	**202**	P	**P**	**16 09 24.2**	**+4.0**
WVZ	**Waitaha Valley**	**30.77**	**204**	P	**P**	**16 09 25.6**	**+3.1**
RPZ	**Rata Peaks**	**31.20**	**203**	P	**P**	**16 09 26.7**	**+0.3**
	4.6nm,0.6s,baz=135,slow=5.7,SNR=3.5						
RPZ	**Rata Peaks**	**31.20**	**203**	P	P	16 09 35.6	+9.2
TAOE	**Nuku Hiva Isla**	**32.70**	**82**	*e*LR	LR	16 17 58.4	
	comp=Z,234nm,28.9s						
TAOE	**Nuku Hiva Isla**	**32.70**	**82**	*e*T	T	16 44 01.2	
	50nm,0.2s						
RKT	**Rikitea**	**36.51**	**108**	*e*T	T	16 48 55.4	
	7.0nm,0.3s						
H11N3	**WAKE ISLAND Hy**	**40.28**	**330**	T	T	16 53 28.1	
	baz=149,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**40.29**	**330**	T	T	16 53 20.2	
	baz=149,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**40.30**	**330**	T	T	16 53 29.4	
	baz=149,slow=76,SNR=14						
STKA	**Stephens Creek**	**44.34**	**240**	P	**P**	**16 11 15.4**	**-2.1**
	3.1nm,0.8s,baz=96,slow=12,SNR=4.7						
STKA				LR	LR	16 27 09.8	
	comp=Z,86nm,19.2s,baz=27,slow=33						
STKA	**Stephens Creek**	**44.34**	**240**	*e*P	**P**	**16 11 15.9**	**-1.6**
	1.9nm,1.1s						
WR1	**Warramunga Arr**	**50.25**	**257**	*e*P	**P**	**16 12 00.9**	**-2.8**
WRA	**Warramunga Arr**	**50.25**	**257**	P	**P**	**16 12 00.9**	**-2.8**
	1.9nm,1.0s,baz=90,slow=8.3,SNR=13						
AS31	**Alice Springs**	**50.49**	**252**	*e*P	**P**	**16 12 03.4**	**-2.2**
	2.6nm,0.8s						
ASAR	**Alice Springs**	**50.49**	**252**	P	**P**	**16 12 03.1**	**-2.4**
	5.2nm,0.6s,baz=87,slow=8.5,SNR=88						
ASAR				LR	LR	16 32 13.1	
	comp=Z,124nm,20.0s,baz=94,slow=35						
SBA	**Scott Base**	**63.12**	**185**	*e*P	**P**	**16 13 36.1**	**+2.0**
	7.7nm,0.9s						
MJAR	**Matsushiro Arr**	**69.36**	**320**	LR	LR	16 39 16.9	
	comp=Z,32nm,21.6s,baz=105,slow=31						
CIS	**Catalina Islan**	**71.23**	**46**	P	**P**	**16 14 27.5**	**+1.2**
	baz=236						
SMMC	**Simmler**	**71.24**	**44**	P	**P**	**16 14 27.4**	**+0.9**
	baz=234						
JAGI	**Jajag, Banyuwa**	**71.39**	**266**	*e*P	**P**	**16 14 28.9**	**+1.2**
	52nm,0.8s						
ASAJ	**Asahikawa**	**71.92**	**328**	P	**P**	**16 14 30.4**	**+0.1**
	3.7nm,0.8s,baz=180,slow=2.0,SNR=3.9						
VES	**Vestal, Richgr**	**72.15**	**44**	P	**P**	**16 14 32.0**	**+0.2**
	baz=235,SNR=5.4						
MURC	**Murrieta**	**72.18**	**46**	P	**P**	**16 14 32.4**	**+0.3**
	baz=237						
BFSC	**Mount Baldy Ra**	**72.21**	**46**	P	**P**	**16 14 32.9**	**+0.5**
	baz=236						
EDW2	**Edwards Air Fo**	**72.34**	**45**	P	**P**	**16 14 33.5**	**+0.4**
	baz=236,SNR=9.7						
MONP2	**Monument Peak**	**72.34**	**47**	P	**P**	**16 14 33.8**	**+0.4**
	baz=238						
O02D	**Mt. Diablo Mer**	**72.43**	**38**	P	**P**	**16 14 34.2**	**+0.7**
	baz=231						
IKP	**In-Ko-Pah, Jac**	**72.44**	**48**	P	**P**	**16 14 34.4**	**+0.7**
	baz=238						
ISA	**Isabella, Lake**	**72.46**	**44**	P	**P**	**16 14 34.4**	**+0.6**
	baz=236,SNR=6.5						
PFO	**Pinyon Flats O**	**72.71**	**47**	P	**P**	**16 14 35.8**	**+0.4**
	baz=238						
LRMC	**Laurel Mtn Rad**	**72.89**	**45**	P	**P**	**16 14 37.0**	**+0.6**
	baz=236						
PETK	**Petropavlovsk-**	**72.93**	**342**	P	**P**	**16 14 35.7**	**-0.4**
	5.5nm,0.7s,baz=124,slow=8.9,SNR=10						
PETK				LR	LR	16 42 33.5	
	comp=Z,20nm,20.0s,baz=119,slow=32						
PEA1	**Petropavlovsk-**	**72.94**	**342**	*e*P	**P**	**16 14 35.7**	**-0.4**
N02D	**Trinity Center**	**72.98**	**37**	P	**P**	**16 14 37.7**	**+1.0**
	baz=231						
O03E	**Paynes Creek**	**73.09**	**38**	P	**P**	**16 14 38.3**	**+0.9**
	baz=232						
CWC	**Cottonwood Cre**	**73.16**	**44**	P	**P**	**16 14 38.4**	**+0.4**
	baz=236						
M02C	**Callahan**	**73.16**	**37**	P	**P**	**16 14 38.3**	**+0.5**
	baz=231						
L02E	**Cave Junction**	**73.22**	**36**	P	**P**	**16 14 39.1**	**+1.1**
	baz=230						
BELC	**Belle Mtn. Jos**	**73.24**	**47**	P	**P**	**16 14 39.0**	**+0.5**
	baz=238,SNR=5.6						
MPMC	**Manual Prospec**	**73.34**	**44**	P	**P**	**16 14 39.8**	**+0.6**
	baz=236,SNR=17						
GSC	**Goldstone, Bar**	**73.39**	**45**	P	**P**	**16 14 39.6**	**+0.4**
	baz=237,SNR=6.1						
TIN	**Tinemaha, Big**	**73.41**	**43**	P	**P**	**16 14 40.2**	**+0.8**
	baz=235						
BC3	**Big Chuckawall**	**73.44**	**47**	P	**P**	**16 14 40.4**	**+0.7**
	baz=238						
HEC	**Hector,Ludlow**	**73.45**	**46**	P	**P**	**16 14 39.9**	**+0.3**
	baz=237,SNR=11						
WAKR	**Walker**	**73.47**	**41**	*e*P	**P**	**16 14 38.0**	**-1.8**
	2.6nm,0.7s						
GLA	**Glamis**	**73.57**	**48**	P	**P**	**16 14 41.1**	**+0.7**
	baz=239						
PNTR	**Pine Nut**	**73.72**	**41**	*e*P	**P**	**16 14 38.5**	**-2.8**
	6.8nm,1.1s						
GMRC	**Granite Mounta**	**73.89**	**46**	P	**P**	**16 14 42.6**	**+0.3**
	baz=238,SNR=6.8						
IRM	**Iron Mountain**	**73.92**	**47**	P	**P**	**16 14 43.0**	**+0.6**
	baz=238,SNR=9.5						
FURC	**Furnace Creek,**	**73.99**	**44**	P	**P**	**16 14 43.3**	**+0.7**
	baz=236						
M04C	**Macdoel**	**74.00**	**37**	P	**P**	**16 14 43.3**	**+0.5**
	baz=231						
L04D	**Klamath Falls**	**74.00**	**37**	P	**P**	**16 14 43.3**	**+0.5**
	baz=231						
TUQ	**Turquoise Moun**	**74.06**	**45**	P	**P**	**16 14 43.5**	**+0.2**
	baz=237,SNR=5.1						
SHOC	**Shoshone, Teco**	**74.07**	**45**	P	**P**	**16 14 43.8**	**+0.5**
	baz=237						
Y12C	**Blythe**	**74.15**	**48**	P	**P**	**16 14 44.2**	**+0.6**
	baz=239						
NVAR	**Mina Array Bea**	**74.15**	**42**	P	**P**	**16 14 44.4**	**+0.5**
	5.2nm,0.9s,baz=227,slow=10,SNR=18						
NVAR				LR	LR	16 40 11.6	
	comp=Z,101nm,21.3s,baz=266,slow=30						
NV11	**Mina Array Sit**	**74.25**	**42**	*e*P	**P**	**16 14 41.6**	**-2.7**
	1.0nm,1.1s						
I03D	**Drain, OR**	**74.36**	**35**	P	**P**	**16 14 45.5**	**+0.8**
	baz=230						
QSPA	**South Pole Qui**	**74.47**	**180**	*e*P	**P**	**16 14 47.1**	**+1.9**
	18nm,1.1s						
214A	**Organ Pipe Nat**	**74.47**	**50**	P	**P**	**16 14 46.3**	**+0.6**
	baz=240						
K04D	**Chiloquin, OR**	**74.58**	**37**	P	**P**	**16 14 46.8**	**+0.7**
	baz=231						
TPNV	**Topopah Spring**	**74.67**	**44**	P	**P**	**16 14 47.2**	**+0.3**
	baz=237,SNR=9.8						
PDMCI	**Parker Dam,Lak**	**74.70**	**47**	P	**P**	**16 14 47.5**	**+0.6**
	baz=239						
J04D	**Umpqua Nationa**	**74.76**	**36**	P	**P**	**16 14 47.9**	**+0.6**
	baz=231,SNR=6.0						
I04A	**Tendick Farm,**	**74.94**	**35**	P	**P**	**16 14 48.3**	**+0.2**
	baz=231						
MOD	**Modoc Plateau**	**74.98**	**38**	*e*P	**P**	**16 14 47.0**	**-1.5**
	7.7nm,0.9s						
KDAK	**Kodiak Island**	**75.00**	**11**	*e*P	**P**	**16 14 48.0**	**0.0**
	13nm,1.1s						
H04D	**Lebanon**	**75.23**	**35**	P	**P**	**16 14 50.6**	**+0.9**
	baz=230						
J05D	**Fort Rock, OR**	**75.29**	**36**	P	**P**	**16 14 51.2**	**+0.9**
	baz=232,SNR=9.1						
G03D	**McMinnville, O**	**75.39**	**34**	P	**P**	**16 14 51.3**	**+0.7**
	baz=230						
PINE	**Pine Mountain**	**75.77**	**36**	*e*P	**P**	**16 14 54.1**	**+1.1**
	27nm,0.9s						
R11A	**Troy Canyon, C**	**75.87**	**43**	P	**P**	**16 14 54.1**	**+0.3**
	baz=237,SNR=11						
I05D	**Terrebonne, OR**	**75.89**	**35**	P	**P**	**16 14 54.3**	**+0.8**
	baz=231						
F04D	**Rainier, OR**	**76.09**	**33**	P	**P**	**16 14 55.6**	**+1.0**
	baz=230						
TUC	**Tucson**	**76.15**	**50**	P	**P**	**16 14 55.8**	**+0.5**
	baz=242						
KSRS	**Korea Array**	**76.60**	**315**	LR	LR	16 43 13.3	
	comp=Z,16nm,21.9s,baz=350,slow=32						
E04D	**Cinebar**	**76.63**	**33**	P	**P**	**16 14 58.7**	**+1.1**
	baz=230						
LCMT	**Little Creek M**	**76.73**	**45**	*e*P	**P**	**16 14 58.8**	**+0.1**
	5.3nm,0.8s						
D04E	**Lakebay**	**76.93**	**33**	P	**P**	**16 15 00.1**	**+0.9**
	baz=230						
D03D	**Eldon**	**77.00**	**32**	P	**P**	**16 15 00.5**	**+0.8**
	baz=229						
SZCU	**Shurtz Canyon**	**77.14**	**45**	*e*P	**P**	**16 15 02.0**	**+0.9**
	9.4nm,1.1s						
WUAZ	**Wupatki**	**77.28**	**47**	*e*P	**P**	**16 15 01.9**	**+0.2**
	10nm,1.1s						
WUAZ	**Wupatki**	**77.28**	**47**	P	**P**	**16 15 02.0**	**+0.2**
	baz=240						
USRK	**Ussuriysk Ar.**	**77.79**	**323**	LR	LR	16 43 17.0	
	comp=Z,45nm,21.2s,baz=126,slow=31						
A04D	**Lummi Island**	**77.97**	**31**	P	**P**	**16 15 05.6**	**+0.6**
	baz=229						
B05A	**Bryant**	**77.98**	**32**	P	**P**	**16 15 05.5**	**+0.4**
	baz=230						
121A	**Cookes Peak, D**	**78.50**	**51**	P	**P**	**16 15 08.9**	**+0.3**
	baz=243						
DUG	**Dugway, Tooele**	**78.68**	**43**	P	**P**	**16 15 09.6**	**+0.2**
	baz=239						
TMUT	**Trail Mountain**	**79.28**	**44**	*e*P	**P**	**16 15 13.5**	**+0.6**
	18nm,0.9s						
HLID	**Hailey**	**79.47**	**39**	P	**P**	**16 15 14.4**	**+0.6**
	baz=237						
SRU	**San Rafael Swe**	**79.65**	**44**	*e*P	**P**	**16 15 15.4**	**+0.6**
	10nm,0.9s						
P17A	**Butcher Ranch,**	**79.68**	**44**	*e*P	**P**	**16 15 16.0**	**+1.1**
	14nm,1.1s						
JLU	**Jordanelle**	**79.78**	**43**	*e*P	**P**	**16 15 16.2**	**+0.7**
	6.7nm,0.8s						
LAZ	**Ladron**	**79.82**	**50**	*e*P	**P**	**16 15 16.6**	**+0.8**
LENM	**Lemitar**	**79.83**	**50**	*e*P	**P**	**16 15 16.1**	**+0.1**
TCUT	**Toone Canyon**	**80.07**	**42**	*e*P	**P**	**16 15 17.2**	**+0.1**
	31nm,0.8s						
MVCO	**Mesa Verde**	**80.13**	**47**	P	**P**	**16 15 18.0**	**+0.5**
	baz=242						
PV19	**Morning Glory**	**80.31**	**46**	*e*P	**P**	**16 15 19.0**	**+0.6**
	20nm,1.1s						
TX31	**Lajitas Ar. Si**	**80.33**	**56**	*e*P	**P**	**16 15 19.0**	**+0.4**
	7.9nm,1.1s						
TXAR	**Lajitas Array**	**80.33**	**56**	P	**P**	**16 15 19.6**	**+1.0**
	3.3nm,0.9s,baz=220,slow=5.7,SNR=20						
TXAR				LR	LR	16 43 02.1	
	comp=Z,45nm,21.0s,baz=0.0,slow=30						
ANMO	**Albuquerque**	**80.56**	**50**	P	**P**	**16 15 20.8**	**+0.9**
	5.0nm,0.9s,baz=225,slow=6.2,SNR=11						
ANMO	**Albuquerque**	**80.56**	**50**	*e*P	**P**	**16 15 20.1**	**+0.2**
	6.5nm,0.9s						
ANMO	**Albuquerque**	**80.56**	**50**	P	**P**	**16 15 20.6**	**+0.8**
	baz=244						
NEW	**Newport**	**80.59**	**34**	P	**P**	**16 15 19.0**	**-0.5**
	baz=234						
NJ2	**Nanjing**	**80.63**	**307**	*e*P	**P**	**16 15 21.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CN2	**Changchun**	**81.51**	**320**	*e*P	**P**	**16 15 25.3**	**+0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MSO	**Missoula**	**81.55**	**37**	P	**P**	**16 15 24.3**	**-0.4**
	baz=237						
S22A	**4UR Ranch, Cre**	**81.55**	**47**	P	**P**	**16 15 26.2**	**+1.1**
	baz=243						
O20A	**White River Ci**	**81.68**	**44**	P	**P**	**16 15 26.0**	**+0.3**
	baz=242						
BW06	**Boulder Array**	**82.09**	**42**	P	**P**	**16 15 27.7**	**-0.1**
	baz=241						
PDAR	**Pinedale Array**	**82.09**	**42**	P	**P**	**16 15 27.8**	**-0.1**
	3.1nm,0.8s,baz=205,slow=3.1,SNR=26						
PDAR				LR	LR	16 45 43.4	
	comp=Z,42nm,20.2s,baz=256,slow=31						
HDA	**Harding Lake**	**82.19**	**11**	P	**P**	**16 15 27.3**	**-0.2**
	baz=205						
H17A	**Grant Village**	**82.26**	**40**	P	**P**	**16 15 30.6**	**+1.9**
	baz=240						
TCOL	**CIGO, UAF Yank**	**82.44**	**11**	P	**P**	**16 15 28.6**	**-0.2**
	baz=204						
SDCO	**Great Sand Dun**	**82.49**	**48**	P	**P**	**16 15 30.6**	**+0.5**
	baz=244						
ILAR	**Eielson Array**	**82.53**	**11**	P	**P**	**16 15 28.3**	**-1.0**
	1.4nm,0.6s,baz=227,slow=6.3,SNR=26						
POKR	**Poker Plat Res**	**82.74**	**11**	P	**P**	**16 15 29.8**	**-0.6**
	baz=205						
MSTX	**Muleshoe**	**82.91**	**52**	P	**P**	**16 15 32.3**	**+0.1**
	baz=246						
T25A	**Trinidad**	**83.01**	**49**	P	**P**	**16 15 32.9**	**+0.2**
	baz=245						
Q24A	**Divide**	**83.28**	**47**	P	**P**	**16 15 34.8**	**+0.6**
	baz=244						
833A	**Chaparral WMA,**	**83.40**	**58**	P	**P**	**16 15 34.8**	**+0.1**
	baz=249						
RLMT	**Red Lodge**	**83.44**	**40**	P	**P**	**16 15 35.0**	**+0.2**
	baz=241						
N23A	**Red Feather La**	**83.59**	**45**	P	**P**	**16 15 36.2**	**+0.5**
	baz=243						
JCT	**Junction City**	**83.87**	**56**	P	**P**	**16 15 36.9**	**-0.2**
	baz=248						
K22A	**Casper**	**84.00**	**43**	P	**P**	**16 15 37.4**	**-0.2**
	baz=243						
AMTX	**Amarillo**	**84.10**	**52**	P	**P**	**16 15 38.1**	**-0.1**
	baz=247						
EGMT	**Eagleton**	**84.59**	**37**	P	**P**	**16 15 40.6**	**+0.2**
	baz=240						
ABTX	**Abilene, Hawle**	**84.79**	**54**	P	**P**	**16 15 41.7**	**0.0**
	baz=248						
TOLK	**Toolik Lake Re**	**85.65**	**8**	P	**P**	**16 15 45.5**	**+0.3**
	baz=203						
EPYK	**Eagle Plains**	**86.03**	**14**	P	**P**	**16 15 47.0**	**-0.1**
	baz=215						
WMOK	**Wichita Mounta**	**86.25**	**53**	P	**P**	**16 15 48.4**	**-0.4**
	baz=248						
WHTX	**Lake Whitney,**	**86.29**	**56**	P	**P**	**16 15 49.2**	**+0.1**
	baz=249						
MAW	**Mawson**	**87.78**	**198**	P	**P**	**16 15 56.0**	**+0.3**
	4.4nm,0.6s,baz=137,slow=6.0,SNR=9.2						
MAW				LR	LR	16 51 33.2	

	comp=Z,72nm,21.9s,baz=114,slow=33						
INK	Inuvik	88.33	14	P	P	16 15 58.2	+0.1
	1.9nm,0.5s,baz=225,slow=4.3,SNR=5.6						
PLCA	Paso Flores	89.06	132	LR	LR	16 47 06.2	
	comp=Z,38nm,20.5s,baz=331,slow=30						
HHC	Hu-ho-hao-te	89.47	313	P	P	16 16 05.0	+0.7
HHC				S	S	16 26 50.5	-2.6
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,11nm,4.9s						
HHC				LR	LR		
	comp=N,120nm,13.6s						
YKA	Yellowknife Ar	90.07	23	P	P	16 16 06.2	-0.2
	0.8nm,0.7s,baz=246,slow=4.2,SNR=4.2						
KMI	Kunming	91.51	296	P	P	16 16 15.3	+1.0
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
CD2	Chengdu	92.29	301	*e*P	P	16 16 17.0	-0.5
SYO	Syowa Base	92.52	191	⇓*e*X	P	16 16 14.0	-3.8
SYO	Syowa Base	92.52	191	⇓*e*PcP	PcP	16 16 20.8	+2.3
VNA3	Neumayer Olymp	92.64	175	P	P	16 16 19.3	+0.9
SNAA	Sanae	92.71	177	P	P	16 16 19.4	+0.6
LZH	Lanzhou	93.69	306	*e*P	P	16 16 21.3	-2.7
LZH				pP	pP	16 16 30.0	-2.8
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				LR	LR		
	comp=N,100nm,12.5s						
LZH				LR	LR		
	comp=E,150nm,14.4s						
LZH				LR	LR		
	comp=Z,83nm,16.5s						
KSH	Kashi	115.94	307	*e*PKP	PKiKP	16 21 50.3	+0.1
KSH				PP	PP	16 23 00.5	+6.0
KSH				SKS	SKSdf	16 28 57.3	-3.2
FIA0	FINESS Array S	132.21	348	*e*PKPdf	PKPdf	16 22 19.7	-0.7
FINES	FINESS Array B	132.21	348	PKP	PKPdf	16 22 19.7	-0.7
	1.3nm,1.0s,baz=321,slow=3.6,SNR=4.0						
CLL	Collm	144.03	354	*e*PKPdf	PKPab	16 22 40.0	+0.2
	comp=Z,2.0nm,1.0s						
KOLS	Kolonicke sedl	144.47	343	*e*PKP	PKPbc	16 22 42.0	+0.2
KOLS				*e*sP		16 29 10.0	
DPC	Dobruska-Polom	144.51	350	*e*PKP	PKPab	16 22 41.6	-0.1
DPC				*e*x	x	16 22 59.3	
BURAR	Bucovina Array	144.69	339	⇑*i*P	PKPab	16 22 42.6	0.0
MORC	Moravsky Berou	144.84	348	*e*PKP	PKPab	16 22 42.7	-0.2
MORC				*e*		16 23 00.0	
TRPA	Tarpa	145.12	342	⇑*i*P	PKPbc	16 22 43.0	-0.9
PRU	Pruhonice	145.14	352	*e*PKP	PKPbc	16 22 43.6	-0.3
VRAC	Vranov	145.47	349	⇑*i*P	PKPdf	16 22 44.7	-0.2
VRAC	Vranov	145.47	349	*e*PKP	PKPdf	16 22 44.8	-0.2
VRAC				*e*		16 23 02.1	
CFR	Carcaliu	145.56	333	⇑*i*P	PKPdf	16 22 45.3	+0.1
VRI	Vrincioaia	145.59	335	⇑*i*P	PKPdf	16 22 45.1	-0.2
JAVC	Velka Javorina	145.68	348	*e*PKP	PKPab	16 22 46.8	+0.7
JAVC				*e*		16 23 04.0	
KRUC	Moravsky	145.74	349	*e*PKP	PKPdf	16 22 45.6	+0.1
KRUC				*e*		16 23 02.6	
DOPR	Dopca	146.03	337	⇓*i*P	PKPbc	16 22 46.7	-0.2
HARR	Harsova	146.03	333	⇓*i*P	PKPab	16 22 47.3	-0.1
TLB	Topalu	146.06	333	⇓*i*P	PKPbc	16 22 46.7	-0.3
KHC	Kasperske Hory	146.11	352	*e*PKPdf	PKPbc	16 22 46.9	-0.2
KHC	Kasperske Hory	146.11	352	*e*PKP	PKPbc	16 22 46.8	-0.2
KHC				*e*x	x	16 23 02.5	
MLR	Muntele Rosu	146.21	336	*e*PKPab	PKPbc	16 22 47.9	+0.3
MLR	Muntele Rosu	146.21	336	⇑*i*P	PKPab	16 22 48.0	-0.3
DRGR		146.25	341	⇑*i*P	PKPdf	16 22 46.8	+0.3
GERES	GERESS Array B	146.37	352	PKPbc	PKPbc	16 22 47.7	-0.2
	comp=Z,1.2nm,0.7s,baz=27,slow=3.3,SNR=13						
BR131	Keskin Array S	146.57	321	*e*PKPbc	PKPbc	16 22 49.0	+0.1
BRTR	Keskin Array B	146.57	321	PKPbc	PKPbc	16 22 48.9	0.0
	comp=Z,3.5nm,0.6s,baz=102,slow=1.9,SNR=17						
VOIR		146.60	337	⇓*i*P	PKPbc	16 22 48.3	-0.4
ARR	Arges	146.82	337	⇓*i*P	PKPbc	16 22 48.9	-0.4
CONA	Conrad Observa	146.93	349	*i* pPKPdf	PKPbc	16 22 49.5	0.0
	comp=Z,3.2nm,0.8s						
MOA	Molln	147.27	351	*i* PKPbc	PKPdf	16 22 47.3	-0.8
	comp=Z,3.3nm,0.9s						
GZR	Gura Zlata	147.46	339	⇓*i*P	PKPbc	16 22 49.9	-1.2
ARSA	Arzberg	147.64	349	*i* PKPdf	PKPdf	16 22 44.9	-3.8
	comp=Z,0.7nm,0.4s						
RETA	Reutte	148.03	355	*i* P	PKPbc	16 22 52.2	-0.4
	comp=Z,4.0nm,0.7s						
MOTA	Moosalm	148.14	355	*i* pPKPdf	PKPdf	16 22 51.0	+1.3
	comp=Z,1.9nm,0.6s						
KBA	Koelnbreinsper	148.15	352	*i* PKPdf	PKPdf	16 22 44.3	-5.5
	comp=Z,1.5nm,0.7s						
SOKA	Soboth	148.28	350	*i* P	PKPbc	16 22 52.4	-0.9
	comp=Z,3.6nm,1.0s						
DAVA	Damuels	148.29	356	*i* PKPbc	PKPdf	16 22 50.5	+0.5
	comp=Z,5.3nm,1.1s						
FETA	Feichten	148.50	355	*i* PKiKP	PKPbc	16 22 53.8	-0.1
	comp=Z,2.9nm,0.9s						
OBKA	Obir	148.53	350	*e*P	PKPbc	16 22 52.8	-1.2
	comp=Z,1.7nm,0.6s						
MYKA	Terra Mystica	148.55	351	*e*P	PKPbc	16 22 52.3	-1.7
	comp=Z,3.2nm,0.9s						
ABTA	Abfaltersbach	148.59	353	*i* pPKPdf	PKPdf	16 22 51.8	+1.4
	comp=Z,5.3nm,0.9s						

IDC 27 16:04:33.3±10.0**, 5°.48N**×**124°.55E, h521**km±129km**,**
mb3.0/4**, mb1 3.2**/4**, mb1mx2.7**/50**, mbtmp4.0**/4**, Error**
ellipse: s-maj=308.4km s-min=31.6km az=63.0,
Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	27.04	159	P	P	16 09 33.4	-0.3
	1.8nm,0.3s,baz=337,slow=8.2,SNR=65						
ASAR	Alice Springs	30.38	163	P	P	16 10 02.9	+0.1
	1.0nm,0.3s,baz=338,slow=7.6,SNR=62						
MKAR	Makanchi Array	54.89	326	P	P	16 13 14.5	-0.1
	0.2nm,0.5s,baz=137,slow=7.8,SNR=5.0						
MKAR				PcP	PcP	16 14 08.6	-0.1
	0.3nm,0.7s,baz=134,slow=4.2,SNR=3.8						
FINES	FINESS Array B	89.27	332	P	P	16 16 33.2	-0.3
	0.6nm,0.9s,baz=45,slow=6.1,SNR=4.0						

*NEIC **27** 16:06:52.0±2.9, 13°.86N×91°.48W, h68km±8km, mb4.2/24, MD4.0(MEX), Error ellipse: s-maj=8.7km s-min=2.2km az=69.0*
*MEX **27** 16:06:52.5±0.6, 14°.00N×91°.34W, h81km±11km, MD4.0*
*ISCJB **27** 16:06:52.1±0.4, 14°.02N±0°.04×91°.38W±0°.03, h84km±2km, mb4.1/24, Error ellipse: s-maj=7.5km s-min=3.2km az=24.7*
*SNET **27** 16:06:53.4±1.2, 13°.92N×91°.24W, h19km±6km, ML4.3*
*IDC **27** 16:06:56.0±1.7, 14°.15N×90°.94W, h110km±12km, mb3.8/11, mb1 4.1/14, mb1mx3.7/48, mbtmp4.2/14, Error ellipse: s-maj=29.5km s-min=15.7km az=48.0*
*GCG **27** 16:06:56.9±0.7, 14°.31N×91°.32W, h49km±23km, MD4.3*
ISC 27 16:06:51.7±0.9**, 13°.86N**±0°.06×**91°.48W**±0°.04**, h81**km±8km**,**
n208, σ1s.**44**/228**, mb4.2**/24**, 2C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	Entre ros, C	0.58	351	*e*P	Pn	16 07 05.8	-0.5
FUG	Fuego 3	0.84	47	*e*P	Pn	16 07 08.5	-0.7
STG3	Santiaguito 3,	0.85	354	*e*P	Pn	16 07 08.2	-1.1
PCG	Pacaya	0.99	58	*e*P	Pn	16 07 10.7	-0.2
THIG		1.29	324	*e*Pn	Pn	16 07 13.7	-0.7
THIG				*e*Sn	Sn	16 07 30.4	-1.0
THIG		1.29	324	*i* P	Pn	16 07 13.7	-0.7
THIG				*e*S	Sn	16 07 30.4	-1.0
NBG	Las Nubes	1.31	57	⇑*i*P	Pn	16 07 15.6	+0.7
APG	El Apazote	1.50	41	P	Pn	16 07 16.7	-0.5
	112nm,0.3s,baz=218,slow=7.2,SNR=363						
APG				S	Sn	16 07 38.1	+1.5
	180nm,0.3s,baz=35,slow=16,SNR=11						
APG				LR	LR	16 07 42.3	
	comp=Z,96nm,19.6s,baz=252,slow=48						
RTR	El Retiro	1.78	89	*e*P	Pn	16 07 20.9	+0.1
RTR				*e*S	Sn	16 07 41.3	-1.7
CEVE	Cerro Verde	1.80	91	*e*P	Pn	16 07 20.8	-0.4
CEVE				*e*S	Sn	16 07 43.0	-0.6
CEVE				IAML		16 07 49.2	
	comp=Z,10μm,0.3s						
SBLS	San Blas	1.80	91	*e*P	Pn	16 07 20.8	-0.4
SBLS				*e*S	Sn	16 07 42.3	-1.3
SNJE	San Jose	1.82	90	*e*P	Pn	16 07 21.1	-0.2
SNJE				*e*S	Sn	16 07 42.9	-1.1
CEDA	San Andres	2.02	91	*e*P	Pn	16 07 24.1	+0.1
CEDA				*e*S	Sn	16 07 47.5	-1.1
CEDA				IAML		16 07 50.8	
	comp=Z,3μm,0.5s						
MRL	Marmol	2.12	55	*e*P	Pn	16 07 25.8	+0.4
MTO3	Montecristo	2.12	75	⇑*e*P	Pn	16 07 24.4	-1.0
MTO3				*e*S	Sn	16 07 50.1	-1.0
SNET	Serv Nac Est T	2.19	94	*e*P	Pn	16 07 25.8	-0.3
SNET				IAML		16 07 55.4	
	comp=Z,2μm,0.3s						
OPAM	Oficina de Pla	2.22	94	*e*P	Pn	16 07 26.9	+0.4
LOMA	Loma Larga	2.25	95	*e*P	Pn	16 07 26.9	0.0
LOMA				*e*S	Sn	16 07 52.7	-1.2
LFU	La Fuente	2.30	93	*e*P	Pn	16 07 27.2	-0.4
PAVA	Las Pavas	2.47	93	*e*P	Pn	16 07 29.6	-0.4
CCIG	Comitan	2.49	345	*e*Pn	Pn	16 07 31.6	+1.3
CCIG				*e*Pn	Pn	16 07 31.7	+1.4
CCIG				*e*Sn	Sn	16 08 03.0	+3.1
CCIG	Comitan	2.49	345	*i* P	Pn	16 07 28.7	-1.6
CCIG				*i* S	Sn	16 07 57.3	-2.6
PCIG		2.49	318	*e*Pn	Pn	16 07 29.7	-0.5
PCIG				*e*Sn	Sn	16 07 58.5	-1.2
PCIG		2.49	318	*e*P	Pn	16 07 29.7	-0.5
PCIG				*i* S	Sn	16 07 58.5	-1.2
TECA	Tecapa	2.91	97	*e*P	Pn	16 07 35.6	-0.5
PACA	Pacayal	3.09	97	*e*P	Pn	16 07 39.1	+0.7
TGIG		3.31	331	*e*Pn	Pn	16 07 40.4	-0.8
TGIG				*e*Sn	Sn	16 08 16.7	-2.8
TGIG		3.31	331	*i* P	Pn	16 07 40.4	-0.8
TGIG				*e*S	Sn	16 08 16.7	-2.8
CNCH	Conchagua	3.59	99	*e*P	Pn	16 07 45.0	-0.2
TGUH	Tegucigalpa,Un	4.08	87	*e*Pn	Pn	16 07 51.7	-0.2
CMIG	Matias Romero	4.59	315	P	Pn	16 07 58.3	-0.4
	comp=Z,11nm,0.3s,baz=155,slow=11,SNR=117						
CMIG				S	Sn	16 08 50.6	-0.3
	comp=Z,17nm,0.3s,baz=78,slow=20,SNR=5.5						
CMIG	Matias Romero	4.59	315	*e*Pn	Pn	16 07 58.9	+0.2
CMIG				*e*Sn	Sn	16 08 50.6	-0.3
CMIG	Matias Romero	4.59	315	*e*P	Pn	16 07 58.9	+0.2
CMIG				*i* S	Sn	16 08 50.1	-0.8
TEIG	Tepich	7.03	25	P	Pn	16 08 31.5	-0.4
	comp=Z,48nm,0.3s,baz=269,slow=0.9,SNR=330						
TEIG				S	Sn	16 09 48.1	-2.2
	baz=36,slow=19,SNR=8.3						
TEIG	Tepich	7.03	25	*e*Pn	Pn	16 08 31.5	-0.4
TEIG				*e*Sn	Sn	16 09 50.1	-0.3
JTS	Las Juntas de	7.30	118	P	Pn	16 08 36.1	+0.3
	comp=Z,3.2nm,0.3s,baz=13,slow=19,SNR=10						
JTS				S	Sn	16 09 54.9	-2.3
	comp=Z,2.4nm,0.3s,baz=331,slow=19,SNR=2.2						
JTS	Las Juntas de	7.30	118	*e*Pn	Pn	16 08 37.0	+1.3
JTS				*e*Sn	Sn	16 09 57.6	+0.5
TLIG	Tlapa	7.75	299	*e*Pn	Pn	16 08 42.8	+0.8
655A	Horseshoe Beac	17.33	25	P	P	16 10 50.5	+1.9
	baz=208						
757A	Oxford	17.36	29	P	P	16 10 50.7	+1.9
	baz=212						
553A	Crawfordville	17.50	21	P	P	16 10 54.1	+3.7
	baz=203						
554A	Perry	17.67	23	P	Pn	16 10 55.1	+2.6
	baz=206						
555A	McAlpin	17.99	25	P	Pn	16 10 59.7	+3.4
	baz=208						
556A	Lake Butler	18.11	26	P	Pn	16 11 00.6	+2.8
	baz=209						
HPIG		18.58	317	*e*P	Pn	16 11 03.8	+0.1
	comp=Z,12nm,0.8s						
251A	Midway	18.98	16	P	Pn	16 11 08.1	0.0
	baz=198						
148A	Greensboro	19.04	10	P	Pn	16 11 08.7	-0.2
	baz=192						
TX31	Lajitas Ar. Si	19.09	326	*e*Pn	Pn	16 11 10.9	+1.3
	comp=Z,12nm,0.8s						
TXAR	Lajitas Array	19.09	326	P	Pn	16 11 10.8	+1.1
	comp=Z,0.7nm,0.3s,baz=153,slow=13,SNR=122						
149A	Jones	19.13	12	P	Pn	16 11 09.4	-0.6
	baz=194						
150A	Eclectic	19.31	14	P	Pn	16 11 11.5	-0.6
	baz=196						
151A	Opelika	19.41	16	P	P	16 11 12.2	+0.8
	baz=198						
254A	Abbeville	19.50	21	P	P	16 11 12.7	+0.4
	baz=204						
LRAL	Lakeview Retre	19.52	11	P	Pn	16 11 14.1	-0.4
	baz=193						
Z49A	Columbiana	19.76	12	P	P	16 11 16.3	+1.1
	baz=194						
Z50A	Ashland	19.95	14	P	P	16 11 18.0	+0.7
	baz=196						
ABTX	Abilene, Hawle	20.11	340	*e*P	P	16 11 19.4	+0.4
	comp=Z,24nm,0.6s						
ABTX	Abilene, Hawle	20.11	340	P	Pn	16 11 20.3	-1.2
	baz=156						
Z51A	Franklin	20.20	15	P	P	16 11 20.9	+1.0
	baz=198						
Z52A	Williamson	20.28	17	P	P	16 11 20.9	+0.1
	baz=200						
155A	Kite	20.41	22	P	P	16 11 22.7	+0.6
	baz=206						
Y49A	Blount Mountai	20.43	12	P	P	16 11 22.2	-0.2
	baz=194						
Y50A	Piedmont	20.61	14	P	P	16 11 25.7	+1.3
	baz=196						
Z53A	Monticello	20.62	19	P	P	16 11 24.6	+0.1
	baz=202						
MIAR	Mount Ida	20.68	355	P	P	16 11 26.3	+1.2
	baz=174						
Y51A	Rockmart	20.78	15	P	P	16 11 26.3	+0.1
	baz=198						
GOGA	Godfrey	20.78	19	*e*P	P	16 11 27.5	+1.4
GOGA	Godfrey	20.78	19	P	P	16 11 26.7	+0.5
	baz=202						
Z54A	Sparta	20.83	21	P	P	16 11 27.7	+1.1
	baz=204						
UALR	University of	20.84	358	*e*P	Pn	16 11 28.4	-1.5
	comp=Z,20nm,0.8s						
X48A	Hartselle	20.89	10	*e*P	Pn	16 11 30.5	-0.1
	comp=Z,6.8nm,0.6s						
Y52A	Lilburn	21.02	17	P	P	16 11 29.6	+0.9
	baz=200						
Y53A	Monroe	21.15	18	P	P	16 11 31.2	+1.0
	baz=202						
X50B	Fort Payne	21.17	13	P	P	16 11 30.8	+0.4
	baz=196						
W41B	Gary Mavity, V	21.23	358	P	P	16 11 31.9	+1.0
	baz=178						
Y54A	Tignall	21.45	20	P	P	16 11 34.0	+0.7
	baz=204						
X51A	Calhoun	21.46	15	P	P	16 11 32.8	-0.7
	baz=198						
W47A	Westpoint	21.58	9	P	P	16 11 34.5	-0.3
	baz=190						
W49A	Belvidere	21.68	12	P	P	16 11 36.1	+0.3
	baz=194						
GDL2	Guadalupe Moun	21.73	329	*e*P	P	16 11 38.4	+1.9
X52A	Dahlonega	21.76	17	P	P	16 11 37.0	+0.4
	baz=200						
WMOK	Wichita Mounta	21.81	344	P	P	16 11 36.8	-0.3
	baz=161						
Y55A	Saluda	21.81	22	P	P	16 11 37.5	+0.4
	baz=206						
X53A	Estanollee	21.84	18	P	P	16 11 37.9	+0.4
	baz=202						
W50A	Signal Mountai	21.96	14	P	P	16 11 39.6	+0.8
	baz=196						
V46A	Holladay	22.05	7	P	P	16 11 38.1	-1.7
	baz=189						
W51A	Cleveland	22.05	15	P	P	16 11 39.5	-0.3
	baz=198						
V47A	Nunnelly	22.16	9	P	P	16 11 40.1	-0.8
	baz=190						
X54A	Belton	22.18	20	P	P	16 11 40.7	-0.4
	baz=204						
V48A	Smith Brothers	22.18	10	P	P	16 11 40.6	-0.6
	baz=192						
X55A	Gracelyn & Ava	22.37	22	P	P	16 11 42.3	-0.9
	baz=206						
V49A	McMinnville	22.38	12	P	P	16 11 42.9	-0.3
	baz=194						
U40A	Yellville	22.43	357	P	P	16 11 43.3	-0.6
	baz=176						
V50A	Pikevile	22.46	14	P	P	16 11 42.6	-1.5
	baz=196						
MSTX	Muleshoe	22.49	335	*e*P	P	16 11 44.5	-0.1
	comp=Z,6.5nm,0.7s						
MSTX	Muleshoe	22.49	335	P	P	16 11 44.7	+0.1
	baz=150						
X56A	White Oak	22.61	23	P	P	16 11 45.3	-0.4
	baz=207						
W54A	Cherokee Point	22.73	20	P	P	16 11 46.5	-0.5
	baz=204						
TKL	Tuckaleechee C	22.78	16	P	P	16 11 46.9	-0.6
	comp=Z,6.8nm,0.5s,baz=180,slow=13,SNR=14						
AMTX	Amarillo	22.87	338	P	P	16 11 48.3	-0.2
	baz=154						
V53A	Saluda	23.07	18	P	P	16 11 49.6	-0.8
	baz=202						
KMSC	Kings Mountain	23.08	22	P	P	16 11 49.9	-0.5
	baz=206						
U49A	Red Boiling Sp	23.12	12	P	P	16 11 49.9	-1.0
	baz=194						
U50A	Jamestown	23.23	14	P	P	16 11 52.0	+0.1
	baz=196						
W56A	Indian Trail	23.35	23	P	P	16 11 52.0	-1.0
	baz=208						
T47A	Sharon Grove	23.36	9	P	P	16 11 52.1	-0.9
	baz=191						
U51A	La Follette	23.40	15	P	P	16 11 52.9	-0.6
	baz=198						
V54A	Nebo	23.44	20	P	P	16 11 53.1	-0.8
	baz=204						
U52A	Thorn Hill	23.58	17	P	P	16 11 54.4	-0.7
	baz=200						
W57A	Gilead	23.59	24	P	P	16 11 54.0	-1.2
	baz=209						
TZTN	Tazewell	23.68	16	P	P	16 11 55.7	-0.2
	baz=199						
T49A	Edmonton	23.75	12	P	P	16 11 55.6	-1.0
	baz=194						
U53A	Fall Branch	23.78	18	P	P	16 11 56.4	-0.6
	baz=202						
W58A	Raeford	23.79	26	P	P	16 11 55.4	-1.5
	baz=211						
T50A	Nancy	23.81	13	P	P	16 11 56.0	-1.1
	baz=196						
S44A	Carbondale	23.82	4	P	P	16 11 56.7	-0.5
	baz=185						
121A	Cookes Peak, D	23.82	324	P	P	16 12 00.4	+3.0
	baz=138						
T51A	Gray	23.97	15	P	P	16 11 57.8	-0.8
	baz=198						
V56A	Mocksville	23.98	22	P	P	16 11 58.3	-0.3
	baz=207						
CCM	Cathedral Cave	24.09	0	P	P	16 11 58.6	-1.0
	baz=181						
U54A	Nelsons Funny	24.16	19	P	P	16 12 00.5	+0.2
	baz=203						
V57A	Coltrane Farms	24.32	24	P	P	16 12 01.0	-0.7
	baz=208						
T52A	Hallie	24.36	17	P	P	16 12 01.5	-0.6
	baz=200						
U55A	TA2, Sparta	24.40	21	P	P	16 12 02.2	-0.3
	baz=205						
BNM	Barren Site	24.43	328	*e*P	P	16 12 05.8	+2.8
S49A	Springfield	24.45	12	P	P	16 12 01.3	-1.5
	baz=195						
U56A	King	24.50	22	P	P	16 12 03.2	-0.1
	baz=207						
V58A	Windy Hill, Pi	24.50	25	P	P	16 12 02.5	-0.8
	baz=210						
LENM	Lemitar	24.61	328	*e*P	P	16 12 07.1	+2.5
S51A	Beattyville	24.70	15	P	P	16 12 04.3	-0.9
	baz=198						
WCI	Wyandotte Cave	24.70	10	P	P	16 12 04.0	-1.1
	baz=192						
T54A	Tazewell	24.74	19	P	P	16 12 04.7	-0.8
	baz=203						
V59A	Middlesex	24.84	26	P	P	16 12 05.0	-1.4
	baz=212						
LAZ	Ladron	24.88	328	*e*P	P	16 12 08.8	+1.7
U57A	Blanch	24.97	24	P	P	16 12 07.3	-0.3
	baz=209						
ANMO	Albuquerque	24.97	330	P	P	16 12 10.2	+2.3
	comp=Z,3.2nm,0.6s,baz=139,slow=12,SNR=12						
ANMO	Albuquerque	24.97	330	*e*P	P	16 12 10.1	+2.1
	comp=Z,3.3nm,0.6s						
ANMO	Albuquerque	24.97	330	P	P	16 12 10.1	+2.1
	baz=144						
R50A	Paris	25.13	13	P	P	16 12 08.6	-0.5
	baz=196						
S53A	Williamson	25.14	18	P	P	16 12 08.9	-0.3
	baz=202						
T56A	Rocky Mt	25.23	22	P	P	16 12 09.4	-0.7
	baz=207						
TUC	Tucson	25.47	319	*e*P	P	16 12 15.1	+2.8
	comp=Z,4.9nm,1.0s						
TUC	Tucson	25.47	319	P	P	16 12 15.8	+3.5
	baz=132						
T57A	Hurt	25.50	23	P	P	16 12 11.7	-0.7
	baz=208						
P43A	Skaggs, Pawnee	25.73	3	P	P	16 12 14.9	+0.4
	baz=184						
R54A	Victor	25.95	19	P	P	16 12 15.8	-0.7
	baz=204						
P48A	Milroy	26.05	11	P	P	16 12 15.6	-1.8
	baz=193						
T59A	Double "B" Far	26.16	26	P	P	16 12 17.9	-0.4
	baz=212						
R55A	Marlinton	26.32	20	P	P	16 12 19.6	-0.4
	baz=206						
214A	Organ Pipe Nat	26.57	316	P	P	16 12 24.4	+2.2
	baz=128						
P51A	Williamsport	26.57	15	P	P	16 12 22.0	-0.1
	baz=198						
Q54A	Coxs Mills	26.73	19	P	P	16 12 22.9	-0.6
	baz=203						
SDCO	Great Sand Dun	26.86	335	P	P	16 12 26.6	+1.5
	baz=149						
R57A	Stanardsville	26.91	23	P	P	16 12 24.3	-0.8
	baz=209						
P52A	Corning	26.96	16	P	P	16 12 25.1	-0.5
	baz=200						
Q55A	Buckhannon	26.98	20	P	P	16 12 25.1	-0.8
	baz=205						
P53A	Whipple	27.03	17	P	P	16 12 25.8	-0.4
	baz=202						
ACSO	Alum Creek Sta	27.30	14	P	P	16 12 27.3	-1.3
	baz=198						
S22A	4UR Ranch, Cre	27.43	333	P	P	16 12 32.5	+2.3
	baz=146						
WUAZ	Wupatki	28.03	324	*e*P	P	16 12 38.0	+2.7
	comp=Z,6.0nm,0.9s						
WUAZ	Wupatki	28.03	324	P	P	16 12 39.0	+3.7
	baz=135						
PV13	Radium Mtn., P	28.68	331	*e*P	P	16 12 43.9	+2.6
	comp=Z,4.1nm,1.1s						
N54A	Moraine State	28.80	18	P	P	16 12 41.1	-0.9
	baz=204						
SSPA	Standing Stone	29.20	21	P	P	16 12 44.6	-1.0
	baz=208						
BC3	Big Chuckawall	29.36	316	P	P	16 12 50.3	+3.1
	baz=126						
KNB	Kanab	29.91	324	*e*P	P	16 12 55.1	+3.0
	comp=Z,6.1nm,0.8s						
LCMT	Little Creek M	30.15	324	*e*P	P	16 12 57.2	+3.0
	comp=Z,4.9nm,0.9s						
GMRC	Granite Mounta	30.18	318	P	P	16 12 58.1	+3.6
	baz=128						
PSUT	Pine Spring	31.56	325	*e*P	P	16 13 10.1	+3.5
	comp=Z,5.5nm,0.8s						
MPMC	Manual Prospec	32.13	318	P	P	16 13 14.5	+2.8
	baz=127						
DUG	Dugway, Tooele	32.22	328	P	P	16 13 14.3	+2.0
	baz=139						
R11A	Troy Canyon, C	32.42	323	P	P	16 13 16.6	+2.4
	baz=132						
CWC	Cottonwood Cre	32.75	318	P	P	16 13 19.4	+2.4
	baz=127						
PDAR	Pinedale Array	32.76	335	P	P	16 13 18.2	+1.1
	comp=Z,0.4nm,0.5s,baz=122,slow=9.8,SNR=6.3						
E46A	Sault Ste Mari	32.96	9	P	P	16 13 18.8	+0.3
	baz=193						
LONY	Lake Ozonia	33.87	22	P	P	16 13 25.4	-1.1
	baz=210						
ELK	Elko	33.88	327	P	P	16 13 29.5	+2.6
	baz=140,slow=10.0						
ELK	Elko	33.88	327	*e*P	P	16 13 29.9	+2.9
	comp=Z,3.3nm,0.8s						
NV11	Mina Array Sit	34.01	321	*e*P	P	16 13 31.3	+3.3
	comp=Z,0.3nm,0.8s						
E51A	G1948 Merrick	34.09	15	P	P	16 13 26.8	-1.6
	baz=201						
NVAR	Mina Array Bea	34.10	321	P	P	16 13 32.1	+3.3
	comp=Z,4.8nm,0.7s,baz=131,slow=8.3,SNR=46						

KVN	Kaiserville	34.37	322	*e*P	P	16 13 34.2	+3.1
	comp=Z,2.2nm,0.8s						
E54A	Lac Daplat, Po	34.62	17	P	P	16 13 31.5	-1.4
	baz=205						
RLMT	Red Lodge	34.63	338	P	P	16 13 34.0	+0.7
	baz=149						
D52A	ZEK Kipawa Sen	34.78	16	P	P	16 13 33.2	-1.1
	baz=203						
D53A	Lac Vacive, Po	35.06	16	P	P	16 13 36.3	-0.5
	baz=204						
D54A	Lac Fusel, La	35.43	18	P	P	16 13 39.0	-0.8
	baz=205						
HLID	Hailey	35.54	331	P	P	16 13 43.4	+2.3
	baz=140						
EGMT	Eagleton	37.29	340	P	P	16 13 56.4	+0.6
	baz=150						
O03E	Paynes Creek	37.38	320	P	P	16 13 59.0	+2.3
	baz=126						
J08A	Circle Bar Ran	37.43	327	*e*P	P	16 13 59.3	+2.1
	comp=Z,18nm,0.7s						
MATQ	Matagami	37.55	15	P	P	16 13 56.1	-1.8
	baz=202						
F10A	Beach Ranch, E	38.67	331	*e*P	P	16 14 08.9	+1.4
	comp=Z,13nm,0.8s						
SIV	San Ignacio	42.23	134	P	P	16 14 37.6	+0.6
	comp=Z,0.8nm,0.6s,baz=339,slow=7.1,SNR=4.0						
SCHQ	Schefferville	45.17	20	P	P	16 14 58.4	-1.9
	comp=Z,2.5nm,0.4s,baz=235,slow=7.9,SNR=7.5						
YKA	Yellowknife Ar	51.27	346	P	P	16 15 46.1	-0.9
	comp=Z,2.4nm,0.6s,baz=148,slow=7.8,SNR=10						
YKB5	Yellowknife Ar	51.27	346	*e*P	P	16 15 46.1	-0.9
INK	Inuvik	60.71	343	P	P	16 16 54.1	-0.2
	comp=Z,1.7nm,0.5s,baz=127,slow=3.6,SNR=4.3						
BRLK	Bradley Lake	62.90	331	*e*P	P	16 17 10.8	+1.7
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	63.16	337	P	P	16 17 11.2	+0.4
	comp=Z,2.1nm,0.9s,baz=134,slow=4.4,SNR=11						
ILB	Eielson Array	63.16	337	*e*P	P	16 17 11.2	+0.4
	comp=Z,3.0nm,0.9s						
TOLK	Toolik Lake Re	65.82	340	P	P	16 17 29.1	+1.0
	baz=115						
EKA	Eskdalemuir Ar	77.78	36	P	P	16 18 36.9	-3.0
	comp=Z,0.5nm,0.5s,baz=268,slow=5.0,SNR=6.0						
ARCES	ARCESS Array B	86.11	18	P	P	16 19 21.6	-1.7
	comp=Z,0.4nm,0.5s,baz=290,slow=5.3,SNR=3.5						
WR1	Warramunga Arr	135.85	256	*e*PKPdf	PKiKP	16 26 05.1	-0.5
WRA	Warramunga Arr	135.85	256	PKP	PKiKP	16 26 05.1	-0.5
	comp=Z,0.5nm,0.8s,baz=95,slow=1.7,SNR=3.0						
ASAR	Alice Springs	136.10	250	PKP	PKiKP	16 26 05.4	-0.6
	comp=Z,0.5nm,1.0s,baz=92,slow=2.2,SNR=2.9						
CMAR	Chiang Mai Arr	146.28	342	PKPbc	PKPab	16 26 25.1	+0.4
	comp=Z,3.0nm,0.7s,baz=346,slow=3.8,SNR=14						

*GUC **27** 16:07:05.7±0.5,22.°96S×69.°02W,h85^{km}±2^{km},ML3.7*

*ISCJB **27** 16:07:06.0±0.6,22.°97S±0.°04×69.°05W±0.°05,h92^{km}±6^{km},mb3.9/1,Error ellipse: s-maj=7.6km s-min=6.6km az=171.5*

*SJA **27** 16:07:06.0±0.8,22.°91S×69.°03W,h78^{km}±6^{km},ML3.0,MW2.8*

*IDC **27** 16:07:20.1±12.0,21.°95S×68.°33W,h179^{km}±88^{km},mb3.8/1,mb1 3.5/3,mb1mx3.2/30,mbtmp4.0/3,Error ellipse: s-maj=147.0km s-min=42.0km az=2.0*

ISC 27 16:07:06.2±1.0,**22.°95S**±0.°04×**69.°05W**±0.°05,**h86**^{km}±7^{km},**n25,**σ**1$\overset{s}{.}$10**/37,**2C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.36	21	*e*P	Pn	16 07 19.2	-0.7
LVC	Limon Verde	0.36	21	*i* S	Sn	16 07 29.9	-0.2
PB15	IPOC Station P	0.47	236	*e*P	Pn	16 07 21.0	+0.4
PB15	IPOC Station P	0.47	236	⇓*i*P	Pn	16 07 20.8	+0.3
PB15				*i* S	Sn	16 07 31.8	+0.6
PB15				IAML		16 07 35.1	
	comp=N,32μm,0.3s						
PB06	IPOC Station P	0.54	296	*e*P	Pn	16 07 21.0	-0.1
PB06	IPOC Station P	0.54	296	⇓*i*P	Pn	16 07 21.3	+0.3
PB06				*e*S	Sn	16 07 32.6	+0.5
PB06				IAML		16 07 33.4	
	comp=E,11μm,0.3s						
PB05	IPOC Station P	1.07	275	*e*P	Pn	16 07 27.2	+0.6
PB05				*e*S	Sn	16 07 42.5	+0.7
PB05	IPOC Station P	1.07	275	*e*P	Pn	16 07 26.6	+0.1
PB05				*i* S	Sn	16 07 42.6	+0.8
PB05				IAML		16 07 46.8	
	comp=E,1μm,0.3s						
PB03	IPOC Station P	1.10	324	*e*P	Pn	16 07 27.7	+0.7
PB03				*e*S	Sn	16 07 42.8	+0.2
PB03	IPOC Station P	1.10	324	*e*P	Pn	16 07 27.4	+0.3
PB03				*i* S	Sn	16 07 43.9	+1.2
PB03				IAML		16 07 45.9	
	comp=E,2μm,0.3s						
PB09	IPOC Station P	1.16	351	⇑*i*P	Pn	16 07 28.7	+1.0
PB09				*e*S	Sn	16 07 45.5	+1.8
PB09				IAML		16 07 49.3	
	comp=E,1μm,0.4s						
PB04	IPOC Station P	1.18	301	*e*P	Pn	16 07 29.1	+1.0
PB04	IPOC Station P	1.18	301	*e*P	Pn	16 07 28.3	+0.2
PB04				*i* S	Sn	16 07 45.9	+1.5
PB04				IAML		16 07 49.9	
	comp=N,2μm,0.1s						
PB07	IPOC Station P	1.44	327	*e*P	Pn	16 07 31.6	+0.4
PB07				*i* S	Sn	16 07 51.5	+1.5
PB07				IAML		16 07 52.6	
	comp=E,1μm,0.2s						
PB10	IPOC Station P	1.50	247	⇑*i*P	Pn	16 07 31.8	+0.1
PB10				*i* S	Sn	16 07 51.9	+0.9
PB10				IAML		16 07 59.2	
	comp=E,848nm,0.3s						
PB02	IPOC Station P	1.80	334	⇓*i*P	Pn	16 07 36.2	+0.4
PB02				*i* S	Sn	16 07 59.5	+1.4
PB02				IAML		16 08 01.1	
	comp=E,1μm,0.5s						
PB01	IPOC Station P	1.94	348	⇓*i*P	Pn	16 07 38.0	+0.5
PB01				*i* S	Sn	16 08 02.0	+0.6
PB01				IAML		16 08 10.1	
	comp=N,831nm,0.3s						
YJA	Yavi	3.36	77	*e*P	Pn	16 07 58.6	+1.7
YJA				IAML		16 08 01.1	
	comp=Z,14nm,0.5s						
HJA	Humahuaca	3.36	95	*e*P	Pn	16 07 58.5	+1.6
HJA				IAML		16 07 59.3	
	comp=Z,65nm,0.5s						
AZAP	Zapla	3.87	110	*e*P	Pn	16 08 05.2	+1.6
VCA	Vinchina	5.82	173	*e*P	Pn	16 08 31.5	+1.4
LPAZ	La Paz	6.68	8	P	Pn	16 08 43.2	+0.9
	comp=Z,0.4nm,0.3s,baz=322,slow=17,SNR=10.0						
SIV	San Ignacio	10.22	49	P	Pn	16 09 27.2	-2.9
	comp=Z,2.3nm,0.3s,baz=256,slow=11,SNR=7.6						
SIV				S	Sn	16 11 09.5	-13
	baz=94,slow=19,SNR=3.0						
TORD	Torodi Ar. Bea	77.96	70	P	P	16 18 53.9	-1.7
	comp=Z,1.3nm,0.5s,baz=260,slow=5.6,SNR=5.5						
MKAR	Makanchi Array	146.87	37	PKPbc	PKPdf	16 26 36.6	-0.1
	comp=Z,1.6nm,1.1s,baz=317,slow=3.7,SNR=5.9						

*IDC **27** 16:08:13.2±2.2,5.°47S×147.°25E,h198^{km}±25^{km},mb3.4/8,mb1 3.7/11,mb1mx3.5/31,mbtmp4.1/11,Error ellipse: s-maj=31.2km s-min=11.1km az=112.0*

ISC 27 16:08:10.8±0.7,**5.°39S**±0.°07×**147.°4E**±0.°1,**h170**^{km}**,n14,**σ**1$\overset{s}{.}$82**/17,**mb3.6**/9,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.99	183	P	Pn	16 09 12.6	+1.1
	11nm,0.3s,baz=21,slow=5.4,SNR=46						
PMG				S	Sn	16 09 57.4	-1.6
	43nm,0.3s,baz=206,slow=22,SNR=20						
HNR	Honiara	13.12	109	P	P	16 11 14.7	-0.2
	15nm,0.3s,baz=163,slow=1.8,SNR=5.9						
CTA	Charters Tower	14.65	184	P	P	16 11 33.8	+2.0
	0.8nm,0.3s,baz=16,slow=12,SNR=9.9						
WRA	Warramunga Arr	19.22	220	P	P	16 12 22.2	+0.1
	3.1nm,0.3s,baz=52,slow=10,SNR=56						
WRA				S	S	16 15 47.3	-3.5
	0.1nm,0.3s,baz=42,slow=20,SNR=3.7						
ASAR	Alice Springs	22.31	214	P	P	16 12 54.7	+0.1
	8.7nm,0.7s,baz=47,slow=9.6,SNR=21						
ASAR				S	S	16 16 50.3	+2.8
	1.8nm,0.9s,baz=32,slow=21,SNR=6.6						
STKA	Stephens Creek	26.89	191	P	P	16 13 34.7	-1.3
	1.7nm,0.6s,baz=2.1,slow=9.6,SNR=4.1						
MJAR	Matsushiro Arr	42.59	349	P	P	16 15 50.1	+0.1
	0.9nm,0.7s,baz=174,slow=9.5,SNR=3.8						
USRK	Ussuriysk Ar.	51.27	346	P	P	16 16 56.9	-0.3
	0.6nm,0.5s,baz=181,slow=6.6,SNR=3.3						
HHC	Hu-ho-hao-te	56.51	328	P	P	16 17 38.8	+3.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,14nm,4.8s						
SONM	Songino Array	64.05	331	P	P	16 18 26.7	+0.1
	comp=Z,0.8nm,0.9s,baz=158,slow=4.2,SNR=4.2						
MKAR	Makanchi Array	77.26	320	P	P	16 19 45.7	-0.6
	comp=Z,0.3nm,0.4s,baz=104,slow=6.1,SNR=5.8						
ZALV	Zalesovo Beam	78.69	328	P	P	16 19 52.8	-1.1
	comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=2.9						
ILAR	Eielson Array	84.79	23	P	P	16 20 24.6	-1.1
	comp=Z,0.4nm,0.6s,baz=258,slow=5.1,SNR=5.2						
TORD	Torodi Ar. Bea	145.28	285	PKPbc	PKPdf	16 27 27.9	-1.4
	comp=Z,0.6nm,0.6s,baz=75,slow=3.4,SNR=4.1						

*ISCJB **27** 16:22:49.2±0.6,76.°95N±0.°02×18.°5E±0.°1,h6^{km}±4^{km},mb4.1/52,MS3.4/29,Error ellipse: s-maj=4.7km s-min=2.7km az=160.7*

*IDC **27** 16:22:50.0±0.4,76.°99N×18.°31E,h0^{km},mb3.9/23,mb1 4.1/27,mb1mx4.0/39,mbtmp3.9/27,ML3.4/3,MS3.3/27,Ms1 3.3/27,ms1mx3.2/45,Error ellipse: s-maj=14.0km s-min=6.8km az=71.0*

*NEIC **27** 16:22:50.7±2.0,76.°93N×17.°96E,h10^{km},mb4.2/22,Error ellipse: s-maj=16.1km s-min=7.1km az=247.0*

*MOS **27** 16:22:50.0±1.1,76.°93N×18.°51E,h11^{km},mb4.3/24,Error ellipse: s-maj=30.2km s-min=5.6km az=94.7*

*NAO **27** 16:22:51.0±1.0,76.°98N×18.°70E,h16^{km}±10^{km},ML4.3*

*IEPN **27** 16:22:53.0,76.°96N×18.°81E,h10^{km}*

*BER **27** 16:22:54.0±2.8,77.°02N×18.°41E,h15^{km},ML3.8,MW4.5,mb4.2(NEIC),Confirmed Earthquake*

ISC 27 16:22:50.7±0.7,**76.°98N**±0.°03×**18.°68E**±0.°03,**h5**^{km}±4^{km},**n185,**σ**2$\overset{s}{.}$82**/217,**mb4.1**/54,**MS3.3**/29,**5C-2D,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	0.71	274	*e*Pn	Pg	16 23 03.8	-0.5
HSPB	Hornsund (broa	0.71	274	Pg	Pg	16 23 03.9	-0.3
HSPB				Lg	Lg	16 23 15.9	
HSPB	Hornsund (broa	0.71	274	*e*P	Pg	16 23 03.8	-0.5
HSPB	Hornsund (broa	0.71	274	*e*P	Pg	16 23 03.8	-0.5
HSPB				*e*S	Sg	16 23 13.8	+0.2
HSPB				IAML		16 23 17.9	
	comp=Z,1μm,0.3s						
SPA0	Spitsbergen Ar	1.31	339	*e*Pn	Pn	16 23 14.5	-1.0
SPA0				*e*Sn	Sg	16 23 32.4	-0.2
SPA0	Spitsbergen Ar	1.31	339	Pn	Pn	16 23 14.8	-0.8
	baz=152,slow=18						
SPA0				Pg	Pb	16 23 16.2	+0.5
SPA0				Lg	Lg	16 23 31.5	
	baz=151,slow=37						
SPA0	Spitsbergen Ar	1.31	339	⇑*i*P	Pn	16 23 14.5	-1.0
SPA0				*i* S	Sg	16 23 31.2	-1.4
SPA0	Spitsbergen Ar	1.31	339	P	Pn	16 23 14.8	-0.8
	baz=152,slow=18						
SPA0				*e*Sg	Sg	16 23 32.5	-0.2
SPITS	Spitsbergen Ar	1.31	339	Pn	Pn	16 23 14.5	-1.0
	baz=141,slow=20,SNR=2555						
SPITS				Sn	Sg	16 23 31.8	-0.8
	baz=157,slow=37,SNR=26						
BRBA	Barentsburg A	1.46	320	Pn	Pn	16 23 17.6	0.0
BRBA				Lg	Lg	16 23 36.1	
BRBA	Barentsburg A	1.46	320	P	Pn	16 23 17.6	0.0
BRBA				Sg	Sb	16 23 36.1	-0.9
HOPEN	Hopen	1.53	105	Pn	Pb	16 23 19.3	-0.2
HOPEN				Lg	Lg	16 23 40.0	
HOPEN	Hopen	1.53	105	*e*P	Pb	16 23 19.3	-0.2
HOPEN				*e*S	Sg	16 23 40.0	+0.2
HOPEN				IAML		16 23 44.6	
	comp=Z,5μm,0.3s						
KBS	Kingsbay	2.42	327	*e*Pn	Pn	16 23 29.3	-1.5
KBS				*e*Sn	Sn	16 23 58.7	-1.9
KBS	Kingsbay	2.42	327	Pn	Pn	16 23 29.4	-1.3
KBS				Pg	Pb	16 23 35.6	+1.1
KBS				Lg	Lg	16 24 04.6	
KBS	Kingsbay	2.42	327	*e*P	Pn	16 23 29.3	-1.5
KBS				*e*		16 23 58.7	
KBS	Kingsbay	2.42	327	*e*P	Pn	16 23 29.2	-1.5
KBS				*e*S	Sn	16 23 58.3	-2.3
KBS	Kingsbay	2.42	327	⇑*i*P	Pn	16 23 29.2	-1.5
KBS				*e*Pg	Pb	16 23 35.0	+0.5
KBS				*e*Sg	Sb	16 24 04.5	-0.1
KBS				IAML		16 24 10.1	
	comp=Z,4μm,0.3s						
BJO1	Bjornoya	2.49	178	Pn	Pn	16 23 31.6	-0.2
BJO1				Pg	Pg	16 23 37.2	-1.0
BJO1				Lg	Lg	16 24 10.4	
BJO1	Bjornoya	2.49	178	*e*P	Pn	16 23 33.6	+1.9
BJO1				*e*Pg	Pg	16 23 37.2	-1.0
BJO1				*e*Sg	Sg	16 24 10.1	-0.4
BJO1				*e*		16 24 11.1	
BJO1				IAML		16 24 17.5	
	comp=Z,1μm,0.5s						
HAMF	Hammerfest	6.52	165	*e*P	Pn	16 24 26.0	-1.0
ZFI2	Zemlya Franca-	6.70	42	⇑*i*P	Pn	16 24 29.9	+0.4
ZFI2				*i* S	Sn	16 25 39.6	-6.4
	comp=Z,105nm,0.4s						
TRO	Tromso	7.38	179	*e*P	Pn	16 24 39.3	+0.4
ARA0	ARCESS Array S	7.73	162	Pn	Pn	16 24 41.4	-2.2
	baz=356,slow=11						
ARA0				Sn	Sn	16 26 03.0	-8.4
	baz=357,slow=22						
ARA0	ARCESS Array S	7.73	162	Pn	Pn	16 24 41.4	-2.2
	baz=356,slow=11						
ARA0				Sn	Sn	16 26 03.0	-8.4
	baz=357,slow=22						
ARCES	ARCESS Array B	7.73	162	Pn	Pn	16 24 42.5	-1.2
	comp=Z,1.0nm,0.3s,baz=353,slow=12,SNR=38						
ARCES				Sn	Sn	16 26 03.9	-7.5
	comp=Z,33nm,0.3s,baz=2.8,slow=20,SNR=12						
ARCES				LR	LR	16 27 50.7	
	comp=Z,362nm,20.1s,baz=308,slow=39						
ARE0	ARCESS Array S	7.73	162	*e*Pn	Pn	16 24 42.9	-0.8
ARE0				*e*Sn	Sn	16 26 06.2	-5.2
ARE0	ARCESS Array S	7.73	162	*e*P	Pn	16 24 44.1	+0.4
ARE0				*e*S	Sn	16 26 02.7	-8.7
KIF	Kilpisjarvi	8.04	175	Pn	Pn	16 24 46.2	-1.7
KIF				Sn	Sn	16 26 12.3	-6.7
KIF	Kilpisjarvi	8.04	175	*e*P	Pn	16 24 47.3	-0.6
KIF				Sn	Sn	16 26 12.3	-6.7
KTK1	Kautokeino	8.11	168	*e*P	Pn	16 24 49.4	+0.5
KTK1				*e*S	Sn	16 26 15.2	-5.7
DAG	Danmarks Havn	8.39	287	*e*P	Pn	16 24 56.3	+3.6
DAG				*e*S	Sn	16 26 24.1	-3.5
DAG	Danmarks Havn	8.39	287	*i* P	Pn	16 24 56.3	+3.6
DAG				*e*S	Sn	16 26 24.1	-3.5
HEF	Hetta	8.74	168	Pn	Pn	16 24 56.3	-1.1
HEF				Sn	Sn	16 26 32.3	-3.9
HEF	Hetta	8.74	168	*e*P	Pn	16 24 57.2	-0.2
HEF				*e*S	Sn	16 26 28.3	-7.8
LOF	Lofoten	9.02	192	*e*P	Pn	16 25 02.2	+0.9
LOF				*e*S	Sn	16 26 35.9	-7.1
LOF				IAML		16 26 44.7	
	comp=Z,21nm,0.5s						
STEI	Steigen	9.15	188	*e*P	Pn	16 25 04.4	+1.4
STEI				*e*S	Sn	16 26 40.9	-5.4
JNW	Jan Mayen West	9.46	245	*e*P	Pn	16 25 07.9	+0.6
JNE	Jan Mayen East	9.46	245	*e*P	Pn	16 25 09.1	+1.8
JMIC	Jan Mayen	9.51	245	Pn	Pn	16 25 07.4	-0.5
	comp=Z,8.5nm,0.3s,baz=189,slow=4.5,SNR=9.6						
JMIC				LR	LR	16 27 39.5	
	comp=Z,124nm,19.0s,baz=8.0,slow=31						
JMIC	Jan Mayen	9.51	245	Pn	Pn	16 25 07.6	-0.4
JMIC	Jan Mayen	9.51	245	*e*P	Pn	16 25 09.9	+1.9
JMI	Jan Mayen	9.60	245	*e*P	Pn	16 25 11.2	+2.0
SALU	Saltoluokta	9.65	180	*e*P	Pn	16 25 12.2	+2.2
SALU				*e*S	Sn	16 26 57.1	-1.4
SGF	Sodankyl	9.86	162	P	Pn	16 25 17.5	+4.6
LVZ	Lovozero	10.26	144	*e*Pn	Pn	16 25 18.4	+0.1
LVZ				*e*Sn	Sn	16 27 05.8	-7.6
LVZ	Lovozero	10.26	144	*e*P	Pn	16 25 18.4	+0.1
APA	Apatity	10.41	147	⇑*i*P	Pn	16 25 16.3	-4.0
APA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KONS	Konsvik	10.67	192	*e*P	Pn	16 25 25.6	+1.7
MOR8	Moi Rana	10.94	189	*e*P	Pn	16 25 28.8	+1.2
MSF	Maaselka	11.57	158	P	Pn	16 25 40.8	+4.7
NSS	Namsos	12.69	193	*e*P	Pn	16 25 53.8	+2.4
NOD	Norderasen	13.66	187	*e*P	Pn	16 26 08.8	+4.1
AMDE	Amderma	13.88	98	*e*P	Pn	16 26 04.8	-2.8
	comp=Z,7.1nm,0.8s						
AMDE				*e*S	Sn	16 28 29.6	-12
SUMG	Summit	15.03	283	*e*P	Pn	16 26 24.7	+0.9
SUMG	Summit	15.03	283	*e*P	Pn	16 26 24.7	+0.9
FIA1	FINESS Array S	15.80	167	*e*Pn	Pn	16 26 32.6	-0.8
	comp=Z,18nm,1.0s						
FIA1				*e*Sn	Sn	16 29 17.3	-11
FIA0	FINESS Array S	15.80	167	*e*Pn	Pn	16 26 30.3	-3.2
FIA0				*e*Sn	Sn	16 29 19.8	-8.9
FIA0	FINESS Array S	15.80	167	P	Pn	16 26 30.9	-2.5
	baz=349,slow=12						
FIA0	FINESS Array S	15.80	167	*e*P	Pn	16 26 30.3	-3.2
FIA0				*e*		16 29 19.8	
FIA0	FINESS Array S	15.80	167	P	Pn	16 26 30.9	-2.5
	baz=349,slow=12						
FINES	FINESS Array B	15.80	167	Pn	Pn	16 26 30.3	-3.2
	comp=Z,0.5nm,0.3s,baz=1.4,slow=12,SNR=21						
FINES				Sn	Sn	16 29 19.8	-8.9
	comp=Z,1.6nm,0.3s,baz=0.7,slow=23,SNR=7.4						
FINES				LR	LR	16 32 40.4	
	comp=Z,209nm,18.9s,baz=356,slow=37						
NC204	NORSAR Array S	16.00	194	*e*P	P	16 26 39.1	-0.6
	comp=Z,12nm,1.0s						
NC303	NORSAR Array S	16.02	193	*e*P	P	16 26 38.9	-0.9
	comp=Z,8.1nm,0.8s						
NC405	NORSAR Array S	16.11	192	*e*P	P	16 26 39.9	-1.0
	comp=Z,11nm,0.9s						
NB201	NORSAR Array S	16.20	193	*e*P	P	16 26 40.9	-0.9
	comp=Z,11nm,1.1s						
NB2	NORSAR Subarra	16.21	193	P	P	16 26 40.5	-1.5
NB2	NORSAR Subarra	16.21	193	P	P	16 26 40.5	-1.5
NOA	NORSAR Array B	16.21	193	Pn	P	16 26 40.8	-1.3
	comp=Z,0.1nm,0.3s,baz=5.6,slow=12,SNR=9.9						
NOA				LR	LR	16 33 39.3	
	comp=Z,109nm,18.6s,baz=5.0,slow=40						
NRA0	NORESS Array S	16.50	192	P	Pn	16 26 43.7	+1.3
	baz=9.4,slow=16						
NRA0	NORESS Array S	16.50	192	P	Pn	16 26 43.7	+1.3
	baz=9.4,slow=16						
HFS	Hagfors	17.01	189	P	Pn	16 26 49.3	+0.4
	comp=Z,0.5nm,0.3s,baz=17,slow=11,SNR=26						
HFS				Sn	Sn	16 29 54.6	-3.4
	comp=Z,0.3nm,0.3s,baz=30,slow=21,SNR=2.9						
HFS				LR	LR	16 34 02.5	
	comp=Z,84nm,18.5s,baz=359,slow=40						
HFS	Hagfors	17.01	189	P	Pn	16 26 49.2	+0.4
	baz=7.0,slow=11						
HFS	Hagfors	17.01	189	P	Pn	16 26 49.2	+0.4
	baz=7.0,slow=11						
BORG	Borgarnes	17.39	247	LR	LR	16 31 41.9	
	comp=Z,93nm,18.1s,baz=64,slow=31						
KLMR	Klimovskoe	17.63	145	*e*P	Pn	16 26 54.4	-2.2
KLMR				*e*		16 30 13.1	
KLMR				pmax	pmax		
	comp=Z,14nm,0.9s						
PRGR	Permogore	17.77	135	*e*P	Pn	16 26 57.3	-1.1
PRGR				pmax	pmax		
	comp=Z,26nm,0.9s						
PRGR	Permogore	17.77	135	*e*P	Pn	16 26 57.4	-1.1
	comp=Z,26nm,0.9s						
PRGR				*e*S	Sn	16 30 01.5	-15
VSU	Vasula	18.81	167	*e*P	P	16 27 10.8	+0.1
VSU				IAmb	IAmb	16 27 16.1	
	comp=Z,39nm,0.8s						
VSU	Vasula	18.81	167	*i* P	Pn	16 27 11.4	+0.3
VSU				pmax	pmax		
	comp=Z,21nm,0.5s						
KIRV	Kirov	21.29	132	P	P	16 27 36.4	-1.2
	comp=Z,13nm,0.7s,baz=46,slow=4.6,SNR=7.3						
KIRV				LR	LR	16 39 11.1	
	comp=Z,44nm,18.8s,baz=109,slow=46						
ISAL	Salakas	21.67	169	*e*P	P	16 27 40.6	-1.0
ISAL				IAmb	IAmb	16 27 48.4	
	comp=Z,9.4nm,1.0s						
IIGN	Ignalina	21.89	168	*e*P	P	16 27 43.8	-0.3
IIGN				IAmb	IAmb	16 27 46.9	
	comp=Z,5.6nm,0.6s						
MOS	Moscow	22.40	151	*e*P	P	16 27 48.6	-0.9
MOS				*e*S	S	16 31 51.5	-4.2
OBN	Obninsk	22.90	153	LR	LR	16 36 05.8	
	comp=Z,19nm,19.1s,baz=10,slow=35						
OBN	Obninsk	22.90	153	*ce*P	P	16 27 55.0	+0.2
OBN				*PP	sP	16 27 57.0	+0.2
OBN				*SP	pP	16 27 59.0	+2.8
OBN						16 28 20.0	
OBN				*e*PPP	PPP	16 28 29.7	
OBN				SSS	SSS	16 32 53.0	
OBN				pmax	pmax		
	comp=Z,25nm,1.3s						
OBN				MLR	MLR		
	comp=Z,178nm,14.0s						
EKA	Eskdalemuir Ar	23.14	213	P	P	16 27 56.2	-1.0
	comp=Z,0.7nm,0.8s,baz=359,slow=9.4,SNR=3.1						
ARU	Arti	24.97	122	P	P	16 28 15.5	+0.9
	comp=Z,0.6nm,0.2s,baz=334,slow=12,SNR=4.1						
ARU				S	S	16 32 55.0	+17
	comp=Z,1.2nm,0.5s,baz=270,slow=20,SNR=3.6						
ARU				LR	LR	16 38 46.8	
	comp=Z,24nm,21.6s,baz=300,slow=38						
ARU	Arti	24.97	122	*e*P	P	16 28 15.5	+0.9
	comp=Z,20nm,0.8s						
ARU	Arti	24.97	122	*d i*P	P	16 28 15.5	+0.9
ARU						16 28 48.3	
ARU				PPP	PPP	16 28 57.2	
ARU				S	S	16 32 42.7	+4.3
ARU				SS	SnSn	16 33 33.6	+7.7
ARU				SSS	SSS	16 33 49.1	
ARU				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SVE	Sverdlovsk	25.00	120	*e*P	P	16 28 15.7	+0.8
LPSR	Galich'ya Gora	25.63	151	*e*P	P	16 28 22.1	+1.5
LPSR				pmax	pmax		
	comp=Z,40nm,1.5s						
CLL	Collm	25.86	188	*e*P	P	16 28 31.0	+8.3
CLL	Collm	25.86	188	*e*P	P	16 28 21.0	-1.7
CLL				*e*		16 28 45.0	
CLL				*e*PPP	PPP	16 29 11.0	
CLL				*e*PPPP		16 29 18.0	
CLL				*e*		16 32 26.0	
CLL				*e*S	S	16 33 02.0	+9.4
	comp=N,200nm,17.8s						
TIXI	Tiksi	25.97	43	LR	LR	16 38 27.4	
	comp=N,50nm,21.2s,baz=356,slow=36						
UPC	Upice	26.59	184	*e*S	S	16 33 06.6	+2.5
UPC				AMS	AMS	16 38 00.0	
	comp=N,100nm,17.7s						
PVCC	Panska Ves	26.60	186	AMS	AMS	16 37 40.0	
	comp=N,200nm,20.5s						
AKASG	Malin Array Be	26.69	165	P	P	16 28 29.5	-0.7
	comp=N,1.2nm,0.3s,baz=354,slow=9.3,SNR=5.6						
AKASG				LR	LR	16 38 23.1	
	comp=N,84nm,20.4s,baz=10.0,slow=35						
VSR	Storozhevoye	27.02	151	*e*P	P	16 28 32.3	-0.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PRU	Pruhonice	27.14	186	*e*S	S	16 33 21.7	+8.9
PRU				AMS	AMS	16 38 20.0	
	comp=Z,200nm,22.7s						
GOPC	GO Pecny, Ondr	27.21	186	*e*S	S	16 33 22.8	+8.9
GOPC				AMS	AMS	16 38 10.0	
	comp=Z,100nm,22.7s						
OKC	Ostrava-Krasne	27.25	181	*e*S	S	16 33 18.6	+4.2
VRAC	Vranov	27.79	183	LR	LR	16 40 29.0	
	comp=Z,63nm,18.9s,baz=348,slow=38						
TREC	Trest	27.82	184	AMS	AMS	16 38 40.0	
	comp=Z,200nm,23.6s						
KHC	Kasperske Hory	28.02	187	*e*P	P	16 28 51.6	+9.4
KHC				*e*		16 28 55.0	
KHC				*e*S	S	16 33 30.7	+3.9
KHC				MLR	MLR		
	comp=Z,100nm,23.1s						
KHC	Kasperske Hory	28.02	187	*e*P	P	16 28 51.6	+9.4
KHC				*e*x	x	16 28 55.0	
KHC				*e*S	S	16 33 30.7	+3.9
KHC				AMS	AMS	16 38 30.0	
	comp=Z,100nm,23.1s						
GERES	GERESS Array B	28.31	187	P	P	16 28 46.0	+1.2
	comp=Z,0.2nm,0.3s,baz=13,slow=9.1,SNR=3.7						
GERES				LR	LR	16 39 51.8	
	comp=Z,96nm,20.9s,baz=6.0,slow=36						
VYHS	Vyhne	28.59	180	*e*P	P	16 28 47.7	+0.5
VYHS	Vyhne	28.59	180	*e*P	P	16 28 47.7	+0.5

FRB	Frobisher Bay	28.69	292	LR	LR	16 40 40.7	
	comp=Z,79nm,19.2s,baz=26,slow=37						
BRVK	Borovoye	30.51	111	*i* P	P	16 29 06.3	+2.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DAVOX	Davos/Dischmat	30.51	192	LR	LR	16 41 37.8	
	comp=Z,45nm,21.2s,baz=9.0,slow=37						
AKTO	Aktyubinsk	30.58	127	LR	LR	16 43 18.1	
	comp=Z,62nm,19.9s,baz=348,slow=40						
MLR	Muntele Rosu	31.73	170	LR	LR	16 42 18.1	
	comp=Z,82nm,19.3s,baz=52,slow=37						
ABKAR	Akbulak array	32.06	126	*e*P	P	16 29 16.4	-1.5
	comp=Z,1.4nm,1.0s						
SIM	Simferopol'	32.76	160	*e*P	P	16 29 28.0	+4.0
SIM				S	S	16 34 46.0	+5.2
SIM				pmax	pmax		
	comp=Z,200nm,8.8s						
SIM				smax	smax		
	comp=Z,150nm,9.0s						
ZAA1	Zalesovo Array	32.88	95	*e*PcP	PcP	16 32 07.8	-1.4
ZALV	Zalesovo Beam	32.88	95	PcP	PcP	16 32 07.8	-1.4
	comp=Z,1.1nm,0.6s,baz=297,slow=4.4,SNR=4.1						
ZALV				LR	LR	16 45 38.1	
	comp=Z,42nm,18.5s,baz=66,slow=42						
BILL	Bilibino	33.86	21	⇓*e*P	P	16 29 34.6	+1.2
BILL						16 32 18.0	
BILL				S	S	16 34 55.0	-2.6
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,138nm,22.0s						
KURK	Kurchatov	34.51	104	*e*P	P	16 29 38.8	-0.4
	comp=Z,5.7nm,1.1s						
KURK	Kurchatov	34.51	104	*i* P	P	16 29 40.1	+0.9
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	34.83	149	P	P	16 29 44.0	+2.0
	comp=Z,2.2nm,0.7s,baz=4.6,slow=5.6,SNR=5.3						
KBZ	Khabaz	34.83	149	P	P	16 29 44.0	+2.0
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	Yakutsk	34.86	50	*i* P	P	16 29 42.6	+0.6
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NCK	Nalchik	35.15	148	*i* P	P	16 29 46.3	+1.5
NCK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NEY	Neytrino	35.29	149	*i* P	P	16 29 47.0	+0.8
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
COLD	Coldfoot	35.86	353	*e*P	P	16 29 50.2	-0.5
	comp=Z,2.8nm,0.7s						
DGZ	Jazzator, Alta	37.43	95	*i* P	P	16 30 06.1	+1.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.4s						
YKA	Yellowknife Ar	37.78	327	P	P	16 30 07.0	0.0
	comp=Z,0.4nm,0.4s,baz=19,slow=7.8,SNR=2.8						
YKA				PcP	PcP	16 32 23.1	-0.3
	comp=Z,0.7nm,0.7s,baz=8.6,slow=3.0,SNR=3.2						
YKB5	Yellowknife Ar	37.78	327	*e*PcP	PcP	16 32 23.1	-0.3
BR101	Keskin Array S	37.91	161	*e*P	P	16 30 08.1	-0.5
BRTR	Keskin Array B	37.91	161	P	P	16 30 08.1	-0.5
	comp=Z,0.4nm,0.5s,baz=353,slow=4.5,SNR=3.4						
BRTR				LR	LR	16 46 57.6	
	comp=Z,58nm,20.0s,baz=350,slow=38						
COLA	College	38.14	351	*i* P	P	16 30 11.1	+1.1
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR	Eielson Array	38.20	350	P	P	16 30 08.7	-1.9
	comp=Z,0.4nm,0.5s,baz=1.0,slow=7.0,SNR=5.8						
ILAR				PcP	PcP	16 32 23.8	-0.9
	comp=Z,0.5nm,0.7s,baz=337,slow=4.2,SNR=5.2						
GNI	Garni	38.59	147	LR	LR	16 47 09.7	
	comp=Z,56nm,19.1s,baz=344,slow=38						
ESDC	Sonseca Array	38.66	208	P	P	16 30 15.2	+0.5
	comp=Z,0.5nm,0.5s,baz=3.6,slow=9.1,SNR=4.5						
MAKZ	Makanchi	38.94	102	*e*P	P	16 30 16.9	-0.1
	comp=Z,4.0nm,1.0s						
MAKZ	Makanchi	38.94	102	*e*P	P	16 30 16.9	-0.1
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BPAW	Bear Paw Mtn.	39.01	353	*e*P	P	16 30 18.4	+0.9
	comp=Z,3.1nm,1.0s						
MK31	Makanchi Array	39.02	102	*e*P	P	16 30 18.9	+1.2
	comp=Z,4.4nm,0.9s						
MK31	Makanchi Array	39.02	102	*e*P	P	16 30 18.9	+1.2
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK32	Makanchi Array	39.02	102	*e*PcP	PcP	16 32 26.8	-0.8
MKAR	Makanchi Array	39.02	102	P	P	16 30 18.9	+1.2
	comp=Z,3.0nm,0.7s,baz=340,slow=6.1,SNR=22						
MKAR				PcP	PcP	16 32 26.8	-0.8
	comp=Z,0.4nm,0.5s,baz=344,slow=4.6,SNR=4.1						
TLY	Talaya	39.24	79	*i* P	P	16 30 20.8	+1.4
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KTH	Kantishna Hill	39.56	353	*e*P	P	16 30 21.4	-0.7
	comp=Z,5.2nm,1.0s						
VAE	Valguarnera	39.64	185	LR	LR	16 47 11.4	
	comp=Z,44nm,20.5s,baz=330,slow=37						
SKT	Skwentna	41.15	353	*e*P	P	16 30 34.6	-0.6
	comp=Z,6.4nm,1.1s						
AAK	Ala-Archa	41.29	112	*i* P	P	16 30 37.1	+0.4
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KEST	Kesra	41.55	191	P	P	16 30 38.8	0.0
	comp=Z,2.0nm,0.7s,baz=74,slow=7.4,SNR=3.8						
KEST				LR	LR	16 51 27.3	
	comp=Z,41nm,18.1s,baz=298,slow=41						
SUA	Susitna One	41.65	352	*e*P	P	16 30 39.5	+0.2
	comp=Z,16nm,1.2s						
GEYT	Alibeck	42.72	132	P	P	16 30 49.8	+1.6
	comp=Z,1.7nm,0.7s,baz=341,slow=8.4,SNR=5.2						
WMQ	Urumqi	43.05	98	*e*P	P	16 30 52.5	+1.6
WMQ				pP	sP	16 30 58.0	+5.0
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,5.0nm,4.5s						
WMQ				LR	LR		
	comp=N,870nm,28.9s						
WMQ				LR	LR		
	comp=E,590nm,28.9s						
WMQ				LR	LR		
	comp=Z,42nm,29.0s						
SONA0	Songino Array	43.46	78	*e*P	P	16 30 55.9	+1.6
SONM	Songino Array	43.46	78	P	P	16 30 55.9	+1.6
	comp=Z,2.5nm,1.0s,baz=327,slow=8.6,SNR=9.4						
GAR	Garm	43.94	118	*e*P	P	16 30 58.7	+0.5
	comp=Z,7.7nm,0.5s						
GAR	Garm	43.94	118	*e*P	P	16 30 58.7	+0.5
GAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KDAK	Kodiak Island	45.39	353	*i* P	P	16 31 09.4	+0.1
PEA1	Petropavlovsk-	47.63	32	*e*P	P	16 31 27.9	+0.9
PETK	Petropavlovsk-	47.64	32	P	P	16 31 27.9	+0.8
	comp=Z,1.4nm,0.7s,baz=351,slow=7.6,SNR=3.0						
PETK				LR	LR	16 51 53.1	
	comp=Z,19nm,18.9s,baz=75,slow=37						
GTA	Gaotai	49.99	88	*e*P	P	16 31 47.8	+2.3
GTA				pP	sP	16 31 52.5	+4.9
GTA				sP	pP	16 31 55.3	+8.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
USRK	Ussuriysk Ar.	52.26	57	P	P	16 32 02.8	+0.5
	comp=Z,2.7nm,0.7s,baz=4.5,slow=5.4,SNR=7.7						
HRY	Holter Researc	52.75	319	*e*P	P	16 32 04.3	-1.7
MSO	Missoula	52.94	321	*e*P	P	16 32 04.9	-2.5
	comp=Z,5.4nm,0.6s						
ECSD	EROS Data Cent	53.08	305	*e*P	P	16 32 06.6	-1.8
	comp=Z,4.3nm,0.8s						
MCMT	McKenzie Canyo	54.74	319	*e*P	P	16 32 20.9	+0.1
BW06	Boulder Array	56.25	316	*e*P	P	16 32 31.7	0.0
PDAR	Pinedale Array	56.25	316	P	P	16 32 32.3	+0.6
	comp=Z,0.3nm,0.3s,baz=108,slow=1.9,SNR=5.6						
KSRS	Korea Array	57.98	62	P	P	16 32 43.7	+0.1
	comp=Z,0.6nm,0.5s,baz=341,slow=6.6,SNR=3.9						
KSRS				LR	LR	17 01 06.8	
	comp=Z,47nm,18.2s,baz=356,slow=40						
KS15	Wonju Array Si	57.98	62	*e*P	P	16 32 43.3	-0.3
	comp=Z,4.1nm,1.0s						
MAJO	Matsushiro	60.83	53	*e*P	P	16 33 04.1	+0.7
MAJO	Matsushiro	60.83	53	*e*P	P	16 33 04.1	+0.7
MJAR	Matsushiro Arr	60.83	53	P	P	16 33 04.1	+0.7
	comp=Z,1.9nm,0.7s,baz=334,slow=8.3,SNR=8.5						
NV01	Mina Array Sit	61.80	323	*e*P	P	16 33 10.6	+0.5
NVAR	Mina Array Bea	61.80	323	P	P	16 33 10.6	+0.5
	comp=Z,0.7nm,0.8s,baz=20,slow=8.0,SNR=4.7						
NVAR				LR	LR	17 01 42.1	
	comp=Z,59nm,18.2s,baz=80,slow=38						
ANMO	Albuquerque	63.38	311	*i* P	P	16 33 20.4	-0.3
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KMI	Kunming	64.37	90	P	P	16 33 29.5	+2.1
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
TOA1	Torodi Ar. Sit	64.44	198	*e*P	P	16 33 27.4	-0.2
TORD	Torodi Ar. Bea	64.44	198	P	P	16 33 27.4	-0.2
	comp=Z,0.9nm,0.6s,baz=355,slow=5.8,SNR=5.4						
TORD				LR	LR	17 02 19.8	
	comp=Z,38nm,20.4s,baz=300,slow=37						
TX31	Lajitas Ar. Si	68.36	307	*e*P	P	16 33 50.5	-2.2
	comp=Z,1.2nm,0.9s						
TXAR	Lajitas Array	68.36	307	P	P	16 33 51.8	-1.0
	comp=Z,0.9nm,0.5s,baz=41,slow=5.1,SNR=15						
TXAR				LR	LR	17 04 34.5	
	comp=Z,27nm,18.1s,baz=0.0,slow=37						
CMAR	Chiang Mai Arr	69.95	95	P	P	16 34 03.5	+1.0
	comp=Z,0.8nm,0.8s,baz=332,slow=6.8,SNR=5.7						
WRA	Warramunga Arr	115.00	69	PKP	PKPdf	16 41 31.5	-0.5
	comp=Z,2.8nm,1.2s,baz=333,slow=1.8,SNR=3.4						
WR1	Warramunga Arr	115.00	69	*e*PKiKP	PKPdf	16 41 31.5	-0.6
ASAR	Alice Springs	118.51	71	PKP	PKPdf	16 41 37.4	-1.3
	comp=Z,0.6nm,0.4s,baz=6.8,slow=1.6,SNR=25						
MAW	Mawson	146.85	151	PKPbc	PKPbc	16 42 31.7	-0.1
	comp=Z,1.1nm,0.5s,baz=27,slow=6.8,SNR=3.8						

WEL 27 16:43:32.6, 42°S±1°×17°4E±°, h16^{km}±2^{km}, M3.6/28, ML3.9/22, MLv3.6/28, Error ellipse: s-maj=0.0km s-min=0.0km az=174.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	180	P	Pg	16 43 36.4	+0.4
CMWZ				S	Sg	16 43 39.1	+0.9
BSWZ	Blackbirch Sta	0.26	257	P	Pb	16 43 38.7	-0.2
BSWZ				S	Sb	16 43 43.2	+0.1
TUWZ	Tuamarina	0.30	318	P	Pb	16 43 39.6	0.0
TUWZ				S	Sb	16 43 44.6	+0.2
TCW	Tory Channel	0.45	6	P	Pb	16 43 41.9	-0.2
TCW				S	Sb	16 43 48.3	-0.2
BHW	Baring Head	0.55	64	P	Pb	16 43 44.2	+0.4
BHW				S	Sb	16 43 52.3	+0.9
NNZ	Nelson	0.77	305	P	Pg	16 43 47.6	+0.1
PLWZ	Palliser	0.79	84	P	Pn	16 43 48.9	-0.1
MSWZ	Moikau Station	0.81	73	P	Pn	16 43 49.1	-0.3
CAW	Cannon Point	0.84	50	P	Pg	16 43 49.2	+0.2
DUWZ	D'Urville Isla	0.88	345	P	Pb	16 43 49.6	+0.1
PAWZ	Paruwai Farm	0.95	74	P	Pn	16 43 51.4	+0.1
MTW	Mount Morrison	1.09	63	P	Pn	16 43 53.3	+0.1
OGWZ	Otaki Gorge	1.10	41	P	Pn	16 43 53.6	+0.2
TRWZ	Traveller	1.14	77	P	Pn	16 43 53.7	-0.1
HOWZ	Holdsworth Sta	1.24	53	P	Pb	16 43 55.8	+0.2
TMWZ	Te Maipa	1.38	67	P	Pn	16 43 56.9	-0.3
MRZ	Mangatainoka R	1.43	46	P	Pb	16 43 58.4	-0.5
QRZ	Quartz Range	1.52	303	P	Pb	16 44 00.7	+0.3
TIWZ	Tintock	1.54	56	P	Pn	16 43 59.5	+0.2
OHWZ	Ohakea	1.67	30	P	Pb	16 44 03.4	+0.4
PRWZ	Pori Road	1.72	51	P	Pn	16 44 02.0	+0.1
POWZ	Post Office Ro	1.73	43	P	Pb	16 44 03.5	-0.3
BFZ	Birch Farm	1.82	58	P	Pn	16 44 03.1	-0.1
LTZ	Lake Taylor	1.83	231	P	Pn	16 44 04.0	+0.5
WAZ	Wanganui	1.99	17	P	Pb	16 44 09.0	+0.7
DVHZ	Dannevirke	2.00	48	P	Pn	16 44 05.4	-0.4
TSZ	Takapari Road	2.07	40	P	Pn	16 44 07.1	+0.4
LREZ	Lake Rotokare	2.20	4	P	Pb	16 44 11.0	-0.9
NMEZ	Namu Road	2.25	353	P	Pb	16 44 14.3	+1.4
PNHZ	Pukenui	2.30	42	P	Pn	16 44 09.8	-0.1
WPHZ	Waipukurau	2.32	47	P	Pn	16 44 10.0	-0.1
KHEZ	Kahui Hut	2.36	356	P	Pb	16 44 14.6	-0.2
NBEZ	Newall Road No	2.40	354	P	Pb	16 44 15.1	-0.3
MTVZ	Mangateitei	2.46	23	P	Pb	16 44 14.9	-1.6
DREZ	Durham Road	2.46	360	P	Pb	16 44 15.0	-1.5
PKE	Pukeiti	2.46	356	P	Pb	16 44 14.9	-1.6
PKVZ	Pokaka	2.52	20	P	Pb	16 44 15.3	-2.1
MOVZ	Moawhango	2.53	28	P	Pb	16 44 17.1	-0.6
VRZ	Vera Road	2.56	10	P	Pb	16 44 16.1	-2.1
BHHZ	Black Hill Sta	2.58	34	P	Pn	16 44 15.8	+2.1
PXZ	Pawanui	2.58	52	P	Pn	16 44 13.1	-0.6
DRZ	Dome Shelter	2.59	24	P	Pb	16 44 20.1	+1.2
WHVZ	Whangaehu Hut	2.59	24	P	Pb	16 44 16.9	-1.9
KRHZ	Kereru	2.59	40	P	Pn	16 44 13.9	0.0
FWVZ	Far West T-bar	2.61	23	P	Pb	16 44 19.5	+0.4
TUVZ	Tukino	2.63	25	P	Pn	16 44 16.6	+2.1
NGZ	Ngauruhoe	2.69	24	P	Pb	16 44 19.2	-1.3
TWVZ	Taurewa	2.75	20	P	Pb	16 44 23.2	+1.8
WTVZ	West Tongariro	2.75	23	P	Pb	16 44 21.1	-0.2
KAHZ	Kahuranaki	2.75	48	P	Pn	16 44 16.4	+0.4
KRVZ	Karewarewa	2.78	24	P	Pb	16 44 22.2	+0.3
KWHZ	Kaweka Forest	2.79	38	P	Pg	16 44 24.4	-1.7
KATZ	Kakaramea	2.91	23	P	Pb	16 44 26.1	+2.0
RITZ	Rihia Road	2.96	26	P	Pb	16 44 26.7	+1.9
RATZ	Rangitukua	3.03	24	P	Pb	16 44 26.6	+0.4
BKZ	Black Stump Fm	3.04	36	P	Pn	16 44 20.8	+0.9
WATZ	Wairara	3.17	22	P	Pb	16 44 29.5	+1.1
HIZ	Hauiti	3.18	9	P	Pb	16 44 25.4	-3.2
MTHZ	Maungataniwha	3.45	37	P	Pb	16 44 30.9	-2.3
TLZ	Tolley Road	3.47	17	P	Pb	16 44 31.4	-2.3
TOZ	Tahuroa Road	4.04	15	P	Pb	16 44 39.1	-4.2
URZ	Urewera	4.06	34	P	Pn	16 44 36.2	+2.2
MWZ	Matawai	4.18	39	P	Pn	16 44 35.8	+0.1
AWAZ	Awhitu Peninsu	4.60	4	P	Pn	16 44 45.4	+4.0
MKAZ	Moumakai	4.60	9	P	Pn	16 44 45.0	+3.5
ETAZ	East Tamaki Re	4.73	7	P	Pn	16 44 47.3	+4.1
MBAZ	Motutapu North	4.91	6	P	Pb	16 44 52.2	-5.9

ISCJB ***27*** *16:45:29.6±0.9, 27°87S±0°09×178°3W±0°2, h150^{km}, mb3.7/6, Error ellipse: s-maj=24.6km s-min=10.9km az=14.1*

IDC ***27*** *16:45:33.2±5.7, 27°91S×178°27W, h176^{km}±51^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.6/23, mbtmp4.1/7, Error ellipse: s-maj=31.6km s-min=23.5km az=24.0*

ISC 27 16:45:31.0±0.8**, 27°9S**±0°1×**178°3W**±0°2**, h150^{km}, n14, σ2^{s}01**/14**, mb3.8**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	11.01	199	P	Pn	16 48 05.3	+1.2
	0.1nm,0.3s,baz=220,slow=19,SNR=3.4						
URZ				S	Sn	16 50 04.2	-1.6
	1.0nm,0.3s,baz=78,slow=21,SNR=6.5						
ASAR	Alice Springs	43.04	264	P	P	16 53 16.4	+0.3
	0.4nm,0.4s,baz=100,slow=6.8,SNR=21						
WRA	Warramunga Arr	43.80	270	P	P	16 53 21.7	-0.5
	0.8nm,0.6s,baz=102,slow=8.3,SNR=7.6						
MJAR	Matsushiro Arr	76.07	325	P	P	16 57 01.1	-0.8
	1.9nm,0.6s,baz=163,slow=4.8,SNR=15						
PETK	Petropavlovsk-	83.36	346	P	P	16 57 40.4	-0.4
	3.1nm,0.8s,baz=108,slow=7.3,SNR=6.4						
PLCA	Paso Flores	84.38	133	P	P	16 57 46.4	-0.2
	1.2nm,0.8s,baz=333,slow=9.0,SNR=3.5						
NVAR	Mina Array Bea	86.60	43	P	P	16 57 57.0	-0.6
	0.8nm,0.6s,baz=224,slow=6.9,SNR=9.5						
MKAR	Makanchi Array	115.97	311	PKP	PKPdf	17 03 53.2	-2.6
	0.3nm,0.8s,baz=90,slow=2.9,SNR=3.4						
FINES	FINESS Array B	142.73	341	PKhKP	PKPpre	17 04 40.1	
	0.5nm,0.3s,baz=37,slow=2.6,SNR=16						
NB2	NORSAR Subarra	146.27	352	PKP	PKPdf	17 04 50.9	-1.1
	comp=Z,1.7nm,0.9s,baz=10,slow=3.2						
NOA	NORSAR Array B	146.27	352	PKPbc	PKPdf	17 04 51.5	-0.5
	comp=Z,1.6nm,0.7s,baz=16,slow=4.6,SNR=8.6						
AKASG	Malin Array Be	149.16	325	PKPbc	PKPdf	17 04 59.9	+2.9
	comp=Z,4.1nm,0.7s,baz=41,slow=3.2,SNR=12						
BRTR	Keskin Array B	151.13	302	PKPbc	PKPdf	17 05 05.2	+4.6
	comp=Z,1.1nm,0.5s,baz=137,slow=4.4,SNR=6.1						
TORD	Torodi Ar. Bea	165.30	180	PKPab	PKPab	17 06 15.5	-0.8
	comp=Z,0.9nm,0.9s,baz=193,slow=1.4,SNR=3.6						

IDC 27 16:52:13.4±9.2**, 6°39N×67°09E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.4**/26**, mbtmp3.6**/5**, Error ellipse: s-maj=291.1km s-min=30.4km az=73.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	13.21	163	T	T	17 08 50.3	
	baz=346,slow=75,SNR=45						
H08N3	Diego Garcia H	13.23	163	T	T	17 08 52.1	
	baz=346,slow=75,SNR=53						
H08N1	Diego Carcia H	13.23	163	T	T	17 08 52.3	
	baz=346,slow=75,SNR=59						
MKAR	Makanchi Array	42.33	16	P	P	17 00 09.4	+0.3
	0.2nm,0.5s,baz=210,slow=9.3,SNR=3.5						
ZALV	Zalesovo Beam	49.55	14	P	P	17 01 05.6	-0.4
	0.4nm,0.3s,baz=218,slow=9.1,SNR=3.7						
SONM	Songino Array	53.14	32	P	P	17 01 33.0	-0.2
	0.6nm,0.7s,baz=235,slow=6.5,SNR=3.9						
WRA	Warramunga Arr	71.08	113	P	P	17 03 33.9	-0.2
	0.8nm,0.6s,baz=287,slow=8.5,SNR=6.6						
ASAR	Alice Springs	71.66	117	P	P	17 03 37.9	+0.3
	0.4nm,0.8s,baz=288,slow=5.9,SNR=4.7						

ISCJB ***27*** *17:28:04.8±0.8, 24°4N±0°1×94°8E±0°1, h82^{km}, mb3.4/5, Error ellipse: s-maj=22.6km s-min=9.5km az=39.1*

IDC ***27*** *17:28:07.8±3.8, 24°30N×94°61E, h100^{km}±37^{km}, mb3.2/5, mb1 3.3/6, mb1mx3.0/41, mbtmp3.5/6, Error ellipse: s-maj=60.2km s-min=15.7km az=65.0*

ISC 27 17:28:06.6±1.0**, 24°4N**±0°2×**94°7E**±0°2**, h82^{km}, n7, σ0^{s}78**/7**, mb3.5**/5**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	2.82	295	*e*PN	Pn	17 28 53.5	+3.7
SHL				*e*SN	Sn	17 29 23.0	+0.1
CMAR	Chiang Mai Arr	7.10	146	P	Pn	17 29 48.8	+0.8
	0.2nm,0.3s,baz=316,slow=13,SNR=4.3						
CMAR				Lg	Lg	17 31 40.5	
	0.2nm,0.3s,baz=314,slow=30,SNR=3.0						
MKAR	Makanchi Array	24.46	339	P	P	17 33 18.0	+0.2
	1.1nm,0.5s,baz=148,slow=10,SNR=17						
SONM	Songino Array	25.16	19	P	P	17 33 24.5	+0.3
	0.6nm,0.6s,baz=221,slow=9.5,SNR=3.1						
KURBB	Kurchatov Arra	29.02	339	P	P	17 33 58.8	+0.1
	0.2nm,0.6s,baz=162,slow=7.3,SNR=3.5						
WRA	Warramunga Arr	58.58	135	P	P	17 37 54.1	-1.0
	0.7nm,0.7s,baz=319,slow=8.3,SNR=5.7						
ASAR	Alice Springs	61.06	139	P	P	17 38 11.3	-0.8
	0.2nm,0.4s,baz=318,slow=6.7,SNR=11						

ISCJB ***27*** *17:32:20.9±0.4, 41°96N±0°01×23°13E±0°03, h2^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.2km az=166.1*

SOF ***27*** *17:32:21.6, 41°97N×23°24E, h6^{km}*

SKO ***27*** *17:32:21.3, 41°94N×23°19E, h22^{km}, M2.4, ML2.7*

THE ***27*** *17:32:21.9, 41°93N×23°20E, h2^{km}±1^{km}, ML2.6/7, Error ellipse: s-maj=1.9km s-min=0.9km az=275.0*

ATH ***27*** *17:32:23.0, 41°86N×23°22E, h25^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=3.3km s-min=1.4km az=164.0*

BEO ***27*** *17:32:22.5±0.2, 41°95N×23°14E, h11^{km}±3^{km}, ML2.6/11*

ISC 27 17:32:21.9±0.8**, 41°95N**±0°01×**23°21E**±0°02**, h11**^{km}±6^{km}**, n82, σ0^{s}65**/113**, 7C-6D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.12	228	⇑*i*Pg	Pg	17 32 25.2	+0.2
KKB				*i* Sg	Sg	17 32 27.4	+0.2
KKB	Krupnik	0.12	228	*i* P	Pg	17 32 25.2	+0.2
MMB	Musomiste	0.53	132	⇑*i*Pg	Pb	17 32 32.8	-0.4
MMB				*i* Sg	Sb	17 32 40.5	-0.4
MMB	Musomiste	0.53	132	*i* P	Pb	17 32 32.8	-0.4
VTS	Vitosha	0.67	2	*e*Pg	Pg	17 32 34.3	-0.7
VTS				*e*Sg	Sg	17 32 43.3	-0.6
VTS	Vitosha	0.67	2	P	Pg	17 32 34.5	-0.5
VTS				S	Sg	17 32 43.2	-0.6
VTS	Vitosha	0.67	2	⇑*i*P	Pg	17 32 34.4	-0.5
VTS				S	Sg	17 32 42.8	-1.0
VTS	Vitosha	0.67	2	*i* Pg	Pg	17 32 34.5	-0.5
VTS				*i* Sg	Sg	17 32 43.4	-0.4
VTS	Vitosha	0.67	2	*i* P	Pg	17 32 34.5	-0.5
NVR	Nevrokopi	0.77	140	P	Pg	17 32 36.5	-0.4
NVR				S	Sg	17 32 46.8	-0.2
	360nm,0.2s						
NVR	Nevrokopi	0.77	140	P	Pg	17 32 36.6	-0.4
NVR				S	Sg	17 32 46.7	-0.3
NVR				AML	AML	17 32 46.7	
	comp=E,649µm,0.3s						
NVR				AML	AML	17 32 50.6	
	comp=N,785µm,0.1s						
VAY	Valandovo	0.79	217	*e*Pg	Pg	17 32 37.0	-0.1
VAY				*e*Sg	Sb	17 32 47.6	-0.6
VAY	Valandovo	0.79	217	*i* Pg	Pb	17 32 37.3	-0.3
VAY				*i* Sg	Sb	17 32 48.0	-0.2
	comp=E,150nm,0.3s						
VAY				*i* Sg	Sg	17 32 48.7	+1.3
	comp=N,184nm,0.4s						
KNT	Kendrikon	0.82	196	P	Pg	17 32 37.4	-0.4
KNT				S	Sg	17 32 47.8	-0.6
	comp=N,315nm,0.2s						
KNT	Kendrikon	0.82	196	*i* Pg	Pg	17 32 37.3	-0.4
KNT				*i* Sg	Sg	17 32 47.9	-0.6
KNT	Kendrikon	0.82	196	P	Pg	17 32 37.4	-0.4
KNT				S	Sg	17 32 47.8	-0.6
KNT				AML	AML	17 32 48.8	
	comp=E,698µm,0.2s						
KNT				AML	AML	17 32 52.5	
	comp=N,678µm,0.3s						
SRS	Serrai	0.88	161	*e*Pg	Pg	17 32 38.3	-0.6
SRS				*e*Sg	Sb	17 32 50.7	-0.2
SRS	Serrai	0.88	161	P	Pg	17 32 38.5	-0.4
SRS				S	Sb	17 32 50.5	-0.4
	comp=N,278nm,0.2s						
SRS	Serrai	0.88	161	*i* Pg	Pg	17 32 38.5	-0.4
SRS				*i* Sg	Sb	17 32 51.2	+0.3
SRS	Serrai	0.88	161	P	Pg	17 32 38.5	-0.4
SRS				S	Sg	17 32 50.2	-0.1
SRS				AML	AML	17 32 53.1	
	comp=E,424µm,0.1s						
SRS				AML	AML	17 32 53.4	
	comp=N,652µm,0.2s						
PGB	Panagyurishte	0.93	50	*i* P	Pg	17 32 39.0	-0.9
PLD	Plovdiv	1.13	81	*e*Pg	Pn	17 32 43.9	+0.3
PLD				*e*Sg	Sn	17 33 00.5	+1.5
PLD	Plovdiv	1.13	81	*i* Pg	Pn	17 32 43.8	+0.2
PLD				*i* Sg	Sn	17 33 00.3	+1.3
PLD	Plovdiv	1.13	81	P	Pn	17 32 44.5	+0.9
SOH	Sokhos	1.13	174	*i* Pg	Pb	17 32 43.1	-0.4
SOH				*i* Sg	Sn	17 32 58.9	-0.3
SOH	Sokhos	1.13	174	P	Pb	17 32 43.2	-0.3
SOH				S	Sb	17 32 58.0	-0.2
SOH				AML	AML	17 33 00.0	
	comp=E,478µm,0.3s						
SOH				AML	AML	17 33 00.6	
	comp=N,1093µm,0.5s						
RZN	Rozhen	1.16	102	*i* P	Pb	17 32 44.0	0.0
THE	Thessaloniki	1.33	188	P	Pb	17 32 46.8	0.0
THE				S	Sg	17 33 05.0	+0.4
	comp=N,340nm,0.5s						
THE	Thessaloniki	1.33	188	*i* Pg	Pb	17 32 46.9	+0.1
THE				*i* Sg	Sg	17 33 05.0	+0.4
THE	Thessaloniki	1.33	188	P	Pb	17 32 46.7	0.0
KVLA	Kavala	1.34	138	P	Pb	17 32 47.3	+0.2
KVLA				S	Sb	17 33 04.0	-0.3
BARS	Barje	1.35	311	*e*Pg	Pn	17 32 46.6	0.0
BARS				*e*Sg	Sb	17 33 03.9	-0.5
HORT	Hortiatis	1.35	183	P	Pg	17 32 47.5	-0.4
HORT				S	Sg	17 33 04.9	-0.5
HORT				AML	AML	17 33 07.7	
	comp=E,355µm,0.4s						
HORT				AML	AML	17 33 07.8	
	comp=N,339µm,0.5s						
KAVA	Kavala	1.37	134	P	Pn	17 32 46.5	-0.4
KAVA				S	Sg	17 33 06.3	+0.4
	comp=N,135nm,0.5s						
KAVA	Kavala	1.37	134	P	Pb	17 32 47.5	0.0
KAVA				AML	AML	17 33 10.9	
	comp=E,531µm,0.4s						
KAVA				AML	AML	17 33 12.0	
	comp=N,470µm,0.4s						
ZAPS	Zavoj	1.39	343	*e*Pg	Pb	17 32 48.2	+0.3
PLG	Polygyros	1.58	173	P	Pn	17 32 50.1	+0.2
PLG	Polygyros	1.58	173	P	Pn	17 32 50.3	+0.4
PLG				S	Sn	17 33 10.0	-0.4
PLG				AML	AML	17 33 14.5	
	comp=E,288µm,0.5s						
PLG				AML	AML	17 33 15.0	
	comp=N,314µm,0.4s						
KDZ	Kurdzhali	1.68	99	*i* P	Pb	17 32 52.8	0.0
OUR	Ouranopolis	1.71	160	P	Pn	17 32 51.3	-0.3

BLKB	Belogradchik	1.72	347	S	Sn	17 33 14.2	+0.5
THAS	Thassos island	1.76	139	P	Pn	17 32 52.3	0.0
THAS				S	Sb	17 33 16.6	+0.4
	comp=N,122nm,0.4s						
THAS	Thassos island	1.76	139	P	Pn	17 32 52.3	0.0
PLVB	Pleven	1.78	35	⇑iP	Pb	17 32 54.3	-0.2
PLVB	Pleven	1.78	35	S	Sg	17 33 19.5	+0.4
FNA	Florina	1.80	230	ePg	Pb	17 32 54.9	0.0
FNA				eSg	Sb	17 33 17.9	+0.4
FNA	Florina	1.80	230	P	Pb	17 32 54.6	-0.3
RDO	Rodhopi	1.93	114	P	Pb	17 32 56.4	-0.6
RDO	Rodhopi	1.93	114	P	Pb	17 32 56.7	-0.2
RDO				AML	AML	17 33 24.4	
	comp=N,248µm,0.4s						
RDO				AML	AML	17 33 26.6	
	comp=E,316µm,0.3s						
ZAGS	Zajecar	2.00	339	ePn	Pn	17 32 55.7	+0.2
SELS	Selova	2.00	310	ePn	Pn	17 32 55.6	0.0
BOVS	Bovan	2.02	327	ePn	Pn	17 32 56.2	+0.4
PAIG	Paliouri	2.05	170	P	Pn	17 32 56.3	+0.1
PAIG	Paliouri	2.05	170	P	Pn	17 32 56.3	+0.1
ELND	Elena	2.21	63	⇑iP	Pb	17 33 01.2	-0.6
ELND	Elena	2.21	63	S	Sb	17 33 30.6	+1.5
VLAD	Vladila	2.23	23	S	Sb	17 33 28.6	-1.2
NEST	Nestorio	2.23	227	P	Pn	17 32 59.4	+0.5
SMTH	Samothraki Isl	2.29	129	P	Pn	17 33 01.0	+1.4
SMTH	Samothraki Isl	2.29	129	P	Pb	17 33 01.9	-1.3
ALN	Alexandroupoli	2.38	115	P	Pb	17 33 02.9	-1.8
ALN	Alexandroupoli	2.38	115	P	Pn	17 33 02.4	+1.6
ALN				AML	AML	17 33 41.5	
	comp=E,65µm,0.5s						
ALN				AML	AML	17 33 44.0	
	comp=N,74µm,0.6s						
XOR	Xorichti	2.58	180	P	Pn	17 33 03.5	-0.1
COPA	Copaceanca	2.64	33	S	Sb	17 33 40.3	-1.2
GRUS	Gruza	2.67	318	ePn	Pn	17 33 05.6	+0.9
GRUS				eSn	Sn	17 33 36.9	-0.1
KUBS	Kucevo	2.71	336	ePn	Pn	17 33 04.8	-0.5
SRE	Strehaia	2.71	0	⇓iP	Pn	17 33 06.7	+1.3
SRE	Strehaia	2.71	0	S	Sn	17 33 39.4	+1.2
SJES	Sjenica	2.72	300	ePn	Pn	17 33 05.8	+0.2
IVAS	Ivanjica	2.77	307	ePn	Pn	17 33 06.9	+0.6
HERR	Herculane	2.99	349	⇓iP	Pn	17 33 09.2	0.0
HERR	Herculane	2.99	349	S	Sn	17 33 45.3	+0.4
TRUS	Trudelj	3.06	319	ePn	Pn	17 33 10.6	+0.4
DIVS	Divibare	3.19	313	ePn	Pn	17 33 12.0	0.0
GZR	Gura Zlata	3.46	355	⇑iP	Pn	17 33 16.4	+0.7
GZR	Gura Zlata	3.46	355	S	Sn	17 33 58.0	+1.3
LOT	Lotru	3.52	6	⇓iP	Pn	17 33 18.2	+1.6
VOIR		3.74	20	⇓iP	Pn	17 33 20.3	+0.8
BZS	Buzias	3.84	343	⇓iP	Pn	17 33 20.5	-0.4
MLR	Muntele Rosu	4.06	28	⇓iP	Pn	17 33 25.3	+1.3
SIRR	Siria	4.46	346	⇑iP	Pn	17 33 30.0	+0.6
VYHS	Vyhne	7.24	336	ePN	Pn	17 34 01.8	-5.7

IDC ***27*** *17:36:10.9±0.7, 38.°10N×72.°95E, h0^{km}, mb3.7/15, mb1 3.8/22, mb1mx3.7/48, mbtmp3.7/22, ML3.3/7, MS3.1/8, Ms1 3.1/8, ms1mx2.8/42, Error ellipse: s-maj=15.5km s-min=13.2km az=16.0*

ISCJB ***27*** *17:36:10.6±0.4, 38.°06N±0.°04×72.°84E±0.°04, h10^{km}, mb3.9/30, MS3.2/9, Error ellipse: s-maj=6.0km s-min=5.1km az=4.9*

NNC ***27*** *17:36:13.8±2.1, 38.°26N×72.°94E, h1^{km}±10^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=15.2km s-min=11.4km az=173.0*

MOS ***27*** *17:36:15.9±2.5, 38.°26N×72.°83E, h33^{km}, mb4.1/14, Error ellipse: s-maj=8.7km s-min=5.2km az=92.5*

NEIC ***27*** *17:36:19.8±1.8, 38.°36N×72.°69E, h60^{km}±14^{km}, mb4.3/12, Error ellipse: s-maj=12.2km s-min=9.6km az=96.0*

BJI ***27*** *17:36:19.0±0.0, 38.°38N×73.°17E, h33^{km}, mb4.1/14, mB4.3/11, ML3.7/6, Ms3.6/6, Ms7 3.4/4*

ISC 27 17:36:13.4±0.4, **38.°25N**±0.°04×**72.°95E**±0.°04, **h10^{km}, n124,** σ**2.^{s}88**/120, **mb4.0**/29, **MS3.2**/9, **11C-11D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.20	291	ePn	Pn	17 36 51.6	+1.5
GAR	Garm	2.20	291	ePN	Pn	17 36 51.6	+1.5
KSH	Kashi	2.67	61	Pn	Pn	17 36 53.0	-3.7
KSH				Sn	Sn	17 37 20.3	-8.9
KSH				smax	smax		
	comp=N,760nm,0.8s						
KSH				smax	smax		
	comp=E,790nm,0.9s						
CHGR	Chuyangaron	3.01	279	eP	Pg	17 37 19.9	+8.8
AML	Almayashu	3.92	8	P	Pn	17 37 17.4	+3.4
	SNR=62						
UCH	Uchtor	4.15	16	P	Pn	17 37 20.6	+3.4
	SNR=18						
KZA	Kyzart	4.21	24	P	Pb	17 37 24.3	-3.5
	SNR=12						
EKS2	Erkin-Say	4.45	8	P	Pb	17 37 27.2	-4.5
	SNR=7.3						
IUG	Iuzhnay	4.49	331	Pg	Pg	17 37 37.7	-1.7
	18nm,0.6s						
IUG				Lg	Lg	17 38 41.4	
	311nm,0.7s						
CEP	Cherat	4.50	191	P	Pb	17 37 27.8	-4.8
CEP				S	Sb	17 38 22.0	-4.9
AAK	Ala-Archa	4.54	15	Pn	Pn	17 37 26.0	+3.7
	4.2nm,0.3s,baz=186,slow=11,SNR=21						
AAK				Sn	Sb	17 38 22.6	-5.4
	2.9nm,0.3s,baz=153,slow=18,SNR=2.6						
AAK	Ala-Archa	4.54	15	ePn	Pn	17 37 25.8	+3.5
AAK	Ala-Archa	4.54	15	⇓Pg	Pb	17 37 36.5	+3.3
	24nm,0.6s						
AAK				Lg	Lg	17 38 36.8	
	93nm,0.8s						
AAK	Ala-Archa	4.54	15	PN	Pb	17 37 28.1	-5.2
AAK				S	Sn	17 38 21.4	+6.2
AAK				pmax	pmax		
	comp=Z,27nm,0.7s						
AAK				smax	smax		
	comp=N,93nm,0.9s						
AAK	Ala-Archa	4.54	15	P	Pb	17 37 31.2	-2.0
	SNR=13						
CHCP	Chirah Chowk	4.59	177	P	Pn	17 37 27.5	+4.6
NIL	Nilore	4.60	177	ePn	Pn	17 37 27.3	+4.3
NIL	Nilore	4.60	177	ePN	Pn	17 37 27.3	+4.3
KBK	Karagaybulak	4.66	18	P	Pg	17 37 39.4	-3.2
	SNR=5.4						
KBL	Kabul	4.86	222	ePn	Pn	17 37 32.8	+5.9
KBL	Kabul	4.86	222	ePN	Pn	17 37 32.8	+6.0
TKM2	Tokmak 2	5.08	22	⇓Pn	Pn	17 37 32.8	+2.9
	comp=N,11nm,0.5s						
TKM2				⇑Pg	Pg	17 37 47.5	-3.2
	comp=N,26nm,1.1s						
TKM2				⇓Lg	Lg	17 38 55.8	
	comp=N,60nm,0.9s						
TKM2	Tokmak 2	5.08	22	PN	Pb	17 37 36.8	-5.8
TKM2				S	Sb	17 38 46.5	+2.8
TKM2				pmax	pmax		
	comp=Z,11nm,0.5s						
TKM2				smax	smax		
	comp=N,60nm,1.0s						
TKM2	Tokmak 2	5.08	22	P	Pb	17 37 39.5	-3.1
	SNR=11						
USP	Ospenovka	5.15	13	P	Pb	17 37 39.4	-4.2
	SNR=6.6						
KK31	Karatay Array	5.19	340	ePn	Pn	17 37 32.9	+1.7
KK31	Karatay Array	5.19	340	⇑Pn	Pn	17 37 32.7	+1.6
	comp=N,14nm,0.5s,baz=151,slow=12,SNR=295						
KK31				⇓Pg	Pb	17 37 46.8	+2.5
	comp=N,19nm,0.6s,baz=157,slow=12,SNR=4.5						
KK31				⇓Sn	Sn	17 38 33.5	+2.4
	comp=N,30nm,0.6s,baz=152,slow=26,SNR=2.9						
KK31				⇓Lg	Lg	17 38 56.0	
	comp=N,51nm,0.5s,baz=152,slow=26,SNR=2.9						
KK31	Karatay Array	5.19	340	PN	Pn	17 37 33.1	+1.9
KK31				S	Sn	17 38 34.4	+3.3
KK31				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KK31				smax	smax		
	comp=N,30nm,0.6s						
KKAR	Karatay Array	5.19	340	ePn	Pn	17 37 32.8	+1.6
KKAR	Karatay Array	5.19	340	ePN	Pn	17 37 32.8	+1.6
KST	Kastek	5.31	25	Pg	Pb	17 37 48.4	+2.1
	comp=N,15nm,0.7s						
KST				Lg	Lg	17 38 59.9	
	comp=N,51nm,0.8s						
BRLS	Borolday	5.33	335	Pg	Pb	17 37 49.4	+2.7
	comp=N,2.3nm,0.4s						
BRLS				Lg	Lg	17 39 01.6	
	comp=N,9.6nm,0.6s						
DGS	Degeres	5.43	22	Pg	Pb	17 37 50.5	+2.1
	comp=N,13nm,0.5s						
DGS				Lg	Lg	17 39 03.6	
	comp=N,55nm,1.0s						
THW	Thamme Wali	5.53	191	P	Pn	17 37 39.2	+3.3
KNDC	Almaty	5.82	30	⇑Pg	Pg	17 38 01.9	-3.0
KNDC				⇓Lg	Lg	17 39 21.1	
KTBS	Karatobe	6.14	26	Pg	Pb	17 38 04.7	+4.2
	comp=N,14nm,0.6s						
KTBS				Lg	Lg	17 39 28.0	
	comp=N,44nm,1.1s						
CHKK	Chushkaly	6.38	27	Pg	Pb	17 38 08.3	+3.9
	comp=N,10nm,0.6s						
CHKK				Lg	Lg	17 39 34.3	
	comp=N,27nm,0.9s						
KURS	Kuram	6.56	35	Pg	Pb	17 38 11.7	+4.1
	comp=N,8.8nm,0.9s						
KURS				Lg	Lg	17 39 39.7	
	comp=N,28nm,0.9s						
PDGK	Podgornoye	7.09	42	⇓Pn	Pn	17 38 01.8	+4.4
	comp=N,11nm,0.8s						
PDGK	Podgornoye	7.09	42	PN	Pn	17 38 00.2	+2.8
PDGK				S	Sb	17 39 31.8	-10
PDGK				pmax	pmax		
	comp=Z,11nm,0.8s						
PDGK				smax	smax		
	comp=N,41nm,0.9s						
OTUK	Ortayu	10.00	358	⇑Lg	Lg	17 41 29.9	
	comp=N,21nm,0.9s						
OTUK	Ortayu	10.00	358	P	Pn	17 38 41.5	+4.4
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	10.83	35	ePn	Pn	17 38 53.7	+5.2
MAKZ	Makanchi	10.83	35	eP	Pn	17 38 53.7	+5.2
MK31	Makanchi Array	10.96	36	ePn	Pn	17 38 53.8	+3.4
MK31	Makanchi Array	10.96	36	⇑Pn	Pn	17 38 53.7	+3.3
	comp=Z,1.1nm,0.6s,baz=186,slow=9.5,SNR=14						
MK31	Makanchi Array	10.96	36	iP	Pn	17 38 54.1	+3.8
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	10.96	36	Pn	Pn	17 38 52.9	+2.5
	comp=Z,0.1nm,0.3s,baz=227,slow=14,SNR=9.9						
MKAR				Lg	Lg	17 41 57.6	
	comp=Z,0.1nm,0.3s,baz=225,slow=28,SNR=3.2						
MKAR				LR	LR	17 43 23.3	
	comp=Z,20nm,20.4s,baz=182,slow=39						
GEYT	Alibeck	11.70	273	Pn	Pn	17 38 58.8	-1.7
	comp=Z,1.3nm,0.3s,baz=112,slow=9.8,SNR=14						
GEYT				Sn	Sn	17 41 06.0	-5.1
	comp=Z,0.2nm,0.3s,baz=92,slow=22,SNR=2.6						
GYA0B	ALIBECK ARRAY	11.70	273	ePn	Pn	17 38 58.3	-2.2
GYA0B	ALIBECK ARRAY	11.70	273	⇑Pn	Pn	17 38 58.7	-1.8
GYA0B				⇓Sn	Sn	17 41 14.2	+3.2
WMQ	Urumqi	12.44	59	eP	Pn	17 39 18.5	+7.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,56nm,3.7s						
WMQ				smax	smax		
	comp=N,10.0nm,0.7s						
WMQ				smax	smax		
	comp=E,11nm,0.5s						
WMQ				LR	LR		
	comp=N,57nm,8.1s						
WMQ				LR	LR		
	comp=E,65nm,5.9s						
WMQ				LR	LR		
	comp=Z,44nm,20.5s						
WMQ	Urumqi	12.44	59	eP	Pn	17 39 13.5	+2.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,56nm,3.7s						
WMQ				LR	LR		
	comp=Z,74nm,5.1s						
WMQ				LR	LR		
	comp=Z,60nm,6.1s						
WMQ				LR	LR		
	comp=Z,100nm,7.7s						
KURBB	Kurchatov Arra	12.99	16	Pn	Pn	17 39 16.6	-1.4
	comp=Z,0.0nm,0.3s,baz=203,slow=12,SNR=3.4						
KURBB				Lg	Lg	17 42 58.2	
	comp=Z,0.0nm,0.3s,baz=201,slow=28,SNR=3.8						
KURBB	Kurchatov Arra	12.99	16	⇑Lg	Lg	17 43 04.3	
	comp=Z,12nm,0.8s						
KURK	Kurchatov	13.10	16	ePn	Pn	17 39 21.7	+2.3
KURK	Kurchatov	13.10	16	iP	Pn	17 39 21.7	+2.3
DANN	Dangsing	13.37	134	eP	Pn	17 39 20.5	-3.1
	comp=Z,27nm,0.5s						
GKN	Gorkha	14.14	133	eP	Pn	17 39 30.0	-3.9
	comp=Z,14nm,0.3s						
AB31	Akbulak array	14.45	324	⇑Pn	Pn	17 39 34.7	-3.2
	comp=Z,1.7nm,0.5s,baz=131,slow=13,SNR=36						
AB31				⇑Sn	Sn	17 42 16.3	-1.8
	comp=Z,5.6nm,0.7s,baz=137,slow=23,SNR=7.2						
AB31	Akbulak array	14.45	324	eP	Pn	17 39 34.7	-3.2
AB31				eS	Sn	17 42 14.1	-3.9
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AB31				smax	smax		
	comp=N,6.0nm,0.7s						
ABKAR	Akbulak array	14.45	324	ePn	Pn	17 39 34.3	-3.5
KKN	Kakani	14.67	132	eP	Pn	17 39 35.9	-5.4
	comp=N,22nm,0.7s						
DMN	Daman	14.71	133	eP	Pn	17 39 36.9	-4.9
	comp=N,16nm,0.6s						
BVAR	Borovoye Array	14.88	354	Pn	Pn	17 39 42.4	-1.4
	comp=N,0.2nm,0.3s,baz=158,slow=12,SNR=6.5						
PKIN	Phulchoki	14.90	132	eP	Pn	17 39 38.8	-5.6
	comp=N,17nm,0.6s						
PKI	Pulchoki	14.91	132	eP	Pn	17 39 38.9	-5.7
	comp=N,16nm,0.6s						
BRVK	Borovoye	14.93	354	ePn	Pn	17 39 43.1	-1.3
BRVK	Borovoye	14.93	354	⇓Pn	Pn	17 39 45.6	+1.2
	comp=N,4.8nm,0.8s						
BRVK	Borovoye	14.93	354	eP	Pn	17 39 43.1	-1.3
JIRN	Jiri	15.31	130	eP	Pn	17 39 44.9	-5.1
	comp=N,24nm,0.4s						
DGZ	Jazzator, Alta	15.45	38	eP	P	17 39 58.0	+2.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKTO	Aktyubinsk	16.16	324	Pn	Pn	17 39 59.5	-1.1
	comp=Z,0.2nm,0.3s,baz=127,slow=12,SNR=3.7						
AKTO				Sn	Sn	17 42 50.3	-10
	comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=2.4						
AKTO				LR	LR	17 46 43.6	
	comp=Z,101nm,18.1s,baz=143,slow=39						
AKTO	Aktyubinsk	16.16	324	⇑Pn	Pn	17 40 00.4	-0.1
	comp=Z,12nm,1.1s						
AKTO				⇑Sn	Sn	17 43 05.3	+5.5
	comp=Z,4.9nm,0.7s						
LSA	Lhasa	17.32	114	ePn	Pn	17 40 14.6	-1.1
	comp=Z,2.5nm,0.6s						
LSA	Lhasa	17.32	114	eP	Pn	17 40 14.6	-1.1
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAA0	Zalesovo Array	17.69	24	eP	P	17 40 22.1	+1.5
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	17.69	24	P	Pn	17 40 19.3	-0.4
	comp=Z,0.3nm,0.3s,baz=209,slow=12,SNR=6.7						
UOSS	Minazif	19.44	232	eP	P	17 40 37.6	-2.5
	comp=Z,34nm,1.4s						
AKT	Akhty	19.61	287	iP	Pn	17 40 43.4	+0.1
ARU	Arti	20.56	337	P	P	17 40 51.6	-0.5
	comp=Z,0.9nm,0.5s,baz=153,slow=11,SNR=2.6						
ARU				LR	LR	17 49 13.2	
	comp=Z,106nm,18.6s,baz=170,slow=38						
ARU	Arti	20.56	337	eP	P	17 40 50.6	-1.4
	comp=Z,7.4nm,1.2s						
ARU	Arti	20.56	337	d iP	Pn	17 40 53.8	-0.5
ARU						17 41 09.2	
ARU				S	Sn	17 44 44.8	-1.1
ARU				SS	SnSn	17 45 01.2	+0.6
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA	Gaotai	20.94	78	eP	Pn	17 41 00.5	+1.5
GTA				pP	sP	17 41 04.8	+2.4
GTA				sP	pP	17 41 07.5	+7.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,27nm,5.1s						
GTA				LR	LR		
	comp=Z,52nm,14.6s						
GTA				LR	LR		
	comp=Z,61nm,16.5s						
GTA				LR	LR		
	comp=Z,68nm,15.2s						
NCK	Nalchik	22.75	293	eP	P	17 41 14.2	-1.5
NCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	23.26	293	P	P	17 41 24.0	+3.1
	comp=Z,0.9nm,0.5s,baz=75,slow=14,SNR=2.7						
KBZ				LR	LR	17 52 13.7	
	comp=Z,52nm,18.4s,baz=93,slow=41						
KVAR	Kislovodsk Arr	23.42	294	P	P	17 41 21.6	-1.2
	comp=Z,1.4nm,0.4s,baz=135,slow=4.3,SNR=3.3						
KIV	Kislovodsk	23.43	294	eP	P	17 41 20.4	-2.4
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV				MLR	MLR		
	comp=Z,60nm,14.0s						
LZH	Lanzhou	24.66	85	eP	P	17 41 36.5	+2.0
LZH				pP	sP	17 41 51.0	+10
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
KIRV	Kirov	25.41	331	LR	LR	17 51 50.9	
	comp=Z,36nm,18.4s,baz=145,slow=37						
SONM	Songino Array	26.07	58	P	P	17 41 47.6	+0.4
	comp=Z,1.3nm,0.9s,baz=261,slow=10,SNR=6.3						
VSR	Storozhevoye	27.02	310	eP	P	17 41 54.7	-0.8
VSR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI	Kunming	28.39	109	P	P	17 42 12.5	+4.2
OBN	Obninsk	29.68	317	eP	P	17 42 18.5	-0.7
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	Hu-ho-hao-te	29.73	73	P	P	17 42 21.3	+1.4
HHC				S	S	17 47 13.0	-3.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,12nm,5.8s						
HHC				LR	LR		
	comp=Z,130nm,15.3s						
HHC				LR	LR		
	comp=Z,120nm,15.3s						
HHC				LR	LR		
	comp=Z,100nm,15.3s						
CMAR	Chiang Mai Arr	30.03	124	P	P	17 42 20.8	-1.8
	comp=Z,0.3nm,0.5s,baz=307,slow=9.0,SNR=3.5						
BR131	Keskin Array S	30.43	285	eP	P	17 42 26.5	+0.4
	comp=Z,1.6nm,0.8s						
BRTR	Keskin Array B	30.43	285	P	P	17 42 25.6	-0.5
	comp=Z,0.7nm,0.7s,baz=92,slow=8.9,SNR=4.2						
BRTR	Keskin Array B	30.43	285	iP	P	17 42 27.3	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	33.11	306	LR	LR	17 58 54.1	
	comp=Z,34nm,18.2s,baz=75,slow=41						
FIA1	FINESS Array S	36.94	324	eP	P	17 43 19.5	-2.7
	comp=Z,4.7nm,1.3s						
FINES	FINESS Array B	36.94	324	P	P	17 43 21.8	-0.5
	comp=Z,1.3nm,0.6s,baz=114,slow=9.0,SNR=14						
FINES				LR	LR	17 59 17.0	
	comp=Z,49nm,20.6s,baz=124,slow=37						
VYHS	Vyhne	39.89	303	eP	P	17 43 48.4	+1.1
VYHS	Vyhne	39.89	303	eP	P	17 43 48.4	+1.1
ARCES	ARCESS Array B	40.15	336	P	P	17 43 48.4	-0.8
	comp=Z,1.7nm,0.7s,baz=116,slow=8.2,SNR=4.9						
KLR	Kul'dur	42.87	56	P	P	17 44 12.5	+0.8
	comp=Z,0.4nm,0.5s,baz=288,slow=6.4,SNR=2.2						
KLR	Kul'dur	42.87	56	iP	P	17 44 16.9	+5.2
KLR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GERES	GERESS Array B	43.22	304	P	P	17 44 14.4	-0.3
	comp=Z,0.3nm,0.6s,baz=97,slow=7.3,SNR=3.9						
KHC	Kasperske Hory	43.25	304	eP	P	17 44 15.1	+0.2
KHC	Kasperske Hory	43.25	304	eP	P	17 44 15.1	+0.2
NC405	NORSAR Array S	43.70	322	eP	P	17 44 16.6	-1.8
	comp=Z,12nm,1.3s						
NC602	NORSAR Array S	43.77	321	eP	P	17 44 17.1	-1.8
	comp=Z,7.8nm,1.1s						
NC303	NORSAR Array S	43.88	322	eP	P	17 44 18.8	-0.9
	comp=Z,5.3nm,0.8s						
NB201	NORSAR Array S	43.91	322	eP	P	17 44 18.5	-1.5
	comp=Z,15nm,1.4s						
NB2	NORSAR Subarra	43.94	322	P	P	17 44 19.2	-1.1
	comp=Z,1.0nm,0.5s,baz=90,slow=7.9						
NOA	NORSAR Array B	43.94	322	P	P	17 44 19.5	-0.8
	comp=Z,1.6nm,0.6s,baz=91,slow=7.8,SNR=13						
NOA				LR	LR	18 03 44.6	
	comp=Z,31nm,21.5s,baz=195,slow=38						
NBO00	NORSAR Array S	44.16	322	eP	P	17 44 20.9	-1.1
	comp=Z,8.0nm,0.9s						
NC204	NORSAR Array S	44.17	322	eP	P	17 44 21.0	-1.1
	comp=Z,22nm,1.6s						
BILL	Bilibino	56.35	27	eP	P	17 45 58.7	+4.5
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ESDC	Sonseca Array	58.02	298	P	P	17 46 06.5	0.0
	comp=Z,0.3nm,0.6s,baz=57,slow=8.0,SNR=3.4						
TORD	Torodi Ar. Bea	67.31	269	P	P	17 47 08.4	-0.4
	comp=Z,0.4nm,0.5s,baz=42,slow=6.6,SNR=3.4						
ILAR	Eielson Array	72.67	17	P	P	17 47 41.6	+0.7
	comp=Z,0.3nm,0.7s,baz=318,slow=5.7,SNR=2.9						
WRA	Warramunga Arr	81.62	123	P	P	17 48 29.7	-2.2
	comp=Z,0.9nm,0.8s,baz=312,slow=5.1,SNR=7.4						
ASAR	Alice Springs	84.00	126	P	P	17 48 42.4	-1.7
	comp=Z,0.3nm,0.8s,baz=324,slow=4.6,SNR=3.6						

ATH ***27*** *17:39:12.8, 35.°17N×27.°97E, h31^{km}±5^{km}, ML2.5/1, Error ellipse: s-maj=10.7km s-min=2.4km az=343.0*

ISCJB ***27*** *17:39:16.5±1.0, 35.°02N±0.°06×27.°55E±0.°06, h10^{km}, Error ellipse: s-maj=9.3km s-min=6.4km az=164.1*

ISK ***27*** *17:39:18.2, 35.°08N×27.°42E, h12^{km}, ML2.6/7*

THE ***27*** *17:39:20.1, 35.°93N×26.°99E, h0^{km}±7^{km}, ML2.1/1, Error ellipse: s-maj=8.5km s-min=2.6km az=332.0*

DDA ***27*** *17:40:01.7, 35.°04N×27.°79E, h12^{km}±1^{km}, ML2.8*

ISC 27 17:39:15.2±1.7, **34.°93N**±0.°09×**27.°58E**±0.°05, **h10^{km}, n24,** σ**1.^{s}27**/25, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.70	331	PG	Pg	17 39 28.5	-0.2
KARP				SG	Sg	17 39 36.4	-1.5
KARP	Karpathos	0.70	331	P	Pg	17 39 28.0	-0.7
KARP				S	Sg	17 39 35.9	-2.0
	410nm,0.6s						
KARP	Karpathos	0.70	331	P	Pg	17 39 28.0	-0.7
KARP				S	Sg	17 39 39.2	+1.3
KARP				AML	AML	17 39 45.3	
	comp=N,983µm,0.5s						
KARP				AML	AML	17 39 46.6	
	comp=E,585µm,0.3s						
ZKR	Zakros	1.13	280	PG	Pn	17 39 37.8	+0.8
ZKR	Zakros	1.13	280	P	Pn	17 39 38.9	+1.9
ZKR	Zakros	1.13	280	P	Pn	17 39 38.9	+1.9
ARG	Arkhangelos	1.36	19	PN	Pg	17 39 42.4	+1.2
ARG				SN	Sn	17 39 59.7	+1.5
ARG	Arkhangelos	1.36	19	P	Pn	17 39 39.0	-1.2
ARG	Arkhangelos	1.36	19	P	Pn	17 39 32.9	-7.3
NPS	Neapolis	1.64	282	P	Pb	17 39 45.1	-0.5
NPS	Neapolis	1.64	282	P	Pb	17 39 45.0	-0.5
DAT	Datca	1.79	0	PN	Pn	17 39 47.4	+1.1
DAT	Datca	1.79	0	iP	Pn	17 39 47.3	+1.1
DALY	Dalyan (Mula)	2.07	25	PN	Pb	17 39 53.0	+0.1
FETY	Fethiye	2.09	35	PN	Pb	17 39 53.7	+0.4
FETY	Fethiye	2.09	35	iP	Pn	17 39 49.7	-0.6
AKAS	Kas	2.10	51	iP	Pn	17 39 49.2	-1.4
AKAS				IAML_P			
	comp=Z,443nm,0.1s						
TURN	Turunc	2.11	23	PN	Pn	17 39 49.9	-0.6
TURN	Turunc	2.11	23	iP	Pn	17 39 46.6	-3.9
TURN				IAML_P			
	comp=Z,269nm,0.1s						
IDI	Anoyia	2.23	280	PN	Pb	17 39 53.9	-1.7
YER	Yerkesik	2.27	14	PN	Pn	17 39 54.9	+2.1
AYDN	Tasoluk	2.73	5	iP	Pn	17 39 58.2	-0.9
AYDN				IAML_P			
	comp=Z,42nm,0.1s						
TAVA	DENIZLI_Tavas	2.75	23	iP	Pn	17 39 59.5	+0.1
TAVA				IAML_P			
	comp=Z,172nm,0.1s						
GOLH	Golhisar	2.81	34	iP	Pn	17 39 53.6	-6.6

MEX 27 17:45:17.7±0.3**,19°.28N×104°.85W,h14**^{km}±13^{km}**,MD3.5, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.28**	**320**	*e*P	Pg	17 45 23.1	-0.5
CJM				*e*S	Sg	17 45 27.5	-0.2
EZ5V		**1.20**	**80**	*i* P	Pn	17 45 36.4	-3.9
EZ5V				*i* S	Sb	17 45 51.3	-4.5
ANIG	**Ahuacatlan**	**1.79**	**10**	*i* P	Pn	17 45 44.4	-3.9
ANIG				*e*S	Sn	17 46 06.3	-4.6

*NIED **27** 17:47:00,36°.80N×141°.40E,h5^{km},Mw4.0 Best double couple: M₀1.16000×10^{15} NP1:φ$_s$21.00000°,δ40.00000°, λ-90.00000°. NP2:φ$_s$200.00000°,δ50.00000°, λ-90.00000°.*

*IDC **27** 17:47:40.5±0.7,36°.80N×141°.20E,h0^{km},mb3.9/15, mb1 4.1/19,mb1mx3.9/52,mbtmp3.9/19,ML3.1/4,MS3.1/9, Ms1 3.1/9,ms1mx2.8/38,Error ellipse: s-maj=17.9km s-min=15.5km az=110.0*

*JMA **27** 17:47:41.7±0.1,36°.77N×141°.37E,h34^{km}±1^{km},M4.2*

JMA Felt II J1.

*ISCJB **27** 17:47:42.8±0.7,36°.78N±0°.03×141°.29E±0°.05,h26^{km}±4^{km}, mb4.2/38,MS3.5/5,Error ellipse: s-maj=6.9km s-min=4.3km az=8.3*

*NEIC **27** 17:47:46.4±1.8,36°.82N×141°.11E,h38^{km}±7^{km},mb4.3/24, Error ellipse: s-maj=11.8km s-min=9.3km az=125.0*

NEIC Recorded [2 JMA] in Fukushima and Ibaraki.

ISC 27 17:47:42.2±1.6**,36°.82N**±0°.03×**141°.26E**±0°.05**,h8**^{km}±9^{km}**, n83,**σ**1^{s}37**/88**,mb4.2**/38**,MS3.6**/5**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.46**	**307**	P	**Pb**	**17 47 52.9**	**+0.2**
ONAJ				*e*S	**Sb**	**17 48 00.5**	**+0.7**
JHO	**Hitachi**	**0.60**	**249**	P	**Pb**	**17 47 54.4**	**-0.5**
JHO				*e*S	**Sb**	**17 48 03.7**	**+0.2**
JFFD	**Fukushimafurud**	**0.62**	**296**	P	**Pb**	**17 47 55.1**	**-0.2**
JFFD				*e*S	**Sb**	**17 48 04.9**	**+0.6**
JFK	**Kawauchi**	**0.62**	**330**	P	**Pb**	**17 47 55.1**	**-0.3**
JFK				*e*S	**Sb**	**17 48 04.8**	**+0.4**
JHYU	**Hitachinakayam**	**0.73**	**229**	P	**Pg**	**17 47 56.0**	**-0.2**
JHYU				*e*S	**Sb**	**17 48 07.0**	**-0.2**
JFT	**Otama**	**1.01**	**313**	P	**Pb**	**17 48 02.0**	**0.0**
JFT				*e*S	**Sb**	**17 48 16.1**	**+0.6**
JMM	**Marumori**	**1.11**	**340**	P	**Pg**	**17 48 02.2**	**-1.2**
JMM				*e*S	**Sb**	**17 48 18.4**	**+0.2**
JFY	**Yanaizu**	**1.38**	**296**	P	**Pn**	**17 48 07.6**	**-0.1**
JFY				*e*S	**Sn**	**17 48 26.6**	**+0.5**
MJAR	**Matsushiro Arr**	**2.47**	**264**	Pn	**Pn**	**17 48 22.6**	**-0.1**
	0.9nm,0.3s,baz=98,slow=12,SNR=94						
MJAR				Lg	Lg	17 48 54.4	
	1.7nm,0.3s,baz=79,slow=25,SNR=4.6						
MJAR				LR	LR	17 49 24.8	
	comp=Z,186nm,21.1s,baz=75,slow=44						
MAJO	**Matsushiro**	**2.47**	**264**	*e*Pn	**Pn**	**17 48 23.0**	**+0.2**
MAT	**Matsushiro**	**2.47**	**264**	P	**Pn**	**17 48 23.3**	**+0.5**
MAT				S	**Sb**	**17 48 57.9**	**+0.4**
MJB9	**Matsu-Tunnel**	**2.48**	**264**	*e*Pn	**Pn**	**17 48 23.3**	**+0.4**
JHJ2	**Mitsune**	**3.89**	**198**	*e*Pn	**Pn**	**17 48 42.2**	**0.0**
JHJ	**Hachijo jima 2**	**3.89**	**199**	Pn	**Pn**	**17 48 42.4**	**+0.1**
	10nm,0.3s,baz=302,slow=23,SNR=6.6						
JHJ				Sn	**Sn**	**17 49 27.6**	**-0.6**
	11nm,0.3s,baz=32,slow=19,SNR=3.4						
JHJ				LR	LR	17 50 24.2	
	comp=Z,103nm,19.8s,baz=94,slow=43						
ERM	**Erimo**	**5.39**	**15**	*e*Pn	**Pn**	**17 49 02.3**	**-0.5**
ERM				*e*Sn	**Sn**	**17 50 06.5**	**+1.4**
ASAJ	**Asahikawa**	**7.36**	**8**	Pn	**Pn**	**17 49 27.8**	**-2.0**
	0.5nm,0.3s,baz=191,slow=14,SNR=10						
ASAJ				Sn	**Sn**	**17 50 51.4**	**-2.1**
	0.2nm,0.3s,baz=114,slow=20,SNR=2.0						
JNU	**Nakatsue**	**9.29**	**250**	LR	LR	17 54 01.1	
	comp=Z,47nm,20.3s,baz=78,slow=41						
USRK	**Ussuriysk Ar.**	**10.20**	**319**	Pn	**Pn**	**17 50 11.2**	**+2.3**
	0.2nm,0.3s,baz=137,slow=13,SNR=4.9						
USRK				LR	LR	17 53 46.0	
	comp=Z,143nm,20.3s,baz=141,slow=36						
KSRS	**Korea Array**	**10.67**	**277**	Pn	**Pn**	**17 50 18.4**	**+3.1**
	0.1nm,0.3s,baz=90,slow=13,SNR=3.3						
KSRS				LR	LR	17 54 04.1	
	comp=Z,110nm,21.5s,baz=84,slow=36						
KS15	**Wonju Array Si**	**10.70**	**277**	*e*Pn	**Pn**	**17 50 16.8**	**+1.0**
KS15				*e*Sn	Sn	17 52 02.2	-14
MDJ	**Mudanjiang**	**11.78**	**315**	*e*Pn	**Pn**	**17 50 34.3**	**+3.8**
CN2	**Changchun**	**13.92**	**305**	*e*P	**Pn**	**17 51 02.3**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	**Kul'dur**	**14.20**	**334**	Pn	**Pn**	**17 51 03.5**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=151,slow=10,SNR=2.6						
KLR				LR	LR	17 56 12.9	
	comp=Z,83nm,19.7s,baz=140,slow=36						
HHC	**Hu-ho-hao-te**	**23.43**	**289**	P	**P**	**17 52 50.0**	**-1.9**
HHC				S	S	17 56 54.3	-11
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,13nm,4.8s						
HHC				LR	LR		
	comp=N,180nm,15.3s						
HHC				LR	LR		
	comp=E,190nm,15.3s						
HHC				LR	LR		
	comp=Z,110nm,16.2s						
MA2	**Magadan**	**23.58**	**12**	P	**P**	**17 52 53.6**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=194,slow=12,SNR=3.4						
MA2	**Magadan**	**23.58**	**12**	*e*P	**P**	**17 52 54.2**	**+1.1**
	comp=Z,23nm,1.4s						
SONA0	**Songino Array**	**27.80**	**304**	*e*P	**P**	**17 53 31.5**	**-0.3**
SONM	**Songino Array**	**27.80**	**304**	P	**P**	**17 53 31.5**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=96,slow=7.2,SNR=7.0						
SONM				LR	LR	18 04 56.1	
	comp=Z,34nm,20.1s,baz=86,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.14**	**120**	T	T	18 22 54.7	
	baz=313,slow=75,SNR=666						
H11N1	**WAKE ISLAND Hy**	**28.15**	**120**	T	T	18 22 56.6	
	baz=313,slow=75,SNR=638						
H11N3	**WAKE ISLAND Hy**	**28.16**	**120**	T	T	18 22 56.0	
	baz=313,slow=75,SNR=586						
H11S1	**WAKE ISLAND Hy**	**28.85**	**122**	T	T	18 23 45.4	
	baz=315,slow=76,SNR=397						
H11S3	**WAKE ISLAND Hy**	**28.85**	**122**	T	T	18 23 48.2	
	baz=315,slow=76,SNR=188						
H11S2	**WAKE ISLAND Hy**	**28.86**	**122**	T	T	18 23 48.5	
	baz=315,slow=76,SNR=192						
KMI	**Kunming**	**34.81**	**261**	P	**P**	**17 54 34.5**	**+0.7**
KMI				pmax	pmax		
	comp=Z,28nm,0.5s						
WMQ	**Urumqi**	**40.83**	**297**	*e*P	**P**	**17 55 24.5**	**+0.2**
WMQ				pP	sP	17 55 34.0	+6.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,37nm,5.3s						
WMQ				LR	LR		
	comp=N,110nm,27.9s						
WMQ				LR	LR		
	comp=E,60nm,25.9s						
WMQ				LR	LR		
	comp=Z,100nm,23.9s						
ZAA0	**Zalesovo Array**	**41.97**	**313**	*e*P	**P**	**17 55 32.7**	**-0.7**
	comp=Z,3.0nm,0.8s						
ZAA1	**Zalesovo Array**	**41.97**	**313**	*e*P	**P**	**17 55 32.7**	**-0.7**
ZALV	**Zalesovo Beam**	**41.97**	**313**	P	**P**	**17 55 32.7**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=100,slow=7.5,SNR=12						
MK31	**Makanchi Array**	**44.13**	**302**	*e*P	**P**	**17 55 50.4**	**-0.6**
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**44.13**	**302**	P	**P**	**17 55 50.6**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=88,slow=9.8,SNR=19						
MAKZ	**Makanchi**	**44.34**	**302**	*e*P	**P**	**17 55 52.2**	**-0.5**
	comp=Z,2.6nm,1.0s						
KURK	**Kurchatov**	**45.97**	**308**	*e*P	**P**	**17 56 04.7**	**-0.9**
	comp=Z,5.3nm,0.9s						
KDAK	**Kodiak Island**	**47.34**	**42**	P	**P**	**17 56 16.1**	**0.0**
	comp=Z,2.3nm,0.7s,baz=272,slow=6.2,SNR=2.9						
KDAK	**Kodiak Island**	**47.34**	**42**	*e*P	**P**	**17 56 16.5**	**+0.4**
	comp=Z,14nm,1.5s						
PPLA	**Purkeypile**	**47.41**	**35**	*e*P	**P**	**17 56 18.0**	**+1.1**
	comp=Z,8.0nm,1.4s						
CAST	**Castle Rocks**	**47.47**	**34**	*e*P	**P**	**17 56 18.9**	**+1.7**
	comp=Z,1.3nm,0.8s						
KTH	**Kantishna Hill**	**47.99**	**34**	*e*P	**P**	**17 56 22.3**	**+1.0**
	comp=Z,5.5nm,1.2s						
ILAR	**Eielson Array**	**49.74**	**32**	P	**P**	**17 56 34.2**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=268,slow=6.2,SNR=9.1						
ILB	**Eielson Array**	**49.74**	**32**	*e*P	**P**	**17 56 33.2**	**-1.4**
	comp=Z,2.6nm,0.9s						
KSH	**Kashi**	**50.38**	**294**	*e*P	**P**	**17 56 43.3**	**+3.3**
KSH				pP	sP	17 56 56.0	+13
KSH				S	**S**	**18 03 53.0**	**-0.5**
KSH	**Kashi**	**50.38**	**294**	SS	**SS**	**18 07 25.8**	**-1.1**
KSH				pmax	pmax		
	comp=Z,37nm,7.8s						
AAK	**Ala-Archa**	**50.48**	**298**	LR	LR	18 19 14.1	
	comp=Z,81nm,19.8s,baz=72,slow=38						
EPYK	**Eagle Plains**	**53.77**	**30**	*e*P	**P**	**17 57 06.0**	**+1.3**
	comp=Z,6.5nm,0.8s						
ARU	**Arti**	**56.44**	**319**	LR	LR	18 22 39.5	
	comp=Z,26nm,18.2s,baz=12,slow=37						
ARU	**Arti**	**56.44**	**319**	*e*P	**P**	**17 57 22.8**	**-1.3**
	comp=Z,4.9nm,0.8s						
WRAB	**Tennant Creek**	**56.83**	**188**	*e*P	**P**	**17 57 25.3**	**-1.9**
	comp=Z,9.3nm,1.3s						
WB2	**Warramunga Arr**	**56.84**	**188**	*e*P	**P**	**17 57 25.6**	**-1.6**
	comp=Z,18nm,1.4s						
WB2				*e*PcP	**PcP**	**17 58 23.1**	**+0.2**
WR1	**Warramunga Arr**	**56.84**	**188**	*e*P	**P**	**17 57 25.6**	**-1.7**
WRA	**Warramunga Arr**	**56.84**	**188**	P	**P**	**17 57 25.5**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=0.5,slow=9.2,SNR=7.0						
ABKAR	**Akbulak array**	**57.98**	**310**	*e*P	**P**	**17 57 33.6**	**-1.5**
	comp=Z,1.2nm,0.9s						
AS31	**Alice Springs**	**60.56**	**188**	*e*P	**P**	**17 57 51.7**	**-1.5**
	comp=Z,1.4nm,1.1s						
ASAR	**Alice Springs**	**60.56**	**188**	P	**P**	**17 57 52.1**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=9.3,slow=6.4,SNR=11						
FIA0	**FINESS Array S**	**68.94**	**332**	*e*P	**P**	**17 58 46.4**	**-1.0**
FINES	**FINESS Array B**	**68.94**	**332**	P	**P**	**17 58 46.4**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=67,slow=6.4,SNR=6.8						
BMO	**Blue Mountains**	**72.16**	**47**	*e*PcP	**PcP**	**17 59 32.4**	**+6.6**
WVOR	**Wild Horse Val**	**72.72**	**50**	*e*P	**P**	**17 59 12.4**	**+1.5**
	comp=Z,3.2nm,0.7s						
BEKR	**Beckworth**	**73.08**	**53**	*e*P	**P**	**17 59 13.1**	**-0.1**
	comp=Z,3.8nm,1.1s						
CMB	**Columbia Colle**	**74.09**	**54**	*e*P	**P**	**17 59 19.6**	**+0.7**
	comp=Z,2.6nm,1.0s						
NC204	**NORSAR Array S**	**74.29**	**338**	*e*P	**P**	**17 59 19.6**	**-0.2**
	comp=Z,7.4nm,1.1s						
NB2	**NORSAR Subarra**	**74.33**	**337**	P	**P**	**17 59 19.1**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.33**	**337**	P	**P**	**17 59 19.2**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=39,slow=5.8,SNR=4.8						
LRM	**Limekiln Ridge**	**74.38**	**44**	*e*P	**P**	**17 59 20.2**	**-0.6**
AKASG	**Malin Array Be**	**74.39**	**322**	P	**P**	**17 59 19.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=45,slow=6.2,SNR=3.6						
AKBB	**Malin Array Si**	**74.39**	**322**	*e*P	**P**	**17 59 19.1**	**-1.3**
	comp=Z,3.3nm,1.1s						
KVN	**Kaiserville**	**74.98**	**52**	*e*P	**P**	**17 59 25.2**	**+0.9**
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**75.21**	**53**	P	**P**	**17 59 26.6**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=289,slow=6.0,SNR=12						
R11A	**Troy Canyon, C**	**76.99**	**52**	*e*P	**P**	**17 59 36.6**	**+0.8**
	comp=Z,3.4nm,1.3s						
PD31	**Pinedale Array**	**77.90**	**45**	*e*P	**P**	**17 59 40.7**	**-0.2**
	comp=Z,1.9nm,1.4s						
PDAR	**Pinedale Array**	**77.90**	**45**	P	**P**	**17 59 40.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=275,slow=4.1,SNR=3.9						
GERES	**GERESS Array B**	**82.83**	**328**	P	**P**	**18 00 07.0**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=29,slow=3.0,SNR=3.5						
TXAR	**Lajitas Array**	**90.34**	**52**	P	**P**	**18 00 44.5**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=306,slow=4.0,SNR=5.3						
LPAZ	**La Paz**	**146.90**	**60**	PKPbc	**PKPbc**	**18 07 26.2**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=287,slow=2.5,SNR=8.9						

*ATH **27** 17:50:58.7,34°.81N×27°.59E,h17^{km}±12^{km},ML3.0/1,Error ellipse: s-maj=12.6km s-min=3.1km az=314.0*

*ISK **27** 17:51:00.7,34°.96N×27°.58E,h5^{km},ML2.9/12*

*THE **27** 17:51:02.5,35°.08N×27°.55E,h0^{km}±3^{km},ML2.7/2,Error ellipse: s-maj=5.4km s-min=1.6km az=181.0*

*DDA **27** 17:51:38.5,35°.43N×27°.96E,h20^{km},ML2.9*

ISC 27 17:50:59.2±1.9**,34°.90N**±0°.08×**27°.62E**±0°.05**,h3**^{km}±13^{km}**, n32,**σ**1^{s}25**/37**,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.75**	**330**	PG	**Pg**	**17 51 14.3**	**+0.7**
KARP				SG	**Sb**	**17 51 23.7**	**-1.9**
KARP	**Karpathos**	**0.75**	**330**	P	**Pg**	**17 51 14.3**	**+0.7**
KARP				S	**Sg**	**17 51 22.6**	**-0.8**
	1μm,0.7s						
KARP	**Karpathos**	**0.75**	**330**	P	**Pg**	**17 51 14.4**	**+0.7**
KARP				S	**Sb**	**17 51 25.7**	**+0.1**
KARP				AML	AML	17 51 25.8	
	comp=E,1542μm,0.5s						
KARP				AML	AML	17 51 31.6	
	comp=N,2705μm,0.5s						
ZKR	**Zakros**	**1.17**	**281**	PN	**Pg**	**17 51 22.2**	**+0.5**
ZKR	**Zakros**	**1.17**	**281**	P	**Pg**	**17 51 21.0**	**-0.7**
STIA	**Sitia Lasithi**	**1.29**	**284**	P	**Pn**	**17 51 25.4**	**+1.3**
ARG	**Arkhangelos**	**1.38**	**17**	PN	**Pg**	**17 51 26.5**	**+0.8**
ARG				SN	**Sn**	**17 51 45.1**	**+1.0**
ARG	**Arkhangelos**	**1.38**	**17**	P	**Pn**	**17 51 25.2**	**-0.1**
ARG				S	**Sn**	**17 51 43.8**	**-0.3**
	comp=N,268nm,1.1s						
ARG	**Arkhangelos**	**1.38**	**17**	P	**Pg**	**17 51 26.9**	**+1.2**
DAT	**Datca**	**1.83**	**359**	PN	**Pb**	**17 51 33.1**	**-0.3**
DAT	**Datca**	**1.83**	**359**	*i* P	**Pn**	**17 51 31.7**	**+0.1**
KSL	**Kastellorizon**	**2.03**	**51**	P	**Pn**	**17 51 34.7**	**+0.4**
KSL	**Kastellorizon**	**2.03**	**51**	P	**Pn**	**17 51 34.7**	**+0.4**
DALY	**Dalyan (Mula)**	**2.09**	**23**	PN	**Pn**	**17 51 36.6**	**+1.5**
AKAS	**Kas**	**2.10**	**50**	PN	**Pn**	**17 51 36.2**	**+0.9**
AKAS	**Kas**	**2.10**	**50**	*i* P	**Pn**	**17 51 36.0**	**+0.6**
AKAS				IAML_P			
	comp=Z,944nm,0.2s						
FETY	**Fethiye**	**2.11**	**34**	PN	**Pn**	**17 51 37.0**	**+1.7**
FETY	**Fethiye**	**2.11**	**34**	P	**Pn**	**17 51 35.4**	**+0.1**
FETY	**Fethiye**	**2.11**	**34**	*i* P	**Pn**	**17 51 35.1**	**-0.3**
TURN	**Turunc**	**2.13**	**22**	PN	**Pn**	**17 51 34.8**	**-0.8**
TURN	**Turunc**	**2.13**	**22**	*i* P	**Pn**	**17 51 31.9**	**-3.7**
BODT	**Bodrum**	**2.18**	**353**	PN	**Pb**	**17 51 38.0**	**-1.2**
BODT	**Bodrum**	**2.18**	**353**	P	**Pn**	**17 51 36.0**	**-0.3**
YER	**Yerkesik**	**2.30**	**13**	PN	**Pn**	**17 51 39.6**	**+1.6**
ELL	**Elmali**	**2.62**	**45**	PN	**Pn**	**17 51 43.7**	**+1.2**
AKUM	**Antalya-Kumluc**	**2.64**	**57**	*i* P	**Pn**	**17 51 40.7**	**-1.9**
AKUM				IAML_P			
	comp=Z,81nm,0.1s						
APE	**Apeiranthos**	**2.75**	**323**	PN	**Pn**	**17 51 45.7**	**+1.5**
AYDN	**Tasoluk**	**2.77**	**4**	*i* P	**Pn**	**17 51 44.8**	**+0.3**
AYDN				IAML_P			
	comp=Z,168nm,0.2s						
GOLH	**Golhisar**	**2.82**	**33**	*i* P	**Pn**	**17 51 44.7**	**-0.5**
GOLH				IAML_P			
	comp=Z,1μm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**3.05**	**4**	PN	**Pn**	**17 51 50.6**	**+2.1**
KORT	**Korkueli**	**3.05**	**46**	PN	**Pn**	**17 51 50.2**	**+1.7**
KEPZ	**Antalya-Kepez**	**3.80**	**57**	*i* P	**Pn**	**17 51 59.2**	**+0.5**
KEPZ				IAML_P			
	comp=Z,523nm,0.2s						

*MAN **27** 17:55:04.4,7°.44N×127°.23E,h33^{km},MS3.6*

*DJA **27** 17:55:05.2±1.8,8°N±15°×12°7E±°,h49^{km}±8^{km},M5.1/18, mB5.4/10,mb5.3/18,MLv5.4/7,Mw(mB)4.9/10*

*ISCJB **27** 17:55:08.8±0.6,7°.38N±0°.03×126°.97E±0°.05,h82^{km}±6^{km}, mb4.5/66,Error ellipse: s-maj=8.4km s-min=4.1km az=168.1*

*NEIC **27** 17:55:10.8±2.4,7°.35N×126°.84E,h83^{km}±6^{km},mb4.8/48, Error ellipse: s-maj=11.8km s-min=10.5km az=61.0*

*BJI **27** 17:55:10.8±0.0,7°.62N×126°.83E,h77^{km},mb4.7/31, mB4.8/22,Ms4.0/15,Ms7 3.9/13*

*IDC **27** 17:55:10.7±1.5,7°.33N×126°.76E,h85^{km}±13^{km},mb3.9/21, mb1 4.0/23,mb1mx3.8/40,mbtmp4.2/23,MS3.5/21, Ms1 3.5/21,ms1mx3.4/29,Error ellipse: s-maj=19.8km s-min=9.7km az=82.0*

ISC 27 17:55:08.7±0.8**,7°.38N**±0°.04×**127°.08E**±0°.06**,h63**^{km}±7^{km}**, n133,**σ**1^{s}70**/132**,mb4.7**/66**,6C-2D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.07**	**319**⇑	*i*P	**Pn**	**17 55 24.9**	**-2.9**
BIPH						17 55 37.6	
DAV	**Davao City (W)**	**1.52**	**258**	P	**Pn**	**17 55 32.9**	**-0.8**
	460nm,0.3s,baz=65,slow=1.4,SNR=128						
DAV				S	**Sn**	**17 55 51.7**	**-0.8**
	328nm,0.3s,baz=351,slow=8.6,SNR=6.1						
DAV	**Davao City (W)**	**1.52**	**258**	*e*Pn	**Pn**	**17 55 33.4**	**-0.4**
DAV				*e*		17 55 33.7	
GSPH	**General Santos**	**2.47**	**239**	*e*P	**Pn**	**17 55 47.0**	**+0.2**
CGP	**Cagayan de Oro**	**2.59**	**295**⇑	*i*P	**Pn**	**17 55 49.0**	**+0.7**
CGP						17 56 18.6	
SCPH	**Surigao**	**2.86**	**327**⇓	*e*P	Pn	17 55 59.0	+7.0
SCPH						17 56 30.4	
DCPH	**Dipolog City**	**3.88**	**288**⇑	*e*P	**Pn**	**17 56 08.6**	**+2.7**
DCPH						17 56 53.6	
TBP	**Tagbilaran**	**3.92**	**306**	*e*P	**Pn**	**17 56 05.9**	**-0.6**
TBP						17 56 51.2	
SGSI	**Sangihe**	**3.98**	**203**	P	**Pn**	**17 56 09.1**	**+1.8**
LLP	**Lapu-Lapu**	**4.24**	**314**	*e*P	**Pn**	**17 56 10.5**	**-0.3**
LLP						17 56 59.3	
SNPH	**Sibulan**	**4.27**	**297**⇑	*e*P	**Pn**	**17 56 12.5**	**+1.1**
SNPH						17 56 58.9	
PLP	**Palo**	**4.29**	**331**⇑	*e*P	**Pn**	**17 56 09.6**	**-2.0**
PLP						17 56 58.3	
RCP	**Roxas**	**5.96**	**315**⇑	*e*P	**Pn**	**17 56 34.4**	**0.0**
TNTI	**Ternate**	**6.57**	**177**	*e*Pn	**Pn**	**17 56 43.5**	**+0.8**
TNTI				*e*Sn	**Sn**	**17 57 53.6**	**-2.7**
TNTI	**Ternate**	**6.57**	**177**	P	**Pn**	**17 56 43.6**	**+0.8**
	297nm,1.4s,3μm1.0nm						
LBMI	**Labuha**	**7.97**	**177**	P	**Pn**	**17 57 02.8**	**+0.8**
	230nm,0.9s,3μm						
TGY	**Tagaytay City**	**9.00**	**318**	LR	LR	18 01 03.0	
	comp=Z,463nm,18.2s,baz=142,slow=40						
SIJI	**Sorong**	**9.20**	**153**	P	**Pn**	**17 57 16.7**	**-2.1**
	12nm,0.3s,baz=349,slow=12,SNR=18						
SIJI				S	**Sn**	**17 58 55.5**	**-5.3**
	3.6nm,0.3s,baz=344,slow=24,SNR=6.4						
LUWI	**Luwuk**	**9.40**	**207**	*e*Pn	**Pn**	**17 57 23.3**	**+1.7**
LUWI				*e*Sn	**Sn**	**17 59 08.5**	**+2.7**
LUWI	**Luwuk**	**9.40**	**207**	P	**Pn**	**17 57 24.5**	**+3.0**
	141nm,0.7s						
NLAI	**Namlea**	**10.55**	**180**	P	**Pn**	**17 57 34.7**	**-2.5**
	57nm,0.5s,2μm						
MSAI	**Masohi**	**10.81**	**170**	P	**Pn**	**17 57 42.2**	**+1.4**
	22nm,1.3s						
PCI	**Palu**	**10.95**	**222**	P	Pn	17 57 29.8	-13
FAKI	**Fak Fak**	**11.46**	**153**	*e*Pn	**Pn**	**17 57 48.2**	**-1.4**
BAKI	**Biak**	**12.39**	**133**	P	**P**	**17 58 10.0**	**-2.3**
TTSI	**Tana Toraja**	**12.64**	**215**	P	**Pn**	**17 58 07.6**	**+1.9**
	123nm,1.1s,1μm						
BNSI	**Bone**	**13.61**	**211**	P	**Pn**	**17 58 21.0**	**+2.1**
	61nm,0.9s						
KAPI	**Kappang**	**14.32**	**211**	P	**Pn**	**17 58 27.9**	**-0.4**
	9.9nm,0.3s,baz=46,slow=3.9,SNR=6.1						
KAPI				LR	LR	18 05 17.0	
	comp=Z,201nm,18.2s,baz=116,slow=43						
SBUM	**Sibu**	**15.59**	**252**	*e*P	**P**	**17 58 48.1**	**+0.3**
	4.4nm,0.7s						
MMRI	**Maumere**	**16.62**	**197**	*e*P	**P**	**17 59 01.8**	**+2.6**
	37nm,0.6s						
YULB	**Yu-li**	**16.86**	**341**	*e*P	**P**	**17 59 02.1**	**+0.2**
	8.6nm,1.3s						
EDFI	**Ende, Flores**	**16.90**	**199**	P	**P**	**17 59 02.3**	**-0.1**
SOEI	**Soe**	**17.25**	**189**	*e*P	**P**	**17 59 07.2**	**+1.0**
	59nm,0.7s						
SOEI	**Soe**	**17.25**	**189**	P	**P**	**17 59 07.3**	**+1.0**
GUMO	**Guam**	**18.54**	**69**	LR	LR	18 05 33.8	
	comp=Z,108nm,19.5s,baz=235,slow=33						
JOW	**Kunigami**	**19.38**	**3**	P	**Pn**	**17 59 31.8**	**+0.6**
	0.2nm,0.3s,baz=182,slow=14,SNR=7.8						
JOW	**Kunigami**	**19.38**	**3**	*e*P	**Pn**	**17 59 32.0**	**+0.8**
	34nm,0.8s						
ANA2	**Anatahan**	**20.28**	**62**	*e*P	**P**	**17 59 41.4**	**+2.0**
	74nm,0.6s						
JAGI	**Jajag, Banyuwa**	**20.34**	**220**	P	Pn	17 59 55.7	+13
QIZ	**Qiongzhong**	**20.36**	**306**	P	**P**	**17 59 39.8**	**-0.4**
QIZ				S	**S**	**18 03 23.0**	**-2.1**
QIZ				pmax	pmax		
	comp=Z,120nm,2.0s						
QIZ				LR	LR		
	comp=N,330nm,16.7s						
QIZ				LR	LR		
	comp=E,280nm,15.9s						
QIZ				LR	LR		
	comp=Z,280nm,17.6s						
MTN	**Manton Dam**	**20.49**	**169**	*e*P	**P**	**17 59 41.6**	**0.0**
	61nm,1.2s						
NJ2	**Nanjing**	**25.72**	**344**	*e*P	**P**	**18 00 34.8**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JNU	**Nakatsue**	**25.86**	**7**	P	**P**	**18 00 34.0**	**-0.5**
	11nm,0.9s,baz=266,slow=3.9,SNR=5.6						
JNU				LR	LR	18 09 57.9	
	comp=Z,76nm,21.8s,baz=178,slow=34						
JNU	**Nakatsue**	**25.86**	**7**	*e*P	**P**	**18 00 34.6**	**+0.1**
	22nm,1.1s						
COEN	**Coen**	**26.55**	**143**	*e*P	**P**	**18 00 40.6**	**-0.2**
	50nm,1.3s						
GYA	**Guiyang**	**27.15**	**317**	*e*P	**P**	**18 00 42.3**	**-4.0**
GYA				pP	pP	18 00 59.8	-1.1
GYA				PP	**PnPn**	**18 01 32.5**	**-0.1**
GYA				S	**S**	**18 05 14.5**	**-6.1**
GYA				sS	sS	18 05 43.5	-0.6
GYA				SS	**SnSn**	**18 06 34.3**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,210nm,15.7s						
GYA				LR	LR		
	comp=E,180nm,16.9s						
GYA				LR	LR		
	comp=Z,280nm,16.4s						
WRAB	**Tennant Creek**	**28.07**	**165**	*e*P	**P**	**18 00 53.6**	**-0.8**
	11nm,0.6s						
WRA	**Warramunga Arr**	**28.07**	**165**	P	**P**	**18 00 53.5**	**-1.0**
	6.1nm,0.6s,baz=346,slow=12,SNR=55						
WB2	**Warramunga Arr**	**28.08**	**165**	*e*P	**P**	**18 00 53.9**	**-0.6**
	17nm,1.0s						
PSI	**Prapat**	**28.40**	**262**	LR	LR	18 13 33.7	
	comp=Z,61nm,18.5s,baz=60,slow=39						
KMI	**Kunming**	**29.18**	**310**	P	**P**	**18 01 06.3**	**+1.7**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI				LR	LR		
	comp=N,95nm,11.0s						
KMI				LR	LR		
	comp=E,200nm,14.1s						
KMI				LR	LR		
	comp=Z,280nm,20.1s						
CMAR	**Chiang Mai Arr**	**29.50**	**295**	pP	**pP**	**18 01 22.7**	**+0.4**
	1.4nm,0.9s,baz=112,slow=6.9,SNR=4.5						
CMAR				PcP	**PcP**	**18 04 12.2**	**+0.7**
	0.8nm,0.8s,baz=124,slow=1.9,SNR=4.9						
PSA00	**Pilbara Seismi**	**29.63**	**194**	*e*P	**P**	**18 01 08.2**	**-0.1**
	29nm,0.8s						
KSRS	**Korea Array**	**29.95**	**1**	P	**P**	**18 01 11.3**	**+0.4**
	3.6nm,0.8s,baz=178,slow=11,SNR=18						
KSRS				LR	LR	18 14 36.0	
	comp=Z,94nm,19.6s,baz=176,slow=39						
GSI	**Gunungsitoli**	**30.02**	**260**	*e*P	**P**	**18 01 11.2**	**-0.7**
	12nm,1.1s						
MJAR	**Matsushiro Arr**	**30.76**	**18**	P	**P**	**18 01 17.4**	**-0.7**
	0.9nm,0.6s,baz=189,slow=8.8,SNR=8.5						
MJAR				LR	LR	18 11 21.0	
	comp=Z,98nm,21.6s,baz=210,slow=31						
MAJO	**Matsushiro**	**30.76**	**18**	*e*P	**P**	**18 01 17.4**	**-0.7**
MJB9	**Matsu-Tunnel**	**30.76**	**18**	*e*P	**P**	**18 01 17.8**	**-0.4**
	6.1nm,1.1s						
AS31	**Alice Springs**	**31.57**	**168**	*e*P	**P**	**18 01 24.7**	**-0.7**
	1.9nm,0.9s						
AS31				*e*PcP	**PcP**	**18 04 17.0**	**+0.1**
ASAR	**Alice Springs**	**31.57**	**168**	P	**P**	**18 01 24.5**	**-0.9**
	3.2nm,0.4s,baz=337,slow=7.4,SNR=79						
ASAR				PcP	**PcP**	**18 04 16.9**	**+0.1**
	2.6nm,0.4s,baz=345,slow=2.5,SNR=11						
ASAR				ScP	**ScP**	**18 07 52.9**	**-1.9**
	3.3nm,1.4s,baz=346,slow=2.3,SNR=2.8						
ASAR				LR	LR	18 16 38.8	
	comp=Z,69nm,18.2s,baz=348,slow=41						
CD2	**Chengdu**	**32.00**	**320**	*e*P	**P**	**18 01 28.8**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
CTA	**Charters Tower**	**33.18**	**146**	P	**P**	**18 01 40.8**	**+1.2**
	4.7nm,0.6s,baz=320,slow=11,SNR=7.1						
CTAO	**Charters Tower**	**33.18**	**146**	*e*P	**P**	**18 01 40.7**	**+1.1**
	20nm,1.0s						

LZH	Lanzhou	35.60	327	eP	P	18 01 58.8	-1.8
LZH				pmax	pmax		
	comp=Z,19nm,0.9s						
LZH				LR	LR		
	comp=N,230nm,15.7s						
LZH				LR	LR		
	comp=E,210nm,16.0s						
LZH				LR	LR		
	comp=Z,190nm,18.4s						
HHC	Hu-ho-hao-te	36.09	340	P	P	18 02 06.5	+1.9
HHC				S	S	18 07 40.5	+1.0
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				LR	LR		
	comp=N,100nm,13.6s						
HHC				LR	LR		
	comp=E,110nm,15.3s						
CN2	Changchun	36.31	358	eP	P	18 02 12.0	+5.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USA0B	Ussuriysk Arra	36.93	6	eP	P	18 02 12.5	+1.0
	11nm,0.8s						
USRK	Ussuriysk Ar.	36.93	6	P	P	18 02 12.4	+0.9
	8.2nm,0.7s,baz=191,slow=7.8,SNR=22						
USRK				LR	LR	18 17 41.8	
	comp=Z,52nm,20.6s,baz=167,slow=36						
MORW	Morawa	37.76	196	eP	P	18 02 18.5	-0.2
	26nm,0.9s						
FORT	Forrest	37.95	179	eP	P	18 02 20.9	+0.6
	74nm,0.6s						
ASAJ	Asahikawa	39.03	18	P	P	18 02 31.3	+2.1
	2.9nm,0.4s,baz=233,slow=8.2,SNR=12						
GTA	Gaotai	40.21	327	eP	P	18 02 39.3	0.0
GTA				PcP	PcP	18 04 43.3	+0.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,45nm,6.5s						
GTA				LR	LR		
	comp=N,100nm,17.1s						
GTA				LR	LR		
	comp=E,130nm,19.0s						
GTA				LR	LR		
	comp=Z,160nm,18.4s						
H11N1	WAKE ISLAND Hy	40.49	68	T	T	18 46 55.0	
	baz=265,slow=74,SNR=21						
H11N2	WAKE ISLAND Hy	40.50	68	T	T	18 46 50.6	
	baz=265,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	40.51	68	T	T	18 46 56.5	
	baz=265,slow=74,SNR=17						
BBOO	Buckleboo	40.87	168	eP	P	18 02 44.5	-0.1
	24nm,0.4s						
NWAO	Narrogin (SRO)	41.16	193	eP	P	18 02 47.5	+0.5
	99nm,1.4s						
STKA	Stephens Creek	41.42	161	P	P	18 02 49.3	+0.2
	11nm,0.7s,baz=337,slow=8.3,SNR=18						
STKA				LR	LR	18 21 57.4	
	comp=Z,52nm,20.1s,baz=20,slow=39						
STKA	Stephens Creek	41.42	161	eP	P	18 02 49.4	+0.2
	3.5nm,0.9s						
KLR	Kul'dur	41.90	5	P	P	18 02 53.1	+0.3
	1.9nm,0.6s,baz=175,slow=5.3,SNR=12						
KLR				LR	LR	18 19 40.8	
	comp=Z,42nm,21.6s,baz=192,slow=35						
SONA0	Songino Array	43.99	340	ePP	PP	18 04 54.0	+0.5
SONM	Songino Array	43.99	340	P	P	18 03 09.8	-0.2
	0.2nm,0.3s,baz=151,slow=9.2,SNR=4.1						
SONM				PcP	PcP	18 04 54.0	-0.7
	0.6nm,0.7s,baz=158,slow=4.2,SNR=2.6						
SONM				LR	LR	18 22 22.4	
	comp=Z,63nm,19.8s,baz=124,slow=37						
ARMA	Armidale	44.35	149	eP	P	18 03 13.6	+0.6
	19nm,1.1s						
CAN	Canberra	47.23	155	eP	P	18 03 36.8	+1.2
	19nm,1.1s						
TOO	Toolangi	47.91	160	eP	P	18 03 42.1	+1.3
	36nm,1.5s						
DZM	Mont Dzumac	48.42	128	eP	P	18 03 46.3	+1.2
	47nm,1.4s						
WMQ	Urumqi	49.99	323	eP	P	18 03 58.0	+1.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,31nm,4.7s						
WMQ				LR	LR		
	comp=N,140nm,27.3s						
WMQ				LR	LR		
	comp=E,56nm,13.1s						
WMQ				LR	LR		
	comp=Z,81nm,18.1s						
PEA0B	Petropavlovsk-	51.95	23	eP	P	18 04 13.4	+2.3
	22nm,1.3s						
PETK	Petropavlovsk-	51.95	23	P	P	18 04 12.9	+1.7
	2.6nm,0.6s,baz=193,slow=4.2,SNR=12						
PETK				LR	LR	18 23 11.9	
	comp=Z,42nm,21.8s,baz=211,slow=32						
PET	Petropavlovsk	52.26	24	eP	P	18 04 15.4	+2.0
	14nm,0.9s						
YAK	Yakutsk	54.58	2	eP	P	18 04 30.7	+0.5
	13nm,0.9s						
MK31	Makanchi Array	54.81	324	eP	P	18 04 31.2	-1.1
	4.4nm,1.4s						
MK32	Makanchi Array	54.81	324	ePcP	PcP	18 05 33.1	-0.8
MKAR	Makanchi Array	54.81	324	P	P	18 04 30.8	-1.5
	0.6nm,0.4s,baz=119,slow=7.7,SNR=10						
MKAR				PcP	PcP	18 05 33.1	-0.8
	1.4nm,0.7s,baz=129,slow=4.8,SNR=4.5						
MKAR				LR	LR	18 29 50.8	
	comp=Z,70nm,18.9s,baz=114,slow=38						
MAKZ	Makanchi	55.00	324	eP	P	18 04 32.5	-1.2
	2.5nm,1.1s						
KSH	Kashi	55.77	313	eP	P	18 04 42.5	+3.1
KSH				PP	PP	18 06 50.0	+5.5
ZALV	Zalesovo Beam	57.53	332	P	P	18 04 49.5	-2.0
	0.5nm,0.4s,baz=122,slow=7.4,SNR=2.8						
ZALV				LR	LR	18 32 09.4	
	comp=Z,26nm,18.3s,baz=66,slow=39						
KURK	Kurchatov	58.89	326	eP	P	18 04 59.3	-1.8
	1.9nm,0.8s						
KURBB	Kurchatov Arra	58.90	326	P	P	18 04 59.4	-1.7
	0.5nm,0.5s,baz=123,slow=6.5,SNR=8.6						
GAR	Garm	59.76	311	eP	P	18 05 06.1	-1.4
	7.1nm,0.8s						
KK31	Karatay Array	60.85	316	eP	P	18 05 13.2	-1.5
	5.8nm,1.3s						
KKAR	Karatay Array	60.85	316	eP	P	18 05 12.9	-1.8
	5.8nm,1.3s						
BVAR	Borovoye Array	64.49	326	P	P	18 05 37.5	-1.2
	0.4nm,0.6s,baz=104,slow=8.0,SNR=3.2						
LBZ	Lake Benmore	64.52	147	eP	P	18 05 40.5	+1.5
	55nm,1.6s						
BKZ	Black Stump Fm	65.08	139	eP	P	18 05 43.9	+1.1
	21nm,1.5s						
KHZ	Kahutara	65.15	144	eP	P	18 05 42.9	-0.2
	65nm,1.5s						
ATKA	Atka Island	65.33	35	eP	P	18 05 45.9	+1.8
	91nm,1.3s						
NIKH	Nikolski High	68.66	36	eP	P	18 06 06.9	+1.6
	50nm,1.4s						
GEYT	Alibeck	68.92	308	LR	LR	18 39 38.1	
	comp=Z,69nm,20.8s,baz=285,slow=39						
KIP	Kipapa	73.33	70	eP	P	18 06 37.2	+3.0
	102nm,1.3s						
CASY	Casey	74.46	187	eP	P	18 06 39.8	0.0
	9.5nm,0.9s						
OHAK	Old Harbor	78.22	33	eP	P	18 07 02.9	+1.5
	15nm,1.5s						
KDAK	Kodiak Island	78.64	33	eP	P	18 07 05.1	+1.3
	18nm,1.5s						
KBZ	Khabaz	80.75	313	LR	LR	18 46 23.7	
	comp=Z,37nm,20.5s,baz=62,slow=38						
ILAR	Eielson Array	81.68	26	P	P	18 07 20.2	+0.2
	0.6nm,0.5s,baz=249,slow=5.1,SNR=6.2						
PRP	Porcupine Dome	82.26	25	epP	pP	18 07 45.0	+6.4
ARCES	ARCESS Array B	87.17	340	LR	LR	18 50 26.3	
	comp=Z,34nm,19.2s,baz=94,slow=38						
MAW	Mawson	87.28	200	LR	LR	18 42 21.3	
	comp=Z,30nm,21.6s,baz=302,slow=32						
SBA	Scott Base	87.88	172	eP	P	18 07 51.4	+0.7
	15nm,1.4s						
BR101	Keskin Array S	87.97	310	eP	P	18 07 50.6	-1.7
BRTR	Keskin Array B	87.97	310	P	P	18 07 50.6	-1.7
	0.6nm,0.7s,baz=105,slow=6.3,SNR=4.3						
FIA0	FINESS Array S	88.80	332	eP	P	18 07 53.9	-1.7
FINES	FINESS Array B	88.80	332	P	P	18 07 53.9	-1.7
	0.2nm,0.3s,baz=57,slow=7.0,SNR=4.5						
FINES				LR	LR	18 51 29.7	
	comp=Z,41nm,20.2s,baz=70,slow=38						
AKASG	Malin Array Be	89.30	321	P	P	18 07 55.9	-2.2
	0.6nm,0.5s,baz=65,slow=4.0,SNR=4.6						
AKBB	Malin Array Si	89.30	321	eP	P	18 07 55.2	-2.9
	5.7nm,1.3s						
NOA	NORSAR Array B	95.69	334	LR	LR	18 54 56.0	
	comp=Z,25nm,18.9s,baz=70,slow=38						
SYO	Syowa Base	95.93	201⇓	eX	P	18 08 24.6	-3.6
GERES	GERESS Array B	99.45	322	P	Pdif	18 08 43.0	-1.8
	0.2nm,0.5s,baz=74,slow=5.6,SNR=3.8						
TORD	Torodi Ar. Bea	122.05	290	PKP	PKPdf	18 13 56.4	-0.8
	1.1nm,0.8s,baz=13,slow=3.5,SNR=6.1						
TOA1	Torodi Ar. Sit	122.05	290	ePKPdf	PKPdf	18 13 56.4	-0.8
PLCA	Paso Flores	143.25	157	PKP	PKPbc	18 14 34.0	+0.6
	1.6nm,0.8s,baz=180,slow=3.0,SNR=3.9						
CPUP	Villa Florida	160.69	168	PKPab	PKPab	18 15 43.5	-0.5
	2.3nm,1.0s,baz=188,slow=7.1,SNR=3.2						
LPAZ	La Paz	162.69	122	PKPab	PKPab	18 15 55.9	+1.8
	0.9nm,0.7s,baz=201,slow=4.9,SNR=4.5						

ISCJB ***27*** *18:12:58.0±0.3, 24°.37N±0°.02×121°.99E±0°.02, h31*^{km}*±2*^{km}*,*
Error ellipse: s-maj=3.2km s-min=2.6km az=136.0
JMA ***27*** *18:12:57.1±0.2, 24°.29N×121°.94E, h48*^{km}*±3*^{km}*, M1.9*
TAP ***27*** *18:12:57.6, 24°.37N×121°.96E, h30*^{km}*, ML2.7, B*
ISC 27 18:12:57.9±0.9**, 24°.37N**±0°.02×**121°.97E**±0°.02**, h31**^{km}±6^{km}**,**
n78, σ0^{s}**.64**/111**, 1C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	Nanao	0.21	287⇓	iP	Pb	18 13 04.2	-0.2
	baz=285						
NANB				S	Sb	18 13 09.1	+0.3
	baz=285						
ENA	Nanau	0.22	287⇓	iP	Pb	18 13 04.2	-0.3
	baz=285						
ENA				eS	Sn	18 13 09.4	-0.2
	baz=285						
EOS1	EOS1	0.23	38	eP	Pn	18 13 04.9	-0.3
	baz=40						
EOS1				eS	Sn	18 13 10.6	+0.8
	baz=40						
TWC	Suao	0.27	336	i P	Pb	18 13 04.7	-0.3
	baz=337						
TWC				eS	Sb	18 13 09.4	-0.5
	baz=337						
NACB	Ninganchiao	0.39	241	eP	Pb	18 13 06.3	-0.4
	baz=239						
NACB				eS	Sn	18 13 13.6	-0.2
	baz=239						
TWD	Chiawan	0.44	230	P	Pb	18 13 07.2	-0.4
	baz=228						
TWD				eS	Sn	18 13 15.2	+0.1
	baz=228						
ILA	Ilan	0.45	333	eS	Sn	18 13 15.3	+0.1
	baz=334						
TWE	Neicheng	0.45	322⇑	iP	Pb	18 13 07.3	-0.3
	baz=323						
TWE				S	Sn	18 13 14.4	-0.9
	baz=323						
ETLH	Xiulin Townshi	0.47	251	eP	Pb	18 13 07.5	-0.6
	baz=249						
ETLH				S	Sn	18 13 15.6	-0.3
	baz=249						
NDT	Datong Townshi	0.48	300⇓	iP	Pb	18 13 07.8	-0.3
	baz=299						
NDT				S	Sn	18 13 15.3	-0.7
	baz=299						
NTC	Toucheng	0.50	345	eP	Pn	18 13 08.3	-0.7
	baz=345						
NTC				eS	Sn	18 13 16.5	0.0
	baz=345						
NNSB	Datong	0.54	277	i P	Pb	18 13 08.8	-0.3
	baz=276						
NNSB				eS	Sn	18 13 16.9	-0.7
	baz=276						
NNS	Nan Shan	0.55	278	P	Pb	18 13 08.9	-0.4
	baz=277						
NNS				eS	Sn	18 13 17.1	-0.8
	baz=277						
TIPB	Shuangxi	0.62	348	i P	Pn	18 13 10.0	-0.6
	baz=348						
TIPB				eS	Sn	18 13 19.0	-0.5
	baz=348						
YHNB	Yeheng	0.62	299	eP	Pb	18 13 10.1	-0.4
	baz=298						
YHNB				eS	Sn	18 13 18.9	-0.7
	baz=298						
NSK	Sanguang	0.64	299	P	Pb	18 13 10.2	-0.5
	baz=298						
NSK				eS	Sn	18 13 19.2	-0.8
	baz=298						
WHF	Hehuan Shan	0.68	251	P	Pn	18 13 11.2	-0.6
	baz=250						
WHF				eS	Sn	18 13 21.6	+0.1
	baz=250						
TWA	Mucha	0.71	330	eP	Pb	18 13 11.7	-0.1
	baz=330						
TWA				eS	Sn	18 13 21.3	-0.4
	baz=330						
NHDH	Xindian Distri	0.72	326	eP	Pb	18 13 12.2	+0.2
	baz=325						
NHDH				eS	Sn	18 13 22.1	+0.1
	baz=325						
NWF	Wu-fen Shan	0.72	346	eP	Pb	18 13 12.1	-0.1
	baz=346						
NWF				eS	Sn	18 13 22.3	+0.1
	baz=346						
WFSB	Wu-fen Shan	0.72	346	eP	Pb	18 13 12.2	0.0
	baz=346						
TWT	Tachien	0.73	261	eP	Pb	18 13 12.3	-0.1
	baz=260						
TWT				eS	Sn	18 13 23.2	+0.8
	baz=260						
ESL	Shilin	0.74	222	P	Pn	18 13 11.4	-0.8
	baz=220						
ESL				eS	Sn	18 13 22.4	+0.1
	baz=220						
TDCB	Techi	0.75	262	eP	Pn	18 13 12.3	-0.2
	baz=260						
TDCB				eS	Sn	18 13 22.6	-0.2
	baz=260						
TATO	Taipei	0.75	324	eP	Pb	18 13 12.6	+0.1
	baz=324						
TATO				eS	Sn	18 13 22.8	+0.2
	baz=324						
CHGB	Renai	0.79	248	eP	Pn	18 13 12.7	-0.3
	baz=246						
TAP	Taipei	0.79	328	eP	Pn	18 13 12.5	-0.4
	baz=328						
WLTB	Daxi	0.81	307	eP	Pb	18 13 13.7	+0.1
	baz=306						
WLTB				eS	Sb	18 13 26.2	+1.9
	baz=306						
EGFH	Guangfu	0.85	216	eP	Pn	18 13 13.0	-0.7
	baz=215						
YM01	YM01	0.86	335	eP	Pb	18 13 14.2	-0.2
	baz=335						
YM10	YM10	0.87	335	eP	Pb	18 13 14.1	-0.5
	baz=334						
YM05	YM05	0.88	335	eP	Pb	18 13 14.3	-0.4
	baz=335						
YM04	YM04	0.88	333	eP	Pb	18 13 14.1	-0.6
	baz=333						
TWS1	Kuangyinshan	0.89	326	eP	Pb	18 13 14.6	-0.3
	baz=325						
YM08	YM08	0.89	337	eP	Pb	18 13 14.1	-0.8
	baz=337						
JYNG	Yonagunijimaku	0.89	84	P	Pn	18 13 14.2	-0.1
JYNG				eS	Sb	18 13 26.7	+0.2
YM03	YM03	0.90	334	eP	Pb	18 13 14.3	-0.8
	baz=334						
LIOB	Emei	0.91	288	eP	Pb	18 13 15.4	+0.1
	baz=287						
LIOB				eS	Sb	18 13 28.9	+1.8
	baz=287						
ANP	Anpu	0.92	334	eP	Pn	18 13 14.5	-0.2
	baz=333						
NSTT	Nanjuang	0.92	287	eP	Pb	18 13 15.5	+0.1
	baz=286						
NCUH	Zhongli	0.93	310	eP	Pb	18 13 15.1	-0.5
	baz=309						
NCUH				eS	Sb	18 13 28.6	+1.0
	baz=309						
YOJ	Yonaguni jima	0.95	84	i P	Pn	18 13 15.1	-0.1
	baz=84						
YOJ				S	Sb	18 13 28.4	+0.2
	baz=84						
YOJ	Yonaguni jima	0.95	84	P	Pn	18 13 14.9	-0.2
YOJ				eS	Sb	18 13 28.5	+0.3
TWY	Chenhua	0.97	340	eP	Pb	18 13 16.0	-0.2
	baz=340						
VWDT	VWDT	0.97	231	eP	Pn	18 13 15.2	-0.1
	baz=230						
SBCB	Hsinchu	0.99	296	eP	Pb	18 13 16.4	-0.2
	baz=295						
HGSD	Ruisui	1.00	210	eP	Pn	18 13 16.3	+0.5
	baz=209						
HGSD				eS	Sn	18 13 29.2	+0.3
	baz=209						
DPDB	Guoxing	1.01	251	eP	Pn	18 13 16.1	+0.2
	baz=250						
EHY	Hungye	1.04	215	eP	Pn	18 13 15.6	-0.8
	baz=213						
NMLH	Miaoli	1.09	279	eP	Pb	18 13 17.9	-0.2
	baz=278						
SSLB	Suanglung	1.09	238	eP	Pn	18 13 17.1	0.0
	baz=237						
YULB	Yu-li	1.15	213	eP	Pn	18 13 17.0	-0.8
	baz=212						
TWF1	Yuli	1.18	212	eP	Pn	18 13 17.3	-1.0
	baz=210						
WHYT	Xinyi Township	1.22	237	eP	Pb	18 13 19.8	-0.6
	baz=236						
WJS	Zhushan	1.26	245	eP	Pb	18 13 21.0	-0.1
	baz=244						
PCYT	Pengchaiyu	1.26	4	eP	Pn	18 13 19.1	-0.3
	baz=4.0						
WNT	Mingjian	1.27	248	eP	Pb	18 13 21.5	+0.3
	baz=247						
YUS	Yu-Shan	1.28	227	eP	Pn	18 13 20.6	+0.6
	baz=226						
CHN5	Tsauling	1.41	237	eP	Pb	18 13 23.3	-0.3
	baz=236						
ELDTW	Lidau	1.46	217	eP	Pn	18 13 22.5	+0.3
	baz=216						
WDLH	Douliu	1.47	243	eP	Pb	18 13 24.1	-0.6
	baz=242						
IRIF	Iriomote-Funau	1.61	91	P	Pn	18 13 23.8	-0.3
IRIF				eS	Sn	18 13 43.8	0.0
CHN4	Tsaushan	1.61	232	eP	Pb	18 13 26.6	-0.5
	baz=231						
TPUB	Ta-pu	1.62	229	eP	Pb	18 13 26.1	-1.2
	baz=228						
WTP	Ta-pu	1.67	228	eP	Pb	18 13 26.8	-1.2
	baz=227						
TWK	Hsinying	1.74	231	eP	Pb	18 13 27.9	-1.4
	baz=230						
CHN1	Nanshi	1.77	229	eP	Pb	18 13 29.2	-0.5
	baz=228						
SLGT	Liugui	1.83	222	eP	Pn	18 13 28.9	+1.8
	baz=221						
JKRS	Kuro-shima	1.86	93	P	Pn	18 13 27.9	+0.2
JKRS				eS	Sn	18 13 51.2	+1.0
JIJ	Ishigaki jima	1.98	90	P	Pn	18 13 28.9	-0.4
JIJ				eS	Sn	18 13 53.3	+0.2
MASBT	Mashibuluo	2.13	215	eP	Pn	18 13 33.5	+2.2
	baz=214						
JISG	Ishigakijimahi	2.14	84	P	Pn	18 13 32.0	+0.5
EAST	Anshuo	2.23	208	eP	Pb	18 13 35.9	-1.6
	baz=207						
PTTC	Pingtan	2.29	300	eS	Sn	18 13 59.9	-0.9
	baz=299						
PHUB	P'eng-hu	2.35	249	eS	Sn	18 14 02.5	+0.3
	baz=248						
MATB	Ma-tsu	2.55	315	eP	Pn	18 13 37.7	+0.5
	baz=314						
PTMZ	Houxiangcun	2.68	285	eP	Pn	18 13 38.9	0.0
	baz=284						
XPSS	Dashiqiu	3.02	328	eP	Pn	18 13 42.9	-0.6
	baz=327						

ISCJB ***27*** *18:34:56.1±0.8, 13°.1N±0°.1×142°.78E±0°.09, h150*^{km}*,*
mb3.4/7, Error ellipse: s-maj=15.9km s-min=12.0km
az=169.5
IDC ***27*** *18:35:01.5±1.9, 13°.15N×143°.65E, h211*^{km}*±39*^{km}*, mb3.0/7,*
mb1 3.2/7, mb1mx3.0/47, mbtmp3.6/7, Error ellipse:
s-maj=97.1km s-min=14.7km az=88.0
ISC 27 18:34:57.7±0.9**, 13°.1N**±0°.1×**142°.8E**±0°.1**, h150**^{km}**, n8,**
σ1^{s}**.57**/9**, mb3.4**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.07	77	P	Pn	18 35 35.1	+1.5
	4.0nm,0.3s,baz=229,slow=5.7,SNR=6.2						
GUMO				S	Sn	18 35 59.7	-1.4
	18nm,0.3s,baz=164,slow=24,SNR=13						
MJAR	Matsushiro Arr	23.67	351	P	P	18 39 55.3	-0.3
	1.0nm,0.8s,baz=176,slow=11,SNR=4.3						
WRA	Warramunga Arr	33.90	194	P	P	18 41 26.4	-0.1
	0.5nm,0.6s,baz=8.2,slow=7.6,SNR=4.8						
KLR	Kul'dur	37.13	348	P	P	18 41 54.0	+0.3
	0.7nm,0.7s,baz=164,slow=16,SNR=3.9						
ASAR	Alice Springs	37.59	193	P	P	18 41 58.2	+0.3
	0.5nm,0.8s,baz=14,slow=12,SNR=5.5						
SONM	Songino Array	45.97	326	P	P	18 43 07.6	+1.8
	0.4nm,0.5s,baz=122,slow=6.9,SNR=3.0						
MKAR	Makanchi Array	60.43	317	P	P	18 44 51.1	-0.3
	0.3nm,0.6s,baz=91,slow=7.0,SNR=3.6						
FINES	FINESS Array B	90.72	335	P	P	18 47 40.7	-2.6
	0.4nm,0.5s,baz=67,slow=6.4,SNR=4.7						

ISCJB ***27*** *18:39:45.9±0.7, 21°.60N±0°.05×143°.1E±0°.2, h311*^{km}*,*
mb3.4/11, Error ellipse: s-maj=23.5km s-min=7.1km
az=175.9
JMA ***27*** *18:39:46.9±0.3, 21°.61N×142°.89E, h326*^{km}*, M4.4*
IDC ***27*** *18:39:48.3±2.2, 21°.66N×143°.12E, h321*^{km}*±23*^{km}*,*
mb3.2/12, mb1 3.3/15, mb1mx3.1/52, mbtmp4.0/15, Error
ellipse: s-maj=21.9km s-min=11.5km az=85.0
ISC 27 18:39:47.7±0.8**, 21°.69N**±0°.07×**143°.1E**±0°.2**, h311**^{km}**, n23,**
σ0^{s}**.87**/28**, mb3.3**/11**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	4.99	351	P	Pn	18 41 06.7	+1.2
JHH2				S	S	18 42 08.9	+0.8
CBIJ	Chichi jima	5.44	352	P	Pn	18 41 11.2	+0.5
CBIJ				S	S	18 42 17.7	+0.1
GUMO	Guam	8.24	168	P	Pn	18 41 45.1	+0.7
	1.7nm,0.3s,baz=6.3,slow=9.2,SNR=3.1						
JHJ	Hachijo jima 2	11.75	346	P	Pn	18 42 26.8	-0.2
	6.6nm,0.3s,baz=159,slow=22,SNR=6.3						
JHJ				S	S	18 44 35.8	-2.2
	2.2nm,0.3s,baz=72,slow=20,SNR=2.5						
BSO1	Boso 1	13.05	352	P	Pn	18 42 41.7	-0.3
BSO3	Boso 3	13.26	351	P	Pn	18 42 46.0	+1.2
BSO4	Boso 4	13.47	350	P	Pn	18 42 49.0	+1.5
JOD2	Odawara 2	13.96	346	P	Pn	18 42 54.1	+0.6
JRY	Ryogami san	14.73	347	P	Pn	18 43 03.1	+0.5
JHO	Hitachi	15.03	352	P	Pn	18 43 07.1	+1.1
MJAR	Matsushiro Arr	15.39	345	P	P	18 43 08.4	-0.1
	0.1nm,0.3s,baz=162,slow=9.1,SNR=7.4						
KSRS	Korea Array	20.45	324	P	P	18 44 03.0	+0.6
	1.6nm,0.6s,baz=148,slow=8.2,SNR=12						
USRK	Ussuriysk Ar.	24.25	340	P	P	18 44 36.8	-0.3
	0.7nm,0.6s,baz=163,slow=7.5,SNR=3.8						
KLR	Kul'dur	28.92	345	P	P	18 45 19.3	+0.7
	2.7nm,0.5s,baz=157,slow=8.1,SNR=17						
CMAR	Chiang Mai Arr	41.45	274	P	P	18 47 06.2	+1.0
	0.9nm,0.5s,baz=80,slow=6.5,SNR=11						
WRA	Warramunga Arr	42.24	192	P	P	18 47 10.6	-0.8
	0.7nm,0.4s,baz=4.7,slow=7.4,SNR=18						
ASAR	Alice Springs	45.95	192	P	P	18 47 39.8	-0.8
	0.2nm,0.3s,baz=12,slow=6.8,SNR=8.0						
ZALV	Zalesovo Beam	54.14	322	P	P	18 48 40.9	-0.4
	0.7nm,0.4s,baz=110,slow=6.4,SNR=3.2						
ZALV				PcP	PcP	18 49 40.8	-0.7
	0.9nm,0.4s,baz=122,slow=4.8,SNR=4.2						
MKAR	Makanchi Array	54.61	313	P	P	18 48 44.1	-0.7
	0.5nm,0.6s,baz=91,slow=8.9,SNR=5.5						
MKAR				PcP	PcP	18 49 43.5	-0.1
	0.2nm,0.4s,baz=87,slow=4.9,SNR=3.6						
ILAR	Eielson Array	62.10	27	P	P	18 49 35.7	-0.2
	0.3nm,0.6s,baz=256,slow=5.5,SNR=4.1						
YKA	Yellowknife Ar	76.52	28	P	P	18 51 03.5	-0.2
	1.1nm,0.6s,baz=285,slow=5.9,SNR=4.0						
ARCES	ARCESS Array B	78.89	341	P	P	18 51 16.7	+0.1
	1.4nm,0.8s,baz=70,slow=7.8,SNR=6.7						
FINES	FINESS Array B	83.14	334	P	P	18 51 38.0	-0.9
	0.8nm,0.3s,baz=67,slow=5.0,SNR=20						

DJA 27 18:46:33.4±0.3,**6°S**±3°×**10°5E**±°,**h10**^{km},**M3.8**/12, **MLv3.8**/12,**Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.38	146	P	Pg	18 46 41.0	+0.1
CGJI				S	Sg	18 46 46.5	+0.6
BLSI	Bandar Lampung	0.95	346	P	Pg	18 46 51.2	-0.6
BLSI				S	Sg	18 47 04.2	-0.1
TNG	Tangerang	1.17	84	P	Pb	18 46 55.1	-0.6
TNG				S	Sn	18 47 11.8	0.0
KASI	Kota Agung	1.25	308	P	Pn	18 46 55.8	-1.1
CBJI	Citeko	1.37	95	P	Pg	18 47 00.2	+0.5
KLI	Kotabumi	1.56	336	P	Pn	18 47 01.6	+0.4
KLSI		1.77	335	P	Pn	18 47 04.3	+0.3
LWLI	Liwa	1.90	312	P	Pn	18 47 06.6	+0.5
LEM	Lembang	2.19	104	P	Pn	18 47 10.3	+0.3
MDSI	Maura Dua	2.22	324	P	Pn	18 47 10.0	-0.3
CISI	Cisompet, Garu	2.63	118	P	Pn	18 47 15.9	-0.1
JCJI	Jatiwangi	2.78	94	P	Pg	18 47 31.1	+4.4
LHSI	Lahat	3.14	321	P	Pn	18 47 22.4	-0.5
CMJI	Cimerak	3.29	117	P	Pn	18 47 25.7	+0.6
KPJI	Karang Pucung	3.58	107	P	Pg	18 47 50.0	+8.0
PCI	Palu	15.29	70	P	P	18 50 20.5	+6.1

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*IDC **27** 18:48:28.7±1.0, 50.°29N×130.°26W, h0^{km}, mb3.7/6, mb1 3.9/14, mb1mx3.7/38, mbtmp3.7/14, ML3.6/7, MS3.4/12, Ms1 3.4/12, ms1mx3.2/34, Error ellipse: s-maj=19.9km s-min=11.3km az=54.0*

*PGC **27** 18:48:28.9±1.4, 50.°25N×130.°21W, h10^{km}, mb3.9, MLSn3.2/26, Mw3.9/26, 204km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*ISCJB **27** 18:48:29.6±1.0, 50.°40N±0.°02×129.°99W±0.°04, h14^{km}±7^{km}, mb3.9/14, MS3.3/4, Error ellipse: s-maj=4.9km s-min=2.5km az=141.1*

*NEIC **27** 18:48:31.0±1.8, 50.°38N×130.°15W, h14^{km}±4^{km}, mb3.9/81, Mw3.9(OTT), Error ellipse: s-maj=14.0km s-min=9.1km az=56.0*

ISC 27 18:48:28.6±2.4,**50.°37N**±0.°05×**130.°02W**±0.°04,**h3**^{km}±15^{km}, **n189**,σ**1^{s}81**/187,**mb4.0**/14,**MS3.4**/4,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.24	77	Pn	Pn	18 48 51.7	-1.1
HOLB				Sn	Sg	18 49 08.4	+0.1
BPBC	Brooks Peninsu	1.46	98	Pn	Pn	18 48 53.6	-2.4
BPBC				Sn	Sn	18 49 09.2	-6.4
PHC	Port Hardy	1.69	77	Pn	Pn	18 48 58.1	-0.8
PHC				Sn	Sn	18 49 19.1	-2.0
MAYB	Maynard	1.82	88	Pn	Pn	18 48 59.8	-1.2
EDB	Eliza Dome	1.93	104	Pn	Pn	18 49 00.8	-1.6
EDB				Sn	Sn	18 49 25.1	-2.0
TLCB	Telegraph Cove	2.04	84	Pn	Pn	18 49 03.6	-0.3
TLCB				Sn	Sn	18 49 28.5	-1.4
HG4B	Hotspring	2.06	340	Pn	Pn	18 49 02.1	-2.1
HG4B				Sn	Sn	18 49 28.5	-1.9
BBB	Bella Bella	2.18	33	Pn	Pn	18 49 05.7	-0.1
	26nm,0.3s,baz=228,slow=12,SNR=141						
BBB				Sn	Sn	18 49 32.6	-0.6
	24nm,0.3s,baz=131,slow=19,SNR=12						
BBB				LR	LR	18 50 04.3	
	comp=Z,809nm,18.2s,baz=226,slow=41						
BBB	Bella Bella	2.18	33	*e*Pn	Pn	18 49 06.0	+0.3
BBB				*e*Sn	Sn	18 49 32.6	-0.6
BBB	Bella Bella	2.18	33	Pn	Pn	18 49 05.6	-0.1
BBB				Sn	Sn	18 49 32.5	-0.6
NTKA	Nootka	2.33	108	Pn	Pn	18 49 07.3	-0.5
HG3B	Hotspring	2.38	339	Pn	Pn	18 49 06.9	-1.7
HG3B				Sn	Sn	18 49 35.4	-2.8
BNB	Barry Inlet	2.46	335	Pn	Pn	18 49 07.8	-1.9
NCRB	Newcastle Ridg	2.54	88	Pn	Pn	18 49 10.4	-0.4
GDR	Gold River	2.64	101	Pn	Pn	18 49 11.3	-0.7
SPLB	Strathcona Par	2.85	98	Pn	Pn	18 49 15.3	+0.3
BCBC	Bella Coola	2.87	44	Pn	Pb	18 49 17.6	-2.7
BCBC				Sn	Sb	18 49 51.7	-4.1
HG1B	Mitchell Dam	2.88	334	Pn	Pn	18 49 13.2	-2.2
CBB	Campbell River	3.01	95	Pn	Pn	18 49 16.7	-0.5
MOBC	Moresby Island	3.03	337	Pn	Pn	18 49 16.2	-1.3
BTB	Buttle Lake	3.04	106	Pn	Pn	18 49 17.7	-0.1
DIB	Dawson Inlet,	3.22	333	*e*Pn	Pn	18 49 18.3	-1.8
DIB	Dawson Inlet,	3.22	333	Pn	Pn	18 49 18.4	-1.6
H02S1	DAWSON INLET T	3.22	333	Pn	Pn	18 49 18.1	-1.9
H02S1				Sn	Sn	18 49 56.0	-2.9
OZB	Mount Ozzard	3.26	114	Pn	Pn	18 49 19.7	-1.0
OZB				Sn	Sn	18 49 56.6	-3.4
B928	Bamfield	3.53	114	Pn	Pn	18 49 23.0	-1.3
TXB	Texada	3.66	98	Pn	Pn	18 49 25.3	-0.9
MGB	Mount Grey	3.72	110	Pn	Pn	18 49 26.5	-0.6
RUBB	Prince Rupert	3.97	358	Pn	Pn	18 49 31.0	+0.7
YOUB	Youbou, Lake C	4.02	109	Pn	Pn	18 49 31.2	+0.1
SHB	Sechelt	4.04	99	Pn	Pn	18 49 31.5	0.0
PFB	Port Renfrew	4.06	114	Pn	Pn	18 49 30.8	-0.8
PFB				Sn	Sn	18 50 17.8	-1.9
LZB	Mount Lazard	4.41	111	Pn	Pn	18 49 36.8	+0.3
GOBB	Galiano Island	4.46	106	Pn	Pn	18 49 37.9	+0.8
UBRB	Upper Baezaeko	4.48	53	Pn	Pn	18 49 39.5	+2.0
UBRB				Sn	Sn	18 50 29.7	-0.4
NLWA	Neilton Lookou	5.04	124	*e*Pn	Pn	18 49 45.4	+0.4
LLLB	Lillooet	5.20	84	*e*Pn	Pn	18 49 49.0	+1.6
LLLB	Lillooet	5.20	84	Pn	Pn	18 49 48.9	+1.6
FSB	Fort Saint Jam	5.39	38	Pn	Pn	18 49 51.9	+1.9
MBW	Mount Baker	5.52	104	Pn	Pn	18 49 53.1	+1.3
D05A	Enumclaw	6.19	118	*e*Pn	Pn	18 50 04.5	+3.7
WRAK	Wrangell Islan	6.22	348	*e*Pn	Pn	18 50 02.9	+1.7
LON	Longmire	6.54	120	*e*Pn	Pn	18 50 08.7	+2.9
LTY	Liberty	6.92	113	*e*Pn	Pn	18 50 14.7	+3.8
BMBC	Bull Mountain	7.40	37	Pn	Pn	18 50 19.9	+2.4
H04A	Detroit Lake	7.77	134	*e*Pn	Pn	18 50 25.6	+2.9
HAWA	Hanford	8.04	116	*e*Pn	Pn	18 50 29.8	+3.6
DLBC	Dease Lake	8.09	360	Pn	Pn	18 50 30.2	+3.3
	0.4nm,0.3s,baz=191,slow=12,SNR=8.0						
DLBC				Lg	Lg	18 52 47.7	
	0.2nm,0.3s,baz=170,slow=18,SNR=3.3						
DLBC	Dease Lake	8.09	360	*e*Pn	Pn	18 50 29.9	+3.0
C09A	Chrisman Ranch	8.13	104	*e*Pn	Pn	18 50 28.1	+0.6
NEW	Newport	8.69	99	Pn	Pn	18 50 38.3	+3.1
	0.2nm,0.3s,baz=284,slow=8.3,SNR=2.5						
NEW				Lg	Lg	18 53 08.2	
	0.1nm,0.3s,baz=229,slow=20,SNR=1.8						
NEW	Newport	8.69	99	*e*Pn	Pn	18 50 37.8	+2.6
G08A	Pilot Rock	9.01	120	*e*Pn	Pn	18 50 41.6	+2.0
PINE	Pine Mountain	9.03	133	*e*Pn	Pn	18 50 42.0	+1.9
I07A	Izee	9.52	127	*e*Pn	Pn	18 50 48.2	+1.5
YBH	Yreka Blue Hor	10.02	147	Pn	Pn	18 50 56.1	+2.6
	baz=346,slow=12,SNR=2.7						
YBH				LR	LR	18 54 16.0	
	comp=Z,378nm,20.0s,baz=334,slow=35						
J08A	Circle Bar Ran	10.56	127	*e*Pn	Pn	18 51 02.4	+1.5
MOD	Modoc Plateau	10.82	138	*e*Pn	Pn	18 51 07.4	+2.9
WDC	Whiskeytown Da	11.10	149	*e*Pn	Pn	18 51 10.0	+1.7
WVOR	Wild Horse Val	11.16	131	*e*Pn	Pn	18 51 11.5	+2.4
ORV	Oroville	12.37	148	*e*Pn	Pn	18 51 28.6	+3.0
BEKR	Beckworth	12.51	143	*e*Pn	Pn	18 51 30.1	+2.5
BALM	Baldy	12.72	332	*e*Pn	Pn	18 51 30.2	-0.1
MCMT	McKenzie Canyo	12.84	109	*e*Pn	Pn	18 51 33.3	+1.2
PAHR	Pah Rah Range	13.03	141	*e*Pn	Pn	18 51 38.1	+3.3
AFDM	Forest Hills D	13.10	147	*e*Pn	Pn	18 51 36.6	+1.0
BMN	Battle Mountai	13.38	133	*e*Pn	Pn	18 51 41.0	+1.5
EGMT	Eagleton	13.46	92	*e*Pn	P	18 51 44.4	-5.6
PNTR	Pine Nut	13.48	143	*e*Pn	Pn	18 51 42.1	+1.2
YERR	Yerington	13.71	142	*e*Pn	Pn	18 51 45.3	+1.3
WAKR	Walker	14.05	144	*e*Pn	Pn	18 51 51.1	+2.4
YHH	Holmes Hill	14.08	106	*e*Pn	Pn	18 51 50.6	+1.5
ELK	Elko	14.11	127	LR	LR	18 57 18.7	
	comp=Z,119nm,18.9s,baz=314,slow=37						
ELK	Elko	14.11	127	*e*Pn	Pn	18 51 50.3	+0.7
KVN	Kaiserville	14.12	139	*e*Pn	Pn	18 51 50.6	+1.0
CMB	Columbia Colle	14.12	147	*e*Pn	Pn	18 51 49.9	+0.4
RYN	Ryan	14.30	141	*e*Pn	Pn	18 51 53.1	+1.0
NVAR	Mina Array Bea	14.56	141	Pn	Pn	18 51 58.3	+2.6
	0.1nm,0.3s,baz=326,slow=11,SNR=9.9						
NV11	Mina Array Sit	14.62	140	*e*Pn	P	18 51 59.2	-3.8
HVU	Hansel Valley	14.71	119	*e*Pn	P	18 52 00.8	-3.2
YKA	Yellowknife Ar	14.79	29	Pn	Pn	18 51 58.7	+0.3
	0.1nm,0.3s,baz=218,slow=12,SNR=4.1						
YKA				LR	LR	18 58 30.3	
	comp=Z,7.9nm,20.6s,baz=219,slow=40						
YKB5	Yellowknife Ar	14.79	29	*e*Pn	Pn	18 51 58.7	+0.3
RLMT	Red Lodge	14.90	103	*e*Pn	P	18 52 05.2	-1.0
MDPB	Devils Postpil	14.95	144	*e*Pn	Pn	18 52 00.4	-0.6
OMMB	Old Mammoth Mi	14.99	144	*e*Pn	Pn	18 52 03.1	+1.4
	4.1nm,1.0s						
KDAK	Kodiak Island	15.13	308	LR	LR	18 56 25.0	
	comp=Z,336nm,20.7s,baz=112,slow=32						
BGU	Big Grassy Mou	15.15	122	*e*Pn	P	18 52 08.2	-0.7
	8.8nm,1.4s						
DOT	Dot Lake	15.29	336	*e*Pn	P	18 52 07.4	-2.8
	5.5nm,1.3s						
PMR	Palmer	15.44	324	*e*Pn	P	18 52 08.8	-3.0
	10.0nm,1.4s						
SCRK	Sand Creek	15.54	337	*e*Pn	P	18 52 10.1	-3.0
	7.6nm,1.3s						
RIDG	Independent Ri	15.58	335	*e*P	P	18 52 12.9	-0.5
	11nm,1.2s						
EGAK	Eagle	15.59	342	*e*P	P	18 52 12.4	-1.0
	5.8nm,1.2s						
DUG	Dugway, Tooele	15.78	124	*e*Pn	P	18 52 13.2	-2.6
	9.0nm,1.1s						
R11A	Troy Canyon, C	15.81	134	*e*Pn	P	18 52 13.6	-2.6
	5.8nm,1.4s						
BW06	Boulder Array	15.96	111	*e*Pn	P	18 52 17.5	-0.5
	8.9nm,1.5s						
PD31	Pinedale Array	15.96	111	*e*Pn	P	18 52 17.4	-0.6
	4.0nm,1.3s						
PDAR	Pinedale Array	15.96	111	Pn	P	18 52 17.6	-0.4
	0.1nm,0.3s,baz=307,slow=12,SNR=11						
PDAR				LR	LR	18 58 09.7	
	comp=Z,67nm,18.0s,baz=307,slow=36						
SUA	Susitna One	15.99	322	*e*Pn	P	18 52 15.5	-2.5
	7.3nm,0.8s						
JLU	Jordanelle	16.24	120	*e*P	P	18 52 21.5	+0.4
	3.2nm,0.7s						
PAGB	Antelope Grade	16.26	150	*e*P	P	18 52 23.2	+2.2
	27nm,1.5s						
NLU	North Lily Min	16.35	123	*e*P	P	18 52 23.8	+1.5
	4.6nm,0.9s						
EPYK	Eagle Plains	16.41	350	*e*P	P	18 52 22.6	0.0
	3.7nm,0.8s						
PSUT	Pine Spring	16.49	130	*e*P	P	18 52 25.2	+1.4
	10nm,1.2s						
TPNV	Topopah Spring	16.67	138	*e*Pn	P	18 52 25.1	-0.7
	44nm,1.5s						
DAC	Darwin (Calif)	16.70	143	*e*Pn	P	18 52 25.8	-0.4
MCK	McKinley	16.79	330	*e*P	P	18 52 25.7	-1.0
	14nm,1.6s						
ISA	Isabella, Lake	16.92	146	*e*P	P	18 52 29.4	+1.0
	17nm,1.2s						
ILAR	Eielson Array	16.94	335	Pn	P	18 52 27.9	-0.6
	0.1nm,0.3s,baz=152,slow=12,SNR=4.0						
ILAR				LR	LR	18 58 31.2	
	comp=Z,145nm,18.3s,baz=148,slow=36						
WRH	Wood River Hil	17.06	333	*e*Pn	P	18 52 28.1	-1.7
	9.1nm,1.4s						
CCB	Clear Creek Bu	17.11	333	*e*P	P	18 52 31.0	+0.8
	4.1nm,1.3s						
TCRU	Three Creeks R	17.14	127	*e*P	P	18 52 33.6	+2.5
	7.4nm,1.2s						
BWN	Browne	17.26	331	*e*P	P	18 52 34.5	+2.6
	8.7nm,0.7s						
TMUT	Trail Mountain	17.29	123	*e*P	P	18 52 34.7	+2.0
	2.8nm,0.9s						
KTH	Kantishna Hill	17.32	328	*e*P	P	18 52 34.6	+1.8
	14nm,1.4s						
PPLA	Purkeypile	17.37	325	*e*Pn	P	18 52 31.7	-1.7
	16nm,1.6s						
P17A	Butcher Ranch,	17.41	121	*e*P	P	18 52 35.5	+1.5
	4.2nm,1.0s						
CCUT	Cedar City	17.50	131	*e*P	P	18 52 36.2	+1.2
	6.3nm,1.2s						
SHPR	Sheep Range	17.52	137	*e*P	P	18 52 36.3	+1.1
	9.5nm,1.4s						
FFC	Flin Flon	17.54	65	*e*P	P	18 52 37.0	+1.8
	54nm,1.1s						
SZCU	Shurtz Canyon	17.60	130	*e*P	P	18 52 37.1	+1.0
	10.0nm,1.2s						
CAST	Castle Rocks	17.65	326	*e*P	P	18 52 38.2	+1.9
	7.3nm,1.4s						
BPAW	Bear Paw Mtn.	17.70	329	*e*P	P	18 52 38.1	+1.2
	6.5nm,1.0s						
MTPU	Mount Pierson	17.70	127	*e*P	P	18 52 38.8	+1.4
	8.1nm,1.3s						
SRU	San Rafael Swe	17.79	122	*e*P	P	18 52 40.7	+2.5
	9.2nm,1.4s						
SVW2	Sparrevohn	17.82	317	*e*P	P	18 52 38.3	0.0
	5.7nm,1.1s						
GSC	Goldstone, Bar	17.86	142	*e*P	P	18 52 41.0	+2.1
	8.7nm,1.1s						
LCMT	Little Creek M	17.98	132	*e*P	P	18 52 41.4	+1.1
	5.6nm,0.9s						
INK	Inuvik	18.08	356	LR	LR	18 59 04.3	
	comp=Z,101nm,18.5s,baz=186,slow=35						
PKCU	Pink Cliffs	18.10	129	*e*P	P	18 52 43.8	+2.0
	14nm,1.1s						
KNB	Kanab	18.18	131	*e*P	P	18 52 45.0	+2.5
	6.3nm,1.0s						
MLY	Manley	18.25	331	*e*P	P	18 52 44.2	+1.2
	7.2nm,1.2s						
O20A	White River Ci	18.37	115	*e*P	P	18 52 44.7	+0.1
	11nm,1.4s						
RSSD	Black Hills	18.66	100	*e*P	Pn	18 52 49.0	+1.0
	5.9nm,1.4s						
LDFC	Landfair	18.75	139	*e*P	Pn	18 52 48.1	-1.0
	10.0nm,1.0s						
TTA	Tatalina	18.86	322	*e*P	Pn	18 52 49.9	-0.3
	3.4nm,1.0s						
U15A	North Rim	18.91	131	*e*P	Pn	18 52 52.9	+1.7
	5.7nm,0.9s						
PV21	Cone Mtn., Par	19.03	120	*e*P	P	18 52 51.1	-0.7
	10.0nm,0.8s						
PV23	Carpenter Ridg	19.09	121	*e*P	Pn	18 52 54.0	+0.7
	6.3nm,1.0s						
PV10	Paradox Valley	19.12	121	*e*P	Pn	18 52 54.7	+0.9
	9.5nm,0.8s						
PV14	Lion Creek, Pa	19.14	121	*e*P	Pn	18 52 54.1	+0.3
	21nm,1.5s						
PV22	Blue Mesa, Par	19.15	120	*e*P	Pn	18 52 55.0	+1.0
	4.4nm,0.9s						
PV04	Paradox Valley	19.19	121	*e*P	Pn	18 52 53.9	-0.5
	5.0nm,0.9s						
PV20	West Nyswonger	19.19	121	*e*P	Pn	18 52 53.6	-0.8
	10.0nm,1.2s						
PV17	East Wray Mesa	19.24	121	*e*P	Pn	18 52 56.0	+1.0
	5.8nm,0.7s						
PV16	Nyswonger Mesa	19.24	121	*e*P	Pn	18 52 55.9	+0.8
	10nm,1.4s						
W13A	Hualapai Mount	19.26	136	*e*P	Pn	18 52 55.5	+0.2
	3.7nm,1.0s						
PV11	David Mesa, Pa	19.27	121	*e*P	Pn	18 52 56.7	+1.3
	11nm,1.3s						
PV18	Skein Mesa, Pa	19.29	121	*e*P	Pn	18 52 56.9	+1.2
	7.6nm,1.1s						
PV13	Radium Mtn., P	19.40	121	*e*P	Pn	18 52 57.3	+0.3
	6.8nm,1.1s						
PV02	Paradox Valley	19.41	121	*e*P	Pn	18 52 57.7	+0.5
	19nm,1.5s						
PFO	Pinyon Flats O	19.49	144	LR	LR	19 00 53.3	
	comp=Z,79nm,18.7s,baz=306,slow=38						
PFO	Pinyon Flats O	19.49	144	*e*P	Pn	18 52 57.6	-0.4
	5.5nm,1.3s						
PV01	Paradox Valley	19.56	121	*e*P	Pn	18 52 59.6	+0.7
	13nm,1.2s						
SMCO	Snowmass	19.74	116	*e*P	Pn	18 53 02.0	+0.8
	6.5nm,1.2s						
WUAZ	Wupatki	20.08	131	*e*P	Pn	18 53 04.8	-0.3
	6.1nm,1.0s						
Y12C	Blythe	20.14	140	*e*P	Pn	18 53 06.0	+0.5
	14nm,1.2s						
MVCO	Mesa Verde	20.26	122	*e*P	Pn	18 53 06.6	-0.7
	16nm,1.3s						
GLA	Glamis	20.62	141	*e*P	P	18 53 09.2	+0.1
	9.0nm,0.9s						
Y14A	Wickenburg	20.62	136	*e*P	Pn	18 53 10.5	-0.8
	6.9nm,1.1s						
X16A	Lo Mia Camp, P	20.94	133	*e*P	Pn	18 53 14.1	-1.1
	8.6nm,1.3s						
W18A	Petrified Fore	21.21	128	*e*P	P	18 53 16.9	+1.3
	17nm,1.0s						
SDCO	Great Sand Dun	21.56	116	*e*P	P	18 53 20.7	+1.3
	2.6nm,0.9s						
ULM	Lac du Bonnet	21.70	77	P	P	18 53 25.5	+5.0
	2.6nm,0.5s,baz=285,slow=12,SNR=4.5						
ULM				LR	LR	19 02 18.9	
	comp=Z,122nm,19.6s,baz=272,slow=38						
ULM	Lac du Bonnet	21.70	77	*e*P	P	18 53 24.3	+3.8
	19nm,1.4s						
KSCO	Kaye Shedlock’	22.41	110	*e*P	P	18 53 30.0	+1.6
	18nm,1.1s						
TUC	Tucson	23.00	134	*e*P	P	18 53 36.4	+1.8
	5.0nm,1.3s						
ANMO	Albuquerque	23.05	123	P	P	18 53 36.0	+0.8
	0.6nm,0.4s,baz=308,slow=10,SNR=4.8						
ANMO	Albuquerque	23.05	123	*e*P	P	18 53 36.2	+1.0
	8.6nm,1.6s						
LAZ	Ladron	23.10	125	*e*P	P	18 53 38.2	+2.4
LENM	Lemitar	23.37	125	*e*P	P	18 53 39.7	+1.2
BNM	Barren Site	23.57	125	*e*P	P	18 53 41.8	+1.3
AMTX	Amarillo	25.76	116	*e*P	P	18 54 02.0	+1.5
	9.6nm,0.9s						
MSTX	Muleshoe	25.80	119	*e*P	P	18 54 01.2	+0.3
	6.6nm,1.3s						
WMOK	Wichita Mounta	27.55	113	*e*P	P	18 54 17.6	+0.9
	2.8nm,0.8s						
TXAR	Lajitas Array	28.91	127	P	P	18 54 30.2	+1.3
	0.7nm,0.8s,baz=325,slow=6.4,SNR=5.6						
TXAR				LR	LR	19 06 50.0	
	comp=Z,96nm,19.3s,baz=0.0,slow=38						
SCHQ	Schefferville	37.48	58	LR	LR	19 11 43.8	
	comp=Z,72nm,19.3s,baz=301,slow=37						
PEA1	Petropavlovsk-	43.09	303	*e*P	P	18 56 30.0	+0.4
PETK	Petropavlovsk-	43.09	303	P	P	18 56 30.0	+0.4
	1.3nm,0.8s,baz=72,slow=14,SNR=3.0						
PETK				LR	LR	19 12 41.8	
	comp=Z,27nm,19.5s,baz=81,slow=34						
H11N2	WAKE ISLAND Hy	57.94	262	T	T	20 01 00.4	
	baz=42,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	57.94	262	T	T	20 00 50.6	
	baz=42,slow=75,SNR=41						
H11N1	WAKE ISLAND Hy	57.95	262	T	T	20 00 54.3	
	baz=42,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	58.96	262	T	T	20 02 29.4	
	baz=39						
H11S2	WAKE ISLAND Hy	58.97	262	T	T	20 02 16.8	
	baz=39						
H11S3	WAKE ISLAND Hy	58.98	262	T	T	20 02 26.1	
	baz=39						
FIA0	FINESS Array S	66.90	12	*e*P	P	18 59 22.1	+0.5
FINES	FINESS Array B	66.90	12	P	P	18 59 22.1	+0.5
	0.7nm,0.7s,baz=1.6,slow=9.7,SNR=4.7						
ZAA1	Zalesovo Array	72.01	339	*e*P	P	18 59 53.8	+0.5
ZALV	Zalesovo Beam	72.01	339	P	P	18 59 53.7	+0.4
	0.8nm,0.6s,baz=27,slow=6.6,SNR=4.1						
MKAR	Makanchi Array	79.27	338	P	P	19 00 35.2	+0.1
	0.7nm,0.6s,baz=32,slow=5.3,SNR=9.8						

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*NEIC **27** 18:56:45.0±0.0, 16.°63N×100.°40W, h2^{km}, MD4.0(MEX), After MEX.*

MEX 27 18:56:44.9±0.9,**16.°63N**×**100.°40W**,**h2**^{km}±7^{km},**MD3.9**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.43	17	*e*Pg	Pg	18 56 52.3	-0.9
CAIG				*e*Sg	Sg	18 57 00.1	+1.3
CAIG	El Cayaco	0.43	17	*i* P	Pg	18 56 52.3	-0.9
CAIG				*i* S	Sg	18 57 00.1	+1.3
ZIIG	Zihuatanejo	1.41	314	*e*Pn	Pn	18 57 08.3	-3.2
ZIIG	Zihuatanejo	1.41	314	*i* P	Pn	18 57 08.3	-3.2
ZIIG				*i* S	Sg	18 57 25.2	-4.9
MEIG	Mezcala	1.48	30	*e*Pn	Pn	18 57 08.9	-3.8
MEIG				*e*Sg	Sn	18 57 36.4	+3.7
MEIG	Mezcala	1.48	30	*i* P	Pn	18 57 08.7	-4.0
MEIG				*i* S	Sb	18 57 27.8	-4.9
PLIG	Platanillo	1.95	26	*e*Pn	Pn	18 57 15.7	-3.3
PLIG	Platanillo	1.95	26	*e*P	Pn	18 57 14.8	-4.3
PLIG				*i* S	Sn	18 57 39.2	-4.9
TLIG	Tlapa	1.98	62	*e*Pn	Pn	18 57 14.1	-5.5
TLIG	Tlapa	1.98	62	*e*P	Pn	18 57 16.5	-3.1
TLIG				*i* S	Sn	18 57 39.7	-5.3

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*KRNET **27** 19:04:30.4±0.1, 43.°13N×70.°61E, mb2.5*

*SOME **27** 19:04:31.6, 42.°93N×71.°02E, h10^{km}*

*NNC **27** 19:04:32.0±0.3, 42.°80N×71.°06E, h0^{km}, mb3.1, mpv2.6, Error ellipse: s-maj=2.6km s-min=1.5km az=26.0*

ISC 27 19:04:32.3±1.1,**42.°80N**±0.°04×**71.°07E**±0.°02,**h4**^{km}±11^{km}, **n32**,σ**1^{s}18**/60,**26C-14D**,**Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK06	Karatay Array	0.49	306	⇑P	Pg	19 04 41.6	-0.2
KK06				⇓S	Sg	19 04 48.7	+0.4
KK07	Karatay Array	0.51	305	⇑P	Pg	19 04 41.8	-0.2
KK07				⇑S	Sg	19 04 49.2	+0.6
KK02	Karatay Array	0.51	307	⇑P	Pg	19 04 41.9	-0.2
KK02				⇓S	Sg	19 04 49.2	+0.5
KK31	Karatay Array	0.51	307	⇓P	Pg	19 04 41.9	-0.2
	baz=130,slow=17						
KK31				S	Sg	19 04 49.1	+0.4
	1.9nm,0.2s,baz=311,slow=63,SNR=36						
KK31				⇓S	Sb	19 04 49.2	-2.5
KK05	Karatay Array	0.51	308	⇑P	Pg	19 04 41.9	-0.2
KK05				⇑S	Sg	19 04 49.2	+0.5
KK01	Karatay Array	0.51	306	⇑P	Pg	19 04 41.9	-0.3
KK01				⇑S	Sg	19 04 49.3	+0.4
KK03	Karatay Array	0.51	306	⇑P	Pg	19 04 41.9	-0.3
KK03				⇑S	Sg	19 04 49.3	+0.5
KK04	Karatay Array	0.52	307	⇑P	Pg	19 04 41.9	-0.3
KK04				⇓S	Sg	19 04 49.3	+0.4
KK08	Karatay Array	0.52	305	⇑P	Pg	19 04 42.1	-0.2
KK08				⇑S	Sg	19 04 49.9	+0.7
KK09	Karatay Array	0.53	308	⇑P	Pg	19 04 42.2	-0.3
KK09				⇓S	Sg	19 04 49.6	+0.4
BRLS	Borolday	0.93	285	P	Pg	19 04 50.7	+0.5
	0.4nm,0.1s						
BRLS				S	Sn	19 05 05.0	-1.2
	5.6nm,0.3s						
BRLS	Borolday	0.93	285	*e*P	Pg	19 04 50.7	+0.5
	0.4nm,0.1s						
BRLS				*e*S	Sn	19 05 05.0	-1.2
	5.6nm,0.3s						
IUG	Iuzhnay	1.01	230	P	Pg	19 04 51.4	-0.2
	0.5nm,0.3s						
IUG				S	Sb	19 05 06.0	-0.1
	22nm,0.2s						
IUG	Iuzhnay	1.01	230	*e*P	Pg	19 04 51.4	-0.2
	0.5nm,0.3s						
IUG				*e*S	Sb	19 05 06.0	-0.1
	22nm,0.2s						
MRKS	Merke	1.59	91	P	Pb	19 05 02.2	-0.2
	3.4nm,0.2s						
MRKS				S	Sg	19 05 24.7	+1.3
	5.8nm,0.3s						
MRKS	Merke	1.59	91	*e*P	Pb	19 05 02.2	-0.2
	3.4nm,0.2s						
MRKS				*e*S	Sg	19 05 24.7	+1.3
	5.8nm,0.3s						
EKS2	Erkin-Say	2.00	93	⇑*i*P	Pb	19 05 08.1	-1.3
	baz=0.0						
EKS2				⇑*i*S	Sg	19 05 35.4	-1.2
	baz=0.0						
ARSB	Arslanbob	2.05	135	⇑*i*P	Pb	19 05 10.0	-0.3
	baz=35						
ARSB				⇑*i*S	Sg	19 05 39.1	+0.9
	baz=35						
AML	Almayashu	2.05	108	⇑*i*P	Pb	19 05 09.7	-0.8
	baz=13						
AML				⇑*i*S	Sg	19 05 38.6	+0.3
	baz=13						
AAK	Ala-Archa	2.53	93	⇓Pg	Pb	19 05 17.6	-0.8
	1.4nm,0.5s						
AAK				⇓Lg	Lg	19 05 51.0	
	2.3nm,0.4s						
AAK	Ala-Archa	2.53	93	⇓*i*P	Pn	19 05 15.3	+0.9
	baz=98						
AAK				⇓*i*S	Sb	19 05 48.3	-1.7
	baz=98						
USP	Ospenovka	2.56	78	⇑*e*P	Pn	19 05 14.8	+0.1
	baz=86						
USP				⇑*i*S	Sn	19 05 47.1	+0.8
	baz=86						
ARLS	Aral	2.59	110	⇑*i*P	Pb	19 05 17.3	-2.1
	baz=13						
ARLS				⇑*i*S	Sb	19 05 51.4	-0.3
	baz=13						
UCH	Uchtor	2.61	102	⇓*i*P	Pn	19 05 17.4	+1.7
	baz=6.0						
UCH				⇓*i*S	Sb	19 05 51.3	-1.3
	baz=6.0						
CHMS	Chumysh	2.71	85	⇑*e*P	Pn	19 05 17.4	+0.6
	baz=91						

CHMS				⇑*i*S	**Sn**	**19 05 51.5**	**+1.4**
	baz=91						
TKM2	**Tokmak 2**	**3.33**	**86**	⇓Pg	**Pb**	**19 05 32.0**	**-0.1**
	1.8nm,1.1s						
TKM2				⇓Lg	Lg	19 06 17.6	
	1.9nm,0.6s						
KST	**Kastek**	**3.60**	**85**	Pg	**Pb**	**19 05 36.5**	**-0.2**
	0.5nm,0.1s						
KST				Lg	Lg	19 06 23.7	
	2.2nm,0.3s						
KST	**Kastek**	**3.60**	**85**	*e*P	**Pb**	**19 05 36.5**	**-0.2**
	0.5nm,0.1s						
KST				*e*S	**Sb**	**19 06 23.7**	**+2.9**
	2.2nm,0.3s						
KUU	**Kurty**	**4.00**	**72**	Pg	**Pb**	**19 05 44.7**	**+1.4**
	0.8nm,0.5s						
KUU				Lg	Lg	19 06 37.8	
	4.0nm,0.5s						
KUU	**Kurty**	**4.00**	**72**	*e*P	**Pb**	**19 05 44.7**	**+1.4**
	0.8nm,0.5s						
KUU				*e*S	**Sg**	**19 06 37.8**	**-2.8**
	4.0nm,0.5s						
KTBS	**Karatobe**	**4.20**	**76**	Pg	**Pb**	**19 05 47.9**	**+1.1**
	1.0nm,0.3s						
KTBS				Lg	Lg	19 06 42.9	
	3.3nm,0.4s						
KTBS	**Karatobe**	**4.20**	**76**	*e*P	**Pb**	**19 05 47.9**	**+1.1**
	1.0nm,0.3s						
KTBS				*e*S	**Sg**	**19 06 42.9**	**-4.2**
	3.3nm,0.4s						

PGC ***27*** *19:10:58.5±1.3, 50.°22N×130.°26W, h10^{km}, mb4.3, MLSn3.5/23, Mw4.1/23, 208km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

ISCJB ***27*** *19:10:59.9±0.9, 50.°40N±0.°02×129.°95W±0.°03, h14^{km}±6^{km}, mb4.2/20, MS3.9/24, Error ellipse: s-maj=4.4km s-min=2.1km az=139.6*

IDC ***27*** *19:10:59.3±0.9, 50.°33N×130.°22W, h0^{km}, mb3.9/9, mb1 4.0/20, mb1mx3.8/42, mbtmp3.8/20, ML3.5/11, MS3.9/27, Ms1 3.9/27, ms1mx3.8/35, Error ellipse: s-maj=19.4km s-min=10.6km az=58.0*

GCMT ***27*** *19:11:00.6±0.4, 50.°06N±0.°03×130.°39W±0.°04, h21^{km}±2^{km}, MW4.8/76, Moment Tensor Solution. s10,c12; s76,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.25±.14; M$_{\theta\theta}$-0.71±.12; M$_{\phi\phi}$0.95±.13; M$_{r\theta}$0.27±.18; M$_{\theta\phi}$1.62±.09; M$_{\phi r}$-0.87±.20; Best double couple: M$_0$2.04600×10^{16} NP1:ϕ_s348.00000°, δ85.00000°, λ-153.00000°. NP2: ϕ_s255.00000°, δ63.00000°, λ-6.00000°. Principal axes: T 2.1070, Plg15.0000°, Azm119.0000°; N -0.1210, Plg62.0000°, Azm358.0000°; P -1.9850, Plg23.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***27*** *19:11:01.6±2.3, 50.°33N×129.°99W, h22^{km}±6^{km}, mb4.2/73, MW4.6(OTT) Error ellipse: s-maj=10.5km s-min=5.9km az=221.0*

ISC 27 19:10:59.3±2.1**, 50.°37N**±0.°04×**130.°02W**±0.°04**, h5**^{km}±13^{km}**, n312,** σ1^{s}**73**/314**, mb4.2**/20**, MS3.9**/24**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.23**	**76**	Pn	**Pn**	**19 11 22.2**	**-1.0**
HOLB				Sn	**Sg**	**19 11 39.6**	**+0.7**
HOLB	**Holberg**	**1.23**	**76**	Pn	**Pn**	**19 11 22.2**	**-1.0**
HOLB				Sn	**Sg**	**19 11 39.6**	**+0.7**
BPBC	**Brooks Peninsu**	**1.46**	**97**	*e*Pn	**Pn**	**19 11 23.9**	**-2.3**
BPBC	**Brooks Peninsu**	**1.46**	**97**	Pn	**Pn**	**19 11 23.9**	**-2.3**
BPBC				Sn	**Sn**	**19 11 40.2**	**-5.5**
BPBC	**Brooks Peninsu**	**1.46**	**97**	Pn	**Pn**	**19 11 23.9**	**-2.3**
BPBC				Sn	**Sn**	**19 11 40.2**	**-5.5**
PHC	**Port Hardy**	**1.68**	**77**	Pn	**Pn**	**19 11 28.7**	**-0.6**
PHC				Sn	**Sb**	**19 11 49.7**	**-2.5**
PHC	**Port Hardy**	**1.68**	**77**	Pn	**Pn**	**19 11 28.7**	**-0.6**
PHC				Sn	**Sb**	**19 11 49.7**	**-2.5**
MAYB	**Maynard**	**1.82**	**88**	*e*Pn	**Pn**	**19 11 29.9**	**-1.5**
MAYB	**Maynard**	**1.82**	**88**	Pn	**Pn**	**19 11 29.9**	**-1.5**
MAYB	**Maynard**	**1.82**	**88**	Pn	**Pn**	**19 11 29.9**	**-1.5**
EDB	**Eliza Dome**	**1.93**	**104**	*e*Pn	**Pn**	**19 11 30.3**	**-2.4**
EDB				*e*Sn	**Sn**	**19 11 54.0**	**-3.3**
EDB	**Eliza Dome**	**1.93**	**104**	Pn	**Pn**	**19 11 30.3**	**-2.4**
EDB				Sn	**Sn**	**19 11 54.0**	**-3.3**
EDB	**Eliza Dome**	**1.93**	**104**	Pn	**Pn**	**19 11 30.3**	**-2.4**
EDB				Sn	**Sn**	**19 11 54.0**	**-3.3**
TLCB	**Telegraph Cove**	**2.04**	**84**	Pn	**Pn**	**19 11 33.5**	**-0.8**
TLCB				Sn	**Sn**	**19 11 58.6**	**-1.5**
TLCB	**Telegraph Cove**	**2.04**	**84**	Pn	**Pn**	**19 11 33.5**	**-0.8**
TLCB				Sn	**Sn**	**19 11 58.6**	**-1.5**
HG4B	**Hotspring**	**2.07**	**339**	Pn	**Pn**	**19 11 32.4**	**-2.3**
HG4B				Sn	**Sn**	**19 11 58.4**	**-2.4**
HG4B	**Hotspring**	**2.07**	**339**	Pn	**Pn**	**19 11 32.4**	**-2.3**
HG4B				Sn	**Sn**	**19 11 58.4**	**-2.4**
BBB	**Bella Bella**	**2.18**	**33**	Pn	**Pn**	**19 11 36.0**	**-0.2**
	47nm,0.3s,baz=235,slow=14,SNR=212						
BBB				Sn	**Sb**	**19 12 02.9**	**-3.6**
	35nm,0.3s,baz=127,slow=20,SNR=10						
BBB				LR	LR	19 12 35.0	
	comp=Z,3μm,18.1s,baz=201,slow=42						
BBB	**Bella Bella**	**2.18**	**33**	*e*Pn	**Pb**	**19 11 36.6**	**-2.6**
BBB				*e*Sn	**Sb**	**19 12 02.7**	**-3.7**
BBB	**Bella Bella**	**2.18**	**33**	Pn	**Pb**	**19 11 36.5**	**-2.6**
BBB				Sn	**Sb**	**19 12 03.2**	**-3.3**
BBB	**Bella Bella**	**2.18**	**33**	Pn	**Pb**	**19 11 36.5**	**-2.6**
BBB				Sn	**Sb**	**19 12 03.2**	**-3.3**
NTKA	**Nootka**	**2.33**	**108**	Pn	**Pn**	**19 11 37.4**	**-0.8**
NTKA				Sn	**Sn**	**19 12 05.1**	**-2.0**
NTKA	**Nootka**	**2.33**	**108**	Pn	**Pn**	**19 11 37.4**	**-0.8**
NTKA				Sn	**Sn**	**19 12 05.1**	**-2.0**
HG3B	**Hotspring**	**2.39**	**339**	Pn	**Pn**	**19 11 37.0**	**-2.0**
HG3B				Sn	**Sn**	**19 12 06.2**	**-2.4**
HG3B	**Hotspring**	**2.39**	**339**	Pn	**Pn**	**19 11 37.0**	**-2.0**
HG3B				Sn	**Sn**	**19 12 06.2**	**-2.4**
BNB	**Barry Inlet**	**2.47**	**335**	*e*Pn	**Pn**	**19 11 37.8**	**-2.3**
BNB	**Barry Inlet**	**2.47**	**335**	Pn	**Pn**	**19 11 37.8**	**-2.3**
BNB	**Barry Inlet**	**2.47**	**335**	Pn	**Pn**	**19 11 37.8**	**-2.3**
NCRB	**Newcastle Ridg**	**2.54**	**88**	Pn	**Pn**	**19 11 40.9**	**-0.3**
NCRB	**Newcastle Ridg**	**2.54**	**88**	Pn	**Pn**	**19 11 40.9**	**-0.3**
GDR	**Gold River**	**2.63**	**101**	*e*Pn	**Pn**	**19 11 41.0**	**-1.3**
GDR	**Gold River**	**2.63**	**101**	Pn	**Pn**	**19 11 41.0**	**-1.3**
GDR	**Gold River**	**2.63**	**101**	Pn	**Pn**	**19 11 41.0**	**-1.3**
SPLB	**Strathcona Par**	**2.85**	**98**	Pn	**Pn**	**19 11 44.3**	**-1.0**
SPLB	**Strathcona Par**	**2.85**	**98**	Pn	**Pn**	**19 11 44.3**	**-1.0**
HG1B	**Mitchell Dam**	**2.89**	**334**	Pn	**Pn**	**19 11 44.4**	**-1.5**
HG1B	**Mitchell Dam**	**2.89**	**334**	Pn	**Pn**	**19 11 44.4**	**-1.5**
CBB	**Campbell River**	**3.01**	**95**	Pn	**Pn**	**19 11 47.0**	**-0.5**
CBB				Sn	**Sn**	**19 12 21.8**	**-2.2**
CBB	**Campbell River**	**3.01**	**95**	Pn	**Pn**	**19 11 47.0**	**-0.5**
CBB				Sn	**Sn**	**19 12 21.8**	**-2.2**
MOBC	**Moresby Island**	**3.04**	**337**	*e*Pn	**Pn**	**19 11 47.1**	**-0.9**
MOBC	**Moresby Island**	**3.04**	**337**	Pn	**Pn**	**19 11 46.5**	**-1.5**
MOBC	**Moresby Island**	**3.04**	**337**	Pn	**Pn**	**19 11 46.5**	**-1.5**
BTB	**Buttle Lake**	**3.04**	**105**	Pn	**Pn**	**19 11 46.1**	**-2.1**
BTB	**Buttle Lake**	**3.04**	**105**	Pn	**Pn**	**19 11 46.1**	**-2.1**
DIB	**Dawson Inlet,**	**3.23**	**333**	*e*Pn	**Pn**	**19 11 49.0**	**-1.5**
DIB	**Dawson Inlet,**	**3.23**	**333**	Pn	**Pn**	**19 11 48.5**	**-2.0**
DIB	**Dawson Inlet,**	**3.23**	**333**	Pn	**Pn**	**19 11 48.5**	**-2.0**
H02S1	**DAWSON INLET T**	**3.23**	**333**	Pn	**Pn**	**19 11 48.5**	**-2.1**
H02S1				Sn	**Sn**	**19 12 27.0**	**-2.3**
OZB	**Mount Ozzard**	**3.26**	**114**	*e*Pn	**Pn**	**19 11 50.6**	**-0.4**
OZB				*e*Sn	**Sn**	**19 12 26.6**	**-3.6**
OZB	**Mount Ozzard**	**3.26**	**114**	Pn	**Pn**	**19 11 50.6**	**-0.4**
OZB				Sn	**Sn**	**19 12 26.6**	**-3.6**
OZB	**Mount Ozzard**	**3.26**	**114**	Pn	**Pn**	**19 11 50.6**	**-0.4**
OZB				Sn	**Sn**	**19 12 26.6**	**-3.6**
TXB	**Texada**	**3.66**	**98**	Pn	**Pn**	**19 11 56.4**	**-0.1**
TXB	**Texada**	**3.66**	**98**	Pn	**Pn**	**19 11 56.4**	**-0.1**
MGB	**Mount Grey**	**3.72**	**110**	*e*Pn	**Pn**	**19 11 56.3**	**-1.1**
MGB	**Mount Grey**	**3.72**	**110**	Pn	**Pn**	**19 11 56.3**	**-1.1**
MGB	**Mount Grey**	**3.72**	**110**	Pn	**Pn**	**19 11 56.3**	**-1.1**
RUBB	**Prince Rupert**	**3.97**	**358**	Pn	**Pn**	**19 12 01.1**	**+0.4**
RUBB	**Prince Rupert**	**3.97**	**358**	Pn	**Pn**	**19 12 01.1**	**+0.4**
YOUB	**Youbou, Lake C**	**4.02**	**109**	Pn	**Pn**	**19 12 01.4**	**-0.1**
YOUB	**Youbou, Lake C**	**4.02**	**109**	Pn	**Pn**	**19 12 01.4**	**-0.1**
SHB	**Sechelt**	**4.04**	**99**	Pn	**Pn**	**19 12 01.4**	**-0.4**
SHB	**Sechelt**	**4.04**	**99**	Pn	**Pn**	**19 12 01.4**	**-0.4**
PFB	**Port Renfrew**	**4.05**	**114**	*e*Pn	**Pn**	**19 12 01.3**	**-0.7**
PFB	**Port Renfrew**	**4.05**	**114**	Pn	**Pn**	**19 12 01.3**	**-0.7**
PFB	**Port Renfrew**	**4.05**	**114**	Pn	**Pn**	**19 12 01.3**	**-0.7**
LZB	**Mount Lazard**	**4.40**	**111**	Pn	**Pn**	**19 12 06.8**	**0.0**
LZB	**Mount Lazard**	**4.40**	**111**	Pn	**Pn**	**19 12 06.8**	**0.0**
UBRB	**Upper Baezaeko**	**4.48**	**53**	Pn	**Pn**	**19 12 10.2**	**+2.3**
UBRB				Sn	**Sn**	**19 13 00.4**	**0.0**
UBRB	**Upper Baezaeko**	**4.48**	**53**	Pn	**Pn**	**19 12 10.2**	**+2.3**
UBRB				Sn	**Sn**	**19 13 00.4**	**0.0**
LLLB	**Lillooet**	**5.20**	**84**	*e*Pn	**Pn**	**19 12 18.7**	**+1.0**
LLLB	**Lillooet**	**5.20**	**84**	Pn	**Pn**	**19 12 18.4**	**+0.7**
LLLB	**Lillooet**	**5.20**	**84**	Pn	**Pn**	**19 12 18.4**	**+0.7**
VDB	**Vedder Mountai**	**5.31**	**102**	*e*Pn	**Pn**	**19 12 19.4**	**+0.2**
VDB	**Vedder Mountai**	**5.31**	**102**	Pn	**Pn**	**19 12 19.4**	**+0.2**
VDB	**Vedder Mountai**	**5.31**	**102**	Pn	**Pn**	**19 12 19.4**	**+0.2**
D03D	**Eldon**	**5.37**	**119**	P	**Pn**	**19 12 22.6**	**+2.6**
	baz=304						
FSB	**Fort Saint Jam**	**5.39**	**38**	*e*Pn	**Pn**	**19 12 22.5**	**+2.2**
FSB	**Fort Saint Jam**	**5.39**	**38**	Pn	**Pn**	**19 12 22.5**	**+2.2**
FSB	**Fort Saint Jam**	**5.39**	**38**	Pn	**Pn**	**19 12 22.5**	**+2.2**
CRAG	**Craig**	**5.45**	**341**	*e*Pn	**Pn**	**19 12 20.9**	**-0.1**
MBW	**Mount Baker**	**5.51**	**104**	*e*Pn	**Pn**	**19 12 22.9**	**+0.8**
MBW	**Mount Baker**	**5.51**	**104**	Pn	**Pn**	**19 12 22.9**	**+0.8**
MBW	**Mount Baker**	**5.51**	**104**	Pn	**Pn**	**19 12 22.9**	**+0.8**
D04E	**Lakebay**	**5.75**	**121**	P	**Pn**	**19 12 27.7**	**+2.4**
	baz=306						
E04D	**Cinebar**	**6.25**	**125**	P	**Pn**	**19 12 34.3**	**+2.2**
	baz=310						
LON	**Longmire**	**6.54**	**120**	*e*Pn	**Pn**	**19 12 36.4**	**+0.3**
G03D	**McMinnville, O**	**6.87**	**136**	P	**Pn**	**19 12 43.3**	**+2.7**
	baz=321						
LTY	**Liberty**	**6.91**	**113**	*e*Pn	**Pn**	**19 12 41.4**	**+0.1**
BMBC	**Bull Mountain**	**7.40**	**37**	*e*Pn	**Pn**	**19 12 50.6**	**+2.7**
BMBC	**Bull Mountain**	**7.40**	**37**	Pn	**Pn**	**19 12 50.6**	**+2.7**
BMBC	**Bull Mountain**	**7.40**	**37**	Pn	**Pn**	**19 12 50.6**	**+2.7**
H04D	**Lebanon**	**7.64**	**137**	P	**Pn**	**19 12 53.7**	**+2.5**
	baz=322						
G05D	**Wamic, OR**	**7.78**	**128**	P	**Pn**	**19 12 56.1**	**+2.9**
	baz=314						
I03D	**Drain, OR**	**8.07**	**143**	P	**Pn**	**19 12 60.0**	**+2.9**
	baz=328						
DLBC	**Dease Lake**	**8.09**	**360**	Pn	**Pn**	**19 12 59.9**	**+2.5**
	0.5nm,0.3s,baz=188,slow=14,SNR=7.0						
DLBC				Lg	Lg	19 15 11.1	
	0.2nm,0.3s,baz=108,slow=20,SNR=2.3						
DLBC				LR	LR	19 15 56.3	
	comp=Z,754nm,18.4s,baz=213,slow=37						
DLBC	**Dease Lake**	**8.09**	**360**	*e*Pn	**Pn**	**19 12 58.9**	**+1.5**
DLBC	**Dease Lake**	**8.09**	**360**	Pn	**Pn**	**19 12 59.8**	**+2.4**
DLBC	**Dease Lake**	**8.09**	**360**	Pn	**Pn**	**19 12 59.8**	**+2.4**
C09A	**Chrisman Ranch**	**8.12**	**104**	*e*Pn	**Pn**	**19 12 58.4**	**+0.5**
I04A	**Tendick Farm,**	**8.37**	**139**	P	**Pn**	**19 13 03.6**	**+2.4**
	baz=324						
NEW	**Newport**	**8.68**	**99**	Pn	**Pn**	**19 13 06.6**	**+1.1**
	0.3nm,0.3s,baz=291,slow=15,SNR=3.2						
NEW				Lg	Lg	19 15 30.7	
	0.1nm,0.3s,baz=254,slow=20,SNR=2.4						
NEW	**Newport**	**8.68**	**99**	P	**Pn**	**19 13 06.9**	**+1.4**
	baz=289						
K02D	**Willamette Mer**	**8.83**	**148**	P	**Pn**	**19 13 10.4**	**+2.8**
	baz=333						
J04D	**Umpqua Nationa**	**8.95**	**140**	P	**Pn**	**19 13 12.6**	**+3.3**
	baz=326						
PINE	**Pine Mountain**	**9.03**	**133**	*e*Pn	**Pn**	**19 13 10.4**	**0.0**
HUMO	**Hull Mountain**	**9.16**	**145**	*e*Pn	**Pn**	**19 13 12.0**	**0.0**
J05D	**Fort Rock, OR**	**9.29**	**136**	P	**Pn**	**19 13 16.8**	**+2.9**
	baz=323,SNR=12						
L04D	**Klamath Falls**	**9.73**	**144**	P	**Pn**	**19 13 23.0**	**+2.9**
	baz=330						
YBH	**Yreka Blue Hor**	**10.01**	**147**	Pn	**Pn**	**19 13 26.5**	**+2.8**
	0.3nm,0.3s,baz=334,slow=16,SNR=6.5						
YBH				LR	LR	19 16 46.9	
	comp=Z,1μm,19.8s,baz=334,slow=35						
YBH	**Yreka Blue Hor**	**10.01**	**147**	*e*Pn	**Pn**	**19 13 24.1**	**+0.3**
M04C	**Macdoel**	**10.29**	**143**	P	**Pn**	**19 13 30.6**	**+3.0**
	baz=329						
J08A	**Circle Bar Ran**	**10.55**	**127**	*e*Pn	**Pn**	**19 13 31.1**	**-0.1**
N02D	**Trinity Center**	**10.69**	**149**	P	**Pn**	**19 13 36.3**	**+3.3**
	baz=334						
MOD	**Modoc Plateau**	**10.81**	**138**	*e*Pn	**Pn**	**19 13 36.2**	**+1.4**
WDC	**Whiskeytown Da**	**11.10**	**149**	*e*Pn	**Pn**	**19 13 39.9**	**+1.4**
WVOR	**Wild Horse Val**	**11.15**	**131**	*e*Pn	**Pn**	**19 13 40.8**	**+1.4**
MSO	**Missoula**	**11.22**	**102**	P	**Pn**	**19 13 43.3**	**+3.1**
	baz=294						
O02D	**Mt. Diablo Mer**	**11.38**	**151**	P	**Pn**	**19 13 46.3**	**+3.7**
	baz=336						
O03E	**Paynes Creek**	**11.60**	**147**	P	**Pn**	**19 13 49.1**	**+3.6**
	baz=333						
BEKR	**Beckworth**	**12.51**	**143**	*e*Pn	**Pn**	**19 13 57.9**	**-0.1**
HLID	**Hailey**	**12.63**	**117**	P	**Pn**	**19 14 01.9**	**+2.3**
	baz=308						
PAHR	**Pah Rah Range**	**13.03**	**141**	*e*Pn	**Pn**	**19 14 04.3**	**-0.7**
AFDM	**Forest Hills D**	**13.09**	**147**	*e*Pn	**Pn**	**19 14 05.5**	**-0.3**
VCNR	**Virginia City**	**13.27**	**143**	*e*Pn	**Pn**	**19 14 08.3**	**-0.2**
BMN	**Battle Mountai**	**13.38**	**133**	*e*Pn	**Pn**	**19 14 10.9**	**+1.1**
EGMT	**Eagleton**	**13.45**	**92**	*e*Pn	**Pn**	**19 14 12.0**	**+1.2**
EGMT	**Eagleton**	**13.45**	**92**	P	**Pn**	**19 14 13.0**	**+2.2**
	baz=288						
YERR	**Yerington**	**13.70**	**142**	*e*Pn	**Pn**	**19 14 14.4**	**+0.1**
WAKR	**Walker**	**14.04**	**144**	*e*Pn	**Pn**	**19 14 20.0**	**+1.0**
ELK	**Elko**	**14.11**	**127**	Pn	**P**	**19 14 24.8**	**-2.9**
	0.1nm,0.3s,baz=333,slow=16,SNR=3.8						
ELK	**Elko**	**14.11**	**127**	*e*Pn	**Pn**	**19 14 19.5**	**-0.4**
KVN	**Kaiserville**	**14.11**	**139**	*e*Pn	**Pn**	**19 14 19.7**	**-0.2**
CMB	**Columbia Colle**	**14.11**	**147**	*e*Pn	**Pn**	**19 14 19.0**	**-0.8**
RYN	**Ryan**	**14.29**	**141**	*e*Pn	**Pn**	**19 14 21.8**	**-0.6**
NV01	**Mina Array Sit**	**14.55**	**141**	*e*P	**Pn**	**19 14 29.0**	**+3.0**
NVAR	**Mina Array Bea**	**14.55**	**141**	Pn	**Pn**	**19 14 29.0**	**+3.0**
	0.1nm,0.3s,baz=320,slow=11,SNR=20						
NV11	**Mina Array Sit**	**14.61**	**140**	*e*Pn	**Pn**	**19 14 26.0**	**-0.7**
DAWY	**Dawson**	**14.62**	**344**	*e*Pn	**Pn**	**19 14 27.0**	**+0.4**
YKA	**Yellowknife Ar**	**14.79**	**29**	Pn	**Pn**	**19 14 28.6**	**-0.2**
	0.1nm,0.3s,baz=221,slow=11,SNR=4.6						
YKA				LR	LR	19 21 00.9	
	comp=Z,22nm,20.8s,baz=220,slow=40						
YKB5	**Yellowknife Ar**	**14.79**	**29**	*e*Pn	**Pn**	**19 14 28.6**	**-0.2**
RLMT	**Red Lodge**	**14.89**	**103**	*e*Pn	**Pn**	**19 14 31.8**	**+1.2**
RLMT	**Red Lodge**	**14.89**	**103**	P	**Pn**	**19 14 33.4**	**+2.8**
	baz=298						
MDPB	**Devils Postpil**	**14.94**	**144**	*e*Pn	**Pn**	**19 14 31.1**	**-0.2**
SCM	**Sheep Creek Mo**	**14.95**	**327**	*e*Pn	**Pn**	**19 14 31.0**	**0.0**
OMMB	**Old Mammoth Mi**	**14.99**	**144**	*e*Pn	**Pn**	**19 14 33.9**	**+1.9**
KNK	**Knik Glacier**	**15.08**	**324**	*e*Pn	**P**	**19 14 36.0**	**-2.3**
	34nm,1.3s						
KDAK	**Kodiak Island**	**15.13**	**308**	Pn	**Pn**	**19 14 33.0**	**-0.5**
	0.1nm,0.3s,baz=124,slow=7.3,SNR=2.4						
KDAK				LR	LR	19 18 55.8	
	comp=Z,1μm,20.8s,baz=150,slow=32						
KDAK	**Kodiak Island**	**15.13**	**308**	*e*Pn	**P**	**19 14 37.0**	**-1.8**
	26nm,1.4s						
BGU	**Big Grassy Mou**	**15.14**	**122**	*e*P	**Pn**	**19 14 36.8**	**+2.9**
	16nm,1.4s						
PAX	**Paxson**	**15.16**	**332**	*e*Pn	**Pn**	**19 14 35.1**	**+1.2**
	15nm,1.6s						
CNPM	**China Poot**	**15.19**	**315**	*e*Pn	**Pn**	**19 14 36.5**	**+2.2**
	24nm,1.3s						
SML	**Sawmill**	**15.29**	**326**	*e*Pn	**P**	**19 14 38.3**	**-2.2**
	28nm,1.4s						
DOT	**Dot Lake**	**15.30**	**336**	*e*Pn	**Pn**	**19 14 36.2**	**+0.5**
	9.8nm,1.3s						
OHAK	**Old Harbor**	**15.32**	**306**	*e*P	**P**	**19 14 39.6**	**-1.2**
	22nm,1.4s						
PMR	**Palmer**	**15.45**	**324**	*e*Pn	**P**	**19 14 39.5**	**-2.7**
	31nm,1.5s						
GHO	**Glory Hole Cre**	**15.48**	**325**	*e*P	**Pn**	**19 14 39.2**	**+1.1**
	19nm,1.3s						
HWUT	**Hardware Ranch**	**15.50**	**117**	*e*Pn	**Pn**	**19 14 38.1**	**-0.5**
	12nm,1.0s						
RIDG	**Independent Ri**	**15.58**	**335**	*e*P	**P**	**19 14 42.5**	**-1.3**
	23nm,1.2s						
EGAK	**Eagle**	**15.60**	**342**	*e*Pn	**P**	**19 14 42.0**	**-1.9**
	13nm,1.4s						
TIN	**Tinemaha, Big**	**15.77**	**143**	P	**Pn**	**19 14 45.0**	**+2.9**
	baz=331,SNR=6.1						
DUG	**Dugway, Tooele**	**15.77**	**124**	*e*P	**Pn**	**19 14 44.3**	**+2.2**
	21nm,1.4s						
DUG	**Dugway, Tooele**	**15.77**	**124**	P	**Pn**	**19 14 44.4**	**+2.2**
	baz=316						
R11A	**Troy Canyon, C**	**15.80**	**134**	*e*Pn	**Pn**	**19 14 43.6**	**+1.1**
	12nm,1.4s						
R11A	**Troy Canyon, C**	**15.80**	**134**	P	**Pn**	**19 14 45.0**	**+2.5**
	baz=324,SNR=8.6						
BW06	**Boulder Array**	**15.96**	**111**	P	**Pn**	**19 14 46.5**	**+1.9**
	baz=306						
PDAR	**Pinedale Array**	**15.96**	**111**	LR	LR	19 20 40.1	
	comp=Z,237nm,18.7s,baz=310,slow=36						
SUA	**Susitna One**	**15.99**	**322**	*e*P	**P**	**19 14 48.2**	**-0.3**
	22nm,1.1s						
GRAC	**Grapevine Rang**	**16.16**	**141**	P	**P**	**19 14 49.9**	**-0.4**
	baz=330,SNR=9.5						
PAGB	**Antelope Grade**	**16.25**	**150**	*e*P	**Pn**	**19 14 49.4**	**+1.2**
	28nm,1.1s						
NLU	**North Lily Min**	**16.34**	**123**	*e*P	**Pn**	**19 14 51.2**	**+1.7**
	16nm,1.3s						
CWC	**Cottonwood Cre**	**16.37**	**144**	P	**Pn**	**19 14 52.2**	**+2.4**
	baz=332						
EPYK	**Eagle Plains**	**16.41**	**350**	*e*P	**P**	**19 14 52.8**	**-0.2**
	15nm,1.2s						
PSUT	**Pine Spring**	**16.48**	**130**	*e*P	**P**	**19 14 53.6**	**-0.5**
	24nm,1.3s						
RND	**Reindeer**	**16.54**	**329**	*e*P	**P**	**19 14 53.5**	**-0.9**
	17nm,1.2s						
VES	**Vestal, Richgr**	**16.54**	**147**	P	**P**	**19 14 54.6**	**+0.1**
	baz=335						
TPNV	**Topopah Spring**	**16.67**	**138**	*e*P	**Pn**	**19 14 54.3**	**+0.7**
	60nm,1.3s						
TPNV	**Topopah Spring**	**16.67**	**138**	P	**Pn**	**19 14 55.8**	**+2.1**
	baz=328,SNR=30						
HDA	**Harding Lake**	**16.69**	**334**	*e*P	**P**	**19 14 56.0**	**0.0**
	6.3nm,1.0s						
DAC	**Darwin (Calif)**	**16.70**	**143**	*e*P	**Pn**	**19 14 56.2**	**+2.2**
MCK	**McKinley**	**16.79**	**330**	*e*P	**P**	**19 14 56.5**	**-0.7**
	35nm,1.5s						
FURC	**Furnace Creek,**	**16.82**	**141**	P	**P**	**19 14 58.1**	**+0.5**
	baz=330						
ISA	**Isabella, Lake**	**16.91**	**146**	*e*P	**Pn**	**19 14 58.3**	**+1.7**
ISA	**Isabella, Lake**	**16.91**	**146**	P	**P**	**19 14 60.0**	**+1.2**
	baz=334,SNR=14						
MPMC	**Manual Prospec**	**16.93**	**143**	P	**P**	**19 14 59.6**	**+0.6**
	baz=332,SNR=16						
ILAR	**Eielson Array**	**16.95**	**335**	Pn	**P**	**19 14 57.5**	**-1.4**
	0.1nm,0.3s,baz=150,slow=10,SNR=9.9						
ILAR				LR	LR	19 21 01.8	
	comp=Z,407nm,18.8s,baz=144,slow=36						
ILB	**Eielson Array**	**16.95**	**335**	*e*Pn	**P**	**19 14 57.6**	**-1.3**
	12nm,1.5s						
WRH	**Wood River Hil**	**17.06**	**333**	*e*P	**P**	**19 15 00.5**	**+0.3**
	16nm,1.3s						
CCB	**Clear Creek Bu**	**17.11**	**333**	*e*P	**P**	**19 15 00.7**	**+0.1**
	9.9nm,1.2s						
PKM	**Mcpherson Peak**	**17.16**	**150**	P	**P**	**19 15 03.3**	**+1.7**
	baz=338						
KTH	**Kantishna Hill**	**17.33**	**328**	*e*P	**P**	**19 15 02.9**	**-0.3**
	44nm,1.5s						
LRMC	**Laurel Mtn Rad**	**17.37**	**144**	P	**P**	**19 15 05.1**	**+1.3**
	baz=333						
PPLA	**Purkeypile**	**17.38**	**325**	*e*P	**P**	**19 15 03.2**	**-0.6**
	36nm,1.6s						
P17A	**Butcher Ranch,**	**17.41**	**121**	*e*P	**P**	**19 15 04.4**	**+0.1**
	24nm,1.1s						
CCUT	**Cedar City**	**17.49**	**131**	*e*P	**Pn**	**19 15 04.9**	**+0.9**
	27nm,1.4s						
SHPR	**Sheep Range**	**17.51**	**137**	*e*P	**Pn**	**19 15 05.3**	**+1.0**
	26nm,1.5s						
FFC	**Flin Flon**	**17.54**	**65**	*e*P	**P**	**19 15 07.0**	**+1.5**
	94nm,0.9s						
SHOC	**Shoshone, Teco**	**17.55**	**140**	P	**P**	**19 15 07.2**	**+1.5**
	baz=330						
SZCU	**Shurtz Canyon**	**17.59**	**130**	*e*P	**Pn**	**19 15 05.9**	**+0.6**
	36nm,1.6s						
CAST	**Castle Rocks**	**17.65**	**326**	*e*P	**P**	**19 15 06.4**	**-0.3**
	21nm,1.5s						
MTPU	**Mount Pierson**	**17.70**	**127**	*e*P	**Pn**	**19 15 07.8**	**+1.0**
	30nm,1.6s						
BPAW	**Bear Paw Mtn.**	**17.71**	**329**	*e*P	**P**	**19 15 07.4**	**+0.1**
	24nm,1.4s						
EDW2	**Edwards Air Fo**	**17.79**	**146**	P	**P**	**19 15 10.0**	**+1.6**
	baz=334						
SVW2	**Sparrevohn**	**17.83**	**317**	*e*Pn	**Pn**	**19 15 07.8**	**-0.1**
	16nm,1.2s						
GSC	**Goldstone, Bar**	**17.86**	**142**	*e*P	**Pn**	**19 15 09.5**	**+1.0**
	15nm,1.1s						
GSC	**Goldstone, Bar**	**17.86**	**142**	P	**P**	**19 15 11.5**	**+2.3**
	baz=332,SNR=8.1						
K22A	**Casper**	**17.86**	**107**	*e*Pn	**Pn**	**19 15 07.4**	**-1.2**
	58nm,0.9s						
CHGN	**Chignik**	**17.89**	**300**	*e*P	**Pn**	**19 15 08.7**	**+0.1**
	23nm,1.3s						
LCMT	**Little Creek M**	**17.98**	**132**	*e*P	**Pn**	**19 15 10.1**	**+0.1**
	18nm,1.1s						
FYU	**Fort Yukon**	**18.00**	**340**	*e*P	**P**	**19 15 11.5**	**+1.1**
	34nm,1.4s						
INK	**Inuvik**	**18.08**	**356**	P	**P**	**19 15 12.8**	**+1.5**
	0.3nm,0.3s,baz=198,slow=9.6,SNR=3.8						
INK	**Inuvik**	**18.08**	**356**	*e*P	**P**	**19 15 11.7**	**+0.4**
	8.7nm,1.3s						
PKCU	**Pink Cliffs**	**18.09**	**129**	*e*P	**Pn**	**19 15 12.5**	**+0.9**
	29nm,1.1s						
TUQ	**Turquoise Moun**	**18.09**	**140**	P	**P**	**19 15 13.7**	**+1.8**
	baz=330,SNR=10						
KNB	**Kanab**	**18.18**	**131**	*e*P	**P**	**19 15 13.5**	**+0.7**
	16nm,1.2s						
MLY	**Manley**	**18.26**	**331**	*e*P	**Pn**	**19 15 12.6**	**-0.6**
	28nm,1.6s						
HEC	**Hector,Ludlow**	**18.46**	**142**	P	**Pn**	**19 15 18.0**	**+2.2**
	baz=332						
LDFC	**Landfair**	**18.74**	**139**	*e*P	**P**	**19 15 18.1**	**-0.8**
	48nm,1.4s						
GMRC	**Granite Mounta**	**18.77**	**141**	P	**Pn**	**19 15 21.4**	**+1.8**
	baz=330,SNR=8.6						
TTA	**Tatalina**	**18.87**	**322**	*e*P	**P**	**19 15 19.9**	**-0.2**
	15nm,1.3s						
U15A	**North Rim**	**18.90**	**131**	*e*P	**P**	**19 15 21.2**	**+0.3**
	11nm,1.0s						
SDPT	**Sand Point**	**18.96**	**297**	*e*P	**Pn**	**19 15 23.7**	**+1.9**
	42nm,1.4s						
W13A	**Hualapai Mount**	**19.25**	**136**	*e*P	**P**	**19 15 24.7**	**0.0**
	6.3nm,0.9s						
BELC	**Belle Mtn. Jos**	**19.32**	**143**	P	**Pn**	**19 15 27.4**	**+1.1**
	baz=332,SNR=8.6						
PFO	**Pinyon Flats O**	**19.48**	**144**	P	**Pn**	**19 15 29.6**	**+1.3**
	0.1nm,0.3s,baz=336,slow=9.3,SNR=9.4						
PFO	**Pinyon Flats O**	**19.48**	**144**	*e*P	**P**	**19 15 26.8**	**-0.3**
	30nm,1.4s						
PFO	**Pinyon Flats O**	**19.48**	**144**	P	**Pn**	**19 15 29.6**	**+1.3**
	baz=333						
IRM	**Iron Mountain**	**19.52**	**140**	P	**Pn**	**19 15 29.4**	**+0.8**
	baz=331,SNR=12						
COLD	**Coldfoot**	**19.71**	**337**	*e*P	**Pn**	**19 15 30.4**	**-0.2**
	20nm,1.6s						
PDMCI	**Parker Dam,Lak**	**19.81**	**138**	P	**Pn**	**19 15 33.0**	**+0.9**
	baz=329						
BC3	**Big Chuckawall**	**19.84**	**142**	P	**Pn**	**19 15 33.4**	**+0.9**
	baz=332,SNR=11						
WUAZ	**Wupatki**	**20.08**	**131**	*e*P	**P**	**19 15 34.8**	**+1.2**
	24nm,1.3s						
WUAZ	**Wupatki**	**20.08**	**131**	P	Pn	19 15 35.3	0.0
	baz=324,SNR=5.4						
Y12C	**Blythe**	**20.13**	**140**	*e*P	**P**	**19 15 34.6**	**+0.7**
	23nm,1.3s						
Y12C	**Blythe**	**20.13**	**140**	P	Pn	19 15 36.4	+0.6
	baz=330						
MONP2	**Monument Peak**	**20.14**	**145**	P	**P**	**19 15 36.1**	**+1.7**
	baz=334						
BAR	**Barrett**	**20.24**	**146**	*e*P	**P**	**19 15 35.5**	**+0.3**
	22nm,1.4s						
MVCO	**Mesa Verde**	**20.26**	**122**	*e*P	**P**	**19 15 36.9**	**+1.3**
	53nm,1.6s						
SWSC	**Sam W. Stewart**	**20.33**	**144**	P	**P**	**19 15 37.8**	**+1.6**
	baz=333						
IKP	**In-Ko-Pah, Jac**	**20.48**	**145**	P	**P**	**19 15 39.7**	**+1.8**
	baz=334						
GLA	**Glamis**	**20.61**	**141**	*e*P	**P**	**19 15 40.2**	**+0.9**
	36nm,1.4s						
GLA	**Glamis**	**20.61**	**141**	P	**P**	**19 15 41.1**	**+1.8**
	baz=332						
Y14A	**Wickenburg**	**20.62**	**136**	*e*P	**P**	**19 15 40.0**	**+0.6**
	22nm,1.2s						
TOLK	**Toolik Lake Re**	**20.66**	**340**	*e*P	Pn	19 15 41.2	-0.7
	25nm,1.4s						
S22A	**4UR Ranch, Cre**	**20.80**	**118**	P	Pn	19 15 43.3	-0.6
	baz=315						
X16A	**Lo Mia Camp, P**	**20.93**	**133**	*e*P	**P**	**19 15 43.7**	**+0.8**
	10nm,1.0s						
W18A	**Petrified Fore**	**21.20**	**128**	*e*P	**P**	**19 15 47.1**	**+1.2**
	48nm,1.2s						
W18A	**Petrified Fore**	**21.20**	**128**	P	**P**	**19 15 47.7**	**+1.8**
	baz=322						
113A	**Mohawk Valley,**	**21.29**	**140**	*e*P	**P**	**19 15 46.7**	**+0.1**
	5.0nm,0.9s						
SDCO	**Great Sand Dun**	**21.55**	**116**	*e*P	**P**	**19 15 50.2**	**+0.6**
	18nm,1.6s						
SDCO	**Great Sand Dun**	**21.55**	**116**	P	**P**	**19 15 51.2**	**+1.5**
	baz=314						
OGNE	**Ogallala**	**21.60**	**105**	P	**P**	**19 15 50.8**	**+0.9**
	baz=305						

ULM	Lac du Bonnet	21.70	77	P	P	19 15 53.7	+2.9
	3.9nm,0.6s,baz=286,slow=9.4,SNR=4.2						
ULM				LR	LR	19 24 25.0	
	comp=Z,434nm,21.4s,baz=280,slow=37						
ULM	Lac du Bonnet	21.70	77	eP	P	19 15 52.9	+2.0
	27nm,1.1s						
FCC	Fort Churchill	22.22	54	eP	P	19 15 58.3	+1.9
	23nm,1.1s						
214A	Organ Pipe Nat	22.40	139	P	P	19 16 00.5	+1.9
	baz=330						
T25A	Trinidad	22.60	116	P	P	19 16 02.0	+1.2
	baz=314						
TUC	Tucson	22.99	134	eP	P	19 16 03.4	-1.4
	27nm,1.4s						
TUC	Tucson	22.99	134	P	P	19 16 06.7	+1.9
	baz=327						
ANMO	Albuquerque	23.05	123	P	P	19 16 07.6	+2.1
	3.6nm,0.9s,baz=313,slow=11,SNR=12						
ANMO	Albuquerque	23.05	123	eP	P	19 16 05.5	0.0
	8.9nm,1.3s						
ANMO	Albuquerque	23.05	123	P	P	19 16 06.7	+1.2
	baz=319						
BNM	Barren Site	23.56	125	eP	P	19 16 10.7	0.0
ECSD	EROS Data Cent	23.56	93	eP	P	19 16 11.5	+1.0
	6.0nm,0.8s						
ECSD	EROS Data Cent	23.56	93	P	P	19 16 11.9	+1.4
	baz=298						
121A	Cookes Peak, D	24.24	129	P	P	19 16 18.6	+1.3
	baz=324						
EYMN	Ely	25.12	80	P	P	19 16 24.7	-0.1
	baz=290						
AMTX	Amarillo	25.75	116	P	P	19 16 31.3	+0.5
	baz=316						
MSTX	Muleshoe	25.80	119	eP	P	19 16 30.7	-0.5
	8.2nm,1.0s						
MSTX	Muleshoe	25.80	119	P	P	19 16 32.1	+0.9
	baz=318						
WMOK	Wichita Mounta	27.55	113	P	P	19 16 48.1	+1.2
	baz=314						
TXAR	Lajitas Array	28.90	127	P	P	19 17 01.1	+2.0
	2.1nm,1.0s,baz=318,slow=5.2,SNR=11						
TXAR				LR	LR	19 29 10.9	
	comp=Z,288nm,20.1s,baz=0.0,slow=38						
JCT	Junction City	30.07	120	P	P	19 17 10.6	+1.2
	baz=320						
MIAR	Mount Ida	30.82	107	P	P	19 17 18.1	+2.2
	baz=312						
W41B	Gary Mavity, V	31.22	105	P	P	19 17 21.0	+1.5
	baz=311						
SCHQ	Schefferville	37.48	58	LR	LR	19 34 15.3	
	comp=Z,228nm,20.9s,baz=296,slow=37						
PEA1	Petropavlovsk-	43.09	303	eP	P	19 19 00.5	+0.5
PETK	Petropavlovsk-	43.09	303	P	P	19 19 00.5	+0.5
	1.2nm,0.7s,baz=78,slow=13,SNR=3.3						
PETK				LR	LR	19 34 13.7	
	comp=Z,93nm,21.6s,baz=70,slow=32						
TIXI	Tiksi	46.42	335	LR	LR	19 40 43.2	
	comp=Z,74nm,18.1s,baz=354,slow=38						
SPITS	Spitsbergen Ar	50.09	9	LR	LR	19 42 03.3	
	comp=Z,104nm,18.3s,baz=335,slow=37						
H11N2	WAKE ISLAND Hy	57.94	262	T	T	20 23 27.9	
	baz=42,slow=75,SNR=136						
H11N3	WAKE ISLAND Hy	57.94	262	T	T	20 23 30.3	
	baz=42,slow=75,SNR=162						
H11N1	WAKE ISLAND Hy	57.96	262	T	T	20 23 27.8	
	baz=42,slow=75,SNR=152						
H11S1	WAKE ISLAND Hy	58.97	262	T	T	20 24 50.7	
	baz=52,slow=78						
H11S2	WAKE ISLAND Hy	58.98	262	T	T	20 24 51.8	
	baz=52,slow=78						
H11S3	WAKE ISLAND Hy	58.98	262	T	T	20 24 57.5	
	baz=52,slow=78						
TAOE	Nuku Hiva Isla	59.63	192	eLR	LR	19 38 33.0	
	comp=Z,169nm,24.5s						
USRK	Ussuriysk Ar.	62.00	306	LR	LR	19 47 35.2	
	comp=Z,56nm,20.2s,baz=32,slow=36						
MJAR	Matsushiro Arr	63.94	296	LR	LR	19 45 09.4	
	comp=Z,28nm,21.8s,baz=165,slow=32						
NB200	NORSAR Array S	64.67	20	eP	P	19 21 38.8	+1.2
NOA	NORSAR Array B	64.67	20	P	P	19 21 38.8	+1.2
	0.4nm,0.8s,baz=331,slow=5.9,SNR=3.2						
NOA				LR	LR	19 48 50.1	
	comp=Z,79nm,19.7s,baz=335,slow=35						
FIA0	FINESS Array S	66.91	12	eP	P	19 21 53.3	+1.3
FINES	FINESS Array B	66.91	12	P	P	19 21 53.3	+1.3
	1.2nm,0.8s,baz=324,slow=6.9,SNR=4.8						
FINES				LR	LR	19 52 13.7	
	comp=Z,72nm,18.4s,baz=350,slow=37						
PMOR	Pomariorio Ree	66.96	199	eT	T	20 34 17.6	
	11nm,0.3s						
TLY	Talaya	68.61	327	LR	LR	19 53 24.9	
	comp=Z,102nm,19.8s,baz=0.0,slow=37						
KSRS	Korea Array	68.99	304	LR	LR	19 50 15.0	
	comp=Z,20nm,21.4s,baz=44,slow=34						
PPT	Papeete	69.80	200	LR	LR	19 45 33.0	
	comp=Z,84nm,19.8s,baz=359,slow=30						
PPT2	Papeete2	69.82	200	eLR	LR	19 43 20.6	
	comp=Z,116nm,26.2s						
SONM	Songino Array	70.80	324	LR	LR	19 53 53.3	
	comp=Z,144nm,20.0s,baz=32,slow=36						
ZAA1	Zalesovo Array	72.01	339	eP	P	19 22 23.2	-0.4
ZALV	Zalesovo Beam	72.02	339	P	P	19 22 23.3	-0.4
	0.6nm,0.5s,baz=10,slow=3.5,SNR=3.6						
ZALV				LR	LR	19 56 07.0	
	comp=Z,66nm,21.3s,baz=68,slow=38						
HHC	Hu-ho-hao-te	74.39	316	P	P	19 22 38.5	+0.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GERES	GERESS Array B	76.38	24	LR	LR	19 58 10.4	
	comp=Z,58nm,19.5s,baz=326,slow=37						
AKASG	Malin Array Be	77.77	13	P	P	19 22 58.0	+1.1
	comp=Z,0.5nm,0.4s,baz=354,slow=5.4,SNR=3.7						
AKASG				LR	LR	19 57 51.6	
	comp=Z,69nm,18.8s,baz=300,slow=36						
AKBB	Malin Array Si	77.77	13	eP	P	19 22 57.0	+0.1
	comp=Z,7.4nm,1.5s						
MK32	Makanchi Array	79.27	338	eP	P	19 23 05.0	-0.4
MKAR	Makanchi Array	79.27	338	P	P	19 23 05.0	-0.4
	comp=Z,1.0nm,0.6s,baz=30,slow=5.1,SNR=14						
MKAR				LR	LR	20 02 01.2	
	comp=Z,100nm,18.7s,baz=14,slow=39						
WMQ	Urumqi	80.61	333	eP	P	19 23 15.5	+2.8
WMQ				LR	LR		
	comp=N,300nm,28.8s						
WMQ				LR	LR		
	comp=E,300nm,29.0s						
WMQ				LR	LR		
	comp=Z,72nm,29.2s						
LZH	Lanzhou	81.70	319	eP	P	19 23 17.3	-1.5
LZH				pP	pP	19 23 23.0	+3.3
LZH				sP	pwP	19 23 26.8	+4.3
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
KBZ	Khabaz	86.08	5	LR	LR	20 04 34.2	
	comp=Z,23nm,18.0s,baz=330,slow=37						
KMI	Kunming	91.55	314	P	P	19 24 07.0	-0.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BDFB	Brasilia	96.89	106	LR	LR	20 14 53.1	
	comp=Z,32nm,18.3s,baz=157,slow=40						
CMAR	Chiang Mai Arr	99.06	314	LR	LR	20 12 53.0	
	comp=Z,46nm,18.2s,baz=28,slow=38						

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*DDA **27** 19:19:33.8, 39°.38N×40°.86E, h7^{km}±1^{km}, ML2.5*
*ISK **27** 19:19:33.2, 39°.37N×40°.91E, h13^{km}, ML2.1/6*
*ISCJB **27** 19:19:34.0±0.5, 39°.38N±0°.03×40°.90E±0°.04, h10^{km}±5^{km},*
Error ellipse: s-maj=5.6km s-min=5.2km az=3.5
ISC 27 19:19:33.5±1.0**, 39°.37N**±0°.03×**40°.89E**±0°.04**, h12**^{km}±9^{km}**,**
n13, σ0^{s}.34/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARO	Karliova-Bingo	0.14	116	PG	Pg	19 19 36.8	-0.3
KARO				SG	Sg	19 19 39.5	-0.2
ECAT	Cat-ERZURUM	0.24	16	*i* P	Pb	19 19 39.8	-0.2
ECAT				*i* S	Sg	19 19 43.0	+0.6
YEDI	Yedisu-Bingol	0.27	284	PG	Pg	19 19 39.5	+0.3
YEDI				SG	Sb	19 19 44.5	-0.5
BNGB	Bingl	0.41	203	PG	Pg	19 19 41.9	+0.2
BNGB				SG	Sb	19 19 48.6	-0.3
BGOL	Bingol	0.42	204	*i* P	Pb	19 19 42.5	-0.3
BGOL				*i* S	Sb	19 19 49.4	+0.3
BGOL				IAML_P			
	comp=Z,633nm,0.1s						
BNGL	BINGOL	0.47	154	*i* P	Pb	19 19 43.7	0.0
MUSM	Mu-Merkez	0.81	143	*i* P	Pg	19 19 49.1	0.0
ERZN	Erzincan	0.93	284	PG	Pb	19 19 51.6	+0.1
KOPR	Koprukoy-ERZUR	0.97	50	PG	Pb	19 19 52.4	+0.1
TNCL	Tunceli-Merkez	1.07	257	*i* P	Pg	19 19 54.1	-0.1
TNCL				IAML_P			
	comp=Z,185nm,0.2s						
GURO	Guroymak-BITLI	1.21	132	PN	Pb	19 19 56.2	-0.2
KELT	Kelkit	1.48	302	*i* P	Pg	19 20 01.7	-0.1
SRTM	Siirt_Merkez	1.60	149	*i* P	Pg	19 20 04.6	+0.5
SRTM				IAML_P			
	comp=Z,237nm,0.3s						

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*ISCJB **27** 19:27:46.2±1.6, 13°.5N±0°.2×90°.0W±0°.1, h77^{km}±18^{km},*
Error ellipse: s-maj=44.2km s-min=7.1km az=23.4
*SNET **27** 19:27:46.4±0.6, 13°.64N×90°.05W, h66^{km}±4^{km}, ML3.0*
*GCG **27** 19:27:47.1±0.4, 13°.41N×90°.25W, h27^{km}±138^{km}, MD3.5*
ISC 27 19:27:47.9±2.2**, 13°.6N**±0°.2×**89°.99W**±0°.09**, h66**^{km}±18^{km}**,**
n12, σ0^{s}.94/19**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.42	57	eP	Pn	19 27 59.1	-0.9
CEVE				eS	Sn	19 28 09.0	+0.2
CEVE				IAML		19 28 11.1	
	comp=Z,698nm,0.2s						
SBLS	San Blas	0.43	56⇓	eP	Pn	19 27 59.0	-0.9
SBLS				eS	Sn	19 28 09.4	+0.6
RTR	El Retiro	0.45	48	eP	Pn	19 27 59.4	-0.7
SNJE	San Jose	0.46	54	eP	Pn	19 27 59.3	-0.9
CEDA	San Andres	0.61	70	eP	Pn	19 28 00.8	-0.8
LOMA	Loma Larga	0.80	86	eP	Pn	19 28 03.3	-0.4
LOMA				eS	Sn	19 28 16.8	+1.5
LOMA				IAML		19 28 20.1	
	comp=Z,374nm,0.3s						
LFU	La Fuente	0.86	80	eP	Pn	19 28 04.0	-0.6
PCG	Pacaya	0.99	323	eP	Pn	19 28 06.6	+0.2
PCG				eS	Sn	19 28 22.0	+1.9
MTO3	Montecristo	1.01	37	eP	Pn	19 28 05.5	-1.0
PAVA	Las Pavas	1.03	83	eP	Pn	19 28 06.4	-0.3
PAVA				eS	Sn	19 28 21.6	+0.9
FUG	Fuego 3	1.19	316	eP	Pn	19 28 08.2	-0.6
FUG				eS	Sn	19 28 24.7	+0.4
STG3	Santiaguito 3,	1.89	306	eP	Pn	19 28 17.4	-0.7
STG3				eS	Sn	19 28 40.9	-0.3

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*IDC **27** 19:45:41.5±0.9, 55°.53N×162°.48E, h0^{km}, mb3.6/10,*
mb1 3.7/11, mb1mx3.5/37, mbtmp3.5/11, ML2.5/1, MS2.6/1,
Ms1 2.6/1, ms1mx2.1/41, Error ellipse: s-maj=27.0km
s-min=17.6km az=139.0
*KRSC **27** 19:45:42.5±1.0, 55°.38N×162°.94E, h45^{km}±21^{km}, ML4.0*
ISC 27 19:45:41.5±1.4**, 55°.45N**±0°.03×**162°.85E**±0°.04**, h5**^{km}±9^{km}**,**
n54, σ1^{s}.19/76**, mb3.6**/10**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.76	359	eP	Pn	19 45 58.4	-0.5
KBTR				eS	Sn	19 46 11.7	+1.0
KBG	Krutoberegovo	0.81	354	eP	Pn	19 45 59.2	-0.3
KBG				eS	Sn	19 46 12.9	+1.0
MKZ	Mys Kozlova	1.11	216	eP	Pg	19 46 01.5	-1.1
MKZ				eS	Sg	19 46 17.2	+0.2
BZGR	Bezymyannyi-Gr	1.31	293	eP	Pn	19 46 06.2	-0.4
BZGR				eS	Sb	19 46 23.4	-0.4
CIRR	Tsirk	1.36	300	eP	Pg	19 46 07.9	+0.4
CIRR				eS	Sn	19 46 27.3	+1.6
SMKR	Semkarok	1.37	326	eP	Pg	19 46 07.9	+0.2
LGNR	Loginova	1.37	298	P	Pg	19 46 08.0	+0.2
LGNR				eS	Sn	19 46 25.5	-0.8
BZMR	Bezymyannaya	1.42	291	eP	Pg	19 46 08.8	+0.2
TUMD	Tumrok D	1.42	261	eP	Pn	19 46 07.5	-0.5
TUMD				eS	Sb	19 46 25.8	-1.1
BZWR	Bezymyannyi-We	1.43	292	eP	Pg	19 46 08.7	-0.1
BDR	Baidarnaya	1.45	321	eP	Pg	19 46 09.4	+0.2
BDR				eS	Sg	19 46 30.2	+2.3
KRSR	Krestovskiy	1.50	302	P	Pn	19 46 08.9	-0.2
KRSR				eS	Sn	19 46 28.5	-0.6
KZV	Kizimen	1.50	258	P	Pn	19 46 08.9	-0.3
KIRR	Kirishev	1.50	290	eP	Pg	19 46 10.1	-0.2
KLY	Klyuchi	1.51	306	eP	Pn	19 46 08.2	-0.9
KLY				eS	Sn	19 46 26.2	-3.0
KMNR	Kamenistaya	1.51	283	P	Pn	19 46 09.3	0.0
SRKR	Sorokina	1.53	323	eP	Pb	19 46 10.4	+0.1
SRKR				eS	Sg	19 46 30.2	-0.3
TUMR	Tumrok	1.55	265	eP	Pb	19 46 10.6	-0.1
TUMR				eS	Sg	19 46 31.2	0.0
KPT	Kopyto	1.57	290	P	Pb	19 46 10.5	-0.6
KOZ	Kozyrevsk	1.79	291	P	Pb	19 46 14.8	+0.1
KOZ				eS	Sg	19 46 39.1	+0.3
BKI	Bering	1.80	97	eP	Pn	19 46 13.0	-0.2
BKI				eS	Sn	19 46 34.6	-1.9
SRDR	Sredinnyy	1.96	297	eP	Pb	19 46 16.9	-0.9
SRDR				eS	Sg	19 46 43.4	-1.1
ESO	Esso	2.39	283	eP	Pn	19 46 22.2	+0.8
SPN	Mys Shipunski	2.88	216	eP	Pn	19 46 26.3	-1.8
SPN				eS	Sn	19 47 00.6	-2.5
NLC	Nalytchevo	3.07	223	eP	Pn	19 46 31.7	+1.1
NLC				eS	Sn	19 47 09.4	+1.7
SDLR	Sedlovina	3.18	228	eP	Pn	19 46 32.6	+0.3
KRER	Koryakskii	3.22	230	P	Pn	19 46 34.0	+1.1
KRX	Arik	3.23	231	P	Pn	19 46 34.2	+1.2
SMAR	Somma	3.23	229	eP	Pn	19 46 33.2	+0.2
SMAR				eS	Sn	19 47 12.9	+1.0
AVH	Avacha	3.25	229	eP	Pn	19 46 34.7	+1.5
UGLR	Uglovaya	3.26	228	eP	Pn	19 46 33.8	+0.5
KOK	Koryaka	3.28	230	P	Pn	19 46 34.7	+1.1
GNL	Ganaly	3.35	240	eP	Pn	19 46 35.2	+0.5
DALK	Dalny	3.41	226	eP	Pn	19 46 36.0	+0.7
DALK				eS	Sn	19 47 16.6	+0.4
PET	Petropavlovsk	3.46	227	eP	Pn	19 46 37.2	+1.2
PET				eS	Sn	19 47 17.9	+0.6
OSSR	Ossora	3.81	2	eP	Pn	19 46 42.3	+1.5
KRMR	Karymshinskiy	3.82	228	P	Pn	19 46 42.3	+1.4
KRMR				eS	Sn	19 47 27.9	+1.7
PETK	Petropavlovsk-	3.82	234	Pn	Pn	19 46 41.7	+0.7
	2.0nm,0.3s,baz=63,slow=16,SNR=32						
PETK				Sn	Sn	19 47 28.3	+2.0
	baz=73,slow=21,SNR=2.9						
PETK				LR	LR	19 48 16.5	
	comp=Z,78nm,18.6s,baz=63,slow=42						
MTVR	Mutnovka	4.05	225	P	Pn	19 46 46.8	+2.5
APC	Apacha	4.19	235	eP	Pn	19 46 48.0	+2.0
ASAK	Asacha	4.24	226	eP	Pn	19 46 50.1	+3.2
KDTR	Khodutka, Kamc	4.62	220	eP	Pn	19 46 53.5	+1.5
ASAJ	Asahikawa	17.24	237	P	P	19 49 44.8	+0.4
	0.4nm,0.3s,baz=41,slow=11,SNR=5.2						
MAT	Matsushiro	25.28	232	P	P	19 51 07.9	-0.7
MJAR	Matsushiro Arr	25.28	232	P	P	19 51 07.9	-0.7
	2.4nm,0.7s,baz=27,slow=6.8,SNR=19						
ILAR	Eielson Array	26.02	49	P	P	19 51 16.0	+0.9
	0.4nm,0.4s,baz=259,slow=9.8,SNR=5.8						
SONM	Songino Array	34.97	282	P	P	19 52 34.1	-0.4
	0.3nm,0.6s,baz=54,slow=7.3,SNR=2.7						
MKAR	Makanchi Array	48.59	295	P	P	19 54 24.3	-1.4
	0.2nm,0.4s,baz=56,slow=9.1,SNR=4.5						
FINES	FINESS Array B	58.58	337	P	P	19 55 38.5	-0.1
	0.3nm,0.4s,baz=39,slow=9.1,SNR=10						
CMAR	Chiang Mai Arr	60.23	259	P	P	19 55 49.6	-1.0
	0.3nm,0.5s,baz=46,slow=7.5,SNR=3.6						
NOA	NORSAR Array B	61.70	345	P	P	19 55 59.9	-0.2
	0.1nm,0.4s,baz=18,slow=6.8,SNR=3.5						
AKASG	Malin Array Be	67.39	330	P	P	19 56 36.9	-0.5
	0.4nm,0.3s,baz=28,slow=7.1,SNR=6.6						
TXAR	Lajitas Array	68.26	70	P	P	19 56 46.1	+2.7
	0.3nm,0.7s,baz=304,slow=6.4,SNR=3.0						
ASAR	Alice Springs	82.59	207	P	P	19 58 05.5	+0.1
	0.9nm,0.8s,baz=14,slow=4.7,SNR=13						

IDC 27 20:09:50.4±5.0**, 6°.84S**×**132°.63E, h0**^{km}**, mb3.5**/1**,**
mb1 3.4/3**, mb1mx3.2**/21**, mbtmp3.3**/3**, ML3.0**/2**, Error**
ellipse: s-maj=320.4km s-min=33.1km az=75.0,
Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.13	173	Pn	Pn	20 12 58.7	+0.4
	0.1nm,0.3s,baz=354,slow=13,SNR=4.7						
WRA				Sn	Sn	20 15 18.8	-6.4
	0.2nm,0.3s,baz=348,slow=23,SNR=5.9						
ASAR	Alice Springs	16.77	176	Pn	Pn	20 13 46.5	-0.4
	0.0nm,0.3s,baz=352,slow=11,SNR=3.5						
ASAR				Sn	Sn	20 16 46.9	-7.1
	0.0nm,0.3s,baz=354,slow=27,SNR=2.6						
MKAR	Makanchi Array	69.55	326	P	P	20 21 01.2	0.0
	0.2nm,0.4s,baz=113,slow=7.7,SNR=5.2						

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*NSSC **27** 20:13:49.9±0.3, 36°.11N×35°.46E, h352^{km}±34^{km}, ML3.0*
*DDA **27** 20:13:52.4, 36°.95N×35°.63E, h30^{km}±1^{km}, ML3.7*
*NEIC **27** 20:13:53.9±0.0, 36°.94N×35°.61E, h25^{km}, ML3.7(DDA),*
ML3.7(ISK), After ISK.
NEIC Felt at Adana.
*ISK **27** 20:13:53.9, 36°.97N×35°.55E, h21^{km}, ML3.7/31*
*ISCJB **27** 20:13:54.2±0.3, 36°.92N±0°.02×35°.60E±0°.02, h26^{km}±3^{km},*
Error ellipse: s-maj=3.4km s-min=2.7km az=9.0
*NIC **27** 20:13:54.8±0.2, 37°.12N×35°.59E, h25^{km}, mb4.2, ML3.9*
*GII **27** 20:13:55.4±0.0, 36°.95N×35°.63E, h30^{km}, MD3.5/1*
ISC 27 20:13:54.8±0.9**, 36°.98N**±0°.03×**35°.59E**±0°.02**, h23**^{km}±7^{km}**,**
n95, σ0^{s}.87/113**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.13	79	PG	Pb	20 13 59.2	-0.3
CEYT				SG	Sb	20 14 03.0	+0.4
KRTD	Karatas-Adana	0.41	199	PG	Pb	20 14 03.1	-0.3
KRTS	Karatas	0.44	202	PG	Pb	20 14 03.4	-0.6
KARA	Karaisali	0.51	303	PG	Pb	20 14 04.2	-0.8
KARA				SG	Sb	20 14 11.7	-0.3
ANDN	Andirin	0.85	45	*i* P	Pb	20 14 09.2	-1.7
ANDN				IAML_P			
	comp=Z,12μm,0.2s						
MERS	Mersin	0.86	263	PG	Pb	20 14 10.3	-0.8
MERS				SG	Sb	20 14 22.5	+0.3
YAYL	Yayladag	1.04	156	*i* P	Pn	20 14 13.6	-0.4
SAIM	ADANA	1.07	22	*i* P	Pn	20 14 13.7	-0.7
SAIM				IAML_P			
	comp=Z,7μm,0.1s						
YAHY	KAYSERI_Yahyal	1.12	351	*i* P	Pn	20 14 14.3	-0.9
YAHY				IAML_P			
	comp=Z,9μm,0.1s						
KMRS	Kahramanmaras	1.17	63	PN	Pn	20 14 15.3	-0.5
KUZU	Kuzuini	1.21	100	*i* P	Pb	20 14 17.7	+0.6
KUZU				*i* S	Sn	20 14 31.6	-0.5
KERG	Konya-Eregli	1.24	291	*i* P	Pb	20 14 17.1	-0.6
KIZK	Mersin	1.26	247	PN	Pn	20 14 16.8	-0.2
KIZK	Mersin	1.26	247	*i* P	Pn	20 14 16.1	-0.9
GAZ	Gaziantep	1.31	81	PN	Pn	20 14 17.8	0.0
NIG	Nigde	1.36	326	PN	Pn	20 14 18.8	+0.1
SLFK	Silifke-Mersin	1.44	246	PN	Pn	20 14 19.1	-0.3
SILI	Silifke-Mersin	1.47	246	PN	Pn	20 14 19.5	-0.3
GZT	Gaziantep	1.62	76	*i* P	Pn	20 14 22.7	+0.6
KARG	Kargicak-Mersi	1.70	243	PN	Pn	20 14 22.8	-0.2
IKL	Isikli	1.70	245	PN	Pn	20 14 22.5	-0.5
TISA	Tisan-Mersin	1.74	242	PN	Pn	20 14 23.4	-0.1
YESI	Yesilovacik-Me	1.75	244	PN	Pn	20 14 23.5	-0.2
TEPE	Tepekoy-Mersin	1.80	245	PN	Pn	20 14 24.2	-0.2
TEVE	Tevekalti-Mers	1.81	253	PN	Pn	20 14 24.5	0.0
AKKU	Akkuyu-Mersin	1.83	244	PN	Pn	20 14 24.9	+0.1
AKK2	Akkuyu-Mersin	1.84	243	PN	Pn	20 14 25.0	0.0
AKK1	Akkuyu-Mersin	1.85	244	PN	Pn	20 14 24.9	-0.1
EREN	Erenkoy	1.85	219	PN	Pn	20 14 24.3	-0.7
BNN	Bunyan	1.88	6	PN	Pn	20 14 26.2	+0.6
BNN	Bunyan	1.88	6	ePn	Pn	20 14 26.2	+0.6
AVNS	Nevsehir-Avano	1.91	342	*i* P	Pn	20 14 27.0	+1.0
AVNS				IAML_P			
	comp=Z,2μm,0.2s						
GUNE	Kayseri	1.92	1	*i* P	Pn	20 14 26.1	0.0
GUNE				IAML_P			
	comp=Z,4μm,0.2s						
YORU	Yoruktepe-Mers	1.94	245	PN	Pn	20 14 26.0	-0.3
BERE	Bereket-Mersin	2.00	252	PN	Pn	20 14 26.8	-0.5
SULT	Sultanhani-AKS	2.04	307	PN	Pn	20 14 28.5	+0.7
TEKE	Tekeli-Mersin	2.16	248	PN	Pn	20 14 29.0	-0.3
DARE	Darende-Malaty	2.19	43	PN	Pn	20 14 30.2	+0.4
CUGUR	Gurin_SVAS	2.19	37	*i* P	Pn	20 14 31.5	+1.6
PHNC	Paralimni	2.34	213	P	Pn	20 14 31.9	+0.1
	baz=30						
PHNC				S	Sn	20 15 01.2	+1.3
SIRC	Yozgat	2.37	352	*i* P	Pn	20 14 32.7	+0.3
SIRC				IAML_P			
	comp=Z,443nm,0.3s						
YAYX	Yaylak	2.40	325	PN	Pn	20 14 33.4	+0.6
SURC	SANLIURFA_SURC	2.43	92	*i* P	Pn	20 14 32.6	-0.5
SURC				IAML_P			
	comp=Z,1μm,0.3s						
CUALT	Altinyayla-SIV	2.46	22	*i* P	Pn	20 14 34.6	+0.9
CUSAR	Sarkisla-SIVAS	2.48	12	*i* P	Pn	20 14 27.4	-6.5
KIRS	Kırehir-Merke	2.52	329	*i* P	Pn	20 14 35.5	+1.1
SERE	Sereflikochisa	2.53	321	PN	Pn	20 14 35.5	+1.0
URFA	Urfa	2.62	79	PN	Pn	20 14 35.4	-0.4
URFA	Urfa	2.62	79	ePn	Pn	20 14 35.4	-0.4
MAMC	Mammari	2.64	227	P	Pn	20 14 35.6	-0.3
	baz=43						
YOZ	Yozgat	2.66	356	PN	Pn	20 14 37.5	+1.2
CHBY	Cihanbeyli	2.67	308	PN	Pn	20 14 37.1	+0.7
HEKM	Malatya_Hekimh	2.67	44	*i* P	Pn	20 14 37.2	+0.7
HEKM				IAML_P			
	comp=Z,912nm,0.2s						
CSS	Mathiatis	2.72	223	PN	Pn	20 14 36.9	-0.2
CSS	Mathiatis	2.72	223	ePn	Pn	20 14 35.9	-1.2
CSS	Mathiatis	2.72	223	P	Pn	20 14 37.2	+0.1
	baz=39						
CSS				S	Sn	20 15 10.1	+0.8
SANL	SANLIURFA_Merk	2.73	85	*i* P	Pn	20 14 37.0	-0.1
KONT	Konya--Tatoy	2.74	291	PN	Pn	20 14 38.0	+0.7
CUKAN	kangal_SIVAS	2.76	32	*i* P	Pn	20 14 38.4	+0.6
CDAG	Cicekdag	2.80	340	*i* P	Pn	20 14 40.9	+2.6
LADK	Ladik-KONYA	2.83	296	PN	Pn	20 14 39.6	+0.9
ALFC	Alefka	3.03	234	P	Pn	20 14 40.9	-0.4
	baz=50						
ALFC				S	Sn	20 15 17.6	+0.7
BHL	Bhannes	3.07	179	eP	Pn	20 14 41.5	-0.5
SZAC	Souni	3.12	225	P	Pn	20 14 42.9	+0.3
	baz=42						
BR131	Keskin Array S	3.13	331	ePn	Pn	20 14 42.9	0.0
KEMA	Kemaliye	3.23	44	*i* P	Pn	20 14 44.7	+0.5
DQRL	Deir Qamar	3.27	180	eP	Pn	20 14 44.1	-0.6
PPCY	Paphos	3.36	232	P	Pn	20 14 46.1	+0.3
	baz=48						
RCY	Rachaya	3.49	177	eP	Pn	20 14 47.8	+0.1
QASN	Qassioun	3.49	170	eP	Pn	20 14 49.6	+1.9
QASN				eS	Sn	20 15 32.0	+3.7
QASN				AML	AML	20 16 00.7	
	comp=N,83nm,0.4s						
QASN				AML	AML	20 16 05.5	
	comp=E,171nm,0.6s						
BRBR	Barbar	3.58	175	eP	Pn	20 14 49.7	+0.6
BRBR				eS	Sn	20 15 33.3	+2.6
BRBR				AML	AML	20 16 03.3	
	comp=N,51nm,0.7s						
BRBR				AML	AML	20 16 05.6	
	comp=E,34nm,0.6s						
ANTO	Ankara	3.62	324	ePn	Pn	20 14 49.1	-0.3
SHBL	Chebaa	3.63	178	eP	Pn	20 14 49.3	-0.4
TOTH	TOTAH	3.68	169	eP	Pn	20 14 51.5	+1.2
TOTH				eS	Sn	20 15 35.0	+2.0
TOTH				AML	AML	20 15 52.2	
	comp=N,44nm,0.6s						
TOTH				AML	AML	20 15 53.5	
	comp=E,77nm,0.6s						
NATI	Neve Ativ	3.72	178	Pn	Pn	20 14 50.6	-0.1
NATI				Sn	Sn	20 15 33.1	-0.6
GEM	Giv'at Ha'Em	3.77	179	Pn	Pn	20 14 51.3	-0.1
GEM				Sn	Sn	20 15 34.3	-0.7
HNTI	Hanita	3.91	185	Pn	Pn	20 14 52.3	-1.1
HNTI				Sn	Sn	20 15 37.2	-1.3
MMA0B	Mount Meron ar	3.96	182	Pn	Pn	20 14 53.7	-0.5
MMA0B				Sn	Sn	20 15 38.8	-1.2
KSHT	Keshet	4.00	177	Pn	Pn	20 14 55.3	+0.6
ISP	Isparta	4.12	283	ePn	Pn	20 14 57.8	+1.4
ISP	Isparta	4.12	283	Pn	Pn	20 14 58.0	+1.7
BLGI	Bet Lehem HaGe	4.25	184	Pn	Pn	20 14 57.9	-0.2
OFRI	`Ofer	4.38	187	Pn	Pn	20 14 59.5	-0.4
MMLI	Mount Malkishu	4.54	182	Pn	Pn	20 15 01.7	-0.4
MMLI				Sn	Sn	20 15 52.6	-1.5
HMDT	Nahal Hemdat	4.72	181	Pn	Pn	20 15 04.8	+0.3
HMDT				Sn	Sn	20 15 57.8	-0.8
SLTI	Sal'it	4.75	186	Pn	Pn	20 15 05.0	0.0
SLTI				Sn	Sn	20 15 58.3	-1.1
DSI	Dead Sea	5.40	182	Pn	Pn	20 15 14.0	+0.1
AMAZ	Amatzia	5.47	186	Pn	Pn	20 15 15.3	+0.5

AMAZ				Sn	**Sn**	**20 16 16.3**	**-0.7**
YTIR	**Yattir**	**5.62**	**184**	Pn	**Pn**	**20 15 17.4**	**+0.4**
YTIR				Sn	**Sn**	**20 16 20.3**	**-0.6**
MZDA	**Masada**	**5.66**	**182**	Pn	**Pn**	**20 15 17.2**	**-0.2**
KZIT	**Kziot**	**6.14**	**190**	Pn	**Pn**	**20 15 24.0**	**-0.1**
PRNI	**Paran**	**6.63**	**184**	Pn	**Pn**	**20 15 31.1**	**+0.3**
HRFI	**Mount Harif**	**6.95**	**184**	Pn	**Pn**	**20 15 35.1**	**0.0**
MBRI	**Mt Berech**	**7.19**	**185**	Pn	**Pn**	**20 15 38.3**	**-0.3**
EIL	**Elat**	**7.31**	**184**	Pn	**Pn**	**20 15 40.2**	**0.0**

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*IDC **27** 20:16:10.6±0.9, 7°.66N×126°.42E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.6/31, mbtmp3.8/7, MS3.3/1, Ms1 3.2/1, ms1mx2.4/23, Error ellipse: s-maj=46.2km s-min=18.9km az=83.0*

*ISCJB **27** 20:16:11.6±0.8, 7°.7N±0°.1×127°.16E±0°.09, h10^{km}, mb3.7/7, MS3.3/1, Error ellipse: s-maj=17.0km s-min=11.0km az=37.5*

*MAN **27** 20:16:12.9, 7°.72N×127°.15E, h16^{km}, MS3.3*

ISC 27 20:16:12.8±0.9, **7°.75N**±0°.10×**127°.11E**±0°.09, **h10^{km}, n16, σ1^{s}99**/13, **mb3.9**/7, **2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.86**	**300**	⇓iP	**Pg**	**20 16 29.3**	**-0.1**
BIPH						20 16 40.8	
CGP	**Cagayan de Oro**	**2.50**	**287**	⇓eP	**Pn**	**20 16 54.9**	**+1.4**
GSPH	**General Santos**	**2.71**	**233**	eP	**Sn**	**20 17 30.6**	**+1.2**
LLP	**Lapu-Lapu**	**4.02**	**310**	eP	**Pn**	**20 17 15.2**	**+0.7**
LLP						20 18 08.7	
SNPH	**Sibulan**	**4.15**	**293**	eP	**Pn**	**20 17 17.7**	**+1.4**
SNPH						20 18 06.6	
WRA	**Warramunga Arr**	**28.42**	**166**	P	**P**	**20 22 08.9**	**+1.1**
	1.3nm,0.6s,baz=344,slow=12,SNR=7.0						
MJAR	**Matsushiro Arr**	**30.39**	**18**	P	**P**	**20 22 26.8**	**+1.6**
	0.9nm,0.8s,baz=198,slow=10,SNR=3.5						
ASAR	**Alice Springs**	**31.92**	**168**	P	**P**	**20 22 37.9**	**-0.9**
	0.2nm,0.4s,baz=342,slow=7.5,SNR=7.3						
USRK	**Ussuriysk Ar.**	**36.56**	**6**	P	**P**	**20 23 20.0**	**+1.2**
	1.1nm,0.6s,baz=199,slow=7.0,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	**40.32**	**69**	T	T	21 07 49.9	
	baz=261						
H11N2	**WAKE ISLAND Hy**	**40.33**	**69**	T	T	21 07 49.7	
	baz=261						
H11N3	**WAKE ISLAND Hy**	**40.34**	**69**	T	T	21 07 54.0	
	baz=261						
STKA	**Stephens Creek**	**41.76**	**161**	LR	LR	20 45 37.0	
	comp=Z,38nm,20.0s,baz=212,slow=42						
PETK	**Petropavlovsk-**	**51.60**	**23**	P	**P**	**20 25 21.3**	**+2.1**
	1.3nm,0.8s,baz=210,slow=6.5,SNR=3.6						
MKAR	**Makanchi Array**	**54.53**	**324**	P	**P**	**20 25 38.9**	**-2.2**
	0.8nm,0.6s,baz=125,slow=7.8,SNR=12						
MKAR				PcP	**PcP**	**20 26 41.8**	**-2.6**
	0.5nm,0.7s,baz=123,slow=5.3,SNR=2.5						
FINES	**FINESS Array B**	**88.49**	**332**	P	**P**	**20 29 01.9**	**-3.5**
	0.4nm,0.7s,baz=107,slow=8.9,SNR=3.8						

KRSC 27 20:19:00.0±1.8, **49°.12N**×**157°.34E, h30^{km}**±33^{km}**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**2.38**	**352**	eP	Pn	20 19 38.4	+1.5
PAU				eS	Sn	20 20 05.9	+0.9
KDTR	**Khodutka, Kamc**	**2.74**	**10**	eP	Pb	20 19 45.4	-2.8
KDTR				S	Sb	20 20 17.8	-3.5
ASAK	**Asacha**	**3.29**	**6**	eP	Pn	20 19 53.2	+3.7
RUS	**Russkaya**	**3.41**	**12**	eP	Pn	20 19 54.6	+3.6
RUS				eS	Sn	20 20 34.2	+3.9
MTVR	**Mutnovka**	**3.41**	**9**	eP	Pn	20 19 55.3	+4.0
MTVR				eS	Sn	20 20 34.7	+3.9
KRMR	**Karymshinskiy**	**3.75**	**7**	eP	Pn	20 20 00.0	+4.2
KRMR				S	Sb	20 20 45.1	-5.4
PET	**Petropavlovsk**	**4.00**	**11**	eP	Pn	20 20 03.0	+3.8
PET				eS	Sn	20 20 50.6	+5.6
DALK	**Dalny**	**4.02**	**12**	eP	Pn	20 20 03.6	+4.2
DALK				S	Sn	20 20 51.2	+5.7
UGLR	**Uglovaya**	**4.20**	**12**	eP	Pn	20 20 06.7	+4.6
AVH	**Avacha**	**4.25**	**11**	eP	Pn	20 20 07.7	+5.0
NLC	**Nalytchevo**	**4.25**	**17**	S	Sn	20 20 54.8	+3.6
SMAR	**Somma**	**4.25**	**12**	P	Pn	20 20 08.4	+5.5
SMAR				eS	Sn	20 20 58.2	+6.6
KOK	**Koryaka**	**4.26**	**11**	eP	Pn	20 20 07.8	+4.9
SDLR	**Sedlovina**	**4.28**	**13**	eP	Pn	20 20 06.7	+3.6
KRER	**Koryakskii**	**4.29**	**11**	eP	Pn	20 20 07.5	+4.2
KRX	**Arik**	**4.33**	**10**	eP	Pn	20 20 08.5	+4.7
SPN	**Mys Shipunski**	**4.33**	**22**	eP	Pn	20 20 08.7	+5.0
SPN				eS	Sn	20 20 59.6	+6.4
GNL	**Ganaly**	**4.60**	**4**	eP	Pn	20 20 11.0	+3.5
MKZ	**Mys Kozlova**	**6.09**	**25**	eS	Sn	20 21 40.0	+3.6
KZV	**Kizimen**	**6.28**	**16**	eS	Sn	20 21 46.1	+4.8
KBTR	**Krutoberegovo**	**7.84**	**23**	eP	Pn	20 20 56.1	+4.2

NEIC 27 20:23:36.1±0.0, **51°.05N**×**177°.86E, h10^{km}, ML2.6**(AEIC), **After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAEA	**Gareloi East**	**2.25**	**70**	ePn	Pn	20 24 12.8	-0.5
GAEA				eSg	Sb	20 24 43.9	-0.7
TANO	**Tanaga North**	**2.66**	**69**	ePn	Pn	20 24 19.8	+0.9
TASE	**Tanaga Southea**	**2.68**	**71**	ePn	Pn	20 24 20.2	+0.9
TAFP	**Tanaga Falls P**	**2.73**	**70**	ePn	Pn	20 24 20.4	+0.4
TAFP				eSn	Sn	20 24 54.3	+1.2
KIMD	**Kanaga Island**	**3.15**	**75**	ePn	Pn	20 24 26.0	+0.3
ADK	**Adak**	**3.51**	**74**	ePn	Pn	20 24 31.2	+0.6
ADK				eSn	Sn	20 25 12.4	+0.2
ETKA	**Kagalaska Isla**	**3.68**	**75**	ePn	Pn	20 24 33.7	+0.8
GSMY	**Great Sitkin M**	**3.92**	**73**	ePn	Pn	20 24 37.2	+0.8
ATKA	**Atka Island**	**5.08**	**74**	ePn	Pn	20 24 53.1	+0.9

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*ISCJB **27** 20:23:38.9±0.3, 36°.67N±0°.02×97°.36W±0°.03, h10^{km}, Error ellipse: s-maj=3.3km s-min=3.0km az=1.4*

*NEIC **27** 20:23:39.4±0.0, 36°.66N×97°.39W, h5^{km}, ML3.3(TUL), After TUL.*

NEIC Felt at Amber, Chickasha, Ponca City and Tonkawa.

*ANF **27** 20:23:39.6±1.7, 36°.67N×97°.38W, h5^{km}±12^{km}, ML4.0/11, Error ellipse: s-maj=7.5km s-min=5.8km az=42.0*

*TUL **27** 20:23:39.4, 36°.66N×97°.39W, h5^{km}, ML3.3*

ISC 27 20:23:40.2±0.7, **36°.64N**±0°.03×**97°.38W**±0°.03, **h10^{km}, n53, σ0^{s}81**/65, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.99**	**171**	ePg	**Pg**	**20 23 58.5**	**-0.8**
OK009	**Oakdale Elemen**	**1.06**	**182**	ePg	**Pg**	**20 23 59.9**	**-0.6**
OK001	**Jones High Sch**	**1.08**	**176**	ePg	**Pb**	**20 24 00.0**	**-0.9**
TUL1	**Leonard**	**1.47**	**119**	ePn	**Pb**	**20 24 06.8**	**-0.8**
TUL1				eSn	**Sb**	**20 24 26.4**	**0.0**
TUL1	**Leonard**	**1.47**	**119**	P	**Pb**	**20 24 07.0**	**-0.7**
	baz=301						
TUL1				S	**Sg**	**20 24 27.0**	**-0.6**
	baz=301						
WMOK	**Wichita Mounta**	**2.21**	**212**	ePn	**Pn**	**20 24 17.3**	**+0.3**
WMOK	**Wichita Mounta**	**2.21**	**212**	P	**Pn**	**20 24 17.4**	**+0.4**
	baz=30						
WMOK				S	**Sb**	**20 24 45.8**	**-2.0**
	baz=30						
KSU1	**Kansas State U**	**2.53**	**14**	Pb	**Pb**	**20 24 24.8**	**-0.9**
	baz=194						
KSU1				S	**Sn**	**20 24 53.1**	**+0.9**
	baz=194						
CBKS	**Cedar Bluff**	**2.87**	**320**	ePn	**Pn**	**20 24 26.1**	**0.0**
CBKS	**Cedar Bluff**	**2.87**	**320**	Pb	**Pb**	**20 24 30.4**	**-1.1**
	baz=138						
CBKS				S	**Sn**	**20 25 02.1**	**+1.4**
	baz=138						
W39A	**Magazine**	**3.25**	**115**	ePn	**Pn**	**20 24 31.9**	**+0.7**
W39A				eSn	**Sn**	**20 25 09.5**	**-0.5**
W39A	**Magazine**	**3.25**	**115**	P	**Pn**	**20 24 31.8**	**+0.6**
	baz=298						
W39A				S	**Sn**	**20 25 11.4**	**+1.4**
	baz=298						
U40A	**Yellville**	**3.65**	**93**	P	**Pn**	**20 24 36.8**	**0.0**
	baz=276						
U40A				S	**Sn**	**20 25 21.2**	**+1.2**
	baz=276						
MIAR	**Mount Ida**	**3.73**	**123**	ePn	**Pn**	**20 24 38.7**	**+0.8**
MIAR	**Mount Ida**	**3.73**	**123**	P	**Pn**	**20 24 38.8**	**+0.9**
	baz=305						
MIAR				S	**Sn**	**20 25 22.9**	**+1.0**
	baz=305						
AMTX	**Amarillo**	**3.92**	**245**	ePn	**Pn**	**20 24 41.0**	**+0.5**
AMTX				eSn	**Sn**	**20 25 26.7**	**+0.2**
AMTX	**Amarillo**	**3.92**	**245**	Pb	**Pb**	**20 24 49.5**	**+0.1**
	baz=62						
AMTX				S	**Sn**	**20 25 27.8**	**+1.2**
	baz=62						
X40A	**Basin Creek Fa**	**4.28**	**119**	ePn	**Pn**	**20 24 45.9**	**+0.5**
X40A	**Basin Creek Fa**	**4.28**	**119**	P	**Pn**	**20 24 45.9**	**+0.5**
	baz=302						
FCAR	**Ozark Folk Cen**	**4.31**	**98**	ePn	**Pn**	**20 24 45.8**	**0.0**
WHAR	**Wooly Hollow**	**4.34**	**107**	ePn	**Pn**	**20 24 46.8**	**+0.5**
ABTX	**Abilene, Hawle**	**4.42**	**206**	ePn	**Pn**	**20 24 48.6**	**+1.3**
ABTX	**Abilene, Hawle**	**4.42**	**206**	Pb	**Pb**	**20 24 57.8**	**-0.1**
	baz=24						
UALR	**University of**	**4.50**	**113**	ePn	**Pn**	**20 24 48.8**	**+0.4**
WHTX	**Lake Whitney,**	**4.64**	**181**	ePn	**Pn**	**20 24 50.8**	**+0.5**
WHTX	**Lake Whitney,**	**4.64**	**181**	Pb	**Pb**	**20 25 02.1**	**+0.5**
	baz=0.7						
KSCO	**Kaye Shedlock'**	**4.79**	**301**	ePn	**Pn**	**20 24 51.7**	**-0.8**
BGNE	**Belgrade**	**4.80**	**353**	ePn	**Pn**	**20 24 52.5**	**-0.1**
CCM	**Cathedral Cave**	**5.08**	**72**	ePn	**Pn**	**20 24 56.7**	**+0.3**
CCM				eSn	**Sn**	**20 25 57.1**	**+1.8**
NATX	**Nacogdoches**	**5.36**	**154**	ePn	**Pn**	**20 25 01.6**	**+1.3**
PBMO	**Poplar Bluff**	**5.58**	**86**	ePn	**Pn**	**20 25 04.0**	**+0.8**
OGNE	**Ogallala**	**5.63**	**321**	ePn	**Pn**	**20 25 05.2**	**+1.2**
FVM	**French Village**	**5.70**	**74**	ePn	**Pn**	**20 25 06.1**	**+1.1**
GNAR	**Gosnell**	**5.98**	**94**	ePn	**Pn**	**20 25 08.3**	**-0.4**
SLM	**Saint Louis**	**6.01**	**68**	ePn	**Pn**	**20 25 09.5**	**+0.4**
SCIA	**State Center**	**6.17**	**30**	ePn	**Pn**	**20 25 12.2**	**+0.8**
JCT	**Junction City**	**6.47**	**199**	ePn	**Pn**	**20 25 15.7**	**+0.1**
N41A	**Harden Midland**	**6.52**	**49**	ePn	**Pn**	**20 25 17.4**	**+1.2**
GLAT	**Glass**	**6.53**	**91**	ePn	**Pn**	**20 25 16.1**	**-0.2**
SIUC	**Southern Illin**	**6.60**	**78**	ePn	**Pn**	**20 25 17.3**	**0.0**
OXF	**Oxford**	**6.83**	**106**	ePn	**Pn**	**20 25 20.6**	**+0.1**
CLNB	**Carlsbad**	**6.92**	**233**	ePn	**Pn**	**20 25 22.3**	**+0.5**
ECSD	**EROS Data Cent**	**7.11**	**4**	ePn	**Pn**	**20 25 24.5**	**+0.2**
L40A	**Anamosa**	**7.21**	**39**	ePn	**Pn**	**20 25 24.6**	**-1.0**
HDIL	**Hopedale**	**7.44**	**56**	ePn	**Pn**	**20 25 29.6**	**+0.9**
ANMO	**Albuquerque**	**7.57**	**260**	ePn	**Pn**	**20 25 31.6**	**+0.8**
WVT	**Waverly**	**7.72**	**91**	ePn	**Pn**	**20 25 32.1**	**-0.5**
PLAL	**Pickwick Lake**	**7.73**	**100**	ePn	**Pn**	**20 25 32.6**	**-0.2**
L42A	**Oliver, Polo**	**8.02**	**46**	ePn	**Pn**	**20 25 36.2**	**-0.6**
T47A	**Sharon Grove**	**8.24**	**85**	ePn	**Pn**	**20 25 39.0**	**-0.8**
JFWS	**Jewell Farm**	**8.33**	**39**	ePn	**Pn**	**20 25 40.9**	**-0.1**
RSSD	**Black Hills**	**9.04**	**328**	ePn	**Pn**	**20 25 51.3**	**+0.4**
BW06	**Boulder Array**	**11.20**	**307**	ePn	**Pn**	**20 26 20.1**	**-0.4**

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*ISCJB **27** 20:39:02.4±0.7, 67°.55N±0°.04×33°.46E±0°.09, h0^{km}, Error ellipse: s-maj=6.1km s-min=4.5km az=153.6*

*HEL **27** 20:39:05.6±0.2, 67°.62N×33°.69E, h0^{km}, ML2.3, Explosion*

*IDC **27** 20:39:06.0±2.7, 67°.70N×33°.92E, h0^{km}, mb1 2.9/4, mb1mx2.8/39, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=27.8km s-min=10.8km az=86.0*

*NAO **27** 20:39:07.0±1.6, 67°.69N×33°.49E, ML2.5*

ISC 27 20:39:04.5±1.0, **67°.54N**±0°.04×**33°.70E**±0°.05, **h0^{km}, n26, σ2^{s}02**/45, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.52**	**45**	eP	**Pg**	**20 39 13.8**	**-0.5**
LVZ				eS	**Sg**	**20 39 20.1**	**-1.0**
MSF	**Maaselka**	**2.47**	**231**	ePG	**Pg**	**20 39 51.2**	**-0.5**
SGF	**Sodankyl**	**2.76**	**271**	ePG	**Pb**	**20 39 54.5**	**-0.1**
SGF				eSG	**Sb**	**20 40 31.1**	**+2.1**
RNF	**Rovaniemi**	**3.15**	**256**	eP	**Pn**	**20 39 56.6**	**+1.3**
ARA0	**ARCESS Array S**	**3.62**	**307**	Pn	**Pn**	**20 40 01.9**	**+0.2**
	baz=121,slow=16						
ARA0				Pg	**Pb**	**20 40 10.4**	**+1.1**
	baz=121,slow=18						
ARA0				Sn	**Sn**	**20 40 43.5**	**-1.6**
	baz=119,slow=28						
ARA0				Lg	Lg	20 40 54.8	
	baz=112,slow=37						
ARA0	**ARCESS Array S**	**3.62**	**307**	Pn	**Pn**	**20 40 01.9**	**+0.2**
	baz=121,slow=16						
ARA0				Pg	**Pb**	**20 40 10.4**	**+1.1**
	baz=121,slow=18						
ARA0				Sn	**Sn**	**20 40 43.5**	**-1.6**
	baz=119,slow=28						
ARA0				Sg	**Sb**	**20 40 54.8**	**+1.1**
	baz=112,slow=37						
ARCES	**ARCESS Array B**	**3.62**	**307**	Pn	**Pn**	**20 40 01.9**	**+0.2**
	1.3nm,0.3s,baz=118,slow=15,SNR=51						
ARCES				Pg	**Pb**	**20 40 10.6**	**+1.3**
	1.3nm,0.3s,baz=114,slow=16,SNR=10						
ARCES				Sn	**Sn**	**20 40 43.4**	**-1.7**
	1.4nm,0.3s,baz=119,slow=25,SNR=12						
ARCES				Lg	Lg	20 40 53.3	
	2.4nm,0.3s,baz=112,slow=31,SNR=9.7						
ARE0	**ARCESS Array S**	**3.62**	**307**	eP	**Pn**	**20 40 01.8**	**+0.1**
ARE0				eSG	**Sb**	**20 40 55.7**	**+2.0**
HEF	**Hetta**	**3.88**	**288**	Pn	**Pn**	**20 40 05.7**	**+0.4**
HEF				Sn	**Sn**	**20 40 50.5**	**-1.1**
HEF				Lg	Lg	20 41 04.3	
HEF	**Hetta**	**3.88**	**288**	eP	**Pn**	**20 40 05.8**	**+0.4**
HEF				eSG	**Sb**	**20 41 04.3**	**+3.1**
HEF				MSG		20 41 06.3	
	comp=Z,6.0nm,0.4s						
HEF	**Hetta**	**3.88**	**288**	Pn	**Pn**	**20 40 05.7**	**+0.4**
HEF				Sn	**Sn**	**20 40 50.5**	**-1.1**
HEF				Sg	**Sb**	**20 41 04.3**	**+3.1**
TOF	**Tornio**	**3.98**	**253**	eSG	**Sb**	**20 41 09.0**	**+4.8**
KIF	**Kilpisjarvi**	**5.01**	**293**	Sn	**Sn**	**20 41 19.1**	**-0.3**
KIF				Lg	Lg	20 41 36.6	
KIF	**Kilpisjarvi**	**5.01**	**293**	eSG	**Sb**	**20 41 38.5**	**+4.8**
KIF				MSG		20 41 43.9	
	comp=Z,4.7nm,0.4s						
KIF	**Kilpisjarvi**	**5.01**	**293**	Sn	**Sn**	**20 41 19.1**	**-0.3**
KIF				Sg	**Sb**	**20 41 36.6**	**+2.9**
FIA0	**FINESS Array S**	**6.94**	**212**	Pn	**Pn**	**20 40 48.6**	**+1.4**
FIA0				Sn	**Sn**	**20 42 07.6**	**+0.8**
FIA0				Lg	Lg	20 42 43.6	
	baz=27,slow=28						
FIA0	**FINESS Array S**	**6.94**	**212**	Pn	**Pn**	**20 40 48.6**	**+1.4**
FIA0				Sn	**Sn**	**20 42 07.6**	**+0.8**
FIA0				Sg	**Sg**	**20 42 43.6**	**-3.4**
	baz=27,slow=28						
FINES	**FINESS Array B**	**6.94**	**212**	Pn	**Pn**	**20 40 49.1**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=33,slow=11,SNR=4.0						
FINES				Sn	**Sn**	**20 42 07.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=26,slow=26,SNR=3.1						
FINES				Lg	Lg	20 42 43.7	
	comp=Z,0.4nm,0.3s,baz=20,slow=29,SNR=8.0						
HFS	**Hagfors**	**11.48**	**239**	Pn	**Pn**	**20 41 49.3**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=36,slow=15,SNR=3.2						
HFS				Sn	**Sn**	**20 43 55.4**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=46,slow=21,SNR=4.7						
HFS				Lg	Lg	20 45 05.6	
	comp=Z,0.1nm,0.3s,baz=53,slow=24,SNR=3.1						
HFS	**Hagfors**	**11.48**	**239**	Pn	**Pn**	**20 41 48.7**	**-0.7**
	baz=11,slow=10						
HFS	**Hagfors**	**11.48**	**239**	Pn	**Pn**	**20 41 48.7**	**-0.7**
	baz=11,slow=10						
NB2	**NORSAR Subarra**	**11.68**	**247**	Pn	**Pn**	**20 41 52.3**	**+0.1**
NB2	**NORSAR Subarra**	**11.68**	**247**	Pn	**Pn**	**20 41 52.3**	**+0.1**
NOA	**NORSAR Array B**	**11.68**	**247**	Pn	**Pn**	**20 41 50.9**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=45,slow=11,SNR=4.2						
NOA				Sn	**Sn**	**20 43 57.0**	**-6.1**
	comp=Z,0.0nm,0.3s,baz=37,slow=21,SNR=2.5						
NOA				Lg	Lg	20 45 09.7	
	comp=Z,0.0nm,0.3s,baz=36,slow=22,SNR=3.5						
SPA0	**Spitsbergen Ar**	**11.76**	**342**	Pn	Pn	20 41 48.6	-4.6
SPA0	**Spitsbergen Ar**	**11.76**	**342**	Pn	Pn	20 41 48.6	-4.6

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*IDC **27** 20:59:48.2±1.4, 41°.61S×174°.20E, h0^{km}, mb3.9/2, mb1 4.1/4, mb1mx3.8/19, mbtmp3.9/4, ML3.7/2, MS3.5/3, Ms1 3.5/3, ms1mx3.1/12, Error ellipse: s-maj=41.6km s-min=18.2km az=134.0*

*ISCJB **27** 20:59:49.5±0.4, 41°.77S±0°.02×174°.22E±0°.03, h11^{km}±3^{km}, mb4.0/6, MS3.5/2, Error ellipse: s-maj=5.0km s-min=2.7km az=135.0*

*WEL **27** 20:59:49.3, 42°S±1°×17°4E±°, h10^{km}±2^{km}, M4.3/32, ML4.5/25, MLv4.3/32, Error ellipse: s-maj=0.0km s-min=0.0km az=167.4*

*NEIC **27** 20:59:49.3±0.0, 41°.70S×174°.20E, h11^{km}, mb4.2/4, ML4.4(WEL), After WEL.*

ISC 27 20:59:49.8±0.8, **41°.71S**±0°.03×**174°.23E**±0°.02, **h12^{km}**±5^{km}**, n134, σ1^{s}33**/138, **mb4.1**/6, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.04**	**192**	P	**Pg**	**20 59 51.9**	**-0.2**
CMWZ				S	**Sg**	**20 59 54.0**	**+0.3**
BSWZ	**Blackbirch Sta**	**0.26**	**268**	P	**Pg**	**20 59 55.0**	**-0.2**
BSWZ				S	**Sg**	**20 59 59.2**	**+0.3**
TUWZ	**Tuamarina**	**0.35**	**322**	P	**Pb**	**20 59 56.5**	**-1.4**
TUWZ				S	**Sb**	**21 00 01.7**	**-1.7**
TCW	**Tory Channel**	**0.49**	**4**	P	**Pb**	**20 59 59.3**	**-1.2**
TCW				S	**Sb**	**21 00 06.7**	**-1.0**
SNZO	**South Karori**	**0.53**	**43**	ePg	**Pb**	**21 00 00.6**	**-0.5**
BHW	**Baring Head**	**0.57**	**59**	P	**Pb**	**21 00 01.6**	**0.0**
PLWZ	**Palliser**	**0.78**	**80**	P	**Pn**	**21 00 06.3**	**-0.4**
NNZ	**Nelson**	**0.80**	**307**	P	**Pb**	**21 00 04.5**	**-1.1**
MSWZ	**Moikau Station**	**0.82**	**70**	P	**Pn**	**21 00 06.5**	**-0.7**
CAW	**Cannon Point**	**0.87**	**47**	P	**Pb**	**21 00 06.5**	**-0.3**
KHZ	**Kahutara**	**0.88**	**216**	ePg	**Pb**	**21 00 07.1**	**+0.1**
KHZ	**Kahutara**	**0.88**	**216**	P	**Pn**	**21 00 07.5**	**-0.4**
DUWZ	**D'Urville Isla**	**0.93**	**346**	P	**Pg**	**21 00 06.9**	**-0.8**
PAWZ	**Paruwai Farm**	**0.96**	**71**	P	**Pn**	**21 00 09.0**	**-0.1**
THZ	**Tophouse**	**0.99**	**266**	ePg	**Pb**	**21 00 08.3**	**-0.6**
THZ	**Tophouse**	**0.99**	**266**	P	**Pb**	**21 00 08.3**	**-0.6**
MTW	**Mount Morrison**	**1.10**	**61**	P	**Pn**	**21 00 11.3**	**+0.2**
OGWZ	**Otaki Gorge**	**1.14**	**39**	P	**Pb**	**21 00 11.0**	**-0.4**
TRWZ	**Traveller**	**1.14**	**75**	P	**Pb**	**21 00 11.4**	**0.0**
HOWZ	**Holdsworth Sta**	**1.26**	**51**	P	**Pg**	**21 00 13.5**	**-0.6**
TMWZ	**Te Maipa**	**1.39**	**65**	P	**Pn**	**21 00 14.8**	**-0.2**
MRZ	**Mangatainoka R**	**1.46**	**45**	P	**Pb**	**21 00 16.2**	**-0.7**
GVZ	**Greta Valley S**	**1.54**	**215**	P	**Pn**	**21 00 17.1**	**0.0**
QRZ	**Quartz Range**	**1.55**	**304**	ePn	**Pb**	**21 00 17.2**	**-1.3**
QRZ	**Quartz Range**	**1.55**	**304**	P	**Pb**	**21 00 17.6**	**-0.8**
TIWZ	**Tintock**	**1.56**	**54**	P	**Pn**	**21 00 17.5**	**+0.2**
CPWZ	**Castlepoint**	**1.69**	**63**	P	**Pg**	**21 00 21.4**	**-0.7**
OHWZ	**Ohakea**	**1.71**	**29**	P	**Pg**	**21 00 21.3**	**-1.2**
PRWZ	**Pori Road**	**1.75**	**49**	P	**Pn**	**21 00 20.5**	**+0.6**
POWZ	**Post Office Ro**	**1.75**	**42**	P	**Pb**	**21 00 20.8**	**-1.1**
LTZ	**Lake Taylor**	**1.81**	**233**	ePn	**Pn**	**21 00 20.8**	**0.0**
LTZ	**Lake Taylor**	**1.81**	**233**	P	**Pn**	**21 00 21.1**	**+0.3**
DSZ	**Denniston Nort**	**1.81**	**268**	P	**Pb**	**21 00 22.3**	**-0.6**
BFZ	**Birch Farm**	**1.83**	**57**	ePn	**Pn**	**21 00 21.0**	**-0.1**
BFZ	**Birch Farm**	**1.83**	**57**	P	**Pn**	**21 00 20.5**	**-0.6**
AMCZ	**Amberley**	**1.88**	**218**	P	**Pn**	**21 00 21.5**	**-0.2**
DVHZ	**Dannevirke**	**2.03**	**47**	P	**Pn**	**21 00 23.4**	**-0.5**
WAZ	**Wanganui**	**2.03**	**17**	P	**Pb**	**21 00 26.7**	**+0.1**
TSZ	**Takapari Road**	**2.11**	**39**	P	**Pn**	**21 00 24.9**	**0.0**
OKCZ	**Okains Bay**	**2.19**	**203**	P	**Pn**	**21 00 25.0**	**-1.1**
CRLZ	**Canterbury Las**	**2.21**	**212**	ePn	**Pn**	**21 00 25.7**	**-0.6**
CRLZ	**Canterbury Las**	**2.21**	**212**	P	**Pn**	**21 00 27.4**	**+1.1**
LREZ	**Lake Rotokare**	**2.25**	**3**	P	**Pb**	**21 00 30.6**	**+0.3**
OXZ	**Oxford**	**2.29**	**224**	ePn	**Pn**	**21 00 26.5**	**-1.0**
OXZ	**Oxford**	**2.29**	**224**	P	**Pn**	**21 00 26.4**	**-1.0**
NMEZ	**Namu Road**	**2.30**	**353**	P	**Pg**	**21 00 32.3**	**-1.6**
INZ	**Inchbonnie**	**2.31**	**243**	P	**Pn**	**21 00 28.1**	**+0.5**
MQZ	**McQueen's Vall**	**2.31**	**210**	ePn	**Pn**	**21 00 26.4**	**-1.3**
MQZ	**McQueen's Vall**	**2.31**	**210**	P	**Pn**	**21 00 26.1**	**-1.6**
PNHZ	**Pukenui**	**2.33**	**41**	P	**Pn**	**21 00 27.8**	**-0.2**
PREZ	**Palmer Road**	**2.36**	**359**	P	**Pb**	**21 00 32.4**	**+0.2**
KHEZ	**Kahui Hut**	**2.41**	**356**	P	**Pb**	**21 00 32.2**	**-1.0**
NBEZ	**Newall Road No**	**2.45**	**353**	P	**Pb**	**21 00 33.1**	**-0.7**
MTVZ	**Mangateitei**	**2.50**	**23**	P	**Pb**	**21 00 34.1**	**-0.7**
DREZ	**Durham Road**	**2.51**	**360**	P	**Pb**	**21 00 34.1**	**-0.7**
PKE	**Pukeiti**	**2.52**	**356**	P	**Pb**	**21 00 34.3**	**-0.6**
PKVZ	**Pokaka**	**2.56**	**20**	P	**Pb**	**21 00 33.3**	**-2.4**
MOVZ	**Moawhango**	**2.57**	**27**	P	**Pn**	**21 00 32.9**	**+1.6**
PXZ	**Pawanui**	**2.61**	**51**	P	**Pn**	**21 00 31.7**	**0.0**
VRZ	**Vera Road**	**2.61**	**9**	P	**Pb**	**21 00 34.4**	**-2.0**
BHHZ	**Black Hill Sta**	**2.62**	**33**	P	**Pn**	**21 00 32.8**	**+0.9**
KRHZ	**Kereru**	**2.63**	**39**	P	**Pn**	**21 00 31.7**	**-0.3**
DRZ	**Dome Shelter**	**2.63**	**23**	P	**Pb**	**21 00 36.0**	**-1.1**
WHVZ	**Whangaehu Hut**	**2.63**	**24**	P	**Pn**	**21 00 33.9**	**+1.6**
FWVZ	**Far West T-bar**	**2.65**	**23**	P	**Pn**	**21 00 34.4**	**+1.9**
TUVZ	**Tukino**	**2.67**	**25**	P	**Pb**	**21 00 35.8**	**-1.8**
NGZ	**Ngauruhoe**	**2.73**	**23**	P	**Pn**	**21 00 35.5**	**+1.8**
WTVZ	**West Tongariro**	**2.79**	**22**	P	**Pn**	**21 00 36.4**	**+2.1**
TWVZ	**Taurewa**	**2.79**	**20**	P	**Pb**	**21 00 39.3**	**-0.3**
KRVZ	**Karewarewa**	**2.82**	**23**	P	**Pb**	**21 00 37.1**	**-3.1**
KWHZ	**Kaweka Forest**	**2.83**	**37**	P	**Pb**	**21 00 38.7**	**-1.5**
WVZ	**Waitaha Valley**	**2.92**	**241**	P	**Pn**	**21 00 37.4**	**+1.3**
MCHZ	**McNeill Hill**	**2.94**	**41**	P	**Pn**	**21 00 37.1**	**+0.8**
KATZ	**Kakaramea**	**2.95**	**23**	P	**Pb**	**21 00 43.0**	**+0.6**
RITZ	**Rihia Road**	**3.00**	**25**	P	**Pb**	**21 00 43.3**	**+0.2**
BKZ	**Black Stump Fm**	**3.07**	**35**	ePn	**Pn**	**21 00 37.6**	**-0.6**
BKZ	**Black Stump Fm**	**3.07**	**35**	P	**Pn**	**21 00 40.2**	**+2.0**
RATZ	**Rangitukua**	**3.07**	**23**	P	**Pb**	**21 00 44.7**	**+0.3**
RPZ	**Rata Peaks**	**3.08**	**228**	Pn	**Pn**	**21 00 37.2**	**-1.1**
	14nm,0.3s,baz=73,slow=4.2,SNR=34						
RPZ				Pg	**Pb**	**21 00 45.4**	**+0.9**
	42nm,0.3s,baz=332,slow=6.4,SNR=41						
RPZ				Sn	**Sn**	**21 01 13.3**	**-1.8**
	29nm,0.3s,baz=166,slow=23,SNR=9.4						
RPZ				LR	LR	21 02 19.6	
	comp=Z,792nm,18.2s,baz=356,slow=48						
RPZ	**Rata Peaks**	**3.08**	**228**	ePn	**Pn**	**21 00 37.6**	**-0.7**
RPZ	**Rata Peaks**	**3.08**	**228**	P	**Pn**	**21 00 37.8**	**-0.5**
WATZ	**Wairara**	**3.21**	**22**	P	**Pb**	**21 00 46.6**	**-0.1**
HIZ	**Hauiti**	**3.22**	**9**	ePn	**Pn**	**21 00 41.5**	**+1.2**
HIZ	**Hauiti**	**3.22**	**9**	P	**Pn**	**21 00 42.7**	**+2.5**
MRHZ	**Matea Rd**	**3.32**	**31**	P	**Pn**	**21 00 41.5**	**-0.1**
MRHZ				P	**Pb**	**21 00 49.2**	**+0.6**
KUTZ	**Kaahu Road**	**3.44**	**21**	P	**Pb**	**21 00 51.5**	**+0.9**
MTHZ	**Maungataniwha**	**3.48**	**36**	P	**Pn**	**21 00 44.0**	**+0.2**
TLZ	**Tolley Road**	**3.52**	**17**	P	**Pn**	**21 00 46.8**	**+2.5**
ALRZ	**Allen Road**	**3.53**	**28**	P	**Pb**	**21 00 50.3**	**-1.9**
RAHZ	**Arahi**	**3.54**	**39**	P	**Pn**	**21 00 47.5**	**+2.9**
PRRZ	**Plateau Road**	**3.61**	**28**	P	**Pb**	**21 00 53.6**	**+0.1**
FOZ	**Fox Glacier**	**3.73**	**239**	ePn	**Pn**	**21 00 47.9**	**+0.7**
FOZ	**Fox Glacier**	**3.73**	**239**	P	**Pn**	**21 00 49.5**	**+2.4**
RTZ	**Ruatahuna**	**3.74**	**35**	P	**Pn**	**21 00 49.3**	**+2.0**
LBZ	**Lake Benmore**	**3.99**	**227**	P	**Pn**	**21 00 51.1**	**+0.3**
RAGZ	**Rawiri**	**4.03**	**38**	P	**Pn**	**21 00 53.1**	**+1.6**
RIGZ	**Rimuhau**	**4.04**	**43**	P	**Pn**	**21 00 52.8**	**+1.3**
TOZ	**Tahuroa Road**	**4.09**	**14**	P	**Pn**	**21 00 54.9**	**+2.8**
URZ	**Urewera**	**4.09**	**34**	Pn	**Pn**	**21 00 50.6**	**-1.5**
	2.6nm,0.3s,baz=222,slow=7.6,SNR=15						
URZ				Pg	**Pb**	**21 00 59.9**	**-1.8**
	7.0nm,0.3s,baz=230,slow=9.5,SNR=29						
URZ				Sn	**Sn**	**21 01 40.2**	**+0.2**
	7.3nm,0.3s,baz=144,slow=14,SNR=3.3						
URZ	**Urewera**	**4.09**	**34**	ePn	**Pn**	**21 00 50.9**	**-1.3**
URZ	**Urewera**	**4.09**	**34**	P	**Pn**	**21 00 52.4**	**+0.3**
ODZ	**Otahua Downs**	**4.24**	**217**	ePn	**Pn**	**21 00 53.4**	**-0.8**
ODZ	**Otahua Downs**	**4.24**	**217**	P	**Pn**	**21 00 53.2**	**-1.0**
TWGZ	**Tauwhareparae**	**4.55**	**41**	P	Pb	21 01 04.2	-5.4
RUGZ	**Raukumara Rang**	**4.58**	**37**	P	**Pn**	**21 00 59.1**	**+0.1**
KBAZ	**Karaka Road Bo**	**4.63**	**7**	P	Pb	21 01 05.2	-5.8
AWAZ	**Awhitu Peninsu**	**4.65**	**4**	P	**Pn**	**21 01 02.9**	**+3.1**
JCZ	**Jackson Bay**	**4.65**	**238**	P	**Pn**	**21 01 01.4**	**+1.5**
MKAZ	**Moumakai**	**4.65**	**9**	P	**Pn**	**21 01 01.5**	**+1.7**
ETAZ	**East Tamaki Re**	**4.78**	**7**	P	**Pn**	**21 01 04.6**	**+3.1**
HAZ	**Te Kaha**	**4.80**	**36**	P	**Pn**	**21 01 04.0**	**+2.1**
PKGZ	**Pakihiroa**	**4.83**	**39**	P	**Pn**	**21 01 04.6**	**+2.3**
WIAZ	**Waiheke Island**	**4.96**	**8**	P	**Pn**	**21 01 06.4**	**+2.4**
MBAZ	**Motutapu North**	**4.96**	**6**	P	**Pn**	**21 01 07.0**	**+2.9**
KUZ	**Kuaotunu**	**5.09**	**14**	P	**Pn**	**21 01 09.1**	**+3.3**
ABAZ	**Army Bay**	**5.12**	**5**	P	Pn	21 01 11.4	+5.1
WCZ	**Waipu Caves**	**5.76**	**1**	P	**Pn**	**21 01 18.9**	**+3.9**
SYZ	**Scrubby Hill**	**6.06**	**215**	P	**Pn**	**21 01 19.8**	**+0.6**
OUZ	**Omahuta**	**6.49**	**355**	ePn	**Pn**	**21 01 26.2**	**+1.0**
OUZ	**Omahuta**	**6.49**	**355**	P	**Pn**	**21 01 28.0**	**+2.9**
CTZ	**Chatham Island**	**7.04**	**110**	P	**Pn**	**21 01 33.0**	**+0.3**
STKA	**Stephens Creek**	**27.77**	**280**	LR	LR	21 14 24.0	
	comp=Z,54nm,20.1s,baz=212,slow=32						
ASAR	**Alice Springs**	**38.00**	**285**	P	**P**	**21 07 07.6**	**-0.2**
	0.4nm,0.4s,baz=126,slow=6.4,SNR=8.4						
WB2	**Warramunga Arr**	**40.06**	**290**	eP	**P**	**21 07 25.1**	**+0.1**
	4.3nm,0.8s						
WRAB	**Tennant Creek**	**40.07**	**290**	eP	**P**	**21 07 25.4**	**+0.3**
	4.4nm,0.8s						
WR1	**Warramunga Arr**	**40.07**	**290**	eP	**P**	**21 07 24.5**	**-0.6**
WRA	**Warramunga Arr**	**40.07**	**290**	P	**P**	**21 07 24.5**	**-0.6**
	2.2nm,0.7s,baz=133,slow=7.9,SNR=11						
CASY	**Casey**	**42.23**	**213**	eP	**P**	**21 07 43.9**	**+1.6**
	3.8nm,1.2s						
QSPA	**South Pole Qui**	**48.42**	**180**	eP	**P**	**21 08 32.7**	**+1.0**
	4.8nm,1.3s						
MAW	**Mawson**	**59.49**	**204**	LR	LR	21 34 14.4	
	comp=Z,76nm,18.4s,baz=146,slow=35						
TORD	**Torodi Ar. Bea**	**150.81**	**195**	PKPbc	**PKiKP**	**21 19 42.8**	**-0.4**
	0.4nm,0.4s,baz=169,slow=4.4,SNR=10.0						

TOA1	Torodi Ar. Sit	150.82	195	*e*PKPbc	PKiKP	21 19 42.8	-0.4
FIA0	FINESS Array S	152.49	327	*e*PKPbc	PKiKP	21 19 45.9	+0.8
FINES	FINESS Array B	152.49	327	PKPbc	PKiKP	21 19 45.9	+0.8
	0.9nm,0.9s,baz=66,slow=3.4,SNR=3.0						

TAP 27 21:31:05.7, 24°.39N×121°.36E, h6^{km}±1^{km}, ML0.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.04	27	*e*P	Pg	21 31 06.8	-0.3
	baz=26						
NNSB				*e*S	Sg	21 31 07.8	-0.4
	baz=26						
NNS	Nan Shan	0.05	10	*i* P	Pg	21 31 07.0	-0.2
	baz=20						
NNS				*i* S	Sg	21 31 08.1	-0.2
	baz=20						
ETLH	Xiulin Townshi	0.21	150	*e*P	Pg	21 31 10.0	0.0
	baz=150						
ETLH				*e*S	Sg	21 31 13.0	+0.2
	baz=150						
TWT	Tachien	0.22	231	*e*P	Pg	21 31 10.3	+0.2
	baz=231						
TWT				S	Sg	21 31 13.6	+0.5
	baz=231						
TWT	Tachien	0.22	231	*i* S	Sg	21 31 13.6	+0.5
	baz=323						
TDCB	Techi	0.23	233	*e*P	Pg	21 31 10.5	+0.2
	baz=233						
TDCB				*e*S	Sg	21 31 13.7	+0.2
	baz=233						
TDCB	Techi	0.23	233	*e*S	Sg	21 31 13.4	-0.1
	baz=322						

TAP 27 21:31:09.4, 24°.19N×121°.21E, h8^{km}±1^{km}, ML0.7, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWT	Tachien	0.07	334	*i* P	Pg	21 31 12.0	+0.6
	baz=323						
WHF	Hehuan Shan	0.07	133	P	Pg	21 31 12.0	+0.3
	baz=130						
WHF				*e*S	Sg	21 31 13.8	+0.4
	baz=130						
TDCB	Techi	0.07	323	*e*P	Pg	21 31 11.8	+0.3
	baz=322						
CHGB	Renai	0.14	193	*e*P	Pg	21 31 13.3	+0.9
	baz=192						
CHGB				*e*S	Sg	21 31 15.5	+0.9
	baz=192						
NNSB	Datong	0.28	34	*e*P	Pb	21 31 16.4	-0.5
	baz=34						
NNS	Nan Shan	0.29	32	P	Pg	21 31 15.9	+0.7
	baz=33						

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*IDC **27** 21:39:06.3±1.5, 36°.88N×56°.13E, h0^{km}, mb3.6/11, mb1 3.8/17, mb1mx3.6/43, mbtmp3.7/17, ML2.2/3, MS2.7/7, Ms1 2.7/7, ms1mx2.5/43, Error ellipse: s-maj=25.9km s-min=10.3km az=175.0*

*ISCJB **27** 21:39:07.8±0.2, 37°.07N±0°.03×56°.33E±0°.02, h10^{km}, mb3.6/12, MS2.7/6, Error ellipse: s-maj=3.6km s-min=2.5km az=174.6*

*TEH **27** 21:39:08.6, 36°.98N×56°.35E, h17^{km}, ML4.0*

*THR **27** 21:39:09.0, 36°.92N×56°.09E, h18^{km}, ML4.0*

*NEIC **27** 21:39:09.0±0.0, 36°.92N×56°.09E, h18^{km}, ML4.0(THR), After THR.*

*NNC **27** 21:39:10.8±1.2, 37°.49N×56°.06E, h0^{km}, mb4.0, Error ellipse: s-maj=12.0km s-min=5.6km az=10.0*

ISC 27 21:39:08.5±0.5**, 37°.00N**±0°.04×**56°.29E**±0°.03**, h10^{km}, n124, σ2^s.18**/126**, mb3.7**/12**, MS2.6**/6**, 7C-10D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	0.68	346	*e*Pg	Pb	21 39 23.8	+1.4
MRVT	Maraveh tapeh	0.68	346	Pg	Pb	21 39 23.1	+0.7
MRVT				Sg	Sb	21 39 33.4	+1.5
IMND	Minoodasht	0.75	290	*e*Pg	Pb	21 39 24.3	+0.6
IMND				*e*Sg	Sb	21 39 35.8	+1.8
IMND				IAMB	IAmb	21 39 38.3	
	comp=Z,0.0nm,0.5s						
BJRD	Bojnurd	1.13	52	*e*Pn	Pn	21 39 33.2	+2.7
BJRD	Bojnurd	1.13	52	Pg	Pn	21 39 33.2	+2.7
SBZV	Sabzevar	1.22	120	*e*Pg	Pb	21 39 29.7	-2.1
SBZV				IAMB	IAmb	21 39 53.5	
	comp=Z,0.0nm,0.7s						
ISFR	Sfrayin	1.37	87	*e*Pg	Pb	21 39 33.7	-0.6
ISFR				*e*Sg	Sg	21 39 52.7	+0.2
ISFR				IAMB	IAmb	21 40 01.0	
	comp=Z,39µm,0.4s						
GEYT	Alibeck	1.72	57	Pg	Pg	21 39 41.3	-0.2
	comp=Z,136nm,0.3s,baz=234,slow=16,SNR=536						
GEYT				Lg	Lg	21 40 04.5	
	comp=Z,53nm,0.3s,baz=252,slow=12,SNR=6.6						
GEYT				LR	LR	21 40 36.7	
	comp=Z,228nm,18.9s,baz=265,slow=48						
GYA0	ALIBECK ARRAY	1.72	57	*e*Pn	Pb	21 39 40.0	-0.2
GYA0B	ALIBECK ARRAY	1.72	57	*e*Pn	Pg	21 39 40.6	-0.9
GYA0B	ALIBECK ARRAY	1.72	57	⇓P	Pg	21 39 41.1	-0.4
GYA0B				⇑S	Sg	21 40 04.2	+0.4
IKRD	Kardeh	1.79	97	*e*Pn	Pg	21 39 53.0	+10
IEMG	Emamgholi	1.93	77	*e*Pg	Pb	21 39 43.5	-0.4
IEMG				IAMB	IAmb	21 40 11.6	
	comp=Z,21µm,0.7s						
IAKL	Akhelmad	2.02	101	*e*Pn	Pb	21 39 43.9	-1.5
IAKL				IAMB	IAmb	21 40 16.6	
	comp=Z,11µm,0.4s						
IGLO	Ghaloghah	2.04	257	*e*Pn	Pb	21 39 45.2	-0.6
IGLO				IAMB	IAmb	21 40 27.4	
	comp=Z,33µm,0.8s						
IPAY	Payeh	2.24	103	*e*Pn	Pn	21 39 46.8	+1.0
IPAY				IAMB	IAmb	21 40 24.2	
	comp=Z,6µm,0.4s						
IANJ	Anjilo	2.46	232	*e*Pn	Pn	21 39 50.1	+1.2
IANJ				IAMB	IAmb	21 40 31.8	
	comp=Z,6µm,0.4s						
ISHM	Shahmirzad	2.70	245	*e*Pn	Pn	21 39 54.8	+2.6
IALA	Alasht	2.95	253	*e*Pn	Pn	21 39 59.0	+3.3
IALA				IAMB	IAmb	21 40 48.1	
	comp=Z,4µm,0.7s						
TNSJ	Nastanj	3.04	175	*e*Pn	Pn	21 39 57.5	+0.7
IMYA	Miami	3.13	101	*e*Pn	Pn	21 40 00.0	+1.9
IMYA				IAMB	IAmb	21 41 05.9	
	comp=Z,3µm,0.8s						
ILAS	Lasjerd	3.14	240	*e*Pn	Pn	21 40 00.4	+2.1
IFIR	Firoozkooh	3.17	246	*e*Pn	Pn	21 40 01.3	+2.7
IFIR				IAMB	IAmb	21 40 13.3	
	comp=Z,6µm,0.2s						
IPRN	Peran	3.27	258	IAMB	IAmb	21 40 12.5	
	comp=Z,15µm,0.7s						
IPRN				*e*Pn	Pn	21 40 02.4	+2.5
TABS	Tabas	3.41	168	*e*Pn	Pn	21 40 03.0	+1.1
TABS	Tabas	3.41	168	Pn	Pn	21 40 03.0	+1.1
JRKH	Jarkhoshk	3.45	107	*e*Pn	Pn	21 40 03.3	+1.0
TKDS	Koohdasht(Taba	3.45	168	*e*Pn	Pn	21 40 02.9	+0.5
IDMV	Damavand	3.72	249	*e*Pn	Pn	21 40 10.0	+3.7
IDMV				IAMB	IAmb	21 40 22.0	
	comp=Z,2µm,0.6s						
IVRN	Varamin	4.21	243	*e*Pn	Pn	21 40 14.8	+2.0
ANAR	Anarak	4.35	210	*e*Pn	Pn	21 40 15.7	+1.0
ANAR				IAMB	IAmb	21 41 47.3	
	comp=Z,0.0nm,0.6s						
KRSH	Karshahi	4.55	229	*e*Pn	Pn	21 40 18.8	+1.3
QALM	Alamut, Qazvin	4.57	265	*e*Pn	Pn	21 40 19.9	+2.0
IMHD	Mahdasht	4.73	256	*e*Pn	Pn	21 40 23.6	+3.7
IMHD				IAMB	IAmb	21 40 38.9	
	comp=Z,837nm,0.6s						
IGZV	Ghazvin	4.92	265	*e*Pn	Pn	21 40 24.7	+2.0
IKOO	Kooshah	5.08	153	*e*Pn	Pn	21 40 25.8	+0.8
IZEF	Zefreh	5.23	220	*e*Pn	Pn	21 40 27.8	+0.8
IKLH	Kolahrood	5.33	228	*e*Pn	Pn	21 40 29.8	+1.4
IBAF	Bafgh	5.43	187	*e*Pn	Pn	21 40 30.0	+0.3
IBAF				IAMB	IAmb	21 42 17.6	
	comp=Z,510nm,0.7s						
ISAD	Sadrabad	5.51	204	*e*Pn	Pn	21 40 32.0	+1.1
QABG	Abgarm-Qazvin	5.57	259	*e*Pn	Pn	21 40 34.6	+3.0
IMEH	Mehriz	5.77	194	*e*Pn	Pn	21 40 35.5	+1.1
IGAR	Gharneh	5.77	219	*e*Pn	Pn	21 40 36.2	+1.8
GALA	Gala	5.88	307	*e*Pn	Pn	21 40 36.3	+0.6
NDR	Nardaran	6.08	308	*e*Pn	Pn	21 40 39.7	+1.3
IRAM	Ramesheh	6.11	213	*e*Pn	Pn	21 40 40.2	+1.2
ZNJK	Zanjan	6.11	269	*e*Pn	Pn	21 40 38.8	-0.3
ZNJK	Zanjan	6.11	269	AML	AML	21 41 54.9	
	comp=E,27nm,0.3s						
ZNJK				AML	AML	21 41 55.1	
	comp=N,66nm,0.6s						
ZNJK	Zanjan	6.11	269	Pn	Pn	21 40 38.8	-0.3
ASTR	Astara	6.14	287	*e*Pn	Pn	21 40 39.3	+0.1
GOBA	Gobu	6.15	305	*e*Pn	Pn	21 40 40.5	+1.1
LKRN	Lenkeran, Azer	6.18	288	*e*Pn	Pn	21 40 39.9	+0.1
IPIR	Pirpir	6.19	227	*e*Pn	Pn	21 40 43.8	+3.6
ROKH	ROKH	6.35	225	*e*Pn	Pn	21 40 45.5	+3.1
ALIB	Äli-Bayra	6.43	300	*e*Pn	Pn	21 40 44.0	+0.8
LRK	Lerik	6.50	287	*e*Pn	Pn	21 40 44.5	+0.1
KHGB	Koh Gabri	6.61	179	*e*Pn	Pn	21 40 47.5	+1.6
ZNGN	Zangian	6.62	224	*e*Pn	Pn	21 40 49.0	+2.8
JHBN	Jahan bin	6.64	226	*e*Pn	Pn	21 40 49.2	+2.7
HSRG	Sareghieh	6.72	257	*e*Pn	Pn	21 40 49.7	+2.2
GBS	Qobustan	6.74	304	*e*Pn	Pn	21 40 49.0	+1.5
SAAT	Saatly	6.80	297	*e*Pn	Pn	21 40 50.1	+1.8
GRMI	Germi	6.88	288	*e*Pn	Pn	21 40 49.6	+0.1
GRMI	Germi	6.88	288	AML	AML	21 42 09.9	
	comp=N,28nm,0.6s						
GRMI				AML	AML	21 42 15.1	
	comp=E,42nm,0.4s						
GRMI	Germi	6.88	288	Pn	Pn	21 40 49.6	+0.1
ATGJ	Altiaghaj	6.91	306	*e*Pn	Pn	21 40 51.7	+1.8
ISRB	Sarab	6.92	279	*e*Pn	Pn	21 40 51.3	+1.2
SIZA	Siyzn	7.05	308	*e*Pn	Pn	21 40 53.8	+2.1
PQL	Pirkuli	7.10	305	*e*Pn	Pn	21 40 54.0	+1.5
IHSH	Hashtrud	7.28	283	*e*Pn	Pn	21 40 56.4	+1.2
IMRD	Marand	8.55	285	*e*Pn	Pn	21 41 14.5	+2.0
ISHB	Shabestar	8.57	282	*e*Pn	Pn	21 41 14.8	+2.0
GNI	Garni	9.58	293	Pn	Pn	21 41 24.8	-1.7
	comp=E,0.2nm,0.3s,baz=147,slow=17,SNR=1.4						
GNI				Sn	Sn	21 43 10.6	-3.7
	comp=E,0.2nm,0.3s,baz=209,slow=19,SNR=2.5						
GNI				LR	LR	21 46 34.4	
	comp=E,46nm,19.5s,baz=102,slow=47						
GNI	Garni	9.58	293	*e*Pn	Pn	21 41 25.4	-1.1
TBLG	Delisi	10.11	301	*e*Pn	Pn	21 41 32.4	-1.3
CHGR	Chuyangaron	10.31	77	*e*Pn	Pn	21 41 37.2	+0.6
KBL	Kabul	10.65	100	*e*Pn	Pn	21 41 41.8	+0.6
KARS	Kars	10.93	293	*e*Pn	Pn	21 41 42.7	-2.3
GAR	Garm	11.24	76	*e*Pn	Pn	21 41 49.7	+0.4
KBZ	Khabaz	12.22	307	Pn	Pn	21 42 01.1	-1.4
	comp=E,0.7nm,0.3s,baz=111,slow=4.2,SNR=10						
KBZ				Sn	Sn	21 44 11.0	-7.7
	comp=E,0.2nm,0.3s,baz=108,slow=16,SNR=2.8						
KVAR	Kislovodsk Arr	12.46	308	Pn	Pn	21 42 04.2	-1.7
	baz=90,slow=20,SNR=10						
KVAR				Sn	Sn	21 44 14.9	-10
	baz=102,slow=9.3,SNR=2.8						
KIV	Kislovodsk	12.46	308	*e*Pn	Pn	21 42 04.2	-1.7
KK31	Karatay Array	12.47	56	*e*Pn	Pn	21 42 07.7	+1.6
KK31	Karatay Array	12.47	56	⇑Pn	Pn	21 42 08.3	+2.3
	comp=E,1.4nm,0.7s,baz=251,slow=13,SNR=14						
KK31				⇓Sn	Sn	21 44 27.9	+2.8
	comp=E,2.1nm,0.8s,baz=171,slow=12,SNR=2.9						
KKAR	Karatay Array	12.47	56	*e*Pn	Pn	21 42 06.9	+0.8
AB31	Akbulak array	12.53	11	⇓Pn	Pn	21 42 04.1	-2.6
	comp=E,0.6nm,0.4s,baz=206,slow=14,SNR=6.5						
AB31				⇓Sn	Sn	21 44 20.4	-6.0
	comp=E,2.0nm,0.7s,baz=198,slow=22,SNR=3.9						
ABKAR	Akbulak array	12.53	11	*e*Pn	Pn	21 42 06.5	-0.2
AKTO	Aktyubinsk	13.48	5	Pn	Pn	21 42 18.8	-0.9
	comp=E,0.8nm,0.3s,baz=182,slow=7.9,SNR=11						
AKTO	Aktyubinsk	13.48	5	⇑Pn	Pn	21 42 18.5	-1.2
	comp=E,2.6nm,0.5s						
AKTO				⇓Sn	Sn	21 44 42.6	-7.0
	comp=E,3.0nm,0.7s						
NIL	Nilore	14.24	99	*e*Pn	Pn	21 42 31.9	+1.6
AAK	Ala-Archa	15.07	62	LR	LR	21 49 36.6	
	comp=E,30nm,20.6s,baz=262,slow=41						
RAYN	Ar Rayn	16.33	218	*e*Pn	Pn	21 42 54.6	-3.4
BRTR	Keskin Array B	17.97	286	P	Pn	21 43 17.9	-0.6
	comp=E,0.1nm,0.3s,baz=103,slow=13,SNR=3.8						
EIL	Elat	19.25	254	LR	LR	21 52 35.3	
	comp=E,62nm,18.1s,baz=63,slow=42						
ARU	Arti	19.49	4	P	P	21 43 36.0	+0.5
	comp=E,0.0nm,0.3s,baz=173,slow=16,SNR=3.3						
KURBB	Kurchatov Arra	20.94	42	P	Pn	21 43 53.1	-0.7
	comp=E,2.4nm,0.2s,baz=243,slow=9.7,SNR=3.7						
MAKZ	Makanchi	21.40	55	*e*P	P	21 43 58.1	+1.8
MK31	Makanchi Array	21.60	55	*e*P	P	21 43 59.8	+1.4
MKAR	Makanchi Array	21.60	55	P	P	21 43 59.9	+1.5
	comp=E,0.5nm,0.5s,baz=247,slow=11,SNR=5.8						
MKAR				LR	LR	21 52 30.1	
	comp=E,21nm,20.2s,baz=273,slow=37						
KIRV	Kirov	22.06	350	LR	LR	21 55 09.2	
	comp=E,22nm,18.8s,baz=135,slow=43						
OBN	Obninsk	22.57	330	LR	LR	21 55 49.0	
	comp=E,6.6nm,18.8s,baz=181,slow=44						
TLB	Topalu	22.61	298	⇑*i*P	P	21 44 10.8	+1.6
CFR	Carcaliu	22.65	300	⇑*i*P	P	21 44 15.9	+6.2
AKASG	Malin Array Be	23.68	314	P	P	21 44 20.1	0.0
	comp=E,1.4nm,0.6s,baz=119,slow=9.3,SNR=8.1						
AKBB	Malin Array Si	23.68	314	*e*P	P	21 44 20.5	+0.4
VRI	Vrincioaia	23.76	301	⇑*i*P	P	21 44 15.2	-5.8
PLOR	Plostina	23.81	301	⇓*i*P	P	21 44 17.6	-3.9
TESR	Tescani	23.95	303	⇓*i*P	P	21 44 25.0	+2.3
MLR	Muntele Rosu	24.23	300	P	P	21 44 24.6	-1.0
	comp=E,1.1nm,0.7s,baz=27,slow=14,SNR=2.5						
MLR	Muntele Rosu	24.23	300	⇓*i*P	P	21 44 28.4	+2.9
BIZ	Bicaz	24.41	304	⇓*i*P	P	21 44 25.7	-1.3
OZUR		24.45	301	⇓*i*P	P	21 44 28.5	+1.1
WMQ	Urumqi	24.76	64	*e*P	P	21 44 35.0	+4.7
WMQ				sP	sP	21 44 41.5	+6.4
WMQ				LR	LR		
	comp=N,130nm,29.3s						
WMQ				LR	LR		
	comp=E,240nm,29.0s						
WMQ				LR	LR		
	comp=Z,63nm,29.1s						
ARR	Arges	25.12	299	⇑*i*P	P	21 44 36.0	+2.5
ZALV	Zalesovo Beam	25.96	40	P	P	21 44 40.8	-0.1
	comp=Z,0.2nm,0.3s,baz=261,slow=6.6,SNR=2.9						
FINES	FINESS Array B	30.91	332	P	P	21 45 25.6	+0.6
	comp=Z,0.3nm,0.6s,baz=140,slow=9.5,SNR=3.5						
HFS	Hagfors	35.54	324	P	P	21 46 05.0	-0.4
	comp=Z,0.9nm,0.7s,baz=113,slow=11,SNR=3.4						
ARCES	ARCESS Array B	36.60	342	P	P	21 46 15.2	+0.8
	comp=Z,1.3nm,0.8s,baz=150,slow=11,SNR=3.3						
NOA	NORSAR Array B	37.00	325	P	P	21 46 18.0	+0.1
	comp=Z,0.7nm,1.0s,baz=109,slow=8.3,SNR=2.9						
NOA				LR	LR	22 03 36.1	
	comp=Z,9.9nm,19.9s,baz=200,slow=40						
KMI	Kunming	41.15	93	P	P	21 46 54.8	+1.6
KMI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	Chiang Mai Arr	41.63	105	P	P	21 46 56.5	-0.5
	comp=Z,0.9nm,0.3s,baz=303,slow=8.3,SNR=4.8						
HHC	Hu-ho-hao-te	42.57	67	P	P	21 47 05.8	+1.2
HHC				S	S	21 53 27.8	+0.5
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,8.0nm,4.8s						
HHC				LR	LR		
	comp=N,66nm,15.3s						
HHC				LR	LR		
	comp=E,60nm,16.2s						
HHC				LR	LR		
	comp=Z,7.0nm,16.2s						
EKA	Eskdalemuir Ar	43.59	314	P	P	21 47 12.4	-0.1
	comp=Z,0.1nm,0.3s,baz=96,slow=7.4,SNR=2.5						
WRAK	Wrangell Islan	86.65	5	*e*P	P	21 51 53.1	+1.1

IGQ 27 21:42:40.7±0.7**, 4°S**±2°×**7°9W**±°**, h8^{km}, MLv3.6, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GONZ	Gonzanam	0.70	212	P	Pn	21 43 01.2	+3.8
MCRA	Macar, Loja	1.19	232	P	Pg	21 43 02.3	-1.2
MCRA				P	Pb	21 43 02.7	-0.9
MCRA				S	Sn	21 43 22.0	+1.8
MCRA				S	Sb	21 43 22.1	+2.9
COHC	Cochancay	1.19	348	P	Pn	21 43 03.8	+0.1
COHC				S	Sn	21 43 21.0	+0.9
ZUMB	Zumba	1.22	186	P	Pn	21 43 04.9	+0.5
ZUMB				S	Sn	21 43 23.3	+2.1
MILO	Milagro-Astudi	1.45	338	P	Pg	21 43 09.7	+1.1
MILO				S	Sg	21 43 30.3	+2.8
MORR	Playas El Morr	1.65	307	P	Pg	21 43 12.2	-0.3
BPAT	Tungurahua Vol	2.20	15	P	Pn	21 43 15.7	-2.4
BULB	Ulba Tungurahu	2.27	15	P	Pn	21 43 16.4	-2.6
BREF	Cotopaxi Volca	3.00	11	P	Pn	21 43 29.8	+0.4
BTAM	Cotopaxi Volca	3.01	12	P	Pn	21 43 27.7	-1.6
BVC2	Cotopaxi Volca	3.02	12	P	Pn	21 43 28.0	-1.5

IDC 27 21:44:05.3±3.2**, 4°.73S×134°.93E, h0^{km}, mb3.4**/1**, mb1 3.5**/3**, mb1mx3.3**/21**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=143.3km s-min=33.0km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.13	182	Pn	Pn	21 47 39.4	-1.1
	0.1nm,0.3s,baz=0.9,slow=12,SNR=9.9						
WRA				Sn	Sn	21 50 25.0	-3.9
	0.4nm,0.3s,baz=11,slow=22,SNR=7.0						
ASAR	Alice Springs	18.85	183	P	Pn	21 48 27.5	0.0
	0.1nm,0.3s,baz=12,slow=11,SNR=7.4						
ASAR				S	Sn	21 51 52.8	-6.4
	0.1nm,0.3s,baz=5.7,slow=29,SNR=3.2						
MKAR	Makanchi Array	69.14	324	P	P	21 55 13.6	0.0
	0.1nm,0.4s,baz=115,slow=8.9,SNR=3.9						

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*ISCJB **27** 21:47:53.6±0.8, 37°.07N±0°.03×42°.43E±0°.04, h2^{km}±7^{km}, Error ellipse: s-maj=5.8km s-min=4.2km az=135.9*

*ISN **27** 21:47:53.3±0.3, 37°.10N×42°.48E, h8^{km}±1^{km}, ML2.6*

*DDA **27** 21:47:54.6, 37°.17N×42°.47E, h7^{km}±3^{km}, ML2.6*

*ISK **27** 21:47:54.5, 37°.12N×42°.45E, h11^{km}, ML2.7/8*

ISC 27 21:47:53.9±1.4**, 37°.11N**±0°.03×**42°.46E**±0°.04**, h1^{km}**±12^{km}**, n21, σ0^s.52**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	Sırnak	0.38	355	*i* P	Pg	21 48 01.3	0.0
SIRN				IAML_P			
	comp=Z,5µm,0.2s						
MSL	Mosul	0.89	143	*e*Pg	Pg	21 48 10.0	-0.8
MSL				AML	AML	21 48 14.0	
	comp=Z,207nm,0.5s						
MSL				*e*Sg	Sg	21 48 22.0	-0.3
CUKT	Cukurca	0.93	81	PG	Pb	21 48 13.0	+0.2
CUKT				SG	Sb	21 48 26.3	+0.6
CUKT	Cukurca	0.93	81	*i* P	Pb	21 48 12.8	-0.1
CUKT				*i* S	Sb	21 48 25.9	+0.2
SRTM	Siirt_Merkez	0.97	334	*i* P	Pb	21 48 13.8	+0.2
SRTM				IAML_P			
	comp=Z,643nm,0.1s						
HAKT	HAKKARI	1.09	66	*i* P	Pb	21 48 15.7	+0.1
HAKT				IAML_P			
	comp=Z,321nm,0.2s						
BTMN	Batman	1.22	310	*i* P	Pb	21 48 17.6	-0.2
BTMN				*i* S	Sn	21 48 35.3	0.0
BTMN				IAML_P			
	comp=Z,674nm,0.3s						
AKDM	Akdamar-Van	1.28	19	PN	Pg	21 48 19.1	+0.6
GEVA	Gevas	1.29	22	*i* P	Pn	21 48 17.8	-1.4
GEVA				IAML_P			
	comp=Z,579nm,0.3s						
BLIS	Bitlis-Merkez	1.33	348	*i* P	Pn	21 48 19.1	-0.6
BLIS				IAML_P			
	comp=Z,148nm,0.1s						
MARD	Mardin	1.35	279	*i* P	Pn	21 48 20.1	+0.1
MARD				IAML_P			
	comp=Z,824nm,0.2s						
SVAN	Silvan-Diyarba	1.44	316	PN	Pn	21 48 21.0	-0.1
GURO	Guroymak-BITLI	1.47	347	PN	Pn	21 48 21.5	-0.2
GURO				SN	Sb	21 48 41.3	-0.1
YOVA	Hakkari_Yksek	1.53	72	*i* P	Pg	21 48 24.0	+0.7
YOVA				IAML_P			
	comp=Z,338nm,0.2s						
MAZI	Mazidag	1.64	283	PN	Pn	21 48 23.9	0.0
VANB	Van	1.65	26	PN	Pn	21 48 23.3	-0.8
MUSM	Mu-Merkez	1.77	335	*i* P	Pn	21 48 25.6	-0.2
MUSM				IAML_P			
	comp=Z,136nm,0.1s						
DYBB	Diyarbakir	2.02	295	PN	Pn	21 48 29.3	+0.1
VRTB	Varto-Mus	2.19	339	PN	Pn	21 48 31.7	+0.2
IKRK	Kirkuk	2.29	138	*e*Pn	Pn	21 48 33.0	+0.2
IKRK				*e*Sn	Sn	21 49 02.0	+0.4
RTB	Rutbah	4.44	204	*e*Pn	Pn	21 49 03.0	+0.6
RTB				AML	AML	21 49 05.8	
	comp=Z,36nm,0.4s						
RTB				*e*Sn	Sn	21 49 54.0	-0.7

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*IDC **27** 21:54:46.9±1.7, 34°.17N×25°.05E, h0^{km}, mb3.5/2, mb1 3.5/3, mb1mx3.2/26, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=30.1km s-min=14.8km az=92.0*

*ISCJB **27** 21:54:49.3±1.1, 34°.18N±0°.05×25°.02E±0°.04, h21^{km}±6^{km}, mb3.4/2, Error ellipse: s-maj=8.6km s-min=5.4km az=0.3*

*ATH **27** 21:54:50.5, 34°.32N×24°.99E, h29^{km}±1^{km}, ML2.8/9, Error ellipse: s-maj=3.0km s-min=1.1km az=344.0*

*THE **27** 21:54:51.4, 34°.36N×25°.01E, h0^{km}±1^{km}, ML2.9/6, Error ellipse: s-maj=2.1km s-min=0.7km az=175.0*

ISC 27 21:54:50.5±1.5**, 34°.29N**±0°.06×**25°.00E**±0°.03**, h17^{km}**±9^{km}**, n41, σ0^s.72**/59**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.74	348	P	Pg	21 55 04.8	-0.2
SIVA				S	Sb	21 55 15.1	+0.3
	2µm,0.4s						
SIVA	Sivas	0.74	348	P	Pg	21 55 04.9	-0.2
SIVA				S	Sb	21 55 15.0	+0.3
SIVA				AML	AML	21 55 22.2	
	comp=N,3586µm,0.3s						
SIVA				AML	AML	21 55 22.3	
	comp=E,6103µm,0.3s						
TMBK	Timbaki Herakl	0.80	346	P	Pg	21 55 06.0	-0.2
TMBK				S	Sb	21 55 17.1	+0.6
GVD	Gavdhos	0.93	306	P	Pn	21 55 08.6	-0.2
GVD				S	Sn	21 55 22.5	+0.8
	comp=E,1µm,0.5s						
GVD	Gavdhos	0.93	306	P	Pg	21 55 08.4	-0.2
GVD				S	Sg	21 55 20.8	-0.1
GVD				AML	AML	21 55 26.6	
	comp=E,2229µm,0.3s						
GVD				AML	AML	21 55 27.1	
	comp=N,1856µm,0.7s						
GVDS	Gavdos	0.93	307	P	Pn	21 55 09.3	+0.5
GVDS				S	Sn	21 55 23.6	+1.9
LAST	Lasithi	0.95	24	P	Pb	21 55 08.1	-0.5
LAST				S	Sn	21 55 23.0	+0.6
	comp=N,338nm,0.6s						
LAST	Lasithi	0.95	24	P	Pb	21 55 08.6	0.0
LAST				S	Sg	21 55 21.5	-0.1
LAST				AML	AML	21 55 33.9	
	comp=N,596µm,0.5s						
LAST				AML	AML	21 55 36.0	
	comp=E,736µm,0.7s						
IDI	Anoyia	1.00	355	Pg	Pb	21 55 08.3	-1.1
	comp=E,14nm,0.3s,baz=179,slow=18,SNR=82						
IDI				Lg	Lg	21 55 24.4	
	comp=E,32nm,0.3s,baz=282,slow=20,SNR=12						
IDI	Anoyia	1.00	355	P	Pb	21 55 09.4	+0.1
IDI				S	Sn	21 55 23.4	-0.1
IDI				AML	AML	21 55 29.0	
	comp=E,574µm,0.4s						
IDI				AML	AML	21 55 31.1	
	comp=N,455µm,0.5s						
KSTL	Kastelli Herak	1.01	3	P	Pb	21 55 08.8	-0.8
KSTL				S	Sb	21 55 21.8	-0.8
NPS	Neapolis	1.09	27	P	Pb	21 55 10.9	-0.1
NPS				S	Sn	21 55 26.3	+0.5
NPS				AML	AML	21 55 37.5	
	comp=E,612µm,0.6s						
NPS				AML	AML	21 55 37.8	
	comp=N,645µm,0.8s						
PRNS	Prines Rethymn	1.15	339	P	Pn	21 55 12.1	+0.4
PRNS				S	Sg	21 55 28.2	+0.5
STIA	Sitia Lasithi	1.28	44	P	Pn	21 55 13.7	+0.1
STIA				S	Sg	21 55 32.5	+0.6
VAM	Vamos	1.29	330	P	Pb	21 55 14.3	-0.1
VAM				S	Sg	21 55 32.5	+0.2
	comp=N,475nm,0.6s						
VAM	Vamos	1.29	330	P	Pb	21 55 14.3	-0.1
VAM				AML	AML	21 55 42.8	
	comp=N,682µm,0.3s						

VAM				AML	AML	21 55 44.7	
	comp=E,1089µm,0.3s						
ZKR	Zakros	1.30	50	P	Pg	21 55 15.5	-0.1
ZKR				S	Sg	21 55 32.7	+0.2
	comp=E,235nm,1.1s						
ZKR	Zakros	1.30	50	P	Pb	21 55 14.7	+0.3
ZKR				S	Sb	21 55 31.3	+0.5
ZKR				AML	AML	21 55 40.6	
	comp=E,459µm,0.5s						
ZKR				AML	AML	21 55 41.6	
	comp=N,309µm,0.5s						
IMMV	Iera Moni Meta	1.43	325	P	Pb	21 55 16.8	0.0
IMMV				S	Sg	21 55 37.0	+0.1
	comp=N,450nm,0.7s						
IMMV	Iera Moni Meta	1.43	325	P	Pb	21 55 16.8	0.0
IMMV				AML	AML	21 55 49.5	
	comp=N,601µm,0.7s						
IMMV				AML	AML	21 55 51.3	
	comp=E,1062µm,0.6s						
SAP1	Santorini-Akro	2.09	9	P	Pn	21 55 25.6	+0.9
ANKY	Antikythira Is	2.10	319	P	Pn	21 55 25.6	+0.8
THR3	Thira Island,	2.14	9	P	Pn	21 55 25.5	+0.1
THR5	Thira Island,	2.14	8	P	Pn	21 55 26.4	+1.0
ANAF	Anafi Island	2.15	17	P	Pn	21 55 25.6	-0.1
ANAF	Anafi Island	2.15	17	P	Pn	21 55 25.8	+0.1
ANAF				AML	AML	21 55 58.6	
	comp=N,820µm,0.4s						
ANAF				AML	AML	21 55 59.1	
	comp=E,885µm,0.3s						
SAP3	Santorini-Thir	2.16	7	P	Pn	21 55 26.8	+1.1
MHLO	Agia Marina, M	2.44	349	P	Pn	21 55 30.0	+0.4
MHLO				S	Sb	21 56 01.5	-2.2
MHLO	Agia Marina, M	2.44	349	P	Pn	21 55 30.2	+0.7
MHLA	Plaka, Milos I	2.49	349	P	Pn	21 55 30.8	+0.5
KTHA	Kythira Island	2.52	322	P	Pn	21 55 30.9	+0.2
AMGA	Amorgos Island	2.64	16	P	Pn	21 55 33.1	+0.8
APE	Apeiranthos	2.81	9	P	Pn	21 55 34.8	+0.2
VLI	Veliai	2.95	326	P	Pn	21 55 37.2	+0.7
ARG	Arkhangelos	3.20	52	P	Pn	21 55 41.3	+1.3
DYR	Agios Nikonas	3.29	319	P	Pn	21 55 42.1	+0.9
DID	Didima	3.51	336	P	Pn	21 55 44.9	+0.6
PYL	PYLOS	3.71	315	P	Pn	21 55 48.4	+1.4
GERES	GERESS Array B	16.79	333	Pn	Pn	21 58 45.9	+1.1
	comp=E,0.1nm,0.3s,baz=147,slow=12,SNR=4.6						
TORD	Torodi Ar. Bea	29.83	231	P	P	22 00 56.0	-0.9
	comp=E,0.5nm,0.4s,baz=26,slow=9.5,SNR=7.7						
MKAR	Makanchi Array	44.37	56	P	P	22 02 58.6	-1.2
	comp=E,0.2nm,0.4s,baz=271,slow=9.8,SNR=4.3						

NIED ***27*** *21:56:00, 43°.50N×147°.50E, h38^{km}, Mw3.8 Best double couple: M₀5.18000×10^{14} NP1:φ$_s$200.00000°, δ13.00000°, λ-16.00000°. NP2:φ$_s$306.00000°, δ86.00000°, λ-102.00000°.*

JMA ***27*** *21:56:04.3±0.3, 43°.53N×147°.46E, h15^{km}, M4.0*

ISCJB ***27*** *21:56:05.3±0.8, 43°.68N±0°.05×147°.51E±0°.08, h52^{km}±8^{km}, mb3.5/8, Error ellipse: s-maj=11.1km s-min=6.2km az=43.4*

MOS ***27*** *21:56:05.2±1.3, 43°.72N×147°.49E, h54^{km}, mb4.1/3, Error ellipse: s-maj=11.9km s-min=9.1km az=50.1*

IDC ***27*** *21:56:06.5±2.6, 43°.78N×147°.49E, h46^{km}±24^{km}, mb3.3/7, mb1 3.5/10, mb1mx3.3/32, mbtmp3.5/10, ML3.0/4, MS2.6/3, Ms1 2.6/3, ms1mx2.3/25, Error ellipse: s-maj=26.4km s-min=18.7km az=131.0*

SKHL ***27*** *21:56:06.1±0.9, 43°.65N×147°.52E, h59^{km}±3^{km}, mb4.1/5*

ISC 27 21:56:07.3±0.9**, 43°.71N**±0°.07×**147°.45E**±0°.06**, h54**^{km}±7^{km}**, n54, σ1^{s}.23**/63**, mb3.4**/8**, 3C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.19	286	d *i*PN	Pn	21 56 27.0	-0.7
YUK	Yuzh-Kuril'sk	1.19	286	*i* P	Pn	21 56 27.0	-0.7
YUK				AMB	AMB	21 56 27.0	
	80nm,0.3s						
YUK				AMB	AMB	21 56 27.0	
	70nm,0.3s						
YUK				*e*S	Sn	21 56 42.0	-0.9
YUK				A	A	21 56 42.0	
	540nm,0.3s						
YUK				A	A	21 56 42.0	
	490nm,0.3s						
GRPR	Tuman	1.25	284	⇓ *i*PN	Pn	21 56 27.6	-0.8
GRPR				*e*S	Sn	21 56 43.8	-0.4
GRPR				pmax	pmax		
	comp=N,63nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,142nm,0.2s						
GRPR				pmax	pmax		
	comp=E,126nm,0.1s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,2µm,0.4s						
GRPR	Tuman	1.25	284	*i* P	Pn	21 56 27.0	-1.4
GRPR				AMB	AMB	21 56 28.0	
	comp=E,10.0nm,0.3s						
GRPR				AMB	AMB	21 56 28.0	
	comp=E,50nm,0.3s						
GRPR				*e*S	Sn	21 56 43.0	-1.2
GRPR				A	A	21 56 45.0	
	comp=E,350nm,0.3s						
GRPR				A	A	21 56 45.0	
	comp=E,540nm,0.3s						
LAGR	Lagunnoye	1.25	286	*e*PN	Pn	21 56 28.3	-0.2
LAGR				*e*S	Sn	21 56 42.6	-1.7
LAGR				pmax	pmax		
	comp=Z,287nm,0.2s						
LAGR				pmax	pmax		
	comp=N,112nm,0.1s						
LAGR				pmax	pmax		
	comp=E,222nm,0.1s						
LAGR				smax	smax		
	comp=E,2µm,0.6s						
LAGR				smax	smax		
	comp=N,3µm,0.5s						
LAGR	Lagunnoye	1.25	286	*e*P	Pn	21 56 28.0	-0.5
LAGR				AMB	AMB	21 56 29.0	
	comp=N,20nm,0.2s						
LAGR				AMB	AMB	21 56 29.0	
	comp=N,30nm,0.2s						
LAGR				AMB	AMB	21 56 29.0	
	comp=N,50nm,0.2s						
LAGR				*e*S	Sn	21 56 44.0	-0.3
LAGR				A	A	21 56 48.0	
	comp=N,410nm,0.3s						
LAGR				A	A	21 56 48.0	
	comp=N,480nm,0.3s						
NEM2	Nemuro 2	1.29	255	P	Pn	21 56 27.2	-1.8
NEM2				*e*S	Sn	21 56 44.3	-0.9
NMR	Nemuro--Hokkai	1.30	255	c *i*PN	Pn	21 56 27.4	-1.7
NMR				*e*S	Sn	21 56 45.2	-0.2
NMR	Nemuro--Hokkai	1.30	255	*i* P	Pn	21 56 27.4	-1.7
NMR				*e*S	Sn	21 56 45.2	-0.2
GLVR	Golovnino	1.40	272	⇑ *i*PN	Pn	21 56 29.9	-0.6
GLVR				*e*S	Sn	21 56 47.7	-0.2
GLVR				pmax	pmax		
	comp=N,31nm,0.1s						
GLVR				pmax	pmax		
	comp=E,25nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,256nm,0.1s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
GLVR				smax	smax		
	comp=N,3µm,0.2s						
GLVR	Golovnino	1.40	272	*i* P	Pn	21 56 29.0	-1.5
GLVR				AMB	AMB	21 56 30.0	
	comp=N,30nm,0.2s						
GLVR				*e*S	Sn	21 56 47.0	-0.9
GLVR				A	A	21 56 50.0	
	comp=N,530nm,0.3s						
GLVR				A	A	21 56 50.0	
	comp=N,260nm,0.3s						
KUR	Kuril'sk	1.55	11	⇑ *i*PN	Pn	21 56 31.6	-0.9
KUR				*e*S	Sn	21 56 51.5	0.0
KUR				pmax	pmax		
	comp=E,15nm,0.1s						
KUR				pmax	pmax		
	comp=Z,98nm,0.1s						
KUR				pmax	pmax		
	comp=N,30nm,0.2s						
KUR				smax	smax		
	comp=N,412nm,0.4s						
KUR				smax	smax		
	comp=E,849nm,0.3s						
KUR	Kuril'sk	1.55	11	*e*P	Pn	21 56 31.9	-0.6
KUR				AMB	AMB	21 56 33.0	
	comp=E,30nm,0.3s						
KUR				AMB	AMB	21 56 33.0	
	comp=E,20nm,0.3s						
KUR				AMB	AMB	21 56 33.0	
	comp=E,40nm,0.3s						
KUR				*e*S	Sn	21 56 50.7	-0.8
KUR				A	A	21 56 51.0	
	comp=E,200nm,0.4s						
KUR				A	A	21 56 51.0	
	comp=E,410nm,0.4s						
JRA	Rausu	1.70	278	P	Pn	21 56 34.3	-0.3
JNSB	Nemuroshibetsu	1.77	273	P	Pn	21 56 35.4	-0.2
JKHN	Kushirohamanak	1.78	250	P	Pn	21 56 34.6	-1.1
JNK	Nakash	1.99	267	P	Pn	21 56 37.8	-0.7
JNK				*e*S	Sn	21 57 02.5	+0.3
JTKR	Abashiri--Toko	2.58	277	P	Pn	21 56 47.3	+0.8
JTKR				*e*S	Sn	21 57 20.0	+3.4
JAR	Ashorobuto	2.71	262	P	Pn	21 56 48.1	-0.3
JOB	Onbets	2.76	254	P	Pn	21 56 48.6	-0.5
JOB				*e*S	Sn	21 57 20.7	-0.5
JMP	Maruseppu	2.97	277	P	Pn	21 56 53.0	+1.0
JCH	Churui	3.19	251	P	Pn	21 56 54.5	-0.4
JKA	Kamikawa-asahi	3.53	278	*e*P	Pn	21 56 59.8	+0.2
ASAJ	Asahikawa	3.53	278	P	Pn	21 56 59.8	+0.1
	comp=E,0.7nm,0.3s,baz=105,slow=12,SNR=7.0						
ASAJ				S	Sn	21 57 36.8	-3.3
	comp=E,2.6nm,0.3s,baz=99,slow=31,SNR=3.7						
ASAJ				LR	LR	21 58 37.3	
	comp=E,70nm,20.3s,baz=155,slow=42						
JFR	Furan	3.58	263	P	Pn	21 57 00.9	+0.6
ERM	Erimo	3.58	243	*i* PN	Pn	21 57 00.9	+0.6
JNBK	Urakawa-nobuka	3.73	249	P	Pn	21 57 01.5	-0.9
MJA0	Matsu Arr-Jizo	10.04	228	*e*PN	Pn	21 58 29.7	+0.8
MJAR	Matsushiro Arr	10.06	228	P	Pn	21 58 27.5	-1.6
	comp=E,0.1nm,0.3s,baz=26,slow=13,SNR=6.6						
MAJO	Matsushiro	10.06	228	*i* PN	Pn	21 58 31.4	+2.2
PETK	Petropavlovsk-	11.60	32	P	Pn	21 58 48.3	-1.7
	comp=E,0.4nm,0.3s,baz=207,slow=8.6,SNR=9.1						
PETK				LR	LR	22 03 11.3	
	comp=E,26nm,20.6s,baz=243,slow=37						
KSRS	Korea Array	16.08	254	LR	LR	22 06 18.3	
	comp=E,25nm,19.8s,baz=76,slow=38						
SEY	Seymchan	19.47	7	P	P	22 00 27.8	-1.6
	comp=E,0.2nm,0.3s,baz=169,slow=4.3,SNR=6.2						
SEY	Seymchan	19.47	7	*i* P	P	22 00 28.0	-1.3
BILL	Bilibino	26.33	16	⇓ *e*P	P	22 01 40.2	+2.5
BILL				*e**SP	sP	22 02 00.1	+2.5
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BILL	Bilibino	26.33	16	*e*P	P	22 01 40.2	+2.5
SONM	Songino Array	28.68	293	P	P	22 02 00.1	+0.9
	comp=Z,0.3nm,0.6s,baz=82,slow=10,SNR=1.7						
H11N2	WAKE ISLAND Hy	28.93	140	T	T	22 32 34.1	
	baz=330,slow=76						
H11N1	WAKE ISLAND Hy	28.94	140	T	T	22 32 32.0	
	baz=330,slow=76						
H11N3	WAKE ISLAND Hy	28.95	140	T	T	22 32 32.3	
	baz=330,slow=76						
H11S1	WAKE ISLAND Hy	29.90	141	T	T	22 33 42.5	
	baz=332,slow=76						
H11S3	WAKE ISLAND Hy	29.91	141	T	T	22 33 39.9	
	baz=332,slow=76						
H11S2	WAKE ISLAND Hy	29.92	141	T	T	22 33 40.4	
	baz=332,slow=76						
KDAK	Kodiak Island	39.11	47	*i* P	P	22 03 32.5	+3.4
ILAR	Eielson Array	41.39	36	P	P	22 03 48.0	+0.2
	comp=Z,1.3nm,0.7s,baz=271,slow=8.5,SNR=14						
ILAR	Eielson Array	41.39	36	P	P	22 03 48.0	+0.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	44.79	298	P	P	22 04 15.9	+0.4
	comp=Z,0.2nm,0.4s,baz=92,slow=7.5,SNR=3.5						
FINES	FINESS Array B	65.00	333	P	P	22 06 40.3	-0.9
	comp=Z,0.6nm,0.6s,baz=44,slow=8.2,SNR=13						
FINES	FINESS Array B	65.00	333	*i* P	P	22 06 40.7	-0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	68.19	193	P	P	22 07 02.6	+0.7
	comp=Z,0.4nm,0.9s,baz=13,slow=9.7,SNR=3.0						
NB2	NORSAR Subarra	69.71	339	P	P	22 07 10.5	-0.6
	comp=Z,0.2nm,0.5s,baz=31,slow=6.5						
NOA	NORSAR Array B	69.71	339	P	P	22 07 10.2	-0.8
	comp=Z,0.3nm,0.6s,baz=32,slow=6.3,SNR=4.6						
NOA	NORSAR Array B	69.71	339	*e*P	P	22 07 10.8	-0.3
TXAR	Lajitas Array	82.49	56	P	P	22 08 23.9	-0.4
	comp=Z,0.2nm,0.6s,baz=298,slow=4.6,SNR=3.5						

IDC ***27*** *22:02:59.6±1.8, 2°.72N×90°.28E, h0^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.5/34, mbtmp3.8/5, MS4.2/1, Ms1 4.2/1, ms1mx2.6/37, Error ellipse: s-maj=61.8km s-min=27.9km az=48.0*

NEIC ***27*** *22:03:00.1±0.8, 2°.64N×90°.22E, h10^{km}±1^{km}, mb4.6/20, Error ellipse: s-maj=13.5km s-min=12.2km az=91.0*

ISCJB ***27*** *22:03:01.8±0.5, 2°.63N±0°.08×90°.31E±0°.06, h33^{km}, mb5.0/2, MS4.2/1, Error ellipse: s-maj=12.2km s-min=7.5km az=23.6*

ISC 27 22:03:03.8±0.6**, 2°.7N**±0°.1×**90°.27E**±0°.08**, h35**^{km}**, n36, σ0^{s}.87**/32**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	7.14	69	*e*Pn	Pn	22 04 45.9	+0.1
GSI	Gunungsitoli	7.42	100	*e*Pn	Pn	22 04 49.8	0.0
KULM	Kulim	10.68	75	*e*Pn	Pn	22 05 31.4	-3.0
IPM	Ipoh	10.89	80	*e*Pn	Pn	22 05 36.9	-0.4
KSM	Kuching	20.06	93	*e*P	P	22 07 34.5	+0.3
	18nm,1.2s						
XMIS	Christmas Isla	20.12	131	*e*P	P	22 07 34.8	-0.1
	89nm,1.0s						
CISI	Cisompet, Garu	20.23	120	*e*P	P	22 07 36.4	+0.2
	87nm,1.5s						
H08S2	Diego Garcia H	20.47	240	T	T	22 28 53.4	
	baz=61,slow=75						
H08S3	Diego Garcia H	20.47	240	T	T	22 28 53.4	
	baz=61,slow=75						
H08S1	Diego Carcia H	20.49	240	T	T	22 28 50.9	
	baz=61,slow=75						
SBUM	Sibu	21.93	90	*e*P	P	22 07 54.4	-0.1
	2.6nm,1.0s						
JAGI	Jajag, Banyuwa	26.25	115	*e*P	P	22 08 36.6	+0.6
	24nm,0.8s						
LUWI	Luwuk	32.70	96	*e*P	P	22 09 33.5	+0.2
	41nm,0.6s						
KNMB	Chin-men Tao	34.74	49	*e*P	P	22 09 50.2	-0.6
	28nm,0.7s						
MSEY	Mahe Island	35.51	258	*e*P	P	22 09 56.8	-1.0
	155nm,1.8s						
TPUB	Ta-pu	35.85	53	*e*P	P	22 10 00.7	+0.1
	64nm,1.8s						
NACB	Ninganchiao	37.05	52	*e*P	P	22 10 11.2	+0.5
	13nm,0.7s						
KBL	Kabul	37.38	331	*e*P	P	22 10 12.9	-0.7
	5.6nm,1.5s						
SSE	Sheshan	40.64	43	*e*P	P	22 10 40.4	-0.3
	39nm,0.6s						
RER	Riviere de l'E	41.26	233	*e*P	P	22 10 45.7	-0.4
	399nm,1.8s						
MK32	Makanchi Array	44.52	352	*e*P	P	22 11 12.1	+0.1
MKAR	Makanchi Array	44.52	352	P	P	22 11 12.1	+0.1
	0.7nm,0.7s,baz=174,slow=9.9,SNR=7.1						
GEYT	Alibeck	45.82	324	P	P	22 11 24.1	+1.6
	1.3nm,0.6s,baz=129,slow=11,SNR=4.1						
SONA0	Songino Array	47.12	15	*e*P	P	22 11 33.4	+0.7
SONM	Songino Array	47.12	15	P	P	22 11 33.4	+0.7
	1.4nm,0.7s,baz=200,slow=8.4,SNR=11						
WRA	Warramunga Arr	48.73	119	P	P	22 11 46.7	+1.3
	1.9nm,0.9s,baz=302,slow=9.5,SNR=5.1						
WR1	Warramunga Arr	48.73	119	*e*P	P	22 11 46.7	+1.3
WB2	Warramunga Arr	48.74	119	*e*P	P	22 11 44.1	-1.4
	12nm,1.3s						
ASAR	Alice Springs	49.87	124	LR	LR	22 31 14.3	
	comp=Z,257nm,21.9s,baz=347,slow=34						
PSZ	Piszkesteto	74.95	319	*e*P	P	22 14 41.7	+0.1
	2.7nm,0.8s						
KWAJ	Kwajalein Atol	77.10	82	*e*P	P	22 14 54.4	+0.1
	213nm,1.1s						
GERES	GERESS Array B	79.18	319	P	P	22 15 05.4	+0.1
	0.2nm,0.2s,baz=92,slow=4.9,SNR=5.4						
NC602	NORSAR Array S	82.19	331	*e*P	P	22 15 21.3	+0.3
	17nm,1.4s						
NAO01	NORSAR Array S	82.52	331	*e*P	P	22 15 23.0	+0.2
	20nm,1.4s						
SPA0	Spitsbergen Ar	84.14	349	*e*P	P	22 15 30.1	-0.8
	25nm,1.2s						
WLF	Walferdange	84.18	319	*e*P	P	22 15 31.5	-0.1
	73nm,1.6s						

IDC ***27*** *22:18:25.3±0.4, 6°.91S×131°.85E, h0^{km}, mb4.9/34, mb1 4.8/38, mb1mx4.8/47, mbtmp4.8/38, ML3.8/4, MS3.7/16, Ms1 3.7/16, ms1mx3.6/28, Error ellipse: s-maj=14.6km s-min=10.7km az=64.0*

MOS ***27*** *22:18:28.6±1.0, 6°.79S×131°.79E, h29^{km}, mb5.3/47, Error ellipse: s-maj=10.3km s-min=6.4km az=119.9*

DJA ***27*** *22:18:29.4±0.8, 7°S±2°×13°2E±°, h18^{km}±6^{km}, M5.1/43, mB5.5/19, mb5.2/43, MLv5.3/12, Mw(mB)5.0/19, Mwp6.1/1*

BJI ***27*** *22:18:29.2±0.0, 6°.77S×131°.94E, h36^{km}, mb5.0/61, mB4.9/39, Ms4.5/15, Ms7 4.4/7*

ISCJB ***27*** *22:18:29.1±0.1, 6°.84S±0°.02×131°.84E±0°.02, h33^{km}, mb5.2/185, MS3.9/18, Error ellipse: s-maj=3.3km s-min=3.0km az=143.7*

GCMT ***27*** *22:18:31.1±0.3, 6°.70S±0°.05×131°.91E±0°.04, h25^{km}±1^{km}, MW4.9/52, Moment Tensor Solution. s27,c29; s52,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.31±.22; M$_{θθ}$-0.05±.12; M$_{φφ}$2.36±.15; M$_{rθ}$-0.18±.35; M$_{θφ}$0.85±.10; M$_{φr}$0.61±.36; Best double couple: M₀2.55500×10^{16} NP1:φ$_s$188.00000°, δ52.00000°, λ-102.00000°. NP2: φ$_s$27.00000°, δ40.00000°, λ-75.00000°. Principal axes: T 2.6860, Plg6.0000°, Azm287.0000°; N -0.2600, Plg9.0000°, Azm196.0000°; P -2.4240, Plg79.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***27*** *22:18:31.1±1.6, 6°.81S×131°.79E, h35^{km}±2^{km}, mb5.1/150 Error ellipse: s-maj=9.7km s-min=8.7km az=92.0*

ISC 27 22:18:30.8±0.2**, 6°.91S**±0°.04×**131°.87E**±0°.04**, h35**^{km}**, n476, σ1^{s}.41**/484**, mb5.1**/183**, MS3.8**/18**, 7C-2D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.21	208	*e*Pn	Pn	22 18 53.6	+2.3
SAUI	Saumlaki	1.21	208	P	Pn	22 18 52.9	+1.6
BNDI	Bandanaira	3.07	320	P	Pn	22 19 19.0	+2.1
FAKI	Fak Fak	3.98	5	*e*Pn	Pn	22 19 28.4	-0.9
FAKI	Fak Fak	3.98	5	P	Pn	22 19 28.0	-1.3
MSAI	Masohi	4.59	320	P	Pn	22 19 38.8	+1.0
AAI	Ambon	4.86	311	P	Pn	22 19 41.9	+0.4
KDU	Kakadu	5.78	174	P	Pn	22 19 53.9	-0.2
	baz=5.8,SNR=160						
MTN	Manton Dam	5.95	187	*e*Pn	Pn	22 19 56.4	0.0
MTN	Manton Dam	5.95	187	P	Pn	22 19 56.4	0.0
	baz=6.0,SNR=52						
SRPI	Serui, Papua	6.63	41	P	Pn	22 20 05.4	-0.4
	447nm,0.7s,6µm1.7nm						
BAKI	Biak	7.07	37	P	Pn	22 20 12.2	+0.3
	267nm,0.8s,1.0nm						
SANI	Sanana	7.59	309	P	Pn	22 20 20.3	+1.3
	290nm,0.5s,4µm1.2nm						
LBMI	Labuha	7.60	325	P	Pn	22 20 19.5	+0.4
	290nm,0.5s,3µm93µm						
SOEI	Soe	8.04	249	*e*Pn	Pn	22 20 25.1	-0.2
SOEI	Soe	8.04	249	P	Pn	22 20 25.9	+0.6
	420nm,0.7s,4µm						
KNRA	Kununurra	9.23	199	P	Pn	22 20 40.4	-1.2
	baz=9.3,SNR=51						
GENI	Genyem	9.31	63	P	Pn	22 20 44.0	+1.4
BBSI	Bau Bau	9.36	278	P	Pn	22 20 56.8	+14
KDI	Kendari	9.66	287	P	Pn	22 20 58.9	+11
MMRI	Maumere	9.70	259	*e*Pn	Pn	22 20 48.5	+0.5
MMRI	Maumere	9.70	259	P	Pn	22 20 45.2	-2.8
EDFI	Ende, Flores	10.25	259	P	Pn	22 20 55.7	+0.1
	47nm,0.6s,1µm						
LUWI	Luwuk	10.78	302	*e*Pn	Pn	22 21 00.4	-2.4
LUWI	Luwuk	10.78	302	P	Pn	22 21 03.8	+1.0
	109nm,0.8s,3µm						
WSI	Waingapu	11.78	256	P	Pn	22 21 16.0	-0.4
BKSI	Bulukumba	11.79	277	P	Pn	22 21 28.0	+11
BNSI	Bone	11.97	281	P	Pn	22 21 32.7	+14
KAPI	Kappang	12.20	278	Pn	Pn	22 21 21.7	-0.5
	0.1nm,0.3s,baz=204,slow=19,SNR=1.8						
KAPI				LR	LR	22 26 02.8	
	comp=Z,1µm,20.2s,baz=298,slow=38						
KAPI	Kappang	12.20	278	*e*Pn	Pn	22 21 22.1	-0.1
KAPI	Kappang	12.20	278	*e*P	Pn	22 21 22.1	-0.1
SPSI	Sidrap Palu	12.40	283	P	Pn	22 21 28.4	+3.5
TTSI	Tana Toraja	12.60	287	P	Pn	22 21 28.9	+1.2
WBSI	Waikabubak, Su	12.65	257	P	Pn	22 21 28.0	-0.4
	174nm,0.7s,2µm						
COEN	Coen	13.14	123	*e*Pn	Pn	22 21 33.1	-1.9
COEN	Coen	13.14	123	P	Pn	22 21 33.4	-1.6
	baz=13,SNR=17						
WRAB	Tennant Creek	13.17	170	*e*P	Pn	22 21 30.9	-4.6
WRAB				pmax	pmax		
	comp=Z,19nm,0.7s						
WRA	Warramunga Arr	13.18	170	Pn	Pn	22 21 31.0	-4.6
	comp=Z,4.0nm,0.3s,baz=351,slow=13,SNR=92						
WRA				Sn	Sn	22 23 51.9	-9.1
	comp=Z,10.0nm,0.3s,baz=352,slow=24,SNR=12						
PLAI	Plampang	14.09	261	P	Pn	22 21 45.8	-2.3
	comp=Z,107nm,0.8s						
DAV	Davao City (W)	15.24	336	Pn	P	22 22 07.8	-0.2
	comp=Z,48nm,0.3s,baz=135,slow=5.7,SNR=2.4						
DAV	Davao City (W)	15.24	336	*e*Pn	Pn	22 22 01.7	-1.8
	comp=Z,282nm,0.4s						
PMG	Port Moresby	15.34	100	Pn	Pn	22 22 03.9	-0.9
	comp=Z,2.1nm,0.3s,baz=320,slow=7.9,SNR=2.9						
PMG				Sn	Sn	22 24 44.7	-8.9
	comp=Z,2.2nm,0.3s,baz=192,slow=20,SNR=4.3						
PMG				LR	LR	22 29 35.0	
	comp=Z,740nm,18.6s,baz=254,slow=44						
PMG	Port Moresby	15.34	100	*e*Pn	Pn	22 22 05.7	+1.0
	comp=Z,99nm,0.9s						
PMG	Port Moresby	15.34	100	*e*P	Pn	22 22 05.7	+1.0
PMG				pmax	pmax		
	comp=Z,99nm,0.9s						
QIS	Mount Isa	15.50	152	P	Pn	22 22 03.6	-3.4
	baz=16,SNR=50						
KBKI	Kotabaru	16.05	282	P	P	22 22 30.9	+14
MANU	Manus Island	16.18	73	*e*Pn	Pn	22 22 16.2	+0.5
	comp=Z,149nm,1.3s						
MTSU	Mount Surprise	16.48	134	P	Pn	22 22 17.3	-2.2
	baz=16,SNR=28						
AS31	Alice Springs	16.78	174	*e*Pn	Pn	22 22 19.9	-3.3
	comp=Z,26nm,0.6s						
ASAR	Alice Springs	16.78	174	Pn	Pn	22 22 20.1	-3.2
	comp=Z,3.3nm,0.3s,baz=353,slow=8.3,SNR=150						
ASAR				Sn	Sn	22 25 21.2	-7.5
	comp=Z,2.2nm,0.3s,baz=354,slow=27,SNR=5.6						
JAGI	Jajag, Banyuwa	17.63	264	*e*P	Pn	22 22 33.4	-0.4
	comp=Z,29nm,0.8s						
WRKA	Warakurna	18.35	190	P	P	22 22 39.0	-3.5
	baz=18,SNR=27						
PSA00	Pilbara Seismi	18.65	217	*e*P	P	22 22 45.1	-0.6
	comp=Z,53nm,0.8s						
CTA	Charters Tower	19.14	135	P	P	22 22 50.4	-0.8
	comp=Z,0.8nm,0.3s,baz=303,slow=13,SNR=16						
CTA				S	Sn	22 26 17.7	-8.2
	comp=Z,0.5nm,0.3s,baz=37,slow=18,SNR=1.9						
CTAO	Charters Tower	19.14	135	*e*P	Pn	22 22 53.5	+1.2
	comp=Z,40nm,0.8s						
CTAO	Charters Tower	19.14	135	*e*P	Pn	22 22 53.5	+1.2
CTAO				pmax	pmax		
	comp=Z,40nm,0.8s						
KKM	Kota Kinabalu	20.24	309	*e*P	P	22 23 01.6	-1.7
	comp=Z,91nm,0.5s						
RABL	Rabaul	20.37	83	*e*P	P	22 23 05.7	+1.0
	comp=Z,54nm,0.6s						
PBKI	Pangkalan Bun	20.55	281	P	Pn	22 23 09.5	+0.5
SMRI	Semarang	21.27	268	*e*P	P	22 23 14.3	-0.1
	comp=Z,73nm,1.2s						
SBUM	Sibu	21.71	295	*e*P	P	22 23 18.0	-1.0
	comp=Z,19nm,0.9s						
KPJI	Karang Pucung	22.77	268	P	P	22 23 31.2	+0.8
KSM	Kuching	23.07	290	*e*P	P	22 23 32.4	-1.1
	comp=Z,16nm,0.8s						
GIRL	Giralia	23.10	226	*e*P	P	22 23 35.2	+1.5
	comp=Z,415nm,1.3s						
MEEK	Meekatharra	23.33	211	P	P	22 23 35.8	-0.2
	baz=23,SNR=18						
TGY	Tagaytay City	23.52	333	P	P	22 23 36.7	-1.3
	comp=Z,121nm,0.4s,baz=156,slow=8.7,SNR=2.0						

CISI	**Cisompet, Garu**	23.87	267	*e*P	P	22 23 40.8	-0.6
	comp=Z,244nm,1.5s						
CISI	**Cisompet, Garu**	23.87	267	P	P	22 23 41.0	-0.4
FORT	**Forrest**	24.02	188	*e*P	P	22 23 43.2	+0.8
	comp=Z,299nm,0.7s						
FORT	**Forrest**	24.02	188	P	P	22 23 43.4	+0.9
	baz=24,SNR=32						
LEM	**Lembang**	24.08	269	P	P	22 23 42.1	-1.4
	comp=Z,13nm,0.4s,baz=50,slow=17,SNR=1.8						
GUMO	**Guam**	24.11	32	LR	LR	22 33 56.4	
	comp=Z,58nm,20.3s,baz=202,slow=39						
RMQ	**Roma**	25.25	142	P	P	22 23 55.8	+1.9
	baz=25,SNR=15						
EIDS	**Eidsvold**	25.96	137	*e*P	P	22 24 02.2	+1.9
	comp=Z,111nm,1.9s						
BBOO	**Buckleboo**	26.07	172	*e*P	P	22 24 01.4	+0.3
	comp=Z,43nm,0.8s						
BBOO	**Buckleboo**	26.07	172	P	P	22 24 01.7	+0.6
	baz=26,SNR=26						
KMBL	**Kambalda**	26.07	200	P	P	22 24 01.6	+0.5
	baz=26,SNR=16						
PPBI	**Pangkal Pinang**	26.08	279	P	P	22 24 01.0	-0.4
STKA	**Stephens Creek**	26.45	161	P	P	22 24 04.4	-0.2
	comp=Z,18nm,0.9s,baz=332,slow=10,SNR=14						
STKA				LR	LR	22 35 33.0	
	comp=Z,549nm,20.4s,baz=334,slow=39						
STKA	**Stephens Creek**	26.45	161	*e*P	P	22 24 05.6	+1.1
	comp=Z,9.2nm,1.0s						
STKA	**Stephens Creek**	26.45	161	P	P	22 24 05.7	+1.1
	baz=26,SNR=15						
STKA	**Stephens Creek**	26.45	161	*e*P	P	22 24 05.6	+1.1
STKA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MORW	**Morawa**	26.63	212	*e*P	P	22 24 07.1	+0.8
	comp=Z,45nm,1.0s						
MORW	**Morawa**	26.63	212	P	P	22 24 07.0	+0.7
	baz=27,SNR=6.4						
HTT	**Hallett**	27.19	167	P	P	22 24 12.4	+1.1
	baz=27,SNR=5.8						
BLDU	**Ballidu**	27.55	209	P	P	22 24 15.6	+1.1
	baz=28,SNR=4.9						
CMSA	**Cobar Meteorol**	27.70	154	P	P	22 24 17.4	+1.5
	baz=28,SNR=27						
HNR	**Honiara**	27.90	97	P	P	22 24 17.2	-0.6
	comp=Z,51nm,0.3s,baz=181,slow=4.2,SNR=3.6						
MUN	**Mundaring**	28.91	208	P	P	22 24 27.6	+1.0
	baz=29,SNR=3.2						
NWAO	**Narrogin (SRO)**	29.25	206	P	P	22 24 29.2	-0.4
	comp=Z,17nm,0.7s,baz=39,slow=9.0,SNR=7.4						
NWAO				LR	LR	22 38 12.5	
	comp=Z,423nm,20.8s,baz=57,slow=41						
NWAO	**Narrogin (SRO)**	29.25	206	*e*P	P	22 24 29.2	-0.4
NWAO				*e*P	P	22 24 30.2	+0.6
MYKOM	**Kota Tinggi**	29.27	286	*e*P	P	22 24 30.4	+0.4
	comp=Z,12nm,1.1s						
ARMA	**Armidale**	29.85	144	*e*P	P	22 24 35.4	+0.3
	comp=Z,12nm,0.8s						
ARMA	**Armidale**	29.85	144	P	P	22 24 37.1	+2.0
	baz=30,SNR=4.6						
DLV	**T Lat**	29.86	309	*e*P	P	22 24 34.9	-0.5
	comp=Z,73nm,1.8s						
ARPS	**Mount Arapiles**	31.09	164	P	P	22 24 47.8	+2.0
	baz=31,SNR=7.0						
YULB	**Yu-li**	31.84	341	*e*P	P	22 24 50.8	-1.8
	comp=Z,6.6nm,1.0s						
PDSI	**Padang**	31.88	279	P	P	22 25 04.8	+12
SSLB	**Suanglung**	32.31	341	*e*P	P	22 24 54.5	-2.2
	comp=Z,7.8nm,0.9s						
CAN	**Canberra**	32.37	153	*e*P	P	22 24 59.2	+2.0
	comp=Z,12nm,0.7s						
CAN	**Canberra**	32.37	153	*e*P	P	22 24 59.2	+2.0
CAN				pmax	pmax		
	comp=Z,12nm,0.7s						
NACB	**Ninganchiao**	32.48	342	*e*P	P	22 24 57.2	-0.9
	comp=Z,15nm,0.8s						
CNB	**Canberra Magne**	32.53	153	P	P	22 25 00.7	+2.2
	baz=33,SNR=6.3						
IPM	**Ipoh**	32.80	289	*e*P	P	22 25 00.6	-0.6
	comp=Z,5.5nm,0.8s						
TOO	**Toolangi**	32.94	160	*e*P	P	22 25 03.5	+1.4
	comp=Z,18nm,0.8s						
TOO	**Toolangi**	32.94	160	P	P	22 25 04.8	+2.6
	baz=33,SNR=8.1						
TOO	**Toolangi**	32.94	160	*e*P	P	22 25 03.5	+1.4
TOO				pmax	pmax		
	comp=Z,18nm,0.8s						
YHNB	**Yeheng**	33.01	342	*e*P	P	22 25 01.6	-1.2
	comp=Z,21nm,1.1s						
MNSI	**Mandailing Nat**	33.12	282	P	P	22 25 06.6	+2.7
	comp=Z,26nm,0.9s						
JOW	**Kunigami**	33.72	354	*e*P	P	22 25 09.0	+0.1
	comp=Z,14nm,0.6s						
KNMB	**Chin-men Tao**	33.84	338	*e*P	P	22 25 07.2	-2.8
	comp=Z,34nm,0.7s						
PSI	**Prapat**	34.27	285	P	P	22 25 11.9	-2.2
	comp=Z,4.4nm,0.3s,baz=214,slow=3.6,SNR=3.9						
PSI	**Prapat**	34.27	285	*e*P	P	22 25 13.2	-0.9
	comp=Z,17nm,0.9s						
PSI	**Prapat**	34.27	285	*e*P	P	22 25 13.2	-0.9
PSI				pmax	pmax		
	comp=Z,17nm,0.9s						
GSI	**Gunungsitoli**	35.18	282	P	P	22 25 19.0	-2.9
PANO	**Nakornpanom**	36.02	312	P	P	22 25 33.8	+4.9
	comp=Z,0.7nm,1.1s						
DZM	**Mont Dzumac**	36.59	118	P	P	22 25 32.7	-1.2
	comp=Z,8.5nm,1.0s,baz=313,slow=19,SNR=3.3						
DZM	**Mont Dzumac**	36.59	118	*e*P	P	22 25 32.7	-1.2
	comp=Z,79nm,1.7s						
CHAI	**Chaiyaphum**	37.27	308	P	P	22 25 38.7	-0.9
	comp=Z,45µm,0.8s,comp=Z,472µm						
PHET	**Kaeng Krachan**	37.60	302	P	P	22 25 47.7	+5.3
	comp=Z,29µm,0.7s						
NONG	**Nongkai**	37.68	312	P	P	22 25 42.4	-0.6
	comp=Z,0.3nm,0.8s						
MARNC	**Mare, Loyalty**	37.81	116	*e*P	P	22 25 43.8	-0.3
	comp=Z,265nm,1.3s						
TAU	**Tasmania Unive**	38.36	162	*e*P	P	22 25 50.4	+1.9
	comp=Z,175nm,1.8s						
TAU	**Tasmania Unive**	38.36	162	*e*P	P	22 25 50.4	+1.9
TAU				pmax	pmax		
	comp=Z,175nm,1.8s						
KWAJ	**Kwajalein Atol**	38.89	67	*e*P	P	22 25 54.3	+1.0
	comp=Z,189nm,1.1s						
KWAJ	**Kwajalein Atol**	38.89	67	*e*P	P	22 25 54.3	+1.0
KWAJ				pmax	pmax		
	comp=Z,189nm,1.1s						
UTHA	**Uthaitani**	39.12	305	P	P	22 25 54.7	-0.5
	comp=Z,52µm,0.8s,comp=Z,405µm						
SLVN	**Son La**	39.26	316	*e*P	P	22 25 55.9	-0.5
	comp=Z,16nm,1.2s						
UTTA	**Uttaradit**	39.45	309	P	P	22 25 58.1	+0.2
	comp=Z,37µm,0.8s,comp=Z,270µm						
JNU	**Nakatsue**	39.82	359	P	P	22 25 59.6	-1.2
	comp=Z,12nm,1.0s,baz=209,slow=2.5,SNR=5.7						
JNU	**Nakatsue**	39.82	359	*e*P	P	22 26 00.3	-0.5
	comp=Z,26nm,1.1s						
JHJ2	**Mitsune**	40.51	10	*e*P	P	22 26 05.8	-0.6
	comp=Z,381nm,1.3s						
NJ2	**Nanjing**	40.68	343	*e*P	P	22 26 10.5	+2.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
WHN	**Wuhan**	40.85	337	⇑P	P	22 26 09.8	+0.5
WHN				pP	pP	22 26 19.3	-0.2
WHN				pmax	pmax		
	comp=Z,42nm,0.7s						
PAYA	**Payao**	40.92	310	P	P	22 26 11.9	+1.7
	comp=Z,21µm,1.2s,comp=Z,337µm						
CM31	**Chiang Mai Arr**	41.11	308	*e*P	P	22 26 10.8	-0.9
	comp=Z,14nm,1.0s						
CM31				*e*PcP	PcP	22 28 11.8	+0.8
CMAR	**Chiang Mai Arr**	41.11	308	P	P	22 26 10.8	-0.9
	comp=Z,4.4nm,0.6s,baz=136,slow=7.7,SNR=18						
CMAR				PcP	PcP	22 28 11.8	+0.8
	comp=Z,1.4nm,0.5s,baz=140,slow=2.7,SNR=4.2						
CMAR				LR	LR	22 47 15.3	
	comp=Z,97nm,18.7s,baz=146,slow=42						
CMAR	**Chiang Mai Arr**	41.11	308	*i* P	P	22 26 11.3	-0.4
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GYA	**Guiyang**	41.21	325	⇑*i*P	P	22 26 11.8	-0.7
GYA				pP	pP	22 26 20.5	-2.2
GYA				PP	PnPn	22 27 51.5	-1.3
GYA				S	S	22 32 21.8	-2.3
GYA				sS	sS	22 32 41.5	+0.7
GYA				SS	SS	22 35 20.5	-7.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,240nm,17.7s						
GYA				LR	LR		
	comp=Z,210nm,17.9s						
CMMT	**Chiang Mai**	41.31	309	P	P	22 26 13.1	-0.3
	comp=Z,8.7nm,0.9s,comp=Z,184nm						
CHTO	**Chiang Mai**	41.32	309	*e*P	P	22 26 12.6	-0.8
	comp=Z,15nm,0.9s						
CHTO	**Chiang Mai**	41.32	309	*e*P	P	22 26 12.6	-0.8
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
KMI	**Kunming**	42.63	319	P	P	22 26 24.5	+0.2
KMI				pP	sP	22 26 36.8	-1.8
KMI				sP	pP	22 26 41.8	+7.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ENH	**Enshi**	42.75	331	*e*P	P	22 26 23.6	-1.4
	comp=Z,15nm,0.7s						
WAKE	**Wake Island**	43.02	52	*e*P	P	22 26 28.1	+0.8
	comp=Z,128nm,1.1s						
PBA	**Port Blair**	43.07	295	*e*P	P	22 26 26.1	-1.7
MJAR	**Matsushiro Arr**	43.62	7	P	P	22 26 30.4	-1.5
	comp=Z,6.5nm,0.6s,baz=194,slow=10,SNR=26						
MAJO	**Matsushiro**	43.62	7	*e*P	P	22 26 30.8	-1.1
	comp=Z,18nm,0.9s						
MAJO	**Matsushiro**	43.62	7	*e*P	P	22 26 30.8	-1.1
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s						
MAT	**Matsushiro**	43.62	7	P	P	22 26 30.7	-1.2
MAT				*e*S	S	22 33 14.4	+15
MJB9	**Matsu-Tunnel**	43.63	7	*e*P	P	22 26 30.4	-1.6
	comp=Z,17nm,0.9s						
KSRS	**Korea Array**	44.28	355	P	P	22 26 36.0	-1.1
	comp=Z,1.7nm,0.6s,baz=162,slow=7.9,SNR=11						
KSRS				LR	LR	22 47 36.5	
	comp=Z,115nm,18.6s,baz=170,slow=40						
TIA	**Tai'an**	45.07	343	P	P	22 26 41.8	-1.7
TIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN	**Xi'an**	46.16	333	*e*P	P	22 26 51.3	-0.9
	comp=Z,21nm,1.0s						
XAN	**Xi'an**	46.16	333	P	P	22 26 51.0	-1.2
XAN				sP	pP	22 27 03.5	+1.0
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN	**Xi'an**	46.16	333	*e*P	P	22 26 51.3	-0.9
XAN				pmax	pmax		
	comp=Z,21nm,1.0s						
CD2	**Chengdu**	46.24	326	P	P	22 26 52.0	-0.9
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
BJT	**Baijiatuau**	48.89	344	*e*P	P	22 27 13.3	+0.2
	comp=Z,10.0nm,0.5s						
BJT	**Baijiatuau**	48.89	344	*e*P	P	22 27 13.4	+0.2
BJT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI	**Beijing**	48.91	344	⇑*i*P	P	22 27 13.3	0.0
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LBZ	**Lake Benmore**	50.07	145	*e*P	P	22 27 23.5	+1.2
	comp=Z,60nm,1.2s						
RPZ	**Rata Peaks**	50.19	143	*e*P	P	22 27 25.1	+1.9
	comp=Z,42nm,0.8s						
LZH	**Lanzhou**	50.22	330	*e*P	P	22 27 24.0	+0.3
LZH				pP	pP	22 27 32.0	-2.0
LZH				sP	sP	22 27 35.8	-2.3
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,55nm,4.6s						
LZH				LR	LR		
	comp=Z,1µm,13.8s						
LZH				LR	LR		
	comp=Z,1µm,12.7s						
LZH				LR	LR		
	comp=Z,1µm,17.4s						
CN2	**Changchun**	50.80	354	*e*P	P	22 27 29.0	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	**Ussuriysk Ar.**	50.87	0	P	P	22 27 28.2	0.0
	comp=Z,7.5nm,0.6s,baz=181,slow=7.0,SNR=26						
USRK				LR	LR	22 48 07.7	
	comp=Z,55nm,21.6s,baz=159,slow=35						
USA0B	**Ussuriysk Arra**	50.87	0	*e*P	P	22 27 27.7	-0.4
	comp=Z,8.2nm,0.6s						
HHC	**Hu-ho-hao-te**	51.06	340	P	P	22 27 29.3	-0.5
HHC				S	S	22 34 44.5	-0.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,9.0nm,4.3s						
HHC				LR	LR		
	comp=Z,86nm,17.9s						
HHC				LR	LR		
	comp=Z,84nm,17.0s						
MDJ	**Mudanjiang**	51.32	358	*e*P	P	22 27 30.3	-1.3
	comp=Z,9.3nm,0.8s						
ASAJ	**Asahikawa**	51.70	10	P	P	22 27 34.5	+0.1
	comp=Z,2.6nm,0.6s,baz=224,slow=7.0,SNR=6.7						
MXZ	**Matakaoa Point**	51.96	133	*e*P	P	22 27 37.7	+1.2
	comp=Z,77nm,1.2s						
RAO	**Raoul Island**	52.17	122	*e*P	P	22 27 39.0	+0.7
	comp=Z,2µm,1.5s						
RAO	**Raoul Island**	52.17	122	*e*P	P	22 27 39.0	+0.7
MCQ	**Macquarie Isla**	52.22	160	*e*P	P	22 27 40.4	+2.2
	comp=Z,741nm,1.8s						
MCQ	**Macquarie Isla**	52.22	160	*e*P	P	22 27 40.4	+2.2
PALK	**Pallekele**	52.95	284	P	P	22 27 43.8	-0.5
	comp=Z,10nm,0.9s,baz=116,slow=15,SNR=2.6						
PALK	**Pallekele**	52.95	284	*e*P	P	22 27 43.8	-0.5
	comp=Z,73nm,1.7s						
PALK	**Pallekele**	52.95	284	*e*P	P	22 27 43.8	-0.5
PALK				pmax	pmax		
	comp=Z,73nm,1.7s						
LSA	**Lhasa**	53.43	315	*e*P	P	22 27 47.7	-0.4
	comp=Z,12nm,0.7s						
LSA	**Lhasa**	53.43	315	*i* P	P	22 27 48.1	+0.1
	SNR=8.5						
LSA	**Lhasa**	53.43	315	*e*P	P	22 27 47.7	-0.4
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
YSS	**Yuzh-Sakhalins**	54.49	9	*e*P	P	22 27 53.8	-1.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA	**Gaotai**	54.80	330	P	P	22 27 57.8	+0.3
GTA				pP	pP	22 28 05.0	-3.0
GTA				sP	sP	22 28 09.8	-2.3
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
GTA				pmax	pmax		
	comp=Z,57nm,5.1s						
KLR	**Kul'dur**	55.90	360	P	P	22 28 04.8	-0.3
	comp=Z,2.3nm,0.8s,baz=234,slow=3.5,SNR=8.9						
KLR	**Kul'dur**	55.90	360	*e*P	P	22 28 03.7	-1.3
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JIRN	**Jiri**	55.94	310	*e*P	P	22 28 06.1	-0.1
	comp=Z,54nm,0.5s						
PKI	**Pulchoki**	56.49	309	*e*P	P	22 28 09.2	-0.9
	comp=Z,22nm,0.6s						
PKIN	**Phulchoki**	56.50	309	*e*P	P	22 28 08.8	-1.3
	comp=Z,17nm,0.5s						
KKN	**Kakani**	56.70	310	*e*P	P	22 28 10.7	-0.7
	comp=Z,34nm,0.7s						
DMN	**Daman**	56.74	309	*e*P	P	22 28 11.2	-0.6
	comp=Z,19nm,0.5s						
GKN	**Gorkha**	57.30	310	*e*P	P	22 28 15.0	-0.6
	comp=Z,54nm,0.4s						
HYB	**Hyderabad**	57.95	295	*i* P	P	22 28 18.5	-1.7
SONA0	**Songino Array**	58.96	340	*e*PcP	PcP	22 29 15.7	0.0
SONM	**Songino Array**	58.96	340	P	P	22 28 27.4	+0.6
	comp=Z,5.6nm,0.6s,baz=159,slow=6.7,SNR=33						
SONM				PcP	PcP	22 29 15.7	0.0
	comp=Z,3.4nm,0.9s,baz=147,slow=3.8,SNR=2.0						
KAAM	**Kaadhehdhoo**	59.19	275	*e*P	P	22 28 28.8	-0.1
	comp=Z,421nm,1.8s						
ZEA	**Zeya**	60.54	357	*e*P	P	22 28 38.0	+0.6
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
CASY	**Casey**	61.10	190	*e*P	P	22 28 42.3	+1.3
	comp=Z,15nm,0.8s						
ZAK	**Zakamensk**	62.20	340	*e*P	P	22 28 48.0	-0.9
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TLY	**Talaya**	63.18	341	P	P	22 28 56.0	+0.7
	comp=Z,5.4nm,0.6s,baz=190,slow=2.1,SNR=7.6						
TLY	**Talaya**	63.18	341	*e*P	P	22 28 55.5	+0.2
	comp=Z,6.9nm,0.7s						
TLY	**Talaya**	63.18	341	*e*P	P	22 28 56.4	+1.1
TLY				pmax	pmax		
	comp=Z,15nm,0.6s						
IRK	**Irkutsk**	63.46	341	*e*P	P	22 28 56.4	-0.7
IRK				pmax	pmax		
	comp=Z,19nm,1.5s						
PEA0B	**Petropavlovsk-**	63.67	17	*e*P	P	22 28 59.0	+0.5
	comp=Z,16nm,0.9s						
PETK	**Petropavlovsk-**	63.67	17	P	P	22 28 59.3	+0.9
	comp=Z,11nm,0.8s,baz=174,slow=5.0,SNR=20						
PETK				LR	LR	22 52 25.5	
	comp=Z,19nm,20.7s,baz=201,slow=32						
PET	**Petropavlovsk**	63.88	18	*e*P	P	22 29 00.2	+0.4
	comp=Z,26nm,1.2s						
PET	**Petropavlovsk**	63.88	18	*e*P	P	22 29 00.2	+0.4
PET				pmax	pmax		
	comp=Z,27nm,1.2s						
MOY	**Mondy**	64.07	339	*e*P	P	22 29 02.2	+0.9
MOY				pmax	pmax		
	comp=Z,21nm,1.6s						
WMQ	**Urumqi**	64.34	326	*e*P	P	22 29 04.3	+1.2
WMQ				pP	pP	22 29 13.8	0.0
WMQ				sP	sP	22 29 18.3	+0.5
WMQ				ScP		22 33 35.0	
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,38nm,3.8s						
WMQ				LR	LR		
	comp=Z,690nm,29.0s						
WMQ				LR	LR		
	comp=Z,920nm,28.8s						
BOD	**Bodaibo**	66.12	350	*e*P	P	22 29 13.8	-0.5
BOD				pmax	pmax		
	comp=Z,13nm,1.2s						
DGZ	**Jazzator, Alta**	68.32	331	*e*P	P	22 29 29.0	+0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NIL	**Nilore**	68.57	310	*e*P	P	22 29 30.7	+0.3
	comp=Z,8.3nm,0.6s						
YAK	**Yakutsk**	68.75	359	*e*P	P	22 29 30.6	-0.2
	comp=Z,29nm,0.7s						
YAK	**Yakutsk**	68.75	359	*e*P	P	22 29 30.6	-0.2
YAK				*e**PP	pP	22 29 40.2	-1.3
YAK				*e*S	S	22 38 35.3	+3.8
YAK				*e**SS	sS	22 38 54.8	+5.8
YAK				*e*		22 39 26.7	
YAK				pmax	pmax		
	comp=Z,24nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.7s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.7s						
YAK				smax	smax		
	comp=N,37nm,3.8s						
YAK				smax	smax		
	comp=E,19nm,3.1s						
MK31	**Makanchi Array**	69.18	326	*e*P	P	22 29 33.9	+0.1
	comp=E,18nm,0.9s						
MK31	**Makanchi Array**	69.18	326	*e*P	P	22 29 33.9	+0.1
MK31				pmax	pmax		
	comp=Z,18nm,0.9s						
MKAR	**Makanchi Array**	69.18	326	P	P	22 29 34.5	+0.7
	comp=Z,14nm,0.4s,baz=112,slow=9.0,SNR=72						
MKAR				LR	LR	23 04 17.5	
	comp=Z,42nm,19.0s,baz=120,slow=40						
MKAR	**Makanchi Array**	69.18	326	*i* P	P	22 29 34.5	+0.7
MKAR				pmax	pmax		
	comp=Z,15nm,0.4s						
KSH	**Kashi**	69.21	317	P	P	22 29 35.0	+0.6
KSH				PP	PP	22 32 11.0	+3.3
KSH				S	S	22 38 39.0	+0.8
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,62nm,4.7s						
KSH				LR	LR		
	comp=Z,98nm,5.6s						
KSH				LR	LR		
	comp=Z,48nm,5.6s						
KSH				LR	LR		
	comp=Z,96nm,5.8s						
MAKZ	**Makanchi**	69.36	326	*e*P	P	22 29 35.0	0.0
	comp=Z,32nm,1.1s						
MAKZ	**Makanchi**	69.36	326	*e*P	P	22 29 35.0	0.0
MAKZ				pmax	pmax		
	comp=Z,32nm,1.1s						
KZA	**Kyzart**	70.92	319	P	P	22 29 47.0	+1.8
	SNR=7.0						
XMAS	**Kiritimati**	71.09	85	*e*P	P	22 29 46.5	+0.3
	comp=Z,125nm,1.5s						
TKM2	**Tokmak 2**	71.10	320	P	P	22 29 46.9	+0.9
	SNR=9.7						
SEY	**Seymchan**	71.39	10	*e*P	P	22 29 47.7	+0.7
KBK	**Karagaybulak**	71.39	319	P	P	22 29 49.1	+1.4
	SNR=5.2						
UCH	**Uchtor**	71.47	319	P	P	22 29 50.1	+1.6
	SNR=10						
AAK	**Ala-Archa**	71.68	319	P	P	22 29 50.2	+0.8
	comp=Z,3.8nm,0.4s,baz=128,slow=5.7,SNR=6.5						
AAK				LR	LR	23 04 48.9	
	comp=Z,43nm,21.8s,baz=94,slow=39						
AAK	**Ala-Archa**	71.68	319	*e*P	P	22 29 49.2	-0.2
	comp=Z,20nm,1.3s						
AAK	**Ala-Archa**	71.68	319	P	P	22 29 50.5	+1.1
AAK	**Ala-Archa**	71.68	319	*e*P	P	22 29 49.2	-0.2
AAK				pmax	pmax		
	comp=Z,20nm,1.3s						
AAK	**Ala-Archa**	71.68	319	P	P	22 29 50.9	+1.5
	SNR=5.0						
AML	**Almayashu**	71.97	318	P	P	22 29 52.7	+1.3
	SNR=12						
USP	**Ospenovka**	71.97	320	P	P	22 29 51.6	+0.5
	SNR=16						
KBL	**Kabul**	72.13	310	*e*P	P	22 29 52.5	+0.2
	comp=Z,14nm,0.9s						
KBL	**Kabul**	72.13	310	*e*P	P	22 29 52.5	+0.2
KBL				pmax	pmax		
	comp=Z,14nm,0.9s						
EKS2	**Erkin-Say**	72.16	319	P	P	22 29 53.6	+1.4
	SNR=10						
ZALV	**Zalesovo Beam**	72.33	333	P	P	22 29 52.4	-0.4
	comp=Z,28nm,0.7s,baz=116,slow=5.0,SNR=59						
ZALV				LR	LR	23 05 29.8	
	comp=Z,18nm,18.1s,baz=68,slow=39						
GAR	**Garm**	72.92	314	*e*P	P	22 29 57.0	+0.1
	comp=Z,28nm,0.8s						
GAR	**Garm**	72.92	314	*e*P	P	22 29 57.0	+0.1
GAR				pmax	pmax		
	comp=Z,28nm,0.8s						
ADK	**Adak**	73.15	30	*e*P	P	22 29 58.0	+0.3
	comp=Z,91nm,1.4s						
ADK	**Adak**	73.15	30	*e*P	P	22 29 58.0	+0.3
ADK				pmax	pmax		
	comp=Z,91nm,1.4s						
SBA	**Scott Base**	73.19	173	*e*P	P	22 30 00.1	+2.5
	comp=Z,15nm,1.1s						
SBA	**Scott Base**	73.19	173	*e*P	P	22 30 00.1	+2.5
SBA				pmax	pmax		
	comp=Z,15nm,1.1s						
KURBB	**Kurchatov Arra**	73.41	328	P	P	22 29 59.0	-0.3
	comp=Z,20nm,0.7s,baz=127,slow=4.8,SNR=115						
KURK	**Kurchatov**	73.42	328	*e*P	P	22 29 59.6	+0.3
	comp=Z,29nm,0.8s						
KURK	**Kurchatov**	73.42	328	*e*P	P	22 29 59.6	+0.3
KURK				pmax	pmax		
	comp=Z,29nm,0.8s						
HON	**Honolulu**	74.25	66	*e*P	P	22 30 05.3	+0.5
	comp=Z,144nm,1.0s						
HON	**Honolulu**	74.25	66	*e*P	P	22 30 05.3	+0.5
HON				pmax	pmax		
	comp=Z,144nm,1.0s						
OPA	**Opana**	74.33	65	*e*P	P	22 30 06.3	+1.1
	comp=Z,242nm,1.7s						
KK31	**Karatay Array**	74.50	318	*e*P	P	22 30 06.1	+0.2
	comp=Z,11nm,0.8s						
KK31	**Karatay Array**	74.50	318	*e*P	P	22 30 06.1	+0.2
KK31				pmax	pmax		
	comp=Z,11nm,0.8s						
KKAR	**Karatay Array**	74.50	318	*e*P	P	22 30 05.5	-0.4
	comp=Z,11nm,0.8s						
KKAR	**Karatay Array**	74.50	318	*e*P	P	22 30 05.5	-0.4
KKAR				pmax	pmax		

	comp=Z,11nm,0.8s						
ATKA	**Atka Island**	**74.60**	**31**	*e*P	**P**	**22 30 06.3**	**+0.2**
	comp=Z,158nm,1.5s						
RER	**Riviere de l'E**	**74.63**	**250**	*e*P	**P**	**22 30 07.1**	**-0.1**
	comp=Z,144nm,1.2s						
KHLH	**Kahului Airpor**	**75.58**	**66**	*e*P	**P**	**22 30 12.7**	**+0.2**
	comp=Z,353nm,1.6s						
MAW	**Mawson**	**75.72**	**202**	P	**P**	**22 30 12.0**	**-0.5**
	comp=Z,14nm,0.7s,baz=77,slow=5.9,SNR=35						
MAW				LR	LR	23 03 04.9	
	comp=Z,100nm,18.1s,baz=60,slow=35						
MAW	**Mawson**	**75.72**	**202**	*e*P	**P**	**22 30 14.6**	**+2.2**
	comp=Z,3.3nm,0.7s						
MAW	**Mawson**	**75.72**	**202**	P	**P**	**22 30 14.7**	**+2.2**
	baz=76,SNR=15						
MAW	**Mawson**	**75.72**	**202**	*e*P	**P**	**22 30 14.6**	**+2.2**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HLP	**Hilina Pali**	**76.25**	**68**	*e*P	**P**	**22 30 16.4**	**-0.1**
	comp=Z,197nm,0.9s						
WRMHI	**West Rim**	**76.28**	**68**	*e*P	**P**	**22 30 16.7**	**0.0**
	comp=Z,1µm,2.0s						
SDHHI	**Sand Hill**	**76.28**	**68**	*e*P	**P**	**22 30 15.6**	**-1.1**
	comp=Z,148nm,0.8s						
OBL	**Observatory Le**	**76.29**	**68**	*e*P	**P**	**22 30 15.5**	**-1.3**
	comp=Z,413nm,1.0s						
RIM	**Rim**	**76.30**	**68**	*e*P	**P**	**22 30 15.5**	**-1.3**
	comp=Z,320nm,1.2s						
UWB	**Uwekahuna B**	**76.30**	**68**	*e*P	**P**	**22 30 15.4**	**-1.4**
	comp=Z,309nm,1.3s						
KKO	**Keanakako`i**	**76.31**	**68**	*e*P	**P**	**22 30 16.9**	**0.0**
	comp=Z,123nm,0.8s						
SBLHI	**Steaming Bluff**	**76.31**	**68**	*e*P	**P**	**22 30 16.8**	**-0.1**
	comp=Z,127nm,0.7s						
BYL	**Byron's Ledge**	**76.31**	**68**	*e*P	**P**	**22 30 16.1**	**-0.8**
	comp=Z,216nm,0.9s						
PUH	**Pauahi**	**76.35**	**68**	*e*P	**P**	**22 30 16.7**	**-0.4**
	comp=Z,170nm,1.4s						
PPT	**Papeete**	**77.07**	**106**	LR	LR	23 02 01.6	
	comp=Z,65nm,19.2s,baz=336,slow=34						
PPT	**Papeete**	**77.07**	**106**	*e*P	**P**	**22 30 21.7**	**+0.6**
PPT	**Papeete**	**77.07**	**106**	*e*P	**P**	**22 30 21.7**	**+0.6**
WSAR	**Wadi Sarin**	**77.50**	**296**	P	**P**	**22 30 23.6**	**+0.2**
	comp=Z,9.5nm,0.8s,baz=112,slow=4.8,SNR=8.2						
NIKH	**Nikolski High**	**77.78**	**32**	*e*P	**P**	**22 30 24.3**	**0.0**
	comp=Z,60nm,1.3s						
CRZF	**Crozet Islands**	**78.15**	**224**	*e*P	**P**	**22 30 27.2**	**+0.6**
	comp=Z,218nm,1.4s						
TIXI	**Tiksi**	**78.42**	**359**	*e*P	**P**	**22 30 27.4**	**0.0**
	comp=Z,12nm,0.8s						
TIXI	**Tiksi**	**78.42**	**359**	*e*P	**P**	**22 30 27.4**	**0.0**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BILL	**Bilibino**	**78.61**	**13**	*e*P	**P**	**22 30 27.8**	**-0.8**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BVAR	**Borovoye Array**	**78.98**	**327**	P	**P**	**22 30 30.9**	**0.0**
	comp=Z,22nm,0.8s,baz=128,slow=6.2,SNR=52						
BRVK	**Borovoye**	**79.05**	**327**	*e*P	**P**	**22 30 31.1**	**-0.3**
	comp=Z,29nm,0.8s						
BRVK	**Borovoye**	**79.05**	**327**	*e*P	**P**	**22 30 31.3**	**0.0**
BRVK				pmax	pmax		
	comp=Z,28nm,0.9s						
UNV	**Unalaska Valle**	**79.43**	**32**	*e*P	**P**	**22 30 33.8**	**+0.5**
	comp=Z,14nm,0.6s						
UOSS	**Minazif**	**80.04**	**297**	P	**P**	**22 30 37.7**	**+0.4**
HATD	**Hatta, Dubai**	**80.08**	**297**	P	**P**	**22 30 37.9**	**+0.4**
ASHO	**Ashiyiah**	**80.11**	**296**	*i* P	**P**	**22 30 38.1**	**+0.3**
	SNR=8.3						
MSFE	**Esma-Masafi**	**80.17**	**297**	P	**P**	**22 30 38.9**	**+0.8**
SHME	**Shamm**	**80.33**	**298**	P	**P**	**22 30 39.6**	**+0.7**
NAZ	**Nazwa, Dubai**	**80.53**	**297**	P	**P**	**22 30 40.2**	**+0.2**
ASUD	**Al Ashush, Dub**	**80.75**	**296**	*i* P	**P**	**22 30 42.0**	**+0.8**
	SNR=6.0						
GEYT	**Alibeck**	**81.58**	**310**	P	**P**	**22 30 45.4**	**+0.1**
	comp=Z,14nm,0.5s,baz=107,slow=4.7,SNR=20						
GEYT				LR	LR	23 13 14.7	
	comp=Z,18nm,18.7s,baz=205,slow=40						
QSPA	**South Pole Qui**	**83.07**	**180**	*e*P	**P**	**22 30 53.8**	**+1.1**
	comp=Z,17nm,0.8s						
ABKAR	**Akbulak array**	**83.59**	**321**	*e*P	**P**	**22 30 54.6**	**-0.9**
	comp=Z,8.6nm,0.7s						
SYO	**Syowa Base**	**84.42**	**201**	⇑*e*P	**P**	**22 31 00.0**	**+0.6**
SYO	**Syowa Base**	**84.42**	**201**	⇑*e*PcP	**PcP**	**22 31 04.2**	**+1.2**
SYO	**Syowa Base**	**84.42**	**201**	⇓*i*pP	pP	22 31 11.0	+0.6
CHGN	**Chignik**	**84.68**	**32**	*e*P	**P**	**22 31 00.5**	**-0.3**
	comp=Z,23nm,1.2s						
ANM	**Nome**	**84.92**	**23**	*e*P	**P**	**22 31 02.6**	**+0.7**
	comp=Z,14nm,1.3s						
ANM	**Nome**	**84.92**	**23**	*e*P	**P**	**22 31 02.6**	**+0.7**
ANM				pmax	pmax		
	comp=Z,14nm,1.3s						
AKTO	**Aktyubinsk**	**85.14**	**322**	P	**P**	**22 31 03.5**	**+0.1**
	comp=Z,13nm,0.7s,baz=102,slow=6.8,SNR=17						
SVE	**Sverdlovsk**	**85.65**	**329**	*e*P	**P**	**22 31 05.7**	**0.0**
SVE				pmax	pmax		
	comp=Z,25nm,1.1s						
ARU	**Arti**	**86.61**	**328**	P	**P**	**22 31 08.8**	**-1.7**
	comp=Z,2.4nm,0.6s,baz=156,slow=2.1,SNR=13						
ARU	**Arti**	**86.61**	**328**	*e*P	**P**	**22 31 08.8**	**-1.7**
	comp=Z,10.0nm,0.8s						
ARU	**Arti**	**86.61**	**328**	*d i*P	**P**	**22 31 09.1**	**-1.4**
ARU						22 34 26.1	
ARU				S	**SKSac**	**22 41 35.3**	**+0.9**
ARU				SS	**SS**	**22 47 26.2**	**-0.1**
ARU				SSS	SSS	22 51 03.4	
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SII	**Sitkinak Islan**	**86.99**	**32**	*e*P	**P**	**22 31 12.5**	**+0.2**
	comp=Z,26nm,0.6s						
OHAK	**Old Harbor**	**87.65**	**32**	*e*P	**P**	**22 31 15.7**	**+0.3**
	comp=Z,16nm,0.9s						
SVW2	**Sparrevohn**	**87.69**	**28**	*e*P	**P**	**22 31 17.1**	**+1.5**
	comp=Z,6.9nm,1.1s						
TTA	**Tatalina**	**88.09**	**26**	*e*P	**P**	**22 31 19.0**	**+1.4**
	comp=Z,12nm,1.1s						
TTA	**Tatalina**	**88.09**	**26**	*e*P	**P**	**22 31 19.0**	**+1.4**
TTA				pmax	pmax		
	comp=Z,12nm,1.1s						
KDAK	**Kodiak Island**	**88.17**	**31**	*e*P	**P**	**22 31 19.4**	**+1.5**
	comp=Z,16nm,0.8s						
KDAK	**Kodiak Island**	**88.17**	**31**	*e*P	**P**	**22 31 19.4**	**+1.5**
KDAK				pmax	pmax		
	comp=Z,16nm,0.8s						
CNPM	**China Poot**	**89.31**	**30**	*e*P	**P**	**22 31 23.7**	**+0.4**
	comp=Z,10nm,1.1s						
RAYN	**Ar Rayn**	**89.41**	**294**	*e*P	**P**	**22 31 25.1**	**+0.5**
	comp=Z,20nm,0.7s						
RAYN	**Ar Rayn**	**89.41**	**294**	*i* P	**P**	**22 31 25.2**	**+0.5**
	SNR=27						
RAYN	**Ar Rayn**	**89.41**	**294**	*e*P	**P**	**22 31 25.1**	**+0.5**
RAYN				pmax	pmax		
	comp=Z,20nm,0.7s						
CAST	**Castle Rocks**	**89.94**	**26**	*e*P	**P**	**22 31 25.6**	**-0.6**
	comp=Z,6.7nm,0.6s						
SUA	**Susitna One**	**90.03**	**28**	*e*P	**P**	**22 31 27.1**	**+0.3**
	comp=Z,12nm,1.3s						
SEW	**Seward**	**90.33**	**29**	*e*P	**P**	**22 31 28.6**	**+0.6**
	comp=Z,10nm,0.9s						
RC01	**Rabbit Creek A**	**90.42**	**28**	*e*P	**P**	**22 31 28.8**	**+0.4**
	comp=Z,8.6nm,0.7s						
BPAW	**Bear Paw Mtn.**	**90.59**	**25**	*e*P	**P**	**22 31 29.9**	**+0.7**
	comp=Z,43nm,0.8s						
PMR	**Palmer**	**90.82**	**28**	*e*P	**P**	**22 31 30.4**	**+0.2**
	comp=Z,8.8nm,1.2s						
PMR	**Palmer**	**90.82**	**28**	*e*P	**P**	**22 31 30.4**	**+0.2**
PMR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MLY	**Manley**	**90.92**	**24**	*e*P	**P**	**22 31 31.3**	**+0.5**
	comp=Z,51nm,0.3s						
GHO	**Glory Hole Cre**	**90.95**	**28**	*e*P	**P**	**22 31 31.8**	**+0.8**
	comp=Z,4.9nm,0.8s						
KNK	**Knik Glacier**	**91.09**	**28**	*e*P	**P**	**22 31 31.8**	**+0.2**
	comp=Z,14nm,1.2s						
SML	**Sawmill**	**91.24**	**28**	*e*P	**P**	**22 31 33.1**	**+0.8**
	comp=Z,12nm,1.0s						
BWN	**Browne**	**91.25**	**25**	*e*P	**P**	**22 31 34.0**	**+1.8**
	comp=Z,91nm,0.5s						
RND	**Reindeer**	**91.35**	**26**	*e*P	**P**	**22 31 31.7**	**-1.1**
	comp=Z,6.3nm,0.4s						
RND	**Reindeer**	**91.35**	**26**	*e*P	**P**	**22 31 31.7**	**-1.1**
RND				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MCK	**McKinley**	**91.38**	**26**	*e*P	**P**	**22 31 33.6**	**+0.7**
	comp=Z,19nm,1.0s						
MCK	**McKinley**	**91.38**	**26**	*e*P	**P**	**22 31 33.6**	**+0.7**
MCK				pmax	pmax		
	comp=Z,19nm,1.0s						
GLI	**Glacier Island**	**91.63**	**29**	*e*P	**P**	**22 31 34.2**	**+0.1**
	comp=Z,5.8nm,0.8s						
COLD	**Coldfoot**	**91.67**	**22**	*e*P	**P**	**22 31 34.5**	**+0.3**
	comp=Z,6.2nm,0.7s						
FID	**Port Fidalgo**	**91.90**	**29**	*e*P	**P**	**22 31 35.6**	**+0.3**
	comp=Z,8.6nm,1.1s						
WRH	**Wood River Hil**	**91.90**	**25**	*e*P	**P**	**22 31 34.7**	**-0.6**
	comp=Z,45nm,0.5s						
KIRV	**Kirov**	**91.92**	**329**	P	**P**	**22 31 34.4**	**-1.0**
	comp=Z,5.6nm,0.6s,baz=148,slow=9.5,SNR=3.5						
MDM	**Murphy Dome**	**91.94**	**25**	*e*P	**P**	**22 31 35.0**	**-0.5**
	comp=Z,124nm,0.6s						
GNI	**Garni**	**92.21**	**310**	*e*P	**P**	**22 31 36.6**	**-0.9**
	comp=Z,25nm,1.2s						
GNI	**Garni**	**92.21**	**310**	*e*P	**P**	**22 31 36.6**	**-0.9**
GNI				pmax	pmax		
	comp=Z,25nm,1.2s						
TOLK	**Toolik Lake Re**	**92.23**	**21**	*e*P	**P**	**22 31 36.9**	**+0.2**
	comp=Z,5.1nm,0.6s						
TOLK	**Toolik Lake Re**	**92.23**	**21**	P	**P**	**22 31 37.4**	**+0.7**
	baz=257						
HDA	**Harding Lake**	**92.38**	**25**	P	**P**	**22 31 37.7**	**+0.2**
	baz=259						
ILAR	**Eielson Array**	**92.47**	**25**	P	**P**	**22 31 36.5**	**-1.4**
	comp=Z,1.4nm,0.5s,baz=272,slow=4.3,SNR=13						
ILAR				LR	LR	23 08 11.9	
	comp=Z,23nm,20.9s,baz=282,slow=32						
RAGM	**Ragged Mountai**	**92.72**	**30**	*e*P	**P**	**22 31 39.1**	**-0.1**
	comp=Z,9.7nm,1.2s						
PAX	**Paxson**	**92.77**	**27**	*e*P	**P**	**22 31 40.0**	**+0.6**
	comp=Z,5.9nm,0.8s						
PAX	**Paxson**	**92.77**	**27**	*e*P	**P**	**22 31 40.0**	**+0.6**
PAX				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KAIM	**Kayak Island**	**92.77**	**30**	*e*P	**P**	**22 31 38.9**	**-0.4**
	comp=Z,31nm,1.2s						
HMT	**Hamilton**	**92.91**	**30**	*e*P	**P**	**22 31 40.9**	**+0.8**
	comp=Z,13nm,1.0s						
GLB	**Gilahina Butte**	**93.30**	**29**	*e*P	**P**	**22 31 39.7**	**-2.1**
	comp=Z,3.0nm,0.8s						
FYU	**Fort Yukon**	**93.46**	**23**	*e*P	**P**	**22 31 43.3**	**+1.0**
	comp=Z,15nm,1.0s						
KBZ	**Khabaz**	**93.98**	**313**	P	**P**	**22 31 43.8**	**-1.5**
	comp=Z,1.6nm,0.7s,baz=147,slow=3.8,SNR=3.6						
KIV	**Kislovodsk**	**94.15**	**314**	*e*P	**P**	**22 31 44.1**	**-2.1**
	comp=Z,11nm,1.3s						
KIV	**Kislovodsk**	**94.15**	**314**	*e*P	**P**	**22 31 44.1**	**-2.1**
KIV				pmax	pmax		
	comp=Z,11nm,1.3s						
PRGR	**Permogore**	**94.24**	**331**	*e*P	**P**	**22 31 43.2**	**-2.8**
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CTGM	**Chitina Glacie**	**94.43**	**29**	*e*P	**P**	**22 31 47.4**	**+0.2**
	comp=Z,9.4nm,0.9s						
KMBO	**Kilima Mbogo**	**94.45**	**268**	P	**P**	**22 31 49.1**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=53,slow=4.9,SNR=8.1						
KMBO	**Kilima Mbogo**	**94.45**	**268**	*e*P	**P**	**22 31 49.1**	**+0.6**
	comp=Z,7.3nm,1.2s						
KMBO	**Kilima Mbogo**	**94.45**	**268**	*e*P	**P**	**22 31 49.1**	**+0.6**
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
DAWY	**Dawson**	**95.60**	**26**	*e*P	**P**	**22 31 52.9**	**+0.6**
	comp=Z,4.7nm,1.0s						
SNAA	**Sanae**	**96.18**	**193**	P	**P**	**22 31 56.2**	**+1.3**
EPYK	**Eagle Plains**	**96.84**	**24**	P	**P**	**22 31 58.4**	**+0.5**
	baz=269						
KLMR	**Klimovskoe**	**97.13**	**330**	*e*P	**P**	**22 31 56.6**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ASF	**Jabal al Asfar**	**97.83**	**301**	P	Pdif	22 32 03.6	+0.3
	comp=Z,2.5nm,0.7s,baz=101,slow=6.8,SNR=5.4						
VNA3	**Neumayer Olymp**	**97.96**	**192**	P	Pdif	22 32 03.8	+0.8
MMAI	**Mount Meron Ar**	**99.13**	**302**	P	**Pdif**	**22 32 08.2**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=292,slow=42,SNR=2.8						
BR101	**Keskin Array S**	**100.70**	**309**	*e*Pdif	**Pdif**	**22 32 14.6**	**-1.4**
BRTR	**Keskin Array B**	**100.70**	**309**	P	**Pdif**	**22 32 14.6**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=106,slow=4.9,SNR=5.1						
FIA0	**FINESS Array S**	**103.57**	**332**	*e*Pdif	**Pdif**	**22 32 25.2**	**-2.8**
FIA0	**FINESS Array S**	**103.57**	**332**	*e*P	**Pdif**	**22 32 25.2**	**-2.8**
FINES	**FINESS Array B**	**103.57**	**332**	Pdiff	**Pdif**	**22 32 25.2**	**-2.8**
	comp=Z,0.6nm,0.6s,baz=69,slow=7.6,SNR=3.2						
E04D	**Cinebar**	**105.68**	**44**	P	**PKiKP**	**22 36 51.9**	**+1.3**
	baz=277						
BURAR	**Bucovina Array**	**106.29**	**318**	⇑*i*P	**Pdif**	**22 32 41.3**	**+0.7**
BURAR	**Bucovina Array**	**106.29**	**318**	⇑P	**Pdif**	**22 32 41.3**	**+0.7**
BUR08	**Bucovina Ar. S**	**106.30**	**318**	*e*Pdif	**Pdif**	**22 32 40.8**	**+0.2**
CIS	**Catalina Islan**	**110.22**	**57**	P	**PKiKP**	**22 37 00.1**	**+0.5**
	baz=275						
NB2	**NORSAR Subarra**	**110.53**	**333**	P	**Pdif**	**22 32 57.5**	**-1.5**
	comp=Z,0.7nm,0.8s,baz=70,slow=4.4						
NB200	**NORSAR Array S**	**110.53**	**333**	*e*Pdif	**Pdif**	**22 32 55.9**	**-3.2**
NOA	**NORSAR Array B**	**110.53**	**333**	Pdiff	**Pdif**	**22 32 55.9**	**-3.2**
	comp=Z,0.2nm,0.6s,baz=66,slow=1.8,SNR=6.2						
GERES	**GERESS Array B**	**113.53**	**321**	PKiKP	**PKiKP**	**22 37 05.3**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=83,slow=2.3,SNR=10						
ABTA	**Abfaltersbach**	**114.93**	**319**	*i* PKiKP	**PKiKP**	**22 37 07.9**	**-0.3**
	comp=Z,1.7nm,0.7s						
WTTA	**Wattenberg**	**115.34**	**319**	*i* PKiKP	**PKPdf**	**22 37 09.5**	**+0.4**
	comp=Z,4.6nm,0.5s						
WATA	**Walderalm**	**115.35**	**319**	*i* PKiKP	**PKiKP**	**22 37 09.0**	**-0.2**
	comp=Z,1.1nm,0.5s						
PDAR	**Pinedale Array**	**115.50**	**46**	PKP	**PKPdf**	**22 37 10.2**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=202,slow=1.0,SNR=3.6						
PDAR				PKKPbc	**PKKPbc**	**22 47 43.3**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=107,slow=5.1,SNR=4.6						
PDAR				PKKPab	**PKKPab**	**22 47 50.1**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=132,slow=2.2,SNR=4.2						
MOTA	**Moosalm**	**115.66**	**320**	*i* PKiKP	**PKiKP**	**22 37 09.7**	**0.0**
	comp=Z,1.3nm,0.6s						
RETA	**Reutte**	**115.83**	**320**	*i* PKiKP	**PKPdf**	**22 37 10.4**	**+0.5**
	comp=Z,1.4nm,0.9s						
FETA	**Feichten**	**116.00**	**319**	*i* PKiKP	**PKiKP**	**22 37 10.9**	**+0.5**
	comp=Z,2.0nm,0.7s						
DAVA	**Damuels**	**116.46**	**320**	*i* PKiKP	**PKiKP**	**22 37 11.7**	**+0.4**
	comp=Z,5.9nm,0.8s						
O20A	**White River Ci**	**117.13**	**48**	P	**PKiKP**	**22 37 14.9**	**+2.0**
	baz=285						
MVCO	**Mesa Verde**	**117.63**	**52**	P	**PKiKP**	**22 37 16.2**	**+2.2**
	baz=283						
N23A	**Red Feather La**	**118.61**	**47**	P	**PKiKP**	**22 37 16.4**	**+0.6**
	baz=287						
S22A	**4UR Ranch, Cre**	**118.79**	**51**	P	**PKiKP**	**22 37 18.4**	**+2.1**
	baz=285						
RSSD	**Black Hills**	**118.92**	**43**	P	**PKiKP**	**22 37 17.1**	**+0.8**
	baz=290						
121A	**Cookes Peak, D**	**119.18**	**57**	P	**PKiKP**	**22 37 18.9**	**+1.8**
	baz=281						
ANMO	**Albuquerque**	**119.76**	**54**	*e*PKPdf	**PKiKP**	**22 37 19.9**	**+1.7**
ANMO	**Albuquerque**	**119.76**	**54**	*e*PKIKP	**PKiKP**	**22 37 19.9**	**+1.7**
ANMO	**Albuquerque**	**119.76**	**54**	P	**PKiKP**	**22 37 19.8**	**+1.7**
	baz=284						
SDCO	**Great Sand Dun**	**119.81**	**50**	*e*PKPdf	**PKiKP**	**22 37 19.4**	**+1.1**
SDCO	**Great Sand Dun**	**119.81**	**50**	P	**PKiKP**	**22 37 19.5**	**+1.2**
	baz=286						
T25A	**Trinidad**	**120.81**	**51**	P	**PKiKP**	**22 37 21.8**	**+1.6**
	baz=286						
TXAR	**Lajitas Array**	**123.28**	**59**	PKP	**PKiKP**	**22 37 25.4**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=241,slow=0.9,SNR=12						
ECSD	**EROS Data Cent**	**124.01**	**41**	*e*PKPdf	**PKiKP**	**22 37 26.4**	**+0.4**
ECSD	**EROS Data Cent**	**124.01**	**41**	P	**PKiKP**	**22 37 26.2**	**+0.2**
	baz=296						
EYMN	**Ely**	**125.00**	**34**	P	**PKiKP**	**22 37 28.1**	**+0.2**
	baz=304						
WMOK	**Wichita Mounta**	**125.88**	**52**	P	**PKiKP**	**22 37 30.4**	**+0.4**
	baz=289						
JCT	**Junction City**	**126.28**	**57**	P	**PKiKP**	**22 37 31.9**	**+1.0**
	baz=285						
C40A	**Isle Royale Na**	**126.32**	**33**	P	**PKiKP**	**22 37 31.2**	**+0.8**
	baz=306						
G39A	**Holcombe**	**126.64**	**37**	P	**PKiKP**	**22 37 31.6**	**+0.4**
	baz=303						
PLCA	**Paso Flores**	**128.30**	**158**	PKP	**PKPdf**	**22 37 34.3**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=299,slow=2.1,SNR=7.3						
E43A	**Lone Tree Farm**	**128.42**	**34**	P	**PKiKP**	**22 37 35.4**	**+0.7**
	baz=308						
JFWS	**Jewell Farm**	**128.47**	**39**	P	**PKiKP**	**22 37 35.4**	**+0.5**
	baz=302						
ESDC	**Sonseca Array**	**128.73**	**316**	PKP	**PKiKP**	**22 37 35.7**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=88,slow=1.5,SNR=3.4						
U40A	**Yellville**	**129.78**	**48**	P	**PKiKP**	**22 37 38.3**	**+0.5**
	baz=295						
D47A	**Chapleau**	**130.04**	**31**	P	**PKiKP**	**22 37 38.8**	**+0.9**
	baz=312						
CCM	**Cathedral Cave**	**130.20**	**45**	P	**PKiKP**	**22 37 39.6**	**+1.1**
	baz=298						
G46A	**Petoskey**	**130.24**	**34**	P	**PKiKP**	**22 37 39.4**	**+1.0**
	baz=309						
HDIL	**Hopedale**	**130.30**	**41**	P	**PKiKP**	**22 37 39.2**	**+0.5**
	baz=301						
TORD	**Torodi Ar. Bea**	**130.61**	**281**	PKP	**PKPdf**	**22 37 39.1**	**0.0**
	comp=Z,2.2nm,0.8s,baz=81,slow=2.2,SNR=14						
TOA1	**Torodi Ar. Sit**	**130.62**	**281**	*e*PKPdf	**PKPdf**	**22 37 39.1**	**0.0**
LSQQ	**Lebel-sur-Quev**	**131.45**	**25**	P	**PKiKP**	**22 37 40.5**	**-0.2**
	baz=320						
D50A	**G1974 Best Tow**	**131.57**	**29**	P	**PKiKP**	**22 37 41.8**	**+0.8**
	baz=316						
K47A	**Vermontville**	**131.79**	**36**	P	**PKiKP**	**22 37 41.3**	**-0.3**
	baz=307						
SFIN	**Lafayette**	**131.82**	**40**	P	**PKiKP**	**22 37 42.2**	**+0.5**
	baz=303						
CHGQ	**Chibougamau**	**131.82**	**23**	P	**PKPdf**	**22 37 40.9**	**+0.5**
	baz=324						
P46A	**Rosedale**	**132.16**	**41**	P	**PKiKP**	**22 37 43.5**	**+1.1**
	baz=303						
E51A	**G1948 Merrick**	**132.19**	**29**	P	**PKiKP**	**22 37 43.1**	**+0.8**
	baz=316						
L48A	**N Adams**	**132.56**	**37**	P	**PKiKP**	**22 37 43.5**	**+0.4**
	baz=307						
L49A	**Milan**	**132.86**	**36**	P	**PKiKP**	**22 37 44.4**	**+0.7**
	baz=308						
M49A	**Liberty Center**	**133.12**	**37**	P	**PKiKP**	**22 37 44.9**	**+0.6**
	baz=308						
E53A	**Dumoine, Ponti**	**133.17**	**28**	P	**PKiKP**	**22 37 43.8**	**-0.5**
	baz=318						
CLWO	**Collingwood**	**133.25**	**32**	P	**PKiKP**	**22 37 44.0**	**-0.6**
	baz=314						
P48A	**Milroy**	**133.40**	**40**	P	**PKPdf**	**22 37 44.0**	**+0.2**
	baz=304						
V46A	**Holladay**	**133.47**	**46**	P	**PKiKP**	**22 37 44.8**	**-0.4**
	baz=299						
WVT	**Waverly**	**133.51**	**45**	P	**PKiKP**	**22 37 44.9**	**-0.4**
	baz=299						
O49A	**Covington**	**133.67**	**39**	P	**PKiKP**	**22 37 45.5**	**0.0**
	baz=306						
V47A	**Nunnelly**	**133.88**	**46**	P	**PKiKP**	**22 37 46.4**	**+0.4**
	baz=299						
M51A	**Elyria**	**134.27**	**36**	P	**PKiKP**	**22 37 46.2**	**-0.4**
	baz=309						
V48A	**Smith Brothers**	**134.42**	**45**	P	**PKiKP**	**22 37 47.2**	**+0.1**
	baz=300						
T49A	**Edmonton**	**134.61**	**43**	P	**PKiKP**	**22 37 48.2**	**+0.8**
	baz=302						
O51A	**Pataskala**	**134.75**	**38**	P	**PKiKP**	**22 37 48.1**	**+0.4**
	baz=308						
S50A	**Richmond**	**135.06**	**42**	P	**PKiKP**	**22 37 49.1**	**+0.7**
	baz=304						
W49A	**Belvidere**	**135.12**	**46**	P	**PKiKP**	**22 37 48.7**	**+0.2**
	baz=300						
T50A	**Nancy**	**135.12**	**43**	P	**PKiKP**	**22 37 48.0**	**-0.5**
	baz=303						
U50A	**Jamestown**	**135.44**	**43**	P	**PKiKP**	**22 37 50.0**	**+0.7**
	baz=302						
O53A	**New Philadelph**	**135.52**	**37**	P	**PKPdf**	**22 37 48.2**	**+0.5**
	baz=310						
LRAL	**Lakeview Retre**	**135.57**	**49**	P	**PKPdf**	**22 37 48.7**	**+0.8**
	baz=297						
V50A	**Pikevile**	**135.66**	**44**	P	**PKPdf**	**22 37 48.4**	**+0.3**
	baz=302						
Q52A	**Bidwell**	**135.68**	**39**	P	**PKiKP**	**22 37 49.7**	**+0.1**
	baz=307						
W50A	**Signal Mountai**	**135.75**	**45**	P	**PKiKP**	**22 37 50.7**	**+0.8**
	baz=301						
Z49A	**Columbiana**	**135.85**	**48**	P	**PKiKP**	**22 37 49.6**	**-0.5**
	baz=298						
X50B	**Fort Payne**	**135.88**	**46**	P	**PKiKP**	**22 37 50.0**	**-0.2**
	baz=300						
P53A	**Whipple**	**135.90**	**38**	P	**PKiKP**	**22 37 50.2**	**+0.2**
	baz=309						
149A	**Jones**	**135.92**	**49**	P	**PKiKP**	**22 37 50.7**	**+0.5**
	baz=297						
TZTN	**Tazewell**	**136.25**	**42**	P	**PKPdf**	**22 37 49.4**	**+0.3**
	baz=304						
Z50A	**Ashland**	**136.27**	**48**	*e*PKPdf	**PKiKP**	**22 37 52.0**	**+1.1**
Z50A	**Ashland**	**136.27**	**48**	P	**PKPdf**	**22 37 49.5**	**+0.2**
	baz=299						
M56A	**Emporium**	**136.43**	**33**	P	**PKiKP**	**22 37 51.7**	**+0.6**
	baz=314						
V52A	**Sevierville**	**136.60**	**43**	P	**PKiKP**	**22 37 51.9**	**+0.4**
	baz=303						
P55A	**Reedsville**	**136.82**	**36**	P	**PKiKP**	**22 37 52.1**	**+0.2**
	baz=311						
O56A	**Blue Knob Stat**	**137.04**	**35**	P	**PKPdf**	**22 37 51.1**	**+0.6**
	baz=313						
X52A	**Dahlonega**	**137.06**	**45**	P	**PKPdf**	**22 37 51.6**	**+0.9**
	baz=302						
251A	**Midway**	**137.19**	**49**	P	**PKiKP**	**22 37 53.9**	**+1.0**
	baz=298						
V53A	**Saluda**	**137.23**	**43**	P	**PKiKP**	**22 37 52.2**	**-0.7**
	baz=304						
Y52A	**Lilburn**	**137.32**	**46**	P	**PKiKP**	**22 37 52.6**	**-0.5**
	baz=301						
Q57A	**Strasburg**	**137.96**	**36**	P	**PKiKP**	**22 37 54.5**	**+0.3**
	baz=312						
GOGA	**Godfrey**	**137.98**	**46**	P	**PKPdf**	**22 37 52.6**	**+0.2**
	baz=301						
W54A	**Cherokee Point**	**137.98**	**43**	P	**PKPdf**	**22 37 52.4**	**+0.1**
	baz=304						
N59A	**State Game Lan**	**138.11**	**32**	P	**PKiKP**	**22 37 54.7**	**+0.2**
	baz=317						
KMSC	**Kings Mountain**	**138.53**	**43**	P	**PKiKP**	**22 37 55.8**	**+0.3**
	baz=305						
LVC	**Limon Verde**	**144.30**	**146**	*e*PKPdf	**PKPdf**	**22 38 05.8**	**+1.2**
LVC	**Limon Verde**	**144.30**	**146**	*e*PKIKP	**PKPdf**	**22 38 05.8**	**+1.2**
PB01	**IPOC Station P**	**145.19**	**143**	*e*PKPbc	**PKPdf**	**22 38 07.4**	**+1.6**
CPUP	**Villa Florida**	**145.78**	**165**	PKPbc	**PKPdf**	**22 38 06.7**	**+0.1**
	comp=Z,8.1nm,0.7s,baz=182,slow=1.5,SNR=18						
CPUP	**Villa Florida**	**145.78**	**165**	*e*PKPab	**PKPab**	**22 38 08.8**	**+1.6**
CPUP	**Villa Florida**	**145.78**	**165**	*e*PKP2	**PKPab**	**22 38 08.9**	**+1.6**
PB11	**IPOC Station P**	**146.07**	**142**	*e*PKPbc	**PKPab**	**22 38 09.7**	**+0.9**
LPAZ	**La Paz**	**149.62**	**139**	PKP	**PKPdf**	**22 38 13.9**	**0.0**
	comp=Z,1.5nm,0.9s,baz=275,slow=2.0,SNR=5.2						
LPAZ				PKPbc	**PKiKP**	**22 38 19.1**	**-0.5**
	comp=Z,25nm,1.2s,baz=43,slow=2.7,SNR=6.4						
LPAZ	**La Paz**	**149.62**	**139**	*e*PKPdf	**PKPbc**	**22 38 16.5**	**-2.0**
LPAZ				*e*PKPbc	**PKiKP**	**22 38 20.8**	**+1.2**

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*IDC **27** 22:22:40.1±2.6, 36°.30N×70°.80E, h193^{km}±23^{km}, mb3.5/12, mb1 3.7/18, mb1mx3.4/48, mbtmp4.2/18, MS3.9/1, Ms1 3.9/1, ms1mx2.3/34, Error ellipse: s-maj=18.7km s-min=12.8km az=2.0*

*ISCJB **27** 22:22:40.9±0.2, 36°.53N±0°.03×70°.74E±0°.03, h200^{km}, mb4.2/61, Error ellipse: s-maj=3.9km s-min=3.3km az=34.2*

*BJI **27** 22:22:42.9±0.0, 36°.76N×70°.60E, h229^{km}, mb4.3/17, mB4.5/11*

*MOS **27** 22:22:42.7±0.9, 36°.54N×70°.83E, h225^{km}, mb4.1/16, Error ellipse: s-maj=9.5km s-min=5.8km az=90.4*

*NEIC **27** 22:22:43.4±1.5, 36°.53N×70°.78E, h220^{km}±4^{km}, mb4.4/49, Error ellipse: s-maj=11.2km s-min=9.6km az=70.0*

*NNC **27** 22:22:44.5±1.8, 36°.81N×70°.64E, h194^{km}±18^{km}, mb3.4, mpv4.1, Error ellipse: s-maj=17.5km s-min=9.0km az=163.0*

ISC 27 22:22:41.8±0.4**, 36°.56N**±0°.05×**70°.78E**±0°.04**, h200**^{km}**, n170,** σ**1^s.73**/185**, mb4.4**/61**, 10C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**2.46**	**351**	*e*Pn	**Pn**	**22 23 28.6**	**+3.2**
GAR	**Garm**	**2.46**	**351**	*e*PN	**Pn**	**22 23 28.6**	**+3.2**
KBL	**Kabul**	**2.46**	**216**	*e*Pn	**Pn**	**22 23 28.6**	**+3.0**
CEP	**Cherat**	**2.88**	**161**	⇓P	**Pn**	**22 23 33.4**	**+3.1**
CEP				S	**Sn**	**22 24 10.0**	**+1.9**
CHCP	**Chirah Chowk**	**3.54**	**144**	⇓P	**Pn**	**22 23 41.1**	**+3.1**
NIL	**Nilore**	**3.54**	**144**	*e*Pn	**Pn**	**22 23 41.2**	**+3.2**
NIL	**Nilore**	**3.54**	**144**	*e*PN	**Pn**	**22 23 41.2**	**+3.2**
THW	**Thamme Wali**	**3.84**	**168**	P	**Pn**	**22 23 44.3**	**+2.6**
SARP	**Sargodha**	**4.88**	**161**	P	**Pn**	**22 23 56.8**	**+2.0**
KSH	**Kashi**	**5.05**	**53**	P	**Pn**	**22 23 54.8**	**-2.1**
KSH				S	**Sn**	**22 24 47.3**	**-8.8**
KSH				smax	smax		
	comp=N,320nm,0.5s						
KSH				smax	smax		
	comp=E,340nm,0.6s						
AML	**Almayashu**	**6.00**	**21**	P	**Pn**	**22 24 11.3**	**+1.9**
	SNR=43						
UCH	**Uchtor**	**6.35**	**26**	P	**Pn**	**22 24 16.0**	**+2.0**
	SNR=38						
KZA	**Kyzart**	**6.51**	**31**	P	**Pn**	**22 24 17.6**	**+1.7**
	SNR=11						
EKS2	**Erkin-Say**	**6.52**	**20**	P	**Pn**	**22 24 17.9**	**+2.1**

	SNR=16						
KK31	Karatay Array	6.54	358	*e*Pn	Pn	22 24 17.7	+1.7
KK31	Karatay Array	6.54	358	⇓P	Pn	22 24 17.0	+1.0
	2.6nm,0.3s,baz=189,slow=13,SNR=120						
KK31				⇑S	Sn	22 25 26.5	-4.2
	26nm,0.5s,baz=187,slow=17,SNR=20						
KK31	Karatay Array	6.54	358	PN	Pn	22 24 16.9	+1.0
KKAR	Karatay Array	6.54	358	*e*Pn	Pn	22 24 17.7	+1.7
KKAR	Karatay Array	6.54	358	*e*PN	Pn	22 24 17.7	+1.7
AAK	Ala-Archa	6.71	24	P	Pn	22 24 20.1	+1.8
	6.7nm,0.3s,baz=172,slow=4.4,SNR=21						
AAK				S	Sn	22 25 34.1	-0.8
	3.7nm,0.3s,baz=191,slow=21,SNR=3.9						
AAK	Ala-Archa	6.71	24	*e*Pn	Pn	22 24 20.4	+2.1
AAK	Ala-Archa	6.71	24	⇓P	Pn	22 24 20.1	+1.8
	8.3nm,0.3s						
AAK				⇑S	Sn	22 25 34.2	-0.7
	28nm,0.5s						
AAK	Ala-Archa	6.71	24	P	Pn	22 24 20.4	+2.1
	SNR=6.2						
KBK	Karagaybulak	6.88	27	P	Pn	22 24 22.9	+2.3
	SNR=15						
BHK	Bhakra	6.94	136	*e*P	Pn	22 24 22.6	+1.3
BHK				*e*S	Sn	22 25 36.2	-4.1
CHMS	Chumysh	7.12	24	P	Pn	22 24 25.1	+1.6
	SNR=10						
USP	Ospenovka	7.28	22	P	Pn	22 24 27.7	+2.0
	SNR=19						
TKM2	Tokmak 2	7.35	29	⇑P	Pn	22 24 28.1	+1.3
	13nm,0.6s						
TKM2				⇑S	Sn	22 25 48.3	-1.9
	18nm,0.8s						
TKM2	Tokmak 2	7.35	29	PN	Pn	22 24 28.9	+2.1
TKM2	Tokmak 2	7.35	29	P	Pn	22 24 28.6	+1.8
	SNR=34						
JOSI	Joshimath	9.46	127	*e*P	Pn	22 24 56.4	+2.2
JOSI				*e*S	Sn	22 26 34.4	-5.8
JOSI				IAML		22 26 46.5	
	comp=N,71nm,0.6s						
JOSI				IAML		22 26 47.9	
	comp=E,105nm,0.3s						
PDGK	Podgornoye	9.50	42	⇑P	Pn	22 24 55.1	+0.5
	comp=E,2.5nm,0.4s						
PDGK				⇑S	Sn	22 26 40.9	-0.1
	comp=E,15nm,1.0s						
PDGK	Podgornoye	9.50	42	P	Pn	22 24 55.1	+0.5
PDGK				S	Sn	22 26 40.9	-0.1
NDI	New Delhi	9.54	144	*e*P	Pn	22 24 57.0	+1.8
GEYT	Alibeck	10.19	281	P	Pn	22 25 02.9	-0.7
	comp=E,1.8nm,0.3s,baz=104,slow=11,SNR=15						
GEYT				S	Sn	22 26 54.3	-3.0
	comp=E,1.2nm,0.3s,baz=221,slow=48,SNR=3.0						
GYA0B	ALIBECK ARRAY	10.19	281	*e*Pn	Pn	22 25 03.8	+0.2
GYA0B	ALIBECK ARRAY	10.19	281	⇑P	Pn	22 25 03.0	-0.5
GYA0B				⇓S	Sn	22 26 55.8	-1.5
MAKZ	Makanchi	13.21	36	*e*Pn	P	22 25 42.6	-2.1
MAKZ	Makanchi	13.21	36	⇓P	Pn	22 25 41.8	0.0
	comp=E,22nm,0.6s						
MAKZ	Makanchi	13.21	36	*e*P	P	22 25 42.6	-2.1
MK31	Makanchi Array	13.35	36	*e*Pn	P	22 25 44.3	-1.9
MK31	Makanchi Array	13.35	36	P	Pn	22 25 43.8	+0.3
	comp=E,4.6nm,0.5s,baz=222,slow=12,SNR=147						
MK31	Makanchi Array	13.35	36	*e*P	P	22 25 44.3	-1.9
MK32	Makanchi Array	13.35	36	*e*P	Pn	22 25 43.9	+0.4
MKAR	Makanchi Array	13.35	36	P	Pn	22 25 43.9	+0.4
	comp=E,1.4nm,0.3s,baz=223,slow=12,SNR=51						
DANN	Dangsing	13.67	123	*e*P	Pn	22 25 48.2	+0.3
	comp=E,45nm,0.3s						
KOLN	Koldanda	13.94	125	*e*P	P	22 25 51.8	-1.4
	comp=E,34nm,0.3s						
GKN	Gorkha	14.48	122	*e*P	P	22 25 58.5	-0.7
	comp=E,89nm,0.2s						
WMQ	Urumqi	14.81	55	*e*P	P	22 26 03.5	+1.0
WMQ				pmax	pmax		
	comp=E,12nm,0.8s						
WMQ				pmax	pmax		
	comp=E,44nm,4.5s						
WMQ				LR	LR		
	comp=E,170nm,28.9s						
WMQ				LR	LR		
	comp=E,180nm,29.2s						
WMQ				LR	LR		
	comp=E,51nm,29.1s						
AB31	Akbulak array	14.95	331	P	P	22 26 03.4	-0.5
	comp=E,2.5nm,0.4s,baz=144,slow=12,SNR=112						
AB31				⇑S	S	22 28 46.2	-2.9
	comp=E,4.8nm,0.9s,baz=155,slow=23,SNR=2.6						
AB31	Akbulak array	14.95	331	P	P	22 26 03.4	-0.5
AB31				S	S	22 28 46.2	-2.9
ABKAR	Akbulak array	14.95	331	*e*P	P	22 26 03.4	-0.5
DMN	Daman	15.05	122	*e*P	P	22 26 05.2	-0.4
	comp=E,39nm,0.4s						
KKN	Kakani	15.06	121	*e*P	P	22 26 05.1	-0.5
	comp=E,54nm,0.4s						
KURBB	Kurchatov Arra	15.12	19	P	P	22 26 05.3	-0.5
	comp=E,0.5nm,0.3s,baz=211,slow=8.8,SNR=20						
KURK	Kurchatov	15.23	19	*e*P	P	22 26 07.0	0.0
	comp=E,31nm,1.8s						
KURK	Kurchatov	15.23	19	*e*P	P	22 26 07.0	0.0
KURK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
PKIN	Phulchoki	15.27	122	*e*P	P	22 26 07.7	-0.3
	comp=Z,53nm,0.4s						
PKI	Pulchoki	15.28	122	*e*P	P	22 26 07.8	-0.4
	comp=Z,38nm,0.3s						
JIRN	Jiri	15.77	120	*e*P	Pn	22 26 14.3	+0.5
	comp=Z,196nm,0.4s						
BVAR	Borovoye Array	16.47	359	P	Pn	22 26 22.0	+0.5
	comp=Z,1.8nm,0.3s,baz=167,slow=13,SNR=19						
BVAR	Borovoye Array	16.47	359	P	Pn	22 26 22.0	+0.5
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	Borovoye	16.50	359	*e*P	Pn	22 26 21.9	0.0
	comp=Z,4.6nm,0.7s						
BRVK	Borovoye	16.50	359	*e*P	Pn	22 26 21.9	0.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKTO	Aktyubinsk	16.64	330	P	Pn	22 26 24.4	+0.7
	comp=Z,1.6nm,0.3s,baz=139,slow=11,SNR=48						
AKTO	Aktyubinsk	16.64	330	⇑P	Pn	22 26 24.7	+1.1
	comp=Z,14nm,0.7s						
AKTO				⇓S	S	22 29 25.9	-0.3
	comp=Z,4.0nm,0.9s						
AKTO	Aktyubinsk	16.64	330	P	Pn	22 26 24.7	+1.1
AKTO				S	S	22 29 25.9	-0.3
DGZ	Jazzator, Alta	17.84	37	*e*P	Pn	22 26 37.2	-0.7
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LSA	Lhasa	18.36	106	*e*P	P	22 26 41.6	-0.5
	comp=Z,6.8nm,0.6s						
LSA	Lhasa	18.36	106	P	Pn	22 26 48.5	+4.0
LSA	Lhasa	18.36	106	*e*P	P	22 26 41.6	-0.5
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKT	Akhty	18.56	292	*e*P	Pn	22 26 46.2	-0.2
AKT				*e*S	S	22 30 05.8	+1.1
AKT				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ZAA0	Zalesovo Array	19.93	25	*e*P	P	22 26 59.1	+0.9
	comp=Z,17nm,0.6s						
ZAA0	Zalesovo Array	19.93	25	⇑P	P	22 26 58.8	+0.6
	comp=Z,2.1nm,0.6s						
ZALV	Zalesovo Beam	19.93	25	P	P	22 26 59.1	+0.9
	comp=Z,18nm,0.4s,baz=216,slow=11,SNR=88						
ZAA1	Zalesovo Array	19.94	25	*e*P	P	22 26 59.1	+0.8
SHL	Shillong	21.09	115	*e*x	P	22 27 11.0	0.0
ARU	Arti	21.52	341	P	P	22 27 16.0	+1.1
	comp=Z,0.8nm,0.6s,baz=214,slow=1.6,SNR=4.8						
ARU	Arti	21.52	341	*e*P	P	22 27 16.0	+1.1
	comp=Z,2.2nm,0.7s						
ARU	Arti	21.52	341	P	P	22 27 17.8	+2.9
ARU				S	S	22 31 05.7	+5.7
NCK	Nalchik	21.88	297	*i* P	P	22 27 20.2	+1.4
NCK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KARS	Kars	21.99	289	*e*P	P	22 27 19.5	-0.5
	comp=Z,30nm,1.0s						
KARS	Kars	21.99	289	*e*P	P	22 27 19.5	-0.5
KARS				pmax	pmax		
	comp=Z,30nm,1.0s						
KBZ	Khabaz	22.42	297	P	P	22 27 24.5	+0.8
	comp=Z,0.8nm,0.6s,baz=176,slow=9.6,SNR=2.1						
KIV	Kislovodsk	22.61	298	*e*P	P	22 27 25.4	-0.2
	comp=Z,5.9nm,1.0s						
KIV	Kislovodsk	22.61	298	*e*P	P	22 27 26.6	+1.0
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA	Gaotai	23.02	74	*e*P	P	22 27 31.5	+2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
RAYN	Ar Rayn	25.36	246	*e*P	P	22 27 50.4	-0.3
	comp=Z,3.6nm,1.0s						
RAYN	Ar Rayn	25.36	246	*e*P	P	22 27 50.4	-0.3
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	Lanzhou	26.57	81	*e*P	P	22 28 03.0	+1.4
LZH				pP	pP	22 28 47.0	+3.8
LZH				sP	sP	22 29 12.0	+5.1
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
SONA0	Songino Array	28.44	55	*e*P	P	22 28 18.8	+0.8
SONM	Songino Array	28.44	55	P	P	22 28 18.8	+0.8
	comp=Z,1.3nm,0.8s,baz=264,slow=9.9,SNR=8.5						
KMI	Kunming	29.58	104	P	P	22 28 31.8	+3.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC	Hu-ho-hao-te	31.91	70	P	P	22 28 49.8	+1.3
HHC				S	S	22 33 42.3	-2.2
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				LR	LR		
	comp=Z,160nm,15.3s						
HHC				LR	LR		
	comp=Z,180nm,14.5s						
HHC				LR	LR		
	comp=Z,210nm,15.3s						
TIRR	Tirgusor	32.87	297	*e*P	P	22 28 55.4	-1.3
	comp=Z,16nm,1.2s						
TIRR	Tirgusor	32.87	297	*e*P	P	22 28 55.4	-1.3
TIRR				pmax	pmax		
	comp=Z,16nm,1.2s						
MLR	Muntele Rosu	34.60	299	*e*P	P	22 29 11.8	0.0
	comp=Z,17nm,2.0s						
MLR	Muntele Rosu	34.60	299	*e*P	P	22 29 11.8	0.0
MLR				pmax	pmax		
	comp=Z,17nm,2.0s						
ALN	Alexandroupoli	34.88	291	*e*P	P	22 29 14.0	-0.1
	comp=Z,7.5nm,1.3s						
ALN	Alexandroupoli	34.88	291	*e*P	P	22 29 14.0	-0.1
ALN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KOLS	Kolonicke sedl	37.10	305	*e*P	P	22 29 36.6	+3.8
KOLS	Kolonicke sedl	37.10	305	*e*P	P	22 29 36.5	+3.7
FIA0	FINESS Array S	37.34	326	*e*P	P	22 29 35.6	+1.0
FIA0	FINESS Array S	37.34	326	*e*P	P	22 29 35.6	+1.0
FINES	FINESS Array B	37.34	326	P	P	22 29 35.6	+1.0
	comp=Z,0.4nm,0.4s,baz=118,slow=11,SNR=12						
FINES	FINESS Array B	37.34	326	*i* P	P	22 29 36.5	+1.9
VYHS	Vyhne	39.38	304	*e*P	P	22 29 55.9	+4.1
VYHS	Vyhne	39.38	304	*e*P	P	22 29 55.9	+4.1
ARCES	ARCESS Array B	41.02	338	P	P	22 30 06.5	+1.5
	comp=Z,2.0nm,0.6s,baz=110,slow=7.8,SNR=15						
NC405	NORSAR Array S	43.99	323	*e*P	P	22 30 27.6	-1.4
	comp=Z,19nm,1.5s						
NC602	NORSAR Array S	44.04	323	*e*P	P	22 30 30.0	+0.7
	comp=Z,30nm,1.8s						
NC303	NORSAR Array S	44.17	323	*e*P	P	22 30 31.2	+0.8
	comp=Z,33nm,1.8s						
NB201	NORSAR Array S	44.19	323	*e*P	P	22 30 30.8	+0.2
	comp=Z,11nm,1.3s						
NB2	NORSAR Subarra	44.23	323	P	P	22 30 31.5	+0.6
	comp=Z,0.4nm,0.5s,baz=96,slow=7.9						
NB200	NORSAR Array S	44.23	323	*e*P	P	22 30 31.2	+0.3
NOA	NORSAR Array B	44.23	323	P	P	22 30 31.2	+0.3
	comp=Z,0.5nm,0.5s,baz=97,slow=7.7,SNR=11						
NAO01	NORSAR Array S	44.37	323	*e*P	P	22 30 31.6	-0.4
	comp=Z,18nm,1.4s						
NBO00	NORSAR Array S	44.44	323	*e*P	P	22 30 33.0	+0.5
	comp=Z,18nm,1.5s						
NC204	NORSAR Array S	44.47	323	*e*P	P	22 30 33.3	+0.4
	comp=Z,26nm,1.7s						
NACB	Ninganchiao	45.08	91	*e*P	P	22 30 37.1	-0.9
	comp=Z,16nm,0.8s						
TIXI	Tiksi	45.78	22	*e*P	P	22 30 43.8	+0.8
	comp=Z,12nm,0.8s						
TIXI	Tiksi	45.78	22	*e*P	P	22 30 43.9	+1.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
USA0B	Ussuriysk Arra	46.29	61	*e*P	P	22 30 46.8	-0.5
	comp=Z,29nm,1.9s						
SPA0	Spitsbergen Ar	47.40	347	*e*P	P	22 30 56.0	+0.6
	comp=Z,22nm,1.1s						
WLF	Walferdange	47.55	307	*e*P	P	22 30 56.5	-0.4
	comp=Z,45nm,1.3s						
WLF	Walferdange	47.55	307	*e*P	P	22 30 56.5	-0.4
WLF				pmax	pmax		
	comp=Z,45nm,1.3s						
KBS	Kingsbay	48.52	347	*e*P	P	22 31 07.2	+3.3
KBS				pmax	pmax		
	comp=Z,62nm,1.0s						
ASAJ	Asahikawa	53.67	58	LR	LR	22 55 32.9	
	comp=Z,110nm,18.8s,baz=160,slow=37						
BILL	Bilibino	58.63	26	*i* P	P	22 32 17.4	-0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PEA1	Petropavlovsk-	60.04	44	*e*P	P	22 32 26.8	-0.6
PETK	Petropavlovsk-	60.05	44	P	P	22 32 26.8	-0.6
	comp=Z,1.9nm,1.0s,baz=316,slow=4.0,SNR=3.2						
SFS	San Fernando	60.19	295	*e*P	P	22 32 27.8	-0.8
	comp=Z,88nm,1.0s						
SFS	San Fernando	60.19	295	*e*P	P	22 32 27.8	-0.8
SFS				pmax	pmax		
	comp=Z,88nm,1.0s						
SUMG	Summit	60.95	341	*e*P	P	22 32 33.8	+0.1
	comp=Z,12nm,1.4s						
SUMG	Summit	60.95	341	*e*P	P	22 32 33.8	+0.1
SUMG				pmax	pmax		
	comp=Z,12nm,1.4s						
TOA1	Torodi Ar. Sit	65.55	268	*e*P	P	22 33 02.3	-2.0
TORD	Torodi Ar. Bea	65.55	268	P	P	22 33 02.3	-2.0
	comp=Z,0.5nm,0.5s,baz=48,slow=5.8,SNR=10						
SFJD	Kangerlussuaq	67.64	339	*e*P	P	22 33 16.0	-0.6
	comp=Z,9.9nm,0.8s						
SFJD	Kangerlussuaq	67.64	339	*e*P	P	22 33 16.0	-0.6
SFJD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TOLK	Toolik Lake Re	70.91	15	*e*P	P	22 33 37.5	+0.8
	comp=Z,5.1nm,0.6s						
INK	Inuvik	73.87	9	P	P	22 33 54.9	+0.7
	comp=Z,2.0nm,0.6s,baz=330,slow=7.3,SNR=10.0						
INK	Inuvik	73.87	9	*e*P	P	22 33 54.3	+0.2
	comp=Z,2.4nm,0.6s						
ROSA	Rosais	74.30	307	*e*P	P	22 33 57.1	-0.1
	comp=Z,210nm,1.6s						
SKT	Skwentna	76.02	19	*e*P	P	22 34 06.3	-0.3
	comp=Z,5.1nm,1.1s						
RIDG	Independent Ri	76.11	15	*e*P	P	22 34 07.0	-0.2
	comp=Z,8.2nm,0.7s						
SML	Sawmill	76.98	18	*e*P	P	22 34 11.8	-0.2
	comp=Z,26nm,1.9s						
SML	Sawmill	76.98	18	*e*P	P	22 34 11.8	-0.2
SML				pmax	pmax		
	comp=Z,26nm,1.9s						
GLI	Glacier Island	78.09	18	*e*P	P	22 34 17.6	-0.5
	comp=Z,7.0nm,1.1s						
SEW	Seward	78.15	19	*e*P	P	22 34 19.0	+0.6
	comp=Z,8.4nm,0.8s						
SDPT	Sand Point	78.52	27	*e*P	P	22 34 20.1	-0.5
	comp=Z,9.3nm,0.8s						
KDAK	Kodiak Island	79.21	22	*i* P	P	22 34 24.7	+0.5
CTGM	Chitina Glacie	79.34	15	*e*P	P	22 34 24.2	-0.9
	comp=Z,3.6nm,0.6s						
OHAK	Old Harbor	79.45	23	*e*P	P	22 34 26.3	+0.7
	comp=Z,10nm,1.3s						
HYT	Haines Junctio	80.23	14	*e*P	P	22 34 29.7	-0.2
	comp=Z,4.9nm,1.2s						
BCPM	Bancas Point	80.61	15	*e*P	P	22 34 30.9	-0.9
	comp=Z,22nm,0.7s						
WHY	Whitehorse	80.86	12	*e*P	P	22 34 32.7	-0.5
	comp=Z,2.8nm,0.8s						
YKW3	Yellowknife Ar	81.12	3	*e*P	P	22 34 34.5	+0.1
	comp=Z,4.7nm,0.9s						
YKA	Yellowknife Ar	81.19	3	P	P	22 34 34.5	-0.2
	comp=Z,1.0nm,0.6s,baz=350,slow=5.5,SNR=5.1						
WR1	Warramunga Arr	82.17	122	*e*P	P	22 34 38.9	-1.6
WRA	Warramunga Arr	82.17	122	P	P	22 34 38.9	-1.6
	comp=Z,1.8nm,0.4s,baz=306,slow=5.6,SNR=20						
WRAB	Tennant Creek	82.17	122	*e*P	P	22 34 39.1	-1.4
	comp=Z,50nm,2.0s						
WRAB	Tennant Creek	82.17	122	*e*P	P	22 34 39.1	-1.4
WRAB				pmax	pmax		
	comp=Z,50nm,2.0s						
WB2	Warramunga Arr	82.18	122	*e*P	P	22 34 39.5	-1.1
	comp=Z,16nm,1.3s						
WC3	Warramunga Arr	82.20	122	*e*P	P	22 34 39.4	-1.3
	comp=Z,8.8nm,1.0s						
BESE	Bessie Mountai	82.82	13	*e*P	P	22 34 43.6	+0.2
	comp=Z,18nm,1.8s						
AS31	Alice Springs	84.43	125	*e*P	P	22 34 50.6	-1.4
	comp=Z,3.4nm,1.3s						
ASAR	Alice Springs	84.43	125	P	P	22 34 50.5	-1.6
	comp=Z,1.6nm,0.6s,baz=313,slow=4.6,SNR=12						
WALA	Waterton Lakes	94.65	3	*e*P	P	22 35 37.6	-2.4
	comp=Z,4.4nm,0.8s						
PECO	Prince Edward	94.71	337	*e*P	P	22 35 40.3	+0.1
	comp=Z,21nm,1.2s						
PLCA	Paso Flores	149.68	250	PKPbc	PKPbc	22 42 07.0	-0.6
	comp=Z,1.3nm,0.8s,baz=232,slow=3.0,SNR=3.3						

WEL 27 22:24:59.0,42°S±1°×174°.2E±1°.0,h9km±2km,M3.9/30, ML4.2/24,MLv3.9/30,Error ellipse: s-maj=0.0km s-min=0.0km az=175.5,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.07	169	P	Pg	22 25 01.6	+0.5
CMWZ				S	Sg	22 25 03.6	+1.0
BSWZ	Blackbirch Sta	0.24	262	P	Pg	22 25 04.6	+0.7
BSWZ				S	Sg	22 25 08.9	+1.6
TUWZ	Tuamarina	0.32	323	P	Pb	22 25 06.2	-0.6
TUWZ				S	Sb	22 25 11.2	-0.8
TCW	Tory Channel	0.48	7	P	Pb	22 25 08.9	-0.6
TCW				S	Sb	22 25 16.3	-0.3
BHW	Baring Head	0.58	62	P	Pb	22 25 11.4	+0.1
NNZ	Nelson	0.77	307	P	Pg	22 25 14.2	+0.3
PLWZ	Palliser	0.80	82	P	Pn	22 25 16.1	-0.4
MSWZ	Moikau Station	0.83	72	P	Pn	22 25 16.3	-0.6
CAW	Cannon Point	0.87	49	P	Pb	22 25 16.4	+0.2
KHZ	Kahutara	0.88	214	P	Pn	22 25 17.3	-0.3
DUWZ	D'Urville Isla	0.90	347	P	Pb	22 25 16.6	-0.2
THZ	Tophouse	0.97	265	P	Pb	22 25 17.9	-0.1
PAWZ	Paruwai Farm	0.97	72	P	Pn	22 25 18.7	-0.1
MTW	Mount Morrison	1.11	62	P	Pn	22 25 20.8	+0.1
OGWZ	Otaki Gorge	1.14	41	P	Pb	22 25 20.8	0.0
TRWZ	Traveller	1.16	76	P	Pg	22 25 21.2	0.0
HOWZ	Holdsworth Sta	1.27	52	P	Pb	22 25 23.1	+0.1
TMWZ	Te Maipa	1.40	66	P	Pn	22 25 24.4	-0.2
MRZ	Mangatainoka R	1.46	46	P	Pb	22 25 25.9	-0.4
QRZ	Quartz Range	1.52	304	P	Pb	22 25 27.2	-0.1
GVZ	Greta Valley S	1.55	213	P	Pn	22 25 26.7	0.0
TIWZ	Tintock	1.56	55	P	Pn	22 25 27.4	+0.5
OHWZ	Ohakea	1.70	30	P	Pg	22 25 31.1	-0.5
PRWZ	Pori Road	1.75	51	P	Pn	22 25 29.6	+0.1
POWZ	Post Office Ro	1.75	43	P	Pn	22 25 30.1	+0.5
DSZ	Denniston Nort	1.79	267	P	Pb	22 25 31.7	-0.3
LTZ	Lake Taylor	1.80	232	P	Pn	22 25 30.7	+0.4
BFZ	Birch Farm	1.84	58	P	Pn	22 25 30.1	-0.7
AMCZ	Amberley	1.88	217	P	Pn	22 25 31.0	-0.3
WAZ	Wanganui	2.02	18	P	Pb	22 25 36.3	+0.5
DVHZ	Dannevirke	2.03	48	P	Pn	22 25 33.1	-0.3
TSZ	Takapari Road	2.10	40	P	Pn	22 25 34.6	+0.2
OKCZ	Okains Bay	2.21	202	P	Pn	22 25 34.9	-0.9
LREZ	Lake Rotokare	2.23	4	P	Pb	22 25 39.7	+0.3
NMEZ	Namu Road	2.28	354	P	Pb	22 25 40.9	+0.6
OXZ	Oxford	2.29	223	P	Pn	22 25 36.5	-0.5
INZ	Inchbonnie	2.29	242	P	Pn	22 25 38.0	+1.0
MQZ	McQueen's Vall	2.32	209	P	Pn	22 25 35.7	-1.6
PRHZ	Porangahau	2.33	53	P	Pn	22 25 37.3	-0.2
PNHZ	Pukenui	2.33	41	P	Pn	22 25 37.3	-0.3
PREZ	Palmer Road	2.34	359	P	Pb	22 25 41.6	+0.3
WPHZ	Waipukurau	2.35	47	P	Pn	22 25 37.9	+0.2
KHEZ	Kahui Hut	2.39	357	P	Pb	22 25 42.0	-0.2
NBEZ	Newall Road No	2.42	354	P	Pb	22 25 42.0	-0.8
DREZ	Durham Road	2.49	0	P	Pb	22 25 42.6	-1.3
PKE	Pukeiti	2.49	356	P	Pb	22 25 42.5	-1.5
MTVZ	Mangateitei	2.49	23	P	Pb	22 25 42.7	-1.3
PKVZ	Pokaka	2.55	21	P	Pb	22 25 43.1	-1.8
MOVZ	Moawhango	2.56	28	P	Pn	22 25 42.0	+1.2
VRZ	Vera Road	2.59	10	P	Pb	22 25 44.0	-1.6
PXZ	Pawanui	2.61	52	P	Pn	22 25 40.3	-1.0
BHHZ	Black Hill Sta	2.61	34	P	Pb	22 25 46.0	0.0
DRZ	Dome Shelter	2.62	24	P	Pn	22 25 44.0	+2.2
WHVZ	Whangaehu Hut	2.62	24	P	Pn	22 25 43.6	+1.9
KRHZ	Kereru	2.62	40	P	Pn	22 25 41.3	-0.2
FWVZ	Far West T-bar	2.64	24	P	Pn	22 25 44.1	+2.2
TUVZ	Tukino	2.66	25	P	Pn	22 25 44.3	+2.2
NGZ	Ngauruhoe	2.72	24	P	Pn	22 25 45.2	+2.2
KAHZ	Kahuranaki	2.78	48	P	Pn	22 25 43.1	-0.6
TWVZ	Taurewa	2.78	20	P	Pn	22 25 46.1	+2.4
WTVZ	West Tongariro	2.78	23	P	Pn	22 25 46.1	+2.4
KRVZ	Karewarewa	2.81	24	P	Pb	22 25 47.1	-2.3
KATZ	Kakaramea	2.94	23	P	Pb	22 25 51.7	+0.2
MCHZ	McNeill Hill	2.94	41	P	Pn	22 25 46.2	+0.4
RITZ	Rihia Road	2.99	26	P	Pb	22 25 51.2	-1.2
RATZ	Rangitukua	3.06	24	P	Pb	22 25 54.0	+0.4
BKZ	Black Stump Fm	3.06	36	P	Pb	22 25 54.3	+0.6
RPZ	Rata Peaks	3.08	228	P	Pn	22 25 47.8	-0.1
WATZ	Wairara	3.20	22	P	Pb	22 25 56.7	+0.8
HIZ	Hauiti	3.21	9	P	Pn	22 25 52.5	+3.0
MRHZ	Matea Rd	3.31	32	P	Pn	22 25 51.1	0.0
MRHZ				P	Pb	22 25 59.0	+1.0
TLZ	Tolley Road	3.50	18	P	Pn	22 25 56.4	+2.8
FOZ	Fox Glacier	3.73	239	P	Pb	22 26 03.3	-1.6
MUGZ	Murupara	3.76	32	P	Pb	22 26 04.9	-0.6
LBZ	Lake Benmore	3.99	226	P	Pn	22 26 03.7	+3.3
RAGZ	Rawiri	4.03	39	P	Pn	22 26 03.5	+2.6
TOZ	Tahuroa Road	4.07	15	P	Pn	22 26 04.9	+3.4
URZ	Urewera	4.09	34	P	Pn	22 26 02.6	+1.0
MWZ	Matawai	4.21	38	P	Pn	22 26 02.4	-0.9
ODZ	Otahua Downs	4.24	216	P	Pn	22 26 03.1	-0.6
KBAZ	Karaka Road Bo	4.61	7	P	Pn	22 26 13.0	+4.1
AWAZ	Awhitu Peninsu	4.63	4	P	Pn	22 26 12.5	+3.5
MKAZ	Moumakai	4.63	10	P	Pn	22 26 11.2	+2.1
JCZ	Jackson Bay	4.64	237	P	Pn	22 26 12.9	+3.6
ETAZ	East Tamaki Re	4.76	7	P	Pn	22 26 14.4	+3.6
HAZ	Te Kaha	4.80	36	P	Pn	22 26 13.4	+2.0
WIAZ	Waiheke Island	4.94	9	P	Pn	22 26 16.5	+3.2
OUZ	Omahuta	6.47	356	P	Pn	22 26 38.6	+4.3
CTZ	Chatham Island	7.07	110	P	Pn	22 26 43.4	+0.8

AZER 27 22:29:43.7±0.3,39°.92N×57°.16E,h72km±11km,ml4.2/1, Error ellipse: s-maj=2.8km s-min=2.2km az=17.0, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALA	Gala	5.39	277	P	Pn	22 31 01.4	-0.1
GALA				S	Sn	22 32 02.4	+0.3
NDR	Nardaran	5.53	279	P	Pn	22 31 03.3	-0.1
NDR				S	Sn	22 32 05.9	+0.4
GOBA	Gobu	5.71	277	P	Pn	22 31 05.7	-0.1
GOBA				S	Sn	22 32 10.4	+0.4
ALIB	Äli-Bayra	6.27	273	P	Pn	22 31 13.3	-0.2
ALIB	Äli-Bayra	6.27	273	S	Sn	22 32 24.0	+0.4
GBS	Qobustan	6.32	278	P	Pn	22 31 14.1	-0.2
GBS	Qobustan	6.32	278	S	Sn	22 32 25.3	+0.3
ATGJ	Altiaghaj	6.35	281	P	Pn	22 31 14.5	-0.2
	SNR=8.7						
ATGJ	Altiaghaj	6.35	281	S	Sn	22 32 25.3	-0.5
SIZA	Siyzn	6.40	283	P	Pn	22 31 15.2	-0.2
SIZA	Siyzn	6.40	283	S	Sn	22 32 27.4	+0.3
PQL	Pirkuli	6.60	280	P	Pn	22 31 18.0	-0.2
	SNR=13						
PQL	Pirkuli	6.60	280	S	Sn	22 32 32.2	+0.2
LKRN	Lenkeran, Azer	6.61	262	P	Pn	22 31 18.0	-0.2
	SNR=4.3						
LKRN	Lenkeran, Azer	6.61	262	S	Sn	22 32 32.3	+0.3
ASTR	Astara	6.64	261	P	Pn	22 31 18.4	-0.2
	SNR=5.4						
ASTR	Astara	6.64	261	S	Sn	22 32 33.0	+0.3
SAAT	Saatly	6.72	272	P	Pn	22 31 20.1	+0.5
SAAT	Saatly	6.72	272	S	Sn	22 32 36.2	+1.5
QUBA	Quba, Azerbaij	6.75	285	P	Pn	22 31 19.9	-0.2
QUBA	Quba, Azerbaij	6.75	285	S	Sn	22 32 35.8	+0.4
GLBA	Clilabad	6.81	267	P	Pn	22 31 20.6	-0.3
	SNR=7.4						
GLBA	Clilabad	6.81	267	S	Sn	22 32 37.6	+0.8
KDMR	Kurdemir	6.89	277	P	Pn	22 31 21.9	-0.1
KDMR	Kurdemir	6.89	277	S	Sn	22 32 39.5	+0.5
IML	Ismayilli	6.91	280	P	Pn	22 31 22.2	-0.2
	SNR=8.3						
IML	Ismayilli	6.91	280	S	Sn	22 32 39.9	+0.3
QSAR	Qusar	6.95	286	P	Pn	22 31 22.6	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSAR	Qusar	6.95	286	S	Sn	22 32 40.7	+0.3
LRK	Lerik	6.96	262	P	Pn	22 31 22.8	-0.4
	SNR=5.7						
LRK	Lerik	6.96	262	S	Sn	22 32 41.0	+0.1
XNQ	Khinaliq	6.98	283	P	Pn	22 31 23.2	-0.3
	SNR=19						
XNQ	Khinaliq	6.98	283	S	Sn	22 32 41.7	+0.2
QBL	Gabala	7.19	281	P	Pn	22 31 25.9	-0.2
	SNR=6.1						
QBL	Gabala	7.19	281	S	Sn	22 32 46.6	+0.3
ZRD	Zardab	7.27	276	P	Pn	22 31 27.1	-0.1
ZRD	Zardab	7.27	276	S	Sn	22 32 48.7	+0.4
BRDA	Brd	7.66	276	P	Pn	22 31 32.4	-0.2
BRDA	Brd	7.66	276	S	Sn	22 32 58.2	+0.4
SEKA	Sheki	7.69	283	P	Pn	22 31 31.8	-1.2
MNGR	Mingechevir, A	7.74	280	P	Pn	22 31 33.5	-0.1
MNGR	Mingechevir, A	7.74	280	S	Sn	22 33 00.3	+0.5
ZKTA	Zakatala	8.18	286	P	Pn	22 31 39.4	-0.2
ZKTA	Zakatala	8.18	286	S	Sn	22 33 10.8	+0.3
GANJ	Ganja	8.32	278	P	Pn	22 31 41.3	-0.3
GANJ	Ganja	8.32	278	S	Sn	22 33 14.1	+0.2
ORD	Ordubad	8.70	267	P	Pn	22 31 46.5	-0.3
ORD	Ordubad	8.70	267	S	Sn	22 33 23.5	+0.2
GDB	GEDABAY	8.75	279	P	Pn	22 31 43.5	-4.1
GDB	GEDABAY	8.75	279	S	Sn	22 33 24.3	-0.4
SBZ	Shahbuz	8.97	270	P	Pn	22 31 50.2	-0.3
SBZ				S	Sn	22 33 30.1	+0.2
NAX	Nakhchivan	9.04	269	P	Pn	22 31 51.2	-0.3
NAX				S	Sn	22 33 32.0	+0.2
QZX	Qazax, Azerbai	9.05	281	P	Pn	22 31 51.4	-0.2
QZX				S	Sn	22 33 32.4	+0.4
HYR	Heyderabad	9.47	273	P	Pn	22 31 57.2	-0.2
HYR				S	Sn	22 33 42.5	+0.3

TRN 27 22:30:08.9, 17°.64N×61°.64W, h24^{km}, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.14	284	eP	Pn	22 30 14.9	-0.7
ANWB				eS	Sb	22 30 19.8	+2.7
BPA	Boggy Peak	0.62	199	eP	Pn	22 30 22.9	+0.7
BPA				eS	Sn	22 30 32.9	+1.5
NVRH	Round Hill, Ne	1.02	244	eS	Sn	22 30 43.7	+2.5
MLYT	Lee's Yard	1.05	210	eP	Pb	22 30 29.3	+0.9
MLYT				eS	Sn	22 30 45.6	+3.6
SKI	Saint Kitts	1.09	254	eP	Pb	22 30 29.7	+0.6
SKI				eS	Sn	22 30 45.3	+2.4
BSK	Brimstone Hill	1.18	256	eP	Pb	22 30 32.1	+1.6
BSK				eS	Sb	22 30 48.6	+3.2
SEUS	St. Eustatius	1.28	264	eP	Pb	22 30 32.8	+0.4
SEUS				eS	Sb	22 30 50.4	+2.0
SMRT	St. Maarten	1.43	287	eP	Pb	22 30 34.7	-0.1
SMRT				eS	Sb	22 30 53.7	+1.2
SABA	Saba	1.52	270	eP	Pb	22 30 36.4	-0.1
SABA				eS	Sb	22 30 55.9	+0.5
MAGL	Barre de l'ile	1.71	168	eP	Pb	22 30 39.0	-0.7
MDPO	Dominica; Chan	2.06	175	eP	Pb	22 30 44.0	-1.6
MDPO				eS	Sb	22 31 09.3	-1.4
DWS	Wesley	2.08	171	eP	Pn	22 30 44.0	+1.7
DWS				eS	Sb	22 31 09.4	-1.9
MDN	Morne-Daniel	2.32	174	eP	Pb	22 30 47.8	-2.2
MDN				eS	Sn	22 31 15.4	+2.2
DLPL	La Plaine	2.32	171	eP	Pn	22 30 47.2	+1.6
DLPL				eS	Sb	22 31 16.0	-2.4
DBCT	Belle View Cho	2.37	173	eP	Pb	22 30 48.9	-2.0
PCM	Pelee Case Pet	2.83	172	eP	Pb	22 30 57.3	-1.6
BAMF	Morne Balai	2.84	170	eP	Pn	22 30 55.5	+2.7
GBMF	Grand Be	2.86	171	eP	Pn	22 30 55.4	+2.4
PML	Morne Lenard	2.87	171	eP	Pn	22 30 56.3	+3.1
FDF	Fort de France	2.92	171	eP	Pn	22 30 55.3	+1.4
FDF				eS	Sn	22 31 30.8	+2.5
SLBI	Saint Lucia, B	3.65	170	eP	Pn	22 31 05.2	+1.3
SLBI				eS	Sn	22 31 47.1	+0.9
MCLT	Moule a Chique	3.96	170	eP	Pn	22 31 09.9	+1.7
MCLT	Moule a Chique	3.96	170	eS	Sn	22 31 56.1	+2.2
SVB	Belmont	4.35	175	eP	Pn	22 31 15.5	+1.9
FCV	Fort Charlotte	4.47	175	eP	Pn	22 31 17.3	+2.1

TRN 27 22:33:22.2, 17°.58N×61°.83W, h18^{km}, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.10	27	eP	Pg	22 33 26.2	+0.3
ANWB				eS	Sg	22 33 30.9	+2.6
BPA	Boggy Peak	0.53	182	eP	Pn	22 33 34.9	-0.1
BPA	Boggy Peak	0.53	182	eP	Pn	22 33 35.5	+0.5
BPA				eS	Sn	22 33 44.0	+0.5
NEV	Hard Times	0.83	238	eP	Pn	22 33 40.3	+1.2
NEV				eS	Sn	22 33 54.5	+3.6
SKI	Saint Kitts	0.90	254	eP	Pn	22 33 41.0	+1.0
SKI				eS	Sn	22 33 56.4	+3.8
MLYT	Lee's Yard	0.92	202	eP	Pn	22 33 41.8	+1.5
MLYT				eS	Sn	22 33 56.8	+3.7
BSK	Brimstone Hill	0.99	257	eS	Sn	22 33 57.7	+2.9
SEUS	St. Eustatius	1.10	266	eP	Pg	22 33 44.3	+0.8
SEUS				eS	Sg	22 34 01.1	+3.2
SMRT	St. Maarten	1.27	292	eP	Pg	22 33 46.6	-0.2
SMRT				eS	Sg	22 34 04.5	+1.0
SABA	Saba	1.34	272	eP	Pg	22 33 48.0	-0.2
SABA				eS	Sg	22 34 06.7	+0.9
MDPO	Dominica; Chan	2.03	170	eP	Pb	22 33 57.0	-1.5
MDPO				eS	Sb	22 34 23.1	-0.3
DWS	Wesley	2.06	166	eP	Pb	22 33 58.1	-1.0
DWS				eS	Sb	22 34 24.7	+0.2
MDN	Morne-Daniel	2.29	169	eP	Pb	22 34 01.7	-1.4
MDN				eS	Sb	22 34 29.4	-1.7
DLPL	La Plaine	2.31	166	eP	Pb	22 34 01.9	-1.5
DBCT	Belle View Cho	2.34	168	eP	Pn	22 34 01.8	+1.9
DBCT				eS	Sb	22 34 30.9	-1.8
DPMT	Pointe Michel	2.35	169	eP	Pn	22 34 01.5	+1.6
DPMT				eS	Sn	22 34 30.1	+1.8
SLBI	Saint Lucia, B	3.63	167	eP	Pn	22 34 20.4	+2.8
SLBI				eS	Sn	22 35 02.0	+1.9

*IDC **27** 22:50:23.1±1.1, 5°.57S×153°.08E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.7/35, mbtmp3.9/8, ML1.9/1, MS2.7/1, Ms1 2.7/1, ms1mx2.5/20, Error ellipse: s-maj=43.5km s-min=19.1km az=121.0*

*ISCJB **27** 22:50:26.2±0.4, 5°.62S±0°.06×153°.15E±0°.06, h37^{km}, mb4.8/27, MS2.5/1, Error ellipse: s-maj=10.4km s-min=6.4km az=44.8*

*NEIC **27** 22:50:28.0±2.3, 5°.56S×153°.13E, h35^{km}±3^{km}, mb4.7/22, Error ellipse: s-maj=11.8km s-min=6.3km az=157.0*

ISC 27 22:50:28.1±0.6, 5°.58S±0°.08×153°.15E±0°.09, h37^{km}, n40, σ0^{s}.86/41, mb4.8/27, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.69	325	ePn	Pn	22 50 54.4	-0.6
PMG	Port Moresby	7.05	237	Pn	Pn	22 52 08.8	+0.1
	1.4nm,0.3s,baz=9.5,slow=18,SNR=3.0						
PMG				Sn	Sn	22 53 29.0	+1.3
	6.1nm,0.3s,baz=113,slow=22,SNR=9.4						
EIDS	Eidsvold	19.78	186	eP	P	22 54 54.1	-1.0
	37nm,1.5s						
GUMO	Guam	20.74	337	LR	LR	23 03 54.0	
	comp=Z,18nm,18.7s,baz=150,slow=39						
FAKI	Fak Fak	21.00	276	eP	P	22 55 07.8	-0.8
	181nm,1.5s						
SAUI	Saumlaki	21.82	262	eP	P	22 55 16.7	-0.7
	442nm,0.9s						
PINNC	Pines Island,	21.86	142	eP	P	22 55 16.8	-0.8
	142nm,1.2s						
WRAB	Tennant Creek	23.19	230	eP	P	22 55 32.6	+0.8
	35nm,1.9s						
WB2	Warramunga Arr	23.19	230	eP	P	22 55 31.8	0.0
	45nm,1.9s						
WR1	Warramunga Arr	23.20	230	eP	P	22 55 32.3	+0.4
WRA	Warramunga Arr	23.20	230	P	P	22 55 32.3	+0.4
	1.5nm,0.8s,baz=53,slow=13,SNR=5.1						
SARN	Sarigan	23.30	342	eP	P	22 55 33.9	+1.0
	57nm,1.5s						
AS31	Alice Springs	25.82	224	ePcP	PcP	22 59 26.4	+1.3
ASAR	Alice Springs	25.82	224	P	P	22 55 54.2	-1.9
	1.0nm,0.8s,baz=55,slow=9.1,SNR=4.3						
ASAR				PcP	PcP	22 59 26.4	+1.3
	0.3nm,0.7s,baz=46,slow=5.3,SNR=3.8						
JNU	Nakatsue	43.91	333	eP	P	22 58 30.5	-0.8
	18nm,1.2s						
KNMB	Chin-men Tao	45.14	313	eP	P	22 58 40.7	-0.5
	31nm,0.9s						
SBLHI	Steaming Bluff	56.51	62	eP	P	23 00 07.0	-0.2
	195nm,0.9s						
BYL	Byron's Ledge	56.52	62	eP	P	23 00 07.2	0.0
	231nm,0.9s						
PUH	Pauahi	56.54	63	eP	P	23 00 08.1	+0.7
	184nm,1.4s						
PEA0B	Petropavlovsk-	58.59	3	eP	P	23 00 22.0	+1.0
	25nm,1.4s						
PETK	Petropavlovsk-	58.59	3	P	P	23 00 22.1	+1.1
	4.5nm,0.5s,baz=159,slow=6.6,SNR=30						
PEA1	Petropavlovsk-	58.60	3	eP	P	23 00 22.1	+1.1
CHTO	Chiang Mai	58.63	296	eP	P	23 00 20.9	-1.1
	18nm,1.9s						
SONA0	Songino Array	67.16	328	eP	P	23 01 19.3	+0.9
SONM	Songino Array	67.16	328	P	P	23 01 19.3	+0.9
	0.4nm,0.4s,baz=149,slow=5.9,SNR=3.4						
SII	Sitkinak Islan	75.30	27	eP	P	23 02 08.1	+0.9
	18nm,0.9s						
SEW	Seward	79.34	25	eP	P	23 02 29.0	-0.7
	9.9nm,0.8s						
KTH	Kantishna Hill	80.60	22	eP	P	23 02 37.3	+0.7
	11nm,1.6s						
GLI	Glacier Island	80.73	25	eP	P	23 02 37.6	+0.3
	5.5nm,0.9s						
MK32	Makanchi Array	81.13	319	eP	P	23 02 39.8	0.0
MKAR	Makanchi Array	81.13	319	P	P	23 02 39.8	0.0
	0.3nm,0.5s,baz=119,slow=5.1,SNR=2.9						
ZALV	Zalesovo Beam	81.99	326	P	P	23 02 43.5	-0.5
	1.0nm,0.6s,baz=103,slow=6.2,SNR=3.9						
ZAA1	Zalesovo Array	81.99	326	eP	P	23 02 43.5	-0.5
ILAR	Eielson Array	82.75	22	P	P	23 02 48.0	+0.2
	0.5nm,0.6s,baz=247,slow=5.6,SNR=4.2						
HYT	Haines Junctio	84.96	27	eP	P	23 02 58.4	-1.0
	12nm,1.8s						
KCPM	Cahto Peak	88.36	50	eP	P	23 03 15.2	-1.3
	41nm,1.3s						
PAGB	Antelope Grade	90.47	54	eP	P	23 03 27.3	+1.0
	6.6nm,1.1s						
BDFB	Brasilia	150.28	135	PKPbc	PKiKP	23 10 17.7	+0.4
	1.3nm,0.6s,baz=204,slow=6.9,SNR=4.2						
TORD	Torodi Ar. Bea	150.87	287	PKPbc	PKiKP	23 10 18.4	0.0
	0.7nm,0.5s,baz=54,slow=2.7,SNR=5.9						
TOA1	Torodi Ar. Sit	150.87	287	ePKPbc	PKiKP	23 10 18.4	0.0

*IDC **27** 22:52:11.6±7.8, 41°.41N×103°.29E, h0^{km}, mb1 3.4/4, mb1mx3.1/46, mbtmp3.4/4, ML3.1/4, Error ellipse: s-maj=95.7km s-min=31.7km az=142.0*

*BJI **27** 22:52:11.4±0.0, 40°.96N×103°.76E, h7^{km}, mb4.2/1, mB4.3/1, ML4.0/14, Ms3.7/5*

ISC 27 22:52:09.6±0.7, 41°.20N±0°.06×103°.52E±0°.05, h10^{km}, n11, σ3^{s}.66/16, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	3.35	239	Pn	Pn	22 53 01.3	-0.9
GTA				Pg	Pb	22 53 07.0	-2.2
GTA				Sn	Sn	22 53 41.5	-0.6
GTA				Sg	Sb	22 53 49.8	-0.3
GTA				smax	smax		
	comp=N,590nm,0.9s						
GTA				smax	smax		
	comp=E,340nm,0.7s						
GTA				LR	LR		
	comp=N,450nm,4.2s						
GTA				LR	LR		
	comp=E,390nm,4.9s						
BTO	Baotou	4.96	95	ePn	Pn	22 53 20.0	-4.3
BTO				Sn	Sb	22 54 30.3	-6.1
LZH	Lanzhou	5.12	177	Pg	Pb	22 53 37.5	-1.8
LZH				Sg	Sb	22 54 40.5	-0.4
LZH				smax	smax		
	comp=N,290nm,0.7s						
LZH				smax	smax		
	comp=E,300nm,0.8s						
LZH				LR	LR		
	comp=N,430nm,4.3s						
LZH				LR	LR		
	comp=E,580nm,4.9s						
HHC	Hu-ho-hao-te	6.09	91	Pg	Pb	22 53 58.0	+2.1
HHC				Sg	Sb	22 55 16.3	+7.4
HHC				smax	smax		
	comp=N,290nm,0.6s						
HHC				smax	smax		
	comp=E,210nm,0.5s						
SONM	Songino Array	6.94	16	Pn	Pn	22 53 51.4	-0.1
	0.7nm,0.3s,baz=194,slow=15,SNR=8.5						
SONM				Pg	Pb	22 54 16.1	+5.7
	2.3nm,0.3s,baz=199,slow=19,SNR=11						
SONM				Sn	Sn	22 55 03.9	-6.7
	0.7nm,0.3s,baz=190,slow=17,SNR=3.2						
SONM				Lg	Lg	22 55 48.0	
	2.8nm,0.3s,baz=207,slow=29,SNR=10						
XAN	Xi'an	8.33	147	P	Pn	22 54 11.0	+0.5
XAN				smax	smax		
	comp=N,17nm,1.0s						
XAN				smax	smax		
	comp=E,16nm,1.1s						
TLY	Talaya	10.48	0	Lg	Lg	22 57 38.2	
	0.0nm,0.3s,baz=342,slow=19,SNR=2.7						
WMQ	Urumqi	11.97	288	eP	Pn	22 55 05.0	+4.7
WMQ				pmax	pmax		
	comp=Z,37nm,4.5s						
WMQ				LR	LR		
	comp=N,42nm,5.7s						
WMQ				LR	LR		
	comp=E,34nm,6.3s						
MKAR	Makanchi Array	16.25	297	Pn	Pn	22 55 56.4	-1.5
	0.1nm,0.3s,baz=102,slow=14,SNR=2.7						
ZALV	Zalesovo Beam	17.86	322	Pn	Pn	22 56 18.9	+0.8
	0.1nm,0.3s,baz=130,slow=10,SNR=2.5						
KURBB	Kurchatov Arra	19.69	307	Pn	P	22 56 38.9	0.0
	0.1nm,0.3s,baz=111,slow=10,SNR=4.7						

*ISCJB **27** 22:57:10.5±0.3, 26°.59S±0°.07×67°.75E±0°.06, h10^{km}, mb4.8/46, MS3.2/1, Error ellipse: s-maj=10.2km s-min=8.1km az=12.3*

*IDC **27** 22:57:10.6±0.7, 26°.60S×67°.73E, h0^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.8/34, mbtmp4.0/10, MS3.2/1, Ms1 3.4/1, ms1mx2.7/24, Error ellipse: s-maj=24.4km s-min=19.8km az=176.0*

*NEIC **27** 22:57:12.2±0.8, 26°.60S×67°.76E, h10^{km}±1^{km}, mb4.6/38, Error ellipse: s-maj=15.6km s-min=14.5km az=182.0*

ISC 27 22:57:12.1±0.4, 26°.60S±0°.09×67°.74E±0°.08, h10^{km}, n58, σ0^{s}.57/55, mb4.8/46, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	12.23	294	ePn	Pn	23 00 06.0	-0.5
CRZF	Crozet Islands	23.46	208	eP	P	23 02 22.5	+0.8
	77nm,0.9s						
KAAM	Kaadhehdhoo	27.41	11	eP	P	23 02 58.6	+0.6
	101nm,1.1s						
BOSA	Boshof	37.55	257	P	P	23 04 26.4	-0.5
	3.5nm,0.9s,baz=82,slow=12,SNR=3.6						
LSZ	Lusaka	38.47	279	P	P	23 04 35.1	+0.4
	1.0nm,0.2s,baz=18,slow=20,SNR=3.1						
LSZ	Lusaka	38.47	279	eP	P	23 04 35.1	+0.4
	23nm,2.0s						
XMIS	Christmas Isla	39.18	73	eP	P	23 04 40.5	-0.1
	93nm,0.9s						
MNAI	Manna	40.27	63	eP	P	23 04 49.4	-0.2
	462nm,1.6s						
H01W2	Cape Leeuwin H	40.43	113	T	T	23 47 46.3	
	baz=269,slow=74						
H01W3	Cape Leeuwin H	40.43	113	T	T	23 47 44.3	
	baz=269						
H01W1	Cape Leeuwin H	40.45	113	T	T	23 47 47.5	
	baz=269,slow=74						
MAW	Mawson	41.13	183	P	P	23 04 56.2	+0.2
	1.4nm,0.5s,baz=292,slow=11,SNR=4.1						
MAW	Mawson	41.13	183	eP	P	23 04 56.2	+0.2
	7.4nm,2.0s						
SIMRM	Sittwe	52.47	30	eP	P	23 06 25.3	0.0
	393nm,1.9s						
FORT	Forrest	52.53	110	eP	P	23 06 26.4	+0.5
	40nm,1.0s						
CMAR	Chiang Mai Arr	54.08	37	P	P	23 06 36.6	-0.6
	0.5nm,0.3s,baz=218,slow=5.6,SNR=4.8						
CMAR				LR	LR	23 27 25.6	
	comp=Z,18nm,18.1s,baz=235,slow=34						
SNAA	Sanae	58.89	200	eP	P	23 07 11.8	+0.9
	10nm,1.6s						
ASAR	Alice Springs	59.37	103	P	P	23 07 14.8	-0.2
	1.4nm,0.7s,baz=251,slow=6.5,SNR=20						
WRA	Warramunga Arr	60.96	99	P	P	23 07 26.1	+0.2
	1.9nm,0.9s,baz=251,slow=9.6,SNR=6.6						
WR1	Warramunga Arr	60.96	99	eP	P	23 07 26.1	+0.2
WB2	Warramunga Arr	60.97	99	eP	P	23 07 25.8	-0.2
	11nm,1.3s						
WRAB	Tennant Creek	60.97	99	eP	P	23 07 25.9	0.0
	34nm,1.8s						
SAUI	Saumlaki	62.86	85	eP	P	23 07 38.3	-0.4
	626nm,1.1s						
SHEL	Horse Pasture	68.50	262	eP	P	23 08 14.3	-0.8
	496nm,1.6s						
CSS	Mathiatis	69.35	330	eP	P	23 08 20.2	+0.2
	13nm,1.1s						
KK31	Karatay Array	69.41	2	eP	P	23 08 20.3	+0.2
	4.1nm,1.4s						
KKAR	Karatay Array	69.41	2	eP	P	23 08 20.9	+0.7
	4.1nm,1.4s						
GNI	Garni	69.78	341	eP	P	23 08 22.2	-0.4
	18nm,1.0s						
KNMB	Chin-men Tao	70.50	48	eP	P	23 08 27.5	+0.3
	35nm,0.8s						
YULB	Yu-li	71.78	51	eP	P	23 08 34.9	-0.1
	7.2nm,0.9s						
NACB	Ninganchiao	72.49	51	eP	P	23 08 39.6	+0.4
	17nm,0.9s						
YOJ	Yonaguni jima	73.66	51	eP	P	23 08 46.2	0.0
	61nm,1.1s						
KIV	Kislovodsk	73.88	341	eP	P	23 08 47.5	+0.4
	6.6nm,1.1s						
MK32	Makanchi Array	74.23	10	eP	P	23 08 49.3	+0.3
MKAR	Makanchi Array	74.23	10	P	P	23 08 49.3	+0.3
	0.3nm,0.6s,baz=196,slow=3.6,SNR=3.0						
TORD	Torodi Ar. Bea	75.31	293	P	P	23 08 55.6	-0.4
	0.8nm,0.9s,baz=107,slow=5.1,SNR=3.9						
TOA1	Torodi Ar. Sit	75.32	293	eP	P	23 08 55.6	-0.4
ABKAR	Akbulak array	75.83	355	eP	P	23 08 58.9	+0.7
	2.1nm,0.8s						
ITM	Ithomi	76.68	324	eP	P	23 09 03.4	+0.1
	16nm,1.4s						
ALN	Alexandroupoli	77.50	329	eP	P	23 09 07.5	-0.3
	4.6nm,1.3s						
LHI	Lord Howe Isla	77.64	119	eP	P	23 09 08.3	-0.7
	62nm,1.1s						
AGG	Agios Georgios	77.86	325	eP	P	23 09 10.0	+0.1
	12nm,1.5s						
LIT	Litokhoron	78.59	326	eP	P	23 09 13.9	-0.1
	12nm,0.9s						
TIRR	Tirgusor	79.33	332	eP	P	23 09 17.8	0.0
	11nm,0.9s						
VTS	Vitosha	80.16	328	eP	P	23 09 23.0	+0.4
	3.9nm,1.4s						
ZALV	Zalesovo Beam	81.57	10	P	P	23 09 30.0	+0.4
	1.4nm,0.7s,baz=193,slow=5.9,SNR=6.4						
ZAA1	Zalesovo Array	81.57	10	eP	P	23 09 30.0	+0.3
SONA0	Songino Array	81.84	25	eP	P	23 09 32.4	+1.0
SONM	Songino Array	81.84	25	P	P	23 09 32.4	+1.0
	0.7nm,0.8s,baz=226,slow=5.1,SNR=4.3						
PSZ	Piszkesteto	85.72	330	eP	P	23 09 51.8	+0.6
	4.0nm,0.9s						
OUZ	Omahuta	86.83	128	eP	P	23 09 56.8	-0.2
	35nm,1.6s						
SARN	Sarigan	87.10	70	eP	P	23 09 58.7	0.0
	32nm,1.2s						
FUORN	Ofenpass-Fuorn	89.48	324	eP	P	23 10 10.2	+0.6
	3.6nm,0.9s						
KHC	Kasperske Hory	89.51	328	eP	P	23 10 09.5	+0.1
	3.3nm,1.8s						
TUE	Stuetta	89.86	324	eP	P	23 10 11.2	0.0
	8.5nm,1.6s						
SENIN	Lac Senin/Sane	90.88	323	eP	P	23 10 16.9	+0.8
	7.1nm,1.4s						
USA0B	Ussuriysk Arra	91.70	40	eP	P	23 10 18.3	-1.3
	6.6nm,1.0s						
ILAR	Eielson Array	135.91	20	PKP	PKPdf	23 16 30.4	-2.1
	0.2nm,0.4s,baz=224,slow=2.5,SNR=3.8						

*ISCJB **27** 23:01:35.0±0.8, 31°.90N±0°.03×115°.08W±0°.05, h8^{km}±6^{km}, Error ellipse: s-maj=6.9km s-min=4.4km az=158.2*

*ECX **27** 23:01:35.8±0.6, 31°.90N×114°.99W, h10^{km}, MD2.5, ML2.7*

*MEX **27** 23:01:36.1±0.8, 31°.66N×115°.19W, h103^{km}±13^{km}, MD3.5*

ISC 27 23:01:33.3±1.3, 31°.88N±0°.04×115°.01W±0°.04, h6^{km}±13^{km}, n12, σ0^{s}.62/22, 2C-1D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBX	El Chinero	0.41	185	⇑eP	Pb	23 01 43.5	+0.7
ECBX				eS	Sb	23 01 49.4	+0.1
CPBX	Cerro Prieto	0.59	335	eP	Pb	23 01 46.4	+0.3
CPBX				eS	Sg	23 01 53.7	+1.2
CPBX				⇑e		23 01 57.6	
CPBX				IAML		23 01 57.6	
	comp=E,1μm,0.3s						
SPIG	San Pedro Mart	0.92	205	eP	Pn	23 01 52.5	-0.5
SPIG				i S	Sb	23 02 05.0	+0.6
SPIG	San Pedro Mart	0.92	205	eP	Pn	23 01 52.6	-0.5
SPX	San Pedro Mart	0.92	205	eP	Pn	23 01 52.4	-0.6
SPX				eS	Sb	23 02 04.7	+0.3
SPX	San Pedro Mart	0.92	205	eP	Pn	23 01 52.8	-0.2
SPX				eS	Sb	23 02 05.2	+0.9
RMX	La Rumorosa	1.16	309	eP	Pg	23 01 54.9	-0.7
RMX				eS	Sg	23 02 10.0	-0.7
CBX	Cerro Bola	1.47	288	i P	Pn	23 02 00.5	+0.1
CBX				eS	Sn	23 02 19.7	-0.4
CBX	Cerro Bola	1.47	288	eP	Pn	23 02 00.5	+0.1
CBX				eS	Sg	23 02 21.0	+0.4
CBX				IAML		23 02 23.3	
	comp=E,132nm,0.2s						
CBX				⇓e		23 02 23.3	
TJIG	Tijuana	1.52	292	i P	Pn	23 02 00.4	-0.6
TJIG				i S	Sn	23 02 20.5	-0.6
BAR	Barrett	1.62	300	eP	Pn	23 02 03.3	+0.8
214A	Organ Pipe Nat	1.87	87	i P	Pg	23 02 08.8	-0.3
214A				i S	Sg	23 02 33.2	-0.2

TRN 27 23:30:42.2, 16°.72N×60°.65W, h41^{km}, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAGL	Barre de l'ile	0.97	219	eP	Pn	23 31 00.0	+0.5
BPA	Boggy Peak	1.20	286	eP	Pn	23 31 04.4	+1.8
BPA				eS	Sn	23 31 20.8	+3.0
DWS	Wesley	1.31	209	eP	Pn	23 31 05.1	+1.1
DWS				eS	Sn	23 31 22.6	+2.3
MDPO	Dominica; Chan	1.37	214	eP	Pn	23 31 06.4	+1.5
MDPO				eS	Sn	23 31 24.4	+2.5
ANWB	Willy Bob	1.44	311	eP	Pn	23 31 06.8	+0.9
ANWB				eS	Sn	23 31 24.8	+1.2
MLYT	Lee's Yard	1.48	270	eP	Pn	23 31 08.8	+2.4
MLYT				eS	Sn	23 31 27.7	+3.2
DLPL	La Plaine	1.49	203	eP	Pn	23 31 08.5	+1.9
DLPL				eS	Sn	23 31 26.8	+1.9
MDN	Morne-Daniel	1.56	207	eP	Pn	23 31 09.4	+1.9
MDN				eS	Sn	23 31 27.9	+1.4
DBCT	Belle View Cho	1.58	205	eP	Pn	23 31 09.8	+1.9
DBCT				eS	Sn	23 31 29.5	+2.3
DPMT	Pointe Michel	1.61	206	eP	Pn	23 31 10.0	+1.8
DPMT				eS	Sn	23 31 29.9	+2.2
NEV	Hard Times	1.89	283	eP	Pn	23 31 14.7	+2.7
NEV				eS	Sn	23 31 37.1	+2.5
BAMF	Morne Balai	1.95	194	eP	Pn	23 31 14.6	+1.7
CXM	Morne La Croix	1.96	195	eP	Pn	23 31 14.7	+1.6
PCM	Pelee Case Pet	1.96	196	eP	Pn	23 31 15.4	+2.3
GBMF	Grand Be	1.97	195	eP	Pn	23 31 14.8	+1.6
PML	Morne Lenard	1.99	195	eP	Pn	23 31 15.1	+1.7
FDF	Fort de France	2.03	194	eP	Pn	23 31 15.6	+1.5
FDF				eS	Sn	23 31 39.6	+1.5
SKI	Saint Kitts	2.09	287	eP	Pn	23 31 16.7	+1.8
SKI				eS	Sn	23 31 41.7	+2.0
LPMF	Morne Lapointe	2.15	188	eP	Pn	23 31 17.5	+1.8
ZAM	Aeronautique	2.16	190	eP	Pn	23 31 17.6	+1.9
TRMF	Trois Ilets	2.20	190	eP	Pn	23 31 18.5	+2.2
SEUS	St. Eustatius	2.36	289	eP	Pn	23 31 20.9	+2.4
SEUS				eS	Sn	23 31 47.9	+1.6
SABA	Saba	2.64	290	eP	Pn	23 31 23.3	+1.0
SABA				eS	Sn	23 31 54.7	+1.5
SMRT	St. Maarten	2.67	300	eP	Pn	23 31 24.6	+1.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT				*e*S	Sn	23 31 54.9	+0.9
SLBI	**Saint Lucia, B**	2.69	187	*e*P	Pn	23 31 25.7	+2.6
SLBI				*e*S	Sn	23 31 55.5	+1.0
SLB	**Belfond**	2.90	188	*e*P	Pn	23 31 27.5	+1.6
SLB				*e*S	Sn	23 32 00.6	+1.0
SVV	**Soufriere Volc**	3.42	189	*e*P	Pn	23 31 35.1	+2.0
SVV				*e*S	Sn	23 32 14.4	+1.9
SVCV	**St. Vincent, C**	3.46	188	*e*P	Pn	23 31 35.1	+1.5
SVCV				*e*S	Sn	23 32 14.8	+1.4
SVB	**Belmont**	3.47	190	*e*P	Pn	23 31 35.5	+1.6
SVB				*e*S	Sn	23 32 15.0	+1.3
FCV	**Fort Charlotte**	3.58	189	*e*P	Pn	23 31 37.3	+2.0
FCV				*e*S	Sn	23 32 17.5	+1.0
GRSS	**Sisters**	4.49	192	*e*P	Pn	23 31 49.9	+2.1
GRHS	**Sauteurs**	4.57	192	*e*P	Pn	23 31 51.0	+2.1
GRGR	**Grenville**	4.66	192	*e*P	Pn	23 31 52.0	+1.9

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*GCG **27** 23:30:59.8±0.8, 15°.13N×89°.14W, h8km±27km, MD4.2*
*SNET **27** 23:31:00.2±1.5, 15°.44N×89°.59W, h8km±13km, ML3.9*
ISC 27 23:30:57.2±2.5**, 15°.5N**±0°.1×**89°.33W**±0°.05**, h6**km±12km**, n22, σ0s.77**/30**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	**Marmol**	0.56	218	*e*P	**Pg**	**23 31 08.2**	**+0.2**
MTO3	**Montecristo**	1.12	182	*e*P	**Pn**	**23 31 19.4**	**-0.2**
MTO3				*e*S	**Sn**	**23 31 36.1**	**+0.6**
NBG	**Las Nubes**	1.36	227	*e*P	**Pg**	**23 31 23.4**	**+0.2**
NBG				*e*S	**Sn**	**23 31 41.9**	**+0.5**
RTR	**El Retiro**	1.65	191	*e*P	**Pg**	**23 31 28.3**	**-0.5**
RTR				*e*S	**Sg**	**23 31 49.1**	**-1.1**
SNJE	**San Jose**	1.67	189	*e*P	**Pb**	**23 31 28.6**	**+0.1**
SNJE				*e*S	**Sg**	**23 31 50.4**	**-0.5**
PCG	**Pacaya**	1.67	228	*e*P	**Pg**	**23 31 29.0**	**-0.4**
PCG				*e*S	**Sg**	**23 31 51.5**	**+0.4**
VICT	**Victoria**	1.69	157	*e*P	**Pg**	**23 31 29.4**	**-0.3**
VICT				*e*S	**Sg**	**23 31 54.6**	**+3.0**
VICT				IAML		23 31 56.2	
	comp=Z,774nm,0.4s						
CEVE	**Cerro Verde**	1.71	190	*e*P	**Pb**	**23 31 29.0**	**-0.2**
CEVE				*e*S	**Sg**	**23 31 52.5**	**+0.3**
CEDA	**San Andres**	1.71	182	*e*P	**Pg**	**23 31 29.6**	**-0.5**
CEDA				*e*S	**Sn**	**23 31 49.7**	**-0.1**
CEDA				IAML		23 32 02.4	
	comp=Z,2µm,0.6s						
LFU	**La Fuente**	1.78	173	*e*P	**Pg**	**23 31 30.5**	**-0.8**
UEES	**Universidad Ev**	1.80	177	*e*P	**Pg**	**23 31 31.2**	**-0.3**
UEES				*e*S	**Sg**	**23 31 55.4**	**+0.6**
FUG	**Fuego 3**	1.81	234	*e*P	**Pb**	**23 31 30.5**	**-0.4**
SNET	**Serv Nac Est T**	1.83	177	*e*P	**Pb**	**23 31 31.1**	**-0.1**
PAVA	**Las Pavas**	1.84	168	*e*P	**Pg**	**23 31 31.8**	**-0.7**
PAVA				IAML		23 32 02.6	
	comp=Z,1µm,0.3s						
LOMA	**Loma Larga**	1.87	175	IAML		23 32 01.4	
	comp=Z,1µm,0.2s						
TECA	**Tecapa**	2.17	158	*e*P	**Pb**	**23 31 37.2**	**+0.2**
PACA	**Pacayal**	2.26	154	*e*P	**Pb**	**23 31 38.6**	**+0.1**
LCY	**Lacayo**	2.31	154	*e*P	**Pb**	**23 31 39.8**	**+0.4**
STG3	**Santiaguito 3,**	2.31	250	*e*P	**Pb**	**23 31 39.6**	**+0.1**
VSM	**San Miguel**	2.32	154	*e*P	**Pb**	**23 31 39.7**	**+0.1**
LCND	**La Caada**	2.60	148	*e*P	**Pb**	**23 31 43.6**	**-0.7**
LCND				IAML		23 32 23.3	
	comp=Z,274nm,0.5s						
CNCH	**Conchagua**	2.66	147	*e*P	**Pb**	**23 31 44.5**	**-0.8**

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*NIED **27** 23:42:00, 43°.70N×147°.30E, h56km, Mw3.7 Best double couple: Mo3.77000×10^14 NP1:φs47.00000°, δ54.00000°, λ151.00000°. NP2:φs155.00000°, δ67.00000°, λ40.00000°.*
*MOS **27** 23:42:30.9±1.3, 43°.65N×147°.31E, h77km, mb4.4/1, Error ellipse: s-maj=16.3km s-min=14.5km az=1.3*
*JMA **27** 23:42:32.7±0.2, 43°.70N×147°.25E, h27km, M3.9*
*ISCJB **27** 23:42:32.2±0.9, 43°.81N±0°.07×147°.31E±0°.09, h63km±9km, mb3.7/4, Error ellipse: s-maj=13.8km s-min=6.3km az=136.5*
*SKHL **27** 23:42:33.4±0.4, 43°.90N×147°.24E, h83km±5km, mb4.3/5, msh5.4/5*
*IDC **27** 23:42:35.5±3.4, 43°.51N×147°.07E, h108km±36km, mb3.4/4, mb1 3.5/6, mb1mx3.1/31, mbtmp3.7/6, MS2.3/1, Ms1 2.3/1, ms1mx1.8/26, Error ellipse: s-maj=55.7km s-min=33.4km az=163.0*
ISC 27 23:42:31.7±1.5**, 43°.73N**±0°.08×**147°.40E**±0°.08**, h50**km±16km**, n38, σ1s.37**/57**, mb3.6**/4**, 1C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	1.15	286	⇓*i*PN	**Pn**	**23 42 51.5**	**+0.1**
YUK				*e*S	**Sn**	**23 43 05.3**	**-0.8**
YUK				pmax	pmax		
	comp=N,187nm,0.1s						
YUK				pmax	pmax		
	comp=E,137nm,0.1s						
YUK				pmax	pmax		
	comp=Z,371nm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.2s						
YUK				smax	smax		
	comp=E,931nm,0.2s						
YUK	**Yuzh-Kuril'sk**	1.15	286	*i* P	**Pn**	**23 42 51.6**	**+0.1**
YUK				AMB	AMB	23 42 52.0	
	comp=E,20nm,0.2s						
YUK				AMB	AMB	23 42 52.0	
	comp=E,10.0nm,0.2s						
YUK				AMB	AMB	23 42 52.0	
	comp=E,60nm,0.2s						
YUK				*e*S	**Sn**	**23 43 05.3**	**-0.8**
YUK				A	A	23 43 07.0	
	comp=E,640nm,0.4s						
YUK				A	A	23 43 07.0	
	comp=E,530nm,0.4s						
GRPR	**Tuman**	1.21	283	⇓*i*PN	**Pn**	**23 42 52.2**	**+0.1**
GRPR				*i* S	**Sn**	**23 43 06.0**	**-1.4**
GRPR				pmax	pmax		
	comp=E,108nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,410nm,0.2s						
GRPR				pmax	pmax		
	comp=N,121nm,0.1s						
GRPR				smax	smax		
	comp=E,1µm,0.5s						
GRPR				smax	smax		
	comp=N,1µm,0.4s						
GRPR	**Tuman**	1.21	283	*i* P	**Pn**	**23 42 52.0**	**-0.1**
GRPR				AMB	AMB	23 42 52.0	
	comp=N,10.0nm,0.2s						
GRPR				AMB	AMB	23 42 52.0	
	comp=N,60nm,0.2s						
GRPR				*i* S	**Sn**	**23 43 06.0**	**-1.4**
GRPR				A	A	23 43 06.0	
	comp=N,1µm,0.5s						
GRPR				A	A	23 43 06.0	
	comp=N,1µm,0.5s						
LAGR	**Lagunnoye**	1.21	286	⇑*i*PN	**Pn**	**23 42 52.4**	**+0.2**
LAGR				*e*S	**Sn**	**23 43 06.2**	**-1.3**
LAGR				pmax	pmax		
	comp=N,88nm,0.1s						
LAGR				pmax	pmax		
	comp=E,129nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,644nm,0.1s						
LAGR				smax	smax		
	comp=E,2µm,0.5s						
LAGR				smax	smax		
	comp=N,936nm,0.4s						
LAGR	**Lagunnoye**	1.21	286	*i* P	**Pn**	**23 42 52.0**	**-0.2**
LAGR				AMB	AMB	23 42 53.0	
	comp=N,60nm,0.3s						
LAGR				AMB	AMB	23 42 53.0	
	comp=N,20nm,0.3s						
LAGR				AMB	AMB	23 42 53.0	
	comp=N,70nm,0.3s						
LAGR				*e*S	**Sn**	**23 43 06.0**	**-1.5**
LAGR				A	A	23 43 06.0	
	comp=N,940nm,0.5s						
LAGR				A	A	23 43 06.0	
	comp=N,2µm,0.5s						
NEM2	**Nemuro 2**	1.26	254	P	**Pn**	**23 42 53.2**	**+0.3**
NEM2				*e*S	**Sn**	**23 43 08.3**	**-0.4**
NMR	**Nemuro--Hokkai**	1.27	254	*d* *i*PN	**Pn**	**23 42 53.3**	**+0.3**
NMR				*i* S	**Sn**	**23 43 08.2**	**-0.7**
NMR	**Nemuro--Hokkai**	1.27	254	*i* P	**Pn**	**23 42 53.3**	**+0.3**
NMR				*i* S	**Sn**	**23 43 08.2**	**-0.7**
GLVR	**Golovnino**	1.36	271	*i* PN	**Pn**	**23 42 55.0**	**+0.7**
GLVR				*i* S	**Sn**	**23 43 11.5**	**+0.3**
GLVR				pmax	pmax		
	comp=E,105nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,885nm,0.2s						
GLVR				pmax	pmax		
	comp=N,134nm,0.1s						
GLVR				smax	smax		
	comp=N,3µm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.2s						
GLVR	**Golovnino**	1.36	271	*i* P	**Pn**	**23 42 55.0**	**+0.7**
GLVR				AMB	AMB	23 42 55.0	
	comp=E,10.0nm,0.3s						
GLVR				AMB	AMB	23 42 55.0	
	comp=E,50nm,0.3s						
GLVR				*i* S	**Sn**	**23 43 11.0**	**-0.2**
GLVR				A	A	23 43 14.0	
	comp=E,370nm,0.3s						
GLVR				A	A	23 43 14.0	
	comp=E,280nm,0.3s						
KUR	**Kuril'sk**	1.54	12	*e*PN	**Pn**	**23 42 57.7**	**+1.1**
KUR				*e*S	**Sn**	**23 43 15.1**	**-0.4**
KUR				pmax	pmax		
	comp=N,5.0nm,0.1s						
KUR				pmax	pmax		
	comp=E,15nm,0.1s						
KUR				pmax	pmax		
	comp=Z,87nm,0.1s						
KUR				smax	smax		
	comp=E,785nm,0.4s						
KUR				smax	smax		
	comp=N,2µm,0.2s						
KUR	**Kuril'sk**	1.54	12	*e*P	**Pn**	**23 42 57.6**	**+1.0**
KUR				AMB	AMB	23 42 58.0	
	comp=N,6.0nm,0.3s						
KUR				AMB	AMB	23 42 58.0	
	comp=N,40nm,0.3s						
KUR				*e*S	**Sn**	**23 43 15.5**	**0.0**
KUR				A	A	23 43 16.0	
	comp=N,170nm,0.4s						
KUR				A	A	23 43 16.0	
	comp=N,390nm,0.4s						
JRA	**Rausu**	1.66	278	P	**Pn**	**23 42 59.2**	**+0.9**
JNSB	**Nemuroshibetsu**	1.74	272	P	**Pn**	**23 43 00.5**	**+1.1**
JNSB				*e*S	**Sn**	**23 43 20.8**	**+0.5**
JKHN	**Kushirohamanak**	1.76	249	P	**Pn**	**23 43 00.6**	**+1.0**
JKHN				*e*S	**Sn**	**23 43 20.6**	**-0.2**
JNK	**Nakash**	1.95	267	P	**Pn**	**23 43 03.1**	**+0.8**
JNK				*e*S	**Sn**	**23 43 25.7**	**+0.1**
JAK	**Akkeshi**	2.10	250	P	**Pn**	**23 43 05.3**	**+0.9**
JAK				*e*S	**Sn**	**23 43 28.9**	**-0.4**
JTKR	**Abashiri--Toko**	2.54	277	P	**Pn**	**23 43 11.9**	**+1.6**
JTKR				*e*S	**Sn**	**23 43 42.9**	**+2.9**
JAR	**Ashorobuto**	2.68	262	P	**Pn**	**23 43 13.8**	**+1.6**
JAR				*e*S	**Sn**	**23 43 44.9**	**+1.5**
JOB	**Onbets**	2.73	254	P	**Pn**	**23 43 14.6**	**+1.6**
JMP	**Maruseppu**	2.94	277	P	**Pn**	**23 43 17.5**	**+1.7**
JCH	**Churui**	3.16	251	P	**Pn**	**23 43 19.9**	**+1.1**
JKK2	**Kamakawa 2**	3.37	274	P	**Pn**	**23 43 24.4**	**+2.6**
JKA	**Kamikawa-asahi**	3.49	278	*e*P	**Pn**	**23 43 25.5**	**+2.1**
ASAJ	**Asahikawa**	3.49	278	P	**Pn**	**23 43 25.4**	**+2.0**
	comp=N,4.2nm,0.3s,baz=74,slow=14,SNR=35						
ASAJ				S	Sn	23 44 11.5	+8.0
	comp=N,2.9nm,0.3s,baz=210,slow=20,SNR=2.0						
ASAJ				LR	LR	23 44 52.2	
	comp=N,44nm,21.1s,baz=16,slow=41						
ASAJ	**Asahikawa**	3.49	278	P	**Pn**	**23 43 25.9**	**+2.5**
JFR	**Furan**	3.55	262	P	**Pn**	**23 43 26.9**	**+2.7**
JEM	**Erimo**	3.56	243	P	**Pn**	**23 43 27.6**	**+3.3**
JSE	**Soyaes**	3.67	291	P	**Pn**	**23 43 27.1**	**+1.3**
JNBK	**Urakawa-nobuka**	3.71	249	P	**Pn**	**23 43 28.5**	**+2.2**
MJAR	**Matsushiro Arr**	10.05	227	P	**Pn**	**23 44 52.0**	**-1.3**
	comp=N,0.1nm,0.3s,baz=26,slow=13,SNR=3.3						
MJAR	**Matsushiro Arr**	10.05	227	PN	**Pn**	**23 44 52.0**	**-1.3**
ILAR	**Eielson Array**	41.40	36	P	**P**	**23 50 13.1**	**+0.5**
	comp=N,1.2nm,0.9s,baz=255,slow=6.6,SNR=6.9						
INK	**Inuvik**	46.33	30	P	**P**	**23 50 52.3**	**+0.2**
	comp=N,1.6nm,0.4s,baz=292,slow=5.7,SNR=9.5						
FINES	**FINESS Array B**	64.97	333	P	**P**	**23 53 04.0**	**-1.8**
	comp=N,0.3nm,0.4s,baz=32,slow=5.4,SNR=6.1						
NB2	**NORSAR Subarra**	69.69	339	P	**P**	**23 53 34.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	69.69	339	P	**P**	**23 53 33.7**	**-1.9**
	comp=Z,0.2nm,0.4s,baz=30,slow=6.3,SNR=9.1						

WEL 27 23:49:20.7, 42°S±1°×**17°4E**±°**, h10**km±2km**, M3.6**/25**, ML3.8**/19**, MLv3.6**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=2.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.07	181	P	Pg	23 49 23.5	+0.6
CMWZ				S	Sg	23 49 25.4	+0.8
BSWZ	**Blackbirch Sta**	0.26	262	P	Pg	23 49 26.6	+0.6
BSWZ				S	Sb	23 49 31.0	-1.0
TUWZ	**Tuamarina**	0.32	320	P	Pb	23 49 27.9	-0.6
TUWZ				S	Sb	23 49 33.0	-0.7
TCW	**Tory Channel**	0.47	6	P	Pg	23 49 30.4	+0.5
TCW				S	Sb	23 49 37.5	-0.5
BHW	**Baring Head**	0.56	61	P	Pb	23 49 32.6	+0.1
NNZ	**Nelson**	0.78	306	P	Pg	23 49 35.9	+0.2
PLWZ	**Palliser**	0.79	82	P	Pn	23 49 37.2	-0.6
MSWZ	**Moikau Station**	0.82	72	P	Pb	23 49 37.4	+0.5
CAW	**Cannon Point**	0.86	49	P	Pb	23 49 37.6	0.0
KHZ	**Kahutara**	0.89	214	P	Pn	23 49 39.2	-0.1
DUWZ	**D'Urville Isla**	0.90	346	P	Pg	23 49 38.0	-0.1
THZ	**Tophouse**	0.98	265	P	Pb	23 49 39.8	0.0
TRWZ	**Traveller**	1.14	76	P	Pb	23 49 42.3	-0.2
QRZ	**Quartz Range**	1.53	303	P	Pb	23 49 49.3	+0.2
GVZ	**Greta Valley S**	1.56	214	P	Pn	23 49 48.4	-0.1
POWZ	**Post Office Ro**	1.74	43	P	Pn	23 49 51.6	+0.6
DSZ	**Denniston Nort**	1.81	267	P	Pb	23 49 53.4	-0.4
LTZ	**Lake Taylor**	1.82	232	P	Pn	23 49 52.3	+0.3
BFZ	**Birch Farm**	1.83	58	P	Pn	23 49 51.9	-0.2
AMCZ	**Amberley**	1.89	217	P	Pn	23 49 52.6	-0.4
WAZ	**Wanganui**	2.01	17	P	Pb	23 49 58.0	+0.8
DVHZ	**Dannevirke**	2.02	48	P	Pn	23 49 54.5	-0.3
OKCZ	**Okains Bay**	2.21	202	P	Pn	23 49 56.3	-1.1
OXZ	**Oxford**	2.30	224	P	Pn	23 49 57.5	-1.2
INZ	**Inchbonnie**	2.31	242	P	Pn	23 49 59.3	+0.6
PNHZ	**Pukenui**	2.32	41	P	Pn	23 49 58.9	0.0
MQZ	**McQueen's Vall**	2.33	209	P	Pn	23 49 57.2	-1.8
WPHZ	**Waipukurau**	2.33	47	P	Pn	23 50 00.9	+1.8
PREZ	**Palmer Road**	2.33	359	P	Pb	23 50 02.5	-0.3
KHEZ	**Kahui Hut**	2.39	356	P	Pb	23 50 03.2	-0.6
NBEZ	**Newall Road No**	2.42	354	P	Pb	23 50 03.6	-0.7
PKVZ	**Pokaka**	2.54	20	P	Pb	23 50 05.1	-1.3
VRZ	**Vera Road**	2.58	9	P	Pb	23 50 05.6	-1.5
PXZ	**Pawanui**	2.60	52	P	Pn	23 50 02.9	+0.3
BHHZ	**Black Hill Sta**	2.60	33	P	Pb	23 50 05.7	-1.7
DRZ	**Dome Shelter**	2.61	24	P	Pb	23 50 08.8	+1.0
KRHZ	**Kereru**	2.61	40	P	Pn	23 50 03.0	0.0
WHVZ	**Whangaehu Hut**	2.61	24	P	Pn	23 50 04.8	+1.7
FWVZ	**Far West T-bar**	2.63	23	P	Pb	23 50 06.9	-1.1
NGZ	**Ngauruhoe**	2.71	23	P	Pn	23 50 06.9	+2.4
KAHZ	**Kahuranaki**	2.76	48	P	Pn	23 50 04.4	-0.6
WTVZ	**West Tongariro**	2.77	23	P	Pb	23 50 10.3	0.0
KRVZ	**Karewarewa**	2.80	23	P	Pb	23 50 10.7	-0.2
WVZ	**Waitaha Valley**	2.93	240	P	Pn	23 50 07.4	+0.1
BKZ	**Black Stump Fm**	3.05	35	P	Pn	23 50 10.6	+1.6
RPZ	**Rata Peaks**	3.09	228	P	Pn	23 50 09.0	-0.5
HIZ	**Hauiti**	3.20	9	P	Pn	23 50 14.2	+3.2
FOZ	**Fox Glacier**	3.74	239	P	Pn	23 50 19.8	+1.4
LBZ	**Lake Benmore**	4.01	226	P	Pn	23 50 21.8	-0.3
ODZ	**Otahua Downs**	4.25	217	P	Pn	23 50 24.2	-1.3
MKAZ	**Moumakai**	4.63	9	P	Pn	23 50 33.8	+3.2

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*GUC **27** 23:54:21.5±0.7, 29°.77S×71°.53W, h30km±4km, ML3.0*
*SJA **27** 23:54:22.7±0.6, 29°.79S×71°.50W, h10km±14km, ML3.9, MW3.7*
ISC 27 23:54:20.8±2.6**, 29°.73S**±0°.05×**71°.6W**±0°.1**, h4**km±15km**, n12, σ1s.50**/18**, 3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	**La Serena**	0.34	122	⇓*i*P	**Pb**	**23 54 28.9**	**-0.6**
LSCH				*i* S	**Sb**	**23 54 34.8**	**-0.6**
LSCH				IAML		23 54 35.4	
	comp=E,1µm,0.3s						
GO04	**Tololo Observa**	0.81	123	⇓*i*P	**Pg**	**23 54 36.6**	**+0.2**
GO04				*i* S	**Sb**	**23 54 48.7**	**-0.4**
LCO	**Las Campanas**	1.05	47	*e*P	**Pn**	**23 54 43.2**	**+0.6**
LCO				*e*S	**Sn**	**23 54 57.9**	**+0.1**
LCO	**Las Campanas**	1.05	47	⇓*i*P	**Pb**	**23 54 41.5**	**-0.2**
LCO				*i* S	**Sn**	**23 54 57.0**	**-0.8**
LCO				IAML		23 55 02.1	
	comp=E,825nm,0.4s						
AROD	**Rodeo**	1.88	104	*e*P	**Pb**	**23 54 56.0**	**+0.1**
AROD				*e*S	**Sg**	**23 55 21.8**	**+0.5**
ACCO	**Cerro Coronel**	2.34	112	*e*P	**Pb**	**23 55 03.2**	**-0.6**
ACCO				*e*S	**Sb**	**23 55 33.0**	**-0.2**
ACCO				IAML		23 55 37.4	
	comp=Z,4µm,0.4s						
GO03	**Copiap**	2.43	29	*e*P	**Pn**	**23 55 02.9**	**+1.5**
GO03				IAML		23 55 44.4	
	comp=E,167nm,0.2s						
AMOG	**MOGNA**	2.93	115	*e*P	**Pb**	**23 55 10.9**	**-2.8**
VCA	**Vinchina**	3.11	72	*e*P	**Pb**	**23 55 14.2**	**-2.7**
VCA				IAML		23 56 09.5	
	comp=Z,79nm,0.5s						
FCH	**Farellones**	3.75	163	*e*P	**Pn**	**23 55 20.1**	**+0.3**
LMEL	**Las Melosas**	4.27	164	*e*P	**Pn**	**23 55 27.4**	**+0.6**
ACAN	**Cantantal**	4.55	125	*e*P	**Pn**	**23 55 33.8**	**+3.3**

WEL 28 00:06:36.9, 42°S±1°×**174°.2E**±1°.0**, h13**km±2km**, M3.9**/30**, ML4.2**/21**, MLv3.9**/30**, Error ellipse: s-maj=0.0km s-min=0.0km az=3.9, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.08	173	P	Pg	00 06 40.0	+0.4
CMWZ				S	Sg	00 06 42.7	+1.0
BSWZ	**Blackbirch Sta**	0.25	260	P	Pb	00 06 42.7	-0.5
BSWZ				S	Sb	00 06 46.9	-0.5
TUWZ	**Tuamarina**	0.31	321	P	Pb	00 06 43.9	-0.3
TUWZ				S	Sb	00 06 48.8	-0.3
TCW	**Tory Channel**	0.46	7	P	Pb	00 06 46.5	-0.3
TCW				S	Sb	00 06 53.0	-0.6
BHW	**Baring Head**	0.57	63	P	Pb	00 06 48.9	+0.3
NNZ	**Nelson**	0.77	306	P	Pb	00 06 51.9	-0.1
PLWZ	**Palliser**	0.80	83	P	Pn	00 06 53.6	-0.2
MSWZ	**Moikau Station**	0.83	72	P	Pn	00 06 53.8	-0.4
CAW	**Cannon Point**	0.86	49	P	Pb	00 06 53.9	+0.2
KHZ	**Kahutara**	0.89	213	P	Pn	00 06 55.1	0.0
DUWZ	**D'Urville Isla**	0.89	346	P	Pg	00 06 54.1	0.0
PAWZ	**Paruwai Farm**	0.96	73	P	Pn	00 06 56.3	+0.2
THZ	**Tophouse**	0.97	264	P	Pg	00 06 55.8	+0.2
MTW	**Mount Morrison**	1.10	63	P	Pg	00 06 58.1	0.0
OGWZ	**Otaki Gorge**	1.12	41	P	Pn	00 06 58.3	0.0
TRWZ	**Traveller**	1.15	77	P	Pb	00 06 58.6	0.0
HOWZ	**Holdsworth Sta**	1.26	52	P	Pb	00 07 00.4	0.0
TMWZ	**Te Maipa**	1.39	67	P	Pn	00 07 01.8	-0.2
MRZ	**Mangatainoka R**	1.45	46	P	Pb	00 07 03.2	-0.4
QRZ	**Quartz Range**	1.52	303	P	Pb	00 07 05.1	+0.2
TIWZ	**Tintock**	1.55	55	P	Pn	00 07 04.4	+0.2
GVZ	**Greta Valley S**	1.56	213	P	Pn	00 07 04.3	0.0
CPWZ	**Castlepoint**	1.69	64	P	Pg	00 07 11.4	+2.2
OHWZ	**Ohakea**	1.69	30	P	Pb	00 07 08.4	+0.6
PRWZ	**Pori Road**	1.74	51	P	Pn	00 07 07.0	+0.3
POWZ	**Post Office Ro**	1.74	43	P	Pn	00 07 07.4	+0.6
DSZ	**Denniston Nort**	1.79	267	P	Pb	00 07 09.5	-0.1
LTZ	**Lake Taylor**	1.81	232	P	Pn	00 07 08.4	+0.6
BFZ	**Birch Farm**	1.83	58	P	Pn	00 07 07.4	-0.6
AMCZ	**Amberley**	1.89	217	P	Pn	00 07 08.6	-0.2
WAZ	**Wanganui**	2.00	18	P	Pb	00 07 13.8	+0.7
DVHZ	**Dannevirke**	2.02	48	P	Pn	00 07 09.9	-0.7
TSZ	**Takapari Road**	2.09	40	P	Pn	00 07 11.8	+0.2
LREZ	**Lake Rotokare**	2.21	4	P	Pb	00 07 16.7	0.0
OKCZ	**Okains Bay**	2.22	202	P	Pn	00 07 12.4	-0.9
CRLZ	**Canterbury Las**	2.23	211	P	Pn	00 07 12.1	-1.3
NMEZ	**Namu Road**	2.27	354	P	Pb	00 07 17.2	-0.4
OXZ	**Oxford**	2.30	223	P	Pn	00 07 13.6	-0.8
INZ	**Inchbonnie**	2.30	242	P	Pn	00 07 15.3	+0.9
PRHZ	**Porangahau**	2.32	54	P	Pn	00 07 13.7	-1.0
PNHZ	**Pukenui**	2.32	42	P	Pn	00 07 14.8	0.0
PREZ	**Palmer Road**	2.33	359	P	Pb	00 07 18.7	+0.1
MQZ	**McQueen's Vall**	2.33	209	P	Pn	00 07 13.3	-1.6
WPHZ	**Waipukurau**	2.34	47	P	Pn	00 07 15.1	+0.1
KHEZ	**Kahui Hut**	2.38	357	P	Pb	00 07 19.1	-0.4
NBEZ	**Newall Road No**	2.41	354	P	Pb	00 07 18.4	-1.7
DREZ	**Durham Road**	2.48	0	P	Pb	00 07 20.9	-0.3
PKE	**Pukeiti**	2.48	356	P	Pb	00 07 20.1	-1.1
MTVZ	**Mangateitei**	2.48	23	P	Pb	00 07 19.8	-1.5
PKVZ	**Pokaka**	2.54	21	P	Pb	00 07 20.2	-2.0
MOVZ	**Moawhango**	2.55	28	P	Pn	00 07 19.5	+1.6
VRZ	**Vera Road**	2.58	10	P	Pb	00 07 21.4	-1.5
BHHZ	**Black Hill Sta**	2.60	34	P	Pn	00 07 20.3	+1.7
PXZ	**Pawanui**	2.60	52	P	Pn	00 07 17.6	-0.9
DRZ	**Dome Shelter**	2.61	24	P	Pb	00 07 21.3	-2.3
WHVZ	**Whangaehu Hut**	2.61	24	P	Pn	00 07 20.9	+2.0
KRHZ	**Kereru**	2.61	40	P	Pn	00 07 18.6	-0.2
FWVZ	**Far West T-bar**	2.62	24	P	Pb	00 07 21.5	-2.4
TUVZ	**Tukino**	2.65	25	P	Pb	00 07 25.0	+0.8
NGZ	**Ngauruhoe**	2.71	24	P	Pn	00 07 22.5	+2.2
TWVZ	**Taurewa**	2.76	20	P	Pb	00 07 26.5	+0.4
WTVZ	**West Tongariro**	2.77	23	P	Pn	00 07 23.3	+2.4
KAHZ	**Kahuranaki**	2.77	48	P	Pn	00 07 20.4	-0.5
KRVZ	**Karewarewa**	2.80	24	P	Pb	00 07 25.1	-1.6
KWHZ	**Kaweka Forest**	2.81	38	P	Pg	00 07 29.1	-1.6
WVZ	**Waitaha Valley**	2.92	240	P	Pn	00 07 24.2	+1.2
KATZ	**Kakaramea**	2.93	23	P	Pb	00 07 30.4	+1.5
RITZ	**Rihia Road**	2.98	26	P	Pb	00 07 29.8	+0.1
RATZ	**Rangitukua**	3.05	24	P	Pb	00 07 32.8	+1.9
BKZ	**Black Stump Fm**	3.05	36	P	Pn	00 07 25.1	+0.3
RPZ	**Rata Peaks**	3.09	228	P	Pn	00 07 25.0	-0.3
WATZ	**Wairara**	3.18	22	P	Pb	00 07 33.4	+0.2
HIZ	**Hauiti**	3.19	9	P	Pn	00 07 29.8	+3.1
MRHZ	**Matea Rd**	3.30	32	P	Pb	00 07 36.5	+1.2
MTHZ	**Maungataniwha**	3.46	37	P	Pn	00 07 31.6	+1.1
TLZ	**Tolley Road**	3.49	18	P	Pb	00 07 37.0	-1.5
FOZ	**Fox Glacier**	3.73	239	P	Pn	00 07 36.8	+2.7
LBZ	**Lake Benmore**	4.00	226	P	Pn	00 07 38.7	+0.8
RAGZ	**Rawiri**	4.02	39	P	Pn	00 07 38.0	-0.1
RIGZ	**Rimuhau**	4.03	44	P	Pn	00 07 37.4	-0.8
TOZ	**Tahuroa Road**	4.06	15	P	Pn	00 07 42.7	+4.1
MWZ	**Matawai**	4.20	39	P	Pn	00 07 40.1	-0.4
ODZ	**Otahua Downs**	4.25	216	P	Pn	00 07 40.3	-0.9
TWGZ	**Tauwhareparae**	4.54	41	P	Pn	00 07 49.7	+4.4
AWAZ	**Awhitu Peninsu**	4.61	4	P	Pn	00 07 49.6	+3.4
MKAZ	**Moumakai**	4.62	10	P	Pn	00 07 48.7	+2.4
JCZ	**Jackson Bay**	4.65	237	P	Pn	00 07 48.6	+1.9
ETAZ	**East Tamaki Re**	4.75	7	P	Pn	00 07 51.3	+3.2
HAZ	**Te Kaha**	4.79	36	P	Pn	00 07 51.6	+3.0
WIAZ	**Waiheke Island**	4.92	9	P	Pn	00 07 54.4	+3.9
MBAZ	**Motutapu North**	4.93	7	P	Pb	00 07 58.3	-4.6
WCZ	**Waipu Caves**	5.72	1	P	Pn	00 08 04.7	+3.2
SYZ	**Scrubby Hill**	6.08	215	P	Pn	00 08 06.8	+0.5
OUZ	**Omahuta**	6.46	356	P	Pn	00 08 15.3	+3.8
CTZ	**Chatham Island**	7.07	110	P	Pn	00 08 20.5	+0.6

JMA 28 00:18:49.1±0.2**, 38°.25N×144°.33E, h46**km**, M3.9, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.24	293	P	Pn	00 19 25.0	+1.3
OFUJ				*e*S	Sn	00 19 51.9	+1.7
JIKH	**Ishinomakikobu**	2.25	272	P	Pn	00 19 24.7	+0.8
JIKH				S	Sn	00 19 51.1	+0.6
JKMT	**Kesennumamotoy**	2.31	285	P	Pn	00 19 25.8	+1.2
JKMT				*e*S	Sn	00 19 53.1	+1.3
JIO	**Ouri**	2.35	276	P	Pn	00 19 26.4	+1.2
JIO				S	Sn	00 19 54.1	+1.2
MIYJ	**Miyakonagasawa**	2.36	305	P	Pn	00 19 26.4	+1.0
MIYJ				S	Sn	00 19 54.0	+0.8
JMK	**Ichinoseki**	2.54	287	P	Pn	00 19 29.4	+1.7
JMK				S	Sn	00 19 59.2	+1.8
JOM	**Ohasama**	2.67	298	P	Pn	00 19 31.2	+1.6
JOM				S	Sn	00 20 02.7	+2.1
JANG	**Nango**	3.04	315	P	Pn	00 19 35.8	+1.1
JANG				S	Sn	00 20 10.0	+0.1
JYK	**Kaneyama**	3.18	283	P	Pn	00 19 38.6	+2.0
JYK				S	Sn	00 20 15.7	+2.4
JFT	**Otama**	3.24	258	P	Pn	00 19 39.4	+1.9
JFT				S	Sn	00 20 16.5	+1.7
JOT	**Ohata**	4.02	322	P	Pn	00 19 49.4	+1.3
JOT				*e*S	Sn	00 20 33.2	-0.7

JCH	Churui	4.42	351	P	Pn	00 19 53.3	-0.3
JCH				S	Sn	00 20 41.2	-2.6
JKB	Kayabe	4.43	326	P	Pn	00 19 54.7	+1.0
JKB				eS	Sn	00 20 43.3	-0.6
BSO1	Boso 1	4.49	218	P	Pn	00 19 54.7	+0.6
BSO1				eS	Sn	00 20 44.8	0.0
JRY	Ryogami san	4.88	244	P	Pn	00 20 00.8	+0.9
JRY				eS	Sn	00 20 53.7	-1.4
JOD2	Odawara 2	5.16	236	P	Pn	00 20 03.3	-0.5
JOD2				S	Sn	00 20 59.5	-2.5
NEM2	Nemuro 2	5.22	11	P	Pn	00 20 01.5	-3.1
NEM2				eS	Sn	00 20 57.1	-6.3
JOSM	Okushiri--Mats	5.34	317	P	Pn	00 20 07.8	+1.6
JTKR	Abashiri--Toko	5.72	357	P	Pn	00 20 10.7	-0.8
JTKR				eS	Sn	00 21 12.4	-3.4
JHR	Hokuryu	5.83	341	P	Pn	00 20 14.8	+1.9

UCR 28 00:19:11.2±1.1, 9°.42N×84°.55W, h14km±8km, MW3.9, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	La Lucha 2	0.62	60	eP	Pg	00 19 23.1	-0.4
SRA1	San Ramn	0.66	6	eP	Pg	00 19 23.4	-0.8
EDDO	Dominical	0.70	104	eP	Pg	00 19 24.3	-0.5
SJS	Escuela Geolog	0.71	44	eP	Pg	00 19 25.0	-0.1
HDC	Heredia	0.72	37	eP	Pg	00 19 24.8	-0.4
CVTR	Volcan Turrial	0.98	53	eP	Pg	00 19 30.2	0.0
ARE1	Arenal 1	1.04	351	eP	Pb	00 19 30.0	-1.1
CEDE	Laguna Cedeo	1.07	352	eP	Pb	00 19 30.6	-0.9
EDPN	Palmar Norte	1.17	113	eP	Pn	00 19 31.5	-1.7
PLVR	Palo Verde	1.21	319	eP	Pn	00 19 31.5	-2.4
EDBA	Buenos Aires	1.28	102	eP	Pn	00 19 33.2	-1.6
DRK0	Durika	1.30	97	eP	Pn	00 19 34.2	-0.8
CUI	Cuipilapa	1.37	334	eP	Pn	00 19 34.8	-1.1
PTJ1	Puerto Jimnez	1.52	126	eP	Pg	00 19 41.0	+0.6
BUEV	Buena Vista	1.61	328	eP	Pn	00 19 38.6	-0.6
GB1A	Borinquen Arri	1.62	329	eP	Pn	00 19 39.1	-0.2
BRU2	Volcan	1.94	109	eP	Pn	00 19 42.5	-1.4
ACON	Acoyapa	2.60	346	eP	Pn	00 19 52.5	-0.3
ESPN	Las Esperanzas	2.77	5	eP	Pn	00 19 55.0	0.0

*GUC **28** 00:29:31.5±0.4, 29°.77S×71°.54W, h29km±3km, ML3.2*
*SJA **28** 00:29:32.6±0.6, 29°.79S×71°.52W, h10km, ML4.0, MW3.4*

ISC 28 00:29:32.3±2.6, 29°.72S±0°.05×71°.6W±0°.1, h10km, n11, σ1°.46/17, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	0.36	122	⇓iP	Pg	00 29 39.1	-0.4
LSCH				i S	Sg	00 29 44.6	+0.3
LSCH				IAML		00 29 45.4	
	comp=N,2µm,0.3s						
GO04	Tololo Observa	0.83	124	eP	Pg	00 29 46.7	-1.6
GO04				i S	Sg	00 29 58.8	-0.4
GO04				IAML		00 30 02.0	
	comp=N,5µm,0.5s						
LCO	Las Campanas	1.05	48	eP	Pn	00 29 53.0	-0.4
LCO	Las Campanas	1.05	48	⇓iP	Pg	00 29 51.7	-0.8
LCO				i S	Sb	00 30 07.1	+0.4
LCO				IAML		00 30 12.2	
	comp=E,806nm,0.4s						
AROD	Rodeo	1.90	104	eP	Pb	00 30 06.4	-0.8
AROD				eS	Sb	00 30 31.5	+0.3
ACCO	Cerro Coronel	2.36	112	eP	Pb	00 30 13.2	-1.9
ACCO				eS	Sb	00 30 43.7	-0.7
ACCO				IAML		00 30 47.5	
	comp=Z,4µm,0.4s						
GO03	Copiap	2.43	30	⇓iP	Pn	00 30 12.5	+0.3
GO03				i S	Sn	00 30 43.8	+1.8
GO03				IAML		00 30 54.5	
	comp=E,156nm,0.3s						
AMOG	MOGNA	2.95	115	eP	Pn	00 30 20.8	+1.6
VCA	Vinchina	3.12	73	eP	Pn	00 30 24.4	+2.7
VCA				IAML		00 31 19.6	
	comp=Z,79nm,0.5s						
RTCV	Cerro Valdivia	3.39	130	eP	Pn	00 30 26.8	+1.5
ACAN	Cantantal	4.57	125	eP	Pn	00 30 43.8	+2.3

TAP 28 00:42:40.9, 24°.31N×121°.46E, h10km±1km, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETLH	Xiulin Townshi	0.11	168	eP	Pg	00 42 44.8	+1.1
	baz=167						
ETLH				eS	Sg	00 42 46.6	+1.0
	baz=167						
NNSB	Datong	0.14	330	P	Pg	00 42 45.3	+1.2
	baz=329						
NNSB				S	Sg	00 42 47.2	+0.9
	baz=329						
NNS	Nan Shan	0.15	329	eP	Pg	00 42 45.5	+1.2
	baz=331						
NNS				eS	Sg	00 42 47.8	+1.0
	baz=331						
NACB	Ninganchiao	0.19	137	eP	Pg	00 42 46.3	+1.4
	baz=137						
NACB				eS	Sg	00 42 49.0	+1.5
	baz=137						
WHF	Hehuan Shan	0.24	227	P	Pg	00 42 46.9	+0.9
	baz=225						
WHF				eS	Sg	00 42 50.0	+0.6
	baz=225						
TWD	Chiawan	0.26	151	eS	Sb	00 42 51.3	-1.0
	baz=149						
TWT	Tachien	0.26	257	eS	Sb	00 42 51.6	-0.9
	baz=257						
TDCB	Techi	0.28	258	eP	Pb	00 42 47.9	-0.2
	baz=258						
TDCB				eS	Sg	00 42 51.4	+1.0
	baz=258						
ENA	Nanau	0.28	66	eP	Pb	00 42 48.0	-0.1
	baz=66						
ENA				eS	Sb	00 42 51.8	-1.1
	baz=66						
NANB	Nanao	0.29	66	P	Pb	00 42 48.0	-0.3
	baz=66						
NANB				S	Sb	00 42 52.1	-1.1
	baz=66						
NDT	Datong Townshi	0.29	10	eP	Pb	00 42 48.5	+0.1
	baz=9.0						
NDT				eS	Sb	00 42 52.4	-0.9
	baz=9.0						
CHGB	Renai	0.36	226	eP	Pb	00 42 49.1	-0.4
	baz=225						
YHNB	Yeheng	0.36	348	eP	Pb	00 42 49.9	+0.4
	baz=348						
YHNB				eS	Sb	00 42 54.6	-0.8
	baz=348						
DPDB	Guoxing	0.56	240	eP	Pb	00 42 52.8	0.0
	baz=240						
DPDB				eS	Sb	00 43 00.6	-0.3
	baz=240						
VWDT	VWDT	0.62	208	eP	Pb	00 42 54.0	0.0
	baz=207						
VWDT				eS	Sb	00 43 03.2	+0.5
	baz=207						

JMA 28 00:42:56.0±0.2, 24°.02N×122°.80E, h27km±4km, M2.3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.45	17	P	Pb	00 43 05.2	-0.3
JYNG				S	Sb	00 43 11.7	-0.2
YOJ	Yonaguni jima	0.48	24	P	Pb	00 43 05.8	-0.2
YOJ				S	Sb	00 43 12.3	-0.5
IRIF	Iriomote-Funau	0.91	70	P	Pn	00 43 12.1	-0.9
IRIF				eS	Sb	00 43 24.4	-0.4
HATJ	Hateruma jima	0.92	88	P	Pn	00 43 12.6	-0.5
HATJ				eS	Sb	00 43 24.6	-0.6
JKRS	Kuro-shima	1.13	79	P	Pb	00 43 16.7	-0.1
JKRS				eS	Sb	00 43 31.1	0.0
JIJ	Ishigaki jima	1.27	74	P	Pn	00 43 18.5	+0.5
JIJ				S	Sb	00 43 35.1	-0.2
JISG	Ishigakijimahi	1.49	67	P	Pn	00 43 21.8	+0.8

TRN 28 00:57:26.3, 17°.68N×61°.70W, h28km, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	0.08	266	eP	Pb	00 57 32.3	+1.0
ANWB				eS	Sb	00 57 36.8	+2.1
BPA	Boggy Peak	0.64	194	eP	Pn	00 57 41.4	+1.8
BPA				eS	Sn	00 57 50.8	+2.0
NEV	Hard Times	0.99	237	eP	Pb	00 57 46.4	+1.5
NEV				eS	Sb	00 58 00.6	+3.1
SKI	Saint Kitts	1.05	251	i P	Pb	00 57 46.7	+0.8
SKI				eS	Sb	00 58 01.6	+2.4
MLYT	Lee's Yard	1.06	206	eP	Pb	00 57 46.5	+0.5
MLYT				eS	Sb	00 58 01.6	+2.0
SEUS	St. Eustatius	1.24	262	eP	Pb	00 57 49.0	0.0
SEUS				eS	Sb	00 58 06.2	+1.7
SMRT	St. Maarten	1.36	286	eP	Pb	00 57 50.3	-0.8
SMRT				eS	Sb	00 58 08.7	+0.5
SABA	Saba	1.47	268	eP	Pb	00 57 52.3	-0.7
SABA				eS	Sb	00 58 11.5	+0.1
MAGL	Barre de l'ile	1.76	167	eP	Pb	00 57 57.0	-1.0
MDPO	Dominica; Chan	2.10	173	eP	Pn	00 58 01.6	+2.0
MDPO				eS	Sb	00 58 27.4	-1.9
DWS	Wesley	2.13	170	eP	Pb	00 58 02.4	-1.8
DWS				eS	Sb	00 58 28.1	-2.0
MDN	Morne-Daniel	2.36	173	eP	Pn	00 58 05.0	+1.9
MDN				eS	Sn	00 58 33.0	+1.8
DLPL	La Plaine	2.37	169	eP	Pn	00 58 05.3	+2.0
DLPL				eS	Sn	00 58 32.9	+1.4
PCM	Pelee Case Pet	2.88	171	eP	Pn	00 58 11.0	+0.6
BAMF	Morne Balai	2.89	169	eP	Pn	00 58 11.4	+0.9
SLBI	Saint Lucia, B	3.70	169	eS	Sn	00 59 05.8	+1.6

*ISCJB **28** 00:57:58.7±0.5, 37°.27N±0°.04×71°.93E±0°.06, h130km, mb3.3/3, Error ellipse: s-maj=7.4km s-min=5.5km az=144.0*
*IDC **28** 00:57:58.5±4.4, 37°.26N×72°.00E, h132km±30km, mb3.1/3, mb1 3.2/10, mb1mx2.9/46, mbtmp3.7/10, Error ellipse: s-maj=49.2km s-min=19.3km az=147.0*
*NNC **28** 00:58:06.2±2.2, 37°.73N×71°.97E, h156km±36km, mb3.0, mpv3.7, Error ellipse: s-maj=21.6km s-min=16.8km az=167.0*

ISC 28 00:57:59.2±0.9, 37°.32N±0°.08×71°.95E±0°.07, h130km, n28, σ1°.51/33, mb3.5/3, 6C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.99	15	P	Pn	00 59 14.6	+2.1
	SNR=27						
UCH	Uchtor	5.29	21	P	Pn	00 59 18.6	+2.1
	SNR=33						
KZA	Kyzart	5.39	27	P	Pn	00 59 19.3	+1.5
	SNR=9.9						
EKS2	Erkin-Say	5.52	14	P	Pn	00 59 21.9	+2.5
	SNR=17						
AAK	Ala-Archa	5.66	19	P	Pn	00 59 23.0	+1.8
	4.3nm,0.3s,baz=187,slow=5.7,SNR=13						
AAK				S	Sn	01 00 22.9	-2.3
	3.6nm,0.3s,baz=132,slow=22,SNR=14						
AAK	Ala-Archa	5.66	19	⇓P	Pn	00 59 23.6	+2.4
	9.6nm,0.6s						
AAK				⇑S	Sn	01 00 24.2	-1.0
	20nm,0.7s						
AAK	Ala-Archa	5.66	19	P	Pn	00 59 23.3	+2.1
	SNR=11						
KK31	Karatay Array	5.88	350	⇑P	Pn	00 59 26.4	+2.3
	4.9nm,0.3s,baz=154,slow=11,SNR=158						
KK31				⇑S	Sn	01 00 28.0	-2.4
	10nm,0.4s,baz=176,slow=25,SNR=4.1						
CHMS	Chumysh	6.07	20	P	Pn	00 59 28.9	+2.3
	SNR=8.8						
TKM2	Tokmak 2	6.25	25	⇑P	Pn	00 59 30.7	+1.4
	2.0nm,0.7s						
TKM2				⇑S	Sn	01 00 38.9	-0.7
	4.0nm,0.7s						
GEYT	Alibeck	10.99	277	P	Pn	01 00 34.3	+1.5
	baz=112,slow=11,SNR=2.7						
GEYT				S	Sn	01 02 32.7	-1.3
	0.7nm,0.3s,baz=50,slow=23,SNR=4.6						
MKAR	Makanchi Array	12.18	36	P	Pn	01 00 48.2	-0.2
	0.2nm,0.3s,baz=218,slow=14,SNR=3.6						
DANN	Dangsing	13.35	129	eP	Pn	01 01 04.1	+0.2
	14nm,0.3s						
KURBB	Kurchatov Arra	14.11	17	P	Pn	01 01 14.4	+1.3
	0.1nm,0.3s,baz=207,slow=11,SNR=7.3						
GKN	Gorkha	14.14	127	eP	Pn	01 01 13.8	-0.1
	12nm,0.2s						
KKN	Kakani	14.70	126	eP	Pn	01 01 20.2	-0.8
	9.1nm,0.5s						
DMN	Daman	14.72	127	eP	Pn	01 01 20.9	-0.4
	4.9nm,0.3s						
AB31	Akbulak array	14.77	328	⇓P	P	01 01 23.4	-0.6
	1.3nm,0.4s,baz=138,slow=12,SNR=74						
PKIN	Phulchoki	14.92	127	eP	Pn	01 01 24.4	+0.5
	7.6nm,0.5s						
PKI	Pulchoki	14.94	127	eP	Pn	01 01 24.0	-0.1
	6.6nm,0.4s						
JIRN	Jiri	15.38	125	eP	Pn	01 01 29.6	-0.1
	17nm,0.3s						
BVAR	Borovoye Array	15.75	357	P	P	01 01 34.3	-0.6
	0.3nm,0.3s,baz=165,slow=12,SNR=5.8						
AKTO	Aktyubinsk	16.48	327	P	P	01 01 43.4	+0.4
	0.4nm,0.3s,baz=121,slow=9.9,SNR=7.7						
AKTO	Aktyubinsk	16.48	327	⇑P	P	01 01 43.8	+0.8
	1.4nm,0.6s						
ZALV	Zalesovo Beam	18.86	24	P	P	01 02 08.4	-0.6
	0.7nm,0.3s,baz=208,slow=9.8,SNR=8.3						
FINES	FINESS Array B	37.24	325	P	P	01 04 58.0	+0.2
	0.7nm,0.9s,baz=124,slow=12,SNR=3.4						
ARCES	ARCESS Array B	40.69	337	P	P	01 05 26.6	+0.2
	0.9nm,0.8s,baz=117,slow=9.2,SNR=3.4						
TORD	Torodi Ar. Bea	66.50	269	P	P	01 08 33.3	-1.9
	0.2nm,0.5s,baz=47,slow=6.4,SNR=2.8						

MEX 28 01:36:02.4±0.6, 18°.03N×103°.31W, h10km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.26	352	i P	Pg	01 36 07.4	-0.4
MMIG				eS	Sg	01 36 11.1	-0.3
EZ5V		1.47	349	eP	Pn	01 36 26.1	-3.2
EZ5V				eS	Sn	01 36 44.1	-4.7

KRSC 28 01:36:32.4±1.3, 52°.01N×160°.15E, h51km±19km, ML4.2, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.09	356	eP	Pn	01 36 53.3	+1.9
SPN				eS	Sn	01 37 08.0	+2.6
RUS	Russkaya	1.09	293	eP	Pn	01 36 51.7	+0.3
RUS				eS	Sn	01 37 06.0	+0.5
NLC	Nalytchevo	1.26	337	eP	Pn	01 36 55.4	+1.7
NLC				eS	Sn	01 37 11.3	+1.8
MTVR	Mutnovka	1.30	292	eP	Pn	01 36 55.3	+1.0
MTVR				eS	Sn	01 37 11.3	+0.6
KDTR	Khodutka, Kamc	1.30	262	eP	Pn	01 36 55.8	+1.6
KDTR				eS	Sn	01 37 13.0	+2.5
DALK	Dalny	1.33	321	eP	Pn	01 36 55.9	+1.3
DALK				eS	Sn	01 37 13.1	+1.9
ASAK	Asacha	1.44	286	eP	Pn	01 36 57.8	+1.7
ASAK				eS	Sn	01 37 15.6	+1.7
UGLR	Uglovaya	1.45	326	eP	Pn	01 36 58.3	+2.0
KRMR	Karymshinskiy	1.49	304	eP	Pn	01 36 58.0	+1.3
KRMR				eS	Sn	01 37 15.7	+0.7
SDLR	Sedlovina	1.49	329	eP	Pn	01 36 58.3	+1.5
SMAR	Somma	1.50	327	eP	Pn	01 36 58.7	+1.6
AVH	Avacha	1.52	326	eP	Pn	01 37 00.0	+2.7
AVH				eS	Sn	01 37 20.0	+4.0
KRER	Koryakskii	1.55	327	eP	Pn	01 36 59.7	+1.9
KOK	Koryaka	1.58	325	eP	Pn	01 37 00.4	+2.3
KRX	Arik	1.63	326	eP	Pn	01 37 00.8	+2.0
APC	Apacha	2.05	298	eP	Pn	01 37 07.5	+3.1
APC				eS	Sn	01 37 31.9	+3.2
PAU	Pauzhetka	2.15	257	eP	Pn	01 37 08.9	+3.1
GNL	Ganaly	2.15	322	eP	Pn	01 37 10.0	+4.0
GNL				eS	Sn	01 37 35.4	+3.9
MKZ	Mys Kozlova	2.72	20	eP	Pn	01 37 16.4	+2.9
MKZ				eS	Sn	01 37 47.7	+2.6
SKR	Severo-Kuril's	2.86	244	eP	Pn	01 37 18.8	+3.3
SKR				eS	Sn	01 37 52.3	+3.7
KZV	Kizimen	3.11	1	eP	Pn	01 37 22.3	+3.3
KZV				eS	Sn	01 37 58.3	+3.3
TUMD	Tumrok D	3.20	3	eP	Pn	01 37 23.5	+3.3
TUMD				eS	Sn	01 38 00.1	+3.0
TUMR	Tumrok	3.28	360	eP	Pn	01 37 24.9	+3.6
ESO	Esso	4.01	348	eP	Pn	01 37 36.4	+5.1
LGNR	Loginova	4.09	4	eP	Pn	01 37 36.1	+3.5
SRDR	Sredinnyy	4.32	357	eP	Pn	01 37 39.9	+4.3
KBTR	Krutoberegovo	4.49	19	eP	Pn	01 37 41.8	+4.0
KBG	Krutoberegovo	4.51	18	eP	Pn	01 37 42.2	+4.2
SMKR	Semkarok	4.64	9	eP	Pn	01 37 44.7	+4.7
SRKR	Sorokina	4.69	7	eP	Pn	01 37 46.1	+5.5
BKI	Bering	4.71	45	eP	Pn	01 37 44.3	+3.4
BKI				eS	Sn	01 38 34.2	0.0

IDC 28 01:46:36.9±10.0, 45°.49N×149°.20E, h0km, mb3.8/4, mb1 3.7/6, mb1mx3.4/42, mbtmp3.7/6, ML2.7/2, Error ellipse: s-maj=229.8km s-min=35.8km az=147.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAJ	Asahikawa	4.90	256	Pn	Pn	01 47 50.9	-0.8
	0.5nm,0.3s,baz=102,slow=14,SNR=4.0						
USRK	Ussuriysk Ar.	12.29	270	Pn	Pn	01 49 34.5	+1.5
	0.1nm,0.3s,baz=78,slow=14,SNR=4.1						
SONM	Songino Array	29.20	290	P	P	01 52 39.2	-0.9
	0.3nm,0.3s,baz=76,slow=7.6,SNR=2.9						
MKAR	Makanchi Array	45.09	297	P	P	01 54 55.0	+0.4
	1.0nm,0.7s,baz=70,slow=7.6,SNR=10						
FINES	FINESS Array B	63.98	333	P	P	01 57 11.5	0.0
	0.8nm,0.6s,baz=27,slow=7.5,SNR=11						
NB2	NORSAR Subarra	68.49	340	P	P	01 57 40.9	+0.4
	comp=Z,0.3nm,0.6s,baz=29,slow=6.5						
NOA	NORSAR Array B	68.49	340	P	P	01 57 40.5	0.0
	comp=Z,0.3nm,0.5s,baz=30,slow=6.7,SNR=6.7						

*ISCJB **28** 01:47:48.2±0.5, 5°.56S±0°.05×128°.72E±0°.07, h300km, mb3.8/9, Error ellipse: s-maj=9.6km s-min=7.1km az=169.0*
*DJA **28** 01:47:50.5±0.4, 6°S±4°×12°9E±°, h327km±9km, M4.6/9, mb4.7/9, mB4.8/4, MLv4.7/9, Mw(mB)4.1/4*
*IDC **28** 01:47:51.8±3.7, 5°.63S×128°.63E, h344km±41km, mb3.5/8, mb1 3.6/10, mb1mx3.3/34, mbtmp4.2/10, Error ellipse: s-maj=31.1km s-min=10.0km az=78.0*

ISC 28 01:47:48.9±0.7, 5°.62S±0°.07×128°.8E±0°.1, h300km, n22, σ2°.19/23, mb3.7/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.57	46	P	Pn	01 48 36.2	+3.7
MSAI	Masohi	2.26	4	P	Pn	01 48 41.2	+3.3
FAKI	Fak Fak	4.39	52	P	Pn	01 49 02.1	+2.6
LBMI	Labuha	5.11	346	P	Pn	01 49 10.3	+2.6
	83nm,0.9s						
SOEI	Soe	6.06	227	P	Pn	01 49 22.5	+3.4
	117nm,0.9s,0.6nm						
EDFI	Ende, Flores	7.68	246	P	Pn	01 49 41.3	+2.6
SRPI	Serui, Papua	8.34	64	P	Pn	01 49 48.2	+1.5
	246nm,0.5s						
TTSI	Tana Toraja	9.28	286	P	Pn	01 49 59.0	+0.8
WBSI	Waikabubak, Su	10.11	246	P	Pn	01 50 07.6	-0.9
PLAI	Plampang	11.36	253	P	Pn	01 50 23.5	-0.2
WRA	Warramunga Arr	15.23	160	P	P	01 51 09.9	+1.2
	0.8nm,0.3s,baz=338,slow=13,SNR=40						
WRA				S	S	01 53 52.5	-1.9
	0.2nm,0.3s,baz=335,slow=21,SNR=5.7						
ASAR	Alice Springs	18.61	165	P	P	01 51 46.8	+1.6
	0.6nm,0.3s,baz=345,slow=11,SNR=66						
ASAR				S	S	01 55 00.1	-1.3
	0.4nm,0.3s,baz=348,slow=21,SNR=14						
CMAR	Chiang Mai Arr	37.91	310	P	P	01 54 35.6	-2.6
	0.6nm,0.3s,baz=115,slow=8.1,SNR=4.1						
WHN	Wuhan	38.52	340	P	P	01 54 48.5	+5.5
KSRS	Korea Array	42.86	359	P	P	01 55 17.6	-0.5
	2.2nm,0.6s,baz=173,slow=9.0,SNR=8.7						
MJAR	Matsushiro Arr	42.86	11	P	P	01 55 16.1	-2.2
	2.7nm,0.8s,baz=192,slow=9.8,SNR=10						
HHC	Hu-ho-hao-te	48.86	343	P	P	01 56 08.0	+3.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,11nm,4.7s						
USRK	Ussuriysk Ar.	49.67	3	P	P	01 56 09.6	-1.2
	comp=Z,2.8nm,0.6s,baz=184,slow=7.8,SNR=9.1						
KLR	Kul'dur	54.68	2	P	P	01 56 46.2	-1.2
	comp=Z,1.0nm,0.7s,baz=186,slow=10,SNR=3.6						
PETK	Petropavlovsk-	63.41	19	P	P	01 57 46.4	-0.5
	comp=Z,2.8nm,0.6s,baz=177,slow=4.2,SNR=7.3						
MKAR	Makanchi Array	66.41	327	P	P	01 58 05.0	-1.2
	comp=Z,0.7nm,0.4s,baz=111,slow=8.8,SNR=14						
SEY	Seymchan	70.69	11	P	P	01 58 31.7	-0.5
	comp=Z,4.7nm,0.7s,baz=233,slow=5.1,SNR=11						

WEL 28 02:00:16.9, 41°S±3°×17°3E±°, h105km±5km, M3.8/32, ML3.7/5, MLv3.8/32, Error ellipse: s-maj=0.0km s-min=0.0km az=84.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.31	173	P	Pn	02 00 33.0	+0.7
THZ				S	Sn	02 00 44.8	+1.1
NNZ	Nelson	0.46	60	P	Pn	02 00 33.3	+0.3
NNZ				S	Sn	02 00 46.0	+0.9
QRZ	Quartz Range	0.67	339	P	Pn	02 00 35.2	+0.6
QRZ				S	Sn	02 00 47.9	0.0
BSWZ	Blackbirch Sta	0.81	109	P	Pn	02 00 36.0	+0.2
BSWZ				S	Sn	02 00 51.2	+1.1
TUWZ	Tuamarina	0.82	89	P	Pn	02 00 36.0	+0.1
TUWZ				S	Sn	02 00 50.6	+0.4
DSZ	Denniston Nort	0.84	249	P	Pn	02 00 36.6	+0.5
DSZ				S	Sn	02 00 50.7	+0.1
DUWZ	D'Urville Isla	1.04	52	P	Pn	02 00 38.6	+0.5
DUWZ				S	Sn	02 00 54.3	+0.1
CMWZ	Cape Campbell	1.06	107	P	Pn	02 00 38.4	0.0
CMWZ				S	Sn	02 00 55.6	+0.9
KHZ	Kahutara	1.09	152	P	Pn	02 00 39.0	+0.3
TCW	Tory Channel	1.10	78	P	Pn	02 00 38.8	0.0
TCW				S	Sn	02 00 54.9	-0.4
LTZ	Lake Taylor	1.40	198	P	Pn	02 00 42.5	+0.2
BHW	Baring Head	1.52	89	P	Pn	02 00 42.4	-1.2
GVZ	Greta Valley S	1.52	175	P	Pn	02 00 43.8	+0.1
INZ	Inchbonnie	1.65	219	P	Pn	02 00 45.4	+0.1
CAW	Cannon Point	1.71	79	P	Pn	02 00 44.7	-1.2
AMCZ	Amberley	1.73	185	P	Pn	02 00 46.1	-0.1
MSWZ	Moikau Station	1.80	90	P	Pn	02 00 45.6	-1.6
PLWZ	Palliser	1.81	95	P	Pn	02 00 45.6	-1.7
OGWZ	Otaki Gorge	1.86	71	P	Pn	02 00 46.8	-1.1
PAWZ	Paruwai Farm	1.94	89	P	Pn	02 00 47.1	-1.9
OXZ	Oxford	1.97	198	P	Pn	02 00 48.4	-0.9
MTW	Mount Morrison	2.02	83	P	Pn	02 00 48.1	-1.9
HOWZ	Holdsworth Sta	2.09	75	P	Pn	02 00 49.0	-1.8
CRLZ	Canterbury Las	2.13	184	P	Pn	02 00 50.6	-0.7
TRWZ	Traveller	2.13	89	P	Pn	02 00 49.6	-1.9
NMEZ	Namu Road	2.18	21	P	Pn	02 00 52.8	+0.8
MRZ	Mangatainoka R	2.21	70	P	Pn	02 00 50.6	-1.8
WVZ	Waitaha Valley	2.26	223	P	Pn	02 00 52.5	-0.5
MQZ	McQueen's Vall	2.26	184	P	Pn	02 00 51.6	-1.4
OKCZ	Okains Bay	2.28	176	P	Pn	02 00 52.5	-0.8
LREZ	Lake Rotokare	2.31	31	P	Pn	02 00 54.8	+1.1
NBEZ	Newall Road No	2.31	20	P	Pn	02 00 54.5	+0.8
TMWZ	Te Maipa	2.32	82	P	Pn	02 00 51.7	-2.1
KHEZ	Kahui Hut	2.33	23	P	Pn	02 00 54.8	+0.7
PREZ	Palmer Road	2.33	26	P	Pn	02 00 54.7	+0.6
WAZ	Wanganui	2.35	44	P	Pn	02 00 55.2	+1.0
TIWZ	Tintock	2.39	75	P	Pn	02 00 52.9	-1.9
PKE	Pukeiti	2.42	21	P	Pn	02 00 55.6	+0.5
DREZ	Durham Road	2.48	25	P	Pn	02 00 56.5	+0.5
PRWZ	Pori Road	2.53	70	P	Pn	02 00 54.7	-1.8
CPWZ	Castlepoint	2.59	79	P	Pn	02 00 55.7	-1.6
RPZ	Rata Peaks	2.62	210	P	Pn	02 00 56.6	-1.2
MHEZ	Mangahewa	2.63	26	P	Pn	02 00 58.5	+0.6
BFZ	Birch Farm	2.68	74	P	Pn	02 00 56.2	-2.3
VRZ	Vera Road	2.74	33	P	Pn	02 00 59.8	+0.4
DVHZ	Dannevirke	2.77	66	P	Pn	02 00 57.2	-2.5
MTVZ	Mangateitei	2.87	45	P	Pn	02 01 01.4	+0.2
PKVZ	Pokaka	2.88	42	P	Pn	02 01 00.7	-0.6

PNHZ	Pukenui	2.97	60	P	Pn	02 01 00.2	-2.3
FWVZ	Far West T-bar	3.01	44	P	Pn	02 01 02.6	-0.6
MOVZ	Moawhango	3.01	48	P	Pn	02 01 01.5	-1.5
TUVZ	Tukino	3.06	45	P	Pn	02 01 04.0	+0.3
WPHZ	Waipukurau	3.06	64	P	Pn	02 01 01.1	-2.4
FOZ	Fox Glacier	3.06	226	P	Pn	02 01 02.7	-0.8
TWVZ	Taurewa	3.09	41	P	Pn	02 01 04.4	+0.3
NGZ	Ngauruhoe	3.10	44	P	Pn	02 01 05.5	+1.3
WTVZ	West Tongariro	3.14	43	P	Pn	02 01 05.6	+0.9
BHHZ	Black Hill Sta	3.14	52	P	Pn	02 01 03.4	-1.3
KRVZ	Karewarewa	3.18	43	P	Pn	02 01 08.3	+3.0
KRHZ	Kereru	3.23	57	P	Pn	02 01 04.0	-1.9
HIZ	Hauiti	3.31	28	P	Pn	02 01 06.6	-0.4
PXZ	Pawanui	3.36	66	P	Pn	02 01 10.2	+2.6
KAHZ	Kahuranaki	3.48	63	P	Pn	02 01 06.9	-2.3
LBZ	Lake Benmore	3.53	213	P	Pn	02 01 07.5	-2.3
MCHZ	McNeill Hill	3.55	57	P	Pn	02 01 08.2	-2.0
BKZ	Black Stump Fm	3.60	52	P	Pn	02 01 08.7	-2.2
TLZ	Tolley Road	3.74	34	P	Pn	02 01 11.7	-1.0
MRHZ	Matea Rd	3.78	47	P	Pn	02 01 10.7	-2.6
ARHZ	Aropaoanui	3.85	57	P	Pn	02 01 15.4	+1.3
ODZ	Otahua Downs	3.94	203	P	Pn	02 01 13.9	-1.4
JCZ	Jackson Bay	3.98	227	P	Pn	02 01 15.1	-0.9
MTHZ	Maungataniwha	4.01	51	P	Pn	02 01 15.2	-1.2
RAHZ	Arahi	4.12	53	P	Pn	02 01 22.1	+4.3
MUGZ	Murupara	4.23	47	P	Pn	02 01 19.5	+0.2
TOZ	Tahuroa Road	4.24	30	P	Pn	02 01 18.9	-0.5
SNGZ	Shannon Statio	4.35	54	P	Pn	02 01 20.8	-0.2
WKZ	Wanaka	4.39	218	P	Pn	02 01 20.4	-1.0
MHGZ	Mahia Peninsul	4.50	61	P	Pn	02 01 21.8	-1.1
URZ	Urewera	4.57	47	P	Pn	02 01 22.0	-1.9
RAGZ	Rawiri	4.58	51	P	Pn	02 01 23.2	-1.0
AWAZ	Awhitu Peninsu	4.60	18	P	Pn	02 01 25.8	+1.6
PRGZ	Paritu Road	4.61	58	P	Pn	02 01 25.0	+0.6
RIGZ	Rimuhau	4.66	56	P	Pn	02 01 21.7	-3.4
MKAZ	Moumakai	4.70	23	P	Pn	02 01 25.4	-0.1
HHSZ	Highcliff Hill	4.72	199	P	Pn	02 01 26.4	+0.5
MWZ	Matawai	4.76	51	P	Pn	02 01 25.0	-1.4
ETAZ	East Tamaki Re	4.77	20	P	Pn	02 01 27.1	+0.5
WIAZ	Waiheke Island	4.98	22	P	Pn	02 01 29.5	+0.1
CNGZ	Carnagh Statio	5.07	56	P	Pn	02 01 32.2	+1.5
RUGZ	Raukumara Rang	5.10	48	P	Pn	02 01 29.9	-1.2
TWGZ	Tauwhareparae	5.13	52	P	Pn	02 01 30.2	-1.2
KUZ	Kuaotunu	5.20	26	P	Pn	02 01 33.2	+0.8
HAZ	Te Kaha	5.30	48	P	Pn	02 01 32.2	-1.5
WMGZ	Waiomatatini S	5.62	52	P	Pn	02 01 37.3	-0.8
WCZ	Waipu Caves	5.63	12	P	Pn	02 01 38.7	+0.5
OUZ	Omahuta	6.25	6	P	Pn	02 01 47.6	+1.0
CTZ	Chatham Island	8.10	110	P	Pn	02 02 09.9	-1.8

SJA ***28*** *02:04:43.7±0.7, 29°.83S×72°.52W, h10km, ML4.2, MW3.7*

IDC ***28*** *02:04:46.7±0.8, 29°.87S×72°.31W, h0km, mb3.7/5, mb1 4.0/10, mb1mx3.9/28, mbtmp3.8/10, ML3.9/5, MS3.3/2, Ms1 3.3/2, ms1mx2.8/20, Error ellipse: s-maj=24.4km s-min=20.0km az=53.0*

ISCJB ***28*** *02:04:47.4±1.9, 29°.79S±0°.04×72°.30W±0°.05, h15km±13km, mb3.9/6, Error ellipse: s-maj=7.8km s-min=6.8km az=153.2*

NEIC ***28*** *02:04:47.9±2.6, 29°.78S×72°.11W, h10km±2km, mb4.1/3, ML3.7(GUC), Error ellipse: s-maj=16.3km s-min=6.9km az=101.0*

GUC ***28*** *02:04:48.9±0.6, 29°.74S×72°.08W, h52km±6km, ML3.7*

ISC 28 02:04:47.7±1.9, **29°.77S**±0°.04×**72°.14W**±0°.06, **h5**km±11km, **n46**, σ1ˢ51/55, **mb3.9**/6, **3C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.79	100	⇑*e*P	Pn	02 05 04.0	-1.4
LSCH				*e*S	Sn	02 05 15.5	-2.1
LSCH				IAML		02 05 18.2	
	comp=E,5µm,0.4s						
GO04	Tololo Observa	1.23	109	*e*Pn	Pb	02 05 11.0	-0.6
GO04	Tololo Observa	1.23	109	*e*P	Pg	02 05 11.6	+0.3
GO04	Tololo Observa	1.23	109	⇑*e*P	Pg	02 05 11.1	-0.2
GO04				*e*S	Sn	02 05 28.4	-0.5
LCO	Las Campanas	1.47	59	*e*Pn	Pn	02 05 14.5	-0.6
LCO	Las Campanas	1.47	59	*e*P	Pg	02 05 16.8	+0.9
LCO	Las Campanas	1.47	59	⇓*e*P	Pn	02 05 14.6	-0.4
LCO				*e*S	Sn	02 05 33.4	-1.4
LCO				IAML		02 05 41.6	
	comp=E,2µm,0.5s						
AROD	Rodeo	2.35	100	*e*P	Pb	02 05 29.8	-0.9
AROD				*e*S	Sg	02 06 04.1	+0.9
GO03	Copiap	2.74	38	*e*Pn	Pn	02 05 31.4	-0.9
GO03	Copiap	2.74	38	*e*P	Pn	02 05 34.3	+1.9
GO03	Copiap	2.74	38	*i* P	Pn	02 05 31.9	-0.4
ACCO	Cerro Coronel	2.78	108	*e*P	Pb	02 05 35.9	-2.2
ACCO				*e*S	Sg	02 06 14.9	-2.2
AMOG	MOGNA	3.36	111	*e*P	Pn	02 05 43.2	+2.3
AMOG				*e*S	Sb	02 06 27.3	-1.6
PEL	Peldehue	3.58	160	*e*Pn	Pn	02 05 43.6	-0.4
PEL	Peldehue	3.58	160	*e*P	Pn	02 05 43.4	-0.5
VCA	Vinchina	3.59	74	*e*P	Pn	02 05 47.0	+2.9
VCA				*e*S	Sb	02 06 34.5	-1.2
VCA				IAML		02 06 56.9	
	comp=Z,343nm,0.5s						
RTCV	Cerro Valdivia	3.73	125	*e*P	Pn	02 05 48.0	+2.0
CFA	Coronel Fontan	3.83	120	Pn	Pn	02 05 49.6	+2.3
	comp=Z,4.7nm,0.3s,baz=305,slow=13,SNR=48						
CFA				Sn	Sn	02 06 34.3	+1.7
	comp=Z,17nm,0.3s,baz=104,slow=19,SNR=3.8						
FCH	Farellones	3.88	156	⇑*i*P	Pn	02 05 48.7	+0.4
FCH				*e*S	Sn	02 06 34.7	+0.3
ACAN	Cantantal	4.93	122	*e*P	Pn	02 06 05.2	+2.8
GO02	Mina Guanaco	5.12	27	*e*Pn	Pn	02 06 03.8	-1.5
GO05	Huala	5.22	178	*e*Pn	Pn	02 06 04.5	-2.0
LVC	Limon Verde	7.70	23	Pn	Pn	02 06 38.2	-2.6
	comp=Z,0.6nm,0.3s,baz=208,slow=12,SNR=5.0						
LVC				Lg	Lg	02 08 40.5	
	comp=Z,2.3nm,0.3s,baz=343,slow=12,SNR=3.5						
LVC	Limon Verde	7.70	23	*e*Pn	Pn	02 06 39.1	-1.7
PLCA	Paso Flores	11.01	174	Pn	Pn	02 07 24.7	-1.2
	comp=Z,0.5nm,0.3s,baz=5.0,slow=12,SNR=23						
CPUP	Villa Florida	13.52	79	Pn	Pn	02 08 02.8	+2.6
	comp=Z,0.1nm,0.3s,baz=248,slow=19,SNR=2.4						
CPUP				LR	LR	02 13 51.9	
	comp=Z,117nm,21.6s,baz=270,slow=40						
LPAZ	La Paz	13.92	16	Pn	Pn	02 08 07.9	+1.7
	comp=Z,0.2nm,0.3s,baz=207,slow=8.2,SNR=8.8						
LPAZ	La Paz	13.92	16	*e*Pn	Pn	02 08 09.7	+3.5
SIV	San Ignacio	17.07	39	P	P	02 08 48.2	-0.9
	comp=Z,0.3nm,0.3s,baz=233,slow=11,SNR=32						
SIV				LR	LR	02 15 58.5	
	comp=Z,106nm,18.4s,baz=292,slow=39						
BDFB	Brasilia	26.25	63	P	P	02 10 25.8	+1.7
	comp=Z,0.7nm,0.4s,baz=259,slow=5.2,SNR=1.6						
SNAA	Sanae	55.54	159	P	P	02 14 22.8	-0.7
	comp=Z,1.9nm,0.9s,baz=285,slow=9.1,SNR=8.4						
SNAA	Sanae	55.54	159	*e*P	P	02 14 23.9	+0.4
	comp=Z,17nm,1.6s						
QSPA	South Pole Qui	60.45	180	*e*P	P	02 14 59.1	+0.9
	comp=Z,5.4nm,1.0s						
TXAR	Lajitas Array	66.03	330	P	P	02 15 35.0	-0.5
	comp=Z,0.2nm,0.6s,baz=155,slow=9.1,SNR=3.7						
PD31	Pinedale Array	79.97	333	*e*P	P	02 16 57.9	-0.1
	comp=Z,3.7nm,1.5s						
PDAR	Pinedale Array	79.97	333	P	P	02 16 57.9	-0.1
	comp=Z,0.1nm,0.4s,baz=142,slow=4.9,SNR=3.0						
TOA1	Torodi Ar. Sit	82.87	71	*e*P	P	02 17 13.9	+0.2
TORD	Torodi Ar. Bea	82.87	71	P	P	02 17 13.9	+0.2
	comp=Z,1.6nm,1.0s,baz=290,slow=6.1,SNR=4.8						
WR1	Warramunga Arr	124.38	211	*e*PKPdf	PKPdf	02 23 46.8	-1.6
WRA	Warramunga Arr	124.38	211	PKP	PKPdf	02 23 46.8	-1.6
	comp=Z,2.5nm,1.1s,baz=208,slow=1.6,SNR=3.9						
ZAA1	Zalesovo Array	150.62	28	*e*PKPbc	PKiKP	02 24 40.6	-0.3
ZALV	Zalesovo Beam	150.62	28	PKPbc	PKiKP	02 24 40.6	-0.3
	comp=Z,7.2nm,0.8s,baz=291,slow=3.3,SNR=19						
MJAR	Matsushiro Arr	153.78	293	PKPab	PKPab	02 25 01.6	+0.6
	comp=Z,0.7nm,0.3s,baz=116,slow=2.2,SNR=6.6						
MAJO	Matsushiro	153.78	293	*e*PKPab	PKPab	02 25 01.6	+0.6
MK32	Makanchi Array	153.87	42	*e*PKPab	PKPab	02 25 00.9	-0.1
MKAR	Makanchi Array	153.87	42	PKPab	PKPab	02 25 00.9	-0.1
	comp=Z,0.3nm,0.4s,baz=316,slow=4.0,SNR=2.2						

MAN 28 02:07:27.5, 17°.88N×120°.39E, h23km, mb3.8, ML2.5, MS2.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	Callao Caves	1.38	97	⇑*i*P	Pb	02 07 52.5	-0.1
CVP				*i* S	Sn	02 08 07.4	-1.4

WEL 28 02:09:04.4, 42°S±1°×**17°4E**±°, **h13**km±3km, **M3.7**/31, **ML4.0**/25, **MLv3.7**/31, **Error ellipse: s-maj=0.0km s-min=0.0km az=142.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	199	P	Pg	02 09 07.9	+0.3
CMWZ				S	Sb	02 09 11.2	-0.2
BSWZ	Blackbirch Sta	0.30	255	P	Pb	02 09 11.2	-0.5
BSWZ				S	Sb	02 09 16.5	-0.2
TUWZ	Tuamarina	0.32	310	P	Pb	02 09 11.5	-0.5
TUWZ				S	Sb	02 09 16.7	-0.4
TCW	Tory Channel	0.42	1	P	Pb	02 09 13.3	-0.5
TCW				S	Sb	02 09 20.0	-0.1
BHW	Baring Head	0.51	64	P	Pb	02 09 15.4	+0.2
PLWZ	Palliser	0.74	85	P	Pn	02 09 20.1	-0.6
MSWZ	Moikau Station	0.77	74	P	Pb	02 09 20.3	+0.6
NNZ	Nelson	0.79	302	P	Pb	02 09 19.8	-0.1
CAW	Cannon Point	0.80	49	P	Pb	02 09 20.5	+0.3
DUWZ	D'Urville Isla	0.87	343	P	Pg	02 09 21.3	0.0
PAWZ	Paruwai Farm	0.91	74	P	Pn	02 09 22.8	-0.2
KHZ	Kahutara	0.95	215	P	Pn	02 09 24.1	+0.6
THZ	Tophouse	1.03	262	P	Pn	02 09 24.5	-0.1
MTW	Mount Morrison	1.04	63	P	Pn	02 09 25.2	+0.4
OGWZ	Otaki Gorge	1.06	40	P	Pb	02 09 24.8	+0.1
TRWZ	Traveller	1.09	78	P	Pn	02 09 25.6	+0.1
HOWZ	Holdsworth Sta	1.20	52	P	Pg	02 09 27.4	0.0
TMWZ	Te Maipa	1.33	67	P	Pn	02 09 28.8	+0.1
MRZ	Mangatainoka R	1.39	46	P	Pb	02 09 30.3	+0.1
TIWZ	Tintock	1.49	55	P	Pn	02 09 31.2	+0.2
QRZ	Quartz Range	1.54	301	P	Pb	02 09 33.1	+0.3
GVZ	Greta Valley S	1.61	214	P	Pn	02 09 33.0	+0.3
OHWZ	Ohakea	1.64	29	P	Pg	02 09 35.3	-0.5
PRWZ	Pori Road	1.68	51	P	Pn	02 09 33.9	+0.3
POWZ	Post Office Ro	1.68	43	P	Pn	02 09 34.4	+0.8
BFZ	Birch Farm	1.77	58	P	Pn	02 09 34.4	-0.4
DSZ	Denniston Nort	1.85	266	P	Pb	02 09 38.2	+0.1
LTZ	Lake Taylor	1.87	232	P	Pn	02 09 37.1	+0.9
AMCZ	Amberley	1.95	217	P	Pn	02 09 37.4	+0.1
WAZ	Wanganui	1.96	16	P	Pg	02 09 41.0	-1.0
DVHZ	Dannevirke	1.96	48	P	Pn	02 09 37.2	-0.3
TSZ	Takapari Road	2.03	40	P	Pn	02 09 39.0	+0.5
NMEZ	Namu Road	2.24	352	P	Pg	02 09 46.6	-0.7
PNHZ	Pukenui	2.26	41	P	Pn	02 09 41.6	+0.1
OKCZ	Okains Bay	2.27	203	P	Pn	02 09 40.8	-0.8
WPHZ	Waipukurau	2.28	47	P	Pn	02 09 41.4	-0.3
PREZ	Palmer Road	2.29	358	P	Pb	02 09 45.5	-0.1
KHEZ	Kahui Hut	2.35	355	P	Pb	02 09 46.4	-0.2
OXZ	Oxford	2.36	224	P	Pn	02 09 42.3	-0.6
INZ	Inchbonnie	2.36	242	P	Pn	02 09 44.0	+1.1
NBEZ	Newall Road No	2.38	353	P	Pb	02 09 47.1	-0.1
MQZ	McQueen's Vall	2.39	209	P	Pn	02 09 42.0	-1.3
PKVZ	Pokaka	2.48	20	P	Pb	02 09 47.5	-1.5
MOVZ	Moawhango	2.50	27	P	Pn	02 09 46.2	+1.3
VRZ	Vera Road	2.54	9	P	Pb	02 09 48.3	-1.5
PXZ	Pawanui	2.54	52	P	Pn	02 09 44.3	-1.1
BHHZ	Black Hill Sta	2.54	33	P	Pn	02 09 46.7	+1.2
KRHZ	Kereru	2.55	40	P	Pn	02 09 45.6	0.0
FWVZ	Far West T-bar	2.57	23	P	Pb	02 09 48.3	-2.2
TUVZ	Tukino	2.59	25	P	Pb	02 09 48.6	-2.2
NGZ	Ngauruhoe	2.66	23	P	Pb	02 09 49.8	-2.2
KAHZ	Kahuranaki	2.71	48	P	Pn	02 09 47.2	-0.5
WTVZ	West Tongariro	2.71	22	P	Pb	02 09 53.6	+0.7
TWVZ	Taurewa	2.71	20	P	Pb	02 09 53.7	+0.8
KRVZ	Karewarewa	2.75	23	P	Pb	02 09 54.7	+1.2
KWHZ	Kaweka Forest	2.75	37	P	Pg	02 09 55.5	-1.7
RITZ	Rihia Road	2.92	25	P	Pb	02 09 58.1	+1.7
WVZ	Waitaha Valley	2.98	240	P	Pb	02 09 55.0	-2.4
BKZ	Black Stump Fm	3.00	35	P	Pb	02 09 59.1	+1.4
RATZ	Rangitukua	3.00	23	P	Pg	02 09 59.8	-2.0
WATZ	Wairara	3.13	22	P	Pb	02 10 01.6	+1.6
RPZ	Rata Peaks	3.15	228	P	Pn	02 09 53.9	+0.1
HIZ	Hauiti	3.15	8	P	Pb	02 09 57.2	-3.1
MRHZ	Matea Rd	3.25	31	P	Pn	02 09 55.6	+0.4
TLZ	Tolley Road	3.44	17	P	Pb	02 10 05.0	-0.3
FOZ	Fox Glacier	3.79	239	P	Pb	02 10 07.2	-4.0
TOZ	Tahuroa Road	4.01	14	P	Pb	02 10 13.3	-1.7
URZ	Urewera	4.02	34	P	Pn	02 10 09.3	+3.6
MWZ	Matawai	4.14	38	P	Pn	02 10 07.1	-0.3
ODZ	Otahua Downs	4.31	217	P	Pn	02 10 09.7	0.0
RUGZ	Raukumara Rang	4.51	37	P	Pn	02 10 15.6	+3.0
MKAZ	Moumakai	4.58	9	P	Pb	02 10 20.2	-4.4
JCZ	Jackson Bay	4.71	237	P	Pn	02 10 19.1	+3.8
CTZ	Chatham Island	7.04	110	P	Pn	02 10 48.6	+1.5

CNRM ***28*** *02:17:24.6, 34°.46N×14°.84W, h92km, ml3.3*

MDD ***28*** *02:17:25.3±0.5, 34°.26N×14°.72W, h35km, mb4.6/14, Error ellipse: s-maj=13.6km s-min=3.8km az=136.0, PRXIMO*

IGIL ***28*** *02:17:27.2, 34°.27N×14°.82W, h70km, ML3.4*

INMG ***28*** *02:17:28.3±2.4, 34°.55N×14°.97W, h10km, ML3.1, Error ellipse: s-maj=10.8km s-min=3.0km az=132.0*

ISC 28 02:17:21.4±1.0, **34°.32N**±0°.06×**14°.79W**±0°.05, **h10**km, **n99**, σ**1ˢ82**/115, **3C, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	1.79	226	⇑*e*Pn	Pn	02 17 53.6	+1.3
PMPST				*e*Sn	Sn	02 18 13.8	-1.2
PMPST				A	A	02 18 14.9	
	217nm,0.1s						
PMPS	Porto Santo	1.80	226	P	Pn	02 17 53.6	+1.2
PMPS				S	Sn	02 18 13.8	-1.5
	108nm,0.1s						
PMAR	Madeira	2.38	229	⇑*i*Pn	Pn	02 18 01.8	+1.2
PMAR				*e*Sn	Sn	02 18 28.7	-1.3
PMAR				A	A	02 18 31.1	
	329nm,0.2s						
PMAR	Madeira	2.38	229	P	Pn	02 18 01.8	+1.2
PMAR				S	Sn	02 18 28.7	-1.3
	165nm,0.2s						
PMAR	Madeira	2.38	229	P	Pn	02 18 02.1	+1.5
PMAR				S	Sn	02 18 32.2	+2.2
FUL	Funchal	2.42	227	*e*Pn	Pn	02 18 02.4	+1.4
FUL				*e*Sn	Sn	02 18 29.5	-1.2
FUL				A	A	02 18 31.2	
	295nm,0.2s						
FUL	Funchal	2.42	227	P	Pn	02 18 02.4	+1.4
FUL				S	Sn	02 18 29.5	-1.2
	148nm,0.2s						
PMOZ	Porto Moniz, M	2.50	234	*e*Pn	Pn	02 18 03.5	+1.3
PMOZ				*e*Sn	Sn	02 18 30.9	-2.0
PMOZ				A	A	02 18 33.0	
	122nm,0.2s						
PMOZ	Porto Moniz, M	2.50	234	P	Pn	02 18 03.1	+0.9
	28nm,0.2s,SNR=7.9						
PMOZ				S	Sn	02 18 30.9	-2.0
	122nm,0.2s						
PMOZ	Porto Moniz, M	2.50	234	P	Pn	02 18 03.8	+1.6
PMOZ				S	Sn	02 18 34.9	+2.0
EAH	EAH	5.12	120	P	Pn	02 18 41.4	+3.2
EAH				S	Sn	02 19 40.1	+2.7
EFAM	Famara	5.29	168	S	Sn	02 19 35.6	-5.8
	4.2nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	5.60	58	*e*Pn	Pn	02 18 45.8	+1.1
PFVI				*e*Sn	Sn	02 19 42.4	-6.8
PFVI				A	A	02 19 45.6	
	19nm,0.2s						
PFVI	Vila Bisbo	5.60	58	P	Pn	02 18 45.8	+1.1
	8.4nm,0.1s,SNR=41						
PFVI				S	Sn	02 19 43.0	-6.2
	12nm,0.3s,SNR=11						
PFVI	Vila Bisbo	5.60	58	P	Pn	02 18 44.0	-0.7
PFVI				S	Sn	02 19 47.5	-1.6
CFUE	Fuerteventura	5.71	172	P	Pn	02 18 46.1	0.0
	1.4nm,0.1s,SNR=7.9						
CFUE				S	Sn	02 19 45.0	-6.7
	16nm,0.1s,SNR=7.9						
MORF	Marmelete	5.81	57	*e*P	Pn	02 18 48.7	+1.1
MORF				*e*S	Sn	02 19 48.5	-5.9
MORF				AML	AML	02 19 51.9	
	comp=N,44nm,0.4s						
MORF	Marmelete	5.81	57	*e*Pn	Pn	02 18 48.7	+1.1
MORF				*e*Sn	Sn	02 19 46.8	-7.6
MORF				A	A	02 19 53.0	
	comp=N,22nm,0.1s						
MORF	Marmelete	5.81	57	P	Pn	02 18 48.7	+1.1
MORF				S	Sn	02 19 48.5	-5.9
	comp=N,44nm,0.4s						
PTEO	Sao Teotonio	5.88	55	*e*Pn	Pn	02 18 50.2	+1.7
PTEO				*e*Sn	Sn	02 19 48.3	-7.7
PTEO				A	A	02 20 00.1	
	comp=N,10nm,0.3s						
PTEO	Sao Teotonio	5.88	55	P	Pn	02 18 50.2	+1.7
EBAJ	Bajamar	5.92	193	S	Sn	02 19 50.1	-6.8
	comp=N,2.1nm,0.2s,SNR=7.9						
SRHM	Skhour des Reh	6.05	106	P	Pn	02 18 53.2	+2.2
SRHM				S	Sn	02 20 03.3	+2.9
TBT	Taburiente	6.22	206	P	Pn	02 18 53.2	-0.1
	comp=N,11nm,0.2s,SNR=7.9						
TBT				S	Sn	02 19 56.8	-7.8
	comp=N,38nm,0.2s,SNR=7.9						
EOSO	Osorio	6.26	186	S	Sn	02 19 58.1	-7.5
	comp=N,4.4nm,0.5s,SNR=12						
PBDV	Barranco-do-Ve	6.29	60	*e*Pn	Pn	02 18 55.5	+1.3
PBDV				*e*Sn	Sn	02 19 59.6	-6.6
PBDV				A	A	02 20 06.4	
	comp=N,7.3nm,0.2s						
PBDV	Barranco-do-Ve	6.29	60	P	Pn	02 18 55.5	+1.3
PBDV				S	Sn	02 19 59.6	-6.6
	comp=N,7.3nm,0.2s						
EHIG	Higuera	6.30	205	P	Pn	02 18 54.9	+0.5
	comp=N,8.8nm,0.2s,SNR=5.6						
EHIG				S	Sn	02 19 59.8	-6.6
	comp=N,9.3nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	6.32	51	*e*Pn	Pn	02 18 55.8	+1.3
PNCL				*e*Sn	Sn	02 20 00.3	-6.5
PNCL				A	A	02 20 04.2	
	comp=N,9.0nm,0.1s						
PNCL	Nicolau / Gran	6.32	51	P	Pn	02 18 55.8	+1.3
PNCL				S	Sn	02 20 00.3	-6.5
	comp=N,9.0nm,0.1s						
PCVE	Castro Verde	6.39	57	*e*Pn	Pn	02 18 56.8	+1.2
PCVE				*e*Sn	Sn	02 20 02.0	-6.6
PCVE				A	A	02 20 09.0	
	comp=N,6.8nm,0.2s						
PCVE	Castro Verde	6.39	57	P	Pn	02 18 56.8	+1.2
PCVE				S	Sn	02 20 02.0	-6.6
	comp=N,6.8nm,0.2s						
PMAFR	Mafra	6.40	42	*e*Pn	Pn	02 18 56.3	+0.6
PMAFR				*e*Sn	Sn	02 19 59.4	-9.5
PMAFR				A	A	02 20 02.7	
	comp=N,35nm,0.2s						
PMAFR	Mafra	6.40	42	P	Pn	02 18 56.3	+0.6
	comp=N,3.5nm,0.1s,SNR=6.1						
EGOM	La Gomera	6.48	199	P	Pn	02 18 56.5	-0.3
	comp=N,1.2nm,0.1s,SNR=5.6						
EGOM				S	Sn	02 20 03.7	-7.2
	comp=N,3.9nm,0.3s,SNR=7.0						
PVAQ	Vaqueiros	6.51	60	*e*Pn	Pn	02 18 58.4	+1.1
PVAQ				*e*Sn	Sn	02 20 04.8	-6.8
PVAQ				A	A	02 20 10.4	
	comp=N,16nm,0.1s						
PVAQ	Vaqueiros	6.51	60	P	Pn	02 18 58.4	+1.1
PVAQ				S	Sn	02 20 04.8	-6.8
	comp=N,16nm,0.1s						
PVAQ	Vaqueiros	6.51	60	P	Pn	02 18 58.9	+1.6
PVAQ				S	Sn	02 20 09.8	-1.8
TTIG	Tnine Tigouga,	6.56	123	P	Pn	02 18 57.1	-0.8
TTIG				S	Sn	02 20 13.1	+0.2
PBEJ	Beja	6.71	55	*e*Pn	Pn	02 19 02.4	+2.5
PBEJ				*e*Sn	Sn	02 20 10.2	-6.2
PBEJ				A	A	02 20 16.4	
	comp=N,4.9nm,0.1s						
PBEJ	Beja	6.71	55	P	Pn	02 19 02.4	+2.5
PBEJ				S	Sn	02 20 10.2	-6.2
	comp=N,2.5nm,0.1s						
EGRO	El Granado	6.74	60	P	Pn	02 19 01.8	+1.4
	comp=N,2.1nm,0.1s,SNR=19						
EGRO				S	Sn	02 20 10.5	-6.7
	comp=N,4.2nm,0.2s,SNR=9.2						
ZHG	ZHG	6.83	95	P	Pn	02 19 05.0	+3.2
ZHG				S	Sn	02 20 19.6	0.0
ALMR	Almeirim	6.94	44	*e*S	Sn	02 20 14.1	-8.0
ALMR				AML	AML	02 20 20.2	
	comp=N,38nm,0.4s						
ALMR	Almeirim	6.94	44	*e*Pn	Pn	02 19 05.0	+1.9
ALMR				*e*Sn	Sn	02 20 14.9	-7.1
ALMR				A	A	02 20 19.2	
	comp=N,25nm,0.4s						
ALMR	Almeirim	6.94	44	P	Pn	02 19 05.0	+1.9
ALMR				S	Sn	02 20 14.9	-7.1
	comp=N,12nm,0.4s						
CTIG	El Hierro	7.04	203	P	Pn	02 19 03.9	-0.7
	comp=N,1.1nm,0.1s,SNR=7.9						
CTIG				S	Sn	02 20 17.4	-7.3
	comp=N,2.9nm,0.1s,SNR=7.9						
PMTG	Montargil	7.09	46	*e*Pn	Pn	02 19 05.6	+0.5
PMTG				*e*Sn	Sn	02 20 16.7	-9.0
PMTG				A	A	02 20 22.7	
	comp=N,5.8nm,0.2s						
PMTG	Montargil	7.09	46	P	Pn	02 19 05.6	+0.5
PTOM	Tomar	7.35	42	*e*Pn	Pn	02 19 10.0	+1.3
PTOM				*e*Sn	Sn	02 20 24.6	-7.5
PTOM				A	A	02 20 31.2	
	comp=N,9.3nm,0.2s						
PTOM	Tomar	7.35	42	P	Pn	02 19 10.0	+1.3
PTOM				S	Sn	02 20 24.6	-7.5
	comp=N,4.7nm,0.2s						
RSA	Sarsar	7.42	83	P	Pn	02 19 10.9	+1.1
RSA				S	Sn	02 20 34.0	+0.1
EMIN	Mina Concepcio	7.42	60	P	Pn	02 19 10.9	+1.2
	comp=N,3.1nm,0.2s,SNR=30						
EMIN				S	Sn	02 20 27.4	-6.6
	comp=N,3.9nm,0.4s,SNR=14						
OUZM	OUZ	7.58	114	P	Pn	02 19 16.1	+4.0
OUZM				S	Sn	02 20 40.6	+2.5
PCAS	Casmilo, Conde	7.61	39	*e*Pn	Pn	02 19 13.4	+1.1
PCAS				*e*Sn	Sn	02 20 28.8	-10
PCAS				A	A	02 20 35.8	
	comp=N,4.0nm,0.2s						
PCAS	Casmilo, Conde	7.61	39	P	Pn	02 19 13.4	+1.1
ESPR	Espera	7.71	68	P	Pn	02 19 14.6	+0.9
	comp=N,3.6nm,0.2s,SNR=9.2						
ESPR				S	Sn	02 20 33.4	-7.6
	comp=N,3.3nm,0.4s						
PMRV	Marv??o	7.82	47	*e*Pn	Pn	02 19 15.6	+0.5
PMRV				*e*Sn	Sn	02 20 33.4	-10
PMRV				A	A	02 20 40.7	
	comp=N,6.2nm,0.2s						
PMRV	Marv??o	7.82	47	P	Pn	02 19 15.6	+0.5
CHEFC	Chefchaouen	7.82	82	P	Pn	02 19 15.5	+0.2
CHEFC				S	Sn	02 20 45.2	+1.2
SICH	Sidi Chahed	7.85	89	P	Pn	02 19 14.8	-0.8
SICH				S	Sn	02 20 41.2	-3.3
PCBR	Castelo Branco	8.03	45	*e*Pn	Pn	02 19 18.6	+0.6
PCBR				*e*Sn	Sn	02 20 40.6	-8.3
PCBR				A	A	02 20 43.8	
	comp=N,2.1nm,0.1s						
PCBR	Castelo Branco	8.03	45	P	Pn	02 19 18.6	+0.6
PCBR				S	Sn	02 20 40.6	-8.3
	comp=N,1.1nm,0.1s						
IFR	Ifrane	8.07	93	⇑*i*P	Pn	02 19 21.3	+2.4
IFR				*e*S	Sn	02 20 42.4	-7.9
CZD	Col de Zad	8.23	96	P	Pn	02 19 20.0	-1.0
CZD				S	Sn	02 20 51.1	-3.2
LCRM	LCR	8.27	92	P	Pn	02 19 24.0	+2.4
LCRM				S	Sn	02 20 55.0	-0.2
MTE	Manteigas	8.37	41	*e*Pn	Pn	02 19 24.0	+1.2
MTE				*e*Sn	Sn	02 20 47.5	-10
MTE				A	A	02 20 51.2	
	comp=N,5.3nm,0.1s						
MTE	Manteigas	8.37	41	P	Pn	02 19 24.0	+1.2
PVIS	Viseu	8.41	39	*e*Pn	Pn	02 19 24.4	+1.1
PVIS				*e*Sn	Sn	02 20 47.1	-11
PVIS				A	A	02 20 55.0	
	comp=N,6.3nm,0.1s						
PVIS	Viseu	8.41	39	P	Pn	02 19 24.4	+1.1
ECAB	El Cabril	8.45	61	P	Pn	02 19 25.0	+1.1
	comp=N,1.3nm,0.1s,SNR=26						
ECAB				S	Sn	02 20 51.2	-8.1
	comp=N,3.5nm,0.8s						
EMIJ	Mijas	8.48	72	S	Sn	02 20 52.2	-7.8
	comp=N,0.7nm,0.2s,SNR=7.9						
HORN	Hornachuelos	8.48	63	P	Pn	02 19 25.4	+1.2
HORN				S	Sn	02 20 56.3	-3.7
MD31	MD31	8.50	97	P	Pn	02 19 27.9	+3.4
MD31				S	Sn	02 20 58.3	-2.3
MDT	Midelt	8.63	97	P	Pn	02 19 29.9	+3.4
MDT				S	Sn	02 21 00.9	-3.0
PVRL	Vila Real	8.91	37	*e*Pn	Pn	02 19 30.9	+0.7
PVRL				*e*Sn	Sn	02 20 58.4	-12

PVRL				A	A	02 21 06.3	
	comp=N,4.6nm,0.1s						
PVRL	Vila Real	8.91	37	P	Pn	02 19 30.9	+0.7
POLO	Lamas de Olo	8.95	36	*e*Sn	Sn	02 20 59.8	-12
POLO				A	A	02 21 09.6	
	comp=N,2.6nm,0.4s						
AKLM	AKL	9.03	86	P	Pn	02 19 35.0	+3.1
EADA	Adamuz	9.10	62	P	Pn	02 19 33.7	+1.0
	comp=N,0.7nm,0.1s,SNR=7.9						
EADA				S	Sn	02 21 07.0	-8.3
	comp=N,0.6nm,0.1s,SNR=7.9						
PCAB	Cabril	9.10	34	*e*Pn	Pn	02 19 33.4	+0.6
PCAB				*e*Sn	Sn	02 21 04.2	-11
PCAB				A	A	02 21 14.4	
	comp=N,4.7nm,0.3s						
PCAB	Cabril	9.10	34	P	Pn	02 19 33.4	+0.6
EGOR	Sierra Gorda,	9.12	69	P	Pn	02 19 34.3	+1.1
	comp=N,0.1nm,0.2s,SNR=7.9						
EGOR				S	Sn	02 21 07.8	-8.2
	comp=N,1.1nm,0.2s,SNR=7.9						
MVO	Moncorvo	9.19	40	*e*Pn	Pn	02 19 34.7	+0.7
MVO				A	A	02 21 14.6	
	comp=N,5.1nm,0.3s						
MVO	Moncorvo	9.19	40	P	Pn	02 19 34.5	+0.5
	comp=N,1.4nm,0.3s,SNR=7.9						
PGAV	Gavieira, Arco	9.20	32	*e*Sn	Sn	02 21 06.0	-12
PGAV				A	A	02 21 10.2	
	comp=N,5.0nm,0.5s						
ELOB	Lobios	9.21	33	P	Pn	02 19 34.7	+0.4
	comp=N,0.9nm,0.2s,SNR=6.1						
PAB	San Pablo	9.85	55	P	Pn	02 19 43.3	+0.2
	comp=N,0.5nm,0.2s,SNR=7.9						
PAB				S	Sn	02 21 23.9	-10
	comp=N,0.5nm,0.1s,SNR=7.9						
ECAL	Calabor	9.90	37	P	Pn	02 19 44.4	+0.6
	comp=N,1.2nm,0.2s,SNR=7.9						
ECAL				S	Sn	02 21 25.5	-9.5
	comp=N,1.3nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	9.96	30	P	Pn	02 19 43.8	-0.7
	comp=N,0.5nm,0.1s,SNR=7.9						
EQES	Quesada	10.10	67	P	Pn	02 19 47.1	+0.6
	comp=N,0.5nm,0.2s,SNR=7.9						
EQES				S	Sn	02 21 31.3	-8.8
	comp=N,0.4nm,0.1s,SNR=7.9						
JBK	JBK	10.11	86	P	Pn	02 19 45.6	-1.2
ESDC	Sonseca Array	10.17	55	P	Pn	02 19 48.4	+0.9
	SNR=7.9						
SESP	Santiago Espad	10.59	66	S	Sn	02 21 42.9	-9.2
	comp=N,3.4nm,1.1s,SNR=7.9						
TDRA	Tendrara	10.71	93	P	Pn	02 19 56.1	+1.0
EPON	Pontenova	10.78	31	S	Sn	02 21 47.5	-9.0
	comp=N,1.7nm,1.7s,SNR=7.9						
ETOB	Tobarra	11.50	64	P	Pn	02 20 06.8	+1.2
	comp=N,0.3nm,0.1s,SNR=7.9						
ETOB				S	Sn	02 22 04.2	-10
	comp=N,0.3nm,0.1s,SNR=7.9						
EARI	Arriondas	11.66	37	P	Pn	02 20 09.1	+1.2
	comp=N,0.2nm,0.2s,SNR=4.1						
EARI				S	Sn	02 22 08.5	-10
	comp=N,0.1nm,0.2s,SNR=7.9						
ETOR	Torete	12.00	54	S	Sn	02 22 16.7	-10
	comp=N,1.1nm,1.7s,SNR=7.9						

SJA 28 02:24:58.9±0.4**, 31°.69S×64°.83W, h91**^{km}±5^{km}**, ML2.6, MW3.6, Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCA	Tanti	0.41	30	*e*P	Pn	02 25 14.0	+0.7
TCA				*e*S	Sn	02 25 24.9	+1.0
TCA				IAML		02 25 28.1	
	comp=Z,175nm,0.1s						
ACAN	Cantantal	2.08	253	*e*P	Pn	02 25 33.5	+1.2
ACAN				*e*S	Sn	02 25 59.3	+1.6
CFA	Coronel Fontan	2.91	271	*e*P	Pn	02 25 44.6	+1.4

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*TIF **28** 03:06:18.0, 43°.17N×42°.26E, h11^{km}±4^{km}*

*NORS **28** 03:06:19.4±0.0, 43°.18N×42°.33E, h2^{km}, MPVA3.3*

ISC 28 03:06:18.3±1.6**, 43°.17N**±0°.04×**42°.24E**±0°.07**, h5**^{km}±11^{km}**, n11,** σ**0^{s}.71**/21**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEY	Neytrino	0.36	77	*e*Pg	Pg	03 06 25.5	+0.2
NEY				*e*Sg	Sg	03 06 29.8	-0.3
SHA1	Shidzhatmaz	0.64	28	*i* Pg	Pb	03 06 31.8	-0.4
SHA1				*e*Sg	Sb	03 06 40.6	-0.9
TKB	Tkibuli	0.99	146	P	Pg	03 06 37.0	-0.3
TKB				S	Sb	03 06 50.9	-0.4
NCK	Nalchik	1.04	71	*e*Pg	Pn	03 06 40.1	+0.6
NCK				*e*Sg	Sn	03 06 55.1	+0.6
ONI	Oni	1.06	123	P	Pb	03 06 39.2	0.0
ONI				S	Sb	03 06 53.0	-0.4
KBTC	Kuba-Taba	1.06	52	*e*Pg	Pb	03 06 38.9	-0.4
KBTC				*e*Sg	Sn	03 06 54.3	-0.8
LSNR	Lesken	1.16	84	*e*Pg	Pn	03 06 41.5	+0.3
LSNR				*e*Sg	Sn	03 06 56.6	-0.9
STDR	Stavd-Durt	1.34	81	*e*Pg	Pg	03 06 45.1	+1.0
STDR				*e*Sg	Sn	03 07 03.5	+1.5
BATM	Batumi	1.62	195	P	Pn	03 06 48.1	+0.6
BATM				S	Sg	03 07 10.7	+0.4
AKH	Akhalkalaki	1.99	152	P	Pb	03 06 54.7	-0.4
AKH				S	Sg	03 07 21.6	-0.7
TBLG	Delisi	2.34	127	P	Pb	03 07 00.6	-0.4

IDC 28 03:24:08.8±7.6**, 30°.49S×178°.75W, h0**^{km}**, mb3.6**/1**, mb1 4.0**/1**, mb1mx3.3**/22**, mbtmp3.6**/1**, Error ellipse: s-maj=359.4km s-min=61.4km az=161.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	43.45	273	P	P	03 32 13.3	-0.5
	1.0nm,1.0s,baz=109,slow=7.3,SNR=1.3						
FINES	FINESS Array B	145.00	339	PKPbc	PKPbc	03 43 46.0	-0.5
	0.9nm,0.4s,baz=61,slow=4.5,SNR=22						
NB2	NORSAR Subarra	148.73	351	PKP	PKPbc	03 43 56.7	-0.7
	comp=Z,0.2nm,0.4s,baz=15,slow=2.5						
NOA	NORSAR Array B	148.73	351	PKPbc	PKPbc	03 43 57.0	-0.4
	comp=Z,0.2nm,0.4s,baz=14,slow=4.1,SNR=3.9						

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*IDC **28** 03:32:21.3±5.8, 46°.15N×146°.95E, h0^{km}, mb3.7/5, mb1 3.7/6, mb1mx3.4/35, mbtmp3.6/6, ML3.0/1, Error ellipse: s-maj=127.0km s-min=36.3km az=131.0*

*JMA **28** 03:32:23.7±0.3, 44°.06N×147°.77E, h97^{km}, M3.4*

*SKHL **28** 03:32:24.3±0.5, 44°.04N×147°.95E, h54^{km}±1^{km}, mb4.1/5*

ISC 28 03:32:20.6±1.8**, 44°.1N**±0°.1×**148°.0E**±0°.1**, h108**^{km}±9^{km}**, n26,** σ**1^{s}.53**/39**, mb3.7**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.14	357	*i* P	Pn	03 32 44.0	+0.9
KUR				AMB	AMB	03 32 44.4	
	10.0nm,0.2s						
KUR				AMB	AMB	03 32 44.4	
	40nm,0.2s						
KUR				*i* S	Sn	03 32 58.4	-1.7
KUR				A	A	03 32 59.0	
	870nm,0.4s						
KUR				A	A	03 32 59.0	
	890nm,0.4s						
YUK	Yuzh-Kuril'sk	1.51	268	*i* P	Pn	03 32 48.0	+0.6
YUK				AMB	AMB	03 32 49.0	
	20nm,0.2s						
YUK				AMB	AMB	03 32 49.0	
	40nm,0.2s						
YUK				*i* S	Sn	03 33 06.0	-1.7
YUK				A	A	03 33 07.0	
	450nm,0.4s						
YUK				A	A	03 33 07.0	
	830nm,0.4s						
LAGR	Lagunnoye	1.56	269	*i* P	Pn	03 32 49.0	+1.0
LAGR				AMB	AMB	03 32 49.0	
	20nm,0.3s						
LAGR				AMB	AMB	03 32 49.0	
	10.0nm,0.3s						
LAGR				AMB	AMB	03 32 49.0	
	50nm,0.3s						
LAGR				*i* S	Sn	03 33 07.0	-1.8
LAGR				A	A	03 33 11.0	
	210nm,0.3s						
LAGR				A	A	03 33 11.0	
	460nm,0.3s						
GRPR	Tuman	1.58	267	*i* P	Pn	03 32 49.1	+0.9
GRPR				AMB	AMB	03 32 49.8	
	20nm,0.3s						
GRPR				AMB	AMB	03 32 49.8	
	10.0nm,0.3s						
GRPR				AMB	AMB	03 32 49.8	
	60nm,0.3s						
GRPR				*i* S	Sn	03 33 08.0	-1.2
GRPR				A	A	03 33 08.0	
	600nm,0.5s						
GRPR				A	A	03 33 08.0	
	760nm,0.5s						
NEM2	Nemuro 2	1.76	246	P	Pn	03 32 51.7	+1.2
NEM2				*e*S	Sn	03 33 12.6	-0.6
NMR	Nemuro--Hokkai	1.77	246	*i* P	Pn	03 32 51.9	+1.3
NMR				*i* S	Sn	03 33 12.9	-0.5
GLVR	Golovnino	1.79	259	*i* P	Pn	03 32 52.0	+1.1
GLVR				AMB	AMB	03 32 52.0	
	20nm,0.3s						
GLVR				AMB	AMB	03 32 52.0	
	10.0nm,0.3s						
GLVR				AMB	AMB	03 32 52.0	
	50nm,0.3s						
GLVR				*e*S	Sn	03 33 13.0	-1.0
GLVR				A	A	03 33 14.0	
	340nm,0.3s						
GLVR				A	A	03 33 14.0	
	450nm,0.3s						
JRA	Rausu	2.05	266	P	Pn	03 32 55.4	+1.3
JRA				*e*S	Sn	03 33 19.4	-0.3
JNSB	Nemuroshibetsu	2.15	262	P	Pn	03 32 57.1	+1.7
JNSB				*e*S	Sn	03 33 22.7	+0.6
JKHN	Kushirohamanak	2.27	244	P	Pn	03 32 58.5	+1.6
JNK	Nakash	2.40	259	P	Pn	03 33 00.0	+1.4
JNK				*e*S	Sn	03 33 27.3	-0.4
JAK	Akkeshi	2.61	246	P	Pn	03 33 02.7	+1.3
JAK				*e*S	Sn	03 33 31.6	-1.1
JTKR	Abashiri--Toko	2.92	269	P	Pn	03 33 06.5	+1.1
JAR	Ashorobuto	3.14	257	P	Pn	03 33 10.4	+2.1
JAR				*e*S	Sn	03 33 46.1	+0.9
JCH	Churui	3.66	248	P	Pn	03 33 16.7	+1.4
JCH				*e*S	Sn	03 33 56.0	-1.7
JKK2	Kamakawa 2	3.76	268	P	Pn	03 33 18.7	+2.0
ASAJ	Asahikawa	3.86	272	Pn	Pn	03 33 19.4	+1.4
	1.0nm,0.3s,baz=55,slow=17,SNR=11						
JNBK	Urakawa-nobuka	4.21	246	P	Pn	03 33 23.8	+1.1
JKB	Kayabe	5.54	249	*e*S	Sn	03 34 39.7	-3.2
JOT	Ohata	5.76	244	*e*S	Sn	03 34 44.0	-4.4
MKAR	Makanchi Array	44.94	298	P	P	03 40 24.9	+0.5
	0.8nm,0.5s,baz=81,slow=8.8,SNR=5.5						
KURBB	Kurchatov Arra	45.90	304	P	P	03 40 31.8	-0.2
	0.5nm,0.4s,baz=75,slow=8.7,SNR=3.5						
ARCES	ARCESS Array B	59.12	340	P	P	03 42 08.3	-0.8
	0.5nm,0.5s,baz=46,slow=8.7,SNR=5.2						
FINES	FINESS Array B	64.83	333	P	P	03 42 46.8	-0.6
	0.8nm,0.6s,baz=31,slow=8.9,SNR=7.3						
NB2	NORSAR Subarra	69.48	339	P	P	03 43 17.2	+0.3
	comp=Z,0.0nm,0.3s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.48	339	P	P	03 43 17.4	+0.5
	comp=Z,0.1nm,0.4s,baz=31,slow=6.7,SNR=6.4						

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*ISCJB **28** 03:34:14.3±0.5, 30°.35S±0°.05×179°.1E±0°.1, h550^{km}, mb4.1/9, Error ellipse: s-maj=12.8km s-min=6.2km az=175.4*

*IDC **28** 03:34:15.1±1.7, 30°.29S×178°.99E, h556^{km}±19^{km}, mb3.6/9, mb1 3.8/12, mb1mx3.5/28, mbtmp4.6/12, Error ellipse: s-maj=24.1km s-min=15.3km az=174.0*

ISC 28 03:34:14.2±0.6**, 30°.43S**±0°.08×**179°.06E**±0°.10**, h550**^{km}**, n110,** σ**2^{s}.14**/112**, mb4.3**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRZ	Great Barrier	6.54	206	P	P	03 36 04.4	+6.7
OUZ	Omahuta	6.63	222	P	P	03 36 02.8	+4.3
WCZ	Waipu Caves	6.77	214	P	P	03 36 04.4	+4.6
KUZ	Kuaotunu	6.89	203	P	P	03 36 05.3	+4.4
MXZ	Matakaoa Point	7.14	185	P	P	03 36 04.0	+0.7
MXZ				S	S	03 37 31.8	-1.1
PKGZ	Pakihiroa	7.49	186	P	P	03 36 07.5	+0.8
PKGZ				S	S	03 37 35.9	-3.2
TGRZ	Tauranga	7.64	197	P	P	03 36 12.1	+3.9
OPRZ	Ohinepanea	7.68	195	P	P	03 36 11.7	+3.1
TWGZ	Tauwhareparae	7.78	186	P	P	03 36 10.8	+1.2
MARZ	Manawahe	7.79	194	P	P	03 36 13.3	+3.6
EDRZ	Edgecumbe	7.90	193	P	P	03 36 15.5	+4.7
OMRZ	Omania	7.97	195	P	P	03 36 15.0	+3.5
URZ	Urewera	7.98	191	P	P	03 36 12.4	+0.9
	22nm,0.3s,baz=4.0,slow=1.4,SNR=126						
URZ				S	S	03 37 45.5	-2.3
	12nm,0.3s,baz=250,slow=23,SNR=17						
URZ	Urewera	7.98	191	P	P	03 36 11.9	+0.4
MWZ	Matawai	7.99	189	P	P	03 36 13.0	+1.4
TKGZ	Te Karaka	8.05	187	P	P	03 36 13.3	+1.1
CNGZ	Carnagh Statio	8.07	185	P	P	03 36 14.7	+2.3
TARZ	Mount Tarawera	8.07	194	P	P	03 36 15.6	+3.1
RAGZ	Rawiri	8.16	189	P	P	03 36 14.0	+0.6
RAGZ				S	S	03 37 50.1	-1.3
RRRZ	Republican Roa	8.17	194	P	P	03 36 16.7	+3.2
HSRZ	Hossack Road	8.20	196	P	P	03 36 17.1	+3.3
MUGZ	Murupara	8.25	193	P	P	03 36 15.1	+0.9
HRRZ	Handcock Road	8.27	195	P	P	03 36 17.4	+3.0
GRRZ	Galatos Road	8.27	196	P	P	03 36 17.9	+3.5
RIGZ	Rimuhau	8.33	187	P	P	03 36 15.7	+0.7
RIGZ				S	S	03 37 52.5	-1.8
RTZ	Ruatahuna	8.35	191	P	P	03 36 15.7	+0.4
PRRZ	Plateau Road	8.35	195	P	P	03 36 17.5	+2.3
TLZ	Tolley Road	8.40	199	P	P	03 36 20.3	+4.5
ALRZ	Allen Road	8.42	195	P	P	03 36 17.8	+1.8
SNGZ	Shannon Statio	8.45	189	P	P	03 36 18.6	+2.4
PRGZ	Paritu Road	8.53	186	P	P	03 36 20.5	+3.5
MTHZ	Maungataniwha	8.60	192	P	P	03 36 19.3	+1.5
RAHZ	Arahi	8.62	190	P	P	03 36 19.4	+1.4
KNZ	Kokohu	8.65	187	P	P	03 36 19.3	+1.2
MRHZ	Matea Rd	8.66	194	P	P	03 36 19.4	+1.0
WATZ	Wairara	8.70	197	P	P	03 36 21.9	+3.1
WHHZ	Waihua	8.76	189	P	P	03 36 21.7	+2.4
RATZ	Rangitukua	8.84	197	P	P	03 36 22.4	+2.2
RITZ	Rihia Road	8.93	196	P	P	03 36 23.9	+2.9
BKZ	Black Stump Fm	8.97	193	P	P	03 36 21.4	-0.1
ARHZ	Aropaoanui	8.98	190	P	P	03 36 23.7	+2.2
KRVZ	Karewarewa	9.09	197	P	P	03 36 24.3	+1.5
TWVZ	Taurewa	9.12	198	P	P	03 36 24.9	+1.8
WTVZ	West Tongariro	9.12	197	P	P	03 36 24.3	+1.1
NGZ	Ngauruhoe	9.18	197	P	P	03 36 25.8	+2.1
MCHZ	McNeill Hill	9.20	192	P	P	03 36 25.2	+1.4
TUVZ	Tukino	9.25	197	P	P	03 36 25.9	+1.5
FWVZ	Far West T-bar	9.27	197	P	P	03 36 26.4	+1.7
WHVZ	Whangaehu Hut	9.28	197	P	P	03 36 26.1	+1.3
CKHZ	Cape Kidnapper	9.35	189	P	P	03 36 27.9	+2.6
PKVZ	Pokaka	9.35	198	P	P	03 36 27.3	+2.0
MOVZ	Moawhango	9.36	196	P	P	03 36 27.1	+1.6
BHHZ	Black Hill Sta	9.37	194	P	P	03 36 25.6	+0.1
VRZ	Vera Road	9.37	201	P	P	03 36 31.0	+5.5
MTVZ	Mangateitei	9.41	197	P	P	03 36 29.4	+3.4
KRHZ	Kereru	9.45	193	P	P	03 36 27.1	+0.8
KAHZ	Kahuranaki	9.51	190	P	P	03 36 28.8	+1.8
PXZ	Pawanui	9.75	190	P	P	03 36 30.7	+1.4
PNHZ	Pukenui	9.75	193	P	P	03 36 30.3	+0.9
KHEZ	Kahui Hut	9.77	204	P	P	03 36 35.5	+5.9
NBEZ	Newall Road No	9.79	204	P	P	03 36 36.4	+6.6
WAZ	Wanganui	9.88	199	P	P	03 36 34.0	+3.2
TSZ	Takapari Road	9.94	194	P	P	03 36 32.7	+1.4
PRHZ	Porangahau	10.01	191	P	P	03 36 34.5	+2.5
DVHZ	Dannevirke	10.13	193	P	P	03 36 34.3	+1.1
PRWZ	Pori Road	10.41	193	P	P	03 36 39.9	+3.7
BFZ	Birch Farm	10.48	192	P	P	03 36 37.5	+0.6
MRZ	Mangatainoka R	10.60	195	P	P	03 36 38.1	+0.1
HOWZ	Holdsworth Sta	10.84	194	P	P	03 36 41.7	+1.2
OGWZ	Otaki Gorge	10.84	196	P	P	03 36 41.0	+0.5
TMWZ	Te Maipa	10.96	193	P	P	03 36 43.8	+2.0
MTW	Mount Morrison	11.09	194	P	P	03 36 44.3	+1.2
CAW	Cannon Point	11.14	196	P	P	03 36 45.5	+1.9
DUWZ	D'Urville Isla	11.16	201	P	P	03 36 45.2	+1.3
TRWZ	Traveller	11.28	193	P	P	03 36 46.4	+1.3
PAWZ	Paruwai Farm	11.32	194	P	P	03 36 46.3	+0.7
MSWZ	Moikau Station	11.39	195	P	P	03 36 46.8	+0.6
TCW	Tory Channel	11.44	199	P	P	03 36 47.9	+1.3
BHW	Baring Head	11.47	196	P	P	03 36 48.8	+1.8
PLWZ	Palliser	11.54	194	P	P	03 36 48.9	+1.1
QRZ	Quartz Range	11.65	205	P	P	03 36 52.2	+3.2
NNZ	Nelson	11.71	202	P	P	03 36 50.3	+0.8
TUWZ	Tuamarina	11.73	199	P	P	03 36 50.9	+1.2
BSWZ	Blackbirch Sta	12.02	199	P	P	03 36 56.9	+4.3
KHZ	Kahutara	12.76	199	P	P	03 37 02.3	+1.9
LTZ	Lake Taylor	13.47	202	P	P	03 37 15.6	+7.8
DZM	Mont Dzumac	14.04	303	P	P	03 37 13.2	-0.9
	1.5nm,0.3s,baz=22,slow=22,SNR=13						
MQZ	McQueen's Vall	14.20	199	P	P	03 37 18.7	+3.5
RPZ	Rata Peaks	14.71	203	P	P	03 37 21.3	+0.8
	1.2nm,0.3s,baz=316,slow=1.4,SNR=6.5						
PPT	Papeete	31.27	73	P	P	03 39 51.3	+1.6
	37nm,0.8s,baz=255,slow=20,SNR=3.5						
CTA	Charters Tower	31.31	281	P	P	03 39 50.5	+0.4
	9.4nm,0.5s,baz=100,slow=10,SNR=18						
STKA	Stephens Creek	32.00	258	P	P	03 39 57.2	+1.5
	5.4nm,0.5s,baz=95,slow=12,SNR=13						
ASAR	Alice Springs	40.57	268	P	P	03 41 06.2	-0.3
	5.5nm,0.6s,baz=106,slow=7.1,SNR=74						
ASAR				ScP	ScP	03 45 52.8	+0.1
	2.0nm,0.9s,baz=102,slow=5.1,SNR=8.4						
WRA	Warramunga Arr	41.56	274	P	P	03 41 14.0	-0.5
	13nm,0.6s,baz=101,slow=8.2,SNR=128						
WRA				S	S	03 46 47.4	-3.7
	1.0nm,0.8s,baz=99,slow=20,SNR=3.6						
MJAR	Matsushiro Arr	76.86	327	P	P	03 45 07.7	-2.1
	0.7nm,0.5s,baz=134,slow=3.5,SNR=5.4						
SNAA	Sanae	78.17	179	PKPdf	P	03 45 18.1	+1.5
VNA3	Neumayer Olymp	78.42	177	PKPdf	P	03 45 19.5	+1.7
VNA1	Neumayer--Stat	79.07	178	PKPdf	P	03 45 20.7	-0.5
KSRS	Korea Array	82.75	321	P	P	03 45 40.8	+0.2
	1.2nm,0.6s,baz=132,slow=5.0,SNR=5.7						
USRK	Ussuriysk Ar.	85.81	328	P	P	03 45 54.8	-0.7
	2.0nm,1.0s,baz=112,slow=3.1,SNR=4.2						
NVAR	Mina Array Bea	90.00	44	P	P	03 46 16.6	+1.0
	0.9nm,0.7s,baz=218,slow=8.3,SNR=11						
KURBB	Kurchatov Arra	119.28	314	PKP	PKPdf	03 51 59.9	-0.8
	0.3nm,0.4s,baz=130,slow=2.3,SNR=4.3						
BVAR	Borovoye Array	124.66	316	PKP	PKPdf	03 52 10.7	-0.3
	0.4nm,0.5s,baz=190,slow=4.4,SNR=3.9						
FINES	FINESS Array B	144.26	338	PKP	PKPbc	03 52 46.3	-0.5
	7.8nm,0.5s,baz=54,slow=3.9,SNR=111						
NB2	NORSAR Subarra	148.34	349	PKP	PKPbc	03 52 57.8	-0.4
	comp=Z,0.4nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.34	349	PKPbc	PKPbc	03 52 57.7	-0.5
	comp=Z,0.2nm,0.5s,baz=18,slow=4.1,SNR=4.4						
AKASG	Malin Array Be	149.75	321	PKPbc	PKPbc	03 53 00.8	-1.0
	comp=Z,0.4nm,0.4s,baz=56,slow=3.3,SNR=4.3						
BRTR	Keskin Array B	150.37	298	PKPbc	PKPbc	03 53 03.6	-0.2
	comp=Z,0.5nm,0.5s,baz=129,slow=4.4,SNR=5.1						
BRTR				PKPab	PKPab	03 53 11.4	-1.5
	comp=Z,1.0nm,0.7s,baz=125,slow=3.6,SNR=6.4						
GERES	GERESS Array B	158.50	333	PKPab	PKPab	03 53 46.2	-1.0
	comp=Z,0.3nm,0.7s,baz=57,slow=3.6,SNR=4.3						
TORD	Torodi Ar. Bea	162.63	189	PKPab	PKPab	03 54 06.0	0.0
	comp=Z,0.6nm,0.8s,baz=171,slow=5.1,SNR=5.0						

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*NORS **28** 03:42:11.8±0.0, 43°.25N×42°.44E, h8^{km}, MPVA3.6*

ISC 28 03:42:10.0±2.3**, 43°.17N**±0°.07×**42°.2E**±0°.1**, h10**^{km}**, n6,** σ**0^{s}.79**/10**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEY	Neytrino	0.40	79	*e*Pg	Pg	03 42 17.4	-0.5
NEY				*e*Sg	Sg	03 42 22.0	-1.2
SHA1	Shidzhatmaz	0.66	31	*i* Pg	Pb	03 42 23.6	-0.1
SHA1				*e*Sg	Sb	03 42 32.4	-0.6
TKB	Tkibuli	1.01	144	P	Pg	03 42 29.0	-0.5
ONI	Oni	1.10	122	P	Pn	03 42 31.6	+0.1
ZEI	Tsey	1.31	106	*e*Pg	Pn	03 42 35.8	+1.2
ZEI				*e*Sg	Sn	03 42 52.7	+0.4
STDR	Stavd-Durt	1.38	81	*e*Pg	Pg	03 42 37.1	+0.6
STDR				*e*Sg	Sn	03 42 54.2	+0.5

NORS 28 03:42:30.3±0.0**, 43°.22N×42°.42E, h16**^{km}**, MPVA3.5, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEY	Neytrino	0.23	83	*e*Pg	Pb	03 42 36.4	+0.2
NEY				*e*Sg	Sb	03 42 41.0	+0.9
SHA1	Shidzhatmaz	0.55	19	*e*Pg	Pb	03 42 42.6	+0.9
SHA1				*e*Sg	Sn	03 42 51.4	-1.3
TKB	Tkibuli	0.97	154	P	Pb	03 42 45.2	-3.5
TKB				S	Sb	03 43 01.4	+0.1
ONI	Oni	0.99	129	P	Pb	03 42 45.9	-3.2
ONI				S	Sn	03 43 03.0	-0.3
LSNR	Lesken	1.03	86	*e*Pg	Pg	03 42 51.5	+1.2
LSNR				*e*Sg	Sn	03 43 06.8	+2.4
ZEI	Tsey	1.17	111	*e*Pg	Pg	03 42 53.6	+0.6
ZEI				*e*Sg	Sg	03 43 10.6	+2.3

WEL 28 03:44:10.7±0.3**, 44°S**±3°×**17°1E**±°**, h5**^{km}**, M3.4**/18**, ML3.6**/15**, MLv3.4**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=147.1, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHCZ	Mount Hutt	0.13	99	P	Pg	03 44 13.8	+0.4
MHCZ				S	Sg	03 44 16.0	+0.9
RPZ	Rata Peaks	0.32	230	P	Pg	03 44 17.3	+0.4
RPZ				S	Sg	03 44 22.0	+0.9
OXZ	Oxford	0.51	69	P	Pg	03 44 21.1	+0.6
OXZ				S	Sg	03 44 28.3	+1.3
EYCZ	Eyrewell	0.71	83	P	Pb	03 44 25.2	-0.4
INZ	Inchbonnie	0.79	3	P	Pg	03 44 26.2	+0.4
INZ				S	Sg	03 44 36.4	+0.4
GCSZ	Gaunt Creek Bo	0.80	284	P	Pg	03 44 26.3	+0.3
CRLZ	Canterbury Las	0.90	94	P	Pb	03 44 28.4	-0.3
MQZ	McQueen's Vall	0.94	102	P	Pg	03 44 28.7	0.0
LTZ	Lake Taylor	0.97	42	P	Pb	03 44 30.1	0.0
AMCZ	Amberley	0.98	70	P	Pg	03 44 29.7	+0.3
FOZ	Fox Glacier	1.15	268	P	Pb	03 44 32.9	-0.1
OKCZ	Okains Bay	1.23	100	P	Pg	03 44 33.3	-1.0
LBZ	Lake Benmore	1.23	225	P	Pg	03 44 33.9	-0.5
GVZ	Greta Valley S	1.32	66	P	Pn	03 44 34.3	-1.5
ODZ	Otahua Downs	1.62	199	P	Pn	03 44 38.5	-1.5
DSZ	Denniston Nort	1.79	10	P	Pn	03 44 42.2	-0.1
KHZ	Kahutara	1.92	56	P	Pn	03 44 42.8	-1.2
JCZ	Jackson Bay	1.97	253	P	Pn	03 44 45.0	+0.2
THZ	Tophouse	2.08	33	P	Pn	03 44 46.0	-0.3
WKZ	Wanaka	2.15	232	P	Pn	03 44 47.7	+0.4
EAZ	Earnscleugh	2.28	220	P	Pn	03 44 48.3	-0.6
HHSZ	Highcliff Hill	2.44	193	P	Pn	03 44 49.8	-1.4
BSWZ	Blackbirch Sta	2.57	46	P	Pn	03 44 52.6	-0.4
NNZ	Nelson	2.73	33	P	Pn	03 44 55.1	0.0
TUZ	Tuapeka	2.75	207	P	Pn	03 44 54.2	-1.1
TUWZ	Tuamarina	2.81	43	P	Pn	03 44 55.6	-0.7
QRZ	Quartz Range	2.81	18	P	Pn	03 44 56.0	-0.4
MLZ	Mavora Lakes	2.99	231	P	Pn	03 44 58.0	-0.7
TCW	Tory Channel	3.14	44	P	Pn	03 45 00.0	-0.8
DUWZ	D'Urville Isla	3.30	36	P	Pn	03 45 03.3	+0.3
SYZ	Scrubby Hill	3.42	207	P	Pn	03 45 03.5	-1.2
PLWZ	Palliser	3.45	57	P	Pn	03 45 03.1	-2.0
CAW	Cannon Point	3.63	50	P	Pn	03 45 04.9	-2.7
OGWZ	Otaki Gorge	3.89	47	P	Pn	03 45 08.9	-2.3
MRZ	Mangatainoka R	4.22	49	P	Pn	03 45 13.2	-2.5
BFZ	Birch Farm	4.59	54	P	Pn	03 45 18.9	-1.9
NBEZ	Newall Road No	4.63	25	P	Pn	03 45 21.6	+0.3
KHEZ	Kahui Hut	4.65	26	P	Pn	03 45 22.2	+0.5
PREZ	Palmer Road	4.66	27	P	Pn	03 45 22.1	+0.4
PKE	Pukeiti	4.74	25	P	Pn	03 45 23.0	+0.3
VRZ	Vera Road	5.06	31	P	Pn	03 45 28.2	+0.9

UCR 28 03:51:54.8±1.2**, 7°.56N×82°.38W, h1**^{km}±14^{km}**, MW3.6, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	1.27	346	*e*P	Pg	03 52 17.9	-1.3
BRU2				*e*S	Sg	03 52 33.6	-2.0
PTJ1	Puerto Jimnez	1.33	317	*e*P	Pg	03 52 19.4	-1.0
PTJ1				*e*S	Sg	03 52 37.1	-0.6
EDPN	Palmar Norte	1.75	323	*e*P	Pn	03 52 25.3	-1.1
EDBA	Buenos Aires	1.82	331	*e*P	Pn	03 52 26.8	-0.6
DRK0	Durika	1.90	333	*e*P	Pn	03 52 27.4	-1.1
EDLM	Las Mercedes	2.09	325	*e*P	Pn	03 52 30.3	-0.7
AZU	Azuero	2.10	83	*e*P	Pn	03 52 31.3	+0.1
EDDO	Dominical	2.23	319	*e*P	Pn	03 52 31.9	-1.0

LCR2	**La Lucha 2**	2.70	324	eP	Pn	03 52 39.0	-0.6
CVTR	**Volcan Turrial**	2.80	331	eP	Pn	03 52 41.9	+0.7
ZANG	**Zanguenga, Cho**	2.85	61	eP	Pb	03 52 44.7	-1.9
BCIP	**Isla Barro Col**	2.98	57	eP	Pn	03 52 43.4	+0.1
ARE1	**Arenal 1**	3.69	322	eP	Pn	03 52 53.8	+0.7
CUI	**Cuipilapa**	4.13	319	eP	Pn	03 52 59.5	+0.4

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*ISCJB **28** 04:06:33.6±0.7, 24°.83N±0°.04×121°.88E±0°.03, h96^{km}±4^{km}, Error ellipse: s-maj=6.4km s-min=4.6km az=148.3*
*JMA **28** 04:06:33.0±0.1, 24°.80N×121°.84E, h93^{km}±1^{km}, M1.8*
*TAP **28** 04:06:33.7, 24°.83N×121°.85E, h96^{km}, ML2.5, C*
ISC 28 04:06:33.9±1.8, **24°.83N**±0°.05×**121°.86E**±0°.04, **h95**^{km}±9^{km}, **n38,** σ**0^{s}.36**/70, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	**Toucheng** baz=327	0.04	303	eP	**Pn**	**04 06 47.2**	**+0.1**
NTC	baz=327			eS	**Sn**	**04 06 56.9**	**-0.1**
TIPB	**Shuangxi** baz=352	0.14	346	P	**Pn**	**04 06 47.4**	**0.0**
TIPB	baz=352			eS	**Sn**	**04 06 57.2**	**-0.2**
TWE	**Neicheng** baz=232	0.21	238	eP	**Pn**	**04 06 47.9**	**+0.4**
TWE	baz=232			eS	**Sn**	**04 06 57.6**	**0.0**
SLBB	**Yuanshan** baz=247	0.22	249	P	**Pn**	**04 06 47.9**	**+0.3**
SLBB	baz=247			eS	**Sn**	**04 06 58.5**	**+0.7**
TWC	**Suao** baz=176	0.22	184	eP	**Pn**	**04 06 47.7**	**+0.1**
TWC	baz=176			eS	**Sn**	**04 06 57.8**	**+0.1**
NWF	**Wu-fen Shan** baz=346	0.25	342	eP	**Pn**	**04 06 47.7**	**0.0**
NWF	baz=346			eS	**Sn**	**04 06 57.8**	**-0.3**
WFSB	**Wu-fen Shan** baz=346	0.25	342	eP	**Pn**	**04 06 47.6**	**0.0**
WFSB	baz=346			eS	**Sn**	**04 06 57.8**	**-0.1**
NHDH	**Xindian Distri** baz=294	0.33	293	eP	**Pn**	**04 06 48.1**	**+0.1**
NHDH	baz=294			eS	**Sn**	**04 06 58.8**	**+0.1**
EOS1	**EOS1** baz=137	0.37	140	P	**Pn**	**04 06 48.4**	**+0.2**
EOS1	baz=137			S	**Sn**	**04 06 59.2**	**+0.4**
NDT	**Datong Townshi** baz=232	0.39	234	P	**Pn**	**04 06 48.5**	**+0.1**
NDT	baz=232			eS	**Sn**	**04 06 59.3**	**0.0**
YM01	**YM01** baz=321	0.41	319	eP	**Pn**	**04 06 48.8**	**+0.2**
YM01	baz=321			eS	**Sn**	**04 07 00.1**	**+0.6**
NANB	**Nanao** baz=192	0.42	194	P	**Pn**	**04 06 48.7**	**+0.1**
NANB	baz=192			S	**Sn**	**04 06 59.7**	**+0.2**
ENA	**Nanau** baz=192	0.42	196	P	**Pn**	**04 06 48.7**	**+0.1**
ENA	baz=192			eS	**Sn**	**04 06 60.0**	**+0.5**
YM05	**YM05** baz=322	0.43	321	eP	**Pn**	**04 06 48.7**	**0.0**
YM05	baz=322			eS	**Sn**	**04 06 59.6**	**-0.2**
YM04	**YM04** baz=318	0.44	317	eP	**Pn**	**04 06 48.8**	**+0.1**
YM04	baz=318			eS	**Sn**	**04 07 00.2**	**+0.4**
YHNB	**Yeheng** baz=249	0.47	250	eP	**Pn**	**04 06 48.5**	**-0.5**
YHNB	baz=249			eS	**Sn**	**04 06 59.2**	**-1.1**
TWS1	**Kuangyinshan** baz=304	0.48	303	eP	**Pn**	**04 06 49.2**	**+0.2**
NSK	**Sanguang** baz=249	0.49	251	eP	**Pn**	**04 06 48.6**	**-0.5**
NSK	baz=249			eS	**Sn**	**04 06 59.6**	**-0.9**
NNS	**Nan Shan** baz=226	0.59	229	eP	**Pn**	**04 06 50.0**	**-0.1**
NNS	baz=226			eS	**Sn**	**04 07 02.0**	**-0.1**
NNSB	**Datong** baz=226	0.60	227	eP	**Pn**	**04 06 50.0**	**-0.1**
NNSB	baz=226			eS	**Sn**	**04 07 01.9**	**-0.2**
NACB	**Ninganchiao** baz=199	0.70	201	eP	**Pn**	**04 06 49.7**	**-1.2**
NACB	baz=199			eS	**Sn**	**04 07 03.6**	**+0.1**
ETLH	**Xiulin Townshi** baz=207	0.71	209	eP	**Pn**	**04 06 50.6**	**-0.5**
ETLH	baz=207			eS	**Sn**	**04 07 03.6**	**-0.3**
LIOB	**Emei** baz=256	0.79	257	P	**Pn**	**04 06 51.5**	**-0.2**
LIOB	baz=256			eS	**Sn**	**04 07 04.9**	**-0.3**
NSTT	**Nanjuang** baz=255	0.81	256	eP	**Pn**	**04 06 51.8**	**-0.1**
NSTT	baz=255			eS	**Sn**	**04 07 04.8**	**-0.6**
TWT	**Tachien** baz=226	0.85	227	eP	**Pn**	**04 06 53.0**	**+0.4**
TWT	baz=226			eS	**Sn**	**04 07 06.9**	**+0.4**
TDCB	**Techi** baz=227	0.86	228	eP	**Pn**	**04 06 52.8**	**+0.2**
TDCB	baz=227			eS	**Sn**	**04 07 06.7**	**+0.1**
WHF	**Hehuan Shan** baz=217	0.88	219	eP	**Pn**	**04 06 53.1**	**+0.1**
WHF	baz=217			eS	**Sn**	**04 07 07.6**	**+0.2**
CHGB	**Renai** baz=218	0.99	219	eP	**Pn**	**04 06 54.4**	**+0.3**
CHGB	baz=218			eS	**Sn**	**04 07 09.3**	**0.0**
JYNG	**Yonagunijimaku**	1.05	111	P	**Pn**	**04 06 54.0**	**-0.5**
JYNG				eS	**Sn**	**04 07 09.8**	**-0.3**
VWDT	**VWDT** baz=210	1.26	212	eP	**Pn**	**04 06 57.3**	**+0.4**
VWDT	baz=210			eS	**Sn**	**04 07 14.5**	**+0.2**
TYC	**Yuchr** baz=223	1.30	225	eP	**Pn**	**04 06 57.6**	**+0.1**
SSLB	**Suanglung** baz=217	1.33	219	eP	**Pn**	**04 06 57.6**	**-0.2**
SSLB	baz=217			eS	**Sn**	**04 07 16.4**	**+0.4**
HGSD	**Ruisui** baz=196	1.40	197	eP	**Pn**	**04 06 58.8**	**+0.2**
HGSD	baz=196			eS	**Sn**	**04 07 17.5**	**+0.2**
IRIF	**Iriomote-Funau**	1.77	106	P	**Pn**	**04 07 02.9**	**-0.4**
IRIF				eS	**Sn**	**04 07 25.5**	**-0.1**
JKRS	**Kuro-shima**	2.04	106	P	**Pn**	**04 07 06.9**	**+0.1**
JIJ	**Ishigaki jima**	2.13	102	P	**Pn**	**04 07 07.6**	**-0.3**
JISG	**Ishigakijimahi**	2.24	96	P	**Pn**	**04 07 09.3**	**0.0**
JTJ	**Tarama**	2.59	94	P	**Pn**	**04 07 14.5**	**+0.5**

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*NIED **28** 04:28:00, 38°.30N×144°.60E, h5^{km}, Mw3.5 Best double couple: $M_0$1.98000×10^{14} NP1:ϕ_s28.00000°, δ14.00000°, λ-76.00000°. NP2:ϕ_s193.00000°, δ76.00000°, λ-94.00000°.*
JMA 28 04:28:01.1±0.2, **38°.29N**×**144°.58E**, **h39**^{km}, **M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.41	290	P	Pn	04 28 39.6	+1.6
OFUJ				S	Sn	04 29 08.3	+2.0
JIKH	**Ishinomakikobu**	2.45	271	P	Pn	04 28 39.9	+1.4
JIKH				S	Sn	04 29 08.2	+1.0
JKMT	**Kesennumamotoy**	2.49	283	P	Pn	04 28 40.6	+1.5
MIYJ	**Miyakonagasawa**	2.51	302	P	Pn	04 28 40.7	+1.4
MIYJ				S	Sn	04 29 10.6	+2.0
JIO	**Ouri**	2.54	275	P	Pn	04 28 41.4	+1.6
JIO				S	Sn	04 29 11.3	+1.8
JMK	**Ichinoseki**	2.71	285	P	Pn	04 28 44.0	+1.9
JOM	**Ohasama**	2.83	296	P	Pn	04 28 45.6	+1.9
JOM				S	Sn	04 29 19.3	+2.8
JYK	**Kaneyama**	3.37	282	P	Pn	04 28 53.5	+2.4
JYK				eS	Sn	04 29 32.8	+3.0
JFT	**Otama**	3.44	258	P	Pn	04 28 54.7	+2.5
JFT				S	Sn	04 29 34.6	+2.8
JOT	**Ohata**	4.11	320	eS	Sn	04 29 47.8	-0.4
JCH	**Churui**	4.42	348	P	Pn	04 29 05.9	+0.3
JCH				S	Sn	04 29 54.1	-1.6
JRY	**Ryogami san**	5.07	245	P	Pn	04 29 16.3	+1.7
JRY				eS	Sn	04 30 11.8	-0.1
NEM2	**Nemuro 2**	5.15	9	P	Pn	04 29 13.4	-2.1
NEM2				eS	Sn	04 30 08.2	-5.4
JTKR	**Abashiri--Toko**	5.70	355	eS	Sn	04 30 24.3	-2.9

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*NEIC **28** 04:31:00.7±0.0, 15°.80N×93°.46W, h115^{km}, MD4.0(MEX), After MEX.*
MEX 28 04:31:00.7±0.8, **15°.80N**×**93°.46W**, **h115**^{km}±6^{km}, **MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.25	111	ePn	Pn	04 31 15.3	-1.5
PCIG				eSn	Sn	04 31 26.9	-2.0
PCIG		0.25	111	eP	Pn	04 31 15.3	-1.5
PCIG				i S	Sn	04 31 26.9	-2.0
TGIG		1.03	19	ePn	Pn	04 31 20.9	-1.7
TGIG				eSn	Sn	04 31 36.9	-2.4
TGIG		1.03	19	eP	Pn	04 31 20.9	-1.7
TGIG				i S	Sn	04 31 36.9	-2.4
CCIG	**Comitan**	1.36	69	ePn	Pn	04 31 25.1	-1.3
CCIG				ePn	Pn	04 31 25.1	-1.3
CCIG				eSn	Sn	04 31 44.1	-1.8
CCIG	**Comitan**	1.36	69	eP	Pn	04 31 25.1	-1.3
CCIG				i S	Sn	04 31 44.1	-1.8
THIG		1.46	127	ePn	Pn	04 31 26.5	-0.8
THIG				eSn	Sn	04 31 46.1	-1.3
THIG		1.46	127	eP	Pn	04 31 26.5	-0.8
THIG				i S	Sn	04 31 46.1	-1.3
CMIG	**Matias Romero**	1.88	314	ePn	Pn	04 31 31.8	-0.6
CMIG				eSn	Sn	04 31 55.7	-0.8
CMIG	**Matias Romero**	1.88	314	eP	Pn	04 31 31.8	-0.6
CMIG				eS	Sn	04 31 55.7	-0.8
HUIG	**Huatulco**	2.55	270	ePn	Pn	04 31 39.1	-1.8
HUIG				eSn	Sn	04 32 09.6	-2.2
HUIG	**Huatulco**	2.55	270	eP	Pn	04 31 39.1	-1.8
HUIG				eS	Sn	04 32 09.6	-2.2
TLIG	**Tlapa**	5.20	290	ePn	Pn	04 32 17.9	+1.5
TEIG	**Tepich**	6.62	47	ePn	Pn	04 32 32.5	-2.9

MAN 28 04:48:58.2, 7°.51N×127°.41E, h33^{km}, mb4.2, ML3.0, MS2.6, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	1.23	303	⇓iP	Pn	04 49 16.9	-2.2
BIPH				i S	Sn	04 49 28.2	-6.5

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*ISCJB **28** 05:03:36.2±1.3, 15°.89N±0°.05×94°.91W±0°.03, h19^{km}±11^{km}, Error ellipse: s-maj=9.0km s-min=5.2km az=6.6*
*NEIC **28** 05:03:37.8±2.3, 15°.86N×94°.91W, h32^{km}±8^{km}, mb4.1/4, MD4.1(MEX), Error ellipse: s-maj=7.0km s-min=4.0km az=179.0*
*MEX **28** 05:03:39.7±0.5, 15°.86N×94°.91W, h15^{km}±5^{km}, MD4.1*
ISC 28 05:03:34.7±1.6, **15°.86N**±0°.05×**94°.88W**±0°.03, **h8**^{km}±12^{km}, **n23,** σ**1^{s}.39**/35, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	1.18	266	ePn	**Pg**	**05 03 57.9**	**+0.4**
HUIG				eSn	**Sn**	**05 04 12.1**	**-1.8**
HUIG	**Huatulco**	1.18	266	i P	**Pg**	**05 03 57.9**	**+0.4**
HUIG				eS	**Sn**	**05 04 12.1**	**-1.8**
CMIG	**Matias Romero**	1.22	0	ePn	**Pg**	**05 03 58.6**	**+0.4**
CMIG				eSn	**Sb**	**05 04 13.5**	**-0.6**
CMIG	**Matias Romero**	1.22	0	eP	**Pg**	**05 03 58.6**	**+0.4**
CMIG				i S	**Sb**	**05 04 13.4**	**-0.6**
PCIG		1.61	95	ePn	**Pb**	**05 04 04.5**	**-0.3**
PCIG				eSn	**Sn**	**05 04 23.6**	**-0.8**
PCIG		1.61	95	eP	**Pb**	**05 04 04.5**	**-0.3**
PCIG				eS	**Sn**	**05 04 23.6**	**-0.8**
TGIG		1.92	61	ePn	**Pn**	**05 04 08.8**	**+1.0**
TGIG		1.92	61	eP	**Pn**	**05 04 08.8**	**+1.0**
VHO	**Vista Hermosa**	2.14	304	ePn	**Pb**	**05 04 12.6**	**-1.3**
VHO				eSn	**Sn**	**05 04 36.6**	**-1.3**
VHO	**Vista Hermosa**	2.14	304	eP	**Pb**	**05 04 12.6**	**-1.3**
VHO				i S	**Sn**	**05 04 36.6**	**-1.3**
CCIG	**Comitan**	2.67	81	ePn	**Pn**	**05 04 19.7**	**+1.4**
CCIG				ePn	**Pb**	**05 04 20.0**	**-3.0**
CCIG				eSn	**Sb**	**05 04 53.7**	**-2.3**
CCIG	**Comitan**	2.67	81	eP	**Pn**	**05 04 19.7**	**+1.4**
TLIG	**Tlapa**	3.91	296	ePn	**Pn**	**05 04 35.6**	**+0.3**
TLIG				eSn	**Sn**	**05 05 22.1**	**+0.6**
LVIG	**Laguna Verde**	4.11	339	ePn	**Pn**	**05 04 35.0**	**-2.8**
MYIG	**Mrida**	7.04	43	ePn	**Pn**	**05 05 17.2**	**-0.9**
TEIG	**Tepich**	7.64	54	ePn	**Pn**	**05 05 26.2**	**-0.1**
TEIG				eSn	**Sn**	**05 06 52.4**	**-0.7**
LNIG	**Linares**	9.96	335	ePn	**Pn**	**05 05 58.7**	**+0.5**
ZAIG	**Zacatecas**	9.99	315	ePn	**Pn**	**05 05 58.2**	**-0.7**
ACON	**Acoyapa**	10.19	111	ePn	**Pn**	**05 06 00.7**	**-0.7**
HSIG	1.5nm,0.7s	19.77	314	eP	**Pn**	**05 08 08.1**	**+1.3**
X48A	**Hartselle** 18nm,2.0s	19.81	19	eP	**Pn**	**05 08 09.8**	**+2.6**
AMTX	**Amarillo** 10nm,0.8s	19.90	343	eP	**Pn**	**05 08 10.1**	**+1.7**
BANI	**BANI**	23.57	80	eP	**P**	**05 08 47.4**	**+1.3**

TRN 28 05:11:04.0, 11°.09N×61°.64W, h62^{km}, MD3.8, 2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	0.50	152	eP	Pn	05 11 16.0	-0.1
TRN				eS	Sn	05 11 24.8	-0.1
GUIV	**Guiria**	0.72	233	eP	Pn	05 11 18.4	-0.3
GUIV				eS	Sn	05 11 29.2	-0.2
TPP	**Pointe-a-Pierr**	0.79	166	eP	Pn	05 11 20.1	+0.6
TPP				eS	Sn	05 11 31.1	+0.3
TBH	**Brigand Hill**	0.82	137	eP	Pn	05 11 20.5	+0.5
TBH				eS	Sn	05 11 32.5	+0.8
GRGR	**Grenville**	1.04	359	eP	Pn	05 11 22.1	-0.6
GRGR				eS	Sn	05 11 36.7	+0.1
TOSP	**Speyside**	1.10	79	eP	Pn	05 11 23.3	-0.2
TOSP				eS	Sn	05 11 37.6	-0.4
GRHS	**Sauteurs**	1.13	360	eP	Pn	05 11 24.1	+0.3
GRHS				eS	Sn	05 11 38.8	+0.2
GRSS	**Sisters**	1.20	1	eP	Pn	05 11 25.6	+0.7
FCV	**Fort Charlotte**	2.09	11	eP	Pn	05 11 37.7	+0.9
FCV				eS	Sn	05 12 02.1	+0.3
SVB	**Belmont**	2.20	10	eP	Pn	05 11 39.0	+0.7
SVB				eS	Sn	05 12 04.5	0.0
SVCV	**St. Vincent, C**	2.22	13	eP	Pn	05 11 38.4	-0.2
SVCV				eS	Sn	05 12 04.6	-0.5
SVV	**Soufriere Volc**	2.25	11	eP	Pn	05 11 40.0	+1.0
SVV				eS	Sn	05 12 05.7	-0.1
SSV	**Crater Summit**	2.27	11	eP	Pn	05 11 39.8	+0.5
SSV				eS	Sn	05 12 06.2	0.0
SFAN	**Fancy Village**	2.33	11	eP	Pn	05 11 40.2	+0.2
SFAN				eS	Sn	05 12 07.6	0.0
ORIV	**Oritupano**	2.66	221	eP	Pn	05 11 44.6	+0.1
ORIV				eS	Sn	05 12 15.9	+0.3
MCLT	**Moule a Chique**	2.69	15	eP	Pn	05 11 45.0	0.0
MCLT				eS	Sn	05 12 16.4	-0.1
SLB	**Belfond**	2.79	12	eP	Pn	05 11 47.2	+0.9
SLB				eS	Sn	05 12 18.1	-0.7
SLBI	**Saint Lucia, B**	2.99	13	eP	Pn	05 11 49.1	+0.1
SLBI				eS	Sn	05 12 22.7	-1.0
BIM	**Bigot**	3.45	9	eP	Pn	05 11 55.7	+0.3
TRMF	**Trois Ilets**	3.48	9	eP	Pn	05 11 55.7	0.0
ZAM	**Aeronautique**	3.52	10	eP	Pn	05 11 56.1	-0.1
MVM	**Montagne Vaucl**	3.52	12	eP	Pn	05 11 57.1	+0.8
LPMF	**Morne Lapointe**	3.53	11	eP	Pn	05 11 56.7	+0.3
FDF	**Fort de France**	3.66	7	eP	Pn	05 11 58.1	-0.1
FDF				eS	Sn	05 12 37.9	-2.3
PML	**Morne Lenard**	3.70	7	eP	Pn	05 11 58.8	0.0
GBMF	**Grand Be**	3.72	7	eP	Pn	05 11 58.9	-0.2
CXM	**Morne La Croix**	3.73	7	eP	Pn	05 11 59.4	+0.1
PCM	**Pelee Case Pet**	3.73	6	⇓eP	Pn	05 11 59.1	-0.1
BAMF	**Morne Balai**	3.74	7	⇓eP	Pn	05 11 59.2	-0.1
ILAM	**Ilet Lapin Mar**	3.74	11	eP	Pn	05 11 59.8	+0.5
DBCT	**Belle View Cho**	4.17	4	eP	Pn	05 12 05.0	-0.2
MDN	**Morne-Daniel**	4.21	3	eP	Pn	05 12 06.6	+0.8
MDN				eS	Sn	05 12 51.4	-2.3
DLPL	**La Plaine**	4.24	5	eP	Pn	05 12 07.5	+1.4
DLPL				eS	Sn	05 12 51.8	-2.6
DWS	**Wesley**	4.46	4	eP	Pn	05 12 10.2	+0.9
MAGL	**Barre de l’ile**	4.84	4	eP	Pn	05 12 15.4	+1.0

NNC 28 05:34:19.8±5.5, **38°.53N**×**72°.03E, h0**^{km}**, mb3.6, mpv3.2, 2C, Error ellipse: s-maj=38.5km s-min=25.4km az=172.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay** 1.6nm,0.3s	3.92	338	Pg	Pg	05 35 33.0	-2.0
IUG	10nm,0.2s			Lg	Lg	05 36 28.3	
MRKS	**Merke** 3.7nm,0.5s	4.31	12	Pg	Pb	05 35 38.5	+2.1
MRKS	4.3nm,0.3s			Lg	Lg	05 36 38.2	
AAK	**Ala-Archa** 1.8nm,0.4s	4.51	24	Pg	Pb	05 35 41.1	+1.1
AAK	2.4nm,0.6s			Lg	Lg	05 36 41.6	
KK31	**Karatay Array** 0.9nm,0.3s,baz=167,slow=12,SNR=20	4.71	346	Pg	Pb	05 35 44.3	+1.0
KK31	1.1nm,0.3s,baz=168,slow=21,SNR=3.6			⇑Lg	Lg	05 36 45.6	
BRLS	**Borolday** 0.7nm,0.1s	4.79	340	Pg	Pb	05 35 42.4	-2.3
BRLS	8.0nm,0.2s			Lg	Lg	05 36 44.2	
AB31	**Akbulak array** 0.3nm,0.6s,baz=133,slow=13,SNR=4.8	13.80	325	⇑P	P	05 37 41.5	-3.8

NNC 28 06:08:00.6±10.0, **37°.09N**×**71°.36E, h0**^{km}**, mb3.8, mpv3.7, 5C, Error ellipse: s-maj=108.0km s-min=62.6km az=153.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array** 3.4nm,0.3s,baz=179,slow=13,SNR=108	6.04	354	⇑P	Pn	06 09 32.7	+1.4
KK31	0.4nm,0.3s,baz=180,slow=21,SNR=4.4			⇑S	Sn	06 10 44.8	+3.7
TKM2	**Tokmak 2** 2.0nm,0.5s	6.67	28	⇑P	Pn	06 09 41.0	+0.9
TKM2	0.2nm,0.4s			⇑S	Sn	06 10 56.7	-0.2
AB31	**Akbulak array** 0.2nm,0.3s,baz=264,slow=56,SNR=19	14.72	329	⇑P	Pn	06 11 25.5	-4.4

MAN 28 06:19:37.1, 18°.33N×120°.50E, h1^{km}, mb4.8, ML3.7, MS3.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	**Callao Caves**	1.40	116	⇓iP	Pn	06 20 03.0	-0.7
CVP				i S	Sn	06 20 33.9	+11

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*IDC **28** 06:20:00.0±1.0, 5°.80S×152°.30E, h0^{km}, mb4.2/6, mb1 4.4/7, mb1mx4.0/30, mbtmp4.2/7, ML2.3/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/21, Error ellipse: s-maj=37.8km s-min=20.9km az=118.0*
*ISCJB **28** 06:20:05.3±0.3, 5°.91S±0°.06×152°.03E±0°.07, h36^{km}, mb4.5/42, MS2.7/1, Error ellipse: s-maj=12.8km s-min=5.4km az=40.9*
*NEIC **28** 06:20:06.6±1.9, 5°.90S×152°.10E, h35^{km}±2^{km}, mb4.5/38, Error ellipse: s-maj=16.6km s-min=9.6km az=114.0*
ISC 28 06:20:06.3±0.7, **5°.91S**±0°.08×**152°.1E**±0°.1, **h36**^{km}**, n57,** σ**1^{s}.02**/58, **mb4.5**/42, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	1.71	1	ePn	**Pn**	**06 20 32.8**	**-0.8**
PMG	**Port Moresby** 4.8nm,0.3s,baz=54,slow=9.0,SNR=7.5	6.03	235	Pn	**Pn**	**06 21 33.3**	**+0.3**
PMG	9.5nm,0.3s,baz=18,slow=20,SNR=6.5			Sn	**Sn**	**06 22 39.8**	**-1.0**
PMG	**Port Moresby**	6.03	235	ePn	**Pn**	**06 21 33.8**	**+0.8**
PMG				eSn	**Sn**	**06 22 41.3**	**+0.5**
MANU	**Manus Island**	6.11	309	ePn	**Pn**	**06 21 34.4**	**+0.3**
MTN	**Manton Dam** 30nm,1.3s	21.82	250	eP	**P**	**06 24 55.7**	**0.0**
WC3	**Warramunga Arr** 7.4nm,0.8s	22.20	229	eP	**P**	**06 24 59.8**	**0.0**
WRAB	**Tennant Creek** 13nm,0.8s	22.20	229	eP	**P**	**06 24 58.6**	**-1.1**
WB2	**Warramunga Arr** 9.2nm,0.8s	22.21	229	eP	**P**	**06 24 59.6**	**-0.2**
WR1	**Warramunga Arr**	22.22	229	eP	**P**	**06 25 00.8**	**+0.9**
WRA	**Warramunga Arr** 6.2nm,0.9s,baz=54,slow=11,SNR=20	22.22	229	P	**P**	**06 25 00.8**	**+0.9**
AS31	**Alice Springs** 3.8nm,0.7s	24.89	223	eP	**P**	**06 25 26.0**	**+0.1**
ASAR	**Alice Springs** 7.3nm,0.8s,baz=57,slow=9.8,SNR=38	24.89	223	P	**P**	**06 25 26.1**	**+0.2**
TNTI	**Ternate** 25nm,0.7s	25.60	284	eP	**P**	**06 25 32.9**	**+0.4**
LHI	**Lord Howe Isla** 63nm,0.9s	26.29	167	eP	**P**	**06 25 37.3**	**-1.3**
STKA	**Stephens Creek** 1.0nm,0.4s,baz=8.4,slow=9.1,SNR=4.2	27.65	200	P	**P**	**06 25 51.6**	**+0.9**
STKA	**Stephens Creek** 3.3nm,1.4s	27.65	200	eP	**P**	**06 25 50.5**	**-0.2**
FORT	**Forrest** 49nm,1.3s	33.51	219	eP	**P**	**06 26 41.4**	**-1.2**
ERM	**Erimo** 66nm,1.4s	48.39	351	eP	**P**	**06 28 45.4**	**+0.7**
KSRS	**Korea Array** comp=Z,7.3nm,19.4s,baz=10.0,slow=35	48.70	334	LR	LR	06 48 12.3	
CMAR	**Chiang Mai Arr** 0.7nm,0.3s,baz=107,slow=4.8,SNR=3.0	57.75	296	P	**P**	**06 29 55.1**	**+1.0**
SONA0	**Songino Array**	66.91	328	eP	**P**	**06 30 54.2**	**-0.9**
SONM	**Songino Array** 0.6nm,0.5s,baz=165,slow=6.8,SNR=4.0	66.91	328	P	**P**	**06 30 54.2**	**-0.9**
OHAK	**Old Harbor** 4.7nm,0.8s	76.83	27	eP	**P**	**06 31 55.1**	**+0.9**
KDAK	**Kodiak Island**	77.46	27	eP	**P**	**06 31 58.1**	**+0.4**
SVW2	**Sparrevohn** 3.2nm,0.7s	78.10	23	eP	**P**	**06 32 02.6**	**+1.3**
CNPM	**China Poot** 16nm,0.7s	79.00	26	eP	**P**	**06 32 07.3**	**+0.9**
SEW	**Seward** 5.6nm,0.9s	80.07	26	eP	**P**	**06 32 12.9**	**+0.9**
SUA	**Susitna One** 3.3nm,0.6s	80.24	24	eP	**P**	**06 32 13.3**	**+0.2**
RC01	**Rabbit Creek A** 8.4nm,1.1s	80.46	25	eP	**P**	**06 32 14.6**	**+0.4**
CAST	**Castle Rocks** 2.6nm,0.9s	80.78	22	eP	**P**	**06 32 15.9**	**0.0**
PMR	**Palmer** 4.9nm,1.1s	80.97	24	eP	**P**	**06 32 17.3**	**+0.5**
KTH	**Kantishna Hill** 3.4nm,1.0s	81.29	22	eP	**P**	**06 32 18.5**	**-0.2**
SML	**Sawmill** 7.1nm,0.8s	81.40	24	eP	**P**	**06 32 20.1**	**+0.8**
FID	**Port Fidalgo** 6.7nm,1.0s	81.67	26	eP	**P**	**06 32 21.4**	**+0.8**
SCM	**Sheep Creek Mo** 9.3nm,1.2s	81.83	25	eP	**P**	**06 32 23.3**	**+1.7**
RND	**Reindeer** 2.8nm,0.8s	82.00	23	eP	**P**	**06 32 22.4**	**-0.1**
MLY	**Manley** 5.5nm,0.5s	82.15	21	eP	**P**	**06 32 23.7**	**+0.6**
HMT	**Hamilton** 6.5nm,1.0s	82.46	27	eP	**P**	**06 32 26.1**	**+1.3**
WRH	**Wood River Hil** 3.0nm,1.0s	82.83	22	eP	**P**	**06 32 26.3**	**-0.3**
CCB	**Clear Creek Bu** 2.1nm,0.7s	83.03	22	eP	**P**	**06 32 27.2**	**-0.5**
HDA	**Harding Lake**	83.23	22	eP	**P**	**06 32 29.2**	**+0.5**

	4.1nm,1.2s						
ILAR	**Eielson Array**	**83.43**	**22**	P	**P**	**06 32 28.6**	**-1.1**
	2.6nm,0.6s,baz=248,slow=5.1,SNR=39						
ILB	**Eielson Array**	**83.43**	**22**	*e*P	**P**	**06 32 29.4**	**-0.3**
	3.0nm,0.6s						
BALM	**Baldy**	**83.61**	**26**	*e*P	**P**	**06 32 32.2**	**+1.3**
	5.0nm,1.0s						
RIDG	**Independent Ri**	**83.74**	**24**	*e*P	**P**	**06 32 31.9**	**+0.5**
	3.9nm,1.0s						
TOLK	**Toolik Lake Re**	**84.47**	**18**	*e*P	**P**	**06 32 35.9**	**+0.9**
	7.2nm,1.4s						
FYU	**Fort Yukon**	**84.89**	**21**	*e*P	**P**	**06 32 38.0**	**+0.9**
	2.6nm,0.6s						
EGAK	**Eagle**	**85.64**	**23**	*e*P	**P**	**06 32 42.0**	**+1.1**
	3.8nm,0.9s						
HYT	**Haines Junctio**	**85.72**	**28**	*e*P	**P**	**06 32 42.7**	**+1.2**
	6.1nm,0.9s						
DAWY	**Dawson**	**86.07**	**24**	*e*P	**P**	**06 32 45.1**	**+2.0**
	5.4nm,1.1s						
EPYK	**Eagle Plains**	**87.94**	**22**	*e*P	**P**	**06 32 53.8**	**+1.7**
	6.8nm,0.9s						
NV01	**Mina Array Sit**	**93.29**	**52**	*e*P	**P**	**06 33 19.8**	**+1.9**
NVAR	**Mina Array Bea**	**93.29**	**52**	P	**P**	**06 33 19.8**	**+1.9**
	0.2nm,0.5s,baz=252,slow=6.5,SNR=3.8						
GERES	**GERESS Array B**	**124.64**	**328**	PKP	**PKPdf**	**06 39 00.8**	**-1.4**
	0.2nm,0.4s,baz=96,slow=2.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**149.99**	**286**	PKPbc	**PKPbc**	**06 39 51.9**	**-2.2**
	1.1nm,0.7s,baz=98,slow=2.4,SNR=8.6						
TOA1	**Torodi Ar. Sit**	**150.00**	**286**	*e*PKPbc	**PKPbc**	**06 39 51.9**	**-2.2**
BDFB	**Brasilia**	**150.73**	**137**	PKPbc	**PKPbc**	**06 39 55.9**	**0.0**
	1.0nm,0.6s,baz=117,slow=4.5,SNR=2.8						

TAP 28 06:33:52.4,23.°44N×120.°93E,h3^{km},ML2.7,1C-1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALS	**Alishan**	**0.14**	**304⇓**	*i*P	Pg	06 33 55.9	+0.7
	baz=305						
ALS				*i* S	Sg	06 33 58.2	+1.2
	baz=305						
ELDTW	**Lidau**	**0.26**	**162**	*i* P	Pg	06 33 58.2	+0.8
	baz=159						
ELDTW				S	Sg	06 34 01.7	+1.0
	baz=159						
WHYT	**Xinyi Township**	**0.27**	**345**	P	Pg	06 33 58.4	+0.8
	baz=346						
WHYT				S	Sg	06 34 02.5	+1.4
	baz=346						
CHN5	**Tsauling**	**0.28**	**305**	*i* P	Pb	06 33 59.0	-1.0
	baz=307						
CHN5				S	Sg	06 34 03.3	+1.8
	baz=307						
TPUB	**Ta-pu**	**0.30**	**244**	*i* P	Pb	06 33 59.4	-1.1
	baz=244						
TPUB				S	Sg	06 34 03.8	+1.5
	baz=244						
STYT	**Tauyuan**	**0.31**	**210**	P	Pg	06 33 59.2	+0.8
	baz=209						
STYT				S	Sg	06 34 03.9	+1.4
	baz=209						
CHN4	**Tsaushan**	**0.32**	**255**	*i* P	Pb	06 33 59.9	-0.8
	baz=255						
CHN4				S	Sb	06 34 04.8	-1.5
	baz=255						
YULB	**Yu-li**	**0.34**	**97**	*i* P	Pg	06 33 59.9	+0.9
	baz=97						
YULB				S	Sg	06 34 04.4	+1.0
	baz=97						
WTP	**Ta-pu**	**0.34**	**237⇑**	*i*P	Pb	06 34 00.2	-0.9
	baz=248						
WTP				S	Sb	06 34 05.3	-1.7
	baz=248						
TWF1	**Yuli**	**0.35**	**104**	*i* P	Pb	06 34 00.2	-1.0
	baz=115						
TWF1				*e*S	Sg	06 34 04.8	+1.1
	baz=115						
SSLB	**Suanglung**	**0.35**	**4**	*i* P	Pg	06 33 59.5	+0.3
	baz=4.0						
SSLB				*e*S	Sg	06 34 04.9	+1.1
	baz=4.0						
EHY	**Hungye**	**0.37**	**79**	*e*P	Pb	06 34 00.7	-0.9
	baz=87						
EHY				S	Sg	06 34 05.5	+1.2
	baz=87						
VWDT	**VWDT**	**0.37**	**32**	*i* P	Pg	06 34 00.3	+0.8
	baz=36						
VWDT				*e*S	Sg	06 34 05.1	+0.7
	baz=36						
WJS	**Zhushan**	**0.43**	**335**	*e*P	Pb	06 34 02.6	+0.1
	baz=335						
WJS				*e*S	Sb	06 34 09.6	+0.3
	baz=335						
TWK	**Hsinying**	**0.44**	**248**	*i* P	Pb	06 34 02.3	-0.5
	baz=246						
TWK				S	Sb	06 34 08.9	-0.8
	baz=246						
WDLH	**Douliu**	**0.44**	**305**	P	Pb	06 34 02.8	+0.1
	baz=306						
WDLH				S	Sb	06 34 10.2	+0.5
	baz=306						
CHN1	**Nanshi**	**0.44**	**236**	*i* P	Pb	06 34 02.5	-0.3
	baz=236						
CHN1				S	Sb	06 34 09.4	-0.5
	baz=236						
HGSD	**Ruisui**	**0.46**	**83**	*e*P	Pb	06 34 02.7	-0.4
	baz=83						
HGSD				*e*S	Sb	06 34 09.1	-1.2
	baz=83						
CHY	**Chiayi**	**0.47**	**278**	*e*P	Pb	06 34 03.2	0.0
	baz=278						
CHY				*e*S	Sb	06 34 10.8	+0.3
	baz=278						
TYC	**Yuchr**	**0.47**	**352**	*i* P	Pg	06 34 02.4	+0.9
	baz=4.0						
TYC				*e*S	Sb	06 34 10.4	-0.3
	baz=4.0						
SGST	**Jiashian**	**0.47**	**222**	P	Pb	06 34 02.9	-0.4
	baz=221						
SGST				S	Sb	06 34 10.0	-0.7
	baz=221						
WNT	**Mingjian**	**0.49**	**333**	*e*P	Pb	06 34 04.0	+0.4
	baz=336						
WNT				*e*S	Sb	06 34 12.0	+0.7
	baz=336						
SLGT	**Liugui**	**0.51**	**211**	*e*P	Pb	06 34 03.2	-0.7
	baz=210						
EGFH	**Guangfu**	**0.51**	**63**	*e*S	Sg	06 34 10.3	+1.3
	baz=63						
ESL	**Shilin**	**0.60**	**51**	*e*P	Pb	06 34 04.8	-0.6
	baz=52						
ESL				*e*S	Sg	06 34 12.7	+1.1
	baz=52						
TWG	**Pinlang**	**0.63**	**168**	*e*S	Pb	06 34 05.4	-0.5
TWG	**Pinlang**	**0.63**	**168**	P	Pb	06 34 05.3	-0.6
	baz=167						
TWG				*e*S	Sg	06 34 13.7	+1.2
	baz=167						
TWGBT	**Beinan**	**0.63**	**167**	*e*P	Pg	06 34 04.8	+0.4
	baz=167						
TWGBT				*e*S	Sb	06 34 14.1	-1.2
	baz=167						
CHGB	**Renai**	**0.66**	**20**	*e*P	Pg	06 34 05.1	0.0
	baz=20						
CHGB				*e*S	Sg	06 34 15.0	+1.3
	baz=20						
CHN8	**Yiju**	**0.67**	**262**	*e*P	Pb	06 34 07.2	+0.7
	baz=262						
CHN8				*e*S	Sb	06 34 17.7	+1.5
	baz=262						
SCLT	**Jiali**	**0.72**	**249**	*e*S	Sn	06 34 20.4	-0.5
	baz=248						
SSD	**Sandimen**	**0.74**	**202**	*e*P	Pg	06 34 07.0	+0.5
	baz=195						
WHF	**Hehuan Shan**	**0.77**	**24**	*e*P	Pg	06 34 07.2	0.0
	baz=25						
WHF				*e*S	Sb	06 34 19.1	-0.6
	baz=25						
ECL	**Taimali**	**0.83**	**178**	*e*P	Pg	06 34 08.9	+0.5
	baz=177						
TDCB	**Techi**	**0.84**	**14**	*e*P	Pg	06 34 08.3	-0.2
	baz=15						
MASBT	**Mashibuluo**	**0.86**	**198**	*e*P	Pg	06 34 09.2	+0.3
	baz=198						
MASBT				*e*S	Sb	06 34 22.0	+0.1
	baz=198						
TWD	**Chiawan**	**0.89**	**43**	*e*P	Pb	06 34 10.0	-0.3
	baz=53						
TWD				*e*S	Sb	06 34 21.9	-0.8
	baz=53						
ETLH	**Xiulin Townshi**	**0.92**	**33**	*e*P	Pg	06 34 09.8	-0.3
	baz=25						
ETLH				*e*S	Sb	06 34 23.6	0.0
	baz=25						
NACB	**Ninganchiao**	**0.96**	**40**	*e*S	Pg	06 34 10.7	0.0
NACB	**Ninganchiao**	**0.96**	**40**	*e*P	Pg	06 34 10.7	-0.1
	baz=53						
NACB				*e*S	Sg	06 34 23.8	+0.7
	baz=53						
NSY	**Sanyi**	**0.99**	**351**	*e*P	Pn	06 34 13.5	+0.3
	baz=339						
NSY				*e*S	Sn	06 34 27.8	+0.2
	baz=339						
WDGT	**Dungji**	**1.18**	**262**	*e*P	Pg	06 34 14.9	0.0
	baz=260						
WDGT				*e*S	Sb	06 34 30.9	0.0
	baz=260						
LIOB	**Emei**	**1.21**	**4**	*e*P	Pn	06 34 17.1	+1.0
	baz=351						
LIOB				*e*S	Sn	06 34 34.3	+1.3
	baz=351						
PHUB	**P'eng-hu**	**1.25**	**274**	*e*P	Pg	06 34 15.8	-0.5
	baz=273						
PHUB				*e*S	Sb	06 34 33.1	+0.2
	baz=273						
PNG	**Penghu**	**1.27**	**276**	*e*P	Pg	06 34 16.3	-0.4
	baz=276						
PNG				*e*S	Sb	06 34 33.5	0.0
	baz=276						
NDT	**Datong Townshi**	**1.28**	**25**	*e*P	Pn	06 34 17.1	0.0
	baz=19						
NDT				*e*S	Sn	06 34 34.8	0.0
	baz=19						
YHNB	**Yeheng**	**1.29**	**18**	*e*P	Pg	06 34 16.8	-0.4
	baz=19						
YHNB				*e*S	Sg	06 34 33.8	-0.2
	baz=19						

GCG ***28*** *07:10:47.4±0.9, 12.°12N×91.°44W, h0^{km}±156^{km}, MD3.9*
ISCJB ***28*** *07:10:58.2±0.8, 14.°5N±0.°1×90.°42W±0.°08, h223^{km}±9^{km}, mb4.6/1, Error ellipse: s-maj=21.2km s-min=7.5km az=33.6*
NEIC ***28*** *07:11:00.0±0.0, 14.°43N×90.°51W, h231^{km}, mb3.8/3, MD4.0(MEX), After MEX.*
MEX ***28*** *07:11:00.3±0.6, 14.°38N×90.°61W, h234^{km}±9^{km}, MD4.0*
ISC 28 07:10:59.0±1.3**, 14.°6N**±0.°1×**90.°53W**±0.°07**, h249**^{km}±10^{km}**, n20, σ2.^{s}48**/32**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.19**	**205**	*e*P	**Pn**	**07 11 28.1**	**-3.4**
PCG				*e*S	**S**	**07 12 01.3**	**+4.3**
FUG	**Fuego 3**	**0.33**	**249**	*e*P	**Pn**	**07 11 28.2**	**-3.3**
FUG				*e*S	**S**	**07 11 59.8**	**+2.7**
STG3	**Santiaguito 3,**	**1.02**	**278**	*e*P	**Pn**	**07 11 32.0**	**-2.2**
STG3				*e*S	**S**	**07 12 04.7**	**+2.8**
THIG		**1.72**	**282**	*e*Pn	**Pn**	**07 11 37.5**	**-1.4**
THIG		**1.72**	**282**	*i* P	**Pn**	**07 11 36.8**	**-2.1**
THIG				*i* S	**S**	**07 12 06.0**	**-4.3**
CCIG	**Comitan**	**2.31**	**318**	*e*Pn	**Pn**	**07 11 44.0**	**-0.5**
CCIG				*e*Pn	Pn	07 11 44.7	+0.2
CCIG				*e*S	**S**	**07 12 19.9**	**-0.4**
CCIG	**Comitan**	**2.31**	**318**	*e*P	**Pn**	**07 11 44.2**	**-0.2**
CCIG				*i* S	**S**	**07 12 18.3**	**-2.0**
PCIG		**2.84**	**294**	*e*Pn	**Pn**	**07 11 49.2**	**-0.4**
PCIG				*e*S	**S**	**07 12 27.8**	**-1.9**
PCIG		**2.84**	**294**	*e*P	**Pn**	**07 11 49.2**	**-0.4**
PCIG				*i* S	**S**	**07 12 26.4**	**-3.3**
TGUH	**Tegucigalpa,Un**	**3.19**	**99**	*e*Pn	**Pn**	**07 11 49.8**	**-3.9**
TGIG		**3.33**	**312**	*e*Pn	**Pn**	**07 11 55.2**	**+0.1**
TGIG				*e*S	**S**	**07 12 38.0**	**-1.6**
TGIG		**3.33**	**312**	*e*P	**Pn**	**07 11 55.2**	**+0.1**
TGIG				*e*S	**S**	**07 12 38.0**	**-1.6**
CMIG	**Matias Romero**	**4.89**	**301**	*e*Pn	**Pn**	**07 12 14.2**	**+0.8**
CMIG				*e*S	**S**	**07 13 10.6**	**-2.1**
CMIG	**Matias Romero**	**4.89**	**301**	*e*P	**Pn**	**07 12 14.2**	**+0.8**
CMIG				*e*S	**S**	**07 13 10.6**	**-2.1**
ACON	**Acoyapa**	**5.81**	**116**	*e*Pn	**Pn**	**07 12 22.9**	**-1.9**
TEIG	**Tepich**	**6.03**	**21**	*e*Pn	**Pn**	**07 12 25.6**	**-1.8**
JTS	**Las Juntas de**	**6.90**	**127**	*e*Pn	**Pn**	**07 12 36.1**	**-2.4**
JTS				*e*S	S	07 13 46.9	-11
257A	**Skidaway Islan**	**19.38**	**25**	*e*P	**P**	**07 15 08.1**	**+1.6**
	160nm,1.3s						
ABTX	**Abilene, Hawle**	**19.80**	**337**	*e*P	**P**	**07 15 15.4**	**+4.4**
	2.7nm,0.8s						
HALT	**Halls**	**21.28**	**3**	*e*P	**P**	**07 15 28.2**	**+1.9**
	15nm,0.8s						

IDC ***28*** *07:20:59.5±0.5, 52.°21N×159.°76E, h0^{km}, mb4.5/34, mb1 4.6/37, mb1mx4.6/46, mbtmp4.4/37, ML4.1/3, MS4.1/37, Ms1 4.1/37, ms1mx4.1/42, Error ellipse: s-maj=13.9km s-min=10.4km az=151.0*
KRSC ***28*** *07:21:00.4±1.5, 52.°00N×160.°18E, h41^{km}±17^{km}, ML5.5, FELT [III] at MGeoES-I, state-farm Termalniy; [II-III] at Petropavlovsk, Ribachiy.*
BJI ***28*** *07:21:02.8±0.0, 52.°74N×159.°57E, h25^{km}, mb4.9/50, mB5.0/42, Ms5.1/51, Ms7 4.9/49*
MOS ***28*** *07:21:04.4±1.1, 52.°13N×159.°76E, h49^{km}, mb5.1/80, MS4.3/25, Error ellipse: s-maj=5.8km s-min=2.7km az=93.5*
MOS Felt (II) at Petropavlovsk-Kamchatskiy.
NEIC ***28*** *07:21:04.7±1.5, 52.°25N×159.°70E, h34^{km}±4^{km}, mb4.9/315, Error ellipse: s-maj=10.7km s-min=9.7km az=174.0*
ISCJB ***28*** *07:21:05.2±0.3, 52.°18N±0.°02×159.°85E±0.°02, h54^{km}±2^{km}, mb4.8/304, MS4.5/71, Error ellipse: s-maj=3.7km s-min=2.1km az=163.5*
GCMT ***28*** *07:21:11.7±0.2, 52.°09N±0.°02×160.°10E±0.°02, h27^{km}, MW5.2/98, Moment Tensor Solution. s73,c108; s98,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.81±.19; $M_{\theta\theta}$-1.22±.13; $M_{\phi\phi}$-4.60±.14; $M_{r\theta}$3.07±.28; $M_{\theta\phi}$-2.64±.10; $M_{\phi r}$2.61±.23; Best double couple: $M_0$7.17000×10^{16} NP1:ϕ_s40.00000°, δ62.00000°, λ101.00000°. NP2:ϕ_s197.00000°, δ30.00000°, λ70.00000°. Principal axes: T 7.1790, Plg71.0000°, Azm335.0000°; N -0.0290, Plg10.0000°, Azm215.0000°; P -7.1610, Plg16.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 28 07:21:04.3±0.3**, 52.°18N**±0.°03×**159.°86E**±0.°03**, h32**^{km}±1^{km}**, h32**^{km}**:pP-P, n1156, σ1.^{s}20**/1322**, mb4.8**/310**, MS4.6**/74**, 53C-30D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.86**	**287**	*e*P	**Pb**	**07 21 19.7**	**-1.1**
RUS				*e*S	**Sb**	**07 21 34.6**	**+2.5**
RUS	**Russkaya**	**0.86**	**287**	PN	**Pb**	**07 21 19.7**	**-1.1**
RUS				S	**Sb**	**07 21 34.6**	**+2.5**
SPN	**Mys Shipunski**	**0.92**	**6**	*e*P	**Pb**	**07 21 21.4**	**-0.4**
SPN				*e*S	**Sb**	**07 21 36.1**	**+2.3**
SPN	**Mys Shipunski**	**0.92**	**6**	PN	**Pb**	**07 21 21.4**	**-0.4**
SPN				S	**Sb**	**07 21 36.1**	**+2.3**
NLC	**Nalytchevo**	**1.04**	**343**	*e*P	**Pb**	**07 21 23.0**	**-0.8**
NLC				*e*S	**Sb**	**07 21 39.4**	**+2.4**
NLC	**Nalytchevo**	**1.04**	**343**	PN	**Pb**	**07 21 23.0**	**-0.8**
NLC				S	**Sb**	**07 21 39.4**	**+2.4**
MTVR	**Mutnovka**	**1.07**	**287**	*e*P	**Pb**	**07 21 23.2**	**-1.2**
MTVR	**Mutnovka**	**1.07**	**287**	PN	**Pb**	**07 21 23.2**	**-1.2**
DALK	**Dalny**	**1.08**	**322**	*e*P	**Pb**	**07 21 23.8**	**-0.7**
DALK				*e*S	**Sb**	**07 21 40.2**	**+1.8**
DALK	**Dalny**	**1.08**	**322**	PN	**Pb**	**07 21 23.8**	**-0.7**
DALK				S	**Sb**	**07 21 40.2**	**+1.8**
PET	**Petropavlovsk**	**1.12**	**319**	*e*Pn	**Pb**	**07 21 24.8**	**-0.3**
PET	**Petropavlovsk**	**1.12**	**319κ**	*i*PN	**Pb**	**07 21 24.3**	**-0.8**
PET				*e*S	**Sb**	**07 21 41.0**	**+1.7**
PET				pmax	pmax		
	comp=Z,6μm,0.7s						
PET				smax	smax		
	comp=E,23μm,0.7s						
PET				smax	smax		
	comp=N,22μm,0.6s						
KDTR	**Khodutka, Kamc**	**1.16**	**252**	*e*P	**Pn**	**07 21 23.4**	**-1.0**
KDTR				*e*S	**Sb**	**07 21 39.3**	**-1.3**
KDTR	**Khodutka, Kamc**	**1.16**	**252**	PN	**Pn**	**07 21 23.4**	**-1.0**
KDTR				S	**Sb**	**07 21 39.3**	**-1.3**
UGLR	**Uglovaya**	**1.21**	**329**	*e*P	**Pb**	**07 21 26.3**	**-0.4**
UGLR	**Uglovaya**	**1.21**	**329**	PN	**Pb**	**07 21 26.3**	**-0.4**
ASAK	**Asacha**	**1.22**	**280**	*i* P	**Pb**	**07 21 25.8**	**-1.1**
ASAK	**Asacha**	**1.22**	**280**	PN	**Pb**	**07 21 25.8**	**-1.1**
KRMR	**Karymshinskiy**	**1.24**	**302**	*i* P	**Pb**	**07 21 26.3**	**-0.8**
KRMR				*e*S	**Sb**	**07 21 44.8**	**+2.0**
KRMR	**Karymshinskiy**	**1.24**	**302**	PN	**Pb**	**07 21 26.3**	**-0.8**
KRMR				S	**Sb**	**07 21 44.8**	**+2.0**
SMAR	**Somma**	**1.26**	**330**	*e*P	**Pb**	**07 21 26.5**	**-1.1**
SMAR	**Somma**	**1.26**	**330**	PN	**Pb**	**07 21 26.5**	**-1.1**
AVH	**Avacha**	**1.28**	**328**	*e*P	**Pb**	**07 21 28.2**	**+0.3**
AVH				*e*S	**Sb**	**07 21 47.0**	**+3.0**
AVH	**Avacha**	**1.28**	**328**	PN	**Pb**	**07 21 28.2**	**+0.3**
AVH				S	**Sb**	**07 21 47.0**	**+3.0**
KRER	**Koryakskii**	**1.31**	**329**	*e*P	**Pb**	**07 21 27.9**	**-0.6**
KRER	**Koryakskii**	**1.31**	**329**	PN	**Pb**	**07 21 27.9**	**-0.6**
KOK	**Koryaka**	**1.34**	**327**	*e*P	**Pb**	**07 21 28.1**	**-0.8**
KOK	**Koryaka**	**1.34**	**327**	PN	**Pb**	**07 21 28.1**	**-0.8**
KRX	**Arik**	**1.39**	**329**	*e*P	**Pb**	**07 21 29.3**	**-0.5**
KRX	**Arik**	**1.39**	**329**	PN	**Pb**	**07 21 29.3**	**-0.5**
I44RU	**PETROPAVLOVSK-**	**1.60**	**306**	Pn	**Pn**	**07 21 30.1**	**-0.3**
	baz=103,slow=23,SNR=1.1						
PEA0B	**Petropavlovsk-**	**1.61**	**306**	*e*Pn	**Pb**	**07 21 32.6**	**-0.8**
PETK	**Petropavlovsk-**	**1.61**	**306**	Pn	**Pb**	**07 21 32.0**	**-1.4**
	comp=N,161nm,0.3s,baz=109,slow=20,SNR=1160						
PETK	**Petropavlovsk-**	**1.61**	**306**	PN	**Pb**	**07 21 32.0**	**-1.4**
PETK				pmax	pmax		
	comp=Z,161nm,0.3s						
APC	**Apacha**	**1.81**	**295**	*e*P	**Pb**	**07 21 35.4**	**-1.4**
APC				*e*S	**Sb**	**07 22 00.4**	**+1.4**
APC	**Apacha**	**1.81**	**295**	PN	**Pb**	**07 21 35.4**	**-1.4**
APC				S	**Sb**	**07 22 00.4**	**+1.4**
GNL	**Ganaly**	**1.91**	**323**	*e*P	**Pb**	**07 21 36.8**	**-1.7**
GNL	**Ganaly**	**1.91**	**323**	PN	**Pb**	**07 21 36.8**	**-1.7**
MKZ	**Mys Kozlova**	**2.63**	**24**	*e*P	**Pn**	**07 21 44.4**	**-0.1**
MKZ				*e*S	**Sn**	**07 22 15.8**	**+0.5**
MKZ	**Mys Kozlova**	**2.63**	**24**	PN	**Pn**	**07 21 44.4**	**-0.1**
MKZ				S	**Sn**	**07 22 15.8**	**+0.5**
SKR	**Severo-Kuril's**	**2.78**	**239**	*e*P	**Pn**	**07 21 47.4**	**+0.8**
SKR				*e*S	**Sn**	**07 22 21.2**	**+2.1**
SKR	**Severo-Kuril's**	**2.78**	**239**	PN	**Pn**	**07 21 47.4**	**+0.8**
SKR				S	**Sn**	**07 22 21.2**	**+2.1**
KZV	**Kizimen**	**2.95**	**5**	*e*P	**Pn**	**07 21 51.2**	**+2.1**
KZV	**Kizimen**	**2.95**	**5**	PN	**Pn**	**07 21 51.2**	**+2.1**
TUMD	**Tumrok D**	**3.04**	**6**	*e*P	**Pn**	**07 21 51.8**	**+1.6**
TUMD				*e*S	**Sn**	**07 22 28.8**	**+3.2**
TUMR	**Tumrok**	**3.11**	**3**	*e*P	**Pn**	**07 21 53.4**	**+2.1**
TUMR				*e*S	**Sb**	**07 22 32.0**	**-4.5**
TUMR	**Tumrok**	**3.11**	**3**	PN	**Pn**	**07 21 51.8**	**+0.5**
TUMR				S	**Sn**	**07 22 28.8**	**+1.4**
KIRR	**Kirishev**	**3.79**	**4**	*e*P	**Pn**	**07 22 03.8**	**+3.2**
KIRR	**Kirishev**	**3.79**	**4**	PN	**Pn**	**07 22 03.8**	**+3.2**
KPT	**Kopyto**	**3.80**	**3**	*e*P	**Pn**	**07 22 02.3**	**+1.6**
KPT	**Kopyto**	**3.80**	**3**	PN	**Pn**	**07 22 02.3**	**+1.6**
BZWR	**Bezymyannyi-We**	**3.81**	**5**	*e*P	**Pn**	**07 22 04.2**	**+3.3**
BZWR	**Bezymyannyi-We**	**3.81**	**5**	PN	**Pn**	**07 22 04.2**	**+3.3**
ESO	**Esso**	**3.81**	**350**	*e*P	**Pn**	**07 22 03.2**	**+2.4**
ESO	**Esso**	**3.81**	**350**	PN	**Pn**	**07 22 03.2**	**+2.4**
KOZ	**Kozyrevsk**	**3.88**	**0**	*e*P	**Pn**	**07 22 05.1**	**+3.3**
KOZ	**Kozyrevsk**	**3.88**	**0**	PN	**Pn**	**07 22 05.1**	**+3.3**
LGNR	**Loginova**	**3.94**	**7**	*e*P	**Pn**	**07 22 06.2**	**+3.4**
LGNR	**Loginova**	**3.94**	**7**	PN	**Pn**	**07 22 06.2**	**+3.4**
CIRR	**Tsirk**	**3.98**	**7**	*e*P	**Pn**	**07 22 05.4**	**+2.2**
CIRR	**Tsirk**	**3.98**	**7**	PN	**Pn**	**07 22 05.4**	**+2.2**
KRSR	**Krestovskiy**	**4.06**	**6**	*e*P	**Pn**	**07 22 06.9**	**+2.6**
KRSR	**Krestovskiy**	**4.06**	**6**	PN	**Pn**	**07 22 06.9**	**+2.6**
SRDR	**Sredinnyy**	**4.14**	**359**	*e*P	**Pn**	**07 22 08.4**	**+3.0**
SRDR	**Sredinnyy**	**4.14**	**359**	PN	**Pn**	**07 22 08.4**	**+3.0**
KLY	**Klyuchi**	**4.17**	**6**	*e*P	**Pn**	**07 22 08.9**	**+3.3**
KLY	**Klyuchi**	**4.17**	**6**	PN	**Pn**	**07 22 08.9**	**+3.3**
KBTR	**Krutoberegovo**	**4.39**	**22**	*e*P	**Pn**	**07 22 09.3**	**+0.6**
KBTR	**Krutoberegovo**	**4.39**	**22**	PN	**Pn**	**07 22 09.3**	**+0.6**
KBG	**Krutoberegovo**	**4.41**	**21**	*e*P	**Pn**	**07 22 09.8**	**+0.9**
KBG	**Krutoberegovo**	**4.41**	**21**	PN	**Pn**	**07 22 09.8**	**+0.9**
BDR	**Baidarnaya**	**4.46**	**10**	*e*P	**Pn**	**07 22 12.5**	**+2.7**
BDR	**Baidarnaya**	**4.46**	**10**	PN	**Pn**	**07 22 12.5**	**+2.7**
SMKR	**Semkarok**	**4.51**	**11**	*e*P	**Pn**	**07 22 13.4**	**+3.0**
SMKR	**Semkarok**	**4.51**	**11**	PN	**Pn**	**07 22 13.4**	**+3.0**
SRKR	**Sorokina**	**4.55**	**9**	*e*P	**Pn**	**07 22 13.9**	**+3.0**
SRKR	**Sorokina**	**4.55**	**9**	PN	**Pn**	**07 22 13.9**	**+3.0**
BKI	**Bering**	**4.73**	**48**	*e*P	**Pn**	**07 22 11.9**	**-1.4**
BKI				*e*S	**Sn**	**07 23 02.6**	**-4.4**
BKI	**Bering**	**4.73**	**48**	PN	**Pn**	**07 22 11.9**	**-1.4**
PALN	**Palana**	**6.92**	**0**	*e*P	**Pn**	**07 22 47.6**	**+4.2**
PALN	**Palana**	**6.92**	**0**	PN	**Pn**	**07 22 47.6**	**+4.2**
OSSR	**Ossora**	**7.31**	**13**	*e*P	**Pn**	**07 22 51.8**	**+3.1**
OSSR	**Ossora**	**7.31**	**13**	PN	**Pn**	**07 22 51.8**	**+3.1**
TILK	**Tilichiki**	**8.98**	**20**	*e*P	**Pn**	**07 23 13.3**	**+1.6**
TILK	**Tilichiki**	**8.98**	**20**	PN	**Pn**	**07 23 13.3**	**+1.6**
MA2	**Magadan**	**8.99**	**329**	Pn	**Pn**	**07 23 13.7**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=167,slow=14,SNR=3.0						
MA2				LR	LR	07 27 25.2	
	comp=Z,2μm,21.9s,baz=164,slow=43						
MA2	**Magadan**	**8.99**	**329**	*e*Pn	**Pn**	**07 23 09.8**	**-2.1**
OKH	**Okha**	**10.33**	**284*d***	*i*PN	Pn	07 23 37.1	+7.0
OKH				*e*S	Sn	07 25 35.2	+11
OKH				pmax	pmax		
	comp=Z,200nm,6.4s						
OKH				smax	smax		
	comp=E,400nm,8.1s						
KUR	**Kuril'sk**	**10.53**	**233**	*e*PN	Pn	07 23 38.0	+5.0
KUR				*e*S	**Sn**	**07 25 37.6**	**+7.9**
KUR				pmax	pmax		
	comp=Z,101nm,2.0s						
KUR				pmax	pmax		
	comp=Z,51nm,0.7s						
KUR				pmax	pmax		
	comp=E,20nm,0.9s						
KUR				pmax	pmax		
	comp=N,17nm,0.4s						
KUR				MLR	MLR		
	comp=Z,2μm,17.0s						
KUR				MLR	MLR		
	comp=E,4μm,20.0s						
KUR				MLR	MLR		
	comp=N,4μm,18.0s						
KMSK	**Kamenskaya**	**10.86**	**16**	*e*P	**Pn**	**07 23 39.1**	**+1.8**
KMSK	**Kamenskaya**	**10.86**	**16**	PN	**Pn**	**07 23 39.1**	**+1.8**
SEY	**Seymchan**	**11.49**	**343**	Pn	**Pn**	**07 23 49.3**	**+3.3**
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=7.3						
SEY	**Seymchan**	**11.49**	**343⇑**	*e*PN	**Pn**	**07 23 47.4**	**+1.4**
UGL	**Uglegorsk**	**11.72**	**262**	*e*PN	Pn	07 23 58.2	+9.1
UGL				pmax	pmax		
	comp=Z,700nm,4.8s						
UGL				pmax	pmax		
	comp=Z,108nm,0.8s						
UGL				MLR	MLR		
	comp=Z,3μm,12.0s						
UGL				MLR	MLR		
	comp=E,4μm,14.0s						
YSS	**Yuzh-Sakhalins**	**12.27**	**252**	*e*Pn	**Pn**	**07 23 54.9**	**-1.7**
YSS	**Yuzh-Sakhalins**	**12.27**	**252*d***	*i*PN	Pn	07 24 01.3	+4.7
YSS				*e*S	**Sn**	**07 26 17.5**	**+5.4**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,3μm,15.0s						
YSS				MLR	MLR		
	comp=N,2μm,14.0s						
YUK	**Yuzh-Kuril'sk**	**12.39**	**234**	PN	**Pn**	**07 24 02.5**	**+4.2**
YUK				S	**Sn**	**07 26 20.3**	**+5.1**
YUK				pmax	pmax		
	comp=N,62nm,0.5s						
YUK				pmax	pmax		
	comp=Z,106nm,0.5s						
YUK				pmax	pmax		
	comp=E,44nm,0.3s						
GRPR	**Tuman**	**12.47**	**234**	*e*PN	**Pn**	**07 24 02.2**	**+2.8**
GRPR				S	**Sn**	**07 26 22.6**	**+5.6**
GRPR				pmax	pmax		
	comp=E,38nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,67nm,0.4s						
GRPR				pmax	pmax		
	comp=N,55nm,0.5s						
NMR	**Nemuro--Hokkai**	**12.94**	**233**	PN	**Pn**	**07 24 08.8**	**+2.9**
ASAJ	**Asahikawa**	**14.04**	**242**	Pn	**Pn**	**07 24 20.8**	**-0.1**
	comp=N,1.0nm,0.3s,baz=56,slow=16,SNR=5.9						
ASAJ				LR	LR	07 30 41.8	
	comp=N,699nm,18.6s,baz=48,slow=42						
ADK	**Adak**	**14.43**	**82**	*e*Pn	**Pn**	**07 24 27.5**	**+1.4**
ADK	**Adak**	**14.43**	**82**	*e*P	**Pn**	**07 24 27.5**	**+1.4**

GRNR	Gornyy	14.66	274	eP	P	07 24 34.2	-1.0
GRNR				pmax	pmax		
	comp=Z,42nm,1.2s						
ERM	Erimo	15.22	235	ePn	Pn	07 24 34.0	-2.8
	comp=Z,29nm,0.9s						
ERM	Erimo	15.22	235	eP	Pn	07 24 34.0	-2.8
ERM				pmax	pmax		
	comp=Z,29nm,0.9s						
ATKA	Atka Island	15.89	80	ePn	Pn	07 24 45.9	+0.6
	comp=Z,143nm,1.5s						
BILL	Bilibino	16.21	9	ePn	Pn	07 24 48.5	-0.9
	comp=Z,39nm,0.7s						
BILL	Bilibino	16.21	9	deP	P	07 24 51.5	-0.7
BILL				pmax	pmax		
	comp=Z,39nm,0.7s						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s						
TEY	Ternei	16.91	254⇑	eP	P	07 25 09.0	+8.9
TEY				pmax	pmax		
	comp=E,60nm,0.8s						
TEY				pmax	pmax		
	comp=Z,80nm,0.8s						
TEY				MLR	MLR		
	comp=N,200nm,15.0s						
SPIA	Saint Paul Isl	17.90	62	ePn	Pn	07 25 10.0	-0.6
	comp=N,93nm,1.1s						
KLR	Kul'dur	18.00	272	P	Pn	07 25 10.9	-0.9
	comp=N,0.5nm,0.3s,baz=60,slow=12,SNR=16						
KLR				LR	LR	07 33 15.9	
	comp=N,774nm,19.0s,baz=72,slow=41						
KLR	Kul'dur	18.00	272	P	Pn	07 25 11.0	-0.9
KLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLR				MLR	MLR		
	comp=Z,774nm,19.0s						
YAK	Yakutsk	18.94	313	eP	P	07 25 20.8	-1.5
	comp=Z,88nm,0.8s						
YAK	Yakutsk	18.94	313	eP	P	07 25 20.7	-1.7
YAK				eS	Sn	07 28 49.6	-4.4
YAK				pmax	pmax		
	comp=Z,86nm,0.9s						
YAK				pmax	pmax		
	comp=N,18nm,1.2s						
YAK				pmax	pmax		
	comp=E,48nm,1.1s						
YAK				smax	smax		
	comp=N,146nm,2.8s						
YAK				smax	smax		
	comp=E,219nm,2.5s						
YAK				MLR	MLR		
	comp=Z,1µm,16.0s						
YAK				MLR	MLR		
	comp=N,931nm,17.0s						
YAK				MLR	MLR		
	comp=E,694nm,16.0s						
ZEA	Zeya	19.61	288	eP	P	07 25 29.2	-0.6
ZEA				eS	Sn	07 29 10.5	+0.1
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEA				smax	smax		
	comp=N,300nm,6.0s						
ZEA				MLR	MLR		
	comp=N,2µm,13.0s						
ZEA				MLR	MLR		
	comp=E,3µm,13.0s						
ZEA				MLR	MLR		
	comp=Z,5µm,13.0s						
USA0B	Ussuriysk Arra	20.13	258	eP	P	07 25 32.3	-3.1
	comp=Z,17nm,0.8s						
USRK	Ussuriysk Ar.	20.13	258	P	P	07 25 33.7	-1.7
	comp=Z,5.3nm,0.9s,baz=63,slow=11,SNR=9.7						
USRK				LR	LR	07 34 01.3	
	comp=Z,261nm,19.1s,baz=54,slow=39						
UNV	Unalaska Valle	20.20	72	eP	P	07 25 36.4	+0.3
	comp=Z,160nm,1.2s						
AKUT	Akutan	20.58	71	eP	P	07 25 41.1	+0.9
	comp=Z,181nm,1.5s						
MDJ	Mudanjiang	21.36	261	eP	P	07 25 48.4	-0.4
	comp=Z,21nm,1.0s						
MDJ	Mudanjiang	21.36	261	P	P	07 25 48.0	-0.7
MDJ				pP	pP	07 25 56.5	+0.3
MDJ				sP	sP	07 25 58.8	-1.1
MDJ				S	S	07 29 41.0	-3.0
MDJ				sS	pS	07 29 53.8	-2.9
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,91nm,4.1s						
MDJ				LR	LR		
	comp=Z,1µm,22.9s						
MDJ				LR	LR		
	comp=Z,630nm,22.5s						
MDJ				LR	LR		
	comp=Z,400nm,10.4s						
ANM	Nome	21.70	42	eP	P	07 25 52.3	+0.1
	comp=Z,25nm,1.1s						
ANM	Nome	21.70	42	eP	P	07 25 52.3	+0.1
ANM				pmax	pmax		
	comp=Z,25nm,1.1s						
FALS	False Pass	21.84	68	eP	P	07 25 54.3	+0.6
	comp=Z,44nm,0.9s						
MJAR	Matsushiro Arr	21.87	233	P	P	07 25 54.5	+0.1
	comp=Z,6.8nm,0.7s,baz=19,slow=11,SNR=27						
MJAR				LR	LR	07 35 15.1	
	comp=Z,1µm,21.2s,baz=50,slow=39						
MJB9	Matsu-Tunnel	21.87	233	eP	P	07 25 55.4	+1.1
	comp=Z,136nm,0.8s						
MAJO	Matsushiro	21.88	233	eP	P	07 25 55.4	+1.1
	comp=Z,137nm,0.8s						
MAJO	Matsushiro	21.88	233	d iP	P	07 25 54.9	+0.6
MAJO				pmax	pmax		
	comp=Z,25nm,0.7s						
MAJO				MLR	MLR		
	comp=Z,1µm,22.0s						
MAT	Matsushiro	21.88	233	P	P	07 25 54.5	+0.2
MAT				S	S	07 29 53.6	-0.6
SDPT	Sand Point	23.43	66	eP	P	07 26 12.0	+1.6
	comp=Z,14nm,0.8s						
TIXI	Tiksi	23.85	336	P	P	07 26 13.6	-0.7
	comp=Z,94nm,0.8s,baz=124,slow=10,SNR=68						
TIXI				LR	LR	07 37 57.0	
	comp=Z,742nm,18.0s,baz=123,slow=43						
TIXI	Tiksi	23.85	336	eP	P	07 26 13.8	-0.5
	comp=Z,112nm,0.7s						
TIXI	Tiksi	23.85	336	ceP	P	07 26 12.6	-1.7
TIXI				pmax	pmax		
	comp=Z,79nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,2µm,15.0s						
RDOG	Red Dog Mine	23.87	34	eP	P	07 26 14.4	-0.1
	comp=Z,89nm,1.4s						
JHJ	Hachijo jima 2	23.96	225	LR	LR	07 35 39.9	
	comp=Z,185nm,21.2s,baz=98,slow=37						
CN2	Changchun	24.32	264	eP	P	07 26 25.0	+6.2
CN2				eS	S	07 30 09.3	-26
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				LR	LR		
	comp=N,1µm,17.0s						
CN2				LR	LR		
	comp=E,790nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CHGN	Chignik	24.45	64	eP	P	07 26 21.3	+1.4
	comp=Z,21nm,1.0s						
HIA	Hailar	25.34	279	eP	P	07 26 26.9	-1.2
	comp=Z,76nm,0.8s						
HIA	Hailar	25.34	279	eP	P	07 26 26.9	-1.2
HIA				pmax	pmax		
	comp=Z,76nm,0.8s						
TTA	Tatalina	25.46	48	eP	P	07 26 28.7	-0.5
	comp=Z,15nm,1.0s						
TTA	Tatalina	25.46	48	eP	P	07 26 28.7	-0.5
TTA				pmax	pmax		
	comp=Z,15nm,1.0s						
SVW2	Sparrevohn	25.60	52	eP	P	07 26 31.0	+0.7
	comp=Z,11nm,1.0s						
BOD	Bodaibo	26.48	301	eP	P	07 26 37.0	-1.2
BOD				pmax	pmax		
	comp=Z,21nm,1.8s						
KSRS	Korea Array	26.75	249	P	P	07 26 39.9	-1.0
	comp=Z,2.3nm,0.8s,baz=39,slow=9.6,SNR=9.7						
KSRS				LR	LR	07 38 21.4	
	comp=Z,808nm,18.0s,baz=57,slow=39						
OHAK	Old Harbor	27.10	61	eP	P	07 26 44.1	+0.3
	comp=Z,25nm,1.0s						
PPLA	Purkeypile	27.21	48	eP	P	07 26 46.1	+1.1
	comp=Z,20nm,1.3s						
CAST	Castle Rocks	27.27	47	eP	P	07 26 46.2	+0.8
	comp=Z,7.0nm,1.0s						
KDAK	Kodiak Island	27.38	59	P	P	07 26 45.1	-1.3
	comp=Z,3.1nm,0.6s,baz=304,slow=6.2,SNR=8.3						
KDAK	Kodiak Island	27.38	59	eP	P	07 26 48.0	+1.6
	comp=Z,13nm,1.0s						
KDAK	Kodiak Island	27.38	59	eP	P	07 26 48.0	+1.6
KDAK				pmax	pmax		
	comp=Z,13nm,1.0s						
SKT	Skwentna	27.52	50	eP	P	07 26 48.5	+0.8
	comp=Z,5.2nm,1.1s						
KTH	Kantishna Hill	27.79	47	eP	P	07 26 50.3	+0.2
	comp=Z,28nm,1.4s						
CNPM	China Poot	27.84	55	eP	P	07 26 51.0	+0.4
	comp=Z,13nm,1.0s						
SUA	Susitna One	27.92	51	eP	P	07 26 52.3	+1.0
	comp=Z,8.4nm,1.0s						
MLY	Manley	27.93	43	eP	P	07 26 51.9	+0.6
	comp=Z,13nm,1.4s						
JNU	Nakatsue	28.29	239	P	P	07 26 54.2	-0.6
	comp=Z,4.5nm,1.1s,baz=270,slow=20,SNR=2.2						
JNU				LR	LR	07 39 45.9	
	comp=Z,468nm,19.2s,baz=40,slow=40						
JNU	Nakatsue	28.29	239	eP	P	07 26 55.3	+0.4
	comp=Z,55nm,0.9s						
MCK	McKinley	28.68	46	eP	P	07 26 57.5	-0.5
	comp=Z,13nm,1.2s						
MCK	McKinley	28.68	46	eP	P	07 26 57.5	-0.5
MCK				pmax	pmax		
	comp=Z,13nm,1.2s						
RND	Reindeer	28.72	47	eP	P	07 26 58.2	-0.2
	comp=Z,11nm,1.0s						
RND	Reindeer	28.72	47	eP	P	07 26 58.2	-0.2
RND				pmax	pmax		
	comp=Z,11nm,1.0s						
GHO	Glory Hole Cre	28.77	50	eP	P	07 26 58.8	0.0
	comp=Z,3.5nm,0.7s						
TOLK	Toolik Lake Re	28.78	36	eP	P	07 26 57.1	-1.7
	comp=Z,6.6nm,0.8s						
TOLK	Toolik Lake Re	28.78	36	P	P	07 26 58.5	-0.4
	baz=261						
KNK	Knik Glacier	29.02	51	eP	P	07 27 00.2	-0.8
	comp=Z,15nm,1.0s						
SML	Sawmill	29.05	50	eP	P	07 27 00.9	-0.4
	comp=Z,18nm,0.7s						
SML	Sawmill	29.05	50	eP	P	07 27 00.9	-0.4
SML				pmax	pmax		
	comp=Z,18nm,0.7s						
WRH	Wood River Hil	29.05	45	eP	P	07 27 01.3	+0.1
	comp=Z,17nm,1.2s						
TCOL	CIGO, UAF Yank	29.15	44	P	P	07 27 02.5	+0.4
	baz=270						
COLA	College	29.15	44	eP	P	07 27 02.0	0.0
	comp=Z,11nm,0.8s						
COLA	College	29.15	44	deP	P	07 27 03.2	+1.1
COLA				pmax	pmax		
	comp=Z,12nm,1.7s						
COLA				MLR	MLR		
	comp=Z,359nm,17.0s						
CCB	Clear Creek Bu	29.17	44	eP	P	07 27 02.5	+0.2
	comp=Z,6.5nm,1.0s						
POKR	Poker Plat Res	29.33	43	P	P	07 27 04.4	+0.7
	baz=270						
DHY	Denali Highway	29.40	48	eP	P	07 27 03.4	-1.1
	comp=Z,6.3nm,1.0s						
DL2	Dalian	29.52	259	eP	P	07 27 05.8	+0.3
DL2				eS	S	07 31 59.8	+1.9
DL2				pmax	pmax		
	comp=Z,34nm,1.1s						
DL2				pmax	pmax		
	comp=Z,96nm,7.5s						
DL2				LR	LR		
	comp=Z,1µm,14.1s						
DL2				LR	LR		
	comp=Z,840nm,14.0s						
DL2				LR	LR		
	comp=Z,810nm,13.9s						
SCM	Sheep Creek Mo	29.52	50	eP	P	07 27 05.5	0.0
	comp=Z,11nm,0.8s						
SCM	Sheep Creek Mo	29.52	50	eP	P	07 27 05.5	0.0
SCM				pmax	pmax		
	comp=Z,11nm,0.8s						
HDA	Harding Lake	29.54	45	eP	P	07 27 05.4	-0.2
	comp=Z,4.4nm,0.6s						
ILAR	Eielson Array	29.56	44	P	P	07 27 04.9	-0.9
	comp=Z,2.1nm,0.7s,baz=252,slow=8.4,SNR=39						
ILAR				LR	LR	07 41 18.0	
	comp=Z,312nm,18.1s,baz=274,slow=41						
ILB	Eielson Array	29.56	44	eP	P	07 27 06.0	+0.2
	comp=Z,4.6nm,0.8s						
PRP	Porcupine Dome	30.13	43	eP	P	07 27 11.2	+0.2
	comp=Z,10nm,0.8s						
FYU	Fort Yukon	30.26	40	eP	P	07 27 12.7	+0.8
	comp=Z,20nm,1.2s						
PAX	Paxson	30.28	48	eP	P	07 27 11.7	-0.5
	comp=Z,6.9nm,1.3s						
PAX	Paxson	30.28	48	eP	P	07 27 11.7	-0.5
PAX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
RIDG	Independent Ri	30.50	46	eP	P	07 27 13.4	-0.7
	comp=Z,16nm,1.3s						
DOT	Dot Lake	30.85	46	eP	P	07 27 16.2	-1.0
	comp=Z,3.2nm,0.8s						
SCRK	Sand Creek	30.86	46	eP	P	07 27 17.2	-0.1
	comp=Z,8.9nm,1.0s						
MENT	Mentasta	31.08	48	eP	P	07 27 20.6	+1.4
	comp=Z,4.0nm,0.8s						
CRQM	Cirque	31.67	52	eP	P	07 27 25.6	+1.0
	comp=Z,13nm,0.7s						
EGAK	Eagle	32.01	44	eP	P	07 27 26.5	-0.8
	comp=Z,8.1nm,0.7s						
BJI	Beijing	32.14	265	P	P	07 27 28.8	+0.1
BJI				S	S	07 32 40.0	+1.0
BJI				LR	LR		
	comp=Z,310nm,12.8s						
BJI				LR	LR		
	comp=Z,470nm,12.5s						
BJI				LR	LR		
	comp=Z,220nm,15.2s						
CTGM	Chitina Glacie	32.50	51	eP	P	07 27 31.2	-0.7
	comp=Z,6.6nm,0.8s						
H11N2	WAKE ISLAND Hy	32.85	168	T	T	08 03 38.2	
	baz=352,slow=76,SNR=562						
DAWY	Dawson	32.86	45	eP	P	07 27 35.5	+0.6
	comp=Z,4.4nm,0.8s						
H11N3	WAKE ISLAND Hy	32.87	168	T	T	08 03 43.5	
	baz=352,slow=76,SNR=639						
H11N1	WAKE ISLAND Hy	32.87	168	T	T	08 03 24.9	
	baz=352,slow=76,SNR=513						
PCA	Pinnacle	33.20	52	eP	P	07 27 38.4	+0.4
	comp=Z,36nm,0.5s						
EPYK	Eagle Plains	33.68	41	eP	P	07 27 42.3	+0.4
	comp=Z,22nm,1.4s						
EPYK	Eagle Plains	33.68	41	P	P	07 27 41.4	-0.5
	baz=277,SNR=5.7						
TLY	Talaya	33.92	292	LR	LR	07 41 37.3	
	comp=Z,201nm,18.3s,baz=0.0,slow=37						
TLY	Talaya	33.92	292	eP	P	07 27 44.0	-0.2
	comp=Z,25nm,1.2s						
TLY	Talaya	33.92	292	c iP	P	07 27 43.1	-1.1
TLY	Talaya	33.92	292	P	P	07 27 44.3	+0.1
	SNR=12						
SONA0	Songino Array	33.98	284	eP	P	07 27 43.9	-1.0
SONM	Songino Array	33.98	284	P	P	07 27 43.9	-1.0
	comp=Z,0.6nm,0.4s,baz=87,slow=9.1,SNR=4.8						
SONM				PcP	PcP	07 30 22.6	+0.4
	comp=Z,2.6nm,1.0s,baz=44,slow=4.4,SNR=2.8						
SONM				LR	LR	07 43 28.3	
	comp=Z,1µm,20.9s,baz=68,slow=40						
H11S1	WAKE ISLAND Hy	34.03	168	T	T	08 04 21.6	
	baz=351,slow=76,SNR=182						
H11S3	WAKE ISLAND Hy	34.04	168	T	T	08 04 24.5	
	baz=351,slow=76,SNR=258						
H11S2	WAKE ISLAND Hy	34.05	168	T	T	08 04 27.2	
	baz=351,slow=76,SNR=159						
HYT	Haines Junctio	34.35	50	eP	P	07 27 49.5	+1.5
	comp=Z,13nm,1.0s						
HHC	Hu-ho-hao-te	34.50	270	eP	P	07 27 47.8	-1.6
HHC				sS	sS	07 33 31.5	+2.2
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				LR	LR		
	comp=Z,970nm,13.2s						
HHC				LR	LR		
	comp=Z,880nm,14.1s						
ZAK	Zakamensk	34.67	290	eP	P	07 27 50.2	-0.6
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
INK	Inuvik	34.68	37	P	P	07 27 50.9	+0.4
	comp=Z,5.8nm,0.8s,baz=289,slow=9.6,SNR=16						
INK	Inuvik	34.68	37	eP	P	07 27 51.1	+0.7
	comp=Z,10nm,0.8s						
INK	Inuvik	34.68	37	eP	P	07 27 51.2	+0.7
INK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BTO	Baotou	35.59	271	eP	P	07 27 54.5	-4.3
BTO				S	S	07 33 54.0	+21
BTO				LR	LR		
	comp=N,989µm,13.9s						
BTO				LR	LR		
	comp=E,900µm,14.4s						
WHY	Whitehorse	35.64	50	eP	P	07 27 58.6	-0.4
	comp=E,16nm,1.3s						
SKAG	Skagway	35.78	52	eP	P	07 28 01.3	+1.2
	comp=E,13nm,0.8s						
NJ2	Nanjing	35.84	252	eP	P	07 28 01.8	+1.0
NJ2				pP	pP	07 28 08.3	-0.8
NJ2				sP	sP	07 28 11.0	-1.6
NJ2				pmax	pmax		
	comp=E,15nm,0.8s						
NJ2				pmax	pmax		
	comp=E,220nm,5.7s						
NJ2				LR	LR		
	comp=E,1µm,14.7s						
NJ2				LR	LR		
	comp=E,440nm,9.0s						
NJ2				LR	LR		
	comp=E,1µm,19.9s						
JIS	Juneau Island	36.62	54	eP	P	07 28 08.9	+1.7
	comp=E,15nm,0.9s						
WRAK	Wrangell Islan	38.33	56	eP	P	07 28 23.9	+2.1
	comp=E,14nm,1.0s						
DLBC	Dease Lake	38.71	52	eP	P	07 28 26.3	+1.3
	comp=E,11nm,1.0s						
WHN	Wuhan	39.58	255	P	P	07 28 42.5	+10
WHN				S	S	07 34 31.5	-1.6
WHN				LR	LR		
	comp=N,2µm,16.3s						
WHN				LR	LR		
	comp=E,1µm,13.6s						
WHN				LR	LR		
	comp=Z,1µm,17.9s						
SSLB	Suanglung	40.98	241	eP	P	07 28 44.1	-0.1
	comp=Z,15nm,0.9s						
TPUB	Ta-pu	41.55	241	eP	P	07 28 49.2	+0.4
	comp=Z,18nm,0.8s						
LZH	Lanzhou	42.20	270	eP	P	07 28 53.8	-0.4
LZH				pP	pP	07 29 02.5	0.0
LZH				sP	sP	07 29 06.3	+0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				LR	LR		
	comp=Z,1µm,12.5s						
LZH				LR	LR		
	comp=Z,1µm,12.2s						
LZH				LR	LR		
	comp=Z,2µm,13.0s						
GTA	Gaotai	42.57	277	⇓P	P	07 28 57.0	-0.2
GTA				pP	pP	07 29 05.5	0.0
GTA				sP	pwP	07 29 10.0	0.0
GTA				S	S	07 35 15.8	-1.9
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,99nm,7.2s						
GTA				LR	LR		
	comp=Z,990nm,13.7s						
GTA				LR	LR		
	comp=Z,1µm,13.1s						
GTA				LR	LR		
	comp=Z,1µm,13.4s						
ENH	Enshi	42.70	259	eP	P	07 28 56.6	-1.5
	comp=Z,43nm,1.2s						
ZAA1	Zalesovo Array	43.15	303	eP	P	07 28 59.3	-2.2
ZAA0	Zalesovo Array	43.15	303	eP	P	07 28 58.3	-3.2
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	43.15	303	P	P	07 28 59.3	-2.2
	comp=Z,1.2nm,0.6s,baz=91,slow=6.4,SNR=3.7						
ZALV				LR	LR	07 48 30.8	
	comp=Z,755nm,18.5s,baz=72,slow=38						
YKA	Yellowknife Ar	43.93	42	P	P	07 29 06.8	-0.9
	comp=Z,2.0nm,0.8s,baz=295,slow=7.4,SNR=3.1						
YKA				LR	LR	07 49 31.9	
	comp=Z,15nm,19.6s,baz=276,slow=39						
YKB5	Yellowknife Ar	43.93	42	eP	P	07 29 06.8	-0.9
DGZ	Jazzator, Alta	43.95	297	⇓iP	P	07 29 06.7	-1.5
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RES	Resolute Bay	44.22	22	eP	P	07 29 10.8	+0.9
	comp=Z,17nm,0.8s						
RES	Resolute Bay	44.22	22	eP	P	07 29 10.8	+0.9
RES				pmax	pmax		
	comp=Z,17nm,0.8s						
CD2	Chengdu	45.74	265	eP	P	07 29 20.8	-1.7
CD2				S	S	07 36 01.0	-2.7
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,25.0s						
CD2				LR	LR		
	comp=Z,660nm,15.7s						
CD2				LR	LR		
	comp=Z,1µm,13.2s						
WMQ	Urumqi	47.14	290	eP	P	07 29 32.6	-0.8
	comp=Z,44nm,1.0s						
WMQ	Urumqi	47.14	290	eP	P	07 29 35.5	+2.1
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,70nm,5.5s						
WMQ				LR	LR		
	comp=Z,800nm,15.7s						
WMQ				LR	LR		
	comp=Z,2µm,15.3s						
WMQ				LR	LR		
	comp=Z,1µm,14.9s						
WMQ	Urumqi	47.14	290	eP	P	07 29 32.6	-0.8
WMQ				pmax	pmax		
	comp=Z,44nm,1.0s						
GYA	Guiyang	47.17	258	eP	P	07 29 42.3	+8.4
GYA				pP	pwP	07 29 51.8	+5.2
GYA				PP	PP	07 31 31.8	+6.9
GYA				S	S	07 36 37.8	+13
GYA				sS	sS	07 36 52.3	+14
GYA	Guiyang	47.17	258	SS	SS	07 39 58.0	+6.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,60nm,4.2s						
GYA				LR	LR		
	comp=N,400nm,13.4s						
GYA				LR	LR		
	comp=E,390nm,14.9s						
GYA				LR	LR		
	comp=Z,470nm,14.2s						
KBS	Kingsbay	47.76	352	d iP	P	07 29 38.9	+1.2
KBS				pmax	pmax		
	comp=Z,140nm,1.7s						
SPA0	Spitsbergen Ar	48.01	350	eP	P	07 29 39.4	-0.3
SPA0				epP	pP	07 29 49.1	+0.8
SPITS	Spitsbergen Ar	48.01	350	P	P	07 29 39.9	+0.2
SPITS				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KURK	Kurchatov	48.10	302	eP	P	07 29 39.2	-1.4
KURK				epP	pP	07 29 48.0	-1.1
KURK	Kurchatov	48.10	302	c iP	P	07 29 38.9	-1.7
KURK				pmax	pmax		
	comp=Z,24nm,1.2s						
KURK				MLR	MLR		
	comp=Z,685nm,14.0s						
KURK	Kurchatov	48.10	302	P	P	07 29 39.4	-1.2
	SNR=19						
MK31	Makanchi Array	48.42	296	eP	P	07 29 41.7	-1.6
MK31				epP	pP	07 29 50.6	-1.3
MK31	Makanchi Array	48.42	296	i P	P	07 29 41.4	-1.9
MK31				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MK32	Makanchi Array	48.42	296	eP	P	07 29 41.0	-2.2
MKAR	Makanchi Array	48.42	296	P	P	07 29 41.0	-2.2
	comp=Z,2.0nm,0.6s,baz=57,slow=8.6,SNR=14						
MKAR				LR	LR	07 50 55.2	
	comp=Z,445nm,20.7s,baz=58,slow=37						
MAKZ	Makanchi	48.59	296	eP	P	07 29 42.9	-1.7

MAKZ				epP	pP	07 29 51.7	-1.4
MAKZ	Makanchi	48.59	296	eP	P	07 29 42.9	-1.7
MAKZ				e*PP	pP	07 29 51.7	-1.4
HSPB	Hornsund (broa	49.13	350	eP	P	07 29 48.2	0.0
HSPB				epP	pP	07 29 57.3	+0.4
HSPB	Hornsund (broa	49.13	350	eP	P	07 29 48.2	0.0
HSPB				e*PP	pP	07 29 57.3	+0.4
C09A	Chrisman Ranch	50.16	60	eP	P	07 29 57.8	+1.3
	comp=Z,5.2nm,1.0s						
NEW	Newport	50.49	59	eP	P	07 29 59.1	+0.1
	comp=Z,4.9nm,1.2s						
NEW	Newport	50.49	59	eP	P	07 29 59.1	+0.1
NEW				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NEW	Newport	50.49	59	P	P	07 29 58.7	-0.3
	baz=308						
KMI	Kunming	50.53	260	P	P	07 29 59.5	-0.3
KMI				pP	pP	07 30 08.3	0.0
KMI				sP	sP	07 30 11.5	-0.2
KMI				PP	PP	07 31 53.8	-1.7
KMI				S	S	07 37 09.3	-2.6
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,3.6s						
KMI				LR	LR		
	comp=Z,520nm,17.1s						
KMI				LR	LR		
	comp=Z,600nm,17.6s						
KMI				LR	LR		
	comp=Z,310nm,18.2s						
BRVK	Borovoye	50.88	309	eP	P	07 30 00.4	-1.4
BRVK				epP	pP	07 30 09.0	-1.3
BRVK	Borovoye	50.88	309c	iP	P	07 29 59.6	-2.2
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s						
BRVK	Borovoye	50.88	309	P	P	07 30 00.7	-1.1
	SNR=12						
QIZ	Qiongzhong	50.98	249	P	P	07 30 04.0	+1.1
QIZ				S	S	07 37 20.0	+2.3
QIZ				pmax	pmax		
	comp=Z,170nm,2.0s						
QIZ				LR	LR		
	comp=Z,550nm,28.4s						
QIZ				LR	LR		
	comp=Z,590nm,16.7s						
QIZ				LR	LR		
	comp=Z,400nm,14.7s						
E09A	Wood Farm, Sta	51.02	62	eP	P	07 30 02.6	-0.4
	comp=Z,7.3nm,1.0s						
DAG	Danmarks Havn	51.31	360	eP	P	07 30 04.5	-0.2
DAG	Danmarks Havn	51.31	360	i P	P	07 30 04.5	-0.2
WALA	Waterton Lakes	51.67	57	eP	P	07 30 08.4	+0.4
	comp=Z,9.3nm,0.9s						
PDGK	Podgornoye	52.13	294	P	P	07 30 09.6	-1.8
PDGK				pmax	pmax		
	comp=Z,30nm,1.3s						
BMO	Blue Mountains	52.52	63	eP	P	07 30 15.0	+0.7
	comp=Z,5.7nm,1.4s						
BMO	Blue Mountains	52.52	63	eP	P	07 30 15.0	+0.7
BMO				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SLVN	Son La	52.67	256	eP	P	07 30 16.6	+1.0
	comp=Z,29nm,1.1s						
MOD	Modoc Plateau	52.74	67	eP	P	07 30 17.5	+1.4
	comp=Z,12nm,1.1s						
SVE	Sverdlovsk	52.85	317	eP	P	07 30 15.8	-0.6
SVE				pmax	pmax		
	comp=Z,30nm,1.5s						
OTUK	Ortayu	52.85	303	P	P	07 30 14.4	-2.2
OTUK				pmax	pmax		
	comp=Z,17nm,1.0s						
MSO	Missoula	53.07	59	eP	P	07 30 18.3	0.0
	comp=Z,9.6nm,1.1s						
MSO	Missoula	53.07	59	P	P	07 30 17.6	-0.7
	baz=310						
PLID	Pearl Lake	53.08	62	eP	P	07 30 19.1	+0.5
	comp=Z,3.9nm,0.8s						
WVOR	Wild Horse Val	53.34	66	eP	P	07 30 20.5	+0.1
	comp=Z,6.6nm,1.3s						
WVOR	Wild Horse Val	53.34	66	eP	P	07 30 20.5	+0.1
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LVZ	Lovozero	53.49	337⇑	eP	P	07 30 20.1	-0.9
LVZ				pmax	pmax		
	comp=Z,16nm,1.1s						
FFC	Flin Flon	53.76	45	eP	P	07 30 24.1	+0.9
FFC				epP	pP	07 30 32.3	+0.2
ARU	Arti	53.97	318	eP	P	07 30 23.3	-1.4
ARU				epP	pP	07 30 32.5	-0.8
ARU	Arti	53.97	318c	iP	P	07 30 22.9	-1.8
ARU				S	S	07 37 55.8	-2.1
ARU				SS	SKiKP	07 41 31.0	-3.3
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
ARU				MLR	MLR		
	comp=Z,467nm,15.0s						
APA	Apatity	54.04	338⇑	iP	P	07 30 35.3	+10
APA				i		07 31 27.0	
APA				pmax	pmax		
	comp=Z,15nm,0.7s						
APA				MLR	MLR		
	comp=Z,100nm,16.0s						
BEKR	Beckworth	54.04	69	eP	P	07 30 26.3	+0.6
BEKR				epP	pP	07 30 35.4	+0.9
ARCES	ARCESS Array B	54.11	342	P	P	07 30 25.0	-0.5
	comp=Z,13nm,0.9s,baz=34,slow=8.8,SNR=25						
ARCES				LR	LR	07 56 47.9	
	comp=Z,279nm,19.8s,baz=32,slow=40						
ARE0	ARCESS Array S	54.11	342	eP	P	07 30 25.4	-0.2
ARE0				epP	pP	07 30 34.5	+0.3
ARE0	ARCESS Array S	54.11	342	eP	P	07 30 25.2	-0.3
HRY	Holter Researc	54.25	58	eP	P	07 30 28.4	+1.4
HRY				epP	sP	07 30 38.3	-1.0
MFID	Camas Ranch	54.26	63	eP	P	07 30 28.7	+1.5
MFID				epP	pP	07 30 36.6	+0.6
FCC	Fort Churchill	54.28	38	eP	P	07 30 27.1	+0.3
FCC				epP	pP	07 30 36.0	+0.4
FCC	Fort Churchill	54.28	38	eP	P	07 30 27.2	+0.3
FCC				e*PP	pP	07 30 36.0	+0.4
AFDM	Forest Hills D	54.30	71	eP	P	07 30 26.4	-0.9
AFDM				epP	pP	07 30 37.4	+1.1
EGMT	Eagleton	54.46	56	eP	P	07 30 29.1	+0.6
	comp=Z,12nm,1.3s						
EGMT	Eagleton	54.46	56	P	P	07 30 27.9	-0.6
	baz=311						
PAHR	Pah Rah Range	54.71	69	eP	P	07 30 30.5	0.0
	comp=Z,8.0nm,1.1s						
DLMT	Dillon	54.73	60	eP	P	07 30 31.3	+0.7
DLMT				epP	pP	07 30 40.2	+0.8
VCNR	Virginia City	54.83	69	eP	P	07 30 32.5	+1.1
	comp=Z,7.6nm,0.9s						
SUMG	Summit	54.88	7	eP	P	07 30 31.5	-0.1
SUMG				epP	pP	07 30 40.2	-0.1
SUMG	Summit	54.88	7⇑	iP	P	07 30 31.6	+0.1
SUMG				pmax	pmax		
	comp=Z,90nm,1.2s						
SUMG	Summit	54.88	7⇑	iP	P	07 30 31.6	+0.1
	comp=Z,90nm,1.2s						
HLID	Hailey	54.94	62	eP	P	07 30 34.3	+2.2
	comp=Z,3.3nm,1.0s						
HLID	Hailey	54.94	62	P	P	07 30 31.9	-0.2
	baz=312						
MCMT	McKenzie Canyo	54.95	60	eP	P	07 30 32.3	+0.1
KTK1	Kautokeino	54.98	342	eP	P	07 30 31.6	-0.2
PNTR	Pine Nut	55.00	70	eP	P	07 30 33.9	+1.2
	comp=Z,8.0nm,0.7s						
MANU	Manus Island	55.05	195	eP	P	07 30 33.0	+0.1
	comp=Z,371nm,0.1s						
BOZ	Bozeman (W)	55.09	59	eP	P	07 30 34.0	+0.9
	comp=Z,6.6nm,0.9s						
BOZ	Bozeman (W)	55.09	59	eP	P	07 30 34.0	+0.9
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BOZ	Bozeman (W)	55.09	59	P	P	07 30 32.5	-0.7
	baz=312						
PRGR	Permogore	55.14	328	eP	P	07 30 31.9	-1.1
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
TRO	Tromso	55.20	344	eP	P	07 30 33.0	-0.4
CMB	Columbia Colle	55.25	71	eP	P	07 30 35.0	+0.7
	comp=Z,8.4nm,1.3s						
CMB	Columbia Colle	55.25	71	eP	P	07 30 35.0	+0.7
CMB				pmax	pmax		
	comp=Z,8.0nm,1.3s						

YERR	Yerington	55.28	69	eP	P	07 30 36.1	+1.4
	comp=Z,11nm,1.1s						
AAK	Ala-Archa	55.35	297	eP	P	07 30 34.0	-1.0
	comp=Z,36nm,1.4s						
AAK	Ala-Archa	55.35	297	eP	P	07 30 34.1	-1.0
AAK				pmax	pmax		
	comp=Z,36nm,1.4s						
AAK	Ala-Archa	55.35	297	P	P	07 30 34.8	-0.3
	SNR=13						
BMN	Battle Mountai	55.46	67	eP	P	07 30 36.4	+0.5
	comp=Z,13nm,1.1s						
BMN	Battle Mountai	55.46	67	eP	P	07 30 36.4	+0.5
BMN				pmax	pmax		
	comp=Z,13nm,1.1s						
WAKR	Walker	55.49	70	eP	P	07 30 37.5	+1.3
	comp=Z,6.5nm,0.9s						
PANO	Nakornpanom	55.49	252	P	P	07 30 41.0	+4.8
	comp=Z,1.0nm,1.0s						
NONG	Nongkai	55.65	254	P	P	07 30 39.5	+2.3
	comp=Z,1.1nm,1.0s						
QLMT	Earthquake Lak	55.70	59	eP	P	07 30 37.3	-0.4
YHB	Horse Butte	55.88	59	eP	P	07 30 39.9	+1.0
	comp=Z,16nm,1.3s						
KVN	Kaiserville	55.89	69	eP	P	07 30 40.1	+1.1
	comp=Z,21nm,1.4s						
KVN	Kaiserville	55.89	69	eP	P	07 30 40.1	+1.1
KVN				pmax	pmax		
	comp=Z,21nm,1.4s						
YHH	Holmes Hill	56.04	59	eP	P	07 30 40.7	+0.5
	comp=Z,6.9nm,0.9s						
YMR	Madison River	56.06	59	eP	P	07 30 41.0	+0.8
	comp=Z,8.4nm,0.9s						
NV01	Mina Array Sit	56.19	69	eP	P	07 30 41.8	+0.6
NVAR	Mina Array Bea	56.19	69	P	P	07 30 41.8	+0.6
	comp=Z,0.6nm,0.7s,baz=302,slow=7.0,SNR=7.4						
NVAR				LR	LR	07 51 45.5	
	comp=Z,64nm,22.0s,baz=292,slow=33						
YFT	Old Faithful	56.27	59	eP	P	07 30 42.6	+0.9
	comp=Z,20nm,1.3s						
NV11	Mina Array Sit	56.28	69	eP	P	07 30 42.7	+1.0
	comp=Z,0.4nm,1.1s						
MDPB	Devils Postpil	56.29	71	eP	P	07 30 43.0	+1.0
	comp=Z,9.2nm,1.2s						
OMMB	Old Mammoth Mi	56.34	71	eP	P	07 30 43.2	+0.8
	comp=Z,5.6nm,1.1s						
ELK	Elko	56.37	65	eP	P	07 30 43.3	+0.8
	comp=Z,4.7nm,0.9s						
MSF	Maaselka	56.40	338	P	P	07 30 42.3	+0.2
MSF				pmax	pmax		
	comp=Z,109nm,1.1s						
YPP	Pitchstone Pla	56.41	60	eP	P	07 30 44.3	+1.5
	comp=Z,7.2nm,1.0s						
LKWY	Lake	56.42	59	eP	P	07 30 42.6	-0.3
	comp=Z,6.9nm,1.0s						
LKWY	Lake	56.42	59	eP	P	07 30 42.6	-0.3
LKWY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
H17A	Grant Village	56.45	59	eP	P	07 30 43.0	0.0
	comp=Z,10.0nm,1.0s						
H17A	Grant Village	56.45	59	P	P	07 30 42.8	-0.2
	baz=313						
IMW	Indian Meadow	56.59	60	eP	P	07 30 43.6	-0.5
	comp=Z,6.5nm,0.9s						
FLWY	Flagg Ranch	56.59	60	eP	P	07 30 45.3	+1.3
	comp=Z,16nm,1.2s						
PAYA	Payao	56.60	258	P	P	07 30 48.5	+4.4
	comp=Z,61µm,0.8s						
KSH	Kashi	56.63	293	eP	P	07 30 47.8	+3.6
KSH				pP	pwP	07 30 59.0	+2.3
KSH				pmax	pmax		
	comp=Z,14nm,1.4s						
RLMT	Red Lodge	56.64	58	eP	P	07 30 43.5	-0.9
	comp=Z,11nm,1.0s						
RLMT	Red Lodge	56.64	58	P	P	07 30 44.2	-0.2
	baz=313						
ILULI	Ilulissat	56.80	13	eP	P	07 30 44.9	+0.1
	comp=Z,35nm,0.8s						
ILULI	Ilulissat	56.80	13	eP	P	07 30 44.9	+0.1
ILULI				pmax	pmax		
	comp=Z,35nm,0.8s						
ILULI	Ilulissat	56.80	13	i P	P	07 30 44.9	+0.1
	comp=Z,20nm,0.8s						
SHL	Shillong	56.86	270	eP	P	07 30 45.0	-1.1
TPAW	Teton Pass	56.86	60	eP	P	07 30 44.8	-1.1
	comp=Z,9.8nm,1.4s						
LOHW	Long Hollow	56.96	60	eP	P	07 30 46.8	+0.2
	comp=Z,8.7nm,1.1s						
SNOW	Snow King Moun	56.98	60	eP	P	07 30 47.8	+0.9
	comp=Z,10nm,1.2s						
HVU	Hansel Valley	57.03	63	eP	P	07 30 47.9	+0.8
	comp=Z,8.2nm,1.0s						
HVU	Hansel Valley	57.03	63	eP	P	07 30 47.9	+0.8
HVU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PHRA	Phrae	57.05	257	P	P	07 30 49.0	+1.7
	comp=Z,7.4nm,1.1s						
LAO	LASA Array	57.14	55	eP	P	07 30 49.0	+1.3
LAO				epP	pP	07 30 57.8	+1.2
LAO	LASA Array	57.14	55	P	P	07 30 48.0	+0.3
	baz=313						
KK31	Karatay Array	57.20	299	eP	P	07 30 46.8	-1.3
KK31				epP	pP	07 30 55.7	-1.2
KK31	Karatay Array	57.20	299	eP	P	07 30 46.8	-1.3
KK31				e*PP	pP	07 30 55.7	-1.2
KKAR	Karatay Array	57.20	299	eP	P	07 30 46.8	-1.3
KKAR				epP	pP	07 30 55.3	-1.6
KKAR	Karatay Array	57.20	299	eP	P	07 30 46.8	-1.3
STEI	Steigen	57.33	345	eP	P	07 30 47.5	-1.1
LOF	Lofoten	57.41	346	eP	P	07 30 48.9	-0.2
UTTA	Uttaradit	57.44	256	P	P	07 30 51.8	+1.8
	comp=Z,51µm,0.9s,comp=Z,427µm						
BGU	Big Grassy Mou	57.47	64	eP	P	07 30 49.7	-0.6
	comp=Z,4.2nm,1.1s						
SPUT	South Promonto	57.53	63	eP	P	07 30 50.8	+0.2
	comp=Z,11nm,1.1s						
CMMT	Chiang Mai	57.58	259	P	P	07 30 52.3	+1.3
	comp=Z,22nm,1.0s,comp=Z,240nm						
CHTO	Chiang Mai	57.58	259	eP	P	07 30 50.7	-0.3
CHTO				epP	pP	07 31 00.9	+1.1
CHTO	Chiang Mai	57.58	259	eP	P	07 30 50.7	-0.3
CHTO				e*PP	pP	07 31 00.9	+1.1
KLMR	Klimovskoe	57.67	330	eP	P	07 30 48.3	-2.7
KLMR				pmax	pmax		
	comp=Z,27nm,0.9s						
CWC	Cottonwood Cre	57.68	71	P	P	07 30 51.7	0.0
	baz=314						
GRAC	Grapevine Rang	57.72	70	P	P	07 30 52.3	+0.4
	baz=314						
R11A	Troy Canyon, C	57.80	68	eP	P	07 30 52.8	+0.2
	comp=Z,4.0nm,1.0s						
R11A	Troy Canyon, C	57.80	68	P	P	07 30 52.8	+0.2
	baz=314						
HWUT	Hardware Ranch	57.81	62	eP	P	07 30 53.4	+0.8
	comp=Z,7.1nm,0.8s						
CM31	Chiang Mai Arr	57.86	258	eP	P	07 30 53.5	+0.6
	comp=Z,22nm,0.9s						
CMAR	Chiang Mai Arr	57.86	258	P	P	07 30 53.5	+0.6
	comp=Z,3.9nm,0.7s,baz=25,slow=7.3,SNR=16						
CMAR				LR	LR	07 58 18.4	
	comp=Z,272nm,18.7s,baz=51,slow=39						
CHAI	Chaiyaphum	58.02	254	P	P	07 31 04.6	+10
DUG	Dugway, Tooele	58.09	64	eP	P	07 30 55.6	+1.0
	comp=Z,7.4nm,0.9s						
DUG	Dugway, Tooele	58.09	64	eP	P	07 30 55.6	+1.0
DUG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DUG	Dugway, Tooele	58.09	64	P	P	07 30 55.1	+0.6
	baz=314						
BW06	Boulder Array	58.10	60	eP	P	07 30 55.4	+0.7
	comp=Z,9.9nm,0.9s						
BW06	Boulder Array	58.10	60	P	P	07 30 54.6	0.0
	baz=314						
PD31	Pinedale Array	58.10	60	eP	P	07 30 55.4	+0.8
	comp=Z,6.6nm,0.9s						
PDAR	Pinedale Array	58.10	60	P	P	07 30 55.5	+0.8
	comp=Z,2.8nm,0.7s,baz=313,slow=2.8,SNR=15						
PDAR				LR	LR	07 53 08.7	
	comp=Z,68nm,21.7s,baz=333,slow=33						
PBKT	Sadao Pong	58.10	255	P	P	07 30 57.6	+3.0
	comp=Z,6.1nm,0.7s,comp=Z,537nm						
SBC	Santa Barbara	58.11	74	P	P	07 30 56.0	+1.5
	baz=315						
TCUT	Toone Canyon	58.23	63	eP	P	07 30 55.5	-0.2
	comp=Z,14nm,1.2s						
AB31	Akbulak array	58.28	311	i P	P	07 30 53.8	-1.7
AB31				pmax	pmax		
	comp=Z,6.0nm,0.7s						

ABKAR	Akbulak array	58.28	311	eP	P	07 30 53.8	-1.7
ABKAR				epP	pP	07 31 03.0	-1.2
MPMC	Manual Prospec	58.29	71	P	P	07 30 56.5	+0.4
	baz=314						
AKTO	Aktyubinsk	58.33	313	P	P	07 30 53.7	-2.2
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FURC	Furnace Creek,	58.37	70	P	P	07 30 56.9	+0.5
	baz=314						
TPNV	Topopah Spring	58.39	69	eP	P	07 30 57.8	+1.1
	comp=Z,11nm,1.1s						
TPNV	Topopah Spring	58.39	69	eP	P	07 30 57.8	+1.1
TPNV				pmax	pmax		
	comp=Z,11nm,1.1s						
TPNV	Topopah Spring	58.39	69	P	P	07 30 56.9	+0.1
	baz=314						
FRB	Frobisher Bay	58.40	23	LR	LR	07 58 44.7	
	comp=Z,160nm,18.5s,baz=326,slow=39						
PSUT	Pine Spring	58.66	66	eP	P	07 30 58.4	-0.2
	comp=Z,4.3nm,1.0s						
NLU	North Lily Min	58.67	64	eP	P	07 30 57.1	-1.5
	comp=Z,6.6nm,0.9s						
MPU	Maple Canyon	58.87	64	eP	P	07 31 00.2	+0.1
MPU				epP	pP	07 31 09.5	+0.5
SFJD	Kangerlussuaq	58.94	13	LR	LR	07 57 47.6	
	comp=Z,142nm,21.7s,baz=326,slow=38						
SFJD	Kangerlussuaq	58.94	13	eP	P	07 30 59.7	-0.1
SFJD				epP	pP	07 31 08.8	+0.2
SFJD	Kangerlussuaq	58.94	13	eP	P	07 30 59.7	-0.1
SFJD				e*PP	pP	07 31 08.8	+0.2
SFJD	Kangerlussuaq	58.94	13	i P	P	07 30 59.9	+0.1
SFJD				i		07 31 08.8	
MOR8	Moi Rana	59.07	344	eP	P	07 30 59.4	-1.4
GSC	Goldstone, Bar	59.22	71	eP	P	07 31 03.8	+1.4
GSC				epP	pP	07 31 12.7	+1.4
GSC	Goldstone, Bar	59.22	71	eP	P	07 31 03.8	+1.4
GSC				e*PP	pP	07 31 12.7	+1.4
GSC	Goldstone, Bar	59.22	71	P	P	07 31 03.1	+0.8
	baz=315						
SHPR	Sheep Range	59.33	69	eP	P	07 31 05.0	+1.7
SHPR				epP	pP	07 31 14.0	+1.8
ULM	Lac du Bonnet	59.55	46	P	P	07 31 05.2	+0.8
	comp=Z,3.2nm,0.6s,baz=303,slow=5.8,SNR=6.2						
ULM				LR	LR	07 57 01.6	
	comp=Z,94nm,21.4s,baz=330,slow=36						
ULM	Lac du Bonnet	59.55	46	eP	P	07 31 05.3	+1.0
ULM				epP	pP	07 31 14.1	+0.9
TMUT	Trail Mountain	59.61	64	eP	P	07 31 06.1	+0.8
	comp=Z,10nm,0.8s						
CCUT	Cedar City	59.62	67	eP	P	07 31 06.2	+0.9
CCUT				epP	pP	07 31 15.1	+0.9
TUQ	Turquoise Moun	59.64	70	P	P	07 31 06.0	+0.7
	baz=315						
UMPA	Umpang Tak	59.65	257	P	P	07 31 17.5	+12
P17A	Butcher Ranch,	59.74	64	eP	P	07 31 07.4	+1.4
	comp=Z,7.7nm,1.0s						
SZCU	Shurtz Canyon	59.75	67	eP	P	07 31 04.6	-1.5
SZCU				epP	pP	07 31 16.4	+1.3
K22A	Casper	59.78	58	eP	P	07 31 07.6	+1.3
	comp=Z,6.3nm,0.9s						
K22A	Casper	59.78	58	P	P	07 31 07.2	+0.9
	baz=315						
SUF	Sumiainen	59.78	337	P	P	07 31 06.0	+0.3
SUF				pmax	pmax		
	comp=Z,98nm,0.9s						
HEC	Hector,Ludlow	59.82	71	P	P	07 31 08.0	+1.5
	baz=315						
MTPU	Mount Pierson	59.94	66	eP	P	07 31 08.8	+1.2
	comp=Z,5.5nm,1.0s						
RSSD	Black Hills	60.03	56	eP	P	07 31 08.3	+0.3
	comp=Z,21nm,0.9s						
RSSD	Black Hills	60.03	56	eP	P	07 31 08.3	+0.3
RSSD				pmax	pmax		
	comp=Z,21nm,0.9s						
RSSD	Black Hills	60.03	56	P	P	07 31 08.4	+0.4
	baz=315						
LCMT	Little Creek M	60.07	67	eP	P	07 31 08.7	+0.4
	comp=Z,5.6nm,0.9s						
RWWY	Rawlins	60.10	60	eP	P	07 31 08.9	+0.3
RWWY				epP	pP	07 31 18.6	+1.1
SRU	San Rafael Swe	60.12	64	eP	P	07 31 09.2	+0.6
	comp=Z,14nm,0.9s						
SRU	San Rafael Swe	60.12	64	eP	P	07 31 09.2	+0.6
SRU				pmax	pmax		
	comp=Z,14nm,0.9s						
GAR	Garm	60.15	296	eP	P	07 31 07.8	-1.0
GAR				epP	pP	07 31 16.8	-0.8
GAR	Garm	60.15	296	eP	P	07 31 07.8	-1.0
GAR				e*PP	pP	07 31 16.8	-0.8
MURC	Murrieta	60.19	73	P	P	07 31 10.0	+1.0
	baz=316						
GMRC	Granite Mounta	60.25	71	P	P	07 31 10.2	+0.7
	baz=315						
PKCU	Pink Cliffs	60.29	66	eP	P	07 31 10.6	+0.6
	comp=Z,6.6nm,0.9s						
KNB	Kanab	60.30	67	eP	P	07 31 10.6	+0.7
	comp=Z,9.2nm,1.1s						
KNB	Kanab	60.30	67	eP	P	07 31 10.6	+0.7
KNB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LDFC	Landfair	60.36	70	eP	P	07 31 10.5	+0.2
	comp=Z,13nm,0.9s						
BELC	Belle Mtn. Jos	60.61	72	P	P	07 31 12.5	+0.5
	baz=316						
O20A	White River Ci	60.64	62	eP	P	07 31 11.8	-0.4
O20A				epP	pP	07 31 22.2	+1.0
O20A	White River Ci	60.64	62	P	P	07 31 12.1	-0.2
	baz=315						
FIA1	FINESS Array S	60.90	337	eP	P	07 31 12.3	-1.1
FIA1				epP	pP	07 31 22.8	+0.7
FIA0	FINESS Array S	60.90	337	eP	P	07 31 13.1	-0.2
FIA0	FINESS Array S	60.90	337	eP	P	07 31 13.1	-0.2
FINES	FINESS Array B	60.90	337	P	P	07 31 13.1	-0.2
	comp=Z,15nm,0.7s,baz=37,slow=7.9,SNR=67						
FINES				LR	LR	08 01 00.8	
	comp=Z,296nm,18.1s,baz=28,slow=40						
AGMN	Agassiz Nation	60.98	48	eP	P	07 31 13.7	-0.5
	comp=Z,7.5nm,0.8s						
AGMN	Agassiz Nation	60.98	48	P	P	07 31 14.1	0.0
	baz=317						
NSS	Namsos	60.99	345	eP	P	07 31 13.8	-0.1
U15A	North Rim	61.02	67	eP	P	07 31 15.6	+0.7
	comp=Z,2.8nm,0.8s						
CHGR	Chuyangaron	61.03	297	eP	P	07 31 13.2	-1.6
	comp=Z,41nm,1.4s						
W13A	Hualapai Mount	61.05	69	eP	P	07 31 15.5	+0.3
W13A				epP	pP	07 31 25.2	+1.1
MONP2	Monument Peak	61.15	73	P	P	07 31 15.9	+0.1
	baz=316						
PUL	Pulkovo	61.23	334	eP	P	07 31 14.7	-0.9
PV09	Paradox Valley	61.31	63	eP	P	07 31 17.9	+1.0
N23A	Red Feather La	61.33	60	P	P	07 31 17.5	+0.5
	baz=316						
HNR	Honiara	61.37	180	LR	LR	07 55 02.0	
	comp=Z,243nm,20.8s,baz=7.0,slow=33						
PV23	Carpenter Ridg	61.41	63	eP	P	07 31 18.1	+0.5
	comp=Z,10nm,0.9s						
PV10	Paradox Valley	61.45	63	eP	P	07 31 18.4	+0.5
PV10				epP	pP	07 31 28.2	+1.4
PV14	Lion Creek, Pa	61.47	63	eP	P	07 31 19.0	+1.1
	comp=Z,14nm,0.9s						
PV22	Blue Mesa, Par	61.48	63	eP	P	07 31 19.2	+1.2
	comp=Z,8.1nm,0.9s						
PV04	Paradox Valley	61.52	63	eP	P	07 31 18.5	+0.3
PV04				epP	pP	07 31 26.3	-0.9
PV20	West Nyswonger	61.52	63	eP	P	07 31 18.2	0.0
	comp=Z,14nm,1.0s						
PV19	Morning Glory	61.53	63	epP	pP	07 31 26.5	-0.8
PV17	East Wray Mesa	61.57	63	eP	P	07 31 19.0	+0.4
	comp=Z,22nm,0.9s						
PV16	Nyswonger Mesa	61.57	63	eP	P	07 31 19.4	+0.8
	comp=Z,7.5nm,0.9s						
PV11	David Mesa, Pa	61.60	63	eP	P	07 31 20.0	+1.3
	comp=Z,21nm,1.0s						
PV18	Skein Mesa, Pa	61.62	63	eP	P	07 31 19.9	+1.0
	comp=Z,16nm,0.9s						
PV07	Paradox Valley	61.63	63	eP	P	07 31 20.4	+1.5
	comp=Z,8.8nm,1.0s						
PV12	Saucer Basin,	61.63	63	eP	P	07 31 19.4	+0.4
	comp=Z,16nm,1.1s						
PV03	Paradox Valley	61.65	63	eP	P	07 31 20.3	+1.2
	comp=Z,14nm,1.0s						
PV13	Radium Mtn., P	61.73	63	eP	P	07 31 20.3	+0.7
	comp=Z,18nm,0.9s						
PHET	Kaeng Krachan	61.77	254	P	P	07 31 23.9	+4.0

	comp=Z,97µm,0.8s,comp=Z,877µm						
PV01	Paradox Valley	61.88	63	eP	P	07 31 21.9	+1.2
	comp=Z,5.8nm,1.0s						
SMCO	Snowmass	62.01	62	eP	P	07 31 22.2	+0.4
	comp=Z,9.8nm,1.1s						
WUAZ	Wupatki	62.19	67	eP	P	07 31 22.1	-0.6
	comp=Z,11nm,1.1s						
WUAZ	Wupatki	62.19	67	P	P	07 31 23.1	+0.4
	baz=316						
NIL	Nilore	62.29	290	eP	P	07 31 23.0	-0.2
NIL				epP	pP	07 31 31.8	-0.3
NIL	Nilore	62.29	290	eP	P	07 31 23.0	-0.2
NIL				e*PP	pP	07 31 31.8	-0.3
MOS	Moscow	62.35	327	eP	P	07 31 22.0	-1.2
MOS				e		07 33 43.5	
MOS				eS	S	07 39 52.3	+5.2
MOS				MLR	MLR		
	comp=Z,900nm,17.0s						
Y14A	Wickenburg	62.39	70	eP	P	07 31 24.3	+0.4
Y14A				epP	pP	07 31 34.4	+1.5
MVCO	Mesa Verde	62.59	64	eP	P	07 31 24.7	-0.7
MVCO				epP	pP	07 31 35.6	+1.2
MVCO	Mesa Verde	62.59	64	P	P	07 31 24.9	-0.6
	baz=316						
X16A	Lo Mia Camp, P	62.94	68	eP	P	07 31 29.0	+1.3
X16A				epP	pP	07 31 37.7	+0.9
S22A	4UR Ranch, Cre	63.12	63	P	P	07 31 29.0	-0.1
	baz=317,SNR=6.8						
Q24A	Divide	63.15	61	P	P	07 31 28.6	-0.7
	baz=317						
EYMN	Ely	63.19	46	eP	P	07 31 29.8	+0.7
EYMN				epP	pP	07 31 37.8	0.0
EYMN	Ely	63.19	46	P	P	07 31 28.8	-0.2
	baz=319						
OBN	Obninsk	63.21	327	eP	P	07 31 28.1	-0.8
OBN				epP	pP	07 31 37.3	-0.5
OBN	Obninsk	63.21	327	d iP	P	07 31 27.1	-1.8
OBN				e		07 32 04.0	
OBN				e		07 33 47.5	
OBN				ePPP	PPP	07 35 16.4	
OBN				pmax	pmax		
	comp=Z,31nm,1.1s						
OBN				MLR	MLR		
	comp=Z,518nm,15.0s						
VSU	Vasula	63.31	335	eP	P	07 31 29.0	-0.5
VSU				IAmb	IAmb	07 31 39.9	
	comp=Z,123nm,0.8s						
VSU	Vasula	63.31	335	c eP	P	07 31 29.1	-0.5
OGNE	Ogallala	63.34	57	eP	P	07 31 29.9	-0.4
OGNE				epP	pP	07 31 40.4	+1.2
OGNE	Ogallala	63.34	57	P	P	07 31 29.8	-0.4
	baz=317						
BORG	Borgarnes	63.40	1	LR	LR	07 59 22.6	
	comp=Z,61nm,18.6s,baz=354,slow=36						
BORG	Borgarnes	63.40	1	eP	P	07 31 29.6	-0.4
BORG				epP	sP	07 31 41.0	-1.3
BORG	Borgarnes	63.40	1	eP	P	07 31 29.7	-0.4
BORG				e*PP	sP	07 31 41.0	-1.3
W18A	Petrified Fore	63.41	66	P	P	07 31 31.2	+0.4
	baz=317						
DOMB	Dombas	63.79	345	eP	P	07 31 33.0	+0.3
SDCO	Great Sand Dun	63.84	62	eP	P	07 31 34.3	+0.5
SDCO				epP	pP	07 31 43.9	+1.1
SDCO	Great Sand Dun	63.84	62	P	P	07 31 34.5	+0.7
	baz=317						
214A	Organ Pipe Nat	63.93	71	P	P	07 31 34.7	+0.5
	baz=317						
AKN	Aaknes	63.97	346	eP	P	07 31 34.6	+0.7
ECSD	EROS Data Cent	64.00	52	eP	P	07 31 34.1	-0.3
	comp=Z,10nm,1.1s						
ECSD	EROS Data Cent	64.00	52	P	P	07 31 34.1	-0.3
	baz=318						
KBL	Kabul	64.06	293	eP	P	07 31 33.5	-1.7
KBL				epP	pP	07 31 41.8	-2.2
KBL	Kabul	64.06	293	eP	P	07 31 33.5	-1.7
NC303	NORSAR Array S	64.18	344	eP	P	07 31 35.5	+0.2
	comp=Z,26nm,0.9s						
E38A	The Farm, Brul	64.19	47	eP	P	07 31 35.5	-0.1
E38A				epP	pP	07 31 44.9	+0.5
E38A	The Farm, Brul	64.19	47	P	P	07 31 35.6	+0.1
	baz=320						
NC405	NORSAR Array S	64.22	343	eP	P	07 31 35.5	0.0
NC405				epP	pP	07 31 45.2	+0.8
NC204	NORSAR Array S	64.23	344	eP	P	07 31 35.6	-0.1
NC204				epP	pP	07 31 44.4	-0.2
NB201	NORSAR Array S	64.36	344	eP	P	07 31 36.5	+0.1
NB201				epP	pP	07 31 46.4	+1.1
NB2	NORSAR Subarra	64.38	344	P	P	07 31 36.2	-0.4
	comp=Z,66nm,2.0s,baz=20,slow=6.9						
NB2	NORSAR Subarra	64.38	344	P	P	07 31 36.2	-0.4
	baz=20,slow=6.9						
NB200	NORSAR Array S	64.38	344	eP	P	07 31 35.9	-0.7
NOA	NORSAR Array B	64.38	344	P	P	07 31 35.9	-0.7
	comp=Z,6.6nm,0.7s,baz=21,slow=6.7,SNR=60						
NOA				LR	LR	08 06 25.4	
	comp=Z,127nm,18.1s,baz=15,slow=42						
LPSR	Galich'ya Gora	64.44	325	eP	P	07 31 35.1	-2.0
LPSR				e*PP	pP	07 31 43.7	-2.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NBO00	NORSAR Array S	64.46	344	eP	P	07 31 37.1	0.0
NBO00				epP	pP	07 31 46.1	+0.2
VRH	Novokhopyorsk	64.55	322	eP	P	07 31 36.2	-1.6
VRH				e*PP	pP	07 31 45.5	-1.0
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
NC602	NORSAR Array S	64.61	343	eP	P	07 31 37.6	-0.4
NC602				epP	pP	07 31 47.4	+0.5
NC602	NORSAR Array S	64.61	343	eP	P	07 31 38.1	+0.1
NAO01	NORSAR Array S	64.62	344	eP	P	07 31 37.9	-0.3
NAO01				epP	pP	07 31 47.4	+0.5
SPMN	Marine on St.	64.67	48	eP	P	07 31 38.6	-0.2
SPMN				epP	pP	07 31 48.0	+0.4
SPMN	Marine on St.	64.67	48	P	P	07 31 38.3	-0.4
	baz=320						
SURA	Surathani	64.75	251	P	P	07 31 47.8	+8.2
HFS	Hagfors	64.77	342	P	P	07 31 38.9	-0.3
	comp=Z,8.3nm,0.5s,baz=40,slow=5.6,SNR=6.8						
T25A	Trinidad	64.88	61	P	P	07 31 40.8	+0.3
	baz=318						
BGNE	Belgrade	64.98	54	P	P	07 31 41.2	+0.4
	baz=319						
D41A	Chassel	65.15	44	P	P	07 31 41.3	-0.5
	baz=321						
SLIT	Slitere, Latvi	65.18	336	eP	P	07 31 41.1	-0.7
SLIT				IAmb	IAmb	07 31 52.0	
	comp=Z,272nm,0.8s						
ANMO	Albuquerque	65.37	64	eP	P	07 31 45.1	+1.5
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	65.37	64	⇑eP	P	07 31 43.6	-0.1
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.7s						
ANMO	Albuquerque	65.37	64	P	P	07 31 44.2	+0.5
	baz=318						
G39A	Holcombe	65.37	47	P	P	07 31 42.8	-0.5
	baz=320						
LAZ	Ladron	65.39	65	eP	P	07 31 45.4	+1.6
VSR	Storozhevoye	65.48	324	eP	P	07 31 42.8	-1.1
VSR				e*PP	pP	07 31 51.6	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	Divnogorie	65.64	323	eP	P	07 31 43.8	-1.1
VORD				e*PP	pP	07 31 52.7	-1.1
VORD				pmax	pmax		
	comp=Z,30nm,1.3s						
COWI	Conover	65.65	45	eP	P	07 31 45.0	-0.1
	comp=Z,16nm,1.1s						
TRTT	Trang	65.78	250	P	P	07 31 54.8	+8.5
SKLT	Songkhla	65.78	249	P	P	07 31 57.3	+11
IZAR	Zarasai	65.81	333	eP	P	07 31 46.6	+0.7
IZAR				IAmb	IAmb	07 31 56.2	
	comp=Z,20nm,1.1s						
G40A	Rib Lake	65.82	47	P	P	07 31 46.3	+0.1
	baz=321						
ASK	Askoy	65.86	347	eP	P	07 31 46.8	+0.6
BER	Bergen	65.93	346	eP	P	07 31 47.6	+1.0
ISAL	Salakas	66.00	333	eP	P	07 31 47.6	+0.5
ISAL				IAmb	IAmb	07 31 57.6	
	comp=Z,14nm,1.1s						
CBKS	Cedar Bluff	66.11	57	eP	P	07 31 48.6	+0.4
CBKS				epP	pP	07 31 57.0	-0.2
CBKS	Cedar Bluff	66.11	57	eP	P	07 31 48.6	+0.4
CBKS	Cedar Bluff	66.11	57	P	P	07 31 48.4	+0.1
	baz=319						
IIGN	Ignalina	66.16	333	eP	P	07 31 48.4	+0.2
IIGN				IAmb	IAmb	07 31 58.6	
	comp=Z,36nm,0.9s						
MICGM	Minsk	66.43	332	eP	P	07 31 50.0	+0.1
MICGM				eLR	LR	08 04 46.0	
MNK	Minsk	66.43	332	⇓eP	P	07 31 50.0	+0.1
SCHQ	Schefferville	66.53	27	LR	LR	08 03 41.2	
	comp=Z,88nm,19.7s,baz=353,slow=38						
I41A	Arkdale	66.91	47	P	P	07 31 52.4	-0.8
	baz=321						
SCIA	State Center	67.01	51	eP	P	07 31 54.2	+0.3
SCIA				epP	pP	07 32 03.2	+0.3
SCIA	State Center	67.01	51	P	P	07 31 54.0	+0.1
	baz=320						
D46A	Sault St. Mari	67.19	42	P	P	07 31 54.2	-0.7
	baz=323						
KULM	Kulim	67.29	248	eP	P	07 31 56.1	+0.2
KULM				epP	pP	07 32 06.0	+1.1
MATQ	Matagami	67.34	36	P	P	07 31 55.3	-0.5
	baz=326						
D47A	Chapleau	67.44	41	P	P	07 31 56.1	-0.4
	baz=324						
GEYT	Alibeck	67.47	303	P	P	07 31 56.7	-0.2
	comp=Z,3.4nm,0.7s,baz=20,slow=4.7,SNR=7.4						
GEYT				LR	LR	08 04 11.0	
	comp=Z,427nm,21.3s,baz=25,slow=38						
I42A	Draeger Farm,	67.47	47	P	P	07 31 56.7	0.0
	baz=322						
KSU1	Kansas State U	67.49	55	P	P	07 31 57.1	+0.1
	baz=320						
E46A	Sault Ste Mari	67.50	42	P	P	07 31 56.8	-0.1
	baz=323						
H43A	Windswept, Lux	67.52	46	P	P	07 31 57.2	+0.2
	baz=322						
F45A	CMU Biological	67.54	44	P	P	07 31 56.9	-0.2
	baz=323						
JFWS	Jewell Farm	67.62	48	P	P	07 31 57.4	-0.3
	baz=322						
L40A	Anamosa	67.83	50	eP	P	07 31 59.4	+0.3
	comp=Z,15nm,0.8s						
L40A	Anamosa	67.83	50	P	P	07 31 58.6	-0.5
	baz=321						
E47A	Iron Bridge	67.85	42	P	P	07 31 58.6	-0.5
	baz=324						
D49A	Beulah Townshi	67.97	40	P	P	07 31 59.0	-0.8
	baz=325						
G46A	Petoskey	68.11	43	P	P	07 32 00.1	-0.7
	baz=323						
MSTX	Muleshoe	68.12	63	eP	P	07 31 59.4	-1.8
MSTX				epP	pP	07 32 10.9	+0.6
MSTX	Muleshoe	68.12	63	P	P	07 32 00.9	-0.3
	baz=319						
LSQQ	Lebel-sur-Quev	68.17	36	P	P	07 32 00.1	-0.9
	baz=326						
SUW	Suwalki	68.18	334	eP	P	07 31 59.4	-1.6
SUW				epP	pP	07 32 09.9	0.0
SUW	Suwalki	68.18	334	eP	P	07 32 01.1	+0.1
SUW				epP	pP	07 32 09.8	-0.1
SUW	Suwalki	68.18	334	eP	P	07 31 59.4	-1.6
SUW				e*PP	pP	07 32 09.9	0.0
E48A	Lockeyer	68.29	41	P	P	07 32 01.3	-0.5
	baz=324						
CHGQ	Chibougamau	68.38	34	P	P	07 32 01.2	-1.2
	baz=328						
KLNR	Kaliningrad	68.42	336	⇓eP	P	07 32 02.7	+0.3
KLNR				pmax	pmax		
	comp=Z,40nm,0.7s						
N40A	Mertquake, Sal	68.58	51	P	P	07 32 03.8	0.0
	baz=321						
H46A	Fife Lake	68.58	44	P	P	07 32 03.5	-0.2
	baz=323						
L42A	Oliver, Polo	68.60	49	P	P	07 32 03.6	-0.3
	baz=322						
M41A	Milan	68.69	50	P	P	07 32 04.1	-0.4
	baz=322						
VLDQ	Val d'Or	68.78	37	eP	P	07 32 02.9	-1.9
	comp=Z,16nm,1.0s						
E50A	Wahnapitae	68.91	40	P	P	07 32 04.8	-0.9
	baz=325						
F49A	Sandfield	68.92	41	P	P	07 32 04.6	-1.2
	baz=325						
I46A	Reed City	68.96	45	P	P	07 32 05.1	-1.0
	baz=323						
N41A	Harden Midland	69.06	50	eP	P	07 32 06.5	-0.2
	comp=Z,31nm,0.9s						
N41A	Harden Midland	69.06	50	P	P	07 32 06.9	+0.1
	baz=322						
E51A	G1948 Merrick	69.31	39	P	P	07 32 07.4	-0.8
	baz=326						
AKASG	Malin Array Be	69.32	329	P	P	07 32 07.4	-0.8
	comp=Z,15nm,0.5s,baz=30,slow=6.3,SNR=62						
AKASG				LR	LR	08 07 38.6	
	comp=Z,368nm,18.5s,baz=15,slow=40						
AKASG	Malin Array Be	69.32	329	P	P	07 32 07.4	-0.8
AKASG				pmax	pmax		
	comp=Z,16nm,0.5s						
AKASG				MLR	MLR		
	comp=Z,368nm,18.5s						
AKBB	Malin Array Si	69.32	329	eP	P	07 32 07.7	-0.5
AKBB				epP	pP	07 32 16.8	-0.2
AKBB	Malin Array Si	69.32	329	eP	P	07 32 07.7	-0.5
AKBB				e*PP	pP	07 32 16.8	-0.2
J46A	Howard City	69.34	45	P	P	07 32 08.5	+0.1
	baz=323						
D53A	Lac Vacive, Po	69.54	38	P	P	07 32 09.4	-0.3
	baz=326						
WMOK	Wichita Mounta	69.69	59	eP	P	07 32 11.2	+0.4
WMOK				epP	pP	07 32 20.2	+0.3
WMOK	Wichita Mounta	69.69	59	eP	P	07 32 11.2	+0.4
WMOK				e*PP	pP	07 32 20.2	+0.3
WMOK	Wichita Mounta	69.69	59	P	P	07 32 10.5	-0.2
	baz=320,SNR=6.2						
J47A	Sunmer	69.79	45	eP	P	07 32 11.7	+0.5
J47A				epP	pP	07 32 21.0	+0.8
J47A	Sunmer	69.79	45	P	P	07 32 10.8	-0.4
	baz=324						
K46A	Dorr	69.81	46	P	P	07 32 11.2	-0.1
	baz=324						
D54A	Lac Fusel, La	69.88	37	P	P	07 32 11.1	-0.6
	baz=327						
HDIL	Hopedale	69.92	49	eP	P	07 32 11.2	-0.9
HDIL				epP	pP	07 32 21.5	+0.4
HDIL	Hopedale	69.92	49	P	P	07 32 12.0	0.0
	baz=322						
F52A	Sundridge	69.98	40	P	P	07 32 11.9	-0.4
	baz=326						
NCK	Nalchik	69.99	316	⇑eP	P	07 32 13.8	+1.3
NCK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KIV	Kislovodsk	70.00	317	eP	P	07 32 09.9	-2.7
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,662nm,17.0s						
KBZ	Khabaz	70.10	317	P	P	07 32 13.0	0.0
	comp=Z,6.1nm,0.8s,baz=123,slow=3.9,SNR=5.4						
KBZ				LR	LR	08 07 02.7	
	comp=Z,156nm,18.9s,baz=5.5,slow=40						
L46A	Eue Claire	70.13	46	P	P	07 32 13.0	-0.3
	baz=323						
E53A	Dumoine, Ponti	70.14	38	P	P	07 32 12.2	-1.2
	baz=327						
K47A	Vermontville	70.17	45	P	P	07 32 13.5	0.0
	baz=324						
TUL1	Leonard	70.35	57	eP	P	07 32 15.3	+0.5
	comp=Z,18nm,1.2s						
TUL1	Leonard	70.35	57	P	P	07 32 15.2	+0.5
	baz=321						
K48A	Perry	70.45	45	P	P	07 32 15.3	+0.1
	baz=324						
BASO	Ashfield	70.50	42	P	P	07 32 15.3	-0.2
	baz=325						
P43A	Skaggs, Pawnee	70.53	50	P	P	07 32 15.6	-0.2
	baz=323						
NEY	Neytrino	70.56	316	⇓eP	P	07 32 17.9	+1.7
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
O44A	Mansfield	70.62	49	P	P	07 32 16.3	0.0
	baz=323						
L47A	Sherwood	70.64	46	P	P	07 32 16.3	-0.1
	baz=324						
H52A	Wyevale	70.71	41	P	P	07 32 16.2	-0.6
	baz=326						
K49A	Clarkson	70.75	44	P	P	07 32 17.1	0.0
	baz=325						
BEL	Belsk	70.77	334	eP	P	07 32 17.4	+0.4
BEL				epP	pP	07 32 26.6	+0.7
BEL	Belsk	70.77	334	eP	P	07 32 17.5	+0.4
BEL				e*PP	pP	07 32 26.6	+0.7
G53A	Haliburton	70.81	40	P	P	07 32 16.7	-0.8
	baz=326						
ABTX	Abilene, Hawle	70.84	61	eP	P	07 32 19.2	+1.3
	comp=Z,13nm,0.9s						
ABTX	Abilene, Hawle	70.84	61	P	P	07 32 17.6	-0.3
	baz=320						
PEMO	Pembroke	70.89	39	P	P	07 32 17.7	-0.2
	baz=327						
M47A	Cromwell	70.95	46	P	P	07 32 18.4	0.0
	baz=324						
CCM	Cathedral Cave	70.96	52	eP	P	07 32 18.6	+0.2
	comp=Z,14nm,1.0s						
CCM	Cathedral Cave	70.96	52	eP	P	07 32 18.6	+0.2
CCM				pmax	pmax		
	comp=Z,13nm,1.0s						
CCM	Cathedral Cave	70.96	52	P	P	07 32 18.3	-0.1
	baz=322						
L48A	N Adams	71.01	45	P	P	07 32 18.4	-0.3
	baz=324						
HHAR	Hobbs	71.01	55	eP	P	07 32 18.3	-0.5
	comp=Z,14nm,0.9s						
AAM	Ann Arbor	71.05	45	eP	P	07 32 18.7	-0.2
	comp=Z,23nm,0.8s						
AAM	Ann Arbor	71.05	45	eP	P	07 32 18.7	-0.2
AAM				pmax	pmax		
	comp=Z,23nm,0.8s						
AAM	Ann Arbor	71.05	45	P	P	07 32 18.1	-0.8
	baz=325						
F55A	Otter Lake	71.10	38	P	P	07 32 18.0	-1.1
	baz=328						
TXAR	Lajitas Array	71.13	66	P	P	07 32 20.0	+0.3
	comp=Z,2.8nm,0.8s,baz=293,slow=4.3,SNR=25						
TXAR				LR	LR	08 01 12.4	
	comp=Z,50nm,21.1s,baz=0.0,slow=34						
HYB	Hyderabad	71.14	274	i P	P	07 32 19.0	-0.8
HYB				e		07 32 28.0	
HYB				e		07 32 37.0	
L49A	Milan	71.16	45	P	P	07 32 19.5	-0.1
	baz=325						
BANO	Bancroft	71.17	39	P	P	07 32 18.3	-1.3
	baz=327						
M48A	Edgerton	71.25	46	P	P	07 32 19.4	-0.8
	baz=324						
N47A	Urbana	71.31	47	P	P	07 32 19.8	-0.7
	baz=324						
TRQ	Mont Tremblant	71.44	37	eP	P	07 32 20.8	-0.5
TRQ				epP	pP	07 32 29.8	-0.5
G55A	Calabogie	71.44	38	P	P	07 32 20.8	-0.4
	baz=327						
U40A	Yellville	71.50	54	P	P	07 32 21.3	-0.4
	baz=322,SNR=11						
M49A	Liberty Center	71.59	45	P	P	07 32 21.3	-0.9
	baz=325						
N48A	Decatur	71.62	46	P	P	07 32 21.7	-0.7
	baz=324						
LVV	L'vov	71.68	332	eP	P	07 32 22.0	-0.6
ORIO	Orleans, Innes	71.74	38	P	P	07 32 22.2	-0.8
	baz=328						
WLVO	Wesleyville	71.90	40	P	P	07 32 23.2	-0.8
	baz=327						
EKA	Eskdalemuir Ar	71.93	350	P	P	07 32 23.6	-0.4
	comp=Z,2.0nm,0.6s,baz=22,slow=5.5,SNR=11						
N49A	Columbus Grove	71.94	46	P	P	07 32 24.3	0.0
	baz=325						
O48A	Farmland	72.05	47	P	P	07 32 24.7	-0.3
	baz=324						
H56A	Elgin	72.18	39	P	P	07 32 25.1	-0.5
	baz=328						
GNI	Garni	72.20	313	⇑eP	P	07 32 28.0	+1.9
GNI				pmax	pmax		
	comp=Z,80nm,1.8s						
S44A	Carbondale	72.20	51	P	P	07 32 26.1	+0.2
	baz=323						
FCAR	Ozark Folk Cen	72.23	54	eP	P	07 32 26.0	-0.1
	comp=Z,16nm,0.8s						
KWP	Kalwaria Pacla	72.23	332	eP	P	07 32 27.0	+1.1
KWP				epP	pP	07 32 36.1	+1.2
KWP	Kalwaria Pacla	72.23	332	eP	P	07 32 26.2	+0.3
KWP				epP	pP	07 32 36.0	+1.2
KWP	Kalwaria Pacla	72.23	332	eP	P	07 32 26.2	+0.3
KWP				e*PP	pP	07 32 36.0	+1.2
BLO	Bloomington	72.31	48	eP	P	07 32 26.8	+0.3
	comp=Z,10nm,0.8s						
BLO	Bloomington	72.31	48	eP	P	07 32 26.8	+0.3
BLO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PBMO	Poplar Bluff	72.36	52	eP	P	07 32 27.1	+0.2
	comp=Z,21nm,1.1s						
JCT	Junction City	72.41	63	eP	P	07 32 28.7	+1.4
	comp=Z,7.7nm,0.9s						
JCT	Junction City	72.41	63	P	P	07 32 28.1	+0.8
	baz=321						
OJC	Ojcow	72.50	334	eP	P	07 32 28.2	+0.6
OJC				epP	pP	07 32 37.1	+0.6
OJC	Ojcow	72.50	334	eP	P	07 32 28.1	+0.6
OJC				epP	pP	07 32 37.3	+0.8
OJC	Ojcow	72.50	334	eP	P	07 32 28.1	+0.6
OJC				e*PP	pP	07 32 37.3	+0.8
MEDO	Medina	72.51	41	P	P	07 32 27.1	-0.6
	baz=327						
N50A	Nevada	72.52	45	P	P	07 32 27.9	+0.1
	baz=325						
MIAR	Mount Ida	72.55	56	eP	P	07 32 28.5	+0.5
	comp=Z,9.1nm,0.9s						
MIAR	Mount Ida	72.55	56	eP	P	07 32 28.5	+0.5
MIAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MIAR	Mount Ida	72.55	56	P	P	07 32 28.5	+0.5
	baz=322						
P48A	Milroy	72.57	47	eP	P	07 32 28.3	+0.2
	comp=Z,22nm,0.9s						
P48A	Milroy	72.57	47	P	P	07 32 27.5	-0.6
	baz=324,SNR=6.0						
SIM	Simferopol'	72.58	323	eP	P	07 32 29.0	+0.9
SIM				pmax	pmax		
	comp=Z,16nm,0.8s						
WHAR	Wooly Hollow	72.62	55	eP	P	07 32 28.6	+0.2
WHAR				epP	sP	07 32 39.9	-1.1
M52A	Chesterland	72.66	44	P	P	07 32 27.8	-0.9
	baz=326						
KIS	Kishinev	72.68	327	⇓iP	P	07 32 28.0	-0.6
	comp=Z,80nm,1.0s						
KIS	Kishinev	72.68	327	i PcP	PcP	07 32 38.0	-7.9
KIS				eS	S	07 41 50.0	-1.3
KIS				eL	L	07 56 30.0	
KIS				LRM	MLR	08 07 36.0	
	comp=Z,500nm,16.0s						
KIS	Kishinev	72.68	327	⇓iP	P	07 32 28.0	-0.6
KIS				i		07 32 38.0	
KIS				eS	S	07 41 50.0	-1.3
KIS				pmax	pmax		
	comp=Z,80nm,1.0s						
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
KIS				MLR	MLR		
	comp=N,300nm,15.0s						
W41B	Gary Mavity, V	72.73	55	P	P	07 32 29.3	+0.2
	baz=322,SNR=5.4						
N51A	Ashland	72.74	45	eP	P	07 32 28.7	-0.5
N51A				epP	pP	07 32 37.7	-0.4
N51A	Ashland	72.74	45	P	P	07 32 28.6	-0.5
	baz=325						
USIN	University of	72.74	50	eP	P	07 32 27.8	-1.3
USIN				epP	pP	07 32 39.2	+0.9
L53A	Girard	72.78	43	P	P	07 32 29.5	+0.1
	baz=326						
PARMO	Parma	72.78	52	eP	P	07 32 30.7	+1.3
	comp=N,81nm,0.8s						
O50A	Cable	72.82	46	P	P	07 32 29.5	-0.1
	baz=325						
KSP	Ksiaz	72.83	337	eP	P	07 32 29.7	+0.3
KSP				epP	pP	07 32 39.0	+0.7
KSP	Ksiaz	72.83	337	eP	P	07 32 29.7	+0.3
KSP				e*PP	pP	07 32 39.1	+0.7
P49A	Miami Univ. Ec	72.83	47	P	P	07 32 29.9	+0.3
	baz=325						
Q48A	North Vernon	72.86	48	P	P	07 32 29.7	-0.1
	baz=324						
X40A	Basin Creek Fa	72.97	56	P	P	07 32 30.8	+0.2
	baz=322						
KOLS	Kolonicke sedl	72.99	332	eP	P	07 32 31.4	+1.0
KOLS	Kolonicke sedl	72.99	332	eP	P	07 32 31.4	+1.0
KOLS				epP	pP	07 32 39.8	+0.4

K55A	Perry	73.03	41	P	P	07 32 30.5	-0.3
	baz=327						
M53A	WI Miller and	73.03	43	P	P	07 32 30.6	-0.2
	baz=326						
ACSO	Alum Creek Sta	73.04	45	P	P	07 32 30.7	-0.1
	baz=325						
NIE	Niedzica	73.10	334	eP	P	07 32 31.1	0.0
NIE				epP	pP	07 32 40.9	+0.8
NIE	Niedzica	73.10	334	eP	P	07 32 31.1	0.0
NIE				e*PP	pP	07 32 40.8	+0.8
OSTC	Ostas	73.11	337	eP	P	07 32 32.2	+1.1
OSTC				AMS	AMS	08 11 10.0	
	comp=N,400nm,15.8s						
CHVC	Chvalec	73.12	337	eP	P	07 32 31.8	+0.6
CHVC				ex	x	07 32 40.9	
CHVC				AMS	AMS	08 09 50.0	
	comp=N,500nm,13.8s						
N52A	McGinn’s Farm,	73.12	44	P	P	07 32 31.2	-0.2
	baz=326						
CLL	Collm	73.15	339	eP	P	07 32 31.0	-0.3
CLL				epP	pP	07 32 40.9	+0.6
CLL	Collm	73.15	339	⇓iP	P	07 32 32.1	+0.8
CLL				pmax	pmax		
	comp=Z,29nm,1.4s						
CLL	Collm	73.15	339	⇓iP	P	07 32 32.1	+0.8
	comp=Z,29nm,1.4s						
CLL				i pP	pP	07 32 40.0	-0.3
	comp=Z,49nm,1.5s						
CLL				i sP	sP	07 32 44.2	+0.5
CLL				i		07 32 51.3	
CLL				ePP	PP	07 35 19.0	+5.3
CLL				eS	SKiKP	07 42 06.0	+5.6
CLL				ePS	PnS	07 42 36.0	+5.5
CLL				eSS	SS	07 46 36.0	-0.8
CLL				e		07 47 48.0	
WCI	Wyandotte Cave	73.17	49	eP	P	07 32 31.8	+0.1
WCI				epP	pP	07 32 41.1	+0.3
WCI	Wyandotte Cave	73.17	49	eP	P	07 32 31.8	+0.1
WCI				e*PP	pP	07 32 41.1	+0.3
WCI	Wyandotte Cave	73.17	49	P	P	07 32 32.4	+0.7
	baz=324						
Q49A	Aurora	73.18	47	P	P	07 32 31.6	-0.2
	baz=325						
P50A	Jamestown	73.18	46	P	P	07 32 31.2	-0.6
	baz=325						
UPC	Upice	73.20	337	eP	P	07 32 32.3	+0.6
UPC				e		07 32 41.1	
UPC				MLR	MLR		
	comp=Z,500nm,14.8s						
UPC	Upice	73.20	337	eP	P	07 32 32.3	+0.6
UPC				epP	pP	07 32 41.1	+0.5
UPC				AMS	AMS	08 11 20.0	
	comp=Z,500nm,14.8s						
UZH	Uzhgorod	73.25	332	⇓eP	P	07 32 32.2	+0.2
UZH				e		07 32 44.1	
BUR08	Bucovina Ar. S	73.27	330	eP	P	07 32 32.0	-0.3
BUR08				epP	pP	07 32 41.9	+0.7
O51A	Pataskala	73.27	45	P	P	07 32 31.6	-0.6
	baz=326,SNR=5.1						
DPC	Dobruska-Polom	73.27	337	eP	P	07 32 33.1	+1.0
DPC				e		07 32 41.9	
DPC				MLR	MLR		
	comp=Z,500nm,15.8s						
DPC	Dobruska-Polom	73.27	337	eP	P	07 32 33.1	+1.0
DPC				epP	pP	07 32 41.9	+0.8
DPC				AMS	AMS	08 09 00.0	
	comp=Z,500nm,15.8s						
OKC	Ostrava-Krasne	73.29	335	eP	P	07 32 32.3	+0.1
OKC				e		07 32 41.7	
OKC				e		07 32 52.9	
OKC				MLR	MLR		
	comp=Z,700nm,16.1s						
OKC	Ostrava-Krasne	73.29	335	eP	P	07 32 32.3	+0.1
OKC				epP	pP	07 32 41.7	+0.6
OKC				ex	x	07 32 52.9	
OKC				AMS	AMS	08 08 40.0	
	comp=Z,700nm,16.1s						
BURAR	Bucovina Array	73.29	330	⇓iP	P	07 32 32.4	0.0
BURAR	Bucovina Array	73.29	330	⇓P	P	07 32 32.4	0.0
L55A	Hinsdale	73.34	41	P	P	07 32 32.8	+0.2
	baz=327						
BRG	Berggiesshubel	73.35	338	eP	P	07 32 33.0	+0.5
	comp=Z,7.9nm,1.2s						
BRG				i		07 32 41.2	
	comp=Z,23nm,1.5s						
BRG				S	SKiKP	07 42 00.0	-0.7
	comp=N,423nm,13.5s						
	comp=E,174nm,13.8s						
	comp=Z,543nm,13.6s						
BRG	Berggiesshubel	73.35	338	eP	P	07 32 33.0	+0.5
BRG				S	SKiKP	07 42 00.0	-0.7
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BRG				MLR	MLR		
	comp=N,423nm,13.5s						
BRG				MLR	MLR		
	comp=E,174nm,13.8s						
BRG				MLR	MLR		
	comp=Z,543nm,13.6s						
M54A	Oil Creek Stat	73.40	42	P	P	07 32 32.3	-0.7
	baz=327						
N53A	Lisbon	73.49	44	P	P	07 32 32.7	-0.9
	baz=326						
MORC	Moravsky Berou	73.50	336	eP	P	07 32 33.6	+0.2
MORC				epP	pP	07 32 43.2	+0.8
MORC	Moravsky Berou	73.50	336	eP	P	07 32 33.7	+0.2
MORC				e*PP	pP	07 32 43.2	+0.8
MORC	Moravsky Berou	73.50	336	eP	P	07 32 34.1	+0.6
MORC				e		07 32 42.7	
PVCC	Panska Ves	73.53	338	AMS	AMS	08 10 00.0	
	comp=Z,800nm,15.4s						
LANS	Liptovska Anna	73.57	334	eP	P	07 32 35.5	+1.6
LANS				e		07 32 44.6	
LANS	Liptovska Anna	73.57	334	eP	P	07 32 35.5	+1.6
LANS				epP	pP	07 32 44.6	+1.8
BIZ	Bicaz	73.61	329	⇑iP	P	07 32 34.6	+0.4
O52A	Adamsville	73.63	45	eP	P	07 32 34.4	+0.1
O52A				epP	pP	07 32 43.5	+0.1
O52A	Adamsville	73.63	45	P	P	07 32 34.0	-0.4
	baz=326,SNR=5.7						
TRPA	Tarpa	73.63	332	⇑iP	P	07 32 35.2	+1.0
TRPA	Tarpa	73.63	332	⇓eP	P	07 32 34.1	-0.1
R49A	Shelbyville	73.64	48	eP	P	07 32 33.7	-0.7
	comp=Z,14nm,1.1s						
R49A				epP	pP	07 32 44.0	+0.4
R49A	Shelbyville	73.64	48	P	P	07 32 34.2	-0.3
	baz=325						
N54A	Moraine State	73.72	43	eP	P	07 32 35.1	+0.3
N54A				epP	pP	07 32 44.2	+0.3
N54A	Moraine State	73.72	43	P	P	07 32 35.0	+0.1
	baz=326						
Q50A	Georgetown	73.73	47	P	P	07 32 34.9	-0.1
	baz=325						
O53A	New Philadelph	73.79	44	P	P	07 32 35.1	-0.2
	baz=326						
T47A	Sharon Grove	73.79	50	eP	P	07 32 35.4	+0.1
T47A				epP	pP	07 32 45.2	+0.8
T47A	Sharon Grove	73.79	50	P	P	07 32 34.7	-0.6
	baz=324,SNR=6.9						
M55A	Ridgway	73.81	42	P	P	07 32 35.0	-0.4
	baz=327						
TESR	Tescani	73.82	328	⇑iP	P	07 32 35.3	0.0
Q51A	Peebles	73.86	46	eP	P	07 32 36.2	+0.4
Q51A				epP	pP	07 32 45.1	+0.2
Q51A	Peebles	73.86	46	P	P	07 32 35.4	-0.3
	baz=325						
P52A	Corning	73.90	45	P	P	07 32 35.7	-0.2
	baz=326						
S49A	Springfield	74.00	48	P	P	07 32 35.6	-0.9
	baz=325,SNR=6.6						
R50A	Paris	74.03	47	eP	P	07 32 37.2	+0.4
R50A				epP	pP	07 32 46.2	+0.3
R50A	Paris	74.03	47	P	P	07 32 37.0	+0.3
	baz=325						
PRU	Pruhonice	74.04	338	eP	P	07 32 37.3	+0.7
PRU				e		07 32 46.1	
PRU				MLR	MLR		
	comp=Z,700nm,14.4s						
PRU	Pruhonice	74.04	338	eP	P	07 32 37.3	+0.7
PRU				epP	pP	07 32 46.1	+0.6
PRU				AMS	AMS	08 10 30.0	
	comp=Z,700nm,14.4s						
GOPC	GO Pecny, Ondr	74.05	337	eP	P	07 32 37.7	+1.0
GOPC				e		07 32 46.4	
GOPC				MLR	MLR		
	comp=Z,600nm,14.2s						
GOPC	GO Pecny, Ondr	74.05	337	eP	P	07 32 37.7	+1.0
GOPC				epP	pP	07 32 46.4	+0.8
GOPC				AMS	AMS	08 09 50.0	
	comp=Z,600nm,14.2s						
WVT	Waverly	74.14	51	eP	P	07 32 37.2	-0.2
WVT				epP	pP	07 32 46.9	+0.4
WVT	Waverly	74.14	51	eP	P	07 32 37.2	-0.2
WVT				e*PP	pP	07 32 46.9	+0.4
WVT	Waverly	74.14	51	P	P	07 32 37.2	-0.2
	baz=324						
VRAC	Vranov	74.17	336	P	P	07 32 38.3	+0.9
	comp=Z,7.2nm,1.0s,baz=24,slow=7.7,SNR=12						
VRAC	Vranov	74.17	336	eP	P	07 32 38.2	+0.9
VRAC				e		07 32 47.1	
NATX	Nacogdoches	74.17	59	eP	P	07 32 37.7	+0.1
NATX				epP	pP	07 32 47.9	+1.1
O54A	Avella	74.20	44	P	P	07 32 37.1	-0.6
	baz=326						
V46A	Holladay	74.26	52	P	P	07 32 37.8	-0.3
	baz=324						
NKC	Novy Kostel	74.29	339	eP	P	07 32 39.2	+1.2
NKC				e		07 32 47.8	
NKC				MLR	MLR		
	comp=Z,500nm,14.1s						
NKC	Novy Kostel	74.29	339	eP	P	07 32 39.2	+1.2
NKC				ex	x	07 32 47.8	
NKC				AMS	AMS	08 11 30.0	
	comp=Z,500nm,14.1s						
N55A	Marion Center	74.29	42	eP	P	07 32 37.8	-0.5
N55A				epP	pP	07 32 47.4	+0.1
N55A	Marion Center	74.29	42	P	P	07 32 37.4	-0.8
	baz=327,SNR=5.8						
JAVC	Velka Javorina	74.31	335	eP	P	07 32 39.8	+1.5
JAVC				e		07 32 48.8	
VYHS	Vyhne	74.34	334	eP	P	07 32 39.1	+0.7
VYHS				e		07 32 48.0	
VYHS	Vyhne	74.34	334	eP	P	07 32 39.1	+0.7
VYHS				epP	pP	07 32 47.9	+0.6
P53A	Whipple	74.34	45	P	P	07 32 38.4	-0.1
	baz=326						
R51A	Hillsboro	74.35	47	P	P	07 32 38.4	-0.2
	baz=325						
VRI	Vrincioaia	74.36	328	⇑iP	P	07 32 38.8	+0.2
VRI	Vrincioaia	74.36	328	⇑P	P	07 32 38.8	+0.2
Q52A	Bidwell	74.39	46	P	P	07 32 38.3	-0.5
	baz=326						
PLOR	Plostina	74.40	328	⇑iP	P	07 32 39.9	+1.1
PLOR	Plostina	74.40	328	⇑P	P	07 32 39.9	+1.1
T49A	Edmonton	74.43	49	eP	P	07 32 38.6	-0.5
	comp=Z,10nm,0.9s						
T49A	Edmonton	74.43	49	P	P	07 32 38.8	-0.3
	baz=325						
KRUC	Moravsky	74.45	336	eP	P	07 32 39.9	+0.9
KRUC				e		07 32 48.6	
TREC	Trest	74.46	337	eP	P	07 32 40.2	+1.1
TREC				e		07 32 48.6	
TREC				MLR	MLR		
	comp=Z,500nm,14.6s						
TREC	Trest	74.46	337	eP	P	07 32 40.2	+1.1
TREC				epP	pP	07 32 48.6	+0.6
TREC				AMS	AMS	08 09 50.0	
	comp=Z,500nm,14.6s						
N56A	West Decatur	74.46	42	P	P	07 32 38.9	-0.3
	baz=327,SNR=5.6						
OZUR		74.46	329	⇑iP	P	07 32 39.9	+0.7
S50A	Richmond	74.49	48	P	P	07 32 39.6	+0.2
	baz=325						
L58A	Harry Jones Me	74.49	40	P	P	07 32 39.3	-0.1
	baz=328						
LTVH	Ltavrtes, Hu	74.49	332	eP	P	07 32 48.0	+8.8
CFR	Carcaliu	74.50	327	⇓iP	P	07 32 39.0	-0.3
CFR	Carcaliu	74.50	327	⇓P	P	07 32 39.0	-0.3
V47A	Nunnelly	74.53	51	P	P	07 32 39.8	+0.1
	baz=324						
PSZ	Piszkesteto	74.58	333	eP	P	07 32 39.3	-0.5
PSZ				epP	pP	07 32 50.1	+1.3
PSZ	Piszkesteto	74.58	333	⇑iP	P	07 32 41.5	+1.7
PSZ	Piszkesteto	74.58	333	eP	P	07 32 39.3	-0.5
PSZ				e*PP	pP	07 32 50.1	+1.3
PSZ	Piszkesteto	74.58	333	eP	P	07 32 40.1	+0.2
CJR	Cluj-Napoca	74.59	330	⇓iP	P	07 32 39.3	-0.6
CJR	Cluj-Napoca	74.59	330	⇓P	P	07 32 39.3	-0.6
O55A	Ligonier	74.64	43	P	P	07 32 40.4	+0.1
	baz=327						
P54A	Burton	74.64	44	P	P	07 32 40.1	-0.2
	baz=326,SNR=5.6						
OXF	Oxford	74.67	53	eP	P	07 32 41.2	+0.7
OXF				epP	pP	07 32 51.5	+1.9
OXF	Oxford	74.67	53	P	P	07 32 40.8	+0.3
	baz=324						
SMOL	Smolenice	74.69	335	eP	P	07 32 42.3	+1.9
SMOL				e		07 32 50.6	
SMOL	Smolenice	74.69	335	eP	P	07 32 42.3	+1.9
SMOL				epP	pP	07 32 50.6	+1.2
DOPR	Dopca	74.70	329	⇑iP	P	07 32 42.1	+1.6
R52A	Catlettsburg	74.74	46	P	P	07 32 40.8	-0.1
	baz=326						
DRGR		74.79	331	⇑iP	P	07 32 41.4	+0.3
DRGR		74.79	331	⇑P	P	07 32 41.4	+0.3
U49A	Red Boiling Sp	74.80	50	P	P	07 32 41.5	+0.3
	baz=325						
Q53A	Leroy	74.80	45	P	P	07 32 41.2	0.0
	baz=326						
T50A	Nancy	74.82	49	P	P	07 32 41.0	-0.3
	baz=325						
MODS	Modra-Piesok	74.86	335	eP	P	07 32 42.3	+0.9
MODS				e		07 32 50.7	
MODS				pmax	pmax		
	comp=Z,27nm,1.2s						
MODS	Modra-Piesok	74.86	335	eP	P	07 32 42.3	+0.9
MODS				epP	pP	07 32 50.7	+0.3
MCWV	Mont Chateau	74.86	44	eP	P	07 32 41.5	0.0
MCWV				epP	pP	07 32 51.1	+0.5
MCWV	Mont Chateau	74.86	44	P	P	07 32 41.2	-0.4
	baz=327						
SSPA	Standing Stone	74.86	42	eP	P	07 32 41.1	-0.4
SSPA				epP	pP	07 32 50.8	+0.2
SSPA	Standing Stone	74.86	42	P	P	07 32 41.4	-0.1
	baz=328						
CLTN	Cedars of Leba	74.88	50	eP	P	07 32 42.0	+0.3
CLTN				epP	pP	07 32 51.2	+0.3
S51A	Beattyville	74.89	47	P	P	07 32 41.8	+0.1
	baz=325						
O56A	Blue Knob Stat	74.89	42	eP	P	07 32 41.7	-0.1
O56A				epP	pP	07 32 51.1	+0.3
O56A	Blue Knob Stat	74.89	42	P	P	07 32 41.2	-0.6
	baz=327,SNR=6.8						
N57A	Milroy	74.90	42	P	P	07 32 41.2	-0.5
	baz=328,SNR=9.9						
V48A	Smith Brothers	74.93	51	eP	P	07 32 42.0	0.0
	comp=Z,12nm,0.9s						
V48A	Smith Brothers	74.93	51	P	P	07 32 41.7	-0.3
	baz=324,SNR=6.8						
PLAL	Pickwick Lake	74.94	52	eP	P	07 32 42.5	+0.5
	comp=Z,9.9nm,0.9s						
MLR	Muntele Rosu	74.95	328	P	P	07 32 42.4	+0.3
	comp=Z,9.8nm,0.8s,baz=196,slow=16,SNR=16						
MLR	Muntele Rosu	74.95	328	eP	P	07 32 42.4	+0.3
MLR				epP	pP	07 32 51.6	+0.5
MLR	Muntele Rosu	74.95	328	⇑iP	P	07 32 42.5	+0.4
W47A	Westpoint	74.96	52	P	P	07 32 41.8	-0.4
	baz=324						
P55A	Reedsville	75.00	44	P	P	07 32 41.8	-0.6
	baz=327,SNR=7.5						
HARR	Harsova	75.00	327	⇓iP	P	07 32 42.2	0.0
HARR	Harsova	75.00	327	⇓P	P	07 32 42.2	0.0
Q54A	Coxs Mills	75.00	45	P	P	07 32 41.4	-0.9
	baz=326						
X46A	Booneville	75.04	53	P	P	07 32 42.9	+0.3
	baz=324						
TIRR	Tirgusor	75.04	326	eP	P	07 32 41.2	-1.3
TIRR				epP	pP	07 32 52.0	+0.6
TIRR	Tirgusor	75.04	326	⇑iP	P	07 32 42.8	+0.4
TIRR	Tirgusor	75.04	326	eP	P	07 32 41.2	-1.3
TIRR				e*PP	pP	07 32 52.0	+0.6
R53A	Hurricane	75.05	46	eP	P	07 32 43.1	+0.4
	comp=Z,19nm,0.8s						
R53A	Hurricane	75.05	46	P	P	07 32 43.4	+0.7
	baz=326						
TLB	Topalu	75.06	327	⇑iP	P	07 32 43.2	+0.7
TLB	Topalu	75.06	327	P	P	07 32 43.2	+0.7
GRA1	Grafenberg Arr	75.06	340	eP	P	07 32 42.3	-0.2
GRA1				epP	pP	07 32 52.2	+0.7
GRF	Grafenberg Arr	75.06	340	eP	P	07 32 42.3	-0.2
GRF				e*PP	pP	07 32 52.2	+0.7
KHC	Kasperske Hory	75.06	338	eP	P	07 32 41.2	-1.4
KHC				epP	pP	07 32 52.7	+1.2
KHC	Kasperske Hory	75.06	338	c iP	P	07 32 43.2	+0.6
KHC				pmax	pmax		
	comp=Z,29nm,1.0s						
KHC	Kasperske Hory	75.06	338	eP	P	07 32 42.5	-0.1
KHC				epP	pP	07 32 51.5	0.0
KHC				ex	x	07 33 03.3	
KHC				AMS	AMS	08 11 10.0	
	comp=Z,700nm,15.0s						
ZST	Bratislava	75.07	335	eP	P	07 32 43.3	+0.7
ZST	Bratislava	75.07	335	eP	P	07 32 43.3	+0.7
M59A	Waymart	75.08	40	P	P	07 32 42.6	-0.2
	baz=329						
ISR	Istrita	75.08	328	⇑iP	P	07 32 42.3	-0.5
ISR	Istrita	75.08	328	⇑P	P	07 32 42.3	-0.5
S52A	Salyersville	75.09	47	P	P	07 32 43.2	+0.3
	baz=326						
SRO	Srobarova	75.10	334	eP	P	07 32 44.2	+1.4
SRO				e		07 32 53.1	
SRO				pmax	pmax		
	comp=Z,65nm,1.7s						
SRO	Srobarova	75.10	334	eP	P	07 32 44.2	+1.4
SRO				epP	pP	07 32 53.1	+1.4
N58A	Sunbury	75.17	41	P	P	07 32 43.7	+0.5
	baz=328						
WRAB	Tennant Creek	75.18	205	eP	P	07 32 42.9	-0.6
	comp=Z,15nm,1.4s						
WRAB	Tennant Creek	75.18	205	⇑eP	P	07 32 42.0	-1.4
WRAB				pmax	pmax		
	comp=Z,20nm,1.9s						
WR1	Warramunga Arr	75.19	205	eP	P	07 32 42.7	-0.8
WRA	Warramunga Arr	75.19	205	P	P	07 32 42.7	-0.8
	comp=Z,4.1nm,1.2s,baz=7.8,slow=8.0,SNR=6.7						
BUD	Budapest	75.21	334	⇓eP	P	07 32 44.0	+0.6
T51A	Gray	75.28	48	P	P	07 32 44.2	+0.2
	baz=325						
VOIR		75.28	329	⇑iP	P	07 32 44.9	+0.9
VOIR		75.28	329	⇑P	P	07 32 44.9	+0.9
GEC2	GERESS Array S	75.30	338	eP	P	07 32 44.6	+0.6
GEC2				epP	pP	07 32 53.5	+0.5
GEC2	GERESS Array S	75.30	338	eP	P	07 32 44.7	+0.6
GEC2				e*PP	pP	07 32 53.5	+0.5
GERES	GERESS Array B	75.30	338	P	P	07 32 44.6	+0.6
	comp=Z,2.2nm,0.7s,baz=35,slow=4.9,SNR=25						
GERES				LR	LR	08 10 21.9	
	comp=Z,176nm,18.9s,baz=21,slow=39						
U50A	Jamestown	75.31	49	P	P	07 32 44.3	+0.1
	baz=325,SNR=5.5						
Q55A	Buckhannon	75.32	44	P	P	07 32 44.4	+0.1
	baz=327						
O57A	Amberson	75.33	42	P	P	07 32 44.3	+0.1
	baz=328						
V49A	McMinnville	75.35	50	P	P	07 32 44.3	-0.1
	baz=325						
P56A	Dayton Farm, R	75.42	43	P	P	07 32 44.5	-0.2
	baz=327,SNR=10						
X47A	Russelville	75.42	52	P	P	07 32 45.2	+0.4
	baz=324						
ARR	Arges	75.48	329	⇑iP	P	07 32 47.2	+2.1
N59A	State Game Lan	75.48	40	eP	P	07 32 45.1	-0.1
	comp=Z,13nm,0.8s						
N59A	State Game Lan	75.48	40	P	P	07 32 44.8	-0.3
	baz=329						
S53A	Williamson	75.51	46	P	P	07 32 45.2	-0.1
	baz=326						
BCLA	Clavier	75.52	344	⇑P	P	07 32 44.9	-0.2
BCLA				⇑pP	pP	07 32 54.1	0.0
	comp=Z,18nm,1.3s						
SIRR	Siria	75.58	331	⇑iP	P	07 32 46.1	+0.6
T52A	Hallie	75.60	47	eP	P	07 32 46.6	+0.8
	comp=Z,21nm,1.1s						
T52A	Hallie	75.60	47	P	P	07 32 46.4	+0.5
	baz=326						
R54A	Victor	75.60	45	P	P	07 32 46.3	+0.4
	baz=326						
CONA	Conrad Observa	75.63	336	eP	P	07 32 47.2	+1.2
	comp=Z,8.9nm,1.0s,SNR=8.0						
SOP	Sopron	75.68	335	eP	P	07 32 48.0	+1.9
O58A	Lewisberry	75.69	41	P	P	07 32 46.5	+0.2
	baz=328						
W49A	Belvidere	75.70	51	P	P	07 32 47.0	+0.5
	baz=325						
HRV	Adam Dziewonsk	75.73	37	P	P	07 32 46.1	-0.3
	baz=330						
U51A	La Follette	75.73	48	P	P	07 32 46.7	+0.1
	baz=326						
AMBH	Ambrzfalva	75.77	332	eP	P	07 32 47.1	+0.5
SWET	Sewanee	75.78	50	eP	P	07 32 47.3	+0.4
	comp=Z,16nm,0.9s						
P57A	Homestead Farm	75.78	43	P	P	07 32 47.1	+0.3
	baz=328						
V50A	Pikevile	75.80	50	P	P	07 32 46.6	-0.4
	baz=325,SNR=5.4						
TZTN	Tazewell	75.81	48	eP	P	07 32 47.1	+0.1
	comp=Z,13nm,1.0s						
TZTN	Tazewell	75.81	48	P	P	07 32 47.5	+0.4
	baz=326						
O59A	Robesonia	75.83	41	P	P	07 32 47.5	+0.4
	baz=328						
X48A	Hartselle	75.87	52	P	P	07 32 47.1	-0.3
	baz=324						
R55A	Marlinton	75.89	45	P	P	07 32 47.7	+0.1
	baz=327						
T53A	Wise	75.91	47	P	P	07 32 47.7	0.0
	baz=326						
M61A	Granite Spring	75.93	39	P	P	07 32 47.4	-0.3
	baz=330						
DOU	Dourbes	75.96	344	⇑P	P	07 32 48.0	+0.4
Q57A	Strasburg	75.99	43	P	P	07 32 47.8	-0.3
	baz=328						
U52A	Thorn Hill	76.01	48	P	P	07 32 48.3	+0.1
	baz=326						
GZR	Gura Zlata	76.03	330	⇑iP	P	07 32 48.0	-0.2
GZR	Gura Zlata	76.03	330	⇑P	P	07 32 48.0	-0.2
V51A	Loudon	76.04	49	eP	P	07 32 48.0	-0.4
V51A				epP	pP	07 32 57.7	+0.2
V51A	Loudon	76.04	49	P	P	07 32 48.3	-0.1
	baz=325,SNR=5.1						
ILGA	Ilgaz	76.06	321	eP	P	07 32 49.0	+0.3
	comp=Z,76nm,0.9s						
P58A	Pank, Wackersv	76.07	42	P	P	07 32 48.4	-0.1
	baz=328						
W50A	Signal Mountai	76.09	50	eP	P	07 32 48.7	0.0
	comp=Z,11nm,0.8s						
W50A	Signal Mountai	76.09	50	P	P	07 32 48.7	0.0
	baz=325,SNR=5.8						
R56A	Bull Pasture M	76.10	44	P	P	07 32 48.4	-0.3
	baz=327						
WLF	Walferdange	76.10	343	⇑pP	pP	07 32 57.7	+0.3
MOA	Molln	76.10	337	eP	P	07 32 49.0	+0.4
	comp=Z,5.7nm,0.9s						
PAL	Palisades	76.14	39	P	P	07 32 48.3	-0.5
	baz=329						
BZS	Buzias	76.18	331	⇑iP	P	07 32 48.5	-0.4
BZS	Buzias	76.18	331	⇑P	P	07 32 48.6	-0.4
Y48A	Jasper	76.25	52	P	P	07 32 49.1	-0.4
	baz=324						
CPCT	Cooper Cave	76.25	49	eP	P	07 32 49.6	+0.1
	comp=Z,9.3nm,0.8s						
T54A	Tazewell	76.27	46	P	P	07 32 50.2	+0.4
	baz=326						
P59A	Jarrettsville	76.33	41	P	P	07 32 49.7	-0.2
	baz=328						
ARSA	Arzberg	76.35	336	i P	P	07 32 50.7	+0.7
	comp=Z,6.6nm,0.9s,SNR=7.3						
V52A	Sevierville	76.36	48	eP	P	07 32 50.1	-0.1
	comp=Z,14nm,1.0s						
V52A	Sevierville	76.36	48	P	P	07 32 50.4	+0.2
	baz=326						
Q58A	Fox Den Farm,	76.38	43	P	P	07 32 50.0	-0.2
	baz=328,SNR=5.8						
W51A	Cleveland	76.38	50	P	P	07 32 50.1	-0.2
	baz=325						
U53A	Fall Branch	76.40	47	P	P	07 32 50.2	-0.2
	baz=326,SNR=5.1						
X50B	Fort Payne	76.53	51	P	P	07 32 51.5	+0.3
	baz=325						
R57A	Stanardsville	76.57	44	P	P	07 32 51.5	+0.2
	baz=328						
T55A	Pulaski	76.58	46	P	P	07 32 51.8	+0.3
	baz=327						
HERR	Herculane	76.60	330	⇑iP	P	07 32 51.4	0.0

U54A	Nelsons Funny	76.61	47	P	P	07 32 51.5	-0.1
	baz=326						
S56A	Natural Bridge	76.64	45	P	P	07 32 51.7	0.0
	baz=327						
BLA	Blacksburg	76.66	45	P	P	07 32 51.9	0.0
	baz=327						
Y49A	Blount Mountai	76.66	52	P	P	07 32 52.1	+0.2
	baz=325						
O61A	Allentown	76.67	40	P	P	07 32 51.6	-0.2
	baz=329						
BEHE	Becsehely	76.75	335	*e*P	P	07 32 54.0	+1.8
R58A	Rapidan	76.78	43	P	P	07 32 52.2	-0.4
	baz=328						
X51A	Calhoun	76.82	50	P	P	07 32 53.2	+0.4
	baz=325						
W52A	Murphy	76.82	49	*e*P	P	07 32 52.3	-0.5
	comp=Z,9.1nm,0.8s						
W52A	Murphy	76.82	49	P	P	07 32 53.3	+0.5
	baz=326						
S57A	Dark Hollow, R	76.83	44	*e*P	P	07 32 53.2	+0.4
S57A				*e*pP	pP	07 33 02.5	+0.6
S57A	Dark Hollow, R	76.83	44	P	P	07 32 52.6	-0.2
	baz=328						
V53A	Saluda	76.86	48	P	P	07 32 53.1	0.0
	baz=326						
Y50A	Piedmont	76.95	51	P	P	07 32 53.4	-0.1
	baz=325						
BFO	Black Forest	76.96	341	*e*P	P	07 32 54.5	+1.1
BFO				*e*pP	pP	07 33 03.1	+0.7
BFO	Black Forest	76.96	341	*e*P	P	07 32 54.5	+1.1
BFO				*e**PP	pP	07 33 03.1	+0.7
U55A	TA2, Sparta	76.97	46	P	P	07 32 54.1	+0.4
	baz=327						
T56A	Rocky Mt	76.98	45	P	P	07 32 53.1	-0.6
	baz=327						
SOKA	Soboth	77.00	336	*e*P	P	07 32 54.5	+0.8
	comp=Z,21nm,1.5s,SNR=7.4						
PERS	Pernice	77.02	336	*e*P	P	07 32 54.0	+0.2
PERS				*i*		07 33 03.1	
KBA	Koelnbreinsper	77.04	337	*e*P	P	07 32 55.0	+0.9
	comp=Z,23nm,0.8s,SNR=19						
LRAL	Lakeview Retre	77.04	52	*e*P	P	07 32 54.2	+0.2
	comp=Z,5.3nm,0.8s						
LRAL	Lakeview Retre	77.04	52	P	P	07 32 54.0	-0.1
	baz=325						
CDF	Champ du Feu	77.09	342	*e*P	P	07 32 54.5	+0.3
CDF				pmax	pmax		
	comp=Z,15nm,1.0s						
W53A	Cullowhee	77.11	49	P	P	07 32 54.7	+0.1
	baz=326						
R58B	Mineral	77.12	43	P	P	07 32 54.9	+0.5
	baz=328						
FRGS	Fruska Gora	77.12	332	*e*P	P	07 32 54.0	-0.3
CBN	Corbin Frederi	77.13	43	P	P	07 32 54.8	+0.3
	baz=328						
Z49A	Columbiana	77.14	52	P	P	07 32 54.4	-0.2
	baz=325						
KALN	Kalnik	77.15	335	P	P	07 32 54.9	+0.4
V54A	Nebo	77.17	47	P	P	07 32 55.1	+0.3
	baz=326						
WATA	Walderalm	77.21	338	*e*P	P	07 32 56.7	+1.7
	comp=Z,8.5nm,1.0s						
BR101	Keskin Array S	77.23	320	*e*P	P	07 32 55.1	-0.1
BR131	Keskin Array S	77.23	320	*e*P	P	07 32 55.4	+0.1
	comp=Z,19nm,1.0s						
BR131	Keskin Array S	77.23	320	P	P	07 32 55.8	+0.6
	SNR=7.0						
BRTR	Keskin Array B	77.23	320	P	P	07 32 55.1	-0.1
	comp=Z,7.7nm,0.9s,baz=45,slow=3.7,SNR=23						
BRTR				LR	LR	08 11 40.6	
	comp=Z,92nm,18.8s,baz=24,slow=39						
R59A	King George, V	77.24	43	P	P	07 32 55.2	+0.1
	baz=328						
X52A	Dahlonega	77.24	49	P	P	07 32 55.6	+0.4
	baz=326						
RETA	Reutte	77.25	339	*e*P	P	07 32 56.4	+1.4
	comp=Z,4.1nm,0.9s						
PLVB	Pleven	77.25	328	⇑*i*P	P	07 32 55.9	+0.8
WTTA	Wattenberg	77.26	338	*e*P	P	07 32 56.9	+1.6
	comp=Z,11nm,1.1s,SNR=8.5						
Y51A	Rockmart	77.27	51	P	P	07 32 55.1	-0.3
	baz=325						
OBKA	Obir	77.28	336	*e*P	P	07 32 55.0	-0.3
	comp=Z,15nm,1.5s,SNR=8.8						
ECH	Echery	77.30	342	*e*P	P	07 32 55.0	-0.3
	comp=Z,20nm,1.0s						
ECH	Echery	77.30	342	*e*P	P	07 32 55.0	-0.3
ECH				pmax	pmax		
	comp=Z,20nm,1.0s						
MOTA	Moosalm	77.31	339	*e*P	P	07 32 56.5	+1.0
	comp=Z,8.8nm,0.8s,SNR=7.8						
T57A	Hurt	77.34	45	P	P	07 32 55.6	-0.1
	baz=327						
BG3	Lake Jocassee	77.37	48	*e*P	P	07 32 55.8	-0.1
	comp=Z,9.8nm,0.8s						
Z50A	Ashland	77.38	52	*e*P	P	07 32 56.3	+0.3
	comp=Z,14nm,0.9s						
Z50A	Ashland	77.38	52	P	P	07 32 55.8	-0.2
	baz=325,SNR=6.2						
MYKA	Terra Mystica	77.39	337	*e*P	P	07 32 56.3	+0.4
	comp=Z,5.7nm,1.0s,SNR=6.0						
U56A	King	77.39	46	P	P	07 32 55.9	-0.1
	baz=327						
SQTA	Sankt Quirin	77.40	339	*e*P	P	07 32 57.1	+1.1
	comp=Z,17nm,1.0s,SNR=7.2						
ANTO	Ankara	77.44	321	*e*P	P	07 32 55.6	-0.7
	comp=Z,40nm,1.1s						
ANTO	Ankara	77.44	321	*e*P	P	07 32 55.6	-0.7
ANTO				pmax	pmax		
	comp=Z,39nm,1.1s						
149A	Jones	77.50	53	P	P	07 32 56.7	+0.1
	baz=325						
MDUB	Mudurnu	77.53	322	*e*P	P	07 32 57.6	+0.8
	comp=Z,193nm,1.0s						
S59A	Mechanicsville	77.54	43	P	P	07 32 57.4	+0.7
	baz=328						
ABTA	Abfaltersbach	77.55	338	*e*P	P	07 32 57.9	+1.1
	comp=Z,15nm,1.0s,SNR=7.8						
X53A	Estanollee	77.60	49	P	P	07 32 57.7	+0.5
	baz=326						
DAVA	Damuels	77.63	340	*e*P	P	07 32 58.3	+1.0
	comp=Z,9.6nm,1.2s						
W54A	Cherokee Point	77.63	48	P	P	07 32 57.8	+0.5
	baz=326						
CRES	Cresnjev	77.69	335	*e*P	P	07 32 57.2	-0.3
FETA	Feichten	77.70	339	*e*P	P	07 32 58.9	+1.1
	comp=Z,12nm,1.0s,SNR=6.0						
T58A	Grand View Acr	77.70	44	P	P	07 32 57.9	+0.3
	baz=328						
LJU	Ljubljana	77.72	336	*e*P	P	07 32 57.8	+0.1
Y52A	Lilburn	77.77	50	*e*P	P	07 32 57.6	-0.5
	comp=Z,16nm,1.4s						
Y52A	Lilburn	77.77	50	P	P	07 32 58.6	+0.4
	baz=326						
U57A	Blanch	77.78	45	P	P	07 32 58.3	+0.2
	baz=328						
V56A	Mocksville	77.79	46	P	P	07 32 58.1	-0.2
	baz=327						
249A	Camden	77.84	53	P	P	07 32 59.0	+0.4
	baz=325						
R61A	Willards	77.86	41	P	P	07 32 58.1	-0.4
	baz=329						
150A	Eclectic	77.86	52	P	P	07 32 58.8	+0.2
	baz=325						
VISS	Visnje	77.87	336	*e*P	P	07 32 58.2	-0.3
VISS				*i*		07 33 07.2	
EDRB	Edirne	77.92	326	P	P	07 32 57.4	-1.4
KMSC	Kings Mountain	77.97	47	P	P	07 32 58.9	-0.3
	baz=327						
JAVS	Javornik	77.98	336	*i* P	P	07 32 58.7	-0.5
JAVS				*i*		07 33 07.8	
X54A	Belton	77.99	48	P	P	07 32 59.6	+0.3
	baz=326						
Y53A	Monroe	78.00	50	P	P	07 32 59.7	+0.3
	baz=326						
CEY	Cerknica	78.03	336	*e*P	P	07 32 58.7	-0.7
DIVS	Divibare	78.04	332	*e*P	P	07 32 58.6	-1.0
BOJS	Bojanci	78.04	335	*i* P	P	07 32 59.3	-0.1
BOJS				*i*		07 33 08.6	
T59A	Double "B" Far	78.09	44	P	P	07 32 59.4	-0.4
	baz=328						
DAVOX	Davos/Dischmat	78.11	339	P	P	07 33 00.9	+0.8
	comp=Z,4.9nm,0.8s						
U58A	Oxford	78.16	45	P	P	07 33 00.8	+0.6
	baz=328						
Z52A	Williamson	78.16	51	P	P	07 33 00.7	+0.4
	baz=326						
BLY	Banja Luka	78.23	334	*e*P	P	07 33 00.0	-0.5
	comp=Z,7.2nm,0.9s						
BLY	Banja Luka	78.23	334	*e*P	P	07 33 05.2	+4.7
250A	Grady	78.26	53	P	P	07 33 01.5	+0.6
	baz=325						
HODGE	Hodges	78.31	48	*e*P	P	07 33 01.4	+0.3
	comp=Z,17nm,1.2s						
W56A	Indian Trail	78.32	47	P	P	07 33 01.7	+0.6
	baz=327						
HAPS	Han Pijesak,Bl	78.35	332	*e*P	P	07 32 59.1	-2.2
PLD	Plovdiv	78.38	328	*e*P	P	07 33 10.2	+8.9
VTS	Vitosha	78.39	329	P	P	07 33 01.0	-0.6
VTS	Vitosha	78.39	329	⇑*i*P	P	07 33 01.4	-0.2
VTS	Vitosha	78.39	329	⇑P	P	07 33 01.4	-0.2
VTS	Vitosha	78.39	329	*e*P	P	07 33 01.5	-0.2
X55A	Gracelyn & Ava	78.40	48	P	P	07 33 01.9	+0.4
	baz=327						
RIY	Rijeka	78.40	336	*e*P	P	07 33 01.3	-0.1
V58A	Windy Hill, Pi	78.42	45	P	P	07 33 01.8	+0.2
	baz=328						
Y54A	Tignall	78.42	49	P	P	07 33 01.5	-0.2
	baz=326,SNR=7.0						
BBLS	Lazići	78.42	332	*e*P	P	07 33 01.5	-0.2
GOGA	Godfrey	78.42	50	P	P	07 33 02.0	+0.2
	baz=326						
Z53A	Monticello	78.48	50	P	P	07 33 02.2	+0.1
	baz=326						
U59A	Littleton	78.52	44	P	P	07 33 02.5	+0.3
	baz=328						
TUE	Stuetta	78.52	340	*e*P	P	07 33 01.0	-1.4
	comp=Z,22nm,0.9s						
WSAR	Wadi Sarin	78.53	293	P	P	07 33 01.3	-1.2
UOSS	Minazif	78.55	296	*e*P	P	07 33 02.3	-0.3
	comp=Z,79nm,1.1s						
UOSS	Minazif	78.55	296	P	P	07 33 01.2	-1.4
UOSS				P	P	07 33 01.2	-1.4
W57A	Gilead	78.57	46	P	P	07 33 02.5	0.0
	baz=327						
251A	Midway	78.58	52	P	P	07 33 02.9	+0.3
	baz=326						
BIDO	Bidbid	78.59	294	P	P	07 33 00.7	-2.2
BIDO				P	P	07 33 00.7	-2.2
X56A	White Oak	78.65	47	P	P	07 33 03.0	0.0
	baz=327						
HATD	Hatta, Dubai	78.68	296	P	P	07 33 01.4	-1.9
HATD				P	P	07 33 01.4	-1.9
U60A	Pendleton	78.69	44	P	P	07 33 03.3	+0.2
	baz=328						
Y55A	Saluda	78.74	48	P	P	07 33 03.8	+0.4
	baz=327						
V59A	Middlesex	78.82	45	P	P	07 33 03.8	0.0
	baz=328						
Z54A	Sparta	78.86	49	P	P	07 33 03.9	-0.3
	baz=326						
AS31	Alice Springs	78.87	204	*e*P	P	07 33 04.2	+0.1
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	78.87	204	P	P	07 33 04.2	+0.1
	comp=Z,0.7nm,0.6s,baz=15,slow=5.3,SNR=11						
ASAR				LR	LR	08 07 09.8	
	comp=Z,56nm,20.5s,baz=18,slow=35						
153A	Fort Valley	78.88	50	P	P	07 33 04.7	+0.5
	baz=326						
JLN	Jalan Bani Buh	78.94	292	P	P	07 33 03.7	-1.1
RDO	Rodhopi	78.95	327	P	P	07 33 04.0	-0.5
252A	Lumpkin	78.99	51	P	P	07 33 04.8	-0.1
	baz=326						
ALN	Alexandroupoli	79.00	326	*e*P	P	07 33 04.9	+0.1
	comp=Z,35nm,1.3s						
ALN	Alexandroupoli	79.00	326	P	P	07 33 04.0	-0.8
ALN	Alexandroupoli	79.00	326	*e*P	P	07 33 04.9	+0.1
ALN				pmax	pmax		
	comp=Z,35nm,1.3s						
W58A	Raeford	79.01	46	P	P	07 33 05.3	+0.3
	baz=328						
SENIN	Lac Senin/Sane	79.05	341	*e*P	P	07 33 04.8	-0.4
	comp=Z,16nm,1.4s						
KKB	Krupnik	79.12	329	*e*P	P	07 33 05.6	+0.1
UPM	Unac-Piva	79.17	332	*e*P	P	07 33 05.8	-0.2
154A	Montrose	79.25	50	P	P	07 33 06.6	+0.3
	baz=326						
ASUD	Al Ashush, Dub	79.28	296	P	P	07 33 05.1	-1.5
352A	Blakely	79.32	52	P	P	07 33 07.3	+0.6
	baz=326						
NVR	Nevrokopi	79.33	328	P	P	07 33 06.2	-0.5
X58A	Rowland	79.36	46	P	P	07 33 06.6	-0.2
	baz=328						
TAOE	Nuku Hiva Isla	79.41	119	*e*LR	LR	07 57 53.9	
	comp=Z,196nm,23.3s,baz=329						
KAVA	Kavala	79.43	327	P	P	07 33 06.7	-0.4
MORI	Morici	79.45	334	P	P	07 33 06.5	-0.7
Z56A	Williston	79.47	48	P	P	07 33 08.0	+0.5
	baz=327						
BALB	Balikesir	79.47	324	*e*P	P	07 33 07.0	-0.4
	comp=Z,202nm,1.1s						
DUGI	Dugi Otok	79.50	335	P	P	07 33 06.7	-0.8
SKO	Skopje	79.54	330	*i* P	P	07 33 09.3	+1.5
155A	Kite	79.55	49	P	P	07 33 08.2	+0.3
	baz=327						
BRY	Bratogost	79.56	332	*e*P	P	07 33 07.2	-0.8
MAKA	Makarska	79.63	333	P	P	07 33 07.5	-0.6
SRS	Serrai	79.63	328	P	P	07 33 07.4	-0.8
W60A	Pink Hill	79.65	45	P	P	07 33 08.7	+0.3
	baz=328						
ZIRJ	Zirje	79.66	334	P	P	07 33 08.0	-0.4
254A	Abbeville	79.72	50	P	P	07 33 09.5	+0.7
	baz=326						
VAY	Valandovo	79.77	329	*i* P	P	07 33 09.6	+0.6
PDG	Podgorica	79.78	331	⇑*i*P	P	07 33 09.0	0.0
PDG	Podgorica	79.78	331	*e*P	P	07 33 08.7	-0.3
TTG	Podgorica	79.78	331	*e*P	P	07 33 08.9	-0.1
	comp=Z,29nm,0.8s						
TTG	Podgorica	79.78	331	*e*P	P	07 33 08.9	-0.1
TTG				pmax	pmax		
	comp=Z,29nm,0.8s						
KNT	Kendrikon	79.81	328	P	P	07 33 08.4	-0.8
STON	Ston	79.82	333	*e*P	P	07 33 08.0	-1.2
LPL	La Plagne	79.97	341	*e*P	P	07 33 11.4	+1.1
LPL				pmax	pmax		
	comp=Z,17nm,1.0s						
HCY	Herceg Novi	79.99	332	*e*P	P	07 33 08.2	-2.0
TIGA	Tifton	80.00	51	*e*P	P	07 33 11.4	+1.1
	comp=Z,22nm,0.9s						
TIGA	Tifton	80.00	51	P	P	07 33 10.5	+0.1
	baz=326						
DRME	Dracevica, Mon	80.03	331	*e*P	P	07 33 09.6	-0.8
Y59A	Loris	80.04	46	P	P	07 33 10.9	+0.4
	baz=328						
ISP	Isparta	80.09	322	*e*P	P	07 33 10.2	-0.7
	comp=Z,26nm,1.0s						
ISP	Isparta	80.09	322	*e*P	P	07 33 10.2	-0.7
ISP				pmax	pmax		
	comp=Z,26nm,1.0s						
PHP	Peshkopia	80.11	330	P	P	07 33 09.4	-1.5
453A	Whigham	80.13	52	P	P	07 33 12.0	+1.0
	baz=326						
LIA	Limnos Island	80.19	326	P	P	07 33 10.3	-1.0
MANT	Manisa	80.24	323	*e*P	P	07 33 11.8	-0.1
	comp=Z,318nm,1.4s						
PLG	Polygyros	80.35	328	P	P	07 33 11.1	-1.1
PRK	Paraskevi	80.39	325	P	P	07 33 12.8	+0.4
BNI	Bardonecchia	80.43	341	*e*P	P	07 33 12.8	+0.2
	comp=Z,14nm,1.1s						
BNI	Bardonecchia	80.43	341	*e*P	P	07 33 12.9	+0.2
BNI				pmax	pmax		
	comp=Z,14nm,1.1s						
Z59A	Georgetown, SC	80.49	47	P	P	07 33 13.6	+0.6
	baz=328						
TIR	Tirane	80.59	331	*e*P	P	07 33 13.7	+0.3
	comp=Z,35nm,0.8s						
FNA	Florina	80.64	329	*e*P	P	07 33 13.1	-0.7
	comp=Z,107nm,0.8s						
FNA	Florina	80.64	329	*e*P	P	07 33 13.1	-0.7
PAIG	Paliouri	80.67	327	P	P	07 33 12.1	-1.7
MHTO	MHTO	80.68	292	P	P	07 33 15.0	+0.8
	SNR=9.3						
MHTO				P	P	07 33 15.0	+0.8
	SNR=9.3						
356A	Blackshear	80.78	50	P	P	07 33 15.4	+0.8
	baz=327						
455A	Stateville	80.84	51	P	P	07 33 15.3	+0.4
	baz=326						
LIT	Litokhoron	80.90	328	P	P	07 33 11.1	-4.0
XOR	Xorichti	81.34	327	P	P	07 33 14.8	-2.7
CAF	Calviac	81.39	344	*e*P	P	07 33 18.8	+1.1
CAF				pmax	pmax		
	comp=Z,12nm,1.0s						
KPRO	Kipourio	81.40	329	P	P	07 33 16.3	-1.5
AQU	L'Aquila	81.46	336	*e*P	P	07 33 17.2	-0.9
	comp=Z,31nm,1.0s						
AQU	L'Aquila	81.46	336	*e*P	P	07 33 17.2	-0.9
AQU				pmax	pmax		
	comp=Z,31nm,1.0s						
AQU	L'Aquila	81.46	336	*e*P	P	07 33 16.4	-1.7
JAN	Janina	81.83	329	P	P	07 33 19.8	-0.3
AGG	Agios Georgios	81.93	328	*e*P	P	07 33 19.7	-0.9
	comp=Z,10nm,0.9s						
AGG	Agios Georgios	81.93	328	*e*P	P	07 33 19.7	-0.9
AGG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ATAL	Atalanti	82.00	327	P	P	07 33 07.7	-13
PPT	Papeete	82.14	132	LR	LR	08 02 59.0	
	comp=Z,137nm,19.3s,baz=318,slow=31						
PPT2	Papeete2	82.16	132	*e*LR	LR	07 59 08.0	
	comp=Z,403nm,23.8s,baz=317						
656A	Willston	82.22	51	*e*P	P	07 33 22.7	+0.5
	comp=Z,30nm,0.5s						
PVO	Paravola	82.56	328	P	P	07 33 28.5	+4.6
KALE	Kalithea	82.57	328	P	P	07 33 21.6	-2.4
LKD2	Lefkada island	82.68	329	P	P	07 33 32.2	+7.7
LAKA	Lakka	82.76	328	P	P	07 33 33.8	+8.9
757A	Oxford	82.80	51	P	P	07 33 25.6	+0.4
	baz=327						
KLV	Kalavryta, Ach	82.88	328	P	P	07 33 24.4	-1.2
GUR	Goura	82.91	327	P	P	07 33 24.4	-1.5
RLS	Riolos of Patr	83.09	328	P	P	07 33 25.6	-1.0
TIP	Timpagrande	83.51	332	*e*P	P	07 33 26.8	-2.0
TIP				*e*pP	pP	07 33 38.4	+0.5
TIP	Timpagrande	83.51	332	⇑*i*P	P	07 33 30.3	+1.4
ZKS	Zakynthos	83.64	328	P	P	07 33 27.4	-2.1
ITM	Ithomi	83.74	327	*e*P	P	07 33 28.7	-1.3
ITM				*e*pP	pP	07 33 38.1	-0.9
DYR	Agios Nikonas	83.98	327	P	P	07 33 30.6	-0.7
LAST	Lasithi	84.33	324	P	P	07 33 32.3	-0.8
IDI	Anoyia	84.42	324	P	P	07 33 31.9	-1.7
	comp=Z,11nm,0.8s,baz=327,slow=11,SNR=2.7						
STKA	Stephens Creek	85.22	196	LR	LR	08 08 51.6	
	comp=Z,74nm,21.8s,baz=20,slow=34						
RAYN	Ar Rayn	85.43	303	*e*P	P	07 33 36.5	-2.3
RAYN				*e*pP	pP	07 33 47.2	-0.7
RAYN	Ar Rayn	85.43	303	*e*P	P	07 33 36.5	-2.3
RAYN				*e**PP	pP	07 33 47.2	-0.7
TBI	Tubuai	87.25	135	*e*LR	LR	08 01 29.6	
	comp=Z,325nm,25.8s,baz=327						
ESDC	Sonseca Array	87.44	348	P	P	07 33 48.5	+0.1
	comp=Z,1.8nm,0.7s,baz=0.0,slow=4.9,SNR=13						
ESDC				LR	LR	08 18 47.5	
	comp=Z,70nm,18.4s,baz=25,slow=40						
KEST	Kesra	88.74	336	P	P	07 33 55.1	+0.5
	comp=Z,1.9nm,0.5s,baz=214,slow=6.0,SNR=5.0						
KEST				LR	LR	08 19 44.9	
	comp=Z,192nm,18.1s,baz=16,slow=40						
KEST	Kesra	88.74	336	*e*P	P	07 33 54.3	-0.4
KEST				*e*pP	pP	07 34 03.7	-0.1
PLCA	Paso Flores	144.13	92	PKP	PKPdf	07 40 36.1	0.0
	comp=Z,2.2nm,1.0s,baz=349,slow=5.2,SNR=3.7						
SYO	Syowa Base	147.87	216	⇓*e*PKPab	PKPab	07 40 50.0	+2.8
SYO	Syowa Base	147.87	216	⇑*e*pPKPdf	pPKPdf	07 40 54.2	+3.2

MEX 28 07:23:24.9±0.6, 15°.87N×97°.17W, h10km±2km, MD3.9,
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.03	95	*e*P	Pg	07 23 41.6	-3.1
HUIG				*e*S	Sg	07 23 54.6	-3.5
VHO	Vista Hermosa	1.27	19	*e*P	Pn	07 23 45.2	-3.8
VHO				*e*S	Sb	07 24 01.0	-4.6
TLIG	Tlapa	2.15	322	*i* P	Pn	07 23 57.4	-3.6
TLIG				*e*S	Sn	07 24 23.8	-4.0
CMIG	Matias Romero	2.51	61	*e*P	Pn	07 24 02.3	-3.5
CMIG				*i* S	Sn	07 24 31.8	-4.7
MEIG	Mezcala	3.11	312	*i* P	Pn	07 24 10.9	-3.2
MEIG				*i* S	Sn	07 24 48.5	-3.0

KRSC 28 07:24:36.6±1.5, 52°.07N×160°.11E, h41km±21km, ML3.8,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.03	357	*e*P	Pn	07 24 55.3	+0.7
SPN				*e*S	Sn	07 25 08.7	+0.9
RUS	Russkaya	1.05	291	*e*S	Sn	07 25 07.9	-0.3
NLC	Nalytchevo	1.20	337	*e*P	Pn	07 24 58.5	+1.7
NLC				*e*S	Sn	07 25 14.3	+2.4
MTVR	Mutnovka	1.25	290	*e*P	Pn	07 24 58.6	+0.8
MTVR				*e*S	Sn	07 25 14.4	+0.9
DALK	Dalny	1.27	320	*e*P	Pn	07 24 59.2	+1.4
DALK				*e*S	Sn	07 25 15.4	+1.7
KDTR	Khodutka, Kamc	1.29	259	*e*P	Pn	07 24 59.1	+1.1
KDTR				*e*S	Sn	07 25 15.1	+1.1
UGLR	Uglovaya	1.39	326	*e*P	Pn	07 25 02.2	+2.7
ASAK	Asacha	1.40	284	*e*P	Pn	07 25 01.0	+1.4
ASAK				*e*S	Sn	07 25 18.7	+1.8
SDLR	Sedlovina	1.42	329	*e*P	Pn	07 25 01.4	+1.4
KRMR	Karymshinskiy	1.43	303	*e*P	Pn	07 25 01.2	+1.2
KRMR				*e*S	Sn	07 25 18.9	+1.3
SMAR	Somma	1.44	327	*e*P	Pn	07 25 02.3	+2.0
AVH	Avacha	1.46	326	*e*P	Pn	07 25 02.6	+2.1
KOK	Koryaka	1.52	324	*e*P	Pn	07 25 04.6	+3.3
KRX	Arik	1.57	326	*e*P	Pn	07 25 05.0	+2.9
GNL	Ganaly	2.09	322	*e*P	Pn	07 25 13.2	+4.0
MKZ	Mys Kozlova	2.67	21	*e*P	Pn	07 25 18.5	+1.4
KBTR	Krutoberegovo	4.44	20	*e*P	Pn	07 25 45.0	+3.7

KRSC 28 07:26:21.4±1.1, 51°.98N×160°.16E, h41km±18km, ML4.2,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.11	295	P	Pn	07 26 41.2	+0.8
SPN	Mys Shipunski	1.12	356	*e*P	Pn	07 26 42.4	+1.8
SPN				*e*S	Sn	07 26 57.4	+2.5
NLC	Nalytchevo	1.29	338	*e*P	Pn	07 26 44.5	+1.6
NLC				*e*S	Sn	07 27 00.6	+1.6
KDTR	Khodutka, Kamc	1.30	263	*e*P	Pn	07 26 44.9	+1.8
KDTR				*e*S	Sn	07 27 01.3	+2.1
MTVR	Mutnovka	1.32	293	*e*P	Pn	07 26 44.5	+1.1
MTVR				*e*S	Sn	07 27 00.6	+0.7
DALK	Dalny	1.36	321	*e*P	Pn	07 26 45.4	+1.5
DALK				*e*S	Sn	07 27 02.2	+1.5
ASAK	Asacha	1.45	287	*i* P	Pn	07 26 47.0	+1.8
ASAK				*e*S	Sn	07 27 04.9	+1.9
UGLR	Uglovaya	1.48	327	*e*P	Pn	07 26 47.8	+2.2
UGLR				*e*S	Sn	07 27 05.7	+2.0
KRMR	Karymshinskiy	1.51	305	*e*P	Pn	07 26 47.2	+1.3
KRMR				*e*S	Sn	07 27 05.0	+0.7
SDLR	Sedlovina	1.52	330	*e*P	Pn	07 26 47.4	+1.3
SMAR	Somma	1.53	328	*e*P	Pn	07 26 48.5	+2.1
AVH	Avacha	1.55	327	*e*P	Pn	07 26 48.6	+2.0
AVH				*i* S	Sn	07 27 07.5	+1.9
KRER	Koryakskii	1.58	328	*e*P	Pn	07 26 49.6	+2.5
KRER				*e*S	Sn	07 27 09.7	+3.3
KOK	Koryaka	1.61	325	*e*P	Pn	07 26 50.5	+3.1
KRX	Arik	1.66	327	*e*P	Pn	07 26 49.9	+1.8
APC	Apacha	2.07	298	*e*P	Pn	07 26 56.5	+2.9
APC				*e*S	Sn	07 27 21.4	+3.3
PAU	Pauzhetka	2.15	257	*e*P	Pn	07 26 57.2	+2.6
GNL	Ganaly	2.18	323	*e*P	Pn	07 26 58.3	+3.0
GNL				*e*S	Sn	07 27 24.7	+3.6
MKZ	Mys Kozlova	2.75	19	*e*P	Pn	07 27 05.3	+2.4
MKZ				*e*S	Sn	07 27 36.3	+1.5
SKR	Severo-Kuril's	2.85	244	*e*P	Pn	07 27 07.5	+3.2
SKR				*e*S	Sn	07 27 40.3	+3.0
KZV	Kizimen	3.14	1	*e*P	Pn	07 27 12.3	+3.9
KZV				*e*S	Sn	07 27 48.5	+3.8
TUMD	Tumrok D	3.23	2	*e*P	Pn	07 27 13.7	+4.1
TUMD				*e*S	Sn	07 27 51.3	+4.5
TUMR	Tumrok	3.31	360	*e*P	Pn	07 27 15.2	+4.5
ESO	Esso	4.05	348	*e*P	Pn	07 27 25.7	+4.9
LGNR	Loginova	4.12	4	*e*P	Pn	07 27 27.1	+5.0
KBTR	Krutoberegovo	4.52	19	*e*P	Pn	07 27 30.9	+3.7
KBG	Krutoberegovo	4.54	18	*e*P	Pn	07 27 30.9	+3.5

*TIF **28** 07:32:28.3, 42°.97N×41°.09E, h4^{km}±1^{km}*
*ISK **28** 07:32:29.6, 43°.06N×40°.70E, h29^{km}, ML3.4/1*
*MOS **28** 07:32:29.9±1.2, 43°.02N×41°.01E, h8^{km}, mb3.7/1, Error ellipse: s-maj=7.3km s-min=6.4km az=46.9*
ISC 28 07:32:29.8±1.4, **43°.01N**±0°.03×**41°.03E**±0°.03, **h5**^{km}±11^{km}, **n36**, σ**1^{s}.23**/49, **5C-9D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOMR	Dombai	0.52	57	⇓iPG	Pg	07 32 39.8	0.0
DOMR				eS	Sg	07 32 46.7	+0.1
RPOR	Krasnaya Polya	0.89	321	ePG	Pb	07 32 47.4	-0.3
RPOR				eS	Sn	07 33 00.2	-2.1
SOC	Sochi	1.12	301	ePG	Pn	07 32 51.5	-0.6
SOC				e		07 33 07.0	
SOC				pmax	pmax		
	comp=Z,100nm,0.3s						
SOC				smax	smax		
	comp=E,767nm,0.2s						
SOC				smax	smax		
	comp=N,846nm,0.3s						
NEY	Neytrino	1.26	78	ePG	Pn	07 32 52.7	-1.6
NEY				eS	Sb	07 33 08.6	-2.3
SHA1	Shidzhatmaz	1.39	58	⇓iPG	Pn	07 32 55.4	-0.8
SHA1				eS	Sb	07 33 14.3	-0.4
BATM	Batumi	1.49	160	PN	Pn	07 32 57.0	-0.2
BATM				SN	Sb	07 33 17.1	0.0
BATM	Batumi	1.49	160	P	Pn	07 32 56.5	-0.7
BATM				S	Sg	07 33 17.8	+0.2
BATM	Batumi	1.49	160	⇑iP	Pb	07 32 57.9	0.0
BATM	Batumi	1.49	160	PG	Pn	07 32 56.8	-0.4
KIV	Kislovodsk	1.53	51	PN	Pb	07 32 58.0	-0.7
KIV				SN	Sb	07 33 18.5	-0.1
KIV	Kislovodsk	1.53	51	⇑iP	Pb	07 32 58.3	-0.5
KIV	Kislovodsk	1.53	51	⇓ePG	Pb	07 32 58.1	-0.7
KIV				eS	Sb	07 33 18.2	-0.4
TKB	Tkibuli	1.59	114	P	Pn	07 32 58.1	-0.6
TKB				S	Sb	07 33 19.8	-0.4
TKB	Tkibuli	1.59	114	PG	Pn	07 32 58.7	0.0
BCA	Borcka	1.62	164	PN	Pn	07 32 58.7	-0.4
BCA	Borcka	1.62	164	⇑iP	Pn	07 32 59.2	+0.1
BEYR	Belyy Ugol+	1.64	52	⇑ePN	Pb	07 33 00.1	-0.5
BEYR				eS	Sb	07 33 21.6	-0.1
ONI	Oni	1.83	102	PN	Pb	07 33 03.4	-0.5
ONI				SN	Sg	07 33 27.9	-0.8
ONI	Oni	1.83	102	P	Pb	07 33 02.8	-1.1
ONI				S	Sb	07 33 27.6	+0.4
ONI	Oni	1.83	102	ePN	Pb	07 33 02.8	-1.1
ONI				eS	Sb	07 33 27.6	+0.4
PYA1	Pyatigorsk	1.84	54	iPN	Pn	07 33 01.7	-0.4
DIGR	Digorskoe uzhe	1.88	92	ePN	Pn	07 33 03.0	+0.2
KBTC	Kuba-Taba	1.91	64	ePN	Pn	07 33 02.9	-0.2
NCK	Nalchik	1.94	75	⇓ePN	Pg	07 33 07.5	+0.6
LSNR	Lesken	2.07	82	PN	Pb	07 33 08.3	+0.5
LSNR				S	Sb	07 33 34.4	+0.6
ZEI	Tsey	2.12	95	⇓ePN	Pb	07 33 07.9	-1.0
AKH	Akhalkalaki	2.43	130	⇓iP	Pn	07 33 10.9	+0.5
PRTR	Priterechnaya	2.49	72	⇓ePN	Pn	07 33 12.3	+1.4
BGD	Bogdanovka	2.59	131	PN	Pn	07 33 12.3	-0.2
ANN	Anapa	3.15	306	ePN	Pn	07 33 22.0	+1.9
ANN				e		07 34 00.0	
ANN				pmax	pmax		
	comp=Z,20nm,0.5s						
ANN				smax	smax		
	comp=N,104nm,0.7s						
OBN	Obninsk	12.46	348	eP	Pn	07 35 29.0	+1.4
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KOLS	Kolonicke sedl	14.31	301	ePN	Pn	07 35 44.6	-8.4
VYHS	Vyhne	16.41	297	ePN	Pn	07 36 16.0	-4.7
ARU	Arti	17.50	34	⇓eP	P	07 36 37.2	+1.6
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BRVK	Borovoye	21.85	52	⇑eP	P	07 37 26.4	+3.4
AAK	Ala-Archa	24.46	79	⇓eP	P	07 37 51.4	+1.6

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*CRAAG **28** 07:41:16.8, 36°.42N×7°.33E, Ml3.3*
*ISCJB **28** 07:41:17.4±0.8, 36°.41N±0°.08×7°.36E±0°.05, h14^{km}±8^{km}, Error ellipse: s-maj=14.1km s-min=7.3km az=173.6*
*TUN **28** 07:41:21.4, 36°.54N×7°.67E, h25^{km}, MD3.0*
ISC 28 07:41:17.2±1.2, **36°.39N**±0°.06×**7°.35E**±0°.05, **h15**^{km}±11^{km}, **n13**, σ**0^{s}.41**/12, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABSA	Djebel Ababsia	0.16	139	P	Pg	07 41 21.2	-0.1
CMAH	Djebel Manchou	0.24	14	P	Pg	07 41 22.7	+0.1
CKFL	Kef-Lekhel	0.51	271	P	Pg	07 41 27.1	-0.2
CAEH	'Ain El Ouahch	0.56	314	P	Pg	07 41 28.2	0.0
CASM	Ain Smara	0.71	259	P	Pg	07 41 30.9	-0.1
GHAT	Ghardimaou	0.78	82	iP	Pn	07 41 34.1	+0.5
CTEI	Djebel Teioual	0.83	247	P	Pb	07 41 33.9	+0.6
DFRA	Djebel Bou Aff	1.20	278	P	Pb	07 41 39.7	+0.1
BLIT	Baltah	1.33	76	iP	Pn	07 41 41.0	-0.1
KRIT	Krib	1.40	92	iP	Pn	07 41 42.0	-0.1
CKHR	Kef el Ahmar	1.53	256	P	Pb	07 41 45.3	0.0
TAMR	Tamra	1.56	65	iP	Pn	07 41 43.5	-0.8
SET	Setif	1.59	264	P	Pg	07 41 55.0	+7.3

MAN 28 08:11:13.6, 7°.58N×127°.21E, h3^{km}, mb4.7, ML3.6, MS3.5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.03	306	⇑iP	Pg	08 11 32.3	-1.2
BIPH				iS	Sg	08 11 43.2	-3.7
MATI	Mati	1.14	236	eP	Pg	08 11 35.4	0.0
MATI				eS	Sn	08 11 51.9	-0.6
DDMP	Don Marcelino,	2.09	226	eP	Pn	08 11 50.2	+0.7
DDMP				eS	Sg	08 12 21.6	+0.8
BUKP	Musuan	2.15	278	eP	Pn	08 11 51.3	+0.9
BUKP				eS	Sn	08 12 18.9	+1.2
CGP	Cagayan de Oro	2.64	289	eP	Pn	08 11 58.4	+1.3

KRSC 28 08:12:10.2±1.3, **51°.99N×160°.20E, h49**^{km}±19^{km}, **ML4.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.11	355	eP	Pn	08 12 31.4	+2.0
SPN				eS	Sn	08 12 46.1	+2.4
RUS	Russkaya	1.13	294	eP	Pn	08 12 30.3	+0.7
RUS				eS	Sn	08 12 44.2	+0.3
NLC	Nalytchevo	1.29	337	eP	Pn	08 12 33.7	+1.9
NLC				eS	Sn	08 12 50.0	+2.0
KDTR	Khodutka, Kamc	1.33	263	eP	Pn	08 12 34.0	+1.7
KDTR				eS	Sn	08 12 50.2	+1.4
MTVR	Mutnovka	1.33	293	eP	Pn	08 12 34.0	+1.5
MTVR				eS	Sn	08 12 50.6	+1.4
DALK	Dalny	1.37	320	eP	Pn	08 12 34.6	+1.8
DALK				eS	Sn	08 12 51.1	+1.3
ASAK	Asacha	1.47	286	eP	Pn	08 12 36.5	+2.2
ASAK				eS	Sn	08 12 54.3	+1.9
UGLR	Uglovaya	1.48	326	eP	Pn	08 12 36.5	+2.0
UGLR				eS	Sn	08 12 54.8	+2.0
SDLR	Sedlovina	1.52	329	eP	Pn	08 12 36.7	+1.7
KRMR	Karymshinskiy	1.52	304	eP	Pn	08 12 36.6	+1.7
KRMR				eS	Sn	08 12 54.7	+1.2
SMAR	Somma	1.53	327	eP	Pn	08 12 37.0	+1.7
AVH	Avacha	1.56	326	eP	Pn	08 12 37.7	+2.2
AVH				eS	Sn	08 12 56.8	+2.2
KRER	Koryakskii	1.58	327	eP	Pn	08 12 37.9	+1.9
KOK	Koryaka	1.61	325	eP	Pn	08 12 38.6	+2.3
KRX	Arik	1.66	326	eP	Pn	08 12 39.0	+1.9
APC	Apacha	2.08	298	eP	Pn	08 12 46.0	+3.4
APC				eS	Sn	08 13 11.5	+4.2
GNL	Ganaly	2.19	322	eP	Pn	08 12 47.1	+2.9
GNL				eS	Sn	08 13 13.2	+3.1
MKZ	Mys Kozlova	2.73	19	eP	Pn	08 12 54.7	+3.2
MKZ				eS	Sn	08 13 25.5	+2.3
SKR	Severo-Kuril’s	2.87	245	eP	Pn	08 12 55.9	+2.5
KZV	Kizimen	3.13	1	eP	Pn	08 13 01.2	+4.1
KZV				eS	Sn	08 13 37.2	+3.9
TUMD	Tumrok D	3.22	2	eP	Pn	08 13 02.1	+3.8
TUMD				eS	Sn	08 13 38.6	+3.2
TUMR	Tumrok	3.30	360	eP	Pn	08 13 03.6	+4.2
KBTR	Krutoberegovo	4.50	19	eP	Pn	08 13 19.9	+4.2
KBG	Krutoberegovo	4.52	18	eP	Pn	08 13 19.2	+3.2
BDR	Baidarnaya	4.63	7	eP	Pn	08 13 22.7	+5.1
SMKR	Semkarok	4.66	9	eP	Pn	08 13 23.8	+5.8
SRKR	Sorokina	4.71	7	eP	Pn	08 13 23.6	+4.9
BKI	Bering	4.71	45	eP	Pn	08 13 22.2	+3.6
BKI				eS	Sn	08 14 12.3	+0.4

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*WEL **28** 08:32:44.1±1.4, 34°S±14°×17°9E±5°2, h33^{km}, M3.6/11, mB4.5/1, ML4.0/12, MLv3.6/11, Mw(mB)3.7/1, Error ellipse: s-maj=0.1km s-min=0.0km az=101.5*
ISC 28 08:32:41.9±1.3, **34°.0S**±0°.1×**178°.9E**±0°.4, **h300**^{km}, **n21**, σ**3^{s}.00**/22, **mb4.0**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.56	188	P	Pn	08 33 43.1	0.0
WMGZ	Waiomatatini S	3.80	186	P	Pn	08 33 46.2	+0.4
HAZ	Te Kaha	3.83	194	P	Pn	08 33 46.7	+0.7
HAZ				S	S	08 34 35.8	-1.7
PKGZ	Pakihiroa	3.91	190	P	Pn	08 33 47.6	+0.5
RUGZ	Raukumara Rang	4.05	194	P	Pn	08 33 50.0	+1.3
RUGZ				S	S	08 34 39.7	-2.5
TWGZ	Tauwhareparae	4.21	190	P	Pn	08 33 51.3	+1.0
TWGZ				S	S	08 34 44.4	-0.8
MWZ	Matawai	4.44	194	P	Pn	08 33 54.4	+1.5
MWZ				S	S	08 34 49.6	-0.3
URZ	Urewera	4.47	199	LR	LR	08 42 20.7	
	comp=Z,74nm,21.7s,baz=176,slow=29						
URZ	Urewera	4.47	199	P	Pn	08 33 55.4	+2.2
CNGZ	Carnagh Statio	4.48	187	P	Pn	08 33 54.3	+1.0
TKGZ	Te Karaka	4.48	191	P	Pn	08 33 54.5	+1.1
RAGZ	Rawiri	4.62	195	P	Pn	08 33 57.1	+2.2
RIGZ	Rimuhau	4.76	191	P	Pn	08 33 58.5	+2.0
RTZ	Ruatahuna	4.84	198	P	Pn	08 33 58.7	+1.3
SNGZ	Shannon Statio	4.91	195	P	Pn	08 34 00.1	+1.9
PETK	Petropavlovsk-	88.73	347	P	P	08 44 46.9	-14
	1.6nm,0.8s,baz=128,slow=9.3,SNR=3.5						
NVAR	Mina Array Bea	92.66	44	P	P	08 45 21.4	+1.4
	0.6nm,0.7s,baz=222,slow=8.6,SNR=8.2						
TXAR	Lajitas Array	96.51	59	P	P	08 45 54.6	+17
	0.8nm,0.7s,baz=217,slow=5.9,SNR=14						
PDAR	Pinedale Array	100.54	45	P	Pdif	08 45 59.8	+4.2
	0.4nm,0.5s,baz=224,slow=3.5,SNR=6.7						
ILAR	Eielson Array	102.06	14	P	Pdif	08 45 50.8	-11
	0.5nm,0.4s,baz=221,slow=5.3,SNR=9.9						
GERES	GERESS Array B	161.57	328	PKPbc	PKPab	08 52 52.3	-0.9
	0.8nm,0.6s,baz=25,slow=3.5,SNR=8.7						

IDC 28 08:34:22.6±4.7, **18°.32S×179°.60W, h0**^{km}, **mb3.8**/4, **mb1 4.3**/4, **mb1mx3.9**/34, **mbtmp3.8**/4, **Error ellipse: s-maj=181.7km s-min=79.9km az=2.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	80.50	44	P	P	08 46 37.6	+0.6
	0.4nm,0.7s,baz=222,slow=9.1,SNR=5.3						
ILAR	Eielson Array	86.54	13	P	P	08 47 07.0	-0.2
	0.3nm,0.4s,baz=222,slow=5.2,SNR=6.2						
TXAR	Lajitas Array	87.17	58	P	P	08 47 11.2	0.0
	0.6nm,0.7s,baz=218,slow=5.8,SNR=11						
PDAR	Pinedale Array	88.43	44	P	P	08 47 16.4	-0.7
	0.3nm,0.5s,baz=163,slow=1.5,SNR=4.7						
GERES	GERESS Array B	147.70	343	PKPbc	PKPbc	08 54 08.8	-0.6
	0.7nm,0.5s,baz=33,slow=4.1,SNR=8.4						

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*IDC **28** 08:34:51.8±4.5, 8°.71S×122°.22E, h23^{km}±29^{km}, mb4.3/15, mb1 4.4/17, mb1mx4.1/43, mbtmp4.4/17, ML4.4/2, MS3.1/6, Ms1 3.1/6, ms1mx2.9/27, Error ellipse: s-maj=25.1km s-min=14.2km az=73.0*
*KLM **28** 08:34:56.0, 9°.40S×122°.81E, h75^{km}, mb5.1*
*ISCJB **28** 08:34:58.6±0.3, 9°.00S±0°.04×122°.59E±0°.03, h106^{km}, mb4.4/30, Error ellipse: s-maj=5.7km s-min=3.9km az=15.7*
*NEIC **28** 08:35:00.1±1.8, 9°.03S×122°.51E, h126^{km}±8^{km}, mb4.4/17, Error ellipse: s-maj=26.2km s-min=3.1km az=222.0*
*DJA **28** 08:35:01.9±0.2, 9°S±3°×12°3E±°, h101^{km}±3^{km}, M4.8/20, mb5.0/20, mB5.1/6, MLv4.8/12, Mw(mB)4.5/6*
ISC 28 08:34:59.5±0.4, **9°.13S**±0°.06×**122°.54E**±0°.04, **h106**^{km}, **n87**, σ**2^{s}.22**/94, **mb4.4**/29, **Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	0.57	329	ePn	Pn	08 35 19.2	+2.7
MMRI				eSn	Sn	08 35 31.6	+2.5
MMRI	Maumere	0.57	329	P	Pn	08 35 18.7	+2.2
MMRI				S	Sn	08 35 31.3	+2.1
EDFI	Ende, Flores	0.91	294	P	Pn	08 35 21.2	+1.6
SOEI	Soe	1.82	110	ePn	Pn	08 35 36.1	+5.9
SOEI	Soe	1.82	110	P	Pn	08 35 33.4	+3.2
WSI	Waingapu	2.27	256	P	Pn	08 35 38.5	+2.6
WBSI	Waikabubak, Su	3.14	260	P	Pn	08 35 50.1	+2.7
WBSI				S	Sn	08 36 27.9	+3.6
BBSI	Bau Bau	3.61	1	P	Pn	08 35 54.4	+0.7
BKSI	Bulukumba	4.47	327	P	Pn	08 36 06.2	+1.0
PLAI	Plampang	4.71	273	P	Pn	08 36 10.9	+2.5
KAPI	Kappang	4.93	326	Pg	Pn	08 36 13.3	+1.9
	18nm,0.3s,baz=148,slow=8.5,SNR=60						
KAPI				LR	LR	08 37 56.4	
	comp=Z,144nm,21.1s,baz=117,slow=42						
KAPI	Kappang	4.93	326	ePn	Pn	08 36 13.0	+1.6
KDI	Kendari	5.13	1	P	Pn	08 36 14.9	+0.7
	93nm,1.2s,1μm0.3nm						
BNSI	Bone	5.28	333	P	Pn	08 36 17.2	+1.1
	100nm,0.9s,1μm0.3nm						
SPSI	Sidrap Palu	5.82	332	P	Pn	08 36 25.0	+1.6
	31nm,0.7s,0.1nm						
TTSI	Tana Toraja	6.62	336	P	Pn	08 36 44.6	+10
SRBI	Singaraja	7.31	278	P	Pn	08 36 46.8	+3.1
	47nm,0.9s,807nm0.4nm						
SANI	Sanana	7.82	26	P	Pn	08 36 52.9	+2.2
	104nm,0.7s,1μm0.3nm						
LUWI	Luwuk	8.03	2	ePn	Pn	08 36 52.9	-0.6
JAGI	Jajag, Banyuwa	8.31	274	ePn	Pn	08 36 58.0	+0.7
JAGI				eSn	Sn	08 38 24.8	-4.8
JAGI	Jajag, Banyuwa	8.31	274	P	Pn	08 36 57.9	+0.6
MSAI	Masohi	8.56	48	P	Pn	08 37 02.9	+2.2
	19nm,0.8s						
SAUI	Saumlaki	8.74	83	ePn	Pn	08 37 03.9	+0.7
SAUI				eSn	Sn	08 38 41.2	+1.2
SAUI	Saumlaki	8.74	83	P	Pn	08 37 05.6	+2.4
MTN	Manton Dam	9.21	114	ePn	Pn	08 37 12.0	+2.4
MTN				eSn	Sn	08 38 48.0	-3.5
PWJI	Pagerwojo	10.67	275	P	Pn	08 37 31.3	+2.0
	83nm,0.8s						
NGJI	Ngawi	11.10	278	P	P	08 37 51.5	+6.1
SIJI	Sorong	11.95	47	Pn	Pn	08 37 46.4	-0.1
	2.8nm,0.3s,baz=207,slow=6.9,SNR=18						
SMRI	Semarang	12.15	279	ePn	Pn	08 37 47.1	-2.1
SMRI	Semarang	12.15	279	P	Pn	08 37 51.5	+2.3
	191nm,0.9s						
KPJI	Karang Pucung	13.58	277	P	P	08 38 11.3	-1.9
	72nm,0.9s						
CISI	Cisompet, Garu	14.65	275	ePn	Pn	08 38 20.1	-1.6
CISI	Cisompet, Garu	14.65	275	P	Pn	08 38 23.3	+1.6
	141nm,0.6s						
LEM	Lembang	14.95	278	Pn	Pn	08 38 24.7	-1.0
	9.0nm,0.3s,baz=27,slow=12,SNR=15						
LEM				LR	LR	08 45 17.0	
	comp=Z,98nm,19.9s,baz=28,slow=43						
SBUM	Sibu	15.42	318	ePn	Pn	08 38 30.4	-1.1
	9.3nm,0.9s						
SBUM	Sibu	15.42	318	P	P	08 38 37.0	+3.3
WRA	Warramunga Arr	15.68	135	Pn	P	08 38 36.1	-0.4
	1.6nm,0.3s,baz=304,slow=14,SNR=52						
WRA				Sn	Sn	08 41 20.5	-7.7
	2.5nm,0.3s,baz=222,slow=24,SNR=8.7						
WRAB	Tennant Creek	15.68	135	ePn	Pn	08 38 35.0	+0.3
	15nm,0.8s						
WB2	Warramunga Arr	15.69	135	ePn	Pn	08 38 34.7	0.0
	13nm,0.8s						
KSM	Kuching	16.10	310	ePn	Pn	08 38 38.3	-1.6
	27nm,0.9s						
KSM	Kuching	16.10	310	P	P	08 38 43.0	+1.8
PPBI	Pangkal Pinang	17.72	292	P	Pn	08 39 00.4	+0.8
	26nm,1.0s						
AS31	Alice Springs	18.09	144	eP	P	08 39 03.1	0.0
	4.1nm,0.6s						
ASAR	Alice Springs	18.09	144	P	Pn	08 39 07.9	+3.8
	1.0nm,0.3s,baz=322,slow=12,SNR=110						
ASAR				S	S	08 42 21.8	-3.5
	1.7nm,0.3s,baz=307,slow=21,SNR=17						
ASAR				LR	LR	08 46 41.4	
	comp=Z,46nm,18.0s,baz=337,slow=38						
KLSI		18.21	283	P	P	08 39 05.2	+0.7
	105nm,1.0s,1μm						
KASI	Kota Agung	18.24	280	P	Pn	08 39 06.4	+0.4
	104nm,0.6s						
LWLI	Liwa	18.78	281	P	P	08 39 11.0	+0.2
	68nm,0.5s						
MDSI	Maura Dua	18.80	283	P	Pn	08 39 12.6	+0.1
	39nm,0.9s						
LHSI	Lahat	19.60	284	P	Pn	08 39 21.9	-0.1
	57nm,0.9s						
COEN	Coen	20.78	105	eP	P	08 39 31.6	-0.8
	18nm,0.6s						
COEN				eS	S	08 43 21.2	+2.7
MYKOM	Kota Tinggi	21.55	299	eP	P	08 39 38.7	-1.8
	12nm,0.8s						
JRMM	Jerantut	23.81	302	P	P	08 40 04.0	+1.1
NWAO	Narrogin (SRO)	24.19	191	P	P	08 40 10.3	+4.2
	9.0nm,0.6s,baz=25,slow=8.8,SNR=13						
STKA	Stephens Creek	28.73	145	P	P	08 40 51.8	+4.7
	1.2nm,0.5s,baz=308,slow=13,SNR=4.1						
STKA				LR	LR	08 54 48.4	
	comp=Z,54nm,20.1s,baz=13,slow=41						
CMAR	Chiang Mai Arr	35.96	320	P	P	08 41 49.8	-0.5
	1.3nm,0.3s,baz=134,slow=8.2,SNR=7.4						
WHN	Wuhan	40.22	349	P	P	08 42 29.5	+3.7
KSRS	Korea Array	46.61	6	P	P	08 43 15.2	-1.8
	1.7nm,1.0s,baz=188,slow=7.1,SNR=5.4						
KSRS				PcP	PcP	08 44 51.2	+1.9
	1.3nm,0.5s,baz=185,slow=2.7,SNR=5.6						
KSRS				LR	LR	09 05 12.3	
	comp=Z,11nm,18.7s,baz=194,slow=39						
MJAR	Matsushiro Arr	47.76	17	P	P	08 43 24.9	-1.1
	5.7nm,1.0s,baz=196,slow=9.2,SNR=15						
MJAR				PcP	PcP	08 44 56.5	+2.9
	0.9nm,0.6s,baz=188,slow=4.7,SNR=4.6						
MAJO	Matsushiro	47.76	17	eP	P	08 43 23.3	-2.7
	5.0nm,0.8s						
MJB9	Matsu-Tunnel	47.76	17	eP	P	08 43 23.9	-2.2
	5.0nm,0.8s						
HHC	Hu-ho-hao-te	50.74	349	eP	P	08 43 50.3	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,8.0nm,5.8s						
GTA	Gaotai	52.70	338	eP	P	08 44 03.0	-0.4
GTA				pP	pP	08 44 32.5	+3.7
GTA				sP	sP	08 44 46.5	+5.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
USRK	Ussuriysk Ar.	53.76	8	P	P	08 44 08.7	-2.2
	comp=Z,5.8nm,0.6s,baz=191,slow=6.3,SNR=20						
SONM	Songino Array	58.49	347	P	P	08 44 43.5	-1.2
	comp=Z,2.6nm,0.6s,baz=167,slow=8.1,SNR=9.5						
SONM				LR	LR	09 10 59.7	
	comp=Z,37nm,18.9s,baz=124,slow=37						
WMQ	Urumqi	61.45	332	eP	P	08 45 04.3	-0.6
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,84nm,4.5s						
MK31	Makanchi Array	66.21	331	eP	P	08 45 33.8	-2.2
	comp=Z,3.7nm,0.8s						
MKAR	Makanchi Array	66.21	331	P	P	08 45 35.0	-1.0
	comp=Z,7.0nm,0.7s,baz=137,slow=7.3,SNR=47						
KBL	Kabul	66.67	314	eP	P	08 45 37.5	-1.9
	comp=Z,17nm,1.0s						
AAK	Ala-Archa	67.61	324	P	P	08 45 44.5	-0.6
	comp=Z,4.4nm,0.5s,baz=122,slow=6.3,SNR=5.7						
CHGR	Chuyangaron	68.70	318	eP	P	08 45 48.1	-3.9
	comp=Z,24nm,0.9s						
PETK	Petropavlovsk-	68.84	22	P	P	08 45 52.3	-0.1
	comp=Z,4.1nm,0.6s,baz=180,slow=3.8,SNR=8.5						
KK31	Karatay Array	70.26	322	eP	P	08 45 59.9	-1.5
KKAR	Karatay Array	70.26	322	eP	P	08 45 59.8	-1.6
	comp=Z,2.1nm,0.7s						
WSAR	Wadi Sarin	70.26	299	P	P	08 46 01.7	-0.1
	comp=Z,3.1nm,0.6s,baz=196,slow=7.4,SNR=5.0						
ZAA0	Zalesovo Array	70.45	337	eP	P	08 45 58.2	-4.1
	comp=Z,8.8nm,1.1s						
ZALV	Zalesovo Beam	70.45	337	P	P	08 46 00.2	-2.0
	comp=Z,4.0nm,0.5s,baz=142,slow=4.8,SNR=15						
KURBB	Kurchatov Arra	70.67	332	P	P	08 46 02.4	-1.3
	comp=Z,2.6nm,0.6s,baz=141,slow=5.8,SNR=24						
KURK	Kurchatov	70.69	332	eP	P	08 46 02.1	-1.7
	comp=Z,4.4nm,0.8s						
BVAR	Borovoye Array	76.08	331	P	P	08 46 34.1	-1.3
	comp=Z,0.7nm,0.6s,baz=58,slow=5.4,SNR=4.7						
ABKAR	Akbulak array	79.70	324	eP	P	08 46 53.6	-1.9
	comp=Z,1.6nm,0.8s						
AKTO	Aktyubinsk	81.34	324	P	P	08 47 02.7	-1.6
	comp=Z,2.5nm,0.7s,baz=103,slow=9.5,SNR=9.7						
KMBO	Kilima Mbogo	85.17	270	P	P	08 47 25.2	+0.1
	comp=Z,1.3nm,0.4s,baz=52,slow=1.4,SNR=4.3						
PRP	Porcupine Dome	99.04	25	eP	Pdif	08 48 26.3	-2.0
	comp=Z,6.9nm,0.6s						
TORD	Torodi Ar. Bea	121.92	280	PKP	PKiKP	08 53 42.9	+0.3
	comp=Z,0.6nm,0.6s,baz=43,slow=1.7,SNR=5.3						
PDAR	Pinedale Array	123.60	44	PKP	PKiKP	08 53 49.3	+3.8
	comp=Z,0.3nm,0.7s,baz=116,slow=3.4,SNR=3.5						
TXAR	Lajitas Array	132.34	59	PKP	PKiKP	08 54 05.4	+2.2
	comp=Z,0.2nm,0.7s,baz=224,slow=2.5,SNR=2.9						
CPUP	Villa Florida	144.76	180	PKPbc	PKiKP	08 54 27.6	-1.0
	comp=Z,4.0nm,0.9s,baz=204,slow=7.2,SNR=4.3						

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*DJA **28** 08:39:59.9±1.9, 4°N±17°×12°7E±°, h128^{km}±23^{km}, M4.3/6, mb4.0/2, mB4.4/1, MLv4.5/6, Mw(mB)3.6/1*
*IDC **28** 08:40:00.3±0.8, 3°.26N×126°.30E, h0^{km}, mb4.1/10, mb1 4.1/11, mb1mx3.8/49, mbtmp4.1/11, ML4.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/26, Error ellipse: s-maj=50.3km s-min=16.6km az=64.0*
*ISCJB **28** 08:40:05.3±0.6, 3°.4N±0°.1×126°.7E±0°.1, h53^{km}, mb4.1/10, Error ellipse: s-maj=22.0km s-min=7.6km az=136.6*
*MAN **28** 08:40:05.5, 3°.31N×126°.26E, h1^{km}, mb5.3, ML4.3, MS4.5*
ISC 28 08:40:07.4±0.8, **3°.3N**±0°.2×**126°.6E**±0°.1, **h53**^{km}, **n14**, σ**1^{s}.02**/13, **mb4.1**/10, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.17	290	P	Pn	08 40 27.6	+0.1
SWI	Sorong	6.20	132	P	Pn	08 41 30.6	-5.8
SIJI	Sorong	6.21	132	Pn	Pn	08 41 35.7	-0.8
	4.2nm,0.3s,baz=172,slow=21,SNR=7.3						
SIJI				Sn	Sn	08 42 47.2	+1.0
	0.8nm,0.3s,baz=197,slow=20,SNR=3.3						
KAPI	Kappang	10.73	220	LR	LR	08 47 02.6	
	comp=Z,110nm,21.0s,baz=54,slow=40						
WRA	Warramunga Arr	24.30	162	P	P	08 45 20.1	0.0
	6.4nm,0.9s,baz=338,slow=11,SNR=3.2						
ASAR	Alice Springs	27.71	166	P	P	08 45 51.8	+0.9
	0.7nm,0.5s,baz=346,slow=12,SNR=2.2						
SONM	Songino Array	47.68	342	P	P	08 48 38.9	+0.1
	0.4nm,0.3s,baz=142,slow=7.2,SNR=2.7						
PETK	Petropavlovsk-	55.88	22	P	P	08 49 40.8	+1.2
	0.9nm,0.6s,baz=167,slow=3.5,SNR=4.6						
MKAR	Makanchi Array	57.86	325	P	P	08 49 53.6	-0.2
	0.9nm,0.5s,baz=122,slow=7.7,SNR=7.8						
ZALV	Zalesovo Beam	60.94	333	P	P	08 50 14.8	0.0
	0.8nm,0.4s,baz=144,slow=5.2,SNR=2.9						
KURBB	Kurchatov Arra	62.05	328	P	P	08 50 20.7	-1.8
	3.7nm,0.7s,baz=128,slow=6.3,SNR=24						
BVAR	Borovoye Array	67.63	327	P	P	08 50 57.4	-1.3
	1.0nm,0.6s,baz=108,slow=9.3,SNR=7.9						
AKTO	Aktyubinsk	73.94	322	P	P	08 51 36.9	-0.2
	2.1nm,0.6s,baz=99,slow=11,SNR=7.0						
ARU	Arti	75.25	328	P	P	08 51 43.4	-1.2
	0.6nm,0.3s,baz=124,slow=3.6,SNR=3.7						

MAN 28 08:42:00.8, 7°.34N×124°.92E, h29^{km}, mb5.3, ML4.3, MS4.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.68	260	⇑iP	Pn	08 42 14.9	+0.4
CTBH				iS	Sn	08 42 24.6	+0.5
CGP	Cagayan de Oro	1.13	349	⇑eP	Pb	08 42 21.6	-0.1
CGP				eS	Sn	08 42 35.2	0.0

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*NNC **28** 08:44:52.0±3.6, 36°.82N×71°.20E, h124^{km}±62^{km}, mb3.2, mpv3.8, Error ellipse: s-maj=34.8km s-min=27.7km az=139.0*

*IDC **28** 08:44:54.5±9.2, 36°.94N×71°.33E, h118^{km}±61^{km}, mb3.4/3, mb1 3.4/7, mb1mx3.1/45, mbtmp3.8/7, Error ellipse: s-maj=86.9km s-min=48.5km az=158.0*

ISC 28 08:44:49.9±1.9**, 36°.6N**±0°.1×**71°.5E**±0°.1**, h114^{km}, n14,** σ**1^{s}56**/18**, mb3.7**/3**, 3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	4.56	49	Pn	Pn	08 45 54.3	-2.6
KSH				Sn	Sn	08 46 38.5	-10
KSH				smax	smax		
	comp=N,300nm,0.3s						
KSH				smax	smax		
	comp=E,150nm,0.2s						
AAK	**Ala-Archa**	6.44	20	P	Pn	08 46 23.6	+1.4
	comp=E,3.1nm,0.3s,baz=157,slow=7.3,SNR=7.1						
AAK				S	Sn	08 47 33.6	-0.8
	comp=E,1.3nm,0.3s,baz=329,slow=18,SNR=4.3						
AAK	**Ala-Archa**	6.44	20	⇓P	Pn	08 46 23.4	+1.1
	comp=E,3.9nm,0.4s						
AAK				⇑S	Sn	08 47 34.3	0.0
	comp=E,6.2nm,0.7s						
KK31	**Karatay Array**	6.52	354	P	Pn	08 46 22.6	-0.7
	comp=E,2.5nm,0.3s,baz=189,slow=15,SNR=100						
KK31				⇓S	Sn	08 47 34.4	-1.8
	comp=E,4.0nm,0.3s,baz=183,slow=23,SNR=7.2						
TKM2	**Tokmak 2**	7.04	25	⇑P	Pn	08 46 31.5	+1.1
	comp=E,3.1nm,0.5s						
TKM2				⇓S	Sn	08 47 50.4	+1.5
	comp=E,1.8nm,0.7s						
KURBB	**Kurchatov Arra**	14.88	18	P	P	08 48 17.1	0.0
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=3.9						
AB31	**Akbulak array**	15.18	330	P	Pn	08 48 15.0	-3.1
	comp=E,0.6nm,0.3s,baz=140,slow=12,SNR=26						
AKTO	**Aktyubinsk**	16.88	329	P	Pn	08 48 38.0	-1.0
	comp=E,0.6nm,0.3s,baz=131,slow=14,SNR=7.7						
AKTO	**Aktyubinsk**	16.88	329	⇑P	Pn	08 48 37.8	-1.3
	comp=E,3.7nm,0.7s						
ZALV	**Zalesovo Beam**	19.64	24	P	P	08 49 10.2	+0.9
	comp=E,0.4nm,0.3s,baz=220,slow=10,SNR=6.4						
FINES	**FINESS Array B**	37.61	326	P	P	08 51 54.7	+1.5
	comp=E,0.9nm,0.3s,baz=118,slow=9.2,SNR=19						
ARCES	**ARCESS Array B**	41.19	337	P	P	08 52 24.0	+1.2
	comp=E,0.4nm,0.5s,baz=102,slow=7.5,SNR=4.1						
NB2	**NORSAR Subarra**	44.53	323	P	P	08 52 50.8	+0.9
	comp=Z,0.5nm,0.4s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	44.53	323	P	P	08 52 51.0	+1.1
	comp=Z,1.0nm,0.7s,baz=96,slow=7.8,SNR=8.6						

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*GUC **28** 08:48:50.9±0.4, 36°.13S×73°.73W, h44^{km}±2^{km}, ML4.0*

*NEIC **28** 08:48:50.0±0.0, 36°.13S×73°.73W, h44^{km}, mb4.5/76, ML4.0(GUC), After GUC.*

*IDC **28** 08:48:51.0±1.2, 35°.99S×73°.34W, h0^{km}, mb3.9/7, mb1 4.1/10, mb1mx4.0/23, mbtmp3.9/10, ML3.9/3, MS4.0/11, Ms1 4.0/11, ms1mx3.8/19, Error ellipse: s-maj=26.5km s-min=24.4km az=112.0*

*ISCJB **28** 08:48:53.6±0.3, 36°.07S±0°.03×73°.36W±0°.05, h33^{km}, mb4.5/70, MS4.0/11, Error ellipse: s-maj=6.3km s-min=4.9km az=171.4*

*VAO **28** 08:49:30.9±2.5, 33°.65S×70°.24W, h10^{km}±15^{km}, mb4.4*

ISC 28 08:48:54.8±0.6**, 36°.06S**±0°.04×**73°.46W**±0°.09**, h35^{km}, n135,** σ**2^{s}06**/95**, mb4.6**/70**, MS4.1**/11**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCSP	**San Pedro de C**	0.83	160	eP	Pn	08 49 06.8	-3.3
CCSP				eS	Sn	08 49 18.4	-2.7
CCHI	**Chillan**	1.24	116	eP	Pn	08 49 14.1	-1.6
CCHI				IAML		08 49 38.2	
	comp=E,10μm,0.5s						
GO05	**Huala**	1.63	50	ePn	Pn	08 49 20.5	-0.5
GO05	**Huala**	1.63	50	eP	Pn	08 49 20.3	-0.7
GO05				eS	Sn	08 49 42.8	+2.0
GO05				IAML		08 49 50.8	
	comp=N,1μm,0.5s						
PEL	**Peldehue**	3.70	39	ePn	Pn	08 49 49.6	+0.1
GO06	**Curarrehue**	3.86	157	ePn	Pn	08 49 51.2	-0.5
PLCA	**Paso Flores**	5.20	155	Pn	Pn	08 50 10.0	-0.1
	comp=N,1.3nm,0.3s,baz=347,slow=12,SNR=48						
PLCA				Sn	Sn	08 51 13.9	+5.0
	comp=N,1.9nm,0.3s,baz=2.2,slow=11,SNR=3.5						
PLCA	**Paso Flores**	5.20	155	ePn	Pn	08 50 10.6	+0.5
PLCA				eSn	Sn	08 51 08.3	-0.5
CFA	**Coronel Fontan**	6.21	46	Pn	Pn	08 50 24.2	+0.1
	comp=N,5.1nm,0.3s,baz=229,slow=11,SNR=47						
CFA				Sn	Sn	08 51 35.6	+1.7
	comp=N,3.7nm,0.3s,baz=270,slow=18,SNR=4.3						
CFA				LR	LR	08 53 12.8	
	comp=N,2μm,21.6s,baz=268,slow=43						
GO04	**Tololo Observa**	6.28	22	ePn	Pn	08 50 23.8	-1.4
GO04				eSn	Sn	08 51 33.6	-2.2
LCO	**Las Campanas**	7.40	19	ePn	Pn	08 50 36.0	-4.6
LCO	**Las Campanas**	7.40	19	eP	Pn	08 50 40.7	0.0
LCO				eS	Sn	08 51 36.2	-27
GO03	**Copiap**	8.87	19	ePn	Pn	08 50 55.4	-5.2
TRQA	**Tornquist**	9.39	106	ePn	Pn	08 51 02.7	-5.0
TRQA	**Tornquist**	9.39	106	eP	Pn	08 51 27.9	+20
GO02	**Mina Guanaco**	11.36	18	ePn	Pn	08 51 31.8	-3.1
LVC	**Limon Verde**	13.97	18	LR	LR	08 57 42.0	
	comp=N,416nm,19.1s,baz=206,slow=38						
PB01	**IPOC Station P**	15.36	14	ePn	Pn	08 52 24.7	-4.3
	comp=N,9.2nm,0.8s						
OGAUY	**Aigu**	15.43	89	eP	P	08 52 33.2	-0.8
PB11	**IPOC Station P**	16.57	13	ePn	Pn	08 52 40.8	-4.0
	comp=N,30nm,1.2s						
GO01	**Chusmiza**	16.75	14	eP	Pn	08 52 46.7	-0.5
	comp=N,16nm,1.4s						
CPUP	**Villa Florida**	16.84	59	Pn	Pn	08 52 45.4	-2.5
	comp=N,0.1nm,0.3s,baz=196,slow=20,SNR=2.2						
CPUP	**Villa Florida**	16.84	59	eP	Pn	08 52 42.7	-5.2
	comp=N,4.9nm,1.1s						
CPUP	**Villa Florida**	16.84	59	eP	Pn	08 52 41.0	-6.9
CPSB	**Cacapava Do Su**	17.66	77	eP	Pn	08 52 58.3	+0.2
ITAB	**Concordia**	20.14	70	eP	P	08 53 26.2	+0.3
LPAZ	**La Paz**	20.25	15	P	P	08 53 26.8	-1.1
	comp=N,0.8nm,0.4s,baz=141,slow=5.9,SNR=11						
LPAZ	**La Paz**	20.25	15	eP	P	08 53 23.4	-4.5
	comp=N,5.0nm,0.9s						
AQDB	**Aquidauana**	21.98	50	eP	P	08 53 46.4	+0.6
SIV	**San Ignacio**	22.83	32	P	P	08 53 54.7	-0.3
	comp=N,4.3nm,0.9s,baz=234,slow=12,SNR=23						
SIV				LR	LR	09 03 17.0	
	comp=N,104nm,20.4s,baz=222,slow=38						
NNA	**Nana**	24.16	352	LR	LR	09 01 38.4	
	comp=N,139nm,18.4s,baz=182,slow=32						
FRTB	**Fartura**	24.24	65	eP	P	08 54 13.1	+4.5
BB19B	**Bebedouro**	26.40	62	eP	P	08 54 34.0	+5.9
BSCB	**Bom Sucesso**	29.19	67	eP	P	08 55 01.4	+8.2
PMSA	**Palmer Station**	29.30	172	LR	LR	09 06 34.6	
	comp=N,371nm,18.0s,baz=332,slow=36						
VAS01	**Vassouras-RJ**	29.45	70	eP	P	08 55 05.4	+10
CLDB	**Colider**	29.74	37	eP	P	08 55 06.3	+8.3
DUB01	**Friburgo-RJ**	30.38	71	eP	P	08 55 13.9	+10
BDFB	**Brasilia**	30.46	55	P	P	08 55 04.4	-0.1
	comp=N,2.4nm,0.9s,baz=214,slow=12,SNR=3.5						
BDFB				LR	LR	09 08 26.9	
	comp=N,456nm,20.7s,baz=238,slow=39						
BDFB	**Brasilia**	30.46	55	eP	P	08 55 00.6	-3.9
	comp=N,7.4nm,1.3s						
BDFB				eP	P	08 55 04.4	-0.1
PEXB	**Peixe**	32.92	50	eP	P	08 55 34.2	+8.3
SJMB	**Sao Joao De Ma**	33.26	67	eP	P	08 55 39.5	+11
BSFB	**Barra de Sao F**	33.44	68	eP	P	08 55 40.0	+9.5
RIB01	**Linhares ES**	33.49	69	eP	P	08 55 41.2	+10
SMTB	**Santa Maria do**	35.88	47	eP	P	08 56 00.5	+8.8
PTGA	**Pitinga**	37.31	23	eP	P	08 55 58.5	-5.3
	comp=N,5.7nm,0.9s						
PTGA	**Pitinga**	37.31	23	eP	P	08 56 15.8	+12
NBPA	**Parau_RN**	44.95	57	eP	P	08 57 17.2	+11
RCBR	**Riachuelo**	45.72	58	eP	P	08 57 23.8	+11
VNA3	**Neumayer Olymp**	47.91	157	P	P	08 57 30.2	+1.0
SNAA	**Sanae**	50.14	157	P	P	08 57 47.3	+1.0
SNAA	**Sanae**	50.14	157	eP	P	08 57 39.1	-7.2
	comp=N,3.8nm,0.9s						
ESTN	**Estel**	50.39	344	eP	P	08 57 42.9	-5.9
	comp=N,25nm,1.3s						
QSPA	**South Pole Qui**	54.18	180	eP	P	08 58 09.3	-7.2
	comp=N,7.6nm,1.1s						
TBI	**Tubuai**	65.73	258	eLR	LR	09 19 20.9	
	comp=N,154nm,27.8s						
MEH	**Mehetia**	67.44	264	eT	T	10 13 10.6	
	comp=N,46nm,0.2s						
TIAR	**Tiarei**	68.64	263	eT	T	10 14 41.1	
	comp=N,3.2nm,0.2s						
PPT2	**Papeete2**	68.81	263	eLR	LR	09 20 53.6	
	comp=N,165nm,23.5s						
HPIG		69.63	329	eP	P	08 59 54.6	-6.3
	comp=N,6.3nm,1.0s						
JCT	**Junction City**	70.66	336	eP	P	09 00 00.8	-6.1
	comp=N,12nm,1.3s						
TXAR	**Lajitas Array**	70.98	332	P	P	09 00 10.7	+1.8
	comp=N,2.6nm,1.1s,baz=152,slow=8.3,SNR=13						
TXAR				LR	LR	09 26 40.6	
	comp=N,106nm,18.1s,baz=0.0,slow=32						
TX31	**Lajitas Ar. Si**	70.98	332	eP	P	09 00 09.2	+0.3
	comp=N,3.4nm,1.1s						
X48A	**Hartselle**	71.28	348	eP	P	09 00 11.3	+0.9
	comp=N,6.3nm,0.9s						
WHTX	**Lake Whitney,**	71.33	339	eP	P	09 00 04.9	-5.9
	comp=N,7.8nm,0.9s						
MAW	**Mawson**	71.54	164	LR	LR	09 32 18.0	
	comp=N,160nm,18.8s,baz=232,slow=36						
CCAR	**Cane Creek**	71.69	344	eP	P	09 00 15.6	+2.7
	comp=N,20nm,0.8s						
OXF	**Oxford**	71.77	346	eP	P	09 00 13.3	-0.1
	comp=N,14nm,1.0s						
WLAR	**White Oak Lake**	71.78	343	eP	P	09 00 05.9	-7.5
	comp=N,6.1nm,0.9s						
V56A	**Mocksville**	71.80	354	eP	P	09 00 14.0	+0.4
	comp=N,9.1nm,1.3s						
SWET	**Sewanee**	71.86	349	eP	P	09 00 14.5	+0.5
	comp=N,8.9nm,1.0s						
V53A	**Saluda**	71.89	352	eP	P	09 00 15.2	+1.0
	comp=N,13nm,1.4s						
PLAL	**Pickwick Lake**	71.98	347	eP	P	09 00 14.6	-0.1
	comp=N,5.2nm,1.1s						
V52A	**Sevierville**	72.15	351	eP	P	09 00 16.4	+0.7
	comp=N,9.7nm,1.3s						
V51A	**Loudon**	72.21	351	eP	P	09 00 16.7	+0.7
	comp=N,7.4nm,1.2s						
V48A	**Smith Brothers**	72.51	349	eP	P	09 00 18.9	+1.1
	comp=N,10nm,0.8s						
ABTX	**Abilene, Hawle**	72.59	337	eP	P	09 00 12.1	-6.3
	comp=N,10nm,1.1s						
U54A	**Nelsons Funny**	72.63	353	eP	P	09 00 19.6	+1.0
	comp=N,9.0nm,1.0s						
UALR	**University of**	72.64	344	eP	P	09 00 10.5	-8.1
	comp=N,7.0nm,1.1s						
WVT	**Waverly**	73.05	348	eP	P	09 00 22.1	+1.1
	comp=N,17nm,1.4s						
WHAR	**Wooly Hollow**	73.12	344	eP	P	09 00 22.8	+1.4
	comp=N,19nm,1.5s						
S57A	**Dark Hollow, R**	73.62	355	eP	P	09 00 24.7	+0.4
	comp=N,21nm,1.5s						
FCAR	**Ozark Folk Cen**	73.66	344	eP	P	09 00 16.7	-7.9
	comp=N,6.6nm,1.5s						
HSIG		73.72	326	eP	P	09 00 17.3	-7.8
	comp=N,3.7nm,1.0s						
WMOK	**Wichita Mounta**	74.29	339	eP	P	09 00 28.3	-0.1
	comp=N,2.1nm,1.0s						
TUL1	**Leonard**	74.56	341	eP	P	09 00 30.1	+0.3
	comp=N,5.8nm,0.9s						
R50A	**Paris**	74.65	351	eP	P	09 00 29.9	-0.4
	comp=N,9.5nm,1.4s						
USIN	**University of**	74.82	348	eP	P	09 00 25.1	-6.2
	comp=N,17nm,1.1s						
SIUC	**Southern Illin**	74.84	347	eP	P	09 00 26.1	-5.3
	comp=N,7.1nm,0.9s						
MSTX	**Muleshoe**	74.86	335	eP	P	09 00 30.8	-1.0
	comp=N,2.6nm,0.8s						
Q51A	**Peebles**	75.27	352	eP	P	09 00 34.7	+0.8
	comp=N,11nm,1.3s						
AMTX	**Amarillo**	75.33	336	eP	P	09 00 34.5	0.0
	comp=N,7.2nm,0.9s						
CCM	**Cathedral Cave**	75.56	346	eP	P	09 00 36.6	+1.0
	comp=N,12nm,1.1s						
TUC	**Tucson**	76.47	328	eP	P	09 00 33.1	-8.0
	comp=N,4.6nm,1.1s						
PAL	**Palisades**	76.69	360	eP	P	09 00 35.2	-6.7
	comp=N,13nm,1.4s						
LAZ	**Ladron**	76.82	332	eP	P	09 00 42.9	-0.2
N51A	**Ashland**	77.04	353	eP	P	09 00 44.8	+0.9
	comp=N,39nm,1.3s						
ANMO	**Albuquerque**	77.05	333	eP	P	09 00 36.4	-7.9
	comp=N,5.8nm,1.3s						
X16A	**Lo Mia Camp, P**	78.56	329	eP	P	09 00 54.4	+1.6
	comp=N,4.7nm,1.3s						
KSCO	**Kaye Shedlock'**	79.41	337	eP	P	09 00 57.4	+0.2
	comp=N,8.8nm,1.3s						
BAR	**Barrett**	79.45	324	eP	P	09 00 59.0	+1.6
	comp=N,7.4nm,1.1s						
WUAZ	**Wupatki**	79.48	329	eP	P	09 00 59.8	+2.0
	comp=N,5.0nm,1.1s						
BOSA	**Boshof**	80.14	118	LR	LR	09 34 24.1	
	comp=N,96nm,18.0s,baz=211,slow=34						
U15A	**North Rim**	80.64	329	eP	P	09 01 05.8	+1.6
	comp=N,6.9nm,1.4s						
PV13	**Radium Mtn., P**	80.77	332	eP	P	09 01 06.5	+1.7
	comp=N,8.6nm,1.4s						
SMCO	**Snowmass**	81.00	334	eP	P	09 01 06.0	-0.2
	comp=N,7.4nm,1.4s						
KNB	**Kanab**	81.36	329	eP	P	09 01 09.1	+1.2
	comp=N,14nm,1.4s						
LCMT	**Little Creek M**	81.54	329	eP	P	09 01 09.7	+1.0
	comp=N,2.4nm,1.0s						
SHPR	**Sheep Range**	81.93	327	eP	P	09 01 11.6	+0.7
	comp=N,5.2nm,1.2s						
CCUT	**Cedar City**	82.05	329	eP	P	09 01 13.3	+1.7
	comp=N,5.5nm,1.2s						
ECSD	**EROS Data Cent**	82.16	343	eP	P	09 01 12.7	+1.0
	comp=N,6.6nm,1.0s						
SRU	**San Rafael Swe**	82.25	332	eP	P	09 01 11.5	-1.0
	comp=N,4.9nm,1.3s						
MPU	**Maple Canyon**	83.46	331	eP	P	09 01 20.1	+1.3
	comp=N,6.4nm,1.4s						
R11A	**Troy Canyon, C**	83.66	328	eP	P	09 01 21.4	+1.6
	comp=N,3.7nm,1.2s						
K22A	**Casper**	83.95	336	eP	P	09 01 19.9	-1.2
	comp=N,11nm,1.5s						
DUG	**Dugway, Tooele**	84.08	331	eP	P	09 01 23.3	+1.5
	comp=N,8.7nm,1.4s						
OMMB	**Old Mammoth Mi**	84.58	325	eP	P	09 01 26.3	+1.7
	comp=N,3.6nm,1.3s						
BGU	**Big Grassy Mou**	84.78	331	eP	P	09 01 27.3	+1.9
	comp=N,4.1nm,1.4s						
HWUT	**Hardware Ranch**	84.81	332	eP	P	09 01 27.3	+1.7
	comp=N,9.8nm,1.3s						
NVAR	**Mina Array Bea**	84.92	326	P	P	09 01 28.7	+2.4
	comp=N,0.6nm,0.7s,baz=143,slow=5.8,SNR=6.0						
PDAR	**Pinedale Array**	85.08	334	P	P	09 01 28.4	+1.4
	comp=N,0.2nm,0.5s,baz=180,slow=2.7,SNR=5.1						
PDAR				LR	LR	09 35 21.3	
	comp=N,65nm,19.4s,baz=166,slow=33						
HVU	**Hansel Valley**	85.42	332	eP	P	09 01 29.5	+0.9
	comp=N,3.3nm,1.0s						
ELK	**Elko**	85.52	329	eP	P	09 01 30.1	+0.9
	comp=N,3.7nm,1.3s						
TORD	**Torodi Ar. Bea**	86.00	71	LR	LR	09 39 27.4	
	comp=N,86nm,18.7s,baz=275,slow=35						
YHH	**Holmes Hill**	87.31	334	eP	P	09 01 39.6	+1.7
	comp=N,3.8nm,1.2s						
MCMT	**McKenzie Canyo**	88.06	333	eP	P	09 01 43.2	+1.7
ULM	**Lac du Bonnet**	88.19	346	P	P	09 01 42.5	+0.8
	comp=N,3.0nm,0.9s,baz=141,slow=7.2,SNR=3.7						
J08A	**Circle Bar Ran**	89.03	329	eP	P	09 01 47.7	+1.7
	comp=N,5.5nm,1.0s						
VYHS	**Vyhne**	117.33	48	ePDIF	Pdif	09 03 54.9	+1.9
H11S2	**WAKE ISLAND Hy**	124.56	269	T	T	11 24 51.6	
	baz=118,slow=74,SNR=9.5						
H11S1	**WAKE ISLAND Hy**	124.58	269	T	T	11 24 53.0	
	baz=118,slow=74,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	124.58	269	T	T	11 24 49.7	
	baz=118,slow=74,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	125.03	270	T	T	11 25 19.8	
	baz=122,slow=75,SNR=7.2						
H11N1	**WAKE ISLAND Hy**	125.04	270	T	T	11 25 19.4	
	baz=122,slow=75,SNR=9.6						
H11N2	**WAKE ISLAND Hy**	125.05	270	T	T	11 25 22.0	
	baz=122,slow=75,SNR=5.4						
KSH	**Kashi**	155.65	73	ePKP	PKPdf	09 08 45.8	+0.9
KSH				PP	PP	09 12 50.5	+1.7

MAN 28 09:10:32.5, 6°.26N×124°.72E, h8^{km}, mb4.7, ML3.6, MS3.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	0.29	126	eP	Pn	09 10 42.6	-0.4
CTBH	**Cotabato--PC H**	1.07	334	⇑iP	Pb	09 10 53.3	+0.2
CTBH				i S	Sn	09 11 08.5	-0.3

WEL 28 09:15:28.3, 42°S±1°×**17°4E**±°**, h5^{km}**±2^{km}**, M3.5**/25**, ML3.8**/20**, MLv3.5**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=126.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	0.07	213	P	Pg	09 15 30.6	+0.7
CMWZ				S	Sg	09 15 32.3	+1.3
BSWZ	**Blackbirch Sta**	0.29	265	P	Pg	09 15 34.9	+0.9
BSWZ				S	Sb	09 15 40.0	-1.2
TUWZ	**Tuamarina**	0.35	317	P	Pb	09 15 36.4	-0.7
TUWZ				S	Sb	09 15 42.0	-1.0
TCW	**Tory Channel**	0.48	1	P	Pb	09 15 38.5	-0.8
BHW	**Baring Head**	0.54	58	P	Pb	09 15 40.0	-0.2
PLWZ	**Palliser**	0.75	81	P	Pb	09 15 44.8	+0.8
MSWZ	**Moikau Station**	0.79	70	P	Pb	09 15 45.2	+0.7
NNZ	**Nelson**	0.82	305	P	Pg	09 15 44.3	+0.3
CAW	**Cannon Point**	0.84	46	P	Pb	09 15 45.4	0.0
KHZ	**Kahutara**	0.90	216	P	Pn	09 15 47.5	-0.1
DUWZ	**D'Urville Isla**	0.93	344	P	Pn	09 15 48.2	+0.2
PAWZ	**Paruwai Farm**	0.93	71	P	Pn	09 15 47.9	-0.1
THZ	**Tophouse**	1.02	266	P	Pb	09 15 48.6	+0.1
MTW	**Mount Morrison**	1.07	61	P	Pn	09 15 49.9	-0.1
TRWZ	**Traveller**	1.11	75	P	Pb	09 15 50.0	+0.1
OGWZ	**Otaki Gorge**	1.11	38	P	Pn	09 15 50.8	+0.3
HOWZ	**Holdsworth Sta**	1.23	50	P	Pn	09 15 52.2	0.0
TMWZ	**Te Maipa**	1.36	65	P	Pn	09 15 53.6	-0.4
MRZ	**Mangatainoka R**	1.43	44	P	Pb	09 15 55.2	-0.2
TIWZ	**Tintock**	1.53	54	P	Pn	09 15 56.1	-0.2
GVZ	**Greta Valley S**	1.57	215	P	Pn	09 15 56.3	-0.6
QRZ	**Quartz Range**	1.57	303	P	Pg	09 15 58.3	-0.1
CPWZ	**Castlepoint**	1.66	63	P	Pg	09 16 00.1	0.0
OHWZ	**Ohakea**	1.68	29	P	Pg	09 16 00.7	+0.1
PRWZ	**Pori Road**	1.72	49	P	Pn	09 15 58.5	-0.4
POWZ	**Post Office Ro**	1.73	42	P	Pn	09 15 59.4	+0.4
BFZ	**Birch Farm**	1.80	57	P	Pn	09 15 59.0	-1.1
LTZ	**Lake Taylor**	1.84	233	P	Pn	09 16 00.3	-0.3
DSZ	**Denniston Nort**	1.84	268	P	Pb	09 16 01.9	-0.6
AMCZ	**Amberley**	1.91	218	P	Pn	09 16 00.7	-0.8
DVHZ	**Dannevirke**	2.00	47	P	Pn	09 16 02.0	-0.8
WAZ	**Wanganui**	2.01	16	P	Pg	09 16 06.2	-0.6
TSZ	**Takapari Road**	2.08	39	P	Pn	09 16 04.2	+0.3
OKCZ	**Okains Bay**	2.22	203	P	Pn	09 16 04.0	-1.8
CRLZ	**Canterbury Las**	2.24	212	P	Pn	09 16 04.3	-1.7
PNHZ	**Pukenui**	2.31	40	P	Pn	09 16 06.8	-0.2
WPHZ	**Waipukurau**	2.32	46	P	Pn	09 16 08.0	+0.8
OXZ	**Oxford**	2.32	224	P	Pn	09 16 05.6	-1.6
INZ	**Inchbonnie**	2.34	243	P	Pn	09 16 07.8	+0.4
MQZ	**McQueen's Vall**	2.34	210	P	Pn	09 16 05.2	-2.2
KHEZ	**Kahui Hut**	2.40	355	P	Pb	09 16 13.1	+1.0
NBEZ	**Newall Road No**	2.44	353	P	Pg	09 16 14.6	-0.5
DREZ	**Durham Road**	2.50	359	P	Pg	09 16 15.6	-0.7
PKVZ	**Pokaka**	2.54	19	P	Pb	09 16 14.5	+0.2
MOVZ	**Moawhango**	2.55	27	P	Pg	09 16 15.9	-1.2
PXZ	**Pawanui**	2.58	51	P	Pn	09 16 11.9	+1.2
BHHZ	**Black Hill Sta**	2.59	33	P	Pg	09 16 17.2	-0.8
VRZ	**Vera Road**	2.59	9	P	Pb	09 16 16.4	+1.2
KRHZ	**Kereru**	2.60	39	P	Pb	09 16 13.6	-1.8
DRZ	**Dome Shelter**	2.61	23	P	Pg	09 16 19.3	+1.0
WHVZ	**Whangaehu Hut**	2.61	23	P	Pg	09 16 17.5	-0.8
FWVZ	**Far West T-bar**	2.62	22	P	Pb	09 16 17.0	+1.0
TUVZ	**Tukino**	2.64	24	P	Pg	09 16 19.1	+0.1
NGZ	**Ngauruhoe**	2.71	23	P	Pg	09 16 19.3	-1.0
KAHZ	**Kahuranaki**	2.74	47	P	Pn	09 16 14.6	+1.6
WTVZ	**West Tongariro**	2.77	22	P	Pg	09 16 21.3	0.0
KRVZ	**Karewarewa**	2.80	23	P	Pg	09 16 21.2	-0.8
WVZ	**Waitaha Valley**	2.96	241	P	Pb	09 16 20.8	-0.6
BKZ	**Black Stump Fm**	3.04	35	P	Pg	09 16 25.1	-1.6
RPZ	**Rata Peaks**	3.11	228	P	Pn	09 16 17.6	-0.5
HIZ	**Hauiti**	3.21	8	P	Pb	09 16 24.3	-1.5
SNGZ	**Shannon Statio**	3.74	40	P	Pb	09 16 32.1	-2.7
FOZ	**Fox Glacier**	3.76	239	P	Pb	09 16 32.9	-2.3
LIRZ	**Lichensteins R**	4.03	25	P	Pb	09 16 35.7	-4.0
URZ	**Urewera**	4.07	33	P	Pn	09 16 35.4	+4.2
TOZ	**Tahuroa Road**	4.07	14	P	Pb	09 16 39.3	-1.1
MWZ	**Matawai**	4.19	38	P	Pn	09 16 33.6	+0.8
ODZ	**Otahua Downs**	4.26	217	P	Pn	09 16 33.0	-0.9
AWAZ	**Awhitu Peninsu**	4.63	4	P	Pb	09 16 44.7	-5.3
MKAZ	**Moumakai**	4.63	9	P	Pn	09 16 44.0	+5.1
JCZ	**Jackson Bay**	4.68	238	P	Pn	09 16 43.5	+3.8
ETAZ	**East Tamaki Re**	4.76	6	P	Pb	09 16 46.9	-5.3
HAZ	**Te Kaha**	4.78	36	P	Pn	09 16 43.7	+2.8

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*RSNC **28** 09:26:34.9±1.4, 8°.01N×72°.51W, h4^{km}±11^{km}, ML3.4*

*IDC **28** 09:26:38.2±1.6, 8°.24N×72°.53W, h68^{km}±16^{km}, mb3.1/3, mb1 3.4/4, mb1mx3.1/27, mbtmp3.4/4, MS3.4/1, Ms1 3.3/1, ms1mx2.5/14, Error ellipse: s-maj=23.4km s-min=8.5km az=137.0*

ISC 28 09:26:32.3±1.6**, 8°.09N**±0°.04×**72°.49W**±0°.04**, h0^{km}**±11^{km}**, n31,** σ**2^{s}28**/40**, mb3.5**/3**, 2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	0.77	195	i Pg	Pg	09 26 46.8	-0.3
PAMC				eS	Sg	09 26 56.9	-0.2
PAMC				i		09 26 58.0	
	comp=Z,1μm,0.2s						
OCAC	**Ocana**	0.83	281	⇓iP	Pg	09 26 49.0	+0.8
OCAC				i		09 27 03.0	
	comp=Z,1μm,0.2s						
GIRC	**Giron, Santand**	1.22	215	eP	Pb	09 26 55.0	-1.3
BRRC	**Barranca, Sant**	1.55	231	⇓iP	Pn	09 27 01.9	+0.7
BRRC				eS	Sn	09 27 21.4	-0.6
BRRC				i		09 27 25.3	
	comp=Z,157nm,0.3s						
SOCV	**Socops**	1.63	83	eP	Pn	09 27 02.8	+0.5
SOCV				eS	Sn	09 27 25.0	+1.0
BARC	**Barichara**	1.64	205	eP	Pn	09 27 02.8	+0.2
BARC				eS	Sb	09 27 24.3	-0.4
SMLC	**San Martn de**	1.72	295	eP	Pn	09 27 03.7	+0.3
SMLC				eS	Sn	09 27 27.4	+1.3
SMLC				i		09 27 28.4	
	comp=Z,932nm,0.2s						
TAMC	**Tame, Arauca**	1.78	157	ePg	Pn	09 27 04.7	+0.3
TAMC				i		09 27 06.9	
	comp=Z,527nm,0.2s						
TAMC				eS	Sg	09 27 29.8	+0.1
SDV	**Santo Domingo**	2.00	67	P	Pn	09 27 08.9	+1.4
	comp=Z,95nm,0.3s,baz=255,slow=16,SNR=25						
SDV				S	Sn	09 27 34.5	+1.0
	comp=Z,536nm,0.3s,baz=292,slow=16,SNR=33						
SDV	**Santo Domingo**	2.00	67	eP	Pn	09 27 09.5	+1.9
SDV				eS	Sn	09 27 36.0	+2.6
RUSC	**La Rusia**	2.26	195	i	Sb	09 27 46.5	+3.6
	comp=Z,116nm,0.3s						
ZARC	**Zaragoza, Cauc**	2.42	256	eP	Pn	09 27 14.0	+0.9
ZARC				i		09 27 50.4	
	comp=Z,229nm,0.3s						
ARGC	**Ariguani, Magd**	2.47	316	eP	Pn	09 27 14.8	+1.0
ARGC				eS	Sn	09 27 46.8	+2.1
PTBC	**PUERTO BERRIO,**	2.48	232	eP	Pn	09 27 14.1	+0.1
PTBC				i		09 27 52.3	
	comp=Z,221nm,0.6s						
UREC	**San Jos de Ur**	3.03	264	eP	Pn	09 27 24.1	+2.5
SJCC	**San Jacinto, C**	3.21	304	eP	Pn	09 27 26.0	+2.0
NORC	**Norcasia**	3.44	223	eP	Pn	09 27 29.7	+2.5
URIC	**Uribia, Colomb**	3.63	8	eP	Pn	09 27 28.1	-1.6
CHIC	**Chingaza**	3.65	200	eP	Pn	09 27 31.8	+1.4
ROSC	**El Rosal**	3.70	209	P	Pn	09 27 33.6	+2.5
	comp=Z,2.5nm,0.3s,baz=53,slow=20,SNR=5.9						
ROSC				S	Sb	09 28 19.9	-4.5
	comp=Z,4.5nm,0.3s,baz=323,slow=20,SNR=3.0						
ROSC	**El Rosal**	3.70	209	eP	Pn	09 27 35.5	+4.4
RREF	**El Recreo**	4.25	222	eP	Pn	09 27 41.1	+2.3
PLMC	**San Jos del P**	4.92	230	eP	Pn	09 27 51.9	+4.4
PRAC	**Prado**	4.95	209	eP	Pn	09 27 50.4	+2.4
PCRV	**Puerto La Cruz**	8.03	74	P	Pn	09 28 29.0	-1.3
	comp=Z,0.8nm,0.3s,baz=291,slow=1.4,SNR=13						
PCRV				S	Sn	09 29 56.0	-5.9
	comp=Z,0.8nm,0.3s,baz=144,slow=19,SNR=3.2						
LPAZ	**La Paz**	24.60	170	P	P	09 31 53.9	-1.1
	comp=Z,0.5nm,0.4s,baz=348,slow=8.0,SNR=5.0						
SIV	**San Ignacio**	26.46	155	P	P	09 32 10.0	-1.3
	comp=Z,1.0nm,0.9s,baz=282,slow=14,SNR=4.5						
BDFB	**Brasilia**	33.82	134	LR	LR	09 46 40.2	
	comp=Z,55nm,18.1s,baz=165,slow=35						

TXAR	Lajitas Array	36.11	310	P	P	09 33 32.6	-3.7
	comp=Z,0.2nm,0.8s,baz=138,slow=4.4,SNR=2.7						
ASAR	Alice Springs	150.34	235	PKPbc	PKPdf	09 46 22.9	+1.5
	comp=Z,0.4nm,0.6s,baz=117,slow=2.8,SNR=6.2						
WRA	Warramunga Arr	151.48	243	PKPbc	PKPdf	09 46 26.0	+2.9
	comp=Z,1.6nm,0.4s,baz=100,slow=2.6,SNR=45						

ISCJB ***28*** *09:42:14.3±0.4, 24°.75N±0°.02×122°.24E±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=3.6km s-min=2.5km az=19.9*

TAP ***28*** *09:42:14.9, 24°.75N×122°.22E, h13^{km}, ML3.1, C*

JMA ***28*** *09:42:14.9±0.1, 24°.70N×122°.22E, h16^{km}±5^{km}, M2.4*

ISC 28 09:42:14.8±0.9, **24°.73N**±0°.03×**122°.22E**±0°.02, **h17**^{km}±6^{km}, **n44**, σ**0^{s}.72**/76, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.20	204	⇑iP	Pg	09 42 20.0	+0.4
	baz=203						
EOS1				eS	Sg	09 42 23.4	+0.6
	baz=203						
TWC	Suao	0.35	250	P	Pg	09 42 21.4	-0.8
	baz=246						
NTC	Toucheng	0.37	290	P	Pg	09 42 21.8	-0.8
	baz=286						
NTC				eS	Sg	09 42 27.7	-0.1
	baz=286						
TIPB	Shuangxi	0.43	304	eP	Pg	09 42 22.5	-1.1
	baz=301						
TIPB				eS	Sg	09 42 29.9	+0.4
	baz=301						
TWE	Neicheng	0.50	269	P	Pg	09 42 24.2	-0.7
	baz=266						
TWE				eS	Sg	09 42 31.5	-0.1
	baz=266						
NANB	Nanao	0.52	235	P	Pg	09 42 24.6	-0.6
	baz=233						
NANB				eS	Sb	09 42 32.5	-0.2
	baz=233						
NWF	Wu-fen Shan	0.52	311	eP	Pg	09 42 25.2	-0.1
	baz=308						
NWF				eS	Sg	09 42 32.0	-0.4
	baz=308						
WFSB	Wu-fen Shan	0.52	311	P	Pg	09 42 25.0	-0.3
	baz=308						
WFSB				eS	Sg	09 42 32.6	+0.3
	baz=308						
ENA	Nanau	0.53	235	eP	Pg	09 42 24.6	-0.7
	baz=233						
TWA	Mucha	0.63	294	eP	Pb	09 42 27.6	+0.3
	baz=291						
TWA				eS	Sb	09 42 36.0	+0.3
	baz=291						
NDT	Datong Townshi	0.65	259	iP	Pg	09 42 27.3	-0.4
	baz=257						
NDT				eS	Sg	09 42 36.3	-0.1
	baz=257						
NHDH	Xindian Distri	0.67	291	eP	Pb	09 42 28.5	+0.5
	baz=288						
NHDH				eS	Sb	09 42 37.6	+0.6
	baz=288						
TATO	Taipei	0.71	291	eP	Pb	09 42 28.8	+0.2
	baz=288						
TATO				eS	Sb	09 42 38.5	+0.4
	baz=288						
JYNG	Yonagunijimaku	0.72	112	P	Pg	09 42 28.4	-0.5
JYNG				S	Sg	09 42 38.0	-0.5
YM01	YM01	0.72	305	P	Pg	09 42 28.5	-0.4
	baz=303						
YM01				eS	Sg	09 42 38.5	0.0
	baz=303						
YM08	YM08	0.73	309	P	Pg	09 42 28.3	-0.8
	baz=307						
YM08				eS	Sg	09 42 37.8	-1.0
	baz=307						
YM10	YM10	0.73	306	P	Pg	09 42 28.4	-0.7
	baz=303						
YM10				eS	Sg	09 42 38.6	-0.3
	baz=303						
YM05	YM05	0.73	306	P	Pg	09 42 28.5	-0.7
	baz=304						
YM05				eS	Sg	09 42 38.4	-0.6
	baz=304						
YM04	YM04	0.75	305	P	Pg	09 42 28.8	-0.7
	baz=302						
YM04				eS	Sg	09 42 38.8	-0.7
	baz=302						
YHNB	Yeheng	0.77	266	P	Pg	09 42 29.6	-0.3
	baz=264						
YOJ	Yonaguni jima	0.77	110	P	Pg	09 42 28.8	-1.1
	baz=111						
YOJ				S	Sg	09 42 39.5	-0.6
	baz=111						
YOJ	Yonaguni jima	0.77	110	P	Pg	09 42 29.2	-0.7
YOJ				S	Sg	09 42 39.4	-0.7
NSK	Sanguang	0.78	266	P	Pg	09 42 29.5	-0.6
	baz=264						
NSK				eS	Sb	09 42 40.8	+0.5
	baz=264						
NACB	Ninganchiao	0.79	226	P	Pg	09 42 29.7	-0.6
	baz=224						
NACB				eS	Sb	09 42 40.5	0.0
	baz=224						
NNSB	Datong	0.82	249	P	Pg	09 42 30.2	-0.6
	baz=247						
NNSB				S	Sb	09 42 41.3	0.0
	baz=247						
NNS	Nan Shan	0.82	250	eP	Pb	09 42 30.5	-0.2
	baz=247						
ETLH	Xiulin Townshi	0.85	232	P	Pg	09 42 30.8	-0.6
	baz=231						
ETLH				eS	Sb	09 42 42.0	-0.2
	baz=231						
TWD	Chiawan	0.86	221	P	Pb	09 42 31.1	-0.1
	baz=220						
TWD				eS	Sb	09 42 43.5	+1.1
	baz=220						
WHF	Hehuan Shan	1.04	236	P	Pb	09 42 34.7	0.0
	baz=235						
WHF				eS	Sb	09 42 49.1	+0.9
	baz=235						
TDCB	Techi	1.07	244	P	Pb	09 42 35.2	+0.2
	baz=242						
TDCB				eS	Sb	09 42 49.7	+0.9
	baz=242						
LIOB	Emei	1.09	266	eP	Pg	09 42 34.7	-1.4
	baz=264						
NSTT	Nanjuang	1.11	265	eP	Pg	09 42 35.2	-1.1
	baz=263						
NSTT				eS	Sg	09 42 48.8	-2.0
	baz=263						
ESL	Shilin	1.16	218	eP	Pn	09 42 36.5	+0.3
	baz=217						
CHGB	Renai	1.16	235	P	Pn	09 42 37.1	+0.7
	baz=234						
CHGB				eS	Sb	09 42 51.9	+0.5
	baz=234						
EGFH	Guangfu	1.28	214	eP	Pb	09 42 38.4	0.0
	baz=214						
VWDT	VWDT	1.38	226	eP	Pg	09 42 40.5	-0.9
	baz=224						
HGSD	Ruisui	1.43	211	eP	Pg	09 42 41.4	-1.0
	baz=210						
IRIF	Iriomote-Funau	1.43	106	P	Pb	09 42 41.3	+0.3
IRIF				S	Sn	09 42 59.1	+0.7
SSLB	Suanglung	1.48	231	eP	Pn	09 42 41.3	+0.6
	baz=230						
SSLB				S	Sb	09 43 01.1	+0.6
	baz=230						
TYC	Yuchr	1.49	237	eP	Pb	09 42 41.8	-0.2
	baz=235						
YULB	Yu-li	1.57	212	eP	Pn	09 42 42.2	+0.3
	baz=212						
JKRS	Kuro-shima	1.71	106	P	Pn	09 42 43.0	-0.7
JKRS				eS	Sn	09 43 03.6	-1.5
JIJ	Ishigaki jima	1.79	101	P	Pn	09 42 45.6	+0.7
JIJ				eS	Sn	09 43 08.2	+1.0
JISG	Ishigakijimahi	1.91	94	S	Sn	09 43 12.0	+1.8

IDC ***28*** *10:12:06.8±2.1, 31°.46S×65°.07W, h0^{km}, mb1 3.8/5, mb1mx3.6/24, mbtmp3.7/5, ML3.5/5, Error ellipse: s-maj=36.5km s-min=18.8km az=138.0*

SJA ***28*** *10:12:07.6±0.3, 31°.48S×64°.78W, h54^{km}±4^{km}, ML3.7, MW3.5*

ISCJB ***28*** *10:12:09.1±0.8, 31°.51S±0°.08×64°.93W±0°.07, h33^{km}, Error ellipse: s-maj=13.0km s-min=6.0km az=152.3*

ISC 28 10:12:10.7±1.1, **31°.50S**±0°.09×**64°.90W**±0°.06, **h35**^{km}, **n9**, σ**1^{s}.45**/13, **Cordoba Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCA	Tanti	0.31	58	eP	Pn	10 12 17.1	-1.7
TCA				eS	Sn	10 12 24.1	-0.2
TCA					IAML	10 12 24.7	
	comp=Z,3μm,0.3s						
ACAN	Cantantal	2.09	248	eP	Pn	10 12 43.5	+0.2
ACAN				eS	Sn	10 13 10.1	+1.9
CFA	Coronel Fontan	2.85	267	Pn	Pn	10 12 51.2	-2.5
	comp=Z,7.7nm,0.3s,baz=81,slow=18,SNR=103						
CFA				Sn	Sn	10 13 24.9	-2.0
	comp=Z,32nm,0.3s,baz=126,slow=18,SNR=14						
CYA	Choya	3.15	345	eP	Pn	10 12 57.3	-0.6
CYA					IAML	10 13 41.9	
	comp=Z,272nm,0.4s						
VCA	Vinchina	3.98	313	eP	Pn	10 13 09.6	+0.3
CPUP	Villa Florida	8.40	54	Pn	Pn	10 14 10.2	+0.3
	comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=7.6						
CPUP				Sn	Sn	10 15 42.4	-1.1
	comp=Z,0.3nm,0.3s,baz=216,slow=19,SNR=1.5						
CPUP				Lg	Lg	10 16 36.0	
	comp=Z,1.3nm,0.3s,baz=156,slow=18,SNR=2.9						
PLCA	Paso Flores	10.28	205	Pn	Pn	10 14 36.5	+0.8
	comp=Z,0.0nm,0.3s,baz=47,slow=18,SNR=2.9						
PLCA				Lg	Lg	10 17 31.0	
	comp=Z,0.4nm,0.3s,baz=358,slow=9.5,SNR=6.0						
LPAZ	La Paz	15.43	348	Pn	Pn	10 15 46.4	0.0
	comp=Z,0.1nm,0.3s,baz=189,slow=9.0,SNR=9.8						
SIV	San Ignacio	15.83	14	Pn	Pn	10 15 52.4	+1.4
	comp=Z,0.3nm,0.3s,baz=191,slow=16,SNR=16						

IDC ***28*** *11:08:06.8±5.5, 28°.01S×177°.77W, h114^{km}±45^{km}, mb4.0/10, mb1 4.1/12, mb1mx3.9/24, mbtmp4.3/12, MS3.7/1, Ms1 3.7/1, ms1mx2.9/27, Error ellipse: s-maj=27.3km s-min=22.1km az=63.0*

ISCJB ***28*** *11:08:16.1±0.5, 28°.39S±0°.03×178°.14W±0°.09, h198^{km}, mb4.4/40, Error ellipse: s-maj=11.0km s-min=4.0km az=1.3*

NEIC ***28*** *11:08:17.2±2.5, 28°.08S×177°.94W, h203^{km}±5^{km}, mb4.6/41, Error ellipse: s-maj=20.7km s-min=12.4km az=111.0*

ISC 28 11:08:17.4±0.5, **28°.39S**±0°.05×**178°.15W**±0°.09, **h198**^{km}, **n173**, σ**2^{s}.35**/175, **mb4.6**/40, **2C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	0.88	167	P	Pn	11 08 49.5	+3.4
RIZ				S	Sn	11 09 14.1	+5.5
RAO	Raoul Island	0.89	167	ePn	Pn	11 08 48.4	+2.1
GLKZ	Green Lake	0.90	167	P	Pn	11 08 49.4	+3.2
GLKZ				S	Sn	11 09 14.4	+5.6
MXZ	Matakaoa Point	9.62	197	P	Pn	11 10 33.7	+2.0
WMGZ	Waiomatatini S	9.84	196	P	Pn	11 10 35.3	+0.8
WMGZ				S	Sn	11 12 22.8	-1.5
WCZ	Waipu Caves	9.85	218	P	Pn	11 10 41.0	+6.3
HAZ	Te Kaha	9.95	199	P	Pn	11 10 34.1	-1.8
HAZ	Te Kaha	9.95	199	P	Pn	11 10 35.8	-0.1
PKGZ	Pakihiroa	9.99	197	P	Pn	11 10 33.8	-2.8
RUGZ	Raukumara Rang	10.17	199	P	Pn	11 10 37.7	-1.2
RUGZ	Raukumara Rang	10.17	199	P	Pn	11 10 37.4	-1.6
RUGZ				S	Sn	11 12 24.0	-8.5
TWGZ	Tauwhareparae	10.29	197	P	Pn	11 10 39.0	-1.4
CNGZ	Carnagh Statio	10.52	196	P	Pn	11 10 42.2	-1.1
MWZ	Matawai	10.56	199	P	Pn	11 10 41.1	-2.8
MWZ	Matawai	10.56	199	P	Pn	11 10 41.7	-2.1
TKGZ	Te Karaka	10.57	197	P	Pn	11 10 45.0	+1.1
URZ	Urewera	10.61	201	P	Pn	11 10 41.4	-3.1
	0.8nm,0.3s,baz=12,slow=18,SNR=16						
URZ				S	Sn	11 12 40.2	-2.7
	10nm,0.3s,baz=308,slow=23,SNR=16						
URZ	Urewera	10.61	201	P	Pn	11 10 43.0	-1.5
URZ	Urewera	10.61	201	P	Pn	11 10 43.1	-1.4
RAGZ	Rawiri	10.74	199	P	P	11 10 52.2	-0.9
RAGZ	Rawiri	10.74	199	P	Pn	11 10 46.2	-0.1
RIGZ	Rimuhau	10.84	197	P	Pn	11 10 46.1	-1.4
MUGZ	Murupara	10.92	202	P	Pn	11 10 46.6	-1.9
RAHZ	Arahi	11.22	199	P	Pn	11 10 55.8	+3.4
RAHZ	Arahi	11.22	199	P	Pn	11 10 54.1	+1.7
MHGZ	Mahia Peninsul	11.23	196	P	Pn	11 10 52.5	+0.1
TLZ	Tolley Road	11.23	206	P	P	11 10 58.8	+0.3
MTHZ	Maungataniwha	11.24	200	P	Pn	11 10 55.4	+2.7
MRHZ	Matea Rd	11.36	202	P	Pn	11 10 57.9	+3.7
ARHZ	Aropaoanui	11.57	199	P	Sn	11 13 04.9	-0.9
BKZ	Black Stump Fm	11.64	201	ePn	Pn	11 10 58.8	+1.1
BKZ	Black Stump Fm	11.64	201	P	Pn	11 10 59.1	+1.4
BKZ	Black Stump Fm	11.64	201	P	Pn	11 10 55.6	-2.1
HIZ	Hauiti	11.66	208	P	P	11 11 04.7	+1.4
MCHZ	McNeill Hill	11.83	200	P	Pn	11 11 02.2	+2.2
KWHZ	Kaweka Forest	11.89	201	P	Pn	11 11 03.4	+2.4
KWHZ	Kaweka Forest	11.89	201	P	Sn	11 13 12.7	-0.8
CKHZ	Cape Kidnapper	11.92	198	P	Sn	11 13 15.6	+1.6
NIUE	Niue	11.94	41	ePn	Pn	11 10 54.7	-6.9
NGZ	Ngauruhoe	11.95	204	P	Pn	11 11 05.5	+3.8
TUVZ	Tukino	12.01	204	P	Pn	11 11 05.9	+3.4
WHVZ	Whangaehu Hut	12.05	204	P	Pn	11 11 04.3	+1.3
BHHZ	Black Hill Sta	12.07	202	P	Pn	11 11 03.6	+0.4
BHHZ	Black Hill Sta	12.07	202	P	Sn	11 13 15.8	-1.9
MOVZ	Moawhango	12.10	203	P	P	11 11 12.8	+4.5
KAHZ	Kahuranaki	12.10	199	P	Pn	11 11 02.9	-0.7
KAHZ	Kahuranaki	12.10	199	P	Sn	11 13 15.4	-3.0
KRHZ	Kereru	12.11	201	P	Pn	11 11 03.9	+0.2
KRHZ	Kereru	12.11	201	P	Sn	11 13 16.4	-2.2
PKVZ	Pokaka	12.14	205	P	Pn	11 11 06.2	+2.1
PXZ	Pawanui	12.32	198	P	Pn	11 11 07.6	+1.3
PXZ	Pawanui	12.32	198	P	Sn	11 13 18.8	-4.8
PNHZ	Pukenui	12.41	201	P	Sn	11 13 21.8	-4.0
WPHZ	Waipukurau	12.47	200	P	Sn	11 13 22.9	-4.4
PRHZ	Porangahau	12.61	199	P	Sn	11 13 21.7	-8.7
TSZ	Takapari Road	12.62	201	P	Pn	11 11 09.9	-0.3
DVHZ	Dannevirke	12.77	200	P	Sn	11 13 29.6	-4.8
POWZ	Post Office Ro	12.98	201	P	Sn	11 13 34.9	-4.4
PRWZ	Pori Road	13.07	200	P	Sn	11 13 34.1	-7.3
BFZ	Birch Farm	13.10	199	ePn	Pn	11 11 15.6	-0.5
BFZ	Birch Farm	13.10	199	P	Sn	11 13 36.3	-5.9
PAWZ	Paruwai Farm	13.99	200	P	Pn	11 11 29.3	+2.0
DUWZ	D'Urville Isla	13.99	206	P	Pn	11 11 24.2	-3.0
SNZO	South Karori	14.16	203	ePn	P	11 11 31.6	+0.6
BHW	Baring Head	14.19	202	P	Pn	11 11 27.8	-1.9
PLWZ	Palliser	14.21	201	P	Pn	11 11 28.5	-1.6
TCW	Tory Channel	14.22	204	P	Pn	11 11 27.6	-2.4
NNZ	Nelson	14.56	206	P	Pn	11 11 32.5	-1.7
QRZ	Quartz Range	14.58	209	ePn	Pn	11 11 36.3	+1.8
QRZ	Quartz Range	14.58	209	P	Pn	11 11 32.1	-2.3
THZ	Tophouse	15.21	206	P	Pn	11 11 39.1	-3.1
DZM	Mont Dzumac	15.29	291	P	Pn	11 11 44.3	+0.8
	0.2nm,0.3s,baz=120,slow=20,SNR=2.1						
KHZ	Kahutara	15.54	204	P	P	11 11 42.9	-3.4
DSZ	Denniston Nort	15.64	209	P	P	11 11 44.6	-2.9
GVZ	Greta Valley S	16.20	204	P	P	11 11 51.4	-2.2
AMCZ	Amberley	16.52	204	P	P	11 11 54.6	-2.5
AMCZ				S	S	11 14 53.0	-6.7
INZ	Inchbonnie	16.60	208	P	P	11 11 56.2	-1.8
INZ				S	S	11 14 51.5	-10
OKCZ	Okains Bay	16.86	202	P	P	11 11 59.0	-1.8
OKCZ				S	S	11 14 58.8	-7.6
OXZ	Oxford	16.88	205	eP	P	11 12 00.6	-0.4
	43nm,1.5s						
OXZ	Oxford	16.88	205	P	P	11 11 59.2	-1.8
MQZ	McQueen's Vall	16.98	203	eP	P	11 11 59.3	-2.8
	22nm,1.5s						
MQZ	McQueen's Vall	16.98	203	P	P	11 11 58.0	-4.1
MQZ				S	S	11 14 59.6	-9.3
WVZ	Waitaha Valley	17.19	209	P	P	11 12 03.7	-0.7
WVZ				S	S	11 15 05.7	-7.2
RPZ	Rata Peaks	17.59	207	P	P	11 12 08.3	-0.5
	0.9nm,0.3s,baz=333,slow=2.0,SNR=5.8						
RPZ				S	S	11 15 12.7	-8.4
	1.6nm,0.3s,baz=322,slow=23,SNR=11						
RPZ	Rata Peaks	17.59	207	eP	P	11 12 09.9	+1.1
	4.9nm,0.7s						
RPZ	Rata Peaks	17.59	207	P	P	11 12 09.6	+0.8
FOZ	Fox Glacier	17.95	209	eP	P	11 12 12.9	+0.2
	27nm,1.3s						
FOZ	Fox Glacier	17.95	209	P	P	11 12 13.1	+0.4
FOZ				S	S	11 15 22.8	-5.5
RAR	Rarotonga	18.14	71	LR	LR	11 16 38.1	
	comp=Z,240nm,20.5s,baz=301,slow=29						
LBZ	Lake Benmore	18.49	207	eP	Pn	11 12 22.6	+1.4
	37nm,1.4s						
ODZ	Otahua Downs	18.86	205	eP	P	11 12 23.3	+0.7
ODZ	Otahua Downs	18.86	205	P	P	11 12 23.7	+1.1
WKZ	Wanaka	19.33	209	eP	P	11 12 30.3	+2.6
	47nm,1.3s						
WKZ	Wanaka	19.33	209	P	P	11 12 29.7	+2.0
MLZ	Mavora Lakes	20.15	209	eP	Pn	11 12 41.1	0.0
	53nm,1.4s						
MLZ	Mavora Lakes	20.15	209	P	P	11 12 40.0	+3.6
SYZ	Scrubby Hill	20.69	205	P	Pn	11 12 46.4	-1.4
ARMA	Armidale	26.37	258	eP	P	11 13 40.0	+4.4
	5.9nm,0.9s						
EIDS	Eidsvold	27.57	269	eP	P	11 13 49.3	+3.1
	4.9nm,0.9s						
CAN	Canberra	28.66	248	eP	P	11 13 59.8	+4.0
	22nm,1.4s						
TAU	Tasmania Unive	31.34	233	eP	P	11 14 22.8	+3.6
	36nm,1.3s						
TOO	Toolangi	31.68	244	eP	P	11 14 25.6	+3.2
	14nm,1.4s						
CTA	Charters Tower	33.40	276	P	P	11 14 39.0	+1.6
	4.0nm,0.3s,baz=116,slow=10.0,SNR=7.9						
CTAO	Charters Tower	33.40	276	eP	P	11 14 39.5	+2.1
	25nm,1.4s						
STKA	Stephens Creek	34.85	254	P	P	11 14 50.4	+0.5
	1.8nm,0.4s,baz=102,slow=9.7,SNR=11						
STKA	Stephens Creek	34.85	254	eP	P	11 14 52.3	+2.4
	0.8nm,1.0s						
COEN	Coen	38.63	284	eP	P	11 15 23.4	+1.5
	15nm,1.2s						
BBOO	Buckleboo	39.43	252	eP	P	11 15 29.8	+1.4
	30nm,1.4s						
AS31	Alice Springs	43.12	265	eP	P	11 15 57.9	-0.6
	2.1nm,0.6s						
ASAR	Alice Springs	43.12	265	P	P	11 15 58.1	-0.4
	5.7nm,0.6s,baz=95,slow=7.2,SNR=114						
ASAR				PcP	PP	11 17 43.9	+1.1
	0.8nm,0.7s,baz=108,slow=5.0,SNR=3.1						
WC3	Warramunga Arr	43.89	270	eP	P	11 16 05.5	+0.8
	14nm,0.4s						
WB2	Warramunga Arr	43.91	270	eP	P	11 16 05.6	+0.8
	14nm,0.4s						
WRAB	Tennant Creek	43.92	270	eP	P	11 16 05.5	+0.6
	8.9nm,0.8s						
WR1	Warramunga Arr	43.93	270	eP	P	11 16 05.3	+0.4
WRA	Warramunga Arr	43.93	270	P	P	11 16 05.3	+0.4
	9.1nm,0.3s,baz=100,slow=9.4,SNR=89						
FORT	Forrest	46.47	253	eP	P	11 16 25.1	+0.3
	19nm,0.6s						
PSAC2	Pilbara Seismi	56.05	262	eP	P	11 17 36.0	-0.1
	11nm,0.8s						
PSA00	Pilbara Seismi	56.09	262	eP	P	11 17 36.6	+0.2
	14nm,0.9s						
CASY	Casey	56.86	207	eP	P	11 17 42.6	+1.6
	27nm,0.6s						
MORW	Morawa	57.00	252	eP	P	11 17 42.6	-0.1
	18nm,1.3s						
GIRL	Giralia	60.59	259	eP	P	11 18 08.9	+1.4
	135nm,1.1s						
QSPA	South Pole Qui	61.72	180	eP	P	11 18 17.9	+3.4
	12nm,0.7s						
KKM	Kota Kinabalu	71.82	288	eP	P	11 19 18.7	-0.3
	23nm,1.0s						
SBUM	Sibu	73.36	282	eP	P	11 19 29.2	+1.1
	3.7nm,0.8s						
MAW	Mawson	74.14	200	P	P	11 19 34.0	+2.4
	4.5nm,0.5s,baz=131,slow=6.4,SNR=24						
MAW	Mawson	74.14	200	eP	P	11 19 34.5	+2.8
	1.3nm,0.6s						
KSM	Kuching	74.53	280	eP	P	11 19 35.5	+0.7
MJAR	Matsushiro Arr	76.52	325	P	P	11 19 43.7	-1.9
	0.7nm,0.5s,baz=164,slow=6.1,SNR=5.8						
MAJO	Matsushiro	76.52	325	eP	P	11 19 43.8	-1.9
JNU	Nakatsue	77.97	318	eP	P	11 19 52.9	-0.9
	19nm,1.3s						
TPUB	Ta-pu	78.23	305	eP	P	11 19 53.5	-1.9
	24nm,1.5s						
SSLB	Suanglung	78.29	305	eP	P	11 19 54.3	-1.5
	3.5nm,0.6s						
SYO	Syowa Base	79.04	193	⇑eP	P	11 19 59.0	-0.1
SYO	Syowa Base	79.04	193	⇑ePcP	PcP	11 20 05.7	-1.2
SNAA	Sanae	80.17	178	P	P	11 20 06.9	+1.7
SNAA	Sanae	80.17	178	eP	P	11 20 07.0	+1.7
	7.2nm,1.0s						
MYKOM	Kota Tinggi	80.30	277	eP	P	11 20 07.4	+0.5
	22nm,0.8s						
VNA3	Neumayer Olymp	80.32	176	P	P	11 20 07.3	+1.3
VNA1	Neumayer--Stat	80.98	177	P	P	11 20 11.1	+1.6
PEA0B	Petropavlovsk-	83.84	346	eP	P	11 20 24.1	-0.2
	15nm,1.4s						
PETK	Petropavlovsk-	83.84	346	P	P	11 20 21.7	-2.6
	1.1nm,0.7s,baz=100,slow=6.8,SNR=4.2						
PEA1	Petropavlovsk-	83.84	346	eP	P	11 20 21.7	-2.6
IPM	Ipoh	84.07	278	eP	P	11 20 26.7	+0.3
	15nm,0.9s						
KULM	Kulim	84.78	279	eP	P	11 20 30.3	+0.3
	8.4nm,0.9s						
PSI	Prapat	85.10	276	eP	P	11 20 30.3	-1.5
	12nm,0.8s						
USRK	Ussuriysk Ar.	85.41	327	P	P	11 20 31.0	-1.3
	1.2nm,0.8s,baz=150,slow=6.7,SNR=3.4						
GSI	Gunungsitoli	85.57	274	eP	P	11 20 34.8	+0.9
	54nm,1.0s						
NV01	Mina Array Sit	86.86	43	eP	P	11 20 37.5	-2.4
NVAR	Mina Array Bea	86.86	43	P	P	11 20 37.5	-2.4
	0.3nm,0.7s,baz=224,slow=7.5,SNR=4.7						
X16A	Lo Mia Camp, P	88.74	49	epwP	pwP	11 21 37.8	+0.5
U15A	North Rim	89.37	47	epwP	pwP	11 21 40.7	+0.4
CMAR	Chiang Mai Arr	92.61	289	P	P	11 21 08.3	+1.3
	0.7nm,0.4s,baz=148,slow=3.1,SNR=4.2						
KURBB	Kurchatov Arra	119.60	315	PKP	PKPdf	11 26 40.4	-2.9
	0.5nm,0.5s,baz=93,slow=1.7,SNR=3.6						
BVAR	Borovoye Array	124.86	317	PKP	PKPdf	11 26 51.8	-1.5
	1.0nm,0.4s,baz=118,slow=1.6,SNR=5.5						
ARCES	ARCESS Array B	136.60	348	PKP	PKPdf	11 27 14.6	-0.5
	1.7nm,0.9s,baz=4.1,slow=1.7,SNR=7.2						
FINES	FINESS Array B	143.21	341	PKhKP	PKPpre	11 27 21.9	
	0.9nm,0.3s,baz=50,slow=4.0,SNR=19						
NC303	NORSAR Array S	146.55	352	ePKPdf	PKPbc	11 27 32.9	-1.9
NC405	NORSAR Array S	146.61	351	ePKPbc	PKPbc	11 27 34.2	-0.8
NB201	NORSAR Array S	146.73	352	ePKPbc	PKPbc	11 27 33.6	-1.8
NB201				ePKPab	PKPab	11 27 35.3	-1.7
NB2	NORSAR Subarra	146.75	352	PKP	PKPdf	11 27 33.0	-0.4
	comp=Z,0.7nm,0.5s,baz=12,slow=2.9						
NB200	NORSAR Array S	146.75	352	ePKPbc	PKPbc	11 27 33.3	-2.1
NOA	NORSAR Array B	146.75	352	PKPbc	PKPbc	11 27 33.3	-2.1
	comp=Z,1.1nm,0.5s,baz=15,slow=4.4,SNR=6.8						
NAO01	NORSAR Array S	146.98	352	ePKPbc	PKPbc	11 27 34.6	-1.4
NAO01				ePKPab	PKPab	11 27 36.1	-1.9
NC602	NORSAR Array S	147.00	351	ePKPbc	PKPbc	11 27 33.8	-2.3
AKASG	Malin Array Be	149.60	325	PKPbc	PKPbc	11 27 41.5	-1.6
	comp=Z,3.4nm,0.6s,baz=44,slow=3.1,SNR=14						
BR101	Keskin Array S	151.48	302	ePKPbc	PKPbc	11 27 47.2	-0.9
BRTR	Keskin Array B	151.48	302	PKPbc	PKPbc	11 27 47.2	-0.9
	comp=Z,1.1nm,0.4s,baz=148,slow=4.3,SNR=5.7						
CSS	Mathiatis	152.49	292	ePKPbc	PKiKP	11 27 50.1	-0.5
MLR	Muntele Rosu	154.41	318	ePKPab	PKPab	11 28 07.8	-1.7
ITM	Ithomi	161.00	303	ePKPab	PKPab	11 28 37.7	-0.4
TOA0	Torodi Ar. Sit	164.84	179	ePKPab	PKPab	11 28 56.5	+1.4
TORD	Torodi Ar. Bea	164.84	179	PKP	PKPdf	11 27 56.4	-2.0
	comp=Z,0.5nm,0.7s,baz=252,slow=1.4,SNR=2.8						
TORD				PKPab	PKPab	11 28 56.2	+1.1
	comp=Z,2.7nm,1.0s,baz=171,slow=2.9,SNR=7.8						
TOA1	Torodi Ar. Sit	164.84	179	ePKPdf	PKPdf	11 27 56.4	-2.0
TOA1				ePKPab	PKPab	11 28 56.2	+1.0

NIED ***28*** *11:35:00, 31°.10N×138°.20E, h500^{km}, Mw5.3 Best double couple: $M_0$1.19000×10^{17} NP1:ϕ_s304.00000°, δ50.00000°, λ11.00000°. NP2:ϕ_s207.00000°, δ82.00000°, λ139.00000°.*

MOS ***28*** *11:35:59.5±0.7, 31°.02N×137°.88E, h453^{km}, mb5.2/82, Error ellipse: s-maj=7.4km s-min=3.8km az=107.5*

JMA ***28*** *11:35:59.6±0.2, 31°.13N×138°.20E, h476^{km}±3^{km}, M5.4*

JMA Felt I J1.

BJI ***28*** *11:35:59.3±0.0, 30°.98N×137°.90E, h457^{km}, mb5.5/73, mB5.2/49*

ISCJB ***28*** *11:36:00.4±0.1, 31°.07N±0°.02×138°.00E±0°.02, h461^{km}±1^{km}, mb5.1/191, Error ellipse: s-maj=2.8km s-min=2.0km az=142.9*

NEIC ***28*** *11:36:00.6±1.4, 31°.05N×137°.94E, h455^{km}±4^{km}, mb4.8/271, Error ellipse: s-maj=11.9km s-min=10.9km az=83.0*

NEIC Recorded [1 JMA] in Chiba, Saitama, Tochigi and Tokyo.
IDC **28** *11:36:01.2±0.3, 31°.07N×137°.93E, h458^{km}±3^{km}, mb4.5/45, mb1 4.6/54, mb1mx4.5/60, mbtmp5.4/54, Error ellipse: s-maj=6.6km s-min=4.8km az=83.0*
GCMT **28** *11:36:02.6±0.3, 31°.08N±0°.02×137°.84E±0°.03, h464^{km}±2^{km}, MW5.4/70, Moment Tensor Solution. s70,c103; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.17±.03; $M_{\theta\theta}$0.85±.03; $M_{\phi\phi}$-1.01±.04; $M_{r\theta}$-0.49±.05; $M_{\theta\phi}$0.33±.04; $M_{\phi r}$-0.84±.04; Best double couple: $M_0$1.38400×10^{17} NP1:ϕ_s212.00000°, δ86.00000°, λ135.00000°. NP2:ϕ_s306.00000°, δ45.00000°, λ6.00000°. Principal axes: T 1.3220, Plg33.0000°, Azm158.0000°; N 0.1270, Plg45.0000°, Azm28.0000°; P -1.4470, Plg27.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 28 11:36:00.8±0.3**, 31°.07N**±0°.03×**137°.96E**±0°.03**, h458**^{km}±2^{km}**, h459**^{km}**:pP-P, n862,** σ**1^{s}35**/1097**, mb5.1**/216**, 140C-57D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.07	48	⇓P	P	11 37 02.7	+0.3
JAOM				S	S	11 37 51.3	-1.2
JHCJ	Hachijojimakas	2.53	38	P	P	11 37 05.3	+0.1
JHCJ				S	S	11 37 55.0	-2.6
JHJ	Hachijo jima 2	2.56	37	P	P	11 37 05.2	-0.1
	231nm,0.3s,baz=315,slow=10.0,SNR=141						
JHJ				S	S	11 37 55.4	-2.5
	807nm,0.3s,baz=66,slow=19,SNR=6.1						
JHJ2	Mitsune	2.57	37	*e*P	P	11 37 05.4	0.0
JHJ2				*e*S	S	11 37 56.4	-1.7
JHJ2	Mitsune	2.57	37	P	P	11 37 05.1	-0.3
JHJ2				*e*S	S	11 37 55.6	-2.4
TK01	Tokai 1	2.70	354	P	P	11 37 07.6	+1.7
TK01				*e*S	S	11 38 01.7	+2.7
TTO1	TONANKAI O.B.S	2.73	339	⇑P	P	11 37 08.2	+2.1
TK02	Tokai 2	2.87	357	⇑P	P	11 37 08.9	+1.7
JMKN	Mikurajimanish	3.13	26	⇑P	P	11 37 08.6	-0.8
JMMH	Miemihama	3.19	330	⇑P	P	11 37 11.3	+1.5
JTNC	Tanabenakahech	3.38	325	⇑P	P	11 37 12.8	+1.5
JTNC				*e*S	S	11 38 09.9	+1.2
JKN2	Miekihoku	3.46	336	P	P	11 37 13.0	+1.1
JIE	Ise	3.47	343	⇑P	P	11 37 13.5	+1.5
JIE				S	S	11 38 10.9	+0.9
JWM	Minabe	3.54	322	⇑P	P	11 37 14.2	+1.7
JSG	Sagara	3.60	3	⇑P	P	11 37 14.5	+1.5
JSG				S	S	11 38 12.7	+0.9
JAA	Atsumi	3.61	349	⇑P	P	11 37 14.6	+1.5
JAA				S	S	11 38 12.6	+0.6
JKKS	Kakegawashinom	3.67	0	⇑P	P	11 37 15.2	+1.6
JKKS				S	S	11 38 14.0	+1.1
JWY	Kouya	3.72	328	⇑P	P	11 37 15.8	+1.7
JSSY	Shinshiroyabe	3.85	354	S	S	11 38 16.0	+0.4
TSUJ	Tsu 2	3.85	341	⇑P	P	11 37 16.7	+1.6
JYZW	Yoshizawa	3.92	357	P	P	11 37 16.6	+1.0
MRT2	Murotomisaki 2	3.97	307	⇑P	P	11 37 18.0	+1.8
JHTM	Izuhatsuma	3.98	13	⇑P	P	11 37 16.2	0.0
JHTM				S	S	11 38 15.7	-1.9
SHZ3	Shizuoka 3	3.99	3	P	P	11 37 17.2	+0.9
JAI	Aioi	4.02	313	⇑P	P	11 37 18.3	+1.8
JHE	Heguri	4.05	332	⇑P	P	11 37 18.4	+1.6
AJI	Ajiro2	4.08	13	⇑P	P	11 37 16.6	-0.4
JFNN	Fujinakano	4.16	8	⇑P	P	11 37 17.9	+0.2
JAJ2	Tsuna	4.22	323	⇑P	P	11 37 19.8	+1.5
JAO	Obara	4.22	352	S	S	11 38 21.6	-0.1
JEG	Eigenji	4.26	342	⇑P	P	11 37 20.4	+1.7
JNY	Yasuok	4.28	359	⇑P	P	11 37 19.8	+0.9
JOD2	Odawara 2	4.29	12	⇑P	P	11 37 18.2	-0.7
JOD2				S	S	11 38 20.3	-2.3
BSO3	Boso 3	4.29	29	P	P	11 37 17.0	-1.6
JICN	Ichinomiyachia	4.32	348	P	P	11 37 20.6	+1.4
JMN	Monobe	4.35	309	⇑P	P	11 37 21.7	+2.2
BSO1	Boso 1	4.38	35	⇑P	P	11 37 17.7	-1.4
BSO1				*e*S	S	11 38 19.6	-3.5
BSO4	Boso 4	4.39	26	⇑P	P	11 37 18.4	-1.3
JYN	Shimob	4.44	6	⇑P	P	11 37 20.5	+0.1
JMIK	Miki	4.45	328	⇑P	P	11 37 21.8	+1.4
JKUC	kamogawauchiur	4.49	24	⇑P	P	11 37 18.8	-1.9
JGF	Kuroka	4.54	354	⇑P	P	11 37 22.1	+0.8
JYTA	Yamagatataniai	4.62	348	⇑P	P	11 37 23.1	+1.2
JSGW	Sagamiharawaka	4.64	13	⇑P	P	11 37 21.1	-1.0
JKS	Kasai	4.69	327	⇑P	P	11 37 23.8	+1.2
JKU	Kubokawa	4.71	300	⇑P	P	11 37 24.8	+2.0
JWT	Wachi	4.71	334	⇑P	P	11 37 24.1	+1.3
JJS	Sakaide	4.73	315	⇑P	P	11 37 24.7	+1.8
JTO	Tosashimizu	4.73	293	⇑P	P	11 37 24.9	+1.9
JTO				S	S	11 38 31.4	+1.4
JET	Tanbara	4.95	304	⇑P	P	11 37 27.1	+2.0
JRY	Ryogami san	4.99	9	⇑P	P	11 37 25.1	-0.4
JRY				S	S	11 38 31.8	-2.8
JAD	Aida	5.00	321	⇑P	P	11 37 27.2	+1.7
UWA2	Uwa jima 2	5.00	297	⇑P	P	11 37 27.6	+2.0
JSMT	Sammumatsuo	5.01	24	P	P	11 37 24.4	-1.2
JKY	Yasaka	5.13	333	⇑P	P	11 37 27.8	+1.0
JGN	Niukaw	5.17	354	⇑P	P	11 37 27.5	+0.4
JNA	Nagahama	5.26	300	⇑P	P	11 37 30.2	+2.2
JKSM	Kasumi	5.28	329	⇑P	P	11 37 29.3	+1.2
JNG	Nsakai	5.32	1	⇑P	P	11 37 28.4	-0.3
JKG	Kaga	5.36	346	⇑P	P	11 37 29.7	+0.7
JJG	Jouge	5.38	313	⇑P	P	11 37 30.8	+1.5
CBIJ	Chichi jima	5.42	136	P	P	11 37 26.2	-3.6
CBIJ				*e*S	S	11 38 35.1	-7.2
JSKE	Saikikamae	5.43	290	⇑P	P	11 37 32.2	+2.5
MJAR	Matsushiro Arr	5.46	2	P	P	11 37 29.1	-0.8
	15nm,0.3s,baz=186,slow=11,SNR=2326						
MJAR				S	S	11 38 42.6	-0.2
	4.6nm,0.3s,baz=147,slow=14,SNR=3.9						
MAJO	Matsushiro	5.46	2	*e*P	P	11 37 29.4	-0.5
MAJO				*e*S	S	11 38 42.6	-0.2
MAJO	Matsushiro	5.46	2	*e*P	P	11 37 29.4	-0.5
MAJO				*e*S	S	11 38 42.6	-0.2
MAT	Matsushiro	5.46	2	P	P	11 37 29.4	-0.5
MAT				S	S	11 38 39.6	-3.2
MAT	Matsushiro	5.46	2	P	P	11 37 29.4	-0.5
MJB9	Matsu-Tunnel	5.46	2	*e*P	P	11 37 29.4	-0.6
JAG	Ashikaga	5.48	13	S	S	11 38 36.6	-6.6
JHM	Kurahashi	5.51	305	⇑P	P	11 37 32.2	+1.8
JKR	Kurayoshi	5.52	322	⇑P	P	11 37 32.1	+1.6
JTT	Ttatey	5.54	355	⇑P	P	11 37 31.1	+0.4
JUS	Usuki	5.63	292	⇑P	P	11 37 33.9	+2.2
JHS	Saijyo	5.64	315	⇑P	P	11 37 33.3	+1.5
JHS				S	S	11 38 47.0	+0.8
JNKG	Nichinankitago	5.66	278	⇑P	P	11 37 34.9	+2.9
JHYU	Hitachinakayam	5.69	22	⇑P	P	11 37 30.3	-1.9
JNAR	Kushima--Naru	5.74	276	⇑P	P	11 37 35.6	+2.8
JKIT	Kitakata	5.75	287	⇑P	P	11 37 35.5	+2.7
JKT	Katashina	5.78	10	⇑P	P	11 37 31.4	-1.8
JHT	Toyohira	5.87	309	⇑P	P	11 37 35.3	+1.2
JJH	Hakui	5.92	351	⇑P	P	11 37 35.0	+0.5
JTZ	Takazaki	5.92	280	P	P	11 37 37.1	+2.4
JKD	Kudamatsu	5.93	302	⇑P	P	11 37 36.8	+2.1
JHO	Hitachi	5.94	21	⇑P	P	11 37 32.7	-2.0
JKI	Kunimi	5.98	297	⇑P	P	11 37 37.3	+2.2
JBEP	Beppuamama	5.99	294	⇑P	P	11 37 37.6	+2.3
JTN	Tanegashima 3	6.01	268	⇓P	P	11 37 37.7	+2.1
JJN	Nakama	6.02	2	⇑P	P	11 37 34.8	-0.7
JNM	Ikuma	6.04	318	⇑P	P	11 37 37.3	+1.6
JGT2	ShimaneMisato	6.06	312	⇑P	P	11 37 37.3	+1.3
JMTN	Minamitane	6.11	265	⇓P	P	11 37 38.7	+2.1
JHIK	Hikimi	6.13	306	⇑P	P	11 37 38.2	+1.4
JHK	Hiroka	6.22	8	⇑P	P	11 37 35.9	-1.7
JIU3	Izumi3	6.26	285	⇑P	P	11 37 40.5	+2.5
JNU	Nakatsue	6.34	291	P	P	11 37 41.0	+2.0
	18nm,0.3s,baz=104,slow=4.5,SNR=234						
JNU				S	S	11 39 00.6	+1.4
	1.4nm,0.3s,baz=200,slow=18,SNR=4.7						
JNU	Nakatsue	6.34	291	*e*P	P	11 37 40.6	+1.7
JNU				*e*S	S	11 39 00.2	+1.0
JNU	Nakatsue	6.34	291	⇑P	P	11 37 40.8	+1.8
JZO	Okuchi	6.37	282	⇑P	P	11 37 41.2	+2.0
JFFD	Fukushimafurud	6.38	19	⇑P	P	11 37 37.6	-1.6
JSU	Suzuyama	6.43	276	P	P	11 37 41.9	+2.0
ONAJ	Iwakimizuishiy	6.46	21	⇑P	P	11 37 38.4	-1.7
JFY	Yanaizu	6.48	12	⇑P	P	11 37 38.9	-1.4
JOI	OKI	6.52	324	P	P	11 37 41.3	+0.7
JOI				S	S	11 39 02.1	-0.2
JKC	Kuchinoerabu	6.71	267	⇓P	P	11 37 44.7	+2.1
JFT	Otama	6.72	16	⇑P	P	11 37 41.6	-1.1
JFK	Kawauchi	6.73	20	⇑P	P	11 37 41.5	-1.3
JHD	Hondo	6.80	284	⇑P	P	11 37 45.8	+2.2
JHG	Hegura jima	6.81	353	⇑P	P	11 37 43.2	-0.4
JSD	Sado	6.95	2	⇑P	P	11 37 43.4	-1.7
JMST	Minamisoumatoc	7.06	19	⇑P	P	11 37 45.3	-0.9
JSJ	Shimokoshiki	7.07	277	P	P	11 37 48.1	+1.6
JSJ				S	S	11 39 14.2	+1.1
JUR	Ureshino	7.09	289	⇑P	P	11 37 48.7	+2.1
JYS	Shirataka	7.34	13	⇑P	P	11 37 48.5	-0.7
JOU	Okura	7.61	16	⇑P	P	11 37 51.8	-0.2
JYA	Atsumi	7.64	10	⇑P	P	11 37 51.5	-0.8
JKDJ	Kitadaitoujima	7.77	231	P	P	11 37 55.9	+2.0
JIKH	Ishinomakikobu	7.78	21	P	P	11 37 53.2	-0.6
JTAJ	Takarajima	7.82	258	P	P	11 37 56.0	+1.6
JIO	Ouri	7.87	20	P	P	11 37 54.3	-0.5
JMZ	Minamidaito 2	7.91	230	P	P	11 37 57.0	+1.6
JMZ				*e*S	S	11 39 31.3	+1.9
JTSM	Tsushimamitsus	7.92	297	P	P	11 37 57.2	+1.8
JTU	Tsushima	7.98	298	P	P	11 37 57.7	+1.6
JTU				S	S	11 39 32.2	+1.5
JFU	Fukue jima 2	7.99	284	P	P	11 37 58.2	+2.0
JYK	Kaneyama	8.07	13	P	P	11 37 56.5	-0.4
JAMN	Amaminishikomi	8.14	252	P	P	11 37 58.9	+1.0
JAMN				S	S	11 39 34.9	+0.9
JTB	Tobi-shima	8.21	9	P	P	11 37 57.7	-0.7
JMK	Ichinoseki	8.30	18	P	P	11 37 59.2	-0.2
JMK				*e*S	S	11 39 32.2	-4.7
JTK	Tokunoshima	8.51	250	P	P	11 38 03.6	+1.8
OFUJ	Ofunato	8.55	20	P	P	11 38 02.2	+0.1
JRG	Rokugo	8.59	14	P	P	11 38 02.6	+0.1
JOM	Ohasama	8.81	17	P	P	11 38 05.3	+0.4
JOG3	Oga3	8.88	6	P	P	11 38 06.5	+0.9
JSZI	Iwateshizukuis	8.99	15	P	P	11 38 07.6	+0.8
JOKE	Okinoerabujima	8.99	248	P	P	11 38 08.9	+1.8
MIYJ	Miyakonagasawa	9.05	19	P	P	11 38 07.7	+0.2
JYRO	Yoronjima	9.24	247	P	P	11 38 11.8	+2.0
JKZ	Kuzumaki	9.31	16	P	P	11 38 11.0	+0.7
JNTW	Noshirotokiwa	9.35	10	P	P	11 38 11.7	+1.0
JAH	Hinai	9.35	13	P	P	11 38 11.7	+1.0
JTH	Tanohata	9.40	19	P	P	11 38 11.6	+0.3
JOW	Kunigami	9.47	246	P	P	11 38 14.2	+1.8
	8.1nm,0.3s,baz=109,slow=16,SNR=101						
JOW	Kunigami	9.47	246	*e*P	P	11 38 13.9	+1.6
JOW	Kunigami	9.47	246	P	P	11 38 14.1	+1.8
JKEN	Kujiedanarisaw	9.61	17	P	P	11 38 13.7	+0.2
JIH	Iheya	9.62	248	P	P	11 38 15.2	+1.3
JIW	Iwasaki	9.64	9	P	P	11 38 14.7	+0.8
JANG	Nango	9.72	16	P	P	11 38 15.0	+0.3
JHHS	Hirosakihyakuz	9.76	11	P	P	11 38 16.6	+1.5
JNTH	Nagotoyohara	9.82	245	P	P	11 38 17.9	+1.8
JTM	Tenmabayashi	10.02	14	P	P	11 38 18.5	+0.6
TJN	Taejon	10.28	304	*d i*P	P	11 38 21.8	+0.9
JARK	Aomorirokkasho	10.29	15	P	P	11 38 21.4	+0.5
KSRS	Korea Array	10.46	310	P	P	11 38 24.1	+1.4
	16nm,0.3s,baz=125,slow=11,SNR=573						
KSRS				S	S	11 40 21.4	+1.8
	baz=119,slow=9.0,SNR=6.0						
KSRS				ScP	ScP	11 46 31.4	+0.5
	0.5nm,0.3s,baz=141,slow=0.8,SNR=22						
KS15	Wonju Array Si	10.47	310	*e*P	P	11 38 24.0	+1.0
KS15				*e*S	S	11 40 21.1	+1.1
JAHD	Aomorihigashid	10.53	14	P	P	11 38 23.9	+0.4
JOT	Ohata	10.59	13	P	P	11 38 24.8	+0.7
JOT				*e*S	S	11 40 20.3	-1.8
JKE	Kume jima 2	10.88	247	P	P	11 38 28.1	+0.5
JKE				S	S	11 40 29.2	+0.7
JOSM	Okushiri--Mats	11.06	6	P	P	11 38 29.7	+0.5
JKB	Kayabe	11.07	12	P	P	11 38 29.9	+0.6
JKB				S	S	11 40 28.7	-3.1
ERM	Erimo	11.69	19	*e*P	P	11 38 36.8	+0.8
ERM	Erimo	11.69	19	*d i*P	P	11 38 37.0	+1.0
ERM				pmax	pmax		
	comp=Z,482nm,1.0s						
JEM	Erimo	11.69	19	P	P	11 38 37.0	+1.0
JTHR	Tokachihiroo	11.99	19	P	P	11 38 40.2	+1.0
JBT2	Biratori 2	12.20	16	P	P	11 38 42.5	+0.9
JCH	Churui	12.30	19	P	P	11 38 43.5	+0.9
JCH				*e*S	S	11 40 53.1	-3.1
JOB	Onbets	12.70	20	P	P	11 38 48.5	+1.5
MSHR	Mys Shultsa	12.70	337	*ce*P	P	11 38 47.3	+0.3
JOGS	Gusukube	12.75	244	P	P	11 38 49.3	+1.5
VLA	Vladivostok	12.96	340	*c i*P	P	11 38 50.7	+1.0
JHR	Hokuryu	12.99	12	P	P	11 38 51.4	+1.3
JAR	Ashorobuto	13.05	19	P	P	11 38 51.8	+1.1
ASAJ	Asahikawa	13.53	14	P	P	11 38 57.1	+1.3
	comp=Z,24nm,0.3s,baz=225,slow=11,SNR=198						
ASAJ				S	S	11 41 20.1	-0.3
	comp=Z,6.1nm,0.3s,baz=9.5,slow=18,SNR=3.5						
ASAJ				ScP	ScP	11 46 36.0	+0.6
	comp=Z,0.6nm,0.3s,baz=280,slow=13,SNR=7.0						
ASAJ	Asahikawa	13.53	14	P	P	11 38 57.1	+1.3
JMP	Maruseppu	13.60	17	P	P	11 38 58.4	+1.8
JISG	Ishigakijimahi	13.69	245	P	P	11 38 57.5	-0.3
JTKR	Abashiri--Toko	13.71	18	P	P	11 38 59.2	+1.4
NEM2	Nemuro 2	13.74	25	P	P	11 38 58.8	+0.7
USA0B	Ussuriysk Arra	13.93	342	*e*P	P	11 39 00.8	+0.8
USRK	Ussuriysk Ar.	13.93	342	P	P	11 39 00.9	+0.8
	comp=Z,50nm,0.3s,baz=150,slow=9.8,SNR=1213						
USRK				S	S	11 41 28.5	+0.4
	baz=126,slow=7.3,SNR=1.8						
USRK				ScP	ScP	11 46 35.6	-0.4
	comp=Z,0.1nm,0.3s,baz=252,slow=0.6,SNR=4.2						
JIJ	Ishigaki jima	13.93	245	P	P	11 38 59.9	-0.6
TEY	Ternei	13.98	356	⇑*i*P	P	11 39 01.4	+0.7
TEY				*e*		11 41 26.4	
TEY				pmax	pmax		
	comp=E,80nm,0.6s						
TEY				pmax	pmax		
	comp=N,240nm,0.8s						
TEY				pmax	pmax		
	comp=Z,370nm,0.7s						
TEY				pmax	pmax		
	comp=Z,400nm,2.4s						
GLVR	Golovnino	13.99	23	*e*P	P	11 39 02.9	+2.1
GLVR				*e*S	S	11 41 31.3	+1.9
GLVR				pmax	pmax		
	comp=Z,332nm,0.5s						
GLVR				pmax	pmax		
	comp=N,146nm,0.6s						
GLVR				pmax	pmax		
	comp=E,292nm,0.6s						
GLVR				pmax	pmax		
	comp=Z,801nm,1.6s						
IRIF	Iriomote-Funau	14.27	245	P	P	11 39 03.2	-0.9
GRPR	Tuman	14.30	23	*e*P	P	11 39 05.7	+1.6
GRPR				*e*S	S	11 41 36.3	+0.8
GRPR				pmax	pmax		
	comp=N,95nm,0.6s						
GRPR				pmax	pmax		
	comp=E,62nm,0.6s						
GRPR				pmax	pmax		
	comp=Z,210nm,0.6s						
LAGR	Lagunnoye	14.36	23	*de*P	P	11 39 06.3	+1.6
LAGR				*e*S	S	11 41 38.9	+2.3
LAGR				pmax	pmax		
	comp=E,204nm,0.3s						
LAGR				pmax	pmax		
	comp=Z,463nm,0.6s						
LAGR				pmax	pmax		
	comp=N,377nm,0.7s						
YUK	Yuzh-Kuril'sk	14.37	24	*e*P	P	11 39 05.2	+0.4
YUK				*e*S	S	11 41 37.9	+1.1
YUK				pmax	pmax		
	comp=Z,396nm,0.5s						
YUK				pmax	pmax		
	comp=N,167nm,0.6s						
YUK				pmax	pmax		
	comp=E,157nm,0.6s						
SSE	Sheshan	14.37	274	*e*P	P	11 39 03.4	-1.7
SSE	Sheshan	14.37	274	P	P	11 39 03.5	-1.6
SSE				S	S	11 41 34.8	-2.5
SSE				pmax	pmax		
	comp=E,42nm,0.8s						
SSE				pmax	pmax		
	comp=E,310nm,3.2s						
YOJ	Yonaguni jima	14.77	247	*e*P	P	11 39 08.1	-1.3
YOJ	Yonaguni jima	14.77	247	*e*P	P	11 39 08.1	-1.3
JYNG	Yonagunijimaku	14.83	247	P	P	11 39 08.7	-1.3
MDJ	Mudanjiang	15.04	336	*e*P	P	11 39 12.5	+0.6
	comp=E,249nm,1.2s						
MDJ	Mudanjiang	15.04	336	P	P	11 39 12.8	+0.8
MDJ				sP	sP	11 40 54.5	-13
MDJ				S	S	11 41 49.0	-0.8
MDJ				ScS	ScS	11 50 16.0	-0.2
MDJ				pmax	pmax		
	comp=E,200nm,1.1s						
MDJ				pmax	pmax		
	comp=E,830nm,3.0s						
DL2	Dalian	15.48	305	⇓*i*P	P	11 39 16.8	0.0
DL2				S	S	11 41 57.0	-1.6
DL2				ScS	ScS	11 50 15.5	-2.1
DL2				pmax	pmax		
	comp=E,370nm,0.9s						
DL2				pmax	pmax		
	comp=E,300nm,4.6s						
TATO	Taipei	15.75	251	*e*P	P	11 39 18.4	-1.4
	comp=E,268nm,0.8s						
TATO	Taipei	15.75	251	P	P	11 39 19.0	-0.8
	SNR=8.3						
SNY	Shenyang	15.76	317	⇓P	P	11 39 20.3	+0.7
SNY				S	S	11 42 02.5	-1.4
SNY				pmax	pmax		
	comp=E,96nm,0.6s						
SNY				pmax	pmax		
	comp=E,330nm,5.9s						
YHNB	Yeheng	15.98	251	*e*P	P	11 39 20.0	-2.3
	comp=E,175nm,0.8s						
SARN	Sarigan	15.99	152	*e*P	P	11 39 21.3	-1.1
	comp=E,510nm,1.9s						
NACB	Ninganchiao	16.04	249	*e*P	P	11 39 20.2	-2.7
	comp=E,87nm,0.8s						
CN2	Changchun	16.10	326	⇑*e*P	P	11 39 24.0	+0.7
CN2				*e*sP	sP	11 41 10.0	-9.2
CN2				*e*S	S	11 42 08.0	-2.5
CN2				pmax	pmax		
	comp=E,50nm,1.2s						
CN2				pmax	pmax		
	comp=E,110nm,3.0s						
KUR	Kuril'sk	16.12	26	*e*P	P	11 39 28.8	+5.4
KUR				pmax	pmax		
	comp=Z,145nm,0.9s						
KUR				pmax	pmax		
	comp=E,37nm,0.8s						
KUR				pmax	pmax		
	comp=N,51nm,0.6s						
ANA2	Anatahan	16.28	152	*e*P	P	11 39 24.8	-0.8
	comp=N,98nm,0.7s						
YSS	Yuzh-Sakhalins	16.29	12	*e*P	P	11 39 25.7	+0.6
	comp=N,278nm,0.9s						
YSS	Yuzh-Sakhalins	16.29	12	α*i*P	P	11 39 26.0	+0.9
YSS				*i* S	S	11 42 15.5	+1.6
YSS				pmax	pmax		
	comp=Z,180nm,0.9s						
YSS				smax	smax		
	comp=N,90nm,1.6s						
YSS				smax	smax		
	comp=E,130nm,1.3s						
YSS				smax	smax		
	comp=E,900nm,3.5s						
YSS				MLR	MLR		
	comp=E,500nm,18.0s						
NJ2	Nanjing	16.31	278	⇑*i*P	P	11 39 24.5	-1.2
NJ2				sP	sP	11 41 14.0	-7.5
NJ2				S	S	11 42 12.5	-2.4
NJ2				ScP	ScP	11 46 42.0	+1.2
YULB	Yu-li	16.66	247	*e*P	P	11 39 27.2	-2.3
	comp=E,165nm,0.6s						
SSLB	Suanglung	16.74	248	*e*P	P	11 39 27.9	-2.3
	comp=E,354nm,1.1s						
TIA	Tai'an	18.08	292	P	P	11 39 42.5	-1.4
TIA				S	S	11 42 43.0	-3.7
TIA				pmax	pmax		
	comp=E,360nm,1.2s						
QZH	Quanzhou	18.15	255	⇓*i*P	P	11 39 42.5	-2.2
QZH				sP	sP	11 41 35.8	-6.3
QZH				S	S	11 42 46.0	-2.0
QZH				pmax	pmax		
	comp=E,93nm,0.6s						
QZH				pmax	pmax		
	comp=E,550nm,4.8s						
UGL	Uglegorsk	18.25	9	*e*P	P	11 39 46.4	+1.1
UGL				*i* S	S	11 42 54.4	+5.3
UGL				pmax	pmax		
	comp=Z,1μm,2.0s						
UGL				pmax	pmax		
	comp=Z,217nm,1.5s						
UGL				smax	smax		
	comp=E,2μm,5.1s						
UGL				smax	smax		
	comp=N,2μm,6.2s						
GUMO	Guam	18.53	158	P	P	11 39 48.0	-0.4
	comp=N,34nm,0.3s,baz=176,slow=2.1,SNR=40						
GUMO	Guam	18.53	158	*e*P	P	11 39 47.6	-0.8
	comp=N,2μm,1.5s						
GUMO	Guam	18.53	158	P	P	11 39 48.0	-0.4
GUMO				pmax	pmax		
	comp=Z,34nm,0.3s						
KLR	Kul'dur	18.73	347	P	P	11 39 49.9	-0.1
	comp=Z,3.5nm,0.3s,baz=151,slow=11,SNR=48						
KLR				S	S	11 42 57.9	+0.9
	comp=Z,0.2nm,0.3s,baz=334,slow=18,SNR=2.4						
KLR				ScP	ScP	11 46 45.8	+0.2
	comp=Z,0.2nm,0.3s,baz=277,slow=1.8,SNR=12						
GRNR	Gornyy	19.71	357	*e*P	P	11 40 00.8	+2.0
GRNR				pmax	pmax		
	comp=N,88nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,65nm,1.0s						
CVP	Callao Caves	19.79	231	⇓*e*P	P	11 39 59.9	0.0
BJT	Baijiatuau	19.81	303	*e*P	P	11 39 58.7	-1.2
	comp=Z,224nm,1.2s						
BJT	Baijiatuau	19.81	303	*e*P	P	11 39 58.7	-1.2
BJT				pmax	pmax		
	comp=Z,224nm,1.2s						
BJI	Beijing	19.81	303	⇓*i*P	P	11 39 59.0	-0.9
BJI				sP	sP	11 41 57.5	-3.0
BJI				S	S	11 43 12.8	-1.9
BJI				pmax	pmax		
	comp=Z,88nm,1.4s						
WHN	Wuhan	20.28	275	⇓P	P	11 40 04.5	+0.2
WHN				sP	sP	11 42 03.0	-2.5
WHN				S	S	11 43 20.5	-2.0
WHN				pmax	pmax		
	comp=Z,190nm,0.5s						
TIY	Taiyuan	22.04	294	*e*P	P	11 40 20.8	+0.5
TIY				sP	sP	11 42 27.3	+2.5
TIY				pmax	pmax		
	comp=Z,170nm,0.6s						
TIY				pmax	pmax		
	comp=Z,730nm,3.8s						
HIA	Hailar	22.79	328	*e*P	P	11 40 27.6	+0.8
	comp=Z,69nm,0.8s						
HIA	Hailar	22.79	328	*e*P	P	11 40 27.6	+0.8
HIA				pmax	pmax		
	comp=Z,69nm,0.8s						
TGY	Tagaytay City	23.02	227	P	P	11 40 31.1	+1.8
	comp=Z,249nm,0.5s,baz=68,slow=8.0,SNR=6.2						
HHC	Hu-ho-hao-te	23.41	302	P	P	11 40 32.8	+0.2
HHC				S	S	11 44 12.5	+0.3
HHC				pmax	pmax		
	comp=Z,43nm,0.9s						
HHC				pmax	pmax		
	comp=Z,78nm,3.9s						
ZEA	Zeya	23.94	344	*e*P	P	11 40 37.8	+0.8
ZEA				pmax	pmax		
	comp=N,52nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,93nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,2.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
BTO	Baotou	24.48	301	*e*P	P	11 40 42.8	+0.7
BTO				S	S	11 44 30.3	+1.3
XAN	Xi'an	24.62	285	*e*P	P	11 40 43.0	-0.4
	comp=Z,349nm,0.8s						
XAN	Xi'an	24.62	285	P	P	11 40 43.3	-0.1
XAN				sP	sP	11 42 53.8	-0.4
XAN				PcP	PcP	11 44 07.0	+1.0
XAN				S	S	11 44 29.3	-2.0
XAN				ScP	ScP	11 47 03.5	+2.6
XAN				pmax	pmax		
	comp=Z,1μm,3.3s						
XAN	Xi'an	24.62	285	*e*P	P	11 40 43.0	-0.4
XAN				pmax	pmax		
	comp=Z,349nm,0.8s						
PETK	Petropavlovsk-	26.28	27	P	P	11 40 59.2	+1.5
	comp=Z,1.2nm,0.5s,baz=173,slow=5.5,SNR=25						
PETK				ScP	ScP	11 47 04.4	-0.9
	comp=Z,12nm,0.7s,baz=170,slow=1.8,SNR=20						

GYA	**Guiyang**	27.76	268⇓	*i*P	P	11 41 11.0	-0.4
GYA				pP	pP	11 42 28.8	-0.6
GYA				S	S	11 45 23.8	+2.9
GYA				ScP	ScP	11 47 11.5	+1.0
GYA				pmax	pmax		
	comp=Z,120nm,0.9s						
GYA				pmax	pmax		
	comp=Z,200nm,5.4s						
LZH	**Lanzhou**	28.76	289⇓	*i*P	P	11 41 20.3	+0.2
LZH				sP	sP	11 43 28.8	-4.5
LZH				*e*S	S	11 45 33.8	-2.6
LZH				pmax	pmax		
	comp=Z,270nm,1.0s						
LZH				pmax	pmax		
	comp=Z,630nm,4.1s						
CD2	**Chengdu**	29.25	279⇓	*i*P	P	11 41 24.0	-0.3
CD2				S	S	11 45 41.0	-2.9
CD2				pmax	pmax		
	comp=Z,440nm,3.3s						
SONM	**Songino Array**	29.30	314	P	P	11 41 25.2	+0.6
	comp=Z,40nm,0.6s,baz=117,slow=7.8,SNR=170						
SONM				pP	PP	11 42 45.6	-0.9
	comp=Z,13nm,1.0s,baz=118,slow=9.0,SNR=3.1						
SONM				ScP	ScP	11 47 14.7	-0.3
	comp=Z,5.0nm,0.8s,baz=146,slow=3.6,SNR=7.2						
MA2	**Magadan**	29.78	13	P	P	11 41 29.6	+1.1
	comp=Z,16nm,0.5s,baz=234,slow=7.2,SNR=13						
MA2				pP	pP	11 42 48.2	-0.5
	comp=Z,10nm,0.9s,baz=171,slow=12,SNR=2.4						
MA2				ScP	ScP	11 47 16.0	-0.1
	comp=Z,11nm,0.8s,baz=145,slow=4.9,SNR=4.8						
MA2	**Magadan**	29.78	13	*e*P	P	11 41 29.9	+1.5
	comp=Z,106nm,1.5s						
MA2				*e*ScP	ScP	11 47 17.3	+1.2
MA2	**Magadan**	29.78	13*c*	*i*P	P	11 41 29.0	+0.6
MA2				pmax	pmax		
	comp=Z,47nm,1.0s						
PATS	**Pohnpei**	30.73	137	*e*P	P	11 41 37.0	-0.2
	comp=Z,274nm,1.4s						
YAK	**Yakutsk**	31.43	353	*e*P	P	11 41 42.8	+0.1
	comp=Z,40nm,0.8s						
YAK	**Yakutsk**	31.43	353	*e*P	P	11 41 42.8	+0.1
YAK				*e*S	S	11 46 18.0	+1.3
YAK				*e*		11 51 15.0	
YAK				pmax	pmax		
	comp=Z,43nm,0.9s						
KMI	**Kunming**	31.54	268	P	P	11 41 44.5	+0.1
KMI				pP	pP	11 43 04.8	+1.0
KMI				PP	PP	11 43 11.5	+0.7
KMI				S	S	11 46 17.5	-2.2
KMI				pmax	pmax		
	comp=Z,54nm,0.8s						
KMI				pmax	pmax		
	comp=Z,400nm,3.9s						
TNTI	**Ternate**	31.76	200	*e*P	P	11 41 45.9	-0.2
	comp=Z,120nm,1.2s						
TNTI	**Ternate**	31.76	200	P	P	11 41 46.8	+0.7
	comp=Z,84nm,1.4s,comp=Z,1µm						
SLVN	**Son La**	31.95	261	*e*P	P	11 41 48.3	+0.5
	comp=Z,115nm,0.8s						
SLVN				*e*ScP	ScP	11 47 25.7	+1.5
GTA	**Gaotai**	32.05	296	⇓P	P	11 41 48.8	+0.3
GTA				pP	PP	11 43 14.0	-2.0
GTA				sP	sP	11 44 04.5	+2.1
GTA				S	S	11 46 24.8	-2.4
GTA				ScP	ScP	11 47 24.3	-0.1
GTA				ScS	ScS	11 51 21.8	-2.6
GTA				pmax	pmax		
	comp=Z,160nm,0.9s						
GTA				pmax	pmax		
	comp=Z,340nm,7.2s						
ZAK	**Zakamensk**	32.19	317	*e*P	P	11 41 50.0	+0.5
ZAK				pmax	pmax		
	comp=Z,74nm,1.2s						
SIJI	**Sorong**	32.40	193	P	P	11 41 51.4	-0.2
	comp=Z,26nm,0.6s,baz=7.5,slow=12,SNR=11						
SIJI				ScP	ScP	11 47 25.7	0.0
	comp=Z,15nm,0.7s,baz=267,slow=5.6,SNR=5.7						
IRK	**Irkutsk**	32.43	321	*e*P	P	11 41 51.8	+0.4
IRK				*e*		11 43 15.8	
IRK				pmax	pmax		
	comp=Z,87nm,2.7s						
TLY	**Talaya**	32.53	319	P	P	11 41 53.4	+1.2
	comp=Z,26nm,0.7s,baz=148,slow=4.6,SNR=37						
TLY				ScP	ScP	11 47 25.7	+0.1
	comp=Z,2.9nm,0.3s,baz=101,slow=4.1,SNR=3.6						
TLY	**Talaya**	32.53	319	*e*P	P	11 41 53.2	+1.0
	comp=Z,36nm,0.8s						
TLY	**Talaya**	32.53	319	*e*P	P	11 41 53.2	+1.0
TLY				pmax	pmax		
	comp=Z,36nm,0.8s						
TLY	**Talaya**	32.53	319	P	P	11 41 53.4	+1.2
	SNR=21						
LBMI	**Labuha**	33.06	199	P	P	11 41 57.3	+0.1
SEY	**Seymchan**	33.19	12	P	P	11 41 59.0	+1.3
	comp=Z,2.4nm,0.3s,baz=34,slow=23,SNR=12						
SEY				pP	pP	11 43 20.3	+0.9
	comp=Z,3.6nm,0.8s,baz=214,slow=8.7,SNR=2.1						
SEY				ScP	ScP	11 47 27.5	-0.2
	comp=Z,5.7nm,0.6s,baz=212,slow=4.6,SNR=9.0						
DLV	**T Lat**	33.21	242	*e*P	P	11 41 58.8	0.0
	comp=Z,87nm,0.8s						
PANO	**Nakornpanom**	33.30	253	P	P	11 42 00.2	+1.0
	comp=Z,2.5nm,0.9s						
GENI	**Genyem**	33.54	176	P	P	11 42 02.5	+1.2
	comp=Z,118nm,1.0s,comp=Z,3µm						
MOY	**Mondy**	34.02	318	*e*P	P	11 42 05.6	+0.5
MOY				pmax	pmax		
	comp=Z,66nm,2.4s						
NONG	**Nongkai**	34.06	256	P	P	11 42 06.3	+0.6
	comp=Z,6.5nm,0.8s,comp=Z,234nm						
MANU	**Manus Island**	34.13	163	*e*P	P	11 42 06.1	-0.2
	comp=Z,72nm,0.6s						
SANI	**Sanana**	34.85	201	P	P	11 42 11.3	-1.1
	comp=Z,184nm,0.9s,comp=Z,1µm						
MSAI	**Masohi**	35.29	196	P	P	11 42 18.5	+2.5
	comp=Z,20nm,1.4s,comp=Z,402nm						
NLAI	**Namlea**	35.66	199	P	P	11 42 21.7	+2.6
	comp=Z,33nm,0.7s,comp=Z,2µm						
AAI	**Ambon**	35.80	197	P	P	11 42 21.0	+0.7
CHAI	**Chaiyaphum**	36.09	254	P	P	11 42 22.7	-0.1
	comp=Z,349µm,0.7s						
PAYA	**Payao**	36.21	260	P	P	11 42 24.5	+0.8
	comp=Z,92µm,0.7s,comp=Z,764µm						
BNDI	**Bandanaira**	36.22	194	P	P	11 42 25.7	+1.9
UTTA	**Uttaradit**	36.37	257	P	P	11 42 25.2	+0.1
	comp=Z,384µm,0.7s						
PBKT	**Sadao Pong**	36.60	255	P	P	11 42 27.4	+0.5
	comp=Z,113nm,0.9s,comp=Z,1µm						
LAMP	**Lampang**	36.79	259	P	P	11 42 29.3	+0.8
	comp=Z,181µm,0.8s						
CMMT	**Chiang Mai**	37.23	260	P	P	11 42 32.3	+0.1
	comp=Z,61nm,0.8s,comp=Z,704nm						
CHTO	**Chiang Mai**	37.23	260	*e*P	P	11 42 32.2	0.0
	comp=Z,66nm,0.8s						
CHTO				*e*ScP	ScP	11 47 44.0	+0.7
CHTO	**Chiang Mai**	37.23	260	*e*P	P	11 42 32.2	0.0
CHTO				*e*		11 47 44.0	
CHTO				pmax	pmax		
	comp=Z,66nm,0.8s						
CHTO	**Chiang Mai**	37.23	260	P	P	11 42 32.5	+0.3
	SNR=18						
CM31	**Chiang Mai Arr**	37.40	260	P	P	11 42 34.5	+0.9
	SNR=13						
CMAR	**Chiang Mai Arr**	37.40	260	P	P	11 42 34.0	+0.4
	comp=Z,31nm,0.8s,baz=52,slow=7.0,SNR=125						
CMAR				ScP	ScP	11 47 44.5	+0.6
	comp=Z,11nm,0.9s,baz=32,slow=3.1,SNR=24						
UTHA	**Uthaitani**	38.37	255	P	P	11 42 42.3	+0.8
	comp=Z,134µm,0.7s						
MHMT	**Maesarieng**	38.38	260	P	P	11 42 42.6	+1.0
	comp=Z,80nm,0.7s						
UMPA	**Umpang Tak**	38.53	257	P	P	11 42 44.7	+1.8
	comp=Z,103µm,1.1s						
SPSI	**Sidrap Palu**	38.92	210	P	P	11 42 46.4	+0.4
	comp=Z,15nm,1.1s						
BNSI	**Bone**	39.17	209	P	P	11 42 49.6	+1.5
	comp=Z,60nm,1.0s						
SRDT	**SRDT**	39.26	254	P	P	11 42 49.4	+0.6
	comp=Z,68nm,0.8s,comp=Z,1µm						
KSM	**Kuching**	39.38	227	*e*P	P	11 42 50.7	+0.9
	comp=Z,68nm,0.9s						
PHET	**Kaeng Krachan**	39.62	251	P	P	11 42 52.8	+1.1
	comp=Z,207µm,0.8s						
KAPI	**Kappang**	39.88	209	P	P	11 42 53.7	-0.1
	comp=Z,30nm,0.9s,baz=318,slow=6.5,SNR=6.2						
KAPI	**Kappang**	39.88	209	*e*P	P	11 42 54.0	+0.2
	comp=Z,74nm,1.1s						
KAPI	**Kappang**	39.88	209	*e*P	P	11 42 54.0	+0.2
KAPI				pmax	pmax		
	comp=Z,74nm,1.1s						
LSA	**Lhasa**	40.17	280	P	P	11 42 57.5	+0.9
LSA				pmax	pmax		
	comp=Z,160nm,0.6s						
LSA	**Lhasa**	40.17	280	*i* P	P	11 42 57.9	+1.4
	SNR=7.9						
BILL	**Bilibino**	40.54	16	*e*P	P	11 42 59.5	+1.2
	comp=Z,58nm,1.3s						
BILL	**Bilibino**	40.54	16*c*	*i*P	P	11 42 59.6	+1.2
BILL				*e**PP	pP	11 44 24.9	+2.1
BILL				*e*		11 44 46.3	
BILL				pmax	pmax		
	comp=Z,50nm,1.3s						
SHL	**Shillong**	40.70	274	*e*P	P	11 43 00.3	-0.3
	comp=Z,65nm,0.6s						
SHL				*e*PcP	PcP	11 44 51.0	-0.5
SHL				*e*ScP	ScP	11 47 56.9	0.0
SHL	**Shillong**	40.70	274	*e*P	P	11 43 00.3	-0.3
SHL				*e*		11 44 51.0	
SHL				pmax	pmax		
	comp=Z,65nm,0.6s						
SHL	**Shillong**	40.70	274	*e*P	P	11 43 02.0	+1.4
TIXI	**Tiksi**	40.93	356	P	P	11 43 01.4	0.0
	comp=Z,18nm,0.6s,baz=143,slow=6.5,SNR=41						
TIXI				pP	pP	11 44 26.0	-0.6
	comp=Z,6.6nm,0.8s,baz=144,slow=9.3,SNR=2.5						
TIXI				S	S	11 48 38.9	+0.2
	comp=Z,3.7nm,0.8s,baz=105,slow=20,SNR=2.6						
TIXI	**Tiksi**	40.93	356	*e*P	P	11 43 01.5	0.0
	comp=Z,21nm,0.6s						
TIXI	**Tiksi**	40.93	356*d*	*e*P	P	11 43 01.2	-0.2
TIXI				pmax	pmax		
	comp=Z,17nm,0.6s						
PMG	**Port Moresby**	41.20	166	P	P	11 43 04.2	-0.2
	comp=Z,58nm,0.7s,baz=18,slow=4.4,SNR=26						
PMG	**Port Moresby**	41.20	166	*e*P	P	11 43 03.8	-0.5
	comp=Z,55nm,0.6s						
PMG				*e*PcP	PcP	11 44 53.7	+0.8
WMQ	**Urumqi**	41.29	302	*e*P	P	11 43 05.5	+0.6
	comp=Z,257nm,1.2s						
WMQ	**Urumqi**	41.29	302	P	P	11 43 06.0	+1.1
WMQ				pmax	pmax		
	comp=Z,100nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.7s						
WMQ	**Urumqi**	41.29	302	*e*P	P	11 43 05.5	+0.6
WMQ				pmax	pmax		
	comp=Z,257nm,1.2s						
DGZ	**Jazzator, Alta**	41.86	311*d*	*i*P	P	11 43 10.4	+1.0
DGZ				pmax	pmax		
	comp=Z,111nm,1.1s						
SKLT	**Songkhla**	42.21	244	P	P	11 43 13.6	+1.1
	comp=Z,45nm,0.9s,comp=Z,540nm						
TRTT	**Trang**	42.52	245	P	P	11 43 15.8	+0.9
	comp=Z,43nm,1.0s,comp=Z,760nm						
EDFI	**Ende, Flores**	42.56	204	P	P	11 43 14.6	-0.7
	comp=Z,32nm,0.8s,comp=Z,570nm						
SOEI	**Soe**	42.67	200	P	P	11 43 15.6	-0.5
	comp=Z,85nm,0.9s						
MYKOM	**Kota Tinggi**	43.44	235	*e*P	P	11 43 22.5	+0.3
	comp=Z,20nm,0.6s						
PKDT	**Phuket**	43.55	246	P	P	11 43 24.3	+1.3
	comp=Z,87nm,0.8s,comp=Z,21µm						
IPM	**Ipoh**	43.64	240	*e*P	P	11 43 23.4	-0.4
	comp=Z,44nm,0.9s						
IPM				*e*PcP	PcP	11 45 02.2	+0.9
ZAA0	**Zalesovo Array**	44.07	317	*e*P	P	11 43 25.9	-0.6
	comp=Z,40nm,0.6s						
ZAA0				*e*PcP	PcP	11 45 01.8	-0.3
ZAA0				*e*ScP	ScP	11 48 08.6	-1.1
ZALV	**Zalesovo Beam**	44.07	317	P	P	11 43 26.1	-0.4
	comp=Z,39nm,0.4s,baz=94,slow=8.0,SNR=145						
ZALV				PcP	PcP	11 45 01.8	-0.3
	comp=Z,20nm,0.6s,baz=110,slow=3.8,SNR=13						
ZALV				ScP	ScP	11 48 08.7	-1.0
	comp=Z,12nm,0.7s,baz=116,slow=3.9,SNR=11						
ZALV				S	S	11 49 22.2	-2.2
	comp=Z,0.5nm,0.3s,baz=92,slow=7.2,SNR=3.9						
ZAA1	**Zalesovo Array**	44.07	317	*e*P	P	11 43 26.1	-0.4
ZAA1				*e*PcP	PcP	11 45 01.8	-0.3
ZAA1				*e*ScP	ScP	11 48 08.7	-1.0
JIRN	**Jiri**	44.91	279	*e*P	P	11 43 34.8	+0.8
	comp=Z,850nm,0.5s						
GUN	**Gumba**	45.10	280	*e*P	P	11 43 36.1	+0.7
	comp=Z,514nm,0.6s						
MK31	**Makanchi Array**	45.12	307	*e*P	P	11 43 34.9	+0.1
	comp=Z,72nm,0.8s						
MK31				*e*ScP	ScP	11 48 13.6	-0.6
MK31	**Makanchi Array**	45.12	307	*i* P	P	11 43 34.8	0.0
MK31				pmax	pmax		
	comp=Z,117nm,0.9s						
MK32	**Makanchi Array**	45.12	307	*e*PcP	PcP	11 45 05.7	-0.3
MK32				*e*ScP	ScP	11 48 13.4	-0.9
MKAR	**Makanchi Array**	45.12	307	P	P	11 43 35.1	+0.3
	comp=Z,62nm,0.6s,baz=91,slow=9.8,SNR=280						
MKAR				PcP	PcP	11 45 05.7	-0.3
	comp=Z,18nm,0.9s,baz=71,slow=4.8,SNR=6.6						
MKAR				ScP	ScP	11 48 13.4	-0.9
	comp=Z,5.5nm,0.7s,baz=81,slow=6.2,SNR=5.8						
MKAR				S	S	11 49 38.6	-0.9
	comp=Z,0.4nm,0.3s,baz=97,slow=11,SNR=2.9						
MAKZ	**Makanchi**	45.33	307	*e*P	P	11 43 36.6	+0.1
	comp=Z,367nm,1.6s						
MAKZ	**Makanchi**	45.33	307	P	P	11 43 36.5	+0.1
MAKZ				pmax	pmax		
	comp=Z,90nm,0.9s						
HNR	**Honiara**	45.46	149	P	P	11 43 38.5	+0.7
	comp=Z,84nm,0.8s,baz=238,slow=5.8,SNR=5.0						
HNR	**Honiara**	45.46	149	*e*P	P	11 43 37.6	-0.2
	comp=Z,213nm,1.0s						
HNR	**Honiara**	45.46	149	P	P	11 43 36.0	-1.8
PKI	**Pulchoki**	45.60	279	*e*P	P	11 43 39.2	0.0
	comp=Z,143nm,0.6s						
PKIN	**Phulchoki**	45.61	280	*e*P	P	11 43 39.1	-0.1
	comp=Z,110nm,0.6s						
KKN	**Kakani**	45.65	280	*e*P	P	11 43 39.6	+0.2
	comp=Z,297nm,0.8s						
DMN	**Daman**	45.85	280	*e*P	P	11 43 41.2	+0.2
	comp=Z,139nm,0.5s						
GKN	**Gorkha**	46.12	280	*e*P	P	11 43 43.3	+0.3
	comp=Z,281nm,0.7s						
PSI	**Prapat**	46.32	240	P	P	11 43 44.8	+0.3
	comp=Z,16nm,0.7s,baz=11,slow=5.4,SNR=20						
PSI				PcP	PcP	11 45 10.7	-0.1
	comp=Z,10nm,0.8s,baz=319,slow=2.1,SNR=6.3						
PSI				ScP	ScP	11 48 20.2	+0.3
	comp=Z,8.6nm,0.8s,baz=296,slow=3.1,SNR=7.1						
PSI	**Prapat**	46.32	240	*e*P	P	11 43 44.6	0.0
	comp=Z,19nm,0.7s						
PSI				*e*PcP	pP	11 45 12.5	+1.6
PSI				*e*ScP	ScP	11 48 20.1	+0.2
BKNI	**Bangkinang**	46.46	236	*e*P	P	11 43 45.2	-0.3
	comp=Z,72nm,0.8s						
BKNI	**Bangkinang**	46.46	236	P	P	11 43 46.6	+1.1
	comp=Z,114nm,0.8s,comp=Z,2µm						
DANN	**Dangsing**	46.76	281	*e*P	P	11 43 48.7	+0.7
	comp=Z,422nm,0.6s						
KOLN	**Koldanda**	47.07	280	*e*P	P	11 43 50.8	+0.5
	comp=Z,449nm,0.7s						
PDGK	**Podgornoye**	47.26	302	P	P	11 43 51.3	-0.1
PDGK				pmax	pmax		
	comp=Z,257nm,1.0s						
LEM	**Lembang**	47.57	223	P	P	11 43 54.1	0.0
	comp=Z,68nm,0.7s,baz=330,slow=3.3,SNR=14						
KURK	**Kurchatov**	47.57	312	*e*P	P	11 43 53.1	-0.3
	comp=Z,161nm,1.0s						
KURK	**Kurchatov**	47.57	312	P	P	11 43 53.8	+0.4
KURK				*PP	pP	11 45 23.0	+1.6
KURK				S	S	11 50 11.4	-2.3
KURK				pmax	pmax		
	comp=Z,77nm,0.6s						
KURK				smax	smax		
	comp=N,1.0nm,0.6s						
KURK	**Kurchatov**	47.57	312	P	P	11 43 53.5	+0.1
	SNR=61						
KURBB	**Kurchatov Arra**	47.63	312	P	P	11 43 53.8	-0.1
	comp=N,77nm,0.6s,baz=92,slow=7.4,SNR=406						
KURBB				pP	pP	11 45 23.0	+1.2
	comp=N,15nm,1.0s,baz=92,slow=8.6,SNR=4.1						
KURBB				ScP	ScP	11 48 23.2	-1.5
	comp=N,2.2nm,0.7s,baz=94,slow=4.5,SNR=4.2						
KURBB				S	S	11 50 11.4	-3.1
	comp=N,0.9nm,0.6s,baz=102,slow=22,SNR=6.1						
KLSI		47.65	228	P	P	11 43 55.4	+0.9
	comp=N,80nm,0.7s,comp=N,905nm						
KLI	**Kotabumi**	47.70	227	P	P	11 43 56.2	+1.3
PDSI	**Padang**	47.73	235	P	P	11 43 55.4	+0.2
	comp=N,17nm,0.6s						
LHSI	**Lahat**	47.77	230	P	P	11 43 56.4	+1.0
	comp=N,76nm,0.8s,comp=N,2µm						
MDSI	**Maura Dua**	47.84	228	P	P	11 43 55.8	-0.1
	comp=N,79nm,0.8s,comp=N,1µm						
BLSI	**Bandar Lampung**	47.85	227	P	P	11 43 56.2	+0.2
	comp=N,76nm,0.4s						
ULHL	**Ulahol**	49.77	301	P	P	11 44 11.1	+0.8
	SNR=8.9						
TKM2	**Tokmak 2**	50.14	302	P	P	11 44 13.1	+0.1
TKM2				pmax	pmax		
	comp=Z,71nm,0.8s						
TKM2	**Tokmak 2**	50.14	302	P	P	11 44 13.9	+0.9
	SNR=86						
KSH	**Kashi**	50.41	298	P	P	11 44 18.8	+3.8
KSH				PP	PP	11 46 21.3	+5.1
KSH				S	S	11 50 58.0	+4.6
KSH				SS	SS	11 54 40.0	+5.8
KSH				pmax	pmax		
	comp=Z,88nm,0.6s						
KSH				pmax	pmax		
	comp=Z,110nm,7.2s						
KZA	**Kyzart**	50.52	301	P	P	11 44 17.5	+1.5
	SNR=75						
KBK	**Karagaybulak**	50.65	302	P	P	11 44 17.6	+0.8
	SNR=77						
CHMS	**Chumysh**	50.74	302	P	P	11 44 17.7	+0.5
	SNR=24						
WRAB	**Tennant Creek**	50.83	184	*e*P	P	11 44 17.4	-0.6
	comp=Z,67nm,0.8s						
WRAB				*e*ScP	ScP	11 48 39.2	+0.5
WRAB	**Tennant Creek**	50.83	184*c*	*i*P	P	11 44 17.4	-0.6
WRAB				pmax	pmax		
	comp=Z,69nm,0.8s						
WB2	**Warramunga Arr**	50.84	184	*e*P	P	11 44 17.8	-0.3
	comp=Z,77nm,0.8s						
WB2				*e*PcP	PcP	11 45 27.9	+0.9
WR1	**Warramunga Arr**	50.84	184	*e*P	P	11 44 17.8	-0.3
WR1				*e*PcP	PcP	11 45 27.8	+0.8
WR1				*e*ScP	ScP	11 48 39.1	+0.3
WR1				*e*S	S	11 50 55.7	-3.5
WRA	**Warramunga Arr**	50.84	184	P	P	11 44 17.8	-0.3
	comp=Z,64nm,0.8s,baz=357,slow=8.5,SNR=303						
WRA				PcP	PcP	11 45 27.8	+0.7
	comp=Z,16nm,0.6s,baz=3.2,slow=4.4,SNR=5.2						
WRA				ScP	ScP	11 48 39.1	+0.3
	comp=Z,9.4nm,0.8s,baz=352,slow=5.1,SNR=7.1						
WRA				S	S	11 50 55.7	-3.5
	comp=Z,1.2nm,0.6s,baz=21,slow=36,SNR=3.2						
USP	**Ospenovka**	50.89	303	P	P	11 44 18.7	+0.4
	SNR=49						
AAK	**Ala-Archa**	50.99	302	P	P	11 44 19.7	+0.5
	comp=Z,60nm,0.7s,baz=107,slow=5.6,SNR=66						
AAK	**Ala-Archa**	50.99	302	*e*P	P	11 44 19.1	-0.1
	comp=Z,64nm,0.7s						
AAK	**Ala-Archa**	50.99	302	*i* P	P	11 44 19.7	+0.5
	SNR=32						
AAK	**Ala-Archa**	50.99	302*d*	*i*P	P	11 44 19.4	+0.2
AAK				pmax	pmax		
	comp=Z,70nm,0.8s						
AAK	**Ala-Archa**	50.99	302	P	P	11 44 19.5	+0.5
	SNR=24						
AAK	**Ala-Archa**	50.99	302	P	P	11 44 19.6	+0.5
	SNR=32						
UCH	**Uchtor**	51.04	301	P	P	11 44 21.0	+1.1
	SNR=129						
CTA	**Charters Tower**	51.49	170	P	P	11 44 22.8	0.0
	comp=Z,29nm,0.9s,baz=346,slow=8.0,SNR=20						
CTAO	**Charters Tower**	51.49	170	*e*P	P	11 44 22.6	-0.2
	comp=Z,154nm,1.6s						
CTAO	**Charters Tower**	51.49	170	*e*P	P	11 44 22.6	-0.2
CTAO				pmax	pmax		
	comp=Z,154nm,1.6s						
EKS2	**Erkin-Say**	51.51	302	P	P	11 44 23.4	+0.5
	SNR=43						
AML	**Almayashu**	51.65	301	P	P	11 44 25.4	+1.0
	SNR=61						
OTUK	**Ortayu**	51.77	309	P	P	11 44 24.8	+0.2
OTUK				pmax	pmax		
	comp=Z,113nm,0.9s						
BVAR	**Borovoye Array**	52.62	315	P	P	11 44 30.7	+0.1
	comp=Z,92nm,0.6s,baz=93,slow=8.4,SNR=512						
BVAR				PcP	PcP	11 45 33.5	+0.2
	comp=Z,21nm,0.7s,baz=79,slow=3.5,SNR=6.6						
BVAR				ScP	ScP	11 48 45.4	-0.7
	comp=Z,6.8nm,0.5s,baz=98,slow=4.3,SNR=10						
BVAR				S	S	11 51 20.7	-1.8
	comp=Z,4.6nm,0.7s,baz=90,slow=13,SNR=13						
BRVK	**Borovoye**	52.68	315	*e*P	P	11 44 30.9	-0.2
	comp=Z,122nm,0.8s						
BRVK				*e*PcP	PcP	11 45 34.1	+0.5
BRVK	**Borovoye**	52.68	315	*e*P	P	11 44 30.9	-0.2
BRVK				*e*		11 45 34.1	
BRVK				pmax	pmax		
	comp=Z,122nm,0.8s						
BRVK	**Borovoye**	52.68	315	P	P	11 44 31.3	+0.2
	SNR=62						
NGP	**Nagpur**	53.28	274	*i* P	P	11 44 30.7	-5.2
NGP				*e*S	P	11 44 35.9	0.0
KDAK	**Kodiak Island**	53.49	39	P	P	11 44 37.2	+0.4
	comp=Z,24nm,0.7s,baz=277,slow=2.3,SNR=51						
KDAK				ScP	ScP	11 48 49.9	0.0
	comp=Z,7.4nm,1.1s,baz=281,slow=5.2,SNR=3.7						
KDAK	**Kodiak Island**	53.49	39	*e*P	P	11 44 36.9	+0.2
	comp=Z,23nm,0.7s						
KDAK				*e*ScP	ScP	11 48 49.7	-0.2
KDAK	**Kodiak Island**	53.49	39	*e*P	P	11 44 36.9	+0.2
KDAK				pmax	pmax		
	comp=Z,23nm,0.7s						
KK31	**Karatay Array**	53.79	303	*i* P	P	11 44 39.4	+0.2
KK31				pmax	pmax		
	comp=Z,85nm,0.6s						
AS31	**Alice Springs**	54.56	185	*e*P	P	11 44 44.3	-0.5
	comp=Z,19nm,0.6s						
ASAR	**Alice Springs**	54.57	185	P	P	11 44 44.5	-0.3
	comp=Z,32nm,0.8s,baz=14,slow=13,SNR=332						
ASAR				PcP	PcP	11 45 41.8	+0.6
	comp=Z,8.1nm,0.9s,baz=6.2,slow=4.1,SNR=6.6						
ASAR				ScP	ScP	11 48 55.5	+0.6
	comp=Z,6.8nm,0.9s,baz=1.4,slow=4.4,SNR=7.9						
ASAR				S	S	11 51 47.2	-1.6
	comp=Z,1.0nm,0.8s,baz=17,slow=20,SNR=3.7						
MBWA	**Marble Bar**	54.80	201	P	P	11 44 46.0	-0.5
TOLK	**Toolik Lake Re**	55.07	25	P	P	11 44 49.7	+1.8
	baz=266						
PMR	**Palmer**	55.14	34	*e*P	P	11 44 48.6	+0.3
PMR				*e*PcP	PcP	11 45 43.9	+1.1
PMR	**Palmer**	55.14	34	*e*P	P	11 44 48.6	+0.3
PMR				*e*		11 45 43.9	
PSA00	**Pilbara Seismi**	55.16	201	*e*P	P	11 44 48.5	-0.5
	comp=Z,31nm,0.7s						
RND	**Reindeer**	55.23	32	*e*P	P	11 44 49.3	+0.2
	comp=Z,6.7nm,0.4s						
RND				*e*ScP	ScP	11 48 55.7	-1.8
RND	**Reindeer**	55.23	32	*e*P	P	11 44 49.3	+0.2
RND				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TCOL	**CIGO, UAF Yank**	55.65	30	P	P	11 44 53.7	+1.9
	baz=270						
COLA	**College**	55.65	30⇓	*e*P	P	11 44 53.1	+1.2
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
POKR	**Poker Plat Res**	55.83	30	P	P	11 44 54.5	+1.4
	baz=271						
HDA	**Harding Lake**	56.05	30	P	P	11 44 55.1	+0.4
	baz=272						
ILAR	**Eielson Array**	56.07	30	P	P	11 44 54.8	0.0
	comp=Z,1.2nm,0.4s,baz=249,slow=5.4,SNR=31						
KBL	**Kabul**	56.99	293	*e*P	P	11 45 01.7	-0.3
	comp=Z,58nm,0.8s						
KBL	**Kabul**	56.99	293	*e*P	P	11 45 01.7	-0.3
KBL				pmax	pmax		
	comp=Z,59nm,0.8s						
SVE	**Sverdlovsk**	57.82	321*c*	*i*P	P	11 45 07.3	+0.3
SVE				pmax	pmax		
	comp=Z,81nm,0.8s						
PALK	**Pallekele**	58.33	259	P	P	11 45 11.5	+0.3
	comp=Z,38nm,0.8s,baz=115,slow=3.2,SNR=24						
PALK	**Pallekele**	58.33	259	*e*P	P	11 45 11.3	+0.1
	comp=Z,37nm,0.7s						
PALK	**Pallekele**	58.33	259	*i* P	P	11 45 12.0	+0.8
	SNR=7.2						

ARU	Arti	59.02	320	eP	P	11 45 14.8	-0.3
	comp=Z,112nm,0.6s						
ARU	Arti	59.02	320	d iP	P	11 45 15.0	-0.1
ARU						11 45 56.4	
ARU				*PP	pP	11 46 48.0	-0.1
ARU						11 47 31.8	
ARU				S	S	11 52 46.7	+1.2
ARU				pmax	pmax		
	comp=Z,91nm,0.6s						
DZM	Mont Dzumac	59.49	149	P	P	11 45 20.3	+1.5
	comp=Z,79nm,0.7s,baz=3.4,slow=5.7,SNR=46						
DZM	Mont Dzumac	59.49	149	eP	P	11 45 20.0	+1.2
	comp=Z,93nm,0.8s						
AB31	Akbulak array	59.69	312	i P	P	11 45 19.7	0.0
AB31				pmax	pmax		
	comp=Z,74nm,0.6s						
EPYK	Eagle Plains	60.12	28	P	P	11 45 23.7	+1.3
	baz=280						
AKTO	Aktyubinsk	60.61	314	P	P	11 45 25.6	-0.3
	comp=Z,62nm,0.7s,baz=86,slow=7.5,SNR=143						
AKTO				pP	pP	11 47 00.0	+0.6
	comp=Z,4.1nm,0.8s,baz=53,slow=13,SNR=1.1						
INK	Inuvik	60.99	25	P	P	11 45 28.9	+0.9
	comp=Z,3.9nm,0.3s,baz=273,slow=4.8,SNR=48						
INK				ScP	ScP	11 49 21.9	-0.8
	comp=Z,4.3nm,1.0s,baz=291,slow=6.7,SNR=4.4						
INK	Inuvik	60.99	25	eP	P	11 45 28.7	+0.7
	comp=Z,6.2nm,0.9s						
INK				eScP	ScP	11 49 22.0	-0.8
INK	Inuvik	60.99	25	eP	P	11 45 28.7	+0.7
INK				e		11 49 22.0	
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FORT	Forrest	62.23	190	eP	P	11 45 36.4	-0.2
	comp=Z,152nm,0.6s						
STKA	Stephens Creek	62.70	177	P	P	11 45 40.0	+0.2
	comp=Z,58nm,0.6s,baz=347,slow=6.9,SNR=163						
STKA	Stephens Creek	62.70	177	P	P	11 45 40.0	+0.2
STKA				pmax	pmax		
	comp=Z,58nm,0.6s						
PRGR	Permogore	64.24	328	eP	P	11 45 47.3	-2.0
PRGR				pmax	pmax		
	comp=Z,86nm,0.9s						
GEYT	Alibeck	64.27	300	P	P	11 45 50.9	+0.8
	comp=Z,62nm,0.5s,baz=33,slow=3.5,SNR=20						
SPA0	Spitsbergen Ar	65.80	349	eP	P	11 45 59.6	+0.7
	comp=Z,32nm,1.1s						
KBS	Kingsbay	66.02	350	d eP	P	11 46 01.2	+0.9
KBS				pmax	pmax		
	comp=Z,103nm,0.9s						
LVZ	Lovozero	66.38	336	d eP	P	11 46 02.5	-0.3
LVZ				pmax	pmax		
	comp=Z,25nm,0.9s						
NWAO	Narrogin (SRO)	66.60	199	P	P	11 46 04.5	0.0
	comp=Z,42nm,0.6s,baz=24,slow=5.9,SNR=37						
NWAO	Narrogin (SRO)	66.60	199	eP	P	11 46 04.3	-0.2
	comp=Z,53nm,0.7s						
NWAO	Narrogin (SRO)	66.60	199	P	P	11 46 04.3	-0.2
HSPB	Hornsund (broa	66.66	348	eP	P	11 46 04.9	+0.6
CAN	Canberra	66.85	170	P	P	11 46 07.3	+1.2
CAN				pmax	pmax		
	comp=Z,64nm,1.2s						
KLMR	Klimovskoe	67.28	328	eP	P	11 46 06.0	-2.4
KLMR				e*PP	pwP	11 47 46.9	-0.3
KLMR				pmax	pmax		
	comp=Z,49nm,0.8s						
XMAS	Kiritimati	67.29	102	eP	P	11 46 09.5	+0.3
	comp=Z,69nm,0.8s						
HAMF	Hammerfest	68.50	341	eP	P	11 46 15.6	0.0
ARCES	ARCESS Array B	68.56	340	P	P	11 46 16.7	+0.6
	comp=Z,32nm,0.5s,baz=68,slow=8.7,SNR=304						
ARE0	ARCESS Array S	68.56	340	ePcP	PcP	11 46 40.1	+2.6
ARE0	ARCESS Array S	68.56	340	eP	P	11 46 16.6	+0.5
MSF	Maaselka	69.26	335	P	P	11 46 21.4	+1.0
KTK1	Kautokeino	69.52	340	eP	P	11 46 22.5	+0.5
WBK	Wadi Bani Khal	69.65	285	P	P	11 46 22.8	-0.8
WSAR	Wadi Sarin	69.65	285	P	P	11 46 23.9	+0.4
	comp=Z,22nm,0.9s,baz=105,slow=7.3,SNR=9.7						
WSAR	Wadi Sarin	69.65	285	P	P	11 46 23.0	-0.5
MAK	Makhachkala	69.89	309	eP	P	11 46 22.3	-2.3
MAK				e*PP	pP	11 47 56.0	-4.6
MAK				e*SP	sP	11 48 45.1	-3.5
MAK				e		11 49 05.5	
MAK				ePPP	PPP	11 50 49.6	
MAK				eS	S	11 54 53.0	-4.1
MAK				eSS	SS	11 59 39.0	+2.3
MAK				pmax	pmax		
	comp=Z,350nm,1.8s						
MAK				MLR	MLR		
	comp=Z,94nm,14.0s						
BIDO	Bidbid	69.95	286	P	P	11 46 26.1	+0.8
	SNR=6.0						
VRH	Novokhopyorsk	70.09	318	eP	P	11 46 25.2	-0.4
VRH				pmax	pmax		
	comp=Z,100nm,0.6s						
MOS	Moscow	70.33	324	eP	P	11 46 26.2	-0.8
MOS				e*PP	pwP	11 48 08.4	+0.9
MOS				eS	S	11 54 59.1	-2.6
MOS				pmax	pmax		
	comp=Z,200nm,1.4s						
MOS				pmax	pmax		
	comp=Z,113nm,1.2s						
AKT	Akhty	70.35	307	⇓iP	P	11 46 27.7	+0.2
AKT				e		11 46 46.0	
AKT				pmax	pmax		
	comp=Z,167nm,0.6s						
YKA	Yellowknife Ar	70.40	28	P	P	11 46 27.6	+0.4
	comp=Z,2.0nm,0.6s,baz=293,slow=5.9,SNR=7.8						
TRO	Tromso	70.41	341	eP	P	11 46 27.6	+0.4
SHME	Shamm	70.48	289	i P	P	11 46 29.1	+0.6
	SNR=16						
MSFE	Esma-Masafi	70.76	288	i P	P	11 46 30.9	+0.7
	SNR=6.7						
LKRN	Lenkeran, Azer	70.76	304	P	P	11 46 30.0	+0.1
SEKA	Sheki	70.82	307	P	P	11 46 30.5	+0.2
UOSS	Minazif	70.90	288	eP	P	11 46 30.6	-0.4
	comp=Z,40nm,1.0s						
UOSS	Minazif	70.90	288	P	P	11 46 31.3	+0.3
HATD	Hatta, Dubai	71.02	288	i P	P	11 46 32.4	+0.7
	SNR=12						
ZKTA	Zakatala	71.04	308	P	P	11 46 31.9	+0.4
LPSR	Galich'ya Gora	71.04	320	eP	P	11 46 31.0	-0.3
LPSR				pmax	pmax		
	comp=Z,80nm,0.8s						
MNGR	Mingechevir, A	71.08	307	P	P	11 46 32.2	+0.5
OBN	Obninsk	71.15	323	eP	P	11 46 31.8	-0.1
	comp=Z,66nm,0.8s						
OBN	Obninsk	71.15	323	⇓iP	P	11 46 32.2	+0.4
OBN	Obninsk	71.15	323	d eP	P	11 46 31.8	-0.1
OBN				e*PP	pP	11 48 08.5	0.0
OBN				pmax	pmax		
	comp=Z,79nm,0.9s						
DAG	Danmarks Havn	71.43	354	⇓iP	P	11 46 33.6	+0.4
DAG				i		11 48 13.5	
DAG	Danmarks Havn	71.43	354	⇓iP	P	11 46 33.6	+0.4
DAG				i		11 48 13.5	
FAQ	Al Faqa, Dubai	71.49	288	P	P	11 46 34.6	+0.1
VSR	Storozhevoye	71.53	319	eP	P	11 46 33.9	-0.3
VSR				pmax	pmax		
	comp=Z,120nm,0.7s						
VORD	Divnogorie	71.57	319	eP	P	11 46 33.9	-0.5
VORD				pmax	pmax		
	comp=Z,40nm,0.5s						
GANJ	Ganja	71.66	307	P	P	11 46 35.5	+0.3
ALNE	Al Ain	71.67	287	i P	P	11 46 36.0	+0.4
	SNR=16						
ASUD	Al Ashush, Dub	71.76	288	i P	P	11 46 36.7	+0.7
	SNR=11						
PUL	Pulkovo	71.85	330	⇓eP	P	11 46 36.0	+0.1
PUL				pmax	pmax		
	comp=Z,95nm,0.5s						
GOF	Gofitskoye	71.93	312	⇑eP	P	11 46 36.8	+0.2
GOF				pmax	pmax		
	comp=Z,109nm,0.7s						
SUF	Sumiainen	72.00	333	P	P	11 46 37.3	+0.6
NCK	Nalchik	72.26	310	⇓eP	P	11 46 38.6	0.0
NCK				pmax	pmax		
	comp=Z,76nm,1.2s						
ZEI	Tsey	72.37	310	eP	P	11 46 38.4	-1.1
ZEI				pmax	pmax		
	comp=Z,38nm,0.6s						
KBZ	Khabaz	72.61	311	P	P	11 46 41.2	+0.6
	comp=Z,93nm,0.8s,baz=92,slow=3.9,SNR=122						
KVAR	Kislovodsk Arr	72.64	311	P	P	11 46 42.1	+1.2
	comp=Z,25nm,0.8s,baz=270,slow=20,SNR=19						
KIV	Kislovodsk	72.64	311	eP	P	11 46 40.9	0.0
	comp=Z,91nm,0.8s						
KIV	Kislovodsk	72.64	311	⇑iP	P	11 46 41.9	+0.9
KIV	Kislovodsk	72.64	311	i P	P	11 46 41.7	+0.8
	SNR=21						
KIV	Kislovodsk	72.64	311	eP	P	11 46 41.3	+0.3
KIV				e*PP	pP	11 48 20.1	+2.2
KIV				eS	S	11 55 29.1	+0.7
KIV				pmax	pmax		
	comp=Z,374nm,1.1s						
KIV				pmax	pmax		
	comp=Z,97nm,3.5s						
KIV				MLR	MLR		
	comp=Z,149nm,18.0s						
KIV	Kislovodsk	72.64	311	P	P	11 46 41.7	+0.8
	SNR=12						
FINES	FINESS Array B	72.74	332	P	P	11 46 41.0	0.0
	comp=Z,49nm,0.5s,baz=62,slow=5.7,SNR=737						
FINES				pP	pwP	11 48 20.8	-1.8
	comp=Z,8.4nm,0.8s,baz=73,slow=6.4,SNR=4.2						
FINES				PP	PP	11 49 30.4	+0.4
	comp=Z,6.1nm,0.7s,baz=81,slow=8.6,SNR=3.7						
FINES				S	S	11 55 25.6	-3.0
	comp=Z,1.7nm,0.8s,baz=54,slow=7.2,SNR=4.6						
LOF	Lofoten	72.87	341	eP	P	11 46 41.2	-0.4
NAX	Nakhchivan	72.87	306	P	P	11 46 42.7	+0.3
NEY	Neytrino	72.94	310	c iP	P	11 46 44.3	+1.5
NEY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GNI	Garni	72.96	307	P	P	11 46 43.3	+0.4
	comp=Z,40nm,0.8s,baz=37,slow=1.2,SNR=12						
GNI	Garni	72.96	307	eP	P	11 46 43.8	+0.8
	comp=Z,66nm,1.0s						
GNI	Garni	72.96	307	i P	P	11 46 44.4	+1.4
	SNR=6.3						
GNI	Garni	72.96	307	eP	P	11 46 43.8	+0.8
GNI				pmax	pmax		
	comp=Z,66nm,1.0s						
GNI	Garni	72.96	307	P	P	11 46 44.4	+1.4
	SNR=8.4						
A04D	Lummi Island	72.98	43	P	P	11 46 43.3	+0.7
	baz=298						
AKH	Akhalkalaki	73.25	308	⇑iP	P	11 46 46.0	+1.4
AKH	Akhalkalaki	73.25	308	P	P	11 46 46.0	+1.4
D03D	Eldon	73.31	44	P	P	11 46 46.4	+1.8
	baz=298						
B05A	Bryant	73.56	43	P	P	11 46 47.2	+1.3
	baz=298						
D04E	Lakebay	73.67	45	P	P	11 46 47.7	+1.1
	baz=298						
OUZ	Omahuta	73.97	150	eP	P	11 46 50.3	+1.9
	comp=Z,137nm,1.8s						
MZR	Muzera	74.00	287	i P	P	11 46 49.2	+0.2
	SNR=14						
E04D	Cinebar	74.08	45	P	P	11 46 50.6	+1.5
	baz=298						
VSU	Vasula	74.12	329	eP	P	11 46 49.0	0.0
VSU				IAmb	IAmb	11 46 50.1	
	comp=Z,150nm,0.7s						
VSU	Vasula	74.12	329	d iP	P	11 46 48.9	0.0
VSU				pmax	pmax		
	comp=Z,134nm,0.7s						
TAU	Tasmania Unive	74.12	173	eP	P	11 46 50.0	+1.0
	comp=Z,65nm,1.0s						
TAU	Tasmania Unive	74.12	173	eP	P	11 46 50.0	+1.0
TAU				pmax	pmax		
	comp=Z,65nm,1.0s						
G03D	McMinnville, O	74.29	47	P	P	11 46 51.8	+1.6
	baz=298						
I02D	Swisshome	74.45	48	P	P	11 46 52.7	+1.5
	baz=298						
BCA	Borcka	74.48	309	⇑iP	P	11 46 52.2	+0.7
J01E	Myrtle Point	74.84	49	P	P	11 46 54.0	+0.6
	baz=298						
LTY	Liberty	74.89	44	eP	P	11 46 54.2	+0.5
	comp=Z,5.8nm,0.6s						
H04D	Lebanon	74.95	47	P	P	11 46 55.4	+1.5
	baz=299						
I03D	Drain, OR	74.96	48	P	P	11 46 55.3	+1.2
	baz=299,SNR=5.2						
F05D	White Salmon	75.08	45	P	P	11 46 56.0	+1.3
	baz=299						
K02D	Willamette Mer	75.24	49	P	P	11 46 56.9	+1.2
	baz=299						
G05D	Wamic, OR	75.48	46	P	P	11 46 58.4	+1.4
	baz=300						
I04A	Tendick Farm,	75.51	48	P	P	11 46 58.5	+1.3
	baz=299,SNR=5.3						
L02E	Cave Junction	75.54	49	P	P	11 46 56.5	-0.9
	baz=299						
ANN	Anapa	75.58	314	eP	P	11 46 54.8	-2.6
ANN				e*PP	pP	11 48 34.5	-0.8
ANN				eS	S	11 55 57.4	-2.9
ANN				pmax	pmax		
	comp=Z,155nm,1.1s						
MICGM	Minsk	75.79	326	⇑eP	P	11 47 00.0	+1.5
MICGM				PM		11 47 02.0	
	comp=Z,1.0nm,3.0s						
MICGM				epP	pwP	11 48 40.0	-2.3
MICGM				eS	S	11 56 02.0	-0.3
MNK	Minsk	75.79	326	⇑eP	P	11 47 00.0	+1.5
MNK				e		11 48 40.0	
MNK				eS	S	11 56 02.0	-0.3
MNK				pmax	pmax		
	comp=Z,1µm,3.0s						
IZAR	Zarasai	75.87	327	eP	P	11 46 59.3	+0.5
IZAR				IAmb	IAmb	11 47 00.3	
	comp=Z,33nm,0.9s						
I05D	Terrebonne, OR	75.92	47	P	P	11 47 00.7	+1.2
	baz=300						
J04D	Umpqua Nationa	75.97	48	P	P	11 47 01.3	+1.3
	baz=300,SNR=8.4						
ISAL	Salakas	76.03	327	eP	P	11 47 00.4	+0.6
ISAL				IAmb	IAmb	11 47 01.3	
	comp=Z,41nm,0.6s						
IIGN	Ignalina	76.11	327	eP	P	11 47 00.8	+0.6
IIGN				IAmb	IAmb	11 47 01.7	
	comp=Z,27nm,0.6s						
L04D	Klamath Falls	76.35	49	P	P	11 47 02.6	+0.6
	baz=300						
M02C	Callahan	76.40	50	P	P	11 47 03.5	+1.3
	baz=299						
NEW	Newport	76.44	42	P	P	11 47 03.2	+0.9
	baz=302						
K04D	Chiloquin, OR	76.50	48	P	P	11 47 04.0	+1.1
	baz=300						
J05D	Fort Rock, OR	76.50	48	P	P	11 47 04.4	+1.5
	baz=300,SNR=16						
SLIT	Slitere, Latvi	76.53	330	eP	P	11 47 01.8	-0.7
SLIT				IAmb	IAmb	11 47 02.9	
	comp=Z,259nm,0.6s						
SUMG	Summit	76.60	359	⇓iP	P	11 47 04.4	+1.2
SUMG				i		11 48 47.5	
SUMG				pmax	pmax		
	comp=Z,61nm,1.0s						
SUMG	Summit	76.60	359	⇓iP	P	11 47 04.4	+1.2
	comp=Z,61nm,1.0s						
SUMG				i		11 48 47.5	
N02D	Trinity Center	76.70	50	P	P	11 47 05.4	+1.5
	baz=300,SNR=5.3						
M04C	Macdoel	76.87	49	P	P	11 47 06.1	+1.2
	baz=300,SNR=8.5						
O02D	Mt. Diablo Mer	77.04	51	P	P	11 47 07.2	+1.4
	baz=300						
AKASG	Malin Array Be	77.22	322	P	P	11 47 06.2	-0.3
	comp=Z,36nm,0.6s,baz=49,slow=5.8,SNR=131						
AKASG				pP	pP	11 48 46.4	+1.5
	comp=Z,1.6nm,0.5s,baz=46,slow=6.1,SNR=2.4						
AKASG				PP	PP	11 50 07.8	+0.2
	comp=Z,8.0nm,1.0s,baz=51,slow=7.8,SNR=4.5						
AKASG				S	S	11 56 14.8	-3.0
	comp=Z,0.3nm,0.3s,baz=71,slow=11,SNR=1.2						
SIM	Simferopol'	77.53	315	d iP	P	11 47 08.8	+0.5
SIM				pmax	pmax		
	comp=Z,57nm,0.5s						
O03E	Paynes Creek	77.63	50	P	P	11 47 09.6	+0.5
	baz=300						
SEVA	Sevastopol	78.02	315	⇓iP	P	11 47 11.3	+0.4
SUW	Suwalki	78.32	327	eP	P	11 47 12.2	-0.2
SUW	Suwalki	78.32	327	eP	P	11 47 12.2	-0.2
DOMB	Dombas	78.52	338	eP	P	11 47 13.2	-0.1
NB2	NORSAR Subarra	78.53	337	P	P	11 47 13.0	-0.4
	comp=Z,18nm,0.6s,baz=43,slow=5.3						
NB2	NORSAR Subarra	78.53	337	P	P	11 47 13.0	-0.4
	baz=43,slow=5.3						
NOA	NORSAR Array B	78.53	337	P	P	11 47 13.3	-0.1
	comp=Z,13nm,0.6s,baz=45,slow=5.4,SNR=105						
NOA				pP	pwP	11 48 55.1	-2.5
	comp=Z,9.9nm,0.9s,baz=42,slow=5.7,SNR=9.5						
NOA				PP	PP	11 50 18.2	0.0
	comp=Z,4.8nm,0.9s,baz=47,slow=8.6,SNR=6.2						
DIKM	Dikmen	78.54	312	⇑iP	P	11 47 14.0	+0.2
NC602	NORSAR Array S	78.64	336	eP	P	11 47 13.2	-0.7
MSO	Missoula	79.03	42	P	P	11 47 17.9	+1.5
	baz=304						
AKN	Aaknes	79.07	339	eP	P	11 47 16.6	+0.4
BZK	Bozkurt	79.17	313	⇑iP	P	11 47 16.8	-0.4
MILM	Milestii Mici	79.57	319	⇓iP	P	11 47 18.8	-0.3
SKAR	Skarslia	79.77	337	eP	P	11 47 20.5	+0.5
ILGA	Ilgaz	79.84	312	eP	P	11 47 21.9	+0.9
	comp=Z,50nm,0.8s						
LTZ	Lake Taylor	79.97	155	eP	P	11 47 21.8	+0.7
	comp=Z,20nm,0.7s						
YERR	Yerington	80.00	51	eP	P	11 47 22.6	+0.7
	comp=Z,8.5nm,1.0s						
KONO	Kongsberg	80.09	336	d iP	P	11 47 21.4	-0.3
KONO				pmax	pmax		
	comp=Z,16nm,0.9s						
RAYN	Ar Rayn	80.21	291	eP	P	11 47 23.1	0.0
	comp=Z,67nm,0.9s						
RAYN	Ar Rayn	80.21	291	i P	P	11 47 23.3	+0.3
	SNR=10						
FFC	Flin Flon	80.27	31	eP	P	11 47 23.1	+0.4
	comp=Z,63nm,0.8s						
FFC	Flin Flon	80.27	31	eP	P	11 47 23.1	+0.4
FFC				pmax	pmax		
	comp=Z,63nm,0.8s						
RPZ	Rata Peaks	80.36	156	P	P	11 47 23.0	-0.1
	comp=Z,20nm,0.7s,baz=139,slow=1.7,SNR=13						
OXZ	Oxford	80.36	155	eP	P	11 47 22.6	-0.6
	comp=Z,80nm,1.5s						
BMN	Battle Mountai	80.55	48	eP	P	11 47 25.7	+1.0
	comp=Z,8.9nm,1.1s						
BMN	Battle Mountai	80.55	48	eP	P	11 47 25.7	+1.0
BMN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLCR		80.55	317	⇑iP	P	11 47 24.7	+0.4
HLID	Hailey	80.57	45	P	P	11 47 25.9	+1.1
	baz=304						
BR131	Keskin Array S	80.60	311	P	P	11 47 25.4	+0.4
	SNR=16						
BRTR	Keskin Array B	80.60	311	P	P	11 47 25.1	+0.2
	comp=Z,22nm,0.7s,baz=99,slow=3.4,SNR=94						
BRTR				pP	pP	11 49 05.2	+0.7
	comp=Z,5.7nm,0.9s,baz=106,slow=4.4,SNR=7.7						
BRTR				PP	PP	11 50 34.9	-1.0
	comp=Z,2.2nm,0.8s,baz=86,slow=7.7,SNR=3.7						
BIR	Birlad	80.61	319	⇓iP	P	11 47 25.4	+0.7
EGMT	Eagleton	80.67	39	P	P	11 47 25.8	+0.8
	baz=306						
PRAR	RASCA	80.75	320	⇑iP	P	11 47 25.6	+0.2
BEL	Belsk	80.81	326	eP	P	11 47 25.9	+0.3
BEL	Belsk	80.81	326	eP	P	11 47 25.9	+0.3
MQZ	McQueen's Vall	80.91	155	eP	P	11 47 26.0	0.0
	comp=Z,61nm,1.5s						
NVAR	Mina Array Bea	80.92	51	P	P	11 47 27.7	+1.0
	comp=Z,7.2nm,0.7s,baz=288,slow=5.2,SNR=66						
NVAR				pP	pP	11 49 07.5	+0.1
	comp=Z,3.2nm,1.0s,baz=286,slow=5.4,SNR=4.0						
ASK	Askoy	80.93	338	eP	P	11 47 26.2	+0.3
CFR	Carcaliu	80.95	318	⇑iP	P	11 47 26.8	+0.4
BER	Bergen	80.96	338	eP	P	11 47 26.2	+0.1
MLAC	Mammoth, Mammo	80.99	51	P	P	11 47 28.2	+1.1
	baz=302						
TESR	Tescani	81.02	319	⇑iP	P	11 47 27.2	+0.4
BOZ	Bozeman (W)	81.05	42	P	P	11 47 28.0	+0.9
	baz=306						
BIZ	Bicaz	81.07	320	⇑iP	P	11 47 27.8	+0.7
ANTO	Ankara	81.07	311	eP	P	11 47 27.5	+0.2
	comp=Z,44nm,1.0s						
ANTO	Ankara	81.07	311	⇑iP	P	11 47 27.5	+0.2
ANTO	Ankara	81.07	311	eP	P	11 47 27.5	+0.2
ANTO				pmax	pmax		
	comp=Z,45nm,1.0s						
ANTO	Ankara	81.07	311	P	P	11 47 27.8	+0.5
	SNR=7.1						
BUR08	Bucovina Ar. S	81.14	321	eP	P	11 47 27.8	+0.2
	comp=Z,29nm,1.0s						
PETR	Petresti	81.15	318	⇓iP	P	11 47 29.0	+1.5
BURAR	Bucovina Array	81.15	321	⇑iP	P	11 47 28.3	+0.7
TIRR	Tirgusor	81.20	317	⇑iP	P	11 47 27.7	0.0
ODBI	Odobesti	81.23	319	⇑iP	P	11 47 29.5	+1.6
KWP	Kalwaria Pacla	81.25	323	eP	P	11 47 28.5	+0.6
KWP	Kalwaria Pacla	81.25	323	eP	P	11 47 28.5	+0.6
BLS5	Blasjo	81.33	337	eP	P	11 47 28.3	+0.2
TLB	Topalu	81.35	317	⇑iP	P	11 47 28.8	+0.3
HARR	Harsova	81.35	317	⇑iP	P	11 47 29.2	+0.7
VRI	Vrincioaia	81.36	319	⇓iP	P	11 47 29.9	+1.3
VRI	Vrincioaia	81.36	319	P	P	11 47 29.9	+1.3
PLOR	Plostina	81.41	319	⇑iP	P	11 47 29.6	+0.7
SMMC	Simmler	81.43	54	P	P	11 47 29.8	+0.6
	baz=302						
GRER		81.50	318	⇑iP	P	11 47 31.1	+1.8
GKP	Gorka Klasztor	81.53	329	eP	P	11 47 29.1	-0.1
GKP	Gorka Klasztor	81.53	329	eP	P	11 47 29.2	-0.1
BISRR	Bisoca	81.55	319	⇑iP	P	11 47 31.1	+1.4
ICOR	Ion Corvin	81.76	317	⇑iP	P	11 47 31.3	+0.7
PGOR	Pogoanele	81.77	318	⇑iP	P	11 47 31.7	+1.0
VES	Vestal, Richgr	81.78	53	P	P	11 47 30.8	-0.1
	baz=302,SNR=8.4						
PKM	Mcpherson Peak	81.78	54	P	P	11 47 32.2	+1.0
	baz=302						
PSN	Preselentsi	81.79	316	eP	P	11 47 31.5	+0.7
COP	Copenhagen	81.90	332	i P	P	11 47 31.2	+0.1
COP				pmax	pmax		
	comp=Z,56nm,0.7s						
COP	Copenhagen	81.90	332	i P	P	11 47 31.2	+0.1
	comp=Z,56nm,0.7s						
ISR	Istrita	81.90	318	⇓iP	P	11 47 32.6	+1.2
KOLS	Kolonicke sedl	81.90	323	eP	P	11 47 31.6	+0.3
KOLS				pmax	pmax		
	comp=Z,14nm,0.9s						
KOLS	Kolonicke sedl	81.90	323	eP	P	11 47 31.6	+0.3
MLR	Muntele Rosu	82.02	319	⇑iP	P	11 47 32.5	+0.4
SFJD	Kangerlussuaq	82.02	3	i P	P	11 47 31.5	0.0
SFJD	Kangerlussuaq	82.02	3	i P	P	11 47 31.5	0.0
BMR	Baia Mare	82.04	322	⇑iP	P	11 47 33.1	+1.1
DOPR	Dopca	82.05	319	⇓iP	P	11 47 33.4	+1.3
UZH	Uzhgorod	82.08	323	⇑iP	P	11 47 32.5	+0.3
UZH				e		11 49 15.0	
UZH				e		11 50 01.3	
RASA	Rasa	82.08	317	⇑iP	P	11 47 32.5	+0.2
SBC	Santa Barbara	82.08	55	P	P	11 47 32.1	-0.3
	baz=302						
TOTH	TOTAH	82.09	304	eP	P	11 47 33.4	+0.8
QASN	Qassioun	82.11	304	eP	P	11 47 34.1	+1.3
CWC	Cottonwood Cre	82.14	52	P	P	11 47 32.8	-0.2
	baz=303						
SECR		82.22	318	⇓iP	P	11 47 33.9	+0.9
TRPA	Tarpa	82.27	322	⇓iP	P	11 47 33.5	+0.4
TRPA	Tarpa	82.27	322	⇓eP	P	11 47 33.1	-0.1
ISA	Isabella, Lake	82.29	53	P	P	11 47 33.5	-0.1
	baz=303,SNR=7.8						
GRAC	Grapevine Rang	82.32	51	P	P	11 47 34.6	+0.9
	baz=303,SNR=5.3						
OJC	Ojcow	82.33	325	eP	P	11 47 33.5	+0.1
OJC	Ojcow	82.33	325	eP	P	11 47 33.5	+0.1
ARVC	Arvin	82.33	54	P	P	11 47 34.0	+0.2
	baz=303						
H17A	Grant Village	82.36	42	P	P	11 47 36.8	+2.7
	baz=306						
SCZ2	Santa Cruz Isl	82.38	55	P	P	11 47 34.3	+0.3
	baz=302						
BRBR	Barbar	82.40	304	eP	P	11 47 35.6	+1.2
MDB	Medias	82.50	320	⇓iP	P	11 47 35.2	+0.8
PRD	Provadia	82.53	316	eP	P	11 47 35.3	+0.7
VOIR		82.56	319	⇑iP	P	11 47 35.9	+1.1
CJR	Cluj-Napoca	82.58	321	⇑iP	P	11 47 36.0	+1.1
HVU	Hansel Valley	82.58	45	eP	P	11 47 36.5	+1.4
	comp=Z,12nm,0.9s						
HVU	Hansel Valley	82.58	45	eP	P	11 47 36.5	+1.4
HVU				pmax	pmax		
	comp=Z,12nm,0.9s						
NIE	Niedzica	82.60	324	eP	P	11 47 35.2	+0.4
NIE	Niedzica	82.60	324	eP	P	11 47 35.3	+0.4
MUD	Monsted U'grnd	82.60	334	i P	P	11 47 33.5	-1.1
MUD				pmax	pmax		
	comp=Z,43nm,1.1s						
MUD	Monsted U'grnd	82.60	334	i P	P	11 47 33.5	-1.1
	comp=Z,43nm,1.1s						

KLYT	Kilyos	82.67	314	⇑iP	P	11 47 35.6	+0.3
RLMT	Red Lodge	82.67	41	P	P	11 47 36.7	+1.1
	baz=307						
OSI	Osito Audit: C	82.68	54	P	P	11 47 36.3	+0.7
	baz=303						
BLG	Laguna Peak, P	82.72	55	P	P	11 47 36.3	+0.5
	baz=303						
MPMC	Manual Prospec	82.75	52	P	P	11 47 36.7	+0.6
	baz=303,SNR=21						
R11A	Troy Canyon, C	82.75	49	P	P	11 47 37.0	+0.9
	baz=304,SNR=29						
ARR	Arges	82.83	319	⇓iP	P	11 47 37.3	+1.1
RAZG	Razgrad	82.84	317	⇓iP	P	11 47 36.8	+0.6
YLV	Yalova	82.85	313	⇓iP	P	11 47 36.2	-0.2
LRMC	Laurel Mtn Rad	82.93	53	P	P	11 47 37.6	+0.6
	baz=303,SNR=10						
FURC	Furnace Creek,	82.95	52	P	P	11 47 37.6	+0.8
	baz=304,SNR=35						
DRGR		83.01	321	⇑iP	P	11 47 37.5	+0.4
DRGR		83.01	321	P	P	11 47 37.4	+0.4
EDW2	Edwards Air Fo	83.04	53	P	P	11 47 38.3	+0.9
	baz=303,SNR=17						
TPNV	Topopah Spring	83.09	51	P	P	11 47 38.4	+0.6
	baz=304,SNR=48						
KECS	Kecovo	83.10	324	eP	P	11 47 38.0	+0.6
KECS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KECS	Kecovo	83.10	324	eP	P	11 47 38.0	+0.6
BORG	Borgarnes	83.13	351	eP	P	11 47 38.3	+1.1
	comp=Z,25nm,1.1s						
BORG	Borgarnes	83.13	351	eP	P	11 47 38.3	+1.1
BORG				pmax	pmax		
	comp=Z,25nm,1.1s						
DECC	Green Verdugo	83.15	54	P	P	11 47 38.4	+0.4
	baz=303						
LANS	Liptovska Anna	83.19	324	eP	P	11 47 38.8	+0.9
LANS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LANS	Liptovska Anna	83.19	324	eP	P	11 47 38.8	+0.9
COPA	Copaceanca	83.25	318	⇑iP	P	11 47 38.5	+0.3
DGMT	Dagmar	83.30	36	P	P	11 47 38.8	+0.4
	baz=310						
PHSR	Pinarhisar	83.38	315	⇑iP	P	11 47 39.8	+0.9
LAO	LASA Array	83.38	39	P	P	11 47 39.9	+1.0
	baz=309						
OKC	Ostrava-Krasne	83.38	326	eP	P	11 47 38.9	+0.1
OKC	Ostrava-Krasne	83.38	326	eP	P	11 47 38.9	+0.1
OKC				ex	x	11 49 26.2	
FMP	Fort Macarthur	83.47	55	P	P	11 47 40.2	+0.7
	baz=303						
DUG	Dugway, Tooele	83.47	47	P	P	11 47 40.8	+1.2
	baz=306						
CIS	Catalina Islan	83.55	55	P	P	11 47 40.3	+0.3
	baz=303						
KSP	Ksiaz	83.59	327	eP	P	11 47 40.0	+0.2
KSP	Ksiaz	83.59	327	eP	P	11 47 40.0	+0.2
BFSC	Mount Baldy Ra	83.62	54	P	P	11 47 40.7	+0.2
	baz=303,SNR=7.5						
GSC	Goldstone, Bar	83.63	53	P	P	11 47 41.0	+0.6
	baz=304,SNR=23						
SHOC	Shoshone, Teco	83.66	52	P	P	11 47 41.1	+0.6
	baz=304,SNR=12						
ISP	Isparta	83.68	311	⇑iP	P	11 47 39.9	-0.8
SCI2	San Clemente I	83.69	55	P	P	11 47 41.0	+0.4
	baz=303						
MORC	Moravsky Berou	83.72	326	⇓iP	P	11 47 40.6	+0.1
MORC	Moravsky Berou	83.72	326	eP	P	11 47 40.1	-0.4
RRX	Edison Barstow	83.73	53	P	P	11 47 41.4	+0.6
	baz=304						
PSUT	Pine Spring	83.77	49	eP	P	11 47 41.8	+0.6
	comp=Z,9.0nm,0.7s						
PSZ	Piszkesteto	83.77	323	⇑iP	P	11 47 40.4	-0.4
PSZ	Piszkesteto	83.77	323	eP	P	11 47 40.1	-0.8
OSTC	Ostas	83.82	327	eP	P	11 47 40.8	-0.2
OSTC				epP	pwP	11 49 27.3	+0.3
DPC	Dobruska-Polom	83.91	327	eP	P	11 47 41.4	-0.1
DPC				eS	SKSac	11 57 22.9	+2.7
DPC	Dobruska-Polom	83.91	327	eP	P	11 47 41.4	-0.1
DPC				ex	x	11 49 29.8	
DPC				eSKS	SKSac	11 57 22.9	+2.7
BW06	Boulder Array	83.93	43	P	P	11 47 42.3	+0.4
	baz=307						
PDAR	Pinedale Array	83.93	43	P	P	11 47 42.6	+0.7
	comp=Z,2.7nm,0.7s,baz=304,slow=2.7,SNR=24						
PDAR				pP	pP	11 49 25.9	+2.3
	comp=Z,0.1nm,0.4s,baz=150,slow=27,SNR=2.0						
VYHS	Vyhne	83.93	324	eP	P	11 47 42.0	+0.4
VYHS				pmax	pmax		
	comp=Z,17nm,1.0s						
VYHS	Vyhne	83.93	324	eP	P	11 47 42.0	+0.4
VYHS				ePP	PP	11 51 01.3	-1.1
UPC	Upice	83.95	327	eP	P	11 47 41.4	-0.2
UPC				eS	SKSac	11 57 18.2	-2.2
UPC	Upice	83.95	327	eP	P	11 47 41.4	-0.2
UPC				eSKS	SKSac	11 57 18.2	-2.2
SRE	Strehaia	84.06	319	⇑iP	P	11 47 43.1	+0.8
BBRC	Big Bear Solar	84.12	53	P	P	11 47 43.5	+0.4
	baz=304,SNR=10						
TUQ	Turquoise Moun	84.15	52	P	P	11 47 43.8	+0.7
	baz=304,SNR=26						
HEC	Hector,Ludlow	84.21	53	P	P	11 47 44.0	+0.7
	baz=304,SNR=16						
JAVC	Velka Javorina	84.27	325	eP	P	11 47 44.0	+0.7
MURC	Murrieta	84.30	54	P	P	11 47 44.0	+0.3
	baz=304,SNR=6.5						
BZS	Buzias	84.34	321	⇑iP	P	11 47 43.3	-0.3
AMBH	Ambrzfalva	84.35	322	eP	P	11 47 44.0	+0.4
VRAC	Vranov	84.49	326	⇑iP	P	11 47 44.1	-0.2
VRAC	Vranov	84.49	326	eP	P	11 47 43.9	-0.4
BUD	Budapest	84.50	323	⇓eP	P	11 47 44.0	-0.3
PVCC	Panska Ves	84.61	328	eP	P	11 47 45.1	+0.3
PVCC	Panska Ves	84.61	328	eP	P	11 47 45.1	+0.3
SMOL	Smolenice	84.62	325	eP	P	11 47 45.5	+0.6
SMOL				pmax	pmax		
	comp=Z,34nm,1.7s						
SMOL	Smolenice	84.62	325	eP	P	11 47 45.5	+0.6
KDZ	Kurdzhali	84.63	316	eP	P	11 47 45.3	+0.1
BRG	Berggiesshubel	84.65	328	⇓iP	P	11 47 44.8	-0.2
	comp=Z,16nm,0.8s						
BRG				epP	pP	11 49 24.2	-1.6
	comp=Z,3.7nm,0.7s						
BRG				sP	sP	11 50 10.0	-2.6
BRG				ePP	PP	11 51 05.9	-2.1
	comp=Z,7.3nm,1.1s						
BRG				S	SKSac	11 57 24.0	-0.7
BRG				SS	SS	12 03 10.0	-6.1
	comp=N,60nm,12.8s						
	comp=E,45nm,13.8s						
	comp=Z,105nm,10.0s						
BRG	Berggiesshubel	84.65	328	⇓iP	P	11 47 44.8	-0.2
BRG				e*PP	pP	11 49 24.2	-1.6
BRG				*SP	sP	11 50 10.0	-2.6
BRG				e		11 51 05.9	
BRG				S	SKSac	11 57 24.0	-0.7
BRG				pmax	pmax		
	comp=Z,16nm,0.8s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,60nm,12.8s						
BRG				MLR	MLR		
	comp=E,45nm,13.8s						
BRG				MLR	MLR		
	comp=Z,105nm,10.0s						
GMRC	Granite Mounta	84.69	52	P	P	11 47 46.5	+0.8
	baz=304,SNR=20						
109C	Camp Elliot, M	84.75	55	P	P	11 47 46.3	+0.4
	baz=304						
KRUC	Moravsky	84.75	326	eP	P	11 47 45.1	-0.5
CLL	Collm	84.77	329	⇓iP	P	11 47 44.9	-0.7
CLL				i *PP	pP	11 49 26.2	-0.2
CLL				eS	S	11 57 32.0	-2.4
CLL				pmax	pmax		
	comp=Z,30nm,1.2s						
CLL	Collm	84.77	329	⇓iP	P	11 47 44.9	-0.7
	comp=Z,30nm,1.2s						
CLL				i PcP	PcP	11 47 47.6	-0.5
CLL				i		11 47 50.6	
CLL				e		11 48 07.0	
CLL				i pP	pP	11 49 26.2	-0.2
CLL				esP	sP	11 50 14.0	+0.7
CLL				ePP	PP	11 51 08.0	-0.9
CLL				esPP		11 53 22.0	
CLL				eS	S	11 57 32.0	-2.4
CLL				e		11 59 42.0	
CLL				esS	sS	12 00 42.0	+6.0
CLL				eSS	SS	12 03 14.0	-3.8
CLL				esSS		12 05 54.0	
CLL				eSSS	SSS	12 06 54.0	
CLL				e		12 08 58.0	
CLL				eSSSS		12 09 51.0	
CLL				ePKPPKPdf	P'P'df	12 13 58.0	-1.8
MODS	Modra-Piesok	84.79	325	eP	P	11 47 45.3	-0.5
MODS				pmax	pmax		
	comp=Z,24nm,1.5s						
MODS	Modra-Piesok	84.79	325	eP	P	11 47 45.3	-0.5
PFO	Pinyon Flats O	84.80	54	eP	P	11 47 46.4	+0.1
	comp=Z,22nm,0.8s						
PFO	Pinyon Flats O	84.80	54	eP	P	11 47 46.4	+0.1
PFO				pmax	pmax		
	comp=Z,22nm,0.8s						
PFO	Pinyon Flats O	84.80	54	P	P	11 47 46.8	+0.5
	baz=304,SNR=22						
SZCU	Shurtz Canyon	84.80	49	eP	P	11 47 46.6	+0.3
	comp=Z,6.1nm,1.3s						
BELC	Belle Mtn. Jos	84.90	53	P	P	11 47 47.1	+0.3
	baz=304,SNR=25						
LDFC	Landfair	84.90	52	eP	P	11 47 47.3	+0.5
	comp=Z,14nm,0.8s						
GOPC	GO Pecny, Ondr	84.93	327	eP	P	11 47 45.9	-0.6
GOPC	GO Pecny, Ondr	84.93	327	eP	P	11 47 45.9	-0.6
ZST	Bratislava	84.99	325	eP	P	11 47 45.9	-0.9
ZST				pmax	pmax		
	comp=Z,17nm,1.4s						
ZST	Bratislava	84.99	325	eP	P	11 47 45.9	-0.9
PRU	Pruhonice	84.99	327	eP	P	11 47 46.6	-0.1
PRU				e		11 49 29.5	
PRU	Pruhonice	84.99	327	eP	P	11 47 46.6	-0.1
PRU				epP	pP	11 49 29.5	+1.9
MONP2	Monument Peak	85.23	54	P	P	11 47 49.1	+0.6
	baz=304,SNR=11						
VTS	Vitosha	85.32	318	⇓iP	P	11 47 48.3	-0.4
VTS	Vitosha	85.32	318	eP	P	11 47 48.4	-0.3
IRM	Iron Mountain	85.40	53	P	P	11 47 49.9	+0.8
	baz=305,SNR=10						
BC3	Big Chuckawall	85.47	53	P	P	11 47 50.0	+0.4
	baz=304,SNR=16						
MORH	Mrgy, Hungar	85.53	323	i P	P	11 47 48.5	-0.9
MORH	Mrgy, Hungar	85.53	323	eP	P	11 47 48.1	-1.3
IKP	In-Ko-Pah, Jac	85.58	54	P	P	11 47 50.7	+0.6
	baz=304						
FRGS	Fruska Gora	85.61	321	i P	P	11 47 49.2	-0.7
SOP	Sopron	85.61	325	eP	P	11 47 49.0	-0.8
SWSC	Sam W. Stewart	85.63	54	P	P	11 47 50.7	+0.5
	baz=304						
MMB	Musomiste	85.67	317	eP	P	11 47 49.7	-0.6
K22A	Casper	85.76	42	P	P	11 47 51.4	+0.6
	baz=309						
NKC	Novy Kostel	85.78	328	eP	P	11 47 50.3	-0.3
NKC	Novy Kostel	85.78	328	eP	P	11 47 50.3	-0.3
CONA	Conrad Observa	85.79	325	ePcP	P	11 47 50.7	0.0
	comp=Z,4.2nm,0.8s,SNR=6.9						
CONA				epP	pP	11 49 31.9	+0.1
	comp=Z,22nm,1.6s						
PDMCI	Parker Dam,Lak	86.00	52	P	P	11 47 52.7	+0.8
	baz=305,SNR=6.2						
MDND	Maddock	86.01	35	P	P	11 47 52.3	+0.5
	baz=314						
KHC	Kasperske Hory	86.04	327	eP	P	11 47 51.1	-0.8
KHC				e		11 49 33.1	
KHC				eS	S	11 57 41.4	-5.5
KHC	Kasperske Hory	86.04	327	eP	P	11 47 51.1	-0.8
KHC				ex	x	11 48 33.5	
KHC				epP	pP	11 49 33.1	+0.1
KHC				eS	S	11 57 41.4	-5.5
Y12C	Blythe	86.06	53	P	P	11 47 52.9	+0.7
	baz=305,SNR=5.3						
ULM	Lac du Bonnet	86.06	31	P	P	11 47 50.7	-1.2
	comp=Z,1.6nm,0.5s,baz=43,slow=0.7,SNR=3.8						
GERES	GERESS Array B	86.19	327	P	P	11 47 51.9	-0.8
	comp=Z,4.2nm,0.6s,baz=41,slow=5.6,SNR=43						
GERES				pP	pP	11 49 33.8	-0.1
	comp=Z,1.0nm,0.8s,baz=57,slow=4.9,SNR=3.3						
GERES				PP	PP	11 51 21.0	+0.5
	comp=Z,1.0nm,0.7s,baz=47,slow=9.8,SNR=3.9						
GERES				PKKPbc	PKKPbc	12 05 47.8	-0.8
	comp=Z,0.5nm,0.6s,baz=215,slow=1.6,SNR=7.0						
DIVS	Divibare	86.20	320	i P	P	11 47 51.8	-1.0
RSSD	Black Hills	86.21	40	eP	P	11 47 53.2	+0.2
	comp=Z,6.8nm,0.8s						
RSSD	Black Hills	86.21	40	eP	P	11 47 53.2	+0.2
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RSSD	Black Hills	86.21	40	P	P	11 47 53.3	+0.2
	baz=311						
GLA	Glamis	86.25	54	P	P	11 47 53.8	+0.6
	baz=305						
O20A	White River Ci	86.31	45	P	P	11 47 54.2	+0.6
	baz=308						
ARSA	Arzberg	86.42	325	ePcP	P	11 47 53.2	-0.5
	comp=Z,11nm,1.5s,SNR=6.2						
ARSA				epP	pP	11 49 34.8	-0.1
	comp=Z,12nm,1.7s						
KAC	Achnashellach	86.50	341	eP	P	11 47 53.9	+0.1
STIP	Stip	86.50	317	i P	P	11 47 52.8	-1.4
MOA	Molln	86.62	326	ePcP	P	11 47 54.3	-0.4
	comp=Z,7.3nm,1.3s						
MOA				epP	pP	11 49 38.4	+2.4
	comp=Z,16nm,1.8s						
BBLS	Lazići	86.67	320	i P	P	11 47 54.5	-0.5
KPL	Plockton	86.73	341	eP	P	11 47 55.1	+0.2
KPL				IAmb	IAmb	11 47 55.9	
	comp=Z,42nm,0.7s						
SKO	Skopje	86.76	318	i P	P	11 47 55.6	+0.2
HAPS	Han Pijesak,Bl	86.78	321	eP	P	11 47 54.2	-1.4
RUDO	Rudo	86.85	320	eP	P	11 47 54.6	-1.2
PV14	Lion Creek, Pa	86.92	46	eP	P	11 47 57.5	+0.9
	comp=Z,12nm,1.0s						
PERS	Pernice	87.04	325	i P	P	11 47 55.9	-0.8
PERS				i pP	pwP	11 49 44.6	+0.8
PERS				i S	SKSac	11 57 36.3	-3.4
SOKA	Soboth	87.06	325	ePcP	P	11 47 56.2	-0.6
	comp=Z,7.4nm,0.7s,SNR=5.8						
SOKA				epP	pP	11 49 38.4	+0.2
	comp=Z,20nm,1.2s						
WUAZ	Wupatki	87.14	50	P	P	11 47 58.3	+0.7
	baz=307						
N23A	Red Feather La	87.20	43	P	P	11 47 59.4	+1.5
	baz=310						
BLY	Banja Luka	87.28	322	⇑iP	P	11 47 57.6	-0.2
BLY	Banja Luka	87.28	322	i P	P	11 47 57.0	-0.8
OBKA	Obir	87.41	325	ePcP	P	11 47 57.4	-1.1
	comp=Z,5.9nm,0.8s						
CRES	Cresnjev	87.43	324	i P	P	11 47 57.4	-1.1
AGMN	Agassiz Nation	87.47	33	P	P	11 47 58.6	0.0
	baz=316						
MGRS	Mrkonjic Grad	87.55	322	i P	P	11 47 59.2	+0.1
KBA	Koelnbreinsper	87.60	326	ePcP	P	11 47 58.2	-1.3
	comp=Z,6.9nm,1.1s						
KBA				epP	pP	11 49 42.1	+1.0
	comp=Z,12nm,1.2s						
PDG	Podgorica	87.70	319	⇑iP	P	11 47 59.2	-0.6
PDG	Podgorica	87.70	319	eP	P	11 47 58.7	-1.1
LJU	Ljubljana	87.75	324	i P	P	11 47 58.7	-1.3
BOJS	Bojanci	87.76	324	i P	P	11 47 59.1	-0.9
BOJS				i pP	pwP	11 49 48.6	+1.3
BOJS				i S	SKSac	11 57 41.9	-2.0
VISS	Visnje	87.76	324	i P	P	11 47 59.0	-1.1
VISS				epP	pwP	11 49 47.7	+0.4
VISS				i S	SKSac	11 57 39.9	-4.0
MYKA	Terra Mystica	87.78	325	eP	P	11 47 58.8	-1.3
	comp=Z,6.0nm,0.6s						
MYKA				pP	pP	11 49 39.6	-2.2
	comp=Z,16nm,1.7s						
BRY	Bratogost	87.78	320	eP	P	11 47 58.9	-1.5
DRME	Dracevica, Mon	87.90	319	eP	P	11 47 59.8	-0.9
MVCO	Mesa Verde	87.96	47	P	P	11 48 02.0	+0.6
	baz=308						
CEY	Cerknica	88.01	324	i P	P	11 48 00.0	-1.2
JAVS	Javornik	88.08	325	i P	P	11 48 00.2	-1.5
JAVS				i pP	pwP	11 49 48.9	-0.2
JAVS				i S	SKSac	11 57 43.2	-2.9
ABTA	Abfaltersbach	88.24	326	eP	P	11 48 00.7	-1.7
	comp=Z,12nm,0.7s,SNR=8.3						
ABTA				epP	pP	11 49 46.0	+1.8
	comp=Z,9.8nm,1.1s						
WATA	Walderalm	88.26	327	ePcP	P	11 48 01.3	-1.2
	comp=Z,4.1nm,0.6s						
WATA				epP	pP	11 49 46.3	+2.0
	comp=Z,1.1nm,0.7s						
214A	Organ Pipe Nat	88.27	53	P	P	11 48 03.2	+0.5
	baz=306						
WTTA	Wattenberg	88.29	327	ePcP	P	11 48 01.8	-0.9
	comp=Z,7.4nm,0.7s,SNR=6.6						
WTTA				epP	pP	11 49 46.3	+1.9
	comp=Z,8.5nm,1.4s						
MOTA	Moosalm	88.48	327	ePcP	P	11 48 02.5	-1.0
	comp=Z,3.8nm,0.6s,SNR=6.6						
SQTA	Sankt Quirin	88.52	327	ePcP	P	11 48 02.8	-0.9
	comp=Z,9.2nm,0.7s,SNR=6.0						
RETA	Reutte	88.53	327	ePcP	P	11 48 03.1	-0.6
	comp=Z,8.2nm,0.7s						
RETA				epP	pP	11 49 45.7	+0.1
	comp=Z,10nm,1.3s						
GAL1	Galloway	88.58	339	eP	P	11 48 02.8	-0.9
GAL1				IAmb	IAmb	11 48 04.2	
	comp=Z,12nm,0.8s						
S22A	4UR Ranch, Cre	88.66	46	P	P	11 48 05.9	+1.1
	baz=309						
SUSD	Miller	88.69	37	P	P	11 48 05.1	+0.6
	baz=314						
CLGH	Cloghs, Cushen	88.81	340	eP	P	11 48 04.2	-0.6
CLGH				IAmb	IAmb	11 48 05.5	
	comp=Z,19nm,0.7s						
LBWR	Ladybower, Pea	88.88	337	eP	P	11 48 04.9	-0.1
FETA	Feichten	88.89	327	ePcP	P	11 48 04.7	-0.8
	comp=Z,13nm,0.8s,SNR=8.5						
FETA				pP	pP	11 49 47.4	0.0
	comp=Z,8.1nm,1.1s						
Q24A	Divide	88.91	44	P	P	11 48 06.4	+0.5
	baz=310						
BFO	Black Forest	89.01	329	eP	P	11 48 05.0	-0.9
	comp=Z,13nm,0.8s						
BFO	Black Forest	89.01	329	eP	P	11 48 05.0	-0.9
BFO				pmax	pmax		
	comp=Z,13nm,0.8s						
DAVA	Damuels	89.09	328	ePcP	P	11 48 05.7	-0.7
	comp=Z,21nm,0.7s,SNR=9.7						
DAVA				pP	pP	11 49 45.5	-2.9
	comp=Z,18nm,1.5s						
WIM	Isle of Man	89.19	339	eP	P	11 48 06.4	-0.1
SDCO	Great Sand Dun	89.48	45	P	P	11 48 09.6	+1.0
	baz=310						
GMM	Mts of Mourne	89.50	340	eP	P	11 48 07.6	-0.3
EYMN	Ely	89.70	31	P	P	11 48 09.1	+0.1
	baz=319						
WME	Myndd Eilian	89.72	338	eP	P	11 48 08.6	-0.3
FOEL	Foel Wylfa	89.79	338	eP	P	11 48 09.0	-0.3
FOEL				IAmb	IAmb	11 48 10.0	
	comp=Z,28nm,0.6s						
WLF1	Llynfaes	89.84	338	eP	P	11 48 08.8	-0.7
WLF1				IAmb	IAmb	11 48 10.1	
	comp=Z,31nm,0.8s						
KSCO	Kaye Shedlock’	90.36	43	P	P	11 48 12.9	+0.5
	baz=312						
STRD	Stroud	90.38	337	eP	P	11 48 12.1	+0.1
STRD				IAmb	IAmb	11 48 12.5	
	comp=Z,51nm,0.8s						
ECSD	EROS Data Cent	90.39	36	P	P	11 48 12.7	+0.3
	baz=316						
MCH1	Michaelchurch	90.48	337	eP	P	11 48 11.9	-0.6
MCH1				IAmb	IAmb	11 48 12.9	
	comp=Z,37nm,0.6s						
T25A	Trinidad	90.53	45	P	P	11 48 14.2	+0.8
	baz=311						
ANMO	Albuquerque	90.66	48	eP	P	11 48 14.7	+0.7
	comp=Z,5.3nm,0.8s						
ANMO	Albuquerque	90.66	48	c iP	P	11 48 14.9	+0.9
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ANMO	Albuquerque	90.66	48	P	P	11 48 15.2	+1.2
	baz=309						
TIP	Timpagrande	91.28	318	⇑iP	P	11 48 16.4	-0.2
121A	Cookes Peak, D	91.31	50	P	P	11 48 18.3	+1.3
	baz=309						
SSF	Saint Saulge	92.06	331	eP	P	11 48 18.8	-1.1
SSF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSU1	Kansas State U	93.70	39	P	P	11 48 27.6	0.0
	baz=316						
MFF	Saint Martin d	93.92	333	eP	P	11 48 28.2	-0.3
MFF				pmax	pmax		
	comp=Z,21nm,1.2s						
E47A	Iron Bridge	94.30	27	P	P	11 48 30.2	0.0
	baz=326						
D49A	Beulah Townshi	94.36	26	P	P	11 48 30.0	-0.5
	baz=327						
LFF	La Frestale	94.92	331	eP	P	11 48 29.7	-3.3
LFF				pmax	pmax		
	comp=Z,63nm,1.8s						
F48A	Evansville	95.08	27	P	P	11 48 33.1	-0.6
	baz=326						
WMOK	Wichita Mounta	95.52	44	P	P	11 48 36.0	-0.1
	baz=314						
TXAR	Lajitas Array	96.07	51	P	P	11 48 38.7	0.0
	comp=Z,1.0nm,0.6s,baz=294,slow=2.6,SNR=16						
MIAR	Mount Ida	98.67	41	P	P	11 48 50.6	+0.5
	baz=317						
M56A	Emporium	100.47	27	P	Pdif	11 48 57.7	-0.3
	baz=329						
S50A	Richmond	100.98	33	P	Pdif	11 48 59.1	-1.3
	baz=324						
ESDC	Sonseca Array	101.23	331	PP	PP	11 53 14.2	-2.1
	comp=Z,1.2nm,0.8s,baz=30,slow=7.1,SNR=4.1						
R54A	Victor	102.11	30	P	Pdif	11 49 04.6	-0.7
	baz=327						
TOA1	Torodi Ar. Sit	119.19	310	ePKPdf	PKPdf	11 53 56.9	-0.8
TORD	Torodi Ar. Bea	119.20	310	PKP	PKPdf	11 53 56.9	-0.8
	comp=Z,0.8nm,0.6s,baz=14,slow=0.6,SNR=5.4						
TORD				PP	PP	11 55 23.8	-1.2
	comp=Z,2.5nm,0.8s,baz=52,slow=4.2,SNR=6.8						
TORD				PKKPbc	PKKPbc	12 04 11.2	-0.4
	comp=Z,1.6nm,0.9s,baz=202,slow=5.6,SNR=6.1						
QSPA	South Pole Qui	120.83	180	ePKPdf	PKPdf	11 53 58.5	-0.8
SNAA	Sanae	134.23	196	PKPdf	PKiKP	11 54 25.7	-0.4
SNAA	Sanae	134.23	196	ePKPdf	PKPdf	11 54 24.8	+0.1
SNAA	Sanae	134.23	196	ePKIKP	PKPdf	11 54 24.8	+0.1
VNA3	Neumayer Olymp	136.09	194	PKPdf	PKiKP	11 54 29.7	-0.1
VNA1	Neumayer--Stat	136.21	196	PKPdf	PKiKP	11 54 29.2	-0.9
PMSA	Palmer Station	143.60	164	ePKPdf	PKPbc	11 54 40.2	0.0
PTGA	Pitinga	145.37	33	ePKPbc	PKPbc	11 54 47.1	-0.3
GO10	Punta Arenas	149.53	145	ePKPbc	PKiKP	11 54 59.0	+1.0
GO09	Cerro Castillo	149.88	141	ePKPbc	PKiKP	11 54 58.5	-0.2
LPAZ	La Paz	152.04	64	PKP	PKPdf	11 54 58.6	+0.9
	comp=Z,1.7nm,1.0s,baz=340,slow=6.9,SNR=5.6						
LPAZ				PKPbc	PKiKP	11 55 05.6	+0.7
	comp=Z,6.5nm,0.8s,baz=350,slow=2.7,SNR=26						
LPAZ				PKPab	PKPab	11 55 15.6	-0.7
	comp=Z,4.7nm,0.7s,baz=56,slow=8.0,SNR=9.1						
LPAZ				pPKPbc	pPKPbc	11 56 52.8	-0.7
	comp=Z,2.5nm,0.9s,baz=19,slow=6.5,SNR=2.5						
LPAZ	La Paz	152.04	64	ePKPdf	PKPdf	11 54 58.4	+0.7
LPAZ				ePKPbc	PKiKP	11 55 05.2	+0.3
PB11	IPOC Station P	152.71	72	ePKPdf	PKPdf	11 54 59.1	+1.0
PB11				ePKPbc	PKiKP	11 55 05.9	+0.2
PLCA	Paso Flores	155.07	121	PKPbc	PKPdf	11 55 09.8	+9.1
	comp=Z,2.3nm,0.6s,baz=257,slow=2.7,SNR=12						
PLCA				PKPab	PKPab	11 55 29.5	+1.4
	comp=Z,5.9nm,0.7s,baz=247,slow=4.3,SNR=12						
PLCA	Paso Flores	155.07	121	ePKPab	PKPab	11 55 28.7	+0.7
PLCA	Paso Flores	155.07	121	ePKP2	PKPab	11 55 28.7	+0.7
GO04	Tololo Observa	155.26	95	ePKPab	PKPab	11 55 28.8	-0.6
CPUP	Villa Florida	165.78	74	PKP	PKPdf	11 55 11.4	-1.1
	comp=Z,2.2nm,0.8s,baz=40,slow=8.3,SNR=3.6						
CPUP				PKPab	PKPab	11 56 15.8	+0.6
	comp=Z,2.4nm,1.0s,baz=314,slow=6.7,SNR=2.9						

KRNET **28** *12:09:04.0±0.1, 40°.56N×77°.39E, h3^{km}, mb2.8*
SOME **28** *12:09:06.1, 40°.63N×77°.35E, h5^{km}*
NNC **28** *12:09:07.3±0.9, 40°.70N×77°.38E, h0^{km}, mb3.6, mpv3.3,*
Error ellipse: s-maj=6.2km s-min=4.9km az=176.0
ISC 28 12:09:01.2±2.4**, 40°.35N**±0°.10×**77°.21E**±0°.04**, h6^{km}**±12^{km}**,**
n39, σ1^{s}22/65**, 15C-19D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.41	320	⇓iP	Pg	12 09 29.5	+1.2
	baz=9.0						
NRN				⇓iS	Sg	12 09 48.2	+1.5
	baz=9.0						
KDJ	Kajisay	1.77	359	⇑iP	Pn	12 09 33.2	+0.6
	baz=55						
KDJ				⇑iS	Sn	12 09 54.2	-1.4
	baz=55						

ULHL	Ulahol	2.02	339	⇑*i*P	Pb	12 09 39.5	+1.0
	baz=33						
ULHL				⇑*i*S	Sb	12 10 04.7	+0.7
	baz=33						
KZA	Kyzart	2.27	320	⇓*i*P	Pg	12 09 45.4	+0.7
	baz=14						
KZA				⇓*i*S	Sg	12 10 15.5	+1.4
	baz=14						
PRZ	Przheval'sk	2.31	22	⇓*e*P	Pn	12 09 40.9	+1.0
	baz=22						
PRZ				⇓*i*S	Sn	12 10 07.8	-0.9
	baz=22						
BOOM	Boomskoye usch	2.34	336	⇓*e*P	Pb	12 09 43.2	-0.6
	baz=31						
BOOM				⇓*i*S	Sb	12 10 11.8	-1.2
	baz=31						
ARLS	Aral	2.65	306	⇓*i*P	Pb	12 09 49.4	+0.3
	baz=1.0						
ARLS				⇓*i*S	Sb	12 10 22.6	+0.7
	baz=1.0						
TNSS	Tian-Shan	2.69	356	Pg	Pb	12 09 50.7	+0.9
	25nm,0.4s						
TNSS				Lg	Lg	12 10 23.5	
	20nm,0.5s						
TNSS	Tian-Shan	2.69	356	*e*P	Pb	12 09 50.8	+0.9
	25nm,0.4s						
TNSS				*e*S	Sb	12 10 23.2	-0.1
	20nm,0.5s						
UCH	Uchtor	2.76	314	⇑*e*P	Pg	12 09 53.0	-1.1
	baz=8.0						
UCH				⇑*e*S	Sg	12 10 28.4	-1.5
	baz=8.0						
MDOK	Medeo	2.81	358	Pg	Pb	12 09 52.1	+0.2
	11nm,0.3s						
MDOK				Lg	Lg	12 10 25.2	
	14nm,0.4s						
MDOK	Medeo	2.81	358	*e*P	Pb	12 09 52.5	+0.6
	7.7nm,0.3s						
MDOK				*e*S	Sb	12 10 26.0	-0.5
	14nm,0.4s						
MTBS	Maitube	2.83	348	Pg	Pg	12 09 54.4	-1.1
	11nm,0.3s						
MTBS				Lg	Lg	12 10 29.1	
	12nm,0.3s						
MTBS	Maitube	2.83	348	*e*P	Pg	12 09 54.4	-1.1
	11nm,0.3s						
MTBS				*e*S	Sb	12 10 29.1	+1.9
	12nm,0.3s						
TKM2	Tokmak 2	2.83	335	⇑Pg	Pg	12 09 54.4	-1.1
	4.9nm,0.7s						
TKM2				⇓Lg	Lg	12 10 30.3	
	5.4nm,0.6s						
TKM2	Tokmak 2	2.83	335	⇑*e*P	Pb	12 09 50.7	-1.6
	baz=31						
TKM2				⇑*i*S	Sb	12 10 24.7	-2.6
	baz=31						
KST	Kastek	2.84	341	Pg	Pg	12 09 54.7	-1.0
	11nm,0.5s						
KST				Lg	Lg	12 10 29.6	
	8.8nm,0.3s						
KST	Kastek	2.84	341	*e*P	Pg	12 09 54.7	-1.0
	11nm,0.5s						
KST				*e*S	Sb	12 10 29.6	+2.0
	8.8nm,0.3s						
SATY	Saty	2.85	18	Pg	Pb	12 09 52.9	+0.4
	7.6nm,0.2s						
SATY				Lg	Lg	12 10 26.9	
	14nm,0.3s						
SATY	Saty	2.85	18	*e*P	Pb	12 09 53.6	+1.2
	7.6nm,0.2s						
SATY				*e*S	Sb	12 10 27.9	+0.3
	14nm,0.3s						
KBK	Karagaybulak	2.86	324	⇓*i*P	Pb	12 09 52.9	+0.2
	baz=20						
KBK				⇓*i*S	Sb	12 10 28.0	0.0
	baz=20						
AAK	Ala-Archa	3.06	319	⇑Pg	Pg	12 09 59.9	+0.1
	4.0nm,0.5s						
AAK				⇓Lg	Lg	12 10 39.1	
	4.0nm,0.6s						
AAK	Ala-Archa	3.06	319	⇑*e*P	Pb	12 09 56.3	+0.2
	baz=15						
AAK				⇑*i*S	Sb	12 10 33.8	+0.1
	baz=15						
DGS	Degeres	3.08	340	Pg	Pg	12 09 59.0	-1.2
	2.7nm,0.5s						
DGS				Lg	Lg	12 10 36.9	
	9.6nm,0.4s						
DGS	Degeres	3.08	340	*e*P	Pg	12 09 58.7	-1.5
	2.7nm,0.5s						
DGS				*e*S	Sb	12 10 36.3	+2.0
	9.6nm,0.4s						
UZB	Uzynbulak	3.10	25	*e*P	Pb	12 09 57.2	+0.3
	1.5nm,0.2s						
UZB				*e*S	Sb	12 10 33.6	-1.5
	6.8nm,0.9s						
AML	Almayashu	3.19	305	⇓*i*P	Pb	12 09 59.9	+1.4
	baz=1.0						
AML				⇓*i*S	Sg	12 10 40.3	-3.3
	baz=1.0						
KPKS	Kokpek	3.30	19	*e*P	Pb	12 10 00.9	+0.7
	5.6nm,0.2s						
KPKS				*e*S	Sb	12 10 40.1	-0.5
	12nm,0.4s						
KTBS	Karatobe	3.38	354	Pg	Pb	12 10 03.4	+1.9
	5.4nm,0.3s						
KTBS				Lg	Lg	12 10 44.6	
	22nm,0.3s						
KTBS	Karatobe	3.38	354	*e*P	Pb	12 10 03.4	+1.9
	5.4nm,0.3s						
KTBS				*e*S	Sb	12 10 44.6	+1.8
	22nm,0.3s						
PDGK	Podgornoye	3.43	29	⇓Pg	Pb	12 10 02.3	-0.1
	2.2nm,0.5s						
PDGK				⇑Lg	Lg	12 10 44.9	
	4.8nm,0.6s						
PDGK	Podgornoye	3.43	29	⇑*e*P	Pn	12 09 56.2	+0.9
	baz=29						
PDGK				⇑*i*S	Sn	12 10 35.1	-1.1
	baz=29						
EKS2	Erkin-Say	3.46	313	⇓*e*P	Pb	12 10 02.4	-0.5
	baz=9.0						
EKS2				⇓*e*S	Sb	12 10 44.5	-0.6
	baz=9.0						
CHKK	Chushkaly	3.50	357	Pg	Pb	12 10 04.4	+0.8
	7.5nm,0.3s						
CHKK				Lg	Lg	12 10 46.2	
	9.0nm,0.3s						
CHKK	Chushkaly	3.50	357	*e*P	Pb	12 10 04.4	+0.8
	7.5nm,0.3s						
CHKK				*e*S	Sb	12 10 46.2	-0.2
	9.0nm,0.3s						
KUU	Kurty	3.59	350	Pg	Pb	12 10 06.7	+1.5
	2.5nm,0.2s						
KUU				Lg	Lg	12 10 50.2	
	7.4nm,0.5s						
KUU	Kurty	3.59	350	*e*P	Pb	12 10 06.7	+1.5
	2.5nm,0.2s						
KUU				*e*S	Sb	12 10 50.2	+1.2
	7.4nm,0.5s						
ARXS	Arharly	3.88	7	Pg	Pb	12 10 11.2	+1.1
	2.2nm,0.5s						
ARXS				Lg	Lg	12 10 57.8	
	6.7nm,0.4s						
ARXS	Arharly	3.88	7	*e*P	Pb	12 10 11.2	+1.1
	2.2nm,0.5s						
ARXS				*e*S	Sb	12 10 57.9	+0.5
	6.7nm,0.4s						

ISC 28 12:10:04.3±1.1, 49°.90N±0°.05×18°.45E±0°.03, h12^{km}±9^{km}, n10, σ0^{s}.54/19, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.21	253	*e*PG	Pg	12 10 08.8	+0.1
OKC				*e*SG	Sg	12 10 12.3	+0.5
	comp=Z,39nm,0.3s						
MORC	Moravsky Berou	0.60	259	*e*PG	Pg	12 10 15.8	-0.2
MORC				*e*SG	Sg	12 10 24.0	+0.1
OJC	Ojcow	0.93	69	*e*Pg	Pg	12 10 21.8	-0.3
OJC				*e*Sg	Sb	12 10 34.6	0.0
LANS	Liptovska Anna	1.00	138	*e*PG	Pn	12 10 24.0	-0.2
LANS				*e*SG	Sn	12 10 39.3	+1.1
LANS				*e*LG	Lg	12 10 41.2	
VRAC	Vranov	1.35	245	*e*PG	Pb	12 10 29.5	+0.1
VRAC				*e*SG	Sb	12 10 46.5	-0.1
VYHS	Vyhne	1.43	170	*e*PG	Pn	12 10 30.4	+0.4
VYHS				*e*SG	Sg	12 10 49.7	-0.5
DPC	Dobruska-Polom	1.44	289	*e*PG	Pg	12 10 31.5	-0.5
DPC				*e*SG	Sg	12 10 51.2	+0.5
	comp=Z,2.6nm,0.6s						
KRUC	Moravsky	1.58	239	*e*PG	Pb	12 10 32.8	-0.6
KRUC				*e*SG	Sb	12 10 53.6	+0.2
OSTC	Ostas	1.58	296	*e*PG	Pg	12 10 34.0	-0.6
OSTC				*e*SG	Sg	12 10 55.9	+0.8
KHC	Kasperske Hory	3.27	258	*e*SG	Sg	12 11 48.5	-0.7

*NEIC **28** 12:28:19.7±0.0, 15°.44N×94°.78W, h18^{km}, MD4.0(MEX), After MEX.*

MEX 28 12:28:19.7±0.8, 15°.44N×94°.78W, h18^{km}±37^{km}, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	1.32	284	*e*Pn	Pn	12 28 40.1	-3.1
HUIG				*e*Sn	Sn	12 28 55.2	-5.2
HUIG	Huatulco	1.32	284	*e*P	Pn	12 28 40.1	-3.1
HUIG				*e*S	Sn	12 28 55.2	-5.2
PCIG		1.53	80	*e*Pn	Pn	12 28 42.2	-3.9
PCIG				*e*Sn	Sn	12 29 00.2	-5.4
PCIG		1.53	80	*e*P	Pn	12 28 42.2	-3.9
PCIG				*e*S	Sn	12 29 00.2	-5.4
CMIG	Matias Romero	1.64	357	*e*Pn	Pn	12 28 44.3	-3.4
CMIG				*e*Sn	Sn	12 29 03.4	-5.1
CMIG	Matias Romero	1.64	357	*e*P	Pn	12 28 44.3	-3.4
CMIG				*i* S	Sn	12 29 03.4	-5.1
TGIG		2.07	50	*e*Pn	Pn	12 28 51.4	-2.4
TGIG				*e*Sn	Sn	12 29 15.5	-3.7
TGIG		2.07	50	*e*P	Pn	12 28 51.4	-2.4
TGIG				*i* S	Sn	12 29 15.5	-3.7
CCIG	Comitan	2.68	72	*e*Pn	Pn	12 29 01.0	-1.2
TLIG	Tlapa	4.20	301	*e*Pn	Pn	12 29 23.9	+0.9
TLIG				*e*Sn	Sn	12 30 09.9	-1.8
TEIG	Tepich	7.81	52	*e*Pn	Pn	12 30 10.5	-2.0

*TEH **28** 12:46:42.0, 32°.05N×58°.57E, h7^{km}, ML4.0*

*ISCJB **28** 12:46:43.8±0.5, 32°.08N±0°.04×58°.56E±0°.05, h10^{km}, mb4.4/1, Error ellipse: s-maj=7.4km s-min=4.0km az=141.0*

*THR **28** 12:46:44.6, 32°.05N×58°.44E, h18^{km}, ML3.9*

ISC 28 12:46:42.4±0.8, 32°.00N±0°.04×58°.51E±0°.05, h10^{km}, n31, σ2^{s}.05/32, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKOO	Kooshah	0.59	45	*e*Pg	Pg	12 46 52.7	-1.3
IKOO				IAMB	IAmb	12 47 04.0	
	comp=Z,38µm,0.1s						
ITEG	Tejag	0.92	13	*e*Pg	Pg	12 46 58.3	-1.8
ITEG				IAMB	IAmb	12 47 12.2	
	comp=Z,41µm,0.2s						
IDAH	Dahanechah	1.36	57	IAMB	IAmb	12 47 12.8	
	comp=Z,22µm,0.2s						
IDAH				*e*Pg	Pg	12 47 08.0	-0.6
IDAH				*e*Sg	Sn	12 47 28.4	+2.4
TKDS	Koohdasht(Taba	1.99	324	*e*Pn	Pb	12 47 18.2	-0.6
TKDS				IAMB	IAmb	12 47 56.0	
	comp=Z,0.0nm,0.6s						
TABS	Tabas	2.02	325	*e*Pn	Pb	12 47 18.6	-0.7
TABS	Tabas	2.02	325	Pn	Pb	12 47 18.6	-0.7
TABS				Sg	Sg	12 47 46.0	-1.3
SHRT	Shahrakht	2.22	42	*e*Pn	Pg	12 47 22.6	-2.4
SHRT	Shahrakht	2.22	42	Pn	Pg	12 47 22.6	-2.4
SHRT				Sg	Sg	12 47 54.5	+0.7
CHMN	Cheshme madani	2.29	202	*e*Pn	Pb	12 47 23.5	-0.6
CHMN				IAMB	IAmb	12 48 03.3	
	comp=Z,0.0nm,0.6s						
KHGB	Koh Gabri	2.38	228	*e*Pn	Pb	12 47 25.0	-0.5
KHGB				IAMB	IAmb	12 48 01.3	
	comp=Z,0.0nm,0.7s						
TVBK	TV Kerman	2.51	217	*e*Pn	Pb	12 47 26.7	-1.1
TVBK				IAMB	IAmb	12 48 11.4	
	comp=Z,0.0nm,0.5s						
KRBR	Kerman	2.51	217	*e*Pn	Pb	12 47 27.0	-0.8
KRBR	Kerman	2.51	217	AML	AML	12 48 09.4	
	comp=E,433nm,0.6s						
KRBR	Kerman	2.51	217	Pn	Pb	12 47 27.0	-0.8
TNSJ	Nastanj	2.53	321	*e*Pn	Pn	12 47 25.0	+1.4
TNSJ				IAMB	IAmb	12 48 15.9	
	comp=Z,0.0nm,0.6s						
IBAF	Bafgh	2.54	261	*e*Pn	Pb	12 47 27.2	-1.0
NGRK	Negar Kerman	2.81	214	*e*Pn	Pb	12 47 30.9	-2.0
NGRK				IAMB	IAmb	12 48 17.2	
	comp=Z,0.0nm,0.5s						
YZKH	Yazd	3.35	278	*e*Pn	Pn	12 47 37.5	+2.6
YZKH	Yazd	3.35	278	AML	AML	12 48 33.1	
	comp=E,416nm,0.5s						
YZKH				AML	AML	12 48 33.6	
	comp=N,202nm,0.4s						
YZKH	Yazd	3.35	278	Pn	Pn	12 47 37.5	+2.6
IMEH	Mehriz	3.38	261	*e*Pn	Pn	12 47 38.4	+2.9
IMEH				IAMB	IAmb	12 47 48.6	
	comp=Z,3µm,0.5s						
ISAD	Sadrabad	4.10	270	*e*Pn	Pb	12 47 55.3	+0.4
ANAR	Anarak	4.21	288	*e*Pn	Pn	12 47 48.7	+1.9
SBZV	Sabzevar	4.44	351	*e*Pn	Pn	12 47 52.1	+2.1
IMYA	Miami	4.53	16	*e*Pn	Pn	12 47 53.9	+2.7
IAKL	Akhelmad	4.59	2	*e*Pn	Pn	12 47 54.3	+2.1
KRSH	Karshahi	5.71	292	*e*Pn	Pn	12 48 11.4	+4.0
IGLO	Ghaloghah	5.93	320	*e*Pn	Pn	12 48 13.7	+3.2
IPRN	Peran	6.64	311	*e*Pn	Pn	12 48 23.7	+3.5
CLL	Collm	38.35	314	*e*P	P	12 54 01.0	-2.3
CLL				LmV		14 49 00.0	
	comp=Z,100nm,19.7s						
HHC	Hu-ho-hao-te	43.03	63	P	P	12 54 42.5	+0.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,11nm,5.0s						

*MAN **28** 12:52:56.2, 6°.07N×123°.85E, h581^{km}, mb4.0, ML2.8, MS2.4*

*DJA **28** 12:52:57.5±0.4, 6°N±6°×12°4E±°, h557^{km}±4^{km}, M4.3/20, mB4.8/5, mb4.4/20, MLv4.3/7, Mw(mB)4.0/5*

*BJI **28** 12:52:57.7±0.0, 6°.10N×123°.50E, h568^{km}, mb4.5/27, mB4.6/16*

*NEIC **28** 12:52:58.7±1.4, 6°.08N×123°.54E, h568^{km}±8^{km}, mb4.6/34, Error ellipse: s-maj=15.8km s-min=12.4km az=207.0*

*ISCJB **28** 12:52:58.1±0.2, 6°.07N±0°.04×123°.57E±0°.05, h574^{km}, mb4.5/54, Error ellipse: s-maj=7.2km s-min=3.8km az=147.0*

*IDC **28** 12:52:60.0±1.0, 6°.08N×123°.56E, h585^{km}±13^{km}, mb3.4/19, mb1 3.5/20, mb1mx3.2/40, mbtmp4.4/20, Error ellipse: s-maj=15.1km s-min=7.0km az=66.0*

ISC 28 12:52:59.1±0.4, 6°.06N±0°.06×123°.58E±0°.08, h574^{km}, n95, σ0^{s}.90/99, mb4.4/54, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	1.32	30	⇓*i*P	P	12 54 08.0	-0.6
SGSI	Sangihe	3.06	141	P	P	12 54 14.1	-2.4
TNTI	Ternate	6.47	144	*e*P	P	12 54 41.7	-1.5
TNTI	Ternate	6.47	144	P	P	12 54 41.2	-2.0
KKM	Kota Kinabalu	7.33	270	*e*P	P	12 54 50.1	-1.2
TGY	Tagaytay City	8.40	342	P	P	12 55 01.3	-0.2
	31nm,0.3s,baz=197,slow=3.3,SNR=8.7						
TTSI	Tana Toraja	9.80	203	P	P	12 55 16.4	+1.0
NLAI	Namlea	9.88	159	P	P	12 55 17.1	+0.8
KDI	Kendari	10.00	186	P	P	12 55 18.6	+1.1
SIJI	Sorong	10.31	132	P	P	12 55 21.6	+1.1
	1.1nm,0.3s,baz=323,slow=20,SNR=3.8						
SBUM	Sibu	11.89	253	*e*P	P	12 55 36.9	+0.2
FAKI	Fak Fak	12.43	136	*e*P	P	12 55 42.4	+0.2
BAKI	Biak	14.43	120	P	P	12 56 01.5	-1.1
EDFI	Ende, Flores	14.84	187	P	P	12 56 07.4	+0.8
SOEI	Soe	15.73	178	*e*P	P	12 56 14.8	-0.5
	27nm,0.8s						
SOEI	Soe	15.73	178	P	P	12 56 14.8	-0.5
SAUI	Saumlaki	15.93	151	*e*P	P	12 56 17.2	+0.1
	514nm,1.0s						
DLV	T Lat	16.01	292	*e*P	P	12 56 17.8	-0.3
	33nm,1.1s						
TWG	Pinlang	16.84	352	*e*P	P	12 56 24.6	-0.7
	49nm,1.4s						
TPUB	Ta-pu	17.37	351	*e*P	P	12 56 30.6	+0.5
	14nm,0.6s						
MYKOM	Kota Tinggi	20.14	259	*e*P	P	12 56 55.5	+0.1
	12nm,0.9s						
MTN	Manton Dam	20.23	158	*e*P	P	12 56 55.8	-0.4
	11nm,0.5s						
IPM	Ipoh	22.52	267	*e*P	P	12 57 16.8	0.0
	12nm,1.1s						
CHAI	Chaiyaphum	23.32	297	P	P	12 57 24.1	+0.2
	42µm,0.6s,540µm						
PDSI	Padang	24.10	254	P	P	12 57 29.3	-1.6
PBKT	Sadao Pong	24.48	297	P	P	12 57 35.2	+1.1
	7.6nm,1.1s,974nm						
PSI	Prapat	24.80	264	P	P	12 57 37.4	+0.2
	14nm,0.9s,baz=86,slow=2.3,SNR=7.7						
PSI	Prapat	24.80	264	*e*P	P	12 57 36.6	-0.6
	18nm,1.0s						
UTHA	Uthaitani	25.49	294	P	P	12 57 44.5	+1.4
	25µm,0.8s,607µm						
SISI	Saibi	25.54	254	P	P	12 57 41.9	-1.6
KCSI	Kotacane, Aceh	25.84	266	P	P	12 57 44.6	-1.7
WHN	Wuhan	25.85	341	P	P	12 57 53.8	+7.7
NJ2	Nanjing	26.23	351	*e*P	P	12 57 51.3	+1.9
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
GSI	Gunungsitoli	26.37	261	*e*P	P	12 57 49.9	-1.0
	41nm,0.7s						
GSI	Gunungsitoli	26.37	261	P	P	12 57 49.2	-1.7
PAYA	Payao	26.59	302	P	P	12 57 53.8	+1.0
	21µm,0.9s						
CMAR	Chiang Mai Arr	27.00	299	P	P	12 57 57.2	+0.8
	4.7nm,0.7s,baz=117,slow=7.3,SNR=29						
CMMT	Chiang Mai	27.14	300	P	P	12 57 58.5	+0.9
	7.4nm,0.8s						
KMI	Kunming	27.53	316	P	P	12 58 02.3	+1.2
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,3.9s						
WRAB	Tennant Creek	27.92	158	*e*P	P	12 58 03.9	-0.4
	30nm,0.6s						
WRA	Warramunga Arr	27.93	158	P	P	12 58 04.2	-0.2
	47nm,0.5s,baz=343,slow=12,SNR=282						
WRA				ScP	ScP	13 03 47.4	-0.6
	1.1nm,0.5s,baz=322,slow=3.4,SNR=12						
WB2	Warramunga Arr	27.93	158	*e*P	P	12 58 03.9	-0.5
	43nm,0.5s						
XAN	Xi'an	30.98	336	P	P	12 58 30.8	+0.2
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,62nm,3.9s						
AS31	Alice Springs	31.22	162	*e*P	P	12 58 33.0	+0.2
	8.4nm,0.3s						
ASAR	Alice Springs	31.22	162	P	P	12 58 33.2	+0.4
	10nm,0.3s,baz=339,slow=7.5,SNR=462						
ASAR				PcP	PcP	13 01 09.5	0.0
	0.4nm,0.7s,baz=3.8,slow=2.8,SNR=2.8						
ASAR				S	S	13 02 58.0	-1.5
	2.2nm,0.9s,baz=343,slow=13,SNR=9.2						
ASAR				ScP	ScP	13 03 58.2	-0.4
	1.3nm,0.4s,baz=338,slow=3.2,SNR=12						
MJAR	Matsushiro Arr	33.16	22	P	P	12 58 48.0	-1.0
	0.4nm,0.7s,baz=208,slow=11,SNR=4.1						
CTA	Charters Tower	34.24	140	P	P	12 58 59.0	+0.7
	2.8nm,0.5s,baz=320,slow=9.9,SNR=7.8						
MORW	Morawa	35.67	191	*e*P	P	12 59 09.4	-0.6
	43nm,1.4s						
HHC	Hu-ho-hao-te	36.27	345	*e*P	P	12 59 16.5	+1.5
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,71nm,4.4s						
FORT	Forrest	36.88	174	*e*P	P	12 59 20.2	+0.3
	43nm,0.6s						
LSA	Lhasa	38.55	312	*e*P	P	12 59 33.4	-0.8
	7.7nm,0.7s						
USRK	Ussuriysk Ar.	38.69	10	P	P	12 59 34.5	0.0
	0.4nm,0.4s,baz=180,slow=6.3,SNR=5.4						
NWAO	Narrogin (SRO)	39.24	188	P	P	12 59 39.4	+0.3
	6.3nm,0.8s,baz=25,slow=7.7,SNR=8.1						
GTA	Gaotai	39.52	331	*e*P	P	12 59 42.0	+0.6
GTA				pP	pP	13 01 20.8	+0.4
GTA				sP	sP	13 02 20.5	-5.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BBOO	Buckleboo	40.44	164	*e*P	P	12 59 49.1	+0.5
	16nm,0.7s						
EIDS	Eidsvold	41.12	141	*e*P	P	12 59 54.3	+0.1
	15nm,0.9s						
STKA	Stephens Creek	41.46	157	P	P	12 59 57.6	+0.9
	11nm,0.6s,baz=335,slow=8.1,SNR=28						
STKA	Stephens Creek	41.46	157	*e*P	P	12 59 57.4	+0.6
	2.2nm,0.8s						
JIRN	Jiri	41.47	306	*e*P	P	12 59 58.0	+0.6
	15nm,0.3s						
GUN	Gumba	41.83	306	*e*P	P	13 00 00.7	+0.5
	24nm,0.4s						
PKI	Pulchoki	42.07	305	*e*P	P	13 00 02.0	-0.1
KKN	Kakani	42.26	305	*e*P	P	13 00 03.7	+0.2
	8.2nm,0.4s						
GKN	Gorkha	42.87	305	*e*P	P	13 00 08.3	+0.2
KLR	Kul'dur	43.57	8	P	P	13 00 12.9	0.0
	0.7nm,0.3s,baz=167,slow=9.2,SNR=4.4						
KOLN	Koldanda	43.63	304	*e*P	P	13 00 14.8	+0.7
	38nm,0.5s						
DANN	Dangsing	43.72	305	*e*P	P	13 00 15.2	+0.3
	73nm,0.6s						
SONM	Songino Array	44.14	343	P	P	13 00 18.0	+0.4
	2.7nm,0.9s,baz=155,slow=11,SNR=8.9						
SONM				PcP	PcP	13 01 48.3	-1.4
	0.5nm,0.4s,baz=160,slow=4.6,SNR=2.7						
ARMA	Armidale	45.14	145	*e*P	P	13 00 25.6	+0.1
	16nm,1.1s						
CAN	Canberra	47.61	152	*e*P	P	13 00 45.2	+1.2
	14nm,0.8s						
TOO	Toolangi	47.98	156	*e*P	P	13 00 47.9	+1.2
	34nm,1.6s						
WMQ	Urumqi	49.04	326	*e*P	P	13 00 55.8	+1.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,53nm,5.9s						
DZM	Mont Dzumac	50.43	125	P	P	13 01 06.2	+1.1
	5.6nm,0.6s,baz=307,slow=20,SNR=4.6						
DZM	Mont Dzumac	50.43	125	*e*P	P	13 01 05.9	+0.8
	38nm,1.3s						
MK31	Makanchi Array	53.87	326	*e*P	P	13 01 29.5	+0.3
	5.2nm,0.6s						
MKAR	Makanchi Array	53.87	326	P	P	13 01 29.8	+0.6
	6.6nm,0.5s,baz=119,slow=7.8,SNR=91						
MKAR				PcP	PcP	13 02 25.0	-0.6
	1.4nm,0.4s,baz=113,slow=5.0,SNR=8.2						
MKAR				ScP	ScP	13 05 28.1	-0.9
	0.6nm,0.5s,baz=105,slow=5.4,SNR=5.1						
NIL	Nilore	54.03	307	*e*P	P	13 01 30.7	+0.2
	28nm,1.5s						
PETK	Petropavlovsk-	54.54	25	P	P	13 01 34.6	+0.8
	1.2nm,0.7s,baz=195,slow=2.5,SNR=5.8						
ZALV	Zalesovo Beam	57.11	334	P	P	13 01 50.8	-0.7
	1.3nm,0.3s,baz=134,slow=5.5,SNR=7.2						
GAR	Garm	58.05	313	*e*P	P	13 01 58.7	+0.4
	21nm,0.6s						
KURK	Kurchatov	58.11	328	*e*P	P	13 01 58.5	+0.2
	22nm,0.5s						
KK31	Karatay Array	59.40	317	*e*P	P	13 02 07.4	+0.3
	5.5nm,0.8s						
KKAR	Karatay Array	59.40	317	*e*P	P	13 02 07.4	+0.3
	5.5nm,0.8s						
LBZ	Lake Benmore	65.37	145	*e*P	P	13 02 46.3	+0.8
	43nm,1.6s						
RPZ	Rata Peaks	65.47	144	P	P	13 02 46.9	+0.7
	5.9nm,0.6s,baz=286,slow=3.4,SNR=5.4						
TIXI	Tiksi	65.59	2	*e*P	P	13 02 45.8	-0.6
	3.1nm,0.5s						
URZ	Urewera	66.38	136	P	P	13 02 52.2	+0.3
	3.6nm,0.5s,baz=253,slow=10,SNR=5.9						
BKZ	Black Stump Fm	66.41	137	*e*P	P	13 02 52.9	+0.7
	15nm,0.5s						
ABKAR	Akbulak array	68.37	321	*e*P	P	13 03 03.8	-0.2
	8.2nm,1.4s						
BRTR	Keskin Array B	86.13	309	P	P	13 04 39.3	-1.1
	0.5nm,0.3s,baz=122,slow=4.2,SNR=6.0						
ARCES	ARCESS Array B	87.19	340	P	P	13 04 42.7	-1.9
	1.0nm,0.6s,baz=79,slow=6.3,SNR=6.6						
FINES	FINESS Array B	88.30	332	P	P	13 04 48.8	-1.1
	1.3nm,0.5s,baz=67,slow=4.2,SNR=18						
TORD	Torodi Ar. Bea	119.21	289	PKP	PKPdf	13 10 43.9	-0.7
	0.8nm,0.7s,baz=56,slow=2.1,SNR=4.0						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PLCA	**Paso Flores**	**143.23**	**162**	PKP	PKPbc	13 11 28.1	+0.8
	0.9nm,0.6s,baz=321,slow=7.2,SNR=4.3						
PLCA	**Paso Flores**	**143.23**	**162**	*e*PKPdf	**PKPdf**	**13 11 28.9**	**-0.1**
GO06	**Curarrehue**	**143.97**	**160**	*e*PKPbc	PKPab	13 11 29.9	0.0

MDD ***28*** *12:55:48.8±2.1, 35.̊17N×0.̊35E, h47km±16km, mb3.9/10, Error ellipse: s-maj=20.6km s-min=9.0km az=148.0, PRXIMO*

CRAAG ***28*** *12:55:51.6, 35.̊32N×0.̊15E, Ml2.8*

ISC 28 12:55:51.4±1.6**, 35.̊62N**±0.̊05×**0.̊25E**±0.̊05**, h11**km±13km**,**
n25, σ1.̊**97**/34**, 1C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJBR	**Djebel Berber**	**0.09**	**115**	P	Pg	12 55 59.0	+5.0
OJBR	**Djebel Berber**	**0.09**	**115**	P	Pg	12 55 59.0	+5.0
ODJA	**Bouhanifia**	**0.43**	**228**	P	**Pg**	**12 55 58.0**	**-1.9**
ODJA	**Bouhanifia**	**0.43**	**228**	P	**Pg**	**12 55 58.0**	**-1.9**
OKGL	**Djebel Kef Gue**	**0.53**	**38**	P	Pg	12 55 56.0	-5.7
OKGL	**Djebel Kef Gue**	**0.53**	**38**	P	**Pn**	**12 56 03.7**	**-1.2**
	80nm,0.1s,SNR=7.9						
OKGL				S	**Sn**	**12 56 15.5**	**+1.6**
	339nm,0.2s,SNR=7.9						
USTO	**Oran**	**0.66**	**280**	P	**Pb**	**12 56 05.0**	**+0.1**
USTO	**Oran**	**0.66**	**280**	P	**Pb**	**12 56 05.0**	**+0.1**
TAF	**Taforalt**	**2.32**	**250**	P	**Pg**	**12 56 36.6**	**+0.7**
TAF				S	**Sg**	**12 57 10.7**	**+4.7**
ENIJ	**Nijar**	**2.40**	**305**	P	**Pn**	**12 56 28.7**	**-1.9**
	1.8nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**2.52**	**332**	P	**Pn**	**12 56 31.4**	**-0.9**
	0.8nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**12 57 04.2**	**+1.2**
	1.1nm,0.3s,SNR=7.9						
JBK	**JBK**	**2.64**	**242**	P	**Pb**	**12 56 39.3**	**+0.4**
JBK				S	**Sg**	**12 57 20.5**	**+4.2**
EBER	**Berja**	**2.84**	**298**	P	**Pn**	**12 56 35.1**	**-1.7**
	1.6nm,0.2s,SNR=10						
EBER				S	**Sn**	**12 57 09.2**	**-1.9**
	1.1nm,0.3s,SNR=7.9						
TDRA	**Tendrara**	**3.19**	**217**	P	**Pb**	**12 56 49.7**	**+1.6**
TDRA				S	**Sg**	**12 57 33.6**	**-0.2**
ETOB	**Tobarra**	**3.34**	**335**	P	**Pn**	**12 56 43.9**	**+0.2**
	2.5nm,0.2s,SNR=32						
ETOB				S	**Sn**	**12 57 23.9**	**+0.6**
	0.9nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**3.35**	**319**	P	**Pn**	**12 56 43.8**	**0.0**
	7.1nm,0.6s,SNR=7.9						
SESP	**Santiago Espad**	**3.35**	**319**	P	**Pn**	**12 56 44.5**	**+0.6**
SESP				S	**Sb**	**12 57 29.0**	**-2.7**
EQUE	**Quentar**	**3.37**	**299**	P	**Pn**	**12 56 43.1**	**-0.9**
	1.9nm,2.0s,SNR=7.9						
EQES	**Quesada**	**3.44**	**310**	⇑P	**Pn**	**12 56 45.6**	**+0.5**
	6.9nm,0.3s,SNR=18						
EQES				S	**Sn**	**12 57 24.7**	**-1.2**
	0.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.51**	**14**	P	**Pn**	**12 56 46.4**	**+0.5**
	2.6nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**12 57 28.0**	**+0.6**
	1.8nm,0.2s,SNR=7.9						
FIGM	**Figuig**	**3.70**	**200**	P	**Pb**	**12 56 54.3**	**-2.5**
FIGM				S	**Sb**	**12 57 44.7**	**+3.0**
EMOS	**Mosqueruela**	**4.77**	**353**	P	**Pn**	**12 57 04.4**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
MD31	**MD31**	**4.97**	**238**	P	**Pb**	**12 57 14.0**	**-4.5**
MD31				S	**Sb**	**12 58 19.5**	**+1.1**
ECAB	**El Cabril**	**5.16**	**300**	P	**Pn**	**12 57 08.0**	**-0.6**
	1.1nm,4.7s,SNR=7.9						
PAB	**San Pablo**	**5.35**	**318**	P	**Pn**	**12 57 11.1**	**-0.2**
	1.1nm,0.3s,SNR=7.9						

BJI ***28*** *13:07:12.8±0.0, 41.̊64S×174.̊16E, h6km, mb5.3/5, mB5.5/4, Ms5.4/1*

IDC ***28*** *13:07:13.1±0.6, 41.̊46S×174.̊12E, h0km, mb4.6/12, mb1 4.7/14, mb1mx4.6/23, mbtmp4.6/14, ML4.0/2, MS4.0/15, Ms1 4.1/15, ms1mx4.0/17, Error ellipse: s-maj=15.8km s-min=11.9km az=135.0*

NEIC ***28*** *13:07:14.6±0.0, 41.̊70S×174.̊30E, h12km, mb4.9/15, ML5.4(WEL), After WEL.*

ISCJB ***28*** *13:07:15.0±0.3, 41.̊74S±0.̊02×174.̊28E±0.̊03, h22km±2km, mb4.8/21, MS4.1/18, Error ellipse: s-maj=4.4km s-min=2.2km az=137.1*

WEL ***28*** *13:07:14.8, 42˚S±1˚×17˚4E±˚, h9km±3km, M5.2/26, ML5.5/20, MLv5.2/26, Error ellipse: s-maj=0.0km s-min=0.0km az=137.3*

GCMT ***28*** *13:07:17.6±0.5, 41.̊61S±0.̊03×174.̊29E±0.̊03, h15km±2km, MW5.0/65, Moment Tensor Solution. s22,c25; s65,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.54±.16; $M_{\theta\theta}$0.52±.11; $M_{\phi\phi}$-1.06±.12; $M_{r\theta}$-1.09±.38; $M_{\theta\phi}$-1.75±.09; $M_{\phi r}$2.80±.66; Best double couple: $M_0$3.57400×10^{16} NP1:ϕ_s348.00000°, δ85.00000°, λ57.00000°. NP2: ϕ_s251.00000°, δ33.00000°, λ171.00000°. Principal axes: T 3.8070, Plg41.0000°, Azm227.0000°; N -0.4650, Plg33.0000°, Azm351.0000°; P -3.3410, Plg32.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 13:07:15.0±0.8**, 41.̊64S**±0.̊03×**174.̊29E**±0.̊02**, h15**km±5km**,**
n278, σ1.̊**46**/276**, mb4.9**/21**, MS4.1**/18**, 1C-1D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.12**	**209**	P	**Pg**	**13 07 18.3**	**-0.2**
CMWZ				S	**Sg**	**13 07 21.4**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.32**	**257**	P	**Pg**	**13 07 21.6**	**0.0**
BSWZ				S	**Sb**	**13 07 27.1**	**-0.4**
TUWZ	**Tuamarina**	**0.34**	**309**	P	**Pg**	**13 07 21.9**	**0.0**
TUWZ				S	**Sb**	**13 07 27.0**	**-0.9**
TCW	**Tory Channel**	**0.43**	**358**	P	**Pb**	**13 07 23.7**	**-0.6**
TCW				S	**Sb**	**13 07 29.7**	**-0.9**
BHW	**Baring Head**	**0.49**	**62**	P	**Pb**	**13 07 25.8**	**+0.4**
BHW				S	**Sb**	**13 07 33.5**	**+1.1**
PLWZ	**Palliser**	**0.72**	**85**	P	**Pn**	**13 07 30.5**	**-0.3**
MSWZ	**Moikau Station**	**0.75**	**73**	P	**Pn**	**13 07 30.7**	**-0.4**
CAW	**Cannon Point**	**0.79**	**48**	P	**Pb**	**13 07 30.7**	**+0.3**
NNZ	**Nelson**	**0.81**	**301**	P	**Pg**	**13 07 30.2**	**-0.5**
DUWZ	**D'Urville Isla**	**0.88**	**341**	P	**Pg**	**13 07 31.6**	**-0.5**
PAWZ	**Paruwai Farm**	**0.89**	**73**	P	**Pn**	**13 07 33.2**	**+0.1**
KHZ	**Kahutara**	**0.96**	**216**	*e*Pn	**Pn**	**13 07 34.3**	**+0.4**
KHZ	**Kahutara**	**0.96**	**216**	P	**Pn**	**13 07 34.3**	**+0.4**
MTW	**Mount Morrison**	**1.03**	**62**	P	**Pn**	**13 07 35.6**	**+0.6**
THZ	**Tophouse**	**1.05**	**263**	*e*Pn	**Pb**	**13 07 34.8**	**-0.1**
THZ	**Tophouse**	**1.05**	**263**	P	**Pb**	**13 07 34.7**	**-0.1**
OGWZ	**Otaki Gorge**	**1.06**	**39**	P	**Pg**	**13 07 35.2**	**-0.2**
TRWZ	**Traveller**	**1.07**	**77**	P	**Pg**	**13 07 36.1**	**+0.4**
HOWZ	**Holdsworth Sta**	**1.18**	**52**	P	**Pg**	**13 07 37.8**	**-0.1**
TMWZ	**Te Maipa**	**1.32**	**67**	P	**Pn**	**13 07 39.3**	**+0.4**
MRZ	**Mangatainoka R**	**1.38**	**45**	P	**Pb**	**13 07 40.7**	**+0.2**
TIWZ	**Tintock**	**1.48**	**55**	P	**Pn**	**13 07 41.7**	**+0.5**
QRZ	**Quartz Range**	**1.56**	**301**	*e*Pn	**Pb**	**13 07 43.3**	**-0.3**
QRZ	**Quartz Range**	**1.56**	**301**	P	**Pb**	**13 07 43.4**	**-0.2**
CPWZ	**Castlepoint**	**1.61**	**64**	P	**Pg**	**13 07 46.3**	**+0.3**
GVZ	**Greta Valley S**	**1.62**	**215**	P	**Pn**	**13 07 43.4**	**+0.3**
OHWZ	**Ohakea**	**1.63**	**29**	P	**Pg**	**13 07 45.8**	**-0.5**
PRWZ	**Pori Road**	**1.67**	**50**	P	**Pn**	**13 07 44.5**	**+0.8**
POWZ	**Post Office Ro**	**1.68**	**42**	P	**Pb**	**13 07 44.9**	**-0.7**
BFZ	**Birch Farm**	**1.76**	**58**	*e*Pn	**Pn**	**13 07 44.7**	**-0.2**
BFZ	**Birch Farm**	**1.76**	**58**	P	**Pn**	**13 07 44.9**	**-0.1**
DSZ	**Denniston Nort**	**1.87**	**266**	P	**Pb**	**13 07 48.3**	**-0.5**
LTZ	**Lake Taylor**	**1.89**	**232**	*e*Pn	**Pn**	**13 07 47.2**	**+0.4**
LTZ	**Lake Taylor**	**1.89**	**232**	P	**Pn**	**13 07 47.4**	**+0.6**
DVHZ	**Dannevirke**	**1.95**	**47**	P	**Pn**	**13 07 47.8**	**+0.2**
AMCZ	**Amberley**	**1.96**	**218**	P	**Pn**	**13 07 47.7**	**0.0**
WAZ	**Wanganui**	**1.96**	**16**	P	**Pb**	**13 07 50.9**	**+0.6**
TSZ	**Takapari Road**	**2.02**	**39**	P	**Pn**	**13 07 49.5**	**+0.8**
ANWZ	**Angora Road**	**2.03**	**55**	P	**Pn**	**13 07 49.6**	**+0.9**
LREZ	**Lake Rotokare**	**2.18**	**2**	P	**Pb**	**13 07 53.9**	**-0.3**
PRHZ	**Porangahau**	**2.24**	**53**	P	**Pn**	**13 07 51.5**	**-0.2**
NMEZ	**Namu Road**	**2.25**	**352**	P	**Pb**	**13 07 54.7**	**-0.6**
PNHZ	**Pukenui**	**2.25**	**41**	P	**Pn**	**13 07 52.3**	**+0.5**
WPHZ	**Waipukurau**	**2.27**	**47**	P	**Pn**	**13 07 52.5**	**+0.6**
OKCZ	**Okains Bay**	**2.27**	**203**	P	**Pn**	**13 07 51.4**	**-0.6**
CRLZ	**Canterbury Las**	**2.29**	**212**	*e*Pn	**Pn**	**13 07 51.3**	**-1.0**
CRLZ	**Canterbury Las**	**2.29**	**212**	P	**Pn**	**13 07 51.5**	**-0.8**
PREZ	**Palmer Road**	**2.30**	**357**	P	**Pb**	**13 07 55.5**	**-0.7**
KHEZ	**Kahui Hut**	**2.35**	**355**	P	**Pb**	**13 07 55.8**	**-1.4**
OXZ	**Oxford**	**2.37**	**224**	*e*Pn	**Pn**	**13 07 52.5**	**-0.9**
OXZ	**Oxford**	**2.37**	**224**	P	**Pn**	**13 07 52.7**	**-0.6**
INZ	**Inchbonnie**	**2.38**	**242**	P	**Pn**	**13 07 54.2**	**+0.7**
MQZ	**McQueen's Vall**	**2.39**	**210**	*e*Pn	**Pn**	**13 07 52.0**	**-1.6**
MQZ	**McQueen's Vall**	**2.39**	**210**	P	**Pn**	**13 07 52.3**	**-1.3**
NBEZ	**Newall Road No**	**2.39**	**352**	P	**Pb**	**13 07 56.3**	**-1.5**
MTVZ	**Mangateitei**	**2.43**	**22**	P	**Pb**	**13 07 57.9**	**-0.5**
DREZ	**Durham Road**	**2.45**	**358**	P	**Pb**	**13 07 57.3**	**-1.5**
PKE	**Pukeiti**	**2.46**	**354**	P	**Pb**	**13 07 57.3**	**-1.6**
PKVZ	**Pokaka**	**2.48**	**19**	P	**Pb**	**13 07 57.6**	**-1.7**
MOVZ	**Moawhango**	**2.49**	**27**	P	**Pn**	**13 07 56.9**	**+1.7**
PXZ	**Pawanui**	**2.53**	**51**	P	**Pn**	**13 07 55.1**	**-0.4**
BHHZ	**Black Hill Sta**	**2.54**	**33**	P	**Pn**	**13 07 57.0**	**+1.2**
VRZ	**Vera Road**	**2.54**	**8**	P	**Pb**	**13 07 58.2**	**-2.1**
KRHZ	**Kereru**	**2.55**	**39**	P	**Pn**	**13 07 56.1**	**+0.3**
DRZ	**Dome Shelter**	**2.55**	**23**	P	**Pb**	**13 07 59.0**	**-1.7**
WHVZ	**Whangaehu Hut**	**2.56**	**23**	P	**Pb**	**13 07 58.4**	**-2.3**
MHEZ	**Mangahewa**	**2.56**	**1**	P	**Pb**	**13 08 02.1**	**+1.4**
FWVZ	**Far West T-bar**	**2.57**	**22**	P	**Pb**	**13 07 58.7**	**-2.3**
TUVZ	**Tukino**	**2.59**	**24**	P	**Pn**	**13 07 58.8**	**+2.3**
NGZ	**Ngauruhoe**	**2.66**	**22**	P	**Pb**	**13 07 60.0**	**-2.4**
KAHZ	**Kahuranaki**	**2.69**	**48**	P	**Pn**	**13 07 57.7**	**-0.2**
WTVZ	**West Tongariro**	**2.71**	**22**	P	**Pn**	**13 08 00.5**	**+2.4**
TWVZ	**Taurewa**	**2.71**	**19**	P	**Pb**	**13 08 00.8**	**-2.5**
KRVZ	**Karewarewa**	**2.75**	**22**	P	**Pn**	**13 08 01.2**	**+2.5**
KWHZ	**Kaweka Forest**	**2.75**	**37**	P	**Pn**	**13 07 59.2**	**+0.6**
MCHZ	**McNeill Hill**	**2.86**	**41**	P	**Pn**	**13 08 00.3**	**+0.2**
KATZ	**Kakaramea**	**2.87**	**22**	P	**Pb**	**13 08 03.2**	**-2.9**
RITZ	**Rihia Road**	**2.92**	**25**	P	**Pb**	**13 08 04.8**	**-2.0**
BKZ	**Black Stump Fm**	**2.99**	**35**	*e*Pn	**Pn**	**13 08 02.0**	**0.0**
BKZ	**Black Stump Fm**	**2.99**	**35**	P	**Pn**	**13 08 02.2**	**+0.3**
RATZ	**Rangitukua**	**2.99**	**23**	P	**Pb**	**13 08 05.1**	**-2.9**
WVZ	**Waitaha Valley**	**3.00**	**240**	P	**Pn**	**13 08 02.5**	**+0.5**
HATZ	**Hinemaiaia**	**3.07**	**27**	P	**Pb**	**13 08 09.8**	**+0.4**
WATZ	**Wairara**	**3.13**	**21**	P	**Pb**	**13 08 07.5**	**-2.9**
ARHZ	**Aropaoanui**	**3.15**	**42**	P	**Pn**	**13 08 04.4**	**+0.4**
HIZ	**Hauiti**	**3.15**	**8**	*e*Pn	**Pn**	**13 08 06.5**	**+2.4**
HIZ	**Hauiti**	**3.15**	**8**	P	**Pn**	**13 08 07.0**	**+2.8**
RPZ	**Rata Peaks**	**3.16**	**228**	Pn	**Pn**	**13 08 03.7**	**-0.5**
	40nm,0.3s,baz=79,slow=1.4,SNR=175						
RPZ				Pg	**Pb**	**13 08 12.2**	**+1.3**
	251nm,0.3s,baz=304,slow=1.7,SNR=201						
RPZ				Lg	Lg	13 08 52.9	
	171nm,0.3s,baz=61,slow=21,SNR=3.9						
RPZ	**Rata Peaks**	**3.16**	**228**	*e*Pn	**Pn**	**13 08 03.5**	**-0.8**
RPZ	**Rata Peaks**	**3.16**	**228**	P	**Pn**	**13 08 04.0**	**-0.2**
MRHZ	**Matea Rd**	**3.24**	**31**	P	**Pn**	**13 08 05.8**	**+0.4**
KUTZ	**Kaahu Road**	**3.36**	**21**	P	**Pb**	**13 08 12.1**	**-2.2**
MTHZ	**Maungataniwha**	**3.40**	**36**	P	**Pn**	**13 08 07.7**	**+0.1**
WHHZ	**Waihua**	**3.41**	**42**	P	**Pn**	**13 08 09.0**	**+1.4**
WPRZ	**Whakapapatarin**	**3.43**	**25**	P	**Pb**	**13 08 14.1**	**-1.5**
TLZ	**Tolley Road**	**3.44**	**17**	P	**Pn**	**13 08 10.4**	**+2.2**
ALRZ	**Allen Road**	**3.45**	**28**	P	**Pn**	**13 08 09.3**	**+1.0**
RAHZ	**Arahi**	**3.46**	**39**	P	**Pn**	**13 08 08.2**	**-0.2**
PRRZ	**Plateau Road**	**3.53**	**28**	P	**Pn**	**13 08 11.3**	**+2.0**
GRRZ	**Galatos Road**	**3.57**	**24**	P	**Pn**	**13 08 12.8**	**+2.9**
HRRZ	**Handcock Road**	**3.59**	**26**	P	**Pn**	**13 08 12.1**	**+2.0**
HSRZ	**Hossack Road**	**3.65**	**25**	P	**Pb**	**13 08 15.4**	**-3.8**
RTZ	**Ruatahuna**	**3.66**	**35**	P	**Pn**	**13 08 11.6**	**+0.4**
KNZ	**Kokohu**	**3.68**	**46**	P	**Pn**	**13 08 12.7**	**+1.4**
MUGZ	**Murupara**	**3.69**	**32**	P	**Pn**	**13 08 12.3**	**+0.8**
SNGZ	**Shannon Statio**	**3.69**	**40**	P	**Pn**	**13 08 11.2**	**-0.3**
RRRZ	**Republican Roa**	**3.71**	**28**	P	**Pn**	**13 08 15.0**	**+3.1**
MHGZ	**Mahia Peninsul**	**3.71**	**49**	P	**Pn**	**13 08 12.2**	**+0.4**
HLRZ	**Highlands Stat**	**3.74**	**26**	P	**Pb**	**13 08 19.5**	**-1.2**
UTU	**Utuhina**	**3.76**	**24**	P	**Pn**	**13 08 16.4**	**+4.0**
TARZ	**Mount Tarawera**	**3.80**	**27**	P	**Pn**	**13 08 14.1**	**+0.9**
FOZ	**Fox Glacier**	**3.81**	**239**	*e*Pn	**Pn**	**13 08 11.2**	**-1.9**
FOZ	**Fox Glacier**	**3.81**	**239**	P	**Pn**	**13 08 13.9**	**+0.8**
NGRZ	**Ngongotaha**	**3.82**	**23**	P	**Pn**	**13 08 17.4**	**+3.9**
PRGZ	**Paritu Road**	**3.86**	**46**	P	**Pn**	**13 08 13.0**	**-0.9**
OMRZ	**Omania**	**3.88**	**25**	P	**Pn**	**13 08 16.8**	**+2.7**
OMRZ				P	**Pb**	**13 08 21.1**	**-2.0**
RAGZ	**Rawiri**	**3.95**	**38**	P	**Pn**	**13 08 14.9**	**-0.3**
RIGZ	**Rimuhau**	**3.96**	**43**	P	**Pn**	**13 08 14.1**	**-1.1**
URZ	**Urewera**	**4.01**	**34**	Pn	**Pn**	**13 08 14.6**	**-1.3**
	4.6nm,0.3s,baz=214,slow=8.8,SNR=25						
URZ				Pg	**Pb**	**13 08 23.3**	**-2.1**
	21nm,0.3s,baz=202,slow=9.2,SNR=21						
URZ				Lg	Lg	13 09 15.4	
	36nm,0.3s,baz=202,slow=9.0,SNR=3.6						
URZ	**Urewera**	**4.01**	**34**	*e*Pn	**Pn**	**13 08 14.5**	**-1.5**
URZ	**Urewera**	**4.01**	**34**	P	**Pn**	**13 08 15.3**	**-0.7**
TOZ	**Tahuroa Road**	**4.01**	**14**	P	**Pn**	**13 08 18.6**	**+2.6**
LBZ	**Lake Benmore**	**4.07**	**226**	*e*Pn	**Pn**	**13 08 15.5**	**-1.3**
LBZ	**Lake Benmore**	**4.07**	**226**	P	**Pn**	**13 08 16.9**	**+0.1**
MWZ	**Matawai**	**4.13**	**38**	P	**Pn**	**13 08 16.3**	**-1.3**
OPRZ	**Ohinepanea**	**4.17**	**25**	P	**Pn**	**13 08 20.7**	**+2.5**
TGRZ	**Tauranga**	**4.19**	**22**	P	**Pn**	**13 08 20.4**	**+2.0**
TKGZ	**Te Karaka**	**4.20**	**42**	P	**Pn**	**13 08 17.3**	**-1.2**
ODZ	**Otahua Downs**	**4.32**	**217**	*e*Pn	**Pn**	**13 08 19.0**	**-1.2**
ODZ	**Otahua Downs**	**4.32**	**217**	P	**Pn**	**13 08 19.1**	**-1.0**
CNGZ	**Carnagh Statio**	**4.36**	**45**	P	**Pn**	**13 08 21.4**	**+0.8**
TWGZ	**Tauwhareparae**	**4.47**	**41**	P	**Pn**	**13 08 23.9**	**+1.5**
RUGZ	**Raukumara Rang**	**4.50**	**36**	P	**Pn**	**13 08 22.3**	**-0.5**
KBAZ	**Karaka Road Bo**	**4.56**	**6**	P	**Pn**	**13 08 27.2**	**+3.7**
AWAZ	**Awhitu Peninsu**	**4.58**	**4**	P	**Pn**	**13 08 26.6**	**+2.8**
MKAZ	**Moumakai**	**4.58**	**9**	P	**Pn**	**13 08 26.2**	**+2.4**
ETAZ	**East Tamaki Re**	**4.71**	**6**	P	**Pn**	**13 08 28.4**	**+2.9**
WTAZ	**Waiatarua**	**4.71**	**3**	P	**Pn**	**13 08 29.2**	**+3.7**
HAZ	**Te Kaha**	**4.72**	**36**	P	**Pn**	**13 08 25.5**	**-0.1**
JCZ	**Jackson Bay**	**4.72**	**237**	P	**Pn**	**13 08 25.5**	**-0.3**
EPAZ	**Eden Park BICE**	**4.77**	**4**	P	**Pn**	**13 08 30.6**	**+4.2**
HBAZ	**Herne Bay Bore**	**4.80**	**4**	P	**Pn**	**13 08 30.8**	**+4.1**
RVAZ	**Riverhead Bore**	**4.87**	**3**	P	**Pn**	**13 08 30.6**	**+2.9**
WIAZ	**Waiheke Island**	**4.88**	**8**	P	**Pn**	**13 08 31.0**	**+3.1**
MBAZ	**Motutapu North**	**4.89**	**6**	P	**Pn**	**13 08 31.1**	**+3.1**
WMGZ	**Waiomatatini S**	**4.97**	**41**	P	**Pn**	**13 08 29.5**	**+0.4**
WKZ	**Wanaka**	**5.00**	**229**	*e*Pn	**Pn**	**13 08 27.9**	**-1.6**
WKZ	**Wanaka**	**5.00**	**229**	P	**Pn**	**13 08 29.3**	**-0.2**
KUZ	**Kuaotunu**	**5.01**	**13**	P	**Pn**	**13 08 32.4**	**+2.7**
HHSZ	**Highcliff Hill**	**5.01**	**211**	P	**Pn**	**13 08 29.2**	**-0.5**
ABAZ	**Army Bay**	**5.05**	**5**	P	**Pn**	**13 08 33.4**	**+3.2**
EAZ	**Earnscleugh**	**5.10**	**224**	P	**Pn**	**13 08 31.1**	**+0.2**
MXZ	**Matakaoa Point**	**5.12**	**39**	*e*Pn	**Pn**	**13 08 29.6**	**-1.5**
MXZ	**Matakaoa Point**	**5.12**	**39**	P	**Pn**	**13 08 32.4**	**+1.3**
GRZ	**Great Barrier**	**5.46**	**10**	P	Pb	13 08 43.5	-6.6
TUZ	**Tuapeka**	**5.47**	**216**	P	**Pn**	**13 08 35.8**	**-0.2**
MSZ	**Milford Sound**	**5.55**	**235**	P	Pn	13 08 42.4	+5.2
WCZ	**Waipu Caves**	**5.69**	**0**	P	**Pn**	**13 08 41.8**	**+2.8**
MLZ	**Mavora Lakes**	**5.83**	**228**	*e*Pn	**Pn**	**13 08 39.9**	**-1.0**
MLZ	**Mavora Lakes**	**5.83**	**228**	P	**Pn**	**13 08 41.4**	**+0.5**
SYZ	**Scrubby Hill**	**6.14**	**215**	P	**Pn**	**13 08 45.4**	**+0.2**
WHZ	**Wether Hill Ro**	**6.26**	**225**	*e*Pn	**Pn**	**13 08 45.9**	**-0.9**
WHZ	**Wether Hill Ro**	**6.26**	**225**	P	**Pn**	**13 08 46.7**	**-0.1**
OUZ	**Omahuta**	**6.43**	**355**	*e*Pn	**Pn**	**13 08 49.0**	**-0.2**
OUZ	**Omahuta**	**6.43**	**355**	P	**Pn**	**13 08 51.6**	**+2.4**
DCZ	**Deep Cove**	**6.44**	**231**	*e*Pn	**Pn**	**13 08 48.5**	**-0.8**
APZ	**The Paps**	**6.88**	**219**	P	**Pn**	**13 08 56.1**	**+0.6**
CTZ	**Chatham Island**	**7.02**	**110**	P	**Pn**	**13 08 57.1**	**-0.1**
LHI	**Lord Howe Isla**	**15.84**	**305**	*e*Pn	**Pn**	**13 10 56.8**	**-0.7**
	92nm,1.0s						
PINNC	**Pines Island,**	**19.83**	**341**	*e*P	**P**	**13 11 43.1**	**-2.0**
	176nm,1.3s						
MILA	**Mila**	**19.95**	**275**	P	**Pn**	**13 11 47.7**	**-0.5**
	baz=20,SNR=4.0						
TAU	**Tasmania Unive**	**19.97**	**257**	*e*P	**P**	**13 11 46.8**	**+0.1**
	36nm,1.0s						
CNB	**Canberra Magne**	**20.48**	**280**	P	Pn	13 11 55.0	+0.5
	baz=21						
DZM	**Mont Dzumac**	**20.60**	**339**	*e*P	Pn	13 11 56.8	+0.8
	124nm,1.4s						
DZM				*e*LR	LR	13 16 45.3	
	comp=Z,760nm,26.8s						
DZM	**Mont Dzumac**	**20.60**	**339**	P	**P**	**13 11 52.9**	**-0.9**
	11nm,0.8s,baz=151,slow=22,SNR=6.2						
DZM				LR	LR	13 19 54.1	
	comp=Z,402nm,19.4s,baz=174,slow=37						
DZM	**Mont Dzumac**	**20.60**	**339**	*e*P	**P**	**13 11 52.9**	**-0.9**
	38nm,0.9s						
CAN	**Canberra**	**20.74**	**279**	P	Pn	13 11 58.7	+1.2
	baz=21						
CMSA	**Cobar Meteorol**	**24.98**	**285**	P	**P**	**13 12 39.2**	**+1.2**
	baz=25,SNR=6.2						
EIDS	**Eidsvold**	**25.14**	**303**	P	**P**	**13 12 40.9**	**+1.4**
	baz=25						
ARPS	**Mount Arapiles**	**25.52**	**270**	P	**P**	**13 12 43.2**	**+0.2**
	baz=26						
RMQ	**Roma**	**25.87**	**298**	P	**P**	**13 12 48.0**	**+1.8**
	baz=26						
STKA	**Stephens Creek**	**27.81**	**280**	P	**P**	**13 13 03.2**	**-0.4**
	1.9nm,0.8s,baz=138,slow=12,SNR=2.0						
STKA				LR	LR	13 22 25.8	
	comp=Z,511nm,19.9s,baz=130,slow=33						
STKA	**Stephens Creek**	**27.81**	**280**	*e*P	**P**	**13 13 03.2**	**-0.4**
	2.6nm,1.1s						
STKA	**Stephens Creek**	**27.81**	**280**	P	**P**	**13 13 05.5**	**+1.9**
	baz=28						
RAR	**Rarotonga**	**29.88**	**55**	LR	LR	13 25 35.8	
	comp=Z,254nm,18.5s,baz=204,slow=37						
CTA	**Charters Tower**	**32.02**	**304**	P	**P**	**13 13 39.6**	**-1.4**
	10nm,1.0s,baz=177,slow=5.6,SNR=4.2						
HNR	**Honiara**	**34.49**	**334**	P	**P**	**13 14 00.4**	**-2.1**
	37nm,1.0s,baz=191,slow=16,SNR=2.4						
MTSU	**Mount Surprise**	**34.69**	**303**	P	**P**	**13 14 06.0**	**+1.7**
	baz=35						
TBI	**Tubuai**	**35.27**	**70**	*e*LR	LR	13 23 41.4	
	comp=Z,248nm,22.5s						
TBI	**Tubuai**	**35.27**	**70**	*e*T	T	13 51 50.0	
	15nm,0.4s						
QIS	**Mount Isa**	**36.04**	**295**	P	**P**	**13 14 17.0**	**+1.1**
	baz=36						
AS31	**Alice Springs**	**38.03**	**285**	*e*P	**P**	**13 14 31.0**	**-1.9**
	2.6nm,0.4s						
AS31				*e*PcP	**PcP**	**13 16 45.9**	**-2.3**
AS31				*e*S	**S**	**13 20 23.4**	**-1.5**
ASAR	**Alice Springs**	**38.03**	**285**	P	**P**	**13 14 31.9**	**-0.9**
	5.0nm,0.4s,baz=124,slow=6.9,SNR=38						
ASAR				PcP	**PcP**	**13 16 45.9**	**-2.3**
	0.7nm,0.6s,baz=125,slow=4.4,SNR=2.4						
ASAR				S	**S**	**13 20 23.4**	**-1.5**
	0.6nm,1.0s,baz=137,slow=14,SNR=2.9						
ASAR				LR	LR	13 29 42.6	
	comp=Z,373nm,18.8s,baz=130,slow=36						
PPT2	**Papeete2**	**39.08**	**63**	*e*LQ	LQ	13 23 51.9	
	516nm,26.5s						
PPT2				*e*LR	LR	13 25 19.7	
	comp=Z,211nm,21.5s						
PPT	**Papeete**	**39.10**	**63**	LR	LR	13 28 54.3	
	comp=Z,221nm,20.5s,baz=244,slow=33						
PMG	**Port Moresby**	**40.03**	**316**	P	**P**	**13 14 48.2**	**-1.4**
	30nm,0.9s,baz=168,slow=20,SNR=1.6						
WC3	**Warramunga Arr**	**40.06**	**290**	P	**P**	**13 14 49.6**	**-0.2**
	baz=40						
WB2	**Warramunga Arr**	**40.09**	**290**	*e*P	**P**	**13 14 48.9**	**-1.2**
	14nm,0.8s						
WRAB	**Tennant Creek**	**40.09**	**290**	*e*P	**P**	**13 14 48.9**	**-1.2**
	12nm,0.6s						
WR1	**Warramunga Arr**	**40.09**	**290**	*e*P	**P**	**13 14 49.4**	**-0.7**
WRA	**Warramunga Arr**	**40.10**	**290**	P	**P**	**13 14 49.4**	**-0.7**
	9.5nm,0.6s,baz=125,slow=8.6,SNR=49						
WRKA	**Warakurna**	**41.33**	**279**	P	**P**	**13 14 58.7**	**-1.6**
	baz=42,SNR=13						
RABL	**Rabaul**	**42.22**	**326**	*e*P	**P**	**13 15 05.8**	**-1.8**
	153nm,1.3s						
KMBL	**Kambalda**	**42.78**	**266**	P	**P**	**13 15 11.9**	**-0.2**
	baz=43						
NWAO	**Narrogin (SRO)**	**45.50**	**262**	P	**P**	**13 15 34.2**	**+0.4**
	baz=46						
KDU	**Kakadu**	**46.40**	**296**	P	**P**	**13 15 40.9**	**-0.2**
	baz=47,SNR=4.2						
KNRA	**Kununurra**	**46.88**	**290**	P	**P**	**13 15 46.2**	**+1.4**
	baz=47						
MTN	**Manton Dam**	**47.20**	**295**	*e*P	**P**	**13 15 44.4**	**-3.0**
	18nm,0.6s						
MTN	**Manton Dam**	**47.20**	**295**	P	**P**	**13 15 48.2**	**+0.9**
	baz=47,SNR=10						
MEEK	**Meekatharra**	**47.67**	**270**	P	**P**	**13 15 50.6**	**-0.3**
	baz=48,SNR=11						
MORW	**Morawa**	**48.30**	**266**	P	**P**	**13 15 55.3**	**-0.5**
	baz=48,SNR=3.4						
TAOE	**Nuku Hiva Isla**	**51.69**	**64**	*e*LR	LR	13 31 11.4	
	comp=Z,222nm,21.1s						
MAW	**Mawson**	**59.57**	**204**	P	**P**	**13 17 19.1**	**+1.6**
	3.7nm,0.9s,baz=114,slow=10.0,SNR=7.3						
MAW				LR	LR	13 42 32.2	
	comp=Z,582nm,18.4s,baz=112,slow=36						
MAW	**Mawson**	**59.57**	**204**	*e*P	**P**	**13 17 18.2**	**+0.7**
	1.3nm,0.9s						
SYO	**Syowa Base**	**64.69**	**196**	⇑*e*P	**P**	**13 17 51.2**	**-0.6**
SYO	**Syowa Base**	**64.69**	**196**	⇓*e*pP	pP	13 17 56.2	-0.3
SNAA	**Sanae**	**66.98**	**181**	P	**P**	**13 18 07.9**	**+1.2**
SNAA	**Sanae**	**66.98**	**181**	*e*P	**P**	**13 18 07.5**	**+0.9**
	18nm,1.2s						
VNA3	**Neumayer Olymp**	**67.39**	**179**	P	**P**	**13 18 10.8**	**+1.6**
VNA1	**Neumayer--Stat**	**68.00**	**179**	P	**P**	**13 18 14.8**	**+1.7**
PLCA	**Paso Flores**	**79.15**	**136**	P	**P**	**13 19 21.0**	**+1.8**
	4.0nm,1.0s,baz=249,slow=7.2,SNR=5.7						
PLCA				LR	LR	13 46 25.4	
	comp=Z,116nm,19.3s,baz=241,slow=30						
PLCA	**Paso Flores**	**79.15**	**136**	*e*P	**P**	**13 19 21.0**	**+1.8**
	12nm,1.3s						
MJAR	**Matsushiro Arr**	**84.53**	**332**	P	**P**	**13 19 46.9**	**-0.3**
	1.9nm,0.9s,baz=165,slow=6.6,SNR=5.9						
MJAR				LR	LR	13 55 39.6	
	comp=Z,16nm,19.5s,baz=130,slow=34						
MAJO	**Matsushiro**	**84.53**	**332**	*e*P	**P**	**13 19 46.9**	**-0.3**
CFA	**Coronel Fontan**	**87.12**	**131**	LR	LR	13 50 03.9	
	comp=Z,68nm,18.5s,baz=226,slow=29						
NJ2	**Nanjing**	**89.34**	**316**	*e*P	**P**	**13 20 12.5**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**89.39**	**325**	P	**P**	**13 20 11.8**	**+1.1**
	8.2nm,0.9s,baz=143,slow=5.3,SNR=19						
KSRS				LR	LR	13 57 38.0	
	comp=Z,34nm,18.9s,baz=144,slow=34						
KS15	**Wonju Array Si**	**89.39**	**325**	*e*P	**P**	**13 20 11.8**	**+1.0**
	15nm,1.0s						
WHN	**Wuhan**	**90.62**	**312**	P	**P**	**13 20 18.5**	**+1.8**
CMAR	**Chiang Mai Arr**	**91.63**	**293**	P	**P**	**13 20 22.4**	**+0.7**
	4.7nm,0.8s,baz=151,slow=3.5,SNR=14						
CMAR				LR	LR	14 06 43.6	
	comp=Z,62nm,18.1s,baz=184,slow=39						
CM31	**Chiang Mai Arr**	**91.63**	**293**	*e*P	**P**	**13 20 22.4**	**+0.7**
	7.6nm,0.8s						
PETK	**Petropavlovsk-**	**95.46**	**350**	LR	LR	13 58 19.4	
	comp=Z,85nm,20.6s,baz=144,slow=32						
XAN	**Xi'an**	**96.28**	**311**	P	P	13 20 48.5	+5.7
XAN				pP	sP	13 20 55.0	+5.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CPUP	**Villa Florida**	**97.21**	**135**	LR	LR	13 57 19.4	
	comp=Z,80nm,20.5s,baz=216,slow=31						
PALK	**Pallekele**	**97.46**	**273**	LR	LR	14 02 32.4	
	comp=Z,78nm,18.2s,baz=116,slow=34						
LPAZ	**La Paz**	**98.55**	**121**	LR	LR	13 54 53.3	
	comp=Z,65nm,19.6s,baz=266,slow=29						
HHC	**Hu-ho-hao-te**	**99.83**	**317**	*e*P	**Pdif**	**13 20 58.5**	**-0.1**
HHC				pmax	pmax		
	comp=Z,41nm,7.4s						
LZH	**Lanzhou**	**100.66**	**309**	*e*P	**Pdif**	**13 21 05.3**	**+2.8**
LZH				pP	sPdif	13 21 08.0	-1.1
LZH				sP	sP	13 21 10.0	+0.8
ILAR	**Eielson Array**	**110.35**	**17**	PKiKP	**PKiKP**	**13 25 46.1**	**+0.7**
	0.4nm,0.8s,baz=212,slow=4.3,SNR=3.5						
ILB	**Eielson Array**	**110.35**	**17**	*e*PKiKP	**PKiKP**	**13 25 46.1**	**+0.7**
WMQ	**Urumqi**	**115.12**	**307**	*e*PKP	**PKiKP**	**13 25 55.5**	**+0.3**
WMQ				AMB	AMB		
	comp=Z,78nm,4.3s						
YKA	**Yellowknife Ar**	**118.27**	**30**	PKP	**PKiKP**	**13 26 00.9**	**+0.3**
	3.5nm,0.9s,baz=289,slow=1.4,SNR=4.6						
FFC	**Flin Flon**	**119.45**	**41**	*e*PKPdf	**PKiKP**	**13 26 03.7**	**+0.6**
MKAR	**Makanchi Array**	**119.93**	**308**	PKP	**PKiKP**	**13 26 04.5**	**+0.1**
	0.5nm,0.3s,baz=90,slow=2.4,SNR=7.7						
KSH	**Kashi**	**120.23**	**298**	*e*PKP	**PKiKP**	**13 26 07.5**	**+2.1**
KSH				PKS	**PKSdf**	**13 29 41.0**	**-1.0**
KSH				LR	LR		
	comp=N,140nm,6.3s						
KSH				LR	LR		
	comp=E,77nm,7.5s						
ULM	**Lac du Bonnet**	**120.41**	**48**	PKP	**PKPdf**	**13 26 05.0**	**-0.1**
	6.1nm,1.0s,baz=284,slow=3.4,SNR=3.9						
DAG	**Danmarks Havn**	**144.33**	**5**	*i* P	**PKPdf**	**13 26 50.4**	**+1.3**
KBZ	**Khabaz**	**144.62**	**290**	PKP	**PKPab**	**13 26 48.0**	**-1.2**
	2.9nm,0.7s,baz=124,slow=3.6,SNR=3.3						
LIC	**Lamto**	**144.73**	**181**	*e*PKP1	**PKPdf**	**13 26 51.8**	**+0.1**
	40nm,0.8s						
KIC	**Kosan Boka**	**144.86**	**182**	*e*PKP1	PKPbc	13 26 51.5	+0.5
	36nm,1.0s						
TIC	**Toumodi**	**145.15**	**181**	*e*PKP1	**PKPdf**	**13 26 52.5**	**+0.1**
DBIC	**Dimbokro**	**145.17**	**181**	*e*PKPbc	**PKPbc**	**13 26 50.7**	**-1.2**
SUMG	**Summit**	**145.20**	**17**	*e*PKPbc	**PKPbc**	**13 26 50.3**	**-0.6**
SUMG	**Summit**	**145.20**	**17**	*i* P	**PKPab**	**13 26 51.1**	**+0.1**
	33nm,1.0s						
ARCES	**ARCESS Array B**	**147.69**	**340**	PKPbc	**PKPbc**	**13 26 56.8**	**-1.0**
	5.1nm,0.8s,baz=22,slow=1.3,SNR=13						
ARE0	**ARCESS Array S**	**147.69**	**340**	*e*PKPdf	**PKPdf**	**13 26 56.0**	**+1.0**
IVI	**Ivigtut**	**147.88**	**38**	*e*PKPbc	**PKPbc**	**13 26 57.8**	**-0.6**
BR101	**Keskin Array S**	**150.28**	**280**	*e*PKPbc	**PKPbc**	**13 27 04.9**	**-0.6**
BRTR	**Keskin Array B**	**150.28**	**280**	PKPbc	**PKPbc**	**13 27 04.9**	**-0.6**
	6.3nm,1.0s,baz=124,slow=3.8,SNR=8.3						

TOA0	Torodi Ar. Sit	150.89	195	*e*PKPbc	PKPbc	13 27 06.2	-1.2
TORD	Torodi Ar. Bea	150.89	195	PKP	PKPdf	13 27 02.5	+0.7
	6.3nm,1.2s,baz=135,slow=2.9,SNR=6.8						
TORD				PKPbc	PKiKP	13 27 08.2	+0.2
	11nm,0.8s,baz=160,slow=4.7,SNR=24						
TOA1	Torodi Ar. Sit	150.89	195	*e*PKPbc	PKiKP	13 27 08.2	+0.2
FIA1	FINESS Array S	152.46	327	*e*PKPbc	PKPbc	13 27 08.9	-0.6
FIA0	FINESS Array S	152.46	327	*e*PKPbc	PKPbc	13 27 08.8	-0.8
FINES	FINESS Array B	152.46	327	PKP	PKPdf	13 27 02.9	+0.2
	1.1nm,0.9s,baz=160,slow=29,SNR=2.2						
FINES				PKPbc	PKPbc	13 27 08.8	-0.8
	4.5nm,0.9s,baz=53,slow=3.0,SNR=22						
AKASG	Malin Array Be	154.38	303	PKPbc	PKPbc	13 27 13.9	-0.2
	0.4nm,0.4s,baz=54,slow=2.7,SNR=5.2						
AKASG				PKPab	PKPab	13 27 28.5	+0.1
	0.8nm,0.5s,baz=62,slow=3.7,SNR=5.8						
AKBB	Malin Array Si	154.38	303	*e*PKPbc	PKPbc	13 27 13.9	-0.2
AKBB				*e*PKPab	PKPab	13 27 28.5	+0.1
BUR08	Bucovina Ar. S	157.30	296	*e*PKPab	PKPab	13 27 41.2	-0.1
NB2	NORSAR Subarra	158.01	338	PKP	PKPab	13 27 46.3	+2.6
	comp=Z,3.6nm,1.1s,baz=37,slow=4.4						
NB200	NORSAR Array S	158.01	338	*e*PKPab	PKPab	13 27 43.6	-0.1
NOA	NORSAR Array B	158.01	338	PKPab	PKPab	13 27 43.6	-0.1
	comp=Z,1.8nm,0.9s,baz=38,slow=4.6,SNR=5.3						
KOLS	Kolonicke sedl	159.09	300	*e*PKP	PKPab	13 27 49.9	+1.1
VYHS	Vyhne	161.41	300	*e*PKP	PKPab	13 28 00.1	+1.2
VYHS				*e*		13 57 24.1	
TTG	Podgorica	161.45	281	*e*PKPab	PKPab	13 27 57.3	-2.0
KHC	Kasperske Hory	164.54	306	*e*PKP	PKPab	13 28 16.0	+3.3
GEC2	GERESS Array S	164.57	304	*e*PKPab	PKPab	13 28 12.3	-0.7
GERES	GERESS Array B	164.57	304	PKPab	PKPab	13 28 12.3	-0.7
	comp=Z,0.4nm,0.6s,baz=57,slow=3.8,SNR=3.6						
ESDC	Sonseca Array	177.63	215	PKP	PKPdf	13 27 24.6	0.0
	comp=Z,1.4nm,1.0s,baz=178,slow=0.2,SNR=9.0						
ESDC				PKPab	PKPab	13 29 10.3	-0.5
	comp=Z,0.5nm,0.7s,baz=171,slow=3.8,SNR=4.3						

MEX 28 13:41:09.1±0.8**,16°.25N×98°.34W,h5km,MD3.6,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	1.32	350	*e*P	Pn	13 41 29.8	-4.6
TLIG				*i* S	Sg	13 41 46.8	-4.9
CAIG	El Cayaco	2.01	293	*i* P	Pn	13 41 40.3	-3.5
CAIG				*i* S	Sn	13 42 04.8	-4.6
MEIG	Mezcala	2.07	324	*e*P	Pn	13 41 41.2	-3.4
MEIG				*i* S	Sn	13 42 06.7	-4.2
PLIG	Platanillo	2.40	333	*e*P	Pn	13 41 46.8	-2.4
PLIG				*i* S	Sn	13 42 15.8	-3.3
ARIG	Puente Sto Nin	2.79	317	*e*P	Pn	13 41 51.9	-2.6
ARIG				*i* S	Sn	13 42 24.9	-3.6

WEL 28 13:41:41.5,42°S±2°**×17°4E**±°**,h11km**±3km**,M3.0**/15**, ML3.5**/19**,MLv3.0**/15**,Error ellipse: s-maj=0.0km s-min=0.0km az=158.0,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.12	199	P	Pg	13 41 45.2	+0.7
CMWZ				S	Sg	13 41 47.9	+1.2
BSWZ	Blackbirch Sta	0.30	254	P	Pb	13 41 48.3	-0.7
BSWZ				S	Sb	13 41 53.4	-0.6
TUWZ	Tuamarina	0.32	310	P	Pb	13 41 48.6	-0.6
TUWZ				S	Sb	13 41 53.6	-0.8
TCW	Tory Channel	0.42	1	P	Pg	13 41 50.4	+0.6
BHW	Baring Head	0.51	64	P	Pb	13 41 52.4	0.0
PLWZ	Palliser	0.74	85	P	Pb	13 41 57.2	+0.6
MSWZ	Moikau Station	0.77	74	P	Pb	13 41 57.4	+0.5
NNZ	Nelson	0.79	302	P	Pb	13 41 57.0	-0.2
CAW	Cannon Point	0.80	49	P	Pb	13 41 57.4	0.0
DUWZ	D'Urville Isla	0.87	342	P	Pb	13 41 58.5	-0.2
PAWZ	Paruwai Farm	0.91	74	P	Pn	13 41 59.9	-0.3
KHZ	Kahutara	0.95	215	P	Pn	13 42 01.1	+0.2
MTW	Mount Morrison	1.04	63	P	Pn	13 42 02.3	+0.2
OGWZ	Otaki Gorge	1.06	40	P	Pb	13 42 01.9	-0.1
TRWZ	Traveller	1.09	78	P	Pg	13 42 02.6	+0.1
HOWZ	Holdsworth Sta	1.19	52	P	Pg	13 42 04.4	-0.1
TMWZ	Te Maipa	1.33	67	P	Pn	13 42 06.3	+0.2
MRZ	Mangatainoka R	1.39	46	P	Pb	13 42 07.4	-0.1
TIWZ	Tintock	1.49	55	P	Pn	13 42 08.3	0.0
OHWZ	Ohakea	1.63	29	P	Pg	13 42 12.3	-0.5
PRWZ	Pori Road	1.68	51	P	Pn	13 42 10.9	+0.1
POWZ	Post Office Ro	1.68	43	P	Pn	13 42 11.7	+0.8
BFZ	Birch Farm	1.77	58	P	Pn	13 42 12.1	0.0
LTZ	Lake Taylor	1.88	232	P	Pn	13 42 14.1	+0.5
WAZ	Wanganui	1.96	16	P	Pb	13 42 17.9	+0.8
DVHZ	Dannevirke	1.96	48	P	Pn	13 42 14.1	-0.6
TSZ	Takapari Road	2.03	40	P	Pn	13 42 15.8	0.0
BHHZ	Black Hill Sta	2.54	33	P	Pn	13 42 24.9	+2.1

WEL 28 13:42:20.4±0.4**,42°S**±4°**×17°4E**±°**,h5km,M3.2**/14**, ML3.6**/12**,MLv3.2**/14**,Error ellipse: s-maj=0.0km s-min=0.0km az=167.6,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.17	204	P	Pg	13 42 24.0	+0.2
TUWZ	Tuamarina	0.32	301	P	Pg	13 42 26.7	+0.1
TUWZ				S	Sg	13 42 32.2	+1.3
BSWZ	Blackbirch Sta	0.34	250	P	Pg	13 42 27.1	0.0
BSWZ				S	Sb	13 42 33.6	-1.3
TCW	Tory Channel	0.39	356	P	Pg	13 42 27.7	-0.2
TCW				S	Sg	13 42 34.1	+1.2
BHW	Baring Head	0.46	66	P	Pg	13 42 29.7	+0.3
BHW				S	Sb	13 42 37.0	-1.1
PLWZ	Palliser	0.71	88	P	Pg	13 42 34.4	+0.3
MSWZ	Moikau Station	0.73	76	P	Pg	13 42 34.8	+0.4
CAW	Cannon Point	0.75	50	P	Pg	13 42 34.4	-0.4
NNZ	Nelson	0.79	298	P	Pg	13 42 35.2	-0.4
DUWZ	D'Urville Isla	0.84	340	P	Pb	13 42 37.9	+0.4
PAWZ	Paruwai Farm	0.87	76	P	Pb	13 42 37.6	-0.3
MTW	Mount Morrison	1.00	64	P	Pg	13 42 39.9	+0.3
KHZ	Kahutara	1.00	215	P	Pb	13 42 40.0	-0.2
OGWZ	Otaki Gorge	1.01	40	P	Pg	13 42 39.5	-0.4

DDA ***28*** *13:42:47.5,39°.70N×27°.86E,h7km±3km,ML2.6*
ISCJB ***28*** *13:42:48.9±0.4,39°.65N±0°.02×27°.92E±0°.03,h9km±3km, Error ellipse: s-maj=4.3km s-min=3.7km az=141.1*
ISK ***28*** *13:42:48.6,39°.66N×27°.92E,h10km,ML2.1/7*
ISC 28 13:42:48.6±0.9**,39°.66N**±0°.03×**27°.90E**±0°.03**,h12km**±6km**, n21,**σ**0^{s}56**/31**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.03	223	PG	Pg	13 42 50.8	0.0
BALB				SG	Sg	13 42 52.6	+0.3
STEP	BALIKESIR_Sava	0.32	207	*i* P	Pb	13 42 55.8	-0.5
STEP				*i* S	Sg	13 42 59.7	+0.3
STEP				IAML_P			
	comp=Z,2μm,0.1s						
GONE	Gonen-Balikesi	0.42	337	PG	Pb	13 42 57.7	-0.3
GONE				SG	Sb	13 43 03.8	-0.5
DURS	Dursunbey	0.44	98	*i* P	Pg	13 42 57.4	0.0
DURS				*i* S	Sg	13 43 02.7	-0.6
DURS				IAML_P			
	comp=Z,629nm,0.1s						
EDC	Edincik	0.69	357	PG	Pb	13 43 02.5	0.0
KCTX	Karacabey (Bur	0.70	30	PG	Pb	13 43 02.5	-0.2
AKHS	Akhisar	0.78	185	*i* P	Pb	13 43 04.1	-0.1
AKHS				*i* S	Sg	13 43 12.1	-1.9
AKHS				IAML_P			
	comp=Z,797nm,0.1s						
DEMI	Demirci	0.88	134	*i* P	Pb	13 43 06.1	+0.2
DEMI				*i* S	Sg	13 43 16.3	-0.9
ZEDA	zmir-Bergama	0.94	223	*i* P	Pb	13 43 07.0	+0.1
ZEDA				*i* S	Sb	13 43 19.5	+0.1
MRMT	Marmara Adasi	0.97	346	PG	Pn	13 43 08.1	-0.1
DKL	Dikili	0.97	233	PG	Pb	13 43 07.5	+0.1
DKL				SG	Sn	13 43 21.8	0.0
AYVA	Ayvalik	1.00	250	*i* P	Pn	13 43 08.3	-0.2
MDNY	Mudanya-Bursa	1.03	46	PG	Pg	13 43 08.7	+0.2
BAYC	CANAKKALE_Bayr	1.05	275	*i* P	Pn	13 43 09.7	+0.5
BAYC				*i* S	Sb	13 43 22.1	-0.4
BAYC				IAML_P			
	comp=Z,415nm,0.1s						
ULDT	Uludag	1.06	63	*i* P	Pn	13 43 10.0	+0.5
ULDT				*i* S	Sb	13 43 23.5	+0.5
ULDT				IAML_P			
	comp=Z,542nm,0.1s						
LPK	Lapseki	1.13	309	PN	Pg	13 43 10.9	+0.5
ARMT	Armutlu	1.16	39	PN	Pg	13 43 11.0	0.0
RKY	Sarkoy-Tekirda	1.17	332	PN	Pg	13 43 11.7	+0.6
TVSB	Tavsanli	1.22	99	PN	Pg	13 43 12.7	+0.6
MANT	Manisa	1.27	156	*i* P	Pg	13 43 13.7	+0.6
MANT				IAML_P			
	comp=Z,388nm,0.1s						
USAK	Uak-Merkez	1.28	137	*i* P	Pg	13 43 13.9	+0.6
USAK				IAML_P			
	comp=Z,105nm,0.1s						

THE ***28*** *13:54:07.8,38°.18N×23°.23E,h10km±1km,ML2.5/4,Error ellipse: s-maj=1.0km s-min=0.2km az=158.0*
ATH 28 13:54:07.7,38°.18N×23°.23E,h11km±2km**,ML2.3**/7**,1C, Error ellipse: s-maj=2.1km s-min=0.8km az=142.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIL2	Platees	0.04	37	P	Pg	13 54 10.0	+0.1
VIL2				S	Sg	13 54 11.6	+0.1
VIL2				AML	AML	13 54 11.8	
	comp=N,13890μm,0.3s						
VIL2				AML	AML	13 54 11.9	
	comp=E,10605μm,0.2s						
VILL	Villia	0.06	102	P	Pg	13 54 10.0	-0.1
VILL				S	Sg	13 54 11.6	-0.2
	comp=E,4μm,0.3s						
PROD	Prodromos	0.28	287	P	Pg	13 54 13.1	-0.3
PROD				S	Sg	13 54 17.6	+0.5
PROD	Prodromos	0.28	287	P	Pg	13 54 13.5	+0.1
PROD				S	Sg	13 54 18.0	+0.8
PROD				AML	AML	13 54 19.3	
	comp=N,6270μm,0.3s						
PROD				AML	AML	13 54 19.5	
	comp=E,12863μm,0.3s						
LOUT	Loutraki	0.28	227	P	Pg	13 54 13.0	-0.4
LOUT				S	Sg	13 54 17.4	+0.2
	comp=E,768nm,0.2s						
LOUT	Loutraki	0.28	227	P	Pg	13 54 13.0	-0.4
LOUT				S	Sg	13 54 17.2	-0.1
LOUT				AML	AML	13 54 17.9	
	comp=N,339μm,0.2s						
LOUT				AML	AML	13 54 20.0	
	comp=E,302μm,0.1s						
ACOR	Acrocorinthos	0.41	225	P	Pg	13 54 15.6	-0.2
ATH	Athens Observa	0.43	118	P	Pg	13 54 16.4	+0.2
ATH				S	Sg	13 54 22.5	+0.6
ATH	Athens Observa	0.43	118	P	Pg	13 54 16.5	+0.3
ATH				S	Sg	13 54 22.7	+0.7
ATH				AML	AML	13 54 23.1	
	comp=E,1100μm,0.3s						
ATH				AML	AML	13 54 25.1	
	comp=N,1002μm,0.2s						
ATHU	Athens Univers	0.48	116	P	Pg	13 54 17.1	-0.1
ATHU				S	Sg	13 54 24.4	+0.9
ATHU	Athens Univers	0.48	116	P	Pg	13 54 17.2	+0.1
ATHU				S	Sg	13 54 23.7	+0.1
ATHU				AML	AML	13 54 28.6	
	comp=E,253μm,0.2s						
ATHU				AML	AML	13 54 28.6	
	comp=N,435μm,0.2s						
LKR	Lokris	0.51	339	P	Pg	13 54 17.3	-0.3
LKR				S	Sg	13 54 24.9	+0.5
	comp=N,792nm,0.1s						
LKR	Lokris	0.51	339	P	Pg	13 54 17.3	-0.3
LKR				S	Sg	13 54 25.1	+0.7
LKR				AML	AML	13 54 27.0	
	comp=E,1302μm,0.2s						
LKR				AML	AML	13 54 29.4	
	comp=N,1826μm,0.2s						
PTL	Penteli	0.51	104	P	Pg	13 54 17.9	+0.2
PTL				S	Sb	13 54 25.6	-0.6
PTL	Penteli	0.51	104	P	Pg	13 54 17.8	+0.1
ATAL	Atalanti	0.54	342	P	Pg	13 54 17.9	-0.4
ATAL				S	Sg	13 54 26.1	+0.6
ATAL	Atalanti	0.54	342	P	Pg	13 54 18.0	-0.3
VLY	Voula,Athens	0.55	126	P	Pg	13 54 18.3	-0.1
VLY				S	Sb	13 54 26.5	-0.7
	comp=N,555nm,0.2s						
VLY	Voula,Athens	0.55	126	P	Pg	13 54 18.4	0.0
EPID	Epidavros	0.57	189	P	Pg	13 54 18.9	+0.2
MRKA	Markates	0.60	28	P	Pg	13 54 19.0	-0.3
MRKA	Markates	0.60	28	P	Pg	13 54 18.9	-0.4
EREA	Eretria	0.60	66	P	Pg	13 54 19.3	-0.1
EREA				S	Sb	13 54 28.3	-0.4
EREA	Eretria	0.60	66	P	Pg	13 54 19.5	+0.1
EREA				S	Sg	13 54 27.5	+0.2
EREA				AML	AML	13 54 32.3	
	comp=N,346μm,0.4s						
EREA				AML	AML	13 54 33.2	
	comp=E,363μm,0.2s						
DSF	Desfina	0.60	293	P	Pg	13 54 18.9	-0.6
DSF				S	Sg	13 54 27.7	+0.3
DSF	Desfina	0.60	293	P	Pg	13 54 19.0	-0.4
DID	Didima	0.67	180	P	Pg	13 54 20.2	-0.5
DID				S	Sb	13 54 30.5	-0.2
DID	Didima	0.67	180	P	Pg	13 54 20.2	-0.5
GUR	Goura	0.74	251	P	Pg	13 54 21.7	-0.4
MATE	Matera	5.63	298⇑	*i*P	Pb	13 55 45.0	-0.8

TIR ***28*** *13:54:30.8,37°.59N×21°.25E,h5km,Md4.2/9*
BEO ***28*** *13:54:36.7±1.2,37°.70N×20°.89E,h7km±7km,ML4.2/3*
BJI ***28*** *13:54:36.8±0.0,38°.27N×20°.51E,h18km,mb4.7/12, mB4.9/10,Ms4.4/3,Ms7 4.1/1*
IDC ***28*** *13:54:37.0±0.9,37°.94N×21°.19E,h0km,mb3.8/8, mb1 3.8/15,mb1mx3.7/56,mbtmp3.7/15,ML3.3/6,MS3.0/12, Ms1 3.1/12,ms1mx2.8/49,Error ellipse: s-maj=17.1km s-min=16.7km az=172.0*
ATH ***28*** *13:54:39.9,37°.95N×20°.98E,h18km±1km,ML3.9/15,Error ellipse: s-maj=1.4km s-min=0.6km az=226.0*
MOS ***28*** *13:54:39.8±1.6,37°.97N×20°.86E,h20km,mb4.1/10,Error ellipse: s-maj=10.6km s-min=5.5km az=89.3*
NEIC ***28*** *13:54:39.0±3.2,37°.82N×21°.10E,h10km,mb4.3/8, ML3.7(THE),Error ellipse: s-maj=10.4km s-min=4.2km az=229.0*
NEIC Felt at Zakinthos.
PDG ***28*** *13:54:39.8±0.5,37°.96N×20°.97E,h16km,ML4.2/11,Error ellipse: s-maj=1.0km s-min=0.8km az=90.0*
ISCJB ***28*** *13:54:39.4±0.3,37°.94N±0°.01×20°.79E±0°.02,h15km±2km, mb4.2/21,MS2.9/7,Error ellipse: s-maj=2.6km s-min=1.6km az=37.1*
THE ***28*** *13:54:40.3,37°.93N×20°.95E,h0km±1km,ML3.7/44,Error ellipse: s-maj=1.3km s-min=0.5km az=235.0*
ISC 28 13:54:40.2±0.8**,37°.94N**±0°.02×**20°.98E**±0°.01**,h15km**±5km**, n321,**σ**1^{s}71**/422**,mb4.0**/21**,MS3.0**/7**,19C-10D,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	Vitineika	0.17	98	P	Pb	13 54 44.5	-0.5
VTN				S	Sb	13 54 48.0	-0.2
VTN	Vitineika	0.17	98	P	Pb	13 54 44.5	-0.5
VTN				S	Sg	13 54 47.4	+0.3
KFL	Anninata	0.23	319	P	Pg	13 54 45.1	-0.2
KFL				S	Sg	13 54 48.1	-0.7
	81μm,0.5s						
KFL	Anninata	0.23	319	P	Pg	13 54 45.1	-0.2
KFL				S	Sb	13 54 48.9	-1.0
KFL				AML	AML	13 54 50.0	
KFL				AML	AML	13 54 53.4	
VLMS	Volimes, Zakyn	0.26	256	P	Pb	13 54 45.7	-0.8
VLMS				S	Sb	13 54 50.4	-0.4
VLMS				AML	AML	13 54 51.2	
VLMS				AML	AML	13 54 51.5	
ZKS	Zakynthos	0.29	212	P	Pb	13 54 46.2	-0.9
ZKS				S	Sb	13 54 50.7	-1.0
	43μm,0.5s						
ZKS	Zakynthos	0.29	212	P	Pb	13 54 46.4	-0.7
ZKS				S	Sb	13 54 51.3	-0.4
ZKS				AML	AML	13 54 54.1	
ZKS				AML	AML	13 54 56.6	
VLS	Valsamata	0.39	308	P	Pg	13 54 47.5	-0.6
VLS				S	Sb	13 54 53.6	-1.0
	41μm,0.5s						
VLS	Valsamata	0.39	308	P	Pg	13 54 47.3	-0.8
VLS	Valsamata	0.39	308	P	Pg	13 54 47.8	-0.3
VLS				S	Sb	13 54 53.5	-1.0
VLS				AML	AML	13 54 54.7	
	comp=E,62461μm,0.2s						
VLS				AML	AML	13 54 55.0	
	comp=N,45904μm,0.1s						
RLS	Riolos of Patr	0.40	73	P	Pg	13 54 48.2	-0.2
RLS				S	Sb	13 54 54.5	-0.6
	comp=N,24μm,0.5s						
RLS	Riolos of Patr	0.40	73	P	Pg	13 54 48.2	-0.2
RLS				S	Sb	13 54 54.4	-0.6
RLS				AML	AML	13 54 56.1	
	comp=N,43063μm,0.4s						
RLS				AML	AML	13 54 56.2	
	comp=E,52947μm,0.5s						
AMT	Artemida-Makis	0.71	125	P	Pg	13 54 53.0	-1.1
AMT				S	Sb	13 55 04.7	+0.9
	comp=E,12μm,0.4s						
AMT	Artemida-Makis	0.71	125	P	Pb	13 54 53.9	-0.4
AMT				S	Sb	13 55 03.8	0.0
AMT				AML	AML	13 55 09.1	
	comp=N,25555μm,0.4s						
AMT				AML	AML	13 55 09.6	
	comp=E,19669μm,0.4s						
EVGI	Lefkada island	0.72	340	P	Pg	13 54 53.3	-1.1
EVGI				S	Sb	13 55 04.7	+0.4
EVGI	Lefkada island	0.72	340	P	Pg	13 54 53.5	-0.9
UPR	University Cam	0.72	62	P	Pb	13 54 54.8	+0.3
UPR				S	Sn	13 55 06.4	-0.3
UPR	University Cam	0.72	62	P	Pb	13 54 54.5	0.0
MGNA	Meganis	0.73	348	P	Pg	13 54 53.4	-1.0
MGNA				S	Sb	13 55 04.2	-0.2
MGNA				AML	AML	13 55 14.9	
	comp=E,10215μm,0.5s						
MGNA				AML	AML	13 55 18.0	
	comp=N,7244μm,0.3s						
PVO	Paravola	0.80	32	P	Pb	13 54 55.8	-0.1
PVO				S	Sn	13 55 08.8	+0.2
PVO	Paravola	0.80	32	P	Pb	13 54 55.7	-0.1
PVO				S	Sb	13 55 06.6	+0.2
PVO				AML	AML	13 55 10.7	
	comp=E,69685μm,0.3s						
PVO				AML	AML	13 55 10.8	
	comp=N,75400μm,0.3s						
LAKA	Lakka	0.84	69	P	Pg	13 54 55.6	-1.1
LAKA				S	Sn	13 55 09.1	-0.6
	comp=N,3μm,0.4s						
LAKA	Lakka	0.84	69	P	Pg	13 54 55.8	-0.8
LAKA				S	Sb	13 55 08.1	+0.3
LAKA				AML	AML	13 55 11.4	
	comp=N,7877μm,0.3s						
LAKA				AML	AML	13 55 13.0	
	comp=E,7865μm,0.5s						
LKD2	Lefkada island	0.88	344	P	Pg	13 54 56.0	-1.4
LKD2				S	Sn	13 55 09.7	-1.0
	comp=E,7μm,0.5s						
LKD2	Lefkada island	0.88	344	*i* PN	Pg	13 54 56.2	-1.2
LKD2				*i* SN	Sn	13 55 14.5	+3.8
LKD2	Lefkada island	0.88	344	P	Pg	13 54 56.2	-1.2
LKD2				S	Sb	13 55 08.8	-0.1
LKD2				AML	AML	13 55 17.2	
	comp=N,12570μm,0.2s						
LKD2				AML	AML	13 55 21.4	
	comp=E,13282μm,0.6s						
AIG2	Aigio	0.92	70	P	Pg	13 54 57.6	-0.4
TSLK	Tsoukalades, L	0.92	344	P	Pg	13 54 56.7	-1.3
TSLK				S	Sn	13 55 11.9	+0.4
TSLK	Tsoukalades, L	0.92	344	P	Pg	13 54 56.9	-1.1
TSLK				S	Sb	13 55 10.1	+0.3
TSLK				AML	AML	13 55 18.2	
	comp=N,15387μm,0.4s						
TSLK				AML	AML	13 55 18.4	
	comp=E,14480μm,0.6s						
AIG4	Aigion	0.92	70	P	Pg	13 54 57.3	-0.8
KLV	Kalavryta, Ach	0.93	83	P	Pg	13 54 56.8	-1.5
KLV				S	Sn	13 55 12.1	+0.2
	comp=E,3μm,0.5s						
KLV	Kalavryta, Ach	0.93	83	P	Pg	13 54 57.3	-1.0
KLV				S	Sg	13 55 10.3	-0.2
KLV				AML	AML	13 55 24.9	
	comp=N,5903μm,0.6s						
KLV				AML	AML	13 55 25.6	
	comp=E,4137μm,0.4s						
AIG3	Aigion	0.94	70	P	Pb	13 54 57.7	-0.6
ALIK	Aliki, Aigiali	0.95	70	P	Pb	13 54 57.7	-0.7
ALIK				S	Sn	13 55 14.6	+2.4
AIG1	Aigion	0.96	73	P	Pb	13 54 57.9	-0.6
TRIZ	Trizonia	0.96	64	P	Pb	13 54 57.3	-1.3
TRIZ				S	Sn	13 55 12.9	+0.4
	comp=E,7μm,0.4s						
TRIZ	Trizonia	0.96	64	P	Pb	13 54 57.7	-0.8
ANX	Ano Chora	0.99	48	P	Pb	13 54 58.6	-0.5
ANX				S	Sg	13 55 12.8	+0.4
TRAZ	Trapeza	1.00	77	P	Pb	13 54 58.2	-1.1
TRAZ				S	Sn	13 55 14.9	+1.3
	comp=E,12μm,0.2s						
TRAZ	Trapeza	1.00	77	P	Pb	13 54 58.3	-0.9
TRAZ				S	Sn	13 55 13.2	-0.5
TRAZ				AML	AML	13 55 17.2	
	comp=E,16508μm,0.2s						
TRAZ				AML	AML	13 55 18.0	
	comp=N,26115μm,0.2s						
KALE	Kalithea	1.02	64	P	Pb	13 54 59.1	-0.6
KALE				S	Sn	13 55 15.4	+1.3
	comp=N,7μm,0.4s						
KALE	Kalithea	1.02	64	P	Pb	13 54 59.0	-0.6
KALE				S	Sg	13 55 13.6	+0.2
KALE				AML	AML	13 55 17.0	
	comp=E,7467μm,0.3s						
KALE				AML	AML	13 55 18.1	
	comp=N,13548μm,0.2s						
ITM	Ithomi	1.07	135	*e*Pg	Pb	13 54 56.5	-4.0
ITM	Ithomi	1.07	135	P	Pb	13 54 59.7	-0.7
ITM				S	Sn	13 55 17.9	+2.6
	comp=N,4μm,1.0s						
ITM	Ithomi	1.07	135	P	Pb	13 55 00.1	-0.3
GUR	Goura	1.08	90	P	Pb	13 54 59.6	-1.0
GUR				S	Sn	13 55 18.4	+2.8
	comp=N,12μm,0.5s						
GUR	Goura	1.08	90	P	Pb	13 54 59.7	-1.0
TRIP	Tripoli	1.11	112	P	Pn	13 55 01.1	-0.1
TRIP				S	Sn	13 55 17.6	+1.4
	comp=N,3μm,0.7s						
TRIP	Tripoli	1.11	112	P	Pg	13 55 01.2	-0.4
EVR	Evrytania	1.17	34	P	Pn	13 55 02.0	-0.1
EVR				S	Sn	13 55 20.6	+2.7
	comp=N,3μm,0.6s						
EVR	Evrytania	1.17	34	P	Pn	13 55 02.0	-0.1
EVR				S	Sn	13 55 18.5	+0.6
EVR				AML	AML	13 55 24.8	
	comp=E,6160μm,0.5s						
EVR				AML	AML	13 55 28.6	
	comp=N,6785μm,0.7s						
PYL	PYLOS	1.21	149	P	Pn	13 55 01.6	-0.9
PYL				S	Sg	13 55 20.1	+0.8
	comp=N,2μm,0.7s						
PYL	PYLOS	1.21	149	P	Pn	13 55 01.6	-0.9
VLX	Vlachokerasia	1.25	117	P	Pg	13 55 04.1	-0.2
VLX				S	Sg	13 55 22.9	+2.2
	comp=N,3μm,0.5s						
VLX	Vlachokerasia	1.25	117	P	Pb	13 55 03.6	+0.1
DSF	Desfina	1.31	68	P	Pn	13 55 03.7	-0.3
DSF				S	Sg	13 55 24.7	+2.2
	comp=N,3μm,0.3s						
DSF	Desfina	1.31	68	P	Pn	13 55 03.8	-0.2
DLFA	Delphi	1.31	65	P	Pn	13 55 03.9	-0.1
ACOR	Acrocorinthos	1.50	91	P	Pb	13 55 07.9	+0.2
AGG	Agios Georgios	1.52	44	*e*Pn	Pb	13 55 08.3	+0.3
AGG	Agios Georgios	1.52	44	P	Pg	13 55 08.5	-0.9
AGG				S	Sg	13 55 29.8	+0.7
	comp=N,2μm,0.9s						
AGG	Agios Georgios	1.52	44	*e*P	Pb	13 55 08.3	+0.3
AGG	Agios Georgios	1.52	44	P	Pb	13 55 08.3	+0.3
PROD	Prodromos	1.55	78	P	Pb	13 55 08.7	+0.1
PROD				S	Sg	13 55 32.4	+2.2
PROD	Prodromos	1.55	78	P	Pb	13 55 09.0	+0.4
LOUT	Loutraki	1.58	88	P	Pb	13 55 09.6	+0.5
LOUT				S	Sg	13 55 30.8	-0.3
	comp=N,2μm,1.1s						
DYR	Agios Nikonas	1.60	137	P	Pb	13 55 09.1	-0.3
DYR				S	Sg	13 55 31.4	-0.3
IGT	Igoumenitsa	1.67	343	*e*Pg	Pb	13 55 09.9	-0.7
IGT				*e*Sg	Sg	13 55 36.8	+2.8
IGT	Igoumenitsa	1.67	343	P	Pb	13 55 09.6	-1.0
IGT				S	Sg	13 55 33.1	-0.9

	comp=N,1µm,0.9s						
IGT	Igoumenitsa	1.67	343	*i* PN	Pb	13 55 10.4	-0.2
IGT				*i* SN	Sg	13 55 38.5	+4.5
IGT	Igoumenitsa	1.67	343	P	Pb	13 55 09.9	-0.7
JAN	Janina	1.72	357	P	Pb	13 55 11.0	-0.5
JAN				S	Sg	13 55 34.0	-1.5
	comp=N,2µm,1.0s						
JAN	Janina	1.72	357	P	Pb	13 55 11.7	+0.3
LKR	Lokris	1.74	65	P	Pb	13 55 11.4	-0.5
LKR				S	Sg	13 55 35.1	-1.2
	comp=N,1µm,0.4s						
LKR	Lokris	1.74	65	P	Pb	13 55 11.4	-0.5
ATAL	Atalanti	1.77	64	P	Pb	13 55 12.0	-0.4
ATAL				S	Sg	13 55 37.5	+0.1
KRND	KRANIDI	1.81	107	P	Pb	13 55 13.8	+0.7
KRND				S	Sb	13 55 36.5	+0.9
	comp=N,2µm,1.1s						
THL	Klokotos Trika	1.81	26	P	Pg	13 55 13.9	-1.2
THL				S	Sg	13 55 37.1	-1.5
	comp=N,2µm,1.1s						
THL	Klokotos Trika	1.81	26	P	Pb	13 55 13.4	+0.3
DID	Didima	1.84	103	P	Pb	13 55 13.9	+0.3
DID				S	Sg	13 55 38.9	-0.7
	comp=N,2µm,1.5s						
MEV	Metsovon	1.85	6	P	Pb	13 55 14.0	+0.1
VILL	Villia	1.86	82	P	Pb	13 55 13.5	-0.4
VLI	Veliai	1.98	127	P	Pb	13 55 15.8	-0.2
VLI				S	Sg	13 55 42.5	-1.5
	comp=N,972nm,1.6s						
KEK	Kerkira	1.99	333	P	Pn	13 55 13.9	+0.5
KEK	Kerkira	1.99	333	P	Pb	13 55 14.8	-1.4
KPRO	Kipourio	2.03	8	P	Pb	13 55 16.7	-0.2
KPRO				S	Sb	13 55 41.6	-0.4
	comp=N,2µm,1.1s						
SRN	Sarande	2.08	339	P	Pn	13 55 15.7	+1.2
SRN				S	Sb	13 55 42.5	-0.8
	comp=N,4µm,0.9s						
SRN	Sarande	2.08	339	*i* PN	Pb	13 55 15.9	-1.8
SRN				*i* SN	Sg	13 55 49.8	+2.6
ATH	Athens Observa	2.17	88	P	Pb	13 55 18.2	-0.9
ATH				S	Sg	13 55 47.8	-2.1
	comp=N,682nm,0.6s						
MRKA	Markates	2.19	69	P	Pn	13 55 17.5	+1.4
MRKA				S	Sb	13 55 46.6	+0.1
	comp=N,640nm,0.6s						
ATHU	Athens Univers	2.22	88	P	Pb	13 55 19.4	-0.6
ATHU				S	Sb	13 55 48.5	+1.2
	comp=N,292nm,0.6s						
NEO	Neokhori	2.23	52	P	Pb	13 55 19.3	-0.9
VLY	Voula,Athens	2.23	91	P	Pb	13 55 18.7	-1.5
VLY				S	Sb	13 55 46.5	-1.1
	comp=N,722nm,0.7s						
XOR	Xorichti	2.24	50	P	Pb	13 55 19.0	-1.4
PENT	Pentalofos	2.25	3	P	Pb	13 55 19.7	-1.0
PENT				S	Sb	13 55 48.3	-0.1
	comp=N,980nm,1.2s						
PTL	Penteli	2.28	86	P	Pb	13 55 19.7	-1.4
PTL				S	Sb	13 55 49.5	+0.3
	comp=N,798nm,1.2s						
SKIA	Skiathos	2.30	57	P	Pn	13 55 19.4	+1.8
SKIA				S	Sb	13 55 48.8	-0.9
	comp=N,262nm,1.0s						
KTHR	Kythira	2.33	135	P	Pb	13 55 21.1	-0.8
KTHR				S	Sb	13 55 49.0	-1.5
KTHA	Kythira Island	2.37	135	P	Pb	13 55 21.6	-1.0
KTHA				S	Sb	13 55 50.1	-1.5
	comp=N,880nm,1.8s						
EREA	Eretria	2.38	77	P	Pb	13 55 21.0	-1.7
EREA				S	Sb	13 55 50.5	-1.4
	comp=N,612nm,0.9s						
KZN	Kozani	2.44	14	P	Pb	13 55 22.4	-1.5
KZN				S	Sb	13 55 52.0	-1.8
	comp=N,465nm,0.9s						
LIT	Litokhoron	2.46	28	*e*Pn	Pb	13 55 22.8	-1.3
LIT	Litokhoron	2.46	28	P	Pb	13 55 21.9	-2.2
LIT				S	Sb	13 55 53.2	-1.0
	comp=N,862nm,0.9s						
LIT	Litokhoron	2.46	28	*e*P	Pb	13 55 22.8	-1.3
TPE	Tepelena	2.47	343	P	Pn	13 55 20.9	+1.0
TPE				S	Sb	13 55 52.0	-2.5
	comp=N,2µm,0.9s						
TPE	Tepelena	2.47	343	*i* PN	Pn	13 55 21.6	+1.7
TPE				*i* SN	Sg	13 55 57.8	-1.8
NEST	Nestorio	2.47	1	P	Pb	13 55 23.1	-1.3
NEST				S	Sb	13 55 53.6	-1.0
	comp=N,645nm,1.2s						
KTI	Kastanea	2.60	20	P	Pb	13 55 24.5	-2.2
VLO	Vlora	2.77	336	*i* PN	Pn	13 55 25.6	+1.5
VLO				*i* SN	Sg	13 56 06.6	-2.8
FNA	Florina	2.86	6	*e*Pn	Pn	13 55 27.3	+2.0
FNA	Florina	2.86	6	*e*Pn	Pn	13 55 26.7	+1.4
FNA				*e*Sn	Sb	13 56 03.0	-2.7
FNA	Florina	2.86	6	P	Pn	13 55 27.2	+1.9
FNA	Florina	2.86	6	*e*P	Pn	13 55 27.3	+2.0
PAIG	Paliouri	2.89	46	P	Pn	13 55 27.3	+1.6
PLG	Polygyros	3.10	38	P	Pn	13 55 30.9	+2.4
THE	Thessaloniki	3.10	29	P	Pn	13 55 30.4	+1.9
HORT	Hortiatis	3.12	31	P	Pn	13 55 30.8	+1.8
OUR	Ouranopolis	3.34	43	P	Pn	13 55 34.4	+2.5
IMMV	Iera Moni Meta	3.46	135	P	Pn	13 55 35.1	+1.6
TIR	Tirane	3.51	346	*e*Pn	Pn	13 55 35.8	+1.6
TIR	Tirane	3.51	346	P	Pn	13 55 35.6	+1.4
TIR	Tirane	3.51	346	⇑*i*P	Pn	13 55 35.4	+1.2
TIR	Tirane	3.51	346	*e*P	Pn	13 55 35.8	+1.6
TIR	Tirane	3.51	346	*i* PN	Pn	13 55 36.5	+2.3
TIR				*i* SN	Sb	13 56 26.0	+1.6
TIP	Timpagrande	3.53	292	*e*Pn	Pn	13 55 34.6	0.0
TIP	Timpagrande	3.53	292	⇑*i*P	Pn	13 55 35.0	+0.5
KNT	Kendrikon	3.54	24	P	Pn	13 55 36.8	+2.1
VAY	Valandovo	3.59	20	*e*Pn	Pn	13 55 36.1	+0.8
VAY	Valandovo	3.59	20	*i* Pn	Pn	13 55 38.2	+2.9
VAM	Vamos	3.62	133	P	Pn	13 55 37.1	+1.4
APE	Apeiranthos	3.72	102	⇓*e*P	Pn	13 55 40.6	+3.4
PHP	Peshkopia	3.76	354	P	Pn	13 55 38.7	+1.0
PHP	Peshkopia	3.76	354	*i* PN	Pn	13 55 39.6	+1.9
PHP				*i* SN	Sb	13 56 31.9	+0.1
SRS	Serrai	3.76	32	*e*Pn	Pn	13 55 37.2	-0.5
SRS				*e*Sn	Sn	13 56 23.9	+2.2
SRS	Serrai	3.76	32	P	Pn	13 55 39.5	+1.8
CGL1	Ceglie Messapi	3.84	316	*e*Pn	Pn	13 55 38.9	+0.2
CGL1				Sn	Sg	13 56 51.6	+8.2
TAR1	Taranto	3.86	313	*e*Pn	Pn	13 55 39.6	+0.6
TAR1				Sn	Sg	13 56 52.4	+8.3
STIP	Stip	3.86	14	*i* Pn	Pn	13 55 42.6	+3.6
MASS	Massafra	4.01	313	*e*Pn	Pn	13 55 42.1	+1.0
MASS				Sn	Sg	13 56 58.5	+10
FASA	Fasano	4.01	317	*e*Pn	Pn	13 55 41.5	+0.4
FASA				Sn	Sg	13 56 57.7	+8.6
SKO	Skopje	4.04	5	*e*Pn	Pn	13 55 43.4	+1.9
SKO	Skopje	4.04	5	*i* Pn	Pn	13 55 43.3	+1.8
NVR	Nevrokopi	4.07	32	P	Pn	13 55 43.6	+1.7
KAVA	Kavala	4.10	41	P	Pn	13 55 44.0	+1.7
IDI	Anoyia	4.11	129	Pn	Pn	13 55 38.6	-4.0
	comp=N,0.5nm,0.3s,baz=346,slow=8.3,SNR=2.9						
IDI				Sn	Sn	13 56 27.8	-2.6
	comp=N,7.4nm,0.3s,baz=71,slow=16,SNR=6.5						
IDI				LR	LR	13 57 20.4	
	comp=N,290nm,18.4s,baz=276,slow=41						
PUK	Puka	4.18	349	*i* PN	Pn	13 55 46.0	+2.5
PUK				*i* SN	Sb	13 56 43.6	-0.2
MMB	Musomiste	4.21	29	*e*P	Pn	13 55 45.9	+2.0
ULC	Ulcinj	4.23	342	⇓*i*Pn	Pn	13 55 44.2	0.0
ULC				*e*Sn	Sn	13 56 34.0	+0.7
KKB	Krupnik	4.24	22	*e*P	Pn	13 55 46.2	+1.9
SMTH	Samothraki Isl	4.35	53	P	Pn	13 55 47.1	+1.4
SG1	Sgolgore (BA)	4.41	312	*e*Pn	Pn	13 55 47.2	+0.6
DRME	Dracevica, Mon	4.46	343	⇑*i*Pn	Pn	13 55 47.2	0.0
DRME				*e*Sn	Sn	13 56 39.8	+1.0
DRME	Dracevica, Mon	4.46	343	*i* Pn	Pn	13 55 47.3	0.0
BAI	Bari	4.48	316	*e*Pn	Pn	13 55 48.0	+0.6
BUM	Brajici-Budva	4.64	341	⇓*i*Pn	Pn	13 55 49.6	-0.2
BUM				*e*Sn	Sn	13 56 44.0	+0.7
PDG	Podgorica	4.67	344	⇓*i*P	Pn	13 55 50.6	+0.4
PDG	Podgorica	4.67	344	*i* Pn	Pn	13 55 50.1	-0.1
TTG	Podgorica	4.67	344	⇓*i*Pn	Pn	13 55 50.7	+0.5
TTG				*e*Sn	Sn	13 56 45.3	+1.2
TTG	Podgorica	4.67	344	*e*Pn	Pn	13 55 49.7	-0.5
TTG	Podgorica	4.67	344	*e*P	Pn	13 55 49.7	-0.5
PVY	Plav	4.71	351	⇑*i*Pn	Pn	13 55 52.0	+1.1
PVY				*e*Sn	Sn	13 56 45.9	+0.6
RZN	Rozhen	4.72	36	*e*P	Pn	13 55 53.2	+2.2
CEME	Cevo	4.86	342	⇑*i*Pn	Pn	13 55 53.0	+0.2
CEME				*e*Sn	Sn	13 56 50.1	+1.2
HCY	Herceg Novi	4.89	338	⇓*i*Pn	Pn	13 55 53.1	0.0
HCY				*e*Sn	Sn	13 56 50.0	+0.6
HCY	Herceg Novi	4.89	338	*e*Pn	Pn	13 55 51.4	-1.7
ALN	Alexandroupoli	4.91	51	*e*Pn	Pn	13 55 56.0	+2.6
BARS	Barje	4.91	7	*e*Pn	Pn	13 55 54.5	+1.0
VTS	Vitosha	4.98	20	*e*Pn	Pn	13 55 55.9	+1.4
VTS	Vitosha	4.98	20	*e*Pn	Pn	13 55 54.4	-0.1
VTS	Vitosha	4.98	20	⇑*i*P	Pn	13 55 57.3	+2.8
VTS	Vitosha	4.98	20	*e*P	Pn	13 55 55.9	+1.4
VTS	Vitosha	4.98	20	*e*P	Pn	13 55 56.4	+1.9
IVA	Berane	4.99	351	⇑*i*Pn	Pn	13 55 55.8	+1.1
IVA				*e*Sn	Sn	13 56 52.6	+0.4
KOME	Kolasin	5.03	348	⇓*i*Pn	Pn	13 55 56.2	+1.0
KOME				*e*Sn	Sn	13 56 54.0	+1.0
KDZ	Kurdzhali	5.04	41	*e*P	Pn	13 55 56.5	+1.3
NKME	Niksic	5.06	343	⇓*i*Pn	Pn	13 55 56.0	+0.4
NKME				*e*Sn	Sn	13 56 54.1	+0.3
NKY	Niksic	5.10	343	⇑*i*Pn	Pn	13 55 56.5	+0.4
NKY				*e*Sn	Sn	13 56 55.2	+0.5
TREB	Trebinje	5.18	338	*e*Pn	Pn	13 55 56.7	-0.4
TREB	Trebinje	5.18	338	*e*Pn	Pn	13 55 56.1	-1.0
DBRK	Dubrovnik	5.19	336	*e*Pn	Pn	13 55 57.2	-0.1
DBRK				Sn	Sn	13 56 54.7	-2.2
VAE	Valguarnera	5.23	267	Pn	Pn	13 55 58.3	+0.5
	comp=N,1.5nm,0.3s,baz=18,slow=7.2,SNR=3.3						
VAE				Sn	Sn	13 56 55.1	-2.7
	comp=N,1.5nm,0.3s,baz=169,slow=19,SNR=2.5						
SELS	Selova	5.27	1	*e*Pn	Pn	13 55 58.6	+0.1
BRY	Bratogost	5.29	340	⇓*i*Pn	Pn	13 55 58.8	0.0
BRY				*e*Sn	Sn	13 56 59.4	-0.2
BRY	Bratogost	5.29	340	*e*Pn	Pn	13 55 58.0	-0.8
SJES	Sjenica	5.37	352	*e*Pn	Pn	13 56 00.6	+0.8
ZAPS	Zavoj	5.47	13	*e*Pn	Pn	13 56 02.1	+0.9
UPM	Unac-Piva	5.49	344	⇑*i*Pn	Pn	13 56 01.9	+0.4
UPM				*e*Sn	Sn	13 57 05.1	+0.6
UPM	Unac-Piva	5.49	344	*e*Pn	Pn	13 56 02.3	+0.8
KARP	Karpathos	5.51	114	*e*Pn	Pn	13 56 04.7	+3.0
PLE	Pljevlja	5.52	348	⇑*i*Pn	Pn	13 56 03.1	+1.2
PLE				*e*Sn	Sn	13 57 05.7	+0.6
STON	Ston	5.52	334	*e*Pn	Pn	13 56 01.1	-0.7
STON				Sn	Sn	13 57 02.1	-2.9
STON	Ston	5.52	334	*e*Pn	Pn	13 56 00.5	-1.3
WDD	Wied Dalam	5.58	250	*e*Pn	Pn	13 56 02.1	-0.6
BALB	Balikesir	5.65	70	*e*Pn	Pn	13 56 05.7	+2.1
IVAS	Ivanjica	5.67	354	*e*Pn	Pn	13 56 04.0	+0.1
BOVS	Bovan	5.71	5	*e*Pn	Pn	13 56 04.8	+0.3
RUDO	Rudo	5.80	348	*e*Pn	Pn	13 56 04.0	-1.7
ZAGS	Zajecar	5.94	9	*e*Pn	Pn	13 56 08.5	+0.9
GRUS	Gruza	5.95	358	*e*Pn	Pn	13 56 07.4	-0.2
BBLS	Lazići	6.04	349	*e*Pn	Pn	13 56 08.2	-0.8
BBLS	Lazići	6.04	349	*e*Pn	Pn	13 56 09.9	+0.9
MAKA	Makarska	6.13	332	*e*Pn	Pn	13 56 09.5	-0.7
MAKA				Sn	Sn	13 57 16.7	-3.3
CLTB	Caltabellotta	6.16	269	*e*Pn	Pn	13 56 14.0	+3.3
DIVS	Divibare	6.20	353	*e*Pn	Pn	13 56 10.6	-0.6
DIVS	Divibare	6.20	353	*e*Pn	Pn	13 56 10.3	-0.9
TRUS	Trudelj	6.29	356	*e*Pn	Pn	13 56 12.1	-0.3
HAPS	Han Pijesak,Bl	6.33	347	*e*Pn	Pn	13 56 11.4	-1.6
HAPS	Han Pijesak,Bl	6.33	347	*e*Pn	Pn	13 56 11.4	-1.6
ZIRJ	Zirje	6.99	326	*e*Pn	Pn	13 56 21.5	-0.5
ZIRJ				Sn	Sn	13 57 36.4	-4.9
MGRS	Mrkonjic Grad	7.10	337	*e*Pn	Pn	13 56 23.4	-0.2
MORI	Morici	7.14	328	*i* Pn	Pn	13 56 24.3	+0.3
FRGS	Fruska Gora	7.26	353	*e*Pn	Pn	13 56 25.6	-0.2
AQU	L'Aquila	7.29	310	*e*Pn	Pn	13 56 28.8	+2.7
AQU	L'Aquila	7.29	310	*e*P	Pn	13 56 28.8	+2.7
AQU	L'Aquila	7.29	310	*e*Pn	Pn	13 56 30.3	+4.2
BLY	Banja Luka	7.38	338	*e*Pn	Pn	13 56 26.4	-0.8
BLY	Banja Luka	7.38	338	⇑*i*P	Pn	13 56 26.8	-0.5
BLY	Banja Luka	7.38	338	*e*Pn	Pn	13 56 26.5	-0.8
DUGI	Dugi Otok	7.52	325	*i* Pn	Pn	13 56 29.5	+0.3
GZR	Gura Zlata	7.57	10	⇑*i*P	Pn	13 56 30.9	+0.9
UDBI	Udbina	7.66	331	*i* Pn	Pn	13 56 32.3	+1.0
NVLJ	Novalja	8.05	327	*e*Pn	Pn	13 56 37.0	+0.4
VOIR		8.09	21	⇑*i*P	Pn	13 56 39.2	+2.1
VOIR		8.09	21	P	Pn	13 56 39.2	+2.1
MLR	Muntele Rosu	8.41	25	Pn	Pn	13 56 39.7	-1.9
	comp=N,0.2nm,0.3s,baz=349,slow=19,SNR=2.0						
MLR	Muntele Rosu	8.41	25	*e*Pn	Pn	13 56 39.9	-1.6
MLR	Muntele Rosu	8.41	25	⇑*i*P	Pn	13 56 45.4	+3.8
MLR	Muntele Rosu	8.41	25	*e*P	Pn	13 56 39.9	-1.6
MORH	Mrgy, Hungar	8.45	349	*e*Pn	Pn	13 56 39.5	-2.5
MORH	Mrgy, Hungar	8.45	349	*e*Pn	Pn	13 56 42.0	+0.1
MORH				Sn	Sn	13 58 13.0	-3.9
OZLJ	Ozalj	8.70	334	*i* Pn	Pn	13 56 45.1	-0.3
RIY	Rijeka	8.83	329	*e*Pn	Pn	13 56 46.3	-0.9
CRES	Cresnjev	8.89	334	*e*Pn	Pn	13 56 46.6	-1.4
PLOR	Plostina	8.96	26	⇑*i*P	Pn	13 56 51.8	+2.7
VRI	Vrincioaia	9.00	27	⇑*i*P	Pn	13 56 53.5	+3.9
CEY	Cerknica	9.19	330	*e*Pn	Pn	13 56 51.9	-0.3
LJU	Ljubljana	9.41	331	*e*Pn	Pn	13 56 54.1	-1.1
TRI	Trieste	9.44	328	*e*Pn	Pn	13 56 57.5	+1.9
TRI	Trieste	9.44	328	*e*P	Pn	13 56 57.5	+1.9
KEST	Kesra	9.58	260	Pn	Pn	13 56 58.8	+1.1
	comp=N,0.1nm,0.3s,baz=155,slow=10,SNR=4.0						
KEST				Sn	Sn	13 58 39.9	-5.2
	comp=N,0.1nm,0.3s,baz=232,slow=19,SNR=2.0						
KEST				LR	LR	14 01 33.4	
	comp=N,39nm,18.9s,baz=290,slow=43						
SOKA	Soboth	9.77	335	*e*Pn	Pn	13 56 59.1	-1.1
	comp=N,2.1nm,0.2s						
SOKA				Sn	Sn	13 58 44.8	-5.0
	comp=N,1.0nm,0.2s						
OBKA	Obir	9.80	333	*e*Pn	Pn	13 57 00.7	+0.1
	comp=N,2.6nm,0.4s						
OBKA				Sn	Sn	13 58 49.1	-1.2
	comp=N,14nm,0.7s						
BR101	Keskin Array S	10.04	76	*e*Pn	Pn	13 57 01.1	-2.9
BRTR	Keskin Array B	10.04	76	Pn	Pn	13 57 01.1	-2.9
	comp=N,0.1nm,0.3s,baz=264,slow=13,SNR=2.5						
ARSA	Arzberg	10.13	338	*e*Pn	Pn	13 57 03.8	-1.3
	comp=N,0.6nm,0.3s						
ARSA				Sn	Sn	13 58 53.5	-4.9
	comp=N,1.2nm,0.5s						
MYKA	Terra Mystica	10.24	330	*e*Pn	Pn	13 57 07.2	+0.6
	comp=N,1.3nm,0.4s						
MYKA				Sn	Sn	13 59 00.1	-0.9
	comp=N,1.1nm,0.4s						
KBA	Koelnbreinsper	10.72	331	*e*Pn	Pn	13 57 13.0	-0.3
	comp=N,0.5nm,0.2s						
KBA				Sn	Sn	13 59 11.7	-1.4
	comp=N,6.2nm,0.7s						
ABTA	Abfaltersbach	10.79	327	*e*Pn	Pn	13 57 14.5	+0.3
	comp=N,0.9nm,0.3s						
ABTA				Sn	Sn	13 59 12.2	-2.5
	comp=N,11nm,0.8s						
MOA	Molln	11.05	336	*e*Pn	Pn	13 57 17.3	-0.4
	comp=N,1.6nm,0.3s						
MOA				Sn	Sn	13 59 19.4	-1.6
	comp=N,1.7nm,0.4s						
WTTA	Wattenberg	11.57	327	*e*Pn	Pn	13 57 24.0	-1.0
	comp=N,1.5nm,0.3s						
WTTA				*e*Sn	Sn	13 59 35.1	+1.1
	comp=N,14nm,0.8s						
WATA	Walderalm	11.65	327	*e*Pn	Pn	13 57 27.1	+1.1
	comp=N,0.8nm,0.3s						
SQTA	Sankt Quirin	11.73	325	*e*Pn	Pn	13 57 28.1	+1.1
	comp=N,2.0nm,0.4s						
SQTA				Sn	Sn	13 59 37.7	0.0
	comp=N,14nm,0.9s						
VRAC	Vranov	11.80	346	LR	LR	14 02 41.1	
	comp=N,100nm,18.8s,baz=192,slow=41						
FETA	Feichten	11.80	323	*e*Pn	Pn	13 57 30.8	+2.7
	comp=N,0.8nm,0.3s						
MOTA	Moosalm	11.87	325	*e*Pn	Pn	13 57 29.7	+0.7
	comp=N,4.0nm,0.7s						
TREC	Trest	12.02	342	AMS	AMS	14 02 40.0	
	comp=N,300nm,11.8s						
DAVOX	Davos/Dischmat	12.05	321	Pn	Pn	13 57 32.1	+0.7
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=2.3						
DAVOX				Sn	Sn	13 59 41.6	-3.9
	comp=N,0.2nm,0.3s,baz=319,slow=19,SNR=2.5						
DAVOX				LR	LR	14 02 43.7	
	comp=N,148nm,19.3s,baz=79,slow=40						
OKC	Ostrava-Krasne	12.07	351	AMS	AMS	14 07 10.0	
	comp=N,400nm,16.4s						
GEC2	GERESS Array S	12.11	336	*e*Pn	Pn	13 57 32.3	+0.1
GEC2				*e*Sn	Sn	13 59 40.2	-6.7
GEC2	GERESS Array S	12.11	336	*e*P	Pn	13 57 32.3	+0.1
GEC2				*e*		13 59 40.2	
GERES	GERESS Array B	12.11	336	Pn	Pn	13 57 32.3	+0.1
	comp=N,0.3nm,0.3s,baz=154,slow=14,SNR=6.8						
GERES				Sn	Sn	13 59 40.2	-6.7
	comp=N,0.1nm,0.3s,baz=145,slow=22,SNR=3.5						
TUE	Stuetta	12.11	318	*e*Pn	Pn	13 57 35.0	+2.6
DAVA	Damuels	12.40	322	Sn	Sn	13 59 51.5	-2.5
	comp=N,4.8nm,0.6s						
KHC	Kasperske Hory	12.40	337	*e*P	Pn	13 57 34.9	-1.2
KHC				MLR	MLR		
	comp=Z,200nm,14.1s						
KHC	Kasperske Hory	12.40	337	*e*P	Pn	13 57 34.9	-1.2
KHC				AMS	AMS	14 03 20.0	
	comp=Z,200nm,14.1s						
GOPC	GO Pecny, Ondr	12.77	342	AMS	AMS	14 03 10.0	
	comp=Z,300nm,10.7s						
DPC	Dobruska-Polom	12.84	346	AMS	AMS	14 03 20.0	
	comp=Z,300nm,12.6s						
PRU	Pruhonice	12.90	341	AMS	AMS	14 03 10.0	
	comp=Z,300nm,11.7s						
UPC	Upice	13.05	346	AMS	AMS	14 03 30.0	
	comp=Z,300nm,17.0s						
OSTC	Ostas	13.06	346	AMS	AMS	14 03 30.0	
	comp=Z,300nm,10.4s						
CHVC	Chvalec	13.12	346	AMS	AMS	14 03 30.0	
	comp=Z,300nm,9.4s						
PVCC	Panska Ves	13.39	342	AMS	AMS	14 03 30.0	
	comp=Z,200nm,11.0s						
NKC	Novy Kostel	13.72	336	AMS	AMS	14 04 00.0	
	comp=Z,200nm,13.4s						
ANN	Anapa	14.12	56	*e*P	Pn	13 57 56.4	-3.1
ANN				*e*S	Sn	14 00 32.9	-2.9
ANN				pmax	pmax		
	comp=Z,28nm,0.9s						
SUW	Suwalki	16.15	5	*e*P	P	13 58 29.1	-0.5
	comp=Z,28nm,0.7s						
SUW	Suwalki	16.15	5	*e*P	P	13 58 29.1	-0.5
SUW				pmax	pmax		
	comp=Z,28nm,0.7s						
KIV	Kislovodsk	17.45	63	*e*P	P	13 58 45.9	+1.7
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV				MLR	MLR		
	comp=Z,47nm,14.0s						
GNI	Garni	18.58	76	LR	LR	14 06 28.3	
	comp=Z,24nm,19.7s,baz=320,slow=39						
ESDC	Sonseca Array	19.50	283	P	Pn	13 59 07.9	-0.2
	baz=77,slow=13,SNR=5.2						
OBN	Obninsk	20.17	27	*e*P	P	13 59 13.3	-0.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VSU	Vasula	20.88	9	⇓*e*P	P	13 59 21.3	-0.1
VSU				pmax	pmax		
	comp=Z,46nm,1.2s						
MDT	Midelt	21.45	264	LR	LR	14 08 56.8	
	comp=Z,37nm,18.1s,baz=354,slow=40						
HFS	Hagfors	22.69	351	P	P	13 59 40.8	-0.1
	comp=Z,3.4nm,0.6s,baz=155,slow=11,SNR=16						
HFS				LR	LR	14 09 30.9	
	comp=Z,34nm,18.2s,baz=172,slow=39						
FIA0	FINESS Array S	23.74	6	*e*P	P	13 59 51.0	-0.5
FIA0	FINESS Array S	23.74	6	*e*P	P	13 59 51.0	-0.5
FINES	FINESS Array B	23.74	6	P	P	13 59 51.0	-0.5
	comp=Z,0.9nm,0.5s,baz=174,slow=11,SNR=7.7						
FINES				LR	LR	14 10 03.6	
	comp=Z,68nm,18.5s,baz=205,slow=39						
NB2	NORSAR Subarra	23.92	348	P	P	13 59 53.2	-0.1
	comp=Z,4.6nm,1.2s,baz=161,slow=9.3						
NB200	NORSAR Array S	23.92	348	*e*P	P	13 59 53.2	-0.1
NOA	NORSAR Array B	23.92	348	P	P	13 59 53.2	-0.1
	comp=Z,1.4nm,0.9s,baz=157,slow=9.0,SNR=5.3						
NOA				LR	LR	14 10 03.5	
	comp=Z,17nm,18.6s,baz=175,slow=39						
NC303	NORSAR Array S	24.07	349	*e*P	P	13 59 58.0	+3.3
	comp=Z,22nm,1.1s						
KLMR	Klimovskoe	25.73	21	P	P	14 00 03.7	-6.0
KLMR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KIRV	Kirov	27.66	33	LR	LR	14 11 58.5	
	comp=Z,48nm,20.0s,baz=144,slow=38						
TOA1	Torodi Ar. Sit	30.07	220	*e*P	P	14 00 48.8	-0.2
TORD	Torodi Ar. Bea	30.08	220	P	P	14 00 48.8	-0.2
	comp=Z,0.7nm,0.6s,baz=40,slow=9.2,SNR=4.1						
ABKAR	Akbulak array	30.08	55	*e*P	P	14 00 50.1	+1.4
	comp=Z,3.0nm,1.3s						
BORG	Borgarnes	36.49	331	LR	LR	14 17 12.9	
	comp=Z,27nm,19.2s,baz=97,slow=37						
BRVK	Borovoye	36.93	50	⇑*e*P	P	14 01 49.4	+1.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.8s						
KURK	Kurchatov	42.13	53	⇑*e*P	P	14 02 34.7	+3.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSH	Kashi	42.37	70	*e*P	P	14 02 33.8	-0.1
KSH				LR	LR		
	comp=Z,62nm,5.9s						
KSH				LR	LR		
	comp=Z,76nm,7.3s						
MK31	Makanchi Array	45.12	58	*e*P	P	14 02 56.0	+0.2
	comp=Z,1.7nm,0.9s						
MK31	Makanchi Array	45.12	58	*e*P	P	14 02 56.0	+0.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK32	Makanchi Array	45.12	58	*e*P	P	14 02 54.1	-1.7
MKAR	Makanchi Array	45.12	58	P	P	14 02 54.2	-1.7
	comp=Z,0.6nm,0.4s,baz=276,slow=6.5,SNR=5.8						
ZAA1	Zalesovo Array	45.58	48	*e*P	P	14 02 58.2	-1.1
ZAA0	Zalesovo Array	45.58	48	*e*P	P	14 03 00.7	+1.4
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	45.58	48	P	P	14 02 58.2	-1.1
	comp=Z,1.3nm,0.4s,baz=275,slow=8.8,SNR=6.9						
DGZ	Jazzator, Alta	47.88	53	⇑*e*P	P	14 03 18.2	+0.6
WMQ	Urumqi	49.56	61	*e*P	P	14 03 33.5	+3.0
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,37nm,4.3s						
HHC	Hu-ho-hao-te	66.87	56	*e*P	P	14 05 32.0	+0.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,12nm,5.6s						
CMAR	Chiang Mai Arr	69.56	82	LR	LR	14 40 16.3	
	comp=Z,12nm,20.8s,baz=170,slow=40						
WHN	Wuhan	74.37	63	P	P	14 06 21.5	+4.1
NJ2	Nanjing	76.62	60	*e*P	P	14 06 30.5	+0.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
KS15	Wonju Array Si	79.19	51	*e*P	P	14 06 43.0	-1.5
	comp=Z,11nm,0.8s						
KSRS	Korea Array	79.20	51	P	P	14 06 43.0	-1.6
	comp=Z,0.3nm,0.5s,baz=314,slow=4.9,SNR=2.8						
KSRS	Korea Array	79.20	51	P	P	14 06 43.0	-1.6
KNK	Knik Glacier	80.62	355	*e*P	P	14 06 54.0	+2.1
	comp=Z,9.3nm,0.6s						
KDAK	Kodiak Island	84.48	357	*i* P	P	14 07 15.0	+3.0
B08A	Colville Reser	87.11	335	*e*P	P	14 07 26.7	+1.4
	comp=Z,18nm,0.6s						
TXAR	Lajitas Array	95.40	314	P	P	14 08 04.9	+0.6
	comp=Z,0.2nm,0.8s,baz=50,slow=4.9,SNR=3.1						
ASAR	Alice Springs	121.79	97	PKP	PKPdf	14 13 32.2	-1.7
	comp=Z,0.3nm,0.9s,baz=310,slow=1.6,SNR=3.3						
AS31	Alice Springs	121.79	97	*e*PKPdf	PKPdf	14 13 32.2	-1.7

DJA 28 13:56:43.0±0.9**, 9°S**±5°×**11°3E**±°**, h37**km±20km**, M3.6**/8**,**
MLv3.6/8**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.16	71	P	Pn	13 57 02.4	-0.3
JAGI				S	Sn	13 57 17.7	+0.3
PWJI	Pagerwojo	1.47	304	P	Pn	13 57 06.0	-1.0
PWJI				S	Sn	13 57 24.0	-1.0
GRJI	Gresik	2.00	344	P	Pn	13 57 14.5	+0.2
GRJI				S	Sn	13 57 39.1	+1.0
KMMI	Kalianget	2.01	27	P	Pn	13 57 14.1	-0.3
KMMI				S	Sn	13 57 37.7	-0.6
UGM	Wanagama	2.66	290	P	Pn	13 57 23.3	0.0
UGM				S	Sn	13 57 53.5	-0.9
KPJI	Karang Pucung	4.34	290	P	Pn	13 57 47.3	+0.9
KPJI				S	Sn	13 58 37.0	+1.2

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*IDC **28** 14:13:54.2±2.8, 38°.83N×28°.77E, h0km, mb3.4/4, mb1 3.3/6, mb1mx3.2/40, mbtmp3.3/6, ML3.2/2, Error ellipse: s-maj=35.3km s-min=18.1km az=30.0*
*ISK **28** 14:13:59.8, 39°.34N×29°.02E, h5km, ML3.9/34*

ISCJB ***28*** *14:14:00.5±0.3, 39°.35N±0°.01×29°.00E±0°.02, h4^{km}±3^{km}, mb3.4/4, Error ellipse: s-maj=2.6km s-min=2.3km az=173.6*

DDA ***28*** *14:14:00.3, 39°.37N×29°.02E, h4^{km}±3^{km}, ML3.6*

THE ***28*** *14:14:01.1, 39°.27N×29°.16E, h10^{km}±2^{km}, ML3.5/6, Error ellipse: s-maj=2.9km s-min=0.6km az=135.0*

ISC 28 14:14:00.6±1.0, **39°.35N**±0°.02×**29°.04E**±0°.02, **h6**^{km}±8^{km}, **n110,** σ**1^s.17**/132, **mb3.5**/4, **19C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.25	191	PG	Pg	14 14 06.1	+0.6
SMAA				SG	Sg	14 14 10.2	+1.4
TVSB	Tavsanli	0.34	72	PG	Pg	14 14 07.7	+0.4
SHAP	Saphane-Kutahy	0.35	157	PG	Pg	14 14 08.1	+0.7
SHAP				SG	Sg	14 14 12.9	+0.8
DEMI	Demirci	0.40	220	*i* P	Pg	14 14 08.4	+0.1
DEMI				*i* S	Sg	14 14 13.9	+0.4
DEMI				IAML_P			
	comp=Z,51µm,0.2s						
GEDZ	Gediz	0.41	136	PG	Pg	14 14 09.2	+0.6
GDZ	Gediz	0.42	127	*i* P	Pg	14 14 09.2	+0.3
DURS	Dursunbey	0.51	300	*i* P	Pg	14 14 10.9	+0.4
DURS				*i* S	Sg	14 14 17.0	-0.1
DURS				IAML_P			
	comp=Z,43µm,0.3s						
USAK	Uak-Merkez	0.63	182	*i* P	Pb	14 14 13.5	-0.6
USAK				*i* S	Sg	14 14 20.7	-0.2
ORLT	Orhaneli	0.71	351	PG	Pg	14 14 13.9	-0.4
ULDT	Uludag	0.80	5	*i* P	Pg	14 14 16.2	+0.2
ULDT				*i* S	Sg	14 14 26.1	-0.3
ULDT				IAML_P			
	comp=Z,14µm,0.2s						
KULA	Kula-Manisa	0.88	200	PG	Pg	14 14 17.3	-0.2
KULA	Kula-Manisa	0.88	200	P	Pg	14 14 17.1	-0.4
KULA				S	Sg	14 14 29.3	+0.3
MANT	Manisa	0.93	204	*i* P	Pg	14 14 18.4	-0.1
MANT				*i* S	Sg	14 14 29.3	-1.3
BALB	Balikesir	0.95	288	PG	Pb	14 14 19.2	-0.3
STEP	BALIKESIR_Sava	1.03	272	*i* P	Pb	14 14 20.7	-0.2
STEP				*i* S	Sb	14 14 34.4	-0.3
STEP				IAML_P			
	comp=Z,13µm,0.4s						
MDNY	Mudanya-Bursa	1.03	353	PG	Pg	14 14 20.0	-0.4
KHAL	Karahalli	1.03	160	*i* P	Pg	14 14 20.7	+0.2
KHAL				IAML_P			
	comp=Z,17µm,0.3s						
IZI	Iznik	1.04	18	PG	Pn	14 14 21.6	-0.3
KCTX	Karacabey (Bur	1.06	330	PG	Pg	14 14 20.7	-0.3
KCTX				SG	Sn	14 14 36.9	-0.3
AKHS	Akhisar	1.06	244	*i* P	Pb	14 14 21.2	-0.3
AKHS				IAML_P			
	comp=Z,11µm,0.1s						
GOMA	Golmarmara-Man	1.08	234	PG	Pb	14 14 21.6	-0.2
KHL	Karahalli	1.09	160	PN	Pg	14 14 21.1	-0.4
GEMT	Gemlik	1.09	6	PN	Pb	14 14 22.2	+0.2
GEMT				SN	Sn	14 14 38.2	+0.2
AFYO	Afyonkarahisar	1.12	119	*i* P	Pn	14 14 24.1	+1.0
AFYO				*i* S	Sn	14 14 40.4	+1.5
AUKIR	Kırka- Seyitga	1.16	93	*i* P	Pn	14 14 24.3	+0.9
ADVT	Abdulvahap	1.21	26	PN	Pn	14 14 24.3	+0.2
BORA	Eskisehir	1.21	63	PN	Pg	14 14 24.0	+0.1
BORA	Eskisehir	1.21	63	*i* P	Pn	14 14 24.3	+0.1
ARMT	Armutlu	1.23	354	PN	Pg	14 14 23.6	-0.6
YLV	Yalova	1.25	12	PN	Pn	14 14 24.9	+0.2
YLV	Yalova	1.25	12	⇑*i*P	Pn	14 14 25.2	+0.5
GONE	Gonen-Balikesi	1.26	304	PN	Pn	14 14 24.7	-0.1
EDC	Edincik	1.35	318	PN	Pb	14 14 26.3	-0.1
KZIL	AFYON_Kizioren	1.38	141	*i* P	Pg	14 14 27.1	-0.1
KZIL				IAML_P			
	comp=Z,4µm,0.3s						
SRCK	Saricakaya, Es	1.41	60	PN	Pg	14 14 27.6	0.0
SRCK	Saricakaya, Es	1.41	60	*i* P	Pg	14 14 27.8	+0.2
SRCK				*i* S	Sg	14 14 47.2	+1.4
ESKT	Eskisehir	1.41	82	PN	Pg	14 14 27.6	0.0
SHUT	Suhut-Afyon	1.42	123	PN	Pg	14 14 27.7	-0.1
GEYV	SAKARYA_Geyve	1.49	40	*i* P	Pb	14 14 28.5	-0.3
BUY	Buyukada	1.51	2	PN	Pb	14 14 28.8	-0.2
HRT	Hereke	1.55	18	PN	Pn	14 14 29.0	+0.1
CIFT	Cifteler, Eski	1.56	89	PN	Pb	14 14 30.2	+0.2
CIFT	Cifteler, Eski	1.56	89	*i* P	Pb	14 14 29.8	-0.2
GULT	Gulveren	1.57	46	PN	Pn	14 14 29.6	+0.5
ZEDA	zmir-Bergama	1.57	257	*i* P	Pg	14 14 30.9	+0.1
ZEDA				IAML_P			
	comp=Z,7µm,0.3s						
SPNC	Sapanca-Adapaz	1.66	36	PN	Pb	14 14 31.5	0.0
SAUV	Serdivan-Sakar	1.71	35	PN	Pb	14 14 32.1	-0.3
KAVV	Kandilli-Istan	1.72	0	PN	Pb	14 14 32.1	-0.5
ISK	Istanbul-Kandi	1.72	0	PN	Pb	14 14 32.0	-0.6
ISK	Istanbul-Kandi	1.72	0	P	Pn	14 14 30.6	-0.5
ISK				S	Sn	14 14 53.6	+0.2
AYVA	Ayvalik	1.83	270	*i* P	Pb	14 14 34.8	+0.3
AYVA				IAML_P			
	comp=Z,2µm,0.4s						
BRDR	BURDUR-Merkez	1.83	154	*i* P	Pn	14 14 32.9	+0.2
ELBA	Catalca	1.86	346	*i* P	Pg	14 14 35.9	-0.4
SILT	Sile	1.86	14	PN	Pb	14 14 34.1	-1.0
SILT	Sile	1.86	14	⇑*i*P	Pb	14 14 35.0	-0.1
TAVA	DENIZLI_Tavas	1.88	183	*i* P	Pn	14 14 33.7	+0.3
KLYT	Kilyos	1.91	360	⇑*i*P	Pb	14 14 35.1	-0.7
ISP	Isparta	1.91	142	P	Pn	14 14 30.6	-3.2
ISP	Isparta	1.91	142	⇓*i*P	Pg	14 14 37.3	+0.1
AYDN	Tasoluk	1.91	209	*i* P	Pn	14 14 33.3	-0.5
SVRH	Sivrihisar-ESK	1.92	86	PN	Pn	14 14 34.9	+0.9
AUSIV	SIVRIHISAR	1.94	86	PN	Pn	14 14 35.3	+1.1
AUSIV	SIVRIHISAR	1.94	86	*i* P	Pg	14 14 37.5	-0.2
AUMIH	MIHALICIK	1.96	74	PN	Pb	14 14 35.8	-0.9
AUMIH	MIHALICIK	1.96	74	*i* P	Pg	14 14 38.0	-0.1
KAND	Kocaeli-Kandir	1.96	26	*i* P	Pn	14 14 34.5	+0.2
SART	Tekirdag	1.96	314	*i* P	Pb	14 14 35.9	-0.9
SART				IAML_P			
	comp=Z,2µm,0.1s						
BAYC	CANAKKALE_Bayr	1.97	282	*i* P	Pn	14 14 34.3	-0.3
MDUB	Mudurnu	2.00	55	PN	Pn	14 14 36.2	+1.1
SAHE	Sakarya_HENDEK	2.05	42	*i* P	Pn	14 14 35.6	0.0
GOLH	Golhisar	2.14	169	*i* P	Pn	14 14 37.6	+0.6
URLA	Izmir	2.15	244	*i* P	Pg	14 14 42.3	+0.5
PRK	Paraskevi	2.15	268	P	Pn	14 14 37.8	+0.7
PRK				S	Sb	14 15 05.7	-1.3
	comp=Z,992nm,0.7s						
GCAM	G?zelcaml?	2.17	221	*i* P	Pg	14 14 41.6	-0.6
GCAM				IAML_P			
	comp=Z,3µm,0.6s						
CTYL	Yalikoy Yolu	2.20	345	⇓*i*P	Pb	14 14 40.5	-0.4
YER	Yerkesik	2.29	195	P	Pn	14 14 38.2	-0.8
SIGR	SIGRI	2.48	268	P	Pn	14 14 41.2	-0.3
SIGR				S	Sn	14 15 11.7	-0.4
	comp=Z,538nm,0.8s						
CHOS	Chios island	2.52	249	P	Pn	14 14 41.5	-0.7
PHSR	Pinarhisar	2.56	334	⇓*i*P	Pb	14 14 45.6	-1.4
ALN	Alexandroupoli	2.77	305	P	Pn	14 14 45.6	0.0
ALN				S	Sn	14 15 20.2	+0.8
	comp=Z,338nm,0.6s						
SMTH	Samothraki Isl	2.93	294	P	Pn	14 14 47.8	+0.1
SMTH				S	Sn	14 15 24.9	+1.7
	comp=Z,432nm,0.8s						
LIA	Limnos Island	3.03	282	P	Pn	14 14 49.4	+0.3
EDRB	Edirne	3.05	326	P	Pn	14 14 49.0	-0.4
RDO	Rodhopi	3.23	305	P	Pn	14 14 52.2	+0.3
RDO				S	Sn	14 15 32.2	+1.5
	comp=Z,188nm,1.2s						
BRTR	Keskin Array B	3.57	82	Pn	Pn	14 14 56.4	-0.4
	comp=Z,0.7nm,0.3s,baz=260,slow=12,SNR=19						
BRTR				Pg	Pg	14 15 08.0	-1.1
	comp=Z,2.2nm,0.3s,baz=257,slow=18,SNR=44						
BRTR				Sn	Sb	14 15 44.0	-4.0
	comp=Z,1.0nm,0.3s,baz=266,slow=16,SNR=2.7						
BRTR				Lg	Lg	14 15 55.7	
	comp=Z,1.4nm,0.3s,baz=259,slow=23,SNR=9.0						
RAZG	Razgrad	4.63	337	⇑*i*P	Pn	14 15 13.3	+2.2
TIRR	Tirgusor	5.13	355	⇑*i*P	Pn	14 15 17.5	-0.5
PLVB	Pleven	5.23	322	⇑*i*P	Pn	14 15 22.4	+3.0
TLB	Topalu	5.29	352	⇑*i*P	Pn	14 15 22.5	+2.3
VAY	Valandovo	5.33	294	*i* Pn	Pg	14 15 43.2	+0.6
HARR	Harsova	5.41	352	⇑*i*P	Pn	14 15 23.4	+1.7
STIP	Stip	5.73	296	*i* Pn	Pn	14 15 25.1	-1.1
TLCR		5.84	358	⇑*i*P	Pn	14 15 28.5	+0.8
CFR	Carcaliu	5.87	354	⇑*i*P	Pn	14 15 28.9	+0.8
MLR	Muntele Rosu	6.55	341	⇑*i*P	Pn	14 15 40.5	+2.8
PLOR	Plostina	6.74	346	⇑*i*P	Pn	14 15 42.7	+2.6
VRI	Vrincioaia	6.74	346	⇑*i*P	Pn	14 15 41.1	+1.0
VOIR		6.77	335	⇑*i*P	Pn	14 15 41.1	+0.6
ARR	Arges	6.85	333	⇑*i*P	Pn	14 15 41.1	-0.5
DOPR	Dopca	7.14	339	⇓*i*P	Pn	14 15 46.7	+1.0
TESR	Tescani	7.38	347	⇑*i*P	Pn	14 15 50.6	+1.8
MDB	Medias	7.61	335	⇑*i*P	Pn	14 15 54.6	+2.6
GZR	Gura Zlata	7.62	325	⇑*i*P	Pn	14 15 53.7	+1.5
BURAR	Bucovina Array	8.72	343	⇑*i*P	Pn	14 16 09.0	+1.6
AKASG	Malin Array Be	11.36	1	Pn	Pn	14 16 43.1	-0.2
	comp=Z,0.4nm,0.3s,baz=165,slow=14,SNR=3.7						
AKASG				Sn	Sn	14 18 55.6	+5.1
	comp=Z,0.3nm,0.3s,baz=172,slow=27,SNR=2.8						
VYHS	Vyhne	11.73	325	*e*PN	Pn	14 16 43.9	-4.6
FINES	FINESS Array B	22.20	356	P	P	14 18 57.8	+0.4
	comp=Z,2.7nm,0.8s,baz=166,slow=14,SNR=9.4						
AKTO	Aktyubinsk	23.18	52	P	P	14 19 07.2	-0.7
	comp=Z,0.6nm,0.5s,baz=226,slow=9.7,SNR=3.6						
ARU	Arti	25.86	39	P	P	14 19 31.1	-1.6
	comp=Z,0.3nm,0.3s,baz=240,slow=14,SNR=3.0						
MKAR	Makanchi Array	38.96	61	P	P	14 21 26.1	-1.3
	comp=Z,0.1nm,0.3s,baz=282,slow=6.1,SNR=2.1						

MAN 28 14:16:46.5, 13°.47N×120°.84E, h31^{km}, mb3.8, ML2.5, MS2.1, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.12	74	⇓*e*P	Pb	14 16 50.2	-1.9
PGP				*i* S	Sn	14 16 53.0	-2.8

IDC ***28*** *14:19:51.7±2.3, 37°.75N×144°.26E, h0^{km}, mb3.3/2, mb1 3.6/5, mb1mx3.3/47, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=51.3km s-min=26.5km az=134.0*

ISCJB ***28*** *14:19:54.3±0.8, 37°.84N±0°.04×143°.97E±0°.06, h33^{km}, mb3.3/2, Error ellipse: s-maj=6.9km s-min=5.6km az=12.5*

JMA ***28*** *14:19:55.8±0.2, 37°.95N×143°.91E, h41^{km}, M3.9*

ISC 28 14:19:56.7±1.4, **37°.92N**±0°.05×**143°.98E**±0°.09, **h35**^{km}, **n19,** σ**1^s.65**/34, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.02	282	P	Pn	14 20 27.6	-0.7
JIKH				S	Sn	14 20 50.7	-1.6
JIO	Ouri	2.14	285	P	Pn	14 20 29.4	-0.5
JIO				S	Sn	14 20 54.2	-1.1
OFUJ	Ofunato	2.15	303	P	Pn	14 20 29.6	-0.5
OFUJ				S	Sn	14 20 54.8	-0.8
JKMT	Kesennumamotoy	2.16	295	P	Pn	14 20 29.7	-0.5
JKMT				S	Sn	14 20 54.9	-0.9
JMK	Ichinoseki	2.40	296	P	Pn	14 20 33.2	-0.3
JMK				S	Sn	14 21 01.5	-0.2
JOM	Ohasama	2.61	307	P	Pn	14 20 36.4	-0.1
JOM				S	Sn	14 21 07.0	0.0
JFT	Otama	2.92	263	P	Pn	14 20 40.9	+0.3
JFT				S	Sn	14 21 14.0	-0.4
JYK	Kaneyama	3.01	290	P	Pn	14 20 42.3	+0.4
JYK				S	Sn	14 21 17.0	+0.2
JANG	Nango	3.11	323	P	Pn	14 20 43.0	-0.3
JANG				S	Sn	14 21 17.0	-2.3
BSO1	Boso 1	4.06	218	P	Pn	14 20 54.0	-1.8
BSO1				S	Sn	14 21 40.2	-1.6
JOT	Ohata	4.13	328	P	Pn	14 20 58.9	+1.6
JRY	Ryogami san	4.49	247	P	Pn	14 21 01.6	-0.6
JRY				S	Sn	14 21 49.7	-3.5
JKB	Kayabe	4.57	331	P	Pn	14 21 03.8	+0.5
JKB				S	Sn	14 21 52.7	-2.4
JCH	Churui	4.72	354	P	Pn	14 21 04.3	-1.0
JCH				S	Sn	14 21 55.4	-3.4
MJAR	Matsushiro Arr	4.80	255	Pn	Pn	14 21 07.1	+0.5
	0.1nm,0.3s,baz=79,slow=15,SNR=6.3						
MJAR				Sn	Sn	14 21 59.8	-1.2
	0.0nm,0.3s,baz=323,slow=23,SNR=2.3						
JHJ	Hachijo jima 2	5.88	217	Pn	Pn	14 21 19.2	-2.2
	4.0nm,0.3s,baz=307,slow=20,SNR=5.6						
JHJ				Sn	Sn	14 22 15.1	-13
	7.4nm,0.3s,baz=66,slow=16,SNR=3.0						
ASAJ	Asahikawa	6.28	351	Pn	Pn	14 21 26.4	-0.4
	2.1nm,0.3s,baz=192,slow=16,SNR=38						
ASAJ				Sn	Sn	14 22 33.2	-4.1
	0.4nm,0.3s,baz=221,slow=20,SNR=3.3						
MKAR	Makanchi Array	45.38	302	P	P	14 28 14.6	+2.9
	0.2nm,0.7s,baz=75,slow=10,SNR=2.8						
ILAR	Eielson Array	47.65	33	P	P	14 28 29.5	+0.4
	0.5nm,0.8s,baz=264,slow=6.9,SNR=6.1						

SOF ***28*** *14:25:02.1, 45°.68N×26°.43E, h10^{km}*

ISCJB ***28*** *14:25:03.6±0.2, 45°.67N±0°.01×26°.53E±0°.02, h97^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=2.1km az=41.4*

SIGU ***28*** *14:25:04.4±0.1, 46°N±1°×2°6E±°, h90^{km}, mb3.3/7*

BUC ***28*** *14:25:05.2±0.3, 45°.66N×26°.53E, h84^{km}±4^{km}, MD4.1/7, Error ellipse: s-maj=4.4km s-min=3.8km az=75.0*

BEO ***28*** *14:25:07.9±0.7, 45°.47N×25°.82E, h3^{km}±4^{km}, ML3.3/16*

ISC 28 14:25:04.0±1.1, **45°.67N**±0°.02×**26°.50E**±0°.02, **h96**^{km}±5^{km}, **n153,** σ**1^s.61**/221, **67C-38D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.21	30	⇑*i*P	Pn	14 25 17.5	-0.3
PLOR				*i* S	Sn	14 25 26.5	-1.5
PLOR	Plostina	0.21	30	⇑*i*P	Pn	14 25 17.5	-0.3
VRI	Vrincioaia	0.25	39	⇑*i*P	Pn	14 25 17.9	0.0
VRI				*i* S	Sn	14 25 26.9	-1.3
VRI	Vrincioaia	0.25	39	⇑*i*P	Pn	14 25 17.9	0.0
ODBI	Odobesti	0.40	77	⇓*i*P	Pn	14 25 19.5	+0.9
ODBI				*i* S	Sn	14 25 30.0	+0.5
ODBI	Odobesti	0.40	77	⇓*i*P	Pn	14 25 19.5	+0.9
MLR	Muntele Rosu	0.43	245	⇑*i*P	Pn	14 25 19.5	+0.5
MLR				*i* S	Sn	14 25 29.1	-1.1
MLR	Muntele Rosu	0.43	245	⇑*i*P	Pn	14 25 19.5	+0.5
GRER		0.44	131	⇓*i*P	Pn	14 25 19.9	+1.0
GRER				*i* S	Sn	14 25 29.3	-0.7
GRER		0.44	131	⇓*i*P	Pn	14 25 19.9	+1.0
PETR	Petresti	0.52	84	⇓*i*P	Pn	14 25 20.0	+0.6
PETR				*i* S	Sn	14 25 30.8	-0.1
PETR	Petresti	0.52	84	⇓*i*P	Pn	14 25 20.0	+0.6
ISR	Istrita	0.55	177	⇑*i*P	Pn	14 25 20.5	+0.7
ISR				*i* S	Sn	14 25 30.9	-0.7
ISR	Istrita	0.55	177	⇑*i*P	Pn	14 25 20.5	+0.7
OZUR		0.65	311	⇓*i*P	Pn	14 25 20.7	+0.1
OZUR				*i* S	Sn	14 25 31.7	-1.4
OZUR		0.65	311	⇓*i*P	Pn	14 25 20.7	+0.1
SECR		0.71	206	⇑*i*P	Pn	14 25 22.4	+1.3
SECR		0.71	206	⇑*i*P	Pn	14 25 22.4	+1.3
PLAR	PLOIESTI	0.83	204	⇑*i*P	Pn	14 25 23.5	+1.3
PLAR				*i* S	Sn	14 25 36.2	+0.3
PLAR	PLOIESTI	0.83	204	⇑*i*P	Pn	14 25 23.5	+1.3
DOPR	Dopca	0.83	291	⇓*i*P	Pn	14 25 22.8	+0.5
DOPR				*i* S	Sn	14 25 35.9	-0.1
DOPR	Dopca	0.83	291	⇓*i*P	Pn	14 25 22.8	+0.5
PGOR	Pogoanele	0.84	156	⇑*i*P	Pn	14 25 23.2	+0.9
PGOR				*i* S	Sn	14 25 35.8	-0.2
PGOR	Pogoanele	0.84	156	⇑*i*P	Pn	14 25 23.2	+0.9
TESR	Tescani	0.85	7	⇓*i*P	Pn	14 25 22.8	+0.4
TESR				*i* S	Sn	14 25 35.2	-1.1
TESR	Tescani	0.85	7	⇓*i*P	Pn	14 25 22.8	+0.4
BIR	Birlad	0.98	52	⇑*i*P	Pn	14 25 24.5	+0.6
BIR				*i* S	Sn	14 25 38.4	-0.5
BIR	Birlad	0.98	52	⇑*i*P	Pn	14 25 24.5	+0.6
SULR		1.01	190	⇑*i*P	Pn	14 25 25.3	+1.1
SULR				*i* S	Sn	14 25 39.7	+0.4
SULR		1.01	190	⇑*i*P	Pn	14 25 25.3	+1.1
VOIR		1.05	258	⇓*i*P	Pn	14 25 25.3	+0.6
VOIR				*i* S	Sn	14 25 39.8	-0.4
VOIR		1.05	258	⇓*i*P	Pn	14 25 25.3	+0.6
MTUR	Matau	1.11	247	⇓*i*P	Pn	14 25 27.9	+2.5
MTUR	Matau	1.11	247	⇓*i*P	Pn	14 25 27.9	+2.5
GIUM	Giurgiulesti	1.21	98	⇑*i*P	Pn	14 25 27.5	+1.0
GIUM				*i* S	Sn	14 25 43.8	+0.3
GIUM	Giurgiulesti	1.21	98	⇑*i*P	Pn	14 25 27.5	+1.0
GIUM	Giurgiulesti	1.21	98	P	Pn	14 25 27.5	+1.0
GIUM				S	Sn	14 25 43.8	+0.3
AMRR	Amara	1.22	151	⇑*i*P	Pn	14 25 27.5	+1.0
AMRR				*i* S	Sn	14 25 44.1	+0.6
AMRR	Amara	1.22	151	⇑*i*P	Pn	14 25 27.5	+1.0
LEHL	Lehliu	1.22	169	⇑*i*P	Pn	14 25 27.7	+1.1
LEHL				*i* S	Sn	14 25 44.6	+1.0
LEHL	Lehliu	1.22	169	⇑*i*P	Pn	14 25 27.7	+1.1
JOSR	Joseni	1.24	327	⇑*i*P	Pn	14 25 27.3	+0.4
JOSR				*i* S	Sn	14 25 45.2	+1.0
JOSR	Joseni	1.24	327	⇑*i*P	Pn	14 25 27.3	+0.4
CFR	Carcaliu	1.25	113	⇓*i*P	Pn	14 25 26.8	-0.2
CFR				*i* S	Sn	14 25 42.8	-1.5
CFR	Carcaliu	1.25	113	⇓*i*P	Pn	14 25 26.8	-0.2
BIZ	Bicaz	1.30	348	⇑*i*P	Pn	14 25 29.0	+1.5
BIZ				*i* S	Sn	14 25 46.4	+1.1
BIZ	Bicaz	1.30	348	⇑*i*P	Pn	14 25 29.0	+1.5
ARR	Arges	1.35	258	⇓*i*P	Pn	14 25 29.4	+1.2
ARR				*i* S	Sn	14 25 47.5	+1.0
ARR	Arges	1.35	258	⇓*i*P	Pn	14 25 29.4	+1.2
BUC1	Bucharest	1.37	194	⇑*i*P	Pn	14 25 29.4	+1.1
BUC1				*i* S	Sn	14 25 46.2	-0.5
BUC1	Bucharest	1.37	194	⇑*i*P	Pn	14 25 29.4	+1.1
GOLR		1.37	233	*i* S	Sn	14 25 47.4	+0.6
HARR	Harsova	1.41	134	⇓*i*P	Pn	14 25 29.3	+0.4
HARR	Harsova	1.41	134	⇓*i*P	Pn	14 25 29.3	+0.4
SGRR	Singureni	1.50	195	⇑*i*P	Pn	14 25 30.7	+0.7
SGRR				*i* S	Sn	14 25 49.8	+0.2
SGRR	Singureni	1.50	195	⇑*i*P	Pn	14 25 30.7	+0.7
RASA	Rasa	1.53	162	⇑*i*P	Pn	14 25 31.2	+0.9
RASA				*i* S	Sn	14 25 50.2	-0.1
RASA	Rasa	1.53	162	⇑*i*P	Pn	14 25 31.2	+0.9
TLB	Topalu	1.54	134	⇓*i*P	Pn	14 25 31.0	+0.5
TLB				*i* S	Sn	14 25 49.2	-1.3
TLB	Topalu	1.54	134	⇓*i*P	Pn	14 25 31.0	+0.5
MDB	Medias	1.55	288	⇑*i*P	Pn	14 25 32.1	+1.4
MDB				*i* S	Sn	14 25 51.5	+0.6
MDB	Medias	1.55	288	⇑*i*P	Pn	14 25 32.1	+1.4
HUMR	Humele	1.57	224	⇑*i*P	Pn	14 25 31.7	+0.8
HUMR				*i* S	Sn	14 25 51.3	0.0
HUMR	Humele	1.57	224	⇑*i*P	Pn	14 25 31.7	+0.8
PRAR	RASCA	1.70	354	⇑*i*P	Pn	14 25 34.0	+1.5
PRAR	RASCA	1.70	354	⇑*i*P	Pn	14 25 34.0	+1.5
TLCR		1.70	106	⇑*i*P	Pn	14 25 33.3	+0.8
TLCR				*i* S	Sn	14 25 54.6	+0.4
TLCR		1.70	106	⇑*i*P	Pn	14 25 33.3	+0.8
CVDA	Cernavoda	1.73	140	⇑*i*P	Pn	14 25 33.5	+0.7
CVDA				*i* S	Sn	14 25 54.3	-0.5
CVDA	Cernavoda	1.73	140	⇑*i*P	Pn	14 25 33.5	+0.7
ICOR	Ion Corvin	1.81	149	⇓*i*P	Pn	14 25 35.0	+1.1
ICOR				*i* S	Sn	14 25 56.2	-0.5
ICOR	Ion Corvin	1.81	149	⇓*i*P	Pn	14 25 35.0	+1.1
TIRR	Tirgusor	1.82	131	⇓*i*P	Pn	14 25 34.6	+0.6
TIRR				*i* S	Sn	14 25 55.2	-1.7
TIRR	Tirgusor	1.82	131	⇓*i*P	Pn	14 25 34.6	+0.6
LOT	Lotru	1.93	264	⇑*i*P	Pn	14 25 36.5	+0.9
LOT				*i* S	Sn	14 26 00.3	+0.6
LOT	Lotru	1.93	264	⇑*i*P	Pn	14 25 36.5	+0.9
MFTR	Murfatlar	2.02	137	⇓*i*P	Pn	14 25 37.3	+0.6
MFTR				*i* S	Sn	14 26 00.3	-1.3
MFTR	Murfatlar	2.02	137	⇓*i*P	Pn	14 25 37.3	+0.6
MILM	Milestii Mici	2.03	51	⇑*i*P	Pn	14 25 37.7	+1.0
MILM				*i* S	Sn	14 26 00.6	-1.1
MILM	Milestii Mici	2.03	51	⇑*i*P	Pn	14 25 37.7	+1.0
MILM	Milestii Mici	2.03	51	P	Pn	14 25 37.7	+1.0
KIS	Kishinev	2.08	50	*e*P	Pn	14 25 38.0	+0.6
KIS				*e*S	Sn	14 26 01.0	-2.0
	1µm,0.5s						
KIS	Kishinev	2.08	50	P	Pn	14 25 38.0	+0.6
KIS				Pm		14 25 38.0	
KIS				S	Sn	14 26 01.0	-2.0
KIS				m		14 26 01.5	
RAZG	Razgrad	2.11	180	*i* S	Sn	14 26 03.4	-0.2
BURAR	Bucovina Array	2.13	336	⇓*i*P	Pn	14 25 40.2	+2.0
TSCT	Constanta Port	2.15	134	⇑*i*P	Pn	14 25 39.1	+0.8
TSCT				*i* S	Sn	14 26 03.1	-1.5
TSCT	Constanta Port	2.15	134	⇑*i*P	Pn	14 25 39.1	+0.8
ZIMR		2.17	202	⇓*i*P	Pn	14 25 39.4	+0.8
ZIMR				*i* S	Sn	14 26 04.4	-0.7
ZIMR		2.17	202	⇓*i*P	Pn	14 25 39.4	+0.8
EFOR	EFORIE	2.20	136	⇑*i*P	Pn	14 25 39.8	+0.9
EFOR				*i* S	Sn	14 26 05.9	+0.2
EFOR	EFORIE	2.20	136	⇑*i*P	Pn	14 25 39.8	+0.9
VLAD	Vladila	2.24	222	⇑*i*P	Pn	14 25 40.1	+0.6
VLAD				*i* S	Sn	14 26 05.5	-1.2
VLAD	Vladila	2.24	222	⇑*i*P	Sn	14 26 09.3	+2.6
CJR	Cluj-Napoca	2.27	298	⇓*i*P	Pn	14 25 41.3	+1.4
PSN	Preselentsi	2.32	148	*i* P	Pn	14 25 42.0	+1.4
MANR	Mangalia	2.38	141	⇑*i*P	Pn	14 25 42.2	+0.9
MANR				*i* S	Sn	14 26 09.3	-0.6
TSMN	Mangalia Port-	2.39	141	⇓*i*P	Pn	14 25 41.9	+0.4
TSMN				*i* S	Sn	14 26 10.6	+0.3
DEV	Deva	2.53	276	⇑*i*P	Pn	14 25 45.2	+1.9
SRE	Strehaia	2.54	248	⇑*i*P	Pn	14 25 44.7	+1.2
SRE				*i* S	Sn	14 26 14.1	+0.3
PRD	Provadia	2.56	165	*i* P	Pn	14 25 45.4	+1.7
GZR	Gura Zlata	2.63	265	⇑*i*P	Pn	14 25 46.3	+1.5
PLVB	Pleven	2.65	211	⇑*i*P	Pn	14 25 45.5	+0.5
PLVB				*i* S	Sn	14 26 14.6	-1.8
CHRU	Chernivtsi	2.66	352	*e*S	Sn	14 26 16.1	-0.4
CHRU				Sm		14 26 20.5	
ELND	Elena	2.78	190	⇑*i*P	Pn	14 25 47.9	+1.2
ELND				*i* S	Sn	14 26 19.1	-0.4
BAIL	Bailesti	2.79	235	⇑*i*P	Pn	14 25 47.8	+1.1
BAIL				*i* S	Sn	14 26 19.3	-0.3
KSV	Kosov	2.82	340	*e*P	Pn	14 25 48.9	+1.7
KSV				Pm		14 25 52.7	
KSV				*i* S	Sn	14 26 20.5	+0.1
KSV				Sm		14 26 21.1	
RAKU	Rahkiv	2.85	327	*i* P	Pn	14 25 49.1	+1.5
DRGR		2.86	294	*e*Pn	Pn	14 25 49.1	+1.3
DRGR				*e*Sn	Sn	14 26 21.9	+0.4
DRGR		2.86	294	⇑*i*P	Pn	14 25 49.1	+1.3
BMR	Baia Mare	2.88	315	⇑*i*P	Pn	14 25 49.7	+1.7
NSLU	Nyzhne Selyshc	2.89	332	*e*P	Pn	14 25 54.6	+6.5
KMPD	K-Podol'skiy	2.89	359	*i* P	Pn	14 25 48.5	+0.4
KMPD				⇓*i*S	Sn	14 26 20.2	-1.9
NDNU	Novodnistrovsk	2.98	11	*i* P	Pn	14 25 50.0	+0.6
NDNU				Pm		14 25 50.4	
NDNU				*i* S	Sn	14 26 21.9	-2.4
NDNU				Sm		14 26 23.1	
HERR	Herculane	2.99	256	⇑*i*P	Pn	14 25 50.5	+1.0
HERR				*i* S	Sn	14 26 23.8	-0.7
KORU	Korolevo	3.39	318	⇓*i*P	Pn	14 25 56.0	+1.2
BZS	Buzias	3.43	271	*e*Pn	Pn	14 25 54.7	-0.6
BZS	Buzias	3.43	271	⇓*i*P	Pn	14 25 56.2	+0.9
SIRR	Siria	3.43	282	⇑*i*P	Pn	14 25 57.2	+1.8
MEZ	Mezhgor'ye	3.50	325	*e*P	Pn	14 25 57.7	+1.4
HORU	Horodok	3.54	359	*e*S	Sn	14 26 36.5	-1.3
ZAGS	Zajecar	3.56	240	*e*Pn	Pn	14 25 56.4	-0.8
ZAGS				*e*Sn	Sn	14 26 33.6	-4.7
BRIU	Brid	3.58	319	*i* P	Pn	14 25 57.8	+0.5
KUBS	Kucevo	3.65	251	*e*Pn	Pn	14 25 57.2	-1.1
ZAPS	Zavoj	3.66	230	*e*Pn	Pn	14 25 58.3	-0.3
ZAPS				*e*Sn	Sn	14 26 36.1	-4.7
MUKU	Mukachevo	3.81	318	*i* P	Pn	14 26 01.5	+1.0
VTS	Vitosha	3.85	219	*e*Pn	Pn	14 26 02.3	+1.1
VTS				*e*Sn	Sn	14 26 42.9	-2.7
VTS	Vitosha	3.85	219	⇑*i*P	Pn	14 26 02.7	+1.5
VTS				*i* S	Sn	14 26 43.1	-2.5
VTS	Vitosha	3.85	219	P	Pn	14 26 02.6	+1.4
MORS	Morshin	3.89	334	*e*P	Pn	14 26 04.9	+3.4
BOVS	Bovan	3.98	241	*e*Pn	Pn	14 26 02.9	+0.1
BOVS				*e*Sn	Sn	14 26 43.9	-4.5
STZU	Stuzhytsa	4.26	323	⇑*i*P	Pn	14 26 08.6	+2.1
KOLS	Kolonicke sedl	4.35	320	*e*PN	Pn	14 26 09.6	+1.8
BARS	Barje	4.41	231	*e*Pn	Pn	14 25 55.9	-13
BARS	Barje	4.41	231	*e*Pn	Pn	14 26 09.1	+0.4
BARS				*e*Sn	Sn	14 26 32.5	-26
BARS				*e*Sn	Sn	14 26 54.9	-4.0
GRUS	Gruza	4.49	249	*e*Pn	Pn	14 26 09.7	0.0
GRUS				*e*Sn	Sn	14 26 56.2	-4.5
KKB	Krupnik	4.54	214	P	Pn	14 26 12.0	+1.6
MMB	Musomiste	4.55	207	P	Pn	14 26 12.0	+1.4
TRUS	Trudelj	4.56	254	*e*Pn	Pn	14 26 11.0	+0.3
TRUS				*e*Sn	Sn	14 26 58.2	-4.3
SELS	Selova	4.57	239	*e*Pn	Pn	14 26 10.8	0.0
SELS				*e*Sn	Sn	14 26 57.5	-5.2
DIVS	Divibare	4.89	254	*e*Pn	Pn	14 26 15.5	+0.4
DIVS				*e*Sn	Sn	14 27 04.7	-5.8
IVAS	Ivanjica	4.99	247	*e*Pn	Pn	14 26 16.4	-0.2
IVAS				*e*Sn	Sn	14 27 07.1	-5.9
STIP	Stip	5.06	220	*i* Pn	Pn	14 26 16.3	-1.1
SEV	Sevastopol'	5.20	100	P	Pn	14 26 17.9	-1.4
SEV				Pm		14 26 19.7	
SEV				S	Sn	14 27 13.6	-4.3
SEV				Sm		14 27 18.1	
VAY	Valandovo	5.20	215	*i* Pn	Pn	14 26 21.5	+2.1
SJES	Sjenica	5.26	245	*e*Pn	Pn	14 26 20.2	0.0

SJES				*e*Sn	**Sn**	**14 27 13.1**	**-6.4**
BBLS	**Lazići**	**5.37**	**253**	*e*Pn	**Pn**	**14 26 22.1**	**+0.5**
BBLS				*e*Sn	**Sn**	**14 27 16.1**	**-6.0**
SIM	**Simferopol'**	**5.42**	**95**	P	**Pn**	**14 26 23.2**	**+0.9**
SIM				Pm		14 26 24.2	
SIM				S	**Sn**	**14 27 22.0**	**-1.3**
SIM				Sm		14 27 22.3	
SIM				m		14 27 27.9	
YAL	**Yalta**	**5.55**	**100**	P	**Pn**	**14 26 24.6**	**+0.6**
YAL				Pm		14 26 25.0	
YAL				S	**Sn**	**14 27 25.4**	**-1.0**
YAL				Sm		14 27 32.3	
ALU	**Alushta**	**5.67**	**97**	P	**Pn**	**14 26 25.8**	**+0.1**
ALU				Pm		14 26 26.3	
ALU				S	**Sn**	**14 27 28.2**	**-1.3**
ALU				Sm		14 27 32.2	
VYHS	**Vyhne**	**5.95**	**301**	*e*PN	**Pn**	**14 26 31.5**	**+2.0**
VYHS				*e*		14 26 40.5	
SRO	**Srobarova**	**6.02**	**294**	*e*PN	**Pn**	**14 26 32.8**	**+2.4**
SUDU	**Sudak**	**6.05**	**94**	P	**Pn**	**14 26 31.1**	**+0.3**
SUDU				Pm		14 26 32.8	
SUDU				S	**Sn**	**14 27 36.5**	**-2.1**
SUDU				Sm		14 27 39.8	
KHC	**Kasperske Hory**	**9.42**	**296**	*e*PN	**Pn**	**14 27 20.0**	**+3.3**

WEL 28 14:31:20.6, 42°S±2°×17°4E±°, h12^{km}±3^{km}, M3.3/31, ML3.5/25, MLv3.3/31, Error ellipse: s-maj=0.0km s-min=0.0km az=147.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.12**	**199**	P	Pg	14 31 24.0	+0.4
CMWZ				S	Sg	14 31 27.2	+1.4
BSWZ	**Blackbirch Sta**	**0.30**	**256**	P	Pb	14 31 27.4	-0.5
BSWZ				S	Sb	14 31 32.2	-0.7
TUWZ	**Tuamarina**	**0.32**	**311**	P	Pb	14 31 27.8	-0.5
TUWZ				S	Sb	14 31 33.2	-0.2
TCW	**Tory Channel**	**0.43**	**1**	P	Pb	14 31 29.6	-0.5
TCW				S	Sb	14 31 36.0	-0.5
BHW	**Baring Head**	**0.51**	**63**	P	Pb	14 31 31.6	+0.1
PLWZ	**Palliser**	**0.75**	**85**	P	Pb	14 31 36.3	+0.7
MSWZ	**Moikau Station**	**0.77**	**73**	P	Pb	14 31 36.5	+0.5
NNZ	**Nelson**	**0.79**	**302**	P	Pb	14 31 36.1	-0.1
CAW	**Cannon Point**	**0.81**	**49**	P	Pb	14 31 36.8	+0.2
DUWZ	**D'Urville Isla**	**0.88**	**343**	P	Pb	14 31 37.9	+0.1
PAWZ	**Paruwai Farm**	**0.91**	**74**	P	Pn	14 31 39.2	-0.1
KHZ	**Kahutara**	**0.94**	**215**	P	Pn	14 31 40.1	+0.5
THZ	**Tophouse**	**1.02**	**263**	P	Pn	14 31 40.6	-0.3
MTW	**Mount Morrison**	**1.05**	**63**	P	Pn	14 31 41.5	+0.3
OGWZ	**Otaki Gorge**	**1.07**	**40**	P	Pg	14 31 41.1	0.0
TRWZ	**Traveller**	**1.10**	**78**	P	Pg	14 31 41.6	-0.1
HOWZ	**Holdsworth Sta**	**1.20**	**52**	P	Pg	14 31 44.0	+0.4
TMWZ	**Te Maipa**	**1.33**	**67**	P	Pb	14 31 45.5	-0.1
MRZ	**Mangatainoka R**	**1.39**	**46**	P	Pb	14 31 46.5	0.0
TIWZ	**Tintock**	**1.50**	**55**	P	Pn	14 31 47.8	+0.4
QRZ	**Quartz Range**	**1.54**	**301**	P	Pg	14 31 49.6	-0.5
GVZ	**Greta Valley S**	**1.61**	**214**	P	Pn	14 31 49.1	+0.2
OHWZ	**Ohakea**	**1.64**	**29**	P	Pb	14 31 51.4	+0.6
PRWZ	**Pori Road**	**1.69**	**50**	P	Pn	14 31 50.4	+0.5
POWZ	**Post Office Ro**	**1.69**	**43**	P	Pn	14 31 50.6	+0.7
BFZ	**Birch Farm**	**1.78**	**58**	P	Pn	14 31 51.2	+0.1
DSZ	**Denniston Nort**	**1.85**	**266**	P	Pb	14 31 54.2	-0.1
LTZ	**Lake Taylor**	**1.87**	**232**	P	Pn	14 31 53.2	+0.7
AMCZ	**Amberley**	**1.94**	**217**	P	Pn	14 31 53.2	-0.3
WAZ	**Wanganui**	**1.96**	**16**	P	Pb	14 31 56.4	+0.2
DVHZ	**Dannevirke**	**1.97**	**48**	P	Pn	14 31 54.0	+0.3
TSZ	**Takapari Road**	**2.04**	**40**	P	Pn	14 31 55.8	+1.0
NMEZ	**Namu Road**	**2.24**	**352**	P	Pg	14 32 02.9	-0.7
OKCZ	**Okains Bay**	**2.26**	**203**	P	Pn	14 31 57.1	-0.8
PREZ	**Palmer Road**	**2.30**	**358**	P	Pb	14 32 03.0	+1.0
KHEZ	**Kahui Hut**	**2.35**	**355**	P	Pb	14 32 03.1	+0.1
OXZ	**Oxford**	**2.36**	**224**	P	Pn	14 31 58.5	-0.6
INZ	**Inchbonnie**	**2.36**	**242**	P	Pn	14 32 00.2	+1.1
MQZ	**McQueen's Vall**	**2.38**	**209**	P	Pn	14 31 58.0	-1.4
MTVZ	**Mangateitei**	**2.43**	**23**	P	Pb	14 32 04.9	+0.5
DREZ	**Durham Road**	**2.45**	**359**	P	Pg	14 32 06.6	-1.0
PKE	**Pukeiti**	**2.45**	**355**	P	Pb	14 32 04.3	-0.3
PKVZ	**Pokaka**	**2.49**	**20**	P	Pb	14 32 06.3	+1.0
MOVZ	**Moawhango**	**2.50**	**27**	P	Pb	14 32 06.0	+0.4
VRZ	**Vera Road**	**2.54**	**9**	P	Pb	14 32 05.5	-0.6
BHHZ	**Black Hill Sta**	**2.55**	**33**	P	Pb	14 32 06.8	+0.5
KRHZ	**Kereru**	**2.56**	**39**	P	Pb	14 32 05.0	-1.4
WHVZ	**Whangaehu Hut**	**2.56**	**24**	P	Pb	14 32 07.4	+0.8
FWVZ	**Far West T-bar**	**2.58**	**23**	P	Pb	14 32 07.8	+0.9
TUVZ	**Tukino**	**2.60**	**25**	P	Pb	14 32 08.4	+1.3
NGZ	**Ngauruhoe**	**2.67**	**23**	P	Pb	14 32 09.1	+0.8
WTVZ	**West Tongariro**	**2.72**	**22**	P	Pb	14 32 10.1	+0.9
TWVZ	**Taurewa**	**2.72**	**20**	P	Pb	14 32 10.6	+1.4
KRVZ	**Karewarewa**	**2.75**	**23**	P	Pb	14 32 11.0	+1.2
KWHZ	**Kaweka Forest**	**2.76**	**37**	P	Pb	14 32 11.5	+1.7
KATZ	**Kakaramea**	**2.88**	**23**	P	Pb	14 32 13.1	+1.2
RITZ	**Rihia Road**	**2.93**	**25**	P	Pb	14 32 14.6	+1.9
WVZ	**Waitaha Valley**	**2.98**	**240**	P	Pb	14 32 14.1	+0.5
BKZ	**Black Stump Fm**	**3.00**	**35**	P	Pb	14 32 15.7	+1.7
RATZ	**Rangitukua**	**3.00**	**23**	P	Pg	14 32 16.1	-2.0
RPZ	**Rata Peaks**	**3.15**	**228**	P	Pn	14 32 11.4	+1.4
HIZ	**Hauiti**	**3.16**	**8**	P	Pb	14 32 15.1	-1.5
TLZ	**Tolley Road**	**3.45**	**17**	P	Pb	14 32 22.8	+1.2
FOZ	**Fox Glacier**	**3.79**	**239**	P	Pb	14 32 24.7	-2.7
MKAZ	**Moumakai**	**4.58**	**9**	P	Pb	14 32 37.1	-3.9
JCZ	**Jackson Bay**	**4.70**	**237**	P	Pn	14 32 35.8	+4.3
WMGZ	**Waiomatatini S**	**4.98**	**41**	P	Pn	14 32 40.1	+4.9

WEL 28 14:35:29.0, 42°S±2°×17°4E±°, h17^{km}±4^{km}, M3.4/32, ML3.6/24, MLv3.4/32, Error ellipse: s-maj=0.0km s-min=0.0km az=132.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.09**	**270**	P	Pg	14 35 32.4	-0.1
CMWZ				S	Sg	14 35 35.5	+0.8
BSWZ	**Blackbirch Sta**	**0.35**	**276**	P	Pb	14 35 36.9	+0.3
BSWZ				S	Sb	14 35 42.8	+0.9
TUWZ	**Tuamarina**	**0.43**	**317**	P	Pb	14 35 38.1	-0.1
TUWZ				S	Sb	14 35 44.9	+0.5
BHW	**Baring Head**	**0.53**	**50**	P	Pb	14 35 39.9	+0.2
TCW	**Tory Channel**	**0.54**	**355**	P	Pg	14 35 39.7	0.0
PLWZ	**Palliser**	**0.71**	**76**	P	Pn	14 35 44.3	0.0
PLWZ				S	Sn	14 35 56.2	+1.3
MSWZ	**Moikau Station**	**0.76**	**64**	P	Pn	14 35 44.8	-0.2
MSWZ				S	Sn	14 35 57.6	+1.5
CAW	**Cannon Point**	**0.84**	**41**	P	Pg	14 35 45.4	0.0
KHZ	**Kahutara**	**0.89**	**221**	P	Pn	14 35 47.8	+1.1
NNZ	**Nelson**	**0.89**	**306**	P	Pg	14 35 46.3	0.0
PAWZ	**Paruwai Farm**	**0.90**	**66**	P	Pn	14 35 47.2	+0.3
PAWZ				S	Sn	14 36 00.7	+1.2
DUWZ	**D'Urville Isla**	**1.00**	**342**	P	Pb	14 35 47.8	+0.1
MTW	**Mount Morrison**	**1.06**	**56**	P	Pg	14 35 49.4	-0.1
MTW				S	Sn	14 36 05.1	+1.8
THZ	**Tophouse**	**1.07**	**269**	P	Pg	14 35 50.3	+0.6
TRWZ	**Traveller**	**1.07**	**71**	P	Pn	14 35 49.3	+0.1
OGWZ	**Otaki Gorge**	**1.12**	**34**	P	Pb	14 35 50.2	+0.2
HOWZ	**Holdsworth Sta**	**1.23**	**47**	P	Pb	14 35 51.8	0.0
TMWZ	**Te Maipa**	**1.33**	**62**	P	Pn	14 35 52.9	0.0
MRZ	**Mangatainoka R**	**1.44**	**41**	P	Pn	14 35 54.7	+0.5
TIWZ	**Tintock**	**1.52**	**51**	P	Pn	14 35 55.5	+0.1
GVZ	**Greta Valley S**	**1.55**	**218**	P	Pb	14 35 56.7	-0.6
CPWZ	**Castlepoint**	**1.64**	**60**	P	Pn	14 35 57.2	+0.2
QRZ	**Quartz Range**	**1.65**	**304**	P	Pb	14 35 59.5	+0.6
OHWZ	**Ohakea**	**1.71**	**26**	P	Pb	14 36 00.1	+0.1
PRWZ	**Pori Road**	**1.72**	**47**	P	Pn	14 35 58.3	+0.2
POWZ	**Post Office Ro**	**1.74**	**39**	P	Pn	14 35 58.5	+0.2
BFZ	**Birch Farm**	**1.79**	**54**	P	Pn	14 35 58.9	-0.2
LTZ	**Lake Taylor**	**1.85**	**235**	P	Pn	14 36 01.0	+1.1
AMCZ	**Amberley**	**1.89**	**221**	P	Pn	14 36 00.9	+0.4
DSZ	**Denniston Nort**	**1.89**	**269**	P	Pb	14 36 02.8	-0.3
DVHZ	**Dannevirke**	**2.00**	**44**	P	Pn	14 36 01.6	-0.5
WAZ	**Wanganui**	**2.05**	**14**	P	Pb	14 36 05.2	-0.5
TSZ	**Takapari Road**	**2.09**	**37**	P	Pn	14 36 03.6	+0.3
OKCZ	**Okains Bay**	**2.19**	**205**	P	Pn	14 36 04.3	-0.3
CRLZ	**Canterbury Las**	**2.22**	**214**	P	Pn	14 36 04.6	-0.4
LREZ	**Lake Rotokare**	**2.29**	**1**	P	Pb	14 36 10.3	+0.5
MQZ	**McQueen's Vall**	**2.31**	**212**	P	Pn	14 36 05.6	-0.7
OXZ	**Oxford**	**2.32**	**226**	P	Pn	14 36 06.1	-0.2
PNHZ	**Pukenui**	**2.32**	**38**	P	Pn	14 36 05.9	-0.4
WPHZ	**Waipukurau**	**2.32**	**44**	P	Pn	14 36 06.4	0.0
INZ	**Inchbonnie**	**2.36**	**245**	P	Pn	14 36 08.4	+1.5
NMEZ	**Namu Road**	**2.36**	**351**	P	Pg	14 36 13.7	-0.5
PREZ	**Palmer Road**	**2.41**	**357**	P	Pb	14 36 12.3	+0.5
KHEZ	**Kahui Hut**	**2.46**	**354**	P	Pb	14 36 13.3	+0.5
NBEZ	**Newall Road No**	**2.50**	**352**	P	Pb	14 36 14.0	+0.5
MTVZ	**Mangateitei**	**2.52**	**20**	P	Pb	14 36 12.5	-1.2
DREZ	**Durham Road**	**2.56**	**358**	P	Pb	14 36 16.2	+1.7
PKE	**Pukeiti**	**2.57**	**354**	P	Pb	14 36 14.2	-0.3
PKVZ	**Pokaka**	**2.58**	**18**	P	Pb	14 36 12.9	-1.8
MOVZ	**Moawhango**	**2.58**	**25**	P	Pn	14 36 12.2	+2.2
KRHZ	**Kereru**	**2.61**	**37**	P	Pn	14 36 10.3	-0.1
BHHZ	**Black Hill Sta**	**2.61**	**31**	P	Pn	14 36 11.6	+1.1
VRZ	**Vera Road**	**2.64**	**7**	P	Pb	14 36 14.2	-1.6
WHVZ	**Whangaehu Hut**	**2.64**	**22**	P	Pn	14 36 12.9	+1.9
FWVZ	**Far West T-bar**	**2.66**	**21**	P	Pn	14 36 13.4	+2.2
TUVZ	**Tukino**	**2.67**	**23**	P	Pn	14 36 13.2	+1.8
KAHZ	**Kahuranaki**	**2.75**	**45**	P	Pn	14 36 13.5	+1.2
NGZ	**Ngauruhoe**	**2.75**	**21**	P	Pn	14 36 14.4	+2.1
WTVZ	**West Tongariro**	**2.80**	**20**	P	Pb	14 36 16.6	-2.0
TWVZ	**Taurewa**	**2.81**	**18**	P	Pb	14 36 20.0	+1.3
KWHZ	**Kaweka Forest**	**2.81**	**35**	P	Pn	14 36 13.9	+0.7
KRVZ	**Karewarewa**	**2.83**	**21**	P	Pb	14 36 20.4	+1.3
KATZ	**Kakaramea**	**2.96**	**21**	P	Pb	14 36 23.0	+1.6
WVZ	**Waitaha Valley**	**2.98**	**242**	P	Pn	14 36 17.5	+2.2
BKZ	**Black Stump Fm**	**3.06**	**33**	P	Pb	14 36 24.9	+1.9
RPZ	**Rata Peaks**	**3.12**	**230**	P	Pn	14 36 17.9	+0.6
HIZ	**Hauiti**	**3.26**	**7**	P	Pn	14 36 22.4	+3.2
MTHZ	**Maungataniwha**	**3.47**	**34**	P	Pb	14 36 27.0	-3.0
TLZ	**Tolley Road**	**3.54**	**16**	P	Pb	14 36 28.8	-2.4
LBZ	**Lake Benmore**	**4.02**	**228**	P	Pn	14 36 34.3	+4.5
MWZ	**Matawai**	**4.20**	**37**	P	Pn	14 36 31.5	-0.7
ODZ	**Otahua Downs**	**4.25**	**218**	P	Pn	14 36 32.8	-0.1
MKAZ	**Moumakai**	**4.68**	**8**	P	Pn	14 36 43.8	+4.9
AWAZ	**Awhitu Peninsu**	**4.69**	**3**	P	Pn	14 36 43.7	+4.8
JCZ	**Jackson Bay**	**4.69**	**238**	P	Pb	14 36 46.5	-4.3
ETAZ	**East Tamaki Re**	**4.81**	**6**	P	Pn	14 36 44.6	+4.0
CTZ	**Chatham Island**	**6.95**	**110**	P	Pn	14 37 12.4	+2.5

ISK ***28*** *14:52:25.8, 38.°18N×38.°25E, h13^{km}, ML1.8/5*
ISCJB ***28*** *14:52:26.1±0.7, 38.°14N±0.°05×38.°25E±0.°04, h9^{km}, Error ellipse: s-maj=7.3km s-min=4.6km az=0.3*
DDA ***28*** *14:52:26.8, 38.°22N×38.°23E, h7^{km}±1^{km}, ML2.8*
ISC 28 14:52:26.0±1.0, 38.°16N±0.°05×38.°24E±0.°04, h9^{km}, n10, σ0^{s}41/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.28**	**299**	*i* P	**Pb**	**14 52 32.5**	**-0.8**
ELZG	**Elazig**	**0.68**	**60**	*i* P	**Pb**	**14 52 40.3**	**+0.2**
ELZG				*i* S	**Sb**	**14 52 49.4**	**-0.3**
DARE	**Darende-Malaty**	**0.72**	**305**	PG	**Pg**	**14 52 40.2**	**+0.3**
DARE				SG	**Sb**	**14 52 50.8**	**0.0**
HEKM	**Malatya_Hekimh**	**0.75**	**343**	*i* P	**Pb**	**14 52 41.7**	**+0.3**
HEKM				IAML_P			
	comp=Z,2µm,0.2s						
URFA	**Urfa**	**0.86**	**147**	PG	**Pg**	**14 52 42.9**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.87**	**75**	PG	**Pg**	**14 52 42.8**	**0.0**
SVRC				SG	**Sb**	**14 52 54.9**	**-0.4**
KEMA	**Kemaliye**	**1.12**	**10**	*i* P	**Pb**	**14 52 47.2**	**-0.5**
KMRS	**Kahramanmaras**	**1.24**	**239**	PN	**Pn**	**14 52 49.7**	**+0.1**
GAZ	**Gaziantep**	**1.28**	**220**	PN	**Pn**	**14 52 50.2**	**+0.1**
CUKAN	**kangal_SIVAS**	**1.30**	**333**	*i* P	**Pg**	**14 52 51.5**	**+0.5**

ISCJB ***28*** *14:55:05.5±0.6, 36.°12N±0.°04×35.°64E±0.°04, h13^{km}, Error ellipse: s-maj=6.2km s-min=5.0km az=156.4*
DDA ***28*** *14:55:05.6, 36.°32N×35.°64E, h8^{km}±2^{km}, ML2.4*
ISK ***28*** *14:55:05.6, 36.°19N×35.°74E, h30^{km}, ML2.5/11*
ISC 28 14:55:05.2±1.2, 36.°23N±0.°06×35.°68E±0.°04, h13^{km}, n20, σ0^{s}91/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.40**	**118**	*i* P	**Pn**	**14 55 15.6**	**-1.2**
YAYL				IAML_P			
	comp=Z,15nm,0.1s						
KRTD	**Karatas-Adana**	**0.42**	**330**	PG	**Pn**	**14 55 16.5**	**-0.5**
KRTD				SG	**Sn**	**14 55 24.4**	**-0.2**
KRTS	**Karatas**	**0.42**	**325**	PG	**Pn**	**14 55 16.9**	**-0.1**
KRTS				SG	**Sn**	**14 55 24.5**	**-0.2**
CEYT	**Ceyhan**	**0.79**	**4**	PG	**Pn**	**14 55 21.2**	**-0.8**
CEYT				SG	**Sn**	**14 55 32.9**	**-0.7**
MERS	**Mersin**	**1.13**	**305**	PN	**Pb**	**14 55 26.4**	**-0.2**
KARA	**Karaisali**	**1.15**	**334**	PN	**Pg**	**14 55 26.8**	**-0.5**
KUZU	**Kuzuini**	**1.25**	**64**	*i* P	**Pg**	**14 55 29.4**	**+0.1**
KUZU				*i* S	**Sg**	**14 55 47.9**	**+2.3**
KIZK	**Mersin**	**1.26**	**282**	PN	**Pn**	**14 55 28.5**	**0.0**
EREN	**Erenkoy**	**1.41**	**241**	PN	**Pn**	**14 55 30.0**	**-0.5**
SILI	**Silifke-Mersin**	**1.42**	**276**	PN	**Pn**	**14 55 30.6**	**-0.1**
ANDN	**Andirin**	**1.46**	**21**	*i* P	**Pg**	**14 55 35.4**	**+2.2**
ANDN				IAML_P			
	comp=Z,344nm,0.2s						
GAZ	**Gaziantep**	**1.56**	**52**	PN	**Pn**	**14 55 31.6**	**-1.0**
KEBE	**Keben-Mersin**	**1.60**	**279**	PN	**Pn**	**14 55 33.4**	**+0.2**
IKL	**Isikli**	**1.61**	**271**	PN	**Pn**	**14 55 33.6**	**+0.3**
KMRS	**Kahramanmaras**	**1.61**	**37**	PN	**Pn**	**14 55 32.7**	**-0.7**
AKKU	**Akkuyu-Mersin**	**1.72**	**268**	PN	**Pn**	**14 55 34.8**	**0.0**
KERG	**Konya-Eregli**	**1.72**	**314**	*i* P	**Pb**	**14 55 36.2**	**-0.5**
KERG				IAML_P			
	comp=Z,88nm,0.3s						
YAHY	**KAYSERI_Yahyal**	**1.88**	**352**	*i* P	**Pg**	**14 55 40.2**	**-1.2**
YAHY				IAML_P			
	comp=Z,142nm,0.2s						
BERE	**Bereket-Mersin**	**1.98**	**274**	PN	**Pn**	**14 55 38.9**	**+0.3**
TEKE	**Tekeli-Mersin**	**2.07**	**268**	PN	**Pn**	**14 55 40.2**	**+0.5**

ISCJB ***28*** *15:10:43.0±0.5, 5.°18S±0.°05×146.°47E±0.°07, h150^{km}, mb4.2/20, Error ellipse: s-maj=10.5km s-min=6.4km az=179.8*
IDC ***28*** *15:10:46.1±1.4, 5.°35S×146.°52E, h172^{km}±15^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.8/23, mbtmp4.3/15, Error ellipse: s-maj=19.2km s-min=8.8km az=104.0*
NEIC ***28*** *15:10:47.2±1.2, 5.°18S×146.°42E, h182^{km}±15^{km}, mb4.5/8, Error ellipse: s-maj=19.3km s-min=14.3km az=173.0*
ISC 28 15:10:45.1±0.5, 5.°25S±0.°06×146.°30E±0.°07, h150^{km}, n35, σ1^{s}37/36, mb4.2/20, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.22**	**168**	P	**Pn**	**15 11 48.7**	**+0.5**
	40nm,0.3s,baz=6.3,slow=9.2,SNR=248						
PMG				S	**Sn**	**15 12 35.5**	**-1.8**
	51nm,0.3s,baz=166,slow=21,SNR=18						
PMG	**Port Moresby**	**4.22**	**168**	*e*Pn	**Pn**	**15 11 48.9**	**+0.7**
RABL	**Rabaul**	**5.94**	**80**	*e*Pn	**Pn**	**15 12 13.0**	**+1.9**
COEN	**Coen**	**9.18**	**199**	*e*Pn	Pn	15 12 58.1	+3.8
HNR	**Honiara**	**14.16**	**108**	P	**Pn**	**15 13 59.9**	**+0.8**
	4.7nm,0.3s,baz=253,slow=11,SNR=4.9						
HNR	**Honiara**	**14.16**	**108**	*e*P	**P**	**15 14 01.5**	**-0.6**
FAKI	**Fak Fak**	**14.20**	**279**	*e*Pn	**P**	**15 14 01.6**	**-0.9**
CTA	**Charters Tower**	**14.75**	**180**	P	**P**	**15 14 11.2**	**+2.6**
	0.1nm,0.3s,baz=3.4,slow=17,SNR=3.6						
SIJI	**Sorong**	**15.62**	**286**	P	**P**	**15 14 20.5**	**+2.2**
	3.2nm,0.3s,baz=180,slow=4.5,SNR=10.0						
MTN	**Manton Dam**	**16.76**	**242**	*e*P	**Pn**	**15 14 32.4**	**+1.3**
	13nm,0.8s						
WRAB	**Tennant Creek**	**18.66**	**217**	*e*P	**Pn**	**15 14 53.0**	**-0.7**
	28nm,0.9s						
WB2	**Warramunga Arr**	**18.66**	**217**	*e*P	**Pn**	**15 14 53.3**	**-0.5**
	23nm,0.6s						
WRA	**Warramunga Arr**	**18.67**	**217**	P	**Pn**	**15 14 53.3**	**-0.6**
	5.0nm,0.3s,baz=45,slow=8.7,SNR=532						
WRA				S	**S**	**15 18 13.9**	**-2.8**
	0.3nm,0.3s,baz=36,slow=19,SNR=5.1						
AS31	**Alice Springs**	**21.86**	**212**	*e*P	**P**	**15 15 26.6**	**+0.7**
	4.2nm,0.3s						
ASAR	**Alice Springs**	**21.86**	**212**	P	**P**	**15 15 27.2**	**+1.3**
	3.4nm,0.4s,baz=44,slow=7.7,SNR=117						
ASAR				S	**S**	**15 19 17.8**	**+0.2**
	2.3nm,0.8s,baz=38,slow=20,SNR=8.3						
SOEI	**Soe**	**22.29**	**257**	*e*P	**P**	**15 15 31.5**	**+1.1**
	25nm,0.7s						
DZM	**Mont Dzumac**	**25.69**	**133**	P	**P**	**15 15 59.7**	**-1.8**
	15nm,1.0s,baz=328,slow=6.0,SNR=3.9						
KAPI	**Kappang**	**26.44**	**269**	P	**P**	**15 16 10.3**	**+2.1**
	5.0nm,0.2s,baz=106,slow=15,SNR=2.6						
NWAO	**Narrogin (SRO)**	**38.62**	**221**	P	**P**	**15 17 54.1**	**+0.2**
	9.1nm,1.1s,baz=61,slow=13,SNR=2.5						
MJAR	**Matsushiro Arr**	**42.26**	**350**	P	**P**	**15 18 22.0**	**-1.7**
	1.1nm,0.9s,baz=186,slow=9.3,SNR=5.0						
NJ2	**Nanjing**	**45.37**	**327**	*e*P	**P**	**15 18 48.5**	**0.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSRS	**Korea Array**	**45.81**	**340**	P	**P**	**15 18 52.0**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=154,slow=8.8,SNR=5.5						
USRK	**Ussuriysk Ar.**	**50.88**	**347**	P	**P**	**15 19 31.1**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=172,slow=8.5,SNR=11						
CMAR	**Chiang Mai Arr**	**52.28**	**298**	P	**P**	**15 19 42.5**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=126,slow=6.0,SNR=7.1						
XAN	**Xi'an**	**52.66**	**321**	*e*P	**P**	**15 19 42.4**	**-1.7**
	comp=Z,8.7nm,0.8s						
XAN	**Xi'an**	**52.66**	**321**	P	**P**	**15 19 44.3**	**+0.2**
XAN				pP	pP	15 19 51.0	-27
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN				pmax	pmax		
	comp=Z,77nm,4.6s						
HHC	**Hu-ho-hao-te**	**55.83**	**329**	*e*P	**P**	**15 20 08.0**	**+1.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,12nm,5.2s						
GTA	**Gaotai**	**61.72**	**320**	P	**P**	**15 20 48.5**	**+0.8**
GTA				pP	pP	15 21 22.8	-0.4
GTA				sP	sP	15 21 38.0	-1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**63.41**	**331**	P	**P**	**15 20 59.2**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=160,slow=5.8,SNR=7.3						
WMQ	**Urumqi**	**71.77**	**319**	*e*P	**P**	**15 21 50.3**	**-0.9**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,64nm,5.5s						
MKAR	**Makanchi Array**	**76.48**	**321**	P	**P**	**15 22 18.1**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=97,slow=7.8,SNR=8.2						
ZALV	**Zalesovo Beam**	**78.01**	**328**	P	**P**	**15 22 25.4**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=107,slow=6.2,SNR=4.8						
NIL	**Nilore**	**78.92**	**306**	*e*P	**P**	**15 22 30.5**	**-1.8**
	comp=Z,6.0nm,0.8s						
ILAR	**Eielson Array**	**85.07**	**23**	P	**P**	**15 23 01.6**	**-2.1**
	comp=Z,0.9nm,0.5s,baz=253,slow=4.8,SNR=18						
TORD	**Torodi Ar. Bea**	**144.22**	**285**	PKP	PKPbc	15 30 01.2	-1.5
	comp=Z,0.4nm,0.6s,baz=77,slow=4.1,SNR=5.4						

MEX 28 15:17:16.5±0.5, 18.°21N×103.°48W, h4^{km}±9^{km}, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.15**	**57**	*e*P	Pg	15 17 19.0	-0.5
MMIG				*e*S	Sg	15 17 21.6	+0.2
EZ5V		**1.27**	**355**	*e*P	Pg	15 17 37.8	-3.1
EZ5V				*i* S	Sg	15 17 52.9	-4.5
CJM	**Chamela**	**1.96**	**311**	*e*P	Pn	15 17 47.5	-3.1
CJM				*i* S	Sn	15 18 11.4	-4.3
ARIG	**Puente Sto Nin**	**2.97**	**88**	*e*P	Pn	15 18 01.4	-3.1
ARIG				*i* S	Sn	15 18 37.0	-3.7

IDC ***28*** *15:26:21.7±0.5, 34.°55N×104.°26E, h0^{km}, mb4.1/30, mb1 4.2/34, mb1mx4.1/64, mbtmp4.1/34, ML3.4/4, MS3.0/10, Ms1 3.1/10, ms1mx2.9/34, Error ellipse: s-maj=14.0km s-min=10.8km az=25.0*
ISCJB ***28*** *15:26:22.3±1.3, 34.°58N±0.°02×104.°26E±0.°04, h15^{km}±9^{km}, mb4.4/76, MS3.1/9, Error ellipse: s-maj=5.0km s-min=4.1km az=162.2*
NEIC ***28*** *15:26:23.0±1.4, 34.°56N×104.°25E, h9^{km}±9^{km}, mb4.6/35, Error ellipse: s-maj=3.6km s-min=2.9km az=220.0*
BJI ***28*** *15:26:23.3±0.0, 34.°55N×104.°20E, h10^{km}, mb4.3/35, mB4.6/25, ML4.1/24, Ms4.1/38, Ms7 3.8/34*
MOS ***28*** *15:26:24.3±1.0, 34.°55N×104.°20E, h30^{km}, mb4.7/41, Error ellipse: s-maj=8.1km s-min=5.3km az=116.2*
ISC 28 15:26:24.0±1.1, 34.°56N±0.°03×104.°30E±0.°03, h14^{km}±7^{km}, n192, σ1^{s}38/213, mb4.5/86, MS3.2/9, 12C-8D, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.57**	**346**	*e*Pn	**Pn**	**15 26 51.8**	**+0.2**
LZH				Pg	**Pg**	**15 26 54.5**	**+0.3**
LZH				Sn	**Sb**	**15 27 12.3**	**-0.4**
LZH				Sg	**Sg**	**15 27 16.0**	**+1.4**
LZH				smax	smax		
	comp=N,7µm,0.9s						
LZH				smax	smax		
	comp=E,8µm,0.9s						
CD2	**Chengdu**	**3.67**	**187**	Pn	**Pn**	**15 27 21.5**	**+1.1**
CD2				Pg	**Pg**	**15 27 32.5**	**-1.8**
CD2				Sn	**Sn**	**15 28 04.3**	**+0.9**
CD2				Sg	**Sg**	**15 28 19.5**	**-2.3**
CD2				smax	smax		
	comp=N,460nm,0.7s						
CD2				smax	smax		
	comp=E,510nm,0.8s						
XAN	**Xi'an**	**3.86**	**96**	*e*Pn	**Pn**	**15 27 23.9**	**+1.0**
XAN	**Xi'an**	**3.86**	**96**	Pn	**Pn**	**15 27 24.3**	**+1.3**
XAN				Pg	**Pg**	**15 27 36.8**	**-1.1**
XAN				Sn	**Sn**	**15 28 11.5**	**+3.4**
XAN				Sg	**Sg**	**15 28 25.5**	**-2.4**
XAN				smax	smax		
	comp=N,950nm,0.7s						
XAN				smax	smax		
	comp=E,930nm,0.7s						
XAN	**Xi'an**	**3.86**	**96**	*e*P	**Pn**	**15 27 24.0**	**+1.0**
GTA	**Gaotai**	**6.03**	**325**	⇑Pn	**Pn**	**15 27 53.0**	**+0.1**
GTA				Sn	**Sn**	**15 28 59.0**	**-2.8**
GTA				smax	smax		
	comp=N,46nm,1.2s						
GTA				smax	smax		
	comp=E,62nm,1.2s						
GTA				LR	LR		
	comp=N,710nm,9.6s						
GTA				LR	LR		
	comp=E,540nm,10.3s						
GTA				LR	LR		
	comp=Z,1µm,11.0s						
ENH	**Enshi**	**6.12**	**133**	*e*Pn	**Pn**	**15 27 55.7**	**+1.6**
TIY	**Taiyuan**	**7.29**	**62**	*e*Pn	Pn	15 28 16.5	+6.3
TIY				Pg	Pg	15 28 37.5	-6.1
TIY				Sg	**Sb**	**15 29 55.0**	**-2.2**
TIY	**Taiyuan**	**7.29**	**62**	Pg	Pg	15 28 37.5	-6.1
TIY				smax	smax		
	comp=N,200nm,0.6s						
TIY				smax	smax		
	comp=E,250nm,0.9s						
BTO	**Baotou**	**7.55**	**35**	*e*Pn	Pn	15 28 23.8	+10
BTO				*e*Pg	Pg	15 28 42.0	-6.5
BTO				Sn	**Sn**	**15 29 44.0**	**+4.8**
BTO				Sg	**Sb**	**15 30 01.5**	**-3.2**
BTO				smax	smax		
	comp=N,240µm,0.9s						
BTO				smax	smax		
	comp=E,208µm,0.9s						
BTO				SMZ			
	comp=E,179µm,0.8s						
GYA	**Guiyang**	**8.33**	**165**	⇑*i*P	**Pn**	**15 28 25.0**	**+0.6**
GYA				S	**Sn**	**15 29 56.5**	**-1.8**
GYA				pmax	pmax		
	comp=E,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=E,50nm,3.6s						
GYA				LR	LR		
	comp=E,200nm,5.7s						
GYA				LR	LR		
	comp=E,130nm,4.7s						
GYA				LR	LR		
	comp=E,280nm,6.5s						
HHC	**Hu-ho-hao-te**	**8.51**	**40**	*e*P	**Pn**	**15 28 27.5**	**+0.5**
HHC				pmax	pmax		
	comp=E,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=E,73nm,4.7s						
HHC				LR	LR		
	comp=E,840nm,6.2s						
HHC				LR	LR		
	comp=E,770nm,5.8s						
WHN	**Wuhan**	**9.38**	**113**	P	**Pn**	**15 28 39.0**	**+0.3**
WHN				S	**Sn**	**15 30 21.8**	**-2.1**
WHN				LR	LR		
	comp=E,2µm,5.3s						
WHN				LR	LR		
	comp=E,1µm,7.5s						
WHN				LR	LR		
	comp=E,2µm,8.0s						
KMI	**Kunming**	**9.50**	**189**	P	**Pn**	**15 28 42.8**	**+2.2**

KMI				pP		15 28 45.3	
KMI				sP		15 28 49.5	
KMI				S	**Sn**	**15 30 31.0**	**+3.6**
KMI				SS	**SnSn**	**15 30 44.8**	**+5.5**
KMI				pmax	pmax		
	comp=E,12nm,0.5s						
KMI				pmax	pmax		
	comp=E,140nm,3.7s						
KMI				LR	LR		
	comp=E,340nm,9.2s						
KMI				LR	LR		
	comp=E,920nm,9.4s						
KMI				LR	LR		
	comp=E,340nm,9.1s						
TIA	**Tai'an**	**10.60**	**77**	P	Pn	15 29 31.0	+36
TIA				S	Sn	15 31 52.8	+59
TIA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
TIA				LR	LR		
	comp=N,180nm,6.8s						
TIA				LR	LR		
	comp=E,160nm,7.2s						
TIA				LR	LR		
	comp=Z,210nm,7.4s						
BJI	**Beijing**	**10.92**	**56**	Pg	Pn	15 29 49.0	+49
BJI				Sg		15 32 10.3	
BJI				smax	smax		
	comp=N,24nm,1.2s						
BJI				smax	smax		
	comp=E,12nm,1.1s						
NJ2	**Nanjing**	**12.43**	**98**	*e*P	**Pn**	**15 29 20.0**	**-0.4**
NJ2				pmax	pmax		
	comp=E,12nm,0.6s						
NJ2				LR	LR		
	comp=E,330nm,8.1s						
NJ2				LR	LR		
	comp=E,200nm,8.5s						
SLVN	**Son La**	**13.18**	**182**	*e*Pn	**Pn**	**15 29 29.8**	**-1.1**
SONA0	**Songino Array**	**13.36**	**6**	*e*Pn	**Pn**	**15 29 32.4**	**-0.8**
SONA0				*e*Sn	**Sn**	**15 32 02.5**	**+1.0**
SONM	**Songino Array**	**13.36**	**6**	Pn	**Pn**	**15 29 32.4**	**-0.8**
	comp=E,0.2nm,0.3s,baz=187,slow=14,SNR=7.4						
SONM				Sn	**Sn**	**15 32 02.5**	**+1.0**
	comp=E,0.3nm,0.3s,baz=195,slow=27,SNR=3.0						
SONM				Lg	Lg	15 33 21.2	
	comp=E,0.1nm,0.3s,baz=200,slow=29,SNR=2.1						
SONM				LR	LR	15 34 14.7	
	comp=E,41nm,18.3s,baz=210,slow=35						
DL2	**Dalian**	**14.55**	**68**	P	**P**	**15 29 58.8**	**+2.8**
DL2				*e*S	**S**	**15 32 45.8**	**-4.1**
DL2				pmax	pmax		
	comp=Z,25nm,1.1s						
DL2				LR	LR		
	comp=N,200nm,15.9s						
DL2				LR	LR		
	comp=E,120nm,13.3s						
DL2				LR	LR		
	comp=Z,120nm,13.6s						
PAYA	**Payao**	**15.64**	**196**	P	**P**	**15 30 10.9**	**+2.7**
	comp=Z,23µm,1.0s						
WMQ	**Urumqi**	**15.83**	**311**	*e*P	**Pn**	**15 30 07.5**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				LR	LR		
	comp=Z,220nm,10.9s						
WMQ				LR	LR		
	comp=Z,260nm,10.9s						
ZAK	**Zakamensk**	**15.83**	**358**	*e*P	**Pn**	**15 30 06.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CHTO	**Chiang Mai**	**16.39**	**198**	*e*Pn	**Pn**	**15 30 13.2**	**-0.5**
	comp=Z,12nm,1.1s						
CHTO	**Chiang Mai**	**16.39**	**198**	*e*P	**Pn**	**15 30 13.2**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,13nm,1.1s						
CMMT	**Chiang Mai**	**16.39**	**198**	P	**P**	**15 30 19.2**	**+2.7**
	comp=Z,5.5nm,1.8s						
CM31	**Chiang Mai Arr**	**16.73**	**198**	*e*PcP	**PcP**	**15 35 07.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**16.73**	**198**	Pn	**Pn**	**15 30 17.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=13,slow=8.3,SNR=4.6						
CMAR				PcP	**PcP**	**15 35 07.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=318,slow=2.2,SNR=5.0						
CMAR				LR	LR	15 36 20.1	
	comp=Z,20nm,18.4s,baz=195,slow=36						
TLY	**Talaya**	**17.12**	**359**	Pn	**Pn**	**15 30 23.4**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=158,slow=5.4,SNR=2.3						
TLY				Lg	Lg	15 35 21.9	
	comp=Z,0.0nm,0.3s,baz=358,slow=19,SNR=1.5						
TLY	**Talaya**	**17.12**	**359**	*e*Pn	**Pn**	**15 30 22.6**	**-0.2**
	comp=Z,1.9nm,0.9s						
TLY				Lg	Lg	15 35 21.9	
TLY	**Talaya**	**17.12**	**359**	*e*P	**Pn**	**15 30 22.6**	**-0.2**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YHNB	**Yeheng**	**17.80**	**119**	*e*Pn	**Pn**	**15 30 29.5**	**-1.9**
	comp=Z,23nm,1.3s						
SSLB	**Suanglung**	**18.05**	**122**	*e*P	**Pn**	**15 30 34.1**	**-0.3**
	comp=Z,7.1nm,1.0s						
PBKT	**Sadao Pong**	**18.16**	**190**	P	**P**	**15 30 39.1**	**+3.0**
	comp=Z,4.8nm,0.8s						
TJN	**Taejon**	**18.87**	**78**⇑	*e*P	**Pn**	**15 30 46.2**	**+1.9**
KS15	**Wonju Array Si**	**19.29**	**75**	*e*P	**P**	**15 30 48.7**	**+0.3**
	comp=Z,48nm,1.8s						
KSAR	**Wonju Array Be**	**19.29**	**75**	P	**P**	**15 30 48.7**	**+0.4**
KSAR	**Wonju Array Be**	**19.29**	**75**	P	**P**	**15 30 48.7**	**+0.4**
KSRS	**Korea Array**	**19.32**	**75**	P	**P**	**15 30 48.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=259,slow=9.8,SNR=6.7						
KSRS				LR	LR	15 38 31.4	
	comp=Z,48nm,19.1s,baz=256,slow=38						
UTHA	**Uthaitani**	**19.42**	**194**	P	**Pn**	**15 30 52.7**	**+1.6**
	comp=Z,23µm,0.8s						
DGZ	**Jazzator, Alta**	**19.57**	**326**⇑	*e*P	**P**	**15 30 51.5**	**0.0**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SRAK	**Srakaew**	**20.56**	**186**	P	Pn	15 31 05.4	+0.8
	comp=Z,142µm,0.7s						
MK31	**Makanchi Array**	**20.61**	**313**	*e*P	**P**	**15 31 02.6**	**-0.2**
	comp=Z,2.9nm,0.9s						
MK31	**Makanchi Array**	**20.61**	**313**	*e*P	**P**	**15 31 02.6**	**-0.2**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK32	**Makanchi Array**	**20.61**	**313**	*e*P	**P**	**15 31 02.6**	**-0.1**
MK32				*e*PcP	**PcP**	**15 35 12.9**	**-0.1**
MKAR	**Makanchi Array**	**20.61**	**313**	P	**P**	**15 31 02.6**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=111,slow=11,SNR=14						
MKAR				PcP	**PcP**	**15 35 12.9**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=122,slow=1.9,SNR=3.7						
MAKZ	**Makanchi**	**20.81**	**313**	*e*P	**P**	**15 31 04.9**	**0.0**
	comp=Z,9.3nm,1.3s						
MAKZ	**Makanchi**	**20.81**	**313**	*e*P	**P**	**15 31 04.9**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PDGK	**Podgornoye**	**21.13**	**302**	P	**P**	**15 31 08.0**	**-0.5**
PDGK				pmax	pmax		
	comp=Z,23nm,1.0s						
JNU	**Nakatsue**	**22.10**	**86**	P	**P**	**15 31 19.6**	**+0.7**
	comp=Z,4.3nm,0.7s,baz=333,slow=6.8,SNR=3.3						
JNU				LR	LR	15 39 53.7	
	comp=Z,70nm,18.8s,baz=158,slow=37						
KSH	**Kashi**	**23.10**	**291**	P	**P**	**15 31 33.0**	**+3.4**
KSH				pP	sP	15 31 36.5	0.0
KSH				S	**S**	**15 35 41.5**	**+1.1**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,46nm,3.8s						
KSH				LR	LR		
	comp=Z,81nm,5.3s						
KSH				LR	LR		
	comp=Z,120nm,4.1s						
KSH				LR	LR		
	comp=Z,70nm,4.9s						
USA0B	**Ussuriysk Arra**	**23.37**	**57**	*e*P	**P**	**15 31 32.7**	**+0.6**
	comp=Z,9.7nm,1.3s						
USRK	**Ussuriysk Ar.**	**23.37**	**57**	P	**P**	**15 31 32.6**	**+0.5**
	comp=Z,4.1nm,1.0s,baz=255,slow=8.2,SNR=10						
ZALV	**Zalesovo Beam**	**23.74**	**331**	P	**P**	**15 31 34.3**	**-1.3**
	comp=Z,2.5nm,0.8s,baz=133,slow=11,SNR=7.5						
ZAA1	**Zalesovo Array**	**23.75**	**331**	*e*P	**P**	**15 31 34.3**	**-1.3**
AAK	**Ala-Archa**	**24.56**	**298**	LR	LR	15 41 54.9	
	comp=Z,92nm,18.6s,baz=107,slow=38						
AAK	**Ala-Archa**	**24.56**	**298**⇑	*e*P	**P**	**15 31 45.1**	**+1.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	**Kurchatov**	**24.67**	**319**	*e*P	**P**	**15 31 43.3**	**-0.9**
	comp=Z,13nm,1.2s						
KURK	**Kurchatov**	**24.67**	**319***d*	*i*P	**P**	**15 31 44.3**	**+0.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURBB	**Kurchatov Arra**	**24.67**	**318**	P	**P**	**15 31 43.7**	**-0.6**
	comp=Z,4.4nm,0.8s,baz=124,slow=10,SNR=22						
KURBB				PcP	**PcP**	**15 35 21.0**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=119,slow=2.0,SNR=6.9						
KLR	**Kul'dur**	**24.97**	**46**	P	**P**	**15 31 47.1**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=259,slow=8.5,SNR=10						
KLR				LR	LR	15 42 05.9	
	comp=Z,33nm,18.5s,baz=236,slow=38						
KLR	**Kul'dur**	**24.97**	**46***c*	*i*P	**P**	**15 31 48.2**	**+1.3**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NIL	**Nilore**	**25.68**	**277**	*e*P	**P**	**15 31 52.1**	**-1.5**
	comp=Z,14nm,0.9s						
NIL	**Nilore**	**25.68**	**277**	*e*P	**P**	**15 31 52.1**	**-1.5**
NIL				pmax	pmax		
	comp=Z,14nm,0.9s						
OTUK	**Ortayu**	**27.38**	**310**	P	**P**	**15 32 09.0**	**+0.2**
OTUK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAJO	**Matsushiro**	**27.58**	**76**	*e*P	**P**	**15 32 10.5**	**-0.2**
MAJO	**Matsushiro**	**27.58**	**76**⇓	*e*P	**P**	**15 32 13.4**	**+2.7**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MJAR	**Matsushiro Arr**	**27.58**	**76**	P	**P**	**15 32 10.5**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=268,slow=9.5,SNR=4.9						
MJAR				LR	LR	15 42 24.7	
	comp=Z,21nm,20.2s,baz=115,slow=35						
BVAR	**Borovoye Array**	**30.26**	**318**	P	**P**	**15 32 34.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=104,slow=9.3,SNR=6.4						
BVAR				PcP	**PcP**	**15 35 34.6**	**0.0**
	comp=Z,2.0nm,0.7s,baz=113,slow=3.4,SNR=11						
BRVK	**Borovoye**	**30.33**	**318**⇓	*e*P	**P**	**15 32 35.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**31.34**	**55**	*e*P	**P**	**15 32 45.1**	**+1.2**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ABKAR	**Akbulak array**	**35.59**	**308**	*e*P	**P**	**15 33 19.8**	**-1.1**
	comp=Z,2.9nm,0.8s						
SVE	**Sverdlovsk**	**36.88**	**321**⇑	*e*P	**P**	**15 33 32.5**	**+0.7**
SVE				pmax	pmax		
	comp=Z,11nm,1.0s						
AKTO	**Aktyubinsk**	**36.98**	**310**	P	**P**	**15 33 32.4**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=82,slow=13,SNR=4.9						
GEYT	**Alibeck**	**37.11**	**289**	P	**P**	**15 33 34.6**	**+0.6**
	comp=Z,3.9nm,0.8s,baz=56,slow=6.1,SNR=7.2						
GEYT				LR	LR	15 52 02.7	
	comp=Z,34nm,18.5s,baz=55,slow=42						
ARU	**Arti**	**37.86**	**320**	P	**P**	**15 33 39.9**	**-0.2**
	comp=Z,5.4nm,0.9s,baz=108,slow=4.0,SNR=16						
ARU	**Arti**	**37.86**	**320**	*e*P	**P**	**15 33 38.9**	**-1.2**
	comp=Z,18nm,1.0s						
ARU	**Arti**	**37.86**	**320***c*	*i*P	**P**	**15 33 40.1**	**0.0**
ARU				S	**S**	**15 39 31.7**	**+0.9**
ARU				SS	**SnSn**	**15 42 04.5**	**-7.1**
ARU				pmax	pmax		
	comp=Z,18nm,0.9s						
MA2	**Magadan**	**39.16**	**36**	LR	LR	15 50 10.2	
	comp=Z,31nm,18.7s,baz=256,slow=36						
TIXI	**Tiksi**	**39.34**	**12**	P	**P**	**15 33 52.6**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=252,slow=3.5,SNR=7.9						
TIXI	**Tiksi**	**39.34**	**12**	*e*P	**P**	**15 33 51.9**	**-0.5**
	comp=Z,8.4nm,1.4s						
TIXI	**Tiksi**	**39.34**	**12**	*i* P	**P**	**15 33 52.6**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SEY	**Seymchan**	**41.03**	**31**	P	**P**	**15 34 07.5**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=216,slow=14,SNR=4.2						
PETK	**Petropavlovsk-**	**41.65**	**47**	P	**P**	**15 34 12.3**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=231,slow=4.6,SNR=2.8						
PETK	**Petropavlovsk-**	**41.65**	**47**	P	**P**	**15 34 12.3**	**+0.5**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PEA1	**Petropavlovsk-**	**41.65**	**47**	*e*P	**P**	**15 34 12.3**	**+0.5**
PRGR	**Permogore**	**45.49**	**325**	*e*P	**P**	**15 34 41.0**	**-1.5**
PRGR				pmax	pmax		
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	**47.52**	**300**	P	**P**	**15 34 58.7**	**0.0**
	comp=Z,0.7nm,0.3s,baz=83,slow=8.1,SNR=3.8						
NEY	**Neytrino**	**47.74**	**300**⇑	*i*P	**P**	**15 35 02.7**	**+2.0**
NEY				pmax	pmax		
	comp=Z,11nm,2.2s						
BILL	**Bilibino**	**48.00**	**27**	*e*P	**P**	**15 35 04.7**	**+2.6**
BILL				*e*		15 36 54.3	
BILL				*e*PPP	PPP	15 37 46.1	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,112nm,22.0s						
KLMR	**Klimovskoe**	**48.36**	**324**	*e*P	**P**	**15 35 03.3**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MOS	**Moscow**	**49.42**	**317**	*e*P	P	15 35 07.0	-6.2
OBN	**Obninsk**	**50.07**	**316**	*e*P	**P**	**15 35 18.4**	**+0.3**
OBN				*e*		15 37 13.3	
OBN				*e*PPP	PPP	15 38 07.1	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,20nm,16.0s						
LVZ	**Lovozero**	**50.86**	**333**⇓	*e*P	**P**	**15 35 23.6**	**-0.3**
LVZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ANN	**Anapa**	**51.15**	**303**	*e*P	**P**	**15 35 24.0**	**-2.4**
ANN				*e*S	**S**	**15 42 40.4**	**-3.5**
ANN				pmax	pmax		
	comp=Z,32nm,1.0s						
ARCES	**ARCESS Array B**	**54.20**	**335**	P	**P**	**15 35 48.8**	**+0.2**
	comp=Z,4.2nm,0.8s,baz=96,slow=9.2,SNR=8.0						
FIA0	**FINESS Array S**	**54.82**	**325**	*e*P	**P**	**15 35 52.9**	**-0.3**
FIA0	**FINESS Array S**	**54.82**	**325**	*e*P	**P**	**15 35 52.9**	**-0.3**
FINES	**FINESS Array B**	**54.82**	**325**	P	**P**	**15 35 52.9**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=72,slow=6.2,SNR=7.4						
VSU	**Vasula**	**54.99**	**321**⇓	*e*P	**P**	**15 35 53.6**	**-0.9**
VSU				pmax	pmax		
	comp=Z,16nm,0.8s						
AKASG	**Malin Array Be**	**55.19**	**312**	P	**P**	**15 35 54.9**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=67,slow=6.9,SNR=7.6						
AKBB	**Malin Array Si**	**55.19**	**312**	*e*P	**P**	**15 35 55.1**	**-0.9**
	comp=Z,3.4nm,0.8s						
AKBB	**Malin Array Si**	**55.19**	**312**	*e*P	**P**	**15 35 55.1**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR101	**Keskin Array S**	**55.24**	**298**	*e*P	**P**	**15 35 56.2**	**-0.6**
BR131	**Keskin Array S**	**55.24**	**298**	*e*P	**P**	**15 35 56.2**	**-0.6**
	comp=Z,2.9nm,0.7s						
BRTR	**Keskin Array B**	**55.24**	**298**	P	**P**	**15 35 56.2**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=92,slow=6.4,SNR=11						
VRI	**Vrincioaia**	**58.13**	**307**	P	**P**	**15 36 20.3**	**+3.2**
VRI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KOLS	**Kolonicke sedl**	**60.00**	**311**	*e*P	**P**	**15 36 29.9**	**-0.1**
KOLS	**Kolonicke sedl**	**60.00**	**311**	*e*P	**P**	**15 36 29.9**	**-0.1**
OJC	**Ojcow**	**61.08**	**313**	*e*P	**P**	**15 36 37.0**	**-0.4**
	comp=Z,6.4nm,0.9s						
OJC	**Ojcow**	**61.08**	**313**	*e*P	**P**	**15 36 37.0**	**-0.4**
OJC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRAB	**Tennant Creek**	**61.27**	**148**	*e*P	**P**	**15 36 38.5**	**-0.3**
	comp=Z,6.0nm,0.7s						
WRAB	**Tennant Creek**	**61.27**	**148**⇑	*i*P	**P**	**15 36 38.7**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WR1	**Warramunga Arr**	**61.27**	**148**	*e*P	**P**	**15 36 38.9**	**0.0**
WRA	**Warramunga Arr**	**61.27**	**148**	P	**P**	**15 36 38.9**	**0.0**
	comp=Z,5.6nm,0.6s,baz=328,slow=7.8,SNR=59						
WB2	**Warramunga Arr**	**61.27**	**148**	*e*P	**P**	**15 36 38.9**	**-0.1**
	comp=Z,6.8nm,0.6s						
NC405	**NORSAR Array S**	**61.61**	**327**	*e*P	**P**	**15 36 40.0**	**-0.7**
	comp=Z,82nm,1.8s						
VTS	**Vitosha**	**61.61**	**304**	*e*P	**P**	**15 36 41.3**	**0.0**
	comp=Z,3.3nm,0.8s						
VTS	**Vitosha**	**61.61**	**304**	*e*P	**P**	**15 36 41.3**	**0.0**
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB2	**NORSAR Subarra**	**61.86**	**327**	P	**P**	**15 36 41.2**	**-1.3**
	comp=Z,1.9nm,0.6s,baz=70,slow=6.9						
NB200	**NORSAR Array S**	**61.86**	**327**	*e*P	**P**	**15 36 41.6**	**-0.9**
NOA	**NORSAR Array B**	**61.86**	**327**	P	**P**	**15 36 41.6**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=70,slow=6.8,SNR=13						
NOA				LR	LR	16 03 34.0	
	comp=Z,11nm,18.7s,baz=250,slow=36						
NC204	**NORSAR Array S**	**61.98**	**327**	*e*P	**P**	**15 36 42.6**	**-0.7**
	comp=Z,84nm,1.8s						
VYHS	**Vyhne**	**62.29**	**311**	*e*P	**P**	**15 36 46.1**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VYHS	**Vyhne**	**62.29**	**311**	*e*P	**P**	**15 36 46.1**	**+0.5**
MORC	**Moravsky Berou**	**62.60**	**313**	*e*P	**P**	**15 36 47.4**	**-0.3**
	comp=Z,7.4nm,1.1s						
MORC	**Moravsky Berou**	**62.60**	**313**	*e*P	**P**	**15 36 47.4**	**-0.3**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MORC	**Moravsky Berou**	**62.60**	**313**	*e*P	**P**	**15 36 47.7**	**0.0**
JAVC	**Velka Javorina**	**62.87**	**312**	*e*P	**P**	**15 36 51.0**	**+1.5**
DPC	**Dobruska-Polom**	**63.12**	**314**	*e*P	**P**	**15 36 51.7**	**+0.6**
DPC	**Dobruska-Polom**	**63.12**	**314**	*e*P	**P**	**15 36 51.7**	**+0.6**
UPC	**Upice**	**63.24**	**314**	*e*P	**P**	**15 36 52.6**	**+0.8**
UPC	**Upice**	**63.24**	**314**	*e*P	**P**	**15 36 52.6**	**+0.8**
ZST	**Bratislava**	**63.47**	**312**	*e*P	**P**	**15 36 53.3**	**-0.1**
ZST	**Bratislava**	**63.47**	**312**	*e*P	**P**	**15 36 53.3**	**-0.1**
BRG	**Berggiesshubel**	**64.31**	**315**	*e*P	**P**	**15 36 58.5**	**-0.3**
	comp=Z,3.7nm,0.9s						
BRG				*e*		15 37 01.9	
	comp=Z,5.1nm,1.0s						
BRG	**Berggiesshubel**	**64.31**	**315**	*e*P	**P**	**15 36 58.5**	**-0.3**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PRU	**Pruhonice**	**64.31**	**314**	*e*P	**P**	**15 36 59.4**	**+0.5**
PRU	**Pruhonice**	**64.31**	**314**	*e*P	**P**	**15 36 59.4**	**+0.5**
CONA	**Conrad Observa**	**64.34**	**312**	*e*pP	**P**	**15 37 00.2**	**+0.9**
	comp=Z,5.2nm,1.4s						
AS31	**Alice Springs**	**64.37**	**150**	*e*P	**P**	**15 36 59.3**	**-0.2**
	comp=Z,1.2nm,0.4s						
ASAR	**Alice Springs**	**64.37**	**150**	P	**P**	**15 36 59.7**	**+0.2**
	comp=Z,2.8nm,0.5s,baz=334,slow=6.6,SNR=171						
TTG	**Podgorica**	**64.39**	**305**	*e*P	**P**	**15 36 59.0**	**-0.5**
	comp=Z,6.9nm,0.8s						
TTG	**Podgorica**	**64.39**	**305**	*e*P	**P**	**15 36 59.0**	**-0.5**
TTG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	**Collm**	**64.67**	**316**⇓	*i*P	**P**	**15 37 01.1**	**-0.1**
CLL	**Collm**	**64.67**	**316**⇓	*i*P	**P**	**15 37 01.1**	**-0.1**
ARSA	**Arzberg**	**64.83**	**311**	*e*P	**P**	**15 37 05.2**	**+2.9**
	comp=Z,3.2nm,1.1s						
MLY	**Manley**	**65.11**	**27**	*e*P	**P**	**15 37 04.2**	**+0.2**
	comp=Z,4.6nm,1.2s						
KHC	**Kasperske Hory**	**65.23**	**314**⇓	*e*P	**P**	**15 37 05.7**	**+0.7**
KHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KHC	**Kasperske Hory**	**65.23**	**314**	*e*P	**P**	**15 37 04.4**	**-0.6**
GEC2	**GERESS Array S**	**65.28**	**313**	*e*P	**P**	**15 37 05.3**	**-0.1**
	comp=Z,6.7nm,1.2s						
GEC2	**GERESS Array S**	**65.28**	**313**	*e*P	**P**	**15 37 05.3**	**-0.1**
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GERES	**GERESS Array B**	**65.28**	**313**	P	**P**	**15 37 05.5**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=76,slow=5.6,SNR=11						
MOA	**Molln**	**65.35**	**312**	*e*pP	**P**	**15 37 06.0**	**+0.2**
	comp=Z,3.3nm,0.9s						
SOKA	**Soboth**	**65.37**	**311**	*e*pP	**P**	**15 37 06.0**	**+0.1**
	comp=Z,3.9nm,0.8s						
PPLA	**Purkeypile**	**65.56**	**29**	*e*P	**P**	**15 37 07.3**	**+0.3**
	comp=Z,7.5nm,0.7s						
KBA	**Koelnbreinsper**	**66.25**	**312**	*e*pP	**P**	**15 37 11.8**	**+0.1**
	comp=Z,2.3nm,0.7s						
COLA	**College**	**66.26**	**26***c*	*i*P	**P**	**15 37 11.7**	**+0.5**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ILAR	**Eielson Array**	**66.66**	**26**	P	**P**	**15 37 13.2**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=289,slow=6.0,SNR=11						
ILB	**Eielson Array**	**66.66**	**26**	*e*P	**P**	**15 37 13.2**	**-0.6**
	comp=Z,2.2nm,0.7s						
WTTA	**Wattenberg**	**67.21**	**312**	*e*pP	**P**	**15 37 17.9**	**0.0**
	comp=Z,6.0nm,1.0s						
WATA	**Walderalm**	**67.22**	**313**	*e*pP	**P**	**15 37 17.9**	**0.0**
	comp=Z,8.0nm,1.2s						
SQTA	**Sankt Quirin**	**67.49**	**313**	*e*pP	**P**	**15 37 19.3**	**-0.3**
	comp=Z,2.3nm,0.5s						
MOTA	**Moosalm**	**67.50**	**313**	*e*pP	**P**	**15 37 20.0**	**+0.3**
	comp=Z,2.1nm,0.6s						
RETA	**Reutte**	**67.64**	**313**	*e*P	**P**	**15 37 24.3**	**+3.8**
	comp=Z,4.3nm,1.0s						
FETA	**Feichten**	**67.88**	**313**	*e*pP	**P**	**15 37 21.9**	**-0.2**
	comp=Z,5.2nm,0.9s						
KDAK	**Kodiak Island**	**67.88**	**34**	P	**P**	**15 37 21.2**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=240,slow=7.6,SNR=6.5						
KDAK	**Kodiak Island**	**67.88**	**34**	*e*P	**P**	**15 37 21.2**	**-0.5**
	comp=Z,8.2nm,0.7s						
RIDG	**Independent Ri**	**67.97**	**27**	*e*P	**P**	**15 37 21.5**	**-0.7**
	comp=Z,12nm,1.2s						
SCRK	**Sand Creek**	**68.16**	**26**	*e*P	**P**	**15 37 22.3**	**-1.2**
	comp=Z,5.8nm,0.9s						
DAVA	**Damuels**	**68.27**	**313**	*e*pP	**P**	**15 37 24.9**	**+0.3**
	comp=Z,6.5nm,1.2s						
DOT	**Dot Lake**	**68.31**	**27**	*e*P	**P**	**15 37 23.6**	**-0.8**
FUORN	**Ofenpass-Fuorn**	**68.34**	**312**	*e*P	**P**	**15 37 24.7**	**-0.4**
	comp=Z,7.7nm,0.8s						
INK	**Inuvik**	**68.85**	**20**	P	**P**	**15 37 27.6**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=320,slow=4.5,SNR=11						
INK	**Inuvik**	**68.85**	**20**	*e*P	**P**	**15 37 27.6**	**+0.1**
	comp=Z,11nm,1.4s						
EPYK	**Eagle Plains**	**69.17**	**22**	*e*P	**P**	**15 37 29.4**	**-0.3**
	comp=Z,5.8nm,0.6s						
WLF	**Walferdange**	**69.32**	**317**	*e*P	**P**	**15 37 31.4**	**+0.6**
	comp=Z,56nm,0.9s						
WLF	**Walferdange**	**69.32**	**317**	*e*P	**P**	**15 37 31.4**	**+0.6**
DAWY	**Dawson**	**69.74**	**25**	*e*P	**P**	**15 37 33.1**	**-0.1**
	comp=Z,2.6nm,0.8s						
KMBO	**Kilima Mbogo**	**71.90**	**256**	P	**P**	**15 37 47.0**	**-0.4**
	comp=Z,1.7nm,0.9s,baz=39,slow=13,SNR=4.1						
KMBO	**Kilima Mbogo**	**71.90**	**256**	*e*P	**P**	**15 37 47.0**	**-0.4**
	comp=Z,12nm,1.8s						
KMBO	**Kilima Mbogo**	**71.90**	**256***c*	*e*P	**P**	**15 37 48.0**	**+0.6**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HYT	**Haines Junctio**	**72.47**	**27**	*e*P	**P**	**15 37 50.4**	**+0.4**
	comp=Z,6.9nm,1.0s						
SKAG	**Skagway**	**74.19**	**27**	*e*P	**P**	**15 38 00.9**	**+1.0**
	comp=Z,8.9nm,1.0s						
STKA	**Stephens Creek**	**74.82**	**148**	P	**P**	**15 38 03.8**	**0.0**
	comp=Z,5.4nm,0.8s,baz=341,slow=6.3,SNR=10						
YKA	**Yellowknife Ar**	**78.35**	**17**	P	**P**	**15 38 23.7**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=331,slow=5.5,SNR=5.0						
YKB5	**Yellowknife Ar**	**78.35**	**17**	*e*P	**P**	**15 38 23.7**	**+0.2**
ESDC	**Sonseca Array**	**80.83**	**312**	P	**P**	**15 38 37.3**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=36,slow=5.7,SNR=3.6						
ROSC	**El Rosal**	**140.79**	**358**	PKP	**PKPdf**	**15 45 54.0**	**-0.6**
	comp=Z,7.7nm,0.3s,baz=22,slow=11,SNR=2.4						
BDFB	**Brasilia**	**148.81**	**300**	PKPbc	**PKPbc**	**15 46 11.0**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=41,slow=11,SNR=1.7						
LPAZ	**La Paz**	**160.58**	**338**	PKP	**PKPdf**	**15 46 23.6**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=14,slow=8.6,SNR=3.9						
LPAZ				PKPab	**PKPab**	**15 47 05.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=10,slow=11,SNR=2.3						

MEX 28 15:31:59.4±0.7, 15°.39N×93°.26W, h96^{km}±5^{km}, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.32**	**7**	*e*P	Pn	15 32 12.4	-1.1
PCIG				*e*S	Sn	15 32 22.2	-1.9
THIG		**1.07**	**116**	*i* P	Pn	15 32 19.1	-1.2
THIG				*e*S	Sn	15 32 34.9	-1.2
TGIG		**1.39**	**6**	*i* P	Pn	15 32 22.5	-1.6
TGIG				*i* S	Sn	15 32 40.4	-2.5
CCIG	**Comitan**	**1.40**	**50**	*i* P	Pn	15 32 23.1	-1.3
CCIG				*e*S	Sn	15 32 42.2	-1.1
CMIG	**Matias Romero**	**2.30**	**318**	*e*P	Pn	15 32 34.1	-1.7
CMIG				*i* S	Sn	15 33 02.4	-1.3

TAP 28 15:48:05.9, 24°.94N×122°.53E, h2^{km}, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.53**	**223**	P	Pb	15 48 17.9	0.0
	baz=222						
EOS1				*e*S	Sb	15 48 26.4	+0.3
	baz=222						
TIPB	**Shuangxi**	**0.64**	**273**	*e*P	Pb	15 48 19.8	0.0
	baz=272						
YOJ	**Yonaguni jima**	**0.65**	**137**	P	Pb	15 48 19.9	-0.1
	baz=137						
NWF	**Wu-fen Shan**	**0.69**	**281**	*e*P	Pb	15 48 20.7	-0.1
	baz=280						
WFSB	**Wu-fen Shan**	**0.69**	**281**	*e*P	Pb	15 48 20.5	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	baz=280						
TWC	**Suao**	**0.70**	**242**	eP	Pb	15 48 21.2	+0.3
	baz=241						
TWC				eS	Sb	15 48 31.7	+0.8
	baz=241						
PCYT	**Pengchaiyu**	**0.80**	**329**	eP	Pb	15 48 22.4	-0.2
	baz=329						
TWE	**Neicheng**	**0.81**	**255**	P	Pb	15 48 22.9	+0.1
	baz=253						
TWE				eS	Sb	15 48 34.4	+0.2
	baz=253						
SLBB	**Yuanshan**	**0.83**	**257**	eP	Pb	15 48 23.8	+0.7
	baz=257						
NANB	**Nanao**	**0.87**	**234**	eP	Pb	15 48 23.5	-0.3
	baz=234						
NANB				eS	Sn	15 48 37.5	-1.1
	baz=234						
ENA	**Nanau**	**0.88**	**235**	eP	Pb	15 48 23.8	-0.1
	baz=234						
ENA				eS	Sn	15 48 37.8	-0.9
	baz=234						
YM01	**YM01**	**0.89**	**284**	eP	Pn	15 48 25.1	-0.4
	baz=283						
NDT	**Datong Townshi**	**0.98**	**250**	P	Pn	15 48 26.3	-0.5
	baz=249						
NDT				eS	Sn	15 48 41.3	0.0
	baz=249						
YHNB	**Yeheng**	**1.08**	**256**	eP	Pb	15 48 27.6	+0.2
	baz=255						
YHNB				eS	Sn	15 48 43.8	0.0
	baz=255						
NSK	**Sanguang**	**1.09**	**256**	eP	Pn	15 48 28.4	+0.1
	baz=255						
NSK				eS	Sn	15 48 44.3	+0.2
	baz=255						
NACB	**Ninganchiao**	**1.14**	**228**	eP	Pb	15 48 28.3	0.0
	baz=228						
NACB				eS	Sn	15 48 45.5	+0.3
	baz=228						
NNS	**Nan Shan**	**1.16**	**245**	eP	Pn	15 48 29.3	-0.1
	baz=244						
NNS				eS	Sn	15 48 46.0	+0.1
	baz=244						
ETLH	**Xiulin Townshi**	**1.20**	**233**	eP	Pn	15 48 29.8	0.0
	baz=232						
ETLH				eS	Sn	15 48 47.4	+0.6
	baz=232						
TWD	**Chiawan**	**1.21**	**225**	eP	Pn	15 48 30.7	+0.9
	baz=224						
TWD				eS	Sn	15 48 47.7	+1.0
	baz=224						
WHF	**Hehuan Shan**	**1.40**	**236**	eP	Pb	15 48 33.3	+0.3
	baz=235						
WHF				eS	Sn	15 48 52.8	+0.8
	baz=235						
LIOB	**Emei**	**1.41**	**258**	eP	Pb	15 48 33.1	+0.2
	baz=258						
LIOB				eS	Sn	15 48 53.6	+1.9
	baz=258						
NSTT	**Nanjuang**	**1.42**	**258**	eP	Pb	15 48 33.4	+0.2
	baz=257						
TDCB	**Techi**	**1.42**	**242**	eS	Sn	15 48 53.2	+0.9
	baz=241						
ESL	**Shilin**	**1.50**	**222**	eP	Pg	15 48 35.1	+0.4
	baz=221						
CHGB	**Renai**	**1.51**	**235**	eP	Pg	15 48 35.2	+0.3
	baz=234						
CHGB				eS	Sn	15 48 56.0	+1.3
	baz=234						
VWDT	**VWDT**	**1.73**	**227**	eP	Pb	15 48 37.8	-0.6
	baz=226						
SSLB	**Suanglung**	**1.84**	**232**	eP	Pb	15 48 39.9	-0.4
	baz=231						

JMA 28 15:48:59.9±0.2, 24°.08N×122°.92E, h29^{km}, M1.6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.37**	**4**	P	Pb	15 49 08.0	-0.3
JYNG				eS	Sb	15 49 14.1	+0.1
YOJ	**Yonaguni jima**	**0.39**	**12**	P	Pb	15 49 08.6	0.0
YOJ				eS	Sb	15 49 14.4	0.0
IRIF	**Iriomote-Funau**	**0.78**	**71**	P	Pb	15 49 14.1	-0.9
HATJ	**Hateruma jima**	**0.81**	**91**	P	Pn	15 49 14.9	-0.4
JKRS	**Kuro-shima**	**1.01**	**81**	P	Pb	15 49 18.8	+0.1
JKRS				S	Sb	15 49 32.1	+0.5
JIJ	**Ishigaki jima**	**1.15**	**76**	P	Pn	15 49 20.1	0.0
JIJ				eS	Sn	15 49 35.0	+0.1
JISG	**Ishigakijimahi**	**1.36**	**68**	P	Pn	15 49 23.1	+0.1
JISG				eS	Sn	15 49 40.4	+0.3

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*KRSC **28** 16:20:57.2±2.2, 48°.64N×155°.85E, h77^{km}±38^{km}, ML4.6*

*ISCJB **28** 16:20:58.5±0.4, 48°.84N±0°.05×155°.22E±0°.08, h51^{km}, mb3.5/10, MS3.1/6, Error ellipse: s-maj=10.1km s-min=2.5km az=40.3*

*MOS **28** 16:20:59.4±1.1, 48°.84N×155°.27E, h67^{km}, mb4.2/2, Error ellipse: s-maj=13.1km s-min=4.1km az=68.6*

*SKHL **28** 16:21:00.1±0.1, 48°.80N×155°.22E, h76^{km}±1^{km}, mb4.4/4*

*IDC **28** 16:21:03.5±2.4, 48°.98N×154°.94E, h83^{km}±22^{km}, mb3.2/10, mb1 3.5/16, mb1mx3.3/67, mbtmp3.6/16, MS3.0/11, Ms1 3.0/11, ms1mx2.9/20, Error ellipse: s-maj=25.3km s-min=12.3km az=134.0*

ISC 28 16:20:59.8±0.7, 48°.81N±0°.08×155°.32E±0°.08, h51^{km}, n100, σ1^{s}.59/124, mb3.4/10, MS3.1/6, 3C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.95**	**15**	eP	**Pn**	**16 21 30.8**	**+0.4**
SKR				eS	**Sn**	**16 21 54.1**	**+0.4**
SKR	**Severo-Kuril's**	**1.95**	**15**	ePN	**Pn**	**16 21 30.4**	**0.0**
SKR				eS	**Sn**	**16 21 52.5**	**-1.2**
SKR				pmax	pmax		
	comp=Z,234nm,0.7s						
SKR				smax	smax		
	comp=E,1μm,0.8s						
SKR				smax	smax		
	comp=N,2μm,0.5s						
SKR	**Severo-Kuril's**	**1.95**	**15**	eP	**Pn**	**16 21 30.4**	**0.0**
SKR				AMB	AMB	16 21 33.0	
	comp=N,170nm,0.4s						
SKR				eS	**Sn**	**16 21 53.1**	**-0.6**
SKR				A	A	16 22 00.0	
	comp=N,1μm,0.8s						
SKR				A	A	16 22 00.0	
	comp=N,1μm,0.8s						
PAU	**Pauzhetka**	**2.83**	**19**	eP	**Pn**	**16 21 43.2**	**+0.7**
PAU				eS	**Sn**	**16 22 15.6**	**+0.2**
PAU	**Pauzhetka**	**2.83**	**19**	PN	**Pn**	**16 21 43.2**	**+0.7**
PAU				S	**Sn**	**16 22 15.6**	**+0.2**
PAU	**Pauzhetka**	**2.83**	**19**	eP	**Pn**	**16 21 43.2**	**+0.7**
PAU				eS	**Sn**	**16 22 15.6**	**+0.2**
KDTR	**Khodutka, Kamc**	**3.49**	**29**	eP	**Pn**	**16 21 51.6**	**+0.1**
KDTR				eS	**Sn**	**16 22 30.4**	**-1.1**
KDTR	**Khodutka, Kamc**	**3.49**	**29**	PN	**Pn**	**16 21 51.6**	**+0.1**
KDTR				S	**Sn**	**16 22 30.4**	**-1.1**
ASAK	**Asacha**	**3.94**	**24**	eP	**Pn**	**16 21 59.0**	**+1.2**
ASAK				eS	**Sn**	**16 22 45.0**	**+2.2**
ASAK	**Asacha**	**3.94**	**24**	PN	**Pn**	**16 21 59.0**	**+1.2**
ASAK				S	**Sn**	**16 22 45.0**	**+2.2**
MTVR	**Mutnovka**	**4.11**	**25**	eP	**Pn**	**16 22 00.6**	**+0.5**
MTVR				eS	**Sn**	**16 22 47.9**	**+0.9**
MTVR	**Mutnovka**	**4.11**	**25**	PN	**Pn**	**16 22 00.6**	**+0.5**
MTVR				S	**Sn**	**16 22 47.9**	**+0.9**
RUS	**Russkaya**	**4.16**	**28**	eS	**Sn**	**16 22 49.1**	**+1.1**
APC	**Apacha**	**4.29**	**15**	eP	**Pn**	**16 22 05.5**	**+3.1**
APC	**Apacha**	**4.29**	**15**	PN	**Pn**	**16 22 05.5**	**+3.1**
KRMR	**Karymshinskiy**	**4.41**	**23**	eP	**Pn**	**16 22 06.2**	**+2.1**
KRMR	**Karymshinskiy**	**4.41**	**23**	PN	**Pn**	**16 22 06.2**	**+2.1**
PETK	**Petropavlovsk-**	**4.56**	**18**	P	**Pn**	**16 22 08.6**	**+2.3**
	comp=N,3.8nm,0.3s,baz=187,slow=11,SNR=63						
PETK				S	**Sn**	**16 23 00.1**	**+2.1**
	comp=N,1.1nm,0.3s,baz=200,slow=17,SNR=2.2						
PETK				LR	LR	16 24 15.6	
	comp=N,89nm,21.1s,baz=195,slow=43						
PET	**Petropavlovsk**	**4.72**	**25**	eP	**Pn**	**16 22 09.9**	**+1.5**
PET	**Petropavlovsk**	**4.72**	**25**	⇑iPN	**Pn**	**16 22 09.8**	**+1.4**
PET				eS	**Sn**	**16 23 04.6**	**+2.8**
PET				pmax	pmax		
	comp=Z,47nm,0.5s						
PET				smax	smax		
	comp=E,224nm,0.5s						
PET				smax	smax		
	comp=N,194nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,20.0s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET	**Petropavlovsk**	**4.72**	**25**	eP	**Pn**	**16 22 09.8**	**+1.4**
PET				AMB	AMB	16 22 10.0	
	comp=Z,40nm,0.5s						
PET				eS	**Sn**	**16 23 02.1**	**+0.3**
PET				A	A	16 23 08.3	
	comp=Z,130nm,0.6s						
PET				A	A	16 23 08.3	
	comp=Z,180nm,0.6s						
DALK	**Dalny**	**4.76**	**26**	eP	**Pn**	**16 22 10.3**	**+1.4**
DALK				eS	**Sn**	**16 23 02.8**	**+0.2**
DALK	**Dalny**	**4.76**	**26**	PN	**Pn**	**16 22 10.3**	**+1.4**
DALK				S	**Sn**	**16 23 02.8**	**+0.2**
UGLR	**Uglovaya**	**4.93**	**25**	eP	**Pn**	**16 22 13.2**	**+1.8**
UGLR	**Uglovaya**	**4.93**	**25**	PN	**Pn**	**16 22 13.2**	**+1.8**
KOK	**Koryaka**	**4.96**	**24**	eP	**Pn**	**16 22 14.4**	**+2.7**
KOK	**Koryaka**	**4.96**	**24**	PN	**Pn**	**16 22 14.4**	**+2.7**
KOK	**Koryaka**	**4.96**	**24**	eP	**Pn**	**16 22 14.4**	**+2.7**
AVH	**Avacha**	**4.96**	**25**	eP	**Pn**	**16 22 14.0**	**+2.3**
AVH				eS	**Sn**	**16 23 08.4**	**+0.6**
AVH	**Avacha**	**4.96**	**25**	PN	**Pn**	**16 22 14.0**	**+2.3**
AVH				S	**Sn**	**16 23 08.4**	**+0.6**
SMAR	**Somma**	**4.97**	**25**	eP	**Pn**	**16 22 14.3**	**+2.2**
SMAR	**Somma**	**4.97**	**25**	PN	**Pn**	**16 22 14.3**	**+2.2**
KRER	**Koryakskii**	**5.00**	**24**	eP	**Pn**	**16 22 13.4**	**+1.0**
KRER				eS	**Sn**	**16 23 08.3**	**-0.6**
KRER	**Koryakskii**	**5.00**	**24**	PN	**Pn**	**16 22 13.4**	**+1.0**
KRER				S	**Sn**	**16 23 08.3**	**-0.6**
SDLR	**Sedlovina**	**5.01**	**25**	eP	**Pn**	**16 22 13.5**	**+1.0**
SDLR				eS	**Sn**	**16 23 10.1**	**+1.0**
SDLR	**Sedlovina**	**5.01**	**25**	PN	**Pn**	**16 22 13.5**	**+1.0**
SDLR				S	**Sn**	**16 23 10.1**	**+1.0**
KRX	**Arik**	**5.02**	**23**	eP	**Pn**	**16 22 15.2**	**+2.6**
KRX				eS	**Sn**	**16 23 10.9**	**+1.6**
KRX	**Arik**	**5.02**	**23**	PN	**Pn**	**16 22 15.2**	**+2.6**
KRX				S	**Sn**	**16 23 10.9**	**+1.6**
NLC	**Nalytchevo**	**5.06**	**29**	eP	**Pn**	**16 22 11.9**	**-1.1**
NLC				eS	**Sn**	**16 23 06.3**	**-3.7**
NLC	**Nalytchevo**	**5.06**	**29**	PN	**Pn**	**16 22 11.9**	**-1.1**
GNL	**Ganaly**	**5.17**	**18**	eP	**Pn**	**16 22 17.6**	**+3.0**
GNL	**Ganaly**	**5.17**	**18**	PN	**Pn**	**16 22 17.6**	**+3.0**
SPN	**Mys Shipunski**	**5.23**	**33**	eP	**Pn**	**16 22 15.6**	**+0.3**
SPN				eS	**Sn**	**16 23 13.4**	**-0.8**
SPN	**Mys Shipunski**	**5.23**	**33**	PN	**Pn**	**16 22 15.6**	**+0.3**
SPN				S	**Sn**	**16 23 13.4**	**-0.8**
SPN	**Mys Shipunski**	**5.23**	**33**	eP	**Pn**	**16 22 15.6**	**+0.3**
KUR	**Kuril'sk**	**6.22**	**238**	ePN	**Pn**	**16 22 30.1**	**+1.2**
KUR				S	**Sn**	**16 23 39.8**	**+1.2**
KUR				pmax	pmax		
	comp=Z,46nm,0.4s						
KUR				pmax	pmax		
	comp=E,4.0nm,0.6s						
KUR				pmax	pmax		
	comp=N,13nm,0.2s						
KUR	**Kuril'sk**	**6.22**	**238**	eP	**Pn**	**16 22 30.7**	**+1.8**
KUR				AMB	AMB	16 22 31.0	
	comp=N,10.0nm,0.5s						
KUR				AMB	AMB	16 22 31.0	
	comp=N,4.0nm,0.5s						
KUR				AMB	AMB	16 22 31.0	
	comp=N,20nm,0.5s						
KUR				eS	**Sn**	**16 23 37.9**	**-0.7**
MKZ	**Mys Kozlova**	**7.00**	**32**	eP	**Pn**	**16 22 38.6**	**-1.0**
MKZ				eS	**Sn**	**16 23 53.0**	**-4.8**
MKZ	**Mys Kozlova**	**7.00**	**32**	PN	**Pn**	**16 22 38.6**	**-1.0**
TUMD	**Tumrok D**	**7.13**	**24**	P	**Pn**	**16 22 41.3**	**-0.1**
TUMD				eS	**Sn**	**16 24 01.6**	**+0.6**
TUMR	**Tumrok**	**7.14**	**23**	PN	**Pn**	**16 22 41.3**	**-0.3**
TUMR				S	**Sn**	**16 24 01.6**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**8.09**	**237**	⇑ePN	**Pn**	**16 22 59.0**	**+4.5**
YUK	**Yuzh-Kuril'sk**	**8.09**	**237**	eP	**Pn**	**16 22 55.0**	**+0.5**
LAGR	**Lagunnoye**	**8.12**	**238**	ePN	**Pn**	**16 22 55.0**	**+0.1**
LAGR	**Lagunnoye**	**8.12**	**238**	eP	**Pn**	**16 22 55.0**	**+0.1**
GRPR	**Tuman**	**8.16**	**237**	PN	**Pn**	**16 22 55.5**	**-0.1**
GRPR	**Tuman**	**8.16**	**237**	eP	**Pn**	**16 22 55.0**	**-0.6**
GLVR	**Golovnino**	**8.47**	**237**	PN	**Pn**	**16 22 59.4**	**-0.3**
GLVR	**Golovnino**	**8.47**	**237**	eP	**Pn**	**16 22 59.0**	**-0.7**
YSS	**Yuzh-Sakhalins**	**8.64**	**262**	⇑ePN	**Pn**	**16 23 04.0**	**+1.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,100nm,18.0s						
YSS	**Yuzh-Sakhalins**	**8.64**	**262**	eP	**Pn**	**16 23 03.0**	**+0.9**
YSS				AMB	AMB	16 23 07.0	
	comp=Z,10.0nm,0.9s						
KBTR	**Krutoberegovo**	**8.71**	**29**	P	**Pn**	**16 23 02.7**	**-0.3**
KBTR	**Krutoberegovo**	**8.71**	**29**	PN	**Pn**	**16 23 02.7**	**-0.3**
UGL	**Uglegorsk**	**8.73**	**277**	eP	**Pn**	**16 23 03.8**	**+0.5**
OKH	**Okha**	**9.11**	**306**	eP	**Pn**	**16 23 07.8**	**-0.6**
BKI	**Bering**	**9.17**	**42**	eP	**Pn**	**16 23 09.1**	**-0.2**
BKI	**Bering**	**9.17**	**42**	PN	**Pn**	**16 23 09.1**	**-0.2**
JKA	**Kamikawa-asahi**	**9.95**	**247**	eP	**Pn**	**16 23 21.8**	**+1.8**
ASAJ	**Asahikawa**	**9.95**	**247**	P	**Pn**	**16 23 21.8**	**+1.8**
	comp=Z,6.9nm,0.3s,baz=70,slow=11,SNR=90						
ERM	**Erimo**	**10.91**	**236**	⇓ePN	**Pn**	**16 23 31.6**	**-1.5**
MA2	**Magadan**	**11.11**	**348**	P	**Pn**	**16 23 37.2**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=168,slow=18,SNR=3.3						
MA2				LR	LR	16 27 44.5	
	comp=Z,35nm,21.4s,baz=249,slow=37						
EKMR	**Ekimchan**	**14.71**	**295**	eP	**Pn**	**16 24 20.0**	**-4.6**
KLR	**Kul'dur**	**15.46**	**280**	P	**Pn**	**16 24 33.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=72,slow=16,SNR=1.7						
KLR				LR	LR	16 30 57.8	
	comp=Z,86nm,18.4s,baz=67,slow=39						
USRK	**Ussuriysk Ar.**	**16.68**	**263**	P	**Pn**	**16 24 50.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=77,slow=14,SNR=2.8						
USRK				LR	LR	16 31 06.1	
	comp=Z,30nm,21.8s,baz=24,slow=37						
MJA0	**Matsu Arr-Jizo**	**17.49**	**232**	eP	**P**	**16 25 02.6**	**+2.0**
MJAR	**Matsushiro Arr**	**17.51**	**232**	P	**Pn**	**16 25 00.4**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=36,slow=8.4,SNR=4.5						
MJAR				LR	LR	16 32 30.3	
	comp=Z,48nm,19.5s,baz=20,slow=39						
KROS	**Kirovskiy**	**18.40**	**299**	eP	**P**	**16 25 10.2**	**-0.3**
KSRS	**Korea Array**	**22.86**	**250**	P	**P**	**16 25 57.7**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=51,slow=9.9,SNR=4.4						
KSRS				LR	LR	16 34 14.5	
	comp=Z,62nm,19.0s,baz=62,slow=35						
KSRS	**Korea Array**	**22.86**	**250**	eP	**P**	**16 25 58.2**	**-0.4**
JNU	**Nakatsue**	**24.06**	**238**	LR	LR	16 34 30.1	
	comp=Z,55nm,21.7s,baz=82,slow=34						
TIXI	**Tiksi**	**25.95**	**341**	P	**P**	**16 26 24.9**	**-2.1**
	comp=Z,1.4nm,0.3s,baz=136,slow=17,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**30.47**	**158**	T	T	16 59 26.2	
	baz=346,slow=77,SNR=20						
H11N1	**WAKE ISLAND Hy**	**30.49**	**158**	T	T	16 59 24.0	
	baz=346,slow=77,SNR=52						
H11N3	**WAKE ISLAND Hy**	**30.49**	**158**	T	T	16 59 35.5	
	baz=346,slow=77,SNR=18						
H11S1	**WAKE ISLAND Hy**	**31.60**	**159**	T	T	17 00 45.5	
	baz=346,slow=76,SNR=752						
H11S3	**WAKE ISLAND Hy**	**31.61**	**159**	T	T	17 00 49.4	
	baz=346,slow=76,SNR=1031						
H11S2	**WAKE ISLAND Hy**	**31.62**	**159**	T	T	17 00 55.0	
	baz=346,slow=76,SNR=610						
KDAK	**Kodiak Island**	**31.67**	**54**	LR	LR	16 40 02.5	
	comp=Z,41nm,19.8s,baz=276,slow=36						
SONM	**Songino Array**	**32.10**	**287**	LR	LR	16 41 26.9	
	comp=Z,41nm,19.3s,baz=113,slow=38						
ILAR	**Eielson Array**	**34.02**	**40**	P	**P**	**16 27 39.0**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=253,slow=8.1,SNR=4.1						
ILAR				LR	LR	16 40 55.6	
	comp=Z,25nm,21.3s,baz=245,slow=35						
ILAR	**Eielson Array**	**34.02**	**40**	P	**P**	**16 27 39.0**	**+0.6**
ILAR				MLR	MLR		
	comp=Z,25nm,21.3s						
MKAR	**Makanchi Array**	**47.33**	**297**	P	**P**	**16 29 26.3**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=79,slow=9.0,SNR=2.1						
MKAR				LR	LR	16 50 39.8	
	comp=Z,29nm,19.2s,baz=73,slow=38						
CMAR	**Chiang Mai Arr**	**54.29**	**257**	P	**P**	**16 30 20.4**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=23,slow=6.6,SNR=7.6						
CMAR	**Chiang Mai Arr**	**54.29**	**257**	eP	**P**	**16 30 21.4**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**60.19**	**65**	P	**P**	**16 31 05.1**	**+2.5**
	comp=Z,0.1nm,0.4s,baz=291,slow=7.6,SNR=2.6						
FINES	**FINESS Array B**	**62.80**	**335**	P	**P**	**16 31 17.5**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=35,slow=7.0,SNR=5.1						
FINES	**FINESS Array B**	**62.80**	**335**	eP	**P**	**16 31 19.1**	**-0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**70.95**	**201**	P	**P**	**16 32 11.2**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=16,slow=6.3,SNR=3.5						
ASAR	**Alice Springs**	**74.64**	**200**	P	**P**	**16 32 34.0**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=13,slow=5.2,SNR=13						
TXAR	**Lajitas Array**	**75.20**	**62**	P	**P**	**16 32 38.4**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=305,slow=4.9,SNR=3.5						

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*IDC **28** 16:27:53.6±0.7, 8°.59N×126°.11E, h0^{km}, mb3.7/12, mb1 3.8/12, mb1mx3.7/46, mbtmp3.7/12, MS3.0/3, Ms1 3.0/3, ms1mx2.6/36, Error ellipse: s-maj=32.3km s-min=10.6km az=98.0*

*ISCJB **28** 16:27:57.5±0.5, 8°.47N±0°.06×125°.92E±0°.04, h46^{km}±6^{km}, mb3.6/12, MS3.0/3, Error ellipse: s-maj=10.4km s-min=5.6km az=31.7*

ISC 28 16:27:57.8±1.6, 8°.48N±0°.05×125°.92E±0°.05, h30^{km}±12^{km}, n33, σ1^{s}.03/29, mb3.7/12, MS3.1/3, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.52**	**123**	⇓iP	**Pb**	**16 28 08.3**	**-0.3**
BIPH				i S	**Sn**	**16 28 17.3**	**+0.2**
CGP	**Cagayan de Oro**	**1.21**	**269**	⇑iP	**Pn**	**16 28 16.5**	**-2.2**
CGP				i S	**Sn**	**16 28 31.8**	**-2.3**
SCPH	**Surigao**	**1.37**	**342**	⇓eP	Pb	16 28 28.8	+6.1
DAV	**Davao City (W)**	**1.44**	**194**	Pg	**Pn**	**16 28 22.3**	**+0.5**
	158nm,0.3s,baz=62,slow=3.9,SNR=12						
DAV				Lg	Lg	16 28 45.4	
	232nm,0.3s,baz=284,slow=20,SNR=3.7						
DAV				LR	LR	16 28 58.2	
	comp=Z,216nm,18.2s,baz=198,slow=40						
CTBH	**Cotabato--PC H**	**2.07**	**233**	⇓eP	**Pn**	**16 28 30.6**	**0.0**
TBP	**Tagbilaran**	**2.36**	**301**	eP	**Pn**	**16 28 34.1**	**-0.4**
TBP				i S	**Sn**	**16 29 04.8**	**+2.2**
DCPH	**Dipolog City**	**2.54**	**273**	⇑eP	**Pn**	**16 28 38.7**	**+1.8**
GSPH	**General Santos**	**2.56**	**202**	eP	**Pb**	**16 28 43.8**	**+0.7**
LLP	**Lapu-Lapu**	**2.66**	**314**	eP	**Pn**	**16 28 38.6**	**0.0**
LLP				eS	**Sn**	**16 29 11.3**	**+1.4**
SNPH	**Sibulan**	**2.79**	**288**	⇑eP	**Pn**	**16 28 40.4**	**0.0**
SNPH				i S	**Sn**	**16 29 13.5**	**+0.4**
PLP	**Palo**	**2.83**	**341**	⇑eP	**Pn**	**16 28 42.0**	**+1.1**
KSRS	**Korea Array**	**28.91**	**3**	LR	LR	16 43 40.3	
	comp=Z,18nm,21.2s,baz=171,slow=33						
WRA	**Warramunga Arr**	**29.43**	**164**	P	**P**	**16 33 59.1**	**+0.1**
	0.9nm,1.0s,baz=339,slow=12,SNR=5.5						
MJAR	**Matsushiro Arr**	**30.09**	**20**	P	**P**	**16 34 03.5**	**-1.1**
	0.3nm,0.5s,baz=192,slow=8.5,SNR=2.5						
ASAR	**Alice Springs**	**32.88**	**166**	P	**P**	**16 34 29.7**	**+0.4**
	0.6nm,0.6s,baz=337,slow=7.2,SNR=22						
ASAR				PcP	**PcP**	**16 37 14.4**	**+0.7**
	0.3nm,0.8s,baz=340,slow=3.0,SNR=3.1						
USRK	**Ussuriysk Ar.**	**35.98**	**7**	P	**P**	**16 34 55.0**	**-0.9**
	2.1nm,0.7s,baz=199,slow=8.3,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**40.79**	**72**	T	T	17 18 39.8	
	baz=262,slow=74,SNR=28						
H11S1	**WAKE ISLAND Hy**	**40.80**	**72**	T	T	17 18 41.0	
	baz=262,slow=74,SNR=36						
H11S2	**WAKE ISLAND Hy**	**40.80**	**72**	T	T	17 18 42.2	
	baz=262,slow=74,SNR=16						
KLR	**Kul'dur**	**40.91**	**6**	P	**P**	**16 35 36.9**	**-0.4**
	0.4nm,0.5s,baz=208,slow=17,SNR=2.2						
H11N1	**WAKE ISLAND Hy**	**41.17**	**70**	T	T	17 19 18.8	
	baz=265,slow=74,SNR=22						
H11N2	**WAKE ISLAND Hy**	**41.18**	**70**	T	T	17 19 20.4	
	baz=265,slow=74,SNR=18						
H11N3	**WAKE ISLAND Hy**	**41.19**	**70**	T	T	17 19 21.6	
	baz=265,slow=74,SNR=19						
SONM	**Songino Array**	**42.58**	**341**	LR	LR	16 56 10.1	
	comp=Z,34nm,18.7s,baz=184,slow=40						
STKA	**Stephens Creek**	**42.83**	**160**	P	**P**	**16 35 53.9**	**+0.7**
	1.7nm,0.9s,baz=335,slow=11,SNR=2.5						
PETK	**Petropavlovsk-**	**51.41**	**24**	P	**P**	**16 36 59.3**	**-0.5**
	1.2nm,0.8s,baz=212,slow=5.1,SNR=2.5						
MKAR	**Makanchi Array**	**53.25**	**324**	P	**P**	**16 37 14.1**	**+0.5**
	0.6nm,0.7s,baz=132,slow=6.8,SNR=7.0						
ZALV	**Zalesovo Beam**	**56.03**	**332**	P	**P**	**16 37 33.9**	**+0.2**
	0.2nm,0.3s,baz=143,slow=5.0,SNR=2.6						
TIXI	**Tiksi**	**63.14**	**1**	P	**P**	**16 38 22.0**	**-0.4**
	0.4nm,0.4s,baz=262,slow=2.3,SNR=2.2						
ILAR	**Eielson Array**	**81.20**	**26**	P	**P**	**16 40 10.5**	**+0.1**
	0.2nm,0.6s,baz=280,slow=7.0,SNR=3.0						
FINES	**FINESS Array B**	**87.30**	**332**	P	**P**	**16 40 41.1**	**-0.3**
	0.5nm,0.7s,baz=120,slow=24,SNR=2.9						
NOA	**NORSAR Array B**	**94.20**	**334**	LR	LR	17 27 28.6	
	comp=Z,6.1nm,18.3s,baz=255,slow=38						
PLCA	**Paso Flores**	**144.69**	**158**	PKP	**PKPdf**	**16 47 32.1**	**+0.1**
	1.4nm,1.0s,baz=248,slow=8.2,SNR=2.4						

MAN 28 16:31:59.5, 9°.12N×126°.60E, h7^{km}, mb3.6, ML2.2, MS1.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.95**	**194**	⇓eP	Pg	16 32 17.8	0.0
BIPH				eS	Sg	16 32 28.1	-2.1
CGP	**Cagayan de Oro**	**1.99**	**251**	eP	Pn	16 32 33.9	+0.3

IDC 28 16:39:47.5±2.3, 6°.50S×129°.28E, h0^{km}, mb3.4/1, mb1 3.8/3, mb1mx3.4/22, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=148.5km s-min=32.5km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.24**	**160**	Pn	Pn	16 43 10.0	-0.7
	0.2nm,0.3s,baz=339,slow=13,SNR=3.0						
WRA				Sn	Sn	16 45 35.3	-14
	0.4nm,0.3s,baz=330,slow=22,SNR=4.4						
ASAR	**Alice Springs**	**17.64**	**166**	P	Pn	16 43 55.4	+0.4
	0.3nm,0.3s,baz=339,slow=9.3,SNR=57						
ASAR				S	Sn	16 46 55.8	-16
	0.1nm,0.3s,baz=350,slow=26,SNR=2.3						
MKAR	**Makanchi Array**	**67.42**	**327**	P	P	16 50 45.0	0.0
	0.1nm,0.3s,baz=112,slow=4.8,SNR=4.1						

MEX 28 16:44:32.8±0.8, 15°.98N×92°.69W, h194^{km}±7^{km}, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.58**	**242**	eP	Pn	16 44 58.4	-1.2
PCIG				eS	Sn	16 45 18.0	-2.1
CCIG	**Comitan**	**0.61**	**60**	i P	Pn	16 44 58.9	-0.9
CCIG				i S	Sn	16 45 18.0	-2.8
TGIG		**0.90**	**332**	eP	Pn	16 45 00.7	-0.6
TGIG				i S	Sn	16 45 20.6	-3.0
CMIG	**Matias Romero**	**2.38**	**298**	eP	Pn	16 45 13.6	-1.4
CMIG				i S	Sn	16 45 44.9	-2.9

MEX 28 16:52:06.5±0.6, 17°.35N×94°.78W, h134^{km}±4^{km}, MD3.6, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.27**	**202**	i P	Pn	16 52 23.8	-1.3
CMIG				i S	Sn	16 52 37.3	-1.9
TUIG	**Tuzandepetl**	**0.76**	**26**	i P	Pn	16 52 27.1	-0.7
TUIG				i S	Sn	16 52 42.0	-2.0
TGIG		**1.68**	**109**	eP	Pn	16 52 35.8	-1.2
TGIG				eS	Sn	16 52 57.9	-2.4
VHO	**Vista Hermosa**	**1.89**	**262**	eP	Pn	16 52 38.6	-1.0
VHO				i S	Sn	16 53 03.0	-1.9
HUIG	**Huatulco**	**2.02**	**219**	eP	Pn	16 52 37.9	-3.1
HUIG				eS	Sn	16 53 04.9	-2.5
PCIG		**2.21**	**137**	i P	Pn	16 52 42.2	-1.1
PCIG				eS	Sn	16 53 09.8	-1.7
CCIG	**Comitan**	**2.74**	**112**	i P	Pn	16 52 48.5	-1.6
CCIG				eS	Sn	16 53 21.3	-2.4

RSPR 28 16:56:04.9, 18°.15N×67°.03W, h19^{km}, 3C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSP	**Las Mesas**	**0.06**	**302**	eS	Sg	16 56 11.0	0.0
LSP	**Las Mesas**	**0.06**	**302**	⇓eP	Pg	16 56 08.3	-0.2
CRPR	**Cabo Rojo, PR**	**0.16**	**208**	⇑eP	Pg	16 56 09.9	+0.4

CRPR	Cabo Rojo, PR	0.16	208	eS	Sg	16 56 12.9	+0.4
MLPR	Magueyes Islan	0.17	183	eS	Sg	16 56 12.6	-0.3
MLPR	Magueyes Islan	0.17	183	⇓eP	Pb	16 56 09.2	+0.4
CELP	Cerrillos	0.44	99	⇑eP	Pg	16 56 13.6	-0.4
CELP				eS	Sg	16 56 19.5	-0.6
IDE	Isla Desecheo	0.48	300	⇓eP	Pg	16 56 13.5	-1.3
IDE	Isla Desecheo	0.48	300	eS	Sg	16 56 20.9	-0.5
EMPR	Esperanza - Ma	0.58	55	eS	Sg	16 56 24.5	0.0
MTP	Monte Pirata	1.41	92	⇑eP	Pn	16 56 28.7	-0.9
MTP	Monte Pirata	1.41	92	eS	Sn	16 56 47.7	+0.1

ISCJB **28** *16:57:31.3±0.2, 5.°73S±0.°04×80.°75W±0.°05, h35^{km}, mb4.5/92, MS3.7/11, Error ellipse: s-maj=7.2km s-min=4.2km az=148.7*

NEIC **28** *16:57:34.0±1.4, 5.°78S×80.°73W, h47^{km}±4^{km}, mb4.6/95, Error ellipse: s-maj=21.5km s-min=9.2km az=56.0*

IDC **28** *16:57:38.2±2.0, 5.°84S×80.°79W, h84^{km}±18^{km}, mb3.9/18, mb1 4.1/21, mb1mx3.9/42, mbtmp4.2/21, MS3.7/15, Ms1 3.7/15, ms1mx3.5/34, Error ellipse: s-maj=21.3km s-min=12.1km az=54.0*

ISC 28 16:57:32.7±0.4**, 5.°89S**±0.°07×**80.°92W**±0.°09**, h35^{km}, n355, σ0.^{s}98**/356**, mb4.6**/92**, MS3.8**/11**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	2.80	116	P	Pn	16 58 18.2	+2.8
	41nm,0.3s,baz=286,slow=11,SNR=198						
ATAH				S	Sn	16 58 54.2	+5.9
	571nm,0.3s,baz=161,slow=23,SNR=15						
ATAH				LR	LR	16 59 24.9	
	comp=Z,2µm,18.4s,baz=333,slow=40						
NNA	Nana	7.28	147	P	Pn	16 59 18.2	+1.5
	9.5nm,0.3s,baz=326,slow=11,SNR=14						
NNA				S	Sn	17 00 34.2	-4.1
	baz=9.0,slow=22,SNR=0.9						
NNA	Nana	7.28	147	ePn	Pn	16 59 17.4	+0.7
PAYG	Puerto Ayora	10.68	299	ePn	Pn	17 00 05.9	+2.5
ROSC	El Rosal	12.53	32	LR	LR	17 05 38.4	
	comp=Z,606nm,21.1s,baz=224,slow=39						
LPAZ	La Paz	16.25	131	P	Pn	17 01 19.6	+0.6
	0.1nm,0.3s,baz=316,slow=12,SNR=4.6						
LPAZ				LR	LR	17 08 33.7	
	comp=Z,220nm,21.0s,baz=320,slow=40						
LPAZ	La Paz	16.25	131	eP	P	17 01 21.3	-0.5
	32nm,1.4s						
JTS	Las Juntas de	16.56	346	LR	LR	17 06 44.5	
	comp=Z,292nm,18.1s,baz=220,slow=33						
MNMC	Minye Minye	17.18	141	eP	P	17 01 32.6	+0.9
	27nm,1.2s						
PB11	IPOC Station P	17.62	143	eP	Pn	17 01 35.6	-0.1
	20nm,1.0s						
GO01	Chusmiza	17.83	141	eP	P	17 01 40.0	+0.9
	64nm,1.4s						
LVC	Limon Verde	20.27	146	P	P	17 02 05.3	-0.5
	2.6nm,0.5s,baz=349,slow=16,SNR=2.6						
LVC	Limon Verde	20.27	146	eP	Pn	17 02 08.3	+0.4
	12nm,0.9s						
PTGA	Pitinga	21.53	77	P	P	17 02 17.6	-1.4
	6.5nm,0.7s,baz=262,slow=11,SNR=16						
PTGA				LR	LR	17 11 42.7	
	comp=Z,421nm,18.5s,baz=267,slow=40						
PTGA	Pitinga	21.53	77	eP	P	17 02 16.9	-2.2
	14nm,0.8s						
SIV	San Ignacio	21.90	119	P	P	17 02 23.1	+0.1
	7.0nm,0.8s,baz=309,slow=9.4,SNR=32						
SIV				LR	LR	17 11 33.1	
	comp=Z,321nm,18.1s,baz=314,slow=38						
GO02	Mina Guanaco	22.03	152	eP	P	17 02 26.9	+2.2
	18nm,0.8s						
PCRV	Puerto La Cruz	22.75	46	P	P	17 02 31.7	-0.5
	8.0nm,0.9s,baz=20,slow=3.8,SNR=3.4						
CMIG	Matias Romero	26.68	329	LR	LR	17 11 51.1	
	comp=Z,122nm,21.4s,baz=194,slow=32						
TEIG	Tepich	26.94	345	LR	LR	17 12 37.8	
	comp=Z,146nm,21.2s,baz=236,slow=33						
SJG	San Juan	27.95	31	P	P	17 03 19.8	-0.2
	9.6nm,0.6s,baz=224,slow=2.3,SNR=5.0						
CPUP	Villa Florida	30.34	135	P	P	17 03 41.0	-0.2
	1.4nm,0.7s,baz=178,slow=17,SNR=3.2						
CPUP	Villa Florida	30.34	135	eP	P	17 03 41.0	-0.2
	17nm,1.7s						
BDFB	Brasilia	33.70	109	P	P	17 04 10.2	-0.8
	2.3nm,0.8s,baz=313,slow=2.5,SNR=4.2						
BDFB				LR	LR	17 18 43.1	
	comp=Z,310nm,20.4s,baz=301,slow=38						
758A	Lake Helen	34.65	360	P	P	17 04 19.1	+0.2
	baz=179						
PLCA	Paso Flores	35.92	167	P	P	17 04 30.4	+0.5
	2.7nm,0.9s,baz=6.1,slow=11,SNR=5.1						
PLCA				PcP	PcP	17 06 56.9	+0.5
	1.4nm,0.7s,baz=1.0,slow=2.5,SNR=5.7						
PLCA				LR	LR	17 16 04.7	
	comp=Z,55nm,20.0s,baz=28,slow=31						
PLCA	Paso Flores	35.92	167	eP	P	17 04 30.4	+0.5
	25nm,1.9s						
PLCA				ePcP	PcP	17 06 56.9	+0.5
455A	Stateville	36.47	357	P	P	17 04 34.5	0.0
	baz=176						
353A	Camilla	37.16	355	P	P	17 04 39.6	-0.7
	baz=174						
BRAL	Brewton	37.31	351	P	P	17 04 41.2	-0.4
	baz=170						
349A	Repton	37.51	351	P	P	17 04 43.1	-0.2
	baz=169						
256A	Glennville	37.66	359	P	P	17 04 43.7	-0.9
	baz=178						
254A	Abbeville	37.69	357	P	P	17 04 44.8	0.0
	baz=176						
252A	Lumpkin	37.84	355	P	P	17 04 45.5	-0.6
	baz=174						
251A	Midway	38.01	354	P	P	17 04 47.2	-0.3
	baz=172						
249A	Camden	38.11	351	P	P	17 04 48.6	+0.3
	baz=170						
155A	Kite	38.32	358	P	P	17 04 49.6	-0.5
	baz=177						
HKT	Hockley	38.40	339	eP	P	17 04 51.4	+0.7
	42nm,1.8s						
150A	Eclectic	38.58	353	P	P	17 04 52.5	+0.2
	baz=172						
NHSC	New Hope	38.78	1	P	P	17 04 53.5	-0.5
	baz=181						
Z59A	Georgetown, SC	38.94	2	P	P	17 04 54.8	-0.6
	baz=182						
Z54A	Sparta	38.95	357	P	P	17 04 54.9	-0.5
	baz=177						
Z52A	Williamson	39.00	355	P	P	17 04 55.0	-0.8
	baz=174						
Z53A	Monticello	39.03	356	P	P	17 04 55.8	-0.3
	baz=176						
LRAL	Lakeview Retre	39.13	352	P	P	17 04 57.0	0.0
	baz=170						
GOGA	Godfrey	39.15	357	P	P	17 04 56.8	-0.3
	baz=176						
Z50A	Ashland	39.21	353	P	P	17 04 57.3	-0.3
	baz=172						
Z49A	Columbiana	39.23	353	P	P	17 04 57.2	-0.6
	baz=171						
Y54A	Tignall	39.56	358	P	P	17 05 00.1	-0.5
	baz=177						
Y53A	Monroe	39.60	357	P	P	17 05 00.2	-0.7
	baz=176						
Y55A	Saluda	39.62	359	P	P	17 05 00.5	-0.4
	baz=178						
Y52A	Lilburn	39.64	356	P	P	17 05 01.0	-0.2
	baz=175						
Y59A	Loris	39.70	3	P	P	17 05 00.9	-0.8
	baz=183						
Y51A	Rockmart	39.76	355	P	P	17 05 01.9	-0.4
	baz=173						
Y49A	Blount Mountai	39.87	353	P	P	17 05 02.8	-0.3
	baz=171						
X55A	Gracelyn & Ava	40.14	359	P	P	17 05 05.3	-0.1
	baz=179						
X56A	White Oak	40.16	360	P	P	17 05 04.3	-1.1
	baz=180						
X53A	Estanollee	40.23	357	P	P	17 05 05.7	-0.4
	baz=176						
X54A	Belton	40.24	358	P	P	17 05 06.0	-0.1
	baz=178						
X59A	McDuffie Farm,	40.30	3	P	P	17 05 05.3	-1.3
	baz=183						
X52A	Dahlonega	40.37	356	P	P	17 05 06.7	-0.6
	baz=175						
X50B	Fort Payne	40.38	354	P	P	17 05 06.2	-1.1
	baz=172						
JCT	Junction City	40.43	334	eP	P	17 05 09.3	+1.5
	8.4nm,1.0s						
JCT	Junction City	40.43	334	P	P	17 05 08.6	+0.8
	baz=150						
X48A	Hartselle	40.53	352	P	P	17 05 08.1	-0.4
	baz=170						
X47A	Russelville	40.71	351	P	P	17 05 09.1	-1.0
	baz=169						
W54A	Cherokee Point	40.77	358	P	P	17 05 10.2	-0.3
	baz=178						
KMSC	Kings Mountain	40.81	359	eP	P	17 05 09.5	-1.3
	9.1nm,0.8s						
KMSC	Kings Mountain	40.81	359	P	P	17 05 10.2	-0.7
	baz=179						
W57A	Gilead	40.83	1	P	P	17 05 10.7	-0.3
	baz=181						
W53A	Cullowhee	40.89	357	P	P	17 05 10.5	-1.1
	baz=176						
W59A	Clinton	40.90	3	P	P	17 05 10.5	-1.0
	baz=184						
W51A	Cleveland	40.98	355	P	P	17 05 11.7	-0.6
	baz=174						
CPCT	Cooper Cave	41.25	356	eP	P	17 05 14.0	-0.5
	10nm,1.1s						
TXAR	Lajitas Array	41.28	329	P	P	17 05 15.7	+0.7
	0.6nm,0.8s,baz=153,slow=9.1,SNR=6.5						
W47A	Westpoint	41.40	352	P	P	17 05 15.0	-0.6
	baz=170						
TKL	Tuckaleechee C	41.41	356	P	P	17 05 15.5	-0.3
	2.6nm,0.7s,baz=163,slow=13,SNR=4.7						
V54A	Nebo	41.45	359	P	P	17 05 15.2	-1.0
	baz=178						
V58A	Windy Hill, Pi	41.49	2	P	P	17 05 15.4	-1.0
	baz=182						
V50A	Pikevile	41.52	355	P	P	17 05 16.3	-0.4
	baz=173						
V52A	Sevierville	41.58	357	P	P	17 05 16.8	-0.4
	baz=176						
V51A	Loudon	41.59	356	P	P	17 05 16.6	-0.7
	baz=175						
V49A	McMinnville	41.69	354	P	P	17 05 17.0	-1.1
	baz=172						
V48A	Smith Brothers	41.77	353	P	P	17 05 18.1	-0.7
	baz=171						
MIAR	Mount Ida	41.95	344	eP	P	17 05 19.8	-0.4
	6.3nm,1.0s						
MIAR	Mount Ida	41.95	344	P	P	17 05 20.1	-0.1
	baz=161						
U53A	Fall Branch	42.05	358	P	P	17 05 20.2	-0.9
	baz=177						
U52A	Thorn Hill	42.12	357	P	P	17 05 20.6	-1.0
	baz=176						
U59A	Littleton	42.12	4	P	P	17 05 20.0	-1.5
	baz=184						
U57A	Blanch	42.12	2	P	P	17 05 20.8	-0.7
	baz=182						
U51A	La Follette	42.14	356	P	P	17 05 20.9	-0.9
	baz=175						
U55A	TA2, Sparta	42.16	360	P	P	17 05 21.4	-0.6
	baz=180						
U54A	Nelsons Funny	42.19	359	P	P	17 05 21.2	-1.0
	baz=178						
W41B	Gary Mavity, V	42.21	346	P	P	17 05 22.0	-0.4
	baz=163						
ABTX	Abilene, Hawle	42.23	336	eP	P	17 05 22.5	-0.1
	15nm,0.9s						
ABTX				epP	pP	17 05 35.7	+2.8
ABTX	Abilene, Hawle	42.23	336	P	P	17 05 22.7	0.0
	baz=151						
U50A	Jamestown	42.24	355	P	P	17 05 21.4	-1.1
	baz=174						
WVT	Waverly	42.29	352	eP	P	17 05 21.2	-1.7
	19nm,1.8s						
WVT	Waverly	42.29	352	P	P	17 05 21.6	-1.4
	baz=170						
U49A	Red Boiling Sp	42.42	354	P	P	17 05 23.2	-0.8
	baz=173						
W39A	Magazine	42.62	344	eP	P	17 05 24.7	-0.9
W39A				epP	pP	17 05 38.7	+2.7
W39A	Magazine	42.62	344	P	P	17 05 26.5	+0.8
	baz=161,SNR=5.9						
T53A	Wise	42.67	358	P	P	17 05 25.4	-0.8
	baz=177						
T57A	Hurt	42.69	2	P	P	17 05 25.5	-0.7
	baz=182						
T51A	Gray	42.72	356	P	P	17 05 25.9	-0.6
	baz=175						
T54A	Tazewell	42.73	359	P	P	17 05 26.1	-0.5
	baz=179						
T59A	Double "B" Far	42.75	4	P	P	17 05 26.0	-0.7
	baz=185						
T55A	Pulaski	42.78	0	P	P	17 05 26.2	-0.8
	baz=180						
T49A	Edmonton	42.98	355	eP	P	17 05 25.6	-3.0
	5.8nm,0.8s						
T49A	Edmonton	42.98	355	P	P	17 05 27.5	-1.1
	baz=173						
T47A	Sharon Grove	43.04	353	eP	P	17 05 26.2	-2.8
	5.2nm,0.8s						
T47A	Sharon Grove	43.04	353	P	P	17 05 27.7	-1.3
	baz=171						
S56A	Natural Bridge	43.35	2	P	P	17 05 30.2	-1.4
	baz=182						
S51A	Beattyville	43.37	357	P	P	17 05 30.7	-1.1
	baz=176						
S55A	Lewisburg	43.43	0	P	P	17 05 31.2	-1.1
	baz=180						
S50A	Richmond	43.46	356	P	P	17 05 31.5	-0.9
	baz=175						
U40A	Yellville	43.48	346	P	P	17 05 32.3	-0.4
	baz=162,SNR=8.0						
R58B	Mineral	43.72	3	P	P	17 05 33.9	-0.5
	baz=184						
WMOK	Wichita Mounta	43.78	339	eP	P	17 05 34.5	-0.6
	7.9nm,1.1s						
WMOK				epP	pP	17 05 47.4	+2.0
WMOK	Wichita Mounta	43.78	339	P	P	17 05 35.6	+0.6
	baz=154						
R54A	Victor	43.84	360	P	P	17 05 34.0	-1.6
	baz=180						
TUL1	Leonard	43.86	343	eP	P	17 05 34.5	-1.2
TUL1				epP	pP	17 05 47.8	+1.8
TUL1	Leonard	43.86	343	P	P	17 05 36.0	+0.3
	baz=158						
R59A	King George, V	44.00	4	P	P	17 05 36.4	-0.3
	baz=185						
R51A	Hillsboro	44.03	357	P	P	17 05 36.2	-0.8
	baz=176						
S44A	Carbondale	44.04	350	P	P	17 05 36.6	-0.5
	baz=168						
R50A	Paris	44.05	356	P	P	17 05 36.1	-1.1
	baz=175						
Q52A	Bidwell	44.64	359	P	P	17 05 41.7	-0.2
	baz=178						
Q55A	Buckhannon	44.66	1	P	P	17 05 40.9	-1.2
	baz=181						
MSTX	Muleshoe	44.71	334	P	P	17 05 43.0	+0.4
	baz=148,SNR=7.6						
Q51A	Peebles	44.74	357	P	P	17 05 42.0	-0.7
	baz=176						
CCM	Cathedral Cave	44.76	348	eP	P	17 05 41.8	-1.0
CCM				epP	pP	17 05 55.0	+1.8
CCM	Cathedral Cave	44.76	348	P	P	17 05 42.7	-0.1
	baz=165						
P56A	Dayton Farm, R	45.20	2	P	P	17 05 46.3	0.0
	baz=183						
P57A	Homestead Farm	45.22	3	P	P	17 05 45.9	-0.6
	baz=184						
P54A	Burton	45.26	0	P	P	17 05 46.1	-0.7
	baz=180						
P58A	Pank, Wackersv	45.27	4	P	P	17 05 45.4	-1.4
	baz=185						
P52A	Corning	45.30	359	P	P	17 05 46.6	-0.5
	baz=178						
P60A	Greenville	45.73	6	P	P	17 05 50.0	-0.5
	baz=187						
O51A	Pataskala	45.83	358	P	P	17 05 50.7	-0.6
	baz=177						
O54A	Avella	45.84	1	P	P	17 05 51.1	-0.3
	baz=180						
O55A	Ligonier	45.89	2	P	P	17 05 51.6	-0.2
	baz=182						
ACSO	Alum Creek Sta	45.93	358	P	P	17 05 51.5	-0.6
	baz=177						
O58A	Lewisberry	45.93	4	P	P	17 05 51.5	-0.6
	baz=185						
O57A	Amberson	45.97	4	P	P	17 05 51.6	-0.8
	baz=184						
O56A	Blue Knob Stat	45.98	3	P	P	17 05 52.3	-0.2
	baz=183						
P43A	Skaggs, Pawnee	45.99	351	P	P	17 05 51.7	-0.8
	baz=168						
O48A	Farmland	46.08	356	P	P	17 05 52.5	-0.7
	baz=174						
O59A	Robesonia	46.17	5	P	P	17 05 53.1	-0.9
	baz=186						
O60A	Telford	46.25	6	P	P	17 05 54.0	-0.6
	baz=187						
SFIN	Lafayette	46.38	353	P	P	17 05 54.5	-1.2
	baz=171						
N55A	Marion Center	46.47	2	P	P	17 05 56.0	-0.4
	baz=182						
N50A	Nevada	46.47	358	P	P	17 05 56.3	0.0
	baz=177						
N54A	Moraine State	46.62	1	P	P	17 05 56.9	-0.6
	baz=181						
N56A	West Decatur	46.63	3	P	P	17 05 56.6	-1.1
	baz=183						
BNM	Barren Site	46.65	330	eP	P	17 05 58.2	0.0
N58A	Sunbury	46.66	4	P	P	17 05 57.5	-0.3
	baz=186						
N49A	Columbus Grove	46.67	357	P	P	17 05 57.4	-0.5
	baz=175						
N59A	State Game Lan	46.81	5	P	P	17 05 58.8	-0.3
	baz=187						
N60A	Cedar Hill Far	46.83	6	P	P	17 05 58.5	-0.6
	baz=188						
KSU1	Kansas State U	47.06	343	P	P	17 06 01.2	+0.2
	baz=158						
M55A	Ridgway	47.16	2	P	P	17 06 01.5	-0.2
	baz=183						
M54A	Oil Creek Stat	47.18	1	P	P	17 06 01.1	-0.8
	baz=181						
M58A	Price's Panora	47.20	5	P	P	17 06 01.2	-0.9
	baz=186						
M56A	Emporium	47.20	3	P	P	17 06 01.3	-0.8
	baz=183						
ANMO	Albuquerque	47.21	331	P	P	17 06 03.4	+1.0
	4.7nm,0.7s,baz=148,slow=9.8,SNR=21						
ANMO	Albuquerque	47.21	331	eP	P	17 06 02.6	+0.2
	7.2nm,0.9s						
ANMO	Albuquerque	47.21	331	P	P	17 06 02.3	-0.2
	baz=144						
M47A	Cromwell	47.21	355	P	P	17 06 00.8	-1.4
	baz=173						
M49A	Liberty Center	47.21	357	P	P	17 06 01.9	-0.2
	baz=176						
N41A	Harden Midland	47.25	350	P	P	17 06 01.7	-0.8
	baz=166						
M48A	Edgerton	47.27	356	P	P	17 06 02.1	-0.5
	baz=175						
TUC	Tucson	47.44	325	P	P	17 06 05.4	+1.2
	baz=138						
M59A	Waymart	47.46	6	P	P	17 06 03.5	-0.6
	baz=187						
N40A	Mertquake, Sal	47.56	349	P	P	17 06 04.9	0.0
	baz=165						
L53A	Girard	47.61	1	P	P	17 06 04.3	-0.9
	baz=181						
L47A	Sherwood	47.79	356	P	P	17 06 06.0	-0.6
	baz=174						
L55A	Hinsdale	47.89	2	P	P	17 06 06.8	-0.6
	baz=183						
L58A	Harry Jones Me	47.92	5	P	P	17 06 07.3	-0.4
	baz=186						
BINY	Binghamton	48.06	5	P	P	17 06 08.0	-0.8
	baz=186						
T25A	Trinidad	48.10	335	P	P	17 06 09.5	+0.1
	baz=148,SNR=5.5						
K54A	Basiliko Farm,	48.31	2	P	P	17 06 09.3	-1.3
	baz=183						
L42A	Oliver, Polo	48.32	351	P	P	17 06 09.4	-1.3
	baz=168						
214A	Organ Pipe Nat	48.37	323	P	P	17 06 12.4	+1.1
	baz=135						
K55A	Perry	48.45	3	P	P	17 06 10.5	-1.3
	baz=184						
K48A	Perry	48.54	357	P	P	17 06 11.7	-0.7
	baz=176						
L40A	Anamosa	48.63	350	eP	P	17 06 11.0	-2.2
	10nm,0.8s						
L40A				epP	pP	17 06 24.1	+0.5
L40A	Anamosa	48.63	350	P	P	17 06 12.4	-0.8
	baz=166						
SCIA	State Center	48.87	348	P	P	17 06 14.3	-0.6
	baz=163						
W18A	Petrified Fore	48.99	328	P	P	17 06 16.8	+0.5
	baz=140						
SDCO	Great Sand Dun	49.08	334	eP	P	17 06 16.3	-0.7
	7.4nm,0.8s						
SDCO	Great Sand Dun	49.08	334	P	P	17 06 17.9	+1.0
	baz=147,SNR=12						
S22A	4UR Ranch, Cre	49.66	333	P	P	17 06 22.0	+0.5
	baz=145						
Y14A	Wickenburg	49.90	325	eP	P	17 06 23.4	+0.3
	4.3nm,1.0s						
Q24A	Divide	49.95	335	P	P	17 06 23.9	+0.2
	baz=148						
MVCO	Mesa Verde	50.01	331	eP	P	17 06 24.7	+0.6
	4.0nm,0.8s						
MVCO	Mesa Verde	50.01	331	P	P	17 06 24.3	+0.3
	baz=143						
WUAZ	Wupatki	50.16	327	eP	P	17 06 26.1	+1.1
	4.7nm,0.8s						
WUAZ	Wupatki	50.16	327	P	P	17 06 26.2	+1.1
	baz=139						
LBNH	Lisbon	50.55	8	P	P	17 06 26.7	-1.0
	baz=191						
LONY	Lake Ozonia	50.60	6	P	P	17 06 27.1	-0.9
	baz=188						
Y12C	Blythe	50.65	323	P	P	17 06 29.3	+0.7
	baz=134						
PDMCI	Parker Dam,Lak	50.82	324	P	P	17 06 30.8	+0.9
	baz=135						
SMCO	Snowmass	50.91	334	eP	P	17 06 31.5	+0.6
	6.5nm,1.4s						
PV13	Radium Mtn., P	50.92	332	eP	P	17 06 31.9	+1.0
	11nm,1.0s						
PV03	Paradox Valley	51.01	332	eP	P	17 06 32.3	+0.8
	5.8nm,0.9s						
PV18	Skein Mesa, Pa	51.03	332	eP	P	17 06 32.4	+0.7
	8.4nm,1.0s						
PV12	Saucer Basin,	51.04	332	eP	P	17 06 31.9	+0.1
	11nm,0.9s						
PV11	David Mesa, Pa	51.06	332	eP	P	17 06 32.6	+0.7
	8.7nm,0.9s						
PV07	Paradox Valley	51.06	332	eP	P	17 06 32.9	+0.9
	7.5nm,1.0s						
PV17	East Wray Mesa	51.08	332	eP	P	17 06 31.6	-0.5
	6.6nm,0.9s						
PV16	Nyswonger Mesa	51.09	332	eP	P	17 06 32.4	+0.3
	9.4nm,1.3s						
BC3	Big Chuckawall	51.14	323	P	P	17 06 32.7	+0.2
	baz=134						
PV04	Paradox Valley	51.15	332	eP	P	17 06 33.3	+0.8
	25nm,1.7s						
PV14	Lion Creek, Pa	51.19	332	eP	P	17 06 31.3	-1.6
	5.4nm,0.8s						
PV22	Blue Mesa, Par	51.20	332	eP	P	17 06 32.3	-0.7
	2.5nm,0.8s						
MONP2	Monument Peak	51.22	321	P	P	17 06 33.0	-0.2
	baz=132						
W13A	Hualapai Mount	51.24	325	eP	P	17 06 33.6	+0.3
	5.2nm,1.0s						
IRM	Iron Mountain	51.30	323	P	P	17 06 34.4	+0.8
	baz=134,SNR=5.3						
ORIO	Orleans, Innes	51.33	5	P	P	17 06 32.6	-0.9
	baz=187						
ECSD	EROS Data Cent	51.39	345	P	P	17 06 33.3	-0.7
	baz=160						
F49A	Sandfield	51.43	359	P	P	17 06 32.9	-1.3
	baz=178						
F52A	Sundridge	51.47	1	P	P	17 06 32.9	-1.7
	baz=182						
BELC	Belle Mtn. Jos	51.71	323	P	P	17 06 37.4	+0.6
	baz=133						
G39A	Holcombe	51.76	351	P	P	17 06 36.2	-0.6
	baz=167						
PKME	Peaks-Kenny Pk	51.98	10	P	P	17 06 37.1	-1.2
	baz=194						
SPMN	Marine on St.	51.98	349	eP	P	17 06 36.8	-1.6
	13nm,1.0s						
SPMN	Marine on St.	51.98	349	P	P	17 06 38.0	-0.4
	baz=165						

E46A	Sault Ste Mari	52.11	357	P	P	17 06 37.7	-1.6
	baz=176						
E48A	Lockeyer	52.15	359	P	P	17 06 37.7	-1.9
	baz=178						
E47A	Iron Bridge	52.15	358	P	P	17 06 38.2	-1.4
	baz=177						
MURC	Murrieta	52.17	321	P	P	17 06 40.7	+0.6
	baz=132						
E54A	Lac Daplat, Po	52.19	3	P	P	17 06 38.1	-1.9
	baz=184						
E51A	G1948 Merrick	52.20	1	P	P	17 06 38.1	-1.9
	baz=182						
O20A	White River Ci	52.25	334	P	P	17 06 41.4	+0.6
	baz=145						
LCMT	Little Creek M	52.27	327	eP	P	17 06 40.3	-0.6
	3.3nm,1.1s						
HEC	Hector,Ludlow	52.48	323	P	P	17 06 43.1	+0.7
	baz=133						
SRU	San Rafael Swe	52.49	331	eP	P	17 06 42.6	+0.1
	5.1nm,0.9s						
MTPU	Mount Pierson	52.49	329	eP	P	17 06 42.0	-0.8
	7.2nm,1.7s						
TUQ	Turquoise Moun	52.65	324	P	P	17 06 44.3	+0.6
	baz=134						
CCUT	Cedar City	52.74	328	eP	P	17 06 46.3	+1.8
	6.3nm,1.1s						
D47A	Chapleau	52.74	358	P	P	17 06 42.7	-1.3
	baz=177						
P17A	Butcher Ranch,	52.87	331	eP	P	17 06 45.5	+0.1
	6.4nm,0.9s						
TMUT	Trail Mountain	52.96	331	eP	P	17 06 47.1	+0.9
	4.4nm,1.1s						
SHPR	Sheep Range	52.97	325	eP	P	17 06 46.8	+0.7
	7.6nm,1.3s						
GSC	Goldstone, Bar	53.08	323	eP	P	17 06 47.4	+0.6
	6.3nm,1.3s						
GSC	Goldstone, Bar	53.08	323	P	P	17 06 48.2	+1.3
	baz=133						
RWWY	Rawlins	53.09	335	eP	P	17 06 45.1	-2.0
	8.4nm,1.0s						
D41A	Chassel	53.15	353	P	P	17 06 47.0	+0.1
	baz=170						
EDW2	Edwards Air Fo	53.52	322	P	P	17 06 50.5	+0.5
	baz=132						
K22A	Casper	53.62	337	eP	P	17 06 50.7	-0.1
	8.2nm,1.0s						
K22A	Casper	53.62	337	P	P	17 06 51.5	+0.7
	baz=148						
BLG	Laguna Peak, P	53.68	321	P	P	17 06 52.5	+1.4
	baz=130						
LRMC	Laurel Mtn Rad	53.73	323	P	P	17 06 53.2	+1.5
	baz=132						
TPNV	Topopah Spring	53.90	325	eP	P	17 06 53.1	+0.2
	4.8nm,1.1s						
TPNV	Topopah Spring	53.90	325	P	P	17 06 54.3	+1.4
	baz=134,SNR=5.1						
FURC	Furnace Creek,	53.91	324	P	P	17 06 54.0	+1.2
	baz=134						
RSSD	Black Hills	53.96	340	P	P	17 06 53.8	+0.5
	baz=151						
JLU	Jordanelle	54.09	331	eP	P	17 06 53.6	-0.8
	7.4nm,1.0s						
ARVC	Arvin	54.19	322	P	P	17 06 56.3	+1.4
	baz=131						
ISA	Isabella, Lake	54.33	322	P	P	17 06 56.9	+0.9
	baz=132						
DUG	Dugway, Tooele	54.44	330	eP	P	17 06 57.2	+0.4
	6.0nm,0.9s						
DUG	Dugway, Tooele	54.44	330	P	P	17 06 58.0	+1.2
	baz=140,SNR=7.9						
TCUT	Toone Canyon	54.48	332	eP	P	17 06 57.3	+0.1
	42nm,1.7s						
R11A	Troy Canyon, C	54.52	327	eP	P	17 06 58.4	+1.0
	16nm,2.0s						
R11A	Troy Canyon, C	54.52	327	P	P	17 06 58.8	+1.4
	baz=136,SNR=6.9						
GRAC	Grapevine Rang	54.57	324	P	P	17 06 59.0	+1.4
	baz=133						
CWC	Cottonwood Cre	54.61	323	P	P	17 06 58.8	+0.7
	baz=132						
HWUT	Hardware Ranch	54.94	332	eP	P	17 07 00.8	+0.4
	14nm,0.8s						
BW06	Boulder Array	54.97	334	eP	P	17 07 00.2	-0.5
	5.5nm,1.1s						
BW06	Boulder Array	54.97	334	P	P	17 07 00.6	-0.1
	baz=144						
PD31	Pinedale Array	54.97	334	eP	P	17 07 00.2	-0.4
	2.6nm,1.0s						
PD31				ePcP	PcP	17 08 02.1	-0.2
PDAR	Pinedale Array	54.97	334	P	P	17 07 01.2	+0.5
	1.0nm,0.4s,baz=131,slow=9.1,SNR=20						
PDAR				PcP	PcP	17 08 02.1	-0.2
	0.6nm,0.6s,baz=129,slow=6.4,SNR=3.0						
AGMN	Agassiz Nation	55.53	348	eP	P	17 07 03.7	-0.6
	11nm,1.0s						
AGMN	Agassiz Nation	55.53	348	P	P	17 07 03.8	-0.6
	baz=162,SNR=5.9						
OMMB	Old Mammoth Mi	55.95	324	eP	P	17 07 08.7	+0.7
	15nm,1.7s						
NV11	Mina Array Sit	56.01	325	eP	P	17 07 09.1	+0.9
	0.3nm,1.0s						
ELK	Elko	56.08	329	P	P	17 07 09.4	+0.7
	2.4nm,0.8s,baz=137,slow=5.2,SNR=13						
ELK	Elko	56.08	329	eP	P	17 07 08.8	+0.1
	3.2nm,0.8s						
NV01	Mina Array Sit	56.09	325	eP	P	17 07 09.7	+0.9
NV01				ePcP	PcP	17 08 07.4	+0.7
NVAR	Mina Array Bea	56.09	325	P	P	17 07 09.7	+0.9
	2.0nm,0.8s,baz=131,slow=7.3,SNR=21						
NVAR				PcP	PcP	17 08 07.4	+0.7
	0.7nm,0.7s,baz=147,slow=5.4,SNR=3.5						
RLMT	Red Lodge	56.77	336	P	P	17 07 13.8	+0.2
	baz=146						
GCMT	Greycliff	57.49	336	eP	P	17 07 18.4	-0.1
PAHR	Pah Rah Range	57.58	325	eP	P	17 07 20.0	+0.7
	3.9nm,1.1s						
HLID	Hailey	57.78	332	eP	P	17 07 20.5	-0.2
	6.4nm,0.9s						
HLID	Hailey	57.78	332	P	P	17 07 21.6	+0.9
	baz=139,SNR=11						
MCMT	McKenzie Canyo	58.04	334	eP	P	17 07 22.3	-0.3
BOZ	Bozeman (W)	58.13	335	eP	P	17 07 22.7	-0.3
	6.3nm,1.0s						
BOZ	Bozeman (W)	58.13	335	P	P	17 07 23.6	+0.6
	baz=143						
BEKR	Beckworth	58.24	325	eP	P	17 07 23.8	-0.2
	3.4nm,0.9s						
MFID	Camas Ranch	58.35	331	eP	P	17 07 24.6	+0.1
	15nm,1.0s						
WVOR	Wild Horse Val	59.06	328	eP	P	17 07 29.3	-0.3
	14nm,1.5s						
HRY	Holter Researc	59.11	336	eP	P	17 07 29.8	0.0
EGMT	Eagleton	59.37	338	P	P	17 07 31.8	+0.3
	baz=146						
MOD	Modoc Plateau	59.59	327	eP	P	17 07 32.1	-1.1
	7.1nm,0.8s						
O02D	Mt. Diablo Mer	59.85	324	P	P	17 07 36.6	+1.6
	baz=130						
MSO	Missoula	60.09	334	eP	P	17 07 35.6	-0.9
	6.7nm,1.0s						
MSO	Missoula	60.09	334	P	P	17 07 37.3	+0.8
	baz=141,SNR=6.0						
M04C	Macdoel	60.35	326	P	P	17 07 38.9	+0.4
	baz=131						
F10A	Beach Ranch, E	60.91	332	eP	P	17 07 42.7	+0.6
	44nm,2.0s						
PINE	Pine Mountain	61.22	328	eP	P	17 07 45.1	+0.7
	23nm,1.7s						
G08A	Pilot Rock	61.25	330	eP	P	17 07 44.6	+0.1
	9.9nm,1.0s						
SCHQ	Schefferville	61.63	9	LR	LR	17 36 29.0	
	comp=Z,15nm,19.1s,baz=96,slow=38						
I05D	Terrebonne, OR	61.80	328	P	P	17 07 49.4	+1.2
	baz=133						
K02D	Willamette Mer	61.98	325	P	P	17 07 50.3	+0.9
	baz=130						
G05D	Wamic, OR	62.41	329	P	P	17 07 53.3	+1.1
	baz=133						
NEW	Newport	62.57	334	eP	P	17 07 53.2	0.0
	7.4nm,1.4s						
NEW	Newport	62.57	334	P	P	17 07 53.7	+0.5
	baz=138						
B05A	Bryant	64.88	331	P	P	17 08 09.1	+0.8
	baz=134						
A04D	Lummi Island	65.48	331	P	P	17 08 12.2	-0.1
	baz=133						
DLBC	Dease Lake	75.17	336	eP	P	17 09 11.5	+0.1
	3.9nm,0.8s						
VNA3	Neumayer Olymp	78.48	162	P	P	17 09 29.7	-0.1
VNA1	Neumayer--Stat	78.77	161	P	P	17 09 31.4	+0.1
SNAA	Sanae	80.70	162	P	P	17 09 41.5	-0.5
SNAA	Sanae	80.70	162	eP	P	17 09 41.3	-0.7
	5.5nm,0.8s						
RES	Resolute Bay	80.89	356	LR	LR	17 46 16.3	
	comp=Z,27nm,18.3s,baz=224,slow=36						
EPYK	Eagle Plains	82.40	340	eP	P	17 09 50.2	-0.7
	5.5nm,0.8s						
EPYK	Eagle Plains	82.40	340	P	P	17 09 50.7	-0.2
	baz=124						
INK	Inuvik	82.53	343	P	P	17 09 51.2	-0.3
	5.8nm,1.1s,baz=130,slow=4.0,SNR=6.5						
INK	Inuvik	82.53	343	eP	P	17 09 50.8	-0.6
	7.2nm,1.0s						
EGAK	Eagle	83.13	338	eP	P	17 09 54.4	-0.2
	11nm,0.9s						
DOT	Dot Lake	83.72	336	eP	P	17 09 57.2	-0.5
	2.6nm,0.9s						
ESDC	Sonseca Array	83.77	49	P	P	17 09 58.2	-0.4
	1.4nm,0.7s,baz=271,slow=4.5,SNR=11						
PAX	Paxson	83.99	335	eP	P	17 09 59.3	0.0
	4.7nm,1.0s						
TOA1	Torodi Ar. Sit	84.17	76	eP	P	17 09 59.9	-1.2
TORD	Torodi Ar. Bea	84.18	76	P	P	17 09 59.9	-1.2
	1.3nm,0.6s,baz=301,slow=7.8,SNR=7.3						
TORD				LR	LR	17 47 01.8	
	comp=Z,80nm,18.1s,baz=300,slow=35						
KDAK	Kodiak Island	85.31	329	LR	LR	17 46 49.1	
	comp=Z,40nm,18.6s,baz=120,slow=35						
ILAR	Eielson Array	85.32	337	P	P	17 10 05.5	-0.3
	1.0nm,0.9s,baz=160,slow=4.1,SNR=5.9						
ILB	Eielson Array	85.32	337	eP	P	17 10 05.5	-0.3
	2.6nm,1.3s						
FYU	Fort Yukon	85.46	339	eP	P	17 10 06.7	+0.2
	8.1nm,0.8s						
RND	Reindeer	85.57	335	eP	P	17 10 07.0	-0.2
	9.0nm,1.3s						
SKT	Skwentna	86.20	333	eP	P	17 10 09.8	-0.5
	5.6nm,0.8s						
KTH	Kantishna Hill	86.49	335	eP	P	17 10 11.2	-0.5
	5.4nm,1.0s						
BPAW	Bear Paw Mtn.	86.70	336	eP	P	17 10 12.1	-0.6
	5.3nm,0.8s						
CAST	Castle Rocks	86.93	335	eP	P	17 10 13.1	-0.7
	6.9nm,0.9s						
MLY	Manley	86.93	336	eP	P	17 10 13.5	-0.3
	5.5nm,0.9s						
RPZ	Rata Peaks	98.80	224	LR	LR	17 44 54.8	
	comp=Z,70nm,18.9s,baz=233,slow=29						
H11N3	WAKE ISLAND Hy	12.81	289	T	T	19 18 27.6	
	baz=92,slow=74,SNR=38						
H11N2	WAKE ISLAND Hy	12.83	289	T	T	19 18 28.1	
	baz=92,slow=74,SNR=21						
H11N1	WAKE ISLAND Hy	12.83	289	T	T	19 18 28.2	
	baz=92,slow=74,SNR=21						
H11S2	WAKE ISLAND Hy	13.04	288	T	T	19 18 40.6	
	baz=87,slow=71,SNR=78						
H11S1	WAKE ISLAND Hy	13.05	288	T	T	19 18 42.2	
	baz=87,slow=71,SNR=91						
H11S3	WAKE ISLAND Hy	13.06	288	T	T	19 18 42.3	
	baz=87,slow=71,SNR=46						
ZAA1	Zalesovo Array	130.69	11	ePKPdf	PKPdf	17 16 39.5	-0.5
ZALV	Zalesovo Beam	130.70	11	PKP	PKPdf	17 16 39.5	-0.5
	0.7nm,0.4s,baz=330,slow=2.1,SNR=5.3						
AS31	Alice Springs	135.08	228	ePKPdf	PKPdf	17 16 48.6	-0.7
ASAR	Alice Springs	135.08	228	PKP	PKPdf	17 16 48.6	-0.7
	0.8nm,0.7s,baz=118,slow=1.5,SNR=10						
MK32	Makanchi Array	136.75	17	ePKPdf	PKPdf	17 16 50.4	-1.3
MKAR	Makanchi Array	136.75	17	PKP	PKPdf	17 16 50.4	-1.3
	0.4nm,0.6s,baz=8.7,slow=2.5,SNR=2.9						
WR1	Warramunga Arr	136.85	233	ePKPdf	PKPdf	17 16 52.5	-0.2
WRA	Warramunga Arr	136.85	233	PKP	PKPdf	17 16 52.5	-0.2
	0.8nm,0.5s,baz=152,slow=2.0,SNR=6.7						
SONA0	Songino Array	137.74	353	ePKPdf	PKPdf	17 16 53.5	-0.1
SONM	Songino Array	137.74	353	PKP	PKPdf	17 16 53.5	-0.1
	0.4nm,0.6s,baz=357,slow=2.9,SNR=2.8						
CM31	Chiang Mai Arr	167.50	1	ePKPdf	PKPdf	17 17 35.2	-1.0
CM31				ePKPab	PKPab	17 18 40.3	-1.1
CMAR	Chiang Mai Arr	167.50	1	PKP	PKPdf	17 17 35.2	-1.0
	0.6nm,0.7s,baz=336,slow=2.0,SNR=3.8						
CMAR				PKPab	PKPab	17 18 40.3	-1.1
	1.7nm,0.8s,baz=332,slow=5.2,SNR=7.7						

ISC 28 17:02:39.8±1.2, 49°.84N±0°.04×18°.49E±0°.03, h9^{km}±9^{km}, n13, σ0^{s}.66/23, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.22	269	ePG	Pg	17 02 44.4	+0.1
OKC				eSG	Sg	17 02 47.4	+0.1
	comp=Z,75nm,0.5s						
MORC	Moravsky Berou	0.61	264	ePG	Pg	17 02 51.9	+0.2
MORC				eSG	Sg	17 02 59.6	-0.1
OJC	Ojcow	0.93	65	ePg	Pb	17 02 57.8	-0.3
OJC				eSg	Sb	17 03 10.4	-0.1
LANS	Liptovska Anna	0.94	137	eSG	Sn	17 03 12.5	-0.4
LANS				eLG	Lg	17 03 16.8	
JAVC	Velka Javorina	1.12	209	ePG	Pn	17 03 01.7	0.0
VRAC	Vranov	1.34	247	ePG	Pb	17 03 04.9	-0.2
VRAC				eSG	Sn	17 03 22.5	-0.2
VYHS	Vyhne	1.37	170	ePG	Pb	17 03 05.2	-0.4
VYHS				eSG	Sg	17 03 24.4	+0.6
DPC	Dobruska-Polom	1.48	291	ePG	Pn	17 03 06.7	0.0
DPC				eSG	Sg	17 03 27.4	-0.1
	comp=Z,4.8nm,0.5s						
KRUC	Moravsky	1.57	241	ePG	Pb	17 03 08.5	-0.5
KRUC				eSG	Sb	17 03 29.1	+0.1
OSTC	Ostas	1.62	297	ePG	Pb	17 03 09.6	-0.4
OSTC				eSG	Sg	17 03 32.1	+0.1
CHVC	Chvalec	1.73	296	ePG	Pb	17 03 11.3	-0.5
CHVC				eSG	Sb	17 03 34.5	+0.9
PRU	Pruhonice	2.55	275	eSG	Sg	17 04 00.6	-1.2
	comp=Z,1.9nm,0.4s						
KHC	Kasperske Hory	3.28	259	ePN	Pn	17 03 33.0	+1.6
KHC				eSG	Sg	17 04 23.7	-1.3

ISCJB 28 17:29:20.5±0.2, 23°.07S±0°.03×68°.28W±0°.03, h134^{km}±3^{km}, mb4.0/19, Error ellipse: s-maj=5.3km s-min=4.1km az=166.1

SJA 28 17:29:20.8±0.6, 23°.07S×68°.39W, h141^{km}±8^{km}, ML3.1, MW3.4

IDC 28 17:29:21.3±0.6, 23°.01S×68°.15W, h123^{km}±5^{km}, mb3.9/11, mb1 4.1/15, mb1mx4.0/31, mbtmp4.3/15, Error ellipse: s-maj=15.8km s-min=14.1km az=70.0

VAO 28 17:29:22.1±0.4, 23°.02S×68°.20W, h130^{km}±4^{km}, mb4.5

NEIC 28 17:29:22.0±0.0, 23°.03S×68°.58W, h143^{km}, mb4.3/13, ML4.2(GUC), After GUC.

GUC 28 17:29:22.5±0.7, 23°.03S×68°.58W, h143^{km}±5^{km}, ML4.3

ISC 28 17:29:21.5±0.6, 23°.06S±0°.03×68°.29W±0°.05, h129^{km}±6^{km}, n109, σ1^{s}.20/127, mb4.1/19, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.73	308	P	Pn	17 29 42.9	+0.6
	524nm,0.3s,baz=186,slow=5.0,SNR=9918						
LVC				S	Sn	17 29 58.5	+0.4
	527nm,0.3s,baz=334,slow=21,SNR=49						
LVC	Limon Verde	0.73	308	eP	Pn	17 29 43.0	+0.6
PB15	IPOC Station P	1.09	262	eP	Pn	17 29 46.0	+0.5
PB15	IPOC Station P	1.09	262	eP	Pn	17 29 45.8	+0.4
PB15				i S	Sn	17 30 03.9	+0.3
PB06	IPOC Station P	1.23	287	eP	Pn	17 29 47.0	+0.2
PB06				eS	Sn	17 30 06.1	+0.1
PB06	IPOC Station P	1.23	287	eP	Pn	17 29 47.3	+0.5
PB06				i S	Sn	17 30 06.0	+0.1
PB06				IAML		17 30 07.3	
	comp=N,10μm,0.6s						
PB09	IPOC Station P	1.54	325	eP	Pn	17 29 50.6	+0.4
PB09	IPOC Station P	1.54	325	eP	Pn	17 29 51.1	+1.0
PB09				i S	Sn	17 30 12.6	+0.7
PB03	IPOC Station P	1.69	307	eP	Pn	17 29 51.6	-0.2
PB03				eS	Sn	17 30 14.8	-0.2
PB03	IPOC Station P	1.69	307	eP	Pn	17 29 52.1	+0.2
PB03				i S	Sn	17 30 14.6	-0.4
PB03				IAML		17 30 16.9	
	comp=N,3μm,0.3s						
PB04	IPOC Station P	1.86	293	ePn	Pn	17 29 54.0	+0.1
PB04	IPOC Station P	1.86	293	eP	Pn	17 29 54.1	+0.2
PB04	IPOC Station P	1.86	293	eP	Pn	17 29 53.8	-0.1
PB04				i S	Sn	17 30 17.6	-1.1
PB04				IAML		17 30 21.3	
	comp=E,3μm,0.6s						
PB07	IPOC Station P	1.99	312	eP	Pn	17 29 55.6	+0.1
PB07				i S	Sn	17 30 20.5	-0.9
PB07				IAML		17 30 22.2	
	comp=N,2μm,0.2s						
PB10	IPOC Station P	2.13	257	ePn	Pn	17 29 56.8	-0.2
PB10				eSn	Sn	17 30 23.2	-1.0
PB10	IPOC Station P	2.13	257	eP	Pn	17 29 56.8	-0.2
PB10				i S	Sn	17 30 22.1	-2.0
PB10				IAML		17 30 25.3	
	comp=N,2μm,0.5s						
PB02	IPOC Station P	2.29	319	eP	Pn	17 29 58.9	-0.2
PB02				i S	Sn	17 30 27.0	-0.9
PB01	IPOC Station P	2.30	331	ePn	Pn	17 29 59.2	0.0
PB01				eSn	Sn	17 30 29.0	+0.9
PB01	IPOC Station P	2.30	331	eP	Pn	17 29 59.1	-0.1
PB01				i S	Sn	17 30 27.6	-0.5
PB01				IAML		17 30 30.1	
	comp=N,2μm,0.2s						
GO02	Mina Guanaco	2.40	209	ePn	Pn	17 30 00.9	+0.2
GO02				eSn	Sn	17 30 30.9	+0.1
PB14	IPOC Station P	2.48	231	eP	Pn	17 30 01.3	-0.4
PB14				i S	Sn	17 30 31.1	-1.5
YJA	Yavi	2.71	72	eP	Pn	17 30 07.4	+2.5
YJA				IAML		17 30 07.9	
	comp=Z,25nm,0.5s						
PB08	IPOC Station P	3.02	344	eP	Pn	17 30 09.3	+0.5
PB08				i S	Sn	17 30 45.6	+0.5
PB08				IAML		17 30 50.6	
	comp=E,828nm,0.6s						
SLA	San Lorenzo	3.04	123	eP	Pn	17 30 10.4	+1.7
GO01	Chusmiza	3.48	346	ePn	Pn	17 30 15.0	+0.1
PB11	IPOC Station P	3.52	339	ePn	Pn	17 30 13.2	-1.9
MNMC	Minye Minye	4.10	342	ePn	Pn	17 30 21.8	-1.0
GO03	Copiap	4.84	201	ePn	Pn	17 30 30.1	-2.4
VCA	Vinchina	5.65	179	eP	Pn	17 30 43.9	+0.4
CYA	Choya	5.81	158	eP	Pn	17 30 45.7	+0.3
CYA				IAML		17 31 54.1	
	comp=Z,12nm,0.8s						
LCO	Las Campanas	6.31	200	ePn	Pn	17 30 48.6	-3.8
LPAZ	La Paz	6.74	1	P	Pn	17 30 58.9	+0.2
	comp=Z,5.8nm,0.3s,baz=187,slow=3.6,SNR=188						
LPAZ				S	Sn	17 32 13.0	-1.4
	baz=232,slow=19,SNR=1.2						
LPAZ	La Paz	6.74	1	ePn	Pn	17 30 59.1	+0.4
LPAZ				e		17 30 59.3	
LPAZ				eSn	Sn	17 32 11.5	-3.0
LPAZ	La Paz	6.74	1	eP	Pn	17 30 59.2	+0.6
GO04	Tololo Observa	7.43	197	ePn	Pn	17 31 03.3	-4.2
CFA	Coronel Fontan	8.51	180	P	Pn	17 31 18.8	-3.0
	comp=Z,3.0nm,0.3s,baz=7.9,slow=15,SNR=18						
CFA				S	Sn	17 32 47.8	-8.5
	comp=Z,2.3nm,0.3s,baz=181,slow=18,SNR=6.6						
SIV	San Ignacio	9.79	45	P	Pn	17 31 35.4	-3.8
	comp=Z,9.6nm,0.3s,baz=231,slow=12,SNR=218						
SIV				S	Sn	17 33 14.1	-13
	comp=Z,0.5nm,0.3s,baz=245,slow=17,SNR=1.6						
CPUP	Villa Florida	10.48	110	P	Pn	17 31 46.0	-2.3
	comp=Z,0.1nm,0.3s,baz=289,slow=13,SNR=18						
CPUP	Villa Florida	10.48	110	eP	Pn	17 31 46.6	-1.7
AQDB	Aquidauana	11.98	80	eP	Pn	17 32 08.9	+0.7
C2SB	Chapadao do Su	15.06	76	eP	Pn	17 32 48.4	+0.7
ITAB	Concordia	15.21	109	eP	Pn	17 32 50.7	+1.1
GO06	Curarrehue	16.69	189	eP	Pn	17 33 07.7	-0.1
	comp=Z,9.3nm,0.6s						
CNLB	Canela	16.84	115	eP	P	17 33 08.5	-1.1
CLDB	Colider	17.01	47	eP	P	17 33 10.0	-1.5
ITRB	Iturama	17.03	82	eP	Pn	17 33 12.4	+0.4
FRTB	Fartura	17.22	95	eP	P	17 33 14.2	+0.3
PLCA	Paso Flores	17.72	186	P	P	17 33 19.2	-0.1
	comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=8.9						
PLCA	Paso Flores	17.72	186	eP	P	17 33 19.6	+0.3
	comp=Z,7.0nm,0.8s						
PLCA	Paso Flores	17.72	186	eP	P	17 33 20.2	+0.9
BB19B	Bebedouro	18.43	88	eP	P	17 33 26.3	-0.9
RCLB	Rio Claro- Sao	19.16	92	eP	P	17 33 34.2	-0.9
VAO	Valinhos	19.63	94	eP	P	17 33 39.2	-1.0
BDFB	Brasilia	20.49	73	P	P	17 33 48.6	-1.0
	comp=Z,6.4nm,0.6s,baz=249,slow=13,SNR=17						
PARB	Paraibuna	20.84	95	eP	P	17 33 51.1	-2.1
BSCB	Bom Sucesso	21.89	89	eP	P	17 34 03.8	-0.7
PEXB	Peixe	21.92	64	eP	P	17 34 03.5	-1.2
ESAR	Angra dos Reis	21.95	95	eP	P	17 34 04.5	-0.4
VAS01	Vassouras-RJ	22.94	93	eP	P	17 34 13.4	-1.4
PTGA	Pitinga	23.63	21	P	P	17 34 20.1	-1.0
	comp=Z,12nm,0.4s,baz=203,slow=10,SNR=37						
PTGA	Pitinga	23.63	21	eP	P	17 34 20.0	-1.1
	comp=Z,16nm,0.8s						
PTGA	Pitinga	23.63	21	eP	P	17 34 20.1	-1.0
DUB01	Friburgo-RJ	23.95	93	eP	P	17 34 24.2	+0.2
SMTB	Santa Maria do	24.36	58	eP	P	17 34 26.3	-1.4
SJMB	Sao Joao De Ma	25.68	85	eP	P	17 34 39.2	-0.5
BSFB	Barra de Sao F	25.96	86	eP	P	17 34 42.2	0.0
RIB01	Linhares ES	26.26	87	eP	P	17 34 44.6	-0.4
ORTC	Ortega, Tolima	27.66	345	eP	P	17 34 57.2	-0.3
GUY2C	Guyana, Caldas	28.95	345	eP	P	17 35 12.5	+3.1
RUSC	La Rusia	29.16	350	eP	P	17 35 11.8	+0.6
ZARC	Zaragoza, Cauc	31.04	347	eP	P	17 35 24.5	-2.9
SDV	Santo Domingo	31.84	356	eP	P	17 35 33.9	-0.6
PMSA	Palmer Station	41.79	177	eP	P	17 36 59.4	+1.4
VNA3	Neumayer Olymp	58.42	161	P	P	17 39 03.7	+0.5
VNA1	Neumayer--Stat	58.63	160	P	P	17 39 05.2	+0.6
SNAA	Sanae	60.62	161	P	P	17 39 18.6	+0.2
SNAA	Sanae	60.62	161	eP	P	17 39 18.9	+0.5
	comp=Z,12nm,1.1s						
WVT	Waverly	61.70	342	eP	P	17 39 25.3	-0.7
	comp=Z,4.5nm,0.8s						
TXAR	Lajitas Array	62.23	325	P	P	17 39 30.3	+0.5
	comp=Z,0.3nm,0.6s,baz=146,slow=9.1,SNR=5.4						
SDCO	Great Sand Dun	69.88	329	eP	P	17 40 18.6	-0.1
	comp=Z,2.6nm,0.8s						
SYO	Syowa Base	74.84	159⇑	eP	P	17 40 46.7	-0.8
SYO	Syowa Base	74.84	159⇓	eP	P	17 40 51.8	+4.3
TPNV	Topopah Spring	74.87	322	eP	P	17 40 50.2	+1.9
	comp=Z,2.2nm,0.8s						
PDAR	Pinedale Array	75.74	330	P	P	17 40 53.9	+0.7
	comp=Z,0.8nm,0.5s,baz=120,slow=5.3,SNR=5.3						
HWUT	Hardware Ranch	75.81	328	eP	P	17 40 54.0	+0.5
	comp=Z,2.8nm,0.6s						
AHID	Auburn Hatcher	76.46	329	eP	P	17 40 56.8	-0.4
	comp=Z,6.7nm,0.8s						
ULM	Lac du Bonnet	76.97	342	P	P	17 40 59.0	-0.6
	comp=Z,4.6nm,0.6s,baz=166,slow=6.9,SNR=7.8						
ULM	Lac du Bonnet	76.97	342	eP	P	17 40 58.5	-1.2
	comp=Z,4.4nm,0.6s						
NVAR	Mina Array Bea	77.07	322	P	P	17 41 01.6	+0.8
	comp=Z,0.4nm,0.6s,baz=153,slow=9.4,SNR=5.1						
TOA1	Torodi Ar. Sit	77.35	70	eP	P	17 41 02.5	0.0
TORD	Torodi Ar. Bea	77.35	70	P	P	17 41 02.5	-0.1
	comp=Z,1.7nm,0.4s,baz=267,slow=5.2,SNR=8.7						
YHH	Holmes Hill	77.90	330	eP	P	17 41 07.3	+1.9
	comp=Z,1.8nm,0.8s						
PAHR	Pah Rah Range	78.56	322	eP	P	17 41 10.7	+1.8
	comp=Z,5.6nm,0.8s						
HLID	Hailey	78.66	328	eP	P	17 41 09.5	0.0
	comp=Z,3.6nm,0.9s						
BOSA	Boshof	82.22	118	P	P	17 41 28.8	-0.1
	comp=Z,2.3nm,0.6s,baz=275,slow=3.3,SNR=5.5						
MAW	Mawson	82.67	163	P	P	17 41 31.0	+0.7
	comp=Z,4.6nm,0.5s,baz=232,slow=6.0,SNR=16						
ESDC	Sonseca Array	86.55	44	P	P	17 41 50.5	+0.3
	comp=Z,0.7nm,0.8s,baz=183,slow=3.0,SNR=4.5						
YKA	Yellowknife Ar	92.84	340	P	P	17 42 19.4	+0.4
	comp=Z,0.7nm,0.5s,baz=142,slow=4.9,SNR=4.5						
YKB5	Yellowknife Ar	92.84	340	eP	P	17 42 19.4	+0.4
ASAR	Alice Springs	128.78	206	PKP	PKPdf	17 48 14.7	+0.2
	comp=Z,0.9nm,0.6s,baz=142,slow=1.2,SNR=9.9						
WR1	Warramunga Arr	131.89	209	ePKPdf	PKPdf	17 48 20.6	+0.2
WRA	Warramunga Arr	131.89	209	PKP	PKPdf	17 48 20.6	+0.2
	comp=Z,1.7nm,0.7s,baz=178,slow=2.5,SNR=12						
ZALV	Zalesovo Beam	143.11	26	PKhKP	PKPpre	17 48 37.1	
	comp=Z,0.7nm,0.6s,baz=340,slow=3.6,SNR=3.1						
KSH	Kashi	145.61	53	ePKPbc	PKPab	17 48 47.5	+1.7
MK32	Makanchi Array	146.54	38	ePKPbc	PKPbc	17 48 48.2	+0.4
MKAR	Makanchi Array	146.54	38	PKPbc	PKPbc	17 48 48.2	+0.4
	comp=Z,1.2nm,0.7s,baz=325,slow=3.0,SNR=14						
KLR	Kul'dur	149.47	334	PKPbc	PKPbc	17 48 55.4	0.0
	comp=Z,0.3nm,0.4s,baz=18,slow=3.2,SNR=2.7						
KLR				PKPab	PKPab	17 49 00.5	-0.2
	comp=Z,0.5nm,0.5s,baz=9.5,slow=6.1,SNR=4.0						
SONA0	Songino Array	154.92	8	ePKPab	PKPab	17 49 23.9	+0.2
SONM	Songino Array	154.92	8	PKPab	PKPab	17 49 23.9	+0.2
	comp=Z,1.1nm,0.7s,baz=339,slow=4.9,SNR=6.2						

BJI ***28*** *17:31:54.9±0.0, 7°.45S×145°.38E, h28^{km}, mb4.7/39, mB4.9/27, Ms4.9/15, Ms7 4.7/11*
ISCJB ***28*** *17:31:57.4±0.2, 7°.38S±0°.03×144°.91E±0°.04, h33^{km}, mb4.6/42, MS3.8/10, Error ellipse: s-maj=5.9km s-min=4.3km az=173.5*
NEIC ***28*** *17:31:59.2±3.0, 7°.40S×144°.91E, h34^{km}±4^{km}, mb4.6/24, Error ellipse: s-maj=11.8km s-min=9.6km az=77.0*
IDC ***28*** *17:32:02.6±2.2, 7°.46S×145°.17E, h72^{km}±22^{km}, mb4.1/15, mb1 4.2/19, mb1mx4.1/31, mbtmp4.4/19, MS3.7/8, Ms1 3.7/8, ms1mx3.4/28, Error ellipse: s-maj=20.3km s-min=10.9km az=96.0*
DJA ***28*** *17:32:05.3±0.3, 8°S±4°×14°5E±°, h182^{km}±6^{km}, M4.7/13, mB4.9/1, mb4.5/13, MLv4.8/4, Mw(mB)4.2/1*
ISC 28 17:31:59.1±0.4**, 7°.37S**±0°.05×**144°.96E**±0°.06**, h35**^{km}**, n92, σ1^{s}.67**/83**, mb4.6**/41**, MS3.9**/11**, Near south coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.97	133	P	Pn	17 32 44.3	+0.5
	10nm,0.3s,baz=357,slow=9.7,SNR=80						
PMG				S	Sn	17 33 17.2	-1.1
	65nm,0.3s,baz=312,slow=22,SNR=18						
PMG	Port Moresby	2.97	133	ePn	Pn	17 32 44.8	+0.9
PMG				eSn	Sn	17 33 17.2	-1.1
MMPI	Merauke	4.66	256	P	Pn	17 33 21.2	+14
	1µm,0.6s,9.0nm						
MANU	Manus Island	5.81	25	ePn	Pn	17 33 23.7	+0.9
GENI	Genyem	6.73	315	P	Pn	17 33 50.9	+15
	67nm,1.0s,0.7nm						
COEN	Coen	6.78	195	ePn	Pn	17 33 37.2	+1.0
COEN	Coen	6.78	195	P	Pn	17 33 36.8	+0.6
	baz=6.9,SNR=7.0						
RABL	Rabaul	7.83	67	ePn	Pn	17 33 51.8	+1.1
MTSU	Mount Surprise	10.72	183	P	Pn	17 34 31.0	+0.7
	baz=11,SNR=40						
CTA	Charters Tower	12.71	174	P	Pn	17 35 00.1	+2.6
	0.8nm,0.3s,baz=1.4,slow=13,SNR=7.7						
CTA				Lg	Lg	17 38 50.1	
	0.3nm,0.3s,baz=82,slow=16,SNR=1.9						
KDU	Kakadu	13.38	246	P	Pn	17 35 03.6	-3.0
	baz=13,SNR=12						
QIS	Mount Isa	14.10	201	P	Pn	17 35 16.0	-0.5
	baz=14,SNR=10.0						
MTN	Manton Dam	14.65	247	ePn	Pn	17 35 21.9	-2.2
MTN	Manton Dam	14.65	247	P	Pn	17 35 21.1	-3.0
	baz=15,SNR=5.6						
HNR	Honiara	14.97	99	P	Pn	17 35 26.8	-1.5
	1.2nm,0.3s,baz=289,slow=18,SNR=1.9						
WRAB	Tennant Creek	16.18	218	ePn	Pn	17 35 42.5	-1.5
	39nm,0.8s						
WB2	Warramunga Arr	16.19	218	ePn	Pn	17 35 42.6	-1.5
	49nm,0.9s						
WR1	Warramunga Arr	16.20	218	ePn	Pn	17 35 42.5	-1.7
WRA	Warramunga Arr	16.20	218	P	Pn	17 35 42.5	-1.7
	0.9nm,0.3s,baz=43,slow=11,SNR=48						
WRA				S	Sn	17 38 47.5	+4.6
	0.5nm,0.3s,baz=42,slow=25,SNR=3.3						
WRA				Lg	Lg	17 40 26.0	
	0.6nm,0.3s,baz=40,slow=28,SNR=3.6						
KNRA	Kununurra	17.88	241	P	Pn	17 36 03.8	-1.4
	baz=18,SNR=7.6						
EIDS	Eidsvold	18.83	163	P	Pn	17 36 25.2	+8.4
	baz=19,SNR=14						
RMQ	Roma	19.36	170	P	Pn	17 36 24.5	+1.4
	baz=20,SNR=11						
AS31	Alice Springs	19.37	212	eP	Pn	17 36 23.1	-0.2
	12nm,0.6s						
ASAR	Alice Springs	19.37	212	P	Pn	17 36 23.1	-0.2
	1.1nm,0.3s,baz=47,slow=8.1,SNR=199						
ASAR				S	S	17 39 58.5	-0.9
	0.2nm,0.3s,baz=30,slow=15,SNR=3.9						
ASAR				Lg	Lg	17 42 02.8	
	0.2nm,0.3s,baz=26,slow=26,SNR=3.7						
ASAR				LR	LR	17 44 17.7	
	comp=Z,615nm,19.9s,baz=38,slow=38						
SANI	Sanana	19.62	285	P	Pn	17 36 25.8	-0.6
	81nm,1.0s,793nm						
SOEI	Soe	20.60	262	eP	P	17 36 33.8	-1.7
	99nm,1.0s						
SOEI	Soe	20.60	262	P	P	17 36 33.3	-2.3
	106nm,1.1s						
EDFI	Ende, Flores	23.08	265	P	P	17 36 58.2	-3.9
WRKA	Warakurna	23.71	220	P	P	17 37 07.6	-0.5
	baz=24,SNR=27						
CMSA	Cobar Meteorol	24.06	178	P	P	17 37 12.4	+1.2
	baz=24,SNR=6.6						
DAV	Davao City (W)	24.07	306	LR	LR	17 47 14.4	
	comp=Z,47nm,18.1s,baz=102,slow=38						
STKA	Stephens Creek	24.59	187	P	P	17 37 16.6	+0.5
	10nm,1.0s,baz=327,slow=12,SNR=6.8						
STKA				LR	LR	17 47 21.5	
	comp=Z,194nm,21.6s,baz=5.2,slow=38						
STKA	Stephens Creek	24.59	187	eP	P	17 37 16.2	+0.2
	3.0nm,0.9s						
STKA	Stephens Creek	24.59	187	P	P	17 37 16.9	+0.9
	baz=25,SNR=5.2						
BKSI	Bulukumba	24.77	273	P	P	17 37 13.5	-4.3
KAPI	Kappang	25.17	274	LR	LR	17 49 41.3	
	comp=Z,144nm,19.9s,baz=114,slow=42						
DZM	Mont Dzumac	25.35	127	LR	LR	17 46 36.7	
	comp=Z,120nm,20.4s,baz=14,slow=35						
HTT	Hallett	26.53	191	P	P	17 37 36.3	+2.6
	baz=27,SNR=3.3						
BKZ	Black Stump Fm	42.50	143	eP	P	17 39 50.5	-0.7
	21nm,0.9s						
RPZ	Rata Peaks	42.81	152	P	P	17 39 55.0	+1.4
	3.9nm,0.6s,baz=16,slow=7.4,SNR=2.8						
MJAR	Matsushiro Arr	44.13	352	P	P	17 40 03.6	-0.7
	1.9nm,0.8s,baz=185,slow=9.6,SNR=8.3						
MAJO	Matsushiro	44.13	352	eP	P	17 40 04.3	-0.1
	6.0nm,1.0s						
MJB9	Matsu-Tunnel	44.14	352	eP	P	17 40 03.8	-0.6
	5.5nm,0.9s						
IPM	Ipoh	45.39	284	eP	P	17 40 14.5	-0.3
	15nm,0.8s						
NJ2	Nanjing	46.44	329	eP	P	17 40 24.0	+1.3
NJ2				pmax	pmax		
	comp=Z,14nm,0.9s						
KSRS	Korea Array	47.35	342	P	P	17 40 31.0	+1.4
	16nm,0.9s,baz=160,slow=8.9,SNR=49						
KS15	Wonju Array Si	47.35	341	eP	P	17 40 31.0	+1.3
	22nm,1.0s						
WHN	Wuhan	47.77	324	P	P	17 40 35.5	+2.4
NONG	Nongkai	48.39	302	P	P	17 40 44.8	+6.7
	0.3nm,0.9s,242nm						
PHET	Kaeng Krachan	49.34	294	P	P	17 40 54.6	+9.2
	36µm,0.9s						
PAYA	Payao	51.74	302	P	P	17 41 12.6	+9.0
	11µm,0.9s						
CM31	Chiang Mai Arr	52.14	300	eP	P	17 41 07.8	+1.3
	8.3nm,1.0s						
CMAR	Chiang Mai Arr	52.14	300	P	P	17 41 07.9	+1.3
	2.2nm,0.9s,baz=131,slow=5.5,SNR=12						
CMMT	Chiang Mai	52.29	301	P	P	17 41 17.0	+9.4
	3.3nm,1.2s						
CHTO	Chiang Mai	52.29	301	eP	P	17 41 09.1	+1.4
	5.5nm,1.0s						
USA0B	Ussuriysk Arra	52.65	348	eP	P	17 41 10.5	+0.7
	13nm,1.0s						
USRK	Ussuriysk Ar.	52.65	348	P	P	17 41 10.3	+0.5
	7.2nm,0.8s,baz=169,slow=7.8,SNR=20						
XAN	Xi'an	53.48	323	P	P	17 41 16.5	+0.3
XAN				pP	pP	17 41 24.0	-2.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
HHC	Hu-ho-hao-te	56.96	330	eP	P	17 41 42.0	+0.7
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,54nm,5.3s						
HHC				LR	LR		
	comp=N,190nm,12.9s						
HHC				LR	LR		
	comp=E,680nm,14.7s						
LZH	Lanzhou	57.95	321	eP	P	17 41 44.5	-3.9
LZH				pP	pP	17 41 53.3	-5.8
LZH				sP	sP	17 41 57.0	-6.2
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
GTA	Gaotai	62.52	322	P	P	17 42 21.0	+1.4
GTA				pP	pP	17 42 28.8	-1.5
GTA				sP	sP	17 42 33.5	-0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,62nm,4.8s						
GTA				LR	LR		
	comp=Z,88nm,19.9s						
GTA				LR	LR		
	comp=Z,75nm,20.6s						
CASY	Casey	63.42	195	eP	P	17 42 25.7	+0.8
	comp=Z,12nm,1.0s						
SONA0	Songino Array	64.63	332	eP	P	17 42 34.1	+0.7
SONM	Songino Array	64.63	332	P	P	17 42 34.1	+0.7
	comp=Z,0.7nm,0.8s,baz=101,slow=4.7,SNR=5.8						
MA2	Magadan	66.89	3	P	P	17 42 47.4	-0.1
	comp=Z,4.7nm,0.9s,baz=203,slow=9.3,SNR=2.6						
SEY	Seymchan	70.33	4	P	P	17 43 09.2	+0.3
	comp=Z,3.0nm,1.0s,baz=126,slow=4.8,SNR=5.8						
SBA	Scott Base	71.36	175	eP	P	17 43 16.6	+1.6
	comp=Z,3.4nm,1.0s						
WMQ	Urumqi	72.52	320	eP	P	17 43 24.8	+2.2
WMQ				sP	PcP	17 43 39.5	-0.7
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,63nm,4.9s						
WMQ				LR	LR		
	comp=Z,160nm,17.1s						
WMQ				LR	LR		
	comp=Z,60nm,15.7s						
MKAR	Makanchi Array	77.27	321	P	P	17 43 50.5	+0.6
	comp=Z,6.8nm,1.0s,baz=110,slow=7.1,SNR=39						
KSH	Kashi	78.79	313	eP	P	17 44 01.3	+2.6
KSH				S	S	17 53 55.5	+1.2
KSH				LR	LR		
	comp=Z,120nm,9.9s						
KSH				LR	LR		
	comp=Z,300nm,15.9s						
NIL	Nilore	79.08	306	eP	P	17 44 01.2	+0.9
	comp=Z,13nm,1.0s						
ZALV	Zalesovo Beam	79.10	329	P	P	17 43 58.9	-1.0
	comp=Z,2.7nm,0.8s,baz=100,slow=3.5,SNR=9.0						
ZAA1	Zalesovo Array	79.10	329	eP	P	17 43 58.9	-1.0
TIXI	Tiksi	79.57	355	P	P	17 44 01.7	-0.4
	comp=Z,1.5nm,0.3s,baz=177,slow=1.6,SNR=7.0						
TIXI	Tiksi	79.57	355	eP	P	17 44 02.7	+0.7
	comp=Z,2.7nm,1.1s						
MAW	Mawson	80.21	203	P	P	17 44 05.8	+0.1
	comp=Z,0.6nm,0.3s,baz=64,slow=8.5,SNR=2.7						
AAK	Ala-Archa	80.86	315	eP	P	17 44 10.9	+0.9
	comp=Z,7.6nm,1.0s						
KDAK	Kodiak Island	82.06	29	P	P	17 44 14.6	-1.0
	comp=Z,7.0nm,1.0s,baz=243,slow=6.8,SNR=5.1						
KK31	Karatay Array	83.80	315	eP	P	17 44 24.3	-0.7
	comp=Z,3.6nm,1.0s						
KKAR	Karatay Array	83.80	315	eP	P	17 44 24.1	-0.9
	comp=Z,3.6nm,1.0s						
ILAR	Eielson Array	87.53	23	P	P	17 44 42.3	-0.8
	comp=Z,3.8nm,0.9s,baz=259,slow=4.8,SNR=26						
DOT	Dot Lake	88.27	25	eP	P	17 44 47.9	+1.3
	comp=Z,8.8nm,1.0s						
EGAK	Eagle	89.83	24	eP	P	17 44 55.5	+1.5
	comp=Z,3.9nm,0.9s						
DLBC	Dease Lake	93.61	32	LR	LR	18 23 54.1	
	comp=Z,41nm,18.7s,baz=289,slow=33						
BBB	Bella Bella	93.88	38	LR	LR	18 23 26.8	
	comp=Z,41nm,18.7s,baz=202,slow=33						
YBH	Yreka Blue Hor	96.58	49	LR	LR	18 20 50.4	
	comp=Z,59nm,21.7s,baz=300,slow=30						
NVAR	Mina Array Bea	99.80	52	P	Pdif	17 45 38.6	-1.8
	comp=Z,0.1nm,0.3s,baz=258,slow=4.5,SNR=2.6						
LPAZ	La Paz	139.69	126	PKP	PKPdf	17 51 21.9	-3.3
	comp=Z,1.1nm,0.8s,baz=25,slow=6.4,SNR=3.8						
CPUP	Villa Florida	140.12	148	PKP	PKPdf	17 51 22.8	-2.1
	comp=Z,2.0nm,1.0s,baz=227,slow=4.8,SNR=3.0						
TORD	Torodi Ar. Bea	143.43	282	PKP	PKPbc	17 51 28.3	0.0
	comp=Z,2.1nm,0.9s,baz=79,slow=4.4,SNR=5.8						
TOA1	Torodi Ar. Sit	143.43	282	ePKPdf	PKPbc	17 51 28.3	0.0
BDFB	Brasilia	153.78	151	PKP	PKPdf	17 51 44.8	-3.1
	comp=Z,2.1nm,0.5s,baz=184,slow=16,SNR=3.8						
BDFB				PKPbc	PKPbc	17 51 55.6	-0.2
	comp=Z,3.5nm,0.8s,baz=249,slow=8.6,SNR=3.7						

MAN 28 17:39:02.5, 9°.61N×122°.07E, h29^{km}**, mb4.2, ML3.0, MS2.7, 1C, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	1.19	103⇑	iP	Pn	17 39 23.1	-0.2
SNPH				iS	Sn	17 39 38.6	+0.2

ISK ***28*** *17:45:54.9, 40°.76N×27°.45E, h16^{km}, ML2.9/28*
DDA ***28*** *17:45:54.5, 40°.76N×27°.44E, h18^{km}±2^{km}, ML3.2*
ATH ***28*** *17:45:54.8, 40°.80N×27°.39E, h0^{km}±15^{km}, ML2.4/2, Error ellipse: s-maj=19.7km s-min=4.3km az=54.0*
ISCJB ***28*** *17:45:55.7±0.3, 40°.78N±0°.02×27°.46E±0°.02, h16^{km}±4^{km}, Error ellipse: s-maj=3.3km s-min=2.5km az=174.4*
THE ***28*** *17:45:56.4, 40°.86N×27°.41E, h11^{km}±5^{km}, ML2.5/5, Error ellipse: s-maj=5.2km s-min=1.6km az=65.0*
SOF ***28*** *17:45:57.2, 40°.72N×26°.97E, h2^{km}*
ISC 28 17:45:55.3±0.8**, 40°.76N**±0°.02×**27°.44E**±0°.02**, h15**^{km}±6^{km}**, n73, σ0^{s}.62**/94**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRMT	Marmara Adasi	0.20	142	PG	Pg	17 45 59.9	-0.1
MRMT				SG	Sg	17 46 02.5	-0.6
SART	Tekirdag	0.21	250	iP	Pb	17 46 00.6	-0.3
SART				iS	Sb	17 46 04.0	-0.6
SART				IAML_P			
	comp=Z,27µm,0.1s						
RKY	Sarkoy-Tekirda	0.21	250	PG	Pg	17 46 00.3	+0.1
RKY				SG	Sb	17 46 03.9	-0.7
TKR	Tekirdag	0.24	18	PG	Pg	17 46 00.8	+0.1
TKR				SG	Sg	17 46 04.7	+0.4
CRLT	Corlu	0.43	31	PG	Pb	17 46 04.8	+0.1
EDC	Edincik	0.53	142	PG	Pg	17 46 05.6	-0.1
KESN	Edirne-Kesan	0.58	277	iP	Pb	17 46 07.4	0.0
KESN				iS	Sg	17 46 14.2	-0.4
LPK	Lapseki	0.64	233	PG	Pg	17 46 07.9	-0.1
GONE	Gonen-Balikesi	0.74	165	PG	Pg	17 46 09.8	+0.1
ELBA	Catalca	0.85	62	iP	Pn	17 46 12.6	-0.1
ELBA				iS	Sb	17 46 22.9	-0.1
KCTX	Karacabey (Bur	0.86	125	PG	Pb	17 46 11.3	-0.7
PHSR	Pinarhisar	0.87	4	PG	Pg	17 46 12.2	-0.1
CTKS	Kestanelik-??a	0.94	59	PG	Pb	17 46 12.9	-0.4
CTYL	Yalikoy Yolu	0.96	42	PG	Pg	17 46 13.9	-0.1
ENEZ	Enez	0.97	269	PG	Pg	17 46 14.0	-0.2
KIRK	Kırklareli	1.05	346	iP	Pb	17 46 15.0	-0.3
KIRK				iS	Sn	17 46 29.5	-0.6
KIRK				IAML_P			
	comp=Z,3µm,0.2s						
ALN	Alexandroupoli	1.06	278	PG	Pg	17 46 15.6	-0.3
ALN	Alexandroupoli	1.06	278	P	Pn	17 46 15.4	-0.3
ALN				S	Sn	17 46 29.8	-0.4
	comp=Z,158nm,0.4s						
ALN	Alexandroupoli	1.06	278	P	Pg	17 46 15.5	-0.3
ALN				S	Sn	17 46 30.4	+0.1
ALN				AML	AML	17 46 31.3	
	comp=E,335µm,0.4s						
ALN				AML	AML	17 46 32.2	
	comp=N,269µm,0.3s						
ARMT	Armutlu	1.10	100	PN	Pb	17 46 16.0	-0.1
BALB	Balikesir	1.17	163	PN	Pb	17 46 17.2	0.0
MDNY	Mudanya-Bursa	1.17	109	PN	Pn	17 46 17.2	0.0
EDRB	Edirne	1.21	335	PN	Pn	17 46 17.5	-0.2
EDRB	Edirne	1.21	335	P	Pn	17 46 17.5	-0.2
EDRB				S	Sb	17 46 32.9	-0.4
BAYC	CANAKKALE_Bayr	1.22	214	iP	Pb	17 46 18.0	-0.2
BAYC				iS	Sg	17 46 34.5	-0.4
ISK	Istanbul-Kandi	1.27	76	PN	Pn	17 46 17.7	-0.8
ISK	Istanbul-Kandi	1.27	76	P	Pn	17 46 18.0	-0.5
KAVV	Kandilli-Istan	1.27	76	PN	Pn	17 46 17.9	-0.6
BUY	Buyukada	1.28	85	PN	Pn	17 46 17.7	-1.0
BUY	Buyukada	1.28	85	iP	Pn	17 46 18.1	-0.6
BUY				iS	Sb	17 46 34.6	-0.8
KLYT	Kilyos	1.31	67	PN	Pn	17 46 18.6	-0.5
ORLT	Orhaneli	1.32	122	PN	Pn	17 46 18.9	-0.4
GEMT	Gemlik	1.37	103	PN	Pn	17 46 20.2	+0.2
STEP	BALIKESIR_Sava	1.40	171	iP	Pg	17 46 23.1	+0.8
STEP				iS	Sg	17 46 40.6	+0.2
BOZC	Bozcaada	1.40	230	PN	Pn	17 46 20.5	+0.2
BOZC	Bozcaada	1.40	230	iP	Pg	17 46 21.9	-0.4
DURS	Dursunbey	1.40	145	iP	Pg	17 46 22.3	-0.1
DURS				iS	Sg	17 46 40.8	+0.2
DURS				IAML_P			
	comp=Z,3µm,0.3s						
ULDT	Uludag	1.44	115	iP	Pb	17 46 22.2	+0.3
ULDT				IAML_P			
	comp=Z,797nm,0.1s						
SMTH	Samothraki Isl	1.48	259	P	Pn	17 46 21.2	-0.3
SMTH				S	Sg	17 46 42.2	-0.8
	comp=Z,188nm,0.4s						
SMTH	Samothraki Isl	1.48	259	P	Pn	17 46 21.1	-0.3
YLV	Yalova	1.49	97	PN	Pn	17 46 20.8	-0.8
RDO	Rodhopi	1.49	286	PN	Pn	17 46 21.6	0.0
RDO	Rodhopi	1.49	286	P	Pb	17 46 22.0	-0.7
RDO				S	Sn	17 46 40.4	-0.3
	comp=Z,175nm,0.3s						
RDO	Rodhopi	1.49	286	P	Pb	17 46 22.0	-0.7
RDO				S	Sn	17 46 40.6	-0.2
RDO				AML	AML	17 46 44.0	
	comp=N,237µm,0.2s						
RDO				AML	AML	17 46 44.5	
	comp=E,439µm,0.2s						
AYVA	Ayvalik	1.56	202	iP	Pg	17 46 25.3	0.0
HRT	Hereke	1.69	87	PN	Pn	17 46 23.8	-0.7
SILT	Sile	1.72	76	PN	Pn	17 46 24.5	-0.2
DKL	Dikili	1.73	194	PN	Pn	17 46 24.9	0.0
PRK	Paraskevi	1.76	211	P	Pb	17 46 27.8	+0.5
PRK				S	Sg	17 46 51.6	-0.3
	comp=E,128nm,0.6s						
PRK	Paraskevi	1.76	211	P	Pg	17 46 28.4	-0.6
KDZ	Kurdzhali	1.77	301	PN	Pn	17 46 25.9	+0.5
KDZ	Kurdzhali	1.77	301	P	Pn	17 46 25.9	+0.5
KDZ	Kurdzhali	1.77	301	iP	Pn	17 46 25.9	+0.5
JMB	Yambol	1.82	340	P	Pg	17 46 30.0	-0.3
JMB	Yambol	1.82	340	eP	Pg	17 46 30.5	+0.2
LIA	Limnos Island	1.93	244	P	Pn	17 46 27.6	+0.1
LIA				S	Sb	17 46 54.1	+0.1
	comp=E,52nm,0.4s						
DIM	Dimitrovgrad	1.93	313	P	Pn	17 46 27.6	0.0
DIM	Dimitrovgrad	1.93	313	iP	Pb	17 46 30.9	+0.7
SIGR	SIGRI	1.97	219	PN	Pn	17 46 28.5	+0.4
SIGR	SIGRI	1.97	219	P	Pb	17 46 31.6	+0.8
TVSB	Tavsanli	2.03	129	PN	Pn	17 46 29.1	0.0
THAS	Thassos island	2.07	267	P	Pn	17 46 29.8	+0.2
THAS				S	Sn	17 46 55.4	+0.3
KAND	Kocaeli-Kandir	2.12	80	iP	Pn	17 46 31.3	+1.2
KAND				iS	Sn	17 46 57.0	+0.8
SAUV	Serdivan-Sakar	2.20	90	PN	Pn	17 46 31.1	-0.2
KAVA	Kavala	2.23	277	P	Pn	17 46 32.4	+0.7
RZN	Rozhen	2.25	295	P	Pn	17 46 32.6	+0.4
RZN	Rozhen	2.25	295	iP	Pn	17 46 32.6	+0.4
GULT	Gulveren	2.37	97	PN	Pn	17 46 34.2	+0.5
BORA	Eskisehir	2.47	110	PN	Pn	17 46 35.3	+0.2
MMB	Musomiste	2.92	288	P	Pb	17 46 48.4	+1.3
MMB	Musomiste	2.92	288	iP	Pb	17 46 48.9	+1.8
STIP	Stip	4.07	285	iPn	Pn	17 46 55.7	-1.3
VYHS	Vyhne	9.86	324	ePN	Pn	17 48 19.7	+3.2

NIED ***28*** *17:49:00, 39°.40N×143°.50E, h23^{km}, Mw4.5 Best double couple: $M_0$7.05000×10^{15} NP1:ϕ_s193.00000°, δ33.00000°, λ71.00000°. NP2:ϕ_s36.00000°, δ59.00000°, λ102.00000°.*
IDC ***28*** *17:49:43.9±0.6, 39°.37N×143°.25E, h0^{km}, mb4.3/25, mb1 4.5/32, mb1mx4.4/37, mbtmp4.3/32, ML3.5/5, MS3.8/19, Ms1 3.8/19, ms1mx3.5/44, Error ellipse: s-maj=14.5km s-min=12.5km az=136.0*
ISCJB ***28*** *17:49:45.7±0.8, 39°.40N±0°.03×143°.34E±0°.03, h21^{km}±5^{km}, mb4.5/94, MS4.1/35, Error ellipse: s-maj=5.7km s-min=3.3km az=140.7*
JMA ***28*** *17:49:45.5±0.1, 39°.40N×143°.46E, h32^{km}±4^{km}, M4.7*
BJI ***28*** *17:49:46.2±0.0, 39°.38N×143°.26E, h29^{km}, mb4.7/63, mB4.8/38, Ms4.3/49, Ms7 4.2/41*
MOS ***28*** *17:49:47.2±1.1, 39°.47N×143°.23E, h29^{km}, mb4.8/56, Error ellipse: s-maj=7.6km s-min=4.4km az=100.5*
NEIC ***28*** *17:49:48.8±1.2, 39°.45N×143°.27E, h31^{km}±5^{km}, mb4.6/34, Error ellipse: s-maj=16.1km s-min=9.2km az=118.0*
ISC 28 17:49:48.1±0.8**, 39°.41N**±0°.04×**143°.44E**±0°.05**, h29**^{km}±4^{km}**, n262, σ1^{s}.64**/282**, mb4.6**/108**, MS4.2**/37**, 18C-10D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.26	278	P	Pn	17 50 07.8	-1.9
MIYJ				eS	Sn	17 50 23.6	-2.1
JTH	Tanohata	1.32	294	P	Pn	17 50 08.8	-1.8
JTH				eS	Sn	17 50 26.0	-1.3
OFUJ	Ofunato	1.41	257	P	Pn	17 50 09.8	-2.0
OFUJ				eS	Sn	17 50 27.8	-1.6
JOM	Ohasama	1.66	273	P	Pn	17 50 14.0	-1.2
JOM				eS	Sn	17 50 35.0	-0.6
JANG	Nango	1.76	304	P	Pn	17 50 14.5	-2.2
JMK	Ichinoseki	1.78	256	P	Pn	17 50 15.5	-1.4
JMK				eS	Sn	17 50 37.0	-1.5
JIO	Ouri	1.89	240	P	Pn	17 50 16.4	-1.9
JIO				eS	Sn	17 50 39.7	-1.4
JRG	Rokugo	2.17	271	P	Pn	17 50 21.3	-0.9
JTM	Tenmabayashi	2.28	308	P	Pn	17 50 22.3	-1.4
JYK	Kaneyama	2.44	259	P	Pn	17 50 25.2	-0.8
ERM	Erimo	2.61	355	ePn	Pn	17 50 28.0	-0.3
ERM	Erimo	2.61	355	eP	Pn	17 50 28.0	-0.3
JOT	Ohata	2.69	318	P	Pn	17 50 28.5	-0.8
JNBK	Urakawa-nobuka	2.91	350	P	Pn	17 50 32.4	-0.1
JKB	Kayabe	3.08	324	P	Pn	17 50 34.0	-0.7
JFT	Otama	3.08	233	P	Pn	17 50 33.6	-1.2
ASAJ	Asahikawa	4.75	353	Pn	Pn	17 50 57.5	-0.2
	3.7nm,0.3s,baz=200,slow=9.0,SNR=61						
ASAJ				Sn	Sn	17 51 49.5	-2.1
	3.5nm,0.3s,baz=187,slow=16,SNR=5.6						
GRPR	Tuman	4.90	20	eP	Pn	17 50 59.7	-0.1
GRPR				eS	Sn	17 51 50.9	-4.6
GRPR				pmax	pmax		
	comp=Z,114nm,0.3s						
GRPR				smax	smax		
	comp=N,744nm,0.5s						
GRPR				smax	smax		
	comp=E,1µm,0.5s						
YUK	Yuzh-Kuril'sk	4.96	21	eP	Pn	17 51 00.5	-0.1
YUK				eS	Sn	17 51 53.6	-3.4
YUK				pmax	pmax		
	comp=Z,164nm,0.2s						
YUK				smax	smax		
	comp=N,175nm,0.3s						
YUK				smax	smax		
	comp=E,634nm,0.6s						
MJAR	Matsushiro Arr	5.02	237	Pn	Pn	17 51 01.5	0.0
	comp=E,1.6nm,0.3s,baz=41,slow=12,SNR=421						
MJAR				Sn	Sn	17 52 06.7	+8.1
	baz=19,slow=19,SNR=2.4						
MJAR				LR	LR	17 52 48.6	
	comp=E,282nm,21.8s,baz=55,slow=38						
MAJO	Matsushiro	5.03	237	ePn	Pn	17 51 00.8	-0.7
MAJO				eSn	Sn	17 52 06.7	+8.1
MAJO	Matsushiro	5.03	237	eP	Pn	17 51 00.8	-0.7
MAJO				e		17 52 06.7	
MAT	Matsushiro	5.03	237	P	Pn	17 51 01.8	+0.3
MAT				eS	Sn	17 51 57.9	-0.7
MJB9	Matsu-Tunnel	5.03	237	ePn	Pn	17 51 01.9	+0.4
KUR	Kuril'sk	6.68	28	eP	Pn	17 51 23.2	-1.0
KUR				eS	Sn	17 52 36.7	-2.6
KUR				pmax	pmax		
	comp=Z,36nm,0.3s						
JHJ	Hachijo jima 2	6.94	206	Pn	Pn	17 51 25.4	-2.4
	comp=Z,12nm,0.3s,baz=328,slow=23,SNR=18						
JHJ				Sn	Sn	17 52 38.6	-7.0
	comp=Z,8.0nm,0.3s,baz=55,slow=23,SNR=1.5						
JHJ				LR	LR	17 54 26.6	
	comp=Z,484nm,19.4s,baz=132,slow=41						
YSS	Yuzh-Sakhalins	7.56	356	ePn	Pn	17 51 36.1	-0.1
YSS	Yuzh-Sakhalins	7.56	356⇓	eP	Pn	17 51 35.4	-0.8
YSS				eS	Sn	17 53 02.2	+1.4
YSS				MLR	MLR		
	comp=Z,900nm,13.0s						
TEY	Ternei	7.57	320⇓	iP	Pn	17 51 38.5	+2.1
TEY				pmax	pmax		
	comp=N,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,70nm,0.8s						
TEY				pmax	pmax		
	comp=Z,70nm,0.8s						
USA0B	Ussuriysk Arra	9.79	303	ePn	Pn	17 52 06.8	-0.1
USRK	Ussuriysk Ar.	9.79	303	Pn	Pn	17 52 05.9	-0.9
	comp=Z,0.1nm,0.3s,baz=104,slow=11,SNR=18						

USRK				Sn	Sn	17 53 57.5	+1.7
	baz=140,slow=36,SNR=1.7						
USRK				LR	LR	17 55 40.4	
	comp=Z,780nm,19.7s,baz=122,slow=37						
MDJ	**Mudanjiang**	11.53	301	ePn	Pn	17 52 28.9	-1.8
MDJ	**Mudanjiang**	11.53	301	P	Pn	17 52 31.0	+0.3
MDJ				pP		17 52 39.0	
MDJ				sP		17 52 41.8	
MDJ				S	Sn	17 54 32.3	-6.1
MDJ				sS		17 54 47.8	
MDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.6s						
MDJ				LR	LR		
	comp=Z,570nm,12.8s						
MDJ				LR	LR		
	comp=Z,1µm,14.2s						
MDJ				LR	LR		
	comp=Z,2µm,14.8s						
JNU	**Nakatsue**	11.91	242	Pn	Pn	17 52 35.2	-0.8
	comp=Z,0.2nm,0.3s,baz=74,slow=8.0,SNR=3.0						
JNU				LR	LR	17 57 27.8	
	comp=Z,790nm,19.8s,baz=48,slow=39						
JNU	**Nakatsue**	11.91	242	ePn	Pn	17 52 34.8	-1.2
KSRS	**Korea Array**	12.32	266	Pn	Pn	17 52 39.8	-1.7
	comp=Z,0.1nm,0.3s,baz=85,slow=12,SNR=3.6						
KS15	**Wonju Array Si**	12.36	266	ePn	Pn	17 52 40.8	-1.2
KLR	**Kul'dur**	12.88	323	Pn	Pn	17 52 47.6	-1.5
	comp=Z,0.1nm,0.3s,baz=134,slow=14,SNR=7.7						
KLR				LR	LR	17 57 52.6	
	comp=Z,541nm,19.2s,baz=132,slow=38						
OKH	**Okha**	14.15	359	deP	Pn	17 53 09.1	+2.8
OKH				pmax	pmax		
	comp=Z,100nm,8.8s						
OKH				MLR	MLR		
	comp=Z,600nm,15.0s						
CN2	**Changchun**	14.15	294	eP	Pn	17 53 07.3	+0.9
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,570nm,15.0s						
CN2				LR	LR		
	comp=Z,590nm,16.0s						
SNY	**Shenyang**	15.27	285	⇑P	P	17 53 28.8	+2.7
SNY				S	S	17 56 28.0	+2.4
SNY				pmax	pmax		
	comp=Z,130nm,11.1s						
SNY				LR	LR		
	comp=N,350nm,12.5s						
SNY				LR	LR		
	comp=E,1µm,16.7s						
SNY				LR	LR		
	comp=Z,1µm,15.5s						
PETK	**Petropavlovsk-**	16.84	31	Pn	P	17 53 43.1	-0.3
	comp=Z,0.0nm,0.3s,baz=212,slow=7.0,SNR=16						
PEA1	**Petropavlovsk-**	16.84	31	eP	P	17 53 43.1	-0.3
DL2	**Dalian**	16.92	275	P	P	17 53 49.5	+5.1
DL2				S	S	17 57 06.0	+6.6
DL2				pmax	pmax		
	comp=Z,15nm,1.3s						
DL2				pmax	pmax		
	comp=Z,120nm,9.4s						
DL2				LR	LR		
	comp=N,440nm,15.0s						
DL2				LR	LR		
	comp=E,360nm,17.1s						
DL2				LR	LR		
	comp=Z,550nm,17.4s						
PET	**Petropavlovsk**	17.16	33	eP	P	17 53 48.0	+1.1
	comp=Z,41nm,1.1s						
PET	**Petropavlovsk**	17.16	33	eP	P	17 53 48.0	+1.1
PET				pmax	pmax		
	comp=Z,41nm,1.1s						
ZEA	**Zeya**	18.08	328	eP	Pn	17 53 53.3	-3.6
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
MA2	**Magadan**	20.71	11	P	P	17 54 25.8	0.0
	comp=Z,23nm,0.9s,baz=195,slow=9.3,SNR=12						
MA2				LR	LR	18 02 46.8	
	comp=Z,81nm,18.6s,baz=194,slow=38						
MA2	**Magadan**	20.71	11	eP	P	17 54 25.9	+0.1
	comp=Z,35nm,1.0s						
MA2	**Magadan**	20.71	11	c iP	P	17 54 26.2	+0.4
MA2				pmax	pmax		
	comp=Z,42nm,1.7s						
BJI	**Beijing**	20.95	280	⇓iP	P	17 54 25.5	-3.0
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIA	**Tai'an**	21.01	270	P	P	17 54 26.5	-2.7
TIA				pmax	pmax		
	comp=Z,19nm,1.0s						
NJ2	**Nanjing**	21.22	257	eP	P	17 54 31.8	+0.3
NJ2				pP	pwP	17 54 41.3	-0.2
NJ2				sP	sP	17 54 43.5	+1.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.8s						
NJ2				LR	LR		
	comp=Z,220nm,18.5s						
NJ2				LR	LR		
	comp=Z,350nm,14.2s						
NJ2				LR	LR		
	comp=Z,380nm,16.1s						
YAK	**Yakutsk**	24.16	344	eP	P	17 54 59.8	-1.6
YAK				e*PP	pwP	17 55 11.9	-0.4
YAK				e		17 55 31.1	
YAK				ePPP	PPP	17 55 49.8	
YAK				eS	S	17 59 14.4	-2.9
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,1.3s						
YAK				smax	smax		
	comp=N,112nm,3.5s						
YAK				smax	smax		
	comp=E,73nm,3.2s						
YAK				MLR	MLR		
	comp=Z,332nm,19.0s						
YAK				MLR	MLR		
	comp=N,336nm,18.0s						
YAK				MLR	MLR		
	comp=E,60nm,17.0s						
SEY	**Seymchan**	24.17	10	P	P	17 55 02.2	+0.8
	comp=E,36nm,0.9s,baz=189,slow=8.3,SNR=67						
HHC	**Hu-ho-hao-te**	24.34	284	eP	P	17 55 02.0	-1.5
HHC				S	S	17 59 22.0	+1.0
HHC				pmax	pmax		
	comp=E,12nm,0.9s						
HHC				pmax	pmax		
	comp=E,51nm,6.3s						
HHC				LR	LR		
	comp=E,190nm,12.1s						
HHC				LR	LR		
	comp=E,690nm,12.1s						
SSLB	**Suanglung**	24.59	237	eP	P	17 55 03.2	-2.5
	comp=E,16nm,0.9s						
TWG	**Pinlang**	25.19	236	eP	P	17 55 09.4	-1.7
	comp=E,68nm,1.0s						
WHN	**Wuhan**	25.34	259	⇑P	P	17 55 11.5	-0.9
WHN				pmax	pmax		
	comp=E,100nm,0.8s						
WHN				LR	LR		
	comp=E,430nm,8.4s						
WHN				LR	LR		
	comp=E,710nm,10.1s						
WHN				LR	LR		
	comp=E,910nm,15.6s						
BTO	**Baotou**	25.54	283	eP	P	17 55 13.3	-1.0
BTO				S	S	17 59 37.3	-2.8
GUMO	**Guam**	25.75	177	LR	LR	18 04 38.6	
	comp=E,98nm,18.6s,baz=6.0,slow=35						
BOD	**Bodaibo**	26.46	324	eP	P	17 55 21.7	-0.6
BOD				pmax	pmax		
	comp=Z,17nm,0.9s						
SONA0	**Songino Array**	27.89	300	eP	P	17 55 35.1	-0.3
SONM	**Songino Array**	27.89	300	P	P	17 55 35.1	-0.3
	comp=Z,4.6nm,0.7s,baz=99,slow=8.8,SNR=30						
XAN	**Xi'an**	28.07	270	eP	P	17 55 36.4	-0.7
	comp=Z,5.4nm,1.0s						
XAN	**Xi'an**	28.07	270	P	P	17 55 36.0	-1.0
XAN				pP	pP	17 55 42.3	-2.6
XAN				pmax	pmax		
	comp=Z,9.0nm,1.6s						
XAN				pmax	pmax		
	comp=Z,130nm,4.6s						
XAN	**Xi'an**	28.07	270	eP	P	17 55 36.4	-0.7
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	28.16	127	T	T	18 26 32.2	
	baz=318,slow=75,SNR=146						
H11N1	**WAKE ISLAND Hy**	28.17	127	T	T	18 26 33.1	
	baz=318,slow=75,SNR=99						
H11N3	**WAKE ISLAND Hy**	28.18	127	T	T	18 26 41.0	
	baz=318,slow=75,SNR=131						
H11S1	**WAKE ISLAND Hy**	28.97	129	T	T	18 27 34.4	
	baz=318,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	28.97	129	T	T	18 27 28.0	
	baz=318,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	28.99	129	T	T	18 27 35.8	
	baz=318,slow=76,SNR=11						
ENH	**Enshi**	29.18	262	eP	P	17 55 44.9	-2.1
	comp=Z,32nm,1.0s						
TLY	**Talaya**	30.07	307	P	P	17 55 53.6	-1.0
	comp=Z,2.2nm,0.4s,baz=82,slow=19,SNR=3.0						
TLY				LR	LR	18 08 35.8	
	comp=Z,209nm,19.6s,baz=180,slow=38						
ZAK	**Zakamensk**	30.14	305	eP	P	17 55 54.5	-0.8
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL	**Bilibino**	31.30	16	ceP	P	17 56 05.8	+0.5
BILL				e		17 57 10.4	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LZH	**Lanzhou**	31.31	277	eP	P	17 56 10.0	+4.1
LZH				pP	sP	17 56 17.3	+0.3
LZH				sP	pwP	17 56 20.5	+3.7
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				LR	LR		
	comp=Z,400nm,13.0s						
LZH				LR	LR		
	comp=Z,710nm,13.3s						
LZH				LR	LR		
	comp=Z,700nm,14.4s						
MOY	**Mondy**	31.70	307	eP	P	17 56 09.2	+0.1
MOY				pmax	pmax		
	comp=Z,12nm,1.6s						
TIXI	**Tiksi**	33.15	352	P	P	17 56 20.6	-0.8
	comp=Z,1.6nm,0.8s,baz=134,slow=6.4,SNR=4.6						
TIXI				LR	LR	18 12 15.6	
	comp=Z,177nm,18.2s,baz=164,slow=41						
TIXI	**Tiksi**	33.15	352	eP	P	17 56 21.2	-0.1
	comp=Z,3.9nm,1.1s						
TIXI	**Tiksi**	33.15	352	ceP	P	17 56 21.1	-0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GYA	**Guiyang**	33.23	258	⇑iP	P	17 56 21.8	-0.9
GYA				S	S	18 01 36.5	-4.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,110nm,3.2s						
GYA				LR	LR		
	comp=Z,190nm,17.1s						
GYA				LR	LR		
	comp=Z,190nm,14.9s						
GYA				LR	LR		
	comp=Z,190nm,16.8s						
CD2	**Chengdu**	33.31	268	eP	P	17 56 21.5	-1.9
GTA	**Gaotai**	33.46	284	P	P	17 56 24.8	+0.2
GTA				pP	pP	17 56 31.5	-1.0
GTA				sP	sP	17 56 37.0	+1.2
GTA				PcP	PcP	17 59 06.5	+1.2
GTA				S	S	18 01 46.0	+1.6
GTA				pmax	pmax		
	comp=Z,21nm,1.0s						
GTA				pmax	pmax		
	comp=Z,95nm,5.6s						
GTA				LR	LR		
	comp=Z,230nm,16.7s						
GTA				LR	LR		
	comp=Z,600nm,15.8s						
GTA				LR	LR		
	comp=Z,850nm,17.4s						
QIZ	**Qiongzhong**	35.37	245	P	P	17 56 40.3	-0.9
QIZ				S	S	18 02 12.8	-1.1
QIZ				LR	LR		
	comp=Z,300nm,16.7s						
QIZ				LR	LR		
	comp=Z,320nm,16.2s						
QIZ				LR	LR		
	comp=Z,300nm,15.7s						
DGZ	**Jazzator, Alta**	40.35	304	c iP	P	17 57 23.5	+0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NONG	**Nongkai**	40.80	250	P	P	17 57 28.3	+1.4
	comp=Z,0.3nm,1.1s,comp=Z,238nm						
WMQ	**Urumqi**	41.24	295	eP	P	17 57 31.7	+1.3
	comp=Z,29nm,0.7s						
WMQ	**Urumqi**	41.24	295	eP	P	17 57 31.3	+0.9
WMQ				pP	sP	17 57 41.8	+0.1
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,66nm,4.7s						
WMQ				LR	LR		
	comp=Z,160nm,16.1s						
WMQ				LR	LR		
	comp=Z,90nm,20.7s						
WMQ	**Urumqi**	41.24	295	eP	P	17 57 31.7	+1.3
WMQ				pmax	pmax		
	comp=Z,29nm,0.7s						
ZAA0	**Zalesovo Array**	41.54	310	eP	P	17 57 32.3	-0.3
	comp=Z,7.6nm,0.8s						
ZAA1	**Zalesovo Array**	41.54	310	ePcP	PcP	17 59 30.5	+0.9
ZALV	**Zalesovo Beam**	41.54	310	P	P	17 57 32.2	-0.5
	comp=Z,5.7nm,0.7s,baz=82,slow=7.7,SNR=24						
ZALV				PcP	PcP	17 59 30.5	+0.9
	comp=Z,4.6nm,0.8s,baz=104,slow=3.1,SNR=5.9						
ZALV				LR	LR	18 15 29.6	
	comp=Z,148nm,19.8s,baz=70,slow=37						
SVW2	**Sparrevohn**	42.67	39	eP	P	17 57 43.3	+1.5
	comp=Z,5.4nm,1.0s						
CHAI	**Chaiyaphum**	43.04	249	P	P	17 57 46.3	+1.0
	comp=Z,15µm,1.1s						
CMMT	**Chiang Mai**	43.43	255	P	P	17 57 48.6	+0.1
	comp=Z,4.3nm,1.1s						
CHTO	**Chiang Mai**	43.43	255	eP	P	17 57 47.6	-0.8
	comp=Z,4.9nm,0.8s						
CHTO	**Chiang Mai**	43.43	255	eP	P	17 57 47.7	-0.8
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CM31	**Chiang Mai Arr**	43.65	255	eP	P	17 57 49.9	-0.4
	comp=Z,3.4nm,0.8s						
CM31				ePcP	PcP	17 59 36.8	-0.4
CMAR	**Chiang Mai Arr**	43.65	255	P	P	17 57 49.9	-0.4
	comp=Z,1.8nm,0.8s,baz=46,slow=6.9,SNR=15						
CMAR				PcP	PcP	17 59 36.8	-0.4
	comp=Z,0.9nm,0.8s,baz=64,slow=4.1,SNR=3.1						
CMAR				LR	LR	18 18 54.7	
	comp=Z,80nm,18.4s,baz=70,slow=40						
RSO	**Redoubt South**	44.06	40	eP	P	17 57 53.4	+0.2
MK32	**Makanchi Array**	44.25	300	ePP	PP	17 59 37.5	-0.4
MKAR	**Makanchi Array**	44.25	300	P	P	17 57 54.2	-0.5
	comp=Z,9.2nm,0.8s,baz=84,slow=9.2,SNR=67						
MKAR				PcP	PP	17 59 37.6	-0.4
	comp=Z,1.2nm,0.9s,baz=62,slow=3.4,SNR=1.7						
KDAK	**Kodiak Island**	44.28	44	i P	P	17 57 55.9	+1.2
MAKZ	**Makanchi**	44.46	301	eP	P	17 57 56.1	-0.3
	comp=Z,13nm,1.0s						
MAKZ	**Makanchi**	44.46	301	eP	P	17 57 56.1	-0.3
MAKZ				pmax	pmax		
	comp=Z,13nm,1.0s						
MLY	**Manley**	44.99	33	eP	P	17 58 01.4	+1.0
	comp=Z,5.5nm,0.9s						
SUA	**Susitna One**	45.01	38	eP	P	17 58 03.0	+2.3
	comp=Z,5.8nm,0.8s						
RC01	**Rabbit Creek A**	45.51	39	eP	P	17 58 05.4	+0.9
	comp=Z,9.2nm,0.9s						
KURK	**Kurchatov**	45.76	307	eP	P	17 58 06.3	-0.3
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	45.76	307	eP	P	17 58 06.3	-0.3
KURK				pmax	pmax		
	comp=Z,20nm,0.8s						
RND	**Reindeer**	45.82	35	eP	P	17 58 06.7	-0.4
	comp=Z,6.8nm,0.9s						
RND	**Reindeer**	45.82	35	eP	P	17 58 06.7	-0.4
RND				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SML	**Sawmill**	46.14	38	eP	P	17 58 10.0	+0.4
	comp=Z,6.6nm,0.9s						
SML	**Sawmill**	46.14	38	eP	P	17 58 10.0	+0.4
SML				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLA	**College**	46.22	33	⇓eP	P	17 58 12.3	+2.2
COLA				pmax	pmax		
	comp=Z,7.0nm,1.8s						
ILAR	**Eielson Array**	46.64	34	P	P	17 58 14.2	+0.8
	comp=Z,3.8nm,0.8s,baz=265,slow=6.5,SNR=52						
ILB	**Eielson Array**	46.64	34	eP	P	17 58 14.5	+1.1
	comp=Z,6.8nm,0.9s						
DOT	**Dot Lake**	47.95	35	eP	P	17 58 24.6	+1.0
	comp=Z,2.5nm,0.7s						
MENT	**Mentasta**	48.18	36	eP	P	17 58 27.9	+2.4
	comp=Z,6.7nm,0.8s						
GUN	**Gumba**	48.53	275	eP	P	17 58 28.7	-0.3
	comp=Z,42nm,0.7s						
KKN	**Kakani**	49.05	275	eP	P	17 58 32.7	-0.1
	comp=Z,20nm,0.6s						
PKI	**Pulchoki**	49.06	275	eP	P	17 58 32.4	-0.6
	comp=Z,23nm,1.1s						
PKIN	**Phulchoki**	49.07	275	eP	P	17 58 32.2	-0.8
BALM	**Baldy**	49.09	38	eP	P	17 58 34.2	+1.7
	comp=Z,7.4nm,0.8s						
BALM	**Baldy**	49.09	38	eP	P	17 58 34.2	+1.7
BALM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KDJ	**Kajisay**	49.11	296	eP	P	17 58 33.1	+0.1
	comp=Z,7.2nm,1.1s						
KDJ	**Kajisay**	49.11	296	eP	P	17 58 33.1	+0.1
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DMN	**Daman**	49.27	275	eP	P	17 58 34.2	-0.4
GKN	**Gorkha**	49.44	275	eP	P	17 58 35.6	-0.2
DANN	**Dangsing**	49.95	276	eP	P	17 58 40.2	+0.4
	comp=Z,83nm,0.7s						
BRVK	**Borovoye**	50.23	311	c iP	P	17 58 41.2	0.0
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OTUK	**Ortayu**	50.35	305	P	P	17 58 42.2	0.0
KOLN	**Koldanda**	50.36	276	eP	P	17 58 42.7	-0.1
	comp=Z,53nm,1.1s						
KSH	**Kashi**	50.92	293	P	P	17 58 50.8	+4.0
KSH				pP	sP	17 59 00.5	+2.4
KSH				S	S	18 06 03.8	+2.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,62nm,5.0s						
KSH				LR	LR		
	comp=Z,130nm,10.5s						
KSH				LR	LR		
	comp=Z,300nm,15.9s						
KSH				LR	LR		
	comp=Z,280nm,17.0s						
INK	**Inuvik**	51.55	28	eP	P	17 58 51.9	+1.1
	comp=Z,5.2nm,0.8s						
INK	**Inuvik**	51.55	28	eP	P	17 58 51.9	+1.1
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KK31	**Karatay Array**	53.34	299	eP	P	17 59 02.3	-2.2
	comp=Z,3.6nm,0.8s						
KK31	**Karatay Array**	53.34	299	eP	P	17 59 02.3	-2.2
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	53.34	299	eP	P	17 59 02.3	-2.3
	comp=Z,3.6nm,0.8s						
KKAR	**Karatay Array**	53.34	299	eP	P	17 59 02.3	-2.3
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SVE	**Sverdlovsk**	54.44	318	deP	P	17 59 12.9	+0.6
SVE				pmax	pmax		
	comp=Z,23nm,0.9s						
SVE				MLR	MLR		
	comp=Z,451nm,15.0s						
NIL	**Nilore**	55.40	288	P	P	17 59 18.7	-1.0
NIL				pmax	pmax		
	comp=Z,18nm,1.1s						
ARU	**Arti**	55.65	318	eP	P	17 59 20.6	-0.5
	comp=Z,26nm,1.0s						
ARU	**Arti**	55.65	318	c iP	P	17 59 21.1	0.0
ARU						18 00 19.5	
ARU						18 01 20.6	
ARU				PPP	PPP	18 02 36.7	
ARU				S	S	18 07 04.1	-1.0
ARU				SS	SS	18 10 51.3	+1.4
ARU				pmax	pmax		
	comp=Z,28nm,1.0s						
ARU				MLR	MLR		
	comp=Z,375nm,16.0s						
KBL	**Kabul**	58.07	290	P	P	17 59 38.5	-0.4
KBL				pmax	pmax		
	comp=Z,15nm,1.0s						
PRGR	**Permogore**	59.65	327	eP	P	17 59 48.1	-1.0
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
WR1	**Warramunga Arr**	59.65	190	eP	P	17 59 48.9	-0.6
WRA	**Warramunga Arr**	59.65	190	P	P	17 59 48.9	-0.6
	comp=Z,2.8nm,0.8s,baz=7.0,slow=7.6,SNR=11						
LVZ	**Lovozero**	60.60	336	⇓eP	P	17 59 55.3	-0.3
LVZ				pmax	pmax		
	comp=Z,15nm,1.4s						
YKA	**Yellowknife Ar**	60.95	31	P	P	17 59 59.4	+1.4
	comp=Z,0.9nm,0.9s,baz=225,slow=30,SNR=3.1						
YKA	**Yellowknife Ar**	60.95	31	P	P	17 59 59.4	+1.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKB5	**Yellowknife Ar**	60.95	31	eP	P	17 59 59.4	+1.3
MDRS	**Chennai**	61.15	263	ex	P	18 00 11.6	+12
MDRS				ex	x	18 07 55.6	
MDRS				ex	x	18 16 51.6	
MDRS				ex	x	18 24 27.6	
ARCES	**ARCESS Array B**	62.34	339	P	P	18 00 07.8	+0.5
	comp=Z,1.0nm,0.3s,baz=62,slow=6.2,SNR=6.4						
ARCES				LR	LR	18 32 59.8	
	comp=Z,73nm,18.7s,baz=57,slow=42						
KLMR	**Klimovskoe**	62.60	328	eP	P	18 00 07.9	-1.2
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
AS31	**Alice Springs**	63.38	190	eP	P	18 00 14.3	-0.3
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	63.38	190	P	P	18 00 14.3	-0.3
	comp=Z,1.3nm,0.8s,baz=13,slow=5.7,SNR=10						
MSF	**Maaselka**	63.56	335	P	P	18 00 16.8	+1.4
MSF				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GEYT	**Alibeck**	64.08	299	P	P	18 00 18.9	-0.5
	comp=Z,1.6nm,0.5s,baz=64,slow=3.4,SNR=6.0						
SUF	**Sumiainen**	66.58	333	P	P	18 00 35.7	+0.7
SUF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VRH	**Novokhopyorsk**	66.89	318	eP	P	18 00 36.0	-1.2
VRH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN	**Obninsk**	67.15	323	⇓eP	P	18 00 37.2	-1.6
OBN				e		18 01 05.5	
OBN				e		18 03 11.2	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FIA0	**FINESS Array S**	67.45	332	eP	P	18 00 40.7	+0.1
FIA0	**FINESS Array S**	67.45	332	eP	P	18 00 40.7	+0.1
FINES	**FINESS Array B**	67.45	332	P	P	18 00 40.7	+0.1
	comp=Z,4.6nm,0.7s,baz=46,slow=8.2,SNR=22						
FINES				LR	LR	18 32 48.8	
	comp=Z,220nm,18.1s,baz=38,slow=38						
LPSR	**Galich'ya Gora**	67.50	320	eP	P	18 00 40.6	-0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	**Storozhevoye**	68.19	319	ceP	P	18 00 45.5	0.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SUMG	**Summit**	68.31	1	eP	P	18 00 46.7	+0.3
	comp=Z,9.9nm,0.9s						
SUMG	**Summit**	68.31	1	eP	P	18 00 46.7	+0.3
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSU	**Vasula**	69.21	330	eP	P	18 00 50.7	-1.0
VSU				IAmb	IAmb	18 00 53.5	
	comp=Z,30nm,1.1s						
VSU	**Vasula**	69.21	330	⇓iP	P	18 00 52.2	+0.5
VSU				pmax	pmax		

	comp=Z,52nm,2.5s						
NCK	Nalchik	70.29	310⇑	eP	P	18 00 59.8	+1.2
NCK				pmax	pmax		
	comp=Z,18nm,1.1s						
KIV	Kislovodsk	70.55	311	eP	P	18 01 01.0	+0.7
KIV				pmax	pmax		
	comp=Z,75nm,1.1s						
KBZ	Khabaz	70.56	311	P	P	18 00 59.9	-0.3
	comp=Z,7.4nm,0.9s,baz=335,slow=0.5,SNR=10						
KBZ				LR	LR	18 37 32.6	
	comp=Z,93nm,18.2s,baz=54,slow=41						
ISAL	Salakas	71.43	328	eP	P	18 01 04.4	-0.9
ISAL				IAmb	IAmb	18 01 07.3	
	comp=Z,11nm,0.9s						
IIGN	Ignalina	71.54	328	eP	P	18 01 04.1	-1.8
IIGN				IAmb	IAmb	18 01 07.8	
	comp=Z,6.6nm,0.6s						
GNI	Garni	71.56	307	ceP	P	18 01 07.3	+0.7
GNI				pmax	pmax		
	comp=Z,104nm,1.5s						
NV01	Mina Array Sit	72.30	55	eP	P	18 01 13.6	+2.4
NVAR	Mina Array Bea	72.30	55	P	P	18 01 13.6	+2.4
	comp=Z,2.1nm,0.8s,baz=289,slow=6.6,SNR=17						
NC204	NORSAR Array S	72.55	338	eP	P	18 01 11.6	-0.3
	comp=Z,27nm,0.9s						
NB2	NORSAR Subarra	72.60	338	P	P	18 01 12.1	-0.2
	comp=Z,7.8nm,0.8s,baz=37,slow=6.2						
NOA	NORSAR Array B	72.60	338	P	P	18 01 12.5	+0.2
	comp=Z,4.9nm,0.8s,baz=38,slow=6.0,SNR=21						
NOA				LR	LR	18 38 48.3	
	comp=Z,76nm,18.7s,baz=40,slow=41						
AKASG	Malin Array Be	73.38	323	P	P	18 01 16.8	-0.2
	comp=Z,4.5nm,0.9s,baz=43,slow=6.4,SNR=17						
AKASG				LR	LR	18 37 32.0	
	comp=Z,105nm,18.1s,baz=80,slow=39						
FRB	Frobisher Bay	74.09	14	LR	LR	18 38 17.9	
	comp=Z,95nm,18.4s,baz=9.5,slow=39						
PDAR	Pinedale Array	74.88	47	P	P	18 01 27.8	+1.6
	comp=Z,1.3nm,0.7s,baz=272,slow=2.2,SNR=16						
BEL	Belsk	76.32	327	eP	P	18 01 35.3	+1.3
BEL	Belsk	76.32	327	eP	P	18 01 35.3	+1.3
ULM	Lac du Bonnet	76.65	35	P	P	18 01 36.8	+0.9
	comp=Z,1.0nm,0.3s,baz=328,slow=9.5,SNR=2.8						
KWP	Kalwaria Pacla	77.11	325	eP	P	18 01 39.3	+0.7
KWP	Kalwaria Pacla	77.11	325	eP	P	18 01 39.3	+0.7
KOLS	Kolonicke sedl	77.82	325	eP	P	18 01 43.3	+0.7
KOLS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KOLS	Kolonicke sedl	77.82	325	eP	P	18 01 43.2	+0.7
OJC	Ojcow	77.94	327	eP	P	18 01 44.2	+1.1
OJC	Ojcow	77.94	327	eP	P	18 01 44.2	+1.1
UZH	Uzhgorod	78.03	325	eP	P	18 01 43.2	-0.5
UZH				e		18 01 47.6	
UZH				e		18 01 55.0	
TRPA	Tarpa	78.29	324	eP	P	18 01 46.0	+0.9
NIE	Niedzica	78.33	326	eP	P	18 01 46.4	+1.0
NIE	Niedzica	78.33	326	eP	P	18 01 46.4	+1.0
BR101	Keskin Array S	78.45	312	eP	P	18 01 46.2	-0.1
BRTR	Keskin Array B	78.45	312	P	P	18 01 46.2	-0.1
	comp=Z,4.5nm,1.2s,baz=90,slow=3.7,SNR=11						
LANS	Liptovska Anna	78.89	326	eP	P	18 01 49.5	+1.0
LANS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LANS	Liptovska Anna	78.89	326	eP	P	18 01 49.5	+1.0
KSP	Ksiaz	78.91	329	eP	P	18 01 49.6	+1.1
KSP	Ksiaz	78.91	329	eP	P	18 01 49.6	+1.1
OKC	Ostrava-Krasne	78.93	327	eP	P	18 01 50.1	+1.5
OKC				MLR	MLR		
	comp=Z,200nm,19.2s						
OKC	Ostrava-Krasne	78.93	327	eP	P	18 01 50.1	+1.5
OKC				AMS	AMS	18 39 20.0	
	comp=Z,200nm,19.2s						
OSTC	Ostas	79.16	329	eP	P	18 01 51.2	+1.3
OSTC				AMS	AMS	18 39 40.0	
	comp=Z,100nm,14.2s						
CHVC	Chvalec	79.20	329	eP	P	18 01 51.1	+1.0
CHVC				AMS	AMS	18 39 40.0	
	comp=Z,100nm,15.7s						
MORC	Moravsky Berou	79.22	328	eP	P	18 01 51.1	+0.8
DPC	Dobruska-Polom	79.28	329	eP	P	18 01 51.7	+1.1
DPC				MLR	MLR		
	comp=Z,100nm,19.1s						
DPC	Dobruska-Polom	79.28	329	eP	P	18 01 51.7	+1.1
DPC				AMS	AMS	18 40 00.0	
	comp=Z,100nm,19.1s						
UPC	Upice	79.28	329	eP	P	18 01 51.6	+1.1
UPC				MLR	MLR		
	comp=Z,100nm,14.9s						
UPC	Upice	79.28	329	eP	P	18 01 51.6	+1.1
UPC				AMS	AMS	18 40 20.0	
	comp=Z,100nm,14.9s						
PSZ	Piszkesteto	79.63	325⇑	eP	P	18 01 53.1	+0.5
VYHS	Vyhne	79.66	326	eP	P	18 01 54.1	+1.4
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	79.66	326	eP	P	18 01 54.1	+1.4
BRG	Berggiesshubel	79.80	330	eP	P	18 01 54.3	+0.9
	comp=Z,5.2nm,1.1s						
BRG	Berggiesshubel	79.80	330	eP	P	18 01 54.3	+0.9
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CLL	Collm	79.81	331⇑	iP	P	18 01 53.8	+0.4
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL	Collm	79.81	331⇑	iP	P	18 01 53.8	+0.4
	comp=Z,8.0nm,1.1s						
PVCC	Panska Ves	79.83	330	AMS	AMS	18 40 10.0	
	comp=Z,100nm,17.1s						
JAVC	Velka Javorina	79.88	327	eP	P	18 01 55.5	+1.6
VRAC	Vranov	79.98	328	eP	P	18 01 55.2	+0.8
GOPC	GO Pecny, Ondr	80.23	329	AMS	AMS	18 42 50.0	
	comp=Z,100nm,14.8s						
KRUC	Moravsky	80.25	328	eP	P	18 01 56.5	+0.7
PRU	Pruhonice	80.27	329	eP	P	18 01 56.8	+0.9
PRU				MLR	MLR		
	comp=Z,200nm,16.2s						
PRU	Pruhonice	80.27	329	eP	P	18 01 56.8	+0.9
PRU				AMS	AMS	18 40 20.0	
	comp=Z,200nm,16.2s						
SRO	Srobarova	80.41	326	eP	P	18 01 58.4	+1.8
SRO				pmax	pmax		
	comp=Z,15nm,1.3s						
SRO	Srobarova	80.41	326	eP	P	18 01 58.4	+1.8
MODS	Modra-Piesok	80.42	327	eP	P	18 01 57.7	+0.9
MODS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MODS	Modra-Piesok	80.42	327	eP	P	18 01 57.7	+0.9
TREC	Trest	80.44	328	AMS	AMS	18 41 50.0	
	comp=Z,200nm,15.2s						
ZST	Bratislava	80.63	327	eP	P	18 01 58.6	+0.8
ZST	Bratislava	80.63	327	eP	P	18 01 58.6	+0.8
NKC	Novy Kostel	80.89	331	AMS	AMS	18 44 30.0	
	comp=Z,100nm,14.5s						
SOP	Sopron	81.26	327⇓	eP	P	18 02 02.1	+0.8
KHC	Kasperske Hory	81.33	329	ceP	P	18 02 02.4	+0.7
KHC				pmax	pmax		
	comp=Z,18nm,1.0s						
KHC	Kasperske Hory	81.33	329	eP	P	18 02 02.2	+0.5
KHC				AMS	AMS	18 43 30.0	
	comp=Z,200nm,17.1s						
CONA	Conrad Observa	81.36	327	ePcP	P	18 02 03.1	+1.2
	comp=Z,7.0nm,1.2s						
MORH	Mrgy, Hungar	81.48	325⇑	eP	P	18 02 02.1	-0.4
GERES	GERESS Array B	81.52	329	P	P	18 02 02.8	+0.1
	comp=Z,1.1nm,0.7s,baz=35,slow=4.9,SNR=12						
ANMO	Albuquerque	81.85	51⇑	eP	P	18 02 07.0	+2.1
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARSA	Arzberg	82.03	327	ePcP	P	18 02 06.3	+0.9
	comp=Z,5.4nm,1.6s						
MOA	Molln	82.08	328	eP	P	18 02 06.0	+0.3
	comp=Z,3.1nm,1.1s						
SCHQ	Schefferville	82.61	17	LR	LR	18 41 47.5	
	comp=Z,34nm,19.6s,baz=1.0,slow=38						
SOKA	Soboth	82.69	327	ePcP	P	18 02 09.4	+0.5
	comp=Z,5.5nm,1.0s						
OBKA	Obir	83.03	327	ePcP	P	18 02 10.7	+0.1
	comp=Z,3.0nm,0.7s						
KBA	Koelnbreinsper	83.07	328	ePcP	P	18 02 11.5	+0.5
	comp=Z,7.0nm,1.0s						
MYKA	Terra Mystica	83.31	328	eP	P	18 02 11.8	-0.2
	comp=Z,1.9nm,0.6s						
ABTA	Abfaltersbach	83.68	328	ePcP	P	18 02 14.0	0.0
	comp=Z,5.7nm,1.1s						
MOTA	Moosalm	83.75	330	ePcP	P	18 02 14.7	+0.3
	comp=Z,7.3nm,1.1s						
RETA	Reutte	83.77	330	ePcP	P	18 02 15.2	+0.7
	comp=Z,11nm,1.0s						
SQTA	Sankt Quirin	83.81	329	ePcP	P	18 02 15.5	+0.8
	comp=Z,5.0nm,1.0s						
BFO	Black Forest	83.99	332	i P	P	18 02 16.7	+1.2
FETA	Feichten	84.17	330	ePcP	P	18 02 17.1	+0.5
	comp=Z,7.5nm,1.0s						
DAVA	Damuels	84.28	330	ePcP	P	18 02 17.8	+0.7
	comp=Z,8.6nm,0.9s						
PPT	Papeete	84.31	118	LR	LR	18 39 53.6	
	comp=Z,80nm,18.2s,baz=316,slow=36						
TXAR	Lajitas Array	87.42	54	P	P	18 02 34.2	+1.2
	comp=Z,0.8nm,0.9s,baz=306,slow=4.5,SNR=7.1						
ESDC	Sonseca Array	95.83	335	P	P	18 03 12.1	+0.4
	comp=Z,0.1nm,0.3s,baz=2.6,slow=5.7,SNR=3.2						
PLCA	Paso Flores	154.05	104	PKPbc	PKiKP	18 09 45.8	+1.0
	comp=Z,2.9nm,1.2s,baz=318,slow=9.7,SNR=3.1						

*IDC **28** 18:27:15.5±0.7, 57°.26S×25°.36W, h0^{km}, mb4.2/6, mb1 4.4/8, mb1mx4.2/25, mbtmp4.3/8, ML4.8/2, MS3.8/9, Ms1 3.8/9, ms1mx3.6/20, Error ellipse: s-maj=28.0km s-min=22.6km az=34.0*

*ISCJB **28** 18:27:19.9±0.4, 57°.33S±0°.06×25°.6W±0°.1, h43^{km}, mb4.5/23, MS3.8/8, Error ellipse: s-maj=11.9km s-min=7.2km az=142.1*

*NEIC **28** 18:27:21.8±1.7, 57°.29S×25°.48W, h46^{km}±6^{km}, mb4.5/24, Error ellipse: s-maj=15.8km s-min=5.2km az=141.0*

ISC 28 18:27:21.4±0.5, **57°.47S**±0°.07×**25°.46W**±0°.09, **h43**^{km}, **n60**, σ**2**^{s}**29**/53, **mb4.5**/21, **MS3.9**/8, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	15.12	158	P	Pn	18 30 53.7	+2.0
VNA1				S	Sn	18 33 37.3	-0.2
VNA3	Neumayer Olymp	15.33	161	P	Pn	18 30 56.1	+1.7
VNA3				S	Sn	18 33 33.8	-9.0
SNAA	Sanae	17.05	155	P	P	18 31 19.2	+1.6
SNAA				S	Sn	18 34 19.3	-5.3
SNAA	Sanae	17.05	155	P	P	18 31 18.9	+1.3
	3.6nm,0.3s,baz=335,slow=13,SNR=86						
SNAA				S	Sn	18 34 18.3	-6.3
	0.3nm,0.3s,baz=343,slow=14,SNR=4.3						
SNAA	Sanae	17.05	155	eP	P	18 31 19.0	+1.3
	10nm,0.9s						
SNAA				eSn	Sn	18 34 18.3	-6.3
EFI	East Falkland	19.64	273	eP	P	18 31 45.0	-1.0
	42nm,1.0s						
PMSA	Palmer Station	19.74	232	P	Pn	18 31 49.9	+1.2
	2.7nm,0.3s,baz=85,slow=9.2,SNR=17						
PMSA				LR	LR	18 38 07.9	
	comp=Z,408nm,20.7s,baz=88,slow=33						
PMSA	Palmer Station	19.74	232	ePn	Pn	18 31 50.3	+1.6
	17nm,0.7s						
USHA	Ushuaia	23.79	258	LR	LR	18 39 35.5	
	comp=Z,423nm,20.2s,baz=68,slow=31						
GO09	Cerro Castillo	27.54	263	eP	P	18 33 03.7	0.0
	22nm,1.0s						
QSPA	South Pole Qui	32.78	180	eP	P	18 33 52.5	+2.5
	17nm,0.6s						
PLCA	Paso Flores	33.20	281	P	P	18 33 52.3	-1.5
	0.7nm,0.8s,baz=180,slow=5.8,SNR=5.8						
PLCA				LR	LR	18 48 10.5	
	comp=Z,85nm,18.2s,baz=156,slow=38						
PLCA	Paso Flores	33.20	281	eP	P	18 33 53.4	-0.4
	0.9nm,0.9s						
GO06	Curarrehue	34.51	281	eP	P	18 34 02.5	-2.9
	0.4nm,0.5s						
MAW	Mawson	38.44	142	LR	LR	18 47 52.5	
	comp=Z,87nm,21.8s,baz=246,slow=32						
CPUP	Villa Florida	38.46	310	P	P	18 34 37.7	-1.2
	1.7nm,0.6s,baz=183,slow=4.8,SNR=4.3						
CPUP				LR	LR	18 49 23.7	
	comp=Z,49nm,18.8s,baz=186,slow=35						
CPUP	Villa Florida	38.46	310	eP	P	18 34 36.1	-2.8
	5.7nm,1.1s						
SBA	Scott Base	44.73	184	eP	P	18 35 33.2	+3.6
	3.5nm,0.7s						
GO02	Mina Guanaco	44.99	297	eP	P	18 35 31.5	-1.2
	5.3nm,0.8s						
BDFB	Brasilia	45.07	329	P	P	18 35 33.5	+0.3
	1.7nm,0.5s,baz=193,slow=6.5,SNR=3.7						
BDFB				LR	LR	18 53 44.9	
	comp=Z,169nm,19.3s,baz=125,slow=35						
BDFB	Brasilia	45.07	329	eP	P	18 35 33.4	+0.2
	4.4nm,1.1s						
BDFB				eP	P	18 35 33.5	+0.3
BOSA	Boshof	45.44	73	LR	LR	18 50 49.2	
	comp=Z,186nm,18.4s,baz=208,slow=31						
LVC	Limon Verde	46.84	299	eP	P	18 35 47.2	0.0
	5.7nm,0.9s						
PB01	IPOC Station P	48.45	300	eP	P	18 35 58.6	-0.9
	4.7nm,0.8s						
LBTB	Lobatse	48.55	70	eP	P	18 35 59.9	-0.4
	4.1nm,1.0s						
H10S2	ASCENSION HYDR	49.12	14	T	T	19 29 01.2	
	baz=188,slow=74						
H10S3	ASCENSION HYDR	49.12	14	T	T	19 28 57.7	
	baz=188,slow=74						
H10S1	ASCENSION HYDR	49.13	14	T	T	19 29 19.4	
	baz=188						
GO01	Chusmiza	49.50	301	eP	P	18 36 06.9	-1.1
	4.7nm,0.8s						
PB11	IPOC Station P	49.64	300	eP	P	18 36 08.1	-0.5
	9.2nm,1.1s						
MNMC	Minye Minye	50.15	301	eP	P	18 36 11.9	-0.8
	9.7nm,0.7s						
H10N1	ASCENSION HYDR	50.23	14	T	T	19 30 23.1	
	baz=188,slow=75,SNR=4.9						
H10N3	ASCENSION HYDR	50.24	14	T	T	19 30 30.2	
	baz=188,slow=75,SNR=8.4						
H10N2	ASCENSION HYDR	50.25	14	T	T	19 30 23.9	
	baz=188,slow=75,SNR=6.1						
LPAZ	La Paz	51.97	304	P	P	18 36 26.6	-0.1
	9.6nm,0.5s,baz=110,slow=6.0,SNR=71						
LPAZ	La Paz	51.97	304	eP	P	18 36 25.9	-0.9
	12nm,0.5s						
CASY	Casey	52.24	159	eP	P	18 36 28.9	+1.4
	4.3nm,0.9s						
PTGA	Pitinga	62.88	320	eP	P	18 37 42.7	-0.2
	4.5nm,1.1s						
ABPO	Ambohimpanom	64.87	86	eP	P	18 37 56.6	+0.4
	6.3nm,1.1s						
DBIC	Dimbokro	66.09	22	LR	LR	18 59 54.0	
	comp=Z,76nm,19.0s,baz=140,slow=30						
TOA0	Torodi Ar. Sit	73.85	28	eP	P	18 38 51.4	+0.1
	8.4nm,0.8s						
TORD	Torodi Ar. Bea	73.85	28	P	P	18 38 51.0	-0.4
	1.1nm,0.5s,baz=214,slow=5.3,SNR=9.9						
TOA1	Torodi Ar. Sit	73.85	28	eP	P	18 38 51.0	-0.4
GRGR	Grenville	75.48	323	eP	P	18 39 01.4	+0.6
	44nm,0.8s						
MDT	Midelt	91.64	17	LR	LR	19 16 39.8	
	comp=Z,79nm,19.6s,baz=158,slow=32						
ASAR	Alice Springs	97.34	161	P	Pdif	18 40 50.2	+0.2
	0.8nm,0.5s,baz=185,slow=3.9,SNR=7.3						
AS31	Alice Springs	97.34	161	eP	Pdif	18 40 50.2	+0.2
	0.5nm,0.6s						
PDAR	Pinedale Array	121.90	300	PKP	PKPdf	18 46 09.0	-1.2
	0.2nm,0.5s,baz=152,slow=6.0,SNR=2.9						
NV01	Mina Array Sit	122.82	291	ePKPdf	PKiKP	18 46 13.5	+1.2
NVAR	Mina Array Bea	122.82	291	PKP	PKiKP	18 46 13.5	+1.2
	0.2nm,0.5s,baz=191,slow=0.9,SNR=1.7						
CMAR	Chiang Mai Arr	123.68	110	PKP	PKiKP	18 46 14.6	+0.3
	0.6nm,0.8s,baz=230,slow=5.0,SNR=4.1						
FIA0	FINESS Array S	125.20	27	ePKPdf	PKPdf	18 46 15.0	-0.5
FINES	FINESS Array B	125.20	27	PKP	PKPdf	18 46 15.0	-0.5
	0.8nm,0.5s,baz=147,slow=2.2,SNR=14						
ARCES	ARCESS Array B	131.91	22	PKP	PKPdf	18 46 28.1	-0.1
	0.9nm,0.6s,baz=11,slow=1.2,SNR=5.7						
YKA	Yellowknife Ar	137.86	316	PKP	PKiKP	18 46 40.4	-1.1
	1.1nm,0.6s,baz=125,slow=2.6,SNR=6.1						
YKB5	Yellowknife Ar	137.86	316	ePKPdf	PKiKP	18 46 40.4	-1.0
SONA0	Songino Array	149.85	88	ePKPbc	PKPbc	18 47 06.1	+0.3
SONM	Songino Array	149.85	88	PKPbc	PKPbc	18 47 06.1	+0.3
	1.7nm,0.5s,baz=231,slow=2.5,SNR=10.0						
ILAR	Eielson Array	151.76	309	PKPbc	PKiKP	18 47 10.4	+0.4
	2.4nm,0.6s,baz=143,slow=1.6,SNR=19						
ILB	Eielson Array	151.76	309	ePKPbc	PKiKP	18 47 10.2	+0.2

*ISCJB **28** 18:41:52.7±0.3, 30°.61S±0°.03×179°.60W±0°.07, h350^{km}, mb4.1/22, Error ellipse: s-maj=8.4km s-min=3.2km az=14.4*

*NEIC **28** 18:41:53.2±2.7, 30°.59S×179°.52W, h349^{km}±6^{km}, mb4.3/27, Error ellipse: s-maj=16.1km s-min=4.1km az=140.0*

*IDC **28** 18:41:54.1±2.3, 30°.75S×179°.46W, h360^{km}±23^{km}, mb3.4/7, mb1 3.7/10, mb1mx3.5/26, mbtmp4.4/10, Error ellipse: s-maj=24.1km s-min=20.1km az=158.0*

ISC 28 18:41:52.7±0.5, **30°.68S**±0°.06×**179°.40W**±0°.08, **h350**^{km}, **n163**, σ**1**^{s}**69**/166, **mb4.1**/22, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.91	43	P	Pn	18 42 45.1	+1.6
GLKZ				S	S	18 43 16.1	-8.0
RIZ	Raoul Island	1.92	42	P	Pn	18 42 45.2	+1.7
RAO	Raoul Island	1.92	43	ePn	Pn	18 42 45.0	+1.5
RAO				eS	S	18 43 26.1	+1.8
GRZ	Great Barrier	7.02	216	P	Pn	18 43 41.7	+6.5
MXZ	Matakaoa Point	7.12	195	ePn	Pn	18 43 39.0	+2.5
MXZ				eS	S	18 45 00.5	-0.3
MXZ	Matakaoa Point	7.12	195	P	Pn	18 43 38.9	+2.5
MXZ	Matakaoa Point	7.12	195	P	S	18 45 04.6	+3.9
KUZ	Kuaotunu	7.29	213	P	Pn	18 43 44.2	+5.9
WMGZ	Waiomatatini S	7.35	194	P	Pn	18 43 42.4	+3.4
WCZ	Waipu Caves	7.41	223	P	Pn	18 43 45.0	+5.2
OUZ	Omahuta	7.42	231	ePn	Pn	18 43 45.5	+5.6
OUZ	Omahuta	7.42	231	P	Pn	18 43 45.5	+5.5
HAZ	Te Kaha	7.43	198	P	Pn	18 43 42.9	+2.9
PKGZ	Pakihiroa	7.49	195	P	Pn	18 43 41.6	+0.9
WIAZ	Waiheke Island	7.61	215	P	Pn	18 43 48.7	+6.6
RUGZ	Raukumara Rang	7.66	198	P	Pn	18 43 45.5	+2.7
WHRZ	Whale Island	7.76	202	P	Pn	18 43 51.7	+7.8
TWGZ	Tauwhareparae	7.78	195	P	Pn	18 43 45.5	+1.2
TWGZ				S	S	18 45 17.3	+2.2
ETAZ	East Tamaki Re	7.83	215	P	Pn	18 43 51.7	+7.0
MKAZ	Moumakai	7.84	214	P	Pn	18 43 50.9	+6.1
EPAZ	Eden Park BICE	7.87	217	P	Pn	18 43 51.9	+6.7
OPRZ	Ohinepanea	7.89	204	P	Pn	18 43 47.9	+2.5
MARZ	Manawahe	7.97	203	P	P	18 43 51.2	+4.7
CNGZ	Carnagh Statio	8.03	194	P	P	18 43 48.4	-1.7
MWZ	Matawai	8.04	198	P	Pn	18 43 47.9	+0.6
MWZ				S	S	18 45 21.8	+1.1
EDRZ	Edgecumbe	8.06	202	P	P	18 43 55.8	+5.3
TKGZ	Te Karaka	8.06	196	P	Pn	18 43 48.0	+0.5
TKGZ				S	S	18 45 21.6	+0.5
URZ	Urewera	8.09	200	P	Pn	18 43 48.0	+0.2
	20nm,0.3s,baz=247,slow=1.6,SNR=59						
URZ				S	S	18 45 22.0	+0.4
	35nm,0.3s,baz=87,slow=20,SNR=13						
URZ	Urewera	8.09	200	ePn	P	18 43 49.5	-1.3
URZ				eS	S	18 45 20.9	-0.7
URZ	Urewera	8.09	200	P	Pn	18 43 48.1	+0.4
KMRZ	Kaimai	8.12	207	P	P	18 43 55.2	+4.0
KARZ	Kaharoa	8.16	205	P	P	18 43 52.9	+1.3
MKRZ	Makatiti	8.18	204	P	P	18 43 54.8	+2.9
OMRZ	Omania	8.19	204	P	P	18 43 54.9	+3.0
TOZ	Tahuroa Road	8.20	210	P	P	18 43 53.8	+1.8
RAGZ	Rawiri	8.22	198	P	Pn	18 43 50.0	+0.5
RAGZ				S	S	18 45 25.9	+1.1
NGRZ	Ngongotaha	8.25	205	P	P	18 43 55.2	+2.6
TARZ	Mount Tarawera	8.26	203	P	P	18 43 53.7	+1.0
RIGZ	Rimuhau	8.34	195	P	Pn	18 43 51.3	+0.5
RRRZ	Republican Roa	8.35	203	P	P	18 43 54.9	+1.2
HSRZ	Hossack Road	8.42	204	P	P	18 43 56.2	+1.8
RTZ	Ruatahuna	8.46	200	P	Pn	18 43 52.3	+0.1
HRRZ	Handcock Road	8.47	204	P	P	18 43 55.9	+0.8
GRRZ	Galatos Road	8.50	205	P	P	18 43 58.6	+3.2
SNGZ	Shannon Statio	8.51	197	P	P	18 43 55.5	0.0
PRGZ	Paritu Road	8.52	194	P	Pn	18 43 53.8	+0.9
PRRZ	Plateau Road	8.53	203	P	P	18 43 55.9	+0.2
ALRZ	Allen Road	8.61	203	P	P	18 43 57.0	+0.5
WPRZ	Whakapapatarin	8.63	204	P	P	18 43 57.9	+1.0
KNZ	Kokohu	8.66	195	P	Pn	18 43 54.2	-0.3
TLZ	Tolley Road	8.70	207	P	P	18 43 58.3	+0.7
MTHZ	Maungataniwha	8.72	200	P	Pn	18 43 56.0	+0.7
MHGZ	Mahia Peninsul	8.74	194	P	Pn	18 43 55.2	-0.2
HATZ	Hinemaiaia	8.99	203	P	P	18 44 01.6	+0.8
ARHZ	Aropaoanui	9.06	198	P	Pn	18 43 59.2	-0.1
BKZ	Black Stump Fm	9.11	201	eP	P	18 44 02.7	+0.5
BKZ				eS	S	18 45 39.1	-5.0
BKZ	Black Stump Fm	9.11	201	P	Pn	18 43 59.9	-0.1
HIZ	Hauiti	9.13	210	eP	P	18 44 04.2	+1.8
HIZ	Hauiti	9.13	210	P	P	18 44 04.0	+1.7
MCHZ	McNeill Hill	9.31	199	P	Pn	18 44 02.1	-0.2
KRVZ	Karewarewa	9.33	205	P	P	18 44 05.6	+0.9
WTVZ	West Tongariro	9.36	205	P	P	18 44 05.2	+0.1
KWHZ	Kaweka Forest	9.37	200	P	Pn	18 44 02.9	-0.2
TWVZ	Taurewa	9.38	205	P	P	18 44 05.5	+0.2
NGZ	Ngauruhoe	9.41	204	P	P	18 44 06.3	+0.7
TUVZ	Tukino	9.48	204	P	P	18 44 07.0	+0.6
WHVZ	Whangaehu Hut	9.51	204	P	Pn	18 44 05.2	+0.3
DRZ	Dome Shelter	9.52	204	P	P	18 44 08.1	+1.1
BHHZ	Black Hill Sta	9.54	202	P	Pn	18 44 04.1	-1.0
MOVZ	Moawhango	9.57	203	P	P	18 44 07.1	-0.2
KAHZ	Kahuranaki	9.59	197	P	Pn	18 44 05.0	-0.6
KRHZ	Kereru	9.59	200	P	Pn	18 44 04.6	-1.0
PKVZ	Pokaka	9.61	205	P	P	18 44 06.6	-1.1
MTVZ	Mangateitei	9.64	204	P	P	18 44 08.7	+0.6
VRZ	Vera Road	9.69	208	P	P	18 44 08.8	+0.3
PXZ	Pawanui	9.81	197	P	Pn	18 44 07.0	-1.3
PNHZ	Pukenui	9.89	200	P	Pn	18 44 08.1	-1.1
WPHZ	Waipukurau	9.96	199	P	P	18 44 10.6	-0.9
DREZ	Durham Road	9.98	210	P	P	18 44 17.3	+5.5
PKE	Pukeiti	10.07	211	P	P	18 44 17.4	+4.6
TSZ	Takapari Road	10.09	201	P	Pn	18 44 09.8	-1.8
PRHZ	Porangahau	10.09	198	P	Pn	18 44 10.7	-0.9
KHEZ	Kahui Hut	10.14	210	P	P	18 44 19.0	+5.3
WAZ	Wanganui	10.15	205	P	P	18 44 14.3	+0.7
DVHZ	Dannevirke	10.25	199	P	Pn	18 44 12.1	-1.4
POWZ	Post Office Ro	10.46	201	P	P	18 44 17.0	-0.1
PRWZ	Pori Road	10.54	200	P	Pn	18 44 16.8	-0.3
BFZ	Birch Farm	10.59	198	eP	Pn	18 44 17.4	-0.2
BFZ	Birch Farm	10.59	198	P	Pn	18 44 16.9	-0.6
TIWZ	Tintock	10.77	199	P	Pn	18 44 19.1	-0.7
HOWZ	Holdsworth Sta	10.99	201	P	Pn	18 44 21.0	-1.4
TMWZ	Te Maipa	11.08	199	P	Pn	18 44 23.1	-0.3
MTW	Mount Morrison	11.24	200	P	P	18 44 27.6	+1.9
SNZO	South Karori	11.63	203	eP	Pn	18 44 29.3	-0.5
SNZO				eS	S	18 46 37.1	-2.3
NNZ	Nelson	12.03	207	P	Pn	18 44 35.1	+0.5
QRZ	Quartz Range	12.05	211	eP	Pn	18 44 35.1	+0.2
QRZ				eS	S	18 46 45.7	-3.1
BSWZ	Blackbirch Sta	12.27	204	P	Pn	18 44 39.8	+2.3
THZ	Tophouse	12.68	207	eP	Pn	18 44 41.5	-0.8
THZ				eS	S	18 46 56.5	-5.2
THZ	Tophouse	12.68	207	P	Pn	18 44 42.5	+0.1
KHZ	Kahutara	13.01	204	eP	P	18 44 45.0	-0.3
KHZ				eS	S	18 47 03.9	-4.4
KHZ	Kahutara	13.01	204	P	Pn	18 44 46.2	+0.1
DSZ	Denniston Nort	13.12	210	P	Pn	18 44 48.9	+1.3
GVZ	Greta Valley S	13.67	204	P	Pn	18 44 53.8	-0.2
LTZ	Lake Taylor	13.79	207	eP	Pn	18 44 54.7	-0.7
LTZ	Lake Taylor	13.79	207	P	Pn	18 44 55.5	+0.1
AMCZ	Amberley	13.99	205	P	Pn	18 44 58.4	+0.8
PINNC	Pines Island,	14.23	301	eP	Pn	18 44 59.9	-0.8
OKCZ	Okains Bay	14.33	203	P	Pn	18 45 02.3	+0.7
OXZ	Oxford	14.34	206	eP	Pn	18 45 00.4	-1.4
OXZ				eS	S	18 47 31.9	-3.4
OXZ	Oxford	14.34	206	P	Pn	18 45 00.8	-1.0
CRLZ	Canterbury Las	14.35	204	eP	P	18 44 59.5	-0.4
CRLZ				eS	S	18 47 31.5	-3.8
MQZ	McQueen's Vall	14.45	204	eP	Pn	18 45 01.6	-1.4
MQZ				eS	S	18 47 34.8	-2.5
MQZ	McQueen's Vall	14.45	204	P	Pn	18 45 02.8	-0.1
MARNC	Mare, Loyalty	14.53	306	eP	Pn	18 45 04.5	+0.3
RPZ	Rata Peaks	15.05	208	P	Pn	18 45 08.9	-1.2
	5.5nm,0.3s,baz=61,slow=4.4,SNR=16						
RPZ				S	S	18 47 47.6	-1.9
	2.4nm,0.3s,baz=286,slow=22,SNR=12						
RPZ	Rata Peaks	15.05	208	eP	Pn	18 45 09.2	-0.8
	17nm,0.9s						
RPZ				eS	S	18 47 49.3	-0.2
DZM	Mont Dzumac	15.30	301	P	Pn	18 45 13.3	+0.1
	3.4nm,0.3s,baz=174,slow=17,SNR=25						
DZM	Mont Dzumac	15.30	301	eP	Pn	18 45 11.7	-1.5
	22nm,0.6s						
FOZ	Fox Glacier	15.43	211	eP	Pn	18 45 12.6	-1.7
	17nm,0.9s						
LBZ	Lake Benmore	15.96	208	eP	P	18 45 18.1	+0.5
	5.2nm,0.6s						
ODZ	Otahua Downs	16.33	206	eP	Pn	18 45 23.4	-1.4

	10nm,0.7s						
WKZ	Wanaka	16.80	210	eP	P	18 45 27.6	+0.9
	30nm,1.2s						
MLZ	Mavora Lakes	17.62	210	eP	P	18 45 36.5	+1.0
	1.4nm,0.7s						
AFI	Afiamalu	18.11	24	eP	P	18 45 40.2	-0.9
	84nm,0.9s						
WHZ	Wether Hill Ro	18.11	209	eP	P	18 45 39.4	-1.2
	8.2nm,0.9s						
DCZ	Deep Cove	18.12	212	eP	P	18 45 42.9	+2.1
EIDS	Eidsvold	26.55	274	eP	P	18 47 01.7	+1.9
	11nm,1.1s						
KNTN	Kanton	28.69	16	eP	P	18 47 19.7	+0.8
	36nm,0.9s						
CTA	Charters Tower	32.66	281	P	P	18 47 53.7	+0.3
	3.5nm,0.9s,baz=102,slow=9.3,SNR=3.1						
CTAO	Charters Tower	32.66	281	eP	P	18 47 53.6	+0.2
	6.9nm,1.0s						
STKA	Stephens Creek	33.24	258	P	P	18 47 59.5	+1.2
	1.6nm,0.7s,baz=112,slow=15,SNR=3.7						
STKA	Stephens Creek	33.24	258	eP	P	18 47 57.4	-0.9
	0.8nm,1.1s						
BBOO	Buckleboo	37.73	255	eP	P	18 48 36.3	+0.1
	9.1nm,1.0s						
ASAR	Alice Springs	41.89	268	P	P	18 49 09.8	-0.5
	0.3nm,0.3s,baz=103,slow=7.1,SNR=16						
ASAR				ScP	ScP	18 54 14.4	-0.4
	1.1nm,0.8s,baz=130,slow=4.2,SNR=6.4						
WC3	Warramunga Arr	42.87	273	eP	P	18 49 17.4	-0.7
	4.1nm,0.9s						
WB2	Warramunga Arr	42.89	273	eP	P	18 49 17.3	-1.0
	3.7nm,1.1s						
WRA	Warramunga Arr	42.90	273	P	P	18 49 17.6	-0.7
	1.1nm,0.3s,baz=106,slow=8.9,SNR=23						
PTCN	Pitcairn Islan	43.67	95	eP	P	18 49 21.5	-2.8
	229nm,0.9s						
HATHI	Halema‘uma‘u T	54.96	28	eP	P	18 50 48.2	-0.7
	70nm,0.9s						
MLH	Mauna Loa	54.97	28	eP	P	18 50 50.3	+1.1
	67nm,1.1s						
HMH	Humu‘ula Sheep	55.03	28	eP	P	18 50 50.6	+0.9
	45nm,0.8s						
QSPA	South Pole Qui	59.43	180	eP	P	18 51 23.7	+4.4
	3.0nm,1.0s						
KSM	Kuching	73.89	282	eP	P	18 52 49.9	-0.7
	5.2nm,1.0s						
SNAA	Sanae	77.90	179	eP	P	18 53 15.2	+3.1
	1.2nm,1.0s						
ADK	Adak	82.24	2	eP	P	18 53 35.3	+0.2
	24nm,1.0s						
PLCA	Paso Flores	83.20	134	eP	P	18 53 45.0	+4.4
GSI	Gunungsitoli	84.66	275	eP	P	18 53 49.6	+1.3
	11nm,0.9s						
PETK	Petropavlovsk-	85.79	346	P	P	18 53 53.3	+0.4
	4.1nm,0.6s,baz=114,slow=7.2,SNR=11						
USRK	Ussuriysk Ar.	86.73	327	P	P	18 53 58.1	+0.5
	1.1nm,0.7s,baz=123,slow=5.3,SNR=3.6						
SDPT	Sand Point	87.21	11	eP	P	18 53 59.8	+0.2
	8.8nm,0.6s						
NVAR	Mina Array Bea	89.27	43	P	P	18 54 11.6	+1.6
	0.8nm,0.8s,baz=212,slow=7.2,SNR=5.9						
MKAR	Makanchi Array	117.03	310	PKP	PKiKP	18 59 55.6	-0.4
	0.2nm,0.5s,baz=232,slow=0.2,SNR=5.1						
KK31	Karatay Array	124.22	304	ePKPdf	PKiKP	19 00 10.0	-0.3
KKAR	Karatay Array	124.22	304	ePKPdf	PKiKP	19 00 10.3	0.0
BVAR	Borovoye Array	125.76	316	PKP	PKiKP	19 00 12.5	-0.5
	1.0nm,0.7s,baz=107,slow=1.5,SNR=9.5						
ARCES	ARCESS Array B	138.60	347	PKhKP	PKPpre	19 00 29.4	
	0.6nm,0.4s,baz=48,slow=1.3,SNR=5.2						
FIA1	FINESS Array S	144.98	339	ePKPdf	PKPab	19 00 47.5	-0.9
FINES	FINESS Array B	144.98	339	PKPbc	PKPab	19 00 47.8	-0.7
	13nm,0.5s,baz=50,slow=3.8,SNR=158						
NB2	NORSAR Subarra	148.83	350	PKP	PKiKP	19 00 58.6	-1.2
	comp=Z,1.9nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.83	350	PKPbc	PKiKP	19 00 58.8	-1.0
	comp=Z,3.1nm,0.6s,baz=15,slow=4.2,SNR=16						
HFS	Hagfors	149.26	347	PKPbc	PKiKP	19 00 59.5	-1.2
	comp=Z,3.1nm,0.5s,baz=97,slow=2.2,SNR=31						
EKA	Eskdalemuir Ar	155.21	5	PKPab	PKPab	19 01 29.8	-1.0
	comp=Z,1.1nm,0.7s,baz=338,slow=2.9,SNR=5.5						
CLL	Collm	157.43	339	i PKPab	PKPab	19 01 40.4	-0.1

UCR 28 18:44:38.5±1.2, 8°.61N×83°.33W, h9^{km}±4^{km}, MW3.9, 3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDPN	Palmar Norte	0.37	339	⇓eP	Pg	18 44 46.2	+0.4
EDPN				eS	Sg	18 44 51.8	+1.0
EDSV	San Vito	0.41	59	⇓iP	Pg	18 44 47.2	+0.7
EDSV				eS	Sb	18 44 53.9	-0.4
EDBA	Buenos Aires	0.55	5	eP	Pg	18 44 49.2	0.0
BRU2	Volcan	0.65	74	⇓iP	Pg	18 44 51.0	-0.2
BRU2				eS	Sg	18 45 00.5	+0.7
EDLM	Las Mercedes	0.71	339	eP	Pg	18 44 52.1	-0.2
EDDO	Dominical	0.83	320	eP	Pg	18 44 54.0	-0.5
LCR2	La Lucha 2	1.31	329	eP	Pn	18 45 01.2	-2.0
LCR2				eS	Sb	18 45 19.4	-1.0
CVTR	Volcan Turrial	1.46	343	eP	Pn	18 45 03.9	-1.5
CVTR				eS	Sn	18 45 24.3	-0.7
HDC	Heredia	1.58	331	eP	Pn	18 45 06.6	-0.3
HDC				eS	Sn	18 45 27.3	-0.3
ARE1	Arenal 1	2.29	323	eP	Pn	18 45 17.9	+1.4
ARE1				eS	Sb	18 45 47.4	-1.2
JTS	Las Juntas de	2.31	316	eP	Pn	18 45 17.3	+0.4
JTS				eS	Sn	18 45 44.6	-0.8

NNC 28 18:45:22.1±8.8, 36°.51N×69°.92E, h0^{km}, mb3.6, mpv3.5, 1C-3D, Error ellipse: s-maj=86.4km s-min=54.3km az=153.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.60	4	Pn	Pn	18 47 00.6	+0.2
	0.6nm,0.3s,baz=173,slow=11,SNR=16						
KK31				Sn	Sn	18 48 16.7	+0.5
	1.7nm,0.5s,baz=183,slow=21,SNR=5.9						
AAK	Ala-Archa	7.06	29	⇓Pn	Pn	18 47 07.3	+0.5
	1.7nm,0.3s						
AAK				⇓Sn	Sn	18 48 29.8	+1.9
	3.5nm,0.5s						
TKM2	Tokmak 2	7.75	33	⇑Pn	Pn	18 47 17.5	+1.1
	1.3nm,0.5s						
TKM2				⇓Sn	Sn	18 48 45.6	+0.7
	2.1nm,0.6s						
AB31	Akbulak array	14.66	333	P	Pn	18 48 45.9	-4.8
	0.1nm,0.3s,baz=167,slow=12,SNR=11						

ISCJB **28** *18:57:55.7±0.4, 41°.07N±0°.01×34°.29E±0°.01, h4^{km}±2^{km}, mb4.1/38, MS3.4/12, Error ellipse: s-maj=1.9km s-min=1.8km az=165.4*

ISK **28** *18:57:55.9, 41°.02N×34°.36E, h8^{km}, ML4.5/38*

DDA **28** *18:57:55.9, 41°.00N×34°.37E, h17^{km}±1^{km}, ML4.4*

NEIC **28** *18:57:56.0±0.0, 41°.02N×34°.35E, h10^{km}, mb4.2/10, ML4.5(ISK), After ISK.*

IDC **28** *18:57:56.1±0.5, 41°.02N×34°.30E, h0^{km}, mb3.9/17, mb1 4.1/29, mb1mx4.0/45, mbtmp4.0/29, ML3.8/9, MS3.3/20, Ms1 3.4/20, ms1mx3.2/44, Error ellipse: s-maj=7.8km s-min=7.5km az=167.0*

MED_RC **28** *18:57:56.0±0.4, 40°.99N×34°.35E, h21^{km}±2^{km}, MW4.5/9, Moment Tensor Solution.Mantle waves: s9,c11; Duration: 1ṣ0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.74±1.41; M$_{\theta\theta}$1.98±1.22; M$_{\phi\phi}$-0.25±.68; M$_{r\theta}$-1.67±.88; M$_{\theta\phi}$-6.09±.43; M$_{\phi r}$-0.02±.68; Best double couple: M$_0$6.44000×10^{15} NP1:φ$_s$86.00000°, δ85.00000°, λ-163.00000°. NP2: φ$_s$354.00000°, δ73.00000°, λ-6.00000°. Principal axes: T 7.2400, Plg8.0000°, Azm219.0000°; N -1.6100, Plg72.0000°, Azm103.0000°; P -5.6400, Plg16.0000°, Azm311.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

MOS **28** *18:57:56.6±1.3, 41°.12N×34°.22E, h10^{km}, mb4.3/30 Error ellipse: s-maj=5.3km s-min=3.7km az=92.0*

ISC 28 18:57:57.5±0.9, 41°.06N±0°.02×34°.33E±0°.02, h7^{km}±6^{km}, n366, σ1ṣ66/414, mb4.1/38, MS3.4/12, 62C-36D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAGI	orum-Kargı	0.14	53	⇑iP	Pg	18 58 00.7	+0.3
KAGI				i S	Sg	18 58 03.3	+0.9
TOS	Tosya	0.23	265	PG	Pg	18 58 01.6	-0.6
TOS				SG	Sg	18 58 05.6	+0.2
ILGA	Ilgaz	0.47	270	ePg	Pg	18 58 06.2	-0.4
ILGA				eSg	Sg	18 58 13.4	+0.7
ILGA	Ilgaz	0.47	270	⇓iP	Pg	18 58 06.2	-0.4
ILGA				i S	Sb	18 58 13.7	-1.7
CANT	Cankiri	0.70	231	PG	Pg	18 58 10.1	-0.9
CANT				SG	Sg	18 58 20.1	-0.1
ELDT	Eldivan	0.89	231	⇑iP	Pg	18 58 13.4	-1.2
ELDT				i S	Sg	18 58 25.9	-0.3
CORM	Corum	0.91	165	PG	Pg	18 58 12.9	-2.0
CORM				SG	Sg	18 58 25.6	-1.0
DIKM	Dikmen	0.92	49	PG	Pg	18 58 13.9	-1.1
DIKM				SG	Sg	18 58 27.4	+0.4
DIKM	Dikmen	0.92	49	⇑iP	Pg	18 58 14.0	-1.1
DIKM	Dikmen	0.92	49	S	Sg	18 58 25.5	-1.5
BZK	Bozkurt	0.94	345	PG	Pg	18 58 15.3	-0.2
BZK	Bozkurt	0.94	345	⇓iP	Pg	18 58 15.6	+0.1
BZK	Bozkurt	0.94	345	S	Sb	18 58 28.8	0.0
COAL	Corum-Alaca	0.94	148	⇓iP	Pg	18 58 13.8	-1.8
COAL				i S	Sg	18 58 27.4	-0.4
HAVZ	Havza	1.05	89	⇑iP	Pg	18 58 15.4	-2.2
HAVZ				i S	Sg	18 58 31.3	+0.1
DELI	KIRIKKALE	1.10	197	⇑iP	Pg	18 58 16.7	-2.0
DELI				i S	Sg	18 58 30.6	-2.4
DELI				IAML_P			
	comp=Z,70µm,0.3s						
AMSY	Amasya-Merkez	1.21	110	i P	Pb	18 58 18.6	-2.2
AMSY				i S	Sg	18 58 34.2	-2.4
SAFT	Safranbolu	1.26	279	PN	Pn	18 58 20.3	-1.3
KVT	Kavak	1.30	88	PN	Pn	18 58 20.1	-2.0
KVT				SN	Sb	18 58 38.7	-0.4
BR101	Keskin Array S	1.43	202	ePn	Pn	18 58 21.6	-2.4
BR131	Keskin Array S	1.43	202	ePn	Pn	18 58 21.8	-2.2
BR131				eSn	Sb	18 58 41.0	-2.1
CDAG	Cicekdag	1.43	179	⇑iP	Pn	18 58 22.7	-1.3
CDAG				i S	Sn	18 58 41.1	-2.0
CDAG				IAML_P			
	comp=Z,62µm,0.6s						
BRTR	Keskin Array B	1.43	202	Pg	Pn	18 58 21.6	-2.4
	comp=Z,326nm,0.3s,baz=30,slow=14,SNR=4919						
BRTR				Lg	Lg	18 58 41.2	
	comp=Z,229nm,0.3s,baz=297,slow=27,SNR=10						
BRTR				LR	LR	18 59 14.2	
	comp=Z,1µm,18.4s,baz=146,slow=56						
SAMS	Samsun-Alacam	1.43	77	⇑iP	Pn	18 58 23.3	-0.6
SAMS				i S	Sn	18 58 42.9	-0.1
KURC	Kurucasile-Bar	1.43	304	PN	Pn	18 58 23.9	0.0
CMDR	Camlidere-ANKA	1.52	249	⇑iP	Pb	18 58 25.5	-0.6
CMDR				i S	Sg	18 58 48.7	+2.4
YOZ	Yozgat	1.60	152	PN	Pn	18 58 25.1	-1.3
ANTO	Ankara	1.67	225	PN	Pn	18 58 26.3	-1.0
ANTO	Ankara	1.67	225	ePn	Pn	18 58 26.3	-1.0
ANTO				eSn	Sn	18 58 48.9	-0.1
ANTO	Ankara	1.67	225	⇑iP	Pn	18 58 26.5	-0.8
ANTO	Ankara	1.67	225	eP	Pn	18 58 26.3	-1.0
ANTO				e		18 58 48.9	
LOD	Lodumlu	1.67	226	PN	Pn	18 58 26.3	-1.0
BR231	Keskin MP Arra	1.70	225	ePn	Pn	18 58 26.8	-0.9
BCAM	Yenicaga	1.73	263	⇑iP	Pb	18 58 28.8	-0.9
BCAM				i S	Sg	18 58 53.3	0.0
BBAL	Bala	1.77	212	⇑iP	Pn	18 58 27.6	-1.1
BBAL				i S	Sb	18 58 53.5	+0.5
TOKA	Tokat	1.79	113	⇓iP	Pn	18 58 28.0	-0.8
TOKA				i S	Sb	18 58 53.8	+0.5
SIRC	Yozgat	1.83	160	⇑iP	Pn	18 58 28.4	-1.1
SIRC				i S	Sn	18 58 53.2	+0.2
SIRC				IAML_P			
	comp=Z,27µm,0.2s						
TOKT	Tokat	1.83	113	PN	Pn	18 58 28.4	-1.1
TOKT	Tokat	1.83	113	ePn	Pn	18 58 28.1	-1.4
ERBA	Erbaa	1.87	101	⇓iP	Pn	18 58 29.9	-0.1
ERBA				i S	Sb	18 58 55.8	+0.1
ERBA				IAML_P			
	comp=Z,31µm,0.2s						
KIRS	Kırehir-Merke	1.95	190	⇑iP	Pn	18 58 31.0	-0.1
KIRS				i S	Sn	18 58 56.6	+0.7
KIBS	BOLU	1.99	252	⇑iP	Pn	18 58 31.8	+0.1
KIBS				i S	Sg	18 59 03.0	+1.5
YAYX	Yaylak	2.15	191	PN	Pn	18 58 32.7	-1.2
KKUL	Konya-Kulu	2.17	210	⇑iP	Pn	18 58 33.4	-0.8
KKUL				i S	Sg	18 59 08.6	+1.3
YIGI	Dzce	2.19	269	i P	Pn	18 58 34.6	+0.3
YIGI				i S	Sg	18 59 08.5	+0.8
SERE	Sereflikochisa	2.19	196	PN	Pn	18 58 33.3	-1.1
CUSAR	Sarkisla-SIVAS	2.19	138	⇓iP	Pn	18 58 27.7	-6.9
CUSAR				i S	Sn	18 59 01.4	-0.6
KDZE	Karadeniz Ereo	2.20	278	PN	Pn	18 58 34.8	+0.3
KDZE	Karadeniz Ereo	2.20	278	⇓iP	Pn	18 58 35.0	+0.5
KULU	Kulu	2.25	207	PN	Pn	18 58 34.3	-1.1
AVNS	Nevsehir-Avano	2.28	170	⇑iP	Pn	18 58 35.5	-0.3
AVNS				i S	Sb	18 59 07.4	-0.1
SVSK	Karacayir	2.33	118	PN	Pn	18 58 35.7	-0.5
SVSK	Karacayir	2.33	118	ePn	Pn	18 58 35.1	-1.2
GUNE	Kayseri	2.37	155	i P	Pb	18 58 39.7	-0.9
GUNE				i S	Sb	18 59 11.3	+1.2
RSDY	Resadiye-TOKAT	2.37	105	PN	Pn	18 58 36.1	-0.8
AKSY	AKSARAY - Alti	2.44	191	⇑iP	Pn	18 58 37.8	-0.2
AKSY				i S	Sb	18 59 12.1	-0.1
SCER	sogukcermik	2.44	118	i P	Pn	18 58 38.0	0.0
SCER				i S	Sb	18 59 13.3	+1.0
MDUB	Mudurnu	2.45	257	PN	Pn	18 58 37.9	-0.2
MDUB	Mudurnu	2.45	257	ePn	Pn	18 58 37.9	-0.2
MDUB				eSn	Sn	18 59 06.5	-1.8
AUMIH	MIHALICIK	2.48	242	PN	Pn	18 58 37.5	-0.9
AUMIH	MIHALICIK	2.48	242	i P	Pn	18 58 38.1	-0.3
AUMIH				i S	Sg	18 59 17.2	+0.1
BNN	Bunyan	2.49	152	PN	Pn	18 58 37.6	-1.0
CUALT	Altinyayla-SIV	2.57	133	⇓iP	Pn	18 58 40.2	+0.5
CUALT				i S	Sb	18 59 18.2	+2.3
BTAS	Taskesti	2.58	260	i P	Pn	18 58 40.3	+0.6
BTAS				i S	Sg	18 59 22.8	+2.5
SAHE	Sakarya_HENDEK	2.64	267	i P	Pb	18 58 43.5	-1.7
SAHE				i S	Sg	18 59 22.7	+0.3
AUSIV	SIVRIHISAR	2.68	234	PN	Pn	18 58 40.0	-1.2
SVRH	Sivrihisar-ESK	2.68	234	PN	Pn	18 58 40.1	-1.2
CHBY	Cihanbeyli	2.71	205	PN	Pn	18 58 39.7	-1.9
CUZAR	Zara_SIVAS	2.87	113	i P	Pn	18 58 43.4	-0.4
CUZAR				i S	Sb	18 59 26.3	+1.8
KIZT	Kizilcal	2.88	222	PN	Pn	18 58 42.6	-1.3
SULT	Sultanhani-AKS	2.92	193	PN	Pn	18 58 44.0	-0.5
NIG	Nigde	2.95	176	PN	Pn	18 58 43.9	-1.2
GULT	Gulveren	2.97	259	PN	Pn	18 58 45.1	0.0
SRCK	Saricakaya, Es	3.00	251	PN	Pn	18 58 44.8	-0.7
CIFT	Cifteler, Eski	3.02	237	PN	Pn	18 58 44.7	-1.2
SAUV	Serdivan-Sakar	3.05	265	PN	Pn	18 58 46.2	0.0
ESKT	Eskisehir	3.07	241	PN	Pn	18 58 45.9	-0.7
SPNC	Sapanca-Adapaz	3.07	264	PN	Pn	18 58 45.6	-0.9
BORA	Eskisehir	3.18	250	PN	Pn	18 58 48.0	-0.1
LADK	Ladik-KONYA	3.23	209	PN	Pn	18 58 47.3	-1.5
YAL	Yalta	3.43	358	⇓iP	Pn	18 58 51.8	+0.4
YAL				eS	Sn	18 59 33.7	+1.3
KONT	Konya--Tatoy	3.46	207	PN	Pn	18 58 50.2	-1.7
DARE	Darende-Malaty	3.47	135	PN	Pn	18 58 50.5	-1.6
SEV	Sevastopol'	3.52	352	eP	Pn	18 58 53.1	+0.5
SEV				eS	Sn	18 59 36.0	+1.4
HRT	Hereke	3.54	268	PN	Pn	18 58 53.3	+0.3
SILT	Sile	3.54	273	PN	Pn	18 58 53.3	+0.3
SILT	Sile	3.54	273	⇑iP	Pn	18 58 52.5	-0.5
ADVT	Abdulvahap	3.55	261	PN	Pn	18 58 53.3	+0.3
ALU	Alushta	3.62	1	⇓iP	Pn	18 58 54.4	+0.3
ALU				eS	Sn	18 59 38.1	+1.0
YLV	Yalova	3.80	264	PN	Pn	18 58 56.9	+0.4
YLV	Yalova	3.80	264	⇓iP	Pn	18 58 57.3	+0.7
YLV	Yalova	3.80	264	P	Pn	18 58 57.2	+0.7
KARA	Karaisali	3.83	171	PN	Pn	18 58 55.9	-1.0
SHUT	Suhut-Afyon	3.84	231	PN	Pn	18 58 56.7	-0.4
SUDU	Sudak	3.86	7	⇓iP	Pn	18 58 57.5	+0.1
SUDU				i S	Sn	18 59 44.0	+1.0
SIM	Simferopol'	3.90	358	⇓iP	Pn	18 58 58.0	+0.2
SIM				eS	Sn	18 59 44.3	+0.5
BUY	Buyukada	3.96	269	PN	Pn	18 58 59.0	+0.4
GEMT	Gemlik	3.96	263	PN	Pn	18 58 58.9	+0.3
KAVV	Kandilli-Istan	3.99	272	PN	Pn	18 58 59.2	+0.1
ISK	Istanbul-Kandi	3.99	272	PN	Pn	18 58 59.5	+0.4
ISK	Istanbul-Kandi	3.99	272	P	Pn	18 58 59.1	0.0
ISK				S	Sb	18 59 53.1	-3.4
KLYT	Kilyos	4.00	275	PN	Pn	18 59 00.3	+1.1
KLYT	Kilyos	4.00	275	⇓iP	Pn	18 59 00.3	+1.1
FEO	Feodosiya	4.04	11	eP	Pn	18 59 01.8	+2.1
FEO				eS	Sn	18 59 50.7	+3.5
TVSB	Tavsanli	4.06	248	PN	Pn	18 59 00.5	+0.4
ISP	Isparta	4.37	224	ePn	Pn	18 59 03.3	-1.2
ISP	Isparta	4.37	224	P	Pn	18 59 02.8	-1.7
ISP				S	Sn	18 59 55.1	-0.7
ISP	Isparta	4.37	224	⇑iP	Pn	18 59 03.5	-1.0
ISP	Isparta	4.37	224	eP	Pn	18 59 03.3	-1.2
ANN	Anapa	4.38	30	eP	Pn	18 59 04.0	-0.4
ANN				eS	Sn	18 59 56.2	+0.5
ANN				pmax	pmax		
	comp=Z,41nm,1.1s						
CTYL	Yalikoy Yolu	4.58	277	⇓iP	Pn	18 59 07.5	+0.4
SOC	Sochi	4.72	56	eP	Pn	18 59 08.4	-0.8
SOC				e		19 00 06.1	
SOC				pmax	pmax		
	comp=Z,81nm,0.6s						
SOC				MLR	MLR		
	comp=Z,289nm,12.0s						
KULA	Kula-Manisa	5.05	242	P	Pn	18 59 13.5	-0.3
MANR	Mangalia	5.07	305	⇓iP	Pn	18 59 14.2	+0.3
BALB	Balikesir	5.13	256	ePn	Pn	18 59 14.2	-0.6
EFOR	EFORIE	5.18	308	⇑iP	Pn	18 59 14.8	-0.7
MFTR	Murfatlar	5.36	308	⇑iP	Pn	18 59 17.7	-0.2
TIRR	Tirgusor	5.53	310	ePn	Pn	18 59 18.1	-2.1
TIRR	Tirgusor	5.53	310	⇑iP	Pn	18 59 19.5	-0.7
TIRR	Tirgusor	5.53	310	eP	Pn	18 59 18.1	-2.1
CVDA	Cernavoda	5.68	307	⇓iP	Pn	18 59 23.1	+0.8
ICOR	Ion Corvin	5.71	305	⇓iP	Pn	18 59 22.6	-0.1
EDRB	Edirne	5.76	280	P	Pn	18 59 23.0	-0.4
TLCR		5.77	317	⇑iP	Pn	18 59 22.2	-1.4
TLCR		5.77	317	P	Pn	18 59 22.2	-1.4
TLB	Topalu	5.82	309	⇑iP	Pn	18 59 23.2	-1.0
HARR	Harsova	5.94	310	⇑iP	Pn	18 59 25.1	-0.8
YER	Yerkesik	6.12	232	P	Pn	18 59 29.3	+0.8
CFR	Carcaliu	6.13	314	⇑iP	Pn	18 59 27.4	-1.0
CSS	Mathiatis	6.13	188	ePn	Pn	18 59 27.3	-1.3
CSS	Mathiatis	6.13	188	P	Pb	18 59 38.5	-6.2
ALN	Alexandroupoli	6.28	271	ePn	Pn	18 59 30.7	+0.2
ALN	Alexandroupoli	6.28	271	eP	Pn	18 59 30.7	+0.2
RAZG	Razgrad	6.32	296	⇓iP	Pn	18 59 30.9	-0.2
PRK	Paraskevi	6.43	256	P	Pn	18 59 31.8	-0.9
LEHL	Lehliu	6.50	304	⇓iP	Pn	18 59 33.5	0.0
ELND	Elena	6.57	289	⇑iP	Pn	18 59 34.8	+0.2
NEY	Neytrino	6.61	68	deP	Pn	18 59 37.6	+2.4
TKB	Tkibuli	6.61	76	P	Pn	18 59 33.8	-1.4
PGOR	Pogoanele	6.62	308	⇓iP	Pn	18 59 35.2	0.0
RDO	Rodhopi	6.64	274	P	Pn	18 59 35.1	-0.5
SMTH	Samothraki Isl	6.71	268	P	Pn	18 59 37.1	+0.6
SIGR	SIGRI	6.75	257	P	Pn	18 59 35.6	-1.4
KIV	Kislovodsk	6.82	62	ePn	Pn	18 59 38.2	+0.1
KIV	Kislovodsk	6.82	62	⇑iP	Pn	18 59 37.8	-0.3
KIV	Kislovodsk	6.82	62	eP	Pn	18 59 39.0	+0.9
KIV				pmax	pmax		
	comp=Z,91nm,1.1s						
KIV				MLR	MLR		
	comp=Z,134nm,9.0s						
KVAR	Kislovodsk Arr	6.83	62	Pn	Pn	18 59 39.4	+1.2
	baz=258,slow=22,SNR=14						
KVAR				Sn	Sn	19 00 53.5	-2.7
	baz=72,slow=19,SNR=2.1						
KBZ	Khabaz	6.88	64	Pn	Pn	18 59 39.1	+0.4
	comp=Z,0.6nm,0.3s,baz=235,slow=10,SNR=9.7						
KBZ				Sn	Sn	19 00 52.2	-5.1
	comp=Z,0.5nm,0.3s,baz=252,slow=20,SNR=3.8						
KBZ				LR	LR	19 03 16.0	
	comp=Z,178nm,20.6s,baz=249,slow=46						
GRER		6.90	311	⇑iP	Pn	18 59 38.0	-1.0
AKH	Akhalkalaki	6.91	84	ePn	Pn	18 59 40.8	+1.3
AKH	Akhalkalaki	6.91	84	⇓iP	Pn	18 59 41.6	+2.1
AKH	Akhalkalaki	6.91	84	eP	Pn	18 59 40.8	+1.3
PETR	Petresti	6.96	314	⇑iP	Pn	18 59 40.8	+0.9
ONI	Oni	6.98	74	P	Pn	18 59 40.3	0.0
ISR	Istrita	7.00	308	⇓iP	Pn	18 59 41.5	+1.0
ISR	Istrita	7.00	308	P	Pn	18 59 40.5	0.0
LIA	Limnos Island	7.07	264	P	Pn	18 59 41.0	-0.4
ODBI	Odobesti	7.08	314	⇓iP	Pn	18 59 41.8	+0.2
KIS	Kishinev	7.15	328	⇑iP	Pn	18 59 41.5	-1.0
	comp=Z,160nm,1.0s						
KIS				i S	Sn	19 01 02.0	-1.8
	comp=Z,500nm,2.0s						
KIS				LRM	MLR	19 04 28.0	
	comp=Z,360nm,12.0s						
KIS	Kishinev	7.15	328	⇓iP	Pn	18 59 41.4	-1.0
KIS	Kishinev	7.15	328	⇑iP	Pn	18 59 41.5	-1.0
KIS				i S	Sn	19 01 02.0	-1.8
KIS				pmax	pmax		
	comp=Z,160nm,1.0s						
KIS				smax	smax		
	comp=N,500nm,2.0s						
KIS				MLR	MLR		
	comp=Z,360nm,12.0s						
SECR		7.24	306	⇑iP	Pn	18 59 44.3	+0.5
NCK	Nalchik	7.29	67	⇑eP	Pn	18 59 47.5	+3.1
NCK				pmax	pmax		
	comp=Z,15nm,0.5s						
THAS	Thassos island	7.30	270	P	Pn	18 59 44.9	+0.3
VRI	Vrincioaia	7.33	314	⇑iP	Pn	18 59 45.0	0.0
VRI	Vrincioaia	7.33	314	P	Pn	18 59 44.8	-0.2
ZEI	Tsey	7.34	73	eP	Pn	18 59 44.1	-1.3
ZEI				pmax	pmax		
	comp=Z,16nm,0.5s						
PLOR	Plostina	7.36	313	⇑iP	Pn	18 59 45.6	+0.1
KAVA	Kavala	7.43	273	P	Pn	18 59 46.8	+0.5
GOF	Gofitskoye	7.53	55	⇑eP	Pn	18 59 48.0	+0.3
GOF				pmax	pmax		
	comp=Z,31nm,0.9s						
MLR	Muntele Rosu	7.56	309	Pn	Pn	18 59 48.8	+0.6
	comp=Z,0.6nm,0.3s,baz=133,slow=8.2,SNR=24						
MLR				Sn	Sn	19 01 13.7	-0.4
	comp=Z,0.6nm,0.3s,baz=308,slow=14,SNR=1.5						
MLR	Muntele Rosu	7.56	309	ePn	Pn	18 59 48.3	+0.1
MLR	Muntele Rosu	7.56	309	⇑iP	Pn	18 59 49.2	+1.0
MLR	Muntele Rosu	7.56	309	P	Pn	18 59 48.8	+0.6
MLR						19 01 13.7	
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MLR				smax	smax		
	comp=N,1.0nm,0.3s						
PLVB	Pleven	7.58	291	⇑iP	Pn	18 59 47.4	-0.9
QASN	Qassioun	7.67	168	eP	Pn	18 59 49.9	+0.2
QASN				eS	Sb	19 01 46.9	+4.4
QASN				AML	AML	19 02 05.5	
	comp=N,27nm,0.6s						
QASN				AML	AML	19 03 05.0	
	comp=E,24nm,0.4s						
BRBR	Barbar	7.74	170	eP	Pn	18 59 48.5	-2.3
BRBR				eS	Sb	19 01 46.9	+2.2
BRBR				AML	AML	19 01 53.3	
	comp=E,4.1nm,0.7s						
BRBR				AML	AML	19 01 59.5	
	comp=N,6.9nm,0.9s						
TESR	Tescani	7.79	317	⇓iP	Pn	18 59 50.9	-0.3
TOTH	TOTAH	7.86	167	eP	Pn	18 59 51.4	-0.9
TOTH				eS	Sb	19 01 50.7	+2.7
TOTH				eS	Sb	19 01 52.4	+4.4
TOTH				AML	AML	19 02 00.7	
	comp=E,5.2nm,0.7s						
TOTH				AML	AML	19 02 21.0	
	comp=N,5.9nm,0.9s						
GNI	Garni	7.97	93	Pn	Pn	18 59 55.8	+1.9
	comp=N,0.6nm,0.3s,baz=310,slow=22,SNR=2.5						
GNI				Lg	Lg	19 02 00.6	
	comp=N,0.8nm,0.3s,baz=64,slow=16,SNR=1.7						
OZUR		7.99	312	⇑iP	Pn	18 59 53.6	-0.5
VOIR		8.07	306	⇑iP	Pn	18 59 54.6	-0.6
MMAI	Mount Meron Ar	8.07	174	Pn	Pn	18 59 55.4	+0.2
	comp=N,3.9nm,0.3s,baz=346,slow=14,SNR=20						
MMAI				LR	LR	19 03 31.4	
	comp=N,222nm,20.9s,baz=355,slow=42						
SRS	Serrai	8.11	274	P	Pn	18 59 55.3	-0.5
DOPR	Dopca	8.14	310	⇑iP	Pn	18 59 55.5	-0.7
ARR	Arges	8.29	305	⇑iP	Pn	18 59 57.4	-0.8
BIZ	Bicaz	8.35	318	⇑iP	Pn	18 59 58.2	-0.8
VTS	Vitosha	8.43	284	ePn	Pn	19 00 00.6	+0.3
VTS	Vitosha	8.43	284	⇑iP	Pn	19 00 00.5	+0.3
VTS	Vitosha	8.43	284	eP	Pn	19 00 00.6	+0.3
PRAR	RASCA	8.58	320	⇑iP	Pn	19 00 00.9	-1.2
MMLI	Mount Malkishu	8.64	174	P	Pn	19 00 08.2	+5.1
	comp=N,16nm,1.7s,comp=N,0.1nm						
LOT	Lotru	8.87	303	⇑iP	Pn	19 00 00.4	-5.8
ASF	Jabal al Asfar	9.10	166	Pn	Pn	19 00 11.1	+1.7
	comp=N,0.2nm,0.3s,baz=302,slow=14,SNR=5.9						
ASF				Lg	Lg	19 02 44.6	
	comp=N,0.1nm,0.3s,baz=189,slow=19,SNR=1.7						

ASF	Jabal al Asfar	9.10	166	P	Pn	19 00 13.8	+4.4
	comp=N,7.5nm,1.3s						
BURAR	Bucovina Array	9.25	318	⇑iP	Pn	19 00 10.8	-0.7
BURAR	Bucovina Array	9.25	318	P	Pn	19 00 10.7	-0.7
BUR08	Bucovina Ar. S	9.28	318	ePn	Pn	19 00 10.3	-1.5
ARCR	ARCALIA	9.37	313	⇓iP	Pn	19 00 12.1	-0.9
IDI	Anoyia	9.40	235	Pn	Pn	19 00 13.2	-0.3
	comp=N,1.3nm,0.3s,baz=56,slow=16,SNR=8.0						
GZR	Gura Zlata	9.48	301	⇓iP	Pn	19 00 14.3	-0.3
CJR	Cluj-Napoca	9.59	310	⇑iP	Pn	19 00 15.3	-0.7
MAK	Makhachkala	9.99	75	eP	Pn	19 00 19.4	-2.0
MAK				eS	Sn	19 02 12.7	-1.0
MAK				pmax	pmax		
	comp=Z,179nm,1.3s						
MAK				MLR	MLR		
	comp=Z,125nm,13.0s						
DRGR		10.15	308	⇓iP	Pn	19 00 22.4	-1.3
DRGR		10.15	308	P	Pn	19 00 24.2	+0.5
BMR	Baia Mare	10.19	314	⇑iP	Pn	19 00 23.1	-1.1
AKASG	Malin Array Be	10.28	342	Pn	Pn	19 00 22.6	-2.7
	comp=Z,8.0nm,0.3s,baz=151,slow=13,SNR=23						
AKASG				Sn	Sn	19 02 15.8	-5.0
	comp=Z,3.4nm,0.3s,baz=155,slow=24,SNR=5.6						
AKBB	Malin Array Si	10.28	342	ePn	Pn	19 00 22.8	-2.6
AKBB	Malin Array Si	10.28	342	eP	Pn	19 00 22.8	-2.6
BZS	Buzias	10.32	300	⇑iP	Pn	19 00 25.4	-0.6
VSR	Storozhevoye	10.70	17	eP	Pn	19 00 31.1	0.0
VSR				eS	Sn	19 02 24.4	-6.7
VSR				pmax	pmax		
	comp=Z,20nm,1.2s						
VSR				smax	smax		
	comp=N,100nm,0.7s						
TRPA	Tarpa	10.98	314	⇓iP	Pn	19 00 33.2	-1.8
TRPA	Tarpa	10.98	314	ePn	Pn	19 00 33.1	-1.9
TRPA				Sn	Sn	19 02 36.1	-1.9
VORR	Voronezh	11.14	16	P	Pn	19 00 45.0	+7.9
VORR				pmax	pmax		
	comp=Z,250nm,0.8s						
LVV	L'vov	11.36	324	⇓iP	Pn	19 00 37.3	-2.8
LVV				eS	Sn	19 02 42.9	-4.3
VRH	Novokhopyorsk	11.36	24	eP	Pn	19 00 39.7	-0.5
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
EIL	Elat	11.37	177	Pn	Pn	19 00 41.1	+0.7
	comp=Z,0.2nm,0.3s,baz=354,slow=8.1,SNR=4.3						
EIL				LR	LR	19 05 55.4	
	comp=Z,224nm,18.3s,baz=56,slow=42						
EIL	Elat	11.37	177	P	Pn	19 00 31.8	-8.6
UZH	Uzhgorod	11.41	316	eP	Pn	19 00 39.0	-1.8
UZH				eS	Sn	19 02 45.7	-2.8
KOLS	Kolonicke sedl	11.61	317	eP	Pn	19 00 42.7	-0.8
KOLS	Kolonicke sedl	11.61	317	ePN	Pn	19 00 42.7	-0.8
LPSR	Galich'ya Gora	11.97	14	eP	Pn	19 00 48.1	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
PSZ	Piszkesteto	12.37	308	ePn	Pn	19 00 52.4	-1.7
PSZ	Piszkesteto	12.37	308	⇑iP	Pn	19 00 54.8	+0.7
PSZ	Piszkesteto	12.37	308	eP	Pn	19 00 52.4	-1.7
PSZ	Piszkesteto	12.37	308	ePn	Pn	19 00 53.1	-1.0
PSZ				Sn	Sn	19 03 03.0	-9.2
MORH	Mrgy, Hungar	12.48	300	ePn	Pn	19 00 53.1	-2.3
LANS	Liptovska Anna	13.24	313	eP	Pn	19 01 04.6	-1.3
LANS	Liptovska Anna	13.24	313	ePN	Pn	19 01 04.6	-1.3
VYHS	Vyhne	13.27	309	eP	Pn	19 00 59.4	-6.9
VYHS	Vyhne	13.27	309	ePN	Pn	19 00 59.4	-6.9
VYHS				epPN		19 01 06.2	
JAVC	Velka Javorina	14.12	309	eP	P	19 01 25.7	-0.1
MICGM	Minsk	14.13	344	eP	Pn	19 01 17.0	-0.9
MICGM				eS	Sn	19 03 52.0	-2.8
MNK	Minsk	14.13	344	eP	Pn	19 01 17.0	-0.9
MNK				eS	Sn	19 03 52.0	-2.8
MODS	Modra-Piesok	14.14	307	eP	P	19 01 27.6	+1.6
MODS	Modra-Piesok	14.14	307	e	P	19 01 27.6	+1.6
OBN	Obninsk	14.15	5	Pn	Pn	19 01 18.7	+0.6
	comp=Z,0.1nm,0.3s,baz=182,slow=19,SNR=3.9						
OBN				Sn	Sn	19 03 45.7	-10
	comp=Z,1.0nm,0.3s,baz=12,slow=22,SNR=1.8						
OBN	Obninsk	14.15	5	eP	Pn	19 01 19.6	+1.5
OBN				pmax	pmax		
	comp=Z,17nm,1.1s						
OBN				MLR	MLR		
	comp=Z,56nm,16.0s						
ZST	Bratislava	14.18	306	eP	P	19 01 24.4	-1.9
ZST	Bratislava	14.18	306	eP	P	19 01 24.4	-1.9
OKC	Ostrava-Krasne	14.34	313	AMS	AMS	19 07 10.0	
	comp=Z,200nm,19.9s						
MORC	Moravsky Berou	14.64	312	ePn	Pn	19 01 22.5	-2.5
MORC	Moravsky Berou	14.64	312	⇑iP	P	19 01 33.0	+1.5
MORC	Moravsky Berou	14.64	312	eP	Pn	19 01 22.5	-2.5
MORC	Moravsky Berou	14.64	312	eP	P	19 01 32.1	+0.6
NACGM	Naroch	14.74	343	eP	Pn	19 01 21.0	-5.2
NACGM				eS	Sn	19 04 04.0	-5.7
NACGM				eLR	LR	19 08 32.0	
ARSA	Arzberg	14.84	301	epP	P	19 01 34.9	+1.3
	comp=Z,1.9nm,0.6s						
CONA	Conrad Observa	14.85	304	epP	P	19 01 35.0	+1.2
	comp=Z,41nm,1.4s						
MOS	Moscow	14.85	7	eP	Pn	19 01 25.1	-2.7
MOS				eS	Sn	19 04 04.0	-8.5
VRAC	Vranov	14.96	309	Pn	Pn	19 01 28.7	-0.6
	comp=Z,0.1nm,0.3s,baz=132,slow=12,SNR=3.0						
VRAC				LR	LR	19 08 09.4	
	comp=Z,76nm,21.1s,baz=113,slow=41						
VRAC	Vranov	14.96	309	eP	P	19 01 36.0	+1.0
SUW	Suwalki	14.97	334	ePn	Pn	19 01 22.9	-6.4
	comp=Z,29nm,0.5s						
SUW	Suwalki	14.97	334	eP	Pn	19 01 23.0	-6.3
SUW				pmax	pmax		
	comp=Z,29nm,0.5s						
KRUC	Moravsky	14.97	308	eP	P	19 01 36.1	+1.0
SOKA	Soboth	15.00	298	epP	P	19 01 37.1	+1.6
	comp=Z,7.6nm,1.3s						
IIGN	Ignalina	15.28	342	eP	Pn	19 01 27.6	-5.8
IIGN				IAmb	IAmb	19 01 34.7	
	comp=Z,7.6nm,0.8s						
ISAL	Salakas	15.50	342	eP	Pn	19 01 31.8	-4.6
ISAL				IAmb	IAmb	19 01 40.2	
	comp=Z,8.7nm,0.8s						
TREC	Trest	15.61	308	AMS	AMS	19 10 20.0	
	comp=Z,100nm,15.2s						
DPC	Dobruska-Polom	15.61	313	eP	P	19 01 43.0	+0.8
DPC				MLR	MLR		
	comp=Z,100nm,15.0s						
DPC	Dobruska-Polom	15.61	313	eP	P	19 01 43.0	+0.8
DPC				AMS	AMS	19 09 40.0	
	comp=Z,100nm,15.0s						
IZAR	Zarasai	15.64	343	eP	Pn	19 01 34.6	-3.6
IZAR				IAmb	IAmb	19 01 40.0	
	comp=Z,6.4nm,0.7s						
OSTC	Ostas	15.77	313	eP	P	19 01 43.9	-0.1
OSTC				AMS	AMS	19 09 50.0	
	comp=Z,100nm,14.7s						
MOA	Molln	15.83	302	epP	P	19 01 45.5	+0.8
	comp=Z,6.5nm,1.1s						
UPC	Upice	15.86	313	eP	P	19 01 45.7	+0.8
UPC				MLR	MLR		
	comp=Z,200nm,11.8s						
UPC	Upice	15.86	313	eP	P	19 01 45.7	+0.8
UPC				AMS	AMS	19 09 50.0	
	comp=Z,200nm,11.8s						
CHVC	Chvalec	15.87	313	eP	P	19 01 45.8	+0.7
CHVC				AMS	AMS	19 09 50.0	
	comp=Z,100nm,12.5s						
MYKA	Terra Mystica	15.92	297	eP	P	19 01 48.0	+2.3
	comp=Z,5.8nm,1.1s						
KBA	Koelnbreinsper	16.22	299	epP	P	19 01 49.4	+0.2
	comp=Z,11nm,1.1s						
GOPC	GO Pecny, Ondr	16.28	310	AMS	AMS	19 09 30.0	
	comp=Z,100nm,13.0s						
PRU	Pruhonice	16.46	310	eP	P	19 01 52.5	+0.9
PRU				MLR	MLR		
	comp=Z,100nm,19.9s						
PRU	Pruhonice	16.46	310	eP	P	19 01 52.5	+0.9
PRU				AMS	AMS	19 09 40.0	
	comp=Z,100nm,19.9s						
KLNR	Kaliningrad	16.50	330	ceP	P	19 01 51.8	-0.1
KLNR				pmax	pmax		
	comp=Z,29nm,0.6s						
GERES	GERESS Array B	16.52	305	Pn	Pn	19 01 48.8	-0.9
	baz=110,slow=8.5,SNR=9.8						
GERES				LR	LR	19 09 45.3	
	comp=Z,87nm,18.6s,baz=112,slow=43						
PVCC	Panska Ves	16.68	311	eP	P	19 01 55.1	+1.1
PVCC				MLR	MLR		
	comp=Z,100nm,9.6s						
PVCC	Panska Ves	16.68	311	eP	P	19 01 55.1	+1.1
PVCC				AMS	AMS	19 10 00.0	
	comp=Z,100nm,9.6s						
KHC	Kasperske Hory	16.70	306	ePn	Pn	19 01 46.9	-5.0
	comp=Z,1.9nm,1.1s						
KHC	Kasperske Hory	16.70	306	eP	Pn	19 01 46.9	-5.0
KHC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KHC	Kasperske Hory	16.70	306	eP	Pn	19 01 51.8	-0.1
KHC				AMS	AMS	19 09 20.0	
	comp=Z,100nm,14.0s						
ABTA	Abfaltersbach	16.70	297	eP	P	19 01 57.8	+3.4
	comp=Z,3.1nm,0.9s						
BRG	Berggiesshubel	17.19	312	eP	P	19 01 59.5	-0.2
	comp=Z,5.0nm,1.0s						
BRG				e		19 02 02.7	
	comp=Z,7.1nm,1.0s						
BRG	Berggiesshubel	17.19	312	eP	P	19 01 59.5	-0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WTTA	Wattenberg	17.40	298	eP	P	19 02 04.2	+2.0
	comp=Z,4.9nm,0.9s						
WATA	Walderalm	17.45	299	eP	P	19 02 06.0	+3.2
	comp=Z,5.8nm,1.0s						
SQTA	Sankt Quirin	17.67	298	eP	P	19 02 06.3	+1.1
	comp=Z,4.3nm,0.9s						
MOTA	Moosalm	17.77	298	eP	P	19 02 05.8	-0.5
	comp=Z,3.6nm,0.8s						
NKC	Novy Kostel	17.79	308	AMS	AMS	19 09 30.0	
	comp=Z,100nm,24.4s						
CLL	Collm	17.92	312	⇑iP	P	19 02 07.3	-0.4
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	Collm	17.92	312	⇑iP	P	19 02 07.3	-0.4
	comp=Z,11nm,0.9s						
FETA	Feichten	17.95	297	epP	P	19 02 09.2	+0.9
	comp=Z,4.6nm,0.9s						
RETA	Reutte	18.03	299	eP	P	19 02 10.6	+1.6
	comp=Z,6.2nm,0.9s						
VSU	Vasula	18.08	347	eP	Pn	19 02 04.3	-4.7
VSU				IAmb	IAmb	19 02 18.5	
	comp=Z,51nm,0.8s						
SLIT	Slitere, Latvi	18.30	339	eP	Pn	19 02 05.3	-6.4
SLIT				IAmb	IAmb	19 02 28.1	
	comp=Z,221nm,1.3s						
MOX	Moxa	18.44	309	P	Pn	19 02 14.1	+0.6
DAVOX	Davos/Dischmat	18.49	296	LR	LR	19 10 28.6	
	comp=Z,97nm,18.7s,slow=41						
DAVA	Damuels	18.57	298	epP	Pn	19 02 15.0	-0.3
	comp=Z,8.9nm,0.8s						
GEYT	Alibeck	18.61	92	P	Pn	19 02 15.7	0.0
	comp=Z,0.2nm,0.3s,baz=289,slow=14,SNR=12						
GEYT				LR	LR	19 10 55.6	
	comp=Z,56nm,19.3s,baz=290,slow=42						
GYA0B	ALIBECK ARRAY	18.61	92	eP	P	19 02 13.7	-1.7
	comp=Z,6.5nm,0.9s						
AKTO	Aktyubinsk	18.93	52	P	Pn	19 02 19.3	-0.2
	comp=Z,0.6nm,0.3s,baz=255,slow=12,SNR=15						
AKTO				LR	LR	19 11 49.7	
	comp=Z,52nm,19.3s,baz=259,slow=44						
BFO	Black Forest	19.80	300	i P	Pn	19 02 31.3	+1.3
KIRV	Kirov	19.98	24	LR	LR	19 11 38.0	
	comp=Z,39nm,18.2s,baz=174,slow=41						
KLMR	Klimovskoe	20.08	7	eP	Pn	19 02 35.1	+2.0
KLMR				pmax	pmax		
	comp=Z,16nm,1.2s						
SENIN	Lac Senin/Sane	20.20	294	eP	P	19 02 33.1	+0.1
	comp=Z,14nm,0.9s						
KEST	Kesra	20.26	263	P	Pn	19 02 34.5	-1.0
	comp=Z,7.2nm,0.8s,baz=281,slow=2.8,SNR=8.6						
BNI	Bardonecchia	20.56	290	P	P	19 02 34.2	-2.6
BNI				pmax	pmax		
	comp=Z,16nm,1.8s						
FIA0	FINESS Array S	21.03	349	eP	P	19 02 41.5	0.0
FIA0	FINESS Array S	21.03	349	eP	P	19 02 41.5	0.0
FINES	FINESS Array B	21.03	349	P	P	19 02 41.5	0.0
	comp=Z,2.8nm,0.6s,baz=152,slow=9.8,SNR=8.1						
FINES				LR	LR	19 11 49.5	
	comp=Z,79nm,21.7s,baz=158,slow=40						
PRGR	Permogore	21.72	15	eP	P	19 02 47.1	-1.9
PRGR				eS	S	19 06 46.8	-2.6
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
ARU	Arti	22.00	37	P	P	19 02 52.7	+0.5
	comp=Z,4.1nm,0.7s,baz=234,slow=7.2,SNR=20						
ARU				LR	LR	19 13 23.3	
	comp=Z,54nm,18.4s,baz=231,slow=42						
ARU	Arti	22.00	37	eP	P	19 02 52.6	+0.5
	comp=Z,19nm,0.9s						
ARU	Arti	22.00	37	c iP	P	19 02 52.4	+0.3
ARU				PPP	PPP	19 03 21.5	
ARU				S	S	19 06 56.3	+1.3
ARU				pmax	pmax		
	comp=Z,14nm,0.8s						
SUF	Sumiainen	22.24	350	P	P	19 02 53.4	-1.2
SUF				pmax	pmax		
	comp=Z,13nm,1.3s						
HFS	Hagfors	22.98	333	P	P	19 03 02.2	-0.3
	comp=Z,2.3nm,0.5s,baz=145,slow=11,SNR=9.6						
SVE	Sverdlovsk	23.18	38	eP	P	19 03 08.5	+3.9
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
KONO	Kongsberg	24.16	329	deP	P	19 03 15.8	+1.8
KONO				pmax	pmax		
	comp=Z,25nm,1.7s						
NB2	NORSAR Subarra	24.49	333	P	P	19 03 16.4	-0.6
	comp=Z,5.3nm,0.9s,baz=132,slow=11						
NB200	NORSAR Array S	24.49	333	eP	P	19 03 16.5	-0.6
NOA	NORSAR Array B	24.49	333	P	P	19 03 16.5	-0.6
	comp=Z,1.9nm,0.8s,baz=130,slow=9.8,SNR=8.5						
NOA				LR	LR	19 15 00.1	
	comp=Z,91nm,18.5s,baz=145,slow=42						
MSF	Maaselka	25.08	355	P	P	19 03 22.4	0.0
MSF				pmax	pmax		
	comp=Z,18nm,1.1s						
KK31	Karatay Array	26.80	73	eP	P	19 03 39.6	+1.4
	comp=Z,2.8nm,0.8s						
KK31	Karatay Array	26.80	73	eP	P	19 03 39.6	+1.4
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	26.80	73	eP	P	19 03 39.6	+1.3
	comp=Z,2.8nm,0.8s						
KKAR	Karatay Array	26.80	73	eP	P	19 03 39.6	+1.3
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LVZ	Lovozero	26.90	0	⇑eP	P	19 03 41.6	+2.7
LVZ				pmax	pmax		
	comp=Z,18nm,1.4s						
BRVK	Borovoye	26.98	51	⇓eP	P	19 03 42.8	+3.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.2s						
BVAR	Borovoye Array	27.03	51	P	P	19 03 41.8	+1.6
	comp=Z,0.4nm,0.6s,baz=280,slow=8.5,SNR=3.4						
WSAR	Wadi Sarin	27.04	124	LR	LR	19 16 48.7	
	comp=Z,84nm,18.7s,baz=326,slow=42						
OTUK	Ortayu	27.75	62	P	P	19 03 46.4	-0.3
OTUK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	ARCESS Array B	28.92	354	P	P	19 03 56.8	-0.1
	comp=Z,3.9nm,0.6s,baz=160,slow=8.5,SNR=13						
ARCES				LR	LR	19 16 45.9	
	comp=Z,97nm,18.3s,baz=196,slow=39						
ESDC	Sonseca Array	29.06	280	P	P	19 03 57.2	-1.3
	comp=Z,1.3nm,0.7s,baz=72,slow=8.9,SNR=8.9						
AAK	Ala-Archa	29.77	73	⇓eP	P	19 04 07.8	+2.9
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	31.88	57	ceP	P	19 04 24.8	+1.7
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDGK	Podgornoye	33.23	71	P	P	19 04 36.6	+1.3
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	34.58	64	P	P	19 04 47.4	+0.6
	comp=Z,1.1nm,0.9s,baz=287,slow=6.5,SNR=9.5						
MKAR				LR	LR	19 20 56.0	
	comp=Z,61nm,20.0s,baz=256,slow=40						
ZAA1	Zalesovo Array	35.69	51	eP	P	19 04 56.9	+0.6
ZALV	Zalesovo Beam	35.69	51	P	P	19 04 56.9	+0.6
	comp=Z,2.0nm,0.8s,baz=270,slow=8.2,SNR=7.4						
ZALV				LR	LR	19 22 38.0	
	comp=Z,62nm,18.0s,baz=248,slow=42						
DGZ	Jazzator, Alta	37.59	58	ceP	P	19 05 15.0	+2.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	Urumqi	38.91	68	eP	P	19 05 26.5	+2.7
WMQ				sP	sP	19 05 33.5	+6.2
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,44nm,4.1s						
WMQ				LR	LR		
	comp=N,61nm,28.1s						
WMQ				LR	LR		
	comp=Z,94nm,24.9s						
TOA1	Torodi Ar. Sit	39.80	235	eP	P	19 05 30.1	-1.3
TORD	Torodi Ar. Bea	39.80	235	P	P	19 05 30.1	-1.3
	comp=Z,4.5nm,0.9s,baz=28,slow=9.0,SNR=11						
DANN	Dangsing	42.05	92	eP	P	19 05 47.5	-2.7
	comp=Z,32nm,0.6s						
KOLN	Koldanda	42.22	92	eP	P	19 05 52.5	+0.9
GKN	Gorkha	42.89	91	eP	P	19 05 57.0	+0.1
	comp=Z,14nm,0.5s						
DMN	Daman	43.45	92	eP	P	19 06 03.5	+2.0
	comp=Z,17nm,0.8s						
KKN	Kakani	43.48	91	eP	P	19 06 03.4	+1.6
	comp=Z,9.1nm,0.6s						
PKIN	Phulchoki	43.68	91	eP	P	19 06 05.0	+1.5
	comp=Z,7.6nm,0.7s						
PKI	Pulchoki	43.70	91	eP	P	19 06 05.0	+1.4
	comp=Z,13nm,0.8s						
SONA0	Songino Array	50.18	57	eP	P	19 06 54.3	+0.4
SONM	Songino Array	50.18	57	P	P	19 06 54.3	+0.4
	comp=Z,0.8nm,0.4s,baz=292,slow=7.9,SNR=6.4						
SONM				LR	LR	19 30 45.8	
	comp=Z,74nm,19.1s,baz=277,slow=39						
TIXI	Tiksi	53.01	23	⇑iP	P	19 07 17.2	+2.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
HHC	Hu-ho-hao-te	56.42	63	eP	P	19 07 39.0	-0.8
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,51nm,4.9s						
CM31	Chiang Mai Arr	59.09	92	eP	P	19 07 58.5	-0.3
	comp=Z,2.9nm,1.0s						
CMAR	Chiang Mai Arr	59.09	92	P	P	19 07 58.5	-0.3
	comp=Z,1.2nm,1.0s,baz=297,slow=8.0,SNR=3.5						
CMAR				LR	LR	19 40 12.3	
	comp=Z,22nm,18.5s,baz=275,slow=43						
WHN	Wuhan	63.64	71	P	P	19 08 30.0	+0.6
KLR	Kul'dur	64.53	46	⇓iP	P	19 08 36.7	+1.8
KLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SEY	Seymchan	65.22	26	⇑eP	P	19 08 41.7	+2.5
BILL	Bilibino	65.41	18	eP	P	19 08 42.5	+2.1
BILL				e		19 09 11.7	
BILL				ePPP	PPP	19 12 39.3	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KS15	Wonju Array Si	68.97	58	eP	P	19 09 04.5	+1.1
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	68.99	58	P	P	19 09 04.5	+1.0
	comp=Z,1.1nm,0.8s,baz=316,slow=6.0,SNR=5.6						
KSRS				LR	LR	19 42 58.0	
	comp=Z,68nm,18.3s,baz=291,slow=39						
YSS	Yuzh-Sakhalins	71.76	43	eP	P	19 09 22.8	+2.4
YSS				pmax	pmax		
	comp=Z,19nm,1.3s						
ILAR	Eielson Array	74.51	1	P	P	19 09 37.7	+1.3
	comp=Z,0.3nm,0.8s,baz=12,slow=4.6,SNR=4.2						
ILB	Eielson Array	74.51	1	eP	P	19 09 37.6	+1.3
	comp=Z,1.0nm,1.1s						
MAJO	Matsushiro	76.00	54	eP	P	19 09 47.0	+1.6
MAJO	Matsushiro	76.00	54	eP	P	19 09 47.0	+1.6
MJAR	Matsushiro Arr	76.01	54	P	P	19 09 47.0	+1.6
	comp=Z,0.7nm,0.6s,baz=312,slow=7.5,SNR=5.0						
MJAR				LR	LR	19 47 32.1	
	comp=Z,28nm,19.2s,baz=210,slow=39						
ULM	Lac du Bonnet	79.15	330	P	P	19 10 02.8	+0.1
	comp=Z,2.5nm,0.8s,baz=16,slow=6.4,SNR=4.2						

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*ISCJB **28** 19:02:44.2±0.9, 32°.10N±0°.05×116°.59W±0°.08, h17^{km},*
Error ellipse: s-maj=11.3km s-min=5.3km az=149.7
*MEX **28** 19:02:46.6±0.6, 32°.20N×116°.56W, h16^{km}±908^{km}, MD3.2*
*ECX **28** 19:02:47.8±0.3, 32°.25N×116°.57W, h6^{km}, MD1.5, ML1.7*
ISC 28 19:02:43.6±1.3**, 32°.08N**±0°.06×**116°.59W**±0°.07**, h17^{km}, n11,**
σ**0^{s}.80**/17**, 1C, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBX	Cerro Bola	0.24	345	eP	Pg	19 02 50.0	+0.9
CBX				eS	Sg	19 02 52.2	-0.7
CBX	Cerro Bola	0.24	345	i P	Pg	19 02 50.2	+1.0
CBX				eS	Sg	19 02 52.0	-0.9
CBX				IAML		19 02 52.6	
	comp=E,574nm,0.2s						
CBX				⇑e		19 02 52.6	
CBX				e		19 02 53.2	
CBX				IAML		19 02 53.2	
	comp=N,543nm,0.2s						
TJIG	Tijuana	0.36	348	i P	Pg	19 02 51.7	+0.6
TJIG				eS	Sg	19 02 54.9	-1.3
TJIG	Tijuana	0.36	348	eP	Pg	19 02 51.4	+0.4
TJIG				eS	Sg	19 02 54.8	-1.4
BAR	Barrett	0.60	353	eP	Pg	19 02 55.7	+0.2
RMX	La Rumorosa	0.68	40	eP	Pg	19 02 57.6	+0.7
RMX				eS	Sg	19 03 05.4	-0.6
RMX				IAML		19 03 06.3	
	comp=N,52nm,0.1s						
RMX				e		19 03 06.3	
IKP	In-Ko-Pah, Jac	0.70	35	eP	Pb	19 02 57.8	+0.5
SDRC	San Diego Road	0.72	335	eP	Pb	19 02 58.2	+0.6
MONP2	Monument Peak	0.82	10	eP	Pb	19 02 59.6	+0.1
EML	El Monte Cty P	0.84	345	eP	Pb	19 02 59.9	+0.2
SPIG	San Pedro Mart	1.41	137	i P	Pb	19 03 09.6	0.0
SPIG				i S	Sn	19 03 26.6	-0.5

MEX 28 19:15:20.2±0.8**, 17°.11N×100°.47W, h5^{km}, MD3.6,**
Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.20	109	eP	Pg	19 15 23.9	-0.3
CAIG				eS	Sg	19 15 27.3	+0.5
MEIG	Mezcala	1.14	45	i P	Pg	19 15 38.3	-3.8
MEIG				i S	Sg	19 15 52.9	-4.2
ARIG	Puente Sto Nin	1.17	6	eP	Pg	19 15 39.6	-3.0
ARIG				i S	Sg	19 15 55.0	-2.8
PLIG	Platanillo	1.57	36	i P	Pn	19 15 45.3	-3.6
PLIG				i S	Sn	19 16 05.5	-4.1
TLIG	Tlapa	1.87	76	i P	Pn	19 15 50.4	-2.6
TLIG				eS	Sn	19 16 13.3	-3.8

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*ISCJB **28** 19:41:21.5±0.3, 0°.26N±0°.04×122°.20E±0°.05, h200^{km},*
mb4.1/26, Error ellipse: s-maj=6.4km s-min=4.9km
az=161.7
*DJA **28** 19:41:22.3±0.3, 0°N±3°×12°2E±°, h171^{km}±4^{km}, M4.2/15,*
mb4.0/8, mB4.8/2, MLv4.2/15, Mw(mB)4.0/2
*NEIC **28** 19:41:22.5±2.3, 0°.24N×122°.25E, h194^{km}±8^{km}, mb4.3/19,*
Error ellipse: s-maj=14.4km s-min=11.2km az=101.0
*IDC **28** 19:41:23.4±2.1, 0°.25N×122°.18E, h205^{km}±20^{km}, mb3.6/10,*
mb1 3.7/11, mb1mx3.3/46, mbtmp4.1/11, Error ellipse:
s-maj=26.4km s-min=10.2km az=69.0
ISC 28 19:41:22.4±0.4**, 0°.25N**±0°.06×**122°.20E**±0°.05**, h200^{km}, n55,**
σ**1^{s}.55**/64**, mb4.2**/26**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.40	156	ePn	Pn	19 41 54.9	-0.3
LUWI				eSn	Sn	19 42 18.5	-2.4
LUWI	Luwuk	1.40	156	P	Pn	19 41 54.6	-0.7
LUWI				S	Sn	19 42 18.3	-2.6
TTSI	Tana Toraja	4.04	216	P	Pn	19 42 24.4	-0.3
SANI	Sanana	4.42	121	P	Pn	19 42 28.0	-1.5
SANI				S	Sn	19 43 17.4	-4.9
SGKI	Sangatta, Kali	4.66	260	P	Pn	19 42 30.0	-2.5
SGKI				S	Sn	19 43 21.6	-6.0
SGSI	Sangihe	4.77	44	P	Pn	19 42 35.2	+1.3
SPSI	Sidrap Palu	4.83	210	P	Pn	19 42 34.7	0.0
BNSI	Bone	5.07	204	P	Pn	19 42 39.1	+1.4
	113nm,0.7s,1μm0.5nm						
TNTI	Ternate	5.20	84	ePn	Pn	19 42 38.9	-0.4
TNTI	Ternate	5.20	84	P	Pn	19 42 38.4	-1.0
LBMI	Labuha	5.38	99	P	Pn	19 42 41.6	-0.1
BBSI	Bau Bau	5.71	176	P	Pn	19 42 46.7	+0.8

KAPI	**Kappang**	**5.77**	**205**	P	**Pn**	**19 42 46.8**	**+0.1**
	1.2nm,0.3s,baz=88,slow=11,SNR=7.6						
BKSI	**Bulukumba**	**5.91**	**201**	P	**Pn**	**19 42 49.0**	**+0.5**
NLAI	**Namlea**	**6.00**	**125**	P	**Pn**	**19 42 51.2**	**+1.5**
KBKI	**Kotabaru**	**6.98**	**240**	P	**Pn**	**19 43 01.2**	**-1.2**
EDFI	**Ende, Flores**	**8.95**	**183**	P	**Pn**	**19 43 28.7**	**+0.5**
JAGI	**Jajag, Banyuwa**	**11.80**	**223**	*e*P	**P**	**19 44 10.8**	**+0.9**
MTN	**Manton Dam**	**15.74**	**146**	*e*P	**Pn**	**19 44 55.0**	**+1.3**
	15nm,0.6s						
TNG	**Tangerang**	**16.78**	**247**	P	P	19 44 54.0	-11
PSA00	**Pilbara Seismi**	**21.81**	**186**	*e*P	**P**	**19 45 57.1**	**-1.7**
	6.5nm,1.0s						
KULM	**Kulim**	**22.09**	**283**	*e*P	**P**	**19 46 01.6**	**-0.1**
	5.5nm,1.1s						
TPUB	**Ta-pu**	**22.97**	**356**	*e*P	**P**	**19 46 10.7**	**+1.1**
	7.4nm,0.9s						
WRAB	**Tennant Creek**	**23.32**	**150**	*e*P	**P**	**19 46 13.1**	**+0.3**
	5.8nm,0.6s						
WRA	**Warramunga Arr**	**23.33**	**150**	P	**P**	**19 46 13.3**	**+0.4**
	4.5nm,0.5s,baz=326,slow=12,SNR=62						
WRA				PcP	**PcP**	**19 49 54.1**	**-0.1**
	0.7nm,0.4s,baz=300,slow=2.5,SNR=7.5						
WB2	**Warramunga Arr**	**23.33**	**150**	*e*P	**P**	**19 46 13.3**	**+0.4**
	5.7nm,0.6s						
GIRL	**Giralia**	**24.04**	**198**	*e*P	**P**	**19 46 19.1**	**-0.1**
	47nm,1.0s						
AS31	**Alice Springs**	**26.35**	**155**	*e*P	**P**	**19 46 41.3**	**+1.1**
	1.2nm,0.4s						
ASAR	**Alice Springs**	**26.35**	**155**	P	**P**	**19 46 41.0**	**+0.8**
	2.2nm,0.5s,baz=343,slow=14,SNR=66						
ASAR				PcP	**PcP**	**19 50 01.4**	**+0.6**
	1.5nm,0.3s,baz=347,slow=2.2,SNR=35						
ASAR				ScP	**ScP**	**19 53 21.7**	**-0.1**
	0.2nm,0.4s,baz=342,slow=2.9,SNR=6.2						
JOW	**Kunigami**	**27.07**	**12**	*e*P	**P**	**19 46 45.4**	**-1.2**
	11nm,0.9s						
ANA2	**Anatahan**	**28.17**	**54**	*e*P	**P**	**19 46 53.1**	**-3.4**
	46nm,0.6s						
SARN	**Sarigan**	**28.42**	**54**	*e*P	**P**	**19 46 56.7**	**-2.0**
	23nm,1.1s						
CMAR	**Chiang Mai Arr**	**29.14**	**310**	P	**P**	**19 47 06.3**	**+1.3**
	0.6nm,0.7s,baz=139,slow=7.3,SNR=5.5						
MORW	**Morawa**	**29.74**	**191**	*e*P	**P**	**19 47 10.1**	**0.0**
	1.7nm,0.8s						
STKA	**Stephens Creek**	**36.85**	**152**	P	**P**	**19 48 12.5**	**+0.9**
	4.6nm,0.7s,baz=335,slow=8.7,SNR=11						
STKA	**Stephens Creek**	**36.85**	**152**	*e*P	**P**	**19 48 13.3**	**+1.7**
	1.9nm,1.0s						
EIDS	**Eidsvold**	**37.79**	**135**	*e*P	**P**	**19 48 19.7**	**+0.1**
	6.9nm,1.0s						
CAN	**Canberra**	**43.33**	**147**	*e*P	**P**	**19 49 07.2**	**+2.3**
	8.2nm,1.1s						
JIRN	**Jiri**	**43.99**	**311**	*e*P	**P**	**19 49 12.0**	**+1.4**
	31nm,0.6s						
PKI	**Pulchoki**	**44.53**	**311**	*e*P	**P**	**19 49 15.7**	**+0.8**
PKIN	**Phulchoki**	**44.54**	**311**	*e*P	**P**	**19 49 15.7**	**+0.8**
	4.2nm,0.4s						
USRK	**Ussuriysk Ar.**	**44.62**	**10**	P	**P**	**19 49 14.8**	**-0.1**
	0.5nm,0.6s,baz=196,slow=5.9,SNR=3.6						
KKN	**Kakani**	**44.74**	**311**	*e*P	**P**	**19 49 17.4**	**+1.0**
DMN	**Daman**	**44.78**	**311**	*e*P	**P**	**19 49 17.9**	**+1.1**
	11nm,0.6s						
GKN	**Gorkha**	**45.34**	**311**	*e*P	**P**	**19 49 22.1**	**+1.1**
DANN	**Dangsing**	**46.18**	**311**	*e*P	**P**	**19 49 28.8**	**+1.0**
	55nm,0.6s						
SONM	**Songino Array**	**49.35**	**346**	P	**P**	**19 49 52.6**	**+1.0**
	2.0nm,0.6s,baz=164,slow=8.8,SNR=12						
SONM				PcP	**PcP**	**19 51 10.5**	**-0.5**
	0.4nm,0.5s,baz=160,slow=5.0,SNR=3.9						
MK31	**Makanchi Array**	**57.98**	**329**	*e*P	**P**	**19 50 55.0**	**+0.9**
	2.1nm,0.5s						
MKAR	**Makanchi Array**	**57.98**	**329**	P	**P**	**19 50 54.9**	**+0.8**
	2.2nm,0.4s,baz=127,slow=8.8,SNR=49						
MKAR				PcP	**PcP**	**19 51 43.3**	**-0.6**
	0.6nm,0.6s,baz=134,slow=4.9,SNR=5.4						
MAKZ	**Makanchi**	**58.16**	**329**	*e*P	**P**	**19 50 56.4**	**+1.1**
	2.2nm,0.4s						
PEA0B	**Petropavlovsk-**	**60.38**	**24**	*e*P	**P**	**19 51 11.8**	**+1.4**
	12nm,1.1s						
PETK	**Petropavlovsk-**	**60.38**	**24**	P	**P**	**19 51 11.5**	**+1.1**
	1.4nm,0.6s,baz=147,slow=2.9,SNR=7.5						
PETK				PcP	**PcP**	**19 51 53.5**	**+0.2**
	0.9nm,0.7s,baz=222,slow=1.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**61.76**	**336**	P	**P**	**19 51 18.8**	**-0.8**
	0.6nm,0.4s,baz=133,slow=6.3,SNR=3.2						
ILAR	**Eielson Array**	**90.17**	**25**	P	**P**	**19 53 58.5**	**-1.2**
	0.1nm,0.6s,baz=260,slow=5.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**119.57**	**285**	PKP	**PKPdf**	**19 59 48.5**	**-0.9**
	0.8nm,1.1s,baz=112,slow=2.4,SNR=4.1						

MAN 28 19:48:09.1, 9°.25N×125°.67E, h0^{km}, mb3.6, ML2.3, MS1.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.56**	**341**	⇑*e*P	Pg	19 48 20.3	+0.4

IDC 28 19:50:05.2±1.5**, 0°.56N×122°.04E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/29**, mbtmp3.4**/3**, Error ellipse: s-maj=208.6km s-min=25.1km az=61.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.67**	**150**	P	P	19 55 18.7	0.0
	0.8nm,0.5s,baz=327,slow=11,SNR=19						
ASAR	**Alice Springs**	**26.70**	**155**	P	P	19 55 46.4	0.0
	0.3nm,0.6s,baz=343,slow=15,SNR=4.3						
MKAR	**Makanchi Array**	**57.64**	**329**	P	P	19 59 57.2	-0.1
	0.2nm,0.5s,baz=119,slow=8.8,SNR=3.5						

*ISCJB **28** 19:52:02.7±0.4, 23°.16S±0°.03×68°.74W±0°.05, h117^{km}±5^{km}, mb4.0/4, Error ellipse: s-maj=8.0km s-min=4.7km az=4.3*

*IDC **28** 19:52:02.1±1.0, 23°.18S×68°.32W, h82^{km}±12^{km}, mb3.7/4, mb1 3.8/9, mb1mx3.6/26, mbtmp4.1/9, Error ellipse: s-maj=24.0km s-min=16.2km az=112.0*

*SJA **28** 19:52:03.5±0.4, 23°.15S×68°.67W, h94^{km}±6^{km}, ML3.3, MW3.3*

*NEIC **28** 19:52:04.0±0.0, 23°.14S×68°.80W, h101^{km}, mb3.8/4, ML4.0(GUC), After GUC.*

*GUC **28** 19:52:04.3±0.6, 23°.14S×68°.80W, h101^{km}±4^{km}, ML4.0*

ISC 28 19:52:02.8±0.7**, 23°.19S**±0°.04×**68°.60W**±0°.05**, h98**^{km}±7^{km}**, n48, σ1^{s}.68**/66**, mb4.1**/4**, 4C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.64**	**334**	P	**Pn**	**19 52 20.5**	**+0.6**
	102nm,0.3s,baz=129,slow=7.0,SNR=2188						
LVC				S	**Sn**	**19 52 32.7**	**+0.1**
	311nm,0.3s,baz=338,slow=19,SNR=78						
LVC	**Limon Verde**	**0.64**	**334**	*e*Pn	**Pn**	**19 52 20.3**	**+0.4**
LVC				*e*Sn	**Sn**	**19 52 33.4**	**+0.8**
LVC	**Limon Verde**	**0.64**	**334**	*e*P	**Pn**	**19 52 20.2**	**+0.4**
PB15	**IPOC Station P**	**0.80**	**268**	*e*P	**Pn**	**19 52 21.7**	**+0.6**
PB15				*e*S	**Sn**	**19 52 35.4**	**+0.4**
PB15	**IPOC Station P**	**0.80**	**268**	⇑*i*P	**Pn**	**19 52 21.6**	**+0.4**
PB15				*i* S	**Sn**	**19 52 34.9**	**-0.1**
PB06	**IPOC Station P**	**1.01**	**298**	*e*P	**Pn**	**19 52 23.5**	**+0.2**
PB06				*e*S	**Sn**	**19 52 38.9**	**0.0**
PB06	**IPOC Station P**	**1.01**	**298**	⇑*i*P	**Pn**	**19 52 23.8**	**+0.4**
PB06				*i* S	**Sn**	**19 52 38.1**	**-0.7**
PB06				IAML		19 52 39.6	
	comp=N,7μm,0.3s						
PB09	**IPOC Station P**	**1.50**	**337**	*e*P	**Pn**	**19 52 30.1**	**+1.0**
PB09	**IPOC Station P**	**1.50**	**337**	⇓*i*P	**Pn**	**19 52 30.5**	**+1.4**
PB09				*i* S	**Sn**	**19 52 50.1**	**+1.0**
PB09				IAML		19 52 54.1	
	comp=E,2μm,0.4s						
PB03	**IPOC Station P**	**1.55**	**317**	*e*P	**Pn**	**19 52 30.3**	**+0.6**
PB03				*e*S	**Sn**	**19 52 50.6**	**+0.4**
PB03	**IPOC Station P**	**1.55**	**317**	⇓*i*P	**Pn**	**19 52 30.2**	**+0.4**
PB03				*i* S	**Sn**	**19 52 50.2**	**0.0**
PB03				IAML		19 52 55.0	
	comp=N,2μm,0.2s						
PB04	**IPOC Station P**	**1.66**	**300**	*e*Pn	**Pn**	**19 52 31.4**	**+0.4**
PB04	**IPOC Station P**	**1.66**	**300**	⇓*i*P	**Pn**	**19 52 31.2**	**+0.1**
PB04				*i* S	**Sn**	**19 52 51.7**	**-0.9**
PB04				IAML		19 52 57.9	
	comp=N,2μm,0.2s						
PB10	**IPOC Station P**	**1.82**	**259**	*e*Pn	**Pn**	**19 52 33.3**	**+0.3**
PB10	**IPOC Station P**	**1.82**	**259**	⇑*i*P	**Pn**	**19 52 33.3**	**+0.3**
PB10				*i* S	**Sn**	**19 52 57.1**	**+1.1**
PB10				IAML		19 53 03.0	
	comp=N,3μm,0.5s						
PB07	**IPOC Station P**	**1.88**	**320**	⇓*i*P	**Pn**	**19 52 34.3**	**+0.5**
PB07				*i* S	**Sn**	**19 52 57.1**	**-0.4**
PB07				IAML		19 53 02.1	
	comp=N,1μm,0.3s						
GO02	**Mina Guanaco**	**2.17**	**204**	⇓*i*P	**Pn**	**19 52 38.7**	**+1.0**
GO02				*e*S	**Sn**	**19 53 05.7**	**+1.3**
PB14	**IPOC Station P**	**2.19**	**229**	⇑*i*P	**Pn**	**19 52 38.3**	**+0.3**
PB14				*i* S	**Sn**	**19 53 05.1**	**+0.2**
PB02	**IPOC Station P**	**2.21**	**327**	⇓*i*P	**Pn**	**19 52 38.7**	**+0.5**
PB02				*i* S	**Sn**	**19 53 04.9**	**-0.2**
PB01	**IPOC Station P**	**2.28**	**339**	*e*Pn	**Pn**	**19 52 40.1**	**+1.0**
PB01	**IPOC Station P**	**2.28**	**339**	⇓*i*P	**Pn**	**19 52 40.0**	**+1.0**
PB01				*i* S	**Sn**	**19 53 07.3**	**+0.5**
PB01				IAML		19 53 12.8	
	comp=E,2μm,0.2s						
HJA	**Humahuaca**	**2.94**	**91**	*e*P	**Pn**	**19 52 51.6**	**+3.6**
HJA				IAML		19 52 52.5	
	comp=Z,222nm,0.5s						
YJA	**Yavi**	**3.02**	**71**	*e*P	**Pn**	**19 52 52.7**	**+3.5**
YJA				IAML		19 52 53.7	
	comp=Z,34nm,0.5s						
AZAP	**Zapla**	**3.40**	**108**	*e*P	**Pn**	**19 52 57.6**	**+3.5**
GO01	**Chusmiza**	**3.54**	**351**	*e*Pn	**Pn**	**19 52 56.8**	**+0.6**
PB11	**IPOC Station P**	**3.54**	**344**	*e*Pn	**Pn**	**19 52 55.5**	**-0.5**
MNMC	**Minye Minye**	**4.14**	**347**	*e*Pn	**Pn**	**19 53 02.8**	**-1.3**
GO03	**Copiap**	**4.63**	**198**	*e*Pn	**Pn**	**19 53 09.3**	**-1.2**
LCO	**Las Campanas**	**6.10**	**198**	*e*Pn	**Pn**	**19 53 30.4**	**-0.2**
LPAZ	**La Paz**	**6.88**	**4**	P	**Pn**	**19 53 42.4**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=157,slow=2.9,SNR=30						
LPAZ	**La Paz**	**6.88**	**4**	*e*Pn	**Pn**	**19 53 43.2**	**+1.7**
GO04	**Tololo Observa**	**7.23**	**195**	*e*Pn	**Pn**	**19 53 43.4**	**-2.6**
CFA	**Coronel Fontan**	**8.39**	**178**	P	**Pn**	**19 54 00.0**	**-1.6**
	comp=Z,2.4nm,0.3s,baz=4.6,slow=9.6,SNR=17						
CFA				S	**Sn**	**19 55 28.6**	**-6.2**
	comp=Z,1.7nm,0.3s,baz=188,slow=18,SNR=3.2						
SIV	**San Ignacio**	**10.08**	**46**	P	**Pn**	**19 54 22.3**	**-2.3**
	comp=Z,7.2nm,0.3s,baz=249,slow=11,SNR=117						
SIV				S	**Sn**	**19 56 10.2**	**-5.6**
	comp=Z,1.0nm,0.3s,baz=273,slow=14,SNR=5.9						
CPUP	**Villa Florida**	**10.71**	**109**	*e*Pn	**Pn**	**19 54 35.7**	**+2.5**
NNA	**Nana**	**13.62**	**323**	P	**Pn**	**19 55 14.4**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=10,slow=10.0,SNR=4.0						
GO06	**Curarrehue**	**16.53**	**188**	*e*P	**Pn**	**19 55 50.0**	**+1.2**
	comp=Z,8.2nm,0.9s						
PLCA	**Paso Flores**	**17.57**	**185**	P	**P**	**19 56 02.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=3.8						
BDFB	**Brasilia**	**20.80**	**73**	P	**P**	**19 56 34.0**	**-2.6**
	comp=Z,2.0nm,0.5s,baz=216,slow=13,SNR=3.1						
BDFB	**Brasilia**	**20.80**	**73**	*e*P	**P**	**19 56 36.7**	**+0.2**
	comp=Z,1.6nm,1.1s						
PTGA	**Pitinga**	**23.84**	**22**	P	**P**	**19 57 05.5**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=218,slow=5.8,SNR=3.7						
PTGA	**Pitinga**	**23.84**	**22**	*e*P	**P**	**19 57 06.5**	**-0.7**
	comp=Z,2.4nm,0.8s						
ROSC	**El Rosal**	**28.41**	**348**	*e*P	**P**	**19 57 46.8**	**-1.9**
	comp=Z,4.6nm,0.5s						
SNAA	**Sanae**	**60.60**	**161**	P	**P**	**20 02 03.5**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=256,slow=9.4,SNR=6.1						
TORD	**Torodi Ar. Bea**	**77.66**	**70**	P	**P**	**20 03 48.9**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=256,slow=5.3,SNR=32						
ASAR	**Alice Springs**	**128.55**	**207**	PKP	**PKPdf**	**20 10 59.7**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=126,slow=1.3,SNR=3.7						
WRA	**Warramunga Arr**	**131.64**	**209**	PKP	**PKPdf**	**20 11 05.8**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=173,slow=2.5,SNR=3.2						
MKAR	**Makanchi Array**	**146.81**	**38**	PKPbc	**PKPbc**	**20 11 34.9**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=338,slow=3.1,SNR=2.7						

*ISK **28** 19:55:37.9, 36°.13N×35°.73E, h14^{km}, ML2.7/16*

*ISCJB **28** 19:55:39.1±0.5, 36°.16N±0°.04×35°.69E±0°.04, h15^{km}, Error ellipse: s-maj=6.6km s-min=4.1km az=160.9*

*DDA **28** 19:55:39.3, 36°.34N×35°.65E, h7^{km}±7^{km}, ML2.8*

ISC 28 19:55:38.5±0.9**, 36°.20N**±0°.04×**35°.71E**±0°.03**, h15**^{km}**, n30, σ0^{s}.92**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.36**	**117**	*i* P	**Pn**	**19 55 50.1**	**+0.7**
YAYL				*i* S	**Sn**	**19 55 56.5**	**+0.2**
KRTD	**Karatas-Adana**	**0.46**	**329**	PG	**Pb**	**19 55 49.1**	**+0.8**
KRTS	**Karatas**	**0.46**	**324**	PG	**Pb**	**19 55 49.3**	**+1.0**
KRTS				SG	**Sn**	**19 55 56.8**	**-1.7**
CEYT	**Ceyhan**	**0.81**	**2**	PG	**Pn**	**19 55 54.9**	**-0.5**
MERS	**Mersin**	**1.16**	**305**	PN	**Pg**	**19 56 00.8**	**-0.2**
KARA	**Karaisali**	**1.18**	**334**	PN	**Pn**	**19 56 00.3**	**-0.2**
KUZU	**Kuzuini**	**1.24**	**62**	*i* P	**Pn**	**19 56 01.4**	**0.0**
KIZK	**Mersin**	**1.29**	**283**	PN	**Pb**	**19 56 02.8**	**+0.3**
KIZK	**Mersin**	**1.29**	**283**	*i* P	**Pg**	**19 56 03.1**	**-0.3**
KIZK				*i* S	**Sb**	**19 56 17.4**	**-1.5**
KIZK				IAML_P			
	comp=Z,1μm,0.2s						
EREN	**Erenkoy**	**1.42**	**242**	PN	**Pn**	**19 56 04.0**	**+0.3**
SILI	**Silifke-Mersin**	**1.45**	**277**	PN	**Pn**	**19 56 04.7**	**+0.5**
ANDN	**Andirin**	**1.47**	**20**	*i* P	**Pg**	**19 56 07.4**	**+0.6**
ANDN				*i* S	**Sg**	**19 56 25.9**	**-0.1**
GAZ	**Gaziantep**	**1.55**	**51**	PN	**Pn**	**19 56 06.5**	**+0.8**
KMRS	**Kahramanmaras**	**1.62**	**36**	PN	**Pb**	**19 56 07.8**	**-0.3**
KEBE	**Keben-Mersin**	**1.63**	**279**	PN	**Pn**	**19 56 07.5**	**+0.8**
IKL	**Isikli**	**1.63**	**272**	PN	**Pn**	**19 56 07.6**	**+0.9**
AKKU	**Akkuyu-Mersin**	**1.74**	**269**	PN	**Pn**	**19 56 08.8**	**+0.6**
GULN	**MERSIN_Gulnar**	**1.75**	**270**	*i* P	**Pb**	**19 56 10.5**	**+0.2**
KERG	**Konya-Eregli**	**1.75**	**314**	*i* P	**Pb**	**19 56 10.8**	**+0.3**
KERG				IAML_P			
	comp=Z,184nm,0.2s						
TEVE	**Tevekalti-Mers**	**1.84**	**278**	PN	**Pn**	**19 56 10.7**	**+1.0**
YAHY	**KAYSERI_Yahyal**	**1.91**	**352**	*i* P	**Pb**	**19 56 12.6**	**-0.5**
YAHY				IAML_P			
	comp=Z,300nm,0.2s						
BERE	**Bereket-Mersin**	**2.01**	**275**	PN	**Pn**	**19 56 12.8**	**+0.7**
TEKE	**Tekeli-Mersin**	**2.10**	**269**	PN	**Pn**	**19 56 13.9**	**+0.8**
CSS	**Mathiatis**	**2.30**	**238**	PN	**Pn**	**19 56 15.6**	**-0.3**
SURC	**SANLIURFA_SURC**	**2.44**	**73**	*i* P	**Pb**	**19 56 20.6**	**-1.5**
SULT	**Sultanhani-AKS**	**2.65**	**319**	PN	**Pn**	**19 56 22.3**	**+1.5**
GAZI	**Gazipasa**	**2.74**	**272**	PN	**Pn**	**19 56 23.3**	**+1.3**
DARE	**Darende-Malaty**	**2.76**	**30**	PN	**Pn**	**19 56 23.6**	**+1.3**
URFA	**Urfa**	**2.79**	**63**	PN	**Pn**	**19 56 24.0**	**+1.3**
MAZI	**Mazidag**	**4.01**	**70**	PN	**Pn**	**19 56 41.2**	**+1.7**

*NEIC **28** 20:03:09.6±0.0, 61°.58N×141°.08W, h1^{km}, ML2.6(AEIC), After AEIC.*

*PGC **28** 20:03:10.3±0.0, 61°.59N×141°.08W, h5^{km}, ML2.8/12, 212km Wnw of Haines Jct., Yt Southern Alaska*

ISC 28 20:03:09.4±1.0**, 61°.58N**±0°.02×**141°.07W**±0°.02**, h6**^{km}±9^{km}**, n48, σ1^{s}.12**/81**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.23**	**27**	P	**Pg**	**20 03 14.2**	**+0.2**
YUK2				S	**Sg**	**20 03 17.7**	**+0.6**
YUK3	**Moose Creek**	**0.35**	**56**	P	**Pg**	**20 03 16.3**	**+0.1**
YUK3				S	**Sg**	**20 03 21.3**	**+0.4**
YUK1	**Sand Pete Hill**	**0.63**	**24**	P	**Pg**	**20 03 21.1**	**-0.4**
YUK1				S	**Sg**	**20 03 29.5**	**-0.2**
CTGM	**Chitina Glacie**	**0.63**	**192**	*e*Pg	**Pg**	**20 03 21.4**	**-0.2**
CTGM				*e*Sg	**Sg**	**20 03 31.0**	**+1.3**
CTGM	**Chitina Glacie**	**0.63**	**192**	P	**Pg**	**20 03 21.3**	**-0.2**
CTGM				S	**Sg**	**20 03 30.7**	**+1.0**
PTPK	**Patty Peak**	**0.78**	**240**	P	**Pg**	**20 03 24.2**	**-0.2**
PTPK				S	**Sg**	**20 03 35.2**	**+0.7**
BALM	**Baldy**	**0.82**	**229**	*e*Pg	**Pg**	**20 03 24.6**	**-0.6**
BALM				*e*Sg	**Sg**	**20 03 35.1**	**-0.8**
BALM	**Baldy**	**0.82**	**229**	P	**Pg**	**20 03 24.6**	**-0.6**
BALM				S	**Sg**	**20 03 35.7**	**-0.1**
BVCY	**Beaver Creek**	**0.84**	**7**	P	**Pg**	**20 03 25.4**	**-0.2**
BVCY				S	**Sg**	**20 03 36.9**	**+0.4**
KIAG	**Kiagna River**	**0.91**	**224**	P	**Pg**	**20 03 26.0**	**-0.8**
KIAG				S	**Sg**	**20 03 38.3**	**-0.2**
GRNC	**Granite Creek**	**0.91**	**202**	P	**Pg**	**20 03 26.4**	**-0.6**
GRNC				S	**Sg**	**20 03 39.3**	**+0.5**
TABL	**Table Mountain**	**1.14**	**182**	P	**Pb**	**20 03 30.7**	**-1.0**
TABL				S	**Sg**	**20 03 46.0**	**-0.1**
YUK4	**Talbot Arm**	**1.19**	**100**	P	**Pb**	**20 03 31.8**	**-0.6**
YUK4				S	**Sb**	**20 03 48.5**	**+0.4**
TGL	**Tana Glacier**	**1.19**	**227**	*e*Pg	**Pb**	**20 03 31.1**	**-1.2**
TGL				*e*Sg	**Sb**	**20 03 48.3**	**+0.3**
CRQM	**Cirque**	**1.30**	**231**	*e*Pn	**Pn**	**20 03 33.0**	**-1.2**
CRQM				*e*Pg	**Pn**	**20 03 33.0**	**-1.2**
CRQM				*e*Sg	**Sb**	**20 03 50.4**	**-0.9**
GLB	**Gilahina Butte**	**1.32**	**265**	*e*Pn	**Pn**	**20 03 33.8**	**-0.7**
GLB				*e*Sg	**Sb**	**20 03 52.0**	**+0.2**
WAX	**Waxell Ridge**	**1.43**	**218**	*e*Pn	**Pn**	**20 03 35.7**	**-0.2**
YUK6	**Outpost Mounta**	**1.45**	**115**	Pn	**Pn**	**20 03 36.0**	**-0.4**
YUK6				Sg	**Sn**	**20 03 56.1**	**+0.2**
SAMH	**Samovar Hills**	**1.46**	**174**	Pn	**Pn**	**20 03 37.2**	**+0.9**
SAMH				Sg	**Sg**	**20 03 57.2**	**+0.9**
MESA	**MESA**	**1.47**	**197**	Pn	**Pn**	**20 03 37.3**	**+0.7**
MESA				Sg	**Sn**	**20 03 56.7**	**+0.4**
CHX	**Chaix Hills**	**1.52**	**181**	*e*Pn	**Pn**	**20 03 37.8**	**+0.6**
BCA3	**Beaver Creek A**	**1.53**	**348**	*e*Pn	**Pn**	**20 03 37.4**	**+0.1**
PCA	**Pinnacle**	**1.54**	**165**	*e*Pn	**Pn**	**20 03 38.5**	**+1.1**
PCA				*e*Sg	**Sg**	**20 04 00.0**	**+1.2**
PCA	**Pinnacle**	**1.54**	**165**	Pn	**Pn**	**20 03 38.4**	**+0.9**
PCA				Sg	**Sb**	**20 03 59.4**	**+1.3**
YUK5	**Granite Creek**	**1.61**	**105**	Pn	**Pn**	**20 03 38.5**	**+0.1**
YUK5				Sg	**Sn**	**20 03 59.9**	**+0.3**
SNH	**Sunshine Point**	**1.65**	**212**	*e*Pn	**Pb**	**20 03 40.3**	**+0.1**
YUK7	**Dusty Glacier**	**1.77**	**125**	Pn	**Pn**	**20 03 42.1**	**+1.4**
YUK7				Sg	**Sb**	**20 04 05.6**	**+0.8**
BCPM	**Bancas Point**	**1.78**	**156**	*e*Pn	**Pb**	**20 03 42.9**	**+0.6**
MENT	**Mentasta**	**1.84**	**319**	*e*Pn	**Pb**	**20 03 43.0**	**-0.5**
HYT	**Haines Junctio**	**1.88**	**112**	*e*Pn	**Pn**	**20 03 43.0**	**+0.8**
HYT	**Haines Junctio**	**1.88**	**112**	Pn	**Pn**	**20 03 42.6**	**+0.4**
HYT				Sg	**Sb**	**20 04 08.5**	**+0.5**
HMT	**Hamilton**	**2.00**	**233**	*e*Pn	**Pb**	**20 03 46.5**	**+0.5**
PNL	**Peninsula**	**2.09**	**156**	*e*Pn	**Pn**	**20 03 46.2**	**+1.3**
PNL	**Peninsula**	**2.09**	**156**	Pn	**Pn**	**20 03 46.7**	**+1.8**
PNL				Sg	**Sg**	**20 04 16.3**	**0.0**
PAX	**Paxson**	**2.49**	**306**	Pg	**Pb**	**20 03 54.0**	**-0.5**
PAX				Sg	**Sb**	**20 04 25.9**	**+0.6**
DOT	**Dot Lake**	**2.50**	**328**	*e*Pn	**Pn**	**20 03 51.0**	**+0.4**
DOT	**Dot Lake**	**2.50**	**328**	Pn	**Pn**	**20 03 50.9**	**+0.4**
DOT				Pg	**Pb**	**20 03 55.4**	**+0.8**
DOT				Sg	**Sg**	**20 04 28.1**	**-1.4**
DAWY	**Dawson**	**2.61**	**16**	*e*Pn	**Pn**	**20 03 52.3**	**+0.2**
DAWY	**Dawson**	**2.61**	**16**	Pn	**Pn**	**20 03 52.6**	**+0.5**
DAWY				Sg	**Sb**	**20 04 29.5**	**+0.6**
FID	**Port Fidalgo**	**2.75**	**255**	*e*Pn	**Pn**	**20 03 56.0**	**+1.9**
RIDG	**Independent Ri**	**2.78**	**323**	*e*Pn	**Pn**	**20 03 55.1**	**+0.6**
WHY	**Whitehorse**	**3.14**	**104**	*e*Pn	**Pn**	**20 03 59.6**	**+0.1**
WHY	**Whitehorse**	**3.14**	**104**	Pn	**Pn**	**20 03 59.8**	**+0.3**
WHY				Sg	**Sg**	**20 04 48.3**	**-1.8**
PLBC	**Pleasant Camp**	**3.15**	**130**	Pg	**Pb**	**20 04 06.5**	**+0.7**
PLBC				Sg	**Sg**	**20 04 48.5**	**-2.0**
EGAK	**Eagle**	**3.21**	**359**	*e*Pn	**Pn**	**20 04 01.6**	**+1.3**
DHY	**Denali Highway**	**3.30**	**300**	*e*Pn	**Pn**	**20 04 00.8**	**-0.9**
BESE	**Bessie Mountai**	**4.33**	**131**	Pn	**Pn**	**20 04 16.9**	**+1.1**
BESE				Sg	**Sg**	**20 05 24.9**	**-3.3**
DLBC	**Dease Lake**	**6.37**	**115**	Sg	**Sg**	**20 06 27.9**	**-5.8**

*MOS **28** 20:16:21.8±1.3, 20°.63S×174°.54E, h33^{km}, mb5.2/23, MS5.0/12, Error ellipse: s-maj=13.5km s-min=12.8km az=43.2*

*GCMT **28** 20:16:22.9±0.1, 20°.50S±0°.01×174°.81E±0°.01, h12^{km}, MW5.3/129, Moment Tensor Solution. s90,c140; s129,c229; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.14±.01; $M_{\theta\theta}$-1.06±.01; $M_{\phi\phi}$0.92±.01; $M_{r\theta}$-0.02±.03; $M_{\theta\phi}$-0.00±.01; $M_{\phi r}$0.31±.03; Best double couple: $M_0$1.04600×10^{17} NP1:ϕ_s313.00000°, δ77.00000°, λ165.00000°. NP2:ϕ_s47.00000°, δ76.00000°, λ13.00000°. Principal axes: T 1.0310, Plg19.0000°, Azm270.0000°; N 0.0270, Plg71.0000°, Azm93.0000°; P -1.0600, Plg1.0000°, Azm0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ISCJB **28** 20:16:22.1±0.1, 20°.54S±0°.02×174°.51E±0°.03, h33^{km}, mb5.0/68, MS4.7/55 Error ellipse: s-maj=4.0km s-min=3.3km az=33.5*

*NEIC **28** 20:16:23.9±2.0, 20°.55S×174°.69E, h47^{km}±4^{km}, mb5.2/52, Error ellipse: s-maj=14.7km s-min=13.6km az=196.0*

*IDC **28** 20:16:25.1±4.2, 20°.53S×174°.74E, h55^{km}±36^{km}, mb4.5/17, mb1 4.7/20, mb1mx4.6/26, mbtmp4.8/20, ML4.3/3, MS4.5/26, Ms1 4.5/26, ms1mx4.5/32, Error ellipse: s-maj=20.2km s-min=16.8km az=76.0*

*BJI **28** 20:16:26.8±0.0, 20°.90S×174°.30E, h68^{km}, mb4.9/49, mB5.3/40, Ms4.9/44, Ms7 4.7/44*

ISC 28 20:16:23.6±0.3**, 20°.66S**±0°.05×**174°.58E**±0°.06**, h35**^{km}**, n475, σ1^{s}.62**/475**, mb5.1**/68**, MS4.8**/55**, 41C-25D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**6.17**	**261**	*e*Pn	**Pn**	**20 17 55.1**	**+2.8**
PINNC	**Pines Island,**	**6.92**	**252**	*e*Pn	**Pn**	**20 18 03.2**	**+0.7**
DZM	**Mont Dzumac**	**7.71**	**258**	*e*Pn	**Pn**	**20 18 16.5**	**+2.9**
	430nm,1.6s						
DZM				*e*LQ	LQ	20 19 39.3	
	8μm,25.3s						
DZM				*e*LR	LR	20 19 59.9	
	comp=Z,19μm,24.6s						
DZM	**Mont Dzumac**	**7.71**	**258**	P	**Pn**	**20 18 16.7**	**+3.1**
	1.1nm,0.3s,baz=44,slow=13,SNR=11						
DZM				LR	LR	20 20 55.1	
	comp=Z,15μm,21.3s,baz=70,slow=34						
DZM	**Mont Dzumac**	**7.71**	**258**	*e*Pn	**Pn**	**20 18 15.5**	**+1.9**
NFK	**Norfolk Island**	**10.30**	**215**	P	**Pn**	**20 18 52.2**	**+3.3**
	baz=11,SNR=3.3						
OUZ	**Omahuta**	**14.53**	**183**	*e*P	**P**	**20 19 52.5**	**-0.3**
OUZ	**Omahuta**	**14.53**	**183**	P	**Pn**	**20 19 47.4**	**+0.6**
KUZ	**Kuaotunu**	**16.06**	**177**	P	**P**	**20 20 12.5**	**+2.7**
MKAZ	**Moumakai**	**16.40**	**178**	P	**P**	**20 20 16.5**	**+3.0**
TOZ	**Tahuroa Road**	**17.03**	**178**	P	**P**	**20 20 23.4**	**+2.9**
MXZ	**Matakaoa Point**	**17.15**	**170**	*e*P	**P**	**20 20 23.3**	**+1.5**
	141nm,1.1s						
MXZ	**Matakaoa Point**	**17.15**	**170**	P	**P**	**20 20 23.5**	**+1.6**
HAZ	**Te Kaha**	**17.26**	**171**	P	**P**	**20 20 25.3**	**+2.2**
PKGZ	**Pakihiroa**	**17.44**	**171**	P	**P**	**20 20 26.1**	**+1.0**
RUGZ	**Raukumara Rang**	**17.45**	**172**	P	**P**	**20 20 26.6**	**+1.3**
HSRZ	**Hossack Road**	**17.65**	**176**	P	**P**	**20 20 31.9**	**+4.5**
URZ	**Urewera**	**17.68**	**173**	P	**P**	**20 20 29.5**	**+1.9**
	1.7nm,0.3s,baz=59,slow=4.9,SNR=19						
URZ				LR	LR	20 25 38.5	
	comp=Z,5μm,21.9s,baz=46,slow=31						
URZ	**Urewera**	**17.68**	**173**	*e*P	**P**	**20 20 29.4**	**+1.7**
	158nm,1.1s						
URZ	**Urewera**	**17.68**	**173**	P	**P**	**20 20 30.9**	**+3.2**
TWGZ	**Tauwhareparae**	**17.70**	**171**	P	**P**	**20 20 29.0**	**+0.9**
HIZ	**Hauiti**	**17.80**	**179**	*e*P	**P**	**20 20 30.6**	**+1.6**
	68nm,1.0s						
HNR	**Honiara**	**17.99**	**306**	P	**P**	**20 20 31.7**	**+0.4**
	1.9nm,0.3s,baz=273,slow=14,SNR=5.5						
HNR				LR	LR	20 26 26.4	
	comp=Z,2μm,19.0s,baz=142,slow=33						
HNR	**Honiara**	**17.99**	**306**	P	**Pn**	**20 20 30.0**	**-1.0**
BKZ	**Black Stump Fm**	**18.52**	**175**	*e*Pn	**Pn**	**20 20 39.0**	**+1.6**
	106nm,1.1s						
BKZ	**Black Stump Fm**	**18.52**	**175**	P	**Pn**	**20 20 41.1**	**+3.7**
TUVZ	**Tukino**	**18.57**	**177**	P	**Pn**	**20 20 41.1**	**+3.0**
WHVZ	**Whangaehu Hut**	**18.58**	**178**	P	**Pn**	**20 20 41.5**	**+3.1**
KWHZ	**Kaweka Forest**	**18.77**	**176**	P	**Pn**	**20 20 41.3**	**+0.9**
BHHZ	**Black Hill Sta**	**18.81**	**176**	P	**Pn**	**20 20 42.9**	**+2.0**
KRHZ	**Kereru**	**18.98**	**176**	P	**Pn**	**20 20 44.1**	**+1.1**
TSZ	**Takapari Road**	**19.37**	**177**	P	**Pn**	**20 20 49.6**	**+2.0**
PXZ	**Pawanui**	**19.41**	**175**	P	**P**	**20 20 48.0**	**+1.3**
MRZ	**Mangatainoka R**	**19.96**	**178**	P	**P**	**20 20 53.8**	**+1.1**
BFZ	**Birch Farm**	**20.01**	**176**	P	**P**	**20 20 54.3**	**+1.0**
QRZ	**Quartz Range**	**20.18**	**185**	*e*P	**P**	**20 20 54.6**	**-0.5**
	130nm,1.2s						
SNZO	**South Karori**	**20.59**	**180**	*e*P	**P**	**20 21 00.7**	**+1.2**
	138nm,0.9s						
THZ	**Tophouse**	**21.09**	**183**	*e*P	**P**	**20 21 07.1**	**+2.1**
	101nm,0.9s						
KHZ	**Kahutara**	**21.71**	**182**	*e*P	**P**	**20 21 10.9**	**-0.7**
	170nm,1.1s						
EIDS	**Eidsvold**	**22.12**	**253**	*e*P	**P**	**20 21 16.4**	**+0.2**
	62nm,1.1s						
EIDS	**Eidsvold**	**22.12**	**253**	P	**P**	**20 21 18.0**	**+1.9**
	baz=22,SNR=9.2						
LTZ	**Lake Taylor**	**22.14**	**185**	*e*P	**P**	**20 21 18.0**	**+1.8**
	152nm,1.0s						
ARMA	**Armidale**	**22.84**	**240**	*e*P	**P**	**20 21 24.4**	**+0.5**
	30nm,1.0s						
ARMA	**Armidale**	**22.84**	**240**	P	**P**	**20 21 26.5**	**+2.6**
	baz=23,SNR=9.2						
FOZ	**Fox Glacier**	**23.15**	**189**	*e*P	**P**	**20 21 27.5**	**+0.7**
	63nm,1.0s						
RPZ	**Rata Peaks**	**23.18**	**187**	P	**P**	**20 21 28.9**	**+1.8**
	27nm,0.9s,baz=123,slow=6.1,SNR=8.7						

RPZ				LR	LR	20 29 44.2	
	comp=Z,6µm,19.1s,baz=12,slow=34						
RPZ	Rata Peaks	23.18	187	*e*P	P	20 21 27.7	+0.5
	55nm,1.1s						
RAR	Rarotonga	23.95	96	LR	LR	20 28 42.6	
	comp=Z,2µm,21.9s,baz=278,slow=31						
MGCD	Mangrove Creek	24.31	234	P	P	20 21 40.1	+2.2
	baz=25,SNR=4.2						
RMQ	Roma	24.35	251	P	P	20 21 40.6	+2.3
	baz=25,SNR=39						
ODZ	Otahua Downs	24.54	187	*e*P	P	20 21 42.0	+2.1
	57nm,1.2s						
WKZ	Wanaka	24.54	190	*e*P	P	20 21 42.1	+2.2
	118nm,1.2s						
CTA	Charters Tower	26.55	266	P	P	20 22 01.1	+2.7
	16nm,0.8s,baz=99,slow=12,SNR=9.0						
CTA				LR	LR	20 31 50.3	
	comp=Z,3µm,20.6s,baz=80,slow=35						
CTA	Charters Tower	26.55	266	P	P	20 21 57.3	-1.1
CTA				pmax	pmax		
	comp=Z,43nm,1.6s						
CTAO	Charters Tower	26.55	266	*e*P	P	20 21 57.9	-0.5
	comp=Z,37nm,1.0s						
CTAO	Charters Tower	26.55	266	*e*P	P	20 21 57.9	-0.5
CTAO				pmax	pmax		
	comp=Z,37nm,1.0s						
CMSA	Cobar Meteorol	28.04	241	P	P	20 22 12.7	+1.1
	baz=28,SNR=5.4						
MTSU	Mount Surprise	28.64	270	P	P	20 22 18.4	+1.3
	baz=29,SNR=6.6						
PMG	Port Moresby	28.70	289	P	P	20 22 18.5	+0.9
	comp=Z,58nm,0.9s,baz=144,slow=2.8,SNR=8.5						
PMG				LR	LR	20 31 47.2	
	comp=Z,1µm,20.4s,baz=91,slow=32						
PMG	Port Moresby	28.70	289	*e*P	P	20 22 18.0	+0.4
	comp=Z,98nm,1.0s						
PMG	Port Moresby	28.70	289	*e*P	P	20 22 18.0	+0.4
PMG				pmax	pmax		
	comp=Z,98nm,1.0s						
COEN	Coen	30.68	277	*e*P	P	20 22 35.0	-0.2
	comp=Z,34nm,1.1s						
COEN	Coen	30.68	277	P	P	20 22 36.7	+1.4
	baz=31,SNR=4.3						
STKA	Stephens Creek	31.50	242	P	P	20 22 43.8	+1.5
	comp=Z,14nm,1.0s,baz=80,slow=9.8,SNR=12						
STKA				LR	LR	20 33 53.7	
	comp=Z,621nm,21.6s,baz=72,slow=33						
STKA	Stephens Creek	31.50	242	*e*P	P	20 22 41.7	-0.6
	comp=Z,2.5nm,1.1s						
STKA				*e*PcP	PcP	20 25 34.1	-0.7
STKA	Stephens Creek	31.50	242	P	P	20 22 43.9	+1.6
	baz=32,SNR=6.5						
STKA	Stephens Creek	31.50	242	*e*P	P	20 22 41.7	-0.6
STKA				*e*		20 25 34.1	
STKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
QIS	Mount Isa	32.70	264	P	P	20 22 53.6	+0.6
	baz=33,SNR=6.4						
TBI	Tubuai	33.39	101	*e*S	S	20 28 22.9	+5.0
	comp=Z,318nm,28.2s						
TBI				*e*LQ	LQ	20 30 10.5	
	comp=Z,3µm,27.2s						
TBI				*e*LR	LR	20 31 46.7	
	comp=Z,3µm,29.0s,baz=264						
PPT2	Papeete2	33.96	91	*e*S	S	20 28 31.0	+4.1
	comp=Z,305nm,22.1s						
PPT2				*e*LQ	LQ	20 30 52.1	
	comp=Z,1µm,27.0s						
PPT2				*e*LR	LR	20 32 14.2	
	comp=Z,5µm,26.0s,baz=255						
PPT	Papeete	33.96	91	LR	LR	20 33 19.3	
	comp=Z,965nm,21.9s,baz=274,slow=30						
HTT	Hallett	34.05	241	P	P	20 23 06.0	+1.4
	baz=34,SNR=4.6						
BBOO	Buckleboo	36.28	242	*e*P	P	20 23 24.4	+0.6
	comp=Z,33nm,1.1s						
BBOO				*e*PcP	PcP	20 25 46.4	-2.0
WRAB	Tennant Creek	37.67	264	*e*P	P	20 23 33.2	-2.6
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	37.67	264c	*i*P	P	20 23 34.5	-1.3
WRAB				pmax	pmax		
	comp=Z,78nm,1.7s						
WRA	Warramunga Arr	37.68	264	P	P	20 23 35.4	-0.6
	comp=Z,17nm,1.0s,baz=86,slow=6.8,SNR=37						
AS31	Alice Springs	37.70	258	*e*P	P	20 23 34.6	-1.5
	comp=Z,11nm,1.0s						
ASAR	Alice Springs	37.70	258	P	P	20 23 35.5	-0.6
	comp=Z,27nm,1.0s,baz=85,slow=9.1,SNR=110						
ASAR				LR	LR	20 38 47.5	
	comp=Z,917nm,21.2s,baz=104,slow=35						
GENI	Genyem	38.04	294	P	P	20 23 34.2	-4.7
H11S2	WAKE ISLAND Hy	39.66	348	T	T	21 05 50.5	
	baz=168,slow=76,SNR=4.5						
H11S3	WAKE ISLAND Hy	39.67	348	T	T	21 05 50.2	
	baz=168,slow=76,SNR=5.7						
H11S1	WAKE ISLAND Hy	39.68	348	T	T	21 05 49.7	
	baz=168,slow=76,SNR=3.9						
H11N1	WAKE ISLAND Hy	40.82	349	T	T	21 07 13.7	
	baz=169,slow=76,SNR=6.3						
H11N3	WAKE ISLAND Hy	40.82	349	T	T	21 07 15.2	
	baz=169,slow=76,SNR=6.9						
H11N2	WAKE ISLAND Hy	40.84	349	T	T	21 07 16.3	
	baz=169,slow=76,SNR=4.8						
KDU	Kakadu	41.02	274	P	P	20 24 03.4	-0.3
	baz=41,SNR=4.9						
MTN	Manton Dam	42.22	274	*e*P	P	20 24 13.6	0.0
	comp=Z,43nm,0.8s						
MTN	Manton Dam	42.22	274	P	P	20 24 12.1	-1.5
	baz=42,SNR=9.3						
WRKA	Warakurna	42.72	255	P	P	20 24 17.6	0.0
	baz=43,SNR=25						
FORT	Forrest	42.85	247	*e*P	P	20 24 18.0	-0.5
	comp=Z,70nm,0.8s						
FORT	Forrest	42.85	247	P	P	20 24 18.8	+0.2
	baz=43,SNR=13						
KNRA	Kununurra	43.71	269	P	P	20 24 25.1	-0.6
	baz=44,SNR=14						
TAOE	Nuku Hiva Isla	45.17	82	*e*S	S	20 31 17.5	+2.3
	comp=Z,377nm,26.5s						
TAOE				*e*LR	LR	20 37 22.9	
	comp=Z,2µm,26.4s,baz=256						
KMBL	Kambalda	48.16	246	P	P	20 25 01.0	+0.4
	baz=48,SNR=10.0						
AAI	Ambon	48.16	284	P	P	20 24 59.2	-1.6
PALU	Palau	48.25	301	P	P	20 25 02.3	+0.9
	baz=48,SNR=6.3						
SOEI	Soe	49.57	275	P	P	20 25 11.5	-0.3
PSA00	Pilbara Seismi	50.84	259	*e*P	P	20 25 19.6	-1.6
	comp=Z,61nm,1.1s						
MEEK	Meekatharra	51.28	252	P	P	20 25 24.3	-0.2
	baz=52,SNR=6.6						
MMRI	Maumere	51.83	275	*e*P	P	20 25 27.5	-1.2
	comp=Z,102nm,0.9s						
MMRI	Maumere	51.83	275	P	P	20 25 27.4	-1.2
NWAO	Narrogin (SRO)	52.07	244	*e*P	P	20 25 31.4	+1.2
	comp=Z,102nm,1.0s						
NWAO	Narrogin (SRO)	52.07	244	P	P	20 25 31.4	+1.2
	baz=52,SNR=8.8						
NWAO	Narrogin (SRO)	52.07	244	*e*P	P	20 25 31.4	+1.2
NWAO				pmax	pmax		
	comp=Z,102nm,1.0s						
EDFI	Ende, Flores	52.30	275	P	P	20 25 31.4	-0.9
BBSI	Bau Bau	52.62	279	P	P	20 25 33.9	-0.6
BLDU	Ballidu	52.62	247	P	P	20 25 34.7	+0.3
	baz=53,SNR=4.7						
MUN	Mundaring	52.98	245	P	P	20 25 38.0	+1.1
	baz=53,SNR=8.3						
MORW	Morawa	53.32	249	P	P	20 25 39.6	+0.1
	baz=54,SNR=15						
LUWI	Luwuk	54.18	284	P	P	20 25 45.9	-0.1
BKSI	Bulukumba	54.95	278	P	P	20 25 48.8	-2.8
SPSI	Sidrap Palu	55.77	280	P	P	20 26 01.4	+3.9
TTSI	Tana Toraja	56.08	281	P	P	20 25 55.9	-3.8
CTBH	Cotabato--PC H	56.68	294	⇓*i*P	P	20 26 03.8	-0.2
CGP	Cagayan de Oro	56.93	295	*e*P	P	20 26 08.1	+2.4
SRBI	Singaraja	58.57	273	P	P	20 26 15.5	-1.8
JAGI	Jajag, Banyuwa	59.44	272	P	P	20 26 22.1	-1.2
RCP	Roxas	60.18	297	⇓*e*P	P	20 26 28.1	-0.3
PWJI	Pagerwojo	61.78	272	P	P	20 26 37.3	-2.0
MJAR	Matsushiro Arr	66.46	329	P	P	20 27 08.4	-1.2
	comp=Z,13nm,0.8s,baz=166,slow=6.2,SNR=47						
MJAR				LR	LR	20 51 28.3	
	comp=Z,268nm,21.9s,baz=150,slow=32						
MAJO	Matsushiro	66.47	329	*e*P	P	20 27 08.7	-0.9
	comp=Z,32nm,1.0s						
MAJO	Matsushiro	66.47	329	*e*P	P	20 27 08.7	-0.9
MAJO				pmax	pmax		
	comp=Z,32nm,1.0s						
MAT	Matsushiro	66.47	329	P	P	20 27 08.6	-1.0
MAT				S	S	20 36 03.0	+5.3
KSM	Kuching	66.58	281	*e*P	P	20 27 10.4	-0.5
KSM				*e*PcP	PcP	20 27 37.1	-2.9
JNU	Nakatsue	67.83	321	LR	LR	20 52 02.6	
	comp=Z,238nm,21.7s,baz=114,slow=32						
QSPA	South Pole Qui	69.41	180	*e*P	P	20 27 27.4	-0.4
	comp=Z,35nm,1.0s						
ASAJ	Asahikawa	70.80	336	LR	LR	20 53 03.5	
	comp=Z,1µm,21.4s,baz=171,slow=31						
QZH	Quanzhou	70.83	307	⇓*i*P	P	20 27 37.8	+0.8
QZH				S	S	20 36 53.5	+3.7
QZH				LR	LR		
	comp=Z,240nm,20.7s						
KSRS	Korea Array	72.59	323	P	P	20 27 46.7	-0.6
	comp=Z,9.1nm,1.1s,baz=142,slow=6.2,SNR=19						
KSRS				LR	LR	20 59 12.6	
	comp=Z,173nm,18.9s,baz=132,slow=35						
SKR	Severo-Kuril's	72.87	348	*e*P	P	20 27 41.3	-7.4
SKR				*e*S	SKiKP	20 37 17.5	-1.9
SKR				pmax	pmax		
	comp=Z,300nm,4.0s						
SKR				MLR	MLR		
	comp=Z,400nm,16.0s						
SKR				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS	Yuzh-Sakhalins	73.17	338	*e*P	P	20 27 51.1	+0.6
YSS				*e**SP	pP	20 28 00.8	+0.3
YSS				*e*		20 28 07.8	
YSS				*e*S	S	20 37 17.4	+1.6
YSS				*e*SS	SS	20 41 55.5	-2.8
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				pmax	pmax		
	comp=Z,300nm,4.0s						
PET	Petropavlovsk	74.67	350	*e*P	P	20 28 04.1	+5.0
PET				*e*S	S	20 37 37.3	+4.9
QIZ	Qiongzhong	74.67	297	P	P	20 28 01.0	+1.0
QIZ				S	S	20 37 33.5	-0.4
QIZ				pmax	pmax		
	comp=Z,260nm,3.8s						
QIZ				LR	LR		
	comp=Z,230nm,26.5s						
QIZ				LR	LR		
	comp=Z,260nm,22.1s						
QIZ				LR	LR		
	comp=Z,260nm,29.4s						
NJ2	Nanjing	74.78	313	*e*P	P	20 28 04.0	+3.7
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
PETK	Petropavlovsk-	74.90	350	P	P	20 27 59.8	-0.8
	comp=Z,13nm,1.1s,baz=95,slow=11,SNR=7.4						
PETK				LR	LR	20 54 49.2	
	comp=Z,394nm,21.2s,baz=161,slow=31						
PEA1	Petropavlovsk-	74.91	350	*e*P	P	20 27 59.8	-0.8
USRK	Ussuriysk Ar.	75.39	330	P	P	20 28 03.6	+0.1
	comp=Z,9.8nm,1.0s,baz=134,slow=5.5,SNR=13						
USRK				LR	LR	20 56 18.0	
	comp=Z,422nm,21.3s,baz=134,slow=32						
IPM	Ipoh	76.29	280	*e*P	P	20 28 09.1	-0.3
	comp=Z,35nm,0.9s						
IPM				*e*PcP	pP	20 28 15.7	-3.7
MDJ	Mudanjiang	76.85	329	P	P	20 28 12.0	+0.2
MDJ				pP	pwP	20 28 30.3	+4.7
MDJ				S	S	20 38 03.3	+6.3
MDJ				pmax	pmax		
	comp=Z,19nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,300nm,4.1s						
MDJ				LR	LR		
	comp=Z,390nm,19.6s						
MDJ				LR	LR		
	comp=Z,220nm,23.1s						
MDJ				LR	LR		
	comp=Z,520nm,21.2s						
KULM	Kulim	76.94	281	*e*P	P	20 28 13.3	+0.2
	comp=Z,26nm,1.1s						
WHN	Wuhan	77.07	310	P	P	20 28 13.0	-0.4
WHN				S	S	20 38 03.8	+3.9
WHN				LR	LR		
	comp=Z,850nm,19.1s						
WHN				LR	LR		
	comp=Z,630nm,18.2s						
WHN				LR	LR		
	comp=Z,550nm,17.5s						
DL2	Dalian	77.24	320	P	P	20 28 14.3	+0.1
DL2				sP	pwP	20 28 39.8	+12
DL2				S	S	20 38 00.5	-1.0
DL2				SS	SS	20 43 04.5	+4.0
DL2				pmax	pmax		
	comp=Z,28nm,1.2s						
DL2				pmax	pmax		
	comp=Z,170nm,4.1s						
DL2				LR	LR		
	comp=Z,230nm,21.2s						
DL2				LR	LR		
	comp=Z,150nm,18.2s						
DL2				LR	LR		
	comp=Z,250nm,23.2s						
SNY	Shenyang	78.03	324	⇑P	P	20 28 16.8	-1.7
SNY				pmax	pmax		
	comp=Z,270nm,3.5s						
SNY				LR	LR		
	comp=Z,240nm,19.1s						
SNY				LR	LR		
	comp=Z,270nm,19.6s						
SNY				LR	LR		
	comp=Z,590nm,21.6s						
PANO	Nakornpanom	78.23	293	P	P	20 28 20.8	+0.6
CN2	Changchun	78.36	326	*e*P	P	20 28 19.3	-1.0
CN2				*e*S	S	20 38 14.3	+0.9
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,240nm,20.0s						
CN2				LR	LR		
	comp=Z,170nm,20.0s						
CN2				LR	LR		
	comp=Z,390nm,20.0s						
TIA	Tai'an	78.40	316	P	P	20 28 19.3	-1.4
TIA				S	S	20 38 17.3	+3.2
TIA				pmax	pmax		
	comp=Z,11nm,1.1s						
TIA				LR	LR		
	comp=Z,220nm,20.5s						
TIA				LR	LR		
	comp=Z,220nm,24.4s						
TIA				LR	LR		
	comp=Z,400nm,25.1s						
TRTT	Trang	78.79	283	P	P	20 28 24.4	+1.0
MAW	Mawson	78.98	201	P	P	20 28 23.5	+0.1
	comp=Z,8.9nm,1.1s,baz=100,slow=7.6,SNR=10						
MAW				LR	LR	21 00 51.1	
	comp=Z,410nm,18.6s,baz=96,slow=34						
MAW	Mawson	78.98	201	*e*P	P	20 28 23.7	+0.3
	comp=Z,2.7nm,1.1s						
MAW	Mawson	78.98	201	P	P	20 28 23.8	+0.3
	baz=79,SNR=8.2						
MAW	Mawson	78.98	201	*e*P	P	20 28 23.7	+0.3
MAW				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KLR	Kul'dur	79.32	333	LR	LR	20 57 48.5	
	comp=Z,440nm,21.8s,baz=157,slow=31						
KLR	Kul'dur	79.32	333	*i* P	P	20 28 25.7	+0.3
KLR				pmax	pmax		
	comp=Z,25nm,1.8s						
NONG	Nongkai	79.89	294	P	P	20 28 29.9	+0.7
PHET	Kaeng Krachan	80.84	287	P	P	20 28 37.5	+3.1
PBKT	Sadao Pong	81.14	291	P	P	20 28 37.2	+1.2
BJI	Beijing	81.26	319	*e*P	P	20 28 35.3	-0.8
BJI				S	S	20 38 46.5	+2.4
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI				LR	LR		
	comp=Z,110nm,21.3s						
BJI				LR	LR		
	comp=Z,120nm,25.2s						
BJI				LR	LR		
	comp=Z,310nm,23.0s						
UTHA	Uthaitani	82.07	290	P	P	20 28 42.7	+1.8
MA2	Magadan	82.29	348	⇓*e*P	P	20 28 42.2	+1.1
MA2				pmax	pmax		
	comp=Z,20nm,1.6s						
TIY	Taiyuan	82.34	315	*e*P	P	20 28 42.5	+0.5
KDAK	Kodiak Island	82.80	17	LR	LR	20 58 17.2	
	comp=Z,638nm,21.3s,baz=205,slow=30						
KDAK	Kodiak Island	82.80	17	*i* P	P	20 28 42.3	-1.4
SCZ2	Santa Cruz Isl	82.88	50	P	P	20 28 45.3	+0.5
	baz=239						
LAMP	Lampang	83.11	293	P	P	20 28 48.6	+2.3
PKM	Mcpherson Peak	83.21	49	P	P	20 28 46.8	+0.1
	baz=239,SNR=7.6						
PAYA	Payao	83.25	293	P	P	20 28 48.0	+1.0
SMMC	Simmler	83.30	48	P	P	20 28 48.1	+1.1
	baz=239						
KMI	Kunming	83.31	300	P	P	20 28 50.5	+3.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,100nm,3.8s						
KMI				LR	LR		
	comp=Z,230nm,17.8s						
KMI				LR	LR		
	comp=Z,220nm,22.6s						
KMI				LR	LR		
	comp=Z,280nm,22.6s						
BLG	Laguna Peak, P	83.34	50	P	P	20 28 49.2	+2.0
	baz=240						
CIS	Catalina Islan	83.46	51	P	P	20 28 49.1	+1.3
	baz=240						
CMAR	Chiang Mai Arr	83.68	292	P	P	20 28 50.1	+0.9
	comp=Z,22nm,1.1s,baz=125,slow=3.5,SNR=53						
CMAR	Chiang Mai Arr	83.68	292c	*e*P	P	20 28 49.5	+0.3
CMAR				pmax	pmax		
	comp=Z,19nm,1.1s						
CMMT	Chiang Mai	83.82	293	P	P	20 28 50.7	+0.7
DECC	Green Verdugo	83.94	50	P	P	20 28 50.8	+0.6
	baz=240						
O02D	Mt. Diablo Mer	84.00	43	P	P	20 28 51.5	+1.0
	baz=237						
ARVC	Arvin	84.02	49	P	P	20 28 51.0	+0.4
	baz=240						
109C	Camp Elliot, M	84.17	52	P	P	20 28 51.5	+0.1
	baz=241						
VES	Vestal, Richgr	84.20	48	P	P	20 28 51.5	0.0
	baz=240,SNR=5.9						
VOG	Valley Oaks Go	84.24	48	P	P	20 28 51.6	-0.1
	baz=239						
BFSC	Mount Baldy Ra	84.42	50	P	P	20 28 52.3	-0.5
	baz=240,SNR=5.6						
MURC	Murrieta	84.44	51	P	P	20 28 52.6	-0.3
	baz=241						
N02D	Trinity Center	84.49	43	P	P	20 28 53.4	+0.4
	baz=237						
EDW2	Edwards Air Fo	84.50	50	P	P	20 28 52.6	-0.5
	baz=240,SNR=7.4						
ISA	Isabella, Lake	84.54	49	P	P	20 28 53.0	-0.4
	baz=240,SNR=16						
L02E	Cave Junction	84.59	41	P	P	20 28 53.5	+0.2
	baz=236						
HHC	Hu-ho-hao-te	84.62	317	*e*P	P	20 28 54.3	+0.6
HHC				S	S	20 39 15.0	-3.5
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,6.7s						
HHC				LR	LR		
	comp=Z,220nm,16.8s						
HHC				LR	LR		
	comp=Z,260nm,17.5s						
M02C	Callahan	84.63	42	P	P	20 28 53.8	+0.2
	baz=236						
MONP2	Monument Peak	84.67	52	P	P	20 28 53.2	-1.0
	baz=241,SNR=9.9						
O03E	Paynes Creek	84.70	43	P	P	20 28 53.7	-0.3
	baz=237						
IKP	In-Ko-Pah, Jac	84.79	52	P	P	20 28 54.1	-0.5
	baz=242						
SYO	Syowa Base	84.92	195	⇑*e*X	P	20 28 51.6	-3.0
J01E	Myrtle Point	84.95	40	P	P	20 28 55.2	+0.1
	baz=236						
PFO	Pinyon Flats O	84.99	51	P	P	20 28 54.9	-0.8
	baz=241						
LRMC	Laurel Mtn Rad	85.01	49	P	P	20 28 54.5	-1.3
	baz=240						
MDPB	Devils Postpil	85.11	47	*e*P	P	20 28 54.2	-2.2
	comp=Z,23nm,1.1s						
CD2	Chengdu	85.12	305	P	P	20 28 56.5	+0.2
CD2				S	S	20 39 27.0	+3.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,150nm,6.1s						
CD2				LR	LR		
	comp=Z,370nm,21.6s						
CD2				LR	LR		
	comp=Z,310nm,21.6s						
SEY	Seymchan	85.14	350	⇓*e*P	P	20 28 54.9	-0.7
SWSC	Sam W. Stewart	85.16	52	P	P	20 28 55.7	-0.7
	baz=242						
CWC	Cottonwood Cre	85.21	48	P	P	20 28 55.1	-1.7
	baz=240						
RRX	Edison Barstow	85.21	50	P	P	20 28 55.2	-1.4
	baz=241						
WAKR	Walker	85.32	46	*e*P	P	20 28 55.5	-1.8
	comp=Z,30nm,1.2s						
MPMC	Manual Prospec	85.43	49	P	P	20 28 55.8	-2.2
	baz=240,SNR=7.7						
BTO	Baotou	85.48	316	*e*P	P	20 28 56.5	-1.5
M04C	Macdoel	85.48	42	P	P	20 28 55.9	-2.1
	baz=237						
BELC	Belle Mtn. Jos	85.51	51	P	P	20 28 58.5	+0.2
	baz=242,SNR=17						
I02D	Swisshome	85.53	39	P	P	20 28 58.7	+0.7
	baz=236						
GSC	Goldstone, Bar	85.55	50	P	P	20 28 58.3	-0.2
	baz=241,SNR=5.8						
I03D	Drain, OR	85.60	40	P	P	20 28 58.8	+0.4
	baz=236						
HEC	Hector,Ludlow	85.66	50	P	P	20 28 58.8	-0.2
	baz=241						
BC3	Big Chuckawall	85.75	52	P	P	20 28 59.9	+0.4
	baz=242,SNR=6.9						
GLA	Glamis	85.93	53	P	P	20 29 00.7	+0.4
	baz=242						
K04D	Chiloquin, OR	85.99	42	P	P	20 29 01.1	+0.6
	baz=237						
NVAR	Mina Array Bea	86.05	46	P	P	20 28 59.6	-1.4
	comp=Z,2.1nm,0.7s,baz=228,slow=8.6,SNR=16						
NVAR				LR	LR	21 01 46.7	
	comp=Z,124nm,18.9s,baz=244,slow=32						
FURC	Furnace Creek,	86.08	49	P	P	20 29 01.6	+0.7
	baz=241						
J04D	Umpqua Nationa	86.10	41	P	P	20 29 01.3	+0.2
	baz=237						
GMRC	Granite Mounta	86.13	51	P	P	20 29 01.3	0.0
	baz=242,SNR=14						
IRM	Iron Mountain	86.21	51	P	P	20 29 01.6	-0.1
	baz=242,SNR=26						
SHOC	Shoshone, Teco	86.22	49	P	P	20 29 01.6	-0.1
	baz=241						
I04A	Tendick Farm,	86.22	40	P	P	20 29 02.1	+0.6
	baz=237						
TUQ	Turquoise Moun	86.25	50	P	P	20 29 02.4	+0.4
	baz=241						
H04D	Lebanon	86.42	40	P	P	20 29 03.4	+0.9
	baz=236						
Y12C	Blythe	86.48	52	P	P	20 29 03.6	+0.6
	baz=242						
G03D	McMinnville, O	86.50	39	P	P	20 29 03.8	+1.1
	baz=236						
KVN	Kaiserville	86.50	46	*e*P	P	20 29 01.7	-1.4
	comp=Z,14nm,1.2s						
KVN	Kaiserville	86.50	46	*e*P	P	20 29 01.7	-1.4
KVN				pmax	pmax		
	comp=Z,14nm,1.2s						
J05D	Fort Rock, OR	86.66	41	P	P	20 29 03.6	-0.2
	baz=238						
TPNV	Topopah Spring	86.74	49	*e*P	P	20 29 02.4	-2.0
	comp=Z,17nm,1.1s						
TPNV	Topopah Spring	86.74	49	*e*P	P	20 29 02.4	-2.0
TPNV				pmax	pmax		
	comp=Z,17nm,1.1s						
TPNV	Topopah Spring	86.74	49	P	P	20 29 04.7	+0.3
	baz=241						
GLI	Glacier Island	86.93	18	*e*P	P	20 29 01.1	-3.4
	comp=Z,23nm,1.2s						
214A	Organ Pipe Nat	86.95	54	P	P	20 29 05.0	-0.3
	baz=243,SNR=6.1						
PDMCI	Parker Dam,Lak	87.01	52	P	P	20 29 05.9	+0.4
	baz=243						

I05D	Terrebonne, OR	87.16	40	P	P	20 29 06.8	+0.7
	baz=237						
LZH	Lanzhou	87.45	310	eP	P	20 29 08.0	+0.2
LZH				pP	pwP	20 29 23.5	+1.7
LZH				sP	sP	20 29 30.0	+8.4
LZH				eS	S	20 39 49.3	+2.8
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,5.8s						
LZH				LR	LR		
	comp=Z,300nm,16.0s						
LZH				LR	LR		
	comp=Z,120nm,14.1s						
LZH				LR	LR		
	comp=Z,1µm,18.7s						
E04D	Cinebar	87.65	38	P	P	20 29 09.4	+1.1
	baz=236						
SCM	Sheep Creek Mo	87.65	17	eP	P	20 29 05.9	-2.2
	comp=Z,9.2nm,1.0s						
SCM	Sheep Creek Mo	87.65	17	eP	P	20 29 05.9	-2.2
SCM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
G05D	Wamic, OR	87.66	39	P	P	20 29 09.6	+1.1
	baz=237						
WVOR	Wild Horse Val	87.85	43	eP	P	20 29 07.0	-2.5
	comp=Z,6.7nm,0.9s						
WVOR	Wild Horse Val	87.85	43	eP	P	20 29 07.0	-2.5
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
R11A	Troy Canyon, C	87.87	48	P	P	20 29 10.3	+0.4
	baz=242						
D03D	Eldon	87.89	37	P	P	20 29 09.5	+0.1
	baz=236						
SNAA	Sanae	87.90	181	P	P	20 29 07.3	-1.9
SNAA	Sanae	87.90	181	⇓eP	P	20 29 07.4	-1.9
VNA3	Neumayer Olymp	88.30	179	P	P	20 29 09.9	-1.3
BILL	Bilibino	88.65	357	eP	P	20 29 13.5	+1.0
BILL				e		20 32 42.4	
BILL				pmax	pmax		
	comp=Z,23nm,1.9s						
TUC	Tucson	88.65	55	P	P	20 29 14.0	+0.5
	baz=244						
B05A	Bryant	88.85	37	P	P	20 29 14.0	+0.1
	baz=237						
VNA1	Neumayer--Stat	88.92	179	P	P	20 29 11.9	-2.1
BESE	Bessie Mountai	89.26	24	eP	P	20 29 13.8	-1.9
	comp=Z,13nm,1.0s						
WUAZ	Wupatki	89.59	52	P	P	20 29 17.8	-0.2
	baz=244						
YAK	Yakutsk	89.80	341	eP	P	20 29 17.3	-0.7
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
HDA	Harding Lake	89.86	16	eP	P	20 29 15.7	-2.6
	comp=Z,7.6nm,1.0s						
COLA	College	90.01	15	⇓eP	P	20 29 18.3	-0.7
COLA				pmax	pmax		
	comp=Z,11nm,1.2s						
ILAR	Eielson Array	90.17	15	P	P	20 29 16.4	-3.4
	comp=Z,1.8nm,0.8s,baz=238,slow=5.9,SNR=13						
ILAR				LR	LR	21 02 59.3	
	comp=Z,544nm,21.1s,baz=220,slow=31						
POKR	Poker Plat Res	90.31	15	P	P	20 29 22.4	+2.0
	baz=215						
DUG	Dugway, Tooele	90.63	47	P	P	20 29 22.9	+0.2
	baz=243						
W18A	Petrified Fore	90.63	53	P	P	20 29 23.0	+0.2
	baz=245						
121A	Cookes Peak, D	91.05	56	P	P	20 29 25.3	+0.4
	baz=246						
HLID	Hailey	91.10	43	P	P	20 29 25.4	+0.6
	baz=242						
SONA0	Songino Array	91.42	321	eP	P	20 29 24.4	-1.7
SONM	Songino Array	91.42	321	P	P	20 29 24.4	-1.7
	comp=Z,4.0nm,1.1s,baz=126,slow=4.3,SNR=18						
SONM				LR	LR	21 10 27.3	
	comp=Z,158nm,18.6s,baz=116,slow=36						
DAWY	Dawson	91.67	18	eP	P	20 29 24.8	-2.0
	comp=Z,12nm,1.1s						
GTA	Gaotai	91.79	312	⇓P	P	20 29 27.8	-0.3
GTA				pP	pwP	20 29 49.0	+7.0
GTA				sP	sP	20 29 58.3	+16
GTA				S	S	20 40 23.0	-3.7
GTA				sS	sS	20 40 59.5	+16
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,120nm,6.7s						
GTA				LR	LR		
	comp=Z,130nm,20.3s						
GTA				LR	LR		
	comp=Z,150nm,19.6s						
GTA				LR	LR		
	comp=Z,190nm,21.3s						
MVCO	Mesa Verde	92.41	51	P	P	20 29 31.7	+0.6
	baz=246						
SHL	Shillong	92.47	296	P	P	20 29 29.5	-2.1
SHL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TOLK	Toolik Lake Re	92.77	12	P	P	20 29 33.8	+2.0
	baz=213						
MSO	Missoula	92.91	41	P	P	20 29 35.0	+2.0
	baz=243						
ANMO	Albuquerque	93.02	54	⇑eP	P	20 29 33.4	-0.6
ANMO				pmax	pmax		
	comp=Z,13nm,1.0s						
ANMO	Albuquerque	93.02	54	P	P	20 29 34.2	+0.3
	baz=247						
TXAR	Lajitas Array	93.07	60	P	P	20 29 33.5	-0.7
	comp=Z,2.9nm,0.9s,baz=229,slow=4.6,SNR=18						
TXAR				LR	LR	21 02 39.3	
	comp=Z,151nm,20.6s,baz=0.0,slow=30						
O20A	White River Ci	93.77	49	P	P	20 29 37.2	-0.1
	baz=246						
BOZ	Bozeman (W)	93.79	43	P	P	20 29 38.2	+1.0
	baz=244						
S22A	4UR Ranch, Cre	93.84	51	P	P	20 29 38.2	+0.5
	baz=247						
BW06	Boulder Array	93.94	46	P	P	20 29 38.4	+0.4
	baz=246						
PDAR	Pinedale Array	93.94	46	P	P	20 29 35.6	-2.5
	comp=Z,0.6nm,0.7s,baz=219,slow=1.9,SNR=5.0						
PDAR				LR	LR	21 06 48.3	
	comp=Z,50nm,19.3s,baz=262,slow=32						
PLCA	Paso Flores	94.09	136	PKKP	PKKPdf	20 46 37.5	-1.7
	comp=Z,2.8nm,0.8s,baz=258,slow=4.6,SNR=3.2						
PLCA				LR	LR	21 04 06.3	
	comp=Z,41nm,19.2s,baz=268,slow=30						
EPYK	Eagle Plains	94.12	18	P	P	20 29 39.0	+0.9
	baz=225						
ZAK	Zakamensk	94.43	323	eP	P	20 29 38.4	-1.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SDCO	Great Sand Dun	94.81	52	P	P	20 29 42.1	-0.2
	baz=248						
RLMT	Red Lodge	95.11	44	P	P	20 29 43.0	-0.3
	baz=246						
T25A	Trinidad	95.39	52	P	P	20 29 44.2	-0.6
	baz=248						
MSTX	Muleshoe	95.48	56	P	P	20 29 44.8	-0.3
	baz=249						
Q24A	Divide	95.52	51	P	P	20 29 45.0	-0.5
	baz=248						
AMTX	Amarillo	96.64	55	P	P	20 29 50.2	-0.2
	baz=250						
TIXI	Tiksi	97.21	347	⇓eP	Pdif	20 29 53.7	+1.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	Yellowknife Ar	99.66	26	LR	LR	21 07 42.5	
	comp=Z,27nm,20.5s,baz=246,slow=31						
WMQ	Urumqi	101.84	312	eP	Pdif	20 30 17.0	+3.6
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,91nm,4.5s						
WMQ				LR	LR		
	comp=Z,110nm,16.9s						
WMQ				LR	LR		
	comp=Z,170nm,21.1s						
WMQ				LR	LR		
	comp=Z,170nm,21.3s						
BRVK	Borovoye	114.79	320	⇑iPKIKP	PKiKP	20 35 00.6	+0.4
ARU	Arti	121.32	324	PKP	PKPdf	20 35 10.8	-1.9
	comp=Z,1.6nm,0.9s,baz=3.2,slow=4.7,SNR=4.8						
ARU	Arti	121.32	324	d iPKIKP	PKPdf	20 35 10.7	-2.0
ARU				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BDFB	Brasilia	124.76	127	PKP	PKPdf	20 35 18.7	-2.0
	comp=Z,1.1nm,0.4s,baz=188,slow=7.1,SNR=3.2						
PRGR	Permogore	126.11	333	ePKIKP	PKPdf	20 35 18.7	-3.0
PRGR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	ARCESS Array B	127.65	347	PKP	PKPdf	20 35 22.7	-1.8
	comp=Z,4.2nm,0.7s,baz=33,slow=2.9,SNR=14						
KLMR	Klimovskoe	129.08	334	ePKIKP	PKPdf	20 35 23.8	-3.6
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
AKT	Akhty	130.80	307	ePKIKP	PKiKP	20 35 36.3	+4.0
OBN	Obninsk	133.39	328	ePKIKP	PKPdf	20 35 34.5	-1.2
OBN				e		20 38 07.4	
OBN				ePPP	PPP	20 40 56.7	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FIA0	FINESS Array S	133.73	340	ePKPdf	PKPdf	20 35 34.0	-2.2
FIA0	FINESS Array S	133.73	340	ePKIKP	PKPdf	20 35 34.0	-2.2
FINES	FINESS Array B	133.73	340	PKP	PKPdf	20 35 34.0	-2.2
	comp=Z,3.0nm,0.9s,baz=357,slow=3.8,SNR=7.2						
KIV	Kislovodsk	133.97	312	i PKIKP	PKPdf	20 35 36.7	-0.6
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,469nm,24.0s						
VSU	Vasula	135.65	336	⇑ePKIKP	PKPdf	20 35 38.3	-1.5
BR101	Keskin Array S	141.64	308	ePKPdf	PKPdf	20 35 50.1	-1.5
BRTR	Keskin Array B	141.64	308	PKP	PKPdf	20 35 50.1	-1.5
	comp=Z,1.0nm,1.0s,baz=88,slow=4.8,SNR=3.8						
CFR	Carcaliu	143.12	319	⇑iP	PKPbc	20 35 52.5	+1.7
CFR	Carcaliu	143.12	319	⇑PKIKP	PKPbc	20 35 52.5	+1.7
BIZ	Bicaz	143.37	323	⇑iP	PKPbc	20 35 51.1	-0.4
BURAR	Bucovina Array	143.46	325	⇑iP	PKPbc	20 35 53.0	+1.2
BURAR	Bucovina Array	143.46	325	⇑PKIKP	PKPbc	20 35 53.0	+1.2
VRI	Vrincioaia	143.60	321	⇑iP	PKPab	20 35 51.7	+0.4
VRI	Vrincioaia	143.60	321	⇑PKIKP	PKPab	20 35 51.7	+0.4
PLOR	Plostina	143.66	321	⇓iP	PKPab	20 35 52.1	+0.5
PLOR	Plostina	143.66	321	⇓PKIKP	PKPab	20 35 52.1	+0.5
PSN	Preselentsi	143.83	317	eP	PKPab	20 35 52.3	+0.1
KOLS	Kolonicke sedl	144.14	328	ePKIKP	PKPbc	20 35 54.0	+0.3
KOLS	Kolonicke sedl	144.14	328	ePKP	PKPbc	20 35 54.0	+0.3
ARCR	ARCALIA	144.25	324	⇓iP	PKPab	20 35 53.7	0.0
MLR	Muntele Rosu	144.27	321	⇑iP	PKPab	20 35 54.0	0.0
MLR	Muntele Rosu	144.27	321	⇑PKIKP	PKPab	20 35 54.0	0.0
DOPR	Dopca	144.32	322	⇓iP	PKPab	20 35 53.8	-0.3
UZH	Uzhgorod	144.34	328	⇑iPKIKP	PKPab	20 35 52.0	-1.9
UZH				e		20 36 01.0	
OJC	Ojcow	144.39	332	eP	PKPab	20 35 53.7	-0.5
OJC	Ojcow	144.39	332	ePKIKP	PKPab	20 35 53.7	-0.5
TRPA	Tarpa	144.54	327	⇑iP	PKPab	20 35 54.7	0.0
TRPA	Tarpa	144.54	327	ePPiKP	PKPdf	20 35 52.1	-4.2
PRD	Provadia	144.56	317	eP	PKPab	20 35 53.6	-1.4
NIE	Niedzica	144.75	331	eP	PKPab	20 35 55.5	0.0
NIE	Niedzica	144.75	331	ePKIKP	PKPab	20 35 55.5	0.0
VOIR		144.82	322	⇑iP	PKPab	20 35 55.4	-0.6
VOIR		144.82	322	⇑PKIKP	PKPab	20 35 55.4	-0.6
CJR	Cluj-Napoca	144.88	325	⇑iP	PKPab	20 35 55.8	-0.3
CJR	Cluj-Napoca	144.88	325	⇑PKIKP	PKPab	20 35 55.8	-0.3
RAZG	Razgrad	144.95	318	⇑iP	PKPab	20 35 56.1	-0.3
ARR	Arges	145.10	322	⇑iP	PKPbc	20 35 56.6	-0.4
PHSR	Pinarhisar	145.21	314	⇓iP	PKPbc	20 35 56.7	-0.6
DRGR		145.31	325	⇓iP	PKPbc	20 35 56.1	-1.5
DRGR		145.31	325	⇓PKP2	PKPbc	20 35 56.1	-1.5
KECS	Kecovo	145.32	329	ePKIKP	PKPbc	20 35 56.2	-1.2
KECS	Kecovo	145.32	329	ePKP	PKPbc	20 35 56.2	-1.2
LANS	Liptovska Anna	145.32	331	ePKIKP	PKPbc	20 35 57.1	-0.4
LANS	Liptovska Anna	145.32	331	ePKP	PKPbc	20 35 57.1	-0.4
LTVH	Ltavrtes, Hu	145.36	327	ePPiKP	PKPdf	20 35 57.0	-0.7
KSP	Ksiaz	145.37	336	eP	PKPbc	20 35 57.2	-0.3
KSP	Ksiaz	145.37	336	ePKIKP	PKPbc	20 35 57.2	-0.3
HUMR	Humele	145.37	320	⇑iP	PKPbc	20 35 56.6	-1.1
OKC	Ostrava-Krasne	145.39	333	ePKIKP	PKPbc	20 35 56.5	-1.1
OKC				e		20 36 07.8	
OKC				MLR	MLR		
	comp=Z,300nm,19.1s						
OKC	Ostrava-Krasne	145.39	333	ePKP	PKPbc	20 35 56.5	-1.1
OKC				epPKP	pPKPab	20 36 07.8	-0.3
OKC				AMS	AMS	21 39 10.0	
	comp=Z,300nm,19.1s						
OSTC	Ostas	145.63	335	ePKP	PKPdf	20 35 57.1	-1.0
OSTC				ex	x	20 36 11.1	
OSTC				AMS	AMS	21 32 40.0	
	comp=Z,500nm,36.3s						
CHVC	Chvalec	145.66	336	ePKP	PKPdf	20 35 57.7	-0.5
CHVC				ex	x	20 36 11.2	
CHVC				AMS	AMS	21 33 30.0	
	comp=Z,400nm,26.3s						
ELND	Elena	145.67	317	⇑iP	PKPdf	20 35 58.4	0.0
MORC	Moravsky Berou	145.69	333	⇑iP	PKPdf	20 35 58.3	0.0
MORC	Moravsky Berou	145.69	333	⇑PKP2	PKPdf	20 35 58.3	0.0
MORC	Moravsky Berou	145.69	333	ePKP	PKPdf	20 35 57.8	-0.5
UPC	Upice	145.75	336	ePKP2	PKPdf	20 35 57.6	-0.7
UPC				MLR	MLR		
	comp=Z,400nm,26.9s						
UPC	Upice	145.75	336	ePKP	PKPdf	20 35 57.6	-0.7
UPC				AMS	AMS	21 34 40.0	
	comp=Z,400nm,26.9s						
DPC	Dobruska-Polom	145.75	335	ePKP2	PKPdf	20 35 57.8	-0.6
DPC				MLR	MLR		
	comp=Z,300nm,19.5s						
DPC	Dobruska-Polom	145.75	335	ePKP	PKPdf	20 35 57.8	-0.6
DPC				AMS	AMS	21 43 20.0	
	comp=Z,300nm,19.5s						
PSZ	Piszkesteto	145.99	329	ePKPdf	PKPdf	20 35 57.9	-1.0
PSZ	Piszkesteto	145.99	329	⇑iP	PKPdf	20 35 58.7	-0.2
PSZ	Piszkesteto	145.99	329	ePKP2	PKPdf	20 35 57.9	-1.0
PSZ	Piszkesteto	145.99	329	ePPiKP	PKPdf	20 35 57.1	-1.8
VYHS	Vyhne	146.08	331	ePKP2	PKPdf	20 35 58.2	-0.8
VYHS	Vyhne	146.08	331	ePKP	PKPdf	20 35 58.2	-0.8
GZR	Gura Zlata	146.14	323	⇑iP	PKPdf	20 35 57.8	-1.4
CLL	Collm	146.17	339	ePKPbc	PKPdf	20 35 59.2	+0.2
CLL	Collm	146.17	339	⇓ePKIKP	PKPdf	20 35 58.0	-1.0
CLL				i		20 35 59.0	
CLL				pmax	pmax		
	comp=Z,28nm,1.0s						
CLL	Collm	146.17	339	ePKPdf	PKPdf	20 35 58.0	-1.0
CLL				⇓iPKPbc	PKPbc	20 35 59.0	-1.0
	comp=Z,28nm,1.0s						
CLL				i pPKPdf	pPKPdf	20 36 08.8	-0.7
CLL				e		20 48 30.0	
CLL				eSS	SS	20 58 06.0	-8.7
CLL				eSSP	SSP	20 58 48.0	
CLL				eSSS	SSS	21 03 54.0	
CLL				e		21 04 54.0	
CLL				eSSSS		21 07 54.0	
SIRR	Siria	146.21	325	⇑iP	PKPdf	20 35 59.1	-0.1
PLVB	Pleven	146.21	319	⇓iP	PKPdf	20 35 59.2	-0.1
BRG	Berggiesshubel	146.22	338	ePKP	PKPdf	20 35 58.4	-0.7
	comp=Z,25nm,1.1s comp=N,239nm,24.9s comp=E,246nm,20.0s comp=Z,410nm,24.7s						
BRG	Berggiesshubel	146.22	338	ePKP2	PKPdf	20 35 58.4	-0.7
BRG				pmax	pmax		
	comp=Z,25nm,1.1s						
BRG				MLR	MLR		
	comp=N,239nm,24.9s						
BRG				MLR	MLR		
	comp=E,246nm,20.0s						
BRG				MLR	MLR		
	comp=Z,410nm,24.7s						
PVCC	Panska Ves	146.27	337	ePKP2	PKPdf	20 35 58.8	-0.4
PVCC				MLR	MLR		
	comp=Z,500nm,21.7s						
PVCC	Panska Ves	146.27	337	ePKP	PKPdf	20 35 58.8	-0.4
PVCC				AMS	AMS	21 39 50.0	
	comp=Z,500nm,21.7s						
JAVC	Velka Javorina	146.33	332	ePKP	PKPbc	20 36 01.0	+0.3
VRAC	Vranov	146.45	334	⇑iP	PKPdf	20 35 59.4	-0.2
VRAC	Vranov	146.45	334	⇑PKP2	PKPdf	20 35 59.4	-0.2
VRAC	Vranov	146.45	334	ePKP	PKPdf	20 36 00.1	+0.5
AMBH	Ambrzfalva	146.64	326	⇑ePPiKP	PKPdf	20 36 00.1	+0.2
BZS	Buzias	146.65	325	⇓iP	PKPdf	20 35 59.1	-0.9
BZS	Buzias	146.65	325	⇓PKIKP	PKPdf	20 35 59.1	-0.9
HERR	Herculane	146.66	323	⇑iP	PKPdf	20 35 59.7	-0.3
GOPC	GO Pecny, Ondr	146.69	336	ePKP2	PKPdf	20 36 00.3	+0.3
GOPC				MLR	MLR		
	comp=Z,500nm,24.3s						
GOPC	GO Pecny, Ondr	146.69	336	ePKP	PKPdf	20 36 00.3	+0.3
GOPC				epPKP	pPKPab	20 36 12.8	-0.3
GOPC				AMS	AMS	21 38 50.0	
	comp=Z,500nm,24.3s						
SMOL	Smolenice	146.70	332	ePKP2	PKPdf	20 36 01.0	+1.0
SMOL	Smolenice	146.70	332	ePKP	PKPdf	20 36 01.0	+1.0
BUD	Budapest	146.72	329	ePPiKP	PKPbc	20 36 02.1	+0.3
PRU	Pruhonice	146.72	336	ePKIKP	PKPdf	20 35 59.6	-0.4
PRU				MLR	MLR		
	comp=Z,400nm,18.4s						
PRU	Pruhonice	146.72	336	ePKP	PKPdf	20 35 59.6	-0.4
PRU				AMS	AMS	21 40 00.0	
	comp=Z,400nm,18.4s						
KRUC	Moravsky	146.72	334	ePKP	PKPdf	20 36 00.8	+0.8
SRO	Srobarova	146.82	330	ePKP2	PKPdf	20 36 00.1	-0.1
SRO	Srobarova	146.82	330	ePKP	PKPdf	20 36 00.1	-0.1
PLD	Plovdiv	146.83	317	eP	PKPdf	20 36 00.5	+0.1
MODS	Modra-Piesok	146.87	332	ePKIKP	PKPdf	20 36 00.1	-0.2
MODS	Modra-Piesok	146.87	332	ePKP	PKPdf	20 36 00.1	-0.2
TREC	Trest	146.91	335	ePKP2	PKPdf	20 36 01.2	+0.9
TREC				MLR	MLR		
	comp=Z,500nm,27.8s						
TREC	Trest	146.91	335	ePKP	PKPdf	20 36 01.2	+0.9
TREC				AMS	AMS	21 34 30.0	
	comp=Z,500nm,27.8s						
ZST	Bratislava	147.08	332	ePKP2	PKPdf	20 36 01.2	+0.6
ZST	Bratislava	147.08	332	ePKP	PKPdf	20 36 01.2	+0.6
CSKK	Cskako	147.17	330	ePPiKP	PKPbc	20 36 01.1	-2.0
NKC	Novy Kostel	147.27	339	ePKP2	PKPbc	20 36 02.4	-0.9
NKC				MLR	MLR		
	comp=Z,400nm,22.9s						
NKC	Novy Kostel	147.27	339	ePKP	PKPbc	20 36 02.4	-0.9
NKC				AMS	AMS	21 37 30.0	
	comp=Z,400nm,22.9s						
VTS	Vitosha	147.48	319	ePKPbc	PKPbc	20 36 03.5	-0.7
VTS	Vitosha	147.48	319	⇑iP	PKPdf	20 36 02.7	+1.0
VTS	Vitosha	147.48	319	⇑PKP2	PKPdf	20 36 02.7	+1.0
VTS	Vitosha	147.48	319	eP	PKPdf	20 36 02.4	+0.7
SOP	Sopron	147.71	332	ePPiKP	PKPdf	20 36 02.0	+0.4
MMB	Musomiste	147.72	317	eP	PKPdf	20 36 02.1	+0.1
KHC	Kasperske Hory	147.79	336	ePKPbc	PKPbc	20 36 03.9	-0.9
KHC	Kasperske Hory	147.79	336	ePKP2	PKPdf	20 36 02.9	+1.1
KHC				MLR	MLR		
	comp=Z,500nm,22.0s						
KHC	Kasperske Hory	147.79	336	ePKP	PKPdf	20 36 02.9	+1.1
KHC				ex	x	20 36 04.0	
KHC				ex	x	20 36 08.9	
KHC				epPKP	sPKPdf	20 36 16.1	+0.2
KHC				AMS	AMS	21 41 10.0	
	comp=Z,500nm,22.0s						
MORH	Mrgy, Hungar	147.79	328	eP	PKPdf	20 36 00.5	-1.3
MORH	Mrgy, Hungar	147.79	328	ePPiKP	PKPdf	20 36 00.0	-1.8
CONA	Conrad Observa	147.83	333	ePKPab	PKPdf	20 36 03.4	+1.4
	comp=Z,24nm,1.3s,SNR=12						
FRGS	Fruska Gora	147.91	325	eP	PKPdf	20 36 00.1	-2.0
GERES	GERESS Array B	147.97	336	PKPbc	PKPdf	20 36 03.6	+1.4
	comp=Z,9.0nm,0.8s,baz=31,slow=2.8,SNR=65						
KKB	Krupnik	147.99	318	eP	PKPdf	20 36 02.9	+0.5
ARSA	Arzberg	148.49	332	ePKPbc	PKPdf	20 36 04.6	+1.6
	comp=Z,3.8nm,0.8s						
DIVS	Divibare	148.50	324	eP	PKPdf	20 36 04.8	+1.6
BEHE	Becsehely	148.51	330	ePPiKP	PKPdf	20 36 04.1	+1.0
MOA	Molln	148.56	334	ePKPbc	PKPdf	20 36 04.7	+1.6
	comp=Z,23nm,2.0s,SNR=8.4						
VAY	Valandovo	148.60	317	i P	PKPab	20 36 14.3	+3.7
STIP	Stip	148.64	318	i P	PKPdf	20 36 04.9	+1.5
MEM	Membach	148.78	346	⇓PKP	PKPdf	20 36 04.6	+1.2
SKO	Skopje	148.95	319	i P	PKPbc	20 36 06.7	-1.2
BBLS	Lazići	148.98	324	eP	PKPdf	20 36 03.1	-0.9
HAPS	Han Pijesak,Bl	149.08	325	eP	PKPdf	20 36 05.1	+0.9
BCLA	Clavier	149.11	347	⇓PKP	PKPbc	20 36 06.7	-1.4
PERS	Pernice	149.14	332	i PKPdf	PKPdf	20 36 06.3	+2.2
SOKA	Soboth	149.15	332	ePKiKP	PKPdf	20 36 06.5	+2.3
	comp=Z,7.4nm,0.8s,SNR=12						
RUDO	Rudo	149.16	324	eP	PKPdf	20 36 06.3	+2.1
SNF	Seneffe	149.24	348	⇑PKP	PKPbc	20 36 07.0	-1.3
OBKA	Obir	149.49	332	ePKiKP	PKPdf	20 36 07.1	+2.4
	comp=Z,8.8nm,1.0s						
KBA	Koelnbreinsper	149.55	334	ePKiKP	PKPdf	20 36 07.5	+2.5
	comp=Z,14nm,0.9s,SNR=11						
BLY	Banja Luka	149.56	327	⇑iP	PKPdf	20 36 05.3	+0.5
BLY	Banja Luka	149.56	327	eP	PKPdf	20 36 07.3	+2.5
DOU	Dourbes	149.57	347	⇑PKP	PKPbc	20 36 07.3	-1.8
CRES	Cresnjev	149.61	330	eP	PKPdf	20 36 07.3	+2.4
WLF	Walferdange	149.62	345	ePKPbc	PKPbc	20 36 09.0	-0.3
WLF	Walferdange	149.62	345	ePKP2	PKPbc	20 36 09.0	-0.3
WLF	Walferdange	149.62	345	⇑PKP	PKPbc	20 36 08.3	-1.0
UPM	Unac-Piva	149.68	323	eP	PKPdf	20 36 07.5	+2.2
MYKA	Terra Mystica	149.78	333	ePKiKP	PKPbc	20 36 07.9	-2.0
	comp=Z,8.2nm,0.6s,SNR=7.2						
LJU	Ljubljana	149.86	332	eP	PKPdf	20 36 07.9	+2.7
VISS	Visnje	149.91	331	i PKPdf	PKPbc	20 36 08.7	-1.5
BOJS	Bojanci	149.94	330	i PKPdf	PKPbc	20 36 09.1	-1.2
PDG	Podgorica	149.97	322	⇓iP	PKPdf	20 36 06.7	+1.2
PDG	Podgorica	149.97	322	eP	PKPbc	20 36 08.4	-2.0
WATA	Walderalm	150.03	337	ePKiKP	PKPbc	20 36 08.7	-1.9
	comp=Z,8.7nm,0.6s,SNR=13						
WTTA	Wattenberg	150.06	336	ePKiKP	PKPbc	20 36 09.3	-1.5
	comp=Z,40nm,1.3s,SNR=12						
BRY	Bratogost	150.08	323	eP	PKPbc	20 36 09.1	-1.8
CEY	Cerknica	150.14	331	eP	PKPbc	20 36 08.6	-2.2
ABTA	Abfaltersbach	150.15	335	ePKiKP	PKPbc	20 36 08.8	-2.1
	comp=Z,8.7nm,0.7s,SNR=7.7						
DRME	Dracevica, Mon	150.17	322	eP	PKPbc	20 36 09.3	-1.6
JAVS	Javornik	150.18	332	i PKPdf	PKPbc	20 36 09.1	-1.9
MOTA	Moosalm	150.19	337	ePKiKP	PKPdf	20 36 08.7	+2.7
	comp=Z,18nm,1.0s,SNR=16						
RETA	Reutte	150.19	338	ePKiKP	PKPbc	20 36 09.7	-1.3
	comp=Z,7.6nm,0.7s,SNR=8.3						
BFO	Black Forest	150.25	341	ePKPbc	PKPbc	20 36 09.4	-1.6
BFO	Black Forest	150.25	341	i PKIKP	PKPbc	20 36 09.6	-1.4
SQTA	Sankt Quirin	150.26	337	ePKiKP	PKPbc	20 36 09.4	-1.7
	comp=Z,16nm,0.7s,SNR=14						
TREB	Trebinje	150.31	323	eP	PKPbc	20 36 09.7	-1.5
HCY	Herceg Novi	150.40	323	eP	PKPbc	20 36 09.5	-2.0
RIY	Rijeka	150.43	331	eP	PKPbc	20 36 09.6	-1.8
STON	Ston	150.57	324	eP	PKPdf	20 36 08.5	+2.1
FETA	Feichten	150.60	337	ePKiKP	PKPbc	20 36 10.1	-2.0
	comp=Z,14nm,0.8s,SNR=12						
DAVA	Damuels	150.67	338	ePKiKP	PKPbc	20 36 10.9	-1.3
	comp=Z,31nm,1.4s,SNR=7.0						
ECH	Echery	150.70	343	ePKPbc	PKPbc	20 36 10.8	-1.2
ECH	Echery	150.70	343	ePKIKP	PKPbc	20 36 10.8	-1.2
ITM	Ithomi	151.10	311	ePKPbc	PKPbc	20 36 12.1	-1.2
FUORN	Ofenpass-Fuorn	151.11	337	ePKPbc	PKPbc	20 36 12.3	-1.0
TUE	Stuetta	151.56	338	ePKPbc	PKPbc	20 36 13.6	-0.7
CLF	Chambon-Foret	152.00	349	ePKPbc	PKPbc	20 36 14.3	-0.6
AQU	L'Aquila	153.19	328	eP	PKiKP	20 36 20.2	+2.1
ESDC	Sonseca Array	161.00	357	PKPab	PKPab	20 37 01.1	-2.2
	comp=Z,1.2nm,0.8s,baz=8.2,slow=4.3,SNR=5.2						
TORD	Torodi Ar. Bea	169.90	223	PKP	PKPdf	20 36 26.9	-1.6
	comp=Z,2.2nm,1.1s,baz=114,slow=3.8,SNR=5.0						
TORD				PKPab	PKPab	20 37 43.0	0.0
	comp=Z,1.3nm,0.8s,baz=132,slow=5.4,SNR=3.6						
TOA1	Torodi Ar. Sit	169.90	223	ePKPdf	PKPdf	20 36 26.9	-1.6
TOA1				ePKPab	PKPab	20 37 43.0	-0.1

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*WEL **28** 20:21:34.7, 42°S±1°×17°4E±°, h5^{km}±2^{km}, M3.5/19, ML3.7/15, MLv3.5/19, Error ellipse: s-maj=0.0km s-min=0.0km az=126.0*

*IDC **28** 20:21:34.5±1.8, 41°.59S×173°.90E, h0^{km}, mb3.7/2, mb1 3.9/3, mb1mx3.7/22, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=40.3km s-min=35.4km az=69.0*

ISC 28 20:21:34.8±0.8, **41°.70S**±0°.03×**174°.22E**±0°.03, **h13**^{km}±5^{km}, **n73,** σ**1^{s}.24**/76, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.05	184	P	Pg	20 21 36.7	-0.7
CMWZ				S	Sg	20 21 38.9	-0.4
BSWZ	Blackbirch Sta	0.26	266	P	Pg	20 21 41.4	+1.1
BSWZ				S	Sg	20 21 46.4	+2.4
TUWZ	Tuamarina	0.34	322	P	Pg	20 21 42.9	+1.2
TUWZ				S	Sg	20 21 49.1	+2.8
TCW	Tory Channel	0.49	5	P	Pb	20 21 45.1	-0.1
BHW	Baring Head	0.57	60	P	Pg	20 21 46.4	+0.4
PLWZ	Palliser	0.79	81	P	Pg	20 21 51.2	+1.1
NNZ	Nelson	0.79	307	P	Pn	20 21 51.1	-0.5
MSWZ	Moikau Station	0.82	70	P	Pg	20 21 51.3	+0.6
CAW	Cannon Point	0.87	48	P	Pg	20 21 51.8	+0.2
KHZ	Kahutara	0.88	215	P	Pn	20 21 53.6	+0.7
DUWZ	D'Urville Isla	0.92	346	P	Pn	20 21 53.7	+0.2
PAWZ	Paruwai Farm	0.96	71	P	Pg	20 21 53.9	+0.5
THZ	Tophouse	0.99	266	P	Pn	20 21 55.1	+0.7
MTW	Mount Morrison	1.10	61	P	Pg	20 21 55.9	-0.2
OGWZ	Otaki Gorge	1.13	40	P	Pg	20 21 56.7	0.0

TRWZ	Traveller	1.14	75	P	Pg	20 21 56.1	-0.7
HOWZ	Holdsworth Sta	1.26	51	P	Pg	20 21 58.5	-0.6
TMWZ	Te Maipa	1.39	65	P	Pn	20 21 59.6	-0.3
MRZ	Mangatainoka R	1.46	45	P	Pn	20 22 01.3	+0.5
QRZ	Quartz Range	1.54	304	P	Pg	20 22 04.8	+0.3
GVZ	Greta Valley S	1.54	214	P	Pn	20 22 02.8	+0.7
TIWZ	Tintock	1.56	54	P	Pn	20 22 01.9	-0.3
OHWZ	Ohakea	1.71	29	P	Pb	20 22 06.7	+0.8
PRWZ	Pori Road	1.75	50	P	Pn	20 22 04.9	+0.1
POWZ	Post Office Ro	1.75	42	P	Pn	20 22 05.4	+0.6
DSZ	Denniston Nort	1.81	268	P	Pg	20 22 08.8	-0.7
LTZ	Lake Taylor	1.81	232	P	Pn	20 22 06.7	+1.0
BFZ	Birch Farm	1.83	57	P	Pn	20 22 05.2	-0.8
AMCZ	Amberley	1.88	218	P	Pn	20 22 06.7	+0.1
WAZ	Wanganui	2.02	17	P	Pg	20 22 12.8	-0.9
DVHZ	Dannevirke	2.03	47	P	Pn	20 22 08.2	-0.6
TSZ	Takapari Road	2.10	39	P	Pn	20 22 10.2	+0.5
OKCZ	Okains Bay	2.20	202	P	Pn	20 22 10.5	-0.6
OXZ	Oxford	2.29	224	P	Pn	20 22 13.1	+0.8
INZ	Inchbonnie	2.30	243	P	Pb	20 22 16.5	+0.3
MQZ	McQueen's Vall	2.32	209	P	Pn	20 22 11.8	-0.8
PNHZ	Pukenui	2.33	41	P	Pn	20 22 15.9	+3.0
WPHZ	Waipukurau	2.34	47	P	Pb	20 22 16.8	-0.1
PREZ	Palmer Road	2.35	359	P	Pg	20 22 18.6	-1.3
KHEZ	Kahui Hut	2.41	356	P	Pg	20 22 19.4	-1.5
NBEZ	Newall Road No	2.44	354	P	Pg	20 22 20.8	-0.8
MTVZ	Mangateitei	2.50	23	P	Pg	20 22 23.4	+0.7
PKE	Pukeiti	2.51	356	P	Pg	20 22 20.6	-2.3
PKVZ	Pokaka	2.55	20	P	Pb	20 22 21.5	+1.0
MOVZ	Moawhango	2.57	28	P	Pb	20 22 21.6	+0.9
VRZ	Vera Road	2.60	9	P	Pb	20 22 20.8	-0.5
BHHZ	Black Hill Sta	2.61	33	P	Pb	20 22 20.7	-0.8
KRHZ	Kereru	2.62	39	P	Pn	20 22 17.0	+0.1
DRZ	Dome Shelter	2.63	23	P	Pb	20 22 22.9	+1.0
WHVZ	Whangaehu Hut	2.63	24	P	Pn	20 22 20.0	+2.9
FWVZ	Far West T-bar	2.64	23	P	Pb	20 22 22.2	+0.1
TUVZ	Tukino	2.66	25	P	Pb	20 22 20.8	-1.6
NGZ	Ngauruhoe	2.73	23	P	Pb	20 22 23.1	-0.5
KAHZ	Kahuranaki	2.77	48	P	Pn	20 22 21.4	+2.4
WTVZ	West Tongariro	2.78	23	P	Pb	20 22 23.8	-0.6
TWVZ	Taurewa	2.78	20	P	Pg	20 22 27.5	-0.7
KRVZ	Karewarewa	2.82	23	P	Pb	20 22 26.4	+1.3
KWHZ	Kaweka Forest	2.82	37	P	Pb	20 22 27.4	+2.3
WVZ	Waitaha Valley	2.92	241	P	Pb	20 22 26.4	-0.4
KATZ	Kakaramea	2.94	23	P	Pb	20 22 28.9	+1.7
BKZ	Black Stump Fm	3.07	35	P	Pg	20 22 31.9	-1.7
RPZ	Rata Peaks	3.08	228	Pn	Pn	20 22 23.1	-0.1
	5.0nm,0.3s,baz=74,slow=2.5,SNR=15						
RPZ				Sn	Sn	20 22 59.5	-0.4
	5.8nm,0.3s,baz=130,slow=21,SNR=12						
RPZ	Rata Peaks	3.08	228	P	Pn	20 22 23.6	+0.4
HIZ	Hauiti	3.22	9	P	Pb	20 22 29.8	-2.0
SNGZ	Shannon Statio	3.77	40	P	Pb	20 22 41.3	+0.1
TOZ	Tahuroa Road	4.08	14	P	Pb	20 22 45.2	-1.3
ODZ	Otahua Downs	4.24	217	P	Pn	20 22 39.5	+0.4
AWAZ	Awhitu Peninsu	4.64	4	P	Pb	20 22 51.8	-4.2
MKAZ	Moumakai	4.64	9	P	Pb	20 22 51.1	-4.9
JCZ	Jackson Bay	4.65	237	P	Pb	20 22 50.9	-5.2
ASAR	Alice Springs	37.99	285	P	P	20 28 52.1	-0.5
	0.7nm,0.9s,baz=122,slow=6.3,SNR=4.4						
WRA	Warramunga Arr	40.06	290	P	P	20 29 09.3	-0.6
	1.5nm,0.8s,baz=127,slow=8.3,SNR=5.6						
TORD	Torodi Ar. Bea	150.82	195	PKPbc	PKPbc	20 41 28.1	+0.8
	0.5nm,0.5s,baz=158,slow=2.8,SNR=10						
TORD				PKPab	pPKPab	20 41 37.0	-1.8
	1.7nm,1.2s,baz=162,slow=2.7,SNR=3.6						

MAN 28 20:22:58.9, 11°.68N×124°.34E, h21^{km}, mb4.1, ML2.9, MS2.6, 2C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	Ormoc	0.68	157	*e*P	Pb	20 23 12.0	-0.1
OCLP				*e*S	Sn	20 23 23.3	+0.1
PLP	Palo	0.81	129	⇑*e*P	Pn	20 23 14.8	-0.3
PLP				*e*S	Sn	20 23 27.8	+1.3
CNP	Catarman	0.89	21	*e*P	Pb	20 23 15.1	-0.5
CNP				*e*S	Sn	20 23 29.1	+0.6
LLP	Lapu-Lapu	1.40	195	*e*P	Pn	20 23 22.7	-0.5
LLP				*i* S	Sb	20 23 42.4	+0.7
RCP	Roxas	1.56	266	⇑*e*P	Pn	20 23 25.1	-0.4

UCR 28 20:23:00.6±1.8, 8°.69N×84°.61W, h25^{km}±7^{km}, MW3.8, 6C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDDO	Dominical	0.93	53	⇑*i*P	Pn	20 23 17.3	-0.7
EDDO				*e*S	Sb	20 23 29.7	-0.2
EDLM	Las Mercedes	1.17	60	*e*P	Pn	20 23 21.1	-0.3
EDLM				*e*S	Sb	20 23 37.5	+0.5
EDPN	Palmar Norte	1.17	77	*e*P	Pn	20 23 21.0	-0.4
EDPN				*e*S	Sn	20 23 36.6	0.0
LCR2	La Lucha 2	1.21	30	⇑*i*P	Pn	20 23 21.4	-0.7
LCR2				*e*S	Sn	20 23 37.0	-0.7
PTJ1	Puerto Jimnez	1.30	97	*e*P	Pn	20 23 22.3	-0.9
PTJ1				*e*S	Sn	20 23 38.5	-1.4
HDC	Heredia	1.39	21	⇑*i*P	Pn	20 23 24.7	+0.1
HDC				*e*S	Sn	20 23 42.7	+0.5
DRK0	Durika	1.47	67	⇑*e*P	Pn	20 23 25.6	0.0
DRK0				*e*S	Sn	20 23 43.4	-0.7
CVTR	Volcan Turrial	1.57	32	⇑*i*P	Pn	20 23 27.3	+0.1
CVTR				*e*S	Sn	20 23 47.6	+0.7
EDSV	San Vito	1.63	85	⇓*e*P	Pn	20 23 28.2	+0.4
EDSV				*e*S	Sb	20 23 49.5	-0.7
JTS	Las Juntas de	1.63	348	*e*P	Pn	20 23 27.9	+0.3
JTS				*e*S	Sn	20 23 47.4	-0.5
ARE1	Arenal 1	1.76	357	⇑*i*P	Pn	20 23 30.8	+1.2
ARE1				*e*S	Sb	20 23 54.2	+0.2
PLVR	Palo Verde	1.80	336	*e*P	Pn	20 23 31.2	+1.0
PLVR				*e*S	Sn	20 23 51.6	-0.8
BRU2	Volcan	1.90	87	⇓*e*P	Pn	20 23 31.8	+0.2
BRU2				*e*S	Sn	20 23 55.7	+0.9

MEX 28 20:25:25.8±0.7, 14°.08N×93°.18W, h10^{km}±24^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.21	47	*e*P	Pn	20 25 45.1	-3.6
THIG				*i* S	Sb	20 26 00.1	-4.2
PCIG		1.61	359	*i* P	Pn	20 25 50.3	-4.0
PCIG				*e*S	Sn	20 26 10.3	-4.9
CCIG	Comitan	2.41	25	*i* P	Pn	20 26 02.5	-2.9
CCIG				*i* S	Sn	20 26 30.8	-4.3
TGIG		2.68	1	*e*P	Pn	20 26 06.9	-2.2
TGIG				*e*S	Sn	20 26 37.6	-4.1
CMIG	Matias Romero	3.41	331	*e*P	Pn	20 26 16.5	-2.6
CMIG				*i* S	Sn	20 26 55.7	-3.9

*ISCJB **28** 20:27:45.9±0.4, 37°.15N±0°.04×71°.89E±0°.05, h150^{km}, mb3.8/17, Error ellipse: s-maj=6.0km s-min=4.3km az=141.9*

*IDC **28** 20:27:46.6±2.9, 37°.06N×71°.90E, h149^{km}±24^{km}, mb3.5/12, mb1 3.6/19, mb1mx3.4/44, mbtmp4.0/19, Error ellipse: s-maj=23.5km s-min=13.7km az=180.0*

*NEIC **28** 20:27:49.0±1.4, 37°.29N×71°.95E, h151^{km}±9^{km}, mb4.2/6, Error ellipse: s-maj=13.2km s-min=7.2km az=70.0*

*NNC **28** 20:27:52.2±5.4, 37°.59N×71°.80E, h153^{km}±81^{km}, mb3.3, mpv4.1, Error ellipse: s-maj=53.3km s-min=33.5km az=173.0*

ISC 28 20:27:47.7±0.6, 37°.28N±0°.06×71°.91E±0°.05, h150^{km}, n61, σ1^{s}84/68, mb3.6/17, 6C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.12	324	*e*Pn	Pn	20 28 26.4	+2.0
GAR				*e*Sn	Sn	20 28 53.7	+1.0
KBL	Kabul	3.59	221	*e*Pn	Pn	20 28 44.4	+1.6
NIL	Nilore	3.79	163	*e*Pn	Pn	20 28 46.6	+1.4
AML	Almayashu	5.04	15	P	Pn	20 29 03.1	+1.3
	SNR=252						
UCH	Uchtor	5.33	21	P	Pn	20 29 07.2	+1.3
	SNR=147						
KZA	Kyzart	5.44	27	P	Pn	20 29 08.0	+0.7
	SNR=29						
EKS2	Erkin-Say	5.56	14	P	Pn	20 29 10.0	+1.4
	SNR=32						
AAK	Ala-Archa	5.71	20	P	Pn	20 29 12.2	+1.7
	24nm,0.3s,baz=159,slow=6.4,SNR=56						
AAK				S	Sn	20 30 14.8	-0.5
	5.8nm,0.3s,baz=340,slow=22,SNR=16						
AAK	Ala-Archa	5.71	20	*e*Pn	Pn	20 29 12.7	+2.1
AAK	Ala-Archa	5.71	20	⇑P	Pn	20 29 11.9	+1.3
	17nm,0.3s						
AAK				⇑S	Sn	20 30 14.9	-0.5
	54nm,0.5s						
AAK	Ala-Archa	5.71	20	P	Pn	20 29 12.3	+1.7
	SNR=37						
KBK	Karagaybulak	5.85	23	P	Pn	20 29 14.2	+1.7
	SNR=22						
KK31	Karatay Array	5.91	350	*e*Pn	Pn	20 29 14.7	+1.5
KK31	Karatay Array	5.91	350	P	Pn	20 29 14.4	+1.2
	5.4nm,0.3s,baz=178,slow=14,SNR=238						
KK31				⇑S	Sn	20 30 18.0	-2.1
	34nm,0.3s,baz=172,slow=23,SNR=4.4						
KKAR	Karatay Array	5.91	350	*e*Pn	Pn	20 29 14.7	+1.5
CHMS	Chumysh	6.11	20	P	Pn	20 29 17.4	+1.5
	SNR=32						
USP	Ospenovka	6.30	18	P	Pn	20 29 19.5	+1.1
	SNR=26						
TKM2	Tokmak 2	6.30	26	⇑P	Pn	20 29 19.1	+0.6
	6.2nm,0.5s						
TKM2				⇓S	Sn	20 30 27.6	-2.1
	12nm,0.6s						
TKM2	Tokmak 2	6.30	26	P	Pn	20 29 19.6	+1.0
	SNR=28						
KNDC	Almaty	7.08	32	⇑P	Pn	20 29 31.1	+2.4
GEYT	Alibeck	10.96	278	P	Pn	20 30 18.4	-2.0
	2.6nm,0.3s,baz=106,slow=10,SNR=36						
GEYT				S	Sn	20 32 17.3	-4.2
	2.3nm,0.3s,baz=341,slow=29,SNR=8.9						
GYA0B	ALIBECK ARRAY	10.96	278	*e*Pn	Pn	20 30 18.8	-1.6
OTUK	Ortayu	10.96	2	⇓P	Pn	20 30 19.9	-0.4
	1.8nm,0.7s						
MAKZ	Makanchi	12.10	35	*e*Pn	Pn	20 30 35.3	+0.2
MK31	Makanchi Array	12.23	36	*e*Pn	Pn	20 30 37.4	+0.5
MK31	Makanchi Array	12.23	36	P	Pn	20 30 36.9	0.0
	1.6nm,0.6s,baz=223,slow=14,SNR=14						
MKAR	Makanchi Array	12.23	36	P	Pn	20 30 37.0	+0.2
	0.3nm,0.3s,baz=225,slow=16,SNR=14						
DANN	Dangsing	13.36	128	*e*P	Pn	20 30 49.1	-2.6
	18nm,0.3s						
GKN	Gorkha	14.15	127	*e*P	Pn	20 30 59.4	-2.3
	49nm,0.4s						
KURBB	Kurchatov Arra	14.15	17	P	P	20 31 04.7	+0.4
	0.1nm,0.3s,baz=206,slow=10,SNR=9.0						
KKN	Kakani	14.71	126	*e*P	Pn	20 31 06.6	-2.1
	17nm,0.4s						
DMN	Daman	14.72	127	*e*P	Pn	20 31 06.2	-2.7
	16nm,0.3s						
AB31	Akbulak array	14.78	328	P	Pn	20 31 10.2	+1.0
	1.7nm,0.3s,baz=136,slow=12,SNR=99						
ABKAR	Akbulak array	14.78	328	*e*Pn	Pn	20 31 10.7	+1.5
PKIN	Phulchoki	14.93	127	*e*P	Pn	20 31 09.1	-2.4
	14nm,0.3s						
PKI	Pulchoki	14.94	127	*e*P	Pn	20 31 09.3	-2.4
	16nm,0.3s						
JIRN	Jiri	15.39	124	*e*P	Pn	20 31 15.1	-2.2
	92nm,0.4s						
BVAR	Borovoye Array	15.78	357	P	Pn	20 31 21.2	-0.3
	0.4nm,0.3s,baz=163,slow=12,SNR=13						
AKTO	Aktyubinsk	16.49	327	P	Pn	20 31 31.7	+1.5
	0.8nm,0.3s,baz=141,slow=9.1,SNR=10						
AKTO				S	S	20 34 28.0	-5.3
	0.4nm,0.3s,baz=128,slow=14,SNR=7.2						
AKTO	Aktyubinsk	16.49	327	⇑P	Pn	20 31 32.6	+2.4
	1.7nm,0.6s						
LSA	Lhasa	17.73	110	*e*P	Pn	20 31 46.4	+0.7
	3.9nm,0.8s						
ZAA0	Zalesovo Array	18.91	24	*e*P	P	20 31 57.0	+0.5
	6.6nm,0.8s						
ZALV	Zalesovo Beam	18.91	24	P	P	20 31 57.4	+0.8
	1.2nm,0.3s,baz=224,slow=10,SNR=26						
ARU	Arti	21.15	339	P	P	20 32 21.7	+1.2
	0.4nm,0.4s,baz=138,slow=16,SNR=4.2						
RAYN	Ar Rayn	26.48	246	*e*P	P	20 33 17.5	+6.5
	3.4nm,0.5s						
SONM	Songino Array	27.30	56	P	P	20 33 19.5	+1.3
	1.2nm,0.5s,baz=270,slow=8.5,SNR=7.2						
BRTR	Keskin Array B	29.90	287	P	P	20 33 42.8	+1.4
	0.4nm,0.5s,baz=89,slow=7.5,SNR=4.6						
FIA1	FINESS Array S	37.25	325	*e*P	P	20 34 44.9	+0.5
	4.7nm,1.1s						
FINES	FINESS Array B	37.25	325	P	P	20 34 44.9	+0.4
	0.6nm,0.5s,baz=121,slow=7.9,SNR=4.1						
ARCES	ARCESS Array B	40.70	337	P	P	20 35 14.2	+1.1
	1.2nm,0.7s,baz=116,slow=8.6,SNR=8.7						
GSI	Gunungsitoli	42.91	141	*e*P	P	20 35 32.7	+1.1
	14nm,0.7s						
KSRS	Korea Array	43.94	72	P	P	20 35 39.9	+0.2
	0.6nm,0.6s,baz=280,slow=6.1,SNR=4.2						
NB2	NORSAR Subarra	44.20	322	P	P	20 35 41.7	+0.3
	comp=Z,0.7nm,0.7s,baz=92,slow=8.6						
NOA	NORSAR Array B	44.20	322	P	P	20 35 41.1	-0.4
	comp=Z,1.4nm,0.8s,baz=95,slow=7.6,SNR=5.6						
TIXI	Tiksi	44.78	22	*e*P	P	20 35 46.5	+0.7
	comp=Z,5.4nm,0.6s						
MJAR	Matsushiro Arr	51.99	69	P	P	20 36 40.9	-0.7
	comp=Z,0.6nm,0.5s,baz=290,slow=9.6,SNR=5.3						
TORD	Torodi Ar. Bea	66.46	269	P	P	20 38 19.8	-1.5
	comp=Z,0.6nm,0.5s,baz=62,slow=4.3,SNR=5.8						
INK	Inuvik	73.02	10	P	P	20 39 00.7	+0.2
	comp=Z,2.4nm,0.5s,baz=286,slow=7.7,SNR=6.0						
ILAR	Eielson Array	73.83	16	P	P	20 39 04.5	-0.8
	comp=Z,0.8nm,0.7s,baz=316,slow=5.0,SNR=4.5						
YKA	Yellowknife Ar	80.43	3	P	P	20 39 42.0	-0.2
	comp=Z,2.0nm,0.5s,baz=350,slow=5.3,SNR=8.4						
WRA	Warramunga Arr	81.79	123	P	P	20 39 48.0	-2.0
	comp=Z,0.5nm,0.7s,baz=303,slow=5.3,SNR=6.6						

*KRSC **28** 20:46:56.6±1.7, 52°.02N×160°.10E, h60^{km}±23^{km}, ML4.3*

*ISCJB **28** 20:46:58.5±0.7, 52°.03N±0°.04×160°.08E±0°.06, h47^{km}±6^{km}, mb3.9/16, MS4.1/2, Error ellipse: s-maj=7.2km s-min=4.4km az=141.3*

*MOS **28** 20:46:58.6±0.8, 52°.04N×160°.03E, h49^{km}, mb4.2/5, Error ellipse: s-maj=11.2km s-min=4.8km az=100.5*

*NEIC **28** 20:47:00.5±2.5, 52°.30N×160°.24E, h35^{km}, mb4.0/9, Error ellipse: s-maj=17.9km s-min=10.2km az=49.0*

*IDC **28** 20:47:04.8±2.6, 52°.34N×159°.90E, h75^{km}±21^{km}, mb3.4/9, mb1 3.6/10, mb1mx3.3/42, mbtmp3.8/10, MS4.0/2, Ms1 4.0/2, ms1mx3.1/28, Error ellipse: s-maj=23.1km s-min=18.5km az=129.0*

ISC 28 20:46:57.8±1.0, 51°.97N±0°.05×160°.15E±0°.04, h37^{km}±2^{km}, n95, σ1^{s}07/106, mb3.9/16, 1C-2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	1.11	295	*e*P	Pn	20 47 16.1	-0.6
RUS				*e*S	Sn	20 47 29.1	-1.6
RUS	Russkaya	1.11	295	PN	Pn	20 47 16.1	-0.6
RUS				S	Sn	20 47 29.1	-1.6
SPN	Mys Shipunski	1.13	356	*e*P	Pn	20 47 17.3	+0.3
SPN				*e*S	Sn	20 47 30.8	-0.5
SPN	Mys Shipunski	1.13	356	PN	Pn	20 47 17.3	+0.3
SPN				S	Sn	20 47 30.8	-0.5
KDTR	Khodutka, Kamc	1.29	263	*e*P	Pn	20 47 19.3	0.0
KDTR				*e*S	Sn	20 47 36.3	+1.0
KDTR	Khodutka, Kamc	1.29	263	PN	Pn	20 47 19.3	0.0
KDTR				S	Sn	20 47 36.3	+1.0
NLC	Nalytchevo	1.29	338	*e*P	Pn	20 47 19.8	+0.5
NLC				*e*S	Sn	20 47 35.5	+0.1
NLC	Nalytchevo	1.29	338	PN	Pn	20 47 19.8	+0.5
NLC				S	Sn	20 47 35.5	+0.1
MTVR	Mutnovka	1.31	294	*e*P	Pn	20 47 19.6	-0.1
MTVR				*e*S	Sn	20 47 36.0	0.0
MTVR	Mutnovka	1.31	294	PN	Pn	20 47 19.6	-0.1
MTVR				S	Sn	20 47 36.0	0.0
DALK	Dalny	1.36	322	*e*P	Pn	20 47 20.3	+0.1
DALK				*e*S	Sn	20 47 36.5	-0.4
DALK	Dalny	1.36	322	PN	Pn	20 47 20.3	+0.1
DALK				S	Sn	20 47 36.5	-0.4
PET	Petropavlovsk	1.39	320	*e*Pn	Pn	20 47 20.9	+0.3
PET	Petropavlovsk	1.39	320	*e*P	Pn	20 47 21.0	+0.3
PET				*e*S	Sn	20 47 38.3	+0.5
PET	Petropavlovsk	1.39	320	*e*PN	Pn	20 47 20.9	+0.3
PET				*e*S	Sn	20 47 37.8	0.0
PET				pmax	pmax		
	comp=Z,479nm,0.6s						
PET				smax	smax		
	comp=N,2µm,0.7s						
PET				smax	smax		
	comp=E,1µm,0.8s						
ASAK	Asacha	1.44	287	*e*P	Pn	20 47 22.1	+0.7
ASAK	Asacha	1.44	287	PN	Pn	20 47 22.1	+0.7
UGLR	Uglovaya	1.48	327	*e*P	Pn	20 47 22.6	+0.7
UGLR				*e*S	Sn	20 47 41.5	+1.5
UGLR	Uglovaya	1.48	327	PN	Pn	20 47 22.6	+0.7
UGLR				S	Sn	20 47 41.5	+1.5
KRMR	Karymshinskiy	1.50	306	*e*P	Pn	20 47 22.3	+0.1
KRMR	Karymshinskiy	1.50	306	PN	Pn	20 47 22.3	+0.1
SDLR	Sedlovina	1.52	330	*e*P	Pn	20 47 22.8	+0.3
SDLR				*e*S	Sn	20 47 40.6	-0.4
SDLR	Sedlovina	1.52	330	PN	Pn	20 47 22.8	+0.3
SDLR				S	Sn	20 47 40.6	-0.4
SMAR	Somma	1.53	328	*e*P	Pn	20 47 23.0	+0.2
SMAR				*e*S	Sn	20 47 41.9	+0.4
SMAR	Somma	1.53	328	PN	Pn	20 47 23.0	+0.2
SMAR				S	Sn	20 47 41.9	+0.4
KRER	Koryakskii	1.58	328	*e*P	Pn	20 47 24.4	+0.9
KRER				*e*S	Sn	20 47 42.1	-0.6
KRER	Koryakskii	1.58	328	PN	Pn	20 47 24.4	+0.9
KRER				S	Sn	20 47 42.1	-0.6
KOK	Koryaka	1.61	326	*e*P	Pn	20 47 24.8	+1.0
KOK				*e*S	Sn	20 47 43.5	+0.2
KOK	Koryaka	1.61	326	PN	Pn	20 47 24.8	+1.0
KOK				S	Sn	20 47 43.5	+0.2
KRX	Arik	1.66	327	*e*P	Pn	20 47 25.3	+0.8
KRX	Arik	1.66	327	PN	Pn	20 47 25.3	+0.8
PEA0B	Petropavlovsk-	1.88	308	*e*Pn	Pn	20 47 28.3	+1.0
PETK	Petropavlovsk-	1.88	308	P	Pn	20 47 28.6	+1.2
	comp=E,41nm,0.3s,baz=115,slow=20,SNR=915						
PETK				S	Sn	20 47 50.1	+0.3
	comp=E,52nm,0.3s,baz=61,slow=40,SNR=13						
PEA1	Petropavlovsk-	1.88	308	*e*Pn	Pn	20 47 28.6	+1.2
PEA1				*e*Sn	Sn	20 47 50.1	+0.2
APC	Apacha	2.06	299	*e*P	Pn	20 47 31.4	+1.5
APC				*e*S	Sn	20 47 54.2	-0.1
APC	Apacha	2.06	299	PN	Pn	20 47 31.4	+1.5
APC				S	Sn	20 47 54.2	-0.1
GNL	Ganaly	2.18	323	*e*P	Pn	20 47 33.1	+1.5
GNL	Ganaly	2.18	323	PN	Pn	20 47 33.1	+1.5
MKZ	Mys Kozlova	2.76	20	*e*P	Pn	20 47 40.1	+0.7
MKZ				*e*S	Sn	20 48 10.7	-0.7
MKZ	Mys Kozlova	2.76	20	PN	Pn	20 47 40.1	+0.7
MKZ				S	Sn	20 48 10.7	-0.7
SKR	Severo-Kuril's	2.84	244	*e*P	Pn	20 47 41.7	+1.2
SKR				*e*S	Sn	20 48 14.3	+0.9
SKR	Severo-Kuril's	2.84	244	PN	Pn	20 47 41.7	+1.2
SKR				S	Sn	20 48 14.3	+0.9
KZV	Kizimen	3.15	2	*e*P	Pn	20 47 47.5	+2.6
KZV				*e*S	Sn	20 48 23.4	+2.2
KZV	Kizimen	3.15	2	PN	Pn	20 47 47.5	+2.6
KZV				S	Sn	20 48 23.4	+2.2
TUMD	Tumrok D	3.24	3	*e*P	Pn	20 47 47.4	+1.3
TUMD				*e*S	Sn	20 48 22.3	-1.0
TUMR	Tumrok	3.32	360	*e*P	Pn	20 47 49.9	+2.7
TUMR	Tumrok	3.32	360	PN	Pn	20 47 47.4	+0.2
TUMR				S	Sn	20 48 22.3	-3.1
KBTR	Krutoberegovo	4.53	19	*e*P	Pn	20 48 05.6	+1.9
KBTR	Krutoberegovo	4.53	19	PN	Pn	20 48 05.6	+1.9
KBG	Krutoberegovo	4.55	18	*e*P	Pn	20 48 05.7	+1.8
KBG	Krutoberegovo	4.55	18	PN	Pn	20 48 05.7	+1.8
BDR	Baidarnaya	4.65	7	*e*P	Pn	20 48 08.8	+3.4
BDR	Baidarnaya	4.65	7	PN	Pn	20 48 08.8	+3.4
SRKR	Sorokina	4.73	7	*e*P	Pn	20 48 09.8	+3.3
SRKR	Sorokina	4.73	7	PN	Pn	20 48 09.8	+3.3
BKI	Bering	4.74	45	*e*P	Pn	20 48 07.5	+0.8
BKI				*e*S	Sn	20 48 57.4	-2.9
BKI	Bering	4.74	45	PN	Pn	20 48 07.5	+0.8
ASAJ	Asahikawa	14.10	243	P	P	20 50 21.3	-0.6
	comp=E,0.3nm,0.3s,baz=77,slow=14,SNR=5.9						
ERM	Erimo	15.25	236	⇓*e*P	Pn	20 50 28.9	-1.2
BILL	Bilibino	16.39	8	*e*P	P	20 50 47.1	0.0
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SPIA	Saint Paul Isl	17.85	61	*e*P	Pn	20 51 02.5	-0.3
	comp=Z,46nm,1.2s						
MJB9	Matsu-Tunnel	21.89	234	*e*P	P	20 51 53.8	+6.3
	comp=Z,4.7nm,0.7s						
MAJO	Matsushiro	21.89	234	*e*P	P	20 51 53.7	+6.3
	comp=Z,4.7nm,0.8s						
MAJO	Matsushiro	21.89	234	*e*P	P	20 51 53.7	+6.3
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	21.89	234	P	P	20 51 53.6	+6.1
	comp=Z,1.5nm,0.5s,baz=26,slow=7.6,SNR=15						
SDPT	Sand Point	23.36	66	*e*P	P	20 52 04.3	+1.8
	comp=Z,8.7nm,1.1s						
TIXI	Tiksi	24.12	336	P	P	20 52 09.7	+0.1
	comp=Z,1.5nm,0.3s,baz=125,slow=8.5,SNR=5.3						
TIXI	Tiksi	24.12	336	*e*P	P	20 52 09.1	-0.4
	comp=Z,2.6nm,0.6s						
TIXI	Tiksi	24.12	336	⇓*e*P	P	20 52 10.1	+0.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
H11N2	WAKE ISLAND Hy	32.61	168	T	T	21 28 43.1	
	baz=352,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	32.62	168	T	T	21 28 43.1	
	baz=352,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	32.63	168	T	T	21 28 43.1	
	baz=352,slow=76,SNR=27						
H11S1	WAKE ISLAND Hy	33.79	169	T	T	21 30 13.1	
	baz=351,slow=76,SNR=4.8						
H11S3	WAKE ISLAND Hy	33.80	169	T	T	21 30 15.2	
	baz=351,slow=76,SNR=8.0						
H11S2	WAKE ISLAND Hy	33.81	169	T	T	21 30 14.3	
	baz=351,slow=76,SNR=3.9						
ZALV	Zalesovo Beam	43.42	304	LR	LR	21 15 18.3	
	comp=Z,152nm,21.7s,baz=70,slow=39						
KURK	Kurchatov	48.36	303	⇑*e*P	P	20 55 35.1	-0.3
KURK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
MK32	Makanchi Array	48.68	297	*e*P	P	20 55 37.1	-0.8
MKAR	Makanchi Array	48.68	297	P	P	20 55 37.1	-0.9
	comp=Z,0.3nm,0.4s,baz=56,slow=6.6,SNR=5.7						
CM31	Chiang Mai Arr	57.99	259	*e*P	P	20 56 49.8	+3.1
	comp=Z,4.9nm,1.1s						
CMAR	Chiang Mai Arr	57.99	259	P	P	20 56 49.8	+3.1
	comp=Z,0.3nm,0.3s,baz=28,slow=6.3,SNR=2.6						
PD31	Pinedale Array	58.05	60	*e*P	P	20 56 50.0	+2.9
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	58.05	60	P	P	20 56 50.0	+2.9
	comp=Z,0.8nm,0.8s,baz=301,slow=3.1,SNR=5.6						
FIA0	FINESS Array S	61.16	337	*e*P	P	20 57 08.7	+0.8
FIA0	FINESS Array S	61.16	337	*e*P	P	20 57 08.7	+0.8
FINES	FINESS Array B	61.16	337	P	P	20 57 08.7	+0.8
	comp=Z,0.8nm,0.7s,baz=62,slow=5.3,SNR=5.5						
FINES	FINESS Array B	61.16	337	*e*P	P	20 57 08.1	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BORG	Borgarnes	63.61	1	*i* P	P	20 57 24.9	+0.7
GEYT	Alibeck	67.73	303	LR	LR	21 29 23.8	
	comp=Z,191nm,21.7s,baz=210,slow=38						
AKASG	Malin Array Be	69.59	329	P	P	20 58 02.3	-0.3
	comp=Z,0.4nm,0.3s,baz=30,slow=6.7,SNR=3.3						
AKBB	Malin Array Si	69.59	329	*e*P	P	20 58 02.3	-0.3
	comp=Z,1.3nm,0.8s						
AKBB	Malin Array Si	69.59	329	*e*P	P	20 58 02.3	-0.3
AKBB				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	71.05	67	P	P	20 58 15.1	+3.1
	comp=Z,0.6nm,0.8s,baz=293,slow=4.9,SNR=7.8						
AS31	Alice Springs	78.75	204	*e*P	P	20 58 59.6	+3.4
	comp=Z,1.0nm,1.1s						
ASAR	Alice Springs	78.75	204	P	P	20 58 59.6	+3.4
	comp=Z,0.4nm,0.7s,baz=11,slow=6.3,SNR=4.4						

*ISCJB **28** 20:50:58.5±0.5, 0°.22S±0°.06×130°.80E±0°.10, h10^{km}, mb4.0/12, Error ellipse: s-maj=14.4km s-min=7.8km az=168.0*

*IDC **28** 20:51:00.2±1.0, 0°.32S×130°.73E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.7/36, mbtmp3.9/8, ML3.7/2, Error ellipse: s-maj=36.8km s-min=17.8km az=79.0*

*NEIC **28** 20:51:05.2±1.1, 0°.25S×130°.78E, h54^{km}±6^{km}, mb4.1/11, Error ellipse: s-maj=29.3km s-min=9.9km az=76.0*

ISC 28 20:51:01.3±0.7, 0°.28S±0°.09×130°.7E±0°.1, h10^{km}, n22, σ1^{s}45/23, mb3.9/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.03	150	ePn	Pn	20 51 50.5	+1.2
KAPI	Kappang 0.5nm,0.3s,baz=106,slow=4.6,SNR=5.6	11.94	247	Pn	Pn	20 53 53.5	+1.7
JAGI	Jajag, Banyuwa 83nm,0.8s	18.43	243	eP	P	20 55 17.1	0.0
WRAB	Tennant Creek 6.5nm,1.0s	19.85	170	eP	P	20 55 31.3	-1.4
WR1	Warramunga Arr	19.86	170	eP	Pn	20 55 32.5	-1.9
WRA	Warramunga Arr 0.2nm,0.3s,baz=357,slow=12,SNR=12	19.86	170	P	Pn	20 55 32.5	-1.9
WRA	0.1nm,0.3s,baz=2.2,slow=23,SNR=3.6			S	S	20 59 02.5	-14
WB2	Warramunga Arr 4.5nm,0.8s	19.86	170	eP	P	20 55 31.9	-0.9
AS31	Alice Springs 1.9nm,0.6s	23.45	173	eP	P	20 56 11.3	+0.2
ASAR	Alice Springs 1.9nm,0.5s,baz=353,slow=10,SNR=26	23.45	173	P	P	20 56 10.5	-0.6
STKA	Stephens Creek 3.2nm,1.0s,baz=6.4,slow=13,SNR=2.9	33.06	163	P	P	20 57 37.8	+0.6
STKA	Stephens Creek 1.5nm,1.1s	33.06	163	eP	P	20 57 37.8	+0.6
CM31	Chiang Mai Arr 6.0nm,1.1s	36.37	302	eP	P	20 58 04.4	-1.6
CMAR	Chiang Mai Arr 0.6nm,0.4s,baz=124,slow=7.3,SNR=6.0	36.37	302	P	P	20 58 06.7	+0.6
MAJO	Matsushiro	37.28	10	eP	P	20 58 11.6	-2.0
MAJO				epP	P	20 58 14.1	+0.5
MJAR	Matsushiro Arr 0.9nm,0.7s,baz=190,slow=9.5,SNR=4.7	37.28	10	P	P	20 58 14.1	+0.6
MJB9	Matsu-Tunnel 2.6nm,0.7s	37.29	10	eP	P	20 58 11.6	-2.0
KS15	Wonju Array Si 5.6nm,1.1s	37.62	356	eP	P	20 58 14.6	-1.9
USRK	Ussuriysk Ar. 0.3nm,0.3s,baz=146,slow=3.1,SNR=5.3	44.30	1	P	P	20 59 13.5	+2.2
MK32	Makanchi Array	63.12	325	eP	P	21 01 28.1	-1.1
MKAR	Makanchi Array 0.6nm,0.6s,baz=108,slow=8.5,SNR=4.7	63.12	325	P	P	21 01 28.1	-1.1
MAKZ	Makanchi 0.8nm,0.9s	63.30	325	eP	P	21 01 28.6	-1.9
KURK	Kurchatov 4.8nm,0.9s	67.26	327	eP	P	21 01 55.3	-0.8

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*IDC **28** 21:18:52.1±1.0, 5°.45N×92°.67E, h0^{km}, mb3.7/9, mb1 3.8/12, mb1mx3.6/30, mbtmp3.7/12, ML3.4/3, Error ellipse: s-maj=35.6km s-min=17.5km az=46.0*

*ISCJB **28** 21:18:54.4±0.7, 5°.5N±0°.1×92°.71E±0°.10, h28^{km}, mb3.6/9, Error ellipse: s-maj=18.5km s-min=11.2km az=32.5*

ISC 28 21:18:56.3±0.8**, 5°.5N**±0°.1×**92°.78E**±0°.10**, h28^{km}, n19, σ1^{s}.20**/15**, mb3.8**/9**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat 0.6nm,0.3s,baz=336,slow=20,SNR=2.4	6.67	113	Pn	Pn	21 20 33.8	+1.2
PSI	0.1nm,0.3s,baz=295,slow=19,SNR=2.8			Sn	Sn	21 21 45.5	-2.4
PALK	Pallekele 0.3nm,0.3s,baz=112,slow=5.4,SNR=3.6	12.14	279	Pn	Pn	21 21 47.0	-0.5
PALK	1.7nm,0.3s,baz=116,slow=5.3,SNR=9.4			Sn	Sn	21 23 49.8	-12
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=225,slow=14,SNR=3.9	14.24	24	Pn	Pn	21 22 15.6	-0.6
H08S3	Diego Garcia H baz=57,slow=75,SNR=76	24.07	237	T	T	21 49 26.6	
H08S2	Diego Garcia H baz=57,slow=75,SNR=40	24.07	237	T	T	21 49 27.2	
H08S1	Diego Carcia H baz=57,slow=75,SNR=61	24.09	237	T	T	21 49 27.8	
MKAR	Makanchi Array 0.3nm,0.6s,baz=144,slow=5.4,SNR=3.2	42.16	349	P	P	21 26 45.4	-0.9
MKAR	0.5nm,0.9s,baz=145,slow=5.3,SNR=3.3			PcP	PcP	21 28 40.4	0.0
SONM	Songino Array 0.2nm,0.4s,baz=223,slow=7.9,SNR=2.8	43.80	13	P	P	21 27 01.1	+1.3
H01W3	Cape Leeuwin H baz=331	44.90	155	T	T	22 15 06.9	
H01W2	Cape Leeuwin H baz=331	44.91	155	T	T	22 15 08.0	
H01W1	Cape Leeuwin H baz=331	44.91	155	T	T	22 15 06.9	
GEYT	Alibeck 1.7nm,0.9s,baz=177,slow=5.3,SNR=4.2	45.14	321	P	P	21 27 10.1	-0.5
WRA	Warramunga Arr 1.1nm,0.7s,baz=304,slow=9.7,SNR=7.0	48.03	123	P	P	21 27 32.7	-0.8
ZALV	Zalesovo Beam 0.7nm,0.4s,baz=186,slow=6.5,SNR=3.8	48.77	354	P	P	21 27 40.0	+1.4
ASAR	Alice Springs 0.3nm,0.6s,baz=283,slow=6.4,SNR=3.5	49.47	128	P	P	21 27 46.4	+1.9
FINES	FINESS Array B 0.9nm,0.9s,baz=108,slow=8.9,SNR=3.6	74.21	333	P	P	21 30 30.0	-0.3
ARCES	ARCESS Array B 0.9nm,0.7s,baz=102,slow=8.4,SNR=2.5	77.06	341	P	P	21 30 46.2	-0.4
GERES	GERESS Array B 0.1nm,0.3s,baz=96,slow=4.0,SNR=5.3	78.72	319	P	P	21 30 56.2	-0.1
CPUP	Villa Florida 0.9nm,0.6s,baz=184,slow=9.2,SNR=2.9	144.72	231	PKP	PKPdf	21 38 30.9	-0.3

IDC 28 21:22:14.8±64.0**, 13°.49S**×**167°.98E, h0^{km}, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.6**/25**, mbtmp3.9**/3**, Error ellipse: s-maj=1094.0km s-min=124.5km az=64.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 1.5nm,0.7s,baz=22,slow=16,SNR=3.2	30.32	228	P	P	21 28 28.4	+0.2
WRA	Warramunga Arr 1.2nm,0.7s,baz=85,slow=8.7,SNR=3.0	32.81	254	P	P	21 28 50.3	+0.1
ASAR	Alice Springs 0.5nm,0.6s,baz=80,slow=9.5,SNR=7.7	33.77	248	P	P	21 28 58.3	-0.3

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*SJA **28** 21:23:50.9±0.6, 22°.08S×67°.32W, h203^{km}±7^{km}, ML3.0, MW3.1*

*GUC **28** 21:23:53.3±0.7, 22°.11S×67°.85W, h226^{km}±8^{km}, ML3.9*

ISC 28 21:23:53.4±3.5**, 22°.14S**±0°.08×**67°.5W**±0°.2**, h208^{km}**±26^{km}**, n19, σ0^{s}.61**/29**, 9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.36	249	eP	Pn	21 24 26.2	-0.8
LVC				eS	S	21 24 52.4	-0.4
PB09	IPOC Station P	1.62	282	⇑iP	Pn	21 24 29.5	+0.4
PB09				eS	S	21 24 57.5	+1.1
YJA	Yavi	1.87	92	eP	Pn	21 24 27.9	-3.8
YJA	comp=Z,32nm,0.5s			IAML		21 24 56.5	
PB06	IPOC Station P	1.97	253	⇑iP	Pn	21 24 32.4	0.0
PB06				eS	S	21 25 02.4	+0.1
PB06	comp=E,432nm,0.2s			IAML		21 25 04.4	
PB03	IPOC Station P	2.06	272	⇓iP	Pn	21 24 33.5	+0.2
PB03				eS	S	21 25 03.6	-0.3
PB03	comp=E,619nm,0.2s			IAML		21 25 05.0	
PB15	IPOC Station P	2.08	239	eP	Pn	21 24 33.3	-0.3
PB15				eS	S	21 25 04.8	+0.4
PB15	IPOC Station P	2.08	239	⇑iP	Pn	21 24 34.2	+0.6
PB15				eS	S	21 25 04.9	+0.4
PB01	IPOC Station P	2.12	301	⇑iP	Pn	21 24 33.8	-0.1
PB01				eS	S	21 25 04.8	0.0
PB01	comp=E,573nm,0.3s			IAML		21 25 05.8	
PB07	IPOC Station P	2.22	280	eP	Pn	21 24 35.0	+0.1
PB07				eS	S	21 25 07.4	+0.5
PB07	IPOC Station P	2.22	280	⇑iP	Pn	21 24 35.1	+0.1
PB07				eS	S	21 25 06.3	-0.6
PB07	comp=N,520nm,0.1s			IAML		21 25 08.6	
HJA	Humahuaca	2.23	119	eP	Pn	21 24 32.5	-2.9
HJA	comp=Z,74nm,0.5s			IAML		21 24 32.8	
PB02	IPOC Station P	2.34	290	eP	Pn	21 24 36.0	-0.2
PB02	IPOC Station P	2.34	290	⇑iP	Pn	21 24 36.1	-0.1
PB02				eS	S	21 25 08.2	-0.8
PB02	comp=E,647nm,0.3s			IAML		21 25 10.2	
PB04	IPOC Station P	2.43	265	eP	Pn	21 24 37.1	-0.1
PB04	IPOC Station P	2.43	265	⇑iP	Pn	21 24 37.5	+0.2
PB04				eS	S	21 25 10.1	-0.8
PB04	comp=N,438nm,0.3s			IAML		21 25 13.7	
PB08	IPOC Station P	2.49	322	eP	Pn	21 24 36.6	-1.6
PB08	IPOC Station P	2.49	322	⇑iP	Pn	21 24 38.9	+0.7
PB08				eS	S	21 25 13.7	+1.1
PB08	comp=E,202nm,0.3s			IAML		21 25 14.1	
GO01	Chusmiza	2.90	327	⇑iP	Pn	21 24 42.8	-0.1
GO01				eS	S	21 25 21.3	+0.3
AZAP	Zapla	3.08	133	eP	Pn	21 24 41.4	-3.2
AZAP	comp=Z,62nm,0.4s			IAML		21 24 42.7	

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*NNC **28** 22:02:45.2±8.9, 36°.91N×69°.78E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=87.7km s-min=54.8km az=159.0*

ISC 28 22:02:47.2±2.2**, 36°.78N**±0°.10×**70°.0E**±0°.2**, h250^{km}, n18, σ0^{s}.95**/20**, 3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu SNR=21	6.08	27	P	Pn	22 04 17.1	+0.5
KK31	Karatay Array 0.4nm,0.3s,baz=180,slow=14,SNR=30	6.33	4	Pn	Pn	22 04 20.5	+1.1
KK31	1.7nm,0.5s,baz=193,slow=26,SNR=3.7			⇓Sn	S	22 05 31.2	-2.2
UCH	Uchtor SNR=18	6.49	32	P	Pn	22 04 22.1	+0.3
EKS2	Erkin-Say SNR=17	6.58	25	P	Pn	22 04 23.6	+1.0
KZA	Kyzart SNR=6.3	6.70	36	P	Pn	22 04 24.5	+0.1
AAK	Ala-Archa 7.9nm,0.3s	6.82	30	⇑Pn	Pn	22 04 26.7	+1.0
AAK	4.4nm,0.5s			⇓Sn	S	22 05 44.1	-0.6
AAK	Ala-Archa SNR=8.8	6.82	30	P	Pn	22 04 26.8	+1.1
KBK	Karagaybulak SNR=6.7	7.02	32	P	Pn	22 04 29.3	+1.1
CHMS	Chumysh SNR=5.6	7.23	29	P	Pn	22 04 32.0	+1.3
USP	Ospenovka SNR=12	7.36	27	P	Pn	22 04 33.3	+0.9
TKM2	Tokmak 2 3.0nm,0.5s	7.52	34	⇑Pn	Pn	22 04 34.6	+0.1
TKM2	3.4nm,0.9s			⇓Sn	S	22 06 01.3	+0.5
TKM2	Tokmak 2 SNR=14	7.52	34	P	Pn	22 04 35.0	+0.4
PDGK	Podgornoye 3.0nm,0.5s	9.81	45	⇓Pn	Pn	22 05 04.1	+0.6
PDGK	1.1nm,0.4s			⇑Sn	S	22 07 03.4	+9.5
AB31	Akbulak array 0.1nm,0.3s,baz=164,slow=12,SNR=7.1	14.44	333	P	P	22 06 11.3	+11
GKN	Gorkha 12nm,0.2s	15.17	121	eP	Pn	22 06 09.7	+0.1
KKN	Kakani 12nm,0.4s	15.75	120	eP	P	22 06 15.6	+0.1
PKIN	Phulchoki 4.9nm,0.2s	15.96	121	eP	Pn	22 06 18.3	-0.9
PKI	Pulchoki 5.3nm,0.3s	15.97	121	eP	Pn	22 06 18.7	-0.7

IDC 28 22:11:41.7±59.0**, 23°.42S**×**176°.67W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/28**, mbtmp3.9**/3**, Error ellipse: s-maj=1083.0km s-min=168.1km az=88.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 0.5nm,0.3s,baz=102,slow=9.3,SNR=2.4	37.73	248	P	P	22 18 58.1	-1.2
ASAR	Alice Springs 0.7nm,0.4s,baz=93,slow=7.2,SNR=12	45.12	259	P	P	22 20 00.3	+0.2
WRA	Warramunga Arr 1.1nm,0.4s,baz=99,slow=8.2,SNR=15	45.49	265	P	P	22 20 03.7	+0.6

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*TAP **28** 22:31:50.9, 21°.45N×122°.10E, h37^{km}±2^{km}, ML3.1, D*

*JMA **28** 22:31:52.2±0.4, 21°.71N×121°.83E, h132^{km}, M2.6*

ISC 28 22:31:49.8±2.6**, 21°.4N**±0°.1×**122°.09E**±0°.04**, h18^{km}**±8^{km}**, n42, σ1^{s}.13**/62**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu baz=320	0.82	322	P	Pg	22 32 05.7	-0.1
LAY	baz=320			S	Sg	22 32 16.1	-0.5
TSEB	Hengchuen, Pin baz=292	1.22	295	eS	Sb	22 32 29.2	+1.6
TWKBT	Hengchun baz=293	1.31	295	eP	Pn	22 32 13.4	+0.2
TWKBT	baz=293			eS	Sb	22 32 30.7	+0.5
TWK1	Hengchun baz=293	1.31	295	P	Pn	22 32 12.8	-0.5
TWK1	baz=293			S	Sb	22 32 30.3	-0.2
HEN	Hengchun baz=304	1.40	296	eS	Sb	22 32 32.7	-0.2
TAW	Tawu baz=310	1.47	311	eP	Pn	22 32 14.7	-0.6
EAST	Anshuo baz=320	1.52	311	eP	Pn	22 32 15.2	-1.0
EAST	baz=320			eS	Sn	22 32 35.0	-0.5
ECL	Taimali baz=318	1.60	319	eP	Pn	22 32 16.1	-1.1
ECL	baz=318			eS	Sn	22 32 35.6	-1.7
SCZT	Fangliau baz=314	1.68	306	eP	Pn	22 32 18.2	0.0
SCZT	baz=314			eS	Sn	22 32 39.1	-0.2
TWGBT	Beinan baz=312	1.70	327	eS	Sn	22 32 39.3	-0.7
TWG	Pinlang baz=312	1.71	327	eS	Sn	22 32 39.8	-0.3
MASBT	Mashibuluo baz=311	1.82	312	eP	Pn	22 32 19.7	-0.5
MASBT	baz=311			eS	Sn	22 32 42.9	+0.1
CHKT	Chengkung baz=347	1.83	339	eS	Sn	22 32 40.7	-2.3
SLGT	Liugui baz=319	2.08	320	eP	Pn	22 32 24.6	+0.7
TWF1	Yuli baz=349	2.08	340	eP	Pn	22 32 24.1	+0.2
YULB	Yu-li baz=348	2.12	340	eP	Pn	22 32 23.6	-0.9
YULB	baz=348			eS	Sn	22 32 50.4	0.0
HGSD	Ruisui baz=351	2.18	344	eP	Pn	22 32 25.0	-0.2
HGSD	baz=351			eS	Sn	22 32 52.4	+0.7
WTP	Ta-pu baz=323	2.30	324	eP	Pn	22 32 28.1	+1.3
CHN1	Nanshi baz=320	2.30	321	eP	Pn	22 32 28.0	+1.1
CHN1	baz=320			eS	Sn	22 32 56.3	+1.6
TPUB	Ta-pu baz=324	2.33	325	eP	Pn	22 32 28.4	+1.1
VWDT	VWDT baz=339	2.51	340	eP	Pn	22 32 30.1	+0.4
VWDT	baz=339			eS	Sn	22 32 58.6	-1.2
CHN5	Tsauling baz=314	2.55	330	eP	Pn	22 32 31.8	+1.3
TYC	Yuchr baz=336	2.75	336	eP	Pn	22 32 34.3	+1.3
CHGB	Renai baz=352	2.79	343	eP	Pn	22 32 34.9	+1.1
NACB	Ninganchiao baz=350	2.81	351	eP	Pn	22 32 34.1	+0.3
WHF	Hehuan Shan baz=354	2.84	345	eP	Pn	22 32 34.9	+0.1
TDCB	Techi baz=351	2.98	343	eP	Pn	22 32 37.0	+0.7
NANB	Nanao baz=354	3.04	354	eP	Pn	22 32 37.8	+0.8
NANB	baz=354			eS	Sn	22 33 11.4	-1.5
HATJ	Hateruma jima	3.09	31	P	Pn	22 32 38.9	+1.2
HATJ				eS	Sn	22 33 13.8	-0.5
JYNG	Yonagunijimaku	3.15	14	P	Pn	22 32 38.8	+0.3
JYNG				S	Sn	22 33 13.1	-2.5
YOJ	Yonaguni jima baz=5.0	3.17	15	eP	Pn	22 32 38.8	-0.1
YOJ	baz=5.0			eS	Sn	22 33 15.8	-0.5
YOJ	Yonaguni jima	3.17	15	P	Pn	22 32 39.7	+0.8
IRIF	Iriomote-Funau	3.30	27	P	Pn	22 32 41.9	+1.3
IRIF				eS	Sn	22 33 18.8	-0.6
YHNB	Yeheng baz=357	3.33	349	eP	Pn	22 32 42.9	+1.8
NSK	Sanguang baz=357	3.34	349	eP	Pn	22 32 43.8	+2.6
JKRS	Kuro-shima	3.34	32	P	Pn	22 32 42.6	+1.4
JKRS				eS	Sn	22 33 19.7	-0.8
JIJ	Ishigaki jima	3.52	32	P	Pn	22 32 44.8	+1.2
JIJ				eS	Sn	22 33 23.4	-1.3
TIPB	Shuangxi baz=5.0	3.57	356	eP	Pn	22 32 46.4	+2.0
TIPB	baz=5.0			eS	Sn	22 33 26.4	+0.2
JISG	Ishigakijimahi	3.79	32	P	Pn	22 32 47.9	+0.6
JISG				eS	Sn	22 33 30.3	-1.1
JTJ	Tarama	4.03	36	S	Sn	22 33 35.3	-2.2
JIRB	Irabujima	4.45	39	eS	Sn	22 33 47.0	-0.7
JIKM	Ikemajima	4.56	39	eS	Sn	22 33 49.3	-1.3

MAN 28 22:35:43.6, 13°.22N×**121°.01E, h28^{km}, mb3.5, ML2.2, MS1.6, 1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.29	350	⇓eP	Pn	22 35 52.3	+0.3
PGP				eS	Sn	22 35 59.5	+2.0
SJMP	San Jose	0.76	172	eP	Pb	22 35 58.2	0.0
SJMP				eS	Sn	22 36 10.2	+1.3
TGY	Tagaytay City	0.88	356	i P	Pn	22 35 59.4	-0.8
LUBP	Lubang	0.90	305	eP	Pn	22 35 56.9	-3.5
LUBP				eS	Sb	22 36 09.9	-2.4
OTRP	Odiongan	1.30	130	eP	Pn	22 36 05.9	-0.1
OTRP				eS	Sn	22 36 22.9	+0.4

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*ISCJB **28** 22:37:54.5±0.2, 17°.87S±0°.07×178°.30W±0°.07, h590^{km}, mb4.2/89, Error ellipse: s-maj=11.0km s-min=5.3km az=44.4*

*NEIC **28** 22:37:55.6±1.3, 17°.87S×178°.30W, h592^{km}±9^{km}, mb4.3/80, Error ellipse: s-maj=30.2km s-min=16.2km az=131.0*

*IDC **28** 22:37:59.4±2.1, 18°.05S×178°.19W, h644^{km}±27^{km}, mb3.5/15, mb1 3.7/16, mb1mx3.5/28, mbtmp4.4/16, Error ellipse: s-maj=23.0km s-min=10.7km az=150.0*

ISC 28 22:37:55.4±0.6**, 17°.9S**±0°.1×**178°.2W**±0°.1**, h590^{km}, n180, σ0^{s}.87**/179**, mb4.2**/89**, 15C-13D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac 0.5nm,0.3s,baz=78,slow=20,SNR=4.0	15.02	251	P	P	22 41 05.2	+1.0
KNTN	Kanton 81nm,0.8s	16.29	24	eP	P	22 41 16.6	+0.6
OUZ	Omahuta 38nm,1.5s	18.76	201	eP	P	22 41 40.5	+2.4
QRZ	Quartz Range 29nm,1.1s	24.23	197	eP	P	22 42 26.8	-0.4
RPZ	Rata Peaks 3.2nm,0.4s,baz=10,slow=11,SNR=5.2	27.32	197	P	P	22 42 53.2	-1.0
RPZ	Rata Peaks 12nm,1.0s	27.32	197	eP	P	22 42 53.7	-0.5
LBZ	Lake Benmore 24nm,1.4s	28.18	198	eP	P	22 43 00.6	-1.2
WKZ	Wanaka 30nm,1.3s	28.94	199	eP	P	22 43 06.7	-1.5
MLZ	Mavora Lakes 38nm,1.4s	29.70	200	eP	P	22 43 14.8	0.0
DCZ	Deep Cove 26nm,1.4s	30.11	201	eP	P	22 43 17.8	-0.5
COEN	Coen 21nm,1.3s	37.29	270	eP	P	22 44 21.5	+2.6
STKA	Stephens Creek 3.8nm,0.7s,baz=75,slow=4.6,SNR=6.9	38.82	241	P	P	22 44 31.9	+0.9
BBOO	Buckleboo 36nm,1.3s	43.59	241	eP	P	22 45 09.0	+0.3
WB2	Warramunga Arr 4.8nm,0.9s	44.81	259	eP	P	22 45 18.5	+0.2
WRAB	Tennant Creek 5.2nm,1.1s	44.81	259	eP	P	22 45 18.0	-0.3
WRA	Warramunga Arr 1.8nm,0.4s,baz=89,slow=7.6,SNR=35	44.83	259	P	P	22 45 18.9	+0.5
WRA	0.8nm,0.5s,baz=82,slow=6.1,SNR=2.7			PcP	PcP	22 46 46.3	-1.0
WRA	0.8nm,0.9s,baz=96,slow=12,SNR=3.6			S	S	22 51 10.0	-4.0
AS31	Alice Springs 3.7nm,1.2s	44.98	254	eP	P	22 45 20.7	+1.2
ASAR	Alice Springs 3.7nm,0.4s,baz=91,slow=8.1,SNR=60	44.98	254	P	P	22 45 20.6	+1.0
ASAR	1.7nm,0.5s,baz=99,slow=4.2,SNR=9.9			PcP	PcP	22 46 47.4	-0.4
ASAR	1.8nm,0.7s,baz=90,slow=15,SNR=16			S	S	22 51 14.4	-1.8
FORT	Forrest 21nm,0.8s	50.20	245	eP	P	22 45 58.1	-0.1
PSA00	Pilbara Seismi 18nm,1.3s	58.10	255	eP	P	22 46 53.9	+0.1
MJAR	Matsushiro Arr 3.3nm,0.6s,baz=160,slow=5.9,SNR=8.1	67.98	323	P	P	22 47 56.8	+0.1
MAT	Matsushiro	67.98	323	P	P	22 47 57.4	+0.7
ADK	Adak 72nm,1.4s	69.46	1	eP	P	22 48 05.2	0.0
ATKA	Atka Island 40nm,1.1s	69.86	3	eP	P	22 48 06.7	-0.8
NIKH	Nikolski High 120nm,1.2s	71.00	6	eP	P	22 48 14.7	+0.4
PETK	Petropavlovsk- 7.2nm,0.6s,baz=118,slow=8.0,SNR=11	73.68	345	P	P	22 48 30.1	+0.4
SDPT	Sand Point 14nm,0.6s	74.46	10	eP	P	22 48 33.5	-0.5
KSRS	Korea Array 0.8nm,0.5s,baz=136,slow=5.7,SNR=3.5	74.79	318	P	P	22 48 37.8	+1.5
CHGN	Chignik 9.3nm,0.8s	75.74	11	eP	P	22 48 40.5	-0.6
USRK	Ussuriysk Ar. 0.9nm,0.6s,baz=188,slow=3.2,SNR=4.2	76.68	326	P	P	22 48 48.1	+1.5
OHAK	Old Harbor 9.1nm,0.6s	77.64	14	eP	P	22 48 51.6	+0.2
ISA	Isabella, Lake 9.7nm,0.9s	77.65	46	eP	P	22 48 52.9	+0.8
CMB	Columbia Colle 5.2nm,1.0s	77.68	43	eP	P	22 48 52.7	+0.5
KDAK	Kodiak Island 9.4nm,0.9s	78.31	14	eP	P	22 48 55.4	+0.4
OMMB	Old Mammoth Mi 5.7nm,1.2s	78.36	44	eP	P	22 48 57.3	+1.1
WAKR	Walker 8.6nm,0.9s	78.56	43	eP	P	22 48 58.0	+1.0
YERR	Yerington 12nm,0.9s	78.95	43	eP	P	22 49 00.3	+1.1
YERR				epP	pwP	22 51 04.0	-1.0
NVAR	Mina Array Bea 2.8nm,0.7s,baz=222,slow=8.9,SNR=13	79.26	44	P	P	22 49 01.0	+0.2
LDFC	Landfair 8.9nm,1.0s	79.69	48	eP	P	22 49 03.8	+0.7
TPNV	Topopah Spring 3.0nm,0.9s	79.85	46	eP	P	22 49 04.6	+0.7
MOD	Modoc Plateau 6.0nm,0.8s	79.93	40	eP	P	22 49 04.9	+0.8
PINE	Pine Mountain 16nm,0.9s	80.64	38	eP	P	22 49 08.9	+1.1
SVW2	Sparrevohn 3.0nm,0.9s	80.76	11	eP	P	22 49 07.6	-0.2
R11A	Troy Canyon, C 3.6nm,1.1s	81.03	45	eP	P	22 49 10.3	+0.3
WVOR	Wild Horse Val 8.8nm,1.0s	81.25	40	eP	P	22 49 11.4	+0.4
TUC	Tucson 6.0nm,1.1s	81.52	52	eP	P	22 49 13.8	+1.3
J08A	Circle Bar Ran 10nm,1.1s	81.86	40	eP	P	22 49 14.5	+0.4
LCMT	Little Creek M 3.8nm,0.9s	81.96	47	eP	P	22 49 15.4	+0.7
X16A	Lo Mia Camp, P	82.01	50	eP	P	22 49 16.2	+1.1

	4.5nm,1.0s						
SUA	Susitna One	82.05	13	eP	P	22 49 13.9	-0.7
	7.4nm,0.7s						
KNB	Kanab	82.26	47	eP	P	22 49 17.2	+0.9
	4.0nm,0.8s						
U15A	North Rim	82.35	48	eP	P	22 49 17.6	+0.8
	8.1nm,0.8s						
GLI	Glacier Island	82.36	15	eP	P	22 49 15.7	-0.3
	16nm,0.8s						
TTA	Tatalina	82.40	10	eP	P	22 49 16.4	+0.1
	8.2nm,1.1s						
ELK	Elko	82.50	43	eP	P	22 49 17.5	+0.1
PMR	Palmer	82.51	14	eP	P	22 49 16.4	-0.2
	16nm,1.4s						
RAGM	Ragged Mountai	82.55	16	eP	P	22 49 17.0	0.0
	17nm,1.2s						
G08A	Pilot Rock	82.66	38	eP	P	22 49 18.6	+0.6
	14nm,1.4s						
GHO	Glory Hole Cre	82.72	14	eP	P	22 49 17.6	-0.3
	16nm,0.7s						
PKCU	Pink Cliffs	82.82	47	eP	P	22 49 20.2	+0.9
	13nm,1.3s						
HAWA	Hanford	82.96	37	eP	P	22 49 20.1	+0.8
	6.7nm,0.9s						
SCM	Sheep Creek Mo	83.14	14	eP	P	22 49 19.7	-0.3
	14nm,0.7s						
MTPU	Mount Pierson	83.20	47	eP	P	22 49 22.5	+1.3
	3.3nm,0.9s						
MFID	Camas Ranch	83.52	41	eP	P	22 49 22.9	+0.5
	4.8nm,1.0s						
D08A	Wollman Farm,	83.68	36	eP	P	22 49 23.2	+0.3
	6.3nm,0.9s						
BALM	Baldy	83.72	17	eP	P	22 49 23.1	+0.2
	10nm,0.9s						
KTH	Kantishna Hill	83.89	12	eP	P	22 49 22.2	-1.4
	6.9nm,0.8s						
F10A	Beach Ranch, E	84.05	38	eP	P	22 49 24.8	-0.1
	6.1nm,0.8s						
PSI	Prapat	84.07	275	P	P	22 49 25.4	-0.3
	2.6nm,0.5s,baz=52,slow=3.2,SNR=3.9						
RND	Reindeer	84.18	13	eP	P	22 49 24.6	-0.5
	14nm,0.7s						
MCK	McKinley	84.46	13	eP	P	22 49 26.0	-0.4
	17nm,1.2s						
TMUT	Trail Mountain	84.47	46	eP	P	22 49 28.2	+0.9
	2.5nm,0.7s						
HLID	Hailey	84.47	41	eP	P	22 49 27.9	+0.8
	2.8nm,0.8s						
PAX	Paxson	84.56	14	eP	P	22 49 26.4	-0.6
	3.7nm,0.9s						
SRU	San Rafael Swe	84.85	46	eP	P	22 49 29.3	+0.3
	2.3nm,0.7s						
HYT	Haines Junctio	84.95	19	eP	P	22 49 29.5	+0.6
	5.8nm,1.0s						
WRH	Wood River Hil	85.28	13	eP	P	22 49 29.7	-0.6
	9.9nm,1.0s						
RIDG	Independent Ri	85.37	14	eP	P	22 49 30.7	-0.1
	6.9nm,0.9s						
DOT	Dot Lake	85.47	15	eP	P	22 49 31.1	-0.2
	6.9nm,1.1s						
CCB	Clear Creek Bu	85.50	13	eP	P	22 49 30.3	-1.0
	15nm,1.3s						
ILAR	Eielson Array	85.80	13	P	P	22 49 31.7	-1.1
	2.2nm,0.4s,baz=221,slow=4.8,SNR=40						
ILB	Eielson Array	85.80	13	eP	P	22 49 31.9	-0.8
	4.1nm,0.6s						
TX31	Lajitas Ar. Si	85.81	58	eP	P	22 49 34.8	+1.0
	3.9nm,0.9s						
TXAR	Lajitas Array	85.81	58	P	P	22 49 34.2	+0.5
	3.2nm,0.8s,baz=219,slow=6.4,SNR=38						
MCMT	McKenzie Canyo	86.08	40	eP	P	22 49 35.6	+0.7
DLMT	Dillon	86.50	40	eP	P	22 49 36.8	+0.1
	4.9nm,1.0s						
PRP	Porcupine Dome	86.74	13	eP	P	22 49 34.3	-3.1
	12nm,0.8s						
DAWY	Dawson	86.99	16	eP	P	22 49 38.2	-0.2
	7.8nm,1.4s						
EGAK	Eagle	87.12	15	eP	P	22 49 39.0	0.0
	5.8nm,1.0s						
PD31	Pinedale Array	87.19	43	eP	P	22 49 40.0	-0.2
	1.9nm,0.9s						
PDAR	Pinedale Array	87.19	43	P	P	22 49 40.0	-0.2
	1.8nm,0.6s,baz=209,slow=2.7,SNR=16						
BOZ	Bozeman (W)	87.21	40	eP	P	22 49 40.5	+0.5
YHH	Holmes Hill	87.31	41	eP	P	22 49 42.9	+2.2
	4.9nm,1.3s						
HHC	Hu-ho-hao-te	87.38	314	eP	P	22 49 41.8	+0.9
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,49nm,6.9s						
RLMT	Red Lodge	88.46	41	eP	P	22 49 47.2	+1.2
	comp=Z,2.6nm,0.8s						
CMAR	Chiang Mai Arr	89.05	290	P	P	22 49 48.3	-0.7
	comp=Z,0.9nm,0.3s,baz=96,slow=2.5,SNR=5.2						
EPYK	Eagle Plains	89.51	15	eP	P	22 49 50.0	-0.1
	comp=Z,6.5nm,0.9s						
INK	Inuvik	91.79	15	eP	P	22 49 58.5	-2.0
	comp=Z,6.8nm,1.1s						
YKA	Yellowknife Ar	94.21	25	P	P	22 50 10.9	-0.8
	comp=Z,0.7nm,0.5s,baz=249,slow=4.7,SNR=3.0						
MKAR	Makanchi Array	109.24	314	PKiKP	PKiKP	22 55 16.8	-2.3
	comp=Z,0.4nm,0.5s,baz=128,slow=0.9,SNR=8.2						
ARCES	ARCESS Array B	126.30	350	PKP	PKPdf	22 55 49.8	-1.3
	comp=Z,1.1nm,0.6s,baz=48,slow=1.8,SNR=9.8						
GEYT	Alibeck	127.17	304	PKP	PKPdf	22 55 52.4	-1.4
	comp=Z,1.8nm,0.9s,baz=217,slow=7.2,SNR=3.7						
FINES	FINESS Array B	133.20	344	PKP	PKPdf	22 56 02.1	-2.3
	comp=Z,0.7nm,0.7s,baz=93,slow=2.4,SNR=7.5						
NOA	NORSAR Array B	136.35	353	PKP	PKPdf	22 56 10.9	+0.5
	comp=Z,1.2nm,1.0s,baz=344,slow=2.3,SNR=3.0						
AKASG	Malin Array Be	140.61	333	PKhKP	PKPpre	22 56 10.9	
	comp=Z,0.2nm,0.3s,baz=38,slow=4.7,SNR=5.4						
MILM	Milestii Mici	143.47	328	⇑iP	PKPab	22 56 21.8	-0.5
OJC	Ojcow	144.63	340	ePKPdf	PKPdf	22 56 25.4	-0.1
TLCR		144.64	326	⇑iP	PKPbc	22 56 26.2	+0.2
BUR08	Bucovina Ar. S	144.65	332	ePKPdf	PKPab	22 56 26.6	-0.4
BURAR	Bucovina Array	144.66	332	⇑iP	PKPab	22 56 27.2	+0.2
BIZ	Bicaz	144.76	331	⇑iP	PKPab	22 56 27.2	0.0
TESR	Tescani	144.81	330	⇑iP	PKPbc	22 56 26.6	0.0
KOLS	Kolonicke sedl	144.84	336	ePKP	PKPbc	22 56 26.8	+0.2
BR131	Keskin Array S	144.88	315	ePKPdf	PKPbc	22 56 27.0	-0.2
BRTR	Keskin Array B	144.88	315	PKPbc	PKPdf	22 56 26.6	+0.2
	comp=Z,3.7nm,0.7s,baz=126,slow=4.2,SNR=23						
CFR	Carcaliu	145.00	327	⇓iP	PKPdf	22 56 25.9	-0.3
VRI	Vrincioaia	145.24	329	⇓iP	PKPbc	22 56 27.6	-0.3
PLOR	Plostina	145.29	329	⇑iP	PKPdf	22 56 27.4	+0.6
ANTO	Ankara	145.38	316	ePKPbc	PKPbc	22 56 28.9	+0.3
TRPA	Tarpa	145.38	335	⇑iP	PKPbc	22 56 28.3	+0.1
OSTC	Ostas	145.40	344	ePKP	PKPbc	22 56 28.2	0.0
CHVC	Chvalec	145.41	344	ePKP	PKPbc	22 56 28.1	-0.1
HARR	Harsova	145.44	326	⇑iP	PKPbc	22 56 28.7	+0.3
ARCR	ARCALIA	145.44	332	⇓iP	PKPbc	22 56 28.8	+0.4
TLB	Topalu	145.45	326	⇓iP	PKPbc	22 56 28.5	+0.1
CLL	Collm	145.46	348	ePKPdf	PKPbc	22 56 27.9	-0.4
CLL	Collm	145.46	348	⇓iPKPbc	PKPbc	22 56 27.9	-0.4
	comp=Z,17nm,0.9s						
OKC	Ostrava-Krasne	145.49	341	ePKP	PKPbc	22 56 28.3	-0.1
UPC	Upice	145.50	344	ePKP	PKPbc	22 56 28.6	+0.2
DPC	Dobruska-Polom	145.56	343	ePKP	PKPbc	22 56 28.7	0.0
LANS	Liptovska Anna	145.66	339	ePKP	PKPab	22 56 29.9	-0.8
BRG	Berggiesshubel	145.67	346	i PKP	PKPbc	22 56 28.6	-0.3
	comp=Z,7.2nm,0.7s						
MORC	Moravsky Berou	145.73	342	⇓iP	PKPbc	22 56 29.0	-0.2
MORC	Moravsky Berou	145.73	342	ePKP	PKPbc	22 56 28.6	-0.6
DOPR	Dopca	145.81	330	⇓iP	PKPbc	22 56 29.8	+0.3
PVCC	Panska Ves	145.84	345	ePKP	PKPbc	22 56 29.4	0.0
MLR	Muntele Rosu	145.89	329	ePKPdf	PKPdf	22 56 26.7	-1.3
MLR	Muntele Rosu	145.89	329	⇓iP	PKPbc	22 56 29.4	-0.5
PRU	Pruhonice	146.35	345	ePKP	PKPbc	22 56 30.5	-0.3
GOPC	GO Pecny, Ondr	146.36	345	ePKP	PKPbc	22 56 30.4	-0.5
VOIR		146.36	330	⇓iP	PKPbc	22 56 31.1	0.0
DRGR		146.38	334	⇑iP	PKPbc	22 56 31.1	0.0
VYHS	Vyhne	146.44	339	ePKP	PKPbc	22 56 31.1	-0.1
VYHS				e		22 56 34.5	
JAVC	Velka Javorina	146.50	341	ePKP	PKPbc	22 56 32.1	+0.7
ARR	Arges	146.61	330	⇑iP	PKPbc	22 56 32.5	+0.7
KRUC	Moravsky	146.70	342	ePKP	PKPbc	22 56 31.1	-0.7
TREC	Trest	146.75	344	ePKP	PKPbc	22 56 31.7	-0.3
SMOL	Smolenice	146.88	341	ePKP	PKPbc	22 56 32.8	+0.5
SMOL				e		22 56 36.6	
MODS	Modra-Piesok	147.05	341	ePKP	PKPbc	22 56 32.3	-0.5
SIRR	Siria	147.24	334	⇑iP	PKPbc	22 56 33.4	+0.1
KHC	Kasperske Hory	147.38	346	ePKPbc	PKPbc	22 56 33.4	-0.2
KHC	Kasperske Hory	147.38	346	ePKP	PKPbc	22 56 33.2	-0.4
KHC				ex	x	22 56 38.0	
GZR	Gura Zlata	147.45	332	⇑iP	PKPbc	22 56 33.1	-0.9
GEC2	GERESS Array S	147.62	345	ePKPbc	PKPbc	22 56 34.0	-0.3
GERES	GERESS Array B	147.62	345	PKPbc	PKPbc	22 56 33.5	-0.9
	comp=Z,3.4nm,0.6s,baz=26,slow=3.2,SNR=38						
ELND	Elena	147.73	326	⇑iP	PKPbc	22 56 34.7	0.0
BZS	Buzias	147.78	333	⇓iP	PKPbc	22 56 34.3	-0.4
CONA	Conrad Observa	147.88	342	ePKiKP	PKPbc	22 56 35.0	-0.1
	comp=Z,3.1nm,0.7s						
ISP	Isparta	147.94	314	⇓iP	PKPbc	22 56 34.2	-1.3
HERR	Herculane	148.00	332	⇓iP	PKPbc	22 56 34.8	-0.5
PLVB	Pleven	148.06	328	⇓iP	PKPbc	22 56 35.3	-0.2
MOA	Molln	148.40	344	ePKiKP	PKPbc	22 56 35.8	-0.4
	comp=Z,4.4nm,1.2s						
SOKA	Soboth	149.25	342	ePKiKP	PKPbc	22 56 37.7	-0.7
	comp=Z,4.1nm,0.9s						
VTS	Vitosha	149.32	328	ePKPbc	PKPbc	22 56 38.5	-0.3
VTS	Vitosha	149.32	328	⇑iP	PKPbc	22 56 38.7	-0.1
KBA	Koelnbreinsper	149.35	344	ePKPbc	PKPbc	22 56 37.3	-1.5
	comp=Z,3.8nm,0.5s						
WATA	Walderalm	149.52	347	i PKiKP	PKPbc	22 56 38.6	-0.5
	comp=Z,3.0nm,0.6s,SNR=7.6						
OBKA	Obir	149.54	342	ePKPbc	PKPbc	22 56 38.2	-0.9
	comp=Z,2.9nm,0.8s						
RETA	Reutte	149.55	348	ePKiKP	PKPbc	22 56 38.7	-0.4
	comp=Z,1.9nm,0.6s						
WTTA	Wattenberg	149.58	347	i PKiKP	PKPbc	22 56 38.8	-0.5
	comp=Z,10nm,0.6s,SNR=5.4						
MOTA	Moosalm	149.62	347	i PKiKP	PKPbc	22 56 38.8	-0.6
	comp=Z,5.3nm,0.9s,SNR=5.0						
MYKA	Terra Mystica	149.69	344	ePKPbc	PKPbc	22 56 38.3	-1.1
	comp=Z,4.0nm,0.6s						
SQTA	Sankt Quirin	149.71	347	ePKiKP	PKPbc	22 56 39.0	-0.6
	comp=Z,6.6nm,0.7s						
ABTA	Abfaltersbach	149.86	345	ePKPbc	PKPbc	22 56 38.8	-1.1
	comp=Z,7.1nm,0.6s,SNR=7.5						
DAVA	Damuels	149.91	349	ePKiKP	PKPbc	22 56 40.0	0.0
	comp=Z,3.8nm,0.6s						
FETA	Feichten	150.00	348	i PKiKP	PKPbc	22 56 39.8	-0.5
	comp=Z,5.0nm,0.8s						
BLY	Banja Luka	150.25	338	ePKPbc	PKPbc	22 56 40.6	-0.1
BLY	Banja Luka	150.25	338	⇑iP	PKPbc	22 56 40.7	0.0
FUORN	Ofenpass-Fuorn	150.48	348	ePKPbc	PKPbc	22 56 41.5	0.0
KEST	Kesra	160.98	341	PKPab	PKPab	22 57 36.0	-0.1
	comp=Z,1.5nm,0.6s,baz=104,slow=9.0,SNR=2.9						

KRSC 28 22:45:02.6±2.1**, 55°.25N**×**166°.20E, h38**^{km}±14^{km}**, ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.14	251	eP	Pn	22 45 09.3	-3.6
BKI				eS	Sn	22 45 14.6	-7.8
KBTR	Krutoberegovo	2.14	298	eP	Pn	22 45 36.1	+0.4
MKZ	Mys Kozlova	2.67	257	eS	Sn	22 46 18.5	+4.4
SPN	Mys Shipunski	4.22	242	eP	Pn	22 46 07.1	+2.8
SPN				eS	Sn	22 46 56.2	+4.0
SDLR	Sedlovina	4.72	248	eP	Pn	22 46 16.9	+5.6
SDLR				eS	Sn	22 47 10.2	+5.4
SMAR	Somma	4.77	248	eP	Pn	22 46 17.6	+5.5
KRER	Koryakskii	4.78	249	eP	Pn	22 46 17.6	+5.4
AVH	Avacha	4.80	249	eP	Pn	22 46 17.7	+5.3
AVH				eS	Sn	22 47 13.4	+6.6
KRX	Arik	4.81	250	eP	Pn	22 46 17.7	+5.2
GNL	Ganaly	5.06	255	eP	Pn	22 46 21.9	+5.9
KRMR	Karymshinskiy	5.33	246	eP	Pn	22 46 23.4	+3.8
KRMR				eS	Sn	22 47 24.6	+4.9
KDTR	Khodutka, Kamc	5.94	238	eS	Sn	22 47 38.3	+3.7

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*ISCJB **28** 23:14:18.0±0.1, 17°.83S±0°.04×178°.64W±0°.04, h579^{km}, mb4.5/219, Error ellipse: s-maj=6.4km s-min=3.3km az=146.1*

*NEIC **28** 23:14:19.9±1.2, 17°.83S×178°.59W, h589^{km}±6^{km}, mb4.5/240, Error ellipse: s-maj=15.4km s-min=12.5km az=143.0*

*IDC **28** 23:14:20.9±2.1, 17°.93S×178°.56W, h598^{km}±23^{km}, mb3.8/12, mb1 4.1/13, mb1mx3.8/22, mbtmp4.8/13, Error ellipse: s-maj=24.8km s-min=11.8km az=147.0*

ISC 28 23:14:18.9±0.3**, 17°.84S**±0°.07×**178°.58W**±0°.06**, h579**^{km}**, n264, σ0^{s}.72**/267**, mb4.5**/219**, 2C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	8.30	100	eP	P	23 16 21.7	+1.2
MARNC	Mare, Loyalty	13.12	252	eP	P	23 17 10.1	+1.0
PINNC	Pines Island,	13.95	248	eP	P	23 17 17.9	+0.4
DZM	Mont Dzumac	14.70	251	P	P	23 17 25.2	+0.3
	1.5nm,0.3s,baz=82,slow=17,SNR=14						
KNTN	Kanton	16.42	25	eP	P	23 17 40.0	-1.2
	64nm,0.8s						
RAR	Rarotonga	18.04	104	eP	P	23 17 56.3	+0.4
	50nm,1.0s						
MXZ	Matakaoa Point	19.84	187	eP	P	23 18 12.5	+0.6
	43nm,1.0s						
URZ	Urewera	20.69	190	eP	P	23 18 20.0	+0.4
	32nm,1.6s						
LHI	Lord Howe Isla	24.39	232	eP	P	23 18 52.6	-0.1
	82nm,1.1s						
THZ	Tophouse	24.93	195	eP	P	23 18 58.2	+0.7
	24nm,1.4s						
RPZ	Rata Peaks	27.24	197	eP	P	23 19 16.4	-1.3
	43nm,1.6s						
FOZ	Fox Glacier	27.43	199	eP	P	23 19 19.4	+0.1
	44nm,1.4s						
PPT	Papeete	27.62	94	eP	P	23 19 21.6	+0.3
PPTF	Pamatai, Papee	27.63	94	eP	P	23 19 21.6	+0.1
	205nm,1.6s						
XMAS	Kiritimati	28.71	49	eP	P	23 19 29.0	-1.8
	47nm,1.0s						
EIDS	Eidsvold	29.14	250	eP	P	23 19 34.5	+0.1
	21nm,0.8s						
KWAJ	Kwajalein Atol	29.78	332	eP	P	23 19 38.5	-1.6
	471nm,1.4s						
ARMA	Armidale	29.84	240	eP	P	23 19 40.0	-0.5
	20nm,0.8s						
CTAO	Charters Tower	33.30	260	eP	P	23 20 09.9	-0.1
	24nm,0.8s						
CAN	Canberra	33.62	232	eP	P	23 20 13.1	+0.6
	13nm,0.7s						
PMG	Port Moresby	34.29	280	P	P	23 20 20.4	+2.1
	62nm,0.8s,baz=77,slow=7.7,SNR=11						
PMG	Port Moresby	34.29	280	eP	P	23 20 19.6	+1.3
	77nm,0.9s						
COEN	Coen	36.95	270	eP	P	23 20 41.2	+1.0
	56nm,0.9s						
TOO	Toolangi	37.09	231	eP	P	23 20 41.7	+0.5
	27nm,0.8s						
STKA	Stephens Creek	38.52	241	P	P	23 20 53.4	+0.6
	29nm,0.8s,baz=92,slow=10,SNR=42						
STKA	Stephens Creek	38.52	241	eP	P	23 20 53.5	+0.6
	8.2nm,1.0s						
MCQ	Macquarie Isla	40.47	200	eP	P	23 21 08.6	+0.6
	436nm,1.8s						
BBOO	Buckleboo	43.30	241	eP	P	23 21 30.2	-0.4
	32nm,0.8s						
KHLU	Kahalu`u	43.36	32	eP	P	23 21 31.5	+0.1
	96nm,1.1s						
AIN	Ainahou	43.40	33	eP	P	23 21 32.2	+0.5
	504nm,1.8s						
HLP	Hilina Pali	43.41	33	eP	P	23 21 31.1	-0.6
	244nm,1.1s						
HUH	Hualalai	43.47	32	eP	P	23 21 32.1	-0.3
	310nm,1.6s						
MLOA	Mauna Loa Obse	43.47	32	eP	P	23 21 32.5	-0.1
	129nm,1.2s						
KKO	Keanakako`i	43.52	33	eP	P	23 21 31.5	-1.1
	174nm,0.8s						
PUH	Pauahi	43.52	33	eP	P	23 21 32.3	-0.3
	220nm,1.5s						
UWE	Uwekahuna	43.52	33	eP	P	23 21 34.2	+1.5
	616nm,1.6s						
OBL	Observatory Le	43.52	33	eP	P	23 21 32.0	-0.7
	284nm,0.6s						
BYL	Byron's Ledge	43.53	33	eP	P	23 21 33.1	+0.4
	182nm,0.8s						
MLH	Mauna Loa	43.54	33	eP	P	23 21 32.0	-0.9
	164nm,1.4s						
HMH	Humu‘ula Sheep	43.58	32	eP	P	23 21 33.0	-0.3
	82nm,0.7s						
KEKH	Kekaha	43.68	26	eP	P	23 21 34.2	+0.6
	165nm,1.1s						
HON	Honolulu	43.84	28	eP	P	23 21 35.4	+0.5
	123nm,0.8s						
OPA	Opana	44.15	28	eP	P	23 21 36.4	-0.9
	314nm,1.9s						
HLK	Haleakala	44.17	31	eP	P	23 21 38.7	+0.9
	173nm,1.2s						
KHLH	Kahului Airpor	44.20	30	eP	P	23 21 38.0	+0.3
	224nm,1.7s						
WB2	Warramunga Arr	44.48	259	eP	P	23 21 40.0	0.0
	29nm,0.6s						
WRAB	Tennant Creek	44.48	260	eP	P	23 21 39.8	-0.1
	22nm,0.6s						
WR1	Warramunga Arr	44.49	259	eP	P	23 21 40.2	+0.2
WRA	Warramunga Arr	44.49	259	P	P	23 21 40.2	+0.2
	18nm,0.5s,baz=94,slow=8.2,SNR=208						
AS31	Alice Springs	44.65	254	eP	P	23 21 42.1	+0.8
	33nm,0.6s						
AS31				eScP	ScP	23 26 09.2	+0.4
AS31				eS	S	23 27 34.9	-1.6
ASAR	Alice Springs	44.66	254	P	P	23 21 42.1	+0.8
	134nm,0.7s,baz=88,slow=8.5,SNR=1124						
ASAR				PcP	PcP	23 23 11.2	0.0
	2.7nm,0.5s,baz=99,slow=3.9,SNR=4.3						
ASAR				ScP	ScP	23 26 09.3	+0.4
	0.8nm,0.8s,baz=96,slow=4.9,SNR=3.9						
ASAR				S	S	23 27 34.9	-1.6
	0.3nm,0.6s,baz=81,slow=16,SNR=5.0						
MTN	Manton Dam	48.64	268	eP	P	23 22 11.4	+0.1
	30nm,0.6s						
SAUI	Saumlaki	49.70	275	eP	P	23 22 18.9	-0.3
	686nm,1.1s						
FORT	Forrest	49.89	245	eP	P	23 22 19.5	-0.8
	38nm,0.6s						
FAKI	Fak Fak	50.41	281	eP	P	23 22 24.1	-0.3
	114nm,1.4s						
SOEI	Soe	55.91	270	eP	P	23 23 03.8	+0.3
	66nm,0.7s						
PSA00	Pilbara Seismi	57.77	255	eP	P	23 23 15.6	-0.4
	25nm,0.6s						
NWAO	Narrogin (SRO)	59.10	242	eP	P	23 23 24.4	-0.3
	113nm,1.8s						
LUWI	Luwuk	59.94	279	eP	P	23 23 30.8	+0.2
	83nm,1.3s						
MORW	Morawa	60.36	246	eP	P	23 23 33.0	-0.2
	65nm,1.6s						
GIRL	Giralia	62.76	253	eP	P	23 23 47.7	-1.2
	459nm,1.4s						
JAGI	Jajag, Banyuwa	65.88	269	eP	P	23 24 07.4	-1.4
	82nm,0.7s						
MJAR	Matsushiro Arr	67.76	323	P	P	23 24 20.4	+0.6
	2.3nm,0.5s,baz=166,slow=6.6,SNR=7.6						
MAJO	Matsushiro	67.76	323	eP	P	23 24 20.4	+0.6
ADK	Adak	69.45	1	eP	P	23 24 29.3	-0.2
	48nm,1.1s						
UGM	Wanagama	69.49	268	eP	P	23 24 30.6	-0.1
	1µm,1.9s						
ATKA	Atka Island	69.85	3	eP	P	23 24 32.0	+0.1
	106nm,1.5s						
YULB	Yu-li	71.60	303	eP	P	23 24 42.9	0.0
	9.4nm,1.2s						
NACB	Ninganchiao	71.75	304	eP	P	23 24 43.9	+0.2
	19nm,0.9s						
SSLB	Suanglung	72.07	303	eP	P	23 24 45.1	-0.5
	9.7nm,0.4s						
TPUB	Ta-pu	72.09	302	eP	P	23 24 45.4	-0.4
	18nm,0.6s						
UNV	Unalaska Valle	72.15	7	eP	P	23 24 44.3	-1.0
	13nm,0.8s						
YHNB	Yeheng	72.17	304	eP	P	23 24 45.0	-1.3
	31nm,1.4s						
QSPA	South Pole Qui	72.21	180	eP	P	23 24 45.5	-0.3
	5.4nm,0.8s						
KSM	Kuching	72.52	277	eP	P	23 24 49.9	+1.5
	32nm,0.8s						
PETK	Petropavlovsk-	73.58	345	P	P	23 24 54.3	+0.7
	3.0nm,0.6s,baz=121,slow=8.1,SNR=7.0						
PEA1	Petropavlovsk-	73.58	345	eP	P	23 24 54.3	+0.7
SDPT	Sand Point	74.51	11	eP	P	23 24 58.2	-0.5
	12nm,0.8s						
CHIA	Chirikof Islan	75.93	13	eP	P	23 25 06.5	-0.1
	18nm,0.6s						
MCCM	Marconi Confer	76.35	42	eP	P	23 25 09.4	+0.1
	41nm,0.9s						
USRK	Ussuriysk Ar.	76.47	326	P	P	23 25 11.6	+1.7
	0.9nm,0.5s,baz=111,slow=2.5,SNR=3.4						
USA0B	Ussuriysk Arra	76.47	326	eP	P	23 25 09.9	0.0
	38nm,2.0s						
SAO	San Andreas Ge	76.49	44	eP	P	23 25 10.8	+0.6
	9.8nm,0.8s						
PAGB	Antelope Grade	76.71	45	eP	P	23 25 12.3	+0.9
	18nm,1.5s						
KCPM	Cahto Peak	76.83	40	eP	P	23 25 12.5	+0.4
	78nm,1.4s						
SII	Sitkinak Islan	76.90	14	eP	P	23 25 12.4	+0.4
	19nm,0.7s						
KMRM	Mail Ridge	77.07	40	eP	P	23 25 13.3	0.0
	47nm,1.3s						
PASC	Pasadena Art C	77.30	48	eP	P	23 25 13.8	-0.9
	9.4nm,0.7s						
MWC	Mount Wilson	77.41	48	eP	P	23 25 15.6	+0.1
	67nm,1.9s						
OHAK	Old Harbor	77.71	14	eP	P	23 25 16.2	0.0
	9.3nm,0.8s						
ISA	Isabella, Lake	77.89	46	eP	P	23 25 18.6	+0.7
	13nm,0.8s						
CMB	Columbia Colle	77.90	43	eP	P	23 25 17.9	+0.1
	6.6nm,0.9s						
WDC	Whiskeytown Da	78.00	40	eP	P	23 25 18.7	+0.4
	19nm,1.5s						
AFDM	Forest Hills D	78.04	42	eP	P	23 25 18.5	-0.1
	5.8nm,1.0s						
ORV	Oroville	78.05	42	eP	P	23 25 19.1	+0.6
	4.3nm,0.6s						
PFO	Pinyon Flats O	78.23	49	eP	P	23 25 20.7	+0.9
	4.7nm,1.0s						
KDAK	Kodiak Island	78.38	14	eP	P	23 25 20.5	+0.7
	11nm,0.9s						
MDPB	Devils Postpil	78.54	44	eP	P	23 25 21.6	0.0
	12nm,0.9s						
YBH	Yreka Blue Hor	78.58	39	eP	P	23 25 22.0	+0.6
	7.1nm,0.8s						
OMMB	Old Mammoth Mi	78.58	44	eP	P	23 25 22.1	+0.2
	13nm,1.5s						
WAKR	Walker	78.78	43	eP	P	23 25 23.1	+0.3
	9.9nm,0.9s						
DAC	Darwin (Calif)	78.82	46	eP	P	23 25 23.7	+0.7
BEKR	Beckworth	78.95	42	eP	P	23 25 23.9	+0.3
	20nm,1.4s						
HUMO	Hull Mountain	78.95	38	eP	P	23 25 24.1	+0.7
	20nm,1.4s						
PNTR	Pine Nut	79.00	43	eP	P	23 25 24.7	+0.8
	16nm,0.9s						
GLA	Glamis	79.14	50	eP	P	23 25 25.4	+0.8
	5.9nm,0.8s						
QIZ	Qiongzhong	79.28	294	eP	P	23 25 25.7	+0.1
	197nm,1.8s						
RYN	Ryan	79.45	44	eP	P	23 25 26.7	+0.5
	5.9nm,1.0s						
PAHR	Pah Rah Range	79.48	42	eP	P	23 25 26.1	-0.3
	6.5nm,0.8s						
NVAR	Mina Array Bea	79.49	44	P	P	23 25 27.3	+0.8
	6.0nm,0.8s,baz=226,slow=8.6,SNR=23						
NV11	Mina Array Sit	79.59	44	eP	P	23 25 27.1	+0.1
	0.7nm,1.1s						
113A	Mohawk Valley,	79.78	51	eP	P	23 25 27.5	-0.4
	4.4nm,0.8s						
KVN	Kaiserville	79.96	43	eP	P	23 25 29.4	+0.5
	6.4nm,0.8s						
TPNV	Topopah Spring	80.09	46	eP	P	23 25 30.0	+0.3
	6.3nm,1.1s						
CNPM	China Poot	80.26	14	eP	P	23 25 30.1	+0.3
	9.3nm,1.0s						
WHN	Wuhan	80.44	306	P	P	23 25 32.3	+1.0
BRLK	Bradley Lake	80.55	14	eP	P	23 25 30.1	-1.2
	10nm,0.9s						
SHPR	Sheep Range	80.62	47	eP	P	23 25 31.8	-0.6
	4.5nm,0.9s						
H04A	Detroit Lake	80.64	37	eP	P	23 25 32.3	+0.2
	9.7nm,0.7s						
SVW2	Sparrevohn	80.81	11	eP	P	23 25 32.2	-0.3
	3.4nm,0.9s						
W13A	Hualapai Mount	80.82	49	eP	P	23 25 33.7	+0.2
	2.9nm,1.1s						
PINE	Pine Mountain	80.84	38	eP	P	23 25 34.0	+0.6
	14nm,0.8s						
DIB	Dawson Inlet,	81.14	26	eP	P	23 25 34.7	+0.3
	31nm,1.3s						
SEW	Seward	81.19	14	eP	P	23 25 33.8	-0.7
	14nm,0.9s						
R11A	Troy Canyon, C	81.26	45	eP	P	23 25 35.6	-0.1
	3.0nm,1.0s						

BMN	Battle Mountai	81.27	43	eP	P	23 25 35.7	+0.1
NLWA	Neilton Lookou	81.35	34	eP	P	23 25 36.0	+0.3
	22nm,1.3s						
WVOR	Wild Horse Val	81.46	40	eP	P	23 25 37.1	+0.5
	12nm,1.0s						
SPU	Mount Spurr	81.58	13	eP	P	23 25 35.6	-1.0
TUC	Tucson	81.79	52	eP	P	23 25 39.9	+1.5
	6.6nm,1.0s						
I07A	Izee	81.86	39	eP	P	23 25 39.0	+0.5
	7.6nm,0.8s						
RC01	Rabbit Creek A	81.99	14	eP	P	23 25 38.7	+0.1
	6.3nm,1.0s						
J08A	Circle Bar Ran	82.07	40	eP	P	23 25 39.9	+0.3
	11nm,1.0s						
LCMT	Little Creek M	82.20	47	eP	P	23 25 41.4	+1.0
	5.9nm,0.8s						
D05A	Enumclaw	82.24	35	eP	P	23 25 41.8	+1.6
	44nm,1.5s						
IPM	Ipoh	82.25	277	eP	P	23 25 40.8	-0.3
	11nm,0.7s						
X16A	Lo Mia Camp, P	82.26	50	eP	P	23 25 42.3	+1.4
	8.1nm,0.9s						
KAIM	Kayak Island	82.31	17	eP	P	23 25 40.6	+0.4
	44nm,1.1s						
BBB	Bella Bella	82.34	29	eP	P	23 25 41.4	+0.9
	36nm,1.1s						
PGC	Sidney	82.34	33	eP	P	23 25 41.5	+0.8
	19nm,1.0s						
CCUT	Cedar City	82.38	47	eP	P	23 25 42.0	+0.5
	5.8nm,0.9s						
SKT	Skwentna	82.41	13	eP	P	23 25 41.2	+0.5
	4.3nm,1.2s						
GLI	Glacier Island	82.43	15	eP	P	23 25 40.6	-0.2
	14nm,0.7s						
TTA	Tatalina	82.44	10	eP	P	23 25 41.4	+0.5
	4.7nm,1.0s						
FID	Port Fidalgo	82.47	15	eP	P	23 25 40.5	-0.6
	9.1nm,1.2s						
EYAK	Cordova Ski Ar	82.48	16	eP	P	23 25 41.2	+0.2
	6.1nm,0.7s						
KNB	Kanab	82.50	47	eP	P	23 25 42.8	+0.8
	6.0nm,0.8s						
PSUT	Pine Spring	82.53	46	eP	P	23 25 42.8	+0.6
	6.5nm,0.8s						
RAGM	Ragged Mountai	82.63	16	eP	P	23 25 42.8	+0.9
	9.1nm,1.0s						
HMT	Hamilton	82.70	16	eP	P	23 25 42.4	+0.2
	5.5nm,0.8s						
ANM	Nome	82.78	6	eP	P	23 25 43.3	+0.8
	38nm,1.0s						
SML	Sawmill	82.95	14	eP	P	23 25 43.4	0.0
	3.8nm,0.8s						
LTY	Liberty	83.01	36	eP	P	23 25 44.5	+0.4
	7.1nm,1.0s						
PKCU	Pink Cliffs	83.06	47	eP	P	23 25 46.1	+1.1
	11nm,1.0s						
PPLA	Purkeypile	83.10	12	eP	P	23 25 45.4	+1.0
	22nm,1.9s						
HAWA	Hanford	83.15	37	eP	P	23 25 44.9	+0.1
	7.6nm,0.7s						
WAX	Waxell Ridge	83.18	17	eP	P	23 25 45.0	+0.3
	22nm,1.1s						
MTPU	Mount Pierson	83.44	47	eP	P	23 25 47.9	+1.0
	5.8nm,0.9s						
CAST	Castle Rocks	83.60	12	eP	P	23 25 45.5	-1.1
	9.8nm,0.7s						
PCA	Pinnacle	83.63	18	eP	P	23 25 48.2	+1.2
	11nm,0.6s						
BCPM	Bancas Point	83.71	19	eP	P	23 25 48.8	+1.6
	36nm,1.2s						
PSI	Prapat	83.72	275	eP	P	23 25 48.5	-0.1
	10nm,0.8s						
GLB	Gilahina Butte	83.75	16	eP	P	23 25 47.7	+0.2
	7.6nm,0.7s						
BALM	Baldy	83.80	17	eP	P	23 25 48.1	+0.3
	5.5nm,0.6s						
W18A	Petrified Fore	83.83	50	eP	P	23 25 47.9	-0.7
	27nm,0.8s						
MAW	Mawson	83.87	200	P	P	23 25 47.8	-0.2
	2.7nm,0.8s,baz=142,slow=6.5,SNR=7.0						
D08A	Wollman Farm,	83.87	36	eP	P	23 25 48.9	+0.6
	8.0nm,0.9s						
CTGM	Chitina Glacie	84.03	17	eP	P	23 25 49.1	+0.1
	5.7nm,0.8s						
DUG	Dugway, Tooele	84.05	45	eP	P	23 25 49.6	0.0
	7.3nm,1.6s						
ENH	Enshi	84.10	304	eP	P	23 25 49.6	-0.3
	13nm,0.9s						
JIS	Juneau Island	84.13	22	eP	P	23 25 49.5	+0.2
	6.6nm,0.9s						
BESE	Bessie Mountai	84.19	21	eP	P	23 25 50.0	+0.3
	5.8nm,0.9s						
BGU	Big Grassy Mou	84.26	44	eP	P	23 25 52.0	+1.4
	7.8nm,1.8s						
LLLB	Lillooet	84.35	32	eP	P	23 25 50.0	-0.7
	3.9nm,0.9s						
B08A	Colville Reser	84.38	35	eP	P	23 25 50.7	-0.1
	9.1nm,0.6s						
BPAW	Bear Paw Mtn.	84.42	12	eP	P	23 25 51.1	+0.4
	3.4nm,0.9s						
NLU	North Lily Min	84.43	45	eP	P	23 25 51.4	-0.1
	4.7nm,1.1s						
PLID	Pearl Lake	84.50	39	eP	P	23 25 51.8	0.0
	2.2nm,0.8s						
ZAIG	Zacatecas	84.53	64	eP	P	23 25 52.9	+0.4
	4.9nm,1.1s						
GSI	Gunungsitoli	84.54	273	eP	P	23 25 52.4	0.0
	23nm,1.0s						
PAX	Paxson	84.63	15	eP	P	23 25 51.3	-0.5
PAX				epP	pwP	23 27 57.0	-0.6
C09A	Chrisman Ranch	84.65	36	eP	P	23 25 52.1	0.0
	6.8nm,1.0s						
SKAG	Skagway	84.69	21	eP	P	23 25 52.6	+0.5
	5.0nm,0.9s						
TMUT	Trail Mountain	84.70	46	eP	P	23 25 54.0	+1.0
	5.0nm,0.9s						
MPU	Maple Canyon	84.75	45	eP	P	23 25 52.5	-0.6
	4.1nm,0.9s						
HVU	Hansel Valley	84.84	43	eP	P	23 25 53.5	0.0
	8.1nm,1.0s						
MENT	Mentasta	85.03	15	eP	P	23 25 53.9	+0.2
	2.9nm,0.7s						
HYT	Haines Junctio	85.05	19	eP	P	23 25 53.7	-0.3
	3.9nm,1.2s						
SRU	San Rafael Swe	85.09	46	eP	P	23 25 55.1	+0.4
	4.9nm,0.8s						
TCUT	Toone Canyon	85.43	44	eP	P	23 25 56.9	+0.5
	7.7nm,0.7s						
LAZ	Ladron	85.44	52	eP	P	23 25 57.2	+0.7
LENM	Lemitar	85.47	52	eP	P	23 25 57.0	+0.3
NEW	Newport	85.55	36	eP	P	23 25 57.0	+0.5
	3.0nm,0.8s						
HWUT	Hardware Ranch	85.56	44	eP	P	23 25 56.8	-0.1
	2.6nm,0.6s						
BNM	Barren Site	85.72	52	eP	P	23 25 58.4	+0.5
WHY	Whitehorse	85.75	20	eP	P	23 25 57.4	+0.2
	6.1nm,1.3s						
LPM	Los Pinos Moun	85.79	52	eP	P	23 25 57.3	-0.9
PV14	Lion Creek, Pa	85.80	48	eP	P	23 25 58.3	+0.1
	3.0nm,0.8s						
PV19	Morning Glory	85.80	48	eP	P	23 25 58.3	+0.1
	6.1nm,1.0s						
PV17	East Wray Mesa	85.80	48	eP	P	23 25 58.9	+0.7
	4.2nm,0.9s						
PV20	West Nyswonger	85.82	48	eP	P	23 25 58.7	+0.5
	3.8nm,0.9s						
PV23	Carpenter Ridg	85.84	48	eP	P	23 25 58.5	+0.1
	5.6nm,0.8s						
ILAR	Eielson Array	85.86	13	P	P	23 25 57.0	-0.6
	1.9nm,0.4s,baz=222,slow=5.1,SNR=23						
PV04	Paradox Valley	85.89	48	eP	P	23 25 58.7	+0.1
	3.4nm,0.8s						
PV12	Saucer Basin,	85.93	48	eP	P	23 25 59.1	+0.2
	17nm,1.7s						
PV22	Blue Mesa, Par	86.04	48	eP	P	23 25 59.8	+0.5
	4.3nm,1.1s						
PV07	Paradox Valley	86.09	48	eP	P	23 25 59.5	-0.1
	9.1nm,1.6s						
XAN	Xi'an	86.09	307	eP	P	23 26 00.1	+0.7
	8.6nm,1.0s						
XAN	Xi'an	86.09	307	P	P	23 26 01.3	+1.8
XAN				pP	PcP	23 26 07.3	+6.1
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,69nm,4.7s						
TX31	Lajitas Ar. Si	86.09	58	eP	P	23 26 01.1	+1.4
	comp=Z,8.3nm,0.9s						
TXAR	Lajitas Array	86.10	58	P	P	23 26 01.2	+1.6
	comp=Z,5.7nm,0.8s,baz=219,slow=6.0,SNR=72						
ANMO	Albuquerque	86.18	52	eP	P	23 26 00.2	+0.2
	comp=Z,3.0nm,0.9s						
MCMT	McKenzie Canyo	86.29	41	eP	P	23 26 01.4	+1.0
LHMI	Lhok Sumawe	86.35	277	eP	P	23 26 00.3	-0.8
	comp=Z,78nm,1.0s						
TPAW	Teton Pass	86.85	42	eP	P	23 26 03.1	0.0
	comp=Z,6.8nm,1.0s						
REDW	Red Top Meadow	86.85	43	eP	P	23 26 03.6	+0.5
	comp=Z,9.3nm,1.0s						
SNOW	Snow King Moun	86.96	42	eP	P	23 26 04.3	+0.8
	comp=Z,9.3nm,1.0s						
LRM	Limekiln Ridge	87.03	40	eP	P	23 26 04.4	+0.6
IMW	Indian Meadow	87.05	42	eP	P	23 26 04.6	+0.6
	comp=Z,8.9nm,0.8s						
DAWY	Dawson	87.07	16	eP	P	23 26 04.0	+0.7
	comp=Z,5.7nm,1.3s						
MOOW	Moose Ponds	87.10	42	eP	P	23 26 04.9	+0.7
	comp=Z,7.1nm,0.6s						
HHC	Hu-ho-hao-te	87.11	315	eP	P	23 26 03.5	-0.7
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,76nm,6.5s						
O20A	White River Ci	87.12	46	eP	P	23 26 04.8	+0.5
	comp=Z,4.2nm,0.8s						
LOHW	Long Hollow	87.13	42	eP	P	23 26 03.4	-0.9
	comp=Z,3.7nm,0.7s						
QLMT	Earthquake Lak	87.18	41	eP	P	23 26 05.3	+0.8
FLWY	Flagg Ranch	87.28	42	eP	P	23 26 05.7	+0.7
	comp=Z,12nm,1.0s						
PDAR	Pinedale Array	87.42	43	P	P	23 26 06.2	+0.5
	comp=Z,3.3nm,0.6s,baz=226,slow=2.8,SNR=26						
YHH	Holmes Hill	87.52	41	eP	P	23 26 07.1	+0.9
	comp=Z,3.6nm,1.0s						
WALA	Waterton Lakes	87.78	37	eP	P	23 26 07.3	+0.2
	comp=Z,3.8nm,0.8s						
HRY	Holter Researc	87.83	39	eP	P	23 26 07.4	0.0
LNIG	Linares	87.94	63	eP	P	23 26 08.9	+0.6
	comp=Z,7.3nm,0.9s						
SDCO	Great Sand Dun	88.04	49	eP	P	23 26 08.9	0.0
	comp=Z,6.6nm,1.8s						
PAYG	Puerto Ayora	88.17	90	eP	P	23 26 10.1	+0.5
	comp=Z,79nm,1.2s						
RWWY	Rawlins	88.50	45	eP	P	23 26 10.6	-0.3
	comp=Z,7.4nm,1.0s						
MSTX	Muleshoe	88.58	54	eP	P	23 26 11.4	+0.2
	comp=Z,10nm,1.0s						
RLMT	Red Lodge	88.67	41	eP	P	23 26 12.3	+0.8
	comp=Z,6.1nm,1.1s						
CMAR	Chiang Mai Arr	88.71	290	P	P	23 26 13.2	+1.1
	comp=Z,3.0nm,0.8s,baz=105,slow=2.7,SNR=11						
CHTO	Chiang Mai	88.83	290	eP	P	23 26 12.9	+0.3
	comp=Z,15nm,1.7s						
SYO	Syowa Base	89.18	193⇑	eP	P	23 26 11.1	-2.1
KVTX	Kingsville	90.18	61	eP	P	23 26 19.1	+0.5
	comp=Z,51nm,0.6s						
ABTX	Abilene, Hawle	90.52	56	eP	P	23 26 19.5	-0.6
	comp=Z,6.3nm,0.9s						
SNAA	Sanae	90.67	179	P	P	23 26 19.1	-1.1
SNAA	Sanae	90.67	179	eP	P	23 26 19.5	-0.6
	comp=Z,9.2nm,1.5s						
VNA3	Neumayer Olymp	90.81	176	P	P	23 26 19.9	-0.9
VNA1	Neumayer--Stat	91.48	177	P	P	23 26 23.4	-0.4
PLCA	Paso Flores	91.49	134	eP	P	23 26 24.4	-0.2
	comp=Z,23nm,1.9s						
RSSD	Black Hills	91.63	44	eP	P	23 26 25.3	+0.1
	comp=Z,4.3nm,0.9s						
INK	Inuvik	91.86	15	eP	P	23 26 24.7	-0.7
	comp=Z,3.4nm,0.8s						
WHTX	Lake Whitney,	92.04	57	eP	P	23 26 25.1	-2.0
	comp=Z,5.8nm,0.6s						
PBA	Port Blair	92.27	281	eP	P	23 26 28.3	-0.2
YKA	Yellowknife Ar	94.34	25	P	P	23 26 35.5	-1.3
	comp=Z,0.6nm,0.5s,baz=231,slow=4.6,SNR=4.7						
YKW3	Yellowknife Ar	94.37	25	eP	P	23 26 36.5	-0.5
	comp=Z,6.7nm,0.9s						
MKAR	Makanchi Array	108.97	314	PKiKP	PKiKP	23 31 41.6	-1.7
	comp=Z,0.3nm,0.5s,baz=79,slow=2.3,SNR=2.4						
BUR08	Bucovina Ar. S	144.47	332	ePKPdf	PKPab	23 32 51.5	+0.7
BR101	Keskin Array S	144.62	315	ePKPdf	PKPbc	23 32 51.4	+0.3
BR131	Keskin Array S	144.62	315	ePKPdf	PKPab	23 32 51.5	-0.2
BRTR	Keskin Array B	144.62	315	PKP	PKPbc	23 32 51.4	+0.3
	comp=Z,1.4nm,0.4s,baz=103,slow=3.2,SNR=18						
KOLS	Kolonicke sedl	144.68	336	ePKP	PKPab	23 32 52.1	+0.7
CLL	Collm	145.37	347⇑	iPKPbc	PKPbc	23 32 53.0	+0.4
	comp=Z,3.0nm,0.6s						
MBAR	Mbarara	145.82	241	ePKPbc	PKPbc	23 32 55.4	+0.1
GEC2	GERESS Array S	147.51	345	ePKPbc	PKPbc	23 32 58.8	+0.1
GERES	GERESS Array B	147.51	345	PKPbc	PKPbc	23 32 58.8	+0.1
	comp=Z,0.6nm,0.5s,baz=26,slow=3.6,SNR=8.0						
VTS	Vitosha	149.12	328	ePKPbc	PKPbc	23 33 02.7	-0.2
BOJS	Bojanci	150.11	340	i PKPbc	PKiKP	23 33 05.8	+0.2

TRN 28 23:24:56.5, 10°.87N×62°.24W, h58^{km}, MD3.7, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
GUIV	Guiria	0.22	175	eP	Pn	23 25 05.2	-0.6
GUIV				eS	Sn	23 25 13.0	+0.5
TRN	Trinidad (W)	0.85	105	eP	Pn	23 25 12.9	+0.3
TRN				eS	Sn	23 25 24.9	+0.5
TPP	Pointe-a-Pierr	0.95	125	eP	Pn	23 25 13.9	+0.1
TPP				eS	Sn	23 25 26.8	+0.1
TBH	Brigand Hill	1.22	108	eP	Pn	23 25 16.8	-0.6
GRGR	Grenville	1.39	25	eP	Pn	23 25 19.8	+0.1
GRGR				eS	Sn	23 25 37.0	0.0
GRHS	Sauteurs	1.47	24	eP	Pn	23 25 21.5	+0.7
GRHS				eS	Sn	23 25 39.1	0.0
GRSS	Sisters	1.55	23	eP	Pn	23 25 23.1	+1.2
GRSS				eS	Sn	23 25 40.8	-0.2
TOSP	Speyside	1.73	75	eP	Pn	23 25 24.5	+0.2
TOSP				eS	Sn	23 25 45.6	+0.3
ORIV	Oritupano	2.12	213	eP	Pn	23 25 30.5	+0.9
ORIV				eS	Sn	23 25 54.1	-0.8
FCV	Fort Charlotte	2.48	23	eP	Pn	23 25 35.1	+0.6
FCV				eS	Sn	23 26 03.1	-0.5
SVB	Belmont	2.58	22	eP	Pn	23 25 36.4	+0.4
SVB				eS	Sn	23 26 05.5	-0.7
SVCV	St. Vincent, C	2.62	24	eP	Pn	23 25 36.9	+0.4
SVCV				eS	Sn	23 26 06.8	-0.3
SVV	Soufriere Volc	2.64	22	eP	Pn	23 25 37.6	+0.9
SVV				eS	Sn	23 26 06.8	-0.7
SSV	Crater Summit	2.65	23	eP	Pn	23 25 37.8	+0.8
SSV				eS	Sn	23 26 07.4	-0.7
SFAN	Fancy Village	2.71	23	eP	Pn	23 25 37.9	+0.2
SFAN				eS	Sn	23 26 08.1	-1.3
MCLT	Moule a Chique	3.10	24	eP	Pn	23 25 42.8	-0.2
MCLT				eS	Sn	23 26 17.4	-1.5
SLB	Belfond	3.17	22	eP	Pn	23 25 44.9	+0.9
SLB				eS	Sn	23 26 19.7	-0.9
SLBI	Saint Lucia, B	3.37	21	eP	Pn	23 25 46.5	-0.3
SLBI				eS	Sn	23 26 23.9	-1.7
BIM	Bigot	3.81	17	eP	Pn	23 25 54.1	+1.4
ZAM	Aeronautique	3.87	18	eP	Pn	23 25 53.8	+0.3
LPMF	Morne Lapointe	3.89	19	eP	Pn	23 25 54.2	+0.4
MVM	Montagne Vaucl	3.90	20	eP	Pn	23 25 52.2	-1.7
FDF	Fort de France	3.99	15	eP	Pn	23 25 56.3	+1.0
FDF				eS	Sn	23 26 38.5	-2.3
PML	Morne Lenard	4.03	15	eP	Pn	23 25 56.7	+1.0
GBMF	Grand Be	4.05	15	eP	Pn	23 25 57.5	+1.4
PCM	Pelee Case Pet	4.05	14	eP	Pn	23 25 56.2	+0.1
CXM	Morne La Croix	4.06	15	eP	Pn	23 25 55.4	-0.9
BAMF	Morne Balai	4.07	15	eP	Pn	23 25 59.5	+3.2
MAGL	Barre de l'ile	5.14	10	eP	Pn	23 26 12.3	+1.4

TRN 28 23:56:18.1, 10°.33N×62°.18W, h11^{km}, MD3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
GUIV	Guiria	0.31	353	eP	Pg	23 56 24.5	0.0
GUIV				eS	Sg	23 56 29.6	+0.9
TPP	Pointe-a-Pierr	0.72	91	eP	Pg	23 56 32.1	+0.1
TPP				eS	Sb	23 56 42.8	+0.2
TRN	Trinidad (W)	0.83	68	eP	Pg	23 56 33.4	-0.7
TRN				eS	Sb	23 56 46.2	+0.5
TBH	Brigand Hill	1.11	82	eP	Pn	23 56 40.4	+0.8
ORIV	Oritupano	1.74	224	eP	Pn	23 56 47.8	-0.5
ORIV				eS	Sb	23 57 11.6	-0.4
GRGR	Grenville	1.86	16	eP	Pn	23 56 50.2	+0.3
GRGR				eS	Sn	23 57 13.9	+0.4
TOSP	Speyside	1.88	59	eP	Pn	23 56 51.0	+0.8
TOSP				eS	Sn	23 57 14.6	+0.6
GRHS	Sauteurs	1.95	16	eP	Pn	23 56 51.2	+0.1
GRHS				eS	Sn	23 57 15.7	0.0
GRSS	Sisters	2.03	16	eP	Pn	23 56 53.4	+1.2
GRSS				eS	Sn	23 57 17.9	+0.2

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*ISCJB **28** 23:59:45.1±0.7, 37°.97N±0°.10×135°.2E±0°.1, h366^{km}, mb3.4/1, Error ellipse: s-maj=14.3km s-min=10.6km az=39.2*

*IDC **28** 23:59:45.0±1.2, 37°.86N×135°.15E, h380^{km}±19^{km}, mb3.2/1, mb1 2.9/6, mb1mx2.6/37, mbtmp3.5/6, Error ellipse: s-maj=29.4km s-min=22.0km az=73.0*

*JMA **28** 23:59:46.1±0.5, 37°.83N×135°.36E, h378^{km}±4^{km}, M2.9*

ISC 28 23:59:44.8±1.0, 37°.9N±0°.1×135°.2E±0°.1, h366^{km}, n11, σ1^{s}.35/12, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JSD	Sado	2.43	86	P	Pn	00 00 42.4	+1.7
JSD				eS	S	00 01 26.0	+0.4
JNG	Nsakai	2.76	122	P	Pn	00 00 44.8	+1.3
MJAR	Matsushiro Arr	2.76	118	P	Pn	00 00 45.2	+1.8
	0.2nm,0.3s,baz=290,slow=10.0,SNR=8.5						
JIE	Ise	3.71	160	P	Pn	00 00 53.7	+1.7
JMK	Ichinoseki	4.85	76	P	Pn	00 01 04.8	+1.3
BSO1	Boso 1	5.69	123	P	Pn	00 01 12.5	+0.4
KSRS	Korea Array	5.78	268	P	Pn	00 01 14.3	+0.6
	0.2nm,0.3s,baz=91,slow=12,SNR=4.4						
USRK	Ussuriysk Ar.	6.74	340	P	P	00 01 25.6	0.0
	0.5nm,0.3s,baz=153,slow=11,SNR=9.3						
ASAJ	Asahikawa	8.36	40	P	P	00 01 44.0	-1.1
	0.7nm,0.3s,baz=229,slow=19,SNR=2.8						
KLR	Kul'dur	11.60	349	P	P	00 02 20.8	-0.2
	0.1nm,0.3s,baz=184,slow=15,SNR=3.2						
WRA	Warramunga Arr	57.54	181	P	P	00 08 56.0	-1.4
	2.2nm,1.2s,baz=0.8,slow=5.9,SNR=4.7						

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*ATH **29** 00:44:27.0, 41°.44N×19°.88E, h33^{km}±1^{km}, ML2.0/6, Error ellipse: s-maj=4.8km s-min=1.4km az=349.0*

*ISCJB **29** 00:44:28.6±0.4, 41°.31N±0°.02×19°.82E±0°.03, h14^{km}±3^{km}, Error ellipse: s-maj=4.1km s-min=2.7km az=166.4*

*BEO **29** 00:44:28.1±0.8, 41°.18N×19°.77E, h16^{km}±2^{km}, ML2.0/6*

*TIR **29** 00:44:28.6, 41°.24N×20°.11E, h11^{km}, Md2.8/7*

ISC 29 00:44:28.4±1.0, 41°.24N±0°.02×19°.84E±0°.03, h13^{km}±9^{km}, n38, σ1^{s}.23/62, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.10	10	ePg	Pb	00 44 32.9	+0.6
TIR				eSg	Sb	00 44 36.8	+1.9
TIR	Tirane	0.10	10	i Pg	Pb	00 44 33.0	+0.8
TIR	Tirane	0.10	10	i PG	Pb	00 44 33.3	+1.0
TIR				i SG	Sb	00 44 37.3	+2.5
TIR	Tirane	0.10	10	P	Pb	00 44 33.0	+0.8
TIR				S	Sb	00 44 36.9	+2.1
TIR				AML	AML	00 44 37.6	
	comp=N,2185µm,0.1s						
TIR				AML	AML	00 44 37.9	
	comp=E,3166µm,0.3s						
PHP	Peshkopia	0.63	46	i PG	Pg	00 44 39.7	-1.0
PHP				i SG	Sg	00 44 46.6	-2.5
PUK	Puka	0.80	3	i PG	Pn	00 44 44.9	-0.5
PUK				i SG	Sn	00 44 57.1	-0.1
VLO	Vlora	0.82	199	i PG	Pn	00 44 46.4	+0.8
VLO				i SG	Sn	00 45 00.0	+2.6
ULC	Ulcinj	0.85	328	i Pg	Pg	00 44 44.8	+0.1
TPE	Tepelena	0.96	172	i PG	Pn	00 44 47.5	0.0
TPE				i SG	Sn	00 45 01.9	+1.0
BCI	Bajram Curri	1.14	9	i PG	Pg	00 44 50.2	0.0
BCI				i SG	Sg	00 45 07.3	+2.2
NEST	Nestorio	1.24	132	P	Pg	00 44 51.6	-0.5
NEST				S	Sg	00 45 09.2	+0.9
NEST				AML	AML	00 45 11.9	
	comp=N,41µm,0.5s						
NEST				AML	AML	00 45 15.2	
	comp=E,63µm,0.4s						
FNA	Florina	1.25	111	P	Pn	00 44 50.7	-0.8
FNA				S	Sg	00 45 07.8	-0.9
FNA				AML	AML	00 45 10.5	
	comp=N,1634µm,0.7s						
FNA				AML	AML	00 45 10.9	
	comp=E,1465µm,0.5s						
PDG	Podgorica	1.26	340	ePg	Pb	00 44 51.7	-0.3
PDG				eSg	Sg	00 45 10.2	+1.1
PDG	Podgorica	1.26	340	i Pg	Pb	00 44 52.0	0.0
PDG				i Sg	Sg	00 45 11.0	+1.9
SRN	Sarande	1.37	175	i PN	Pg	00 44 55.1	+0.4
SRN				i SN	Sg	00 45 14.7	+2.2
SKO	Skopje	1.40	58	ePg	Pn	00 44 47.5	-6.1
SKO				i Sg	Sg	00 45 13.6	0.0
SKO				eLg	Lg	00 45 13.7	
	comp=E,3.2nm,0.8s						
SKO				eLg	Lg	00 45 15.6	
	comp=N,2.7nm,0.5s						
PENT	Pentalofos	1.44	136	P	Pb	00 44 54.7	-0.4
KEK	Kerkira	1.53	181	P	Pg	00 44 57.5	-0.3
KEK				S	Sg	00 45 17.8	+0.2
KEK				AML	AML	00 45 24.5	
	comp=N,45µm,0.6s						
KEK				AML	AML	00 45 24.9	
	comp=E,44µm,0.3s						
SCTE	Santa Cesarea	1.57	222	P	Pb	00 44 56.9	-0.3
SCTE				S	Sg	00 45 18.1	-0.7
SCTE				AML	AML	00 45 23.0	
	comp=N,34µm,0.4s						
SCTE				AML	AML	00 45 23.1	
	comp=E,31µm,0.4s						
BEY	Berane	1.63	1	i Pg	Pb	00 44 58.1	-0.2
IGT	Igoumenitsa	1.75	167	P	Pb	00 44 59.1	-1.2
IGT				S	Sg	00 45 24.0	-0.7
IGT				AML	AML	00 45 28.5	
	comp=N,34µm,0.8s						
IGT				AML	AML	00 45 34.4	
	comp=E,28µm,0.7s						
STIP	Stip	1.82	75	i Pg	Pb	00 45 01.1	-0.3
STIP				i Sg	Sg	00 45 28.2	+1.3
STIP				eLg	Lg	00 45 28.4	
	comp=E,2.9nm,0.4s						
STIP				eLg	Lg	00 45 29.7	
	comp=N,2.2nm,0.5s						
TREB	Trebinje	1.84	323	ePn	Pn	00 44 58.7	-1.0
TREB				eSn	Sn	00 45 22.5	-0.4
DBRK	Dubrovnik	1.90	319	i Pn	Pn	00 44 59.7	-0.8
DBRK				Sn	Sn	00 45 23.2	-1.1
SJES	Sjenica	2.02	3	ePn	Pn	00 45 02.5	+0.3
SJES				eSn	Sb	00 45 28.6	-1.4
BARS	Barje	2.15	42	ePn	Pb	00 45 04.8	-2.4
SELS	Selova	2.19	25	ePn	Pn	00 45 04.8	+0.3
STON	Ston	2.28	316	ePn	Pn	00 45 04.6	-1.0
STON	Ston	2.28	316	ePn	Pn	00 45 04.5	-1.0
STON				Sn	Sn	00 45 30.8	-2.6
IVAS	Ivanjica	2.34	6	ePn	Pn	00 45 06.6	0.0
IVAS				eSn	Sn	00 45 35.5	+0.3
BBLS	Lazići	2.64	353	ePn	Pn	00 45 12.0	+1.3
DIVS	Divibare	2.85	2	ePn	Pn	00 45 14.1	+0.4
ZAPS	Zavoj	2.90	45	ePn	Pn	00 45 15.0	+0.8
MAKA	Makarska	2.92	315	ePn	Pn	00 45 13.7	-0.8
MAKA				Sn	Sn	00 45 47.8	-1.6
ZIRJ	Zirje	3.93	309	i Pn	Pn	00 45 27.8	-0.5
ZIRJ				Sn	Sn	00 46 11.9	-2.4
MORI	Morici	4.02	312	ePn	Pn	00 45 29.2	-0.4
UDBI	Udbina	4.44	319	ePn	Pn	00 45 35.7	+0.2
DUGI	Dugi Otok	4.47	309	ePn	Pn	00 45 35.1	-0.7

KRSC 29 00:47:07.6±1.4, 53°.18N×168°.87E, h30^{km}±57^{km}, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	2.65	321	eP	Pn	00 47 51.0	+2.7
BKI				eS	Sn	00 48 21.9	+2.6
SPN	Mys Shipunski	5.33	273	eP	Pn	00 48 29.0	+4.0
SPN				eS	Sn	00 49 32.1	+6.8
SDLR	Sedlovina	6.00	275	eP	Pn	00 48 38.7	+4.3
SDLR				eS	Sn	00 49 46.6	+4.5
UGLR	Uglovaya	6.04	274	eP	Pn	00 48 40.0	+5.1

KRER	**Koryakskii**	6.08	275	*e*P	Pn	00 48 40.7	+5.1
AVH	**Avacha**	6.09	275	*e*P	Pn	00 48 40.4	+4.8
KRX	**Arik**	6.14	276	*e*P	Pn	00 48 41.4	+5.1
KOK	**Koryaka**	6.15	275	*e*P	Pn	00 48 41.3	+4.9
KRMR	**Karymshinskiy**	6.49	271	*e*P	Pn	00 48 46.2	+5.2
GNL	**Ganaly**	6.55	279	*e*P	Pn	00 48 46.9	+4.9
ASAK	**Asacha**	6.70	268	*e*P	Pn	00 48 50.2	+6.2
KDTR	**Khodutka, Kamc**	6.73	263	*e*P	Pn	00 48 49.0	+4.7
KDTR				*e*S	Sn	00 50 05.1	+5.2
APC	**Apacha**	7.07	273	*e*P	Pn	00 48 54.7	+5.8

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*ISCJB **29** 00:47:44.5±0.4, 24°.12N±0°.03×122°.87E±0°.02, h50^{km}±8^{km}, Error ellipse: s-maj=5.0km s-min=2.6km az=178.5*
*JMA **29** 00:47:44.3±0.1, 24°.18N×122°.87E, h57^{km}±3^{km}, M2.3*
*TAP **29** 00:47:44.5, 24°.15N×122°.89E, h48^{km}, ML3.1, C*
ISC 29 00:47:44.8±1.2**, 24°.11N**±0°.04×**122°.88E**±0°.02**, h47**^{km}±11^{km}**, n58, σ0^{s}97**/106**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.35	10	P	Pn	00 47 54.0	-0.1
JYNG				*e*S	Sn	00 48 00.8	+0.1
YOJ	**Yonaguni jima**	0.37	19	⇑P	Pn	00 47 54.2	-0.2
	baz=17						
YOJ				S	Sn	00 48 01.2	0.0
	baz=17						
YOJ	**Yonaguni jima**	0.37	19	P	Pn	00 47 54.3	-0.1
YOJ				S	Sn	00 48 01.1	-0.1
EOS1	**EOS1**	0.81	303	P	Pn	00 48 00.0	+0.1
	baz=300						
EOS1				*e*S	Sn	00 48 11.8	+1.0
	baz=300						
IRIF	**Iriomote-Funau**	0.81	74	P	Pn	00 47 59.7	-0.2
IRIF				S	Sn	00 48 11.7	+0.8
HATJ	**Hateruma jima**	0.85	93	P	Pn	00 48 00.7	+0.2
HATJ				S	Sn	00 48 13.0	+1.1
JKRS	**Kuro-shima**	1.04	83	P	Pn	00 48 03.5	+0.5
JKRS				S	Sn	00 48 17.5	+1.0
TWC	**Suao**	1.06	298	*e*P	Pn	00 48 03.4	+0.1
	baz=286						
TWC				*e*S	Sn	00 48 16.7	-0.3
	baz=286						
NANB	**Nanao**	1.08	287	*e*P	Pn	00 48 03.5	0.0
	baz=285						
NANB				*e*S	Sn	00 48 18.2	+0.9
	baz=285						
ENA	**Nanau**	1.08	287	*e*P	Pn	00 48 03.5	-0.1
	baz=285						
ENA				*e*S	Sn	00 48 17.7	+0.2
	baz=285						
TWD	**Chiawan**	1.17	269	*e*P	Pn	00 48 04.4	-0.4
	baz=267						
TWD				*e*S	Sn	00 48 19.3	-0.3
	baz=267						
NACB	**Ninganchiao**	1.17	273	*e*P	Pn	00 48 04.5	-0.4
	baz=259						
NACB				*e*S	Sn	00 48 19.2	-0.5
	baz=259						
JIJ	**Ishigaki jima**	1.18	77	P	Pn	00 48 04.5	-0.5
JIJ				S	Sn	00 48 19.3	-0.7
NTC	**Toucheng**	1.21	308	*e*P	Pn	00 48 05.5	+0.2
	baz=317						
NTC				*e*S	Sn	00 48 20.5	0.0
	baz=317						
TWE	**Neicheng**	1.26	299	*e*P	Pn	00 48 06.8	+0.8
	baz=306						
TWE				*e*S	Sn	00 48 22.6	+0.8
	baz=306						
ETLH	**Xiulin Townshi**	1.28	275	*e*P	Pn	00 48 06.0	-0.4
	baz=273						
ETLH				*e*S	Sn	00 48 21.7	-0.7
	baz=273						
TIPB	**Shuangxi**	1.29	312	*e*P	Pn	00 48 06.1	-0.3
	baz=310						
TIPB				*e*S	Sn	00 48 21.8	-0.7
	baz=310						
NDT	**Datong Townshi**	1.34	292	*e*P	Pn	00 48 07.6	+0.5
	baz=278						
NDT				*e*S	Sn	00 48 23.6	-0.1
	baz=278						
ESL	**Shilin**	1.35	258	*e*P	Pn	00 48 06.5	-0.8
	baz=256						
ESL				*e*S	Sn	00 48 23.4	-0.7
	baz=256						
JISG	**Ishigakijimahi**	1.39	70	P	Pn	00 48 07.2	-0.6
JISG				S	Sn	00 48 24.2	-0.8
EGFH	**Guangfu**	1.40	252	*e*P	Pn	00 48 07.9	0.0
	baz=251						
EGFH				*e*S	Sn	00 48 24.3	-0.9
	baz=251						
NNSB	**Datong**	1.40	283	*e*P	Pn	00 48 08.1	0.0
	baz=272						
NNSB				*e*S	Sn	00 48 25.1	-0.3
	baz=272						
NNS	**Nan Shan**	1.41	284	*e*P	Pn	00 48 08.2	0.0
	baz=281						
HGSD	**Ruisui**	1.47	245	*e*P	Pn	00 48 08.1	-0.8
	baz=245						
HGSD				*e*S	Sn	00 48 25.4	-1.5
	baz=245						
WHF	**Hehuan Shan**	1.47	272	*e*P	Pn	00 48 08.9	-0.4
	baz=270						
WHF				*e*S	Sn	00 48 26.7	-1.0
	baz=270						
YHNB	**Yeheng**	1.48	292	*e*P	Pn	00 48 09.7	+0.6
	baz=278						
YHNB				*e*S	Sn	00 48 27.2	-0.1
	baz=278						
NSK	**Sanguang**	1.50	292	*e*P	Pn	00 48 09.8	+0.4
	baz=278						
NSK				*e*S	Sn	00 48 27.5	-0.1
	baz=278						
TATO	**Taipei**	1.53	305	*e*S	Sn	00 48 28.3	-0.1
	baz=302						
CHGB	**Renai**	1.56	269	*e*P	Pn	00 48 10.3	0.0
	baz=267						
CHGB				*e*S	Sn	00 48 28.9	-0.6
	baz=267						
TWT	**Tachien**	1.56	276	*e*P	Pn	00 48 10.6	+0.4
	baz=263						
TWT				*e*S	Sn	00 48 29.3	-0.1
	baz=263						
YM01	**YM01**	1.57	311	*e*S	Sn	00 48 29.3	-0.3
	baz=309						
TDCB	**Techi**	1.57	276	*e*P	Pn	00 48 10.7	+0.2
	baz=263						
TDCB				*e*S	Sn	00 48 29.4	-0.4
	baz=263						
YM05	**YM05**	1.59	312	*e*S	Sn	00 48 29.5	-0.5
	baz=309						
YM04	**YM04**	1.60	311	*e*S	Sn	00 48 29.4	-0.9
	baz=309						
YULB	**Yu-li**	1.61	244	*e*P	Pn	00 48 10.6	-0.2
	baz=235						
YULB				*e*S	Sn	00 48 29.5	-1.0
	baz=235						
VWDT	**VWDT**	1.63	258	*e*P	Pn	00 48 11.3	+0.3
	baz=256						
VWDT				*e*S	Sn	00 48 30.7	-0.1
	baz=256						
TWF1	**Yuli**	1.63	243	*e*P	Pn	00 48 10.9	-0.2
	baz=234						
TWF1				*e*S	Sn	00 48 30.8	-0.2
	baz=234						
CHKT	**Chengkung**	1.71	234	*e*S	Sn	00 48 29.9	-3.0
	baz=225						
JTJ	**Tarama**	1.75	72	P	Pn	00 48 12.5	-0.2
JTJ				*e*S	Sn	00 48 33.9	+0.1
LIOB	**Emei**	1.78	288	*e*P	Pn	00 48 14.4	+1.2
	baz=277						
LIOB				*e*S	Sn	00 48 35.8	+1.2
	baz=277						
DPDB	**Guoxing**	1.78	268	*e*P	Pn	00 48 13.8	+0.6
	baz=266						
DPDB				*e*S	Sn	00 48 34.8	0.0
	baz=266						
SSLB	**Suanglung**	1.79	260	*e*P	Pn	00 48 13.5	+0.2
	baz=259						
SSLB				*e*S	Sn	00 48 34.8	-0.1
	baz=259						
TYC	**Yuchr**	1.86	264	*e*P	Pn	00 48 14.7	+0.5
	baz=263						
TYC				*e*S	Sn	00 48 36.5	+0.1
	baz=263						
YUS	**Yu-Shan**	1.87	251	*e*P	Pn	00 48 15.0	+0.2
	baz=250						
YUS				*e*S	Sn	00 48 36.6	-0.8
	baz=250						
WHYT	**Xinyi Township**	1.90	258	*e*P	Pn	00 48 16.4	+1.6
	baz=248						
WHYT				*e*S	Sn	00 48 39.3	+1.8
	baz=248						
ELDTW	**Lidau**	1.94	242	*e*P	Pn	00 48 15.0	-0.4
	baz=242						
ELDTW				*e*S	Sn	00 48 37.5	-1.0
	baz=242						
TPUB	**Ta-pu**	2.21	249	*e*P	Pn	00 48 21.0	+2.0
	baz=255						
TPUB				*e*S	Sn	00 48 46.3	+1.1
	baz=255						
CHN4	**Tsaushan**	2.22	251	*e*P	Pn	00 48 21.2	+1.9
	baz=250						
CHN4				*e*S	Sn	00 48 48.2	+2.6
	baz=250						
WTP	**Ta-pu**	2.25	248	*e*P	Pn	00 48 21.0	+1.4
	baz=247						
WTP				*e*S	Sn	00 48 47.7	+1.6
	baz=247						
SLGT	**Liugui**	2.33	242	*e*P	Pn	00 48 22.2	+1.5
	baz=235						
SLGT				*e*S	Sn	00 48 48.9	+0.8
	baz=235						
CHN1	**Nanshi**	2.34	247	*e*P	Pn	00 48 21.7	+0.9
	baz=247						
CHN1				*e*S	Sn	00 48 50.7	+2.2
	baz=247						
TWK	**Hsinying**	2.34	250	*e*P	Pn	00 48 22.7	+1.8
	baz=249						
TWK				*e*S	Sn	00 48 49.8	+1.3
	baz=249						
LAY	**Lan-yu**	2.40	211	*e*S	Sn	00 48 46.9	-2.9
	baz=213						
MASBT	**Mashibuluo**	2.54	235	*e*P	Pn	00 48 23.7	0.0
	baz=231						
MASBT				*e*S	Sn	00 48 54.6	+1.2
	baz=231						
PHUB	**P'eng-hu**	3.08	260	*e*S	Sn	00 49 06.3	-0.4
	baz=269						
PNG	**Penghu**	3.09	261	*e*S	Sn	00 49 06.2	-0.6
	baz=258						
VCHM	**Qimei**	3.29	255	*e*S	Sn	00 49 11.3	-0.3
	baz=253						
PTMZ	**Houxiangcun**	3.54	286	*e*P	Pn	00 48 36.8	-0.5
	baz=283						
PTMZ				*e*S	Sn	00 49 14.6	-3.4
	baz=283						

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*LDG **29** 00:56:41.2±0.0, 48°.06N×6°.98E, h12^{km}, Md1.8/4, Ml1.9/8, Error ellipse: s-maj=1.0km s-min=0.7km az=174.0*
STR 29 00:56:41.4±0.3**, 48°N**±1°×°±°**, h6**^{km}±7^{km}**, MLv1.3**/6**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	**Echery**	0.19	36	Pg	Pg	00 56 45.3	+0.1
ECH				Sg	Sg	00 56 48.1	+0.3
MOF	**Molkenrain**	0.23	156	Pg	Pg	00 56 46.1	+0.2
MOF				Sg	Sg	00 56 49.0	0.0
HINF	**Hinteralfeld**	0.26	201	*e*Pg	Pg	00 56 46.4	-0.2
HINF				*e*Sg	Sg	00 56 49.9	-0.1
	8.3nm,0.2s						
CDF	**Champ du Feu**	0.40	28	*e*Pg	Pg	00 56 49.0	-0.2
CDF				*e*Sg	Sg	00 56 54.1	-0.4
	8.3nm,0.2s						
WLS	**Welschbruch**	0.43	34	Pg	Pg	00 56 49.7	-0.1
WLS				Sg	Sg	00 56 55.3	0.0
HAU	**Haudompre**	0.44	263	*e*Pg	Pg	00 56 49.5	-0.4
HAU				*e*Sg	Sg	00 56 55.6	0.0
	11nm,0.3s						
KIZ	**Kirchzarten**	0.63	99	Pg	Pg	00 56 53.4	-0.2
KIZ				Sg	Sg	00 57 01.6	-0.2
THEF	**They Montfort**	0.69	284	Pg	Pg	00 56 54.5	-0.2
THEF				Sg	Sg	00 57 03.5	-0.3
LOMF	**Lomont**	0.72	189	Pg	Pg	00 56 55.2	0.0
LOMF				Sg	Sg	00 57 05.0	+0.5
CHMF	**Charmoille**	0.84	196	Pg	Pg	00 56 57.5	-0.1
CHMF				Sg	Sg	00 57 08.4	-0.2
OPP	**Oppenau**	0.91	61	Pg	Pg	00 56 58.5	-0.3
OPP				Sg	Sg	00 57 10.3	-0.4
PAGF	**Fort de Pagny**	0.98	301	*e*Pg	Pg	00 56 59.9	-0.3
PAGF				*e*Sg	Sg	00 57 12.7	-0.2
	9.0nm,0.3s,baz=122						
SFTF	**Sexfontaines**	1.32	277	*e*Pn	Pn	00 57 03.8	-2.5
	baz=100						
SFTF	**Sexfontaines**	1.32	277	*e*Pg	Pn	00 57 05.7	-0.6
SFTF				*e*Sg	Sb	00 57 22.7	-0.9
	3.5nm,0.3s						
MEZF	**Maizieres J'vi**	1.37	290	*e*Pn	Pn	00 57 04.3	-2.7
	baz=111						
MEZF	**Maizieres J'vi**	1.37	290	*e*Pg	Pn	00 57 06.9	-0.1
MEZF				*e*Sn	Sb	00 57 21.7	-3.4
	1.6nm,0.2s						
CABF	**La Chapelle**	1.58	203	*e*Pn	Pn	00 57 07.3	-2.6
CABF	**La Chapelle**	1.58	203	*e*Pg	Pn	00 57 10.4	+0.5
CABF				*e*Sn	Sn	00 57 25.8	-4.8
CABF				*e*Sg	Sb	00 57 30.7	-0.4
	1.1nm,0.2s						
LOR	**Lormes**	2.26	251	*e*Pn	Pn	00 57 16.5	-2.8
	baz=77						
LOR	**Lormes**	2.26	251	*e*Pg	Pb	00 57 23.2	+0.6
	baz=73						
LOR				*e*Sn	Sn	00 57 43.0	-4.5
LOR				*e*Sg	Sb	00 57 52.3	+1.5
	0.9nm,0.2s,baz=69						
SSF	**Saint Saulge**	2.56	248	*e*Pn	Pn	00 57 20.3	-3.1
SSF	**Saint Saulge**	2.56	248	*e*Pg	Pb	00 57 28.5	+0.7
SSF				*e*Sn	Sn	00 57 49.9	-5.0
SSF				*e*Sg	Sb	00 58 01.1	+1.6
	0.3nm,0.2s						
SMF	**Signal de Mont**	2.57	238	*e*Pn	Pn	00 57 20.8	-2.7
SMF	**Signal de Mont**	2.57	238	*e*Pg	Pb	00 57 28.6	+0.8
SMF				*e*Sn	Sn	00 57 50.4	-4.6
SMF				*e*Sg	Sb	00 58 01.1	+1.5
	0.8nm,0.2s						
AVF	**Avril sur Loir**	2.78	244	*e*Pn	Pn	00 57 23.4	-3.0
AVF	**Avril sur Loir**	2.78	244	*e*Pg	Pb	00 57 32.8	+1.4
AVF				*e*Sn	Sn	00 57 55.3	-4.9
AVF				*e*Sg	Sb	00 58 08.1	+2.4
	0.3nm,0.2s						

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*IDC **29** 01:26:00.8±1.1, 6°.63S×150°.57E, h0^{km}, mb4.1/6, mb1 4.4/7, mb1mx4.0/36, mbtmp4.1/7, ML2.1/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/32, Error ellipse: s-maj=53.3km s-min=20.4km az=120.0*
*ISCJB **29** 01:26:04.4±0.9, 6°.6S±0°.2×150°.4E±0°.2, h33^{km}, mb4.0/5, MS2.9/2, Error ellipse: s-maj=37.5km s-min=10.5km az=42.1*
ISC 29 01:26:05.9±1.0**, 6°.6S**±0°.2×**150°.5E**±0°.2**, h33**^{km}**, n12, σ0^{s}66**/10**, mb4.0**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	4.29	230	Pn	Pn	01 27 09.7	+0.8
	8.0nm,0.3s,baz=63,slow=8.7,SNR=12						
PMG				Sn	Sn	01 27 57.3	-0.4
	9.9nm,0.3s,baz=161,slow=18,SNR=3.7						
SIJI	**Sorong**	19.99	286	LR	LR	01 39 16.3	
	comp=Z,64nm,19.3s,baz=7.0,slow=40						
WRA	**Warramunga Arr**	20.50	228	P	P	01 30 41.2	-0.2
	11nm,0.8s,baz=52,slow=9.6,SNR=24						
GUMO	**Guam**	20.84	345	LR	LR	01 38 59.8	
	comp=Z,27nm,18.1s,baz=129,slow=37						
DZM	**Mont Dzumac**	21.76	136	LR	LR	01 37 24.1	
	comp=Z,70nm,19.4s,baz=13,slow=32						
ASAR	**Alice Springs**	23.25	221	P	P	01 31 10.1	-0.5
	4.1nm,0.7s,baz=56,slow=9.1,SNR=22						
STKA	**Stephens Creek**	26.45	197	P	P	01 31 39.5	-0.4
	3.8nm,0.6s,baz=1.7,slow=11,SNR=7.6						
SONM	**Songino Array**	66.67	329	P	P	01 36 53.4	-0.2
	0.4nm,0.5s,baz=123,slow=5.5,SNR=3.6						
ILAR	**Eielson Array**	84.72	22	P	P	01 38 35.7	-0.6
	1.4nm,0.8s,baz=255,slow=5.1,SNR=13						
NVAR	**Mina Array Bea**	95.03	52	P	P	01 39 26.5	+0.5
	0.4nm,0.8s,baz=298,slow=1.9,SNR=1.7						
WTTA	**Wattenberg**	126.39	326	*e*PKPdf	PKiKP	01 45 07.2	+0.9
	0.7nm,0.2s						
TORD	**Torodi Ar. Bea**	148.59	284	PKPbc	PKiKP	01 45 51.8	-0.4
	2.0nm,0.9s,baz=68,slow=2.4,SNR=9.9						

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*IDC **29** 01:38:44.8±2.6, 32°.39N×49°.30E, h0^{km}, mb3.6/3, mb1 3.5/4, mb1mx3.3/41, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=71.5km s-min=29.8km az=154.0*
*THR **29** 01:38:44.9, 32°.52N×49°.65E, h14^{km}, ML3.3*
*ISCJB **29** 01:38:45.6±0.5, 32°.46N±0°.04×49°.60E±0°.04, h19^{km}, mb3.5/3, Error ellipse: s-maj=7.2km s-min=3.8km az=34.8*
*TEH **29** 01:38:45.3, 32°.55N×49°.69E, h8^{km}, ML3.4*
ISC 29 01:38:47.7±0.8**, 32°.50N**±0°.05×**49°.63E**±0°.04**, h19**^{km}**, n56, σ1^{s}39**/54**, mb3.6**/3**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHBN	**Jahan bin**	0.92	106	*e*Pg	Pb	01 39 02.0	-3.2
JHBN				IAMB	IAmb	01 39 21.8	
	comp=Z,0.0nm,0.7s						
IPIR	**Pirpir**	1.08	80	IAMB	IAmb	01 39 22.8	
	comp=Z,11µm,0.5s						
IPIR				*e*Pg	Pb	01 39 03.9	-4.1
ZNGN	**Zangian**	1.11	110	IAMB	IAmb	01 39 38.7	
	comp=Z,0.0nm,0.5s						
ZNGN				*e*Pg	Pb	01 39 05.9	-2.5
ROKH	**ROKH**	1.20	97	*e*Pn	Pn	01 39 06.2	-3.5
KHMZ	**Khomeyn**	1.27	13	AML	AML	01 39 29.1	
	comp=Z,437nm,0.4s						
AHWZ	**Ahwaz**	1.43	216	*e*Sg	Sg	01 39 37.9	+3.9
AHWZ				IAMB	IAmb	01 39 38.2	
	comp=N,0.0nm,0.4s						
IKMR	**Kamar-syah**	1.46	315	*e*Pn	Pn	01 39 10.4	-2.6
IDOB	**Doab**	1.77	317	*e*Pn	Pn	01 39 15.9	-1.6
IDOB				IAMB	IAmb	01 39 47.7	
	comp=Z,0.0nm,0.4s						
IKFM	**Kafar-mosalman**	1.81	305	*e*Pn	Pn	01 39 17.3	-0.6
IKLH	**Kolahrood**	1.83	63	*e*Pn	Pn	01 39 17.0	-1.4
IKLH				IAMB	IAmb	01 39 18.8	
	comp=Z,3µm,0.4s						
HSAM	**Samen**	1.91	334	*e*Pn	Pn	01 39 18.3	-1.2
HSAM				IAMB	IAmb	01 39 54.6	
	comp=Z,0.0nm,0.4s						
IGAR	**Gharneh**	2.04	92	*e*Pn	Pn	01 39 21.4	+0.1
IGAR				IAMB	IAmb	01 39 52.7	
	comp=Z,4µm,0.4s						
ASAO	**Ashtian**	2.07	9	*e*Pn	Pn	01 39 21.0	-0.7
ASAO	**Ashtian**	2.07	9	AML	AML	01 39 53.4	
	comp=Z,232nm,0.5s						
ASAO	**Ashtian**	2.07	9	Pn	Pn	01 39 21.0	-0.7
ASAO				Sg	Sn	01 39 49.4	+2.3
IZEF	**Zefreh**	2.31	79	*e*Pn	Pn	01 39 24.4	-0.6
HAGD	**Aghdareh**	2.35	350	*e*Pn	Pn	01 39 24.9	-0.7
HAGD				IAMB	IAmb	01 40 01.6	
	comp=Z,0.0nm,0.4s						
GHVR	**GHOM**	2.42	35	AML	AML	01 40 02.6	
	comp=Z,156nm,0.7s						
IRAM	**Ramesheh**	2.44	106	*e*Pn	Pn	01 39 26.7	+0.1
IRAM				IAMB	IAmb	01 40 20.1	
	comp=Z,1µm,1.0s						
IKOM	**Komasi**	2.44	314	*e*Pn	Pn	01 39 26.1	-0.5
IKOM				IAMB	IAmb	01 40 12.3	
	comp=Z,0.0nm,0.5s						
KRSH	**Karshahi**	2.56	54	*e*Pn	Pn	01 39 28.4	0.0
KRSH				IAMB	IAmb	01 39 39.2	
	comp=Z,0.0nm,0.6s						
NASN	**Na'in**	2.70	83	*e*Pn	Pn	01 39 29.9	-0.5
NASN	**Na'in**	2.70	83	Pn	Pn	01 39 29.9	-0.5
NASN				Sg	Sb	01 40 09.0	+0.6
IRAZ	**Razeghan**	2.91	5	*e*Pn	Pn	01 39 30.8	-2.4
IRAZ				IAMB	IAmb	01 40 27.0	
	comp=N,4µm,0.8s						
HSRG	**Sareghieh**	2.96	338	*e*Pn	Pn	01 39 33.7	-0.2
HSRG				IAMB	IAmb	01 40 19.7	
	comp=Z,0.0nm,0.5s						
IVRN	**Varamin**	3.04	34	*e*Pn	Pn	01 39 34.4	-0.5
IVIS	**Veis**	3.08	312	*e*Pn	Pn	01 39 34.2	-1.2
QABG	**Abgarm-Qazvin**	3.20	359	*e*Pn	Pn	01 39 36.7	-0.5
SNGE	**Sanandaj**	3.21	324	*e*Pn	Pn	01 39 36.9	-0.4
SNGE	**Sanandaj**	3.21	324	Pn	Pn	01 39 36.9	-0.4
IHSB	**Hasanabad**	3.24	25	*e*Pn	Pn	01 39 37.4	-0.2
IHSB				IAMB	IAmb	01 39 44.4	
	comp=Z,0.0nm,0.4s						
ILIN	**Lien**	3.28	318	*e*Pn	Pn	01 39 36.8	-1.5
IKAZ	**Kazeroun**	3.31	144	*e*Pn	Pn	01 39 39.1	+0.4
IKAZ				IAMB	IAmb	01 40 48.2	
	comp=Z,1µm,0.5s						
IDHR	**Dehrash**	3.48	310	*e*Pn	Pn	01 39 39.9	-1.2
IDHR				IAMB	IAmb	01 40 33.2	
	comp=Z,0.0nm,0.4s						
ISAD	**Sadrabad**	3.49	99	*e*Pn	Pn	01 39 41.1	-0.1
ANAR	**Anarak**	3.52	78	*e*Pn	Pn	01 39 41.0	-0.5
ANAR				IAMB	IAmb	01 39 55.1	
	comp=Z,0.0nm,0.6s						
CHTH	**Charan**	3.62	20	*e*Pn	Pn	01 39 42.4	-0.6
CHTH	**Charan**	3.62	20	Pn	Pn	01 39 42.4	-0.6
IDMV	**Damavand**	3.66	32	*e*Pn	Pn	01 39 43.5	-0.1
IDMV				IAMB	IAmb	01 40 01.6	
	comp=Z,606nm,0.4s						
IGZV	**Ghazvin**	3.91	7	*e*Pn	Pn	01 39 46.0	-0.9
IPAR	**Pars**	3.95	131	*e*Pn	Pn	01 39 46.7	-0.9
ILAS	**Lasjerd**	3.99	43	*e*Pn	Pn	01 39 48.1	0.0
QALM	**Alamut, Qazvin**	4.01	12	*e*Pn	Pn	01 39 48.6	+0.2
IFIR	**Firoozkooh**	4.07	39	*e*Pn	Pn	01 39 48.5	-0.7
IFIR				IAMB	IAmb	01 39 51.4	
	comp=Z,494nm,0.4s						
YZKH	**Yazd**	4.20	90	*e*Pn	Pn	01 39 50.6	-0.2
YZKH	**Yazd**	4.20	90	Pn	Pn	01 39 50.5	-0.2
ISRV	**Sarvestan**	4.31	135	*e*Pn	Pn	01 39 52.0	-0.6
IPRN	**Peran**	4.36	30	*e*Pn	Pn	01 39 53.5	+0.5
IMEH	**Mehriz**	4.38	103	*e*Pn	Pn	01 39 53.3	-0.1
IMEH				IAMB	IAmb	01 40 15.5	
	comp=Z,147nm,0.5s						
ISHM	**Shahmirzad**	4.49	42	*e*Pn	Pn	01 39 54.9	0.0
IBAF	**Bafgh**	5.12	99	IAMB	IAmb	01 40 13.2	
	comp=Z,110nm,0.5s						
IBAF				*e*Pn	Pn	01 40 03.3	-0.3
TKDS	**Koohdasht(Taba**	6.39	78	*e*Pn	Pn	01 40 20.1	-0.8
GEYT	**Alibeck**	8.81	50	Pn	Pn	01 40 55.2	+1.2
	comp=Z,0.4nm,0.3s,baz=226,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	28.68	51	P	P	01 44 46.7	+3.3
	comp=Z,0.5nm,0.7s,baz=251,slow=7.3,SNR=4.2						
FINES	**FINESS Array B**	32.74	339	P	P	01 45 19.0	+0.1
	comp=Z,0.4nm,0.5s,baz=147,slow=7.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	47.75	258	P	P	01 47 21.2	-2.5
	comp=Z,0.5nm,0.8s,baz=57,slow=7.3,SNR=1.8						

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*ISCJB **29** 01:41:23.9±0.6, 6°.53N±0°.05×126°.33E±0°.08, h143^{km}±4^{km}, mb4.3/7, Error ellipse: s-maj=12.6km s-min=8.3km az=2.9*
*IDC **29** 01:41:25.4±1.3, 6°.59N×126°.36E, h142^{km}±11^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.4/41, mbtmp4.1/7, MS3.2/1, Ms1 3.2/1, ms1mx2.4/22, Error ellipse: s-maj=49.6km s-min=16.0km az=74.0*
*MAN **29** 01:41:25.4, 6°.55N×126°.35E, h121^{km}, mb4.6, ML3.5, MS3.3*
ISC 29 01:41:25.1±0.8**, 6°.53N**±0°.06×**126°.35E**±0°.08**, h137**^{km}±6^{km}**, n22, σ1^{s}45**/30**, mb3.8**/7**, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	0.43	348	*e*P	Pn	01 41 44.8	+0.2
MATI				*e*S	Sn	01 41 58.8	-0.6
DDMP	**Don Marcelino,**	0.76	237	*e*P	Pn	01 41 46.6	0.0
DDMP				*e*S	Sn	01 42 02.5	-0.5
DAV	**Davao City (W)**	0.94	305	P	Pn	01 41 48.7	+0.6
	530nm,0.3s,baz=257,slow=5.2,SNR=15						
DAV				LR	LR	01 42 04.3	
	comp=Z,65nm,18.4s,baz=194,slow=43						
DAV				S	Sn	01 42 06.9	+1.4
	281nm,0.3s,baz=313,slow=23,SNR=40						
KCP	**Kidapawan**	1.34	291	⇑*e*P	Pn	01 41 51.9	-0.1
KCP				*i* S	Sn	01 42 12.0	-0.5
GSPH	**General Santos**	1.46	253	*e*P	Pn	01 41 53.9	+0.6
BIPH	**Bislig**	1.65	0	⇑*e*P	Pn	01 41 54.8	-0.5
BIPH				*e*S	Sn	01 42 18.1	-0.4
SKMP	**Bagumbayan, Su**	1.79	270	*e*P	Pn	01 41 56.9	-0.1
SKMP				*e*S	Sn	01 42 18.7	-2.7
BUKP	**Musuan**	1.85	317	*e*P	Pn	01 41 57.4	-0.4
BUKP				*e*S	Sn	01 42 21.4	-1.4
CTBH	**Cotabato--PC H**	2.20	288	⇓*i*P	Pn	01 42 02.6	+0.8
CGP	**Cagayan de Oro**	2.52	320	⇓*e*P	Pn	01 42 13.2	+7.3
CGP				*e*S	Sn	01 42 37.2	-0.1
BUTP	**Butuan**	2.53	344	*e*P	Pn	01 42 06.0	0.0
BUTP				*e*S	Sn	01 42 39.7	+2.1
KAPI	**Kappang**	13.22	210	P	Pn	01 44 28.5	+0.8

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       1.2nm,0.3s,baz=41,slow=17,SNR=7.7
CHAI   Chaiyaphum         25.62 293  P        P        01 46 47.2 +5.1
WRA    Warramunga Arr     27.45 164  P        P        01 46 59.6 +1.1
       0.6nm,0.6s,baz=342,slow=10,SNR=4.5
PAYA   Payao              28.73 299  P        P        01 47 08.7 -1.2
       41µm,0.8s
ASAR   Alice Springs      30.90 166  P        P        01 47 27.9 -1.1
       0.3nm,0.3s,baz=341,slow=6.6,SNR=5.3
ASAR                                 PcP      PcP      01 50 23.1 +0.7
       0.9nm,0.4s,baz=351,slow=2.3,SNR=12
SONM   Songino Array      44.55 341  PcP      PcP      01 51 05.5 +1.3
       0.7nm,0.6s,baz=158,slow=5.9,SNR=4.1
MKAR   Makanchi Array     55.07 324  P        P        01 50 42.0 -0.8
       0.9nm,0.6s,baz=116,slow=9.2,SNR=5.5
ZALV   Zalesovo Beam      57.95 332  LR       LR       02 16 58.6
       comp=Z,20nm,19.6s,baz=68,slow=37
ILAR   Eielson Array      82.76  26  P        P        01 53 32.8 -0.7
       0.5nm,0.5s,baz=254,slow=4.5,SNR=7.1
ARCES  ARCESS Array B     87.71 340  P        P        01 53 57.5 -0.5
       1.5nm,0.4s,baz=84,slow=6.3,SNR=20
FINES  FINESS Array B     89.20 332  P        P        01 54 04.1 -1.1
       0.5nm,0.6s,baz=90,slow=8.3,SNR=5.2
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VAO ***29*** *01:42:19.8±0.8, 15°.22S×76°.99W, h10km, mb4.7*
IDC ***29*** *01:42:29.7±0.8, 15°.16S×75°.54W, h0km, mb4.0/11, mb1 4.2/15, mb1mx4.1/38, mbtmp4.1/15, ML3.5/4, MS3.8/17, Ms1 3.8/17, ms1mx3.7/26, Error ellipse: s-maj=27.2km s-min=13.9km az=54.0*
NEIC ***29*** *01:42:31.6±1.9, 15°.24S×75°.82W, h33km±4km, mb4.5/40, Error ellipse: s-maj=17.3km s-min=7.8km az=58.0*
ISC 29 01:42:31.8±0.5, **15°.23S**±0°.06×**75°.71W**±0°.08, **h28**km, **n97**, σ**1s.92**/87, **mb4.4**/26, **MS3.9**/10, **Near coast of Peru**

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Code   Station Name          Δ°  AZ°   Phase ID            Time       Res
                                     Op       ISC       h  m  s       ISC
NNA    Nana                3.40 341  Pn       Pn       01 43 22.6 -0.5
       3.2nm,0.3s,baz=177,slow=17,SNR=8.7
NNA                                  Lg       Lg       01 44 13.2
       46nm,0.3s,baz=52,slow=20,SNR=6.4
NNA                                  LR       LR       01 44 56.0
       comp=Z,1µm,18.2s,baz=115,slow=43
NNA    Nana                3.40 341  ePn      Pn       01 43 21.8 -1.3
NNA                                  eSn      Sn       01 43 55.6 -7.0
MNMC   Minye Minye         7.01 124  ePn      Pn       01 44 13.6 +0.7
MNMC                                 eSn      Sn       01 45 32.4 +0.5
PB11   IPOC Station P      7.32 129  ePn      Pn       01 44 17.9 +0.8
PB11                                 eSn      Sn       01 45 38.1 -1.3
LPAZ   La Paz              7.37  99  Pn       Pn       01 44 23.9 +5.7
       1.5nm,0.3s,baz=280,slow=9.4,SNR=44
LPAZ                                 LR       LR       01 47 50.8
       comp=Z,767nm,20.1s,baz=282,slow=44
LPAZ   La Paz              7.37  99  ePn      Pn       01 44 21.4 +3.2
LPAZ   La Paz              7.37  99  eP       Pn       01 44 23.7 +5.6
LPAZ                                 eS       Sb       01 46 02.7 -4.3
GO01   Chusmiza            7.62 126  ePn      Pn       01 44 22.6 +1.1
PB01   IPOC Station P      8.27 135  ePn      Pn       01 44 30.2 +0.2
PB01                                 eSn      Sn       01 46 00.6 -2.0
ATAH   Atahualpa           8.46 342  Pn       Pn       01 44 41.7 +8.8
       1.0nm,0.3s,baz=163,slow=10,SNR=6.3
ATAH                                 LR       LR       01 47 56.5
       comp=Z,384nm,21.1s,baz=192,slow=39
PB04   IPOC Station P      8.81 144  ePn      Pn       01 44 37.7 +0.1
PB10   IPOC Station P      9.57 150  ePn      Pn       01 44 47.6 -0.2
LVC    Limon Verde         9.76 140  Pn       Pn       01 44 53.0 +2.3
       2.3nm,0.3s,baz=310,slow=11,SNR=15
LVC                                  Sn       Sn       01 46 41.6 +2.0
       1.1nm,0.3s,baz=68,slow=19,SNR=3.3
LVC                                  Lg       Lg       01 47 40.1
       2.0nm,0.3s,baz=150,slow=11,SNR=4.6
LVC                                  LR       LR       01 48 30.9
       comp=Z,277nm,20.6s,baz=308,slow=37
LVC    Limon Verde         9.76 140  ePn      Pn       01 44 52.7 +2.0
LVC    Limon Verde         9.76 140  eP       Pn       01 44 52.1 +1.4
LVC                                  eS       Sn       01 46 51.1  +12
GO02   Mina Guanaco       11.43 151  ePn      Pn       01 45 11.6 -1.9
GO03   Copiap             13.31 158  ePn      Pn       01 45 35.8 -3.3
SIV    San Ignacio        14.12  95  Pn       Pn       01 45 48.1 -1.9
       0.1nm,0.3s,baz=280,slow=14,SNR=12
SIV                                  LR       LR       01 51 44.5
       comp=Z,458nm,21.4s,baz=286,slow=40
LCO    Las Campanas       14.48 162  ePn      Pn       01 45 53.7 -1.4
GO04   Tololo Observa     15.55 164  ePn      Pn       01 46 09.5 +0.2
       16nm,0.9s
FLOC   Florencia          16.70   0  eP       P        01 46 27.6 +1.5
BBAC   Balboa, Cauca      17.20 355  eP       P        01 46 34.3 +2.4
SOTA   Rioblanco          17.27 357  eP       P        01 46 36.0 +3.0
CFA    Coronel Fontan     17.67 159  P        P        01 46 38.1 +1.3
       0.1nm,0.3s,baz=330,slow=12,SNR=12
CFA                                  LR       LR       01 53 54.1
       comp=Z,142nm,18.1s,baz=97,slow=39
POPC   Popayan, Colom     17.68 357  eP       P        01 46 38.6 +1.5
ORTC   Ortega, Tolima     19.02   1  eP       Pn       01 47 00.1 +7.5
YOTC   Yotoco, Valle      19.10 358  eP       Pn       01 46 54.3 +0.7
AQDB   Aquidauana         19.74 108  eP       Pn       01 47 01.0 -0.1
CHIC   Chingaza           19.82   6  eP       Pn       01 47 06.2 +3.7
ROSC   El Rosal           19.98   4  P        Pn       01 47 08.8 +4.4
       1.2nm,0.3s,baz=114,slow=16,SNR=3.9
ROSC                                 LR       LR       01 55 33.7
       comp=Z,214nm,18.1s,baz=238,slow=39
ROSC   El Rosal           19.98   4  eP       P        01 47 01.2 -1.4
       5.4nm,0.8s
RREF   El Recreo          20.00   1  eP       Pn       01 47 07.3 +2.5
GUY2C  Guyana, Caldas     20.32   1  eP       Pn       01 47 09.5 +1.1
CPUP   Villa Florida      20.40 126  P        Pn       01 47 08.4 -0.4
       5.9nm,1.0s,baz=316,slow=8.8,SNR=7.8
CPUP                                 LR       LR       01 56 29.7
       comp=Z,133nm,20.5s,baz=298,slow=41
CPUP   Villa Florida      20.40 126  eP       P        01 47 07.2 +0.5
       15nm,1.1s
NORC   Norcasia           20.67   2  eP       Pn       01 47 11.7 -0.4
RUSC   La Rusia           21.14   7  eP       P        01 47 16.9 +1.7
PTGA   Pitinga            21.19  49  P        P        01 47 15.0 -0.3
       2.0nm,0.3s,baz=228,slow=11,SNR=8.8
PTGA                                 LR       LR       01 55 58.1
       comp=Z,599nm,18.5s,baz=233,slow=38
PTGA   Pitinga            21.19  49  eP       P        01 47 15.6 +0.3
       15nm,1.0s
PTGA   Pitinga            21.19  49  eP       P        01 47 15.2  0.0
PTGA                                 eS       Sn       01 51 21.0 +3.7
PTBC   PUERTO BERRIO,     21.66   3  eP       P        01 47 21.4 +1.1
SMLC   San Martn de       23.93   4  eP       P        01 47 42.9 -0.7
PTGB   Pitanga            24.11 117  eP       P        01 47 45.3 -0.1
PTGB                                 eS       S        01 52 13.9  +12
SDV    Santo Domingo      24.48  12  P        P        01 47 49.7 +0.8
       3.4nm,0.3s,baz=207,slow=6.2,SNR=4.0
SDV    Santo Domingo      24.48  12  eP       P        01 47 46.6 -2.3
       17nm,1.0s
GO06   Curarrehue         24.55 172  eP       P        01 47 48.0 -1.3
       7.3nm,1.1s
SJCC   San Jacinto, C     24.97   1  eP       P        01 47 55.5 +2.3
PLCA   Paso Flores        25.81 171  P        P        01 48 01.3 +0.6
       3.5nm,1.0s,baz=6.0,slow=12,SNR=4.8
PLCA   Paso Flores        25.81 171  eP       P        01 47 58.8 -1.8
       5.7nm,1.1s
FRTB   Fartura            25.93 112  eP       P        01 48 04.3 +2.3
BB19B  Bebedouro          26.45 107  eP       P        01 48 07.7 +1.1
BB19B                                eS       S        01 52 51.2  +12
BDFB   Brasilia           26.69  95  P        P        01 48 08.8 -0.2
       3.6nm,0.9s,baz=259,slow=16,SNR=3.5
BDFB                                 LR       LR       01 59 48.8
       comp=Z,345nm,19.5s,baz=281,slow=39
JTS    Las Juntas de      26.96 340  LR       LR       01 57 46.1
       comp=Z,210nm,19.4s,baz=219,slow=34
RCLB   Rio Claro- Sao     27.58 109  eP       P        01 48 19.0 +2.2
PMNB   Patos De Minas     28.18 101  eP       P        01 48 23.4 +1.1
250A   Grady              48.02 348  eP       P        01 51 07.6 -0.9
       11nm,1.0s
W50A   Signal Mountai     50.97 350  eP       P        01 51 29.5 -1.6
       8.1nm,0.8s
SWET   Sewanee            51.09 349  eP       P        01 51 30.4 -1.6
       7.4nm,0.9s
PLAL   Pickwick Lake      51.30 347  eP       P        01 51 33.1 -0.3
       4.9nm,1.0s
TXAR   Lajitas Array      51.88 329  P        P        01 51 40.0 +1.9
       1.0nm,0.9s,baz=147,slow=8.0,SNR=7.7
TXAR                                 LR       LR       02 12 31.1
       comp=Z,121nm,18.1s,baz=0.0,slow=35
T49A   Edmonton           52.87 350  eP       P        01 51 44.8 -0.3
       5.5nm,0.9s
PBMO   Poplar Bluff       53.56 345  eP       P        01 51 48.9 -1.2
       3.9nm,0.8s
WCI    Wyandotte Cave     54.09 350  eP       P        01 51 53.5 -0.5
       12nm,0.9s
ANMO   Albuquerque        57.81 330  eP       P        01 52 19.7 -1.4
       2.2nm,0.9s
X16A   Lo Mia Camp, P     59.94 326  eP       P        01 52 35.8  0.0
       3.4nm,1.0s
JLU    Jordanelle         64.70 331  eP       P        01 53 06.7 -0.9
       6.0nm,1.0s
PDAR   Pinedale Array     65.56 333  P        P        01 53 16.3 +3.1
       0.6nm,0.8s,baz=169,slow=5.3,SNR=6.3
NV01   Mina Array Sit     66.64 325  eP       P        01 53 24.5 +4.3
NVAR   Mina Array Bea     66.64 325  P        P        01 53 24.5 +4.3
       0.2nm,0.3s,baz=132,slow=6.7,SNR=5.2
RYN    Ryan               66.90 325  eP       P        01 53 21.9 +0.2
       1.8nm,0.7s
ULM    Lac du Bonnet      67.57 346  LR       LR       02 26 43.8
       comp=Z,36nm,18.4s,baz=53,slow=39
MFID   Camas Ranch        68.95 330  eP       P        01 53 33.5 -1.0
       3.4nm,0.9s
SCHQ   Schefferville      70.19   5  LR       LR       02 24 11.2
       comp=Z,44nm,21.6s,baz=334,slow=36
SNAA   Sanae              70.27 161  eP       P        01 53 42.0 -0.3
       5.0nm,1.0s
DBIC   Dimbokro           73.47  78  LR       LR       02 24 36.2
       comp=Z,191nm,19.1s,baz=229,slow=34
COR    Corvallis          73.59 327  eP       P        01 54 01.3 -1.0
       13nm,1.0s
TOA1   Torodi Ar. Sit     81.60  74  eP       P        01 54 49.2 +1.5
TOA0   Torodi Ar. Sit     81.60  74  eP       P        01 54 47.2 -0.6
       10nm,0.8s
TORD   Torodi Ar. Bea     81.60  74  P        P        01 54 49.2 +1.5
       7.2nm,0.8s,baz=282,slow=5.8,SNR=35
TORD                                 LR       LR       02 29 00.7
       comp=Z,147nm,21.9s,baz=335,slow=34
ESDC   Sonseca Array      86.13  47  P        P        01 55 12.7 +2.2
       0.1nm,0.2s,baz=257,slow=5.1,SNR=4.2
ESDC                                 LR       LR       02 31 49.0
       comp=Z,40nm,18.4s,baz=240,slow=34
INK    Inuvik             92.93 342  P        P        01 55 42.6 +0.8
       1.6nm,1.1s,baz=124,slow=3.6,SNR=2.9
H11N3  WAKE ISLAND Hy120.39 284      T        T        04 13 05.3
       baz=97,slow=74,SNR=17
H11N2  WAKE ISLAND Hy120.40 284      T        T        04 13 10.3
       baz=97,slow=74,SNR=17
H11N1  WAKE ISLAND Hy120.40 284      T        T        04 13 05.0
       baz=97,slow=74,SNR=9.7
H11S2  WAKE ISLAND Hy120.44 283      T        T        04 13 11.4
       baz=97,slow=75,SNR=14
H11S1  WAKE ISLAND Hy120.44 283      T        T        04 13 05.9
       baz=97,slow=75,SNR=16
H11S3  WAKE ISLAND Hy120.45 283      T        T        04 13 08.6
       baz=97,slow=75,SNR=12
ASAJ   Asahikawa         136.61 319  PKP      PKiKP    02 01 54.0 +0.8
       2.3nm,0.3s,baz=299,slow=29,SNR=6.7
ZAA1   Zalesovo Array    138.46  17  ePKPdf   PKiKP    02 01 57.0 +0.3
ZALV   Zalesovo Beam     138.46  17  PKP      PKiKP    02 01 57.0 +0.3
       0.9nm,0.5s,baz=259,slow=1.5,SNR=4.1
MK32   Makanchi Array    143.57  26  ePKPdf   PKiKP    02 02 05.8 -1.6
MKAR   Makanchi Array    143.57  26  PKP      PKiKP    02 02 05.8 -1.6
       0.5nm,0.8s,baz=22,slow=0.8,SNR=4.1
KSH    Kashi             145.36  40  ePKPbc   PKPdf    02 02 09.3 +1.8
SONA0  Songino Array     147.44 357  ePKPab   PKPab    02 02 14.8 -0.4
SONM   Songino Array     147.44 357  PKPbc    PKPab    02 02 14.8 -0.4
       2.9nm,0.7s,baz=341,slow=2.2,SNR=14
KSRS   Korea Array       149.53 321  PKPbc    PKiKP    02 02 20.8 +0.9
       0.4nm,0.3s,baz=349,slow=1.2,SNR=4.1
LZH    Lanzhou           159.22   1  ePKP     PKPdf    02 02 26.5 -1.6
LZH                                  pPKP     pPKPdf   02 02 34.3 -2.7
LZH                                  sPKP              02 02 38.0
LZH                                  PKP      PKPab    02 03 03.3 -1.7
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BJI ***29*** *01:43:28.5±0.0, 4°.44N×94°.74E, h55km, mb4.8/36, mB4.8/22, Ms4.1/15, Ms7 3.8/12*
ISCJB ***29*** *01:43:31.2±0.2, 5°.03N±0°.03×94°.64E±0°.03, h43km, mb4.6/101, MS3.7/17, Error ellipse: s-maj=5.3km s-min=2.8km az=39.2*
MOS ***29*** *01:43:33.5±1.1, 5°.25N×94°.79E, h59km, mb5.0/44, Error ellipse: s-maj=9.3km s-min=5.0km az=114.1*
NEIC ***29*** *01:43:35.0±2.7, 5°.08N×94°.75E, h65km±8km, mb4.6/48, Error ellipse: s-maj=14.8km s-min=11.6km az=221.0*
NEIC Felt [III] at Banda Aceh.
IDC ***29*** *01:43:36.1±2.9, 5°.21N×94°.76E, h67km±25km, mb4.2/23, mb1 4.3/26, mb1mx4.1/41, mbtmp4.4/26, MS3.5/9, Ms1 3.5/9, ms1mx3.3/28, Error ellipse: s-maj=19.5km s-min=10.6km az=44.0*
DJA ***29*** *01:43:39.2±1.0, 5°N±5°×9°5E±°, h12km±9km, M4.7/9, mb5.0/1, mB5.4/2, MLv4.5/9, Mw(mB)4.9/2*
ISC 29 01:43:32.4±0.4, **5°.05N**±0°.05×**94°.62E**±0°.05, **h43**km, **n262**, σ**1s.62**/275, **mb4.7**/102, **MS3.7**/17, **23C-16D, Northern Sumatera**

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Code   Station Name          Δ°  AZ°   Phase ID            Time       Res
                                     Op       ISC       h  m  s       ISC
MLSI   Meulaboh, Aceh      1.94 114  P        Pn       01 44 04.5 +1.5
MLSI                                 S        Sn       01 44 21.6 -4.5
CMBY   CAMPBELL BAY        2.07 341  eP       Pn       01 44 06.3 +1.6
CMBY                                 IAmb     IAmb     01 44 09.8
       comp=Z,697nm,0.2s
LHMI   Lhok Sumawe         2.32  86  ePn      Pn       01 44 10.3 +2.1
LHMI   Lhok Sumawe         2.32  86  P        Pn       01 44 10.2 +2.0
LHMI                                 S        Sn       01 44 36.4 +0.8
TPTI                       3.11 125  P        Pn       01 44 20.9 +1.9
TPTI                                 S        Sn       01 44 53.6 -1.4
SNSI   Sinabang, Aceh      3.13 147  P        Pn       01 44 20.5 +1.2
SNSI                                 S        Sn       01 44 53.9 -1.5
KCSI   Kotacane, Aceh      3.49 116  P        Pn       01 44 27.8 +3.5
KCSI                                 S        Sn       01 45 01.2 -3.2
PKDT   Phuket              4.65  52  P        Pn       01 44 41.4 +1.3
GSI    Gunungsitoli        4.75 142  ePn      Pn       01 44 43.5 +1.9
GSI                                  eSn      Sn       01 45 33.7 -1.7
GSI    Gunungsitoli        4.75 142  P        Pn       01 44 43.4 +1.8
GSI                                  S        Sn       01 45 33.4 -2.0
PSI    Prapat              4.84 117  P        Pn       01 44 47.0 +4.1
       comp=Z,12nm,0.3s,baz=328,slow=12,SNR=34
PSI                                  S        Sn       01 45 40.3 +2.5
       comp=Z,9.0nm,0.3s,baz=359,slow=16,SNR=6.1
PSI                                  LR       LR       01 46 56.7
       comp=Z,546nm,19.2s,baz=293,slow=41
PSI    Prapat              4.84 117  ePn      Pn       01 44 46.5 +3.6
TRTT   Trang               5.75  61  P        Pn       01 44 56.2 +0.9
KULM   Kulim               6.01  87  ePn      Pn       01 45 00.1 +1.2
SKLT   Songkhla            6.33  70  P        Pn       01 45 05.6 +2.4
       comp=Z,55nm,0.7s,comp=Z,697nmcomp=Z,0.2nm
IPM    Ipoh                6.41  95  ePn      Pn       01 45 05.8 +1.4
IPM                                  eSn      Sn       01 46 12.8 -3.5
MNSI   Mandailing Nat      6.51 130  P        Pn       01 45 08.0 +2.2
MNSI                                 S        Sn       01 46 14.0 -4.8
DGPR   DIGLIPUR            8.24 348  eP       Pn       01 45 30.2 +0.6
DGPR                                 IAmb     IAmb     01 45 40.1
       comp=Z,71nm,0.3s
PHET   Kaeng Krachan       9.24  32  P        Pn       01 45 46.9 +3.6
       comp=Z,50µm,0.5s,comp=Z,278nm
MNAI   Manna              12.52 138  ePn      Pn       01 46 28.2 +0.1
MHMT   Maesarieng         13.44  14  P        P        01 46 46.4 -2.7
       comp=Z,49nm,0.9s,comp=Z,1µm
UTTA   Uttaradit          13.89  24  P        P        01 46 54.8 +0.8
       comp=Z,51µm,0.6s,comp=Z,585µm
CM31   Chiang Mai Arr     13.98  17  eP       Pn       01 46 49.9 +1.9
CMAR   Chiang Mai Arr     13.98  17  P        Pn       01 46 50.4 +2.3
       comp=Z,1.2nm,0.3s,baz=206,slow=14,SNR=8.7
CMAR                                 LR       LR       01 51 57.7
       comp=Z,144nm,20.4s,baz=220,slow=36
PALK   Pallekele          14.01 280  P        P        01 46 53.5 -2.0
       comp=Z,0.8nm,0.3s,baz=117,slow=13,SNR=4.0
PALK                                 S        Sn       01 49 14.2 -8.6
       comp=Z,1.5nm,0.3s,baz=116,slow=16,SNR=6.3
LAMP   Lampang            14.26  20  P        P        01 46 59.3 +1.1
       comp=Z,81µm,0.7s
CHTO   Chiang Mai         14.31  17  eP       P        01 46 57.4 -1.4
CHTO   Chiang Mai         14.31  17  eP       P        01 46 57.4 -1.4
CMMT   Chiang Mai         14.31  17  P        P        01 46 58.9 +0.1
       comp=Z,14nm,0.9s
NONG   Nongkai            15.39  32  P        P        01 47 11.5 +0.8
       comp=Z,0.5nm,1.0s,comp=Z,60nm
PANO   Nakornpanom        15.50  38  P        P        01 47 17.6 +5.6
KSM    Kuching            16.06 102  eP       Pn       01 47 16.4 +1.0
       comp=Z,17nm,0.7s
SBUM   Sibu               17.75  98  eP       Pn       01 47 35.6 -1.0
       comp=Z,2.3nm,0.8s
SMRI   Semarang           19.84 127  eP       P        01 47 57.4 -2.5
       comp=Z,38nm,0.6s
HYB    Hyderabad          19.96 309  eP       Pn       01 48 04.0 +0.9
QIZ    Qiongzhong         20.34  46  P        P        01 48 06.0 +0.8
QIZ                                  S        Sn       01 51 53.5 -2.4
QIZ                                  pmax     pmax
       comp=Z,140nm,12.8s
QIZ                                  LR       LR
       comp=Z,280nm,15.7s
QIZ                                  LR       LR
       comp=Z,280nm,18.6s
QIZ                                  LR       LR
       comp=Z,270nm,15.7s
BOK    Bokaro             20.45 337  eP       P        01 48 06.8 +0.3
BOK                                  IAmb     IAmb     01 48 10.4
       comp=Z,68nm,1.5s
KOHI   KOHIMA             20.56 359  eP       P        01 48 05.5 -2.3
KOHI                                 IAmb     IAmb     01 48 06.4
       comp=Z,12nm,1.1s
SHL    Shillong           20.57 353  eP       P        01 48 05.7 -2.2
       comp=Z,10nm,0.8s
SHL    Shillong           20.57 353  eP       P        01 48 05.7 -2.2
SHL                                  pmax     pmax
       comp=Z,10.0nm,0.8s
SHL    Shillong           20.57 353  eP       P        01 48 09.0 +1.1
MOKO   MOKOCHONG          21.15 360  ex       P        01 48 04.5  -10
KMI    Kunming            21.43  21  P        P        01 48 21.0 +3.8
KMI                                  pP       sP       01 48 34.3 +1.8
KMI                                  sP       pP       01 48 40.5  +13
KMI                                  pmax     pmax
       comp=Z,16nm,0.7s
KMI                                  pmax     pmax
       comp=Z,96nm,3.5s
KMI                                  LR       LR
       comp=Z,210nm,14.9s
KMI                                  LR       LR
       comp=Z,150nm,10.8s
KMI                                  LR       LR
       comp=Z,200nm,13.4s
TEZP   TEZPUR             21.52 356  eP       P        01 48 16.3 -1.6
LKP    Lekhapani          22.19   3  eP       P        01 48 25.6 +0.5
ZIRO   ZIRO               22.36 358  ex       P        01 48 23.4 -3.8
JIRN   Jiri               23.87 341  eP       P        01 48 42.7 +0.2
       comp=Z,25nm,0.3s
PKI    Pulchoki           24.05 340  eP       P        01 48 43.8 -0.3
       comp=Z,4.7nm,0.3s
PKIN   Phulchoki          24.06 340  eP       P        01 48 43.7 -0.5
       comp=Z,3.0nm,0.3s
DMN    Daman              24.19 339  eP       P        01 48 45.7 +0.3
       comp=Z,5.8nm,0.2s
GYA    Guiyang            24.20  27⇑iP       P        01 48 45.8 +0.5
GYA                                  pP       sP       01 49 00.5 -0.6
GYA                                  PP       PnPn     01 49 21.5 +5.1
GYA                                  S        S        01 52 54.8 -6.1
GYA                                  pmax     pmax
       comp=Z,10.0nm,0.9s
GYA                                  pmax     pmax
       comp=Z,110nm,4.2s
GYA                                  LR       LR
       comp=Z,200nm,15.6s
GYA                                  LR       LR
       comp=Z,170nm,15.3s
GYA                                  LR       LR
       comp=Z,260nm,15.3s
KKN    Kakani             24.30 340  eP       P        01 48 46.1 -0.2
GKN    Gorkha             24.72 338  eP       P        01 48 50.4 +0.4
       comp=Z,36nm,0.3s
LSA    Lhasa              24.74 353  eP       P        01 48 51.1 +0.6
       comp=Z,20nm,0.5s
LSA    Lhasa              24.74 353  eP       P        01 48 51.1 +0.6
LSA                                  pmax     pmax
       comp=Z,20nm,0.5s
DANN   Dangsing           25.36 337  eP       P        01 48 56.5 +0.5
       comp=Z,98nm,0.7s
H08S2  Diego Garcia H     25.43 240  T        T        02 16 08.5
       baz=60,slow=75,SNR=621
H08S3  Diego Garcia H     25.43 240  T        T        02 16 13.9
       baz=60,slow=75,SNR=845
H08S1  Diego Carcia H     25.44 240  T        T        02 16 09.7
       baz=60,slow=75,SNR=486
KAPI   Kappang            27.02 111  P        P        01 49 11.6 +0.8
       comp=Z,7.2nm,0.5s,baz=285,slow=10,SNR=7.5
KAPI   Kappang            27.02 111  eP       P        01 49 11.6 +0.8
       comp=Z,11nm,0.7s
KAPI   Kappang            27.02 111  eP       P        01 49 11.6 +0.8
KAPI                                 pmax     pmax
       comp=Z,11nm,0.7s
CD2    Chengdu            27.12  17  eP       P        01 49 13.0 +1.4
ENH    Enshi              28.74  27  eP       P        01 49 24.4 -1.6
       comp=Z,9.9nm,0.6s
SMLA   Simla              30.69 330  eP       P        01 49 41.4 -1.9
XAN    Xi'an              31.75  23  eP       P        01 49 50.5 -2.2
       comp=Z,16nm,0.7s
XAN    Xi'an              31.75  23  P        P        01 49 51.5 -1.2
XAN                                  pmax     pmax
       comp=Z,20nm,0.8s
XAN                                  LR       LR
       comp=Z,110nm,20.6s
XAN                                  LR       LR
       comp=Z,150nm,15.2s
XAN                                  LR       LR
       comp=Z,170nm,21.7s
XAN    Xi'an              31.75  23  eP       P        01 49 50.5 -2.2
XAN                                  pmax     pmax
       comp=Z,16nm,0.7s
DHRM   DHARAMSHALA        32.03 330  eP       P        01 49 55.9 +0.6
DHRM                                 IAmb     IAmb     01 49 57.9
       comp=Z,9.0nm,0.4s
LZH    Lanzhou            32.03  14  eP       P        01 49 52.0 -3.2
LZH                                  pP       pP       01 50 06.3 -0.1
LZH                                  sP       sP       01 50 14.5 +3.2
LZH                                  pmax     pmax
       comp=Z,27nm,1.0s
LZH                                  LR       LR
       comp=N,160nm,13.0s
LZH                                  LR       LR
       comp=E,140nm,14.6s
LZH                                  LR       LR
       comp=Z,140nm,16.5s
SOEI   Soe                33.00 116  eP       P        01 50 01.1 -2.8
       comp=Z,15nm,1.0s
GTA    Gaotai             34.53   7  P        P        01 50 16.3 -0.6
GTA                                  pP       pP       01 50 29.3 +1.5
GTA                                  sP       sP       01 50 35.5 +2.8
GTA                                  pmax     pmax
       comp=Z,12nm,0.9s
GTA                                  pmax     pmax
       comp=Z,38nm,4.3s
GTA                                  LR       LR
       comp=Z,82nm,17.5s
GTA                                  LR       LR
       comp=Z,90nm,19.2s
GTA                                  LR       LR
       comp=Z,110nm,18.2s
NIL    Nilore             34.71 328  eP       P        01 50 18.0 -0.4
       comp=Z,4.1nm,0.8s
NIL    Nilore             34.71 328  eP       P        01 50 18.0 -0.4
NIL                                  pmax     pmax
       comp=Z,4.0nm,0.8s
NJ2    Nanjing            35.16  37  eP       P        01 50 25.5 +3.2
NJ2                                  pmax     pmax
       comp=Z,14nm,0.7s
TIA    Tai'an             37.28  31  P        P        01 50 40.5 +0.2
TIA                                  pmax     pmax
       comp=Z,12nm,0.7s
KSH    Kashi              38.23 336  P        P        01 50 48.0 -0.5
KSH                                  sP       sP       01 51 11.5 +7.2
KSH                                  S        S        01 56 36.0 -3.4
KSH                                  sS       sS       01 57 02.8 +5.0
KSH                                  pmax     pmax
       comp=Z,9.0nm,0.6s
KSH                                  pmax     pmax
       comp=Z,100nm,7.8s
KSH                                  LR       LR
       comp=Z,62nm,8.3s
KSH                                  LR       LR
       comp=Z,98nm,7.4s
HHC    Hu-ho-hao-te       38.75  21  P        P        01 50 55.0 +2.2
HHC                                  S        S        01 56 42.5 -4.7
HHC                                  pmax     pmax
       comp=Z,7.0nm,0.9s
HHC                                  LR       LR
       comp=Z,160nm,19.0s
HHC                                  LR       LR
       comp=Z,150nm,18.0s
WMQ    Urumqi             39.09 352  eP       P        01 50 56.2 +0.6
       comp=Z,9.3nm,0.5s
WMQ    Urumqi             39.09 352  eP       P        01 50 57.3 +1.7
WMQ                                  sP       sP       01 51 18.0 +6.4
WMQ                                  pmax     pmax
       comp=Z,18nm,0.6s
WMQ                                  pmax     pmax
```

	comp=Z,61nm,5.7s						
WMQ				LR	LR		
	comp=Z,330nm,27.7s						
WMQ				LR	LR		
	comp=Z,87nm,27.7s						
WMQ				LR	LR		
	comp=Z,210nm,26.3s						
WMQ	**Urumqi**	**39.09**	**352**	*e*P	**P**	**01 50 56.2**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KNRA	**Kununurra**	**39.58**	**122**	P	**P**	**01 50 59.8**	**-0.1**
	baz=40						
BJT	**Baijiatuau**	**39.86**	**26**	*e*P	**P**	**01 51 02.9**	**+0.9**
	comp=Z,17nm,0.7s						
BJT	**Baijiatuau**	**39.86**	**26**	*e*P	**P**	**01 51 02.9**	**+0.9**
BJT				pmax	pmax		
	comp=Z,17nm,0.7s						
NRN	**Naryn**	**39.87**	**338**	*e*P	**P**	**01 51 03.6**	**+1.2**
	comp=Z,8.2nm,0.6s						
NRN				*e*PcP	**PcP**	**01 53 09.0**	**+1.3**
NRN	**Naryn**	**39.87**	**338**	*e*P	**P**	**01 51 03.6**	**+1.2**
NRN				*e*		01 53 09.0	
NRN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJI	**Beijing**	**39.88**	**26**	⇓*i*P	**P**	**01 51 03.5**	**+1.4**
BJI				pmax	pmax		
	comp=Z,23nm,0.7s						
KDJ	**Kajisay**	**40.06**	**340**	*e*P	**P**	**01 51 05.2**	**+1.4**
	comp=Z,19nm,0.6s						
KDJ	**Kajisay**	**40.06**	**340**	*e*P	**P**	**01 51 05.2**	**+1.4**
KDJ				pmax	pmax		
	comp=Z,19nm,0.6s						
GAR	**Garm**	**40.34**	**330**	*e*P	**P**	**01 51 05.5**	**-0.6**
	comp=Z,9.7nm,0.9s						
GAR	**Garm**	**40.34**	**330**	*e*P	**P**	**01 51 05.5**	**-0.6**
GAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PDGK	**Podgornoye**	**40.40**	**343**	P	**P**	**01 51 07.3**	**+0.7**
PDGK				pmax	pmax		
	comp=Z,15nm,0.6s						
TKM2	**Tokmak 2**	**41.31**	**339**	*i* P	**P**	**01 51 14.2**	**0.0**
TKM2				pmax	pmax		
	comp=Z,13nm,1.2s						
AAK	**Ala-Archa**	**41.48**	**337**	*e*P	**P**	**01 51 16.8**	**+1.4**
	comp=Z,8.1nm,0.8s						
AAK	**Ala-Archa**	**41.48**	**337**	⇓*e*P	**P**	**01 51 16.4**	**+0.9**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK31	**Makanchi Array**	**42.93**	**348**	*e*P	**P**	**01 51 27.3**	**+0.2**
	comp=Z,10nm,0.8s						
MK31	**Makanchi Array**	**42.93**	**348**	*i* P	**P**	**01 51 27.0**	**-0.1**
MK31				pmax	pmax		
	comp=Z,13nm,0.7s						
MKAR	**Makanchi Array**	**42.93**	**348**	P	**P**	**01 51 27.2**	**+0.2**
	comp=Z,13nm,0.6s,baz=167,slow=8.2,SNR=58						
MKAR				PcP	**PcP**	**01 53 18.0**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=197,slow=5.7,SNR=3.7						
MAKZ	**Makanchi**	**43.01**	**347**	*e*P	**P**	**01 51 27.8**	**+0.1**
	comp=Z,12nm,0.6s						
MAKZ	**Makanchi**	**43.01**	**347**	*e*P	**P**	**01 51 27.8**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,12nm,0.6s						
TJN	**Taejon**	**43.30**	**40**	⇑*e*P	**P**	**01 51 29.8**	**-0.3**
KK31	**Karatay Array**	**43.49**	**334**	*i* P	**P**	**01 51 32.0**	**+0.4**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
H01W3	**Cape Leeuwin H**	**43.77**	**157**	T	T	02 39 30.1	
	baz=330						
H01W2	**Cape Leeuwin H**	**43.78**	**157**	T	T	02 38 41.1	
	baz=330						
H01W1	**Cape Leeuwin H**	**43.78**	**157**	T	T	02 39 20.0	
	baz=330						
SONA0	**Songino Array**	**43.81**	**11**	*e*P	**P**	**01 51 33.5**	**-0.8**
SONA0				*e*PcP	**PcP**	**01 53 20.6**	**+0.3**
SONM	**Songino Array**	**43.81**	**11**	P	**P**	**01 51 33.5**	**-0.8**
	comp=Z,6.8nm,0.8s,baz=193,slow=8.2,SNR=30						
SONM				PcP	**PcP**	**01 53 20.6**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=188,slow=3.8,SNR=6.4						
SONM				LR	LR	02 11 03.5	
	comp=Z,98nm,18.7s,baz=262,slow=38						
ULN	**Ulaanbaatar**	**43.97**	**12**	*e*P	**P**	**01 51 37.2**	**+1.6**
	comp=Z,5.2nm,0.7s						
ULN	**Ulaanbaatar**	**43.97**	**12**	*e*P	**P**	**01 51 37.2**	**+1.6**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSRS	**Korea Array**	**44.31**	**39**	P	**P**	**01 51 38.0**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=218,slow=9.3,SNR=14						
KSRS				LR	LR	02 11 45.5	
	comp=Z,44nm,19.3s,baz=226,slow=38						
KSRS	**Korea Array**	**44.31**	**39**	P	**P**	**01 51 38.0**	**-0.3**
DGZ	**Jazzator, Alta**	**44.91**	**353**	*de*P	**P**	**01 51 43.6**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**46.27**	**124**	P	**P**	**01 51 55.5**	**+1.3**
	comp=Z,20nm,0.7s,baz=295,slow=10.0,SNR=112						
WRAB	**Tennant Creek**	**46.28**	**124**	*e*P	**P**	**01 51 53.9**	**-0.3**
	comp=Z,27nm,0.7s						
WRAB	**Tennant Creek**	**46.28**	**124**	*c i*P	**P**	**01 51 55.1**	**+0.9**
WRAB				pmax	pmax		
	comp=Z,27nm,0.7s						
WB2	**Warramunga Arr**	**46.28**	**124**	*e*P	**P**	**01 51 54.1**	**-0.2**
	comp=Z,24nm,0.7s						
GEYT	**Alibeck**	**46.63**	**320**	P	**P**	**01 51 57.7**	**+1.0**
	comp=Z,7.5nm,0.7s,baz=148,slow=8.7,SNR=14						
GEYT				LR	LR	02 13 22.7	
	comp=Z,27nm,19.1s,baz=215,slow=38						
GYA0B	**ALIBECK ARRAY**	**46.63**	**320**	*e*P	**P**	**01 51 57.3**	**+0.6**
	comp=Z,6.9nm,0.6s						
OTUK	**Ortayu**	**47.06**	**340**	*i* P	**P**	**01 52 00.6**	**+0.7**
OTUK				pmax	pmax		
	comp=Z,18nm,0.7s						
TLY	**Talaya**	**47.08**	**8**	*e*P	**P**	**01 51 59.8**	**-0.2**
TLY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,142nm,16.0s						
CN2	**Changchun**	**47.18**	**30**	*e*P	**P**	**01 52 00.3**	**-0.5**
CN2				*e*S	**S**	**01 58 51.8**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=Z,60nm,17.0s						
CN2				LR	LR		
	comp=Z,100nm,17.0s						
CN2				LR	LR		
	comp=Z,80nm,15.1s						
KURK	**Kurchatov**	**47.45**	**346**	*e*P	**P**	**01 52 03.5**	**+0.7**
	comp=Z,15nm,0.8s						
KURK	**Kurchatov**	**47.45**	**346**	*c i*P	**P**	**01 52 03.2**	**+0.4**
KURK				pmax	pmax		
	comp=Z,15nm,0.7s						
AS31	**Alice Springs**	**47.77**	**128**	*e*P	**P**	**01 52 06.4**	**+0.6**
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**47.77**	**128**	P	**P**	**01 52 06.9**	**+1.1**
	comp=Z,6.9nm,0.8s,baz=305,slow=7.4,SNR=41						
ZALV	**Zalesovo Beam**	**49.40**	**352**	P	**P**	**01 52 17.9**	**+0.1**
	comp=Z,20nm,0.5s,baz=190,slow=7.3,SNR=79						
MAJO	**Matsushiro**	**50.73**	**46**	*e*P	**P**	**01 52 28.5**	**+0.3**
MAJO	**Matsushiro**	**50.73**	**46**	*e*P	**P**	**01 52 28.5**	**+0.3**
MJAR	**Matsushiro Arr**	**50.73**	**46**	P	**P**	**01 52 28.5**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=250,slow=8.9,SNR=6.9						
MJAR				LR	LR	02 15 54.1	
	comp=Z,57nm,18.1s,baz=250,slow=38						
USRK	**Ussuriysk Ar.**	**50.94**	**34**	P	**P**	**01 52 29.2**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=243,slow=7.2,SNR=8.9						
USRK				LR	LR	02 16 44.4	
	comp=Z,76nm,19.5s,baz=204,slow=39						
BRVK	**Borovoye**	**51.86**	**342**	*e*P	**P**	**01 52 36.1**	**-0.3**
	comp=Z,8.1nm,0.7s						
BRVK	**Borovoye**	**51.86**	**342**	*de*P	**P**	**01 52 35.6**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s						
AB31	**Akbulak array**	**52.93**	**332**	*i* P	**P**	**01 52 44.7**	**+0.4**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KLR	**Kul'dur**	**54.08**	**29**	P	**P**	**01 52 52.3**	**-0.5**
	comp=Z,6.5nm,1.1s,baz=264,slow=6.4,SNR=9.2						
KLR	**Kul'dur**	**54.08**	**29**	*ce*P	**P**	**01 52 52.5**	**-0.3**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PMG	**Port Moresby**	**54.29**	**105**	P	**P**	**01 52 54.0**	**-0.9**
	comp=Z,20nm,0.9s,baz=253,slow=11,SNR=2.5						
PMG	**Port Moresby**	**54.29**	**105**	*e*P	**P**	**01 52 54.0**	**-0.9**
BBOO	**Buckleboo**	**54.43**	**137**	P	**P**	**01 52 55.9**	**+0.3**
	baz=55						
AKTO	**Aktyubinsk**	**54.65**	**332**	P	**P**	**01 52 56.5**	**-0.4**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CTA	**Charters Tower**	**56.54**	**118**	P	**P**	**01 53 10.6**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=247,slow=2.2,SNR=4.3						
HTT	**Hallett**	**56.75**	**136**	P	**P**	**01 53 11.9**	**-0.4**
	baz=57						
GNI	**Garni**	**56.76**	**316**	⇑*e*P	**P**	**01 53 12.3**	**-0.1**
GNI				pmax	pmax		
	comp=Z,49nm,1.5s						
QLP	**Quilpie**	**57.38**	**126**	P	**P**	**01 53 17.0**	**+0.1**
	baz=58						
STKA	**Stephens Creek**	**57.84**	**133**	P	**P**	**01 53 21.4**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=44,slow=2.6,SNR=5.1						
STKA	**Stephens Creek**	**57.84**	**133**	P	**P**	**01 53 19.9**	**-0.1**
	baz=58						
SVE	**Sverdlovsk**	**58.19**	**339**	*e*P	**P**	**01 53 22.6**	**+0.6**
SVE				pmax	pmax		
	comp=Z,16nm,1.3s						
ARU	**Arti**	**58.66**	**337**	*e*P	**P**	**01 53 25.6**	**+0.3**
	comp=Z,5.2nm,0.9s						
ARU	**Arti**	**58.66**	**337**	*d i*P	**P**	**01 53 25.2**	**-0.1**
ARU						01 55 31.9	
ARU				S	**S**	**02 01 28.0**	**+1.4**
ARU				SS	**SS**	**02 05 11.5**	**-8.6**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YSS	**Yuzh-Sakhalins**	**58.73**	**37**	*e*P	**P**	**01 53 24.7**	**-1.2**
YSS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NCK	**Nalchik**	**58.94**	**319**	⇑*e*P	**P**	**01 53 30.1**	**+2.6**
NCK				pmax	pmax		
	comp=Z,11nm,0.9s						
KBZ	**Khabaz**	**59.50**	**319**	P	**P**	**01 53 31.3**	**0.0**
	comp=Z,1.2nm,0.6s,baz=82,slow=5.8,SNR=3.5						
KIV	**Kislovodsk**	**59.73**	**319**	*e*P	**P**	**01 53 33.4**	**+0.3**
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
YAK	**Yakutsk**	**62.51**	**18**	*e*P	**P**	**01 53 50.1**	**-1.3**
BRTR	**Keskin Array B**	**64.64**	**312**	P	**P**	**01 54 06.6**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=124,slow=7.1,SNR=12						
VSR	**Storozhevoye**	**64.96**	**325**	*ce*P	**P**	**01 54 06.7**	**-1.1**
PRGR	**Permogore**	**67.11**	**337**	*e*P	**P**	**01 54 20.3**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,13nm,0.8s						
MOS	**Moscow**	**67.73**	**329**	*e*P	**P**	**01 54 24.4**	**-1.0**
MOS				*e*		01 54 38.8	
OBN	**Obninsk**	**68.01**	**328**	⇑*e*P	**P**	**01 54 28.0**	**+0.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MA2	**Magadan**	**69.04**	**27**	⇓*e*P	**P**	**01 54 33.2**	**-0.3**
MA2				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	**Klimovskoe**	**69.19**	**335**	*e*P	**P**	**01 54 33.1**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,12nm,1.5s						
PHSR	**Pinarhisar**	**69.60**	**313**	⇓*i*P	**P**	**01 54 38.6**	**+1.2**
TIXI	**Tiksi**	**69.89**	**11**	*e*P	**P**	**01 54 36.3**	**-2.3**
	comp=Z,8.2nm,0.5s						
TIXI	**Tiksi**	**69.89**	**11**	*c i*P	**P**	**01 54 37.0**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CFR	**Carcaliu**	**69.94**	**316**	⇑*i*P	**P**	**01 54 39.8**	**+0.4**
PETK	**Petropavlovsk-**	**70.02**	**35**	LR	LR	02 25 50.8	
	comp=Z,44nm,21.8s,baz=257,slow=36						
AKASG	**Malin Array Be**	**70.66**	**322**	P	**P**	**01 54 43.0**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=89,slow=5.0,SNR=7.8						
AKBB	**Malin Array Si**	**70.66**	**322**	*e*P	**P**	**01 54 43.0**	**-0.6**
	comp=Z,3.7nm,1.1s						
AKBB	**Malin Array Si**	**70.66**	**322**	*e*P	**P**	**01 54 43.1**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VRI	**Vrincioaia**	**71.06**	**317**	⇑*i*P	**P**	**01 54 47.8**	**+1.5**
VRI	**Vrincioaia**	**71.06**	**317**	P	**P**	**01 54 47.7**	**+1.5**
VRI				pmax	pmax		
	comp=Z,19nm,1.2s						
PLOR	**Plostina**	**71.11**	**317**	⇓*i*P	**P**	**01 54 48.5**	**+1.9**
TESR	**Tescani**	**71.26**	**317**	⇑*i*P	**P**	**01 54 48.3**	**+0.9**
SEY	**Seymchan**	**71.28**	**24**	⇓*e*P	**P**	**01 54 46.6**	**-0.6**
MLR	**Muntele Rosu**	**71.52**	**316**	⇓*i*P	**P**	**01 54 50.6**	**+1.4**
BIZ	**Bicaz**	**71.72**	**318**	⇓*i*P	**P**	**01 54 51.4**	**+1.2**
PLVB	**Pleven**	**72.05**	**314**	⇓*i*P	**P**	**01 54 53.5**	**+1.3**
VOIR		**72.13**	**316**	⇓*i*P	**P**	**01 54 53.3**	**+0.5**
VOIR		**72.13**	**316**	P	**P**	**01 54 54.2**	**+1.4**
VOIR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARR	**Arges**	**72.40**	**316**	⇓*i*P	**P**	**01 54 55.1**	**+0.7**
BURAR	**Bucovina Array**	**72.45**	**318**	⇑*i*P	**P**	**01 54 56.1**	**+1.4**
PUL	**Pulkovo**	**72.90**	**332**	⇑*e*P	**P**	**01 54 58.3**	**+1.4**
VTS	**Vitosha**	**72.92**	**313**	⇑*i*P	**P**	**01 54 58.2**	**+0.6**
STIP	**Stip**	**73.55**	**312**	*i* P	**P**	**01 55 00.3**	**-0.9**
DRGR		**73.97**	**317**	⇑*i*P	**P**	**01 55 04.9**	**+1.3**
DRGR		**73.97**	**317**	P	**P**	**01 55 04.9**	**+1.3**
VSU	**Vasula**	**74.25**	**330**	*de*P	**P**	**01 55 05.5**	**+0.7**
VSU				pmax	pmax		
	comp=Z,27nm,1.3s						
TRPA	**Tarpa**	**74.32**	**319**	⇑*i*P	**P**	**01 55 06.8**	**+1.3**
LVZ	**Lovozero**	**74.36**	**340**	⇓*e*P	**P**	**01 55 05.3**	**-0.1**
LVZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KWP	**Kalwaria Pacla**	**74.48**	**320**	*e*P	**P**	**01 55 07.2**	**+0.8**
KWP	**Kalwaria Pacla**	**74.48**	**320**	*e*P	**P**	**01 55 07.2**	**+0.8**
BZS	**Buzias**	**74.53**	**316**	⇑*i*P	**P**	**01 55 07.6**	**+0.8**
KOLS	**Kolonicke sedl**	**74.64**	**319**	*e*P	**P**	**01 55 08.8**	**+1.4**
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KOLS	**Kolonicke sedl**	**74.64**	**319**	*e*P	**P**	**01 55 08.8**	**+1.4**
FIA0	**FINESS Array S**	**75.42**	**332**	*e*P	**P**	**01 55 11.8**	**+0.2**
FIA0	**FINESS Array S**	**75.42**	**332**	*e*P	**P**	**01 55 11.8**	**+0.2**
FINES	**FINESS Array B**	**75.42**	**332**	P	**P**	**01 55 11.8**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=99,slow=4.8,SNR=16						
SUF	**Sumiainen**	**75.75**	**334**	P	**P**	**01 55 16.2**	**+2.7**
SUF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PDG	**Podgorica**	**75.81**	**312**	⇑*i*P	**P**	**01 55 14.4**	**+0.2**
NIE	**Niedzica**	**75.99**	**320**	*e*P	**P**	**01 55 16.2**	**+1.0**
NIE	**Niedzica**	**75.99**	**320**	*e*P	**P**	**01 55 16.2**	**+1.0**
OJC	**Ojcow**	**76.43**	**320**	*e*P	**P**	**01 55 18.6**	**+1.0**
OJC	**Ojcow**	**76.43**	**320**	*e*P	**P**	**01 55 18.1**	**+0.4**
	comp=Z,6.6nm,0.8s						
OJC	**Ojcow**	**76.43**	**320**	*e*P	**P**	**01 55 18.7**	**+1.0**
VYHS	**Vyhne**	**76.82**	**319**	*e*P	**P**	**01 55 20.9**	**+1.0**
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.6s						
VYHS	**Vyhne**	**76.82**	**319**	*e*P	**P**	**01 55 20.8**	**+0.9**
SRO	**Srobarova**	**77.08**	**318**	*e*P	**P**	**01 55 23.0**	**+1.7**
SRO	**Srobarova**	**77.08**	**318**	*e*P	**P**	**01 55 23.0**	**+1.7**
OKC	**Ostrava-Krasne**	**77.44**	**320**	*e*P	**P**	**01 55 24.6**	**+1.3**
OKC	**Ostrava-Krasne**	**77.44**	**320**	*e*P	**P**	**01 55 24.6**	**+1.3**
JAVC	**Velka Javorina**	**77.63**	**319**	*e*P	**P**	**01 55 26.1**	**+1.6**
MORC	**Moravsky Berou**	**77.82**	**320**	⇑*i*P	**P**	**01 55 26.8**	**+1.3**
MORC	**Moravsky Berou**	**77.82**	**320**	*e*P	**P**	**01 55 26.4**	**+0.9**
MODS	**Modra-Piesok**	**77.84**	**318**	*e*P	**P**	**01 55 26.5**	**+0.9**
MODS	**Modra-Piesok**	**77.84**	**318**	*e*P	**P**	**01 55 26.5**	**+0.9**
ZST	**Bratislava**	**77.93**	**318**	*e*P	**P**	**01 55 26.1**	**0.0**
ZST	**Bratislava**	**77.93**	**318**	*e*P	**P**	**01 55 26.1**	**0.0**
ARCES	**ARCESS Array B**	**78.07**	**340**	P	**P**	**01 55 26.8**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=107,slow=7.0,SNR=26						
VRAC	**Vranov**	**78.38**	**319**	*e*P	**P**	**01 55 29.4**	**+0.8**
KRUC	**Moravsky**	**78.49**	**319**	*e*P	**P**	**01 55 29.8**	**+0.7**
BILL	**Bilibino**	**78.52**	**21**	⇑*e*P	**P**	**01 55 30.2**	**+1.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
DPC	**Dobruska-Polom**	**78.66**	**320**	*e*P	**P**	**01 55 31.7**	**+1.6**
DPC	**Dobruska-Polom**	**78.66**	**320**	*e*P	**P**	**01 55 31.7**	**+1.6**
KSP	**Ksiaz**	**78.73**	**321**	*e*P	**P**	**01 55 31.8**	**+1.3**
KSP	**Ksiaz**	**78.73**	**321**	*e*P	**P**	**01 55 31.8**	**+1.3**
CONA	**Conrad Observa**	**78.74**	**318**	*i* P	**P**	**01 55 31.0**	**+0.4**
	comp=Z,2.2nm,0.8s						
OSTC	**Ostas**	**78.75**	**320**	*e*P	**P**	**01 55 31.4**	**+0.8**
CHVC	**Chvalec**	**78.86**	**320**	*e*P	**P**	**01 55 32.1**	**+0.9**
ARSA	**Arzberg**	**78.91**	**317**	*i* P	**P**	**01 55 32.5**	**+0.9**
	comp=Z,2.7nm,0.7s						
SOKA	**Soboth**	**79.20**	**316**	*i* P	**P**	**01 55 35.0**	**+1.7**
	comp=Z,14nm,1.4s						
OBKA	**Obir**	**79.52**	**316**	*i* P	**P**	**01 55 36.3**	**+1.3**
	comp=Z,2.9nm,0.8s						
PRU	**Pruhonice**	**79.77**	**320**	*e*P	**P**	**01 55 37.1**	**+1.0**
PRU	**Pruhonice**	**79.77**	**320**	*e*P	**P**	**01 55 37.1**	**+1.0**
MOA	**Molln**	**79.80**	**318**	*i* P	**P**	**01 55 37.1**	**+0.7**
	comp=Z,1.8nm,0.7s						
MYKA	**Terra Mystica**	**80.15**	**316**	*i* P	**P**	**01 55 39.2**	**+0.8**
	comp=Z,3.5nm,0.8s						
GERES	**GERESS Array B**	**80.24**	**319**	P	**P**	**01 55 40.0**	**+1.1**
	comp=Z,4.3nm,0.7s,baz=100,slow=5.4,SNR=51						
GERES	**GERESS Array B**	**80.24**	**319**	P	**P**	**01 55 40.0**	**+1.1**
KHC	**Kasperske Hory**	**80.34**	**319**	⇑*e*P	**P**	**01 55 40.1**	**+0.8**
KHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KHC	**Kasperske Hory**	**80.34**	**319**	*e*P	**P**	**01 55 40.0**	**+0.8**
KHC				*e*x	x	01 56 01.4	
ABTA	**Abfaltersbach**	**80.94**	**316**	*i* P	**P**	**01 55 43.2**	**+0.6**
	comp=Z,2.9nm,0.9s						
WTTA	**Wattenberg**	**81.55**	**317**	*i* P	**P**	**01 55 46.3**	**+0.4**
	comp=Z,6.9nm,0.7s,SNR=9.2						
WATA	**Walderalm**	**81.59**	**317**	*i* P	**P**	**01 55 46.3**	**+0.2**
	comp=Z,2.6nm,0.5s						
SQTA	**Sankt Quirin**	**81.84**	**317**	*i* P	**P**	**01 55 47.9**	**+0.5**
	comp=Z,7.1nm,0.6s,SNR=7.2						
MOTA	**Moosalm**	**81.92**	**317**	*i* P	**P**	**01 55 48.2**	**+0.4**
	comp=Z,4.8nm,0.7s,SNR=7.4						
RETA	**Reutte**	**82.15**	**317**	*i* P	**P**	**01 55 49.6**	**+0.6**
	comp=Z,7.4nm,0.6s,SNR=14						
FETA	**Feichten**	**82.17**	**317**	*i* P	**P**	**01 55 50.1**	**+0.9**
	comp=Z,3.1nm,0.7s,SNR=4.9						
NOA	**NORSAR Array B**	**82.41**	**331**	P	**P**	**01 55 50.3**	**+0.3**
	comp=Z,1.3nm,1.0s,baz=98,slow=5.6,SNR=2.3						
NOA				LR	LR	02 35 39.9	
	comp=Z,13nm,18.5s,baz=235,slow=38						
FUORN	**Ofenpass-Fuorn**	**82.48**	**316**	*e*P	**P**	**01 55 52.6**	**+1.6**
	comp=Z,5.5nm,0.7s						
DAVA	**Damuels**	**82.75**	**317**	*i* PcP	**P**	**01 55 54.0**	**+1.8**
	comp=Z,4.0nm,0.7s						
TUE	**Stuetta**	**83.11**	**316**	*e*P	**P**	**01 55 55.1**	**+0.9**
	comp=Z,4.6nm,1.0s						
KEST	**Kesra**	**83.25**	**305**	P	**P**	**01 55 57.0**	**+2.0**
	comp=Z,3.6nm,0.7s,baz=5.5,slow=5.6,SNR=6.0						
SENIN	**Lac Senin/Sane**	**84.53**	**316**	*e*P	**P**	**01 56 03.1**	**+1.7**
	comp=Z,4.6nm,0.7s						
ESDC	**Sonseca Array**	**93.39**	**310**	P	**P**	**01 56 44.1**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=73,slow=4.2,SNR=3.6						
CAST	**Castle Rocks**	**95.69**	**25**	*e*P	**P**	**01 56 53.7**	**+0.2**
	comp=Z,3.4nm,1.0s						
ILAR	**Eielson Array**	**97.16**	**22**	P	**P**	**01 56 58.2**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=295,slow=4.4,SNR=4.4						
ILB	**Eielson Array**	**97.16**	**22**	*e*P	**P**	**01 56 58.2**	**-1.9**
	comp=Z,0.7nm,0.6s						
INK	**Inuvik**	**99.55**	**16**	P	**Pdif**	**01 57 11.2**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=324,slow=7.9,SNR=3.9						
ULM	**Lac du Bonnet**	**124.18**	**8**	PKP	**PKPdf**	**02 02 26.8**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=90,slow=2.0,SNR=3.1						
NV01	**Mina Array Sit**	**127.06**	**32**	*e*PKPdf	**PKiKP**	**02 02 34.0**	**+0.8**
NVAR	**Mina Array Bea**	**127.06**	**32**	PKP	**PKiKP**	**02 02 34.0**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=286,slow=2.6,SNR=7.2						
PDAR	**Pinedale Array**	**127.59**	**22**	PKP	**PKPdf**	**02 02 34.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=38,slow=2.6,SNR=7.4						
TXAR	**Lajitas Array**	**141.56**	**26**	PKhKP	PKPpre	02 02 56.3	
	comp=Z,0.4nm,0.8s,baz=308,slow=2.1,SNR=1.7						
TXAR				PKP	**PKPdf**	**02 02 59.7**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=133,slow=0.6,SNR=4.3						
CPUP	**Villa Florida**	**145.85**	**229**	PKPbc	**PKPab**	**02 03 09.8**	**+1.4**
	comp=Z,3.4nm,1.1s,baz=81,slow=1.6,SNR=4.0						

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*IDC **29** 01:54:44.5±1.2, 19°.46S×174°.25W, h0^{km}, mb4.1/3, mb1 4.5/4, mb1mx3.8/29, mbtmp4.4/4, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/24, Error ellipse: s-maj=47.4km s-min=32.0km az=155.0*

ISC 29 01:54:49.9±1.0**, 19°.6S**±0°.3×**174°.1W**±0°.1**, h35^{km}, n8,** σ**1^{s}85**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**13.56**	**99**	Pn	**Pn**	**01 57 59.1**	**-0.6**
	4.5nm,0.3s,baz=277,slow=9.3,SNR=6.5						
RAR				Sn	Sn	02 00 14.1	-15
	1.9nm,0.3s,baz=90,slow=20,SNR=0.9						
URZ	**Urewera**	**20.08**	**200**	P	**P**	**01 59 21.0**	**+0.8**
	7.0nm,0.5s,baz=82,slow=7.1,SNR=3.2						
HNR	**Honiara**	**27.02**	**288**	LR	LR	02 10 18.2	
	comp=Z,54nm,19.5s,baz=43,slow=35						
ASAR	**Alice Springs**	**48.26**	**255**	P	**P**	**02 03 26.8**	**-1.0**
	1.4nm,0.5s,baz=94,slow=8.0,SNR=23						
ASAR				PcP	**PcP**	**02 04 54.6**	**+0.1**
	0.6nm,0.8s,baz=112,slow=3.7,SNR=4.4						
WRA	**Warramunga Arr**	**48.33**	**260**	P	**P**	**02 03 26.7**	**-1.7**
	0.8nm,0.3s,baz=95,slow=6.8,SNR=2.8						
WRA				PcP	**PcP**	**02 04 55.2**	**+0.3**
	2.4nm,1.1s,baz=95,slow=4.5,SNR=2.6						
ARCES	**ARCESS Array B**	**128.66**	**351**	PKP	**PKPdf**	**02 13 51.7**	**-1.0**
	0.4nm,0.5s,baz=29,slow=2.1,SNR=6.4						
BRTR	**Keskin Array B**	**148.84**	**316**	PKPbc	**PKPdf**	**02 14 34.1**	**+3.8**
	0.6nm,0.6s,baz=173,slow=1.9,SNR=4.5						
GERES	**GERESS Array B**	**150.16**	**350**	PKPbc	**PKPbc**	**02 14 37.0**	**-0.1**
	0.1nm,0.3s,baz=316,slow=2.7,SNR=4.4						

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*ISCJB **29** 02:26:25.1±0.4, 13°.93N±0°.05×92°.93E±0°.05, h10^{km}, mb4.4/55, MS3.4/8, Error ellipse: s-maj=7.4km s-min=6.8km az=12.7*

*IDC **29** 02:26:25.4±0.5, 13°.92N×92°.98E, h0^{km}, mb4.2/17, mb1 4.3/19, mb1mx4.2/38, mbtmp4.2/19, ML4.3/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/35, Error ellipse: s-maj=19.6km s-min=13.2km az=58.0*

*NEIC **29** 02:26:29.7±2.1, 14°.04N×92°.89E, h29^{km}±5^{km}, mb4.5/23, Error ellipse: s-maj=12.7km s-min=9.0km az=119.0*

*BJI **29** 02:26:32.0±0.0, 14°.42N×92°.96E, h20^{km}, mb4.3/17, mB4.6/15, Ms3.9/7, Ms7 3.6/3*

ISC 29 02:26:26.5±0.4**, 13°.98N**±0°.06×**92°.93E**±0°.05**, h10^{km}, n100,** σ**2^{s}02**/103**, mb4.4**/55**, MS3.6**/9**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**2.32**	**185**	*e*Pn	Pg	02 27 10.5	-0.4
UMPA	**Umpang Tak**	**6.14**	**68**	P	**Sb**	**02 29 19.0**	**-8.2**
	715nm207µm,0.7s						
CM31	**Chiang Mai Arr**	**7.29**	**52**	*e*Pn	**Pn**	**02 28 14.7**	**+1.5**
CM31				*e*Sn	**Sn**	**02 29 32.4**	**-3.6**
CMAR	**Chiang Mai Arr**	**7.29**	**52**	Pn	**Pn**	**02 28 14.6**	**+1.4**
	1.8nm,0.3s,baz=242,slow=15,SNR=25						
CMAR				Sn	**Sn**	**02 29 32.4**	**-3.6**
	4.3nm,0.3s,baz=295,slow=11,SNR=8.0						
CMAR				LR	LR	02 31 55.7	
	comp=Z,361nm,18.2s,baz=216,slow=45						
CHTO	**Chiang Mai**	**7.51**	**49**	*e*Pn	**Pn**	**02 28 18.2**	**+2.1**
CHTO				*e*Sn	**Sn**	**02 29 36.9**	**-4.5**
CMMT	**Chiang Mai**	**7.51**	**49**	P	**Sn**	**02 29 38.6**	**-2.9**
	0.1nm340nm31nm,0.6s						
UTTA	**Uttaradit**	**8.23**	**62**	P	**Sn**	**02 29 59.1**	**-0.1**
	495µm43µm,0.7s						
KRAB	**Krabi**	**8.40**	**132**	P	**Sn**	**02 30 05.3**	**+2.0**
SHL	**Shillong**	**11.57**	**355**	*e*Pn	**Pn**	**02 29 11.1**	**-0.9**
PALK	**Pallekele**	**13.74**	**242**	Pn	**Pn**	**02 29 42.2**	**+0.6**
	1.0nm,0.3s,baz=118,slow=9.7,SNR=4.1						
PALK				Sn	**Sn**	**02 32 06.2**	**-8.2**
	1.8nm,0.3s,baz=295,slow=4.7,SNR=6.0						
PALK	**Pallekele**	**13.74**	**242**	*e*Pn	**Pn**	**02 29 42.6**	**+1.0**
PALK				*e*Sn	**Sn**	**02 32 06.2**	**-8.2**
JIRN	**Jiri**	**14.99**	**336**	*e*Pn	**Pn**	**02 29 59.3**	**+0.4**
PKI	**Pulchoki**	**15.23**	**334**	*e*Pn	**Pn**	**02 30 01.6**	**-0.5**
	26nm,0.7s						
PKIN	**Phulchoki**	**15.24**	**334**	*e*Pn	**Pn**	**02 30 01.7**	**-0.5**
	26nm,0.6s						
DMN	**Daman**	**15.40**	**333**	*e*Pn	**Pn**	**02 30 04.8**	**+0.6**
	22nm,0.5s						
GKN	**Gorkha**	**15.95**	**332**	*e*Pn	**Pn**	**02 30 12.0**	**+0.8**
KOLN	**Koldanda**	**16.25**	**329**	*e*Pn	**Pn**	**02 30 15.7**	**+0.6**
	32nm,0.5s						
DANN	**Dangsing**	**16.65**	**331**	*e*Pn	**P**	**02 30 21.4**	**-1.4**
	31nm,0.5s						
CD2	**Chengdu**	**19.57**	**29**	*e*P	**Pn**	**02 30 55.5**	**-0.6**
LZH	**Lanzhou**	**24.09**	**22**	*e*P	**P**	**02 31 38.5**	**-4.0**
LZH				pP	sP	02 31 45.5	-1.0
LZH				sP	pP	02 31 48.5	+3.1
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH				LR	LR		
	comp=N,170nm,16.5s						
LZH				LR	LR		
	comp=E,100nm,15.7s						
LZH				LR	LR		
	comp=Z,170nm,19.2s						
XAN	**Xi'an**	**24.68**	**33**	*e*P	**P**	**02 31 48.2**	**+0.5**
	comp=Z,13nm,1.1s						
GTA	**Gaotai**	**26.05**	**12**	*e*P	**P**	**02 32 02.3**	**+2.1**
GTA				pP	sP	02 32 11.5	+7.3
GTA				sP	pP	02 32 15.5	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						

GTA				pmax	pmax		
	comp=Z,58nm,6.0s						
GTA				LR	LR		
	comp=Z,46nm,15.5s						
GTA				LR	LR		
	comp=Z,72nm,15.1s						
NIL	**Nilore**	**26.51**	**321**	*e*P	**P**	**02 32 04.3**	**0.0**
	comp=Z,3.2nm,0.8s						
KSH	**Kashi**	**29.50**	**333**	*e*P	**P**	**02 32 34.0**	**+2.9**
KSH				pP	sP	02 32 41.8	+6.8
KSH				S	**S**	**02 37 24.0**	**-1.7**
H08S3	**Diego Garcia H**	**29.54**	**225**	T	T	03 02 44.5	
	baz=42,slow=75,SNR=14						
H08S2	**Diego Garcia H**	**29.55**	**225**	T	T	03 02 44.1	
	baz=42,slow=75,SNR=13						
H08S1	**Diego Carcia H**	**29.56**	**225**	T	T	03 03 00.7	
	baz=42,slow=75,SNR=11						
NJ2	**Nanjing**	**29.75**	**48**	*e*P	**P**	**02 32 35.8**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
WMQ	**Urumqi**	**30.08**	**352**	*e*P	**P**	**02 32 38.5**	**+2.4**
WMQ				pP	sP	02 32 46.0	+5.8
WMQ				LR	LR		
	comp=Z,390nm,26.5s						
HHC	**Hu-ho-hao-te**	**31.32**	**28**	P	**P**	**02 32 50.5**	**+3.3**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,10.0nm,5.7s						
HHC				LR	LR		
	comp=Z,130nm,18.0s						
HHC				LR	LR		
	comp=Z,140nm,16.1s						
BTK	**Batken**	**32.42**	**327**	*e*P	**P**	**02 32 55.1**	**-1.7**
	comp=Z,5.4nm,1.1s						
FRU1	**Bishkek**	**32.78**	**335**	*e*P	**P**	**02 32 57.7**	**-2.2**
	comp=Z,26nm,0.4s						
MK31	**Makanchi Array**	**33.91**	**347**	*e*P	**P**	**02 33 11.2**	**+1.6**
	comp=Z,4.0nm,0.8s						
MK32	**Makanchi Array**	**33.91**	**347**	*e*P	**P**	**02 33 11.9**	**+2.2**
MKAR	**Makanchi Array**	**33.91**	**347**	P	**P**	**02 33 11.9**	**+2.2**
	comp=Z,2.5nm,0.8s,baz=154,slow=6.9,SNR=15						
MKAR				LR	LR	02 49 37.2	
	comp=Z,28nm,19.3s,baz=167,slow=41						
MAKZ	**Makanchi**	**33.99**	**346**	*e*P	**P**	**02 33 10.1**	**-0.3**
	comp=Z,4.6nm,0.8s						
KK31	**Karatay Array**	**34.84**	**331**	*e*P	**P**	**02 33 18.4**	**+0.5**
	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array**	**34.84**	**331**	*e*P	**P**	**02 33 19.3**	**+1.5**
	comp=Z,2.2nm,0.8s						
SONA0	**Songino Array**	**35.56**	**16**	*e*P	**P**	**02 33 25.1**	**+1.0**
SONM	**Songino Array**	**35.56**	**16**	P	**P**	**02 33 25.1**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=203,slow=9.7,SNR=7.5						
KURK	**Kurchatov**	**38.44**	**345**	*e*P	**P**	**02 33 48.5**	**+0.3**
	comp=Z,7.6nm,0.9s						
KSRS	**Korea Array**	**38.90**	**47**	LR	LR	02 52 26.3	
	comp=Z,100nm,19.0s,baz=245,slow=40						
GEYT	**Alibeck**	**39.00**	**314**	P	**P**	**02 33 55.8**	**+2.6**
	comp=Z,555nm,1.0s,baz=146,slow=8.6,SNR=10						
GYA0B	**ALIBECK ARRAY**	**39.00**	**314**	*e*P	**P**	**02 33 52.4**	**-0.8**
	comp=Z,6.3nm,0.6s						
ZAA0	**Zalesovo Array**	**40.38**	**353**	*e*P	**P**	**02 34 04.4**	**-0.1**
	comp=Z,4.8nm,0.8s						
ZALV	**Zalesovo Beam**	**40.38**	**353**	P	**P**	**02 34 05.7**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=179,slow=8.1,SNR=6.8						
ZAA1	**Zalesovo Array**	**40.39**	**353**	*e*P	**P**	**02 34 05.7**	**+1.2**
CN2	**Changchun**	**40.69**	**37**	*e*P	P	02 34 11.8	+4.6
CN2				*e*S	**S**	**02 40 19.0**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,70nm,15.0s						
CN2				LR	LR		
	comp=Z,70nm,15.0s						
CN2				LR	LR		
	comp=Z,90nm,15.0s						
BVAR	**Borovoye Array**	**42.87**	**340**	LR	LR	02 53 20.8	
	comp=Z,6.9nm,21.7s,baz=235,slow=38						
ABKAR	**Akbulak array**	**44.37**	**329**	*e*P	**P**	**02 34 37.6**	**+0.5**
	comp=Z,5.7nm,0.8s						
WR1	**Warramunga Arr**	**52.87**	**129**	*e*P	**P**	**02 35 42.6**	**-0.3**
WR1				*e*PcP	**PcP**	**02 36 52.4**	**+0.3**
WRA	**Warramunga Arr**	**52.87**	**129**	P	**P**	**02 35 42.6**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=296,slow=10.0,SNR=33						
WRA				PcP	**PcP**	**02 36 52.4**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=301,slow=3.7,SNR=9.0						
ASAR	**Alice Springs**	**54.82**	**133**	P	**P**	**02 35 56.8**	**-0.4**
	comp=Z,3.2nm,0.4s,baz=310,slow=7.0,SNR=50						
ASAR				PcP	**PcP**	**02 36 60.0**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=311,slow=3.6,SNR=6.6						
BR101	**Keskin Array S**	**57.65**	**308**	*e*P	**P**	**02 36 18.1**	**+0.8**
BRTR	**Keskin Array B**	**57.65**	**308**	P	**P**	**02 36 18.1**	**+0.8**
	comp=Z,2.8nm,0.7s,baz=123,slow=8.7,SNR=22						
AKASG	**Malin Array Be**	**62.70**	**320**	P	**P**	**02 36 51.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=84,slow=5.4,SNR=5.4						
AKBB	**Malin Array Si**	**62.70**	**320**	*e*P	**P**	**02 36 50.7**	**-0.8**
	comp=Z,1.8nm,0.6s						
MLR	**Muntele Rosu**	**64.05**	**314**	*e*P	**P**	**02 37 01.4**	**+0.6**
	comp=Z,6.1nm,0.9s						
STKA	**Stephens Creek**	**65.21**	**135**	P	**P**	**02 37 08.3**	**0.0**
	comp=Z,0.8nm,0.4s,baz=321,slow=13,SNR=3.3						
STKA				LR	LR	03 07 23.4	
	comp=Z,35nm,18.9s,baz=25,slow=38						
FIA0	**FINESS Array S**	**66.80**	**331**	*e*P	**P**	**02 37 18.6**	**+0.5**
FINES	**FINESS Array B**	**66.80**	**331**	P	**P**	**02 37 18.6**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=88,slow=5.5,SNR=15						
ARCES	**ARCESS Array B**	**69.16**	**340**	P	**P**	**02 37 33.6**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=87,slow=6.2,SNR=5.2						
DPC	**Dobruska-Polom**	**70.83**	**319**	*e*P	**P**	**02 37 44.9**	**+1.4**
DPC				*e*x	x	02 37 54.3	
OSTC	**Ostas**	**70.90**	**319**	*e*P	**P**	**02 37 45.5**	**+1.6**
CONA	**Conrad Observa**	**71.11**	**316**	*i* P	**P**	**02 37 46.1**	**+0.8**
	comp=Z,2.3nm,1.0s						
ARSA	**Arzberg**	**71.34**	**315**	*i* P	**P**	**02 37 47.8**	**+1.1**
	comp=Z,4.1nm,0.9s						
SOKA	**Soboth**	**71.69**	**315**	*i* P	**P**	**02 37 49.9**	**+1.1**
	comp=Z,4.3nm,0.9s						
MOA	**Molln**	**72.19**	**316**	*i* P	**P**	**02 37 52.4**	**+0.7**
	comp=Z,4.8nm,1.3s						
GERES	**GERESS Array B**	**72.54**	**317**	P	**P**	**02 37 55.0**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=89,slow=5.9,SNR=23						
KHC	**Kasperske Hory**	**72.61**	**317**	*e*P	**P**	**02 37 55.2**	**+0.9**
KHC				*e*x	x	02 38 04.3	
HFS	**Hagfors**	**72.63**	**329**	P	**P**	**02 37 54.7**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=123,slow=5.5,SNR=8.4						
MYKA	**Terra Mystica**	**72.65**	**315**	*i* P	**P**	**02 37 57.5**	**+3.0**
	comp=Z,3.8nm,0.8s						
KBA	**Koelnbreinsper**	**72.83**	**315**	*i* P	**P**	**02 37 56.4**	**+0.6**
	comp=Z,2.9nm,0.9s						
ABTA	**Abfaltersbach**	**73.42**	**315**	*i* P	**P**	**02 37 59.4**	**+0.3**
	comp=Z,3.3nm,0.9s						
NB2	**NORSAR Subarra**	**73.87**	**330**	P	**P**	**02 38 01.4**	**0.0**
	comp=Z,6.3nm,1.2s,baz=97,slow=5.1						
NOA	**NORSAR Array B**	**73.87**	**330**	P	**P**	**02 38 01.5**	**0.0**
	comp=Z,0.8nm,0.7s,baz=95,slow=5.5,SNR=3.9						
WTTA	**Wattenberg**	**73.99**	**316**	*i* P	**P**	**02 38 02.2**	**-0.4**
	comp=Z,2.6nm,0.5s						
SQTA	**Sankt Quirin**	**74.28**	**316**	*i* P	**P**	**02 38 04.2**	**-0.1**
	comp=Z,1.4nm,0.4s						
MOTA	**Moosalm**	**74.34**	**316**	*i* P	**P**	**02 38 04.9**	**+0.3**
	comp=Z,0.6nm,0.5s						
RETA	**Reutte**	**74.57**	**316**	*i* P	**P**	**02 38 06.4**	**+0.5**
	comp=Z,5.0nm,1.2s						
FETA	**Feichten**	**74.62**	**315**	*i* P	**P**	**02 38 06.7**	**+0.4**
	comp=Z,3.8nm,1.1s						
DAVA	**Damuels**	**75.18**	**316**	*i* P	**P**	**02 38 10.3**	**+0.8**
	comp=Z,5.3nm,1.0s						
BOSA	**Boshof**	**77.89**	**236**	P	**P**	**02 38 26.6**	**+1.5**
	comp=Z,8.5nm,0.6s,baz=77,slow=3.5,SNR=17						
MAW	**Mawson**	**84.25**	**191**	P	**P**	**02 38 57.6**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=50,slow=8.0,SNR=4.4						
ESDC	**Sonseca Array**	**86.41**	**310**	P	**P**	**02 39 10.1**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=61,slow=4.6,SNR=11						
SVW2	**Sparrevohn**	**87.88**	**27**	*e*P	**P**	**02 39 15.2**	**-0.9**
	comp=Z,4.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**88.06**	**283**	P	**P**	**02 39 18.0**	**0.0**
	comp=Z,2.5nm,1.0s,baz=47,slow=6.0,SNR=10						
TOA1	**Torodi Ar. Sit**	**88.06**	**283**	*e*P	**P**	**02 39 18.0**	**0.0**
SKT	**Skwentna**	**89.20**	**25**	*e*P	**P**	**02 39 22.2**	**-0.2**
	comp=Z,5.5nm,0.8s						
ILAR	**Eielson Array**	**89.56**	**22**	P	**P**	**02 39 23.7**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=301,slow=4.8,SNR=8.0						
ILB	**Eielson Array**	**89.56**	**22**	*e*P	**P**	**02 39 24.0**	**0.0**
	comp=Z,2.5nm,0.9s						
RC01	**Rabbit Creek A**	**90.39**	**26**	*e*P	**P**	**02 39 27.9**	**0.0**
	comp=Z,8.2nm,0.9s						
DOT	**Dot Lake**	**91.21**	**22**	*e*P	**P**	**02 39 31.7**	**-0.1**
	comp=Z,1.6nm,0.8s						
PDAR	**Pinedale Array**	**119.87**	**19**	PKP	**PKPdf**	**02 45 16.5**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=132,slow=1.3,SNR=2.9						
NV01	**Mina Array Sit**	**120.22**	**28**	*e*PKPdf	**PKiKP**	**02 45 20.3**	**+1.6**
NVAR	**Mina Array Bea**	**120.22**	**28**	PKP	**PKiKP**	**02 45 20.3**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=312,slow=1.0,SNR=6.4						
TXAR	**Lajitas Array**	**134.05**	**20**	PKP	**PKiKP**	**02 45 47.1**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=167,slow=1.4,SNR=5.1						
CPUP	**Villa Florida**	**149.58**	**242**	PKPbc	**PKiKP**	**02 46 17.4**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=113,slow=7.7,SNR=2.9						
PLCA	**Paso Flores**	**149.69**	**205**	PKPbc	**PKiKP**	**02 46 17.8**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=325,slow=1.8,SNR=6.9						
LPAZ	**La Paz**	**161.57**	**260**	PKPab	**PKPab**	**02 47 14.8**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=83,slow=5.4,SNR=4.5						

GCG 29 02:34:36.2±0.5, 16°.05N×91°.49W, h34^{km}, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**1.34**	**183**	*e*P	Pn	02 34 59.5	+0.8
STG3				*e*S	Sb	02 35 16.8	-1.0
FUG	**Fuego 3**	**1.71**	**159**	*e*P	Pn	02 35 04.1	+0.3
FUG				*e*S	Sn	02 35 26.4	+1.7
PCG	**Pacaya**	**1.86**	**153**	*e*P	Pn	02 35 06.4	+0.5

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*IDC **29** 03:21:08.6±0.8, 5°.19S×134°.06E, h0^{km}, mb4.0/4, mb1 4.2/6, mb1mx3.8/32, mbtmp4.1/6, ML4.3/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/24, Error ellipse: s-maj=54.8km s-min=20.8km az=66.0*

*ISCJB **29** 03:21:10.8±0.7, 5°.43S±0°.07×133°.87E±0°.09, h32^{km}, mb4.2/6, MS2.4/1, Error ellipse: s-maj=14.7km s-min=7.9km az=152.7*

*DJA **29** 03:21:14.4±1.4, 5°S±4°×13°4E±°, h14^{km}±10^{km}, M4.7/7, mB5.4/4, mb5.0/6, MLv4.5/7, Mw(mB)4.8/4*

ISC 29 03:21:13.0±0.7, 5°.60S±0°.07×133°.9E±0°.1, h32^{km}, n21, σ2^{s}.64/22, mb4.1/6, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.11**	**329**	P	**Pn**	**03 21 56.8**	**-3.2**
SIJI	**Sorong**	**5.37**	**331**	Pn	**Pn**	**03 22 27.5**	**-3.5**
	13nm,0.3s,baz=172,slow=22,SNR=21						
SIJI				Sn	Sn	03 23 21.5	-10
	10nm,0.3s,baz=253,slow=23,SNR=13						
SWI	**Sorong**	**5.38**	**331**	P	**Pn**	**03 22 27.8**	**-3.3**
MSAI	**Masohi**	**5.41**	**294**	P	**Pn**	**03 22 30.8**	**-0.7**
	46nm,0.6s,0.2nm						
AAI	**Ambon**	**5.96**	**288**	P	**Pn**	**03 22 38.3**	**-0.9**
SOEI	**Soe**	**10.37**	**246**	P	**Pn**	**03 23 41.1**	**+1.3**
	126nm,0.9s						
WRA	**Warramunga Arr**	**14.26**	**178**	Pn	**Pn**	**03 24 32.3**	**-0.7**
	0.6nm,0.3s,baz=357,slow=13,SNR=23						
WRA				Sn	**Sn**	**03 27 06.2**	**-4.0**
	1.7nm,0.3s,baz=0.8,slow=24,SNR=4.3						
ASAR	**Alice Springs**	**17.96**	**180**	P	**P**	**03 25 21.1**	**+0.3**
	0.6nm,0.3s,baz=357,slow=8.6,SNR=15						
ASAR				S	**Sn**	**03 28 33.3**	**-6.7**
	0.2nm,0.3s,baz=360,slow=26,SNR=3.4						
CTA	**Charters Tower**	**18.77**	**141**	P	**Pn**	**03 25 32.4**	**+2.1**
	0.6nm,0.3s,baz=312,slow=8.3,SNR=4.3						
KMMI	**Kalianget**	**19.83**	**265**	P	**Pn**	**03 25 44.2**	**+1.1**
GUMO	**Guam**	**21.97**	**30**	LR	LR	03 34 46.9	
	comp=Z,16nm,19.6s,baz=214,slow=38						
STKA	**Stephens Creek**	**27.12**	**165**	P	**P**	**03 26 55.6**	**+2.3**
	2.1nm,0.7s,baz=314,slow=13,SNR=5.1						
CN2	**Changchun**	**49.76**	**352**	*e*P	**P**	**03 30 05.0**	**+2.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**50.55**	**338**	P	**P**	**03 30 08.8**	**+0.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,13nm,5.5s						
MKAR	**Makanchi Array**	**69.23**	**325**	P	**P**	**03 32 16.1**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=115,slow=8.4,SNR=15						
MAW	**Mawson**	**77.66**	**202**	P	**P**	**03 33 08.9**	**+2.8**
	comp=Z,0.9nm,0.5s,baz=65,slow=7.4,SNR=3.9						
ILAR	**Eielson Array**	**90.46**	**25**	P	**P**	**03 34 08.5**	**-2.7**
	comp=Z,0.2nm,0.6s,baz=262,slow=4.5,SNR=2.7						
PLCA	**Paso Flores**	**128.73**	**156**	PKP	**PKiKP**	**03 40 19.0**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=270,slow=1.0,SNR=3.2						
TORD	**Torodi Ar. Bea**	**132.28**	**283**	PKP	**PKPdf**	**03 40 24.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=52,slow=3.0,SNR=5.8						
CPUP	**Villa Florida**	**146.45**	**162**	PKPbc	**PKPab**	**03 40 53.1**	**+0.5**
	comp=Z,8.9nm,0.9s,baz=211,slow=1.9,SNR=19						
LPAZ	**La Paz**	**149.23**	**135**	PKPbc	**PKiKP**	**03 41 02.0**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=66,slow=2.9,SNR=16						

MEX 29 03:31:08.7±0.5, 16°.54N×93°.72W, h149^{km}±4^{km}, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.62**	**67**	*e*P	Pn	03 31 29.2	-1.4
TGIG				*i* S	Sn	03 31 44.9	-2.4
PCIG		**0.96**	**150**	*e*P	Pn	03 31 31.6	-1.4
PCIG				*e*S	Sn	03 31 49.7	-1.9
CMIG	**Matias Romero**	**1.24**	**296**	*e*P	Pn	03 31 34.4	-1.2
CMIG				*e*S	Sn	03 31 54.2	-1.9
CCIG	**Comitan**	**1.54**	**99**	*e*P	Pn	03 31 37.2	-1.6
CCIG				*i* S	Sn	03 31 59.3	-2.5
HUIG	**Huatulco**	**2.42**	**252**	*e*P	Pn	03 31 45.6	-3.2
HUIG				*e*S	Sn	03 32 17.1	-2.6
VHO	**Vista Hermosa**	**2.94**	**281**	*e*P	Pn	03 31 54.4	-1.0
VHO				*i* S	Sn	03 32 29.0	-2.4

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*IDC **29** 03:37:24.0±12.0, 36°.52N×83°.95E, h0^{km}, mb2.9/1, mb1 3.5/3, mb1mx3.2/29, mbtmp3.5/3, ML3.2/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/9, Error ellipse: s-maj=166.6km s-min=53.0km az=45.0*

*BJI **29** 03:37:25.9±0.0, 36°.75N×84°.86E, h7^{km}, mB3.9/1, ML3.7/7, Ms3.2/2*

ISC 29 03:37:33.0±3.5, 37°.1N±0°.2×84°.9E±0°.2, h10^{km}, n5, σ2^{s}.41/6, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**7.03**	**17**	*e*Pn	**Pn**	**03 39 15.5**	**-0.5**
WMQ				Sn	**Sn**	**03 40 34.5**	**-1.5**
WMQ				smax	smax		
	comp=N,48nm,0.9s						
WMQ				smax	smax		
	comp=E,33nm,0.9s						
MKAR	**Makanchi Array**	**9.87**	**349**	Pn	**Pn**	**03 39 54.0**	**-1.0**
	0.3nm,0.3s,baz=167,slow=16,SNR=8.6						
MKAR				Sn	**Sn**	**03 41 48.5**	**+2.6**
	0.3nm,0.3s,baz=177,slow=24,SNR=5.4						
ZALV	**Zalesovo Beam**	**16.84**	**360**	P	**P**	**03 41 29.3**	**-1.5**
	0.3nm,0.3s,baz=191,slow=12,SNR=5.4						
SONM	**Songino Array**	**19.06**	**49**	P	**Pn**	**03 41 58.4**	**+2.2**
	0.3nm,0.5s,baz=238,slow=14,SNR=1.8						
SONM				LR	LR	03 51 14.5	
	comp=Z,49nm,20.7s,baz=101,slow=42						
GEYT	**Alibeck**	**21.26**	**280**	LR	LR	03 51 23.2	
	comp=Z,8.6nm,18.1s,baz=290,slow=41						

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*ISCJB **29** 03:47:53.3±0.5, 5°.7S±0°.1×80°.7W±0°.1, h33^{km}, mb4.0/18, MS3.1/4, Error ellipse: s-maj=24.2km s-min=7.0km az=144.7*

*NEIC **29** 03:47:56.0±0.0, 5°.60S×80°.92W, h38^{km}, mb4.2/9, ML4.1(ARE), After ARE.*

NEIC Felt [II] at Sechura.

*IDC **29** 03:47:58.7±2.7, 5°.75S×80°.62W, h71^{km}±26^{km}, mb3.5/12, mb1 3.7/15, mb1mx3.6/39, mbtmp3.9/15, MS3.2/5, Ms1 3.2/5, ms1mx2.9/25, Error ellipse: s-maj=32.7km s-min=15.2km az=55.0*

ISC 29 03:47:55.1±0.7, 5°.7S±0°.1×80°.8W±0°.1, h35^{km}, n32, σ1^{s}.15/26, mb4.0/18, MS3.2/4, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.73**	**121**	P	**Pn**	**03 48 39.0**	**+2.1**
	16nm,0.3s,baz=348,slow=4.5,SNR=166						
ATAH				S	Sn	03 49 17.1	+8.2
	82nm,0.3s,baz=22,slow=10,SNR=10						
NNA	**Nana**	**7.32**	**148**	P	**Pn**	**03 49 42.5**	**+2.8**
	3.6nm,0.3s,baz=332,slow=10,SNR=6.8						
NNA				S	**Sn**	**03 51 00.4**	**-1.3**
	1.7nm,0.3s,baz=204,slow=20,SNR=1.9						
LPAZ	**La Paz**	**16.23**	**131**	P	**Pn**	**03 51 41.4**	**+0.3**
	0.1nm,0.3s,baz=302,slow=12,SNR=5.6						
LPAZ	**La Paz**	**16.23**	**131**	*e*P	**Pn**	**03 51 41.5**	**+0.3**
	5.2nm,1.0s						
JTS	**Las Juntas de**	**16.45**	**345**	LR	LR	03 57 10.0	
	comp=Z,66nm,20.3s,baz=168,slow=33						
PTGA	**Pitinga**	**21.33**	**77**	P	**P**	**03 52 38.1**	**-1.2**
	0.9nm,0.3s,baz=267,slow=5.4,SNR=5.7						
PTGA	**Pitinga**	**21.33**	**77**	*e*P	**P**	**03 52 39.0**	**-0.4**
	3.9nm,0.8s						
SIV	**San Ignacio**	**21.83**	**119**	P	**P**	**03 52 43.8**	**-0.9**
	1.8nm,0.9s,baz=303,slow=12,SNR=8.9						
SIV				LR	LR	04 02 01.3	
	comp=Z,109nm,20.7s,baz=290,slow=39						
APG	**El Apazote**	**22.73**	**335**	LR	LR	04 00 05.7	
	comp=Z,72nm,20.5s,baz=82,slow=32						
SJG	**San Juan**	**27.73**	**31**	LR	LR	04 04 50.3	
	comp=Z,28nm,20.6s,baz=114,slow=36						
BDFB	**Brasilia**	**33.60**	**110**	LR	LR	04 10 15.1	
	comp=Z,51nm,18.8s,baz=132,slow=40						
TXAR	**Lajitas Array**	**41.23**	**329**	P	**P**	**03 55 37.6**	**+0.6**
	0.2nm,0.6s,baz=175,slow=11,SNR=3.4						
ANMO	**Albuquerque**	**47.15**	**331**	P	**P**	**03 56 25.0**	**+0.5**
	2.7nm,0.6s,baz=147,slow=9.4,SNR=14						
ANMO	**Albuquerque**	**47.15**	**331**	*e*P	**P**	**03 56 24.6**	**+0.1**
	2.6nm,0.8s						
SDCO	**Great Sand Dun**	**49.01**	**334**	*e*P	**P**	**03 56 40.1**	**+1.2**
	2.8nm,0.8s						
HWUT	**Hardware Ranch**	**54.88**	**332**	*e*P	**P**	**03 57 23.3**	**+0.9**
	5.1nm,0.8s						
PDAR	**Pinedale Array**	**54.90**	**334**	P	**P**	**03 57 22.9**	**+0.2**
	1.0nm,0.8s,baz=126,slow=8.7,SNR=11						
NVAR	**Mina Array Bea**	**56.06**	**325**	P	**P**	**03 57 32.2**	**+1.2**
	0.9nm,0.7s,baz=134,slow=7.0,SNR=9.7						
ULM	**Lac du Bonnet**	**57.27**	**349**	P	**P**	**03 57 38.9**	**-0.2**
	1.4nm,0.4s,baz=117,slow=4.5,SNR=3.3						
HLID	**Hailey**	**57.72**	**332**	*e*P	**P**	**03 57 44.0**	**+1.3**
	2.4nm,0.8s						
BOZ	**Bozeman (W)**	**58.06**	**335**	*e*P	**P**	**03 57 45.8**	**+0.9**
	2.2nm,1.0s						
MFID	**Camas Ranch**	**58.29**	**331**	*e*P	**P**	**03 57 47.9**	**+1.3**
	6.6nm,1.1s						
G08A	**Pilot Rock**	**61.20**	**330**	*e*P	**P**	**03 58 07.7**	**+1.1**
	3.9nm,0.9s						
YKA	**Yellowknife Ar**	**72.79**	**344**	P	**P**	**03 59 19.2**	**-0.5**
	0.3nm,0.4s,baz=141,slow=6.2,SNR=3.9						
SNAA	**Sanae**	**80.80**	**162**	P	**P**	**04 00 03.9**	**-1.0**
	0.6nm,0.5s,baz=295,slow=7.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**83.97**	**76**	P	**P**	**04 00 22.6**	**0.0**
	0.3nm,0.7s,baz=293,slow=4.5,SNR=3.7						
QSPA	**South Pole Qui**	**84.36**	**180**	P	**P**	**04 00 22.6**	**-1.0**
	2.6nm,1.0s,baz=72,slow=3.2,SNR=3.7						
ILAR	**Eielson Array**	**85.24**	**337**	P	**P**	**04 00 27.3**	**-0.5**
	0.2nm,0.6s,baz=142,slow=4.6,SNR=3.4						
H11S2	**WAKE ISLAND Hy**	**113.16**	**288**	T	T	06 09 04.7	
	baz=87,slow=71,SNR=38						
H11S1	**WAKE ISLAND Hy**	**113.16**	**288**	T	T	06 09 05.0	
	baz=87,slow=71,SNR=46						
H11S3	**WAKE ISLAND Hy**	**113.17**	**288**	T	T	06 09 08.1	
	baz=87,slow=71,SNR=21						
WRA	**Warramunga Arr**	**137.08**	**233**	PKP	**PKPdf**	**04 07 14.2**	**-1.3**
	2.1nm,1.2s,baz=150,slow=1.8,SNR=3.9						

JMA 29 03:50:43.1±0.1, 37°.92N×142°.29E, h41^{km}±2^{km}, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.76**	**301**	P	Pn	03 50 57.6	+0.3
JIKH				S	Sn	03 51 07.4	-0.2
JIO	**Ouri**	**0.91**	**306**	P	Pn	03 51 00.0	+0.5
JIO				S	Sn	03 51 11.6	+0.2
JKMT	**Kesennumamotoy**	**1.10**	**324**	P	Pn	03 51 02.6	+0.6
JKMT				S	Sn	03 51 16.0	+0.1
JMST	**Minamisoumatoc**	**1.13**	**260**	P	Pn	03 51 02.5	+0.1
JMST				S	Sn	03 51 16.3	-0.4
JMM	**Marumori**	**1.19**	**268**	P	Pn	03 51 03.6	+0.4
JMM				S	Sn	03 51 18.2	+0.1
JFK	**Kawauchi**	**1.25**	**244**	P	Pn	03 51 04.1	-0.1
JFK				S	Sn	03 51 19.9	+0.1
OFUJ	**Ofunato**	**1.26**	**337**	P	Pn	03 51 04.4	+0.2
OFUJ				S	Sn	03 51 19.8	-0.1
JMK	**Ichinoseki**	**1.33**	**321**	P	Pn	03 51 06.0	+0.8
JMK				*e*S	Sn	03 51 22.4	+0.7
JOU	**Okura**	**1.36**	**290**	P	Pn	03 51 06.9	+1.3
JOU				*e*S	Sn	03 51 23.7	+1.3
JFT	**Otama**	**1.60**	**256**	P	Pn	03 51 10.2	+1.3
JFT				S	Sn	03 51 29.7	+1.3
JOM	**Ohasama**	**1.74**	**334**	P	Pn	03 51 11.7	+0.9
JOM				*e*S	Sn	03 51 32.8	+1.1
JYS	**Shirataka**	**1.78**	**280**	P	Pn	03 51 13.1	+1.7
JYS				*e*S	Sn	03 51 35.7	+2.9
JYK	**Kaneyama**	**1.81**	**304**	P	Pn	03 51 13.3	+1.5
JYK				*e*S	Sn	03 51 35.1	+1.5
JRG	**Rokugo**	**1.96**	**319**	P	Pn	03 51 15.8	+1.9
JRG				S	Sn	03 51 40.1	+2.8
JFY	**Yanaizu**	**2.12**	**257**	P	Pn	03 51 17.4	+1.4
JFY				S	Sn	03 51 44.5	+3.5
JYA	**Atsumi**	**2.14**	**289**	P	Pn	03 51 17.8	+1.5
MAT	**Matsushiro**	**3.54**	**248**	P	Pn	03 51 37.7	+2.2
MAT				S	Sn	03 52 21.7	+5.6

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*IDC **29** 03:51:42.1±0.7, 58°.45S×25°.71W, h0^{km}, mb4.2/9, mb1 4.2/9, mb1mx4.0/31, mbtmp4.2/9, Error ellipse: s-maj=29.1km s-min=20.0km az=58.0*

*NEIC **29** 03:51:52.8±2.1, 58°.52S×25°.68W, h82^{km}±7^{km}, mb4.1/5, Error ellipse: s-maj=15.7km s-min=13.8km az=170.0*

ISC 29 03:51:54.0±0.6, 58°.8S±0°.1×25°.9W±0°.2, h100^{km}, n40, σ1^{s}.93/38, mb4.1/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.39**	**303**	*e*Pn	**Pn**	**03 53 37.6**	**-1.4**
VNA1	**Neumayer--Stat**	**14.01**	**155**	P	**P**	**03 55 11.5**	**-0.9**
VNA3	**Neumayer Olymp**	**14.19**	**158**	P	**P**	**03 55 13.4**	**-1.0**
VNA3				S	**Sn**	**03 57 40.8**	**-5.2**
SNAA	**Sanae**	**15.97**	**153**	P	**P**	**03 55 37.0**	**+2.8**
SNAA				S	**Sn**	**03 58 25.2**	**-4.0**
SNAA	**Sanae**	**15.97**	**153**	Pn	**P**	**03 55 36.8**	**+2.5**
	0.5nm,0.3s,baz=297,slow=15,SNR=26						
SNAA				Sn	**Sn**	**03 58 26.5**	**-2.6**
	0.1nm,0.3s,baz=40,slow=16,SNR=2.9						
SNAA	**Sanae**	**15.97**	**153**	*e*P	**P**	**03 55 36.3**	**+2.1**
	2.7nm,0.5s						
SNAA				*e*Sn	**Sn**	**03 58 26.5**	**-2.6**
QSPA	**South Pole Qui**	**31.48**	**180**	P	**P**	**03 58 07.0**	**+1.2**
	1.2nm,0.3s,baz=66,slow=2.9,SNR=45						
QSPA	**South Pole Qui**	**31.48**	**180**	*e*P	**P**	**03 58 06.9**	**+1.1**
	2.1nm,0.6s						
PLCA	**Paso Flores**	**33.24**	**283**	P	**P**	**03 58 22.3**	**+0.9**
	1.0nm,0.4s,baz=168,slow=8.6,SNR=4.9						
PLCA	**Paso Flores**	**33.24**	**283**	*e*P	**P**	**03 58 23.2**	**+1.8**
	4.1nm,1.0s						
GO06	**Curarrehue**	**34.57**	**283**	*e*P	**P**	**03 58 33.0**	**+0.1**
	6.9nm,1.1s						
CFA	**Coronel Fontan**	**39.32**	**295**	P	**P**	**03 59 11.3**	**-1.8**
	0.4nm,0.4s,baz=129,slow=6.5,SNR=3.4						
BDFB	**Brasilia**	**46.08**	**330**	P	**P**	**04 00 06.2**	**-1.7**
	1.0nm,0.5s,baz=219,slow=3.3,SNR=3.6						
H10S2	**ASCENSION HYDR**	**50.43**	**14**	T	T	04 55 10.3	
	baz=188,slow=75,SNR=61						
H10S3	**ASCENSION HYDR**	**50.44**	**14**	T	T	04 55 09.0	
	baz=188,slow=75,SNR=49						
H10S1	**ASCENSION HYDR**	**50.45**	**14**	T	T	04 55 10.1	
	baz=188,slow=75,SNR=16						
H10N1	**ASCENSION HYDR**	**51.55**	**14**	T	T	04 56 32.0	
	baz=176,slow=76						
H10N3	**ASCENSION HYDR**	**51.55**	**14**	T	T	04 56 32.4	
	baz=176,slow=76						
H10N2	**ASCENSION HYDR**	**51.57**	**14**	T	T	04 56 34.3	
	baz=176,slow=76						
LPAZ	**La Paz**	**52.53**	**306**	P	**P**	**04 00 56.5**	**-1.2**
	1.1nm,0.6s,baz=129,slow=2.9,SNR=8.0						
LPAZ	**La Paz**	**52.53**	**306**	*e*P	**P**	**04 00 57.1**	**-0.5**
	1.6nm,0.8s						
MDP	**Montagnes des**	**67.17**	**331**	P	**P**	**04 02 35.9**	**-1.1**
	5.3nm,0.8s,baz=181,slow=7.6,SNR=7.3						
TORD	**Torodi Ar. Bea**	**75.11**	**28**	P	**P**	**04 03 23.9**	**-1.0**
	1.6nm,0.6s,baz=197,slow=6.6,SNR=26						

TOA1	**Torodi Ar. Sit**	**75.11**	**28**	*e*P	**P**	**04 03 23.9**	**-1.0**
STKA	**Stephens Creek**	**89.09**	**169**	P	**P**	**04 04 41.5**	**+3.7**
	2.6nm,0.9s,baz=166,slow=8.3,SNR=3.4						
ASAR	**Alice Springs**	**96.18**	**161**	P	**P**	**04 05 13.5**	**+2.9**
	0.3nm,0.5s,baz=173,slow=4.6,SNR=5.7						
PDAR	**Pinedale Array**	**122.36**	**300**	PKP	**PKiKP**	**04 10 37.6**	**+0.8**
	0.2nm,0.4s,baz=103,slow=4.0,SNR=5.3						
NV01	**Mina Array Sit**	**123.07**	**291**	*e*PKPdf	**PKiKP**	**04 10 40.0**	**+1.6**
NVAR	**Mina Array Bea**	**123.07**	**291**	PKP	**PKiKP**	**04 10 40.0**	**+1.6**
	0.2nm,0.5s,baz=126,slow=4.7,SNR=2.0						
FIA0	**FINESS Array S**	**126.46**	**28**	*e*PKPdf	**PKiKP**	**04 10 43.9**	**-0.1**
FINES	**FINESS Array B**	**126.46**	**28**	PKP	**PKiKP**	**04 10 43.9**	**-0.1**
	1.2nm,0.9s,baz=153,slow=2.1,SNR=6.3						
ARCES	**ARCESS Array B**	**133.21**	**22**	PKP	**PKiKP**	**04 10 56.8**	**-0.6**
	0.3nm,0.4s,baz=225,slow=1.2,SNR=7.8						
MK32	**Makanchi Array**	**137.04**	**73**	*e*PKPdf	**PKiKP**	**04 11 05.8**	**-0.2**
MKAR	**Makanchi Array**	**137.04**	**73**	PKP	**PKiKP**	**04 11 05.7**	**-0.2**
	0.2nm,0.5s,baz=234,slow=4.4,SNR=2.1						
YKA	**Yellowknife Ar**	**138.64**	**315**	PKP	**PKiKP**	**04 11 07.7**	**-0.9**
	0.9nm,0.5s,baz=133,slow=2.0,SNR=7.9						
YKB5	**Yellowknife Ar**	**138.64**	**315**	*e*PKPdf	**PKiKP**	**04 11 07.7**	**-0.9**
SONA0	**Songino Array**	**150.10**	**90**	*e*PKPbc	**PKiKP**	**04 11 33.4**	**+0.5**
SONM	**Songino Array**	**150.10**	**90**	PKPbc	**PKiKP**	**04 11 33.4**	**+0.5**
	1.1nm,0.5s,baz=230,slow=3.7,SNR=6.0						
ILAR	**Eielson Array**	**152.40**	**308**	PKPbc	**PKiKP**	**04 11 38.0**	**+1.1**
	2.6nm,0.5s,baz=137,slow=4.3,SNR=38						
ILB	**Eielson Array**	**152.40**	**308**	*e*PKPbc	**PKiKP**	**04 11 38.0**	**+1.1**

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*TIR **29** 03:56:28.3, 40°.81N×21°.70E, h10^{km}, Md2.7/6*
*ATH **29** 03:56:30.9, 40°.76N×21°.37E, h10^{km}±1^{km}, ML2.3/8, Error ellipse: s-maj=2.0km s-min=0.9km az=318.0*
*SKO **29** 03:56:30.2, 40°.72N×21°.37E, h15^{km}, M1.6, ML2.4*
*ISCJB **29** 03:56:31.1±0.3, 40°.76N±0°.02×21°.38E±0°.03, h2^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.6km az=171.7*
*THE **29** 03:56:31.0, 40°.77N×21°.34E, h7^{km}±1^{km}, ML2.3/8, Error ellipse: s-maj=1.0km s-min=0.7km az=285.0*
*BEO **29** 03:56:32.6±0.8, 40°.72N×21°.39E, h14^{km}±3^{km}, ML2.1/6*
*SOF **29** 03:56:32.8, 40°.90N×21°.40E, h2^{km}*

ISC 29 03:56:31.2±0.9**, 40°.72N**±0°.02×**21°.43E**±0°.02**, h4**^{km}±7^{km}**, n59, σ1$\overset{s}{.}$59**/91**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.07**	**329**	P	**Pg**	**03 56 32.8**	**-0.1**
FNA				S	**Sg**	**03 56 33.8**	**-0.3**
	158µm,0.2s						
FNA	**Florina**	**0.07**	**329**	P	**Pg**	**03 56 32.8**	**-0.1**
FNA				S	**Sg**	**03 56 33.7**	**-0.3**
FNA				AML	AML	03 56 33.8	
FNA				AML	AML	03 56 33.8	
NEST	**Nestorio**	**0.42**	**224**	P	**Pg**	**03 56 38.9**	**-0.4**
NEST				S	**Sb**	**03 56 45.2**	**-2.7**
	1µm,0.3s						
NEST	**Nestorio**	**0.42**	**224**	P	**Pg**	**03 56 38.9**	**-0.4**
NEST				S	**Sb**	**03 56 45.0**	**-2.9**
NEST				AML	AML	03 56 46.6	
	comp=N,1379µm,0.1s						
NEST				AML	AML	03 56 46.8	
	comp=E,2584µm,0.3s						
KZN	**Kozani**	**0.49**	**148**	P	**Pb**	**03 56 41.5**	**-0.8**
KZN				S	**Sb**	**03 56 49.5**	**-0.4**
	comp=E,372nm,0.2s						
KZN	**Kozani**	**0.49**	**148**	P	**Pb**	**03 56 41.6**	**-0.8**
KZN				S	**Sb**	**03 56 48.8**	**-1.1**
KZN				AML	AML	03 56 53.3	
	comp=E,834µm,0.3s						
KZN				AML	AML	03 56 54.4	
	comp=N,690µm,0.3s						
PENT	**Pentalofos**	**0.57**	**203**	P	**Pb**	**03 56 42.3**	**-1.4**
PENT				S	**Sb**	**03 56 51.3**	**-0.9**
	comp=N,302nm,0.3s						
PENT	**Pentalofos**	**0.57**	**203**	P	**Pb**	**03 56 42.2**	**-1.5**
PENT				S	**Sb**	**03 56 50.4**	**-1.8**
PENT				AML	AML	03 56 52.9	
	comp=E,520µm,0.3s						
PENT				AML	AML	03 56 53.9	
	comp=N,695µm,0.3s						
KTI	**Kastanea**	**0.62**	**122**	P	**Pb**	**03 56 44.4**	**-0.2**
KPRO	**Kipourio**	**0.77**	**184**	P	**Pb**	**03 56 45.9**	**-1.2**
KPRO				S	**Sn**	**03 56 57.9**	**-2.9**
	comp=N,245nm,0.5s						
KPRO	**Kipourio**	**0.77**	**184**	P	**Pb**	**03 56 46.2**	**-0.9**
KPRO				S	**Sb**	**03 56 57.3**	**-0.6**
KPRO				AML	AML	03 57 02.2	
	comp=E,596µm,0.4s						
KPRO				AML	AML	03 57 02.4	
	comp=N,354µm,0.4s						
MEV	**Metsovon**	**0.95**	**189**	P	**Pn**	**03 56 50.0**	**-1.4**
MEV	**Metsovon**	**0.95**	**189**	P	**Pn**	**03 56 49.8**	**-1.6**
LIT	**Litokhoron**	**1.02**	**127**	P	**Pn**	**03 56 51.1**	**-1.2**
LIT				S	**Sn**	**03 57 07.7**	**+0.7**
	comp=N,175nm,0.4s						
LIT	**Litokhoron**	**1.02**	**127**	P	**Pn**	**03 56 51.3**	**-1.0**
LIT				S	**Sn**	**03 57 06.2**	**-0.9**
LIT				AML	AML	03 57 10.5	
	comp=E,373µm,0.4s						
LIT				AML	AML	03 57 11.1	
	comp=N,312µm,0.3s						
VAY	**Valandovo**	**1.05**	**55**	*e*Pg	**Pb**	**03 56 51.6**	**-0.4**
VAY				*e*Sg	**Sn**	**03 57 07.1**	**-0.7**
VAY	**Valandovo**	**1.05**	**55**	*i* Pg	**Pb**	**03 56 51.5**	**-0.4**
VAY				*i* Sg	**Sn**	**03 57 07.0**	**-0.8**
VAY				*e*Lg	Lg	03 57 12.3	
	comp=E,87nm,0.5s						
VAY				*e*Lg	Lg	03 57 12.4	
	comp=N,74nm,0.5s						
STIP	**Stip**	**1.13**	**30**	*i* Pg	**Pn**	**03 56 55.3**	**+1.6**
STIP				*i* Sg	**Sn**	**03 57 13.9**	**+4.2**
STIP				*e*Lg	Lg	03 57 15.1	
	comp=E,18nm,0.4s						
STIP				*e*Lg	Lg	03 57 15.4	
	comp=N,10nm,0.4s						
TPE	**Tepelena**	**1.16**	**249**	*i* PN	**Pn**	**03 56 54.9**	**+0.7**
TPE				*i* SN	**Sn**	**03 57 15.4**	**+4.9**
KNT	**Kendrikon**	**1.20**	**68**	P	**Pg**	**03 56 54.5**	**+0.3**
KNT				S	**Sn**	**03 57 11.6**	**+0.2**
	comp=N,112nm,0.4s						
KNT	**Kendrikon**	**1.20**	**68**	P	**Pg**	**03 56 54.4**	**+0.3**
KNT				S	**Sg**	**03 57 10.5**	**+0.8**
KNT				AML	AML	03 57 16.5	
	comp=N,272µm,0.5s						
KNT				AML	AML	03 57 16.9	
	comp=E,173µm,0.4s						
PHP	**Peshkopia**	**1.22**	**323**	P	**Pn**	**03 56 51.6**	**-3.4**
PHP				S	**Sb**	**03 57 08.7**	**-2.2**
PHP	**Peshkopia**	**1.22**	**323**	*i* PN	**Pn**	**03 56 53.4**	**-1.6**
PHP				*i* SN	**Sn**	**03 57 11.7**	**-0.3**
THL	**Klokotos Trika**	**1.24**	**159**	P	**Pg**	**03 56 54.9**	**-0.1**
THL				S	**Sn**	**03 57 14.2**	**+1.9**
	comp=E,92nm,0.6s						
THL	**Klokotos Trika**	**1.24**	**159**	P	**Pg**	**03 56 54.8**	**-0.1**
THL				S	**Sn**	**03 57 13.0**	**+0.7**
THL				AML	AML	03 57 18.4	
	comp=E,151µm,0.6s						
THL				AML	AML	03 57 18.6	
	comp=N,216µm,0.6s						
SKO	**Skopje**	**1.25**	**0**	*e*Pg	**Pg**	**03 56 56.1**	**+0.9**
SKO				*e*Sg	**Sn**	**03 57 11.9**	**-0.8**
SKO	**Skopje**	**1.25**	**0**	*e*Pg	**Pb**	**03 56 55.1**	**-0.3**
SKO				*i* Sg	**Sg**	**03 57 11.7**	**+0.3**
SKO				*e*Lg	Lg	03 57 12.2	
	comp=E,2.5nm,0.3s						
SKO				*e*Lg	Lg	03 57 13.1	
	comp=N,3.5nm,0.2s						
HORT	**Hortiatis**	**1.28**	**95**	P	**Pn**	**03 56 55.3**	**-0.5**
TIR	**Tirane**	**1.34**	**298**	*e*Pg	**Pb**	**03 56 55.9**	**-0.9**
TIR				*e*Sg	**Sg**	**03 57 14.5**	**+0.3**
TIR	**Tirane**	**1.34**	**298**	*i* Pg	**Pn**	**03 56 54.8**	**-1.8**
TIR	**Tirane**	**1.34**	**298**	*i* PN	**Pg**	**03 56 56.7**	**-0.2**
TIR				*i* SN	**Sg**	**03 57 18.1**	**+4.0**
SRN	**Sarande**	**1.38**	**233**	*i* PN	**Pg**	**03 56 59.0**	**+1.4**
SRN				*i* SN	**Sg**	**03 57 21.2**	**+5.8**
IGT	**Igoumenitsa**	**1.45**	**216**	*i* PN	**Pg**	**03 56 59.9**	**+0.8**
IGT				*i* SN	**Sg**	**03 57 23.3**	**+5.5**
PLG	**Polygyros**	**1.58**	**102**	P	**Pg**	**03 57 01.7**	**+0.3**
KEK	**Kerkira**	**1.60**	**232**	P	**Pg**	**03 57 01.4**	**-0.4**
SRS	**Serrai**	**1.69**	**76**	P	**Pb**	**03 57 02.5**	**-0.3**
KKB	**Krupnik**	**1.69**	**47**	*i* Pg	**Pb**	**03 57 03.0**	**+0.1**
KKB				*i* Sg	**Sg**	**03 57 25.7**	**+0.1**
KKB	**Krupnik**	**1.69**	**47**	*i* P	**Pb**	**03 57 02.3**	**-0.6**
PUK	**Puka**	**1.75**	**319**	*i* PN	**Pb**	**03 57 02.9**	**-1.1**
PUK				*i* SN	**Sg**	**03 57 29.0**	**+1.4**
EVR	**Evrytania**	**1.82**	**171**	P	**Pg**	**03 57 04.9**	**-1.2**
AGG	**Agios Georgios**	**1.83**	**157**	P	**Pb**	**03 57 04.6**	**-0.7**
MMB	**Musomiste**	**1.94**	**63**	*i* Pn	**Pb**	**03 57 06.2**	**-1.0**
MMB	**Musomiste**	**1.94**	**63**	*i* P	**Pb**	**03 57 07.2**	**+0.1**
BARS	**Barje**	**2.12**	**8**	*e*Pn	**Pn**	**03 57 07.5**	**+0.2**
BARS				*e*Sn	**Sn**	**03 57 33.1**	**-1.0**
VTS	**Vitosha**	**2.33**	**35**	*e*Pn	**Pn**	**03 57 10.8**	**+0.4**
VTS	**Vitosha**	**2.33**	**35**	*i* Pn	**Pn**	**03 57 11.2**	**+0.9**
VTS	**Vitosha**	**2.33**	**35**	*i* P	**Pn**	**03 57 11.3**	**+0.9**
PDG	**Podgorica**	**2.36**	**317**	*e*Pn	**Pn**	**03 57 09.9**	**-0.8**
PDG				*e*Sn	**Sn**	**03 57 39.7**	**-0.4**
SELS	**Selova**	**2.51**	**355**	*e*Pn	**Pn**	**03 57 13.6**	**+0.8**
ZAPS	**Zavoj**	**2.71**	**19**	*e*Pn	**Pn**	**03 57 16.4**	**+0.9**
SJES	**Sjenica**	**2.76**	**337**	*e*Pn	**Pn**	**03 57 16.4**	**+0.1**
BOVS	**Bovan**	**2.92**	**4**	*e*Pn	**Pn**	**03 57 18.5**	**+0.1**
IVAS	**Ivanjica**	**3.01**	**342**	*e*Pn	**Pn**	**03 57 19.8**	**+0.2**
ZAGS	**Zajecar**	**3.15**	**11**	*e*Pn	**Pn**	**03 57 21.3**	**-0.2**
GRUS	**Gruza**	**3.21**	**351**	*e*Pn	**Pn**	**03 57 22.6**	**+0.2**
DIVS	**Divibare**	**3.54**	**343**	*e*Pn	**Pn**	**03 57 26.8**	**-0.2**
ZIRJ	**Zirje**	**5.20**	**306**	*e*Pn	**Pn**	**03 57 49.9**	**+0.2**
MORI	**Morici**	**5.28**	**308**	*e*Pn	**Pn**	**03 57 52.5**	**+1.7**
DUGI	**Dugi Otok**	**5.74**	**307**	*i* Pn	**Pn**	**03 57 57.5**	**+0.4**

MAN 29 04:05:19.1, 7°.47N×125°.12E, h21^{km}, mb4.9, ML3.8, MS3.7, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.41**	**353**	*e*P	Pb	04 05 28.5	+1.0
BUKP				*e*S	Sn	04 05 38.1	+1.2
KCP	**Kidapawan**	**0.46**	**183**	⇑*e*P	Pb	04 05 29.1	+0.7
KCP				*i* S	Sn	04 05 45.8	+7.8
CGP	**Cagayan de Oro**	**1.06**	**337**	⇑*e*P	Pn	04 05 38.4	-0.4
CGP				*e*S	Sn	04 05 53.4	+0.4

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*ISCJB **29** 04:23:39.2±0.5, 24°.46S±0°.07×178°.9E±0°.1, h549^{km}, mb4.0/16, Error ellipse: s-maj=12.8km s-min=9.2km az=9.3*
*IDC **29** 04:23:39.1±1.9, 24°.33S×179°.01E, h536^{km}±19^{km}, mb3.6/17, mb1 3.8/19, mb1mx3.8/29, mbtmp4.5/19, Error ellipse: s-maj=17.2km s-min=14.7km az=101.0*

ISC 29 04:23:39.7±0.5**, 24°.54S**±0°.09×**178°.99E**±0°.10**, h549**^{km}**, n43, σ1$\overset{s}{.}$21**/47**, mb4.1**/16**, 1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.79**	**279**	P	**P**	**04 26 17.0**	**+0.8**
	5.3nm,0.3s,baz=163,slow=20,SNR=38						
URZ	**Urewera**	**13.77**	**186**	P	**P**	**04 26 36.2**	**-0.2**
	3.0nm,0.3s,baz=15,slow=4.7,SNR=16						
URZ				S	**S**	**04 28 58.6**	**-3.2**
	0.6nm,0.3s,baz=229,slow=19,SNR=2.1						
RPZ	**Rata Peaks**	**20.21**	**197**	P	**P**	**04 27 39.3**	**+1.8**
	4.6nm,0.4s,baz=23,slow=0.5,SNR=5.6						
CTA	**Charters Tower**	**30.56**	**272**	P	**P**	**04 29 10.0**	**+0.7**
	5.4nm,0.3s,baz=95,slow=14,SNR=7.6						
STKA	**Stephens Creek**	**33.63**	**249**	P	**P**	**04 29 36.4**	**+1.3**
	5.7nm,0.4s,baz=97,slow=11,SNR=25						
ASAR	**Alice Springs**	**41.02**	**262**	P	**P**	**04 30 36.2**	**+0.5**
	3.5nm,0.6s,baz=94,slow=9.0,SNR=31						
ASAR				S	**S**	**04 36 08.2**	**-0.9**
	0.5nm,0.5s,baz=102,slow=16,SNR=4.4						
WRA	**Warramunga Arr**	**41.45**	**267**	P	**P**	**04 30 39.0**	**-0.1**
	3.9nm,0.6s,baz=92,slow=9.3,SNR=54						
WRA				S	**S**	**04 36 12.2**	**-2.9**
	4.1nm,0.9s,baz=101,slow=14,SNR=5.6						
SIJI	**Sorong**	**51.77**	**290**	P	**P**	**04 31 56.6**	**-0.5**
	23nm,0.6s,baz=140,slow=8.1,SNR=8.3						
MJAR	**Matsushiro Arr**	**71.91**	**326**	P	**P**	**04 34 06.8**	**-0.9**
	6.3nm,0.7s,baz=165,slow=5.7,SNR=18						
MAT	**Matsushiro**	**71.91**	**326**	P	**P**	**04 34 06.4**	**-1.2**
MAW	**Mawson**	**76.83**	**201**	P	**P**	**04 34 36.4**	**+1.6**
	1.2nm,0.6s,baz=287,slow=14,SNR=4.8						
KSRS	**Korea Array**	**78.15**	**321**	P	**P**	**04 34 41.8**	**-0.6**
	2.1nm,0.6s,baz=137,slow=5.6,SNR=8.7						
PETK	**Petropavlovsk-**	**79.51**	**347**	P	**P**	**04 34 49.1**	**-0.2**
	5.0nm,0.6s,baz=116,slow=5.8,SNR=9.9						
USRK	**Ussuriysk Ar.**	**80.80**	**328**	P	**P**	**04 34 56.6**	**+0.3**
	3.9nm,0.6s,baz=108,slow=4.2,SNR=12						
NVAR	**Mina Array Bea**	**85.85**	**44**	P	**P**	**04 35 22.5**	**+0.7**
	0.8nm,0.8s,baz=225,slow=8.9,SNR=5.3						
CMAR	**Chiang Mai Arr**	**88.89**	**291**	P	**P**	**04 35 38.0**	**+1.7**
	1.6nm,0.7s,baz=132,slow=2.7,SNR=5.9						
SEY	**Seymchan**	**89.70**	**348**	P	**P**	**04 35 38.5**	**-0.4**
	4.0nm,0.8s,baz=176,slow=14						
TXAR	**Lajitas Array**	**91.55**	**58**	P	**P**	**04 35 50.0**	**+1.5**
	0.3nm,0.5s,baz=208,slow=6.4,SNR=9.4						
ILAR	**Eielson Array**	**92.87**	**14**	P	**P**	**04 35 52.1**	**-1.4**
	0.4nm,0.6s,baz=249,slow=4.9,SNR=5.9						
PDAR	**Pinedale Array**	**93.79**	**44**	P	**P**	**04 35 58.4**	**-0.1**
	0.3nm,0.6s,baz=197,slow=2.5,SNR=3.6						
MKAR	**Makanchi Array**	**111.90**	**313**	PKiKP	**PKiKP**	**04 41 10.6**	**-1.9**
	0.4nm,0.4s,baz=298,slow=3.9,SNR=5.2						
KURBB	**Kurchatov Arra**	**115.07**	**316**	PKP	PKPdf	04 41 17.6	-0.8
	0.5nm,0.4s,baz=126,slow=1.9,SNR=8.2						
BVAR	**Borovoye Array**	**120.31**	**318**	PKP	**PKPdf**	**04 41 28.0**	**-0.4**
	1.6nm,0.4s,baz=82,slow=1.6,SNR=11						
SPITS	**Spitsbergen Ar**	**125.68**	**356**	PKP	**PKPdf**	**04 41 38.0**	**-0.1**
	1.4nm,0.5s,baz=102,slow=7.8,SNR=4.2						
AKTO	**Aktyubinsk**	**128.11**	**316**	PKP	**PKPdf**	**04 41 43.5**	**0.0**
	1.5nm,0.6s,baz=62,slow=23,SNR=6.0						
ARCES	**ARCESS Array B**	**132.31**	**348**	PKP	**PKPdf**	**04 41 50.6**	**-0.2**
	1.3nm,0.6s,baz=51,slow=1.4,SNR=12						
FINES	**FINESS Array B**	**138.75**	**341**	PKhKP	PKPpre	04 41 54.7	
	0.5nm,0.3s,baz=54,slow=5.0,SNR=6.6						
FINES				PKP	**PKPdf**	**04 42 03.0**	**0.0**
	1.2nm,0.4s,baz=84,slow=3.8,SNR=10.0						
FINES				SKPbc	**SKPbc**	**04 44 47.5**	**+1.2**
	1.1nm,0.5s,baz=46,slow=5.5,SNR=8.3						
NB2	**NORSAR Subarra**	**142.56**	**350**	PKP	**PKPdf**	**04 42 06.1**	**-3.8**
	comp=Z,1.5nm,0.5s,baz=16,slow=3.0						
NOA	**NORSAR Array B**	**142.56**	**350**	PKhKP	PKPpre	04 42 06.4	
	comp=Z,3.2nm,0.8s,baz=16,slow=5.1,SNR=12						
AKASG	**Malin Array Be**	**144.99**	**326**	PKP	**PKPdf**	**04 42 14.4**	**0.0**
	comp=Z,4.9nm,0.6s,baz=42,slow=4.4,SNR=32						
MMAI	**Mount Meron Ar**	**147.11**	**293**	PKPbc	**PKPbc**	**04 42 22.4**	**+0.6**
	comp=Z,5.4nm,0.5s,baz=66,slow=4.9,SNR=6.6						
BRTR	**Keskin Array B**	**147.21**	**306**	PKPbc	**PKPbc**	**04 42 21.8**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=136,slow=4.4,SNR=18						
MLR	**Muntele Rosu**	**149.83**	**321**	PKPbc	**PKPbc**	**04 42 27.5**	**-0.6**
	comp=Z,2.2nm,0.4s,baz=358,slow=4.7,SNR=4.1						
OSTC	**Ostas**	**150.80**	**337**	*e*PKP	**PKiKP**	**04 42 30.7**	**+0.2**
CHVC	**Chvalec**	**150.83**	**337**	*e*PKP	**PKiKP**	**04 42 30.8**	**+0.2**
DPC	**Dobruska-Polom**	**150.93**	**337**	*e*PKP	**PKPbc**	**04 42 30.8**	**+0.4**
CLL	**Collm**	**151.18**	**342**	⇓*i*PKPbc	**PKPbc**	**04 42 31.1**	**+0.2**
	comp=Z,12nm,0.8s						
CLL				⇑*i*PKPab	**PKPab**	**04 42 41.1**	**-0.2**
	comp=Z,7.0nm,0.5s						
PVCC	**Panska Ves**	**151.38**	**339**	*e*PKP	**PKPbc**	**04 42 31.6**	**+0.2**
GOPC	**GO Pecny, Ondr**	**151.84**	**338**	*e*PKP	**PKPbc**	**04 42 32.6**	**+0.2**
NKC	**Novy Kostel**	**152.30**	**341**	*e*PKP	**PKiKP**	**04 42 34.1**	**+0.5**
KHC	**Kasperske Hory**	**152.91**	**339**	*e*PKP	**PKPbc**	**04 42 34.6**	**-0.2**
KHC				*e*pPKP	**PKPab**	**04 42 48.8**	**0.0**
ESDC	**Sonseca Array**	**164.70**	**9**	PKPab	**PKPab**	**04 43 39.2**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=346,slow=2.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**168.39**	**193**	PKPab	**PKPab**	**04 43 58.7**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=176,slow=2.7,SNR=7.2						

KRSC 29 04:23:49.4±1.1**, 51°.99N×160°.09E, h18**^{km}±19^{km}**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.07**	**295**	*e*P	Pb	04 24 08.8	-0.5
RUS				*e*S	Sb	04 24 22.2	-0.7
SPN	**Mys Shipunski**	**1.11**	**358**	*e*P	Pb	04 24 10.1	0.0
SPN				*e*S	Sn	04 24 24.9	0.0
KDTR	**Khodutka, Kamc**	**1.26**	**263**	*e*P	Pn	04 24 12.3	+0.2
KDTR				*e*S	Sb	04 24 27.9	-0.5
NLC	**Nalytchevo**	**1.27**	**339**	*e*P	Pn	04 24 12.3	+0.1
NLC				*e*S	Sb	04 24 28.4	-0.3
MTVR	**Mutnovka**	**1.27**	**294**	*e*P	Pn	04 24 12.5	+0.1
MTVR				*e*S	Sb	04 24 28.8	-0.2
DALK	**Dalny**	**1.32**	**323**	*e*P	Pn	04 24 13.2	+0.2
DALK				*e*S	Sb	04 24 30.5	+0.2
PET	**Petropavlovsk**	**1.36**	**320**	*e*P	Pn	04 24 13.7	+0.3
PET				*e*S	Sn	04 24 30.4	-0.6
ASAK	**Asacha**	**1.40**	**287**	*e*P	Pb	04 24 14.9	-0.2
ASAK				*e*S	Sb	04 24 33.3	+0.6
UGLR	**Uglovaya**	**1.44**	**328**	*e*P	Pb	04 24 15.9	+0.1
UGLR				*e*S	Sg	04 24 35.4	-0.7
KRMR	**Karymshinskiy**	**1.47**	**306**	*e*P	Pn	04 24 15.3	+0.4
SDLR	**Sedlovina**	**1.48**	**331**	*e*P	Pn	04 24 15.8	+0.5
SDLR				*e*S	Sn	04 24 34.4	+0.1
SMAR	**Somma**	**1.50**	**329**	*e*P	Pn	04 24 16.2	+0.6
AVH	**Avacha**	**1.52**	**328**	*e*P	Pb	04 24 16.7	-0.4
KRER	**Koryakskii**	**1.55**	**329**	*e*P	Pb	04 24 17.6	-0.1
KRER				*e*S	Sg	04 24 38.5	-1.0
KOK	**Koryaka**	**1.58**	**326**	*e*P	Pb	04 24 17.8	-0.3
KRX	**Arik**	**1.63**	**328**	*e*P	Pb	04 24 18.2	-0.8
APC	**Apacha**	**2.02**	**299**	*e*P	Pb	04 24 24.7	-0.9
APC				*e*S	Sb	04 24 49.5	-0.9
GNL	**Ganaly**	**2.15**	**324**	*e*P	Pn	04 24 26.1	+1.7
GNL				*e*S	Sb	04 24 53.9	-0.3
KZV	**Kizimen**	**3.13**	**2**	*e*P	Pn	04 24 40.5	+2.5
KZV				*e*S	Sn	04 25 16.9	+1.9

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*ISCJB **29** 04:28:32.2±0.6, 2°.96N±0°.05×126°.1E±0°.1, h10^{km}, mb3.9/5, MS3.1/1, Error ellipse: s-maj=16.0km s-min=5.5km az=161.4*
*IDC **29** 04:28:33.0±1.8, 2°.76N×126°.07E, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.7/48, mbtmp4.0/5, MS3.0/2, Ms1 3.0/2, ms1mx2.5/31, Error ellipse: s-maj=210.0km s-min=15.3km az=66.0*
*DJA **29** 04:28:34.0±1.3, 3°N±13°×12°6E±°, h63^{km}±21^{km}, M4.5/7, mb4.6/3, mB4.7/1, MLv4.5/7, Mw(mB)3.9/1*
*MAN **29** 04:28:34.9, 2°.94N×125°.79E, h33^{km}, mb3.9, ML2.6, MS2.2*

ISC 29 04:28:33.2±0.8**, 2°.99N**±0°.07×**126°.1E**±0°.1**, h10**^{km}**, n13, σ2$\overset{s}{.}$67**/17**, mb4.1**/5**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.93**	**319**	P	**Pg**	**04 28 49.4**	**-1.7**
SGSI				S	**Sg**	**04 29 01.7**	**-1.6**
TNTI	**Ternate**	**2.52**	**151**	P	**Pb**	**04 29 15.3**	**-3.2**
DDMP	**Don Marcelino,**	**3.13**	**352**	*e*P	**Pn**	**04 29 23.0**	**+0.3**
DDMP				*e*S	**Sn**	**04 30 00.0**	**-0.1**
SKMP	**Bagumbayan, Su**	**3.86**	**336**	*e*P	**Pn**	**04 29 31.9**	**-0.8**
SKMP				*e*S	**Sn**	**04 30 15.9**	**-2.2**
DAV	**Davao City (W)**	**4.10**	**352**	LR	LR	04 31 26.3	
	comp=Z,131nm,18.8s,baz=310,slow=40						
KCP	**Kidapawan**	**4.13**	**345**	⇓*e*P	**Pn**	**04 29 37.3**	**+0.8**
KCP				*i* S	**Sn**	**04 30 28.3**	**+3.3**
TTSI	**Tana Toraja**	**8.71**	**227**	P	**Pn**	**04 30 40.7**	**+1.3**
WRA	**Warramunga Arr**	**24.16**	**161**	P	**P**	**04 33 47.6**	**-2.2**
	4.1nm,0.4s,baz=341,slow=13,SNR=38						
WRA				S	**S**	**04 38 09.2**	**+1.1**
	0.8nm,0.6s,baz=337,slow=21,SNR=4.4						
ASAR	**Alice Springs**	**27.55**	**164**	P	**P**	**04 34 21.5**	**+1.0**
	1.6nm,0.4s,baz=345,slow=10,SNR=11						
ASAR				S	**S**	**04 39 08.5**	**+6.6**
	1.2nm,0.8s,baz=346,slow=19,SNR=5.9						
STKA	**Stephens Creek**	**37.65**	**158**	P	**P**	**04 35 47.3**	**-1.4**
	2.0nm,0.5s,baz=326,slow=8.1,SNR=5.8						
KLR	**Kul'dur**	**46.32**	**5**	LR	LR	04 56 42.5	
	comp=Z,21nm,20.3s,baz=54,slow=36						
MKAR	**Makanchi Array**	**57.83**	**326**	P	**P**	**04 38 27.4**	**+2.3**
	0.1nm,0.3s,baz=123,slow=6.1,SNR=3.3						
KURBB	**Kurchatov Arra**	**62.05**	**328**	P	**P**	**04 38 56.7**	**+2.7**
	0.3nm,0.3s,baz=130,slow=6.6,SNR=2.7						

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*IDC **29** 04:37:46.4±1.1, 42°.57S×172°.63E, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.8/23, mbtmp3.8/4, ML3.9/1, MS3.6/5, Ms1 3.6/5, ms1mx3.3/23, Error ellipse: s-maj=35.4km s-min=13.1km az=132.0*
*ISCJB **29** 04:37:48.4±0.2, 42°.67S±0°.02×172°.69E±0°.04, h10^{km}, MS3.6/5, Error ellipse: s-maj=4.6km s-min=2.0km az=39.0*
*WEL **29** 04:37:48.8, 43°S±2°×17°3E±°, h12^{km}±1^{km}, M4.7/25, ML4.9/14, MLv4.7/25, Error ellipse: s-maj=0.0km s-min=0.0km az=151.9*
*NEIC **29** 04:37:49.8±0.0, 42°.67S×172°.65E, h9^{km}, mb4.3/6, MW4.5, ML4.7(WEL), Moment Tensor Solution. s31 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.86; $M_{\theta\theta}$2.00; $M_{\phi\phi}$-1.14; $M_{r\theta}$-0.92; $M_{\theta\phi}$-3.65; $M_{\phi r}$-5.26; Best double couple: $M_0$6.70000×10^{15} NP1:ϕ_s351.00000°,δ84.00000°, λ-51.00000°. NP2:ϕ_s88.00000°,δ40.00000°, λ-171.00000°. Principal axes: T 5.5800, Plg28.0000°, Azm50.0000°; N 1.8400, Plg39.0000°, Azm166.0000°; P -7.4200, Plg38.0000°, Azm295.0000°; After WEL.*

ISC 29 04:37:48.6±0.5**, 42°.66S**±0°.03×**172°.67E**±0°.03**, h10**^{km}**, n170, σ1$\overset{s}{.}$65**/164**, MS3.6**/5**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTZ	**Lake Taylor**	**0.32**	**247**	*e*Pg	**Pg**	**04 37 55.7**	**+0.7**
LTZ	**Lake Taylor**	**0.32**	**247**	P	**Pg**	**04 37 55.7**	**+0.7**
LTZ				S	**Sg**	**04 37 59.9**	**+0.7**
GVZ	**Greta Valley S**	**0.41**	**139**	P	**Pn**	**04 38 00.7**	**0.0**
AMCZ	**Amberley**	**0.52**	**181**	P	**Pn**	**04 38 02.4**	**+0.3**
KHZ	**Kahutara**	**0.69**	**70**	*e*Pg	**Pb**	**04 38 04.2**	**+1.5**
KHZ	**Kahutara**	**0.69**	**70**	P	**Pb**	**04 38 04.2**	**+1.5**
OXZ	**Oxford**	**0.81**	**215**	*e*Pg	**Pb**	**04 38 05.8**	**+1.0**
OXZ	**Oxford**	**0.81**	**215**	P	**Pb**	**04 38 05.8**	**+1.0**
INZ	**Inchbonnie**	**0.90**	**265**	P	**Pg**	**04 38 05.3**	**-0.7**
THZ	**Tophouse**	**0.91**	**11**	*e*Pg	**Pg**	**04 38 05.3**	**-0.9**
THZ	**Tophouse**	**0.91**	**11**	P	**Pg**	**04 38 05.4**	**-0.9**
CRLZ	**Canterbury Las**	**0.92**	**182**	*e*Pn	**Pn**	**04 38 08.3**	**+0.8**
CRLZ	**Canterbury Las**	**0.92**	**182**	P	**Pn**	**04 38 08.4**	**+0.8**
MQZ	**McQueen's Vall**	**1.05**	**181**	*e*Pn	**Pb**	**04 38 09.8**	**+1.0**
MQZ				*e*Sg	**Sg**	**04 38 21.2**	**-1.2**
MQZ	**McQueen's Vall**	**1.05**	**181**	P	**Pn**	**04 38 10.0**	**+0.6**
OKCZ	**Okains Bay**	**1.10**	**165**	P	**Pn**	**04 38 11.3**	**+1.2**
DSZ	**Denniston Nort**	**1.12**	**325**	P	**Pb**	**04 38 09.0**	**-1.0**
BSWZ	**Blackbirch Sta**	**1.30**	**44**	P	**Pn**	**04 38 13.5**	**+0.6**
CMWZ	**Cape Campbell**	**1.47**	**52**	P	**Pb**	**04 38 17.3**	**+1.3**
WVZ	**Waitaha Valley**	**1.48**	**253**	P	**Pn**	**04 38 15.5**	**+0.2**
NNZ	**Nelson**	**1.54**	**20**	P	**Pn**	**04 38 16.2**	**+0.2**
TUWZ	**Tuamarina**	**1.55**	**38**	P	**Pn**	**04 38 17.2**	**+0.9**
RPZ	**Rata Peaks**	**1.58**	**228**	Pg	**Pn**	**04 38 16.7**	**-0.1**
	138nm,0.3s,baz=16,slow=0.4,SNR=248						
RPZ				Lg	Lg	04 38 37.0	
	260nm,0.3s,baz=145,slow=23,SNR=19						
RPZ	**Rata Peaks**	**1.58**	**228**	P	**Pn**	**04 38 16.7**	**-0.1**
QRZ	**Quartz Range**	**1.84**	**357**	*e*Pn	**Pn**	**04 38 19.8**	**-0.5**
QRZ	**Quartz Range**	**1.84**	**357**	P	**Pn**	**04 38 19.7**	**-0.5**
TCW	**Tory Channel**	**1.88**	**40**	P	**Pn**	**04 38 21.9**	**+1.1**
SNZO	**South Karori**	**2.03**	**49**	*e*Pn	**Pn**	**04 38 23.7**	**+0.8**
BHW	**Baring Head**	**2.06**	**53**	P	**Pn**	**04 38 23.9**	**+0.6**
DUWZ	**D'Urville Isla**	**2.08**	**27**	P	**Pn**	**04 38 24.7**	**+1.1**
PLWZ	**Palliser**	**2.21**	**61**	P	**Pn**	**04 38 25.5**	**+0.1**
FOZ	**Fox Glacier**	**2.26**	**246**	*e*Pn	**Pn**	**04 38 26.8**	**+0.7**
FOZ	**Fox Glacier**	**2.26**	**246**	P	**Pn**	**04 38 26.8**	**+0.7**
MSWZ	**Moikau Station**	**2.29**	**58**	P	**Pn**	**04 38 26.6**	**+0.2**
CAW	**Cannon Point**	**2.37**	**50**	P	**Pn**	**04 38 28.0**	**+0.5**
PAWZ	**Paruwai Farm**	**2.42**	**59**	P	**Pn**	**04 38 28.2**	**0.0**
LBZ	**Lake Benmore**	**2.50**	**225**	*e*Pn	**Pn**	**04 38 29.6**	**+0.3**
LBZ	**Lake Benmore**	**2.50**	**225**	P	**Pn**	**04 38 29.5**	**+0.1**
TRWZ	**Traveller**	**2.58**	**62**	P	**Pn**	**04 38 30.5**	**+0.1**
MTW	**Mount Morrison**	**2.59**	**56**	P	**Pn**	**04 38 30.4**	**-0.2**
OGWZ	**Otaki Gorge**	**2.63**	**46**	P	**Pn**	**04 38 31.5**	**+0.5**
HOWZ	**Holdsworth Sta**	**2.76**	**51**	P	**Pn**	**04 38 32.8**	**-0.2**
ODZ	**Otahua Downs**	**2.80**	**211**	*e*Pn	**Pn**	**04 38 33.3**	**-0.2**
ODZ	**Otahua Downs**	**2.80**	**211**	P	**Pn**	**04 38 33.2**	**-0.2**
TMWZ	**Te Maipa**	**2.86**	**58**	P	**Pn**	**04 38 33.9**	**-0.5**
MRZ	**Mangatainoka R**	**2.96**	**48**	P	**Pn**	**04 38 35.5**	**-0.1**
TIWZ	**Tintock**	**3.06**	**53**	P	**Pn**	**04 38 37.8**	**+0.8**
OHWZ	**Ohakea**	**3.16**	**40**	P	**Pn**	**04 38 39.0**	**+0.6**
JCZ	**Jackson Bay**	**3.16**	**242**	P	**Pn**	**04 38 38.8**	**+0.2**
CPWZ	**Castlepoint**	**3.17**	**58**	P	**Pn**	**04 38 41.3**	**+2.8**
POWZ	**Post Office Ro**	**3.25**	**47**	P	**Pn**	**04 38 40.0**	**+0.3**
PRWZ	**Pori Road**	**3.25**	**51**	P	**Pn**	**04 38 39.4**	**-0.3**
BFZ	**Birch Farm**	**3.33**	**55**	*e*Pn	**Pn**	**04 38 39.8**	**-1.0**
BFZ	**Birch Farm**	**3.33**	**55**	P	**Pn**	**04 38 39.6**	**-1.1**
NMEZ	**Namu Road**	**3.37**	**16**	P	**Pn**	**04 38 44.0**	**+2.7**
WAZ	**Wanganui**	**3.39**	**32**	P	**Pn**	**04 38 43.8**	**+2.2**
WKZ	**Wanaka**	**3.42**	**229**	*e*Pn	**Pn**	**04 38 41.7**	**-0.3**
WKZ	**Wanaka**	**3.42**	**229**	P	**Pn**	**04 38 42.0**	**0.0**
LREZ	**Lake Rotokare**	**3.46**	**23**	P	**Pn**	**04 38 46.3**	**+3.8**
PREZ	**Palmer Road**	**3.50**	**19**	P	**Pn**	**04 38 45.9**	**+2.7**
NBEZ	**Newall Road No**	**3.51**	**15**	P	**Pn**	**04 38 45.5**	**+2.3**
KHEZ	**Kahui Hut**	**3.51**	**17**	P	**Pn**	**04 38 45.5**	**+2.1**
DVHZ	**Dannevirke**	**3.53**	**49**	P	**Pn**	**04 38 42.7**	**-0.8**
EAZ	**Earnscleugh**	**3.53**	**222**	P	**Pn**	**04 38 44.8**	**+1.2**
HHSZ	**Highcliff Hill**	**3.55**	**204**	P	**Pn**	**04 38 43.8**	**0.0**
TSZ	**Takapari Road**	**3.59**	**45**	P	**Pn**	**04 38 44.1**	**-0.3**
PKE	**Pukeiti**	**3.60**	**17**	P	**Pn**	**04 38 46.5**	**+2.0**
DREZ	**Durham Road**	**3.66**	**19**	P	**Pn**	**04 38 47.8**	**+2.6**
MHEZ	**Mangahewa**	**3.79**	**20**	P	**Pn**	**04 38 51.2**	**+4.1**

PNHZ	**Pukenui**	**3.82**	**45**	P	**Pn**	**04 38 47.1**	**-0.5**
PRHZ	**Porangahau**	**3.82**	**53**	P	**Pn**	**04 38 46.6**	**-0.9**
VRZ	**Vera Road**	**3.87**	**25**	P	**Pn**	**04 38 50.5**	**+2.3**
MTVZ	**Mangateitei**	**3.90**	**34**	P	**Pn**	**04 38 53.3**	**+4.7**
PKVZ	**Pokaka**	**3.93**	**32**	P	**Pn**	**04 38 50.3**	**+1.2**
TUZ	**Tuapeka**	**3.95**	**212**	P	**Pn**	**04 38 49.5**	**+0.2**
MSZ	**Milford Sound**	**3.98**	**238**	P	**Pn**	**04 38 52.0**	**+2.3**
MOVZ	**Moawhango**	**4.00**	**37**	P	**Pn**	**04 38 50.9**	**+0.9**
DRZ	**Dome Shelter**	**4.03**	**34**	P	**Pn**	**04 38 52.1**	**+1.5**
WHVZ	**Whangaehu Hut**	**4.03**	**34**	P	**Pn**	**04 38 51.7**	**+1.1**
FWVZ	**Far West T-bar**	**4.04**	**34**	P	**Pn**	**04 38 51.8**	**+1.1**
TUVZ	**Tukino**	**4.07**	**35**	P	**Pn**	**04 38 52.2**	**+1.1**
BHHZ	**Black Hill Sta**	**4.08**	**40**	P	**Pn**	**04 38 51.3**	**+0.2**
KRHZ	**Kereru**	**4.11**	**44**	P	**Pn**	**04 38 51.0**	**-0.5**
NGZ	**Ngauruhoe**	**4.13**	**34**	P	**Pn**	**04 38 53.0**	**+1.1**
TWVZ	**Taurewa**	**4.16**	**31**	P	**Pn**	**04 38 53.2**	**+1.0**
WTVZ	**West Tongariro**	**4.18**	**33**	P	**Pn**	**04 38 53.4**	**+0.9**
KRVZ	**Karewarewa**	**4.21**	**33**	P	**Pn**	**04 38 54.2**	**+1.2**
MLZ	**Mavora Lakes**	**4.25**	**229**	*e*Pn	**Pn**	**04 38 54.7**	**+1.3**
MLZ	**Mavora Lakes**	**4.25**	**229**	P	**Pn**	**04 38 53.6**	**+0.1**
KAHZ	**Kahuranaki**	**4.27**	**49**	P	**Pn**	**04 38 52.7**	**-1.1**
KWHZ	**Kaweka Forest**	**4.30**	**43**	P	**Pn**	**04 38 53.9**	**-0.3**
KATZ	**Kakaramea**	**4.34**	**33**	P	**Pn**	**04 38 56.0**	**+1.3**
RITZ	**Rihia Road**	**4.40**	**34**	P	**Pn**	**04 38 57.8**	**+2.2**
MCHZ	**McNeill Hill**	**4.43**	**45**	P	**Pn**	**04 38 57.5**	**+1.6**
RATZ	**Rangitukua**	**4.46**	**33**	P	**Pn**	**04 38 60.0**	**+3.6**
HIZ	**Hauiti**	**4.46**	**23**	*e*Pn	**Pn**	**04 38 57.6**	**+1.3**
HIZ	**Hauiti**	**4.46**	**23**	P	**Pn**	**04 38 57.9**	**+1.5**
BKZ	**Black Stump Fm**	**4.54**	**41**	*e*Pn	**Pn**	**04 38 56.5**	**-0.9**
BKZ	**Black Stump Fm**	**4.54**	**41**	P	**Pn**	**04 38 56.7**	**-0.7**
WATZ	**Wairara**	**4.58**	**32**	P	**Pn**	**04 39 01.1**	**+3.1**
SYZ	**Scrubby Hill**	**4.62**	**212**	P	**Pn**	**04 38 58.6**	**+0.1**
WHZ	**Wether Hill Ro**	**4.68**	**225**	P	**Pn**	**04 39 03.1**	**+3.8**
WHTZ	**Whakaora**	**4.71**	**33**	P	Pn	04 39 04.7	+5.0
ARHZ	**Aropaoanui**	**4.72**	**45**	P	**Pn**	**04 39 01.5**	**+1.7**
MRHZ	**Matea Rd**	**4.77**	**38**	P	**Pn**	**04 38 59.7**	**-0.9**
TLZ	**Tolley Road**	**4.85**	**28**	P	**Pn**	**04 39 02.7**	**+1.0**
DCZ	**Deep Cove**	**4.86**	**233**	P	**Pn**	**04 39 03.1**	**+1.3**
MTHZ	**Maungataniwha**	**4.95**	**41**	P	**Pn**	**04 39 02.5**	**-0.6**
RTZ	**Ruatahuna**	**5.20**	**41**	P	**Pn**	**04 39 08.1**	**+1.5**
SNGZ	**Shannon Statio**	**5.25**	**44**	P	**Pn**	**04 39 08.9**	**+1.7**
MHGZ	**Mahia Peninsul**	**5.29**	**50**	P	**Pn**	**04 39 08.6**	**+0.9**
OMRZ	**Omania**	**5.36**	**33**	P	**Pn**	**04 39 12.5**	**+3.9**
KARZ	**Kaharoa**	**5.38**	**32**	P	Pn	04 39 15.9	+6.9
TOZ	**Tahuroa Road**	**5.38**	**25**	P	**Pn**	**04 39 10.4**	**+1.5**
KMRZ	**Kaimai**	**5.42**	**29**	P	**Pn**	**04 39 13.5**	**+3.9**
RAGZ	**Rawiri**	**5.51**	**43**	P	**Pn**	**04 39 09.8**	**-1.0**
RIGZ	**Rimuhau**	**5.53**	**46**	P	Pn	04 39 16.5	+5.5
URZ	**Urewera**	**5.55**	**39**	Pn	**Pn**	**04 39 08.9**	**-2.4**
	3.7nm,0.3s,baz=248,slow=8.0,SNR=29						
URZ				Sn	**Sn**	**04 40 13.2**	**-1.9**
	14nm,0.3s,baz=57,slow=17,SNR=3.0						
TGRZ	**Tauranga**	**5.64**	**30**	P	**Pn**	**04 39 13.7**	**+1.2**
OPRZ	**Ohinepanea**	**5.65**	**33**	P	Pn	04 39 19.3	+6.6
MWZ	**Matawai**	**5.69**	**42**	P	**Pn**	**04 39 12.8**	**-0.4**
TKGZ	**Te Karaka**	**5.77**	**45**	P	**Pn**	**04 39 17.2**	**+2.8**
AWAZ	**Awhitu Peninsu**	**5.79**	**16**	P	**Pn**	**04 39 16.4**	**+1.9**
KBAZ	**Karaka Road Bo**	**5.81**	**18**	P	**Pn**	**04 39 19.3**	**+4.5**
MKAZ	**Moumakai**	**5.87**	**20**	P	**Pn**	**04 39 17.1**	**+1.5**
WTAZ	**Waiatarua**	**5.91**	**15**	P	**Pn**	**04 39 18.8**	**+2.7**
CNGZ	**Carnagh Statio**	**5.93**	**47**	P	**Pn**	**04 39 19.9**	**+3.4**
ETAZ	**East Tamaki Re**	**5.96**	**18**	P	**Pn**	**04 39 19.5**	**+2.7**
TWGZ	**Tauwhareparae**	**6.04**	**44**	P	**Pn**	**04 39 18.4**	**+0.4**
RUGZ	**Raukumara Rang**	**6.05**	**41**	P	**Pn**	**04 39 17.7**	**-0.6**
MBAZ	**Motutapu North**	**6.13**	**17**	P	**Pn**	**04 39 22.2**	**+3.0**
WIAZ	**Waiheke Island**	**6.16**	**19**	P	**Pn**	**04 39 21.2**	**+1.5**
HAZ	**Te Kaha**	**6.27**	**40**	P	**Pn**	**04 39 20.5**	**-0.6**
ABAZ	**Army Bay**	**6.28**	**16**	P	**Pn**	**04 39 23.9**	**+2.7**
KUZ	**Kuaotunu**	**6.36**	**23**	P	**Pn**	**04 39 23.7**	**+1.3**
WMGZ	**Waiomatatini S**	**6.53**	**44**	P	**Pn**	**04 39 25.8**	**+1.0**
MXZ	**Matakaoa Point**	**6.68**	**42**	*e*Pn	**Pn**	**04 39 25.2**	**-1.5**
MXZ	**Matakaoa Point**	**6.68**	**42**	P	**Pn**	**04 39 28.2**	**+1.4**
GRZ	**Great Barrier**	**6.75**	**20**	P	**Pn**	**04 39 31.7**	**+3.9**
WCZ	**Waipu Caves**	**6.84**	**12**	P	**Pn**	**04 39 30.7**	**+1.8**
OUZ	**Omahuta**	**7.46**	**6**	*e*Pn	**Pn**	**04 39 37.1**	**-0.5**
OUZ	**Omahuta**	**7.46**	**6**	P	**Pn**	**04 39 38.6**	**+1.1**
CTZ	**Chatham Island**	**7.90**	**101**	P	**Pn**	**04 39 44.6**	**+1.0**
TAU	**Tasmania Unive**	**18.59**	**261**	*e*P	**P**	**04 42 04.0**	**-1.8**
	6.8nm,0.8s						
DZM	**Mont Dzumac**	**21.18**	**344**	LR	LR	04 50 16.0	
	comp=Z,200nm,18.1s,baz=197,slow=36						
STKA	**Stephens Creek**	**26.83**	**283**	P	**P**	**04 43 29.9**	**+0.7**
	0.5nm,0.2s,baz=78,slow=14,SNR=3.1						
NIUE	**Niue**	**27.74**	**37**	*e*P	**P**	**04 43 38.5**	**+1.1**
	228nm,1.1s						
ASAR	**Alice Springs**	**37.17**	**288**	P	**P**	**04 44 57.3**	**-2.6**
	0.7nm,0.6s,baz=126,slow=9.3,SNR=4.1						
WB2	**Warramunga Arr**	**39.34**	**293**	*e*P	**P**	**04 45 15.7**	**-2.4**
	5.7nm,1.1s						
WR1	**Warramunga Arr**	**39.35**	**293**	*e*P	**P**	**04 45 16.4**	**-1.8**
WRA	**Warramunga Arr**	**39.35**	**293**	P	**P**	**04 45 16.4**	**-1.8**
	0.7nm,0.5s,baz=131,slow=8.0,SNR=5.6						
PPT	**Papeete**	**40.63**	**64**	LR	LR	05 01 16.7	
	comp=Z,101nm,18.9s,baz=233,slow=35						
QSPA	**South Pole Qui**	**47.47**	**180**	*e*P	**P**	**04 46 23.3**	**-0.1**
	2.9nm,0.9s						
SOEI	**Soe**	**53.39**	**293**	*e*P	**P**	**04 47 10.2**	**+1.6**
	16nm,0.7s						
MAW	**Mawson**	**58.14**	**205**	LR	LR	05 11 22.8	
	comp=Z,40nm,18.4s,baz=96,slow=35						
SNAA	**Sanae**	**65.93**	**182**	P	**P**	**04 48 33.3**	**-1.0**
SNAA	**Sanae**	**65.93**	**182**	*e*P	**P**	**04 48 34.4**	**+0.1**
	2.3nm,1.1s						
PSI	**Prapat**	**80.01**	**283**	LR	LR	05 27 56.7	
	comp=Z,104nm,18.1s,baz=232,slow=38						
KSRS	**Korea Array**	**89.54**	**326**	LR	LR	05 27 38.8	
	comp=Z,8.7nm,20.2s,baz=215,slow=34						
HHC	**Hu-ho-hao-te**	**99.76**	**318**	P	**Pdif**	**04 51 35.0**	**+2.3**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,12nm,5.7s						
LZH	**Lanzhou**	**100.38**	**310**	*e*P	**Pdif**	**04 51 35.3**	**-0.3**
LZH				pP	pPdif	04 51 39.0	-0.2
LZH				sP	pP	04 51 41.0	+1.7
LZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KURBB	**Kurchatov Arra**	**123.67**	**310**	PKP	**PKPdf**	**04 56 45.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=108,slow=3.0,SNR=3.1						
DBIC	**Dimbokro**	**144.09**	**184**	PKP	**PKPab**	**04 57 22.8**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=145,slow=4.3,SNR=4.0						
ARCES	**ARCESS Array B**	**148.21**	**339**	PKPbc	**PKPbc**	**04 57 33.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=49,slow=3.7,SNR=10						
BR101	**Keskin Array S**	**149.24**	**279**	*e*PKPdf	**PKPdf**	**04 57 36.3**	**+3.3**
BRTR	**Keskin Array B**	**149.24**	**279**	PKPbc	**PKPdf**	**04 57 36.3**	**+3.3**
	comp=Z,0.7nm,0.7s,baz=127,slow=6.4,SNR=4.5						
TORD	**Torodi Ar. Bea**	**149.57**	**198**	PKPbc	**PKPbc**	**04 57 37.7**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=210,slow=1.1,SNR=13						
TOA1	**Torodi Ar. Sit**	**149.58**	**198**	*e*PKPbc	**PKPbc**	**04 57 37.7**	**-0.9**
FIA0	**FINESS Array S**	**152.62**	**325**	*e*PKPbc	**PKPbc**	**04 57 42.5**	**-1.8**
FINES	**FINESS Array B**	**152.62**	**325**	PKPbc	**PKPbc**	**04 57 42.6**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=126,slow=9.1,SNR=3.2						

SJA ***29*** *04:46:08.3±0.4, 21°.96S×69°.06W, h104^{km}±2^{km}, ML2.6, MW3.9*
ISCJB ***29*** *04:46:09.1±0.8, 21°.99S±0°.03×69°.08W±0°.07, h105^{km}±8^{km}, Error ellipse: s-maj=10.5km s-min=5.1km az=178.5*
GUC ***29*** *04:46:09.2±0.7, 21°.97S×69°.03W, h95^{km}±3^{km}, ML3.2*
ISC 29 04:46:10.0±1.5**, 21°.98S**±0°.03×**69°.08W**±0°.06**, h97**^{km}±9^{km}**, n21,** σ**0^{s}.54**/37**, 7C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.24**	**320**	*i* P	**Pn**	**04 46 23.8**	**-0.4**
PB09				*i* S	**Sn**	**04 46 35.5**	**+0.6**
PB09	**IPOC Station P**	**0.24**	**320**	⇑*e*P	**Pn**	**04 46 23.9**	**-0.4**
PB09				*i* S	**Sn**	**04 46 34.5**	**-0.3**
PB09				IAML		04 46 35.8	
	comp=E,1µm,0.2s						
PB03	**IPOC Station P**	**0.63**	**264**	*i* P	**Pn**	**04 46 26.6**	**-0.2**
PB03				*i* S	**Sn**	**04 46 40.2**	**+0.9**
PB03	**IPOC Station P**	**0.63**	**264**	⇑*e*P	**Pn**	**04 46 26.6**	**-0.2**
PB03				*i* S	**Sn**	**04 46 39.2**	**-0.1**
PB03				IAML		04 46 40.4	
	comp=E,1µm,0.1s						
LVC	**Limon Verde**	**0.64**	**166**	*i* P	**Pn**	**04 46 26.7**	**-0.4**
LVC				*i* S	**Sn**	**04 46 40.7**	**+0.9**
LVC	**Limon Verde**	**0.64**	**166**	*e*P	**Pn**	**04 46 26.7**	**-0.4**
LVC				*i* S	**Sn**	**04 46 39.0**	**-0.8**
PB07	**IPOC Station P**	**0.80**	**288**	*i* P	**Pn**	**04 46 27.9**	**-0.3**
PB07				*i* S	**Sn**	**04 46 42.7**	**+0.7**
PB07	**IPOC Station P**	**0.80**	**288**	⇑*e*P	**Pn**	**04 46 28.2**	**0.0**
PB07				*i* S	**Sn**	**04 46 42.4**	**+0.5**
PB07				IAML		04 46 44.0	
	comp=N,1µm,0.1s						
PB06	**IPOC Station P**	**0.85**	**212**	⇓*i*P	**Pn**	**04 46 28.9**	**0.0**
PB06				*i* S	**Sn**	**04 46 43.6**	**+0.6**
PB06				IAML		04 46 45.4	
	comp=N,700nm,0.1s						
PB02	**IPOC Station P**	**1.01**	**311**	*i* P	**Pn**	**04 46 30.1**	**-0.4**
PB02	**IPOC Station P**	**1.01**	**311**	⇑*e*P	**Pn**	**04 46 30.3**	**-0.1**
PB02				*i* S	**Sn**	**04 46 45.9**	**+0.1**
PB02				IAML		04 46 48.0	
	comp=E,730nm,0.1s						
PB01	**IPOC Station P**	**1.01**	**338**	⇑*i*P	**Pn**	**04 46 29.8**	**-0.6**
PB01				*i* S	**Sn**	**04 46 45.2**	**-0.6**
PB01				IAML		04 46 46.2	
	comp=E,1µm,0.2s						
PB04	**IPOC Station P**	**1.05**	**250**	*i* P	**Pn**	**04 46 30.6**	**-0.4**
PB04	**IPOC Station P**	**1.05**	**250**	⇑*e*P	**Pn**	**04 46 30.9**	**-0.1**
PB04				*i* S	**Sn**	**04 46 47.7**	**+0.9**
PB04				IAML		04 46 50.0	
	comp=N,749nm,0.3s						
PB15	**IPOC Station P**	**1.27**	**197**	*i* P	**Pn**	**04 46 33.7**	**+0.1**
PB15	**IPOC Station P**	**1.27**	**197**	*e*P	**Pn**	**04 46 33.4**	**-0.2**
PB15				*i* S	**Sn**	**04 46 52.0**	**+0.6**
PB08	**IPOC Station P**	**1.83**	**358**	⇑*e*P	**Pn**	**04 46 40.5**	**-0.2**
PB08				*i* S	**Sn**	**04 47 04.8**	**+0.9**
PB08				IAML		04 47 07.8	
	comp=E,138nm,0.4s						
GO01	**Chusmiza**	**2.30**	**357**	*e*P	**Pn**	**04 46 46.5**	**-0.4**
GO01				*i* S	**Sn**	**04 47 15.3**	**+0.3**
GO01				IAML		04 47 21.0	
	comp=E,231nm,0.1s						
GO02	**Mina Guanaco**	**3.20**	**188**	*e*P	**Pn**	**04 46 57.5**	**-1.2**
GO02				*i* S	**Sn**	**04 47 35.8**	**-0.3**
HJA	**Humahuaca**	**3.60**	**111**	*i* P	**Pn**	**04 47 04.5**	**+0.4**
HJA				IAML		04 47 06.5	
	comp=Z,8.5nm,0.5s						
AZAP	**Zapla**	**4.31**	**122**	*i* P	**Pn**	**04 47 13.8**	**+0.2**
AZAP				IAML		04 47 14.6	
	comp=Z,5.9nm,0.3s						

KRSC ***29*** *05:03:11.2±1.4, 51°.98N×160°.17E, h63^{km}±26^{km}, ML4.2*
IDC ***29*** *05:03:12.2±1.3, 52°.46N×160°.18E, h0^{km}, mb3.5/6, mb1 3.9/6, mb1mx3.5/43, mbtmp3.5/6, MS3.1/2, Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=38.4km s-min=17.9km az=179.0*
ISC 29 05:03:11.4±1.8**, 52°.02N**±0°.04×**160°.12E**±0°.04**, h9**^{km}±11^{km}**, n33,** σ**1^{s}.40**/52**, mb3.5**/6**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.07**	**294**	*e*P	**Pg**	**05 03 31.5**	**-0.5**
RUS				*e*S	**Sg**	**05 03 45.2**	**-0.6**
SPN	**Mys Shipunski**	**1.08**	**357**	*e*P	**Pn**	**05 03 32.7**	**-0.1**
SPN				*e*S	**Sb**	**05 03 47.2**	**+0.6**
NLC	**Nalytchevo**	**1.25**	**338**	*e*P	**Pb**	**05 03 35.2**	**+0.1**
NLC				*e*S	**Sb**	**05 03 51.3**	**0.0**
MTVR	**Mutnovka**	**1.28**	**292**	*e*P	**Pn**	**05 03 35.0**	**-0.6**
MTVR				*e*S	**Sb**	**05 03 51.3**	**-1.0**
KDTR	**Khodutka, Kamc**	**1.28**	**261**	*e*P	**Pn**	**05 03 34.7**	**-0.8**
KDTR				*e*S	**Sb**	**05 03 50.9**	**-1.3**
DALK	**Dalny**	**1.31**	**321**	*e*P	**Pn**	**05 03 35.8**	**-0.1**
DALK				*e*S	**Sb**	**05 03 52.7**	**-0.5**
PET	**Petropavlovsk**	**1.35**	**319**	*e*P	**Pn**	**05 03 36.3**	**-0.1**
PET				*e*S	**Sb**	**05 03 53.7**	**-0.5**
ASAK	**Asacha**	**1.41**	**286**	*e*P	**Pb**	**05 03 37.6**	**-0.4**
ASAK				*e*S	**Sn**	**05 03 55.8**	**-0.4**
UGLR	**Uglovaya**	**1.43**	**327**	*e*P	**Pb**	**05 03 38.1**	**-0.2**
UGLR				*e*S	**Sg**	**05 03 58.2**	**+0.8**
KRMR	**Karymshinskiy**	**1.46**	**305**	*e*P	**Pn**	**05 03 37.8**	**-0.2**
KRMR				*e*S	**Sn**	**05 03 56.7**	**-0.6**
SDLR	**Sedlovina**	**1.47**	**330**	*e*P	**Pn**	**05 03 38.3**	**+0.1**
SDLR				*e*S	**Sn**	**05 03 56.8**	**-0.8**
SMAR	**Somma**	**1.48**	**328**	*e*P	**Pb**	**05 03 38.8**	**-0.5**
SMAR				*e*S	**Sn**	**05 03 57.3**	**-0.8**
AVH	**Avacha**	**1.50**	**327**	*e*P	**Pn**	**05 03 39.0**	**+0.3**
AVH				*e*S	**Sb**	**05 03 59.1**	**+0.3**
KRER	**Koryakskii**	**1.53**	**328**	*e*P	**Pb**	**05 03 39.8**	**-0.4**
KRER				*e*S	**Sn**	**05 03 57.5**	**-1.9**
KOK	**Koryaka**	**1.56**	**325**	*e*P	**Pb**	**05 03 40.1**	**-0.5**
KOK				*e*S	**Sn**	**05 04 00.0**	**+0.1**
KRX	**Arik**	**1.61**	**327**	*e*P	**Pb**	**05 03 40.9**	**-0.6**
PETK	**Petropavlovsk-**	**1.83**	**307**	Pn	**Pn**	**05 03 43.7**	**+0.6**
	38nm,0.3s,baz=110,slow=20,SNR=454						
PETK				Sn	**Sn**	**05 04 06.3**	**-0.2**
	42nm,0.3s,baz=94,slow=20,SNR=16						
PETK				LR	LR	05 04 32.9	
	comp=Z,92nm,18.2s,baz=140,slow=49						
APC	**Apacha**	**2.02**	**298**	*e*P	**Pb**	**05 03 47.1**	**-1.3**
APC				*e*S	**Sn**	**05 04 09.8**	**-1.3**
PAU	**Pauzhetka**	**2.13**	**256**	*e*P	**Pn**	**05 03 47.5**	**+0.4**
GNL	**Ganaly**	**2.13**	**323**	*e*P	**Pn**	**05 03 48.6**	**+1.2**
MKZ	**Mys Kozlova**	**2.72**	**20**	*e*P	**Pn**	**05 03 55.7**	**+0.4**
MKZ				*e*S	**Sn**	**05 04 26.1**	**-2.2**
SKR	**Severo-Kuril’s**	**2.84**	**244**	*e*P	**Pn**	**05 03 57.5**	**+0.6**
SKR				*e*S	**Sn**	**05 04 28.9**	**-2.3**
KZV	**Kizimen**	**3.10**	**2**	*e*P	**Pn**	**05 04 02.6**	**+1.9**
TUMD	**Tumrok D**	**3.20**	**3**	*e*P	**Pn**	**05 04 03.3**	**+1.4**
TUMD				*e*S	**Sn**	**05 04 37.9**	**-2.2**
BKI	**Bering**	**4.73**	**45**	*e*P	**Pn**	**05 04 22.7**	**-0.1**
BKI				*e*S	**Sn**	**05 05 12.9**	**-4.8**
MJAR	**Matsushiro Arr**	**21.90**	**234**	P	**P**	**05 08 09.9**	**+5.2**
	1.8nm,0.5s,baz=25,slow=8.0,SNR=5.3						
JHJ	**Hachijo jima 2**	**23.96**	**226**	LR	LR	05 19 56.7	
	comp=Z,28nm,19.2s,baz=89,slow=41						
ILAR	**Eielson Array**	**29.57**	**44**	P	**P**	**05 09 15.9**	**-0.3**
	0.3nm,0.7s,baz=247,slow=6.8,SNR=4.6						
MKAR	**Makanchi Array**	**48.64**	**297**	LR	LR	05 31 16.3	
	comp=Z,26nm,18.7s,baz=250,slow=35						
NVAR	**Mina Array Bea**	**56.10**	**69**	P	**P**	**05 12 52.4**	**+1.2**
	0.3nm,0.6s,baz=302,slow=9.1,SNR=3.5						
PDAR	**Pinedale Array**	**58.04**	**60**	P	**P**	**05 13 05.0**	**+0.1**
	0.1nm,0.5s,baz=290,slow=5.4,SNR=3.7						
AKASG	**Malin Array Be**	**69.54**	**329**	P	**P**	**05 14 18.6**	**-1.6**
	0.3nm,0.3s,baz=29,slow=6.4,SNR=2.6						
TXAR	**Lajitas Array**	**71.05**	**67**	P	**P**	**05 14 30.8**	**+0.9**
	0.2nm,0.5s,baz=304,slow=3.2,SNR=5.1						

MDD ***29*** *05:04:36.1±2.5, 37°.12N×12°.85W, h0^{km}, mb3.5/7, Error ellipse: s-maj=24.0km s-min=18.1km az=28.0*
INMG ***29*** *05:04:38.1±1.1, 36°.99N×13°.23W, h10^{km}, ML1.9, Error ellipse: s-maj=12.7km s-min=9.6km az=27.0*
ISC 29 05:04:37.3±4.0**, 37°.2N**±0°.1×**12°.7W**±0°.2**, h10**^{km}**, n25,** σ**0^{s}.90**/39**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.12**	**90**	*e*Sn	**Sn**	**05 06 03.4**	**-0.6**
PFVI				A	A	05 06 07.0	
	4.2nm,0.3s						
PFVI	**Vila Bisbo**	**3.12**	**90**	P	**Pn**	**05 05 26.0**	**-0.6**
	2.9nm,1.7s,SNR=7.9						
PFVI				S	**Sn**	**05 06 03.6**	**-0.4**
	50nm,2.0s,SNR=7.9						
PTEO	**Sao Teotonio**	**3.21**	**83**	*e*Sn	**Sn**	**05 06 05.9**	**-0.3**
PTEO	**Sao Teotonio**	**3.21**	**83**	S	**Sn**	**05 06 05.9**	**-0.3**
PMAFR	**Mafra**	**3.23**	**56**	*e*Pn	**Pn**	**05 05 29.0**	**+0.8**
PMAFR				*e*Sn	**Sn**	**05 06 07.6**	**+0.9**
PMAFR				A	A	05 06 11.6	
	6.4nm,0.7s						
PMAFR	**Mafra**	**3.23**	**56**	P	**Pn**	**05 05 28.6**	**+0.4**
	15nm,0.6s,SNR=7.9						
PMAFR				S	**Sn**	**05 06 07.7**	**+1.0**
	28nm,1.3s,SNR=7.9						
PNCL	**Nicolau / Gran**	**3.46**	**74**	*e*Pn	**Pn**	**05 05 32.4**	**+1.2**
PNCL				*e*Sn	**Sn**	**05 06 12.2**	**0.0**
PNCL				A	A	05 06 17.4	
	1.8nm,0.8s						
PNCL	**Nicolau / Gran**	**3.46**	**74**	P	**Pn**	**05 05 32.4**	**+1.2**
PNCL				S	**Sn**	**05 06 12.2**	**0.0**
	1.8nm,0.8s						
PCVE	**Castro Verde**	**3.76**	**82**	*e*Sn	**Sn**	**05 06 20.0**	**+0.3**
PCVE	**Castro Verde**	**3.76**	**82**	S	**Sn**	**05 06 20.0**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.83**	**88**	*e*Sn	**Sn**	**05 06 22.2**	**+0.6**
PBDV				A	A	05 06 26.6	
	1.5nm,0.9s						
PBDV	**Barranco-do-Ve**	**3.83**	**88**	S	**Sn**	**05 06 22.2**	**+0.6**
	1.5nm,0.9s						
PVAQ	**Vaqueiros**	**4.00**	**86**	*e*Sn	**Sn**	**05 06 24.8**	**-0.9**
PVAQ				A	A	05 06 28.2	
	1.6nm,0.4s						
PVAQ	**Vaqueiros**	**4.00**	**86**	S	**Sn**	**05 06 24.8**	**-0.9**
	1.6nm,0.4s						
PMTG	**Montargil**	**4.01**	**61**	*e*Pn	**Pn**	**05 05 40.1**	**+1.3**
PMTG				*e*Sn	**Sn**	**05 06 26.4**	**+0.5**
PMTG	**Montargil**	**4.01**	**61**	P	**Pn**	**05 05 40.1**	**+1.3**
PMTG				S	**Sn**	**05 06 26.4**	**+0.5**
EGRO	**El Granado**	**4.20**	**84**	P	**Pn**	**05 05 41.8**	**+0.4**
	3.3nm,1.5s,SNR=7.9						
EGRO				S	**Sn**	**05 06 29.8**	**-0.7**
	19nm,1.5s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.37**	**48**	*e*Pn	**Pn**	**05 05 44.2**	**+0.5**
PCAS	**Casmilo, Conde**	**4.37**	**48**	P	**Pn**	**05 05 44.2**	**+0.5**
PMRV	**Marv??o**	**4.75**	**61**	*e*Pn	**Pn**	**05 05 49.5**	**+0.5**
PMRV				*e*Sn	**Sn**	**05 06 43.0**	**-1.1**
PMRV				A	A	05 06 49.2	
	0.9nm,0.8s						
PMRV	**Marv??o**	**4.75**	**61**	P	**Pn**	**05 05 49.5**	**+0.5**
PMRV				S	**Sn**	**05 06 43.0**	**-1.1**
	0.9nm,0.8s						
EMIN	**Mina Concepcio**	**4.85**	**82**	P	**Pn**	**05 05 51.1**	**+0.7**
	3.2nm,1.0s,SNR=7.9						
EMIN				S	**Sn**	**05 06 45.3**	**-1.3**
	7.1nm,1.5s,SNR=7.9						
ECAB	**El Cabril**	**5.87**	**79**	P	**Pn**	**05 06 04.4**	**0.0**
	3.3nm,1.5s,SNR=7.9						
ECAB				S	**Sn**	**05 07 09.8**	**-1.9**
	2.1nm,2.1s,SNR=7.9						
ELOB	**Lobios**	**5.89**	**36**	P	**Pn**	**05 06 04.6**	**-0.1**
	1.4nm,0.8s,SNR=7.9						
ELOB				S	**Sn**	**05 07 10.9**	**-1.3**
	13nm,1.6s,SNR=7.9						
MVO	**Moncorvo**	**5.94**	**47**	P	**Pn**	**05 06 05.7**	**+0.4**
	9.1nm,1.5s,SNR=7.9						
MVO				S	**Sn**	**05 07 11.4**	**-2.0**
	32nm,1.3s,SNR=7.9						

ISCJB ***29*** *05:09:35.5±1.0, 7°.0S±0°.2×126°.2E±0°.3, h500^{km}, mb3.9/3, Error ellipse: s-maj=48.5km s-min=11.0km az=143.3*
IDC ***29*** *05:09:35.1±2.2, 6°.93S×126°.45E, h478^{km}±27^{km}, mb3.4/3, mb1 3.6/6, mb1mx3.1/34, mbtmp4.4/6, Error ellipse: s-maj=73.0km s-min=14.6km az=57.0*
ISC 29 05:09:36.7±1.2**, 7°.2S**±0°.3×**126°.1E**±0°.3**, h500**^{km}**, n6,** σ**1^{s}.10**/8**, mb4.0**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**6.69**	**289**	P	**P**	**05 11 19.6**	**-0.3**
	2.3nm,0.3s,baz=60,slow=20,SNR=8.2						
WRA	**Warramunga Arr**	**14.96**	**149**	P	**P**	**05 12 45.6**	**-0.9**
	2.1nm,0.3s,baz=330,slow=11,SNR=73						
WRA				S	**S**	**05 15 22.0**	**-1.1**
	0.2nm,0.3s,baz=324,slow=21,SNR=4.2						
ASAR	**Alice Springs**	**17.99**	**156**	P	**P**	**05 13 17.5**	**+0.5**
	1.7nm,0.3s,baz=332,slow=9.6,SNR=63						
ASAR				ScP	**ScP**	**05 20 14.3**	**+1.6**
	0.1nm,0.3s,baz=342,slow=2.0,SNR=4.8						
STKA	**Stephens Creek**	**28.47**	**152**	P	**P**	**05 14 51.5**	**+0.7**
	2.4nm,0.4s,baz=334,slow=10,SNR=12						
MKAR	**Makanchi Array**	**66.35**	**329**	P	**P**	**05 19 35.5**	**+0.2**
	0.7nm,0.5s,baz=126,slow=7.0,SNR=7.6						
ZALV	**Zalesovo Beam**	**70.12**	**335**	P	**P**	**05 19 57.4**	**-0.7**
	2.0nm,0.4s,baz=140,slow=5.6,SNR=7.5						

SVSA 29 05:21:13.7±0.7**, 39°.42N**×**29°.73W, h5**^{km}**, MD3.6, ML2.6, Error ellipse: s-maj=11.8km s-min=4.9km az=49.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**1.13**	**134**	*e*P	Pg	05 21 31.3	-4.1
PCED				*e*S	Sg	05 21 44.1	-5.9
PCED				A	A	05 21 46.5	
	46nm,0.5s						
CALA	**Caldeira**	**1.16**	**136**	*e*P	Pg	05 21 31.7	-4.3
CALA				*e*S	Sg	05 21 45.2	-5.9
HOR	**Horta**	**1.24**	**136**	*e*P	Pg	05 21 32.8	-4.7
HOR				*e*S	Sg	05 21 47.4	-6.2
HOR				A	A	05 21 49.2	
	154nm,0.4s						
ROSA	**Rosais**	**1.36**	**121**	*e*P	Pn	05 21 34.2	-5.1
ROSA				*e*S	Sb	05 21 49.8	-7.5
ROSA				A	A	05 21 51.0	
	24nm,0.3s						
PCAN	**Candelaria**	**1.37**	**134**	*e*P	Pn	05 21 34.5	-4.9
PCAN				*e*S	Sb	05 21 50.1	-7.4
PCAN				A	A	05 21 56.6	
	93nm,0.3s						
PPNO	**Prainha do Nor**	**1.49**	**129**	*e*P	Pn	05 21 36.5	-4.7
PPNO				*e*S	Sn	05 21 53.6	-7.4
PPNO				A	A	05 21 56.5	
	31nm,0.3s						
PMAN	**Manadas**	**1.50**	**121**	*e*S	Sn	05 21 53.5	-7.8
PMAN				A	A	05 21 55.2	
	19nm,0.4s						

ISCJB ***29*** *05:21:47.4±0.5, 22°.78S±0°.03×131°.71E±0°.05, h10^{km}, Error ellipse: s-maj=7.2km s-min=4.2km az=23.0*
IDC ***29*** *05:21:50.3±3.3, 22°.67S×131°.87E, h0^{km}, mb1 3.7/3, mb1mx3.5/30, mbtmp3.5/3, ML3.4/3, Error ellipse: s-maj=24.5km s-min=14.6km az=99.0*
AUST ***29*** *05:21:51.3±0.0, 22°.68S×131°.67E, h0^{km}, Error ellipse: s-maj=0.2km s-min=0.1km az=289.0*
ISC 29 05:21:47.7±0.8**, 22°.74S**±0°.05×**131°.71E**±0°.05**, h10**^{km}**, n20,** σ**2^{s}.72**/36**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**2.22**	**115**	Pn	**Pb**	**05 22 28.4**	**+0.4**
	2.8nm,0.3s,baz=298,slow=16,SNR=39						
ASAR				Lg	Lg	05 22 56.8	
	17nm,0.3s,baz=293,slow=28,SNR=26						
AS16	**Alice Springs**	**2.23**	**114**	P	**Pb**	**05 22 28.7**	**+0.6**
	baz=2.3						
AS16				S	**Sb**	**05 22 56.1**	**+0.3**
	baz=2.3						
AS03	**Alice Springs**	**2.23**	**115**	P	**Pb**	**05 22 29.1**	**+0.9**
	baz=2.3						
AS03				S	**Sb**	**05 22 57.6**	**+1.6**
	baz=2.3						
AS01	**Alice Springs**	**2.26**	**114**	P	**Pb**	**05 22 29.1**	**+0.5**
	baz=2.3						
AS01				S	**Sb**	**05 22 57.1**	**+0.5**
	baz=2.3						
WRA	**Warramunga Arr**	**3.71**	**42**	Pn	**Pn**	**05 22 48.2**	**+3.1**
	1.5nm,0.3s,baz=223,slow=14,SNR=74						
WRA				Lg	Lg	05 23 42.3	
	22nm,0.3s,baz=222,slow=30,SNR=18						
WB2	**Warramunga Arr**	**3.71**	**42**	P	**Pn**	**05 22 47.8**	**+2.6**
	baz=3.7						
WB2				S	**Sn**	**05 23 29.8**	**+0.8**
	baz=3.7						
WC3	**Warramunga Arr**	**3.72**	**42**	P	**Pn**	**05 22 47.5**	**+2.3**
	baz=3.7						
WC3				S	**Sn**	**05 23 30.5**	**+1.4**
	baz=3.7						
WC1	**Warramunga Arr**	**3.72**	**42**	P	**Pn**	**05 22 47.8**	**+2.5**
	baz=3.7						
WC1				S	**Sn**	**05 23 28.1**	**-1.1**
	baz=3.7						
WC2	**Warramunga Arr**	**3.74**	**42**	P	**Pn**	**05 22 48.2**	**+2.7**
	baz=3.7						
WC2				S	**Sn**	**05 23 30.8**	**+1.2**
	baz=3.7						
WRKA	**Warakurna**	**3.87**	**233**	P	**Pn**	**05 22 50.8**	**+3.4**
	baz=3.9,SNR=19						
WRKA				S	**Sn**	**05 23 35.3**	**+2.2**
	baz=3.9						
OOD	**Oodnadatta**	**6.19**	**145**	P	**Pn**	**05 23 23.0**	**+3.8**
	baz=6.3,SNR=82						
OOD				S	**Sn**	**05 24 30.9**	**+0.9**
	baz=6.3						
KNRA	**Kununurra**	**7.56**	**338**	P	**Pn**	**05 23 39.8**	**+1.8**
	baz=7.5,SNR=4.7						
KNRA				S	**Sn**	**05 24 58.8**	**-5.1**
	baz=7.5						
QIS	**Mount Isa**	**7.66**	**75**	P	**Pn**	**05 23 41.1**	**+1.7**
	baz=7.7						
QIS				S	**Sn**	**05 25 03.1**	**-3.2**
	baz=7.7						

MULG	Mulgathing	7.80	165	P	Pn	05 23 44.1	+2.8
	baz=7.9,SNR=4.5						
MULG				S	Sn	05 25 09.9	+0.2
	baz=7.9						
FORT	Forrest	8.64	201	P	Pn	05 23 55.2	+2.3
	baz=8.7						
FORT				S	Sn	05 25 27.9	-2.6
	baz=8.7						
LCRK	Leigh Creek	9.63	144	P	Pn	05 24 09.3	+2.8
	baz=9.7,SNR=11						
LCRK				S	Sn	05 25 52.0	-2.7
	baz=9.7						
BBOO	Buckleboo	10.74	160	P	Pn	05 24 22.8	+1.1
	baz=11						
BBOO				S	Sn	05 26 16.5	-5.5
	baz=11						
HTT	Hallett	12.40	151	P	Pn	05 24 44.7	+0.3
	baz=12,SNR=4.1						
MEEK	Meekatharra	12.52	249	P	Pn	05 24 45.4	-0.7
	baz=12,SNR=6.3						
STKA	Stephens Creek	12.64	138	Pn	Pn	05 24 48.7	+1.1
	0.5nm,0.3s,baz=316,slow=12,SNR=8.4						
STKA				Sn	Sn	05 27 01.0	-7.6
	0.6nm,0.3s,baz=329,slow=18,SNR=4.8						

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*IDC **29** 05:26:17.0±0.8, 40°.68N×71°.00E, h0^{km}, mb3.9/14, mb1 4.1/21, mb1mx3.9/53, mbtmp4.0/21, ML3.4/8, MS3.0/5, Ms1 3.1/5, ms1mx2.8/38, Error ellipse: s-maj=15.6km s-min=9.4km az=158.0*

*SOME **29** 05:26:18.4, 40°.82N×71°.05E, h0^{km}, MS3.3*

*BJI **29** 05:26:19.7±0.0, 40°.70N×70°.70E, h10^{km}, mb4.1/6, mB4.6/4, ML4.1/2, Ms3.6/1, Ms7 3.4/1*

*KRNET **29** 05:26:20.2±0.1, 40°.75N×70°.97E, h20^{km}, mb4.4*

*NNC **29** 05:26:20.2±2.7, 40°.86N×70°.96E, h0^{km}, mb4.7, mpv4.4, Error ellipse: s-maj=22.7km s-min=9.0km az=14.0*

*MOS **29** 05:26:22.0±1.4, 40°.88N×70°.84E, h42^{km}, mb4.5/22, Error ellipse: s-maj=8.3km s-min=5.2km az=89.3*

*NEIC **29** 05:26:23.6±1.5, 40°.86N×70°.93E, h40^{km}±6^{km}, mb4.4/30, Error ellipse: s-maj=9.4km s-min=4.8km az=116.0*

ISC 29 05:26:20.1±1.0, **40°.83N**±0°.02×**70°.99E**±0°.02, **h15**^{km}±6^{km}, **n189**, σ**2^{s}.24**/229, **mb4.3**/44, **31C-20D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.78	190	⇑eP	Pg	05 26 33.9	-1.4
	baz=90						
BTK				⇑iS	Sg	05 26 44.1	-1.5
	baz=90						
ARK	Arkit	1.21	37	⇓iP	Pg	05 26 44.2	+0.7
	baz=36						
ARK				⇓iS	Sn	05 27 01.7	+2.9
	baz=36						
TAS	Tashkent	1.38	292	⇓iP	Pb	05 26 45.8	+0.2
	baz=95						
TAS				⇓iS	Sg	05 27 04.5	-0.2
	baz=95						
IUG	Iuzhnay	1.50	332	P	Pg	05 26 48.6	-0.4
	228nm,0.3s						
IUG				S	Sg	05 27 11.3	+2.8
	11µm,0.4s						
IUG	Iuzhnay	1.50	332	eP	Pg	05 26 48.6	-0.4
	228nm,0.3s						
IUG				eS	Sg	05 27 10.7	+2.1
	11µm,0.4s						
ARSB	Arslanbob	1.58	71	⇑iP	Pg	05 26 50.1	-0.4
	baz=69						
ARSB				⇑iS	Sg	05 27 11.5	+0.4
	baz=69						
GAR	Garm	1.90	196	ePn	Pb	05 26 53.7	-0.8
GAR				eSn	Sb	05 27 18.4	+0.3
GAR	Garm	1.90	196	ePN	Pb	05 26 53.7	-0.8
GAR				e		05 27 18.4	
DZA	Taraz	2.08	7	eP	Pb	05 26 58.2	+0.7
	234nm,0.4s						
DZA				eS	Sg	05 27 26.7	-0.2
	2µm,0.5s						
KK31	Karatay Array	2.30	351	⇑Pn	Pb	05 27 00.3	-1.0
	19nm,0.3s,baz=173,slow=13,SNR=434						
KK31				Lg	Lg	05 27 34.2	
	242nm,0.5s,baz=174,slow=31,SNR=23						
KK31	Karatay Array	2.30	351	ePN	Pb	05 27 00.3	-1.0
KK31						05 27 34.2	
KK31				pmax	pmax		
	comp=Z,19nm,0.4s						
KKAR	Karatay Array	2.30	351	ePn	Pb	05 27 00.4	-0.9
KKAR				eSn	Sn	05 27 24.4	-1.2
KKAR	Karatay Array	2.30	351	ePN	Pb	05 27 00.4	-0.9
KKAR				e		05 27 24.4	
BRLS	Borolday	2.36	339	Pg	Pn	05 26 59.8	+1.5
	comp=Z,13nm,0.3s						
BRLS				Lg	Lg	05 27 30.4	
	comp=Z,226nm,0.4s						
BRLS	Borolday	2.36	339	eP	Pn	05 26 59.8	+1.5
	comp=Z,13nm,0.3s						
BRLS				eS	Sb	05 27 29.9	-1.4
	comp=Z,226nm,0.4s						
AML	Almayashu	2.41	56	⇓iP	Pb	05 27 02.3	-1.1
	baz=55						
AML				⇓iS	Sb	05 27 34.3	+1.2
	baz=55						
AML	Almayashu	2.41	56	P	Pb	05 27 02.2	-1.1
	SNR=96						
MRKS	Merke	2.54	40	Pg	Pb	05 27 04.3	-1.1
	comp=Z,165nm,0.5s						
MRKS				Lg	Lg	05 27 38.3	
	comp=Z,1µm,0.3s						
MRKS	Merke	2.54	40	eP	Pb	05 27 04.3	-1.1
	comp=Z,165nm,0.5s						
MRKS				eS	Sb	05 27 37.6	+1.1
	comp=Z,1µm,0.3s						
CHGR	Chuyangaron	2.59	214	ePn	Pb	05 27 07.6	+1.4
ARLS	Aral	2.71	67	⇑iP	Pb	05 27 06.6	-1.8
	baz=65						
ARLS				⇑iS	Sb	05 27 40.6	-0.9
	baz=65						
EKS2	Erkin-Say	2.77	48	⇓eP	Pb	05 27 08.0	-1.4
	baz=47						
EKS2				⇓iS	Sb	05 27 42.9	-0.3
	baz=47						
EKS2	Erkin-Say	2.77	48	P	Pb	05 27 07.9	-1.5
	SNR=40						
UCH	Uchtor	2.99	61	⇑iP	Pn	05 27 10.4	+3.1
	baz=60						
UCH				⇑iS	Sb	05 27 47.8	-2.0
	baz=60						
UCH	Uchtor	2.99	61	P	Pn	05 27 10.4	+3.1
	SNR=34						
AAK	Ala-Archa	3.18	54	Pn	Pn	05 27 12.2	+2.5
	comp=Z,5.3nm,0.3s,baz=207,slow=3.3,SNR=14						
AAK				Sn	Sb	05 27 55.8	+0.7
	comp=Z,29nm,0.3s,baz=152,slow=19,SNR=10						
AAK	Ala-Archa	3.18	54	ePn	Pn	05 27 13.1	+3.4
AAK	Ala-Archa	3.18	54	⇑Pn	Pb	05 27 14.0	-2.4
	comp=Z,86nm,0.6s						
AAK				⇑Lg	Lg	05 28 05.1	
	comp=Z,84nm,0.5s						
AAK	Ala-Archa	3.18	54	PN	Pb	05 27 13.9	-2.4
AAK				pmax	pmax		
	comp=Z,86nm,0.6s						
AAK	Ala-Archa	3.18	54	⇓eP	Pb	05 27 13.3	-3.1
	baz=53						
AAK				⇓iS	Sb	05 27 52.2	-2.9
	baz=53						
AAK	Ala-Archa	3.18	54	P	Pb	05 27 14.1	-2.4
	SNR=11						
FRU1	Bishkek	3.36	53	⇑iP	Pn	05 27 15.6	+3.5
	baz=52						
FRU1				⇑iS	Sb	05 27 56.7	-3.4
	baz=52						
KZA	Kyzart	3.43	67	⇓iP	Pn	05 27 16.5	+3.1
	baz=66						
KZA				⇓iS	Sn	05 27 57.9	+3.9
	baz=66						
KZA	Kyzart	3.43	67	P	Pn	05 27 17.1	+3.7
	SNR=26						
KBK	Karagaybulak	3.48	57	⇑iP	Pn	05 27 17.4	+3.6
	baz=56						
KBK				⇑eS	Sn	05 27 59.4	+4.6
	baz=56						
KBK	Karagaybulak	3.48	57	P	Pb	05 27 18.0	-3.5
	SNR=23						
CHMS	Chumysh	3.54	51	⇓iP	Pn	05 27 18.2	+3.6
	baz=50						
CHMS				⇓iS	Sn	05 28 01.0	+4.8
	baz=50						
CHMS	Chumysh	3.54	51	P	Pg	05 27 26.1	-1.8
	SNR=16						
USP	Ospenovka	3.57	46	⇓iP	Pn	05 27 18.3	+3.3
	baz=45						
USP				⇓iS	Sn	05 28 01.9	+5.0
	baz=45						
USP	Ospenovka	3.57	46	P	Pb	05 27 19.5	-3.4
	SNR=16						
SGDS	Sogindy	3.77	45	Pg	Pb	05 27 28.7	+2.4
	comp=Z,66nm,0.4s						
SGDS				Lg	Lg	05 28 19.1	
	comp=Z,207nm,0.6s						
TKM2	Tokmak 2	4.02	57	⇑Pn	Pn	05 27 24.5	+3.2
	comp=Z,7.6nm,0.4s						
TKM2				⇑Pg	Pg	05 27 34.3	-2.8
	comp=Z,71nm,0.7s						
TKM2				⇑Lg	Lg	05 28 27.2	
	comp=Z,286nm,0.9s						
TKM2	Tokmak 2	4.02	57	PN	Pn	05 27 24.5	+3.2
TKM2	Tokmak 2	4.02	57	⇑iP	Pn	05 27 24.7	+3.4
	baz=56						
TKM2				⇑eS	Sn	05 28 12.7	+4.4
	baz=56						
TKM2	Tokmak 2	4.02	57	P	Pn	05 27 24.8	+3.5
	SNR=14						
KSH	Kashi	4.03	107	Pn	Pn	05 27 22.0	+0.6
KSH				Sn	Sn	05 28 07.8	-0.6
KSH				smax	smax		
	comp=Z,880nm,1.0s						
KSH				smax	smax		
	comp=Z,710nm,0.9s						
BOOM	Boomskoye usch	4.06	64	⇑iP	Pn	05 27 25.7	+3.9
	baz=63						
BOOM				⇑iS	Sn	05 28 12.8	+3.6
	baz=63						
ULHL	Ulahol	4.19	69	⇑eP	Pn	05 27 26.7	+3.1
	baz=68						
ULHL				⇑iS	Sn	05 28 15.7	+3.4
	baz=68						
ULHL	Ulahol	4.19	69	P	Pn	05 27 26.8	+3.3
	SNR=14						
DGS	Degeres	4.30	54	Pg	Pb	05 27 38.8	+3.4
	comp=Z,69nm,0.5s						
DGS				Lg	Lg	05 28 37.0	
	comp=Z,254nm,0.6s						
DGS	Degeres	4.30	54	eP	Pb	05 27 38.8	+3.4
	comp=Z,69nm,0.5s						
DGS				eS	Sg	05 28 37.0	-1.1
	comp=Z,254nm,0.6s						
KST	Kastek	4.32	58	Pg	Pb	05 27 38.8	+3.1
	comp=Z,75nm,0.5s						
KST				Lg	Lg	05 28 37.0	
	comp=Z,278nm,0.6s						
KST	Kastek	4.32	58	eP	Pb	05 27 38.8	+3.1
	comp=Z,75nm,0.5s						
KST				eS	Sg	05 28 37.0	-1.7
	comp=Z,278nm,0.6s						
MTBS	Maitube	4.66	59	Pg	Pb	05 27 44.4	+2.9
	comp=Z,36nm,0.4s						
MTBS				Lg	Lg	05 28 46.4	
	comp=Z,102nm,0.5s						
MTBS	Maitube	4.66	59	eP	Pb	05 27 44.4	+2.9
	comp=Z,36nm,0.4s						
MTBS				eS	Sg	05 28 46.4	-3.2
	comp=Z,102nm,0.5s						
BTLS	Baital	4.77	27	eP	Pb	05 27 47.2	+3.9
	comp=Z,5.1nm,0.6s						
BTLS				eS	Sg	05 28 50.7	-2.4
	comp=Z,143nm,0.6s						
KDJ	Kajisay	4.83	72	⇓eP	Pn	05 27 35.6	+3.3
	baz=72						
KDJ				⇓eS	Sn	05 28 30.8	+2.8
	baz=72						
TNSS	Tian-Shan	4.96	62	Pg	Pb	05 27 50.6	+3.8
	comp=Z,51nm,0.5s						
TNSS				Lg	Lg	05 28 56.9	
	comp=Z,108nm,0.5s						
TNSS	Tian-Shan	4.96	62	eP	Pb	05 27 50.6	+3.8
	comp=Z,51nm,0.5s						
TNSS				eS	Sg	05 28 57.0	-2.3
	comp=Z,108nm,0.5s						
KUU	Kurty	5.01	51	Pg	Pb	05 27 51.0	+3.7
	comp=Z,24nm,0.6s						
KUU				Lg	Lg	05 28 57.8	
	comp=Z,237nm,0.6s						
KUU	Kurty	5.01	51	eP	Pb	05 27 51.0	+3.7
	comp=Z,24nm,0.6s						
KUU				eS	Sg	05 28 57.8	-3.0
	comp=Z,237nm,0.6s						
AAA	Alma-Ata	5.01	60	Pg	Pg	05 27 51.7	-4.3
	comp=Z,78nm,0.4s						
AAA				Lg	Lg	05 28 58.6	
	comp=Z,114nm,0.5s						
AAA	Alma-Ata	5.01	60	ePN	Pg	05 27 53.5	-2.5
AAA				pmax	pmax		
	comp=Z,100nm,0.4s						
AAA	Alma-Ata	5.01	60	eP	Pg	05 27 52.8	-3.3
	comp=Z,78nm,0.4s						
AAA				eS	Sg	05 29 00.9	0.0
	comp=Z,114nm,0.5s						
MDOK	Medeo	5.08	61	Pg	Pb	05 27 52.0	+3.3
	comp=Z,59nm,0.8s						
MDOK				Lg	Lg	05 28 59.4	
	comp=Z,117nm,0.7s						
MDOK	Medeo	5.08	61	eP	Pb	05 27 52.0	+3.3
	comp=Z,59nm,0.8s						
MDOK				eS	Sg	05 28 59.4	-3.7
	comp=Z,117nm,0.7s						
KTBS	Karatobe	5.11	54	Pg	Pb	05 27 52.8	+3.7
	comp=Z,27nm,0.7s						
KTBS				Lg	Lg	05 29 00.0	
	comp=Z,194nm,0.8s						
KTBS	Karatobe	5.11	54	eP	Pb	05 27 52.8	+3.7
	comp=Z,27nm,0.7s						
KTBS				eS	Sg	05 29 01.0	-3.1
	comp=Z,194nm,0.8s						
KOTS	Kotyrbulak	5.15	60	Pg	Pg	05 27 55.1	-3.6
	comp=Z,40nm,0.5s						
KOTS				Lg	Lg	05 29 04.8	
	comp=Z,324nm,0.7s						
KOTS	Kotyrbulak	5.15	60	eP	Pg	05 27 55.1	-3.6
	comp=Z,40nm,0.5s						
KOTS				eS	Sg	05 29 04.8	-0.6
	comp=Z,324nm,0.7s						
CHKK	Chushkaly	5.37	54	Pg	Pb	05 27 57.4	+3.7
	comp=Z,19nm,0.6s						
CHKK				Lg	Lg	05 29 08.6	
	comp=Z,123nm,0.5s						
CHKK	Chushkaly	5.37	54	eP	Pb	05 27 57.4	+3.7
	comp=Z,19nm,0.6s						
CHKK				eS	Sg	05 29 08.6	-3.9
	comp=Z,123nm,0.5s						
KURS	Kuram	5.96	61	Pg	Pg	05 28 10.1	-4.0
	comp=Z,25nm,0.8s						
KURS				Lg	Lg	05 29 30.4	
	comp=Z,43nm,1.2s						
SATY	Saty	5.96	66	Pg	Pg	05 28 10.1	-4.1
	comp=Z,55nm,0.8s						
SATY				Lg	Lg	05 29 30.2	
	comp=Z,95nm,0.7s						
ARXS	Arharly	6.08	54	Pg	Pb	05 28 10.1	+4.5
	comp=Z,20nm,0.5s						
ARXS				Lg	Lg	05 29 30.8	
	comp=Z,146nm,0.6s						
KBL	Kabul	6.46	194	ePn	Pn	05 27 57.5	+2.6
KBL				eSn	Sn	05 29 10.6	+2.1
KBL	Kabul	6.46	194	ePN	Pn	05 27 57.5	+2.6
CEP	Cherat	7.03	174	P	Pn	05 28 06.3	+3.7
CEP				S	Sn	05 29 25.0	+2.7
NIL	Nilore	7.39	165	ePn	Pn	05 28 09.9	+2.5
NIL				eSn	Sn	05 29 32.3	+1.3
NIL	Nilore	7.39	165	eP	Pn	05 28 09.9	+2.5
NIL				e		05 29 32.3	
OTUK	Ortayu	7.48	7	⇑Pn	Pn	05 28 09.0	+0.4
	comp=Z,6.5nm,0.6s						
OTUK				⇓Lg	Lg	05 30 17.3	
	comp=Z,58nm,1.1s						
OTUK	Ortayu	7.48	7	P	Pn	05 28 08.9	+0.4
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
THW	Thamme Wali	8.04	175	P	Pn	05 28 20.2	+3.8
MAKZ	Makanchi	9.93	49	⇑Pn	Pn	05 28 47.7	+5.5
	comp=Z,2.4nm,0.6s						
MAKZ				⇑Lg	Lg	05 31 40.1	
	comp=Z,13nm,0.8s						
MAKZ	Makanchi	9.93	49	P	Pn	05 28 47.6	+5.4
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	10.11	50	ePn	Pn	05 28 46.6	+2.0
MK31	Makanchi Array	10.11	50	Pn	Pn	05 28 47.0	+2.3
	comp=Z,1.1nm,0.5s,baz=235,slow=13,SNR=16						
MK31				⇑Lg	Lg	05 31 31.4	
	comp=Z,9.4nm,0.8s,baz=234,slow=27,SNR=3.7						
MK31	Makanchi Array	10.11	50	eP	Pn	05 28 46.9	+2.3
MK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK32	Makanchi Array	10.11	50	ePn	Pn	05 28 46.4	+1.8
MKAR	Makanchi Array	10.11	50	Pn	Pn	05 28 46.4	+1.8
	comp=Z,0.2nm,0.3s,baz=237,slow=13,SNR=9.5						
MKAR				Lg	Lg	05 31 36.6	
	comp=Z,0.4nm,0.3s,baz=232,slow=27,SNR=5.1						
MKAR	Makanchi Array	10.11	50	eP	Pn	05 28 45.9	+1.3
GEYT	Alibeck	10.38	258	Pn	Pn	05 28 47.1	-1.3
	comp=Z,0.5nm,0.3s,baz=108,slow=9.5,SNR=3.5						
GEYT				Sn	Sn	05 30 41.4	-3.0
	comp=Z,5.7nm,0.3s,baz=36,slow=18,SNR=7.4						
GYA0B	ALIBECK ARRAY	10.38	258	ePn	Pn	05 28 49.8	+1.4
KURBB	Kurchatov Arra	11.11	26	Pn	Pn	05 28 57.2	-1.1
	comp=Z,0.1nm,0.3s,baz=218,slow=13,SNR=4.7						
KURBB				Lg	Lg	05 32 13.1	
	comp=Z,0.2nm,0.3s,baz=213,slow=37,SNR=7.5						
KURBB	Kurchatov Arra	11.11	26	⇑Lg	Lg	05 32 17.9	
	comp=Z,16nm,0.8s						
KURK	Kurchatov	11.22	26	ePn	Pn	05 29 01.6	+1.8
KURK	Kurchatov	11.22	26	eP	Pn	05 29 01.6	+1.8
AB31	Akbulak array	11.48	321	Pn	Pn	05 29 02.2	-1.2
	comp=Z,5.5nm,0.4s,baz=132,slow=13,SNR=159						
AB31	Akbulak array	11.48	321	eP	Pn	05 29 02.2	-1.2
AB31				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ABKAR	Akbulak array	11.48	321	ePn	Pn	05 29 02.0	-1.4
BVAR	Borovoye Array	12.21	358	Pn	Pn	05 29 12.4	-0.9
	comp=Z,1.3nm,0.3s,baz=163,slow=11,SNR=18						
BVAR				Lg	Lg	05 32 50.2	
	comp=Z,0.5nm,0.3s,baz=176,slow=27,SNR=3.0						
BRVK	Borovoye	12.24	358	ePn	Pn	05 29 13.3	-0.5
BRVK	Borovoye	12.24	358	eP	Pn	05 29 13.3	-0.5
AKTO	Aktyubinsk	13.20	321	Pn	Pn	05 29 25.5	-1.3
	comp=Z,1.2nm,0.3s,baz=129,slow=13,SNR=39						
AKTO				Sn	Sn	05 31 47.0	-6.2
	comp=Z,0.6nm,0.3s,baz=216,slow=20,SNR=6.1						
AKTO				LR	LR	05 34 58.6	
	comp=Z,95nm,18.9s,baz=154,slow=39						
AKTO	Aktyubinsk	13.20	321	⇓Pn	Pn	05 29 23.9	-3.0
	comp=Z,14nm,0.8s						
DGZ	Jazzator, Alta	14.56	47	i P	Pn	05 29 48.0	+2.4
ZAA0	Zalesovo Array	16.08	31	ePn	Pn	05 30 05.9	+0.5
	comp=Z,4.6nm,0.8s						
ZALV	Zalesovo Beam	16.08	31	Pn	Pn	05 30 04.3	-1.1
	comp=Z,0.6nm,0.3s,baz=228,slow=11,SNR=11						
ZALV				Sn	S	05 33 12.1	-4.7
	comp=Z,0.2nm,0.3s,baz=212,slow=21,SNR=3.5						
ZAA1	Zalesovo Array	16.08	31	ePn	Pn	05 30 04.3	-1.1
AKT	Akhty	17.53	280	i P	Pn	05 30 22.8	-1.1
ARU	Arti	17.59	337	P	Pn	05 30 23.6	-0.9
	comp=Z,0.0nm,0.3s,baz=145,slow=7.8,SNR=14						
ARU	Arti	17.59	337	ePn	Pn	05 30 23.8	-0.7
	comp=Z,11nm,0.7s						
ARU	Arti	17.59	337	c iP	Pn	05 30 23.7	-0.7
ARU				S	Sn	05 33 42.0	+2.0
ARU				pmax	pmax		
	comp=Z,13nm,0.9s						
GNI	Garni	19.96	277	i P	P	05 30 49.4	-2.3
GNI				pmax	pmax		
	comp=Z,40nm,1.3s						
KBZ	Khabaz	20.95	287	P	P	05 31 03.9	+1.6
	comp=Z,2.9nm,0.8s,baz=143,slow=12,SNR=4.2						
KIV	Kislovodsk	21.09	288	eP	P	05 31 01.8	-2.2
KIV				eS	S	05 34 56.1	-2.1
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV				MLR	MLR		
	comp=Z,37nm,14.0s						
GTA	Gaotai	22.05	84	eP	P	05 31 22.8	+8.5
GTA				pP	sP	05 31 27.0	+6.2
GTA				sP	pP	05 31 29.8	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
OBN	Obninsk	26.79	314	⇑eP	P	05 31 58.9	-0.2
OBN				e		05 32 42.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,40nm,15.0s						
RAYN	Ar Rayn	27.48	239	eP	P	05 32 06.4	+0.7
	comp=Z,4.3nm,0.8s						
RAYN	Ar Rayn	27.48	239	eP	P	05 32 06.4	+0.7
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BR101	Keskin Array S	28.38	280	eP	P	05 32 13.3	-0.5
BRTR	Keskin Array B	28.38	280	P	P	05 32 13.3	-0.5
	comp=Z,0.5nm,0.8s,baz=75,slow=7.6,SNR=2.3						
AKASG	Malin Array Be	30.40	303	P	P	05 32 31.0	-0.4
	comp=Z,0.6nm,0.5s,baz=79,slow=7.3,SNR=1.9						
HHC	Hu-ho-hao-te	30.50	76	P	P	05 32 33.8	+1.2
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,12nm,5.1s						
CM31	Chiang Mai Arr	32.73	125	eP	P	05 32 52.5	+0.3
	comp=Z,4.8nm,0.5s						
CMAR	Chiang Mai Arr	32.73	125	LR	LR	05 46 20.0	
	comp=Z,18nm,18.8s,baz=300,slow=37						
MLR	Muntele Rosu	32.85	293	P	P	05 32 54.2	+1.0
	comp=Z,0.8nm,0.4s,baz=90,slow=6.1,SNR=2.7						
MLR	Muntele Rosu	32.85	293	eP	P	05 32 53.7	+0.5
	comp=Z,4.5nm,1.2s						
MLR	Muntele Rosu	32.85	293	eP	P	05 32 53.7	+0.5
MLR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
FIA1	FINESS Array S	33.96	323	eP	P	05 33 02.1	-0.4
	comp=Z,4.4nm,0.9s						
FIA0	FINESS Array S	33.97	323	eP	P	05 33 03.0	+0.5
FIA0	FINESS Array S	33.97	323	eP	P	05 33 03.0	+0.5
FINES	FINESS Array B	33.97	323	P	P	05 33 03.0	+0.5
	comp=Z,1.8nm,0.6s,baz=104,slow=9.5,SNR=9.2						
FINES				LR	LR	05 46 55.8	
	comp=Z,20nm,21.8s,baz=65,slow=36						
OJC	Ojcow	36.43	303	eP	P	05 33 23.5	-0.4
	comp=Z,8.5nm,1.4s						
OJC	Ojcow	36.43	303	eP	P	05 33 23.5	-0.4
OJC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
PSZ	Piszkesteto	36.63	299	eP	P	05 33 25.5	-0.3
	comp=Z,2.9nm,0.7s						
PSZ	Piszkesteto	36.63	299	eP	P	05 33 25.5	-0.3
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	37.18	335	P	P	05 33 30.8	+0.8
	comp=Z,3.2nm,0.6s,baz=108,slow=8.3,SNR=39						
MORC	Moravsky Berou	37.92	302	eP	P	05 33 35.7	-1.0
	comp=Z,4.2nm,1.2s						
MORC	Moravsky Berou	37.92	302	eP	P	05 33 35.7	-1.0
MORC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GERES	GERESS Array B	40.55	301	P	P	05 33 59.8	+1.1
	comp=Z,0.5nm,0.4s,baz=61,slow=8.0,SNR=4.4						
KHC	Kasperske Hory	40.58	302	eP	P	05 33 59.6	+0.8
	comp=Z,1.0nm,0.8s						
KHC	Kasperske Hory	40.58	302	eP	P	05 33 59.6	+0.8
KHC				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NC602	NORSAR Array S	40.82	320	eP	P	05 34 00.9	+0.3
	comp=Z,33nm,1.3s						
NC303	NORSAR Array S	40.92	320	eP	P	05 34 02.1	+0.7
	comp=Z,40nm,1.5s						
NB2	NORSAR Subarra	40.99	320	P	P	05 34 01.6	-0.5
	comp=Z,0.7nm,0.5s,baz=92,slow=8.6						
NB200	NORSAR Array S	40.99	320	eP	P	05 34 02.0	-0.1
NOA	NORSAR Array B	40.99	320	P	P	05 34 02.0	-0.1
	comp=Z,2.2nm,0.8s,baz=92,slow=8.2,SNR=5.1						
NBO00	NORSAR Array S	41.20	320	eP	P	05 34 03.8	0.0
	comp=Z,54nm,1.5s						
NC204	NORSAR Array S	41.21	320	eP	P	05 34 03.7	-0.3
	comp=Z,13nm,1.2s						
TIXI	Tiksi	41.79	24	eP	P	05 34 08.2	-0.2
	comp=Z,7.0nm,0.9s						
TIXI	Tiksi	41.79	24	eP	P	05 34 09.6	+1.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLR	Kul'dur	42.71	57	i P	P	05 34 14.9	-1.3
KLR				pmax	pmax		
	comp=Z,2.0nm,1.3s						

BNI	Bardonecchia comp=Z,16nm,1.4s	46.17	298	*e*P	P	05 34 44.6	+0.5
BNI	Bardonecchia	46.17	298	*e*P	P	05 34 44.6	+0.5
BNI	comp=Z,16nm,1.4s			pmax	pmax		
MA2	Magadan comp=Z,5.7nm,20.0s,baz=118,slow=36	51.01	40	LR	LR	05 56 50.2	
SUMG	Summit comp=Z,2.6nm,0.7s	56.98	340	*e*P	P	05 36 05.9	+1.0
SUMG	Summit	56.98	340	*e*P	P	05 36 05.9	+1.0
SUMG	comp=Z,3.0nm,0.7s			pmax	pmax		
TOA1	Torodi Ar. Sit	65.89	267	*e*P	P	05 37 04.1	-1.3
TOA0	Torodi Ar. Sit comp=Z,5.0nm,1.3s	65.89	267	*e*P	P	05 37 04.2	-1.2
TORD	Torodi Ar. Bea comp=Z,1.2nm,0.5s,baz=55,slow=6.0,SNR=19	65.89	267	P	P	05 37 04.1	-1.4
SIJI	Sorong comp=Z,44nm,19.3s,baz=226,slow=39	68.50	111	LR	LR	06 11 13.2	
INK	Inuvik comp=Z,5.3nm,0.9s	69.64	9	*e*P	P	05 37 29.2	+1.0
INK	Inuvik	69.64	9	*e*P	P	05 37 29.2	+1.0
INK	comp=Z,5.0nm,0.9s			pmax	pmax		
ILAR	Eielson Array comp=Z,1.2nm,0.8s,baz=326,slow=4.8,SNR=16	70.62	16	P	P	05 37 34.5	+0.1
ILB	Eielson Array comp=Z,2.3nm,1.1s	70.62	16	*e*P	P	05 37 34.2	-0.2
SKT	Skwentna comp=Z,4.7nm,0.9s	71.94	20	*e*P	P	05 37 42.6	+0.2
DOT	Dot Lake comp=Z,1.4nm,0.8s	72.20	16	*e*P	P	05 37 44.0	+0.1
PAX	Paxson comp=Z,2.3nm,0.8s	72.51	17	*e*P	P	05 37 45.8	-0.1
PAX	Paxson	72.51	17	*e*P	P	05 37 45.8	-0.1
PAX	comp=Z,2.0nm,0.8s			pmax	pmax		
SUA	Susitna One comp=Z,4.6nm,1.1s	72.58	20	*e*P	P	05 37 46.8	+0.4
DAWY	Dawson comp=Z,1.4nm,0.8s	72.72	13	*e*P	P	05 37 47.0	-0.1
PMR	Palmer comp=Z,1.6nm,0.8s	72.87	19	*e*P	P	05 37 47.8	-0.1
SML	Sawmill comp=Z,4.3nm,0.8s	72.88	18	*e*P	P	05 37 47.0	-1.1
SML	Sawmill	72.88	18	*e*P	P	05 37 47.0	-1.1
SML	comp=Z,4.0nm,0.8s			pmax	pmax		
SCM	Sheep Creek Mo comp=Z,4.1nm,1.0s	73.09	18	*e*P	P	05 37 49.8	+0.4
SCM	Sheep Creek Mo	73.09	18	*e*P	P	05 37 49.8	+0.4
SCM	comp=Z,4.0nm,1.0s			pmax	pmax		
YKA	Yellowknife Ar comp=Z,1.4nm,0.7s,baz=354,slow=5.7,SNR=6.6	76.93	3	P	P	05 38 11.6	+0.3
YKB5	Yellowknife Ar	76.93	3	*e*P	P	05 38 11.6	+0.3
WRA	Warramunga Arr comp=Z,1.5nm,1.0s,baz=322,slow=5.3,SNR=5.3	84.29	122	P	P	05 38 50.3	-1.1
WR1	Warramunga Arr	84.30	122	*e*P	P	05 38 50.3	-1.1
WB2	Warramunga Arr comp=Z,3.6nm,1.0s	84.30	122	*e*P	P	05 38 51.1	-0.3
FFC	Flin Flon comp=Z,3.2nm,0.8s	84.63	356	*e*P	P	05 38 52.8	+0.1
FFC	Flin Flon	84.63	356	*e*P	P	05 38 52.8	+0.1
FFC	comp=Z,3.0nm,0.8s			pmax	pmax		
ASAR	Alice Springs comp=Z,0.6nm,0.7s,baz=312,slow=4.6,SNR=5.7	86.74	125	P	P	05 39 02.4	-1.2
PDAR	Pinedale Array comp=Z,0.1nm,0.4s,baz=351,slow=2.9,SNR=2.5	96.78	0	P	P	05 39 50.7	+0.3
PLCA	Paso Flores comp=Z,1.7nm,1.1s,baz=203,slow=15,SNR=3.4	151.03	257	PKPbc	PKPbc	05 46 11.9	-0.3
PLCA	Paso Flores	151.03	257	*e*PKPbc	PKPbc	05 46 11.6	-0.5
PLCA	Paso Flores	151.03	257	*e*PKIKP	PKPbc	05 46 11.6	-0.5

ISCJB ***29*** *05:49:33.8±0.4, 4°.64S±0°.06×104°.92W±0°.04, h13^{km}, mb4.6/180, MS3.6/15, Error ellipse: s-maj=8.6km s-min=5.8km az=15.2*

IDC ***29*** *05:49:33.4±0.9, 4°.63S×105°.18W, h0^{km}, mb4.2/13, mb1 4.4/13, mb1mx4.2/32, mbtmp4.2/13, MS3.6/13, Ms1 3.6/13, ms1mx3.5/19, Error ellipse: s-maj=41.2km s-min=14.9km az=60.0*

NEIC ***29*** *05:49:35.0±1.3, 4°.66S×105°.02W, h10^{km}, mb4.7/185, Error ellipse: s-maj=28.5km s-min=19.1km az=247.0*

ISC 29 05:49:35.7±0.7, **4°.6S**±0°.1×**105°.0W**±0°.1, **h13**^{km}, **n454**, σ**0^s.66**/441, **mb4.7**/180, **MS3.6**/15, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero 5.2nm,1.0s,baz=206,slow=6.7,SNR=5.5	23.78	25	P	P	05 54 49.4	+1.2
APG	El Apazote comp=Z,77nm,21.4s,baz=80,slow=32	24.25	36	LR	LR	06 02 21.9	
CCIG	Comitan 23nm,1.2s	24.36	31	*e*P	P	05 54 54.9	+1.0
JTS	Las Juntas de comp=Z,169nm,20.7s,baz=306,slow=30	24.88	53	LR	LR	06 02 08.6	
ZAIG	Zacatecas 6.0nm,1.0s	27.32	5	*e*P	P	05 55 21.3	+0.6
NNA	Nana comp=Z,254nm,21.7s,baz=279,slow=30	28.82	106	LR	LR	06 03 55.9	
TEIG	Tepich comp=Z,49nm,21.6s,baz=148,slow=33	29.67	33	LR	LR	06 06 05.1	
LNIG	Linares 6.4nm,1.3s	29.83	10	*e*P	P	05 55 42.8	0.0
HPIG	10nm,1.3s	31.37	359	*e*P	P	05 55 57.1	+0.6
833A	Chaparral WMA, baz=190	33.19	9	P	P	05 56 12.6	+0.3
TXAR	Lajitas Array 2.0nm,0.9s,baz=190,slow=11,SNR=21	33.78	2	P	P	05 56 18.5	+1.0
TXAR	0.6nm,0.8s,baz=177,slow=5.0,SNR=4.9			PcP	PcP	05 58 57.2	+0.4
TXAR	comp=Z,64nm,21.0s,baz=0.0,slow=32			LR	LR	06 07 40.1	
HSIG	14nm,1.3s	33.92	351	*e*P	P	05 56 19.4	+0.7
RKT	Rikitea 4.4nm,0.3s	34.27	235	*e*T	T	06 32 13.5	
TAOE	Nuku Hiva Isla comp=Z,266nm,25.4s	35.12	261	*e*LR	LR	06 05 38.7	
JCT	Junction City 7.2nm,0.9s	35.25	8	*e*P	P	05 56 30.8	+0.6
JCT	Junction City baz=189	35.25	8	P	P	05 56 30.2	0.0
121A	Cookes Peak, D baz=175,SNR=5.3	37.03	356	P	P	05 56 46.0	+0.5
WHTX	Lake Whitney, 11nm,1.0s	37.11	11	*e*P	P	05 56 46.5	+0.5
WHTX	Lake Whitney, baz=192	37.11	11	P	P	05 56 46.0	0.0
TUC	Tucson 2.2nm,1.0s	37.12	352	*e*P	P	05 56 46.4	+0.1
TUC	Tucson baz=170	37.12	352	P	P	05 56 46.6	+0.4
ABTX	Abilene, Hawle 16nm,1.2s	37.38	7	*e*P	P	05 56 48.3	-0.1
ABTX	Abilene, Hawle baz=189	37.38	7	P	P	05 56 48.7	+0.3
LPAZ	La Paz 0.7nm,0.8s,baz=83,slow=7.8,SNR=3.2	38.02	111	P	P	05 56 55.2	+0.5
LPAZ	comp=Z,45nm,22.0s,baz=297,slow=31			LR	LR	06 09 20.0	
LPAZ	La Paz	38.02	111	*e*P	P	05 56 53.2	-1.5
113A	Mohawk Valley, 8.6nm,1.3s	38.09	348	*e*P	P	05 56 54.0	-0.3
MSTX	Muleshoe 15nm,1.0s	38.43	3	*e*P	P	05 56 57.6	+0.3
MSTX	Muleshoe baz=184,SNR=9.8	38.43	3	P	P	05 56 57.6	+0.3
IKP	In-Ko-Pah, Jac baz=162	38.52	345	P	P	05 56 59.0	+0.9
BNM	Barren Site	38.58	358	*e*P	P	05 56 59.3	+0.6
GLA	Glamis 5.7nm,1.0s	38.59	347	*e*P	P	05 56 58.8	+0.2
GLA	Glamis baz=164	38.59	347	P	P	05 56 59.2	+0.6
LENM	Lemitar	38.61	357	*e*P	P	05 56 59.5	+0.6
MONP2	Monument Peak baz=162	38.83	345	P	P	05 57 01.1	+0.3
LAZ	Ladron	38.85	357	*e*P	P	05 57 00.4	-0.6
Y14A	Wickenburg 6.9nm,1.1s	39.08	349	*e*P	P	05 57 02.6	-0.1
VBMS	Vicksburg 12nm,0.8s	39.14	20	*e*P	P	05 57 03.3	+0.2
X16A	Lo Mia Camp, P 3.7nm,1.0s	39.29	352	*e*P	P	05 57 05.1	+0.5
BC3	Big Chuckawall baz=164	39.32	346	P	P	05 57 06.1	+1.3
LGNH	Logne 51nm,1.1s	39.35	53	*e*P	P	05 57 05.7	+0.6
ANMO	Albuquerque 5.4nm,1.0s	39.37	358	*e*P	P	05 57 05.8	+0.6
ANMO	Albuquerque baz=178	39.37	358	P	P	05 57 06.1	+0.8
Z41A	Richland Creek baz=199	39.40	16	P	P	05 57 06.1	+0.8
AMTX	Amarillo 18nm,1.1s	39.41	4	*e*P	P	05 57 05.8	+0.3
AMTX	Amarillo baz=185	39.41	4	P	P	05 57 05.5	0.0
PFO	Pinyon Flats O 4.9nm,1.1s	39.53	345	*e*P	P	05 57 06.6	+0.1
PFO	Pinyon Flats O baz=162	39.53	345	P	P	05 57 07.7	+1.2
WMOK	Wichita Mounta 19nm,0.3s	39.58	8	*e*P	P	05 57 06.8	0.0
349A	Repton baz=208	39.60	24	P	P	05 57 07.8	+0.7
PDMCI	Parker Dam,Lak baz=166	39.65	348	P	P	05 57 09.0	+1.6
WLAR	White Oak Lake 36nm,1.4s	39.72	16	*e*P	P	05 57 09.1	+1.1
IRM	Iron Mountain baz=164	39.73	347	P	P	05 57 09.3	+1.2
W18A	Petrified Fore 8.4nm,0.9s	39.77	354	*e*P	P	05 57 07.6	-1.0
W18A	Petrified Fore baz=173	39.77	354	P	P	05 57 09.4	+0.8
BELC	Belle Mtn. Jos baz=163	39.78	346	P	P	05 57 09.7	+1.1
656A	Willston baz=216	40.10	31	P	P	05 57 11.7	+0.5
CCAR	Cane Creek 17nm,1.1s	40.32	17	*e*P	P	05 57 14.5	+1.6
WUAZ	Wupatki 7.3nm,1.0s	40.36	352	*e*P	P	05 57 14.6	+1.1
WUAZ	Wupatki baz=170,SNR=6.6	40.36	352	P	P	05 57 14.5	+1.1
W13A	Hualapai Mount 4.7nm,1.3s	40.37	349	*e*P	P	05 57 14.8	+1.2
MIAR	Mount Ida 9.2nm,0.8s	40.42	15	*e*P	P	05 57 13.8	+0.1
MIAR	Mount Ida baz=198,SNR=7.5	40.42	15	P	P	05 57 14.2	+0.4
BFSC	Mount Baldy Ra baz=160	40.44	344	P	P	05 57 15.1	+0.9
GMRC	Granite Mounta baz=164,SNR=5.2	40.45	346	P	P	05 57 15.0	+0.9
657A	Interlachen baz=217	40.62	32	P	P	05 57 16.0	+0.5
454A	Quitman baz=214	40.65	29	P	P	05 57 16.1	+0.4
HEC	Hector,Ludlow baz=163	40.65	346	P	P	05 57 16.9	+1.1
556A	Lake Butler baz=216	40.67	31	P	P	05 57 15.6	-0.3
149A	Jones baz=208	40.86	24	P	P	05 57 17.5	+0.1
W39A	Magazine 16nm,1.3s	40.98	14	*e*P	P	05 57 18.8	+0.4
251A	Midway baz=210	41.00	26	P	P	05 57 18.8	+0.2
TUQ	Turquoise Moun baz=163	41.13	346	P	P	05 57 20.5	+0.7
EDW2	Edwards Air Fo baz=160	41.14	344	P	P	05 57 20.2	+0.4
X43A	Marvell baz=202	41.14	18	P	P	05 57 20.3	+0.6
LRAL	Lakeview Retre 8.2nm,1.3s	41.16	23	*e*P	P	05 57 20.2	+0.2
LRAL	Lakeview Retre baz=208	41.16	23	P	P	05 57 20.1	+0.2
150A	Eclectic baz=209	41.18	25	P	P	05 57 20.1	0.0
GSC	Goldstone, Bar 9.7nm,1.4s	41.22	345	*e*P	P	05 57 21.2	+0.7
GSC	Goldstone, Bar baz=162	41.22	345	P	P	05 57 21.9	+1.5
TUL1	Leonard 24nm,1.4s	41.23	11	*e*P	P	05 57 18.6	-1.8
SBC	Santa Barbara baz=158	41.24	341	P	P	05 57 21.6	+1.1
W41B	Gary Mavity, V baz=199	41.36	16	P	P	05 57 22.1	+0.6
U15A	North Rim 9.1nm,1.6s	41.39	351	*e*P	P	05 57 22.3	+0.2
151A	Opelika baz=210	41.41	26	P	P	05 57 22.0	0.0
WHAR	Wooly Hollow 17nm,1.1s	41.46	16	*e*P	P	05 57 23.2	+0.9
Z49A	Columbiana baz=208	41.48	24	P	P	05 57 22.0	-0.6
T25A	Trinidad baz=181,SNR=9.1	41.54	1	P	P	05 57 23.1	-0.1
OXF	Oxford 15nm,0.9s	41.61	20	*e*P	P	05 57 23.9	+0.3
OXF	Oxford baz=204	41.61	20	P	P	05 57 23.3	-0.2
LRMC	Laurel Mtn Rad baz=161	41.61	344	P	P	05 57 24.5	+0.7
MVCO	Mesa Verde 18nm,1.1s	41.73	356	*e*P	P	05 57 25.3	+0.5
MVCO	Mesa Verde baz=175,SNR=11	41.73	356	P	P	05 57 25.0	+0.2
Z50A	Ashland 15nm,1.3s	41.78	24	*e*P	P	05 57 24.8	-0.3
Z50A	Ashland baz=209	41.78	24	P	P	05 57 24.6	-0.4
152A	Waverly Hall 8.6nm,1.0s	41.79	26	*e*P	P	05 57 25.5	+0.4
152A	Waverly Hall baz=211	41.79	26	P	P	05 57 25.1	0.0
254A	Abbeville baz=213	41.83	28	P	P	05 57 25.6	+0.2
Y48A	Jasper baz=207	41.87	22	P	P	05 57 25.8	+0.1
356A	Blackshear baz=215	41.88	30	P	P	05 57 25.8	0.0
SHPR	Sheep Range 7.9nm,1.2s	41.99	348	*e*P	P	05 57 27.2	+0.3
ISA	Isabella, Lake 8.2nm,1.4s	42.00	344	*e*P	P	05 57 28.2	+1.3
ISA	Isabella, Lake baz=160	42.00	344	P	P	05 57 27.8	+0.9
KNB	Kanab 8.4nm,1.1s	42.05	351	*e*P	P	05 57 28.2	+0.8
MPMC	Manual Prospec baz=161	42.11	345	P	P	05 57 28.4	+0.5
Y49A	Blount Mountai 4.9nm,0.8s	42.11	23	*e*P	P	05 57 27.9	+0.1
Y49A	Blount Mountai baz=208	42.11	23	P	P	05 57 27.5	-0.3
SDCO	Great Sand Dun 5.2nm,1.1s	42.14	359	*e*P	P	05 57 29.2	+1.0
SDCO	Great Sand Dun baz=179,SNR=12	42.14	359	P	P	05 57 28.9	+0.6
X47A	Russelville baz=206	42.15	21	P	P	05 57 28.2	+0.2
S22A	4UR Ranch, Cre baz=177,SNR=16	42.17	358	P	P	05 57 29.3	+0.8
FURC	Furnace Creek, baz=162,SNR=5.4	42.34	346	P	P	05 57 30.3	+0.8
VES	Vestal, Richgr baz=159	42.34	343	P	P	05 57 30.2	+0.7
Z52A	Williamson baz=211	42.37	26	P	P	05 57 29.8	0.0
X48A	Hartselle 34nm,2.0s	42.39	22	*e*P	P	05 57 30.5	+0.5
X48A	Hartselle baz=207	42.39	22	P	P	05 57 30.2	+0.2
Y50A	Piedmont baz=209	42.41	24	P	P	05 57 30.0	-0.2
154A	Montrose 33nm,1.1s	42.47	28	*e*P	P	05 57 31.4	+0.8
154A	Montrose baz=213	42.47	28	P	P	05 57 30.6	-0.1
PLAL	Pickwick Lake 17nm,0.9s	42.49	21	*e*P	P	05 57 31.2	+0.4
W46A	Michie baz=205	42.52	20	P	P	05 57 30.3	-0.7
256A	Glennville baz=215	42.53	30	P	P	05 57 31.3	+0.1
PAGB	Antelope Grade 17nm,1.5s	42.60	342	*e*P	P	05 57 33.0	+1.3
CWC	Cottonwood Cre baz=161	42.62	344	P	P	05 57 32.7	+0.7
TPNV	Topopah Spring 7.4nm,1.4s	42.65	347	*e*P	P	05 57 33.6	+1.3
TPNV	Topopah Spring baz=163	42.65	347	P	P	05 57 33.3	+1.0
PV01	Paradox Valley 8.6nm,1.0s	42.66	356	*e*P	P	05 57 33.0	+0.6
CCUT	Cedar City 5.7nm,1.2s	42.66	350	*e*P	P	05 57 33.5	+1.1
Y51A	Rockmart baz=210	42.70	25	P	P	05 57 32.8	+0.2
PV13	Radium Mtn., P 9.6nm,1.1s	42.70	356	*e*P	P	05 57 33.6	+0.9
PV02	Paradox Valley 11nm,1.1s	42.74	356	*e*P	P	05 57 34.0	+0.9
GNAR	Gosnell 39nm,1.1s	42.75	18	*e*P	P	05 57 33.2	+0.4
155A	Kite baz=214	42.78	28	P	P	05 57 33.8	+0.6
PV18	Skein Mesa, Pa 6.1nm,1.0s	42.79	355	*e*P	P	05 57 34.1	+0.7
Z53A	Monticello baz=212	42.82	27	P	P	05 57 33.4	0.0
W47A	Westpoint baz=206	42.91	21	P	P	05 57 34.4	+0.3
PV14	Lion Creek, Pa 4.7nm,1.0s	42.93	355	*e*P	P	05 57 34.1	-0.5
X50B	Fort Payne baz=209	42.95	24	P	P	05 57 34.9	+0.4
MTPU	Mount Pierson 3.9nm,1.1s	42.95	352	*e*P	P	05 57 36.0	+1.1
GRAC	Grapevine Rang baz=162,SNR=5.5	42.97	345	P	P	05 57 35.4	+0.7
GO05	Huala 46nm,1.8s	43.02	139	*e*P	P	05 57 36.2	+1.0
Y52A	Lilburn baz=211	43.09	26	P	P	05 57 35.7	0.0
Z54A	Sparta baz=213	43.11	28	P	P	05 57 35.7	-0.2
156A	Sylvania baz=215	43.27	29	P	P	05 57 37.8	+0.7
Y53A	Monroe baz=212	43.30	26	P	P	05 57 37.4	+0.1
Q24A	Divide baz=180	43.36	360	P	P	05 57 38.1	0.0
X51A	Calhoun 8.8nm,0.8s	43.36	24	*e*P	P	05 57 37.5	-0.3
X51A	Calhoun baz=210	43.36	24	P	P	05 57 38.0	+0.2
PBMO	Poplar Bluff 44nm,1.4s	43.38	17	*e*P	P	05 57 38.1	+0.2
Z55A	Blythe baz=214	43.43	28	P	P	05 57 38.1	-0.3
UTMT	University of 18nm,0.8s	43.46	19	*e*P	P	05 57 39.1	+0.5
KSCO	Kaye Shedlock’ 53nm,1.6s	43.46	3	*e*P	P	05 57 38.6	-0.1
KSCO	Kaye Shedlock’ baz=183	43.46	3	P	P	05 57 39.0	+0.3
SWET	Sewanee 7.3nm,1.1s	43.50	23	*e*P	P	05 57 38.9	-0.1
WVT	Waverly 19nm,1.3s	43.61	20	*e*P	P	05 57 40.0	+0.2
WVT	Waverly baz=205	43.61	20	P	P	05 57 39.4	-0.5
V48A	Smith Brothers 26nm,1.4s	43.62	22	*e*P	P	05 57 40.2	+0.3
V48A	Smith Brothers baz=207,SNR=5.7	43.62	22	P	P	05 57 39.5	-0.4
Y54A	Tignall baz=213	43.70	27	P	P	05 57 40.1	-0.5
CFA	Coronel Fontan 3.0nm,0.7s,baz=299,slow=6.7,SNR=13	43.72	132	P	P	05 57 41.5	+0.6
W50A	Signal Mountai baz=209	43.73	24	P	P	05 57 40.9	0.0
X52A	Dahlonega baz=211	43.80	25	P	P	05 57 41.8	+0.4
SRU	San Rafael Swe 8.8nm,1.1s	43.80	354	*e*P	P	05 57 42.3	+0.7
R11A	Troy Canyon, C 7.2nm,1.5s	43.85	348	*e*P	P	05 57 43.1	+1.1
R11A	Troy Canyon, C baz=165,SNR=6.3	43.85	348	P	P	05 57 43.1	+1.1
W51A	Cleveland baz=210	43.91	24	P	P	05 57 42.1	-0.2
V49A	McMinnville baz=208	43.99	23	P	P	05 57 43.1	+0.2
TMUT	Trail Mountain 4.4nm,1.0s	44.06	353	*e*P	P	05 57 44.8	+1.0
Y55A	Saluda baz=214	44.15	28	P	P	05 57 44.4	+0.2
P17A	Butcher Ranch, 9.4nm,1.1s	44.18	354	*e*P	P	05 57 45.4	+0.8
KSU1	Kansas State U baz=192	44.19	9	P	P	05 57 44.3	-0.1
W52A	Murphy 14nm,1.1s	44.20	25	*e*P	P	05 57 45.3	+0.6
W52A	Murphy baz=211	44.20	25	P	P	05 57 45.2	+0.6
V50A	Pikevile baz=209	44.22	23	P	P	05 57 44.6	-0.1
CPCT	Cooper Cave 9.8nm,1.1s	44.26	24	*e*P	P	05 57 45.7	+0.7
CCM	Cathedral Cave 12nm,1.0s	44.34	16	*e*P	P	05 57 45.9	+0.2
CCM	Cathedral Cave baz=200	44.34	16	P	P	05 57 45.2	-0.5
X54A	Belton baz=213	44.42	27	P	P	05 57 46.6	+0.2
FVM	French Village 8.2nm,0.9s	44.50	17	*e*P	P	05 57 47.1	+0.2
BG3	Lake Jocassee 10nm,1.1s	44.54	26	*e*P	P	05 57 48.3	+0.9
NV01	Mina Array Sit	44.56	345	*e*P	P	05 57 48.3	+0.6
NVAR	Mina Array Bea 0.9nm,0.9s,baz=168,slow=8.9,SNR=10	44.56	345	P	P	05 57 48.3	+0.6
NVAR	comp=Z,63nm,18.4s,baz=154,slow=31			LR	LR	06 12 35.2	
S44A	Carbondale baz=203	44.57	18	P	P	05 57 47.6	+0.1
W53A	Cullowhee baz=212	44.59	26	P	P	05 57 48.4	+0.5
SIUC	Southern Illin 12nm,0.8s	44.60	18	*e*P	P	05 57 47.4	-0.4
O20A	White River Ci 20nm,1.0s	44.62	356	*e*P	P	05 57 48.5	+0.4
O20A	White River Ci baz=175,SNR=18	44.62	356	P	P	05 57 48.5	+0.4
V51A	Loudon 10nm,1.0s	44.64	24	*e*P	P	05 57 48.7	+0.7
V51A	Loudon baz=210	44.64	24	P	P	05 57 47.9	-0.2
T47A	Sharon Grove 6.6nm,0.7s	44.64	21	*e*P	P	05 57 48.5	+0.4
T47A	Sharon Grove baz=206	44.64	21	P	P	05 57 48.0	0.0
X55A	Gracelyn & Ava baz=214	44.70	28	P	P	05 57 48.5	-0.1
U49A	Red Boiling Sp baz=208	44.70	22	P	P	05 57 48.4	-0.1
RYN	Ryan 5.2nm,1.3s	44.80	345	*e*P	P	05 57 48.8	-0.8
MPU	Maple Canyon 14nm,1.2s	44.82	353	*e*P	P	05 57 51.1	+1.4
PAULI	Pauline 20nm,1.3s	44.90	27	*e*P	P	05 57 50.8	+0.6
W54A	Cherokee Point baz=213	44.95	27	P	P	05 57 51.2	+0.5
U50A	Jamestown baz=209	44.97	23	P	P	05 57 50.7	0.0
V52A	Sevierville baz=211	44.98	25	P	P	05 57 51.1	+0.3
X56A	White Oak baz=215	45.00	28	P	P	05 57 51.3	+0.4
DUG	Dugway, Tooele 6.9nm,1.3s	45.16	352	*e*P	P	05 57 53.2	+0.9
DUG	Dugway, Tooele baz=169	45.16	352	P	P	05 57 53.2	+0.9
PTGA	Pitinga 15nm,1.3s	45.16	86	*e*P	P	05 57 51.8	-0.9
V53A	Saluda 15nm,1.2s	45.17	26	*e*P	P	05 57 52.7	+0.3
V53A	Saluda baz=212	45.17	26	P	P	05 57 52.7	+0.3
Y58A	Scranton	45.19	30	*e*P	P	05 57 53.2	+0.7

	19nm,0.8s						
Y58A	Scranton	45.19	30	P	P	05 57 53.1	+0.7
	baz=217						
U51A	La Follette	45.27	24	P	P	05 57 53.2	0.0
	baz=210						
N23A	Red Feather La	45.29	359	P	P	05 57 53.8	+0.2
	baz=179,SNR=9.3						
T49A	Edmonton	45.31	22	*e*P	P	05 57 53.5	+0.1
	11nm,1.0s						
T49A	Edmonton	45.31	22	P	P	05 57 53.4	0.0
	baz=208,SNR=6.0						
USIN	University of	45.33	19	*e*P	P	05 57 53.5	-0.1
	38nm,1.3s						
JLU	Jordanelle	45.38	353	*e*P	P	05 57 55.0	+0.8
	5.1nm,1.0s						
KMSC	Kings Mountain	45.39	28	P	P	05 57 54.1	+0.1
	baz=214						
BIRD	Birdtown, Kers	45.39	29	*e*P	P	05 57 54.2	+0.1
	5.5nm,0.9s						
OGNE	Ogallala	45.42	3	*e*P	P	05 57 55.1	+0.8
	38nm,1.4s						
OGNE	Ogallala	45.42	3	P	P	05 57 54.2	-0.1
	baz=184						
PPT	Papeete	45.44	250	LR	LR	06 11 40.0	
	comp=Z,83nm,18.7s,baz=106,slow=29						
PPT2	Papeete2	45.45	250	*e*LR	LR	06 10 28.8	
	comp=Z,185nm,24.0s						
T50A	Nancy	45.50	23	P	P	05 57 54.5	-0.5
	baz=209						
PNTR	Pine Nut	45.52	344	*e*P	P	05 57 55.6	+0.3
	8.3nm,1.0s						
U52A	Thorn Hill	45.55	25	P	P	05 57 55.1	-0.2
	baz=211						
TZTN	Tazewell	45.60	24	*e*P	P	05 57 56.1	+0.4
	16nm,1.1s						
TZTN	Tazewell	45.60	24	P	P	05 57 55.9	+0.2
	baz=211						
V54A	Nebo	45.64	26	P	P	05 57 56.1	+0.1
	baz=213						
VCNR	Virginia City	45.73	344	*e*P	P	05 57 58.3	+1.4
	9.1nm,1.3s						
AFDM	Forest Hills D	45.78	343	*e*P	P	05 57 58.1	+0.9
	6.6nm,1.3s						
T51A	Gray	45.80	24	P	P	05 57 57.2	-0.1
	baz=210						
U53A	Fall Branch	45.86	25	P	P	05 57 57.6	-0.2
	baz=212						
X58A	Rowland	45.87	30	P	P	05 57 57.6	-0.2
	baz=217						
TCUT	Toone Canyon	45.88	353	*e*P	P	05 57 58.5	+0.3
	15nm,1.2s						
OLIL	Olney	45.89	18	*e*P	P	05 57 57.9	0.0
	20nm,1.0s						
S49A	Springfield	46.00	22	P	P	05 57 57.9	-1.0
	baz=208						
W57A	Gilead	46.03	29	P	P	05 57 59.0	-0.1
	baz=216						
V55A	Taylorsville	46.03	27	P	P	05 57 59.2	+0.1
	baz=214						
PAHR	Pah Rah Range	46.04	345	*e*P	P	05 58 00.3	+0.9
	4.9nm,1.0s						
BGNE	Belgrade	46.23	7	P	P	05 58 00.6	-0.1
	baz=190						
S50A	Richmond	46.24	23	P	P	05 58 00.7	-0.1
	baz=209,SNR=8.9						
P43A	Skaggs, Pawnee	46.30	17	P	P	05 58 01.4	+0.2
	baz=202						
U54A	Nelsons Funny	46.32	26	*e*P	P	05 58 01.4	-0.1
	25nm,1.6s						
T52A	Hallie	46.32	25	*e*P	P	05 58 01.4	0.0
	10nm,1.0s						
T52A	Hallie	46.32	25	P	P	05 58 01.4	0.0
	baz=211						
V56A	Mocksville	46.32	28	P	P	05 58 01.6	+0.2
	baz=215						
HWUT	Hardware Ranch	46.38	353	*e*P	P	05 58 02.2	+0.2
	6.2nm,1.0s						
T53A	Wise	46.40	25	P	P	05 58 01.8	-0.3
	baz=212						
R49A	Shelbyville	46.49	22	*e*P	P	05 58 02.1	-0.6
	28nm,1.4s						
R49A	Shelbyville	46.49	22	P	P	05 58 02.1	-0.6
	baz=208						
S51A	Beattyville	46.53	24	*e*P	P	05 58 00.7	-2.3
	10.0nm,1.1s						
S51A	Beattyville	46.53	24	P	P	05 58 02.7	-0.4
	baz=210						
X60A	Albert Glenn T	46.58	31	P	P	05 58 02.9	-0.5
	baz=218						
U55A	TA2, Sparta	46.64	27	P	P	05 58 03.5	-0.6
	baz=214						
V57A	Coltrane Farms	46.73	28	P	P	05 58 04.8	+0.1
	baz=216						
S52A	Salyersville	46.77	24	P	P	05 58 05.0	+0.1
	baz=211						
R50A	Paris	46.80	22	*e*P	P	05 58 03.4	-1.7
	17nm,1.3s						
R50A	Paris	46.80	22	P	P	05 58 04.5	-0.7
	baz=209						
BLO	Bloomington	46.80	20	*e*P	P	05 58 03.6	-1.6
	49nm,1.7s						
U56A	King	46.82	27	P	P	05 58 05.3	-0.1
	baz=215						
T54A	Tazewell	46.88	26	P	P	05 58 05.2	-0.6
	baz=213						
V58A	Windy Hill, Pi	46.97	29	P	P	05 58 06.6	+0.1
	baz=216						
P46A	Rosedale	46.98	19	P	P	05 58 06.2	-0.3
	baz=205						
K22A	Casper	47.06	358	*e*P	P	05 58 07.8	+0.5
	13nm,0.9s						
K22A	Casper	47.06	358	P	P	05 58 06.7	-0.6
	baz=178,SNR=9.3						
O44A	Mansfield	47.08	17	P	P	05 58 06.5	-0.7
	baz=203						
R51A	Hillsboro	47.10	23	P	P	05 58 06.7	-0.8
	baz=210						
S53A	Williamson	47.16	25	P	P	05 58 07.4	-0.7
	baz=212						
HDIL	Hopedale	47.21	16	P	P	05 58 07.8	-0.5
	baz=202						
Q49A	Aurora	47.22	21	P	P	05 58 07.7	-0.7
	baz=208						
BW06	Boulder Array	47.34	355	*e*P	P	05 58 09.4	-0.2
	6.1nm,1.2s						
BW06	Boulder Array	47.34	355	P	P	05 58 09.1	-0.5
	baz=174						
PD31	Pinedale Array	47.34	355	*e*P	P	05 58 09.1	-0.4
	2.3nm,0.9s						
PDAR	Pinedale Array	47.34	355	P	P	05 58 09.2	-0.4
	2.3nm,0.8s,baz=165,slow=6.2,SNR=22						
V59A	Middlesex	47.37	30	P	P	05 58 09.2	-0.5
	baz=218						
U57A	Blanch	47.38	28	P	P	05 58 08.3	-1.3
	baz=216						
Q50A	Georgetown	47.42	22	P	P	05 58 08.8	-1.2
	baz=209						
P48A	Milroy	47.44	21	*e*P	P	05 58 08.5	-1.6
	7.1nm,0.7s						
P48A	Milroy	47.44	21	P	P	05 58 09.3	-0.8
	baz=207						
PLCA	Paso Flores	47.44	144	P	P	05 58 11.8	+1.5
	1.3nm,0.8s,baz=294,slow=7.8,SNR=4.8						
PLCA				LR	LR	06 13 43.2	
	comp=Z,100nm,18.1s,baz=292,slow=30						
R52A	Catlettsburg	47.51	24	P	P	05 58 09.8	-0.8
	baz=211						
S54A	Dingess, Beckl	47.61	26	P	P	05 58 11.0	-0.5
	baz=213						
M41A	Milan	47.64	15	P	P	05 58 11.0	-0.6
	baz=200						
P49A	Miami Univ. Ec	47.76	21	P	P	05 58 11.5	-1.1
	baz=208						
R53A	Hurricane	47.79	25	P	P	05 58 12.8	-0.1
	baz=212						
T57A	Hurt	47.87	28	P	P	05 58 13.4	-0.2
	baz=216						
S55A	Lewisburg	47.94	26	P	P	05 58 13.5	-0.6
	baz=214						
R54A	Victor	48.07	26	P	P	05 58 14.8	-0.2
	baz=213						
SNOW	Snow King Moun	48.13	354	*e*P	P	05 58 15.0	-0.7
	3.8nm,0.9s						
P50A	Jamestown	48.16	22	P	P	05 58 14.7	-1.0
	baz=209						
TPAW	Teton Pass	48.18	354	*e*P	P	05 58 16.3	+0.2
	4.0nm,0.9s						
Q52A	Bidwell	48.20	24	P	P	05 58 15.3	-0.7
	baz=211						
V61A	Roper	48.24	31	P	P	05 58 14.6	-1.7
	baz=219						
O48A	Farmland	48.24	20	P	P	05 58 14.7	-1.6
	baz=207						
LOHW	Long Hollow	48.27	355	*e*P	P	05 58 16.9	+0.1
	3.2nm,0.9s						
Q53A	Leroy	48.41	25	P	P	05 58 18.1	+0.4
	baz=212						
MOOW	Moose Ponds	48.41	354	*e*P	P	05 58 16.9	-1.0
	3.8nm,1.0s						
U60A	Pendleton	48.47	30	P	P	05 58 16.9	-1.2
	baz=218						
RSSD	Black Hills	48.52	1	*e*P	P	05 58 18.4	-0.3
	19nm,1.1s						
RSSD	Black Hills	48.52	1	P	P	05 58 18.4	-0.3
	baz=181						
IMW	Indian Meadow	48.58	354	*e*P	P	05 58 18.9	-0.3
	11nm,1.3s						
N47A	Urbana	48.61	20	P	P	05 58 17.7	-1.5
	baz=206						
M04C	Macdoel	48.65	343	P	P	05 58 19.4	-0.2
	baz=158						
T59A	Double "B" Far	48.66	29	P	P	05 58 19.2	-0.4
	baz=218						
HLID	Hailey	48.70	351	*e*P	P	05 58 20.9	+0.9
	4.9nm,1.1s						
HLID	Hailey	48.70	351	P	P	05 58 20.5	+0.5
	baz=168,SNR=7.7						
ECSD	EROS Data Cent	48.72	8	*e*P	P	05 58 18.9	-1.0
	8.1nm,1.4s						
ECSD	EROS Data Cent	48.72	8	P	P	05 58 20.2	+0.3
	baz=191						
U61A	Possum Corner	48.72	31	P	P	05 58 19.8	-0.3
	baz=219						
FLWY	Flagg Ranch	48.74	355	*e*P	P	05 58 20.2	-0.2
	15nm,1.0s						
MFID	Camas Ranch	48.79	350	*e*P	P	05 58 20.9	+0.2
	10nm,1.3s						
Q54A	Coxs Mills	48.80	25	*e*P	P	05 58 20.5	-0.2
	16nm,1.0s						
Q54A	Coxs Mills	48.80	25	P	P	05 58 20.6	-0.1
	baz=213						
N48A	Decatur	48.82	20	P	P	05 58 19.6	-1.1
	baz=207						
P52A	Corning	48.82	24	P	P	05 58 19.8	-1.0
	baz=211						
S58A	Poland Farm, P	48.93	29	P	P	05 58 20.3	-1.4
	baz=217						
YPP	Pitchstone Pla	48.94	354	*e*P	P	05 58 21.8	-0.2
	3.3nm,1.0s						
P53A	Whipple	49.00	24	*e*P	P	05 58 22.1	-0.1
	13nm,0.9s						
P53A	Whipple	49.00	24	P	P	05 58 21.8	-0.4
	baz=212						
H17A	Grant Village	49.04	355	*e*P	P	05 58 23.8	+1.1
	8.2nm,1.4s						
O51A	Pataskala	49.08	23	P	P	05 58 22.0	-0.8
	baz=210						
SUSD	Miller	49.13	6	P	P	05 58 22.9	-0.3
	baz=188						
N49A	Columbus Grove	49.17	21	P	P	05 58 22.2	-1.3
	baz=208						
R57A	Stanardsville	49.26	28	P	P	05 58 23.8	-0.4
	baz=216						
YMR	Madison River	49.35	354	*e*P	P	05 58 25.4	+0.3
	14nm,1.4s						
O52A	Adamsville	49.35	23	*e*P	P	05 58 25.4	+0.5
	25nm,1.3s						
O52A	Adamsville	49.35	23	P	P	05 58 24.2	-0.7
	baz=211						
YHB	Horse Butte	49.45	354	*e*P	P	05 58 26.4	+0.6
	5.8nm,0.9s						
YHH	Holmes Hill	49.45	355	*e*P	P	05 58 26.8	+0.8
	5.4nm,1.1s						
K43A	Burlington	49.47	16	P	P	05 58 25.8	+0.1
	baz=202						
P54A	Burton	49.47	25	P	P	05 58 25.6	-0.3
	baz=213						
R58A	Rapidan	49.51	28	P	P	05 58 25.8	-0.3
	baz=216						
RLMT	Red Lodge	49.66	356	*e*P	P	05 58 26.9	-0.5
	10nm,1.2s						
RLMT	Red Lodge	49.66	356	P	P	05 58 26.9	-0.5
	baz=174,SNR=7.7						
MCMT	McKenzie Canyo	49.71	353	*e*P	P	05 58 28.2	+0.3
O53A	New Philadelph	49.72	24	P	P	05 58 26.9	-0.7
	baz=212						
MCWV	Mont Chateau	49.79	25	P	P	05 58 27.8	-0.4
	baz=214						
J05D	Fort Rock, OR	49.88	345	P	P	05 58 30.2	+1.2
	baz=159						
Q57A	Strasburg	49.91	27	P	P	05 58 29.1	0.0
	baz=216						
L48A	N Adams	49.99	20	P	P	05 58 28.7	-1.0
	baz=207						
O54A	Avella	50.00	25	P	P	05 58 30.5	+0.6
	baz=213						
M50A	Fremont	50.01	22	P	P	05 58 29.3	-0.5
	baz=209						
Q58A	Fox Den Farm,	50.17	28	P	P	05 58 30.7	-0.4
	baz=216						
M51A	Elyria	50.26	22	P	P	05 58 30.9	-0.9
	baz=210						
BOZ	Bozeman (W)	50.33	354	P	P	05 58 32.3	-0.1
	baz=172						
N53A	Lisbon	50.34	24	*e*P	P	05 58 32.0	-0.4
	14nm,1.0s						
N53A	Lisbon	50.34	24	P	P	05 58 32.0	-0.4
	baz=212						
GCMT	Greycliff	50.35	356	*e*P	P	05 58 31.4	-1.2
L49A	Milan	50.37	21	P	P	05 58 32.1	-0.5
	baz=208						
CPUP	Villa Florida	50.41	121	P	P	05 58 32.8	-0.4
	2.1nm,0.8s,baz=291,slow=9.0,SNR=4.9						
CPUP				LR	LR	06 16 19.9	
	comp=Z,65nm,20.0s,baz=280,slow=32						
CPUP	Villa Florida	50.41	121	*e*P	P	05 58 32.9	-0.3
	4.9nm,1.1s						
PLID	Pearl Lake	50.44	350	*e*P	P	05 58 31.3	-2.1
	11nm,1.6s						
I04A	Tendick Farm,	50.67	344	P	P	05 58 35.0	+0.1
	baz=157						
P58A	Pank, Wackersv	50.79	28	P	P	05 58 35.5	-0.3
	baz=217						
SPMN	Marine on St.	50.80	11	*e*P	P	05 58 35.2	-0.6
	8.1nm,0.9s						
SPMN	Marine on St.	50.80	11	P	P	05 58 34.9	-0.9
	baz=196						
N54A	Moraine State	50.82	24	P	P	05 58 35.9	-0.1
	baz=213						
O56A	Blue Knob Stat	50.85	26	*e*P	P	05 58 36.4	+0.1
	9.4nm,1.1s						
N55A	Marion Center	51.09	25	P	P	05 58 37.6	-0.5
	baz=214						
LAO	LASA Array	51.09	359	*e*P	P	05 58 38.1	+0.1
	12nm,1.1s						
LAO	LASA Array	51.09	359	P	P	05 58 37.6	-0.4
	baz=178						
G39A	Holcombe	51.20	13	P	P	05 58 37.7	-1.0
	baz=198						
O57A	Amberson	51.21	27	P	P	05 58 38.2	-0.8
	baz=216						
HRY	Holter Researc	51.45	354	*e*P	P	05 58 40.4	-0.5
N56A	West Decatur	51.50	26	P	P	05 58 40.7	-0.5
	baz=215						
M55A	Ridgway	51.75	25	P	P	05 58 42.5	-0.6
	baz=214						
L55A	Hinsdale	52.48	25	P	P	05 58 48.2	-0.2
	baz=214						
DGMT	Dagmar	52.87	1	*e*P	P	05 58 51.6	+0.4
	22nm,0.9s						
DGMT	Dagmar	52.87	1	P	P	05 58 51.2	+0.1
	baz=181,SNR=7.5						
M59A	Waymart	53.28	28	P	P	05 58 53.6	-0.7
	baz=218						
AGMN	Agassiz Nation	53.30	8	*e*P	P	05 58 53.4	-0.9
	8.3nm,0.8s						
AGMN	Agassiz Nation	53.30	8	P	P	05 58 53.6	-0.7
	baz=191,SNR=5.7						
C09A	Chrisman Ranch	53.48	349	*e*P	P	05 58 55.2	-0.4
	15nm,1.6s						
L58A	Harry Jones Me	53.49	27	P	P	05 58 55.4	-0.5
	baz=217						
EYMN	Ely	53.67	11	*e*P	P	05 58 55.9	-1.2
	24nm,1.6s						
EYMN	Ely	53.67	11	P	P	05 58 56.3	-0.8
	baz=197						
NEW	Newport	53.71	350	P	P	05 58 56.8	-0.6
	baz=165						
WALA	Waterton Lakes	54.01	353	*e*P	P	05 58 59.9	+0.2
	5.4nm,1.0s						
F49A	Sandfield	54.17	20	P	P	05 59 00.2	-0.5
	baz=209						
E47A	Iron Bridge	54.38	18	P	P	05 59 02.3	+0.1
	baz=207						
DELO	Deloro Mine	54.74	24	P	P	05 59 05.0	+0.1
	baz=214						
E48A	Lockeyer	54.76	19	P	P	05 59 04.7	-0.3
	baz=208						
BUKO	Buck Lake	54.83	22	P	P	05 59 04.9	-0.6
	baz=212						
G53A	Haliburton	54.85	23	P	P	05 59 04.7	-1.0
	baz=213						
F52A	Sundridge	55.16	22	P	P	05 59 07.4	-0.5
	baz=212						
E50A	Wahnapitae	55.19	20	P	P	05 59 07.8	-0.3
	baz=210						
ULM	Lac du Bonnet	55.21	7	P	P	05 59 07.7	-0.6
	9.3nm,1.0s,baz=198,slow=8.4,SNR=12						
ULM				LR	LR	06 21 28.1	
	comp=Z,48nm,18.9s,baz=232,slow=35						
ULM	Lac du Bonnet	55.21	7	*e*P	P	05 59 07.6	-0.6
	17nm,1.1s						
H56A	Elgin	55.36	25	P	P	05 59 08.3	-1.0
	baz=216						
PLVO	Plevna	55.39	24	P	P	05 59 09.4	-0.2
	baz=214						
E51A	G1948 Merrick	55.73	21	P	P	05 59 11.7	-0.3
	baz=211						
ALGO	Algonquin Park	55.77	23	P	P	05 59 11.4	-0.9
	baz=213						
E52A	Mattawa	55.82	22	P	P	05 59 11.7	-1.0
	baz=212						
PEMO	Pembroke	55.85	23	P	P	05 59 12.2	-0.7
	baz=214						
LONY	Lake Ozonia	56.10	26	P	P	05 59 14.0	-0.7
	baz=217						
E53A	Dumoine, Ponti	56.27	22	P	P	05 59 15.4	-0.6
	baz=213						
D52A	ZEK Kipawa Sen	56.49	22	P	P	05 59 17.3	-0.2
	baz=212						
D53A	Lac Vacive, Po	56.84	22	*e*P	P	05 59 20.3	+0.3
	12nm,1.1s						
D53A	Lac Vacive, Po	56.84	22	P	P	05 59 19.7	-0.3
	baz=213						
BDFB	Brasilia	57.02	106	LR	LR	06 21 47.0	
	comp=Z,132nm,18.7s,baz=264,slow=34						
TRQ	Mont Tremblant	57.38	25	*e*P	P	05 59 23.7	-0.2
LSQQ	Lebel-sur-Quev	58.77	21	P	P	05 59 32.7	-0.7
	baz=213						
LATQ	La Tuque	59.05	25	P	P	05 59 35.3	-0.2
	baz=218						
MATQ	Matagami	59.12	20	P	P	05 59 35.2	-0.7
	baz=212						
FFC	Flin Flon	59.18	2	*e*P	P	05 59 35.4	-0.8
	5.0nm,1.0s						
CHGQ	Chibougamau	60.43	22	P	P	05 59 44.8	-0.1
	baz=216						
DLBC	Dease Lake	65.97	346	*e*P	P	06 00 22.0	+0.4
	5.9nm,0.9s						
YKA	Yellowknife Ar	67.32	355	P	P	06 00 28.9	-1.1
	1.6nm,0.7s,baz=164,slow=6.2,SNR=7.7						
YKA				PcP	PcP	06 00 57.2	-0.4
	1.6nm,0.8s,baz=159,slow=4.3,SNR=4.8						
YKB5	Yellowknife Ar	67.32	355	*e*P	P	06 00 28.9	-1.1
YKB5				*e*PcP	PcP	06 00 57.2	-0.4
OHAK	Old Harbor	72.91	335	*e*P	P	06 01 04.7	+0.3
	25nm,1.2s						
KDAK	Kodiak Island	72.97	336	P	P	06 01 04.2	-0.6
	5.2nm,0.9s,baz=151,slow=6.9,SNR=3.2						
DAWY	Dawson	73.14	345	*e*P	P	06 01 06.0	+0.3
	7.4nm,1.1s						
MENT	Mentasta	73.45	343	*e*P	P	06 01 07.7	0.0
	4.7nm,0.8s						
CNPM	China Poot	73.57	337	*e*P	P	06 01 08.3	0.0
	17nm,1.2s						
KNK	Knik Glacier	73.85	340	*e*P	P	06 01 09.7	-0.3
	12nm,1.0s						
PAX	Paxson	74.00	342	*e*P	P	06 01 10.0	-0.9
	17nm,1.8s						
RC01	Rabbit Creek A	74.07	339	*e*P	P	06 01 11.1	-0.1
	12nm,1.2s						
SML	Sawmill	74.09	340	*e*P	P	06 01 11.2	-0.1
	16nm,1.3s						
DOT	Dot Lake	74.09	343	*e*P	P	06 01 11.0	-0.4
	6.5nm,0.8s						
EGAK	Eagle	74.17	345	*e*P	P	06 01 11.7	0.0
	7.7nm,0.8s						
PMR	Palmer	74.21	340	*e*P	P	06 01 11.7	-0.3
	11nm,1.1s						
SCRK	Sand Creek	74.32	343	*e*P	P	06 01 11.9	-0.9
	20nm,1.8s						
RIDG	Independent Ri	74.39	343	*e*P	P	06 01 13.2	+0.1
	14nm,0.9s						
EPYK	Eagle Plains	74.41	347	*e*P	P	06 01 13.2	+0.1
	12nm,1.1s						
EPYK	Eagle Plains	74.41	347	P	P	06 01 12.8	-0.3
	baz=147						
CHGN	Chignik	74.63	332	*e*P	P	06 01 14.1	-0.4
	19nm,1.3s						
DHY	Denali Highway	74.68	341	*e*P	P	06 01 14.4	-0.5
	9.7nm,1.3s						
SUA	Susitna One	74.68	339	*e*P	P	06 01 14.8	-0.2
	5.4nm,0.8s						
SKT	Skwentna	75.31	339	*e*P	P	06 01 18.3	-0.2
	8.3nm,1.0s						
RND	Reindeer	75.38	341	*e*P	P	06 01 19.0	+0.1
	20nm,1.1s						
INK	Inuvik	75.43	349	P	P	06 01 18.5	-0.4
	6.1nm,0.9s,baz=111,slow=3.1,SNR=13						
HDA	Harding Lake	75.51	343	*e*P	P	06 01 18.6	-0.8
	4.1nm,1.0s						
HDA	Harding Lake	75.51	343	P	P	06 01 18.7	-0.8
	baz=137						
MCK	McKinley	75.64	341	*e*P	P	06 01 20.3	0.0
	8.1nm,1.0s						
ILAR	Eielson Array	75.76	343	P	P	06 01 20.4	-0.5
	4.9nm,1.0s,baz=153,slow=5.0,SNR=44						
ILB	Eielson Array	75.76	343	*e*P	P	06 01 20.4	-0.5
	7.1nm,1.0s						
WRH	Wood River Hil	75.90	342	*e*P	P	06 01 21.7	-0.1
	17nm,1.2s						
BWN	Browne	76.11	342	*e*P	P	06 01 22.5	-0.5
	63nm,1.0s						
PPLA	Purkeypile	76.15	340	*e*P	P	06 01 22.9	-0.4
	26nm,1.3s						
KTH	Kantishna Hill	76.16	341	*e*P	P	06 01 22.9	-0.4
	15nm,1.0s						
SVW2	Sparrevohn	76.24	337	*e*P	P	06 01 22.7	-1.1
	12nm,1.3s						
CAST	Castle Rocks	76.46	340	*e*P	P	06 01 24.2	-0.8
	10nm,1.2s						
MLY	Manley	77.11	342	*e*P	P	06 01 28.0	-0.6
	8.1nm,1.0s						
COLD	Coldfoot	78.46	344	*e*P	P	06 01 36.3	+0.3
	8.0nm,1.1s						
TOLK	Toolik Lake Re	79.28	345	*e*P	P	06 01 40.2	-0.4
	15nm,1.3s						
TOLK	Toolik Lake Re	79.28	345	P	P	06 01 40.5	-0.2
	baz=135						
QSPA	South Pole Qui	85.44	180	*e*P	P	06 02 13.2	+0.2
	8.6nm,1.3s						
H11N3	WAKE ISLAND Hy	89.72	290	T	T	07 41 44.2	
	baz=96,slow=75,SNR=96						
H11N2	WAKE ISLAND Hy	89.73	290	T	T	07 41 45.6	
	baz=96,slow=75,SNR=137						
H11N1	WAKE ISLAND Hy	89.73	290	T	T	07 41 43.7	
	baz=96,slow=75,SNR=59						
H11S2	WAKE ISLAND Hy	89.80	288	T	T	07 41 53.3	
	baz=95,slow=75,SNR=103						
H11S1	WAKE ISLAND Hy	89.81	288	T	T	07 41 54.1	
	baz=95,slow=75,SNR=139						
H11S3	WAKE ISLAND Hy	89.82	288	T	T	07 41 52.4	
	baz=95,slow=75,SNR=94						
PETK	Petropavlovsk-	98.04	323	LR	LR	06 38 58.9	
	comp=Z,24nm,20.6s,baz=83,slow=30						
SONA0	Songino Array	129.21	333	*e*PKPdf	PKPdf	06 08 43.3	-0.8
SONM	Songino Array	129.21	333	PKP	PKPdf	06 08 43.3	-0.8
	0.3nm,0.3s,baz=345,slow=3.4,SNR=4.2						
KSH	Kashi	145.24	359	*e*PKP	PKPdf	06 09 14.0	+0.2
CMAR	Chiang Mai Arr	152.84	302	PKPbc	PKPbc	06 09 33.5	-0.1
	0.8nm,0.5s,baz=338,slow=0.6,SNR=4.7						

IDC 29 05:52:47.0±1.2**, 20°.82N**×**145°.41E, h0**km**, mb3.9**/4**,
mb1 4.1**/4**, mb1mx3.6**/40**, mbtmp3.9**/4**, MS3.1**/1**, Ms1 3.1**/1**,**

ms1mx2.4/36, **Error ellipse: s-maj=74.8km s-min=21.6km az=100.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	20.17	93	T	T	06 19 22.5	
	baz=280,slow=75,SNR=52						
H11S1	WAKE ISLAND Hy	20.18	93	T	T	06 19 22.2	
	baz=280,slow=75,SNR=44						
H11N1	WAKE ISLAND Hy	20.18	89	T	T	06 19 21.2	
	baz=277,slow=75,SNR=43						
H11N2	WAKE ISLAND Hy	20.19	89	T	T	06 19 21.2	
	baz=277,slow=75,SNR=40						
H11S2	WAKE ISLAND Hy	20.19	93	T	T	06 19 21.0	
	baz=280,slow=75,SNR=60						
H11N3	WAKE ISLAND Hy	20.20	89	T	T	06 19 22.7	
	baz=277,slow=75,SNR=33						
KLR	Kul'dur	30.37	342	P	P	05 59 01.5	+0.9
	1.0nm,0.6s,baz=153,slow=4.5,SNR=3.5						
PETK	Petropavlovsk-	33.59	13	LR	LR	06 11 01.2	
	comp=Z,30nm,20.8s,baz=140,slow=33						
WRA	Warramunga Arr	41.94	196	P	P	06 00 39.5	-0.3
	2.6nm,0.6s,baz=9.8,slow=7.5,SNR=19						
ASAR	Alice Springs	45.62	195	P	P	06 01 09.2	-0.1
	1.0nm,0.6s,baz=16,slow=8.3,SNR=16						
ILAR	Eielson Array	61.88	27	P	P	06 03 07.4	-0.5
	0.3nm,0.8s,baz=270,slow=6.0,SNR=3.8						

IDC 29 06:26:04.2±2.4**, 7°.42S×127°.93E, h0^{km}, mb3.7**/1**, mb1 3.6**/3**, mb1mx3.3**/30**, mbtmp3.4**/3**, ML3.1**/2**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/29**, Error ellipse: s-maj=289.5km s-min=32.3km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.92	154	Pn	Pn	06 29 22.3	-0.7
	0.1nm,0.3s,baz=334,slow=14,SNR=8.3						
WRA				Sn	Sn	06 31 44.6	-14
	0.2nm,0.3s,baz=333,slow=22,SNR=5.7						
ASAR	Alice Springs	17.15	161	P	Pn	06 30 06.0	+0.6
	0.1nm,0.3s,baz=331,slow=9.8,SNR=4.5						
JNU	Nakatsue	40.41	4	LR	LR	06 50 15.8	
	comp=Z,14nm,19.4s,baz=14,slow=36						
MKAR	Makanchi Array	67.46	328	P	P	06 37 02.0	0.0
	0.3nm,0.4s,baz=121,slow=6.2,SNR=6.0						

DJA 29 06:29:43.7±0.8**, 9°S**±6°×**11°5E**±°**, h30^{km}**±8^{km}**, M3.8**/7**, MLv3.8**/7**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	0.52	12	P	Pn	06 29 55.7	+0.6
SRBI	Singaraja	1.10	6	P	Pn	06 30 02.7	-0.4
SRBI				S	Sb	06 30 18.0	-0.3
JAGI	Jajag, Banyuwa	1.18	307	P	Pn	06 30 04.1	-0.1
JAGI				S	Sb	06 30 19.9	-0.5
GMJI	Gumukmas	1.87	299	P	Pn	06 30 14.3	+0.6
GMJI				S	Sn	06 30 37.3	+0.9
PLAI	Plampang	2.67	82	P	Pn	06 30 25.1	+0.4

WEL 29 06:32:00.6, 42°S±1°×**17°4E**±°**, h14^{km}**±3^{km}**, M3.8**/24**, ML4.0**/18**, MLv3.8**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=171.8, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.14	198	P	Pb	06 32 04.7	-0.3
TUWZ	Tuamarina	0.31	307	P	Pb	06 32 07.6	-0.2
TUWZ				S	Sb	06 32 12.8	0.0
BSWZ	Blackbirch Sta	0.31	251	P	Pg	06 32 07.5	+0.4
BSWZ				S	Sb	06 32 12.3	-0.6
TCW	Tory Channel	0.41	1	P	Pb	06 32 09.4	-0.1
TCW				S	Sb	06 32 15.2	-0.4
BHW	Baring Head	0.50	65	P	Pb	06 32 11.3	+0.2
PLWZ	Palliser	0.74	87	P	Pn	06 32 16.1	-0.5
MSWZ	Moikau Station	0.76	75	P	Pn	06 32 16.3	-0.6
NNZ	Nelson	0.78	300	P	Pb	06 32 15.9	0.0
CAW	Cannon Point	0.79	50	P	Pb	06 32 16.3	+0.3
DUWZ	D'Urville Isla	0.85	342	P	Pb	06 32 17.4	+0.1
PAWZ	Paruwai Farm	0.90	75	P	Pn	06 32 18.8	-0.1
KHZ	Kahutara	0.97	214	P	Pn	06 32 19.7	0.0
THZ	Tophouse	1.03	261	P	Pb	06 32 20.3	0.0
MTW	Mount Morrison	1.03	64	P	Pn	06 32 20.7	+0.1
OGWZ	Otaki Gorge	1.05	41	P	Pg	06 32 20.7	-0.1
TRWZ	Traveller	1.09	79	P	Pb	06 32 21.2	+0.1
HOWZ	Holdsworth Sta	1.18	53	P	Pb	06 32 23.0	+0.3
TMWZ	Te Maipa	1.32	68	P	Pn	06 32 24.4	-0.2
MRZ	Mangatainoka R	1.37	46	P	Pb	06 32 25.9	-0.2
TIWZ	Tintock	1.48	56	P	Pn	06 32 27.0	+0.1
QRZ	Quartz Range	1.53	300	P	Pb	06 32 29.1	+0.3
OHWZ	Ohakea	1.62	30	P	Pg	06 32 31.1	-0.5
PRWZ	Pori Road	1.67	51	P	Pn	06 32 29.4	+0.1
POWZ	Post Office Ro	1.67	43	P	Pn	06 32 29.7	+0.4
BFZ	Birch Farm	1.76	59	P	Pn	06 32 30.0	-0.6
DSZ	Denniston Nort	1.85	265	P	Pb	06 32 33.6	-0.6
LTZ	Lake Taylor	1.89	231	P	Pn	06 32 32.4	0.0
WAZ	Wanganui	1.94	17	P	Pg	06 32 36.9	-0.9
DVHZ	Dannevirke	1.95	48	P	Pn	06 32 33.0	-0.2
AMCZ	Amberley	1.97	217	P	Pn	06 32 32.7	-0.7
TSZ	Takapari Road	2.02	40	P	Pn	06 32 34.4	+0.2
ANWZ	Angora Road	2.03	56	P	Pn	06 32 34.2	-0.1
NMEZ	Namu Road	2.22	352	P	Pg	06 32 42.0	-1.1
PRHZ	Porangahau	2.24	54	P	Pn	06 32 36.3	-1.0
PNHZ	Pukenui	2.25	41	P	Pn	06 32 37.3	-0.1
WPHZ	Waipukurau	2.26	47	P	Pn	06 32 37.4	-0.2
PREZ	Palmer Road	2.27	358	P	Pb	06 32 42.3	+0.8
OKCZ	Okains Bay	2.29	203	P	Pn	06 32 36.3	-1.6
KHEZ	Kahui Hut	2.33	355	P	Pb	06 32 43.3	+0.9
NBEZ	Newall Road No	2.37	352	P	Pb	06 32 42.7	-0.3
INZ	Inchbonnie	2.38	241	P	Pn	06 32 39.3	+0.2
OXZ	Oxford	2.38	223	P	Pn	06 32 38.0	-1.1
MQZ	McQueen's Vall	2.41	209	P	Pn	06 32 37.6	-1.9
MTVZ	Mangateitei	2.41	23	P	Pb	06 32 42.9	-0.9
PKE	Pukeiti	2.43	355	P	Pb	06 32 42.7	-1.4
PKVZ	Pokaka	2.46	20	P	Pb	06 32 43.3	-1.4
MOVZ	Moawhango	2.48	28	P	Pb	06 32 45.3	+0.4
VRZ	Vera Road	2.52	9	P	Pb	06 32 45.4	-0.1
BHHZ	Black Hill Sta	2.53	33	P	Pn	06 32 43.2	+2.0
DRZ	Dome Shelter	2.54	23	P	Pb	06 32 47.4	+1.3
KRHZ	Kereru	2.54	40	P	Pn	06 32 41.3	0.0
FWVZ	Far West T-bar	2.55	23	P	Pb	06 32 44.2	-2.1
TUVZ	Tukino	2.57	25	P	Pn	06 32 44.0	+2.1
NGZ	Ngauruhoe	2.64	23	P	Pb	06 32 46.9	-0.9
KAHZ	Kahuranaki	2.69	48	P	Pn	06 32 43.0	-0.5
WTVZ	West Tongariro	2.69	22	P	Pb	06 32 47.4	-1.2
TWVZ	Taurewa	2.69	20	P	Pb	06 32 49.5	+0.8
KRVZ	Karewarewa	2.73	23	P	Pb	06 32 50.2	+0.9
KWHZ	Kaweka Forest	2.74	38	P	Pn	06 32 43.9	-0.2
KATZ	Kakaramea	2.85	23	P	Pb	06 32 52.7	+1.3
RITZ	Rihia Road	2.90	25	P	Pb	06 32 53.5	+1.4
RATZ	Rangitukua	2.98	23	P	Pb	06 32 55.1	+1.7
BKZ	Black Stump Fm	2.98	35	P	Pb	06 32 54.8	+1.3
WVZ	Waitaha Valley	3.00	240	P	Pn	06 32 48.2	+0.5
HIZ	Hauiti	3.13	8	P	Pb	06 32 53.3	-2.7
RPZ	Rata Peaks	3.17	227	P	Pn	06 32 49.9	-0.1
RTZ	Ruatahuna	3.65	36	P	Pb	06 33 02.9	-1.9
FOZ	Fox Glacier	3.81	238	P	Pn	06 33 02.7	+3.9
LBZ	Lake Benmore	4.08	226	P	Pn	06 33 03.7	+1.2
ODZ	Otahua Downs	4.33	216	P	Pn	06 33 04.8	-1.1
TWGZ	Tauwhareparae	4.47	41	P	Pb	06 33 14.9	-3.9
MKAZ	Moumakai	4.56	9	P	Pn	06 33 12.6	+3.5
JCZ	Jackson Bay	4.72	237	P	Pn	06 33 14.4	+3.0

ISCJB ***29*** *06:38:59.1±1.3, 5°.0S±0°.1×146°.7E±0°.2, h150^{km}, mb3.9/2, Error ellipse: s-maj=27.1km s-min=15.1km az=29.4*

IDC ***29*** *06:39:03.0±5.7, 5°.22S×147°.11E, h181^{km}±60^{km}, mb3.7/2, mb1 4.0/5, mb1mx3.3/35, mbtmp4.4/5, MS2.9/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=96.6km s-min=26.5km az=131.0*

ISC 29 06:39:00.2±1.3**, 5°.1S**±0°.1×**146°.6E**±0°.2**, h150^{km}, n13, σ2^s.72**/15**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.30	172	P	Pn	06 40 05.9	+1.5
	24nm,0.3s,baz=0.0,slow=6.1,SNR=26						
PMG				S	Sn	06 40 50.3	-4.1
	34nm,0.3s,baz=220,slow=22,SNR=15						
COEN	Coen	9.39	201	P	Pn	06 41 14.3	+2.1
	baz=10						
MTSU	Mount Surprise	13.12	189	P	P	06 42 07.5	+1.9
	baz=14,SNR=5.8						
CTA	Charters Tower	14.88	181	P	Pn	06 42 24.6	+1.4
	0.4nm,0.3s,baz=0.0,slow=10,SNR=4.7						
SIJI	Sorong	15.84	285	LR	LR	06 50 48.6	
	comp=Z,40nm,18.8s,baz=334,slow=43						
QIS	Mount Isa	16.77	203	P	P	06 42 48.6	+2.6
	baz=18,SNR=11						
WRA	Warramunga Arr	18.93	218	P	P	06 43 13.2	+3.5
	2.8nm,0.3s,baz=43,slow=10.0,SNR=156						
WRA				S	S	06 46 36.1	-1.0
	0.2nm,0.3s,baz=48,slow=19,SNR=4.8						
KNRA	Kununurra	20.38	238	P	P	06 43 21.0	-4.4
	baz=20,SNR=9.9						
AS06	Alice Springs	22.06	212	P	P	06 43 45.2	+2.0
	baz=23						
ASAR	Alice Springs	22.11	212	P	P	06 43 45.8	+2.2
	7.1nm,0.9s,baz=50,slow=8.3,SNR=60						
ASAR				S	S	06 47 34.6	-2.2
	1.4nm,0.7s,baz=35,slow=18,SNR=3.4						
WRKA	Warakurna	26.45	220	P	P	06 44 25.4	+2.0
	baz=27,SNR=24						
ILAR	Eielson Array	84.85	23	P	P	06 51 16.3	-1.4
	1.3nm,0.7s,baz=250,slow=5.0,SNR=15						
TORD	Torodi Ar. Bea	144.44	285	PKPbc	PKPab	06 58 18.9	+0.5
	1.1nm,0.6s,baz=83,slow=3.9,SNR=11						

IDC ***29*** *06:50:42.3±1.6, 6°.59N×75°.86W, h0^{km}, mb3.3/3, mb1 3.8/4, mb1mx3.5/25, mbtmp3.4/4, ML2.7/1, Error ellipse: s-maj=153.4km s-min=21.3km az=51.0*

ISCJB ***29*** *06:50:45.6±0.3, 4°.39N±0°.02×76°.36W±0°.03, h122^{km}, mb3.4/3, Error ellipse: s-maj=4.3km s-min=2.7km az=26.1*

RSNC ***29*** *06:50:46.5±1.0, 4°.37N×76°.36W, h122^{km}±5^{km}, ML3.2, Mw3.5*

ISC 29 06:50:45.7±0.9**, 4°.40N**±0°.03×**76°.36W**±0°.03**, h122^{km}, n37, σ1^s.54**/67**, mb3.2**/3**, 7C-6D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.41	178	⇓iP	Pn	06 51 03.8	+0.2
YOTC				eS	Sn	06 51 18.0	+1.0
YOTC				i		06 51 20.9	
	comp=Z,627nm,0.4s						
PLMC	San Jos del P	0.51	8	eP	Pn	06 51 04.5	+0.5
PLMC				eS	Sn	06 51 21.0	+3.1
MALC	Bahia Malaga	1.05	249	⇑iP	Pn	06 51 10.3	+1.9
MALC				eS	Sn	06 51 29.0	+3.5
RREF	El Recreo	1.12	64	⇑iP	Pn	06 51 10.4	+0.6
RREF				eS	Sn	06 51 28.8	+0.8
RREF				i		06 51 30.3	
	comp=Z,439nm,0.3s						
ORTC	Ortega, Tolima	1.21	114	⇓iP	Pn	06 51 10.2	+0.1
ORTC				eS	Sn	06 51 28.2	-0.4
ORTC				i		06 51 30.7	
	comp=Z,560nm,0.2s						
GUY2C	Guyana, Caldas	1.28	50	⇑iP	Pn	06 51 12.0	+0.6
GUY2C				eS	Sn	06 51 32.1	+1.3
GUY2C				i		06 51 33.4	
	comp=Z,252nm,0.5s						
MARP	Paez Belalcaza	1.60	165	⇓iP	Pn	06 51 15.3	+0.6
MARP				eS	Sn	06 51 36.8	0.0
PRAC	Prado	1.62	115	⇓iP	Pn	06 51 15.0	+0.3
PRAC				eS	Sn	06 51 37.4	+0.6
POPC	Popayan, Colom	1.88	190	⇓iP	Pn	06 51 17.4	-0.6
POPC				eS	Sn	06 51 41.8	-0.9
POPC				i		06 51 43.0	
	comp=Z,149nm,0.3s						
NORC	Norcasia	1.88	52	⇑iP	Pn	06 51 18.4	+0.6
NORC				eS	Sn	06 51 43.3	+0.9
NORC				i		06 51 45.6	
	comp=E,148nm,0.5s						
NORC				i		06 51 46.6	
	comp=Z,54nm,0.3s						
BETC	Betania	1.94	152	eP	Pn	06 51 18.9	+0.3
BETC				eS	Sn	06 51 42.6	-1.1
HELC	Santa Helena	1.96	25	eP	Pn	06 51 19.8	+0.6
HELC				eS	Sn	06 51 44.9	+0.2
HELC				i		06 51 50.6	
	comp=Z,75nm,0.4s						
ROSC	El Rosal	2.08	78	Pn	Pn	06 51 22.6	+2.0
	comp=Z,38nm,0.3s,baz=278,slow=1.8,SNR=64						
ROSC				Sn	Sn	06 51 51.2	+4.0
	comp=Z,19nm,0.3s,baz=194,slow=22,SNR=19						
ROSC	El Rosal	2.08	78	⇑iP	Pn	06 51 22.6	+2.0
ROSC				eS	Sn	06 51 51.4	+4.2
SOLC	Bahia Solano	2.10	330	eP	Pn	06 51 21.5	+1.0
SOLC				eS	Sn	06 51 48.2	+1.1
SOLC				i		06 51 50.4	
	comp=Z,78nm,0.3s						
SOTA	Rioblanco	2.26	186	eP	Pn	06 51 23.1	0.0
SOTA				eS	Sn	06 51 51.3	-0.3
SOTA				i		06 51 55.4	
	comp=Z,141nm,0.3s						
GRGC	Isla de Gorgon	2.28	233	eP	Pn	06 51 22.1	-0.7
GRGC				eS	Sn	06 51 50.7	-0.5
GRGC				i		06 51 59.1	
	comp=Z,45nm,0.2s						
BBAC	Balboa, Cauca	2.52	201	eP	Pn	06 51 26.6	+0.4
BBAC				eS	Sn	06 51 56.9	-0.2
BBAC				i		06 51 59.9	
	comp=Z,154nm,0.4s						
SPBC	San Pablo de B	2.59	61	⇑iP	Pn	06 51 27.7	+0.8
DBBC	Dabeiba	2.60	3	eP	Pn	06 51 28.4	+1.4
CHIC	Chingaza	2.63	85	eP	Pn	06 51 28.7	+1.1
CHIC				⇑iP	Pn	06 51 29.1	+1.5
CHIC				eS	Sn	06 52 00.5	+0.7
CHIC				i		06 52 03.9	
	comp=N,116nm,0.4s						
SJAC	San Juan de Ar	2.65	115	eP	Pn	06 51 29.8	+2.1
SJAC				eS	Sn	06 51 56.6	-3.2
VILC	Villavicencio,	2.67	96	eP	Pn	06 51 29.4	+1.5
VILC				eS	Sn	06 52 01.2	+0.8
VILC				i		06 52 04.3	
	comp=Z,233nm,0.4s						
PTBC	PUERTO BERRIO,	2.85	42	eP	Pn	06 51 30.1	-0.1
PTBC				eS	Sn	06 52 02.8	-1.5
PTBC				i		06 52 07.0	
	comp=Z,40nm,0.5s						
CRUC	La Cruz	2.88	192	eP	Pn	06 51 31.4	+0.5
CRUC				eS	Sn	06 52 04.9	-0.6
FLOC	Florencia	2.88	166	⇓iP	Pn	06 51 30.4	-0.2
FLOC				eS	Sn	06 52 04.0	-1.2
FLOC				i		06 52 05.7	
	comp=Z,51nm,0.4s						
ZARC	Zaragoza, Cauc	3.42	26	eP	Pn	06 51 37.6	0.0
ZARC				eS	Sn	06 52 17.0	-0.7
RUSC	La Rusia	3.58	65	eP	Pn	06 51 41.2	+1.0
RUSC				eS	Sn	06 52 20.7	-1.6
BRRC	Barranca, Sant	3.76	44	eP	Pn	06 51 41.7	-0.5
BRRC				eS	Sn	06 52 22.7	-3.2
BARC	Barichara	3.84	55	eP	Pn	06 51 43.7	+0.3
BARC				eS	Sn	06 52 27.8	-0.2
GIRC	Giron, Santand	4.12	50	eP	Pn	06 51 46.8	-0.3
PTLC	Puerto Leguiza	4.48	160	eP	Pn	06 51 56.3	+4.5
OCAC	Ocana	4.86	38	eP	Pn	06 51 57.3	+0.3
OCAC				eS	Sn	06 52 50.8	-1.8
SMLC	San Martn de	4.93	27	eP	Pn	06 51 57.0	-0.7
PDAR	Pinedale Array	48.24	327	P	P	06 59 13.5	-1.1
	comp=Z,0.2nm,0.5s,baz=132,slow=12,SNR=2.3						
NVAR	Mina Array Bea	50.98	317	P	P	06 59 36.5	+1.2
	comp=Z,0.2nm,0.5s,baz=134,slow=6.4,SNR=2.6						
YKA	Yellowknife Ar	64.47	341	P	P	07 01 07.5	-1.5
	comp=Z,0.5nm,0.5s,baz=135,slow=6.1,SNR=6.1						

ISCJB ***29*** *06:50:47.8±0.6, 39°.33N±0°.03×29°.02E±0°.05, h3^{km}±7^{km}, Error ellipse: s-maj=6.6km s-min=5.1km az=34.0*

DDA ***29*** *06:50:47.7, 39°.34N×29°.03E, h7^{km}±3^{km}, ML2.5*

ISK ***29*** *06:50:47.2, 39°.33N×29°.02E, h6^{km}, ML2.0/5*

ISC 29 06:50:47.9±1.1**, 39°.33N**±0°.03×**29°.02E**±0°.04**, h9^{km}**±12^{km}**, n13, σ0^s.46**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAP	Saphane-Kutahy	0.34	153	PG	Pg	06 50 54.6	-0.1
SHAP				SG	Sg	06 50 59.7	+0.5
TVSB	Tavsanli	0.36	70	PG	Pg	06 50 54.9	-0.2
TVSB				SG	Sg	06 51 00.1	+0.2
DEMI	Demirci	0.37	220	i P	Pg	06 50 55.6	+0.3
DEMI				IAML_P			
	comp=Z,1µm,0.1s						
DURS	Dursunbey	0.51	303	i P	Pb	06 50 58.5	-0.6
USAK	Uak-Merkez	0.61	180	i P	Pb	06 51 00.0	-0.8
ULDT	Uludag	0.82	6	i P	Pg	06 51 03.5	-0.3
ULDT				IAML_P			
	comp=Z,400nm,0.1s						
KULA	Kula-Manisa	0.86	199	PG	Pg	06 51 04.4	-0.1
KULA				SG	Sg	06 51 15.8	+0.2
MANT	Manisa	0.91	204	i P	Pb	06 51 05.5	-0.5
STEP	BALIKESIR_Sava	1.01	273	i P	Pn	06 51 08.8	+0.5
STEP				IAML_P			
	comp=Z,364nm,0.1s						
KHAL	Karahalli	1.02	159	i P	Pn	06 51 08.5	-0.1
KHAL				IAML_P			
	comp=Z,404nm,0.2s						
BORA	Eskisehir	1.24	63	i P	Pn	06 51 12.3	+0.8
BORA				IAML_P			
	comp=Z,548nm,0.1s						
ARMT	Armutlu	1.24	354	PN	Pn	06 51 11.4	-0.1
ARMT				SN	Sn	06 51 28.8	+0.3
SRCK	Saricakaya, Es	1.43	59	PN	Pb	06 51 14.4	-0.4
SRCK				SN	Sg	06 51 34.4	+0.5

SNET ***29*** *07:27:01.9±1.1, 13°.13N×90°.02W, h28^{km}±3^{km}, ML3.1*

GCG ***29*** *07:27:03.0±0.7, 13°.11N×90°.07W, h60^{km}±95^{km}, MD3.7*

ISC 29 07:27:01.6±2.5**, 13°.2N**±0°.1×**90°.01W**±0°.05**, h15^{km}**±11^{km}**, n16, σ0^s.60**/22**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.74	31	eP	Pn	07 27 17.2	-0.6
CEVE				eS	Sn	07 27 29.1	+0.2
CEVE				IAML		07 27 32.1	
	comp=Z,1µm,0.2s						
RTR	El Retiro	0.79	27	eP	Pn	07 27 17.9	-0.5
CEDA	San Andres	0.86	44	eP	Pg	07 27 18.6	+0.3
CEDA				eS	Sn	07 27 31.7	+0.2
CEDA				IAML		07 27 37.6	
	comp=Z,660nm,0.2s						
SNET	Serv Nac Est T	0.91	57	eP	Pg	07 27 19.5	+0.2
SNET				eS	Sn	07 27 33.0	+0.2
SNET				IAML		07 27 36.5	
	comp=Z,424nm,0.2s						
UEES	Universidad Ev	0.92	55	eS	Sn	07 27 33.9	+0.7
UEES				IAML		07 27 37.5	
	comp=Z,651nm,0.1s						
LOMA	Loma Larga	0.94	61	eP	Pb	07 27 19.5	-0.1
LOMA				eS	Sn	07 27 34.2	+0.8
LOMA				IAML		07 27 39.4	
	comp=Z,867nm,0.3s						
OPAM	Oficina de Pla	0.95	57	IAML		07 27 37.4	
	comp=Z,554nm,0.2s						
LFU	La Fuente	1.04	57	eP	Pb	07 27 21.0	-0.4
PAVA	Las Pavas	1.17	63	eP	Pb	07 27 23.5	-0.1
PAVA				IAML		07 27 45.0	
	comp=Z,312nm,0.2s						
PCG	Pacaya	1.33	334	eP	Pb	07 27 26.4	0.0
PCG				eS	Sg	07 27 45.9	+1.2
MTO3	Montecristo	1.36	28	eP	Pb	07 27 26.5	-0.5
MTO3				eS	Sg	07 27 45.9	+0.3
NBG	Las Nubes	1.43	347	eP	Pg	07 27 29.1	-0.2
NBG				eS	Sg	07 27 48.3	+0.4
FUG	Fuego 3	1.49	327	eP	Pb	07 27 28.6	-0.5
FUG				eS	Sg	07 27 48.6	-1.2
VICT	Victoria	1.54	60	eP	Pb	07 27 29.2	-0.7
CNCH	Conchagua	2.12	87	IAML		07 28 09.4	
	comp=Z,363nm,0.3s						
STG3	Santiaguito 3,	2.14	315	eP	Pn	07 27 37.4	+0.4

ISCJB ***29*** *07:33:34.0±0.6, 7°.84N±0°.05×126°.74E±0°.05, h68^{km}, mb3.9/9, Error ellipse: s-maj=6.9km s-min=6.7km az=18.8*

IDC ***29*** *07:33:36.7±2.6, 7°.89N×126°.57E, h74^{km}±23^{km}, mb3.6/9, mb1 3.8/9, mb1mx3.5/40, mbtmp3.9/9, MS2.9/6, Ms1 2.9/6, ms1mx2.7/37, Error ellipse: s-maj=36.6km s-min=16.3km az=79.0*

ISC 29 07:33:35.8±0.7**, 7°.85N**±0°.05×**126°.68E**±0°.08**, h68^{km}, n36, σ1^s.77**/29**, mb3.9**/9**, 5C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.46	316	⇑iP	Pn	07 33 43.9	-4.1
BIPH				i S	Sn	07 33 50.4	-6.7
DAV	Davao City (W)	1.34	235	P	Pn	07 33 59.0	+0.4
	285nm,0.3s,baz=143,slow=2.4,SNR=9.3						
DAV				S	Sn	07 34 18.7	+3.0
	852nm,0.3s,baz=270,slow=20,SNR=36						
DMPH	Davao City--Mi	1.39	237	⇑eP	Pn	07 33 58.6	-0.6
DMPH				eS	Sn	07 34 17.2	+0.3
KCP	Kidapawan	1.79	242	⇑iP	Pn	07 34 04.2	-0.5
KCP				i S	Sn	07 34 24.2	-2.2
CGP	Cagayan de Oro	2.06	287	⇓eP	Pn	07 34 07.7	-0.5
CGP				eS	Sn	07 34 34.0	+1.1
CTBH	Cotabato--PC H	2.50	256	⇓iP	Pn	07 34 12.5	-1.7
TBP	Tagbilaran	3.34	303	eP	Pn	07 34 25.3	-0.2
TBP				i S	Sn	07 35 04.2	+0.2
LLP	Lapu-Lapu	3.63	313	eP	Pn	07 34 30.2	+0.6
LLP				eS	Sn	07 35 13.9	+2.5
PLP	Palo	3.70	333	⇑eP	Pn	07 34 31.1	+0.6
RCP	Roxas	5.35	314	⇑eP	Pn	07 34 54.0	+0.8
KAPI	Kappang	14.53	209	LR	LR	07 42 51.7	
	comp=Z,69nm,18.2s,baz=115,slow=38						
GUMO	Guam	18.75	71	LR	LR	07 45 28.1	
	comp=Z,18nm,18.9s,baz=203,slow=38						
WRA	Warramunga Arr	28.63	165	P	P	07 39 27.0	+1.0
	0.8nm,0.3s,baz=344,slow=11,SNR=8.8						
WRA				PcP	PcP	07 42 36.2	+0.5
	0.7nm,0.5s,baz=352,slow=2.5,SNR=3.3						
CMAR	Chiang Mai Arr	28.95	294	LR	LR	07 50 26.5	
	comp=Z,24nm,21.3s,baz=177,slow=35						
KSRS	Korea Array	29.49	2	LR	LR	07 52 39.2	
	comp=Z,26nm,18.6s,baz=188,slow=39						
MJAR	Matsushiro Arr	30.43	19	LR	LR	07 52 35.7	
	comp=Z,16nm,19.1s,baz=190,slow=37						
ASAR	Alice Springs	32.11	167	P	P	07 39 56.6	-0.1
	0.6nm,0.3s,baz=341,slow=7.6,SNR=4.6						
ASAR				PcP	PcP	07 42 45.5	+0.7
	0.8nm,0.5s,baz=351,slow=2.4,SNR=9.1						
USRK	Ussuriysk Ar.	36.50	6	P	P	07 40 32.9	-1.6
	2.9nm,0.8s,baz=198,slow=9.1,SNR=3.8						
H11S3	WAKE ISLAND Hy	40.27	71	T	T	08 24 16.4	
	baz=262,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	40.28	71	T	T	08 24 23.7	
	baz=262,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	40.29	71	T	T	08 24 19.3	
	baz=262,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	40.68	69	T	T	08 25 03.9	
	baz=263,slow=75						
H11N2	WAKE ISLAND Hy	40.69	69	T	T	08 25 08.4	
	baz=263,slow=75						
H11N3	WAKE ISLAND Hy	40.70	69	T	T	08 25 06.6	
	baz=263,slow=75						
PETK	Petropavlovsk-	51.67	23	P	P	07 42 37.8	+2.2
	0.6nm,0.6s,baz=180,slow=8.9,SNR=4.2						
MKAR	Makanchi Array	54.20	324	P	P	07 42 54.3	-0.2
	0.6nm,0.4s,baz=110,slow=6.8,SNR=7.0						
KURBB	Kurchatov Arra	58.29	326	P	P	07 43 22.4	-1.0
	0.5nm,0.2s,baz=126,slow=7.8,SNR=2.8						
BVAR	Borovoye Array	63.88	326	LR	LR	08 13 02.8	
	comp=Z,7.4nm,20.9s,baz=110,slow=37						
GEYT	Alibeck	68.33	308	LR	LR	08 16 49.4	
	comp=Z,172nm,19.3s,baz=160,slow=38						
KBZ	Khabaz	80.14	313	LR	LR	08 24 08.9	
	comp=Z,95nm,19.9s,baz=102,slow=38						
ILAR	Eielson Array	81.43	26	P	P	07 45 45.3	+0.2
	0.4nm,0.6s,baz=248,slow=4.6,SNR=7.6						
ARCES	ARCESS Array B	86.59	340	P	P	07 46 11.7	+0.3
	0.5nm,0.7s,baz=72,slow=5.8,SNR=2.5						
FINES	FINESS Array B	88.20	332	P	P	07 46 19.0	-0.2
	0.8nm,0.6s,baz=66,slow=4.6,SNR=4.0						
TXAR	Lajitas Array	119.07	50	PKP	PKPdf	07 52 17.2	-0.5
	0.1nm,0.4s,baz=338,slow=1.0,SNR=4.0						
TORD	Torodi Ar. Bea	121.52	291	PKP	PKPdf	07 52 22.1	-0.5
	0.4nm,0.7s,baz=102,slow=2.1,SNR=2.8						
PLCA	Paso Flores	143.83	158	PKP	PKPbc	07 53 03.4	+1.9
	0.9nm,0.9s,baz=225,slow=4.3,SNR=2.5						

ISCJB ***29*** *07:34:20.3±0.9, 3°.18N±0°.09×122°.6E±0°.3, h400^{km}, mb3.6/8, Error ellipse: s-maj=39.6km s-min=11.9km az=177.7*

IDC ***29*** *07:34:23.9±18.0, 3°.19N×122°.77E, h425^{km}±256^{km}, mb3.3/8, mb1 3.5/8, mb1mx3.1/41, mbtmp4.2/8, Error*

ellipse: s-maj=57.0km s-min=14.3km az=92.0

ISC 29 07:34:21.8±1.1**, 3°.2N**±0°.1×**122°.8E**±0°.3**, h400**^{km}**, n9,**
σ**0ˢ67**/9**, mb3.5**/8**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**3.61**	**37**	*e*P	**Pn**	**07 35 31.1**	**+0.7**
WRA	**Warramunga Arr**	**25.67**	**154**	P	**P**	**07 39 17.4**	**-0.1**
	3.0nm,0.3s,baz=341,slow=11,SNR=53						
ASAR	**Alice Springs**	**28.84**	**158**	P	**P**	**07 39 45.8**	**+0.2**
	1.2nm,0.5s,baz=338,slow=6.9,SNR=29						
KSRS	**Korea Array**	**34.41**	**7**	P	**P**	**07 40 34.6**	**+1.1**
	1.1nm,0.6s,baz=183,slow=9.5,SNR=4.1						
MJAR	**Matsushiro Arr**	**36.11**	**21**	P	**P**	**07 40 46.9**	**-0.9**
	0.9nm,0.5s,baz=181,slow=9.2,SNR=4.4						
NWAO	**Narrogin (SRO)**	**36.31**	**188**	P	**P**	**07 40 49.3**	**-0.3**
	5.1nm,0.5s,baz=24,slow=5.5,SNR=4.1						
STKA	**Stephens Creek**	**39.22**	**154**	P	**P**	**07 41 13.8**	**+0.3**
	1.2nm,0.4s,baz=313,slow=7.2,SNR=5.0						
USRK	**Ussuriysk Ar.**	**41.63**	**10**	P	**P**	**07 41 32.9**	**0.0**
	3.0nm,0.6s,baz=203,slow=6.1,SNR=6.8						
SONM	**Songino Array**	**46.64**	**345**	P	**P**	**07 42 12.1**	**-0.1**
	0.5nm,0.5s,baz=152,slow=9.8,SNR=3.5						

ISCJB ***29*** *07:47:21.7±0.3, 43°.55N±0°.02×13°.72E±0°.03, h11^{km}±2^{km},*
Error ellipse: s-maj=3.6km s-min=3.0km az=23.8

ROM ***29*** *07:47:21.6±0.4, 43°.52N±0°.01×13°.72E±0°.03, h8^{km}±1^{km},*
ML2.6/27, Error ellipse: s-maj=2.7km s-min=0.8km
az=244.0

ISC 29 07:47:21.9±0.8**, 43°.51N**±0°.02×**13°.72E**±0°.03**, h11**^{km}±5^{km}**,**
n52, σ**1ˢ04**/60**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.10**	**293**	P	**Pg**	**07 47 23.9**	**-0.8**
AOI				S	**Sg**	**07 47 26.1**	**-0.6**
AOI				AML	AML		
	comp=E,7275µm,1.1s						
AOI				AML	AML		
	comp=N,8245µm,0.9s						
AOI				AML	AML		
	comp=N,8245µm,0.9s						
AOI				AML	AML		
	comp=E,7275µm,1.1s						
AOI				AML	AML		
	comp=N,8245µm,0.9s						
AOI				AML	AML		
	comp=E,7275µm,1.1s						
PP3	**Marolino**	**0.16**	**212**	P	**Pg**	**07 47 25.2**	**-0.2**
PP3				S	**Sg**	**07 47 28.6**	**+0.6**
PP3				AML	AML		
	comp=E,10820µm,1.6s						
PP3				AML	AML		
	comp=N,9820µm,0.8s						
PP3				AML	AML		
	comp=E,10950µm,1.6s						
PP3				AML	AML		
	comp=N,10300µm,0.8s						
PCRO	**Pietralacroce**	**0.17**	**305**	P	**Pg**	**07 47 25.4**	**-0.2**
PCRO				S	**Sg**	**07 47 28.9**	**+0.6**
PCRO				AML	AML		
	comp=E,10745µm,0.5s						
PCRO				AML	AML		
	comp=N,9370µm,0.7s						
PCRO				AML	AML		
	comp=E,10765µm,0.5s						
PCRO				AML	AML		
	comp=N,9375µm,0.7s						
PCRO				AML	AML		
	comp=E,10750µm,0.5s						
PCRO				AML	AML		
	comp=N,9350µm,0.7s						
PCRO				AML	AML		
	comp=N,9350µm,0.7s						
PCRO				AML	AML		
	comp=E,10750µm,0.5s						
PCRO				AML	AML		
	comp=N,9350µm,0.7s						
PCRO				AML	AML		
	comp=E,10750µm,0.5s						
CIMA	**Civitanova Mar**	**0.21**	**191**	P	**Pg**	**07 47 26.6**	**+0.3**
CIMA				S	**Sg**	**07 47 31.7**	**+2.3**
CIMA				AML	AML		
	comp=E,11190µm,0.8s						
CIMA				AML	AML		
	comp=N,24450µm,0.5s						
CIMA				AML	AML		
	comp=E,10800µm,1.0s						
CIMA				AML	AML		
	comp=N,24400µm,0.5s						
CIMA				AML	AML		
	comp=E,11215µm,0.8s						
CIMA				AML	AML		
	comp=N,24400µm,0.5s						
CIMA				AML	AML		
	comp=E,11215µm,0.8s						
CIMA				AML	AML		
	comp=N,24400µm,0.5s						
CIMA				AML	AML		
	comp=E,11215µm,0.8s						
CIMA				AML	AML		
	comp=N,24400µm,0.5s						
CADA	**Capodarco di F**	**0.32**	**175**	P	**Pg**	**07 47 28.4**	**+0.1**
TRE1	**Treia**	**0.36**	**236**	P	**Pg**	**07 47 28.8**	**-0.4**
SENI	**Senigallia**	**0.41**	**299**	P	**Pg**	**07 47 29.8**	**-0.1**
CING	**Cingoli**	**0.41**	**251**	P	**Pg**	**07 47 29.7**	**-0.3**
CING				S	**Sb**	**07 47 36.7**	**-0.7**
CING				AML	AML		
	comp=E,664µm,0.7s						
CING				AML	AML		
	comp=N,761µm,0.5s						
CING				AML	AML		
	comp=E,664µm,0.7s						
CING				AML	AML		
	comp=N,761µm,0.5s						
CING				AML	AML		
	comp=E,664µm,0.7s						
CING				AML	AML		
	comp=N,761µm,0.5s						
CING				AML	AML		
	comp=E,664µm,0.7s						
CING				AML	AML		
	comp=N,761µm,0.5s						
EL6	**Elcito**	**0.49**	**248**	P	**Pg**	**07 47 31.2**	**-0.2**
CSP1	**Cessapalombo**	**0.56**	**222**	P	**Pg**	**07 47 32.5**	**-0.5**
CSP1				AML	AML		
	comp=E,648µm,0.5s						
CSP1				AML	AML		
	comp=N,832µm,0.5s						
CSP1				AML	AML		
	comp=E,647µm,0.5s						
CSP1				AML	AML		
	comp=N,840µm,0.5s						
CSP1				AML	AML		
	comp=E,650µm,0.5s						
CSP1				AML	AML		
	comp=N,835µm,0.5s						
CSP1				AML	AML		
	comp=E,650µm,0.5s						
CSP1				AML	AML		
	comp=N,835µm,0.5s						
CSP1				AML	AML		
	comp=E,650µm,0.5s						
CSP1				AML	AML		
	comp=N,835µm,0.5s						
SNTG	**Esanatoglia**	**0.63**	**246**	P	**Pg**	**07 47 33.4**	**-0.7**
SNTG				AML	AML		
	comp=E,232µm,0.7s						
SNTG				AML	AML		
	comp=N,367µm,0.5s						
SNTG				AML	AML		
	comp=E,232µm,0.7s						
SNTG				AML	AML		
	comp=N,366µm,0.5s						
SNTG				AML	AML		
	comp=N,366µm,0.5s						
SNTG				AML	AML		
	comp=E,232µm,0.7s						
SNTG				AML	AML		
	comp=N,366µm,0.5s						
SNTG				AML	AML		
	comp=E,232µm,0.7s						
FDMO	**Fiordimonte**	**0.67**	**225**	P	**Pg**	**07 47 34.1**	**-0.7**
FDMO				AML	AML		
	comp=E,550µm,0.3s						
FDMO				AML	AML		
	comp=N,442µm,0.9s						
FDMO				AML	AML		
	comp=E,550µm,0.3s						
FDMO				AML	AML		
	comp=N,442µm,0.9s						
FDMO				AML	AML		
	comp=E,550µm,0.3s						
FDMO				AML	AML		
	comp=N,442µm,0.9s						
FDMO				AML	AML		
	comp=N,442µm,0.9s						
FDMO				AML	AML		
	comp=E,550µm,0.3s						
FDMO				AML	AML		
	comp=N,442µm,0.9s						
FDMO				AML	AML		
	comp=E,550µm,0.3s						
FOSV	**Fossato di Vic**	**0.73**	**253**	P	**Pg**	**07 47 36.1**	**0.0**
FOSV				AML	AML		
	comp=E,235µm,0.6s						
FOSV				AML	AML		
	comp=N,290µm,0.6s						
FOSV				AML	AML		
	comp=E,236µm,0.5s						
FOSV				AML	AML		
	comp=N,290µm,0.6s						
FOSV				AML	AML		
	comp=E,236µm,0.5s						
FOSV				AML	AML		
	comp=N,290µm,0.6s						
FOSV				AML	AML		
	comp=E,236µm,0.5s						
FOSV				AML	AML		
	comp=N,290µm,0.6s						
PESA	**Pesaro**	**0.77**	**304**	P	**Pn**	**07 47 38.3**	**-0.4**
PESA				AML	AML		
	comp=E,606µm,0.4s						
PESA				AML	AML		
	comp=N,586µm,0.5s						
PESA				AML	AML		
	comp=E,606µm,0.4s						
PESA				AML	AML		
	comp=N,586µm,0.5s						
PESA				AML	AML		
	comp=N,586µm,0.5s						
PESA				AML	AML		
	comp=E,606µm,0.4s						
PESA				AML	AML		
	comp=N,586µm,0.5s						
PESA				AML	AML		
	comp=E,606µm,0.4s						
CESI	**CESI - Serrava**	**0.78**	**230**	P	**Pg**	**07 47 36.5**	**-0.5**
CESI				AML	AML		
	comp=E,190µm,0.5s						
CESI				AML	AML		
	comp=N,253µm,0.4s						
CESI				AML	AML		
	comp=E,190µm,0.5s						
CESI				AML	AML		
	comp=N,254µm,0.4s						
CESI				AML	AML		
	comp=N,254µm,0.4s						
CESI				AML	AML		
	comp=E,190µm,0.5s						
CESI				AML	AML		
	comp=N,254µm,0.4s						
CESI				AML	AML		
	comp=E,190µm,0.5s						
NARO	**Abbazia di Nar**	**0.84**	**277**	P	**Pg**	**07 47 37.8**	**-0.2**
NARO				AML	AML		
	comp=E,141µm,0.4s						
NARO				AML	AML		
	comp=N,134µm,0.7s						
NARO				AML	AML		
	comp=E,141µm,0.4s						
NARO				AML	AML		
	comp=N,134µm,0.7s						
NARO				AML	AML		
	comp=N,134µm,0.7s						
NARO				AML	AML		
	comp=E,141µm,0.4s						
NARO				AML	AML		
	comp=N,134µm,0.7s						
NARO				AML	AML		
	comp=E,141µm,0.4s						
PIEI	**Pieia**	**0.86**	**272**	P	**Pb**	**07 47 39.0**	**+0.1**
PIEI				AML	AML		
	comp=E,240µm,0.4s						
PIEI				AML	AML		
	comp=N,132µm,0.4s						
PIEI				AML	AML		
	comp=E,240µm,0.4s						
PIEI				AML	AML		
	comp=N,132µm,0.4s						
PIEI				AML	AML		
	comp=N,132µm,0.4s						
PIEI				AML	AML		
	comp=E,240µm,0.4s						
PIEI				AML	AML		
	comp=N,132µm,0.4s						
PIEI				AML	AML		
	comp=E,240µm,0.4s						
TERO	**Teramo**	**0.89**	**186**	P	**Pg**	**07 47 38.6**	**-0.5**
TERO				AML	AML		
	comp=E,255µm,0.4s						
TERO				AML	AML		
	comp=N,203µm,0.6s						
TERO				AML	AML		
	comp=E,255µm,0.4s						
TERO				AML	AML		
	comp=N,203µm,0.6s						
TERO				AML	AML		
	comp=N,203µm,0.6s						
TERO				AML	AML		
	comp=E,255µm,0.4s						
TERO				AML	AML		
	comp=N,203µm,0.6s						
TERO				AML	AML		
	comp=E,255µm,0.4s						
ASSB	**Assisi San Ben**	**0.91**	**239**	P	**Pg**	**07 47 39.1**	**-0.3**
ASSB				AML	AML		
	comp=E,403µm,0.5s						
ASSB				AML	AML		
	comp=N,356µm,0.6s						
ASSB				AML	AML		
	comp=E,403µm,0.5s						
ASSB				AML	AML		
	comp=N,356µm,0.6s						
ASSB				AML	AML		
	comp=N,356µm,0.6s						
ASSB				AML	AML		
	comp=E,403µm,0.5s						
ASSB				AML	AML		
	comp=N,356µm,0.6s						
ASSB				AML	AML		
	comp=E,403µm,0.5s						
PE3	**Peglio**	**0.91**	**282**	AML	AML		
	comp=E,860µm,0.9s						
PE3				AML	AML		
	comp=E,860µm,0.9s						
PE3				AML	AML		
	comp=N,896µm,0.5s						
PE3				AML	AML		
	comp=E,860µm,0.9s						
PE3				AML	AML		
	comp=N,896µm,0.5s						
PE3				AML	AML		
	comp=N,896µm,0.5s						
PE3				AML	AML		
	comp=N,896µm,0.5s						
PE3				AML	AML		
	comp=E,860µm,0.9s						
ATPI	**Pietralunga -**	**0.96**	**267**	P	**Pg**	**07 47 39.9**	**-0.6**
ATPI				AML	AML		
	comp=E,228µm,0.5s						
ATPI				AML	AML		
	comp=N,230µm,1.3s						
ATPI				AML	AML		
	comp=E,228µm,0.5s						
ATPI				AML	AML		
	comp=N,230µm,1.3s						
ATPI				AML	AML		
	comp=N,230µm,1.3s						
ATPI				AML	AML		
	comp=E,228µm,0.5s						
ATPI				AML	AML		
	comp=N,230µm,1.3s						
ATPI				AML	AML		
	comp=E,228µm,0.5s						
ATVO	**AVT- Monte Val**	**0.97**	**263**	P	**Pn**	**07 47 41.1**	**-0.4**
ATVO				AML	AML		
	comp=E,212µm,0.7s						
ATVO				AML	AML		
	comp=N,198µm,0.5s						
ATVO				AML	AML		
	comp=E,212µm,0.7s						
ATVO				AML	AML		
	comp=N,198µm,0.5s						
ATVO				AML	AML		
	comp=N,198µm,0.5s						
ATVO				AML	AML		
	comp=E,212µm,0.7s						
ATVO				AML	AML		
	comp=N,198µm,0.5s						
ATVO				AML	AML		
	comp=E,212µm,0.7s						
LNSS	**Leonessa**	**1.04**	**209**	P	**Pg**	**07 47 40.6**	**-1.3**
LNSS				AML	AML		
	comp=E,778µm,0.5s						
LNSS				AML	AML		
	comp=N,1570µm,0.5s						
LNSS				AML	AML		
	comp=E,778µm,0.5s						
LNSS				AML	AML		
	comp=N,1575µm,0.5s						
LNSS				AML	AML		
	comp=E,778µm,0.5s						
LNSS				AML	AML		
	comp=N,1575µm,0.5s						
LNSS				AML	AML		
	comp=E,778µm,0.5s						
LNSS				AML	AML		
	comp=N,1575µm,0.5s						
ATTE	**AVT- Monte Tez**	**1.05**	**253**	P	**Pn**	**07 47 42.9**	**+0.3**
ATTE				AML	AML		
	comp=E,236µm,0.4s						
ATTE				AML	AML		
	comp=N,210µm,0.9s						
ATTE				AML	AML		
	comp=E,236µm,0.4s						
ATTE				AML	AML		
	comp=N,209µm,0.9s						
ATTE				AML	AML		
	comp=E,236µm,0.4s						
ATTE				AML	AML		
	comp=N,209µm,0.9s						
ATTE				AML	AML		
	comp=E,236µm,0.4s						
ATTE				AML	AML		
	comp=N,209µm,0.9s						
DUGI	**Dugi Otok**	**1.08**	**63**	*e*Pg	**Pn**	**07 47 42.6**	**-0.3**
DUGI				Sg	**Sn**	**07 47 58.5**	**+0.6**
VCEL	**Villa Celiera**	**1.12**	**176**	P	**Pn**	**07 47 44.0**	**+0.4**
VCEL				AML	AML		
	comp=E,834µm,0.4s						
VCEL				AML	AML		
	comp=N,715µm,1.5s						
VCEL				AML	AML		
	comp=E,834µm,0.4s						
VCEL				AML	AML		
	comp=N,714µm,1.5s						
VCEL				AML	AML		
	comp=E,834µm,0.4s						
VCEL				AML	AML		
	comp=N,714µm,1.5s						
VCEL				AML	AML		
	comp=E,834µm,0.4s						
VCEL				AML	AML		
	comp=N,714µm,1.5s						
CAFI	**Castiglion Fio**	**1.29**	**262**	P	**Pg**	**07 47 47.7**	**+0.9**
CAFI				AML	AML		
	comp=E,154µm,0.8s						
CAFI				AML	AML		
	comp=N,210µm,0.7s						
CAFI				AML	AML		
	comp=E,154µm,0.8s						
CAFI				AML	AML		
	comp=N,210µm,0.7s						
CAFI				AML	AML		
	comp=N,210µm,0.7s						
CAFI				AML	AML		
	comp=E,154µm,0.8s						
CAFI				AML	AML		
	comp=N,210µm,0.7s						
CAFI				AML	AML		
	comp=E,154µm,0.8s						
MGAB	**Montegabbione**	**1.32**	**244**	P	**Pg**	**07 47 47.5**	**+0.2**
MGAB				AML	AML		
	comp=E,341µm,1.1s						
MGAB				AML	AML		
	comp=N,338µm,0.7s						
MGAB				AML	AML		
	comp=E,306µm,1.2s						
MGAB				AML	AML		
	comp=N,342µm,0.6s						
MGAB				AML	AML		
	comp=E,341µm,1.1s						
MGAB				AML	AML		
	comp=N,338µm,0.7s						
MGAB				AML	AML		
	comp=E,306µm,1.2s						
MGAB				AML	AML		
	comp=N,342µm,0.6s						
MGAB				AML	AML		
	comp=N,342µm,0.6s						
MGAB				AML	AML		
	comp=E,341µm,1.1s						
MGAB				AML	AML		
	comp=E,306µm,1.2s						
MGAB				AML	AML		
	comp=N,338µm,0.7s						
MGAB				AML	AML		
	comp=N,342µm,0.6s						
MGAB				AML	AML		
	comp=E,341µm,1.1s						
MGAB				AML	AML		
	comp=E,306µm,1.2s						
MGAB				AML	AML		
	comp=N,338µm,0.7s						
NVLJ	**Novalja**	**1.34**	**38**	*e*Pn	**Pn**	**07 47 46.3**	**-0.2**
ZIRJ	**Zirje**	**1.40**	**84**	*i* Pn	**Pn**	**07 47 47.0**	**-0.3**
ZIRJ				Sn	**Sg**	**07 48 07.2**	**+0.2**
MORI	**Morici**	**1.48**	**75**	*e*Pn	**Pb**	**07 47 48.9**	**-0.5**
MORI				Sn	**Sn**	**07 48 06.8**	**-1.0**
INTR	**Introdacqua**	**1.50**	**175**	P	**Pb**	**07 47 49.8**	**-0.1**
INTR				AML	AML		
	comp=E,450µm,0.5s						
INTR				AML	AML		
	comp=N,708µm,0.7s						
INTR				AML	AML		
	comp=E,450µm,0.5s						
INTR				AML	AML		
	comp=N,708µm,0.7s						
INTR				AML	AML		
	comp=E,450µm,0.5s						
INTR				AML	AML		
	comp=N,708µm,0.7s						
INTR				AML	AML		
	comp=E,450µm,0.5s						
INTR				AML	AML		
	comp=N,708µm,0.7s						
UDBI	**Udbina**	**1.79**	**55**	*i* Pn	**Pb**	**07 47 54.3**	**-0.4**
RIY	**Rijeka**	**1.89**	**16**	ePn		07 47 55.4	
MAKA	**Makarska**	**2.41**	**94**	*e*Pn	**Pn**	**07 48 01.3**	**+0.1**
LJU	**Ljubljana**	**2.60**	**12**	AML	AML		
	comp=E,146µm,0.6s						
LJU				AML	AML		
	comp=E,146µm,0.6s						
LJU				AML	AML		
	comp=N,158µm,0.8s						
LJU				AML	AML		
	comp=N,158µm,0.8s						
LJU				AML	AML		
	comp=N,158µm,0.8s						
LJU				AML	AML		
	comp=E,146µm,0.6s						
GRAM	**Graiana**	**2.81**	**292**	AML	AML		
	comp=E,537µm,0.2s						
GRAM				AML	AML		
	comp=E,537µm,0.2s						
GRAM				AML	AML		
	comp=N,1023µm,0.2s						
GRAM				AML	AML		
	comp=E,537µm,0.2s						
GRAM				AML	AML		
	comp=N,1023µm,0.2s						

GRAM				AML	AML		
	comp=N,1023µm,0.2s						
STON	Ston	2.98	101	ePn	Pn	07 48 09.3	+0.3
STON	Ston	2.98	101	AML	AML		
	comp=E,28µm,0.7s						
STON				AML	AML		
	comp=E,28µm,0.7s						
STON				AML	AML		
	comp=N,31µm,0.7s						
STON				AML	AML		
	comp=N,31µm,0.7s						
STON				AML	AML		
	comp=E,28µm,0.7s						
STON				AML	AML		
	comp=N,31µm,0.7s						
OBKA	Obir	3.05	11	iPn	Pn	07 48 11.5	+1.4
	comp=N,5.1nm,0.3s						
OBKA				iSn	Sn	07 48 49.0	+2.2
	comp=N,26nm,0.7s						
MYKA	Terra Mystica	3.12	359	iPn	Pn	07 48 11.8	+0.7
	comp=N,3.3nm,0.5s						
MYKA				iSg	Sg	07 49 03.0	+0.9
	comp=N,9.0nm,0.7s						
MAGA	Magasa	3.16	317	AML	AML		
	comp=N,88µm,0.5s						
MAGA				AML	AML		
	comp=E,163µm,0.7s						
MAGA				AML	AML		
	comp=N,88µm,0.5s						
MAGA				AML	AML		
	comp=E,163µm,0.7s						
MAGA				AML	AML		
	comp=N,88µm,0.5s						
MAGA				AML	AML		
	comp=E,163µm,0.7s						
SOKA	Soboth	3.30	16	iSg	Sg	07 49 07.7	-0.1
	comp=E,4.3nm,0.5s						
ABTA	Abfaltersbach	3.35	346	iPn	Pn	07 48 15.2	+1.0
	comp=E,2.6nm,0.2s						
ABTA				iSn	Sn	07 48 53.7	-0.3
	comp=E,9.2nm,0.6s						
KBA	Koelnbreinsper	3.58	356	iPn	Pn	07 48 19.0	+1.6
	comp=E,1.0nm,0.3s						
KBA				iSg	Sg	07 49 20.4	+3.6
	comp=E,13nm,1.0s						
ARSA	Arzberg	3.95	18	iPn	Pn	07 48 22.1	-0.3
	comp=E,1.6nm,0.3s						
WTTA	Wattenberg	4.03	339	iSn	Sn	07 49 11.7	+0.8
	comp=E,6.3nm,0.5s						
FETA	Feichten	4.10	330	iPn	Pn	07 48 22.6	-1.9
	comp=E,2.5nm,0.5s						
FETA				iSn	Sn	07 49 10.6	-2.0
	comp=E,1.5nm,0.4s						
SQTA	Sankt Quirin	4.11	335	iSn	Sn	07 49 13.2	+0.3
	comp=E,5.5nm,0.3s						
WATA	Walderalm	4.11	339	iPn	Pn	07 48 25.3	+0.5
	comp=E,3.0nm,0.3s						
MOTA	Moosalm	4.25	335	iPn	Pn	07 48 26.6	-0.1
	comp=E,2.0nm,0.3s						
MOA	Molln	4.36	5	iPn	Pn	07 48 24.7	-3.3
	comp=E,0.5nm,0.2s						
MOA				eSn	Sn	07 49 18.1	-0.7
	comp=E,6.9nm,0.7s						

*SJA **29** 07:48:09.5±0.5, 22°.01S×67°.46W, h203^{km}±6^{km}, ML2.5, MW3.5*

*ISCJB **29** 07:48:11.6±1.1, 22°.04S±0°.06×67°.54W±0°.05, h185^{km}±12^{km}, Error ellipse: s-maj=9.5km s-min=6.4km az=24.6*

*GUC **29** 07:48:12.0±0.6, 22°.05S×67°.78W, h198^{km}±6^{km}, ML3.4*

ISC 29 07:48:10.7±2.4**, 22°.05S**±0°.06×**67°.52W**±0°.05**, h193**^{km}±22^{km}**, n19, σ0^{s}.78**/31**, 10C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.41	247	⇓iP	Pn	07 48 43.8	+0.4
LVC	Limon Verde	1.41	247	eP	Pn	07 48 44.0	+0.6
LVC				iS	Sn	07 49 08.5	-0.2
PB09	IPOC Station P	1.62	279	⇑iP	Pn	07 48 46.2	+1.0
PB09				iS	Sn	07 49 11.8	-0.1
YJA	Yavi	1.86	94	iP	Pn	07 48 47.7	-0.1
YJA				IAML		07 48 48.9	
	comp=Z,28nm,0.4s						
YJA				iS	Sn	07 49 16.4	-0.1
PB06	IPOC Station P	2.01	251	⇑iP	Pn	07 48 49.5	+0.4
PB06				iS	Sn	07 49 18.2	-0.6
PB06				IAML		07 49 19.3	
	comp=E,188nm,0.1s						
PB03	IPOC Station P	2.08	270	⇑iP	Pn	07 48 50.1	+0.3
PB03				iS	Sn	07 49 18.9	-1.1
PB03				IAML		07 49 20.0	
	comp=E,214nm,0.1s						
PB01	IPOC Station P	2.09	298	⇑iP	Pn	07 48 50.4	+0.5
PB01				iS	Sn	07 49 19.8	-0.5
PB01				IAML		07 49 20.7	
	comp=E,191nm,0.3s						
PB15	IPOC Station P	2.14	237	iS	Sn	07 49 21.9	+0.5
PB15	IPOC Station P	2.14	237	⇑iP	Pn	07 48 51.3	+0.8
PB15				iS	Sn	07 49 21.4	-0.1
PB07	IPOC Station P	2.23	278	iP	Pn	07 48 52.0	+0.6
PB07	IPOC Station P	2.23	278	⇑iP	Pn	07 48 51.9	+0.6
PB07				iS	Sn	07 49 21.6	-1.3
PB07				IAML		07 49 23.1	
	comp=N,184nm,0.2s						
HJA	Humahuaca	2.26	121	iP	Pn	07 48 52.4	+0.4
HJA				IAML		07 48 52.8	
	comp=Z,26nm,0.3s						
PB02	IPOC Station P	2.33	288	⇑iP	Pn	07 48 52.8	+0.4
PB02				iS	Sn	07 49 23.6	-1.3
PB08	IPOC Station P	2.44	321	⇑iP	Pn	07 48 55.4	+1.4
PB04	IPOC Station P	2.46	263	⇑iP	Pn	07 48 54.3	+0.4
PB04				iS	Sn	07 49 26.2	-1.3
PB04				IAML		07 49 27.5	
	comp=N,141nm,0.4s						
GO01	Chusmiza	2.85	326	⇑iP	Pn	07 48 59.7	+1.0
GO01				iS	Sn	07 49 36.2	0.0
PB11	IPOC Station P	3.04	318	⇓iP	Pn	07 49 00.7	+0.1
PB11				iS	Sn	07 49 38.1	-1.5
AZAP	Zapla	3.12	134	iP	Pn	07 49 01.8	+0.1
AZAP				IAML		07 49 45.9	
	comp=Z,3.1nm,0.5s						
MNMC	Minye Minye	3.50	326	⇓iP	Pn	07 49 07.1	+0.6

*BJI **29** 08:07:58.4±0.0, 36°.63N×70°.43E, h197^{km}, mb4.8/50, mB4.8/33*

*ISCJB **29** 08:07:58.9±0.2, 36°.48N±0°.02×70°.58E±0°.02, h197^{km}±2^{km}, mb4.8/235, Error ellipse: s-maj=2.8km s-min=2.1km az=43.0*

*MOS **29** 08:07:59.1±1.0, 36°.48N×70°.62E, h201^{km}, mb4.8/63, Error ellipse: s-maj=5.4km s-min=3.7km az=102.3*

*NEIC **29** 08:08:01.0±2.1, 36°.50N×70°.54E, h207^{km}±5^{km}, mb4.8/151, Error ellipse: s-maj=9.0km s-min=7.9km az=86.0*

NEIC Felt at Abbottabad, Pabbi and Peshawar, Pakistan.

*IDC **29** 08:08:01.7±0.4, 36°.43N×70°.61E, h213^{km}±3^{km}, mb4.4/34, mb1 4.4/37, mb1mx4.3/48, mbtmp5.0/37, Error ellipse: s-maj=7.6km s-min=6.0km az=14.0*

*GCMT **29** 08:08:02.0±0.3, 36°.50N±0°.02×70°.47E±0°.03, h208^{km}±2^{km}, MW5.1/87, Moment Tensor Solution. s31,c34; s87,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.91±.19; $M_{\theta\theta}$-2.11±.27; $M_{\phi\phi}$-0.79±.24; $M_{r\theta}$-4.21±.17; $M_{\theta\phi}$1.76±.23; $M_{\phi r}$-1.85±.15; Best double couple: $M_0$5.40300×10^{16} NP1:ϕ_s264.00000°, δ75.00000°, λ66.00000°. NP2: ϕ_s143.00000°, δ28.00000°, λ146.00000°. Principal axes: T 6.1850, Plg54.0000°, Azm145.0000°; N -1.5620, Plg23.0000°, Azm270.0000°; P -4.6200, Plg26.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NNC **29** 08:08:09.7±6.2, 37°.22N×71°.10E, h272^{km}±68^{km}, mb4.7, mpv5.9 Error ellipse: s-maj=65.9km s-min=31.3km az=0.0*

ISC 29 08:08:00.4±0.3**, 36°.49N**±0°.03×**70°.56E**±0°.03**, h201**^{km}±2^{km}**, h201**^{km}**:pP-P, n609, σ1^{s}.71**/679**, mb4.8**/255**, 38C-16D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.30	213	ePn	Pn	08 08 42.4	-0.1
KBL				eSn	S	08 09 13.8	-0.7
KBL	Kabul	2.30	213	ePN	Pn	08 08 42.4	-0.1
KBL				e		08 09 13.8	
GAR	Garm	2.51	356	ePn	Pn	08 08 44.3	-0.3
GAR				eSn	S	08 09 17.0	-1.6
GAR	Garm	2.51	356	ePN	Pn	08 08 44.3	-0.3
GAR				e		08 09 17.0	
CEP	Cherat	2.88	157	P	Pn	08 08 49.4	+0.5
CEP				S	S	08 09 25.0	-1.1
CHCP	Chirah Chowk	3.59	141	P	Pn	08 08 58.1	+0.8
NIL	Nilore	3.59	141	ePn	Pn	08 08 58.2	+0.9
NIL	Nilore	3.59	141	ePN	Pn	08 08 58.2	+0.9
THW	Thamme Wali	3.81	165	P	Pn	08 09 00.1	+0.1
SARP	Sargodha	4.88	158	P	Pn	08 09 13.0	-0.3
TAS	Tashkent	4.93	349	PN	Pn	08 09 13.7	-0.2
KSH	Kashi	5.24	53	P	Pn	08 09 13.0	-4.9
KSH				S	S	08 10 03.5	-15
KSH				smax	smax		
	comp=N,12µm,0.4s						
KSH				smax	smax		
	comp=E,11µm,0.7s						
AML	Almayashu	6.14	22	P	Pn	08 09 28.8	-0.9
	SNR=2280						
DHRM	DHARAMSHALA	6.36	130	eP	Pn	08 09 32.0	-0.5
DHRM				eS	S	08 10 41.9	-3.3
DHRM				IAML		08 10 44.1	
DHRM				IAML		08 10 44.5	
	comp=E,19µm,0.7s						
UCH	Uchtor	6.50	27	P	Pn	08 09 33.6	-0.8
	SNR=3540						
KK31	Karatay Array	6.61	360	ePn	Pn	08 09 34.6	-0.8
KK31				eSn	S	08 10 45.5	-5.0
KK31	Karatay Array	6.61	360	P	Pn	08 09 34.2	-1.2
	comp=E,345nm,0.5s,baz=170,slow=12,SNR=3931						
KK31				⇑S	S	08 10 45.6	-5.0
	comp=E,824nm,0.5s,baz=174,slow=40,SNR=10						
KK31	Karatay Array	6.61	360	ePN	Pn	08 09 34.6	-0.8
KKAR	Karatay Array	6.61	360	ePn	Pn	08 09 34.6	-0.8
KKAR				eSn	S	08 10 44.6	-6.0
KKAR	Karatay Array	6.61	360	ePN	Pn	08 09 34.6	-0.8
EKS2	Erkin-Say	6.65	21	P	Pn	08 09 35.4	-0.6
	SNR=995						
KZA	Kyzart	6.66	32	P	Pn	08 09 35.3	-1.3
	SNR=742						
AAK	Ala-Archa	6.85	25	P	Pn	08 09 38.6	-0.2
	comp=E,175nm,0.3s,baz=188,slow=6.4,SNR=489						
AAK				S	S	08 10 52.8	-3.8
	comp=E,135nm,0.3s,baz=301,slow=19,SNR=8.5						
AAK	Ala-Archa	6.85	25	ePn	Pn	08 09 38.3	-0.5
AAK				eSn	S	08 10 52.4	-4.3
AAK	Ala-Archa	6.85	25	⇑P	Pn	08 09 37.8	-0.9
	comp=E,399nm,0.4s						
AAK				S	S	08 10 53.7	-2.9
	comp=E,2µm,0.7s						
AAK	Ala-Archa	6.85	25	iP	Pn	08 09 38.2	-0.5
	SNR=408						
AAK	Ala-Archa	6.85	25	P	Pn	08 09 38.4	-0.3
	SNR=252						
AAK				S	S	08 10 53.7	-2.9
AAK	Ala-Archa	6.85	25	P	Pn	08 09 38.3	-0.5
	SNR=388						
BHK	Bhakra	7.02	134	eP	Pn	08 09 40.2	-0.7
BHK				eS	S	08 10 55.6	-5.0
KBK	Karagaybulak	7.03	27	P	Pn	08 09 40.9	-0.2
	SNR=70						
ULHL	Ulahol	7.24	36	P	Pn	08 09 42.6	-1.3
	SNR=279						
CHMS	Chumysh	7.26	25	P	Pn	08 09 43.0	-0.9
	SNR=71						
USP	Ospenovka	7.42	23	P	Pn	08 09 45.4	-0.6
	SNR=23						
TKM2	Tokmak 2	7.51	30	⇑P	Pn	08 09 46.3	-1.1
	comp=E,1µm,0.5s						
TKM2	Tokmak 2	7.51	30	PN	Pn	08 09 46.2	-1.1
TKM2				pmax	pmax		
	comp=Z,1µm,0.5s						
TKM2	Tokmak 2	7.51	30	P	Pn	08 09 46.5	-0.7
	SNR=3024						
SMLA	Simla	7.67	132	eP	Pn	08 09 48.5	-0.8
SMLA				eS	S	08 11 09.7	-6.2
SMLA				IAML		08 11 13.5	
	comp=N,5µm,0.1s						
SMLA				IAML		08 11 14.6	
	comp=E,3µm,0.2s						
AAA	Alma-Ata	8.30	34	ePN	Pn	08 09 57.8	+0.3
AAA				pmax	pmax		
	comp=Z,2µm,1.3s						
AAA				MLR	MLR		
	comp=Z,900nm,5.0s						
KNDC	Almaty	8.33	34	⇑P	Pn	08 09 57.9	0.0
	comp=Z,998nm,0.6s						
KNDC				⇓S	S	08 11 19.7	-12
	comp=Z,462nm,0.8s						
DDI	Dehra Dun	8.78	132	eP	Pn	08 10 03.2	-0.7
DDI				eS	S	08 11 36.0	-6.5
DDI				IAML		08 11 41.6	
	comp=E,4µm,0.3s						
DDI				IAML		08 11 41.9	
	comp=N,3µm,0.2s						
KHET	Khetri	9.49	151	eP	Pn	08 10 10.9	-2.1
KHET				ex	x	08 11 46.9	
KHET				IAML		08 11 54.2	
	comp=N,1µm,0.1s						
KHET				IAML		08 11 54.6	
	comp=E,2µm,0.9s						
JASL	Jaisalmer	9.54	178	eP	Pn	08 10 11.5	-2.2
JASL				eS	S	08 11 47.8	-13
JOSI	Joshimath	9.56	126	eP	Pn	08 10 13.6	-0.5
JOSI				eS	S	08 11 54.1	-7.3
JOSI				IAML		08 11 58.9	
	comp=N,6µm,0.8s						
JOSI				IAML		08 12 00.4	
	comp=E,5µm,0.9s						
NDI	New Delhi	9.60	142	eP	Pn	08 10 13.0	-1.4
NDI				eS	S	08 11 52.0	-10
PDGK	Podgornoye	9.68	42	⇓P	Pn	08 10 13.5	-2.0
	comp=E,158nm,0.6s						
PDGK	Podgornoye	9.68	42	P	Pn	08 10 13.4	-2.0
PDGK				pmax	pmax		
	comp=Z,158nm,0.6s						
GEYT	Alibeck	10.03	282	P	Pn	08 10 17.3	-2.6
	comp=Z,4.3nm,0.3s,baz=106,slow=11,SNR=33						
GEYT				S	S	08 12 06.8	-5.5
	baz=98,slow=20,SNR=2.8						
GYA0B	ALIBECK ARRAY	10.03	282	ePn	Pn	08 10 17.4	-2.5
GYA0B				eSn	S	08 12 08.9	-3.5
PTH	Pithoragarh	10.66	128	ex	Pn	08 10 26.0	-2.2
PTH				eS	S	08 12 17.8	-10
OTUK	Ortayu	11.82	6	⇓P	Pn	08 10 41.5	-1.3
	comp=Z,259nm,0.9s						
OTUK	Ortayu	11.82	6	P	Pn	08 10 41.5	-1.3
OTUK				pmax	pmax		
	comp=Z,259nm,0.9s						
MAKZ	Makanchi	13.37	36	ePn	Pn	08 11 01.0	-1.3
MAKZ	Makanchi	13.37	36	⇑P	Pn	08 11 00.2	-2.1
	comp=Z,502nm,0.7s						
MAKZ	Makanchi	13.37	36	eP	Pn	08 11 01.0	-1.3
MK31	Makanchi Array	13.51	37	ePn	Pn	08 11 02.4	-1.6
MK31	Makanchi Array	13.51	37	P	Pn	08 11 02.8	-1.3
	comp=Z,186nm,0.6s,baz=219,slow=11,SNR=1643						
MK31	Makanchi Array	13.51	37	P	Pn	08 11 02.7	-1.3
MK31				pmax	pmax		
	comp=Z,186nm,0.6s						
MK32	Makanchi Array	13.51	37	eP	Pn	08 11 02.5	-1.5
MKAR	Makanchi Array	13.51	37	P	Pn	08 11 02.5	-1.5
	comp=Z,21nm,0.3s,baz=215,slow=10,SNR=427						
DANN	Dangsing	13.78	122	eP	Pn	08 11 05.9	-2.0
KOLN	Koldanda	14.05	125	eP	Pn	08 11 09.7	-1.4
	comp=Z,168nm,0.5s						
BHPL	Bhopal	14.48	154	eP	Pn	08 11 16.2	0.0
GKN	Gorkha	14.60	121	eP	Pn	08 11 16.6	-1.2
	comp=Z,210nm,0.5s						
GKN				eS	S	08 13 48.4	-12
AB31	Akbulak array	14.92	332	⇓P	Pn	08 11 19.7	-1.6
	comp=Z,51nm,0.7s,baz=142,slow=14,SNR=561						
AB31	Akbulak array	14.92	332	iP	Pn	08 11 19.7	-1.6
AB31				pmax	pmax		
	comp=Z,51nm,0.7s						
ABKAR	Akbulak array	14.92	332	ePn	Pn	08 11 19.8	-1.6
WMQ	Urumqi	15.00	56	eP	Pn	08 11 21.9	-0.5
	comp=Z,175nm,0.8s						
WMQ	Urumqi	15.00	56	eP	P	08 11 22.8	-0.3
WMQ				S	S	08 14 08.5	-0.3
WMQ				pmax	pmax		
	comp=Z,120nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,3.6s						
WMQ				LR	LR		
	comp=Z,220nm,5.9s						
WMQ				LR	LR		
	comp=Z,100nm,4.5s						
WMQ				LR	LR		
	comp=Z,150nm,7.3s						
WMQ	Urumqi	15.00	56	eP	Pn	08 11 21.9	-0.5
WMQ				pmax	pmax		
	comp=Z,175nm,0.8s						
DMN	Daman	15.17	122	eP	Pn	08 11 24.1	-0.8
	comp=Z,155nm,0.6s						
KKN	Kakani	15.18	121	eP	Pn	08 11 23.8	-1.1
	comp=Z,548nm,0.6s						
KURBB	Kurchatov Arra	15.25	20	P	Pn	08 11 23.3	-2.1
	comp=Z,3.2nm,0.3s,baz=208,slow=11,SNR=181						
KURBB	Kurchatov Arra	15.25	20	⇓P	Pn	08 11 22.7	-2.6
	comp=Z,88nm,0.5s						
KURK	Kurchatov	15.36	20	ePn	Pn	08 11 24.6	-2.1
	comp=Z,159nm,1.0s						
KURK	Kurchatov	15.36	20	eP	Pn	08 11 24.6	-2.1
KURK				pmax	pmax		
	comp=Z,159nm,1.0s						
PKIN	Phulchoki	15.39	121	eP	Pn	08 11 26.5	-1.1
	comp=Z,96nm,0.4s						
PKI	Pulchoki	15.40	121	eP	Pn	08 11 26.6	-1.2
	comp=Z,82nm,0.4s						
GUN	Gumba	15.52	119	eP	Pn	08 11 28.3	-0.9
	comp=Z,286nm,0.4s						
JBP	Jabalpur	15.58	146	⇑eP	Pn	08 11 30.2	+0.6
JBP				ex	x	08 14 12.3	
JIRN	Jiri	15.89	119	eP	P	08 11 33.2	-0.2
	comp=Z,591nm,0.3s						
BANOM	Banah	16.09	233	iP	Pn	08 11 36.1	+0.2
	SNR=5.4						
BANOM	Banah	16.09	233	P	Pn	08 11 35.7	-0.1
	SNR=14						
BANOM				P	P	08 11 35.9	+0.6
SHME	Shamm	16.11	234	P	Pn	08 11 36.2	+0.2
BVAR	Borovoye Array	16.54	360	P	P	08 11 39.9	+0.1
	comp=Z,13nm,0.3s,baz=164,slow=12,SNR=190						
MDH	Madha	16.54	232	P	P	08 11 40.4	+0.3
MDH	Madha	16.54	232	P	P	08 11 40.2	+0.1
BRVK	Borovoye	16.57	359	eP	P	08 11 40.6	+0.4
	comp=Z,124nm,0.7s						
BRVK	Borovoye	16.57	359	eP	P	08 11 40.6	+0.4
BRVK				pmax	pmax		
	comp=Z,124nm,0.7s						
MSFE	Esma-Masafi	16.58	232	iP	Pn	08 11 42.2	+0.5
	SNR=5.4						
AKTO	Aktyubinsk	16.61	331	P	P	08 11 41.2	+0.5
	comp=Z,13nm,0.3s,baz=147,slow=11,SNR=615						
AKTO				S	S	08 14 38.5	-5.4
	baz=210,slow=20,SNR=3.0						
AKTO	Aktyubinsk	16.61	331	⇓P	Pn	08 11 41.5	-0.3
	comp=Z,361nm,0.9s						
WSAR	Wadi Sarin	16.75	221	P	Pn	08 11 43.9	+0.1
	comp=Z,1.5nm,0.3s,baz=52,slow=7.6,SNR=14						
WSAR	Wadi Sarin	16.75	221	P	Pn	08 11 43.8	+0.1
BIDO	Bidbid	16.80	223	P	Pn	08 11 43.8	-0.4
UOSS	Minazif	16.85	231	eP	P	08 11 43.8	+0.2
	comp=Z,58nm,0.8s						
UOSS	Minazif	16.85	231	iP	P	08 11 44.1	+0.6
	SNR=7.0						
UOSS	Minazif	16.85	231	P	P	08 11 44.1	+0.6
HATD	Hatta, Dubai	16.98	231	iP	Pn	08 11 46.8	+0.4
	SNR=11						
HATD	Hatta, Dubai	16.98	231	P	P	08 11 44.7	-0.3
NGP	Nagpur	16.99	152	eP	Pn	08 11 45.8	-0.6
NGP				IAmb	IAmb	08 11 46.7	
	comp=Z,412nm,1.6s						
NGP				ex	x	08 14 46.6	
WBK	Wadi Bani Khal	17.09	219	P	P	08 11 47.0	+0.7
NAZ	Nazwa, Dubai	17.16	232	iP	Pn	08 11 49.5	+1.0
	SNR=8.3						
NAZ	Nazwa, Dubai	17.16	232	P	Pn	08 11 48.7	+0.2
	SNR=8.6						
HOQ	Hoqain	17.21	225	P	Pn	08 11 49.7	+0.6
SMDO	Samad	17.21	222	P	Pn	08 11 49.5	+0.4
JLN	Jalan Bani Buh	17.26	217	P	Pn	08 11 50.1	+0.5
ASUD	Al Ashush, Dub	17.63	232	iP	Pn	08 11 53.5	-0.5
	SNR=32						
ASUD	Al Ashush, Dub	17.63	232	P	Pn	08 11 54.0	0.0
	SNR=32						
ALNE	Al Ain	17.78	230	iP	P	08 11 54.5	+0.7
	SNR=17						
AJN	Ajban	17.89	233	P	P	08 11 55.9	+1.0
AJN	Ajban	17.89	233	P	P	08 11 55.4	+0.5
BSY	Bisya	17.93	224	P	Pn	08 11 58.0	+0.5
DGZ	Jazzator, Alta	18.01	38	d iP	Pn	08 11 57.3	-1.0
BOK	Bokaro	18.30	130	eP	Pn	08 12 00.7	-1.1
AKT	Akhty	18.41	293	eP	P	08 12 01.8	+1.2
AKT				eS	S	08 15 23.7	+3.5
AKT				pmax	pmax		
	comp=Z,16nm,0.6s						
AKT				smax	smax		
	comp=E,17nm,0.8s						
AKT				smax	smax		
	comp=N,42nm,0.7s						
LSA	Lhasa	18.52	106	eP	Pn	08 12 04.8	-0.1
	comp=N,158nm,0.7s						
LSA	Lhasa	18.52	106	P	Pn	08 12 05.0	+0.1
LSA	Lhasa	18.52	106	eP	Pn	08 12 04.8	-0.1
LSA				pmax	pmax		
	comp=Z,158nm,0.7s						
LATR	Latur	18.77	162	ex	P	08 11 55.4	-9.1
MAK	Makhachkala	18.84	297	eP	P	08 12 04.2	-0.8
MAK				eS	S	08 15 27.7	-0.7
MAK				pmax	pmax		
	comp=Z,226nm,1.5s						
MAK				MLR	MLR		
	comp=Z,177nm,16.0s						
GNBR	Gunib	19.12	295	iP	P	08 12 07.9	-0.3
ZAA0	Zalesovo Array	20.07	25	eP	P	08 12 18.3	+0.1
	comp=Z,208nm,0.8s						
ZALV	Zalesovo Beam	20.07	25	P	P	08 12 18.3	+0.1
	comp=Z,125nm,0.4s,baz=222,slow=11,SNR=402						
ZALV	Zalesovo Beam	20.07	25	P	P	08 12 18.3	+0.1
ZALV				pmax	pmax		
	comp=Z,126nm,0.4s						
ZAA1	Zalesovo Array	20.08	25	eP	P	08 12 18.3	+0.1
TAWA	Tawang	20.09	110	eP	P	08 12 20.6	+1.5
HYB	Hyderabad	20.27	157	iP	P	08 12 20.0	-0.7
HYB				eS	S	08 15 56.0	-0.9
HYB	Hyderabad	20.27	157	eP	P	08 12 21.3	+0.6
GNI	Garni	20.56	288	P	Pn	08 12 26.4	-2.7
	comp=Z,62nm,0.9s,baz=102,slow=2.1,SNR=22						
GNI	Garni	20.56	288	eP	Pn	08 12 26.4	-2.6
	comp=Z,83nm,1.0s						
GNI	Garni	20.56	288	iP	P	08 12 26.0	+2.4
	SNR=8.5						
GNI	Garni	20.56	288	iP	P	08 12 26.1	+2.4
GNI				pmax	pmax		
	comp=Z,257nm,1.1s						
GNI	Garni	20.56	288	P	Pn	08 12 27.4	-1.7
	SNR=13						
TBLG	Delisi	20.67	293	eP	P	08 12 27.2	+2.6
	comp=Z,46nm,0.8s						
TBLG	Delisi	20.67	293	eP	P	08 12 27.3	+2.6
TBLG				pmax	pmax		
	comp=Z,46nm,0.8s						
GUWA	GUWAHATI	20.73	114	eP	P	08 12 25.8	+0.4
BWNR	Bhubaneshwar	20.94	136	eP	P	08 12 28.5	+0.9
BWNR				IAmb	IAmb	08 12 31.1	
	comp=Z,182nm,0.8s						
SHL	Shillong	21.23	115	eP	P	08 12 30.8	-0.1
	comp=Z,560nm,0.9s						
SHL	Shillong	21.23	115	eP	P	08 12 30.8	-0.1
SHL	Shillong	21.23	115	eP	P	08 12 30.7	-0.2
SHL				ex	x	08 16 22.5	
TEZP	TEZPUR	21.32	111	eP	P	08 12 31.3	-0.2
SVE	Sverdlovsk	21.41	345	c eP	P	08 12 32.7	+0.5
SVE				eS	S	08 16 18.8	+2.3
SVE				pmax	pmax		
	comp=Z,141nm,1.2s						
ZEI	Tsey	21.42	295	eP	P	08 12 33.6	+0.9
ZEI				pmax	pmax		
	comp=Z,12nm,0.5s						
ARU	Arti	21.53	342	P	P	08 12 33.8	+0.4
	comp=Z,27nm,0.6s,baz=159,slow=11,SNR=81						
ARU	Arti	21.53	342	eP	P	08 12 33.6	+0.2
	comp=Z,201nm,1.1s						
ARU	Arti	21.53	342	c iP	P	08 12 33.7	+0.2
ARU						08 13 12.3	
ARU				eS	S	08 16 21.6	+3.1

ARU				*SS	sS	08 17 10.3	-10
ARU				pmax	pmax		
	comp=Z,173nm,0.9s						
AKH	**Akhalkalaki**	**21.57**	**291**	eP	**P**	**08 12 36.8**	**+2.5**
	comp=Z,29nm,0.8s						
AKH	**Akhalkalaki**	**21.57**	**291**	eP	**P**	**08 12 36.8**	**+2.5**
AKH				pmax	pmax		
	comp=Z,29nm,0.8s						
ZIRO	**ZIRO**	**21.64**	**108**	ex	**P**	**08 12 34.2**	**-0.9**
VIS	**Vishakhapatnam**	**21.84**	**145**	i P	**P**	**08 12 37.2**	**+0.3**
VIS				i x	x	08 16 38.0	
KBZ	**Khabaz**	**22.29**	**297**	P	**P**	**08 12 41.1**	**+0.2**
	comp=Z,9.6nm,0.9s,baz=117,slow=7.3,SNR=12						
NEY	**Neytrino**	**22.34**	**296**	i P	**P**	**08 12 41.2**	**-0.5**
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
JORH	**JORHAT**	**22.35**	**109**	eP	**P**	**08 12 41.3**	**-0.4**
BELO	**BELONIA**	**22.35**	**120**	ex	**P**	**08 12 40.8**	**-0.9**
SILR	**SILCHAR**	**22.36**	**115**	eP	**P**	**08 12 42.9**	**+1.1**
SHA1	**Shidzhatmaz**	**22.46**	**297**	i P	**P**	**08 12 42.3**	**-0.6**
KIV	**Kislovodsk**	**22.48**	**298**	eP	**P**	**08 12 43.1**	**+0.3**
	comp=Z,14nm,0.7s						
KIV	**Kislovodsk**	**22.48**	**298**	eP	**P**	**08 12 42.5**	**-0.3**
KIV				eS	**S**	**08 16 36.0**	**+1.9**
KIV				pmax	pmax		
	comp=Z,56nm,1.0s						
KIV				MLR	MLR		
	comp=Z,194nm,14.0s						
DIBR	**DIBRUGARH**	**22.49**	**107**	eP	**P**	**08 12 44.4**	**+1.4**
DIBR				IAmb	IAmb	08 12 45.0	
MOKO	**MOKOCHONG**	**22.77**	**110**	eP	**P**	**08 12 46.6**	**+0.9**
KOHI	**KOHIMA**	**22.79**	**111**	ex	**P**	**08 12 47.8**	**+1.9**
AZL	**Aizawl**	**22.92**	**118**	eP	**P**	**08 12 47.0**	**0.0**
IMP	**Imphal**	**23.17**	**114**	eP	**P**	**08 12 50.6**	**+1.3**
GTA	**Gaotai**	**23.21**	**74**	⇑P	**P**	**08 12 51.5**	**+2.0**
GTA				pP	pP	08 13 27.5	-0.2
GTA				PP	**PnPn**	**08 13 32.5**	**+2.8**
GTA				sP	sP	08 13 50.8	-2.4
GTA				PcP	**PcP**	**08 16 33.3**	**+2.1**
GTA				S	**S**	**08 16 48.0**	**+1.8**
GTA				pmax	pmax		
	comp=Z,62nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,5.6s						
GTA				LR	LR		
	comp=Z,140nm,11.0s						
GTA				LR	LR		
	comp=Z,130nm,12.0s						
GTA				LR	LR		
	comp=Z,140nm,13.1s						
LKP	**Lekhapani**	**23.27**	**106**	eP	**P**	**08 12 51.4**	**+1.4**
SAIH	**SAIHA**	**23.92**	**119**	eP	**P**	**08 12 58.0**	**+1.9**
SOC	**Sochi**	**24.55**	**296**	eP	**P**	**08 13 02.4**	**+0.9**
SOC				e		08 13 44.0	
SOC				eS	**S**	**08 17 12.3**	**+5.1**
SOC				e*SS	**sS**	**08 18 17.6**	**-2.9**
MDRS	**Chennai**	**24.89**	**157**	eP	**P**	**08 13 05.3**	**+0.5**
MDRS				IAmb	IAmb	08 13 08.1	
	comp=Z,475nm,2.2s						
RAYN	**Ar Rayn**	**25.16**	**246**	eP	**P**	**08 13 07.6**	**+0.2**
	comp=Z,37nm,1.3s						
RAYN	**Ar Rayn**	**25.16**	**246**	i P	**P**	**08 13 07.5**	**+0.2**
	SNR=24						
RAYN	**Ar Rayn**	**25.16**	**246**	eP	**P**	**08 13 07.6**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,37nm,1.3s						
VRH	**Novokhopyorsk**	**25.26**	**315**	eP	**P**	**08 13 08.1**	**+0.3**
VRH				e		08 13 48.3	
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
KIRV	**Kirov**	**26.09**	**335**	P	**P**	**08 13 16.4**	**+1.2**
	comp=Z,32nm,0.4s,baz=137,slow=13,SNR=19						
ANN	**Anapa**	**26.32**	**299**	eP	**P**	**08 13 16.5**	**-0.9**
ANN				e		08 13 56.9	
ANN				e		08 14 08.9	
ANN				eS	**S**	**08 17 36.4**	**+1.3**
ANN				pmax	pmax		
	comp=Z,70nm,1.3s						
VORD	**Divnogorie**	**26.58**	**313**	eP	**P**	**08 13 19.9**	**+0.2**
VORD				e		08 14 01.0	
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	**Storozhevoye**	**26.75**	**313**	eP	**P**	**08 13 21.1**	**0.0**
VSR				e		08 14 02.5	
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
VORR	**Voronezh**	**26.89**	**314**	P	**P**	**08 13 27.0**	**+4.6**
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
ZAK	**Zakamensk**	**27.27**	**49**	eP	**P**	**08 13 27.3**	**+1.4**
ZAK				e		08 14 10.1	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LPSR	**Galich'ya Gora**	**27.41**	**316**	eP	**P**	**08 13 28.0**	**+1.0**
LPSR				e		08 14 07.7	
LPSR				pmax	pmax		
	comp=Z,50nm,0.9s						
TLY	**Talaya**	**27.91**	**47**	P	**P**	**08 13 33.3**	**+1.8**
	comp=Z,8.1nm,0.5s,baz=208,slow=8.2,SNR=5.2						
TLY				pP	**pP**	**08 14 16.0**	**+2.5**
	comp=Z,10nm,0.7s,baz=328,slow=15,SNR=2.9						
CD2	**Chengdu**	**28.09**	**92**	P	**P**	**08 13 34.8**	**+1.4**
CD2				S	**S**	**08 18 05.5**	**+2.2**
CD2				pmax	pmax		
	comp=Z,100nm,0.9s						
CD2				LR	LR		
	comp=Z,120nm,8.6s						
CD2				LR	LR		
	comp=Z,270nm,6.9s						
SONA0	**Songino Array**	**28.64**	**55**	eP	**P**	**08 13 39.5**	**+1.4**
SONM	**Songino Array**	**28.64**	**55**	P	**P**	**08 13 39.5**	**+1.4**
	comp=Z,9.7nm,0.8s,baz=258,slow=9.8,SNR=30						
SONM				pP	**pP**	**08 14 23.2**	**+2.9**
	comp=Z,7.3nm,0.9s,baz=254,slow=10,SNR=3.9						
BR101	**Keskin Array S**	**29.10**	**288**	eP	**P**	**08 13 43.6**	**+1.3**
BR131	**Keskin Array S**	**29.10**	**288**	eP	**P**	**08 13 42.6**	**+0.3**
	comp=Z,2.2nm,0.6s						
BRTR	**Keskin Array B**	**29.10**	**288**	P	**P**	**08 13 43.6**	**+1.3**
	comp=Z,1.9nm,0.7s,baz=92,slow=9.2,SNR=9.3						
BRTR				pP	**pP**	**08 14 26.1**	**+2.8**
	comp=Z,13nm,0.9s,baz=97,slow=7.8,SNR=9.6						
MOS	**Moscow**	**29.44**	**321**	eP	**P**	**08 13 44.7**	**-0.3**
MOS				e*PP	**pP**	**08 14 25.7**	**-0.4**
MOS				e		08 14 47.5	
MOS				eS	**S**	**08 18 22.8**	**-1.0**
MOS				pmax	pmax		
	comp=Z,64nm,1.1s						
MOS				pmax	pmax		
	comp=N,31nm,0.6s						
MOS				pmax	pmax		
	comp=E,44nm,0.6s						
PRGR	**Permogore**	**29.64**	**336**	eP	**P**	**08 13 46.1**	**-0.5**
PRGR				pmax	pmax		
	comp=Z,37nm,0.4s						
OBN	**Obninsk**	**29.71**	**320**	P	**P**	**08 13 48.7**	**+1.4**
	comp=Z,6.1nm,0.4s,baz=156,slow=10.0,SNR=14						
OBN	**Obninsk**	**29.71**	**320**	eP	**P**	**08 13 48.4**	**+1.1**
	comp=Z,52nm,0.5s						
OBN	**Obninsk**	**29.71**	**320**	deP	**P**	**08 13 48.2**	**+0.9**
OBN				i *PP	**pP**	**08 14 29.0**	**+0.5**
OBN				e		08 14 52.9	
OBN				pmax	pmax		
	comp=Z,38nm,0.6s						
KMI	**Kunming**	**29.74**	**103**	P	**P**	**08 13 49.0**	**+0.8**
KMI				pmax	pmax		
	comp=Z,22nm,0.9s						
KMI				pmax	pmax		
	comp=Z,140nm,4.3s						
PALK	**Pallekele**	**30.52**	**160**	P	**P**	**08 13 55.5**	**+0.6**
	comp=Z,20nm,0.8s,baz=296,slow=7.0,SNR=5.9						
PALK	**Pallekele**	**30.52**	**160**	eP	**P**	**08 13 55.5**	**+0.6**
	comp=Z,28nm,0.9s						
CHTO	**Chiang Mai**	**30.53**	**118**	eP	**P**	**08 13 55.4**	**+0.4**
	comp=Z,31nm,1.0s						
CHTO	**Chiang Mai**	**30.53**	**118**	eP	**P**	**08 13 55.4**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,31nm,1.0s						
CMMT	**Chiang Mai**	**30.54**	**118**	P	**P**	**08 13 57.2**	**+2.2**
	comp=Z,17nm,1.1s						
CM31	**Chiang Mai Arr**	**30.77**	**118**	eP	**P**	**08 13 57.0**	**0.0**
	comp=Z,81nm,1.1s						
CM31	**Chiang Mai Arr**	**30.77**	**118**	P	**P**	**08 13 59.9**	**+2.9**
	SNR=12						
CMAR	**Chiang Mai Arr**	**30.77**	**118**	P	**P**	**08 13 57.6**	**+0.6**
	comp=Z,40nm,1.0s,baz=298,slow=7.5,SNR=87						
CMAR	**Chiang Mai Arr**	**30.77**	**118**	P	**P**	**08 13 57.6**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,37nm,1.0s						
PAYA	**Payao**	**30.85**	**116**	P	**P**	**08 13 58.0**	**+0.2**
	comp=Z,38µm,1.0s						
BTO	**Baotou**	**30.96**	**70**	eP	**P**	**08 13 58.8**	**+0.2**
BTO				S	**S**	**08 18 42.3**	**-5.8**
BTO				LR	LR		
	comp=Z,165µm,4.7s						
BTO				LR	LR		
	comp=Z,169µm,5.0s						
LAMP	**Lampang**	**31.21**	**117**	P	**P**	**08 14 03.1**	**+2.1**
	comp=Z,47µm,0.8s						
XAN	**Xi'an**	**31.29**	**83**	eP	**P**	**08 14 01.3**	**-0.2**
	comp=Z,17nm,1.0s						
XAN	**Xi'an**	**31.29**	**83**	P	**P**	**08 14 02.0**	**+0.5**
XAN				pP	pP	08 14 41.3	-2.4
XAN				PcP	**PcP**	**08 16 51.8**	**+1.1**
XAN				S	**S**	**08 18 48.8**	**-4.4**
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN	**Xi'an**	**31.29**	**83**	eP	**P**	**08 14 01.3**	**-0.2**
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
KLMR	**Klimovskoe**	**31.32**	**331**	eP	**P**	**08 13 59.6**	**-1.7**
KLMR				e*PP	**pP**	**08 14 41.6**	**-1.1**
KLMR				e		08 15 09.6	
KLMR				pmax	pmax		
	comp=Z,64nm,1.3s						
HHC	**Hu-ho-hao-te**	**32.10**	**69**	P	**P**	**08 14 10.5**	**+1.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GYA	**Guiyang**	**32.22**	**98**	⇑iP	**P**	**08 14 10.8**	**+1.0**
GYA				pP	pP	08 14 56.3	+4.3
GYA				sP	sP	08 15 11.0	-4.5
GYA				S	**S**	**08 19 08.5**	**+0.5**
GYA				sS	ScP	08 20 18.8	+1.0
GYA				SS	SS	08 21 14.5	-19
GYA				pmax	pmax		
	comp=Z,70nm,1.0s						
GYA				pmax	pmax		
	comp=Z,80nm,3.1s						
UMPA	**Umpang Tak**	**32.23**	**121**	P	**P**	**08 14 12.8**	**+2.9**
	comp=Z,97µm,1.1s						
YLV	**Yalova**	**32.26**	**290**	⇓iP	pP	08 14 48.7	-2.7
UTTA	**Uttaradit**	**32.38**	**117**	P	**P**	**08 14 11.9**	**+0.7**
	comp=Z,108µm,0.7s						
MILM	**Milestii Mici**	**32.51**	**302**	⇑iP	pP	08 14 51.4	-2.0
KIS	**Kishinev**	**32.51**	**302**	eP	**pP**	**08 14 52.0**	**-1.4**
KIS				epP	sP	08 15 20.0	+3.4
KIS				LRM	MLR	08 34 00.0	
	comp=Z,300nm,14.0s						
KIS				eL	L	09 21 16.0	
EFOR	**EFORIE**	**32.58**	**297**	⇑iP	sP	08 15 14.7	-2.6
AKASG	**Malin Array Be**	**32.67**	**309**	P	**P**	**08 14 13.8**	**+0.6**
	comp=Z,4.6nm,0.6s,baz=79,slow=6.9,SNR=27						
AKASG				pP	**pP**	**08 14 56.4**	**+1.5**
	comp=Z,9.1nm,0.5s,baz=82,slow=7.3,SNR=5.6						
AKASG	**Malin Array Be**	**32.67**	**309**	P	**P**	**08 14 13.9**	**+0.6**
AKASG				*PP	**pP**	**08 14 56.4**	**+1.5**
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AKBB	**Malin Array Si**	**32.67**	**309**	eP	**P**	**08 14 13.1**	**-0.2**
	comp=Z,8.7nm,0.8s						
AKBB	**Malin Array Si**	**32.67**	**309**	eP	**P**	**08 14 13.1**	**-0.2**
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SLVN	**Son La**	**32.67**	**108**	eP	**P**	**08 14 14.9**	**+1.2**
	comp=Z,75nm,1.4s						
PSN	**Preselentsi**	**32.92**	**296**	eP	pP	08 15 00.6	+3.6
CFR	**Carcaliu**	**32.93**	**299**	⇑iP	pP	08 14 54.0	-3.0
ENH	**Enshi**	**32.93**	**89**	eP	**P**	**08 14 16.5**	**+0.6**
	comp=Z,39nm,1.0s						
CTYL	**Yalikoy Yolu**	**32.99**	**292**	⇓iP	pP	08 14 55.9	-1.7
PBKT	**Sadao Pong**	**33.46**	**118**	P	**P**	**08 14 21.7**	**+1.2**
	comp=Z,56nm,1.4s,comp=Z,1µm						
PRD	**Provadia**	**33.51**	**295**	eP	pP	08 15 04.5	+2.3
SRDT	**SRDT**	**33.72**	**123**	P	**P**	**08 14 24.3**	**+1.6**
	comp=Z,65nm,1.0s						
VRI	**Vrincioaia**	**33.92**	**300**	⇑iP	pP	08 15 03.3	-2.5
NONG	**Nongkai**	**34.06**	**114**	P	**P**	**08 14 25.9**	**+0.2**
	comp=Z,1.8nm,1.3s						
MICGM	**Minsk**	**34.26**	**315**	⇑eP	**P**	**08 14 27.0**	**+0.1**
MICGM				PM		08 14 28.0	
	comp=Z,0.1nm,1.0s						
MICGM				esP	**pP**	**08 15 03.0**	**-5.8**
MICGM				epP	**pP**	**08 15 10.0**	**+1.2**
MICGM				eS	**S**	**08 19 40.0**	**+1.5**
MICGM				esS	**sS**	**08 20 48.0**	**-6.4**
MICGM				eSS	SS	08 22 41.0	+28
MICGM				eSSS	SSS	08 23 24.0	
MNK	**Minsk**	**34.26**	**315**	⇑eP	**P**	**08 14 27.0**	**+0.1**
MNK				e		08 15 10.0	
MNK				e		08 15 33.0	
MNK				eS	**S**	**08 19 40.0**	**+1.5**
MNK				pmax	pmax		
	comp=Z,140nm,1.0s						
BIZ	**Bicaz**	**34.37**	**302**	⇑iP	pP	08 15 07.1	-2.6
MLR	**Muntele Rosu**	**34.47**	**299**	eP	**P**	**08 14 31.2**	**+2.1**
	comp=Z,17nm,1.1s						
MLR	**Muntele Rosu**	**34.47**	**299**	⇑iP	pP	08 15 08.7	-2.1
MLR	**Muntele Rosu**	**34.47**	**299**	eP	**P**	**08 14 31.2**	**+2.1**
MLR				pmax	pmax		
	comp=Z,17nm,1.1s						
CHAI	**Chaiyaphum**	**34.63**	**118**	P	**P**	**08 14 31.6**	**+1.0**
	comp=Z,104µm,1.0s						
DOPR	**Dopca**	**34.86**	**300**	⇑iP	pP	08 15 11.9	-2.1
NACGM	**Naroch**	**34.97**	**316**	e	pP	08 15 16.0	+1.1
BURAR	**Bucovina Array**	**34.99**	**303**	⇑iP	pP	08 15 12.3	-3.0
BUR08	**Bucovina Ar. S**	**35.00**	**303**	eP	**P**	**08 14 32.0**	**-1.6**
	comp=Z,4.3nm,1.2s						
PHET	**Kaeng Krachan**	**35.10**	**124**	P	**P**	**08 14 36.1**	**+1.5**
	comp=Z,129µm,0.8s						
VOIR		**35.10**	**299**	⇑iP	pP	08 15 13.8	-2.4
IIGN	**Ignalina**	**35.39**	**316**	eP	**P**	**08 14 37.9**	**+1.3**
IIGN				IAmb	IAmb	08 14 38.8	
	comp=Z,16nm,0.7s						
IIGN				epP	**pP**	**08 15 14.1**	**-4.5**
IIGN				epP	**pP**	**08 15 16.5**	**-2.0**
IIGN				esP	**sP**	**08 15 36.1**	**-5.7**
ARR	**Arges**	**35.40**	**299**	⇑iP	pP	08 15 16.6	-2.2
IZAR	**Zarasai**	**35.47**	**317**	eP	**P**	**08 14 38.8**	**+1.5**
IZAR				IAmb	IAmb	08 14 39.4	
	comp=Z,14nm,0.6s						
ISAL	**Salakas**	**35.49**	**317**	eP	**P**	**08 14 38.7**	**+1.2**
ISAL				IAmb	IAmb	08 14 39.6	
	comp=Z,7.5nm,0.8s						
ISAL				epP	**pP**	**08 15 17.2**	**-2.2**
ARCR	**ARCALIA**	**35.57**	**302**	⇑iP	pP	08 15 18.6	-1.6
BOD	**Bodaibo**	**35.58**	**39**	eP	**P**	**08 14 38.7**	**+0.5**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PANO	**Nakornpanom**	**35.72**	**114**	P	**P**	**08 14 40.3**	**+0.4**
	comp=Z,1.9nm,1.1s,comp=Z,305nm						
LVV	**L'vov**	**35.88**	**307**	eP	**P**	**08 14 42.2**	**+1.3**
LVV				i		08 15 23.5	
LVV				eS	**S**	**08 20 07.1**	**+3.6**
LVV				e		08 21 16.3	
PGB	**Panagyurishte**	**35.94**	**294**	eP	pP	08 15 25.4	+1.9
VSU	**Vasula**	**35.97**	**322**	eP	**P**	**08 14 41.5**	**+0.1**
VSU				IAmb	IAmb	08 14 43.1	
	comp=Z,116nm,0.8s						
VSU	**Vasula**	**35.97**	**322**	deP	**P**	**08 14 42.2**	**+0.7**
VSU				pmax	pmax		
	comp=Z,127nm,0.8s						
VTS	**Vitosha**	**36.61**	**295**	eP	pP	08 15 30.8	+1.4
DRGR		**36.70**	**302**	⇑iP	pP	08 15 27.9	-2.1
DRGR		**36.70**	**302**	P	**P**	**08 14 50.3**	**+2.4**
DRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KWP	**Kalwaria Pacla**	**36.73**	**306**	eP	**P**	**08 14 50.0**	**+1.9**
KWP				epP	**pP**	**08 15 27.9**	**-2.4**
KWP	**Kalwaria Pacla**	**36.73**	**306**	eP	**P**	**08 14 50.0**	**+1.9**
KWP				e*PP	**pP**	**08 15 27.9**	**-2.4**
WHN	**Wuhan**	**36.75**	**86**	P	**P**	**08 14 49.5**	**+1.0**
TRPA	**Tarpa**	**36.80**	**304**	⇑iP	pP	08 15 29.2	-1.6
TRPA	**Tarpa**	**36.80**	**304**	eP	pP	08 15 28.0	-2.7
SUW	**Suwalki**	**36.86**	**314**	eP	**P**	**08 14 49.8**	**+0.7**
SUW				epP	**pP**	**08 15 27.7**	**-3.7**
SUW	**Suwalki**	**36.86**	**314**	eP	**P**	**08 14 49.8**	**+0.7**
SUW				e*PP	**pP**	**08 15 27.7**	**-3.7**
UZH	**Uzhgorod**	**36.97**	**305**	eP	**P**	**08 14 50.7**	**+0.6**
UZH				e		08 15 30.1	
KOLS	**Kolonicke sedl**	**36.99**	**305**	eP	**P**	**08 14 51.8**	**+1.5**
KOLS				e		08 15 30.1	
KOLS	**Kolonicke sedl**	**36.99**	**305**	eP	**P**	**08 14 51.8**	**+1.5**
KOLS				epP	**pP**	**08 15 30.1**	**-2.3**
CHBT	**CHBT**	**37.03**	**121**	P	**P**	**08 14 51.0**	**0.0**
	comp=Z,121nm,2.8s,comp=Z,11µm						
TIA	**Tai'an**	**37.22**	**76**	P	**P**	**08 14 54.0**	**+1.6**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VAY	**Valandovo**	**37.27**	**292**	eP	pP	08 15 38.2	+3.2
FIA1	**FINESS Array S**	**37.29**	**326**	eP	**P**	**08 14 53.2**	**+0.6**
	comp=Z,35nm,0.8s						
FIA0	**FINESS Array S**	**37.29**	**326**	eP	**P**	**08 14 53.5**	**+0.8**
FINES	**FINESS Array B**	**37.29**	**326**	P	**P**	**08 14 53.5**	**+0.8**
	comp=Z,26nm,0.7s,baz=106,slow=10,SNR=88						
FINES				pP	**pP**	**08 15 36.0**	**+1.2**
	comp=Z,26nm,0.7s,baz=111,slow=10,SNR=9.1						
LVZ	**Lovozero**	**37.34**	**339**	eP	**P**	**08 14 52.7**	**-0.3**
	comp=Z,33nm,0.8s						
LVZ	**Lovozero**	**37.34**	**339**	deP	**P**	**08 14 53.5**	**+0.5**
LVZ				pmax	pmax		
	comp=Z,26nm,0.7s						
SIRR	**Siria**	**37.44**	**301**	⇑iP	pP	08 15 34.7	-1.6
STIP	**Stip**	**37.51**	**293**	eP	pP	08 15 32.8	-4.2
BZS	**Buzias**	**37.51**	**300**	⇓iP	pP	08 15 34.8	-2.1
APA	**Apatity**	**37.51**	**338**	⇓iP	**P**	**08 14 54.0**	**-0.4**
APA				i		08 15 36.0	
APA				MLR	MLR		
	comp=Z,200nm,10.0s						
HIA	**Hailar**	**37.59**	**54**	eP	**P**	**08 14 57.2**	**+1.8**
	comp=Z,12nm,0.6s						
HIA	**Hailar**	**37.59**	**54**	eP	**P**	**08 14 57.2**	**+1.8**
HIA				pmax	pmax		
	comp=Z,12nm,0.6s						
SLIT	**Slitere, Latvi**	**38.03**	**319**	eP	**P**	**08 14 58.4**	**-0.5**
SLIT				IAmb	IAmb	08 14 59.7	
	comp=Z,134nm,0.6s						
SLIT				epP	**pP**	**08 15 37.6**	**-3.6**
AMBH	**Ambrzfalva**	**38.08**	**301**	eP	pP	08 15 44.1	+2.3
PKDT	**Phuket**	**38.09**	**132**	P	**P**	**08 15 01.1**	**+1.3**
	comp=Z,113nm,1.0s,comp=Z,5µm						
FNA	**Florina**	**38.25**	**292**	eS	**S**	**08 20 41.6**	**+1.9**
NIE	**Niedzica**	**38.29**	**306**	eP	**P**	**08 15 03.3**	**+2.1**
NIE				epP	**pP**	**08 15 41.6**	**-2.0**
NIE	**Niedzica**	**38.29**	**306**	eP	**P**	**08 15 03.3**	**+2.1**
NIE				e*PP	**pP**	**08 15 41.6**	**-2.0**
PSZ	**Piszkesteto**	**38.58**	**303**	eP	**P**	**08 15 03.9**	**+0.2**
	comp=Z,4.2nm,1.0s						
PSZ	**Piszkesteto**	**38.58**	**303**	⇓iP	pP	08 15 43.8	-2.3
PSZ	**Piszkesteto**	**38.58**	**303**	eP	**P**	**08 15 03.9**	**+0.2**
PSZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PSZ	**Piszkesteto**	**38.58**	**303**	eP	pP	08 15 43.0	-3.1
OJC	**Ojcow**	**38.62**	**307**	eP	**P**	**08 15 05.4**	**+1.5**
OJC				epP	**pP**	**08 15 43.3**	**-3.1**
OJC	**Ojcow**	**38.62**	**307**	eP	**P**	**08 15 04.4**	**+0.5**
	comp=Z,10nm,1.0s						
OJC	**Ojcow**	**38.62**	**307**	eP	**P**	**08 15 04.4**	**+0.5**
OJC				pmax	pmax		
	comp=Z,11nm,1.0s						
LANS	**Liptovska Anna**	**38.84**	**305**	epP	pP	08 15 46.0	-2.2
TRTT	**Trang**	**38.96**	**130**	P	**P**	**08 15 07.6**	**+0.5**
	comp=Z,89nm,1.0s						
BUD	**Budapest**	**39.19**	**303**	eP	pP	08 15 53.1	+2.0
VYHS	**Vyhne**	**39.27**	**304**	eP	**P**	**08 15 12.4**	**+3.1**
VYHS	**Vyhne**	**39.27**	**304**	eP	**P**	**08 15 12.4**	**+3.1**
VYHS				epP	**pP**	**08 15 49.1**	**-2.8**
MORH	**Mrgy, Hungar**	**39.53**	**301**	eP	pP	08 15 51.1	-3.0
NJ2	**Nanjing**	**39.83**	**82**	eP	**P**	**08 15 13.5**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,19nm,0.7s						
JAVC	**Velka Javorina**	**40.03**	**305**	eP	**P**	**08 15 17.7**	**+2.1**
JAVC				e		08 15 55.8	
JAVC				e		08 16 00.1	
SKLT	**Songkhla**	**40.05**	**129**	P	**P**	**08 15 16.4**	**+0.3**
	comp=Z,54nm,1.0s,comp=Z,620nm						
DL2	**Dalian**	**40.06**	**71**	P	**P**	**08 15 12.5**	**-3.4**
DL2				pP	**pP**	**08 15 56.8**	**-2.8**
DL2				S	**S**	**08 21 07.5**	**+1.0**
DL2				pmax	pmax		
	comp=Z,20nm,0.9s						
MORC	**Moravsky Berou**	**40.08**	**306**	eP	**P**	**08 15 17.2**	**+1.2**
	comp=Z,6.3nm,1.0s						
MORC	**Moravsky Berou**	**40.08**	**306**	eP	**P**	**08 15 17.2**	**+1.2**
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MORC	**Moravsky Berou**	**40.08**	**306**	eP	**P**	**08 15 17.3**	**+1.2**
MORC				e		08 15 55.7	
MORC				e		08 16 00.2	
HKPS	**Hong Kong Po S**	**40.20**	**98**	eP	**P**	**08 15 16.9**	**-0.3**
	comp=Z,154nm,1.3s						
MODS	**Modra-Piesok**	**40.31**	**304**	epP	pP	08 15 57.5	-3.2
GKP	**Gorka Klasztor**	**40.31**	**312**	eP	**P**	**08 15 18.8**	**+1.0**
GKP	**Gorka Klasztor**	**40.31**	**312**	eP	**P**	**08 15 18.8**	**+1.0**
VRAC	**Vranov**	**40.72**	**306**	P	**P**	**08 15 23.9**	**+2.7**
VRAC				pmax	pmax		
	comp=Z,11nm,1.1s						
VRAC	**Vranov**	**40.72**	**306**	eP	**P**	**08 15 22.8**	**+1.6**
VRAC				e		08 16 01.1	
VRAC				e		08 16 05.8	
BEHE	**Becsehely**	**40.80**	**301**	eP	pP	08 16 02.1	-2.6
SOP	**Sopron**	**40.84**	**303**	eP	pP	08 16 03.1	-1.9
DPC	**Dobruska-Polom**	**40.85**	**307**	eP	**P**	**08 15 23.9**	**+1.6**
DPC				e*PP	**pP**	**08 16 02.6**	**-2.7**
DPC				eS	**S**	**08 21 09.4**	**-8.7**
DPC	**Dobruska-Polom**	**40.85**	**307**	eP	**P**	**08 15 23.9**	**+1.6**
DPC				epP	**pP**	**08 16 02.6**	**-2.7**
DPC				eS	**S**	**08 21 09.4**	**-8.7**
KRUC	**Moravsky**	**40.86**	**305**	eP	**P**	**08 15 24.0**	**+1.7**
KRUC				e		08 16 06.6	
KSP	**Ksiaz**	**40.86**	**308**	eP	**P**	**08 15 21.8**	**-0.5**
KSP				epP	**pP**	**08 16 02.9**	**-2.3**
KSP	**Ksiaz**	**40.86**	**308**	eP	**P**	**08 15 21.8**	**-0.5**
KSP				e*PP	**pP**	**08 16 02.9**	**-2.3**
OSTC	**Ostas**	**40.92**	**308**	eS	**S**	**08 21 21.4**	**+2.4**
CHVC	**Chvalec**	**41.02**	**308**	eP	**P**	**08 15 26.0**	**+2.3**
CHVC				epP	**pP**	**08 16 08.1**	**+1.5**
ARCES	**ARCESS Array B**	**41.02**	**338**	P	**P**	**08 15 24.4**	**+1.0**
	comp=Z,36nm,0.7s,baz=109,slow=9.1,SNR=120						
ARE0	**ARCESS Array S**	**41.02**	**338**	eP	**P**	**08 15 24.5**	**+1.1**
	comp=Z,2.1nm,0.8s						
ARE0	**ARCESS Array S**	**41.02**	**338**	eP	**P**	**08 15 24.5**	**+1.1**
UPC	**Upice**	**41.05**	**308**	eP	**P**	**08 15 25.6**	**+1.7**
UPC				e*PP	**pP**	**08 16 03.8**	**-3.0**
UPC				eS	**S**	**08 21 20.6**	**-0.3**
UPC	**Upice**	**41.05**	**308**	eP	**P**	**08 15 25.6**	**+1.7**
UPC				epP	**pP**	**08 16 03.8**	**-3.0**
UPC				eS	**S**	**08 21 20.6**	**-0.3**
KCSI	**Kotacane, Aceh**	**41.28**	**136**	P	**P**	**08 15 24.7**	**-1.5**
	comp=Z,46nm,0.9s						
CONA	**Conrad Observa**	**41.29**	**304**	i P	**P**	**08 15 27.8**	**+1.8**
	comp=Z,14nm,1.4s						
CONA				i pP	**pP**	**08 16 06.2**	**-2.7**
	comp=Z,44nm,1.2s						
KTK1	**Kautokeino**	**41.48**	**336**	eP	**P**	**08 15 28.0**	**+0.8**
KULM	**Kulim**	**41.54**	**131**	eP	**P**	**08 15 27.4**	**-0.8**
	comp=Z,134nm,1.5s						
ARSA	**Arzberg**	**41.58**	**303**	i P	**P**	**08 15 30.0**	**+1.8**
	comp=Z,3.4nm,1.1s						
ARSA				i pP	**pP**	**08 16 08.9**	**-2.3**
	comp=Z,15nm,1.4s						
GOPC	**GO Pecny, Ondr**	**41.86**	**307**	eS	**S**	**08 21 34.2**	**+1.3**
CN2	**Changchun**	**41.93**	**62**	eP	**P**	**08 15 32.3**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DLV	**T Lat**	**41.95**	**116**	eP	**P**	**08 15 31.6**	**-0.2**
	comp=Z,41nm,1.0s						
SOKA	**Soboth**	**41.97**	**302**	i P	**P**	**08 15 32.6**	**+1.1**
	comp=Z,5.2nm,1.1s						
SOKA				i pP	**pP**	**08 16 11.2**	**-3.4**
	comp=Z,27nm,1.2s						
PRU	**Pruhonice**	**42.01**	**307**	eP	**P**	**08 15 34.0**	**+2.3**
PRU				eS	**S**	**08 21 36.3**	**+1.2**
PRU	**Pruhonice**	**42.01**	**307**	eP	**P**	**08 15 34.0**	**+2.3**
PRU				epP	**pP**	**08 16 11.9**	**-2.9**
PRU				eS	**S**	**08 21 36.3**	**+1.2**
HAMF	**Hammerfest**	**42.11**	**339**	eP	**P**	**08 15 33.6**	**+1.4**
OBKA	**Obir**	**42.32**	**302**	i pP	pP	08 16 18.1	+0.6
	comp=Z,13nm,1.4s						
BRG	**Berggiesshubel**	**42.35**	**308**	i P	**P**	**08 15 35.8**	**+1.4**
	comp=Z,15nm,1.2s						
BRG				i pP	**pP**	**08 16 14.2**	**-3.3**
	comp=Z,12nm,0.9s						
BRG	**Berggiesshubel**	**42.35**	**308**	i P	**P**	**08 15 35.8**	**+1.4**

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BRG                                 i *PP  pP     08 16 14.2 -3.3
BRG                                   pmax pmax
       comp=Z,15nm,1.2s
MOA    Molln            42.36 304   i P    P      08 15 35.6 +1.0
       comp=Z,6.0nm,1.0s
MOA                                 i pP   pP     08 16 14.4 -3.3
       comp=Z,19nm,1.1s
IPM    Ipoh             42.40 131   eP     P      08 15 35.1 -0.1
       comp=Z,126nm,0.8s
PSI    Prapat           42.52 135    P     P      08 15 35.8 -0.6
       comp=Z,46nm,0.7s,baz=300,slow=6.0,SNR=15
PSI    Prapat           42.52 135   eP     P      08 15 35.6 -0.8
       comp=Z,54nm,0.8s
PSI    Prapat           42.52 135   eP     P      08 15 35.6 -0.8
PSI                                   pmax pmax
       comp=Z,54nm,0.8s
GEC2   GERESS Array S   42.64 305   eP     P      08 15 37.8 +0.9
       comp=Z,3.0nm,1.0s
GEC2   GERESS Array S   42.64 305   eP     P      08 15 37.8 +0.9
GEC2                                  pmax pmax
       comp=Z,3.0nm,1.0s
GERES  GERESS Array B   42.64 305    P     P      08 15 38.6 +1.7
       comp=Z,0.7nm,0.2s,baz=90,slow=7.8,SNR=3.9
GERES                                 pP   pP     08 16 22.7 +2.4
       comp=Z,4.8nm,0.8s,baz=85,slow=8.2,SNR=4.0
KHC    Kasperske Hory   42.70 306   eP     P      08 15 39.4 +2.1
KHC                                 e             08 16 22.5
KHC                                 eS     S      08 21 48.0 +2.7
KHC    Kasperske Hory   42.70 306   eP     P      08 15 39.4 +2.1
KHC                                 epP    pP     08 16 17.0 -3.6
KHC                                 epP    pP     08 16 22.5 +1.9
KHC                                 eS     S      08 21 48.0 +2.7
CLL    Collm            42.92 309   eP     P      08 15 38.8 -0.2
       comp=Z,5.2nm,0.8s
CLL    Collm            42.92 309   eP     P      08 15 40.0 +1.0
CLL                                 eS     S      08 21 48.0 -0.3
CLL                                   pmax pmax
       comp=Z,6.0nm,0.8s
CLL    Collm            42.92 309   eP     P      08 15 40.0 +1.0
       comp=Z,6.0nm,0.8s
CLL                                 e             08 16 18.0
CLL                                 i pP   pP     08 16 22.5 +0.2
       comp=Z,24nm,1.2s
CLL                                 esP    sP     08 16 48.0 +2.9
CLL                                 e             08 17 03.0
CLL                                 ePP    PP     08 17 23.0 +0.3
CLL                                 eS     S      08 21 48.0 -0.3
CLL                                 eSS    SS     08 25 07.0 -0.8
CLL                                   Lm   MLR    08 34 00.0
       comp=Z,200nm,18.1s
MYKA   Terra Mystica    42.93 302   i pP   pP     08 16 18.6 -3.9
       comp=Z,11nm,1.0s
GSI    Gunungsitoli     43.02 138   eP     P      08 15 40.9 +0.7
       comp=Z,127nm,0.7s
GSI    Gunungsitoli     43.02 138    P     P      08 15 41.2 +1.0
       comp=Z,230nm,1.2s
KBA    Koelnbreinsper   43.07 303   i pP   pP     08 16 20.6 -3.1
       comp=Z,24nm,0.9s
TRO    Tromso           43.13 336   eP     P      08 15 41.0 +0.6
MOR8   Moi Rana         43.65 331   eP     P      08 15 44.8 +0.2
ABTA   Abfaltersbach    43.68 302   i pP   pP     08 16 25.1 -3.5
       comp=Z,12nm,1.3s
NC405  NORSAR Array S   43.94 323   eP     P      08 15 47.7 +0.7
       comp=Z,38nm,0.8s
NC602  NORSAR Array S   43.98 323   eP     P      08 15 47.8 +0.4
       comp=Z,33nm,1.4s
NC303  NORSAR Array S   44.12 323   eP     P      08 15 48.9 +0.5
       comp=Z,56nm,0.6s
NB201  NORSAR Array S   44.14 323   eP     P      08 15 48.8 +0.2
       comp=Z,25nm,0.6s
NB2    NORSAR Subarra   44.17 323    P     P      08 15 49.0 +0.1
       comp=Z,16nm,0.5s,baz=98,slow=7.9
NB2    NORSAR Subarra   44.17 323    P     P      08 15 49.0 +0.1
       baz=98,slow=7.9
NB200  NORSAR Array S   44.17 323   eP     P      08 15 49.2 +0.3
NOA    NORSAR Array B   44.17 323    P     P      08 15 49.2 +0.3
       comp=Z,21nm,0.7s,baz=97,slow=7.8,SNR=68
NOA                                   pP   pP     08 16 34.7 +2.4
       comp=Z,19nm,0.7s,baz=96,slow=8.1,SNR=7.9
YAK    Yakutsk          44.18  35   eP     P      08 15 48.6 -0.2
       comp=Z,65nm,0.8s
YAK    Yakutsk          44.18  35   eP     P      08 15 48.9  0.0
YAK                                 e*PP   pP     08 16 33.5 +0.4
YAK                                 e             08 17 29.3
YAK                                 e             08 17 37.3
YAK                                 eS     S      08 22 06.3  0.0
YAK                                 e*SS   sS     08 23 25.9 +1.2
YAK                                 e             08 25 27.8
YAK                                   pmax pmax
       comp=Z,45nm,0.8s
YAK                                   pmax pmax
       comp=N,4.0nm,0.9s
YAK                                   pmax pmax
       comp=Z,36nm,1.1s
YAK                                   pmax pmax
       comp=E,12nm,1.1s
YAK                                   pmax pmax
       comp=N,16nm,1.0s
YAK                                   smax smax
       comp=E,297nm,1.8s
YAK                                   smax smax
       comp=N,153nm,1.6s
WTTA   Wattenberg       44.20 303   i pP   pP     08 16 28.4 -4.6
       comp=N,29nm,1.2s
KONS   Konsvik          44.25 331   eP     P      08 15 50.0 +0.7
NAO01  NORSAR Array S   44.31 323   eP     P      08 15 49.2 -0.7
       comp=N,58nm,1.3s
NBO00  NORSAR Array S   44.38 323   eP     P      08 15 50.5 -0.1
       comp=N,81nm,1.1s
NC204  NORSAR Array S   44.41 323   eP     P      08 15 51.0 +0.1
       comp=N,120nm,1.3s
NC204  NORSAR Array S   44.41 323   eP     P      08 15 51.4 +0.6
SQTA   Sankt Quirin     44.50 303   i pP   pP     08 16 31.8 -3.5
       comp=N,19nm,0.9s
MOTA   Moosalm          44.55 303   i pP   pP     08 16 32.0 -3.8
       comp=N,10nm,1.0s
MDJ    Mudanjiang       44.72  60    P     P      08 16 10.3 +17
MDJ                                  S     S      08 22 15.3 +0.7
MDJ                                   pmax pmax
       comp=Z,7.0nm,0.4s
MDJ                                   pmax pmax
       comp=Z,79nm,4.7s
FETA   Feichten         44.85 303   i P    P      08 15 54.9 +0.3
       comp=Z,5.4nm,1.1s
FETA                                i pP   pP     08 16 34.9 -3.3
       comp=Z,22nm,1.3s
TPUB   Ta-pu            44.90  93   eP     P      08 15 56.3 +1.2
       comp=Z,42nm,1.4s
SSLB   Suanglung        44.92  92   eP     P      08 15 57.1 +1.7
       comp=Z,43nm,1.0s
KS15   Wonju Array Si   45.20  71   eP     P      08 15 54.2 -3.1
       comp=Z,22nm,1.4s
KSRS   Korea Array      45.22  71    P     P      08 15 57.8 +0.3
       comp=Z,2.7nm,0.7s,baz=272,slow=6.7,SNR=11
KSRS                                  pP   pP     08 16 44.0 +1.9
       comp=Z,3.6nm,0.8s,baz=281,slow=6.7,SNR=3.3
KSRS                                  sP   sP     08 17 07.3 +2.2
       comp=Z,17nm,1.2s,baz=278,slow=7.1,SNR=4.3
FUORN  Ofenpass-Fuorn   45.23 303   eP     P      08 15 56.1 -1.7
       comp=Z,5.7nm,0.8s
DAVA   Damuels          45.38 304   i P    P      08 15 59.2 +0.4
       comp=Z,13nm,1.1s
DAVA                                i pP   pP     08 16 39.4 -3.1
       comp=Z,33nm,0.9s
YULB   Yu-li            45.39  92   eP     P      08 16 00.6 +1.7
       comp=Z,31nm,0.9s
KLR    Kul'dur          45.44  54    P     P      08 15 59.9 +0.9
       comp=Z,6.7nm,0.6s,baz=278,slow=8.4,SNR=23
KLR                                   pP   pP     08 16 45.9 +2.2
       comp=Z,7.7nm,0.6s,baz=271,slow=8.1,SNR=4.2
KLR    Kul'dur          45.44  54c iP    P      08 15 59.4 +0.4
KLR                                   pmax pmax
       comp=Z,12nm,1.1s
TWG    Pinlang          45.48  93   eP     P      08 16 00.7 +1.0
       comp=Z,260nm,0.9s
BKNI   Bangkinang       45.75 135   eP     P      08 16 01.6 -0.2
       comp=Z,255nm,1.0s
TIXI   Tiksi            45.92  22    P     P      08 16 03.0 +0.6
       comp=Z,9.3nm,0.3s,baz=268,slow=4.5,SNR=20
TIXI                                  pP   pP     08 16 48.0 +0.9
       comp=Z,31nm,0.7s,baz=277,slow=6.4,SNR=4.3
TIXI   Tiksi            45.92  22   eP     P      08 16 02.8 +0.4
       comp=Z,20nm,0.7s
MYKOM  Kota Tinggi      46.24 131   eP     P      08 16 06.3 +0.6
       comp=Z,118nm,1.0s
PDSI   Padang           46.44 137    P     P      08 16 06.7 -0.5
       comp=Z,101nm,1.1s,comp=Z,2µm
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USRK   Ussuriysk Ar.    46.49  61    P     P      08 16 07.6 +0.4
       comp=Z,2.0nm,0.5s,baz=273,slow=7.1,SNR=7.0
USRK                                  pP   pP     08 16 54.4 +2.3
       comp=Z,1.2nm,0.2s,baz=65,slow=20,SNR=3.9
HSPB   Hornsund (broa   47.06 345   eP     P      08 16 11.3 +0.1
HSPB                                epP    pP     08 16 57.2 +1.5
HSPB   Hornsund (broa   47.06 345   eP     P      08 16 11.3 +0.1
HSPB                                e*PP   pP     08 16 57.2 +1.5
SENIN  Lac Senin/Sane   47.29 303   eP     P      08 16 12.9 -0.8
       comp=Z,5.4nm,0.8s
MEM    Membach          47.39 309   ⇑P     P      08 16 15.3 +1.2
MEM                                 ⇑pP    pP     08 16 54.9 -3.4
SPA0   Spitsbergen Ar   47.42 347   eP     P      08 16 14.9 +0.9
       comp=Z,17nm,1.0s
WLF    Walferdange      47.45 307   eP     P      08 16 12.9 -1.7
       comp=Z,44nm,1.0s
WLF    Walferdange      47.45 307   eP     P      08 16 12.9 -1.7
WLF                                   pmax pmax
       comp=Z,44nm,1.0s
WLF    Walferdange      47.45 307   ⇑P     P      08 16 16.9 +2.4
WLF                                 ⇑pP    pP     08 16 56.2 -2.5
       comp=Z,26nm,1.3s
KRJI   Kerinci          47.97 136    P     P      08 16 20.2 +1.1
       comp=Z,169nm,0.9s
GRNR   Gornyy           48.19  51   eP     P      08 16 21.4 +1.1
GRNR                                e             08 17 07.2
GRNR                                  pmax pmax
       comp=Z,21nm,1.0s
KBS    Kingsbay         48.54 347   eP     P      08 16 23.8 +1.3
       comp=Z,23nm,0.8s
KBS    Kingsbay         48.54 347   eP     P      08 16 23.8 +1.3
KBS                                   pmax pmax
       comp=Z,23nm,0.8s
KMBO   Kilima Mbogo     48.56 227    P     P      08 16 25.0 +1.2
       comp=Z,9.2nm,0.5s,baz=356,slow=10.0,SNR=8.2
KMBO   Kilima Mbogo     48.56 227   eP     P      08 16 23.9 +0.1
       comp=Z,12nm,0.6s
KMBO   Kilima Mbogo     48.56 227   eP     P      08 16 23.9 +0.1
KMBO                                  pmax pmax
       comp=Z,11nm,0.6s
KEST   Kesra            48.70 288    P     P      08 16 25.7 +1.3
       comp=Z,1.4nm,0.5s,baz=110,slow=1.5,SNR=3.8
KEST   Kesra            48.70 288   eP     P      08 16 25.5 +1.0
       comp=Z,4.1nm,0.8s
KSM    Kuching          50.62 124   eP     P      08 16 39.2 +0.2
       comp=Z,45nm,1.0s
SBUM   Sibu             51.20 122   eP     P      08 16 44.5 +1.2
       comp=Z,21nm,1.0s
MDSI   Maura Dua        51.46 135    P     P      08 16 45.1 -0.2
       comp=Z,19nm,1.2s
KKM    Kota Kinabalu    51.53 115   eP     P      08 16 47.0 +1.1
       comp=Z,161nm,1.2s
KLSI                    51.94 135    P     P      08 16 45.4 -3.4
       comp=Z,61nm,0.9s
TYV    Tymovskoe        52.05  50   eP     P      08 16 50.7 +1.5
TYV                                   pmax pmax
       comp=Z,10.0nm,1.7s
ESK    Eskdalemuir      52.07 316ceP       P      08 16 51.5 +2.2
TPI    Tanjungpandan    52.14 130    P     P      08 16 50.4 +0.1
       comp=Z,49nm,1.2s,comp=Z,631nm
MBAR   Mbarara          52.21 234    P     P      08 16 51.7 +0.7
       comp=Z,17nm,0.5s,baz=41,slow=11,SNR=23
MBAR   Mbarara          52.21 234   eP     P      08 16 51.3 +0.2
       comp=Z,19nm,0.6s
STKI   Sintang          52.44 124    P     P      08 16 53.8 +1.3
       comp=Z,80nm,0.8s
YSS    Yuzh-Sakhalins   53.12  55   eP     P      08 16 57.5 +0.3
       comp=Z,42nm,0.8s
YSS    Yuzh-Sakhalins   53.12  55⇑eP       P      08 16 57.3 +0.2
YSS                                   pmax pmax
       comp=Z,50nm,0.7s
YSS                                   MLR  MLR
       comp=Z,100nm,15.0s
MJB9   Matsu-Tunnel     53.29  68   eP     P      08 16 57.9 -0.6
       comp=Z,18nm,0.9s
MAT    Matsushiro       53.29  68    P     P      08 16 57.9 -0.6
MJAR   Matsushiro Arr   53.29  68    P     P      08 16 58.6  0.0
       comp=Z,11nm,1.0s,baz=286,slow=9.5,SNR=15
COCO   West Island      54.39 148ceP       P      08 17 05.9 -0.7
MA2    Magadan          54.59  38   eP     P      08 17 08.4 +0.8
MA2    Magadan          54.59  38ceP       P      08 17 08.3 +0.8
MA2                                   pmax pmax
       comp=Z,13nm,1.1s
SEY    Seymchan         54.63  34    P     P      08 17 09.0 +1.3
       comp=Z,10nm,0.6s,baz=271,slow=11,SNR=40
DAG    Danmarks Havn    54.64 344   i P    pP     08 17 54.5 +1.3
       comp=Z,34nm,0.8s
DAG                                 i             08 18 17.3
ESDC   Sonseca Array    57.15 298    P     P      08 17 26.6 +0.5
       comp=Z,0.4nm,0.4s,baz=57,slow=7.8,SNR=6.4
KBKI   Kotabaru         58.06 123    P     P      08 17 33.9 +1.2
       comp=Z,60nm,0.9s
BILL   Bilibino         58.77  26⇑eP       P      08 17 38.3 +1.5
BILL                                i *PP  PcP    08 18 24.3 +0.1
BILL                                e             08 19 49.6
BILL                                  pmax pmax
       comp=Z,18nm,1.1s
PCAB   Cabril           59.21 301   eP     pP     08 18 24.4 -2.0
       comp=Z,56nm,1.3s
PGAV   Gavieira, Arco   59.27 302   eP     pP     08 18 24.5 -2.4
       comp=Z,50nm,1.6s
MTE    Manteigas        59.39 300   eP     pP     08 18 25.5 -2.2
       comp=Z,67nm,1.6s
ABPO   Ambohimpanom     59.45 206   eP     P      08 17 43.2 +1.0
       comp=Z,26nm,1.1s
ABPO   Ambohimpanom     59.45 206   eP     P      08 17 43.2 +1.0
ABPO                                  pmax pmax
       comp=Z,26nm,1.1s
PVIS   Viseu            59.51 300   eP     pP     08 18 25.8 -2.7
       comp=Z,39nm,2.0s
PEA1   Petropavlovsk-   60.22  44   eP     P      08 17 46.8 -0.2
PETK   Petropavlovsk-   60.23  44    P     P      08 17 46.8 -0.2
       comp=Z,4.7nm,0.6s,baz=335,slow=1.3,SNR=15
PETK                                  pP   pP     08 18 34.1  0.0
       comp=Z,2.8nm,0.6s,baz=296,slow=1.2,SNR=4.5
TTSI   Tana Toraja      60.40 120    P     P      08 17 48.3 -0.4
       comp=Z,37nm,0.9s
PVAQ   Vaqueiros        60.75 297   eP     pP     08 18 36.0 -1.2
       comp=Z,30nm,1.5s
SUMG   Summit           60.95 341   eP     P      08 17 52.4 +0.3
       comp=Z,14nm,1.1s
SUMG   Summit           60.95 341   eP     P      08 17 52.4 +0.3
SUMG                                  pmax pmax
       comp=Z,14nm,1.1s
SUMG   Summit           60.95 341⇓iP       pP     08 18 40.0 +1.3
       comp=Z,247nm,1.1s
SUMG                                i             08 19 03.3
SPSI   Sidrap Palu      61.02 120    P     P      08 17 52.2 -0.6
       comp=Z,13nm,1.0s
PNCL   Nicolau / Gran   61.03 298   eP     pP     08 18 41.2 +2.1
BNSI   Bone             61.56 120    P     P      08 17 56.7 +0.2
       comp=Z,29nm,1.2s
KAPI   Kappang          61.76 121    P     P      08 17 56.1 -1.7
       comp=Z,28nm,0.9s,baz=268,slow=1.6,SNR=7.7
KAPI   Kappang          61.76 121   eP     P      08 17 57.3 -0.5
       comp=Z,43nm,1.0s
KAPI   Kappang          61.76 121   eP     P      08 17 57.3 -0.5
KAPI                                  pmax pmax
       comp=Z,43nm,1.0s
BKSI   Bulukumba        62.23 121    P     P      08 18 01.4 +0.5
       comp=Z,14nm,1.0s
TNTI   Ternate          63.32 111   eP     P      08 18 06.8 -1.4
       comp=Z,247nm,1.2s
TNTI   Ternate          63.32 111    P     P      08 18 08.1 -0.1
       comp=Z,170nm,1.2s,comp=Z,2µm
SANI   Sanana           64.16 114    P     P      08 18 13.2 -0.4
       comp=Z,133nm,0.8s,comp=Z,1µm
LBMI   Labuha           64.34 112    P     P      08 18 13.9 -1.0
LSZ    Lusaka           65.19 226   eP     P      08 18 19.3 -1.0
       comp=Z,32nm,1.4s
LSZ    Lusaka           65.19 226   eP     P      08 18 19.3 -1.0
LSZ                                   pmax pmax
       comp=Z,32nm,1.4s
TOA1   Torodi Ar. Sit   65.36 268   eP     P      08 18 17.9 -3.5
TOA1                                esP    sP     08 19 36.0 +5.5
TOA0   Torodi Ar. Sit   65.36 268   eP     P      08 18 19.9 -1.5
       comp=Z,12nm,1.2s
TORD   Torodi Ar. Bea   65.36 268    P     P      08 18 17.9 -3.5
       comp=Z,4.3nm,0.4s,baz=28,slow=5.6,SNR=43
TORD                                  pP   pP     08 19 09.9 +1.3
       comp=Z,8.0nm,0.8s,baz=30,slow=7.5,SNR=4.8
TORD                                  sP   sP     08 19 36.0 +5.5
       comp=Z,9.6nm,0.7s,baz=70,slow=4.1,SNR=3.8
WSI    Waingapu         65.50 124    P     P      08 18 23.0 +0.8
       comp=Z,918nm,0.5s,comp=Z,22µm
NLAI   Namlea           65.77 114    P     P      08 18 24.2 +0.2
       comp=Z,133nm,0.8s,comp=Z,1µm
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ILULI  Ilulissat        66.29 341   i P    pP     08 19 15.0 +1.0
       comp=Z,67nm,1.0s
AAI    Ambon            66.88 114    P     P      08 18 31.2 +0.1
MSAI   Masohi           67.20 113    P     P      08 18 32.0 -1.1
SWI    Sorong           67.33 109    P     P      08 18 34.2 +0.3
       comp=Z,102nm,1.2s,comp=Z,1µm
SIJI   Sorong           67.34 109    P     P      08 18 33.5 -0.5
       comp=Z,154nm,1.0s,baz=329,slow=6.9,SNR=42
SFJD   Kangerlussuaq    67.64 339   i P    pP     08 19 23.2 +0.6
       comp=Z,20nm,0.8s
SOEI   Soe              68.25 121   eP     P      08 18 39.5 -0.2
       comp=Z,109nm,0.9s
SOEI   Soe              68.25 121    P     P      08 18 39.1 -0.7
       comp=Z,132nm,1.1s
MATP   Matopo           69.16 222   i P    P      08 18 45.8 +0.5
MATP   Matopo           69.16 222   i P    P      08 18 45.8 +0.5
FAKI   Fak Fak          69.41 110   eP     P      08 18 46.6 -0.2
       comp=Z,133nm,1.0s
FAKI   Fak Fak          69.41 110    P     P      08 18 46.5 -0.3
       comp=Z,144nm,1.0s,comp=Z,1µm
TOLK   Toolik Lake Re   71.02  14   eP     P      08 18 56.8 +1.0
       comp=Z,18nm,0.7s
COLD   Coldfoot         72.08  15   eP     P      08 19 03.2 +1.1
       comp=Z,11nm,1.0s
FYU    Fort Yukon       73.67  14   eP     P      08 19 12.3 +1.0
       comp=Z,41nm,1.1s
INK    Inuvik           73.97   9   eP     P      08 19 13.5 +0.4
       comp=Z,28nm,1.2s
INK    Inuvik           73.97   9   eP     P      08 19 13.5 +0.4
INK                                   pmax pmax
       comp=Z,28nm,1.2s
PSAC1  Pilbara Seismi   74.12 133   eP     P      08 19 14.2 -0.5
       comp=Z,59nm,1.2s
PSAB1  Pilbara Seismi   74.15 133   eP     P      08 19 14.1 -0.7
       comp=Z,65nm,1.4s
TTA    Tatalina         74.16  20   eP     P      08 19 15.4 +1.0
       comp=Z,9.9nm,1.0s
TTA    Tatalina         74.16  20   eP     P      08 19 15.4 +1.0
TTA                                   pmax pmax
       comp=Z,10.0nm,1.0s
PSAB2  Pilbara Seismi   74.17 133   eP     P      08 19 13.9 -1.0
       comp=Z,50nm,1.3s
PSAA1  Pilbara Seismi   74.17 133   eP     P      08 19 13.8 -1.1
       comp=Z,45nm,1.3s
PSA00  Pilbara Seismi   74.17 133   eP     P      08 19 14.1 -0.9
       comp=Z,26nm,1.0s
PSAA3  Pilbara Seismi   74.18 133   eP     P      08 19 14.5 -0.5
       comp=Z,29nm,1.0s
DBIC   Dimbokro         74.34 267    P     P      08 19 15.8 -0.4
       comp=Z,3.4nm,0.5s,baz=11,slow=8.7,SNR=10
KIC    Kosan Boka       74.43 266   eP     P      08 19 15.4 -1.3
       comp=Z,11nm,0.5s
MDM    Murphy Dome      74.43  16   eP     P      08 19 15.9  0.0
       comp=Z,24nm,1.1s
LBTB   Lobatse          74.43 222   eP     P      08 19 16.6 +0.1
       comp=Z,56nm,1.3s
LBTB   Lobatse          74.43 222   eP     P      08 19 16.6 +0.1
LBTB                                  pmax pmax
       comp=Z,56nm,1.3s
TIC    Toumodi          74.48 267   eP     P      08 19 15.7 -1.3
BPAW   Bear Paw Mtn.    74.51  18   eP     P      08 19 16.0 -0.4
       comp=Z,15nm,1.0s
COLA   College          74.59  16   eP     P      08 19 17.2 +0.5
       comp=Z,32nm,0.8s
COLA   College          74.59  16c iP    P      08 19 17.3 +0.5
COLA                                  pmax pmax
       comp=Z,32nm,0.9s
TSUM   Tsumeb           74.63 231   i P    P      08 19 18.4 +0.7
TSUM   Tsumeb           74.63 231   eP     P      08 19 17.9 +0.2
       comp=Z,29nm,1.3s
TSUM   Tsumeb           74.63 231   i P    P      08 19 18.4 +0.7
LIC    Lamto            74.74 266   eP     P      08 19 17.1 -1.3
       comp=Z,46nm,1.3s
CCB    Clear Creek Bu   74.79  16   eP     P      08 19 17.9  0.0
       comp=Z,6.6nm,1.0s
CAST   Castle Rocks     74.81  18   eP     P      08 19 18.1  0.0
       comp=Z,53nm,1.0s
BWN    Browne           74.82  17   eP     P      08 19 18.8 +0.7
       comp=Z,52nm,1.1s
WRH    Wood River Hil   74.88  16   eP     P      08 19 18.4 -0.1
       comp=Z,8.2nm,1.0s
ILAR   Eielson Array    74.89  16    P     P      08 19 18.4 -0.1
       comp=Z,10nm,0.9s,baz=320,slow=4.2,SNR=75
ILAR                                  pP   pP     08 20 08.2 +0.7
       comp=Z,6.2nm,0.9s,baz=312,slow=5.1,SNR=5.8
ILB    Eielson Array    74.89  16   eP     P      08 19 18.4 -0.1
       comp=Z,14nm,1.0s
KTH    Kantishna Hill   74.99  18   eP     P      08 19 19.5 +0.3
       comp=Z,35nm,1.1s
HDA    Harding Lake     75.19  16   eP     P      08 19 19.6 -0.6
       comp=Z,9.0nm,0.9s
MTN    Manton Dam       75.21 119   eP     P      08 19 20.2 -0.8
       comp=Z,17nm,0.8s
PPLA   Purkeypile       75.21  19   eP     P      08 19 20.9 +0.4
       comp=Z,19nm,1.3s
GENI   Genyem           75.30 105    P     P      08 19 22.7 +1.1
       comp=Z,120nm,1.4s
MCK    McKinley         75.31  17   eP     P      08 19 21.4 +0.4
       comp=Z,9.3nm,0.8s
MCK    McKinley         75.31  17   eP     P      08 19 21.4 +0.4
MCK                                   pmax pmax
       comp=Z,9.0nm,0.8s
EPYK   Eagle Plains     75.34  11   eP     P      08 19 21.5 +0.4
       comp=Z,18nm,1.1s
RND    Reindeer         75.61  17   eP     P      08 19 22.9 +0.1
       comp=Z,22nm,1.2s
RND    Reindeer         75.61  17   eP     P      08 19 22.9 +0.1
RND                                   pmax pmax
       comp=Z,22nm,1.2s
SVW2   Sparrevohn       75.75  21   eP     P      08 19 24.4 +1.0
       comp=Z,9.4nm,1.0s
EGAK   Eagle            76.04  13   eP     P      08 19 26.0 +1.0
       comp=Z,14nm,1.1s
SKT    Skwentna         76.14  19   eP     P      08 19 25.6 -0.1
       comp=Z,36nm,1.0s
SCRK   Sand Creek       76.20  15   eP     P      08 19 26.8 +0.7
       comp=Z,17nm,1.0s
RIDG   Independent Ri   76.23  15   eP     P      08 19 25.6 -0.6
       comp=Z,19nm,1.1s
DHY    Denali Highway   76.24  17   eP     P      08 19 26.5 +0.1
       comp=Z,15nm,0.9s
DOT    Dot Lake         76.47  15   eP     P      08 19 27.2 -0.3
       comp=Z,12nm,1.0s
PAX    Paxson           76.77  16   eP     P      08 19 29.3  0.0
       comp=Z,21nm,1.0s
PAX    Paxson           76.77  16   eP     P      08 19 29.3  0.0
PAX                                   pmax pmax
       comp=Z,21nm,1.0s
SUA    Susitna One      76.78  19   eP     P      08 19 29.7 +0.2
       comp=Z,17nm,0.9s
DAWY   Dawson           77.01  13   eP     P      08 19 30.1 -0.5
       comp=Z,15nm,0.9s
RSO    Redoubt South    77.07  20   eP     P      08 19 32.1 +1.0
PMR    Palmer           77.09  18   eP     P      08 19 31.0 +0.1
       comp=Z,15nm,0.9s
PMR    Palmer           77.09  18   eP     P      08 19 31.0 +0.1
PMR                                   pmax pmax
       comp=Z,15nm,0.9s
SML    Sawmill          77.11  18   eP     P      08 19 31.4 +0.3
SML    Sawmill          77.11  18   eP     P      08 19 31.4 +0.3
MENT   Mentasta         77.18  15   eP     P      08 19 32.3 +0.8
       comp=Z,4.4nm,1.0s
SCM    Sheep Creek Mo   77.33  17   eP     P      08 19 32.7 +0.3
       comp=Z,28nm,0.9s
SCM    Sheep Creek Mo   77.33  17   eP     P      08 19 32.7 +0.3
SCM                                   pmax pmax
       comp=Z,28nm,0.9s
RC01   Rabbit Creek A   77.36  19   eP     P      08 19 32.9 +0.4
       comp=Z,15nm,0.8s
KNK    Knik Glacier     77.41  18   eP     P      08 19 33.9 +1.1
       comp=Z,33nm,1.0s
BOSA   Boshof           77.51 220   i P    P      08 19 38.9 +5.0
BOSA   Boshof           77.51 220    P     P      08 19 34.0 +0.1
       comp=Z,15nm,0.5s,baz=20,slow=4.0,SNR=35
BOSA   Boshof           77.51 220   eP     P      08 19 33.2 -0.6
       comp=Z,28nm,0.9s
BOSA   Boshof           77.51 220   eP     P      08 19 33.2 -0.6
BOSA                                  pmax pmax
       comp=Z,28nm,0.9s
BOSA   Boshof           77.51 220   i P    P      08 19 38.9 +5.0
MORW   Morawa           77.97 140   eP     P      08 19 35.2 -1.0
       comp=Z,17nm,0.9s
BRLK   Bradley Lake     78.17  20   eP     P      08 19 37.0  0.0
       comp=Z,25nm,0.9s
GLI    Glacier Island   78.21  18   eP     P      08 19 37.6 +0.4
       comp=Z,27nm,0.9s
SEW    Seward           78.28  19   eP     P      08 19 38.3 +0.8
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	comp=Z,28nm,1.3s						
FID	Port Fidalgo	78.47	18	eP	P	08 19 39.2	+0.6
	comp=Z,16nm,0.8s						
GLB	Gilahina Butte	78.49	16	eP	P	08 19 38.7	-0.1
	comp=Z,7.0nm,1.0s						
CHGN	Chignik	78.66	25	eP	P	08 19 39.9	+0.2
	comp=Z,15nm,1.0s						
BALM	Baldy	79.17	16	eP	P	08 19 43.3	+0.8
	comp=Z,18nm,0.9s						
BALM	Baldy	79.17	16	eP	P	08 19 43.3	+0.8
BALM				pmax	pmax		
	comp=Z,18nm,0.9s						
RAGM	Ragged Mountai	79.22	17	eP	P	08 19 44.5	+1.7
	comp=Z,14nm,0.9s						
CRQM	Cirque	79.25	16	eP	P	08 19 44.4	+1.3
	comp=Z,21nm,0.9s						
TGL	Tana Glacier	79.32	16	eP	P	08 19 44.7	+1.3
	comp=Z,23nm,1.1s						
KDAK	Kodiak Island	79.34	22	eP	P	08 19 43.9	+0.5
	comp=Z,48nm,0.9s						
KDAK	Kodiak Island	79.34	22	eP	P	08 19 43.9	+0.5
KDAK				pmax	pmax		
	comp=Z,48nm,0.9s						
HMT	Hamilton	79.37	17	eP	P	08 19 44.5	+1.0
	comp=Z,13nm,0.9s						
CTGM	Chitina Glacie	79.45	15	eP	P	08 19 45.1	+1.0
	comp=Z,20nm,1.0s						
OHAK	Old Harbor	79.59	23	eP	P	08 19 45.4	+0.7
	comp=Z,31nm,0.8s						
PCA	Pinnacle	80.47	15	eP	P	08 19 51.1	+1.6
	comp=Z,29nm,1.0s						
WHY	Whitehorse	80.97	12	eP	P	08 19 52.0	-0.2
	comp=Z,12nm,1.0s						
YKA	Yellowknife Ar	81.27	2	P	P	08 19 54.0	+0.4
	comp=Z,8.5nm,0.8s,baz=351,slow=5.3,SNR=42						
YKA				pP	pP	08 20 44.4	+1.2
	comp=Z,9.6nm,0.7s,baz=350,slow=5.8,SNR=6.1						
YKB5	Yellowknife Ar	81.27	2	eP	P	08 19 54.0	+0.4
SKAG	Skagway	82.02	13	eP	P	08 19 58.7	+1.2
	comp=Z,16nm,0.9s						
WR1	Warramunga Arr	82.29	122	eP	P	08 19 58.2	-1.3
WRA	Warramunga Arr	82.29	122	P	P	08 19 58.2	-1.3
	comp=Z,48nm,0.8s,baz=309,slow=5.3,SNR=101						
WRA				pP	pP	08 20 51.0	+1.1
	comp=Z,8.1nm,0.7s,baz=308,slow=5.8,SNR=2.7						
WRAB	Tennant Creek	82.29	122	eP	P	08 19 58.1	-1.5
	comp=Z,51nm,0.9s						
WRAB	Tennant Creek	82.29	122	ceP	P	08 19 58.4	-1.1
WRAB				pmax	pmax		
	comp=Z,64nm,1.0s						
WB2	Warramunga Arr	82.30	122	eP	P	08 19 58.0	-1.6
	comp=Z,54nm,0.9s						
WC3	Warramunga Arr	82.32	122	eP	P	08 19 58.3	-1.4
	comp=Z,53nm,0.9s						
JIS	Juneau Island	83.31	13	eP	P	08 20 04.1	0.0
	comp=Z,19nm,1.2s						
DLBC	Dease Lake	83.87	11	eP	P	08 20 07.8	+0.6
	comp=Z,15nm,1.1s						
FCC	Fort Churchill	84.24	352	eP	P	08 20 08.3	-0.6
	comp=Z,19nm,1.2s						
FCC	Fort Churchill	84.24	352	eP	P	08 20 08.3	-0.6
FCC				pmax	pmax		
	comp=Z,19nm,1.2s						
AS31	Alice Springs	84.54	125	eP	P	08 20 09.7	-1.3
ASAR	Alice Springs	84.54	125	P	P	08 20 09.7	-1.3
	comp=Z,23nm,0.8s,baz=310,slow=4.9,SNR=195						
FORT	Forrest	85.92	133	eP	P	08 20 16.8	-0.7
FFC	Flin Flon	88.92	356	eP	P	08 20 31.9	+0.2
	comp=Z,9.3nm,1.1s						
FFC	Flin Flon	88.92	356	eP	P	08 20 31.9	+0.2
FFC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CTA	Charters Tower	90.86	114	P	P	08 20 40.1	-1.1
	comp=Z,15nm,0.8s,baz=323,slow=6.9,SNR=5.6						
LLLB	Lillooet	92.58	8	eP	P	08 20 50.3	+1.5
	comp=Z,5.6nm,0.9s						
ULM	Lac du Bonnet	92.81	351	eP	P	08 20 48.1	-1.6
	comp=Z,9.3nm,1.3s						
ULM	Lac du Bonnet	92.81	351	eP	P	08 20 48.1	-1.6
ULM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NEW	Newport	95.34	5	eP	P	08 21 02.5	+1.0
	comp=Z,3.4nm,0.9s						
NEW	Newport	95.34	5	eP	P	08 21 02.5	+1.0
NEW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SNAA	Sanae	119.26	200	PKPdf	PKPdf	08 26 22.9	-1.5
VNA3	Neumayer Olymp	121.06	202	PKPdf	PKPdf	08 26 25.1	-2.7
QSPA	South Pole Qui	126.28	180	PKP	PKPdf	08 26 37.1	-0.9
	comp=Z,7.6nm,0.8s,baz=259,slow=1.6,SNR=15						
QSPA	South Pole Qui	126.28	180	ePKPdf	PKPdf	08 26 36.7	-1.2
CPUP	Villa Florida	134.85	268	PKP	PKPdf	08 26 53.8	-1.5
	comp=Z,1.3nm,0.7s,baz=162,slow=2.0,SNR=4.3						
LPAZ	La Paz	138.27	288	PKP	PKPdf	08 27 01.8	-0.9
	comp=Z,0.9nm,0.8s,baz=14,slow=5.2,SNR=3.4						
LPAZ	La Paz	138.27	288	ePKPdf	PKPdf	08 27 01.4	-1.3
GO03	Copiap	145.79	274	ePKPdf	PKPbc	08 27 15.6	-0.4
LCO	Las Campanas	146.74	272	ePKPdf	PKPdf	08 27 15.9	-1.0
LCO				ePKPbc	PKPbc	08 27 17.7	-1.3
LCO				ePKPab	PKPab	08 27 19.4	-1.3
LCO	Las Campanas	146.74	272	ePKIKP	PKPdf	08 27 15.9	-1.0
LCO				e		08 27 19.5	
GO04	Tololo Observa	147.26	270	ePKPbc	PKPbc	08 27 19.3	-1.1
PLCA	Paso Flores	149.49	250	PKPbc	PKPbc	08 27 25.3	-0.2
	comp=Z,12nm,1.0s,baz=28,slow=4.0,SNR=17						
PLCA	Paso Flores	149.49	250	ePKPbc	PKPbc	08 27 25.9	+0.4
PLCA				ePKPab	PKPab	08 27 31.0	-0.3
PLCA	Paso Flores	149.49	250	ePKP2	PKPbc	08 27 26.0	+0.4
GO05	Huala	149.64	261	ePKPbc	PKPbc	08 27 25.4	-0.7
GO06	Curarrehue	150.08	252	ePKPbc	PKPbc	08 27 26.9	-0.2

ISCJB ***29*** *08:12:25.4±0.1, 17°.00S±0°.04×177°.08W±0°.03, h10km, mb5.0/247, MS5.1/523, Error ellipse: s-maj=5.9km s-min=3.3km az=140.6*

IDC ***29*** *08:12:25.6±0.6, 17°.06S×177°.06W, h0km, mb4.8/20, mb1 4.9/20, mb1mx4.8/34, mbtmp4.8/20, MS4.9/18, Ms1 4.9/18, ms1mx4.9/19, Error ellipse: s-maj=20.8km s-min=14.3km az=125.0*

NEIC ***29*** *08:12:26.8±1.7, 16°.97S×177°.06W, h10km±1km, mb5.1/230, MS5.1/527, Error ellipse: s-maj=15.0km s-min=12.3km az=106.0*

BJI ***29*** *08:12:27.0±0.0, 16°.72S×176°.94W, h11km, mb5.0/35, mB5.5/33, Ms5.2/37, Ms7 4.9/36*

MOS ***29*** *08:12:29.8±1.6, 16°.96S×177°.04W, h33km, mb5.2/65, MS5.1/47, Error ellipse: s-maj=10.0km s-min=7.5km az=55.9*

GCMT ***29*** *08:12:30.8±0.1, 16°.89S±0°.01×176°.96W±0°.01, h12km, MW5.5/138, Moment Tensor Solution. s111,c185; s138,c267; Duration: 1s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.12±.02; $M_{\theta\theta}$-2.07±.02; $M_{\phi\phi}$2.18±.02; $M_{r\theta}$-0.08±.05; $M_{\theta\phi}$-0.17±.02; $M_{\phi r}$0.57±.05; Best double couple: $M_0$2.19900×10^{17} NP1:ϕ_s312.00000°, δ82.00000°, λ169.00000°. NP2:ϕ_s44.00000°, δ79.00000°, λ8.00000°. Principal axes: T 2.3190, Plg13.0000°, Azm268.0000°; N -0.2470, Plg77.0000°, Azm95.0000°; P -2.0780, Plg2.0000°, Azm358.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 08:12:26.7±0.3**, 17°.08S**±0°.06×**176°.89W**±0°.05**, h10km, n1033,** σ1s.**31**/661**, mb5.1**/247**, MS5.1**/524**, 33C-10D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUNA	Funafuti	9.32	335	ePn	Pn	08 14 40.7	-0.5
KNTN	Kanton	15.10	20	ePn	Pn	08 15 59.8	-0.4
	95nm,1.1s						
PINNC	Pines Island,	15.72	247	ePn	Pn	08 16 08.0	-0.4
	296nm,1.2s						
DZM	Mont Dzumac	16.47	250	eP	Pn	08 16 16.0	-2.1
	297nm,1.6s						
DZM				eLQ	LQ	08 19 18.6	
	20μm,29.8s						
DZM				eLR	LR	08 19 59.1	
	comp=Z,20μm,25.6s						
DZM	Mont Dzumac	16.47	250	Pn	P	08 16 21.6	+0.8
	0.1nm,0.3s,baz=78,slow=11,SNR=3.8						
DZM				LR	LR	08 21 36.4	
	comp=Z,13μm,18.8s,baz=78,slow=34						
DZM	Mont Dzumac	16.47	250	ePn	Pn	08 16 16.9	-1.2
	146nm,1.3s						
RAR	Rarotonga	16.69	107	LR	LR	08 21 20.0	
	comp=Z,5μm,19.6s,baz=283,slow=32						
OUZ	Omahuta	19.96	203	eP	Pn	08 17 01.7	+1.0
	94nm,1.3s						
MXZ	Matakaoa Point	20.84	191	PFAKE		08 17 20.0	+9.0
MXZ				LR	LR		
	comp=Z,12μm,20.0s						
TARA	Tarawa	20.89	330	PFAKE		08 17 20.0	+8.2
TARA				LR	LR		
	comp=Z,7μm,19.0s						
URZ	Urewera	21.75	193	P	P	08 17 18.2	-0.1
	comp=Z,12nm,0.6s,baz=37,slow=6.0,SNR=14						
URZ				LR	LR	08 25 03.7	
	comp=Z,8μm,18.6s,baz=29,slow=35						
URZ	Urewera	21.75	193	eP	P	08 17 18.6	+0.2
	comp=Z,52nm,0.9s						
URZ				LR	LR		
	comp=Z,10μm,21.0s						
HIZ	Hauiti	22.54	197	eP	P	08 17 28.8	+1.9
	comp=Z,155nm,1.3s						
HIZ				LR	LR		
	comp=Z,10μm,20.0s						
BKZ	Black Stump Fm	22.75	193	eP	P	08 17 28.3	-0.9
	comp=Z,17nm,1.0s						
BKZ				LR	LR		
	comp=Z,8μm,21.0s						
HNR	Honiara	23.77	286	LR	LR	08 25 23.3	
	comp=Z,6μm,19.9s,baz=112,slow=33						
HNR	Honiara	23.77	286	PFAKE		08 17 50.0	+10
HNR				LR	LR		
	comp=Z,5μm,19.0s						
BFZ	Birch Farm	24.26	193	eP	P	08 17 45.7	+1.7
	comp=Z,45nm,1.1s						
BFZ				LR	LR		
	comp=Z,8μm,21.0s						
SNZO	South Karori	25.21	195	PFAKE		08 18 00.0	+7.5
SNZO				LR	LR		
	comp=Z,10μm,21.0s						
QRZ	Quartz Range	25.37	199	eP	P	08 17 55.3	+1.3
	comp=Z,114nm,1.4s						
QRZ				LR	LR		
	comp=Z,7μm,19.0s						
PAE	Paea	26.07	95	eT	T	08 44 58.6	
	comp=Z,5.5nm,0.3s						
PPT2	Papeete2	26.07	95	eS	S	08 22 26.7	-5.5
	comp=Z,1μm,26.5s						
PPT2				eLQ	LQ	08 23 21.6	
	comp=Z,3μm,29.2s						
PPT2				eLR	LR	08 24 30.0	
	comp=Z,13μm,26.8s,baz=260						
PPT2	Papeete2	26.07	95	eT	T	08 44 54.7	
	comp=Z,8.8nm,0.3s						
PPT	Papeete	26.07	95	LR	LR	08 25 37.2	
	comp=Z,3μm,20.8s,baz=272,slow=30						
THZ	Tophouse	26.11	198	eP	P	08 18 02.7	+1.8
	comp=Z,19nm,1.0s						
THZ				LR	LR		
	comp=Z,12μm,20.0s						
LHI	Lord Howe Isla	26.13	232	PFAKE		08 18 10.0	+8.9
LHI				LR	LR		
	comp=Z,2μm,18.0s						
TIAR	Tiarei	26.29	95	eT	T	08 45 15.6	
	comp=Z,4.1nm,0.3s						
TVO	Taravao	26.37	96	eT	T	08 45 22.0	
	comp=Z,4.1nm,0.3s						
TBI	Tubuai	26.46	108	eS	S	08 22 34.4	-3.7
	comp=Z,735nm,29.5s						
TBI				eLQ	LQ	08 23 34.2	
	comp=Z,8μm,30.5s						
TBI				eLR	LR	08 24 49.6	
	comp=Z,11μm,28.0s,baz=280						
TBI	Tubuai	26.46	108	eT	T	08 45 30.2	
	comp=Z,15nm,0.4s						
KHZ	Kahutara	26.55	196	PFAKE		08 18 20.0	+15
KHZ				LR	LR		
	comp=Z,10μm,20.0s						
LTZ	Lake Taylor	27.23	198	eP	P	08 18 11.4	+0.4
	comp=Z,41nm,1.1s						
LTZ				LR	LR		
	comp=Z,11μm,19.0s						
OXZ	Oxford	27.80	197	eP	P	08 18 16.7	+0.7
	comp=Z,27nm,0.9s						
OXZ				LR	LR		
	comp=Z,11μm,20.0s						
CRLZ	Canterbury Las	27.87	196	PFAKE		08 18 30.0	+13
CRLZ				LR	LR		
	comp=Z,10μm,22.0s						
PMOR	Pomariorio Ree	27.93	90	eT	T	08 47 18.0	
	comp=Z,14nm,0.2s						
MQZ	McQueen's Vall	27.98	196	PFAKE		08 18 30.0	+12
MQZ				LR	LR		
	comp=Z,8μm,22.0s						
VAH	Vaihoa	28.16	90	eT	T	08 47 34.3	
	comp=Z,16nm,0.2s						
RPZ	Rata Peaks	28.45	199	P	P	08 18 21.3	-0.5
	comp=Z,6.5nm,0.9s,baz=333,slow=4.5,SNR=2.8						
RPZ	Rata Peaks	28.45	199	eP	P	08 18 22.9	+1.1
	comp=Z,70nm,1.4s						
RPZ				LR	LR		
	comp=Z,9μm,19.0s						
FOZ	Fox Glacier	28.68	200	eP	P	08 18 24.9	+1.2
	comp=Z,33nm,1.0s						
FOZ				LR	LR		
	comp=Z,6μm,18.0s						
LBZ	Lake Benmore	29.32	199	PFAKE		08 18 40.0	+10
LBZ				LR	LR		
	comp=Z,5μm,18.0s						
ODZ	Otahua Downs	29.78	198	PFAKE		08 18 50.0	+16
ODZ				LR	LR		
	comp=Z,9μm,20.0s						
KWAJ	Kwajalein Atol	29.93	328	PFAKE		08 18 50.0	+15
KWAJ				LR	LR		
	comp=Z,4μm,22.0s						
WKZ	Wanaka	30.09	200	eP	P	08 18 34.7	-1.6
	comp=Z,40nm,1.4s						
WKZ				LR	LR		
	comp=Z,6μm,18.0s						
MLZ	Mavora Lakes	30.87	201	eP	P	08 18 43.5	+0.3
	comp=Z,38nm,1.4s						
MLZ				LR	LR		
	comp=Z,4μm,21.0s						
EIDS	Eidsvold	30.91	249	eP	P	08 18 43.1	-0.7
	comp=Z,38nm,1.0s						
EIDS				LR	LR		
	comp=Z,4μm,18.0s						
DCZ	Deep Cove	31.29	202	PFAKE		08 19 00.0	+13
DCZ				LR	LR		
	comp=Z,6μm,21.0s						
WHZ	Wether Hill Ro	31.39	201	eP	P	08 18 48.5	+0.7
	comp=Z,65nm,1.1s						
WHZ				LR	LR		
	comp=Z,3μm,19.0s						
ARMA	Armidale	31.61	239	eP	P	08 18 48.1	-1.9
	comp=Z,56nm,1.4s						
ARMA				LR	LR		
	comp=Z,2μm,18.0s						
RABL	Rabaul	32.93	289	PFAKE		08 19 10.0	+8.3
RABL				LR	LR		
	comp=Z,3μm,22.0s						
PATS	Pohnpei	34.14	312	PFAKE		08 19 20.0	+7.8
PATS				LR	LR		
	comp=Z,2μm,20.0s						
JOHN	Johnston Islan	34.37	13	PFAKE		08 19 30.0	+16
JOHN				LR	LR		
	comp=Z,4μm,22.0s						
CTA	Charters Tower	35.02	259	P	P	08 19 18.1	-1.7
	comp=Z,34nm,1.0s,baz=85,slow=11,SNR=12						
CTAO	Charters Tower	35.02	259	eP	P	08 19 17.5	-2.3
	comp=Z,80nm,1.1s						
CTAO				LR	LR		
	comp=Z,5μm,20.0s						
CTAO	Charters Tower	35.02	259	eP	P	08 19 17.5	-2.3
CTAO				pmax	pmax		
	comp=Z,80nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,5μm,20.0s						
CAN	Canberra	35.35	232	PFAKE		08 19 30.0	+7.4
CAN				LR	LR		
	comp=Z,2μm,18.0s						
CAN	Canberra	35.35	232	P	P	08 19 23.7	+1.1
CAN				pmax	pmax		
	comp=Z,12nm,1.3s						
PMG	Port Moresby	35.77	278	eP	P	08 19 24.5	-1.8
	comp=Z,51nm,1.3s						
PMG				LR	LR		
	comp=Z,2μm,19.0s						
PMG	Port Moresby	35.77	278	eP	P	08 19 24.5	-1.8
PMG				pmax	pmax		
	comp=Z,51nm,1.3s						
PMG				MLR	MLR		
	comp=Z,2μm,19.0s						
TAOE	Nuku Hiva Isla	36.67	82	eS	S	08 25 11.5	-6.3
	comp=Z,590nm,27.8s						
TAOE				eLR	LR	08 29 19.4	
	comp=Z,7μm,28.5s,baz=256						
TAOE	Nuku Hiva Isla	36.67	82	eT	T	08 58 11.7	
	comp=Z,113nm,0.2s						
MANU	Manus Island	38.17	289	PFAKE		08 20 00.0	+13
MANU				LR	LR		
	comp=Z,2μm,20.0s						
COEN	Coen	38.56	269	PFAKE		08 20 00.0	+10
COEN				LR	LR		
	comp=Z,2μm,21.0s						
TOO	Toolangi	38.81	231	eP	P	08 19 50.1	-1.8
	comp=Z,29nm,0.9s						
TOO				LR	LR		
	comp=Z,1μm,18.0s						
TOO	Toolangi	38.81	231	eP	P	08 19 50.1	-1.8
TOO				pmax	pmax		
	comp=Z,29nm,0.9s						
TOO				MLR	MLR		
	comp=Z,1μm,18.0s						
H11S2	WAKE ISLAND Hy	38.86	335	T	T	09 00 22.1	
	baz=149,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	38.87	335	T	T	09 00 22.2	
	baz=149,slow=76,SNR=6.2						
H11S1	WAKE ISLAND Hy	38.88	335	T	T	09 00 20.8	
	baz=149,slow=76,SNR=6.5						
WAKE	Wake Island	39.59	335	PFAKE		08 20 10.0	+12
WAKE				LR	LR		
	comp=Z,3μm,20.0s						
RKT	Rikitea	39.72	106	eLR	LR	08 30 50.6	
	comp=Z,8μm,27.2s						
RKT	Rikitea	39.72	106	eT	T	09 02 08.0	
	comp=Z,5.3nm,0.3s						
H11N3	WAKE ISLAND Hy	39.88	336	T	T	09 01 30.1	
	baz=142,slow=75,SNR=5.7						
H11N1	WAKE ISLAND Hy	39.88	336	T	T	09 01 27.1	
	baz=142,slow=75,SNR=7.1						
H11N2	WAKE ISLAND Hy	39.90	336	T	T	09 01 30.7	
	baz=142,slow=75,SNR=6.6						
STKA	Stephens Creek	40.30	241	P	P	08 20 03.6	-0.7
	comp=Z,41nm,0.9s,baz=80,slow=11,SNR=20						
STKA				LR	LR	08 35 54.5	
	comp=Z,2μm,18.9s,baz=76,slow=35						
STKA	Stephens Creek	40.30	241	eP	P	08 20 03.7	-0.6
	comp=Z,14nm,1.0s						
STKA				LR	LR		
	comp=Z,500nm,18.0s						
BBOO	Buckleboo	45.07	241	eP	P	08 20 42.2	-1.0
	comp=Z,44nm,1.1s						
BBOO				LR	LR		
	comp=Z,3μm,19.0s						
WC3	Warramunga Arr	46.18	259	eP	P	08 20 50.7	-1.3
	comp=Z,35nm,1.4s						
WB2	Warramunga Arr	46.20	259	eP	P	08 20 49.5	-2.7
	comp=Z,20nm,1.0s						
WB2				LR	LR		
	comp=Z,3μm,20.0s						
WRAB	Tennant Creek	46.20	259	eP	P	08 20 50.7	-1.5
	comp=Z,15nm,0.9s						
WRAB				LR	LR		
	comp=Z,3μm,20.0s						
WRAB	Tennant Creek	46.20	259	eP	P	08 20 50.7	-1.5
WRAB				pmax	pmax		
	comp=Z,15nm,0.9s						
WRAB				MLR	MLR		
	comp=Z,3μm,20.0s						
WC4	Warramunga Arr	46.21	259	PFAKE		08 21 00.0	+7.7
WC4				LR	LR		
	comp=Z,400nm,19.0s						
WC1	Warramunga Arr	46.21	259	PFAKE		08 21 00.0	+7.7
WC1				LR	LR		
	comp=Z,2μm,19.0s						
AS31	Alice Springs	46.41	253	eP	P	08 20 51.4	-2.5
ASAR	Alice Springs	46.41	253	P	P	08 20 51.4	-2.5
	comp=Z,13nm,0.7s,baz=86,slow=8.3,SNR=26						
ASAR				LR	LR	08 39 33.2	
	comp=Z,6μm,18.4s,baz=102,slow=35						
GUMO	Guam	48.52	307	PFAKE		08 21 20.0	+10
GUMO				LR	LR		
	comp=Z,1μm,19.0s						
MTN	Manton Dam	50.28	267	PFAKE		08 21 30.0	+6.2
MTN				LR	LR		
	comp=Z,2μm,19.0s						
FORT	Forrest	51.67	244	eP	P	08 21 34.0	0.0
	comp=Z,63nm,0.8s						
FORT				LR	LR		
	comp=Z,2μm,19.0s						
FAKI	Fak Fak	51.85	280	PFAKE		08 21 50.0	+14
FAKI				LR	LR		
	comp=Z,1μm,22.0s						
SOEI	Soe	57.52	269	eP	P	08 22 16.7	-0.3
	comp=Z,102nm,0.9s						
SOEI				LR	LR		
	comp=Z,1μm,21.0s						
TNTI	Ternate	57.69	282	eP	P	08 22 17.0	-1.1
	comp=Z,122nm,1.5s						
TNTI				LR	LR		
	comp=Z,400nm,21.0s						
PSAC2	Pilbara Seismi	59.47	255	eP	P	08 22 30.9	+0.5
	comp=Z,27nm,1.1s						
PSAC2				LR	LR		
	comp=Z,4μm,20.0s						
PSAB2	Pilbara Seismi	59.51	255	eP	P	08 22 30.7	+0.1
	comp=Z,21nm,1.0s						
PSAB3	Pilbara Seismi	59.51	255	eP	P	08 22 29.2	-1.5
	comp=Z,37nm,1.3s						
PSAA3	Pilbara Seismi	59.51	255	PFAKE		08 22 40.0	+9.3
PSAA3				LR	LR		
	comp=Z,3μm,20.0s						
PSAA2	Pilbara Seismi	59.52	255	PFAKE		08 22 40.0	+9.3
PSAA2				LR	LR		
	comp=Z,3μm,19.0s						
PSAA1	Pilbara Seismi	59.53	255	PFAKE		08 22 40.0	+9.2
PSAA1				LR	LR		
	comp=Z,3μm,20.0s						
PSAC3	Pilbara Seismi	59.53	255	PFAKE		08 22 40.0	+9.2
PSAC3				LR	LR		
	comp=Z,4μm,18.0s						
PSAB1	Pilbara Seismi	59.54	255	PFAKE		08 22 40.0	+9.1
PSAB1				LR	LR		
	comp=Z,4μm,19.0s						
PSAC1	Pilbara Seismi	59.56	255	PFAKE		08 22 40.0	+9.0
PSAC1				LR	LR		
	comp=Z,3μm,19.0s						
MBWA	Marble Bar	59.68	255	PFAKE		08 22 40.0	+8.2
MBWA				LR	LR		
	comp=Z,3μm,18.0s						
MMRI	Maumere	59.74	270	PFAKE		08 22 40.0	+7.7
MMRI				LR	LR		
	comp=Z,900nm,20.0s						
NWAO	Narrogin (SRO)	60.88	241	P	P	08 22 41.2	+1.4
	comp=Z,45nm,1.4s,baz=112,slow=7.7,SNR=3.5						
NWAO	Narrogin (SRO)	60.88	241	eP	P	08 22 41.2	+1.4
NWAO				LR	LR		
	comp=Z,2μm,20.0s						
SBA	Scott Base	61.34	184	eP	P	08 22 43.1	+1.0
	comp=Z,6.6nm,0.9s						
SBA				LR	LR		
	comp=Z,1μm,19.0s						
SBA	Scott Base	61.34	184	eP	P	08 22 43.1	+1.0
SBA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SBA				MLR	MLR		
	comp=Z,1μm,19.0s						
MORW	Morawa	62.14	246	PFAKE		08 23 00.0	+12
MORW				LR	LR		
	comp=Z,1μm,21.0s						
KAPI	Kappang	63.09	273	ceP	P	08 22 57.1	+2.1
KAPI				pmax	pmax		
	comp=Z,48nm,1.7s						
GIRL	Giralia	64.52	253	PFAKE		08 23 20.0	+16
GIRL				LR	LR		
	comp=Z,5μm,18.0s						
CASY	Casey	67.49	205	eP	P	08 23 23.6	+1.0
	comp=Z,26nm,1.1s						
CASY				LR	LR		
	comp=Z,1μm,22.0s						
MJAR	Matsushiro Arr	68.13	322	P	P	08 23 24.9	-2.1
	comp=Z,7.6nm,0.8s,baz=163,slow=6.2,SNR=12						
MAJO	Matsushiro	68.13	322	eP	P	08 23 26.1	-1.0
	comp=Z,15nm,0.9s						
MAJO				LR	LR		

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      comp=Z,600nm,21.0s
MAJO  Matsushiro        68.13 322 eP      P       08 23 26.1 -1.0
MAJO                              pmax    pmax
      comp=Z,15nm,0.9s
MAJO                              MLR     MLR
      comp=Z,600nm,21.0s
MAT   Matsushiro        68.13 322 P       P       08 23 25.5 -1.6
MAT                               S       S       08 32 24.6 -2.6
MJB9  Matsu-Tunnel      68.13 322 eP      P       08 23 25.2 -1.9
      comp=Z,15nm,0.9s
ADK   Adak              68.67   0 PFAKE           08 23 40.0 +10
ADK                               LR      LR
      comp=Z,2µm,21.0s
ATKA  Atka Island       69.03   2 PFAKE           08 23 40.0 +7.7
ATKA                              LR      LR
      comp=Z,3µm,22.0s
ERM   Erimo             69.41 329 PFAKE           08 23 50.0 +15
ERM                               LR      LR
      comp=Z,2µm,20.0s
KUR   Kuril'sk          69.79 334 eP      P       08 23 39.1 +1.9
KUR                               pmax    pmax
      comp=Z,500nm,5.1s
SMY   Shemya            69.95 354 PFAKE           08 23 50.0 +12
SMY                               LR      LR
      comp=Z,2µm,21.0s
KKM   Kota Kinabalu     69.96 283 PFAKE           08 23 50.0 +11
KKM                               LR      LR
      comp=Z,300nm,20.0s
JNU   Nakatsue          70.56 315 P       P       08 23 41.5 -0.7
      comp=Z,11nm,0.9s,baz=149,slow=5.9,SNR=2.9
UNV   Unalaska Valle    71.20   6 PFAKE           08 24 00.0 +14
UNV                               LR      LR
      comp=Z,2µm,21.0s
SKR   Severo-Kuril's    71.52 342 eP      P       08 23 49.2 +1.6
SKR                               eS      S       08 33 05.6 -0.7
SKR                               pmax    pmax
      comp=Z,300nm,4.9s
SKR                               MLR     MLR
      comp=Z,400nm,18.0s
AKUT  Akutan            71.56   7 PFAKE           08 24 00.0 +12
AKUT                              LR      LR
      comp=Z,1µm,22.0s
YOJ   Yonaguni jima     71.68 304 PFAKE           08 24 00.0 +11
YOJ                               LR      LR
      comp=Z,400nm,21.0s
SBUM  Sibu              72.51 278 eP      P       08 23 53.5 -0.9
      comp=Z,4.7nm,1.0s
YULB  Yu-li             72.55 302 PFAKE           08 24 10.0 +16
YULB                              LR      LR
      comp=Z,200nm,19.0s
FALS  False Pass        72.56   8 PFAKE           08 24 10.0 +16
FALS                              LR      LR
      comp=Z,1µm,19.0s
NACB  Ninganchiao       72.68 303 eP      P       08 23 52.4 -2.7
      comp=Z,25nm,1.0s
NACB                              LR      LR
      comp=Z,400nm,20.0s
PET   Petropavlovsk     72.95 345 PFAKE           08 24 10.0 +14
PET                               LR      LR
      comp=Z,1µm,22.0s
PET   Petropavlovsk     72.95 345 eP      P       08 24 00.3 +4.3
PET                               eS      SKiKP   08 33 27.0 -2.5
QSPA  South Pole Qui    72.97 180 P       P       08 23 57.0 +0.7
      comp=Z,8.7nm,0.9s,baz=25,slow=1.9,SNR=20
QSPA  South Pole Qui    72.97 180 eP      P       08 23 57.5 +1.1
      comp=Z,17nm,1.0s
QSPA                              LR      LR
      comp=Z,1µm,22.0s
SSLB  Suanglung         73.01 302 eP      P       08 23 56.5 -0.7
      comp=Z,8.2nm,0.9s
SSLB                              LR      LR
      comp=Z,300nm,22.0s
TPUB  Ta-pu             73.05 302 eP      P       08 23 55.9 -1.5
      comp=Z,25nm,1.1s
YHNB  Yeheng            73.09 303 PFAKE           08 24 10.0 +12
YHNB                              LR      LR
      comp=Z,400nm,22.0s
PEA0B Petropavlovsk-    73.27 344 eP      P       08 23 56.4 -1.5
      comp=Z,42nm,1.3s
PEA0B                             LR      LR
      comp=Z,1µm,20.0s
PETK  Petropavlovsk-    73.27 344 P       P       08 23 57.6 -0.4
      comp=Z,13nm,0.9s,baz=124,slow=8.0,SNR=12
PEA1  Petropavlovsk-    73.27 344 eP      P       08 23 57.6 -0.4
YSS   Yuzh-Sakhalins    73.34 332 eP      P       08 23 57.9 -0.6
      comp=Z,24nm,1.0s
YSS                               LR      LR
      comp=Z,900nm,20.0s
YSS   Yuzh-Sakhalins    73.34 332⇓eP      P       08 24 00.1 +1.6
YSS                               e               08 24 07.3
YSS                               eS      S       08 33 28.8 +1.4
YSS                               pmax    pmax
      comp=Z,10.0nm,0.7s
YSS                               MLR     MLR
      comp=N,300nm,18.0s
YSS                               MLR     MLR
      comp=E,500nm,18.0s
YSS                               MLR     MLR
      comp=Z,600nm,18.0s
SDPT  Sand Point        73.48  10 eP      P       08 23 59.0 -0.1
      comp=Z,30nm,1.1s
SDPT                              LR      LR
      comp=Z,800nm,21.0s
CISI  Cisompet, Garu    73.81 267 eP      P       08 24 00.1 -2.0
      comp=Z,110nm,1.3s
KSM   Kuching           74.02 277 PFAKE           08 24 10.0 +6.7
KSM                               LR      LR
      comp=Z,200nm,21.0s
SPIA  Saint Paul Isl    74.18   4 PFAKE           08 24 10.0 +6.8
SPIA                              LR      LR
      comp=Z,4µm,20.0s
LEM   Lembang           74.19 268 P       P       08 24 03.8 -0.8
      comp=Z,60nm,0.8s,baz=68,slow=7.8,SNR=6.9
SCZ2  Santa Cruz Isl    74.49  46 P       P       08 24 06.8 +1.1
      baz=237
SBC   Santa Barbara     74.69  46 P       P       08 24 07.9 +1.2
      baz=236
SCI2  San Clemente I    74.71  48 P       P       08 24 07.8 +0.9
      baz=238
CHGN  Chignik           74.73  11 eP      P       08 24 05.8 -0.6
      comp=Z,12nm,0.8s
CHGN                              LR      LR
      comp=Z,1µm,20.0s
CHIR  Chirikof Islan    74.81  12 PFAKE           08 24 20.0 +13
CHIR                              LR      LR
      comp=Z,2µm,21.0s
SAO   San Andreas Ge    74.83  43 eP      P       08 24 07.2 -0.3
      comp=Z,34nm,1.4s
SAO   San Andreas Ge    74.83  43 eP      P       08 24 07.2 -0.3
SAO                               pmax    pmax
      comp=Z,34nm,1.4s
PKM   Mcpherson Peak    74.86  46 P       P       08 24 08.7 +0.7
      baz=236
SMMC  Simmler           74.98  45 P       P       08 24 10.0 +1.6
      baz=236
CIS   Catalina Islan    75.03  48 P       P       08 24 09.8 +1.0
      baz=238
PAGB  Antelope Grade    75.04  45 eP      P       08 24 09.3 +0.5
      comp=Z,22nm,1.3s
KSRS  Korea Array       75.06 317 P       P       08 24 09.4 +0.7
      comp=Z,3.8nm,1.0s,baz=132,slow=6.1,SNR=12
KSRS                              LR      LR      08 51 11.8
      comp=Z,441nm,21.8s,baz=118,slow=31
FMP   Fort Macarthur    75.28  47 P       P       08 24 11.1 +0.9
      baz=238
QZH   Quanzhou          75.45 302 eP      P       08 24 13.5 +2.2
QZH                               S       S       08 33 54.3 +2.4
QZH                               pmax    pmax
      comp=Z,340nm,4.8s
QZH                               LR      LR
      comp=Z,320nm,18.9s
QZH                               LR      LR
      comp=Z,140nm,19.9s
KMRM  Mail Ridge        75.46  39 eP      P       08 24 12.8 +1.7
      comp=Z,31nm,0.9s
KMRM                              LR      LR
      comp=Z,800nm,19.0s
OSI   Osito Audit: C    75.46  46 PFAKE           08 24 20.0 +8.7
OSI                               LR      LR
      comp=Z,700nm,18.0s
OSI   Osito Audit: C    75.46  46 P       P       08 24 12.5 +1.2
      baz=237
DECC  Green Verdugo     75.54  47 P       P       08 24 12.6 +0.9
      baz=238
PASC  Pasadena Art C    75.60  47 eP      P       08 24 12.0  0.0
      comp=Z,13nm,1.3s
ARVC  Arvin             75.67  46 P       P       08 24 13.6 +1.2
      baz=237
109C  Camp Elliot, M    75.69  49 P       P       08 24 13.4 +0.9
      baz=239
CPE   Camp Elliot       75.69  49 eP      P       08 24 14.2 +1.6
      comp=Z,24nm,1.5s
MWC   Mount Wilson      75.72  47 eP      P       08 24 13.6 +0.7
      comp=Z,20nm,1.3s
MWC   Mount Wilson      75.72  47 eP      P       08 24 13.6 +0.7
MWC                               pmax    pmax
      comp=Z,20nm,1.3s
SII   Sitkinak Islan    75.80  13 PFAKE           08 24 20.0 +7.4
SII                               LR      LR
      comp=Z,2µm,20.0s
KHMM  Horse Mountain    75.84  39 PFAKE           08 24 30.0 +17
KHMM                              LR      LR
      comp=Z,700nm,18.0s
VES   Vestal, Richgr    75.89  45 P       P       08 24 14.1 +0.5
      baz=237,SNR=6.3
BAR   Barrett           75.89  49 eP      P       08 24 14.4 +0.6
      comp=Z,10.0nm,1.3s
O02D  Mt. Diablo Mer    75.99  40 P       P       08 24 15.6 +1.4
      baz=233
MURC  Murrieta          76.00  48 P       P       08 24 15.1 +0.7
      baz=238
BFSC  Mount Baldy Ra    76.00  47 P       P       08 24 15.1 +0.6
      baz=238
EDW2  Edwards Air Fo    76.11  46 P       P       08 24 15.9 +0.8
      baz=238,SNR=11
MONP2 Monument Peak     76.18  49 P       P       08 24 16.3 +0.7
      baz=239,SNR=7.8
ISA   Isabella, Lake    76.20  46 eP      P       08 24 16.5 +0.9
      comp=Z,35nm,1.5s
ISA   Isabella, Lake    76.20  46 P       P       08 24 15.7 +0.2
      baz=237,SNR=8.9
CMB   Columbia Colle    76.25  43 eP      P       08 24 16.3 +0.6
      comp=Z,19nm,1.5s
CMB   Columbia Colle    76.25  43 eP      P       08 24 16.3 +0.6
CMB                               pmax    pmax
      comp=Z,19nm,1.5s
IKP   In-Ko-Pah, Jac    76.28  49 P       P       08 24 17.1 +1.1
      baz=239,SNR=7.2
TYV   Tymovskoe         76.38 335 eP      P       08 24 17.2 +1.1
TYV                               pmax    pmax
      comp=Z,18nm,1.1s
TYV                               pmax    pmax
      comp=Z,100nm,2.8s
WDC   Whiskeytown Da    76.38  40 eP      P       08 24 17.0 +0.7
      comp=Z,20nm,1.3s
WDC                               LR      LR
      comp=Z,700nm,22.0s
WDC   Whiskeytown Da    76.38  40 eP      P       08 24 17.0 +0.7
WDC                               pmax    pmax
      comp=Z,20nm,1.3s
WDC                               MLR     MLR
      comp=Z,700nm,22.0s
AFDM  Forest Hills D    76.40  42 eP      P       08 24 17.3 +0.8
      comp=Z,7.1nm,1.1s
ORV   Oroville          76.42  41 eP      P       08 24 17.8 +1.2
      comp=Z,14nm,1.4s
ORV   Oroville          76.42  41 eP      P       08 24 17.8 +1.2
ORV                               pmax    pmax
      comp=Z,14nm,1.4s
N02D  Trinity Center    76.52  39 P       P       08 24 18.6 +1.4
      baz=233
PFO   Pinyon Flats O    76.53  48 eP      P       08 24 18.3 +0.8
      comp=Z,11nm,1.3s
PFO   Pinyon Flats O    76.53  48 eP      P       08 24 18.3 +0.8
PFO                               pmax    pmax
      comp=Z,11nm,1.3s
PFO   Pinyon Flats O    76.53  48 P       P       08 24 18.7 +1.3
      baz=239
BBRC  Big Bear Solar    76.54  48 P       P       08 24 18.4 +0.7
      baz=238
OHAK  Old Harbor        76.60  13 PFAKE           08 24 30.0 +13
OHAK                              LR      LR
      comp=Z,2µm,21.0s
SRIG  Santa Rosalia     76.64  56 PFAKE           08 24 30.0 +12
SRIG                              LR      LR
      comp=Z,700nm,20.0s
LRMC  Laurel Mtn Rad    76.65  46 P       P       08 24 19.1 +1.0
      baz=238
SWSC  Sam W. Stewart    76.66  49 P       P       08 24 18.9 +0.9
      baz=239
O03E  Paynes Creek      76.67  40 P       P       08 24 18.8 +0.7
      baz=234,SNR=12
M02C  Callahan          76.68  39 P       P       08 24 19.3 +1.2
      baz=233
L02E  Cave Junction     76.71  38 P       P       08 24 19.4 +1.3
      baz=232
USA0B Ussuriysk Arra    76.76 325 eP      P       08 24 17.6 -0.8
      comp=Z,27nm,1.4s
USA0B                             LR      LR
      comp=Z,800nm,21.0s
USRK  Ussuriysk Ar.     76.76 325 P       P       08 24 19.9 +1.5
      comp=Z,7.0nm,1.1s,baz=143,slow=3.1,SNR=10
RRX   Edison Barstow    76.80  47 P       P       08 24 19.4 +0.5
      baz=238
MDPB  Devils Postpil    76.88  44 eP      P       08 24 20.7 +1.2
      comp=Z,11nm,1.1s
CWC   Cottonwood Cre    76.89  45 P       P       08 24 19.6  0.0
      baz=237
OMMB  Old Mammoth Mi    76.92  44 eP      P       08 24 20.4 +0.5
      comp=Z,15nm,1.4s
YBH   Yreka Blue Hor    76.98  39 PFAKE           08 24 30.0 +10
YBH                               LR      LR
      comp=Z,500nm,20.0s
K02D  Willamette Mer    77.00  37 P       P       08 24 20.2 +0.3
      baz=232
BELC  Belle Mtn. Jos    77.05  48 P       P       08 24 21.4 +0.9
      baz=239,SNR=8.4
MPMC  Manual Prospec    77.09  46 P       P       08 24 21.6 +0.9
      baz=238,SNR=14
TIN   Tinemaha, Big     77.13  44 P       P       08 24 21.3 +0.6
      baz=237
WAKR  Walker            77.13  43 eP      P       08 24 21.1 +0.3
      comp=Z,13nm,1.2s
DAC   Darwin (Calif)    77.14  45 PFAKE           08 24 30.0 +9.1
DAC                               LR      LR
      comp=Z,600nm,19.0s
J01E  Myrtle Point      77.14  37 P       P       08 24 21.5 +1.0
      baz=232
GSC   Goldstone, Bar    77.16  47 eP      P       08 24 20.9 -0.1
      comp=Z,21nm,1.5s
GSC                               LR      LR
      comp=Z,600nm,18.0s
GSC   Goldstone, Bar    77.16  47 eP      P       08 24 20.9 -0.1
GSC                               pmax    pmax
      comp=Z,21nm,1.5s
GSC                               MLR     MLR
      comp=Z,600nm,18.0s
GSC   Goldstone, Bar    77.16  47 P       P       08 24 21.6 +0.7
      baz=238,SNR=7.8
HEC   Hector,Ludlow     77.24  47 P       P       08 24 22.3 +0.9
      baz=239
KDAK  Kodiak Island     77.27  13 eP      P       08 24 20.7 -0.2
      comp=Z,17nm,1.0s
KDAK                              LR      LR
      comp=Z,2µm,21.0s
KDAK  Kodiak Island     77.27  13 eP      P       08 24 20.7 -0.2
KDAK                              pmax    pmax
      comp=Z,17nm,1.0s
KDAK                              MLR     MLR
      comp=Z,2µm,21.0s
BC3   Big Chuckawall    77.27  49 P       P       08 24 22.7 +1.1
      baz=240,SNR=9.6
BEKR  Beckworth         77.32  41 eP      P       08 24 21.9  0.0
      comp=Z,19nm,1.3s
PNTR  Pine Nut          77.36  42 eP      P       08 24 22.5 +0.4
      comp=Z,27nm,1.3s
PNTR                              LR      LR
      comp=Z,500nm,19.0s
GLA   Glamis            77.42  49 eP      P       08 24 23.7 +1.3
      comp=Z,12nm,1.1s
GLA   Glamis            77.42  49 eP      P       08 24 23.7 +1.3
GLA                               pmax    pmax
      comp=Z,12nm,1.1s
GLA   Glamis            77.42  49 P       P       08 24 23.5 +1.1
      baz=240
VCNR  Virginia City     77.44  42 eP      P       08 24 23.3 +0.7
      comp=Z,12nm,1.2s
L04D  Klamath Falls     77.51  38 P       P       08 24 23.8 +1.0
      baz=233
M04C  Macdoel           77.53  39 P       P       08 24 23.8 +0.9
      baz=234
YERR  Yerington         77.53  42 eP      P       08 24 23.8 +0.7
      comp=Z,12nm,1.1s
YERR                              LR      LR
      comp=Z,500nm,19.0s
GRAC  Grapevine Rang    77.68  45 P       P       08 24 24.6 +0.9
      baz=238,SNR=8.7
GMRC  Granite Mounta    77.70  48 P       P       08 24 24.9 +0.8
      baz=239,SNR=11
FURC  Furnace Creek,    77.74  46 P       P       08 24 24.8 +0.9
      baz=238,SNR=8.4
IRM   Iron Mountain     77.74  48 P       P       08 24 25.2 +1.0
      baz=240,SNR=16
I02D  Swisshome         77.77  36 P       P       08 24 25.1 +1.0
      baz=232
RYN   Ryan              77.80  43 eP      P       08 24 25.0 +0.5
      comp=Z,8.7nm,1.1s
I03D  Drain, OR         77.80  37 P       P       08 24 25.1 +0.9
      baz=232
NV01  Mina Array Sit    77.83  43 eP      P       08 24 26.2 +1.4
NVAR  Mina Array Bea    77.83  43 P       P       08 24 26.2 +1.4
      comp=Z,5.7nm,0.9s,baz=225,slow=5.9,SNR=22
NVAR                              LR      LR      08 53 37.5
      comp=Z,475nm,18.9s,baz=240,slow=32
PAHR  Pah Rah Range     77.84  42 eP      P       08 24 25.2 +0.5
      comp=Z,20nm,1.5s
TUQ   Turquoise Moun    77.85  47 P       P       08 24 25.5 +0.6
      baz=239,SNR=11
NV11  Mina Array Sit    77.93  43 eP      P       08 24 25.2 -0.1
      comp=Z,3.0nm,1.5s
Y12C  Blythe            77.98  49 eP      P       08 24 26.2 +0.7
      comp=Z,16nm,1.1s
Y12C  Blythe            77.98  49 P       P       08 24 26.7 +1.2
      baz=240,SNR=6.4
113A  Mohawk Valley,    78.05  50 eP      P       08 24 27.1 +1.2
      comp=Z,12nm,1.1s
K04D  Chiloquin, OR     78.08  38 P       P       08 24 26.9 +0.9
      baz=233
LDFC  Landfair          78.23  48 eP      P       08 24 27.7 +0.7
      comp=Z,70nm,1.5s
J04D  Umpqua Nationa    78.24  38 P       P       08 24 27.7 +0.8
      baz=233
KVN   Kaiserville       78.30  43 eP      P       08 24 27.8 +0.4
      comp=Z,13nm,1.2s
KVN   Kaiserville       78.30  43 eP      P       08 24 27.8 +0.4
KVN                               pmax    pmax
      comp=Z,13nm,1.2s
MDJ   Mudanjiang        78.36 324 PFAKE           08 24 40.0 +13
MDJ                               LR      LR
      comp=Z,800nm,20.0s
MDJ   Mudanjiang        78.36 324 P       P       08 24 29.0 +1.7
MDJ                               pP      sP      08 24 32.3 +1.6
MDJ                               sP      pwP     08 24 33.8 +0.7
MDJ                               PP      PP      08 27 27.8 +3.1
MDJ                               S       S       08 34 28.8 +5.9
MDJ                               pmax    pmax
      comp=Z,11nm,0.6s
MDJ                               pmax    pmax
      comp=Z,190nm,3.3s
MDJ                               LR      LR
      comp=Z,410nm,21.4s
MDJ                               LR      LR
      comp=Z,490nm,21.2s
MDJ                               LR      LR
      comp=Z,970nm,19.0s
214A  Organ Pipe Nat    78.37  51 P       P       08 24 27.9 +0.2
      baz=242
I04A  Tendick Farm,     78.40  37 P       P       08 24 27.8 +0.2
      baz=233
TPNV  Topopah Spring    78.41  45 eP      P       08 24 28.1 +0.1
      comp=Z,9.2nm,1.0s
TPNV  Topopah Spring    78.41  45 eP      P       08 24 28.1 +0.1
TPNV                              pmax    pmax
      comp=Z,9.0nm,1.0s
TPNV  Topopah Spring    78.41  45 P       P       08 24 28.9 +0.9
      baz=238,SNR=11
HSIG                    78.43  55 PFAKE           08 24 40.0 +12
HSIG                              LR      LR
      comp=Z,500nm,20.0s
MOD   Modoc Plateau     78.53  39 eP      P       08 24 29.0 +0.5
      comp=Z,22nm,1.4s
MOD                               LR      LR
      comp=Z,500nm,20.0s
PDMCI Parker Dam,Lak    78.53  49 P       P       08 24 29.7 +1.2
      baz=240,SNR=5.8
NJ2   Nanjing           78.54 309 eP      P       08 24 28.5 -0.1
NJ2                               pmax    pmax
      comp=Z,19nm,0.6s
H04D  Lebanon           78.66  36 P       P       08 24 30.3 +1.3
      baz=232
J05D  Fort Rock, OR     78.78  38 P       P       08 24 30.7 +0.8
      baz=234
G03D  McMinnville, O    78.79  35 P       P       08 24 30.6 +1.0
      baz=232
SHPR  Sheep Range       78.93  46 eP      P       08 24 31.6 +0.8
      comp=Z,5.6nm,1.1s
H04A  Detroit Lake      79.07  36 eP      P       08 24 30.8 -0.5
      comp=Z,25nm,1.4s
W13A  Hualapai Mount    79.11  48 eP      P       08 24 32.0  0.0
      comp=Z,14nm,1.3s
CNPM  China Poot        79.15  13 eP      P       08 24 31.4  0.0
      comp=Z,17nm,1.0s
CNPM                              LR      LR
      comp=Z,2µm,20.0s
Y14A  Wickenburg        79.18  49 eP      P       08 24 33.2 +1.0
      comp=Z,11nm,1.0s
HOM   Homer             79.18  13 PFAKE           08 24 40.0 +8.5
HOM                               LR      LR
      comp=Z,1µm,21.0s
PINE  Pine Mountain     79.25  38 eP      P       08 24 32.9 +0.4
      comp=Z,37nm,1.5s
I05D  Terrebonne, OR    79.34  37 P       P       08 24 33.8 +1.0
      baz=234
BRLK  Bradley Lake      79.44  13 PFAKE           08 24 40.0 +7.1
BRLK                              LR      LR
      comp=Z,2µm,20.0s
F04D  Rainier, OR       79.47  35 P       P       08 24 33.8 +0.4
      baz=232
R11A  Troy Canyon, C    79.59  45 eP      P       08 24 34.1 -0.4
      comp=Z,14nm,1.5s
R11A  Troy Canyon, C    79.59  45 P       P       08 24 35.1 +0.7
      baz=239,SNR=11
DIB   Dawson Inlet,     79.76  25 PFAKE           08 24 50.0 +15
DIB                               LR      LR
      comp=Z,800nm,20.0s
SVW2  Sparrevohn        79.76  10 eP      P       08 24 33.5 -1.2
      comp=Z,13nm,1.3s
SVW2                              LR      LR
      comp=Z,800nm,19.0s
NLWA  Neilton Lookou    79.82  33 PFAKE           08 24 50.0 +15
NLWA                              LR      LR
      comp=Z,600nm,19.0s
WVOR  Wild Horse Val    79.85  40 eP      P       08 24 35.2 -0.5
      comp=Z,19nm,1.4s
WVOR                              LR      LR
      comp=Z,800nm,18.0s
WVOR  Wild Horse Val    79.85  40 eP      P       08 24 35.2 -0.5
WVOR                              pmax    pmax
      comp=Z,19nm,1.4s
WVOR                              MLR     MLR
      comp=Z,800nm,18.0s
G05D  Wamic, OR         79.90  36 P       P       08 24 36.7 +0.9
      baz=233
MOBC  Moresby Island    79.93  26 PFAKE           08 24 50.0 +14
MOBC                              LR      LR
      comp=Z,900nm,21.0s
DL2   Dalian            80.00 316 P       P       08 24 32.8 -3.6
DL2                               PP      PP      08 27 39.8 +1.3
DL2                               S       S       08 34 33.0 -7.5
DL2                               SKS     SKSac   08 34 44.8 -9.1
DL2                               pmax    pmax
      comp=Z,20nm,0.9s
DL2                               pmax    pmax
      comp=Z,230nm,5.2s
DL2                               LR      LR
      comp=Z,460nm,16.1s
DL2                               LR      LR
      comp=Z,280nm,15.3s
DL2                               LR      LR
      comp=Z,390nm,21.0s
E04D  Cinebar           80.00  35 P       P       08 24 37.1 +0.9
      baz=232
TUC   Tucson            80.05  52 eP      P       08 24 38.5 +1.5
      comp=Z,38nm,1.5s
TUC                               LR      LR
      comp=Z,600nm,21.0s
TUC   Tucson            80.05  52 eP      P       08 24 38.5 +1.5
TUC                               pmax    pmax
      comp=Z,38nm,1.5s
TUC                               MLR     MLR
      comp=Z,600nm,21.0s
TUC   Tucson            80.05  52 P       P       08 24 38.4 +1.4
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	baz=243						
KLR	**Kul'dur**	80.15	329	*i* P	P	08 24 38.2	+1.2
KLR				pmax	pmax		
	comp=Z,17nm,2.0s						
F05D	**White Salmon**	80.20	36	P	P	08 24 39.2	+1.8
	baz=233						
I07A	**Izee**	80.26	38	*e*P	P	08 24 37.5	-0.4
	comp=Z,16nm,1.5s						
CN2	**Changchun**	80.26	322	*e*P	P	08 24 38.5	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,90nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,20.0s						
MYKOM	**Kota Tinggi**	80.26	275	*e*P	P	08 24 36.8	-1.7
	comp=Z,40nm,1.4s						
D04E	**Lakebay**	80.27	34	P	P	08 24 39.3	+1.7
	baz=232						
D03D	**Eldon**	80.33	34	P	P	08 24 39.4	+1.4
	baz=232						
QIZ	**Qiongzhong**	80.45	293	PFAKE		08 24 50.0	+11
QIZ				LR	LR		
	comp=Z,400nm,19.0s						
QIZ	**Qiongzhong**	80.45	293	P	P	08 24 38.8	-0.5
QIZ				S	S	08 34 44.8	-1.3
QIZ				sS	sS	08 34 52.3	+2.0
QIZ				pmax	pmax		
	comp=Z,200nm,4.1s						
QIZ				LR	LR		
	comp=Z,400nm,22.6s						
QIZ				LR	LR		
	comp=Z,350nm,24.5s						
QIZ				LR	LR		
	comp=Z,480nm,26.5s						
J08A	**Circle Bar Ran**	80.47	39	*e*P	P	08 24 39.5	+0.5
	comp=Z,22nm,1.5s						
J08A				LR	LR		
	comp=Z,500nm,19.0s						
LON	**Longmire**	80.53	35	*e*P	P	08 24 39.2	0.0
	comp=Z,7.4nm,1.3s						
LON				LR	LR		
	comp=Z,500nm,20.0s						
LON	**Longmire**	80.53	35	*e*P	P	08 24 39.2	0.0
LON				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LON				MLR	MLR		
	comp=Z,500nm,20.0s						
X16A	**Lo Mia Camp, P**	80.55	50	*e*P	P	08 24 40.6	+0.9
	comp=Z,21nm,1.4s						
X16A				LR	LR		
	comp=Z,400nm,18.0s						
CCUT	**Cedar City**	80.69	46	*e*P	P	08 24 39.7	-0.8
	comp=Z,8.6nm,1.3s						
GAMB	**Gambell**	80.70	2	PFAKE		08 24 50.0	+10
GAMB				LR	LR		
	comp=Z,2µm,21.0s						
D05A	**Enumclaw**	80.70	34	*e*P	P	08 24 39.5	-0.5
	comp=Z,84nm,1.4s						
MA2	**Magadan**	80.79	344	PFAKE		08 24 50.0	+10
MA2				LR	LR		
	comp=Z,1µm,20.0s						
MA2	**Magadan**	80.79	344	*i* P	P	08 24 40.3	+0.1
MA2				pmax	pmax		
	comp=Z,20nm,1.8s						
KNB	**Kanab**	80.81	47	*e*P	P	08 24 41.6	+0.6
	comp=Z,9.3nm,1.3s						
KNB	**Kanab**	80.81	47	*e*P	P	08 24 41.7	+0.6
KNB				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PSUT	**Pine Spring**	80.85	45	*e*P	P	08 24 41.6	+0.3
	comp=Z,5.5nm,0.9s						
RC01	**Rabbit Creek A**	80.89	13	*e*P	P	08 24 40.6	0.0
	comp=Z,20nm,1.2s						
RC01				LR	LR		
	comp=Z,700nm,20.0s						
U15A	**North Rim**	80.89	48	*e*P	P	08 24 42.1	+0.5
	comp=Z,13nm,1.1s						
SZCU	**Shurtz Canyon**	80.91	46	*e*P	P	08 24 40.7	-1.0
	comp=Z,11nm,1.5s						
SUA	**Susitna One**	81.01	12	*e*P	P	08 24 41.9	+0.4
	comp=Z,10nm,0.8s						
SUA				LR	LR		
	comp=Z,2µm,21.0s						
ELK	**Elko**	81.07	43	*e*P	P	08 24 42.5	+0.1
	comp=Z,6.5nm,1.0s						
ELK				LR	LR		
	comp=Z,500nm,21.0s						
ELK	**Elko**	81.07	43	*e*P	P	08 24 42.6	+0.1
ELK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ELK				MLR	MLR		
	comp=Z,500nm,21.0s						
WUAZ	**Wupatki**	81.11	49	*e*P	P	08 24 44.0	+1.3
	comp=Z,14nm,1.4s						
WUAZ	**Wupatki**	81.11	49	P	P	08 24 43.8	+1.1
	baz=242						
KAIM	**Kayak Island**	81.13	16	PFAKE		08 24 50.0	+8.0
KAIM				LR	LR		
	comp=Z,2µm,21.0s						
A04D	**Lummi Island**	81.26	33	P	P	08 24 43.8	+0.9
	baz=232						
GLI	**Glacier Island**	81.29	14	PFAKE		08 24 50.0	+7.1
GLI				LR	LR		
	comp=Z,1µm,20.0s						
WHN	**Wuhan**	81.30	306	P	P	08 24 45.8	+2.3
WHN				LR	LR		
	comp=Z,1µm,26.9s						
B05A	**Bryant**	81.30	34	P	P	08 24 43.9	+0.7
	baz=232						
SKT	**Skwentna**	81.33	12	*e*P	P	08 24 42.5	-0.5
	comp=Z,5.1nm,1.0s						
SKT				LR	LR		
	comp=Z,1µm,21.0s						
FID	**Port Fidalgo**	81.33	15	PFAKE		08 24 50.0	+7.0
FID				LR	LR		
	comp=Z,1µm,20.0s						
EYAK	**Cordova Ski Ar**	81.33	15	*e*P	P	08 24 42.1	-0.9
	comp=Z,17nm,1.3s						
PKCU	**Pink Cliffs**	81.37	47	*e*P	P	08 24 43.9	-0.3
	comp=Z,5.4nm,1.0s						
TTA	**Tatalina**	81.42	9	*e*P	P	08 24 42.8	-0.7
	comp=Z,32nm,1.2s						
TTA				LR	LR		
	comp=Z,1µm,20.0s						
KNK	**Knik Glacier**	81.45	13	PFAKE		08 24 50.0	+6.3
KNK				LR	LR		
	comp=Z,1µm,20.0s						
RAGM	**Ragged Mountai**	81.46	16	PFAKE		08 25 00.0	+16
RAGM				LR	LR		
	comp=Z,2µm,20.0s						
LTY	**Liberty**	81.46	35	*e*P	P	08 24 44.7	+0.6
	comp=Z,11nm,1.4s						
PMR	**Palmer**	81.47	13	*e*P	P	08 24 42.8	-0.9
	comp=Z,15nm,1.2s						
PMR				LR	LR		
	comp=Z,600nm,21.0s						
PMR	**Palmer**	81.47	13	*e*P	P	08 24 42.8	-0.9
PMR				pmax	pmax		
	comp=Z,15nm,1.2s						
PMR				MLR	MLR		
	comp=Z,600nm,21.0s						
HMT	**Hamilton**	81.52	16	PFAKE		08 25 00.0	+16
HMT				LR	LR		
	comp=Z,2µm,20.0s						
HAWA	**Hanford**	81.58	36	*e*P	P	08 24 45.2	+0.5
	comp=Z,15nm,0.9s						
HAWA				LR	LR		
	comp=Z,500nm,19.0s						
MTPU	**Mount Pierson**	81.75	46	*e*P	P	08 24 47.5	+1.3
	comp=Z,5.2nm,1.1s						
HPIG		81.76	59	*e*P	P	08 24 47.2	+0.8
	comp=Z,13nm,1.4s						
HPIG				LR	LR		
	comp=Z,1µm,22.0s						
SML	**Sawmill**	81.83	13	*e*P	P	08 24 45.5	-0.2
	comp=Z,17nm,1.3s						
SML				LR	LR		
	comp=Z,900nm,21.0s						
SML	**Sawmill**	81.83	13	*e*P	P	08 24 45.5	-0.2
SML				pmax	pmax		
	comp=Z,17nm,1.3s						
SML				MLR	MLR		
	comp=Z,900nm,21.0s						
TCRU	**Three Creeks R**	81.84	46	*e*pP	pP	08 24 48.5	-0.7
ANM	**Nome**	81.87	5	PFAKE		08 25 00.0	+14
ANM				LR	LR		
	comp=Z,2µm,20.0s						
E08A	**Dider Farm, El**	81.91	36	PFAKE		08 25 00.0	+14
E08A				LR	LR		
	comp=Z,600nm,18.0s						
WAX	**Waxell Ridge**	81.99	16	*e*P	P	08 24 47.1	+0.4
	comp=Z,19nm,0.9s						
WAX				LR	LR		
	comp=Z,2µm,20.0s						
BMO	**Blue Mountains**	82.00	38	*e*P	P	08 24 47.7	+0.6
	comp=Z,23nm,1.5s						
BMO				LR	LR		
	comp=Z,600nm,18.0s						
BMO	**Blue Mountains**	82.00	38	*e*P	P	08 24 47.7	+0.6
BMO				pmax	pmax		
	comp=Z,23nm,1.5s						
BMO				MLR	MLR		
	comp=Z,600nm,18.0s						
PPLA	**Purkeypile**	82.04	11	PFAKE		08 25 00.0	+13
PPLA				LR	LR		
	comp=Z,1µm,21.0s						
SCM	**Sheep Creek Mo**	82.08	14	*e*P	P	08 24 46.0	-1.1
	comp=Z,15nm,1.0s						
SCM	**Sheep Creek Mo**	82.08	14	*e*P	P	08 24 46.0	-1.1
SCM				pmax	pmax		
	comp=Z,15nm,1.0s						
MFID	**Camas Ranch**	82.11	40	*e*P	P	08 24 47.9	+0.2
	comp=Z,13nm,1.3s						
W18A	**Petrified Fore**	82.11	50	*e*P	P	08 24 49.4	+1.4
	comp=Z,16nm,1.1s						
W18A	**Petrified Fore**	82.11	50	P	P	08 24 49.0	+0.9
	baz=243						
CRQM	**Cirque**	82.17	16	PFAKE		08 25 00.0	+12
CRQM				LR	LR		
	comp=Z,2µm,20.0s						
WRAK	**Wrangell Islan**	82.18	23	PFAKE		08 25 00.0	+12
WRAK				LR	LR		
	comp=Z,1µm,21.0s						
TGL	**Tana Glacier**	82.25	16	*e*P	P	08 24 48.0	0.0
	comp=Z,28nm,1.2s						
TGL				LR	LR		
	comp=Z,2µm,21.0s						
D08A	**Wollman Farm,**	82.31	36	*e*P	P	08 24 48.9	+0.4
	comp=Z,18nm,1.2s						
DUG	**Dugway, Tooele**	82.38	44	*e*P	P	08 24 49.3	0.0
	comp=Z,16nm,1.5s						
DUG	**Dugway, Tooele**	82.38	44	*e*P	P	08 24 49.3	0.0
DUG				pmax	pmax		
	comp=Z,16nm,1.5s						
DUG	**Dugway, Tooele**	82.38	44	P	P	08 24 50.0	+0.8
	baz=240						
PCA	**Pinnacle**	82.42	18	PFAKE		08 25 00.0	+11
PCA				LR	LR		
	comp=Z,1µm,20.0s						
121A	**Cookes Peak, D**	82.42	53	P	P	08 24 50.5	+0.8
	baz=244						
E09A	**Wood Farm, Sta**	82.44	37	*e*P	P	08 24 48.9	-0.3
	comp=Z,17nm,1.3s						
E09A				LR	LR		
	comp=Z,400nm,19.0s						
CAST	**Castle Rocks**	82.54	11	*e*P	P	08 24 47.3	-2.1
	comp=Z,10nm,1.0s						
CAST				LR	LR		
	comp=Z,1µm,19.0s						
GLB	**Gilahina Butte**	82.58	15	*e*P	P	08 24 49.4	-0.3
	comp=Z,17nm,1.2s						
BGU	**Big Grassy Mou**	82.60	43	*e*P	P	08 24 50.3	-0.1
	comp=Z,8.4nm,1.4s						
BALM	**Baldy**	82.62	16	*e*P	P	08 24 49.7	-0.3
	comp=Z,9.4nm,0.9s						
BALM				LR	LR		
	comp=Z,1µm,22.0s						
BALM	**Baldy**	82.62	16	*e*P	P	08 24 49.7	-0.3
BALM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BALM				MLR	MLR		
	comp=Z,1µm,22.0s						
F10A	**Beach Ranch, E**	82.66	37	*e*P	P	08 24 50.1	-0.4
	comp=Z,9.8nm,0.9s						
ZAIG	**Zacatecas**	82.75	64	PFAKE		08 25 00.0	+8.2
ZAIG				LR	LR		
	comp=Z,2µm,22.0s						
NLU	**North Lily Min**	82.75	45	*e*P	P	08 24 52.0	+0.6
	comp=Z,5.0nm,1.1s						
CTGM	**Chitina Glacie**	82.83	17	*e*P	P	08 24 50.1	-1.0
	comp=Z,10nm,0.8s						
CTGM				LR	LR		
	comp=Z,1µm,21.0s						
JIS	**Juneau Island**	82.84	21	PFAKE		08 25 00.0	+9.1
JIS				LR	LR		
	comp=Z,2µm,20.0s						
B08A	**Colville Reser**	82.84	35	PFAKE		08 25 00.0	+8.7
B08A				LR	LR		
	comp=Z,300nm,19.0s						
LLLB	**Lillooet**	82.85	32	PFAKE		08 25 00.0	+8.7
LLLB				LR	LR		
	comp=Z,500nm,19.0s						
Q16A	**Castle Valley**	82.87	46	*e*P	P	08 24 53.4	+1.5
	comp=Z,20nm,1.5s						
KTH	**Kantishna Hill**	82.88	11	*e*P	P	08 24 50.5	-0.7
	comp=Z,17nm,1.0s						
PLID	**Pearl Lake**	82.90	39	*e*P	P	08 24 51.4	-0.6
	comp=Z,6.9nm,0.9s						
TMUT	**Trail Mountain**	83.02	45	*e*P	P	08 24 52.5	-0.3
	comp=Z,30nm,1.4s						
HLID	**Hailey**	83.06	40	*e*P	P	08 24 53.3	+0.5
	comp=Z,21nm,1.4s						
HLID	**Hailey**	83.06	40	P	P	08 24 53.9	+1.1
	baz=239						
MPU	**Maple Canyon**	83.08	45	*e*P	P	08 24 53.0	0.0
	comp=Z,15nm,1.5s						
C09A	**Chrisman Ranch**	83.10	35	*e*P	P	08 24 52.2	-0.5
	comp=Z,18nm,1.4s						
C09A				LR	LR		
	comp=Z,600nm,20.0s						
RND	**Reindeer**	83.15	12	*e*P	P	08 24 52.0	-0.7
	comp=Z,16nm,0.9s						
RND				LR	LR		
	comp=Z,2µm,20.0s						
DHY	**Denali Highway**	83.17	13	*e*P	P	08 24 52.1	-0.8
	comp=Z,6.5nm,1.0s						
DHY				LR	LR		
	comp=Z,700nm,22.0s						
HVU	**Hansel Valley**	83.19	43	*e*P	P	08 24 53.6	+0.2
	comp=Z,22nm,1.4s						
SEY	**Seymchan**	83.31	346	*i* P	P	08 24 53.2	-0.1
CTU	**Camp Tracy**	83.33	44	*e*P	P	08 24 54.9	+0.7
	comp=Z,16nm,1.4s						
BPAW	**Bear Paw Mtn.**	83.36	11	*e*P	P	08 24 52.0	-1.7
	comp=Z,3.6nm,1.0s						
BPAW				LR	LR		
	comp=Z,700nm,19.0s						
SRU	**San Rafael Swe**	83.40	46	*e*P	P	08 24 54.6	0.0
	comp=Z,32nm,1.4s						
SRU	**San Rafael Swe**	83.40	46	*e*P	P	08 24 54.7	0.0
SRU				pmax	pmax		
	comp=Z,32nm,1.4s						
MCK	**McKinley**	83.43	12	*e*P	P	08 24 51.7	-2.3
	comp=Z,19nm,1.0s						
MCK				LR	LR		
	comp=Z,2µm,20.0s						
MCK	**McKinley**	83.43	12	*e*P	P	08 24 51.7	-2.3
MCK				pmax	pmax		
	comp=Z,19nm,1.0s						
MCK				MLR	MLR		
	comp=Z,2µm,20.0s						
P17A	**Butcher Ranch,**	83.43	45	*e*P	P	08 24 55.4	+0.7
	comp=Z,24nm,1.5s						
SKAG	**Skagway**	83.43	20	*e*P	P	08 24 51.9	-2.1
	comp=Z,16nm,1.0s						
JLU	**Jordanelle**	83.49	44	*e*P	P	08 24 55.6	+0.5
	comp=Z,24nm,1.5s						
PAX	**Paxson**	83.50	14	*e*P	P	08 24 53.8	-0.7
	comp=Z,10nm,1.2s						
PAX	**Paxson**	83.50	14	*e*P	P	08 24 53.8	-0.7
PAX				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LAZ	**Ladron**	83.71	51	*e*P	P	08 24 57.8	+1.5
BWN	**Browne**	83.72	12	*e*P	P	08 24 54.1	-1.3
	comp=Z,72nm,1.4s						
LENM	**Lemitar**	83.73	52	*e*P	P	08 24 57.1	+0.7
Y22D	**IRIS PASSCAL I**	83.73	52	*e*P	P	08 24 56.8	+0.3
	comp=Z,80nm,1.4s						
Y22D	**IRIS PASSCAL I**	83.73	52	P	P	08 24 58.2	+1.8
	baz=245						
IPM	**Ipoh**	83.76	277	*e*P	P	08 24 55.2	-1.6
	comp=Z,27nm,1.0s						
IPM				LR	LR		
	comp=Z,400nm,20.0s						
TCUT	**Toone Canyon**	83.76	44	*e*P	P	08 24 56.5	-0.1
	comp=Z,40nm,1.0s						
HYT	**Haines Junctio**	83.82	18	*e*P	P	08 24 56.6	+0.4
	comp=Z,23nm,1.5s						
HYT				LR	LR		
	comp=Z,2µm,20.0s						
MENT	**Mentasta**	83.88	15	*e*P	P	08 24 56.5	+0.1
	comp=Z,18nm,1.4s						
MENT				LR	LR		
	comp=Z,1µm,21.0s						
HWUT	**Hardware Ranch**	83.90	43	*e*P	P	08 24 56.6	-0.6
	comp=Z,16nm,1.4s						
PV05	**Paradox Valley**	83.92	47	PFAKE		08 25 10.0	+13
PV05				LR	LR		
	comp=Z,700nm,18.0s						
MVCO	**Mesa Verde**	83.95	48	*e*P	P	08 24 58.2	+0.6
	comp=Z,9.9nm,1.4s						
MVCO	**Mesa Verde**	83.95	48	P	P	08 24 58.2	+0.6
	baz=244						
BNM	**Barren Site**	83.99	52	*e*P	P	08 24 59.1	+1.3
NEW	**Newport**	84.00	35	*e*P	P	08 24 56.8	-0.5
	comp=Z,3.4nm,0.8s						
NEW	**Newport**	84.00	35	*e*P	P	08 24 56.8	-0.5
NEW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NEW	**Newport**	84.00	35	P	P	08 24 58.6	+1.3
	baz=236						
PV09	**Paradox Valley**	84.08	47	*e*P	P	08 24 58.3	0.0
PV10	**Paradox Valley**	84.09	47	*e*P	P	08 24 58.7	+0.4
	comp=Z,35nm,1.5s						
PV14	**Lion Creek, Pa**	84.10	47	*e*P	P	08 24 57.7	-0.6
	comp=Z,18nm,1.1s						
PV19	**Morning Glory**	84.10	47	*e*P	P	08 24 58.5	+0.2
	comp=Z,35nm,1.5s						
PV19				LR	LR		
	comp=Z,400nm,18.0s						
PV17	**East Wray Mesa**	84.11	47	*e*P	P	08 24 58.5	+0.2
	comp=Z,12nm,1.1s						
PV18	**Skein Mesa, Pa**	84.12	47	*e*P	P	08 24 58.5	+0.1
	comp=Z,8.6nm,1.0s						
PV18				LR	LR		
	comp=Z,500nm,19.0s						
PV20	**West Nyswonger**	84.13	47	*e*P	P	08 24 58.0	-0.4
	comp=Z,30nm,1.5s						
PV23	**Carpenter Ridg**	84.15	47	*e*P	P	08 24 59.2	+0.6
	comp=Z,16nm,0.9s						
PV23				LR	LR		
	comp=Z,2µm,22.0s						
PV13	**Radium Mtn., P**	84.15	47	*e*P	P	08 24 58.6	+0.1
	comp=Z,28nm,1.5s						
PV16	**Nyswonger Mesa**	84.15	47	*e*P	P	08 24 58.1	-0.4
	comp=Z,29nm,1.5s						
PV16				LR	LR		
	comp=Z,300nm,20.0s						
PV03	**Paradox Valley**	84.17	47	*e*P	P	08 24 58.2	-0.4
	comp=Z,21nm,1.4s						
PV03				LR	LR		
	comp=Z,400nm,19.0s						
PV11	**David Mesa, Pa**	84.17	47	*e*P	P	08 24 59.3	+0.7
	comp=Z,29nm,1.4s						
PV11				LR	LR		
	comp=Z,700nm,22.0s						
PV04	**Paradox Valley**	84.19	47	*e*P	P	08 24 59.1	+0.4
	comp=Z,12nm,1.0s						
BJT	**Baijiatuau**	84.22	315	*e*P	P	08 24 57.6	-0.9
	comp=Z,16nm,1.2s						
BJT				LR	LR		
	comp=Z,400nm,20.0s						
BJT	**Baijiatuau**	84.22	315	*e*P	P	08 24 57.6	-0.9
BJT				pmax	pmax		
	comp=Z,16nm,1.2s						
BJT				MLR	MLR		
	comp=Z,400nm,20.0s						
BJI	**Beijing**	84.22	315⇑	*i*P	P	08 25 00.5	+2.0
BJI				S	S	08 35 28.0	+4.0
BJI				pmax	pmax		
	comp=Z,11nm,1.3s						
BJI				LR	LR		
	comp=Z,340nm,19.8s						
BJI				LR	LR		
	comp=Z,140nm,17.3s						
BJI				LR	LR		
	comp=Z,370nm,24.5s						
PV02	**Paradox Valley**	84.23	47	*e*P	P	08 24 57.7	-1.3
	comp=Z,18nm,1.3s						
PV12	**Saucer Basin,**	84.23	47	*e*P	P	08 24 58.2	-0.7
	comp=Z,36nm,1.2s						
MLY	**Manley**	84.25	11	*e*P	P	08 24 56.9	-1.3
	comp=Z,17nm,1.0s						
MLY				LR	LR		
	comp=Z,800nm,21.0s						
WRH	**Wood River Hil**	84.25	12	*e*P	P	08 24 57.9	-0.3
	comp=Z,70nm,1.5s						
WRH				LR	LR		
	comp=Z,2µm,21.0s						
RIDG	**Independent Ri**	84.31	14	*e*P	P	08 24 58.5	-0.1
	comp=Z,21nm,1.2s						
RIDG				LR	LR		
	comp=Z,1µm,21.0s						
PV01	**Paradox Valley**	84.31	47	*e*P	P	08 24 59.9	+0.5
	comp=Z,26nm,1.5s						
TX31	**Lajitas Ar. Si**	84.33	57	*e*P	P	08 25 00.3	+0.8
	comp=Z,22nm,1.4s						
TXAR	**Lajitas Array**	84.33	57	P	P	08 25 00.8	+1.3
	comp=Z,13nm,1.3s,baz=212,slow=4.4,SNR=36						
TXAR				LR	LR	08 54 34.1	
	comp=Z,522nm,20.6s,baz=0.0,slow=30						
PV22	**Blue Mesa, Par**	84.34	47	*e*P	P	08 24 59.9	+0.4
	comp=Z,26nm,1.5s						
KULM	**Kulim**	84.36	277	PFAKE		08 25 10.0	+10
KULM				LR	LR		
	comp=Z,500nm,20.0s						
PV07	**Paradox Valley**	84.39	47	*e*P	P	08 24 59.6	-0.2
	comp=Z,17nm,1.4s						
PV07				LR	LR		
	comp=Z,500nm,19.0s						
DOT	**Dot Lake**	84.41	14	*e*P	P	08 24 58.9	-0.1
	comp=Z,12nm,0.9s						
DOT				LR	LR		
	comp=Z,1µm,22.0s						
TLIG	**Tlapa**	84.43	70	*e*P	P	08 24 59.0	-1.3
	comp=Z,19nm,1.4s						
TLIG				LR	LR		
	comp=Z,1µm,20.0s						
HDA	**Harding Lake**	84.43	13	*e*P	P	08 24 58.4	-0.7
	comp=Z,17nm,0.9s						
HDA				LR	LR		
	comp=Z,1µm,22.0s						
HDA	**Harding Lake**	84.43	13	P	P	08 24 58.8	-0.3
	baz=209						
ANMO	**Albuquerque**	84.45	51	*e*P	P	08 25 00.8	+0.7
	comp=Z,28nm,1.4s						
ANMO				LR	LR		
	comp=Z,400nm,21.0s						
ANMO	**Albuquerque**	84.45	51	*i* P	P	08 25 00.9	+0.8
ANMO				pmax	pmax		
	comp=Z,28nm,1.6s						
ANMO	**Albuquerque**	84.45	51	P	P	08 25 01.0	+0.8
	baz=245						
CCB	**Clear Creek Bu**	84.47	12	*e*P	P	08 24 58.2	-1.0
	comp=Z,25nm,0.9s						
CCB				LR	LR		
	comp=Z,2µm,21.0s						
WHY	**Whitehorse**	84.50	19	PFAKE		08 25 10.0	+10
WHY				LR	LR		
	comp=Z,2µm,21.0s						
TCOL	**CIGO, UAF Yank**	84.66	12	P	P	08 24 59.2	-0.9
	baz=208						
COLA	**College**	84.66	12	*e*P	P	08 24 58.2	-2.0
	comp=Z,40nm,0.8s						
COLA				LR	LR		
	comp=Z,2µm,20.0s						
COLA	**College**	84.66	12	*e*P	P	08 24 58.2	-2.0
COLA				pmax	pmax		
	comp=Z,39nm,0.8s						
COLA				MLR	MLR		
	comp=Z,2µm,20.0s						
MDM	**Murphy Dome**	84.66	12	*e*P	P	08 24 59.8	-0.4
	comp=Z,23nm,1.3s						
MDM				LR	LR		
	comp=Z,2µm,21.0s						
MCMT	**McKenzie Canyo**	84.67	40	*e*P	P	08 25 01.7	+0.6
SCRK	**Sand Creek**	84.71	14	*e*P	P	08 24 59.7	-1.0

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      comp=Z,12nm,1.0s
SCRK                              LR        LR
      comp=Z,1µm,22.0s
AHID  Auburn Hatcher   84.76  42 eP        P         08 25 01.3 -0.2
      comp=Z,13nm,0.9s
ILAR  Eielson Array    84.77  12  P        P         08 24 59.7 -1.1
      comp=Z,8.0nm,0.9s,baz=227,slow=4.7,SNR=26
ILAR                              LR        LR       08 55 22.4
      comp=Z,1µm,22.0s,baz=222,slow=30
ILB   Eielson Array    84.77  12 eP        P         08 24 59.5 -1.2
      comp=Z,23nm,1.0s
POKR  Poker Plat Res   84.96  12  P        P         08 25 00.8 -0.9
      baz=208
ENH   Enshi            85.02 304 eP        P         08 25 02.5 -0.4
      comp=Z,71nm,1.5s
MSO   Missoula         85.04  38 eP        P         08 25 02.7 -0.1
      comp=Z,29nm,1.5s
MSO                               LR        LR
      comp=Z,400nm,19.0s
MSO   Missoula         85.04  38  P        P         08 25 02.6 -0.1
      baz=239
DLMT  Dillon           85.10  40 eP        P         08 25 03.4 +0.3
      comp=Z,22nm,1.2s
MAW   Mawson           85.12 199  LR        LR       09 01 11.5
      comp=Z,963nm,19.2s,baz=108,slow=34
MAW   Mawson           85.12 199  PFAKE              08 25 10.0 +7.3
MAW                               LR        LR
      comp=Z,300nm,22.0s
ZEA   Zeya             85.18 330 eP        P         08 25 05.0 +1.9
ZEA                              eS        S         08 35 35.0 +2.1
ZEA                               pmax      pmax
      comp=Z,46nm,1.4s
ZEA                               pmax      pmax
      comp=Z,300nm,6.0s
ZEA                               smax      smax
      comp=E,500nm,14.0s
S22A  4UR Ranch, Cre   85.38  48  P        P         08 25 05.9 +1.1
      baz=244
LRM   Limekiln Ridge   85.42  39 eP        P         08 25 05.7 +0.9
O20A  White River Ci   85.44  46 eP        P         08 25 05.2 +0.3
      comp=E,8.7nm,1.0s
O20A  White River Ci   85.44  46  P        P         08 25 05.8 +0.8
      baz=243
RDOG  Red Dog Mine     85.51   5  PFAKE              08 25 20.0  +16
RDOG                              LR        LR
      comp=Z,2µm,20.0s
QLMT  Earthquake Lak   85.55  40 eP        P         08 25 04.7 -0.7
YHB   Horse Butte      85.66  41 eP        P         08 25 05.8 -0.2
      comp=Z,21nm,1.2s
YPP   Pitchstone Pla   85.67  41 eP        P         08 25 04.7 -1.5
      comp=Z,14nm,1.5s
PRP   Porcupine Dome   85.70  13  PFAKE              08 25 20.0  +14
PRP                               LR        LR
      comp=Z,1µm,22.0s
YFT   Old Faithful     85.74  41 eP        P         08 25 07.7 +1.3
      comp=Z,20nm,1.4s
BW06  Boulder Array    85.76  43 eP        P         08 25 06.2 -0.3
      comp=Z,3.5nm,1.0s
BW06  Boulder Array    85.76  43  P        P         08 25 06.7 +0.1
      baz=242
PD31  Pinedale Array   85.76  43 eP        P         08 25 06.0 -0.6
      comp=Z,5.1nm,1.4s
PDAR  Pinedale Array   85.76  43  P        P         08 25 06.5 -0.1
      comp=Z,2.4nm,1.0s,baz=186,slow=1.5,SNR=12
PDAR                              LR        LR       09 00 52.6
      comp=Z,182nm,18.0s,baz=254,slow=34
YMR   Madison River    85.76  41 eP        P         08 25 07.3 +0.8
      comp=Z,38nm,1.5s
BILL  Bilibino         85.77 354  PFAKE              08 25 20.0  +14
BILL                              LR        LR
      comp=Z,1µm,22.0s
BILL  Bilibino         85.77 354⇑eP        P         08 25 05.7  0.0
BILL                             e                   08 28 22.0
BILL                             eS        S         08 35 33.6 -4.5
BILL                              pmax      pmax
      comp=Z,33nm,1.0s
BILL                              MLR       MLR
      comp=Z,842nm,18.0s
BOZ   Bozeman (W)      85.81  40 eP        P         08 25 07.0 +0.4
      comp=Z,29nm,1.4s
BOZ                               LR        LR
      comp=Z,400nm,19.0s
BOZ   Bozeman (W)      85.81  40 eP        P         08 25 07.0 +0.4
BOZ                               pmax      pmax
      comp=Z,29nm,1.4s
BOZ                               MLR       MLR
      comp=Z,400nm,19.0s
BOZ   Bozeman (W)      85.81  40  P        P         08 25 07.3 +0.7
      baz=241
H17A  Grant Village    85.88  41 eP        P         08 25 08.7 +1.5
      comp=Z,8.6nm,1.1s
H17A  Grant Village    85.88  41  P        P         08 25 08.6 +1.5
      baz=242
YHH   Holmes Hill      85.89  41 eP        P         08 25 06.4 -0.8
      comp=Z,22nm,1.5s
DAWY  Dawson           85.90  16 eP        P         08 25 06.2 -0.3
      comp=Z,11nm,0.8s
DAWY                              LR        LR
      comp=Z,1µm,21.0s
EGAK  Eagle            86.05  15 eP        P         08 25 05.7 -1.4
      comp=Z,14nm,0.9s
EGAK                              LR        LR
      comp=Z,1µm,22.0s
LNIG  Linares          86.17  63 eP        P         08 25 09.0 +0.4
      comp=Z,24nm,1.3s
LNIG                              LR        LR
      comp=Z,1µm,20.0s
WALA  Waterton Lakes   86.22  36 eP        P         08 25 07.2 -1.3
      comp=Z,14nm,1.1s
WALA                              LR        LR
      comp=Z,500nm,20.0s
HRY   Holter Researc   86.23  39 eP        P         08 25 10.0 +1.3
SDCO  Great Sand Dun   86.33  49 eP        P         08 25 09.8 +0.3
      comp=Z,3.4nm,1.3s
SDCO  Great Sand Dun   86.33  49  P        P         08 25 10.0 +0.5
      baz=245
COLD  Coldfoot         86.34  10 eP        P         08 25 09.9 +1.4
      comp=Z,16nm,1.2s
COLD                              LR        LR
      comp=Z,1µm,21.0s
SLVN  Son La           86.48 293 eP        P         08 25 08.4 -2.0
      comp=Z,14nm,1.1s
HIA   Hailar           86.54 324  PFAKE              08 25 20.0  +10
HIA                               LR        LR
      comp=Z,900nm,20.0s
FYU   Fort Yukon       86.67  12  PFAKE              08 25 20.0  +10
FYU                               LR        LR
      comp=Z,1µm,20.0s
RWWY  Rawlins          86.83  45  PFAKE              08 25 20.0 +8.1
RWWY                              LR        LR
      comp=Z,500nm,21.0s
MSTX  Muleshoe         86.84  53 eP        P         08 25 12.1 +0.2
      comp=Z,26nm,1.5s
MSTX                              LR        LR
      comp=Z,500nm,20.0s
MSTX  Muleshoe         86.84  53  P        P         08 25 12.5 +0.6
      baz=247
T25A  Trinidad         86.87  50  P        P         08 25 12.3 +0.2
      baz=246
XAN   Xi'an            86.92 307 eP        P         08 25 11.3 -0.8
      comp=Z,17nm,1.1s
XAN                               LR        LR
      comp=Z,500nm,21.0s
XAN   Xi'an            86.92 307  P        P         08 25 13.5 +1.3
XAN                               pP        pwP      08 25 18.8 +0.8
XAN                               S         S        08 35 52.5 +1.6
XAN                               SS        SS       08 41 30.5 -3.4
XAN                               pmax      pmax
      comp=Z,16nm,1.3s
XAN                               pmax      pmax
      comp=Z,240nm,4.5s
XAN                               LR        LR
      comp=Z,240nm,13.7s
XAN                               LR        LR
      comp=Z,360nm,18.1s
XAN                               LR        LR
      comp=Z,500nm,22.6s
XAN   Xi'an            86.92 307 eP        P         08 25 11.4 -0.8
XAN                               pmax      pmax
      comp=Z,17nm,1.1s
XAN                               MLR       MLR
      comp=Z,500nm,21.0s
RLMT  Red Lodge        87.04  41 eP        P         08 25 13.2 +0.4
      comp=Z,10nm,1.1s
RLMT  Red Lodge        87.04  41  P        P         08 25 13.6 +0.8
      baz=242
LVIG  Laguna Verde     87.07  68  PFAKE              08 25 20.0 +6.9
LVIG                              LR        LR
      comp=Z,1µm,21.0s
Q24A  Divide           87.09  48  P        P         08 25 12.9 -0.4
      baz=246
GCMT  Greycliff        87.11  40 eP        P         08 25 13.6 +0.6
N23A  Red Feather La   87.35  46  P        P         08 25 14.6 +0.2
      baz=245
833A  Chaparral WMA,   87.44  59  P        P         08 25 14.0 -0.8
      baz=249
K22A  Casper           87.71  44  PFAKE              08 25 30.0  +14
K22A                              LR        LR
      comp=Z,500nm,19.0s
K22A  Casper           87.71  44  P        P         08 25 15.8 -0.1
      baz=244
TOLK  Toolik Lake Re   87.73  10  PFAKE              08 25 30.0  +15
TOLK                              LR        LR
      comp=Z,900nm,20.0s
TOLK  Toolik Lake Re   87.73  10  P        P         08 25 16.0 +0.7
      baz=206
HHC   Hu-ho-hao-te     87.74 314  P        P         08 25 16.5 +0.4
HHC                               S         S        08 36 04.5 +5.8
HHC                               pmax      pmax
      comp=Z,4.0nm,0.9s
HHC                               LR        LR
      comp=Z,240nm,19.0s
HHC                               LR        LR
      comp=Z,470nm,19.9s
PHWY  Pilot Hill       87.85  46  PFAKE              08 25 30.0  +13
PHWY                              LR        LR
      comp=Z,300nm,21.0s
JCT   Junction City    87.87  57 eP        P         08 25 15.4 -1.5
      comp=Z,7.1nm,1.0s
JCT                               LR        LR
      comp=Z,600nm,19.0s
JCT   Junction City    87.87  57 eP        P         08 25 15.4 -1.5
JCT                               pmax      pmax
      comp=Z,7.0nm,1.0s
JCT                               MLR       MLR
      comp=Z,600nm,19.0s
JCT   Junction City    87.87  57  P        P         08 25 16.8 -0.1
      baz=249
AMTX  Amarillo         88.02  53  PFAKE              08 25 30.0  +12
AMTX                              LR        LR
      comp=Z,500nm,19.0s
AMTX  Amarillo         88.02  53  P        P         08 25 17.6  0.0
      baz=248
EGMT  Eagleton         88.10  38  P        P         08 25 17.9 +0.3
      baz=242
EPYK  Eagle Plains     88.43  15  PFAKE              08 25 30.0  +11
EPYK                              LR        LR
      comp=Z,1µm,21.0s
EPYK  Eagle Plains     88.43  15  P        P         08 25 20.0 +1.3
      baz=218
KMI   Kunming          88.75 297  PFAKE              08 25 30.0 +8.6
KMI                               LR        LR
      comp=Z,400nm,19.0s
KMI   Kunming          88.75 297  P        P         08 25 22.3 +0.9
KMI                               pmax      pmax
      comp=Z,19nm,0.5s
KMI                               pmax      pmax
      comp=Z,160nm,4.6s
ABTX  Abilene, Hawle   88.77  55  PFAKE              08 25 30.0 +8.9
ABTX                              LR        LR
      comp=Z,700nm,20.0s
ABTX  Abilene, Hawle   88.77  55  P        P         08 25 21.5 +0.5
      baz=249
KSCO  Kaye Shedlock'   88.91  49 eP        P         08 25 20.4 -1.3
      comp=Z,13nm,1.3s
KSCO  Kaye Shedlock'   88.91  49  P        P         08 25 22.2 +0.5
      baz=247
YAK   Yakutsk          89.36 338  PFAKE              08 25 30.0 +7.0
YAK                               LR        LR
      comp=Z,500nm,21.0s
LAO   LASA Array       89.64  41 eP        P         08 25 26.0 +1.1
      comp=Z,9.2nm,0.8s
LAO                               LR        LR
      comp=Z,400nm,20.0s
LAO   LASA Array       89.64  41  P        P         08 25 25.5 +0.6
      baz=245
435B  Jarrell          89.77  58  P        P         08 25 25.8  0.0
      baz=250
CD2   Chengdu          89.84 302  P        P         08 25 25.5 -0.7
CD2                               S         S        08 36 17.5 -1.3
CD2                               pmax      pmax
      comp=Z,240nm,6.5s
CD2                               LR        LR
      comp=Z,450nm,16.7s
CD2                               LR        LR
      comp=Z,370nm,14.7s
CD2                               LR        LR
      comp=Z,420nm,16.3s
CCIG  Comitan          89.85  73  PFAKE              08 25 40.0  +13
CCIG                              LR        LR
      comp=Z,2µm,20.0s
RSSD  Black Hills      89.97  43 eP        P         08 25 24.6 -2.1
      comp=Z,5.8nm,1.1s
RSSD                              LR        LR
      comp=Z,500nm,20.0s
RSSD  Black Hills      89.97  43 eP        P         08 25 24.6 -2.1
RSSD                              pmax      pmax
      comp=Z,6.0nm,1.1s
RSSD                              MLR       MLR
      comp=Z,500nm,20.0s
RSSD  Black Hills      89.97  43  P        P         08 25 26.7  0.0
      baz=246
CMAR  Chiang Mai Arr   89.98 289  P        P         08 25 28.4 +1.4
      comp=Z,0.9nm,0.3s,baz=114,slow=3.4,SNR=10
CMAR                              LR        LR       09 06 20.0
      comp=Z,138nm,18.0s,baz=116,slow=36
OGNE  Ogallala         90.08  47  P        P         08 25 27.6 +0.5
      baz=248
WMOK  Wichita Mounta   90.19  54  PFAKE              08 25 40.0  +12
WMOK                              LR        LR
      comp=Z,400nm,22.0s
WMOK  Wichita Mounta   90.19  54  P        P         08 25 27.3 -0.4
      baz=250
SYO   Syowa Base       90.27 192⇑eX        P         08 25 25.0 -2.4
WHTX  Lake Whitney,    90.28  57  PFAKE              08 25 40.0  +12
WHTX                              LR        LR
      comp=Z,800nm,19.0s
WHTX  Lake Whitney,    90.28  57  P        P         08 25 28.3 +0.1
      baz=250
INK   Inuvik           90.72  15  PFAKE              08 25 40.0  +11
INK                               LR        LR
      comp=Z,1µm,22.0s
PLCA  Paso Flores      90.84 133  LR        LR       09 00 26.5
      comp=Z,311nm,18.4s,baz=272,slow=32
HKT   Hockley          90.92  59 eP        P         08 25 29.0 -2.0
      comp=Z,2.9nm,1.0s
HKT                               LR        LR
      comp=Z,800nm,20.0s
HKT   Hockley          90.92  59 eP        P         08 25 29.0 -2.0
HKT                               pmax      pmax
      comp=Z,3.0nm,1.0s
HKT                               MLR       MLR
      comp=Z,800nm,20.0s
SNAA  Sanae            91.38 178  P        P         08 25 35.8 +3.2
SNAA  Sanae            91.38 178  PFAKE              08 25 40.0 +7.3
SNAA                              LR        LR
      comp=Z,900nm,18.0s
SNAA  Sanae            91.38 178 i P       P         08 25 35.6 +2.9
VNA3  Neumayer Olymp   91.46 176  P        P         08 25 35.9 +2.9
LZH   Lanzhou          91.54 307 eP        P         08 25 35.3 +1.2
LZH                               pP        pP       08 25 37.3 +0.7
LZH                               sP        pwP      08 25 39.5 -0.4
LZH                               SS        SS       08 42 39.5 -1.7
LZH                               pmax      pmax
      comp=Z,19nm,0.9s
LZH                               pmax      pmax
      comp=Z,180nm,4.9s
LZH                               LR        LR
      comp=Z,1µm,19.5s
LZH                               LR        LR
      comp=Z,1µm,18.2s
LZH                               LR        LR
      comp=Z,1µm,20.3s
DGMT  Dagmar           91.64  39 eP        P         08 25 33.5 -0.6
DGMT                              LR        LR
      comp=Z,600nm,19.0s
DGMT  Dagmar           91.64  39  P        P         08 25 34.7 +0.6
      baz=246
VNA1  Neumayer--Stat   92.14 176  P        P         08 25 40.7 +4.7
NATX  Nacogdoches      92.45  58  PFAKE              08 25 50.0  +12
NATX                              LR        LR
      comp=Z,700nm,20.0s
NATX  Nacogdoches      92.45  58  P        P         08 25 38.7 +0.5
      baz=252
TUL1  Leonard          92.89  53 eP        P         08 25 39.8 -0.3
      comp=Z,10nm,1.1s
TUL1                              LR        LR
      comp=Z,400nm,19.0s
TUL1  Leonard          92.89  53  P        P         08 25 40.5 +0.4
      baz=251
BGNE  Belgrade         92.97  48  P        P         08 25 40.9 +0.4
      baz=250
YKA   Yellowknife Ar   92.98  24  P        P         08 25 41.3 +1.4
      comp=Z,1.0nm,0.8s,baz=244,slow=4.3,SNR=5.2
YKA                               LR        LR       08 59 44.6
      comp=Z,108nm,22.0s,baz=246,slow=30
YKB5  Yellowknife Ar   92.98  24 eP        P         08 25 41.4 +1.4
YKW3  Yellowknife Ar   93.01  24  PFAKE              08 25 50.0  +10
YKW3                              LR        LR
      comp=Z,1µm,21.0s
KSU1  Kansas State U   93.31  50  PFAKE              08 25 50.0 +8.0
KSU1                              LR        LR
      comp=Z,400nm,19.0s
KSU1  Kansas State U   93.31  50  P        P         08 25 42.7 +0.6
      baz=251
MYIG  Mrida            93.40  69  PFAKE              08 25 50.0 +7.2
MYIG                              LR        LR
      comp=Z,500nm,20.0s
TGUH  Tegucigalpa,Un   93.69  77  PFAKE              08 26 00.0  +16
TGUH                              LR        LR
      comp=Z,900nm,22.0s
SONA0 Songino Array    93.88 319 eP        P         08 25 46.3 +1.7
SONM  Songino Array    93.88 319  P        P         08 25 46.3 +1.7
      comp=Z,0.5nm,0.4s,baz=225,slow=1.5,SNR=4.1
SONM                              LR        LR       09 07 58.9
      comp=Z,249nm,18.2s,baz=103,slow=36
MIAR  Mount Ida        94.18  55  PFAKE              08 26 00.0  +14
MIAR                              LR        LR
      comp=Z,500nm,21.0s
MIAR  Mount Ida        94.18  55  P        P         08 25 47.0 +0.9
      baz=252
W39A  Magazine         94.22  55 eP        P         08 25 45.3 -1.0
      comp=Z,7.1nm,1.3s
W39A                              LR        LR
      comp=Z,600nm,20.0s
W39A  Magazine         94.22  55  P        P         08 25 46.9 +0.7
      baz=252
ESTN  Estel            94.26  78  PFAKE              08 26 00.0  +13
ESTN                              LR        LR
      comp=Z,900nm,20.0s
WLAR  White Oak Lake   94.29  56 eP        P         08 25 44.3 -2.3
      comp=Z,29nm,1.3s
WLAR                              LR        LR
      comp=Z,700nm,18.0s
Z41A  Richland Creek   94.40  57  P        P         08 25 47.2 +0.1
      baz=253
TEIG  Tepich           94.51  70  PFAKE              08 26 00.0  +12
TEIG                              LR        LR
      comp=Z,800nm,21.0s
X40A  Basin Creek Fa   94.75  56  PFAKE              08 26 00.0  +11
X40A                              LR        LR
      comp=Z,400nm,20.0s
X40A  Basin Creek Fa   94.75  56  P        P         08 25 49.1 +0.4
      baz=253
ECSD  EROS Data Cent   94.82  46 eP        P         08 25 47.9 -1.0
      comp=Z,14nm,1.4s
ECSD                              LR        LR
      comp=Z,400nm,18.0s
ECSD  EROS Data Cent   94.82  46  P        P         08 25 49.4 +0.5
      baz=251
ACON  Acoyapa          95.06  79  PFAKE              08 26 00.0 +9.4
ACON                              LR        LR
      comp=Z,600nm,22.0s
UALR  University of    95.22  55  PFAKE              08 26 00.0 +9.1
UALR                              LR        LR
      comp=Z,500nm,21.0s
W41B  Gary Mavity, V   95.41  55  P        P         08 25 52.3 +0.6
      baz=253
WHAR  Wooly Hollow     95.41  55  PFAKE              08 26 00.0 +8.3
WHAR                              LR        LR
      comp=Z,700nm,21.0s
TIXI  Tiksi            95.73 345  PFAKE              08 26 00.0 +7.7
TIXI                              LR        LR
      comp=Z,2µm,21.0s
TIXI  Tiksi            95.73 345 eP        P         08 25 53.7 +1.4
TIXI                              pmax      pmax
      comp=Z,5.0nm,1.0s
ESPN  Las Esperanzas   95.94  79  PFAKE              08 26 10.0  +15
ESPN                              LR        LR
      comp=Z,1µm,20.0s
VBMS  Vicksburg        95.95  58  PFAKE              08 26 10.0  +16
VBMS                              LR        LR
      comp=Z,600nm,21.0s
SCIA  State Center     96.64  48  PFAKE              08 26 10.0  +13
SCIA                              LR        LR
      comp=Z,400nm,21.0s
SCIA  State Center     96.64  48  P        P         08 25 57.6 +0.4
      baz=253
AGMN  Agassiz Nation   96.76  42  PFAKE              08 26 10.0  +12
AGMN                              LR        LR
      comp=Z,500nm,19.0s
AGMN  Agassiz Nation   96.76  42  P        P         08 25 57.9 +0.3
      baz=252
HBAR  Harrisburg       96.76  55  PFAKE              08 26 10.0  +12
HBAR                              LR        LR
      comp=Z,600nm,20.0s
TLY   Talaya           96.87 322  PFAKE              08 26 10.0  +12
TLY                               LR        LR
      comp=Z,600nm,20.0s
CCM   Cathedral Cave   97.00  52  PFAKE              08 26 10.0  +11
CCM                               LR        LR
      comp=Z,300nm,18.0s
CCM   Cathedral Cave   97.00  52  P        P         08 25 58.9  0.0
      baz=254
MET   Memphis--Engin   97.21  56  PFAKE              08 26 10.0  +10
MET                               LR        LR
      comp=Z,400nm,20.0s
PBMO  Poplar Bluff     97.28  54  PFAKE              08 26 10.0  +10
PBMO                              LR        LR
      comp=Z,400nm,18.0s
ULM   Lac du Bonnet    97.35  40  LR        LR       09 04 13.2
      comp=Z,408nm,20.2s,baz=256,slow=32
ULM   Lac du Bonnet    97.35  40  PFAKE              08 26 10.0  +10
ULM                               LR        LR
      comp=Z,400nm,21.0s
GNAR  Gosnell          97.38  55  PFAKE              08 26 10.0 +9.3
GNAR                              LR        LR
      comp=Z,600nm,19.0s
OXF   Oxford           97.47  56  PFAKE              08 26 10.0 +8.8
OXF                               LR        LR
      comp=Z,500nm,19.0s
FVM   French Village   97.60  53  PFAKE              08 26 10.0 +8.3
FVM                               LR        LR
      comp=Z,600nm,20.0s
PVMO  Portageville     97.74  54  PFAKE              08 26 10.0 +7.7
PVMO                              LR        LR
      comp=Z,600nm,20.0s
PARMO Parma            97.77  54  PFAKE              08 26 10.0 +7.6
PARMO                             LR        LR
      comp=Z,600nm,19.0s
SPMN  Marine on St.    97.87  45  PFAKE              08 26 10.0 +7.3
SPMN                              LR        LR
      comp=Z,300nm,18.0s
HALT  Halls            97.89  55  PFAKE              08 26 10.0 +7.0
HALT                              LR        LR
      comp=Z,500nm,19.0s
N41A  Harden Midland   98.01  50  PFAKE              08 26 10.0 +6.5
N41A                              LR        LR
      comp=Z,400nm,20.0s
GLAT  Glass            98.03  55  PFAKE              08 26 20.0  +16
GLAT                              LR        LR
      comp=Z,700nm,21.0s
L40A  Anamosa          98.11  49  PFAKE              08 26 20.0  +16
L40A                              LR        LR
      comp=Z,400nm,20.0s
L40A  Anamosa          98.11  49  P        P         08 26 03.9 +0.1
      baz=255
449A  Pace             98.27  60  P        P         08 26 05.0 +0.2
      baz=255
SIUC  Southern Illin   98.45  53  PFAKE              08 26 20.0  +15
SIUC                              LR        LR
      comp=Z,300nm,21.0s
BRAL  Brewton          98.52  60  PFAKE              08 26 20.0  +14
BRAL                              LR        LR
      comp=Z,400nm,19.0s
JFWS  Jewell Farm      99.03  48  PFAKE              08 26 20.0  +12
JFWS                              LR        LR
      comp=Z,400nm,19.0s
LRAL  Lakeview Retre   99.03  58  PFAKE              08 26 20.0  +12
LRAL                              LR        LR
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      comp=Z,300nm,20.0s
E38A  The Farm, Brul    99.08  44  PFAKE          08 26 20.0  +12
E38A                               LR     LR
      comp=Z,300nm,20.0s
HDIL  Hopedale          99.12  50  PFAKE          08 26 20.0  +12
HDIL                               LR     LR
      comp=Z,500nm,18.0s
WVT   Waverly           99.13  55  PFAKE          08 26 20.0  +11
WVT                                LR     LR
      comp=Z,400nm,20.0s
L42A  Oliver, Polo      99.21  49  PFAKE          08 26 20.0  +11
L42A                               LR     LR
      comp=Z,300nm,20.0s
X48A  Hartselle         99.34  57  PFAKE          08 26 20.0  +10
X48A                               LR     LR
      comp=Z,700nm,22.0s
X48A  Hartselle         99.34  57  P      Pdif    08 26 10.1 +0.6
      baz=256
250A  Grady             99.36  59  PFAKE          08 26 20.0  +10
250A                               LR     LR
      comp=Z,500nm,21.0s
250A  Grady             99.36  59  P      Pdif    08 26 10.0 +0.3
      baz=256
OLIL  Olney             99.56  52  PFAKE          08 26 20.0  +10
OLIL                               LR     LR
      comp=Z,400nm,20.0s
I41A  Arkdale           99.58  47  PFAKE          08 26 20.0  +10
I41A                               LR     LR
      comp=Z,400nm,20.0s
G40A  Rib Lake          99.65  46  PFAKE          08 26 20.0 +9.3
G40A                               LR     LR
      comp=Z,400nm,18.0s
Y49A  Blount Mountai    99.70  58  PFAKE          08 26 20.0 +8.8
Y49A                               LR     LR
      comp=Z,800nm,20.0s
USIN  University of     99.71  53  PFAKE          08 26 20.0 +8.9
USIN                               LR     LR
      comp=Z,400nm,18.0s
V48A  Smith Brothers    99.83  56  PFAKE          08 26 20.0 +8.3
V48A                               LR     LR
      comp=Z,400nm,20.0s
T47A  Sharon Grove      99.91  54  PFAKE          08 26 20.0 +8.0
T47A                               LR     LR
      comp=Z,500nm,20.0s
Z50A  Ashland           99.95  58  PFAKE          08 26 20.0 +7.7
Z50A                               LR     LR
      comp=Z,400nm,20.0s
I42A  Draeger Farm,    100.21  47  PFAKE          08 26 20.0 +6.8
I42A                               LR     LR
      comp=Z,300nm,19.0s
M44A  Midewin, Midew   100.24  50  PFAKE          08 26 30.0  +17
M44A                               LR     LR
      comp=Z,400nm,18.0s
CLTN  Cedars of Leba   100.30  55  PFAKE          08 26 30.0  +16
CLTN                               LR     LR
      comp=Z,300nm,21.0s
K43A  Burlington       100.34  49  PFAKE          08 26 30.0  +16
K43A                               LR     LR
      comp=Z,400nm,20.0s
352A  Blakely          100.35  60  PFAKE          08 26 30.0  +16
352A                               LR     LR
      comp=Z,400nm,20.0s
SWET  Sewanee          100.41  56  PFAKE          08 26 30.0  +16
SWET                               LR     LR
      comp=Z,500nm,21.0s
553A  Crawfordville    100.46  62  P      Pdif    08 26 14.7 +0.1
      baz=256
COWI  Conover          100.58  45  PFAKE          08 26 30.0  +15
COWI                               LR     LR
      comp=Z,300nm,19.0s
453A  Whigham          100.71  61  PFAKE          08 26 30.0  +14
453A                               LR     LR
      comp=Z,400nm,19.0s
FCC   Fort Churchill   100.76  32  PFAKE          08 26 30.0  +15
FCC                                LR     LR
      comp=Z,700nm,19.0s
152A  Waverly Hall     100.80  59  PFAKE          08 26 30.0  +14
152A                               LR     LR
      comp=Z,400nm,22.0s
WCI   Wyandotte Cave   100.82  53  PFAKE          08 26 30.0  +14
WCI                                LR     LR
      comp=Z,400nm,20.0s
BLO   Bloomington      100.86  52  PFAKE          08 26 30.0  +14
BLO                                LR     LR
      comp=Z,400nm,18.0s
W50A  Signal Mountai   100.90  56  PFAKE          08 26 30.0  +14
W50A                               LR     LR
      comp=Z,500nm,22.0s
X51A  Calhoun          101.12  57  PFAKE          08 26 30.0  +13
X51A                               LR     LR
      comp=Z,600nm,21.0s
253A  Americus         101.15  60  PFAKE          08 26 30.0  +12
253A                               LR     LR
      comp=Z,400nm,21.0s
T49A  Edmonton         101.16  55  PFAKE          08 26 30.0  +12
T49A                               LR     LR
      comp=Z,500nm,20.0s
D41A  Chassel          101.18  44  PFAKE          08 26 30.0  +13
D41A                               LR     LR
      comp=Z,500nm,21.0s
TIGA  Tifton           101.45  61  PFAKE          08 26 30.0  +11
TIGA                               LR     LR
      comp=Z,400nm,20.0s
CPCT  Cooper Cave      101.59  56  PFAKE          08 26 30.0  +11
CPCT                               LR     LR
      comp=Z,500nm,22.0s
Y52A  Lilburn          101.61  58  PFAKE          08 26 30.0  +10
Y52A                               LR     LR
      comp=Z,800nm,20.0s
L46A  Eue Claire       101.66  50  PFAKE          08 26 30.0  +10
L46A                               LR     LR
      comp=Z,300nm,19.0s
555A  McAlpin          101.68  62  PFAKE          08 26 30.0  +10
555A                               LR     LR
      comp=Z,500nm,21.0s
R49A  Shelbyville      101.70  53  PFAKE          08 26 30.0  +10
R49A                               LR     LR
      comp=Z,500nm,20.0s
957A  Wimauma          101.75  65  PFAKE          08 26 30.0  +10
957A                               LR     LR
      comp=Z,400nm,22.0s
P48A  Milroy           101.75  52  PFAKE          08 26 30.0  +10
P48A                               LR     LR
      comp=Z,400nm,19.0s
V51A  Loudon           101.80  56  PFAKE          08 26 30.0  +10
V51A                               LR     LR
      comp=Z,600nm,22.0s
656A  Willston         101.88  63  PFAKE          08 26 30.0 +9.1
656A                               LR     LR
      comp=Z,600nm,22.0s
J45A  Montague         101.89  48  PFAKE          08 26 30.0 +9.4
J45A                               LR     LR
      comp=Z,400nm,21.0s
W52A  Murphy           101.98  57  PFAKE          08 26 30.0 +8.7
W52A                               LR     LR
      comp=Z,500nm,21.0s
GOGA  Godfrey          101.99  59  PFAKE          08 26 30.0 +8.7
GOGA                               LR     LR
      comp=Z,500nm,22.0s
E43A  Lone Tree Farm   102.09  45  PFAKE          08 26 30.0 +8.6
E43A                               LR     LR
      comp=Z,400nm,18.0s
154A  Montrose         102.11  59  PFAKE          08 26 30.0 +8.1
154A                               LR     LR
      comp=Z,500nm,22.0s
I45A  Fountain         102.13  48  PFAKE          08 26 30.0 +8.3
I45A                               LR     LR
      comp=Z,300nm,19.0s
R50A  Paris            102.34  54  PFAKE          08 26 30.0 +7.2
R50A                               LR     LR
      comp=Z,500nm,21.0s
V52A  Sevierville      102.41  56  PFAKE          08 26 30.0 +6.9
V52A                               LR     LR
      comp=Z,500nm,22.0s
255A  Hazlehurst       102.49  60  PFAKE          08 26 40.0  +16
255A                               LR     LR
      comp=Z,400nm,21.0s
061Z  Ochoppi          102.50  67  PFAKE          08 26 40.0  +16
061Z                               LR     LR
      comp=Z,500nm,20.0s
059A  Moore Haven      102.54  65  PFAKE          08 26 40.0  +16
059A                               LR     LR
      comp=Z,700nm,22.0s
DWPF  Disney Wildern   102.54  64  PFAKE          08 26 40.0  +16
DWPF                               LR     LR
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      comp=Z,300nm,20.0s
TZTN  Tazewell         102.59  55  PFAKE          08 26 40.0  +16
TZTN                               LR     LR
      comp=Z,600nm,21.0s
456A  Hilliard         102.61  62  PFAKE          08 26 40.0  +16
456A                               LR     LR
      comp=Z,400nm,20.0s
M48A  Edgerton         102.70  50  PFAKE          08 26 40.0  +16
M48A                               LR     LR
      comp=Z,500nm,18.0s
O49A  Covington        102.73  52  PFAKE          08 26 40.0  +16
O49A                               LR     LR
      comp=Z,500nm,19.0s
G45A  Suttons Bay      102.74  47  PFAKE          08 26 40.0  +16
G45A                               LR     LR
      comp=Z,500nm,18.0s
S51A  Beattyville      102.78  54  PFAKE          08 26 40.0  +15
S51A                               LR     LR
      comp=Z,500nm,20.0s
E44A  Grand Marais A   102.86  45  PFAKE          08 26 40.0  +15
E44A                               LR     LR
      comp=Z,400nm,19.0s
758A  Lake Helen       102.93  63  P      Pdif    08 26 26.2 +0.6
      baz=258
H46A  Fife Lake        102.96  47  P      Pdif    08 26 25.8 +0.5
      baz=259
658A  Bunnell          102.98  63  PFAKE          08 26 40.0  +14
658A                               LR     LR
      comp=Z,400nm,19.0s
N49A  Columbus Grove   102.99  51  PFAKE          08 26 40.0  +14
N49A                               LR     LR
      comp=Z,500nm,19.0s
V53A  Saluda           103.00  56  PFAKE          08 26 40.0  +14
V53A                               LR     LR
      comp=Z,400nm,20.0s
T52A  Hallie           103.15  55  PFAKE          08 26 40.0  +14
T52A                               LR     LR
      comp=Z,600nm,20.0s
060A  Indiantown       103.24  66  PFAKE          08 26 40.0  +13
060A                               LR     LR
      comp=Z,700nm,21.0s
Q51A  Peebles          103.25  53  PFAKE          08 26 40.0  +13
Q51A                               LR     LR
      comp=Z,400nm,20.0s
I47A  Gladwin          103.35  48  PFAKE          08 26 40.0  +13
I47A                               LR     LR
      comp=Z,400nm,18.0s
ROSC  El Rosal         103.41  89  PFAKE          08 26 40.0  +11
ROSC                               LR     LR
      comp=Z,400nm,21.0s
GLMI  Grayling         103.42  47  PFAKE          08 26 40.0  +13
GLMI                               LR     LR
      comp=Z,400nm,20.0s
P51A  Williamsport     103.55  53  PFAKE          08 26 40.0  +12
P51A                               LR     LR
      comp=Z,300nm,20.0s
PAULI Pauline          103.62  57  PFAKE          08 26 40.0  +11
PAULI                              LR     LR
      comp=Z,600nm,21.0s
AAM   Ann Arbor        103.64  50  PFAKE          08 26 40.0  +12
AAM                                LR     LR
      comp=Z,400nm,20.0s
Z56A  Williston        103.69  59  PFAKE          08 26 40.0  +11
Z56A                               LR     LR
      comp=Z,4µm,21.0s
257A  Skidaway Islan   103.70  60  PFAKE          08 26 40.0  +11
257A                               LR     LR
      comp=Z,400nm,20.0s
257A  Skidaway Islan   103.70  60  P      Pdif    08 26 30.3 +1.3
      baz=258
N50A  Nevada           103.73  51  P      Pdif    08 26 30.0 +1.1
      baz=259
ACSO  Alum Creek Sta   103.75  52  PFAKE          08 26 40.0  +11
ACSO                               LR     LR
      comp=Z,300nm,20.0s
ACSO  Alum Creek Sta   103.75  52  P      Pdif    08 26 30.2 +1.2
      baz=259
E46A  Sault Ste Mari   103.92  45  PFAKE          08 26 40.0  +10
E46A                               LR     LR
      comp=Z,500nm,19.0s
M50A  Fremont          103.92  51  PFAKE          08 26 40.0  +10
M50A                               LR     LR
      comp=Z,400nm,20.0s
U54A  Nelsons Funny    103.95  56  PFAKE          08 26 40.0  +10
U54A                               LR     LR
      comp=Z,500nm,19.0s
JSC   Jenkinsville     103.97  58  PFAKE          08 26 40.0  +10
JSC                                LR     LR
      comp=Z,700nm,22.0s
KMSC  Kings Mountain   104.08  57  PFAKE          08 26 40.0 +9.4
KMSC                               LR     LR
      comp=Z,600nm,21.0s
R53A  Hurricane        104.19  54  PFAKE          08 26 40.0 +9.0
R53A                               LR     LR
      comp=Z,500nm,20.0s
RES   Resolute Bay     104.24  16  PFAKE          08 26 40.0  +10
RES                                LR     LR
      comp=Z,700nm,20.0s
H48A  Harrisville      104.30  47  PFAKE          08 26 40.0 +8.7
H48A                               LR     LR
      comp=Z,400nm,20.0s
N51A  Ashland          104.33  51  PFAKE          08 26 40.0 +8.4
N51A                               LR     LR
      comp=Z,600nm,21.0s
K50A  Casco            104.47  49  PFAKE          08 26 40.0 +7.9
K50A                               LR     LR
      comp=Z,300nm,19.0s
I49A  Point Hope       104.53  48  PFAKE          08 26 40.0 +7.7
I49A                               LR     LR
      comp=Z,300nm,20.0s
O52A  Adamsville       104.59  52  PFAKE          08 26 40.0 +7.2
O52A                               LR     LR
      comp=Z,300nm,18.0s
Y57A  Sumter           104.62  59  PFAKE          08 26 40.0 +7.0
Y57A                               LR     LR
      comp=Z,500nm,20.0s
NHSC  New Hope         104.63  59  PFAKE          08 26 40.0 +7.0
NHSC                               LR     LR
      comp=Z,300nm,20.0s
BIRD  Birdtown, Kers   104.69  58  PFAKE          08 26 50.0  +17
BIRD                               LR     LR
      comp=Z,600nm,21.0s
P53A  Whipple          104.82  53  PFAKE          08 26 50.0  +16
P53A                               LR     LR
      comp=Z,400nm,20.0s
V56A  Mocksville       104.87  57  PFAKE          08 26 50.0  +16
V56A                               LR     LR
      comp=Z,600nm,22.0s
W57A  Gilead           105.16  57  PFAKE          08 31 00.0  +10
W57A                               LR     LR
      comp=Z,600nm,22.0s
Q54A  Coxs Mills       105.16  53  PFAKE          08 31 00.0  +10
Q54A                               LR     LR
      comp=Z,400nm,20.0s
BLA   Blacksburg       105.18  55  PFAKE          08 31 00.0  +10
BLA                                LR     LR
      comp=Z,500nm,19.0s
M52A  Chesterland      105.19  51  PFAKE          08 31 00.0  +10
M52A                               LR     LR
      comp=Z,500nm,20.0s
Y58A  Scranton         105.20  59  PFAKE          08 31 00.0  +10
Y58A                               LR     LR
      comp=Z,600nm,21.0s
N53A  Lisbon           105.46  52  PFAKE          08 31 00.0  +10
N53A                               LR     LR
      comp=Z,500nm,18.0s
WMQ   Urumqi           105.47 312  PFAKE          08 31 00.0  +10
WMQ                                LR     LR
      comp=Z,300nm,21.0s
X58A  Rowland          105.58  58  PFAKE          08 31 00.0 +9.4
X58A                               LR     LR
      comp=Z,500nm,20.0s
R55A  Marlinton        105.60  54  PFAKE          08 31 00.0 +9.3
R55A                               LR     LR
      comp=Z,500nm,19.0s
MCWV  Mont Chateau     106.03  53  PFAKE          08 31 00.0 +8.7
MCWV                               LR     LR
      comp=Z,200nm,22.0s
T57A  Hurt             106.06  56  PFAKE          08 31 00.0 +8.5
T57A                               LR     LR
      comp=Z,400nm,20.0s
ALLY  Alegheny Colle   106.11  51  PFAKE          08 31 00.0 +8.6
ALLY                               LR     LR
      comp=Z,600nm,20.0s
N54A  Moraine State    106.12  52  PFAKE          08 31 00.0 +8.5
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N54A                               LR     LR
      comp=Z,400nm,19.0s
ERPA  Erie             106.29  50  PFAKE          08 31 00.0 +8.3
ERPA                               LR     LR
      comp=Z,500nm,18.0s
Y60A  Bolivia          106.40  59  PFAKE          08 31 00.0 +7.9
Y60A                               LR     LR
      comp=Z,700nm,20.0s
S57A  Dark Hollow, R   106.42  55  PFAKE          08 31 00.0 +7.9
S57A                               LR     LR
      comp=Z,500nm,20.0s
M54A  Oil Creek Stat   106.44  51  PFAKE          08 31 00.0 +7.9
M54A                               LR     LR
      comp=Z,400nm,20.0s
N55A  Marion Center    106.85  52  PFAKE          08 31 00.0 +7.1
N55A                               LR     LR
      comp=Z,400nm,21.0s
CNNC  Cliffs of the    106.87  58  PFAKE          08 31 00.0 +7.0
CNNC                               LR     LR
      comp=Z,600nm,20.0s
S58A  Poland Farm, P   107.11  55  PFAKE          08 31 10.0  +17
S58A                               LR     LR
      comp=Z,500nm,20.0s
U59A  Littleton        107.12  57  PFAKE          08 31 10.0  +17
U59A                               LR     LR
      comp=Z,600nm,22.0s
R58B  Mineral          107.29  55  PFAKE          08 31 10.0  +16
R58B                               LR     LR
      comp=Z,500nm,21.0s
T59A  Double "B" Far   107.40  56  PFAKE          08 31 10.0  +16
T59A                               LR     LR
      comp=Z,700nm,22.0s
V60A  Jim Taylor Roa   107.45  57  PFAKE          08 31 10.0  +16
V60A                               LR     LR
      comp=Z,500nm,20.0s
MEDO  Medina           107.56  49  PFAKE          08 31 10.0  +16
MEDO                               LR     LR
      comp=Z,300nm,18.0s
SSPA  Standing Stone   107.66  52  PFAKE          08 31 10.0  +16
SSPA                               LR     LR
      comp=Z,300nm,18.0s
SSPA  Standing Stone   107.66  52  P      PKiKP   08 30 55.3 +1.0
      baz=263
CBN   Corbin Frederi   107.72  55  PFAKE          08 31 10.0  +16
CBN                                LR     LR
      comp=Z,600nm,20.0s
V61A  Roper            108.01  57  PFAKE          08 31 10.0  +15
V61A                               LR     LR
      comp=Z,500nm,19.0s
V61A  Roper            108.01  57  P      PKiKP   08 30 55.5 +0.4
      baz=262
T60A  Surry            108.08  56  PFAKE          08 31 10.0  +15
T60A                               LR     LR
      comp=Z,600nm,22.0s
U61A  Possum Corner    108.19  57  PFAKE          08 31 10.0  +15
U61A                               LR     LR
      comp=Z,600nm,21.0s
SDMD  Soldier’s Deli   108.30  53  PFAKE          08 31 10.0  +14
SDMD                               LR     LR
      comp=Z,300nm,21.0s
DELO  Deloro Mine      108.31  48  PFAKE          08 31 10.0  +15
DELO                               LR     LR
      comp=Z,400nm,21.0s
V62A  Hyde County Ai   108.48  58  PFAKE          08 31 10.0  +14
V62A                               LR     LR
      comp=Z,800nm,21.0s
ZAA0  Zalesovo Array   108.48 322  PFAKE          08 31 10.0  +15
ZAA0                               LR     LR
      comp=Z,500nm,22.0s
PAGS  Pennsylvania G   108.49  53  PFAKE          08 31 10.0  +14
PAGS                               LR     LR
      comp=Z,500nm,20.0s
D53A  Lac Vacive, Po   108.51  45  PFAKE          08 31 10.0  +14
D53A                               LR     LR
      comp=Z,400nm,21.0s
N58A  Sunbury          108.56  52  P      PKiKP   08 30 56.7 +0.8
      baz=263
PECO  Prince Edward    108.70  49  PFAKE          08 31 10.0  +14
PECO                               LR     LR
      comp=Z,300nm,21.0s
PLVO  Plevna           108.75  48  PFAKE          08 31 10.0  +14
PLVO                               LR     LR
      comp=Z,400nm,19.0s
VLDQ  Val d'Or         108.77  44  PFAKE          08 31 10.0  +14
VLDQ                               LR     LR
      comp=Z,400nm,19.0s
N59A  State Game Lan   109.28  52  PFAKE          08 31 10.0  +13
N59A                               LR     LR
      comp=Z,600nm,18.0s
R61A  Willards         109.33  55  P      PKiKP   08 30 58.2 +0.7
      baz=263
L58A  Harry Jones Me   109.34  51  P      PKiKP   08 30 58.4 +1.0
      baz=264
KSPA  Keystone Colle   109.35  51  PFAKE          08 31 10.0  +13
KSPA                               LR     LR
      comp=Z,600nm,18.0s
Q61A  Milford          109.40  54  P      PKiKP   08 30 58.3 +0.7
      baz=264
SDDR  Presa de Saban   109.75  76  PFAKE          08 31 10.0  +11
SDDR                               LR     LR
      comp=Z,2µm,22.0s
MAKZ  Makanchi         109.82 314  PFAKE          08 31 10.0  +12
MAKZ                               LR     LR
      comp=Z,400nm,21.0s
BRNJ  Basking Ridge    110.17  52  PFAKE          08 31 10.0  +11
BRNJ                               LR     LR
      comp=Z,600nm,21.0s
ODNJ  Ogdensburg       110.18  52  PFAKE          08 31 10.0  +11
ODNJ                               LR     LR
      comp=Z,400nm,20.0s
LONY  Lake Ozonia      110.48  48  PFAKE          08 31 10.0  +10
LONY                               LR     LR
      comp=Z,400nm,20.0s
TULEG Thule            110.69  14  PFAKE          08 31 10.0  +11
TULEG                              LR     LR
      comp=Z,800nm,20.0s
NCB   Newcomb          110.70  49  PFAKE          08 31 10.0  +10
NCB                                LR     LR
      comp=Z,400nm,21.0s
PAL   Palisades        110.70  52  PFAKE          08 31 10.0  +10
PAL                                LR     LR
      comp=Z,500nm,19.0s
TRY   Troy             111.01  50  PFAKE          08 31 10.0 +9.5
TRY                                LR     LR
      comp=Z,400nm,20.0s
FRNY  Flat Rock        111.20  48  PFAKE          08 31 10.0 +9.2
FRNY                               LR     LR
      comp=Z,400nm,22.0s
VT1   Waterbury        111.77  49  PFAKE          08 31 10.0 +8.0
VT1                                LR     LR
      comp=Z,600nm,20.0s
QUA2  Belchertown      111.95  51  PFAKE          08 31 10.0 +7.7
QUA2                               LR     LR
      comp=Z,500nm,18.0s
HNH   Hanover          112.08  49  PFAKE          08 31 10.0 +7.5
HNH                                LR     LR
      comp=Z,500nm,21.0s
KURK  Kurchatov        112.18 318  PFAKE          08 31 10.0 +7.5
KURK                               LR     LR
      comp=Z,400nm,19.0s
KURK  Kurchatov        112.18 318 i PKIKP PKiKP   08 31 02.8 +0.3
LBNH  Lisbon           112.36  49  PFAKE          08 31 10.0 +6.9
LBNH                               LR     LR
      comp=Z,600nm,21.0s
FFD   Franklin Falls   112.53  50  PFAKE          08 31 20.0  +17
FFD                                LR     LR
      comp=Z,600nm,18.0s
BRYW  Bryant College   112.54  51  PFAKE          08 31 20.0  +17
BRYW                               LR     LR
      comp=Z,400nm,19.0s
HRV   Adam Dziewonsk   112.55  51  PFAKE          08 31 20.0  +17
HRV                                LR     LR
      comp=Z,400nm,19.0s
WES   Weston           112.72  51  PFAKE          08 31 20.0  +16
WES                                LR     LR
      comp=Z,500nm,19.0s
WVL   Waterville       114.00  48  PFAKE          08 31 20.0  +14
WVL                                LR     LR
      comp=Z,500nm,21.0s
PKME  Peaks-Kenny Pk   114.26  48  PFAKE          08 31 20.0  +13
PKME                               LR     LR
      comp=Z,500nm,19.0s
SJG   San Juan         114.35  77  PFAKE          08 31 20.0  +12
SJG                                LR     LR
      comp=Z,300nm,20.0s
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AAK	Ala-Archa	114.98	310	PFAKE		08 31 20.0	+12
AAK				LR	LR		
	comp=Z,300nm,21.0s						
PQI	Presque Isle	115.13	46	PFAKE		08 31 20.0	+12
PQI				LR	LR		
	comp=Z,600nm,19.0s						
SCHQ	Schefferville	115.33	37	PFAKE		08 31 20.0	+12
SCHQ				LR	LR		
	comp=Z,500nm,20.0s						
EMMW	East Machias	115.57	48	PFAKE		08 31 20.0	+11
EMMW				LR	LR		
	comp=Z,500nm,19.0s						
GGN	Saint George	116.00	48	PFAKE		08 31 20.0	+10
GGN				LR	LR		
	comp=Z,600nm,20.0s						
SABA	Saba	116.98	79	PFAKE		08 31 20.0	+7.3
SABA				LR	LR		
	comp=Z,400nm,20.0s						
BRVK	Borovoye	117.17	321	PFAKE		08 31 20.0	+8.0
BRVK				LR	LR		
	comp=Z,499nm,20.0s						
BRVK	Borovoye	117.17	321	c iPKIKP	PKiKP	08 31 13.7	+1.7
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
SEUS	St. Eustatius	117.20	79	PFAKE		08 31 30.0	+17
SEUS				LR	LR		
	comp=Z,500nm,20.0s						
LMN	Caledonia Moun	117.39	47	PFAKE		08 31 20.0	+7.3
LMN				LR	LR		
	comp=Z,600nm,20.0s						
SKI	Saint Kitts	117.40	79	PFAKE		08 31 30.0	+16
SKI				LR	LR		
	comp=Z,500nm,21.0s						
KBS	Kingsbay	117.98	358	PFAKE		08 31 20.0	+7.1
KBS				LR	LR		
	comp=Z,1µm,20.0s						
ILULI	Ilulissat	118.19	19	PFAKE		08 31 30.0	+16
ILULI				LR	LR		
	comp=Z,1µm,20.0s						
HAL	Halifax	118.33	48	PFAKE		08 31 30.0	+15
HAL				LR	LR		
	comp=Z,500nm,20.0s						
MCLT	Moule a Chique	118.39	83	PFAKE		08 31 30.0	+14
MCLT				LR	LR		
	comp=Z,500nm,21.0s						
CHGR	Chuyangaron	119.05	305	PFAKE		08 31 30.0	+14
CHGR				LR	LR		
	comp=Z,800nm,20.0s						
KBL	Kabul	119.12	300	ePKPdf	PKPdf	08 31 14.3	-2.3
KBL	Kabul	119.12	300	ePKIKP	PKPdf	08 31 14.3	-2.3
SFJD	Kangerlussuaq	119.39	21	PFAKE		08 31 30.0	+14
SFJD				LR	LR		
	comp=Z,900nm,22.0s						
SUMG	Summit	119.60	13	PFAKE		08 31 30.0	+13
SUMG				LR	LR		
	comp=Z,800nm,22.0s						
ARU	Arti	122.96	327	PFAKE		08 31 30.0	+6.8
ARU				LR	LR		
	comp=Z,900nm,22.0s						
ARU	Arti	122.96	327	i PKIKP	PKiKP	08 31 24.4	+1.2
ARU						08 33 04.6	
ARU						08 38 33.3	
ARU				SS	SS	08 49 38.6	-6.9
IVI	Ivigtut	123.03	27	PFAKE		08 31 30.0	+6.8
IVI				LR	LR		
	comp=Z,800nm,20.0s						
NRS	Narsarsuaq	124.22	26	PFAKE		08 31 40.0	+14
NRS				LR	LR		
	comp=Z,900nm,20.0s						
ABKAR	Akbulak array	124.29	318	ePKPdf	PKPdf	08 31 23.0	-2.8
SCO	Scoresbysund	124.48	10	PFAKE		08 31 40.0	+14
SCO				LR	LR		
	comp=Z,900nm,20.0s						
ANGG	Ammassalik, Gr	124.50	19	PFAKE		08 31 40.0	+14
ANGG				LR	LR		
	comp=Z,900nm,21.0s						
LVZ	Lovozero	125.36	346	PFAKE		08 31 40.0	+12
LVZ				LR	LR		
	comp=Z,1µm,22.0s						
ARCES	ARCESS Array B	125.75	350	PKP	PKPdf	08 31 28.4	+0.4
	comp=Z,7.6nm,0.9s,baz=13,slow=1.9,SNR=17						
PRGR	Permogore	126.38	336	ePKIKP	PKPdf	08 31 27.2	-2.2
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GEYT	Alibeck	127.76	305	PKP	PKiKP	08 31 34.2	+0.8
	comp=Z,1.5nm,0.4s,baz=79,slow=3.2,SNR=4.5						
GYA0B	ALIBECK ARRAY	127.76	305	PFAKE		08 31 40.0	+6.5
GYA0B				LR	LR		
	comp=Z,400nm,20.0s						
KLMR	Klimovskoe	129.15	338	ePKIKP	PKPdf	08 31 34.9	+0.2
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
BORG	Borgarnes	129.59	13	PFAKE		08 31 50.0	+14
BORG				LR	LR		
	comp=Z,600nm,21.0s						
FIA0	FINESS Array S	132.78	345	ePKPdf	PKPdf	08 31 41.3	-0.3
FIA0	FINESS Array S	132.78	345	ePKIKP	PKPdf	08 31 41.3	-0.3
FINES	FINESS Array B	132.78	345	PKP	PKPdf	08 31 41.3	-0.3
	comp=Z,2.6nm,0.9s,baz=5.7,slow=2.8,SNR=5.4						
OBN	Obninsk	134.22	334	PFAKE		08 32 00.0	+14
OBN				LR	LR		
	comp=Z,700nm,20.0s						
OBN	Obninsk	134.22	334	⇑ePKIKP	PKPdf	08 31 44.0	-0.5
OBN				e		08 34 13.7	
OBN				ePPP	PPP	08 37 08.5	
OBN				pmax	pmax		
	comp=Z,13nm,0.6s						
OBN				MLR	MLR		
	comp=Z,663nm,19.0s						
KONO	Kongsberg	137.23	355	PFAKE		08 32 00.0	+8.2
KONO				LR	LR		
	comp=Z,400nm,20.0s						
KIV	Kislovodsk	137.25	317	PFAKE		08 32 00.0	+7.5
KIV				LR	LR		
	comp=Z,700nm,20.0s						
KIV	Kislovodsk	137.25	317	i PKIKP	PKiKP	08 31 54.0	+1.5
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
GNI	Garni	137.34	311	PFAKE		08 32 00.0	+7.1
GNI				LR	LR		
	comp=Z,400nm,22.0s						
AKH	Akhalkalaki	137.76	314	PFAKE		08 32 00.0	+6.2
AKH				LR	LR		
	comp=Z,400nm,22.0s						
SUW	Suwalki	139.98	342	PFAKE		08 32 10.0	+12
SUW				LR	LR		
	comp=Z,600nm,21.0s						
AKASG	Malin Array Be	140.48	334	PKP	PKPdf	08 31 57.9	+1.7
	comp=Z,1.6nm,0.6s,baz=34,slow=3.0,SNR=4.6						
AKBB	Malin Array Si	140.48	334	ePKPdf	PKPdf	08 31 54.1	-2.1
AKBB	Malin Array Si	140.48	334	ePKIKP	PKPdf	08 31 54.1	-2.1
ATD	Arta Tunnel	141.15	267	PFAKE		08 32 10.0	+8.7
ATD				LR	LR		
	comp=Z,500nm,20.0s						
ESK	Eskdalemuir	141.53	6	PFAKE		08 32 10.0	+9.2
ESK				LR	LR		
	comp=Z,700nm,21.0s						
RGN	Rugen	141.78	350	PFAKE		08 32 10.0	+8.7
RGN				LR	LR		
	comp=Z,500nm,20.0s						
KMBO	Kilima Mbogo	141.79	245	PFAKE		08 32 10.0	+7.1
KMBO				LR	LR		
	comp=Z,700nm,20.0s						
KWP	Kalwaria Pacla	143.87	338	PFAKE		08 32 10.0	+4.2
KWP				LR	LR		
	comp=Z,7µm,21.0s						
OJC	Ojcow	144.32	342	ePKP	PKPbc	08 32 01.9	+0.6
OJC	Ojcow	144.32	342	ePKIKP	PKPbc	08 32 01.9	+0.6
ILGA	Ilgaz	144.44	319	ePKPdf	PKPab	08 32 02.6	+0.5
FURI	Furi	144.45	261	PFAKE		08 32 20.0	+12
FURI				LR	LR		
	comp=Z,400nm,20.0s						
BUR08	Bucovina Ar. S	144.52	334	ePKPdf	PKPab	08 32 01.8	-0.2
BURAR	Bucovina Array	144.54	334	⇑iP	PKPbc	08 32 02.9	+0.7
BURAR	Bucovina Array	144.54	334	⇑PKIKP	PKPbc	08 32 02.9	+0.7
KOLS	Kolonicke sedl	144.61	338	ePKIKP	PKiKP	08 32 07.4	+0.1
KOLS	Kolonicke sedl	144.61	338	ePKP	PKiKP	08 32 07.4	+0.1
BIZ	Bicaz	144.68	332	⇓iP	PKPab	08 32 02.5	0.0
KSP	Ksiaz	144.70	346	ePKP	PKPab	08 32 02.1	-0.3
KSP	Ksiaz	144.70	346	ePKIKP	PKPab	08 32 02.1	-0.3
UZH	Uzhgorod	144.85	338	ePKIKP	PKPab	08 32 02.5	-0.5
UZH				e		08 32 13.1	
NIE	Niedzica	144.86	340	ePKP	PKPab	08 32 02.9	-0.2
NIE	Niedzica	144.86	340	ePKIKP	PKPab	08 32 02.9	-0.2
CLL	Collm	144.95	349	PFAKE		08 32 20.0	+12
CLL				LR	LR		
	comp=Z,400nm,22.0s						
CLL	Collm	144.95	349	i PKIKP	PKPbc	08 32 04.0	+0.7
CLL	Collm	144.95	349	i PKPdf	PKPbc	08 32 04.0	+0.7
CLL				epPKPdf	sPKPdf	08 32 08.0	+0.4
CLL				e		08 33 02.0	
CLL				e		08 34 36.0	
CLL				eSS	SS	08 54 05.0	-4.8
CLL				ePSS	PSS	08 54 48.0	
CLL				eSSS	SSS	08 59 18.0	
CLL				e		09 04 30.0	
OSTC	Ostas	144.99	345	ePKP	PKPdf	08 32 05.3	+1.1
OSTC				AMS	AMS	09 34 10.0	
	comp=Z,500nm,22.6s						
CHVC	Chvalec	145.00	346	ePKP	PKPdf	08 32 04.6	+0.3
CHVC				AMS	AMS	09 34 00.0	
	comp=Z,600nm,23.6s						
CFR	Carcaliu	145.02	329	⇓iP	PKPbc	08 32 02.2	-1.5
CFR	Carcaliu	145.02	329	⇓PKIKP	PKPbc	08 32 02.2	-1.5
UPC	Upice	145.08	346	ePKIKP	PKPdf	08 32 04.9	+0.5
UPC				MLR	MLR		
	comp=Z,600nm,21.1s						
UPC	Upice	145.08	346	ePKP	PKPdf	08 32 04.9	+0.5
UPC				AMS	AMS	09 33 50.0	
	comp=Z,600nm,21.1s						
DPC	Dobruska-Polom	145.15	345	ePKIKP	PKPab	08 32 04.7	+0.6
DPC				MLR	MLR		
	comp=Z,400nm,17.4s						
DPC	Dobruska-Polom	145.15	345	ePKP	PKPab	08 32 04.7	+0.6
DPC				AMS	AMS	09 42 20.0	
	comp=Z,400nm,17.4s						
TRPA	Tarpa	145.18	337	⇑iP	PKPbc	08 32 03.5	-0.6
TRPA	Tarpa	145.18	337	ePKiKP	PKPbc	08 32 04.0	-0.1
BRG	Berggiesshubel	145.19	348	ePKP	PKPbc	08 32 04.1	0.0
	comp=Z,22nm,1.9s comp=N,421nm,25.6s comp=E,199nm,15.8s comp=Z,388nm,20.1s						
BRG	Berggiesshubel	145.19	348	ePKIKP	PKPbc	08 32 04.1	0.0
BRG				pmax	pmax		
	comp=Z,22nm,1.9s						
BRG				MLR	MLR		
	comp=N,421nm,25.6s						
BRG				MLR	MLR		
	comp=E,199nm,15.8s						
BRG				MLR	MLR		
	comp=Z,388nm,20.1s						
VRI	Vrincioaia	145.20	331	⇑iP	PKPbc	08 32 04.6	+0.3
VRI	Vrincioaia	145.20	331	⇑PKIKP	PKPbc	08 32 04.6	+0.3
BR101	Keskin Array S	145.20	317	ePKPbc	PKPbc	08 32 04.0	-0.7
BR131	Keskin Array S	145.20	317	ePKPbc	PKPbc	08 32 03.8	-0.9
BRTR	Keskin Array B	145.20	317	PKPbc	PKPbc	08 32 04.0	-0.7
	comp=Z,28nm,0.9s,baz=120,slow=2.8,SNR=38						
PLOR	Plostina	145.25	331	⇑iP	PKPdf	08 32 06.2	+1.3
PLOR	Plostina	145.25	331	⇑PKIKP	PKPdf	08 32 06.2	+1.3
LANS	Liptovska Anna	145.36	341	ePKIKP	PKPdf	08 32 07.1	+2.1
LANS	Liptovska Anna	145.36	341	ePKP	PKPdf	08 32 07.1	+2.1
MORC	Moravsky Berou	145.36	343	ePKPbc	PKPdf	08 32 05.5	+0.5
MORC				LR	LR		
	comp=Z,900nm,22.0s						
MORC	Moravsky Berou	145.36	343	⇓iP	PKPdf	08 32 05.7	+0.8
MORC	Moravsky Berou	145.36	343	ePKIKP	PKPdf	08 32 05.5	+0.5
MORC				MLR	MLR		
	comp=Z,900nm,22.0s						
MORC	Moravsky Berou	145.36	343	ePKP	PKPbc	08 32 05.1	+0.3
TIRR	Tirgusor	145.38	327	ePKPbc	PKPbc	08 32 04.5	-0.4
TIRR				LR	LR		
	comp=Z,2µm,22.0s						
TIRR	Tirgusor	145.38	327	⇓iP	PKPbc	08 32 05.3	+0.4
TIRR	Tirgusor	145.38	327	ePKIKP	PKPbc	08 32 04.5	-0.4
TIRR				MLR	MLR		
	comp=Z,2µm,22.0s						
PVCC	Panska Ves	145.39	347	ePKIKP	PKPab	08 32 06.5	+1.6
PVCC				MLR	MLR		
	comp=Z,700nm,23.8s						
PVCC	Panska Ves	145.39	347	ePKP	PKPab	08 32 06.5	+1.6
PVCC				AMS	AMS	09 29 00.0	
	comp=Z,700nm,23.8s						
TLB	Topalu	145.48	328	⇓iP	PKPdf	08 32 05.6	+0.4
TLB	Topalu	145.48	328	⇓PKIKP	PKPdf	08 32 05.6	+0.4
KECS	Kecovo	145.61	339	ePKIKP	PKPab	08 32 06.8	+1.0
KECS	Kecovo	145.61	339	ePKP	PKPab	08 32 06.8	+1.0
ANTO	Ankara	145.68	317	ePKPdf	PKPab	08 32 07.0	+0.5
ANTO				LR	LR		
	comp=Z,300nm,22.0s						
ANTO	Ankara	145.68	317	⇑iP	PKPab	08 32 08.5	+2.0
ANTO	Ankara	145.68	317	ePKIKP	PKPab	08 32 07.0	+0.5
ANTO				MLR	MLR		
	comp=Z,300nm,22.0s						
DOPR	Dopca	145.74	332	⇑iP	PKPdf	08 32 05.8	+0.1
ISR	Istrita	145.84	330	⇑iP	PKPbc	08 32 06.7	+0.3
ISR	Istrita	145.84	330	⇑PKP2	PKPbc	08 32 06.7	+0.3
MLR	Muntele Rosu	145.85	331	ePKPbc	PKPab	08 32 07.2	+0.2
MLR				LR	LR		
	comp=Z,800nm,21.0s						
MLR	Muntele Rosu	145.85	331	⇑iP	PKPdf	08 32 06.5	+0.5
MLR	Muntele Rosu	145.85	331	ePKP2	PKPab	08 32 07.2	+0.2
MLR				MLR	MLR		
	comp=Z,800nm,21.0s						
PRU	Pruhonice	145.90	347	ePKP2	PKPbc	08 32 06.9	+0.5
PRU				MLR	MLR		
	comp=Z,600nm,21.0s						
PRU	Pruhonice	145.90	347	ePKP	PKPbc	08 32 06.9	+0.5
PRU				AMS	AMS	09 36 00.0	
	comp=Z,600nm,21.0s						
GOPC	GO Pecny, Ondr	145.92	346	ePKP2	PKPab	08 32 07.5	+0.6
GOPC				MLR	MLR		
	comp=Z,600nm,19.0s						
GOPC	GO Pecny, Ondr	145.92	346	ePKP	PKPab	08 32 07.5	+0.6
GOPC				AMS	AMS	09 39 20.0	
	comp=Z,600nm,19.0s						
PSN	Preselentsi	146.04	327	eP	PKPbc	08 32 07.7	+0.7
LTVH	Ltavrtes, Hu	146.04	337	ePKiKP	PKPbc	08 32 07.0	+0.2
VRAC	Vranov	146.04	344	ePKP	PKPab	08 32 07.7	+0.3
NKC	Novy Kostel	146.08	349	ePKP2	PKPbc	08 32 07.2	+0.2
NKC				MLR	MLR		
	comp=Z,700nm,23.7s						
NKC	Novy Kostel	146.08	349	ePKP	PKPbc	08 32 07.2	+0.2
NKC				AMS	AMS	09 28 50.0	
	comp=Z,700nm,23.7s						
VYHS	Vyhne	146.14	341	ePKP2	PKPbc	08 32 07.9	+0.7
VYHS	Vyhne	146.14	341	ePKP	PKPbc	08 32 07.9	+0.7
JAVC	Velka Javorina	146.16	343	ePKP	PKPab	08 32 09.0	+1.1
DRGR		146.22	336	⇑iP	PKPdf	08 32 07.1	+0.6
DRGR		146.22	336	⇑PKP2	PKPdf	08 32 07.1	+0.6
VOIR		146.30	332	⇑iP	PKPab	08 32 10.0	+1.4
VOIR		146.30	332	⇑PKP2	PKPab	08 32 10.0	+1.4
PSZ	Piszkesteto	146.30	340	ePKPbc	PKPdf	08 32 07.6	+1.0
PSZ				LR	LR		
	comp=Z,600nm,21.0s						
PSZ	Piszkesteto	146.30	340	ePKP2	PKPdf	08 32 07.6	+1.0
PSZ				MLR	MLR		
	comp=Z,600nm,21.0s						
PSZ	Piszkesteto	146.30	340	ePKiKP	PKPdf	08 32 06.1	-0.6
KRUC	Moravsky	146.32	344	ePKP	PKPbc	08 32 08.4	+0.7
TREC	Trest	146.33	345	AMS	AMS	09 35 00.0	
	comp=Z,600nm,21.1s						
UCC	Uccle	146.35	359	PFAKE		08 32 20.0	+9.2
UCC				LR	LR		
	comp=Z,600nm,21.0s						
MDUB	Mudurnu	146.35	320	ePKPbc	PKPdf	08 32 07.8	+0.8
MDUB				LR	LR		
	comp=Z,1µm,20.0s						
ARR	Arges	146.54	332	⇑iP	PKPdf	08 32 05.7	-1.4
MODS	Modra-Piesok	146.71	343	ePKP2	PKPbc	08 32 08.9	0.0
MODS	Modra-Piesok	146.71	343	ePKP	PKPbc	08 32 08.9	0.0
GRA1	Grafenberg Arr	146.81	350	PFAKE		08 32 20.0	+8.2
GRA1				LR	LR		
	comp=Z,500nm,22.0s						
SILT	Sile	146.88	322	⇑iP	PKPab	08 32 11.2	+0.3
KHC	Kasperske Hory	146.92	347	PFAKE		08 32 20.0	+7.9
KHC				LR	LR		
	comp=Z,200nm,21.0s						
KHC	Kasperske Hory	146.92	347	ePKP2	PKiKP	08 32 12.9	+0.8
KHC				MLR	MLR		
	comp=Z,500nm,21.7s						
KHC	Kasperske Hory	146.92	347	ePKP	PKiKP	08 32 12.9	+0.8
KHC				ex	x	08 32 18.5	
KHC				AMS	AMS	09 38 10.0	
	comp=Z,500nm,21.7s						
BUD	Budapest	146.97	340	ePKiKP	PKPbc	08 32 10.1	+0.5
DOU	Dourbes	147.04	358	⇑PKP	PKiKP	08 32 12.5	+0.3
SIRR	Siria	147.06	336	⇑iP	PKPbc	08 32 09.7	-0.3
GEC2	GERESS Array S	147.16	347	PFAKE		08 32 20.0	+7.3
GEC2				LR	LR		
	comp=Z,500nm,21.0s						
GERES	GERESS Array B	147.16	347	PKPbc	PKPbc	08 32 10.2	-0.1
	comp=Z,1.8nm,0.8s,baz=0.0,slow=2.9,SNR=7.9						
CSKK	Cskako	147.32	341	ePKiKP	PKPbc	08 32 10.0	-0.6
GZR	Gura Zlata	147.33	334	⇓iP	PKPbc	08 32 10.3	-0.5
GZR	Gura Zlata	147.33	334	⇓PKIKP	PKPbc	08 32 10.3	-0.5
AMBH	Ambrzfalva	147.35	337	ePKiKP	PKPbc	08 32 12.0	+1.4
WLF	Walferdange	147.41	356	ePKPbc	PKPab	08 32 12.3	-0.3
WLF				LR	LR		
	comp=Z,4µm,20.0s						
WLF	Walferdange	147.41	356	ePKP2	PKPab	08 32 12.3	-0.3
WLF				MLR	MLR		
	comp=Z,4µm,20.0s						
WLF	Walferdange	147.41	356	⇑PKP	PKPab	08 32 12.6	-0.1
CONA	Conrad Observa	147.50	344	i pPKPbc	PKPbc	08 32 12.2	+1.0
	comp=Z,24nm,1.1s						
SOP	Sopron	147.54	343	ePKiKP	PKPbc	08 32 11.0	-0.2
MBAR	Mbarara	147.59	240	PFAKE		08 32 20.0	+5.3
MBAR				LR	LR		
	comp=Z,900nm,21.0s						
BZS	Buzias	147.62	335	⇑iP	PKPbc	08 32 12.4	+0.9
BZS	Buzias	147.62	335	⇑PKP2	PKPbc	08 32 12.4	+0.9
CSS	Mathiatis	147.71	309	ePKPbc	PKPbc	08 32 13.1	+0.9
CSS				LR	LR		
	comp=Z,400nm,21.0s						
TIH	Tihany	147.84	341	ePKiKP	PKPab	08 32 18.1	+3.6
HERR	Herculane	147.89	334	⇑iP	PKPbc	08 32 12.2	0.0
MOA	Molln	147.97	346	i pPKPbc	PKPbc	08 32 13.8	+1.4
	comp=Z,26nm,1.8s						
STU	Stuttgart	148.00	352	PFAKE		08 32 20.0	+4.9
STU				LR	LR		
	comp=Z,500nm,20.0s						
MORH	Mrgy, Hungar	148.21	339	ePKiKP	PKPdf	08 32 11.0	+1.3
ARSA	Arzberg	148.22	344	i pPKPbc	PKPbc	08 32 14.3	+1.2
	comp=Z,6.9nm,0.8s						
ISP	Isparta	148.28	316	PFAKE		08 32 20.0	+3.3
ISP				LR	LR		
	comp=Z,300nm,20.0s						
BFO	Black Forest	148.54	353	ePKPbc	PKPbc	08 32 14.2	+0.3
BFO				LR	LR		
	comp=Z,500nm,20.0s						
BFO	Black Forest	148.54	353	ePKP2	PKPbc	08 32 14.2	+0.3
BFO				MLR	MLR		
	comp=Z,500nm,20.0s						
BEHE	Becsehely	148.57	342	ePKiKP	PKPbc	08 32 13.0	-1.0
ECH	Echery	148.77	355	ePKPbc	PKPbc	08 32 15.3	+0.9
ECH				LR	LR		
	comp=Z,400nm,20.0s						
ECH	Echery	148.77	355	ePKP2	PKPbc	08 32 15.4	+0.9
ECH				MLR	MLR		
	comp=Z,400nm,20.0s						
SOKA	Soboth	148.87	344	i PKiKP	PKPbc	08 32 14.3	-0.6
	comp=Z,11nm,1.2s						
BALB	Balikesir	148.88	321	PFAKE		08 32 20.0	+1.1
BALB				LR	LR		
	comp=Z,2µm,22.0s						
KBA	Koelnbreinsper	148.91	346	i PKPbc	PKPdf	08 32 13.0	+1.9
	comp=Z,8.7nm,1.5s						
RETA	Reutte	149.03	350	i pPKPbc	PKPbc	08 32 16.3	+1.1
	comp=Z,13nm,1.4s						
WATA	Walderalm	149.03	349	i PKiKP	PKPbc	08 32 15.4	0.0
	comp=Z,3.4nm,0.5s						
WTTA	Wattenberg	149.09	349	i PKiKP	PKPbc	08 32 14.6	-0.9
	comp=Z,16nm,1.1s						
ALN	Alexandroupoli	149.10	325	ePKPbc	PKPbc	08 32 16.3	+0.8
ALN				ePKPab	PKPab	08 32 21.1	+1.4
ALN	Alexandroupoli	149.10	325	ePKP2	PKPbc	08 32 16.3	+0.8
MOTA	Moosalm	149.11	349	i PKiKP	PKPbc	08 32 15.5	0.0
	comp=Z,12nm,1.2s						
CLF	Chambon-Foret	149.13	1	PFAKE		08 32 20.0	+0.4
CLF				LR	LR		
	comp=Z,500nm,21.0s						
OBKA	Obir	149.16	345	i pPKPbc	PKPbc	08 32 16.4	+0.8
	comp=Z,9.1nm,1.6s						
SQTA	Sankt Quirin	149.21	349	i PKiKP	PKPbc	08 32 16.0	+0.2
	comp=Z,16nm,1.5s						
MYKA	Terra Mystica	149.27	346	i PKiKP	PKPbc	08 32 15.7	-0.2
	comp=Z,14nm,1.4s						
VTS	Vitosha	149.30	330	ePKPbc	PKPbc	08 32 16.9	+0.7
VTS				e		08 32 17.5	
VTS				LR	LR		
	comp=Z,800nm,22.0s						
VTS	Vitosha	149.30	330	⇑iP	PKPbc	08 32 16.1	-0.1
VTS	Vitosha	149.30	330	ePKP2	PKPbc	08 32 16.9	+0.7
VTS				MLR	MLR		
	comp=Z,800nm,22.0s						
VTS	Vitosha	149.30	330	eP	PKPdf	08 32 12.2	+0.3
DAVA	Damuels	149.36	351	i PKPbc	PKPdf	08 32 14.0	+2.2
	comp=Z,9.7nm,0.9s						
ABTA	Abfaltersbach	149.41	347	i PKiKP	PKPbc	08 32 15.8	-0.4
	comp=Z,15nm,1.2s						
FETA	Feichten	149.49	350	i pPKPbc	PKiKP	08 32 17.9	+0.3
	comp=Z,14nm,1.1s						
LJU	Ljubljana	149.59	344	ePKPdf	PKPbc	08 32 16.6	0.0
ASCN	Ascension	149.73	144	PFAKE		08 32 20.0	+1.1
ASCN				LR	LR		
	comp=Z,45µm,19.0s						
MMB	Musomiste	149.83	328	eP	PKPbc	08 32 16.5	-0.9
BOJS	Bojanci	149.90	343	ePKPdf	PKPbc	08 32 18.0	+0.7
KKB	Krupnik	149.94	329	eP	PKPbc	08 32 18.3	+0.7
FUORN	Ofenpass-Fuorn	149.95	350	ePKPbc	PKPbc	08 32 18.4	+0.7
FUORN				epPKPab	PKPab	08 32 25.3	+1.9
BLY	Banja Luka	149.98	340	PFAKE		08 32 20.0	+1.5
BLY				LR	LR		
	comp=Z,700nm,20.0s						
BLY	Banja Luka	149.98	340	⇑iP	PKiKP	08 32 19.6	+1.1
TUE	Stuetta	150.24	351	ePKPbc	PKPbc	08 32 19.2	+0.8
TUE				LR	LR		
	comp=Z,500nm,21.0s						
STIP	Stip	150.50	330	i P	PKPbc	08 32 18.6	-0.3
SENIN	Lac Senin/Sane	150.59	354	ePKPbc	PKPbc	08 32 18.9	-0.4
SENIN				ePKPab	PKPab	08 32 29.2	+3.2
SENIN				LR	LR		
	comp=Z,900nm,20.0s						
VAY	Valandovo	150.61	329	i P	PKPbc	08 32 18.7	-0.5
SKO	Skopje	150.64	331	i P	PKiKP	08 32 20.8	+0.8
PDG	Podgorica	151.21	335	⇑iP	PKPbc	08 32 19.8	-0.7
TTG	Podgorica	151.21	335	ePKPbc	PKPbc	08 32 19.1	-1.4
TTG				LR	LR		
	comp=Z,500nm,21.0s						
LIT	Litokhoron	151.56	328	ePKPbc	PKPbc	08 32 19.1	-2.4
LIT	Litokhoron	151.56	328	ePKIKP	PKPbc	08 32 19.1	-2.4
KARP	Karpathos	151.79	315	PFAKE		08 32 30.0	-1.1
KARP				LR	LR		
	comp=Z,400nm,20.0s						
TIR	Tirane	151.84	333	PFAKE		08 32 30.0	-1.0
TIR				LR	LR		
	comp=Z,800nm,20.0s						
BNI	Bardonecchia	151.95	355	ePKPbc	PKiKP	08 32 24.0	+1.3
BNI				LR	LR		
	comp=Z,600nm,21.0s						
VLC	Villacollemand	152.31	349	PFAKE		08 32 30.0	-2.9
VLC				LR	LR		
	comp=Z,600nm,22.0s						
AGG	Agios Georgios	152.44	326	ePKPbc	PKPbc	08 32 23.7	+0.2
AGG				ePKPab	PKPab	08 32 29.8	-3.8
AGG	Agios Georgios	152.44	326	ePKIKP	PKPbc	08 32 23.7	+0.2
AGG				e		08 32 29.8	
AQU	L'Aquila	153.32	343	PFAKE		08 32 30.0	+4.5
AQU				LR	LR		
	comp=Z,400nm,22.0s						
PGAV	Gavieira, Arco	153.35	19	eLR	LR	09 24 33.5	
	comp=Z,562nm,20.0s						
ITM	Ithomi	153.99	324	PFAKE		08 32 30.0	+3.0
ITM				LR	LR		
	comp=Z,500nm,22.0s						
MVO	Moncorvo	154.46	18	eLR	LR	09 25 10.4	
	comp=Z,655nm,20.0s						
COI	Coimbra	154.88	21	PFAKE		08 32 30.0	+1.3
COI				LR	LR		
	comp=Z,700nm,20.0s						
TIP	Timpagrande	154.97	334	ePKPbc	PKiKP	08 32 30.1	+1.0
TIP				ePKPab	PKPab	08 32 44.9	+0.6
TIP				LR	LR		
	comp=Z,600nm,20.0s						
MTE	Manteigas	155.00	20	eLR	LR	09 24 54.5	
	comp=Z,733nm,20.0s						
MTE	Manteigas	155.00	20	PFAKE		08 32 30.0	+0.9
MTE				LR	LR		
	comp=Z,800nm,21.0s						
PMOZ	Porto Moniz, M	155.89	46	eLR	LR	09 25 54.1	
	comp=Z,234nm,20.0s						
ESDC	Sonseca Array	156.66	14	PKPab	PKPab	08 32 52.1	+0.6

	comp=Z,0.2nm,0.4s,baz=344,slow=4.7,SNR=4.5						
ESLA	**Sonseca Array**	**156.66**	**14**	PFAKE		08 32 30.0	+7.4
ESLA				LR	LR		
	comp=Z,700nm,22.0s						
PAB	**San Pablo**	**156.69**	**15**	PFAKE		08 32 30.0	+7.4
PAB				LR	LR		
	comp=Z,1μm,22.0s						
PFVI	**Vila Bisbo**	**157.42**	**25**	PFAKE		08 32 30.0	+6.5
PFVI				LR	LR		
	comp=Z,600nm,20.0s						
PVAQ	**Vaqueiros**	**157.62**	**23**	*e*LR	LR	09 26 28.5	
	comp=Z,567nm,22.0s						
PVAQ	**Vaqueiros**	**157.62**	**23**	PFAKE		08 32 30.0	+6.3
PVAQ				LR	LR		
	comp=Z,700nm,20.0s						
CLTB	**Caltabellotta**	**157.72**	**338**	PFAKE		08 32 30.0	+6.0
CLTB				LR	LR		
	comp=Z,700nm,20.0s						
WDD	**Wied Dalam**	**158.74**	**334**	PFAKE		08 32 40.0	+15
WDD				LR	LR		
	comp=Z,400nm,20.0s						
SFS	**San Fernando**	**159.00**	**21**	PFAKE		08 32 40.0	+15
SFS				LR	LR		
	comp=Z,600nm,22.0s						
TORD	**Torodi Ar. Bea**	**175.86**	**161**	PKP	**PKPdf**	**08 32 38.3**	**+0.1**
	comp=Z,3.6nm,1.1s,baz=259,slow=0.9,SNR=6.2						
TOA1	**Torodi Ar. Sit**	**175.86**	**160**	*e*PKPdf	**PKPdf**	**08 32 38.3**	**+0.1**

MAN 29 08:12:50.9, 7°.71N×127°.35E, h6km, mb5.0, ML4.0, MS4.0, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.08**	**296**	⇓*i*P	Pg	08 13 11.3	-0.4
BIPH				*i* S	Sg	08 13 22.3	-3.5
MATI	**Mati**	**1.32**	**235**	*e*P	Pn	08 13 14.2	-1.8
MATI				*e*S	Sn	08 13 33.9	0.0
BUKP	**Musuan**	**2.27**	**274**	*e*P	Pn	08 13 30.0	+1.0
BUKP				*e*S	Sn	08 13 58.0	+0.7
DDMP	**Don Marcelino,**	**2.28**	**226**	*e*P	Pn	08 13 29.5	+0.4
DDMP				*e*S	Sn	08 13 59.2	+1.7

BJI ***29*** *08:21:29.9±0.0, 6°.86S×130°.44E, h86km, mb4.8/16, mB4.9/9, Ms4.7/2, Ms7 4.5/1*

ISCJB ***29*** *08:21:30.5±0.2, 7°.01S±0°.03×130°.32E±0°.03, h100km, mb4.5/34, Error ellipse: s-maj=4.6km s-min=3.5km az=169.7*

NEIC ***29*** *08:21:31.0±2.6, 6°.91S×130°.31E, h90km±5km, mb4.5/34, Error ellipse: s-maj=9.3km s-min=7.7km az=86.0*

IDC ***29*** *08:21:31.8±3.2, 6°.78S×130°.15E, h75km±28km, mb4.0/9, mb1 4.1/11, mb1mx3.9/28, mbtmp4.4/11, MS3.0/2, Ms1 3.0/2, ms1mx2.9/18, Error ellipse: s-maj=29.0km s-min=13.6km az=71.0*

DJA ***29*** *08:21:32.7±0.2, 7°S±2°×13°0E±°, h114km±9km, M4.8/13, mB5.1/4, mb4.8/13, MLv4.9/11, Mw(mB)4.4/4*

ISC 29 08:21:31.9±0.3, **7°.00S**±0°.04×**130°.37E**±0°.05, **h100**km, **n92**, σ**2s.41**/102, **mb4.5**/34, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.34**	**136**	*e*Pn	**Pn**	**08 21 58.9**	**+2.6**
SAUI	**Saumlaki**	**1.34**	**136**	P	**Pn**	**08 21 59.3**	**+3.0**
MSAI	**Masohi**	**3.90**	**338**	P	**Pn**	**08 22 28.9**	**-0.9**
MSAI				S	**Sn**	**08 23 15.9**	**+1.2**
FAKI	**Fak Fak**	**4.47**	**25**	*e*Pn	**Pn**	**08 22 36.0**	**-1.4**
FAKI				*e*Sn	**Sn**	**08 23 25.0**	**-3.4**
FAKI	**Fak Fak**	**4.47**	**25**	P	**Pn**	**08 22 36.0**	**-1.4**
FAKI				S	**Sn**	**08 23 24.6**	**-3.8**
NLAI	**Namlea**	**4.95**	**319**	P	**Pn**	**08 22 44.8**	**+0.8**
MTN	**Manton Dam**	**5.85**	**173**	*e*Pn	**Pn**	**08 22 58.2**	**+2.0**
MTN				*e*Sn	**Sn**	**08 24 00.7**	**-1.3**
SIJI	**Sorong**	**6.16**	**8**	P	**Pn**	**08 22 58.6**	**-1.8**
	17nm,0.3s,baz=206,slow=10,SNR=18						
SIJI				S	**Sn**	**08 24 04.8**	**-4.6**
	19nm,0.3s,baz=240,slow=22,SNR=8.1						
SIJI				LR	LR	08 26 01.7	
	comp=Z,118nm,20.6s,baz=14,slow=45						
SWI	**Sorong**	**6.16**	**8**	P	**Pn**	**08 22 58.6**	**-1.8**
	160nm,0.8s,2μm1.2nm						
SOEI	**Soe**	**6.62**	**245**	*e*Pn	**Pn**	**08 23 06.3**	**-0.5**
SOEI				*e*Sn	**Sn**	**08 24 19.4**	**-1.5**
SOEI	**Soe**	**6.62**	**245**	P	**Pn**	**08 23 06.9**	**+0.1**
	155nm,0.6s,1.1nm						
SOEI				S	**Sn**	**08 24 19.2**	**-1.7**
	155nm,0.6s,1.1nm						
BBSI	**Bau Bau**	**7.89**	**281**	P	**Pn**	**08 23 24.8**	**+0.8**
BAKI	**Biak**	**8.13**	**45**	P	**Pn**	**08 23 28.9**	**+1.7**
EDFI	**Ende, Flores**	**8.77**	**258**	P	**Pn**	**08 23 36.1**	**+0.1**
BKSI	**Bulukumba**	**10.32**	**279**	P	**Pn**	**08 23 57.2**	**+0.2**
	20nm,0.7s						
BNSI	**Bone**	**10.53**	**284**	P	**Pn**	**08 24 01.1**	**+1.3**
KAPI	**Kappang**	**10.74**	**280**	P	Pn	08 24 05.7	+3.0
	1.9nm,0.3s,baz=113,slow=9.5,SNR=8.2						
KAPI				LR	LR	08 28 34.8	
	comp=Z,74nm,18.8s,baz=325,slow=40						
WBSI	**Waikabubak, Su**	**11.17**	**256**	P	**Pn**	**08 24 07.6**	**-1.0**
PCI	**Palu**	**12.12**	**300**	P	P	08 24 34.5	+4.8
PLAI	**Plampang**	**12.60**	**261**	P	**Pn**	**08 24 24.6**	**-3.0**
WRAB	**Tennant Creek**	**13.42**	**164**	*e*Pn	**Pn**	**08 24 37.0**	**-1.4**
WR1	**Warramunga Arr**	**13.43**	**164**	*e*Pn	**Pn**	**08 24 37.9**	**-0.6**
WRA	**Warramunga Arr**	**13.43**	**164**	P	**Pn**	**08 24 37.9**	**-0.6**
	2.0nm,0.3s,baz=342,slow=13,SNR=66						
WRA				S	**Sn**	**08 26 59.3**	**-7.1**
	9.4nm,0.3s,baz=336,slow=22,SNR=11						
WB2	**Warramunga Arr**	**13.43**	**164**	*e*Pn	**Pn**	**08 24 38.2**	**-0.3**
WC3	**Warramunga Arr**	**13.45**	**164**	*e*Pn	**Pn**	**08 24 38.2**	**-0.6**
COEN	**Coen**	**14.36**	**120**	*e*Pn	**Pn**	**08 24 50.9**	**+0.3**
JAGI	**Jajag, Banyuwa**	**16.13**	**264**	*e*P	**P**	**08 25 12.4**	**-1.9**
	90nm,1.3s						
PMG	**Port Moresby**	**16.79**	**99**	P	**P**	**08 25 25.1**	**+3.5**
	0.8nm,0.3s,baz=43,slow=19,SNR=2.7						
PMG				S	**Sn**	**08 28 24.8**	**-2.9**
	0.5nm,0.3s,baz=360,slow=21,SNR=2.3						
PMG	**Port Moresby**	**16.79**	**99**	*e*P	**Pn**	**08 25 21.0**	**-0.1**
	35nm,1.2s						
PMG				*e*Sn	**Sn**	**08 28 24.8**	**-2.9**
AS31	**Alice Springs**	**16.91**	**169**	*e*P	**P**	**08 25 23.4**	**+0.5**
AS31				*e*S	**Sn**	**08 28 22.6**	**-7.9**
ASAR	**Alice Springs**	**16.91**	**169**	P	**P**	**08 25 23.4**	**+0.5**
	3.1nm,0.3s,baz=349,slow=12,SNR=39						
ASAR				S	**Sn**	**08 28 22.6**	**-7.9**
	1.7nm,0.3s,baz=348,slow=26,SNR=5.6						
ASAR				ScP	**ScP**	**08 33 33.2**	**+3.4**
	0.2nm,0.3s,baz=345,slow=1.9,SNR=8.0						
PSAC2	**Pilbara Seismi**	**17.66**	**214**	*e*P	**Pn**	**08 25 31.2**	**-0.4**
	14nm,0.6s						
PSAB2	**Pilbara Seismi**	**17.67**	**214**	*e*P	**P**	**08 25 30.9**	**-0.4**
PSAC1	**Pilbara Seismi**	**17.68**	**214**	*e*P	**P**	**08 25 31.2**	**-0.2**
	25nm,1.0s						
PSAA2	**Pilbara Seismi**	**17.69**	**214**	*e*P	**P**	**08 25 30.9**	**-0.5**
	17nm,0.6s						
PSA00	**Pilbara Seismi**	**17.70**	**214**	*e*P	**P**	**08 25 30.4**	**-1.1**
	13nm,0.6s						
PSAB1	**Pilbara Seismi**	**17.71**	**214**	*e*P	**P**	**08 25 31.2**	**-0.4**
	50nm,1.4s						
PSAB3	**Pilbara Seismi**	**17.71**	**214**	*e*P	**Pn**	**08 25 32.4**	**+0.3**
	22nm,0.8s						
UGM	**Wanagama**	**19.70**	**266**	*e*P	**Pn**	**08 25 53.3**	**-2.5**
	257nm,1.4s						
CTA	**Charters Tower**	**20.17**	**132**	P	Pn	08 26 04.2	+2.9
	3.4nm,0.6s,baz=300,slow=8.1,SNR=3.7						
CTAO	**Charters Tower**	**20.17**	**132**	*e*P	**P**	**08 25 59.6**	**+1.1**
	13nm,1.1s						
SBUM	**Sibu**	**20.40**	**297**	*e*P	Pn	08 26 01.3	-2.7
	8.0nm,0.9s						
GIRL	**Giralia**	**21.98**	**223**	*e*P	**P**	**08 26 19.2**	**+1.4**
	153nm,1.4s						
CISI	**Cisompet, Garu**	**22.38**	**267**	*e*P	**P**	**08 26 17.9**	**-4.2**
	108nm,1.4s						
FORT	**Forrest**	**23.75**	**185**	*e*P	**P**	**08 26 37.7**	**+2.5**
	23nm,0.8s						
GUMO	**Guam**	**25.02**	**35**	*e*P	**P**	**08 26 45.2**	**-1.5**
	140nm,1.3s						
MORW	**Morawa**	**25.78**	**210**	*e*P	**P**	**08 26 54.8**	**+1.3**
	21nm,1.0s						
BBOO	**Buckleboo**	**26.22**	**169**	*e*P	**P**	**08 26 59.1**	**+1.6**
	12nm,0.8s						
STKA	**Stephens Creek**	**26.88**	**158**	P	**P**	**08 27 07.2**	**+3.8**
	5.2nm,0.4s,baz=342,slow=8.7,SNR=24						
STKA	**Stephens Creek**	**26.88**	**158**	*e*P	**P**	**08 27 06.0**	**+2.6**
	1.2nm,0.8s						
NWAO	**Narrogin (SRO)**	**28.54**	**204**	*e*P	**P**	**08 27 19.2**	**+1.1**
	31nm,1.3s						
CMAR	**Chiang Mai Arr**	**40.01**	**310**	P	**P**	**08 28 57.4**	**+0.1**
	2.2nm,0.5s,baz=135,slow=7.3,SNR=10						
CHTO	**Chiang Mai**	**40.22**	**310**	*e*P	**P**	**08 28 58.5**	**-0.5**
	5.2nm,0.6s						
NJ2	**Nanjing**	**40.36**	**345**	*e*P	**P**	**08 29 00.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
KSRS	**Korea Array**	**44.28**	**357**	P	**P**	**08 29 33.2**	**+1.6**
	0.5nm,0.5s,baz=177,slow=9.9,SNR=6.1						
LZH	**Lanzhou**	**49.58**	**332**	*e*P	P	08 30 07.0	-6.1
LZH				pP	pP	08 30 29.0	-6.4
LZH				sP	sP	08 30 43.0	-3.0
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.66**	**342**	P	**P**	**08 30 22.0**	**+0.9**
HHC				S	**S**	**08 37 20.5**	**-8.1**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				LR	LR		
	comp=Z,300nm,21.4s						
HHC				LR	LR		
	comp=Z,200nm,20.8s						
CN2	**Changchun**	**50.76**	**355**	*e*P	**P**	**08 30 21.8**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BKZ	**Black Stump Fm**	**52.34**	**135**	*e*P	**P**	**08 30 33.3**	**-0.4**
	comp=Z,2.9nm,1.0s						
GTA	**Gaotai**	**54.15**	**331**	*e*P	**P**	**08 30 48.5**	**+1.5**
GTA				pP	pwP	08 31 13.0	-3.2
GTA				sP	sP	08 31 20.5	+0.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WMQ	**Urumqi**	**63.59**	**327**	*e*P	**P**	**08 31 52.8**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,34nm,4.7s						
WMQ				LR	LR		
	comp=Z,470nm,25.7s						
PETK	**Petropavlovsk-**	**64.21**	**18**	P	**P**	**08 31 58.2**	**+2.2**
	comp=Z,2.0nm,0.6s,baz=176,slow=5.4,SNR=4.1						
PEA1	**Petropavlovsk-**	**64.22**	**18**	*e*P	**P**	**08 31 58.2**	**+2.2**
KSH	**Kashi**	**68.27**	**317**	*e*P	**P**	**08 32 25.3**	**+3.0**
KSH				pP	pwP	08 32 50.0	-2.2
KSH				S	**S**	**08 41 19.0**	**+3.6**
MK31	**Makanchi Array**	**68.43**	**327**	*e*P	**P**	**08 32 22.3**	**-0.8**
	comp=Z,7.3nm,0.9s						
MK32	**Makanchi Array**	**68.43**	**327**	*e*P	**P**	**08 32 23.8**	**+0.7**
MKAR	**Makanchi Array**	**68.43**	**327**	P	**P**	**08 32 23.8**	**+0.7**
	comp=Z,8.4nm,0.6s,baz=116,slow=8.2,SNR=38						
MAKZ	**Makanchi**	**68.61**	**327**	*e*P	**P**	**08 32 23.6**	**-0.5**
	comp=Z,7.5nm,0.7s						
KBL	**Kabul**	**71.04**	**310**	*e*P	**P**	**08 32 36.7**	**-2.9**
	comp=Z,4.6nm,0.6s						
ZALV	**Zalesovo Beam**	**71.75**	**334**	P	**P**	**08 32 43.0**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=126,slow=3.9,SNR=4.4						
ZAA1	**Zalesovo Array**	**71.75**	**334**	*e*P	**P**	**08 32 43.0**	**-0.2**
CHGR	**Chuyangaron**	**72.60**	**314**	*e*P	**P**	**08 32 47.2**	**-1.5**
	comp=Z,8.3nm,0.8s						
KURK	**Kurchatov**	**72.71**	**328**	*e*P	**P**	**08 32 47.6**	**-1.3**
	comp=Z,8.3nm,1.2s						
KK31	**Karatay Array**	**73.58**	**319**	*e*P	**P**	**08 32 53.0**	**-1.2**
	comp=Z,2.5nm,0.8s						
KKAR	**Karatay Array**	**73.58**	**319**	*e*P	**P**	**08 32 53.3**	**-1.0**
	comp=Z,2.5nm,0.8s						
MAW	**Mawson**	**75.08**	**201**	P	**P**	**08 33 05.9**	**+3.4**
	comp=Z,3.4nm,0.6s,baz=91,slow=13,SNR=14						
MAW	**Mawson**	**75.08**	**201**	*e*P	**P**	**08 33 03.2**	**+0.7**
	comp=Z,0.8nm,0.6s						
ABKAR	**Akbulak array**	**82.73**	**322**	*e*P	**P**	**08 33 44.5**	**-0.2**
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**82.97**	**180**	*e*P	**P**	**08 33 48.5**	**+2.7**
	comp=Z,3.2nm,0.7s						
SDPT	**Sand Point**	**84.13**	**32**	*e*P	**P**	**08 33 53.0**	**+1.4**
	comp=Z,10nm,0.6s						
RAYN	**Ar Rayn**	**88.08**	**294**	*e*P	**P**	**08 34 12.1**	**+0.2**
	comp=Z,3.9nm,0.8s						
ILAR	**Eielson Array**	**93.19**	**25**	P	**P**	**08 34 35.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=260,slow=4.6,SNR=6.5						
ILB	**Eielson Array**	**93.19**	**25**	*e*P	**P**	**08 34 35.0**	**+0.4**
	comp=Z,3.2nm,1.5s						
TXAR	**Lajitas Array**	**124.62**	**59**	PKP	**PKiKP**	**08 40 23.1**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=213,slow=4.3,SNR=3.2						
PLCA	**Paso Flores**	**128.75**	**160**	PKP	**PKiKP**	**08 40 32.3**	**+3.6**
	comp=Z,0.8nm,0.7s,baz=157,slow=19,SNR=4.0						
PLCA	**Paso Flores**	**128.75**	**160**	*e*PKPdf	**PKiKP**	**08 40 30.1**	**+1.3**
TORD	**Torodi Ar. Bea**	**129.16**	**281**	PKP	**PKiKP**	**08 40 31.2**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=80,slow=2.1,SNR=4.4						
TOA1	**Torodi Ar. Sit**	**129.17**	**281**	*e*PKPdf	**PKiKP**	**08 40 31.2**	**+1.1**
CPUP	**Villa Florida**	**146.03**	**168**	PKPbc	**PKiKP**	**08 41 04.5**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=176,slow=1.3,SNR=17						
CPUP	**Villa Florida**	**146.03**	**168**	*e*PKPbc	**PKiKP**	**08 41 04.3**	**+0.1**
LPAZ	**La Paz**	**150.49**	**142**	PKPbc	**PKPab**	**08 41 17.7**	**-2.8**
	comp=Z,2.0nm,0.4s,baz=40,slow=2.7,SNR=32						
LPAZ	**La Paz**	**150.49**	**142**	*e*PKPbc	**PKPab**	**08 41 16.9**	**-3.5**
LPAZ				*e*PKPab	PKiKP	08 41 21.8	+7.4

UCR 29 08:25:49.8±2.0, **8°.89N×82°.81W, h13**km±5km, **MW3.6, 4C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.15**	**130**	⇓*i*P	Pb	08 25 54.1	-0.4
BRU2				*i* S	Sb	08 25 57.9	+0.2
EDSV	**San Vito**	**0.18**	**247**	⇑*i*P	Pg	08 25 54.5	+0.5
EDSV				*e*S	Sb	08 25 59.0	+0.5
EDBA	**Buenos Aires**	**0.54**	**300**	⇑*e*P	Pg	08 26 00.3	0.0
EDBA				*e*S	Sb	08 26 08.6	-0.2
DRK0	**Durika**	**0.57**	**310**	⇑*e*P	Pg	08 25 59.9	-1.2
DRK0				*e*S	Sg	08 26 07.7	-1.0
PTJ1	**Puerto Jimnez**	**0.60**	**234**	⇓*i*P	Pg	08 26 00.3	-1.3
PTJ1				*e*S	Sg	08 26 09.5	-0.1
EDPN	**Palmar Norte**	**0.65**	**276**	⇑*e*P	Pg	08 26 01.2	-1.2
EDPN				*e*S	Sg	08 26 10.7	-0.3
EDLM	**Las Mercedes**	**0.86**	**297**	*e*P	Pg	08 26 05.2	-1.4
EDLM				*e*S	Sg	08 26 17.1	-0.8
LCR2	**La Lucha 2**	**1.45**	**306**	*e*P	Pn	08 26 14.4	-1.6
LCR2				*e*S	Sn	08 26 34.1	-0.9
CVTR	**Volcan Turrial**	**1.47**	**320**	*e*P	Pn	08 26 15.7	-0.7
CVTR				*e*S	Sn	08 26 35.5	0.0
HDC	**Heredia**	**1.70**	**311**	*e*P	Pn	08 26 18.7	-0.6
HDC				*e*S	Sn	08 26 41.2	+0.3
SRA1	**San Ramn**	**2.04**	**306**	*e*P	Pn	08 26 23.5	-0.4
SRA1				*e*S	Sn	08 26 49.6	+0.4
ARE1	**Arenal 1**	**2.45**	**310**	*e*P	Pn	08 26 28.9	-0.6

UCR 29 08:35:03.6±2.3, **7°.82N×82°.34W, h14**km±13km, **MW3.5, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**1.03**	**340**	*e*P	Pb	08 35 21.4	-2.1
BRU2				*e*S	Sb	08 35 36.7	-0.2
DRK0	**Durika**	**1.70**	**328**	*e*P	Pn	08 35 31.4	-1.6
DRK0				*e*S	Sn	08 35 53.8	-0.8
AZU	**Azuero**	**2.04**	**91**	*e*P	Pn	08 35 37.6	0.0
AZU				*e*S	Sn	08 36 03.3	+0.3

ISK ***29*** *08:41:06.7, 39°.63N×29°.40E, h5km, ML1.9/6, Suspected Mining explosion.*

DDA ***29*** *08:41:06.8, 39°.66N×29°.38E, h7km±4km, ML2.6*

ISCJB ***29*** *08:41:07.1±0.5, 39°.66N±0°.02×29°.40E±0°.04, h0km, Error ellipse: s-maj=4.5km s-min=3.3km az=179.2*

ISC 29 08:41:07.5±0.9, **39°.63N**±0°.03×**29°.39E**±0°.03, **h0**km, **n14**, σ**0s.84**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.19**	**164**	PG	**Pg**	**08 41 10.7**	**-0.4**
TVSB				SG	**Sg**	**08 41 14.3**	**+0.7**
ULDT	**Uludag**	**0.55**	**339**	*i* P	**Pg**	**08 41 17.5**	**-0.5**
ULDT				*i* S	**Sg**	**08 41 25.9**	**+0.8**
ULDT				IAML_P			
	comp=Z,764nm,0.2s						
GDZ	**Gediz**	**0.55**	**173**	*i* P	**Pg**	**08 41 18.2**	**+0.2**
GDZ				*i* S	**Sb**	**08 41 27.6**	**-0.9**
GDZ				IAML_P			
	comp=Z,728nm,0.1s						
DURS	**Dursunbey**	**0.71**	**268**	*i* P	**Pg**	**08 41 20.4**	**-0.7**
DURS				*i* S	**Sg**	**08 41 31.3**	**+1.0**
DURS				IAML_P			
	comp=Z,2μm,0.1s						
DEMI	**Demirci**	**0.79**	**222**	*i* P	**Pg**	**08 41 22.5**	**-0.2**
DEMI				*i* S	**Sn**	**08 41 39.3**	**+0.8**
DEMI				IAML_P			
	comp=Z,758nm,0.1s						
MDNY	**Mudanya-Bursa**	**0.83**	**332**	PG	**Pg**	**08 41 23.6**	**+0.1**
YLV	**Yalova**	**0.93**	**359**	PG	**Pg**	**08 41 25.3**	**-0.1**
USAK	**Uak-Merkez**	**0.96**	**198**	*i* P	**Pg**	**08 41 25.8**	**-0.1**
USAK				*i* S	**Sn**	**08 41 41.8**	**-1.0**
USAK				IAML_P			
	comp=Z,1μm,0.1s						
ARMT	**Armutlu**	**1.02**	**337**	PG	**Pg**	**08 41 26.6**	**-0.4**
KCTX	**Karacabey (Bur**	**1.02**	**309**	PG	**Pg**	**08 41 26.8**	**-0.2**
SRCK	**Saricakaya, Es**	**1.03**	**66**	PG	**Pg**	**08 41 27.1**	**-0.2**
SRCK				SG	**Sg**	**08 41 41.4**	**+0.7**
KHAL	**Karahalli**	**1.26**	**176**	*i* P	**Pg**	**08 41 31.1**	**-0.6**
KHAL				*i* S	**Sn**	**08 41 52.9**	**+2.6**
KHAL				IAML_P			
	comp=Z,242nm,0.1s						
MANT	**Manisa**	**1.31**	**210**	*i* P	**Pb**	**08 41 33.0**	**-0.2**
MANT				*i* S	**Sb**	**08 41 50.4**	**-0.2**
MANT				IAML_P			
	comp=Z,425nm,0.1s						
AUMIH	**MIHALICIK**	**1.63**	**81**	PN	**Pn**	**08 41 37.0**	**-0.6**

SOME ***29*** *08:51:04.3, 39°.37N×71°.28E, h15km*

NNC 29 08:51:08.0±12.0, **39°.18N×71°.41E, h0**km, **mb3.6, mpv3.2, 1C-2D, Error ellipse: s-maj=83.5km s-min=73.5km az=16.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.14**	**341**	Pg	Pb	08 52 02.7	-2.0
	1.5nm,0.2s						
IUG				Lg	Lg	08 52 44.8	
	151nm,0.5s						
MRKS	**Merke**	**3.81**	**21**	Pg	Pn	08 52 11.9	+3.8
	3.7nm,0.4s						
MRKS				Lg	Lg	08 53 00.9	
	9.9nm,0.4s						
MRKS	**Merke**	**3.81**	**21**	*e*P	Pn	08 52 12.0	+3.9
	2.2nm,0.1s						
MRKS				*e*S	Sb	08 53 01.5	-1.5
	10.0nm,0.4s						
KK31	**Karatay Array**	**3.97**	**350**	⇓Pn	Pn	08 52 13.6	+3.4
	1.6nm,0.2s,baz=175,slow=13,SNR=121						
KK31				⇑Sn	Sb	08 53 02.9	-4.6
	2.9nm,0.3s,baz=175,slow=22,SNR=8.2						
KK31				⇓Lg	Lg	08 53 14.6	
	9.8nm,0.6s,baz=177,slow=31,SNR=4.9						
BRLS	**Borolday**	**4.02**	**343**	Pg	Pn	08 52 14.7	+3.7
	1.5nm,0.4s						
BRLS				Lg	Lg	08 53 05.9	
	13nm,0.5s						
BRLS	**Borolday**	**4.02**	**343**	*e*P	Pn	08 52 11.3	+0.4
	1.3nm,0.3s						
BRLS				*e*S	Sn	08 52 59.2	+0.5
	12nm,0.3s						

MAN 29 08:51:21.8, 13°.81N×120°.47E, h104km, mb3.9, ML2.6, MS2.2, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.23**	**251**	*e*P	Pn	08 51 38.6	+2.0
LUBP				*e*S	Sn	08 51 49.8	+2.2
TGY	**Tagaytay City**	**0.54**	**57**	⇑*e*P	Pn	08 51 40.4	+2.0
TGY				*i* S	Sn	08 51 55.9	+5.2
PGP	**Puerto Galera**	**0.56**	**123**	⇑*e*P	Pn	08 51 39.5	+1.1
PGP				*e*S	Sn	08 51 51.8	+0.9
SJMP	**San Jose**	**1.48**	**155**	*e*P	Pn	08 51 49.5	+1.4
SJMP				*e*S	Sn	08 52 09.1	+1.2
BUSP	**Coron**	**1.82**	**189**	*e*P	Pn	08 51 53.2	+1.0
BUSP				*e*S	Sn	08 52 16.1	+0.7
SCZP	**Santa Cruz**	**2.03**	**345**	*e*P	Pn	08 51 55.8	+0.8
SCZP				*e*S	Sn	08 52 19.6	-0.6
OTRP	**Odiongan**	**2.08**	**134**	*e*P	Pn	08 51 56.5	+0.9
OTRP				*e*S	Sn	08 52 20.9	-0.6
ENPP	**El Nido**	**2.78**	**202**	*e*P	Pn	08 52 05.4	+0.6
ENPP				*e*S	Sn	08 52 37.8	-0.1

HLW ***29*** *08:59:38.8, 29°.65N×36°.35E, h10km±9km, Md2.9*

ISCJB ***29*** *08:59:39.0±1.7, 29°.82N±0°.09×36°.2E±0°.1, h5km, Error ellipse: s-maj=19.8km s-min=7.2km az=36.2*

JSO ***29*** *08:59:40.4±1.2, 30°N±8°×3°6E±°, h0km, M3.0/9, Mjma2.9/9, ML2.8/7, MLv3.0/9*

ISC 29 08:59:37.9±1.9, **29°.81N**±0°.08×**36°.3E**±0°.1, **h5**km, **n12**, σ**1s.17**/13, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSNJ	**Maan**	**0.66**	**312**	P	**Pg**	**08 59 50.6**	**-0.1**
JDRJ	**Daraweish**	**1.05**	**331**	P	**Pg**	**08 59 58.0**	**0.0**
HRFI	**Mount Harif**	**1.08**	**282**	P	**Pb**	**08 59 59.0**	**-0.2**
EIL	**Elat**	**1.14**	**263**	P	**Pg**	**08 59 59.8**	**-0.1**
HBST	**Basata**	**1.46**	**246**	P	**Pb**	**09 00 05.3**	**-0.2**
	baz=254						
HBST				S	**Sg**	**09 00 24.9**	**+0.2**
	baz=254						
LISJ	**El Lisan**	**1.57**	**335**	P	**Pn**	**09 00 06.1**	**-0.4**
WALJ	**Wala**	**1.79**	**348**	P	**Pb**	**09 00 10.8**	**-0.3**
HDHB	**Dhahab**	**1.80**	**233**	P	**Pn**	**09 00 09.7**	**+0.1**
	baz=240						
KZIT	**Kziot**	**1.94**	**305**	P	**Pb**	**09 00 13.1**	**-0.7**
ASF	**Jabal al Asfar**	**2.42**	**13**	P	**Pb**	**09 00 20.3**	**-1.7**
RSH		**2.47**	**298**	P	**Pb**	**09 00 21.4**	**-1.4**
	baz=301						
SHMJ	**Saham**	**2.94**	**352**	P	**Pn**	**09 00 28.1**	**+2.8**

NCEDC ***29*** *09:07:58.9, 40°.36N×125°.14W, h8km, MD2.8*

ANF ***29*** *09:07:58.5±1.5, 40°.42N×125°.08W, h10km, ML2.3/2, Error ellipse: s-maj=14.5km s-min=6.5km az=32.0*

NEIC ***29*** *09:07:58.9±0.0, 40°.36N×125°.14W, h8km, MD2.8(NCEDC), After NCEDC.*

ISC 29 09:07:57.9±2.7, **40°.42N**±0°.07×**125°.1W**±0°.1, **h6**km±14km, **n18**, σ**1s.02**/23, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCC	**Jacoby Creek,**	**0.93**	**64**	*e*Pg	**Pg**	**09 08 15.9**	**+0.2**
KMRM	**Mail Ridge**	**1.10**	**100**	*e*Pg	**Pb**	**09 08 19.4**	**0.0**
KMRM				*e*Sg	**Sb**	**09 08 34.1**	**0.0**
KHMM	**Horse Mountain**	**1.16**	**66**	*e*Pn	**Pg**	**09 08 19.7**	**-0.4**
KCPM	**Cahto Peak**	**1.39**	**121**	*e*Pn	**Pn**	**09 08 22.7**	**-1.3**
O02D	**Mt. Diablo Mer**	**1.81**	**97**	P	**Pn**	**09 08 29.2**	**-0.5**
	baz=276,SNR=93						
O02D				S	**Sn**	**09 08 52.9**	**0.0**
	baz=276						
N02D	**Trinity Center**	**1.93**	**72**	P	**Pn**	**09 08 31.0**	**-0.4**
	baz=252,SNR=28						
N02D				S	**Sn**	**09 08 55.7**	**-0.2**
	baz=252						
WDC	**Whiskeytown Da**	**1.98**	**84**	*e*Pn	**Pn**	**09 08 31.9**	**-0.1**
M02C	**Callahan**	**1.98**	**60**	P	**Pn**	**09 08 31.1**	**-1.0**
	baz=240,SNR=8.6						
M02C				S	**Sn**	**09 08 57.1**	**-0.2**
	baz=240						
HOPS	**Hopland Field**	**2.13**	**131**	*e*Pn	**Pn**	**09 08 33.3**	**-0.7**
O03E	**Paynes Creek**	**2.54**	**92**	P	**Pn**	**09 08 39.0**	**-0.9**
	baz=272,SNR=32						
O03E				S	**Sn**	**09 09 10.5**	**-0.7**
	baz=272						
L04D	**Klamath Falls**	**2.79**	**49**	P	**Pn**	**09 08 44.9**	**+1.6**
	baz=230,SNR=5.0						
I03D	**Drain, OR**	**3.54**	**21**	P	**Pn**	**09 08 53.2**	**-0.2**
	baz=202						
VCNR	**Virginia City**	**4.36**	**103**	*e*Pn	**Pn**	**09 09 07.6**	**+2.7**
CMB	**Columbia Colle**	**4.38**	**121**	*e*Pn	**Pn**	**09 09 05.6**	**+0.5**
PNTR	**Pine Nut**	**4.46**	**105**	*e*Pn	**Pn**	**09 09 07.2**	**+0.8**
H04D	**Lebanon**	**4.47**	**23**	P	**Pn**	**09 09 06.4**	**+0.2**
	baz=204						
H04A	**Detroit Lake**	**4.79**	**26**	*e*Pn	**Pn**	**09 09 10.6**	**0.0**
MDPB	**Devils Postpil**	**5.47**	**119**	*e*Pn	**Pn**	**09 09 22.1**	**+1.9**

ISCJB ***29*** *09:17:46.9±0.3, 6°.85N±0°.02×73°.14W±0°.03, h155km±2km, mb4.1/28, Error ellipse: s-maj=4.8km s-min=3.4km*

az=20.9

*IDC **29** 09:17:48.0±0.7, 6°.77N×72°.98W, h163^{km}±9^{km}, mb3.5/5, mb1 3.9/9, mb1mx3.4/31, mbtmp4.1/9, Error ellipse: s-maj=23.8km s-min=7.6km az=132.0*

*RSNC **29** 09:17:48.5±0.9, 6°.83N×73°.15W, h148^{km}±4^{km}, ML4.0, Mw4.0*

*NEIC **29** 09:17:48.9±1.3, 6°.90N×73°.10W, h155^{km}±8^{km}, mb4.2/27, Error ellipse: s-maj=14.9km s-min=11.4km az=118.0*

ISC 29 09:17:48.1±0.6**, 6°.86N**±0°.03×**73°.13W**±0°.04**, h152**^{km}±5^{km}**, n76, σ1^{s}.36**/107**, mb4.2**/28**, 9C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GIRC	**Giron, Santand**	**0.23**	**343**	⇓*i*P	**Pn**	**09 18 08.6**	**-0.2**
GIRC				*e*S	**Sn**	**09 18 23.7**	**-1.0**
GIRC				*i*		09 18 25.6	
	comp=Z,817nm,0.4s						
BARC	**Barichara**	**0.27**	**192**	⇓*i*P	**Pn**	**09 18 08.6**	**-0.5**
BARC				*e*S	**Sn**	**09 18 23.5**	**-1.6**
BARC				*i*		09 18 25.0	
	comp=Z,2µm,0.2s						
BRRC	**Barranca, Sant**	**0.63**	**293**	*e*P	**Pn**	**09 18 10.4**	**0.0**
BRRC				*e*S	**Sn**	**09 18 27.0**	**-0.3**
BRRC				*i*		09 18 30.7	
	comp=Z,962nm,0.3s						
PAMC	**Pamplona, Colo**	**0.64**	**41**	⇓*i*P	**Pn**	**09 18 11.4**	**+0.4**
PAMC				*e*S	**Sn**	**09 18 28.5**	**0.0**
PAMC				*i*		09 18 31.0	
	comp=Z,919nm,0.5s						
RUSC	**La Rusia**	**0.96**	**177**	⇑*i*P	**Pn**	**09 18 12.5**	**-0.7**
RUSC				*e*S	**Sn**	**09 18 30.9**	**-1.6**
RUSC				*i*		09 18 32.6	
	comp=Z,959nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	⇑*i*P	**Pn**	**09 18 15.0**	**-1.3**
PTBC				*e*S	**Sn**	**09 18 36.3**	**-1.7**
PTBC				*i*		09 18 43.7	
	comp=Z,1µm,0.4s						
OCAC	**Ocana**	**1.39**	**352**	*e*P	**Pn**	**09 18 16.6**	**-0.2**
OCAC				*e*S	**Sn**	**09 18 38.6**	**-0.3**
OCAC				*i*		09 18 41.7	
	comp=Z,1µm,0.2s						
TAMC	**Tame, Arauca**	**1.39**	**107**	⇑*i*P	**Pn**	**09 18 16.9**	**+0.2**
TAMC				*i*		09 18 37.8	
	comp=Z,551nm,0.4s						
TAMC				*e*S	**Sn**	**09 18 38.7**	**+0.1**
SPBC	**San Pablo de B**	**1.52**	**218**	⇑*i*P	**Pn**	**09 18 17.5**	**-0.7**
SPBC				*e*S	**Sn**	**09 18 40.0**	**-1.2**
SPBC				*i*		09 18 44.4	
	comp=Z,1µm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.83**	**290**	⇓*i*P	**Pn**	**09 18 20.9**	**-0.5**
ZARC				*e*S	**Sn**	**09 18 47.0**	**0.0**
ZARC				*i*		09 18 52.5	
	comp=Z,1µm,0.6s						
SMLC	**San Martn de**	**2.15**	**334**	⇑*i*P	**Pn**	**09 18 24.6**	**-0.4**
SMLC				*e*S	**Sn**	**09 18 53.2**	**-0.3**
SMLC				*i*		09 18 55.6	
	comp=Z,862nm,0.4s						
NORC	**Norcasia**	**2.16**	**234**	⇓*i*P	**Pn**	**09 18 24.5**	**-0.7**
NORC				*e*S	**Sn**	**09 18 52.5**	**-1.3**
NORC				*i*		09 18 57.8	
	comp=Z,1µm,0.5s						
CHIC	**Chingaza**	**2.29**	**195**	⇑*i*P	**Pn**	**09 18 26.5**	**-0.7**
CHIC				*e*S	**Sn**	**09 18 55.9**	**-1.5**
CHIC				*i*		09 19 03.3	
	comp=Z,744nm,0.5s						
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**09 18 28.8**	**+1.2**
	comp=Z,174nm,0.3s,baz=9.5,slow=5.7,SNR=449						
ROSC				S	**Sn**	**09 18 59.6**	**+1.6**
	comp=Z,302nm,0.3s,baz=266,slow=18,SNR=14						
ROSC	**El Rosal**	**2.33**	**211**	*e*Pn	**Pn**	**09 18 28.4**	**+0.8**
ROSC				*e*Sn	**Sn**	**09 18 57.1**	**-0.9**
ROSC	**El Rosal**	**2.33**	**211**	⇑*i*P	**Pn**	**09 18 28.4**	**+0.8**
ROSC				*e*S	**Sn**	**09 18 59.0**	**+1.0**
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**09 18 28.8**	**-0.5**
HELC				*e*S	**Sn**	**09 19 00.1**	**-1.1**
HELC				*i*		09 19 07.8	
	comp=Z,493nm,0.5s						
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P	**Pn**	**09 18 28.5**	**-1.4**
UREC				*e*S	**Sn**	**09 18 59.5**	**-2.6**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*e*P	**Pn**	**09 18 32.7**	**-0.2**
GUY2C				*e*S	**Sn**	**09 19 07.0**	**-0.5**
GUY2C				*i*		09 19 15.2	
	comp=Z,604nm,0.6s						
RREF	**El Recreo**	**2.94**	**229**	*e*P	**Pn**	**09 18 35.3**	**-0.1**
RREF				*e*S	**Sn**	**09 19 11.6**	**-0.3**
RREF				*i*		09 19 22.8	
	comp=Z,644nm,0.3s						
DBBC	**Dabeiba**	**3.06**	**273**	*e*P	**Pn**	**09 18 36.2**	**-0.2**
DBBC				*e*S	**Sn**	**09 19 12.8**	**-1.0**
DBBC				*i*		09 19 19.4	
	comp=Z,354nm,0.3s						
ARGC	**Ariguani, Magd**	**3.18**	**340**	*e*P	**Pn**	**09 18 38.7**	**+0.9**
ARGC				*e*S	**Sn**	**09 19 17.3**	**+0.8**
SDV	**Santo Domingo**	**3.19**	**51**	P	**Pn**	**09 18 38.1**	**0.0**
	comp=Z,104nm,0.3s,baz=206,slow=2.6,SNR=44						
SDV				S	**Sn**	**09 19 17.2**	**+0.4**
	comp=Z,20nm,0.3s,baz=317,slow=16,SNR=9.8						
SDV	**Santo Domingo**	**3.19**	**51**	*e*Pn	**Pn**	**09 18 38.3**	**+0.2**
SDV	**Santo Domingo**	**3.19**	**51**	*e*P	**Pn**	**09 18 38.1**	**0.0**
SDV				*e*S	**Sn**	**09 19 16.3**	**-0.5**
PRAC	**Prado**	**3.58**	**209**	⇑*i*P	**Pn**	**09 18 41.8**	**-1.3**
PRAC				*e*S	**Sn**	**09 19 23.9**	**-1.8**
PRAC				*i*		09 19 33.6	
	comp=Z,602nm,0.5s						
ORTC	**Ortega, Tolima**	**3.61**	**216**	*e*P	**Pn**	**09 18 42.8**	**-0.6**
ORTC				*e*S	**Sn**	**09 19 26.4**	**+0.1**
ORTC				*i*		09 19 33.9	
	comp=Z,436nm,0.7s						
CVALL	**Valledupar, Ce**	**3.63**	**358**	*e*P	**Pn**	**09 18 42.7**	**-1.0**
CVALL				*e*S	**Sn**	**09 19 21.8**	**-5.0**
SJCC	**San Jacinto, C**	**3.64**	**326**	⇑*i*P	**Pn**	**09 18 42.4**	**-1.4**
SJCC				*e*S	**Sn**	**09 19 24.1**	**-2.9**
PLMC	**San Jos del P**	**3.69**	**238**	*e*P	**Pn**	**09 18 44.3**	**-0.2**
PLMC				*e*S	**Sn**	**09 19 30.0**	**+1.8**
GUVC	**San Jose del G**	**4.31**	**173**	*e*P	**Pn**	**09 18 50.2**	**-2.3**
GUVC				*e*S	**Sn**	**09 19 39.7**	**-3.0**
SMRC	**Santa Marta, M**	**4.41**	**346**	*e*P	**Pn**	**09 18 54.0**	**+0.2**
SMRC				*e*S	**Sn**	**09 19 42.0**	**-3.1**
MACC	**Macarena, Meta**	**4.74**	**189**	*e*P	**Pn**	**09 18 55.2**	**-2.9**
MACC				*e*S	**Sn**	**09 19 47.9**	**-4.9**
FLOC	**Florencia**	**5.81**	**206**	*e*P	**Pn**	**09 19 11.1**	**-1.3**
CRUC	**La Cruz**	**6.49**	**216**	*e*P	**Pn**	**09 19 24.4**	**+2.6**
BCIP	**Isla Barro Col**	**7.03**	**289**	*e*Pn	**Pn**	**09 19 26.8**	**-1.8**
PCRV	**Puerto La Cruz**	**9.02**	**68**	P	**Pn**	**09 19 52.5**	**-2.6**
	comp=Z,1.7nm,0.3s,baz=257,slow=0.8,SNR=9.0						
BANI	**BANI**	**11.78**	**13**	*e*Pn	**Pn**	**09 20 32.4**	**+0.8**
MTDJ	**Mount Denham**	**12.09**	**340**	*e*Pn	**Pn**	**09 20 38.0**	**+2.4**
GTBY	**Guantanamo Bay**	**13.13**	**352**	*e*Pn	**Pn**	**09 20 49.4**	**+0.5**
MTP	**Monte Pirata**	**13.39**	**33**	*e*Pn	**Pn**	**09 20 52.1**	**-0.1**
CBCY	**The Bluff, Cay**	**14.33**	**334**	*e*P	**P**	**09 21 06.7**	**-0.1**
TEIG	**Tepich**	**19.81**	**314**	P	**P**	**09 22 08.4**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=46,slow=0.9,SNR=6.0						
TEIG	**Tepich**	**19.81**	**314**	*e*P	**P**	**09 22 07.5**	**+0.5**
	comp=Z,14nm,0.9s						
LPAZ	**La Paz**	**23.52**	**168**	*e*P	**P**	**09 22 46.2**	**+0.9**
	comp=Z,0.9nm,0.8s						
Z50A	**Ashland**	**28.83**	**337**	*e*P	**P**	**09 23 33.5**	**+1.3**
	comp=Z,3.8nm,0.5s						
147A	**Livingston**	**29.30**	**333**	*e*sP	sP	09 24 22.3	-3.6
Y49A	**Blount Mountai**	**29.55**	**337**	*e*P	**P**	**09 23 39.5**	**+1.0**
	comp=Z,2.2nm,0.7s						
V48A	**Smith Brothers**	**31.37**	**338**	*e*P	**P**	**09 23 55.4**	**+0.9**
	comp=Z,6.9nm,0.8s						
WVT	**Waverly**	**32.10**	**337**	*e*P	**P**	**09 24 01.6**	**+0.8**
	comp=Z,6.0nm,1.0s						
WHAR	**Wooly Hollow**	**33.33**	**331**	*e*P	**P**	**09 24 11.5**	**-0.1**
	comp=Z,2.7nm,0.6s						
BRNJ	**Basking Ridge**	**33.70**	**358**	*e*P	**P**	**09 24 14.5**	**-0.3**
	comp=Z,6.0nm,0.8s						
PBMO	**Poplar Bluff**	**33.71**	**335**	*e*P	**P**	**09 24 15.6**	**+0.7**
	comp=Z,5.5nm,0.7s						
CCM	**Cathedral Cave**	**35.14**	**335**	*e*P	**P**	**09 24 27.5**	**+0.3**
	comp=Z,8.0nm,0.6s						
SFIN	**Lafayette**	**35.65**	**342**	*e*P	**P**	**09 24 31.8**	**+0.4**
	comp=Z,13nm,0.5s						
TX31	**Lajitas Ar. Si**	**36.43**	**312**	*e*P	**P**	**09 24 38.5**	**+0.1**
	comp=Z,1.6nm,1.1s						
TXAR	**Lajitas Array**	**36.43**	**312**	P	**P**	**09 24 38.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=129,slow=9.2,SNR=14						
TXAR				PcP	**PcP**	**09 26 59.8**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=131,slow=4.9,SNR=3.1						
JFWS	**Jewell Farm**	**38.96**	**340**	*e*P	**P**	**09 24 58.1**	**-1.2**
	comp=Z,11nm,0.6s						
LMN	**Caledonia Moun**	**39.51**	**9**	*e*P	**P**	**09 25 03.3**	**-0.5**
	comp=Z,9.9nm,1.0s						
E46A	**Sault Ste Mari**	**40.53**	**348**	*e*P	**P**	**09 25 12.4**	**+0.2**
	comp=Z,6.1nm,1.0s						
ECSD	**EROS Data Cent**	**42.11**	**334**	*e*P	**P**	**09 25 24.9**	**-0.4**
	comp=Z,1.6nm,0.6s						
SDCO	**Great Sand Dun**	**42.52**	**321**	*e*P	**P**	**09 25 29.7**	**+0.8**
	comp=Z,1.2nm,0.8s						
C40A	**Isle Royale Na**	**43.13**	**344**	*e*P	**P**	**09 25 33.3**	**-0.1**
	comp=Z,5.5nm,0.8s						
EYMN	**Ely**	**43.83**	**342**	*e*P	**P**	**09 25 38.8**	**-0.3**
	comp=Z,5.3nm,0.6s						
ULM	**Lac du Bonnet**	**47.25**	**340**	P	**P**	**09 26 04.8**	**-1.0**
	comp=Z,3.2nm,0.4s,baz=135,slow=8.1,SNR=6.0						
PDAR	**Pinedale Array**	**48.05**	**324**	P	**P**	**09 26 11.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=127,slow=7.8,SNR=6.9						
DGMT	**Dagmar**	**49.12**	**333**	*e*P	**P**	**09 26 20.9**	**+0.7**
	comp=Z,11nm,0.6s						
REDW	**Red Top Meadow**	**49.16**	**324**	*e*P	**P**	**09 26 21.2**	**+0.3**
	comp=Z,2.2nm,0.5s						
SNOW	**Snow King Moun**	**49.16**	**324**	*e*P	**P**	**09 26 21.6**	**+0.6**
	comp=Z,3.4nm,1.1s						
LOHW	**Long Hollow**	**49.17**	**324**	*e*P	**P**	**09 26 21.3**	**+0.4**
	comp=Z,1.4nm,0.6s						
TPAW	**Teton Pass**	**49.30**	**324**	*e*P	**P**	**09 26 21.4**	**-0.6**
	comp=Z,3.2nm,1.1s						
NVAR	**Mina Array Bea**	**51.45**	**315**	P	**P**	**09 26 38.3**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=109,slow=7.6,SNR=3.6						
YKA	**Yellowknife Ar**	**63.23**	**340**	P	**P**	**09 27 59.2**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=133,slow=6.5,SNR=17						
BCPM	**Bancas Point**	**72.44**	**331**	*e*pP	pP	09 29 36.9	+2.1
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPdf**	**09 37 17.7**	**+2.6**
	comp=Z,0.4nm,0.5s,baz=111,slow=3.6,SNR=6.7						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**09 37 20.7**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=105,slow=2.7,SNR=14						

MEX 29 09:19:22.7±0.8**, 18°.57N**×**103°.39W, h16**^{km}±19^{km}**, MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.28**	**171**	*e*P	Pg	09 19 28.3	-0.4
MMIG				*e*S	Sg	09 19 31.1	-1.7
EZ5V		**0.93**	**348**	*i* P	Pb	09 19 38.0	-2.7
EZ5V				*e*S	Sb	09 19 49.3	-3.6

*NIED **29** 09:19:00, 38°.80N×141°.60E, h68^{km}, Mw3.9 Best double couple: $M_0$7.49000×10^{14} NP1:ϕ_s315.00000°, δ26.00000°, λ30.00000°. NP2:ϕ_s197.00000°, δ77.00000°, λ112.00000°.*

*ISCJB **29** 09:19:57.2±0.5, 38°.73N±0°.03×141°.67E±0°.06, h71^{km}±3^{km}, mb3.8/12, Error ellipse: s-maj=8.7km s-min=5.3km az=17.7*

*JMA **29** 09:19:58.1, 38°.76N×141°.61E, h68^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s198.00000°, δ79.00000°, λ85.00000°. NP2:ϕ_s43.00000°, δ12.00000°, λ115.00000°. Principal axes: T Plg56.0000°, Azm101.0000°; N Plg5.0000°, Azm199.0000°; P Plg34.0000°, Azm292.0000°;*

JMA Felt II J1.

*IDC **29** 09:20:00.3±2.3, 38°.65N×141°.56E, h88^{km}±21^{km}, mb3.7/12, mb1 3.9/16, mb1mx3.7/41, mbtmp4.0/16, MS3.4/2, Ms1 3.4/2, ms1mx2.7/34 Error ellipse: s-maj=18.9km s-min=15.2km az=67.0*

ISC 29 09:19:58.2±0.8**, 38°.72N**±0°.04×**141°.71E**±0°.06**, h67**^{km}±5^{km}**, n40, σ1^{s}.07**/45**, mb3.9**/12**, 12C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.20**	**298**	⇑P	**Pn**	**09 20 08.2**	**-0.2**
JKMT				S	**Sn**	**09 20 15.4**	**-0.5**
OFUJ	**Ofunato**	**0.36**	**356**	⇑P	**Pn**	**09 20 09.2**	**-0.3**
OFUJ				S	**Sn**	**09 20 17.2**	**-0.6**
JIO	**Ouri**	**0.38**	**227**	⇑P	**Pn**	**09 20 09.6**	**0.0**
JIO				S	**Sn**	**09 20 17.8**	**-0.2**
JMK	**Ichinoseki**	**0.45**	**302**	⇑P	**Pn**	**09 20 09.5**	**-0.7**
JMK				S	**Sn**	**09 20 17.8**	**-1.2**
JOM	**Ohasama**	**0.82**	**337**	⇑P	**Pn**	**09 20 13.6**	**-0.7**
JOM				S	**Sn**	**09 20 25.1**	**-1.1**
JOU	**Okura**	**0.89**	**247**	⇑P	**Pn**	**09 20 14.7**	**-0.4**
JOU				*e*S	**Sn**	**09 20 27.0**	**-0.7**
JYK	**Kaneyama**	**1.07**	**281**	⇑P	**Pn**	**09 20 16.6**	**-0.8**
JYK				S	**Sn**	**09 20 30.7**	**-1.0**
JRG	**Rokugo**	**1.08**	**310**	⇑P	**Pn**	**09 20 16.6**	**-0.9**
JRG				S	**Sn**	**09 20 30.5**	**-1.3**
JMM	**Marumori**	**1.11**	**221**	⇑P	**Pn**	**09 20 17.4**	**-0.5**
JMM				S	**Sn**	**09 20 31.6**	**-1.0**
JYS	**Shirataka**	**1.38**	**250**	⇑P	**Pn**	**09 20 21.2**	**-0.2**
JYS				*e*S	**Sn**	**09 20 38.2**	**-0.7**
JFK	**Kawauchi**	**1.50**	**206**	⇑P	**Pn**	**09 20 23.2**	**+0.2**
JFK				S	**Sn**	**09 20 41.7**	**-0.1**
JYA	**Atsumi**	**1.56**	**266**	P	**Pn**	**09 20 23.3**	**-0.6**
JYA				S	**Sn**	**09 20 42.5**	**-0.8**
JFT	**Otama**	**1.61**	**222**	P	**Pn**	**09 20 25.0**	**+0.5**
JANG	**Nango**	**1.66**	**355**	P	**Pn**	**09 20 24.4**	**-0.8**
JAH	**Hinai**	**1.69**	**331**	⇑P	**Pn**	**09 20 25.4**	**-0.1**
MJAR	**Matsushiro Arr**	**3.52**	**233**	P	**Pn**	**09 20 52.3**	**+1.8**
	2.4nm,0.3s,baz=37,slow=11,SNR=92						
MJAR				S	Sn	09 21 43.7	+13
	0.6nm,0.3s,baz=95,slow=28,SNR=5.3						
JHJ	**Hachijo jima 2**	**5.80**	**196**	P	**Pn**	**09 21 20.7**	**-0.8**
	18nm,0.3s,baz=314,slow=23,SNR=19						
JHJ				S	**Sn**	**09 22 23.3**	**-3.4**
	24nm,0.3s,baz=252,slow=19,SNR=3.4						
USRK	**Ussuriysk Ar.**	**9.12**	**310**	P	**Pn**	**09 22 07.3**	**+0.4**
	1.2nm,0.3s,baz=124,slow=14,SNR=30						
JNU	**Nakatsue**	**10.40**	**241**	LR	LR	09 25 56.3	
	comp=Z,98nm,18.1s,baz=170,slow=35						
KSRS	**Korea Array**	**10.94**	**268**	P	**Pn**	**09 22 34.6**	**+2.8**
	0.5nm,0.3s,baz=83,slow=14,SNR=20						
SONM	**Songino Array**	**27.07**	**301**	P	**P**	**09 25 35.1**	**+0.7**
	0.7nm,0.4s,baz=102,slow=9.6,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**28.85**	**124**	T	T	09 56 23.3	
	baz=317,slow=75,SNR=1778						
H11N1	**WAKE ISLAND Hy**	**28.86**	**124**	T	T	09 56 24.0	
	baz=317,slow=75,SNR=3279						
H11N3	**WAKE ISLAND Hy**	**28.87**	**124**	T	T	09 56 24.6	
	baz=317,slow=75,SNR=2523						
H11S1	**WAKE ISLAND Hy**	**29.62**	**126**	T	T	09 57 12.9	
	baz=318,slow=76,SNR=488						
H11S3	**WAKE ISLAND Hy**	**29.62**	**126**	T	T	09 57 13.0	
	baz=318,slow=76,SNR=470						
H11S2	**WAKE ISLAND Hy**	**29.63**	**126**	T	T	09 57 14.1	
	baz=318,slow=76,SNR=355						
ZALV	**Zalesovo Beam**	**40.97**	**311**	P	**P**	**09 27 32.8**	**-1.2**
	4.2nm,0.6s,baz=86,slow=7.3,SNR=13						
MKAR	**Makanchi Array**	**43.44**	**301**	P	**P**	**09 27 53.1**	**-1.2**
	4.1nm,0.8s,baz=85,slow=10,SNR=27						
ILAR	**Eielson Array**	**47.96**	**33**	P	**P**	**09 28 29.9**	**+0.3**
	0.9nm,0.7s,baz=269,slow=6.8,SNR=16						
WRA	**Warramunga Arr**	**58.76**	**188**	P	**P**	**09 29 48.2**	**-1.0**
	1.4nm,0.6s,baz=356,slow=7.1,SNR=9.6						
ASAR	**Alice Springs**	**62.48**	**188**	P	**P**	**09 30 14.0**	**-0.5**
	0.7nm,0.7s,baz=1.9,slow=4.6,SNR=9.9						
DZM	**Mont Dzumac**	**64.76**	**155**	LR	LR	09 56 00.2	
	comp=Z,55nm,18.7s,baz=93,slow=33						
FINES	**FINESS Array B**	**67.44**	**332**	P	**P**	**09 30 47.9**	**+1.6**
	1.4nm,0.9s,baz=32,slow=5.6,SNR=3.6						
AKASG	**Malin Array Be**	**73.11**	**322**	P	**P**	**09 31 20.3**	**-0.8**
	0.4nm,0.3s,baz=42,slow=5.6,SNR=3.5						
NVAR	**Mina Array Bea**	**73.80**	**54**	P	**P**	**09 31 27.1**	**+1.4**
	1.0nm,0.8s,baz=300,slow=5.0,SNR=8.6						
PDAR	**Pinedale Array**	**76.33**	**46**	P	**P**	**09 31 40.5**	**+0.4**
	1.2nm,0.5s,baz=259,slow=1.3,SNR=19						
BRTR	**Keskin Array B**	**77.91**	**311**	P	**P**	**09 31 48.4**	**-0.5**
	0.3nm,0.4s,baz=70,slow=5.0,SNR=3.2						
TXAR	**Lajitas Array**	**88.92**	**53**	P	**P**	**09 32 45.9**	**+0.3**
	0.4nm,0.6s,baz=278,slow=3.3,SNR=8.4						
LPAZ	**La Paz**	**145.62**	**58**	PKPbc	**PKPbc**	**09 39 30.2**	**-0.1**
	1.6nm,0.7s,baz=346,slow=2.8,SNR=8.5						

DJA 29 09:20:28.9±1.0**, 10°S**±8°×**11°2E**±°**, h10**^{km}**, M4.2**/7**, MLv4.2**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**2.35**	**355**	P	Pn	09 21 05.9	-1.7
GMJI	**Gumukmas**	**2.53**	**34**	P	Pn	09 21 10.3	+0.2
GMJI				S	Sn	09 21 41.7	+0.7
WOJI	**Wonogiri, Jawa**	**2.74**	**337**	S	Sn	09 21 46.9	+0.7
JAGI	**Jajag, Banyuwa**	**2.85**	**48**	P	Pn	09 21 13.5	-1.0
JAGI				S	Sn	09 21 46.7	-2.1
UGM	**Wanagama**	**2.85**	**329**	P	Pn	09 21 13.9	-0.6
UGM				S	Sn	09 21 49.8	+0.8
NGJI	**Ngawi**	**3.04**	**350**	P	Pn	09 21 13.9	-3.2
YOGI	**Yogyakarta**	**3.05**	**326**	S	Sn	09 21 55.0	+1.1
DNP	**Denpasar**	**3.59**	**62**	P	Pn	09 21 26.2	+1.5
SRBI	**Singaraja**	**3.91**	**55**	P	Pn	09 21 28.5	-0.5

MAN 29 09:25:22.2, 6°.27N×**124°.78E, h12**^{km}**, mb5.1, ML4.0, MS4.1, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.25**	**137**	*e*P	Pn	09 25 32.6	+0.7
SKMP	**Bagumbayan, Su**	**0.34**	**316**	*e*P	Pb	09 25 29.7	-0.5
SKMP				*e*S	Sb	09 25 34.6	-0.9
KCP	**Kidapawan**	**0.80**	**23**	⇓*i*P	Pn	09 25 42.1	+2.8
KCP				*i* S	Sn	09 25 58.8	+7.6
DDMP	**Don Marcelino,**	**0.94**	**100**	*e*P	Pg	09 25 39.5	-1.0
DDMP				*e*S	Sn	09 25 54.8	+0.1
CTBH	**Cotabato--PC H**	**1.08**	**331**	⇓*i*P	Pg	09 25 42.9	-0.1
CTBH				*i* S	Sg	09 25 57.3	+0.2
BUKP	**Musuan**	**1.62**	**10**	*e*P	Pn	09 25 50.5	-0.1
BUKP				*e*S	Sb	09 26 12.2	-0.4
PAGZ	**Pagadian**	**2.09**	**319**	*e*P	Pn	09 25 57.3	+0.2
PAGZ				*e*S	Sb	09 26 27.1	+1.1

MEX 29 09:27:07.1±0.9**, 16°.13N**×**98°.48W, h5**^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.43**	**357**	*e*P	Pn	09 27 30.4	-3.5
TLIG				*e*S	Sb	09 27 48.9	-4.0
VHO	**Vista Hermosa**	**1.92**	**60**	*e*P	Pn	09 27 36.5	-4.1
VHO				*e*S	Sn	09 28 01.5	-3.7
CMIG	**Matias Romero**	**3.57**	**74**	*i* P	Pn	09 27 59.9	-3.3
CMIG				*e*S	Sn	09 28 42.5	-3.3

*NEIC **29** 09:44:41.0±0.0, 41°.54S×174°.39E, h16^{km}, mb4.5/2, ML4.1(WEL), After WEL.*

WEL 29 09:44:41.1, 41°.5S±0°.9×**17°4E**±°**, h15**^{km}±3^{km}**, M4.0**/22**, ML4.3**/19**, MLv4.0**/22**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.9, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.25**	**212**	P	Pb	09 44 47.0	-0.3
CMWZ				S	Sb	09 44 51.6	0.0
SNZO	**South Karori**	**0.33**	**47**	*e*Pg	Pb	09 44 48.6	0.0
SNZO				*e*Sg	Sb	09 44 54.3	+0.7
TCW	**Tory Channel**	**0.34**	**345**	P	Pb	09 44 48.7	0.0
TCW				S	Sb	09 44 53.6	-0.3
TUWZ	**Tuamarina**	**0.35**	**287**	P	Pb	09 44 48.9	-0.2
TUWZ				S	Sb	09 44 54.3	-0.1
BHW	**Baring Head**	**0.38**	**71**	P	Pb	09 44 49.5	-0.1
BHW				S	Sb	09 44 55.6	+0.3
BSWZ	**Blackbirch Sta**	**0.42**	**245**	P	Pb	09 44 50.0	-0.3
BSWZ				S	Sb	09 44 56.3	-0.3
PLWZ	**Palliser**	**0.65**	**93**	P	Pb	09 44 54.4	+0.2
PLWZ	**Palliser**	**0.65**	**93**	P	Sn	09 45 13.5	+7.7
MSWZ	**Moikau Station**	**0.66**	**80**	P	Pb	09 44 54.5	+0.3
MSWZ	**Moikau Station**	**0.66**	**80**	P	Sn	09 45 13.7	+7.7
CAW	**Cannon Point**	**0.67**	**50**	P	Pb	09 44 54.5	+0.1
CAW	**Cannon Point**	**0.67**	**50**	P	Sn	09 45 13.8	+7.6
PAWZ	**Paruwai Farm**	**0.80**	**79**	P	Pb	09 44 56.9	+0.3
PAWZ	**Paruwai Farm**	**0.80**	**79**	P	Sn	09 45 16.6	+7.2
DUWZ	**D’Urville Isla**	**0.81**	**334**	P	Pb	09 44 57.3	+0.3
NNZ	**Nelson**	**0.82**	**292**	P	Pb	09 44 57.2	+0.1
MTW	**Mount Morrison**	**0.92**	**66**	P	Pn	09 44 59.3	-0.2
MTW	**Mount Morrison**	**0.92**	**66**	P	Sn	09 45 18.6	+6.1
OGWZ	**Otaki Gorge**	**0.93**	**40**	P	Pg	09 44 59.1	0.0
TRWZ	**Traveller**	**0.98**	**82**	P	Pg	09 45 00.1	0.0
TRWZ	**Traveller**	**0.98**	**82**	P	Sn	09 45 18.7	+4.6
HOWZ	**Holdsworth Sta**	**1.06**	**53**	P	Pn	09 45 01.5	+0.1
KHZ	**Kahutara**	**1.08**	**216**	*e*Pn	Pg	09 45 01.9	-0.1
KHZ	**Kahutara**	**1.08**	**216**	P	Pg	09 45 01.9	-0.1
KHZ	**Kahutara**	**1.08**	**216**	P	Sn	09 45 20.9	+4.4
THZ	**Tophouse**	**1.14**	**258**	*e*Pn	Pn	09 45 02.6	+0.1
THZ				*e*Sn	Sb	09 45 16.8	-0.3
THZ	**Tophouse**	**1.14**	**258**	P	Pn	09 45 02.5	0.0
TMWZ	**Te Maipa**	**1.21**	**70**	P	Pn	09 45 03.3	-0.2
MRZ	**Mangatainoka R**	**1.25**	**46**	P	Pb	09 45 04.7	+0.3
TIWZ	**Tintock**	**1.36**	**57**	P	Pn	09 45 05.7	+0.2
CPWZ	**Castlepoint**	**1.50**	**66**	P	Pb	09 45 08.2	-0.5
OHWZ	**Ohakea**	**1.50**	**28**	P	Pg	09 45 09.7	-0.2
PRWZ	**Pori Road**	**1.55**	**51**	P	Pn	09 45 08.5	+0.4
POWZ	**Post Office Ro**	**1.55**	**43**	P	Pb	09 45 09.0	-0.4
QRZ	**Quartz Range**	**1.57**	**296**	*e*Pn	Pb	09 45 10.4	+0.5
QRZ				*e*Sn	Sb	09 45 29.3	-0.3
QRZ	**Quartz Range**	**1.57**	**296**	P	Pb	09 45 10.1	+0.3
BFZ	**Birch Farm**	**1.64**	**59**	*e*Pn	Pn	09 45 09.2	-0.3
BFZ	**Birch Farm**	**1.64**	**59**	P	Pn	09 45 08.9	-0.5
DVHZ	**Dannevirke**	**1.83**	**48**	P	Pn	09 45 11.9	-0.1
WAZ	**Wanganui**	**1.84**	**14**	P	Pg	09 45 15.4	-0.9
TSZ	**Takapari Road**	**1.90**	**39**	P	Pn	09 45 13.8	+0.8
ANWZ	**Angora Road**	**1.91**	**56**	P	Pn	09 45 13.0	-0.1
DSZ	**Denniston Nort**	**1.95**	**263**	P	Pb	09 45 15.5	-0.8
LTZ	**Lake Taylor**	**2.01**	**231**	*e*Pn	Pn	09 45 14.7	+0.2
LTZ	**Lake Taylor**	**2.01**	**231**	P	Pn	09 45 14.7	+0.2
LREZ	**Lake Rotokare**	**2.07**	**0**	P	Pg	09 45 19.8	-1.0
AMCZ	**Amberley**	**2.08**	**218**	P	Pn	09 45 14.9	-0.6
PRHZ	**Porangahau**	**2.12**	**54**	P	Pn	09 45 15.3	-0.7
PNHZ	**Pukenui**	**2.13**	**41**	P	Pn	09 45 16.5	+0.4
WPHZ	**Waipukurau**	**2.14**	**47**	P	Pn	09 45 16.7	+0.4
NMEZ	**Namu Road**	**2.16**	**349**	P	Pb	09 45 20.8	+1.1
PREZ	**Palmer Road**	**2.20**	**355**	P	Pb	09 45 21.6	+1.0
KHEZ	**Kahui Hut**	**2.26**	**353**	P	Pb	09 45 21.9	+0.3
NBEZ	**Newall Road No**	**2.30**	**350**	P	Pb	09 45 22.7	+0.4
MTVZ	**Mangateitei**	**2.30**	**21**	P	Pb	09 45 21.6	-0.7
DREZ	**Durham Road**	**2.35**	**356**	P	Pb	09 45 22.6	-0.5
PKE	**Pukeiti**	**2.36**	**352**	P	Pb	09 45 22.7	-0.6
PKVZ	**Pokaka**	**2.36**	**18**	P	Pb	09 45 22.5	-0.9
MOVZ	**Moawhango**	**2.37**	**26**	P	Pn	09 45 21.4	+1.9
OKCZ	**Okains Bay**	**2.40**	**204**	P	Pn	09 45 18.5	-1.3
PXZ	**Pawanui**	**2.41**	**52**	P	Pn	09 45 19.1	-0.8
BHHZ	**Black Hill Sta**	**2.41**	**33**	P	Pn	09 45 21.3	+1.3
KRHZ	**Kereru**	**2.42**	**39**	P	Pn	09 45 20.3	+0.2
CRLZ	**Canterbury Las**	**2.42**	**212**	*e*Pn	Pn	09 45 18.4	-1.6
CRLZ	**Canterbury Las**	**2.42**	**212**	P	Pn	09 45 18.3	-1.8
VRZ	**Vera Road**	**2.42**	**7**	P	Pb	09 45 23.9	-0.5
DRZ	**Dome Shelter**	**2.43**	**22**	P	Pb	09 45 26.1	+1.4
FWVZ	**Far West T-bar**	**2.44**	**22**	P	Pb	09 45 23.4	-1.5
TUVZ	**Tukino**	**2.46**	**23**	P	Pb	09 45 23.2	-1.9
INZ	**Inchbonnie**	**2.49**	**241**	P	Pn	09 45 21.6	+0.5
OXZ	**Oxford**	**2.50**	**223**	*e*Pn	Pn	09 45 19.9	-1.2
OXZ	**Oxford**	**2.50**	**223**	P	Pn	09 45 20.0	-1.2
MQZ	**McQueen’s Vall**	**2.52**	**210**	*e*Pn	Pn	09 45 19.6	-1.9
MQZ	**McQueen’s Vall**	**2.52**	**210**	P	Pn	09 45 19.6	-1.9
NGZ	**Ngauruhoe**	**2.53**	**22**	P	Pb	09 45 24.5	-1.9
KAHZ	**Kahuranaki**	**2.57**	**48**	P	Pn	09 45 21.6	-0.6
WTVZ	**West Tongariro**	**2.59**	**21**	P	Pb	09 45 25.6	-1.6
TWVZ	**Taurewa**	**2.59**	**18**	P	Pb	09 45 26.1	-1.1
KWHZ	**Kaweka Forest**	**2.62**	**37**	P	Pn	09 45 23.5	+0.6
KRVZ	**Karewarewa**	**2.62**	**22**	P	Pb	09 45 26.1	-1.7
MCHZ	**McNeill Hill**	**2.73**	**41**	P	Pn	09 45 25.0	+0.6
KATZ	**Kakaramea**	**2.75**	**22**	P	Pb	09 45 31.3	+1.3
RITZ	**Rihia Road**	**2.79**	**24**	P	Pb	09 45 31.0	+0.3
BKZ	**Black Stump Fm**	**2.86**	**35**	*e*Pn	Pn	09 45 27.6	+1.4
BKZ	**Black Stump Fm**	**2.86**	**35**	P	Pn	09 45 26.9	+0.6
RATZ	**Rangitukua**	**2.87**	**22**	P	Pb	09 45 32.8	+0.8
HATZ	**Hinemaiaia**	**2.95**	**27**	P	Pb	09 45 35.0	+1.7
WATZ	**Wairara**	**3.01**	**20**	P	Pb	09 45 34.9	+0.6
ARHZ	**Aropaoanui**	**3.02**	**42**	P	Pn	09 45 29.5	+1.1
HIZ	**Hauiti**	**3.04**	**7**	*e*Pn	Pb	09 45 32.5	-2.4
HIZ	**Hauiti**	**3.04**	**7**	P	Pb	09 45 32.3	-2.6
MRHZ	**Matea Rd**	**3.11**	**31**	P	Pn	09 45 30.2	+0.5
WVZ	**Waitaha Valley**	**3.12**	**239**	P	Pn	09 45 30.1	+0.5
KUTZ	**Kaahu Road**	**3.24**	**20**	P	Pb	09 45 40.0	+1.8
MTHZ	**Maungataniwha**	**3.27**	**36**	P	Pn	09 45 33.0	+1.1
WHHZ	**Waihua**	**3.28**	**42**	P	Pb	09 45 37.6	-1.4
RPZ	**Rata Peaks**	**3.29**	**227**	*e*Pn	Pn	09 45 31.4	-0.7
RPZ	**Rata Peaks**	**3.29**	**227**	P	Pn	09 45 31.4	-0.7
TLZ	**Tolley Road**	**3.32**	**16**	P	Pb	09 45 36.2	-3.5
ALRZ	**Allen Road**	**3.33**	**27**	P	Pb	09 45 38.0	-1.7
RAHZ	**Arahi**	**3.33**	**39**	P	Pn	09 45 34.0	+1.3
PRRZ	**Plateau Road**	**3.40**	**28**	P	Pb	09 45 38.9	-2.1

RTZ	**Ruatahuna**	**3.53**	**35**	P	Pn	09 45 37.2	+1.7
SNGZ	**Shannon Statio**	**3.56**	**40**	P	Pn	09 45 35.6	-0.3
TARZ	**Mount Tarawera**	**3.68**	**27**	P	Pb	09 45 42.7	-3.1
PRGZ	**Paritu Road**	**3.74**	**47**	P	Pn	09 45 42.2	+4.0
RAGZ	**Rawiri**	**3.82**	**38**	P	Pn	09 45 38.8	-0.7
RIGZ	**Rimuhau**	**3.83**	**44**	P	Pn	09 45 38.9	-0.6
KMRZ	**Kaimai**	**3.88**	**18**	P	Pb	09 45 47.4	-1.7
URZ	**Urewera**	**3.88**	**33**	*e*Pn	Pn	09 45 39.8	-0.4
URZ	**Urewera**	**3.88**	**33**	P	Pn	09 45 40.5	+0.3
TOZ	**Tahuroa Road**	**3.90**	**13**	P	Pn	09 45 44.5	+4.1
FOZ	**Fox Glacier**	**3.92**	**238**	*e*Pn	Pn	09 45 42.0	+1.3
FOZ	**Fox Glacier**	**3.92**	**238**	P	Pn	09 45 41.8	+1.1
MARZ	**Manawahe**	**3.96**	**27**	P	Pb	09 45 47.6	-3.0
MWZ	**Matawai**	**4.00**	**38**	P	Pn	09 45 40.7	-1.3
TGRZ	**Tauranga**	**4.07**	**21**	P	Pb	09 45 50.3	-2.1
TKGZ	**Te Karaka**	**4.08**	**42**	P	Pn	09 45 41.9	-1.0
LBZ	**Lake Benmore**	**4.20**	**226**	*e*Pn	Pn	09 45 45.0	+0.4
LBZ	**Lake Benmore**	**4.20**	**226**	P	Pn	09 45 44.6	0.0
TWGZ	**Tauwhareparae**	**4.35**	**41**	P	Pn	09 45 46.3	-0.3
RUGZ	**Raukumara Rang**	**4.37**	**36**	P	Pn	09 45 46.8	-0.3
ODZ	**Otahua Downs**	**4.45**	**217**	*e*Pn	Pn	09 45 46.2	-1.8
ODZ	**Otahua Downs**	**4.45**	**217**	P	Pn	09 45 46.3	-1.6
KBAZ	**Karaka Road Bo**	**4.45**	**5**	P	Pb	09 45 56.4	-2.6
MKAZ	**Moumakai**	**4.47**	**8**	P	Pn	09 45 52.6	+4.4
AWAZ	**Awhitu Peninsu**	**4.47**	**3**	P	Pn	09 45 52.2	+3.9
HAZ	**Te Kaha**	**4.59**	**36**	P	Pn	09 45 50.2	+0.2
ETAZ	**East Tamaki Re**	**4.59**	**5**	P	Pn	09 45 55.2	+5.2
WTAZ	**Waiatarua**	**4.60**	**2**	P	Pb	09 45 58.6	-2.8
WIAZ	**Waiheke Island**	**4.77**	**7**	P	Pn	09 45 57.4	+5.0
MBAZ	**Motutapu North**	**4.78**	**5**	P	Pb	09 46 00.2	-4.3
WMGZ	**Waiomatatini S**	**4.84**	**41**	P	Pn	09 45 52.7	-0.7
JCZ	**Jackson Bay**	**4.84**	**237**	P	Pn	09 45 54.2	+0.8
KUZ	**Kuaotunu**	**4.89**	**13**	P	Pb	09 46 01.1	-5.4
ABAZ	**Army Bay**	**4.94**	**4**	P	Pb	09 46 03.0	-4.3
WKZ	**Wanaka**	**5.12**	**228**	*e*Pn	Pn	09 45 56.5	-0.8
WKZ	**Wanaka**	**5.12**	**228**	P	Pn	09 45 58.5	+1.2
HHSZ	**Highcliff Hill**	**5.14**	**211**	P	Pn	09 45 56.8	-0.8
EAZ	**Earnscleugh**	**5.23**	**223**	P	Pn	09 45 58.4	-0.4
WCZ	**Waipu Caves**	**5.59**	**360**	P	Pb	09 46 11.2	-7.1
TUZ	**Tuapeka**	**5.60**	**216**	P	Pn	09 46 03.9	+0.1
MLZ	**Mavora Lakes**	**5.96**	**228**	*e*Pn	Pn	09 46 07.3	-1.5
SYZ	**Scrubby Hill**	**6.27**	**215**	P	Pn	09 46 12.7	-0.2
OUZ	**Omahuta**	**6.34**	**354**	*e*Pn	Pn	09 46 14.3	+0.4
OUZ	**Omahuta**	**6.34**	**354**	P	Pn	09 46 21.5	+7.6
WHZ	**Wether Hill Ro**	**6.38**	**225**	*e*Pn	Pn	09 46 12.4	-2.1
WHZ	**Wether Hill Ro**	**6.38**	**225**	P	Pn	09 46 14.6	0.0
DCZ	**Deep Cove**	**6.56**	**231**	*e*Pn	Pn	09 46 15.6	-1.4
CTZ	**Chatham Island**	**6.99**	**111**	P	Pn	09 46 22.7	-0.1
WB2	**Warramunga Arr**	**40.12**	**290**	*e*P	P	09 52 16.0	-0.3
	11nm,1.3s						
WRAB	**Tennant Creek**	**40.13**	**290**	*e*P	P	09 52 13.8	-2.6
	22nm,1.8s						

WEL 29 09:45:00.3,42°S±1°×17°4E±°,h15km±4km,M3.9/12, ML4.3/9,MLv3.9/12,Error ellipse: s-maj=0.0km s-min=0.0km az=121.8,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.25**	**211**	S	Sb	09 45 10.9	-0.1
TCW	**Tory Channel**	**0.33**	**345**	P	Pb	09 45 07.9	-0.1
TCW				S	Sb	09 45 13.3	+0.1
TUWZ	**Tuamarina**	**0.35**	**287**	P	Pb	09 45 08.1	-0.3
TUWZ				S	Sb	09 45 13.6	-0.1
BHW	**Baring Head**	**0.38**	**71**	P	Pb	09 45 08.8	0.0
BHW				S	Sb	09 45 14.9	+0.4
BSWZ	**Blackbirch Sta**	**0.43**	**244**	P	Pb	09 45 09.3	-0.3
BSWZ				S	Sb	09 45 15.9	0.0

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*IDC **29** 09:44:58.5±1.9, 10°.43S×161°.79E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/20, mbtmp3.9/6, ML4.8/1, Error ellipse: s-maj=47.6km s-min=28.0km az=132.0*

*ISCJB **29** 09:45:04.5±1.1, 10°.4S±0°.1×161°.6E±0°.1, h54km, mb3.7/5, Error ellipse: s-maj=22.6km s-min=14.3km az=31.3*

ISC 29 09:45:06.6±1.4,10°.4S±0°.2×161°.6E±0°.1,h54km,n13, σ0^{s}.71/9,mb3.6/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.84**	**300**	Pn	**Pn**	**09 45 34.9**	**-0.8**
	302nm,0.3s,baz=176,slow=14,SNR=36						
HNR				Sn	**Sn**	**09 45 57.8**	**-0.1**
	159nm,0.3s,baz=136,slow=12,SNR=4.7						
HNR	**Honiara**	**1.84**	**300**	*i* P	**Pn**	**09 45 35.0**	**-0.8**
HNR				*i* S	**Sn**	**09 45 59.0**	**+1.0**
WRA	**Warramunga Arr**	**27.91**	**247**	P	**P**	**09 50 52.0**	**+0.1**
	1.3nm,0.8s,baz=76,slow=8.7,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**29.12**	**10**	T	T	10 21 58.2	
	baz=188,slow=76,SNR=9.4						
H11S3	**WAKE ISLAND Hy**	**29.12**	**10**	T	T	10 22 09.0	
	baz=188,slow=76,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**29.13**	**10**	T	T	10 22 06.8	
	baz=188,slow=76,SNR=9.3						
ASAR	**Alice Springs**	**29.50**	**240**	P	**P**	**09 51 06.1**	**+0.1**
	0.3nm,0.5s,baz=64,slow=9.9,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**30.34**	**10**	T	T	10 23 27.6	
	baz=188,slow=76,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**30.35**	**10**	T	T	10 23 28.5	
	baz=188,slow=76,SNR=9.0						
H11N2	**WAKE ISLAND Hy**	**30.36**	**10**	T	T	10 23 27.2	
	baz=188,slow=76,SNR=6.4						
USRK	**Ussuriysk Ar.**	**60.57**	**336**	P	**P**	**09 55 12.1**	**+0.6**
	1.3nm,0.8s,baz=148,slow=6.3,SNR=5.2						
SONM	**Songino Array**	**75.72**	**325**	P	**P**	**09 56 46.9**	**+0.3**
	0.6nm,0.6s,baz=127,slow=5.2,SNR=3.5						
ILAR	**Eielson Array**	**84.22**	**20**	P	**P**	**09 57 31.6**	**-0.4**
	0.3nm,0.6s,baz=240,slow=5.0,SNR=7.4						

MEX 29 10:10:44.5±0.3,18°.19N×103°.52W,h5km,MD3.5,Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.19**	**61**	*e*P	Pg	10 10 47.9	-0.4
MMIG				*e*S	Sg	10 10 50.9	+0.1
EZ5V		**1.28**	**357**	*i* P	Pg	10 11 05.8	-3.3
EZ5V				*e*S	Sg	10 11 21.7	-4.1
ARIG	**Puente Sto Nin**	**3.02**	**88**	*i* P	Pn	10 11 30.4	-2.6
ARIG				*i* S	Sn	10 12 05.8	-3.8

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*NIED **29** 10:23:00, 45°.80N×143°.10E, h360km, Mw4.4 Best double couple: M$_0$3.90000×10^{15} NP1:φ$_s$57.00000°, δ19.00000°, λ152.00000°. NP2:φ$_s$174.00000°, δ81.00000°, λ73.00000°.*

*ISCJB **29** 10:23:34.9±0.1, 45°.96N±0°.03×143°.02E±0°.03, h338km±1km, mb4.2/102, Error ellipse: s-maj=4.1km s-min=3.0km az=167.3*

*MOS **29** 10:23:34.2±1.0, 46°.02N×143°.00E, h330km, mb4.2/45, Error ellipse: s-maj=7.7km s-min=5.6km az=96.1*

*JMA **29** 10:23:35.0±0.2, 45°.84N×143°.09E, h346km±2km, M4.6*

*NEIC **29** 10:23:35.8±1.4, 45°.91N×143°.04E, h339km±5km, mb4.3/181, Error ellipse: s-maj=12.2km s-min=10.1km az=91.0*

*IDC **29** 10:23:36.7±1.3, 46°.14N×142°.94E, h337km±12km, mb3.9/29, mb1 4.0/36, mb1mx3.9/44, mbtmp4.6/36, Error ellipse: s-maj=12.5km s-min=7.3km az=159.0*

*SKHL **29** 10:23:36.0±0.6, 45°.82N×143°.05E, h337km±34km, mb4.2/1, msh4.4/4*

ISC 29 10:23:35.4±0.4,45°.88N±0°.04×143°.13E±0°.03,h337km±4km, n469,σ1^{s}.31/522,mb4.3/102,24C-14D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	**Soyaes**	**1.00**	**203**	⇑P	**Pn**	**10 24 20.1**	**+0.3**
JSE				*e*S	**S**	**10 24 54.8**	**-0.5**
JWK2	**Keihoku**	**1.03**	**237**	⇑P	**Pn**	**10 24 20.6**	**+0.7**
JWK2				*e*S	**S**	**10 24 56.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**1.10**	**347**	*e*Pn	**Pn**	**10 24 20.6**	**+0.5**
YSS	**Yuzh-Sakhalins**	**1.10**	**347**	⇑*i*PN	**Pn**	**10 24 20.7**	**+0.5**
YSS				*e*S	**S**	**10 24 54.9**	**-1.0**
YSS				pmax	pmax		
	comp=Z,570nm,0.4s						
YSS				smax	smax		
	comp=N,610nm,0.7s						
YSS	**Yuzh-Sakhalins**	**1.10**	**347**	⇑*i*P	**Pn**	**10 24 20.6**	**+0.5**
YSS				AMB	AMB	10 24 20.9	
	comp=N,530nm,0.4s						
YSS				*e*S	**S**	**10 24 54.6**	**-1.3**
YSS				A	A	10 24 56.2	
	comp=N,580nm,0.8s						
YSS				A	A	10 24 56.2	
	comp=N,570nm,0.8s						
JRR	**Rishiri**	**1.48**	**240**	⇑P	**Pn**	**10 24 22.5**	**+0.4**
JRR				*e*S	**S**	**10 25 00.1**	**+0.6**
JRBN	**Rebuntou**	**1.52**	**253**	⇑P	**Pn**	**10 24 22.2**	**-0.1**
JRBN				*e*S	**S**	**10 24 58.1**	**-1.8**
JSS	**Shosan**	**1.73**	**212**	⇑P	**Pn**	**10 24 24.3**	**+0.5**
ASAJ	**Asahikawa**	**1.81**	**192**	⇑P	**Pn**	**10 24 24.8**	**+0.5**
ASAJ				*e*S	**S**	**10 25 04.2**	**+0.8**
JYG	**Yagishiri**	**1.89**	**220**	⇑P	**Pn**	**10 24 25.0**	**+0.2**
JYG				*e*S	**S**	**10 25 04.3**	**0.0**
JTKR	**Abashiri--Toko**	**1.99**	**164**	⇓P	**Pn**	**10 24 26.1**	**+0.6**
JTKR				*e*S	**S**	**10 25 06.0**	**+0.4**
JKK2	**Kamakawa 2**	**2.03**	**188**	⇑P	**Pn**	**10 24 26.4**	**+0.6**
JKK2				*e*S	**S**	**10 25 06.6**	**+0.4**
JHR	**Hokuryu**	**2.36**	**206**	⇑P	**Pn**	**10 24 28.8**	**+0.4**
JRA	**Rausu**	**2.41**	**143**	⇓P	**Pn**	**10 24 29.5**	**+0.8**
JRA				*e*S	**S**	**10 25 12.8**	**+1.4**
JAR	**Ashorobuto**	**2.62**	**170**	⇓P	**Pn**	**10 24 31.1**	**+0.5**
JAR				*e*S	**S**	**10 25 14.2**	**-0.6**
LAGR	**Lagunnoye**	**2.63**	**133**	⇓*i*PN	**Pn**	**10 24 31.0**	**+0.5**
LAGR				*i* S	**S**	**10 25 16.0**	**+1.3**
LAGR				smax	smax		
	comp=N,588nm,0.4s						
LAGR				smax	smax		
	comp=E,220nm,0.2s						
LAGR	**Lagunnoye**	**2.63**	**133**	*e*P	**Pn**	**10 24 31.0**	**+0.5**
LAGR				*e*S	**S**	**10 25 16.0**	**+1.3**
LAGR				A	A	10 25 21.2	
	comp=E,590nm,0.4s						
LAGR				A	A	10 25 21.2	
	comp=E,220nm,0.4s						
GRPR	**Tuman**	**2.66**	**134**	⇑*i*PN	**Pn**	**10 24 31.6**	**+0.7**
GRPR				*i* S	**S**	**10 25 17.8**	**+2.5**
GRPR				pmax	pmax		
	comp=Z,428nm,0.5s						
GRPR				pmax	pmax		
	comp=N,169nm,0.4s						
GRPR				pmax	pmax		
	comp=E,241nm,0.6s						
GRPR				smax	smax		
	comp=N,308nm,0.6s						
GRPR				smax	smax		
	comp=E,267nm,0.5s						
GRPR	**Tuman**	**2.66**	**134**	*i* P	**Pn**	**10 24 31.6**	**+0.7**
GRPR				AMB	AMB	10 24 34.2	
	comp=E,430nm,0.5s						
GRPR				*e*S	**S**	**10 25 17.8**	**+2.5**
GRPR				A	A	10 25 20.3	
	comp=E,310nm,0.6s						
GRPR				A	A	10 25 20.3	
	comp=E,270nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.68**	**133**	⇓*i*PN	**Pn**	**10 24 31.3**	**+0.3**
YUK				*i* S	**S**	**10 25 16.1**	**+0.6**
YUK				pmax	pmax		
	comp=N,57nm,0.2s						
YUK				pmax	pmax		
	comp=E,148nm,0.2s						
YUK				pmax	pmax		
	comp=Z,363nm,0.2s						
YUK				smax	smax		
	comp=E,425nm,0.6s						
YUK				smax	smax		
	comp=N,447nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.68**	**133**	*e*P	Pn	10 24 35.9	+4.9
YUK				AMB	AMB	10 24 36.5	
	comp=N,400nm,0.3s						
YUK				*i* S	**S**	**10 25 21.2**	**+5.7**
YUK				A	A	10 25 24.3	
	comp=N,970nm,0.8s						
YUK				A	A	10 25 24.3	
	comp=N,1μm,0.8s						
JFR	**Furan**	**2.75**	**188**	⇑P	**Pn**	**10 24 31.8**	**+0.2**
JFR				*e*S	**S**	**10 25 16.3**	**-0.4**
JAK	**Akkeshi**	**3.10**	**158**	P	**Pn**	**10 24 33.7**	**-1.1**
JAK				*e*S	**S**	**10 25 19.2**	**-3.2**
NMR	**Nemuro--Hokkai**	**3.12**	**143**	*e*PN	**Pn**	**10 24 34.4**	**-0.6**
NMR				*e*S	**S**	**10 25 18.4**	**-4.4**
NEM2	**Nemuro 2**	**3.13**	**142**	P	**Pn**	**10 24 33.2**	**-1.9**
NEM2				*e*S	**S**	**10 25 18.4**	**-4.6**
JSK	**Shakotan**	**3.16**	**218**	⇑P	**Pn**	**10 24 35.7**	**+0.4**
JEW	**Eniwo**	**3.27**	**202**	P	**Pn**	**10 24 37.1**	**+0.7**
JEW				*e*S	**S**	**10 25 24.0**	**-1.4**
JCH	**Churui**	**3.27**	**177**	⇑P	**Pn**	**10 24 35.3**	**-1.1**
JCH				*e*S	**S**	**10 25 20.4**	**-5.0**
UGL	**Uglegorsk**	**3.28**	**348**	*e*PN	**Pn**	**10 24 36.9**	**+0.6**
UGL				*e*S	**S**	**10 25 23.7**	**-1.5**
UGL				pmax	pmax		
	comp=Z,90nm,0.7s						
UGL				smax	smax		
	comp=N,117nm,0.9s						
UGL	**Uglegorsk**	**3.28**	**348**	*e*P	**Pn**	**10 24 37.1**	**+0.8**
UGL				AMB	AMB	10 24 39.2	
	comp=N,90nm,0.7s						
UGL				*e*S	**S**	**10 25 25.0**	**-0.2**
UGL				A	A	10 25 25.9	
	comp=N,500nm,2.0s						
UGL				A	A	10 25 26.0	
	comp=N,120nm,0.9s						
KUR	**Kuril'sk**	**3.39**	**99**	*d i*PN	**Pn**	**10 24 38.7**	**+1.2**
KUR				*e*S	**S**	**10 25 27.9**	**+0.5**
KUR				pmax	pmax		
	comp=E,24nm,0.5s						
KUR				pmax	pmax		
	comp=Z,164nm,0.5s						
KUR				pmax	pmax		
	comp=N,82nm,0.3s						
KUR	**Kuril'sk**	**3.39**	**99**	*e*P	**Pn**	**10 24 38.6**	**+1.1**
KUR				AMB	AMB	10 24 38.9	
	comp=N,300nm,0.6s						
KUR				*e*S	**S**	**10 25 27.1**	**-0.3**
KUR				A	A	10 25 27.3	
	comp=N,60nm,0.3s						
JNBK	**Urakawa-nobuka**	**3.61**	**184**	P	**Pn**	**10 24 38.8**	**-1.0**
ERM	**Erimo**	**3.87**	**180**	*e*Pn	**Pn**	**10 24 42.2**	**-0.2**
ERM	**Erimo**	**3.87**	**180**	*e*PN	**Pn**	**10 24 42.2**	**-0.2**
JKB	**Kayabe**	**4.27**	**201**	⇑P	**Pn**	**10 24 45.6**	**-1.0**
JKB				*e*S	**S**	**10 25 38.0**	**-5.8**
JOSM	**Okushiri--Mats**	**4.62**	**216**	P	**Pn**	**10 24 49.6**	**-0.7**
TEY	**Ternei**	**4.67**	**262**	⇑*i*PN	**Pn**	**10 24 50.8**	**0.0**
TEY				*e*S	**S**	**10 25 51.1**	**-0.4**
TEY				pmax	pmax		
	comp=Z,140nm,0.7s						
TEY				pmax	pmax		
	comp=E,130nm,0.6s						
TEY				pmax	pmax		
	comp=N,30nm,0.4s						
TEY				smax	smax		
	comp=E,90nm,1.2s						
TEY				smax	smax		
	comp=N,60nm,1.1s						
TEY	**Ternei**	**4.67**	**262**	⇑*i*P	**Pn**	**10 24 50.7**	**0.0**
TEY				AMB	AMB	10 24 51.5	
	comp=N,140nm,0.7s						
TEY				*e*S	**S**	**10 25 48.5**	**-3.0**
TEY				A	A	10 25 49.3	
	comp=N,490nm,2.0s						
TEY				A	A	10 25 51.5	
	comp=N,60nm,1.1s						
TEY				A	A	10 25 51.5	
	comp=N,110nm,1.1s						
JOT	**Ohata**	**4.75**	**199**	⇑P	**Pn**	**10 24 50.2**	**-1.5**
JOT				*e*S	**S**	**10 25 46.7**	**-6.5**
JOMM	**Oshimamatsumae**	**4.91**	**209**	P	**Pn**	**10 24 52.3**	**-1.2**
JOMM				*e*S	**S**	**10 25 51.5**	**-4.9**
TYV	**Tymovskoe**	**5.00**	**357**	*e*PN	**Pn**	**10 24 54.1**	**-0.2**
TYV				*e*S	**S**	**10 25 56.9**	**-1.0**
TYV				pmax	pmax		
	comp=Z,20nm,0.5s						
TYV				pmax	pmax		
	comp=Z,100nm,4.6s						
TYV				smax	smax		
	comp=N,200nm,5.2s						
TYV				smax	smax		
	comp=N,36nm,0.7s						
TYV	**Tymovskoe**	**5.00**	**357**	*e*P	**Pn**	**10 24 54.0**	**-0.2**
TYV				AMB	AMB	10 24 54.6	
	comp=N,20nm,0.5s						
TYV				AMB	AMB	10 24 55.1	
	comp=N,100nm,5.0s						
TYV				*e*S	**S**	**10 25 56.9**	**-1.0**
TYV				A	A	10 25 58.1	
	comp=N,200nm,5.0s						
TYV				A	A	10 25 58.2	
	comp=N,36nm,0.7s						
GRNR	**Gornyy**	**6.62**	**320**	⇓*i*PN	**Pn**	**10 25 13.1**	**+0.2**
GRNR				pmax	pmax		
	comp=N,70nm,0.8s						
GRNR				pmax	pmax		
	comp=E,84nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,110nm,0.8s						
GRNR	**Gornyy**	**6.62**	**320**	⇓*i*P	**Pn**	**10 25 13.1**	**+0.2**
GRNR				AMB	AMB	10 25 14.2	
	comp=Z,70nm,0.8s						
GRNR				AMB	AMB	10 25 14.2	
	comp=Z,84nm,0.8s						
GRNR				AMB	AMB	10 25 14.2	
	comp=Z,110nm,0.8s						
USA0B	**Ussuriysk Arra**	**8.07**	**262**	*e*Pn	**Pn**	**10 25 30.3**	**+0.2**
USA0B				*e*S	**S**	**10 27 01.4**	**-2.1**
USRK	**Ussuriysk Ar.**	**8.07**	**262**	P	**Pn**	**10 25 30.1**	**0.0**
	comp=Z,5.0nm,0.3s,baz=68,slow=12,SNR=108						
USRK				S	**S**	**10 27 00.9**	**-2.7**
	baz=70,slow=22,SNR=6.0						
KLR	**Kul'dur**	**8.39**	**298**	P	**Pn**	**10 25 33.8**	**-0.2**
	comp=Z,3.7nm,0.3s,baz=109,slow=12,SNR=47						
MDJ	**Mudanjiang**	**9.63**	**267**	*e*Pn	**Pn**	**10 25 48.1**	**-0.8**
MDJ	**Mudanjiang**	**9.63**	**267**	P	**Pn**	**10 25 49.5**	**+0.6**
MDJ				sP		10 26 56.3	
MDJ				S	**S**	**10 27 39.5**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,57nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,61nm,1.1s						
EKMR	**Ekimchan**	**9.77**	**321**	*e*P	**Pn**	**10 25 50.0**	**-0.5**
EKMR				AMB	AMB	10 25 52.8	
	comp=Z,40nm,0.6s						
SKR	**Severo-Kuril's**	**9.90**	**56**	*e*PN	**P**	**10 25 53.0**	**-1.1**
SKR				*e*S	**S**	**10 27 43.4**	**-0.4**
SKR				pmax	pmax		
	comp=Z,400nm,2.1s						
SKR				pmax	pmax		
	comp=Z,489nm,0.7s						
SKR				MLR	MLR		
	comp=Z,100nm,11.0s						
SKR				MLR	MLR		
	comp=Z,100nm,10.0s						
SKR	**Severo-Kuril's**	**9.90**	**56**	*e*P	**P**	**10 25 53.7**	**-0.4**
SKR				AMB	AMB	10 25 54.2	
	comp=Z,390nm,0.7s						
SKR				*e*S	**S**	**10 27 45.5**	**+1.7**
MJB9	**Matsu-Tunnel**	**10.04**	**203**	*e*Pn	**Pn**	**10 25 53.4**	**-0.5**
MAJO	**Matsushiro**	**10.04**	**203**	*e*Pn	**Pn**	**10 25 52.7**	**-1.2**
MAJO	**Matsushiro**	**10.04**	**203**	*d i*PN	**Pn**	**10 25 53.8**	**-0.1**
MJAR	**Matsushiro Arr**	**10.04**	**203**	P	**Pn**	**10 25 53.6**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=23,slow=9.0,SNR=102						
PEA0B	**Petropavlovsk-**	**11.90**	**47**	*e*P	**P**	**10 26 16.2**	**-0.1**
PETK	**Petropavlovsk-**	**11.90**	**47**	P	**P**	**10 26 16.2**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=232,slow=9.0,SNR=42						
PEA1	**Petropavlovsk-**	**11.91**	**47**	*e*P	**P**	**10 26 16.2**	**-0.1**
PET	**Petropavlovsk**	**12.36**	**49**	*e*P	**Pn**	**10 26 22.8**	**+1.5**
PET	**Petropavlovsk**	**12.36**	**49**	*e*PN	**P**	**10 26 19.5**	**-1.8**
PET				*e*S	**S**	**10 28 32.3**	**-5.9**
PET				pmax	pmax		
	comp=Z,17nm,0.8s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
PET	**Petropavlovsk**	**12.36**	**49**	*e*P	**P**	**10 26 19.5**	**-1.8**
PET				AMB	AMB	10 26 24.0	
	comp=Z,17nm,0.8s						
PET				*e*sP		10 27 33.8	
PET				*e*S	**S**	**10 28 32.3**	**-5.9**
PET				AMS	AMS	10 29 51.3	
	comp=Z,58nm,18.0s						
BMKR	**Bomnak**	**12.69**	**319**	*e*P	**P**	**10 26 25.0**	**+0.1**
BMKR				AMB	AMB	10 26 26.0	
	comp=Z,30nm,0.5s						
ZEA	**Zeya**	**12.90**	**313**	*e*PN	**P**	**10 26 26.6**	**-0.7**
ZEA				*e*S	**S**	**10 28 50.0**	**+0.5**
ZEA				pmax	pmax		
	comp=N,110nm,0.8s						
ZEA				pmax	pmax		
	comp=E,73nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,180nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,400nm,1.5s						
ZEA				smax	smax		
	comp=N,200nm,10.0s						
ZEA	**Zeya**	**12.90**	**313**	*e*P	**P**	**10 26 27.0**	**-0.3**
ZEA				AMB	AMB	10 26 28.4	
	comp=N,180nm,0.8s						
JHJ2	**Mitsune**	**13.01**	**192**	*e*P	**Pn**	**10 26 30.3**	**+1.0**
KROS	**Kirovskiy**	**13.41**	**315**	*e*P	**P**	**10 26 33.2**	**+0.3**
KROS				AMB	AMB	10 26 35.0	
	comp=N,15nm,0.4s						
KROS				AMB	AMB	10 26 35.0	
	comp=N,14nm,0.4s						
KROS				AMB	AMB	10 26 35.0	
	comp=N,27nm,0.4s						
KSRS	**Korea Array**	**14.13**	**239**	P	**Pn**	**10 26 42.2**	**-0.2**
	comp=N,0.4nm,0.3s,baz=47,slow=10,SNR=18						
KSRS				ScP	**ScP**	**10 34 37.8**	**+2.5**
	comp=N,0.4nm,0.3s,baz=29,slow=2.8,SNR=7.3						
MA2	**Magadan**	**14.46**	**16**	P	**P**	**10 26 44.8**	**+0.4**
	comp=N,4.4nm,0.3s,baz=202,slow=8.8,SNR=32						
MA2	**Magadan**	**14.46**	**16**	*e*P	**P**	**10 26 44.9**	**+0.5**
JNU	**Nakatsue**	**15.84**	**221**	P	**Pn**	**10 27 03.6**	**+1.2**
	comp=N,0.9nm,0.3s,baz=224,slow=2.0,SNR=6.8						
JNU	**Nakatsue**	**15.84**	**221**	*e*P	**P**	**10 26 59.9**	**0.0**
	comp=N,11nm,1.0s						
HIA	**Hailar**	**16.12**	**291**	*e*P	**P**	**10 27 01.7**	**-1.0**
	comp=N,29nm,0.5s						
HIA	**Hailar**	**16.12**	**291**	*e*P	**P**	**10 27 01.7**	**-1.0**
HIA				pmax	pmax		
	comp=Z,29nm,0.5s						
SEY	**Seymchan**	**17.88**	**14**	P	**P**	**10 27 21.4**	**0.0**
	comp=Z,12nm,0.3s,baz=203,slow=6.9,SNR=242						
SEY	**Seymchan**	**17.88**	**14**	*c i*P	**P**	**10 27 21.2**	**-0.2**
YAK	**Yakutsk**	**17.94**	**339**	*i* P	**P**	**10 27 20.9**	**-1.2**
BJI	**Beijing**	**20.52**	**263**	⇓*i*P	**P**	**10 27 48.0**	**-1.0**
BJI				pmax	pmax		
	comp=Z,21nm,1.0s						
BJT	**Baijiatuau**	**20.53**	**263**	*e*P	**P**	**10 27 48.5**	**-0.6**
	comp=Z,15nm,0.8s						
BJT	**Baijiatuau**	**20.53**	**263**	*e*P	**P**	**10 27 48.5**	**-0.6**
BJT				pmax	pmax		
	comp=Z,15nm,0.8s						
SMY	**Shemya**	**21.21**	**60**	*e*P	**P**	**10 27 55.9**	**+0.8**
	comp=Z,34nm,0.6s						
SMY	**Shemya**	**21.21**	**60**	*e*P	**P**	**10 27 55.9**	**+0.8**
SMY				pmax	pmax		
	comp=Z,34nm,0.6s						
BOD	**Bodaibo**	**21.40**	**314**	*e*P	**P**	**10 27 54.3**	**-2.5**
BOD				pmax	pmax		
	comp=Z,14nm,1.4s						
TIA	**Tai'an**	**21.78**	**253**	P	**P**	**10 28 01.3**	**+0.8**
TIA				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC	**Hu-ho-hao-te**	**23.40**	**269**	P	**P**	**10 28 14.3**	**-1.0**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,13nm,6.6s						
BTO	**Baotou**	**24.57**	**270**	*e*P	**P**	**10 28 29.0**	**+3.1**
SONA0	**Songino Array**	**25.05**	**288**	*e*P	**P**	**10 28 29.8**	**-0.2**
SONA0				*e*ScP	**ScP**	**10 35 01.4**	**+0.9**
SONM	**Songino Array**	**25.05**	**288**	P	**P**	**10 28 29.8**	**-0.2**
	comp=Z,8.9nm,0.5s,baz=82,slow=8.4,SNR=29						
SONM				ScP	**ScP**	**10 35 01.4**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=99,slow=2.2,SNR=13						
BILL	**Bilibino**	**25.23**	**20**	⇓*e*P	**P**	**10 28 27.9**	**-3.3**
BILL				*e**PP	**pP**	**10 29 29.5**	**-0.8**
BILL				pmax	pmax		
	comp=Z,43nm,1.4s						
TLY	**Talaya**	**26.41**	**297**	P	**P**	**10 28 41.2**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=101,slow=2.5,SNR=4.7						
TLY	**Talaya**	**26.41**	**297**	*ce*P	**P**	**10 28 41.1**	**-0.9**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZAK	**Zakamensk**	**26.74**	**294**	*e*P	**P**	**10 28 44.0**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ADK	**Adak**	**26.84**	**62**	*e*P	**P**	**10 28 44.6**	**-1.1**
	comp=Z,24nm,1.0s						
ADK	**Adak**	**26.84**	**62**	*e*P	**P**	**10 28 44.6**	**-1.1**

ADK				pmax	pmax		
	comp=Z,24nm,1.0s						
SPIA	Saint Paul Isl	30.52	51	*e*P	P	10 29 18.4	+0.3
	comp=Z,41nm,1.2s						
LZH	Lanzhou	30.95	266	*e*P	P	10 29 23.3	+1.0
LZH				pP	pwP	10 30 30.3	+2.5
LZH				sP	sP	10 31 12.8	+8.6
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
GTA	Gaotai	32.20	274	⇓P	P	10 29 33.8	+0.8
GTA				pP	pP	10 30 37.3	+0.9
GTA				sP	sP	10 31 18.8	+3.6
GTA				ScP	ScP	10 35 24.5	+1.2
GTA				ScS	ScS	10 39 16.8	-6.4
GTA				pmax	pmax		
	comp=Z,29nm,1.0s						
GTA				pmax	pmax		
	comp=Z,51nm,4.9s						
GTA				LR	LR		
	comp=N,61nm,15.1s						
GTA				LR	LR		
	comp=E,54nm,16.8s						
GTA				LR	LR		
	comp=Z,72nm,17.9s						
FALS	False Pass	34.48	55	*e*P	P	10 29 50.9	-1.3
	comp=Z,19nm,0.6s						
SDPT	Sand Point	36.08	54	*e*P	P	10 30 04.4	-1.3
	comp=Z,19nm,0.6s						
DGZ	Jazzator, Alta	36.88	297	*d i*P	P	10 30 12.7	-0.1
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZAA1	Zalesovo Array	37.43	304	*e*P	P	10 30 15.3	-1.7
ZAA0	Zalesovo Array	37.43	304	*e*P	P	10 30 16.9	-0.1
	comp=Z,2.6nm,0.5s						
ZALV	Zalesovo Beam	37.43	304	P	P	10 30 15.3	-1.8
	comp=Z,2.8nm,0.4s,baz=69,slow=9.7,SNR=12						
ZALV	Zalesovo Beam	37.43	304	*i* P	P	10 30 15.5	-1.5
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
TTA	Tatalina	37.64	41	*e*P	P	10 30 19.0	+0.2
	comp=Z,3.6nm,1.0s						
TTA	Tatalina	37.64	41	*e*P	P	10 30 19.0	+0.2
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WMQ	Urumqi	38.68	288	*e*P	P	10 30 27.8	+0.1
WMQ				pP	pP	10 31 34.3	+1.1
WMQ				pmax	pmax		
	comp=Z,50nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,66nm,3.7s						
WMQ				LR	LR		
	comp=N,590nm,25.1s						
WMQ				LR	LR		
	comp=E,570nm,23.7s						
WMQ				LR	LR		
	comp=Z,240nm,23.7s						
CHIR	Chirikof Islan	38.71	52	*e*P	P	10 30 28.2	+0.6
	comp=Z,17nm,0.6s						
SII	Sitkinak Islan	39.35	51	*e*P	P	10 30 33.5	+0.6
	comp=Z,17nm,0.7s						
PPLA	Purkeypile	39.38	41	*e*P	P	10 30 33.7	+0.5
	comp=Z,4.9nm,0.6s						
SKT	Skwentna	39.79	42	*e*P	P	10 30 36.1	-0.3
	comp=Z,1.2nm,0.6s						
BPAW	Bear Paw Mtn.	39.81	39	*e*P	P	10 30 36.9	+0.4
	comp=Z,4.1nm,0.8s						
MLY	Manley	39.84	37	*e*P	P	10 30 37.2	+0.4
	comp=Z,4.6nm,0.6s						
COLD	Coldfoot	39.93	34	*e*P	P	10 30 36.8	-0.7
	comp=Z,3.3nm,1.0s						
KDAK	Kodiak Island	39.95	49	P	P	10 30 37.6	-0.1
	comp=Z,8.5nm,0.5s,baz=109,slow=2.3,SNR=55						
KDAK	Kodiak Island	39.95	49	*e*P	P	10 30 38.0	+0.3
	comp=Z,9.1nm,0.6s						
KDAK	Kodiak Island	39.95	49	*e*P	P	10 30 38.0	+0.3
KDAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HOM	Homer	40.09	46	*e*P	P	10 30 40.2	+1.4
	comp=Z,109nm,1.1s						
TOLK	Toolik Lake Re	40.13	32	P	P	10 30 38.2	-1.0
	baz=271						
SUA	Susitna One	40.23	43	*e*P	P	10 30 39.5	-0.6
	comp=Z,3.7nm,0.6s						
CNPM	China Poot	40.31	46	*e*P	P	10 30 40.0	-0.7
	comp=Z,10nm,0.4s						
BRLK	Bradley Lake	40.45	45	*e*P	P	10 30 41.9	+0.1
	comp=Z,10nm,0.8s						
MDM	Murphy Dome	40.91	37	*e*P	P	10 30 44.0	-1.4
	comp=Z,16nm,0.8s						
WRH	Wood River Hil	41.02	38	*e*P	P	10 30 46.0	-0.3
	comp=Z,4.9nm,0.5s						
TCOL	CIGO, UAF Yank	41.07	37	P	P	10 30 46.1	-0.6
	baz=277,SNR=7.3						
COLA	College	41.08	37	*e*P	P	10 30 46.7	0.0
	comp=Z,15nm,0.7s						
COLA	College	41.08	37	*e*P	P	10 30 46.7	0.0
COLA				pmax	pmax		
	comp=Z,15nm,0.7s						
MK32	Makanchi Array	41.08	294	*e*ScP	ScP	10 35 56.0	-0.2
MKAR	Makanchi Array	41.08	294	P	P	10 30 46.2	-0.9
	comp=Z,5.0nm,0.6s,baz=80,slow=9.0,SNR=53						
MKAR				ScP	ScP	10 35 56.0	-0.2
	comp=Z,0.6nm,0.6s,baz=60,slow=4.0,SNR=5.5						
MKAR	Makanchi Array	41.08	294	*i* P	P	10 30 46.4	-0.7
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
POKR	Poker Plat Res	41.22	37	P	P	10 30 47.5	-0.4
	baz=277,SNR=8.3						
MAKZ	Makanchi	41.27	294	*e*P	P	10 30 48.3	-0.3
	comp=Z,6.3nm,0.7s						
MAKZ	Makanchi	41.27	294	*e*P	P	10 30 48.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ILAR	Eielson Array	41.50	37	P	P	10 30 49.0	-1.2
	comp=Z,4.4nm,0.6s,baz=261,slow=6.0,SNR=72						
ILAR				PcP	PcP	10 32 39.4	-1.0
	comp=Z,0.8nm,0.5s,baz=289,slow=3.5,SNR=7.2						
FYU	Fort Yukon	41.94	35	*e*P	P	10 30 53.9	+0.2
	comp=Z,24nm,1.2s						
KURK	Kurchatov	41.97	301	*e*P	P	10 30 53.1	-1.0
	comp=Z,9.8nm,0.6s						
KURK	Kurchatov	41.97	301	*e*P	P	10 30 53.1	-1.0
KURK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GLI	Glacier Island	42.08	43	*e*P	P	10 30 54.3	-0.6
	comp=Z,11nm,0.6s						
SCRK	Sand Creek	42.87	38	*e*P	P	10 31 00.3	-1.0
	comp=Z,12nm,0.4s						
RAGM	Ragged Mountai	43.35	44	*e*P	P	10 31 05.8	+0.8
	comp=Z,12nm,1.1s						
GLB	Gilahina Butte	43.50	42	*e*P	P	10 31 06.9	+0.6
	comp=Z,4.7nm,0.5s						
HMT	Hamilton	43.56	44	*e*P	P	10 31 06.4	-0.3
	comp=Z,4.2nm,0.7s						
PAYA	Payao	44.27	248	P	P	10 31 15.4	+2.7
	comp=Z,18µm,0.8s						
BALM	Baldy	44.29	42	*e*P	P	10 31 13.1	+0.6
	comp=Z,3.7nm,0.7s						
BALM	Baldy	44.29	42	*e*P	P	10 31 13.1	+0.6
BALM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PDGK	Podgornoye	44.31	291	P	P	10 31 12.5	-0.4
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CTGM	Chitina Glacie	44.79	42	*e*P	P	10 31 16.6	+0.2
	comp=Z,9.4nm,0.5s						
CMMT	Chiang Mai	45.26	248	P	P	10 31 21.8	+1.3
	comp=Z,4.5nm,0.6s						
EPYK	Eagle Plains	45.33	34	P	P	10 31 20.1	-0.4
	baz=285,SNR=14						
SHL	Shillong	45.41	262	P	P	10 31 21.6	-0.2
SHL				pmax	pmax		
	comp=Z,18nm,0.8s						
CHAI	Chaiyaphum	45.49	243	P	P	10 31 23.6	+1.3
	comp=Z,17µm,0.7s						
CMAR	Chiang Mai Arr	45.52	248	P	P	10 31 23.1	+0.6
	comp=Z,1.4nm,0.4s,baz=35,slow=7.3,SNR=6.8						
BRVK	Borovoye	45.98	307	*e*P	P	10 31 25.4	-0.2
	comp=Z,6.3nm,1.0s						
BRVK	Borovoye	45.98	307	*e*P	P	10 31 25.5	-0.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
INK	Inuvik	46.02	31	P	P	10 31 25.0	-0.7
	comp=Z,5.9nm,0.3s,baz=300,slow=10,SNR=150						
OTUK	Ortayu	46.70	300	P	P	10 31 31.0	-0.3
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	47.88	292	*ce*P	P	10 31 40.5	0.0
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH	Kashi	48.45	288	P	P	10 31 48.8	+3.9
KSH				PP	PP	10 33 46.0	+5.0
KSH				S	S	10 38 24.8	+5.4
KSH				pmax	pmax		
	comp=Z,11nm,0.5s						
KSH				pmax	pmax		
	comp=Z,83nm,5.6s						
BESE	Bessie Mountai	48.67	44	*e*P	P	10 31 47.0	+0.8
	comp=Z,6.0nm,0.8s						
JIS	Juneau Island	49.02	44	*e*P	P	10 31 49.6	+0.9
	comp=Z,6.9nm,0.6s						
SIT	Sitka	49.05	46	*e*P	P	10 31 50.7	+1.8
	comp=Z,16nm,0.8s						
SIT	Sitka	49.05	46	*e*P	P	10 31 50.7	+1.8
SIT				pmax	pmax		
	comp=Z,16nm,0.8s						
ARU	Arti	50.82	314	*ce*P	P	10 32 01.1	-1.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DLBC	Dease Lake	51.04	42	P	P	10 32 05.7	+1.9
	comp=Z,5.7nm,0.8s,baz=303,slow=6.5,SNR=13						
NIL	Nilore	53.48	283	*e*P	P	10 32 22.4	+0.5
	comp=Z,25nm,1.1s						
NIL	Nilore	53.48	283	*e*P	P	10 32 22.4	+0.5
NIL				pmax	pmax		
	comp=Z,25nm,1.1s						
ABKAR	Akbulak array	53.49	306	*e*P	P	10 32 21.3	-0.5
	comp=Z,5.4nm,0.5s						
RES	Resolute Bay	53.73	16	P	P	10 32 22.3	-0.8
	comp=Z,18nm,0.6s,baz=301,slow=5.2,SNR=37						
PRGR	Permogore	54.19	324	*e*P	P	10 32 24.7	-1.8
PRGR				pmax	pmax		
	comp=Z,13nm,0.3s						
BBB	Bella Bella	55.03	49	P	P	10 32 34.1	+1.5
	comp=Z,15nm,1.0s,baz=286,slow=11,SNR=6.5						
YKA	Yellowknife Ar	55.61	33	P	P	10 32 36.4	-0.2
	comp=Z,12nm,0.6s,baz=307,slow=7.0,SNR=90						
YKA	Yellowknife Ar	55.61	33	P	P	10 32 36.4	-0.2
YKA				pmax	pmax		
	comp=Z,13nm,0.6s						
KBL	Kabul	55.80	286	*e*P	P	10 32 37.9	-0.8
	comp=Z,10nm,0.6s						
KBL				*e*pP	pP	10 33 55.4	+5.8
KBL	Kabul	55.80	286	*e*P	P	10 32 37.9	-0.8
KBL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARCES	ARCESS Array B	56.22	338	P	P	10 32 39.6	-1.2
	comp=Z,5.9nm,1.3s,baz=23,slow=6.6,SNR=3.9						
ARCES	ARCESS Array B	56.22	338	P	P	10 32 39.6	-1.2
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.3s						
D03D	Eldon	60.33	51	P	P	10 33 10.9	+1.6
	baz=307,SNR=5.6						
B05A	Bryant	60.43	50	P	P	10 33 11.1	+1.1
	baz=307,SNR=5.5						
D04E	Lakebay	60.72	51	P	P	10 33 14.0	+2.1
	baz=307						
SUF	Sumiainen	60.72	332	P	P	10 33 10.5	-1.2
SUF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GEYT	Alibeck	60.92	296	P	P	10 33 13.6	+0.1
	comp=Z,8.0nm,0.4s,baz=25,slow=3.9,SNR=14						
GYA0B	ALIBECK ARRAY	60.92	296	*e*P	P	10 33 13.8	+0.4
	comp=Z,12nm,0.6s						
MOS	Moscow	61.02	321	*e*P	P	10 33 26.1	+12
MOS				*e*		10 35 09.4	
E04D	Cinebar	61.20	52	P	P	10 33 17.1	+2.0
	baz=308						
G03D	McMinnville, O	61.64	53	P	P	10 33 19.9	+1.9
	baz=308						
FIA0	FINESS Array S	61.65	331	*e*P	P	10 33 16.5	-1.3
FIA0	FINESS Array S	61.65	331	*e*P	P	10 33 16.5	-1.3
FINES	FINESS Array B	61.65	331	P	P	10 33 16.5	-1.3
	comp=Z,5.1nm,0.5s,baz=46,slow=8.1,SNR=35						
FINES	FINESS Array B	61.65	331	*i* P	P	10 33 16.7	-1.1
FINES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN	Obninsk	61.88	321	⇓*e*P	P	10 33 18.8	-0.7
OBN				*e**PP	pP	10 34 28.5	-3.6
OBN				*e*		10 35 39.4	
OBN				*e*S	S	10 41 36.3	+21
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
I02D	Swisshome	61.98	55	P	P	10 33 22.5	+2.1
	baz=308						
H04D	Lebanon	62.35	54	P	P	10 33 24.7	+1.9
	baz=308						
J01E	Myrtle Point	62.52	55	P	P	10 33 26.1	+2.2
	baz=308						
I03D	Drain, OR	62.52	55	P	P	10 33 26.0	+2.1
	baz=308						
G05D	Wamic, OR	62.70	52	P	P	10 33 26.9	+1.7
	baz=309						
I04A	Tendick Farm,	62.99	54	P	P	10 33 28.5	+1.4
	baz=309,SNR=7.0						
NEW	Newport	63.04	48	P	P	10 33 28.1	+0.8
	comp=Z,6.6nm,0.8s,baz=326,slow=5.7,SNR=19						
NEW	Newport	63.04	48	P	P	10 33 28.0	+0.6
	baz=310,SNR=9.3						
I05D	Terrebonne, OR	63.25	53	P	P	10 33 30.3	+1.5
	baz=309						
J04D	Umpqua Nationa	63.51	54	P	P	10 33 32.3	+1.6
	baz=309						
J05D	Fort Rock, OR	63.98	54	P	P	10 33 35.4	+1.8
	baz=310,SNR=8.8						
L04D	Klamath Falls	64.04	55	P	P	10 33 35.7	+1.6
	baz=309						
K04D	Chiloquin, OR	64.10	55	P	P	10 33 36.0	+1.6
	baz=310						
YBH	Yreka Blue Hor	64.11	56	P	P	10 33 36.0	+1.5
	comp=Z,4.3nm,0.7s,baz=358,slow=4.5,SNR=5.7						
YBH	Yreka Blue Hor	64.11	56	P	P	10 33 36.0	+1.5
YBH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
M02C	Callahan	64.25	56	P	P	10 33 37.2	+1.9
	baz=310						
M04C	Macdoel	64.59	56	P	P	10 33 39.1	+1.6
	baz=310,SNR=5.2						
N02D	Trinity Center	64.60	57	P	P	10 33 39.4	+1.9
	baz=310						
O02D	Mt. Diablo Mer	65.06	57	P	P	10 33 41.5	+0.9
	baz=310						
O03E	Paynes Creek	65.56	57	P	P	10 33 44.5	+0.8
	baz=310						
FCC	Fort Churchill	65.57	29	*e*P	P	10 33 43.2	0.0
	comp=Z,10nm,0.6s						
FCC	Fort Churchill	65.57	29	*e*P	P	10 33 43.3	0.0
FCC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MSO	Missoula	65.61	47	P	P	10 33 44.8	+0.8
	baz=312						
FFC	Flin Flon	65.65	35	*e*P	P	10 33 44.4	+0.5
	comp=Z,168nm,0.8s						
FFC	Flin Flon	65.65	35	*e*P	P	10 33 44.4	+0.5
WR1	Warramunga Arr	65.99	189	*e*P	P	10 33 49.1	+2.7
WRA	Warramunga Arr	65.99	189	P	P	10 33 49.1	+2.6
	comp=Z,0.8nm,0.9s,baz=7.6,slow=6.9,SNR=3.7						
KIV	Kislovodsk	66.20	309	*e*P	P	10 33 48.5	+0.8
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
KIV				MLR	MLR		
	comp=Z,82nm,17.0s						
KBZ	Khabaz	66.24	309	P	P	10 33 48.0	+0.2
	comp=Z,4.8nm,0.8s,baz=37,slow=2.8,SNR=8.2						
NB200	NORSAR Array S	66.55	337	*e*P	P	10 33 50.2	+0.7
NOA	NORSAR Array B	66.55	337	P	P	10 33 50.2	+0.7
	comp=Z,0.4nm,0.5s,baz=38,slow=4.3,SNR=2.7						
EGMT	Eagleton	66.90	44	P	P	10 33 52.9	+0.8
	baz=314,SNR=8.3						
HLID	Hailey	67.55	50	P	P	10 33 57.4	+1.1
	baz=313,SNR=6.6						
BOZ	Bozeman (W)	67.63	47	P	P	10 33 57.8	+1.1
	baz=313						
AKASG	Malin Array Be	68.14	321	P	P	10 33 58.2	-1.4
	comp=Z,1.2nm,0.5s,baz=42,slow=6.5,SNR=3.3						
YHB	Horse Butte	68.43	48	*e*P	P	10 34 02.4	+0.7
	comp=Z,9.3nm,0.9s						
NVAR	Mina Array Bea	68.83	56	P	P	10 34 05.7	+1.4
	comp=Z,6.7nm,0.7s,baz=295,slow=5.9,SNR=80						
H17A	Grant Village	69.00	47	P	P	10 34 07.8	+2.5
	baz=314,SNR=7.6						
RLMT	Red Lodge	69.16	46	P	P	10 34 07.3	+1.1
	baz=315,SNR=10						
DGMT	Dagmar	69.22	41	P	P	10 34 06.9	+0.7
	baz=317,SNR=8.0						
LAO	LASA Array	69.55	43	P	P	10 34 09.2	+0.9
	baz=316,SNR=6.1						
AS31	Alice Springs	69.72	189	*e*P	P	10 34 11.8	+2.3
ASAR	Alice Springs	69.72	189	P	P	10 34 11.8	+2.3
	comp=Z,0.4nm,0.5s,baz=6.8,slow=6.2,SNR=7.2						
ASAR	Alice Springs	69.72	189	P	P	10 34 11.8	+2.3
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
TIN	Tinemaha, Big	69.80	57	P	P	10 34 11.7	+1.6
	baz=313						
VES	Vestal, Richgr	70.11	59	P	P	10 34 12.6	+0.8
	baz=313						
CWC	Cottonwood Cre	70.30	58	P	P	10 34 14.2	+1.0
	baz=313						
PKM	Mcpherson Peak	70.31	60	P	P	10 34 14.6	+1.3
	baz=313						
GRAC	Grapevine Rang	70.34	57	P	P	10 34 14.8	+1.6
	baz=313,SNR=14						
R11A	Troy Canyon, C	70.45	55	P	P	10 34 15.1	+1.1
	baz=314,SNR=12						
ISA	Isabella, Lake	70.59	59	P	P	10 34 15.0	+0.2
	baz=313						
BW06	Boulder Array	70.67	48	P	P	10 34 16.0	+0.6
	baz=315,SNR=9.5						
PDAR	Pinedale Array	70.67	48	P	P	10 34 16.0	+0.6
	comp=Z,5.7nm,0.6s,baz=293,slow=1.8,SNR=88						
DUG	Dugway, Tooele	70.73	52	P	P	10 34 17.0	+1.3
	baz=314,SNR=7.5						
MPMC	Manual Prospec	70.91	58	P	P	10 34 17.9	+1.0
	baz=313,SNR=15						
FURC	Furnace Creek,	71.00	57	P	P	10 34 18.4	+1.4
	baz=314,SNR=17						
TPNV	Topopah Spring	71.03	56	P	P	10 34 18.8	+1.3
	baz=314,SNR=26						
LRMC	Laurel Mtn Rad	71.19	58	P	P	10 34 19.1	+0.7
	baz=313						
EDW2	Edwards Air Fo	71.41	59	P	P	10 34 20.8	+1.1
	baz=314						
ULM	Lac du Bonnet	71.48	35	P	P	10 34 19.5	-0.2
	comp=Z,8.2nm,0.5s,baz=322,slow=7.1,SNR=18						
ULM	Lac du Bonnet	71.48	35	*e*P	P	10 34 19.6	-0.2
	comp=Z,9.2nm,0.7s						
ULM	Lac du Bonnet	71.48	35	*e*P	P	10 34 19.6	-0.2
ULM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SHOC	Shoshone, Teco	71.73	57	P	P	10 34 22.6	+1.0
	baz=314						
MDND	Maddock	71.74	39	P	P	10 34 22.0	+0.7
	baz=319						
GSC	Goldstone, Bar	71.83	58	P	P	10 34 23.1	+0.9
	baz=314						
BFSC	Mount Baldy Ra	72.06	59	P	P	10 34 24.5	+0.9
	baz=314						
BUR08	Bucovina Ar. S	72.19	321	*e*P	P	10 34 24.1	0.0
	comp=Z,2.3nm,1.0s						
TUQ	Turquoise Moun	72.26	57	P	P	10 34 26.0	+1.2
	baz=314,SNR=13						
K22A	Casper	72.31	47	P	P	10 34 25.3	+0.3
	baz=317						
HEC	Hector,Ludlow	72.44	58	P	P	10 34 27.0	+1.2
	baz=314						
KOLS	Kolonicke sedl	72.44	324	*e*P	P	10 34 22.3	-3.1
KOLS	Kolonicke sedl	72.44	324	*e*P	P	10 34 22.3	-3.1
RSSD	Black Hills	72.47	44	*e*P	P	10 34 26.5	+0.5
	comp=Z,4.4nm,0.6s						
RSSD	Black Hills	72.47	44	*e*P	P	10 34 26.5	+0.5
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RSSD	Black Hills	72.47	44	P	P	10 34 26.3	+0.4
	baz=318						
BBRC	Big Bear Solar	72.48	59	P	P	10 34 27.3	+1.1
	baz=314						
GMRC	Granite Mounta	72.87	58	P	P	10 34 29.4	+1.1
	baz=314,SNR=6.4						
PFO	Pinyon Flats O	73.21	59	P	P	10 34 31.2	+0.8
	baz=314						
BELC	Belle Mtn. Jos	73.21	58	P	P	10 34 31.0	+0.6
	baz=314						
O20A	White River Ci	73.24	49	P	P	10 34 31.2	+0.7
	baz=316,SNR=6.4						
IRM	Iron Mountain	73.61	58	P	P	10 34 33.7	+1.2
	baz=315,SNR=7.1						
MONP2	Monument Peak	73.73	60	P	P	10 34 34.3	+0.8
	baz=314						
BC3	Big Chuckawall	73.78	58	P	P	10 34 34.5	+0.9
	baz=315						
N23A	Red Feather La	73.89	47	P	P	10 34 35.2	+0.9
	baz=317						
VOIR		73.94	320	P	P	10 34 35.2	+0.9
VOIR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BR131	Keskin Array S	73.99	311	*e*P	P	10 34 35.0	+0.3
	comp=Z,2.6nm,0.6s						
BRTR	Keskin Array B	73.99	311	P	P	10 34 34.9	+0.1
	comp=Z,2.1nm,0.6s,baz=87,slow=4.1,SNR=13						
CLL	Collm	74.07	330	*i* P	P	10 34 34.2	-0.6
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	Collm	74.07	330	*i* P	P	10 34 34.2	-0.6
	comp=Z,6.0nm,1.1s						
IKP	In-Ko-Pah, Jac	74.09	60	P	P	10 34 36.3	+0.9
	baz=315						
PV14	Lion Creek, Pa	74.09	51	*e*P	P	10 34 35.6	+0.1
	comp=Z,9.7nm,0.6s						
PDMCI	Parker Dam,Lak	74.10	57	P	P	10 34 36.4	+1.1
	baz=315,SNR=7.3						
VYHS	Vyhne	74.19	325	*e*P	P	10 34 33.8	-1.8
VYHS	Vyhne	74.19	325	*e*P	P	10 34 33.8	-1.8
Y12C	Blythe	74.26	58	P	P	10 34 37.2	+1.0
	baz=315						
GLA	Glamis	74.57	58	P	P	10 34 39.0	+0.9
	baz=315						
SUSD	Miller	74.63	41	P	P	10 34 38.5	+0.3
	baz=320						
WUAZ	Wupatki	74.84	55	P	P	10 34 41.2	+1.5
	baz=316						
EYMN	Ely	75.06	35	P	P	10 34 40.3	-0.2
	baz=324,SNR=8.9						
MVCO	Mesa Verde	75.22	52	P	P	10 34 43.0	+1.1
	baz=317,SNR=9.1						
Q24A	Divide	75.72	48	P	P	10 34 45.6	+0.7
	baz=318						
S22A	4UR Ranch, Cre	75.73	50	P	P	10 34 46.1	+1.2
	baz=318,SNR=6.8						
GERES	GERESS Array B	75.87	328	P	P	10 34 44.9	-0.3
	comp=Z,0.3nm,0.5s,baz=39,slow=5.3,SNR=2.3						
E38A	The Farm, Brul	76.12	35	P	P	10 34 46.1	-0.4
	baz=324,SNR=6.4						
ECSD	EROS Data Cent	76.24	40	P	P	10 34 47.3	0.0
	baz=322,SNR=16						
SDCO	Great Sand Dun	76.44	49	P	P	10 34 49.7	+0.9
	baz=318,SNR=6.5						
SCHQ	Schefferville	76.50	17	P	P	10 34 48.4	-0.1
	comp=Z,5.3nm,0.6s,baz=335,slow=3.7,SNR=4.9						
SPMN	Marine on St.	76.72	37	P	P	10 34 49.6	-0.3
	baz=324						
ALN	Alexandroupoli	76.96	316	P	P	10 34 51.6	+0.3
ALN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BGNE	Belgrade	77.35	43	P	P	10 34 53.6	+0.1
	baz=321						
T25A	Trinidad	77.47	49	P	P	10 34 55.1	+0.6
	baz=319,SNR=8.3						
TUC	Tucson	77.48	56	P	P	10 34 55.5	+1.0
	baz=317						
G40A	Rib Lake	77.76	35	P	P	10 34 55.5	-0.2
	baz=325						
ANMO	Albuquerque	78.00	52	*e*P	P	10 34 58.9	+1.5
	comp=Z,3.3nm,0.9s						
ANMO	Albuquerque	78.00	52	*ce*P	P	10 34 57.9	+0.5
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ANMO	Albuquerque	78.00	52	P	P	10 34 58.8	+1.5
	baz=318						
MATQ	Matagami	78.37	26	P	P	10 34 58.2	-0.6
	baz=332						
Y22D	IRIS PASSCAL I	78.39	53	P	P	10 34 59.0	-0.4
	baz=318						
RAYN	Ar Rayn	78.53	292	*e*P	P	10 35 00.5	+0.3
	comp=Z,3.6nm,0.8s						
RAYN	Ar Rayn	78.53	292	*e*P	P	10 35 00.5	+0.3
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CBKS	Cedar Bluff	78.59	45	P	P	10 35 00.0	-0.3
	baz=321						
D46A	Sault St. Mari	78.75	31	P	P	10 35 00.6	-0.4
	baz=329						

121A	Cookes Peak, D baz=318	79.05	54	P	P	10 35 04.7	+1.6
CHGQ	Chibougamau baz=334	79.19	24	P	P	10 35 02.5	-0.7
LSQQ	Lebel-sur-Quev baz=333	79.19	26	P	P	10 35 02.8	-0.5
F45A	CMU Biological baz=328	79.24	32	P	P	10 35 03.6	+0.1
H43A	Windswept, Lux baz=327	79.39	34	P	P	10 35 04.2	-0.3
I42A	Draeger Farm, baz=326	79.41	35	P	P	10 35 04.2	-0.4
JFWS	Jewell Farm baz=325	79.67	37	P	P	10 35 05.4	-0.6
G46A	Petoskey baz=328	79.79	32	P	P	10 35 06.3	-0.3
KSU1	Kansas State U baz=322	79.89	43	P	P	10 35 06.7	-0.5
H45A	Beulah baz=328	79.93	33	P	P	10 35 06.8	-0.5
L40A	Anamosa baz=325	79.95	38	P	P	10 35 07.2	-0.3
D52A	ZEK Kipawa Sen baz=332	80.59	27	P	P	10 35 10.0	-0.8
AMTX	Amarillo baz=320	80.62	49	P	P	10 35 12.1	+0.8
L42A	Oliver, Polo baz=326	80.66	37	P	P	10 35 10.5	-0.8
D53A	Lac Vacive, Po baz=333	80.73	27	P	P	10 35 11.1	-0.4
I46A	Reed City baz=328	80.74	33	P	P	10 35 11.4	-0.2
N40A	Mertquake, Sal baz=325	80.76	39	P	P	10 35 11.7	-0.1
D54A	Lac Fusel, La baz=333	80.99	26	P	P	10 35 12.4	-0.5
F51A	Arnstein baz=331	81.02	29	P	P	10 35 12.2	-0.8
E52A	Mattawa baz=332	81.12	28	P	P	10 35 12.8	-0.7
N41A	Harden Midland baz=325	81.22	38	P	P	10 35 13.8	-0.4
F52A	Sundridge baz=332	81.33	29	P	P	10 35 14.1	-0.6
E53A	Dumoine, Ponti baz=333	81.36	27	P	P	10 35 14.0	-0.8
KLBO	Killbear Provi baz=331	81.42	29	P	P	10 35 14.3	-0.8
E54A	Lac Daplat, Po baz=333	81.46	27	P	P	10 35 14.6	-0.8
BUKO	Buck Lake baz=332	81.62	29	P	P	10 35 15.7	-0.5
J48A	Bridge Port baz=329	81.92	33	P	P	10 35 19.1	+1.3
HDIL	Hopedale baz=326	82.02	38	P	P	10 35 18.0	-0.3
PEMO	Pembroke baz=333	82.12	27	P	P	10 35 17.9	-0.8
G53A	Haliburton baz=332	82.16	28	P	P	10 35 18.4	-0.6
CLWO	Collingwood baz=331	82.18	30	P	P	10 35 18.6	-0.5
K48A	Perry baz=329	82.22	33	P	P	10 35 19.4	+0.1
WMOK	Wichita Mounta baz=322	82.24	47	P	P	10 35 20.0	+0.4
F55A	Otter Lake baz=334	82.26	27	P	P	10 35 18.8	-0.6
BANO	Bancroft baz=333	82.48	28	P	P	10 35 20.1	-0.5
L47A	Sherwood baz=328	82.50	34	P	P	10 35 20.6	-0.2
G55A	Calabogie baz=333	82.66	27	P	P	10 35 20.8	-0.7
P43A	Skaggs, Pawnee baz=326	82.68	38	P	P	10 35 21.4	-0.3
PLVO	Plevna baz=333	82.74	27	P	P	10 35 21.5	-0.5
L48A	N Adams baz=329	82.83	34	P	P	10 35 22.3	-0.2
ORIO	Orleans, Innes baz=334	82.87	26	P	P	10 35 22.0	-0.5
SFIN	Lafayette baz=327	83.09	36	P	P	10 35 23.3	-0.5
CCM	Cathedral Cave baz=325	83.22	40	P	P	10 35 24.3	-0.2
N47A	Urbana baz=328	83.24	35	P	P	10 35 24.1	-0.5
K51A	Iona Station baz=330	83.26	31	P	P	10 35 24.3	-0.4
ABTX	Abilene, Hawle baz=322	83.44	49	P	P	10 35 26.1	+0.3
P46A	Rosedale baz=327	83.68	37	P	P	10 35 27.1	+0.3
TXAR	Lajitas Array comp=Z,2.9nm,0.5s,baz=294,slow=4.4,SNR=104	83.78	54	P	P	10 35 28.5	+0.9
N49A	Columbus Grove baz=329	83.80	34	P	P	10 35 27.5	+0.1
U40A	Yellville baz=325,SNR=9.4	83.87	42	P	P	10 35 27.8	0.0
O48A	Farmland baz=329	83.98	35	P	P	10 35 28.2	-0.1
W39A	Magazine baz=324	84.36	44	P	P	10 35 30.3	0.0
O49A	Covington baz=329	84.37	35	P	P	10 35 30.1	-0.1
S44A	Carbondale baz=326,SNR=7.1	84.41	39	P	P	10 35 30.7	+0.2
K55A	Perry baz=333	84.47	29	P	P	10 35 30.4	-0.3
P48A	Milroy baz=328	84.55	36	P	P	10 35 31.7	+0.6
M53A	WI Miller and baz=331	84.68	32	P	P	10 35 31.9	+0.1
O50A	Cable baz=329	84.68	34	P	P	10 35 32.0	+0.2
P49A	Miami Univ. Ec baz=329	84.77	35	P	P	10 35 32.3	+0.1
ACSO	Alum Creek Sta baz=330	84.86	34	P	P	10 35 32.7	0.0
Q48A	North Vernon baz=328	84.88	36	P	P	10 35 32.7	-0.1
M54A	Oil Creek Stat baz=332	84.98	31	P	P	10 35 33.1	-0.2
MIAR	Mount Ida baz=324	84.99	44	P	P	10 35 33.9	+0.5
JCT	Junction City baz=322	85.03	50	P	P	10 35 34.2	+0.5
P50A	Jamestown baz=329	85.08	34	P	P	10 35 33.9	+0.1
O51A	Pataskala baz=330	85.08	33	P	P	10 35 34.1	+0.3
WHTX	Lake Whitney, baz=323	85.08	48	P	P	10 35 34.4	+0.5
W41B	Gary Mavity, V baz=325	85.11	43	P	P	10 35 34.5	+0.5
Q49A	Aurora baz=329	85.15	36	P	P	10 35 34.6	+0.5
N53A	Lisbon baz=331	85.17	32	P	P	10 35 34.7	+0.5
WCI	Wyandotte Cave baz=328	85.23	37	P	P	10 35 34.7	+0.1
M55A	Ridgway baz=332	85.34	30	P	P	10 35 35.4	+0.3
N54A	Moraine State baz=332	85.35	31	P	P	10 35 35.4	+0.3
X40A	Basin Creek Fa baz=325	85.39	43	P	P	10 35 36.1	+0.7
O52A	Adamsville baz=330	85.40	33	P	P	10 35 35.6	+0.3
P51A	Williamsport baz=330	85.47	34	P	P	10 35 36.0	+0.2
O53A	New Philadelph baz=331	85.52	32	P	P	10 35 36.0	+0.1
M56A	Emporium baz=333	85.53	30	P	P	10 35 36.0	+0.1
BINY	Binghamton baz=334	85.63	28	P	P	10 35 36.6	+0.1
Q51A	Peebles baz=330	85.75	34	P	P	10 35 37.1	0.0
L58A	Harry Jones Me baz=334	85.82	28	P	P	10 35 37.3	-0.1
N55A	Marion Center baz=332	85.87	31	P	P	10 35 38.0	+0.3
O54A	Avella baz=331	85.89	32	P	P	10 35 38.1	+0.3
T47A	Sharon Grove baz=328	85.94	38	P	P	10 35 38.6	+0.6
R50A	Paris baz=329	86.00	36	P	P	10 35 38.6	+0.3
S49A	Springfield baz=329	86.03	36	P	P	10 35 38.8	+0.3
P53A	Whipple baz=331	86.11	33	P	P	10 35 39.0	+0.1
M58A	Price's Panora baz=334	86.22	29	P	P	10 35 39.3	0.0
O55A	Ligonier baz=332	86.26	31	P	P	10 35 39.5	-0.1
R51A	Hillsboro baz=330	86.28	35	P	P	10 35 40.0	+0.3
WVT	Waverly baz=327	86.34	39	P	P	10 35 40.1	+0.1
P54A	Burton baz=331	86.36	32	P	P	10 35 40.4	+0.4
SSPA	Standing Stone baz=333	86.38	30	P	P	10 35 40.0	-0.1
N57A	Milroy baz=333	86.39	30	P	P	10 35 40.5	+0.3
O56A	Blue Knob Stat baz=332	86.47	31	P	P	10 35 40.6	0.0
S50A	Richmond baz=329	86.49	36	P	P	10 35 41.2	+0.6
T49A	Edmonton baz=328	86.50	37	P	P	10 35 41.4	+0.6
Q53A	Leroy baz=331	86.61	33	P	P	10 35 41.6	+0.4
P55A	Reedsville baz=332	86.68	32	P	P	10 35 42.3	+0.7
NATX	Nacogdoches baz=324	86.70	46	P	P	10 35 42.7	+1.0
Q54A	Coxs Mills baz=331	86.77	33	P	P	10 35 42.3	+0.4
S51A	Beattyville baz=330	86.85	35	P	P	10 35 42.6	+0.2
O57A	Amberson baz=333	86.85	30	P	P	10 35 42.5	+0.2
N59A	State Game Lan baz=334	86.86	28	P	P	10 35 42.8	+0.5
T50A	Nancy baz=329	86.87	37	P	P	10 35 42.8	+0.3
R53A	Hurricane baz=330	86.90	34	P	P	10 35 42.8	+0.1
U49A	Red Boiling Sp baz=328	86.90	37	P	P	10 35 42.9	+0.2
W46A	Michie baz=327	86.93	40	P	P	10 35 43.1	+0.3
Q55A	Buckhannon baz=332	87.04	32	P	P	10 35 44.0	+0.6
P56A	Dayton Farm, R baz=332	87.05	31	P	P	10 35 43.8	+0.5
V48A	Smith Brothers baz=328	87.11	39	P	P	10 35 43.9	+0.2
O58A	Lewisberry baz=333	87.17	30	P	P	10 35 44.2	+0.3
T51A	Gray baz=329	87.28	36	P	P	10 35 44.8	+0.3
X46A	Booneville baz=327	87.32	40	P	P	10 35 44.9	+0.2
U50A	Jamestown baz=329	87.38	37	P	P	10 35 45.2	+0.2
R54A	Victor baz=331	87.41	33	P	P	10 35 45.3	+0.3
V49A	McMinnville baz=328	87.48	38	P	P	10 35 45.4	-0.1
P58A	Pank, Wackersv baz=333	87.61	30	P	P	10 35 46.0	+0.1
S54A	Dingess, Beckl baz=331	87.61	34	P	P	10 35 46.1	+0.1
Q57A	Strasburg baz=332	87.61	31	P	P	10 35 46.1	+0.1
R55A	Marlinton baz=332	87.65	33	P	P	10 35 46.3	0.0
X47A	Russelville baz=327	87.68	40	P	P	10 35 46.5	+0.1
TZTN	Tazewell baz=330	87.81	36	P	P	10 35 47.1	+0.1
T53A	Wise baz=330	87.84	35	P	P	10 35 47.6	+0.4
W49A	Belvidere baz=328	87.88	39	P	P	10 35 47.6	+0.3
P60A	Greenville baz=334	87.89	29	P	P	10 35 47.5	+0.3
SWET	Sewanee comp=Z,9.0nm,0.9s	87.94	38	eP	P	10 35 47.5	-0.1
S55A	Lewisburg baz=331	87.95	33	P	P	10 35 48.0	+0.3
U52A	Thorn Hill baz=330	88.01	36	P	P	10 35 47.9	0.0
X48A	Hartselle baz=328	88.10	39	P	P	10 35 48.4	+0.1
V51A	Loudon baz=329	88.11	37	P	P	10 35 48.5	+0.1
T54A	Tazewell baz=331	88.15	34	P	P	10 35 48.8	+0.1
W50A	Signal Mountai baz=329	88.22	38	P	P	10 35 49.2	+0.2
R57A	Stanardsville baz=332	88.23	32	P	P	10 35 49.1	+0.2
U53A	Fall Branch baz=330	88.36	35	P	P	10 35 49.8	+0.3
V52A	Sevierville baz=330	88.39	36	P	P	10 35 49.6	-0.1
W51A	Cleveland baz=329	88.49	37	P	P	10 35 50.0	-0.1
Y48A	Jasper baz=328	88.49	40	P	P	10 35 50.0	-0.2
S57A	Dark Hollow, R baz=332	88.54	32	P	P	10 35 50.5	+0.1
X50B	Fort Payne baz=328	88.70	38	P	P	10 35 51.0	-0.2
Y49A	Blount Mountai baz=328	88.88	39	P	P	10 35 52.4	+0.3
Y50A	Piedmont baz=328	89.15	39	P	P	10 35 53.5	+0.3
W53A	Cullowhee baz=330	89.15	36	P	P	10 35 53.2	-0.2
X52A	Dahlonega baz=329	89.33	37	P	P	10 35 54.6	+0.5
Z49A	Columbiana baz=328	89.38	40	P	P	10 35 54.7	+0.3
Y51A	Rockmart baz=329	89.43	38	P	P	10 35 54.9	+0.2
Z50A	Ashland baz=328,SNR=9.0	89.60	39	P	P	10 35 55.6	+0.2
W54A	Cherokee Point baz=330	89.62	36	P	P	10 35 55.7	+0.2
X53A	Estanollee baz=330	89.67	37	P	P	10 35 55.7	+0.1
V56A	Mocksville baz=331	89.67	34	P	P	10 35 55.6	0.0
Y52A	Lilburn baz=329	89.89	38	P	P	10 35 56.7	0.0
WIN	Windhoek	130.75	279	ePKPdf	PKPdf	10 42 05.9	-1.1
WIN	Windhoek	130.75	279	ePKIKP	PKPdf	10 42 05.9	-1.1
LPAZ	La Paz comp=Z,0.9nm,0.8s,baz=326,slow=7.3,SNR=3.9	140.62	52	PKP	PKiKP	10 42 27.7	-1.1
BDFB	Brasilia comp=Z,1.6nm,0.3s,baz=0.0,slow=0.0,SNR=5.2	148.44	21	PKPbc	PKPbc	10 42 43.0	+0.2
BDFB	Brasilia	148.44	21	PKP2	PKPbc	10 42 43.0	+0.2
BDFB	comp=Z,2.0nm,0.4s			pmax	pmax		

ISN ***29*** *10:27:17.1±1.2, 37°.30N×42°.43E, h8^{km}±6^{km}, ML3.0*
DDA ***29*** *10:27:19.6, 37°.32N×42°.36E, h7^{km}±5^{km}, ML3.0*
ISC 29 10:27:18.7±1.4**, 37°.23N**±0°.03×**42°.41E**±0°.03**, h5**^{km}±11^{km}**, n17, σ1^{s}37**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRN	Sırnak	0.26	0	i P	Pb	10 27 24.1	-1.8
SIRN				i S	Sg	10 27 26.3	-1.1
SIRN	comp=Z,23μm,0.2s			IAML_P			
SRTM	Siirt_Merkez	0.85	333	i P	Pb	10 27 35.0	-1.0
SRTM				i S	Sg	10 27 45.2	-0.9
MSL	Mosul	1.00	146	ePg	Pb	10 27 37.0	-1.5
MSL				eSg	Sn	10 27 52.0	-1.8
HAKT	HAKKARI	1.08	72	i P	Pn	10 27 40.6	-0.1
HAKT				i S	Sn	10 28 00.8	+4.6
BTMN	Batman	1.12	306	i P	Pn	10 27 40.7	-0.4
BTMN				i S	Sb	10 27 55.4	-0.1
BTMN	comp=Z,1μm,0.4s			IAML_P			
GEVA	Gevas	1.19	25	i P	Pn	10 27 43.6	+1.5
GEVA				i S	Sn	10 27 58.5	-0.3
BLIS	Bitlis-Merkez	1.20	349	i P	Pn	10 27 42.2	-0.1
MARD	Mardin	1.30	274	i P	Pb	10 27 43.8	+0.1
MARD				i S	Sn	10 28 01.9	+0.4
SVAN	Silvan-Diyarba	1.33	314	i P	Pb	10 27 44.6	+0.5
SVAN				i S	Sb	10 28 01.6	+0.1
YOVA	Hakkari_Yksek	1.54	76	i P	Pg	10 27 49.7	+1.6
MUSM	Mu-Merkez	1.65	335	i P	Pb	10 27 48.8	-0.8
MUSM				i S	Sn	10 28 08.5	-1.6
DIYA	Diyarbakir	1.95	291	i P	Pb	10 27 54.0	-0.6
DIYA				i S	Sg	10 28 20.6	-0.6
HANI	Diyarbakir_Han	1.98	307	i P	Pn	10 27 53.2	+0.3
HANI				i S	Sb	10 28 20.0	-0.3
BNGL	BINGOL	1.98	330	i P	Pb	10 27 55.0	-0.3
BNGL				i S	Sn	10 28 18.2	-0.2
IKRK	Kirkuk	2.40	139	ePn	Pn	10 27 58.5	-0.1
IKRK				eSn	Sb	10 28 30.0	-2.3
BHD	Baghdad	4.27	157	ePn	Pn	10 28 25.0	+0.7
BHD				eSn	Sn	10 29 15.0	+0.6
RTB	Rutbah	4.54	203	ePn	Pn	10 28 30.0	+2.0
RTB				eSn	Sn	10 29 21.0	-0.1

MEX 29 10:49:35.0±0.7**, 15°.86N**×**97°.23W, h6**^{km}±3^{km}**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	1.08	95	i P	Pg	10 49 52.6	-3.1
HUIG				eS	Sg	10 50 06.9	-2.9
VHO	Vista Hermosa	1.29	21	i P	Pn	10 49 56.0	-3.8
VHO				eS	Sg	10 50 12.1	-4.6
TLIG	Tlapa	2.12	323	i P	Pn	10 50 08.6	-2.6
TLIG				i S	Sn	10 50 33.8	-4.2

IDC ***29*** *10:50:55.5±0.6, 13°.93N×125°.08E, h0^{km}, mb4.3/16, mb1 4.5/19, mb1mx4.3/36, mbtmp4.4/19, ML4.7/3, MS3.4/12, Ms1 3.4/12, ms1mx3.1/42, Error ellipse: s-maj=21.0km s-min=12.4km az=84.0*
ISCJB ***29*** *10:50:57.6±1.1, 13°.96N±0°.02×125°.04E±0°.03, h27^{km}±8^{km}, mb4.5/37, MS3.3/6, Error ellipse: s-maj=5.5km s-min=3.3km az=162.1*
MAN ***29*** *10:50:57.6, 14°.02N×125°.09E, h48^{km}, mb5.1, ML4.0, MS4.1*
DJA ***29*** *10:51:00.0±0.6, 14°N±5°×12°5E±°, h10^{km}, M4.8/15, mB5.2/4, mb4.9/15, Mw(mB)4.6/4*
NEIC ***29*** *10:51:00.8±0.8, 13°.88N×125°.07E, h36^{km}±7^{km}, mb4.6/20, Error ellipse: s-maj=21.0km s-min=4.4km az=96.0*
ISC 29 10:50:57.0±1.8**, 13°.93N**±0°.03×**125°.04E**±0°.04**, h12**^{km}±11^{km}**, n98, σ1^{s}90**/110**, mb4.5**/37**, MS3.3**/7**, 4C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	0.93	249	eP	Pb	10 51 15.3	+0.3
PVCP				eS	Sb	10 51 27.3	0.0
CNP	Catarman	1.46	195	eP	Pb	10 51 24.2	0.0
CNP				eS	Sb	10 51 43.5	+0.9
MMPH	Masbate	2.09	222⇓	eP	Pn	10 51 33.0	+1.1
MMPH				i S	Sn	10 51 58.9	+1.2
BESP	Borongan	2.35	171	eP	Pn	10 51 35.6	+0.1
BESP				eS	Sn	10 52 02.7	-1.5
AUQP	San Andres	2.38	256	eP	Pb	10 51 38.5	-1.3
AUQP				eS	Sg	10 52 17.3	+3.7
GQP	Guinayangan	2.52	270⇑	eP	Pn	10 51 38.3	+0.5
GQP				eS	Sn	10 52 06.6	-2.0
PLP	Palo	2.75	181⇑	eP	Pn	10 51 42.4	+1.4
PLP				i S	Sn	10 52 14.2	0.0
OCLP	Ormoc	2.89	188	eP	Pn	10 51 43.3	+0.3
OCLP				eS	Sb	10 52 22.1	-1.9
POLP	Polilio Island	3.11	285	eP	Pn	10 51 46.1	+0.1
POLP				eS	Sn	10 52 22.2	-0.9
BOAC	Boac	3.15	262	eP	Pn	10 51 47.2	+0.8
BOAC				eS	Sn	10 52 24.5	+0.6
RCP	Roxas	3.25	224⇑	eP	Pn	10 51 49.0	+1.1
RCP				eS	Sn	10 52 27.4	+0.8
OTRP	Odiongan	3.33	242	eP	Pn	10 51 49.2	+0.2
LLP	Lapu-Lapu	3.74	196	eP	Pn	10 51 55.6	+1.0
LLP				eS	Sn	10 52 31.5	-7.2
MSLP	Maasin	3.78	183	eP	Pn	10 51 56.9	+1.8
MSLP				eS	Sb	10 52 45.5	-3.9
BALP	Baler	3.81	299	eP	Pn	10 51 52.8	-2.8
BALP				eS	Sn	10 52 34.0	-6.2
TGY	Tagaytay City 119nm,0.3s,baz=139,slow=4.1,SNR=5.6	3.99	273	Pn	Pn	10 51 58.6	+0.5
TGY	47nm,0.3s,baz=270,slow=17,SNR=1.6			Sn	Sg	10 53 02.3	-3.0
TGY	comp=Z,789nm,18.4s,baz=52,slow=42			LR	LR	10 53 44.9	
PALP	Palanan	4.01	321	eP	Pn	10 51 56.4	-2.0
PALP				eS	Sn	10 52 44.2	-1.1
SJMP	San Jose	4.09	250	eP	Pn	10 52 01.9	+2.4
CAUP	Cauayan	4.32	314	eP	Pn	10 52 02.2	-0.3
CAUP				eS	Sn	10 52 50.9	-1.9
LUBP	Lubang	4.66	268	eP	Pn	10 52 06.3	-1.0
SMPP	San Manuel, Pa	4.76	298	eP	Pn	10 52 06.0	-2.6
SMPP				eS	Sn	10 52 59.3	-4.5
CVP	Callao Caves	4.87	321⇑	iP	Pn	10 52 09.0	-1.1
CVP				i S	Sn	10 52 59.5	-7.0
APYP	Conner	5.35	317	eP	Pn	10 52 18.4	+1.6
APYP				eS	Sn	10 53 16.4	-2.0
BOLP	Bolinao	5.52	297	eP	Pn	10 52 18.8	-0.3
BOLP				eS	Sn	10 53 19.2	-3.4
ABRA	Dolores	5.57	312	eP	Pn	10 52 22.0	+2.2
ABRA				eS	Sn	10 53 23.2	-0.7
DAV	Davao City (W) comp=Z,584nm,18.4s,baz=6.0,slow=46	6.84	176	LR	LR	10 56 09.1	
YULB	Yu-li	10.06	340	ePn	Pn	10 53 22.3	+0.9
SSLB	Suanglung	10.54	339	ePn	Pn	10 53 30.6	+2.5
YHNB	Yeheng	11.23	343	ePn	Pn	10 53 39.6	+2.0
SIJI	Sorong 1.4nm,0.3s,baz=336,slow=20,SNR=4.9	15.94	157	Pn	P	10 54 43.4	-1.6
NLAI	Namlea 60nm,0.6s	17.18	173	P	Pn	10 54 55.3	-1.8
TTSI	Tana Toraja	17.64	197	P	P	10 55 03.4	-0.4
SPSI	Sidrap Palu 40nm,0.8s	18.53	197	P	Pn	10 55 13.9	+0.1
BNSI	Bone	18.86	195	P	Pn	10 55 17.8	0.0
GUMO	Guam comp=Z,98nm,19.8s,baz=250,slow=33	19.26	89	LR	LR	11 01 25.2	
KAPI	Kappang 2.0nm,0.3s,baz=358,slow=11,SNR=5.9	19.54	196	P	Pn	10 55 25.2	-0.8
KAPI	comp=Z,112nm,20.8s,baz=66,slow=37			LR	LR	11 03 06.8	
KAPI	Kappang 39nm,1.1s	19.54	196	ePn	Pn	10 55 26.4	+0.4
BKSI	Bulukumba	19.74	195	P	P	10 55 25.5	-1.4
JNU	Nakatsue comp=Z,89nm,18.8s,baz=158,slow=37	19.83	15	LR	LR	11 03 08.5	
NONG	Nongkai 0.3nm,1.5s,112nm	21.44	284	P	P	10 55 49.6	+4.3
EDFI	Ende, Flores	22.78	189	P	P	10 55 57.8	-1.9
PBKT	Sadao Pong 3.0nm,1.1s,924nm	23.37	280	P	P	10 56 08.5	+2.8
KMMI	Kalianget 101nm,0.8s,1μm	23.57	208	P	P	10 56 09.3	+1.7
KSRS	Korea Array 1.2nm,0.7s,baz=184,slow=10.0,SNR=3.6	23.57	6	P	P	10 56 06.7	-0.7
KSRS	comp=Z,63nm,19.7s,baz=208,slow=36			LR	LR	11 05 07.3	
PLAI	Plampang	23.73	198	P	P	10 56 07.6	-1.7
PAYA	Payao 21μm,1.2s	24.70	286	P	P	10 56 19.3	+1.0
XAN	Xi'an 13nm,0.9s	24.79	327	eP	P	10 56 20.0	+1.0
NGJI	Ngawi	25.09	213	P	P	10 56 22.0	+0.2
MJAR	Matsushiro Arr comp=Z,97nm,19.1s,baz=225,slow=34	25.42	25	LR	LR	11 05 27.1	
CM31	Chiang Mai Arr 14nm,0.7s	25.45	284	eP	P	10 56 25.9	+0.8
CMAR	Chiang Mai Arr 8.6nm,0.7s,baz=94,slow=7.9,SNR=40	25.45	284	P	P	10 56 25.1	0.0
CMAR	comp=Z,65nm,18.3s,baz=118,slow=38			LR	LR	11 06 53.2	
CMMT	Chiang Mai 4.3nm,0.8s	25.49	284	P	P	10 56 25.9	+0.4
LEM	Lembang 20nm,0.5s,baz=351,slow=12,SNR=4.5	26.91	221	P	P	10 56 39.1	+0.6
PSI	Prapat comp=Z,101nm,18.4s,baz=44,slow=38	28.07	249	LR	LR	11 08 54.3	
HHC	Hu-ho-hao-te	29.29	339	P	P	10 57 03.3	+3.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,14nm,4.8s						
USRK	**Ussuriysk Ar.**	**30.75**	**10**	P	**P**	**10 57 12.8**	**+0.6**
	comp=Z,9.1nm,0.7s,baz=192,slow=8.5,SNR=27						
WRA	**Warramunga Arr**	**34.88**	**165**	P	**P**	**10 57 47.6**	**-1.0**
	comp=Z,2.2nm,0.4s,baz=347,slow=11,SNR=33						
WR1	**Warramunga Arr**	**34.88**	**165**	*e*P	**P**	**10 57 47.6**	**-1.0**
WB2	**Warramunga Arr**	**34.88**	**165**	*e*P	**P**	**10 57 48.3**	**-0.3**
	comp=Z,4.5nm,0.8s						
KLR	**Kul'dur**	**35.63**	**8**	P	**P**	**10 57 55.0**	**+0.3**
	comp=Z,2.8nm,1.0s,baz=247,slow=6.7,SNR=5.5						
SONA0	**Songino Array**	**37.19**	**339**	*e*P	**P**	**10 58 09.1**	**+0.9**
SONM	**Songino Array**	**37.19**	**339**	P	**P**	**10 58 09.1**	**+0.9**
	comp=Z,3.4nm,0.8s,baz=149,slow=9.0,SNR=3.6						
GIRL	**Giralia**	**37.86**	**196**	*e*P	**P**	**10 58 14.3**	**+0.4**
	comp=Z,63nm,0.9s						
AS31	**Alice Springs**	**38.36**	**167**	*e*P	**P**	**10 58 17.9**	**-0.3**
ASAR	**Alice Springs**	**38.36**	**167**	P	**P**	**10 58 17.9**	**-0.3**
	comp=Z,6.5nm,0.4s,baz=350,slow=7.5,SNR=142						
CTAO	**Charters Tower**	**39.73**	**148**	*e*P	**P**	**10 58 29.5**	**-0.1**
	comp=Z,5.0nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**40.18**	**78**	T	T	11 42 11.7	
	baz=270,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	**40.19**	**78**	T	T	11 42 09.2	
	baz=270,slow=75,SNR=30						
H11S2	**WAKE ISLAND Hy**	**40.20**	**78**	T	T	11 42 16.5	
	baz=270,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**40.39**	**76**	T	T	11 42 31.2	
	baz=267,slow=74,SNR=62						
H11N2	**WAKE ISLAND Hy**	**40.40**	**76**	T	T	11 42 26.4	
	baz=267,slow=74,SNR=35						
H11N3	**WAKE ISLAND Hy**	**40.41**	**76**	T	T	11 42 27.4	
	baz=267,slow=74,SNR=64						
MORW	**Morawa**	**43.62**	**191**	*e*P	**P**	**10 58 59.6**	**-1.9**
	comp=Z,6.0nm,0.8s						
FORT	**Forrest**	**44.55**	**176**	*e*P	**P**	**10 59 08.6**	**-0.2**
	comp=Z,29nm,0.6s						
PETK	**Petropavlovsk-**	**46.87**	**26**	P	**P**	**10 59 27.5**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=193,slow=3.2,SNR=7.8						
PETK				LR	LR	11 20 24.1	
	comp=Z,41nm,18.8s,baz=232,slow=38						
PEA1	**Petropavlovsk-**	**46.87**	**26**	*e*P	**P**	**10 59 27.5**	**+0.5**
NWAO	**Narrogin (SRO)**	**47.19**	**189**	*e*P	**P**	**10 59 28.1**	**-1.5**
	comp=Z,10nm,0.7s						
BBOO	**Buckleboo**	**47.66**	**167**	*e*P	**P**	**10 59 33.8**	**+0.5**
	comp=Z,45nm,0.7s						
STKA	**Stephens Creek**	**48.23**	**161**	P	**P**	**10 59 38.6**	**+0.8**
	comp=Z,7.8nm,0.7s,baz=347,slow=7.1,SNR=11						
STKA	**Stephens Creek**	**48.23**	**161**	*e*P	**P**	**10 59 39.2**	**+1.4**
	comp=Z,1.6nm,0.8s						
MK32	**Makanchi Array**	**48.42**	**321**	*e*P	**P**	**10 59 41.1**	**+1.9**
MKAR	**Makanchi Array**	**48.42**	**321**	P	**P**	**10 59 41.1**	**+1.9**
	comp=Z,2.0nm,0.8s,baz=115,slow=8.6,SNR=9.1						
KSH	**Kashi**	**49.94**	**310**	*e*P	P	10 59 56.0	+4.9
KSH				pP	pwP	11 00 02.8	+2.5
KSH				S	**S**	**11 07 04.3**	**+2.8**
KSH				ScS	**ScS**	**11 09 42.0**	**-0.8**
KSH				LR	LR		
	comp=N,260nm,11.1s						
KSH				LR	LR		
	comp=E,270nm,16.6s						
ZALV	**Zalesovo Beam**	**50.86**	**331**	P	**P**	**10 59 57.5**	**-0.1**
	comp=E,1.0nm,0.5s,baz=114,slow=7.0,SNR=4.6						
ZALV				LR	LR	11 23 21.3	
	comp=E,20nm,19.6s,baz=67,slow=38						
ZAA1	**Zalesovo Array**	**50.87**	**331**	*e*P	**P**	**10 59 57.5**	**-0.2**
ABKAR	**Akbulak array**	**63.35**	**318**	*e*P	**P**	**11 01 26.9**	**+0.7**
	comp=E,3.3nm,0.7s						
BPAW	**Bear Paw Mtn.**	**74.95**	**27**	*e*P	**P**	**11 02 38.6**	**+0.7**
	comp=E,12nm,0.8s						
MCK	**McKinley**	**75.86**	**27**	*e*P	**P**	**11 02 43.1**	**0.0**
	comp=E,12nm,0.8s						
ILAR	**Eielson Array**	**76.69**	**26**	P	**P**	**11 02 47.8**	**-0.1**
	comp=E,1.6nm,0.7s,baz=234,slow=5.4,SNR=18						
EGAK	**Eagle**	**79.13**	**26**	*e*P	**P**	**11 03 01.8**	**+0.5**
	comp=E,2.2nm,0.8s						
ARCES	**ARCESS Array B**	**80.37**	**339**	P	**P**	**11 03 08.0**	**0.0**
	comp=E,2.7nm,0.9s,baz=80,slow=6.6,SNR=4.1						
CASY	**Casey**	**80.70**	**186**	*e*P	**P**	**11 03 09.3**	**-0.4**
	comp=E,5.1nm,1.1s						
FIA0	**FINESS Array S**	**82.12**	**331**	*e*P	**P**	**11 03 17.2**	**-0.3**
FINES	**FINESS Array B**	**82.12**	**331**	P	**P**	**11 03 17.2**	**-0.3**
	comp=E,1.3nm,0.8s,baz=90,slow=4.6,SNR=3.4						
AKASG	**Malin Array Be**	**82.99**	**320**	P	**P**	**11 03 22.6**	**+0.5**
	comp=E,0.4nm,0.5s,baz=60,slow=3.7,SNR=3.0						
AKBB	**Malin Array Si**	**82.99**	**320**	*e*P	**P**	**11 03 22.6**	**+0.5**
	comp=E,3.7nm,1.1s						
TXAR	**Lajitas Array**	**116.29**	**47**	PKP	**PKiKP**	**11 09 40.8**	**-0.5**
	comp=E,0.2nm,0.8s,baz=354,slow=1.8,SNR=2.7						
PLCA	**Paso Flores**	**150.02**	**156**	PKPbc	**PKiKP**	**11 10 49.7**	**+0.8**
	comp=E,1.3nm,0.9s,baz=243,slow=2.3,SNR=3.1						

IDC 29 10:56:33.3±3.6**,7°.19S**×**150°.62E,h0^{km},mb3.6**/2**,**
mb1 4.1/3**,mb1mx3.6**/28**,mbtmp3.9**/3**,ML2.5**/1**,Error ellipse: s-maj=151.7km s-min=44.9km az=127.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.07**	**237**	Pn	Pn	10 57 38.5	+1.6
	24nm,0.3s,baz=44,slow=8.2,SNR=43						
PMG				Sn	Sn	10 58 18.5	-6.8
	26nm,0.3s,baz=59,slow=19,SNR=16						
WRA	**Warramunga Arr**	**20.25**	**230**	P	P	11 01 08.5	-2.0
	1.7nm,0.5s,baz=55,slow=10,SNR=11						
ASAR	**Alice Springs**	**22.93**	**223**	P	P	11 01 39.5	+0.3
	1.2nm,0.5s,baz=53,slow=9.2,SNR=13						
TORD	**Torodi Ar. Bea**	**148.87**	**283**	PKPbc	PKPbc	11 16 23.9	-0.2
	0.3nm,0.5s,baz=77,slow=2.3,SNR=4.8						

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*SKO **29** 10:57:13.4,40°.79N×21°.31E,h15^{km},M1.6,ML1.9*
*ISCJB **29** 10:57:14.2±0.8,40°.78N±0°.04×21°.33E±0°.06,h7^{km}±4^{km}, Error ellipse: s-maj=8.3km s-min=4.6km az=39.5*
*ATH **29** 10:57:14.3,40°.75N×21°.37E,h11^{km}±2^{km},ML2.8/2,Error ellipse: s-maj=3.4km s-min=1.5km az=324.0*
*THE **29** 10:57:14.8,40°.75N×21°.35E,h6^{km}±1^{km},ML1.8/6,Error ellipse: s-maj=2.1km s-min=0.9km az=342.0*
ISC 29 10:57:14.9±1.0**,40°.72N**±0°.02×**21°.38E**±0°.04**,h3^{km}**±9^{km}**,**
n19,σ1^{s}.09/33**,1C,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.06**	**358**	P	**Pg**	**10 57 16.4**	**+0.2**
FNA				S	**Sg**	**10 57 17.3**	**+0.2**
	66μm,0.2s						
FNA	**Florina**	**0.06**	**358**	⇑*i*Pg	**Pg**	**10 57 16.4**	**+0.2**
FNA				*i* Sg	**Sg**	**10 57 17.4**	**+0.2**
FNA	**Florina**	**0.06**	**358**	P	**Pg**	**10 57 16.4**	**+0.2**
FNA				S	**Sg**	**10 57 17.4**	**+0.3**
FNA				AML	AML	10 57 17.5	
FNA				AML	AML	10 57 17.7	
NEST	**Nestorio**	**0.40**	**219**	P	**Pg**	**10 57 22.5**	**-0.1**
NEST				S	**Sg**	**10 57 28.3**	**+0.6**
	325nm,0.3s						
NEST	**Nestorio**	**0.40**	**219**	P	**Pg**	**10 57 22.5**	**-0.1**
NEST				S	**Sg**	**10 57 28.6**	**+0.8**
NEST				AML	AML	10 57 30.3	
	comp=E,726μm,0.2s						
NEST				AML	AML	10 57 30.9	
	comp=N,516μm,0.2s						
KZN	**Kozani**	**0.51**	**144**	P	**Pg**	**10 57 25.2**	**+0.5**
KZN				S	**Sg**	**10 57 32.9**	**+1.5**
	comp=N,125nm,0.3s						
KZN	**Kozani**	**0.51**	**144**	P	**Pg**	**10 57 25.2**	**+0.5**
KZN				S	**Sg**	**10 57 32.7**	**+1.3**
PENT	**Pentalofos**	**0.56**	**199**	P	**Pg**	**10 57 26.0**	**+0.4**
KPRO	**Kipourio**	**0.77**	**181**	P	**Pg**	**10 57 28.8**	**-0.8**
KPRO				S	**Sb**	**10 57 42.2**	**+0.4**
	comp=N,70nm,0.3s						
KPRO	**Kipourio**	**0.77**	**181**	P	**Pg**	**10 57 29.5**	**-0.1**
LIT	**Litokhoron**	**1.05**	**126**	P	**Pg**	**10 57 35.1**	**+0.1**
LIT				S	**Sn**	**10 57 50.9**	**-0.9**
	comp=N,48nm,0.4s						
LIT	**Litokhoron**	**1.05**	**126**	*i* Pg	**Pg**	**10 57 35.4**	**+0.4**
LIT				*i* Sg	**Sn**	**10 57 52.1**	**+0.3**
VAY	**Valandovo**	**1.08**	**56**	*e*Pg	**Pb**	**10 57 34.5**	**-1.7**
VAY				*i* Sg	**Sg**	**10 57 49.8**	**+0.2**
VAY				*e*Lg	Lg	10 57 55.5	
	comp=E,24nm,0.5s						
VAY				*e*Lg	Lg	10 57 55.7	
	comp=N,22nm,0.6s						
STIP	**Stip**	**1.15**	**32**	*i* Pg	**Pn**	**10 57 39.0**	**+1.2**
STIP				*i* Sg	**Sn**	**10 57 57.8**	**+3.7**
STIP				*e*Lg	Lg	10 57 58.6	
	comp=N,4.2nm,0.5s						
STIP				*e*Lg	Lg	10 57 58.6	
	comp=E,4.8nm,0.4s						
KNT	**Kendrikon**	**1.23**	**69**	*i* Pg	**Pn**	**10 57 38.3**	**-0.7**
KNT				*i* Sg	**Sn**	**10 57 55.1**	**-1.1**
KNT	**Kendrikon**	**1.23**	**69**	P	**Pn**	**10 57 37.9**	**-1.1**
THL	**Klokotos Trika**	**1.26**	**157**	P	**Pn**	**10 57 38.4**	**-1.0**
THL				S	**Sg**	**10 57 57.0**	**+1.8**
	comp=E,28nm,0.6s						
THL	**Klokotos Trika**	**1.26**	**157**	P	**Pn**	**10 57 38.3**	**-1.0**
AGG	**Agios Georgios**	**1.85**	**156**	P	**Pn**	**10 57 48.0**	**+0.5**

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*SOME **29** 11:02:09.1,41°.28N×71°.07E,h0^{km}*
*KRNET **29** 11:02:10.4±0.1,41°.54N×70°.89E,mb2.4*
*NNC **29** 11:02:10.7±4.0,41°.26N×71°.05E,h0^{km},mb3.0,mpv2.7, Error ellipse: s-maj=33.2km s-min=12.6km az=9.0*
ISC 29 11:02:11.2±1.4**,41°.33N**±0°.04×**71°.01E**±0°.03**,h3^{km}**±11^{km}**,**
n21,σ1^{s}.34/39**,19C-9D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.85**	**57**	⇑*i*P	**Pg**	**11 02 25.2**	**-2.4**
	baz=71						
ARK				⇑*i*S	**Sg**	**11 02 38.6**	**0.0**
	baz=71						
ARK	**Arkit**	**0.85**	**57**	⇓*i*P	**Pg**	**11 02 26.6**	**-1.0**
	baz=73						
ARK				⇓*i*S	**Sg**	**11 02 38.6**	**0.0**
	baz=73						
IUG	**Iuzhnay**	**1.10**	**318**	P	**Pg**	**11 02 32.0**	**-0.2**
	1.2nm,0.2s						
IUG				S	**Sb**	**11 02 47.6**	**0.0**
	18nm,0.5s						
IUG	**Iuzhnay**	**1.10**	**318**	*e*P	**Pg**	**11 02 32.0**	**-0.2**
	0.8nm,0.5s						
IUG				*e*S	**Sn**	**11 02 48.2**	**-1.0**
	18nm,0.5s						
BTK	**Batken**	**1.28**	**187**	⇑*i*P	**Pn**	**11 02 33.8**	**-2.2**
	baz=79						
BTK				⇑*i*S	**Sb**	**11 02 53.4**	**+0.6**
	baz=79						
ARSB	**Arslanbob**	**1.49**	**90**	⇑*i*P	**Pn**	**11 02 37.9**	**-1.0**
	baz=95						
ARSB				⇑*i*S	**Sg**	**11 03 01.4**	**+2.5**
	baz=95						
ARSB	**Arslanbob**	**1.49**	**90**	⇓*e*P	**Pg**	**11 02 40.0**	**+0.4**
	baz=97						
ARSB				⇓*i*S	**Sg**	**11 03 01.3**	**+2.4**
	baz=97						
KK31	**Karatay Array**	**1.81**	**348**	⇓Pn	**Pb**	**11 02 44.9**	**0.0**
	3.7nm,0.3s,baz=158,slow=15,SNR=46						
KK31				⇑Sn	**Sg**	**11 03 11.4**	**+2.1**
	6.9nm,0.5s,baz=159,slow=26,SNR=19						
BRLS	**Borolday**	**1.91**	**333**	Pg	**Pn**	**11 02 44.7**	**0.0**
	0.7nm,0.3s						
BRLS				Lg	Lg	11 03 10.4	
	3.1nm,0.5s						
BRLS	**Borolday**	**1.91**	**333**	*e*P	**Pn**	**11 02 44.6**	**0.0**
	8.1nm,1.0s						
BRLS				*e*S	**Sb**	**11 03 10.4**	**-0.5**
	11nm,0.6s						
AML	**Almayashu**	**2.16**	**67**	⇑*i*P	**Pn**	**11 02 48.1**	**-0.4**
	baz=72						
AML				⇑*i*S	**Sb**	**11 03 18.4**	**-0.1**
	baz=72						
AML	**Almayashu**	**2.16**	**67**	⇑*i*P	**Pn**	**11 02 49.2**	**+0.7**
	baz=73						
AML				⇑*i*S	**Sb**	**11 03 17.7**	**-0.8**
	baz=73						
MRKS	**Merke**	**2.17**	**49**	Pg	**Pb**	**11 02 50.9**	**-0.3**
	3.4nm,0.3s						
MRKS				Lg	Lg	11 03 20.8	
	3.9nm,0.4s						
MRKS	**Merke**	**2.17**	**49**	*e*P	**Pb**	**11 02 50.9**	**-0.3**
	3.4nm,0.3s						
MRKS				*e*S	**Sg**	**11 03 20.8**	**-0.1**
	3.9nm,0.4s						
EKS2	**Erkin-Say**	**2.45**	**56**	⇑*i*P	**Pn**	**11 02 51.7**	**-0.5**
	baz=61						
EKS2				⇑*i*S	**Sb**	**11 03 24.8**	**-1.9**
	baz=61						
ARLS	**Aral**	**2.54**	**77**	⇓*i*P	**Pn**	**11 02 53.5**	**+0.1**
	baz=80						
ARLS				⇓*i*S	**Sb**	**11 03 27.9**	**-1.3**
	baz=80						
UCH	**Uchtor**	**2.77**	**70**	⇑*i*P	**Pn**	**11 02 56.1**	**-0.7**
	baz=74						
UCH				⇑*i*S	**Sb**	**11 03 32.8**	**-3.3**
	baz=74						
UCH	**Uchtor**	**2.77**	**70**	⇓*e*P	**Pn**	**11 02 57.9**	**+1.1**
	baz=75						
UCH				⇓*i*S	**Sn**	**11 03 32.4**	**+1.4**
	baz=75						
KZA	**Kyzart**	**3.26**	**75**	⇑*i*P	**Pn**	**11 03 02.9**	**-0.7**
	baz=78						
KZA				⇑*i*S	**Sn**	**11 03 45.1**	**+2.0**
	baz=78						
KZA	**Kyzart**	**3.26**	**75**	⇑*e*P	**Pn**	**11 03 05.1**	**+1.5**
	baz=79						
KZA				⇑*i*S	**Sn**	**11 03 44.9**	**+1.8**
	baz=79						
SGDS	**Sogindy**	**3.42**	**50**	Pg	**Pb**	**11 03 13.3**	**+0.9**
	1.5nm,0.4s						
SGDS				Lg	Lg	11 03 58.8	
	1.3nm,0.6s						

PGC 29 11:18:35.6,61°.58N×**141°.24W,h5^{km},ML2.2**/12**,219km Wnw of Haines Jct., Yt Southern Alaska,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	**White River**	**0.28**	**43**	P	Pg	11 18 40.6	-0.6
YUK2				S	Sg	11 18 44.6	-0.3
YUK3	**Moose Creek**	**0.42**	**62**	P	Pg	11 18 43.0	-0.9
YUK3				S	Sg	11 18 48.8	-0.6
CTGM	**Chitina Glacie**	**0.62**	**184**	P	Pg	11 18 46.3	-1.2
CTGM				S	Sg	11 18 55.1	-0.5
YUK1	**Sand Pete Hill**	**0.67**	**30**	P	Pg	11 18 47.4	-1.1
YUK1				S	Sg	11 18 56.3	-0.8
PTPK	**Patty Peak**	**0.71**	**237**	P	Pg	11 18 48.4	-0.8
PTPK				S	Sg	11 18 58.3	-0.1
BALM	**Baldy**	**0.76**	**225**	P	Pg	11 18 49.0	-1.3
BALM				S	Sg	11 18 59.3	-0.9
KIAG	**Kiagna River**	**0.85**	**220**	P	Pg	11 18 50.4	-1.5
KIAG				S	Sg	11 19 01.3	-1.7
BVCY	**Beaver Creek**	**0.85**	**12**	P	Pg	11 18 51.1	-1.0
GRNC	**Granite Creek**	**0.89**	**196**	P	Pg	11 18 51.1	-1.5
GRNC				S	Sg	11 19 03.4	-0.8
TABL	**Table Mountain**	**1.15**	**177**	P	Pg	11 18 56.0	-1.6
TABL				S	Sg	11 19 11.0	-1.4
YUK4	**Talbot Arm**	**1.27**	**100**	P	Pg	11 18 58.5	-1.5
YUK4				S	Sg	11 19 15.5	-0.9
MESA	**MESA**	**1.45**	**194**	Pn	Pn	11 19 02.1	-0.6
MESA				Sg	Sb	11 19 20.8	-1.2
SAMH	**Samovar Hills**	**1.47**	**171**	Pn	Pn	11 19 02.3	-0.6
SAMH				Sg	Sb	11 19 22.5	-0.1
YUK6	**Outpost Mounta**	**1.53**	**113**	Pn	Pn	11 19 02.8	-1.1
YUK6				Sg	Sn	11 19 23.8	-0.4
PCA	**Pinnacle**	**1.57**	**162**	Pn	Pn	11 19 04.0	-0.2
PCA				Sg	Sb	11 19 25.1	-0.2
YUK5	**Granite Creek**	**1.69**	**104**	Pn	Pn	11 19 05.1	-0.9
YUK5				Sg	Sn	11 19 27.2	-0.8
YUK7	**Dusty Glacier**	**1.84**	**124**	Pn	Pn	11 19 08.6	+0.6
YUK7				Sg	Sb	11 19 33.7	+0.4
HYT	**Haines Junctio**	**1.96**	**111**	Pn	Pn	11 19 09.4	-0.3
HYT				Sg	Sb	11 19 35.8	-1.0
PNL	**Peninsula**	**2.12**	**154**	Pn	Pn	11 19 12.4	+0.6
PNL				Sg	Sb	11 19 42.0	+0.7
PAX	**Paxson**	**2.42**	**307**	Sg	Sb	11 19 49.4	-0.3
DOT	**Dot Lake**	**2.45**	**329**	Pn	Pn	11 19 15.4	-0.9
DOT				Sg	Sb	11 19 51.8	+1.2
DAWY	**Dawson**	**2.63**	**18**	Pn	Pn	11 19 18.3	-0.6
DAWY				Sg	Sb	11 19 56.2	+0.3
PLBC	**Pleasant Camp**	**3.22**	**129**	Sg	Sb	11 20 15.4	+2.8
WHY	**Whitehorse**	**3.22**	**104**	Pn	Pn	11 19 26.2	-0.7
WHY				Pg	Pb	11 19 33.4	+0.1
WHY				Sg	Sg	11 20 16.3	-2.7

WEL 29 11:25:54.3,42°S±2°×**17°4E**±°**,h11^{km}**±3^{km}**,M3.3**/18**,**
ML3.6/14**,MLv3.3**/18**,Error ellipse: s-maj=0.0km s-min=0.0km az=128.5,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.09**	**266**	P	Pg	11 25 57.3	+0.4
CMWZ				S	Sg	11 25 59.9	+1.1
BSWZ	**Blackbirch Sta**	**0.34**	**274**	P	Pb	11 26 01.9	-0.6
BSWZ				S	Sb	11 26 07.4	-0.5
TUWZ	**Tuamarina**	**0.43**	**317**	P	Pb	11 26 03.5	-0.3
BHW	**Baring Head**	**0.52**	**51**	P	Pb	11 26 05.6	+0.2
TCW	**Tory Channel**	**0.53**	**355**	P	Pb	11 26 05.3	-0.4
TCW				S	Sb	11 26 13.5	+0.2
PLWZ	**Palliser**	**0.71**	**76**	P	Pb	11 26 09.5	+0.8
MSWZ	**Moikau Station**	**0.76**	**65**	P	Pb	11 26 09.8	+0.3
CAW	**Cannon Point**	**0.84**	**41**	P	Pb	11 26 11.3	+0.4
NNZ	**Nelson**	**0.89**	**306**	P	Pb	11 26 11.7	0.0
PAWZ	**Paruwai Farm**	**0.90**	**67**	P	Pb	11 26 12.3	+0.4
KHZ	**Kahutara**	**0.90**	**221**	P	Pb	11 26 12.2	+0.4
DUWZ	**D'Urville Isla**	**0.99**	**342**	P	Pg	11 26 13.0	-0.3
MTW	**Mount Morrison**	**1.05**	**57**	P	Pb	11 26 13.9	-0.6
THZ	**Tophouse**	**1.07**	**268**	P	Pn	11 26 15.1	-0.2
TRWZ	**Traveller**	**1.07**	**72**	P	Pb	11 26 14.4	-0.4
OGWZ	**Otaki Gorge**	**1.12**	**35**	P	Pg	11 26 15.7	-0.1
HOWZ	**Holdsworth Sta**	**1.23**	**47**	P	Pn	11 26 16.8	-0.6
TMWZ	**Te Maipa**	**1.33**	**62**	P	Pn	11 26 18.1	-0.7
MRZ	**Mangatainoka R**	**1.43**	**41**	P	Pn	11 26 19.1	-1.1
TIWZ	**Tintock**	**1.52**	**51**	P	Pn	11 26 20.9	-0.5
GVZ	**Greta Valley S**	**1.56**	**218**	P	Pn	11 26 21.2	-0.7
CPWZ	**Castlepoint**	**1.63**	**60**	P	Pn	11 26 22.8	-0.1
QRZ	**Quartz Range**	**1.64**	**303**	P	Pb	11 26 24.7	+0.1
OHWZ	**Ohakea**	**1.71**	**26**	P	Pb	11 26 25.7	+0.1
PRWZ	**Pori Road**	**1.71**	**47**	P	Pn	11 26 23.8	-0.2
POWZ	**Post Office Ro**	**1.73**	**39**	P	Pn	11 26 24.4	+0.1
BFZ	**Birch Farm**	**1.79**	**54**	P	Pn	11 26 24.1	-1.0
LTZ	**Lake Taylor**	**1.85**	**235**	P	Pn	11 26 25.7	-0.3
DSZ	**Denniston Nort**	**1.89**	**269**	P	Pn	11 26 27.3	+0.8
AMCZ	**Amberley**	**1.90**	**220**	P	Pn	11 26 25.4	-1.2
DVHZ	**Dannevirke**	**2.00**	**44**	P	Pn	11 26 27.2	-0.8
WAZ	**Wanganui**	**2.05**	**14**	P	Pb	11 26 30.6	-0.8
TSZ	**Takapari Road**	**2.08**	**37**	P	Pn	11 26 29.0	-0.2
OKCZ	**Okains Bay**	**2.19**	**205**	P	Pn	11 26 28.8	-1.8
PNHZ	**Pukenui**	**2.31**	**38**	P	Pn	11 26 31.8	-0.5
MQZ	**McQueen's Vall**	**2.32**	**212**	P	Pn	11 26 30.0	-2.4
OXZ	**Oxford**	**2.32**	**226**	P	Pn	11 26 30.8	-1.6
INZ	**Inchbonnie**	**2.36**	**244**	P	Pn	11 26 33.0	0.0
AKCZ	**Akaroa Harbour**	**2.37**	**206**	P	Pn	11 26 31.4	-1.8
PREZ	**Palmer Road**	**2.40**	**357**	P	Pb	11 26 37.0	-0.5
KHEZ	**Kahui Hut**	**2.46**	**354**	P	Pb	11 26 37.9	-0.6
NBEZ	**Newall Road No**	**2.50**	**352**	P	Pb	11 26 38.1	-1.0
PKVZ	**Pokaka**	**2.57**	**18**	P	Pn	11 26 37.8	+1.9
KRHZ	**Kereru**	**2.61**	**37**	P	Pn	11 26 35.4	-0.9
BHHZ	**Black Hill Sta**	**2.61**	**31**	P	Pn	11 26 36.8	+0.4
VRZ	**Vera Road**	**2.63**	**7**	P	Pb	11 26 39.4	-2.1
WHVZ	**Whangaehu Hut**	**2.64**	**22**	P	Pn	11 26 38.6	+1.6
FWVZ	**Far West T-bar**	**2.65**	**21**	P	Pb	11 26 40.9	-1.0
TUVZ	**Tukino**	**2.67**	**23**	P	Pn	11 26 38.7	+1.4
NGZ	**Ngauruhoe**	**2.74**	**21**	P	Pn	11 26 40.1	+1.8
KAHZ	**Kahuranaki**	**2.74**	**46**	P	Pn	11 26 38.0	-0.2
WTVZ	**West Tongariro**	**2.79**	**20**	P	Pb	11 26 43.7	-0.5
KWHZ	**Kaweka Forest**	**2.81**	**35**	P	Pb	11 26 44.2	-0.3
WVZ	**Waitaha Valley**	**2.98**	**242**	P	Pn	11 26 42.1	+0.6
BKZ	**Black Stump Fm**	**3.06**	**33**	P	Pn	11 26 42.4	-0.2
RPZ	**Rata Peaks**	**3.12**	**230**	P	Pn	11 26 42.4	-1.0
HIZ	**Hauiti**	**3.25**	**7**	P	Pb	11 26 48.6	-3.3
HRRZ	**Handcock Road**	**3.67**	**25**	P	Pn	11 26 48.0	-3.0
URZ	**Urewera**	**4.08**	**32**	P	Pb	11 27 01.8	-4.3
ODZ	**Otahua Downs**	**4.26**	**218**	P	Pn	11 26 57.4	-1.6
MKAZ	**Moumakai**	**4.68**	**8**	P	Pn	11 27 09.6	+4.8
JCZ	**Jackson Bay**	**4.69**	**238**	P	Pn	11 27 10.7	+5.6

WEL 29 11:26:12.5,41°S±301°×**17°5E**±7°0**,h7^{km}**±122^{km}**,M3.2**/12**,**
ML3.6/13**,MLv3.2**/12**,Error ellipse: s-maj=0.5km s-min=0.1km az=172.4,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**1.49**	**353**	P	Pb	11 26 40.6	+0.1
WPHZ	**Waipukurau**	**1.64**	**58**	P	Pn	11 26 39.9	-1.8
MTVZ	**Mangateitei**	**1.68**	**23**	P	Pn	11 26 40.3	-2.1
DREZ	**Durham Road**	**1.78**	**349**	P	Pn	11 26 43.2	-0.5
DRZ	**Dome Shelter**	**1.81**	**24**	P	Pn	11 26 44.4	-0.1
PXZ	**Pawanui**	**1.93**	**63**	P	Pn	11 26 46.3	+0.6
KRVZ	**Karewarewa**	**2.00**	**23**	P	Pn	11 26 45.2	-1.6
KATZ	**Kakaramea**	**2.13**	**23**	P	Pn	11 26 48.5	-0.1
RITZ	**Rihia Road**	**2.18**	**26**	P	Pn	11 26 49.8	+0.6
MCHZ	**McNeill Hill**	**2.18**	**47**	P	Pn	11 26 50.7	+1.5
RATZ	**Rangitukua**	**2.25**	**23**	P	Pn	11 26 50.9	+0.7
HATZ	**Hinemaiaia**	**2.33**	**29**	P	Pn	11 26 50.9	-0.5
WATZ	**Wairara**	**2.38**	**21**	P	Pn	11 26 53.3	+1.2
MRHZ	**Matea Rd**	**2.51**	**34**	P	Pb	11 26 56.3	-1.7
KUTZ	**Kaahu Road**	**2.62**	**21**	P	Pb	11 26 58.7	-1.1
MTHZ	**Maungataniwha**	**2.69**	**40**	P	Pb	11 26 58.9	-2.1
TLZ	**Tolley Road**	**2.70**	**15**	P	Pn	11 26 54.9	-1.5
RAHZ	**Arahi**	**2.77**	**44**	P	Pb	11 27 03.1	+0.8

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*ISK **29** 11:32:20.0,39°.14N×41°.31E,h22^{km},ML2.6/5*
*DDA **29** 11:32:20.4,39°.26N×41°.40E,h7^{km}±3^{km},ML2.5*
ISC 29 11:32:21.1±0.9**,39°.27N**±0°.03×**41°.42E**±0°.03**,h16^{km}**±7^{km}**,**
n16,σ0^{s}.70/29**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRTB	**Varto-Mus**	**0.11**	**167**	PG	**Pg**	**11 32 24.6**	**-0.2**
VRTB				SG	**Sb**	**11 32 28.0**	**+0.4**
VRTB	**Varto-Mus**	**0.11**	**167**	*i* P	**Pg**	**11 32 24.8**	**0.0**
VRTB				IAML_P			
	comp=Z,33μm,0.2s						
KARO	**Karliova-Bingo**	**0.29**	**277**	PG	**Pg**	**11 32 26.7**	**-0.7**
KARO				SG	**Sg**	**11 32 31.6**	**-0.2**
BNGL	**BINGOL**	**0.38**	**214**	*i* P	**Pg**	**11 32 28.6**	**-0.4**
BNGL				*i* S	**Sg**	**11 32 34.0**	**-0.4**
ECAT	**Cat-ERZURUM**	**0.48**	**314**	*i* P	**Pg**	**11 32 30.7**	**-0.1**
ECAT				*i* S	**Sb**	**11 32 38.9**	**+0.6**
MUSM	**Mu-Merkez**	**0.55**	**173**	*i* P	**Pg**	**11 32 30.8**	**-1.2**
MUSM				*i* S	**Sg**	**11 32 38.9**	**-0.5**
BGOL	**Bingol**	**0.65**	**244**	*i* P	**Pg**	**11 32 32.7**	**-1.2**
BGOL				*i* S	**Sg**	**11 32 42.8**	**+0.3**
BGOL				IAML_P			
	comp=Z,771nm,0.2s						
YEDI	**Yedisu-Bingol**	**0.70**	**284**	PG	**Pg**	**11 32 33.7**	**-1.1**
YEDI				SG	**Sg**	**11 32 43.8**	**-0.3**
KOPR	**Koprukoy-ERZUR**	**0.79**	**25**	PG	**Pn**	**11 32 38.1**	**+0.3**
GURO	**Guroymak-BITLI**	**0.86**	**146**	PG	**Pg**	**11 32 36.4**	**-1.4**
GURO				SG	**Sg**	**11 32 48.2**	**-1.0**
EATA	**Eleskirt**	**1.01**	**54**	*i* P	**Pn**	**11 32 41.0**	**+0.1**
EATA				*i* S	**Sn**	**11 32 55.4**	**+0.4**
EATA				IAML_P			
	comp=Z,221nm,0.3s						
TUTA	**Tutak**	**1.09**	**83**	*i* P	**Pb**	**11 32 41.4**	**-0.2**
HANI	**Diyarbakir_Han**	**1.17**	**223**	*i* P	**Pn**	**11 32 42.8**	**-0.1**
HANI				*i* S	**Sg**	**11 32 59.3**	**+0.3**
HANI				IAML_P			
	comp=Z,354nm,0.3s						
SRTM	**Siirt_Merkez**	**1.34**	**163**	*i* P	**Pb**	**11 32 46.4**	**+0.6**
SRTM				*i* S	**Sg**	**11 33 05.5**	**+1.2**
BTMN	**Batman**	**1.38**	**185**	*i* P	**Pg**	**11 32 47.5**	**-0.2**
BTMN				*i* S	**Sg**	**11 33 06.5**	**+0.8**
TNCL	**Tunceli-Merkez**	**1.47**	**264**	*i* P	**Pn**	**11 32 47.5**	**+0.4**
TNCL				*i* S	**Sg**	**11 33 08.1**	**-0.4**
TNCL				IAML_P			
	comp=Z,174nm,0.2s						

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*ISCJB **29** 11:32:42.6±0.5,31°.32S±0°.04×138°.65E±0°.04,h10^{km}, Error ellipse: s-maj=5.6km s-min=4.8km az=146.7*
*IDC **29** 11:32:42.7±4.4,31°.11S×138°.81E,h0^{km},mb1 3.9/2, mb1mx3.5/24,mbtmp3.6/2,ML2.9/3,Error ellipse: s-maj=83.4km s-min=16.2km az=36.0*
*AUST **29** 11:32:44.1±0.0,31°.35S×138°.73E,h16^{km},Error ellipse: s-maj=0.5km s-min=0.3km az=271.0*
ISC 29 11:32:42.3±0.9**,31°.34S**±0°.05×**138°.66E**±0°.05**,h10^{km},n12,**
σ2^{s}.47/22**,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**0.97**	**337**	P	**Pg**	**11 33 02.1**	**+1.1**

	baz=1.0						
LCRK				S	**Sb**	**11 33 15.4**	**+1.4**
	baz=1.0						
HTT	**Hallett**	**2.10**	**174**	P	**Pn**	**11 33 19.6**	**+2.0**
	baz=2.1,SNR=217						
HTT				S	**Sn**	**11 33 45.6**	**+1.9**
	baz=2.1						
STKA	**Stephens Creek**	**2.56**	**103**	Pn	**Pn**	**11 33 25.1**	**+1.2**
	0.8nm,0.3s,baz=282,slow=11,SNR=19						
STKA				Lg	Lg	11 34 01.8	
	19nm,0.3s,baz=316,slow=9.9,SNR=11						
STKA	**Stephens Creek**	**2.56**	**103**	P	**Pn**	**11 33 25.4**	**+1.5**
	baz=2.5,SNR=19						
STKA				S	**Sn**	**11 33 56.3**	**+1.2**
	baz=2.5						
BBOO	**Buckleboo**	**2.65**	**236**	P	**Pn**	**11 33 27.1**	**+2.0**
	baz=2.7,SNR=23						
BBOO				S	**Sn**	**11 33 59.0**	**+1.6**
	baz=2.7						
INKA	**Innaminka**	**4.02**	**27**	P	**Pn**	**11 33 46.5**	**+2.5**
	baz=4.0,SNR=9.4						
INKA				S	**Sn**	**11 34 32.2**	**+1.1**
	baz=4.0						
MULG	**Mulgathing**	**4.09**	**284**	P	**Pn**	**11 33 47.6**	**+2.6**
	baz=4.1,SNR=17						
MULG				S	**Sn**	**11 34 34.1**	**+1.1**
	baz=4.1						
OOD	**Oodnadatta**	**4.38**	**323**	P	**Pn**	**11 33 50.9**	**+2.0**
	baz=4.4,SNR=36						
OOD				S	**Sn**	**11 34 41.0**	**+1.0**
	baz=4.4						
ARPS	**Mount Arapiles**	**6.02**	**155**	P	**Pn**	**11 34 12.4**	**+0.9**
	baz=6.0						
ARPS				S	**Sn**	**11 35 17.5**	**-3.0**
	baz=6.0						
ASAR	**Alice Springs**	**8.73**	**330**	Pn	**Pn**	**11 34 48.4**	**-0.3**
	0.2nm,0.3s,baz=151,slow=13,SNR=17						
ASAR				Sn	**Sn**	**11 36 21.4**	**-5.9**
	0.5nm,0.3s,baz=152,slow=22,SNR=7.1						
ASAR				Lg	Lg	11 37 16.9	
	baz=151,slow=30,SNR=2.6						
FORT	**Forrest**	**9.11**	**271**	P	**Pn**	**11 34 53.7**	**-0.2**
	baz=9.2						
FORT				S	**Sn**	**11 36 31.4**	**-5.0**
	baz=9.2						
WRA	**Warramunga Arr**	**12.00**	**340**	Pn	**Pn**	**11 35 31.8**	**-1.7**
	0.2nm,0.3s,baz=157,slow=13,SNR=14						
WRA				Sn	Sn	11 37 39.6	-7.9
	0.1nm,0.3s,baz=167,slow=23,SNR=4.2						

ISCJB ***29*** *11:35:21.3±0.7, 7°.1S±0°.1×125°.1E±0°.2, h543^{km}, mb3.4/6, Error ellipse: s-maj=22.5km s-min=13.8km az=147.6*

IDC ***29*** *11:35:22.0±1.6, 7°.19S×125°.09E, h537^{km}±20^{km}, mb3.1/6, mb1 3.1/10, mb1mx2.8/35, mbtmp3.9/10, Error ellipse: s-maj=32.4km s-min=19.4km az=58.0*

ISC 29 11:35:22.0±1.0, 7°.2S±0°.2×125°.1E±0°.2, h543^{km}, n10, σ0.^{s}79/10, mb3.5/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.78**	**292**	P	**P**	**11 36 58.0**	**-0.4**
	1.5nm,0.3s,baz=22,slow=2.5,SNR=4.7						
SIJI	**Sorong**	**8.79**	**44**	P	**P**	**11 37 27.1**	**-0.4**
	4.3nm,0.3s,baz=220,slow=12,SNR=8.1						
WRA	**Warramunga Arr**	**15.49**	**146**	P	**P**	**11 38 35.6**	**-1.1**
	0.4nm,0.3s,baz=325,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**18.40**	**154**	P	**P**	**11 39 05.1**	**+1.1**
	0.0nm,0.3s,baz=338,slow=12,SNR=2.8						
SONM	**Songino Array**	**57.26**	**345**	P	**P**	**11 44 17.9**	**-0.1**
	0.3nm,0.5s,baz=145,slow=5.3,SNR=2.4						
MKAR	**Makanchi Array**	**65.85**	**329**	P	**P**	**11 45 14.5**	**+0.5**
	0.8nm,0.5s,baz=128,slow=8.8,SNR=8.4						
PETK	**Petropavlovsk-**	**66.14**	**21**	P	**P**	**11 45 16.5**	**+0.9**
	1.5nm,0.6s,baz=206,slow=2.2,SNR=5.6						
ZALV	**Zalesovo Beam**	**69.72**	**336**	P	**P**	**11 45 36.7**	**-0.7**
	1.4nm,0.4s,baz=125,slow=5.4,SNR=4.6						
KURBB	**Kurchatov Arra**	**70.24**	**331**	P	**P**	**11 45 40.6**	**+0.1**
	1.0nm,0.6s,baz=139,slow=5.3,SNR=9.7						
BVAR	**Borovoye Array**	**75.73**	**329**	P	**P**	**11 46 12.1**	**+0.2**
	0.5nm,0.6s,baz=139,slow=5.6,SNR=4.2						

TAP 29 11:41:39.7, 24°.18N×120°.60E, h21^{km}, ML1.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCU	**Taichung**	**0.08**	**113**	*e*P	Pb	11 41 44.3	+0.6
	baz=122						
TCU				S	Sb	11 41 47.2	+0.8
	baz=122						
WCHH	**Zhanghua**	**0.10**	**200**	*i* P	Pb	11 41 44.4	-2.0
	baz=210						
WCHH				*i* S	Sb	11 41 48.2	-2.8
	baz=210						
WDJ	**Dajia District**	**0.17**	**13**	*e*P	Pb	11 41 45.0	-0.7
	baz=6.0						
WDJ				*e*S	Sb	11 41 49.0	-0.8
	baz=6.0						
DPDB	**Guoxing**	**0.33**	**116**	*e*P	Pb	11 41 47.5	+0.5
	baz=116						
DPDB				*e*S	Sb	11 41 53.6	+1.7
	baz=116						
TYC	**Yuchr**	**0.36**	**139**	P	Pb	11 41 47.9	+0.5
	baz=137						
TYC				*e*S	Sn	11 41 55.3	-0.9
	baz=137						
WJS	**Zhushan**	**0.38**	**161**	*e*P	Pb	11 41 48.3	+0.7
	baz=170						
WJS				*e*S	Sn	11 41 54.8	-1.8
	baz=170						
WDLH	**Douliu**	**0.49**	**186**	*e*S	Sn	11 41 58.4	-1.0
	baz=186						
WGK	**Gukeng**	**0.49**	**184**	*e*P	Pb	11 41 50.5	+0.8
	baz=183						
SSLB	**Suanglung**	**0.51**	**140**	*e*P	Pb	11 41 50.0	-0.1
	baz=140						
CHGB	**Renai**	**0.54**	**103**	*e*P	Pb	11 41 50.5	-0.3
	baz=102						
CHGB				*e*S	Sb	11 41 59.1	+0.9
	baz=102						
CHN5	**Tsauling**	**0.58**	**173**	*e*P	Pb	11 41 51.3	-0.1
	baz=173						
CHN5				*e*S	Sn	11 42 00.7	-1.1
	baz=173						
WHF	**Hehuan Shan**	**0.61**	**93**	S	Sn	11 42 02.3	-0.7
	baz=93						

TAP 29 11:41:47.1, 23°.30N×120°.92E, h3^{km}, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.14**	**139**	P	Pg	11 41 50.7	+0.9
	baz=128						
YUS	**Yu-Shan**	**0.20**	**9**	P	Pg	11 41 51.8	+0.8
	baz=12						
YUS				S	Sg	11 41 54.9	+1.2
	baz=12						
STYT	**Tauyuan**	**0.20**	**228**	P	Pg	11 41 51.7	+0.7
	baz=226						
STYT				*e*S	Sg	11 41 54.5	+1.0
	baz=226						
TPUB	**Ta-pu**	**0.27**	**271**	*e*P	Pb	11 41 53.4	-1.1
	baz=277						
TPUB				*e*S	Sg	11 41 57.3	+1.6
	baz=277						
WTP	**Ta-pu**	**0.28**	**260**	P	Pg	11 41 53.7	+1.1
	baz=260						
WTP				*e*S	Sb	11 41 58.3	-1.7
	baz=260						
CHN4	**Tsaushan**	**0.30**	**281**	P	Pb	11 41 54.2	-1.0
	baz=282						
TWF1	**Yuli**	**0.35**	**81**	*e*P	Pg	11 41 54.9	+1.0
	baz=81						
TWF1				S	Sg	11 41 59.4	+0.9
	baz=81						
YULB	**Yu-li**	**0.36**	**74**	*e*P	Pg	11 41 54.3	+0.3
	baz=74						
YULB				*e*S	Sg	11 41 59.4	+0.7
	baz=74						
CHN5	**Tsauling**	**0.37**	**324**	P	Pb	11 41 55.5	-0.9
	baz=325						
CHN5				S	Sb	11 42 01.2	-1.5
	baz=325						
CHN1	**Nanshi**	**0.38**	**253**	*e*P	Pb	11 41 56.0	-0.4
	baz=253						
CHN1				S	Sb	11 42 01.9	-0.8
	baz=253						
SLGT	**Liugui**	**0.39**	**220**	*e*P	Pb	11 41 55.7	-0.9
	baz=212						
SLGT				S	Sb	11 42 01.4	-1.7
	baz=212						
SNST	**Tainan City**	**0.39**	**259**	*e*S	Sb	11 42 03.1	-0.1
	baz=259						
TWK	**Hsinying**	**0.40**	**266**	*e*P	Pb	11 41 56.1	-0.7
	baz=266						
TWK				*e*S	Sb	11 42 02.5	-0.9
	baz=266						
WGK	**Gukeng**	**0.51**	**320**	*e*P	Pb	11 41 58.7	0.0
	baz=322						
WGK	**Gukeng**	**0.51**	**320**	*e*S	Pb	11 41 58.7	0.0
	baz=183						

JMA 29 12:00:10.2±0.3, 24°.84N×123°.19E, h24^{km}, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.41**	**203**	P	Pb	12 00 18.6	-0.3
YOJ				*e*S	Sb	12 00 24.7	-0.1
JYNG	**Yonagunijimaku**	**0.45**	**210**	P	Pb	12 00 19.4	-0.1
JYNG				*e*S	Sb	12 00 25.7	-0.1
IRIF	**Iriomote-Funau**	**0.70**	**136**	P	Pb	12 00 23.6	-0.2
JKRS	**Kuro-shima**	**0.96**	**129**	P	Pb	12 00 27.1	-1.0
JIJ	**Ishigaki jima**	**0.99**	**118**	P	Pn	12 00 28.2	-0.4

TAP 29 12:00:18.9, 24°.49N×121°.87E, h11^{km}, ML1.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.12**	**240**	P	Pg	12 00 22.1	+0.2
	baz=240						
NANB				S	Sg	12 00 24.1	0.0
	baz=240						
TWC	**Suao**	**0.12**	**353**	P	Pg	12 00 22.2	+0.3
	baz=357						
TWC				S	Sg	12 00 24.2	+0.1
	baz=357						
ENA	**Nanau**	**0.13**	**242**	P	Pg	12 00 22.1	+0.1
	baz=240						
ENA				S	Sg	12 00 24.2	0.0
	baz=240						
EOS1	**EOS1**	**0.25**	**76**	P	Pg	12 00 24.5	+0.5
	baz=71						
EOS1				*e*S	Sg	12 00 28.8	+1.3
	baz=71						
TWE	**Neicheng**	**0.29**	**322**	P	Pg	12 00 25.3	+0.4
	baz=324						
TWE				*e*S	Sg	12 00 29.7	+0.8
	baz=324						
NDT	**Datong Townshi**	**0.34**	**290**	P	Pb	12 00 26.4	-0.6
	baz=290						
NDT				*e*S	Sg	12 00 30.9	+0.5
	baz=290						
NACB	**Ninganchiao**	**0.40**	**218**	P	Pg	12 00 26.7	-0.1
	baz=218						
NACB				S	Sg	12 00 32.3	+0.2
	baz=218						
NNSB	**Datong**	**0.44**	**262**	*e*P	Pg	12 00 27.7	0.0
	baz=262						
NNSB				*e*S	Sg	12 00 33.8	+0.2
	baz=262						
ETLH	**Xiulin Townshi**	**0.45**	**231**	P	Pg	12 00 27.6	-0.1
	baz=231						
ETLH				*e*S	Sb	12 00 34.9	-0.8
	baz=231						
NNS	**Nan Shan**	**0.45**	**264**	*e*P	Pb	12 00 28.5	-0.5
	baz=263						
NNS				S	Sg	12 00 34.2	+0.4
	baz=263						
YHNB	**Yeheng**	**0.48**	**292**	P	Pb	12 00 29.0	-0.5
	baz=298						
YHNB				S	Sg	12 00 35.0	+0.2
	baz=298						
TIPB	**Shuangxi**	**0.48**	**356**	*e*P	Pb	12 00 29.0	-0.5
	baz=357						
TIPB				S	Sg	12 00 35.1	+0.2
	baz=357						
NSK	**Sanguang**	**0.50**	**292**	*e*P	Pg	12 00 29.1	+0.4
	baz=298						
NSK				S	Sg	12 00 35.5	+0.1
	baz=298						
WHF	**Hehuan Shan**	**0.65**	**238**	P	Pg	12 00 31.6	0.0
	baz=237						
WHF				*e*S	Sb	12 00 41.0	-0.7
	baz=237						
YM01	**YM01**	**0.71**	**338**	*e*P	Pb	12 00 33.7	+0.4
	baz=338						
YM10	**YM10**	**0.72**	**337**	*e*P	Pb	12 00 33.9	+0.4
	baz=338						
YM05	**YM05**	**0.73**	**338**	*e*P	Pb	12 00 33.8	+0.1
	baz=338						
CHGB	**Renai**	**0.76**	**236**	*e*P	Pg	12 00 33.8	+0.1
	baz=236						
CHGB				*e*S	Sb	12 00 44.8	0.0
	baz=236						

IDC ***29*** *12:32:52.3±1.5, 17°.45S×69°.62W, h148^{km}±11^{km}, mb3.6/5, mb1 3.6/7, mb1mx3.4/38, mbtmp4.0/7, Error ellipse: s-maj=24.3km s-min=15.6km az=110.0*

ISCJB ***29*** *12:32:53.7±0.6, 17°.73S±0°.04×69°.28W±0°.06, h152^{km}±5^{km}, Error ellipse: s-maj=10.0km s-min=4.3km az=33.8*

GUC ***29*** *12:32:54.3±0.4, 17°.82S×69°.50W, h156^{km}±3^{km}, ML3.6*

SCB ***29*** *12:32:57.1±2.0, 17°.77S×69°.15W, h14^{km}±17^{km}, ML3.9/2, Error ellipse: s-maj=7.5km s-min=3.7km az=2.0*

ISC 29 12:32:54.1±0.9, 17°.70S±0°.05×69°.27W±0°.07, h145^{km}±8^{km}, n29, σ1.^{s}50/45, 2C-4D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.67**	**199** ⇑	*i*P	**Pn**	**12 33 17.8**	**+1.2**
PB16				*e*S	**Sn**	**12 33 36.2**	**+2.4**
BBOJ	**La Paz, Jacaqu**	**1.26**	**55**	P	**Pn**	**12 33 21.8**	**+0.4**
PB12	**IPOC Station P**	**1.35**	**228** ⇑	*i*P	**Pn**	**12 33 21.4**	**-0.5**
PB12				*i* S	**Sn**	**12 33 41.8**	**-1.3**
PB12				IAML		12 33 42.8	
	comp=N,1µm,0.4s						
MNMC	**Minye Minye**	**1.46**	**192** ⇓	*i*P	**Pn**	**12 33 24.1**	**+0.9**
MNMC				*e*S	**Sn**	**12 33 46.2**	**+0.8**
MNMC				IAML		12 33 51.4	
	comp=E,950nm,0.4s						
MNMC	**Minye Minye**	**1.46**	**192**	P	**Pn**	**12 33 22.0**	**-1.2**
MNMC				S	**Sn**	**12 33 42.4**	**-3.1**
BBOE	**La Paz, Chanca**	**1.52**	**55**	P	**Pn**	**12 33 24.3**	**+0.2**
BS09	**Huarina**	**1.63**	**23**	P	**Pn**	**12 33 25.6**	**+0.3**
LPAZ	**La Paz**	**1.78**	**38**	P	**Pn**	**12 33 27.9**	**+0.9**
	comp=E,37nm,0.3s,baz=236,slow=6.5,SNR=780						
LPAZ				S	**Sn**	**12 33 51.8**	**-0.4**
	comp=E,6.3nm,0.3s,baz=116,slow=24,SNR=13						
LPAZ	**La Paz**	**1.78**	**38**	P	**Pn**	**12 33 27.6**	**+0.5**
LPAZ				S	**Sn**	**12 33 51.6**	**-0.6**
LPAZ				AML	AML	12 33 52.1	
	comp=E,982nm,0.5s						
BBOB	**La Paz, Bander**	**1.90**	**35**	P	**Pn**	**12 33 29.0**	**+0.7**
BBOB				S	**Sn**	**12 33 54.3**	**-0.1**
PSGC	**Pisagua**	**2.05**	**203** ⇓	*i*P	**Pn**	**12 33 29.3**	**-0.4**
PSGC				*i* S	**Sn**	**12 33 55.7**	**-1.4**
PSGC				IAML		12 33 56.6	
	comp=N,826nm,0.4s						
PSGC	**Pisagua**	**2.05**	**203**	P	**Pn**	**12 33 29.5**	**-0.2**
PSGC				S	**Sn**	**12 33 55.5**	**-1.6**
PB11	**IPOC Station P**	**2.08**	**190** ⇓	*e*P	**Pn**	**12 33 30.4**	**+0.3**
PB11				*i* S	**Sn**	**12 33 57.5**	**-0.3**
PB11				IAML		12 34 02.0	
	comp=E,340nm,0.4s						
PB11	**IPOC Station P**	**2.08**	**190**	P	**Pn**	**12 33 30.1**	**0.0**
BS05	**Cuyupaya**	**2.33**	**73**	P	**Pn**	**12 33 34.7**	**+1.4**
BS05				S	**Sn**	**12 34 03.7**	**+0.3**
PB08	**IPOC Station P**	**2.43**	**177** ⇓	*e*P	**Pn**	**12 33 35.8**	**+1.2**
PB08				*e*S	**Sn**	**12 34 06.8**	**+1.1**
PB08				IAML		12 34 14.7	
	comp=E,138nm,0.2s						
PB08	**IPOC Station P**	**2.43**	**177**	P	**Pn**	**12 33 34.7**	**+0.1**
BS10	**CO. Tuti**	**3.27**	**86**	P	**Pn**	**12 33 46.5**	**+1.3**
BS10				S	**Sn**	**12 34 24.1**	**-0.6**
PB01	**IPOC Station P**	**3.33**	**183**	*e*P	**Pn**	**12 33 45.8**	**+0.1**
PB01				*i* S	**Sn**	**12 34 24.1**	**-1.5**
PB01	**IPOC Station P**	**3.33**	**183**	P	**Pn**	**12 33 46.1**	**+0.4**
BB01	**Montecillos**	**3.84**	**96**	P	**Pn**	**12 33 53.7**	**+1.3**
BB01				S	**Sn**	**12 34 37.5**	**-0.1**
BB01				AML	AML	12 34 38.1	
	comp=E,275nm,0.5s						
LVC	**Limon Verde**	**4.90**	**176**	P	**Pn**	**12 34 07.2**	**+0.8**
	comp=E,7.9nm,0.3s,baz=9.7,slow=9.0,SNR=151						
LVC				S	**Sn**	**12 35 00.1**	**-2.7**
	comp=E,4.6nm,0.3s,baz=129,slow=17,SNR=10						
SIV	**San Ignacio**	**8.03**	**79**	P	**Pn**	**12 34 45.9**	**-2.1**
	comp=E,5.9nm,0.3s,baz=279,slow=10.0,SNR=72						
SIV				S	**Sn**	**12 36 11.7**	**-5.9**
	baz=267,slow=18,SNR=3.1						
CFA	**Coronel Fontan**	**13.88**	**176**	P	**Pn**	**12 36 05.6**	**+0.9**
	comp=E,0.3nm,0.3s,baz=5.2,slow=13,SNR=4.9						
BDFB	**Brasilia**	**20.47**	**87**	P	**P**	**12 37 22.5**	**+1.8**
	comp=E,5.2nm,0.4s,baz=257,slow=9.9,SNR=7.2						
PLCA	**Paso Flores**	**22.98**	**182**	P	**P**	**12 37 46.9**	**+0.7**
	comp=E,1.8nm,0.9s,baz=349,slow=8.3,SNR=5.0						
TXAR	**Lajitas Array**	**57.34**	**324**	P	P	12 42 22.2	-5.1
	comp=E,0.2nm,0.6s,baz=131,slow=12,SNR=3.3						
DBIC	**Dimbokro**	**68.04**	**75**	P	**P**	**12 43 37.6**	**-0.7**
	comp=E,2.6nm,0.5s,baz=231,slow=8.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**76.44**	**71**	P	**P**	**12 44 27.4**	**-0.9**
	comp=E,1.3nm,0.3s,baz=258,slow=4.8,SNR=31						

MAN ***29*** *12:33:34.0, 7°.66N×127°.27E, h1^{km}, mb5.0, ML3.9, MS3.9*

IDC ***29*** *12:33:34.4±1.7, 6°.78N×123°.76E, h0^{km}, mb3.6/3, mb1 3.7/3, mb1mx3.3/43, mbtmp3.6/3, MS3.5/1, Ms1 3.5/1, ms1mx2.5/35, Error ellipse: s-maj=27.9km s-min=18.1km az=155.0*

ISC 29 12:33:35.4±2.5, 7°.69N±0°.05×127°.15E±0°.09, h3^{km}±15^{km}, n14, σ1.^{s}03/19, mb3.5/3, 2C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.93**	**302** ⇓	*i*P	**Pg**	**12 33 53.1**	**-0.1**
BIPH				*i* S	**Sg**	**12 34 04.2**	**-1.0**
MATI	**Mati**	**1.16**	**230**	*e*P	**Pb**	**12 33 57.4**	**-0.7**
DAV	**Davao City (W)**	**1.68**	**249**	Pn	**Pg**	**12 34 08.1**	**+0.4**
	80nm,0.3s,baz=220,slow=16,SNR=3.8						
DAV				Lg	Lg	12 34 32.1	
	39nm,0.3s,baz=287,slow=19,SNR=16						
DAV				LR	LR	12 34 56.0	
	comp=Z,273nm,19.7s,baz=8.5,slow=45						
DMPH	**Davao City--Mi**	**1.74**	**250** ⇑	*e*P	**Pg**	**12 34 08.9**	**+0.1**
DMPH				*e*S	**Sg**	**12 34 32.2**	**+0.8**
BUTP	**Butuan**	**1.98**	**310**	*e*P	**Pn**	**12 34 10.3**	**+0.5**
BUTP				*e*S	**Sg**	**12 34 40.3**	**+1.2**
BUKP	**Musuan**	**2.08**	**275**	*e*P	**Pb**	**12 34 12.7**	**-1.2**
BUKP				*e*S	**Sb**	**12 34 40.9**	**+0.7**
DDMP	**Don Marcelino,**	**2.13**	**222**	*e*P	**Pn**	**12 34 11.4**	**-0.6**
DDMP				*e*S	**Sb**	**12 34 42.5**	**+0.9**
KCP	**Kidapawan**	**2.16**	**252** ⇑	*e*P	**Pn**	**12 34 12.7**	**+0.4**
KCP				*i* S	**Sb**	**12 34 40.9**	**-1.5**
CGP	**Cagayan de Oro**	**2.55**	**287** ⇓	*e*P	**Pn**	**12 34 19.4**	**+1.6**
CGP				*e*S	**Sb**	**12 34 52.3**	**-1.3**
CTBH	**Cotabato--PC H**	**2.92**	**261** ⇓	*i*P	**Pn**	**12 34 24.1**	**+1.3**
WRA	**Warramunga Arr**	**28.36**	**166**	P	**P**	**12 39 30.6**	**-0.3**
	0.6nm,0.8s,baz=338,slow=10,SNR=3.7						
ASAR	**Alice Springs**	**31.86**	**168**	P	**P**	**12 40 02.4**	**+0.4**
	0.2nm,0.7s,baz=344,slow=7.2,SNR=4.0						
USRK	**Ussuriysk Ar.**	**36.61**	**6**	P	P	12 40 53.5	+11
	2.0nm,0.8s,baz=201,slow=7.6,SNR=4.3						
GNI	**Garni**	**79.30**	**309**	LR	LR	13 24 00.1	
	comp=Z,35nm,21.9s,baz=222,slow=39						

IDC ***29*** *12:33:45.3±0.8, 16°.81S×177°.03W, h0^{km}, mb4.2/11, mb1 4.4/11, mb1mx4.1/39, mbtmp4.2/11, MS3.8/19, Ms1 3.8/19, ms1mx3.7/21, Error ellipse: s-maj=34.3km s-min=18.3km az=135.0*

NEIC ***29*** *12:33:46.6±1.2, 16°.87S×177°.14W, h10^{km}, mb4.5/29, Error ellipse: s-maj=26.2km s-min=10.8km az=150.0*

ISCJB ***29*** *12:33:48.5±0.3, 16°.93S±0°.08×177°.22W±0°.10, h33^{km}, mb4.3/36, MS3.9/20, Error ellipse: s-maj=16.1km s-min=8.7km az=38.3*

ISC 29 12:33:50.4±0.6, 16°.9S±0°.1×177°.1W±0°.2, h35^{km}, n68, σ0.^{s}96/52, mb4.4/36, MS4.0/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**16.32**	**249**	*e*LQ	LQ	12 40 45.4	
	2µm,29.2s						
DZM				*e*LR	LR	12 41 29.3	
	comp=Z,1µm,25.7s						
DZM	**Mont Dzumac**	**16.32**	**249**	LR	LR	12 41 54.6	
	comp=Z,144nm,20.3s,baz=80,slow=30						
RAR	**Rarotonga**	**16.93**	**107**	LR	LR	12 42 27.2	
	comp=Z,702nm,20.9s,baz=289,slow=31						
URZ	**Urewera**	**21.84**	**192**	P	**P**	**12 38 37.1**	**-2.7**
	12nm,0.9s,baz=36,slow=4.2,SNR=8.2						
PPT2	**Papeete2**	**26.29**	**96**	*e*LR	LR	12 45 38.2	
	comp=Z,1µm,26.2s						
PPT	**Papeete**	**26.30**	**95**	LR	LR	12 49 12.6	
	comp=Z,213nm,18.0s,baz=305,slow=35						
TBI	**Tubuai**	**26.70**	**108**	*e*LQ	LQ	12 44 45.5	
	604nm,28.8s						
TBI				*e*LR	LR	12 45 55.0	
	comp=Z,955nm,29.0s,baz=282						
RPZ	**Rata Peaks**	**28.51**	**198**	P	**P**	**12 39 44.1**	**+1.5**
	2.8nm,0.7s,baz=23,slow=11,SNR=3.4						
RPZ	**Rata Peaks**	**28.51**	**198**	*e*P	**P**	**12 39 43.2**	**+0.6**
	1.4nm,0.7s						
LBZ	**Lake Benmore**	**29.39**	**199**	*e*P	**P**	**12 39 49.5**	**-0.9**
	9.4nm,1.2s						
PMG	**Port Moresby**	**35.54**	**278**	LR	LR	12 52 27.4	
	comp=Z,66nm,21.8s,baz=80,slow=32						
TAOE	**Nuku Hiva Isla**	**36.86**	**82**	*e*LR	LR	12 50 25.0	
	comp=Z,523nm,28.5s,baz=256						
STKA	**Stephens Creek**	**40.18**	**240**	P	**P**	**12 41 23.0**	**-0.5**
	2.8nm,0.9s,baz=119,slow=7.1,SNR=3.6						
STKA				LR	LR	12 57 24.8	
	comp=Z,138nm,18.5s,baz=51,slow=35						
STKA	**Stephens Creek**	**40.18**	**240**	*e*P	**P**	**12 41 23.5**	**0.0**
	1.6nm,1.1s						
WB2	**Warramunga Arr**	**46.02**	**258**	*e*P	**P**	**12 42 09.3**	**-1.6**
	5.0nm,1.1s						
WR1	**Warramunga Arr**	**46.03**	**258**	*e*P	**P**	**12 42 13.7**	**+2.6**
WRA	**Warramunga Arr**	**46.03**	**258**	P	**P**	**12 42 13.7**	**+2.6**
	1.5nm,1.0s,baz=86,slow=7.5,SNR=3.8						
AS31	**Alice Springs**	**46.25**	**253**	*e*P	**P**	**12 42 10.2**	**-2.6**
	1.9nm,1.0s						
ASAR	**Alice Springs**	**46.25**	**253**	P	**P**	**12 42 12.6**	**-0.1**
	3.5nm,0.7s,baz=88,slow=8.3,SNR=33						
ASAR				LR	LR	13 00 53.7	
	comp=Z,470nm,18.4s,baz=102,slow=35						
CASY	**Casey**	**67.53**	**205**	*e*P	**P**	**12 44 43.6**	**+0.8**
	2.8nm,0.9s						
MJAR	**Matsushiro Arr**	**67.89**	**322**	P	**P**	**12 44 45.1**	**-0.4**
	2.0nm,0.9s,baz=161,slow=5.5,SNR=4.2						
MJAR				LR	LR	13 08 47.8	
	comp=Z,32nm,22.0s,baz=105,slow=31						
MAJO	**Matsushiro**	**67.89**	**322**	*e*P	**P**	**12 44 45.1**	**-0.4**
PETK	**Petropavlovsk-**	**73.08**	**344**	P	**P**	**12 45 16.9**	**+0.1**
	2.6nm,0.8s,baz=101,slow=7.7,SNR=7.1						
PETK				LR	LR	13 12 45.2	
	comp=Z,94nm,19.8s,baz=144,slow=32						
PEA1	**Petropavlovsk-**	**73.08**	**344**	*e*P	**P**	**12 45 16.9**	**+0.1**
QSPA	**South Pole Qui**	**73.11**	**180**	*e*P	**P**	**12 45 17.7**	**+0.6**
	4.4nm,1.1s						
KSRS	**Korea Array**	**74.82**	**318**	LR	LR	13 13 35.5	
	comp=Z,28nm,19.8s,baz=143,slow=32						
USRK	**Ussuriysk Ar.**	**76.53**	**325**	LR	LR	13 15 09.8	
	comp=Z,55nm,19.3s,baz=118,slow=32						
NV01	**Mina Array Sit**	**77.87**	**43**	*e*P	**P**	**12 45 43.8**	**-1.1**
NVAR	**Mina Array Bea**	**77.87**	**43**	P	**P**	**12 45 43.8**	**-1.1**
	1.1nm,0.9s,baz=229,slow=9.1,SNR=7.8						
NVAR				LR	LR	13 14 28.7	
	comp=Z,65nm,19.4s,baz=244,slow=31						
X16A	**Lo Mia Camp, P**	**80.61**	**50**	*e*P	**P**	**12 46 00.1**	**+0.2**
	1.9nm,1.0s						
ELK	**Elko**	**81.11**	**43**	*e*P	**P**	**12 46 02.2**	**-0.3**
	1.5nm,0.9s						
TTA	**Tatalina**	**81.31**	**10**	*e*P	**P**	**12 46 02.8**	**-0.1**
F10A	**Beach Ranch, E**	**82.68**	**37**	*e*P	**P**	**12 46 10.3**	**-0.2**
	2.7nm,0.9s						
KTH	**Kantishna Hill**	**82.78**	**11**	*e*P	**P**	**12 46 10.8**	**+0.2**
	5.4nm,1.0s						
RND	**Reindeer**	**83.06**	**12**	*e*P	**P**	**12 46 11.7**	**-0.4**
	3.6nm,0.8s						
TMUT	**Trail Mountain**	**83.08**	**46**	*e*P	**P**	**12 46 13.7**	**+0.7**
	4.3nm,1.1s						
HLID	**Hailey**	**83.09**	**41**	*e*P	**P**	**12 46 12.3**	**-0.5**
	1.8nm,0.9s						
SEY	**Seymchan**	**83.12**	**346**	P	**P**	**12 46 11.9**	**-0.3**
	3.7nm,0.8s,baz=164,slow=6.9,SNR=5.7						

PV09	**Paradox Valley**	84.14	47	*e*P	P	12 46 18.4	-0.1
PV14	**Lion Creek, Pa**	84.16	47	*e*P	P	12 46 18.0	-0.5
	4.4nm,1.0s						
WRH	**Wood River Hil**	84.16	12	*e*P	P	12 46 17.1	-0.5
	7.4nm,1.1s						
CCB	**Clear Creek Bu**	84.38	12	*e*P	P	12 46 17.8	-0.8
	4.9nm,0.8s						
TXAR	**Lajitas Array**	84.43	57	P	P	12 46 20.1	+0.2
	1.1nm,0.9s,baz=270,slow=1.9,SNR=8.8						
TXAR				LR	LR	13 17 44.7	
	comp=Z,36nm,18.6s,baz=0.0,slow=31						
ANMO	**Albuquerque**	84.53	51	*e*P	P	12 46 20.4	0.0
	2.2nm,1.0s						
COLA	**College**	84.57	12	*e*P	P	12 46 19.0	-0.5
	8.5nm,0.8s						
SCRK	**Sand Creek**	84.62	14	*e*P	P	12 46 19.0	-1.1
	4.4nm,0.9s						
ILAR	**Eielson Array**	84.67	13	P	P	12 46 19.4	-0.8
	3.7nm,0.9s,baz=226,slow=5.9,SNR=28						
ILAR				LR	LR	13 16 42.8	
	comp=Z,86nm,21.4s,baz=234,slow=30						
ILB	**Eielson Array**	84.67	13	*e*P	P	12 46 19.5	-0.6
	5.0nm,1.0s						
MCMT	**McKenzie Canyo**	84.70	40	*e*P	P	12 46 21.7	+0.6
DLMT	**Dillon**	85.12	40	*e*P	P	12 46 22.6	-0.5
	3.2nm,1.0s						
MAW	**Mawson**	85.18	199	LR	LR	13 21 23.3	
	comp=Z,100nm,21.2s,baz=103,slow=34						
REDW	**Red Top Meadow**	85.24	42	*e*P	P	12 46 23.2	-0.6
	2.1nm,1.0s						
QLMT	**Earthquake Lak**	85.58	41	*e*P	P	12 46 26.2	+0.7
BILL	**Bilibino**	85.60	354	*e*P	P	12 46 24.9	+0.2
	10nm,1.1s						
PD31	**Pinedale Array**	85.80	43	*e*P	P	12 46 26.1	-0.6
	0.3nm,0.9s						
PDAR	**Pinedale Array**	85.80	43	P	P	12 46 26.6	0.0
	0.8nm,0.9s,baz=234,slow=4.8,SNR=4.3						
DAWY	**Dawson**	85.82	16	*e*P	P	12 46 25.8	-0.2
	4.4nm,0.9s						
BOZ	**Bozeman (W)**	85.83	40	*e*P	P	12 46 26.4	-0.2
	2.2nm,1.1s						
EGAK	**Eagle**	85.97	15	*e*P	P	12 46 26.4	-0.2
	4.3nm,0.9s						
HRY	**Holter Researc**	86.26	39	*e*P	P	12 46 29.1	+0.5
CMAR	**Chiang Mai Arr**	89.73	289	LR	LR	13 24 48.8	
	comp=Z,15nm,20.5s,baz=176,slow=34						
PLCA	**Paso Flores**	91.09	133	LR	LR	13 20 26.5	
	comp=Z,55nm,18.5s,baz=221,slow=31						
YKA	**Yellowknife Ar**	92.94	24	LR	LR	13 21 04.0	
	comp=Z,11nm,21.4s,baz=224,slow=31						
TLY	**Talaya**	96.63	322	LR	LR	13 27 14.3	
	comp=Z,44nm,19.9s,baz=359,slow=33						
ULM	**Lac du Bonnet**	97.38	40	LR	LR	13 24 50.7	
	comp=Z,52nm,19.7s,baz=4.5,slow=32						
BR101	**Keskin Array S**	144.96	317	*e*PKPdf	PKPdf	12 53 24.8	+0.3
BRTR	**Keskin Array B**	144.96	317	PKP	PKPdf	12 53 24.8	+0.3
	4.9nm,0.9s,baz=79,slow=1.9,SNR=18						
GERES	**GERESS Array B**	146.98	347	PKPbc	PKPbc	12 53 29.9	+0.4
	0.5nm,0.6s,baz=17,slow=3.2,SNR=3.4						

IDC 29 12:41:47.4±48.0**, 13°.03S**×**168°.42E, h0^{km}, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.5**/32**, mbtmp3.8**/3**, Error ellipse: s-maj=825.3km s-min=117.1km az=64.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	30.94	228	P	P	12 48 06.0	-0.2
	0.6nm,0.4s,baz=42,slow=10,SNR=4.0						
WRA	**Warramunga Arr**	33.34	254	P	P	12 48 28.1	+0.5
	0.5nm,0.6s,baz=85,slow=8.9,SNR=6.0						
ASAR	**Alice Springs**	34.34	247	P	P	12 48 35.8	-0.4
	0.6nm,0.4s,baz=74,slow=9.4,SNR=22						

IDC 29 12:49:57.7±2.2**, 48°.69N**×**27°.93W, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.3**/36**, mbtmp3.4**/3**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.5**/36**, Error ellipse: s-maj=82.5km s-min=31.0km az=178.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	19.35	109	LR	LR	13 00 03.6	
	comp=Z,32nm,20.3s,baz=40,slow=31						
DAVOX	**Davos/Dischmat**	25.34	80	LR	LR	13 04 33.5	
	comp=Z,51nm,20.9s,baz=91,slow=35						
AKASG	**Malin Array Be**	36.24	65	P	P	12 57 02.1	0.0
	0.2nm,0.3s,baz=293,slow=7.2,SNR=2.1						
ILAR	**Eielson Array**	57.37	334	P	P	12 59 47.1	-0.1
	0.3nm,0.8s,baz=56,slow=5.6,SNR=4.0						
H10N2	**ASCENSION HYDR**	57.51	164	T	T	14 01 43.1	
	baz=348						
H10N3	**ASCENSION HYDR**	57.52	164	T	T	14 01 40.1	
	baz=348						
H10N1	**ASCENSION HYDR**	57.53	164	T	T	14 01 44.6	
	baz=348						
H10S1	**ASCENSION HYDR**	58.57	165	T	T	14 03 00.2	
	baz=351						
H10S3	**ASCENSION HYDR**	58.58	165	T	T	14 03 02.8	
	baz=351,slow=74						
H10S2	**ASCENSION HYDR**	58.59	165	T	T	14 03 03.6	
	baz=351,slow=74						
TXAR	**Lajitas Array**	59.49	281	P	P	13 00 02.7	0.0
	0.4nm,0.8s,baz=64,slow=6.1,SNR=5.1						
ASAR	**Alice Springs**	151.19	36	PKPbc	PKPbc	13 09 52.6	-0.4
	0.4nm,0.6s,baz=354,slow=2.3,SNR=9.1						

MAN 29 12:52:30.3, 14°.23N×**124°.09E, h6^{km}, mb4.1, ML2.9, MS2.5, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	0.63	174	*e*P	Pg	12 52 43.1	+0.6
PVCP				*e*S	Sn	12 52 55.7	-0.6
GQP	**Guinayangan**	1.62	259⇓	*e*P	Pn	12 52 58.5	-1.0
GQP				*e*S	Sb	12 53 21.4	-0.1
CNP	**Catarman**	1.80	162	*e*P	Pn	12 53 02.5	+0.6
CNP				*e*S	Sg	12 53 29.7	+1.5
BOAC	**Boac**	2.31	251	*e*P	Pn	12 53 09.2	+0.3
BOAC				*e*S	Sn	12 53 39.3	+1.6

KRSC 29 12:54:30.9±1.5**, 49°.53N**×**156°.59E, h199^{km}**±17^{km}**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	1.19	345	P	Pn	12 55 01.7	-0.1
KDTR	**Khodutka, Kamc**	2.47	22	P	Pn	12 55 16.4	+2.2
KDTR				S	Sn	12 55 49.3	+1.1
DALK	**Dalny**	3.76	20	P	Pn	12 55 30.8	+1.3
UGLR	**Uglovaya**	3.94	20	P	Pn	12 55 33.8	+2.0
AVH	**Avacha**	3.97	19	P	Pn	12 55 34.1	+1.9
KOK	**Koryaka**	3.98	18	P	Pn	12 55 33.4	+1.1
KRER	**Koryakskii**	4.01	19	P	Pn	12 55 34.8	+2.0
KRER				S	Sn	12 56 22.1	+0.5
SDLR	**Sedlovina**	4.02	20	P	Pn	12 55 34.2	+1.4
KRX	**Arik**	4.04	18	P	Pn	12 55 34.9	+1.7
SPN	**Mys Shipunski**	4.17	30	P	Pn	12 55 37.1	+2.5
SPN				S	Sn	12 56 23.7	-1.1
MKZ	**Mys Kozlova**	5.95	30	P	Pn	12 55 58.1	+0.9
MKZ				S	Sn	12 57 04.3	-1.3

MAN 29 12:56:20.9, 13°.44N×**120°.27E, h36^{km}, mb3.8, ML2.5, MS2.0, 1C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.30	356	*e*P	Pn	12 56 30.0	+1.0
LUBP				*e*S	Sn	12 56 36.4	+0.6
PGP	**Puerto Galera**	0.67	84⇑	*e*P	Pn	12 56 35.4	+1.5
PGP				*i* S	Sn	12 56 44.2	+0.9
SJMP	**San Jose**	1.28	139	*e*P	Pn	12 56 42.5	+0.3
SJMP				*e*S	Sn	12 56 58.4	+0.3

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*ISCJB **29** 13:00:52.2±0.3, 51°.48N±0°.02×16°.18E±0°.02, h0^{km}, mb3.3/1, Error ellipse: s-maj=2.2km s-min=1.9km az=23.2*

*BGR **29** 13:00:56.0±0.4, 51°.42N×16°.15E, h1^{km}, ML3.3/15, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*

*PRU **29** 13:00:55.3±0.0, 51°.44N×16°.17E, h0^{km}*

*IDC **29** 13:00:55.2±0.6, 51°.42N×16°.11E, h0^{km}, mb3.4/1, mb1 3.4/8, mb1mx3.2/50, mbtmp3.3/8, ML3.3/7, Error ellipse: s-maj=10.3km s-min=6.1km az=111.0*

*UPP **29** 13:01:00.0±3.0, 51°.82N×15°.73E, h0^{km}, ML2.2, Suspected explosion*

ISC 29 13:00:53.4±0.6**, 51°.54N**±0°.03×**16°.22E**±0°.02**, h0^{km}, n68, σ1^{s}52**/139**, 1C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.70	176	*i* Pg	Pg	13 01 07.0	+0.3
KSP				*e*Sg	Sg	13 01 14.8	-1.0
KSP	**Ksiaz**	0.70	176	*e*Pg	Pg	13 01 07.1	+0.3
KSP				*e*Sg	Sg	13 01 14.9	-0.9
CHVC	**Chvalec**	0.96	186	*e*PG	Pg	13 01 11.9	+0.2
CHVC				*e*SG	Sg	13 01 23.1	-1.0
	comp=Z,108nm,0.3s						
OSTC	**Ostas**	0.98	180	*e*PG	Pg	13 01 12.4	+0.2
OSTC				*e*SG	Sg	13 01 24.4	-0.6
	comp=Z,61nm,0.2s						
UPC	**Upice**	1.04	187	*e*PG	Pg	13 01 13.2	-0.1
UPC				*e*SG	Sg	13 01 26.1	-0.7
DPC	**Dobruska-Polom**	1.19	177	*e*Pg	Pg	13 01 16.0	-0.2
DPC				*e*Sg	Sg	13 01 31.0	-0.6
DPC	**Dobruska-Polom**	1.19	177	*e*PG	Pg	13 01 15.8	-0.4
DPC				*e*SG	Sg	13 01 31.0	-0.6
	comp=Z,72nm,0.3s						
PVCC	**Panska Ves**	1.45	226	*e*PG	Pn	13 01 20.9	0.0
PVCC				*e*SG	Sg	13 01 39.3	-0.7
	comp=Z,514nm,0.5s						
BRG	**Berggiesshubel**	1.58	246	PN	Pn	13 01 22.1	-0.5
BRG				PG	Pb	13 01 23.6	+0.1
BRG				SG	Sg	13 01 44.1	0.0
	167nm,0.5s						
BRG	**Berggiesshubel**	1.58	246	*e*Pn	Pn	13 01 22.2	-0.4
BRG				*e*Pg	Pb	13 01 23.4	0.0
BRG				*e*Sg	Sg	13 01 44.4	+0.3
GOPC	**GO Pecny, Ondr**	1.86	210	*e*PN	Pn	13 01 25.3	-1.3
GOPC				*e*PG	Pb	13 01 27.8	-0.5
GOPC				*e*SG	Sn	13 01 50.1	-0.7
PRU	**Pruhonice**	1.88	215	*e*PN	Pn	13 01 26.2	-0.6
PRU				*e*PG	Pb	13 01 28.1	-0.5
PRU				*e*SG	Sn	13 01 51.6	+0.4
	comp=Z,76nm,0.3s						
FBE	**Freiberg**	1.91	252	*e*Pg	Pb	13 01 29.5	+0.6
FBE				*e*Sg	Sg	13 01 54.1	-0.5
RAC	**Raciborz**	1.92	139	*e*Pg	Pg	13 01 29.9	-0.2
RAC				*e*Sg	Sg	13 01 56.7	+1.6
MORC	**Moravsky Berou**	1.96	154	*e*PN	Pn	13 01 27.7	-0.1
MORC				*e*SG	Sb	13 01 53.8	-1.0
MORC	**Moravsky Berou**	1.96	154	*e*Pn	Pn	13 01 27.9	0.0
MORC				*e*Sg	Sb	13 01 54.9	+0.1
CLL	**Collm**	2.03	265	*e*Pn	Pn	13 01 29.0	+0.2
CLL				*e*Pg	Pg	13 01 33.0	+0.8
CLL				*e*Sg	Sg	13 01 59.0	+0.5
	comp=Z,63nm,0.6s						
CLL	**Collm**	2.03	265	*e*Pn	Pn	13 01 29.2	+0.4
CLL				*e*Sg	Sg	13 01 58.6	+0.1
OKC	**Ostrava-Krasne**	2.10	144	*e*Pn	Pn	13 01 30.1	+0.3
OKC				*e*Pg	Pg	13 01 33.5	-0.1
OKC				*e*Sg	Sg	13 01 59.9	-0.9
OKC	**Ostrava-Krasne**	2.10	144	*e*PG	Pg	13 01 33.2	-0.4
OKC				*e*SG	Sg	13 02 00.0	-0.8
VRAC	**Vranov**	2.25	174	Pn	Pn	13 01 31.8	0.0
	comp=Z,5.6nm,0.3s,baz=345,slow=17,SNR=19						
VRAC				Lg	Lg	13 02 02.3	
	comp=Z,14nm,0.3s,baz=77,slow=22,SNR=10						
VRAC	**Vranov**	2.25	174	*e*PN	Pn	13 01 32.9	+1.1
VRAC				*e*SG	Sb	13 02 01.7	-1.5
TREC	**Trest**	2.30	192	*e*PG	Pb	13 01 35.6	-0.1
TREC				*e*SG	Sb	13 02 04.4	-0.2
KRUC	**Moravsky**	2.48	177	*e*PG	Pb	13 01 38.9	+0.1
KRUC				*e*SG	Sb	13 02 10.3	+0.4
OJC	**Ojcow**	2.62	119	*e*Pn	Pn	13 01 36.3	-0.7
OJC				*e*Pg	Pg	13 01 44.6	+1.0
OJC				*e*Sn	Sn	13 02 06.6	-2.9
OJC				*e*Sg	Sg	13 02 19.1	+1.5
TANN	**Tannenbergstha**	2.63	246	*e*Pn	Pn	13 01 37.7	+0.6
TANN				*e*Pg	Pg	13 01 43.8	0.0
TANN				*e*Sg	Sb	13 02 15.8	+1.6
NKC	**Novy Kostel**	2.72	243	*e*PN	Pn	13 01 39.0	+0.6
NKC				*e*PG	Pg	13 01 44.9	-0.6
NKC				*e*SG	Sg	13 02 20.2	-0.6
	comp=Z,99nm,0.3s						
JAVC	**Velka Javorina**	2.84	160	*e*PN	Pn	13 01 41.7	+1.7
JAVC				*e*SG	Sg	13 02 24.0	-0.6
KHC	**Kasperske Hory**	2.95	216	*e*PN	Pn	13 01 41.5	0.0
KHC				*e*PG	Pb	13 01 47.5	+0.7
KHC				*e*SN	Sn	13 02 14.2	-3.3
KHC				*e*SG	Sb	13 02 24.4	+1.1
	comp=Z,46nm,0.4s						
MOX	**Moxa**	3.04	255	*e*Pn	Pn	13 01 43.1	+0.4
MOX				*e*Pg	Pg	13 01 51.7	+0.1
MOX				*e*Sg	Sg	13 02 30.9	-0.1
MANZ	**Manzenberg**	3.04	241	*e*Pn	Pn	13 01 43.2	+0.5
MANZ				*e*Pg	Pg	13 01 51.8	+0.2
MANZ				*e*Sg	Sg	13 02 28.9	-2.0
ROTZ	**Rotzenmuhle**	3.11	237	*e*Pn	Pn	13 01 44.0	+0.4
ROTZ				*e*Sg	Sg	13 02 31.2	-2.0
SMOL	**Smolenice**	3.13	165	*e*PG	Pg	13 01 53.8	+0.5
SMOL				*e*SG	Sg	13 02 34.2	+0.4
SMOL				*e*LG	Lg	13 02 43.9	
GEC2	**GERESS Array S**	3.15	212	*e*Pn	Pn	13 01 45.3	+1.1
GEC2				*e*Sg	Sb	13 02 30.8	+1.7
GERES	**GERESS Array B**	3.15	212	Pn	Pn	13 01 44.6	+0.4
	comp=Z,1.3nm,0.3s,baz=33,slow=13,SNR=13						
GERES				Pg	Pb	13 01 50.5	+0.3
	comp=Z,6.5nm,0.3s,baz=35,slow=17,SNR=39						
GERES				Sn	Sn	13 02 20.9	-1.7
	comp=Z,5.5nm,0.3s,baz=34,slow=25,SNR=8.1						
GERES				Lg	Lg	13 02 28.9	
	comp=Z,16nm,0.3s,baz=26,slow=28,SNR=14						
LANS	**Liptovska Anna**	3.17	138	*e*PG	Pg	13 01 54.3	+0.2
LANS				*e*SG	Sg	13 02 37.2	+2.0
LANS				*e*LG	Lg	13 02 43.5	
WET	**Wettzell**	3.21	223	*e*Pn	Pn	13 01 45.6	+0.4
WET				*e*Sg	Sg	13 02 34.1	-2.5
MODS	**Modra-Piesok**	3.24	167	*e*PN	Pn	13 01 44.4	-1.1
MODS				*e*PG	Pg	13 01 54.1	-1.4
MODS				*e*SG	Sg	13 02 38.2	+0.7
MODS				*e*LG	Lg	13 02 46.4	
NIE	**Niedzica**	3.36	128	*e*P	Pg	13 01 58.0	+0.2
NIE				*e*S	Sg	13 02 41.8	+0.5
ZST	**Bratislava**	3.40	170	*e*PG	Pb	13 01 56.1	+1.7
ZST				*e*SG	Sg	13 02 40.1	-2.3
ZST				*e*LG	Lg	13 02 48.0	
VYHS	**Vyhne**	3.48	150	*e*PN	Pn	13 01 49.0	+0.2
VYHS				*e*PG	Pg	13 02 00.1	0.0
VYHS				*e*SG	Sg	13 02 45.3	0.0
CONA	**Conrad Observa**	3.62	184	*i* Pn	Pn	13 01 51.8	+1.0
	comp=Z,0.9nm,0.1s						
CONA				Sg	Sb	13 02 44.5	+1.7
	comp=Z,37nm,0.4s						
BSD	**Bornholm Skovb**	3.67	348⇑	*i*P	Pn	13 01 52.3	+1.0
BSD				*i* S	Sn	13 02 35.1	0.0
GRF	**Grafenberg Arr**	3.68	242	*e*Sg	Sg	13 02 51.2	-0.4
MOA	**Molln**	3.91	200	*i* Pn	Pn	13 01 55.0	+0.4
	comp=Z,3.5nm,0.2s						
MOA				Sg	Sb	13 02 53.2	+2.3
	comp=Z,21nm,0.4s						
KECS	**Kecovo**	4.11	136	*e*PG	Pg	13 02 12.0	-0.2
KECS				*e*SG	Sg	13 03 08.7	+3.2
KECS				*e*LG	Lg	13 03 22.4	
ARSA	**Arzberg**	4.32	186	Sg	Sb	13 03 04.8	+2.0
	comp=Z,2.9nm,0.4s						
KOLS	**Kolonicke sedl**	4.68	122	*e*PN	Pn	13 02 06.3	+1.1
KOLS				*e*PG	Pg	13 02 27.7	+4.7
KOLS				*e*SG	Sg	13 03 23.6	0.0
KOLS				*e*LG	Lg	13 04 00.2	
BLEU	**Blekinge**	4.78	357	P	Pn	13 02 08.0	+1.5
BLEU				S	Sn	13 03 00.5	-2.1
KBA	**Koelnbreinsper**	4.84	204	*i* Pn	Pn	13 02 08.6	+0.9
	comp=Z,1.9nm,0.3s						
KBA				Sg	Sb	13 03 19.6	+1.5
	comp=Z,20nm,0.6s						
SOKA	**Soboth**	4.93	190	*e*Pg	Pg	13 02 26.3	-1.4
	comp=Z,0.9nm,0.2s						
DEL	**Delary**	5.13	345	P	Pn	13 02 12.2	+0.9
DEL				S	Sn	13 03 08.4	-2.9
OBKA	**Obir**	5.15	193	*e*Sg	Sb	13 03 30.6	+3.7
	comp=Z,8.4nm,0.7s						
WTTA	**Wattenberg**	5.22	217	*e*Pn	Pn	13 02 12.5	-0.4
	comp=Z,2.1nm,0.2s						
WTTA				Sg	Sg	13 03 44.3	+3.3
	comp=Z,7.4nm,0.4s						
RETA	**Reutte**	5.39	223	*e*Pn	Pn	13 02 15.4	+0.3
	comp=Z,1.7nm,0.2s						
RETA				Sg	Sb	13 03 37.5	+3.8
	comp=Z,3.6nm,0.3s						
SQTA	**Sankt Quirin**	5.42	219	Sg	Sg	13 03 52.0	+4.5
	comp=Z,4.0nm,0.2s						
FETA	**Feichten**	5.78	221	*e*Pn	Pn	13 02 19.7	-0.7
	comp=Z,0.5nm,0.3s						
FETA				Sg	Sg	13 04 03.7	+5.0
	comp=Z,5.5nm,0.5s						
BYXU	**Byxelkrok**	5.78	4	P	Pn	13 02 22.5	+2.2
FABU	**Falkenberg**	5.84	341	P	Pn	13 02 21.9	+0.8
ASPU	**Aespoe**	5.90	2	P	Pn	13 02 24.0	+2.1
GOTU	**Gotland**	6.31	12	P	Pn	13 02 29.7	+2.2
DAVOX	**Davos/Dischmat**	6.32	224	Lg	Lg	13 04 09.7	
	comp=Z,1.0nm,0.3s,baz=312,slow=18,SNR=2.6						
AKASG	**Malin Array Be**	8.23	91	Pn	Pn	13 02 53.6	-0.2
	comp=Z,1.1nm,0.3s,baz=279,slow=12,SNR=5.2						
AKASG				Sn	Sn	13 04 23.8	-3.6
	comp=Z,1.2nm,0.3s,baz=279,slow=22,SNR=3.5						
AKASG				Lg	Lg	13 05 19.5	
	comp=Z,1.2nm,0.3s,baz=267,slow=28,SNR=4.2						
HFS	**Hagfors**	8.73	352	Pn	Pn	13 03 01.2	+0.4
	comp=Z,0.2nm,0.3s,baz=164,slow=14,SNR=8.6						
HFS				Sn	Sn	13 04 39.3	-0.5
	comp=Z,0.2nm,0.3s,baz=168,slow=26,SNR=3.0						
FINES	**FINESS Array B**	11.31	25	Pn	Pn	13 03 35.3	-0.7
	comp=Z,0.3nm,0.3s,baz=208,slow=11,SNR=8.8						
FINES				Sn	Sn	13 05 36.9	-6.0
	comp=Z,0.3nm,0.3s,baz=209,slow=25,SNR=4.6						
EKA	**Eskdalemuir Ar**	12.15	296	Pn	Pn	13 03 48.0	+0.3
	baz=101,slow=14,SNR=3.5						
ARCES	**ARCESS Array B**	18.58	10	Pn	P	13 05 09.8	-1.8
	comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=7.5						
KURBB	**Kurchatov Arra**	38.10	66	P	P	13 08 15.3	+1.7
	comp=Z,0.5nm,0.8s,baz=300,slow=8.5,SNR=3.9						

MAN 29 13:07:03.0, 7°.48N×**124°.78E, h27^{km}, mb4.6, ML3.5, MS3.3, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	0.49	35	*e*P	Pb	13 07 13.7	+0.5
BUKP				*e*S	Sn	13 07 23.5	+1.6
KCP	**Kidapawan**	0.55	147⇑	*e*P	Pn	13 07 14.9	-0.3
KCP				*i* S	Sn	13 07 31.8	+8.2
CTBH	**Cotabato--PC H**	0.59	245⇓	*i*P	Pn	13 07 15.8	+0.1
CTBH				*i* S	Sn	13 07 25.6	+1.2
CGP	**Cagayan de Oro**	0.98	355⇑	*e*P	Pb	13 07 23.9	+2.6
CGP				*e*S	Sn	13 07 38.1	+4.2

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*IDC **29** 13:07:00.8±0.9, 23°.21N×70°.45E, h0^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.7/49, mbtmp3.9/11, ML3.7/2, Error ellipse: s-maj=25.0km s-min=19.7km az=34.0*

*NEIC **29** 13:07:02.0±0.4, 23°.27N×70°.43E, h10^{km}, mb4.1/11, Error ellipse: s-maj=8.3km s-min=6.8km az=222.0*

*NDI **29** 13:07:03.3±1.4, 23°.64N×70°.42E, h15^{km}±38^{km}, ML3.5*

ISC 29 13:07:03.0±0.5**, 23°.37N**±0°.05×**70°.37E**±0°.03**, h15^{km}, n46, σ2^{s}27**/44**, mb4.0**/13**, 1C, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHJ	**Bhuj**	0.67	261	*e*P	Pn	13 07 19.2	+1.2
BHJ				*e*S	Sn	13 07 30.4	+2.1
BHJ				IAML		13 07 34.4	
	comp=N,4µm,0.2s						
BHJ				IAML		13 07 34.7	
	comp=E,2µm,0.1s						
BHV	**Bhavnagar**	2.29	134	*e*x	Sg	13 08 20.0	+3.1
BHV				*e*x	x	13 09 25.0	
BHPL	**Bhopal**	6.48	90	*e*P	Pn	13 08 37.5	-0.6
BHPL				*e*S	Sn	13 09 46.8	-5.0
BHPL				IAML		13 09 51.3	
	comp=N,18nm,0.3s						
BHPL				IAML		13 09 51.9	
	comp=E,36nm,0.5s						
NDI	**New Delhi**	8.12	48	*e*x	Sn	13 10 35.0	+3.0
NGP	**Nagpur**	8.33	104	*e*P	Pn	13 08 57.7	-5.8
NGP				*e*S	Sn	13 10 26.1	-11
GOA	**Goa**	8.48	157	*e*S	Sn	13 10 39.1	-1.8
JBP	**Jabalpur**	8.84	89⇑	*i*P	Pn	13 09 07.7	-2.6
JBP				*e*S	Sn	13 10 37.8	-12
HYB	**Hyderabad**	9.69	126	*i* P	Pn	13 09 25.0	+3.0
HYB				*e*S	Sn	13 11 13.0	+2.4
CEP	**Cherat**	10.51	7	P	Pn	13 09 33.3	0.0
NIL	**Nilore**	10.55	13	*e*Pn	Pn	13 09 33.3	-0.5
CHCP	**Chirah Chowk**	10.56	13	P	Pn	13 09 33.9	-0.1
WSAR	**Wadi Sarin**	10.79	272	Pn	Pn	13 09 37.9	+0.7
	comp=E,0.2nm,0.3s,baz=111,slow=13,SNR=3.2						
WSAR				Sn	Sn	13 11 31.9	-5.9
	comp=E,0.2nm,0.3s,baz=33,slow=17,SNR=2.4						
KBL	**Kabul**	11.20	354	*e*Pn	Pn	13 09 43.2	+0.4
KOLN	**Koldanda**	12.72	67	*e*P	Pn	13 09 59.6	-4.0
	comp=E,3.7nm,0.3s						
GKN	**Gorkha**	13.66	67	*e*P	Pn	13 10 11.0	-5.5
DMN	**Daman**	13.96	69	*e*P	Pn	13 10 16.0	-4.6
	comp=E,6.2nm,0.3s						
KKN	**Kakani**	14.15	69	*e*P	Pn	13 10 17.8	-5.5
	comp=E,7.7nm,0.4s						
PKIN	**Phulchoki**	14.20	70	*e*P	Pn	13 10 19.5	-4.5
	comp=E,16nm,0.5s						
PKI	**Pulchoki**	14.21	70	*e*P	Pn	13 10 20.0	-4.1
	comp=E,15nm,0.5s						
GUN	**Gumba**	14.70	69	*e*P	Pn	13 10 24.5	-6.3
JIRN	**Jiri**	14.90	70	*e*P	Pn	13 10 27.5	-6.2
GAR	**Garm**	15.59	360	*e*Pn	Pn	13 10 43.2	+0.9
	comp=E,9.4nm,0.7s						
GEYT	**Alibeck**	17.91	327	P	P	13 11 14.4	+2.1
	comp=E,0.7nm,0.3s,baz=171,slow=10,SNR=3.2						
GYA0B	**ALIBECK ARRAY**	17.91	327	*e*P	Pn	13 11 11.9	+0.2
	comp=E,6.0nm,1.0s						
PALK	**Pallekele**	18.83	147	*e*P	P	13 11 20.2	-2.3
	comp=E,117nm,1.8s						
LSA	**Lhasa**	19.62	67	*e*P	Pn	13 11 30.8	-2.1
	comp=E,8.8nm,0.9s						
KK31	**Karatay Array**	19.68	0	*e*P	P	13 11 31.8	+0.1
	comp=E,5.3nm,0.6s						
KKAR	**Karatay Array**	19.68	0	*e*P	P	13 11 31.8	+0.1
	comp=E,5.3nm,0.6s						
SHL	**Shillong**	19.70	79	*e*P	P	13 11 30.0	-2.1
	comp=E,12nm,0.4s						
RAYN	**Ar Rayn**	22.81	275	*e*P	P	13 12 03.6	-2.0
	comp=E,13nm,1.5s						
MK31	**Makanchi Array**	25.27	19	*e*P	P	13 12 27.9	-0.7
	comp=E,1.4nm,0.8s						
MK32	**Makanchi Array**	25.27	19	*e*P	P	13 12 29.6	+0.9
MKAR	**Makanchi Array**	25.27	19	P	P	13 12 29.6	+0.9
	comp=E,1.0nm,0.8s,baz=200,slow=8.8,SNR=6.0						
CMAR	**Chiang Mai Arr**	27.11	95	P	P	13 12 45.9	+0.3
	comp=E,0.8nm,0.6s,baz=280,slow=10.0,SNR=5.3						
ABKAR	**Akbulak array**	27.12	345	*e*P	P	13 12 46.2	+0.9
	comp=E,3.1nm,0.8s						
KURBB	**Kurchatov Arra**	27.94	11	P	P	13 12 53.3	+0.6
	comp=E,0.2nm,0.3s,baz=205,slow=9.2,SNR=2.6						
SONA0	**Songino Array**	37.61	40	*e*P	P	13 14 18.6	+1.3
SONM	**Songino Array**	37.61	40	P	P	13 14 18.6	+1.3
	comp=E,0.9nm,0.4s,baz=224,slow=9.7,SNR=5.4						
ARCES	**ARCESS Array B**	53.26	342	P	P	13 16 22.0	+1.2
	comp=E,1.5nm,0.9s,baz=108,slow=8.0,SNR=4.1						
USRK	**Ussuriysk Ar.**	53.97	51	P	P	13 16 26.4	0.0
	comp=E,0.7nm,0.6s,baz=255,slow=5.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	65.50	274	P	P	13 17 47.1	+0.9
	comp=E,1.1nm,0.7s,baz=74,slow=5.9,SNR=5.1						
TOA1	**Torodi Ar. Sit**	65.50	274	*e*P	P	13 17 47.1	+0.8
WRA	**Warramunga Arr**	75.78	119	P	P	13 18 47.9	-0.8
	comp=E,0.7nm,0.4s,baz=294,slow=7.2,SNR=11						
WR1	**Warramunga Arr**	75.78	119	*e*P	P	13 18 47.9	-0.8
AS31	**Alice Springs**	77.40	123	*e*P	P	13 18 57.0	-0.9
	comp=E,1.8nm,1.4s						
ASAR	**Alice Springs**	77.40	123	P	P	13 18 57.1	-0.8
	comp=E,1.2nm,0.8s,baz=304,slow=5.6,SNR=16						

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*ATH **29** 13:08:22.9, 34°.02N×25°.05E, h19^{km}±4^{km}, ML3.1/3, Error ellipse: s-maj=6.5km s-min=2.5km az=353.0*

*ISCJB **29** 13:08:25.2±1.9, 34°.18N±0°.05×25°.13E±0°.06, h5^{km}±16^{km}, mb3.4/2, Error ellipse: s-maj=9.3km s-min=8.3km az=14.2*

*THE **29** 13:08:26.8, 34°.24N×25°.06E, h2^{km}±2^{km}, ML2.9/4, Error ellipse: s-maj=3.4km s-min=1.3km az=156.0*

*IDC **29** 13:08:26.6±1.7, 34°.46N×25°.18E, h0^{km}, mb3.5/2,* *mb1 3.7/3, mb1mx3.3/41, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=32.0km s-min=20.6km az=91.0*

ISC 29 13:08:26.7±1.9, **34°.27N**±0°.07×**25°.06E**±0°.04, **h1**^{km}±11^{km}, **n20**, σ**0^{s}79**/32, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.78	345	P	Pg	13 08 41.9	+0.3
SIVA				S	Sb	13 08 53.9	-0.2
	2µm,0.8s						
SIVA	Sivas	0.78	345	P	Pg	13 08 41.9	+0.3
SIVA				S	Sn	13 08 56.3	-0.8
SIVA				AML	AML	13 09 01.1	
	comp=E,5225µm,0.8s						
SIVA				AML	AML	13 09 03.2	
	comp=N,3296µm,0.6s						
TMBK	Timbaki Herakl	0.84	343	P	Pg	13 08 43.4	+0.6
TMBK				S	Sb	13 08 57.1	+1.2
LAST	Lasithi	0.96	21	P	Pg	13 08 45.1	0.0
LAST				S	Sb	13 09 00.3	+0.9
	comp=N,272nm,0.6s						
LAST	Lasithi	0.96	21	P	Pg	13 08 45.0	-0.1
LAST				S	Sn	13 09 03.0	+1.3
LAST				AML	AML	13 09 09.2	
	comp=N,654µm,0.6s						
LAST				AML	AML	13 09 17.5	
	comp=E,508µm,1.0s						
GVD	Gavdhos	0.98	306	P	Pg	13 08 45.5	-0.1
GVD				S	Sb	13 09 00.9	+0.8
	comp=E,1µm,0.5s						
GVD	Gavdhos	0.98	306	P	Pg	13 08 45.2	-0.4
GVD				S	Sb	13 09 00.3	+0.2
GVD				AML	AML	13 09 01.7	
	comp=N,2330µm,0.6s						
GVD				AML	AML	13 09 02.0	
	comp=E,2343µm,0.6s						
GVDS	Gavdos	0.99	306	P	Pg	13 08 45.9	+0.3
GVDS				S	Sb	13 09 01.1	+1.0
IDI	Anoyia	1.03	352	Pn	Pg	13 08 45.9	-0.6
	comp=E,13nm,0.3s,baz=168,slow=18,SNR=21						
IDI				Sn	Sg	13 09 00.5	+0.6
	comp=E,25nm,0.3s,baz=19,slow=15,SNR=12						
KSTL	Kastelli Herak	1.04	1	P	Pg	13 08 46.2	-0.4
KSTL				S	Sg	13 09 00.4	+0.4
NPS	Neapolis	1.09	24	P	Pg	13 08 48.0	+0.3
NPS	Neapolis	1.09	24	P	Pg	13 08 47.6	-0.1
PRNS	Prines Rethymn	1.19	337	P	Pg	13 08 49.6	+0.1
PRNS				S	Sn	13 09 07.5	+0.2
ZKR	Zakros	1.28	48	P	Pg	13 08 51.0	-0.2
VAM	Vamos	1.34	328	P	Pg	13 08 51.6	-0.8
VAM				S	Sg	13 09 09.8	0.0
	comp=E,360nm,0.6s						
VAM	Vamos	1.34	328	P	Pg	13 08 51.7	-0.7
IMMV	Iera Moni Meta	1.49	324	P	Pn	13 08 53.2	-1.3
GERES	GERESS Array B	16.84	333	Pn	Pn	13 12 23.7	0.0
	comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=4.8						
TORD	Torodi Ar. Bea	29.86	231	P	P	13 14 37.5	+1.8
	comp=E,0.4nm,0.6s,baz=36,slow=8.4,SNR=3.1						
MKAR	Makanchi Array	44.34	56	P	P	13 16 36.7	-1.7
	comp=E,0.4nm,0.5s,baz=285,slow=6.5,SNR=4.4						

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*MAN **29** 13:23:45.0, 7°.68N×127°.33E, h3^{km}, mb5.0, ML3.9, MS3.9*

*IDC **29** 13:23:48.8±2.5, 7°.26N×125°.41E, h0^{km}, mb4.0/3, mb1 4.3/3, mb1mx3.6/38, mbtmp4.0/3, Error ellipse: s-maj=206.2km s-min=27.3km az=65.0*

ISC 29 13:23:44.8±2.9, **7°.70N**±0°.05×**127°.2E**±0°.1, **h11**^{km}±15^{km}, **n12**, σ**1^{s}25**/18, **mb3.7**/3, **2C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.00	299	⇓eP	Pn	13 24 04.9	+0.1
BIPH				eS	Sg	13 24 16.0	-1.1
MATI	Mati	1.23	233	eP	Pn	13 24 08.1	+0.1
MATI				eS	Sg	13 24 22.7	-1.8
DMPH	Davao City--Mi	1.82	251	⇑eP	Pg	13 24 20.9	+1.0
DMPH				eS	Sg	13 24 45.4	+1.8
BUTP	Butuan	2.04	308	eP	Pb	13 24 21.7	-0.3
BUTP				eS	Sg	13 24 50.6	0.0
BUKP	Musuan	2.17	275	eP	Pb	13 24 24.6	+0.4
BUKP				eS	Sb	13 24 52.2	+1.1
DDMP	Don Marcelino,	2.19	224	eP	Pb	13 24 23.9	-0.7
DDMP				eS	Sb	13 24 52.0	+0.1
KCP	Kidapawan	2.24	252	⇑iP	Pb	13 24 25.9	+0.5
KCP				i S	Sb	13 24 52.4	-0.9
CGP	Cagayan de Oro	2.63	287	⇓eP	Pb	13 24 30.2	-1.9
CGP				eS	Sb	13 25 04.6	+0.1
CTBH	Cotabato--PC H	3.01	261	⇓iP	Pb	13 24 36.0	-2.5
WRA	Warramunga Arr	28.34	166	P	P	13 29 46.2	+7.2
	0.7nm,0.8s,baz=342,slow=11,SNR=5.0						
ASAR	Alice Springs	31.84	168	P	P	13 30 14.8	+4.8
	4.8nm,0.3s,baz=344,slow=7.2,SNR=6.6						
MKAR	Makanchi Array	54.65	323	P	P	13 33 14.2	+0.3
	0.5nm,0.6s,baz=129,slow=8.3,SNR=5.0						

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*IDC **29** 13:36:54.9±0.9, 1°.17N×125°.96E, h0^{km}, mb4.1/6, mb1 4.3/6, mb1mx3.8/34, mbtmp4.2/6, MS3.2/4, Ms1 3.2/4, ms1mx2.7/35, Error ellipse: s-maj=73.8km s-min=17.4km az=76.0*

*ISCJB **29** 13:36:60.0±0.4, 1°.31N±0°.04×126°.19E±0°.06, h54^{km}, mb4.0/12, MS3.1/4, Error ellipse: s-maj=8.2km s-min=4.8km az=164.8*

*DJA **29** 13:36:59.1±1.2, 1°N±4°×12°6E±°, h12^{km}±12^{km}, M4.4/8, mb4.6/3, mB5.1/1, MLv4.2/8, Mw(mB)4.4/1*

*NEIC **29** 13:37:02.4±0.7, 1°.23N×126°.24E, h58^{km}±6^{km}, mb4.2/7, Error ellipse: s-maj=9.2km s-min=5.3km az=49.0*

ISC 29 13:37:01.9±0.6, **1°.33N**±0°.05×**126°.23E**±0°.07, **h54**^{km}, **n37**, σ**1^{s}13**/39, **mb4.2**/12, **MS3.2**/4, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.26	116	ePn	Pn	13 37 22.4	-0.8
TNTI	Ternate	1.26	116	P	Pn	13 37 23.1	-0.1
LBMI	Labuha	2.33	147	P	Pn	13 37 37.6	-0.2
SGSI	Sangihe	2.45	343	P	Pn	13 37 38.5	-1.0
SANI	Sanana	3.36	184	P	Pn	13 37 51.3	-0.6
LUWI	Luwuk	4.18	236	ePn	Pn	13 38 03.8	+0.6
LUWI	Luwuk	4.18	236	P	Pn	13 38 02.2	-1.0
DDMP	Don Marcelino,	4.78	354	eP	Pn	13 38 10.4	-1.0
DDMP				eS	Sn	13 39 05.2	-0.2
SKMP	Bagumbayan, Su	5.43	342	eP	Pn	13 38 19.0	-1.3
SKMP				eS	Sn	13 39 18.7	-2.9
CTBH	Cotabato--PC H	6.18	341	⇑iP	Pn	13 38 33.9	+3.2
FAKI	Fak Fak	7.34	125	ePn	Pn	13 38 47.3	+0.7
TTSI	Tana Toraja	7.74	236	P	Pn	13 38 51.5	-0.6
SPSI	Sidrap Palu	8.33	231	P	Pn	13 39 00.3	+0.2
BNSI	Bone	8.36	227	P	Pn	13 38 59.3	-1.2
KKM	Kota Kinabalu	11.04	295	ePn	Pn	13 39 37.9	+0.6
MTN	Manton Dam	14.89	161	ePn	Pn	13 40 28.9	-0.4
MYKOM	Kota Tinggi	22.38	271	eP	P	13 41 56.2	+0.3
	14nm,1.1s						
WRAB	Tennant Creek	22.58	160	eP	P	13 41 56.8	-1.2
	9.3nm,0.9s						
WR1	Warramunga Arr	22.58	160	eP	P	13 41 56.6	-1.4
WRA	Warramunga Arr	22.58	160	P	P	13 41 56.6	-1.4
	6.1nm,0.6s,baz=339,slow=12,SNR=54						
WB2	Warramunga Arr	22.59	160	eP	P	13 41 56.7	-1.3
	8.7nm,0.8s						
AS31	Alice Springs	25.94	164	eP	P	13 42 28.0	-1.4
	1.4nm,0.7s						
AS31				ePcP	PcP	13 45 57.0	-0.2
ASAR	Alice Springs	25.94	164	P	P	13 42 28.5	-0.9
	1.2nm,0.6s,baz=345,slow=12,SNR=29						
ASAR				PcP	PcP	13 45 57.0	-0.2
	1.3nm,0.6s,baz=354,slow=2.0,SNR=16						
ASAR				LR	LR	13 52 17.0	
	comp=Z,70nm,20.7s,baz=283,slow=36						
CMAR	Chiang Mai Arr	31.73	304	LR	LR	13 56 21.7	
	comp=Z,11nm,20.4s,baz=135,slow=37						
KSAR	Wonju Array Be	35.97	2	P	P	13 43 59.0	+1.5
KSRS	Korea Array	35.99	2	P	P	13 43 59.0	+1.4
	0.4nm,0.5s,baz=181,slow=9.7,SNR=4.0						
STKA	Stephens Creek	36.09	158	P	P	13 43 58.6	0.0
	3.5nm,0.8s,baz=327,slow=12,SNR=5.4						
STKA				LR	LR	13 59 18.9	
	comp=Z,46nm,18.0s,baz=27,slow=37						
STKA	Stephens Creek	36.09	158	eP	P	13 43 58.2	-0.4
	2.7nm,1.3s						
USRK	Ussuriysk Ar.	43.00	6	P	P	13 44 57.1	+1.2
	1.2nm,0.5s,baz=176,slow=9.3,SNR=5.1						
MK32	Makanchi Array	59.25	326	eP	P	13 46 58.4	+0.5
MKAR	Makanchi Array	59.25	326	P	P	13 46 58.4	+0.5
	0.6nm,0.3s,baz=119,slow=7.8,SNR=4.8						
KURK	Kurchatov	63.50	328	eP	P	13 47 26.4	0.0
	3.1nm,0.6s						
ABKAR	Akbulak array	73.70	321	eP	P	13 48 29.9	-0.1
	1.9nm,0.9s						
KMBO	Kilima Mbogo	89.01	269	LR	LR	14 27 05.4	
	comp=Z,23nm,21.0s,baz=90,slow=34						
TORD	Torodi Ar. Bea	123.16	287	PKP	PKPdf	13 55 53.9	+0.3
	0.9nm,0.8s,baz=46,slow=2.4,SNR=4.1						
TOA1	Torodi Ar. Sit	123.16	287	ePKPdf	PKPdf	13 55 53.9	+0.3
PLCA	Paso Flores	137.93	161	PKP	PKPdf	13 56 22.3	+1.3
	1.1nm,0.9s,baz=270,slow=3.0,SNR=3.4						

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*MOS **29** 14:53:29.1±1.6, 24°.43N×62°.67E, h10^{km}, mb4.4/20, Error ellipse: s-maj=10.3km s-min=6.4km az=91.4*

*TEH **29** 14:53:29.7, 24°.60N×62°.59E, h20^{km}, ML4.5*

*IDC **29** 14:53:30.6±0.6, 24°.65N×62°.41E, h0^{km}, mb4.1/23, mb1 4.2/25, mb1mx4.1/40, mbtmp4.1/25, ML3.6/2, MS3.4/5, Ms1 3.5/5, ms1mx3.1/26, Error ellipse: s-maj=15.0km s-min=13.8km az=2.0*

*NEIC **29** 14:53:31.8±0.4, 24°.64N×62°.47E, h10^{km}, mb4.5/23, Error ellipse: s-maj=8.7km s-min=5.7km az=159.0*

*THR **29** 14:53:35.2, 25°.22N×62°.30E, h18^{km}, ML4.4*

*OMAN **29** 14:53:40.8±0.6, 24°.63N×61°.92E, h34^{km}±25^{km}, ml4.6/11, Error ellipse: s-maj=34.6km s-min=4.7km az=257.0*

*DSN **29** 14:53:42.8±2.7, 25°.31N×61°.78E, h24^{km}, ML4.6/8, Error ellipse: s-maj=53.9km s-min=15.2km az=24.0*

ISC 29 14:53:32.4±2.7, **24°.60N**±0°.05×**62°.44E**±0°.04, **h15**^{km}±17^{km}, **n199**, σ**1^{s}86**/209, **mb4.4**/69, **MS3.4**/9, **5C, Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHBR	Chabahar	2.03	299	ePn	Pn	14 54 06.0	-0.1
CHBR	Chabahar	2.03	299	Pg	Pn	14 54 06.0	-0.1
CHBR				Sg	Sn	14 54 28.5	-2.7
JLN	Jalan Bani Buh	3.70	229	P	Pn	14 54 30.3	+1.2
	SNR=66						
JLN				S	Sn	14 55 10.3	-2.2
WSAR	Wadi Sarin	3.74	249	Pn	Pn	14 54 29.8	+0.1
	5.3nm,0.3s,baz=112,slow=9.5,SNR=70						
WSAR				Sn	Sn	14 55 08.8	-4.7
	46nm,0.3s,baz=72,slow=20,SNR=18						
WSAR	Wadi Sarin	3.74	249	P	Pn	14 54 32.1	+2.5
	SNR=15						
WSAR				S	Sn	14 55 08.1	-5.4
WBK	Wadi Bani Khal	3.75	239	P	Pn	14 54 31.0	+1.2
	SNR=31						
WBK				S	Sn	14 55 10.5	-3.2
BIDO	Bidbid	4.09	256	P	Pn	14 54 36.6	+2.2
	SNR=12						
BIDO	Bidbid	4.09	256	ePn	Pn	14 54 36.7	+2.3
SMDO	Samad	4.30	250	P	Pn	14 54 40.0	+2.5
	SNR=10						
JMDO	Jabal Madar	4.56	242	P	Pn	14 54 43.0	+2.1
	SNR=35						
JMDO				S	Sn	14 55 31.9	-1.7
HOQ	Hoqain	4.79	259	ePn	Pn	14 54 45.1	+1.0
SZD1	Zahaedan-tmp	5.06	344	ePn	Pn	14 54 46.9	-1.0
BSY	Bisya	5.15	250	P	Pn	14 54 52.0	+3.1
	SNR=15						
ZHSF	Zahedan	5.20	344	ePn	Pn	14 54 46.0	-3.9
ZHSF	Zahedan	5.20	344	Pn	Pn	14 54 46.0	-3.9
MHTO	MHTO	5.47	230	P	Pn	14 54 54.9	+1.4
	SNR=10						
MDH	Madha	5.62	278	i P	Pn	14 54 54.5	-0.9
	SNR=26						
MDH	Madha	5.62	278	P	Pn	14 54 55.2	-0.2
	SNR=26						
MDH	Madha	5.62	278	ePn	Pn	14 54 54.5	-0.9
UOSS	Minazif	5.68	275	ePn	Pn	14 54 55.3	-0.9
UOSS	Minazif	5.68	275	i P	Pn	14 54 55.8	-0.5
	SNR=20						
UOSS	Minazif	5.68	275	P	Pn	14 54 56.0	-0.3
UOSS	Minazif	5.68	275	ePn	Pn	14 54 55.6	-0.6
BANOM	Banah	5.71	285	i P	Pn	14 54 56.4	-0.3
	SNR=68						
BANOM	Banah	5.71	285	P	Pn	14 54 56.8	0.0
	SNR=68						
HATD	Hatta, Dubai	5.74	274	i P	Pn	14 54 56.7	-0.4
	SNR=22						
HATD	Hatta, Dubai	5.74	274	P	Pn	14 54 57.3	+0.1
	SNR=8.6						
HATD				S	Sn	14 55 56.6	-6.1
HATD	Hatta, Dubai	5.74	274	ePn	Pn	14 54 57.0	-0.1
MSFE	Esma-Masafi	5.75	279	i P	Pn	14 54 56.8	-0.5
	SNR=14						
MSFE	Esma-Masafi	5.75	279	ePn	Pn	14 54 56.5	-0.7
NIAN	Nian	5.83	301	ePn	Pn	14 54 59.1	+0.7
NIAN				IAMB	IAmb	14 55 08.5	
	comp=Z,0.0nm,0.2s						
SHME	Shamm	5.88	285	i P	Pn	14 54 59.0	0.0
	SNR=42						
SHME				S	Sn	14 55 57.7	-8.5
SHME	Shamm	5.88	285	ePn	Pn	14 54 59.4	+0.4
ALNE	Al Ain	6.12	266	i P	Pn	14 55 04.8	+2.5
	SNR=42						
ALNE	Al Ain	6.12	266	ePn	Pn	14 55 04.9	+2.5
NAZ	Nazwa, Dubai	6.17	275	i P	Pn	14 55 04.5	+1.5
	SNR=9.8						
FAQ	Al Faqa, Dubai	6.23	273	i P	Pn	14 55 05.6	+1.7
	SNR=11						
FAQ	Al Faqa, Dubai	6.23	273	ePn	Pn	14 55 06.7	+2.9
GENO	Geno	6.29	298	ePn	Pn	14 55 05.5	+0.7
GENO				IAMB	IAmb	14 56 18.3	
	comp=Z,0.0nm,0.2s						
ASUD	Al Ashush, Dub	6.47	272	P	Pn	14 55 10.0	+2.8
ASUD	Al Ashush, Dub	6.47	272	ePn	Pn	14 55 09.9	+2.8
BHJ	Bhuj	6.74	100	eP	Pn	14 55 11.2	+0.4
BHJ				eS	Sn	14 56 21.2	-6.1
BHJ				IAML		14 56 23.6	
	comp=E,89nm,0.3s						
BHJ				IAML		14 56 26.7	
	comp=N,15µm,1.6s						
CHMN	Cheshme madani	6.81	321	ePn	Pn	14 55 10.8	-1.4
NGRK	Negar Kerman	7.14	316	ePn	Pn	14 55 16.6	-0.1
KRBR	Kerman	7.36	318	ePn	Pn	14 55 17.1	-2.6
KRBR	Kerman	7.36	318	AML	AML	14 56 43.8	
	comp=N,64nm,0.4s						
KRBR				AML	AML	14 56 45.0	
	comp=N,72nm,0.8s						
KRBR	Kerman	7.36	318	Pn	Pn	14 55 17.1	-2.6
TVBK	TV Kerman	7.36	318	ePn	Pn	14 55 19.5	-0.2
TVBK				IAMB	IAmb	14 57 05.9	
	comp=Z,0.0nm,1.5s						
KHGB	Koh Gabri	7.81	319	ePn	Pn	14 55 24.9	-0.9
KHGB				IAMB	IAmb	14 56 58.4	
	comp=Z,0.0nm,0.3s						
IKOO	Kooshah	8.36	340	ePn	Pn	14 55 31.0	-2.2
MZR	Muzera	8.36	261	ePn	Pn	14 55 32.4	-0.7
GHIR	Ghir-Karzin	9.23	295	ePn	Pn	14 55 45.0	-0.1
GHIR	Ghir-Karzin	9.23	295	Pn	Pn	14 55 45.0	-0.1
IBAF	Bafgh	9.23	320	ePn	Pn	14 55 44.5	-0.7
ISRV	Sarvestan	9.58	302	ePn	Pn	14 55 49.6	-0.5
IMEH	Mehriz	9.67	316	ePn	Pn	14 55 49.4	-1.8
TKDS	Koohdasht(Taba	10.11	334	ePn	Pn	14 55 56.4	-0.7
IKAZ	Kazeroun	10.75	301	ePn	Pn	14 56 05.0	-1.1
IRAM	Ramesheh	11.40	311	ePn	Pn	14 56 13.0	-2.0
KBL	Kabul	11.45	29	ePn	Pn	14 56 14.3	-1.2
KBL	Kabul	11.45	29	P	Pn	14 56 14.3	-1.2
KBL	Kabul	11.45	29	ePn	Pn	14 56 14.3	-1.2
KLNJ	Kolanjah	11.52	306	ePn	Pn	14 56 15.8	-0.9
THW	Thamme Wali	11.54	43	P	Pn	14 56 13.8	-2.9
IZEF	Zefreh	12.11	315	ePn	Pn	14 56 23.4	-1.3
CEP	Cherat	12.35	40	P	Pn	14 56 25.2	-2.7
ZNGN	Zangian	12.65	309	ePn	Pn	14 56 29.9	-2.2
JHBN	Jahan bin	12.84	309	ePn	Pn	14 56 33.5	-1.2
IPIR	Pirpir	12.94	311	ePn	Pn	14 56 36.8	+0.7
NIL	Nilore	13.05	44	ePn	Pn	14 56 34.3	-3.0
NIL	Nilore	13.05	44	P	Pn	14 56 34.3	-3.0
NIL	Nilore	13.05	44	ePn	Pn	14 56 34.3	-3.0
CHCP	Chirah Chowk	13.06	44	P	Pn	14 56 34.3	-3.2
SONA	Sohna	13.61	71	eP	Pn	14 56 46.0	+1.0
SONA				ex	x	14 59 02.9	
BHPL	Bhopal	13.77	93	eP	Pn	14 56 47.4	+0.2
GEYT	Alibeck	13.79	346	Pn	Pn	14 56 46.5	-0.9
	comp=Z,0.3nm,0.3s,baz=185,slow=16,SNR=3.8						
DHRM	DHARAMSHALA	14.37	55	eP	Pn	14 56 54.5	-1.1
DHRM				IAmb	IAmb	14 56 57.8	
	comp=Z,12nm,0.8s						
DHRM				ex	x	14 59 18.0	
SMLA	Simla	14.55	60	eP	Pn	14 56 56.5	-1.3
SMLA				ex	x	14 59 26.4	
CHGR	Chuyangaron	15.13	21	ePn	Pn	14 57 06.2	+0.6
	comp=Z,35nm,1.1s						
RAYN	Ar Rayn	15.51	270	ePn	Pn	14 57 09.5	-1.2
	comp=Z,6.1nm,0.7s						
RAYN	Ar Rayn	15.51	270	P	Pn	14 57 09.5	-1.2
RAYN	Ar Rayn	15.51	270	ePn	Pn	14 57 09.5	-1.2
GAR	Garm	15.83	23	ePn	Pn	14 57 14.0	-0.8
	comp=Z,11nm,0.6s						
KSH	Kashi	18.75	34	P	P	14 57 45.5	-5.3
KSH				sP	sP	14 57 56.0	-0.3
KSH				S	Sn	15 01 05.3	-15
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,66nm,3.5s						
KSH				LR	LR		
	comp=N,100nm,7.9s						
KSH				LR	LR		
	comp=E,90nm,6.5s						
KK31	Karatay Array	19.61	18	eP	P	14 57 59.5	-0.7
	comp=E,10nm,0.8s						
KK31	Karatay Array	19.61	18	P	P	14 57 59.5	-0.7
KKAR	Karatay Array	19.61	18	eP	P	14 57 59.4	-0.8
	comp=E,10nm,0.8s						
KKAR	Karatay Array	19.61	18	P	P	14 57 59.4	-0.8
AAK	Ala-Archa	20.56	26	P	P	14 58 11.7	+1.0
	comp=E,3.6nm,0.7s,baz=208,slow=13,SNR=9.7						
AAK	Ala-Archa	20.56	26	eP	P	14 58 10.5	-0.1
	comp=E,9.9nm,1.1s						
AAK	Ala-Archa	20.56	26	ceP	Pn	14 58 13.1	+0.2
AAK				pmax	pmax		
	comp=Z,15nm,1.7s						
AKT	Akhty	20.81	328	eP	Pn	14 58 15.3	-0.5
AKT				e		14 58 34.8	
AKT				pmax	pmax		
	comp=Z,61nm,1.2s						
GNI	Garni	21.47	320	P	P	14 58 22.8	+2.3
	comp=Z,8.2nm,0.4s,baz=70,slow=4.2,SNR=6.4						
GNI	Garni	21.47	320	i P	P	14 58 22.6	+2.1
GNI				pmax	pmax		
	comp=Z,65nm,1.1s						
GNBR	Gunib	21.87	328	i P	P	14 58 28.1	+3.4
PDGK	Podgornoye	23.34	33	P	P	14 58 40.9	+0.6
PDGK				pmax	pmax		
	comp=Z,8.0nm,1.6s						
ASF	Jabal al Asfar	23.66	294	P	P	14 58 45.0	+1.5
	comp=Z,7.4nm,1.1s,baz=62,slow=15,SNR=4.8						
ZEI	Tsey	23.72	324	eP	P	14 58 47.9	+3.9
ZEI				pmax	pmax		
	comp=Z,20nm,0.8s						
NCK	Nalchik	24.37	325	i P	P	14 58 52.2	+2.3
NCK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ABKAR	Akbulak array	24.68	356	eP	P	14 58 52.5	-0.2
	comp=Z,8.9nm,1.2s						
OTUK	Ortayu	24.86	16	P	P	14 58 55.9	+1.6
OTUK				pmax	pmax		
	comp=Z,11nm,1.3s						
KBZ	Khabaz	24.90	325	P	P	14 58 55.7	+1.1
	comp=Z,4.7nm,0.8s,baz=144,slow=9.6,SNR=6.9						
EIL	Elat	24.95	288	P	P	14 58 57.7	+2.4
	comp=Z,5.6nm,0.9s,baz=52,slow=19,SNR=5.1						
SHA1	Shidzhatmaz	25.03	325	i P	P	14 58 58.2	+2.1
MMAI	Mount Meron Ar	25.08	296	P	P	14 58 59.5	+3.0
	comp=Z,1.8nm,0.4s,baz=112,slow=5.8,SNR=5.1						
KIV	Kislovodsk	25.16	325	eP	P	14 58 58.5	+1.4
	comp=Z,20nm,0.7s						
KIV	Kislovodsk	25.16	325	eP	P	14 58 59.4	+2.2
KIV				pmax	pmax		
	comp=Z,64nm,1.1s						
AKTO	Aktyubinsk	26.01	354	P	P	14 59 05.3	+0.6
	comp=Z,2.3nm,0.7s,baz=170,slow=7.3,SNR=8.0						
MAKZ	Makanchi	27.11	30	eP	P	14 59 13.8	-0.9
	comp=Z,5.8nm,1.0s						
MAKZ	Makanchi	27.11	30	P	P	14 59 13.8	-0.9
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MK31	Makanchi Array	27.24	31	eP	P	14 59 15.9	0.0
	comp=Z,3.8nm,0.8s						
MK31	Makanchi Array	27.24	31	P	P	14 59 15.9	0.0
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK32	Makanchi Array	27.24	31	eP	P	14 59 16.2	+0.4
MK32				ePcP	PcP	15 02 36.2	+0.6
MKAR	Makanchi Array	27.24	31	P	P	14 59 16.2	+0.4
	comp=Z,2.5nm,0.6s,baz=212,slow=9.2,SNR=24						
MKAR				PcP	PcP	15 02 36.2	+0.6
	comp=Z,0.6nm,0.9s,baz=209,slow=1.9,SNR=3.5						
MKAR				LR	LR	15 12 41.6	
	comp=Z,129nm,18.6s,baz=228,slow=42						
MKAR	Makanchi Array	27.24	31	i P	P	14 59 16.7	+0.8
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WMQ	Urumqi	28.17	41	eP	P	14 59 25.0	+0.7
WMQ				pP	pwP	14 59 32.0	+1.4
WMQ				PP	PnPn	15 00 15.5	+3.3
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,90nm,5.7s						
WMQ				LR	LR		
	comp=N,200nm,19.7s						
WMQ				LR	LR		
	comp=E,10.0nm,23.1s						
WMQ				LR	LR		
	comp=Z,250nm,17.3s						
BR101	Keskin Array S	28.51	309	eP	P	14 59 28.1	+0.6
BR101				ePcP	PcP	15 02 39.9	+0.8
BRTR	Keskin Array B	28.51	309	P	P	14 59 28.1	+0.6
	comp=Z,0.6nm,0.7s,baz=130,slow=10,SNR=3.3						
BRTR				PcP	PcP	15 02 39.9	+0.8
	comp=Z,0.7nm,0.7s,baz=135,slow=4.0,SNR=4.4						
KURBB	Kurchatov Arra	28.80	21	P	P	14 59 29.9	+0.1
	comp=Z,0.8nm,0.5s,baz=217,slow=8.3,SNR=5.2						
KURK	Kurchatov	28.91	21	i P	P	14 59 31.6	+0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	29.01	10	P	P	14 59 31.9	+0.3
	comp=Z,1.5nm,0.7s,baz=183,slow=8.9,SNR=10.0						
DGZ	Jazzator, Alta	31.73	31	i P	P	14 59 56.9	+1.1
H08N2	Diego Garcia H	31.85	164	T	T	15 33 15.1	
	baz=345,slow=75,SNR=97						
H08N3	Diego Garcia H	31.87	164	T	T	15 33 17.5	
	baz=345,slow=75,SNR=79						
H08N1	Diego Carcia H	31.87	164	T	T	15 33 23.3	
	baz=345,slow=75,SNR=97						
ARU	Arti	31.92	356	c iP	P	14 59 58.8	+1.6
ARU				S	S	15 05 12.8	+5.2
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAA0	Zalesovo Array	33.75	24	eP	P	15 00 13.1	-0.2
	comp=Z,3.2nm,0.6s						
ZALV	Zalesovo Beam	33.75	24	P	P	15 00 13.0	-0.2
	comp=Z,3.7nm,0.5s,baz=226,slow=10,SNR=18						
ZALV				LR	LR	15 15 58.2	
	comp=Z,71nm,18.4s,baz=72,slow=40						
ZAA1	Zalesovo Array	33.75	24	eP	P	15 00 13.0	-0.2
CMAR	Chiang Mai Arr	34.43	93	LR	LR	15 17 21.1	
	comp=Z,53nm,18.2s,baz=252,slow=42						
GTA	Gaotai	34.70	56	eP	P	15 00 23.8	+2.0
GTA				pP	pwP	15 00 32.5	+4.3
GTA				sP	sP	15 00 36.0	+8.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,55nm,5.3s						
GTA				LR	LR		
	comp=N,55nm,20.3s						
GTA				LR	LR		
	comp=E,44nm,16.2s						
GTA				LR	LR		
	comp=Z,70nm,16.5s						
OBN	Obninsk	35.96	335	⇑eP	P	15 00 34.6	+2.4
OBN				e		15 01 57.8	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,29nm,17.0s						
MLR	Muntele Rosu	36.00	315	P	P	15 00 35.6	+2.7
MLR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	Malin Array Be	36.50	324	P	P	15 00 36.9	-0.1
	comp=Z,2.9nm,0.6s,baz=120,slow=7.4,SNR=13						
AKASG				PcP	PcP	15 03 01.1	+0.6

	comp=Z,0.3nm,0.3s,baz=106,slow=1.5,SNR=4.5						
AKBB	Malin Array Si	36.50	324	eP	P	15 00 36.9	-0.1
	comp=Z,9.7nm,0.6s						
AKBB				ePcP	PcP	15 03 01.1	+0.6
VOIR		36.56	314	P	P	15 00 38.8	+1.1
VOIR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
LZH	Lanzhou	37.27	62	eP	P	15 00 41.8	-2.1
LZH				pP	pP	15 00 47.5	-0.4
LZH				sP	pwP	15 00 50.5	+0.2
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
KLMR	Klimovskoe	39.52	343	eP	P	15 01 00.5	-1.8
KLMR				pmax	pmax		
	comp=Z,22nm,1.3s						
TTG	Podgorica	39.67	307	eP	P	15 01 03.1	-0.8
	comp=Z,6.2nm,0.5s						
PSI	Prapat	41.31	116	P	P	15 01 19.9	+2.0
	comp=Z,6.4nm,0.7s,baz=308,slow=8.0,SNR=4.7						
TLY	Talaya	41.38	38	eP	P	15 01 12.7	-5.2
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,33nm,5.0s						
VYHS	Vyhne	41.62	316	eP	P	15 01 23.2	+3.3
VYHS	Vyhne	41.62	316	eP	P	15 01 23.2	+3.3
OJC	Ojcow	41.63	319	P	P	15 01 21.0	+1.1
OJC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONA0	Songino Array	41.63	45	eP	P	15 01 21.5	+1.4
SONM	Songino Array	41.63	45	P	P	15 01 21.5	+1.4
	comp=Z,2.2nm,0.8s,baz=245,slow=8.9,SNR=9.8						
CONA	Conrad Observa	43.35	315	i pP	P	15 01 34.3	+0.3
	comp=Z,5.1nm,1.4s						
HHC	Hu-ho-hao-te	43.81	56	P	P	15 01 36.5	-1.4
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,8.0nm,5.7s						
KSP	Ksiaz	43.94	319	P	P	15 01 39.4	+0.7
KSP				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FIA0	FINESS Array S	44.33	336	eP	P	15 01 41.2	-0.3
FIA0				ePcP	PcP	15 03 25.4	-0.1
FINES	FINESS Array B	44.33	336	P	P	15 01 41.2	-0.3
	comp=Z,1.5nm,0.7s,baz=132,slow=8.5,SNR=8.0						
FINES				PcP	PcP	15 03 25.4	-0.1
	comp=Z,1.3nm,0.6s,baz=90,slow=1.4,SNR=4.1						
MOA	Molln	44.37	314	i pP	P	15 01 42.7	+0.6
	comp=Z,4.5nm,0.8s						
GEC2	GERESS Array S	44.98	315	eP	P	15 01 47.3	+0.2
	comp=Z,5.2nm,0.9s						
GERES	GERESS Array B	44.98	315	P	P	15 01 47.3	+0.2
	comp=Z,2.1nm,0.7s,baz=104,slow=8.2,SNR=12						
KHC	Kasperske Hory	45.13	316	eP	P	15 01 48.5	+0.3
KHC	Kasperske Hory	45.13	316	eP	P	15 01 48.5	+0.3
ABTA	Abfaltersbach	45.29	312	i pP	P	15 01 50.3	+0.7
	comp=Z,5.0nm,0.7s						
WTTA	Wattenberg	45.98	313	i P	P	15 01 54.6	-0.6
	comp=Z,8.9nm,0.6s						
WATA	Walderalm	46.03	313	i P	P	15 01 55.3	-0.2
	comp=Z,4.7nm,0.6s						
CLL	Collm	46.06	319	eP	P	15 01 55.7	+0.2
	comp=Z,8.2nm,0.9s						
CLL	Collm	46.06	319	i P	P	15 01 56.6	+1.1
CLL				pmax	pmax		
	comp=Z,11nm,1.1s						
CLL	Collm	46.06	319	i P	P	15 01 56.6	+1.1
	comp=Z,11nm,1.1s						
CLL				e		15 02 08.0	
SQTA	Sankt Quirin	46.25	313	i P	P	15 01 57.1	-0.1
	comp=Z,15nm,1.4s						
MOTA	Moosalm	46.35	313	i P	P	15 01 57.8	-0.3
	comp=Z,2.8nm,0.5s						
FETA	Feichten	46.54	312	i pP	P	15 01 59.6	+0.1
	comp=Z,16nm,0.9s						
RETA	Reutte	46.60	313	i P	P	15 01 59.1	-0.8
	comp=Z,7.5nm,0.7s						
DAVA	Damuels	47.16	313	i P	P	15 02 04.2	-0.2
	comp=Z,23nm,0.8s						
BNI	Bardonecchia	49.07	309	P	P	15 02 18.9	-0.3
ECH	Echery	49.11	313	eP	P	15 02 19.1	-0.2
	comp=Z,5.3nm,0.8s						
NJ2	Nanjing	49.74	68	eP	P	15 02 21.5	-2.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ARCES	ARCESS Array B	49.95	344	P	P	15 02 24.8	-0.5
	comp=Z,1.0nm,0.6s,baz=130,slow=8.4,SNR=4.3						
NB200	NORSAR Array S	50.27	330	eP	P	15 02 26.4	-1.6
NOA	NORSAR Array B	50.27	330	P	P	15 02 26.4	-1.6
	comp=Z,0.9nm,0.7s,baz=114,slow=7.7,SNR=3.2						
KS15	Wonju Array Si	56.52	60	eP	P	15 03 14.2	0.0
	comp=Z,34nm,1.6s						
KSAR	Wonju Array Be	56.52	60	P	P	15 03 14.2	0.0
KSRS	Korea Array	56.54	60	P	P	15 03 14.2	-0.2
	comp=Z,1.2nm,0.6s,baz=273,slow=6.5,SNR=6.4						
KSRS				LR	LR	15 30 01.5	
	comp=Z,26nm,19.5s,baz=250,slow=39						
ESDC	Sonseca Array	57.01	303	P	P	15 03 17.2	-0.5
	comp=Z,0.4nm,0.4s,baz=69,slow=8.4,SNR=5.5						
YAK	Yakutsk	57.92	31	eP	P	15 03 22.6	-1.0
	comp=Z,10.0nm,0.9s						
YAK	Yakutsk	57.92	31	i P	P	15 03 23.4	-0.2
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
TOA0	Torodi Ar. Sit	58.20	271	eP	P	15 03 26.5	+0.1
	comp=Z,6.1nm,0.8s						
TORD	Torodi Ar. Bea	58.20	271	P	P	15 03 25.0	-1.4
	comp=Z,5.0nm,0.6s,baz=65,slow=7.1,SNR=27						
TOA1	Torodi Ar. Sit	58.20	271	eP	P	15 03 24.9	-1.5
KLR	Kul'dur	58.43	46	i P	P	15 03 27.3	-0.2
KLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOSA	Boshof	63.87	216	P	P	15 04 06.7	+2.0
	comp=Z,3.4nm,0.5s,baz=28,slow=6.0,SNR=12						
MJAR	Matsushiro Arr	64.81	60	LR	LR	15 35 48.6	
	comp=Z,20nm,19.3s,baz=275,slow=39						
SEY	Seymchan	68.37	29	i P	P	15 04 33.9	+0.9
BILL	Bilibino	72.44	23⇑	eP	P	15 04 59.0	+1.2
BILL				e		15 05 12.8	
BILL				e		15 07 41.1	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,55nm,18.0s						
WR1	Warramunga Arr	82.78	116	eP	P	15 05 56.5	+0.1
WRA	Warramunga Arr	82.78	116	P	P	15 05 56.5	+0.1
	comp=Z,1.1nm,0.7s,baz=300,slow=5.7,SNR=13						
ASAR	Alice Springs	84.26	119	P	P	15 06 03.9	-0.1
	comp=Z,0.5nm,0.7s,baz=307,slow=4.9,SNR=8.5						
AS31	Alice Springs	84.26	119	eP	P	15 06 03.9	-0.1
	comp=Z,1.7nm,1.2s						
BPAW	Bear Paw Mtn.	87.80	14	eP	P	15 06 20.5	-0.2
	comp=Z,3.9nm,0.8s						
ILAR	Eielson Array	88.05	12	P	P	15 06 21.2	-0.7
	comp=Z,0.6nm,0.7s,baz=318,slow=4.3,SNR=10.0						
ILB	Eielson Array	88.05	12	eP	P	15 06 21.2	-0.7
	comp=Z,11nm,2.0s						
CAST	Castle Rocks	88.14	15	eP	P	15 06 21.8	-0.6
	comp=Z,4.5nm,0.9s						
SYO	Syowa Base	94.82	188⇑	eX	P	15 06 50.0	-2.9
NV01	Mina Array Sit	117.30	1	ePKPdf	PKiKP	15 12 19.1	+1.2
NVAR	Mina Array Bea	117.30	1	PKP	PKiKP	15 12 19.1	+1.2
	comp=Z,0.4nm,0.6s,baz=5.7,slow=0.5,SNR=5.9						
TXAR	Lajitas Array	124.73	345	PKP	PKiKP	15 12 32.7	+0.2
	comp=Z,0.5nm,0.6s,baz=191,slow=1.8,SNR=9.0						

IDC 29 15:05:49.4±1.0, 48°.61N×27°.96W, h0^{km}, mb3.5/8, mb1 3.7/8, mb1mx3.5/33, mbtmp3.5/8, MS3.1/4, Ms1 3.1/4, ms1mx2.7/35, Error ellipse: s-maj=35.3km s-min=20.5km az=11.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	24.63	299	LR	LR	15 19 44.2	
	comp=Z,45nm,19.5s,baz=50,slow=34						
NOA	NORSAR Array B	25.33	46	LR	LR	15 20 14.3	
	comp=Z,14nm,21.0s,baz=125,slow=34						
AKASG	Malin Array Be	36.29	65	P	P	15 12 54.1	-0.2
	0.4nm,0.4s,baz=286,slow=8.7,SNR=2.7						
TORD	Torodi Ar. Bea	43.04	135	P	P	15 13 50.7	-0.1
	0.5nm,0.7s,baz=344,slow=9.1,SNR=3.0						
BRTR	Keskin Array B	43.97	78	P	P	15 13 58.5	+0.1
	0.8nm,0.9s,baz=302,slow=6.6,SNR=4.0						
KIRV	Kirov	44.50	47	LR	LR	15 31 17.9	
	comp=Z,40nm,19.4s,baz=167,slow=34						
ARU	Arti	49.88	46	LR	LR	15 36 03.4	
	comp=Z,26nm,18.2s,baz=234,slow=36						
PDAR	Pinedale Array	54.73	297	P	P	15 15 19.8	-0.7
	0.2nm,0.5s,baz=57,slow=6.6,SNR=2.9						
ILAR	Eielson Array	57.43	334	P	P	15 15 40.0	+0.7
	0.3nm,0.8s,baz=46,slow=6.2,SNR=4.3						
H10S1	ASCENSION HYDR	58.50	165	T	T	16 19 05.6	
	baz=350,slow=75,SNR=8.4						
H10S3	ASCENSION HYDR	58.51	165	T	T	16 18 54.8	
	baz=350,slow=75,SNR=7.5						
H10S2	ASCENSION HYDR	58.51	165	T	T	16 18 54.3	
	baz=350,slow=75,SNR=7.3						
TXAR	Lajitas Array	59.49	281	P	P	15 15 54.6	+0.2
	0.4nm,0.7s,baz=58,slow=7.0,SNR=6.7						
MKAR	Makanchi Array	67.31	44	P	P	15 16 45.8	+0.1
	0.3nm,0.6s,baz=324,slow=6.0,SNR=3.8						
SONM	Songino Array	76.10	30	P	P	15 17 38.4	-0.4
	0.3nm,0.4s,baz=324,slow=5.8,SNR=2.9						
ASAR	Alice Springs	151.26	36	PKPbc	PKPbc	15 25 44.5	-0.3
	0.5nm,0.8s,baz=348,slow=2.0,SNR=12						

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*IDC **29** 15:08:03.8±1.0, 29°.33S×176°.95W, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.1/19, mbtmp4.2/7, MS3.7/3, Ms1 3.7/3, ms1mx3.2/19, Error ellipse: s-maj=38.7km s-min=27.3km az=133.0*

*NEIC **29** 15:08:06.2±0.8, 29°.37S×176°.88W, h18^{km}±5^{km}, mb4.3/10, Error ellipse: s-maj=15.9km s-min=9.8km az=127.0*

ISC 29 15:08:07.1±0.8, 29°.69S±0°.08×177°.1W±0°.2, h24^{km}, n45, σ2^{s}.60/49, mb4.1/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.87	300	ePn	Pn	15 08 24.3	+0.5
URZ	Urewera	9.81	208	Pn	Pn	15 10 27.6	+0.9
	0.2nm,0.3s,baz=6.7,slow=17,SNR=3.9						
URZ				Sn	Sn	15 12 19.5	+3.4
	2.8nm,0.3s,baz=102,slow=20,SNR=8.2						
URZ	Urewera	9.81	208	ePn	Pn	15 10 29.6	+2.8
URZ				Sn	Sn	15 12 19.5	+3.4
BFZ	Birch Farm	12.25	205	ePn	Pn	15 11 00.8	+0.7
QRZ	Quartz Range	13.97	215	ePn	P	15 11 29.8	-1.6
THZ	Tophouse	14.53	211	ePn	Pn	15 11 33.0	+1.8
KHZ	Kahutara	14.78	208	ePn	Pn	15 11 36.0	+1.4
	64nm,1.6s						
OXZ	Oxford	16.16	210	ePn	Pn	15 11 51.9	-0.7
	18nm,1.2s						
DZM	Mont Dzumac	16.66	293	LR	LR	15 17 16.0	
	comp=Z,262nm,18.3s,baz=109,slow=33						
RPZ	Rata Peaks	16.90	211	Pn	P	15 12 03.3	-0.6
	0.4nm,0.3s,baz=45,slow=5.7,SNR=2.5						
RPZ				S	Sn	15 14 58.7	-10
	0.2nm,0.3s,baz=121,slow=18,SNR=2.4						
RPZ	Rata Peaks	16.90	211	ePn	Pn	15 12 00.9	-1.2
	76nm,2.0s						
RPZ				S	Sn	15 14 58.7	-10
FOZ	Fox Glacier	17.34	214	ePn	Pn	15 12 07.1	-0.3
	46nm,1.5s						
LBZ	Lake Benmore	17.82	211	ePn	P	15 12 13.3	-0.7
	24nm,1.5s						
ODZ	Otahua Downs	18.14	209	eP	P	15 12 17.6	+0.1
	63nm,1.8s						
WKZ	Wanaka	18.69	212	eP	Pn	15 12 24.0	-0.1
	66nm,1.4s						
STKA	Stephens Creek	35.43	256	P	P	15 15 04.2	+2.6
	3.5nm,0.7s,baz=94,slow=9.7,SNR=6.3						
STKA				LR	LR	15 27 27.7	
	comp=Z,79nm,18.3s,baz=26,slow=33						
STKA	Stephens Creek	35.43	256	eP	P	15 15 03.7	+2.2
	1.4nm,0.9s						
AS31	Alice Springs	43.96	266	eP	P	15 16 13.9	+1.2
	1.0nm,0.6s						
ASAR	Alice Springs	43.97	266	P	P	15 16 13.4	+0.7
	2.0nm,0.6s,baz=105,slow=7.1,SNR=55						
ASAR				LR	LR	15 34 14.2	
	comp=Z,143nm,18.1s,baz=85,slow=36						
WR1	Warramunga Arr	44.89	271	eP	P	15 16 20.8	+0.7
WRA	Warramunga Arr	44.89	271	P	P	15 16 20.8	+0.7
	1.5nm,0.5s,baz=99,slow=7.8,SNR=16						
MAW	Mawson	73.25	200	P	P	15 19 38.4	+2.5
	1.4nm,0.8s,baz=162,slow=3.2,SNR=3.8						
MAW	Mawson	73.25	200	eP	P	15 19 38.6	+2.8
	3.4nm,1.8s						
MJAR	Matsushiro Arr	78.13	325	P	P	15 20 02.7	-1.5
	1.7nm,0.8s,baz=152,slow=5.5,SNR=3.6						
MAJO	Matsushiro	78.13	325	eP	P	15 20 02.7	-1.5
PETK	Petropavlovsk-	85.34	345	P	P	15 20 40.6	-1.2
	1.6nm,0.8s,baz=112,slow=9.1,SNR=6.0						
PEA1	Petropavlovsk-	85.34	345	eP	P	15 20 40.6	-1.2
WAKR	Walker	86.56	42	epP	pP	15 20 52.7	-2.5
USRK	Ussuriysk Ar.	87.03	326	P	P	15 20 50.9	+0.6
	1.0nm,0.5s,baz=145,slow=2.5,SNR=4.7						
MK32	Makanchi Array	117.94	310	ePKPdf	PKiKP	15 26 51.4	-0.2
MKAR	Makanchi Array	117.94	310	PKP	PKiKP	15 26 51.4	-0.2
	0.2nm,0.5s,baz=90,slow=2.2,SNR=2.6						
KURBB	Kurchatov Arra	121.19	314	PKP	PKPdf	15 26 57.2	-0.4
	0.4nm,0.4s,baz=112,slow=2.3,SNR=5.4						
BVAR	Borovoye Array	126.47	316	PKP	PKiKP	15 27 07.8	-0.3
	0.5nm,0.6s,baz=104,slow=3.7,SNR=4.0						
FIA0	FINESS Array S	144.75	341	ePKPdf	PKPab	15 27 39.1	-1.0
FINES	FINESS Array B	144.75	341	PKP	PKPab	15 27 39.1	-1.0
	1.9nm,0.6s,baz=4.4,slow=2.5,SNR=7.2						
NB2	NORSAR Subarra	148.17	352	PKP	PKPab	15 27 54.0	+0.7
	comp=Z,0.7nm,0.8s,baz=17,slow=2.6						
NB200	NORSAR Array S	148.17	352	ePKPbc	PKPbc	15 27 49.0	-1.4
NOA	NORSAR Array B	148.17	352	PKPbc	PKPbc	15 27 49.0	-1.4
	comp=Z,0.5nm,0.6s,baz=13,slow=4.2,SNR=3.5						
HFS	Hagfors	148.71	350	PKPbc	PKiKP	15 27 52.2	-0.9
	comp=Z,1.9nm,0.8s,baz=40,slow=3.2,SNR=2.5						
AKASG	Malin Array Be	151.22	324	PKPbc	PKPbc	15 27 57.7	-0.4
	comp=Z,0.9nm,0.3s,baz=44,slow=2.9,SNR=6.3						
AKBB	Malin Array Si	151.22	324	ePKPbc	PKPbc	15 27 57.7	-0.4
MMAI	Mount Meron Ar	152.14	285	PKPbc	PKiKP	15 28 02.6	+1.4
	comp=Z,2.2nm,0.6s,baz=91,slow=4.3,SNR=5.6						
EIL	Elat	152.23	278	PKPbc	PKiKP	15 28 03.1	+1.7
	comp=Z,2.6nm,0.6s,baz=159,slow=4.9,SNR=3.2						
BR101	Keskin Array S	152.97	300	ePKPbc	PKPbc	15 28 01.9	-0.7
BR101				ePKPab	PKPab	15 28 13.6	-0.4
BRTR	Keskin Array B	152.97	300	PKPbc	PKPbc	15 28 01.9	-0.7
	comp=Z,0.3nm,0.4s,baz=126,slow=2.0,SNR=2.5						
BRTR				PKPab	PKPab	15 28 13.6	-0.4
	comp=Z,0.8nm,0.7s,baz=144,slow=4.5,SNR=4.9						

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*JMA **29** 15:14:35.6±0.4, 43°.94N×148°.09E, h0^{km}, M3.6*

*SKHL **29** 15:14:38.0±0.6, 44°.37N×148°.12E, h35^{km}±2^{km}, mb3.8/2*

ISC 29 15:14:31.2±2.7, 44°.18N±0°.09×148°.1E±0°.1, h10^{km}±16^{km}, n11, σ1^{s}.05/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.07	349	i P	Pn	15 14 52.8	+0.6
KUR				AMB	AMB	15 14 53.5	
	40nm,0.8s						
KUR				AMB	AMB	15 14 53.5	
	50nm,0.8s						
KUR				AMB	AMB	15 14 53.5	
	130nm,0.8s						
KUR				i S	Sb	15 15 04.2	-1.6
KUR				A	A	15 15 05.0	
	270nm,0.3s						
KUR				A	A	15 15 05.0	
	240nm,0.3s						
YUK	Yuzh-Kuril'sk	1.65	266	eP	Pg	15 15 04.6	+1.7
YUK				AMB	AMB	15 15 05.0	
	50nm,0.4s						
YUK				eS	Sg	15 15 24.8	+0.5
YUK				A	A	15 15 30.0	
	90nm,0.2s						
YUK				A	A	15 15 30.0	
	200nm,0.2s						
LAGR	Lagunnoye	1.70	266	eP	Pg	15 15 05.2	+1.3
LAGR				eS	Sg	15 15 25.0	-1.0
LAGR				A	A	15 15 34.0	
	180nm,0.4s						
LAGR				A	A	15 15 34.0	
	390nm,0.4s						
GRPR	Tuman	1.72	264	eP	Pg	15 15 05.0	+0.8
GRPR				eS	Sb	15 15 25.0	+0.5
GRPR				A	A	15 15 34.0	
	160nm,0.4s						
GRPR				A	A	15 15 34.0	
	200nm,0.4s						
NEM2	Nemuro 2	1.92	246	P	Pg	15 15 08.3	+0.2
NEM2				eS	Sg	15 15 31.8	-1.2
NMR	Nemuro--Hokkai	1.93	246	eP	Pg	15 15 08.1	-0.1
NMR				eS	Sb	15 15 31.1	+0.5
JRA	Rausu	2.19	265	P	Pg	15 15 13.2	0.0
JRA				eS	Sg	15 15 40.1	-1.5
JNSB	Nemuroshibetsu	2.30	261	P	Pg	15 15 15.0	-0.4
JNK	Nakash	2.55	258	P	Pb	15 15 17.8	+0.8
JNK				eS	Sb	15 15 48.1	-0.3
JAK	Akkeshi	2.77	246	P	Pb	15 15 20.3	-0.5
JAR	Ashorobuto	3.29	256	eS	Sb	15 16 08.5	-1.3

IDC 29 15:22:01.4±3.6, 20°.84S×175°.81W, h0^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.5/18, mbtmp3.6/2, Error ellipse: s-maj=283.7km s-min=62.6km az=160.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.44	257	P	P	15 30 30.8	+0.4
	0.3nm,0.5s,baz=93,slow=7.9,SNR=15						
ASAR				PcP	PcP	15 32 03.9	-1.4
	0.3nm,0.9s,baz=95,slow=4.9,SNR=4.4						
WRA	Warramunga Arr	46.59	262	P	P	15 30 31.0	-0.5
	0.9nm,0.8s,baz=98,slow=8.3,SNR=5.8						
HFS	Hagfors	140.17	353	PKP	PKPdf	15 41 29.6	-2.0
	1.2nm,0.8s,baz=20,slow=1.7,SNR=4.5						
AKASG	Malin Array Be	144.28	333	PKP	PKPdf	15 41 40.6	+1.4
	1.0nm,0.4s,baz=41,slow=4.4,SNR=4.7						

JMA 29 15:25:11.8±0.1, 38°.72N×142°.34E, h39^{km}±1^{km}, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.64	305	P	Pn	15 25 24.4	0.0
OFUJ				S	Sn	15 25 33.4	+0.1
JKMT	Kesennumamotoy	0.68	278	P	Pn	15 25 25.0	0.0
JKMT				S	Sn	15 25 34.2	-0.2
JIKH	Ishinomakikobu	0.80	239	P	Pn	15 25 26.5	0.0
JIKH				S	Sn	15 25 36.9	-0.3
JIO	Ouri	0.82	251	P	Pn	15 25 26.7	-0.1
JMK	Ichinoseki	0.91	285	P	Pn	15 25 28.2	+0.2
JMK				S	Sn	15 25 40.1	+0.2
JOM	Ohasama	1.11	313	P	Pn	15 25 31.4	+0.6
JOM				S	Sn	15 25 45.8	+0.9
JTH	Tanohata	1.27	343	S	Sn	15 25 50.0	+1.1
JOU	Okura	1.36	255	P	Pn	15 25 34.9	+0.6
JOU				S	Sn	15 25 52.0	+0.9

IDC 29 15:29:06.9±1.9, 6°.84S×130°.07E, h0^{km}, mb3.8/2, mb1 3.8/4, mb1mx3.5/24, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=158.5km s-min=25.9km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.67	163	Pn	Pn	15 32 22.4	+0.3
	0.5nm,0.3s,baz=345,slow=14,SNR=15						
WRA				Sn	Sn	15 34 43.4	-11
	1.7nm,0.3s,baz=64,slow=24,SNR=12						
ASAR	Alice Springs	17.13	168	P	Pn	15 33 08.6	+0.7
	0.2nm,0.3s,baz=347,slow=12,SNR=26						
ASAR				S	Sn	15 36 08.2	-11
	0.3nm,0.3s,baz=357,slow=27,SNR=6.3						
STKA	Stephens Creek	27.14	158	P	P	15 34 51.5	-0.4
	0.5nm,0.3s,baz=331,slow=10,SNR=4.8						
MKAR	Makanchi Array	68.13	327	P	P	15 40 08.9	+0.1
	0.5nm,0.5s,baz=122,slow=7.4,SNR=6.6						

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*IDC **29** 15:33:28.0±3.3, 37°.08N×141°.09E, h0^{km}, mb3.6/3, mb1 3.6/5, mb1mx3.4/30, mbtmp3.5/5, ML2.3/2, Error ellipse: s-maj=71.4km s-min=29.1km az=159.0*

*ISCJB **29** 15:33:35.2±0.6, 36°.84N±0°.03×140°.55E±0°.06, h12^{km}±5^{km}, mb3.5/3, Error ellipse: s-maj=8.5km s-min=4.1km az=16.5*

*JMA **29** 15:33:35.5, 36°.84N×140°.52E, h7^{km}±1^{km}, M2.9*

ISC 29 15:33:32.5±1.2, 36°.81N±0°.04×140°.74E±0°.06, h29^{km}±7^{km}, n21, σ1^{s}.57/25, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.24	215	P	Pn	15 33 40.2	+0.1
JHO				S	Sb	15 33 43.6	-0.1
ONAJ	Iwakimizuishiy	0.29	9	P	Pn	15 33 42.3	+1.4
ONAJ				S	Sn	15 33 47.1	+0.8
JFFD	Fukushimafurud	0.31	333	P	Pb	15 33 40.6	+0.5
JFFD				S	Sb	15 33 44.1	-1.2
JFK	Kawauchi	0.56	11	P	Pn	15 33 46.7	+2.1
JFK				S	Sn	15 33 54.8	+1.8
JSB	Shiboa	0.68	284	P	Pb	15 33 45.9	+0.1
JSB				S	Sb	15 33 52.8	-2.1
JYT	Yasato	0.73	217	P	Pn	15 33 48.1	+1.3
JYT				S	Sb	15 33 57.0	+0.6
JFT	Otama	0.78	335	P	Pn	15 33 49.0	+1.5
JFT				S	Sn	15 33 58.3	+0.1
JFY	Yanaizu	1.02	306	P	Pb	15 33 52.0	+0.4
JFY				S	Sb	15 34 03.0	-1.7
JAG	Ashikaga	1.11	250	P	Pn	15 33 53.0	+1.0
MJAR	Matsushiro Arr	2.05	263	Pn	Pn	15 34 07.9	+2.8
	0.8nm,0.3s,baz=85,slow=16,SNR=44						
MJAR				Sn	Sn	15 34 32.0	+2.3
	1.0nm,0.3s,baz=79,slow=27,SNR=17						
MAT	Matsushiro	2.06	263	P	Pb	15 34 08.8	-0.3
MAT				S	Sb	15 34 33.4	-0.9
USRK	Ussuriysk Ar.	9.94	321	Pn	Pn	15 35 52.9	-0.3
	0.3nm,0.3s,baz=130,slow=15,SNR=7.9						
H11N2	WAKE ISLAND Hy	28.50	120	T	T	16 09 48.5	
	baz=317,slow=75,SNR=61						
H11N1	WAKE ISLAND Hy	28.51	120	T	T	16 09 49.3	
	baz=317,slow=75,SNR=92						
H11N3	WAKE ISLAND Hy	28.52	120	T	T	16 09 49.7	
	baz=317,slow=75,SNR=73						
H11S1	WAKE ISLAND Hy	29.20	122	T	T	16 10 39.6	
	baz=318,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	29.20	122	T	T	16 10 39.8	
	baz=318,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	29.21	122	T	T	16 10 47.2	
	baz=318,slow=76,SNR=23						
ZALV	Zalesovo Beam	41.67	313	P	P	15 41 16.7	-1.4
	0.7nm,0.5s,baz=94,slow=8.7,SNR=3.1						
MKAR	Makanchi Array	43.78	302	P	P	15 41 37.0	+1.6
	0.4nm,0.5s,baz=90,slow=8.6,SNR=5.2						
ILAR	Eielson Array	49.97	32	P	P	15 42 20.7	-2.8
	0.3nm,0.6s,baz=266,slow=7.9,SNR=3.7						

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*NIED **29** 15:33:00, 38°.60N×142°.20E, h47^{km}, Mw3.7 Best double couple: $M_0$4.56000×10^{14} NP1:ϕ_s146.00000°, δ79.00000°, λ171.00000°. NP2:ϕ_s237.00000°, δ81.00000°, λ11.00000°.*

JMA 29 15:33:33.3±0.1, 38°.58N×142°.20E, h37^{km}±1^{km}, M3.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.61	292	P	Pn	15 33 45.6	0.0
JKMT				S	Sn	15 33 54.0	-0.2
JIKH	Ishinomakikobu	0.64	245	P	Pn	15 33 45.7	-0.2
JIKH				S	Sn	15 33 54.1	-0.6
OFUJ	Ofunato	0.65	320	P	Pn	15 33 46.2	+0.1
OFUJ				S	Sn	15 33 54.9	-0.2
JIO	Ouri	0.68	260	P	Pn	15 33 46.3	-0.1
JIO				S	Sn	15 33 55.4	-0.4
JMK	Ichinoseki	0.85	296	P	Pn	15 33 49.1	+0.4
JMK				S	Sn	15 34 00.4	+0.4
JOM	Ohasama	1.14	322	P	Pn	15 33 53.4	+0.7
JOM				S	Sn	15 34 07.8	+0.8
JOU	Okura	1.23	260	P	Pn	15 33 54.5	+0.6
JOU				S	Sn	15 34 10.2	+1.0
JMM	Marumori	1.32	238	P	Pn	15 33 54.6	-0.5
JMM				S	Sn	15 34 09.3	-2.1
JRG	Rokugo	1.47	304	P	Pn	15 33 58.2	+1.0
JRG				S	Sn	15 34 17.5	+2.4
JYK	Kaneyama	1.48	284	P	Pn	15 33 58.3	+1.0

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*ISCJB **29** 15:37:01.8±0.5, 39°.84N±0°.06×33°.07E±0°.03, h0^{km}, Error ellipse: s-maj=8.1km s-min=3.8km az=4.6*

*DDA **29** 15:37:01.4, 39°.97N×33°.05E, h7^{km}±1^{km}, ML2.5*

*ISK **29** 15:37:01.3, 39°.87N×33°.05E, h2^{km}, ML1.6/10, Suspected Mining explosion.*

ISC 29 15:37:01.3±0.9, 39°.85N±0°.06×33°.12E±0°.04, h0^{km}, n14, σ0^{s}.35/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTO	**Ankara**	0.25	275	PG	Pg	15 37 06.2	+0.1
ANTO				SG	Sg	15 37 09.6	+0.3
LOD	**Lodumlu**	0.27	279	PG	Pg	15 37 06.6	0.0
LOD				SG	Sg	15 37 10.4	+0.3
DELI	**KIRIKKALE**	0.64	76	*i* P	Pb	15 37 15.2	-0.2
DELI				*i* S	Sb	15 37 24.8	-0.2
KKUL	**Konya-Kulu**	0.69	193	*i* P	Pb	15 37 16.6	+0.2
KKUL				*i* S	Sn	15 37 29.3	-0.7
KKUL				IAML_P			
	comp=Z,231nm,0.2s						
KULU	**Kulu**	0.81	186	PG	Pb	15 37 18.1	-0.2
KIRS	**Kırehir-Merke**	0.95	139	*i* P	Pb	15 37 20.8	+0.1
KIRS				IAML_P			
	comp=Z,292nm,0.2s						
SERE	**Sereflikochisa**	0.96	159	PG	Pb	15 37 21.5	+0.5
CDAG	**Cicekdag**	0.99	103	*i* P	Pn	15 37 22.9	+0.2
CDAG				IAML_P			
	comp=Z,477nm,0.2s						
YAYX	**Yaylak**	1.06	149	PN	Pb	15 37 22.6	0.0
CORM	**Corum**	1.21	74	PN	Pn	15 37 26.1	+0.4
AUMIH	**MIHALICIK**	1.26	271	PN	Pg	15 37 24.8	-0.6
AUSIV	**SIVRIHISAR**	1.28	252	PN	Pg	15 37 25.8	-0.1
SVRH	**Sivrihisar-ESK**	1.29	252	PN	Pg	15 37 25.9	-0.2
KIZT	**Kizilcal**	1.36	225	PN	Pn	15 37 27.9	+0.2

IDC 29 15:39:46.1±3.9, 4°.23S×135°.06E, h0^{km}, mb3.6/1, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=184.9km s-min=29.5km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	15.63	183	Pn	Pn	15 43 26.3	-1.6
	0.4nm,0.3s,baz=3.3,slow=14,SNR=17						
WRA				Sn	Sn	15 46 22.4	+0.5
	0.2nm,0.3s,baz=2.2,slow=24,SNR=2.9						
ASAR	**Alice Springs**	19.35	183	P	Pn	15 44 14.2	-0.2
	0.5nm,0.3s,baz=8.5,slow=11,SNR=34						
MKAR	**Makanchi Array**	68.82	324	P	P	15 50 52.3	-0.1
	0.4nm,0.5s,baz=123,slow=7.7,SNR=3.8						

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*ISK **29** 15:43:33.9, 38°.85N×43°.49E, h6^{km}, ML2.4/6*
*DDA **29** 15:43:34.0, 38°.77N×43°.62E, h7^{km}±5^{km}, ML2.7*
*ISCJB **29** 15:43:35.0±0.6, 38°.80N±0°.03×43°.62E±0°.05, h13^{km}, Error ellipse: s-maj=6.1km s-min=3.5km az=27.7*
ISC 29 15:43:34.5±0.9, 38°.82N±0°.03×43°.57E±0°.04, h13^{km}, n15, σ0^{s}.53/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	0.17	1	*i* P	Pg	15 43 38.5	-0.2
VMUR				*i* S	Sb	15 43 43.1	0.0
VANB	**Van**	0.26	213	PG	Pb	15 43 40.9	-0.2
VANB				SG	Sb	15 43 46.9	+1.4
TVAN	**Van**	0.31	204	*i* P	Pb	15 43 41.8	-0.3
TVAN				*i* S	Sb	15 43 47.2	+0.1
CLDR	**Caldiran**	0.43	40	PG	Pg	15 43 42.8	-0.2
CLDR				SG	Sg	15 43 49.7	+0.9
CLDR	**Caldiran**	0.43	40	*i* P	Pg	15 43 43.2	+0.1
CLDR				*i* S	Sb	15 43 50.3	-0.1
CLDR				IAML_P			
	comp=Z,6μm,0.1s						
GEVA	**Gevas**	0.64	219	*i* P	Pg	15 43 47.0	0.0
GEVA				IAML_P			
	comp=Z,1μm,0.2s						
ADCV	**BITLIS_Adilcev**	0.66	270	*i* P	Pb	15 43 47.8	-0.2
ADCV				*i* S	Sn	15 43 59.2	-0.9
AKDM	**Akdamar-Van**	0.67	224	PG	Pg	15 43 47.2	-0.4
AKDM				SG	Sb	15 43 57.0	-0.4
TUTA	**Tutak**	0.83	315	*i* P	Pg	15 43 50.7	+0.1
TUTA				*i* S	Sb	15 44 03.0	+1.0
BLIS	**Bitlis-Merkez**	1.21	251	*i* P	Pn	15 43 56.9	-0.4
BLIS				*i* S	Sn	15 44 14.3	+0.8
BLIS				IAML_P			
	comp=Z,1μm,0.2s						
GURO	**Guroymak-BITLI**	1.23	258	PN	Pn	15 43 57.1	-0.4
HAKT	**HAKKARI**	1.26	175	*i* P	Pn	15 43 57.8	-0.2
HAKT				IAML_P			
	comp=Z,526nm,0.1s						
SRTM	**Siirt_Merkez**	1.53	238	*i* P	Pg	15 44 03.9	0.0
SRTM				IAML_P			
	comp=Z,284nm,0.2s						
CUKT	**Cukurca**	1.57	179	PN	Pb	15 44 03.5	+0.1
GNI	**Garni**	1.61	34	PN	Pb	15 44 03.9	-0.3

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*PDG **29** 15:53:48.8±0.3, 41°.07N×19°.15E, h10^{km}, ML2.5/9, Error ellipse: s-maj=0.9km s-min=1.5km az=0.0*
*BEO **29** 15:53:48.1±0.9, 41°.06N×20°.03E, h6^{km}±2^{km}, ML2.0/7*
ISC 29 15:53:38.0±2.5, 40°.6N±0°.1×19°.81E±0°.05, h11^{km}±10^{km}, n24, σ1^{s}.21/46, 8C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	0.72	3	*e*Pg	Pn	15 53 53.9	-0.3
TIR				*e*Sg	Sg	15 53 58.9	-2.5
ULC	**Ulcinj**	1.40	342	⇑ *i*Pg	Pg	15 54 05.4	+0.4
ULC				*e*Sg	Sn	15 54 19.4	-2.7
DRME	**Dracevica, Mon**	1.63	343	⇓ *i*Pg	Pg	15 54 09.7	+0.4
DRME				*e*Sg	Sn	15 54 27.5	-0.2
BUM	**Brajici-Budva**	1.81	338	⇑ *i*Pg	Pb	15 54 11.5	+0.3
BUM				*e*Sg	Sn	15 54 31.4	-0.8
SKO	**Skopje**	1.82	42	*e*Pg	Pg	15 54 12.4	-0.5
SKO				*e*Sg	Sn	15 54 33.5	+1.1
SKO	**Skopje**	1.82	42	*i* Pn	Pg	15 54 12.4	-0.5
SKO				*i* Sn	Sg	15 54 36.3	-0.2
PDG	**Podgorica**	1.85	347	*e*Pg	Pg	15 54 14.4	+0.9
PDG				*e*Sg	Sb	15 54 34.9	-0.1
TTG	**Podgorica**	1.85	347	⇑ *i*Pg	Pg	15 54 14.3	+0.8
TTG				*e*Sg	Sb	15 54 35.5	+0.5
PVY	**Plav**	1.97	3	⇑ *i*Pn	Pg	15 54 18.7	+2.9
PVY				*e*Sn	Sg	15 54 42.6	+1.3
CEME	**Cevo**	2.03	341	⇑ *i*Pg	Pb	15 54 15.7	+0.7
CEME				*e*Sg	Sn	15 54 38.5	+0.8
HCY	**Herceg Novi**	2.07	332	⇑ *i*Pg	Pb	15 54 15.2	-0.5
HCY				*e*Sg	Sn	15 54 38.0	-0.6
STIP	**Stip**	2.08	58	*i* Pn	Pg	15 54 19.6	+1.6
STIP				*i* Sn	Sg	15 54 47.6	+2.6
KOME	**Kolasin**	2.23	354	⇑ *i*Pn	Pg	15 54 20.7	-0.1
KOME				*e*Sn	Sb	15 54 46.5	+0.4
NKME	**Niksic**	2.23	344	⇓ *i*Pn	Pg	15 54 20.2	-0.6
NKME				*e*Sn	Sn	15 54 44.2	+1.5
IVA	**Berane**	2.24	1	⇓ *i*Pn	Pg	15 54 21.8	+0.8
IVA				*e*Sn	Sg	15 54 49.1	-1.0
NKY	**Niksic**	2.27	345	⇓ *i*Pn	Pg	15 54 20.9	-0.6
NKY				*e*Sn	Sn	15 54 45.1	+1.5
TREB	**Trebinje**	2.36	333	*e*Pn	Pg	15 54 23.7	+0.5
TREB				*e*Sn	Sb	15 54 49.6	-0.1
BRY	**Bratogost**	2.46	338	⇓ *i*Pn	Pb	15 54 22.4	0.0
BRY				*e*Sn	Sn	15 54 48.5	0.0
SJES	**Sjenica**	2.63	3	*e*Pn	Pb	15 54 25.9	+0.6
SJES				*e*Sn	Sn	15 54 52.1	-0.6
UPM	**Unac-Piva**	2.66	346	⇑ *i*Pn	Pb	15 54 26.6	+0.8
UPM				*e*Sn	Sn	15 54 54.9	+1.5
SELS	**Selova**	2.77	20	*e*Pn	Pb	15 54 26.4	-1.1
IVAS	**Ivanjica**	2.96	5	*e*Pn	Pb	15 54 30.6	-0.2
VTS	**Vitosha**	3.25	51	*e*Pn	Pb	15 54 33.1	-2.7
VTS				*e*Sn	Sn	15 55 07.8	0.0
BBLS	**Lazići**	3.25	355	*e*Pn	Pb	15 54 34.3	-1.5
BBLS				*e*Sn	Sn	15 55 08.3	+0.5

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*ISK **29** 16:01:21.9, 38°.85N×42°.85E, h21^{km}±1^{km}, ML2.3/4*
*DDA **29** 16:01:22.7, 38°.88N×42°.83E, h7^{km}±3^{km}, ML2.8*
*ISCJB **29** 16:01:23.7±0.5, 38°.86N±0°.03×42°.81E±0°.03, h6^{km}±9^{km}, Error ellipse: s-maj=4.6km s-min=4.2km az=140.7*
ISC 29 16:01:22.4±1.2, 38°.87N±0°.04×42°.84E±0°.03, h11^{km}±9^{km}, n12, σ1^{s}.60/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADCV	**BITLIS_Adilcev**	0.11	235	*i* P	Pg	16 01 25.6	+0.1
ADCV				IAML_P			
	comp=Z,6μm,0.1s						
MLAZ	**Malazgirt-MUS**	0.35	320	PG	Pb	16 01 30.2	-0.6
MLAZ				SG	Sb	16 01 36.3	-0.2
VANB	**Van**	0.51	123	PG	Pb	16 01 33.5	0.0
TUTA	**Tutak**	0.53	358	*i* P	Pb	16 01 33.7	-0.2
TUTA				*i* S	Sb	16 01 42.7	+1.0
TUTA				IAML_P			
	comp=Z,3μm,0.2s						
AKDM	**Akdamar-Van**	0.55	169	PG	Pg	16 01 32.9	-0.4
AKDM				SG	Sb	16 01 41.3	-1.0
TVAN	**Van**	0.56	128	*i* P	Pn	16 01 37.6	+1.0
TVAN				*i* S	Sn	16 01 44.0	-2.0
VMUR	**Van-Muradiye**	0.58	78	*i* P	Pb	16 01 34.4	-0.4
VMUR				*i* S	Sb	16 01 43.9	+0.8
VMUR				IAML_P			
	comp=Z,580nm,0.2s						
GEVA	**Gevas**	0.58	163	*i* P	Pn	16 01 35.4	-1.5
GEVA				*i* S	Sb	16 01 44.0	+0.8
GEVA				IAML_P			
	comp=Z,830nm,0.1s						
GURO	**Guroymak-BITLI**	0.71	243	PG	Pb	16 01 36.4	-0.5
GURO				SG	Sb	16 01 46.9	+0.2
BLIS	**Bitlis-Merkez**	0.73	231	*i* P	Pn	16 01 37.6	-1.2
BLIS				*i* S	Sn	16 01 48.0	-2.1
BLIS				IAML_P			
	comp=Z,2μm,0.3s						
MUSM	**Mu-Merkez**	1.05	262	*i* P	Pb	16 01 42.2	-0.5
MUSM				*i* S	Sn	16 01 57.0	-0.9
SRTM	**Siirt_Merkez**	1.14	220	*i* P	Pg	16 01 46.8	+2.5
SRTM				*i* S	Sn	16 02 04.8	+4.7

MAN 29 16:02:31.7, 12°.39N×120°.71E, h6^{km}, mb3.5, ML2.2, MS1.6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJMP	**San Jose**	0.41	80	*e*P	Pg	16 02 40.0	+0.4
SJMP				*e*S	Sg	16 02 46.0	+1.1
BUSP	**Coron**	0.63	232	*e*P	Pg	16 02 43.9	+0.1
BUSP				*e*S	Sb	16 02 53.3	-0.9
PGP	**Puerto Galera**	1.13	12	⇑ *e*P	Pn	16 02 54.1	0.0
PGP				*i* S	Sn	16 03 09.4	-0.6
LUBP	**Lubang**	1.41	341	*e*P	Pn	16 02 57.2	-0.7
LUBP				*e*S	Sg	16 03 17.0	-0.1
BOAC	**Boac**	1.53	46	*e*P	Pn	16 02 60.0	+0.4
BOAC				*e*S	Sn	16 03 19.8	-0.1
CUYO	**Cuyo Island**	1.56	169	*e*P	Pn	16 02 59.4	-0.6
CUYO				*e*S	Sn	16 03 18.3	-2.2

MEX 29 16:05:27.2±0.8, 16°.04N×97°.30W, h28^{km}±12^{km}, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	1.16	28	*e*P	Pn	16 05 44.5	-3.3
VHO				*e*S	Sn	16 05 59.5	-3.3
CAIG	**El Cayaco**	3.02	290	*i* P	Pn	16 06 10.5	-2.6
CAIG				*i* S	Sn	16 06 45.3	-3.0

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*NIED **29** 16:05:00, 36°.50N×140°.60E, h62^{km}, Mw3.8 Best double couple: $M_0$4.91000×10^{14} NP1:ϕ_s204.00000°, δ26.00000°, λ78.00000°. NP2:ϕ_s38.00000°, δ65.00000°, λ96.00000°.*
*IDC **29** 16:05:41.4±0.8, 36°.67N×140°.88E, h0^{km}, mb3.8/11, mb1 3.9/16, mb1mx3.7/45, mbtmp3.8/16, ML3.3/3, MS2.3/2, Ms1 2.3/2, ms1mx2.1/30, Error ellipse: s-maj=17.4km s-min=16.0km az=12.0*
*ISCJB **29** 16:05:48.5±0.4, 36°.49N±0°.03×140°.68E±0°.05, h68^{km}±2^{km}, mb3.8/14, Error ellipse: s-maj=7.2km s-min=4.9km az=19.2*
*NEIC **29** 16:05:48.6±0.9, 36°.56N×140°.74E, h53^{km}±8^{km}, mb4.3/3, Error ellipse: s-maj=11.9km s-min=8.4km az=75.0*
*JMA **29** 16:05:50.5±0.1, 36°.52N×140°.57E, h58^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s17.00000°, δ60.00000°, λ89.00000°. NP2:ϕ_s199.00000°, δ30.00000°, λ92.00000°. Principal axes: T Plg75.0000°, Azm284.0000°; N Plg1.0000°, Azm18.0000°; P Plg15.0000°, Azm108.0000°;*
JMA Felt III J1.
ISC 29 16:05:49.4±0.7, 36°.52N±0°.04×140°.62E±0°.05, h61^{km}±6^{km}, n49, σ1^{s}.34/57, mb3.7/14, 5C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	0.10	337	⇑P	Pn	16 05 59.2	+0.6
JHO				S	Sn	16 06 05.2	0.0
JHYU	**Hitachinakayam**	0.18	187	⇑P	Pn	16 05 59.7	+0.8
JHYU				S	Sn	16 06 06.2	+0.5
JYT	**Yasato**	0.45	229	⇑P	Pn	16 06 01.6	+0.7
JYT				S	Sn	16 06 09.3	0.0
ONAJ	**Iwakimizuishiy**	0.60	14	⇑P	Pn	16 06 03.1	+0.5
ONAJ				S	Sn	16 06 12.3	+0.1
JSB	**Shiboa**	0.71	309	⇓P	Pn	16 06 04.7	+0.8
JSB				S	Sn	16 06 15.0	+0.4
JFK	**Kawauchi**	0.87	14	⇑P	Pn	16 06 06.3	+0.4
JFK				S	Sn	16 06 17.8	-0.2
JAG	**Ashikaga**	0.94	264	⇓P	Pn	16 06 07.4	+0.7
JAG				S	Sn	16 06 19.2	-0.3
JFT	**Otama**	1.02	347	⇓P	Pn	16 06 08.6	+0.8
JFT				S	Sn	16 06 21.9	+0.5
JKT	**Katashina**	1.13	283	⇓P	Pn	16 06 10.0	+0.8
JKT				S	Sn	16 06 24.9	+1.0
JFY	**Yanaizu**	1.15	321	⇓P	Pn	16 06 10.4	+1.0
JMM	**Marumori**	1.35	6	P	Pn	16 06 13.0	+0.9
JMM				S	Sn	16 06 29.8	+0.7
JHK	**Hiroka**	1.47	300	⇓P	Pn	16 06 14.8	+1.1
MJAR	**Matsushiro Arr**	1.94	271	Pn	Pn	16 06 19.8	-0.3
	8.4nm,0.3s,baz=75,slow=18,SNR=365						
MJAR				Lg	Lg	16 06 46.7	
	5.4nm,0.3s,baz=89,slow=15,SNR=7.5						
MJAR				LR	LR	16 07 25.9	
	comp=Z,72nm,19.9s,baz=95,slow=49						
MAJO	**Matsushiro**	1.94	271	*e*Pn	Pn	16 06 21.7	+1.7
MAT	**Matsushiro**	1.94	271	P	Pn	16 06 21.8	+1.7
MAT				S	Sn	16 06 46.0	+2.6
MJB9	**Matsu-Tunnel**	1.94	271	*e*Pn	Pn	16 06 21.7	+1.6
JHJ	**Hachijo jima 2**	3.46	192	Pn	Pn	16 06 41.0	+0.2
	14nm,0.3s,baz=37,slow=10,SNR=13						
JHJ				Sn	Sn	16 07 19.6	-1.0
	46nm,0.3s,baz=58,slow=22,SNR=8.2						
JHJ2	**Mitsune**	3.46	191	*e*Pn	Pn	16 06 42.4	+1.5
ERM	**Erimo**	5.83	19	*e*Pn	Pn	16 07 13.1	-0.1
USRK	**Ussuriysk Ar.**	10.10	322	Pn	Pn	16 08 09.9	-1.7
	0.1nm,0.3s,baz=139,slow=13,SNR=2.9						
KSRS	**Korea Array**	10.20	279	Pn	Pn	16 08 11.9	-1.0
	0.1nm,0.3s,baz=92,slow=15,SNR=2.6						
KSRS				Sn	Sn	16 10 02.0	-3.7
	0.3nm,0.3s,baz=122,slow=38,SNR=17						
KSRS				LR	LR	16 12 00.8	
	comp=Z,18nm,21.6s,baz=80,slow=36						
KSAR	**Wonju Array Be**	10.23	279	Pn	Pn	16 08 11.9	-1.5
KSAR				Sn	Sn	16 10 02.0	-4.4
SONA0	**Songino Array**	27.55	305	*e*P	P	16 11 30.7	+0.2
SONM	**Songino Array**	27.55	305	P	P	16 11 30.7	+0.2
	0.7nm,0.5s,baz=108,slow=9.7,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	28.45	119	T	T	16 41 42.7	
	baz=313,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	28.46	119	T	T	16 41 43.4	
	baz=313,slow=75,SNR=62						
H11N3	**WAKE ISLAND Hy**	28.47	119	T	T	16 41 44.1	
	baz=313,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	29.13	121	T	T	16 42 35.0	
	baz=314,slow=76,SNR=120						
H11S3	**WAKE ISLAND Hy**	29.13	121	T	T	16 42 35.6	
	baz=314,slow=76,SNR=110						
H11S2	**WAKE ISLAND Hy**	29.15	121	T	T	16 42 37.6	
	baz=314,slow=76,SNR=92						
ZAA1	**Zalesovo Array**	41.79	313	*e*P	P	16 13 32.1	-0.5
ZALV	**Zalesovo Beam**	41.79	313	P	P	16 13 32.1	-0.5
	2.1nm,0.5s,baz=95,slow=6.5,SNR=8.6						
MK31	**Makanchi Array**	43.85	302	*e*P	P	16 13 50.2	+0.7
	1.1nm,0.8s						
MK32	**Makanchi Array**	43.85	302	*e*P	P	16 13 50.4	+0.9
MKAR	**Makanchi Array**	43.85	302	P	P	16 13 50.4	+0.9
	0.9nm,0.6s,baz=88,slow=9.6,SNR=12						
SCM	**Sheep Creek Mo**	50.26	36	*e*P	P	16 14 39.8	+0.6
	13nm,0.7s						
ILAR	**Eielson Array**	50.27	32	P	P	16 14 35.9	-3.2
	0.4nm,0.8s,baz=263,slow=6.3,SNR=2.6						
WR1	**Warramunga Arr**	56.47	187	*e*P	P	16 15 24.8	-0.2
WRA	**Warramunga Arr**	56.47	187	P	P	16 15 24.8	-0.2
	0.3nm,0.4s,baz=359,slow=8.5,SNR=4.7						
AS31	**Alice Springs**	60.20	187	*e*P	P	16 15 51.1	+0.1
	4.4nm,1.8s						
ASAR	**Alice Springs**	60.20	187	P	P	16 15 52.7	+1.7
	0.3nm,0.8s,baz=19,slow=6.1,SNR=3.9						
FIA0	**FINESS Array S**	68.97	332	*e*P	P	16 16 48.2	+0.5
FINES	**FINESS Array B**	68.97	332	P	P	16 16 48.2	+0.5
	0.3nm,0.3s,baz=35,slow=7.9,SNR=3.6						
AKASG	**Malin Array Be**	74.31	322	P	P	16 17 20.2	+0.1
	0.4nm,0.4s,baz=46,slow=5.3,SNR=4.2						
NB200	**NORSAR Array S**	74.41	337	*e*P	P	16 17 21.5	+1.0
NOA	**NORSAR Array B**	74.41	337	P	P	16 17 21.5	+1.0
	0.8nm,0.7s,baz=50,slow=21,SNR=2.8						
BR101	**Keskin Array S**	78.71	311	*e*P	P	16 17 47.0	+1.7
BRTR	**Keskin Array B**	78.71	311	P	P	16 17 47.0	+1.7
	0.6nm,0.7s,baz=49,slow=14,SNR=3.1						
ULM	**Lac du Bonnet**	80.28	33	P	P	16 17 52.0	-1.5
	1.2nm,0.4s,baz=231,slow=6.5,SNR=1.9						

IDC 29 17:03:08.4±5.4, 3°.52S×138°.92E, h113^{km}±61^{km}, mb3.2/2, mb1 3.5/5, mb1mx3.2/25, mbtmp3.9/5, Error ellipse: s-maj=63.2km s-min=17.9km az=90.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	10.06	126	P	Pn	17 05 28.8	-0.9
	0.5nm,0.3s,baz=311,slow=20,SNR=4.9						
WRA	**Warramunga Arr**	16.92	195	P	Pn	17 06 57.1	-1.4
	0.3nm,0.3s,baz=18,slow=12,SNR=13						
WRA				S	Sn	17 09 55.3	-11
	0.3nm,0.3s,baz=12,slow=20,SNR=5.6						
CTA	**Charters Tower**	17.95	157	P	Pn	17 07 11.3	+0.4
	0.1nm,0.3s,baz=346,slow=17,SNR=2.2						
ASAR	**Alice Springs**	20.60	193	P	P	17 07 39.7	+1.0
	1.1nm,0.5s,baz=15,slow=10,SNR=41						
ASAR				S	S	17 11 23.4	+0.4
	0.8nm,0.8s,baz=11,slow=25,SNR=4.1						
MKAR	**Makanchi Array**	70.56	323	P	P	17 14 11.1	-0.2
	0.2nm,0.6s,baz=110,slow=6.6,SNR=3.9						

MAN 29 17:05:04.2, 7°.25N×124°.96E, h23^{km}, mb4.1, ML2.9, MS2.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	0.28	151	⇑ *e*P	Pb	17 05 11.8	+1.1
KCP				*i* S	Sn	17 05 42.7	+24
BUKP	**Musuan**	0.63	10	*e*P	Pb	17 05 17.1	+0.5
BUKP				*e*S	Sn	17 05 27.7	+0.5
CTBH	**Cotabato--PC H**	0.70	268	⇓ *i*P	Pb	17 05 17.6	-0.2
CGP	**Cagayan de Oro**	1.22	348	*e*P	Pb	17 05 26.6	0.0
CGP				*e*S	Sb	17 05 42.0	0.0

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*ISK **29** 17:12:18.4, 38°.44N×28°.51E, h6^{km}, ML2.2/6*
*ISCJB **29** 17:12:19.2±0.4, 38°.47N±0°.03×28°.51E±0°.04, h6^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=4.6km az=144.8*
*DDA **29** 17:12:19.1, 38°.49N×28°.55E, h8^{km}±1^{km}, ML2.9*
ISC 29 17:12:19.0±0.9, 38°.45N±0°.03×28°.51E±0°.03, h6^{km}±7^{km}, n19, σ0^{s}.45/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANT	**Manisa**	0.06	39	*i* P	Pg	17 12 20.6	-0.1
MANT				*i* S	Sg	17 12 22.1	+0.1
MANT				IAML_P			
	comp=Z,117μm,0.3s						
KULA	**Kula-Manisa**	0.14	60	PG	Pg	17 12 21.9	+0.1
KULA				SG	Sg	17 12 24.3	+0.6
USAK	**Uak-Merkez**	0.48	56	*i* P	Pg	17 12 28.0	-0.2
USAK				IAML_P			
	comp=Z,7μm,0.1s						
DEMI	**Demirci**	0.62	15	*i* P	Pg	17 12 30.4	-0.4
DEMI				*i* S	Sg	17 12 38.2	-0.7
DEMI				IAML_P			
	comp=Z,3μm,0.2s						
AKHS	**Akhisar**	0.70	308	*i* P	Pb	17 12 32.9	-0.6
AKHS				*i* S	Sb	17 12 43.7	+0.3
AYDB	**Zeytinkoy-Aydi**	0.70	225	PG	Pg	17 12 32.2	-0.2
AYDB				SG	Sg	17 12 42.2	+0.7
KHAL	**Karahalli**	0.77	95	*i* P	Pb	17 12 34.5	-0.3
KHAL				*i* S	Sb	17 12 46.1	+0.4
KHAL				IAML_P			
	comp=Z,2μm,0.1s						
GEDZ	**Gediz**	0.92	49	PG	Pb	17 12 36.8	-0.6
AYDN	**Tasoluk**	0.93	213	*i* P	Pn	17 12 38.4	-0.2
AYDN				*i* S	Sn	17 12 52.7	+0.5
AYDN				IAML_P			
	comp=Z,2μm,0.2s						
STEP	**BALIKESIR_Sava**	1.12	327	*i* P	Pn	17 12 41.8	+0.6
STEP				IAML_P			
	comp=Z,1μm,0.1s						
BLCB	**Balcova**	1.16	267	PN	Pg	17 12 40.9	-0.2
TVSB	**Tavsanli**	1.25	36	PN	Pb	17 12 42.3	-0.6
BALB	**Balikesir**	1.29	338	PN	Pg	17 12 43.8	+0.1
YER	**Yerkesik**	1.32	188	PN	Pn	17 12 43.8	-0.2
DKL	**Dikili**	1.40	297	PN	Pb	17 12 45.1	-0.4
URLA	**Izmir**	1.51	267	PN	Pn	17 12 46.5	0.0
KCTX	**Karacabey (Bur**	1.82	356	PN	Pn	17 12 51.1	+0.3
CHOS	**Chios island**	1.93	269	PN	Pn	17 12 52.6	+0.2
EDC	**Edincik**	1.96	345	PN	Pn	17 12 53.3	+0.5

JMA 29 17:25:46.5±0.1, 24°.89N×123°.38E, h29^{km}±5^{km}, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	0.54	218	P	Pb	17 25 57.2	-0.4
YOJ				*e*S	Sb	17 26 04.6	-0.5
JYNG	**Yonagunijimaku**	0.59	222	P	Pb	17 25 57.9	-0.5
JYNG				S	Sb	17 26 06.2	-0.2
IRIF	**Iriomote-Funau**	0.64	150	P	Pb	17 25 58.6	-0.6
IRIF				*e*S	Sb	17 26 07.3	-0.5
JKRS	**Kuro-shima**	0.87	138	P	Pn	17 26 02.5	-0.2
JKRS				S	Sb	17 26 13.9	-0.3
JIJ	**Ishigaki jima**	0.87	127	P	Pn	17 26 02.1	-0.7
JIJ				S	Sb	17 26 12.9	-1.4
JISG	**Ishigakijimahi**	0.90	109	P	Pn	17 26 02.9	-0.3
JISG				S	Sb	17 26 14.7	-0.4
HATJ	**Hateruma jima**	0.92	155	*e*S	Sn	17 26 15.0	-0.6

TAP 29 17:25:51.4, 24°.64N×121°.71E, h8^{km}±1^{km}, ML0.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWE	**Neicheng**	0.09	336	P	Pg	17 25 54.0	+0.4
	baz=344						
TWE				*i* S	Sg	17 25 56.0	+0.8
	baz=344						
TWC	**Suao**	0.13	104	*i* P	Pg	17 25 55.5	+1.2
	baz=103						
TWC				S	Sg	17 25 57.9	+1.5
	baz=103						
NDT	**Datong Townshi**	0.18	257	*e*P	Pg	17 25 56.5	+1.3
	baz=257						
NDT				*e*S	Sg	17 25 59.2	+1.5
	baz=257						
NANB	**Nanao**	0.22	169	*e*P	Pg	17 25 57.1	+1.3
	baz=169						
NANB				*e*S	Sg	17 26 00.3	+1.6
	baz=169						
YHNB	**Yeheng**	0.30	275	*e*P	Pb	17 25 58.8	-0.3
	baz=275						
YHNB				*e*S	Sb	17 26 03.0	-1.2
	baz=275						
TIPB	**Shuangxi**	0.35	18	*e*P	Pb	17 25 59.1	-0.7
	baz=18						

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*IDC **29** 17:29:47.8±1.1, 44°.25N×105°.57W, h0^{km}, mb1 3.5/4, mb1mx3.2/43, mbtmp3.1/4, ML3.3/4, Error ellipse: s-maj=27.8km s-min=9.0km az=147.0*
*ISCJB **29** 17:29:48.0±0.5, 44°.14N±0°.04×105°.50W±0°.06, h0^{km}, Error ellipse: s-maj=6.7km s-min=5.1km az=162.7*
*NEIC **29** 17:29:49.8±0.4, 44°.17N×105°.50W, h0^{km}, ML3.4, Error ellipse: s-maj=5.2km s-min=4.3km az=76.0, Suspected Mining explosion.*
NEIC 14 km [8 miles] S of Gillette.

ISC 29 17:29:49.1±1.1**, 44°.21N**±0°.06×**105°.47W**±0°.09**, h0^{km}, n42, σ1^{s}.11**/41**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
K22A	Casper	1.73	207	*e*Pn	Pn	17 30 18.4	-2.4
LAO	LASA Array	2.54	348	*e*Pn	Pn	17 30 31.8	+0.2
RLMT	Red Lodge	2.86	290	*e*Pn	Pn	17 30 37.2	+1.0
BW06	Boulder Array	3.31	246	*e*Pn	Pn	17 30 42.2	-0.1
PD31	Pinedale Array	3.31	246	*e*Pn	Pn	17 30 42.1	-0.3
PDAR	Pinedale Array	3.31	246	Pn	Pn	17 30 43.6	+1.2
	3.5nm,0.3s,baz=70,slow=16,SNR=32						
PDAR				Lg	Lg	17 31 29.4	
	8.3nm,0.3s,baz=66,slow=33,SNR=15						
GCMT	Greycliff	3.37	299	*e*Pn	Pn	17 30 44.1	+0.9
YNR	Norris Junctio	3.77	280	*e*Pn	Pn	17 30 49.0	+0.3
YPP	Pitchstone Pla	3.83	273	*e*Pn	Pn	17 30 51.5	+1.8
YHH	Holmes Hill	3.90	280	*e*Pn	Pn	17 30 51.0	+0.4
OGNE	Ogallala	4.13	141	*e*Pn	Pn	17 30 54.0	+0.4
QLMT	Earthquake Lak	4.31	280	*e*Pn	Pn	17 30 55.9	-0.2
AHID	Auburn Hatcher	4.34	253	*e*Pn	Pn	17 30 56.1	-0.5
DGMT	Dagmar	4.35	11	*e*Pn	Pn	17 30 58.3	+1.7
BOZ	Bozeman (W)	4.59	290	*e*Pn	Pn	17 30 59.9	-0.1
EGMT	Eagleton	4.84	324	*e*Pn	Pn	17 31 03.6	+0.2
HRY	Holter Researc	5.13	301	*e*Pn	Pn	17 31 07.4	+0.1
HWUT	Hardware Ranch	5.18	242	*e*Pn	Pn	17 31 08.1	0.0
DLMT	Dillon	5.20	285	*e*Pn	Pn	17 31 09.4	+1.0
LRM	Limekiln Ridge	5.21	291	*e*Pn	Pn	17 31 09.6	+1.1
MCMT	McKenzie Canyo	5.32	279	*e*Pn	Pn	17 31 09.5	-0.5
TCUT	Toone Canyon	5.36	237	*e*Pn	Pn	17 31 09.1	-1.5
HVU	Hansel Valley	5.88	248	*e*Pn	Pn	17 31 17.2	-0.4
PV22	Blue Mesa, Par	6.19	205	*e*Pn	Pn	17 31 21.7	-0.3
PV07	Paradox Valley	6.24	204	*e*Pn	Pn	17 31 22.3	-0.4
PV23	Carpenter Ridg	6.34	206	*e*Pn	Pn	17 31 24.1	0.0
PV04	Paradox Valley	6.36	205	*e*Pn	Pn	17 31 24.5	+0.2
PV12	Saucer Basin,	6.40	204	*e*Pn	Pn	17 31 27.1	+2.3
ECSD	EROS Data Cent	6.41	91	*e*Pn	Pn	17 31 27.4	+2.6
PV14	Lion Creek, Pa	6.41	206	*e*Pn	Pn	17 31 24.9	-0.2
PV11	David Mesa, Pa	6.43	205	*e*Pn	Pn	17 31 25.1	-0.3
SDCO	Great Sand Dun	6.46	180	*e*Pn	Pn	17 31 24.5	-1.2
PV03	Paradox Valley	6.47	204	*e*Pn	Pn	17 31 25.7	-0.1
TMUT	Trail Mountain	6.52	223	*e*Pn	Pn	17 31 26.4	-0.1
PV13	Radium Mtn., P	6.55	204	*e*Pn	Pn	17 31 27.6	+0.7
DUG	Dugway, Tooele	6.77	236	*e*Pn	Pn	17 31 29.4	-0.5
AGMN	Agassiz Nation	7.81	55	*e*Pn	Pn	17 31 43.5	-0.5
ULM	Lac du Bonnet	8.89	44	Pn	Pn	17 31 55.4	-3.4
	0.8nm,0.3s,baz=234,slow=15,SNR=6.4						
ULM				Lg	Lg	17 34 24.6	
	0.5nm,0.3s,baz=173,slow=8.1,SNR=2.0						
I56US	NEWPORT INFRAS	9.04	301	*i*		18 24 20.0	
	baz=114,slow=316,SNR=2.9						
NV01	Mina Array Sit	11.24	244	*e*Pn	Pn	17 32 31.5	+0.3
NVAR	Mina Array Bea	11.24	244	Pn	Pn	17 32 31.5	+0.3
	0.1nm,0.3s,baz=69,slow=11,SNR=2.6						
TXAR	Lajitas Array	14.91	174	Pn	Pn	17 33 21.6	+0.2
	0.0nm,0.3s,baz=348,slow=7.4,SNR=2.4						

ISCJB ***29*** *17:31:41.9±0.6, 36°.29N±0°.04×139°.23E±0°.06, h140^{km}±5^{km}, mb3.2/2, Error ellipse: s-maj=7.8km s-min=5.8km az=171.1*

IDC ***29*** *17:31:42.0±1.6, 36°.25N×139°.24E, h139^{km}±6^{km}, mb3.0/2, mb1 3.0/4, mb1mx2.8/53, mbtmp3.5/4, Error ellipse: s-maj=36.8km s-min=10.0km az=63.0*

JMA ***29*** *17:31:43.2±0.1, 36°.29N×139°.28E, h135^{km}±1^{km}, M2.9*

ISC 29 17:31:42.6±1.1**, 36°.30N**±0°.04×**139°.21E**±0°.06**, h139^{km}**±7^{km}**, n20, σ0^{s}.64**/33**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.23	57	P	Pn	17 32 01.7	+0.1
JAG				S	Sn	17 32 15.6	-0.5
JRY	Ryogami san	0.38	222	P	Pn	17 32 02.7	+0.5
JRY				S	Sn	17 32 16.9	-0.1
JKT	Katashina	0.47	4	P	Pn	17 32 02.6	-0.1
JKT				S	Sn	17 32 17.8	-0.1
MJAR	Matsushiro Arr	0.84	287	P	Pn	17 32 04.6	-0.4
	1.9nm,0.3s,baz=109,slow=5.5,SNR=128						
MJAR				S	Sn	17 32 22.2	+0.1
	1.4nm,0.3s,baz=114,slow=12,SNR=18						
MAT	Matsushiro	0.85	287	P	Pn	17 32 05.4	+0.3
MAT				S	Sn	17 32 22.1	0.0
MAT	Matsushiro	0.85	287	P	Pn	17 32 05.4	+0.3
MAT				*e*S	Sn	17 32 22.1	0.0
JYN	Shimob	0.97	214	P	Pn	17 32 06.4	+0.2
JYN				*e*S	Sn	17 32 24.3	+0.3
JOD2	Odawara 2	1.04	186	P	Pn	17 32 06.5	-0.3
JOD2				*e*S	Sn	17 32 24.1	-1.0
JFNN	Fujinakano	1.18	201	P	Pn	17 32 09.1	+1.0
JFT	Otama	1.51	36	P	Pn	17 32 12.2	+0.7
JFT				S	Sn	17 32 33.5	-0.1
JNS	Sasagawa	1.52	3	P	Pn	17 32 11.8	+0.3
JSZ	Suzu	1.87	308	P	Pn	17 32 16.1	+0.6
JSD	Sado	1.89	337	P	Pn	17 32 15.6	-0.2
JSD				*e*S	Sn	17 32 40.6	-0.7
JYTA	Yamagatataniai	2.13	251	P	Pn	17 32 19.4	+0.8
JYTA				*e*S	Sn	17 32 46.3	+0.1
JAW	Awa shima	2.15	1	P	Pn	17 32 19.2	+0.3
BSO1	Boso 1	2.19	138	P	Pn	17 32 19.3	+0.5
BSO1				*e*S	Sn	17 32 47.7	+1.1
JHJ	Hachijo jima 2	3.21	171	P	Pn	17 32 31.9	-0.3
	49nm,0.3s,baz=323,slow=20,SNR=16						
JHJ				S	Sn	17 33 09.3	-1.2
	26nm,0.3s,baz=49,slow=20,SNR=5.9						
KSRS	Korea Array	9.12	281	P	Pn	17 33 52.7	+1.8
	0.2nm,0.3s,baz=92,slow=12,SNR=5.2						
ZALV	Zalesovo Beam	41.11	313	P	P	17 39 11.9	-0.6
	0.5nm,0.5s,baz=79,slow=9.0,SNR=2.9						
MKAR	Makanchi Array	43.01	302	P	P	17 39 27.8	-0.4
	0.3nm,0.8s,baz=89,slow=8.8,SNR=2.9						

ISC 29 17:55:33.6±1.8**, 51°.44N**±0°.08×**16°.10E**±0°.05**, h0^{km}, n16, σ0^{s}.66**/31**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	168	*e*Pg	Pg	17 55 45.6	+0.4
KSP				*e*Sg	Sg	17 55 54.4	+1.4
CHVC	Chvalec	0.85	182	*e*PG	Pg	17 55 50.4	+0.6
CHVC				*e*SG	Sb	17 56 03.0	-0.2
	comp=Z,6.8nm,0.4s						
OSTC	Ostas	0.89	175	*e*PG	Pg	17 55 50.5	0.0
OSTC				*e*SG	Sb	17 56 04.2	+0.1
	comp=Z,6.6nm,0.3s						
UPC	Upice	0.93	183	*e*PG	Pg	17 55 51.6	+0.2
UPC				*e*SG	Sb	17 56 05.1	-0.4
	comp=Z,14nm,0.4s						
DPC	Dobruska-Polom	1.10	172	*e*PG	Pg	17 55 54.2	-0.4
DPC				*e*SG	Sg	17 56 09.3	+0.5
	comp=Z,6.1nm,0.3s						
PVCC	Panska Ves	1.33	227	*e*PG	Pg	17 55 59.2	+0.2
PVCC				*e*SG	Sb	17 56 17.1	+0.2
	comp=Z,20nm,0.2s						
BRG	Berggiesshubel	1.47	248	PG	Pn	17 56 01.2	-0.1
BRG				SG	Sn	17 56 21.6	+0.4
	5.5nm,0.4s						
GOPC	GO Pecny, Ondr	1.74	209	*e*SG	Sg	17 56 30.5	+1.2
PRU	Pruhonice	1.76	215	*e*PG	Pb	17 56 06.5	-0.1
PRU				*e*SG	Sg	17 56 30.5	+0.6
	comp=Z,5.7nm,0.4s						
MORC	Moravsky Berou	1.90	150	*e*PN	Pn	17 56 06.0	-1.3
MORC				*e*SG	Sb	17 56 34.1	+0.7
CLL	Collm	1.94	267	*e*Pg	Pn	17 56 08.0	+0.2
CLL				*e*Sg	Sg	17 56 36.0	0.0
	comp=Z,5.0nm,0.8s						
VRAC	Vranov	2.15	171	*e*PN	Pn	17 56 10.7	0.0
VRAC				*e*SG	Sb	17 56 40.8	+0.1
NKC	Novy Kostel	2.61	244	*e*PG	Pg	17 56 23.3	-0.2
NKC				*e*SG	Sg	17 56 57.8	+0.5
	comp=Z,5.5nm,0.3s						
KHC	Kasperske Hory	2.82	216	*e*PN	Pn	17 56 18.8	-1.1
KHC				*e*PG	Pb	17 56 25.2	+0.4
KHC				*e*SN	Sn	17 56 53.3	-1.2
KHC				*e*SG	Sg	17 57 03.6	-0.4
MODS	Modra-Piesok	3.16	166	*e*PG	Pg	17 56 33.0	-1.1
VYHS	Vyhne	3.44	148	*e*PG	Pg	17 56 40.0	+0.6

NIED ***29*** *18:26:00, 40°.20N×142°.50E, h32^{km}, Mw4.0 Best double couple: M₀1.02000×10^{15} NP1:φ$_s$182.00000°, δ23.00000°, λ70.00000°. NP2:φ$_s$24.00000°, δ69.00000°, λ98.00000°.*

NEIC ***29*** *18:26:13.0±1.2, 39°.55N×145°.31E, h33^{km}±9^{km}, mb4.5/12, Error ellipse: s-maj=27.3km s-min=8.9km az=97.0*

NEIC Recorded [1 JMA] in Aomori and Iwate.

ISCJB ***29*** *18:26:29.6±0.8, 40°.19N±0°.04×142°.52E±0°.07, h46^{km}±6^{km}, mb4.1/29, MS3.0/4, Error ellipse: s-maj=9.5km s-min=6.1km az=178.5*

JMA ***29*** *18:26:30.7±0.1, 40°.15N×142°.45E, h35^{km}±1^{km}, M4.1*

JMA Felt I J1.

IDC ***29*** *18:26:33.0±2.3, 40°.20N×142°.48E, h60^{km}±22^{km}, mb3.7/17, mb1 3.8/22, mb1mx3.7/51, mbtmp4.0/22, ML3.2/5, MS3.0/9, Ms1 3.0/9, ms1mx2.8/41, Error ellipse: s-maj=26.0km s-min=19.9km az=163.0*

ISC 29 18:26:29.2±1.7**, 40°.20N**±0°.04×**142°.61E**±0°.07**, h30^{km}**±11^{km}**, n56, σ1^{s}.69**/60**, mb4.0**/29**, MS3.0**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.63	246	P	Pb	18 26 41.1	-0.6
JTH				S	Sb	18 26 48.8	-1.4
JKEN	Kujiedanarisaw	0.69	271	P	Pb	18 26 42.0	-0.7
JKEN				S	Sb	18 26 49.8	-2.1
JANG	Nango	0.85	282	P	Pn	18 26 44.6	-0.5
JANG				S	Sn	18 26 54.2	-2.4
MIYJ	Miyakonagasawa	0.87	224	P	Pn	18 26 44.4	-0.9
MIYJ				S	Sn	18 26 54.2	-2.7
JKZ	Kuzumaki	1.00	258	P	Pn	18 26 46.9	-0.3
JKZ				S	Sn	18 26 58.2	-2.1
JARK	Aomorirokkasho	1.24	311	P	Pn	18 26 51.1	+0.6
JARK				*e*S	Sn	18 27 06.6	+0.4
JOM	Ohasama	1.24	235	P	Pn	18 26 50.5	0.0
JOM				S	Sn	18 27 05.0	-1.2
JTM	Tenmabayashi	1.31	297	P	Pn	18 26 52.0	+0.6
JTM				*e*S	Sn	18 27 08.0	+0.1
JAH	Hinai	1.51	270	P	Pn	18 26 54.7	+0.6
JAH				S	Sn	18 27 12.7	-0.1
JMK	Ichinoseki	1.64	221	P	Pn	18 26 56.3	+0.3
JMK				*e*S	Sn	18 27 16.0	-0.1
ERM	Erimo	1.86	13	*e*Pn	Pn	18 26 58.2	-0.8
MJAR	Matsushiro Arr	5.03	225	P	Pn	18 27 45.5	+3.0
	0.7nm,0.3s,baz=31,slow=13,SNR=47						
MJAR				S	Sb	18 29 01.8	+5.4
	baz=46,slow=11,SNR=2.7						
MJAR				LR	LR	18 29 52.9	
	comp=Z,139nm,20.2s,baz=45,slow=40						
MJB9	Matsu-Tunnel	5.03	225	*e*Pn	Pn	18 27 45.1	+2.6
MAJO	Matsushiro	5.03	225	*e*Pn	Pn	18 27 45.0	+2.5
JHJ	Hachijo jima 2	7.42	199	P	Pn	18 28 16.7	+1.3
	9.3nm,0.3s,baz=100,slow=19,SNR=2.8						
JHJ				S	Sn	18 29 34.6	-4.0
	2.8nm,0.3s,baz=180,slow=21,SNR=1.7						
USRK	Ussuriysk Ar.	8.84	300	P	Pn	18 28 38.1	+3.3
	0.7nm,0.3s,baz=113,slow=17,SNR=20						
USRK				LR	LR	18 31 54.0	
	comp=Z,131nm,19.2s,baz=104,slow=37						
JNU	Nakatsue	11.77	237	LR	LR	18 34 01.3	
	comp=Z,42nm,18.6s,baz=274,slow=38						
KSRS	Korea Array	11.78	261	P	Pn	18 29 18.9	+3.8
	0.2nm,0.3s,baz=68,slow=14,SNR=3.4						
KSRS				LR	LR	18 33 20.2	
	comp=Z,86nm,19.9s,baz=80,slow=35						
KLR	Kul'dur	11.87	323	P	Pn	18 29 17.7	+1.4
	0.1nm,0.3s,baz=138,slow=6.6,SNR=4.6						
KLR				LR	LR	18 33 55.5	
	comp=Z,69nm,19.9s,baz=120,slow=37						
YAK	Yakutsk	23.23	344	*e*P	P	18 31 30.6	-2.9
	11nm,0.5s						
SEY	Seymchan	23.51	11	P	P	18 31 36.2	0.0
	2.8nm,0.7s,baz=192,slow=3.7,SNR=8.6						
ULN	Ulaanbaatar	26.50	299	*e*P	P	18 32 04.2	+0.3
	1.4nm,0.6s						
SONM	Songino Array	26.94	299	P	P	18 32 07.0	-0.9
	1.0nm,0.4s,baz=99,slow=8.7,SNR=8.5						
SONM				LR	LR	18 43 19.4	
	comp=Z,46nm,19.4s,baz=90,slow=38						
TLY	Talaya	29.08	306	LR	LR	18 44 39.1	
	comp=Z,24nm,18.7s,baz=180,slow=37						
H11N2	WAKE ISLAND Hy	29.14	127	T	T	19 03 13.6	
	baz=318,slow=75,SNR=222						
H11N1	WAKE ISLAND Hy	29.15	127	T	T	19 03 13.0	
	baz=318,slow=75,SNR=178						
H11N3	WAKE ISLAND Hy	29.16	127	T	T	19 03 27.8	
	baz=318,slow=75,SNR=123						
H11S1	WAKE ISLAND Hy	29.96	129	T	T	19 04 28.2	
	baz=321,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	29.97	129	T	T	19 04 32.7	
	baz=321,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	29.98	129	T	T	19 04 24.3	
	baz=321,slow=76,SNR=29						
ZAA0	Zalesovo Array	40.54	310	*e*P	P	18 34 05.3	-0.1
	2.3nm,0.8s						
ZALV	Zalesovo Beam	40.54	310	P	P	18 34 05.6	+0.2
	2.0nm,0.5s,baz=96,slow=7.7,SNR=8.4						
ZALV				LR	LR	18 51 41.8	
	comp=Z,37nm,18.7s,baz=68,slow=37						
MK31	Makanchi Array	43.30	300	*e*P	P	18 34 28.1	+0.1
	1.8nm,0.6s						
MKAR	Makanchi Array	43.30	300	P	P	18 34 27.9	-0.2
	1.8nm,0.6s,baz=86,slow=10,SNR=19						
MKAR				LR	LR	18 51 44.9	
	comp=Z,15nm,19.8s,baz=2.0,slow=35						
MAKZ	Makanchi	43.51	300	*e*P	P	18 34 29.8	+0.1
	2.1nm,0.8s						
KURK	Kurchatov	44.78	306	*e*P	P	18 34 39.5	-0.3
	7.9nm,0.6s						
ILAR	Eielson Array	46.34	34	P	P	18 34 53.6	+1.6
	0.5nm,0.8s,baz=269,slow=6.4,SNR=7.0						
BRVK	Borovoye	49.23	311	*e*P	P	18 35 13.1	-1.5
	4.9nm,1.0s						
INK	Inuvik	51.15	28	P	P	18 35 30.3	+1.5
	3.0nm,0.9s,baz=257,slow=4.0,SNR=3.9						
KK31	Karatay Array	52.40	298	*e*P	P	18 35 37.3	-1.2
	12nm,1.9s						
KKAR	Karatay Array	52.40	298	*e*P	P	18 35 38.0	-0.5
	12nm,1.9s						
ARU	Arti	54.64	317	*e*P	P	18 35 51.5	-3.2
	6.0nm,0.7s						
ABKAR	Akbulak array	56.65	309	*e*P	P	18 36 09.2	-0.1
	3.0nm,0.5s						
KBL	Kabul	57.20	290	*e*P	P	18 36 12.7	-0.9
	6.7nm,0.8s						
ARCES	ARCESS Array B	61.37	339	P	P	18 36 42.2	+0.5
	0.4nm,0.5s,baz=61,slow=9.9,SNR=4.9						
GEYT	Alibeck	63.15	298	P	P	18 36 53.8	-0.4
	2.3nm,0.7s,baz=82,slow=11,SNR=4.3						
FINES	FINESS Array B	66.46	332	P	P	18 37 15.3	0.0
	2.2nm,0.7s,baz=42,slow=8.8,SNR=10						
KBZ	Khabaz	69.56	310	P	P	18 37 36.1	+1.0
	2.6nm,0.7s,baz=24,slow=9.3,SNR=4.5						
HFS	Hagfors	71.59	336	P	P	18 37 47.1	0.0
	0.9nm,0.4s,baz=38,slow=7.5,SNR=12						
NB2	NORSAR Subarra	71.63	337	P	P	18 37 47.3	-0.1
	comp=Z,0.9nm,0.7s,baz=37,slow=6.2						
NOA	NORSAR Array B	71.63	337	P	P	18 37 47.8	+0.3
	comp=Z,1.4nm,0.7s,baz=38,slow=6.1,SNR=8.3						
NVAR	Mina Array Bea	72.37	54	P	P	18 37 53.2	+0.7
	comp=Z,0.2nm,0.6s,baz=272,slow=2.4,SNR=2.7						
AKASG	Malin Array Be	72.37	322	P	P	18 37 51.3	-0.7
	comp=Z,0.9nm,0.5s,baz=47,slow=6.7,SNR=6.2						
BRTR	Keskin Array B	77.45	312	P	P	18 38 22.3	+0.5
	comp=Z,0.4nm,0.6s,baz=61,slow=3.6,SNR=2.8						
EKA	Eskdalemuir Ar	80.46	341	P	P	18 38 38.2	+0.5
	comp=Z,0.7nm,0.5s,baz=30,slow=5.2,SNR=3.8						
GERES	GERESS Array B	80.51	329	P	P	18 38 37.1	-1.2
	comp=Z,0.3nm,0.5s,baz=150,slow=40,SNR=2.9						

BJI ***29*** *18:27:38.0±0.0, 37°.27S×177°.93E, h151^{km}, mb5.2/17, mB5.2/8*

MOS ***29*** *18:27:39.4±2.4, 37°.23S×177°.27E, h141^{km}, mb5.0/17, Error ellipse: s-maj=18.8km s-min=12.0km az=34.6*

IDC ***29*** *18:27:40.1±0.8, 37°.34S×177°.65E, h156^{km}±6^{km}, mb4.5/14, mb1 4.6/15, mb1mx4.4/32, mbtmp4.9/15, MS3.5/2, Ms1 3.4/2, ms1mx2.9/21, Error ellipse: s-maj=18.7km s-min=14.1km az=56.0*

ISCJB ***29*** *18:27:41.5±0.2, 37°.38S±0°.03×177°.29E±0°.03, h165^{km}±1^{km}, mb4.8/50, Error ellipse: s-maj=4.6km s-min=4.2km az=16.5*

NEIC ***29*** *18:27:42.0±0.0, 37°.32S×177°.33E, h155^{km}, mb5.0/38, ML4.6(WEL), After WEL.*

GCMT ***29*** *18:27:43.0±0.5, 37°.36S±0°.04×177°.34E±0°.05, h156^{km}±3^{km}, MW4.9/71, Moment Tensor Solution. s21,c25; s71,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.90±.14; M$_{θθ}$-1.95±.22; M$_{φφ}$-0.94±.22; M$_{rθ}$1.06±.16; M$_{θφ}$-0.98±.19; M$_{φr}$1.43±.15; Best double couple: M₀3.24600×10^{16} NP1:φ$_s$48.00000°, δ61.00000°, λ81.00000°. NP2: φ$_s$247.00000°, δ30.00000°, λ107.00000°. Principal axes: T 3.4690, Plg72.0000°, Azm296.0000°; N -0.4400, Plg8.0000°, Azm52.0000°; P -3.0230, Plg16.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

WEL ***29*** *18:27:43.8, 37°S±6°×17°7E±°, h138^{km}±8^{km}, M4.6/55, MLv4.6/55 Error ellipse: s-maj=0.0km s-min=0.0km az=156.5*

ISC 29 18:27:42.0±0.6**, 37°.41S**±0°.05×**177°.31E**±0°.05**, h165^{km}**±4^{km}**, n462, σ1^{s}.40**/483**, mb4.9**/50**, 22C-7D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	White Island	0.15	220	P	Pn	18 28 02.4	-1.6
HAZ	Te Kaha	0.51	132	P	Pn	18 28 03.9	-1.2
HAZ				S	Sn	18 28 19.8	-3.1
WHRZ	Whale Island	0.52	211	P	Pn	18 28 04.6	-0.5
RUGZ	Raukumara Rang	0.62	152	P	Pn	18 28 04.4	-1.4
RUGZ				S	Sn	18 28 20.8	-3.4
OPRZ	Ohinepanea	0.74	234	P	Pn	18 28 05.6	-0.7
MARZ	Manawahe	0.76	221	P	Pn	18 28 06.1	-0.4
PKGZ	Pakihiroa	0.77	128	P	Pn	18 28 06.2	-0.5
PKGZ				S	Sn	18 28 23.8	-1.8
MXZ	Matakaoa Point	0.81	101	*e*Pn	Pn	18 28 05.6	-1.2
MXZ	Matakaoa Point	0.81	101	P	Pn	18 28 05.7	-1.1
MXZ				S	Sn	18 28 23.8	-2.0
EDRZ	Edgecumbe	0.83	213	P	Pn	18 28 08.3	+1.3
URZ	Urewera	0.86	190	P	Pn	18 28 06.5	-0.7
	2μm,0.3s,baz=264,slow=4.4						
URZ				S	Sn	18 28 24.9	-1.7
	1μm,0.3s,baz=191,slow=22,SNR=11						
URZ				LR	LR	18 28 31.7	
	comp=Z,1μm,18.7s,baz=328,slow=51						
URZ	Urewera	0.86	190	P	Pn	18 28 06.7	-0.4
TGRZ	Tauranga	0.89	249	P	Pn	18 28 06.8	-0.5
TWGZ	Tauwhareparae	0.93	145	P	Pn	18 28 08.0	+0.3
TWGZ				S	Sn	18 28 27.4	-0.3
MWZ	Matawai	0.94	169	P	Pn	18 28 07.6	-0.1
MWZ				S	Sn	18 28 27.0	-0.7
LIRZ	Lichensteins R	0.94	231	P	Pn	18 28 07.9	+0.1
WMGZ	Waiomatatini S	0.97	115	P	Pn	18 28 07.6	-0.4
WMGZ				S	Sn	18 28 26.7	-1.2
MKRZ	Makatiti	0.98	222	P	Pn	18 28 08.8	+0.6
OMRZ	Omania	1.01	227	P	Pn	18 28 08.4	+0.1
KARZ	Kaharoa	1.04	234	P	Pn	18 28 08.6	0.0
TARZ	Mount Tarawera	1.04	217	P	Pn	18 28 09.0	+0.4
RAGZ	Rawiri	1.08	176	P	Pn	18 28 09.1	+0.1
TKGZ	Te Karaka	1.11	158	P	Pn	18 28 09.1	+0.1
RRRZ	Republican Roa	1.12	214	P	Pn	18 28 09.5	+0.3
NGRZ	Ngongotaha	1.12	232	P	Pn	18 28 09.8	+0.5
HLRZ	Highlands Stat	1.13	222	P	Pn	18 28 09.8	+0.5
MUGZ	Murupara	1.15	202	P	Pn	18 28 09.4	0.0
UTU	Utuhina	1.17	229	P	Pn	18 28 10.5	+0.8
KMRZ	Kaimai	1.17	248	P	Pn	18 28 09.7	0.0
RTZ	Ruatahuna	1.23	192	P	Pn	18 28 09.9	-0.3
HSRZ	Hossack Road	1.23	223	P	Pn	18 28 11.0	+0.8
HRRZ	Handcock Road	1.27	219	P	Pn	18 28 11.1	+0.6
CNGZ	Carnagh Statio	1.28	147	P	Pn	18 28 11.4	+0.7
PRRZ	Plateau Road	1.30	213	P	Pn	18 28 11.2	+0.4
GRRZ	Galatos Road	1.33	225	P	Pn	18 28 11.9	+0.8
RIGZ	Rimuhau	1.34	165	P	Pn	18 28 11.6	+0.4
SNGZ	Shannon Statio	1.37	179	P	Pn	18 28 11.7	+0.2
ALRZ	Allen Road	1.38	213	P	Pn	18 28 12.1	+0.5
WPRZ	Whakapapatarin	1.43	219	P	Pn	18 28 12.9	+0.9
KUZ	Kuaotunu	1.43	297	P	Pn	18 28 10.2	-1.8
TOZ	Tahuroa Road	1.47	257	P	Pn	18 28 12.5	+0.1
MTHZ	Maungataniwha	1.48	194	P	Pn	18 28 12.6	0.0
RAHZ	Arahi	1.51	187	P	Pn	18 28 13.4	+0.6
PRGZ	Paritu Road	1.57	163	P	Pn	18 28 14.0	+0.5
MRHZ	Matea Rd	1.58	206	P	Pn	18 28 13.8	+0.2
KUTZ	Kaahu Road	1.59	227	P	Pn	18 28 14.7	+1.0
KNZ	Kokohu	1.63	170	P	Pn	18 28 14.4	+0.3
WHTZ	Whakaora	1.64	220	P	Pn	18 28 15.6	+1.3
WHHZ	Waihua	1.66	182	P	Pn	18 28 15.0	+0.6
TLZ	Tolley Road	1.67	236	P	Pn	18 28 15.3	+0.8
MKAZ	Moumakai	1.74	280	P	Pn	18 28 14.7	-0.5
HATZ	Hinemaiaia	1.76	213	P	Pn	18 28 15.8	+0.4
WATZ	Wairara	1.79	223	P	Pn	18 28 16.8	+1.0
MHGZ	Mahia Peninsul	1.80	165	P	Pn	18 28 16.6	+0.8
WIAZ	Waiheke Island	1.84	289	P	Pn	18 28 15.5	-0.8
ARHZ	Aropaoanui	1.86	187	P	Pn	18 28 17.1	+0.6
BKZ	Black Stump Fm	1.86	200	*e*Pn	Pn	18 28 15.9	-0.7
BKZ	Black Stump Fm	1.86	200	P	Pn	18 28 16.5	-0.1
GRZ	Great Barrier	1.88	307	P	Pn	18 28 15.0	-1.8
RATZ	Rangitukua	1.89	219	P	Pn	18 28 17.8	+0.9
RITZ	Rihia Road	1.94	216	P	Pn	18 28 18.5	+1.1
ETAZ	East Tamaki Re	1.96	283	P	Pn	18 28 17.5	-0.1
KBAZ	Karaka Road Bo	1.96	279	P	Pn	18 28 17.9	+0.3
KATZ	Kakaramea	2.01	219	P	Pn	18 28 19.1	+0.8
MBAZ	Motutapu North	2.03	288	P	Pn	18 28 17.9	-0.5
MCHZ	McNeill Hill	2.08	193	P	Pn	18 28 19.6	+0.6
EPAZ	Eden Park BICE	2.12	284	P	Pn	18 28 19.2	-0.2
KWHZ	Kaweka Forest	2.13	199	P	Pn	18 28 19.7	+0.2
KRVZ	Karewarewa	2.13	217	P	Pn	18 28 20.5	+0.8
HBAZ	Herne Bay Bore	2.13	284	P	Pn	18 28 19.7	+0.1
ABAZ	Army Bay	2.14	292	P	Pn	18 28 19.2	-0.4
AWAZ	Awhitu Peninsu	2.15	278	P	Pn	18 28 19.8	0.0
WTVZ	West Tongariro	2.17	218	P	Pn	18 28 20.7	+0.6
NGZ	Ngauruhoe	2.21	217	P	Pn	18 28 21.5	+0.9
TWVZ	Taurewa	2.22	221	P	Pn	18 28 21.3	+0.7
HIZ	Hauiti	2.23	240	*e*Pn	Pn	18 28 21.7	+1.1
HIZ	Hauiti	2.23	240	P	Pn	18 28 22.0	+1.4
WTAZ	Waiatarua	2.24	282	P	Pn	18 28 20.9	+0.1
CKHZ	Cape Kidnapper	2.25	185	P	Pn	18 28 21.3	+0.4
TUVZ	Tukino	2.26	215	P	Pn	18 28 21.7	+0.5
RVAZ	Riverhead Bore	2.27	286	P	Pn	18 28 20.9	-0.2
BHHZ	Black Hill Sta	2.29	205	P	Pn	18 28 21.3	-0.1
FWVZ	Far West T-bar	2.30	216	P	Pn	18 28 22.1	+0.4
WHVZ	Whangaehu Hut	2.31	215	P	Pn	18 28 22.2	+0.4
DRZ	Dome Shelter	2.31	216	P	Pn	18 28 22.6	+0.7
MOVZ	Moawhango	2.34	211	P	Pn	18 28 21.7	-0.3
KRHZ	Kereru	2.35	198	P	Pn	18 28 21.8	-0.2
KAHZ	Kahuranaki	2.40	188	P	Pn	18 28 23.0	+0.3
PKVZ	Pokaka	2.43	219	P	Pn	18 28 23.6	+0.6
MTVZ	Mangateitei	2.44	216	P	Pn	18 28 23.7	+0.5
VRZ	Vera Road	2.64	229	P	Pn	18 28 27.0	+1.5
PXZ	Pawanui	2.64	187	P	Pn	18 28 25.3	-0.2
PNHZ	Pukenui	2.64	199	P	Pn	18 28 25.2	-0.4
WPHZ	Waipukurau	2.73	194	P	Pn	18 28 26.2	-0.4
WCZ	Waipu Caves	2.80	301	P	Pn	18 28 26.3	-1.2
TSZ	Takapari Road	2.84	201	P	Pn	18 28 27.4	-0.7
MHEZ	Mangahewa	2.88	234	P	Pn	18 28 31.9	+3.5
PRHZ	Porangahau	2.90	190	P	Pn	18 28 28.3	-0.4
WAZ	Wanganui	2.96	217	P	Pn	18 28 29.8	+0.3
DVHZ	Dannevirke	3.02	197	P	Pn	18 28 29.2	-1.0
LREZ	Lake Rotokare	3.06	227	P	Pn	18 28 33.3	+2.6
ANWZ	Angora Road	3.11	192	P	Pn	18 28 30.9	-0.4
PKE	Pukeiti	3.16	235	P	Pn	18 28 33.2	+1.2
OHWZ	Ohakea	3.19	209	P	Pn	18 28 32.5	+0.2
KHEZ	Kahui Hut	3.20	233	P	Pn	18 28 34.4	+1.9
POWZ	Post Office Ro	3.21	202	P	Pn	18 28 31.7	-0.9
NBEZ	Newall Road No	3.28	235	P	Pn	18 28 35.4	+2.0
PRWZ	Pori Road	3.31	198	P	Pn	18 28 33.1	-0.6
NMEZ	Namu Road	3.35	232	P	Pn	18 28 36.2	+1.9
BFZ	Birch Farm	3.37	194	*e*Pn	Pn	18 28 33.2	-1.3
BFZ	Birch Farm	3.37	194	P	Pn	18 28 33.5	-1.1
MRZ	Mangatainoka R	3.51	202	P	Pn	18 28 34.9	-1.5
TIWZ	Tintock	3.54	198	P	Pn	18 28 35.6	-1.1
CPWZ	Castlepoint	3.60	193	P	Pn	18 28 37.1	-0.3
OUZ	Omahuta	3.71	305	*e*Pn	Pn	18 28 37.4	-1.5
OUZ	Omahuta	3.71	305	P	Pn	18 28 37.8	-1.1
SNZO	South Karori	4.38	207	*e*Pn	Pn	18 28 44.9	-2.7
CMWZ	Cape Campbell	4.95	208	P	Pn	18 28 54.3	-0.6
QRZ	Quartz Range	5.04	226	*e*Pn	Pn	18 28 53.3	-2.9
THZ	Tophouse	5.52	217	*e*Pn	Pn	18 28 59.8	-2.6
KHZ	Kahutara	5.78	209	*e*Pn	Pn	18 29 02.5	-3.3
DSZ	Denniston Nort	6.07	223	P	Pn	18 29 12.7	+3.1
LTZ	Lake Taylor	6.61	214	*e*Pn	Pn	18 29 13.3	-3.6
CRLZ	Canterbury Las	7.12	209	*e*Pn	Pn	18 29 19.9	-3.6
OXZ	Oxford	7.14	213	*e*Pn	Pn	18 29 20.4	-3.5
MQZ	McQueen's Vall	7.21	208	*e*Pn	Pn	18 29 20.6	-4.2
CTZ	Chatham Island	7.83	146	P	Pn	18 29 35.1	+2.2
RPZ	Rata Peaks	7.89	215	P	Pn	18 29 30.4	-3.4

	5.3nm,0.3s,baz=297,slow=2.2,SNR=65						
RPZ				S	Sn	18 30 55.2	-6.8
	18nm,0.3s,baz=24,slow=9.5,SNR=9.3						
FOZ	Fox Glacier	8.36	221	ePn	Pn	18 29 37.7	-2.3
LBZ	Lake Benmore	8.81	216	ePn	Pn	18 29 43.5	-2.4
ODZ	Otahua Downs	9.12	211	ePn	Pn	18 29 46.7	-3.4
WKZ	Wanaka	9.69	218	ePn	Pn	18 29 54.0	-3.6
HHSZ	Highcliff Hill	9.84	209	P	Pn	18 30 00.3	+0.8
EAZ	Earnscleugh	9.86	215	P	Pn	18 30 01.6	+1.9
MLZ	Mavora Lakes	10.52	218	ePn	Pn	18 30 07.2	-1.3
WHZ	Wether Hill Ro	10.98	217	ePn	Pn	18 30 13.2	-1.4
DCZ	Deep Cove	11.07	220	ePn	Pn	18 30 13.9	-1.8
DCZ	Deep Cove	11.07	220	P	Pn	18 30 19.0	+3.4
APZ	The Paps	11.67	213	P	Pn	18 30 25.6	+2.1
DZM	Mont Dzumac	17.94	325	P	Pn	18 31 41.0	-0.4
	1.2nm,0.3s,baz=175,slow=16,SNR=12						
DZM	Mont Dzumac	17.94	325	eP	P	18 31 39.4	-0.3
	128nm,1.8s						
ARMA	Armidale	22.38	281	eP	P	18 32 28.5	+1.7
	128nm,1.8s						
ARMA	Armidale	22.38	281	P	P	18 32 29.1	+2.3
	baz=23,SNR=9.3						
CNB	Canberra Magne	22.57	267	P	P	18 32 32.0	+3.6
	baz=23,SNR=7.8						
CAN	Canberra	22.86	267	eP	P	18 32 31.1	0.0
	12nm,0.9s						
CAN	Canberra	22.86	267	eP	P	18 32 31.1	0.0
CAN				pmax	pmax		
	comp=Z,12nm,0.9s						
EIDS	Eidsvold	25.32	291	eP	P	18 32 54.5	+1.1
	comp=Z,20nm,0.8s						
EIDS	Eidsvold	25.32	291	P	P	18 32 55.2	+1.8
	baz=26,SNR=5.5						
RMQ	Roma	26.47	286	P	P	18 33 05.6	+1.9
	baz=27,SNR=7.7						
CMSA	Cobar Meteorol	26.64	273	P	P	18 33 07.5	+2.3
	baz=27,SNR=25						
STKA	Stephens Creek	29.78	270	P	P	18 33 35.2	+2.1
	comp=Z,16nm,0.7s,baz=102,slow=11,SNR=27						
STKA				PcP	PcP	18 36 32.0	-0.6
	comp=Z,4.6nm,0.7s,baz=92,slow=2.8,SNR=6.7						
STKA				LR	LR	18 43 44.2	
	comp=Z,70nm,20.2s,baz=30,slow=32						
STKA	Stephens Creek	29.78	270	eP	P	18 33 32.8	-0.3
	comp=Z,3.4nm,0.8s						
STKA	Stephens Creek	29.78	270	P	P	18 33 35.3	+2.2
	baz=30,SNR=17						
HTT	Hallett	31.39	266	P	P	18 33 49.1	+1.8
	baz=32,SNR=5.3						
CTA	Charters Tower	32.04	294	P	P	18 33 54.7	+1.6
CTA				pmax	pmax		
	comp=Z,93nm,0.8s						
CTAO	Charters Tower	32.04	294	eP	P	18 33 54.6	+1.5
	comp=Z,61nm,0.8s						
CTAO	Charters Tower	32.04	294	eP	P	18 33 54.6	+1.5
CTAO				pmax	pmax		
	comp=Z,61nm,0.8s						
BBOO	Buckleboo	33.86	265	eP	P	18 34 09.7	+0.9
	comp=Z,104nm,1.8s						
BBOO	Buckleboo	33.86	265	P	P	18 34 09.8	+1.1
	baz=34,SNR=7.3						
MTSU	Mount Surprise	34.69	295	P	P	18 34 17.8	+1.7
	baz=35,SNR=31						
QIS	Mount Isa	36.72	287	P	P	18 34 34.7	+1.4
	baz=37,SNR=8.0						
COEN	Coen	38.29	298	eP	P	18 34 47.4	+0.9
	comp=Z,73nm,0.8s						
COEN	Coen	38.29	298	P	P	18 34 47.7	+1.1
	baz=39,SNR=42						
PMG	Port Moresby	38.96	308	eP	P	18 34 52.5	+0.4
	comp=Z,51nm,0.8s						
PMG	Port Moresby	38.96	308	ceP	P	18 34 52.9	+0.8
PMG				pmax	pmax		
	comp=Z,225nm,0.9s						
AS31	Alice Springs	39.48	278	eP	P	18 34 56.9	+0.5
	comp=Z,8.8nm,0.7s						
AS31				ePcP	PcP	18 36 60.0	-0.9
AS31				eScP	ScP	18 40 31.9	-2.0
ASAR	Alice Springs	39.48	278	P	P	18 34 57.0	+0.6
	comp=Z,30nm,0.8s,baz=121,slow=8.3,SNR=193						
ASAR				PcP	PcP	18 36 60.0	-0.9
	comp=Z,4.1nm,0.6s,baz=118,slow=4.3,SNR=6.9						
ASAR				ScP	ScP	18 40 31.9	-2.0
	comp=Z,0.9nm,0.8s,baz=121,slow=3.8,SNR=5.3						
ASAR				LR	LR	18 51 19.9	
	comp=Z,80nm,18.1s,baz=96,slow=36						
ASAR	Alice Springs	39.48	278	P	P	18 34 57.0	+0.6
ASAR						18 37 00.0	
ASAR				pmax	pmax		
	comp=Z,30nm,0.8s						
ASAR				MLR	MLR		
	comp=Z,80nm,18.1s						
FORT	Forrest	40.94	264	eP	P	18 35 08.7	+0.3
	comp=Z,71nm,1.1s						
FORT				ePcP	PcP	18 37 04.1	-1.3
FORT	Forrest	40.94	264	P	P	18 35 09.0	+0.7
	baz=42,SNR=20						
WB2	Warramunga Arr	41.12	283	eP	P	18 35 09.5	-0.4
	comp=Z,34nm,0.6s						
WRAB	Tennant Creek	41.12	283	eP	P	18 35 09.3	-0.7
	comp=Z,36nm,0.7s						
WRAB	Tennant Creek	41.12	283	ceP	P	18 35 10.2	+0.2
WRAB				pmax	pmax		
	comp=Z,30nm,0.7s						
WR1	Warramunga Arr	41.13	283	eP	P	18 35 10.3	+0.3
WR1				ePcP	PcP	18 37 06.2	-0.1
WR1				eScP	ScP	18 40 38.9	-1.5
WRA	Warramunga Arr	41.13	283	P	P	18 35 10.3	+0.3
	comp=Z,32nm,0.7s,baz=125,slow=7.5,SNR=176						
WRA				PcP	PcP	18 37 06.2	-0.1
	comp=Z,1.1nm,0.5s,baz=147,slow=2.3,SNR=5.0						
WRA				ScP	ScP	18 40 38.9	-1.5
	comp=Z,2.4nm,1.0s,baz=109,slow=3.8,SNR=3.4						
WRKA	Warakurna	43.25	272	P	P	18 35 26.6	-0.6
	baz=44,SNR=12						
KDU	Kakadu	46.92	290	P	P	18 35 57.6	+1.5
	baz=48,SNR=4.8						
CASY	Casey	47.13	210	eP	P	18 35 56.3	-0.7
	comp=Z,11nm,0.9s						
MTN	Manton Dam	47.83	288	eP	P	18 36 03.5	+0.4
	comp=Z,15nm,0.6s						
MTN	Manton Dam	47.83	288	P	P	18 36 03.6	+0.5
	baz=48,SNR=7.8						
KNRA	Kununurra	47.91	283	P	P	18 36 04.7	+0.9
	baz=48,SNR=10						
MUN	Mundaring	49.77	257	P	P	18 36 18.0	+0.2
	baz=50,SNR=4.2						
BLDU	Ballidu	49.94	259	P	P	18 36 19.6	+0.5
	baz=50,SNR=4.7						
MEEK	Meekatharra	50.20	264	P	P	18 36 21.0	-0.1
	baz=51,SNR=13						
MORW	Morawa	51.13	260	P	P	18 36 27.9	-0.1
	baz=52,SNR=4.0						
QSPA	South Pole Qui	52.71	180	eP	P	18 36 43.2	+3.9
	comp=Z,23nm,0.8s						
SOEI	Soe	54.99	286	P	P	18 36 57.0	+0.5
SIJI	Sorong	55.82	300	P	P	18 37 02.1	-0.2
	comp=Z,20nm,0.9s,baz=128,slow=4.4,SNR=14						
EDFI	Ende, Flores	57.59	285	P	P	18 37 14.8	-0.1
MAW	Mawson	64.37	203	P	P	18 38 00.6	+1.0
	comp=Z,26nm,0.9s,baz=116,slow=8.6,SNR=40						
MAW	Mawson	64.37	203	eP	P	18 38 01.3	+1.7
	comp=Z,9.3nm,1.0s						
MAW	Mawson	64.37	203	P	P	18 37 56.8	-2.8
	baz=64,SNR=7.4						
SYO	Syowa Base	69.39	195	⇓iP	P	18 38 31.0	-0.3
SYO	Syowa Base	69.39	195	⇑iPcP	PcP	18 38 53.0	-0.6
SNAA	Sanae	71.22	180	P	P	18 38 44.7	+2.2
SNAA	Sanae	71.22	180	eP	P	18 38 44.4	+1.9
	comp=Z,17nm,1.0s						
SNAA	Sanae	71.22	180	eP	P	18 38 44.4	+1.9
SNAA				pmax	pmax		
	comp=Z,17nm,1.0s						
VNA3	Neumayer Olymp	71.53	178	P	P	18 38 46.5	+2.2
VNA1	Neumayer--Stat	72.17	178	P	P	18 38 50.5	+2.5
KSM	Kuching	72.81	286	eP	P	18 38 52.6	-0.1
	comp=Z,17nm,0.8s						
MDSI	Maura Dua	73.90	277	P	P	18 38 59.7	+0.6
LHSI	Lahat	74.81	277	P	P	18 39 05.8	+1.4
KRJI	Kerinci	77.50	277	P	P	18 39 20.9	+1.2
YULB	Yu-li	80.20	309	eP	P	18 39 32.9	-1.1
	comp=Z,15nm,0.9s						
PLCA	Paso Flores	80.49	134	P	P	18 39 34.1	-1.6
	comp=Z,1.7nm,0.8s,baz=315,slow=20,SNR=2.0						
PLCA	Paso Flores	80.49	134	eP	P	18 39 37.8	+2.2
	comp=Z,44nm,2.0s						
PLCA	Paso Flores	80.49	134	eP	P	18 39 37.8	+2.2
PLCA				pmax	pmax		
	comp=Z,44nm,2.0s						
TPUB	Ta-pu	80.55	309	eP	P	18 39 35.6	-0.3
	comp=Z,20nm,0.8s						
SSLB	Suanglung	80.71	309	eP	P	18 39 35.9	-0.9
	comp=Z,34nm,0.9s						
MNSI	Mandailing Nat	80.74	278	P	P	18 39 38.0	+0.8
	comp=Z,15nm,0.7s						
MJAR	Matsushiro Arr	82.01	329	P	P	18 39 42.8	-0.5
	comp=Z,5.4nm,0.9s,baz=167,slow=5.9,SNR=9.5						
MJAR	Matsushiro Arr	82.01	329	P	P	18 39 42.8	-0.5
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAJO	Matsushiro	82.01	329	eP	P	18 39 42.8	-0.5
MAJO	Matsushiro	82.01	329	eP	P	18 39 42.8	-0.5
MAT	Matsushiro	82.01	329	P	P	18 39 42.5	-0.8
JNU	Nakatsue	82.44	322	P	P	18 39 45.8	+0.1
	comp=Z,31nm,0.8s,baz=113,slow=3.3,SNR=13						
JNU	Nakatsue	82.44	322	eP	P	18 39 45.4	-0.3
	comp=Z,40nm,1.0s						
PSI	Prapat	82.49	279	eP	P	18 39 45.1	-1.3
	comp=Z,11nm,0.8s						
PSI	Prapat	82.49	279	eP	P	18 39 45.2	-1.3
PSI				pmax	pmax		
	comp=Z,11nm,0.8s						
GSI	Gunungsitoli	82.63	277	eP	P	18 39 46.3	-0.9
	comp=Z,44nm,0.8s						
GSI	Gunungsitoli	82.63	277	P	P	18 39 48.5	+1.4
MLSI	Meulaboh, Aceh	85.36	279	P	P	18 40 01.1	+0.2
TJN	Taejon	86.77	322	ceP	P	18 40 08.0	+0.8
KSRS	Korea Array	87.36	323	P	P	18 40 11.3	+1.3
	comp=Z,22nm,0.9s,baz=143,slow=5.8,SNR=63						
KS15	Wonju Array Si	87.36	323	eP	P	18 40 10.0	-0.1
	comp=Z,32nm,0.9s						
NJ2	Nanjing	88.04	314	⇓iP	P	18 40 15.0	+1.6
NJ2				pmax	pmax		
	comp=Z,32nm,0.9s						
YSS	Yuzh-Sakhalins	89.51	337	eP	P	18 40 19.4	-0.5
	comp=Z,33nm,0.8s						
YSS	Yuzh-Sakhalins	89.51	337	eP	P	18 40 21.0	+1.1
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
WHN	Wuhan	89.63	310	⇑P	P	18 40 22.5	+1.6
USA0B	Ussuriysk Arra	91.01	329	eP	P	18 40 26.2	-0.8
	comp=Z,16nm,1.0s						
USRK	Ussuriysk Ar.	91.01	329	P	P	18 40 27.7	+0.8
	comp=Z,8.9nm,0.8s,baz=135,slow=4.0,SNR=17						
PETK	Petropavlovsk-	91.75	348	P	P	18 40 29.6	-0.5
	comp=Z,4.0nm,0.8s,baz=122,slow=6.6,SNR=9.7						
PEA1	Petropavlovsk-	91.75	348	eP	P	18 40 29.6	-0.5
SCI2	San Clemente I	92.06	49	P	P	18 40 33.9	+1.7
	baz=226						
SCZ2	Santa Cruz Isl	92.12	48	P	P	18 40 34.4	+2.0
	baz=225						
CM31	Chiang Mai Arr	92.17	292	eP	P	18 40 31.7	-1.3
	comp=Z,7.2nm,0.6s						
CMAR	Chiang Mai Arr	92.17	292	P	P	18 40 34.0	+1.0
	comp=Z,5.8nm,0.7s,baz=145,slow=3.5,SNR=27						
CHTO	Chiang Mai	92.40	292	eP	P	18 40 34.6	+0.6
	comp=Z,11nm,1.3s						
CHTO	Chiang Mai	92.40	292	eP	P	18 40 34.6	+0.6
CHTO				pmax	pmax		
	comp=Z,11nm,1.3s						
CIS	Catalina Islan	92.43	49	P	P	18 40 35.8	+1.9
	baz=226						
PKM	Mcpherson Peak	92.64	47	P	P	18 40 37.3	+2.3
	baz=225						
SMMC	Simmler	92.83	47	P	P	18 40 37.3	+1.6
	baz=225						
MONP2	Monument Peak	93.29	50	P	P	18 40 40.0	+1.9
	baz=227						
MURC	Murrieta	93.30	50	P	P	18 40 39.8	+1.9
	baz=226						
IKP	In-Ko-Pah, Jac	93.32	51	P	P	18 40 39.7	+1.7
	baz=227						
BFSC	Mount Baldy Ra	93.46	49	P	P	18 40 40.4	+1.7
	baz=226						
CN2	Changchun	93.51	325	eP	P	18 40 38.5	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
EDW2	Edwards Air Fo	93.70	48	P	P	18 40 41.4	+1.7
	baz=226						
SWSC	Sam W. Stewart	93.71	51	P	P	18 40 41.5	+1.8
	baz=227						
TPFO	Pinon Flats	93.76	50	P	P	18 40 42.2	+2.1
	baz=227						
PFO	Pinyon Flats O	93.76	50	eP	P	18 40 40.7	+0.6
	comp=Z,4.6nm,0.9s						
PFO	Pinyon Flats O	93.76	50	eP	P	18 40 40.7	+0.6
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PFO	Pinyon Flats O	93.76	50	P	P	18 40 42.0	+1.9
	baz=227						
ISA	Isabella, Lake	93.96	47	eP	P	18 40 41.7	+0.7
	comp=Z,8.3nm,1.0s						
ISA	Isabella, Lake	93.96	47	eP	P	18 40 41.7	+0.7
ISA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ISA	Isabella, Lake	93.96	47	P	P	18 40 42.4	+1.4
	baz=226						
BELC	Belle Mtn. Jos	94.30	50	P	P	18 40 44.6	+2.0
	baz=227						
LRMC	Laurel Mtn Rad	94.30	48	P	P	18 40 44.5	+1.9
	baz=226						
GLA	Glamis	94.38	51	eP	P	18 40 42.9	0.0
	comp=Z,12nm,0.8s						
GLA	Glamis	94.38	51	eP	P	18 40 42.9	0.0
GLA				pmax	pmax		
	comp=Z,12nm,0.8s						
GLA	Glamis	94.38	51	P	P	18 40 44.9	+2.0
	baz=228						
BC3	Big Chuckawall	94.40	50	P	P	18 40 45.3	+2.2
	baz=227						
CMB	Columbia Colle	94.53	45	eP	P	18 40 43.1	-0.3
	comp=Z,4.4nm,0.9s						
CMB	Columbia Colle	94.53	45	eP	P	18 40 43.2	-0.3
CMB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HEC	Hector,Ludlow	94.66	49	P	P	18 40 45.9	+1.8
	baz=227						
GSC	Goldstone, Bar	94.70	49	P	P	18 40 46.4	+2.1
	baz=227						
MPMC	Manual Prospec	94.81	48	P	P	18 40 46.3	+1.3
	baz=226						
IRM	Iron Mountain	94.93	50	P	P	18 40 48.0	+2.7
	baz=228						
MDPB	Devils Postpil	94.98	46	eP	P	18 40 43.0	-2.8
	comp=Z,9.2nm,0.8s						
GMRC	Granite Mounta	95.04	50	P	P	18 40 48.1	+2.1
	baz=227						
KLR	Kul'dur	95.24	332	P	P	18 40 46.4	0.0
	comp=Z,1.5nm,0.8s,baz=211,slow=3.1,SNR=5.2						
KLR	Kul'dur	95.24	332	i P	P	18 40 46.5	+0.2
KLR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
FURC	Furnace Creek,	95.46	48	P	P	18 40 49.5	+1.9
	baz=227						
NV01	Mina Array Sit	95.98	45	eP	P	18 40 48.7	-1.6
NVAR	Mina Array Bea	95.98	45	P	P	18 40 48.7	-1.6
	comp=Z,1.0nm,0.9s,baz=215,slow=8.8,SNR=6.7						
CD2	Chengdu	96.63	304	eP	P	18 40 53.0	-0.2
U15A	North Rim	98.18	50	eP	P	18 40 59.7	-0.7
	comp=Z,2.7nm,0.9s						
HHC	Hu-ho-hao-te	98.40	316	P	Pdif	18 41 02.3	+1.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,10.0nm,7.6s						
LZH	Lanzhou	99.86	308	eP	Pdif	18 41 05.8	-1.9
LZH				pP	pP	18 41 45.3	-3.8
LZH				sP	sP	18 41 59.5	-6.7
ILAR	Eielson Array	105.65	15	PKKP	PKKPab	18 57 26.9	+3.7
	comp=Z,1.6nm,1.0s,baz=1.7,slow=3.7,SNR=11						
SONA0	Songino Array	105.76	319	ePdif	Pdif	18 41 35.6	+2.1
SONM	Songino Array	105.76	319	Pdiff	Pdif	18 41 35.6	+2.1
	comp=Z,0.8nm,0.7s,baz=138,slow=4.0,SNR=3.6						
WMQ	Urumqi	114.43	307	ePKP	PKPdf	18 46 01.5	-0.3
WMQ				LR	LR		
	comp=Z,2µm,29.0s						
WMQ				LR	LR		
	comp=Z,2µm,28.9s						
WMQ				LR	LR		
	comp=Z,160nm,29.7s						
MK31	Makanchi Array	119.17	308	ePKPdf	PKPdf	18 46 07.8	-3.0
MK31	Makanchi Array	119.17	308	ePKIKP	PKPdf	18 46 07.8	-3.0
MK32	Makanchi Array	119.17	308	ePKPdf	PKPdf	18 46 09.1	-1.8
MK32				ePKKPab	PKKPab	18 56 27.3	+2.2
MKAR	Makanchi Array	119.17	308	PKP	PKPdf	18 46 09.1	-1.8
	comp=Z,1.0nm,0.6s,baz=185,slow=1.9,SNR=9.5						
MKAR				PKKPbc	PKKPab	18 56 27.3	+2.2
	comp=Z,0.7nm,0.7s,baz=304,slow=2.6,SNR=7.5						
MAKZ	Makanchi	119.37	308	ePKPdf	PKPdf	18 46 09.1	-2.1
MAKZ	Makanchi	119.37	308	ePKIKP	PKPdf	18 46 09.1	-2.1
FCC	Fort Churchill	120.41	37	ePKPdf	PKPdf	18 46 11.1	-1.6
FCC	Fort Churchill	120.41	37	ePKIKP	PKPdf	18 46 11.1	-1.6
ZALV	Zalesovo Beam	120.56	317	PKP	PKPdf	18 46 10.9	-2.3
	comp=Z,0.6nm,0.5s,baz=149,slow=6.1,SNR=3.8						
ZAA1	Zalesovo Array	120.56	317	ePKPdf	PKPdf	18 46 10.9	-2.3
KURK	Kurchatov	122.92	312	ePKPdf	PKPdf	18 46 15.7	-2.1
KURK	Kurchatov	122.92	312	PKIKP	PKPdf	18 46 16.2	-1.6
KURK						18 47 59.1	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURBB	Kurchatov Arra	122.94	311	PKP	PKPdf	18 46 16.2	-1.6
	comp=Z,2.6nm,0.7s,baz=115,slow=1.7,SNR=26						
KURBB				PP	PP	18 47 59.0	-0.6
	comp=Z,1.4nm,1.1s,baz=104,slow=6.7,SNR=4.5						
KBL	Kabul	123.19	290	ePKPdf	PKPdf	18 46 18.0	-1.2
KBL	Kabul	123.19	290	ePKIKP	PKPdf	18 46 18.0	-1.2
KSPA	Keystone Colle	125.01	61	ePKPdf	PKPdf	18 46 22.1	-0.1
BINY	Binghamton	125.10	60	ePKPdf	PKPdf	18 46 22.4	0.0
KK31	Karatay Array	125.48	301	ePKPdf	PKPdf	18 46 21.9	-1.2
KK31	Karatay Array	125.48	301	ePKIKP	PKPdf	18 46 21.9	-1.2
KKAR	Karatay Array	125.48	301	ePKPdf	PKPdf	18 46 21.9	-1.2
KKAR	Karatay Array	125.48	301	ePKIKP	PKPdf	18 46 21.9	-1.2
D53A	Lac Vacive, Po	125.62	54	ePKPdf	PKPdf	18 46 22.7	-0.4
VLDQ	Val d'Or	126.11	53	ePKPdf	PKPdf	18 46 22.9	-1.1
KMBO	Kilima Mbogo	126.76	233	PKP	PKPdf	18 46 26.4	-0.3
	comp=Z,3.8nm,0.9s,baz=57,slow=2.6,SNR=8.9						
LONY	Lake Ozonia	126.89	58	ePKPdf	PKPdf	18 46 25.3	-0.3
BRVK	Borovoye	128.54	312	c iPKIKP	PKPdf	18 46 27.9	-0.6
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
AKTO	Aktyubinsk	135.58	307	PKP	PKPdf	18 46 41.3	-0.6
	comp=Z,1.7nm,0.6s,baz=105,slow=7.5,SNR=7.2						
ARU	Arti	135.71	316	i PKIKP	PKPdf	18 46 40.9	-1.0
RAYN	Ar Rayn	136.66	265	PKIKP	PKPdf	18 46 45.3	+0.5
SPA0	Spitsbergen Ar	138.34	354	epPKPdf	pPKPdf	18 47 29.0	-0.3
PRGR	Permogore	141.66	325	ePKHKP	PKPpre	18 46 45.1	
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TBLG	Delisi	143.55	292	ePKPdf	PKPbc	18 46 54.2	-0.3
TBLG	Delisi	143.55	292	ePKIKP	PKPbc	18 46 54.3	-0.3
ZEI	Tsey	144.32	294	i PKHKP	PKPpre	18 46 55.6	
ZEI				pmax	pmax		
	comp=Z,22nm,0.7s						
ARCES	ARCESS Array B	144.40	343	PKP	PKPab	18 46 55.3	-0.7
	comp=Z,25nm,0.9s,baz=42,slow=2.7,SNR=64						
ARE0	ARCESS Array S	144.40	343	ePKPdf	PKPab	18 46 54.8	-1.2
ARE0	ARCESS Array S	144.40	343	ePKPbc	PKPab	18 46 55.1	-0.9
AKH	Akhalkalaki	144.42	291	ePKPdf	PKPab	18 46 57.1	0.0
AKH	Akhalkalaki	144.42	291	ePKIKP	PKPab	18 46 57.1	0.0
NCK	Nalchik	144.62	295	i PKHKP	PKPpre	18 46 56.3	
KLMR	Klimovskoe	144.71	325	ePKHKP	PKPpre	18 46 54.1	
KLMR				pmax	pmax		
	comp=Z,51nm,0.9s						
KBZ	Khabaz	145.15	295	PKPbc	PKPbc	18 46 57.7	-1.6
	comp=Z,11nm,1.0s,baz=44,slow=0.4,SNR=10						
NEY	Neytrino	145.23	294	i PKP2	PKPdf	18 46 59.6	-0.2
KTK1	Kautokeino	145.32	344	ePKPbc	PKPdf	18 46 57.9	-1.0
KIV	Kislovodsk	145.32	295	ePKPdf	PKPdf	18 46 58.9	-0.9
KIV	Kislovodsk	145.32	295	ePKP2	PKPdf	18 46 59.1	-0.7
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
SHA1	Shidzhatmaz	145.32	295	i PKP2	PKPdf	18 46 59.7	-0.3
TRO	Tromso	145.67	347	ePKPdf	PKPdf	18 46 58.9	-0.6
VRH	Novokhopyorsk	145.90	308	ePKIKP	PKPdf	18 46 59.8	-0.6
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
JMIC	Jan Mayen	146.22	3	PKPbc	PKPdf	18 46 58.5	-1.9
	comp=Z,17nm,1.0s,baz=345,slow=12,SNR=3.2						
ASF	Jabal al Asfar	147.24	273	PKPbc	PKPbc	18 47 06.4	+0.5
	comp=Z,9.6nm,0.9s,baz=69,slow=2.3,SNR=17						
MOS	Moscow	147.38	317	ePKP2	PKPbc	18 47 06.0	+0.6
LPSR	Galich'ya Gora	147.40	311	ePKIKP	PKPbc	18 47 04.3	-1.3
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VORD	Divnogorie	147.45	308	ePKIKP	PKPdf	18 47 04.1	+1.1
VORD				pmax	pmax		
	comp=Z,30nm,1.3s						
VSR	Storozhevoye	147.49	309	ePKIKP	PKPdf	18 47 03.7	+0.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
STEI	Steigen	147.82	347	ePKPdf	PKPdf	18 47 04.2	+1.1
EIL	Elat	147.85	267	PKPbc	PKPbc	18 47 07.7	+0.1
	comp=Z,19nm,0.7s,baz=125,slow=1.8,SNR=24						
LOF	Lofoten	147.92	349	ePKPdf	PKPdf	18 47 03.5	+0.2
OBN	Obninsk	148.14	316	⇑ePKIKP	PKPdf	18 47 04.7	+0.7
OBN				i		18 47 10.7	
OBN				e		18 50 47.2	
OBN				pmax	pmax		
	comp=Z,26nm,1.2s						
MMAI	Mount Meron Ar	148.71	274	PKPbc	PKiKP	18 47 10.6	-0.5
	comp=Z,20nm,0.7s,baz=86,slow=5.1,SNR=44						
LIC	Lamto	148.88	176	ePKP1	PKPbc	18 47 11.1	+0.5
	comp=Z,151nm,1.3s						
KIC	Kosan Boka	149.03	176	ePKP1	PKPbc	18 47 11.5	+0.5
	comp=Z,53nm,0.8s						
TIC	Toumodi	149.30	175	ePKP1	PKPbc	18 47 12.2	+0.5
DBIC	Dimbokro	149.34	176	PKPbc	PKPdf	18 47 08.3	+1.1
	comp=Z,24nm,0.8s,baz=146,slow=3.6,SNR=4.1						
DBIC				PKPab	PKPbc	18 47 12.3	+0.5
	comp=Z,29nm,0.9s,baz=151,slow=4.9,SNR=15						
DBIC	Dimbokro	149.34	176	ePKPbc	PKPbc	18 47 12.1	+0.4
KONS	Konsvik	149.48	348	ePKPbc	PKPbc	18 47 09.9	-0.6
MOR8	Moi Rana	149.53	346	ePKPdf	PKPbc	18 47 08.6	-2.1
FIA1	FINESS Array S	149.99	332	ePKPdf	PKPbc	18 47 10.3	-1.6
FIA0	FINESS Array S	149.99	332	ePKPbc	PKPbc	18 47 10.7	-1.2
FIA0				ePKPab	PKPab	18 47 17.1	-1.1
FINES	FINESS Array B	149.99	332	PKPbc	PKPbc	18 47 10.7	-1.2
	comp=Z,8.2nm,0.7s,baz=42,slow=3.8,SNR=26						
FINES				PKPab	PKPab	18 47 17.1	-1.1
	comp=Z,25nm,0.8s,baz=49,slow=4.2,SNR=32						
BORG	Borgarnes	150.47	16	i PKIKP	PKiKP	18 47 14.4	+0.8
CSS	Mathiatis	150.93	276	ePKPbc	PKPbc	18 47 14.8	-0.2
NSS	Namsos	151.47	347	ePKPbc	PKPbc	18 47 14.9	-0.3
VSU	Vasula	151.54	327	c iPKIKP	PKPbc	18 47 15.0	-0.6
VSU				pmax	pmax		
	comp=Z,21nm,1.3s						
BR101	Keskin Array S	151.62	286	ePKPbc	PKPbc	18 47 15.6	-1.0
BR101				ePKPab	PKPab	18 47 25.6	-0.4
BR131	Keskin Array S	151.62	286	ePKPbc	PKPbc	18 47 15.6	-1.0
BRTR	Keskin Array B	151.62	286	PKPbc	PKPbc	18 47 15.6	-1.0
	comp=Z,12nm,0.8s,baz=138,slow=4.2,SNR=69						
BRTR				PKPab	PKPab	18 47 25.6	-0.4
	comp=Z,4.6nm,0.8s,baz=120,slow=4.4,SNR=8.6						
ILGA	Ilgaz	151.70	289	ePKPbc	PKPbc	18 47 16.5	-0.4
ANTO	Ankara	152.28	286	ePKPbc	PKPbc	18 47 17.2	-0.7
ANTO	Ankara	152.28	286	ePKIKP	PKPbc	18 47 17.3	-0.7
AKASG	Malin Array Be	153.73	311	PKPbc	PKPbc	18 47 19.5	-1.2
	comp=Z,1.8nm,0.5s,baz=62,slow=2.3,SNR=8.9						
AKASG				PKPab	PKPab	18 47 33.6	-0.7
	comp=Z,8.1nm,0.9s,baz=56,slow=4.3,SNR=19						
AKBB	Malin Array Si	153.73	311	ePKPbc	PKPbc	18 47 19.5	-1.2
AKBB	Malin Array Si	153.73	311	ePKIKP	PKPbc	18 47 19.5	-1.2
DOMB	Dombas	154.28	347	epPKPdf	pPKPdf	18 47 55.5	-0.9
NB2	NORSAR Subarra	154.78	344	PKP	PKPbc	18 47 21.7	-1.0
	comp=Z,5.5nm,1.1s,baz=17,slow=2.6						
NB200	NORSAR Array S	154.78	344	ePKPbc	PKPbc	18 47 21.1	-1.6
NB200				ePKPab	PKPab	18 47 36.7	-1.7
NOA	NORSAR Array B	154.78	344	PKPbc	PKPbc	18 47 21.1	-1.6
	comp=Z,0.7nm,0.7s,baz=30,slow=2.0,SNR=4.7						
NOA				PKPab	PKPab	18 47 36.7	-1.7
	comp=Z,2.9nm,0.9s,baz=28,slow=3.3,SNR=7.8						
HFS	Hagfors	154.97	341	PKPbc	PKPbc	18 47 21.5	-1.5
	comp=Z,1.8nm,0.8s,baz=104,slow=6.1,SNR=4.2						
HFS				PKPab	PKPab	18 47 37.4	-1.9
	comp=Z,6.9nm,0.8s,baz=29,slow=3.4,SNR=4.9						
NC602	NORSAR Array S	154.98	343	ePKPdf	PKPdf	18 47 14.9	+0.7
TORD	Torodi Ar. Bea	155.52	190	PKP	PKPdf	18 47 15.3	-1.0
	comp=Z,4.6nm,0.9s,baz=177,slow=2.7,SNR=16						
TORD				PKPbc	PKPab	18 47 25.4	-17
	comp=Z,1.4nm,0.3s,baz=155,slow=2.4,SNR=39						
TORD				PKPab	pPKPdf	18 47 43.8	-16
	comp=Z,21nm,1.1s,baz=164,slow=5.0,SNR=17						
TOA1	Torodi Ar. Sit	155.53	190	ePKPdf	PKPdf	18 47 15.3	-1.0

TOA1				ePKPdif	PKPab	18 47 25.4	-17
TOA1				ePKPab	pPKPdf	18 47 43.8	-16
SUW	Suwalki	155.67	321	ePKPab	PKPab	18 47 41.6	-0.9
SUW	Suwalki	155.67	321	ePKP2	PKPab	18 47 41.6	-0.9
SKAR	Skarslia	155.69	347	epPKPbc	pPKPbc	18 48 07.1	-0.4
SUE	Sulen	155.87	351	ePKPdf	PKPdf	18 47 14.5	-0.8
TESR	Tescani	156.48	302	⇑iP	PKPab	18 47 44.1	-2.1
VRI	Vrincioaia	156.55	300	⇑iP	PKPab	18 47 47.3	+0.7
VRI	Vrincioaia	156.55	300	⇑PKP2	PKPab	18 47 47.3	+0.7
PLOR	Plostina	156.61	300	⇑iP	PKPab	18 47 47.1	+0.2
PLOR	Plostina	156.61	300	⇑PKP2	PKPab	18 47 47.1	+0.2
BURAR	Bucovina Array	157.15	305	⇑iP	PKPab	18 47 49.6	+0.3
BURAR	Bucovina Array	157.15	305	⇑PKP2	PKPab	18 47 49.6	+0.3
BUR08	Bucovina Ar. S	157.16	305	ePKPab	PKPab	18 47 48.9	-0.4
LVV	L'vov	157.16	311	ePKP2	PKPab	18 47 48.9	-0.1
MLR	Muntele Rosu	157.16	300	PKPbc	PKPdf	18 47 27.4	+10
	comp=Z,1.4nm,0.8s,baz=313,slow=9.9,SNR=3.4						
MLR				PKPab	PKPab	18 47 49.2	-0.2
	comp=Z,5.3nm,0.9s,baz=46,slow=4.9,SNR=8.7						
MLR	Muntele Rosu	157.16	300	⇑iP	PKPab	18 47 48.5	-0.9
BLS5	Blasjo	157.19	348	ePKPab	PKPab	18 47 50.0	+1.2
APE	Apeiranthos	157.56	278	⇑iP	PKPab	18 47 54.0	+2.7
APE	Apeiranthos	157.56	278	⇑PKP2	PKPab	18 47 54.0	+2.7
KWP	Kalwaria Pacla	158.02	312	ePKPab	PKPab	18 47 53.0	+0.2
KWP	Kalwaria Pacla	158.02	312	ePKP2	PKPab	18 47 53.0	+0.2
KOLS	Kolonicke sedl	158.56	310	ePKP2	PKPab	18 47 55.8	+0.6
KOLS	Kolonicke sedl	158.56	310	ePKP	PKPab	18 47 55.8	+0.6
UZH	Uzhgorod	158.67	310	ePKP2	PKPab	18 47 55.5	-0.1
TRPA	Tarpa	158.70	308	⇑iP	PKPab	18 47 56.3	+0.5
DRGR		159.03	305	⇓iP	PKPab	18 47 56.9	-0.5
DRGR		159.03	305	⇓PKP2	PKPab	18 47 56.9	-0.5
OJC	Ojcow	159.43	316	ePKPab	PKPab	18 47 58.7	-0.2
OJC	Ojcow	159.43	316	ePKP2	PKPab	18 47 58.7	-0.2
OKC	Ostrava-Krasne	160.54	316	ePKP2	PKPab	18 48 03.9	+0.2
OKC	Ostrava-Krasne	160.54	316	ePKPAB	PKPab	18 48 03.9	+0.2
VYHS	Vyhne	160.81	312	ePKP2	PKPab	18 48 05.8	+0.8
VYHS	Vyhne	160.81	312	ePKP	PKPab	18 48 05.8	+0.8
MORC	Moravsky Berou	160.90	317	ePKPab	PKPab	18 48 05.3	-0.1
MORC	Moravsky Berou	160.90	317	⇓iP	PKPab	18 48 03.5	-1.9
MORC	Moravsky Berou	160.90	317	ePKP2	PKPab	18 48 05.3	-0.1
MORC	Moravsky Berou	160.90	317	ePKP	PKPab	18 48 05.8	+0.4
CHVC	Chvalec	161.22	320	ePKPAB	PKPab	18 48 07.1	+0.4
DPC	Dobruska-Polom	161.23	320	ePKP2	PKPab	18 48 07.4	+0.6
DPC	Dobruska-Polom	161.23	320	ePKPAB	PKPab	18 48 07.4	+0.6
UPC	Upice	161.29	320	ePKP2	PKPab	18 48 07.3	+0.3
UPC	Upice	161.29	320	ePKPAB	PKPab	18 48 07.3	+0.3
JAVC	Velka Javorina	161.31	314	ePKP	PKPab	18 48 09.2	+2.0
SMOL	Smolenice	161.62	313	ePKP2	PKPab	18 48 09.7	+1.2
SMOL	Smolenice	161.62	313	ePKP	PKPab	18 48 09.7	+1.2
VRAC	Vranov	161.68	317	⇑iP	PKPab	18 48 07.6	-1.1
VRAC	Vranov	161.68	317	⇑PKP2	PKPab	18 48 07.6	-1.1
VRAC	Vranov	161.68	317	ePKP	PKPab	18 48 09.5	+0.8
MODS	Modra-Piesok	161.78	313	ePKP2	PKPab	18 48 09.4	+0.2
MODS	Modra-Piesok	161.78	313	ePKP	PKPab	18 48 09.4	+0.2
KRUC	Moravsky	161.92	316	ePKP	PKPab	18 48 10.4	+0.6
PVCC	Panska Ves	162.00	322	ePKP2	PKPab	18 48 10.6	+0.5
PVCC	Panska Ves	162.00	322	ePKPAB	PKPab	18 48 10.6	+0.5
BRG	Berggiesshubel	162.07	324	i PKP	PKPab	18 48 10.2	-0.2
	comp=Z,19nm,0.9s						
BRG	Berggiesshubel	162.07	324	i PKP2	PKPab	18 48 10.1	-0.3
BRG				pmax	pmax		
	comp=Z,19nm,0.9s						
CLL	Collm	162.20	326	ePKPab	PKPab	18 48 10.2	-0.6
CLL	Collm	162.20	326	⇓ePKIKP	PKPdf	18 47 25.0	+2.0
CLL				i		18 48 10.3	
CLL				pmax	pmax		
	comp=Z,15nm,0.9s						
CLL	Collm	162.20	326	ePKPdf	PKPdf	18 47 25.0	+2.0
CLL				⇓iPKPab	PKPab	18 48 10.3	-0.6
	comp=Z,15nm,0.9s						
GOPC	GO Pecny, Ondr	162.28	320	ePKP2	PKPab	18 48 11.3	-0.1
GOPC	GO Pecny, Ondr	162.28	320	ePKPAB	PKPab	18 48 11.3	-0.1
PRU	Pruhonice	162.35	321	ePKP2	PKPab	18 48 11.8	+0.2
PRU	Pruhonice	162.35	321	ePKPAB	PKPab	18 48 11.8	+0.2
PDG	Podgorica	162.45	293	⇑iP	PKPab	18 48 05.6	-6.8
CONA	Conrad Observa	162.82	314	i PKPab	PKPab	18 48 14.8	+0.9
	comp=Z,21nm,1.0s						
NKC	Novy Kostel	163.20	325	ePKP2	PKPab	18 48 15.4	0.0
NKC	Novy Kostel	163.20	325	ePKPAB	PKPab	18 48 15.4	0.0
ARSA	Arzberg	163.36	312	i PKPab	PKPab	18 48 16.5	+0.3
	comp=Z,15nm,1.7s						
KHC	Kasperske Hory	163.38	320	ePKPab	PKPab	18 48 16.5	+0.2
KHC	Kasperske Hory	163.38	320	ePKP2	PKPab	18 48 16.3	0.0
KHC	Kasperske Hory	163.38	320	ePKPAB	PKPab	18 48 16.3	0.0
GEC2	GERESS Array S	163.49	319	ePKPab	PKPab	18 48 15.9	-0.9
GEC2	GERESS Array S	163.49	319	ePKP2	PKPab	18 48 15.9	-0.9
GERES	GERESS Array B	163.49	319	PKPab	PKPab	18 48 16.9	0.0
	comp=Z,2.2nm,0.7s,baz=46,slow=5.8,SNR=14						
MOA	Molln	163.77	315	i PKPab	PKPab	18 48 18.3	+0.3
	comp=Z,4.2nm,0.8s						
SOKA	Soboth	163.94	311	i PKPab	PKPab	18 48 17.8	-1.0
	comp=Z,2.7nm,0.8s						
GRA1	Grafenberg Arr	164.15	325	ePKPab	PKPab	18 48 20.0	+0.5
GRF	Grafenberg Arr	164.15	325	ePKP2	PKPab	18 48 20.0	+0.5
OBKA	Obir	164.31	311	i PKPab	PKPab	18 48 19.4	-1.1
	comp=Z,5.9nm,0.9s						
MYKA	Terra Mystica	164.79	312	i PKPab	PKPab	18 48 22.3	-0.3
	comp=Z,6.3nm,1.0s						
ABTA	Abfaltersbach	165.38	314	i P	PKPab	18 48 24.4	-0.8
	comp=Z,10nm,1.0s						
WTTA	Wattenberg	165.56	317	i P	PKPab	18 48 22.6	-3.5
	comp=Z,4.6nm,0.9s						
SQTA	Sankt Quirin	165.81	318	eP	PKPab	18 48 23.7	-3.4
	comp=Z,4.9nm,1.1s						
FETA	Feichten	166.19	318	i PKPdf	PKPdf	18 47 26.3	-0.7
	comp=Z,5.0nm,1.2s						
BFO	Black Forest	166.44	327	ePKPab	PKPab	18 48 28.8	-0.9
BFO	Black Forest	166.44	327	ePKP2	PKPab	18 48 28.8	-0.9
DAVA	Damuels	166.46	321	i PKPab	PKPab	18 48 29.6	-0.4
	comp=Z,8.1nm,1.1s						
FUORN	Ofenpass-Fuorn	166.70	318	ePKPab	PKPab	18 48 30.8	-0.4
ECH	Echery	167.02	329	ePKPab	PKPab	18 48 31.5	-0.7
ECH	Echery	167.02	329	ePKP2	PKPab	18 48 31.5	-0.7

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*ISCJB **29** 18:39:29.6±0.2, 49.°87N±0.°02×18.°37E±0.°02, h0^{km}, Error ellipse: s-maj=2.5km s-min=1.6km az=16.0*
*SIGU **29** 18:39:29.7±0.2, 50°N±2°×1°8E±°, h3^{km}*
*IDC **29** 18:39:30.2±1.1, 49.°64N×18.°64E, h0^{km}, mb1 3.2/6, mb1mx3.0/43, mbtmp3.1/6, ML2.7/6, Error ellipse: s-maj=18.3km s-min=7.7km az=150.0*
*BGR **29** 18:39:31.6±0.5, 49.°90N×18.°44E, h1^{km}, ML3.2/11, Error ellipse: s-maj=6.7km s-min=4.4km az=174.0*
*IPEC **29** 18:39:31.4±0.1, 49.°86N×18.°49E, h0^{km}±3^{km}, ML2.7/4, Error ellipse: s-maj=1.6km s-min=1.0km az=176.0, Mining induced.*

ISC 29 18:39:30.3±0.6, **49.°89N**±0.°02×**18.°45E**±0.°01, **h0^{km}, n99, σ1.^{s}68**/168, **10C-8D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.20	255	ePg	Pg	18 39 36.4	+2.2
OKC				eSg	Sg	18 39 39.9	+3.2
OKC	Ostrava-Krasne	0.20	255	⇓iPG	Pg	18 39 36.3	+2.2
OKC				eSG	Sg	18 39 38.4	+1.7
	comp=Z,2µm,0.7s						
RAC	Raciborz	0.26	320	ePg	Pb	18 39 37.8	+0.1
RAC				eSg	Sb	18 39 42.6	-0.1
RAC				eSg	Sb	18 39 42.6	-0.1
CHZP	Chorzow	0.53	41	ePg	Pb	18 39 42.7	+0.2
CHZP				eSg	Sb	18 39 50.8	0.0
MORC	Moravsky Berou	0.60	260	⇑iP	Pb	18 39 43.1	-0.5
MORC	Moravsky Berou	0.60	260	ePG	Pb	18 39 42.8	-0.8
MORC				eSG	Sg	18 39 50.9	+1.5
MORC	Moravsky Berou	0.60	260	ePg	Pb	18 39 42.8	-0.8
	baz=82						
MORC				eSg	Sg	18 39 50.9	+1.5
	167nm,0.4s,baz=82						
MORC	Moravsky Berou	0.60	260	ePg	Pb	18 39 42.8	-0.8
MORC				eSg	Sb	18 39 51.6	-1.1
ANAC	Anensky vrch	0.72	285	ePg	Pb	18 39 45.4	-0.2
	baz=106						
ANAC				eSg	Sb	18 39 54.7	-1.4
	110nm,0.4s,baz=106						
OJC	Ojcow	0.93	69	ePg	Pb	18 39 49.0	-0.2
OJC				eSg	Sb	18 40 01.9	-0.3
OJC	Ojcow	0.93	69	ePKP	Pb	18 39 49.0	-0.2
OJC	Ojcow	0.93	69	ePg	Pb	18 39 49.1	-0.2
LANS	Liptovska Anna	0.99	138	ePg	Pb	18 39 49.9	-0.4
	baz=318						
LANS	Liptovska Anna	0.99	138	ePG	Pb	18 39 50.0	-0.4
LANS				eSG	Sb	18 40 05.1	+1.1
LANS				eLG	Lg	18 40 08.9	
JAVC	Velka Javorina	1.15	207	ePG	Pb	18 39 53.2	+0.2
JAVC	Velka Javorina	1.15	207	ePg	Pb	18 39 53.1	+0.1
	baz=28						
NIE	Niedzica	1.29	111	ePg	Pn	18 39 55.5	0.0
NIE				eSg	Sn	18 40 13.8	+0.2
NIE	Niedzica	1.29	111	ePKP	Pn	18 39 55.4	-0.2
VRAC	Vranov	1.34	245	Pn	Pg	18 39 56.0	+0.1
	48nm,0.3s,baz=73,slow=17,SNR=229						
VRAC				Lg	Lg	18 40 14.2	
	23nm,0.3s,baz=41,slow=20,SNR=13						
VRAC	Vranov	1.34	245	⇑iP	Pn	18 39 56.3	+0.1
VRAC	Vranov	1.34	245	ePG	Pb	18 39 56.5	+0.2
VRAC				eSG	Sg	18 40 13.6	+0.3
VRAC	Vranov	1.34	245	ePg	Pb	18 39 56.5	+0.2
	baz=65						
VRAC				eSg	Sg	18 40 13.6	+0.3
	132nm,0.6s,baz=65						
VYHS	Vyhne	1.42	170	ePG	Pn	18 39 56.9	-0.4
VYHS				eSG	Sn	18 40 17.0	+0.3
SMOL	Smolenice	1.53	206	ePN	Pn	18 39 58.8	0.0
SMOL				eSN	Sn	18 40 19.4	0.0
KRUC	Moravsky	1.57	239	ePG	Pb	18 40 00.0	-0.3
KRUC				eSG	Sg	18 40 21.1	+0.2
KRUC	Moravsky	1.57	239	ePg	Pb	18 39 59.9	-0.3
	baz=59						
KRUC				eSg	Sg	18 40 21.0	+0.2
	130nm,0.8s,baz=59						
OSTC	Ostas	1.58	296	⇓ePG	Pg	18 40 00.8	+0.2
OSTC				eSG	Sg	18 40 22.8	+1.7
	comp=Z,262nm,1.0s						
KSP	Ksiaz	1.68	305	ePKP	Pb	18 40 01.6	-0.4
KSP	Ksiaz	1.68	305	ePg	Pb	18 40 01.5	-0.4
KSP				eSg	Sg	18 40 24.3	+0.1
KSP	Ksiaz	1.68	305	ePn	Pb	18 40 01.6	-0.4
KSP				eSg	Sg	18 40 24.7	+0.5
UPC	Upice	1.69	292	⇓ePG	Pg	18 40 02.9	+0.4
UPC				eSG	Sg	18 40 26.3	+2.0
	comp=Z,108nm,0.7s						
CHVC	Chvalec	1.69	295	ePG	Pg	18 40 03.2	+0.6
CHVC				eSG	Sg	18 40 26.0	+1.5
	comp=Z,75nm,0.6s						
MODS	Modra-Piesok	1.70	207	ePN	Pn	18 40 00.5	-0.7
MODS				eSN	Sn	18 40 23.4	-0.3
MODS				eLG	Lg	18 40 32.8	
ZST	Bratislava	1.91	208	ePN	Pn	18 40 03.3	-0.8
ZST				eSN	Sn	18 40 28.1	-0.7
ZST				eLG	Lg	18 40 31.1	
KECS	Kecovo	1.94	136	eSN	Sn	18 40 28.7	-0.8
TREC	Trest	2.02	254	⇓ePG	Pb	18 40 07.7	-0.1
TREC				eSG	Sg	18 40 34.6	-0.4
	comp=Z,48nm,0.4s						
PSZ	Piszkesteto	2.19	154	⇑iP	Pn	18 40 08.5	+0.5
PSZ	Piszkesteto	2.19	154	ePg	Pg	18 40 12.1	-0.2
PSZ	Piszkesteto	2.19	154	ePn	Pn	18 40 08.1	+0.1
PSZ	Piszkesteto	2.19	154	Sn	Sn	18 40 32.1	-3.7
GOPC	GO Pecny, Ondr	2.37	272	ePN	Pn	18 40 10.4	0.0
GOPC				ePG	Pb	18 40 13.2	-0.6
GOPC				eSG	Sg	18 40 47.2	+0.9
	comp=Z,74nm,0.9s						
BEL	Belsk	2.45	36	ePKP	Pg	18 40 21.3	+4.1
PRU	Pruhonice	2.53	274	⇓ePN	Pn	18 40 11.9	-0.6
PRU				ePG	Pb	18 40 17.3	+0.8
PRU				eSG	Sg	18 40 50.7	-0.7
	comp=Z,46nm,0.8s						
CSKK	Cskako	2.53	183	Sn	Sn	18 40 44.1	0.0
CSKK	Cskako	2.53	183	ePg	Pb	18 40 16.1	-0.5
CSKK				ePn	Pn	18 40 09.1	-3.5
SOP	Sopron	2.54	210	ePn	Pn	18 40 12.1	-0.6
SOP				ePg	Pg	18 40 20.0	+1.2
SOP				Sn	Sn	18 40 40.0	-4.2
PVCC	Panska Ves	2.57	286	⇓eSG	Sg	18 40 52.6	-0.3
	comp=Z,66nm,0.7s						
CONA	Conrad Observa	2.60	222	Pn	Pn	18 40 13.5	-0.2
	1.6nm,0.2s						
CONA				Sn	Sn	18 40 45.1	-0.8
	24nm,0.6s						
KOLS	Kolonicke sedl	2.67	110	ePG	Pg	18 40 22.6	+1.1
KWP	Kalwaria Pacla	2.77	94	ePKP	Pg	18 40 21.8	-1.6
UZH	Uzhgorod	2.81	115	⇑iPn	Pg	18 40 23.8	-0.4
UZH				i Sn	Sg	18 41 03.4	+2.8
STZU	Stuzhytsa	2.86	106	i Pn	Pg	18 40 24.7	-0.3
BRG	Berggiesshubel	3.05	291	PG	Pg	18 40 27.4	-1.2
BRG				SG	Sg	18 41 07.6	-0.6
	50nm,0.7s						
BRG	Berggiesshubel	3.05	291	ePg	Pg	18 40 27.8	-0.9
BRG				eSg	Sg	18 41 07.7	-0.5
MUKU	Mukachevo	3.13	116	i Pn	Pg	18 40 30.0	-0.2
MUKU				eSn	Sg	18 41 13.0	+2.3
TRPA	Tarpa	3.22	122	⇑iP	Pn	18 40 21.8	-0.2
TRPA	Tarpa	3.22	122	ePn	Pn	18 40 22.1	+0.1
TRPA				ePg	Pg	18 40 31.0	-0.8
TRPA				Sn	Sn	18 40 54.0	-6.9
TRPA				eSg	Sg	18 41 15.0	+1.5
BERU	Beregovo	3.22	119	i Pn	Pg	18 40 31.4	-0.5
BERU				i Sn	Sg	18 41 15.3	+1.7
KHC	Kasperske Hory	3.26	258	ePN	Pn	18 40 23.1	+0.4
KHC				ePG	Pb	18 40 29.7	+0.6
KHC				eSG	Sg	18 41 13.0	-2.1
	comp=Z,34nm,0.5s						
GEC2	GERESS Array S	3.27	253	ePg	Pg	18 40 31.4	-1.6
GEC2				eSg	Sg	18 41 15.2	-0.2
GERES	GERESS Array B	3.27	253	Pn	Pn	18 40 23.4	+0.5
	0.5nm,0.3s,baz=70,slow=15,SNR=11						
GERES				Pg	Pb	18 40 31.2	+1.9
	6.4nm,0.3s,baz=70,slow=16,SNR=65						
GERES				Sn	Sn	18 41 03.9	+1.3
	2.5nm,0.3s,baz=72,slow=31,SNR=4.3						
GERES				Lg	Lg	18 41 14.9	
	5.7nm,0.3s,baz=73,slow=28,SNR=9.2						
ARSA	Arzberg	3.28	217	ePn	Pn	18 40 22.8	0.0
	2.4nm,0.4s						
ARSA				Sg	Sg	18 41 19.3	+3.8
	4.6nm,0.5s						
BRIU	Brid	3.38	116	i Pn	Pg	18 40 34.7	-0.3
FBE	Freiberg	3.42	290	ePg	Pg	18 40 34.8	-0.9
FBE				eSg	Sg	18 41 20.4	+0.4
MOA	Molln	3.43	235	ePn	Pn	18 40 25.5	+0.5
	0.3nm,0.2s						
MOA				Sg	Sb	18 41 17.0	+2.8
	5.5nm,0.4s						
TRSU	Trosnyk	3.47	119	ePn	Pg	18 40 36.3	-0.4
TRSU				i Sn	Sg	18 41 23.8	+2.2
KORU	Korolevo	3.54	118	i Pn	Pg	18 40 37.4	-0.6
KORU				i Sn	Sg	18 41 25.8	+2.0
MORS	Morshin	3.63	100	i Pn	Pg	18 40 38.7	-1.0
MORS				eSn	Sg	18 41 28.6	+1.9
MORH	Mrgy, Hungar	3.68	178	ePn	Pn	18 40 28.1	-0.3
MORH				Sn	Sn	18 41 09.1	-3.3
WET	Wettzell	3.71	261	ePn	Pn	18 40 29.0	+0.2
WET				ePg	Pg	18 40 40.6	-0.7
WET				eSg	Sg	18 41 28.0	-1.3
CLL	Collm	3.75	294	ePn	Pn	18 40 31.0	+1.7
CLL				ePg	Pg	18 40 42.0	-0.1
CLL				e		18 41 15.0	
CLL				eSg	Sg	18 41 30.0	-0.7
	comp=Z,21nm,0.6s						
CLL	Collm	3.75	294	ePg	Pg	18 40 42.0	-0.1
CLL				eSg	Sg	18 41 30.9	+0.2
NKC	Novy Kostel	3.88	277	ePG	Pg	18 40 42.6	-2.0
NKC				eSG	Sg	18 41 34.9	0.0
	comp=Z,26nm,0.5s						
TANN	Tannenbergstha	3.89	280	ePn	Pn	18 40 32.0	+0.7
TANN				eSg	Sg	18 41 33.8	-1.2
SOKA	Soboth	3.94	217	ePn	Pn	18 40 33.6	+1.6
	comp=Z,0.8nm,0.4s						
SOKA				eSn	Sn	18 41 18.3	-0.6
	comp=Z,1.7nm,0.5s						
ROTZ	Rotzenmuhle	4.04	271	eSg	Sg	18 41 38.4	-1.7
DRGR		4.21	136	⇑iP	Pn	18 40 36.3	+0.7
SIRR	Siria	4.21	148	⇑iP	Pn	18 40 35.8	+0.1
OBKA	Obir	4.27	219	ePn	Pn	18 40 37.2	+0.7
	comp=Z,2.7nm,0.4s						
OBKA				Sg	Sg	18 41 51.8	+4.4
	comp=Z,3.4nm,0.6s						
NSLU	Nyzhne Selyshc	4.30	111	⇓iPn	Pn	18 40 40.5	+3.6
NSLU				eSn	Sn	18 41 31.3	+3.6
MOX	Moxa	4.45	282	eSg	Sg	18 41 53.2	+0.1
MYKA	Terra Mystica	4.58	226	Sg	Sg	18 41 57.7	+0.5
	comp=Z,3.7nm,0.6s						
BZS	Buzias	4.78	152	⇑iP	Pn	18 40 44.0	+0.5
BURAR	Bucovina Array	5.02	114	⇑iP	Pn	18 40 47.8	+0.9
ABTA	Abfaltersbach	5.06	234	ePn	Pb	18 40 58.4	-1.2
	comp=Z,1.0nm,0.4s						
ABTA				Sg	Sb	18 42 05.4	+4.4
	comp=Z,1.2nm,0.4s						
WATA	Walderalm	5.23	243	Sg	Sb	18 42 08.5	+2.6
	comp=Z,9.8nm,0.5s						
WTTA	Wattenberg	5.23	242	ePg	Pg	18 41 08.4	-2.1
	comp=Z,0.6nm,0.2s						
WTTA				Sg	Sb	18 42 09.0	+3.0
	comp=Z,6.0nm,0.4s						
GZR	Gura Zlata	5.36	145	⇓iP	Pn	18 40 52.7	+1.1
MOTA	Moosalm	5.50	245	ePn	Pb	18 41 07.4	+0.2
	comp=Z,1.0nm,0.5s						
MOTA				Sg	Sb	18 42 16.8	+3.2
	comp=Z,1.7nm,0.3s						
SQTA	Sankt Quirin	5.50	244	Sg	Sb	18 42 15.5	+1.8
	comp=Z,5.5nm,0.4s						
RETA	Reutte	5.63	248	Sg	Sb	18 42 21.6	+4.2
	comp=Z,14nm,0.6s						
LOT	Lotru	5.71	139	⇑iP	Pn	18 40 56.5	+0.1
FETA	Feichten	5.88	244	ePn	Pb	18 41 16.7	+3.0
	comp=Z,1.3nm,0.6s						
FETA				Sg	Sb	18 42 30.1	+5.3
	comp=Z,2.7nm,0.5s						
DAVA	Damuels	6.25	249	Pg	Pg	18 41 29.8	-0.2
	comp=Z,2.0nm,0.5s						
DAVA				Sg	Sb	18 42 38.6	+3.2
	comp=Z,8.6nm,0.6s						
DAVOX	Davos/Dischmat	6.50	245	Pn	Pn	18 41 06.1	-1.2
	comp=Z,0.2nm,0.3s,baz=60,slow=20,SNR=2.3						
DAVOX				Lg	Lg	18 42 58.3	
	comp=Z,0.2nm,0.3s,baz=45,slow=1.4,SNR=3.5						
AKASG	Malin Array Be	6.95	79	Pn	Pn	18 41 09.6	-3.7
	comp=Z,0.8nm,0.3s,baz=259,slow=13,SNR=3.6						
AKASG				Lg	Lg	18 43 07.1	
	comp=Z,0.5nm,0.3s,baz=359,slow=20,SNR=3.3						
HFS	Hagfors	10.62	347	Pn	Pn	18 42 01.9	-1.6
	comp=Z,0.1nm,0.3s,baz=164,slow=16,SNR=2.9						
NOA	NORSAR Array B	11.89	343	Pn	Pn	18 42 19.3	-1.7
	comp=Z,0.0nm,0.3s,baz=148,slow=12,SNR=3.2						
FINES	FINESS Array B	12.34	17	Pn	Pn	18 42 24.1	-2.9
	comp=Z,0.2nm,0.3s,baz=203,slow=10,SNR=9.9						

LJU 29 18:46:41.6, 45.°76N×14.°86E, h0^{km}, ML0.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VISS	Visnje	0.05	341	i Pg	Pg	18 46 42.5	-0.1
VISS				i Sg	Sg	18 46 43.5	+0.2
	comp=Z,51nm,0.1s						
GBRS	Gornja Briga	0.23	189	i Pg	Pg	18 46 46.0	+0.1
GBRS				i Sg	Sg	18 46 49.4	+0.5
	comp=Z,2.0nm,0.1s						
GBAS	Gorenja Brezov	0.34	302	i Pg	Pg	18 46 48.5	+0.3
GBAS				i Sg	Sg	18 46 53.1	+0.4
	comp=Z,1.0nm,0.1s						

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*ISK **29** 18:47:23.4, 38.°75N×26.°58E, h11^{km}, ML2.6/20*
*DDA **29** 18:47:23.8, 38.°76N×26.°58E, h7^{km}±3^{km}, ML2.8*
*ISCJB **29** 18:47:24.0±0.3, 38.°75N±0.°02×26.°56E±0.°03, h8^{km}±3^{km}, Error ellipse: s-maj=3.6km s-min=2.7km az=166.1*
*ATH **29** 18:47:24.2, 38.°73N×26.°58E, h11^{km}±5^{km}, ML2.5/3, Error ellipse: s-maj=5.4km s-min=1.3km az=249.0*
*THE **29** 18:47:24.4, 38.°72N×26.°55E, h6^{km}±2^{km}, ML2.3/6, Error ellipse: s-maj=2.2km s-min=0.7km az=249.0*

ISC 29 18:47:24.1±0.8, **38.°75N**±0.°02×**26.°58E**±0.°02, **h10^{km}**±6^{km}, **n51, σ0.^{s}40**/71, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOCM	Foa	0.12	106	PG	Pg	18 47 26.8	-0.2
FOCM				SG	Sg	18 47 29.1	0.0
KRBN	Karaburun	0.15	188	PG	Pg	18 47 27.5	-0.1
KRBN				SG	Sg	18 47 30.7	+0.8
CAND	Candarli	0.27	40	PG	Pg	18 47 29.6	0.0
URLA	Izmir	0.39	178	PG	Pg	18 47 31.6	-0.2
URLA				SG	Sg	18 47 37.7	+0.8
URLA	Izmir	0.39	178	i P	Pg	18 47 32.0	+0.2
URLA				i S	Sb	18 47 39.1	0.0
URLA				IAML_P			
	comp=Z,15µm,0.2s						
DKL	Dikili	0.41	38	PG	Pg	18 47 31.9	-0.3
ZEDA	zmir-Bergama	0.44	60	i P	Pg	18 47 32.9	+0.1
ZEDA				i S	Sb	18 47 39.9	-0.8
ZEDA				IAML_P			
	comp=Z,2µm,0.1s						
CESE	eme	0.47	208	PG	Pg	18 47 33.0	-0.3
BLCB	Balcova	0.51	135	PG	Pg	18 47 34.0	-0.1
CHOS	Chios island	0.55	229	PG	Pg	18 47 34.8	0.0
CHOS	Chios island	0.55	229	P	Pg	18 47 34.9	+0.1
CHOS				S	Sg	18 47 42.2	+0.2
	comp=Z,595nm,0.3s						
CHOS	Chios island	0.55	229	P	Pg	18 47 34.8	0.0
CHOS				S	Sg	18 47 42.0	0.0
CHOS				AML	AML	18 47 47.5	
	comp=E,1291µm,0.3s						
CHOS				AML	AML	18 47 48.5	
	comp=N,1078µm,0.3s						
PRK	Paraskevi	0.55	334	P	Pb	18 47 35.8	-0.1
PRK				S	Sb	18 47 44.2	+0.3
	comp=N,530nm,0.2s						
PRK	Paraskevi	0.55	334	P	Pb	18 47 35.8	-0.1
PRK				S	Sb	18 47 43.2	-0.7
AYVA	Ayvalik	0.57	9	i P	Pg	18 47 35.1	-0.1
AYVA				i S	Sb	18 47 44.0	-0.2
AYVA				IAML_P			
	comp=Z,610nm,0.1s						
GMLD	Gumuldur	0.72	159	PG	Pg	18 47 37.9	-0.1
SIGR	SIGRI	0.73	309	PG	Pg	18 47 38.0	-0.3
SIGR	SIGRI	0.73	309	P	Pg	18 47 38.2	-0.1
SIGR				S	Sb	18 47 48.4	-0.6
	comp=Z,210nm,0.5s						
SIGR	SIGRI	0.73	309	P	Pg	18 47 38.2	-0.1
SIGR				S	Sg	18 47 48.1	+0.3
SIGR				AML	AML	18 47 50.4	
	comp=E,383µm,0.4s						
SIGR				AML	AML	18 47 51.7	
	comp=N,380µm,0.5s						
GPNR	Gulpinar-Canak	0.79	334	PG	Pg	18 47 38.9	-0.5
AKS	Akhisar	0.97	82	PG	Pg	18 47 42.8	0.0
AKHS	Akhisar	0.97	82	i P	Pn	18 47 43.6	-0.2
AKHS				IAML_P			
	comp=Z,2µm,0.2s						
BAYC	CANAKKALE_Bayr	0.99	358	i P	Pb	18 47 43.6	+0.2
BAYC				i S	Sb	18 47 56.7	+0.1
SMG	Samos	1.06	169	P	Pb	18 47 43.3	-1.2
SMG				S	Sb	18 47 59.0	+0.7
	comp=Z,460nm,0.3s						
SMG	Samos	1.06	169	P	Pb	18 47 43.3	-1.2
SMG				S	Sb	18 47 59.1	+0.7
SMG				AML	AML	18 48 01.9	
	comp=E,842µm,0.4s						
SMG				AML	AML	18 48 02.0	
	comp=N,978µm,0.2s						
STEP	BALIKESIR_Sava	1.08	54	i P	Pb	18 47 44.9	-0.1
STEP				i S	Sn	18 48 00.8	+0.3
GCAM	G?zelcaml?	1.17	154	PN	Pb	18 47 46.0	-0.3
GCAM	G?zelcaml?	1.17	154	i P	Pg	18 47 46.9	+0.4
GCAM				i S	Sn	18 48 03.1	+0.8
GCAM				IAML_P			
	comp=Z,1µm,0.1s						
BOZC	Bozcaada	1.17	340	PN	Pb	18 47 45.9	-0.5
BOZC	Bozcaada	1.17	340	i P	Pg	18 47 46.9	+0.3
AYDB	Zeytinkoy-Aydi	1.30	127	PN	Pn	18 47 47.9	-0.6
BALB	Balikesir	1.35	48	PN	Pn	18 47 48.9	0.0
GADA	Gvkgeada	1.54	340	PN	Pn	18 47 51.6	0.0
GONE	Gonen-Balikesi	1.55	33	PN	Pn	18 47 52.0	+0.2
MANT	Manisa	1.57	99	i P	Pg	18 47 54.3	+0.1
MANT				i S	Sg	18 48 14.9	+0.3
MANT				IAML_P			
	comp=Z,503nm,0.3s						
LIA	Limnos Island	1.58	317	P	Pn	18 47 52.1	-0.1
LIA				S	Sb	18 48 13.6	+0.2
	comp=Z,38nm,0.3s						
LIA	Limnos Island	1.58	317	P	Pb	18 47 53.6	+0.2
LPK	Lapseki	1.63	5	PN	Pn	18 47 52.4	-0.5
KULA	Kula-Manisa	1.64	97	PN	Pn	18 47 52.8	-0.3
BODT	Bodrum	1.78	161	PN	Pn	18 47 54.9	0.0
APE	Apeiranthos	1.87	207	PN	Pn	18 47 55.7	-0.5
EDC	Edincik	1.88	31	PN	Pn	18 47 56.3	0.0
SMTH	Samothraki Isl	1.90	335	P	Pb	18 47 59.1	+0.1

RKY	Sarkoy-Tekirda	1.99	13	PN	Pn	18 47 58.0	+0.1
MRMT	Marmara Adasi	2.01	23	PN	Pn	18 47 57.5	-0.7
ENEZ	Enez	2.01	351	PN	Pn	18 47 58.2	+0.1
KCTX	Karacabey (Bur	2.04	42	PN	Pn	18 47 58.4	-0.2
DAT	Datca	2.16	158	PN	Pn	18 48 00.5	+0.2
ALN	Alexandroupoli	2.19	349	PN	Pn	18 48 00.4	-0.1
ALN	Alexandroupoli	2.19	349	P	Pn	18 48 00.2	-0.3
ALN				S	Sn	18 48 27.7	+0.1
	comp=Z,15nm,0.4s						
TVSB	Tavsanli	2.35	72	PN	Pn	18 48 02.7	-0.1

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*GCG **29** 18:57:01.4±0.3, 14°.63N×90°.73W, h27^{km}±999^{km}, MD3.7*
*MEX **29** 18:57:01.8±0.3, 14°.29N×90°.62W, h30^{km}±915^{km}, MD3.8*
*ISCJB **29** 18:57:02.2±0.7, 14°.66N±0°.06×90°.74W±0°.04, h10^{km}, Error ellipse: s-maj=8.7km s-min=5.5km az=20.1*
ISC 29 18:57:01.8±1.4**, 14°.63N**±0°.09×**90°.65W**±0°.05**, h10^{km}, n7, σ0^{s}.98**/11**, 1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.24	171	eP	Pg	18 57 08.9	+2.1
FUG	Fuego 3	0.26	226	⇓iP	Pg	18 57 08.0	+0.8
MRL	Marmol	1.03	64	eP	Pg	18 57 21.7	+0.1
MRL				eS	Sn	18 57 37.5	+0.3
CCIG	Comitan	2.18	319	i P	Pn	18 57 38.7	+0.4
CCIG				i S	Sn	18 58 06.6	+1.1
PCIG		2.70	294	i P	Pn	18 57 43.9	-1.4
PCIG				i S	Sn	18 58 16.8	-1.2
TGIG		3.20	312	i P	Pn	18 57 51.8	-0.4
TGIG				eS	Sn	18 58 31.6	+1.1
CMIG	Matias Romero	4.75	302	i P	Pn	18 58 12.7	-0.8
CMIG				i S	Sn	18 59 08.6	-0.1

MEX 29 19:14:00.0±0.8**, 17°.98N×102°.40W, h5^{km}, MD3.8, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.94	289	eP	Pg	19 14 16.3	-1.9
MMIG				eS	Sg	19 14 28.8	-1.6
ZIIG	Zihuatanejo	0.97	113	i P	Pg	19 14 15.7	-3.0
ZIIG				eS	Sg	19 14 28.7	-2.5
EZ5V		1.87	323	i P	Pn	19 14 29.4	-3.6
EZ5V				eS	Sn	19 14 52.3	-4.8
ARIG	Puente Sto Nin	1.98	81	i P	Pn	19 14 31.3	-2.9
ARIG				eS	Sn	19 14 55.2	-4.2

IDC 29 19:31:54.2±7.2**, 30°.33S×178°.28W, h0^{km}, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/26**, mbtmp3.7**/2**, Error ellipse: s-maj=294.9km s-min=57.6km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.87	267	P	P	19 39 52.6	-1.9
	0.4nm,0.6s,baz=104,slow=7.6,SNR=11						
WRA	Warramunga Arr	43.85	272	P	P	19 40 02.6	+0.2
	0.8nm,0.4s,baz=102,slow=8.9,SNR=8.5						
FINES	FINESS Array B	145.00	340	PKPbc	PKPdf	19 51 33.0	+0.3
	1.0nm,0.8s,baz=85,slow=3.3,SNR=5.8						

MAN 29 19:34:06.5, 11°.84N×125°.55E, h8^{km}, mb4.6, ML3.4, MS3.3, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.26	205	eP	Pg	19 34 12.5	+0.7
BESP				eS	Sb	19 34 20.5	+2.4
PLP	Palo	0.87	220	⇑eP	Pb	19 34 23.8	-0.2
PLP				i S	Sn	19 34 37.5	-0.6
CNP	Catarman	1.10	308	eP	Pg	19 34 27.0	-0.6
CNP				eS	Sn	19 34 44.0	+0.4
OCLP	Ormoc	1.21	230	eP	Pb	19 34 29.4	-0.4
OCLP				eS	Sn	19 34 47.1	+0.6
MSLP	Maasin	1.82	202	eP	Pn	19 34 38.7	+0.4
MSLP				eS	Sg	19 35 06.4	+1.2
PVCP	Virac	2.22	322	eP	Pn	19 34 43.7	+0.1
PVCP				eS	Sg	19 35 18.4	+0.5

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*ISCJB **29** 20:04:26.7±0.4, 43°.77N±0°.03×105°.34W±0°.04, h0^{km}, mb3.7/1, Error ellipse: s-maj=4.5km s-min=4.0km az=17.7*
*ANF **29** 20:04:26.8±0.8, 43°.74N×105°.26W, ML3.5/12, Error ellipse: s-maj=14.4km s-min=6.9km az=146.0*
*IDC **29** 20:04:26.7±1.1, 43°.98N×105°.67W, h0^{km}, mb3.8/1, mb1 3.6/6, mb1mx3.4/40, mbtmp3.4/6, ML3.2/5, Error ellipse: s-maj=26.3km s-min=9.7km az=151.0*
*NEIC **29** 20:04:35.0±0.5, 43°.56N×106°.11W, h0^{km}, ML3.2, Error ellipse: s-maj=6.2km s-min=4.8km az=77.0, Suspected Mining explosion.*
NEIC 21 km [13 miles] NE of Midwest.
ISC 29 20:04:28.0±0.7**, 43°.76N**±0°.03×**105°.29W**±0°.04**, h0^{km}, n62, σ1^{s}.27**/66**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	68	P	Pg	20 04 45.4	-1.3
	baz=247						
K22A	Casper	1.43	220	ePg	Pn	20 04 53.2	-2.0
K22A	Casper	1.43	220	P	Pn	20 04 53.3	-2.0
	baz=40						
K22A				S	Sg	20 05 14.2	+0.3
	baz=40						
N23A	Red Feather La	2.90	190	P	Pn	20 05 15.5	-0.1
	baz=9.8						
N23A				Sb	Sb	20 05 57.3	+0.3
	baz=9.8						
LAO	LASA Array	3.00	348	P	Pn	20 05 16.0	-0.8
	baz=167						
RLMT	Red Lodge	3.16	297	ePn	Pn	20 05 18.4	-0.7
RLMT	Red Lodge	3.16	297	P	Pn	20 05 18.6	-0.5
	baz=114						
BW06	Boulder Array	3.27	254	ePn	Pn	20 05 20.6	-0.1
BW06	Boulder Array	3.27	254	P	Pn	20 05 20.7	-0.1
	baz=71						
PD31	Pinedale Array	3.27	254	ePn	Pn	20 05 20.5	-0.2
PDAR	Pinedale Array	3.27	254	Pn	Pn	20 05 20.2	-0.5
	3.3nm,0.3s,baz=68,slow=15,SNR=29						
PDAR				Lg	Lg	20 06 03.7	
	17nm,0.3s,baz=73,slow=31,SNR=8.4						
OGNE	Ogallala	3.71	138	P	Pn	20 05 25.7	-0.8
	baz=321						
GCMT	Greycliff	3.72	305	ePn	Pn	20 05 26.2	-0.6
H17A	Grant Village	3.86	281	ePn	Pn	20 05 29.7	+0.8
H17A	Grant Village	3.86	281	Pb	Pb	20 05 36.6	-0.5
	baz=98						
H17A				Sb	Sb	20 06 26.7	+2.2
	baz=98						
YNR	Norris Junctio	3.99	286	ePn	Pn	20 05 29.3	-1.3
YPP	Pitchstone Pla	4.01	279	ePn	Pn	20 05 30.7	-0.2
YFT	Old Faithful	4.05	282	ePn	Pn	20 05 30.1	-1.3
YHH	Holmes Hill	4.12	286	ePn	Pn	20 05 32.3	-0.2
O20A	White River Ci	4.24	212	ePn	Pn	20 05 33.9	0.0
O20A	White River Ci	4.24	212	P	Pn	20 05 33.8	-0.2
	baz=31						
AHID	Auburn Hatcher	4.36	259	ePn	Pn	20 05 34.5	-1.1
QLMT	Earthquake Lak	4.54	286	ePn	Pn	20 05 38.3	+0.3
SUSD	Miller	4.61	79	Pb	Pb	20 05 48.4	-1.4
	baz=263						
SUSD				Sb	Sb	20 06 48.0	+2.2
	baz=263						
DGMT	Dagmar	4.77	9	ePn	Pb	20 05 52.6	+0.2
DGMT	Dagmar	4.77	9	P	Pn	20 05 40.2	-0.9
	baz=189						
DGMT				Sb	Sb	20 06 52.8	+2.4
	baz=189						
Q24A	Divide	4.79	179	Pb	Pb	20 05 51.9	-1.1
	baz=359						
BOZ	Bozeman (W)	4.88	294	ePn	Pn	20 05 44.9	+2.2
HWUT	Hardware Ranch	5.10	247	ePn	Pn	20 05 45.8	0.0
HRY	Holter Researc	5.48	305	ePn	Pn	20 05 50.2	-0.7
MCMT	McKenzie Canyo	5.53	284	ePn	Pn	20 05 52.0	+0.3
MDND	Maddock	5.70	42	ePn	Pb	20 06 11.1	+2.8
BGNE	Belgrade	5.77	112	ePn	Pb	20 06 08.9	-0.5
PV22	Blue Mesa, Par	5.85	208	ePn	Pn	20 05 56.7	+0.7
HVU	Hansel Valley	5.85	253	ePn	Pn	20 05 56.1	-0.1
PV07	Paradox Valley	5.89	207	ePn	Pn	20 05 57.1	+0.5
P17A	Butcher Ranch,	5.92	225	ePn	Pn	20 05 57.6	+0.6
PV23	Carpenter Ridg	6.00	209	ePn	Pn	20 05 58.4	+0.1
PV04	Paradox Valley	6.02	208	ePn	Pn	20 05 58.8	+0.4
PV12	Saucer Basin,	6.05	207	ePn	Pn	20 05 59.6	+0.8
PV14	Lion Creek, Pa	6.08	209	ePn	Pn	20 06 00.2	+1.0
PV10	Paradox Valley	6.08	209	ePn	Pn	20 06 01.1	+1.8
PV20	West Nyswonger	6.08	208	ePn	Pn	20 06 00.5	+1.2
SRU	San Rafael Swe	6.08	222	ePn	Pn	20 05 58.1	-1.2
PV11	David Mesa, Pa	6.09	208	ePn	Pn	20 05 59.6	+0.2
PV16	Nyswonger Mesa	6.09	208	ePn	Pn	20 05 59.8	+0.3
PV03	Paradox Valley	6.12	207	ePn	Pn	20 06 00.5	+0.7
PV02	Paradox Valley	6.13	206	ePn	Pn	20 06 00.3	+0.4
PV17	East Wray Mesa	6.14	208	ePn	Pn	20 06 00.4	+0.4
PV18	Skein Mesa, Pa	6.15	208	ePn	Pn	20 06 00.8	+0.5
PV13	Radium Mtn., P	6.20	207	ePn	Pn	20 06 01.3	+0.3
ECSD	EROS Data Cent	6.29	87	ePn	Pb	20 06 17.6	-0.6
TMUT	Trail Mountain	6.29	227	ePn	Pn	20 06 02.6	+0.3
DUG	Dugway, Tooele	6.64	240	ePn	Pn	20 06 06.1	-0.8
ELK	Elko	7.97	251	Pn	Pn	20 06 22.9	-2.4
	0.1nm,0.3s,baz=56,slow=7.3,SNR=2.3						
ELK				Lg	Lg	20 08 29.9	
	0.1nm,0.3s,baz=130,slow=16,SNR=2.3						
PSUT	Pine Spring	8.30	234	ePn	Pn	20 06 29.9	+0.1
ULM	Lac du Bonnet	9.13	41	Pn	Pn	20 06 38.2	-2.7
	0.7nm,0.3s,baz=223,slow=10,SNR=4.5						
I56US	NEWPORT INFRAS	9.38	303	i		21 03 50.0	
	baz=116,slow=316,SNR=4.5						
NV01	Mina Array Sit	11.17	246	ePn	Pn	20 07 07.8	-1.2
NVAR	Mina Array Bea	11.17	246	Pn	Pn	20 07 07.9	-1.2
	0.1nm,0.3s,baz=44,slow=12,SNR=3.1						
TXAR	Lajitas Array	14.46	174	Pn	Pn	20 07 57.8	+3.9
	0.0nm,0.3s,baz=358,slow=9.9,SNR=3.2						
MKAR	Makanchi Array	89.58	355	P	P	20 17 24.5	-2.7
	0.3nm,0.7s,baz=1.8,slow=3.1,SNR=3.6						

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*SOME **29** 20:27:34.2, 40°.15N×78°.18E, h15^{km}*
*KRNET **29** 20:27:35.0±0.1, 40°.10N×77°.89E, mb2.9*
*NNC **29** 20:27:35.3±2.2, 40°.23N×78°.16E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=14.4km s-min=11.9km az=167.0*
ISC 29 20:27:28.8±2.8**, 40°.0N**±0°.1×**78°.12E**±0°.05**, h10^{km}, n36, σ1^{s}.16**/57**, 12C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	2.15	312	⇑iP	Pg	20 28 11.6	+1.6
	baz=13						
NRN				⇑iS	Sg	20 28 37.8	0.0
	baz=13						
KDJ	Kajisay	2.23	342	⇓iP	Pg	20 28 12.8	+1.2
	baz=46						
KDJ				⇓eS	Sg	20 28 41.0	+0.4
	baz=46						
PRZ	Przheval'sk	2.48	5	⇑iP	Pg	20 28 17.5	+1.2
	baz=9.0						
PRZ				⇑iS	Sg	20 28 48.4	-0.1
	baz=9.0						
ANVS	Anan'yevo	2.79	353	⇓eP	Pg	20 28 21.2	-1.1
	baz=57						
ANVS				⇓iS	Sb	20 28 55.3	+2.1
	baz=57						
BOOM	Boomskoye usch	2.97	327	⇑iP	Pb	20 28 22.7	+0.8
	baz=29						
BOOM				⇑iS	Sb	20 28 58.1	-0.3
	baz=29						
KZA	Kyzart	2.99	315	⇓iP	Pb	20 28 23.4	+0.9
	baz=16						
KZA				⇓iS	Sb	20 28 58.0	-1.3
	baz=16						
SATY	Saty	3.05	4	Pg	Pg	20 28 27.9	+0.5
	17nm,0.6s						
SATY				Lg	Lg	20 29 07.5	
	19nm,0.6s						
SATY	Saty	3.05	4	eP	Pg	20 28 27.9	+0.5
	17nm,0.6s						
SATY				eS	Sg	20 29 06.4	-0.5
	19nm,0.6s						
TNSS	Tian-Shan	3.15	344	Pg	Pg	20 28 30.1	+1.0
	7.8nm,0.3s						
TNSS				Lg	Lg	20 29 10.9	
	9.2nm,0.5s						
TNSS	Tian-Shan	3.15	344	eP	Pg	20 28 30.1	+1.0
	7.8nm,0.3s						
TNSS				eS	Sg	20 29 10.3	+0.3
	18nm,0.8s						
UZB	Uzynbulak	3.21	12	Pg	Pb	20 28 27.1	+1.1
	1.6nm,0.6s						
UZB				Lg	Lg	20 29 04.9	
	9.5nm,0.4s						
UZB	Uzynbulak	3.21	12	eP	Pg	20 28 30.2	0.0
	1.2nm,0.2s						
UZB				eS	Sg	20 29 10.7	-1.1
	16nm,0.6s						
MDOK	Medeo	3.25	346	Pg	Pg	20 28 31.7	+0.6
	5.1nm,0.5s						
MDOK				Lg	Lg	20 29 13.0	
	9.4nm,0.6s						
MDOK	Medeo	3.25	346	eP	Pg	20 28 31.7	+0.6
	5.1nm,0.5s						
MDOK				eS	Sg	20 29 13.1	-0.1
	9.4nm,0.6s						
KOTS	Kotyrbulak	3.31	347	Pg	Pg	20 28 33.4	+1.2
	5.1nm,0.4s						
KOTS				Lg	Lg	20 29 15.9	
	15nm,0.7s						
KOTS	Kotyrbulak	3.31	347	eP	Pg	20 28 33.4	+1.2
	5.1nm,0.4s						
KOTS				eS	Sg	20 29 15.9	+0.9
	37nm,0.5s						
MTBS	Maitube	3.36	338	Pg	Pg	20 28 32.7	-0.6
	1.6nm,0.2s						
MTBS				Lg	Lg	20 29 15.2	
	3.8nm,0.3s						
MTBS	Maitube	3.36	338	eP	Pg	20 28 32.7	-0.6
	2.1nm,0.2s						
MTBS				eS	Sg	20 29 14.7	-2.1
	11nm,0.5s						
ARLS	Aral	3.42	304	⇑iP	Pb	20 28 28.6	-0.9
	baz=4.0						
ARLS				⇑iS	Sb	20 29 08.2	-3.0
	baz=4.0						
KST	Kastek	3.43	333	Pg	Pg	20 28 34.3	-0.3
	3.6nm,0.4s						
KST				Lg	Lg	20 29 17.6	
	7.5nm,0.8s						
KST	Kastek	3.43	333	eP	Pg	20 28 34.3	-0.3
	3.6nm,0.4s						
KST				eS	Sg	20 29 17.6	-1.5
	7.5nm,0.8s						
TKM2	Tokmak 2	3.47	328	⇓Pg	Pb	20 28 33.0	+2.5
	3.1nm,0.5s						
TKM2				⇑Lg	Lg	20 29 16.8	
	1.2nm,0.3s						
PDGK	Podgornoye	3.47	17	⇓Pg	Pg	20 28 34.1	-1.3
	2.3nm,0.4s						
PDGK				⇑Lg	Lg	20 29 17.5	
	6.6nm,0.5s						
PDGK	Podgornoye	3.47	17	⇑eP	Pb	20 28 32.0	+1.6
	baz=20						
PDGK				⇑iS	Sb	20 29 13.4	+0.7
	baz=20						
KPKS	Kokpek	3.48	7	eP	Pg	20 28 35.4	-0.1
	20nm,0.4s						
KPKS				eS	Sg	20 29 19.2	-1.3
	27nm,0.6s						
DGS	Degeres	3.67	332	Pg	Pg	20 28 39.1	-0.1
	2.1nm,0.6s						
DGS				Lg	Lg	20 29 25.8	
	8.0nm,0.7s						
DGS	Degeres	3.67	332	eP	Pg	20 28 39.1	-0.1
	2.1nm,0.6s						
DGS				eS	Sg	20 29 25.8	-1.1
	12nm,1.0s						
AAK	Ala-Archa	3.79	315	⇓Pg	Pg	20 28 42.8	+1.4
	0.9nm,0.2s						
AAK				⇓Lg	Lg	20 29 32.7	
	9.1nm,0.6s						
KTBS	Karatobe	3.85	344	Pg	Pg	20 28 42.3	-0.3
	3.3nm,0.4s						
KTBS				Lg	Lg	20 29 31.1	
	26nm,0.6s						
KTBS	Karatobe	3.85	344	eP	Pg	20 28 42.3	-0.3
	3.3nm,0.4s						
KTBS				eS	Sg	20 29 31.1	-1.3
	26nm,0.6s						
CHKK	Chushkaly	3.93	348	Pg	Pg	20 28 43.4	-0.8
	4.8nm,0.5s						
CHKK				Lg	Lg	20 29 33.4	
	6.5nm,0.3s						
CHKK	Chushkaly	3.93	348	eP	Pg	20 28 43.4	-0.8
	4.8nm,0.5s						
CHKK				eS	Sg	20 29 33.4	-1.7
	6.5nm,0.3s						
ARXS	Arharly	4.20	357	Pg	Pg	20 28 49.5	+0.1
	3.3nm,0.5s						
ARXS				Lg	Lg	20 29 43.5	
	9.2nm,0.6s						
ARXS	Arharly	4.20	357	eP	Pg	20 28 49.5	+0.1
	3.3nm,0.5s						
ARXS				eS	Sg	20 29 43.5	-0.3
	9.2nm,0.6s						
KAPS	Kapalarasan	5.35	9	Pg	Pg	20 29 09.6	-1.6
	1.5nm,0.6s						
KAPS				Lg	Lg	20 30 18.3	
	2.7nm,0.4s						
KAPS	Kapalarasan	5.35	9	eP	Pg	20 29 09.6	-1.6
	1.5nm,0.6s						
KAPS				eS	Sg	20 30 18.3	-2.2
	4.1nm,1.4s						

NEIC 29 20:30:59.6±0.0**, 21°.28N×157°.61W, h33^{km}, ML3.7**(HVO)**, After HVO., Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HON	Honolulu	0.37	277	ePg	Pb	20 31 07.8	-0.5
HON				eSg	Sb	20 31 11.8	-2.4
KIP	Kipapa	0.41	291	ePn	Pb	20 31 07.7	-1.1
KIP				eSg	Sb	20 31 12.9	-2.2
OPA	Opana	0.56	317	ePn	Pb	20 31 09.4	-1.6
OPA				eSg	Sb	20 31 16.6	-2.4
KHLH	Kahului Airpor	1.16	109	ePn	Pn	20 31 18.1	-1.5
HLK	Haleakala	1.37	112	ePn	Pn	20 31 20.9	-1.8
MHA	Mahukona	1.93	124	ePn	Pn	20 31 28.0	-2.0
KEKH	Kekaha	2.08	290	ePn	Pn	20 31 30.1	-2.1
HUH	Hualalai	2.29	133	ePn	Pn	20 31 33.3	-2.1
KHLU	Kahalu`u	2.32	136	ePn	Pn	20 31 34.0	-1.6
POHA	Pohakuloa	2.46	128	ePn	Pn	20 31 35.2	-2.5
MLOA	Mauna Loa Obse	2.57	132	ePn	Pn	20 31 36.9	-2.4
MWH	Moku‘aweowe	2.59	133	ePn	Pn	20 31 38.6	-1.2
HMH	Humu‘ula Sheep	2.60	130	ePn	Pn	20 31 37.2	-2.3
MLH	Mauna Loa	2.74	130	ePn	Pn	20 31 39.0	-2.5
KHU	Kahuku	2.75	137	ePn	Pn	20 31 40.1	-1.6
AIN	Ainahou	2.77	133	ePn	Pn	20 31 40.0	-1.8

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*SJA **29** 20:56:13.0±0.4, 24°.19S×66°.97W, h201^{km}±7^{km}, ML2.6, MW2.8*
*ISCJB **29** 20:56:14.2±1.2, 24°.11S±0°.06×67°.06W±0°.06, h188^{km}±17^{km}, Error ellipse: s-maj=11.0km s-min=5.9km az=38.0*
*GUC **29** 20:56:16.2±0.7, 24°.04S×67°.59W, h222^{km}±9^{km}, ML4.1*
ISC 29 20:56:12.2±2.5**, 24°.16S**±0°.06×**67°.00W**±0°.06**, h207^{km}**±**23^{km}, n19, σ1^{s}.52**/31**, 6C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.48	113	eP	Pn	20 56 47.0	+0.5
HJA	Humahuaca	1.74	57	eP	Pn	20 56 50.3	+1.2
AZAP	Zapla	1.77	93	eP	Pn	20 56 50.1	+0.8
AZAP				IAML		20 56 50.3	
	comp=Z,134nm,0.6s						
FSA	Cafayete	2.16	155	eP	Pn	20 56 53.4	+0.4
FSA				IAML		20 56 53.8	
	comp=Z,24nm,0.3s						
LVC	Limon Verde	2.33	311	eP	Pn	20 56 56.6	+1.4
LVC				eS	Sn	20 57 28.6	0.0
LVC	Limon Verde	2.33	311	⇓iP	Pn	20 56 56.8	+1.6
LVC				eS	Sn	20 57 28.0	-0.5
YJA	Yavi	2.40	35	eP	Pn	20 56 57.5	+1.6
YJA				IAML		20 57 32.5	
	comp=Z,3.5nm,0.6s						
PB15	IPOC Station P	2.45	292	eP	Pn	20 56 57.8	+1.5
PB15				eS	Sn	20 57 30.9	+0.3
PB15	IPOC Station P	2.45	292	⇑iP	Pn	20 56 57.8	+1.5
PB15				eS	Sn	20 57 28.9	-1.7
GO02	Mina Guanaco	2.56	246	⇑iP	Pn	20 56 58.6	+1.1
GO02				eS	Sn	20 57 32.6	-0.2
GO02				IAML		20 57 33.6	
	comp=N,707nm,0.1s						
PB06	IPOC Station P	2.77	301	eP	Pn	20 57 01.0	+1.3
PB06	IPOC Station P	2.77	301	⇑iP	Pn	20 57 01.2	+1.5
PB06				eS	Sn	20 57 34.6	-2.2
PB06				IAML		20 57 38.1	
	comp=E,444nm,0.1s						
AHML	Horco Molle	3.02	150	eP	Pn	20 57 03.2	+0.7
PB09	IPOC Station P	3.13	318	⇑iP	Pn	20 57 05.9	+2.0
PB09				eS	Sn	20 57 43.3	-1.1
PB03	IPOC Station P	3.29	309	⇑iP	Pn	20 57 07.0	+1.2
PB03				i S	Sn	20 57 45.9	-1.9
PB03				IAML		20 57 50.7	
	comp=E,236nm,0.2s						
PB04	IPOC Station P	3.42	301	⇑iP	Pn	20 57 08.4	+1.0
PB04				i S	Sn	20 57 48.1	-2.4
PB04				IAML		20 57 51.1	
	comp=N,214nm,0.2s						
PB07	IPOC Station P	3.59	312	⇓iP	Pn	20 57 10.7	+1.2
PB07				i S	Sn	20 57 52.1	-2.3
PB07				IAML		20 57 56.5	
	comp=E,278nm,0.5s						
PB01	IPOC Station P	3.86	323	⇓iP	Pn	20 57 13.7	+1.0
PB01				eS	Sn	20 57 58.0	-2.1
PB01				IAML		20 58 01.4	
	comp=E,122nm,0.2s						
PB02	IPOC Station P	3.89	316	⇓iP	Pn	20 57 13.9	+0.9
PB02				eS	Sn	20 57 58.7	-2.1
PB02				IAML		20 58 03.1	
	comp=E,279nm,0.4s						

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*IDC **29** 21:09:45.0±1.0, 52°.06N×160°.53E, h0^{km}, mb3.7/12, mb1 3.9/14, mb1mx3.7/51, mbtmp3.7/14, ML3.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/40, Error ellipse: s-maj=24.5km s-min=19.5km az=141.0*
*KRSC **29** 21:09:47.2±1.7, 52°.05N×160°.64E, h61^{km}±25^{km}, ML4.3*
*MOS **29** 21:09:49.0±0.9, 52°.03N×160°.57E, h47^{km}, mb4.0/1, Error ellipse: s-maj=10.0km s-min=4.8km az=105.9*
ISC 29 21:09:48.2±2.3**, 52°.04N**±0°.05×**160°.62E**±0°.05**, h23^{km}**±16^{km}**, n78, σ1^{s}.22**/100**, mb3.8**/11**, 1C, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.12	341	eP	Pn	21 10 07.8	-0.6
SPN				eS	Sb	21 10 21.8	-1.2
SPN	Mys Shipunski	1.12	341	PN	Pn	21 10 07.8	-0.6
SPN				S	Sb	21 10 21.8	-1.2
RUS	Russkaya	1.35	288	eP	Pn	21 10 11.4	-0.2
RUS				eS	Sn	21 10 28.3	-0.5
RUS	Russkaya	1.35	288	PN	Pn	21 10 11.4	-0.2
RUS				S	Sn	21 10 28.3	-0.5
NLC	Nalytchevo	1.37	326	eP	Pn	21 10 12.5	+0.6
NLC				eS	Sb	21 10 29.9	-0.3
NLC	Nalytchevo	1.37	326	PN	Pn	21 10 12.5	+0.6
NLC				S	Sb	21 10 29.9	-0.3
DALK	Dalny	1.51	312	eP	Pn	21 10 13.9	+0.1
DALK	Dalny	1.51	312	PN	Pn	21 10 13.9	+0.1
PET	Petropavlovsk	1.55	310	eP	Pn	21 10 14.6	+0.2
PET				eS	Sb	21 10 34.6	-0.8
PET	Petropavlovsk	1.55	310	⇑iPN	Pn	21 10 14.6	+0.2
PET				eS	Sb	21 10 36.6	+1.2
PET				pmax	pmax		
	comp=Z,188nm,0.4s						
PET				smax	smax		
	comp=N,1µm,0.9s						
PET				smax	smax		
	comp=E,894nm,0.7s						
MTVR	Mutnovka	1.56	287	eP	Pn	21 10 15.0	+0.4
MTVR				eS	Sn	21 10 33.3	-0.9
MTVR	Mutnovka	1.56	287	PN	Pn	21 10 15.0	+0.4
MTVR				S	Sn	21 10 33.3	-0.9
KDTR	Khodutka, Kamc	1.59	263	eP	Pn	21 10 14.8	-0.1
KDTR				eS	Sn	21 10 33.2	-1.5
KDTR	Khodutka, Kamc	1.59	263	PN	Pn	21 10 14.8	-0.1
KDTR				S	Sn	21 10 33.2	-1.5
UGLR	Uglovaya	1.60	318	eP	Pn	21 10 15.8	+0.6
UGLR				eS	Sn	21 10 33.6	-1.6
UGLR	Uglovaya	1.60	318	PN	Pn	21 10 15.8	+0.6
UGLR				S	Sn	21 10 33.6	-1.6

SDLR	Sedlovina	1.63	320	*e*P	Pn	21 10 16.0	+0.4
SDLR	Sedlovina	1.63	320	PN	Pn	21 10 16.0	+0.4
SMAR	Somma	1.65	319	*e*P	Pn	21 10 16.4	+0.5
SMAR	Somma	1.65	319	PN	Pn	21 10 16.4	+0.5
AVH	Avacha	1.68	318	*e*P	Pn	21 10 16.9	+0.7
AVH	Avacha	1.68	318	PN	Pn	21 10 16.9	+0.7
KRER	Koryakskii	1.70	319	*e*P	Pn	21 10 17.6	+1.0
KRER	Koryakskii	1.70	319	PN	Pn	21 10 17.6	+1.0
ASAK	Asacha	1.71	283	*e*P	Pn	21 10 17.4	+0.8
ASAK	Asacha	1.71	283	PN	Pn	21 10 17.4	+0.8
KRMR	Karymshinskiy	1.72	298	*e*P	Pn	21 10 17.0	+0.4
KRMR	Karymshinskiy	1.72	298	PN	Pn	21 10 17.0	+0.4
KOK	Koryaka	1.74	317	*e*P	Pn	21 10 17.7	+0.6
KOK	Koryaka	1.74	317	PN	Pn	21 10 17.7	+0.6
KRX	Arik	1.78	319	*e*P	Pn	21 10 18.4	+0.7
KRX	Arik	1.78	319	PN	Pn	21 10 18.4	+0.7
PETK	Petropavlovsk-	2.08	302	Pn	Pn	21 10 21.9	+0.2
	comp=E,12nm,0.3s,baz=105,slow=19,SNR=102						
PETK				Sn	Sb	21 10 51.6	+1.1
	comp=E,22nm,0.3s,baz=45,slow=28,SNR=13						
PETK				LR	LR	21 11 21.6	
	comp=E,248nm,18.4s,baz=90,slow=48						
APC	Apacha	2.29	294	*e*P	Pn	21 10 26.2	+1.6
APC	Apacha	2.29	294	PN	Pn	21 10 26.2	+1.6
GNL	Ganaly	2.32	317	*e*P	Pn	21 10 26.4	+1.4
GNL	Ganaly	2.32	317	PN	Pn	21 10 26.4	+1.4
MKZ	Mys Kozlova	2.61	14	*e*P	Pn	21 10 29.1	+0.3
MKZ				*e*S	Sn	21 10 57.7	-2.0
MKZ	Mys Kozlova	2.61	14	PN	Pn	21 10 29.1	+0.3
MKZ				S	Sn	21 10 57.7	-2.0
KZV	Kizimen	3.08	357	*e*P	Pn	21 10 36.2	+0.6
KZV				*e*S	Sn	21 11 11.3	-0.5
KZV	Kizimen	3.08	357	PN	Pn	21 10 36.2	+0.6
KZV				S	Sn	21 11 11.3	-0.5
SKR	Severo-Kuril's	3.13	246	*e*P	Pn	21 10 36.7	+0.6
SKR				*e*S	Sn	21 11 11.7	-1.0
SKR	Severo-Kuril's	3.13	246	PN	Pn	21 10 36.7	+0.6
SKR				S	Sn	21 11 11.7	-1.0
TUMD	Tumrok D	3.17	358	*e*P	Pn	21 10 37.4	+0.8
TUMD				*e*S	Sn	21 11 13.8	+0.1
TUMR	Tumrok	3.26	355	*e*P	Pn	21 10 39.0	+1.0
TUMR				*e*S	Sn	21 11 17.3	+1.2
TUMR	Tumrok	3.26	355	PN	Pn	21 10 37.4	-0.6
TUMR				S	Sn	21 11 13.8	-2.3
LGNR	Loginova	4.05	1	*e*P	Pn	21 10 51.5	+2.5
LGNR	Loginova	4.05	1	PN	Pn	21 10 51.5	+2.5
ESO	Esso	4.05	345	*e*P	Pn	21 10 50.8	+2.0
ESO	Esso	4.05	345	PN	Pn	21 10 50.8	+2.0
SRDR	Sredinnyy	4.32	353	*e*P	Pn	21 10 53.7	+1.3
SRDR	Sredinnyy	4.32	353	PN	Pn	21 10 53.7	+1.3
KBTR	Krutoberegovo	4.37	16	*e*P	Pn	21 10 54.8	+1.7
KBTR	Krutoberegovo	4.37	16	PN	Pn	21 10 54.8	+1.7
BKI	Bering	4.49	43	*e*P	Pn	21 10 55.6	+0.9
BKI				*e*S	Sn	21 11 42.8	-3.4
BKI	Bering	4.49	43	PN	Pn	21 10 55.6	+0.9
BDR	Baidarnaya	4.55	4	*e*P	Pn	21 10 58.2	+2.6
BDR	Baidarnaya	4.55	4	PN	Pn	21 10 58.2	+2.6
SRKR	Sorokina	4.63	4	*e*P	Pn	21 10 59.2	+2.4
SRKR	Sorokina	4.63	4	PN	Pn	21 10 59.2	+2.4
KLR	Kul'dur	18.47	273	P	P	21 14 00.9	-1.3
	comp=E,0.1nm,0.3s,baz=79,slow=13,SNR=2.8						
USRK	Ussuriysk Ar.	20.56	259	P	P	21 14 23.6	-1.3
	comp=E,2.0nm,0.8s,baz=73,slow=14,SNR=4.2						
MAT	Matsushiro	22.17	234	P	P	21 14 44.3	+1.9
MJAR	Matsushiro Arr	22.17	234	P	P	21 14 42.6	+0.2
	comp=E,1.8nm,0.7s,baz=18,slow=11,SNR=7.5						
H11N2	WAKE ISLAND Hy	32.62	169	T	T	21 50 54.2	
	baz=352,slow=76						
H11N3	WAKE ISLAND Hy	32.63	169	T	T	21 50 56.1	
	baz=352,slow=76						
H11N1	WAKE ISLAND Hy	32.63	169	T	T	21 50 51.4	
	baz=352,slow=76						
SONM	Songino Array	34.47	285	P	P	21 16 33.0	-1.1
	comp=E,0.3nm,0.4s,baz=55,slow=7.8,SNR=4.0						
MKAR	Makanchi Array	48.91	297	P	P	21 18 30.8	-1.3
	comp=E,0.7nm,0.5s,baz=55,slow=6.7,SNR=17						
ARCES	ARCESS Array B	54.39	342	P	P	21 19 12.3	-0.3
	comp=E,1.3nm,0.7s,baz=42,slow=7.3,SNR=6.5						
CMAR	Chiang Mai Arr	58.29	259	P	P	21 19 42.8	+1.7
	comp=E,1.1nm,0.7s,baz=27,slow=6.7,SNR=7.6						
FINES	FINESS Array B	61.22	337	P	P	21 20 01.4	+0.8
	comp=E,3.3nm,0.6s,baz=30,slow=8.2,SNR=37						
NB2	NORSAR Subarra	64.64	344	P	P	21 20 23.9	+0.4
	comp=Z,0.4nm,0.5s,baz=24,slow=6.9						
NOA	NORSAR Array B	64.64	344	P	P	21 20 24.2	+0.8
	comp=Z,0.4nm,0.5s,baz=22,slow=6.7,SNR=5.4						
AKASG	Malin Array Be	69.68	329	P	P	21 20 55.6	+0.2
	comp=Z,0.5nm,0.4s,baz=32,slow=6.1,SNR=4.4						
TXAR	Lajitas Array	70.75	67	P	P	21 21 03.5	+1.0
	comp=Z,0.1nm,0.4s,baz=330,slow=11,SNR=2.9						
GERES	GERESS Array B	75.61	338	P	P	21 21 30.7	-0.2
	comp=Z,0.2nm,0.3s,baz=19,slow=6.7,SNR=3.7						
ASAR	Alice Springs	78.93	205	P	P	21 21 49.7	+0.1
	comp=Z,0.3nm,0.6s,baz=16,slow=6.7,SNR=7.3						

IDC 29 21:16:55.2±2.2**,6°.01S×152°.38E,h0km,mb3.5**/3**,mb1 3.8**/4**,mb1mx3.5**/35**,mbtmp3.6**/4**,ML1.6**/1**,Error ellipse: s-maj=145.4km s-min=25.7km az=130.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.17	237	Pn	Pn	21 18 26.9	-0.8
	1.0nm,0.3s,baz=45,slow=7.1,SNR=2.3						
PMG				Sn	Sn	21 19 35.4	-3.6
	4.8nm,0.3s,baz=8.2,slow=7.6,SNR=7.3						
WRA	Warramunga Arr	22.34	230	P	P	21 21 54.3	-0.6
	1.0nm,0.8s,baz=52,slow=9.9,SNR=6.2						
ASAR	Alice Springs	24.98	223	P	P	21 22 20.7	-0.1
	0.7nm,0.7s,baz=59,slow=8.9,SNR=14						
ILAR	Eielson Array	83.43	22	P	P	21 29 23.5	-0.8
	0.3nm,0.5s,baz=245,slow=5.9,SNR=3.9						
TORD	Torodi Ar. Bea	150.25	286	PKPbc	PKiKP	21 36 50.8	+0.5
	0.3nm,0.7s,baz=64,slow=3.2,SNR=4.8						

IDC 29 21:19:06.4±1.9**,7°.02S×128°.04E,h0km,mb3.7**/2**,mb1 4.1**/4**,mb1mx3.6**/28**,mbtmp3.9**/4**,ML3.9**/2**,Error ellipse: s-maj=269.5km s-min=29.8km az=66.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.22	155	Pn	Pn	21 22 29.1	-0.2
	0.4nm,0.3s,baz=329,slow=13,SNR=14						
WRA				Sn	Sn	21 24 52.8	-15
	2.6nm,0.3s,baz=340,slow=22,SNR=14						
ASAR	Alice Springs	17.48	162	P	Pn	21 23 11.8	+0.1
	0.8nm,0.3s,baz=341,slow=11,SNR=90						
ASAR				S	Sn	21 26 11.9	-15
	0.5nm,0.3s,baz=319,slow=21,SNR=7.7						
MKAR	Makanchi Array	67.19	328	P	P	21 30 03.4	+1.0
	0.2nm,0.5s,baz=112,slow=8.6,SNR=4.2						
ZALV	Zalesovo Beam	70.76	335	P	P	21 30 23.4	-1.0
	0.8nm,0.5s,baz=134,slow=6.2,SNR=3.8						

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*JMA **29** 21:25:00.1±0.1, 36°.78N×141°.36E, h34km±1km, M3.3*
*IDC **29** 21:25:12.4±1.4, 35°.56N×136°.70E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.3/44, mbtmp3.5/5, Error ellipse: s-maj=28.6km s-min=22.4km az=159.0*
ISC 29 21:24:59.9±2.5**,36°.80N**±0°.06×**141°.4E**±0°.1**,h32km**±12km**,n16,**$\sigma 1^{s}.29$**/22,mb3.6**/5**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.55	303	P	Pn	21 25 11.1	-0.5
ONAJ				S	Sb	21 25 18.9	-0.2
JHO	Hitachi	0.67	254	P	Pn	21 25 12.6	-0.6
JHO				S	Sn	21 25 21.9	-0.7
JFK	Kawauchi	0.69	325	P	Pn	21 25 13.4	-0.1
JFK				*e*S	Sn	21 25 23.1	-0.1
JFFD	Fukushimafurud	0.71	294	S	Sn	21 25 22.9	-0.7
JHYU	Hitachinakayam	0.78	234	P	Pn	21 25 14.5	-0.2
JHYU				S	Sb	21 25 25.1	-0.2
JFT	Otama	1.09	311	P	Pb	21 25 20.2	-0.1
JFT				*e*S	Sb	21 25 34.5	+0.2
JMM	Marumori	1.16	337	P	Pn	21 25 20.5	+0.6
JMM				*e*S	Sb	21 25 36.0	-0.1
JFY	Yanaizu	1.46	295	S	Sb	21 25 44.8	0.0
JAG	Ashikaga	1.59	257	P	Pn	21 25 26.5	+0.7
MJAR	Matsushiro Arr	2.56	265	Pg	Pn	21 25 41.2	+2.1
	0.4nm,0.3s,baz=94,slow=5.2,SNR=14						
MJAR				Lg	Lg	21 26 15.5	
	0.6nm,0.3s,baz=103,slow=14,SNR=5.2						
MAT	Matsushiro	2.56	265	P	Pn	21 25 41.8	+2.7
MAT				S	Sb	21 26 16.0	-0.2
ZALV	Zalesovo Beam	42.05	313	P	P	21 32 50.5	+2.2
	0.7nm,0.6s,baz=94,slow=10,SNR=3.8						
MKAR	Makanchi Array	44.22	302	P	P	21 33 03.4	-2.5
	0.4nm,0.9s,baz=89,slow=11,SNR=2.3						
KURBB	Kurchatov Arra	46.12	308	P	P	21 33 19.9	-1.0
	0.4nm,0.5s,baz=82,slow=8.5,SNR=2.3						
BVAR	Borovoye Array	50.70	312	P	P	21 33 58.1	+1.9
	0.1nm,0.4s,baz=81,slow=8.9,SNR=2.7						
WRA	Warramunga Arr	56.83	188	P	P	21 34 47.3	+6.0
	0.8nm,0.6s,baz=356,slow=7.3,SNR=4.9						

MEX 29 21:26:17.5±0.8**,16°.15N×97°.21W,h31km**±13km**,MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.12	109	*i* P	Pn	21 26 35.6	-1.5
HUIG				*i* S	Sn	21 26 48.4	-3.1
CMIG	Matias Romero	2.42	67	*i* P	Pn	21 26 52.6	-2.3
CMIG				*i* S	Sn	21 27 21.0	-2.5

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*ISCJB **29** 21:33:33.0±0.2, 36°.69N±0°.02×71°.18E±0°.02, h228km±2km, mb4.6/111, Error ellipse: s-maj=3.2km s-min=2.5km az=148.2*
*BJI **29** 21:33:33.0±0.0, 36°.84N×71°.08E, h228km, mb4.8/52, mB4.5/32*
*MOS **29** 21:33:33.3±1.2, 36°.69N×71°.29E, h232km, mb4.6/48, Error ellipse: s-maj=5.9km s-min=4.1km az=99.2*
*IDC **29** 21:33:34.4±0.5, 36°.64N×71°.23E, h234km±4km, mb4.0/28, mb1 4.1/35, mb1mx4.1/41, mbtmp4.7/35, Error ellipse: s-maj=8.7km s-min=6.8km az=175.0*
*NEIC **29** 21:33:34.0±2.2, 36°.72N×71°.14E, h230km±5km, mb4.7/81, Error ellipse: s-maj=9.6km s-min=8.3km az=86.0*
*NNC **29** 21:33:34.8±2.2, 36°.93N×70°.96E, h214km±21km, mb3.8, mpv5.1, Error ellipse: s-maj=20.3km s-min=13.9km az=162.0*
ISC 29 21:33:34.0±0.3**,36°.70N**±0°.03×**71°.17E**±0°.03**,h228km**±3km**, h228km:pP-P,n321,**$\sigma 1^{s}.88$**/380,mb4.5**/111**,33C-11D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.39	344	*e*Pn	Pn	21 34 18.7	-0.1
GAR				*e*S	S	21 34 51.4	-2.5
GAR	Garm	2.39	344	*e*PN	Pn	21 34 18.7	-0.1
CHGR	Chuyangaron	2.52	321	*e*P	Pn	21 34 34.7	+15
KBL	Kabul	2.76	219	*e*Pn	Pn	21 34 22.6	-0.3
KBL				*e*S	S	21 34 59.5	-1.6
KBL	Kabul	2.76	219	*e*PN	Pn	21 34 22.6	-0.3
KBL				*e*S	S	21 34 59.5	-1.6
CEP	Cherat	2.93	168	P	Pn	21 34 25.0	+0.3
CEP				S	S	21 35 01.0	-3.3
CHCP	Chirah Chowk	3.48	150	P	Pn	21 34 31.6	+0.7
NIL	Nilore	3.49	150	*e*Pn	Pn	21 34 31.6	+0.7
NIL				*e*S	S	21 35 10.0	-5.5
NIL	Nilore	3.49	150	*e*PN	Pn	21 34 31.6	+0.7
THW	Thamme Wali	3.92	173	⇑P	Pn	21 34 36.1	0.0
KSH	Kashi	4.72	52	P	Pn	21 34 41.3	-4.4
KSH				S	S	21 35 25.5	-17
KSH				smax	smax		
	comp=N,1μm,0.5s						
KSH				smax	smax		
	comp=E,850nm,0.3s						
TAS	Tashkent	4.85	343	PN	Pn	21 34 47.5	+0.2
SARP	Sargodha	4.92	165	P	Pn	21 34 47.8	-0.5
AML	Almayashu	5.76	19	P	Pn	21 34 59.0	-0.1
	SNR=1410						
UCH	Uchtor	6.10	24	P	Pn	21 35 03.3	0.0
	SNR=986						
DHRM	DHARAMSHALA	6.13	135	*e*P	Pn	21 35 03.6	-0.1
DHRM				*e*S	S	21 36 11.4	-3.6
KZA	Kyzart	6.23	29	P	Pn	21 35 04.6	-0.4
	SNR=131						
EKS2	Erkin-Say	6.29	18	P	Pn	21 35 05.5	+0.1
	SNR=270						
KK31	Karatay Array	6.42	356	*e*Pn	Pn	21 35 06.8	-0.2
KK31	Karatay Array	6.42	356	P	Pn	21 35 06.3	-0.6
	18nm,0.3s,baz=180,slow=18,SNR=355						
KK31				⇑S	S	21 36 16.2	-4.8
	389nm,0.8s,baz=186,slow=20,SNR=14						
KK31	Karatay Array	6.42	356	PN	Pn	21 35 06.4	-0.6
KKAR	Karatay Array	6.42	356	*e*Pn	Pn	21 35 06.8	-0.2
KKAR	Karatay Array	6.42	356	*e*PN	Pn	21 35 06.8	-0.2
AAK	Ala-Archa	6.46	22	P	Pn	21 35 08.0	+0.4
	60nm,0.3s,baz=184,slow=8.2,SNR=184						
AAK				S	S	21 36 19.7	-2.6
	32nm,0.3s,baz=339,slow=12,SNR=12						
AAK	Ala-Archa	6.46	22	*e*Pn	Pn	21 35 08.1	+0.4
AAK				*e*S	S	21 36 17.6	-4.6
AAK	Ala-Archa	6.46	22	⇑P	Pn	21 35 07.8	+0.1
	137nm,0.6s						
AAK				⇑S	S	21 36 20.1	-2.2
	518nm,0.8s						
AAK	Ala-Archa	6.46	22	*i* Pn	Pn	21 35 08.0	+0.3
	SNR=9.3						
AAK	Ala-Archa	6.46	22	P	Pn	21 35 08.1	+0.4
	SNR=125						
KBK	Karagaybulak	6.62	25	P	Pn	21 35 10.4	+0.6
	SNR=46						
BHK	Bhakra	6.83	139	*e*P	Pn	21 35 12.2	-0.2
BHK				*e*x	x	21 36 25.0	
CHMS	Chumysh	6.87	23	P	Pn	21 35 12.6	-0.1
	SNR=74						
USP	Ospenovka	7.04	20	P	Pn	21 35 14.3	-0.6
	SNR=32						
TKM2	Tokmak 2	7.08	27	⇑P	Pn	21 35 15.4	-0.3
	244nm,0.6s						
TKM2				⇑S	S	21 36 32.2	-4.6
	232nm,0.9s						
TKM2	Tokmak 2	7.08	27	PN	Pn	21 35 15.4	-0.3
TKM2	Tokmak 2	7.08	27	P	Pn	21 35 15.8	+0.1
	SNR=452						
SMLA	Simla	7.46	136	*e*P	Pn	21 35 19.8	-0.6
SMLA				*e*S	S	21 36 40.8	-4.7
SMLA				IAML		21 36 43.8	
SMLA				IAML		21 36 44.5	
	comp=E,556nm,0.3s						
AAA	Alma-Ata	7.86	32	*e*PN	Pn	21 35 26.3	+0.9
AAA				*e*S	S	21 36 53.2	-1.4
AAA				pmax	pmax		
	comp=Z,400nm,0.7s						
AAA				smax	smax		
	comp=E,400nm,1.8s						
AAA				MLR	MLR		
	comp=Z,300nm,3.0s						
DDI	Dehra Dun	8.57	136	*e*P	Pn	21 35 33.9	-0.8
DDI				*e*S	S	21 37 05.3	-6.3
DDI				IAML		21 37 09.8	
	comp=N,493nm,0.7s						
DDI				IAML		21 37 10.3	
	comp=E,495nm,0.3s						
PDGK	Podgornoye	9.19	41	⇓P	Pn	21 35 40.9	-1.7
	comp=E,59nm,0.7s						
PDGK	Podgornoye	9.19	41	P	Pn	21 35 40.9	-1.7
JOSI	Joshimath	9.29	129	*e*P	Pn	21 35 43.5	-0.6
JOSI				*e*S	S	21 37 22.1	-6.8
JOSI				IAML		21 37 26.0	
	comp=E,597nm,0.7s						
JOSI				IAML		21 37 26.9	
	comp=N,747nm,0.4s						
NDI	New Delhi	9.48	146	*e*P	Pn	21 35 48.5	+2.3
ASHT	Ashkhabad	10.26	281	P	Pn	21 35 56.6	+0.5
GEYT	Alibeck	10.47	281	P	Pn	21 35 52.7	-6.1
	comp=N,2.5nm,0.3s,baz=245,slow=26,SNR=5.6						
GEYT				S	S	21 37 51.8	-4.5
	comp=N,7.7nm,0.3s,baz=130,slow=8.3,SNR=3.3						
GYA0B	ALIBECK ARRAY	10.47	281	*e*Pn	Pn	21 35 56.8	-2.1
GYA0B	ALIBECK ARRAY	10.47	281	⇓P	Pn	21 35 56.0	-2.9
OTUK	Ortayu	11.57	4	P	Pn	21 36 13.1	+0.5
MAKZ	Makanchi	12.91	35	*e*Pn	Pn	21 36 28.7	-0.7
MAKZ	Makanchi	12.91	35	⇑P	Pn	21 36 28.3	-1.1
	comp=N,29nm,0.6s						
MAKZ				⇑S	S	21 38 54.5	+2.3
	comp=N,32nm,0.9s						
MAKZ	Makanchi	12.91	35	P	Pn	21 36 28.3	-1.1
MAKZ				S	S	21 38 54.5	+2.3
MK31	Makanchi Array	13.05	36	*e*Pn	Pn	21 36 30.4	-0.7
MK31	Makanchi Array	13.05	36	P	Pn	21 36 30.1	-1.0
	comp=N,21nm,0.9s,baz=218,slow=11,SNR=133						
MK31				⇑S	S	21 38 59.0	+3.6
	comp=N,8.1nm,0.7s,baz=226,slow=14,SNR=4.8						
MK31	Makanchi Array	13.05	36	P	Pn	21 36 30.1	-1.0
MK31				S	S	21 38 59.3	+3.9
MK32	Makanchi Array	13.05	36	*e*P	Pn	21 36 30.2	-0.9
MKAR	Makanchi Array	13.05	36	P	Pn	21 36 30.2	-0.9
	comp=N,1.1nm,0.3s,baz=224,slow=14,SNR=53						
DANN	Dangsing	13.48	125	*e*P	Pn	21 36 35.8	-1.1
	comp=N,142nm,0.4s						
KOLN	Koldanda	13.77	127	*e*P	Pn	21 36 39.0	-1.4
	comp=N,142nm,0.6s						
GKN	Gorkha	14.30	124	*e*P	Pn	21 36 46.2	-0.5
	comp=N,70nm,0.4s						
BHPL	Bhopal	14.46	156	*e*P	P	21 36 50.2	+0.9
WMQ	Urumqi	14.47	55	*e*P	Pn	21 36 48.2	-0.4
WMQ	Urumqi	14.47	55	*e*P	P	21 36 49.3	0.0
WMQ				pmax	pmax		
	comp=N,65nm,0.9s						
WMQ				pmax	pmax		
	comp=N,33nm,3.7s						
WMQ				LR	LR		
	comp=N,190nm,4.9s						
WMQ				LR	LR		
	comp=N,130nm,5.3s						
WMQ				LR	LR		
	comp=N,45nm,5.3s						
WMQ	Urumqi	14.47	55	*e*P	Pn	21 36 48.2	-0.4
DMN	Daman	14.87	124	*e*P	Pn	21 36 53.3	-0.5
	comp=N,38nm,0.5s						
KKN	Kakani	14.87	123	*e*P	Pn	21 36 53.1	-0.6
	comp=N,113nm,0.6s						
KURBB	Kurchatov Arra	14.89	19	P	Pn	21 36 52.5	-1.1
	comp=N,0.8nm,0.3s,baz=208,slow=12,SNR=41						
KURBB				S	S	21 39 34.1	-3.9
	baz=212,slow=20,SNR=4.5						
KURBB	Kurchatov Arra	14.89	19	⇑P	Pn	21 36 52.2	-1.3
	comp=N,18nm,0.6s						
AB31	Akbulak array	14.98	330	P	Pn	21 36 53.4	-1.2
	comp=N,12nm,0.6s,baz=137,slow=14,SNR=357						
AB31				⇓S	S	21 39 33.9	-6.1
	comp=N,26nm,0.7s,baz=153,slow=22,SNR=6.8						
AB31	Akbulak array	14.98	330	P	Pn	21 36 53.4	-1.2
AB31				S	S	21 39 33.9	-6.1
ABKAR	Akbulak array	14.98	330	*e*P	Pn	21 36 53.6	-1.0
ABKAR				*e*S	S	21 39 35.9	-4.1
KURK	Kurchatov	15.00	19	*e*P	Pn	21 36 54.4	-0.4
KURK	Kurchatov	15.00	19	⇑P	Pn	21 36 53.0	-1.9
	comp=N,15nm,0.9s						
KURK	Kurchatov	15.00	19	P	Pn	21 36 52.5	-2.3
KURK				S	S	21 39 34.1	-6.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PKIN	Phulchoki	15.08	123	*e*P	P	21 36 55.6	-0.8
	comp=Z,33nm,0.4s						
PKI	Pulchoki	15.10	123	*e*P	P	21 36 55.8	-0.8
	comp=Z,42nm,0.4s						
JBP	Jabalpur	15.49	148	⇑*e*P	P	21 37 00.8	+0.2
JBP				*e*x	x	21 39 45.6	
JIRN	Jiri	15.57	121	*e*P	P	21 37 01.9	0.0
	comp=Z,112nm,0.4s						
BVA0	Borovoye Array	16.33	358	P	Pn	21 37 10.3	-0.5
	comp=Z,0.3nm,1.1s,baz=179,slow=14,SNR=141						
BVAR	Borovoye Array	16.33	358	P	Pn	21 37 10.2	-0.6
	comp=Z,3.9nm,0.3s,baz=166,slow=9.8,SNR=69						
BVAR				S	S	21 40 07.4	-1.5
	baz=167,slow=20,SNR=2.7						
BRVK	Borovoye	16.37	358	⇑P	P	21 37 10.0	0.0
	comp=Z,20nm,1.3s						
BRVK	Borovoye	16.37	358	*ce*P	Pn	21 37 11.3	+0.1
BRVK				pmax	pmax		
	comp=Z,18nm,1.0s						
SHME	Shamm	16.64	235	Pn	P	21 37 13.3	0.0
AKTO	Aktyubinsk	16.68	330	P	Pn	21 37 14.4	-0.5
	comp=Z,9.9nm,0.3s,baz=136,slow=10,SNR=114						
AKTO	Aktyubinsk	16.68	330	⇓P	P	21 37 14.1	+0.7
	comp=Z,74nm,0.7s						
AKTO				⇑S	S	21 40 11.5	-4.3
	comp=Z,21nm,0.8s						
AKTO	Aktyubinsk	16.68	330	P	P	21 37 14.1	+0.7
AKTO				S	S	21 40 11.5	-4.3
NGP	Nagpur	16.95	154	*e*P	P	21 37 17.4	+0.8
NGP				IAmb	IAmb	21 37 17.6	
	comp=Z,12nm,0.5s						
NGP				*e*x	x	21 40 18.6	
MDH	Madha	17.05	232	Pn	P	21 37 18.3	+0.6
MSFE	Esma-Masafi	17.10	233	*i* Pn	Pn	21 37 20.8	+0.7
	SNR=17						
WSAR	Wadi Sarin	17.24	222	P	P	21 37 20.4	+0.5
	comp=Z,0.9nm,0.3s,baz=60,slow=5.5,SNR=15						
UOSS	Minazif	17.37	232	*i* Pn	P	21 37 21.3	+0.1
	SNR=14						
HATD	Hatta, Dubai	17.50	232	*i* Pn	Pn	21 37 24.9	+0.1
	SNR=15						
DGZ	Jazzator, Alta	17.54	37	*c i*P	Pn	21 37 24.3	-0.9
NAZ	Nazwa, Dubai	17.68	233	Pn	P	21 37 25.4	+0.8
BOK	Bokaro	18.05	131	*e*P	P	21 37 29.6	+0.9
BOK				IAmb	IAmb	21 37 30.8	
	comp=Z,38nm,0.8s						
LSA	Lhasa	18.10	107	*e*P	Pn	21 37 31.0	-1.3
	comp=Z,24nm,0.8s						
LSA	Lhasa	18.10	107	P	Pn	21 37 32.8	+0.5
LSA				pmax	pmax		
	comp=Z,45nm,0.8s						
LSA	Lhasa	18.10	107	*e*P	Pn	21 37 31.0	-1.3
LSA				pmax	pmax		
	comp=Z,24nm,0.8s						
ASUD	Al Ashush, Dub	18.15	233	P	P	21 37 30.4	+0.7
ALNE	Al Ain	18.29	231	*i* P	P	21 37 31.4	+0.2
	SNR=8.2						
AKT	Akhty	18.79	292	⇑*i*P	P	21 37 38.0	+1.4
AKT				pmax	pmax		
	comp=Z,48nm,0.5s						
GNBR	Gunib	19.48	294	*i* P	P	21 37 46.0	+2.1
ZAA0	Zalesovo Array	19.68	24	*e*P	P	21 37 45.9	+0.1
	comp=Z,22nm,0.6s						
ZALV	Zalesovo Beam	19.68	24	P	P	21 37 45.9	+0.2
	comp=Z,13nm,0.3s,baz=214,slow=12,SNR=116						
ZALV				S	S	21 41 11.6	-3.3
	comp=Z,0.9nm,0.3s,baz=213,slow=19,SNR=4.1						
TAWA	Tawang	19.70	112	*e*P	P	21 37 48.4	+1.7
DDFL	Dedoflistskaro	19.99	291	*i* P	P	21 37 49.4	0.0
BTLR	Botlikh	20.07	295	*i* P	P	21 37 51.9	+1.7
HYB	Hyderabad	20.29	159	*i* P	P	21 37 54.0	+1.3
HYB				*e*S	S	21 41 27.0	-0.2
HYB	Hyderabad	20.29	159	*e*P	P	21 37 54.1	+1.5
SHL	Shillong	20.87	116	P	P	21 38 00.0	+1.0
SHL				pmax	pmax		
	comp=Z,141nm,1.0s						
SHL	Shillong	20.87	116	*e*P	P	21 38 00.0	+1.0
TEZP	TEZPUR	20.93	113	*e*P	P	21 37 59.1	-0.3
GNI	Garni	20.96	288	P	P	21 38 00.4	+0.6
	comp=Z,14nm,0.6s,baz=102,slow=1.1,SNR=13						
GNI	Garni	20.96	288	P	P	21 38 02.6	+2.8
GNI	Garni	20.96	288	*ce*P	Pn	21 38 03.1	-3.1
GNI				pmax	pmax		
	comp=Z,160nm,0.9s						
BTNK	Botanikuri	21.00	292	*i* P	P	21 38 04.3	+4.2
BTNK				IAML_P			
	comp=Z,552nm,0.4s						
TBLG	Delisi	21.05	292	*i* P	P	21 38 03.6	+3.1
TBLG				IAML_P			
	comp=Z,42nm,0.3s						
ZIRO	ZIRO	21.24	109	*e*P	P	21 38 02.0	-0.7
KZRT	Kazreti	21.28	291	*i* P	P	21 38 07.5	+4.6
SVE	Sverdlovsk	21.34	344	⇑*e*P	P	21 38 04.3	+1.1
SVE				pmax	pmax		
	comp=Z,34nm,1.4s						
ARU	Arti	21.49	341	P	P	21 38 05.6	+0.9
	comp=Z,2.6nm,0.4s,baz=161,slow=7.2,SNR=19						
ARU	Arti	21.49	341	*c i*P	P	21 38 05.6	+0.9
ARU				S	S	21 41 49.7	+2.5
ARU				pmax	pmax		
	comp=Z,36nm,1.4s						
ZEI	Tsey	21.78	295	*e*P	P	21 38 08.2	+0.3
ZEI				pmax	pmax		
	comp=Z,15nm,0.5s						
EAK	Akyaka	21.84	289	*i* P	P	21 38 12.5	+4.0
EAK				IAML_P			
	comp=Z,314nm,0.5s						
AKH	Akhalkalaki	21.96	291	*e*P	P	21 38 11.3	+1.7
	comp=Z,20nm,0.8s						

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AKH   Akhalkalaki      21.96 291  eP      P       21 38 11.3 +1.7
AKH                                pmax   pmax
      comp=Z,20nm,0.8s
NCK   Nalchik          22.10 296 i P      P       21 38 12.9 +2.3
NCK                                pmax   pmax
      comp=Z,4.0nm,0.2s
MOKO  MOKOCHONG        22.38 111  eP      P       21 38 15.0 +1.4
KOHI  KOHIMA           22.41 113  eP      P       21 38 15.2 +1.3
AZL   Aizawl           22.58 119  eP      P       21 38 16.7 +1.4
KBZ   Khabaz           22.63 297   P      P       21 38 16.4 +1.0
      comp=Z,6.0nm,0.6s,baz=151,slow=6.7,SNR=12
GTA   Gaotai           22.68  74 ⇑P      P       21 38 18.0 +1.9
GTA                                pP     pP      21 39 02.0 +4.9
GTA                                sP     sP      21 39 28.3 +1.6
GTA                                S      S       21 42 08.5 +1.6
GTA                                pmax   pmax
      comp=Z,19nm,1.0s
GTA                                pmax   pmax
      comp=Z,98nm,5.4s
GOF   Gofitskoye       22.76 300⇑eP      P       21 38 18.7 +2.1
GOF                                pmax   pmax
      comp=Z,164nm,0.9s
SHA1  Shidzhatmaz      22.81 297 i P      P       21 38 18.9 +1.6
KVAR  Kislovodsk Arr   22.81 297   P      P       21 38 17.7 +0.5
      comp=Z,3.2nm,0.6s,baz=90,slow=20,SNR=2.4
KIV   Kislovodsk       22.82 297   P      P       21 38 19.9 +2.6
KIV   Kislovodsk       22.82 297  eP      P       21 38 21.5 +4.2
KIV                               eS      S       21 42 15.1 +6.1
KIV                                pmax   pmax
      comp=Z,62nm,0.9s
KIV                                MLR    MLR
      comp=Z,52nm,14.0s
DAGI  Agillar          23.13 290 i P      P       21 38 23.8 +3.6
DAGI                               IAML_P
      comp=Z,157nm,0.7s
RAYN  Ar Rayn          25.70 246   P      P       21 38 44.0 +0.5
RAYN                               pmax   pmax
      comp=Z,25nm,0.6s
MOY   Mondy            25.87  45  eP      P       21 38 46.5 +1.7
MOY                                pmax   pmax
      comp=Z,14nm,2.0s
KIRV  Kirov            26.12 334   P      P       21 38 47.5 +0.7
      comp=Z,10nm,0.5s,baz=154,slow=13,SNR=7.2
LZH   Lanzhou          26.24  81  eP      P       21 38 51.3 +2.9
LZH                                sP     sP      21 39 58.5 -3.3
LZH                               eS      S       21 43 11.5 +7.9
LZH                                sS     sS      21 44 18.8 -8.3
LZH                                pmax   pmax
      comp=Z,13nm,1.0s
LZH                                pmax   pmax
      comp=Z,69nm,4.1s
ZAK   Zakamensk        26.76  49  eP      P       21 38 54.3 +1.6
ZAK                               e               21 39 41.9
ZAK                                pmax   pmax
      comp=Z,7.0nm,1.0s
VSR   Storozhevoye     26.97 313 i P      P       21 38 57.6 +3.2
VSR                                pmax   pmax
      comp=Z,7.0nm,0.6s
CD2   Chengdu          27.60  92  eP      P       21 39 01.5 +1.1
SONA0 Songino Array    28.11  56  eP      P       21 39 06.1 +1.3
SONA0                             epP     pP      21 39 53.4 +1.9
SONA0                             ePcP    PcP     21 42 12.6 -0.2
SONM  Songino Array    28.11  56   P      P       21 39 06.1 +1.3
      comp=Z,11nm,0.7s,baz=260,slow=9.9,SNR=53
SONM                               pP     pP      21 39 53.4 +1.9
      comp=Z,9.0nm,1.1s,baz=253,slow=9.4,SNR=5.0
SONM                               PcP    PcP     21 42 12.6 -0.2
      comp=Z,0.6nm,0.7s,baz=234,slow=4.8,SNR=2.3
KMI   Kunming          29.31 104   P      P       21 39 17.3 +1.5
KMI                                pmax   pmax
      comp=Z,12nm,0.5s
KMI                                pmax   pmax
      comp=Z,89nm,4.4s
MMAI  Mount Meron Ar   29.47 274   P      P       21 39 18.5 +1.5
      comp=Z,1.6nm,0.6s,baz=56,slow=10,SNR=6.4
MMAI                               PcP    PcP     21 42 16.7 +0.3
      comp=Z,1.4nm,0.7s,baz=59,slow=5.6,SNR=3.3
BR101 Keskin Array S   29.50 287  epP     pP      21 40 04.8 +1.8
BRTR  Keskin Array B   29.50 287   P      P       21 39 18.1 +0.9
      comp=Z,1.9nm,0.7s,baz=111,slow=9.4,SNR=14
BRTR                               pP     pP      21 40 04.8 +1.8
      comp=Z,2.3nm,0.8s,baz=95,slow=8.7,SNR=3.9
PRGR  Permogore        29.65 335  eP      P       21 39 18.2 +0.2
PRGR                               pmax   pmax
      comp=Z,16nm,0.9s
OBN   Obninsk          29.88 319 i P      P       21 39 20.3 +0.2
OBN                                pmax   pmax
      comp=Z,5.0nm,0.9s
CHTO  Chiang Mai       30.19 119   P      P       21 39 24.1 +0.8
CHTO                               pmax   pmax
      comp=Z,7.0nm,0.6s
CMMT  Chiang Mai       30.20 119   P      P       21 39 25.3 +1.9
      comp=Z,5.7nm,0.7s
BTO   Baotou           30.42  71  eP      P       21 39 25.5 +0.3
CM31  Chiang Mai Arr   30.43 119  eP      P       21 39 25.9 +0.5
      comp=Z,14nm,0.8s
CMAR  Chiang Mai Arr   30.43 119   P      P       21 39 25.7 +0.3
      comp=Z,11nm,0.8s,baz=302,slow=8.3,SNR=49
CMAR                               pP     pP      21 40 15.1 +2.7
      comp=Z,6.3nm,1.0s,baz=308,slow=9.5,SNR=4.4
PAYA  Payao            30.49 117   P      P       21 39 27.2 +1.2
      comp=Z,21µm,0.6s
XAN   Xi'an            30.77  84  eP      P       21 39 28.8 +0.5
      comp=Z,18nm,0.8s
XAN   Xi'an            30.77  84   P      P       21 39 29.0 +0.7
XAN                                pmax   pmax
      comp=Z,22nm,0.6s
XAN                                pmax   pmax
      comp=Z,48nm,4.1s
XAN   Xi'an            30.77  84  eP      P       21 39 28.8 +0.5
XAN                                pmax   pmax
      comp=Z,18nm,0.8s
KLMR  Klimovskoe       31.38 330  eP      P       21 39 32.9 -0.3
KLMR                               pmax   pmax
      comp=Z,13nm,0.9s
HHC   Hu-ho-hao-te     31.57  70   P      P       21 39 37.8 +2.5
HHC                                pmax   pmax
      comp=Z,9.0nm,0.8s
GYA   Guiyang          31.76  99⇑iP      P       21 39 38.0 +0.9
GYA                                pP     pP      21 40 20.8 -3.3
GYA                                PP     sP      21 40 50.0 -0.9
GYA                                pmax   pmax
      comp=Z,20nm,0.8s
UMPA  Umpang Tak       31.92 122   P      P       21 39 41.8 +3.3
      comp=Z,53µm,0.8s
UTTA  Uttaradit        32.04 118   P      P       21 39 40.5 +1.0
      comp=Z,60µm,0.7s,comp=Z,472µm
ENH   Enshi            32.44  90  eP      P       21 39 43.5 +0.7
      comp=Z,20nm,0.7s
UTHA  Uthaitani        32.77 122   P      P       21 39 47.8 +1.9
AKASG Malin Array Be   32.93 309   P      P       21 39 47.2 +0.4
      comp=Z,2.6nm,0.4s,baz=80,slow=7.2,SNR=12
AKASG                              pP     pP      21 40 33.0 -0.1
      comp=Z,4.2nm,0.7s,baz=84,slow=7.2,SNR=2.5
AKASG                              sP     sP      21 41 00.8 +1.2
      comp=Z,6.0nm,0.8s,baz=85,slow=7.2,SNR=2.6
PBKT  Sadao Pong       33.12 119   P      P       21 39 50.4 +1.5
      comp=Z,17nm,0.7s
NONG  Nongkai          33.70 115   P      P       21 39 54.4 +0.6
      comp=Z,0.7nm,0.8s
VRI   Vrincioaia       34.25 300⇓iP      P       21 40 01.2 +2.9
VRI   Vrincioaia       34.25 300 ⇓P      P       21 40 01.2 +2.9
CHAI  Chaiyaphum       34.29 119   P      P       21 40 00.4 +1.5
      comp=Z,33µm,0.8s,comp=Z,270µm
PLOR  Plostina         34.30 300⇓iP      P       21 40 01.2 +2.4
PLOR  Plostina         34.30 300 ⇓P      P       21 40 01.2 +2.4
MLR   Muntele Rosu     34.80 299  eP      P       21 40 06.0 +2.8
      comp=Z,8.6nm,0.8s
MLR   Muntele Rosu     34.80 299⇑iP      P       21 40 06.2 +3.0
MLR   Muntele Rosu     34.80 299  eP      P       21 40 06.0 +2.8
MLR                                pmax   pmax
      comp=Z,9.0nm,0.8s
PHET  Kaeng Krachan    34.81 126   P      P       21 40 05.4 +2.0
      comp=Z,71µm,0.8s,comp=Z,742µm
BJI   Beijing          35.16  71  eP      P       21 40 08.0 +1.9
BJI                                pmax   pmax
      comp=Z,10.0nm,0.7s
PANO  Nakornpanom      35.36 114   P      P       21 40 09.0 +1.0
      comp=Z,0.5nm,1.0s
VOIR                   35.44 299⇓iP      P       21 40 11.1 +2.6
VOIR                   35.44 299 ⇓P      P       21 40 11.1 +2.6
VSU   Vasula           36.11 321ceP      P       21 40 15.0 +1.1
VSU                                pmax   pmax
      comp=Z,22nm,0.7s
LVV   L'vov            36.15 306  eP      P       21 40 16.0 +1.6
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LVV                               e               21 41 02.5
LVV                               e               21 41 43.3
LVV                               e               21 45 39.0
WHN   Wuhan            36.24  87 ⇓P      P       21 40 17.0 +1.6
TIA   Tai'an           36.69  77   P      P       21 40 20.8 +1.6
TIA                                pmax   pmax
      comp=Z,12nm,0.8s
VTS   Vitosha          36.98 294  eP      P       21 40 20.9 -0.8
      comp=Z,1.7nm,0.7s
VTS   Vitosha          36.98 294  eP      P       21 40 20.9 -0.8
VTS                                pmax   pmax
      comp=Z,2.0nm,0.7s
KWP   Kalwaria Pacla   37.00 306  eP      P       21 40 24.4 +2.8
KWP   Kalwaria Pacla   37.00 306  eP      P       21 40 24.4 +2.8
DRGR                   37.01 301   P      P       21 40 24.9 +3.1
DRGR                               pmax   pmax
      comp=Z,9.0nm,1.2s
UZH   Uzhgorod         37.26 304  eP      P       21 40 26.7 +2.9
UZH                               e               21 41 11.7
KOLS  Kolonicke sedl   37.27 305  epP     pP      21 41 10.2 -0.8
KOLS                              ePP     PP      21 41 54.6 +0.7
LVZ   Lovozero         37.33 338  eP      P       21 40 24.4 +0.4
      comp=Z,16nm,0.8s
LVZ   Lovozero         37.33 338  eP      P       21 40 24.5 +0.4
LVZ                                pmax   pmax
      comp=Z,16nm,0.8s
FIA0  FINESS Array S   37.40 326  eP      P       21 40 25.3 +0.6
FIA0                              epP     pP      21 41 12.8 +0.8
FIA0  FINESS Array S   37.40 326  eP      P       21 40 25.3 +0.6
FIA0                              e*PP    pP      21 41 12.8 +0.8
FIA1  FINESS Array S   37.40 326  eP      P       21 40 24.4 -0.3
      comp=Z,10.0nm,0.8s
FINES FINESS Array B   37.40 326   P      P       21 40 25.3 +0.6
      comp=Z,7.3nm,0.6s,baz=114,slow=8.8,SNR=51
FINES                              pP     pP      21 41 12.8 +0.8
      comp=Z,3.7nm,0.7s,baz=108,slow=11,SNR=3.5
SUF   Sumiainen        37.83 328   P      P       21 40 29.5 +1.2
SUF                                pmax   pmax
      comp=Z,22nm,0.9s
NIE   Niedzica         38.57 306  eP      P       21 40 36.3 +1.6
NIE                               epP     pP      21 41 24.6 +2.5
NIE   Niedzica         38.57 306  eP      P       21 40 36.3 +1.6
NIE                               e*PP    pP      21 41 24.6 +2.5
OJC   Ojcow            38.89 307  eP      P       21 40 39.9 +2.5
OJC                               epP     pP      21 41 25.6 +0.9
OJC   Ojcow            38.89 307  eP      P       21 40 39.9 +2.5
OJC                               e*PP    pP      21 41 25.7 +0.9
NJ2   Nanjing          39.31  82  eP      P       21 40 39.8 -1.2
NJ2                                pmax   pmax
      comp=Z,18nm,0.6s
VYHS  Vyhne            39.56 304  eP      P       21 40 40.7 -2.2
VYHS                              e               21 41 30.8
VYHS                              e               21 42 16.1
VYHS  Vyhne            39.56 304  eP      P       21 40 40.7 -2.2
VYHS                              epP     pP      21 41 30.8 +0.3
VYHS                              ePP     PP      21 42 16.1 -2.6
MORC  Moravsky Berou   40.36 306  eP      pP      21 41 38.8 +1.6
ARCES ARCESS Array B   41.01 337   P      P       21 40 55.5 +0.9
      comp=Z,16nm,0.7s,baz=112,slow=8.4,SNR=94
ARCES                              pP     pP      21 41 43.8 +0.8
      comp=Z,4.0nm,0.8s,baz=108,slow=7.8,SNR=2.8
ARE0  ARCESS Array S   41.01 337  eP      P       21 40 54.0 -0.6
      comp=Z,0.9nm,0.7s
ARE0  ARCESS Array S   41.01 337  eP      P       21 40 55.6 +1.1
DPC   Dobruska-Polom   41.12 307  epP     pP      21 41 45.8 +2.2
DPC                               ePP     PnPn    21 42 44.2 +1.8
KRUC  Moravsky         41.14 305  eP      pP      21 41 45.1 +1.4
KTK1  Kautokeino       41.49 336  eP      P       21 40 59.3 +1.0
HAMF  Hammerfest       42.09 338  eP      P       21 41 04.5 +1.4
SOKA  Soboth           42.28 302 i P      P       21 41 04.4 -0.8
      comp=Z,2.4nm,0.5s
PSI   Prapat           42.33 136  eP      P       21 41 05.2 -0.8
      comp=Z,12nm,0.7s
PSI   Prapat           42.33 136  eP      P       21 41 05.2 -0.8
PSI                                pmax   pmax
      comp=Z,13nm,0.7s
BRG   Berggiesshubel   42.61 308  eP      P       21 41 10.3 +2.7
      comp=Z,4.1nm,1.2s
BRG                               epP     pP      21 41 57.6 +1.8
      comp=Z,4.2nm,0.8s
BRG   Berggiesshubel   42.61 308  eP      P       21 41 10.3 +2.7
BRG                               e*PP    pP      21 41 57.6 +1.8
BRG                                pmax   pmax
      comp=Z,4.0nm,1.2s
MOA   Molln            42.66 304  eP      P       21 41 07.6 -0.6
      comp=Z,0.7nm,0.5s
GSI   Gunungsitoli     42.85 139  eP      P       21 41 10.8 +0.8
      comp=Z,114nm,0.6s
GEC2  GERESS Array S   42.93 305  eP      P       21 41 09.8 -0.6
      comp=Z,1.4nm,0.8s
GEC2  GERESS Array S   42.93 305  eP      P       21 41 09.8 -0.6
GEC2                               pmax   pmax
      comp=Z,1.0nm,0.8s
GERES GERESS Array B   42.93 305   P      P       21 41 10.8 +0.4
      comp=Z,0.2nm,0.4s,baz=95,slow=6.3,SNR=3.0
KHC   Kasperske Hory   42.98 306  epP     pP      21 42 00.2 +1.2
KHC                               ex      x       21 42 15.0
TRO   Tromso           43.14 336  eP      P       21 41 12.4 +0.8
MOR8  Moi Rana         43.71 331  eP      P       21 41 16.2  0.0
YAK   Yakutsk          43.72  36  eP      P       21 41 16.1 -0.2
YAK                               e               21 43 02.2
YAK                               e               21 43 04.5
YAK                               eS      S       21 47 28.6  0.0
YAK                               eSS     ScS     21 50 46.1 -3.9
YAK                                pmax   pmax
      comp=Z,39nm,0.8s
YAK                                pmax   pmax
      comp=E,4.0nm,0.8s
YAK                                pmax   pmax
      comp=N,5.0nm,0.9s
YAK                                pmax   pmax
      comp=Z,70nm,2.5s
YAK                                pmax   pmax
      comp=N,62nm,3.1s
YAK                                pmax   pmax
      comp=E,30nm,2.7s
YAK                                smax   smax
      comp=N,26nm,1.3s
YAK                                smax   smax
      comp=E,25nm,1.1s
STEI  Steigen          43.86 333  eP      P       21 41 17.8 +0.5
KONS  Konsvik          44.30 331  eP      P       21 41 21.8 +0.9
NB2   NORSAR Subarra   44.30 323   P      P       21 41 21.2 +0.2
      comp=Z,6.7nm,0.6s,baz=96,slow=7.9
NB2   NORSAR Subarra   44.30 323   P      P       21 41 21.2 +0.2
      baz=96,slow=7.9
NB200 NORSAR Array S   44.30 323  epP     pP      21 42 10.4 +0.3
NOA   NORSAR Array B   44.30 323   P      P       21 41 21.0  0.0
      comp=Z,7.2nm,0.6s,baz=96,slow=7.7,SNR=63
NOA                                pP     pP      21 42 10.4 +0.3
      comp=Z,5.7nm,0.8s,baz=96,slow=8.0,SNR=5.4
SSLB  Suanglung        44.44  92  eP      P       21 41 24.6 +2.0
      comp=Z,15nm,0.7s
WTTA  Wattenberg       44.50 303 i P      P       21 41 22.7 -0.3
      comp=Z,0.8nm,0.3s
NC204 NORSAR Array S   44.54 323  eP      P       21 41 21.9 -1.0
      comp=Z,46nm,1.4s
KSRS  Korea Array      44.69  71   P      P       21 41 23.5 -0.8
      comp=Z,2.4nm,0.6s,baz=281,slow=7.0,SNR=13
SQTA  Sankt Quirin     44.80 303 i P      P       21 41 22.8 -2.4
      comp=Z,0.7nm,0.2s
MOTA  Moosalm          44.85 303 i P      P       21 41 25.7  0.0
      comp=Z,0.9nm,0.5s
KLR   Kul'dur          44.92  54c iP      P       21 41 26.7 +0.7
KLR                                pmax   pmax
      comp=Z,9.0nm,0.9s
FETA  Feichten         45.15 303 i P      P       21 41 28.8 +0.7
      comp=Z,0.7nm,0.4s
TIXI  Tiksi            45.54  22  eP      P       21 41 30.8 +0.3
      comp=Z,38nm,0.8s
TIXI  Tiksi            45.54  22ceP      P       21 41 31.1 +0.6
TIXI                               pmax   pmax
      comp=Z,24nm,0.8s
DAVA  Damuels          45.68 303 i P      P       21 41 31.9 -0.3
      comp=Z,3.6nm,0.5s
USA0B Ussuriysk Arra   45.95  61  eP      P       21 41 34.5 +0.3
      comp=Z,7.2nm,1.1s
USRK  Ussuriysk Ar.    45.95  61   P      P       21 41 34.4 +0.2
      comp=Z,3.3nm,0.7s,baz=271,slow=9.5,SNR=13
HSPB  Hornsund (broa   46.98 345  eP      P       21 41 43.3 +1.7
SPA0  Spitsbergen Ar   47.33 347  eP      P       21 41 44.5 +0.1
      comp=Z,16nm,0.9s
SPA0  Spitsbergen Ar   47.33 347  eP      P       21 41 45.8 +1.4
SPITS Spitsbergen Ar   47.33 347   P      P       21 41 45.5 +1.2
      comp=Z,15nm,0.7s,baz=109,slow=12,SNR=23
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KBS   Kingsbay         48.45 347  eP      P       21 41 52.0 -0.9
      comp=Z,22nm,0.7s
KBS   Kingsbay         48.45 347ceP      P       21 41 54.7 +1.8
KBS                                pmax   pmax
      comp=Z,100nm,0.8s
JOW   Kunigami         48.91  85   P      P       21 41 56.5 -0.6
      comp=Z,1.0nm,0.3s,baz=151,slow=12,SNR=6.4
JOW   Kunigami         48.91  85  eP      P       21 41 56.5 -0.6
      comp=Z,19nm,1.1s
KMBO  Kilima Mbogo     49.07 228   P      P       21 41 59.6 +0.9
      comp=Z,6.4nm,0.7s,baz=38,slow=12,SNR=19
KMBO  Kilima Mbogo     49.07 228  eP      P       21 41 58.5 -0.2
      comp=Z,5.8nm,0.7s
KMBO  Kilima Mbogo     49.07 228 i P      P       21 42 01.0 +2.3
KMBO                               pmax   pmax
      comp=Z,6.0nm,0.6s
YSS   Yuzh-Sakhalins   52.60  55  eP      P       21 42 24.6 +0.3
YSS                                pmax   pmax
      comp=Z,14nm,0.9s
MBAR  Mbarara          52.73 235  eP      P       21 42 24.4 -1.5
      comp=Z,7.9nm,0.8s
MBAR  Mbarara          52.73 235  eP      P       21 42 24.4 -1.5
MBAR                               pmax   pmax
      comp=Z,8.0nm,0.8s
MAJO  Matsushiro       52.75  69  eP      P       21 42 24.8 -0.9
MAJO  Matsushiro       52.75  69  eP      P       21 42 24.8 -0.9
MJAR  Matsushiro Arr   52.75  69   P      P       21 42 24.8 -0.9
      comp=Z,3.2nm,0.9s,baz=287,slow=9.7,SNR=8.5
MA2   Magadan          54.12  38ceP      P       21 42 36.2 +1.0
MA2                                pmax   pmax
      comp=Z,15nm,1.1s
SEY   Seymchan         54.18  34 i P      P       21 42 36.2 +0.7
DAG   Danmarks Havn    54.58 344⇑iP      P       21 42 39.4 +1.2
DAG                               i               21 43 31.1
DAG                                pmax   pmax
      comp=Z,15nm,0.9s
DAG   Danmarks Havn    54.58 344⇑iP      P       21 42 39.4 +1.2
      comp=Z,18nm,0.9s
DAG                               i               21 43 31.1
SCO   Scoresbysund     56.93 336 i P      P       21 43 11.2  +16
      comp=Z,12nm,1.0s
ESDC  Sonseca Array    57.49 298   P      P       21 42 59.6 +0.2
      comp=Z,1.9nm,0.7s,baz=58,slow=7.2,SNR=22
ESDC                               pP     pP      21 43 51.0 +0.2
      comp=Z,1.3nm,0.7s,baz=58,slow=7.1,SNR=3.8
BILL  Bilibino         58.37  26ceP      P       21 43 06.3 +1.3
BILL                               pmax   pmax
      comp=Z,22nm,1.0s
PEA1  Petropavlovsk-   59.73  44  eP      P       21 43 13.4 -1.2
PETK  Petropavlovsk-   59.73  44   P      P       21 43 13.4 -1.2
      comp=Z,2.9nm,0.6s,baz=310,slow=1.2,SNR=7.4
ABPO  Ambohimpanom     59.85 206  eP      P       21 43 15.0 -0.9
      comp=Z,10nm,0.8s
ABPO  Ambohimpanom     59.85 206  eP      P       21 43 15.0 -0.9
ABPO                               pmax   pmax
      comp=Z,10.0nm,0.8s
PET   Petropavlovsk    60.30  44 i P      P       21 43 17.4 -1.0
PET                                pmax   pmax
      comp=Z,14nm,1.3s
SUMG  Summit           60.92 341  eP      P       21 43 23.7 +0.9
      comp=Z,18nm,0.8s
SUMG  Summit           60.92 341 i P      P       21 43 24.4 +1.6
SUMG                              i               21 44 17.0
SUMG                               pmax   pmax
      comp=Z,45nm,0.8s
SUMG  Summit           60.92 341 i P      P       21 43 24.4 +1.6
      comp=Z,45nm,0.8s
SUMG                              i               21 44 17.0
TOA1  Torodi Ar. Sit   65.86 269  eP      P       21 43 53.6 -1.9
TOA1                              epP     pP      21 44 48.5 +0.1
TOA0  Torodi Ar. Sit   65.86 269  eP      P       21 43 54.2 -1.2
      comp=Z,5.1nm,0.4s
TORD  Torodi Ar. Bea   65.86 269   P      P       21 43 53.6 -1.9
      comp=Z,3.2nm,0.3s,baz=57,slow=5.3,SNR=64
TORD                               pP     pP      21 44 48.5 +0.1
      comp=Z,2.7nm,0.8s,baz=54,slow=5.6,SNR=3.2
MLY   Manley           73.45  17  eP      P       21 44 41.1 +0.1
      comp=Z,14nm,0.9s
TTA   Tatalina         73.79  20  eP      P       21 44 44.1 +1.1
      comp=Z,8.9nm,0.8s
TTA   Tatalina         73.79  20  eP      P       21 44 44.2 +1.1
TTA                                pmax   pmax
      comp=Z,9.0nm,0.8s
PSA00 Pilbara Seismi   73.95 133  eP      P       21 44 42.9 -1.5
      comp=Z,30nm,0.6s
COLA  College          74.25  16  eP      P       21 44 46.4 +0.9
      comp=Z,49nm,0.8s
COLA  College          74.25  16  eP      P       21 44 46.4 +0.9
COLA                               pmax   pmax
      comp=Z,49nm,0.8s
CCB   Clear Creek Bu   74.45  16  epP     pP      21 45 40.5 -1.2
CCB                               esP     sP      21 46 04.0 -2.4
ILAR  Eielson Array    74.55  16   P      P       21 44 47.0 -0.3
      comp=Z,10nm,0.9s,baz=317,slow=4.7,SNR=69
ILAR                               pP     pP      21 45 43.2 +1.0
      comp=Z,2.3nm,0.8s,baz=322,slow=3.8,SNR=4.6
DBIC  Dimbokro         74.84 267   P      P       21 44 48.3 -1.5
      comp=Z,5.3nm,1.0s,baz=24,slow=7.8,SNR=7.2
DBIC  Dimbokro         74.84 267  eP      P       21 44 48.8 -1.0
      comp=Z,5.4nm,1.0s
DBIC  Dimbokro         74.84 267  eP      P       21 44 48.8 -1.0
DBIC                               pmax   pmax
      comp=Z,5.0nm,1.0s
HDA   Harding Lake     74.85  16  eP      P       21 44 48.0 -1.0
      comp=Z,7.5nm,0.7s
PPLA  Purkeypile       74.85  19  eP      P       21 44 49.1 -0.2
      comp=Z,16nm,0.6s
PPLA                              epP     pP      21 45 46.0 +1.9
PPLA                              esP     sP      21 46 08.1 -0.7
LBTB  Lobatse          74.92 222  eP      P       21 44 49.8 -0.3
      comp=Z,9.3nm,0.6s
KIC   Kosan Boka       74.93 267  eP      P       21 44 49.4 -1.0
      comp=Z,150nm,1.9s
MCK   McKinley         74.97  17  eP      P       21 44 49.2 -0.6
      comp=Z,15nm,0.6s
MCK   McKinley         74.97  17  eP      P       21 44 49.2 -0.6
MCK                                pmax   pmax
      comp=Z,15nm,0.6s
TIC   Toumodi          74.99 267  eP      P       21 44 49.7 -1.0
LIC   Lamto            75.24 267  eP      P       21 44 51.0 -1.1
      comp=Z,84nm,1.5s
BOSA  Boshof           77.99 220   P      P       21 45 06.5 -0.7
      comp=Z,4.0nm,0.5s,baz=12,slow=4.4,SNR=10
KDAK  Kodiak Island    78.96  22  eP      P       21 45 12.7 +0.6
      comp=Z,28nm,0.8s
KDAK  Kodiak Island    78.96  22  eP      P       21 45 12.7 +0.6
KDAK                               pmax   pmax
      comp=Z,28nm,0.8s
YKA   Yellowknife Ar   81.04   3   P      P       21 45 23.5 +0.4
      comp=Z,10nm,0.6s,baz=350,slow=5.3,SNR=70
YKA                                pP     pP      21 46 19.9 +1.0
      comp=Z,7.1nm,0.9s,baz=348,slow=5.3,SNR=9.0
YKB5  Yellowknife Ar   81.04   3  epP     pP      21 46 19.9 +1.0
WRA   Warramunga Arr   81.98 122   P      P       21 45 27.1 -1.5
      comp=Z,7.8nm,0.4s,baz=309,slow=5.4,SNR=59
WRAB  Tennant Creek    81.98 122  eP      P       21 45 27.7 -0.9
      comp=Z,17nm,0.8s
WRAB  Tennant Creek    81.98 122ceP      P       21 45 27.3 -1.3
WRAB                               pmax   pmax
      comp=Z,19nm,0.8s
ASAR  Alice Springs    84.26 125   P      P       21 45 39.0 -1.2
      comp=Z,12nm,0.6s,baz=310,slow=4.9,SNR=145
FORT  Forrest          85.71 134  eP      P       21 45 46.8 -0.4
      comp=Z,47nm,0.7s
STKA  Stephens Creek   94.80 126   P      P       21 46 27.9 -1.8
      comp=Z,1.4nm,0.6s,baz=312,slow=5.3,SNR=4.5
PDAR  Pinedale Array  100.91   1   PKKP   PKKPbc  22 03 08.8 +0.3
      comp=Z,0.9nm,0.3s,baz=130,slow=4.2,SNR=4.5
SNAA  Sanae           119.63 200   PKPdf  PKPdf   21 51 53.2 -2.4
VNA3  Neumayer Olymp  121.44 202   PKPdf  PKPdf   21 51 53.6 -5.4
CPUP  Villa Florida   135.36 268   PKP    PKPdf   21 52 25.2 -1.6
      comp=Z,1.5nm,0.7s,baz=166,slow=3.0,SNR=4.8
USHA  Ushuaia         147.08 224   PKPbc  PKPbc   21 52 48.9 -0.3
      comp=Z,12nm,0.7s,baz=121,slow=3.2,SNR=8.1
PLCA  Paso Flores     150.02 250   PKPbc  PKPbc   21 52 57.1 -0.2
      comp=Z,9.3nm,1.0s,baz=131,slow=2.7,SNR=16
PLCA  Paso Flores     150.02 250  ePKPbc  PKPbc   21 52 57.0 -0.4
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*IDC **29** 21:41:04.0±1.3, 34˚.92N×23˚.91E, h0km, mb3.7/5,*
mb1 3.6/7, mb1mx3.4/35, mbtmp3.5/7, ML2.9/2, Error
ellipse: s-maj=37.8km s-min=22.7km az=147.0
*ISCJB **29** 21:41:07.1±1.0, 34˚.64N±0˚.06×24˚.07E±0˚.04, h22km±5km,*
mb3.7/5, Error ellipse: s-maj=10.0km s-min=5.6km
az=17.9

THE ***29*** *21:41:08.0, 34.°73N×23.°97E, h22km±1km, ML3.6/4, Error ellipse: s-maj=1.9km s-min=1.0km az=222.0*
ISK ***29*** *21:41:08.9, 34.°86N×24.°17E, h20km, ML3.6/10*
ATH ***29*** *21:41:09.8, 34.°87N×24.°14E, h20km±1km, ML3.1/7, Error ellipse: s-maj=1.9km s-min=1.1km az=197.0*
ISC 29 21:41:06.6±1.7**, 34.°68N**±0.°06×**24.°06E**±0.°04**, h14**km±9km**,**
n43, σ1s.**30**/59**, mb3.6**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	0.16	8	PG	Pb	21 41 12.8	+1.4
GVD				SG	Sb	21 41 16.1	+1.5
GVD	**Gavdhos**	0.16	8	P	Pb	21 41 12.8	+1.4
GVD				S	Sb	21 41 16.1	+1.5
	129µm,0.3s						
GVD	**Gavdhos**	0.16	8	P	Pb	21 41 12.8	+1.4
GVD				S	Sb	21 41 16.0	+1.4
GVD				AML	AML	21 41 16.5	
GVD				AML	AML	21 41 16.5	
GVDS	**Gavdos**	0.17	8	P	Pb	21 41 12.8	+1.3
GVDS				S	Sb	21 41 16.1	+1.3
TMBK	**Timbaki Herakl**	0.70	56	P	Pb	21 41 21.4	+0.8
TMBK				S	Sn	21 41 32.1	-0.6
SIVA	**Sivas**	0.70	61	P	Pb	21 41 21.3	+0.7
SIVA				S	Sn	21 41 32.7	-0.1
	4µm,0.6s						
SIVA	**Sivas**	0.70	61	P	Pb	21 41 21.3	+0.7
SIVA				S	Sg	21 41 29.4	-0.1
SIVA				AML	AML	21 41 41.4	
	comp=N,4476µm,0.6s						
SIVA				AML	AML	21 41 43.4	
	comp=E,7360µm,0.6s						
VAM	**Vamos**	0.74	9	P	Pg	21 41 20.8	-0.1
VAM				S	Sg	21 41 31.4	+0.8
	comp=E,4µm,0.6s						
VAM	**Vamos**	0.74	9	P	Pg	21 41 20.8	-0.1
VAM				S	Sg	21 41 28.6	-2.0
VAM				AML	AML	21 41 37.1	
	comp=N,4919µm,0.5s						
VAM				AML	AML	21 41 40.5	
	comp=E,3126µm,0.4s						
PRNS	**Prines Rethymn**	0.78	28	P	Pg	21 41 21.1	-0.5
PRNS				S	Sg	21 41 32.1	+0.3
IMMV	**Iera Moni Meta**	0.78	355	PG	Pg	21 41 21.7	-0.1
IMMV				SG	Sg	21 41 30.9	-1.2
IMMV	**Iera Moni Meta**	0.78	355	P	Pg	21 41 21.4	-0.4
IMMV				S	Sg	21 41 32.2	+0.1
	comp=E,4µm,0.7s						
IMMV	**Iera Moni Meta**	0.78	355	P	Pg	21 41 21.4	-0.4
IMMV				S	Sg	21 41 29.9	-2.2
IMMV				AML	AML	21 41 37.5	
	comp=N,7353µm,0.7s						
IMMV				AML	AML	21 41 39.4	
	comp=E,10487µm,0.6s						
IDI	**Anoyia**	0.91	48	PG	Pg	21 41 23.7	-0.5
IDI	**Anoyia**	0.91	48	P	Pg	21 41 23.8	-0.5
IDI				S	Sg	21 41 34.8	-1.4
IDI				AML	AML	21 41 45.8	
	comp=N,1351µm,0.6s						
IDI				AML	AML	21 41 48.6	
	comp=E,1607µm,0.7s						
LAST	**Lasithi**	1.26	67	P	Pg	21 41 30.9	0.0
LAST	**Lasithi**	1.26	67	P	Pg	21 41 31.5	+0.6
LAST				S	Sn	21 41 47.0	+0.3
LAST				AML	AML	21 42 01.5	
	comp=E,732µm,0.8s						
LAST				AML	AML	21 42 04.6	
	comp=N,879µm,1.1s						
ANKY	**Antikythira Is**	1.34	333	P	Pb	21 41 32.7	+1.3
ANKY				S	Sb	21 41 49.8	+1.3
ANKY				AML	AML	21 41 59.6	
	comp=E,1588µm,0.6s						
ANKY				AML	AML	21 42 04.6	
	comp=N,1078µm,0.9s						
NPS	**Neapolis**	1.40	65	P	Pg	21 41 34.2	+0.6
KTHA	**Kythira Island**	1.77	333	P	Pb	21 41 40.0	+1.2
ZKR	**Zakros**	1.82	76	PN	Pn	21 41 38.3	+0.7
MHLO	**Agia Marina, M**	2.03	8	P	Pn	21 41 42.0	+1.7
MHLA	**Plaka, Milos I**	2.08	8	P	Pn	21 41 42.8	+1.7
VLI	**Veliai**	2.23	336	P	Pb	21 41 45.9	-0.8
APE	**Apeiranthos**	2.67	26	PN	Pn	21 41 49.3	+0.1
KARP	**Karpathos**	2.69	70	PN	Pn	21 41 50.4	+1.0
ITM	**Ithomi**	3.04	326	PN	Pn	21 41 56.0	+1.8
ITM	**Ithomi**	3.04	326	P	Pn	21 41 57.8	+3.5
ARG	**Arkhangelos**	3.66	64	PN	Pn	21 42 03.8	+1.1
YER	**Yerkesik**	4.21	53	PN	Pn	21 42 11.6	+1.2
TURN	**Turunc**	4.29	58	PN	Pn	21 42 08.6	-2.9
DALY	**Dalyan (Mula)**	4.30	59	PN	Pn	21 42 13.1	+1.5
FETY	**Fethiye**	4.53	63	PN	Pn	21 42 15.9	+1.1
AGG	**Agios Georgios**	4.55	343	PN	Pn	21 42 16.5	+1.4
AKAS	**Kas**	4.78	69	PN	Pn	21 42 20.1	+1.7
BRTR	**Keskin Array B**	9.15	54	Pn	Pn	21 43 17.8	-0.5
	comp=N,0.0nm,0.3s,baz=252,slow=12,SNR=2.5						
MMAI	**Mount Meron Ar**	9.58	97	Pn	Pn	21 43 26.0	+1.9
	comp=N,0.3nm,0.3s,baz=300,slow=17,SNR=3.4						
VYHS	**Vyhne**	14.34	346	*e*PN	P	21 44 35.8	-0.4
NOA	**NORSAR Array B**	27.64	347	P	P	21 46 51.0	-2.6
	comp=N,0.4nm,0.6s,baz=153,slow=11,SNR=2.9						
TORD	**Torodi Ar. Bea**	29.49	229	P	P	21 47 10.3	-0.1
	comp=N,0.5nm,0.5s,baz=32,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	44.79	56	P	P	21 49 19.2	-0.6
	comp=N,0.9nm,0.6s,baz=268,slow=7.3,SNR=6.0						
ZALV	**Zalesovo Beam**	45.99	46	P	P	21 49 27.7	-1.5
	comp=N,1.7nm,0.5s,baz=272,slow=9.7,SNR=8.5						
SONM	**Songino Array**	60.49	50	P	P	21 51 15.7	-0.4
	comp=N,0.3nm,0.6s,baz=308,slow=7.1,SNR=3.4						

IDC ***29*** *21:52:04.5±0.4, 57.°67S×25.°22W, h0km, mb5.1/21, mb1 5.1/23, mb1mx4.9/29, mbtmp5.1/23, ML4.8/2, MS4.5/18, Ms1 4.5/18, ms1mx4.5/23, Error ellipse: s-maj=16.8km s-min=11.7km az=30.0*
MOS ***29*** *21:52:09.0±1.2, 57.°75S×25.°44W, h33km, mb5.3/24, MS4.5/11, Error ellipse: s-maj=25.1km s-min=13.3km az=109.8*
ISCJB ***29*** *21:52:10.6±1.6, 57.°79S±0.°05×25.°3W±0.°1, h54km±15km, mb5.1/38, MS4.7/35, Error ellipse: s-maj=10.6km s-min=6.8km az=140.4*
NEIC ***29*** *21:52:11.6±1.6, 57.°77S×25.°29W, h47km±4km, mb5.2/38, Error ellipse: s-maj=14.0km s-min=10.1km az=210.0*
GCMT ***29*** *21:52:13.6±0.2, 57.°82S±0.°02×24.°75W±0.°02, h37km, MW5.2/97, Moment Tensor Solution. s97,c147; s92,c134; Duration: 1s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.68±.02; $M_{\theta\theta}$0.11±.02; $M_{\phi\phi}$-0.79±.01; $M_{r\theta}$-0.06±.02; $M_{\theta\phi}$0.21±.01; $M_{\phi r}$0.33±.02; Best double couple: $M_0$0.82800×10^{17} NP1:ϕ_s349.00000°, δ57.00000°, λ92.00000°. NP2:ϕ_s166.00000°, δ33.00000°, λ87.00000°. Principal axes: T 0.7470, Plg78.0000°, Azm266.0000°; N 0.1600, Plg2.0000°, Azm168.0000°; P -0.9090, Plg12.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 21:52:10.9±0.8**, 57.°86S**±0.°06×**25.°40W**±0.°07**, h41**km±6km**,**
n218, σ1s.**44**/220**, mb5.1**/38**, MS4.7**/35**, 6C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	7.17	295	*e*Pn	Pn	21 53 56.4	+3.5
HOPE				*e*Sn	Sn	21 55 06.5	-6.4
VNA1	**Neumayer--Stat**	14.74	157	P	Pn	21 55 37.2	+0.9
VNA1				S	Sn	21 58 15.5	-2.5
VNA3	**Neumayer Olymp**	14.95	160	P	Pn	21 55 39.6	+0.5
VNA3				S	Sn	21 58 17.8	-5.5
SNAA	**Sanae**	16.68	155	P	Pn	21 56 03.1	+1.8
SNAA				S	Sn	21 58 59.0	-6.3
SNAA	**Sanae**	16.68	155	Pn	Pn	21 56 02.3	+1.0
	7.1nm,0.3s,baz=311,slow=15,SNR=141						
SNAA				Sn	Sn	21 58 54.4	-11
	0.4nm,0.3s,baz=305,slow=18,SNR=2.5						
SNAA				LR	LR	22 00 57.9	
	comp=Z,1µm,22.0s,baz=320,slow=32						
SNAA	**Sanae**	16.68	155	*e*Pn	Pn	21 56 02.5	+1.2
	94nm,1.3s						
PMSA	**Palmer Station**	19.53	233	P	Pn	21 56 36.8	+0.9
	1.5nm,0.3s,baz=90,slow=10.0,SNR=57						
PMSA				PcP	PcP	22 00 53.8	+0.8
	0.3nm,0.3s,baz=7.9,slow=2.2,SNR=6.8						
PMSA				LR	LR	22 03 20.4	
	comp=Z,2µm,18.6s,baz=82,slow=34						
PMSA				PcS	PcS	22 04 29.1	-0.7
	0.6nm,0.3s,baz=70,slow=1.2,SNR=8.7						
PMSA	**Palmer Station**	19.53	233	*e*Pn	Pn	21 56 37.6	+1.7
	103nm,0.9s						
PMSA	**Palmer Station**	19.53	233	*e*P	Pn	21 56 37.6	+1.7
EFI	**East Falkland**	19.69	274	*e*Pn	P	21 56 38.5	+2.2
	197nm,1.0s						
EFI	**East Falkland**	19.69	274	*e*P	P	21 56 38.5	+2.2
EFI				pmax	pmax		
	comp=Z,197nm,1.0s						
USHA	**Ushuaia**	23.74	259	P	P	21 57 19.6	+0.8
	comp=Z,25nm,0.7s,baz=101,slow=3.2,SNR=14						
USHA				PcP	PcP	22 01 02.0	+0.5
	comp=Z,17nm,1.0s,baz=76,slow=8.3,SNR=3.5						
USHA				LR	LR	22 04 25.6	
	comp=Z,3µm,21.6s,baz=110,slow=31						
GO09	**Cerro Castillo**	27.52	263	*e*P	P	21 57 53.2	0.0
	comp=Z,150nm,1.5s						
GO09				*e*PcP	PcP	22 01 10.6	+0.4
SYO	**Syowa Base**	29.57	139⇓	*e*X	P	21 58 17.4	+6.3
QSPA	**South Pole Qui**	32.39	180	*e*P	P	21 58 38.2	+1.9
	comp=Z,52nm,0.8s						
PLCA	**Paso Flores**	33.30	281	P	P	21 58 43.6	-0.8
	comp=Z,12nm,0.9s,baz=171,slow=8.2,SNR=25						
PLCA				PcP	PcP	22 01 25.1	-0.5
	comp=Z,4.2nm,0.7s,baz=92,slow=2.0,SNR=4.5						
PLCA				PcS	PcS	22 05 07.0	-4.2
	comp=Z,1.6nm,0.8s,baz=11,slow=5.2,SNR=2.9						
PLCA				LR	LR	22 12 45.8	
	comp=Z,885nm,18.1s,baz=151,slow=37						
PLCA	**Paso Flores**	33.30	281	*e*P	P	21 58 43.9	-0.5
PLCA				*e*PcP	PcP	22 01 26.0	+0.4
CNLB	**Canela**	33.57	317	*e*P	P	21 58 47.2	+0.4
GO06	**Curarrehue**	34.62	282	*e*P	P	21 58 55.1	-0.8
	comp=Z,10nm,1.1s						
GO06				*e*PcP	PcP	22 01 29.3	-0.1
ITAB	**Concordia**	35.92	317	*e*P	P	21 59 07.3	+0.2
ESAR	**Angra dos Reis**	37.42	330	*e*P	P	21 59 20.8	+1.0
PARB	**Paraibuna**	37.44	328	*e*P	P	21 59 20.1	0.0
DUB01	**Friburgo-RJ**	37.81	334	*e*P	P	21 59 23.8	+0.6
VAS01	**Vassouras-RJ**	37.87	332	*e*P	P	21 59 24.8	+1.1
MAW	**Mawson**	38.11	142	P	P	21 59 25.5	+0.3
	comp=Z,3.3nm,0.5s,baz=229,slow=8.2,SNR=20						
MAW				PcP	PcP	22 01 40.1	+0.9
	comp=Z,4.2nm,0.7s,baz=199,slow=2.6,SNR=4.7						
MAW				PcS	PcS	22 05 23.5	-4.2
	comp=Z,1.6nm,1.0s,baz=338,slow=5.4,SNR=2.4						
MAW				LR	LR	22 13 00.9	
	comp=Z,650nm,20.4s,baz=248,slow=33						
VAO	**Valinhos**	38.15	327	*e*P	P	21 59 27.2	+1.2
PTGB	**Pitanga**	38.20	319	*e*P	P	21 59 25.9	-0.6
GO05	**Huala**	38.32	286	*e*P	P	21 59 27.6	+0.2
	comp=Z,17nm,0.9s						
FRTB	**Fartura**	38.62	323	*e*P	P	21 59 30.8	+0.8
CPUP	**Villa Florida**	38.74	311	P	P	21 59 29.5	-1.4
	comp=Z,8.6nm,0.4s,baz=152,slow=7.3,SNR=41						
CPUP				PcP	PcP	22 01 41.8	-0.1
	comp=Z,7.9nm,0.6s,baz=166,slow=1.5,SNR=6.3						
CPUP				PcS	PcS	22 05 25.9	-5.4
	comp=Z,2.9nm,0.9s,baz=157,slow=4.3,SNR=3.2						
CPUP				LR	LR	22 14 15.9	
	comp=Z,304nm,19.2s,baz=160,slow=34						
CPUP	**Villa Florida**	38.74	311	*e*P	P	21 59 29.7	-1.2
ALF01	**Guarapari-ES**	38.85	337	*e*P	P	21 59 33.3	+1.5
PEL	**Peldehue**	39.16	289	*e*P	P	21 59 34.1	-0.3
	comp=Z,24nm,1.1s						
PEL	**Peldehue**	39.16	289	*e*P	P	21 59 34.1	-0.3
PEL				pmax	pmax		
	comp=Z,24nm,1.1s						
RIB01	**Linhares ES**	40.05	338	*e*P	P	21 59 42.9	+1.1
SUR	**Sutherland**	40.23	71	P	P	21 59 41.3	-2.2
	comp=Z,9.4nm,1.1s,baz=227,slow=12,SNR=2.3						
SUR	**Sutherland**	40.23	71	*e*P	P	21 59 41.3	-2.2
	comp=Z,146nm,1.8s						
BB19B	**Bebedouro**	40.44	326	*e*P	P	21 59 45.6	+0.5
BSFB	**Barra de Sao F**	40.61	337	*e*P	P	21 59 47.5	+1.1
SJMB	**Sao Joao De Ma**	40.80	337	*e*P	P	21 59 48.4	+0.3
ITRB	**Iturama**	42.28	324	*e*P	P	22 00 00.3	+0.1
LCO	**Las Campanas**	42.52	293	*e*P	P	22 00 01.8	-0.5
AQDB	**Aquidauana**	43.40	316	*e*P	P	22 00 07.6	-1.6
C2SB	**Chapadao do Su**	43.96	321	*e*P	P	22 00 14.3	+0.6
GO02	**Mina Guanaco**	45.20	297	*e*P	P	22 00 22.7	-1.2
	comp=Z,15nm,0.8s						
BDFB	**Brasilia**	45.42	329	P	P	22 00 24.8	-0.8
	comp=Z,31nm,1.1s,baz=159,slow=6.9,SNR=26						
BDFB				LR	LR	22 18 20.5	
	comp=Z,636nm,20.1s,baz=145,slow=35						
BDFB	**Brasilia**	45.42	329	*e*P	P	22 00 24.8	-0.8
BDFB				*e*P	P	22 00 26.2	+0.6
BDFB	**Brasilia**	45.42	329	P	P	22 00 24.8	-0.8
BDFB				pmax	pmax		
	comp=Z,15nm,0.7s						
BDFB				MLR	MLR		
	comp=Z,636nm,20.1s						
BOSA	**Boshof**	45.52	72	P	P	22 00 25.0	-1.3
	comp=Z,3.8nm,0.6s,baz=204,slow=7.5,SNR=15						
BOSA				LR	LR	22 15 22.4	
	comp=Z,1µm,21.5s,baz=222,slow=31						
LVC	**Limon Verde**	47.05	300	PcS	PcS	22 06 02.1	-3.7
	comp=Z,3.0nm,0.7s,baz=239,slow=8.0,SNR=3.6						
LVC	**Limon Verde**	47.05	300	*e*P	P	22 00 38.7	0.0
	comp=Z,13nm,0.6s						
LVC				*e*PcP	PcP	22 02 10.4	+0.2
LVC	**Limon Verde**	47.05	300	*e*P	P	22 00 38.7	0.0
LVC				*e*		22 02 10.4	
LVC				pmax	pmax		
	comp=Z,13nm,0.6s						
LVC	**Limon Verde**	47.05	300	*e*P	P	22 00 38.1	-0.5
SALV	**Santo Antonio**	47.60	319	*e*P	P	22 00 42.4	-0.1
LBTB	**Lobatse**	48.65	70	*e*P	P	22 00 50.2	-0.5
	comp=Z,13nm,1.0s						
LBTB	**Lobatse**	48.65	70	*e*P	P	22 00 50.2	-0.5
LBTB				pmax	pmax		
	comp=Z,13nm,1.0s						
PEXB	**Peixe**	48.87	330	*e*P	P	22 00 53.0	+0.7
H10S2	**ASCENSION HYDR**	49.49	14	T	T	22 54 40.0	
	baz=188,slow=75						
H10S3	**ASCENSION HYDR**	49.49	14	T	T	22 54 41.2	
	baz=188,slow=75						
H10S1	**ASCENSION HYDR**	49.50	14	T	T	22 54 43.7	
	baz=188,slow=75						
GO01	**Chusmiza**	49.73	301	*e*P	P	22 00 58.8	-0.7
	comp=Z,20nm,0.6s						
H10N1	**ASCENSION HYDR**	50.60	14	T	T	22 56 03.3	
	baz=195						
H10N3	**ASCENSION HYDR**	50.61	14	T	T	22 56 05.2	
	baz=195						
H10N2	**ASCENSION HYDR**	50.62	14	T	T	22 56 11.0	
	baz=195						
NBLI	**Livramento-PB**	51.16	345	*e*P	P	22 01 09.8	+0.1
SMTB	**Santa Maria do**	51.79	332	*e*P	P	22 01 14.9	+0.4
CASY	**Casey**	51.87	159	*e*P	P	22 01 14.2	-0.2
	comp=Z,21nm,0.8s						
LPAZ	**La Paz**	52.22	304	P	P	22 01 17.6	-0.7
	comp=Z,13nm,0.4s,baz=127,slow=6.3,SNR=52						
LPAZ				LR	LR	22 23 44.9	
	comp=Z,217nm,20.6s,baz=188,slow=36						
LPAZ	**La Paz**	52.22	304	*e*P	P	22 01 17.4	-0.9
	comp=Z,16nm,0.6s						
LPAZ				*e*PcP	PcP	22 02 29.4	-0.1
LPAZ	**La Paz**	52.22	304	*e*P	P	22 01 17.4	-0.9
LPAZ				*e*		22 02 29.4	
LPAZ				pmax	pmax		
	comp=Z,16nm,0.6s						
LPAZ	**La Paz**	52.22	304	*e*P	P	22 01 17.5	-0.7
CLDB	**Colider**	52.32	321	*e*P	P	22 01 17.8	-0.5
NBMO	**Morrinhos-CE**	55.61	342	*e*P	P	22 01 42.7	+0.4
PTGA	**Pitinga**	63.20	321	P	P	22 02 33.9	-0.8
	comp=Z,37nm,0.6s,baz=168,slow=8.5,SNR=16						
PTGA	**Pitinga**	63.20	321	*e*P	P	22 02 33.7	-1.0
	comp=Z,38nm,0.6s						
ATAH	**Atahualpa**	64.94	299	P	P	22 02 46.9	+0.3
	comp=Z,11nm,0.8s,baz=150,slow=5.0,SNR=6.8						
LIC	**Lamto**	65.97	22	*e*P	P	22 02 52.8	+0.1
	comp=Z,54nm,0.8s						
KIC	**Kosan Boka**	66.16	23	*e*P	P	22 02 54.0	+0.1
	comp=Z,132nm,1.5s						
TIC	**Toumodi**	66.38	22	*e*P	P	22 02 55.4	+0.1
DBIC	**Dimbokro**	66.44	22	P	P	22 02 54.7	-1.0
	comp=Z,11nm,0.6s,baz=172,slow=7.1,SNR=16						
DBIC				LR	LR	22 24 47.5	
	comp=Z,325nm,20.7s,baz=164,slow=30						
DBIC	**Dimbokro**	66.44	22	*e*P	P	22 02 54.1	-1.6
	comp=Z,18nm,0.8s						
ROSC	**El Rosal**	73.79	309	P	P	22 03 41.7	+0.5
	comp=Z,11nm,0.4s,baz=212,slow=23,SNR=6.1						
ROSC				LR	LR	22 37 39.7	
	comp=Z,238nm,20.4s,baz=170,slow=37						
TOA0	**Torodi Ar. Sit**	74.18	27	*e*P	P	22 03 42.9	-0.1
	comp=Z,34nm,0.6s						
TORD	**Torodi Ar. Bea**	74.18	27	P	P	22 03 41.6	-1.4
	comp=Z,23nm,0.6s,baz=192,slow=5.9,SNR=120						
TORD				LR	LR	22 29 32.1	
	comp=Z,328nm,21.2s,baz=280,slow=30						
KMBO	**Kilima Mbogo**	74.81	67	LR	LR	22 34 13.4	
	comp=Z,450nm,18.4s,baz=256,slow=34						
SDV	**Santo Domingo**	75.98	314	P	P	22 03 53.0	-0.5
	comp=Z,40nm,0.8s,baz=197,slow=3.6,SNR=10						
SDV	**Santo Domingo**	75.98	314	*e*P	P	22 03 53.1	-0.5
	comp=Z,42nm,0.8s						
BFZ	**Birch Farm**	80.16	197	*e*P	P	22 04 17.5	+1.1
	comp=Z,21nm,1.0s						
BKZ	**Black Stump Fm**	81.61	197	*e*P	P	22 04 25.4	+1.3
	comp=Z,31nm,1.3s						
MTP	**Monte Pirata**	82.66	322	*e*P	P	22 04 29.2	-0.5
SJG	**San Juan**	82.88	321	P	P	22 04 29.0	-1.8
	comp=Z,14nm,0.6s,baz=340,slow=1.8,SNR=6.0						
SJG	**San Juan**	82.88	321	*e*P	P	22 04 30.0	-0.8
SJG	**San Juan**	82.88	321	P	P	22 04 29.0	-1.8
SJG				pmax	pmax		
	comp=Z,14nm,0.6s						
JTS	**Las Juntas de**	83.31	301	P	P	22 04 33.0	-0.2
	comp=Z,15nm,0.8s,baz=343,slow=2.3,SNR=7.0						
JTS	**Las Juntas de**	83.31	301	*e*P	P	22 04 33.6	+0.4
	comp=Z,17nm,0.9s						
JTS	**Las Juntas de**	83.31	301	*e*P	P	22 04 33.6	+0.4
JTS				pmax	pmax		
	comp=Z,17nm,0.9s						
TAM	**Tamanrasset**	84.39	28	*e*P	P	22 04 40.6	+2.0
	comp=Z,24nm,1.5s						
TAM	**Tamanrasset**	84.39	28	*e*P	P	22 04 40.6	+2.0
TAM				pmax	pmax		
	comp=Z,24nm,1.5s						
TBI	**Tubuai**	86.68	230	*e*LR	LR	22 32 20.3	
	comp=Z,217nm,28.8s						
FORT	**Forrest**	88.93	157	*e*P	P	22 05 01.6	+0.8
	comp=Z,25nm,0.8s						
STKA	**Stephens Creek**	89.94	169	P	P	22 05 05.6	+0.1
	comp=Z,4.3nm,0.7s,baz=145,slow=3.0,SNR=8.8						
STKA				LR	LR	22 45 34.0	
	comp=Z,282nm,18.2s,baz=201,slow=36						
STKA	**Stephens Creek**	89.94	169	*e*P	P	22 05 05.6	+0.1
	comp=Z,1.3nm,0.8s						
APG	**El Apazote**	89.98	299	P	P	22 05 05.3	-0.6
	comp=Z,7.6nm,0.2s,baz=273,slow=22,SNR=7.3						
PPT2	**Papeete2**	91.87	232	*e*LR	LR	22 34 50.0	
	comp=Z,985nm,24.5s,baz=150						
PPT	**Papeete**	91.89	232	LR	LR	22 37 50.8	
	comp=Z,465nm,19.9s,baz=156,slow=30						
TEIG	**Tepich**	93.53	303	P	P	22 05 21.2	-0.8
	comp=Z,23nm,0.7s,baz=111,slow=1.3,SNR=23						
TEIG	**Tepich**	93.53	303	*e*P	P	22 05 22.1	+0.1
CMIG	**Matias Romero**	93.88	296	P	P	22 05 23.2	-0.5
	comp=Z,3.8nm,0.8s,baz=87,slow=2.9,SNR=7.1						
TAOE	**Nuku Hiva Isla**	95.28	244	*e*LR	LR	22 36 26.4	
	comp=Z,432nm,29.2s						
ASAR	**Alice Springs**	96.96	161	P	P	22 05 37.6	-0.3
	comp=Z,3.7nm,0.7s,baz=180,slow=4.0,SNR=47						
ASAR				PKKP	PKKPdf	22 22 19.4	+3.4
	comp=Z,0.3nm,0.6s,baz=2.9,slow=2.5,SNR=4.5						
ASAR				LR	LR	22 46 53.1	
	comp=Z,280nm,19.8s,baz=206,slow=34						
KEST	**Kesra**	97.70	28	LR	LR	22 45 34.7	
	comp=Z,277nm,19.2s,baz=186,slow=33						
ESDC	**Sonseca Array**	98.82	17	LR	LR	22 45 53.6	
	comp=Z,82nm,20.1s,baz=245,slow=33						
DZM	**Mont Dzumac**	99.76	191	*e*LR	LR	22 38 34.9	
	comp=Z,231nm,24.2s						
WR1	**Warramunga Arr**	100.67	161	*e*Pdif	Pdif	22 05 54.2	-0.3
WRA	**Warramunga Arr**	100.67	161	P	Pdif	22 05 54.2	-0.3
	comp=Z,1.0nm,0.7s,baz=178,slow=4.7,SNR=4.4						
TXAR	**Lajitas Array**	108.48	296	PKiKP	PKiKP	22 10 34.3	-0.2
	comp=Z,0.5nm,0.8s,baz=97,slow=2.3,SNR=4.5						
BRTR	**Keskin Array B**	109.02	44	PKKPbc	PKKPbc	22 21 42.9	+1.5
	comp=Z,1.2nm,0.7s,baz=113,slow=3.2,SNR=7.3						
KHC	**Kasperske Hory**	111.36	26	AMS	AMS	22 54 20.0	
	comp=Z,200nm,19.5s						
TREC	**Trest**	111.98	28	AMS	AMS	22 52 20.0	
	comp=Z,300nm,17.8s						
VYHS	**Vyhne**	112.10	30	*e*P	Pdif	22 06 45.1	+0.7
VYHS	**Vyhne**	112.10	30	*e*PDIF	Pdif	22 06 45.1	+0.7
NKC	**Novy Kostel**	112.13	25	AMS	AMS	22 53 00.0	
	comp=Z,200nm,20.8s						
GOPC	**GO Pecny, Ondr**	112.38	27	AMS	AMS	22 53 20.0	
	comp=Z,200nm,17.3s						
PRU	**Pruhonice**	112.39	27	AMS	AMS	22 54 20.0	
	comp=Z,200nm,21.3s						
PVCC	**Panska Ves**	112.90	26	AMS	AMS	22 52 40.0	
	comp=Z,200nm,18.5s						
OKC	**Ostrava-Krasne**	113.15	29	AMS	AMS	22 56 30.0	
	comp=Z,100nm,15.0s						
DPC	**Dobruska-Polom**	113.16	28	AMS	AMS	22 53 20.0	
	comp=Z,200nm,19.4s						
UPC	**Upice**	113.23	27	AMS	AMS	22 53 50.0	
	comp=Z,200nm,18.5s						
CLL	**Collm**	113.26	25	*e*PS	PS	22 21 15.0	+5.8
CHVC	**Chvalec**	113.31	27	AMS	AMS	22 54 00.0	
	comp=Z,200nm,16.7s						
OSTC	**Ostas**	113.32	27	AMS	AMS	22 53 30.0	
	comp=Z,200nm,18.4s						
ANMO	**Albuquerque**	114.44	297*c*	*i*PKIKP	PKiKP	22 10 46.9	+1.2
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	**Kislovodsk**	116.13	48	*i* PKIKP	PKPdf	22 10 48.7	+0.1
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,286nm,22.0s						
SHPR	**Sheep Range**	119.92	292	*e*PKPdf	PKiKP	22 10 57.5	+1.2
K22A	**Casper**	120.64	302	*e*PKPdf	PKPdf	22 10 56.8	-0.6
NB2	**NORSAR Subarra**	121.97	20	PKPdf	PKPdf	22 10 58.5	-0.7
	comp=Z,4.8nm,1.2s,baz=202,slow=1.9						
NB200	**NORSAR Array S**	121.97	20	*e*PKPdf	PKPdf	22 10 57.1	-2.1
NOA	**NORSAR Array B**	121.97	20	PKP	PKPdf	22 10 57.1	-2.1
	comp=Z,2.0nm,0.9s,baz=199,slow=1.8,SNR=5.0						
NOA				PKKPbc	PKKPab	22 20 55.8	+1.4
	comp=Z,0.9nm,0.8s,baz=26,slow=4.0,SNR=6.1						
NOA	**NORSAR Array B**	121.97	20	*e*PKIKP	PKPdf	22 10 58.2	-1.0
NOA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDAR	**Pinedale Array**	122.12	300	PKP	PKPdf	22 10 58.6	-1.7
	comp=Z,0.9nm,0.4s,baz=130,slow=2.3,SNR=11						
ULM	**Lac du Bonnet**	122.23	314	PKP	PKPdf	22 10 58.8	-1.1
	comp=Z,2.9nm,0.4s,baz=100,slow=1.4,SNR=5.8						
ULM	**Lac du Bonnet**	122.23	314	*e*PKIKP	PKPdf	22 11 00.1	+0.2
ULM				pmax	pmax		
	comp=Z,3.0nm,0.4s						
PBKT	**Sadao Pong**	122.92	113	P	PKPdf	22 11 02.9	+0.6
NVAR	**Mina Array Bea**	122.98	291	PKP	PKPdf	22 11 02.5	+0.4
	comp=Z,4.6nm,0.9s,baz=150,slow=3.0,SNR=17						
KOLN	**Koldanda**	123.09	90	*e*P	PKPdf	22 11 00.7	-1.9
	comp=Z,17nm,0.8s						
OBN	**Obninsk**	123.19	37	*e*PKIKP	PKPdf	22 11 00.3	-1.3
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CM31	**Chiang Mai Arr**	123.52	110	*e*PKPdf	PKPdf	22 11 03.1	-0.3
CMAR	**Chiang Mai Arr**	123.52	110	PKP	PKPdf	22 11 03.1	-0.3
	comp=Z,5.6nm,0.7s,baz=229,slow=3.7,SNR=27						
DANN	**Dangsing**	123.63	89	*e*P	PKPdf	22 11 03.1	-0.7
	comp=Z,33nm,0.7s						
DMN	**Daman**	123.76	91	*e*P	PKPdf	22 11 03.2	-0.8
GKN	**Gorkha**	123.83	90	*e*P	PKPdf	22 11 02.9	-1.1
	comp=Z,15nm,0.8s						
PKIN	**Phulchoki**	123.89	91	*e*P	PKPdf	22 11 03.2	-1.0
	comp=Z,8.2nm,0.6s						
PKI	**Pulchoki**	123.89	91	*e*P	PKPdf	22 11 03.3	-1.0
	comp=Z,11nm,0.7s						
KKN	**Kakani**	124.00	91	*e*P	PKPdf	22 11 03.5	-0.9
	comp=Z,13nm,0.7s						
JIRN	**Jiri**	124.38	92	*e*P	PKPdf	22 11 04.7	-0.6
	comp=Z,38nm,0.6s						
FIA0	**FINESS Array S**	125.53	28	*e*PKPdf	PKPdf	22 11 05.1	-0.8
FIA0	**FINESS Array S**	125.53	28	*e*PKIKP	PKPdf	22 11 05.1	-0.8
FINES	**FINESS Array B**	125.53	28	PKP	PKPdf	22 11 05.1	-0.8
	comp=Z,7.2nm,0.6s,baz=162,slow=1.6,SNR=57						
FINES	**FINESS Array B**	125.53	28*c*	*i*PKIKP	PKPdf	22 11 05.3	-0.6
FINES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FIA1	**FINESS Array S**	125.53	28	*e*PKPdf	PKPdf	22 11 05.7	-0.2
SHL	**Shillong**	125.73	99	*e*PKPdf	PKPdf	22 11 07.7	0.0
SHL	**Shillong**	125.73	99	*e*PKIKP	PKPdf	22 11 07.7	0.0
KSH	**Kashi**	128.11	75	PKP	PKPdf	22 11 10.0	-1.7
KSH				PP	PP	22 13 16.5	+0.3

KSH				SKKS		22 20 04.5	
KSH				AMB	AMB		
	comp=Z,25nm,5.7s						
KSH				LR	LR		
	comp=Z,54nm,4.7s						
KSH				LR	LR		
	comp=Z,49nm,4.9s						
KSH				LR	LR		
	comp=Z,70nm,6.3s						
LSA	Lhasa	128.64	95	*e*PKPdf	PKiKP	22 11 14.9	+0.7
LSA	Lhasa	128.64	95	*e*PKIKP	PKiKP	22 11 14.9	+0.7
KLMR	Klimovskoe	128.75	35	*e*PKIKP	PKPdf	22 11 10.1	-2.0
KLMR				pmax	pmax		
	comp=Z,30nm,1.3s						
AAK	Ala-Archa	129.65	71	*e*PKPdf	PKPdf	22 11 15.4	+0.7
AAK	Ala-Archa	129.65	71	*c* *i*PKIKP	PKPdf	22 11 15.3	+0.7
AAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
D08A	Wollman Farm,	129.73	297	*e*PKPdf	PKPdf	22 11 15.3	+0.9
KMI	Kunming	131.00	109	PKP	PKPdf	22 11 18.5	+0.7
PRGR	Permogore	131.26	37	*e*PKIKP	PKPdf	22 11 15.4	-1.4
PRGR				pmax	pmax		
	comp=Z,22nm,1.3s						
ARU	Arti	132.18	48	*e*PKPdf	PKPdf	22 11 18.0	-0.7
ARU	Arti	132.18	48	*i* PKIKP	PKPdf	22 11 19.2	+0.5
ARU				MLR	MLR		
	comp=Z,166nm,21.0s						
ARCES	ARCESS Array B	132.26	22	PKP	PKPdf	22 11 18.0	-0.6
	comp=Z,3.2nm,0.6s,baz=191,slow=2.0,SNR=20						
ARCES	ARCESS Array B	132.26	22	*e*PKIKP	PKPdf	22 11 18.3	-0.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GYA	Guiyang	134.07	112	PKP	PKiKP	22 11 26.3	+1.5
GYA				PP	PP	22 14 00.8	+6.2
GYA				AMB	AMB		
	comp=Z,130nm,7.8s						
BRVK	Borovoye	134.89	58	*c* *i*PKIKP	PKPdf	22 11 25.0	+1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CD2	Chengdu	136.23	106	PKP	PKPdf	22 11 27.0	-0.2
MKAR	Makanchi Array	136.52	72	PKhKP	PKPpre	22 11 19.9	
	comp=Z,0.6nm,0.7s,baz=259,slow=2.5,SNR=6.4						
MKAR				PKP	PKPdf	22 11 26.9	-0.3
	comp=Z,2.3nm,0.7s,baz=235,slow=1.3,SNR=14						
MKAR				PKKP	PKKPdf	22 21 03.5	-0.6
	comp=Z,0.7nm,0.8s,baz=46,slow=5.2,SNR=4.5						
MKAR	Makanchi Array	136.52	72	PKIKP	PKPdf	22 11 27.0	-0.3
KURK	Kurchatov	137.28	65	*e*PKPdf	PKPdf	22 11 28.6	+0.1
KURK	Kurchatov	137.28	65	*c* *i*PKIKP	PKPdf	22 11 30.1	+1.7
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WMQ	Urumqi	137.30	79	*e*PKP	PKPdf	22 11 29.5	+0.7
WMQ				LR	LR		
	comp=Z,400nm,25.1s						
WMQ				LR	LR		
	comp=Z,140nm,28.9s						
WMQ				LR	LR		
	comp=Z,140nm,29.3s						
YKA	Yellowknife Ar	138.16	316	PKhKP	PKPpre	22 11 19.0	
	comp=Z,1.2nm,0.7s,baz=122,slow=3.3,SNR=6.4						
YKA				PKP	PKPdf	22 11 29.9	+0.3
	comp=Z,10.0nm,0.8s,baz=131,slow=2.2,SNR=12						
YKA				SKPbc	SKPbc	22 15 00.4	+0.2
	comp=Z,0.9nm,0.6s,baz=132,slow=3.5,SNR=5.3						
YKA				SKPab	SKPab	22 15 14.1	+5.4
	comp=Z,3.1nm,0.8s,baz=125,slow=3.3,SNR=6.6						
LZH	Lanzhou	140.31	101	*e*PKP	PKiKP	22 11 37.3	0.0
GTA	Gaotai	140.64	94	PKP	PKPdf	22 11 35.0	-0.2
GTA				sPKP		22 11 59.0	
GTA				LR	LR		
	comp=Z,220nm,20.8s						
GTA				LR	LR		
	comp=Z,150nm,21.5s						
GTA				LR	LR		
	comp=Z,150nm,22.8s						
ZAA0	Zalesovo Array	142.27	65	*e*PKPpre	PKPpre	22 11 33.6	
ZALV	Zalesovo Beam	142.27	65	PKhKP	PKPpre	22 11 31.1	
	comp=Z,1.2nm,0.5s,baz=228,slow=3.0,SNR=8.8						
ZALV				PKP	PKPdf	22 11 38.4	+1.0
	comp=Z,2.5nm,0.6s,baz=237,slow=5.0,SNR=9.9						
ZAA1	Zalesovo Array	142.27	65	*e*PKPpre	PKPpre	22 11 31.1	
ZAA1				*e*PKPdf	PKPdf	22 11 38.4	+1.0
MIDW	Midway	144.48	226	*e*PKPdf	PKPab	22 11 41.8	+1.3
NJ2	Nanjing	144.56	121	*e*PKP	PKPdf	22 11 43.3	+1.1
TIY	Taiyuan	146.00	108	*e*PKPbc	PKPdf	22 11 45.0	+0.4
BTO	Baotou	146.91	102	*e*PKPbc	PKPdf	22 11 47.8	+1.7
TIA	Tai'an	147.16	115	PKPbc	PKPdf	22 11 48.5	+2.0
PCA	Pinnacle	147.56	302	*e*PKPbc	PKPbc	22 11 49.8	+0.5
HHC	Hu-ho-hao-te	147.89	103	PKPbc	PKPbc	22 11 50.8	+0.1
MOY	Mondy	149.17	78	*e*PKHKP	PKPpre	22 11 49.0	
MOY				pmax	pmax		
	comp=Z,57nm,2.7s						
BJT	Baijiatuau	149.64	109	*e*PKPbc	PKPbc	22 11 55.5	+0.4
BJT	Baijiatuau	149.64	109	*e*PKP2	PKPbc	22 11 55.5	+0.4
BJI	Beijing	149.66	109	PKPbc	PKPbc	22 11 55.0	-0.1
ZAK	Zakamensk	149.67	82	*e*PKP2	PKPbc	22 11 54.2	-0.7
ZAK				pmax	pmax		
	comp=Z,28nm,1.2s						
SONA0	Songino Array	149.83	88	*e*PKPbc	PKPbc	22 11 55.0	-0.5
SONM	Songino Array	149.83	88	PKP	PKPdf	22 11 50.5	-0.2
	comp=Z,6.6nm,0.7s,baz=227,slow=2.1,SNR=36						
SONM				PKPbc	PKPbc	22 11 55.0	-0.5
	comp=Z,21nm,0.8s,baz=228,slow=2.9,SNR=95						
TLY	Talaya	150.57	80	*e*PKPbc	PKPbc	22 11 56.9	-0.1
TLY	Talaya	150.57	80	*c* *i*PKIKP	PKPbc	22 11 56.8	-0.1
TLY				pmax	pmax		
	comp=Z,78nm,0.9s						
ILAR	Eielson Array	152.04	309	PKP	PKPdf	22 11 51.6	-1.7
	comp=Z,1.0nm,0.9s,baz=348,slow=2.7,SNR=5.9						
ILAR				PKPbc	PKPbc	22 11 59.6	-0.3
	comp=Z,30nm,0.8s,baz=133,slow=3.9,SNR=121						
ILAR				PKPab	sPKPdf	22 12 09.7	+0.6
	comp=Z,16nm,0.9s,baz=104,slow=3.8,SNR=11						
COLA	College	152.46	309	*e*PKPbc	PKPbc	22 12 00.9	+0.1
COLA				*e*PKPab	sPKPdf	22 12 11.6	+1.8
COLA	College	152.46	309	*e*PKIKP	PKPbc	22 12 00.9	+0.1
COLA				*e*		22 12 11.6	
KDAK	Kodiak Island	152.46	293	*e*PKPbc	PKPbc	22 12 01.1	+0.1
KDAK	Kodiak Island	152.46	293	*e*PKIKP	PKPbc	22 12 01.1	+0.1
KS15	Wonju Array Si	153.09	128	*e*PKPdf	PKPdf	22 11 56.8	+1.1
KSRS	Korea Array	153.11	128	PKPbc	PKPbc	22 12 02.5	-0.6
	comp=Z,3.6nm,0.7s,baz=200,slow=2.4,SNR=14						
KSRS				PKPab	PKPab	22 12 14.8	-0.1
	comp=Z,2.9nm,0.8s,baz=216,slow=4.4,SNR=8.1						
MAJO	Matsushiro	156.07	146	*e*PKPab	PKPab	22 12 27.3	-0.2
MAJO	Matsushiro	156.07	146	*e*PKP2	PKPab	22 12 27.3	-0.2
MJAR	Matsushiro Arr	156.07	146	PKPab	PKPab	22 12 27.3	-0.2
	comp=Z,2.1nm,0.8s,baz=181,slow=4.7,SNR=4.4						
USRK	Ussuriysk Ar.	160.40	124	PKPab	PKPab	22 12 45.5	-0.7
	comp=Z,3.5nm,0.8s,baz=225,slow=2.4,SNR=6.7						
PETK	Petropavlovsk-	174.92	202	PKP	PKPdf	22 12 14.1	-0.7
	comp=Z,3.5nm,0.9s,baz=116,slow=6.9,SNR=5.5						
PETK				PKPab	PKPab	22 13 50.5	+0.6
	comp=Z,4.0nm,0.7s,baz=128,slow=6.4,SNR=6.3						
PEA1	Petropavlovsk-	174.93	202	*e*PKPdf	PKPdf	22 12 14.1	-0.7
PEA1				*e*PKPab	PKPab	22 13 50.5	+0.6

SVSA 29 22:17:33.9±0.6, 37°.21N×23°.29W, h10^{km}, MD3.5, ML2.9, Error ellipse: s-maj=5.2km s-min=4.2km az=73.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	1.43	262	*e*P	Pn	22 17 55.2	-4.7
PSMN				*e*S	Sn	22 18 11.1	-7.7
PSMN				A	A	22 18 14.1	
	26nm,0.3s						
PSMA	Santa Maria	1.48	262	*e*P	Pn	22 17 56.2	-4.4
PSMA				*e*S	Sn	22 18 12.6	-7.5
PSMA				A	A	22 18 17.0	
	29nm,0.1s						
BART	Pico Bartolome	1.59	291	*e*P	Pn	22 17 57.5	-4.7
BART				*e*S	Sn	22 18 15.6	-7.3
BART				A	A	22 18 17.8	
	38nm,0.2s						
CMLA	Cha da Macela	1.86	288	*e*P	Pn	22 18 01.0	-4.8
CMLA				*e*S	Sn	22 18 21.6	-7.7
CMLA				A	A	22 18 25.8	
	52nm,0.2s						
PDA	Ponta Delgada	1.96	286	*e*S	Sn	22 18 24.0	-7.8
PDA				A	A	22 18 28.1	
	32nm,0.2s						

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*DJA **29** 22:22:40.1±1.2, 7°N±4°×9°3E±°, h37^{km}±22^{km}, M4.6/7, mB5.2/2, mb4.5/7, MLv4.7/7, Mw(mB)4.5/2*

*BJI **29** 22:22:43.7±0.0, 7°.22N×93°.53E, h42^{km}, mb4.6/43, mB4.7/30, Ms4.1/19, Ms7 4.0/11*

*NDI **29** 22:22:43.7±3.6, 7°.69N×94°.07E, h13^{km}±50^{km}, mb4.6, ML4.5, mb4.6(NEIC)*

*ISCJB **29** 22:22:46.4±0.6, 7°.54N±0°.03×93°.75E±0°.04, h41^{km}±6^{km}, mb4.5/58, MS3.9/7, Error ellipse: s-maj=7.5km s-min=5.1km az=148.0*

*IDC **29** 22:22:46.1±4.3, 7°.62N×93°.80E, h22^{km}±27^{km}, mb4.2/23, mb1 4.3/25, mb1mx4.2/42, mbtmp4.3/25, ML3.8/2, MS3.7/6, Ms1 3.7/6, ms1mx3.3/30, Error ellipse: s-maj=16.5km s-min=12.4km az=53.0*

*NEIC **29** 22:22:47.6±1.6, 7°.58N×93°.75E, h36^{km}±7^{km}, mb4.6/25, Error ellipse: s-maj=13.7km s-min=8.5km az=222.0*

ISC 29 22:22:47.3±0.6, **7°.50N**±0°.05×**93°.62E**±0°.05, **h35**^{km}±5^{km}, **n160**, σ1°.**78**/167, **mb4.5**/59, **MS3.9**/9, **3C-3D**, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.57	148	*e*P	Pn	22 22 57.8	-1.2
CMBY				*e*S	Sn	22 23 06.7	-0.5
CMBY				IAML		22 23 08.6	
	comp=E,18μm,0.4s						
CMBY				IAML		22 23 09.7	
	comp=N,29μm,0.4s						
LHMI	Lhok Sumawe	4.00	124	*e*Pn	Pn	22 23 46.8	+0.6
LHMI	Lhok Sumawe	4.00	124	P	Pn	22 23 48.5	+2.3
PBA	Port Blair	4.22	348	*e*Pn	Pn	22 23 47.8	-1.4
PBA	Port Blair	4.22	348	*e*P	Pn	22 23 45.7	-3.5
PBA				*e*S	Sn	22 24 31.4	-5.9
MLSI	Meulaboh, Aceh	4.24	139	P	Pn	22 23 49.7	+0.3
PKDT	Phuket	4.69	85	P	Pn	22 23 57.5	+1.9
DGPR	DIGLIPUR	5.68	353	*e*P	Pn	22 24 08.9	-0.4
DGPR				*e*x	x	22 25 01.5	
KCSI	Kotacane, Aceh	5.72	133	P	Pn	22 24 10.1	+0.3
TRTT	Trang	6.03	86	P	Pn	22 24 14.9	+0.9
	comp=N,80nm,0.9s,comp=N,992nmcomp=N,0.3nm						
SKLT	Songkhla	6.95	92	P	Pn	22 24 30.7	+4.0
	comp=N,14nm,0.8s,comp=N,394nmcomp=N,0.1nm						
PSI	Prapat	7.05	131	Pn	Pn	22 24 30.2	+2.0
	comp=N,3.3nm,0.3s,baz=310,slow=9.2,SNR=13						
PSI				LR	LR	22 27 40.6	
	comp=N,552nm,19.6s,baz=313,slow=42						
PSI	Prapat	7.05	131	*e*Pn	Pn	22 24 29.7	+1.5
PSI				*e*Sn	Sn	22 25 45.6	-1.6
GSI	Gunungsitoli	7.31	147	*e*Pn	Pn	22 24 31.9	+0.2
GSI	Gunungsitoli	7.31	147	P	Pn	22 24 27.3	-4.3
KULM	Kulim	7.32	107	*e*Pn	Pn	22 24 28.9	-2.9
IPM	Ipoh	7.95	112	*e*Pn	Pn	22 24 39.6	-0.9
BKNI	Bangkinang	10.27	134	*e*Pn	Pn	22 25 11.6	-0.7
PBKT	Sadao Pong	11.53	38	P	Pn	22 25 35.6	+6.1
	comp=N,5.6nm,0.6s,comp=N,481nm						
CM31	Chiang Mai Arr	12.06	25	*e*Pn	Pn	22 25 36.3	-0.5
CMAR	Chiang Mai Arr	12.06	25	Pn	Pn	22 25 39.2	+2.4
	comp=N,0.8nm,0.3s,baz=215,slow=14,SNR=38						
UTTA	Uttaradit	12.22	33	P	P	22 25 48.0	-3.0
UTTA	Uttaradit	12.22	33	P	P	22 25 48.0	-3.0
	comp=N,11μm,1.1s						
CHTO	Chiang Mai	12.38	24	*e*Pn	Pn	22 25 40.1	-1.1
CMMT	Chiang Mai	12.38	24	P	Pn	22 25 44.2	+3.0
CMMT	Chiang Mai	12.38	24	P	Pn	22 25 44.2	+3.0
	comp=N,5.3nm,2.0s						
PALK	Pallekele	12.81	270	Pn	Pn	22 25 51.5	+4.3
	comp=N,0.3nm,0.3s,baz=116,slow=12,SNR=3.6						
PALK				Sn	Sn	22 28 05.6	-3.1
	comp=N,0.9nm,0.3s,baz=116,slow=14,SNR=5.2						
PALK				LR	LR	22 30 29.9	
	comp=N,286nm,18.4s,baz=117,slow=36						
PALK	Pallekele	12.81	270	*e*Pn	Pn	22 25 49.5	+2.4
PALK				*e*Sn	Sn	22 28 05.6	-3.1
PAYA	Payao	13.26	27	P	Pn	22 25 56.4	+3.2
PAYA	Payao	13.26	27	P	Pn	22 25 56.4	+3.2
	comp=N,30μm,0.8s,comp=N,427μm						
NONG	Nongkai	14.01	41	P	P	22 26 12.3	+1.4
NONG	Nongkai	14.01	41	P	P	22 26 12.3	+1.4
	comp=N,0.2nm,0.9s,comp=N,177nm						
MDRS	Chennai	14.27	294	*e*P	P	22 26 11.6	-2.2
VIS	Vishakhapatnam	14.28	316	*i* P	Pn	22 26 06.8	-0.3
VIS				*i* x	x	22 28 28.0	
PANO	Nakornpanom	14.39	47	P	P	22 26 12.7	-2.4
PANO	Nakornpanom	14.39	47	P	P	22 26 12.7	-2.4
MDSI	Maura Dua	15.90	138	P	Pn	22 26 26.1	-2.4
AZL	Aizawl	16.17	357	*e*x	P	22 26 33.5	-1.4
HYB	Hyderabad	17.70	305	*i* P	P	22 26 54.0	+2.2
HYB				*e*		22 27 03.0	
HYB				*e*S	S	22 30 13.0	-0.9
HYB	Hyderabad	17.70	305	*e*P	P	22 26 51.9	0.0
BOK	Bokaro	17.82	336	*e*P	Pn	22 26 52.9	+0.2
SHL	Shillong	18.05	355	*e*P	Pn	22 26 52.3	-3.2
	comp=N,29nm,1.1s						
SHL	Shillong	18.05	355	*e*P	Pn	22 26 51.3	-4.2
KOHI	KOHIMA	18.13	1	*e*P	Pn	22 26 52.6	-3.9
KOHI				IAmb	IAmb	22 26 54.5	
	comp=Z,64nm,1.3s						
TEZP	TEZPUR	19.03	358	*e*x	P	22 27 01.3	-5.1
SBUM	Sibu	19.19	104	*e*P	P	22 27 05.5	-2.8
	comp=Z,8.3nm,1.1s						
KMI	Kunming	19.57	25	P	Pn	22 27 15.5	+1.4
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,100nm,8.4s						
KMI				LR	LR		
	comp=Z,160nm,12.1s						
KMI				LR	LR		
	comp=Z,170nm,11.3s						
ZIRO	ZIRO	19.92	1	*e*P	P	22 27 12.8	-3.6
LEM	Lembang	19.93	135	LR	LR	22 36 01.6	
	comp=Z,180nm,19.6s,baz=302,slow=40						
TAWA	Tawang	20.06	355	*e*P	P	22 27 15.9	-2.1
JIRN	Jiri	21.25	342	*e*P	P	22 27 31.1	+0.1
	comp=Z,24nm,0.5s						
PKI	Pulchoki	21.43	340	*e*P	P	22 27 32.5	-0.3
	comp=Z,46nm,0.8s						
PKIN	Phulchoki	21.44	340	*e*P	P	22 27 32.6	-0.2
	comp=Z,50nm,0.9s						
DMN	Daman	21.57	339	*e*P	P	22 27 34.5	+0.3
	comp=Z,53nm,0.8s						
KKN	Kakani	21.67	340	*e*P	P	22 27 34.8	-0.5
	comp=Z,49nm,0.8s						
BHPL	Bhopal	22.07	317	*e*P	P	22 27 41.6	+2.2
GKN	Gorkha	22.10	338	*e*P	P	22 27 40.0	+0.2
	comp=Z,20nm,0.3s						
LSA	Lhasa	22.21	354	*e*P	P	22 27 40.1	-1.3
	comp=Z,26nm,1.1s						
LSA	Lhasa	22.21	354	P	P	22 27 40.0	-1.3
LSA				pmax	pmax		
	comp=Z,50nm,0.7s						
KOLN	Koldanda	22.28	336	*e*P	P	22 27 42.4	+0.5
	comp=Z,142nm,1.1s						
DANN	Dangsing	22.74	337	*e*P	P	22 27 46.9	+0.1
	comp=Z,66nm,0.8s						
CD2	Chengdu	25.15	21	P	P	22 28 10.0	+0.6
CD2				S	S	22 32 32.5	+0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,190nm,12.3s						
CD2				LR	LR		
	comp=Z,270nm,9.4s						
H08S3	Diego Garcia H	25.88	235	T	T	22 55 05.9	
	baz=54,slow=75,SNR=1349						
H08S2	Diego Garcia H	25.89	235	T	T	22 55 11.8	
	baz=54,slow=75,SNR=996						
H08S1	Diego Carcia H	25.90	235	T	T	22 55 07.2	
	baz=54,slow=75,SNR=1186						
H08N1	Diego Carcia H	26.41	239	T	T	22 55 44.1	
	baz=46,slow=75,SNR=3.6						
H08N2	Diego Garcia H	26.41	239	T	T	22 55 46.0	
	baz=46,slow=75,SNR=7.7						
H08N3	Diego Garcia H	26.43	239	T	T	22 55 45.0	
	baz=46,slow=75,SNR=6.3						
TGY	Tagaytay City	27.60	74	LR	LR	22 38 51.9	
	comp=Z,73nm,19.3s,baz=178,slow=35						
SMLA	Simla	28.09	329	*e*P	P	22 28 36.8	+0.9
KAPI	Kappang	28.88	115	LR	LR	22 39 43.2	
	comp=Z,85nm,20.0s,baz=114,slow=35						
DHRM	DHARAMSHALA	29.43	329	*e*P	P	22 28 48.5	+0.5
DHRM				IAmb	IAmb	22 28 50.5	
	comp=Z,152nm,0.1s						
LZH	Lanzhou	29.95	17	*e*P	P	22 28 52.5	0.0
LZH				pP	sP	22 29 05.3	-1.5
LZH				sP	pP	22 29 09.5	+7.2
LZH				*e*S	S	22 33 41.3	-6.7
LZH				sS	sS	22 34 02.8	-1.8
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,87nm,4.6s						
LZH				LR	LR		
	comp=Z,1μm,12.2s						
LZH				LR	LR		
	comp=Z,1μm,13.8s						
LZH				LR	LR		
	comp=Z,1μm,15.4s						
XAN	Xi'an	29.95	26	*e*P	P	22 28 51.3	-1.1
	comp=Z,6.3nm,0.7s						
XAN	Xi'an	29.95	26	P	P	22 28 51.3	-1.1
XAN				pP	pP	22 29 01.5	-0.8
XAN				S	S	22 33 50.5	+2.6
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,72nm,3.1s						
XAN				LR	LR		
	comp=Z,180nm,17.3s						
XAN				LR	LR		
	comp=Z,120nm,14.1s						
XAN				LR	LR		
	comp=Z,180nm,14.7s						
NIL	Nilore	32.12	327	*e*P	P	22 29 12.0	+0.4
	comp=Z,32nm,0.6s						
GTA	Gaotai	32.26	9	P	P	22 29 13.0	+0.3
GTA				pP	pP	22 29 23.0	+0.3
GTA				sP	sP	22 29 27.3	+0.3
GTA				S	S	22 34 28.0	+4.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,39nm,7.7s						
NJ2	Nanjing	33.89	40	*e*P	P	22 29 26.8	-0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KBL	Kabul	35.16	323	*e*P	P	22 29 38.3	+0.1
	comp=Z,4.5nm,0.7s						
KSH	Kashi	35.60	336	P	P	22 29 40.3	-1.5
KSH				pP	pP	22 29 53.0	+1.1
KSH				S	S	22 35 08.5	-7.2
KSH				sS	sS	22 35 30.0	-2.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,50nm,4.5s						
KSH				LR	LR		
	comp=Z,71nm,5.4s						
KSH				LR	LR		
	comp=Z,78nm,9.8s						
WMQ	Urumqi	36.55	353	*e*P	P	22 29 50.3	+0.5
WMQ				pP	pP	22 29 58.3	-1.5
WMQ				sP	sP	22 30 10.0	+5.9
WMQ				LR	LR		
	comp=Z,77nm,24.1s						
WMQ				LR	LR		
	comp=Z,220nm,27.9s						
HHC	Hu-ho-hao-te	36.86	23	P	P	22 29 53.3	+0.8
HHC				pmax	pmax		
	comp=Z,9.0nm,5.7s						
HHC				LR	LR		
	comp=Z,86nm,14.2s						
HHC				LR	LR		
	comp=Z,110nm,17.1s						
GAR	Garm	37.73	330	*e*P	P	22 29 59.7	-0.3
	comp=Z,38nm,1.2s						
CHGR	Chuyangaron	38.07	328	*e*P	P	22 30 03.0	+0.3
	comp=Z,12nm,0.8s						
BJI	Beijing	38.18	28	*e*P	P	22 30 04.5	+1.0
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJI				LR	LR		
	comp=Z,100nm,9.6s						
BJI				LR	LR		
	comp=Z,98nm,15.9s						
BJI				LR	LR		
	comp=Z,300nm,45.1s						
AAK	Ala-Archa	38.85	337	P	P	22 30 09.6	+0.2
	comp=Z,6.3nm,0.7s,baz=147,slow=6.8,SNR=5.1						
AAK	Ala-Archa	38.85	337	*e*P	P	22 30 09.8	+0.5
	comp=Z,6.4nm,0.7s						
MK31	Makanchi Array	40.34	348	*e*P	P	22 30 20.4	-1.2
	comp=Z,4.4nm,1.1s						
MKAR	Makanchi Array	40.34	348	P	P	22 30 21.2	-0.3
	comp=Z,2.7nm,0.7s,baz=166,slow=8.0,SNR=14						
KK31	Karatay Array	40.87	334	*e*P	P	22 30 26.4	+0.4
	comp=Z,5.6nm,0.6s						
KKAR	Karatay Array	40.87	334	*e*P	P	22 30 26.4	+0.4
	comp=Z,5.6nm,0.6s						
SONA0	Songino Array	41.64	13	*e*P	P	22 30 31.9	-0.5
SONA0				*e*PcP	PcP	22 32 29.9	+1.1
SONA0				*e*ScP	ScP	22 36 17.7	+1.1
SONM	Songino Array	41.64	13	P	P	22 30 31.9	-0.5
	comp=Z,3.0nm,0.5s,baz=196,slow=8.5,SNR=26						
SONM				PcP	PcP	22 32 29.9	+1.1
	comp=Z,2.3nm,0.7s,baz=207,slow=3.4,SNR=8.1						
SONM				ScP	ScP	22 36 17.7	+1.1
	comp=Z,0.2nm,0.4s,baz=198,slow=2.9,SNR=3.6						
ULN	Ulaanbaatar	41.82	14	*e*P	P	22 30 33.4	-0.4
	comp=Z,3.1nm,0.6s						
KSRS	Korea Array	43.08	41	P	P	22 30 43.5	-0.6
	comp=Z,0.4nm,0.3s,baz=234,slow=10,SNR=4.3						
GEYT	Alibeck	44.14	319	P	P	22 30 54.9	+2.3
	comp=Z,72nm,0.3s,baz=157,slow=8.8,SNR=0.5						
GYA0B	ALIBECK ARRAY	44.14	319	*e*P	P	22 30 53.0	+0.4
	comp=Z,8.6nm,0.7s						
KURBB	Kurchatov Arra	44.78	346	P	P	22 30 57.8	+0.3
	comp=Z,4.1nm,0.7s,baz=167,slow=7.3,SNR=22						
KURBB				PcP	PcP	22 32 40.1	+1.0
	comp=Z,3.0nm,1.0s,baz=163,slow=2.9,SNR=8.9						
TLY	Talaya	44.82	9	P	P	22 30 55.4	-2.4
	comp=Z,5.7nm,0.7s,baz=95,slow=12,SNR=3.0						
KURK	Kurchatov	44.85	347	*e*P	P	22 30 58.4	+0.3
	comp=Z,5.1nm,0.8s						
ZAA0	Zalesovo Array	46.86	353	*e*P	P	22 31 13.9	0.0
	comp=Z,14nm,0.9s						
ZALV	Zalesovo Beam	46.86	353	P	P	22 31 13.9	+0.1
	comp=Z,6.8nm,0.3s,baz=173,slow=8.6,SNR=47						
WRA	Warramunga Arr	48.47	125	P	P	22 31 26.0	-0.8
	comp=Z,2.5nm,0.8s,baz=292,slow=10.0,SNR=11						
WR1	Warramunga Arr	48.47	125	*e*P	P	22 31 26.0	-0.9
RAYN	Ar Rayn	48.77	295	*e*P	P	22 31 31.5	+2.2
	comp=Z,4.3nm,0.8s						
BRVK	Borovoye	49.24	342	*e*P	P	22 31 31.8	-0.5
	comp=Z,2.9nm,0.8s						
USRK	Ussuriysk Ar.	49.52	36	P	P	22 31 34.3	-0.3
	comp=Z,1.5nm,0.7s,baz=237,slow=8.1,SNR=3.9						
ASAR	Alice Springs	50.07	129	P	P	22 31 38.2	-0.9
	comp=Z,1.6nm,0.8s,baz=309,slow=7.3,SNR=14						
ASAR				PcP	PcP	22 32 58.9	+0.2
	comp=Z,1.0nm,0.8s,baz=311,slow=5.0,SNR=4.5						
ARU	Arti	56.03	337	*e*P	P	22 32 21.3	-1.2
	comp=Z,10.0nm,0.9s						
KMBO	Kilima Mbogo	56.87	264	P	P	22 32 31.1	+1.7
	comp=Z,0.9nm,0.7s,baz=53,slow=20,SNR=1.9						
STKA	Stephens Creek	60.22	133	P	P	22 32 52.2	0.0
	comp=Z,0.9nm,0.5s,baz=0.0,slow=14,SNR=2.2						
BRTR	Keskin Array B	62.28	311	P	P	22 33 06.1	-0.2
	comp=Z,1.2nm,0.7s,baz=126,slow=8.8,SNR=10						
MA2	Magadan	67.33	28	P	P	22 33 38.8	+0.2
	comp=Z,11nm,0.8s,baz=228,slow=4.5,SNR=5.4						
AKASG	Malin Array Be	68.13	322	P	P	22 33 42.9	-0.9
	comp=Z,0.2nm,0.3s,baz=88,slow=4.1,SNR=6.1						
VRI	Vrincioaia	68.61	316	⇑*i*P	P	22 33 47.3	+0.3
PLOR	Plostina	68.66	316	⇓*i*P	P	22 33 48.4	+1.1
TESR	Tescani	68.80	317	⇑*i*P	P	22 33 48.0	-0.1
MLR	Muntele Rosu	69.08	316	*e*P	P	22 33 50.6	+0.6
	comp=Z,7.4nm,1.1s						
MLR	Muntele Rosu	69.08	316	⇑*i*P	P	22 33 51.0	+1.0
SEY	Seymchan	69.48	25	P	P	22 33 51.6	-0.4
	comp=Z,2.1nm,0.2s,baz=221,slow=6.5,SNR=4.6						
PLVB	Pleven	69.65	313	⇓*i*P	P	22 33 54.2	+0.8
VOIR		69.69	316	⇓*i*P	P	22 33 54.2	+0.5
LVZ	Lovozero	71.73	340	*e*P	P	22 34 05.3	-0.3
	comp=Z,12nm,0.7s						
FIA0	FINESS Array S	72.80	332	*e*P	P	22 34 12.4	+0.3
FINES	FINESS Array B	72.80	332	P	P	22 34 12.4	+0.3
	comp=Z,4.0nm,0.8s,baz=104,slow=8.0,SNR=18						
VYHS	Vyhne	74.34	318	*e*P	P	22 34 22.0	+0.6
OKC	Ostrava-Krasne	74.94	320	*e*P	P	22 34 26.5	+1.6

OKC				*e*pP	**pP**	**22 34 35.3**	**-0.5**
BOSA	**Boshof**	**74.95**	**238**	P	**P**	**22 34 28.2**	**+2.7**
	comp=Z,5.2nm,0.8s,baz=45,slow=17,SNR=2.6						
ARCES	**ARCESS Array B**	**75.44**	**340**	P	**P**	**22 34 28.1**	**+0.7**
	comp=Z,5.5nm,0.8s,baz=109,slow=6.4,SNR=14						
DPC	**Dobruska-Polom**	**76.16**	**320**	*e*P	**P**	**22 34 33.2**	**+1.3**
DPC				*e*pP	**pP**	**22 34 42.0**	**-0.8**
OSTC	**Ostas**	**76.25**	**320**	*e*P	**P**	**22 34 33.4**	**+1.0**
OSTC				*e*x	x	22 34 42.9	
CHVC	**Chvalec**	**76.35**	**320**	*e*P	**P**	**22 34 33.8**	**+0.8**
CHVC				*e*x	x	22 34 43.5	
PRU	**Pruhonice**	**77.28**	**319**	*e*P	**P**	**22 34 38.9**	**+0.8**
PRU				*e*pP	**pP**	**22 34 49.0**	**-0.1**
BRG	**Berggiesshubel**	**77.71**	**320**	*e*P	**P**	**22 34 39.8**	**-0.7**
	comp=Z,3.2nm,1.1s						
GEC2	**GERESS Array S**	**77.76**	**318**	*e*P	**P**	**22 34 39.9**	**-1.2**
	comp=Z,4.6nm,0.9s						
GERES	**GERESS Array B**	**77.76**	**318**	P	**P**	**22 34 41.9**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=91,slow=5.6,SNR=13						
KHC	**Kasperske Hory**	**77.86**	**319**	*e*P	**P**	**22 34 42.0**	**+0.5**
KHC				*e*pP	**PcP**	**22 34 50.6**	**-0.7**
CLL	**Collm**	**78.32**	**321**	*e*P	**P**	**22 34 44.0**	**+0.1**
WTTA	**Wattenberg**	**79.10**	**317**	*i* P	**P**	**22 34 48.4**	**-0.2**
	comp=Z,10nm,1.4s						
WATA	**Walderalm**	**79.14**	**317**	*i* P	**P**	**22 34 49.0**	**+0.3**
	comp=Z,2.6nm,0.8s						
SQTA	**Sankt Quirin**	**79.39**	**317**	*i* P	**P**	**22 34 50.0**	**-0.1**
	comp=Z,6.3nm,0.9s						
MOTA	**Moosalm**	**79.46**	**317**	*i* P	**P**	**22 34 50.6**	**+0.1**
	comp=Z,4.7nm,0.9s						
RETA	**Reutte**	**79.70**	**317**	*i* P	**P**	**22 34 51.4**	**-0.2**
	comp=Z,5.1nm,0.8s						
FETA	**Feichten**	**79.72**	**316**	*i* P	**P**	**22 34 52.2**	**+0.3**
	comp=Z,5.5nm,1.0s						
NB2	**NORSAR Subarra**	**79.80**	**331**	P	**P**	**22 34 51.4**	**-0.5**
	comp=Z,4.6nm,1.0s,baz=96,slow=5.1						
NB200	**NORSAR Array S**	**79.80**	**331**	*e*P	**P**	**22 34 51.2**	**-0.7**
NOA	**NORSAR Array B**	**79.80**	**331**	P	**P**	**22 34 51.2**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=92,slow=5.6,SNR=6.5						
DAVA	**Damuels**	**80.30**	**317**	*i* P	**P**	**22 34 54.7**	**-0.4**
	comp=Z,6.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**90.18**	**283**	P	**P**	**22 35 47.2**	**+2.3**
	comp=Z,0.8nm,0.9s,baz=98,slow=3.0,SNR=3.7						
TOA1	**Torodi Ar. Sit**	**90.18**	**283**	*e*P	**P**	**22 35 47.2**	**+2.3**
ESDC	**Sonseca Array**	**91.06**	**310**	P	**P**	**22 35 50.0**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=57,slow=4.4,SNR=8.0						
SKT	**Skwentna**	**94.73**	**25**	*e*P	**P**	**22 36 05.3**	**+0.4**
	comp=Z,3.7nm,1.0s						
ILAR	**Eielson Array**	**95.28**	**22**	LR	LR	23 22 48.9	
	comp=Z,128nm,20.1s,baz=109,slow=38						
SUA	**Susitna One**	**95.29**	**26**	*e*P	**P**	**22 36 07.3**	**-0.4**
	comp=Z,5.5nm,0.9s						
NV01	**Mina Array Sit**	**125.50**	**31**	*e*PKPdf	**PKiKP**	**22 41 46.7**	**+0.7**
NVAR	**Mina Array Bea**	**125.50**	**31**	PKP	**PKiKP**	**22 41 46.7**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=285,slow=1.6,SNR=4.9						
PDAR	**Pinedale Array**	**125.70**	**21**	PKP	**PKPdf**	**22 41 46.0**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=90,slow=0.7,SNR=7.6						
TXAR	**Lajitas Array**	**139.78**	**24**	PKP	**PKiKP**	**22 42 14.0**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=235,slow=3.2,SNR=4.7						
CPUP	**Villa Florida**	**146.63**	**232**	PKPbc	**PKPab**	**22 42 27.2**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=142,slow=1.1,SNR=3.5						
CPUP	**Villa Florida**	**146.63**	**232**	*e*PKPbc	**PKPbc**	**22 42 25.8**	**-0.3**

MAN 29 22:29:06.8, 7°.58N×125°.12E, h20^{km}, mb5.2, ML4.2, MS4.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.30**	**349**	*e*P	Pb	22 29 14.6	+1.0
BUKP				*e*S	Sn	22 29 23.4	+1.3
KCP	**Kidapawan**	**0.57**	**183**	⇑*i*P	Pb	22 29 18.4	+0.3
KCP				*i* S	Sn	22 29 35.9	+7.3
CGP	**Cagayan de Oro**	**0.97**	**334**	*e*P	Pb	22 29 24.3	-0.6
CGP				*e*S	Sn	22 29 39.0	+0.6

*IDC **29** 22:29:28.4±1.2, 38°.51S×75°.48W, h0^{km}, mb4.1/5, mb1 4.2/6, mb1mx4.0/20, mbtmp4.0/6, ML3.4/2, MS3.2/2, Ms1 3.2/2, ms1mx3.0/17, Error ellipse: s-maj=33.8km s-min=23.0km az=82.0*

*ISCJB **29** 22:29:31.8±1.1, 38°.5S±0°.1×75°.4W±0°.2, h33^{km}, mb3.9/5, Error ellipse: s-maj=23.9km s-min=15.7km az=158.8*

ISC 29 22:29:33.8±1.2, 38°.5S±0°.1×75°.4W±0°.2, h35^{km}, n7, σ1^{s}12/7, mb4.0/5, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**4.36**	**123**	Pn	**Pn**	**22 30 38.6**	**+1.0**
	0.2nm,0.3s,baz=326,slow=15,SNR=3.1						
PLCA				Sn	Sn	22 31 36.2	+8.9
	1.2nm,0.3s,baz=29,slow=13,SNR=7.4						
PLCA				LR	LR	22 32 12.0	
	comp=Z,157nm,21.4s,baz=356,slow=37						
CPUP	**Villa Florida**	**19.41**	**57**	P	**Pn**	**22 33 57.5**	**-0.7**
	0.1nm,0.3s,baz=277,slow=18,SNR=2.4						
CPUP				LR	LR	22 41 55.2	
	comp=Z,151nm,18.6s,baz=201,slow=38						
LPAZ	**La Paz**	**22.98**	**18**	P	**P**	**22 34 35.5**	**-0.6**
	1.1nm,0.3s,baz=175,slow=8.7,SNR=3.5						
SIV	**San Ignacio**	**25.67**	**33**	P	**P**	**22 35 00.2**	**-0.4**
	2.8nm,0.7s,baz=218,slow=9.9,SNR=19						
PMSA	**Palmer Station**	**27.19**	**169**	P	**P**	**22 35 12.2**	**-1.6**
	1.6nm,0.3s,baz=340,slow=16,SNR=7.6						
TXAR	**Lajitas Array**	**72.43**	**334**	P	**P**	**22 40 57.2**	**+0.7**
	0.7nm,0.7s,baz=158,slow=8.0,SNR=8.1						
PDAR	**Pinedale Array**	**86.60**	**336**	P	**P**	**22 42 13.9**	**+0.5**
	1.2nm,1.0s,baz=138,slow=5.4,SNR=4.8						

GUC 29 22:29:43.4±0.7, 32°.27S×71°.69W, h31^{km}±10^{km}, ML2.5, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEL	**Peldehue**	**1.21**	**136**	*e*P	Pb	22 30 05.6	-0.1
PEL				*e*S	Sb	22 30 22.9	+1.8
PEL				IAML		22 30 26.1	
	comp=N,175nm,0.3s						
CO02	**Combarbal**	**1.22**	**29**	⇓*i*P	Pb	22 30 06.2	+0.3
CO02				*e*S	Sb	22 30 23.1	+1.8
FCH	**Farellones**	**1.58**	**132**	⇓*i*P	Pb	22 30 11.9	-0.2
FCH				*e*S	Sb	22 30 33.5	+1.7
FCH				IAML		22 30 37.2	
	comp=E,68nm,0.2s						
LMEL	**Las Melosas**	**2.00**	**142**	*e*P	Pb	22 30 17.6	-1.7
LMEL				*e*S	Sb	22 30 44.2	+0.3
LMEL				IAML		22 30 52.7	
	comp=E,95nm,0.2s						
GO04	**Tololo Observa**	**2.23**	**20**	⇓*i*P	Pn	22 30 20.4	+2.0
GO04				*e*S	Sb	22 30 49.6	-0.8

*ISCJB **29** 22:55:29.3±2.3, 46°.8N±0°.1×141°.7E±0°.2, h9^{km}, Error ellipse: s-maj=21.9km s-min=6.4km az=136.7*

*JMA **29** 22:55:29.4±0.5, 46°.79N×141°.59E, h0^{km}, M3.4*

*SKHL **29** 22:55:30.0±0.5, 46°.71N×141°.76E, h10^{km}, mb4.3/3*

SKHL Felt (III) at Nevel'sk.

ISC 29 22:55:30.0±2.5, 46°.8N±0°.1×141°.7E±0°.1, h9^{km}, n4, σ0^{s}33/7, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.76**	**74**	⇑*e*Pg	**Pg**	**22 55 44.6**	**-0.1**
YSS				AMB	AMB	22 55 46.7	
	120nm,0.3s						
YSS				*e*Sg	**Sg**	**22 55 54.8**	**+0.2**
YSS				A	A	22 55 55.6	
	250nm,0.3s						
YSS				A	A	22 55 55.6	
	310nm,0.3s						
YSS				AMS	AMS	22 56 12.1	
	400nm,10.0s						
JRBN	**Rebuntou**	**1.40**	**198**	P	**Pn**	**22 55 55.8**	**+0.2**
JRBN				*e*S	**Sg**	**22 56 14.7**	**-0.2**
JWK2	**Keihoku**	**1.45**	**174**	P	**Pb**	**22 55 57.2**	**+0.1**
JWK2				*e*S	**Sg**	**22 56 16.8**	**+0.3**
JSE	**Soyaes**	**1.90**	**160**	P	**Pb**	**22 56 04.4**	**-0.4**

MEX 29 22:55:30.1±0.6, 15°.16N×92°.86W, h86^{km}±7^{km}, MD3.5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.62**	**114**	*i* P	Pn	22 55 43.3	-2.1
THIG				*e*S	Sn	22 55 55.8	-1.1
PCIG		**0.64**	**327**	*e*P	Pn	22 55 44.3	-1.4
PCIG				*e*S	Sn	22 55 55.4	-1.9
CCIG	**Comitan**	**1.31**	**32**	*e*P	Pn	22 55 52.3	-1.2
CCIG				*i* S	Sn	22 56 09.5	-1.5
TGIG		**1.63**	**351**	*i* P	Pn	22 55 56.1	-1.3
TGIG				*e*S	Sn	22 56 17.0	-1.1
CMIG	**Matias Romero**	**2.73**	**315**	*i* P	Pn	22 56 11.7	-0.3
CMIG				*i* S	Sn	22 56 42.7	-1.5

*NIED **29** 22:56:00, 23°.70N×126°.20E, h5^{km}, Mw4.5 Best double couple: $M_0$6.80000×10^{15} NP1:ϕ_s35.00000°, δ29.00000°, λ-147.00000°. NP2:ϕ_s275.00000°, δ74.00000°, λ-65.00000°.*

*IDC **29** 22:56:05.6±0.5, 23°.39N×126°.33E, h0^{km}, mb4.4/21, mb1 4.6/25, mb1mx4.5/35, mbtmp4.4/25, ML4.4/3, MS3.7/23, Ms1 3.7/23, ms1mx3.5/46, Error ellipse: s-maj=17.5km s-min=12.6km az=88.0*

*ISCJB **29** 22:56:06.3±1.0, 23°.50N±0°.03×126°.38E±0°.03, h15^{km}±6^{km}, mb4.7/71, MS3.8/28, Error ellipse: s-maj=5.1km s-min=3.6km az=152.3*

*NEIC **29** 22:56:06.6±2.5, 23°.37N×126°.33E, h10^{km}±1^{km}, mb4.7/42, Error ellipse: s-maj=11.9km s-min=7.6km az=136.0*

*MOS **29** 22:56:07.6±1.1, 23°.41N×126°.29E, h21^{km}, mb4.9/26, Error ellipse: s-maj=8.8km s-min=5.7km az=114.6*

*BJI **29** 22:56:07.3±0.0, 23°.57N×126°.17E, h7^{km}, mb4.6/55, mB4.6/36, Ms4.1/43, Ms7 3.9/35*

*JMA **29** 22:56:09.5±0.2, 23°.74N×126°.19E, h131^{km}±4^{km}, M4.4*

ISC 29 22:56:08.2±1.8, 23°.39N±0°.04×126°.37E±0°.04, h17^{km}±12^{km}, n223, σ1^{s}95/254, mb4.6/71, MS3.8/29, 26C-7D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.62**	**327**	P	**Pn**	**22 56 35.2**	**-0.8**
JOGS				S	**Sn**	**22 56 54.1**	**-2.5**
JMJ2	**Miyako jima3**	**1.65**	**325**	P	**Pn**	**22 56 35.4**	**-1.0**
JMJ2				S	**Sn**	**22 56 55.0**	**-2.2**
JIRB	**Irabujima**	**1.80**	**323**	P	**Pn**	**22 56 37.3**	**-1.2**
JIRB				*e*S	**Sn**	**22 56 58.3**	**-2.7**
JIKM	**Ikemajima**	**1.84**	**326**	P	**Pn**	**22 56 37.5**	**-1.5**
JIKM				*e*S	**Sn**	**22 56 59.5**	**-2.4**
JTJ	**Tarama**	**1.97**	**310**	P	**Pn**	**22 56 39.6**	**-1.2**
JTJ				S	**Sn**	**22 57 01.5**	**-3.6**
JISG	**Ishigakijimahi**	**2.23**	**303**	P	**Pn**	**22 56 43.1**	**-1.3**
JISG				*e*S	**Sn**	**22 57 09.1**	**-2.4**
JIJ	**Ishigaki jima**	**2.26**	**296**	P	**Pn**	**22 56 43.5**	**-1.3**
JIJ				S	**Sn**	**22 57 08.1**	**-4.1**
JKRS	**Kuro-shima**	**2.32**	**292**	P	**Pn**	**22 56 44.6**	**-1.0**
JKRS				S	**Sn**	**22 57 10.7**	**-3.1**
HATJ	**Hateruma jima**	**2.44**	**286**	P	**Pn**	**22 56 46.0**	**-1.3**
HATJ				S	**Sn**	**22 57 12.8**	**-4.0**
IRIF	**Iriomote-Funau**	**2.59**	**292**	P	**Pn**	**22 56 48.2**	**-1.2**
IRIF				S	**Sn**	**22 57 16.4**	**-4.1**
JKE	**Kume jima 2**	**2.95**	**7**	P	**Pn**	**22 56 52.4**	**-1.9**
JKE				S	**Sn**	**22 57 24.5**	**-4.7**
JJT3	**Tamagusuku3**	**3.03**	**25**	P	**Pn**	**22 56 53.6**	**-1.8**
JJT3				S	**Sn**	**22 57 27.2**	**-4.0**
YOJ	**Yonaguni jima**	**3.25**	**290**	*e*Pn	**Pn**	**22 56 57.4**	**-1.1**
YOJ	**Yonaguni jima**	**3.25**	**290**	*e*P	**Pn**	**22 56 57.4**	**-1.1**
YOJ	**Yonaguni jima**	**3.25**	**290**	P	**Pn**	**22 56 57.3**	**-1.1**
YOJ				*e*S	**Sn**	**22 57 31.8**	**-5.0**
JAGN	**Aguni-jima**	**3.28**	**14**	P	**Pn**	**22 56 57.1**	**-1.8**
JAGN				*e*S	**Sn**	**22 57 33.1**	**-4.4**
JYNG	**Yonagunijimaku**	**3.31**	**289**	P	**Pn**	**22 56 57.9**	**-1.3**
JYNG				S	**Sn**	**22 57 32.7**	**-5.4**
JNTH	**Nagotoyohara**	**3.46**	**25**	P	**Pn**	**22 56 59.0**	**-2.3**
JNTH				S	**Sn**	**22 57 36.4**	**-5.4**
JOW	**Kunigami**	**3.84**	**26**	Pn	**Pn**	**22 57 04.9**	**-1.6**
	24nm,0.3s,baz=184,slow=14,SNR=301						
JOW				Sn	**Sn**	**22 57 47.2**	**-4.0**
	22nm,0.3s,baz=80,slow=22,SNR=5.5						
JOW	**Kunigami**	**3.84**	**26**	*e*Pn	**Pn**	**22 57 04.5**	**-2.0**
JOW				*e*Sn	**Sn**	**22 57 47.2**	**-4.0**
JOW	**Kunigami**	**3.84**	**26**	P	**Pn**	**22 57 04.2**	**-2.3**
JOW				*e*S	**Sn**	**22 57 46.0**	**-5.2**
JIH	**Iheya**	**3.91**	**21**	P	**Pn**	**22 57 05.6**	**-1.8**
JIH				*e*S	**Sn**	**22 57 46.9**	**-6.0**
JYRO	**Yoronjima**	**4.08**	**27**	P	**Pn**	**22 57 07.5**	**-2.3**
JYRO				*e*S	**Sn**	**22 57 53.2**	**-4.0**
JOKE	**Okinoerabujima**	**4.43**	**26**	P	**Pn**	**22 57 12.6**	**-2.0**
JOKE				S	**Sn**	**22 57 59.6**	**-6.2**
NACB	**Ninganchiao**	**4.44**	**281**	*e*Pn	**Pn**	**22 57 12.7**	**-2.2**
YULB	**Yu-li**	**4.66**	**271**	*e*Pn	**Pn**	**22 57 14.5**	**-3.3**
YULB				*e*Sn	Sn	22 58 04.0	-7.6
TATO	**Taipei**	**4.73**	**290**	*e*Pn	**Pn**	**22 57 18.2**	**-0.6**
YHNB	**Yeheng**	**4.74**	**287**	*e*Pn	**Pn**	**22 57 18.4**	**-0.6**
TWG	**Pinlang**	**4.91**	**264**	*e*Pn	**Pn**	**22 57 17.6**	**-3.7**
TWG				*e*Sn	Sn	22 58 09.1	-8.6
JTK	**Tokunoshima**	**4.96**	**27**	P	**Pn**	**22 57 19.6**	**-2.3**
JTK				S	**Sn**	**22 58 13.1**	**-5.8**
SSLB	**Suanglung**	**4.99**	**276**	*e*Pn	**Pn**	**22 57 19.9**	**-2.4**
JMZ	**Minamidaito 2**	**5.03**	**60**	P	Pn	22 57 18.7	-4.2
JMZ				*e*S	Sn	22 58 12.2	-8.5
JKDJ	**Kitadaitoujima**	**5.16**	**59**	P	Pn	22 57 20.6	-4.0
JKDJ				*e*S	Sn	22 58 15.0	-8.7
TPUB	**Ta-pu**	**5.28**	**270**	*e*Pn	**Pn**	**22 57 24.2**	**-2.2**
KNMB	**Chin-men Tao**	**7.38**	**280**	*e*Pn	**Pn**	**22 57 52.4**	**-2.8**
JNU	**Nakatsue**	**10.48**	**21**	Pn	**Pn**	**22 58 36.0**	**-1.7**
	12nm,0.3s,baz=297,slow=2.1,SNR=61						
JNU				Sn	**Sn**	**23 00 30.2**	**-4.5**
	2.3nm,0.3s,baz=318,slow=18,SNR=6.8						
JNU				LR	LR	23 03 26.0	
	comp=Z,270nm,18.7s,baz=187,slow=42						
JNU	**Nakatsue**	**10.48**	**21**	*e*Pn	**Pn**	**22 58 35.7**	**-2.0**
JNU				*e*Sn	**Sn**	**23 00 32.1**	**-2.6**
TGY	**Tagaytay City**	**10.57**	**210**	LR	LR	23 02 48.7	
	comp=Z,301nm,19.9s,baz=0.5,slow=38						
NJ2	**Nanjing**	**10.89**	**324**	*e*P	**Pn**	**22 58 44.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,12nm,0.8s						
TJN	**Taejon**	**12.97**	**4**	*ce*P	**Pn**	**22 59 10.9**	**-0.9**
KS15	**Wonju Array Si**	**14.07**	**5**	*e*Pn	**Pn**	**22 59 25.6**	**-1.1**
KSRS	**Korea Array**	**14.08**	**5**	Pn	**Pn**	**22 59 25.6**	**-1.3**
	0.4nm,0.3s,baz=181,slow=13,SNR=19						
KSRS				LR	LR	23 05 02.4	
	comp=Z,221nm,19.7s,baz=188,slow=38						
JHJ2	**Mitsune**	**15.29**	**48**	*e*Pn	**Pn**	**22 59 41.0**	**-2.3**
	295nm,1.1s						
DL2	**Dalian**	**15.99**	**346**	*e*P	**P**	**22 59 54.3**	**-1.4**
DL2				*e*S	**Sn**	**23 02 53.5**	**+4.4**
DL2				pmax	pmax		
	comp=Z,50nm,1.0s						
DL2				pmax	pmax		
	comp=Z,140nm,4.1s						
DL2				LR	LR		
	comp=N,300nm,18.6s						
DL2				LR	LR		
	comp=E,440nm,14.7s						
DL2				LR	LR		
	comp=Z,320nm,13.3s						
DAV	**Davao City (W)**	**16.25**	**183**	LR	LR	23 05 26.4	
	comp=Z,308nm,21.9s,baz=8.5,slow=34						
ENH	**Enshi**	**16.55**	**298**	*e*P	**P**	**23 00 01.3**	**-0.8**
	10nm,0.9s						
MAJO	**Matsushiro**	**16.62**	**35**	*e*P	**P**	**23 00 02.2**	**-0.6**
	20nm,0.8s						
MAJO	**Matsushiro**	**16.62**	**35**	*e*P	**P**	**23 00 02.3**	**-0.6**
MAT	**Matsushiro**	**16.62**	**35**	P	**Pn**	**23 00 00.6**	**+0.1**
MAT				S	**S**	**23 03 14.0**	**-1.9**
MJAR	**Matsushiro Arr**	**16.62**	**35**	Pn	**P**	**23 00 02.2**	**-0.6**
	0.1nm,0.3s,baz=225,slow=12,SNR=8.5						
MJB9	**Matsu-Tunnel**	**16.62**	**35**	*e*P	**P**	**23 00 02.3**	**-0.6**
	20nm,0.8s						
GYA	**Guiyang**	**18.13**	**284**	⇓*i*P	**P**	**23 00 23.0**	**+3.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,140nm,5.0s						
SNY	**Shenyang**	**18.53**	**353**	⇑P	**Pn**	**23 00 24.8**	**+0.7**
SNY				S	**Sn**	**23 03 51.3**	**+0.5**
SNY				pmax	pmax		
	comp=Z,14nm,0.8s						
SNY				pmax	pmax		
	comp=Z,230nm,3.5s						
SNY				LR	LR		
	comp=N,300nm,17.5s						
SNY				LR	LR		
	comp=E,210nm,15.5s						
SNY				LR	LR		
	comp=Z,460nm,20.2s						
XAN	**Xi'an**	**18.60**	**309**	*e*P	**P**	**23 00 23.7**	**-1.0**
	10.0nm,0.7s						
XAN	**Xi'an**	**18.60**	**309**	*e*P	**P**	**23 00 23.7**	**-1.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI	**Beijing**	**18.70**	**335**	*e*P	**Pn**	**23 00 28.0**	**+1.8**
BJI				S	**Sn**	**23 03 55.0**	**0.0**
BJI				LR	LR		
	comp=Z,500nm,14.6s						
BJI				LR	LR		
	comp=Z,300nm,15.7s						
BJI				LR	LR		
	comp=Z,360nm,17.2s						
CN2	**Changchun**	**20.37**	**358**	*e*P	**P**	**23 00 40.0**	**-4.0**
CN2				*e*S	S	23 04 10.0	-22
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,17.0s						
CN2				LR	LR		
	comp=E,200nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,21.4s						
USA0B	**Ussuriysk Arra**	**21.27**	**11**	*e*P	**P**	**23 00 54.0**	**+0.5**
	comp=Z,18nm,1.0s						
USA0B	**Ussuriysk Arra**	**21.27**	**11**	*e*P	**P**	**23 00 54.1**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,18nm,1.0s						
USRK	**Ussuriysk Ar.**	**21.27**	**11**	P	**P**	**23 00 54.6**	**+1.1**
	comp=Z,11nm,0.8s,baz=198,slow=10,SNR=26						
USRK				LR	LR	23 08 47.5	
	comp=Z,117nm,21.2s,baz=149,slow=36						
PANO	**Nakornpanom**	**21.32**	**257**	P	**P**	**23 00 57.2**	**+2.8**
	comp=Z,1.1nm,1.3s						
MDJ	**Mudanjiang**	**21.34**	**6**	P	**P**	**23 00 57.5**	**+3.1**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,22nm,3.3s						
MDJ				LR	LR		
	comp=Z,140nm,6.7s						
MDJ				LR	LR		
	comp=Z,350nm,13.2s						
HHC	**Hu-ho-hao-te**	**21.40**	**328**	P	**P**	**23 00 56.5**	**+1.3**
HHC				S	**S**	**23 04 55.0**	**+2.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				LR	LR		
	comp=Z,390nm,16.9s						
HHC				LR	LR		
	comp=Z,530nm,17.1s						
CD2	**Chengdu**	**21.45**	**295**	P	**P**	**23 00 56.3**	**+0.6**
CD2				S	**S**	**23 04 54.5**	**+1.3**
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
CD2				LR	LR		
	comp=Z,290nm,9.2s						
CD2				LR	LR		
	comp=Z,390nm,9.2s						
KMI	**Kunming**	**21.61**	**279**	*e*P	**P**	**23 00 59.5**	**+1.8**
	comp=Z,20nm,0.8s						
KMI	**Kunming**	**21.61**	**279**	P	**P**	**23 00 59.5**	**+1.8**
KMI				sP	sP	23 01 02.5	0.0
KMI				PP	**PnPn**	**23 01 22.3**	**+3.9**
KMI				S	**S**	**23 04 51.3**	**-5.5**
KMI				sS	Sn	23 04 59.0	-6.6
KMI				pmax	pmax		
	comp=Z,26nm,1.1s						
KMI				pmax	pmax		
	comp=Z,140nm,5.1s						
KMI				LR	LR		
	comp=Z,200nm,13.2s						
KMI				LR	LR		
	comp=Z,200nm,13.7s						
KMI				LR	LR		
	comp=Z,170nm,10.7s						
KMI	**Kunming**	**21.61**	**279**	*e*P	**P**	**23 00 59.5**	**+1.8**
KMI				pmax	pmax		
	comp=Z,20nm,0.8s						
NONG	**Nongkai**	**22.35**	**261**	P	**P**	**23 01 07.8**	**+2.3**
	comp=Z,1.4nm,1.3s,comp=Z,85nm						
LZH	**Lanzhou**	**23.23**	**308**	*e*P	**P**	**23 01 16.0**	**+1.2**
LZH				pP	pP	23 01 18.5	+0.4
LZH				sP	sP	23 01 20.3	+0.6
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				LR	LR		
	comp=Z,390nm,14.9s						
LZH				LR	LR		
	comp=Z,180nm,14.1s						
LZH				LR	LR		
	comp=Z,290nm,14.6s						
CHAI	**Chaiyaphum**	**24.12**	**256**	P	**P**	**23 01 24.1**	**+0.8**
	comp=Z,25µm,0.6s						
SIJI	**Sorong**	**24.58**	**168**	LR	LR	23 09 15.4	
	comp=Z,277nm,21.2s,baz=342,slow=32						
PBKT	**Sadao Pong**	**24.79**	**259**	P	**P**	**23 01 30.6**	**+1.2**
	comp=Z,15nm,1.1s						
UTTA	**Uttaradit**	**24.80**	**262**	P	**P**	**23 01 30.4**	**+0.9**
	comp=Z,15µm,0.8s						
SBUM	**Sibu**	**24.92**	**215**	*e*P	**P**	**23 01 31.2**	**+0.6**
	comp=Z,13nm,0.8s						
SANI	**Sanana**	**25.29**	**181**	P	**P**	**23 01 34.1**	**+0.2**
CMMT	**Chiang Mai**	**25.97**	**265**	P	**P**	**23 01 41.0**	**+0.9**
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**25.97**	**265**	*e*P	**P**	**23 01 40.5**	**+0.4**
	comp=Z,20nm,1.1s						
CHTO	**Chiang Mai**	**25.97**	**265**	*e*P	**P**	**23 01 40.5**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						
CM31	**Chiang Mai Arr**	**26.06**	**264**	*e*P	**P**	**23 01 41.6**	**+0.6**
	comp=Z,10nm,0.8s						
CMAR	**Chiang Mai Arr**	**26.06**	**264**	P	**P**	**23 01 42.0**	**+1.0**
	comp=Z,6.3nm,0.9s,baz=61,slow=8.2,SNR=24						
CMAR				LR	LR	23 12 46.8	
	comp=Z,81nm,18.6s,baz=132,slow=38						
KLR	**Kul'dur**	**26.14**	**8**	P	**P**	**23 01 42.2**	**+0.9**
	comp=Z,16nm,0.8s,baz=206,slow=5.9,SNR=48						
KLR				LR	LR	23 12 53.4	
	comp=Z,104nm,18.5s,baz=190,slow=38						
KLR	**Kul'dur**	**26.14**	**8**	*i* P	**P**	**23 01 42.6**	**+1.3**
KLR				pmax	pmax		
	comp=Z,16nm,0.9s						
YSS	**Yuzh-Sakhalins**	**26.95**	**25**	*e*P	**P**	**23 01 52.4**	**+3.7**
YSS				*e*		23 01 56.6	
YSS				*e*		23 02 03.4	
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
MHMT	**Maesarieng**	**27.07**	**264**	P	**P**	**23 01 52.9**	**+2.9**
	comp=Z,33nm,1.0s						
GTA	**Gaotai**	**27.59**	**312**	P	**P**	**23 01 54.5**	**-0.2**
GTA				pP	pP	23 01 57.8	-0.5
GTA				sP	sP	23 02 00.8	+1.0
GTA				pmax	pmax		
	comp=Z,12nm,1.4s						
GTA				pmax	pmax		
	comp=Z,56nm,4.4s						
GTA				LR	LR		
	comp=Z,100nm,13.3s						
GTA				LR	LR		
	comp=Z,150nm,12.3s						
GTA				LR	LR		
	comp=Z,180nm,13.3s						
ULN	**Ulaanbaatar**	**28.87**	**333**	*e*P	**P**	**23 02 04.1**	**-2.0**
	comp=Z,3.3nm,0.8s						
ULN	**Ulaanbaatar**	**28.87**	**333**	*e*P	**P**	**23 02 04.1**	**-2.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KAPI	**Kappang**	**28.96**	**194**	LR	LR	23 13 17.9	
	comp=Z,134nm,20.5s,baz=104,slow=36						
SONA0	**Songino Array**	**29.13**	**332**	*e*P	**P**	**23 02 07.4**	**-0.9**
SONA0				*e*PcP	**PcP**	**23 05 16.4**	**+0.6**
SONM	**Songino Array**	**29.13**	**332**	P	**P**	**23 02 07.4**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=146,slow=9.0,SNR=8.9						
SONM				PcP	**PcP**	**23 05 16.4**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=176,slow=4.5,SNR=4.0						
SONM				LR	LR	23 15 22.2	
	comp=Z,464nm,18.7s,baz=168,slow=40						
SHL	**Shillong**	**31.41**	**281**	*e*P	**P**	**23 02 28.1**	**-0.7**
	comp=Z,26nm,1.1s						

SHL	Shillong	31.41	281	eP	P	23 02 28.1	-0.7
SHL				pmax	pmax		
	comp=Z,26nm,1.1s						
SHL	Shillong	31.41	281	eP	P	23 02 31.0	+2.2
LSA	Lhasa	32.04	289	eP	P	23 02 34.5	-0.2
	comp=Z,18nm,0.8s						
LSA	Lhasa	32.04	289	P	P	23 02 36.0	+1.3
LSA	Lhasa	32.04	289	eP	P	23 02 34.5	-0.2
LSA				pmax	pmax		
	comp=Z,18nm,0.8s						
PSI	Prapat	33.53	236	eP	P	23 02 46.8	-0.6
	comp=Z,24nm,1.0s						
PSI	Prapat	33.53	236	eP	P	23 02 46.8	-0.6
PSI				pmax	pmax		
	comp=Z,24nm,1.0s						
MTN	Manton Dam	36.31	172	eP	P	23 03 10.8	-0.3
	comp=Z,15nm,1.0s						
JIRN	Jiri	36.40	285	eP	P	23 03 13.2	+0.9
	comp=Z,74nm,1.1s						
GUN	Gumba	36.66	286	eP	P	23 03 16.3	+1.7
PKI	Pulchoki	37.09	285	eP	P	23 03 18.4	+0.2
PKIN	Phulchoki	37.10	285	eP	P	23 03 18.3	0.0
KKN	Kakani	37.20	286	eP	P	23 03 19.3	+0.3
DMN	Daman	37.36	285	eP	P	23 03 20.6	+0.2
	comp=Z,9.5nm,0.6s						
WMQ	Urumqi	37.67	312	eP	P	23 03 24.5	+1.9
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.9s						
WMQ				LR	LR		
	comp=Z,160nm,21.5s						
WMQ				LR	LR		
	comp=Z,96nm,18.9s						
WMQ				LR	LR		
	comp=Z,220nm,17.5s						
GKN	Gorkha	37.76	286	eP	P	23 03 23.6	0.0
	comp=Z,19nm,0.6s						
PETK	Petropavlovsk-	37.99	31	P	P	23 03 25.9	+0.7
	comp=Z,5.4nm,0.9s,baz=222,slow=2.0,SNR=9.3						
PETK				LR	LR	23 18 13.8	
	comp=Z,209nm,21.9s,baz=128,slow=35						
PEA1	Petropavlovsk-	37.99	31	eP	P	23 03 25.9	+0.7
PET	Petropavlovsk	38.39	31	eP	P	23 03 30.9	+2.5
PET				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DANN	Dangsing	38.51	287	eP	P	23 03 31.0	+0.8
KOLN	Koldanda	38.68	286	eP	P	23 03 31.9	+0.4
	comp=Z,46nm,1.1s						
DGZ	Jazzator, Alta	40.16	321	i P	P	23 03 42.5	-1.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK32	Makanchi Array	42.24	315	ePcP	PcP	23 05 53.9	-0.4
MKAR	Makanchi Array	42.24	315	P	P	23 04 01.1	+0.6
	comp=Z,16nm,0.8s,baz=100,slow=10,SNR=124						
MKAR				PcP	PcP	23 05 53.9	-0.4
	comp=Z,0.5nm,0.6s,baz=96,slow=5.8,SNR=1.8						
MAKZ	Makanchi	42.45	315	eP	P	23 04 02.9	+0.7
	comp=Z,33nm,0.8s						
MAKZ	Makanchi	42.45	315	eP	P	23 04 02.9	+0.7
MAKZ				pmax	pmax		
	comp=Z,33nm,0.8s						
SEY	Seymchan	43.22	17	i P	P	23 04 10.8	+2.7
ZALV	Zalesovo Beam	43.55	325	P	P	23 04 11.0	+0.1
	comp=Z,12nm,0.5s,baz=111,slow=8.1,SNR=52						
ZAA1	Zalesovo Array	43.55	325	eP	P	23 04 11.0	+0.1
WRAB	Tennant Creek	43.76	169	ceP	P	23 04 24.8	+12
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WR1	Warramunga Arr	43.77	169	eP	P	23 04 12.8	-0.2
WR1				ePcP	PcP	23 05 59.6	-0.1
WRA	Warramunga Arr	43.77	169	P	P	23 04 12.8	-0.2
	comp=Z,13nm,0.7s,baz=349,slow=11,SNR=36						
WRA				PcP	PcP	23 05 59.6	-0.1
	comp=Z,2.1nm,0.7s,baz=328,slow=3.0,SNR=3.6						
KSH	Kashi	45.31	303	P	P	23 04 28.8	+3.3
KSH				S	S	23 11 10.3	+4.8
KSH				ScS	ScS	23 14 22.8	+1.0
KSH				pmax	pmax		
	comp=Z,24nm,1.7s						
KSH				pmax	pmax		
	comp=Z,52nm,4.6s						
KSH				LR	LR		
	comp=Z,50nm,7.5s						
KSH				LR	LR		
	comp=Z,120nm,8.3s						
KSH				LR	LR		
	comp=Z,110nm,17.9s						
KURK	Kurchatov	45.78	319	eP	P	23 04 28.9	+0.2
	comp=Z,16nm,1.0s						
KURK	Kurchatov	45.78	319	ceP	P	23 04 29.2	+0.4
KURK				pmax	pmax		
	comp=Z,32nm,1.7s						
PALK	Pallekele	46.64	257	LR	LR	23 27 15.4	
	comp=Z,28nm,18.1s,baz=115,slow=40						
NIL	Nilore	47.34	295	eP	P	23 04 38.4	-2.9
NIL	Nilore	47.34	295	eP	P	23 04 38.4	-2.9
AS31	Alice Springs	47.34	171	eP	P	23 04 40.5	-0.9
	comp=Z,2.1nm,0.4s						
AS31				ePcP	PcP	23 06 10.5	-1.6
ASAR	Alice Springs	47.34	171	P	P	23 04 41.5	+0.2
	comp=Z,2.5nm,0.5s,baz=358,slow=6.7,SNR=34						
ASAR				PcP	PcP	23 06 11.9	-0.2
	comp=Z,1.9nm,0.7s,baz=1.6,slow=3.0,SNR=7.4						
KKAR	Karatay Array	49.73	307	P	P	23 05 01.8	+2.2
KKAR				pmax	pmax		
	comp=Z,43nm,0.8s						
KBL	Kabul	50.78	296	eP	P	23 05 06.5	-1.5
	comp=Z,21nm,1.0s						
KBL	Kabul	50.78	296	eP	P	23 05 06.5	-1.5
KBL				pmax	pmax		
	comp=Z,21nm,1.0s						
BILL	Bilibino	50.88	18	ceP	P	23 05 08.8	+0.9
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRVK	Borovoye	51.38	320	eP	P	23 05 11.8	-0.1
	comp=Z,14nm,1.0s						
BRVK	Borovoye	51.38	320	ceP	P	23 05 12.6	+0.7
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
STKA	Stephens Creek	56.85	165	P	P	23 05 51.8	-0.1
	comp=Z,1.4nm,0.6s,baz=354,slow=6.0,SNR=5.4						
STKA				LR	LR	23 31 37.7	
	comp=Z,36nm,20.1s,baz=21,slow=38						
SVE	Sverdlovsk	57.50	324	eP	P	23 05 56.2	-0.1
SVE				pmax	pmax		
	comp=Z,15nm,0.9s						
SVE				MLR	MLR		
	comp=Z,176nm,17.0s						
ARU	Arti	58.60	323	eP	P	23 06 02.7	-1.3
	comp=Z,6.2nm,0.6s						
ARU	Arti	58.60	323	d iP	P	23 06 04.3	+0.3
ARU						23 08 09.1	
ARU				S	S	23 14 02.3	-4.9
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GEYT	Alibeck	59.28	301	P	P	23 06 09.2	+0.1
	comp=Z,54nm,0.5s,baz=80,slow=1.6,SNR=4.9						
GEYT				LR	LR	23 34 26.7	
	comp=Z,37nm,18.1s,baz=100,slow=39						
KIRV	Kirov	63.58	325	LR	LR	23 36 39.0	
	comp=Z,107nm,18.4s,baz=201,slow=38						
PRGR	Permogore	65.33	329	eP	P	23 06 48.3	-0.8
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ILAR	Eielson Array	67.73	28	P	P	23 07 04.5	0.0
	comp=Z,0.7nm,0.8s,baz=261,slow=6.1,SNR=11						
KLMR	Klimovskoe	68.35	328	eP	P	23 07 07.4	-1.0
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
GNI	Garni	69.14	306	LR	LR	23 40 23.1	
	comp=Z,23nm,18.8s,baz=106,slow=38						
ZEI	Tsey	69.16	309	eP	P	23 07 13.5	-0.6
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
KBZ	Khabaz	69.66	310	P	P	23 07 16.6	-0.2
	comp=Z,8.4nm,0.9s,baz=118,slow=2.4,SNR=9.8						
KIV	Kislovodsk	69.75	310	eP	P	23 07 18.2	+0.6
KIV				pmax	pmax		
	comp=Z,49nm,1.1s						
KIV				MLR	MLR		
	comp=Z,163nm,17.0s						
NEY	Neytrino	69.89	309	i P	P	23 07 19.5	+0.9
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	72.02	339	P	P	23 07 30.5	-0.3
	comp=Z,2.6nm,0.9s,baz=69,slow=6.6,SNR=7.6						
ARCES				LR	LR	23 42 33.8	
	comp=Z,67nm,21.8s,baz=116,slow=39						
FIA0	FINESS Array S	74.50	331	eP	P	23 07 45.6	+0.2
FIA0	FINESS Array S	74.50	331	eP	P	23 07 45.7	+0.2
FINES	FINESS Array B	74.50	331	P	P	23 07 45.6	+0.2
	comp=Z,3.3nm,0.8s,baz=73,slow=6.4,SNR=12						
FINES				LR	LR	23 43 58.7	
	comp=Z,114nm,19.9s,baz=69,slow=39						
AKASG	Malin Array Be	76.59	320	P	P	23 07 57.2	-0.5
	comp=Z,0.5nm,0.5s,baz=56,slow=6.5,SNR=10						
AKASG				LR	LR	23 45 28.6	
	comp=Z,46nm,19.0s,baz=235,slow=39						
BR101	Keskin Array S	77.44	308	eP	P	23 08 03.0	0.0
BR131	Keskin Array S	77.44	308	eP	P	23 08 03.3	+0.4
	comp=Z,8.1nm,1.0s						
BR131	Keskin Array S	77.44	308	eP	P	23 08 03.3	+0.4
BR131				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRTR	Keskin Array B	77.44	308	P	P	23 08 03.0	0.0
	comp=Z,5.0nm,1.0s,baz=108,slow=4.0,SNR=23						
BRTR	Keskin Array B	77.44	308	ceP	P	23 08 03.2	+0.3
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MMAI	Mount Meron Ar	78.40	301	LR	LR	23 47 51.4	
	comp=Z,40nm,18.9s,baz=240,slow=40						
SUW	Suwalki	78.76	324	eP	P	23 08 10.1	+0.3
SUW	Suwalki	78.76	324	eP	P	23 08 10.1	+0.3
CFR	Carcaliu	79.28	315	⇑iP	P	23 08 12.7	-0.1
CFR	Carcaliu	79.28	315	⇑P	P	23 08 12.7	-0.1
HARR	Harsova	79.60	314	⇑iP	P	23 08 14.0	-0.5
HARR	Harsova	79.60	314	⇑P	P	23 08 14.0	-0.5
TESR	Tescani	79.73	316	⇑iP	P	23 08 15.4	+0.2
BIZ	Bicaz	79.90	317	⇑iP	P	23 08 16.5	+0.3
VRI	Vrincioaia	79.93	316	⇓iP	P	23 08 17.5	+1.1
VRI	Vrincioaia	79.93	316	⇓P	P	23 08 17.5	+1.1
BURAR	Bucovina Array	80.19	318	⇑iP	P	23 08 18.4	+0.6
BURAR	Bucovina Array	80.19	318	⇑P	P	23 08 18.4	+0.6
OZUR		80.44	316	⇑iP	P	23 08 19.0	-0.1
MLR	Muntele Rosu	80.58	315	⇑iP	P	23 08 20.4	+0.4
MLR	Muntele Rosu	80.58	315	⇑P	P	23 08 20.4	+0.4
JMIC	Jan Mayen	80.77	346	LR	LR	23 47 52.6	
	comp=Z,40nm,19.5s,baz=65,slow=38						
NC405	NORSAR Array S	80.85	333	eP	P	23 08 19.9	-1.1
	comp=Z,8.4nm,0.8s						
INCR	INCERC-Sediu C	80.86	314	⇓iP	P	23 08 25.5	+4.2
KWP	Kalwaria Pacla	80.86	320	eP	P	23 08 22.1	+0.8
KWP	Kalwaria Pacla	80.86	320	eP	P	23 08 22.1	+0.8
NB2	NORSAR Subarra	81.10	334	P	P	23 08 21.5	-0.9
	comp=Z,0.7nm,0.5s,baz=54,slow=5.3						
NOA	NORSAR Array B	81.10	334	P	P	23 08 22.1	-0.3
	comp=Z,2.1nm,0.9s,baz=56,slow=5.2,SNR=10						
NOA				LR	LR	23 48 15.7	
	comp=Z,104nm,18.9s,baz=55,slow=39						
VOIR		81.18	316	⇑iP	P	23 08 22.9	-0.3
VOIR		81.18	316	⇑P	P	23 08 22.9	-0.3
KOLS	Kolonicke sedl	81.42	320	eP	P	23 08 24.5	+0.2
KOLS	Kolonicke sedl	81.42	320	eP	P	23 08 24.5	+0.2
ARR	Arges	81.48	316	⇑iP	P	23 08 25.5	+0.8
HUMR	Humele	81.60	315	⇑iP	P	23 08 25.0	-0.3
TRPA	Tarpa	81.61	319	⇑iP	P	23 08 25.9	+0.7
YKW3	Yellowknife Ar	81.76	24	eP	P	23 08 26.3	+0.6
	comp=Z,6.4nm,1.0s						
YKA	Yellowknife Ar	81.80	24	P	P	23 08 26.7	+0.7
	comp=Z,4.0nm,0.8s,baz=302,slow=5.0,SNR=16						
YKB5	Yellowknife Ar	81.80	24	eP	P	23 08 26.7	+0.7
LOT	Lotru	82.00	316	⇑iP	P	23 08 28.1	+0.6
DRGR		82.08	318	⇑iP	P	23 08 28.5	+0.6
DRGR		82.08	318	⇑P	P	23 08 28.5	+0.6
OJC	Ojcow	82.29	322	eP	P	23 08 29.2	+0.4
OJC	Ojcow	82.29	322	eP	P	23 08 29.2	+0.4
VTS	Vitosha	83.56	314	⇓iP	P	23 08 36.1	+0.4
VTS	Vitosha	83.56	314	⇓P	P	23 08 36.1	+0.4
VYHS	Vyhne	83.65	320	eP	P	23 08 36.2	+0.3
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	Vyhne	83.65	320	eP	P	23 08 36.2	+0.3
KSP	Ksiaz	83.96	323	eP	P	23 08 38.7	+1.3
KSP	Ksiaz	83.96	323	eP	P	23 08 38.7	+1.3
DPC	Dobruska-Polom	84.19	323	eP	P	23 08 40.0	+1.3
DPC	Dobruska-Polom	84.19	323	eP	P	23 08 40.0	+1.3
BRG	Berggiesshubel	85.22	324	eP	P	23 08 44.1	+0.3
	comp=Z,4.1nm,1.1s						
BRG	Berggiesshubel	85.22	324	eP	P	23 08 44.1	+0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CLL	Collm	85.50	325	i P	P	23 08 45.4	+0.3
CLL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CLL	Collm	85.50	325	i P	P	23 08 45.4	+0.3
	comp=Z,6.0nm,1.2s						
CLL				LmV		23 51 00.0	
	comp=Z,100nm,18.4s						
KHC	Kasperske Hory	86.34	323	eP	P	23 08 49.8	+0.4
KHC	Kasperske Hory	86.34	323	eP	P	23 08 49.8	+0.4
GEC2	GERESS Array S	86.42	322	eP	P	23 08 50.0	+0.1
	comp=Z,2.7nm,1.1s						
GEC2	GERESS Array S	86.42	322	eP	P	23 08 50.1	+0.1
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GERES	GERESS Array B	86.42	322	P	P	23 08 50.0	+0.1
	comp=Z,0.6nm,0.6s,baz=23,slow=4.5,SNR=5.4						
KMBO	Kilima Mbogo	89.63	269	P	P	23 09 06.1	0.0
	comp=Z,4.1nm,1.0s,baz=46,slow=9.3,SNR=6.6						
KMBO	Kilima Mbogo	89.63	269	i P	P	23 09 05.8	-0.3
KMBO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FFC	Flin Flon	91.87	26	eP	P	23 09 14.9	-0.5
	comp=Z,90nm,0.9s						
FFC	Flin Flon	91.87	26	eP	P	23 09 14.9	-0.5
MFID	Camas Ranch	92.40	40	eP	P	23 09 17.8	-0.4
	comp=Z,4.9nm,1.0s						
NV01	Mina Array Sit	93.69	45	eP	P	23 09 25.6	+1.2
NVAR	Mina Array Bea	93.69	45	P	P	23 09 25.6	+1.2
	comp=Z,1.9nm,0.9s,baz=284,slow=4.4,SNR=10						

ISCJB ***29*** *23:00:32.9±0.3, 20°.40S±0°.02×69°.20W±0°.06, h120*^{km}*±4*^{km}*, mb4.1/4, Error ellipse: s-maj=8.8km s-min=3.7km az=179.4*

NEIC ***29*** *23:00:33.0±0.0, 20°.38S×69°.13W, h100*^{km}*, mb3.9/4, ML4.1(GUC), After GUC.*

GUC ***29*** *23:00:33.6±0.7, 20°.38S×69°.14W, h99*^{km}*±3*^{km}*, ML4.1*

IDC ***29*** *23:00:34.8±1.8, 20°.38S×68°.92W, h118*^{km}*±15*^{km}*, mb3.8/6, mb1 3.8/10, mb1mx3.6/30, mbtmp4.2/10, Error ellipse: s-maj=35.3km s-min=14.7km az=108.0*

VAO ***29*** *23:00:46.9±0.5, 21°.63S×68°.79W, h167*^{km}*, mb4.0*

ISC 29 23:00:33.0±0.7**, 20°.39S**±0°.03×**69°.13W**±0°.06**, h106**^{km}±6^{km}**, n69, σ1^{s}.59**/83**, mb4.1**/4**, 3C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.25	355	eP	Pn	23 00 48.8	+0.2
PB08				eS	Sn	23 01 00.2	0.0
PB08	IPOC Station P	0.25	355	eP	Pn	23 00 48.9	+0.2
PB08				i S	Sn	23 00 60.0	-0.2
PB08				IAML		23 01 01.3	
	comp=E,14μm,0.2s						
GO01	Chusmiza	0.72	355	ePn	Pn	23 00 52.1	+0.4
GO01	Chusmiza	0.72	355	eP	Pn	23 00 52.1	+0.4
GO01				i S	Sn	23 01 06.0	+0.2
PB01	IPOC Station P	0.73	207	ePn	Pn	23 00 52.1	+0.8
PB01	IPOC Station P	0.73	207	eP	Pn	23 00 51.9	+0.6
PB01				i S	Sn	23 01 05.8	+0.8
PB01				IAML		23 01 07.5	
	comp=E,8μm,0.3s						
PB11	IPOC Station P	0.80	322	ePn	Pn	23 00 52.6	+0.6
PB11	IPOC Station P	0.80	322	eP	Pn	23 00 52.7	+0.6
PB11				eS	Sn	23 01 06.7	+0.4
PB11	IPOC Station P	0.80	322	eP	Pn	23 00 52.5	+0.4
PB11				i S	Sn	23 01 06.8	+0.4
PB02	IPOC Station P	1.17	218	eP	Pn	23 00 57.2	+1.5
PB02				eS	Sn	23 01 13.8	+0.8
PB02	IPOC Station P	1.17	218	eP	Pn	23 00 57.0	+1.2
PB02				i S	Sn	23 01 14.5	+1.5
PSGC	Pisagua	1.22	310	eP	Pn	23 00 57.0	+0.6
PSGC				i S	Sn	23 01 14.6	+0.5
PSGCX	Pisagua	1.22	310	eP	Pn	23 00 57.4	+1.0
MNMC	Minye Minye	1.33	341	ePn	Pn	23 00 59.1	+1.3
MNMC	Minye Minye	1.33	341	eP	Pn	23 00 58.9	+1.0
MNMC				i S	Sn	23 01 18.2	+1.6
MNMCX	Minye Minye	1.33	341	eP	Pn	23 00 59.5	+1.6
PB09	IPOC Station P	1.40	184	eP	Pn	23 01 00.4	+1.8
PB09	IPOC Station P	1.40	184	eP	Pn	23 00 59.8	+1.2
PB09				i S	Sn	23 01 19.6	+1.7
PB07	IPOC Station P	1.50	208	eP	Pn	23 01 01.3	+1.5
PB07	IPOC Station P	1.50	208	eP	Pn	23 01 00.7	+0.9
PB07				i S	Sn	23 01 21.1	+1.1
PB07				IAML		23 01 28.4	
	comp=E,3μm,0.3s						
PB03	IPOC Station P	1.75	199	eP	Pn	23 01 04.2	+1.4
PB03	IPOC Station P	1.75	199	eP	Pn	23 01 03.7	+1.0
PB03				i S	Sn	23 01 26.2	+0.9
PB03				IAML		23 01 33.6	
	comp=E,2μm,0.6s						
PB16	IPOC Station P	2.08	350	eP	Pn	23 01 09.6	+2.3
PB16	IPOC Station P	2.08	350	⇑iP	Pn	23 01 09.4	+2.0
PB16				eS	Sn	23 01 36.2	+2.6
PB12	IPOC Station P	2.10	327	eP	Pn	23 01 08.5	+1.3
PB12	IPOC Station P	2.10	327	⇑iP	Pn	23 01 07.8	+0.6
PB12				eS	Sn	23 01 34.5	+1.2
PB12				IAML		23 01 42.9	
	comp=E,1μm,0.4s						
PB04	IPOC Station P	2.15	206	ePn	Pn	23 01 09.5	+1.6
PB04				eSn	Sn	23 01 30.9	-3.7
PB04	IPOC Station P	2.15	206	eP	Pn	23 01 09.7	+1.8
PB04	IPOC Station P	2.15	206	eP	Pn	23 01 09.3	+1.4
PB04				i S	Sn	23 01 36.4	+1.9
PB04				IAML		23 01 48.5	
	comp=N,1μm,0.3s						
LVC	Limon Verde	2.21	175	P	Pn	23 01 11.6	+2.7
	comp=N,49nm,0.3s,baz=31,slow=9.4,SNR=310						
LVC				S	Sn	23 01 37.7	+1.3
	comp=N,84nm,0.3s,baz=328,slow=17,SNR=26						
LVC	Limon Verde	2.21	175	ePn	Pn	23 01 11.5	+2.6
LVC	Limon Verde	2.21	175	eP	Pn	23 01 11.9	+3.0
LVC				IAML		23 01 43.8	
	comp=Z,386nm,0.4s						
LVC	Limon Verde	2.21	175	eP	Pn	23 01 11.1	+2.2
LVC				eS	Sn	23 01 35.9	-0.4
PB06	IPOC Station P	2.34	190	eP	Pn	23 01 12.5	+2.2
PB06	IPOC Station P	2.34	190	⇑iP	Pn	23 01 11.8	+1.5
PB06				eS	Sn	23 01 39.0	+0.2
PB06				IAML		23 01 45.6	
	comp=E,1μm,0.4s						
PB15	IPOC Station P	2.82	186	eP	Pn	23 01 19.4	+2.8
PB10	IPOC Station P	3.37	203	ePn	Pn	23 01 24.0	+0.2
YJA	Yavi	3.81	118	eP	Pn	23 01 34.0	+3.9
LPAZ	La Paz	4.19	13	P	Pn	23 01 38.2	+2.8
	comp=E,10nm,0.3s,baz=187,slow=7.4,SNR=188						
LPAZ	La Paz	4.19	13	ePn	Pn	23 01 38.5	+3.1
GO02	Mina Guanaco	4.76	185	ePn	Pn	23 01 43.8	+0.9
GO03	Copiap	7.24	188	ePn	Pn	23 02 14.1	-2.1
LCO	Las Campanas	8.70	189	ePn	Pn	23 02 34.7	-1.4
SIV	San Ignacio	8.82	62	P	Pn	23 02 35.6	-2.2
	comp=E,4.1nm,0.3s,baz=257,slow=14,SNR=50						
CPUP	Villa Florida	12.34	121	P	Pn	23 03 24.5	-0.5
	comp=E,0.2nm,0.3s,baz=306,slow=11,SNR=6.4						
CPUP	Villa Florida	12.34	121	ePn	Pn	23 03 24.1	-0.9
PTGB	Pitanga	16.34	108	eP	P	23 04 19.5	+2.3
FRTB	Fartura	18.40	103	eP	Pn	23 04 42.4	+1.2
FRTB				eS	S	23 08 01.1	-3.6
GO06	Curarrehue	19.23	185	eP	P	23 04 48.3	-0.6
	comp=E,5.8nm,0.8s						
PLCA	Paso Flores	20.31	183	P	Pn	23 05 02.4	-1.1
	comp=E,4.1nm,0.8s,baz=27,slow=12,SNR=9.6						
PLCA	Paso Flores	20.31	183	eP	P	23 05 00.9	+0.3
	comp=E,6.0nm,0.9s						
BDFB	Brasilia	20.63	80	P	P	23 05 03.5	-0.6
	comp=E,3.9nm,0.5s,baz=250,slow=11,SNR=6.0						
BDFB	Brasilia	20.63	80	eP	P	23 05 03.5	-0.6
BDFB				eP	Pn	23 05 04.1	-3.4
PTGA	Pitinga	21.50	26	P	P	23 05 11.4	-2.0
	comp=E,3.8nm,0.4s,baz=316,slow=22,SNR=9.3						
PTGA	Pitinga	21.50	26	eP	P	23 05 11.6	-1.9
	comp=E,4.7nm,0.4s						
PTGA	Pitinga	21.50	26	eP	P	23 05 32.9	+19
PMSA	Palmer Station	44.49	177	P	P	23 08 32.5	-0.8
	comp=E,0.7nm,0.3s,baz=7.1,slow=8.1,SNR=6.6						
DBIC	Dimbokro	68.62	74	P	P	23 11 24.9	-0.3
	comp=E,3.4nm,0.8s,baz=206,slow=7.9,SNR=7.3						
TOA1	Torodi Ar. Sit	77.18	71	eP	P	23 12 15.4	-0.3
TORD	Torodi Ar. Bea	77.18	71	P	P	23 12 15.4	-0.3
	comp=E,1.7nm,0.5s,baz=257,slow=5.3,SNR=30						
H11S2	WAKE ISLAND Hy	127.53	278	T	T	01 39 19.5	
	baz=101,slow=74,SNR=38						
H11S1	WAKE ISLAND Hy	127.53	278	T	T	01 39 18.5	
	baz=101,slow=74,SNR=40						
H11S3	WAKE ISLAND Hy	127.54	278	T	T	01 39 19.1	
	baz=101,slow=74,SNR=46						
H11N3	WAKE ISLAND Hy	127.58	280	T	T	01 39 23.2	
	baz=102,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	127.59	280	T	T	01 39 24.4	
	baz=102,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	127.59	280	T	T	01 39 28.1	
	baz=102,slow=75,SNR=12						
MK32	Makanchi Array	144.86	35	ePKPbc	PKPdf	23 19 58.4	+0.9
MKAR	Makanchi Array	144.86	35	PKP	PKPdf	23 19 58.4	+0.8
	comp=E,2.1nm,1.2s,baz=298,slow=3.6,SNR=3.4						
LZH	Lanzhou	163.19	20	ePKP	PKPdf	23 20 22.8	-0.7
LZH				pPKP	pPKPdf	23 20 49.0	-4.6
LZH				sPKP		23 20 59.5	
LZH				PKP	PKPab	23 21 14.8	+0.7

ISK ***29*** *23:01:42.8, 40°.91N×31°.81E, h4*^{km}*, ML2.2/12*

ISCJB ***29*** *23:01:43.7±0.5, 40°.91N±0°.04×31°.80E±0°.03, h7*^{km}*±5*^{km}*, Error ellipse: s-maj=6.3km s-min=4.3km az=165.8*

DDA ***29*** *23:01:43.5, 40°.89N×31°.79E, h7*^{km}*±2*^{km}*, ML2.7*

ISC 29 23:01:43.7±1.0**, 40°.91N**±0°.04×**31°.80E**±0°.03**, h11**^{km}±9^{km}**, n25, σ0^{s}.70**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCAM	Yenicaga	0.22	115	i P	Pg	23 01 48.5	0.0
BCAM				i S	Sg	23 01 51.8	0.0
BCAM				IAML_P			
	comp=Z,6μm,0.1s						
YIGI	Dzce	0.27	281	i P	Pb	23 01 49.6	-1.0
YIGI				i S	Sg	23 01 53.6	+0.7
YIGI				IAML_P			
	comp=Z,3μm,0.2s						
KIBS	BOLU	0.49	175	i P	Pg	23 01 53.3	-0.1
KIBS				i S	Sb	23 02 00.5	-1.2
KIBS				IAML_P			
	comp=Z,1μm,0.1s						
MDUB	Mudurnu	0.63	226	PG	Pg	23 01 55.9	-0.2
MDUB				SG	Sb	23 02 05.4	-0.4
BTAS	Taskesti	0.69	241	i P	Pb	23 01 57.3	-0.6
SAHE	Sakarya_HENDEK	0.72	266	i P	Pg	23 01 57.3	-0.4
SAHE				IAML_P			
	comp=Z,347nm,0.2s						
SAFT	Safranbolu	0.75	64	PG	Pg	23 01 57.8	-0.4
SAFT				SG	Sb	23 02 08.6	-0.4
AUMIH	MIHALICIK	1.07	193	PG	Pb	23 02 04.0	-0.3
AUMIH	MIHALICIK	1.07	193	i P	Pb	23 02 04.1	-0.3
GULT	Gulveren	1.09	244	PN	Pg	23 02 04.0	-0.6
SAUV	Serdivan-Sakar	1.13	262	PN	Pb	23 02 05.2	-0.1
KURC	Kurucasile-Bar	1.17	37	PN	Pg	23 02 05.8	-0.5
GEYV	SAKARYA_Geyve	1.22	250	i P	Pn	23 02 07.0	+0.3
GEYV				IAML_P			
	comp=Z,2μm,0.3s						
KAND	Kocaeli-Kandir	1.23	279	i P	Pn	23 02 08.2	+1.4
KAND				IAML_P			
	comp=Z,230nm,0.2s						
SRCK	Saricakaya, Es	1.25	226	PN	Pn	23 02 07.4	+0.3
SRCK	Saricakaya, Es	1.25	226	i P	Pn	23 02 07.2	+0.1
BORA	Eskisehir	1.45	225	PN	Pb	23 02 10.7	-0.2
BORA	Eskisehir	1.45	225	i P	Pg	23 02 11.9	+0.2
BORA				IAML_P			
	comp=Z,1μm,0.2s						
ILGA	Ilgaz	1.46	84	i P	Pg	23 02 12.1	+0.3
ILGA				IAML_P			
	comp=Z,643nm,0.1s						
HRT	Hereke	1.62	268	PN	Pb	23 02 13.1	-0.5
SILT	Sile	1.65	279	PN	Pb	23 02 13.6	-0.5
BUY	Buyukada	2.03	269	PN	Pn	23 02 18.9	+1.0
KLYT	Kilyos	2.11	280	PN	Pn	23 02 20.1	+1.1
ARMT	Armutlu	2.26	262	PN	Pn	23 02 22.2	+1.2
TVSB	Tavsanli	2.31	232	PN	Pn	23 02 22.9	+1.1

IDC 29 23:04:55.5±1.6**, 2°.84S**×**139°.25E, h0**^{km}**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/21**, mbtmp3.8**/5**, ML4.3**/1**, MS3.7**/4**, Ms1 3.7**/4**, ms1mx3.1**/26**, Error ellipse: s-maj=79.9km**

s-min=24.7km az=96.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.66	195	P	Pn	23 09 02.7	-0.5
	1.1nm,0.3s,baz=15,slow=14,SNR=14						
ASAR	Alice Springs	21.34	194	P	P	23 09 45.2	+0.7
	1.6nm,0.7s,baz=22,slow=9.3,SNR=15						
NWAO	Narrogin (SRO)	36.35	212	LR	LR	23 28 07.5	
	comp=Z,95nm,20.5s,baz=41,slow=38						
USRK	Ussuriysk Ar.	47.28	353	LR	LR	23 30 27.8	
	comp=Z,96nm,21.1s,baz=360,slow=32						
KLR	Kul'dur	52.27	354	P	P	23 14 10.2	+1.6
	0.9nm,0.6s,baz=162,slow=7.7,SNR=4.0						
SONM	Songino Array	58.07	334	LR	LR	23 38 26.6	
	comp=Z,81nm,21.9s,baz=46,slow=35						
MKAR	Makanchi Array	70.22	322	P	P	23 16 09.8	-0.7
	0.4nm,0.4s,baz=102,slow=8.5,SNR=6.3						
MKAR				LR	LR	23 46 49.1	
	comp=Z,53nm,22.0s,baz=24,slow=36						
ILAR	Eielson Array	85.73	24	P	P	23 17 35.4	-0.9
	0.2nm,0.6s,baz=254,slow=4.1,SNR=4.2						

ISCJB ***29*** *23:20:21.5±0.7, 3°.71S±0°.08×102°.00E±0°.07, h100^{km}, mb3.7/3, Error ellipse: s-maj=14.2km s-min=5.4km az=37.0*

DJA ***29*** *23:20:22.6±0.4, 4°S±2°×10°2E±°, h95^{km}±5^{km}, M3.9/13, MLv3.9/13*

IDC ***29*** *23:20:34.8±24.0, 2°.67S×103°.19E, h197^{km}±225^{km}, mb3.2/3, mb1 3.4/3, mb1mx2.9/48, mbtmp3.7/3, Error ellipse: s-maj=273.0km s-min=27.7km az=53.0*

ISC 29 23:20:21.6±1.0, **3°.71S**±0°.08×**102°.02E**±0°.07, **h100^{km}, n16,** σ**1^{s}.80**/20, **mb3.8**/3, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	1.13	125	P	Pn	23 20 44.6	+1.1
MNAI				S	Sn	23 21 02.3	+2.2
LHSI	Lahat	1.50	94	P	Pn	23 20 49.2	+1.3
LHSI				S	Sn	23 21 08.4	+0.6
KRJI	Kerinci	1.70	341	P	Pn	23 20 51.4	+0.9
KRJI				S	Sn	23 21 14.6	+2.2
PPSI	Pulau Pagai	2.22	295	P	Pn	23 20 58.0	+1.0
MDSI	Maura Dua	2.29	110	P	Pn	23 20 58.9	+1.0
MDSI				S	Sn	23 21 26.6	+0.9
LWLI	Liwa	2.41	123	P	Sn	23 21 23.4	-5.4
JMBI	JAMBI	2.62	38	P	Pn	23 21 03.0	+0.7
KLSI		2.87	110	P	Pn	23 21 07.1	+1.5
KASI	Kota Agung	3.06	126	P	Pn	23 21 09.3	+1.2
PDSI	Padang	3.19	331	P	Pn	23 21 09.7	-0.2
SISI	Saibi	3.77	309	P	Pn	23 21 17.7	+0.1
PPBI	Pangkal Pinang	4.39	70	P	Pn	23 21 25.8	-0.2
WRA	Warramunga Arr	35.39	120	P	P	23 27 08.1	0.0
	0.7nm,0.5s,baz=295,slow=11,SNR=3.5						
ASAR	Alice Springs	36.62	126	P	P	23 27 19.6	+1.1
	0.3nm,0.4s,baz=302,slow=7.9,SNR=8.7						
MKAR	Makanchi Array	53.22	343	P	P	23 29 28.2	-1.5
	0.4nm,0.4s,baz=154,slow=9.1,SNR=6.1						
TXAR	Lajitas Array	144.74	41	PKP	PKPab	23 39 45.6	-1.0
	0.2nm,0.5s,baz=173,slow=1.5,SNR=4.3						

ISCJB ***29*** *23:32:13.6±0.3, 51°.54N±0°.02×16°.08E±0°.02, h0^{km}, mb3.7/3, Error ellipse: s-maj=2.8km s-min=1.7km az=16.9*

IPEC ***29*** *23:32:14.9±0.2, 51°.60N×16°.23E, h0^{km}±1^{km}, ML3.1/4, Error ellipse: s-maj=1.8km s-min=1.3km az=40.0*

IDC ***29*** *23:32:16.0±0.6, 51°.56N×15°.95E, h0^{km}, mb3.7/3, mb1 3.7/11, mb1mx3.5/52, mbtmp3.6/11, ML3.1/8, MS1.8/1, Ms1 1.8/1, ms1mx1.7/50, Error ellipse: s-maj=12.7km s-min=6.9km az=105.0*

PRU ***29*** *23:32:16.2±0.0, 51°.54N×16°.12E, h0^{km}*

BGR ***29*** *23:32:16.6±0.3, 51°.53N×16°.10E, h1^{km}, ML3.7/16, Error ellipse: s-maj=3.3km s-min=2.2km az=17.0*

LDG ***29*** *23:32:17.5±0.1, 51°.58N×16°.16E, h1^{km}, Md4.0/2, Ml4.0/22, Error ellipse: s-maj=3.4km s-min=2.2km az=176.0, Suspected Mining induced.*

ISC 29 23:32:14.2±0.6, **51°.62N**±0°.03×**16°.11E**±0°.02, **h0^{km}, n132,** σ**2^{s}.21**/241, **mb3.8**/3, **4C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.79	172	*i* Pg	Pg	23 32 29.9	+0.6
KSP				*i* Sg	Sg	23 32 39.4	0.0
KSP	Ksiaz	0.79	172	*e*Pg	Pg	23 32 29.9	+0.6
KSP				*e*Sg	Sg	23 32 39.6	+0.2
CHVC	Chvalec	1.03	182	*e*PG	Pb	23 32 34.7	-0.3
CHVC				*e*SG	Sg	23 32 47.6	+0.2
	comp=Z,453nm,0.6s						
OSTC	Ostas	1.07	176	*e*PG	Pb	23 32 35.3	-0.2
OSTC				*e*SG	Sg	23 32 48.4	0.0
	comp=Z,339nm,0.7s						
UPC	Upice	1.12	183	*e*PG	Pb	23 32 36.0	-0.4
UPC				*e*SG	Sg	23 32 49.9	-0.1
	comp=Z,544nm,0.3s						
DPC	Dobruska-Polom	1.28	174	*e*Pg	Pg	23 32 38.7	0.0
DPC				*e*Sg	Sg	23 32 54.7	-0.5
DPC	Dobruska-Polom	1.28	174	*e*PG	Pg	23 32 38.7	0.0
DPC				*e*SG	Sg	23 32 54.1	-1.1
	comp=Z,285nm,0.7s						
PVCC	Panska Ves	1.46	222	*e*PG	Pg	23 32 42.3	+0.1
PVCC				*e*SG	Sn	23 33 02.1	+0.4
	comp=Z,848nm,0.4s						
BRG	Berggiesshubel	1.56	242	PN	Pn	23 32 43.1	0.0
BRG				PG	Pg	23 32 45.3	+1.3
BRG				SG	Sg	23 33 05.3	+1.1
	536nm,0.4s						
BRG	Berggiesshubel	1.56	242	*e*Pn	Pn	23 32 43.3	+0.1
BRG				*e*Pg	Pg	23 32 44.8	+0.8
BRG				*e*Sg	Sg	23 33 05.5	+1.4
ANAC	Anensky vrch	1.74	152	*e*Pn	Pn	23 32 45.6	-0.2
	baz=335						
ANAC				*e*Sg	Sn	23 33 07.9	-0.8
	97nm,0.3s,baz=335						
FBE	Freiberg	1.87	249	*e*Pn	Pn	23 32 47.9	+0.4
FBE				*e*Pg	Pg	23 32 50.4	+0.4
FBE				*e*Sg	Sg	23 33 14.4	+0.2
GOPC	GO Pecny, Ondr	1.90	207	*e*PN	Pn	23 32 48.1	+0.2
GOPC				*e*PG	Pb	23 32 49.9	+0.1
GOPC				*e*SG	Sb	23 33 13.9	-0.2
	comp=Z,253nm,0.8s						
PRU	Pruhonice	1.91	212	*e*PN	Pn	23 32 48.1	+0.1
PRU				*e*PG	Pb	23 32 50.3	+0.3
PRU				*e*SG	Sb	23 33 14.4	0.0
	comp=Z,161nm,0.3s						
CLL	Collm	1.97	262	*i* Pn	Pn	23 32 49.1	+0.3
CLL				*e*Pg	Pg	23 32 52.0	+0.1
CLL				*i*		23 32 55.6	
CLL				*i* Sg	Sg	23 33 18.1	+0.6
	comp=Z,209nm,0.4s						
CLL	Collm	1.97	262	*e*Pn	Pn	23 32 49.1	+0.3
CLL				*e*Sg	Sg	23 33 18.5	+1.1
RAC	Raciborz	2.03	139	*e*Pg	Pg	23 32 53.3	+0.3
RAC				*e*Sg	Sg	23 33 19.3	0.0
MORC	Moravsky Berou	2.06	153	⇓*i*P	Pn	23 32 50.0	-0.1
MORC	Moravsky Berou	2.06	153	*e*PN	Pn	23 32 50.0	-0.1
MORC				*e*SG	Sb	23 33 17.9	-0.7
MORC	Moravsky Berou	2.06	153	*e*Pn	Pn	23 32 50.0	-0.1
	baz=336						
MORC				*e*Sg	Sb	23 33 17.8	-0.8
	comp=Z,146nm,0.7s,baz=336						
MORC	Moravsky Berou	2.06	153	*e*Pn	Pn	23 32 50.1	+0.1
MORC				*e*Sg	Sg	23 33 19.3	-1.0
OKC	Ostrava-Krasne	2.20	143	*e*Pn	Pn	23 32 51.5	-0.6
OKC				*e*Pg	Pg	23 32 56.5	+0.1
OKC				*e*Sg	Sb	23 33 23.4	+0.7
OKC	Ostrava-Krasne	2.20	143	*e*PN	Pn	23 32 51.6	-0.4
OKC				*e*PG	Pg	23 32 56.3	-0.1
OKC				*e*SG	Sb	23 33 23.1	+0.4
	comp=Z,113nm,0.5s						
CHZP	Chorzow	2.26	125	*e*Pg	Pg	23 32 58.8	+1.3
CHZP				*e*Sg	Sg	23 33 27.1	+0.4
VRAC	Vranov	2.33	172	Pn	Pn	23 32 54.3	+0.4
	comp=Z,4.5nm,0.3s,baz=341,slow=13,SNR=46						
VRAC				Sn	Sb	23 33 25.5	-1.0
	comp=Z,21nm,0.3s,baz=244,slow=23,SNR=10						
VRAC	Vranov	2.33	172	⇑*i*P	Pn	23 32 54.3	+0.4
VRAC	Vranov	2.33	172	*e*PN	Pn	23 32 54.0	+0.1
VRAC				*e*SG	Sb	23 33 27.0	+0.4
VRAC	Vranov	2.33	172	*e*Pn	Pn	23 32 54.0	+0.1
	baz=354						
VRAC				*e*Sg	Sb	23 33 26.9	+0.4
	comp=Z,127nm,0.5s,baz=354						
TREC	Trest	2.36	190	*e*PN	Pn	23 32 54.9	+0.7
TREC				*e*PG	Pb	23 32 58.5	+0.9
TREC				*e*SG	Sg	23 33 28.7	-1.3
	comp=Z,150nm,0.6s						
KRUC	Moravsky	2.57	176	*e*PN	Pn	23 32 57.3	+0.3
KRUC				*e*SG	Sb	23 33 34.3	+1.1
KRUC	Moravsky	2.57	176	*e*Pn	Pn	23 32 57.3	+0.3
	baz=358						
KRUC				*e*Sg	Sb	23 33 34.2	+1.1
	comp=Z,80nm,0.6s,baz=358						
TANN	Tannenbergstha	2.60	244	*e*Pn	Pn	23 32 58.5	+0.9
TANN				*e*Pg	Pg	23 33 05.3	+1.2
TANN				*e*Sg	Sg	23 33 37.8	0.0
NKC	Novy Kostel	2.70	241	*e*PN	Pn	23 32 59.8	+0.9
NKC				*e*PG	Pg	23 33 06.7	+0.7
NKC				*e*SG	Sg	23 33 41.9	+0.9
	comp=Z,430nm,0.5s						
OJC	Ojcow	2.72	120	*e*Pg	Pg	23 33 06.4	0.0
OJC				*e*Sg	Sg	23 33 42.0	+0.4
OJC	Ojcow	2.72	120	*e*Pg	Pg	23 33 06.6	+0.3
OJC				*e*Sg	Sg	23 33 42.1	+0.4
JAVC	Velka Javorina	2.94	159	*e*PN	Pn	23 33 02.6	+0.4
JAVC				*e*SG	Sb	23 33 45.2	+1.2
KHC	Kasperske Hory	2.97	214	*e*PN	Pn	23 33 02.7	0.0
KHC				*e*PG	Pb	23 33 09.2	+1.1
KHC				*e*SN	Sn	23 33 37.9	-1.1
KHC				*e*SG	Sg	23 33 48.2	-1.5
	comp=Z,64nm,0.5s						
MOX	Moxa	3.00	253	*e*Pn	Pn	23 33 03.6	+0.7
MOX				*e*Pg	Pg	23 33 12.5	+0.9
MOX				*e*Sg	Sg	23 33 50.6	+0.2
MANZ	Manzenberg	3.02	239	*e*Pn	Pn	23 33 04.4	+1.1
MANZ				*e*Pg	Pg	23 33 13.2	+1.1
MANZ				*e*Sg	Sg	23 33 51.0	-0.3
ROTZ	Rotzenmuhle	3.10	235	*e*Pn	Pn	23 33 05.1	+0.7
ROTZ				*e*Sg	Sg	23 33 52.9	-0.8
GEC2	GERESS Array S	3.18	210	*e*Pn	Pn	23 33 05.9	+0.4
GEC2				*e*Pg	Pg	23 33 14.6	-0.6
GEC2				*e*Sg	Sb	23 33 53.3	+2.4
GERES	GERESS Array B	3.18	210	Pn	Pn	23 33 06.0	+0.4
	comp=Z,5.4nm,0.3s,baz=31,slow=13,SNR=125						
GERES				Pg	Pb	23 33 12.4	+0.8
	comp=Z,8.2nm,0.3s,baz=26,slow=14,SNR=38						
GERES				LR	LR	23 33 49.5	
	comp=Z,18nm,21.4s,baz=74,slow=30						
GERES				Lg	Lg	23 33 51.5	
	comp=Z,14nm,0.3s,baz=19,slow=26,SNR=4.8						
SMOL	Smolenice	3.22	164	*e*SG	Sg	23 33 58.3	+0.6
SMOL				*e*LG	Lg	23 34 03.4	
WET	Wettzell	3.23	221	*e*Pn	Pn	23 33 06.8	+0.6
WET				*e*Sg	Sg	23 33 56.1	-1.8
LANS	Liptovska Anna	3.27	138	*e*PN	Pn	23 33 08.0	+1.2
LANS				*e*PG	Pg	23 33 16.6	-0.3
LANS				*e*SG	Sg	23 33 59.0	-0.4
LANS				*e*LG	Lg	23 34 03.6	
MODS	Modra-Piesok	3.34	167	*e*PN	Pn	23 33 07.0	-0.6
MODS				*e*PG	Pg	23 33 17.6	-0.5
MODS				*e*SG	Sg	23 34 00.8	-0.5
MODS				*e*LG	Lg	23 34 09.9	
KOLL	Kolacno	3.38	153	*e*PN	Pn	23 33 08.7	+0.5
NIE	Niedzica	3.46	128	*e*P	Pg	23 33 19.7	-0.9
NIE				*e*S	Sg	23 34 04.8	-0.6
ZST	Bratislava	3.49	169	*e*PN	Pn	23 33 10.2	+0.5
ZST				*e*SG	Sg	23 34 03.5	-2.7
ZST				*e*LG	Lg	23 34 12.3	
BSD	Bornholm Skovb	3.57	349	*i* P	Pn	23 33 12.1	+1.3
BSD				*e*S	Sn	23 33 52.3	-1.4
CLZ	Clausthal	3.58	276	*e*Pn	Pn	23 33 13.0	+2.0
CLZ				*e*Pg	Pg	23 33 23.2	+0.5
CLZ				*e*Sg	Sg	23 34 08.7	-0.3
VYHS	Vyhne	3.59	150	*e*PN	Pn	23 33 11.0	-0.1
VYHS				*e*PG	Pg	23 33 24.0	+1.1
VYHS				*e*SG	Sb	23 34 05.6	+3.0
GRF	Grafenberg Arr	3.66	240	*e*Pn	Pn	23 33 13.2	+1.1
GRF				*e*Sg	Sg	23 34 11.3	-0.5
CONA	Conrad Observa	3.70	183	*e*Pn	Pn	23 33 14.0	+1.3
	comp=Z,3.8nm,0.2s,SNR=9.3						
CONA				*e*Sg	Sb	23 34 08.7	+2.8
	comp=Z,71nm,0.5s						
SOP	Sopron	3.95	176	*e*Pn	Pn	23 33 17.1	+1.0
SOP				*e*Pg	Pg	23 33 30.1	+0.2
SOP				Sn	Sn	23 34 04.1	+1.0
SOP				*e*Sg	Sb	23 34 16.0	+3.0
MOA	Molln	3.96	198	*i* Pn	Pn	23 33 17.0	+0.8
	comp=Z,27nm,0.4s,SNR=25						
MOA				Sg	Sb	23 34 16.6	+3.3
	comp=Z,40nm,0.4s						
KECS	Kecovo	4.22	136	*e*PG	Pg	23 33 36.2	+1.2
KECS				*e*SG	Sg	23 34 26.2	-3.5
KECS				*e*LG	Lg	23 34 36.7	
ARSA	Arzberg	4.39	185	*i* Pn	Pn	23 33 24.1	+2.0
	comp=Z,2.0nm,0.3s						
ARSA				Sg	Sb	23 34 29.8	+4.1
	comp=Z,18nm,0.4s						
PSZ	Piszkesteto	4.44	145	*e*Pn	Pn	23 33 23.0	+0.2
PSZ				*e*Sg	Sg	23 34 40.0	+3.2
KOLS	Kolonicke sedl	4.78	122	*e*PN	Pn	23 33 27.8	+0.4
KOLS				*e*PG	Pg	23 33 47.0	+1.3
KOLS				*e*SG	Sg	23 34 45.8	-1.8
SOKA	Soboth	5.00	189	*e*Pn	Pn	23 33 31.4	+0.9
	comp=Z,3.1nm,0.4s						
SOKA				Sg	Sb	23 34 48.2	+5.0
	comp=Z,8.1nm,0.7s						
WATA	Walderalm	5.21	216	*i* Pn	Pn	23 33 35.1	+1.6
	comp=Z,9.7nm,0.5s,SNR=10						
WATA				Sg	Sb	23 34 54.5	+5.2
	comp=Z,15nm,0.6s						
OBKA	Obir	5.22	192	*e*Pn	Pn	23 33 35.1	+1.6
	comp=Z,2.1nm,0.5s						
OBKA				Sg	Sb	23 34 55.2	+5.6
	comp=Z,21nm,1.0s						
WTTA	Wattenberg	5.25	216	*i* Pn	Pn	23 33 35.9	+1.8
	comp=Z,8.7nm,0.6s						
WTTA				Sg	Sb	23 34 54.5	+4.1
	comp=Z,8.7nm,0.3s						
MYKA	Terra Mystica	5.25	199	*e*Pn	Pn	23 33 35.0	+1.1
	comp=Z,1.8nm,0.4s						
MYKA				Sg	Sb	23 34 53.6	+3.2
	comp=Z,48nm,0.9s						
MOTA	Moosalm	5.38	219	*e*Pn	Pn	23 33 36.3	+0.5
	comp=Z,4.9nm,0.4s,SNR=9.7						
MOTA				Sg	Sb	23 34 59.4	+5.1
	comp=Z,4.4nm,0.4s						
RETA	Reutte	5.41	222	*e*Pn	Pn	23 33 35.7	-0.4
	comp=Z,1.5nm,0.4s						
RETA				Sg	Sb	23 34 58.2	+3.3
	comp=Z,16nm,0.4s						
ABTA	Abfaltersbach	5.42	207	*e*Pn	Pn	23 33 37.1	+0.8
	comp=Z,2.3nm,0.4s						
ABTA				Sg	Sb	23 35 01.2	+5.9
	comp=Z,30nm,0.8s						
TRPA	Tarpa	5.43	128	⇓*i*P	Pn	23 33 37.3	+1.0
TRPA	Tarpa	5.43	128	*e*Pn	Pn	23 33 37.1	+0.7
SQTA	Sankt Quirin	5.44	218	*e*Pn	Pn	23 33 38.3	+1.6
	comp=Z,2.5nm,0.2s						
SQTA				Sg	Sb	23 35 01.1	+5.1
	comp=Z,9.9nm,0.3s						
MORH	Mrgy, Hungar	5.66	162	*e*Pn	Pn	23 33 39.1	-0.5
MORH				Sn	Sn	23 34 52.1	+6.9
FETA	Feichten	5.79	219	*e*Pn	Pn	23 33 42.1	+0.6
	comp=Z,2.0nm,0.8s						
FETA				Sg	Sb	23 35 12.6	+6.4
	comp=Z,9.0nm,0.6s						
DAVA	Damuels	5.94	226	*e*Pn	Pn	23 33 43.6	+0.1
	comp=Z,1.7nm,0.3s						
DAVA				Sg	Sg	23 35 30.0	+5.0
	comp=Z,36nm,0.6s						
DAVOX	Davos/Dischmat	6.33	223	Pn	Pn	23 33 50.8	+1.8
	comp=Z,0.9nm,0.3s,baz=19,slow=18,SNR=9.5						
DAVOX				Lg	Lg	23 35 31.8	
	comp=Z,1.0nm,0.3s,baz=184,slow=22,SNR=5.3						
DRGR		6.48	136	⇑*i*P	Pn	23 33 51.5	+0.6
CDF	Champ du Feu	6.54	244	*e*Pn	Pn	23 33 52.5	+0.9
CDF	Champ du Feu	6.54	244	*e*Pg	Pg	23 34 19.4	0.0
CDF				*e*Sn	Sn	23 35 03.4	-3.5
CDF				*e*Sg	Sg	23 35 42.3	-1.7
	comp=Z,74nm,0.9s						
SLIT	Slitere, Latvi	7.01	28	*e*P	Pb	23 34 20.5	+3.9
BZS	Buzias	7.03	147	⇑*i*P	Pn	23 34 00.1	+1.8
IIGN	Ignalina	7.09	54	*e*P	Pg	23 34 30.5	+0.4
HINF	Hinteralfeld	7.11	241	*e*Pn	Pn	23 33 59.7	+0.3
HINF	Hinteralfeld	7.11	241	*e*Pg	Pg	23 34 31.3	+1.0
HINF				*e*Sg	Sg	23 35 59.4	-2.9
	comp=Z,37nm,0.8s						
BURAR	Bucovina Array	7.14	121	⇑*i*P	Pn	23 34 00.7	+0.7
ISAL	Salakas	7.15	52	*e*P	Pg	23 34 32.7	+1.6
HAU	Haudompre	7.28	244	*e*Pn	Pn	23 34 01.2	-0.6
HAU	Haudompre	7.28	244	*e*Pg	Pg	23 34 32.5	-1.1
HAU				*e*Sn	Sn	23 35 20.1	-5.0
HAU				*e*Sg	Sg	23 36 05.4	-2.4
	comp=Z,33nm,0.7s						
IZAR	Zarasai	7.30	52	*e*P	Pg	23 34 35.3	+1.3
GIVF	Givet	7.31	262	*e*Sg	Sg	23 36 06.2	-2.5
	comp=Z,44nm,0.9s						
PAGF	Fort de Pagny	7.35	249	*e*Pn	Pn	23 34 03.5	+0.8
	baz=63						
PAGF	Fort de Pagny	7.35	249	*e*Pg	Pg	23 34 33.7	-1.3
	baz=70						
PAGF				*e*Sn	Sn	23 35 23.5	-3.3
PAGF				*e*Sg	Sg	23 36 07.6	-2.6
	comp=Z,70nm,1.1s						
BAIF	Baives	7.70	263	*e*Pg	Pg	23 34 40.4	-1.2
BAIF				*e*Sn	Sn	23 35 29.5	-5.8
BAIF				*e*Sg	Sg	23 36 18.5	-2.8
	comp=Z,29nm,0.9s						
MEZF	Maizieres J'vi	7.77	251	*e*Pn	Pn	23 34 07.9	-0.6
MEZF	Maizieres J'vi	7.77	251	*e*Pg	Pg	23 34 41.7	-1.3
	baz=68						
MEZF				*e*Sn	Sn	23 35 32.9	-4.2
MEZF				*e*Sg	Sg	23 36 19.7	-3.9
	comp=Z,38nm,1.0s						
SFTF	Sexfontaines	7.92	249	*e*Pn	Pn	23 34 11.3	+0.7
SFTF	Sexfontaines	7.92	249	*e*Pg	Pg	23 34 43.4	-2.5
SFTF				*e*Sn	Sn	23 35 35.6	-5.3
SFTF				*e*Sg	Sg	23 36 25.1	-3.4
	comp=Z,80nm,1.4s						
CABF	La Chapelle	8.27	237	*e*Pn	Pn	23 34 15.6	+0.2
CABF	La Chapelle	8.27	237	*e*Pg	Pg	23 34 51.5	-1.0
CABF				*e*Sn	Sn	23 35 44.4	-5.0
CABF				*e*Sg	Sg	23 36 36.6	-2.9
	comp=Z,131nm,1.5s						
AKASG	Malin Array Be	8.30	91	Pn	Pn	23 34 14.9	-0.7
	comp=Z,1.0nm,0.3s,baz=280,slow=12,SNR=11						
HFS	Hagfors	8.64	352	Pn	Pn	23 34 20.6	+0.3
	comp=Z,0.1nm,0.3s,baz=175,slow=17,SNR=5.2						
LPL	La Plagne	8.71	229	*e*Pn	Pn	23 34 22.2	+0.6
LPL	La Plagne	8.71	229	*e*Pg	Pg	23 34 58.6	-2.4
LPL				*e*Sn	Sn	23 35 55.8	-4.8
LPL				*e*Sg	Sg	23 36 50.2	-3.6
	comp=Z,3.4nm,0.6s						
LPG	La Plagne	8.72	229	*e*Pn	Pn	23 34 22.7	+1.0
LPG	La Plagne	8.72	229	*e*Pg	Pg	23 34 58.9	-2.2
LPG				*e*Sn	Sn	23 35 55.7	-5.1
LPG				*e*Sg	Sg	23 36 50.2	-3.8
	comp=Z,61nm,1.4s						
LOR	Lormes	9.09	246	*e*Pn	Pn	23 34 26.6	0.0
	baz=59						
LOR	Lormes	9.09	246	*e*Pg	Pn	23 35 05.8	+39
	baz=60						
LOR				*e*Sn	Sn	23 36 04.4	-5.2
LOR				*e*Sg		23 37 01.6	
	comp=Z,20nm,1.0s,baz=59						
MBDF	Montbardon	9.29	226	*e*Pn	Pn	23 34 32.0	+2.5
MBDF	Montbardon	9.29	226	*e*Pg	Pn	23 35 08.8	+39
MBDF				*e*Sn	Sn	23 36 09.4	-5.4
MBDF				*e*Sg		23 37 08.1	
	comp=Z,16nm,1.0s						
SSF	Saint Saulge	9.41	246	*e*Pn	Pn	23 34 30.6	-0.3
SSF	Saint Saulge	9.41	246	*e*Pg	Pn	23 35 12.9	+42
SSF				*e*Sn	Sn	23 36 12.5	-4.8
SSF				*e*Sg		23 37 11.4	
	comp=Z,20nm,1.0s						
SMF	Signal de Mont	9.46	243	*e*Pn	Pn	23 34 32.2	+0.6
SMF	Signal de Mont	9.46	243	*e*Pg	Pn	23 35 11.6	+40
SMF				*e*Sn	Sn	23 36 13.0	-5.5
SMF				*e*Sg		23 37 13.1	
	comp=Z,17nm,0.8s						
ORIF	Oris-en-Rattie	9.56	229	*e*Pn	Pn	23 34 33.6	+0.5
ORIF	Oris-en-Rattie	9.56	229	*e*Pg	Pn	23 35 13.7	+41
ORIF				*e*Sn	Sn	23 36 15.8	-5.4
ORIF				*e*Sg		23 37 16.6	
	comp=Z,26nm,1.1s						
AVF	Avril sur Loir	9.64	245	*e*Pn	Pn	23 34 36.2	+2.0
AVF	Avril sur Loir	9.64	245	*e*Pg	Pn	23 35 16.3	+42
AVF				*e*Sn	Sn	23 36 17.7	-5.4
AVF				*e*Sg		23 37 19.5	
	comp=Z,21nm,1.0s						
SBF	Sospel	9.71	220	*e*Pn	Pn	23 34 36.0	+0.9
HYF	Humbligny	9.79	249	*e*Sg	Sn	23 37 24.6	+58
NOA	NORSAR Array B	9.82	346	Pn	Pn	23 34 36.1	-0.5
	comp=Z,0.0nm,0.3s,baz=170,slow=13,SNR=3.6						
BGF	Bois d'Agland	10.06	245	*e*Pn	Pn	23 34 39.8	-0.1
BGF	Bois d'Agland	10.06	245	*e*Pg	Pn	23 35 23.9	+44
BGF				*e*Sn	Sn	23 36 27.7	-5.8
BGF				*e*Sg		23 37 32.3	
	comp=Z,19nm,0.8s						
FRF	La Foret Royal	10.28	222	*e*Pn	Pn	23 34 43.9	+1.0
LMR	La Mourre	10.53	222	*e*Pn	Pn	23 34 46.4	+0.2
LMR				*e*Sn	Sn	23 36 38.9	-5.8
	comp=Z,73nm,1.5s						
TCF	Toulx Ste Croi	10.58	245	*e*Pn	Pn	23 34 47.7	+0.7
TCF	Toulx Ste Croi	10.58	245	*e*Pg	Pn	23 35 33.2	+46
TCF				*e*Sn	Sn	23 36 40.1	-6.0
TCF				*e*Sg		23 37 48.5	
	comp=Z,22nm,1.1s						
FINES	FINESS Array B	11.26	25	Pn	Pn	23 34 56.1	-0.1
	comp=Z,0.2nm,0.3s,baz=202,slow=9.6,SNR=7.8						
RJF	Les Rejaudoux	11.56	243	*e*Pg	Pn	23 35 51.2	+51
RJF				*e*Sg		23 38 19.0	
	comp=Z,26nm,1.2s						
EKA	Eskdalemuir Ar	12.06	295	Pn	Pn	23 35 04.3	-2.8
	baz=104,slow=14,SNR=5.4						
ARCES	ARCESS Array B	18.51	10	Pn	P	23 36 30.8	-0.9
	comp=Z,0.2nm,0.3s,baz=191,slow=9.9,SNR=7.3						
AKTO	Aktyubinsk	26.13	76	P	P	23 37 50.6	+1.0
	comp=Z,0.7nm,0.5s,baz=275,slow=12,SNR=4.5						
YKA	Yellowknife Ar	59.76	336	P	P	23 42 21.0	+0.7
	comp=Z,0.7nm,0.6s,baz=27,slow=6.4,SNR=4.0						
TXAR	Lajitas Array	83.64	310	P	P	23 44 45.9	+1.2
	comp=Z,0.6nm,1.0s,baz=90,slow=0.4,SNR=4.5						

KNET ***29*** *23:36:06.5±0.3, 42°.66N×74°.82E, h12^{km}±3^{km}, ml2.6, Error ellipse: s-maj=2.0km s-min=1.9km az=143.0*

KRNET ***29*** *23:36:07.5±0.1, 42°.68N×74°.81E, h13^{km}, mb3.3*

NNC ***29*** *23:36:07.3±0.2, 42°.72N×74°.80E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=5.7km s-min=1.0km az=159.0*

SOME ***29*** *23:36:08.3, 42°.70N×74°.83E, h15^{km}*

ISC 29 23:36:07.6±0.8, **42°.68N**±0°.02×**74°.81E**±0°.01, **h12^{km}**±5^{km}, **n86,** σ**1^{s}.01**/163, **35C-27D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.11	103	⇓*i*P	Pg	23 36 10.1	-0.6
	baz=1.0						
KBK				⇓*i*S	Sg	23 36 11.8	-1.2
	baz=1.0						
KBK	Karagaybulak	0.11	103	P	Pg	23 36 10.1	-0.6
	996nm,0.1s,SNR=492						
KBK				⇑S	Sg	23 36 12.1	-0.9
	3µm,0.2s						
FRU1	Bishkek	0.18	315	⇓*i*P	Pg	23 36 11.9	+0.2
	baz=15						
FRU1				⇓*i*S	Sg	23 36 14.5	-0.1
	baz=15						
AAK	Ala-Archa	0.23	259	⇑P	Pg	23 36 12.1	-0.6
	20nm,0.3s						
AAK				⇑S	Sg	23 36 15.7	-0.4
	65nm,0.6s						
AAK	Ala-Archa	0.23	259	⇑*i*P	Pg	23 36 12.3	-0.4
	baz=61						
AAK				⇑*i*S	Sg	23 36 15.8	-0.3
	baz=61						
AAK	Ala-Archa	0.23	259	⇓P	Pg	23 36 12.2	-0.4
	100nm,0.3s,SNR=77						
AAK				⇓S	Sg	23 36 15.8	-0.3
	571nm,0.3s						
CHMS	Chumysh	0.32	353	⇓*i*P	Pg	23 36 13.9	-0.3
	baz=52						
CHMS				⇓*i*S	Sg	23 36 18.2	-0.3
	baz=52						
CHMS	Chumysh	0.32	353	⇑P	Pg	23 36 13.8	-0.3
	488nm,0.1s,SNR=97						
CHMS				⇓S	Sg	23 36 18.4	-0.1
	454nm,0.1s						
UCH	Uchtor	0.50	206	⇓*i*P	Pg	23 36 17.2	-0.4
	baz=6.0						
UCH				⇓*i*S	Sg	23 36 24.0	-0.3

	baz=6.0						
UCH	**Uchtor** 50nm,0.1s,SNR=116	0.50	206	⇑P	Pg	23 36 17.2	-0.4
UCH	508nm,0.5s			⇑S	Sg	23 36 23.7	-0.6
USP	**Ospenovka** baz=39	0.63	339	⇓iP	Pg	23 36 19.4	-0.4
USP	baz=39			⇓iS	Sg	23 36 28.0	-0.1
USP	**Ospenovka** 60nm,0.1s,SNR=428	0.63	339	P	Pg	23 36 19.4	-0.5
USP	170nm,0.2s			⇓S	Sg	23 36 28.0	-0.1
TKM2	**Tokmak 2** 5.1nm,0.2s	0.63	67	⇑P	Pg	23 36 19.2	-0.7
TKM2	110nm,0.2s			⇑S	Sg	23 36 27.5	-0.8
TKM2	**Tokmak 2** baz=67	0.63	67	⇑iP	Pg	23 36 19.2	-0.7
TKM2	baz=67			⇑iS	Sg	23 36 27.7	-0.5
TKM2	**Tokmak 2** 37nm,0.1s,SNR=172	0.63	67	⇓P	Pg	23 36 19.3	-0.7
TKM2	349nm,0.2s			⇓S	Sg	23 36 27.8	-0.4
KZA	**Kyzart** baz=51	0.69	151	⇑iP	Pg	23 36 20.7	-0.3
KZA	baz=51			⇑iS	Sg	23 36 29.8	-0.3
KZA	**Kyzart** 21nm,0.2s,SNR=32	0.69	151	⇑P	Pg	23 36 20.7	-0.3
KZA	364nm,0.2s			⇓S	Sg	23 36 29.8	-0.3
EKS2	**Erkin-Say** baz=69	0.76	269	⇑iP	Pg	23 36 22.4	+0.1
EKS2	baz=69			⇑iS	Sb	23 36 32.9	-0.3
EKS2	**Erkin-Say** 14nm,0.1s,SNR=64	0.76	269	⇑P	Pg	23 36 22.4	+0.1
EKS2	36nm,0.2s			⇓S	Sb	23 36 33.2	0.0
SGDS	**Sogindy** 56nm,0.1s	0.78	351	P	Pg	23 36 22.1	-0.7
SGDS	28nm,0.1s			S	Sg	23 36 31.8	-1.2
BOOM	**Boomskoye usch** baz=2.0	0.86	102	⇑iP	Pg	23 36 23.7	-0.5
BOOM	baz=2.0			⇑iS	Sg	23 36 35.3	-0.2
ARLS	**Aral** baz=4.0	0.90	204	⇑iP	Pg	23 36 24.3	-0.6
ARLS	baz=4.0			⇑iS	Sg	23 36 36.3	-0.3
DGS	**Degeres** 11nm,0.2s	0.90	51	P	Pg	23 36 24.8	-0.2
DGS	78nm,0.3s			S	Sg	23 36 36.6	-0.3
DGS	**Degeres** baz=51	0.90	51	eP	Pg	23 36 24.8	-0.2
DGS	baz=51			eS	Sg	23 36 36.6	-0.3
DGS	**Degeres** 11nm,0.2s	0.90	51	eP	Pg	23 36 24.8	-0.2
DGS	102nm,0.6s			eS	Sg	23 36 36.6	-0.3
KST	**Kastek** 26nm,0.2s	0.92	67	P	Pg	23 36 25.1	-0.4
KST	91nm,0.3s			S	Sb	23 36 37.6	-0.3
KST	**Kastek** baz=66	0.92	67	eP	Pg	23 36 25.1	-0.4
KST	baz=66			eS	Sg	23 36 37.4	-0.2
KST	**Kastek** 26nm,0.2s	0.92	67	eP	Pg	23 36 25.1	-0.4
KST	91nm,0.3s			eS	Sg	23 36 37.3	-0.2
AML	**Almayashu** baz=37	0.99	237	⇑iP	Pg	23 36 26.1	-0.6
AML	baz=37			⇑iS	Sg	23 36 39.9	+0.2
AML	**Almayashu** 12nm,0.2s,SNR=15	0.99	237	⇑P	Pg	23 36 26.1	-0.6
AML	51nm,0.3s			⇑S	Sg	23 36 39.2	-0.5
MRKS	**Merke** 16nm,0.2s	1.17	274	P	Pb	23 36 29.5	-0.3
MRKS	119nm,0.2s			S	Sb	23 36 44.9	0.0
MRKS	**Merke** baz=74	1.17	274	eP	Pb	23 36 29.5	-0.3
MRKS	baz=74			eS	Sb	23 36 44.9	0.0
MRKS	**Merke** 16nm,0.2s	1.17	274	eP	Pb	23 36 29.5	-0.3
MRKS	119nm,0.2s			eS	Sb	23 36 44.9	0.0
MTBS	**Maitube** 7.5nm,0.2s	1.27	69	P	Pb	23 36 31.6	0.0
MTBS	46nm,0.4s			S	Sn	23 36 48.2	-0.1
MTBS	**Maitube** baz=69	1.27	69	eP	Pb	23 36 31.6	0.0
MTBS	baz=69			eS	Sn	23 36 48.3	-0.1
MTBS	**Maitube** 7.5nm,0.2s	1.27	69	eP	Pb	23 36 31.6	0.0
MTBS	46nm,0.4s			eS	Sn	23 36 48.2	-0.1
NRN	**Naryn** baz=45	1.53	144	⇑iP	Pb	23 36 35.7	-0.4
NRN	baz=45			⇑iS	Sb	23 36 56.1	+0.5
TNSS	**Tian-Shan** 7.8nm,0.3s	1.61	77	P	Pb	23 36 37.8	+0.2
TNSS	43nm,0.3s			S	Sg	23 36 58.8	-0.7
TNSS	**Tian-Shan** baz=76	1.61	77	eP	Pb	23 36 37.8	+0.2
TNSS	baz=76			eS	Sg	23 36 58.9	-0.7
TNSS	**Tian-Shan** 7.8nm,0.3s	1.61	77	eP	Pb	23 36 37.8	+0.2
TNSS	43nm,0.3s			eS	Sg	23 36 58.8	-0.7
AAA	**Alma-Ata** 38nm,0.2s	1.64	70	P	Pg	23 36 38.4	-0.6
AAA	93nm,0.4s			S	Sg	23 37 00.2	0.0
AAA	**Alma-Ata** baz=70	1.64	70	eP	Pg	23 36 38.4	-0.6
AAA	baz=70			eS	Sg	23 37 00.2	0.0
AAA	**Alma-Ata** 38nm,0.2s	1.64	70	eP	Pg	23 36 38.4	-0.6
AAA	93nm,0.4s			eS	Sg	23 37 00.2	0.0
KUU	**Kurty** 23nm,0.3s	1.65	42	P	Pb	23 36 38.1	+0.2
KUU	135nm,0.3s			S	Sg	23 36 59.5	-1.2
KUU	**Kurty** baz=42	1.65	42	eP	Pb	23 36 38.1	+0.2
KUU	baz=42			eS	Sg	23 36 59.5	-1.2
KUU	**Kurty** 23nm,0.3s	1.65	42	eP	Pb	23 36 38.1	+0.2
KUU	135nm,0.3s			eS	Sg	23 36 59.5	-1.2
KNDC	**Almaty** 11nm,0.5s	1.67	71	⇓P	Pb	23 36 38.1	-0.2
KNDC	76nm,0.3s			⇓S	Sg	23 37 01.1	-0.4
KTBS	**Karatobe** 18nm,0.3s	1.71	52	P	Pb	23 36 39.5	+0.4
KTBS	232nm,0.5s			S	Sg	23 37 01.7	-1.0
KTBS	**Karatobe** baz=49	1.71	52	eP	Pb	23 36 39.5	+0.4
KTBS	baz=49			eS	Sg	23 37 01.7	-1.0
KTBS	**Karatobe** 18nm,0.3s	1.71	52	eP	Pb	23 36 39.5	+0.4
KTBS	232nm,0.5s			eS	Sg	23 37 01.7	-1.0
MDOK	**Medeo** 12nm,0.3s	1.71	73	Pg	Pb	23 36 39.6	+0.5
MDOK	48nm,0.4s			Lg	Lg	23 37 02.1	
MDOK	**Medeo** baz=73	1.71	73	eP	Pb	23 36 39.6	+0.5
MDOK	baz=73			eS	Sg	23 37 02.1	-0.7
MDOK	**Medeo** 12nm,0.3s	1.71	73	eP	Pb	23 36 39.6	+0.5
MDOK	48nm,0.4s			eS	Sg	23 37 02.1	-0.7
KOTS	**Kotyrbulak**	1.78	71	P	Pg	23 36 41.2	-0.5
KOTS	159nm,0.6s			S	Sg	23 37 04.7	-0.2
KOTS	**Kotyrbulak** baz=71	1.78	71	eP	Pg	23 36 41.3	-0.5
KOTS	baz=71			eS	Sg	23 37 04.7	-0.2
KOTS	**Kotyrbulak** 20nm,0.2s	1.78	71	eP	Pg	23 36 41.2	-0.5
KOTS	484nm,0.6s			eS	Sg	23 37 04.7	-0.2
KDJ	**Kajisay** baz=6.0	1.84	107	⇑eP	Pb	23 36 41.3	0.0
KDJ	baz=6.0			⇑iS	Sg	23 37 05.8	-1.0
ARSB	**Arslanbob** baz=26	1.92	226	⇑iP	Pb	23 36 42.2	-0.4
ARSB	baz=26			⇑iS	Sg	23 37 08.2	-1.1
CHKK	**Chushkaly** 9.2nm,0.2s	1.98	53	P	Pb	23 36 44.0	+0.5
CHKK	134nm,0.3s			S	Sg	23 37 09.8	-1.4
CHKK	**Chushkaly** baz=53	1.98	53	eP	Pb	23 36 44.0	+0.5
CHKK	baz=53			eS	Sg	23 37 09.7	-1.4
CHKK	**Chushkaly** 9.2nm,0.2s	1.98	53	eP	Pb	23 36 44.0	+0.5
CHKK	134nm,0.3s			eS	Sg	23 37 09.8	-1.4
ANVS	**Anan'yevo** baz=86	2.11	86	⇓iP	Pb	23 36 44.9	-1.0
ANVS	baz=86			⇓iS	Sb	23 37 12.2	+0.1
ARK	**Arkit** baz=48	2.29	248	⇑iP	Pb	23 36 47.8	-1.1
ARK	baz=48			⇑iS	Sb	23 37 17.1	-0.1
BTLS	**Baital** baz=47	2.42	347	eP	Pb	23 36 52.2	+1.1
BTLS	baz=47			eS	Sg	23 37 23.3	-2.2
BTLS	**Baital** 12nm,0.4s	2.42	347	eP	Pb	23 36 52.1	+1.1
BTLS	33nm,0.6s			eS	Sg	23 37 23.2	-2.2
DZA	**Taraz** baz=76	2.57	276	eP	Pg	23 36 55.2	-1.6
DZA	baz=76			eS	Sg	23 37 28.4	-1.6
DZA	**Taraz** 7.7nm,0.2s	2.57	276	eP	Pg	23 36 55.2	-1.6
DZA	84nm,0.4s			eS	Sg	23 37 28.4	-1.6
KURS	**Kuram** 2.7nm,0.3s	2.59	71	Pg	Pb	23 36 55.2	+1.2
KURS	52nm,0.6s			Lg	Lg	23 37 28.9	
KURS	**Kuram** baz=71	2.59	71	eP	Pb	23 36 55.2	+1.2
KURS	baz=71			eS	Sg	23 37 28.8	-2.0
KURS	**Kuram** 2.7nm,0.3s	2.59	71	eP	Pb	23 36 55.2	+1.2
KURS	52nm,0.6s			eS	Sg	23 37 28.9	-2.0
PRZ	**Przheval'sk** baz=93	2.66	93	⇓iP	Pn	23 36 52.7	+2.2
PRZ	baz=93			⇓iS	Sb	23 37 25.4	-2.6
SATY	**Saty** 13nm,0.3s	2.67	81	Pg	Pg	23 36 57.3	-1.5
SATY	98nm,0.6s			Lg	Lg	23 37 32.7	
SATY	**Saty** 13nm,0.3s	2.67	81	eP	Pg	23 36 57.3	-1.5
SATY	98nm,0.6s			eS	Sg	23 37 32.7	-0.8
ARXS	**Arharly** 5.8nm,0.4s	2.68	54	Pg	Pb	23 36 56.3	+0.7
ARXS	135nm,0.5s			Lg	Lg	23 37 30.5	
ARXS	**Arharly** 5.8nm,0.4s	2.68	54	eP	Pb	23 36 56.3	+0.7
ARXS	135nm,0.5s			eS	Sb	23 37 30.5	+2.1
KPKS	**Kokpek** baz=74	2.95	73	eP	Pb	23 36 59.4	-0.7
KPKS	baz=74			eS	Sb	23 37 35.6	-0.6
KPKS	**Kokpek** 3.3nm,0.4s	2.95	73	eP	Pb	23 36 59.4	-0.7
KPKS	146nm,0.7s			eS	Sb	23 37 35.5	-0.6
UZB	**Uzynbulak** 4.9nm,0.3s	3.13	80	Pg	Pb	23 37 04.7	+1.4
UZB	19nm,0.3s			Lg	Lg	23 37 44.9	
UZB	**Uzynbulak** baz=80	3.13	80	eP	Pb	23 37 04.7	+1.4
UZB	baz=80			eS	Sg	23 37 44.9	-3.2
UZB	**Uzynbulak** 4.9nm,0.3s	3.13	80	eP	Pb	23 37 04.7	+1.4
UZB	37nm,0.3s			eS	Sg	23 37 44.9	-3.2
KK31	**Karatay Array** 0.8nm,0.3s,baz=96,slow=17,SNR=19	3.18	279	Pg	Pg	23 37 06.7	-1.9
KK31	2.8nm,0.3s,baz=95,slow=28,SNR=9.2			Lg	Lg	23 37 45.2	
TDK	**Taldyqorghan** 32nm,0.5s	3.49	47	Pg	Pg	23 37 11.7	-2.7
TDK	52nm,0.9s			Lg	Lg	23 37 57.0	
TDK	**Taldyqorghan** 32nm,0.5s	3.49	47	eP	Pg	23 37 11.7	-2.7
TDK	52nm,0.9s			eS	Sg	23 37 57.0	-2.5
PDGK	**Podgornoye** baz=78	3.50	78	⇓iP	Pn	23 37 04.3	+2.4
PDGK	baz=78			⇓iS	Sn	23 37 45.3	+2.0
DJR	**Jarkent** 3.0nm,0.6s	3.98	64	Pg	Pb	23 37 17.6	-0.2
DJR	7.9nm,0.6s			Lg	Lg	23 38 07.3	
MK31	**Makanchi Array** 0.7nm,0.5s,baz=230,slow=12,SNR=9.9	6.73	50	⇓Pn	Pn	23 37 48.1	+1.9
MK31	1.3nm,0.5s,baz=232,slow=28,SNR=3.9			⇑Lg	Lg	23 39 33.1	

IDC 29 23:56:29.3±29.0**, 20°.25S**×**173°.28W, h0**^{km}**, mb4.2**/4**, mb1 4.3**/4**, mb1mx3.8**/25**, mbtmp4.2**/4**, Error ellipse: s-maj=542.5km s-min=167.5km az=73.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower** 1.5nm,0.4s,baz=82,slow=10,SNR=2.7	37.92	263	P	P	00 03 49.0	+0.3
STKA	**Stephens Creek** 1.5nm,0.5s,baz=88,slow=11,SNR=5.4	41.89	245	P	P	00 04 21.4	-0.2
ASAR	**Alice Springs** 2.3nm,0.7s,baz=92,slow=8.0,SNR=12	48.88	256	P	P	00 05 16.9	-0.4
WRA	**Warramunga Arr** 1.1nm,0.3s,baz=96,slow=7.6,SNR=7.5	49.02	261	P	P	00 05 18.1	-0.2

SJA 29 23:58:59.9±0.9**, 31°.65S**×**69°.50W, h117**^{km}±4^{km}**, ML3.5, MW3.8, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	**Leoncito**	0.23	131	eP	Pn	23 59 17.9	+1.3
RTLS				eS	Sn	23 59 30.5	+1.3
RTLS	comp=Z,3µm,0.3s			IAML		23 59 31.0	
ZON	**Zonda**	0.71	82	eP	Pn	23 59 20.2	+1.2
ZON				eS	Sn	23 59 34.5	+1.0
ZON	comp=Z,684nm,0.5s			IAML		23 59 35.7	
SJA	**San Juan**	0.81	81	eP	Pn	23 59 20.9	+1.0
RTCV	**Cerro Valdivia**	0.84	105	eP	Pn	23 59 21.4	+1.2
RTCV				eS	Sn	23 59 36.2	+0.7
RTLL	**Cerro Villicun**	0.93	70	eP	Pn	23 59 21.5	+0.5
RTLL	comp=Z,629nm,0.3s			IAML		23 59 40.3	
CFA	**Coronel Fontan**	1.07	88	eP	Pn	23 59 23.1	+0.6
AMOG	**MOGNA**	1.11	51	eP	Pn	23 59 23.4	+0.5
ACCO	**Cerro Coronel**	1.12	19	eP	Pn	23 59 24.0	+0.7
AROD	**Rodeo**	1.48	1	eP	Pn	23 59 28.6	+1.3
ACAN	**Cantantal**	2.06	108	eP	Pn	23 59 35.0	+1.0
AGUA	**GUANDACOL**	2.33	22	eP	Pn	23 59 38.7	+1.3
VCA	**Vinchina**	3.11	21	eP	Pn	23 59 49.2	+1.4
RFA	**San Rafael**	3.23	165	eP	Pn	23 59 50.1	+0.9
RFA	comp=Z,73nm,0.2s			IAML		23 59 50.4	
TCA	**Tanti**	4.20	87	eP	Pn	00 00 01.6	-0.5

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*ISK **30** 00:04:11.1, 37°.65N×38°.35E, h11^{km}, ML1.9/6*
*DDA **30** 00:04:11.5, 37°.69N×38°.38E, h7^{km}±6^{km}, ML2.7*
*ISCJB **30** 00:04:12.3±0.7, 37°.69N±0°.04×38°.44E±0°.04, h6^{km}±7^{km}, Error ellipse: s-maj=7.1km s-min=4.1km az=155.7*
ISC 30 00:04:12.1±1.0**, 37°.68N**±0°.04×**38°.41E**±0°.03**, h13**^{km}±9^{km}**, n17, σ0^{s}60**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	**Bozova**	0.23	203	i P	Pg	00 04 16.8	-0.3
ATAB				i S	Sg	00 04 21.0	+0.4
ATAB	comp=Z,19µm,0.1s			IAML_P			
URFA	**Urfa**	0.41	126	PG	Pg	00 04 20.0	-0.3
URFA				SG	Sg	00 04 26.2	+0.3
SANL	**SANLIURFA_Merk**	0.69	138	i P	Pg	00 04 25.6	0.0
SANL				i S	Sb	00 04 35.4	-0.1
SANL	comp=Z,896nm,0.1s			IAML_P			
GZT	**Gaziantep**	0.75	244	i P	Pn	00 04 28.0	-0.6
GZT				i S	Sn	00 04 39.9	+0.1
GZT	comp=Z,1µm,0.2s			IAML_P			
SURC	**SANLIURFA_SURC**	0.82	168	i P	Pb	00 04 28.3	+0.1
SURC	comp=Z,179nm,0.1s			IAML_P			
ELZG	**Elazig**	0.93	29	i P	Pn	00 04 31.9	+0.8
ELZG				i S	Sb	00 04 42.3	-0.2
ELZG	comp=Z,526nm,0.1s			IAML_P			
SVRC	**Sivrice-ELAZID**	0.99	45	PG	Pn	00 04 31.7	-0.2
GAZ	**Gaziantep**	1.08	242	PG	Pb	00 04 31.7	-1.0
DARE	**Darende-Malaty**	1.15	321	PN	Pb	00 04 33.4	-0.5
KMRS	**Kahramanmaras**	1.21	262	PN	Pn	00 04 33.9	-0.9
KMRS				SN	Sb	00 04 50.1	-0.4
HCB	**Kahramanmara**	1.24	255	i P	Pb	00 04 35.6	+0.2
HCB				i S	Sg	00 04 52.5	+0.4
HCB	comp=Z,567nm,0.1s			IAML_P			
DYBB	**Diyarbakir**	1.40	78	PN	Pb	00 04 37.8	-0.3
KUZU	**Kuzuini**	1.40	230	i P	Pg	00 04 40.9	+1.8
KUZU				i S	Sg	00 04 57.2	0.0
KAMA	**Osmaniye**	1.47	251	i P	Pb	00 04 39.2	-0.2
KAMA				i S	Sg	00 04 59.4	-0.1
KAMA	comp=Z,307nm,0.1s			IAML_P			
MAZI	**Mazidag**	1.64	97	PN	Pn	00 04 41.1	+0.4
ANDN	**Andirin**	1.64	267	i P	Pb	00 04 42.8	+0.5
ANDN	comp=Z,190nm,0.1s			IAML_P			
SAIM	**ADANA**	1.86	280	i P	Pb	00 04 46.2	+0.1
SAIM				i S	Sg	00 05 11.4	-0.7
SAIM	comp=Z,216nm,0.2s			IAML_P			

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*NIED **30** 00:17:00, 42°.40N×145°.20E, h32^{km}, Mw4.0 Best double couple: M$_0$1.22000×10^{15} NP1:φ$_s$132.00000°, δ61.00000°, λ-2.00000°. NP2:φ$_s$223.00000°, δ88.00000°, λ-151.00000°.*
*MOS **30** 00:17:12.4±1.4, 42°.38N×145°.01E, h50^{km}, mb4.3/10, Error ellipse: s-maj=15.1km s-min=7.8km az=76.3*
*JMA **30** 00:17:12.2, 42°.44N×145°.14E, h49^{km}±1^{km}, M4.1*
JMA Felt I J1.
*ISCJB **30** 00:17:13.2±0.8, 42°.50N±0°.05×145°.09E±0°.06, h49^{km}±5^{km}, mb3.8/16, MS3.3/3, Error ellipse: s-maj=10.5km s-min=4.8km az=145.8*
*SKHL **30** 00:17:13.3±0.7, 42°.63N×145°.12E, h59^{km}±2^{km}, mb4.1/5*
*IDC **30** 00:17:17.1±3.0, 42°.34N×144°.85E, h75^{km}±28^{km}, mb3.5/13, mb1 3.7/16, mb1mx3.5/43, mbtmp3.8/16, MS3.1/6, Ms1 3.1/6, ms1mx2.8/27, Error ellipse: s-maj=33.1km s-min=16.9km az=174.0*
ISC 30 00:17:13.8±1.3**, 42°.54N**±0°.07×**145°.04E**±0°.05**, h43**^{km}±11^{km}**, n57, σ2^{s}27**/64**, mb3.8**/16**, MS3.3**/3**, 10C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	**Akkeshi**	0.53	331	⇑P	Pn	00 17 25.2	+0.3
JAK				eS	Sn	00 17 34.8	+1.9
JKHN	**Kushirohamanak**	0.55	9	⇑P	Pn	00 17 25.4	+0.1
JKHN				eS	Sn	00 17 35.6	+2.1
JOB	**Onbets**	0.96	293	⇓P	Pn	00 17 31.3	+0.5
JOB				eS	Sn	00 17 45.3	+2.0
NMR	**Nemuro--Hokkai**	0.97	31c	iPN	Pn	00 17 30.5	-0.4
NMR				eS	Sn	00 17 43.4	-0.2
NMR	**Nemuro--Hokkai**	0.97	31	i P	Pn	00 17 30.5	-0.4
NMR				eS	Sn	00 17 43.4	-0.2
NEM2	**Nemuro 2**	0.97	32	⇑P	Pn	00 17 30.4	-0.6
NEM2				eS	Sn	00 17 43.8	+0.2
JNK	**Nakash**	1.07	347	⇑P	Pn	00 17 32.3	-0.1
JNK				eS	Sn	00 17 47.2	+1.1
JAR	**Ashorobuto**	1.20	310	⇑P	Pn	00 17 34.4	+0.3
JAR				eS	Sn	00 17 50.9	+1.6
JCH	**Churui**	1.24	274	⇓P	Pn	00 17 35.1	+0.5
JTHR	**Tokachihiroo**	1.31	260	⇓P	Pn	00 17 36.0	+0.4
JRA	**Rausu**	1.40	2	⇑P	Pn	00 17 36.9	+0.1
JRA				eS	Sn	00 17 55.7	+1.6
JEM	**Erimo**	1.49	250	P	Pn	00 17 38.4	+0.4
ERM	**Erimo**	1.49	250d	iPN	Pn	00 17 38.9	+0.8
GRPR	**Tuman**	1.55	20c	iPN	Pn	00 17 38.6	-0.3
GRPR				i S	Sn	00 17 56.5	-1.2
GRPR	comp=E,359nm,0.3s			pmax	pmax		
GRPR	comp=Z,850nm,0.3s			pmax	pmax		
GRPR	comp=E,6µm,0.5s			smax	smax		
GRPR	comp=N,3µm,0.4s			smax	smax		
GRPR	**Tuman**	1.55	20	i P	Pn	00 17 38.0	-0.9
GRPR	comp=N,40nm,0.3s			AMB	AMB	00 17 41.0	
GRPR	comp=N,80nm,0.3s			AMB	AMB	00 17 41.0	
GRPR				i S	Sn	00 17 56.0	-1.7
GRPR	comp=N,260nm,0.4s			A	A	00 17 58.0	
GRPR	comp=N,580nm,0.4s			A	A	00 17 58.0	
LAGR	**Lagunnoye**	1.61	19	ePN	Pn	00 17 39.7	0.0
LAGR				eS	Sn	00 18 00.4	+1.1
LAGR	comp=N,258nm,0.3s			pmax	pmax		
LAGR	comp=Z,942nm,0.3s			pmax	pmax		
LAGR	comp=E,145nm,0.1s			pmax	pmax		
LAGR	comp=N,2µm,0.6s			smax	smax		
LAGR	comp=E,9µm,0.5s			smax	smax		
LAGR	**Lagunnoye**	1.61	19	eP	Pn	00 17 39.0	-0.7
LAGR	comp=E,30nm,0.4s			AMB	AMB	00 17 41.0	
LAGR	comp=E,20nm,0.4s			AMB	AMB	00 17 41.0	
LAGR	comp=E,90nm,0.4s			AMB	AMB	00 17 41.0	
LAGR				eS	Sn	00 18 00.0	+0.7

LAGR				A	A	00 18 05.0	
	comp=E,160nm,0.4s						
LAGR				A	A	00 18 05.0	
	comp=E,870nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.61**	**22***c*	*e*PN	**Pn**	**00 17 44.1**	**+4.4**
YUK				*i* S	**Sn**	**00 18 04.5**	**+5.2**
YUK	**Yuzh-Kuril'sk**	**1.61**	**22**	*i* P	**Pn**	**00 17 39.0**	**-0.7**
YUK				AMB	AMB	00 17 40.0	
	comp=E,10.0nm,0.4s						
YUK				AMB	AMB	00 17 40.0	
	comp=E,20nm,0.4s						
YUK				AMB	AMB	00 17 40.0	
	comp=E,90nm,0.4s						
YUK				*i* S	**Sn**	**00 17 59.8**	**+0.5**
YUK				A	A	00 18 00.0	
	comp=E,430nm,0.3s						
YUK				A	A	00 18 00.0	
	comp=E,550nm,0.3s						
KUR	**Kuril'sk**	**3.38**	**36**	*e*PN	**Pn**	**00 18 07.6**	**+3.6**
KUR				*e*S	**Sn**	**00 18 46.1**	**+3.3**
KUR				pmax	pmax		
	comp=Z,128nm,0.6s						
KUR				smax	smax		
	comp=N,280nm,0.5s						
KUR				smax	smax		
	comp=E,182nm,0.4s						
KUR	**Kuril'sk**	**3.38**	**36**	*e*P	**Pn**	**00 18 06.0**	**+2.0**
KUR				AMB	AMB	00 18 07.0	
	comp=E,20nm,0.6s						
KUR				AMB	AMB	00 18 07.0	
	comp=E,40nm,0.6s						
KUR				*e*S	**Sn**	**00 18 45.7**	**+2.9**
KUR				A	A	00 18 53.0	
	comp=E,140nm,0.5s						
KUR				A	A	00 18 53.0	
	comp=E,90nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.71**	**341**	*e*PN	**Pn**	**00 18 24.2**	**+2.0**
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	**Yuzh-Sakhalins**	**4.71**	**341**	*e*P	**Pn**	**00 18 24.2**	**+2.0**
YSS				AMB	AMB	00 18 24.9	
	comp=Z,10.0nm,0.4s						
MAJO	**Matsushiro**	**7.98**	**224**	*i* PN	**Pn**	**00 19 05.7**	**-1.4**
MJAR	**Matsushiro Arr**	**7.98**	**224**	P	**Pn**	**00 19 05.5**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=25,slow=14,SNR=6.5						
USRK	**Ussuriysk Ar.**	**9.65**	**284**	LR	LR	00 23 12.6	
	comp=Z,51nm,21.5s,baz=197,slow=37						
KLR	**Kul'dur**	**11.42**	**310**	P	Pn	00 19 59.0	+4.9
	comp=Z,0.1nm,0.3s,baz=100,slow=17,SNR=3.1						
KLR				LR	LR	00 24 35.8	
	comp=Z,87nm,21.6s,baz=114,slow=38						
PETK	**Petropavlovsk-**	**13.55**	**34**	P	**P**	**00 20 29.4**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=191,slow=9.8,SNR=7.2						
KSRS	**Korea Array**	**14.07**	**255**	P	**P**	**00 20 34.1**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=68,slow=13,SNR=2.9						
KSRS				LR	LR	00 25 42.0	
	comp=Z,59nm,19.2s,baz=64,slow=36						
SEY	**Seymchan**	**20.88**	**9**	*i* P	**P**	**00 21 45.3**	**-6.6**
SEY	**Seymchan**	**20.88**	**9**	*e*P	**P**	**00 21 45.3**	**-6.6**
YAK	**Yakutsk**	**21.56**	**340**	*i* P	P	00 21 49.5	-10
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SONM	**Songino Array**	**27.54**	**294**	P	**P**	**00 22 57.4**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=78,slow=8.8,SNR=7.3						
BILL	**Bilibino**	**27.96**	**17**	*i* P	**P**	**00 22 54.3**	**-5.5**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BILL	**Bilibino**	**27.96**	**17**	*e*P	**P**	**00 22 54.3**	**-5.5**
H11N2	**WAKE ISLAND Hy**	**29.28**	**134**	T	T	00 54 32.0	
	baz=326,slow=75,SNR=294						
H11N1	**WAKE ISLAND Hy**	**29.29**	**134**	T	T	00 54 33.6	
	baz=326,slow=75,SNR=349						
H11N3	**WAKE ISLAND Hy**	**29.30**	**134**	T	T	00 54 34.1	
	baz=326,slow=75,SNR=358						
H11S1	**WAKE ISLAND Hy**	**30.19**	**136**	T	T	00 55 40.7	
	baz=328,slow=76,SNR=614						
H11S3	**WAKE ISLAND Hy**	**30.19**	**136**	T	T	00 55 44.9	
	baz=328,slow=76,SNR=288						
H11S2	**WAKE ISLAND Hy**	**30.21**	**136**	T	T	00 55 36.3	
	baz=328,slow=76,SNR=375						
ZALV	**Zalesovo Beam**	**40.51**	**308**	P	**P**	**00 24 48.3**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=103,slow=11,SNR=5.1						
ZALV				LR	LR	00 42 15.4	
	comp=Z,28nm,19.1s,baz=68,slow=37						
ILAR	**Eielson Array**	**43.37**	**35**	P	**P**	**00 25 13.6**	**+2.1**
	comp=Z,2.0nm,0.8s,baz=265,slow=6.4,SNR=18						
MKAR	**Makanchi Array**	**43.79**	**298**	P	**P**	**00 25 15.2**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=68,slow=16,SNR=1.8						
INK	**Inuvik**	**48.22**	**30**	P	**P**	**00 25 50.2**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=318,slow=10.0,SNR=4.7						
ARU	**Arti**	**54.18**	**317***c*	*i*P	**P**	**00 26 34.2**	**-0.2**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU	**Arti**	**54.18**	**317**	*e*P	**P**	**00 26 34.2**	**-0.2**
RES	**Resolute Bay**	**56.56**	**16**	P	**P**	**00 26 51.5**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=338,slow=7.6,SNR=3.7						
YKA	**Yellowknife Ar**	**57.66**	**33**	P	**P**	**00 27 02.4**	**+3.2**
	comp=Z,0.5nm,0.6s,baz=296,slow=5.5,SNR=3.6						
GEYT	**Alibeck**	**63.66**	**298**	LR	LR	00 55 43.5	
	comp=Z,34nm,21.1s,baz=200,slow=36						
FINES	**FINESS Array B**	**65.24**	**332**	P	**P**	**00 27 50.4**	**0.0**
	comp=Z,1.9nm,0.5s,baz=47,slow=6.9,SNR=14						
NVAR	**Mina Array Bea**	**69.53**	**56**	P	**P**	**00 28 19.8**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=286,slow=7.4,SNR=3.5						
NB2	**NORSAR Subarra**	**70.16**	**338**	P	**P**	**00 28 21.7**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=34,slow=6.5						
NOA	**NORSAR Array B**	**70.16**	**338**	P	**P**	**00 28 21.7**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=33,slow=6.4,SNR=6.0						
NOA				LR	LR	01 02 57.0	
	comp=Z,16nm,20.2s,baz=305,slow=39						
AKASG	**Malin Array Be**	**71.63**	**323**	P	**P**	**00 28 30.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=33,slow=4.3,SNR=4.2						
PDAR	**Pinedale Array**	**71.87**	**48**	P	**P**	**00 28 33.1**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=280,slow=5.4,SNR=3.0						
TXAR	**Lajitas Array**	**84.61**	**55**	P	**P**	**00 29 44.9**	**+2.0**
	comp=Z,0.1nm,0.6s,baz=283,slow=4.5,SNR=2.3						

LJU ***30*** *00:27:03.4, 46°.39N×15°.07E, h0^{km} Rockburst*

VIE 30 00:27:03.6±0.2**, 46°.40N×15°.09E, h0**^{km}**, mb0.4**/1**, ml1.1**/4**, Error ellipse: s-maj=1.7km s-min=1.5km az=47.0, Suspected Mining induced., Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOKA	**Soboth**	**0.28**	**352**	Pg	Pg	00 27 09.0	0.0
	3.1nm,0.3s						
SOKA				Sg	Sg	00 27 13.0	+0.4
	1.4nm,0.2s						
OBKA	**Obir**	**0.39**	**286**	*e*Pg	Pg	00 27 11.1	0.0
	1.5nm,0.3s						
OBKA				Sg	Sg	00 27 16.7	+0.6
	11nm,0.4s						
LEGS	**Legarje**	**0.48**	**161**	*i* Pg	Pg	00 27 12.6	-0.2
ARSA	**Arzberg**	**0.90**	**19**	Sg	Sg	00 27 33.0	+0.5
	1.7nm,0.6s						
MYKA	**Terra Mystica**	**1.03**	**283**	Sg	Sb	00 27 37.6	-0.8
	1.6nm,0.3s						

IDC 30 01:19:16.2±2.6**, 21°.55N×9°.43W, h0**^{km}**, mb3.3**/1**, mb1 3.5**/4**, mb1mx3.3**/41**, mbtmp3.4**/4**, ML3.7**/3**, Error ellipse: s-maj=70.8km s-min=32.8km az=78.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**13.51**	**126**	Pn	Pn	01 22 30.6	+1.4
	0.1nm,0.3s,baz=311,slow=12,SNR=10						
TORD				Sn	Sn	01 25 00.4	+0.3
	0.3nm,0.3s,baz=312,slow=22,SNR=4.2						
DBIC	**Dimbokro**	**15.44**	**163**	Pn	Pn	01 22 56.4	+0.9
	0.2nm,0.3s,baz=322,slow=13,SNR=4.1						
DBIC				Sn	Sn	01 25 38.0	-9.3
	0.5nm,0.3s,baz=239,slow=20,SNR=4.3						
ESDC	**Sonseca Array**	**18.66**	**13**	P	Pn	01 23 37.0	+1.0
	0.1nm,0.3s,baz=193,slow=11,SNR=2.9						
KEST	**Kesra**	**21.65**	**45**	P	P	01 24 04.7	-3.7
	3.8nm,1.1s,baz=188,slow=18,SNR=1.5						
BRTR	**Keskin Array B**	**40.80**	**54**	P	P	01 26 59.0	-0.6
	0.2nm,0.5s,baz=246,slow=7.1,SNR=1.7						
WRA	**Warramunga Arr**	**146.12**	**94**	PKPbc	PKPdf	01 38 56.8	-1.4
	0.6nm,0.4s,baz=260,slow=4.2,SNR=2.0						
ASAR	**Alice Springs**	**146.14**	**101**	PKPbc	PKPbc	01 38 58.8	-0.3
	1.0nm,0.5s,baz=288,slow=2.1,SNR=12						

ISCJB ***30*** *01:22:50.0±0.1, 17°.96S±0°.05×178°.56W±0°.04, h579^{km}, mb4.5/170, Error ellipse: s-maj=7.3km s-min=3.2km az=148.7*

NEIC ***30*** *01:22:52.0±1.7, 17°.97S×178°.51W, h590^{km}±7^{km}, mb4.5/165, Error ellipse: s-maj=19.7km s-min=12.9km az=148.0*

IDC ***30*** *01:22:53.3±2.5, 17°.93S×178°.52W, h609^{km}±29^{km}, mb4.0/19, mb1 4.2/20, mb1mx3.9/34, mbtmp4.9/20, Error ellipse: s-maj=22.9km s-min=11.4km az=149.0*

ISC 30 01:22:50.7±0.3**, 18°.00S**±0°.08**×178°.46W**±0°.06**, h579**^{km}**, n402,** σ0^{s}.**89**/406**, mb4.5**/170**, 17C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**8.17**	**99**	*e*P	**P**	**01 24 51.6**	**+0.6**
NIUE				*e*S	**S**	**01 26 28.4**	**-1.2**
NIUE	**Niue**	**8.17**	**99**	P	**P**	**01 24 51.4**	**+0.5**
	baz=8.1,SNR=6.3						
MARNC	**Mare, Loyalty**	**13.18**	**253**	*e*P	**P**	**01 25 41.0**	**-0.4**
PINNC	**Pines Island,**	**13.99**	**249**	*e*P	**P**	**01 25 51.2**	**+1.5**
DZM	**Mont Dzumac**	**14.75**	**252**	P	**P**	**01 25 58.1**	**+0.8**
	2.6nm,0.3s,baz=102,slow=20,SNR=20						
DZM	**Mont Dzumac**	**14.75**	**252**	*e*P	**P**	**01 25 58.6**	**+1.4**
ONTNC	**Ouen Toro**	**14.79**	**251**	*e*P	**P**	**01 25 58.1**	**+0.5**
KNTN	**Kanton**	**16.51**	**24**	*e*P	**P**	**01 26 13.1**	**-0.8**
	105nm,0.7s						
NFK	**Norfolk Island**	**16.61**	**226**	P	**P**	**01 26 16.6**	**+2.1**
	baz=17						
OUZ	**Omahuta**	**18.55**	**201**	*e*P	**P**	**01 26 32.5**	**+0.5**
	25nm,0.9s						
URZ	**Urewera**	**20.55**	**190**	*e*P	**P**	**01 26 55.9**	**+5.7**
	13nm,0.7s						
BKZ	**Black Stump Fm**	**21.54**	**191**	*e*P	**P**	**01 26 56.5**	**-2.7**
	3.8nm,0.9s						
BFZ	**Birch Farm**	**23.06**	**190**	*e*P	**P**	**01 27 12.6**	**0.0**
	27nm,1.2s						
QRZ	**Quartz Range**	**24.03**	**197**	*e*P	**P**	**01 27 21.1**	**-0.1**
	40nm,1.4s						
THZ	**Tophouse**	**24.81**	**196**	*e*P	**P**	**01 27 27.3**	**-0.9**
	19nm,1.4s						
FOZ	**Fox Glacier**	**27.31**	**199**	*e*P	**P**	**01 27 49.1**	**-1.0**
	25nm,1.3s						
LBZ	**Lake Benmore**	**27.98**	**198**	*e*P	**P**	**01 27 53.7**	**-2.2**
EIDS	**Eidsvold**	**29.19**	**250**	*e*P	**P**	**01 28 07.1**	**+0.4**
	25nm,0.8s						
EIDS	**Eidsvold**	**29.19**	**250**	P	**P**	**01 28 06.9**	**+0.2**
	baz=29,SNR=9.2						
ARMA	**Armidale**	**29.85**	**240**	*e*P	**P**	**01 28 13.9**	**+1.5**
	23nm,0.8s						
ARMA	**Armidale**	**29.85**	**240**	P	**P**	**01 28 13.7**	**+1.3**
	baz=30,SNR=15						
MGCD	**Mangrove Creek**	**31.20**	**235**	P	**P**	**01 28 25.1**	**+1.3**
	baz=31,SNR=5.2						
RMQ	**Roma**	**31.42**	**249**	P	**P**	**01 28 27.0**	**+1.2**
	baz=32,SNR=6.4						
CNB	**Canberra Magne**	**33.33**	**232**	P	**P**	**01 28 43.1**	**+1.2**
	baz=33,SNR=34						
CTAO	**Charters Tower**	**33.38**	**261**	*e*P	**P**	**01 28 42.7**	**+0.2**
	31nm,0.8s						
CAN	**Canberra**	**33.61**	**233**	*e*P	**P**	**01 28 43.7**	**-0.5**
	15nm,0.7s						
CAN				*e*pP	**pP**	**01 30 19.1**	**+0.2**
PMG	**Port Moresby**	**34.42**	**280**	*e*P	**P**	**01 28 52.8**	**+1.5**
	123nm,0.9s						
CMSA	**Cobar Meteorol**	**35.06**	**241**	P	**P**	**01 28 57.0**	**+0.7**
	baz=35,SNR=32						
MTSU	**Mount Surprise**	**35.35**	**264**	P	**P**	**01 28 59.3**	**+0.4**
	baz=35,SNR=18						
COEN	**Coen**	**37.05**	**271**	*e*P	**P**	**01 29 14.1**	**+1.1**
	70nm,0.8s						
COEN	**Coen**	**37.05**	**271**	P	**P**	**01 29 14.0**	**+1.1**
	baz=37,SNR=52						
TOO	**Toolangi**	**37.07**	**231**	*e*P	**P**	**01 29 14.0**	**+1.2**
	29nm,0.8s						
TOO	**Toolangi**	**37.07**	**231**	P	**P**	**01 29 13.8**	**+0.9**
	baz=37,SNR=8.7						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**01 29 25.8**	**+1.0**
	28nm,0.8s,baz=90,slow=9.3,SNR=50						
STKA	**Stephens Creek**	**38.54**	**241**	*e*P	**P**	**01 29 24.9**	**+0.1**
	8.4nm,1.0s						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**01 29 25.9**	**+1.0**
	baz=39,SNR=15						
QIS	**Mount Isa**	**39.59**	**259**	P	**P**	**01 29 33.1**	**-0.3**
	baz=40,SNR=4.7						
HTT	**Hallett**	**41.05**	**240**	P	**P**	**01 29 45.5**	**+0.5**
	baz=41,SNR=12						
BBOO	**Buckleboo**	**43.32**	**241**	*e*P	**P**	**01 30 02.9**	**+0.3**
	32nm,0.8s						
BBOO	**Buckleboo**	**43.32**	**241**	P	**P**	**01 30 02.9**	**+0.3**
	baz=43,SNR=32						
HMH	**Humu‘ula Sheep**	**43.65**	**32**	*e*P	**P**	**01 30 06.0**	**+0.3**
	93nm,0.7s						
POHA	**Pohakuloa**	**43.76**	**32**	*e*P	**P**	**01 30 05.4**	**-1.0**
	246nm,1.5s						
KEKH	**Kekaha**	**43.77**	**26**	*e*P	**P**	**01 30 05.3**	**-0.9**
	157nm,1.2s						
HPAH	**Hawaii Prepara**	**43.90**	**32**	*e*P	**P**	**01 30 08.2**	**+0.8**
	143nm,1.3s						
WB2	**Warramunga Arr**	**44.55**	**260**	*e*P	**P**	**01 30 11.8**	**-0.5**
	29nm,0.7s						
WR1	**Warramunga Arr**	**44.56**	**260**	*e*P	**P**	**01 30 12.1**	**-0.3**
WRA	**Warramunga Arr**	**44.56**	**260**	P	**P**	**01 30 12.1**	**-0.3**
	24nm,0.7s,baz=87,slow=8.8,SNR=84						
AS06	**Alice Springs**	**44.66**	**254**	P	**P**	**01 30 13.1**	**0.0**
	baz=45						
AS31	**Alice Springs**	**44.72**	**254**	*e*P	**P**	**01 30 13.6**	**0.0**
	26nm,0.6s						
AS31				*e*S	**S**	**01 36 07.1**	**-2.0**
ASAR	**Alice Springs**	**44.72**	**254**	P	**P**	**01 30 14.0**	**+0.4**
	99nm,0.7s,baz=86,slow=8.6,SNR=740						
ASAR				S	**S**	**01 36 07.1**	**-2.0**
	1.1nm,0.7s,baz=86,slow=16,SNR=5.0						
KDU	**Kakadu**	**47.50**	**269**	P	**P**	**01 30 34.5**	**-0.2**
	baz=48,SNR=14						
GUMO	**Guam**	**47.89**	**308**	P	**P**	**01 30 37.5**	**0.0**
	12nm,0.3s,baz=168,slow=10,SNR=6.8						
MTN	**Manton Dam**	**48.74**	**269**	*e*P	**P**	**01 30 43.7**	**-0.2**
	40nm,0.9s						
WRKA	**Warakurna**	**49.77**	**252**	P	**P**	**01 30 51.4**	**0.0**
	baz=50,SNR=46						
FORT	**Forrest**	**49.92**	**245**	*e*P	**P**	**01 30 52.1**	**-0.3**
	37nm,0.6s						
FORT	**Forrest**	**49.92**	**245**	P	**P**	**01 30 51.8**	**-0.6**
	baz=50,SNR=31						
KNRA	**Kununurra**	**50.43**	**264**	P	**P**	**01 30 56.0**	**-0.2**
	baz=50,SNR=13						
SOEI	**Soe**	**56.02**	**270**	*e*P	**P**	**01 31 35.8**	**-0.3**
	63nm,0.8s						
PSA00	**Pilbara Seismi**	**57.84**	**255**	*e*P	**P**	**01 31 48.0**	**-0.2**
	22nm,0.8s						
MEEK	**Meekatharra**	**58.35**	**249**	P	**P**	**01 31 50.8**	**-0.9**
	baz=58,SNR=7.6						
MORW	**Morawa**	**60.40**	**246**	P	**P**	**01 32 04.8**	**-0.4**
	baz=60,SNR=5.2						
GIRL	**Giralia**	**62.82**	**253**	P	**P**	**01 32 22.0**	**+1.0**
	baz=63,SNR=4.5						
MJAR	**Matsushiro Arr**	**67.95**	**323**	P	**P**	**01 32 52.4**	**-0.3**
	1.5nm,0.6s,baz=170,slow=5.8,SNR=4.1						
MAJO	**Matsushiro**	**67.95**	**323**	*e*P	**P**	**01 32 52.4**	**-0.3**
TPUB	**Ta-pu**	**72.26**	**302**	*e*P	**P**	**01 33 17.6**	**-1.0**
	19nm,0.7s						
KSM	**Kuching**	**72.64**	**277**	*e*P	**P**	**01 33 22.0**	**+1.0**
	25nm,0.8s						
PETK	**Petropavlovsk-**	**73.75**	**345**	P	**P**	**01 33 26.1**	**-0.2**
	4.6nm,0.7s,baz=119,slow=7.4,SNR=15						
PEA1	**Petropavlovsk-**	**73.76**	**345**	*e*P	**P**	**01 33 26.1**	**-0.3**
CHGN	**Chignik**	**75.92**	**11**	*e*P	**P**	**01 33 37.5**	**-0.8**
	17nm,0.8s						
SCZ2	**Santa Cruz Isl**	**76.21**	**47**	P	**P**	**01 33 41.2**	**+0.6**
	baz=237						
SCI2	**San Clemente I**	**76.43**	**48**	P	**P**	**01 33 42.1**	**+0.4**
	baz=238						
SAO	**San Andreas Ge**	**76.53**	**44**	*e*P	**P**	**01 33 42.7**	**+0.5**
	21nm,0.8s						
PKM	**Mcpherson Peak**	**76.58**	**46**	P	**P**	**01 33 43.4**	**+0.7**
	baz=237,SNR=7.3						
PAGB	**Antelope Grade**	**76.74**	**45**	*e*P	**P**	**01 33 44.5**	**+1.1**
	6.9nm,0.7s						
KMRM	**Mail Ridge**	**77.12**	**40**	*e*P	**P**	**01 33 47.2**	**+1.7**
	33nm,0.9s						
ARVC	**Arvin**	**77.38**	**46**	P	**P**	**01 33 47.4**	**+0.5**
	baz=237						
109C	**Camp Elliot, M**	**77.42**	**49**	P	**P**	**01 33 47.4**	**+0.3**
	baz=239						
MWC	**Mount Wilson**	**77.44**	**48**	*e*P	**P**	**01 33 48.0**	**+0.5**
	19nm,0.8s						
VES	**Vestal, Richgr**	**77.60**	**46**	P	**P**	**01 33 48.1**	**+0.1**
	baz=237,SNR=7.0						
BAR	**Barrett**	**77.62**	**50**	*e*P	**P**	**01 33 48.8**	**+0.5**
	9.2nm,1.0s						
O02D	**Mt. Diablo Mer**	**77.66**	**40**	P	**P**	**01 33 49.3**	**+1.0**
	baz=234						
MURC	**Murrieta**	**77.72**	**49**	P	**P**	**01 33 49.1**	**+0.3**
	baz=239						
BFSC	**Mount Baldy Ra**	**77.73**	**48**	P	**P**	**01 33 48.9**	**-0.1**
	baz=238,SNR=6.0						
EDW2	**Edwards Air Fo**	**77.83**	**47**	P	**P**	**01 33 49.8**	**+0.4**
	baz=238,SNR=10						
OHAK	**Old Harbor**	**77.83**	**14**	*e*P	**P**	**01 33 48.8**	**0.0**
	22nm,1.0s						
MONP2	**Monument Peak**	**77.91**	**49**	P	**P**	**01 33 50.6**	**+0.5**
	baz=239,SNR=17						
ISA	**Isabella, Lake**	**77.92**	**46**	*e*P	**P**	**01 33 50.4**	**+0.5**
	24nm,0.9s						
ISA	**Isabella, Lake**	**77.92**	**46**	P	**P**	**01 33 50.4**	**+0.5**
	baz=237,SNR=17						
CMB	**Columbia Colle**	**77.94**	**43**	*e*P	**P**	**01 33 50.1**	**+0.2**
	16nm,1.0s						
NJ2	**Nanjing**	**77.96**	**310**	*e*P	**P**	**01 33 49.5**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,27nm,0.5s						
IKP	**In-Ko-Pah, Jac**	**78.02**	**50**	P	**P**	**01 33 51.1**	**+0.6**
	baz=239,SNR=8.3						
WDC	**Whiskeytown Da**	**78.05**	**40**	*e*P	**P**	**01 33 51.2**	**+0.9**
	comp=Z,15nm,1.4s						
AFDM	**Forest Hills D**	**78.08**	**42**	*e*P	**P**	**01 33 51.1**	**+0.5**
	comp=Z,11nm,1.0s						
N02D	**Trinity Center**	**78.18**	**40**	P	**P**	**01 33 52.0**	**+0.9**
	baz=233						
PFO	**Pinyon Flats O**	**78.25**	**49**	*e*P	**P**	**01 33 52.5**	**+0.7**
	comp=Z,5.5nm,1.0s						
PFO	**Pinyon Flats O**	**78.25**	**49**	P	**P**	**01 33 52.2**	**+0.4**
	baz=239						
O03E	**Paynes Creek**	**78.33**	**41**	P	**P**	**01 33 52.1**	**+0.1**
	baz=234,SNR=6.0						
M02C	**Callahan**	**78.34**	**39**	P	**P**	**01 33 52.7**	**+0.7**
	baz=233						
SWSC	**Sam W. Stewart**	**78.39**	**50**	P	**P**	**01 33 52.8**	**+0.4**
	baz=240,SNR=5.9						
KDAK	**Kodiak Island**	**78.50**	**14**	P	**P**	**01 33 51.9**	**-0.4**
	comp=Z,9.6nm,0.7s,baz=231,slow=4.3,SNR=8.0						
KDAK	**Kodiak Island**	**78.50**	**14**	*e*P	**P**	**01 33 52.4**	**+0.1**
	comp=Z,12nm,0.9s						
MDPB	**Devils Postpil**	**78.58**	**44**	*e*P	**P**	**01 33 54.4**	**+0.8**
	comp=Z,17nm,0.9s						
CWC	**Cottonwood Cre**	**78.60**	**46**	P	**P**	**01 33 53.9**	**+0.3**
	baz=238						
OMMB	**Old Mammoth Mi**	**78.62**	**44**	*e*P	**P**	**01 33 54.6**	**+0.8**
	comp=Z,15nm,1.2s						
YBH	**Yreka Blue Hor**	**78.63**	**39**	P	**P**	**01 33 54.2**	**+0.7**
	comp=Z,9.5nm,0.6s,baz=137,slow=2.3,SNR=6.6						
YBH	**Yreka Blue Hor**	**78.63**	**39**	*e*P	**P**	**01 33 54.7**	**+1.2**
	comp=Z,11nm,0.8s						
K02D	**Willamette Mer**	**78.64**	**38**	P	**P**	**01 33 54.3**	**+0.7**
	baz=232						
MLAC	**Mammoth, Mammo**	**78.74**	**44**	P	**P**	**01 33 55.0**	**+0.6**
	baz=237						
J01E	**Myrtle Point**	**78.77**	**37**	P	**P**	**01 33 54.6**	**+0.5**
	baz=232						
BELC	**Belle Mtn. Jos**	**78.78**	**49**	P	**P**	**01 33 55.0**	**+0.3**
	baz=239,SNR=8.6						
MPMC	**Manual Prospec**	**78.80**	**46**	P	**P**	**01 33 55.2**	**+0.4**
	baz=238,SNR=11						
WAKR	**Walker**	**78.82**	**43**	*e*P	**P**	**01 33 55.6**	**+0.8**
	comp=Z,19nm,0.9s						
GSC	**Goldstone, Bar**	**78.88**	**47**	*e*P	**P**	**01 33 55.6**	**+0.6**
	comp=Z,10nm,1.3s						
GSC	**Goldstone, Bar**	**78.88**	**47**	P	**P**	**01 33 55.3**	**+0.2**
	baz=238,SNR=5.3						
HEC	**Hector,Ludlow**	**78.97**	**48**	P	**P**	**01 33 55.5**	**0.0**
	baz=239						
BEKR	**Beckworth**	**78.99**	**42**	*e*P	**P**	**01 33 56.3**	**+0.7**
BEKR				*e*PcP	**PcP**	**01 34 07.4**	**+5.7**
BC3	**Big Chuckawall**	**79.00**	**49**	P	**P**	**01 33 56.2**	**+0.5**
	baz=240,SNR=5.6						
HUMO	**Hull Mountain**	**79.00**	**38**	*e*P	**P**	**01 33 56.7**	**+1.3**
	comp=Z,16nm,1.0s						
PNTR	**Pine Nut**	**79.04**	**43**	*e*P	**P**	**01 33 56.9**	**+0.9**
	comp=Z,28nm,0.9s						
VCNR	**Virginia City**	**79.12**	**43**	*e*P	**P**	**01 33 57.6**	**+1.3**
	comp=Z,10nm,0.9s						
GLA	**Glamis**	**79.15**	**50**	*e*P	**P**	**01 33 57.5**	**+1.1**
	comp=Z,14nm,0.8s						
GLA	**Glamis**	**79.15**	**50**	P	**P**	**01 33 57.3**	**+0.9**
	baz=240						
L04D	**Klamath Falls**	**79.16**	**39**	P	**P**	**01 33 57.0**	**+0.6**
	baz=234						
M04C	**Macdoel**	**79.18**	**39**	P	**P**	**01 33 57.0**	**+0.5**
	baz=234,SNR=5.0						
GRAC	**Grapevine Rang**	**79.38**	**45**	P	**P**	**01 33 58.2**	**+0.6**
	baz=238						
GMRC	**Granite Mounta**	**79.42**	**48**	P	**P**	**01 33 58.3**	**+0.3**
	baz=239,SNR=5.9						
I03D	**Drain, OR**	**79.44**	**37**	P	**P**	**01 33 58.1**	**+0.5**
	baz=232						
FURC	**Furnace Creek,**	**79.45**	**46**	P	**P**	**01 33 58.3**	**+0.4**
	baz=238,SNR=6.4						
IRM	**Iron Mountain**	**79.47**	**49**	P	**P**	**01 33 58.9**	**+0.7**
	baz=240						
RYN	**Ryan**	**79.49**	**44**	*e*P	**P**	**01 33 59.0**	**+0.7**
	comp=Z,7.3nm,0.9s						
PAHR	**Pah Rah Range**	**79.53**	**42**	*e*P	**P**	**01 33 59.2**	**+0.8**
	comp=Z,16nm,1.2s						
NV01	**Mina Array Sit**	**79.53**	**44**	*e*P	**P**	**01 33 59.0**	**+0.4**
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**01 33 59.0**	**+0.4**
	comp=Z,7.8nm,0.7s,baz=224,slow=8.8,SNR=67						
SHOC	**Shoshone, Teco**	**79.56**	**47**	P	**P**	**01 33 59.5**	**+1.0**
	baz=239						
TUQ	**Turquoise Moun**	**79.57**	**47**	P	**P**	**01 33 58.9**	**+0.2**
	baz=239,SNR=5.9						
NV11	**Mina Array Sit**	**79.62**	**44**	*e*P	**P**	**01 33 59.3**	**+0.3**
	comp=Z,1.1nm,1.0s						
Y12C	**Blythe**	**79.72**	**50**	*e*P	**P**	**01 34 00.4**	**+1.0**
	comp=Z,10nm,0.8s						
Y12C	**Blythe**	**79.72**	**50**	P	**P**	**01 34 00.2**	**+0.8**
	baz=240						
113A	**Mohawk Valley,**	**79.79**	**51**	*e*P	**P**	**01 34 00.7**	**+1.0**
	comp=Z,8.1nm,0.9s						
J04D	**Umpqua Nationa**	**79.88**	**38**	P	**P**	**01 34 00.8**	**+0.6**
	baz=234,SNR=7.1						
LDFC	**Landfair**	**79.96**	**48**	*e*P	**P**	**01 34 02.0**	**+1.3**
	comp=Z,32nm,1.0s						
KVN	**Kaiserville**	**80.00**	**43**	*e*P	**P**	**01 34 01.3**	**+0.3**
	comp=Z,13nm,0.9s						
I04A	**Tendick Farm,**	**80.04**	**38**	P	**P**	**01 34 00.9**	**+0.1**
	baz=233						
214A	**Organ Pipe Nat**	**80.11**	**52**	P	**P**	**01 34 02.3**	**+0.8**
	baz=242						
TPNV	**Topopah Spring**	**80.12**	**46**	*e*P	**P**	**01 34 02.1**	**+0.5**
	comp=Z,9.4nm,0.9s						
TPNV	**Topopah Spring**	**80.12**	**46**	P	**P**	**01 34 02.0**	**+0.5**
	baz=239,SNR=7.0						
MOD	**Modoc Plateau**	**80.19**	**40**	*e*P	**P**	**01 34 02.3**	**+0.5**
	comp=Z,18nm,0.8s						
PDMCI	**Parker Dam,Lak**	**80.27**	**49**	P	**P**	**01 34 02.8**	**+0.6**
	baz=240						
H04D	**Lebanon**	**80.29**	**37**	P	**P**	**01 34 02.6**	**+0.6**
	baz=233						
G03D	**McMinnville, O**	**80.41**	**36**	P	**P**	**01 34 03.1**	**+0.5**
	baz=232						
J05D	**Fort Rock, OR**	**80.42**	**39**	P	**P**	**01 34 03.6**	**+0.6**
	baz=234,SNR=16						
SHPR	**Sheep Range**	**80.64**	**47**	*e*P	**P**	**01 34 05.3**	**+1.0**
	comp=Z,6.8nm,0.9s						
H04A	**Detroit Lake**	**80.70**	**37**	*e*P	**P**	**01 34 04.5**	**+0.3**
	comp=Z,12nm,0.6s						
W13A	**Hualapai Mount**	**80.84**	**49**	*e*P	**P**	**01 34 06.0**	**+0.6**
	comp=Z,9.9nm,1.4s						
PINE	**Pine Mountain**	**80.89**	**38**	*e*P	**P**	**01 34 06.3**	**+0.8**
	comp=Z,28nm,0.9s						
Y14A	**Wickenburg**	**80.91**	**50**	*e*P	**P**	**01 34 06.5**	**+0.9**
	comp=Z,6.7nm,0.9s						
SVW2	**Sparrevohn**	**80.94**	**11**	*e*P	**P**	**01 34 04.5**	**-0.5**
	comp=Z,7.4nm,1.1s						
I05D	**Terrebonne, OR**	**80.98**	**38**	P	**P**	**01 34 06.0**	**+0.3**
	baz=234,SNR=5.3						
R11A	**Troy Canyon, C**	**81.30**	**45**	*e*P	**P**	**01 34 04.8**	**-2.8**
	comp=Z,5.2nm,1.0s						
R11A	**Troy Canyon, C**	**81.30**	**45**	P	**P**	**01 34 07.7**	**+0.1**
	baz=239,SNR=8.8						
BMN	**Battle Mountai**	**81.31**	**43**	*e*P	**P**	**01 34 08.0**	**+0.3**
	comp=Z,18nm,0.9s						
NLWA	**Neilton Lookou**	**81.42**	**34**	*e*P	**P**	**01 34 08.4**	**+0.6**
	comp=Z,14nm,1.1s						

WVOR	Wild Horse Val	81.51	40	eP	P	01 34 09.0	+0.4
	comp=Z,20nm,0.9s						
G05D	Wamic, OR	81.53	37	P	P	01 34 08.7	+0.3
	baz=234						
E04D	Cinebar	81.61	35	P	P	01 34 09.4	+0.6
	baz=233						
TUC	Tucson	81.80	52	eP	P	01 34 11.4	+1.2
	comp=Z,17nm,1.1s						
TUC	Tucson	81.80	52	P	P	01 34 11.4	+1.2
	baz=243						
F05D	White Salmon	81.82	36	P	P	01 34 10.1	+0.1
	baz=234						
D04E	Lakebay	81.88	35	P	P	01 34 11.2	+1.1
	baz=232						
I07A	Izee	81.91	39	eP	P	01 34 11.5	+0.9
	comp=Z,13nm,0.8s						
D03D	Eldon	81.92	34	P	P	01 34 10.8	+0.4
	baz=232						
J08A	Circle Bar Ran	82.12	40	eP	P	01 34 12.1	+0.5
	comp=Z,28nm,1.1s						
LON	Longmire	82.14	35	eP	P	01 34 11.7	+0.1
	comp=Z,3.7nm,0.8s						
LCMT	Little Creek M	82.23	47	eP	P	01 34 13.3	+0.9
	comp=Z,12nm,0.8s						
SUA	Susitna One	82.23	13	eP	P	01 34 11.0	-0.7
	comp=Z,12nm,0.7s						
X16A	Lo Mia Camp, P	82.28	50	eP	P	01 34 13.7	+0.9
	comp=Z,15nm,1.0s						
D05A	Enumclaw	82.31	35	eP	P	01 34 13.3	+1.0
	comp=Z,31nm,1.1s						
CCUT	Cedar City	82.41	47	eP	P	01 34 14.3	+0.9
	comp=Z,11nm,0.9s						
319A	Douglas	82.52	54	eP	P	01 34 15.2	+1.3
	comp=Z,23nm,0.9s						
KNB	Kanab	82.53	47	eP	P	01 34 14.8	+0.9
	comp=Z,12nm,0.8s						
GLI	Glacier Island	82.55	15	eP	P	01 34 12.3	-0.9
	comp=Z,22nm,0.7s						
PSUT	Pine Spring	82.56	46	eP	P	01 34 14.5	+0.4
	comp=Z,11nm,0.7s						
TTA	Tatalina	82.57	10	eP	P	01 34 13.3	-0.1
	comp=Z,13nm,1.1s						
U15A	North Rim	82.62	48	eP	P	01 34 15.4	+0.8
	comp=Z,23nm,0.8s						
SZCU	Shurtz Canyon	82.62	47	eP	P	01 34 15.6	+1.1
	comp=Z,10nm,1.0s						
KNK	Knik Glacier	82.70	14	eP	P	01 34 13.7	-0.3
	comp=Z,12nm,0.6s						
PMR	Palmer	82.70	14	eP	P	01 34 13.4	-0.5
	comp=Z,8.6nm,0.6s						
ELK	Elko	82.76	43	eP	P	01 34 15.3	+0.2
	comp=Z,9.8nm,0.9s						
WUAZ	Wupatki	82.84	49	eP	P	01 34 16.3	+0.8
	comp=Z,14nm,1.0s						
WUAZ	Wupatki	82.84	49	P	P	01 34 16.1	+0.6
	baz=242						
A04D	Lummi Island	82.85	33	P	P	01 34 15.4	+0.5
	baz=232						
B05A	Bryant	82.89	34	P	P	01 34 15.5	+0.3
	baz=233						
GHO	Glory Hole Cre	82.91	14	eP	P	01 34 14.5	-0.6
	comp=Z,26nm,0.6s						
G08A	Pilot Rock	82.91	38	eP	P	01 34 15.8	+0.2
	comp=Z,27nm,1.4s						
LTY	Liberty	83.07	35	eP	P	01 34 15.6	-0.7
	comp=Z,9.4nm,0.9s						
PKCU	Pink Cliffs	83.09	47	eP	P	01 34 18.6	+1.7
	comp=Z,21nm,1.0s						
HAWA	Hanford	83.21	37	eP	P	01 34 17.3	+0.4
	comp=Z,19nm,1.0s						
SCM	Sheep Creek Mo	83.33	14	eP	P	01 34 16.7	-0.5
	comp=Z,28nm,0.6s						
X18A	Snowflake	83.43	51	eP	P	01 34 19.5	+1.0
	comp=Z,7.4nm,0.8s						
MTPU	Mount Pierson	83.47	47	eP	P	01 34 20.1	+1.3
	comp=Z,10nm,0.9s						
E08A	Dider Farm, El	83.53	37	eP	P	01 34 19.1	+0.7
	comp=Z,8.3nm,0.8s						
WRAK	Wrangell Islan	83.61	24	eP	P	01 34 19.3	+0.7
	comp=Z,12nm,0.8s						
BMO	Blue Mountains	83.65	39	eP	P	01 34 19.2	-0.1
	comp=Z,6.1nm,1.0s						
MFID	Camas Ranch	83.78	41	eP	P	01 34 20.6	+0.6
	comp=Z,10nm,0.9s						
PSI	Prapat	83.84	275	eP	P	01 34 19.1	-1.8
	comp=Z,15nm,0.9s						
W18A	Petrified Fore	83.85	50	P	P	01 34 20.8	+0.3
	baz=243						
SEY	Seymchan	83.85	347	P	P	01 34 19.1	-0.5
	comp=Z,4.8nm,0.6s,baz=151,slow=7.0,SNR=18						
BALM	Baldy	83.92	17	eP	P	01 34 19.8	-0.4
	comp=Z,12nm,0.8s						
D08A	Wollman Farm,	83.93	36	eP	P	01 34 21.1	+0.6
	comp=Z,14nm,0.9s						
E09A	Wood Farm, Sta	84.07	37	eP	P	01 34 21.4	+0.3
	comp=Z,13nm,1.3s						
KTH	Kantishna Hill	84.08	12	eP	P	01 34 19.1	-1.7
	comp=Z,12nm,0.9s						
DUG	Dugway, Tooele	84.08	45	P	P	01 34 21.5	0.0
	baz=241						
121A	Cookes Peak, D	84.17	53	P	P	01 34 23.2	+1.0
	baz=244						
F10A	Beach Ranch, E	84.30	38	eP	P	01 34 22.1	-0.3
	comp=Z,20nm,0.9s						
RND	Reindeer	84.37	13	eP	P	01 34 21.8	-0.5
	comp=Z,24nm,0.8s						
LLLB	Lillooet	84.42	32	eP	P	01 34 23.0	+0.2
	comp=Z,8.7nm,1.0s						
Q16A	Castle Valley	84.58	46	eP	P	01 34 25.2	+1.1
	comp=Z,8.1nm,1.4s						
MCK	McKinley	84.64	13	eP	P	01 34 22.9	-0.7
	comp=Z,17nm,1.0s						
C09A	Chrisman Ranch	84.71	36	eP	P	01 34 24.6	+0.3
	comp=Z,11nm,0.9s						
TMUT	Trail Mountain	84.73	46	eP	P	01 34 26.0	+1.0
	comp=Z,6.3nm,0.8s						
PAX	Paxson	84.75	14	eP	P	01 34 23.1	-1.1
	comp=Z,5.8nm,0.9s						
CTU	Camp Tracy	85.03	45	eP	P	01 34 27.1	+0.9
	comp=Z,5.2nm,0.7s						
SRU	San Rafael Swe	85.12	46	eP	P	01 34 27.1	+0.5
	comp=Z,9.1nm,0.8s						
HYT	Haines Junctio	85.16	19	eP	P	01 34 26.4	+0.2
	comp=Z,6.6nm,0.9s						
LAZ	Ladron	85.46	52	eP	P	01 34 29.2	+0.8
TCUT	Toone Canyon	85.46	44	eP	P	01 34 29.1	+0.7
	comp=Z,12nm,0.8s						
WRH	Wood River Hil	85.47	13	eP	P	01 34 26.7	-0.8
	comp=Z,23nm,1.3s						
LENM	Lemitar	85.48	52	eP	P	01 34 28.7	+0.2
HWUT	Hardware Ranch	85.59	44	eP	P	01 34 28.9	0.0
	comp=Z,3.0nm,0.8s						
NEW	Newport	85.61	36	P	P	01 34 26.5	-2.2
	comp=Z,5.0nm,0.8s,baz=219,slow=3.5,SNR=11						
NEW	Newport	85.61	36	eP	P	01 34 28.5	-0.1
	comp=Z,5.8nm,0.8s						
NEW	Newport	85.61	36	P	P	01 34 28.2	-0.5
	baz=237						
HDA	Harding Lake	85.66	13	eP	P	01 34 27.7	-0.7
	comp=Z,9.2nm,1.0s						
HDA	Harding Lake	85.66	13	P	P	01 34 27.4	-1.0
	baz=210						
CCB	Clear Creek Bu	85.68	13	eP	P	01 34 27.2	-1.3
	comp=Z,20nm,1.2s						
BNM	Barren Site	85.73	52	eP	P	01 34 30.4	+0.6
PV09	Paradox Valley	85.80	47	eP	P	01 34 30.8	+0.6
PV19	Morning Glory	85.82	48	eP	P	01 34 31.8	+1.7
	comp=Z,9.6nm,1.2s						
PV14	Lion Creek, Pa	85.83	48	eP	P	01 34 30.6	+0.4
	comp=Z,7.8nm,0.9s						
PV17	East Wray Mesa	85.83	48	eP	P	01 34 31.6	+1.5
	comp=Z,10nm,1.3s						
PV20	West Nyswonger	85.85	48	eP	P	01 34 31.0	+0.8
	comp=Z,5.1nm,0.8s						
PV23	Carpenter Ridg	85.87	47	eP	P	01 34 31.2	+0.8
	comp=Z,8.4nm,0.8s						
PV16	Nyswonger Mesa	85.87	48	eP	P	01 34 31.9	+1.6
	comp=Z,5.8nm,1.1s						
PV04	Paradox Valley	85.92	48	eP	P	01 34 31.0	+0.5
	comp=Z,6.1nm,0.8s						
DLBC	Dease Lake	85.94	23	P	P	01 34 28.8	-1.2
	comp=Z,3.3nm,0.7s,baz=208,slow=4.8,SNR=6.9						
DLBC	Dease Lake	85.94	23	eP	P	01 34 29.6	-0.3
	comp=Z,4.7nm,1.0s						
PV12	Saucer Basin,	85.95	48	eP	P	01 34 31.2	+0.4
	comp=Z,4.4nm,0.8s						
ILAR	Eielson Array	85.99	13	P	P	01 34 28.6	-1.4
	comp=Z,3.4nm,0.5s,baz=229,slow=5.6,SNR=39						
ILAR				PP	PP	01 38 02.6	+1.3
	comp=Z,0.8nm,1.1s,baz=221,slow=6.8,SNR=4.1						
ILB	Eielson Array	85.99	13	eP	P	01 34 28.9	-1.1
	comp=Z,6.3nm,0.8s						
ILB				ePP	PP	01 38 02.6	+1.3
TX31	Lajitas Ar. Si	86.09	58	eP	P	01 34 32.6	+1.2
	comp=Z,19nm,0.9s						
TXAR	Lajitas Array	86.09	58	P	P	01 34 32.8	+1.4
	comp=Z,12nm,0.8s,baz=222,slow=5.9,SNR=113						
POKR	Poker Plat Res	86.17	13	P	P	01 34 29.4	-1.4
	baz=210						
ANMO	Albuquerque	86.19	52	eP	P	01 34 32.1	+0.1
	comp=Z,6.5nm,0.9s						
ANMO	Albuquerque	86.19	52	P	P	01 34 32.0	+0.1
	baz=245						
XAN	Xi'an	86.27	307	P	P	01 34 33.5	+1.4
XAN				pP	pP	01 36 36.3	-0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				smax	smax		
	comp=N,10.0nm,0.9s						
XAN				smax	smax		
	comp=E,8.0nm,1.0s						
MCMT	McKenzie Canyo	86.34	40	eP	P	01 34 32.9	+0.5
MSO	Missoula	86.69	38	eP	P	01 34 33.5	-0.4
	comp=E,3.0nm,0.4s						
MSO	Missoula	86.69	38	P	P	01 34 33.7	-0.2
	baz=239						
DLMT	Dillon	86.76	40	eP	P	01 34 35.0	+0.7
	comp=E,7.7nm,0.8s						
LRM	Limekiln Ridge	87.08	40	eP	P	01 34 36.1	+0.2
S22A	4UR Ranch, Cre	87.11	49	P	P	01 34 36.3	0.0
	baz=245						
O20A	White River Ci	87.15	46	eP	P	01 34 36.7	+0.4
	comp=E,10nm,1.1s						
O20A	White River Ci	87.15	46	P	P	01 34 36.2	-0.1
	baz=244						
DAWY	Dawson	87.19	16	eP	P	01 34 35.3	-0.4
	comp=E,11nm,1.3s						
QLMT	Earthquake Lak	87.22	41	eP	P	01 34 37.6	+1.0
HHC	Hu-ho-hao-te	87.30	314	P	P	01 34 31.3	-5.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,10.0nm,5.7s						
EGAK	Eagle	87.32	15	eP	P	01 34 36.0	-0.2
	comp=Z,5.5nm,0.8s						
YHB	Horse Butte	87.33	41	eP	P	01 34 38.4	+1.3
	comp=Z,16nm,0.9s						
BW06	Boulder Array	87.45	43	eP	P	01 34 37.8	+0.1
	comp=Z,7.9nm,0.8s						
BW06	Boulder Array	87.45	43	P	P	01 34 37.5	-0.2
	baz=243						
PD31	Pinedale Array	87.45	43	eP	P	01 34 37.7	0.0
	comp=Z,5.2nm,0.8s						
PD31				ePP	PP	01 38 11.4	-2.3
PDAR	Pinedale Array	87.45	43	P	P	01 34 37.4	-0.3
	comp=Z,5.5nm,0.6s,baz=216,slow=3.0,SNR=31						
PDAR				PP	PP	01 38 11.4	-2.3
	comp=Z,0.1nm,0.3s,baz=224,slow=6.3,SNR=3.9						
BOZ	Bozeman (W)	87.47	40	eP	P	01 34 37.9	+0.3
	comp=Z,12nm,1.3s						
BOZ	Bozeman (W)	87.47	40	P	P	01 34 38.0	+0.3
	baz=241						
COLD	Coldfoot	87.51	11	eP	P	01 34 37.4	+0.3
	comp=Z,4.4nm,1.1s						
H17A	Grant Village	87.55	42	eP	P	01 34 40.1	+1.9
	comp=Z,11nm,0.9s						
H17A	Grant Village	87.55	42	P	P	01 34 39.3	+1.2
	baz=242						
YHH	Holmes Hill	87.57	41	eP	P	01 34 39.4	+1.1
	comp=Z,5.1nm,0.9s						
HRY	Holter Researc	87.89	39	eP	P	01 34 39.2	-0.3
SDCO	Great Sand Dun	88.06	49	eP	P	01 34 41.0	+0.3
	comp=Z,2.7nm,0.9s						
SDCO	Great Sand Dun	88.06	49	P	P	01 34 40.6	-0.1
	baz=246						
MSTX	Muleshoe	88.59	54	eP	P	01 34 42.7	-0.4
	comp=Z,13nm,0.8s						
MSTX	Muleshoe	88.59	54	P	P	01 34 42.9	-0.2
	baz=247						
T25A	Trinidad	88.61	50	P	P	01 34 42.9	-0.3
	baz=246						
RLMT	Red Lodge	88.72	41	eP	P	01 34 44.3	+0.8
	comp=Z,8.0nm,1.0s						
RLMT	Red Lodge	88.72	41	P	P	01 34 44.1	+0.6
	baz=243						
Q24A	Divide	88.82	48	P	P	01 34 44.1	-0.1
	baz=246						
CM31	Chiang Mai Arr	88.87	290	eP	P	01 34 45.2	+0.7
	comp=Z,12nm,0.4s						
CMAR	Chiang Mai Arr	88.87	290	P	P	01 34 45.2	+0.7
	comp=Z,1.7nm,0.3s,baz=102,slow=2.7,SNR=6.1						
TOLK	Toolik Lake Re	88.89	10	P	P	01 34 44.5	+1.0
	baz=207						
N23A	Red Feather La	89.06	46	P	P	01 34 45.7	+0.4
	baz=245						
833A	Chaparral WMA,	89.19	60	P	P	01 34 46.0	+0.1
	baz=249						
JCT	Junction City	89.63	58	eP	P	01 34 48.1	+0.2
	comp=Z,6.8nm,0.8s						
JCT	Junction City	89.63	58	P	P	01 34 47.9	+0.1
	baz=249						
EPYK	Eagle Plains	89.71	16	eP	P	01 34 47.1	-0.3
	comp=Z,8.4nm,0.8s						
EPYK	Eagle Plains	89.71	16	P	P	01 34 46.9	-0.5
	baz=219						
AMTX	Amarillo	89.77	53	P	P	01 34 48.3	-0.2
	baz=248						
SNAA	Sanae	90.51	179	P	P	01 34 49.9	-1.3
ABTX	Abilene, Hawle	90.52	56	eP	P	01 34 52.2	+0.3
	comp=Z,22nm,1.3s						
ABTX	Abilene, Hawle	90.52	56	P	P	01 34 51.9	0.0
	baz=249						
VNA3	Neumayer Olymp	90.65	176	P	P	01 34 51.0	-0.8
PLCA	Paso Flores	91.31	134	P	P	01 34 54.5	-1.0
	comp=Z,1.8nm,0.9s,baz=357,slow=19,SNR=2.7						
PLCA	Paso Flores	91.31	134	eP	P	01 34 54.5	-1.0
	comp=Z,10nm,1.4s						
LAO	LASA Array	91.31	41	eP	P	01 34 56.5	+1.2
	comp=Z,12nm,0.8s						
LAO	LASA Array	91.31	41	P	P	01 34 56.1	+0.8
	baz=245						
VNA1	Neumayer--Stat	91.32	177	P	P	01 34 55.0	+0.2
RSSD	Black Hills	91.67	44	eP	P	01 34 57.1	-0.1
	comp=Z,6.4nm,0.8s						
RSSD	Black Hills	91.67	44	P	P	01 34 56.8	-0.4
	baz=246						
INK	Inuvik	91.99	15	P	P	01 34 56.8	-1.0
	comp=Z,5.1nm,0.8s,baz=201,slow=12,SNR=5.5						
INK	Inuvik	91.99	15	eP	P	01 34 56.8	-1.0
	comp=Z,5.7nm,0.8s						
DGMT	Dagmar	93.30	40	eP	P	01 35 05.0	+0.7
	comp=Z,18nm,0.7s						
DGMT	Dagmar	93.30	40	P	P	01 35 04.5	+0.2
	baz=247						
YKA	Yellowknife Ar	94.44	25	P	P	01 35 08.4	-0.7
	comp=Z,1.0nm,0.5s,baz=236,slow=4.7,SNR=8.4						
YKA				pP	pP	01 37 15.7	+1.1
	comp=Z,0.7nm,0.7s,baz=277,slow=4.9,SNR=3.3						
YKB5	Yellowknife Ar	94.44	25	eP	P	01 35 08.4	-0.7
YKB5				epP	pP	01 37 15.7	+1.1
BGNE	Belgrade	94.70	48	P	P	01 35 11.0	+0.2
	baz=250						
KSU1	Kansas State U	95.05	51	P	P	01 35 12.7	+0.2
	baz=251						
CCM	Cathedral Cave	98.75	53	P	P	01 35 29.6	+0.5
	baz=254						
MK32	Makanchi Array	109.16	314	ePKiKP	PKiKP	01 40 13.9	-1.5
MKAR	Makanchi Array	109.16	314	PKiKP	PKiKP	01 40 13.9	-1.5
	comp=Z,0.3nm,0.5s,baz=224,slow=1.3,SNR=5.0						
KURBB	Kurchatov Arra	111.91	318	PKiKP	PKiKP	01 40 20.4	0.0
	comp=Z,0.1nm,0.3s,baz=105,slow=1.9,SNR=5.5						
BVAR	Borovoye Array	116.88	321	PKP	PKPdf	01 40 28.8	-1.2
	comp=Z,0.9nm,0.4s,baz=125,slow=2.3,SNR=7.7						
AKTO	Aktyubinsk	124.90	319	PKP	PKPdf	01 40 44.5	-0.9
	comp=Z,1.0nm,0.7s,baz=36,slow=8.7,SNR=5.1						
ARCES	ARCESS Array B	126.39	350	PKP	PKPdf	01 40 47.3	-0.5
	comp=Z,2.3nm,0.6s,baz=85,slow=1.3,SNR=11						
FIA0	FINESS Array S	133.26	344	ePKPdf	PKPdf	01 41 00.1	-0.8
FINES	FINESS Array B	133.26	344	PKP	PKPdf	01 41 00.1	-0.8
	comp=Z,1.3nm,0.6s,baz=29,slow=4.8,SNR=8.1						
NB2	NORSAR Subarra	136.46	353	PKP	PKPdf	01 40 58.8	-8.2
	comp=Z,2.5nm,1.4s,baz=17,slow=2.6						
NB200	NORSAR Array S	136.46	353	ePKPdf	PKPdf	01 41 08.0	+0.9
NOA	NORSAR Array B	136.46	353	PKP	PKPdf	01 41 08.0	+0.9
	comp=Z,0.3nm,0.5s,baz=13,slow=4.1,SNR=3.7						
AKASG	Malin Array Be	140.62	332	PKhKP	PKPpre	01 41 07.8	
	comp=Z,0.4nm,0.3s,baz=40,slow=4.7,SNR=4.8						
AKBB	Malin Array Si	140.62	332	ePKPpre	PKPpre	01 41 07.8	
KWP	Kalwaria Pacla	144.13	336	ePKP	PKPbc	01 41 20.9	+0.1
BUR08	Bucovina Ar. S	144.66	332	ePKPdf	PKPbc	01 41 22.9	+0.3
BURAR	Bucovina Array	144.67	332	⇑iP	PKPdf	01 41 22.0	-0.2
OJC	Ojcow	144.68	340	ePKP	PKPdf	01 41 21.7	-0.3
BIZ	Bicaz	144.76	330	⇑iP	PKPab	01 41 23.3	-0.3
BR101	Keskin Array S	144.81	315	ePKPdf	PKPdf	01 41 23.0	+0.2
BRTR	Keskin Array B	144.81	315	PKP	PKPdf	01 41 23.0	+0.2
	comp=Z,0.8nm,0.6s,baz=106,slow=3.6,SNR=8.3						
TESR	Tescani	144.81	329	⇑iP	PKPdf	01 41 22.5	+0.1
KOLS	Kolonicke sedl	144.87	336	ePKP	PKPbc	01 41 23.1	0.0
KSP	Ksiaz	145.18	344	ePKP	PKPbc	01 41 24.3	+0.4
NIE	Niedzica	145.19	338	ePKP	PKPbc	01 41 24.1	0.0
TRPA	Tarpa	145.41	335	⇑iP	PKPbc	01 41 24.3	-0.3
HARR	Harsova	145.42	326	⇑iP	PKPbc	01 41 24.5	-0.3
CLL	Collm	145.54	347	ePKPdf	PKPbc	01 41 24.3	-0.6
CLL	Collm	145.54	347	⇑iPKPbc	PKPbc	01 41 24.5	-0.4
	comp=Z,17nm,0.8s						
UPC	Upice	145.56	344	ePKP	PKPbc	01 41 24.9	-0.1
DPC	Dobruska-Polom	145.62	343	ePKP	PKPbc	01 41 25.4	+0.1
LANS	Liptovska Anna	145.71	339	ePKP	PKPbc	01 41 26.2	+0.7
BRG	Berggiesshubel	145.74	346	i PKP	PKPbc	01 41 25.3	-0.2
	comp=Z,8.6nm,0.7s						
MORC	Moravsky Berou	145.78	341	⇑iP	PKPdf	01 41 23.4	-0.6
MORC	Moravsky Berou	145.78	341	ePKP	PKPbc	01 41 25.3	-0.4
DOPR	Dopca	145.81	330	⇑iP	PKPbc	01 41 26.1	+0.2
MLR	Muntele Rosu	145.88	329	⇑iP	PKPbc	01 41 26.1	-0.2
PVCC	Panska Ves	145.91	345	ePKP	PKPbc	01 41 26.1	+0.1
PVCC				ex	x	01 41 28.2	
CJR	Cluj-Napoca	146.07	332	⇑iP	PKPbc	01 41 25.8	-0.9
VOIR		146.36	330	⇓iP	PKPbc	01 41 27.2	-0.3
DRGR		146.40	333	⇓iP	PKPbc	01 41 27.5	-0.1
PRU	Pruhonice	146.42	345	ePKP	PKPbc	01 41 27.0	-0.4
PRU				ex	x	01 41 29.8	
GOPC	GO Pecny, Ondr	146.43	344	ePKP	PKPbc	01 41 27.2	-0.3
GOPC				ex	x	01 41 29.8	
VRAC	Vranov	146.48	342	ePKP	PKPbc	01 41 27.2	-0.4
VYHS	Vyhne	146.48	339	ePKP	PKPbc	01 41 27.7	0.0
ARR	Arges	146.61	330	⇑iP	PKiKP	01 41 29.3	-0.9
SILT	Sile	146.64	320	⇑iP	PKiKP	01 41 30.3	0.0
KRUC	Moravsky	146.76	342	ePKP	PKPbc	01 41 28.0	-0.4
MODS	Modra-Piesok	147.10	341	ePKP	PKPbc	01 41 28.8	-0.5
MEM	Membach	147.27	355	⇑PKPbc	PKPbc	01 41 29.1	-0.6
KHC	Kasperske Hory	147.45	345	ePKPbc	PKPbc	01 41 30.2	0.0
KHC	Kasperske Hory	147.45	345	ePKP	PKPbc	01 41 30.1	-0.1
KHC				ex	x	01 41 34.6	
GZR	Gura Zlata	147.45	332	⇑iP	PKPbc	01 41 29.2	-1.2
SNF	Seneffe	147.49	357	⇓PKPbc	PKPbc	01 41 30.1	-0.2
GEC2	GERESS Array S	147.69	345	ePKPbc	PKPbc	01 41 30.6	-0.4
GERES	GERESS Array B	147.69	345	PKPbc	PKPbc	01 41 30.5	-0.4
	comp=Z,4.4nm,0.7s,baz=25,slow=3.2,SNR=26						
BZS	Buzias	147.79	333	⇓iP	PKPbc	01 41 30.9	-0.3
DOU	Dourbes	147.89	356	⇑PKPbc	PKPbc	01 41 30.9	-0.4
CONA	Conrad Observa	147.93	342	i PKiKP	PKPbc	01 41 30.9	-0.6
	comp=Z,7.3nm,1.3s						
PLVB	Pleven	148.04	327	⇑iP	PKPbc	01 41 31.2	-0.7
WLF	Walferdange	148.19	354	ePKPbc	PKPbc	01 41 32.6	+0.6
WLF	Walferdange	148.19	354	⇑PKPbc	PKPbc	01 41 32.4	+0.4
MOA	Molln	148.46	344	i PKiKP	PKPbc	01 41 32.5	-0.3
	comp=Z,5.0nm,1.4s						
BFO	Black Forest	149.25	351	ePKPbc	PKPbc	01 41 34.2	-0.5
SOKA	Soboth	149.31	342	i PKiKP	PKPbc	01 41 34.2	-0.8
	comp=Z,7.2nm,1.1s						
VTS	Vitosha	149.31	328	ePKPbc	PKPbc	01 41 35.1	-0.1
VTS	Vitosha	149.31	328	⇓iP	PKPbc	01 41 35.1	-0.1
PERS	Pernice	149.32	342	i PKPbc	PKPbc	01 41 34.4	-0.6
WATA	Walderalm	149.60	346	i PKiKP	PKPbc	01 41 35.1	-0.7
	comp=Z,3.2nm,0.5s						
RETA	Reutte	149.63	348	i PKiKP	PKPbc	01 41 34.9	-0.8
	comp=Z,2.8nm,0.6s						
WTTA	Wattenberg	149.66	346	i PKiKP	PKPbc	01 41 35.4	-0.6
	comp=Z,10nm,0.6s,SNR=11						
MOTA	Moosalm	149.69	347	i PKiKP	PKPbc	01 41 35.3	-0.7
	comp=Z,5.4nm,0.8s						
MYKA	Terra Mystica	149.75	343	i PKPbc	PKPbc	01 41 34.7	-1.3
	comp=Z,5.9nm,0.7s,SNR=4.8						
SQTA	Sankt Quirin	149.79	347	i PKiKP	PKPbc	01 41 35.8	-0.3
	comp=Z,7.8nm,0.7s,SNR=5.5						
ABTA	Abfaltersbach	149.93	345	i PKPbc	PKPbc	01 41 35.2	-1.3
	comp=Z,11nm,0.7s						
DAVA	Damuels	150.00	349	i PKiKP	PKPbc	01 41 35.9	-0.8
	comp=Z,12nm,1.1s						
FETA	Feichten	150.08	347	i PKiKP	PKPbc	01 41 36.7	-0.2
	comp=Z,10nm,1.0s,SNR=4.9						
VISS	Visnje	150.15	341	i PKPbc	PKPbc	01 41 36.6	-0.3
BOJS	Bojanci	150.29	340	i PKPbc	PKPbc	01 41 36.6	-0.6
JAVS	Javornik	150.30	342	i PKPbc	PKPbc	01 41 36.4	-1.0
FUORN	Ofenpass-Fuorn	150.56	348	ePKPbc	PKPbc	01 41 37.9	-0.3
PVRL	Vila Real	155.48	17	ePKPab	PKPab	01 42 08.3	0.0
MVO	Moncorvo	155.77	16	ePKPab	PKPab	01 42 09.5	-0.1
MTE	Manteigas	156.34	17	ePKPab	PKPab	01 42 11.9	-0.2
PTOM	Tomar	156.79	20	ePKPab	PKPab	01 42 13.8	-0.2
ESDC	Sonseca Array	157.88	11	PKPab	PKPab	01 42 17.9	-0.9
	comp=Z,0.5nm,0.5s,baz=335,slow=3.5,SNR=8.1						

KRSC ***30*** *01:23:40.6±1.7, 51.°96N×160.°23E, h44^{km}±24^{km}, ML4.7*

MOS ***30*** *01:23:43.2±0.9, 51.°97N×160.°02E, h49^{km}, mb4.1/15, Error ellipse: s-maj=9.5km s-min=3.9km az=94.2*

IDC ***30*** *01:23:46.0±2.5, 52.°04N×159.°84E, h46^{km}±22^{km}, mb3.6/17, mb1 3.8/19, mb1mx3.7/45, mbtmp3.8/19, ML3.4/2, MS3.1/9, Ms1 3.1/9, ms1mx3.0/37, Error ellipse: s-maj=20.2km s-min=14.6km az=169.0*

ISC 30 01:23:40.8±3.1**, 51.°98N**±0.°04×**160.°12E**±0.°04**, h12**^{km}±19^{km}**, n110, σ1.^{s}62**/134**, mb4.0**/21**, MS2.9**/7**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.09	295	eP	Pb	01 24 01.3	-0.3
RUS				eS	Sb	01 24 14.8	-0.9
RUS	Russkaya	1.09	295	PN	Pb	01 24 01.3	-0.3
RUS				S	Sb	01 24 14.8	-0.9
SPN	Mys Shipunski	1.12	357	eP	Pn	01 24 02.4	0.0
SPN				eS	Sb	01 24 16.1	-0.7
SPN	Mys Shipunski	1.12	357	PN	Pn	01 24 02.4	0.0
SPN				S	Sb	01 24 16.1	-0.7
KDTR	Khodutka, Kamc	1.28	263	eP	Pn	01 24 04.5	+0.1
KDTR				eS	Sb	01 24 20.0	-1.1
KDTR	Khodutka, Kamc	1.28	263	PN	Pn	01 24 04.5	+0.1
KDTR				S	Sb	01 24 20.0	-1.1
NLC	Nalytchevo	1.29	339	eP	Pn	01 24 04.7	+0.1
NLC				eS	Sn	01 24 21.6	-0.1
NLC	Nalytchevo	1.29	339	PN	Pn	01 24 04.7	+0.1
NLC				S	Sn	01 24 21.6	-0.1
MTVR	Mutnovka	1.29	294	eP	Pn	01 24 04.8	-0.1
MTVR	Mutnovka	1.29	294	PN	Pn	01 24 04.8	-0.1
DALK	Dalny	1.35	322	eP	Pn	01 24 05.4	0.0
DALK				eS	Sn	01 24 22.8	-0.4
DALK	Dalny	1.35	322	PN	Pn	01 24 05.4	0.0
DALK				S	Sn	01 24 22.8	-0.4
PET	Petropavlovsk	1.38	320	PN	Pn	01 24 06.0	+0.1
PET				S	Sn	01 24 23.1	-1.0
UGLR	Uglovaya	1.47	328	eP	Pn	01 24 07.7	+0.5
UGLR				S	Sn	01 24 26.2	-0.2
UGLR	Uglovaya	1.47	328	PN	Pn	01 24 07.7	+0.5
UGLR				S	Sn	01 24 26.2	-0.2
KRMR	Karymshinskiy	1.49	306	eP	Pn	01 24 07.5	+0.1
KRMR	Karymshinskiy	1.49	306	PN	Pn	01 24 07.5	+0.1
SDLR	Sedlovina	1.50	330	eP	Pn	01 24 07.9	+0.2
SDLR				eS	Sn	01 24 26.5	-0.9
SDLR	Sedlovina	1.50	330	PN	Pn	01 24 07.9	+0.2
SDLR				S	Sn	01 24 26.5	-0.9
SMAR	Somma	1.52	329	eP	Pn	01 24 08.1	+0.1
SMAR				S	Sn	01 24 27.7	-0.1
SMAR	Somma	1.52	329	PN	Pn	01 24 08.1	+0.1
SMAR				S	Sn	01 24 27.7	-0.1
AVH	Avacha	1.54	327	eP	Pn	01 24 08.8	+0.6
AVH				eS	Sn	01 24 29.1	+0.9
AVH	Avacha	1.54	327	PN	Pn	01 24 08.8	+0.6
AVH				S	Sn	01 24 29.1	+0.9
KRER	Koryakskii	1.57	328	eP	Pn	01 24 09.1	+0.4
KRER				eS	Sn	01 24 30.0	+0.9
KRER	Koryakskii	1.57	328	PN	Pn	01 24 09.1	+0.4
KRER				S	Sn	01 24 30.0	+0.9
KRX	Arik	1.65	328	eP	Pn	01 24 10.3	+0.6
KRX				eS	Sn	01 24 31.2	+0.3
KRX	Arik	1.65	328	PN	Pn	01 24 10.3	+0.6
KRX				S	Sn	01 24 31.2	+0.3

PETK	Petropavlovsk-	1.86	308	P	Pn	01 24 12.6	+0.1
	150nm,0.3s,baz=111,slow=20,SNR=2190						
PETK				S	Sn	01 24 33.8	-2.3
	116nm,0.3s,baz=106,slow=18,SNR=12						
APC	Apacha	2.05	299	*e*P	Pn	01 24 16.7	+1.7
APC				*e*S	Sn	01 24 41.8	+1.3
APC	Apacha	2.05	299	PN	Pn	01 24 16.7	+1.7
APC				S	Sn	01 24 41.8	+1.3
PAU	Pauzhetka	2.12	257	*e*P	Pn	01 24 17.3	+1.3
PAU	Pauzhetka	2.12	257	PN	Pn	01 24 17.3	+1.3
GNL	Ganaly	2.17	323	*e*P	Pn	01 24 18.1	+1.2
GNL	Ganaly	2.17	323	PN	Pn	01 24 18.1	+1.2
MKZ	Mys Kozlova	2.76	20	*e*P	Pn	01 24 25.3	+0.5
MKZ				*e*S	Sn	01 24 56.5	-1.6
MKZ	Mys Kozlova	2.76	20	PN	Pn	01 24 25.3	+0.5
MKZ				S	Sn	01 24 56.5	-1.6
SKR	Severo-Kuril's	2.83	244	*e*P	Pn	01 24 27.2	+1.5
SKR				*e*S	Sn	01 24 59.0	-0.7
SKR	Severo-Kuril's	2.83	244	*e*PN	Pn	01 24 27.4	+1.7
SKR				*e*S	Sn	01 24 58.5	-1.2
SKR				pmax	pmax		
	comp=Z,117nm,0.6s						
SKR				smax	smax		
	comp=E,811nm,0.6s						
SKR				smax	smax		
	comp=N,2µm,0.6s						
SKR				MLR	MLR		
	comp=Z,600nm,13.0s						
SKR				MLR	MLR		
	comp=Z,400nm,12.0s						
KZV	Kizimen	3.14	2	*e*P	Pn	01 24 32.1	+1.8
KZV				*e*S	Sn	01 25 08.7	+0.9
KZV	Kizimen	3.14	2	PN	Pn	01 24 32.1	+1.8
KZV				S	Sn	01 25 08.7	+0.9
TUMD	Tumrok D	3.24	3	*e*P	Pn	01 24 32.1	+0.7
TUMD				*e*S	Sn	01 25 07.6	-2.3
TUMR	Tumrok	3.31	0	*e*P	Pn	01 24 34.5	+1.9
TUMR	Tumrok	3.31	0	PN	Pn	01 24 32.1	-0.5
ESO	Esso	4.04	349	*e*P	Pn	01 24 46.3	+3.8
ESO	Esso	4.04	349	PN	Pn	01 24 46.3	+3.8
LGNR	Loginova	4.13	4	*e*P	Pn	01 24 47.3	+3.4
LGNR	Loginova	4.13	4	PN	Pn	01 24 47.3	+3.4
CIRR	Tsirk	4.16	5	*e*P	Pn	01 24 47.4	+3.1
CIRR	Tsirk	4.16	5	PN	Pn	01 24 47.4	+3.1
KRSR	Krestovskiy	4.26	3	*e*P	Pn	01 24 48.6	+3.1
KRSR	Krestovskiy	4.26	3	PN	Pn	01 24 48.6	+3.1
SRDR	Sredinnyy	4.36	357	*e*P	Pn	01 24 50.5	+3.7
SRDR	Sredinnyy	4.36	357	PN	Pn	01 24 50.5	+3.7
KLY	Klyuchi	4.36	4	*e*P	Pn	01 24 49.8	+3.0
KLY	Klyuchi	4.36	4	PN	Pn	01 24 49.8	+3.0
KBTR	Krutoberegovo	4.53	19	*e*P	Pn	01 24 49.9	+0.8
KBTR	Krutoberegovo	4.53	19	PN	Pn	01 24 49.9	+0.8
KBG	Krutoberegovo	4.55	19	*e*P	Pn	01 24 51.1	+1.7
KBG				*e*S	Sn	01 25 42.2	+0.1
KBG	Krutoberegovo	4.55	19	PN	Pn	01 24 51.1	+1.7
KBG				S	Sn	01 25 42.2	+0.1
BDR	Baidarnaya	4.64	7	*e*P	Pn	01 24 53.7	+2.9
BDR	Baidarnaya	4.64	7	PN	Pn	01 24 53.7	+2.9
SMKR	Semkarok	4.68	9	*e*P	Pn	01 24 54.1	+2.8
SMKR	Semkarok	4.68	9	PN	Pn	01 24 54.1	+2.8
SRKR	Sorokina	4.73	7	*e*P	Pn	01 24 53.9	+2.0
SRKR	Sorokina	4.73	7	PN	Pn	01 24 53.9	+2.0
BKI	Bering	4.75	45	*e*P	Pn	01 24 52.3	+0.1
BKI				*e*S	Sn	01 25 42.3	-4.9
BKI	Bering	4.75	45	PN	Pn	01 24 52.3	+0.1
MA2	Magadan	9.25	329	LR	LR	01 30 07.5	
	comp=Z,140nm,18.4s,baz=185,slow=42						
SEY	Seymchan	11.74	342	P	Pn	01 26 30.6	+2.8
	comp=Z,0.2nm,0.3s,baz=135,slow=17,SNR=2.0						
SEY	Seymchan	11.74	342	*i* PN	Pn	01 26 31.0	+3.1
ERM	Erimo	15.23	236	*i* P	Pn	01 27 14.8	-0.8
BILL	Bilibino	16.39	8	*i* P	Pn	01 27 30.5	+0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KLR	Kul'dur	18.17	273	P	P	01 27 54.4	+1.4
	comp=Z,0.2nm,0.3s,baz=45,slow=7.1,SNR=6.3						
KLR				LR	LR	01 35 30.7	
	comp=Z,73nm,18.3s,baz=44,slow=39						
YAK	Yakutsk	19.20	313	*i* P	P	01 28 03.1	-1.1
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
MAJO	Matsushiro	21.88	234	*i* P	P	01 28 32.6	-0.9
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR	Matsushiro Arr	21.88	234	P	P	01 28 31.8	-1.7
	comp=Z,1.9nm,0.3s,baz=158,slow=14,SNR=8.6						
MJAR				LR	LR	01 37 06.7	
	comp=Z,37nm,21.8s,baz=55,slow=37						
MJAR	Matsushiro Arr	21.88	234	P	P	01 28 31.8	-1.7
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR				MLR	MLR		
	comp=Z,37nm,21.8s						
TIXI	Tiksi	24.11	336	*i* P	P	01 28 53.4	-2.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSRS	Korea Array	26.83	250	LR	LR	01 40 52.1	
	comp=Z,29nm,18.7s,baz=90,slow=38						
KDAK	Kodiak Island	27.35	59	P	P	01 29 26.4	+1.1
	comp=Z,3.7nm,0.8s,baz=270,slow=5.1,SNR=3.7						
JNU	Nakatsue	28.33	240	LR	LR	01 41 14.8	
	comp=Z,18nm,21.2s,baz=8.0,slow=37						
ILAR	Eielson Array	29.60	44	P	P	01 29 45.6	+0.2
	comp=Z,1.0nm,0.7s,baz=255,slow=7.4,SNR=13						
H11N2	WAKE ISLAND Hy	32.62	168	T	T	02 05 32.7	
	baz=353						
H11N3	WAKE ISLAND Hy	32.63	168	T	T	02 05 37.4	
	baz=353						
H11N1	WAKE ISLAND Hy	32.63	168	T	T	02 05 34.2	
	baz=353						
H11S1	WAKE ISLAND Hy	33.80	169	T	T	02 06 59.3	
	baz=352,slow=74						
H11S3	WAKE ISLAND Hy	33.81	169	T	T	02 07 01.3	
	baz=352,slow=74						
H11S2	WAKE ISLAND Hy	33.82	169	T	T	02 06 59.3	
	baz=352						
TLY	Talaya	34.15	292	LR	LR	01 45 22.7	
	comp=Z,22nm,21.9s,baz=0.0,slow=38						
SONM	Songino Array	34.19	285	LR	LR	01 45 50.0	
	comp=Z,117nm,18.6s,baz=63,slow=39						
HHC	Hu-ho-hao-te	34.66	271	P	P	01 30 28.8	-1.3
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,13nm,5.3s						
INK	Inuvik	34.75	37	P	P	01 30 31.3	+0.9
	comp=Z,1.0nm,0.5s,baz=270,slow=4.4,SNR=3.4						
YKA	Yellowknife Ar	43.98	42	P	P	01 31 48.1	+0.7
	comp=Z,0.5nm,0.5s,baz=295,slow=7.7,SNR=3.4						
RES	Resolute Bay	44.36	22	P	P	01 31 51.3	+1.0
	comp=Z,2.1nm,0.6s,baz=274,slow=5.1,SNR=4.6						
MKAR	Makanchi Array	48.66	297	P	P	01 32 22.0	-2.5
	comp=Z,0.6nm,0.4s,baz=54,slow=5.9,SNR=12						
BRVK	Borovoye	51.13	309	*i* P	P	01 32 40.7	-2.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	54.35	342	P	P	01 33 06.1	-0.6
	comp=Z,1.4nm,0.8s,baz=26,slow=15,SNR=4.8						
NVAR	Mina Array Bea	56.12	69	P	P	01 33 22.1	+1.9
	comp=Z,0.6nm,0.6s,baz=305,slow=7.4,SNR=5.4						
PDAR	Pinedale Array	58.06	60	P	P	01 33 35.6	+1.7
	comp=Z,1.3nm,0.7s,baz=316,slow=4.1,SNR=8.7						
FINES	FINESS Array B	61.15	337	P	P	01 33 54.1	-0.4
	comp=Z,0.6nm,0.4s,baz=57,slow=4.6,SNR=7.6						
NB2	NORSAR Subarra	64.62	344	P	P	01 34 17.5	-0.2
	comp=Z,0.7nm,0.6s,baz=21,slow=6.9						
NOA	NORSAR Array B	64.62	344	P	P	01 34 18.0	+0.3
	comp=Z,0.6nm,0.6s,baz=22,slow=6.7,SNR=5.1						
NOA				LR	LR	02 06 18.0	
	comp=Z,9.7nm,20.1s,baz=230,slow=40						
NOA	NORSAR Array B	64.62	344	P	P	01 34 18.0	+0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,10.0nm,20.1s						
GEYT	Alibeck	67.71	303	LR	LR	02 06 43.8	
	comp=Z,35nm,18.7s,baz=295,slow=38						
AKASG	Malin Array Be	69.58	329	P	P	01 34 48.3	-1.0
	comp=Z,0.8nm,0.3s,baz=28,slow=6.2,SNR=5.2						
TXAR	Lajitas Array	71.06	67	P	P	01 35 00.3	+1.5
	comp=Z,0.5nm,0.5s,baz=292,slow=5.1,SNR=3.8						
GERES	GERESS Array B	75.55	338	P	P	01 35 25.5	+0.4
	comp=Z,0.5nm,0.7s,baz=51,slow=7.7,SNR=2.2						
ASAR	Alice Springs	78.75	204	P	P	01 35 45.0	+2.0
	comp=Z,0.5nm,0.6s,baz=0.0,slow=4.7,SNR=4.4						
ASAR	Alice Springs	78.75	204	P	P	01 35 45.0	+2.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	Sonseca Array	87.67	348	P	P	01 36 30.0	+0.9
	comp=Z,0.3nm,0.7s,baz=356,slow=7.7,SNR=3.3						

ISCJB ***30*** *01:36:52.7±0.8, 24.°07N±0.°02×122.°19E±0.°02, h13^{km}±6^{km},*
Error ellipse: s-maj=2.9km s-min=2.3km az=141.0
TAP ***30*** *01:36:53.4, 24.°09N×122.°18E, h26^{km}, ML3.1, D*
JMA ***30*** *01:36:53.5±0.1, 24.°06N×122.°15E, h36^{km}±3^{km}, M2.4*
ISC 30 01:36:51.2±1.2**, 24.°08N**±0.°02×**122.°18E**±0.°02**, h6**^{km}±10^{km}**,**
n61, σ0.ˢ77/109**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.47	354	P	Pb	01 37 02.8	+0.9
	baz=353						
EOS1				S	Sb	01 37 09.5	+0.5
	baz=353						
NANB	Nanao	0.52	312	P	Pb	01 37 03.6	+0.8
	baz=310						
NANB				S	Sb	01 37 11.4	+0.8
	baz=310						
ENA	Nanau	0.53	311	P	Pb	01 37 03.7	+0.8
	baz=310						
ENA				*e*S	Sb	01 37 11.7	+0.9
	baz=310						
TWD	Chiawan	0.53	270	P	Pb	01 37 04.0	+1.1
	baz=269						
TWD				S	Sb	01 37 11.6	+0.8
	baz=269						
NACB	Ninganchiao	0.54	280	P	Pb	01 37 04.1	+1.0
	baz=279						
NACB				*e*S	Sb	01 37 12.6	+1.4
	baz=279						
TWC	Suao	0.61	330	P	Pb	01 37 04.5	+0.3
	baz=330						
TWC				*e*S	Sg	01 37 11.5	+0.6
	baz=330						
ETLH	Xiulin Townshi	0.65	281	P	Pb	01 37 05.8	+0.8
	baz=280						
ETLH				*e*S	Sb	01 37 14.6	+0.3
	baz=280						
ESL	Shilin	0.73	249	P	Pb	01 37 07.1	+0.8
	baz=248						
ESL				*e*S	Sb	01 37 17.2	+0.7
	baz=248						
JYNG	Yonagunijimaku	0.79	62	P	Pn	01 37 08.8	0.0
JYNG				*e*S	Sb	01 37 19.7	+1.4
TWE	Neicheng	0.79	324	*e*P	Pb	01 37 07.9	+0.5
	baz=324						
TWE				*e*S	Sb	01 37 18.3	0.0
	baz=324						
NDT	Datong Townshi	0.80	311	*e*P	Pn	01 37 08.8	-0.2
	baz=310						
NDT				*e*S	Sb	01 37 19.0	+0.4
	baz=310						
NNSB	Datong	0.81	296	*e*P	Pb	01 37 08.2	+0.5
	baz=294						
NNSB				*e*S	Sb	01 37 19.3	+0.5
	baz=294						
NNS	Nan Shan	0.82	296	*e*P	Pb	01 37 08.6	+0.7
	baz=295						
NNS				*e*S	Sb	01 37 19.8	+0.5
	baz=295						
NTC	Toucheng	0.83	338	*e*P	Pb	01 37 08.9	+0.8
	baz=337						
NTC				*e*S	Sb	01 37 19.7	+0.1
	baz=337						
SLBB	Yuanshan	0.83	324	*e*P	Pb	01 37 08.8	+0.7
	baz=323						
SLBB				*e*S	Sb	01 37 20.3	+0.7
	baz=323						
WHF	Hehuan Shan	0.84	275	P	Pb	01 37 08.8	+0.4
	baz=273						
WHF				*e*S	Sb	01 37 20.4	+0.3
	baz=273						
YOJ	Yonaguni jima	0.85	63	*e*P	Pn	01 37 09.8	+0.1
	baz=62						
YOJ				*e*S	Sb	01 37 20.3	+0.4
	baz=62						
YOJ	Yonaguni jima	0.85	63	P	Pn	01 37 09.7	+0.1
YOJ				*e*S	Sb	01 37 21.7	+1.7
HGSD	Ruisui	0.91	230	*e*P	Pb	01 37 10.0	+0.7
	baz=229						
CHGB	Renai	0.92	269	P	Pb	01 37 10.2	+0.5
	baz=268						
CHGB				*e*S	Sb	01 37 22.6	+0.4
	baz=268						
TWT	Tachien	0.93	281	*e*P	Pn	01 37 11.3	+0.3
	baz=279						
TWT				*e*S	Sb	01 37 22.9	+0.3
	baz=279						
YHNB	Yeheng	0.94	309	*e*P	Pb	01 37 10.1	+0.2
	baz=308						
YHNB				*e*S	Sb	01 37 23.2	+0.6
	baz=308						
TIPB	Shuangxi	0.95	340	P	Pb	01 37 10.6	+0.6
	baz=339						
TIPB				S	Sb	01 37 22.2	-0.6
	baz=339						
TDCB	Techi	0.95	281	*e*P	Pb	01 37 10.6	+0.5
	baz=280						
TDCB				*e*S	Sb	01 37 22.6	-0.4
	baz=280						
NSK	Sanguang	0.96	309	*e*P	Pb	01 37 10.3	+0.1
	baz=308						
NSK				*e*S	Sb	01 37 23.5	+0.4
	baz=308						
EHY	Hungye	0.97	234	*e*P	Pb	01 37 10.6	+0.3
	baz=233						
EHY				*e*S	Sb	01 37 23.7	+0.3
	baz=233						
VWDT	VWDT	1.00	251	*e*P	Pn	01 37 11.7	-0.1
	baz=250						
VWDT				*e*S	Sb	01 37 24.7	+0.3
	baz=250						
NWF	Wu-fen Shan	1.05	340	*e*P	Pn	01 37 12.8	+0.2
	baz=339						
NWF				*e*S	Sb	01 37 25.7	-0.2
	baz=339						
WFSB	Wu-fen Shan	1.05	340	*e*P	Pn	01 37 12.8	+0.4
	baz=339						
WFSB				*e*S	Sb	01 37 25.6	-0.2
	baz=339						
YULB	Yu-li	1.06	230	*e*P	Pb	01 37 12.2	+0.3
	baz=229						
YULB				*e*S	Sg	01 37 25.7	+0.4
	baz=229						
TWF1	Yuli	1.08	228	*e*P	Pb	01 37 12.5	+0.2
	baz=227						
TWF1				*e*S	Sg	01 37 26.4	+0.3
	baz=227						
TATO	Taipei	1.09	325	*e*P	Pn	01 37 13.4	+0.4
	baz=324						
TATO				*e*S	Sb	01 37 27.4	+0.4
	baz=324						
DPDB	Guoxing	1.15	268	*e*P	Pb	01 37 13.8	+0.4
	baz=267						
SSLB	Suanglung	1.16	256	*e*P	Pb	01 37 13.6	0.0
	baz=255						
SMLT	Sun Moon Lake	1.19	261	*e*P	Pb	01 37 14.4	+0.2
	baz=260						
SMLT				*e*S	Sg	01 37 29.3	0.0
	baz=260						
YM01	YM01	1.20	333	*e*P	Pn	01 37 15.1	+0.6
	baz=332						
LIOB	Emei	1.20	298	*e*P	Pn	01 37 14.8	+0.2
	baz=297						
NSTT	Nanjuang	1.21	297	*e*P	Pn	01 37 15.1	+0.5
	baz=296						
NSTT				*e*S	Sg	01 37 29.6	-0.4
	baz=296						
YM10	YM10	1.21	332	*e*P	Pn	01 37 14.8	+0.1
	baz=331						
YM05	YM05	1.22	333	*e*P	Pn	01 37 15.7	+0.9
	baz=332						
YM04	YM04	1.22	331	*e*P	Pb	01 37 14.7	0.0
	baz=331						
TYC	Yuchr	1.22	262	*e*P	Pb	01 37 14.8	+0.2
	baz=261						
YUS	Yu-Shan	1.27	243	*e*P	Pn	01 37 16.2	+0.4
	baz=242						
YUS				*e*S	Sg	01 37 31.4	-0.6
	baz=242						
WHYT	Xinyi Township	1.27	253	*e*P	Pg	01 37 15.0	-0.6
	baz=252						
WHYT				*e*S	Sg	01 37 31.8	-0.3
	baz=252						
ELDTW	Lidau	1.39	231	*e*P	Pn	01 37 16.9	-0.2
	baz=229						
ELDTW				*e*S	Sg	01 37 34.1	-1.6
	baz=229						
IRIF	Iriomote-Funau	1.44	79	P	Pb	01 37 18.5	+0.1
IRIF				S	Sg	01 37 36.2	-1.2
CHN5	Tsauling	1.46	251	*e*P	Pg	01 37 19.3	+0.2
	baz=250						
CHN5				*e*S	Sb	01 37 37.9	+0.3
	baz=250						
HATJ	Hateruma jima	1.49	91	P	Pn	01 37 18.4	0.0
TPUB	Ta-pu	1.62	242	*e*P	Pg	01 37 22.0	-0.2
	baz=241						
TPUB				*e*S	Sg	01 37 43.0	-0.3
	baz=241						
CHN4	Tsaushan	1.62	244	*e*P	Pg	01 37 22.2	-0.2
	baz=243						
CHN4				*e*S	Sg	01 37 43.2	-0.2
	baz=243						
WTP	Ta-pu	1.66	240	*e*P	Pb	01 37 22.4	+0.3
	baz=239						
WTP				*e*S	Sb	01 37 43.6	+0.3
	baz=239						
JKRS	Kuro-shima	1.68	84	P	Pb	01 37 22.5	0.0
TWK	Hsinying	1.75	243	*e*P	Pb	01 37 23.5	-0.2
	baz=242						
TWK				*e*S	Sn	01 37 45.9	+1.2
	baz=242						
CHN1	Nanshi	1.76	240	*e*P	Pb	01 37 24.2	+0.4
	baz=239						
CHN1				*e*S	Sn	01 37 46.1	+1.2
	baz=239						
SLGT	Liugui	1.77	233	*e*P	Pb	01 37 23.7	-0.4
	baz=232						
SLGT				*e*S	Sn	01 37 46.2	+0.9
	baz=232						
JIJ	Ishigaki jima	1.81	81	P	Pn	01 37 23.6	+0.7
JISG	Ishigakijimahi	2.01	75	P	Pn	01 37 25.6	0.0
JISG				S	Sn	01 37 50.4	-0.6
JTJ	Tarama	2.37	76	P	Pn	01 37 31.0	+0.5
WDGT	Dungji	2.45	251	*e*P	Pn	01 37 32.4	+0.7
	baz=250						
WDGT				*e*S	Sn	01 38 00.4	-1.5
	baz=250						
PHUB	P'eng-hu	2.45	257	*e*P	Pn	01 37 32.4	+0.7
	baz=256						
PHUB				*e*S	Sn	01 38 01.1	-0.9
	baz=256						
PTMZ	Houxiangcun	2.94	290	*e*P	Pn	01 37 38.2	-0.3
	baz=288						
PTMZ				*e*S	Sn	01 38 09.5	-4.7
	baz=288						

NNC ***30*** *01:39:39.8±4.1, 44.°44N×86.°48E, h0^{km}, mb3.0, mpv2.6,*
Error ellipse: s-maj=25.1km s-min=16.5km az=126.0
ISC 30 01:39:39.5±1.6**, 44.°5N**±0.°3×**86.°8E**±0.°3**, h10**^{km}**, n5, σ0.ˢ67**/6**,**
5C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	0.93	137	Pg	Pg	01 39 54.3	-3.1
WMQ				Sg	Sg	01 40 09.5	0.0
WMQ				smax	smax		
	comp=N,1µm,0.6s						
WMQ				smax	smax		
	comp=E,1µm,0.6s						
MK31	Makanchi Array	3.91	307	⇓Pg	Pb	01 40 48.5	0.0
	comp=E,0.7nm,0.6s,baz=130,slow=16,SNR=6.5						
MK31				⇑Lg	Lg	01 41 40.6	
	comp=E,9.2nm,0.9s,baz=127,slow=27,SNR=10.0						
MAKZ	Makanchi	4.10	306	⇑Pg	Pb	01 40 51.9	+0.2
	comp=E,0.8nm,0.5s						
MAKZ				⇓Sn	Sn	01 41 30.1	-0.1
	comp=E,0.8nm,0.6s						
MAKZ				⇑Lg	Lg	01 41 44.7	
	comp=E,2.7nm,0.6s						
KURBB	Kurchatov Arra	8.29	320	⇓Sn	Sn	01 43 12.5	-0.9
	comp=E,1.7nm,0.9s						
KURBB				⇑Lg	Lg	01 43 57.5	
	comp=E,3.2nm,0.7s						
KURK	Kurchatov	8.32	321	⇓Sn	Sn	01 43 14.7	+0.7
	comp=E,0.5nm,0.4s						
KURK				⇑Lg	Lg	01 44 01.3	
	comp=E,2.6nm,1.2s						

NEIC ***30*** *01:52:21.0±0.0, 62.°20N×145.°75W, h15^{km}, ML3.0(AEIC),*
After AEIC.
AEIC ***30*** *01:52:21.0, 62.°20N×145.°75W, h15^{km}, ML3.0*
PGC ***30*** *01:52:22.4±1.5, 62.°19N×145.°54W, h5^{km}, ML2.7/7, 126km*
northeast of Valdez, Ak Central Alaska
ISC 30 01:52:19.8±1.2**, 62.°20N**±0.°02×**145.°76W**±0.°02**, h1**^{km}±10^{km}**,**
n82, σ1.ˢ25/116**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAX	Paxson	0.78	10	*e*Pg	Pb	01 52 36.3	0.0
PAX				*e*Sg	Sb	01 52 47.0	-0.4
PAX	Paxson	0.78	10	P	Pb	01 52 36.3	0.0
PAX				S	Sb	01 52 46.8	-0.7
SCM	Sheep Creek Mo	0.83	244	*e*Pg	Pb	01 52 37.3	+0.4
SCM				*e*Sn	Sb	01 52 49.6	+1.0
DHY	Denali Highway	1.15	320	*e*Pn	Pn	01 52 43.0	-0.1
DHY				*e*Sn	Sb	01 52 58.5	+0.5
VMT	TAPS TI Valdez	1.16	195	*e*Pn	Pg	01 52 42.0	0.0
MENT	Mentasta	1.20	51	*e*Pn	Pg	01 52 42.9	+0.2
MENT				*e*Sn	Sg	01 52 58.5	+0.2
JPK	Jack Peak	1.22	200	*e*Pn	Pg	01 52 42.9	-0.2
PS10	TAPS Pump St10	1.23	360	*e*Pn	Pn	01 52 44.5	+0.4
PS10				*e*Sn	Sn	01 53 00.8	-0.5
SML	Sawmill	1.27	253	*e*Pn	Pn	01 52 44.9	+0.1
SML				*e*Sn	Sb	01 53 01.5	+0.1
GLI	Glacier Island	1.47	206	*e*Pn	Pn	01 52 47.1	-0.3
GLI				*e*Sn	Sn	01 53 05.5	-1.8
FID	Port Fidalgo	1.50	194	*e*Pn	Pn	01 52 47.6	-0.1
FID				*e*Pn	Pn	01 52 47.7	-0.1
FID				*e*Sn	Sn	01 53 06.2	-1.7
KNK	Knik Glacier	1.50	239	*e*Pn	Pb	01 52 48.8	+0.4
KNK				*e*Sn	Sn	01 53 06.4	-1.7
GHO	Glory Hole Cre	1.55	255	*e*Pn	Pb	01 52 49.2	-0.1
GHO				*e*Sn	Sn	01 53 07.8	-1.6
RIDG	Independent Ri	1.60	15	*e*Pn	Pg	01 52 50.8	+0.3
RIDG				*e*Sn	Sn	01 53 09.2	-1.4
DOT	Dot Lake	1.65	27	*e*Pn	Pb	01 52 50.6	-0.4
DOT				*e*Sg	Sg	01 53 12.3	-0.3
DOT	Dot Lake	1.65	27	P	Pb	01 52 51.1	+0.1
DOT				S	Sg	01 53 12.4	-0.3
EYAK	Cordova Ski Ar	1.66	180	*e*Pn	Pn	01 52 50.3	+0.3
EYAK				*e*Sn	Sn	01 53 10.0	-1.8
PMR	Palmer	1.71	251	*e*Pn	Pn	01 52 50.7	+0.1
PMR				*e*Sn	Sn	01 53 11.4	-1.7
SGAM	Sherman Glacie	1.73	171	*e*Pn	Pn	01 52 51.1	+0.2
RND	Reindeer	1.86	312	*e*Pg	Pg	01 52 55.3	-0.2
RND				*e*Sn	Sn	01 53 15.3	-1.8
PTPK	Patty Peak	1.87	121	P	Pn	01 52 53.1	0.0
PTPK				Sn	Sn	01 53 16.1	-1.4
RAGM	Ragged Mountai	1.90	163	*e*Pg	Pb	01 52 55.5	+0.4
RAGM				*e*Sg	Sg	01 53 21.9	+1.4
CRQM	Cirque	1.92	138	*e*Pn	Pn	01 52 53.4	-0.3
CRQM				*e*Pn	Pb	01 52 53.5	-2.1
CRQM				*e*Sn	Sn	01 53 16.2	-2.4
SCRK	Sand Creek	1.96	24	*e*Pn	Pn	01 52 54.7	+0.5
SCRK				*e*Sn	Sn	01 53 16.8	-2.6
HMT	Hamilton	2.01	158	*e*Pn	Pb	01 52 56.7	-0.3
BALM	Baldy	2.01	124	*e*Pn	Pn	01 52 55.1	+0.2
BALM	Baldy	2.01	124	P	Pn	01 52 54.8	-0.1
BALM				Sn	Sn	01 53 20.0	-0.7
BCA3	Beaver Creek A	2.03	63	*e*Pn	Pb	01 52 56.2	-1.3
KIAG	Kiagna River	2.07	127	P	Pn	01 52 55.5	-0.3
MCK	McKinley	2.11	318	*e*Pg	Pg	01 53 00.2	0.0
RC01	Rabbit Creek A	2.20	241	*e*Pg	Pb	01 53 00.8	+0.5
WAX	Waxell Ridge	2.25	140	*e*Pn	Pb	01 53 00.2	-1.0
HDA	Harding Lake	2.28	347	*e*Pg	Pb	01 53 01.0	-0.7
HDA	Harding Lake	2.28	347	P	Pn	01 52 59.5	+0.9
	baz=166						
HDA				Sb	Sg	01 53 32.6	-0.4
	baz=166						
BVCY	Beaver Creek	2.30	83	Pg	Pb	01 53 01.7	-0.3
BVCY				Sg	Sb	01 53 30.1	-0.8
YUK2	White River	2.36	98	Pn	Pn	01 53 00.4	+0.7

KAIM	Kayak Island	2.37	163	*e*Pg	Pb	01 53 03.4	+0.1
GRNC	Granite Creek	2.42	126	Pn	Pn	01 53 01.0	+0.3
CTGM	Chitina Glacie	2.46	118	Pn	Pn	01 53 01.6	+0.6
YUK1	Sand Pete Hill	2.46	89	Pn	Pn	01 53 01.5	+0.5
SNH	Sunshine Point	2.47	144	*e*Pn	Pn	01 53 03.0	+1.7
SUA	Susitna One	2.48	255	*e*Pg	Pb	01 53 04.9	-0.1
WRH	Wood River Hil	2.51	336	*e*Pn	Pb	01 53 04.3	-1.3
YUK3	Moose Creek	2.54	97	Pn	Pn	01 53 02.6	+0.4
YUK3				Pg	Pb	01 53 06.2	0.0
BWN	Browne	2.59	321	*e*Pn	Pn	01 53 04.2	+1.3
BWN				*e*Pg	Pg	01 53 08.8	-0.7
CCB	Clear Creek Bu	2.62	340	*e*Pn	Pb	01 53 05.8	-1.7
ILB	Eielson Array	2.63	349	*e*Pn	Pn	01 53 04.7	+1.4
SKT	Skwentna	2.72	268	*e*Pg	Pb	01 53 08.4	-0.9
KTH	Kantishna Hill	2.73	302	*e*Pg	Pb	01 53 08.6	-0.7
MESA	MESA	2.74	136	Pn	Pn	01 53 06.0	+1.0
SEW	Seward	2.76	222	*e*Pg	Pb	01 53 08.9	-1.0
COLA	College	2.84	342	*e*Pg	Pg	01 53 14.0	-0.2
TABL	Table Mountain	2.84	126	Pn	Pn	01 53 08.0	+1.5
TCOL	CIGO, UAF Yank	2.84	342	P	Pn	01 53 06.5	+0.3
	baz=160						
TCOL				Sb	Sg	01 53 49.3	-1.7
	baz=160						
MDM	Murphy Dome	2.98	339	*e*Pg	Pg	01 53 17.0	+0.2
POKR	Poker Plat Res	3.02	346	P	Pn	01 53 09.3	+0.6
	baz=165						
POKR				Sb	Sg	01 53 54.6	-2.1
	baz=165						
BPAW	Bear Paw Mtn.	3.04	311	*e*Pn	Pb	01 53 12.4	-2.2
PPLA	Purkeypile	3.06	286	*e*Pg	Pb	01 53 13.6	-1.4
SPU	Mount Spurr	3.17	254	*e*Pg	Pb	01 53 18.1	+1.3
SAMH	Samovar Hills	3.19	129	Pn	Pn	01 53 12.6	+1.5
EGAK	Eagle	3.31	37	*e*Pn	Pn	01 53 14.2	+1.6
PCA	Pinnacle	3.40	126	*e*Pg	Pg	01 53 24.8	-0.1
DAWY	Dawson	3.44	54	*e*Pn	Pn	01 53 16.1	+1.5
DAWY	Dawson	3.44	54	Pn	Pn	01 53 15.7	+1.1
DAWY				Sg	Sb	01 54 06.7	+2.8
YUK4	Talbot Arm	3.49	101	Pn	Pn	01 53 16.3	+1.0
YUK4				Pg	Pb	01 53 22.5	+0.1
BRLK	Bradley Lake	3.49	228	*e*Pg	Pb	01 53 22.3	-0.1
MLY	Manley	3.61	324	*e*Pn	Pn	01 53 20.1	+3.3
YUK6	Outpost Mounta	3.76	106	Pn	Pn	01 53 19.4	+0.4
CNPM	China Poot	3.79	227	*e*Pn	Pn	01 53 21.6	+2.3
RSO	Redoubt South	3.79	246	*e*Pg	Pb	01 53 27.4	-0.2
PNL	Peninsula	4.01	126	Pn	Pn	01 53 24.1	+1.7
PNL				Sg	Sb	01 54 22.8	+2.7
HYT	Haines Junctio	4.19	106	*e*Pg	Pb	01 53 32.5	-1.8
HYT	Haines Junctio	4.19	106	Pn	Pn	01 53 26.2	+1.3
TTA	Tatalina	4.80	283	*e*Pn	Pn	01 53 35.9	+2.8
TT01	Tatalina	4.80	283	*e*Pn	Pn	01 53 35.9	+2.8
SVW2	Sparrevohn	4.81	261	*e*Pn	Pn	01 53 35.8	+2.5
IM3	Indian Mountai	5.16	321	*e*Pn	Pn	01 53 39.6	+1.5
BM3	Burnt Mountain	5.26	5	*e*Pn	Pn	01 53 41.2	+1.7
COLD	Coldfoot	5.39	341	*e*Pn	Pb	01 53 48.1	-6.6
COLD	Coldfoot	5.39	341	Pn	Pn	01 53 43.5	+2.2
EPYK	Eagle Plains	5.74	39	P	Pn	01 53 47.2	+1.1
	baz=227						
EPYK				S	Sn	01 54 53.2	+0.7
	baz=227						
TOLK	Toolik Lake Re	6.66	348	P	Pn	01 53 59.7	+1.0
	baz=164						
TOLK				S	Sn	01 55 16.7	+1.6
	baz=164						

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*GEN **30** 01:58:33.2, 45°.90N×6°.91E, h10^{km}±1^{km}, Ml2.3*
*ZUR **30** 01:58:33.3, 45°.91N×6°.91E, h9^{km}, MLh2.5/20, Error ellipse: s-maj=1.8km s-min=1.0km az=315.0*
*ROM **30** 01:58:33.7±0.2, 45°.889N±0°.008×6°.96E±0°.02, h10^{km}, ML2.3/8, Error ellipse: s-maj=1.2km s-min=0.3km az=119.0*
*LDG **30** 01:58:33.9±0.0, 45°.90N×6°.95E, h2^{km}, Md3.0/3, Ml2.8/32, Error ellipse: s-maj=0.9km s-min=0.8km az=98.0*
*STR **30** 01:58:37.4±0.3, 46°N±2°×°±°, h25^{km}±3^{km}, MLv2.6/7*
ISC 30 01:58:32.7±0.8**, 45°.90N**±0°.01×**6°.92E**±0°.01**, h15**^{km}±5^{km}**, n137, σ1^{s}.38**/227**, 10C-5D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRGE	Morge	0.17	142	⇑Pg	Pg	01 58 37.0	0.0
MRGE	Morge	0.17	142	P	Pg	01 58 37.0	0.0
MRGE				S	Sg	01 58 39.9	+0.1
MRGE				AML	AML		
	comp=E,2155µm,0.4s						
MRGE				AML	AML		
	comp=N,4375µm,0.3s						
SEMOS	Emosson Stauma	0.17	4	⇓Pg	Pg	01 58 36.8	-0.3
REMY	Saint-Rhmy-en	0.18	110	P	Pg	01 58 37.4	+0.1
REMY				S	Sg	01 58 40.4	+0.2
REMY	Saint-Rhmy-en	0.18	110	⇑Pg	Pg	01 58 37.4	+0.1
REMY	Saint-Rhmy-en	0.18	110	P	Pg	01 58 37.4	+0.1
REMY				S	Sg	01 58 40.5	+0.2
REMY				AML	AML		
	comp=E,2190µm,0.4s						
REMY				AML	AML		
	comp=N,2175µm,1.2s						
OGSI	Sixt	0.20	326	⇓Pg	Pg	01 58 37.1	-0.3
SALAN	Lac Salanfe	0.25	9	⇓Pg	Pb	01 58 38.3	-0.8
GRYON	Gryon	0.38	21	⇓Pg	Pb	01 58 40.7	-0.6
DIX	Grande Dixence	0.39	62	⇑Pg	Pb	01 58 41.0	-0.5
DIX				Sg	Sb	01 58 46.6	-0.9
DIX	Grande Dixence	0.39	62	P	Pb	01 58 41.0	-0.5
DIX				S	Sb	01 58 46.5	-0.9
DIX				AML	AML		
	comp=E,440µm,0.2s						
DIX				AML	AML		
	comp=N,364µm,0.4s						
DIX				AML	AML		
	comp=E,440µm,0.2s						
DIX				AML	AML		
	comp=N,364µm,0.4s						
DIX				AML	AML		
	comp=E,440µm,0.2s						
DIX				AML	AML		
	comp=N,364µm,0.4s						
LPL	La Plagne	0.41	199	*e*Pg	Pb	01 58 41.3	-0.5
	SNR=1.0						
LPL				*e*Sg	Sb	01 58 47.4	-0.4
	comp=N,110nm,0.3s						
SAIG	Aigle Rue de l	0.42	5	Pg	Pb	01 58 41.6	-0.3
LPG	La Plagne	0.42	196	*e*Pg	Pb	01 58 41.6	-0.4
	SNR=1.0						
LPG				*e*Sg	Sb	01 58 47.6	-0.7
	comp=N,80nm,0.2s,SNR=1.0						
LSD	Lago del Serru	0.47	161	P	Pb	01 58 42.5	-0.4
LSD				S	Sg	01 58 48.6	+0.2
LSD	Lago del Serru	0.47	161	⇑Pg	Pb	01 58 42.4	-0.4
LSD	Lago del Serru	0.47	161	P	Pb	01 58 42.5	-0.4
LSD				S	Sb	01 58 48.8	-0.9
LSD				AML	AML		
	comp=E,702µm,0.3s						
LSD				AML	AML		
	comp=N,310µm,0.7s						
LSD				AML	AML		
	comp=E,702µm,0.3s						
LSD				AML	AML		
	comp=N,309µm,0.7s						
LSD				AML	AML		
	comp=E,702µm,0.3s						
LSD				AML	AML		
	comp=N,309µm,0.7s						
SENIN	Lac Senin/Sane	0.54	30	Pg	Pb	01 58 43.8	-0.2
CIRO	Champorcher	0.55	123	P	Pb	01 58 43.8	-0.4
CIRO				S	Sg	01 58 50.9	0.0
VANNI	Vissoie, Val d	0.57	57	Pg	Pb	01 58 44.5	0.0
SATI	Passo dei Sala	0.67	92	P	Pg	01 58 45.5	-0.4
SATI				S	Sg	01 58 54.6	-0.1
SATI	Passo dei Sala	0.67	92	⇑Pg	Pg	01 58 45.5	-0.4
SATI	Passo dei Sala	0.67	92	P	Pg	01 58 45.5	-0.4
SATI				S	Sb	01 58 55.1	-0.4
SATI				AML	AML		
	comp=E,168µm,0.2s						
SATI				AML	AML		
	comp=N,168µm,0.3s						
SATI				AML	AML		
	comp=E,168µm,0.2s						
SATI				AML	AML		
	comp=N,168µm,0.3s						
SATI				AML	AML		
	comp=N,168µm,0.3s						
SATI				AML	AML		
	comp=E,168µm,0.2s						
SATI				AML	AML		
	comp=E,168µm,0.2s						
LKBD2	Leukerbad 2	0.69	47	⇑Pg	Pb	01 58 46.7	0.0
TRAV	Traversella	0.70	123	P	Pb	01 58 46.7	0.0
TRAV				S	Sb	01 58 55.8	-0.4
TRAV	Traversella	0.70	123	⇑Pg	Pb	01 58 46.7	0.0
TRAV	Traversella	0.70	123	P	Pb	01 58 46.7	0.0
TRAV				S	Sg	01 58 55.6	-0.1
TRAV				AML	AML		
	comp=E,268µm,1.5s						
TRAV				AML	AML		
	comp=N,351µm,0.3s						
TRAV				AML	AML		
	comp=E,268µm,1.5s						
TRAV				AML	AML		
	comp=N,351µm,0.3s						
TRAV				AML	AML		
	comp=E,268µm,1.5s						
TRAV				AML	AML		
	comp=N,351µm,0.3s						
TRAV				AML	AML		
	comp=E,268µm,1.5s						
EMBD	Embd, Matterta	0.71	63	Pg	Pb	01 58 46.8	-0.2
MMK	Mattmark	0.75	78	P	Pb	01 58 47.6	0.0
MMK				S	Sg	01 58 57.0	-0.2
MMK				AML	AML		
	comp=E,134µm,0.4s						
MMK				AML	AML		
	comp=N,236µm,0.4s						
MMK				AML	AML		
	comp=E,134µm,0.4s						
MMK				AML	AML		
	comp=N,237µm,0.3s						
MMK				AML	AML		
	comp=E,134µm,0.4s						
MMK				AML	AML		
	comp=N,237µm,0.3s						
MMK				AML	AML		
	comp=N,237µm,0.4s						
GIMEL	St. Georges /	0.78	325	P	Pb	01 58 48.7	+0.7
GIMEL				AML	AML		
	comp=E,125µm,0.7s						
GIMEL				AML	AML		
	comp=N,120µm,0.9s						
LAUCH	Lauchernalp	0.79	49	⇑Pn	Pb	01 58 48.4	+0.1
RSP	Reno Superiore	0.79	162	P	Pb	01 58 48.3	0.0
RSP				S	Sb	01 58 58.7	-0.2
RSP	Reno Superiore	0.79	162	P	Pb	01 58 48.3	0.0
RSP				S	Sb	01 58 59.8	+0.9
RSP				AML	AML		
	comp=E,208µm,0.2s						
RSP				AML	AML		
	comp=N,286µm,0.2s						
RSP				AML	AML		
	comp=E,208µm,0.2s						
RSP				AML	AML		
	comp=N,287µm,0.2s						
RSP				AML	AML		
	comp=E,208µm,0.2s						
RSP				AML	AML		
	comp=N,287µm,0.2s						
SIMPL	Simplonpass	0.84	66	Pn	Pb	01 58 49.0	-0.2
BNI	Bardonecchia	0.86	191	P	Pb	01 58 49.4	-0.1
BNI				S	Sb	01 59 01.7	+0.7
BNI				AML	AML		
	comp=E,62µm,1.0s						
BNI				AML	AML		
	comp=N,60µm,1.0s						
BNI				AML	AML		
	comp=E,63µm,1.0s						
BNI				AML	AML		
	comp=N,60µm,1.0s						
BNI				AML	AML		
	comp=N,60µm,1.0s						
BNI				AML	AML		
	comp=E,63µm,1.0s						
TORNY	Torny/Romont	0.87	2	⇑Pn	Pn	01 58 50.4	-0.2
CABF	La Chapelle	0.92	321	*e*Pg	Pn	01 58 51.0	-0.2
	SNR=1.0						
CABF	La Chapelle	0.92	321	*e*P	Pn	01 58 53.4	+2.2
CABF				*e*Sn	Sn	01 59 05.4	+1.2
	comp=E,59nm,0.3s,SNR=1.0						
OG35	Corcelles	0.95	279	Pg	Pn	01 58 54.2	+2.5
OG35				Sg	Sn	01 59 08.5	+3.6
OG35	Corcelles	0.95	279	Pn	Pn	01 58 51.7	+0.1
RRL	Rocca Remolon	0.98	185	P	Pb	01 58 51.8	+0.2
RRL				S	Sg	01 59 01.6	-3.1
RRL	Rocca Remolon	0.98	185	P	Pb	01 58 51.8	+0.2
RRL				S	Sb	01 59 05.1	+0.6
RRL				AML	AML		
	comp=E,147µm,1.3s						
RRL				AML	AML		
	comp=N,138µm,0.5s						
RRL				AML	AML		
	comp=E,147µm,1.3s						
RRL				AML	AML		
	comp=N,138µm,0.5s						
BHB	Bricherasio	1.09	167	P	Pn	01 58 54.1	+0.6
BHB				S	Sn	01 59 09.1	+0.9
BHB				AML	AML		
	comp=E,94µm,0.5s						
BHB				AML	AML		
	comp=N,111µm,0.9s						
BHB				AML	AML		
	comp=E,94µm,0.5s						
BHB				AML	AML		
	comp=N,111µm,0.9s						
BHB				AML	AML		
	comp=E,94µm,0.5s						
MONC	Moncucco Torin	1.09	139	P	Pn	01 58 53.6	+0.1
MONC				AML	AML		
	comp=E,201µm,0.3s						
MONC				AML	AML		
	comp=N,190µm,1.4s						
MONC				AML	AML		
	comp=N,190µm,1.4s						
MONC				AML	AML		
	comp=E,201µm,0.3s						
MONC				AML	AML		
	comp=N,190µm,1.4s						
MONC				AML	AML		
	comp=E,201µm,0.3s						
MBDF	Montbardon	1.18	185	*e*Pn	Pn	01 58 55.3	+0.5
	SNR=1.0						
MBDF	Montbardon	1.18	185	*e*P	Pn	01 58 57.6	+2.8
MBDF				*e*Sg	Sn	01 59 11.4	+0.7
	comp=E,36nm,0.4s						
ORIF	Oris-en-Rattie	1.22	217	*e*Pn	Pg	01 58 56.2	-0.1
	SNR=1.0						
ORIF	Oris-en-Rattie	1.22	217	*e*Pg	Pg	01 58 56.9	+0.6
ORIF	Oris-en-Rattie	1.22	217	*e*P	Pg	01 58 58.7	+2.4
ORIF				*e*Sn	Sn	01 59 12.3	+0.5
	comp=E,75nm,0.4s,SNR=1.0						
FUSIO	Fusio	1.33	65	P	Pg	01 58 58.3	-0.2
FUSIO				AML	AML		
	comp=E,164µm,0.6s						
FUSIO				AML	AML		
	comp=N,146µm,0.5s						
FUSIO				AML	AML		
	comp=N,146µm,0.5s						
FUSIO				AML	AML		
	comp=E,164µm,0.6s						
CHMF	Charmoille	1.36	352	Pn	Pg	01 58 59.3	+0.4
CHMF				Pg	Pb	01 59 00.6	+2.7
CHMF				Sg	Sg	01 59 19.4	+2.7
CHMF	Charmoille	1.36	352	⇓Pn	Pg	01 58 59.2	+0.2
PZZ	Stroppo	1.40	174	P	Pg	01 58 59.6	-0.1
PZZ				AML	AML		
	comp=E,261µm,0.8s						
PZZ				AML	AML		
	comp=N,217µm,1.2s						
PZZ				AML	AML		
	comp=E,261µm,0.8s						
PZZ				AML	AML		
	comp=N,217µm,1.2s						
DOI	San Damiano	1.42	170	P	Pg	01 59 00.2	+0.2
BNALP	Bannalp	1.43	47	P	Pg	01 58 59.8	-0.4
BNALP				AML	AML		
	comp=E,75µm,0.4s						
BNALP				AML	AML		
	comp=N,79µm,0.3s						
BNALP				AML	AML		
	comp=N,79µm,0.3s						
BNALP				AML	AML		
	comp=E,75µm,0.4s						
MUGIO	Muggio	1.48	88	P	Pg	01 59 01.0	-0.3
MUGIO				AML	AML		
	comp=E,150µm,0.5s						
MUGIO				AML	AML		
	comp=N,152µm,0.4s						
MUGIO				AML	AML		
	comp=N,152µm,0.4s						
MUGIO				AML	AML		
	comp=E,150µm,0.5s						
MUGIO				AML	AML		
	comp=N,152µm,0.5s						
DAGMA	Lutertal, Dagm	1.53	29	⇑Pn	Pg	01 59 01.9	-0.3
PCP	Piancastagn	1.78	139	P	Pb	01 59 05.6	+0.5
TUE	Stuetta	1.78	70	P	Pb	01 59 05.6	+0.4
TUE				AML	AML		
	comp=E,52µm,1.3s						
TUE				AML	AML		
	comp=N,65µm,1.0s						
TUE				AML	AML		
	comp=N,65µm,1.0s						
TUE				AML	AML		
	comp=E,52µm,1.3s						
TUE				AML	AML		
	comp=E,52µm,1.3s						
VIVF	Saint-Julien-l	1.90	237	*e*Pn	Pb	01 59 06.9	-0.1
	SNR=1.0						
VIVF	Saint-Julien-l	1.90	237	*e*Pg	Pg	01 59 09.0	-0.1
VIVF				*e*Sn	Sn	01 59 28.6	+0.4
VIVF				*e*Sg	Sg	01 59 33.5	-0.2
	comp=E,20nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.92	359	*e*Pn	Pn	01 59 06.3	+1.4
	SNR=1.0						
HINF	Hinteralfeld	1.92	359	*e*Pg	Pg	01 59 09.8	+0.2
HINF				*e*Sg	Sg	01 59 34.6	+0.2
	comp=E,26nm,0.5s,SNR=1.0						
MDI	Monti di Nese	1.96	93	P	Pb	01 59 07.9	-0.2
SAOF	Saorge	1.97	166	Pn	Pb	01 59 08.4	+0.1
BLAF	les Blancs	2.04	198	Pn	Pb	01 59 10.2	+0.6
SBF	Sospel	2.07	170	*e*Pg	Pg	01 59 12.4	0.0
	SNR=1.0						
SBF				*e*Sg	Sg	01 59 39.2	-0.1
	comp=E,29nm,0.3s,SNR=1.0						
ESCA	l'Escarene	2.09	171	Pn	Pb	01 59 10.7	+0.2
ESCA				Pg	Pg	01 59 15.4	+2.5
HAU	Haudompre	2.14	350	*e*Pn	Pn	01 59 09.2	+1.2
	SNR=1.0						
HAU	Haudompre	2.14	350	*e*Pg	Pg	01 59 13.8	0.0
HAU				*e*Sn	Sn	01 59 34.2	-0.1
	SNR=1.0						
HAU				*e*Sg	Sg	01 59 41.6	0.0
	comp=E,16nm,0.3s,SNR=1.0						
SMRF	Simiane la Rot	2.15	207	*e*P	Pb	01 59 11.3	0.0
SMRF	Simiane la Rot	2.15	207	*e*Pg	Pg	01 59 14.1	+0.2
	SNR=1.0						
SMRF				*e*Sg	Sg	01 59 41.2	-0.5
	comp=E,8.8nm,0.4s,SNR=1.0						
BERGE	Lenzkirch (DE)	2.15	23	Pn	Pn	01 59 09.2	+1.0
SLE	Schleitheim	2.16	30	Pn	Pn	01 59 09.4	+1.2
KIZ	Kirchzarten	2.17	18	Pn	Pn	01 59 09.2	+0.8
KIZ				Pg	Pg	01 59 14.1	-0.2
KIZ				Sn	Sn	01 59 36.1	+1.1
KIZ				Sg	Sg	01 59 42.4	0.0
KIZ	Kirchzarten	2.17	18	Pn	Pn	01 59 09.3	+0.9
RUSF	Rustrel	2.21	208	Pn	Pb	01 59 12.5	+0.1
BSTF	la Bastide-des	2.21	205	Pn	Pg	01 59 13.7	-1.5
BSTF				Sg	Sg	01 59 43.2	-0.7
DAVOX	Davos/Dischmat	2.23	66	P	Pn	01 59 11.2	+1.8
DAVOX				AML	AML		
	comp=N,61µm,0.4s						
DAVOX				AML	AML		
	comp=E,42µm,1.5s						
SMF	Signal de Mont	2.26	290	*e*Pn	Pn	01 59 11.5	+1.9
	SNR=1.0						
SMF	Signal de Mont	2.26	290	*e*Pg	Pg	01 59 16.6	+0.5
SMF				*e*Sn	Sn	01 59 37.3	+0.1
SMF				*e*Sg	Sg	01 59 45.0	-0.4
	comp=E,12nm,0.2s,SNR=1.0						
ECH	Echery	2.32	4	Pn	Pn	01 59 11.6	+1.1
ECH				Sn	Sn	01 59 39.4	+0.6
FRF	La Foret Royal	2.35	185	*e*P	Pb	01 59 14.0	-0.7
FRF	La Foret Royal	2.35	185	*e*Pg	Pg	01 59 17.9	+0.2
FRF				*e*Sn	Sn	01 59 39.7	+0.4
FRF				*e*Sg	Sg	01 59 47.8	-0.3
	comp=E,11nm,0.4s,SNR=1.0						
DAVA	Damuels	2.47	55	*e*Pg	Pg	01 59 20.7	+0.6
	comp=E,1.6nm,0.2s,SNR=14						
DAVA				Sg	Sg	01 59 53.4	+1.2
	comp=E,18nm,0.5s						
LOR	Lormes	2.51	304	*e*Pn	Pn	01 59 15.3	+2.2
	baz=125,SNR=1.0						
LOR	Lormes	2.51	304	*e*Pg	Pg	01 59 21.0	+0.1
	baz=123,SNR=1.0						
LOR				*e*Sn	Sn	01 59 43.0	-0.5
	baz=128						
LOR				*e*Sg	Sg	01 59 52.9	-0.6
	comp=E,8.8nm,0.3s,baz=126,SNR=1.0						
LOR	Lormes	2.51	304	Pn	Pn	01 59 15.4	+2.2
LOR				Pg	Pg	01 59 21.0	+0.1
CDF	Champ du Feu	2.52	5	*e*Pn	Pn	01 59 14.3	+1.0
	SNR=1.0						
CDF	Champ du Feu	2.52	5	*e*Pg	Pg	01 59 21.3	+0.1
	SNR=1.0						
CDF				*e*Sn	Sn	01 59 43.5	-0.4
	SNR=1.0						
CDF				*e*Sg	Sg	01 59 53.7	-0.2
	comp=E,12nm,0.4s,SNR=1.0						
WLS	Welschbruch	2.53	7	Pn	Pn	01 59 14.8	+1.4
WLS				Sn	Sn	01 59 46.1	+2.1
LMR	La Mourre	2.58	187	*e*P	Pb	01 59 17.6	-1.1
LMR	La Mourre	2.58	187	*e*Pg	Pg	01 59 22.0	-0.2
LMR				*e*Sn	Sn	01 59 45.1	0.0
LMR				*e*Sg	Sg	01 59 55.1	-0.6
	comp=E,8.0nm,0.4s,SNR=1.0						
AVF	Avril sur Loir	2.62	291	*e*Pn	Pn	01 59 16.5	+1.9
	SNR=1.0						
AVF	Avril sur Loir	2.62	291	*e*Pg	Pg	01 59 23.0	0.0
	SNR=1.0						
AVF				*e*Sg	Sg	01 59 56.5	-0.5
	comp=E,6.0nm,0.4s						
SSF	Saint Saulge	2.63	297	*e*Pn	Pn	01 59 16.5	+1.9
	SNR=1.0						
SSF	Saint Saulge	2.63	297	*e*Pg	Pg	01 59 23.9	+0.8
	SNR=1.0						
SSF				*e*Sn	Sn	01 59 46.0	-0.3
SSF				*e*Sg	Sg	01 59 56.4	-0.7
	comp=E,5.3nm,0.4s,SNR=1.0						
SFTF	Sexfontaines	2.64	332	*e*Pn	Pn	01 59 16.0	+1.2
	baz=150						
SFTF	Sexfontaines	2.64	332	*e*Pg	Pg	01 59 22.9	-0.4
	baz=149						
SFTF				*e*Sn	Sn	01 59 46.5	-0.1
SFTF				*e*Sg	Sg	01 59 56.8	-0.7
	comp=E,11nm,0.4s						
AGO	Saint Agoulin	2.64	275	Pn	Pn	01 59 17.3	+2.4
PYM	Petit Puy Mans	2.74	268	Pn	Pn	01 59 18.8	+2.6
PYM				Pg	Pg	01 59 25.7	+0.5
PYM				Sn	Sn	01 59 52.2	+3.1
OPP	Oppenau	2.74	18	Pn	Pn	01 59 16.9	+0.7
OPP				Sn	Sn	01 59 50.4	+1.3
PAGF	Fort de Pagny	2.78	343	*e*Pn	Pn	01 59 17.7	+1.0
	baz=163						
PAGF	Fort de Pagny	2.78	343	*e*Pg	Pg	01 59 25.4	-0.6
PAGF				*e*Sn	Sn	01 59 49.6	-0.4
	baz=165						
PAGF				*e*Sg	Sg	02 00 01.3	-0.7
	comp=E,5.6nm,0.4s,baz=154						
LASF	Ste Croix	2.83	231	*e*Pn	Pn	01 59 19.0	+1.5
	SNR=1.0						
LASF				*e*Sn	Sn	01 59 51.0	-0.4
	comp=E,7.9nm,0.4s						
LASF				*e*Sg	Sg	02 00 02.3	-1.5
	comp=E,19nm,0.7s						
FETA	Feichten	2.86	66	Pg	Pb	01 59 23.2	-0.5
	comp=E,0.5nm,0.3s						
FETA				Sn	Sb	01 59 58.7	+0.1
	comp=E,1.4nm,0.3s						
MEZF	Maizieres J'vi	2.90	335	*e*Pn	Pn	01 59 19.7	+1.4
	baz=146,SNR=1.0						
MEZF	Maizieres J'vi	2.90	335	*e*Pg	Pg	01 59 27.9	-0.3
	baz=154						
MEZF				*e*Sg	Sg	02 00 04.9	-0.9
	comp=E,62nm,0.9s						
BGF	Bois d'Agland	2.90	285	*e*Pn	Pn	01 59 20.5	+2.1
	SNR=1.0						
BGF	Bois d'Agland	2.90	285	*e*Pg	Pg	01 59 28.0	-0.3
BGF				*e*Sn	Sn	01 59 52.6	-0.4
BGF				*e*Sg	Sg	02 00 05.0	-0.9

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              comp=E,15nm,0.4s
RETA  Reutte             3.09  58 i Pn      Pb       01 59 24.4 -2.9
              comp=E,0.1nm,0.1s,SNR=7.1
RETA                              eSn      Sn       02 00 00.8 +3.1
              comp=E,0.4nm,0.1s
MOTA  Moosalm            3.23  62 ePn      Pb       01 59 27.1 -2.7
              comp=E,1.4nm,0.2s,SNR=8.6
MOTA                              i Sn     Sb       02 00 07.7 -1.3
              comp=E,0.9nm,0.2s
SQTA  Sankt Quirin       3.24  64 i Pn     Pb       01 59 27.8 -2.3
              comp=E,1.3nm,0.3s
SQTA                              i Sn     Sb       02 00 08.2 -1.2
              comp=E,2.4nm,0.3s
HYF   Humbligny          3.25 296 eP       Pn       01 59 26.0 +2.8
HYF   Humbligny          3.25 296 ePg      Pg       01 59 34.0 -1.0
HYF                               eSn      Sn       02 00 00.6 -1.1
HYF                               eSg      Sg       02 00 15.5 -1.6
TCF   Toulx Ste Croi     3.30 278 ePn      Pn       01 59 25.2 +1.3
              SNR=1.0
TCF   Toulx Ste Croi     3.30 278 ePg      Pg       01 59 35.6 -0.3
TCF                               eSn      Sn       02 00 02.3 -0.5
              SNR=1.0
TCF                               eSg      Sg       02 00 17.4 -1.2
              comp=E,5.2nm,0.3s,SNR=1.0
WATA  Walderalm          3.52  64 i Pn     Pb       01 59 31.6 -3.2
              comp=E,0.6nm,0.2s
WATA                              i Sn     Sn       02 00 07.7 -0.7
              comp=E,0.8nm,0.3s
WTTA  Wattenberg         3.53  66 i Pn     Pb       01 59 31.9 -3.1
              comp=E,1.5nm,0.3s
WTTA                              i Sn     Sb       02 00 14.3 -3.4
              comp=E,1.7nm,0.4s
CAF   Calviac            3.55 256 ePn      Pn       01 59 28.7 +1.3
              SNR=1.0
CAF   Calviac            3.55 256 ePg      Pg       01 59 41.0 +0.2
CAF                               eSn      Sn       02 00 08.1 -1.0
CAF                               eSg      Sg       02 00 25.8 -1.0
              comp=E,5.8nm,0.4s,SNR=1.0
RJF   Les Rejaudoux      3.84 263 ePn      Pn       01 59 33.3 +2.0
              SNR=1.0
RJF   Les Rejaudoux      3.84 263 ePg      Pg       01 59 46.5 +0.3
RJF                               eSn      Sn       02 00 14.5 -1.6
RJF                               eSg      Sg       02 00 34.1 -1.8
              comp=E,3.8nm,0.3s
ABTA  Abfaltersbach      3.97  76  Pg      Pb       01 59 39.8 -2.6
              comp=E,0.8nm,0.4s
ABTA                               Sn      Sb       02 00 26.7 -3.6
              comp=E,1.8nm,0.6s
MTLF  Montolieu          4.22 234 ePn      Pn       01 59 38.4 +1.9
              SNR=1.0
MTLF  Montolieu          4.22 234 ePg      Pg       01 59 51.8 -1.7
MTLF                              eSn      Sn       02 00 23.8 -1.7
MTLF                              eSg      Sg       02 00 46.3 -1.8
              comp=E,3.3nm,0.4s,SNR=1.0
LFF   La Frestale        4.45 260 ePn      Pn       01 59 41.5 +1.8
              SNR=1.0
LFF   La Frestale        4.45 260 ePg      Pg       01 59 56.7 -1.3
LFF                               eSn      Sn       02 00 29.2 -2.1
LFF                               eSg      Sg       02 00 53.9 -1.8
              comp=E,19nm,0.8s
BAIF  Baives             4.54 337 eP       Pn       01 59 43.4 +2.5
              SNR=1.0
BAIF                              eSn      Sn       02 00 32.0 -1.4
              comp=E,0.4nm,0.2s
MFF   Saint Martin d     4.95 281 ePn      Pn       01 59 47.5 +1.0
              SNR=1.0
MFF   Saint Martin d     4.95 281 eP       Pn       01 59 49.6 +3.1
MFF                               eSn      Sn       02 00 41.4 -2.1
              comp=E,1.3nm,0.3s
LDF   La Druitiere       5.50 302 ePn      Pn       01 59 56.3 +2.2
KHC   Kasperske Hory     5.55  52 ePN      Pn       01 59 57.0 +2.2
KHC                               eSN      Sn       02 00 59.5 +1.1
KHC                               eSG      Sg       02 01 39.0 +8.2
GRR   Gorron             5.86 298 ePn      Pn       02 00 00.9 +1.9
ETSF  Etsaut             6.14 243 eP       Pn       02 00 08.2 +5.3
SGMF  Saint Gilles       6.88 293 ePn      Pn       02 00 14.0 +0.9
QUIF  Quistinic          7.20 290 ePn      Pn       02 00 18.6 +1.3
              SNR=1.0
```

SJA 30 02:11:43.8±0.7, 27.°94S×66.°46W, h185km±3km, ML3.3, MW3.7, Catamarca Province

```
Code  Station Name        Δ°  AZ°   Phase ID            Time      Res
                                  Op       ISC        h  m  s    ISC
CYA   Choya              0.77 131 eP       Pn       02 12 12.1 +1.5
CYA                               eS       Sn       02 12 31.0 -0.3
AHML  Horco Molle        1.52  41 eP       Pn       02 12 17.0 +0.5
AHML                              eS       Sn       02 12 41.3 -0.6
AHML                               IAML             02 12 43.3
              comp=Z,128nm,0.5s
VCA   Vinchina           1.73 242 eP       Pn       02 12 19.7 +1.1
VCA                               eS       Sn       02 12 45.2 -0.4
VCA                                IAML             02 12 50.8
              comp=Z,433nm,0.4s
FSA   Cafayete           1.87  13 eP       Pn       02 12 21.0 +0.9
FSA                                IAML             02 12 22.5
              comp=Z,38nm,0.2s
FSA                               eS       Sn       02 12 48.0 -0.2
AGUA  GUANDACOL          2.36 229 eS       Sn       02 12 57.2 -0.4
SLA   San Lorenzo        3.32  15 eP       Pn       02 12 37.3 +0.5
SLA                                IAML             02 12 44.0
              comp=Z,7.7nm,0.5s
SLA                               eS       Sn       02 13 17.3 -0.8
AROD  Rodeo              3.45 229 eP       Pn       02 12 39.7 +1.2
AMOG  MOGNA              3.48 210 eP       Pn       02 12 39.1 +0.5
ACCO  Cerro Coronel      3.48 220 eP       Pn       02 12 39.7 +0.8
TCA   Tanti              3.76 155 eP       Pn       02 12 43.4 +1.3
TCA                                IAML             02 12 43.7
              comp=Z,36nm,0.4s
RTLL  Cerro Villicun     3.81 207 eP       Pn       02 12 43.7 +1.0
RTLL                               IAML             02 13 30.4
              comp=E,224nm,0.4s
AZAP  Zapla              3.91  19 eP       Pn       02 12 45.6 +1.4
AZAP                               IAML             02 12 47.3
              comp=Z,19nm,0.4s
CFA   Coronel Fontan     3.97 202 eP       Pn       02 12 45.2 +0.5
ZON   Zonda              4.08 208 eP       Pn       02 12 46.6 +0.5
ZON                                IAML             02 12 47.1
              comp=Z,34nm,0.2s
RTCV  Cerro Valdivia     4.31 204 eP       Pn       02 12 49.6 +0.6
ACAN  Cantantal          4.37 188 eP       Pn       02 12 50.5 +0.7
RTLS  Leoncito           4.57 212 eP       Pn       02 12 53.7 +1.1
RTLS                               IAML             02 12 55.2
              comp=Z,55nm,0.3s
PB14  IPOC Station P     4.84 312 eP       Pn       02 12 56.6 +0.6
PB15  IPOC Station P     5.44 329 eP       Pn       02 13 04.8 +1.0
LVC   Limon Verde        5.75 337 eP       Pn       02 13 09.2 +1.2
LVC                                IAML             02 13 10.7
              comp=Z,5.3nm,0.3s
```

NNC 30 02:13:43.5±2.3, 37.°82N×71.°87E, h0km, mb3.7, mpv3.3, 6C-2D, Error ellipse: s-maj=17.8km s-min=13.2km az=170.0, Afghanistan-Tajikistan border region

```
Code  Station Name        Δ°  AZ°   Phase ID            Time      Res
                                  Op       ISC        h  m  s    ISC
AML   Almayashu          4.52  17  P       Pn       02 14 54.5 +0.8
              SNR=168
UCH   Uchtor             4.84  24  P       Pn       02 14 58.5 +0.4
              SNR=24
KZA   Kyzart             4.98  30  P       Pn       02 14 59.2 -0.7
              SNR=15
EKS2  Erkin-Say          5.05  16  P       Pn       02 15 02.8 +2.2
              SNR=12
AAK   Ala-Archa          5.21  22 ⇑P       Pn       02 15 03.0 +0.1
              4.8nm,0.3s
AAK                               ⇑S       Sn       02 16 04.9 +1.1
              4.3nm,0.5s
AAK   Ala-Archa          5.21  22  P       Pn       02 15 03.5 +0.6
              SNR=7.1
KK31  Karatay Array      5.38 349 ⇑P       Pn       02 15 06.1 +1.1
              0.5nm,0.2s,baz=170,slow=13,SNR=13
KK31                              ⇑S       Sn       02 16 08.9 +1.3
              5.4nm,0.3s,baz=175,slow=25,SNR=6.2
ULHL  Ulahol             5.54  36  P       Pn       02 14 50.1  -17
              SNR=6.5
CHMS  Chumysh            5.62  22  P       Pn       02 15 08.6 +0.3
              SNR=6.8
TKM2  Tokmak 2           5.83  28 ⇑P       Pn       02 15 10.8 -0.7
              1.2nm,0.7s
TKM2                              ⇓S       Sn       02 16 20.2 +1.0
              1.7nm,0.7s
AB31  Akbulak array     14.31 327 ⇓P       Pn       02 17 06.5 -0.9
              0.3nm,0.3s,baz=145,slow=13,SNR=26
AB31                              ⇑S       Sn       02 19 46.0 -0.7
              1.4nm,0.7s,baz=154,slow=23,SNR=2.5
```

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*BEO **30** 02:13:51.0±2.4, 38.°07N×17.°19E, h74km±6km, ML3.7/11*
*IDC **30** 02:13:57.0±1.0, 38.°75N×17.°93E, h0km, mb3.6/9, mb1 3.7/17, mb1mx3.6/51, mbtmp3.6/17, ML3.6/7, MS2.9/4, Ms1 3.0/4, ms1mx2.5/50, Error ellipse: s-maj=16.7km s-min=14.2km az=57.0*
*ROM **30** 02:13:58.1±0.3, 38.°62N±0.°01×18.°03E±0.°01, h19km±2km, ML3.3/41, Error ellipse: s-maj=1.7km s-min=0.5km az=141.0*
*PDG **30** 02:13:59.9±0.2, 38.°97N×17.°89E, h9km±2km, ML3.6/10, Error ellipse: s-maj=2.3km s-min=1.0km az=90.0*

ISC 30 02:13:58.5±1.4, 38.°70N±0.°04×17.°93E±0.°03, h15km±9km, n223, σ1.s45/256, mb3.6/8, MS2.8/3, 22C-6D, Southern Italy

```
Code  Station Name        Δ°  AZ°   Phase ID            Time      Res
                                  Op       ISC        h  m  s    ISC
LADO  San Nicola del     0.94 308  P       Pn       02 14 18.4 +1.1
LADO                               AML     AML
              comp=E,3150µm,1.6s
LADO                               AML     AML
              comp=N,761µm,0.7s
LADO                               AML     AML
              comp=N,761µm,0.7s
LADO                               AML     AML
              comp=E,3150µm,1.6s
LADO                               AML     AML
              comp=E,3200µm,1.6s
LADO                               AML     AML
              comp=N,760µm,0.7s
SERS  Sersale            1.02 289  P       Pn       02 14 18.8 +0.3
SERS                               AML     AML
              comp=E,514µm,0.6s
SERS                               AML     AML
              comp=N,713µm,0.7s
SERS                               AML     AML
              comp=E,700µm,0.8s
SERS                               AML     AML
              comp=N,560µm,0.6s
SERS                               AML     AML
              comp=E,602µm,0.7s
SERS                               AML     AML
              comp=N,713µm,0.7s
SERS                               AML     AML
              comp=E,700µm,0.8s
SERS                               AML     AML
              comp=N,615µm,0.7s
SERS                               AML     AML
              comp=E,602µm,0.7s
SERS                               AML     AML
              comp=E,700µm,0.8s
SERS                               AML     AML
              comp=N,713µm,0.7s
SERS                               AML     AML
              comp=N,615µm,0.7s
SERS                               AML     AML
              comp=N,615µm,0.7s
SERS                               AML     AML
              comp=E,602µm,0.7s
SERS                               AML     AML
              comp=N,713µm,0.7s
SERS                               AML     AML
              comp=E,700µm,0.8s
TIP   Timpagrande        1.03 298⇑iP       Pn       02 14 19.6 +1.1
TIP   Timpagrande        1.03 298  P       Pn       02 14 19.1 +0.5
TIP                                AML     AML
              comp=E,348µm,0.5s
TIP                                AML     AML
              comp=N,330µm,0.9s
TIP                                AML     AML
              comp=E,537µm,0.8s
TIP                                AML     AML
              comp=N,410µm,0.9s
TIP                                AML     AML
              comp=E,492µm,0.8s
TIP                                AML     AML
              comp=N,364µm,0.9s
TIP                                AML     AML
              comp=E,566µm,0.8s
TIP                                AML     AML
              comp=N,454µm,1.6s
TIP                                AML     AML
              comp=E,566µm,0.8s
TIP                                AML     AML
              comp=N,454µm,1.6s
TIP                                AML     AML
              comp=E,492µm,0.8s
TIP                                AML     AML
              comp=N,364µm,0.9s
TIP                                AML     AML
              comp=N,454µm,1.6s
TIP                                AML     AML
              comp=E,566µm,0.8s
TIP                                AML     AML
              comp=E,492µm,0.8s
TIP                                AML     AML
              comp=N,364µm,0.9s
PIPA  Pietrapaola        1.17 312  P       Pn       02 14 21.2 +0.8
PIPA                               AML     AML
              comp=E,974µm,0.7s
PIPA                               AML     AML
              comp=N,1006µm,0.7s
PIPA                               AML     AML
              comp=E,860µm,0.5s
PIPA                               AML     AML
              comp=N,984µm,0.7s
PIPA                               AML     AML
              comp=E,1012µm,0.7s
PIPA                               AML     AML
              comp=N,1008µm,0.7s
PIPA                               AML     AML
              comp=E,1025µm,0.6s
PIPA                               AML     AML
              comp=N,1012µm,0.6s
PIPA                               AML     AML
              comp=E,1025µm,0.6s
PIPA                               AML     AML
              comp=N,1008µm,0.7s
PIPA                               AML     AML
              comp=N,1012µm,0.6s
PIPA                               AML     AML
              comp=E,1012µm,0.7s
PLAC  Placanica          1.20 258  P       Pn       02 14 21.6 +0.9
PLAC                               AML     AML
              comp=E,532µm,1.2s
PLAC                               AML     AML
              comp=N,664µm,0.6s
PLAC                               AML     AML
              comp=E,688µm,0.7s
PLAC                               AML     AML
              comp=N,496µm,0.7s
PLAC                               AML     AML
              comp=E,578µm,0.6s
PLAC                               AML     AML
              comp=N,665µm,0.6s
PLAC                               AML     AML
              comp=E,688µm,0.7s
PLAC                               AML     AML
              comp=N,510µm,0.6s
PLAC                               AML     AML
              comp=N,510µm,0.6s
PLAC                               AML     AML
              comp=N,665µm,0.6s
PLAC                               AML     AML
              comp=E,688µm,0.7s
PLAC                               AML     AML
              comp=E,578µm,0.6s
PLAC                               AML     AML
              comp=E,688µm,0.7s
PLAC                               AML     AML
              comp=N,510µm,0.6s
PLAC                               AML     AML
              comp=E,578µm,0.6s
PLAC                               AML     AML
              comp=N,664µm,0.6s
CELI  Celico             1.31 303  P       Pg       02 14 23.4 -0.4
CELI                               S       Sn       02 14 41.5 +1.8
CELI                               AML     AML
              comp=E,996µm,1.5s
CELI                               AML     AML
              comp=N,1114µm,1.0s
CELI                               AML     AML
              comp=N,1114µm,1.0s
CELI                               AML     AML
              comp=E,996µm,1.5s
SCTE  Santa Cesarea      1.43  17  P       Pb       02 14 24.4 -0.5
SCTE                               AML     AML
              comp=E,2770µm,0.7s
SCTE                               AML     AML
              comp=N,2185µm,1.0s
SCTE                               AML     AML
              comp=E,2770µm,0.7s
SCTE                               AML     AML
              comp=N,2185µm,1.0s
SCTE                               AML     AML
              comp=E,2770µm,0.7s
SCTE                               AML     AML
              comp=N,2185µm,1.0s
SCTE                               AML     AML
              comp=E,2770µm,0.7s
SCTE                               AML     AML
              comp=N,2185µm,1.0s
CAR1  CAROLEI            1.45 293  P       Pg       02 14 25.9 -0.5
CAR1                               S       Sg       02 14 46.7 +1.5
CAR1                               AML     AML
              comp=E,1352µm,0.9s
CAR1                               AML     AML
              comp=N,1160µm,0.6s
CAR1                               AML     AML
              comp=E,1136µm,0.9s
CAR1                               AML     AML
              comp=N,1220µm,1.0s
CAR1                               AML     AML
              comp=E,1350µm,0.9s
CAR1                               AML     AML
              comp=N,1162µm,0.6s
CAR1                               AML     AML
              comp=E,1136µm,0.9s
CAR1                               AML     AML
              comp=N,1220µm,1.0s
CAR1                               AML     AML
              comp=N,1220µm,1.0s
CAR1                               AML     AML
              comp=N,1162µm,0.6s
CAR1                               AML     AML
              comp=E,1350µm,0.9s
CAR1                               AML     AML
              comp=E,1136µm,0.9s
CAR1                               AML     AML
              comp=N,1161µm,0.6s
CAR1                               AML     AML
              comp=E,1350µm,0.9s
CAR1                               AML     AML
              comp=E,1136µm,0.9s
SOI   Samo               1.60 247  P       Pn       02 14 27.2 +0.9
SOI                                S       Sn       02 14 48.5 +1.7
SOI                                AML     AML
              comp=E,304µm,0.8s
SOI                                AML     AML
              comp=N,308µm,0.9s
SOI                                AML     AML
              comp=E,304µm,0.8s
SOI                                AML     AML
              comp=N,308µm,0.9s
SOI                                AML     AML
              comp=N,308µm,0.9s
SOI                                AML     AML
              comp=E,304µm,0.8s
SOI                                AML     AML
              comp=E,304µm,0.8s
SOI                                AML     AML
              comp=N,308µm,0.9s
JOPP  Joppolo            1.60 267  P       Pn       02 14 27.3 +0.9
JOPP                               S       Sb       02 14 49.0 +1.0
JOPP                               AML     AML
              comp=E,653µm,1.3s
JOPP                               AML     AML
              comp=N,552µm,0.6s
JOPP                               AML     AML
              comp=E,652µm,1.3s
JOPP                               AML     AML
              comp=N,552µm,0.6s
JOPP                               AML     AML
              comp=E,652µm,1.3s
JOPP                               AML     AML
              comp=N,552µm,0.6s
JOPP                               AML     AML
              comp=E,652µm,1.3s
JOPP                               AML     AML
              comp=N,552µm,0.6s
SALB  San Lorenzo Be     1.70 314  P       Pb       02 14 29.2 -0.4
SALB                               AML     AML
              comp=E,480µm,0.6s
SALB                               AML     AML
              comp=N,312µm,0.5s
SALB                               AML     AML
              comp=E,486µm,0.6s
SALB                               AML     AML
              comp=N,305µm,0.6s
SALB                               AML     AML
              comp=E,480µm,0.6s
SALB                               AML     AML
              comp=N,305µm,0.6s
SALB                               AML     AML
              comp=N,312µm,0.5s
SALB                               AML     AML
              comp=E,486µm,0.6s
SALB                               AML     AML
              comp=N,305µm,0.6s
SALB                               AML     AML
              comp=N,312µm,0.5s
SALB                               AML     AML
              comp=E,486µm,0.6s
SALB                               AML     AML
              comp=E,480µm,0.6s
GMB   Gambarie           1.73 253  AML     AML
              comp=N,1800µm,0.8s
GMB                                AML     AML
              comp=E,2310µm,0.4s
GMB                                AML     AML
              comp=E,2310µm,0.4s
GMB                                AML     AML
              comp=N,1800µm,0.8s
GMB                                AML     AML
              comp=E,2310µm,0.4s
GMB                                AML     AML
              comp=N,1800µm,0.8s
MSCL  Scilla             1.75 255  P       Pn       02 14 29.3 +0.9
MSCL                               S       Sn       02 14 52.2 +1.8
MSCL                               AML     AML
              comp=E,1198µm,0.7s
MSCL                               AML     AML
              comp=N,1885µm,0.6s
MSCL                               AML     AML
              comp=E,1198µm,0.7s
MSCL                               AML     AML
              comp=N,1885µm,0.6s
MSCL                               AML     AML
              comp=N,1885µm,0.6s
MSCL                               AML     AML
              comp=E,1198µm,0.7s
MSCL                               AML     AML
              comp=N,1885µm,0.6s
MSCL                               AML     AML
              comp=E,1198µm,0.7s
T0702 Acquaformosa (     1.76 306  P       Pg       02 14 31.0 -1.3
KEK   Kerkira            1.77  55  P       Pn       02 14 28.7 +0.1
KEK   Kerkira            1.77  55  P       Pn       02 14 28.5 -0.1
KEK                                AML     AML
              comp=E,331µm,0.6s
KEK                                AML     AML
              comp=N,240µm,0.8s
KEK                                AML     AML
              comp=E,333µm,0.6s
KEK                                AML     AML
              comp=N,240µm,0.8s
KEK                                AML     AML
              comp=E,333µm,0.6s
KEK                                AML     AML
              comp=N,240µm,0.8s
KEK                                AML     AML
              comp=E,333µm,0.6s
KEK                                AML     AML
              comp=N,240µm,0.8s
TAR1  Taranto            1.89 345 ePn      Pn       02 14 30.8 +0.6
TAR1                               Sn      Sg       02 15 03.3 +4.0
MTTG  Motta San Giov     1.89 249  P       Pn       02 14 31.1 +0.7
MTTG                               S       Sn       02 14 55.2 +1.2
MTTG                               AML     AML
              comp=E,674µm,0.5s
```

MTTG				AML	AML		
	comp=N,895µm,0.7s						
MTTG				AML	AML		
	comp=E,674µm,0.5s						
MTTG				AML	AML		
	comp=N,895µm,0.7s						
MTTG				AML	AML		
	comp=N,895µm,0.7s						
MTTG				AML	AML		
	comp=E,674µm,0.5s						
MSRU	**Castanea**	**1.95**	**258**	P	**Pn**	**02 14 31.6**	**+0.4**
MSRU				AML	AML		
	comp=E,730µm,0.4s						
MSRU				AML	AML		
	comp=N,454µm,0.4s						
MSRU				AML	AML		
	comp=N,454µm,0.4s						
MSRU				AML	AML		
	comp=E,730µm,0.4s						
CGL1	**Ceglie Messapi**	**1.98**	**350**	⇑*i*Pn	**Pn**	**02 14 32.0**	**+0.5**
SRN	**Sarande**	**1.99**	**53**	P	**Pn**	**02 14 31.7**	**+0.1**
SRN	**Sarande**	**1.99**	**53**	P	**Pn**	**02 14 31.7**	**+0.1**
SRN				AML	AML		
	comp=E,603µm,0.9s						
SRN				AML	AML		
	comp=N,900µm,0.9s						
SRN				AML	AML		
	comp=E,603µm,0.9s						
SRN				AML	AML		
	comp=N,900µm,0.9s						
SRN				AML	AML		
	comp=E,603µm,0.9s						
SRN				AML	AML		
	comp=N,900µm,0.9s						
MASS	**Massafra**	**2.02**	**343**	*e*Pn	**Pn**	**02 14 32.8**	**+0.7**
IGT	**Igoumenitsa**	**2.04**	**65**	P	**Pn**	**02 14 32.8**	**+0.4**
FSK	**Fiskardo**	**2.08**	**96**	P	**Pn**	**02 14 33.5**	**+0.6**
CUC	**Castrocucco**	**2.08**	**309**	P	**Pn**	**02 14 34.5**	**+1.4**
CUC				AML	AML		
	comp=E,359µm,0.8s						
CUC				AML	AML		
	comp=N,264µm,1.0s						
CUC				AML	AML		
	comp=E,440µm,0.9s						
CUC				AML	AML		
	comp=N,323µm,0.7s						
CUC				AML	AML		
	comp=E,440µm,0.9s						
CUC				AML	AML		
	comp=E,359µm,0.8s						
CUC				AML	AML		
	comp=N,323µm,0.7s						
CUC				AML	AML		
	comp=N,264µm,1.0s						
CUC				AML	AML		
	comp=E,440µm,0.9s						
CUC				AML	AML		
	comp=E,359µm,0.8s						
CUC				AML	AML		
	comp=N,264µm,1.0s						
CUC				AML	AML		
	comp=N,323µm,0.7s						
IST3	**Stromboli F**	**2.11**	**273**	P	**Pn**	**02 14 33.4**	**0.0**
IST3				AML	AML		
	comp=E,438µm,0.8s						
IST3				AML	AML		
	comp=N,510µm,0.6s						
IST3				AML	AML		
	comp=N,510µm,0.6s						
IST3				AML	AML		
	comp=E,438µm,0.8s						
IST3				AML	AML		
	comp=E,438µm,0.8s						
LKD2	**Lefkada island**	**2.13**	**87**	P	**Pn**	**02 14 34.3**	**+0.6**
VLS	**Valsamata**	**2.15**	**103**	P	**Pn**	**02 14 33.9**	**0.0**
VLS	**Valsamata**	**2.15**	**103**	P	**Pn**	**02 14 33.9**	**0.0**
VLS				AML	AML		
	comp=E,97µm,0.5s						
VLS				AML	AML		
	comp=N,134µm,1.1s						
VLS				AML	AML		
	comp=N,134µm,1.1s						
VLS				AML	AML		
	comp=E,97µm,0.5s						
VLS				AML	AML		
	comp=E,97µm,0.5s						
VLS				AML	AML		
	comp=N,134µm,1.1s						
FASA	**Fasano**	**2.16**	**348**	⇑*i*Pn	**Pn**	**02 14 34.3**	**+0.3**
MATE	**Matera**	**2.16**	**334**	P	**Pn**	**02 14 34.7**	**+0.7**
MATE				AML	AML		
	comp=E,608µm,0.5s						
MATE				AML	AML		
	comp=N,836µm,0.6s						
MATE				AML	AML		
	comp=N,836µm,0.6s						
MATE				AML	AML		
	comp=E,608µm,0.5s						
MATE				AML	AML		
	comp=E,608µm,0.5s						
MILZ	**Milazzo**	**2.16**	**259**	P	**Pn**	**02 14 33.8**	**-0.2**
MILZ				AML	AML		
	comp=E,536µm,0.6s						
MILZ				AML	AML		
	comp=N,516µm,0.4s						
MILZ				AML	AML		
	comp=E,536µm,0.6s						
MILZ				AML	AML		
	comp=N,516µm,0.4s						
MILZ				AML	AML		
	comp=N,516µm,0.4s						
SIRI	**Monte Sirino -**	**2.17**	**313**	P	**Pb**	**02 14 36.3**	**-1.3**
SIRI				AML	AML		
	comp=E,345µm,1.0s						
SIRI				AML	AML		
	comp=N,344µm,1.6s						
SIRI				AML	AML		
	comp=N,344µm,1.6s						
SIRI				AML	AML		
	comp=E,345µm,1.0s						
SIRI				AML	AML		
	comp=N,344µm,1.6s						
SIRI				AML	AML		
	comp=E,345µm,1.0s						
NOCI	**Noci**	**2.19**	**343**	P	**Pn**	**02 14 35.1**	**+0.7**
NOCI				AML	AML		
	comp=E,1095µm,0.5s						
NOCI				AML	AML		
	comp=N,1275µm,0.7s						
NOCI				AML	AML		
	comp=N,1275µm,0.7s						
NOCI				AML	AML		
	comp=E,1095µm,0.5s						
NOCI				AML	AML		
	comp=N,1275µm,0.7s						
NOCI				AML	AML		
	comp=E,1095µm,0.5s						
TPE	**Tepelena**	**2.26**	**45**	P	**Pn**	**02 14 35.9**	**+0.5**
TPE	**Tepelena**	**2.26**	**45**	P	**Pn**	**02 14 36.1**	**+0.6**
MTSN	**Montesano sull**	**2.30**	**313**	P	**Pb**	**02 14 38.0**	**-1.7**
MTSN				AML	AML		
	comp=E,350µm,0.6s						
MTSN				AML	AML		
	comp=N,409µm,1.6s						
MTSN				AML	AML		
	comp=E,350µm,0.6s						
MTSN				AML	AML		
	comp=N,409µm,1.6s						
MTSN				AML	AML		
	comp=E,350µm,0.6s						
MTSN				AML	AML		
	comp=N,409µm,1.6s						
NOV	**Novara**	**2.30**	**254**	P	**Pn**	**02 14 36.7**	**+0.7**
NOV				S	**Sn**	**02 15 05.9**	**+1.9**
NOV				AML	AML		
	comp=E,453µm,1.3s						
NOV				AML	AML		
	comp=N,326µm,0.5s						
NOV				AML	AML		
	comp=N,326µm,0.5s						
NOV				AML	AML		
	comp=E,453µm,1.3s						
MCEL	**Monticello**	**2.31**	**315**	P	**Pn**	**02 14 37.9**	**+1.8**
MCEL				AML	AML		
	comp=E,344µm,0.7s						
MCEL				AML	AML		
	comp=N,502µm,0.9s						
MCEL				AML	AML		
	comp=N,502µm,0.9s						
MCEL				AML	AML		
	comp=E,344µm,0.7s						
MCEL				AML	AML		
	comp=E,344µm,0.7s						
MCEL				AML	AML		
	comp=N,502µm,0.9s						
KFL	**Anninata**	**2.32**	**104**	P	**Pn**	**02 14 36.2**	**0.0**
SG1	**Sgolgore (BA)**	**2.34**	**336**	*e*Pn	**Pn**	**02 14 37.1**	**+0.6**
AMUR	**Altamura**	**2.43**	**336**	P	**Pn**	**02 14 38.3**	**+0.6**
AMUR				AML	AML		
	comp=E,778µm,0.9s						
AMUR				AML	AML		
	comp=N,710µm,0.7s						
AMUR				AML	AML		
	comp=E,778µm,0.9s						
AMUR				AML	AML		
	comp=N,710µm,0.7s						
AMUR				AML	AML		
	comp=E,778µm,0.9s						
AMUR				AML	AML		
	comp=N,710µm,0.7s						
SLCN	**Sala Consilina**	**2.45**	**314**	AML	AML		
	comp=N,422µm,0.5s						
SLCN				AML	AML		
	comp=E,766µm,0.7s						
SLCN				AML	AML		
	comp=N,502µm,0.5s						
SLCN				AML	AML		
	comp=E,816µm,0.7s						
SLCN				AML	AML		
	comp=N,422µm,0.5s						
SLCN				AML	AML		
	comp=E,816µm,0.7s						
SLCN				AML	AML		
	comp=E,766µm,0.7s						
SLCN				AML	AML		
	comp=N,502µm,0.5s						
JAN	**Janina**	**2.46**	**66**	P	**Pn**	**02 14 38.9**	**+0.7**
ZKS	**Zakynthos**	**2.46**	**113**	P	**Pn**	**02 14 37.5**	**-0.7**
MUCR	**Ucria**	**2.49**	**256**	P	**Pn**	**02 14 39.4**	**+0.8**
MUCR				AML	AML		
	comp=E,351µm,0.6s						
MUCR				AML	AML		
	comp=N,352µm,0.7s						
MUCR				AML	AML		
	comp=E,351µm,0.6s						
MUCR				AML	AML		
	comp=N,352µm,0.7s						
MUCR				AML	AML		
	comp=E,351µm,0.6s						
MUCR				AML	AML		
	comp=N,352µm,0.7s						
BAI	**Bari**	**2.53**	**342**	*e*Pn	**Pn**	**02 14 40.3**	**+1.2**
AGST	**Augusta-Monte**	**2.58**	**237**	P	**Pn**	**02 14 38.2**	**-1.6**
AGST				AML	AML		
	comp=E,348µm,1.2s						
AGST				AML	AML		
	comp=N,319µm,0.6s						
AGST				AML	AML		
	comp=E,348µm,1.2s						
AGST				AML	AML		
	comp=N,319µm,0.6s						
AGST				AML	AML		
	comp=E,346µm,1.2s						
MCPD	**Capo d'Orlando**	**2.58**	**258**	P	**Pn**	**02 14 40.0**	**+0.2**
MCPD				AML	AML		
	comp=E,158µm,0.7s						
MCPD				AML	AML		
	comp=N,158µm,0.5s						
MCPD				AML	AML		
	comp=E,158µm,0.7s						
MCPD				AML	AML		
	comp=N,158µm,0.5s						
MCPD				AML	AML		
	comp=E,158µm,0.7s						
MCPD				AML	AML		
	comp=N,158µm,0.5s						
HAGA	**Augusta**	**2.61**	**238**	P	**Pn**	**02 14 38.7**	**-1.5**
HAGA				AML	AML		
	comp=E,230µm,0.6s						
HAGA				AML	AML		
	comp=N,223µm,0.7s						
HAGA				AML	AML		
	comp=E,230µm,0.6s						
HAGA				AML	AML		
	comp=N,223µm,0.7s						
HAGA				AML	AML		
	comp=N,223µm,0.7s						
IFIL	**Filicudi I Eol**	**2.64**	**268**	P	**Pn**	**02 14 40.8**	**+0.2**
IFIL				S	**Sn**	**02 15 12.4**	**+0.1**
IFIL				AML	AML		
	comp=E,1365µm,0.9s						
IFIL				AML	AML		
	comp=N,640µm,0.6s						
IFIL				AML	AML		
	comp=E,1365µm,0.9s						
IFIL				AML	AML		
	comp=N,640µm,0.6s						
IFIL				AML	AML		
	comp=N,640µm,0.6s						
MNO	**Monte Soro**	**2.66**	**254**	P	**Pn**	**02 14 42.0**	**+0.9**
HCRL	**Carlentini**	**2.69**	**239**	P	**Pn**	**02 14 40.1**	**-1.3**
CDRU	**Civita di Ruta**	**2.70**	**312**	P	**Pn**	**02 14 42.9**	**+1.4**
CDRU				AML	AML		
	comp=E,172µm,1.0s						
CDRU				AML	AML		
	comp=N,116µm,1.6s						
CDRU				AML	AML		
	comp=E,172µm,1.0s						
CDRU				AML	AML		
	comp=N,116µm,1.6s						
CDRU				AML	AML		
	comp=E,172µm,1.0s						
CDRU				AML	AML		
	comp=N,116µm,1.6s						
MRVN	**Minervino Murg**	**2.71**	**331**	P	**Pn**	**02 14 42.4**	**+0.8**
MRVN				AML	AML		
	comp=E,351µm,1.1s						
MRVN				AML	AML		
	comp=N,367µm,0.7s						
MRVN				AML	AML		
	comp=E,351µm,1.1s						
MRVN				AML	AML		
	comp=N,367µm,0.7s						
MRVN				AML	AML		
	comp=E,351µm,1.1s						
MRVN				AML	AML		
	comp=N,367µm,0.7s						
MSFR	**San Fratello**	**2.71**	**257**	P	**Pn**	**02 14 42.2**	**+0.6**
MSFR				AML	AML		
	comp=E,126µm,1.5s						
MSFR				AML	AML		
	comp=N,108µm,1.2s						
MSFR				AML	AML		
	comp=E,126µm,1.5s						
MSFR				AML	AML		
	comp=N,108µm,1.2s						
MSFR				AML	AML		
	comp=N,108µm,1.2s						
PVO	**Paravola**	**2.82**	**91**	P	**Pn**	**02 14 44.8**	**+1.8**
HAVL	**Avola**	**2.82**	**233**	P	**Pn**	**02 14 41.1**	**-2.0**
HAVL				S	**Sn**	**02 15 14.3**	**-2.6**
HAVL				AML	AML		
	comp=E,462µm,0.6s						
HAVL				AML	AML		
	comp=N,553µm,0.4s						
HAVL				AML	AML		
	comp=N,553µm,0.4s						
HAVL				AML	AML		
	comp=E,462µm,0.6s						
HAVL				AML	AML		
	comp=E,462µm,0.6s						
GALF	**Gagliano Caste**	**2.83**	**251**	P	**Pn**	**02 14 44.1**	**+0.9**
GALF				AML	AML		
	comp=N,270µm,0.6s						
GALF				AML	AML		
	comp=E,242µm,0.8s						
MEU	**Monte Lauro**	**2.86**	**237**	P	**Pn**	**02 14 43.2**	**-0.5**
PENT	**Pentalofos**	**2.90**	**58**	P	**Pn**	**02 14 46.3**	**+2.1**
KPRO	**Kipourio**	**2.94**	**64**	P	**Pn**	**02 14 46.3**	**+1.5**
NEST	**Nestorio**	**2.96**	**54**	P	**Pn**	**02 14 47.0**	**+2.0**
HVZN	**Vizzini**	**2.96**	**240**	P	**Pn**	**02 14 44.0**	**-1.2**
HVZN				S	**Sn**	**02 15 19.0**	**-1.4**
HVZN				AML	AML		
	comp=E,2520µm,0.5s						
HVZN				AML	AML		
	comp=N,2010µm,0.5s						
HVZN				AML	AML		
	comp=N,2010µm,0.5s						
HVZN				AML	AML		
	comp=E,2520µm,0.5s						
HVZN				AML	AML		
	comp=N,2010µm,0.5s						
MCRV	**Calabrutti - M**	**2.97**	**315**	AML	AML		
	comp=N,182µm,0.6s						
MCRV				AML	AML		
	comp=E,160µm,0.5s						
MCRV				AML	AML		
	comp=N,182µm,0.6s						
MCRV				AML	AML		
	comp=E,160µm,0.5s						
MCRV				AML	AML		
	comp=N,182µm,0.6s						
HPAC	**Pachino**	**3.00**	**229**	P	**Pn**	**02 14 45.0**	**-0.5**
HPAC				S	**Sn**	**02 15 20.3**	**-1.0**
HPAC				AML	AML		
	comp=E,695µm,0.5s						
HPAC				AML	AML		
	comp=N,644µm,0.4s						
HPAC				AML	AML		
	comp=N,644µm,0.4s						
HPAC				AML	AML		
	comp=E,695µm,0.5s						
HPAC				AML	AML		
	comp=N,644µm,0.4s						
TIR	**Tirane**	**3.03**	**29**	*e*Pn	**Pn**	**02 14 47.5**	**+1.5**
TIR				*e*Sn	**Sb**	**02 15 25.4**	**-3.6**
TIR	**Tirane**	**3.03**	**29**	⇑*i*P	**Pn**	**02 14 45.4**	**-0.6**
TIR	**Tirane**	**3.03**	**29**	P	**Pn**	**02 14 46.7**	**+0.7**
TIR				AML	AML		
	comp=E,498µm,0.9s						
TIR				AML	AML		
	comp=N,592µm,0.8s						
TIR				AML	AML		
	comp=E,498µm,0.9s						
TIR				AML	AML		
	comp=N,592µm,0.8s						
TIR				AML	AML		
	comp=E,498µm,0.9s						
TIR				AML	AML		
	comp=N,592µm,0.8s						
VAE	**Valguarnera**	**3.03**	**247**	Pn	**Pn**	**02 14 47.7**	**+1.6**
	comp=N,1.3nm,0.3s,baz=24,slow=15,SNR=3.4						
EVR	**Evrytania**	**3.04**	**85**	P	**Pn**	**02 14 47.8**	**+1.6**
HMDC	**Modica**	**3.04**	**236**	P	**Pn**	**02 14 45.0**	**-1.1**
HMDC				S	**Sn**	**02 15 20.7**	**-1.6**
PETRA	**Petralia Sopra**	**3.13**	**255**	AML	AML		
	comp=N,153µm,0.5s						
PETRA				AML	AML		
	comp=E,209µm,0.6s						
PETRA				AML	AML		
	comp=N,153µm,0.5s						
PETRA				AML	AML		
	comp=E,209µm,0.6s						
AMT	**Artemida-Makis**	**3.20**	**110**	P	**Pn**	**02 14 49.1**	**+0.7**
SERG	**Sergoula**	**3.25**	**94**	P	**Pn**	**02 14 50.5**	**+1.5**
TRIZ	**Trizonia**	**3.27**	**95**	P	**Pn**	**02 14 50.6**	**+1.4**
THL	**Klokotos Trika**	**3.29**	**74**	P	**Pn**	**02 14 51.4**	**+1.9**
KALE	**Kalithea**	**3.31**	**94**	P	**Pn**	**02 14 51.4**	**+1.4**
FNA	**Florina**	**3.37**	**51**	P	**Pn**	**02 14 52.0**	**+1.3**
MSAG	**Monte S. Angel**	**3.38**	**333**	P	**Pn**	**02 14 51.3**	**+0.4**
MSAG				AML	AML		
	comp=E,418µm,1.6s						
MSAG				AML	AML		
	comp=N,725µm,1.4s						
MSAG				AML	AML		
	comp=E,418µm,1.6s						
MSAG				AML	AML		
	comp=N,725µm,1.4s						
MSAG				AML	AML		
	comp=E,418µm,1.6s						
MSAG				AML	AML		
	comp=N,725µm,1.4s						
KLV	**Kalavryta, Ach**	**3.38**	**100**	P	**Pn**	**02 14 51.7**	**+0.8**
ULC	**Ulcinj**	**3.41**	**17**	⇓*i*Pn	**Pn**	**02 14 50.6**	**-0.6**
ULC				*e*Sn	**Sn**	**02 15 31.0**	**-0.4**
AGG	**Agios Georgios**	**3.45**	**83**	P	**Pn**	**02 14 53.7**	**+1.9**
DRME	**Dracevica, Mon**	**3.61**	**15**	⇓*i*Pn	**Pn**	**02 14 53.2**	**-0.7**
DRME				*e*Sn	**Sn**	**02 15 35.8**	**-0.5**
DRME	**Dracevica, Mon**	**3.61**	**15**	*i* Pn	**Pn**	**02 14 53.1**	**-0.8**
DSF	**Desfina**	**3.62**	**93**	P	**Pn**	**02 14 57.2**	**+3.1**
PUK	**Puka**	**3.66**	**24**	P	**Pn**	**02 14 55.2**	**+0.6**
PUK				AML	AML		
	comp=E,230µm,0.7s						
PUK				AML	AML		
	comp=N,217µm,1.5s						
PUK				AML	AML		
	comp=E,230µm,0.7s						
PUK				AML	AML		
	comp=N,217µm,1.5s						
BUM	**Brajici-Budva**	**3.67**	**11**	⇑*i*Pn	**Pn**	**02 14 54.5**	**-0.3**
BUM				*e*Sn	**Sn**	**02 15 36.6**	**-1.2**
HCY	**Herceg Novi**	**3.76**	**6**	⇓*i*Pn	**Pn**	**02 14 55.6**	**-0.5**
HCY				*e*Sn	**Sn**	**02 15 39.2**	**-0.9**
HCY	**Herceg Novi**	**3.76**	**6**	*e*Pn	**Pn**	**02 14 54.8**	**-1.3**
LIT	**Litokhoron**	**3.80**	**67**	P	**Pn**	**02 14 57.4**	**+0.8**
PDG	**Podgorica**	**3.86**	**15**	*e*Pn	**Pn**	**02 14 56.9**	**-0.4**
PDG				*e*Sn	**Sn**	**02 15 43.5**	**+1.1**
PDG	**Podgorica**	**3.86**	**15**	⇑*i*P	**Pn**	**02 14 57.4**	**+0.1**
PDG	**Podgorica**	**3.86**	**15**	*i* Pn	**Pn**	**02 14 56.7**	**-0.6**
PDG	**Podgorica**	**3.86**	**15**	P	**Pn**	**02 14 57.0**	**-0.3**
PDG				AML	AML		
	comp=E,193µm,0.7s						
PDG				AML	AML		
	comp=N,184µm,0.9s						
PDG				AML	AML		
	comp=E,142µm,0.6s						
PDG				AML	AML		
	comp=N,142µm,1.1s						
PDG				AML	AML		
	comp=E,193µm,0.7s						
PDG				AML	AML		
	comp=N,142µm,1.1s						
PDG				AML	AML		
	comp=E,142µm,0.6s						
PDG				AML	AML		
	comp=N,184µm,0.9s						
PDG				AML	AML		
	comp=E,194µm,0.7s						
PDG				AML	AML		
	comp=N,142µm,1.1s						
PDG				AML	AML		
	comp=E,142µm,0.6s						
PDG				AML	AML		
	comp=N,184µm,0.9s						
TTG	**Podgorica**	**3.86**	**15**	⇓*i*Pn	**Pn**	**02 14 57.8**	**+0.5**
TTG				*e*Sn	**Sn**	**02 15 41.2**	**-1.2**
CLTB	**Caltabellotta**	**3.88**	**255**	AML	AML		
	comp=N,194µm,0.7s						
CLTB				AML	AML		
	comp=E,92µm,0.7s						
CEME	**Cevo**	**3.91**	**11**	⇑*i*Pn	**Pn**	**02 14 57.4**	**-0.8**
CEME				*e*Sn	**Sn**	**02 15 42.4**	**-1.5**
DBRK	**Dubrovnik**	**3.96**	**2**	*e*Pn	**Pn**	**02 14 58.9**	**+0.1**
LKR	**Lokris**	**3.97**	**89**	P	**Pn**	**02 15 00.2**	**+1.3**
DYR	**Agios Nikonas**	**3.99**	**118**	P	**Pn**	**02 14 59.3**	**+0.1**
TREB	**Trebinje**	**4.02**	**4**	*e*Pn	**Pn**	**02 14 59.1**	**-0.5**
TREB				*e*Sn	**Sn**	**02 15 45.5**	**-1.0**
TREB	**Trebinje**	**4.02**	**4**	*e*Pn	**Pn**	**02 14 58.8**	**-0.8**
NKME	**Niksic**	**4.13**	**11**	⇑*i*Pn	**Pn**	**02 15 01.3**	**+0.1**
NKME				*e*Sn	**Sn**	**02 15 48.2**	**-1.1**
STON	**Ston**	**4.17**	**358**	*e*Pn	**Pn**	**02 14 59.5**	**-2.1**
STON				*e*Sn	**Sn**	**02 15 48.2**	**-1.8**
STON	**Ston**	**4.17**	**358**	*i* Pn	**Pn**	**02 15 01.5**	**-0.1**
STON				Sn	**Sn**	**02 15 48.3**	**-1.7**
STON	**Ston**	**4.17**	**358**	*e*Pn	**Pn**	**02 15 00.4**	**-1.2**
STON	**Ston**	**4.17**	**358**	P	**Pn**	**02 15 01.5**	**-0.1**
STON				AML	AML		
	comp=E,82µm,0.8s						
STON				AML	AML		
	comp=N,91µm,0.5s						
STON				AML	AML		
	comp=N,91µm,0.5s						
STON				AML	AML		
	comp=E,82µm,0.8s						
STON				AML	AML		
	comp=N,91µm,0.5s						
STON				AML	AML		
	comp=E,82µm,0.8s						
PVY	**Plav**	**4.18**	**21**	⇑*i*Pn	**Pn**	**02 15 02.4**	**+0.5**

PVY				*e*Sn	Sn	02 15 50.2	-0.4
NKY	Niksic	4.18	11	⇑*i*Pn	Pn	02 15 01.7	-0.2
NKY				*e*Sn	Sn	02 15 49.1	-1.5
BRY	Bratogost	4.22	6	⇑*i*Pn	Pn	02 15 01.7	-0.7
BRY				*e*Sn	Sn	02 15 49.5	-2.0
BRY	Bratogost	4.22	6	*e*Pn	Pn	02 15 01.5	-0.9
SKO	Skopje	4.22	38	*e*Pn	Pn	02 15 04.3	+1.9
SKO				*e*Sn	Sn	02 15 55.1	+3.6
SKO	Skopje	4.22	38	*i* Pn	Pn	02 15 04.4	+1.9
VILL	Villia	4.26	96	P	Pn	02 15 05.2	+2.3
KOME	Kolasin	4.31	16	⇑*i*Pn	Pn	02 15 04.3	+0.6
KOME				*e*Sn	Sn	02 15 52.7	-1.1
VAY	Valandovo	4.42	52	*e*Pn	Pn	02 15 06.3	+1.3
VAY				*e*Sn	Sn	02 15 58.5	+2.3
VAY	Valandovo	4.42	52	*i* Pn	Pn	02 15 05.4	+0.3
STIP	Stip	4.42	46	*i* Pn	Pn	02 15 07.8	+2.7
IVA	Berane	4.42	19	⇑*i*Pn	Pn	02 15 05.6	+0.4
IVA				*e*Sn	Sn	02 15 54.8	-1.7
VLI	Veliai	4.44	115	P	Pn	02 15 06.8	+1.5
KNT	Kendrikon	4.54	56	P	Pn	02 15 06.6	-0.1
UPM	Unac-Piva	4.55	9	⇓*i*Pn	Pn	02 15 07.3	+0.2
UPM				*e*Sn	Sn	02 15 57.8	-2.1
UPM	Unac-Piva	4.55	9	*e*Pn	Pn	02 15 08.1	+1.0
PLG	Polygyros	4.58	67	P	Pn	02 15 07.5	+0.2
PAIG	Paliouri	4.62	73	P	Pn	02 15 08.5	+0.6
MAKA	Makarska	4.63	352	*i* Pn	Pn	02 15 07.1	-0.8
MAKA				Sn	Sn	02 15 59.0	-2.4
VLY	Voula,Athens	4.69	99	P	Pn	02 15 10.2	+1.4
KTHR	Kythira	4.71	120	P	Pn	02 15 10.2	+1.1
PLE	Pljevlja	4.75	13	⇓*i*Pn	Pn	02 15 09.6	-0.1
PLE				*e*Sn	Sn	02 16 02.6	-2.0
KTHA	Kythira Island	4.76	119	P	Pn	02 15 10.7	+1.0
SJES	Sjenica	4.81	18	*e*Pn	Pn	02 15 09.9	-0.6
AQU	L'Aquila	5.02	318	*e*Pn	Pg	02 15 32.1	-2.5
RUDO	Rudo	5.03	12	*e*Pn	Pn	02 15 12.8	-0.6
KKB	Krupnik	5.05	50	P	Pn	02 15 14.0	+0.2
BARS	Barje	5.06	34	*e*Pn	Pn	02 15 14.3	+0.5
SELS	Selova	5.12	27	*e*Pn	Pn	02 15 15.0	+0.3
IVAS	Ivanjica	5.15	18	*e*Pn	Pn	02 15 14.8	-0.3
IVAS				*e*Sn	Sn	02 16 14.8	+0.5
ZIRJ	Zirje	5.24	342	*e*Pn	Pn	02 15 16.6	+0.3
BBLS	Lazići	5.28	12	*e*Pn	Pn	02 15 15.4	-1.5
BBLS				*e*Sn	Sn	02 16 17.6	+0.1
BBLS	Lazići	5.28	12	*e*Pn	Pn	02 15 16.8	-0.1
MMB	Musomiste	5.29	55	P	Pn	02 15 17.2	+0.1
MORI	Morici	5.42	343	*e*Pn	Pn	02 15 19.5	+0.6
HAPS	Han Pijesak,BI	5.43	8	*e*Pn	Pn	02 15 16.8	-2.3
GRUS	Gruza	5.59	21	*e*Pn	Pn	02 15 21.2	+0.1
DIVS	Divibare	5.61	15	*e*Pn	Pn	02 15 20.6	-0.9
DIVS	Divibare	5.61	15	*e*Pn	Pn	02 15 21.0	-0.5
VTS	Vitosha	5.62	44	*e*Pn	Pn	02 15 22.0	+0.3
VTS				*e*Sn	Sn	02 16 26.0	0.0
VTS	Vitosha	5.62	44	⇑*i*P	Pn	02 15 22.2	+0.5
VTS	Vitosha	5.62	44	P	Pn	02 15 21.7	0.0
BOVS	Bovan	5.69	29	*e*Pn	Pn	02 15 22.8	+0.3
DUGI	Dugi Otok	5.71	339	*e*Pn	Pn	02 15 23.1	+0.3
DUGI				Sn	Sn	02 16 27.5	-0.5
MGRS	Mrkonjic Grad	5.74	354	*e*Pn	Pn	02 15 25.5	+2.2
ZAPS	Zavoj	5.79	36	*e*Pn	Pn	02 15 23.7	-0.2
ZAPS				*e*Sn	Sn	02 16 31.2	+1.2
TRUS	Trudelj	5.82	18	*e*Pn	Pn	02 15 24.5	+0.2
TRUS				*e*Sn	Sn	02 16 30.7	-0.1
RZN	Rozhen	5.99	58	P	Pn	02 15 27.8	+1.0
UDBI	Udbina	6.04	345	*e*Pn	Pn	02 15 29.6	+2.2
ZAGS	Zajecar	6.05	31	*e*Pn	Pn	02 15 28.6	+1.2
BLY	Banja Luka	6.07	355	⇑*i*P	Pn	02 15 28.9	+1.2
BLY	Banja Luka	6.07	355	*e*Pn	Pn	02 15 28.7	+1.0
PLD	Plovdiv	6.18	55	*e*Pn	Pn	02 15 29.7	+0.4
NVLJ	Novalja	6.29	340	*e*Pn	Pn	02 15 31.6	+0.9
KUBS	Kucevo	6.36	25	*e*Pn	Pn	02 15 31.3	-0.4
IDI	Anoyia	6.53	119	Pn	Pn	02 15 35.5	+1.3
	comp=E,1.3nm,0.3s,baz=226,slow=6.9,SNR=22						
IDI				Sn	Sn	02 16 48.2	-0.2
	comp=E,2.0nm,0.3s,baz=322,slow=21,SNR=6.5						
FRGS	Fruska Gora	6.60	12	*e*Pn	Pn	02 15 33.9	-1.1
FRGS	Fruska Gora	6.60	12	*e*Pn	Pn	02 15 33.6	-1.4
HERR	Herculane	7.02	27	⇑*i*P	Pn	02 15 39.3	-1.5
RIY	Rijeka	7.10	340	*e*Pn	Pn	02 15 41.0	-0.8
OZLJ	Ozalj	7.14	346	*e*Pn	Pn	02 15 43.5	+1.0
PTJ	Puntijarka	7.34	349	ePn		02 15 44.9	
CRES	Cresnjev	7.35	346	*e*Pn	Pn	02 15 45.2	-0.1
ELND	Elena	7.36	52	⇑*i*P	Pn	02 15 46.4	+1.0
BZS	Buzias	7.43	20	⇑*i*P	Pn	02 15 46.0	-0.4
CEY	Cerknica	7.50	341	*e*Pn	Pn	02 15 47.7	+0.4
MORH	Mrgy, Hungar	7.53	4	*e*Pn	Pn	02 15 43.7	-4.0
GZR	Gura Zlata	7.59	27	⇑*i*P	Pn	02 15 49.7	+1.0
LJU	Ljubljana	7.75	342	*e*Pn	Pn	02 15 51.1	+0.2
OBKA	Obir	8.19	343	*e*Pn	Pn	02 15 58.6	+1.8
	comp=E,1.2nm,0.5s						
OBKA				*e*Sn	Sn	02 17 30.6	+1.4
	comp=E,4.8nm,0.5s						
SOKA	Soboth	8.25	346	*e*Pn	Pn	02 15 57.9	+0.2
	comp=E,3.4nm,0.6s						
ARSA	Arzberg	8.72	349	*i* Pn	Pn	02 16 04.7	+0.6
	comp=E,7.7nm,0.8s,SNR=9.2						
DRGR		8.81	22	⇑*i*P	Pn	02 16 07.8	+2.4
ABTA	Abfaltersbach	8.97	335	*e*Pn	Pn	02 16 08.3	+0.7
	comp=E,0.7nm,0.4s						
ABTA				*e*Sn	Sn	02 17 46.3	-2.1
	comp=E,4.5nm,0.7s						
MLR	Muntele Rosu	9.02	39	Pn	Pn	02 16 13.9	+5.5
	comp=E,0.1nm,0.3s,baz=172,slow=14,SNR=3.0						
PSZ	Piszkesteto	9.32	8	⇑*i*P	Pn	02 16 15.1	+2.7
CONA	Conrad Observa	9.34	351	*i* Pn	Pn	02 16 15.2	+2.5
	comp=E,0.2nm,0.1s						
MOA	Molln	9.52	345	*e*Pn	Pn	02 16 16.4	+1.3
	comp=E,0.6nm,0.2s						
WTTA	Wattenberg	9.71	334	*e*Pn	Pn	02 16 20.3	+2.5
	comp=E,0.2nm,0.2s						
WATA	Walderalm	9.80	334	*e*Pn	Pn	02 16 20.5	+1.5
VYHS	Vyhne	9.81	4	*e*PN	Pn	02 16 20.0	+1.0
SQTA	Sankt Quirin	9.83	332	*e*Pn	Pn	02 16 22.1	+2.7
	comp=E,1.8nm,0.4s						
SQTA				*e*Sn	Sn	02 18 07.8	-1.7
	comp=E,1.7nm,0.4s						
FETA	Feichten	9.85	330	*e*Pn	Pn	02 16 21.7	+2.0
	comp=E,0.6nm,0.3s						
MOTA	Moosalm	9.97	332	*e*Pn	Pn	02 16 23.1	+1.7
	comp=E,1.0nm,0.5s						
MOTA				*e*Sn	Sn	02 18 11.4	-1.7
	comp=E,0.7nm,0.5s						
DAVOX	Davos/Dischmat	10.01	326	Pn	Pn	02 16 24.8	+2.9
	comp=E,0.2nm,0.3s,baz=143,slow=20,SNR=4.1						
BURAR	Bucovina Array	10.37	28	⇑*i*P	Pn	02 16 29.0	+2.2
DAVA	Damuels	10.40	328	*e*Pn	Pn	02 16 30.3	+3.0
	comp=E,0.8nm,0.2s						
DAVA				*e*Sn	Sn	02 18 26.3	+2.6
	comp=E,4.0nm,0.7s						
GERES	GERESS Array B	10.59	345	Pn	Pn	02 16 30.1	+0.3
	comp=E,0.2nm,0.3s,baz=155,slow=13,SNR=4.9						
GERES				Sn	Sn	02 18 25.7	-2.3
	comp=E,0.2nm,0.3s,baz=149,slow=25,SNR=2.7						
VRAC	Vranov	10.64	355	LR	LR	02 21 55.4	
	comp=E,52nm,18.3s,baz=206,slow=45						
KOLS	Kolonicke sedl	10.69	16	*e*PN	Pn	02 16 35.6	+4.5
KHC	Kasperske Hory	10.88	345	*e*PN	Pn	02 16 46.0	+12
KHC				*e*SN	Sn	02 18 43.5	+8.3
KHC				AMS	AMS	02 21 40.0	
	comp=E,200nm,15.3s						
GOPC	GO Pecny, Ondr	11.43	350	AMS	AMS	02 22 00.0	
	comp=E,200nm,12.7s						
PRU	Pruhonice	11.54	349	AMS	AMS	02 22 00.0	
	comp=E,200nm,8.8s						
DPC	Dobruska-Polom	11.70	355	AMS	AMS	02 23 20.0	
	comp=E,100nm,13.1s						
UPC	Upice	11.88	354	AMS	AMS	02 23 30.0	
	comp=E,200nm,13.6s						
PVCC	Panska Ves	12.06	350	AMS	AMS	02 22 20.0	
	comp=E,100nm,11.1s						
NKC	Novy Kostel	12.17	343	AMS	AMS	02 24 10.0	
	comp=E,200nm,11.7s						
BRTR	Keskin Array B	12.23	80	Pn	Pn	02 16 54.2	+1.9
	comp=E,0.0nm,0.3s,baz=264,slow=13,SNR=2.8						
AKASG	Malin Array Be	14.41	30	Pn	Pn	02 17 20.5	-1.4
	comp=E,0.5nm,0.3s,baz=213,slow=12,SNR=2.6						
MMAI	Mount Meron Ar	15.26	107	Pn	Pn	02 17 30.1	-3.3
	comp=E,0.8nm,0.3s,baz=286,slow=10,SNR=4.6						
EIL	Elat	16.70	118	Pn	Pn	02 17 52.1	+0.1
	comp=E,0.3nm,0.3s,baz=304,slow=18,SNR=4.1						
ASF	Jabal al Asfar	16.76	107	Pn	Pn	02 17 52.1	-0.8
	comp=E,0.1nm,0.3s,baz=23,slow=13,SNR=2.0						
ESDC	Sonseca Array	17.00	280	Pn	Pn	02 17 55.7	-0.1
	comp=E,0.1nm,0.3s,baz=77,slow=12,SNR=7.7						
GNI	Garni	20.74	78	P	P	02 18 38.2	-0.5
	comp=E,9.3nm,0.7s,baz=39,slow=5.9,SNR=4.8						
HFS	Hagfors	21.62	354	P	P	02 18 48.3	+0.5
	comp=E,1.4nm,0.8s,baz=188,slow=9.0,SNR=6.2						
HFS				LR	LR	02 28 25.0	
	comp=E,24nm,21.5s,baz=210,slow=40						
EKA	Eskdalemuir Ar	21.84	326	P	P	02 18 50.2	-0.1
	comp=E,1.6nm,0.9s,baz=119,slow=7.4,SNR=2.9						
NOA	NORSAR Array B	22.75	352	P	P	02 19 00.5	+0.5
	comp=E,1.0nm,1.0s,baz=180,slow=11,SNR=3.3						
NOA				LR	LR	02 28 54.5	
	comp=E,36nm,21.4s,baz=170,slow=40						
FINES	FINESS Array B	23.32	10	P	P	02 19 05.8	+0.1
	comp=E,2.3nm,0.8s,baz=197,slow=4.4,SNR=5.7						
TORD	Torodi Ar. Bea	29.25	214	P	P	02 20 00.8	+0.8
	comp=E,0.9nm,1.0s,baz=34,slow=10,SNR=3.2						
ARCES	ARCESS Array B	31.16	5	LR	LR	02 34 02.4	
	comp=E,42nm,18.7s,baz=165,slow=39						
MKAR	Makanchi Array	46.76	58	P	P	02 22 27.3	+0.1
	comp=E,0.3nm,0.3s,baz=285,slow=7.5,SNR=6.9						
ZALV	Zalesovo Beam	46.86	48	P	P	02 22 27.9	+0.2
	comp=E,1.3nm,0.5s,baz=276,slow=9.6,SNR=5.9						
SONM	Songino Array	61.69	50	P	P	02 24 17.8	+1.8
	comp=E,0.7nm,0.7s,baz=290,slow=9.1,SNR=3.0						

MAN 30 02:25:52.3, 19°.16N×121°.27E, h19^{km}, mb4.7, ML3.6, MS3.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	Mt. Cagua	1.17	141	*e*P	Pn	02 26 13.8	+0.1
SGCP				*e*S	Sn	02 26 29.4	+0.3
APYP	Conner	1.29	181	*e*P	Pn	02 26 14.3	-1.1
APYP				*e*S	Sn	02 26 32.0	-0.1
BBP	Basco	1.43	27	*e*P	Pn	02 26 15.7	-1.6
BBP				*e*S	Sb	02 26 36.5	+0.3
CVP	Callao Caves	1.54	160	⇓*i*P	Pn	02 26 19.0	+0.2
CVP				*i* S	Sb	02 26 39.1	-0.3
ABRA	Dolores	1.60	200	*e*P	Pn	02 26 18.3	-1.2
ABRA				*e*S	Sn	02 26 37.9	-1.7
CAUP	Cauayan	2.27	167	*e*P	Pb	02 26 31.4	-1.3
CAUP				*e*S	Sg	02 27 15.1	+10
SMPP	San Manuel, Pa	3.05	191	*e*P	Pn	02 26 40.7	+1.2
SMPP				*e*S	Sn	02 27 17.5	+2.0
BALP	Baler	3.42	175	*e*P	Pn	02 26 46.5	+2.0
BALP				*e*S	Sn	02 27 23.9	-0.7

*ISCJB **30** 02:38:19.6±0.6, 61°.54S±0°.08×155°.4E±0°.2, h10^{km}, MS3.6/5, Error ellipse: s-maj=15.6km s-min=10.6km az=17.5*

*NEIC **30** 02:38:22.9±2.1, 61°.43S×155°.31E, h16^{km}±4^{km}, mb4.7/16, Error ellipse: s-maj=24.0km s-min=13.5km az=114.0*

*IDC **30** 02:38:22.9±3.5, 61°.53S×154°.48E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.9/27, mbtmp3.9/4, MS3.6/5, Ms1 3.6/5, ms1mx3.3/23, Error ellipse: s-maj=127.6km s-min=24.9km az=87.0*

ISC 30 02:38:21.3±0.8, **61°.50S**±0°.10×**155°.3E**±0°.2, **h10^{km}, n31,** σ**1^s.68**/20, **MS3.5**/5, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CASY	Casey	19.92	237	*e*P	P	02 42 52.9	+0.2
	11nm,1.3s						
RPZ	Rata Peaks	20.11	35	LR	LR	02 50 27.6	
	comp=Z,193nm,18.1s,baz=188,slow=36						
RPZ	Rata Peaks	20.11	35	*e*P	P	02 42 54.8	-0.2
	35nm,1.4s						
CRLZ	Canterbury Las	20.69	38	*e*P	P	02 43 02.0	+0.8
	108nm,1.4s						
BFZ	Birch Farm	24.43	41	*e*P	P	02 43 39.6	-0.2
	67nm,1.6s						
URZ	Urewera	26.91	40	LR	LR	02 54 58.4	
	comp=Z,91nm,19.0s,baz=192,slow=37						
QSPA	South Pole Qui	28.59	180	*e*P	P	02 44 18.2	+0.8
	8.3nm,1.3s						
BBOO	Buckleboo	31.30	328	*e*P	P	02 44 41.6	+0.3
	31nm,1.4s						
MAW	Mawson	36.62	220	P	P	02 45 28.0	+0.9
	2.1nm,1.0s,baz=108,slow=19,SNR=4.0						
MAW				LR	LR	03 00 32.1	
	comp=Z,146nm,18.6s,baz=92,slow=37						
MAW	Mawson	36.62	220	*e*P	P	02 45 28.0	+0.9
	0.8nm,1.1s						
H01W1	Cape Leeuwin H	37.20	297	T	T	03 24 55.1	
	baz=148,slow=75,SNR=132						
H01W2	Cape Leeuwin H	37.21	296	T	T	03 24 55.4	
	baz=148,slow=75,SNR=150						
H01W3	Cape Leeuwin H	37.22	296	T	T	03 24 56.3	
	baz=148,slow=75,SNR=121						
ASAR	Alice Springs	40.57	329	P	P	02 46 02.7	+1.9
	1.5nm,0.8s,baz=166,slow=8.5,SNR=13						
AS31	Alice Springs	40.57	329	*e*P	P	02 46 02.7	+1.9
	0.9nm,1.0s						
MORW	Morawa	41.48	303	*e*P	P	02 46 05.2	-3.1
	21nm,1.5s						
WR1	Warramunga Arr	44.04	331	*e*P	P	02 46 30.4	+1.3
WRA	Warramunga Arr	44.04	331	P	P	02 46 30.4	+1.3
	2.1nm,0.9s,baz=169,slow=8.3,SNR=7.0						
SNAA	Sanae	46.25	189	P	P	02 46 48.2	+2.1
	1.2nm,0.9s,baz=169,slow=12,SNR=3.9						
SNAA	Sanae	46.25	189	*e*P	P	02 46 48.2	+2.1
	14nm,1.7s						
PSAC3	Pilbara Seismi	46.78	312	*e*P	P	02 46 52.0	+1.3
	73nm,1.9s						
MMRI	Maumere	58.11	321	*e*P	P	02 48 14.3	-0.6
	274nm,1.7s						
KAPI	Kappang	62.30	319	LR	LR	03 13 33.5	
	comp=Z,29nm,18.6s,baz=208,slow=34						
MNAI	Manna	69.00	302	*e*P	P	02 49 26.2	-0.6
	426nm,1.4s						
PSI	Prapat	77.14	301	LR	LR	03 18 09.8	
	comp=Z,43nm,19.2s,baz=203,slow=31						
SUR	Sutherland	79.45	218	*e*P	P	02 50 25.1	-2.7
	131nm,1.7s						
H08S2	Diego Garcia H	79.90	273	T	T	04 18 21.2	
	baz=151,slow=76,SNR=9.0						
H08S1	Diego Carcia H	79.91	273	T	T	04 18 19.5	
	baz=151,slow=76,SNR=7.9						
H08S3	Diego Garcia H	79.92	273	T	T	04 18 16.0	
	baz=151,slow=76,SNR=12						
CPUP	Villa Florida	88.59	151	*e*P	P	02 51 11.7	-2.5
	8.8nm,1.5s						
Y57A	Sumter	135.48	102	*e*PKPpre	PKPpre	02 57 32.1	

*IDC **30** 02:42:44.6±0.6, 6°.75S×155°.20E, h0^{km}, mb4.3/12, mb1 4.4/13, mb1mx4.2/30, mbtmp4.2/13, ML3.9/1, MS3.4/3, Ms1 3.4/3, ms1mx2.8/27, Error ellipse: s-maj=25.0km s-min=17.2km az=125.0*

*ISCJB **30** 02:42:49.5±0.4, 6°.81S±0°.05×155°.14E±0°.05, h41^{km}, mb4.4/24, MS3.4/1, Error ellipse: s-maj=7.7km s-min=6.3km az=140.2*

*NEIC **30** 02:42:53.3±1.5, 6°.78S×155°.13E, h65^{km}±5^{km}, mb4.5/16, Error ellipse: s-maj=13.7km s-min=11.4km az=63.0*

ISC 30 02:42:50.8±0.5, **6°.81S**±0°.07×**155°.19E**±0°.08, **h41^{km}, n55,** σ**1^s.10**/54, **mb4.5**/24, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	3.98	311	*e*Pn	Pn	02 43 50.8	+1.4
RABL				*e*Sn	Sn	02 44 35.4	+0.5
HNR	Honiara	5.38	119	LR	LR	02 46 20.7	
	comp=Z,534nm,18.1s,baz=292,slow=40						
PMG	Port Moresby	8.36	251	Pn	Pn	02 44 51.2	+1.8
	2.3nm,0.3s,baz=34,slow=7.3,SNR=3.6						
PMG				Sn	Sn	02 46 23.8	+1.2
	1.6nm,0.3s,baz=300,slow=14,SNR=2.3						
PMG				LR	LR	02 47 52.7	
	comp=Z,180nm,21.1s,baz=357,slow=37						
MANU	Manus Island	9.12	301	*e*Pn	Pn	02 45 01.2	+1.2
PATS	Pohnpei	13.91	13	*e*Pn	Pn	02 46 05.6	+0.1
CTA	Charters Tower	15.79	212	Pn	Pn	02 46 28.5	-1.9
	0.3nm,0.3s,baz=34,slow=15,SNR=2.0						
DZM	Mont Dzumac	18.66	146	P	Pn	02 47 08.3	+2.2
	0.3nm,0.3s,baz=335,slow=19,SNR=3.4						
DZM	Mont Dzumac	18.66	146	*e*P	Pn	02 47 08.3	+2.2
	21nm,1.1s						
WB2	Warramunga Arr	24.07	235	*e*P	P	02 48 01.9	-0.6
	9.8nm,1.3s						
WR1	Warramunga Arr	24.08	235	*e*P	P	02 48 02.5	-0.2
WR1				*e*PcP	PcP	02 51 44.0	+0.5
WRA	Warramunga Arr	24.08	235	P	P	02 48 02.5	-0.2
	1.6nm,0.3s,baz=65,slow=9.9,SNR=12						
WRA				PcP	PcP	02 51 44.0	+0.5
	1.4nm,0.4s,baz=37,slow=2.0,SNR=5.9						
SIJI	Sorong	24.58	283	P	P	02 48 06.7	-0.5
	7.4nm,0.5s,baz=49,slow=20,SNR=3.5						
ANA2	Anatahan	24.84	338	*e*P	P	02 48 09.7	+0.1
	43nm,0.8s						
AS31	Alice Springs	26.44	228	*e*P	P	02 48 23.6	-0.4
	2.4nm,1.4s						
AS31				*e*PcP	PcP	02 51 47.3	-1.5
ASAR	Alice Springs	26.44	228	P	P	02 48 23.6	-0.4
	1.3nm,0.6s,baz=60,slow=9.3,SNR=20						
ASAR				PcP	PcP	02 51 47.3	-1.5
	0.6nm,0.7s,baz=48,slow=2.8,SNR=5.4						
H11S3	WAKE ISLAND Hy	27.58	24	T	T	03 16 59.4	
	baz=202,slow=75,SNR=66						
H11S2	WAKE ISLAND Hy	27.59	24	T	T	03 16 55.2	
	baz=202,slow=75,SNR=69						
H11S1	WAKE ISLAND Hy	27.60	24	T	T	03 17 01.4	
	baz=202,slow=75,SNR=41						
STKA	Stephens Creek	27.98	205	P	P	02 48 38.8	+1.0
	2.0nm,0.7s,baz=30,slow=14,SNR=4.0						
STKA				LR	LR	02 59 52.9	
	comp=Z,89nm,18.7s,baz=22,slow=37						
STKA	Stephens Creek	27.98	205	*e*P	P	02 48 38.8	+1.0
	3.0nm,1.5s						
H11N1	WAKE ISLAND Hy	28.76	23	T	T	03 18 34.5	
	baz=201						
H11N3	WAKE ISLAND Hy	28.77	23	T	T	03 18 35.4	
	baz=201						
H11N2	WAKE ISLAND Hy	28.78	23	T	T	03 18 36.1	
	baz=201						
BBOO	Buckleboo	31.40	212	*e*P	P	02 49 05.0	-3.0
	34nm,1.4s						
FORT	Forrest	34.86	223	*e*P	P	02 49 39.0	+0.8
	9.2nm,0.8s						
PETK	Petropavlovsk-	59.73	2	P	P	02 52 51.0	-0.2
	1.9nm,0.5s,baz=169,slow=8.2,SNR=4.1						
PEA1	Petropavlovsk-	59.73	2	*e*P	P	02 52 51.0	-0.2
CM31	Chiang Mai Arr	60.88	295	*e*P	P	02 53 00.8	+1.1
	14nm,0.8s						
CMAR	Chiang Mai Arr	60.88	295	P	P	02 53 00.8	+1.1
	5.2nm,0.6s,baz=121,slow=5.1,SNR=20						
SONA0	Songino Array	69.29	327	*e*P	P	02 53 53.5	-0.4
SONM	Songino Array	69.29	327	P	P	02 53 53.5	-0.4
	1.0nm,0.7s,baz=124,slow=6.1,SNR=4.7						
SUA	Susitna One	79.83	23	*e*P	P	02 54 54.9	+0.1
	5.0nm,0.6s						
KTH	Kantishna Hill	80.98	21	*e*P	P	02 55 00.1	-0.8
	7.6nm,1.2s						
ILAR	Eielson Array	83.13	21	P	P	02 55 11.1	-1.0
	1.0nm,0.4s,baz=250,slow=5.0,SNR=14						
ILB	Eielson Array	83.13	21	*e*P	P	02 55 11.1	-1.0
	2.3nm,0.9s						
MK32	Makanchi Array	83.39	319	*e*P	P	02 55 12.9	-1.0
MKAR	Makanchi Array	83.39	319	P	P	02 55 12.9	-1.0
	1.8nm,0.9s,baz=110,slow=5.8,SNR=9.0						
HYT	Haines Junctio	85.12	27	*e*P	P	02 55 22.4	-0.1
	4.7nm,0.8s						
EGAK	Eagle	85.27	23	*e*P	P	02 55 23.1	+0.1
	3.6nm,0.8s						
DAWY	Dawson	85.65	24	*e*P	P	02 55 26.1	+1.2
	2.1nm,0.8s						
EPYK	Eagle Plains	87.62	22	*e*P	P	02 55 35.5	+1.0
	14nm,0.9s						
NV01	Mina Array Sit	91.45	52	*e*P	P	02 55 54.4	+1.0
NVAR	Mina Array Bea	91.45	52	P	P	02 55 54.4	+1.0
	1.0nm,0.8s,baz=256,slow=7.1,SNR=5.5						
YKA	Yellowknife Ar	96.08	28	P	P	02 56 14.3	+0.6
	1.6nm,0.9s,baz=265,slow=5.3,SNR=5.7						
YKB5	Yellowknife Ar	96.08	28	*e*P	P	02 56 14.3	+0.6
PD31	Pinedale Array	98.43	48	*e*P	P	02 56 25.4	+0.3
	1.2nm,1.4s						
PDAR	Pinedale Array	98.43	48	P	P	02 56 25.4	+0.3
	0.2nm,0.3s,baz=244,slow=3.9,SNR=3.9						
PLCA	Paso Flores	116.75	142	PKP	PKPdf	03 01 31.1	-0.1
	1.3nm,0.8s,baz=276,slow=3.8,SNR=3.1						
BR101	Keskin Array S	118.41	312	*e*PKPdf	PKPdf	03 01 32.7	-1.8
BRTR	Keskin Array B	118.41	312	PKP	PKPdf	03 01 32.7	-1.8
	0.5nm,0.9s,baz=120,slow=5.7,SNR=3.2						
LPAZ	La Paz	131.37	119	PKP	PKiKP	03 02 01.7	+0.2
	1.0nm,0.8s,baz=249,slow=8.6,SNR=3.3						
CPUP	Villa Florida	134.38	138	PKP	PKPdf	03 02 04.5	-0.7
	0.8nm,0.6s,baz=153,slow=2.3,SNR=3.6						
BDFB	Brasilia	147.97	134	PKPbc	PKPbc	03 02 32.8	-0.2
	5.8nm,0.5s,baz=194,slow=2.0,SNR=13						
TORD	Torodi Ar. Bea	153.16	286	PKPbc	PKPbc	03 02 44.3	-0.9
	1.9nm,0.8s,baz=89,slow=2.0,SNR=11						
TOA1	Torodi Ar. Sit	153.17	286	*e*PKPbc	PKPbc	03 02 44.3	-0.9

*KRNET **30** 02:49:20.8±0.1, 42°.00N×72°.08E, h13^{km}, mb2.6*

*SOME **30** 02:49:21.8, 42°.07N×72°.02E, h15^{km}*

*NNC **30** 02:49:21.6±0.8, 42°.08N×72°.02E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=8.2km s-min=3.1km az=0.0*

ISC 30 02:49:19.8±1.1, **42°.07N**±0°.03×**72°.08E**±0°.02, **h4^{km}**±11^{km}, **n30,** σ**0^s.94**/55, **14C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	Arkit	0.28	198	⇓*i*P	Pg	02 49 25.5	+0.2
	baz=98						
ARK				⇓*i*S	Sg	02 49 29.2	+0.2
	baz=98						
ARSB	Arslanbob	1.00	137	⇓*i*P	Pg	02 49 38.6	-0.5
	baz=35						
ARSB				⇓*i*S	Sg	02 49 52.4	+0.3
	baz=35						
MRKS	Merke	1.09	51	P	Pn	02 49 43.3	+1.4
	2.7nm,0.1s						
MRKS				S	Sn	02 49 58.5	+1.1
	11nm,0.2s						
MRKS	Merke	1.09	51	*e*P	Pn	02 49 43.3	+1.4
	2.7nm,0.1s						
MRKS				*e*S	Sn	02 49 58.5	+1.1
	11nm,0.2s						
AML	Almayashu	1.20	86	⇓*i*P	Pn	02 49 43.6	-0.1
	baz=83						
AML				⇓*i*S	Sn	02 50 00.6	-0.1
	baz=83						
EKS2	Erkin-Say	1.39	64	⇓*i*P	Pg	02 49 47.8	+1.3
	baz=62						
EKS2				⇓*e*S	Sg	02 50 07.0	+2.5
	baz=62						
IUG	Iuzhnay	1.53	274	P	Pg	02 49 48.8	-0.3
	1.3nm,0.2s						
IUG				S	Sb	02 50 07.4	-1.0
	44nm,0.3s						
IUG	Iuzhnay	1.53	274	*e*P	Pg	02 49 48.8	-0.3
	baz=76						
IUG				*e*S	Sg	02 50 10.4	+1.6
	baz=76						
IUG	Iuzhnay	1.53	274	*e*P	Pg	02 49 48.8	-0.3
	1.3nm,0.2s						
IUG				*e*S	Sb	02 50 07.4	-1.0
	44nm,0.3s						
KK31	Karatay Array	1.55	312	⇓P	Pg	02 49 49.3	-0.2
	0.6nm,0.2s,baz=127,slow=16,SNR=40						
KK31				⇑S	Sg	02 50 10.1	+0.4
	3.7nm,0.2s,baz=132,slow=30,SNR=9.7						
ARLS	Aral	1.69	96	⇑*i*P	Pg	02 49 52.1	0.0
	baz=94						
ARLS				⇑*i*S	Sg	02 50 14.5	+0.5
	baz=94						
UCH	Uchtor	1.82	84	⇓*e*P	Pg	02 49 55.0	+0.4
	baz=82						
UCH				⇓*i*S	Sg	02 50 19.0	+0.8
	baz=82						
AAK	Ala-Archa	1.88	72	⇓Pg	Pg	02 49 56.6	+0.8
	1.1nm,0.3s						
AAK				⇑Lg	Lg	02 50 23.1	
	4.7nm,0.6s						
AAK	Ala-Archa	1.88	72	⇑*i*P	Pg	02 49 56.2	+0.4
	baz=70						
AAK				⇑*i*S	Sg	02 50 21.3	+1.2
	baz=70						
BRLS	Borolday	1.92	301	P	Pg	02 49 56.6	+0.1
	0.5nm,0.1s						
BRLS				S	Sg	02 50 20.9	-0.5
	8.9nm,0.3s						
BRLS	Borolday	1.92	301	*e*P	Pg	02 49 56.6	+0.1
	0.5nm,0.1s						
BRLS				*e*S	Sg	02 50 20.9	-0.5
	8.2nm,0.1s						
USP	Ospenovka	2.15	55	⇑*i*P	Pg	02 50 01.1	+0.1
	baz=54						

USP				⇑iS	Sg	02 50 29.3	+0.4
	baz=54						
CHMS	**Chumysh**	**2.18**	**64**	⇑iP	**Pg**	**02 50 01.1**	**-0.5**
	baz=62						
CHMS				⇑iS	**Sg**	**02 50 29.9**	**0.0**
	baz=62						
KBK	**Karagaybulak**	**2.21**	**74**	⇓iP	**Pg**	**02 50 01.3**	**-0.8**
	baz=72						
KBK				⇓iS	**Sg**	**02 50 30.4**	**-0.3**
	baz=72						
BTK	**Batken**	**2.22**	**206**	⇓iP	**Pb**	**02 50 00.5**	**0.0**
	baz=7.0						
BTK				⇓iS	**Sb**	**02 50 28.9**	**+0.5**
	baz=7.0						
KZA	**Kyzart**	**2.36**	**89**	⇓iP	**Pb**	**02 50 03.3**	**+0.2**
	baz=87						
KZA				⇓iS	**Sb**	**02 50 33.8**	**+1.1**
	baz=87						
TKM2	**Tokmak 2**	**2.74**	**71**	⇑Pg	**Pg**	**02 50 12.1**	**-0.2**
	2.4nm,1.1s						
TKM2				⇑Lg	Lg	02 50 49.4	
	3.1nm,0.3s						
BOOM	**Boomskoye usch**	**2.90**	**80**	⇑eP	**Pb**	**02 50 10.6**	**-1.5**
	baz=79						
BOOM				⇑iS	**Sb**	**02 50 46.3**	**-1.6**
	baz=79						
DGS	**Degeres**	**2.97**	**65**	Pg	**Pg**	**02 50 16.2**	**-0.4**
	1.7nm,0.4s						
DGS				Lg	Lg	02 50 54.5	
	4.0nm,0.3s						
DGS	**Degeres**	**2.97**	**65**	eP	**Pg**	**02 50 16.1**	**-0.4**
	1.7nm,0.4s						
DGS				eS	**Sg**	**02 50 54.7**	**-0.4**
	4.0nm,0.3s						
KST	**Kastek**	**3.03**	**70**	Pg	**Pg**	**02 50 17.8**	**-0.1**
	1.7nm,0.2s						
KST				Lg	Lg	02 50 57.2	
	8.5nm,0.6s						
KST	**Kastek**	**3.03**	**70**	eP	**Pg**	**02 50 17.8**	**-0.1**
	1.7nm,0.2s						
KST				eS	**Sg**	**02 50 57.5**	**+0.4**
	8.5nm,0.6s						
ULHL	**Ulahol**	**3.10**	**85**	⇓eP	**Pb**	**02 50 13.4**	**-2.2**
	baz=84						
ULHL				⇓iS	**Sb**	**02 50 51.0**	**-2.8**
	baz=84						
KTBS	**Karatobe**	**3.76**	**63**	Pg	**Pg**	**02 50 31.4**	**-0.4**
	1.2nm,0.5s						
KTBS				Lg	Lg	02 51 20.3	
	4.0nm,0.4s						
KTBS	**Karatobe**	**3.76**	**63**	eP	**Pg**	**02 50 31.4**	**-0.4**
	1.2nm,0.5s						
KTBS				eS	**Sg**	**02 51 20.3**	**-0.2**
	4.0nm,0.4s						

ISK ***30*** *02:52:43.6, 38°.77N×43°.16E, h5km, ML2.0/4*
DDA ***30*** *02:52:44.7, 38°.75N×43°.15E, h7km±2km, ML2.5*
ISC 30 02:52:44.7±1.2**, 38°.75N**±0°.04×**43°.16E**±0°.04**, h13**km±12km**,**
n10, σ**0ˢ.56**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.24**	**131**	PG	**Pg**	**02 52 50.5**	**+0.6**
TVAN	**Van**	**0.29**	**139**	i P	**Pb**	**02 52 51.7**	**-0.3**
TVAN				i S	**Sb**	**02 52 56.1**	**-0.7**
TVAN				IAML_P			
	comp=Z,3μm,0.1s						
VMUR	**Van-Muradiye**	**0.40**	**53**	i P	**Pb**	**02 52 53.6**	**-0.2**
VMUR				i S	**Sb**	**02 52 59.8**	**-0.1**
VMUR				IAML_P			
	comp=Z,590nm,0.2s						
AKDM	**Akdamar-Van**	**0.44**	**199**	PG	**Pg**	**02 52 52.9**	**-0.7**
GEVA	**Gevas**	**0.44**	**190**	i P	**Pb**	**02 52 54.4**	**-0.1**
GEVA				IAML_P			
	comp=Z,2μm,0.1s						
TUTA	**Tutak**	**0.70**	**338**	i P	**Pb**	**02 52 59.2**	**+0.2**
CLDR	**Caldiran**	**0.71**	**56**	PG	**Pg**	**02 52 57.6**	**-1.0**
CLDR				SG	**Sg**	**02 53 07.9**	**-0.1**
CLDR	**Caldiran**	**0.71**	**56**	i P	**Pg**	**02 52 58.4**	**-0.2**
CLDR				i S	**Sb**	**02 53 09.3**	**+0.5**
GURO	**Guroymak-BITLI**	**0.90**	**258**	PG	**Pb**	**02 53 02.1**	**-0.2**
GURO				SG	**Sb**	**02 53 14.5**	**+0.2**
HAKT	**HAKKARI**	**1.27**	**160**	i P	**Pn**	**02 53 09.1**	**+0.8**
HAKT				IAML_P			
	comp=Z,160nm,0.1s						

NEIC ***30*** *02:53:54.5±1.9, 27°.57N×138°.64E, h408km±3km, mb4.3/22,*
Error ellipse: s-maj=28.8km s-min=15.3km az=77.0
ISCJB ***30*** *02:53:55.7±0.3, 27°.86N±0°.03×139°.56E±0°.06, h478km,*
mb4.1/43, Error ellipse: s-maj=7.7km s-min=3.8km
az=172.0
IDC ***30*** *02:53:56.8±0.6, 27°.94N×139°.65E, h484km±7km, mb3.5/20,*
mb1 3.7/25, mb1mx3.5/45, mbtmp4.3/25, Error ellipse:
s-maj=13.8km s-min=9.1km az=80.0
JMA ***30*** *02:53:57.4±0.3, 28°.12N×140°.30E, h510km±5km, M4.2*
ISC 30 02:53:56.6±0.4**, 27°.94N**±0°.06×**139°.66E**±0°.09**, h478**km**, n72,**
σ**1ˢ.40**/79**, mb4.2**/43**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.39**	**110**	P	**P**	**02 55 03.6**	**+1.7**
CBIJ				eS	**S**	**02 55 55.3**	**+0.4**
JHH2	**Haha-jima-NKT2**	**2.59**	**120**	P	**P**	**02 55 05.2**	**+2.1**
JHH2				S	**S**	**02 55 58.9**	**+1.8**
TTO1	**TONANKAI O.B.S**	**6.18**	**337**	P	P	02 55 38.1	+4.8
BSO1	**Boso 1**	**6.78**	**9**	P	**P**	**02 55 41.3**	**+2.2**
JTNC	**Tanabenakahech**	**6.81**	**330**	P	P	02 55 44.6	+4.6
JTNC				eS	**S**	**02 57 08.6**	**+3.7**
BSO3	**Boso 3**	**6.88**	**6**	P	**P**	**02 55 41.6**	**+1.3**
JIE	**Ise**	**6.91**	**339**	P	P	02 55 45.1	+4.1
JIE				eS	**S**	**02 57 10.1**	**+3.5**
JHMK	**Hamakita**	**7.04**	**347**	P	**P**	**02 55 44.7**	**+2.5**
BSO4	**Boso 4**	**7.05**	**5**	P	**P**	**02 55 43.5**	**+1.2**
BSO4				eS	**S**	**02 57 08.1**	**-1.0**
JAO	**Obara**	**7.58**	**345**	P	P	02 55 51.6	+3.6
JHU	**Hanno**	**7.89**	**358**	P	**P**	**02 55 51.8**	**+0.6**
JHU				eS	**S**	**02 57 23.2**	**-2.1**
JAG	**Ashikaga**	**8.46**	**359**	P	**P**	**02 55 57.2**	**0.0**
JAG				S	**S**	**02 57 31.8**	**-4.5**
MJAR	**Matsushiro Arr**	**8.66**	**352**	P	**P**	**02 56 00.2**	**+0.9**
	0.5nm,0.3s,baz=171,slow=9.7,SNR=15						
MJAR				S	**S**	**02 57 40.3**	**0.0**
	0.1nm,0.3s,baz=124,slow=16,SNR=3.9						
MAJO	**Matsushiro**	**8.66**	**352**	eP	**P**	**02 56 00.8**	**+1.4**
MAJO				eS	**S**	**02 57 41.3**	**+1.0**
MAT	**Matsushiro**	**8.66**	**352**	P	**P**	**02 56 00.6**	**+1.2**
MAT				S	**S**	**02 57 41.4**	**+1.1**
MJB9	**Matsu-Tunnel**	**8.67**	**352**	eP	**P**	**02 56 00.8**	**+1.4**
MJB9				eS	**S**	**02 57 42.3**	**+1.9**
JHO	**Hitachi**	**8.68**	**5**	P	**P**	**02 56 00.9**	**+1.4**
JNU	**Nakatsue**	**9.16**	**306**	P	**P**	**02 56 07.5**	**+2.7**
	0.5nm,0.3s,baz=155,slow=2.8,SNR=4.3						
JMK	**Ichinoseki**	**11.06**	**6**	P	**P**	**02 56 26.9**	**+2.0**
JMK				S	**S**	**02 58 28.5**	**+1.3**
SARN	**Sarigan**	**12.54**	**152**	eP	**P**	**02 56 40.3**	**-0.9**
ANA2	**Anatahan**	**12.83**	**153**	eP	**P**	**02 56 44.0**	**-0.2**
KSRS	**Korea Array**	**13.69**	**317**	P	**P**	**02 56 54.5**	**+1.4**
	baz=165,slow=28,SNR=2.8						
GUMO	**Guam**	**15.08**	**160**	P	**P**	**02 57 09.5**	**+1.3**
	6.4nm,0.3s,baz=0.0,slow=4.0,SNR=2.4						
USRK	**Ussuriysk Ar.**	**17.35**	**341**	P	**P**	**02 57 33.0**	**+1.4**
	0.4nm,0.3s,baz=161,slow=10,SNR=14						
TIA	**Tai'an**	**20.77**	**299**	P	**P**	**02 58 04.0**	**+0.7**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KLR	**Kul'dur**	**22.11**	**346**	P	**P**	**02 58 15.7**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=157,slow=9.1,SNR=5.6						
HHC	**Hu-ho-hao-te**	**26.39**	**307**	P	**P**	**02 58 54.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,10.0nm,5.2s						
XAN	**Xi'an**	**26.98**	**291**	P	**P**	**02 58 59.3**	**+0.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	**Songino Array**	**32.56**	**317**	P	**P**	**02 59 46.7**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=128,slow=9.9,SNR=9.6						
GTA	**Gaotai**	**34.82**	**300**	eP	**P**	**03 00 07.0**	**+0.5**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**38.45**	**265**	P	**P**	**03 00 35.7**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=55,slow=7.8,SNR=4.9						
MTN	**Manton Dam**	**41.38**	**193**	eP	**P**	**03 00 59.6**	**-0.5**
	comp=Z,6.8nm,0.8s						
COEN	**Coen**	**41.79**	**175**	eP	**P**	**03 01 04.2**	**+0.8**
	comp=Z,32nm,1.5s						
ZAA0	**Zalesovo Array**	**47.38**	**319**	eP	**P**	**03 01 46.2**	**0.0**
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**47.38**	**319**	P	**P**	**03 01 46.1**	**-0.1**
	comp=Z,3.2nm,0.3s,baz=98,slow=6.9,SNR=12						
ZALV				PcP	**PcP**	**03 03 06.7**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=79,slow=2.0,SNR=4.3						
WRAB	**Tennant Creek**	**47.87**	**187**	eP	**P**	**03 01 50.1**	**-0.2**
	comp=Z,12nm,0.8s						
WB2	**Warramunga Arr**	**47.88**	**187**	eP	**P**	**03 01 50.0**	**-0.4**
	comp=Z,23nm,1.4s						
WRA	**Warramunga Arr**	**47.88**	**187**	P	**P**	**03 01 50.2**	**-0.3**
	comp=Z,6.8nm,0.3s,baz=358,slow=9.4,SNR=62						
CTA	**Charters Tower**	**48.17**	**172**	P	**P**	**03 01 52.9**	**+0.3**
	comp=Z,5.2nm,0.2s,baz=330,slow=8.1,SNR=3.4						
MK31	**Makanchi Array**	**48.21**	**309**	eP	**P**	**03 01 53.0**	**+0.3**
	comp=Z,4.1nm,1.0s						
MKAR	**Makanchi Array**	**48.21**	**309**	P	**P**	**03 01 52.9**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=92,slow=9.1,SNR=26						
MKAR				PcP	**PcP**	**03 03 10.3**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=70,slow=7.0,SNR=4.4						
MAKZ	**Makanchi**	**48.42**	**309**	eP	**P**	**03 01 54.6**	**+0.4**
	comp=Z,8.4nm,1.4s						
KURK	**Kurchatov**	**50.79**	**314**	eP	**P**	**03 02 11.5**	**-0.1**
	comp=Z,30nm,1.4s						
AS31	**Alice Springs**	**51.61**	**187**	eP	**P**	**03 02 17.6**	**-0.3**
	comp=Z,2.6nm,0.5s						
ASAR	**Alice Springs**	**51.61**	**187**	P	**P**	**03 02 17.6**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=16,slow=14,SNR=57						
KSH	**Kashi**	**53.22**	**300**	eP	**P**	**03 02 33.5**	**+3.9**
KSH				LR	LR		
	comp=N,65nm,7.2s						
KSH				LR	LR		
	comp=E,80nm,6.0s						
KDAK	**Kodiak Island**	**55.04**	**37**	P	**P**	**03 02 42.0**	**+0.1**
	comp=E,4.2nm,0.9s,baz=252,slow=3.2,SNR=3.1						
BRVK	**Borovoye**	**55.96**	**317**	eP	**P**	**03 02 48.7**	**+0.3**
	comp=E,9.1nm,0.8s						
KK31	**Karatay Array**	**56.77**	**305**	eP	**P**	**03 02 54.7**	**+0.4**
	comp=E,9.9nm,0.8s						
KKAR	**Karatay Array**	**56.77**	**305**	eP	**P**	**03 02 54.7**	**+0.4**
	comp=E,9.9nm,0.8s						
GAR	**Garm**	**57.63**	**300**	eP	**P**	**03 03 01.0**	**+0.6**
	comp=E,11nm,0.6s						
ILAR	**Eielson Array**	**58.05**	**29**	P	**P**	**03 03 02.0**	**-0.6**
	comp=E,0.4nm,0.3s,baz=250,slow=5.6,SNR=10						
FORT	**Forrest**	**59.43**	**192**	eP	**P**	**03 03 12.4**	**+0.1**
	comp=E,20nm,0.6s						
BBOO	**Buckleboo**	**60.52**	**183**	eP	**P**	**03 03 19.2**	**-0.3**
	comp=E,22nm,1.5s						
ARU	**Arti**	**62.38**	**322**	eP	**P**	**03 03 31.3**	**-0.2**
	comp=E,8.6nm,0.8s						
ABKAR	**Akbulak array**	**62.90**	**314**	eP	**P**	**03 03 34.8**	**-0.2**
	comp=E,6.9nm,0.6s						
INK	**Inuvik**	**63.19**	**25**	P	**P**	**03 03 36.3**	**-0.2**
	comp=E,1.5nm,0.7s,baz=279,slow=4.1,SNR=4.3						
ARCES	**ARCESS Array B**	**72.00**	**340**	P	**P**	**03 04 30.7**	**0.0**
	comp=E,2.5nm,0.6s,baz=64,slow=8.2,SNR=22						
YKA	**Yellowknife Ar**	**72.45**	**28**	P	**P**	**03 04 33.0**	**-0.4**
	comp=E,0.8nm,0.4s,baz=298,slow=6.2,SNR=6.0						
KBZ	**Khabaz**	**75.79**	**312**	P	**P**	**03 04 52.6**	**-0.1**
	comp=E,3.5nm,0.7s,baz=68,slow=5.8,SNR=5.6						
FINES	**FINESS Array B**	**76.19**	**333**	P	**P**	**03 04 54.0**	**-0.6**
	comp=E,8.0nm,0.3s,baz=70,slow=4.9,SNR=124						
AKASG	**Malin Array Be**	**80.60**	**323**	P	**P**	**03 05 17.2**	**-1.3**
	comp=E,0.9nm,0.3s,baz=46,slow=6.3,SNR=6.6						
NVAR	**Mina Array Bea**	**81.74**	**51**	P	**P**	**03 05 25.5**	**+0.6**
	comp=E,0.5nm,0.6s,baz=304,slow=6.0,SNR=5.5						
NB2	**NORSAR Subarra**	**81.98**	**337**	P	**P**	**03 05 23.9**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=45,slow=5.1						
NOA	**NORSAR Array B**	**81.98**	**337**	P	**P**	**03 05 24.3**	**-1.2**
	comp=Z,3.1nm,0.7s,baz=46,slow=4.9,SNR=18						
RAYN	**Ar Rayn**	**82.76**	**293**	eP	**P**	**03 05 30.5**	**+0.3**
	comp=Z,7.1nm,0.8s						
QLMT	**Earthquake Lak**	**82.91**	**43**	eP	P	03 05 41.9	+11
BRTR	**Keskin Array B**	**83.78**	**312**	P	**P**	**03 05 34.2**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=75,slow=3.5,SNR=6.2						
GERES	**GERESS Array B**	**89.61**	**328**	P	**P**	**03 06 01.4**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=43,slow=4.9,SNR=3.5						
AMTX	**Amarillo**	**94.79**	**46**	eP	P	03 06 36.0	+9.3
	comp=Z,17nm,0.6s						
WMOK	**Wichita Mounta**	**96.71**	**45**	eP	P	03 06 44.6	+9.2
	comp=Z,5.3nm,1.3s						
TORD	**Torodi Ar. Bea**	**122.33**	**309**	PKP	**PKPdf**	**03 11 55.0**	**-2.5**
	comp=Z,0.5nm,0.5s,baz=24,slow=1.9,SNR=7.5						

IDC ***30*** *02:55:46.8±1.2, 29°.58S×176°.21W, h0km, mb4.1/6,*
mb1 4.3/6, mb1mx4.0/22, mbtmp4.1/6, MS3.4/2, Ms1 3.4/2,
ms1mx2.8/27, Error ellipse: s-maj=56.5km s-min=25.6km
az=162.0
NEIC ***30*** *02:55:56.1±2.3, 29°.34S×176°.44W, h70km±6km, mb4.4/8,*
Error ellipse: s-maj=23.3km s-min=7.4km az=163.0
ISC 30 02:55:49.9±0.8**, 29°.3S**±0°.2×**176°.17W**±0°.09**, h21**km**, n32,**
σ**1ˢ.36**/27**, mb4.5**/12**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.53**	**271**	ePn	**Pb**	**02 56 17.8**	**+0.3**
RAO				eSn	**Sb**	**02 56 37.0**	**+0.6**
OUZ	**Omahuta**	**10.49**	**233**	ePn	**Pn**	**02 58 20.6**	**+1.6**
URZ	**Urewera**	**10.55**	**210**	Pn	Pn	02 58 09.4	-10
	0.3nm,0.3s,baz=72,slow=20,SNR=5.9						
URZ				Sn	Sn	03 00 02.3	-15
	1.1nm,0.3s,baz=288,slow=20,SNR=5.3						
DZM	**Mont Dzumac**	**17.23**	**291**	LR	LR	03 05 18.4	
	comp=Z,71nm,20.0s,baz=66,slow=33						
TARA	**Tarawa**	**32.20**	**339**	eP	**P**	**03 02 16.2**	**-0.5**
	48nm,1.0s						
CTA	**Charters Tower**	**35.22**	**276**	P	**P**	**03 02 43.9**	**+1.0**
	1.7nm,0.2s,baz=90,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**36.29**	**255**	P	**P**	**03 02 52.0**	**0.0**
	1.8nm,0.5s,baz=95,slow=12,SNR=5.3						
BBOO	**Buckleboo**	**40.81**	**253**	eP	**P**	**03 03 27.8**	**-2.1**
	10.0nm,1.1s						
AS31	**Alice Springs**	**44.77**	**265**	eP	**P**	**03 04 01.1**	**-1.1**
	1.3nm,1.3s						
ASAR	**Alice Springs**	**44.77**	**265**	P	**P**	**03 04 01.1**	**-1.1**
	0.4nm,0.5s,baz=95,slow=8.7,SNR=5.0						
WB2	**Warramunga Arr**	**45.65**	**270**	eP	**P**	**03 04 08.5**	**-0.7**
	8.9nm,1.2s						
WR1	**Warramunga Arr**	**45.66**	**270**	eP	**P**	**03 04 08.7**	**-0.6**
WRA	**Warramunga Arr**	**45.66**	**270**	P	**P**	**03 04 08.7**	**-0.7**
	3.5nm,0.6s,baz=98,slow=9.6,SNR=11						
FORT	**Forrest**	**47.88**	**254**	eP	**P**	**03 04 24.7**	**-1.8**
	20nm,1.1s						
SMY	**Shemya**	**82.11**	**354**	eP	**P**	**03 08 06.0**	**-2.4**
	99nm,0.3s						
NV01	**Mina Array Sit**	**86.35**	**42**	eP	**P**	**03 08 33.3**	**+2.6**
NVAR	**Mina Array Bea**	**86.35**	**42**	P	**P**	**03 08 33.3**	**+2.6**
	0.5nm,0.8s,baz=230,slow=8.1,SNR=3.6						
ILAR	**Eielson Array**	**96.50**	**12**	P	**P**	**03 09 18.6**	**+1.5**
	0.2nm,0.8s,baz=225,slow=7.5,SNR=3.4						
ILB	**Eielson Array**	**96.50**	**12**	eP	**P**	**03 09 18.6**	**+1.5**
	3.6nm,1.5s						
TEIG	**Tepich**	**97.88**	**71**	LR	LR	03 43 20.9	
	comp=Z,25nm,20.3s,baz=318,slow=29						
H10N3	**ASCENSION HYDR**	**139.08**	**152**	T	T	05 51 39.9	
	baz=204						
H10N1	**ASCENSION HYDR**	**139.09**	**152**	T	T	05 51 41.0	
	baz=204						
H10N2	**ASCENSION HYDR**	**139.10**	**152**	T	T	05 51 42.1	
	baz=204						
FIA0	**FINESS Array S**	**144.62**	**342**	ePKPdf	**PKPdf**	**03 15 23.6**	**-0.5**
FINES	**FINESS Array B**	**144.62**	**342**	PKP	**PKPdf**	**03 15 23.6**	**-0.5**
	1.9nm,0.6s,baz=49,slow=4.2,SNR=9.4						
NB2	**NORSAR Subarra**	**147.86**	**353**	PKP	**PKiKP**	**03 15 33.9**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=10,slow=3.2						
NB200	**NORSAR Array S**	**147.86**	**353**	ePKPbc	**PKPbc**	**03 15 33.1**	**+0.3**
NOA	**NORSAR Array B**	**147.86**	**353**	PKPbc	**PKPbc**	**03 15 33.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=13,slow=4.6,SNR=3.2						
AKASG	**Malin Array Be**	**151.33**	**325**	PKPbc	**PKiKP**	**03 15 41.8**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=88,slow=38,SNR=7.3						
AKBB	**Malin Array Si**	**151.33**	**325**	ePKPbc	**PKiKP**	**03 15 41.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**163.82**	**173**	PKPab	**PKPab**	**03 16 43.0**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=181,slow=4.1,SNR=3.8						
TOA1	**Torodi Ar. Sit**	**163.82**	**173**	ePKPab	**PKPab**	**03 16 43.0**	**-1.2**

IDC ***30*** *02:57:15.7±1.7, 48°.20N×146°.33E, h492km±24km, mb3.0/9,*
mb1 3.3/14, mb1mx3.0/44, mbtmp3.9/14, Error ellipse:
s-maj=27.6km s-min=14.9km az=171.0
ISC 30 02:57:14.5±0.8**, 48°.0N**±0°.1×**146°.4E**±0°.1**, h483**km**, n16,**
σ**1ˢ.78**/16**, mb3.4**/9**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**8.80**	**51**	P	**P**	**02 59 18.6**	**-0.1**
	0.6nm,0.3s,baz=228,slow=6.9,SNR=6.2						
KLR	**Kul'dur**	**9.78**	**282**	P	**P**	**02 59 31.2**	**+2.1**
	0.6nm,0.3s,baz=79,slow=9.5,SNR=9.4						
USRK	**Ussuriysk Ar.**	**10.71**	**254**	P	**P**	**02 59 40.0**	**+0.8**
	1.3nm,0.3s,baz=62,slow=12,SNR=30						
MJAR	**Matsushiro Arr**	**12.98**	**211**	P	**P**	**03 00 05.5**	**+2.0**
	0.4nm,0.3s,baz=64,slow=33,SNR=13						
KSRS	**Korea Array**	**17.16**	**239**	P	**P**	**03 00 49.0**	**+1.6**
	0.2nm,0.3s,baz=40,slow=9.9,SNR=6.0						
JNU	**Nakatsue**	**18.94**	**224**	S	**S**	**03 04 06.7**	**-5.1**
	1.1nm,0.3s,baz=349,slow=24,SNR=6.1						
ILAR	**Eielson Array**	**38.42**	**39**	P	**P**	**03 03 52.9**	**-0.3**
	0.3nm,0.7s,baz=277,slow=9.8,SNR=4.4						
MKAR	**Makanchi Array**	**42.27**	**293**	P	**P**	**03 04 24.3**	**-0.1**
	0.5nm,0.6s,baz=62,slow=7.2,SNR=3.7						
ARCES	**ARCESS Array B**	**55.06**	**338**	P	**P**	**03 05 58.7**	**-0.5**
	3.3nm,1.0s,baz=46,slow=8.7,SNR=4.0						
FINES	**FINESS Array B**	**60.84**	**332**	P	**P**	**03 06 37.7**	**-0.9**
	2.2nm,0.5s,baz=40,slow=8.3,SNR=11						
NB2	**NORSAR Subarra**	**65.43**	**338**	P	**P**	**03 07 07.3**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**65.43**	**338**	P	**P**	**03 07 07.5**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=31,slow=6.7,SNR=17						
NVAR	**Mina Array Bea**	**65.78**	**59**	P	**P**	**03 07 11.8**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=277,slow=2.6,SNR=4.4						
PDAR	**Pinedale Array**	**67.57**	**51**	P	**P**	**03 07 22.3**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=292,slow=2.8,SNR=4.7						
AKASG	**Malin Array Be**	**67.84**	**322**	P	**P**	**03 07 22.5**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=35,slow=7.0,SNR=3.6						
TXAR	**Lajitas Array**	**80.70**	**56**	P	**P**	**03 08 37.0**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=298,slow=4.2,SNR=7.2						

NEIC ***30*** *03:00:27.8±2.4, 21°.65S×177°.57W, h322km±5km,*
mb4.6/100, Error ellipse: s-maj=13.5km s-min=10.4km
az=131.0
BJI ***30*** *03:00:28.5±0.0, 21°.70S×177°.30W, h363km, mb4.7/10,*
mB4.6/7
ISCJB ***30*** *03:00:30.0±0.2, 21°.67S±0°.02×177°.81W±0°.04, h350km,*
mb4.4/99, Error ellipse: s-maj=5.9km s-min=2.9km
az=20.5
IDC ***30*** *03:00:30.8±2.5, 21°.71S×177°.74W, h350km±25km,*
mb4.0/13, mb1 4.2/14, mb1mx4.0/24, mbtmp4.7/14, Error
ellipse: s-maj=15.4km s-min=11.3km az=141.0
ISC 30 03:00:31.2±0.4**, 21°.73S**±0°.05×**177°.69W**±0°.07**, h350**km**,**
n197, σ**1ˢ.62**/203**, mb4.5**/99**, 4C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**7.48**	**182**	S	**S**	**03 03 44.9**	**-2.2**
GLKZ	**Green Lake**	**7.50**	**182**	P	**Pn**	**03 02 20.7**	**+1.3**
GLKZ				S	**S**	**03 03 45.3**	**-2.2**
NIUE	**Niue**	**7.75**	**71**	ePn	Pn	03 02 17.4	-5.1
NIUE				eS	S	03 03 42.5	-11
MARNC	**Mare, Loyalty**	**13.29**	**268**	eP	**P**	**03 03 25.8**	**-1.3**
PINNC	**Pines Island,**	**13.80**	**264**	eP	**P**	**03 03 34.6**	**+1.9**
DZM	**Mont Dzumac**	**14.73**	**266**	P	**P**	**03 03 44.8**	**+1.7**
	7.7nm,0.3s,baz=58,slow=23,SNR=68						
OUZ	**Omahuta**	**15.45**	**208**	ePn	**P**	**03 03 52.2**	**+1.5**
	26nm,0.7s						
OUZ	**Omahuta**	**15.45**	**208**	P	**P**	**03 03 52.9**	**+2.2**
WCZ	**Waipu Caves**	**15.77**	**204**	P	**P**	**03 03 56.2**	**+2.1**
KUZ	**Kuaotunu**	**16.02**	**200**	P	**P**	**03 03 59.4**	**+2.6**
MXZ	**Matakaoa Point**	**16.15**	**192**	eP	**P**	**03 03 58.4**	**+0.1**
	63nm,1.4s						
MXZ				eS	**S**	**03 06 45.2**	**-4.7**
MXZ	**Matakaoa Point**	**16.15**	**192**	P	**P**	**03 03 58.3**	**+0.1**
MXZ				S	**S**	**03 06 46.5**	**-3.4**
WIAZ	**Waiheke Island**	**16.25**	**201**	P	**P**	**03 04 00.6**	**+1.2**
WMGZ	**Waiomatatini S**	**16.38**	**191**	P	**P**	**03 04 00.7**	**0.0**
WMGZ				S	**S**	**03 06 52.2**	**-2.2**
HAZ	**Te Kaha**	**16.44**	**193**	P	**P**	**03 04 01.6**	**+0.2**
ETAZ	**East Tamaki Re**	**16.46**	**201**	P	**P**	**03 04 03.0**	**+1.4**
PKGZ	**Pakihiroa**	**16.51**	**192**	P	**P**	**03 04 04.0**	**+1.8**
MKAZ	**Moumakai**	**16.52**	**200**	P	**P**	**03 04 03.2**	**+1.0**
WTAZ	**Waiatarua**	**16.57**	**202**	P	**P**	**03 04 05.3**	**+2.5**
RUGZ	**Raukumara Rang**	**16.66**	**193**	P	**P**	**03 04 03.6**	**-0.3**
TWGZ	**Tauwhareparae**	**16.81**	**192**	P	**P**	**03 04 05.9**	**+0.5**
TWGZ				S	**S**	**03 07 00.3**	**-2.7**
KMRZ	**Kaimai**	**16.97**	**198**	P	**P**	**03 04 09.8**	**+2.7**
TOZ	**Tahuroa Road**	**16.99**	**199**	P	**P**	**03 04 08.2**	**+0.9**
KARZ	**Kaharoa**	**17.05**	**197**	P	**P**	**03 04 10.8**	**+2.8**
URZ	**Urewera**	**17.07**	**194**	P	**P**	**03 04 06.9**	**-1.2**
	4.9nm,0.3s,baz=276,slow=3.3,SNR=19						
URZ				S	**S**	**03 07 08.5**	**+0.6**
	6.6nm,0.3s,baz=108,slow=17,SNR=12						
URZ	**Urewera**	**17.07**	**194**	eP	**P**	**03 04 06.6**	**-1.5**
	30nm,0.4s						
URZ				eS	**S**	**03 07 09.1**	**+1.2**
URZ	**Urewera**	**17.07**	**194**	P	**P**	**03 04 07.8**	**-0.3**
URZ				S	**S**	**03 07 07.2**	**-0.7**
TKGZ	**Te Karaka**	**17.09**	**192**	P	**P**	**03 04 09.6**	**+1.3**
RAGZ	**Rawiri**	**17.23**	**193**	P	**P**	**03 04 08.6**	**-1.3**
MUGZ	**Murupara**	**17.35**	**195**	P	**P**	**03 04 13.2**	**+2.0**
RIGZ	**Rimuhau**	**17.36**	**192**	P	**P**	**03 04 12.1**	**+0.8**
TLZ	**Tolley Road**	**17.54**	**198**	P	**P**	**03 04 13.5**	**+0.3**
MTHZ	**Maungataniwha**	**17.70**	**194**	P	**P**	**03 04 15.3**	**+0.4**
MHGZ	**Mahia Peninsul**	**17.77**	**191**	P	**P**	**03 04 16.9**	**+1.3**
MRHZ	**Matea Rd**	**17.78**	**195**	P	**P**	**03 04 16.7**	**+0.9**
BKZ	**Black Stump Fm**	**18.07**	**195**	eP	**P**	**03 04 16.9**	**-2.1**
	9.4nm,0.7s						
BKZ				eS	**S**	**03 07 26.0**	**-1.7**
BKZ	**Black Stump Fm**	**18.07**	**195**	P	**P**	**03 04 18.6**	**-0.4**
TWVZ	**Taurewa**	**18.26**	**197**	P	**P**	**03 04 23.2**	**+2.3**
NGZ	**Ngauruhoe**	**18.31**	**197**	P	**P**	**03 04 23.4**	**+1.9**
KWHZ	**Kaweka Forest**	**18.34**	**195**	P	**P**	**03 04 21.2**	**-0.5**
PRWZ	**Pori Road**	**19.52**	**195**	P	**P**	**03 04 33.7**	**-0.5**
BFZ	**Birch Farm**	**19.58**	**194**	eP	**P**	**03 04 34.7**	**-0.1**
	39nm,1.0s						
BFZ				eS	**S**	**03 07 57.6**	**+2.4**
KNTN	**Kanton**	**19.72**	**18**	eP	P	03 04 31.4	-5.2
	56nm,0.9s						
OGWZ	**Otaki Gorge**	**19.96**	**196**	P	**P**	**03 04 37.1**	**-1.6**
SNZO	**South Karori**	**20.55**	**196**	eP	**P**	**03 04 42.5**	**-1.6**
	77nm,0.6s						
QRZ	**Quartz Range**	**20.76**	**201**	eP	**P**	**03 04 47.0**	**+0.9**
	120nm,0.5s						
KHZ	**Kahutara**	**21.89**	**198**	eP	**P**	**03 04 56.5**	**+0.2**
	32nm,0.5s						
LTZ	**Lake Taylor**	**22.60**	**200**	eP	**P**	**03 05 01.4**	**-1.5**
	65nm,0.5s						
OXZ	**Oxford**	**23.17**	**199**	eP	**P**	**03 05 07.1**	**-0.8**
	70nm,0.8s						
MQZ	**McQueen’s Vall**	**23.33**	**198**	eP	**P**	**03 05 08.9**	**-0.4**
	24nm,0.9s						
RPZ	**Rata Peaks**	**23.83**	**201**	P	**P**	**03 05 12.7**	**-1.2**
	24nm,0.5s,baz=16,slow=3.8,SNR=17						
RPZ	**Rata Peaks**	**23.83**	**201**	eP	**P**	**03 05 13.8**	**-0.1**
	28nm,0.6s						
FOZ	**Fox Glacier**	**24.09**	**203**	eP	**P**	**03 05 15.3**	**-0.9**
	27nm,0.5s						
TARA	**Tarawa**	**24.71**	**337**	eP	**P**	**03 05 21.2**	**-0.9**
	103nm,0.9s						
LBZ	**Lake Benmore**	**24.71**	**201**	eP	**P**	**03 05 19.5**	**-2.4**
	44nm,1.4s						
HNR	**Honiara**	**24.73**	**296**	P	**P**	**03 05 22.4**	**+0.1**
	220nm,0.3s,baz=191,slow=12,SNR=6.3						
HNR	**Honiara**	**24.73**	**296**	eP	**P**	**03 05 23.1**	**+0.8**
	394nm,1.2s						
ODZ	**Otahua Downs**	**25.15**	**200**	eP	**P**	**03 05 24.7**	**-1.0**
	11nm,1.1s						
WKZ	**Wanaka**	**25.50**	**202**	eP	**P**	**03 05 27.7**	**-1.2**
	20nm,0.8s						
WHZ	**Wether Hill Ro**	**26.80**	**203**	eP	**P**	**03 05 41.3**	**+0.9**
	50nm,0.4s						
ARMA	**Armidale**	**28.81**	**246**	eP	**P**	**03 05 59.5**	**+1.0**
	12nm,0.6s						
EIDS	**Eidsvold**	**28.82**	**257**	eP	**P**	**03 05 57.6**	**-0.9**
	12nm,1.0s						
CAN	**Canberra**	**32.08**	**238**	eP	**P**	**03 06 26.8**	**-0.1**
	18nm,0.9s						
CTA	**Charters Tower**	**33.67**	**266**	P	**P**	**03 06 40.3**	**-0.5**
	14nm,0.4s,baz=93,slow=10.0,SNR=25						
CTAO	**Charters Tower**	**33.67**	**266**	eP	**P**	**03 06 40.3**	**-0.5**
	18nm,0.6s						
TOO	**Toolangi**	**35.42**	**235**	eP	**P**	**03 06 55.8**	**+0.4**
	6.6nm,0.7s						
TAU	**Tasmania Unive**	**35.96**	**226**	eP	**P**	**03 06 60.0**	**+0.2**
	50nm,1.4s						
STKA	**Stephens Creek**	**37.53**	**246**	P	**P**	**03 07 13.1**	**0.0**

	20nm,0.7s,baz=95,slow=11,SNR=48						
STKA	**Stephens Creek**	**37.53**	**246**	*e*P	**P**	**03 07 13.3**	**+0.2**
	3.9nm,0.7s						
COEN	**Coen**	**37.96**	**275**	*e*P	**P**	**03 07 16.6**	**-0.3**
	11nm,0.8s						
BBOO	**Buckleboo**	**42.27**	**245**	*e*P	**P**	**03 07 50.5**	**-1.2**
	15nm,0.6s						
PTCN	**Pitcairn Islan**	**43.63**	**104**	*e*P	**P**	**03 08 00.4**	**-2.2**
	356nm,1.1s						
AS31	**Alice Springs**	**44.53**	**258**	*e*P	**P**	**03 08 08.9**	**-0.9**
	2.7nm,0.6s						
AS31				*e*S	**S**	**03 14 17.6**	**-0.9**
ASAR	**Alice Springs**	**44.53**	**258**	P	**P**	**03 08 08.7**	**-1.1**
	10.0nm,0.6s,baz=92,slow=8.1,SNR=84						
ASAR				S	**S**	**03 14 17.6**	**-0.9**
	0.2nm,0.5s,baz=97,slow=16,SNR=4.5						
WB2	**Warramunga Arr**	**44.72**	**263**	*e*P	**P**	**03 08 09.7**	**-1.5**
	9.9nm,0.6s						
WR1	**Warramunga Arr**	**44.73**	**263**	*e*P	**P**	**03 08 09.6**	**-1.8**
WRA	**Warramunga Arr**	**44.73**	**263**	P	**P**	**03 08 09.6**	**-1.8**
	4.8nm,0.4s,baz=97,slow=9.1,SNR=26						
KHU	**Kahuku**	**46.10**	**30**	*e*P	**P**	**03 08 20.5**	**-1.6**
	115nm,1.2s						
KHLU	**Kahalu`u**	**46.27**	**29**	*e*P	**P**	**03 08 21.5**	**-1.7**
	117nm,1.2s						
FORT	**Forrest**	**49.08**	**248**	*e*P	**P**	**03 08 44.0**	**-0.5**
	40nm,0.6s						
MTN	**Manton Dam**	**49.47**	**271**	*e*P	**P**	**03 08 45.4**	**-2.2**
	19nm,1.5s						
PSA00	**Pilbara Seismi**	**57.68**	**258**	*e*P	**P**	**03 09 46.3**	**-0.2**
	21nm,1.0s						
NWAO	**Narrogin (SRO)**	**58.08**	**244**	P	**P**	**03 09 48.4**	**-0.8**
	9.2nm,0.5s,baz=115,slow=7.0,SNR=12						
NWAO	**Narrogin (SRO)**	**58.08**	**244**	*e*P	**P**	**03 09 47.3**	**-1.8**
	27nm,1.3s						
NWAO				*e*P	**P**	**03 09 48.4**	**-0.8**
MORW	**Morawa**	**59.63**	**248**	*e*P	**P**	**03 09 59.0**	**-0.9**
	20nm,1.4s						
GIRL	**Giralia**	**62.51**	**255**	*e*P	**P**	**03 10 19.6**	**+0.5**
	95nm,1.1s						
CASY	**Casey**	**62.98**	**206**	*e*P	P	03 10 17.6	-3.7
	12nm,0.8s						
QSPA	**South Pole Qui**	**68.34**	**180**	*e*P	**P**	**03 10 57.5**	**+2.0**
	12nm,0.6s						
UGM	**Wanagama**	**70.23**	**269**	*e*P	**P**	**03 11 06.9**	**-0.8**
	110nm,1.3s						
ADK	**Adak**	**73.30**	**1**	*e*P	P	03 11 22.5	-2.4
	30nm,1.3s						
PEA0B	**Petropavlovsk-**	**77.53**	**345**	*e*P	**P**	**03 11 48.2**	**-0.5**
	23nm,1.4s						
PETK	**Petropavlovsk-**	**77.53**	**345**	P	**P**	**03 11 47.6**	**-1.2**
	3.4nm,0.8s,baz=131,slow=8.2,SNR=8.4						
PEA1	**Petropavlovsk-**	**77.54**	**345**	*e*P	**P**	**03 11 47.6**	**-1.2**
SAO	**San Andreas Ge**	**78.73**	**43**	*e*P	**P**	**03 11 56.4**	**+0.7**
	10nm,0.9s						
HOPS	**Hopland Field**	**79.12**	**40**	*e*P	**P**	**03 11 55.8**	**-1.9**
	26nm,1.3s						
CHIA	**Chirikof Islan**	**79.52**	**12**	*e*P	**P**	**03 11 57.4**	**-2.1**
	9.9nm,0.7s						
KMRM	**Mail Ridge**	**79.53**	**39**	*e*P	**P**	**03 12 01.2**	**+1.2**
	32nm,0.8s						
ISA	**Isabella, Lake**	**79.99**	**45**	*e*P	**P**	**03 12 03.3**	**+0.7**
	5.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**80.14**	**326**	P	**P**	**03 12 03.8**	**+0.8**
	1.4nm,0.6s,baz=83,slow=16,SNR=4.3						
CMB	**Columbia Colle**	**80.17**	**42**	*e*P	**P**	**03 12 03.4**	**0.0**
	3.9nm,1.0s						
WDC	**Whiskeytown Da**	**80.44**	**39**	*e*P	**P**	**03 12 02.3**	**-2.4**
	5.2nm,0.8s						
MAW	**Mawson**	**80.51**	**200**	P	**P**	**03 12 05.8**	**+1.1**
	5.7nm,0.6s,baz=136,slow=6.4,SNR=35						
MAW	**Mawson**	**80.51**	**200**	*e*P	**P**	**03 12 05.8**	**+1.1**
	1.3nm,0.6s						
MDPB	**Devils Postpil**	**80.76**	**43**	*e*P	**P**	**03 12 07.5**	**+0.7**
	4.1nm,1.0s						
NJ2	**Nanjing**	**80.89**	**310**	*e*P	**P**	**03 12 06.8**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
WAKR	**Walker**	**81.05**	**42**	*e*P	**P**	**03 12 09.0**	**+0.8**
	8.3nm,1.0s						
YBH	**Yreka Blue Hor**	**81.07**	**38**	*e*P	**P**	**03 12 09.1**	**+1.0**
	7.8nm,0.7s						
PNTR	**Pine Nut**	**81.30**	**42**	*e*P	**P**	**03 12 10.3**	**+0.7**
	14nm,0.9s						
BEKR	**Beckworth**	**81.30**	**41**	*e*P	**P**	**03 12 09.9**	**+0.4**
	3.4nm,0.8s						
NV01	**Mina Array Sit**	**81.72**	**43**	*e*P	**P**	**03 12 11.7**	**-0.1**
NVAR	**Mina Array Bea**	**81.72**	**43**	P	**P**	**03 12 11.7**	**-0.1**
	3.3nm,0.8s,baz=225,slow=7.6,SNR=26						
NV11	**Mina Array Sit**	**81.82**	**43**	*e*P	**P**	**03 12 12.7**	**+0.5**
	0.5nm,1.1s						
LDFC	**Landfair**	**81.92**	**47**	*e*P	**P**	**03 12 14.0**	**+1.2**
	9.1nm,0.8s						
TPNV	**Topopah Spring**	**82.20**	**45**	*e*P	**P**	**03 12 14.7**	**+0.5**
	2.1nm,0.7s						
KVN	**Kaiserville**	**82.22**	**43**	*e*P	**P**	**03 12 14.6**	**+0.4**
	6.3nm,1.0s						
MOD	**Modoc Plateau**	**82.58**	**39**	*e*P	**P**	**03 12 16.2**	**+0.1**
	6.2nm,0.8s						
Y14A	**Wickenburg**	**82.77**	**49**	*e*P	**P**	**03 12 17.6**	**+0.6**
	3.2nm,0.8s						
PINE	**Pine Mountain**	**83.38**	**38**	*e*P	**P**	**03 12 20.7**	**+0.6**
	14nm,0.8s						
R11A	**Troy Canyon, C**	**83.42**	**44**	*e*P	**P**	**03 12 20.5**	**+0.1**
	1.3nm,0.8s						
TUC	**Tucson**	**83.51**	**52**	*e*P	**P**	**03 12 20.0**	**-0.9**
	4.1nm,1.0s						
X16A	**Lo Mia Camp, P**	**84.12**	**50**	*e*P	P	03 12 21.4	-2.6
	5.0nm,1.1s						
319A	**Douglas**	**84.15**	**53**	*e*P	**P**	**03 12 25.4**	**+1.2**
	6.6nm,0.8s						
CCUT	**Cedar City**	**84.45**	**46**	*e*P	**P**	**03 12 26.3**	**+0.7**
	3.2nm,1.1s						
KNB	**Kanab**	**84.53**	**47**	*e*P	**P**	**03 12 27.0**	**+1.0**
	3.7nm,1.2s						
U15A	**North Rim**	**84.58**	**47**	*e*P	**P**	**03 12 27.2**	**+0.8**
	6.4nm,0.7s						
SZCU	**Shurtz Canyon**	**84.66**	**46**	*e*P	**P**	**03 12 27.6**	**+0.9**
	2.5nm,0.9s						
PKCU	**Pink Cliffs**	**85.10**	**47**	*e*P	**P**	**03 12 27.4**	**-1.6**
	9.3nm,1.1s						
MTPU	**Mount Pierson**	**85.50**	**46**	*e*P	**P**	**03 12 32.3**	**+1.3**
	2.6nm,0.7s						
SYO	**Syowa Base**	**85.59**	**193**	⇑*e*PcP	**P**	**03 12 29.2**	**-1.2**
SYO	**Syowa Base**	**85.59**	**193**	⇑*e*pP	pP	03 13 51.0	+0.3
SUA	**Susitna One**	**85.69**	**13**	*e*P	**P**	**03 12 29.6**	**-1.5**
	3.7nm,0.6s						
HAWA	**Hanford**	**85.77**	**36**	*e*P	**P**	**03 12 32.1**	**+0.5**
	9.0nm,1.3s						
BMO	**Blue Mountains**	**86.10**	**38**	*e*P	**P**	**03 12 33.3**	**-0.1**
	2.2nm,0.9s						
TTA	**Tatalina**	**86.11**	**10**	*e*P	**P**	**03 12 32.0**	**-0.9**
	4.4nm,1.2s						
GHO	**Glory Hole Cre**	**86.35**	**13**	*e*P	**P**	**03 12 32.8**	**-1.4**
	10nm,1.0s						
D08A	**Wollman Farm,**	**86.51**	**36**	*e*P	**P**	**03 12 35.6**	**+0.4**
	6.5nm,1.0s						
SNAA	**Sanae**	**86.77**	**178**	P	**P**	**03 12 36.3**	**0.0**
F10A	**Beach Ranch, E**	**86.80**	**37**	*e*P	**P**	**03 12 35.8**	**-0.9**
	12nm,0.8s						
VNA3	**Neumayer Olymp**	**86.90**	**176**	P	**P**	**03 12 37.2**	**+0.4**
SRU	**San Rafael Swe**	**87.17**	**46**	*e*P	**P**	**03 12 39.1**	**+0.3**
	4.7nm,0.7s						
JLU	**Jordanelle**	**87.33**	**44**	*e*pP	pP	03 13 48.6	-12
TX31	**Lajitas Ar. Si**	**87.48**	**57**	*e*P	**P**	**03 12 41.4**	**+1.1**
	2.9nm,0.8s						
TXAR	**Lajitas Array**	**87.48**	**57**	P	**P**	**03 12 41.3**	**+1.0**
	2.3nm,0.7s,baz=219,slow=6.2,SNR=28						
VNA1	**Neumayer--Stat**	**87.57**	**176**	P	**P**	**03 12 40.6**	**+0.8**
PV09	**Paradox Valley**	**87.80**	**47**	*e*P	**P**	**03 12 39.6**	**-2.2**
PV17	**East Wray Mesa**	**87.81**	**47**	*e*pwP	pwP	03 13 59.4	-6.3
RND	**Reindeer**	**87.83**	**13**	*e*P	**P**	**03 12 39.6**	**-1.5**
	6.3nm,0.7s						
ANMO	**Albuquerque**	**87.95**	**51**	*e*P	**P**	**03 12 43.0**	**+0.4**
	1.4nm,0.8s						
MCMT	**McKenzie Canyo**	**88.70**	**40**	*e*P	**P**	**03 12 46.4**	**+0.5**
WRH	**Wood River Hil**	**88.94**	**12**	*e*P	**P**	**03 12 44.5**	**-1.7**
	5.1nm,0.6s						
MLY	**Manley**	**88.94**	**11**	*e*P	**P**	**03 12 44.0**	**-2.2**
	3.6nm,0.5s						
XAN	**Xi'an**	**89.11**	**307**	P	**P**	**03 12 48.5**	**+0.7**
XAN				pP	pP	03 14 11.0	+1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HDA	**Harding Lake**	**89.12**	**13**	*e*P	**P**	**03 12 45.4**	**-1.6**
	6.0nm,0.6s						
CCB	**Clear Creek Bu**	**89.15**	**12**	*e*P	**P**	**03 12 44.9**	**-2.2**
	7.7nm,0.5s						
ILAR	**Eielson Array**	**89.45**	**13**	P	**P**	**03 12 46.4**	**-2.2**
	1.0nm,0.4s,baz=216,slow=5.4,SNR=24						
ILB	**Eielson Array**	**89.45**	**13**	*e*P	**P**	**03 12 46.6**	**-2.0**
	1.8nm,0.6s						
QLMT	**Earthquake Lak**	**89.56**	**41**	*e*P	**P**	**03 12 48.8**	**-1.1**
QLMT				*e*pP	pP	03 14 00.3	-11
BW06	**Boulder Array**	**89.66**	**43**	*e*P	**P**	**03 12 50.0**	**-0.4**
	2.2nm,0.9s						
PD31	**Pinedale Array**	**89.66**	**43**	*e*P	**P**	**03 12 50.1**	**-0.3**
	1.4nm,0.9s						
PDAR	**Pinedale Array**	**89.66**	**43**	P	**P**	**03 12 50.0**	**-0.4**
	1.7nm,0.8s,baz=216,slow=4.8,SNR=12						
BOZ	**Bozeman (W)**	**89.84**	**40**	*e*P	**P**	**03 12 51.5**	**+0.4**
	4.0nm,0.8s						
YHH	**Holmes Hill**	**89.89**	**41**	*e*P	**P**	**03 12 52.7**	**+1.2**
	4.1nm,1.2s						
HHC	**Hu-ho-hao-te**	**90.42**	**314**	P	**P**	**03 12 54.0**	**+0.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,18nm,7.6s						
DAWY	**Dawson**	**90.56**	**16**	*e*P	**P**	**03 12 53.1**	**-0.8**
	2.8nm,0.6s						
EGAK	**Eagle**	**90.72**	**15**	*e*P	**P**	**03 12 53.5**	**-1.0**
	3.0nm,0.9s						
LZH	**Lanzhou**	**93.74**	**307**	*e*P	**P**	**03 13 11.0**	**+1.7**
LZH				pP	pP	03 14 32.5	+1.2
LZH				sP	sP	03 15 08.0	+0.5
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
ARCES	**ARCESS Array B**	**130.18**	**350**	PKP	**PKPdf**	**03 18 57.1**	**-2.2**
	1.6nm,0.8s,baz=48,slow=1.3,SNR=8.7						
FIA0	**FINESS Array S**	**137.03**	**343**	*e*PKPdf	**PKPdf**	**03 19 10.8**	**-1.6**
FINES	**FINESS Array B**	**137.03**	**343**	PKP	**PKPdf**	**03 19 10.8**	**-1.6**
	0.5nm,0.5s,baz=56,slow=3.5,SNR=5.4						
NB2	**NORSAR Subarra**	**140.24**	**353**	PKP	PKPdf	03 19 09.1	-9.2
	comp=Z,0.6nm,0.6s,baz=12,slow=4.1						
NB200	**NORSAR Array S**	**140.24**	**353**	*e*PKPpre	PKPdf	03 19 09.0	-9.3
NOA	**NORSAR Array B**	**140.24**	**353**	PKhKP	PKPdf	03 19 09.0	-9.3
	comp=Z,0.3nm,0.6s,baz=15,slow=3.7,SNR=3.7						
AKASG	**Malin Array Be**	**144.23**	**330**	PKP	**PKPab**	**03 19 22.9**	**-1.7**
	comp=Z,5.8nm,0.5s,baz=42,slow=4.3,SNR=31						
AKBB	**Malin Array Si**	**144.23**	**330**	*e*PKPbc	**PKPab**	**03 19 23.1**	**-1.5**
MBAR	**Mbarara**	**144.46**	**235**	*e*PKPbc	**PKPab**	**03 19 27.1**	**+0.3**
KWP	**Kalwaria Pacla**	**147.82**	**335**	*e*PKP	**PKiKP**	**03 19 39.1**	**+2.3**
BR101	**Keskin Array S**	**147.87**	**311**	*e*PKPbc	**PKPdf**	**03 19 35.1**	**+2.8**
BRTR	**Keskin Array B**	**147.87**	**311**	PKPbc	**PKPdf**	**03 19 35.1**	**+2.8**
	comp=Z,0.6nm,0.6s,baz=135,slow=3.1,SNR=5.6						
BUR08	**Bucovina Ar. S**	**148.26**	**330**	*e*PKPab	**PKPbc**	**03 19 38.6**	**+2.1**
KOLS	**Kolonicke sedl**	**148.54**	**334**	*e*PKP	**PKiKP**	**03 19 41.8**	**+3.5**
NIE	**Niedzica**	**148.91**	**337**	*e*PKP	**PKPab**	**03 19 43.6**	**+0.4**
KSP	**Ksiaz**	**148.95**	**343**	*e*PKP	**PKPbc**	**03 19 39.4**	**+1.4**
CLL	**Collm**	**149.32**	**347**	*e*PKPbc	**PKPdf**	**03 19 38.6**	**+4.5**
CLL	**Collm**	**149.32**	**347**	*e*PKPdf	**PKPdf**	**03 19 33.0**	**-1.1**
CLL				*e*PKPbc	**PKPbc**	**03 19 38.0**	**-0.9**
	comp=Z,7.0nm,0.7s						
CLL				*i* PKPab	**PKiKP**	**03 19 43.4**	**+3.6**
	comp=Z,6.0nm,0.6s						
DPC	**Dobruska-Polom**	**149.38**	**342**	⇑*e*PKP	**PKPdf**	**03 19 38.7**	**+4.4**
DPC				*e*PKPAB	**PKPab**	**03 19 45.5**	**+0.4**
MLR	**Muntele Rosu**	**149.41**	**326**	*e*PKPbc	**PKPbc**	**03 19 40.4**	**+0.9**
BRG	**Berggiesshubel**	**149.52**	**345**	*e*PKP	**PKPbc**	**03 19 40.2**	**+0.8**
	comp=Z,3.0nm,0.7s						
BRG				*i*		03 19 45.2	
	comp=Z,6.1nm,0.9s						
VYHS	**Vyhne**	**150.21**	**338**	*e*PKP	**PKPdf**	**03 19 40.4**	**+4.8**
VYHS				*e*		03 19 48.7	
KHC	**Kasperske Hory**	**151.23**	**345**	*e*PKPab	**PKPab**	**03 19 52.1**	**-0.7**
KHC	**Kasperske Hory**	**151.23**	**345**	⇑*e*PKP	**PKPbc**	**03 19 42.7**	**-0.8**
KHC				*e*PKPAB	**PKPab**	**03 19 52.3**	**-0.5**
GEC2	**GERESS Array S**	**151.46**	**344**	*e*PKPbc	**PKPdf**	**03 19 42.9**	**+5.3**
GERES	**GERESS Array B**	**151.46**	**344**	PKPbc	**PKPdf**	**03 19 42.9**	**+5.3**
	comp=Z,0.6nm,0.5s,baz=36,slow=2.5,SNR=5.7						
CONA	**Conrad Observa**	**151.69**	**341**	*e*PKiKP	**PKPdf**	**03 19 43.5**	**+5.5**
	comp=Z,1.9nm,0.6s						
ABTA	**Abfaltersbach**	**153.71**	**344**	*i* PKiKP	**PKPbc**	**03 19 49.3**	**+0.2**
	comp=Z,2.7nm,0.6s						
FETA	**Feichten**	**153.87**	**347**	PKiKP	**PKPbc**	**03 19 48.6**	**-1.0**
	comp=Z,7.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**171.44**	**176**	PKPab	**PKPab**	**03 21 21.1**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=191,slow=3.1,SNR=6.5						
TOA1	**Torodi Ar. Sit**	**171.44**	**176**	*e*PKPab	**PKPab**	**03 21 21.1**	**-0.5**

*ISK **30** 03:01:56.3, 38°.71N×43°.23E, h25^{km}, ML2.2/5*
*ISCJB **30** 03:01:57.9±0.7, 38°.73N±0°.04×43°.18E±0°.05, h21^{km}±11^{km},*
Error ellipse: s-maj=7.7km s-min=5.6km az=139.2
*DDA **30** 03:01:57.0, 38°.75N×43°.15E, h7^{km}±3^{km}, ML2.5*
ISC 30 03:01:56.8±1.5**, 38°.75N**±0°.03×**43°.18E**±0°.04**, h17**^{km}±13^{km},
n12, σ0ˢ.73/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.23**	**133**	PG	**Pb**	**03 02 03.3**	**+0.7**
VANB				SG	**Sb**	**03 02 07.7**	**+1.3**
TVAN	**Van**	**0.28**	**141**	*i* P	**Pb**	**03 02 03.4**	**-0.2**
TVAN				*i* S	**Sb**	**03 02 08.7**	**+0.5**
VMUR	**Van-Muradiye**	**0.39**	**52**	*i* P	**Pb**	**03 02 05.3**	**-0.1**
VMUR				*i* S	**Sb**	**03 02 12.5**	**+1.2**
VMUR				IAML_P			
	comp=Z,1µm,0.2s						
GEVA	**Gevas**	**0.45**	**192**	*i* P	**Pb**	**03 02 06.7**	**+0.3**
GEVA				IAML_P			
	comp=Z,3µm,0.3s						
AKDM	**Akdamar-Van**	**0.45**	**200**	PG	**Pb**	**03 02 05.8**	**-0.6**
MLAZ	**Malazgirt-MUS**	**0.63**	**309**	PG	**Pb**	**03 02 10.5**	**+1.0**
CLDR	**Caldiran**	**0.70**	**55**	PG	**Pg**	**03 02 10.3**	**-0.3**
CLDR				SG	**Sb**	**03 02 20.7**	**+0.5**
CLDR	**Caldiran**	**0.70**	**55**	*i* P	**Pg**	**03 02 10.3**	**-0.3**
CLDR				*i* S	**Sn**	**03 02 21.9**	**-0.9**
CLDR				IAML_P			
	comp=Z,685nm,0.1s						
TUTA	**Tutak**	**0.71**	**337**	*i* P	**Pn**	**03 02 11.9**	**-0.5**
BLIS	**Bitlis-Merkez**	**0.90**	**249**	*i* P	**Pn**	**03 02 15.0**	**+0.1**
BLIS				*i* S	**Sn**	**03 02 26.8**	**-0.7**
BLIS				IAML_P			
	comp=Z,723nm,0.2s						
GURO	**Guroymak-BITLI**	**0.92**	**258**	PG	**Pb**	**03 02 14.4**	**0.0**
HAKT	**HAKKARI**	**1.26**	**160**	*i* P	**Pg**	**03 02 21.1**	**0.0**
HAKT				IAML_P			
	comp=Z,173nm,0.1s						

*ISK **30** 03:04:42.7, 38°.75N×43°.15E, h5^{km}, ML2.1/4*
*ISCJB **30** 03:04:44.0±0.8, 38°.72N±0°.06×43°.19E±0°.06, h28^{km}±10^{km},*
Error ellipse: s-maj=11.9km s-min=6.5km az=148.1
*DDA **30** 03:04:43.4, 38°.76N×43°.15E, h7^{km}±2^{km}, ML2.5*
ISC 30 03:04:43.8±1.2**, 38°.76N**±0°.04×**43°.16E**±0°.03**, h18**^{km}±6^{km},
n9, σ0ˢ.70/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.24**	**132**	PG	**Pg**	**03 04 49.6**	**+0.1**
VANB				SG	**Sg**	**03 04 54.2**	**+0.8**
TVAN	**Van**	**0.30**	**140**	*i* P	**Pb**	**03 04 50.4**	**-0.4**
TVAN				*i* S	**Sb**	**03 04 55.7**	**+0.2**
TVAN				IAML_P			
	comp=Z,3µm,0.1s						
AKDM	**Akdamar-Van**	**0.45**	**198**	PG	**Pg**	**03 04 52.2**	**-0.9**
GEVA	**Gevas**	**0.45**	**190**	*i* P	**Pg**	**03 04 52.5**	**-0.6**
GEVA				IAML_P			
	comp=Z,2µm,0.3s						
TUTA	**Tutak**	**0.69**	**338**	*i* P	**Pb**	**03 04 57.4**	**-0.1**
CLDR	**Caldiran**	**0.71**	**57**	PG	**Pg**	**03 04 56.9**	**-0.9**
CLDR	**Caldiran**	**0.71**	**57**	*i* P	**Pb**	**03 04 57.6**	**-0.1**
CLDR				*i* S	**Sb**	**03 05 07.9**	**+0.6**
BLIS	**Bitlis-Merkez**	**0.89**	**247**	*i* P	**Pn**	**03 05 01.6**	**+0.1**
BLIS				*i* S	**Sb**	**03 05 13.6**	**+1.3**
BLIS				IAML_P			
	comp=Z,539nm,0.2s						
GURO	**Guroymak-BITLI**	**0.90**	**257**	PG	**Pb**	**03 05 00.8**	**-0.2**
GURO				SG	**Sb**	**03 05 13.0**	**+0.2**

*IDC **30** 03:23:25.9±6.4, 36°.35N×70°.66E, h164^{km}±58^{km}, mb3.2/3,*
mb1 3.1/7, mb1mx2.9/54, mbtmp3.6/7, Error ellipse:
s-maj=63.4km s-min=42.2km az=143.0
*ISCJB **30** 03:23:27.1±0.9, 36°.56N±0°.05×70°.8E±0°.1, h150^{km},*
mb3.1/2, Error ellipse: s-maj=13.4km s-min=5.4km
az=160.5
*NNC **30** 03:23:30.3±3.1, 37°.04N×70°.64E, h0^{km}, mb3.9, mpv3.6,*
Error ellipse: s-maj=25.8km s-min=19.1km az=161.0
ISC 30 03:23:28.2±1.2**, 36°.54N**±0°.09×**70°.8E**±0°.1**, h150**^{km}**, n21,**
σ2ˢ.02/25**, 4C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.55**	**358**	⇓P	**Pn**	**03 25 01.4**	**-0.8**
	1.5nm,0.2s,baz=188,slow=13,SNR=60						
KK31				⇑S	**Sn**	**03 26 13.2**	**-2.7**
	14nm,0.5s,baz=185,slow=24,SNR=6.0						
AAK	**Ala-Archa**	**6.72**	**24**	P	**Pn**	**03 25 07.0**	**+2.5**
	1.2nm,0.3s,baz=188,slow=7.1,SNR=2.7						
AAK				S	**Sn**	**03 26 20.6**	**+0.5**
	2.4nm,0.3s,baz=353,slow=20,SNR=9.6						
AAK	**Ala-Archa**	**6.72**	**24**	⇑P	**Pn**	**03 25 06.2**	**+1.6**
	2.1nm,0.5s						
AAK				⇓S	**Sn**	**03 26 19.3**	**-0.8**
	10.0nm,0.5s						
TKM2	**Tokmak 2**	**7.36**	**29**	⇑P	**Pn**	**03 25 13.3**	**+0.1**
	2.2nm,0.5s						
TKM2				⇓S	**Sn**	**03 26 34.6**	**-0.9**
	4.8nm,0.8s						
MKAR	**Makanchi Array**	**13.35**	**36**	P	**Pn**	**03 26 32.3**	**+0.6**
	0.2nm,0.3s,baz=209,slow=9.7,SNR=6.9						
DANN	**Dangsing**	**13.64**	**123**	*e*P	**Pn**	**03 26 34.6**	**-1.3**
	20nm,0.6s						
KOLN	**Koldanda**	**13.92**	**125**	*e*P	**Pn**	**03 26 38.1**	**-1.2**
GKN	**Gorkha**	**14.46**	**122**	*e*P	**Pn**	**03 26 45.5**	**-0.6**
AB31	**Akbulak array**	**14.97**	**331**	⇓P	**P**	**03 26 55.5**	**+1.7**
	0.7nm,0.3s,baz=147,slow=12,SNR=41						
AB31				⇑S	**Sn**	**03 29 35.8**	**-2.3**
	0.3nm,0.3s						
DMN	**Daman**	**15.03**	**122**	*e*P	**Pn**	**03 26 53.7**	**+0.4**
	14nm,0.6s						
KKN	**Kakani**	**15.04**	**121**	*e*P	**Pn**	**03 26 52.2**	**-1.1**
	16nm,0.5s						
KURBB	**Kurchatov Arra**	**15.13**	**19**	P	**Pn**	**03 26 54.6**	**+0.5**
	0.0nm,0.3s,baz=208,slow=11,SNR=4.2						
PKIN	**Phulchoki**	**15.25**	**122**	*e*P	**Pn**	**03 26 56.4**	**+0.4**
PKI	**Pulchoki**	**15.26**	**122**	*e*P	**Pn**	**03 26 57.2**	**+1.0**
	35nm,0.6s						
JIRN	**Jiri**	**15.75**	**120**	*e*P	**Pn**	**03 27 02.4**	**+0.2**
	21nm,0.4s						
AKTO	**Aktyubinsk**	**16.66**	**330**	P	**P**	**03 27 12.0**	**-0.6**
	0.2nm,0.3s,baz=136,slow=17,SNR=4.2						
AKTO	**Aktyubinsk**	**16.66**	**330**	⇓P	**Pn**	**03 27 19.3**	**+6.5**
	1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**19.94**	**25**	P	**P**	**03 27 47.6**	**-0.6**
	2.7nm,0.5s,baz=224,slow=12,SNR=10						
NB2	**NORSAR Subarra**	**44.25**	**323**	P	**P**	**03 31 19.9**	**-2.5**
	comp=Z,0.3nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.25**	**323**	P	**P**	**03 31 19.6**	**-2.8**
	comp=Z,0.5nm,0.6s,baz=98,slow=7.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**65.56**	**268**	P	P	03 33 50.5	-5.5
	comp=Z,0.1nm,0.4s,baz=46,slow=5.8,SNR=4.5						

IDC 30 03:29:13.9±2.2**, 7°.65S**×**151°.67E, h0**^{km}**, mb3.4**/4**,**
mb1 3.7/4**, mb1mx3.5**/25**, mbtmp3.5**/4**, Error ellipse:**
s-maj=91.1km s-min=28.7km az=123.0, New Britain
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.79**	**248**	Sn	Sn	03 31 14.6	-9.2
	7.3nm,0.3s,baz=125,slow=16,SNR=6.9						
WRA	**Warramunga Arr**	**20.78**	**232**	P	P	03 33 57.7	+0.9
	0.9nm,0.6s,baz=60,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**23.33**	**225**	P	P	03 34 23.4	-0.6
	0.2nm,0.4s,baz=57,slow=9.1,SNR=5.4						
SONM	**Songino Array**	**68.15**	**329**	P	P	03 40 16.0	-0.1
	0.4nm,0.6s,baz=126,slow=2.0,SNR=3.7						
ILAR	**Eielson Array**	**85.20**	**22**	P	P	03 41 52.6	+0.6
	0.6nm,0.8s,baz=240,slow=5.9,SNR=5.9						
TORD	**Torodi Ar. Bea**	**149.99**	**283**	PKPbc	PKPbc	03 49 06.3	-1.2
	1.3nm,1.2s,baz=99,slow=2.3,SNR=2.1						

*ISCJB **30** 03:34:17.7±0.3, 0°.46N±0°.04×30°.24E±0°.05, h14^{km},*
mb4.3/32, MS3.3/7, Error ellipse: s-maj=6.9km
s-min=5.5km az=158.3
*IDC **30** 03:34:17.8±0.6, 0°.48N×30°.18E, h0^{km}, mb4.0/15,*
mb1 4.1/16, mb1mx4.0/44, mbtmp4.0/16, ML3.7/1, MS3.4/8,
Ms1 3.4/8, ms1mx3.1/33, Error ellipse: s-maj=17.6km
s-min=9.5km az=70.0
*NEIC **30** 03:34:19.6±2.6, 0°.45N×30°.17E, h15^{km}±5^{km}, mb4.4/16,*
Error ellipse: s-maj=12.1km s-min=7.7km az=83.0
ISC 30 03:34:19.6±0.5**, 0°.41N**±0°.05×**30°.23E**±0°.06**, h14**^{km}**, n58,**
σ1ˢ.74/61**, mb4.3**/34**, MS3.2**/7**, Uganda**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**1.12**	**153**	Pg	**Pg**	**03 34 41.8**	**+0.5**
	754nm,0.3s,baz=331,slow=21,SNR=4358						
MBAR				Lg	Lg	03 34 56.5	
	7µm,0.3s,baz=288,slow=19,SNR=55						
KMBO	**Kilima Mbogo**	**7.18**	**102**	Pn	**Pn**	**03 36 04.7**	**+0.2**
	1.4nm,0.3s,baz=274,slow=15,SNR=30						
KMBO				Sn	**Sn**	**03 37 30.4**	**+4.2**
	4.5nm,0.3s,baz=337,slow=18,SNR=3.7						
KMBO				Lg	Lg	03 38 03.0	
	8.5nm,0.3s,baz=31,slow=19,SNR=7.4						
KMBO				LR	LR	03 39 04.6	
	comp=Z,419nm,18.2s,baz=276,slow=40						
KMBO	**Kilima Mbogo**	**7.18**	**102**	*e*Pn	**Pn**	**03 36 04.8**	**+0.3**
KMBO				*e*Sn	**Sn**	**03 37 26.6**	**+0.4**
KOND	**Kondoa**	**7.66**	**134**	*i* P	**Pn**	**03 36 09.4**	**-1.6**
KOND				*i* S	**Sn**	**03 37 31.7**	**-6.1**
KIBA	**Kibaya**	**8.51**	**132**	*i* P	**Pn**	**03 36 23.1**	**+0.5**
FURI	**Furi**	**11.91**	**45**	*e*Pn	**Pn**	**03 37 06.7**	**-2.7**
FURI				*e*Sn	**Sn**	**03 39 20.6**	**-1.8**
LSZ	**Lusaka**	**15.71**	**187**	Pn	**P**	**03 38 09.2**	**+4.4**
	0.2nm,0.3s,baz=18,slow=8.4,SNR=4.4						
LSZ				Sn	**Sn**	**03 40 57.8**	**+2.8**
	baz=156,slow=19,SNR=2.3						
LSZ				Lg	Lg	03 42 31.6	
	0.5nm,0.3s,baz=303,slow=18,SNR=7.1						
LSZ	**Lusaka**	**15.71**	**187**	*e*Pn	**Pn**	**03 38 00.2**	**-0.6**
	23nm,1.8s						
LSZ				*e*Sn	**Sn**	**03 40 51.6**	**-3.4**
LSZ				*e*S	**Sn**	**03 40 54.7**	**-0.4**
MATP	**Matopo**	**20.77**	**185**	P	**P**	**03 39 00.9**	**+0.3**
	2.4nm,0.8s,baz=9.0,slow=14,SNR=4.6						
MATP				Lg	Lg	03 44 59.6	
	4.5nm,0.9s,baz=154,slow=6.3,SNR=3.7						
TSUM	**Tsumeb**	**23.11**	**212**	P	**P**	**03 39 26.5**	**+1.1**
	2.8nm,1.0s,baz=101,slow=19,SNR=3.8						
TSUM				Lg	Lg	03 46 16.9	
	4.2nm,0.9s,baz=289,slow=24,SNR=3.0						
TSUM				LR	LR	03 47 26.9	
	comp=Z,68nm,20.2s,baz=344,slow=34						
OPO	**Ambohidratompo**	**25.17**	**139**	LR	LR	03 49 16.9	
	comp=Z,89nm,19.4s,baz=20,slow=36						
LBTB	**Lobatse**	**25.67**	**190**	P	**P**	**03 39 51.2**	**+1.9**
	2.5nm,0.8s,baz=3.1,slow=8.9,SNR=3.6						
LBTB				LR	LR	03 50 38.3	
	comp=Z,104nm,18.5s,baz=4.0,slow=38						
LBTB	**Lobatse**	**25.67**	**190**	*e*P	**P**	**03 39 51.2**	**+1.9**
	4.4nm,0.9s						
MSEY	**Mahe Island**	**25.72**	**102**	*e*P	**P**	**03 39 49.5**	**-0.5**
	105nm,1.5s						
EIL	**Elat**	**29.45**	**8**	LR	LR	03 51 09.5	
	comp=Z,60nm,19.4s,baz=210,slow=34						
TOA0	**Torodi Ar. Sit**	**30.98**	**295**	*e*P	**P**	**03 40 35.8**	**-1.1**
	6.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**30.98**	**295**	P	**P**	**03 40 36.3**	**-0.5**
	3.0nm,0.9s,baz=101,slow=8.1,SNR=13						
TOA1	**Torodi Ar. Sit**	**30.98**	**295**	*e*P	**P**	**03 40 36.3**	**-0.5**
DBIC	**Dimbokro**	**35.55**	**281**	P	**P**	**03 41 15.0**	**-1.7**
	3.6nm,0.7s,baz=122,slow=12,SNR=3.0						
DBIC				LR	LR	03 56 38.3	
	comp=Z,63nm,18.2s,baz=114,slow=38						
DBIC	**Dimbokro**	**35.55**	**281**	*e*P	**P**	**03 41 15.0**	**-1.7**
	24nm,1.4s						
BR101	**Keskin Array S**	**39.26**	**4**	*e*P	**P**	**03 41 49.4**	**+1.4**
BR131	**Keskin Array S**	**39.26**	**4**	*e*P	**P**	**03 41 49.5**	**+1.6**
	3.9nm,1.0s						
BRTR	**Keskin Array B**	**39.26**	**4**	P	**P**	**03 41 49.4**	**+1.4**
	1.5nm,0.7s,baz=175,slow=10,SNR=13						
TIP	**Timpagrande**	**40.51**	**344**	*e*P	**P**	**03 41 57.1**	**-1.2**
	10nm,1.3s						
KBZ	**Khabaz**	**44.59**	**13**	LR	LR	04 00 41.3	
	comp=Z,29nm,20.6s,baz=228,slow=36						
ASCN	**Ascension**	**45.22**	**258**	*e*P	**P**	**03 42 35.4**	**-1.4**
	170nm,1.0s						
BUR08	**Bucovina Ar. S**	**47.25**	**355**	*e*P	**P**	**03 42 54.3**	**+1.9**
	12nm,1.8s						
ARSA	**Arzberg**	**48.39**	**347**	*e*P	**P**	**03 43 00.7**	**-0.5**

	1.5nm,0.5s						
CONA	Conrad Observa	48.95	347	epP	P	03 43 08.3	+2.8
	1.9nm,0.8s						
BNI	Bardonecchia	49.10	338	eP	P	03 43 07.2	+0.4
	7.2nm,0.7s						
MOA	Molln	49.25	346	eP	P	03 43 07.7	0.0
	2.8nm,0.6s						
WTTA	Wattenberg	49.41	343	iP	P	03 43 15.5	+6.4
	7.5nm,1.1s						
FETA	Feichten	49.45	343	ipP	P	03 43 13.6	+4.1
	4.4nm,1.1s						
SQTA	Sankt Quirin	49.49	343	iP	P	03 43 09.1	-0.6
	5.3nm,1.0s						
MOTA	Moosalm	49.63	343	eP	P	03 43 10.6	-0.3
	1.4nm,0.5s						
RETA	Reutte	49.86	343	iP	P	03 43 11.0	-1.5
	3.1nm,0.7s						
DAVA	Damuels	49.95	342	iP	P	03 43 12.6	-0.7
	9.0nm,0.8s						
ESDC	Sonseca Array	49.99	326	P	P	03 43 13.9	+0.3
	2.8nm,0.8s,baz=129,slow=6.6,SNR=23						
AKASG	Malin Array Be	50.12	359	P	P	03 43 13.8	-0.5
	0.2nm,0.3s,baz=178,slow=6.0,SNR=5.9						
AKBB	Malin Array Si	50.12	359	eP	P	03 43 13.8	-0.5
	3.3nm,0.9s						
GEC2	GERESS Array S	50.31	346	eP	P	03 43 15.9	0.0
	7.1nm,1.4s						
GERES	GERESS Array B	50.31	346	P	P	03 43 15.9	0.0
	0.9nm,0.6s,baz=167,slow=7.8,SNR=7.6						
KHC	Kasperske Hory	50.61	346	eP	P	03 43 17.2	-0.9
	1.6nm,0.8s						
KK31	Karatay Array	55.70	35	eP	P	03 43 56.9	+1.2
	2.9nm,0.9s						
KKAR	Karatay Array	55.70	35	eP	P	03 43 56.9	+1.2
	2.9nm,0.9s						
FIA0	FINESS Array S	60.96	358	eP	P	03 44 31.4	-0.6
FINES	FINESS Array B	60.96	358	P	P	03 44 31.4	-0.6
	1.8nm,0.7s,baz=149,slow=4.4,SNR=7.3						
NB2	NORSAR Subarra	62.21	350	P	P	03 44 40.2	-0.4
	comp=Z,2.5nm,0.8s,baz=161,slow=6.5						
NB200	NORSAR Array S	62.21	350	eP	P	03 44 40.4	-0.2
NOA	NORSAR Array B	62.21	350	P	P	03 44 40.4	-0.2
	comp=Z,1.4nm,0.7s,baz=160,slow=6.6,SNR=10						
NOA				LR	LR	04 15 01.4	
	comp=Z,17nm,18.9s,baz=330,slow=39						
MK31	Makanchi Array	64.69	37	eP	P	03 44 57.8	+0.6
	comp=Z,1.9nm,0.8s						
MK32	Makanchi Array	64.69	37	eP	P	03 44 57.7	+0.5
MKAR	Makanchi Array	64.69	37	P	P	03 44 57.7	+0.5
	comp=Z,2.2nm,0.7s,baz=240,slow=5.2,SNR=18						
ARCES	ARCESS Array B	69.08	358	P	P	03 45 24.4	-0.4
	comp=Z,1.2nm,0.6s,baz=158,slow=3.9,SNR=14						
ZALV	Zalesovo Beam	69.62	31	P	P	03 45 27.6	-0.7
	comp=Z,0.4nm,0.3s,baz=263,slow=3.5,SNR=3.1						
ZAA1	Zalesovo Array	69.62	31	eP	P	03 45 27.6	-0.8
SONA0	Songino Array	80.42	42	eP	P	03 46 31.6	+0.4
SONM	Songino Array	80.42	42	P	P	03 46 31.6	+0.4
	comp=Z,0.3nm,0.4s,baz=284,slow=5.8,SNR=2.7						

DJA 30 03:41:45.5±0.8**, 10°S**±5°×**11°8E**±°**, h11**^{km}±6^{km}**, M3.6**/6**, MLv3.6**/6**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.95	320	P	Pb	03 42 04.1	0.0
PLAI				S	Sb	03 42 17.1	+0.4
WBSI	Waikabubak, Su	0.98	95	P	Pg	03 42 03.5	-0.9
IGBI	Denpasar	3.30	283	P	Pn	03 42 36.4	-0.7
EDFI	Ende, Flores	3.35	76	P	Pn	03 42 39.2	+1.3
SRBI	Singaraja	3.47	295	P	Pn	03 42 40.3	+0.8
JAGI	Jajag, Banyuwa	4.33	284	P	Pn	03 42 50.6	-0.8
BKSI	Bulukumba	4.54	22	P	Pn	03 42 55.2	+0.9

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*STR **30** 03:47:59.0±0.8, 45°N±3°×°±°, h0^{km}, MLv1.3/3*

LDG 30 03:47:58.5±0.0**, 44°.85N**×**6°.64E, h2**^{km}**, Md1.0**/1**, Ml1.4**/2**, Error ellipse: s-maj=0.8km s-min=0.6km az=71.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	Montbardon	0.16	143	ePg	Pg	03 48 01.8	+0.2
	9.4nm,0.1s						
MBDF				eSg	Sg	03 48 04.2	+0.6
	8.9nm,0.2s						
SURF	Saint Ours	0.39	161	Pg	Pg	03 48 07.0	+1.0
SURF				Sg	Sb	03 48 13.2	-1.6
OGAG	Argentiere	0.40	190	Pg	Pg	03 48 01.0	-5.3
OGAG				Sg	Sg	03 48 02.5	-8.9
GDM	Grand'Maison	0.51	314	Sg	Sg	03 48 15.0	0.0
ORIF	Oris-en-Rattie	0.54	277	ePg	Pg	03 48 08.9	0.0
ORIF	Oris-en-Rattie	0.54	277	Pg	Pg	03 48 09.1	+0.2
LPG	La Plagne	0.65	7	ePg	Pg	03 48 11.2	+0.2
LPL	La Plagne	0.67	6	ePg	Pg	03 48 11.4	+0.1
SBF	Sospel	1.14	150	eSg	Sg	03 48 34.9	-0.2
	1.5nm,0.2s						
SMRF	Simiane la Rot	1.16	221	eSg	Sg	03 48 35.2	-0.5
	0.2nm,0.2s						

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*GEN **30** 03:49:43.2, 45°.97N×7°.92E, h9^{km}±1^{km}, Ml0.5*

ROM 30 03:49:43.0±0.2**, 45°.976N**±0°.009×**7°.92E**±0°.03**, h11**^{km}±1^{km}**, ML0.7**/1**, Error ellipse: s-maj=2.1km s-min=0.9km az=93.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMK	Mattmark	0.08	22	P	Pg	03 49 46.1	+0.3
MMK				S	Sg	03 49 47.5	-0.2
MMK				AML	AML		
	comp=E,67µm,0.1s						
MMK				AML	AML		
	comp=N,73µm,0.1s						
MMK				AML	AML		
	comp=N,73µm,0.1s						
MMK				AML	AML		
	comp=E,67µm,0.1s						
MMK				AML	AML		
	comp=N,73µm,0.1s						
MMK				AML	AML		
	comp=E,67µm,0.1s						
SATI	Passo dei Sala	0.11	200	P	Pg	03 49 46.3	+0.2
SATI				S	Sg	03 49 48.1	-0.2
SATI	Passo dei Sala	0.11	200	P	Pg	03 49 46.6	+0.4
SATI				S	Sg	03 49 48.4	0.0
DIX	Grande Dixence	0.37	286	P	Pg	03 49 51.1	+0.6
DIX				S	Sg	03 49 56.2	+0.7
CIRO	Champorcher	0.45	214	P	Pg	03 49 52.2	+0.3
CIRO				S	Sg	03 49 57.9	+0.1
TRAV	Traversella	0.48	195	P	Pg	03 49 52.6	+0.2
TRAV				S	Sg	03 49 58.3	-0.4
TRAV	Traversella	0.48	195	P	Pg	03 49 52.7	+0.4
TRAV				S	Sg	03 49 59.2	+0.5
REMY	Saint-Rhmy-en	0.55	256	P	Pg	03 49 54.0	+0.2
REMY				S	Sg	03 50 00.6	-0.5

LDG 30 03:50:27.6±0.0**, 44°.85N**×**6°.62E, h2**^{km}**, Md1.5**/2**, Ml1.2**/1**, Error ellipse: s-maj=0.6km s-min=0.5km az=104.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	Montbardon	0.16	138	ePg	Pg	03 50 31.0	+0.2
MBDF				eSg	Sg	03 50 33.3	+0.4
	4.8nm,0.2s						
ORIF	Oris-en-Rattie	0.53	278	ePg	Pg	03 50 37.8	0.0
ORIF				eSg	Sg	03 50 44.7	0.0
	2.8nm,0.2s						
LPG	La Plagne	0.66	8	ePg	Pg	03 50 40.3	+0.1
LPG				eSg	Sg	03 50 49.0	+0.2
	1.4nm,0.3s						
LPL	La Plagne	0.67	7	ePg	Pg	03 50 40.6	+0.1
LPL				eSg	Sg	03 50 49.4	+0.1
	1.4nm,0.2s						
SMRF	Simiane la Rot	1.15	221	ePg	Pg	03 50 49.2	-0.4
SMRF				eSg	Sg	03 51 03.8	-0.7
	0.4nm,0.2s						

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*NIED **30** 04:02:00, 36°.20N×138°.00E, h5^{km}, Mw3.6 Best double couple: $M_0$2.90000×10^{14} NP1:ϕ_s80.00000°, δ61.00000°, λ-154.00000°. NP2:ϕ_s337.00000°, δ67.00000°, λ-31.00000°.*

JMA 30 04:02:51.0, 36°.21N×**138°.01E, h6**^{km}±1^{km}**, M3.4, 3C-1D Broadband fault plane solution: P waves. NP1:** ϕ_s88.00000°, δ70.00000°, λ-138.00000°. **NP2:** ϕ_s341.00000°, δ51.00000°, λ-26.00000°. **Principal axes:** T Plg12.0000°, Azm210.0000°; N Plg44.0000°, Azm108.0000°; P Plg43.0000°, Azm312.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNG	Nsakai	0.21	20	⇑P	Pg	04 02 55.3	+0.1
JNG				S	Sg	04 02 58.5	+0.5
JNT	Takato	0.35	163	⇑P	Pg	04 02 57.9	+0.1
JNT				S	Sg	04 03 03.0	+0.5
MAT	Matsushiro	0.37	26	P	Pg	04 02 58.1	-0.1
MAT				S	Sg	04 03 03.1	+0.1
MAT	Matsushiro	0.37	26	P	Pg	04 02 58.0	-0.2
MAT				S	Sg	04 03 03.2	+0.2
JGN	Niukaw	0.56	272	⇓P	Pg	04 03 01.6	-0.2
JGK	Kuni	0.62	55	⇑P	Pg	04 03 03.2	+0.3
JTT	Ttatey	0.67	306	P	Pg	04 03 04.3	+0.3
JRY	Ryogami san	0.75	105	P	Pg	04 03 04.9	-0.5
JRY				S	Sg	04 03 14.8	-0.3
JYN	Shimob	0.83	148	P	Pg	04 03 07.1	+0.1
JYN				S	Sb	04 03 18.6	-0.8

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*IDC **30** 04:10:15.0±0.9, 17°.68S×175°.01W, h0^{km}, mb4.0/8, mb1 4.3/8, mb1mx4.1/30, mbtmp4.0/8, MS3.3/4, Ms1 3.3/4, ms1mx3.0/19 Error ellipse: s-maj=45.2km s-min=20.9km az=140.0*

*NEIC **30** 04:10:18.0±1.8, 18°.20S×174°.60W, h35^{km}±4^{km}, mb4.3/15, Error ellipse: s-maj=33.9km s-min=18.5km az=177.0*

ISC 30 04:10:19.0±0.7**, 18°.1S**±0°.2×**174°.52W**±0°.09**, h35**^{km}**, n39, σ1^{s}.57**/36**, mb4.2**/22**, MS3.3**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	4.47	104	ePn	Pn	04 11 23.8	-0.5
NIUE				eSn	Sn	04 12 12.9	-2.3
RAR	Rarotonga	14.24	105	LR	LR	04 18 34.1	
	comp=Z,91nm,18.4s,baz=263,slow=34						
URZ	Urewera	21.42	198	P	P	04 15 07.1	+3.2
	2.7nm,0.7s,baz=89,slow=9.3,SNR=3.6						
PPT2	Papeete2	23.75	93	eLQ	LQ	04 20 12.0	
	300nm,27.8s						
PPT2				eLR	LR	04 21 12.0	
	comp=Z,145nm,28.2s						
PPT	Papeete	23.75	93	LR	LR	04 22 50.7	
	comp=Z,51nm,18.4s,baz=329,slow=31						
TBI	Tubuai	24.01	107	eLR	LR	04 21 11.7	
	comp=Z,141nm,28.2s						
WR1	Warramunga Arr	48.24	259	eP	P	04 18 54.6	-2.3
WRA	Warramunga Arr	48.24	259	P	P	04 18 54.6	-2.3
	1.6nm,0.9s,baz=115,slow=6.0,SNR=3.4						
AS31	Alice Springs	48.31	254	eP	P	04 18 55.7	-1.7
	1.1nm,0.8s						
ASAR	Alice Springs	48.32	254	P	P	04 18 55.7	-1.7
	4.3nm,0.8s,baz=86,slow=8.3,SNR=35						
ASAR				PcP	PcP	04 20 23.9	+0.1
	0.5nm,0.7s,baz=94,slow=4.2,SNR=4.3						
PETK	Petropavlovsk-	74.83	343	P	P	04 21 54.8	-0.7
	1.2nm,0.7s,baz=106,slow=11,SNR=3.3						
PETK				LR	LR	04 53 54.0	
	comp=Z,17nm,18.8s,baz=114,slow=35						
PEA1	Petropavlovsk-	74.83	343	eP	P	04 21 54.8	-0.8
NVAR	Mina Array Bea	77.00	42	P	P	04 22 10.2	+1.6
	2.0nm,0.8s,baz=226,slow=8.9,SNR=15						
NV11	Mina Array Sit	77.10	42	eP	P	04 22 08.4	-0.7
KVN	Kaiserville	77.50	42	eP	P	04 22 10.9	-0.4
	2.7nm,0.9s						
TPNV	Topopah Spring	77.50	44	eP	P	04 22 10.8	-0.6
	3.7nm,0.9s						
SHPR	Sheep Range	77.98	45	eP	P	04 22 16.8	+2.8
	1.8nm,0.8s						
Y14A	Wickenburg	78.11	48	eP	P	04 22 13.5	-1.1
	2.5nm,0.9s						
USRK	Ussuriysk Ar.	78.86	324	LR	LR	04 51 02.1	
	comp=Z,29nm,19.5s,baz=44,slow=31						
CCUT	Cedar City	79.75	45	eP	P	04 22 23.4	-0.4
	2.6nm,1.0s						
KNB	Kanab	79.84	46	eP	P	04 22 26.0	+1.8
	1.5nm,0.7s						
MTPU	Mount Pierson	80.80	45	eP	P	04 22 29.8	+0.2
	1.4nm,0.9s						
LTX	Lajitas	82.97	56	eP	P	04 22 43.8	+2.9
TXAR	Lajitas Array	82.97	56	P	P	04 22 43.8	+2.9
	0.2nm,0.6s,baz=206,slow=5.8,SNR=3.5						
PV14	Lion Creek, Pa	83.12	46	eP	P	04 22 41.6	-0.1
	11nm,0.9s						
ANMO	Albuquerque	83.31	50	eP	P	04 22 41.8	-0.9
	1.2nm,0.8s						
PV01	Paradox Valley	83.32	46	eP	P	04 22 45.0	+2.3
	4.7nm,1.0s						
RND	Reindeer	83.63	11	eP	P	04 22 44.6	+1.1
	2.7nm,1.1s						
YPP	Pitchstone Pla	84.93	40	eP	P	04 22 51.5	+0.7
	6.1nm,0.9s						
PD31	Pinedale Array	84.94	42	eP	P	04 22 52.3	+1.4
	1.0nm,0.9s						
PDAR	Pinedale Array	84.94	42	P	P	04 22 52.1	+1.3
	1.4nm,0.8s,baz=225,slow=3.6,SNR=11						
ILAR	Eielson Array	85.24	12	P	P	04 22 51.2	-0.3
	0.9nm,0.7s,baz=227,slow=6.1,SNR=8.0						
ILB	Eielson Array	85.24	12	eP	P	04 22 51.2	-0.3
DAWY	Dawson	86.24	15	eP	P	04 22 57.9	+1.3
	4.6nm,1.0s						
CLL	Collm	146.28	351	iPKPbc	PKPbc	04 29 55.6	-0.2
	comp=Z,6.0nm,0.9s						
BR101	Keskin Array S	147.45	317	ePKPbc	PKPbc	04 29 58.9	-0.8
BRTR	Keskin Array B	147.45	317	PKPbc	PKPbc	04 29 58.9	-0.8
	comp=Z,1.3nm,0.8s,baz=126,slow=2.1,SNR=7.8						
GEC2	GERESS Array S	148.57	350	ePKPbc	PKiKP	04 30 02.9	-0.9
GERES	GERESS Array B	148.57	350	PKPbc	PKiKP	04 30 02.9	-0.9
	comp=Z,1.1nm,0.3s,baz=344,slow=4.3,SNR=4.6						

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*IDC **30** 04:13:17.6±1.7, 6°.75S×128°.25E, h0^{km}, mb3.9/1, mb1 4.0/4, mb1mx3.6/35, mbtmp3.9/4, ML3.5/3, Error ellipse: s-maj=56.3km s-min=29.0km az=78.0*

*NEIC **30** 04:13:30.6±1.8, 6°.69S×130°.03E, h160^{km}±8^{km}, mb4.6/2, Error ellipse: s-maj=21.1km s-min=12.3km az=89.0*

ISC 30 04:13:30.2±1.0**, 6°.68S**±0°.05×**130°.3E**±0°.2**, h150**^{km}**, n11, σ2^{s}.96**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	4.21	28	ePn	Pn	04 14 35.8	+2.6
FAKI				eSn	Sn	04 15 21.2	-1.1
SIJI	Sorong	5.85	10	Pn	Pn	04 14 56.1	+1.2
	2.1nm,0.3s,baz=225,slow=23,SNR=17						
SIJI				Sn	Sn	04 15 57.1	-4.1
	0.9nm,0.3s,baz=218,slow=19,SNR=2.9						
MTN	Manton Dam	6.18	172	ePn	Pn	04 15 00.5	+1.1
MTN				eSn	Sn	04 16 11.6	+2.3
WRA	Warramunga Arr	13.76	164	Pn	P	04 16 42.3	-0.5
	0.2nm,0.3s,baz=336,slow=13,SNR=4.4						
WRA				Sn	Sn	04 19 05.5	-6.1
	0.2nm,0.3s,baz=340,slow=23,SNR=4.8						
WR1	Warramunga Arr	13.76	164	eP	P	04 16 42.3	-0.5
WR1				eSn	Sn	04 19 05.5	-6.1
WB2	Warramunga Arr	13.76	164	eP	P	04 16 42.3	-0.5
WB2				eSn	Sn	04 19 09.8	-1.9
ASAR	Alice Springs	17.25	169	P	Pn	04 17 25.6	+3.5
	0.3nm,0.3s,baz=346,slow=11,SNR=12						
ASAR				S	S	04 20 32.9	-0.6
	0.1nm,0.3s,baz=354,slow=26,SNR=2.8						
ONTNC	Ouen Toro	38.16	118	eP	P	04 20 36.9	+1.6
	29nm,0.9s						
RPZ	Rata Peaks	51.31	143	eP	P	04 22 19.0	-0.1
	19nm,1.4s						
MK32	Makanchi Array	68.12	327	eP	P	04 24 12.7	-1.3
MKAR	Makanchi Array	68.12	327	P	P	04 24 12.7	-1.3
	0.6nm,0.5s,baz=123,slow=8.0,SNR=7.9						

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*ISCJB **30** 04:25:22.8±0.7, 42°.47N±0°.03×78°.43E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=5.4km s-min=2.8km az=145.2*

*KRNET **30** 04:25:22.6±0.1, 42°.45N×78°.42E, h24^{km}, mb3.6*

*NNC **30** 04:25:22.4±0.6, 42°.49N×78°.42E, h0^{km}, mb3.6, mpv3.8, Error ellipse: s-maj=4.9km s-min=2.0km az=164.0*

*SOME **30** 04:25:23.1, 42°.53N×78°.40E, h10^{km}*

ISC 30 04:25:23.1±0.9**, 42°.46N**±0°.03×**78°.44E**±0°.02**, h11**^{km}±5^{km}**, n91, σ1^{s}.00**/162**, 29C-14D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.03	308	⇑iP	Pg	04 25 25.3	-0.1
	baz=52						
PRZ				⇑iS	Sg	04 25 27.6	+0.6
	baz=52						
SATY	Saty	0.60	358	P	Pg	04 25 34.1	-0.6
	145nm,0.2s						
SATY				S	Sg	04 25 42.6	0.0
	461nm,0.1s						
SATY	Saty	0.60	358	eP	Pg	04 25 34.1	-0.6
	145nm,0.2s						
SATY				eS	Sg	04 25 42.6	0.0
	461nm,0.1s						
UZB	Uzynbulak	0.81	32	P	Pg	04 25 37.9	-0.8
	16nm,0.1s						
UZB				S	Sg	04 25 48.8	-0.5
	78nm,0.1s						
UZB	Uzynbulak	0.81	32	eP	Pg	04 25 37.9	-0.8
	baz=32						
UZB				eS	Sg	04 25 48.9	-0.5
	baz=32						
UZB	Uzynbulak	0.81	32	eP	Pg	04 25 37.9	-0.8
	16nm,0.1s						
UZB				eS	Sg	04 25 48.8	-0.5
	78nm,0.1s						
KDJ	Kajisay	0.99	251	⇑eP	Pg	04 25 40.9	-1.2
	baz=51						
KDJ				⇑iS	Sg	04 25 53.9	-1.1
	baz=51						
KPKS	Kokpek	1.02	10	eP	Pg	04 25 41.7	-1.0
	baz=10.0						
KPKS				eS	Sg	04 25 55.1	-0.9
	baz=10.0						
KPKS	Kokpek	1.02	10	eP	Pg	04 25 41.7	-1.0
	134nm,0.1s						
KPKS				eS	Sg	04 25 55.1	-0.9
	106nm,0.3s						
KURS	Kuram	1.04	349	P	Pg	04 25 42.1	-1.0
	9.5nm,0.1s						
KURS				S	Sg	04 25 55.9	-0.9
	28nm,0.2s						
KURS	Kuram	1.04	349	eP	Pg	04 25 42.2	-1.0
	baz=50						
KURS				eS	Sg	04 25 55.9	-0.9
	baz=50						
KURS	Kuram	1.04	349	eP	Pg	04 25 42.1	-1.0
	9.5nm,0.1s						
KURS				eS	Sg	04 25 55.9	-0.9
	28nm,0.2s						
PDGK	Podgornoye	1.16	41	⇑P	Pb	04 25 44.1	-1.1
	3.4nm,0.4s						
PDGK				⇑S	Sb	04 25 59.7	-0.7
	44nm,0.6s						
PDGK	Podgornoye	1.16	41	⇓iP	Pb	04 25 44.1	-1.1
	baz=41						
PDGK				⇓iS	Sb	04 25 59.5	-0.9
	baz=41						
TNSS	Tian-Shan	1.24	298	P	Pb	04 25 45.6	-1.1
	23nm,0.2s						
TNSS				S	Sb	04 26 01.9	-0.9
	131nm,0.2s						
TNSS	Tian-Shan	1.24	298	eP	Pb	04 25 45.6	-1.1
	baz=99						
TNSS				eS	Sb	04 26 01.9	-0.9
	baz=99						
TNSS	Tian-Shan	1.24	298	eP	Pb	04 25 45.6	-1.1
	23nm,0.2s						
TNSS				eS	Sb	04 26 01.9	-0.9
	131nm,0.2s						
MDOK	Medeo	1.24	305	Pg	Pn	04 25 45.4	-1.1
	37nm,0.2s						
MDOK				Lg	Lg	04 26 01.4	
	146nm,0.4s						
MDOK	Medeo	1.24	305	eP	Pn	04 25 45.4	-1.1
	baz=6.0						
MDOK				eS	Sb	04 26 01.4	-1.2
	baz=6.0						
MDOK	Medeo	1.24	305	eP	Pn	04 25 45.4	-1.1
	37nm,0.2s						
MDOK				eS	Sb	04 26 01.4	-1.2
	146nm,0.4s						
KOTS	Kotyrbulak	1.24	309	P	Pn	04 25 45.7	-0.8
	72nm,0.1s						
KOTS				S	Sb	04 26 02.0	-0.7
	164nm,0.3s						
KOTS	Kotyrbulak	1.24	309	eP	Pn	04 25 45.7	-0.8
	baz=9.0						
KOTS				eS	Sb	04 26 02.0	-0.7
	baz=9.0						
KOTS	Kotyrbulak	1.24	309	eP	Pn	04 25 45.7	-0.8
	72nm,0.1s						
KOTS				eS	Sb	04 26 02.0	-0.7
	164nm,0.3s						
AAA	Alma-Ata	1.34	304	P	Pn	04 25 47.6	-0.2
	75nm,0.1s						
AAA				S	Sb	04 26 05.0	-0.5
	143nm,0.2s						
AAA	Alma-Ata	1.34	304	eP	Pn	04 25 47.6	-0.2
	baz=5.0						
AAA				eS	Sb	04 26 05.1	-0.5
	baz=5.0						
AAA	Alma-Ata	1.34	304	eP	Pn	04 25 47.6	-0.2
	75nm,0.1s						
AAA				eS	Sb	04 26 05.0	-0.5
	143nm,0.2s						
IZV	Izvestkoviy	1.46	294	P	Pn	04 25 49.4	-0.1
	20nm,0.2s						
IZV				S	Sn	04 26 08.2	-0.5
	275nm,0.2s						
IZV	Izvestkoviy	1.46	294	eP	Pn	04 25 49.4	-0.1
	baz=94						
IZV				eS	Sn	04 26 08.3	-0.5
	baz=94						
IZV	Izvestkoviy	1.46	294	eP	Pn	04 25 49.4	-0.1
	20nm,0.2s						
IZV				eS	Sn	04 26 08.2	-0.5
	275nm,0.2s						
MNBS	Baschi	1.62	359	P	Pb	04 25 52.6	-0.4
	142nm,0.1s						
MNBS				S	Sb	04 26 13.7	+0.3
	144nm,0.2s						
MNBS	Baschi	1.62	359	eP	Pb	04 25 52.6	-0.4
	baz=2.0						
MNBS				eS	Sb	04 26 13.7	+0.3
	baz=2.0						
MNBS	Baschi	1.62	359	eP	Pb	04 25 52.5	-0.4
	142nm,0.1s						
MNBS				eS	Sb	04 26 13.7	+0.3
	144nm,0.2s						
MTBS	Maitube	1.62	295	P	Pn	04 25 52.1	+0.5
	8.8nm,0.1s						
MTBS				S	Sb	04 26 13.0	-0.5
	89nm,0.2s						
MTBS	Maitube	1.62	295	eP	Pn	04 25 52.1	+0.5
	baz=95						
MTBS				eS	Sb	04 26 13.0	-0.5
	baz=95						
MTBS	Maitube	1.62	295	eP	Pn	04 25 52.1	+0.5
	8.8nm,0.1s						
MTBS				eS	Sb	04 26 13.0	-0.5
	89nm,0.2s						
ULHL	Ulahol	1.64	263	⇓iP	Pn	04 25 52.5	+0.5
	baz=63						
ULHL				⇓iS	Sb	04 26 14.1	-0.1
	baz=63						
ULHL	Ulahol	1.64	263	P	Pn	04 25 52.4	+0.3
	SNR=135						
KTMS	Ketmen	1.72	54	P	Pn	04 25 53.9	+0.9
	8.7nm,0.2s						
KTMS				S	Sb	04 26 15.9	-0.4
	78nm,0.3s						
KTMS	Ketmen	1.72	54	eP	Pn	04 25 53.9	+0.9
	baz=54						
KTMS				eS	Sb	04 26 16.0	-0.4
	baz=54						
KTMS	Ketmen	1.72	54	eP	Pn	04 25 53.9	+0.9
	8.7nm,0.2s						
KTMS				eS	Sb	04 26 15.9	-0.4
	78nm,0.3s						
CHKK	Chushkaly	1.75	323	P	Pb	04 25 54.7	-0.5
	111nm,0.2s						
CHKK				S	Sb	04 26 17.2	+0.1
	219nm,0.3s						
CHKK	Chushkaly	1.75	323	eP	Pb	04 25 54.7	-0.5
	baz=24						
CHKK				eS	Sb	04 26 17.2	+0.1

	baz=24						
CHKK	Chushkaly 111nm,0.2s	1.75	323	eP	Pb	04 25 54.7	-0.5
CHKK	219nm,0.3s			eS	Sb	04 26 17.2	+0.1
KTBS	Karatobe 30nm,0.2s	1.79	315	P	Pb	04 25 55.2	-0.7
KTBS	213nm,0.2s			S	Sb	04 26 18.2	-0.2
KTBS	Karatobe baz=13	1.79	315	eP	Pb	04 25 55.2	-0.7
KTBS	baz=13			eS	Sb	04 26 18.2	-0.2
KTBS	Karatobe 30nm,0.2s	1.79	315	eP	Pb	04 25 55.2	-0.7
KTBS	213nm,0.2s			eS	Sb	04 26 18.2	-0.2
ARXS	Arharly 32nm,0.3s	1.81	346	P	Pb	04 25 55.5	-0.7
ARXS	168nm,0.3s			S	Sb	04 26 18.6	-0.3
ARXS	Arharly 32nm,0.3s	1.81	346	eP	Pb	04 25 55.5	-0.7
ARXS	168nm,0.3s			eS	Sb	04 26 18.6	-0.3
KST	Kastek 43nm,0.3s	1.91	288	P	Pb	04 25 57.1	-0.9
KST	55nm,0.6s			S	Sb	04 26 21.5	-0.4
KST	Kastek baz=89	1.91	288	eP	Pb	04 25 57.1	-0.9
KST	baz=89			eS	Sb	04 26 21.5	-0.4
KST	Kastek 43nm,0.3s	1.91	288	eP	Pb	04 25 57.1	-0.9
KST	55nm,0.6s			eS	Sb	04 26 21.5	-0.4
NRN	Naryn baz=41	2.09	241	⇑iP	Pn	04 25 59.6	+1.3
NRN	baz=41			⇑iS	Sb	04 26 26.2	-1.0
KUU	Kurty 14nm,0.2s	2.10	314	Pg	Pb	04 26 00.3	-0.8
KUU	150nm,0.3s			Lg	Lg	04 26 26.9	
KUU	Kurty baz=14	2.10	314	eP	Pb	04 26 00.3	-0.8
KUU	baz=14			eS	Sb	04 26 26.9	-0.2
KUU	Kurty 14nm,0.2s	2.10	314	eP	Pb	04 26 00.3	-0.8
KUU	150nm,0.3s			eS	Sb	04 26 26.9	-0.2
DGS	Degeres 20nm,0.3s	2.11	293	Pg	Pb	04 26 01.1	-0.3
DGS	69nm,0.3s			Lg	Lg	04 26 28.2	
DGS	Degeres baz=93	2.11	293	eP	Pb	04 26 01.1	-0.3
DGS	baz=93			eS	Sb	04 26 28.2	+0.6
DGS	Degeres 20nm,0.3s	2.11	293	eP	Pb	04 26 01.1	-0.3
DGS	69nm,0.3s			eS	Sb	04 26 28.2	+0.6
DJR	Jarkent 51nm,0.2s	2.11	27	Pg	Pb	04 26 00.5	-0.9
DJR	106nm,0.2s			Lg	Lg	04 26 27.2	
DJR	Jarkent 51nm,0.2s	2.11	27	eP	Pb	04 26 00.5	-0.9
DJR	106nm,0.2s			eS	Sb	04 26 27.2	-0.5
TKM2	Tokmak 2 20nm,0.7s	2.14	283	⇑Pn	Pb	04 26 01.0	-1.0
TKM2	103nm,0.5s			⇑Lg	Lg	04 26 29.4	
TKM2	Tokmak 2 baz=84	2.14	283	⇑iP	Pn	04 26 00.2	+1.3
TKM2	baz=84			⇑iS	Sb	04 26 26.9	-1.8
TKM2	Tokmak 2 SNR=36	2.14	283	P	Pb	04 26 01.1	-0.9
KZA	Kyzart baz=62	2.40	262	⇓iP	Pn	04 26 03.5	+0.9
KZA	baz=62			⇓iS	Sn	04 26 32.9	+0.8
KZA	Kyzart SNR=11	2.40	262	P	Pb	04 26 05.1	-1.3
TDK	Taldyqorghan 90nm,0.3s	2.54	360	Pg	Pb	04 26 08.5	-0.1
TDK	100nm,0.3s			Lg	Lg	04 26 41.2	
TDK	Taldyqorghan 90nm,0.3s	2.54	360	eP	Pb	04 26 08.5	-0.1
TDK	100nm,0.3s			eS	Sb	04 26 41.2	+1.3
KBK	Karagaybulak baz=76	2.58	275	⇑iP	Pn	04 26 06.0	+1.0
KBK	baz=76			⇑iS	Sn	04 26 37.6	+1.1
KBK	Karagaybulak SNR=16	2.58	275	P	Pb	04 26 07.8	-1.7
CHMS	Chumysh baz=83	2.77	282	⇑iP	Pn	04 26 08.6	+1.2
CHMS	baz=83			⇑iS	Sn	04 26 41.7	+0.9
KAPS	Kapalarasan 6.5nm,0.2s	2.90	13	Pg	Pb	04 26 14.1	-0.7
KAPS	14nm,0.3s			Lg	Lg	04 26 50.6	
KAPS	Kapalarasan 7.7nm,0.2s	2.90	13	eP	Pb	04 26 14.2	-0.6
KAPS	14nm,0.3s			eS	Sb	04 26 50.7	+0.4
AAK	Ala-Archa 2.2nm,0.5s	2.92	275	⇑Pg	Pb	04 26 14.4	-0.8
AAK	12nm,0.5s			⇓Lg	Lg	04 26 51.9	
AAK	Ala-Archa baz=75	2.92	275	⇓iP	Pn	04 26 10.3	+0.8
AAK	baz=75			⇓iS	Sn	04 26 45.5	+0.8
UCH	Uchtor baz=67	2.92	267	⇑iP	Pn	04 26 10.3	+0.5
UCH	baz=67			⇑iS	Sn	04 26 45.5	+0.4
UCH	Uchtor SNR=7.1	2.92	267	P	Pb	04 26 12.7	-2.6
SGDS	Sogindy 4.9nm,0.2s	2.96	291	Pg	Pb	04 26 15.8	-0.1
SGDS	20nm,0.3s			Lg	Lg	04 26 53.7	
USP	Ospenovka baz=87	3.00	287	⇑iP	Pn	04 26 11.5	+0.9
USP	baz=87			⇑iS	Sn	04 26 47.1	+0.5
USP	Ospenovka SNR=5.9	3.00	287	P	Pg	04 26 55.6	+35
ARLS	Aral baz=61	3.12	260	⇓iP	Pn	04 26 12.8	+0.5
ARLS	baz=61			⇓iS	Sn	04 26 49.9	+0.3
EKS2	Erkin-Say baz=75	3.45	275	⇑iP	Pn	04 26 18.1	+1.3
EKS2	baz=75			⇑iS	Sn	04 26 58.2	+0.5
AML	Almayashu baz=66	3.53	266	⇑eP	Pn	04 26 19.4	+1.2
AML	baz=66			⇑iS	Sn	04 27 00.9	+0.7
MRKS	Merke 2.7nm,0.2s	3.86	276	Pg	Pb	04 26 31.8	+0.7
MRKS	19nm,0.3s			Lg	Lg	04 27 21.0	
MRKS	Merke baz=76	3.86	276	eP	Pb	04 26 31.8	+0.7
MRKS	baz=76			eS	Sb	04 27 21.0	+3.2
MRKS	Merke 2.7nm,0.2s	3.86	276	eP	Pb	04 26 31.8	+0.7
MRKS	19nm,0.3s			eS	Sb	04 27 21.0	+3.2
BTLS	Baital 2.7nm,0.3s	4.09	311	Pg	Pb	04 26 36.2	+1.2
BTLS	8.7nm,0.4s			Lg	Lg	04 27 28.5	
BTLS	Baital baz=11	4.09	311	eP	Pb	04 26 36.3	+1.2
BTLS	baz=11			eS	Sb	04 27 28.5	+3.9
BTLS	Baital 2.7nm,0.3s	4.09	311	eP	Pb	04 26 36.2	+1.2
BTLS	8.7nm,0.4s			eS	Sb	04 27 28.5	+3.9
MAKZ	Makanchi 1.4nm,0.4s	5.03	29	⇓Lg	Lg	04 27 59.5	
MK31	Makanchi Array 0.2nm,0.2s,baz=214,slow=13,SNR=8.8	5.13	31	⇑Pn	Pn	04 26 41.5	+1.7
MK31	0.2nm,0.3s,baz=207,slow=16,SNR=4.2			⇑Pg	Pb	04 26 54.7	+1.9
MK31	0.8nm,0.3s,baz=212,slow=21,SNR=6.3			⇓Sn	Sn	04 27 40.7	+1.7
MK31	0.4nm,0.2s,baz=213,slow=29,SNR=4.6			⇑Lg	Lg	04 28 02.6	
KK31	Karatay Array 1.0nm,0.5s,baz=92,slow=18,SNR=6.6	5.87	279	⇓Pg	Pb	04 27 06.8	+1.4
KK31	2.4nm,0.5s,baz=92,slow=30,SNR=8.1			⇑Lg	Lg	04 28 26.3	

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*ISK **30** 04:38:55.8, 40°.31N×25°.80E, h10^{km}, ML2.1/10*
*ISCJB **30** 04:38:56.3±0.4, 40°.31N±0°.02×25°.79E±0°.03, h7^{km}±4^{km}, Error ellipse: s-maj=4.3km s-min=3.6km az=153.1*
*ATH **30** 04:38:56.5, 40°.32N×25°.81E, h15^{km}±7^{km}, ML1.5/4, Error ellipse: s-maj=8.1km s-min=1.3km az=312.0*
*DDA **30** 04:38:57.0, 40°.29N×25°.88E, h8^{km}±3^{km}, ML2.9*
ISC 30 04:38:56.5±0.9**, 40°.31N**±0°.02×**25°.80E**±0°.03**, h11**^{km}±7^{km}**, n26, σ0^{s}.48**/37**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.14	148	PG	Pg	04 38 59.6	-0.1
GADA				SG	Sg	04 39 01.8	-0.3
SMTH	Samothraki Isl	0.26	308	P	Pg	04 39 02.2	+0.3
SMTH				S	Sg	04 39 06.1	+0.7
SMTH	comp=E,752μm,0.1s			AML	AML	04 39 06.2	
SMTH	comp=N,1113μm,0.2s			AML	AML	04 39 06.5	
ENEZ	Enez	0.50	32	PG	Pg	04 39 06.3	0.0
BOZC	Bozcaada	0.51	157	PG	Pg	04 39 06.1	-0.3
BOZC	Bozcaada	0.51	157	iP	Pg	04 39 06.3	0.0
BOZC				iS	Sg	04 39 13.7	+0.6
BOZC	comp=Z,962nm,0.1s			IAML_P			
ALN	Alexandroupoli	0.61	18	PG	Pg	04 39 08.3	-0.1
ALN				SG	Sg	04 39 17.0	+0.5
ALN	Alexandroupoli	0.61	18	P	Pg	04 39 08.3	-0.1
ALN				S	Sb	04 39 17.3	-0.6
ALN	comp=N,31μm,0.1s			AML	AML	04 39 20.3	
ALN	comp=E,40μm,0.3s			AML	AML	04 39 20.3	
LIA	Limnos Island	0.63	229	P	Pg	04 39 08.8	+0.2
LIA				S	Sb	04 39 18.2	0.0
LIA	comp=N,108μm,0.2s			AML	AML	04 39 20.5	
LIA	comp=E,98μm,0.3s			AML	AML	04 39 20.9	
LPK	Lapseki	0.74	85	PG	Pg	04 39 10.3	-0.4
BAYC	CANAKKALE_Bayr	0.81	135	iP	Pg	04 39 11.5	-0.6
BAYC				iS	Sb	04 39 23.5	+0.1
BAYC	comp=Z,2μm,0.2s			IAML_P			
KESN	Edirne-Kesan	0.84	52	iP	Pb	04 39 13.9	+0.5
KESN				iS	Sb	04 39 25.3	+0.4
KESN	comp=Z,288nm,0.1s			IAML_P			
RDO	Rodhopi	0.86	347	PG	Pg	04 39 12.7	-0.3
THAS	Thassos island	0.88	290	P	Pg	04 39 13.1	-0.3
THAS				S	Sb	04 39 26.0	+0.6
THAS	comp=N,60μm,0.2s			AML	AML	04 39 27.3	
THAS	comp=E,79μm,0.2s			AML	AML	04 39 28.5	
GPNR	Gulpinar-Canak	0.89	163	PG	Pg	04 39 13.1	-0.5
SIGR	SIGRI	1.10	178	PN	Pb	04 39 17.4	-0.1
RKY	Sarkoy-Tekirda	1.11	70	PN	Pb	04 39 17.2	-0.6
SART	Tekirdag	1.12	70	iP	Pn	04 39 18.5	+0.3
SART				iS	Sn	04 39 33.8	+0.2
SART	comp=Z,888nm,0.1s			IAML_P			
AYVA	Ayvalik	1.21	145	iP	Pg	04 39 19.7	-0.1
AYVA				iS	Sn	04 39 36.8	+1.0
AYVA	comp=Z,564nm,0.2s			IAML_P			
KDZ	Kurdzhali	1.37	348	PN	Pn	04 39 20.9	-0.6
OUR	Ouranopolis	1.39	272	PN	Pn	04 39 20.7	-1.1
MRMT	Marmara Adasi	1.40	77	PN	Pn	04 39 21.3	-0.7
GONE	Gonen-Balikesi	1.47	100	PN	Pn	04 39 23.0	+0.1
EDC	Edincik	1.58	88	PN	Pn	04 39 24.9	+0.5
KIRK	Kırklareli	1.77	33	iP	Pb	04 39 28.5	-0.4
CHOS	Chios island	1.93	174	PN	Pn	04 39 29.3	0.0
KCTX	Karacabey (Bur	1.96	91	PN	Pn	04 39 29.3	-0.3

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*DDA **30** 04:50:00.9, 35°.89N×28°.27E, h7^{km}±7^{km}, ML2.8*
*ATH **30** 04:50:02.2, 36°.01N×28°.25E, h59^{km}±2^{km}, ML2.4/2, Error ellipse: s-maj=3.8km s-min=1.6km az=355.0*
*ISCJB **30** 04:50:02.0±0.5, 35°.89N±0°.04×28°.28E±0°.04, h62^{km}±10^{km}, Error ellipse: s-maj=7.0km s-min=5.2km az=165.3*
*ISK **30** 04:50:02.9, 35°.93N×28°.26E, h40^{km}±2^{km}, ML2.7/15*
*HLW **30** 04:50:03.8, 35°.69N×28°.34E, h33^{km}±23^{km}, Md4.0*
*THE **30** 04:50:04.0, 36°.00N×28°.27E, h51^{km}±5^{km}, ML2.3/1, Error ellipse: s-maj=8.2km s-min=0.6km az=346.0*
ISC 30 04:50:02.1±1.2**, 35°.87N**±0°.04×**28°.25E**±0°.04**, h53**^{km}±11^{km}**, n37, σ1^{s}.68**/52**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.36	344	PG	Pn	04 50 12.2	+0.2
ARG				SG	Sn	04 50 17.8	-1.4
ARG	Arkhangelos	0.36	344	P	Pn	04 50 12.3	+0.2
ARG	432nm,0.1s			S	Sn	04 50 19.0	-0.2
ARG	Arkhangelos	0.36	344	P	Pn	04 50 12.3	+0.2
ARG				S	Sn	04 50 19.3	+0.1
ARG	comp=E,1079μm,0.2s			AML	AML	04 50 20.4	
ARG	comp=N,627μm,0.1s			AML	AML	04 50 20.5	
MRSB	Marmaris-Mugla	0.85	357	PG	Pn	04 50 18.1	+0.2
MRSB				SG	Sn	04 50 29.3	-0.2
KARP	Karpathos	0.94	251	PG	Pn	04 50 21.3	+2.1
KARP	Karpathos	0.94	251	P	Pn	04 50 21.2	+2.1
KARP	Karpathos	0.94	251	P	Pn	04 50 21.2	+2.1
KARP				S	Sn	04 50 34.6	+3.0
DALY	Dalyan (Mula)	1.00	19	PG	Pn	04 50 20.3	+0.4
DALY				SG	Sn	04 50 33.0	-0.1
DALY	Dalyan (Mula)	1.00	19	iP	Pn	04 50 20.0	+0.1
DALY	comp=Z,457nm,0.2s			IAML_P			
DATC	Datca-Mugla	1.01	332	PG	Pn	04 50 20.6	+0.6
DAT	Datca	1.02	328	PG	Pn	04 50 20.5	+0.3
DAT				SG	Sn	04 50 33.9	+0.3
DAT	Datca	1.02	328	iP	Pn	04 50 21.1	+0.9
DAT				iS	Sn	04 50 33.5	-0.1
DAT	comp=Z,363nm,0.2s			IAML_P			
FETY	Fethiye	1.02	41	PG	Pn	04 50 20.1	-0.1
TURN	Turunc	1.05	16	PG	Pn	04 50 19.1	-1.4
TURN				SG	Sn	04 50 30.7	-3.4
TURN	Turunc	1.05	16	iP	Pn	04 50 19.3	-1.2
TURN				iS	Sn	04 50 31.9	-2.2
TURN	comp=Z,1μm,0.1s			IAML_P			
KSL	Kastellorizon	1.12	75	P	Pn	04 50 22.3	+0.9
KSL				S	Sn	04 50 36.3	+0.4
KSL	Kastellorizon	1.12	75	P	Pn	04 50 22.4	+0.9
KSL				S	Sn	04 50 36.7	+0.8
KSL	comp=E,478μm,0.4s			AML	AML	04 50 38.2	
KSL	comp=N,214μm,0.3s			AML	AML	04 50 38.3	
AKAS	Kas	1.16	71	PN	Pn	04 50 22.9	+0.7
AKAS	Kas	1.16	71	iP	Pn	04 50 23.8	+1.7
AKAS				iS	Sn	04 50 39.0	+1.9
AKAS	comp=Z,1μm,0.1s			IAML_P			
YER	Yerkesik	1.27	1	PN	Pn	04 50 23.9	+0.3
BODT	Bodrum	1.41	328	PN	Pn	04 50 25.4	-0.1
ELL	Elmali	1.61	56	PN	Pn	04 50 29.3	+1.1
TAVA	DENIZLI_Tavas	1.69	18	iP	Pn	04 50 30.4	+1.1
TAVA	comp=Z,342nm,0.1s			IAML_P			
AYDN	Tasoluk	1.82	351	iP	Pn	04 50 32.9	+1.9
AYDN	comp=Z,482nm,0.1s			IAML_P			
ZKR	Zakros	1.82	246	PN	Pn	04 50 33.2	+2.2
ANAF	Anafi Island	2.06	284	P	Pn	04 50 35.5	+1.1
AYDB	Zeytinkoy-Aydi	2.10	352	PN	Pn	04 50 35.3	+0.4
AMGA	Amorgos Island	2.13	298	P	Pn	04 50 36.2	+0.9
SMG	Samos	2.16	329	P	Pn	04 50 35.7	0.0
LAST	Lasithi	2.37	254	P	Pn	04 50 41.4	+2.9
APE	Apeiranthos	2.50	300	PN	Pn	04 50 41.1	+0.8
APE	Apeiranthos	2.50	300	P	Pn	04 50 41.0	+0.7
IDI	Anoyia	2.80	259	P	Pn	04 50 45.9	+1.5
SLUM	Salum baz=213	5.04	211	P	Pn	04 51 16.3	+1.2
SLUM	baz=213			S	Sn	04 52 08.9	-3.2
RSH	baz=134	6.70	135	P	Pn	04 51 38.0	+0.1
SUZ	Suez baz=145	7.14	146	P	Pn	04 51 44.6	+0.7
HFRF	Wahat Farafira baz=181	8.69	180	P	Pn	04 52 06.2	+1.1
HFRF	baz=181			S	Sn	04 53 35.2	-6.5

IDC 30 04:52:19.4±6.9**, 6°.10S**×**149°.70E, h91**^{km}±45^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.3**/31**, mbtmp4.2**/4**, Error ellipse: s-maj=76.1km s-min=50.0km az=131.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 16nm,0.3s,baz=43,slow=6.8,SNR=20	4.14	217	P	Pn	04 53 20.5	+0.1
PMG	35nm,0.3s,baz=79,slow=17,SNR=11			S	Sn	04 54 08.6	+1.0
WRA	Warramunga Arr 5.4nm,0.3s,baz=54,slow=11,SNR=69	20.30	226	P	P	04 56 47.6	-0.6
ASAR	Alice Springs 0.9nm,0.3s,baz=55,slow=9.2,SNR=13	23.15	219	P	P	04 57 17.3	-1.0
STKA	Stephens Creek 1.3nm,0.4s,baz=15,slow=12,SNR=7.0	26.74	195	P	P	04 57 51.7	+1.1

GUC 30 04:53:28.9±0.4**, 36°.14S**×**73°.57W, h32**^{km}±4^{km}**, ML3.7, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COCH	Cobquecura	0.63	89	⇓iP	Pb	04 53 40.6	-1.0
COCH				iS	Sb	04 53 49.1	-1.1
CCSP	San Pedro de C	0.79	152	eP	Pn	04 53 42.9	-1.0
CCSP				iS	Sn	04 53 53.7	-1.0
CCSP	comp=E,12μm,0.5s			IAML		04 53 54.9	
CCHI	Chillan	1.29	111	⇑iP	Pn	04 53 50.8	+0.1
CCHI				iS	Sn	04 54 07.0	+0.2
CCHI	comp=E,2μm,0.5s			IAML		04 54 14.6	
GO05	Huala	1.75	50	eP	Pn	04 53 57.8	+0.7
GO05				iS	Sn	04 54 20.1	+1.8
GO05	comp=E,451nm,0.3s			IAML		04 54 30.2	
FCH	Farellones	3.90	45	⇑eP	Pn	04 54 28.3	+1.4

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*ISCJB **30** 04:55:25.4±0.3, 24°.16N±0°.02×122°.51E±0°.01, h38^{km}±13^{km}, Error ellipse: s-maj=3.2km s-min=2.2km az=172.7*
*JMA **30** 04:55:25.4±0.1, 24°.12N×122°.51E, h37^{km}±3^{km}, M2.2*
*TAP **30** 04:55:25.1, 24°.19N×122°.50E, h47^{km}±1^{km}, ML3.3, D*
ISC 30 04:55:25.4±1.2**, 24°.17N**±0°.03×**122°.52E**±0°.02**, h46**^{km}±12^{km}**, n88, σ1^{s}.36**/164**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.48	54	P	Pn	04 55 36.2	0.0
JYNG				S	Sn	04 55 43.4	-0.5
EOS1	EOS1 baz=316	0.52	317	P	Pn	04 55 37.2	+0.6
EOS1	baz=316			S	Sn	04 55 46.5	+1.8
YOJ	Yonaguni jima baz=58	0.54	57	P	Pn	04 55 36.9	0.0
YOJ	baz=58			eS	Sn	04 55 44.4	-0.7
YOJ	Yonaguni jima	0.54	57	P	Pn	04 55 36.9	0.0
YOJ				S	Sn	04 55 44.8	-0.3
NANB	Nanao baz=289	0.74	290	P	Pn	04 55 39.9	+0.3
NANB	baz=289			eS	Sn	04 55 50.5	+0.7
TWC	Suao baz=305	0.75	306	P	Pn	04 55 39.9	+0.2
TWC	baz=305			eS	Sn	04 55 50.1	+0.1
ENA	Nanau baz=289	0.75	290	P	Pn	04 55 39.8	+0.1
ENA	baz=289			eS	Sn	04 55 49.5	-0.6
NACB	Ninganchiao baz=268	0.84	271	P	Pn	04 55 40.6	-0.3
NACB	baz=268			eS	Sn	04 55 51.4	-0.8
TWD	Chiawan baz=262	0.84	264	P	Pn	04 55 41.0	0.0
TWD	baz=262			eS	Sn	04 55 51.3	-1.0
HWA	Hwalien baz=255	0.85	257	eS	Sn	04 55 52.2	-0.3
NTC	Toucheng baz=317	0.93	318	eP	Pn	04 55 42.1	+0.1
NTC	baz=317			eS	Sn	04 55 54.2	0.0
ETLH	Xiulin Townshi baz=271	0.94	273	P	Pn	04 55 42.4	0.0
ETLH	baz=271			S	Sn	04 55 54.5	-0.3
TWE	Neicheng baz=305	0.95	306	P	Pn	04 55 42.9	+0.6
TWE	baz=305			eS	Sn	04 55 54.9	+0.1
NDT	Datong Townshi baz=294	1.01	295	P	Pn	04 55 44.0	+0.7
NDT	baz=294			eS	Sn	04 55 56.4	0.0
TIPB	Shuangxi baz=321	1.02	322	eP	Pn	04 55 43.1	-0.2
TIPB	baz=321			S	Sn	04 55 56.2	-0.3
ESL	Shilin baz=248	1.05	251	eP	Pn	04 55 43.6	-0.2
ESL	baz=248			eS	Sn	04 55 56.9	-0.4
NNSB	Datong baz=283	1.07	284	P	Pn	04 55 44.4	+0.3
NNSB	baz=283			eS	Sn	04 55 57.9	+0.1
NNS	Nan Shan baz=283	1.08	285	eP	Pn	04 55 43.9	-0.3
NNS	baz=283			eS	Sn	04 55 57.4	-0.7
EGFH	Guangfu baz=242	1.11	244	eP	Pn	04 55 44.5	-0.1
EGFH	baz=242			eS	Sn	04 55 58.6	-0.2
IRIF	Iriomote-Funau	1.12	81	P	Pn	04 55 45.0	+0.3
IRIF				S	Sn	04 55 59.8	+0.9
NWF	Wu-fen Shan baz=323	1.12	323	eP	Pn	04 55 44.9	+0.2
NWF	baz=323			eS	Sn	04 55 59.5	+0.4
WFSB	Wu-fen Shan baz=323	1.12	323	P	Pn	04 55 45.0	+0.3
WFSB	baz=323			S	Sn	04 55 58.4	-0.6
WHF	Hehuan Shan baz=267	1.14	269	P	Pn	04 55 45.6	+0.3
WHF	baz=267			S	Sn	04 55 60.0	-0.1

YHNB	Yeheng	1.15	296	P	Pn	04 55 46.1	+0.9
	baz=295						
YHNB				S	Sn	04 55 59.5	-0.4
	baz=295						
NSK	Sanguang	1.17	296	P	Pn	04 55 46.3	+0.8
	baz=295						
NSK				S	Sn	04 56 00.8	+0.5
	baz=295						
TWA	Mucha	1.17	314	*e*P	Pn	04 55 45.8	+0.4
	baz=313						
TWA				*e*S	Sn	04 55 59.9	-0.4
	baz=313						
HATJ	Hateruma jima	1.18	95	P	Pn	04 55 46.8	+1.3
HATJ				S	Sn	04 56 01.8	+1.3
HGSD	Ruisui	1.21	236	P	Pn	04 55 46.1	+0.3
	baz=234						
HGSD				*e*S	Sn	04 55 59.6	-1.5
	baz=234						
CHGB	Renai	1.23	265	P	Pn	04 55 46.8	+0.4
	baz=263						
CHGB				S	Sn	04 56 00.9	-1.1
	baz=263						
TDCB	Techi	1.24	274	P	Pn	04 55 47.8	+1.3
	baz=272						
TDCB				*e*S	Sn	04 56 01.8	-0.3
	baz=272						
YM01	YM01	1.30	319	P	Pn	04 55 47.0	-0.2
	baz=318						
YM01				S	Sn	04 56 02.7	-0.7
	baz=318						
YM10	YM10	1.31	319	P	Pn	04 55 47.5	+0.2
	baz=318						
YM10				*e*S	Sn	04 56 03.6	-0.2
	baz=318						
YM05	YM05	1.31	319	*e*P	Pn	04 55 47.0	-0.5
	baz=318						
YM05				S	Sn	04 56 02.2	-1.7
	baz=318						
VWDT	VWDT	1.32	252	P	Pn	04 55 48.1	+0.7
	baz=250						
VWDT				S	Sn	04 56 03.4	-0.5
	baz=250						
YM04	YM04	1.32	318	P	Pn	04 55 47.2	-0.3
	baz=317						
YM04				*e*S	Sn	04 56 03.5	-0.5
	baz=317						
YULB	Yu-li	1.36	236	P	Pn	04 55 48.1	+0.1
	baz=234						
YULB				*e*S	Sn	04 56 03.4	-1.4
	baz=234						
JKRS	Kuro-shima	1.36	87	P	Pn	04 55 49.1	+1.1
JKRS				S	Sn	04 56 06.5	+1.6
TWF1	Yuli	1.38	234	P	Pn	04 55 48.4	+0.1
	baz=232						
TWF1				S	Sn	04 56 04.0	-1.4
	baz=232						
TWY	Chenhua	1.38	323	S	Sn	04 56 06.1	+0.8
	baz=323						
LIOB	Emei	1.45	289	P	Pn	04 55 50.1	+1.0
	baz=288						
LIOB				S	Sn	04 56 08.5	+1.5
	baz=288						
NSTT	Nanjuang	1.46	289	*e*P	Pn	04 55 50.8	+1.5
	baz=287						
NSTT				S	Sn	04 56 09.1	+1.9
	baz=287						
DPDB	Guoxing	1.46	265	P	Pn	04 55 49.5	+0.1
	baz=263						
DPDB				S	Sn	04 56 07.8	+0.5
	baz=263						
SSLB	Suanglung	1.48	255	P	Pn	04 55 50.4	+0.8
	baz=254						
SSLB				S	Sn	04 56 07.8	0.0
	baz=254						
JIJ	Ishigaki jima	1.50	82	P	Pn	04 55 50.3	+0.5
JIJ				S	Sn	04 56 08.4	+0.2
CHKT	Chengkung	1.50	225	*e*P	Pn	04 55 49.2	-0.7
	baz=223						
CHKT				S	Sn	04 56 05.5	-2.7
	baz=223						
PCYT	Pengchaiyu	1.51	345	*e*P	Pn	04 55 49.4	-0.7
	baz=345						
PCYT				*e*S	Sn	04 56 07.1	-1.4
	baz=345						
TYC	Yuchr	1.54	260	P	Pn	04 55 51.5	+1.1
	baz=259						
TYC				*e*S	Sn	04 56 09.4	+0.1
	baz=259						
YUS	Yu-Shan	1.58	245	*e*P	Pn	04 55 52.4	+0.9
	baz=243						
YUS				*e*S	Sn	04 56 10.4	-0.7
	baz=243						
WHYT	Xinyi Township	1.59	253	*e*P	Pn	04 55 52.7	+1.5
	baz=251						
WHYT				*e*S	Sn	04 56 11.4	+0.8
	baz=251						
WJS	Zhushan	1.67	258	P	Pn	04 55 54.6	+2.4
	baz=257						
WJS				S	Sn	04 56 16.7	+4.2
	baz=257						
TCU	Taichung	1.68	270	S	Sn	04 56 15.3	+2.6
	baz=268						
ELDTW	Lidau	1.69	235	P	Pn	04 55 52.6	0.0
	baz=233						
ELDTW				*e*S	Sn	04 56 11.7	-1.3
	baz=233						
JISG	Ishigakijimahi	1.69	75	P	Pn	04 55 52.4	0.0
JISG				S	Sn	04 56 13.3	+0.4
WNT	Mingjian	1.70	261	*e*P	Pn	04 55 54.4	+1.8
	baz=259						
WNT				*e*S	Sn	04 56 15.0	+1.8
	baz=259						
CHN5	Tsauling	1.78	252	P	Pn	04 55 55.5	+1.8
	baz=250						
CHN5				S	Sn	04 56 17.0	+1.8
	baz=250						
WCHH	Zhanghua	1.79	268	*e*P	Pn	04 55 53.5	-0.3
	baz=266						
WCHH				*e*S	Sn	04 56 17.6	+2.2
	baz=266						
WGK	Gukeng	1.85	255	*e*S	Sn	04 56 19.5	+2.6
	baz=254						
WDLH	Douliu	1.87	256	P	Pn	04 55 57.2	+2.2
	baz=254						
WDLH				S	Sn	04 56 19.7	+2.3
	baz=254						
TWGBT	Beinan	1.88	225	*e*P	Pn	04 55 54.7	-0.4
	baz=223						
TWGBT				*e*S	Sn	04 56 15.4	-2.3
	baz=223						
TWG	Pinlang	1.89	225	*e*P	Pn	04 55 54.8	-0.3
	baz=223						
TWG				S	Sn	04 56 15.5	-2.3
	baz=223						
TTN	Taitung	1.89	222	*e*S	Sn	04 56 16.7	-1.1
	baz=220						
STYT	Tauyuan	1.90	239	*e*P	Pn	04 55 55.7	+0.3
	baz=237						
STYT				*e*S	Sn	04 56 18.0	-0.1
	baz=237						
TPUB	Ta-pu	1.93	244	P	Pn	04 55 57.9	+2.1
	baz=242						
TPUB				S	Sn	04 56 21.2	+2.2
	baz=242						
CHN4	Tsaushan	1.94	246	P	Pn	04 55 58.3	+2.4
	baz=244						
CHN4				S	Sn	04 56 21.8	+2.7
	baz=244						
WTP	Ta-pu	1.97	243	P	Pn	04 55 58.5	+2.1
	baz=241						
WTP				S	Sn	04 56 22.8	+2.9
	baz=241						
RLNB	Erlin	1.99	262	*e*S	Sn	04 56 22.3	+2.0
	baz=261						
CHY	Chiayi	2.03	251	*e*S	Sn	04 56 24.1	+2.9
	baz=249						
JTJ	Tarama	2.05	76	P	Pn	04 55 57.5	+0.1
JTJ				*e*S	Sn	04 56 22.1	+0.4
TWK	Hsinying	2.06	245	P	Pn	04 56 00.3	+2.6
	baz=243						
TWK				*e*S	Sn	04 56 25.0	+2.8
	baz=243						
CHN1	Nanshi	2.07	242	P	Pn	04 56 00.1	+2.4
	baz=241						
CHN1				S	Sn	04 56 24.5	+2.2
	baz=241						
SLGT	Liugui	2.08	236	*e*P	Pn	04 55 59.6	+1.8
	baz=234						
SLGT				*e*S	Sn	04 56 24.5	+2.1
	baz=234						
ECL	Taimali	2.12	223	*e*P	Pn	04 55 57.9	-0.5
	baz=221						
ECL				*e*S	Sn	04 56 21.6	-2.0
	baz=221						
WSF	Szhu	2.17	256	*e*P	Pn	04 55 58.0	-1.0
	baz=255						
WSF				*e*S	Sn	04 56 25.1	+0.6
	baz=255						
SSD	Sandimen	2.24	231	*e*P	Pn	04 56 02.1	+2.2
	baz=229						
SSD				*e*S	Sn	04 56 27.8	+1.4
	baz=229						
LAY	Lan-yu	2.30	203	*e*P	Pn	04 55 59.4	-1.5
	baz=202						
LAY				*e*S	Sn	04 56 25.1	-2.8
	baz=202						
MASBT	Mashibuluo	2.32	229	*e*P	Pn	04 56 00.5	-0.6
	baz=227						
MASBT				*e*S	Sn	04 56 27.8	-0.7
	baz=227						
TAW	Tawu	2.34	220	*e*P	Pn	04 56 00.8	-0.6
	baz=218						
TAW				*e*S	Sn	04 56 26.8	-2.1
	baz=218						
EAST	Anshuo	2.35	221	*e*P	Pn	04 56 01.7	+0.2
	baz=220						
EAST				*e*S	Sn	04 56 27.7	-1.5
	baz=220						
SCZT	Fangliau	2.50	225	*e*P	Pn	04 56 05.6	+2.0
	baz=223						
SCZT				*e*S	Sn	04 56 35.0	+2.2
	baz=223						
TWKBT	Hengchun	2.72	216	*e*S	Sn	04 56 37.7	-0.5
	baz=214						
WDGT	Dungji	2.77	252	*e*P	Pn	04 56 08.2	+0.9
	baz=250						
WDGT				*e*S	Sn	04 56 37.5	-2.0
	baz=250						
PHUB	P'eng-hu	2.77	257	*e*S	Sn	04 56 38.5	-1.1
	baz=255						
PNG	Penghu	2.78	258	P	Pn	04 56 08.0	+0.6
	baz=256						
PNG				*e*S	Sn	04 56 39.9	+0.3
	baz=256						
VCHM	Qimei	2.99	252	*e*S	Sn	04 56 42.3	-2.5
	baz=250						
MATB	Ma-tsu	3.05	311	*e*P	Pn	04 56 10.4	-0.8
	baz=310						
MATB				*e*S	Sn	04 56 43.0	-3.5
	baz=310						
PTMZ	Houxiangcun	3.21	286	P	Pn	04 56 13.4	0.0
	baz=285						
PTMZ				*e*S	Sn	04 56 47.6	-2.8
	baz=285						
LYJJ	Jianjiangzhen	3.44	314	*e*S	Sn	04 56 54.1	-1.9
	baz=313						
ZPLA	Ao Xicun	4.36	268	*e*P	Pn	04 56 28.9	-0.2
	baz=266						

IDC ***30*** *04:59:08.2±0.7, 5°.17S×151°.97E, h41^{km}±5^{km}, mb4.1/14, mb1 4.4/15, mb1mx4.2/28, mbtmp4.4/15, ML2.9/1, MS3.8/16, Ms1 3.9/16, ms1mx3.7/28, Error ellipse: s-maj=17.9km s-min=10.7km az=118.0*

ISCJB ***30*** *04:59:08.4±0.9, 5°.29S±0°.04×151°.92E±0°.05, h51^{km}±8^{km}, mb4.7/43, MS3.9/20, Error ellipse: s-maj=9.7km s-min=5.9km az=27.3*

NEIC ***30*** *04:59:09.1±2.1, 5°.28S×151°.96E, h45^{km}±5^{km}, mb4.8/33, Error ellipse: s-maj=12.9km s-min=8.2km az=116.0*

BJI ***30*** *04:59:09.0±0.0, 5°.18S×151°.90E, h50^{km}, mb4.7/25, mB4.9/21, Ms4.5/9, Ms7 4.2/7*

GCMT ***30*** *04:59:11.1±0.4, 5°.49S±0°.03×152°.00E±0°.03, h45^{km}±1^{km}, MW4.9/48, Moment Tensor Solution. s37,c47; s48,c63; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.02±.23; M$_{\theta\theta}$-2.89±.13; M$_{\phi\phi}$-0.13±.15; M$_{r\theta}$0.78±.11; M$_{\theta\phi}$-1.00±.13; M$_{\phi r}$-0.22±.11; Best double couple: M$_0$3.22200×10^{16} NP1:φ$_s$80.00000°, δ52.00000°, λ101.00000°. NP2: φ$_s$243.00000°, δ40.00000°, λ77.00000°. Principal axes: T 3.1590, Plg80.0000°, Azm37.0000°; N 0.1270, Plg8.0000°, Azm254.0000°; P -3.2860, Plg6.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***30*** *04:59:12.8±0.4, 5°S±5°×15°2E±°, h60^{km}±6^{km}, M5.1/11, mB5.3/1, mb4.9/11, MLv5.2/2, Mw(mB)4.7/1*

ISC 30 04:59:08.4±0.5, **5°.30S**±0°.04×**152°.02E**±0°.06, **h41**^{km}±4^{km}, **h41**^{km}**:pP-P, n91,** σ**1^{s}.56**/99, **mb4.7**/42, **MS3.9**/20, **1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.11	7	*e*Pn	Pn	04 59 29.5	+2.0
RABL				*e*Sn	Sn	04 59 41.1	-0.5
MANU	Manus Island	5.66	305	*e*Pn	Pn	05 00 31.6	+1.6
PMG	Port Moresby	6.32	229	P	Pn	05 00 41.4	+2.3
	15nm,0.3s,baz=32,slow=10,SNR=21						
PMG				S	Sn	05 01 52.0	+2.0
	36nm,0.3s,baz=122,slow=9.5,SNR=8.0						
PMG	Port Moresby	6.32	229	*e*Pn	Pn	05 00 41.5	+2.5
PMG				*e*Sn	Sn	05 01 50.8	+0.8
HNR	Honiara	8.87	118	LR	LR	05 04 57.7	
	comp=Z,417nm,19.9s,baz=302,slow=39						
COEN	Coen	12.24	225	*e*Pn	Pn	05 01 58.2	-2.1
CTA	Charters Tower	15.73	200	LR	LR	05 08 22.9	
	comp=Z,578nm,21.5s,baz=30,slow=35						
SRPI	Serui, Papua	16.11	282	P	P	05 03 04.3	+9.4
FAKI	Fak Fak	19.86	276	*e*P	Pn	05 03 37.9	-0.2
	69nm,1.3s						
EIDS	Eidsvold	19.98	182	*e*P	P	05 03 38.7	+1.4
	28nm,1.0s						
SAUI	Saumlaki	20.75	261	*e*P	P	05 03 45.7	-0.1
	427nm,0.9s						
SIJI	Sorong	21.18	281	P	P	05 03 50.8	+0.3
	6.4nm,0.5s,baz=64,slow=21,SNR=5.9						
DZM	Mont Dzumac	21.75	141	*e*P	P	05 04 00.6	+4.0
	16nm,0.7s						
DZM				*e*S	S	05 07 51.5	-3.6
	747nm,26.2s						
DZM				*e*LR	LR	05 09 14.7	
	comp=Z,993nm,23.4s						
DZM	Mont Dzumac	21.75	141	P	P	05 03 59.2	+2.7
	9.5nm,0.8s,baz=322,slow=9.7,SNR=6.7						
DZM				LR	LR	05 11 29.6	
	comp=Z,629nm,20.3s,baz=302,slow=34						
DZM	Mont Dzumac	21.75	141	*e*P	P	05 03 59.2	+2.7
	34nm,1.3s						
MTN	Manton Dam	21.93	249	*e*P	P	05 03 58.5	0.0
	96nm,1.4s						
MTN				*e*S	S	05 07 57.3	-1.4
WRAB	Tennant Creek	22.52	228	*e*P	P	05 04 04.7	-0.2
	68nm,0.8s						
WB2	Warramunga Arr	22.53	228	*e*P	P	05 04 05.0	+0.1
	67nm,0.8s						
WB2				*e*S	S	05 08 08.3	-1.2
WR1	Warramunga Arr	22.53	228	*e*P	P	05 04 05.1	+0.1
WR1				*e*S	S	05 08 07.4	-2.2
WRA	Warramunga Arr	22.53	228	P	P	05 04 05.1	+0.1
	20nm,0.6s,baz=55,slow=9.2,SNR=56						
WRA				S	S	05 08 07.4	-2.2
	7.1nm,1.0s,baz=50,slow=14,SNR=6.7						
AS31	Alice Springs	25.26	222	*e*P	P	05 04 31.6	+0.6
	26nm,1.1s						
AS31				*e*S	S	05 08 53.9	-0.1
AS31				*e*ScP	ScP	05 11 39.6	-0.1
ASAR	Alice Springs	25.26	222	P	P	05 04 31.4	+0.4
	8.7nm,0.8s,baz=53,slow=9.6,SNR=37						
ASAR				pP	pP	05 04 43.5	+1.3
	53nm,0.8s,baz=57,slow=8.9,SNR=37						
ASAR				S	S	05 08 55.9	+1.8
	1.1nm,1.0s,baz=35,slow=19,SNR=2.9						
ASAR				ScP	ScP	05 11 39.6	-0.1
	1.3nm,1.0s,baz=68,slow=2.8,SNR=4.7						
ASAR				LR	LR	05 14 39.5	
	comp=Z,218nm,21.0s,baz=58,slow=37						
LHI	Lord Howe Isla	26.91	167	*e*P	P	05 04 43.9	-1.8
	185nm,1.4s						
STKA	Stephens Creek	28.19	199	P	P	05 04 56.3	-0.9
	1.3nm,0.6s,baz=8.1,slow=14,SNR=3.3						
STKA				pP	pP	05 05 08.3	+0.3
	11nm,1.2s,baz=33,slow=8.6,SNR=5.7						
STKA				LR	LR	05 16 15.7	
	comp=Z,291nm,20.1s,baz=23,slow=36						
STKA	Stephens Creek	28.19	199	*e*P	P	05 04 56.3	-0.9
	3.9nm,1.2s						
WAKE	Wake Island	28.36	30	*e*P	P	05 04 58.9	+0.1
	78nm,1.0s						
DAV	Davao City (W)	29.11	295	LR	LR	05 15 54.6	
	comp=Z,184nm,18.7s,baz=122,slow=35						
BBOO	Buckleboo	31.16	207	*e*P	P	05 05 22.6	-0.9
	10nm,1.1s						
FORT	Forrest	33.91	219	*e*P	P	05 05 43.8	-3.9
	20nm,0.8s						
JAGI	Jajag, Banyuwa	37.72	263	*e*P	P	05 06 18.6	-1.8
	26nm,1.0s						
QRZ	Quartz Range	39.87	155	*e*P	P	05 06 37.0	-1.1
	11nm,1.1s						
JHJ	Hachijo jima 2	39.93	344	LR	LR	05 21 14.7	
	comp=Z,259nm,21.6s,baz=110,slow=33						
GIRL	Giralia	40.35	241	*e*P	P	05 06 41.9	-0.5
	115nm,1.3s						
MORW	Morawa	41.43	231	*e*P	P	05 06 49.2	-2.0
	21nm,1.3s						
CISI	Cisompet, Garu	43.97	265	*e*PcP	PcP	05 08 58.4	+0.8
KSRS	Korea Array	48.10	334	LR	LR	05 26 36.9	
	comp=Z,78nm,20.8s,baz=125,slow=34						
NJ2	Nanjing	48.75	322	*e*P	P	05 07 51.0	+1.8
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
USRK	Ussuriysk Ar.	52.47	342	P	P	05 08 14.7	-2.4
	2.1nm,0.8s,baz=157,slow=7.8,SNR=3.1						
XAN	Xi'an	56.45	317	P	P	05 08 45.5	-0.8
XAN				pP	pP	05 08 58.8	+0.2
XAN				S	S	05 16 38.5	+3.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,64nm,6.9s						
XAN				LR	LR		
	comp=N,110nm,23.5s						
XAN				LR	LR		
	comp=E,110nm,28.2s						
XAN				LR	LR		
	comp=Z,140nm,18.4s						
KMI	Kunming	56.62	305	P	P	05 08 49.3	+1.4
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI				pmax	pmax		
	comp=Z,110nm,5.7s						
KMI				LR	LR		
	comp=N,110nm,22.0s						
KMI				LR	LR		
	comp=E,77nm,23.8s						
KLR	Kul'dur	57.11	344	LR	LR	05 30 39.1	
	comp=Z,106nm,21.7s,baz=184,slow=33						
CM31	Chiang Mai Arr	57.39	296	*e*P	P	05 08 53.8	+0.6
CM31				*e*pP	pP	05 09 05.1	-0.4
CMAR	Chiang Mai Arr	57.39	296	P	P	05 08 53.8	+0.6
	1.6nm,0.5s,baz=108,slow=5.6,SNR=11						
CMAR				pP	pP	05 09 05.1	-0.4
	5.2nm,1.0s,baz=114,slow=5.1,SNR=3.7						
CMAR				LR	LR	05 33 46.3	
	comp=Z,31nm,18.2s,baz=118,slow=36						
PPT	Papeete	58.32	107	LR	LR	05 29 54.7	
	comp=Z,60nm,18.3s,baz=286,slow=32						
PPT2	Papeete2	58.32	107	*e*LR	LR	05 26 08.2	
	comp=Z,84nm,23.8s						
PETK	Petropavlovsk-	58.38	4	LR	LR	05 30 41.5	
	comp=Z,86nm,21.0s,baz=195,slow=32						
CD2	Chengdu	58.47	311	*e*P	P	05 09 01.5	+0.9
HHC	Hu-ho-hao-te	59.00	325	P	P	05 09 07.3	+3.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,13nm,5.7s						
TBI	Tubuai	59.06	114	*e*LR	LR	05 26 22.5	
	comp=Z,262nm,31.0s						
MA2	Magadan	64.68	359	LR	LR	05 37 10.6	
	comp=Z,57nm,19.3s,baz=220,slow=35						
GTA	Gaotai	65.50	318	*e*P	P	05 09 47.8	+0.1
GTA				pP	pP	05 10 00.3	+0.2
GTA				sP	sP	05 10 05.5	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,42nm,5.4s						
GTA				LR	LR		
	comp=N,84nm,21.5s						
GTA				LR	LR		
	comp=E,77nm,23.8s						
GTA				LR	LR		
	comp=Z,130nm,22.1s						
SONA0	Songino Array	66.33	328	*e*P	P	05 09 52.6	-0.4
SONM	Songino Array	66.33	328	P	P	05 09 52.6	-0.4
	1.5nm,0.5s,baz=134,slow=5.2,SNR=7.7						
SONM				LR	LR	05 37 20.1	
	comp=Z,103nm,20.8s,baz=118,slow=35						
CASY	Casey	67.31	197	*e*P	P	05 09 59.7	+1.0
	5.8nm,1.0s						
WMQ	Urumqi	75.58	318	*e*P	P	05 10 51.8	+2.7
WMQ				pP	sP	05 11 06.0	-0.4
WMQ				sP	PcP	05 11 13.3	+11
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ				LR	LR		
	comp=N,930nm,28.8s						
WMQ				LR	LR		
	comp=E,750nm,29.0s						
WMQ				LR	LR		
	comp=Z,190nm,29.2s						
KDAK	Kodiak Island	76.97	27	LR	LR	05 39 29.3	
	comp=Z,40nm,19.3s,baz=270,slow=32						
MK32	Makanchi Array	80.19	319	*e*P	P	05 11 13.4	-1.1
MKAR	Makanchi Array	80.19	319	P	P	05 11 13.4	-1.1
	1.5nm,0.9s,baz=101,slow=6.3,SNR=8.1						
ZAA0	Zalesovo Array	81.14	327	*e*P	P	05 11 19.0	-0.4
	2.1nm,0.7s						
ZALV	Zalesovo Beam	81.14	327	P	P	05 11 17.4	-2.0
	2.6nm,0.7s,baz=108,slow=4.8,SNR=8.6						
ZAA1	Zalesovo Array	81.14	327	*e*P	P	05 11 17.4	-2.0
ILAR	Eielson Array	82.91	22	P	P	05 11 28.0	-0.6
	1.4nm,0.7s,baz=256,slow=4.5,SNR=16						
ILAR				pP	pP	05 11 41.2	+0.1
	0.7nm,0.6s,baz=248,slow=5.2,SNR=4.6						
ILB	Eielson Array	82.91	22	*e*P	P	05 11 30.6	+2.1
	1.9nm,0.8s						
ILB				*e*pP	pP	05 11 41.2	+0.1
KURK	Kurchatov	83.68	322	*e*P	P	05 11 32.4	-0.3
	4.4nm,0.4s						
QSPA	South Pole Qui	84.67	180	*e*P	P	05 11 38.2	+0.5
	13nm,1.0s						
MAW	Mawson	84.81	203	P	P	05 11 38.7	+0.5
	4.3nm,0.7s,baz=112,slow=4.6,SNR=18						
MAW	Mawson	84.81	203	*e*P	P	05 11 38.9	+0.7
	1.4nm,0.9s						
BRVK	Borovoye	89.24	323	*e*P	P	05 12 01.1	+1.1
	3.3nm,1.0s						
PINE	Pine Mountain	91.49	46	*e*P	P	05 12 11.9	+0.9
	7.6nm,1.0s						
PINE				*e*pP	pP	05 12 24.3	+1.2
MOD	Modoc Plateau	91.77	48	*e*P	P	05 12 13.5	+1.3
	7.1nm,1.1s						
SYO	Syowa Base	92.94	199⇓	*e*X	P	05 12 14.0	-2.8
NV01	Mina Array Sit	93.00	52	*e*P	P	05 12 19.2	+1.1
NVAR	Mina Array Bea	93.00	52	P	P	05 12 19.2	+1.1
	1.8nm,0.8s,baz=253,slow=6.7,SNR=14						
NVAR				LR	LR	05 46 08.7	
	comp=Z,109nm,22.0s,baz=236,slow=30						
NV11	Mina Array Sit	93.12	52	*e*P	P	05 12 20.2	+1.7
	0.3nm,1.1s						
J08A	Circle Bar Ran	93.24	47	*e*P	P	05 12 19.9	+0.9
	4.7nm,1.0s						
F10A	Beach Ranch, E	94.29	44	*e*P	P	05 12 24.4	+0.7
	2.5nm,0.9s						
TPNV	Topopah Spring	94.53	53	*e*P	P	05 12 26.4	+1.4
	2.2nm,0.8s						
PD31	Pinedale Array	99.76	48	*e*Pdif	Pdif	05 12 48.6	-0.1
	2.5nm,1.5s						
PDAR	Pinedale Array	99.76	48	P	Pdif	05 12 48.6	-0.1
	0.6nm,0.7s,baz=241,slow=3.1,SNR=6.9						
NB200	NORSAR Array S	117.11	340	*e*PKPdf	PKPdf	05 17 47.7	-1.1
NOA	NORSAR Array B	117.11	340	PKP	PKPdf	05 17 47.7	-1.1
	0.2nm,0.3s,baz=63,slow=2.0,SNR=2.4						
CLL	Collm	122.91	331	*e*PKPdf	PKiKP	05 18 01.0	+0.6
GEC2	GERESS Array S	124.07	328	*e*PKPdf	PKPdf	05 18 01.9	-0.7
GERES	GERESS Array B	124.07	328	PKP	PKPdf	05 18 01.9	-0.7
	0.4nm,0.4s,baz=17,slow=1.4,SNR=4.3						
LPAZ	La Paz	134.86	119	PKP	PKPdf	05 18 24.8	+0.1
	1.8nm,0.9s,baz=191,slow=0.7,SNR=9.1						

LPAZ	La Paz	134.86	119	ePKPdf	PKiKP	05 18 26.3	+0.2
PTGA	Pitinga	147.50	100	ePKPdf	PKPdf	05 18 47.6	+1.0
TOA0	Torodi Ar. Sit	149.72	287	ePKPbc	PKPbc	05 18 54.1	-0.7
TORD	Torodi Ar. Bea	149.72	287	PKPbc	PKPbc	05 18 52.4	-2.5
	14nm,0.9s,baz=21,slow=2.8,SNR=46						
TORD				pPKPbc	sPKPdf	05 19 05.7	-2.6
	6.0nm,0.8s,baz=81,slow=2.4,SNR=7.6						
TOA1	Torodi Ar. Sit	149.72	287	ePKPdf	PKPbc	05 18 52.4	-2.5
BDFB	Brasilia	151.25	137	PKPbc	PKPbc	05 18 58.8	+0.2
	4.5nm,0.8s,baz=192,slow=7.5,SNR=6.4						

*SOME **30** 05:08:02.4,39°.58N×75°.82E,h10^{km}*
*NNC **30** 05:08:05.0±1.2,39°.73N×75°.84E,h0^{km},mb3.6,mpv3.3,*
Error ellipse: s-maj=8.3km s-min=5.9km az=169.0
*KRNET **30** 05:08:12.7±0.1,39°.98N×75°.90E,mb3.2*
ISC 30 05:08:13.1±2.0,**40°.01N**±0°.09×**75°.85E**±0°.04,**h10^{km},n42,**
σ**1^{s}69**/64,**20C-10D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	1.43	5	⇑iP	Pb	05 08 40.1	0.0
	baz=2.0						
NRN				⇑iS	Sg	05 09 00.1	+0.9
	baz=2.0						
KZA	Kyzart	2.12	348	⇑iP	Pb	05 08 52.0	+0.1
	baz=47						
KZA				⇑iS	Sg	05 09 20.8	-0.5
	baz=47						
KZA	Kyzart	2.12	348	P	Pb	05 08 52.8	+0.9
	SNR=19						
ARLS	Aral	2.18	329	⇑iP	Pb	05 08 52.9	+0.1
	baz=28						
ARLS				⇑iS	Sg	05 09 22.3	-1.0
	baz=28						
ULHL	Ulahol	2.26	7	⇑iP	Pb	05 08 54.2	+0.1
	baz=6.0						
ULHL				⇑iS	Sb	05 09 23.8	+1.6
	baz=6.0						
KDJ	Kajisay	2.35	25	⇑iP	Pb	05 08 54.7	-0.9
	baz=24						
KDJ				⇑iS	Sb	05 09 25.9	+1.1
	baz=24						
UCH	Uchtor	2.44	336	⇓iP	Pb	05 08 56.8	-0.5
	baz=35						
UCH				⇓iS	Sb	05 09 28.9	+1.3
	baz=35						
UCH	Uchtor	2.44	336	P	Pb	05 08 57.3	-0.1
	SNR=38						
BOOM	Boomskoye usch	2.48	2	⇑iP	Pb	05 08 57.2	-0.7
	baz=1.0						
BOOM				⇑iS	Sb	05 09 29.5	+0.9
	baz=1.0						
ARSB	Arslanbob	2.55	302	⇑iP	Pb	05 08 58.1	-0.9
	baz=2.0						
ARSB				⇑iS	Sb	05 09 31.6	+1.1
	baz=2.0						
AML	Almayashu	2.68	323	⇓iP	Pb	05 09 00.0	-1.4
	baz=23						
AML				⇓iS	Sb	05 09 34.7	+0.3
	baz=23						
AML	Almayashu	2.68	323	P	Pb	05 09 00.4	-1.0
	SNR=11						
KBK	Karagaybulak	2.73	346	P	Pg	05 09 04.0	-1.5
	SNR=10						
AAK	Ala-Archa	2.82	339	⇑Pg	Pb	05 09 02.4	-1.3
	6.0nm,0.4s						
AAK				⇓Lg	Lg	05 09 41.4	
	37nm,0.7s						
AAK	Ala-Archa	2.82	339	⇑eP	Pb	05 09 01.8	-1.9
	baz=39						
AAK				⇑iS	Sb	05 09 37.8	-0.5
	baz=39						
AAK	Ala-Archa	2.82	339	P	Pb	05 09 02.6	-1.1
	SNR=6.8						
TKM2	Tokmak 2	2.92	356	⇓Pg	Pb	05 09 04.4	-1.0
	2.8nm,0.3s						
TKM2				⇑Lg	Lg	05 09 45.6	
	19nm,0.5s						
TKM2	Tokmak 2	2.92	356	⇓eP	Pb	05 09 03.4	-2.0
	baz=56						
TKM2				⇓iS	Sb	05 09 39.8	-1.4
	baz=56						
TKM2	Tokmak 2	2.92	356	P	Pg	05 09 08.6	-0.5
	SNR=6.0						
KST	Kastek	3.04	2	Pg	Pb	05 09 05.3	-2.1
	7.1nm,0.9s						
KST				Lg	Lg	05 09 51.2	
	18nm,0.7s						
KST	Kastek	3.04	2	eP	Pb	05 09 05.3	-2.1
	7.1nm,0.9s						
KST				eS	Sg	05 09 51.2	+0.6
	18nm,0.7s						
EKS2	Erkin-Say	3.08	330	P	Sg	05 09 51.8	-0.2
	SNR=6.5						
MTBS	Maitube	3.15	8	Pg	Pb	05 09 06.9	-2.4
	2.5nm,0.1s						
MTBS				Lg	Lg	05 09 53.4	
	14nm,0.4s						
MTBS	Maitube	3.15	8	eP	Pb	05 09 06.9	-2.4
	2.5nm,0.1s						
MTBS				eS	Sg	05 09 53.5	-0.9
	14nm,0.4s						
DGS	Degeres	3.23	359	Pg	Pb	05 09 08.8	-1.9
	5.0nm,0.5s						
DGS				Lg	Lg	05 09 57.3	
	23nm,0.6s						
DGS	Degeres	3.23	359	eP	Pb	05 09 08.8	-1.9
	5.0nm,0.5s						
DGS				eS	Sg	05 09 57.4	+0.4
	23nm,0.6s						
MDOK	Medeo	3.28	16	Pg	Pb	05 09 09.4	-2.1
	3.1nm,0.9s						
MDOK				Lg	Lg	05 09 58.0	
	13nm,0.8s						
MDOK	Medeo	3.28	16	eP	Pb	05 09 09.4	-2.1
	3.1nm,0.9s						
MDOK				eS	Sg	05 09 58.0	-0.5
	13nm,0.8s						
MRKS	Merke	3.37	325	Pg	Pb	05 09 10.1	-3.0
	2.9nm,0.5s						
MRKS				Lg	Lg	05 09 59.5	
	14nm,0.7s						
MRKS	Merke	3.37	325	eP	Pb	05 09 10.1	-3.0
	2.9nm,0.5s						
MRKS				eS	Sg	05 09 59.5	-2.0
	14nm,0.7s						
USP	Ospenovka	3.41	343	P	Pb	05 09 11.4	-2.3
	SNR=5.4						
SATY	Saty	3.60	31	Pg	Pb	05 09 15.3	-1.7
	1.8nm,0.1s						
SATY				Lg	Lg	05 10 08.1	
	19nm,0.9s						
SATY	Saty	3.60	31	eP	Pb	05 09 15.3	-1.7
	1.8nm,0.1s						
SATY				eS	Sg	05 10 08.1	-0.7
	19nm,0.9s						
KURS	Kuram	3.89	26	Pg	Pb	05 09 19.9	-1.9
	2.7nm,0.7s						
KURS				Lg	Lg	05 10 16.1	
	14nm,1.1s						
KURS	Kuram	3.89	26	eP	Pb	05 09 19.9	-1.9
	2.7nm,0.7s						
KURS				eS	Sg	05 10 16.1	-1.9
	14nm,1.1s						
KUU	Kurty	3.90	5	Pg	Pb	05 09 20.3	-1.7
	1.1nm,0.1s						
KUU				Lg	Lg	05 10 16.8	
	6.0nm,0.6s						
KUU	Kurty	3.90	5	eP	Pb	05 09 20.4	-1.7
	1.1nm,0.1s						
KUU				eS	Sg	05 10 16.8	-1.6
	6.0nm,0.6s						
UZB	Uzynbulak	3.94	36	Pg	Pb	05 09 20.6	-2.1
	1.1nm,0.3s						
UZB				Lg	Lg	05 10 17.3	
	6.9nm,0.8s						
UZB	Uzynbulak	3.94	36	eP	Pb	05 09 20.6	-2.1
	1.1nm,0.3s						
UZB				eS	Sg	05 10 17.3	-2.3
	6.9nm,0.8s						
KPKS	Kokpek	4.05	31	eP	Pb	05 09 22.3	-2.4
	8.2nm,0.3s						
KPKS				eS	Sg	05 10 20.6	-2.8
	24nm,0.6s						
PDGK	Podgornoye	4.29	38	⇓iP	Pn	05 09 21.6	+2.9
	baz=38						
PDGK				⇓iS	Sn	05 10 12.3	+3.4
	baz=38						
KK31	Karatay Array	5.06	309	⇑Pg	Pb	05 09 40.1	-1.7
	2.7nm,0.8s,baz=130,slow=17,SNR=6.5						
KK31				⇑Lg	Lg	05 10 49.4	
	1.3nm,0.5s,baz=125,slow=27,SNR=5.2						

MEX 30 05:14:06.2±0.5,**16°.92N**×**93°.85W,h161^{km}**±5^{km}**,MD3.7,**
Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		0.71	102	i P	Pn	05 14 28.6	-1.4
TGIG				eS	Sn	05 14 45.7	-2.5
CMIG	Matias Romero	1.00	280	eP	Pn	05 14 30.3	-1.7
CMIG				i S	Sn	05 14 49.5	-2.3
PCIG		1.35	153	eP	Pn	05 14 33.8	-1.4
PCIG				eS	Sn	05 14 55.3	-2.1
CCIG	Comitan	1.76	111	eP	Pn	05 14 38.2	-1.4
CCIG				i S	Sn	05 15 02.7	-2.5
THIG		2.52	142	i P	Pn	05 14 46.9	-1.2
THIG				eS	Sn	05 15 19.2	-1.3

*NIED **30** 05:19:00,37°.20N×143°.70E,h5^{km},Mw4.0 Best double couple: $M_0$9.70000×10^{14} NP1:ϕ_s26.00000°,δ35.00000°, λ-90.00000°. NP2:ϕ_s206.00000°,δ55.00000°, λ-90.00000°.*
*IDC **30** 05:19:25.4±0.7,37°.13N×143°.98E,h0^{km},mb3.8/12, mb1 4.0/17,mb1mx3.9/45,mbtmp3.8/17,ML3.3/5,MS3.4/1, Ms1 3.4/1,ms1mx2.5/39,Error ellipse: s-maj=18.8km s-min=17.4km az=147.0*
*ISCJB **30** 05:19:29.0±0.5,37°.20N±0°.04×143°.68E±0°.04,h33^{km}, mb3.8/12,Error ellipse: s-maj=5.3km s-min=4.3km az=157.0*
*JMA **30** 05:19:29.2±0.2,37°.23N×143°.68E,h56^{km},M3.7*
ISC 30 05:19:30.4±0.7,**37°.26N**±0°.05×**143°.79E**±0°.06,**h35^{km},n43,**
σ**1^{s}69**/54,**mb3.8**/12,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.11	300	P	Pn	05 20 02.4	-0.9
JIKH				S	Sn	05 20 27.1	-1.2
JIO	Ouri	2.27	302	P	Pn	05 20 04.7	-0.6
JIO				S	Sn	05 20 30.1	-1.9
JFK	Kawauchi	2.32	273	P	Pn	05 20 05.0	-1.2
JFK				S	Sn	05 20 31.5	-2.1
JMST	Minamisoumatoc	2.35	282	P	Pn	05 20 05.0	-1.5
JMST				eS	Sn	05 20 32.1	-2.0
JKMT	Kesennumamotoy	2.39	311	P	Pn	05 20 06.5	-0.6
JKMT				S	Sn	05 20 33.6	-1.5
ONAJ	Iwakimizuishiy	2.39	267	P	Pn	05 20 05.8	-1.4
ONAJ				S	Sn	05 20 32.8	-2.5
JMM	Marumori	2.45	285	P	Pn	05 20 07.0	-0.9
JMM				eS	Sn	05 20 35.0	-1.7
JMK	Ichinoseki	2.63	311	P	Pn	05 20 09.9	-0.5
JFT	Otama	2.76	276	P	Pn	05 20 11.7	-0.5
JFT				eS	Sn	05 20 43.7	-0.6
JOM	Ohasama	2.95	319	P	Pn	05 20 14.3	-0.5
JOM				S	Sn	05 20 47.9	-1.1
JYK	Kaneyama	3.17	302	P	Pn	05 20 17.9	+0.1
BSO1	Boso 1	3.46	222	P	Pn	05 20 19.9	-1.4
BSO1				eS	Sn	05 20 59.2	-1.6
JAG	Ashikaga	3.58	258	P	Pn	05 20 22.5	-0.9
JAG				eS	Sn	05 21 02.8	-1.6
JANG	Nango	3.58	331	P	Pn	05 20 22.8	-0.6
JANG				eS	Sn	05 21 01.6	-2.8
JRY	Ryogami san	4.12	254	P	Pn	05 20 29.6	-1.3
JRY				eS	Sn	05 21 15.1	-2.8
JOD2	Odawara 2	4.29	244	eS	Sn	05 21 19.0	-3.0
MJAR	Matsushiro Arr	4.53	263	Pn	Pn	05 20 37.0	+0.5
	1.0nm,0.3s,baz=89,slow=16,SNR=56						
MJAR				Sn	Sn	05 21 26.7	-1.2
	baz=87,slow=15,SNR=4.0						
MAT	Matsushiro	4.53	263	P	Pn	05 20 37.4	+0.9
MAT				S	Sn	05 21 27.3	-0.6
JCH	Churui	5.35	357	P	Pn	05 20 46.3	-1.5
JCH				eS	Sn	05 21 44.8	-3.4
NEM2	Nemuro 2	6.28	13	P	Pn	05 20 59.0	-1.4
USRK	Ussuriysk Ar.	11.31	311	Pn	Pn	05 22 12.5	+3.0
	0.3nm,0.3s,baz=102,slow=13,SNR=5.0						
USRK				LR	LR	05 26 50.7	
	comp=Z,193nm,20.1s,baz=147,slow=39						
JNU	Nakatsue	11.34	252	Pn	Pn	05 22 10.1	+0.1
	0.3nm,0.3s,baz=59,slow=17,SNR=3.1						
KSRS	Korea Array	12.63	276	Pn	Pn	05 22 29.6	+2.2
	0.4nm,0.3s,baz=86,slow=14,SNR=8.8						
KLR	Kul'dur	14.81	328	Pn	P	05 22 59.8	-2.8
	0.2nm,0.3s,baz=129,slow=13,SNR=8.3						
SEY	Seymchan	26.23	9	P	P	05 25 02.6	+0.8
	0.9nm,0.3s,baz=194,slow=9.8,SNR=6.9						
H11N2	WAKE ISLAND Hy	26.68	125	T	T	05 52 51.9	
	baz=316,slow=75,SNR=9.5						
H11N1	WAKE ISLAND Hy	26.68	125	T	T	05 52 52.8	
	baz=316,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	26.69	125	T	T	05 52 51.7	
	baz=316,slow=75,SNR=6.5						
H11S1	WAKE ISLAND Hy	27.43	127	T	T	05 53 48.5	
	baz=320,slow=74,SNR=4.1						
H11S3	WAKE ISLAND Hy	27.43	127	T	T	05 53 48.5	
	baz=320,slow=74,SNR=4.6						
H11S2	WAKE ISLAND Hy	27.45	127	T	T	05 53 50.2	
	baz=320						
SONM	Songino Array	29.24	303	P	P	05 25 31.2	+2.2
	1.7nm,0.8s,baz=100,slow=9.0,SNR=7.0						
ZALV	Zalesovo Beam	43.16	312	P	P	05 27 29.4	+1.9
	3.0nm,1.1s,baz=76,slow=6.3,SNR=4.1						
ZALV				PcP	PcP	05 29 16.3	-0.2
	0.6nm,0.4s,baz=90,slow=4.3,SNR=3.3						
MKAR	Makanchi Array	45.60	302	P	P	05 27 48.8	+1.7
	1.5nm,0.7s,baz=93,slow=11,SNR=4.9						
ILAR	Eielson Array	48.28	32	P	P	05 28 08.0	+0.3
	0.4nm,0.7s,baz=263,slow=6.6,SNR=6.4						
WRA	Warramunga Arr	57.59	191	P	P	05 29 16.0	-0.8
	1.5nm,0.8s,baz=356,slow=7.3,SNR=8.1						
ASAR	Alice Springs	61.31	190	P	P	05 29 42.2	-0.2
	0.6nm,0.7s,baz=17,slow=9.9,SNR=8.4						
FINES	FINESS Array B	69.48	333	P	P	05 30 35.7	+0.8
	3.2nm,0.9s,baz=92,slow=9.5,SNR=7.1						
NVAR	Mina Array Bea	73.32	54	P	P	05 31 00.2	+1.5
	0.2nm,0.5s,baz=307,slow=8.9,SNR=2.6						
NOA	NORSAR Array B	74.69	338	P	P	05 31 07.3	+1.1
	0.5nm,0.7s,baz=16,slow=4.1,SNR=2.2						
PDAR	Pinedale Array	76.14	47	P	P	05 31 14.6	-0.4
	0.2nm,0.5s,baz=341,slow=1.9,SNR=3.0						
TXAR	Lajitas Array	88.47	54	P	P	05 32 20.5	+1.0
	0.3nm,0.7s,baz=304,slow=2.3,SNR=4.7						
LPAZ	La Paz	144.93	62	PKP	PKiKP	05 39 04.6	-4.2
	0.3nm,0.6s,baz=292,slow=5.4,SNR=2.5						

*NIED **30** 05:30:00,35°.20N×141°.30E,h23^{km},Mw4.2 Best double couple: $M_0$1.95000×10^{15} NP1:ϕ_s309.00000°,δ41.00000°, λ165.00000°. NP2:ϕ_s51.00000°,δ80.00000°,λ50.00000°.*
*IDC **30** 05:30:00.7±0.6,35°.22N×141°.29E,h0^{km},mb4.0/14, mb1 4.2/20,mb1mx4.0/61,mbtmp4.0/20,ML3.3/5,MS3.3/5, Ms1 3.3/5,ms1mx3.0/34,Error ellipse: s-maj=16.4km s-min=14.5km az=78.0*
*ISCJB **30** 05:30:03.6±0.4,35°.21N±0°.04×141°.30E±0°.05,h35^{km}, mb4.2/20,MS3.5/2,Error ellipse: s-maj=5.8km s-min=5.4km az=0.5*
*JMA **30** 05:30:03.6±0.1,35°.24N×141°.27E,h28^{km}±3^{km},M3.5*
*NEIC **30** 05:30:05.0±2.2,35°.17N×141°.42E,h36^{km}±8^{km},mb4.3/10, Error ellipse: s-maj=12.0km s-min=8.3km az=66.0*
ISC 30 05:30:05.5±0.6,**35°.19N**±0°.04×**141°.30E**±0°.06,**h35^{km},n59,**
σ**1^{s}46**/56,**mb4.2**/20,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.59	207	P	Pn	05 30 15.8	-1.1
CHOJ	Chosi	0.63	325	P	Pn	05 30 14.9	-3.0
CHOJ				eS	Sn	05 30 23.0	-3.8
BSO3	Boso 3	0.75	240	P	Pn	05 30 18.0	-1.4
BSO3				X		05 30 29.6	
KTR	Katsuura	0.81	268	P	Pn	05 30 18.5	-1.8
KTR				eS	Sn	05 30 28.7	-2.4
BSO4	Boso 4	0.81	256	P	Pn	05 30 18.9	-1.4
JKUC	kamogawauchiur	0.90	269	P	Pn	05 30 19.7	-2.0
JCN	Nagara	0.93	285	P	Pn	05 30 21.2	-0.8
JYT	Yasato	1.38	319	P	Pn	05 30 27.8	-0.4
JHJ	Hachijo jima 2	2.41	212	Pn	Pn	05 30 43.3	+0.8
	43nm,0.3s,baz=68,slow=19,SNR=2.9						
JHJ				Sn	Sn	05 31 07.2	-3.6
	42nm,0.3s,baz=53,slow=20,SNR=3.7						
JHJ				LR	LR	05 31 52.2	
	comp=Z,210nm,19.5s,baz=92,slow=46						
MJAR	Matsushiro Arr	2.85	299	Pn	Pn	05 30 48.5	0.0
	1.7nm,0.3s,baz=120,slow=9.1,SNR=52						
MJAR				Sn	Sn	05 31 25.1	+3.5
	1.0nm,0.3s,baz=157,slow=14,SNR=5.6						
MAJO	Matsushiro	2.85	299	ePn	Pn	05 30 49.0	+0.4
MAJO				eSn	Sn	05 31 25.1	+3.4
MAT	Matsushiro	2.85	299	P	Pn	05 30 48.7	+0.2
MAT				S	Sn	05 31 22.2	+0.5
MJB9	Matsu-Tunnel	2.86	299	ePn	Pn	05 30 49.4	+0.8
ERM	Erimo	6.97	11	ePn	Pn	05 31 42.8	-2.2
JNU	Nakatsue	8.88	260	LR	LR	05 36 01.5	
	comp=Z,154nm,19.3s,baz=145,slow=41						
KSRS	Korea Array	11.03	286	Pn	Pn	05 32 41.1	+0.4
	0.4nm,0.3s,baz=95,slow=14,SNR=8.3						
KSRS				LR	LR	05 37 07.7	
	comp=Z,165nm,19.2s,baz=94,slow=39						
KS15	Wonju Array Si	11.06	286	ePn	Pn	05 32 41.1	0.0
USRK	Ussuriysk Ar.	11.50	324	Pn	Pn	05 32 47.5	+0.4
	0.3nm,0.3s,baz=132,slow=12,SNR=9.5						
KLR	Kul'dur	15.70	336	Pn	Pn	05 33 42.2	-1.6
	0.2nm,0.3s,baz=151,slow=11,SNR=3.6						
YOJ	Yonaguni jima	19.10	241	ePn	Pn	05 34 26.8	+0.5
	74nm,1.1s						
PETK	Petropavlovsk-	21.34	28	P	P	05 34 49.7	+0.3
	1.8nm,0.7s,baz=218,slow=9.4,SNR=3.6						
PEA1	Petropavlovsk-	21.35	28	eP	P	05 34 49.7	+0.2
H11N2	WAKE ISLAND Hy	27.33	118	T	T	06 04 27.7	
	baz=310,slow=75,SNR=77						
H11N1	WAKE ISLAND Hy	27.34	118	T	T	06 04 36.3	
	baz=310,slow=75,SNR=64						
H11N3	WAKE ISLAND Hy	27.35	118	T	T	06 04 29.1	
	baz=310,slow=75,SNR=78						
H11S3	WAKE ISLAND Hy	27.98	120	T	T	06 05 21.4	
	baz=312,slow=75,SNR=254						
H11S1	WAKE ISLAND Hy	27.98	120	T	T	06 05 18.1	
	baz=312,slow=75,SNR=311						
H11S2	WAKE ISLAND Hy	27.99	120	T	T	06 05 11.1	
	baz=312,slow=75,SNR=186						
SONA0	Songino Array	28.78	307	eP	P	05 35 58.2	-1.8
SONM	Songino Array	28.78	307	P	P	05 35 58.2	-1.8
	0.8nm,0.5s,baz=113,slow=10,SNR=4.0						
SONM				LR	LR	05 47 55.4	
	comp=Z,82nm,18.2s,baz=106,slow=37						
ZAA0	Zalesovo Array	43.11	314	eP	P	05 38 02.0	-0.1
	3.1nm,0.6s						
ZAA1	Zalesovo Array	43.11	314	eP	P	05 38 01.5	-0.6
ZALV	Zalesovo Beam	43.11	314	P	P	05 38 01.5	-0.6
	3.2nm,0.5s,baz=97,slow=6.7,SNR=15						
MK31	Makanchi Array	45.04	304	eP	P	05 38 17.8	0.0
	2.2nm,0.8s						
MK32	Makanchi Array	45.04	304	eP	P	05 38 17.5	-0.2
MKAR	Makanchi Array	45.04	304	P	P	05 38 17.5	-0.2
	2.4nm,0.7s,baz=90,slow=9.4,SNR=18						
KURK	Kurchatov	47.02	309	eP	P	05 38 32.8	-0.3
	7.1nm,0.8s						
KURBB	Kurchatov Arra	47.08	309	P	P	05 38 33.1	-0.5
	3.7nm,0.5s,baz=84,slow=8.0,SNR=35						
KDAK	Kodiak Island	48.54	41	P	P	05 38 44.3	-0.6
	2.7nm,0.6s,baz=246,slow=11,SNR=11						
KDAK	Kodiak Island	48.54	41	eP	P	05 38 44.3	-0.6
	21nm,1.3s						
ILAR	Eielson Array	51.11	32	P	P	05 39 03.4	-0.9
	0.5nm,0.7s,baz=262,slow=6.0,SNR=6.6						
ILB	Eielson Array	51.11	32	eP	P	05 39 03.4	-0.9
	3.1nm,1.3s						
BVAR	Borovoye Array	51.76	313	P	P	05 39 09.8	+0.5
	2.0nm,0.9s,baz=73,slow=8.2,SNR=7.0						
DOT	Dot Lake	52.40	33	eP	P	05 39 13.9	0.0
	3.3nm,0.8s						
BCPM	Bancas Point	54.98	37	eP	P	05 39 32.9	0.0
	121nm,1.3s						
NIL	Nilore	55.12	289	epP	pP	05 39 44.7	+0.4
WB2	Warramunga Arr	55.22	188	eP	P	05 39 34.3	-0.7
	7.7nm,1.0s						
WR1	Warramunga Arr	55.22	188	eP	P	05 39 35.3	+0.3
WRA	Warramunga Arr	55.22	188	P	P	05 39 35.3	+0.3
	4.2nm,0.7s,baz=358,slow=6.7,SNR=26						
ASAR	Alice Springs	58.95	188	P	P	05 40 01.6	+0.2
	1.2nm,0.5s,baz=18,slow=12,SNR=13						
ASAR				PcP	PcP	05 40 51.7	+1.5
	0.4nm,0.5s,baz=3.7,slow=5.8,SNR=3.1						
JMIC	Jan Mayen	71.95	350	LR	LR	06 13 49.7	
	comp=Z,35nm,18.3s,baz=94,slow=37						
NVAR	Mina Array Bea	76.17	53	P	P	05 41 50.9	+0.5
	0.5nm,0.6s,baz=303,slow=6.7,SNR=5.2						
NV01	Mina Array Sit	76.17	53	eP	P	05 41 50.9	+0.5
PD31	Pinedale Array	79.03	45	eP	P	05 42 07.5	+1.2
PDAR	Pinedale Array	79.03	45	P	P	05 42 07.5	+1.2
	0.6nm,0.5s,baz=277,slow=2.3,SNR=9.7						
MLR	Muntele Rosu	80.73	320	P	P	05 42 16.8	+1.5
	2.7nm,0.6s,baz=25,slow=18,SNR=3.1						
TXAR	Lajitas Array	91.32	52	P	P	05 43 09.8	+2.0
	0.4nm,0.8s,baz=279,slow=4.0,SNR=5.4						
H06N1	SOCORRO T-PHAS	92.96	65	T	T	07 25 51.1	
	SNR=22						
LPAZ	La Paz	147.67	62	PKPbc	PKiKP	05 49 48.5	-1.1
	0.8nm,0.7s,baz=273,slow=3.8,SNR=4.7						

SVSA 30 05:30:29.6±0.5,**40°.23N**×**29°.53W,h5^{km},MD3.6,ML2.8,**
Error ellipse: s-maj=6.2km s-min=2.6km az=81.0,
Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGRA	Graciosa	1.69	135	eP	Pn	05 30 54.9	-4.9
PGRA				eS	Sn	05 31 14.3	-7.5
PGRA				A	A	05 31 16.4	
	44nm,0.4s						
PCED	Cedros	1.72	158	eP	Pn	05 30 55.6	-4.6
PCED				eS	Sn	05 31 14.6	-7.9
PCED				A	A	05 31 16.9	
	21nm,0.2s						
CALA	Caldeira	1.76	158	eS	Sn	05 31 15.8	-7.9
ROSA	Rosais	1.80	146	eP	Pn	05 30 56.5	-4.8
ROSA				eS	Sn	05 31 16.6	-8.0
ROSA				A	A	05 31 17.6	
	26nm,0.4s						
HOR	Horta	1.83	157	eS	Sn	05 31 17.3	-8.0
PICO	Pico	1.92	153	eP	Pn	05 30 58.3	-4.7
PICO				A	A	05 31 25.1	
	35nm,0.3s						
PCAN	Candelaria	1.94	155	eP	Pn	05 30 58.4	-4.8
PCAN				eS	Sn	05 31 20.0	-7.9
PCAN				A	A	05 31 23.4	
	39nm,0.2s						
PMAN	Manadas	1.94	145	eP	Pn	05 30 58.5	-4.7
PMAN				eS	Sn	05 31 19.9	-8.1
PMAN				A	A	05 31 22.4	
	24nm,0.3s						
ADH	Angra Heroismo	2.37	131	eP	Pn	05 31 04.2	-4.9
PSMA	Santa Maria	4.72	132	eP	Pn	05 31 37.0	-4.4
PSMN	Pico do Norte,	4.75	131	eP	Pn	05 31 37.4	-4.4

*ISCJB **30** 05:32:10.3±0.6,40°.30N±0°.02×25°.72E±0°.05,h8^{km}±4^{km}, Error ellipse: s-maj=6.7km s-min=3.6km az=172.5*
*DDA **30** 05:32:10.2,40°.29N×25°.79E,h25^{km}±1^{km},ML3.3*
*ISK **30** 05:32:10.2,40°.30N×25°.76E,h9^{km},ML3.3/14*
ISC 30 05:32:10.8±1.1,**40°.30N**±0°.02×**25°.77E**±0°.04,**h12^{km}**±7^{km}**,**
n28,σ**0^{s}56**/39,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.15	139	PG	Pg	05 32 14.5	+0.2
GADA				SG	Sg	05 32 16.7	-0.1
BOZC	Bozcaada	0.51	155	PG	Pb	05 32 20.9	-0.7
BOZC				SG	Sb	05 32 27.8	-1.2
BOZC	Bozcaada	0.51	155	i P	Pb	05 32 21.8	+0.2
BOZC				i S	Sb	05 32 28.7	-0.2
ENEZ	Enez	0.52	34	PG	Pg	05 32 21.0	0.0
ENEZ				SG	Sb	05 32 28.9	-0.5
ALN	Alexandroupoli	0.63	19	PG	Pb	05 32 23.2	-0.5
ALN				SG	Sb	05 32 31.9	-0.6
LPK	Lapseki	0.76	84	PG	Pg	05 32 25.1	-0.4
BAYC	CANAKKALE_Bayr	0.82	133	i P	Pg	05 32 26.3	-0.3
BAYC				i S	Sb	05 32 37.5	-0.4
RDO	Rodhopi	0.86	348	PG	Pb	05 32 27.6	0.0
RDO				SG	Sb	05 32 39.5	+0.4
KESN	Edirne-Kesan	0.87	53	i P	Pb	05 32 27.5	-0.5

KESN				iS	Sb	05 32 40.1	+0.4
GPNR	Gulpinar-Canak	0.89	162	PG	Pb	05 32 27.7	-0.4
SIGR	SIGRI	1.09	177	PN	Pb	05 32 31.2	-0.4
RKY	Sarkoy-Tekirda	1.14	70	PN	Pb	05 32 31.6	-0.8
SART	Tekirdag	1.14	70	iP	Pb	05 32 32.1	-0.4
SART				iS	Sn	05 32 48.9	+0.6
SART				IAML_P			
	comp=Z,5µm,0.2s						
AYVA	Ayvalik	1.22	144	iP	Pg	05 32 34.1	-0.1
AYVA				iS	Sn	05 32 50.1	+0.1
OUR	Ouranopolis	1.37	272	PN	Pn	05 32 35.5	-0.1
KDZ	Kurdzhali	1.37	349	PN	Pn	05 32 35.8	0.0
MRMT	Marmara Adasi	1.43	77	PN	Pn	05 32 35.9	-0.6
GONE	Gonen-Balikesi	1.49	99	PN	Pb	05 32 38.3	-0.1
DKL	Dikili	1.51	144	PN	Pb	05 32 37.9	-0.8
CAND	Candarli	1.56	149	PN	Pb	05 32 38.8	-0.8
EDC	Edincik	1.60	88	PN	Pn	05 32 39.3	+0.4
ZEDA	zmir-Bergama	1.67	142	iP	Pb	05 32 41.4	-0.1
ZEDA				iS	Sg	05 33 05.5	+1.0
EDRB	Edirne	1.71	25	PN	Pn	05 32 41.0	+0.6
BALB	Balikesir	1.75	112	PN	Pn	05 32 41.2	+0.3
STEP	BALIKESIR_Sava	1.76	121	iP	Pn	05 32 41.7	+0.5
URLA	Izmir	2.04	161	iP	Pn	05 32 46.0	+1.0
AKHS	Akhisar	2.12	131	iP	Pn	05 32 46.6	+0.5
DURS	Dursunbey	2.19	108	iP	Pn	05 32 47.9	+0.8

PRU ***30*** *05:33:05.3±0.0, 40°.34N×26°.21E, h0^{km}*
BJI ***30*** *05:33:05.3±0.0, 40°.66N×25°.61E, h5^{km}, mb4.6/26, mB4.8/19, Ms4.7/14, Ms7 4.3/14*
GII ***30*** *05:33:07.4±0.0, 40°.33N×25°.87E, h2^{km}*
SOF ***30*** *05:33:07.8, 40°.37N×25°.96E, h2^{km}*
ISCJB ***30*** *05:33:07.8±0.3, 40°.321N±0°.008×25°.81E±0°.01, h10^{km}±2^{km}, mb4.4/84, MS4.3/37, Error ellipse: s-maj=1.5km s-min=1.2km az=34.3*
DDA ***30*** *05:33:07.6, 40°.30N×25°.79E, h20^{km}±2^{km}, ML5.3*
ISK ***30*** *05:33:08.1, 40°.31N×25°.81E, h13^{km}, ML5.3/33*
IDC ***30*** *05:33:08.3±0.5, 40°.37N×25°.97E, h0^{km}, mb4.2/30, mb1 4.3/43, mb1mx4.3/51, mbtmp4.2/43, ML4.2/11, MS4.3/38, Ms1 4.3/38, ms1mx4.2/46, Error ellipse: s-maj=9.3km s-min=8.2km az=32.0*
ATH ***30*** *05:33:08.2, 40°.30N×25°.75E, h28^{km}±1^{km}, ML4.6/12, Error ellipse: s-maj=1.6km s-min=0.7km az=73.0*
GCMT ***30*** *05:33:08.8±0.2, 40°.26N±0°.01×25°.82E±0°.02, h12^{km}, MW5.0/102, Moment Tensor Solution. s34,c41; s102,c157; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.58±.11; $M_{\theta\theta}$4.07±.09; $M_{\phi\phi}$-1.49±.10; $M_{r\theta}$1.06±.29; $M_{\theta\phi}$-1.99±.08; $M_{\phi r}$1.35±.32; Best double couple: $M_0$4.38100×10^{16} NP1:ϕ_s255.00000°, δ62.00000°, λ-137.00000°. NP2:ϕ_s142.00000°, δ53.00000°, λ-36.00000°. Principal axes: T 4.7600, Plg5.0000°, Azm17.0000°; N -0.7570, Plg40.0000°, Azm282.0000°; P -4.0030, Plg49.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
PDG ***30*** *05:33:08.5±1.1, 40°.33N×25°.83E, h13^{km}±1^{km}, ML4.5/11 Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
MED_RC ***30*** *05:33:09.0±0.2, 40°.29N×25°.93E, h8^{km}, MW5.1/11, Moment Tensor Solution. Mantle waves: s11,c21; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.12±.13; $M_{\theta\theta}$5.86±.12; $M_{\phi\phi}$-1.74±.09; $M_{r\theta}$1.57±.60; $M_{\theta\phi}$-2.97±.09; $M_{\phi r}$1.51±.43; Best double couple: $M_0$6.26000×10^{16} NP1:ϕ_s260.00000°, δ59.00000°, λ-131.00000°. NP2: ϕ_s140.00000°, δ50.00000°, λ-42.00000°. Principal axes: T 6.9700, Plg5.0000°, Azm18.0000°; N -1.4300, Plg34.0000°, Azm284.0000°; P -5.5500, Plg55.0000°, Azm116.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
THE ***30*** *05:33:09.1, 40°.31N×25°.79E, h12^{km}, ML4.4/13 Error ellipse: s-maj=0.8km s-min=0.4km az=32.0*
MOS ***30*** *05:33:09.1±1.3, 40°.44N×25°.95E, h19^{km}, mb4.5/33, MS4.2/29, Error ellipse: s-maj=4.9km s-min=3.2km az=92.3*
NEIC ***30*** *05:33:09.8±2.3, 40°.29N×25°.87E, h10^{km}±2^{km}, mb4.6/38, ML4.8(THE), Error ellipse: s-maj=7.4km s-min=4.4km az=224.0*
NEIC Felt at Kamariotissa, Greece. Felt [III] at Gokceada, Turkey. Also felt at Eceabat, Gallipoli and Istanbul.
BEO ***30*** *05:33:10.4±0.7, 40°.36N×25°.87E, h15^{km}±4^{km}, ML4.9/14*
TIR ***30*** *05:33:43.9, 40°.25N×25°.86E, h7^{km}, Md5.0/7*
ISC 30 05:33:08.6±0.8, **40°.31N**±0°.01×**25°.83E**±0°.01, **h5**^{km}±4^{km}, **n723,** σ**1ˢ84**/817, **mb4.5**/84, **MS4.3**/37, **64C-72D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.13	157	PG	Pg	05 33 12.3	+1.0
GADA				SG	Sg	05 33 14.7	+1.7
SMTH	Samothraki Isl	0.28	305	P	Pg	05 33 14.6	+0.6
SMTH				S	Sg	05 33 18.7	+1.0
SMTH	Samothraki Isl	0.28	305	P	Pg	05 33 14.6	+0.6
SMTH				S	Sg	05 33 18.7	+1.0
SMTH				AML	AML	05 33 18.9	
SMTH				AML	AML	05 33 19.2	
ENEZ	Enez	0.49	30	PG	Pg	05 33 18.1	+0.1
ENEZ				SG	Sg	05 33 26.4	+2.0
BOZC	Bozcaada	0.50	160	PG	Pg	05 33 18.7	+0.5
BOZC				SG	Sg	05 33 25.8	+1.1
BOZC	Bozcaada	0.50	160	⇑iP	Pg	05 33 18.9	+0.7
BOZC				iS	Sg	05 33 25.8	+1.1
ALN	Alexandroupoli	0.61	16	PG	Pg	05 33 20.1	-0.2
ALN				SG	Sg	05 33 29.7	+1.6
ALN	Alexandroupoli	0.61	16	P	Pg	05 33 20.8	+0.5
ALN				S	Sg	05 33 29.8	+1.6
	46µm,0.5s						
ALN	Alexandroupoli	0.61	16	P	Pg	05 33 20.8	+0.5
ALN				S	Sg	05 33 29.8	+1.6
ALN	Alexandroupoli	0.61	16	P	Pg	05 33 20.8	+0.5
ALN				AML	AML	05 33 31.0	
	comp=E,66409µm,0.6s						
ALN				AML	AML	05 33 33.4	
	comp=N,98486µm,0.7s						
LIA	Limnos Island	0.65	230	P	Pg	05 33 20.7	-0.3
LIA				S	Sb	05 33 30.7	-1.0
	comp=N,42µm,0.6s						
LIA	Limnos Island	0.65	230	P	Pg	05 33 20.9	-0.1
LIA				S	Sb	05 33 30.0	-1.7
LIA				AML	AML	05 33 35.5	
LIA				AML	AML	05 33 36.7	
	comp=E,65483µm,0.6s						
LPK	Lapseki	0.71	85	PG	Pg	05 33 22.8	+0.5
LPK				SG	Sg	05 33 33.4	+1.8
BAYC	CANAKKALE_Bayr	0.79	136	⇓iP	Pg	05 33 24.3	+0.5
BAYC				iS	Sg	05 33 34.9	+0.8
KESN	Edirne-Kesan	0.83	51	⇑iP	Pg	05 33 24.1	-0.4
KESN				iS	Sg	05 33 37.1	+1.8
RDO	Rodhopi	0.86	345	PG	Pg	05 33 25.5	+0.3
RDO	Rodhopi	0.86	345	P	Pg	05 33 25.2	0.0
RDO				S	Sb	05 33 37.2	-0.8
	comp=E,31µm,0.6s						
RDO	Rodhopi	0.86	345	P	Pg	05 33 25.3	+0.2
RDO				S	Sg	05 33 36.7	+0.4
RDO				AML	AML	05 33 40.3	
	comp=N,58555µm,0.6s						
RDO				AML	AML	05 33 40.4	
	comp=E,63783µm,0.5s						
GPNR	Gulpinar-Canak	0.89	165	PG	Pg	05 33 25.4	-0.2
THAS	Thassos island	0.90	289	P	Pg	05 33 25.4	-0.4
THAS				S	Sb	05 33 37.9	-1.0
	comp=E,22µm,0.5s						
THAS	Thassos island	0.90	289	P	Pg	05 33 25.0	-0.8
EFSA	Agios Efstrati	1.01	220	P	Pb	05 33 27.4	-1.1
RKY	Sarkoy-Tekirda	1.09	70	PN	Pb	05 33 29.2	-0.9
SART	Tekirdag	1.10	69	⇓iP	Pb	05 33 29.8	-0.4
SART				iS	Sg	05 33 45.7	+1.9
SIGR	SIGRI	1.10	179	PN	Pb	05 33 28.9	-1.2
SIGR	SIGRI	1.10	179	P	Pb	05 33 29.1	-1.0
SIGR				S	Sg	05 33 44.8	+0.9
SIGR	SIGRI	1.10	179	P	Pb	05 33 28.6	-1.5
SIGR				S	Sg	05 33 44.6	+0.6
SIGR				AML	AML	05 33 47.9	
SIGR				AML	AML	05 33 48.0	
PRK	Paraskevi	1.12	162	P	Pb	05 33 30.5	+0.1
PRK				S	Sn	05 33 46.6	-0.1
PRK	Paraskevi	1.12	162	P	Pg	05 33 30.7	+0.7
PRK				S	Sn	05 33 46.4	-0.3
PRK				AML	AML	05 33 48.0	
PRK				AML	AML	05 33 49.0	
AYVA	Ayvalik	1.20	146	⇓iP	Pn	05 33 31.4	-0.8
AYVA				iS	Sn	05 33 48.2	-0.6
KAVA	Kavala	1.21	305	PN	Sn	05 33 50.6	+1.5
KAVA	Kavala	1.21	305	P	Pn	05 33 31.1	-1.2
KAVA				S	Sg	05 33 47.3	-0.3
	comp=E,14µm,0.7s						
KAVA	Kavala	1.21	305	P	Pn	05 33 31.1	-1.2
KVLA	Kavala	1.26	300	P	Pn	05 33 31.9	-1.1
KVLA				AML	AML	05 33 53.7	
	comp=E,34612µm,0.7s						
KVLA				AML	AML	05 33 56.2	
	comp=N,17111µm,0.6s						
KDZ	Kurdzhali	1.37	347	PN	Pn	05 33 33.6	-0.9
KDZ	Kurdzhali	1.37	347	P	Pn	05 33 33.5	-0.9
KDZ	Kurdzhali	1.37	347	iP	Pn	05 33 33.6	-0.9
MRMT	Marmara Adasi	1.38	77	PN	Pn	05 33 33.4	-1.2
OUR	Ouranopolis	1.41	271	PN	Pn	05 33 33.2	-1.8
OUR	Ouranopolis	1.41	271	P	Pn	05 33 33.1	-1.9
OUR				S	Sn	05 33 51.6	-2.4
	comp=N,11µm,0.5s						
OUR	Ouranopolis	1.41	271	P	Pn	05 33 32.8	-2.3
OUR				AML	AML	05 33 56.4	
	comp=N,24836µm,0.7s						
OUR				AML	AML	05 33 57.9	
	comp=E,20137µm,0.4s						
GONE	Gonen-Balikesi	1.45	100	PN	Pn	05 33 35.2	-0.3
TKR	Tekirdag	1.46	62	PN	Pn	05 33 35.0	-0.7
DKL	Dikili	1.49	146	PN	Pn	05 33 35.3	-0.8
CAND	Candarli	1.55	151	PN	Pn	05 33 36.5	-0.4
EDC	Edincik	1.56	88	PN	Pn	05 33 36.3	-0.7
RZN	Rozhen	1.61	329	P	Pn	05 33 37.3	-0.7
RZN	Rozhen	1.61	329	iP	Pn	05 33 37.4	-0.6
ZEDA	zmir-Bergama	1.65	144	⇓iP	Pn	05 33 38.4	0.0
ZEDA				iS	Sb	05 34 01.1	+0.4
ZEDA				IAML_P			
	comp=Z,136µm,0.2s						
CRLT	Corlu	1.66	60	PN	Pn	05 33 38.0	-0.5
EDRB	Edirne	1.68	24	PN	Pn	05 33 37.8	-0.9
PAIG	Paliouri	1.69	258	P	Pn	05 33 37.1	-1.8
PAIG				S	Sn	05 33 58.6	-2.3
PAIG	Paliouri	1.69	258	P	Pn	05 33 36.7	-2.1
BALB	Balikesir	1.71	112	PN	Pn	05 33 38.2	-0.9
BALB	Balikesir	1.71	112	ePn	Pn	05 33 39.3	+0.1
BALB				eSn	Sg	05 34 04.2	+0.5
STEP	BALIKESIR_Sava	1.73	122	⇓iP	Pn	05 33 39.5	+0.1
STEP				iS	Sb	05 34 04.0	+1.1
SKY	Skiros Island	1.74	215	P	Pn	05 33 37.6	-1.9
SKY	Skiros Island	1.74	215	P	Pn	05 33 37.5	-2.0
FOCM	Foa	1.74	156	PN	Pn	05 33 38.8	-0.7
DIM	Dimitrovgrad	1.75	353	P	Pn	05 33 39.2	-0.5
DIM	Dimitrovgrad	1.75	353	iP	Pn	05 33 39.2	-0.5
KIRK	Kırklareli	1.75	33	⇑iP	Pn	05 33 38.3	-1.4
KIRK				iS	Sb	05 34 03.5	-0.1
PSRA	Psara	1.78	187	P	Pn	05 33 39.7	-0.3
NVR	Nevrokopi	1.82	305	P	Pn	05 33 39.9	-0.7
NVR				S	Sn	05 34 02.1	-2.0
	comp=Z,6µm,0.6s						
NVR	Nevrokopi	1.82	305	P	Pn	05 33 39.8	-0.9
PLG	Polygyros	1.82	273	P	Pn	05 33 39.2	-1.5
PLG				S	Sn	05 34 03.1	-1.1
PLG	Polygyros	1.82	273	P	Pn	05 33 39.3	-1.5
PLG				AML	AML	05 34 11.2	
	comp=N,11373µm,0.9s						
PLG				AML	AML	05 34 12.4	
	comp=E,9189µm,0.6s						
PHSR	Pinarhisar	1.84	44	PN	Pn	05 33 39.9	-1.0
PHSR	Pinarhisar	1.84	44	⇓iP	Pn	05 33 39.8	-1.1
PHSR	Pinarhisar	1.84	44	S	Sn	05 34 04.6	0.0
SRS	Serrai	1.88	296	P	Pn	05 33 40.3	-1.2
SRS	Serrai	1.88	296	P	Pn	05 33 40.5	-1.0
SRS				AML	AML	05 34 11.5	
	comp=E,24756µm,0.6s						
SRS				AML	AML	05 34 21.8	
	comp=N,13832µm,0.8s						
ALNA	Alonissos	1.91	233	P	Pn	05 33 40.3	-1.5
CHOS	Chios island	1.93	175	PN	Pn	05 33 41.5	-0.7
CHOS	Chios island	1.93	175	P	Pn	05 33 41.5	-0.7
CHOS				S	Sn	05 34 06.4	-0.5
	comp=N,36µm,0.5s						
CHOS	Chios island	1.93	175	P	Pn	05 33 41.8	-0.4
CHOS				AML	AML	05 34 14.6	
	comp=E,71097µm,0.6s						
CHOS				AML	AML	05 34 15.2	
	comp=N,68941µm,0.6s						
KCTX	Karacabey (Bur	1.93	91	PN	Pn	05 33 41.5	-0.7
SOH	Sokhos	1.95	286	P	Pn	05 33 41.2	-1.3
SOH				S	Sn	05 34 06.1	-1.4
	comp=N,7µm,0.7s						
SOH	Sokhos	1.95	286	P	Pn	05 33 41.0	-1.5
PLD	Plovdiv	1.98	335	PN	Pn	05 33 42.2	-0.7
PLD	Plovdiv	1.98	335	ePg	Pb	05 33 45.6	+0.4
PLD				eSg	Sg	05 34 12.7	+0.4
PLD	Plovdiv	1.98	335	P	Pg	05 33 46.5	-0.1
PLD	Plovdiv	1.98	335	iP	Pn	05 33 43.3	+0.4
URLA	Izmir	2.04	163	PN	Pn	05 33 42.9	-0.7
URLA	Izmir	2.04	163	⇓iP	Pn	05 33 43.6	-0.1
URLA				iS	Sg	05 34 14.9	+0.9
MMB	Musomiste	2.04	309	P	Pn	05 33 44.0	+0.3
MMB	Musomiste	2.04	309	iP	Pb	05 33 44.4	-1.8
AKHS	Akhisar	2.10	132	⇓iP	Pn	05 33 44.3	-0.2
AKHS				iS	Sn	05 34 10.9	-0.1
AKS	Akhisar	2.10	132	PN	Pn	05 33 43.9	-0.5
HORT	Hortiatis	2.10	279	PN	Pn	05 33 43.7	-0.9
HORT	Hortiatis	2.10	279	P	Pn	05 33 43.2	-1.4
HORT	Hortiatis	2.10	279	P	Pn	05 33 43.2	-1.4
HORT				AML	AML	05 34 28.3	
	comp=N,10853µm,1.1s						
HORT				AML	AML	05 34 29.8	
	comp=E,7540µm,0.6s						
BLCB	Balcova	2.14	154	PN	Pn	05 33 44.4	-0.6
ELBA	Catalca	2.15	66	⇓iP	Pn	05 33 44.3	-0.8
ELBA				iS	Sb	05 34 15.3	+0.4
SKIA	Skiathos	2.15	239	P	Pn	05 33 42.8	-2.4
SKIA				S	Sg	05 34 17.9	+0.2
	comp=E,16µm,0.8s						
SKIA	Skiathos	2.15	239	P	Pn	05 33 42.9	-2.4
DURS	Dursunbey	2.15	108	⇓iP	Pn	05 33 45.5	+0.2
DURS				iS	Sb	05 34 17.1	+1.9
CTYL	Yalikoy Yolu	2.20	57	PN	Pn	05 33 44.9	-0.9
CTYL	Yalikoy Yolu	2.20	57	⇓iP	Pn	05 33 45.3	-0.5
CTYL	Yalikoy Yolu	2.20	57	S	Sn	05 34 14.5	+1.1
THE	Thessaloniki	2.21	279	P	Pn	05 33 45.4	-0.5
JMB	Yambol	2.23	15	PN	Pn	05 33 46.5	+0.2
JMB	Yambol	2.23	15	ePg	Pb	05 33 49.7	+0.3
JMB				eSg	Sg	05 34 20.1	0.0
JMB	Yambol	2.23	15	P	Pg	05 33 51.1	-0.2
JMB	Yambol	2.23	15	iP	Pn	05 33 46.4	+0.2
CTKS	Kestanelik-??a	2.23	65	PN	Pn	05 33 45.7	-0.6
XOR	Xorichti	2.24	246	P	Pn	05 33 44.8	-1.6
XOR	Xorichti	2.24	246	P	Pn	05 33 44.3	-2.2
NEO	Neokhori	2.25	244	P	Pn	05 33 44.3	-2.2
NEO				S	Sn	05 34 13.4	-1.2
NEO	Neokhori	2.25	244	P	Pn	05 33 44.3	-2.2
ARMT	Armutlu	2.33	83	PN	Pn	05 33 47.4	-0.2
MDNY	Mudanya-Bursa	2.33	88	PN	Pn	05 33 47.6	-0.1
MRKA	Markates	2.36	228	P	Pn	05 33 46.7	-1.4
ORLT	Orhaneli	2.36	95	PN	Pn	05 33 47.8	-0.4
KNT	Kendrikon	2.38	292	PN	Pn	05 33 47.9	-0.4
KNT	Kendrikon	2.38	292	P	Pn	05 33 48.0	-0.4
KNT	Kendrikon	2.38	292	P	Pn	05 33 47.6	-0.8
EREA	Eretria	2.40	219	P	Pn	05 33 46.8	-1.7
KARY	Karystos	2.52	206	P	Pn	05 33 48.9	-1.4
KARY				S	Sn	05 34 17.4	-4.0
KARY	Karystos	2.52	206	P	Pn	05 33 48.3	-2.0
ULDT	Uludag	2.54	93	⇓iP	Pn	05 33 50.5	-0.1
ULDT				iS	Sg	05 34 29.5	-0.6
BUY	Buyukada	2.56	77	PN	Pn	05 33 50.4	-0.4
BUY	Buyukada	2.56	77	⇓iP	Pn	05 33 49.4	-1.4
BUY				iS	Sb	05 34 29.8	+2.9
PGB	Panagyurishte	2.56	331	P	Pb	05 33 55.7	+0.6
DEMI	Demirci	2.56	119	⇓iP	Pn	05 33 51.0	+0.1
DEMI				iS	Sg	05 34 30.8	-0.1
LIT	Litokhoron	2.57	266	P	Pn	05 33 49.7	-1.2
LIT				S	Sn	05 34 20.6	-2.0
	comp=E,820nm,0.7s						
LIT	Litokhoron	2.57	266	P	Pn	05 33 49.4	-1.5
ISK	Istanbul-Kandi	2.57	72	PN	Pn	05 33 49.9	-1.0
KAVV	Kandilli-Istan	2.57	72	PN	Pn	05 33 50.0	-0.9
GEMT	Gemlik	2.57	86	PN	Pn	05 33 50.8	-0.1
KKB	Krupnik	2.59	308	P	Pn	05 33 51.8	+0.5
KKB	Krupnik	2.59	308	iP	Pn	05 33 52.7	+1.4
KLYT	Kilyos	2.61	68	PN	Pn	05 33 51.1	-0.4
KLYT	Kilyos	2.61	68	⇑iP	Pn	05 33 51.6	+0.1
KLYT	Kilyos	2.61	68	S	Sn	05 34 24.9	+1.3
ELND	Elena	2.62	1	⇑iP	Pn	05 33 52.0	+0.4
ELND	Elena	2.62	1	S	Sn	05 34 25.3	+1.6
VAY	Valandovo	2.67	293	ePn	Pb	05 33 54.0	-2.9
VAY				eSn	Sn	05 34 25.9	+0.8
VAY	Valandovo	2.67	293	iPn	Pb	05 33 54.1	-2.8
SMG	Samos	2.72	163	P	Pn	05 33 51.8	-1.2
SMG				S	Sb	05 34 33.7	+2.4
	comp=E,15µm,0.5s						
SMG	Samos	2.72	163	P	Pn	05 33 52.6	-0.3
YLV	Yalova	2.72	83	PN	Pn	05 33 52.3	-0.7
YLV	Yalova	2.72	83	⇓iP	Pn	05 33 53.4	+0.4
YLV	Yalova	2.72	83	S	Sn	05 34 27.8	+1.5
PTL	Penteli	2.73	215	P	Pn	05 33 51.0	-2.1
LKR	Lokris	2.75	234	P	Pn	05 33 51.3	-2.1
MANT	Manisa	2.79	130	ePn	Pn	05 33 54.3	+0.1
MANT	Manisa	2.79	130	⇓iP	Pn	05 33 54.5	+0.3
MANT				iS	Sb	05 34 36.0	+2.4
MANT				IAML_P			
	comp=Z,64µm,0.3s						
TNSA	Tinos	2.82	191	P	Pn	05 33 53.4	-0.9
GCAM	G?zelcaml?	2.83	157	PN	Pn	05 33 53.7	-0.8
GCAM	G?zelcaml?	2.83	157	⇓iP	Pn	05 33 54.1	-0.4
GCAM				iS	Sg	05 34 37.8	-1.6
ATHU	Athens Univers	2.83	215	P	Pn	05 33 52.3	-2.3
ATH	Athens Observa	2.86	216	P	Pn	05 33 53.0	-1.9
AXAR	Agios Charalam	2.90	239	P	Pn	05 33 54.3	-1.2
VLY	Voula,Athens	2.92	213	P	Pn	05 33 53.9	-1.9
PVL	Pavlikeni	2.93	353	P	Pn	05 33 54.8	-1.0
USAK	Uak-Merkez	2.94	122	⇓iP	Pn	05 33 56.8	+0.7
USAK				iS	Sg	05 34 41.5	-1.5
SILT	Sile	3.02	73	⇑iP	Pn	05 33 56.6	-0.5
SILT	Sile	3.02	73	S	Sn	05 34 33.3	-0.3
VTS	Vitosha	3.02	321	ePn	Pb	05 34 01.2	-1.7
VTS				eSn	Sn	05 34 34.7	+0.9
VTS	Vitosha	3.02	321	ePn	Pn	05 33 57.5	+0.2
VTS				eSn	Sn	05 34 31.3	-2.6
VTS	Vitosha	3.02	321	⇑iP	Pb	05 34 02.3	-0.7
VTS	Vitosha	3.02	321	eP	Pb	05 34 01.2	-1.7
VTS				e		05 34 34.7	
VTS	Vitosha	3.02	321	P	Pb	05 34 02.0	-1.0
VTS	Vitosha	3.02	321	iP	Pb	05 34 02.3	-0.7
THL	Klokotos Trika	3.03	257	P	Pn	05 33 56.0	-1.2
PROD	Prodromos	3.06	229	P	Pn	05 33 56.7	-1.0
GDZ	Gediz	3.07	112	⇓iP	Pn	05 33 58.5	+0.5
GDZ				iS	Sg	05 34 46.9	-0.3
STIP	Stip	3.08	298	iPn	Pn	05 33 56.3	-1.7
AYDN	Tasoluk	3.09	148	⇓iP	Pn	05 33 58.5	+0.3
AYDN				iS	Sb	05 34 44.7	+2.5
KZN	Kozani	3.10	271	P	Pn	05 33 57.4	-1.0
PRD	Provadia	3.12	22	P	Pn	05 33 57.8	-0.6
PRD	Provadia	3.12	22	iP	Pn	05 33 57.9	-0.5
PLVB	Pleven	3.20	344	⇓iP	Pn	05 33 59.9	+0.3
LOUT	Loutraki	3.21	225	P	Pn	05 33 58.1	-1.7
APE	Apeiranthos	3.25	184	P	Pn	05 33 59.6	-0.7
APE				S	Sn	05 34 33.3	-6.1
	comp=Z,2µm,0.8s						
APE	Apeiranthos	3.25	184	⇑iP	Pn	05 33 59.5	-0.7
APE	Apeiranthos	3.25	184	iP	Pn	05 33 58.2	-2.1
APE	Apeiranthos	3.25	184	P	Pn	05 33 58.6	-1.7
RAZG	Razgrad	3.29	9	⇓iP	Pn	05 34 01.1	+0.2
ACOR	Acrocorinthos	3.34	225	P	Pn	05 33 60.0	-1.6
ZIMR		3.36	354	⇓iP	Pn	05 34 02.0	+0.2
EVR	Evrytania	3.40	247	P	Pn	05 34 01.2	-1.3
KAND	Kocaeli-Kandir	3.41	75	⇓iP	Pn	05 34 01.6	-0.8
KAND				iS	Sg	05 34 55.7	-2.3
GEYV	SAKARYA_Geyve	3.42	86	⇓iP	Pn	05 34 02.2	-0.3
GEYV				iS	Sg	05 34 57.1	-1.1
EPID	Epidavros	3.42	219	P	Pn	05 34 00.8	-1.9
KHAL	Karahalli	3.44	123	⇓iP	Pn	05 34 03.8	+0.9
KHAL				iS	Sg	05 34 59.6	+0.6
KALE	Kalithea	3.44	237	P	Pn	05 34 01.3	-1.7
AMGA	Amorgos Island	3.48	179	P	Pn	05 34 01.9	-1.5
SERG	Sergoula	3.49	238	P	Pn	05 34 02.5	-1.1
TRIZ	Trizonia	3.50	237	P	Pn	05 34 02.2	-1.5
TRAZ	Trapeza	3.53	234	P	Pn	05 34 03.2	-1.0
BORA	Eskisehir	3.57	95	⇓iP	Pn	05 34 05.7	+0.8
BORA				iS	Sg	05 35 02.5	-0.8
IOSP	Ios island	3.61	187	P	Pn	05 34 03.5	-1.7
LAKA	Lakka	3.63	237	P	Pn	05 34 05.2	-0.4
KLV	Kalavryta, Ach	3.65	233	P	Pn	05 34 04.1	-1.7
SRCK	Saricakaya, Es	3.68	93	⇓iP	Pn	05 34 06.5	+0.2
SRCK				iS	Sg	05 35 07.4	+0.5
SKO	Skopje	3.71	298	ePn	Pn	05 34 07.1	+0.5
SKO	Skopje	3.71	298	iPn	Pn	05 34 08.9	+2.4
TAVA	DENIZLI_Tavas	3.72	139	⇓iP	Pn	05 34 07.6	+0.7
TAVA				iS	Sg	05 35 05.9	-2.3
MHLA	Plaka, Milos I	3.73	198	P	Pn	05 34 05.3	-1.6
AUKIR	Kırka- Seyitga	3.77	104	⇓iP	Pn	05 34 08.1	+0.6
AUKIR				iS	Sg	05 35 09.1	-0.5
AFYO	Afyonkarahisar	3.77	112	⇓iP	Pn	05 34 08.6	+1.0
AFYO				iS	Sg	05 35 11.5	+1.6
PSN	Preselentsi	3.80	27	P	Pn	05 34 07.4	-0.4
ZAPS	Zavoj	3.80	322	ePn	Pn	05 34 08.7	+0.8
ZAPS				eSn	Sn	05 34 52.5	-0.6
DAT	Datca	3.83	158	⇓iP	Pn	05 34 08.4	0.0
DAT				iS	Sg	05 35 11.6	-0.1
VLAD	Vladila	3.83	344	⇑iP	Pn	05 34 08.0	-0.3
COPA	Copaceanca	3.85	353	⇓iP	Pn	05 34 08.5	0.0
SAHE	Sakarya_HENDEK	3.86	80	iP	Pn	05 34 08.2	-0.5
SAHE				iS	Sg	05 35 11.8	-0.8
SGRR	Singureni	3.91	2	⇑iP	Pn	05 34 09.3	0.0
BARS	Barje	3.92	311	ePn	Pn	05 34 09.5	+0.1
BARS	Barje	3.92	311	ePn	Pb	05 34 19.8	+1.6
BARS				eSn	Sn	05 34 54.8	-1.0
BARS				eSg	Sg	05 35 38.5	+24
KZIL	AFYON_Kizioren	3.92	120	⇓iP	Pn	05 34 10.6	+0.9
KZIL				iS	Sg	05 35 18.7	+4.1
TRIP	Tripoli	3.93	226	P	Pn	05 34 08.4	-1.3
ANAF	Anafi Island	3.95	181	P	Pn	05 34 08.4	-1.5
BTAS	Taskesti	3.95	85	iP	Pn	05 34 10.0	0.0
BTAS				iS	Sg	05 35 16.6	+1.0
RASA	Rasa	4.02	14	⇑iP	Pn	05 34 11.4	+0.5
BUC1	Bucharest	4.04	2	⇑iP	Pn	05 34 11.3	+0.2
TSMN	Mangalia Port-	4.05	30	⇑iP	Pn	05 34 11.7	+0.5
MANR	Mangalia	4.06	29	⇑iP	Pn	05 34 11.7	+0.3
TURN	Turunc	4.06	147	⇓iP	Pn	05 34 10.3	-1.2
TURN				iS	Sg	05 35 16.2	-2.9
ICOR	Ion Corvin	4.07	20	⇓iP	Pn	05 34 12.1	+0.5
MDUB	Mudurnu	4.10	86	ePn	Pn	05 34 12.4	+0.3
DALY	Dalyan (Mula)	4.13	147	iP	Pn	05 34 12.8	+0.4
DALY				iS	Sg	05 35 19.6	-1.7
CIFT	Cifteler, Eski	4.14	102	iP	Pn	05 34 13.0	+0.5
CIFT				iS	Sg	05 35 22.4	+0.9
BRDR	BURDUR-Merkez	4.21	127	iP	Pn	05 34 14.2	+0.7
BRDR				iS	Sg	05 35 24.6	+0.9
LEHL	Lehliu	4.22	10	⇑iP	Pn	05 34 14.3	+0.7
GOLH	Golhisar	4.23	135	iP	Pn	05 34 15.4	+1.4
GOLH				iS	Sg	05 35 27.6	+3.0
VLI	Veliai	4.25	213	P	Pn	05 34 12.1	-1.9
HUMR	Humele	4.26	352	⇑iP	Pn	05 34 13.7	-0.5
BOLV	Bolvadin	4.27	110	iP	Pn	05 34 15.9	+1.5
BOLV				iS	Sg	05 35 26.8	+1.1
CRAR	CRAIOVA	4.28	340	⇑iP	Pn	05 34 13.6	-0.9
EFOR	EFORIE	4.30	28	⇑iP	Pn	05 34 14.7	0.0
PHP	Peshkopia	4.30	290	iP	Pn	05 34 18.9	+4.1
MFTR	Murfatlar	4.32	26	⇑iP	Pn	05 34 15.2	+0.3
AUMIH	MIHALICIK	4.36	94	iP	Pn	05 34 16.3	+0.6
AUMIH				iS	Sg	05 35 26.0	-2.6
ITM	Ithomi	4.37	226	ePn	Pn	05 34 15.9	+0.2
KDZE	Karadeniz Ereo	4.38	75	⇓iP	Pn	05 34 15.0	-0.8
SULR		4.38	4	⇑iP	Pn	05 34 16.1	+0.4
TSCT	Constanta Port	4.38	28	⇓iP	Pn	05 34 15.7	-0.1
ZAGS	Zajecar	4.41	324	ePn	Pn	05 34 15.8	-0.3
ZAGS				eSn	Sn	05 35 05.8	-2.0
ISP	Isparta	4.42	123	ePn	Pn	05 34 16.7	+0.3
ISP	Isparta	4.42	123	⇓iP	Pn	05 34 16.9	+0.5
ISP	Isparta	4.42	123	eP	Pn	05 34 16.7	+0.3
ISP	Isparta	4.42	123	Pn	Pn	05 34 15.8	-0.6
AMRR	Amara	4.44	14	⇑iP	Pn	05 34 17.4	+0.8
TPE	Tepelena	4.45	272	iP	Pb	05 34 25.4	-1.9
FETY	Fethiye	4.47	144	iP	Pn	05 34 18.6	+1.5
FETY				iS	Sg	05 35 34.6	+2.3
AUSIV	SIVRIHISAR	4.48	99	iP	Pn	05 34 17.7	+0.4

AUSIV				*i* S	**Sg**	**05 35 30.3**	**-2.1**
SRN	**Sarande**	**4.49**	**266**	*i* P	**Pn**	**05 34 18.8**	**+1.4**
BAGO	**Egridir - ISPA**	**4.50**	**119**	*i* P	**Pn**	**05 34 17.0**	**-0.5**
BAGO				*i* S	**Sg**	**05 35 36.8**	**+3.7**
BOVS	**Bovan**	**4.53**	**319**	*e*Pn	**Pn**	**05 34 17.7**	**-0.1**
BOVS				*e*Sg	**Sg**	**05 35 34.4**	**+0.5**
TIRR	**Tirgusor**	**4.56**	**24**	*e*Pn	**Pn**	**05 34 18.1**	**-0.2**
TIRR	**Tirgusor**	**4.56**	**24**	⇑*i*P	**Pn**	**05 34 17.3**	**-1.0**
TIRR	**Tirgusor**	**4.56**	**24**	*e*P	**Pn**	**05 34 18.1**	**-0.2**
SELS	**Selova**	**4.57**	**311**	*e*Pn	**Pn**	**05 34 17.9**	**-0.5**
SELS				*e*Sg	**Sg**	**05 35 34.8**	**-0.4**
GOLR		**4.57**	**352**	⇑*i*P	**Pn**	**05 34 16.6**	**-1.8**
TLB	**Topalu**	**4.57**	**20**	⇓*i*P	**Pn**	**05 34 18.6**	**+0.2**
KIBS	**BOLU**	**4.60**	**87**	*i* P	**Pn**	**05 34 19.1**	**+0.1**
KIBS				*i* S	**Sg**	**05 35 34.2**	**-2.2**
PLAR	**PLOIESTI**	**4.60**	**2**	⇑*i*P	**Pn**	**05 34 19.9**	**+1.1**
HARR	**Harsova**	**4.64**	**19**	⇓*i*P	**Pn**	**05 34 19.5**	**+0.1**
TIR	**Tirane**	**4.64**	**285**	*e*Pn	**Pn**	**05 34 21.6**	**+2.2**
TIR	**Tirane**	**4.64**	**285**	*e*Pn	**Pn**	**05 34 19.6**	**+0.2**
TIR	**Tirane**	**4.64**	**285**	⇑*i*P	**Pn**	**05 34 20.9**	**+1.5**
TIR	**Tirane**	**4.64**	**285**	*e*P	**Pn**	**05 34 21.6**	**+2.2**
TIR	**Tirane**	**4.64**	**285**	*i* P	Pb	05 34 26.1	-4.4
PGOR	**Pogoanele**	**4.67**	**10**	⇑*i*P	**Pn**	**05 34 19.4**	**-0.4**
BCAM	**Yenicaga**	**4.78**	**82**	*i* P	**Pn**	**05 34 21.9**	**+0.5**
BCAM				*i* S	**Sg**	**05 35 43.8**	**+1.8**
BCI	**Bajram Curri**	**4.80**	**297**	*i* P	**Pn**	**05 34 23.4**	**+1.8**
PUK	**Puka**	**4.80**	**293**	*i* P	**Pn**	**05 34 24.9**	**+3.2**
ISR	**Istrita**	**4.83**	**6**	⇑*i*P	**Pn**	**05 34 22.5**	**+0.4**
VLO	**Vlora**	**4.84**	**274**	*i* P	**Pg**	**05 34 45.5**	**+4.2**
KORT	**Korkueli**	**4.84**	**132**	*i* P	**Pn**	**05 34 23.2**	**+0.9**
KORT				*i* S	**Sg**	**05 35 47.0**	**+2.8**
ANKY	**Antikythira Is**	**4.87**	**205**	P	**Pn**	**05 34 21.1**	**-1.4**
KARP	**Karpathos**	**4.87**	**167**	*e*Pn	**Pn**	**05 34 22.1**	**-0.5**
KARP	**Karpathos**	**4.87**	**167**	P	**Pn**	**05 34 22.1**	**-0.5**
MTUR	**Matau**	**4.94**	**354**	⇓*i*P	**Pn**	**05 34 23.9**	**+0.3**
PVY	**Plav**	**4.97**	**299**	⇓*i*Pn	**Pn**	**05 34 24.2**	**+0.2**
PVY				*e*Sn	**Sn**	**05 35 21.4**	**-0.5**
DJES	**Djerdap**	**4.99**	**332**	*e*Pn	**Pn**	**05 34 23.2**	**-1.0**
DJES				*e*Sg	**Sg**	**05 35 48.0**	**-0.9**
AKAS	**Kas**	**5.04**	**143**	*i* P	**Pn**	**05 34 26.0**	**+1.0**
AKAS				*i* S	**Sg**	**05 35 48.9**	**-1.6**
DOGA	**KONYA_Doganhis**	**5.04**	**114**	*i* P	**Pn**	**05 34 26.7**	**+1.7**
DOGA				*i* S	**Sg**	**05 35 55.3**	**+4.7**
IDI	**Anoyia**	**5.07**	**189**	Pn	**Pn**	**05 34 24.7**	**-0.7**
	comp=Z,1.7nm,0.3s,baz=359,slow=13,SNR=11						
IDI				Sn	**Sn**	**05 35 20.1**	**-4.3**
	comp=Z,7.5nm,0.3s,baz=288,slow=12,SNR=4.1						
KUBS	**Kucevo**	**5.12**	**324**	*e*Pn	**Pn**	**05 34 24.6**	**-1.5**
KUBS				*e*Sg	**Sg**	**05 35 52.3**	**-0.8**
ARR	**Arges**	**5.13**	**351**	⇓*i*P	**Pn**	**05 34 25.9**	**-0.3**
IVA	**Berane**	**5.13**	**302**	⇑*i*Pn	**Pn**	**05 34 26.8**	**+0.5**
IVA				*e*Sn	**Sn**	**05 35 25.9**	**0.0**
GRER		**5.13**	**9**	⇑*i*P	**Pn**	**05 34 24.8**	**-1.4**
CFR	**Carcaliu**	**5.15**	**18**	⇓*i*P	**Pn**	**05 34 26.1**	**-0.3**
VOIR		**5.15**	**354**	⇑*i*P	**Pn**	**05 34 26.0**	**-0.5**
MLR	**Muntele Rosu**	**5.18**	**1**	Pn	**Pn**	**05 34 27.6**	**+0.7**
	comp=Z,22nm,0.3s,baz=196,slow=4.8,SNR=122						
MLR				Lg	Lg	05 35 50.4	
	comp=Z,36nm,0.3s,baz=117,slow=18,SNR=2.3						
MLR	**Muntele Rosu**	**5.18**	**1**	*e*Pn	**Pn**	**05 34 27.8**	**+0.9**
MLR	**Muntele Rosu**	**5.18**	**1**	*e*Pn	**Pn**	**05 34 26.9**	**0.0**
MLR	**Muntele Rosu**	**5.18**	**1**	⇑*i*P	**Pn**	**05 34 27.9**	**+1.0**
HERR	**Herculane**	**5.21**	**332**	⇑*i*P	**Pn**	**05 34 27.5**	**+0.2**
GRUS	**Gruza**	**5.22**	**315**	*e*Pn	**Pn**	**05 34 27.0**	**-0.3**
GRUS				*e*Sg	**Sg**	**05 35 56.7**	**+0.5**
SVIS	**Svilajnac**	**5.23**	**321**	*e*Pn	**Pn**	**05 34 27.1**	**-0.3**
ULC	**Ulcinj**	**5.24**	**290**	⇓*i*Pn	**Pn**	**05 34 27.9**	**+0.3**
ULC				*e*Sn	**Sn**	**05 35 27.6**	**-0.9**
BISRR	**Bisoca**	**5.27**	**7**	⇑*i*P	**Pn**	**05 34 29.1**	**+1.0**
SJES	**Sjenica**	**5.28**	**306**	*e*Pn	**Pn**	**05 34 28.3**	**+0.1**
IVAS	**Ivanjica**	**5.34**	**309**	*e*Pn	**Pn**	**05 34 28.9**	**-0.2**
IVAS				*e*Sg	**Sg**	**05 35 59.9**	**-0.3**
TLCR		**5.34**	**23**	⇑*i*P	**Pn**	**05 34 29.1**	**+0.1**
TLCR		**5.34**	**23**	P	**Pn**	**05 34 29.1**	**+0.1**
DRME	**Dracevica, Mon**	**5.35**	**293**	⇑*i*Pn	**Pn**	**05 34 29.8**	**+0.7**
DRME				*e*Sn	**Sn**	**05 35 30.9**	**-0.2**
DRME	**Dracevica, Mon**	**5.35**	**293**	*e*Pn	**Pn**	**05 34 31.0**	**+1.9**
BR231	**Keskin MP Arra**	**5.35**	**93**	*e*Pn	**Pn**	**05 34 29.4**	**+0.1**
LOT	**Lotru**	**5.35**	**344**	⇑*i*P	**Pn**	**05 34 28.6**	**-0.7**
ANTO	**Ankara**	**5.36**	**92**	*e*Pn	**Pn**	**05 34 29.3**	**0.0**
ANTO	**Ankara**	**5.36**	**92**	⇓*i*P	**Pn**	**05 34 29.5**	**+0.1**
ANTO	**Ankara**	**5.36**	**92**	*e*P	**Pn**	**05 34 29.3**	**0.0**
KOME	**Kolasin**	**5.37**	**300**	⇓*i*Pn	**Pn**	**05 34 30.0**	**+0.5**
KOME				*e*Sn	**Sn**	**05 35 31.3**	**-0.5**
PDG	**Podgorica**	**5.38**	**295**	*e*Pn	**Pn**	**05 34 30.0**	**+0.5**
PDG	**Podgorica**	**5.38**	**295**	⇓*i*P	**Pn**	**05 34 30.3**	**+0.8**
PDG	**Podgorica**	**5.38**	**295**	*e*Pn	**Pn**	**05 34 31.0**	**+1.4**
TTG	**Podgorica**	**5.38**	**295**	⇑*i*Pn	**Pn**	**05 34 30.5**	**+1.0**
TTG				*e*Sn	**Sn**	**05 35 31.5**	**-0.4**
TTG	**Podgorica**	**5.38**	**295**	*e*Pn	**Pn**	**05 34 30.9**	**+1.4**
TTG	**Podgorica**	**5.38**	**295**	*e*P	**Pn**	**05 34 30.9**	**+1.4**
MDVR	**Moldovita**	**5.40**	**327**	⇓*i*P	**Pn**	**05 34 28.9**	**-1.0**
TUDR		**5.45**	**14**	⇑*i*P	**Pn**	**05 34 31.5**	**+1.0**
GIUM	**Giurgiulesti**	**5.46**	**18**	⇑*i*P	**Pn**	**05 34 30.9**	**+0.3**
PETR	**Petresti**	**5.50**	**10**	⇑*i*P	**Pn**	**05 34 30.0**	**-1.2**
ODBI	**Odobesti**	**5.52**	**9**	⇑*i*P	**Pn**	**05 34 31.0**	**-0.5**
GZR	**Gura Zlata**	**5.55**	**337**	⇓*i*P	**Pn**	**05 34 31.4**	**-0.6**
PLOR	**Plostina**	**5.57**	**6**	⇓*i*P	**Pn**	**05 34 33.0**	**+0.8**
BUM	**Brajici-Budva**	**5.59**	**293**	⇓*i*Pn	**Pn**	**05 34 33.2**	**+0.7**
BUM				*e*Sn	**Sn**	**05 35 36.9**	**-0.2**
VRI	**Vrincioaia**	**5.59**	**6**	⇓*i*P	**Pn**	**05 34 33.7**	**+1.2**
TRUS	**Trudelj**	**5.61**	**316**	*e*Pn	**Pn**	**05 34 32.3**	**-0.4**
TRUS				*e*Sg	**Sg**	**05 36 07.8**	**-0.9**
CEME	**Cevo**	**5.66**	**295**	⇑*i*Pn	**Pn**	**05 34 34.3**	**+0.9**
CEME				*e*Sn	**Sn**	**05 35 37.9**	**-0.9**
DOPR	**Dopca**	**5.66**	**357**	⇑*i*P	**Pn**	**05 34 34.0**	**+0.6**
PLE	**Pljevlja**	**5.68**	**304**	⇑*i*Pn	**Pn**	**05 34 34.7**	**+0.9**
PLE				*e*Sn	**Sn**	**05 35 38.8**	**-0.6**
NKY	**Niksic**	**5.70**	**298**	⇓*i*Pn	**Pn**	**05 34 35.4**	**+1.3**
NKY				*e*Sn	**Sn**	**05 35 39.6**	**-0.4**
NKME	**Niksic**	**5.71**	**298**	⇓*i*Pn	**Pn**	**05 34 34.7**	**+0.5**
NKME				*e*Sn	**Sn**	**05 35 39.8**	**-0.4**
DIVS	**Divibare**	**5.75**	**313**	*e*Pn	**Pn**	**05 34 34.0**	**-0.8**
DIVS	**Divibare**	**5.75**	**313**	*e*Pn	**Pn**	**05 34 33.8**	**-1.0**
OZUR		**5.78**	**360**	⇓*i*P	**Pn**	**05 34 35.6**	**+0.5**
RUDO	**Rudo**	**5.84**	**307**	*e*Pn	**Pn**	**05 34 37.3**	**+1.4**
HCY	**Herceg Novi**	**5.92**	**294**	⇑*i*Pn	**Pn**	**05 34 37.9**	**+1.0**
HCY				*e*Sn	**Sn**	**05 35 43.7**	**-1.4**
HCY	**Herceg Novi**	**5.92**	**294**	*e*Pn	Pn	05 34 41.3	+4.4
MDB	**Medias**	**5.92**	**350**	⇑*i*P	**Pn**	**05 34 37.5**	**+0.5**
UPM	**Unac-Piva**	**5.93**	**301**	⇑*i*Pn	**Pn**	**05 34 37.9**	**+0.6**
UPM				*e*Sn	**Sn**	**05 35 44.2**	**-1.5**
UPM	**Unac-Piva**	**5.93**	**301**	*e*Pn	**Pn**	**05 34 38.2**	**+0.9**
BBLS	**Lazići**	**5.95**	**309**	*e*Pn	**Pn**	**05 34 37.6**	**+0.1**
BBLS	**Lazići**	**5.95**	**309**	*e*Pn	**Pn**	**05 34 38.5**	**+1.0**
DEV	**Deva**	**5.97**	**340**	⇑*i*P	**Pn**	**05 34 38.4**	**+0.8**
BR101	**Keskin Array S**	**6.02**	**93**	*e*Pn	**Pn**	**05 34 38.6**	**+0.1**
BR101				*e*Pg	Pg	05 35 00.2	-3.7
BR131	**Keskin Array S**	**6.02**	**93**	*e*Pn	**Pn**	**05 34 38.6**	**+0.1**
BRTR	**Keskin Array B**	**6.02**	**93**	Pn	**Pn**	**05 34 38.6**	**+0.1**
	comp=Z,22nm,0.3s,baz=261,slow=10,SNR=195						
BRTR				Pg	Pg	05 35 00.2	-3.7
	comp=Z,15nm,0.3s,baz=267,slow=15,SNR=16						
BRTR				Lg	Lg	05 36 14.7	
	baz=265,slow=30,SNR=2.6						
ILGA	**Ilgaz**	**6.04**	**80**	*e*Pn	**Pn**	**05 34 39.8**	**+1.0**
BRY	**Bratogost**	**6.05**	**298**	⇓*i*Pn	**Pn**	**05 34 40.3**	**+1.5**
BRY				*e*Sn	**Sn**	**05 35 47.2**	**-1.3**
BRY	**Bratogost**	**6.05**	**298**	*e*Pn	**Pn**	**05 34 41.1**	**+2.3**
BIR	**Birlad**	**6.09**	**12**	⇓*i*P	**Pn**	**05 34 39.5**	**+0.2**
TREB	**Trebinje**	**6.11**	**296**	*e*Pn	**Pn**	**05 34 43.2**	**+3.7**
BZS	**Buzias**	**6.14**	**331**	*e*Pn	**Pn**	**05 34 38.5**	**-1.4**
BZS	**Buzias**	**6.14**	**331**	⇓*i*P	**Pn**	**05 34 39.3**	**-0.6**
TESR	**Tescani**	**6.23**	**5**	⇓*i*P	**Pn**	**05 34 41.9**	**+0.7**
DBRK	**Dubrovnik**	**6.23**	**295**	*i* P	Pn	05 34 46.6	+5.3
HAPS	**Han Pijesak,BI**	**6.35**	**309**	*e*Pn	**Pn**	**05 34 43.7**	**+0.7**
HAPS	**Han Pijesak,BI**	**6.35**	**309**	*e*Pn	**Pn**	**05 34 44.1**	**+1.1**
CGL1	**Ceglie Messapi**	**6.38**	**276**	*e*Pn	Pn	05 34 48.3	+5.0
BZK	**Bozkurt**	**6.39**	**72**	⇑*i*P	**Pn**	**05 34 43.2**	**-0.2**
FASA	**Fasano**	**6.47**	**277**	*e*Pn	Pn	05 34 49.1	+4.5
TAR1	**Taranto**	**6.53**	**275**	*e*Pn	**Pn**	**05 34 46.3**	**+1.0**
FRGS	**Fruska Gora**	**6.56**	**320**	*e*Pn	**Pn**	**05 34 45.2**	**-0.6**
FRGS	**Fruska Gora**	**6.56**	**320**	*e*Pn	**Pn**	**05 34 44.6**	**-1.2**
CJR	**Cluj-Napoca**	**6.60**	**347**	⇑*i*P	**Pn**	**05 34 46.9**	**+0.5**
STON	**Ston**	**6.61**	**295**	*i* P	Pn	05 34 51.0	+4.5
STON	**Ston**	**6.61**	**295**	*e*Pn	Pn	05 34 51.1	+4.7
BIZ	**Bicaz**	**6.63**	**2**	⇓*i*P	**Pn**	**05 34 47.4**	**+0.7**
MASS	**Massafra**	**6.63**	**276**	*e*Pn	**Pn**	**05 34 47.3**	**+0.6**
SIRR	**Siria**	**6.68**	**334**	⇑*i*P	**Pn**	**05 34 46.4**	**-1.1**
BAI	**Bari**	**6.85**	**280**	*e*Pn	Pn	05 34 54.3	+4.6
ARCR	**ARCALIA**	**6.86**	**352**	⇑*i*P	**Pn**	**05 34 48.7**	**-1.1**
DRGR		**6.86**	**342**	*e*Pn	**Pn**	**05 34 49.2**	**-0.8**
DRGR		**6.86**	**342**	⇑*i*P	**Pn**	**05 34 50.8**	**+0.8**
DRGR		**6.86**	**342**	P	**Pn**	**05 34 49.0**	**-1.0**
MILM	**Milestii Mici**	**6.95**	**17**	⇓*i*P	**Pn**	**05 34 50.9**	**-0.2**
SG1	**Sgolgore (BA)**	**6.99**	**277**	*e*Pn	Pn	05 34 56.2	+4.5
KIS	**Kishinev**	**7.03**	**17**	⇑*i*P	**Pn**	**05 34 51.0**	**-1.1**
	comp=Z,380nm,1.0s						
KIS				*i* S	**Sn**	**05 36 08.0**	**-4.4**
KIS				*i* Li		05 36 40.0	
KIS				*i* LQ	LQ	05 37 00.0	
KIS				LRM	MLR	05 37 50.0	
	comp=Z,6µm,12.0s						
KIS	**Kishinev**	**7.03**	**17**	⇑*i*P	**Pn**	**05 34 51.0**	**-1.1**
KIS				*i* S	**Sn**	**05 36 08.0**	**-4.4**
KIS				pmax	pmax		
	comp=Z,380nm,1.0s						
KIS				pmax	pmax		
	comp=N,1µm,2.0s						
KIS				MLR	MLR		
	comp=N,6µm,12.0s						
KIS				MLR	MLR		
	comp=Z,6µm,12.0s						
PRAR	**RASCA**	**7.05**	**2**	⇑*i*P	**Pn**	**05 34 52.2**	**-0.3**
TIP	**Timpagrande**	**7.08**	**264**	*e*Pn	**Pn**	**05 34 53.3**	**+0.3**
TIP	**Timpagrande**	**7.08**	**264**	⇑*i*P	**Pn**	**05 34 53.7**	**+0.7**
SEVA	**Sevastopol**	**7.17**	**51**	⇑*i*P	**Pn**	**05 34 53.4**	**-0.8**
SEV	**Sevastopol'**	**7.18**	**51**	⇓*i*P	**Pn**	**05 34 52.5**	**-1.7**
SEV				*e*S	**Sn**	**05 36 08.5**	**-7.6**
MAKA	**Makarska**	**7.22**	**297**	*i* P	Pn	05 34 59.2	+4.3
DIKM	**Dikmen**	**7.26**	**76**	⇑*i*P	**Pn**	**05 34 54.1**	**-1.2**
BURAR	**Bucovina Array**	**7.31**	**357**	⇑*i*P	**Pn**	**05 34 57.7**	**+1.5**
BUR08	**Bucovina Ar. S**	**7.34**	**357**	*e*Pn	**Pn**	**05 34 57.2**	**+0.6**
ALFC	**Alefka**	**7.43**	**132**	P	**Pn**	**05 34 56.9**	**-0.9**
YAL	**Yalta**	**7.44**	**53**	⇓*i*P	**Pn**	**05 34 56.7**	**-1.1**
YAL				*i* S	**Sn**	**05 36 14.3**	**-8.2**
PPCY	**Paphos**	**7.49**	**134**	P	**Pn**	**05 34 58.7**	**+0.2**
BMR	**Baia Mare**	**7.55**	**348**	⇓*i*P	**Pn**	**05 34 59.1**	**-0.2**
LTVH	**Ltavrtes, Hu**	**7.62**	**339**	Sn	**Sg**	**05 37 13.1**	**0.0**
LEF	**Lefka**	**7.63**	**131**	⇓*i*P	**Pn**	**05 35 02.0**	**+1.6**
MGRS	**Mrkonjic Grad**	**7.66**	**305**	*e*Pn	Pn	05 35 05.5	+4.6
SIM	**Simferopol'**	**7.67**	**50**	*e*P	**Pn**	**05 35 02.1**	**+1.2**
SIM				*i* S	**Sn**	**05 36 22.7**	**-5.5**
ALU	**Alushta**	**7.69**	**53**	*e*P	**Pn**	**05 34 59.5**	**-1.8**
ALU				*e*S	**Sn**	**05 36 21.0**	**-7.8**
BLY	**Banja Luka**	**7.77**	**308**	*e*Pn	**Pn**	**05 35 02.5**	**+0.2**
BLY	**Banja Luka**	**7.77**	**308**	*e*Pn	**Pn**	**05 35 02.7**	**+0.3**
BLY	**Banja Luka**	**7.77**	**308**	⇓*i*P	**Pn**	**05 35 03.0**	**+0.6**
BLY	**Banja Luka**	**7.77**	**308**	*e*Pn	**Pn**	**05 35 02.6**	**+0.2**
SZAC	**Souni**	**7.88**	**133**	P	**Pn**	**05 35 03.6**	**-0.4**
MORH	**Mrgy, Hungar**	**7.89**	**321**	*e*Pn	**Pn**	**05 35 02.4**	**-1.6**
MORH	**Mrgy, Hungar**	**7.89**	**321**	*e*Pn	**Pn**	**05 35 02.1**	**-1.9**
CSS	**Mathiatis**	**7.99**	**130**	*e*Pn	**Pn**	**05 35 06.1**	**+0.7**
CSS	**Mathiatis**	**7.99**	**130**	P	**Pn**	**05 35 06.4**	**+0.9**
CSS	**Mathiatis**	**7.99**	**130**	Pn	**Pn**	**05 35 05.2**	**-0.3**
CSS	**Mathiatis**	**7.99**	**130**	P	**Pn**	**05 35 04.9**	**-0.6**
	comp=Z,20nm,0.9s,comp=Z,0.1nm						
SUDU	**Sudak**	**8.16**	**53**	⇓*i*P	**Pn**	**05 35 07.3**	**-0.4**
SUDU				*i* S	**Sn**	**05 36 33.5**	**-6.9**
TRPA	**Tarpa**	**8.16**	**344**	⇓*i*P	**Pn**	**05 35 07.0**	**-0.7**
TRPA	**Tarpa**	**8.16**	**344**	*e*Pn	**Pn**	**05 35 06.0**	**-1.7**
TRPA				*e*Sg	**Sg**	**05 37 34.0**	**+3.5**
ZIRJ	**Zirje**	**8.29**	**297**	*i* P	**Pn**	**05 35 10.5**	**+1.1**
MORI	**Morici**	**8.32**	**299**	*i* P	Pn	05 35 15.1	+5.2
FEO	**Feodosiya**	**8.47**	**53**	*e*P	**Pn**	**05 35 10.5**	**-1.4**
FEO				*e*S	**Sn**	**05 36 39.6**	**-8.2**
UDBI	**Udbina**	**8.55**	**303**	*i* P	Pn	05 35 17.9	+4.8
UZH	**Uzhgorod**	**8.69**	**344**	*e*P	**Pn**	**05 35 15.0**	**0.0**
UZH				*e*S	**Sn**	**05 36 53.0**	**-0.3**
UZH				MLR	MLR		
	comp=N,1µm,11.0s						
UZH				MLR	MLR		
	comp=E,700nm,11.0s						
UZH				MLR	MLR		
	comp=Z,600nm,11.0s						
PSZ	**Piszkesteto**	**8.72**	**333**	*e*Pn	**Pn**	**05 35 13.5**	**-1.9**
PSZ	**Piszkesteto**	**8.72**	**333**	⇑*i*P	**Pn**	**05 35 13.5**	**-1.9**
PSZ	**Piszkesteto**	**8.72**	**333**	*e*P	**Pn**	**05 35 13.5**	**-1.9**
PSZ	**Piszkesteto**	**8.72**	**333**	*e*Pn	**Pn**	**05 35 13.0**	**-2.4**
PSZ				Sn	**Sn**	**05 36 49.0**	**-5.1**
PSZ				*e*Sg	**Sg**	**05 37 49.0**	**+0.7**
TIH	**Tihany**	**8.74**	**321**	*e*Pn	Pn	05 35 07.1	-8.6
TIH				⇓*e*Sg	**Sg**	**05 37 48.1**	**-1.1**
DUGI	**Dugi Otok**	**8.80**	**298**	*i* P	**Pn**	**05 35 18.9**	**+2.3**
CSKK	**Cskako**	**8.92**	**325**	*e*Pn	Pn	05 35 23.0	+4.9
KALN	**Kalnik**	**8.98**	**313**	*i* P	**Pn**	**05 35 21.3**	**+2.4**
KOLS	**Kolonicke sedl**	**8.98**	**345**	*e*P	**Pn**	**05 35 19.7**	**+0.7**
KOLS				MLR	MLR		
	comp=Z,700nm,1.8s						
KOLS	**Kolonicke sedl**	**8.98**	**345**	*e*PN	**Pn**	**05 35 19.7**	**+0.7**
KOLS	**Kolonicke sedl**	**8.98**	**345**	*e*SG	**Sg**	**05 38 02.0**	**+5.2**
KOLS				*e*LG	Lg	05 38 32.2	
BEHE	**Becsehely**	**9.01**	**316**	*e*Pn	Pn	05 35 24.1	+4.7
BEHE	**Becsehely**	**9.01**	**316**	*e*Pn	**Pn**	**05 35 23.0**	**+3.6**
KECS	**Kecovo**	**9.02**	**337**	*e*P	**Pn**	**05 35 18.9**	**-0.6**
KECS	**Kecovo**	**9.02**	**337**	*e*PN	**Pn**	**05 35 18.9**	**-0.6**
PTJ	**Puntijarka**	**9.12**	**311**	P	**Pn**	**05 35 21.7**	**+0.7**
NVLJ	**Novalja**	**9.15**	**301**	*i* P	**Pn**	**05 35 24.0**	**+2.8**
OZLJ	**Ozalj**	**9.26**	**308**	*i* P	Pn	05 35 28.4	+5.6
VAE	**Valguarnera**	**9.34**	**256**	Pn	**Pn**	**05 35 27.4**	**+3.5**
	comp=Z,1.3nm,0.3s,baz=117,slow=2.3,SNR=2.0						
VAE				LR	LR	05 39 03.5	
	comp=Z,806nm,19.3s,baz=84,slow=37						
CRES	**Cresnjev**	**9.38**	**309**	*e*Pn	**Pn**	**05 35 25.5**	**+1.1**
AQU	**L'Aquila**	**9.57**	**286**	*e*Pn	**Pn**	**05 35 28.0**	**+0.9**
AQU	**L'Aquila**	**9.57**	**286**	*e*P	**Pn**	**05 35 28.0**	**+0.9**
AQU	**L'Aquila**	**9.57**	**286**	*e*Pn	Pn	05 35 32.1	+5.0
KWP	**Kalwaria Pacla**	**9.58**	**348**	*e*P	**Pn**	**05 35 27.4**	**+0.4**
KWP				*e*S		05 38 31.1	
KWP	**Kalwaria Pacla**	**9.58**	**348**	*e*P	**Pn**	**05 35 27.5**	**+0.4**
VYHS	**Vyhne**	**9.59**	**331**	*e*P	**Pn**	**05 35 26.4**	**-0.8**
VYHS	**Vyhne**	**9.59**	**331**	*e*PN	**Pn**	**05 35 26.4**	**-0.8**
LVV	**L'vov**	**9.59**	**353**	*e*P	**Pn**	**05 35 27.4**	**+0.1**
LVV				*e*S	**Sn**	**05 37 15.4**	**0.0**
LVV				MLR	MLR		
	comp=E,6µm,10.0s						
ANN	**Anapa**	**9.66**	**59**	*e*P	Pn	05 35 22.5	-5.8
ANN				*e*S	**Sn**	**05 37 09.6**	**-7.6**
ANN				pmax	pmax		
	comp=Z,33nm,0.9s						
ANN				MLR	MLR		
	comp=N,509nm,13.0s						
ANN				MLR	MLR		
	comp=Z,802nm,12.0s						
ANN				MLR	MLR		
	comp=E,676nm,13.0s						
RIY	**Rijeka**	**9.72**	**305**	*e*Pn	Pn	05 35 33.9	+4.8
NIE	**Niedzica**	**9.91**	**339**	*e*P	**Pn**	**05 35 32.5**	**+0.8**
NIE				*e*S		05 38 31.3	
NIE	**Niedzica**	**9.91**	**339**	*e*P	**Pn**	**05 35 32.5**	**+0.8**
LANS	**Liptovska Anna**	**9.92**	**335**	*e*P	**Pn**	**05 35 33.5**	**+1.6**
LANS	**Liptovska Anna**	**9.92**	**335**	*e*PN	**Pn**	**05 35 33.5**	**+1.6**
SOP	**Sopron**	**9.94**	**321**	*e*Pn	**Pn**	**05 35 36.1**	**+4.0**
CEY	**Cerknica**	**9.95**	**307**	*e*Pn	**Pn**	**05 35 35.8**	**+3.5**
WDD	**Wied Dalam**	**9.97**	**247**	*e*Pn	**Pn**	**05 35 31.9**	**-0.6**
LJU	**Ljubljana**	**10.04**	**308**	*e*Pn	Pn	05 35 39.2	+5.7
ZST	**Bratislava**	**10.06**	**324**	*e*P	**Pn**	**05 35 37.6**	**+3.9**
ZST	**Bratislava**	**10.06**	**324**	*e*PN	**Pn**	**05 35 37.6**	**+3.9**
MODS	**Modra-Piesok**	**10.12**	**326**	*e*P	**Pn**	**05 35 38.3**	**+3.8**
MODS	**Modra-Piesok**	**10.12**	**326**	*e*PN	**Pn**	**05 35 38.3**	**+3.8**
ARSA	**Arzberg**	**10.17**	**316**	*i* Pn	**Pn**	**05 35 37.4**	**+2.0**
	comp=E,6.5nm,0.6s						
OBKA	**Obir**	**10.28**	**311**	*i* Pn	**Pn**	**05 35 39.3**	**+2.5**
	comp=E,6.6nm,0.9s						
JAVC	**Velka Javorina**	**10.33**	**328**	*e*PN	**Pn**	**05 35 38.6**	**+1.1**
HNTI	**Hanita**	**10.40**	**131**	Pn	**Pn**	**05 35 37.5**	**-1.0**
CONA	**Conrad Observa**	**10.45**	**320**	*i* Pn	**Pn**	**05 35 40.1**	**+0.9**
	comp=E,10nm,0.6s						
MMA0B	**Mount Meron ar**	**10.58**	**130**	Pn	**Pn**	**05 35 40.2**	**-0.8**
MMAI	**Mount Meron Ar**	**10.58**	**130**	Pn	**Pn**	**05 35 39.1**	**-2.0**
	comp=E,35nm,0.3s,baz=316,slow=12,SNR=55						
GEM	**Giv'at Ha'Em**	**10.60**	**129**	Pn	**Pn**	**05 35 40.6**	**-0.6**
NATI	**Neve Ativ**	**10.61**	**128**	Pn	**Pn**	**05 35 40.7**	**-0.5**
OFRI	**`Ofer**	**10.64**	**133**	Pn	**Pn**	**05 35 41.0**	**-0.7**
AKASG	**Malin Array Be**	**10.66**	**12**	Pn	**Pn**	**05 35 39.5**	**-2.4**
	comp=E,6.6nm,0.3s,baz=196,slow=13,SNR=25						
AKASG				Lg	Lg	05 38 39.6	
	baz=181,slow=29,SNR=4.2						
AKASG				LR	LR	05 40 17.7	
	comp=E,2µm,18.9s,baz=195,slow=41						
AKBB	**Malin Array Si**	**10.66**	**12**	*e*Pn	**Pn**	**05 35 40.5**	**-1.4**
AKBB	**Malin Array Si**	**10.66**	**12**	*e*P	**Pn**	**05 35 40.5**	**-1.4**
OJC	**Ojcow**	**10.78**	**339**	*e*P	**Pn**	**05 35 42.2**	**-1.3**
OJC	**Ojcow**	**10.78**	**339**	*e*Pn	**Pn**	**05 35 44.0**	**+0.4**
OJC	**Ojcow**	**10.78**	**339**	*e*P	**Pn**	**05 35 42.3**	**-1.3**
SOC	**Sochi**	**10.85**	**68**	*e*P	Pn	05 35 39.7	-4.8
SOC				*e*		05 37 42.6	
MYKA	**Terra Mystica**	**10.87**	**310**	*i* Pn	**Pn**	**05 35 47.4**	**+2.5**
	comp=E,10nm,0.6s,SNR=5.3						
OKC	**Ostrava-Krasne**	**10.96**	**333**	AMS	AMS	05 40 40.0	
	comp=E,3µm,9.8s						
SHMJ	**Saham**	**11.00**	**130**	P	**Pn**	**05 35 46.5**	**-0.2**
	comp=E,122nm,0.4s						
MMLI	**Mount Malkishu**	**11.02**	**132**	Pn	**Pn**	**05 35 46.3**	**-0.6**
KRUC	**Moravsky**	**11.02**	**326**	*e*PN	**Pn**	**05 35 46.4**	**-0.5**
MORC	**Moravsky Berou**	**11.12**	**331**	*e*Pn	**Pn**	**05 35 48.0**	**-0.4**
MORC	**Moravsky Berou**	**11.12**	**331**	⇓*i*P	**Pn**	**05 35 48.5**	**+0.2**
MORC	**Moravsky Berou**	**11.12**	**331**	*e*P	**Pn**	**05 35 48.0**	**-0.4**
MORC	**Moravsky Berou**	**11.12**	**331**	*e*PN	**Pn**	**05 35 48.7**	**+0.4**
VRAC	**Vranov**	**11.12**	**327**	Pn	**Pn**	**05 35 47.9**	**-0.4**
	comp=E,0.6nm,0.3s,baz=142,slow=12,SNR=10						
VRAC				LR	LR	05 39 57.8	
	comp=E,1µm,18.5s,baz=134,slow=37						
VRAC	**Vranov**	**11.12**	**327**	*e*PN	**Pn**	**05 35 49.3**	**+1.0**
HMDT	**Nahal Hemdat**	**11.21**	**133**	Pn	**Pn**	**05 35 49.1**	**-0.5**
MOA	**Molln**	**11.21**	**316**	*e*Pn	**Pn**	**05 35 50.4**	**+0.8**
	comp=E,0.4nm,0.2s						
TREC	**Trest**	**11.59**	**324**	AMS	AMS	05 40 50.0	
	comp=E,7µm,10.5s						
ABTA	**Abfaltersbach**	**11.60**	**308**	*i* Pn	**Pn**	**05 35 58.4**	**+3.5**
	comp=E,8.4nm,0.5s,SNR=7.5						
DSI	**Dead Sea**	**11.65**	**135**	Pn	**Pn**	**05 35 55.3**	**-0.3**
YTIR	**Yattir**	**11.68**	**137**	Pn	**Pn**	**05 35 56.2**	**+0.2**
KZIT	**Kziot**	**11.68**	**141**	Pn	**Pn**	**05 35 54.5**	**-1.5**
KZIT	**Kziot**	**11.68**	**141**	P	**Pn**	**05 35 54.9**	**-1.1**
	comp=E,91nm,0.6s						
WALJ	**Wala**	**11.89**	**134**	P	**Pn**	**05 35 58.8**	**-0.1**
	comp=E,132nm,0.5s						
LISJ	**El Lisan**	**11.96**	**136**	P	**Pn**	**05 36 00.9**	**+1.1**
	comp=E,39nm,0.5s						
DPC	**Dobruska-Polom**	**12.05**	**330**	*e*P	**Pn**	**05 36 02.1**	**+1.1**
DPC				MLR	MLR		
	comp=Z,4µm,8.7s						
DPC	**Dobruska-Polom**	**12.05**	**330**	*e*P	**Pn**	**05 36 02.1**	**+1.1**
DPC				AMS	AMS	05 41 30.0	
	comp=Z,4µm,8.7s						
ASF	**Jabal al Asfar**	**12.07**	**129**	Pn	**Pn**	**05 35 59.0**	**-2.3**
	comp=Z,1.4nm,0.3s,baz=264,slow=12,SNR=8.5						
ASF	**Jabal al Asfar**	**12.07**	**129**	P	**Pn**	**05 35 59.0**	**-2.3**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASF	**Jabal al Asfar**	**12.07**	**129**	P	**Pn**	**05 36 02.9**	**+1.6**
	comp=Z,22nm,1.5s						
VLC	**Villacollemand**	**12.07**	**294**	*e*Pn	**Pn**	**05 36 01.7**	**+0.4**
GERES	**GERESS Array B**	**12.13**	**319**	Pn	**Pn**	**05 36 04.3**	**+2.1**
	baz=126,slow=14,SNR=11						
DOMR	**Dombai**	**12.16**	**71**	*i* P	**Pn**	**05 36 02.7**	**+0.1**
UPC	**Upice**	**12.30**	**329**	AMS	AMS	05 40 20.0	
	comp=Z,2µm,13.4s						
CHVC	**Chvalec**	**12.34**	**330**	*e*P	**Pn**	**05 36 05.1**	**+0.1**
CHVC				AMS	AMS	05 40 20.0	
	comp=Z,2µm,16.4s						
GOPC	**GO Pecny, Ondr**	**12.36**	**325**	AMS	AMS	05 41 20.0	
	comp=Z,8µm,10.2s						
ZFRI	**Zfri**	**12.36**	**139**	Pn	**Pn**	**05 36 04.4**	**-0.8**
WTTA	**Wattenberg**	**12.38**	**309**	*i* Pn		05 36 12.4	
	comp=Z,22nm,0.6s,SNR=12						
KHC	**Kasperske Hory**	**12.38**	**319**	*e*Pn	**Pn**	**05 36 06.4**	**+0.9**
KHC	**Kasperske Hory**	**12.38**	**319**	*e*P	**Pn**	**05 36 07.9**	**+2.4**
KHC				MLR	MLR		
	comp=Z,9µm,10.6s						
KHC	**Kasperske Hory**	**12.38**	**319**	*e*P	**Pn**	**05 36 07.9**	**+2.4**
KHC				AMS	AMS	05 41 10.0	
	comp=Z,9µm,10.6s						
PRNI	**Paran**	**12.44**	**140**	Pn	**Pn**	**05 36 04.8**	**-1.5**
WATA	**Walderalm**	**12.45**	**309**	*i* Pn		05 36 12.5	
	comp=Z,11nm,0.5s,SNR=6.5						
KSP	**Ksiaz**	**12.46**	**331**	*e*P	**Pn**	**05 36 07.8**	**+1.3**
KSP	**Ksiaz**	**12.46**	**331**	*e*P	**Pn**	**05 36 07.8**	**+1.3**
JDRJ	**Daraweish**	**12.47**	**137**	P	**Pn**	**05 36 08.3**	**+1.4**
	comp=Z,34nm,0.4s						
PRU	**Pruhonice**	**12.52**	**324**	AMS	AMS	05 41 20.0	
	comp=Z,6µm,10.5s						
SQTA	**Sankt Quirin**	**12.61**	**308**	*i* Pn		05 36 17.3	
	comp=Z,12nm,0.4s,SNR=7.6						
HRFI	**Mount Harif**	**12.71**	**141**	Pn	**Pn**	**05 36 09.0**	**-1.1**
HRFI	**Mount Harif**	**12.71**	**141**	P	**Pn**	**05 36 09.5**	**-0.6**
	comp=Z,63nm,0.6s						
MOTA	**Moosalm**	**12.73**	**308**	*i* Pn		05 36 16.9	
	comp=Z,4.0nm,0.5s,SNR=9.0						
FETA	**Feichten**	**12.81**	**307**	*i* Pn	**Pn**	**05 36 14.9**	**+3.3**
	comp=Z,4.7nm,0.9s						
MBRI	**Mt Berech**	**12.86**	**142**	Pn	**Pn**	**05 36 11.3**	**-0.8**
PVCC	**Panska Ves**	**12.90**	**326**	AMS	AMS	05 41 40.0	
	comp=Z,6µm,10.0s						
FUORN	**Ofenpass-Fuorn**	**12.94**	**304**	*e*Pn	**Pn**	**05 36 14.8**	**+1.5**
NEY	**Neytrino**	**12.95**	**71**	*i* P	**Pn**	**05 36 13.5**	**+0.1**
SHA1	**Shidzhatmaz**	**12.97**	**69**	*i* P	**Pn**	**05 36 12.5**	**-1.3**
EIL	**Elat**	**12.98**	**142**	Pn	**Pn**	**05 36 12.8**	**-0.9**
	comp=Z,14nm,0.3s,baz=285,slow=3.5,SNR=45						
EIL	**Elat**	**12.98**	**142**	Pn	**Pn**	**05 36 12.8**	**-0.9**
EIL	**Elat**	**12.98**	**142**	P	**Pn**	**05 36 13.5**	**-0.2**
RETA	**Reutte**	**13.01**	**308**	*i* Pn	**P**	**05 36 20.8**	**-4.0**
	comp=Z,4.2nm,0.4s						
KIV	**Kislovodsk**	**13.03**	**68**	*e*P	**Pn**	**05 36 15.6**	**+1.1**
KIV				*e*S	**Sn**	**05 38 42.4**	**+2.6**
KIV				pmax	pmax		
	comp=Z,37nm,1.0s						
KIV				MLR	MLR		
	comp=Z,588nm,11.0s						
KBZ	**Khabaz**	**13.14**	**69**	Pn	**Pn**	**05 36 16.9**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=252,slow=11,SNR=2.0						
KBZ	**Khabaz**	**13.14**	**69**	P	**Pn**	**05 36 17.0**	**+1.1**
DAVOX	**Davos/Dischmat**	**13.24**	**304**	Pn	**Pn**	**05 36 18.3**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=152,slow=16,SNR=23						
DAVOX				LR	LR	05 42 23.5	
	comp=Z,1µm,19.9s,baz=110,slow=42						
BRG	**Berggiesshubel**	**13.43**	**326**	*e*P	**Pn**	**05 36 21.8**	**+2.1**
	comp=Z,16nm,1.6s						
BRG				*e*		05 36 37.5	
	comp=Z,5.3nm,1.0s						
BRG				S	Sn	05 38 57.0	+7.7
	comp=N,3µm,14.2s						
	comp=E,3µm,11.3s						
	comp=Z,4µm,12.0s						
BRG	**Berggiesshubel**	**13.43**	**326**	*e*P	**Pn**	**05 36 21.8**	**+2.1**
BRG				S	Sn	05 38 57.0	+7.7
BRG				pmax	pmax		
	comp=Z,16nm,1.6s						
BRG				MLR	MLR		
	comp=N,3µm,14.2s						
BRG				MLR	MLR		
	comp=E,3µm,11.3s						
BRG				MLR	MLR		
	comp=Z,4µm,12.0s						
DAVA	**Damuels**	**13.45**	**306**	*i* Pn	**Pn**	**05 36 21.3**	**+1.1**
	comp=Z,5.1nm,0.9s						
TUE	**Stuetta**	**13.46**	**303**	*e*Pn	**Pn**	**05 36 21.9**	**+1.4**
NKC	**Novy Kostel**	**13.66**	**321**	AMS	AMS	05 42 10.0	
	comp=Z,4µm,13.6s						
ZEI	**Tsey**	**13.76**	**74**	*e*P	**P**	**05 36 35.5**	**+2.2**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KEST	**Kesra**	**13.77**	**256**	Pn	**P**	**05 36 28.6**	**-4.7**
	comp=Z,0.3nm,0.3s,baz=238,slow=12,SNR=4.1						
KEST				LR	LR	05 42 39.0	
	comp=Z,935nm,19.4s,baz=8.5,slow=41						
KEST	**Kesra**	**13.77**	**256**	*e*Pn	**Pn**	**05 36 25.8**	**+1.2**
SUW	**Suwalki**	**13.82**	**353**	*e*P	**Pn**	**05 36 23.5**	**-1.6**
SUW	**Suwalki**	**13.82**	**353**	*e*Pn	**Pn**	**05 36 26.1**	**+0.9**
SUW	**Suwalki**	**13.82**	**353**	*e*P	**Pn**	**05 36 23.5**	**-1.6**
CLL	**Collm**	**14.15**	**325**	*e*P	**P**	**05 36 33.0**	**-4.3**
CLL	**Collm**	**14.15**	**325**	*e*P	**Pn**	**05 36 32.0**	**+2.4**
CLL				*e*(PP)		05 36 37.0	
CLL				*e*sPPP		05 36 52.0	
CLL				*e*S	S	05 39 18.0	-10
CLL				LmH		05 40 00.0	
	comp=N,4µm,18.9s						
CLL				LmH		05 40 00.0	
	comp=E,5µm,18.5s						
CLL				Lmax		05 42 00.0	
MICGM	**Minsk**	**14.26**	**5**	*e*P	Pn	05 36 25.0	-6.1
MICGM				*e*PP	**P**	**05 36 35.0**	**-3.6**
MICGM				*e*S	**Sn**	**05 39 02.0**	**-7.7**
MICGM				*e*SS	**S**	**05 39 26.0**	**-4.5**
MICGM				*e*LQ	LQ	05 41 00.0	
MICGM				LQM		05 41 26.0	

	comp=E,4.2nm,14.0s						
MICGM				*e*LR	LR	05 42 04.0	
MICGM				LRM	MLR	05 43 20.0	
	comp=Z,3.5nm,8.0s						
MICGM				LRM	MLR	05 43 20.0	
	comp=N,2.7nm,8.0s						
MNK	**Minsk**	**14.26**	**5**	*e*P	Pn	05 36 25.0	-6.1
MNK				*e*S	**Sn**	**05 39 02.0**	**-7.7**
MNK				MLR	MLR		
	comp=N,3µm,8.0s						
MNK				MLR	MLR		
	comp=Z,4µm,8.0s						
VSR	**Storozhevoye**	**14.31**	**36**	*e*P	**Pn**	**05 36 31.2**	**-0.6**
VSR				pmax	pmax		
	comp=Z,60nm,1.6s						
VSR				MLR	MLR		
	comp=Z,1µm,12.0s						
GNI	**Garni**	**14.45**	**85**	Pn	**Pn**	**05 36 30.1**	**-3.9**
	comp=Z,1.2nm,0.3s,baz=268,slow=18,SNR=1.8						
GNI				LR	LR	05 42 21.2	
	comp=Z,2µm,18.2s,baz=273,slow=39						
GNI	**Garni**	**14.45**	**85**	*e*P	**P**	**05 36 41.8**	**+0.9**
GNI	**Garni**	**14.45**	**85**	*i* P	**Pn**	**05 36 35.6**	**+1.6**
GNI				pmax	pmax		
	comp=Z,186nm,1.4s						
NACGM	**Naroch**	**14.61**	**2**	*e*P	**Pn**	**05 36 35.0**	**-0.9**
NACGM				*e*S	**Sn**	**05 39 15.0**	**-3.2**
NACGM				*e*SS	**S**	**05 39 43.0**	**+5.4**
NACGM				*e*LQ	LQ	05 40 50.0	
NACGM				*e*LR	LR	05 42 04.0	
NACGM				LRM	MLR	05 43 05.0	
	comp=Z,5.5nm,12.0s						
VORR	**Voronezh**	**14.65**	**35**	P	**Pn**	**05 36 37.0**	**+0.5**
VORR				pmax	pmax		
	comp=Z,250nm,0.8s						
BFO	**Black Forest**	**14.85**	**308**	*e*Pn	**P**	**05 36 41.5**	**-3.7**
BNI	**Bardonecchia**	**14.85**	**295**	*e*Pn	**Pn**	**05 36 41.1**	**+1.7**
BNI	**Bardonecchia**	**14.85**	**295**	*e*P	**Pn**	**05 36 41.1**	**+1.7**
IIGN	**Ignalina**	**15.05**	**1**	*e*P	**Pn**	**05 36 38.1**	**-3.7**
IIGN				IAmb	IAmb	05 36 50.0	
	comp=Z,11nm,0.7s						
LPSR	**Galich'ya Gora**	**15.22**	**32**	*e*P	**Pn**	**05 36 41.3**	**-2.8**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,2µm,19.0s						
ISAL	**Salakas**	**15.27**	**1**	*e*P	**Pn**	**05 36 39.7**	**-5.0**
ISAL				IAmb	IAmb	05 36 50.0	
	comp=Z,9.1nm,0.5s						
IZAR	**Zarasai**	**15.45**	**1**	*e*P	**Pn**	**05 36 42.4**	**-4.8**
VRH	**Novokhopyorsk**	**15.51**	**40**	*e*P	**Pn**	**05 36 46.3**	**-1.6**
VRH				pmax	pmax		
	comp=Z,100nm,1.6s						
VRH				MLR	MLR		
	comp=Z,2µm,26.0s						
ECH	**Echery**	**15.51**	**307**	*e*Pn	**Pn**	**05 36 47.9**	**-0.1**
ECH	**Echery**	**15.51**	**307**	*e*P	**Pn**	**05 36 47.9**	**-0.1**
CDF	**Champ du Feu**	**15.52**	**308**	*e*P	**P**	**05 36 55.5**	**+2.8**
MAK	**Makhachkala**	**16.41**	**74**	*e*P	**Pn**	**05 36 57.8**	**-1.8**
MAK				*e*S	**Sn**	**05 40 02.5**	**+0.4**
MAK				pmax	pmax		
	comp=Z,168nm,1.3s						
MAK				MLR	MLR		
	comp=Z,497nm,14.0s						
OBN	**Obninsk**	**16.45**	**22**	Pn	**Pn**	**05 36 55.7**	**-4.2**
	comp=Z,1.8nm,0.3s,baz=194,slow=21,SNR=3.8						
OBN				LR	LR	05 43 30.8	
	comp=Z,424nm,20.5s,baz=192,slow=38						
OBN	**Obninsk**	**16.45**	**22**	*i* P	**Pn**	**05 36 55.8**	**-4.2**
OBN				*i* S	**Sn**	**05 39 57.8**	**-4.9**
OBN				pmax	pmax		
	comp=Z,21nm,1.2s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
MOS	**Moscow**	**17.29**	**23**	*e*P	**Pn**	**05 37 07.8**	**-2.9**
MOS				*e*S	**Sn**	**05 40 22.9**	**-0.3**
MOS				pmax	pmax		
	comp=Z,115nm,1.4s						
MOS				pmax	pmax		
	comp=Z,400nm,2.3s						
MOS				smax	smax		
	comp=N,500nm,2.3s						
MOS				MLR	MLR		
	comp=E,1µm,18.0s						
MOS				MLR	MLR		
	comp=Z,2µm,18.0s						
MOS				MLR	MLR		
	comp=N,2µm,17.0s						
MOS				pmax	pmax		
	comp=Z,79nm,1.1s						
SSF	**Saint Saulge**	**17.47**	**300**	*e*P	**P**	**05 37 18.9**	**+4.7**
SLIT	**Slitere, Latvi**	**17.48**	**354**	*e*P	**Pn**	**05 37 07.3**	**-5.6**
SLIT				IAmb	IAmb	05 37 14.2	
	comp=Z,205nm,1.2s						
VSU	**Vasula**	**18.18**	**2**	*e*P	**Pn**	**05 37 15.3**	**-6.3**
VSU				IAmb	IAmb	05 37 33.7	
	comp=Z,156nm,1.0s						
VSU	**Vasula**	**18.18**	**2** *c*	*e*P	**Pn**	**05 37 17.0**	**-4.5**
VSU				pmax	pmax		
	comp=Z,119nm,1.3s						
PUL	**Pulkovo**	**19.69**	**7**	*e*P	**P**	**05 37 35.0**	**-3.4**
FIA0	**FINESS Array S**	**21.16**	**0**	*e*P	**P**	**05 37 52.5**	**-1.9**
FIA0				*e*PcP	**PcP**	**05 42 01.9**	**+2.0**
FIA0	**FINESS Array S**	**21.16**	**0**	*e*P	**P**	**05 37 52.5**	**-1.9**
FIA0				*e*		05 42 01.9	
FINES	**FINESS Array B**	**21.16**	**0**	P	**P**	**05 37 52.5**	**-1.9**
	comp=Z,2.0nm,0.5s,baz=157,slow=10,SNR=11						
FINES				PcP	**PcP**	**05 42 01.9**	**+2.0**
	comp=Z,2.8nm,0.9s,baz=132,slow=2.8,SNR=4.1						
FINES				LR	LR	05 46 34.7	
	comp=Z,2µm,19.6s,baz=180,slow=38						
FIA1	**FINESS Array S**	**21.16**	**0**	*e*P	**P**	**05 37 54.2**	**-0.2**
	comp=Z,16nm,1.0s						
HFS	**Hagfors**	**21.24**	**343**	P	**P**	**05 37 53.9**	**-1.4**
	comp=Z,2.1nm,0.4s,baz=153,slow=10.0,SNR=14						
HFS				LR	LR	05 47 34.2	
	comp=Z,1µm,19.1s,baz=159,slow=41						
KONO	**Kongsberg**	**21.88**	**338**	*e*P	**P**	**05 38 02.6**	**+0.5**
	comp=Z,16nm,0.8s						
KONO	**Kongsberg**	**21.88**	**338**	*e*P	**P**	**05 38 02.6**	**+0.5**
KONO				pmax	pmax		
	comp=Z,16nm,0.8s						
KLMR	**Klimovskoe**	**22.24**	**18**	*e*P	**P**	**05 38 03.0**	**-3.0**
KLMR				pmax	pmax		
	comp=Z,51nm,1.1s						
NC602	**NORSAR Array S**	**22.28**	**341**	*e*P	**P**	**05 38 06.1**	**-0.3**
NC405	**NORSAR Array S**	**22.57**	**342**	*e*P	**P**	**05 38 08.2**	**-1.3**
	comp=Z,14nm,0.9s						
NB2	**NORSAR Subarra**	**22.62**	**341**	P	**P**	**05 38 08.5**	**-1.6**
	comp=Z,87nm,1.7s,baz=150,slow=11						
NB2	**NORSAR Subarra**	**22.62**	**341**	P	**P**	**05 38 08.5**	**-1.6**
	baz=150,slow=11						
NOA	**NORSAR Array B**	**22.62**	**341**	P	**P**	**05 38 08.6**	**-1.6**
	comp=Z,5.3nm,0.9s,baz=145,slow=9.7,SNR=9.8						
NOA				LR	LR	05 48 25.2	
	comp=Z,1µm,20.4s,baz=150,slow=41						
NOA	**NORSAR Array B**	**22.62**	**341**	P	**P**	**05 38 08.6**	**-1.6**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,1µm,20.4s						
NC303	**NORSAR Array S**	**22.75**	**342**	*e*P	**P**	**05 38 10.8**	**-0.6**
ESDC	**Sonseca Array**	**22.79**	**278**	P	**P**	**05 38 14.3**	**+2.2**
	comp=Z,5.7nm,0.6s,baz=70,slow=10,SNR=25						
ESLA	**Sonseca Array**	**22.79**	**278**	*e*P	**P**	**05 38 13.9**	**+1.8**
	comp=Z,23nm,1.1s						
ODD1	**Odda**	**23.00**	**335**	*e*P	**P**	**05 38 15.0**	**+0.9**
SKAR	**Skarslia**	**23.10**	**338**	*e*P	**P**	**05 38 15.4**	**+0.3**
PAB	**San Pablo**	**23.11**	**278**	*e*P	**P**	**05 38 15.3**	**-0.2**
	comp=Z,15nm,0.9s						
PAB	**San Pablo**	**23.11**	**278**	*e*P	**P**	**05 38 15.3**	**-0.2**
PAB				pmax	pmax		
	comp=Z,15nm,0.9s						
RAYN	**Ar Rayn**	**23.56**	**129**	*e*P	**P**	**05 38 20.7**	**+0.6**
	comp=Z,7.0nm,1.0s						
RAYN	**Ar Rayn**	**23.56**	**129**	*e*P	**P**	**05 38 20.7**	**+0.6**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIRV	**Kirov**	**23.65**	**31**	P	**P**	**05 38 18.1**	**-2.5**
	comp=Z,9.1nm,0.4s,baz=233,slow=10,SNR=7.4						
KIRV				LR	LR	05 47 46.2	
	comp=Z,954nm,19.9s,baz=239,slow=37						
BER	**Bergen**	**23.78**	**334**	*e*P	**P**	**05 38 22.8**	**+0.9**
ASK	**Askoy**	**23.90**	**334**	*e*P	**P**	**05 38 24.0**	**+1.0**
DOMB	**Dombas**	**24.02**	**340**	*e*P	**P**	**05 38 24.1**	**-0.1**
HYA	**Hoyanger**	**24.11**	**336**	*e*P	**P**	**05 38 25.5**	**+0.5**
EKA	**Eskdalemuir Ar**	**24.35**	**318**	P	**P**	**05 38 26.3**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=113,slow=9.9,SNR=16						
ESK	**Eskdalemuir**	**24.37**	**318**	*e*P	**P**	**05 38 28.0**	**+0.6**
	comp=Z,26nm,1.1s						
ESK	**Eskdalemuir**	**24.37**	**318**	*e*P	**P**	**05 38 28.0**	**+0.6**
ESK				pmax	pmax		
	comp=Z,26nm,1.1s						
TAM	**Tamanrasset**	**24.49**	**231**	*e*P	**P**	**05 38 29.8**	**+0.8**
	comp=Z,3.3nm,1.1s						
TAM	**Tamanrasset**	**24.49**	**231**	*e*P	**P**	**05 38 29.8**	**+0.8**
TAM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PRGR	**Permogore**	**24.53**	**23**	*e*P	**P**	**05 38 26.9**	**-1.9**
PRGR				pmax	pmax		
	comp=Z,37nm,1.0s						
AKTO	**Aktyubinsk**	**24.59**	**55**	P	**P**	**05 38 27.3**	**-2.3**
	comp=Z,1.6nm,0.7s,baz=209,slow=13,SNR=6.4						
AKTO				LR	LR	05 50 27.7	
	comp=Z,477nm,21.0s,baz=256,slow=42						
AKN	**Aaknes**	**24.68**	**339**	*e*P	**P**	**05 38 29.9**	**-0.3**
MVO	**Moncorvo**	**24.84**	**283**	*e*P	**P**	**05 38 37.2**	**+5.3**
	comp=Z,30nm,1.5s						
MVO				*e*S	**S**	**05 43 00.9**	**+5.8**
MVO				*e*LR	LR	05 49 00.2	
	comp=Z,414nm,18.0s						
GEYT	**Alibeck**	**25.09**	**85**	P	**P**	**05 38 34.5**	**+0.3**
	comp=Z,17nm,1.1s,baz=281,slow=12,SNR=19						
GEYT				LR	LR	05 50 46.0	
	comp=Z,719nm,19.0s,baz=25,slow=42						
GYA0B	**ALIBECK ARRAY**	**25.09**	**85**	*e*P	**P**	**05 38 34.9**	**+0.7**
	comp=Z,39nm,1.1s						
PVRL	**Vila Real**	**25.33**	**283**	*e*P	P	05 38 43.0	+6.7
	comp=Z,16nm,1.9s						
MTE	**Manteigas**	**25.35**	**281**	*e*P	**P**	**05 38 41.4**	**+4.8**
	comp=Z,36nm,1.1s						
MTE				*e*S	**S**	**05 43 09.0**	**+5.6**
MTE				*e*LR	LR	05 49 07.2	
	comp=Z,318nm,18.0s						
MTE	**Manteigas**	**25.35**	**281**	*e*P	**P**	**05 38 38.2**	**+1.6**
	comp=Z,26nm,1.0s						
POLO	**Lamas de Olo**	**25.37**	**283**	*e*P	**P**	**05 38 40.3**	**+3.5**
	comp=Z,5.1nm,1.0s						
PCBR	**Castelo Branco**	**25.41**	**280**	*e*P	**P**	**05 38 42.0**	**+5.0**
	comp=Z,23nm,1.8s						
PMRV	**Marv??o**	**25.43**	**279**	*e*P	**P**	**05 38 42.2**	**+4.9**
	comp=Z,16nm,1.5s						
PMRV				*e*S	**S**	**05 43 11.5**	**+6.9**
PMRV				*e*LR	LR	05 48 58.3	
	comp=Z,544nm,16.0s						
MDT	**Midelt**	**25.48**	**263**	P	**P**	**05 38 40.3**	**+2.5**
	comp=Z,6.6nm,1.1s,baz=58,slow=7.0,SNR=4.9						
MDT				LR	LR	05 49 36.6	
	comp=Z,195nm,18.3s,baz=70,slow=39						
PCAB	**Cabril**	**25.50**	**284**	*e*P	P	05 38 44.2	+6.4
	comp=Z,29nm,1.5s						
PVIS	**Viseu**	**25.56**	**282**	*e*P	**P**	**05 38 41.9**	**+3.5**
	comp=Z,29nm,1.1s						
NSS	**Namsos**	**25.57**	**346**	*e*P	**P**	**05 38 38.6**	**+0.4**
ABKAR	**Akbulak array**	**25.63**	**58**	*e*P	**P**	**05 38 38.6**	**-0.2**
	comp=Z,7.4nm,0.9s						
PGAV	**Gavieira, Arco**	**25.64**	**285**	*e*S	S	05 43 29.1	+21
PGAV				*e*LR	LR	05 49 18.3	
	comp=Z,577nm,16.0s						
PBEJ	**Beja**	**26.14**	**276**	*e*P	**P**	**05 38 49.0**	**+5.3**
	comp=Z,18nm,1.2s						
PTOM	**Tomar**	**26.16**	**280**	*e*P	**P**	**05 38 49.0**	**+5.2**
	comp=Z,30nm,1.6s						
PVAQ	**Vaqueiros**	**26.20**	**275**	*e*S	S	05 43 26.7	+10
PVAQ				*e*LR	LR	05 49 24.1	
	comp=Z,282nm,16.0s						
PBDV	**Barranco-do-Ve**	**26.41**	**274**	*e*P	**P**	**05 38 51.4**	**+5.3**
	comp=Z,43nm,1.4s						
MOR8	**Moi Rana**	**26.70**	**350**	*e*P	**P**	**05 38 50.5**	**+2.1**
ARU	**Arti**	**26.72**	**42**	P	**P**	**05 38 48.9**	**+0.1**
	comp=Z,2.8nm,0.2s,baz=222,slow=6.3,SNR=10.0						
ARU				LR	LR	05 50 24.2	
	comp=Z,1µm,19.6s,baz=236,slow=39						
ARU	**Arti**	**26.72**	**42** *c*	*i*P	**P**	**05 38 49.2**	**+0.4**
ARU						05 39 28.5	
ARU				S	**S**	**05 43 26.9**	**+2.3**
ARU				SS	**SnSn**	**05 44 28.9**	**+1.5**
ARU				pmax	pmax		
	comp=Z,17nm,1.3s						
ARU				MLR	MLR		
	comp=Z,1µm,20.0s						
SVE	**Sverdlovsk**	**27.94**	**42**	*e*P	**P**	**05 39 02.4**	**+2.8**
SVE				*e*S	**S**	**05 43 46.6**	**+2.8**
SVE				pmax	pmax		
	comp=Z,26nm,1.2s						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s						
LVZ	**Lovozero**	**28.06**	**7**	*e*P	**P**	**05 39 00.4**	**-0.3**
	comp=Z,14nm,1.1s						
LVZ	**Lovozero**	**28.06**	**7**	*i* P	**P**	**05 39 01.7**	**+1.0**
LVZ				pmax	pmax		
	comp=Z,31nm,1.4s						
STEI	**Steigen**	**28.27**	**352**	*e*P	**P**	**05 39 03.0**	**+0.5**
LOF	**Lofoten**	**28.67**	**350**	*e*P	**P**	**05 39 06.4**	**+0.4**
KTK1	**Kautokeino**	**28.79**	**358**	*e*P	**P**	**05 39 08.0**	**+0.8**
ARCES	**ARCESS Array B**	**29.29**	**360**	P	**P**	**05 39 11.8**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=157,slow=6.6,SNR=7.3						
ARCES				LR	LR	05 51 25.7	
	comp=Z,1µm,18.6s,baz=176,slow=38						
ARE0	**ARCESS Array S**	**29.29**	**360**	*e*P	**P**	**05 39 11.9**	**+0.4**
TRO	**Tromso**	**29.61**	**355**	*e*P	**P**	**05 39 14.2**	**-0.2**
HAMF	**Hammerfest**	**30.42**	**359**	*e*P	**P**	**05 39 21.7**	**+0.2**
BRVK	**Borovoye**	**32.51**	**52**	*i* P	**P**	**05 39 41.4**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,19nm,1.7s						
BVAR	**Borovoye Array**	**32.58**	**52**	P	**P**	**05 39 41.4**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=239,slow=10.0,SNR=3.0						
GAR	**Garm**	**34.01**	**78**	*e*P	**P**	**05 39 54.0**	**+0.5**
	comp=Z,33nm,1.0s						
GAR	**Garm**	**34.01**	**78**	*e*P	**P**	**05 39 54.0**	**+0.5**
GAR				pmax	pmax		
	comp=Z,33nm,1.0s						
TOA1	**Torodi Ar. Sit**	**34.37**	**225**	*e*P	**P**	**05 39 56.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**34.37**	**225**	P	**P**	**05 39 56.9**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=34,slow=9.4,SNR=6.6						
TORD				LR	LR	05 56 23.7	
	comp=Z,323nm,18.1s,baz=0.0,slow=40						
AAK	**Ala-Archa**	**36.14**	**70**	P	**P**	**05 40 12.4**	**+0.5**
	comp=Z,2.2nm,0.4s,baz=242,slow=8.8,SNR=7.9						
AAK	**Ala-Archa**	**36.14**	**70**	*e*P	**P**	**05 40 12.0**	**0.0**
	comp=Z,7.1nm,1.1s						
AAK	**Ala-Archa**	**36.14**	**70**	*i* P	**P**	**05 40 11.9**	**0.0**
AAK				pmax	pmax		
	comp=Z,16nm,1.9s						
BORG	**Borgarnes**	**36.37**	**328**	P	**P**	**05 40 15.7**	**+2.3**
	comp=Z,13nm,0.7s,baz=116,slow=6.2,SNR=9.5						
BORG	**Borgarnes**	**36.37**	**328**	*e*P	**P**	**05 40 15.7**	**+2.3**
	comp=Z,16nm,0.8s						
KURBB	**Kurchatov Arra**	**37.63**	**56**	P	**P**	**05 40 23.7**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=285,slow=8.9,SNR=9.3						
KURK	**Kurchatov**	**37.68**	**56**	P	**P**	**05 40 23.7**	**-1.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH	**Kashi**	**38.05**	**74**	P	**P**	**05 40 27.5**	**-0.6**
KSH				PcP	**PcP**	**05 42 43.3**	**-0.1**
KSH				S	**S**	**05 46 17.5**	**-3.7**
KSH				sS	pS	05 46 25.0	+2.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,72nm,4.9s						
KSH				LR	LR		
	comp=Z,630nm,17.0s						
KSH				LR	LR		
	comp=Z,330nm,15.5s						
KSH				LR	LR		
	comp=Z,190nm,15.4s						
SPA0	**Spitsbergen Ar**	**38.18**	**357**	*e*P	**P**	**05 40 29.3**	**+0.7**
CMLA	**Cha da Macela**	**39.52**	**283**	*i* P	**P**	**05 40 38.1**	**-2.2**
MK31	**Makanchi Array**	**40.67**	**61**	*e*P	**P**	**05 40 47.2**	**-2.5**
	comp=Z,4.7nm,1.0s						
MK31	**Makanchi Array**	**40.67**	**61**	*e*P	**P**	**05 40 47.3**	**-2.5**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MKAR	**Makanchi Array**	**40.67**	**61**	P	P	05 40 43.3	-6.5
	comp=Z,1.2nm,0.6s,baz=304,slow=16,SNR=8.5						
MKAR				LR	LR	06 00 39.3	
	comp=Z,429nm,19.6s,baz=274,slow=41						
MBAR	**Mbarara**	**40.97**	**173**	P	**P**	**05 40 52.4**	**-0.2**
	comp=Z,6.5nm,0.2s,baz=319,slow=19,SNR=3.6						
MBAR	**Mbarara**	**40.97**	**173**	*e*P	**P**	**05 40 52.4**	**-0.2**
	comp=Z,4.8nm,0.7s						
ZAA1	**Zalesovo Array**	**41.18**	**50**	*e*P	**P**	**05 40 51.9**	**-1.9**
ZAA0	**Zalesovo Array**	**41.18**	**50**	*e*P	**P**	**05 40 53.3**	**-0.5**
	comp=Z,6.1nm,0.9s						
ZALV	**Zalesovo Beam**	**41.18**	**50**	P	**P**	**05 40 51.9**	**-1.9**
	comp=Z,1.2nm,0.4s,baz=268,slow=9.1,SNR=11						
ZALV				LR	LR	05 59 59.6	
	comp=Z,367nm,21.0s,baz=250,slow=39						
ZALV	**Zalesovo Beam**	**41.18**	**50**	P	**P**	**05 40 51.9**	**-1.9**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZALV				MLR	MLR		
	comp=Z,367nm,21.0s						
KMBO	**Kilima Mbogo**	**42.54**	**163**	P	**P**	**05 41 07.2**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=41,slow=20,SNR=2.5						
KMBO				LR	LR	06 00 29.6	
	comp=Z,182nm,18.2s,baz=334,slow=39						
KMBO	**Kilima Mbogo**	**42.54**	**163**	*e*P	**P**	**05 41 07.2**	**+1.6**
	comp=Z,1.6nm,0.7s						
DBIC	**Dimbokro**	**43.32**	**228**	P	**P**	**05 41 14.2**	**+2.5**
	comp=Z,2.3nm,0.6s,baz=12,slow=15,SNR=2.7						
DBIC				LR	LR	06 00 37.9	
	comp=Z,219nm,18.4s,baz=21,slow=38						
DBIC	**Dimbokro**	**43.32**	**228**	*e*P	**P**	**05 41 14.2**	**+2.5**
	comp=Z,9.1nm,1.1s						
DGZ	**Jazzator, Alta**	**43.43**	**56**	*i* P	**P**	**05 41 12.2**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	**Urumqi**	**45.12**	**64**	*e*P	**P**	**05 41 28.5**	**+2.5**
WMQ				sP	sP	05 41 36.0	+8.1
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				LR	LR		
	comp=Z,290nm,26.7s						
TLY	**Talaya**	**52.79**	**50**	*e*P	P	05 42 30.7	+6.1
TLY				pmax	pmax		
	comp=Z,34nm,1.0s						
TLY				MLR	MLR		
	comp=Z,1µm,18.0s						
ZAK	**Zakamensk**	**53.03**	**51**	*e*P	**P**	**05 42 26.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GTA	**Gaotai**	**55.19**	**65**	P	**P**	**05 42 42.5**	**0.0**
GTA				pP	sP	05 42 49.8	+5.3
GTA				sP	pP	05 42 53.8	+10
GTA				S	**S**	**05 50 30.8**	**+4.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,52nm,4.4s						
GTA				LR	LR		
	comp=Z,260nm,20.4s						
GTA				LR	LR		
	comp=Z,230nm,20.8s						
GTA				LR	LR		
	comp=Z,310nm,21.1s						
SONM	**Songino Array**	**55.90**	**53**	P	**P**	**05 42 46.6**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=263,slow=8.8,SNR=7.6						
SONM				LR	LR	06 09 39.1	
	comp=Z,378nm,19.2s,baz=296,slow=39						
SONM	**Songino Array**	**55.90**	**53**	P	**P**	**05 42 46.6**	**-0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,378nm,19.2s						
SHL	**Shillong**	**56.16**	**84**	*e*P	**P**	**05 42 49.0**	**-0.7**
FRB	**Frobisher Bay**	**56.55**	**328**	LR	LR	06 08 06.6	
	comp=Z,241nm,18.4s,baz=60,slow=37						
LZH	**Lanzhou**	**59.57**	**67**	*e*P	**P**	**05 43 13.8**	**+0.3**
LZH				pP	sP	05 43 18.8	+3.3
LZH				sP	pP	05 43 21.8	+6.9
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC	**Hu-ho-hao-te**	**62.42**	**59**	P	**P**	**05 43 32.3**	**-0.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,15nm,6.6s						
XAN	**Xi'an**	**64.19**	**66**	P	**P**	**05 43 44.0**	**-0.5**
XAN				pP	sP	05 43 50.0	+3.5
XAN				S	**S**	**05 52 22.5**	**+0.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
XAN				pmax	pmax		
	comp=Z,82nm,6.4s						
XAN				LR	LR		
	comp=Z,210nm,17.2s						
XAN				LR	LR		
	comp=Z,170nm,18.1s						
XAN				LR	LR		
	comp=Z,160nm,19.5s						
CM31	**Chiang Mai Arr**	**65.57**	**86**	*e*P	**P**	**05 43 52.5**	**-1.0**
	comp=Z,6.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**65.57**	**86**	P	**P**	**05 43 52.5**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=293,slow=7.6,SNR=6.9						
CMAR				LR	LR	06 18 02.7	
	comp=Z,127nm,20.2s,baz=298,slow=41						
BILL	**Bilibino**	**67.95**	**15**	*i* P	**P**	**05 44 11.8**	**+3.8**
BILL				*i*		05 44 30.0	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BOSA	**Boshof**	**68.58**	**181**	LR	LR	06 16 38.1	
	comp=Z,150nm,19.3s,baz=353,slow=38						
KLR	**Kul'dur**	**69.56**	**42**	*i* P	**P**	**05 44 17.5**	**-0.9**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NJ2	**Nanjing**	**72.18**	**63**	*e*P	**P**	**05 44 34.3**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
YKA	**Yellowknife Ar**	**72.72**	**342**	P	**P**	**05 44 38.4**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=31,slow=5.1,SNR=8.9						
YKA				LR	LR	06 19 09.5	
	comp=Z,28nm,18.3s,baz=26,slow=38						
USRK	**Ussuriysk Ar.**	**72.86**	**46**	P	**P**	**05 44 39.6**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=331,slow=8.4,SNR=2.7						
USRK				LR	LR	06 21 10.6	
	comp=Z,204nm,18.7s,baz=317,slow=40						
KS15	**Wonju Array Si**	**74.75**	**54**	*e*P	**P**	**05 44 48.8**	**-0.8**
	comp=Z,7.7nm,0.7s						
KSRS	**Korea Array**	**74.77**	**54**	P	**P**	**05 44 48.8**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=312,slow=6.7,SNR=5.2						
KSRS				LR	LR	06 21 31.8	
	comp=Z,205nm,19.0s,baz=314,slow=39						
KSRS	**Korea Array**	**74.77**	**54**	P	**P**	**05 44 48.8**	**-0.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KSRS				MLR	MLR		
	comp=Z,205nm,19.0s						
ILAR	**Eielson Array**	**75.10**	**357**	P	**P**	**05 44 52.0**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=355,slow=4.7,SNR=2.6						
ILAR				LR	LR	06 17 31.4	
	comp=Z,197nm,21.6s,baz=12,slow=36						
DAWY	**Dawson**	**75.31**	**353**	*e*P	**P**	**05 44 54.8**	**+2.4**
	comp=Z,3.7nm,0.8s						
WRH	**Wood River Hil**	**75.45**	**357**	*e*P	**P**	**05 44 54.5**	**+1.4**
	comp=Z,5.6nm,0.8s						
HDA	**Harding Lake**	**75.46**	**357**	*e*pP	pP	05 44 58.1	+3.4
BPAW	**Bear Paw Mtn.**	**75.90**	**359**	*e*P	**P**	**05 44 56.9**	**+1.1**
	comp=Z,3.1nm,1.0s						
COWI	**Conover**	**76.22**	**319**	*e*pP	pP	05 45 01.9	+2.5
ULM	**Lac du Bonnet**	**76.34**	**326**	P	**P**	**05 44 58.6**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=23,slow=5.8,SNR=2.2						
J45A	**Montague**	**76.65**	**316**	*e*P	**P**	**05 45 02.2**	**+1.8**
	comp=Z,40nm,0.4s						
PETK	**Petropavlovsk-**	**78.09**	**27**	LR	LR	06 24 34.1	
	comp=Z,321nm,18.0s,baz=309,slow=40						
X58A	**Rowland**	**78.54**	**306**	*e*P	**P**	**05 45 12.9**	**+1.8**
	comp=Z,17nm,0.6s						
SJG	**San Juan**	**79.98**	**285**	LR	LR	06 16 34.6	
	comp=Z,40nm,20.9s,baz=34,slow=33						
TKL	**Tuckaleechee C**	**80.50**	**309**	LR	LR	06 21 11.8	
	comp=Z,144nm,18.2s,baz=60,slow=36						
MJAR	**Matsushiro Arr**	**81.51**	**49**	LR	LR	06 25 13.2	
	comp=Z,192nm,19.2s,baz=335,slow=38						
CCM	**Cathedral Cave**	**83.06**	**315**	*e*P	**P**	**05 45 35.3**	**0.0**
	comp=Z,4.4nm,0.6s						
CCM	**Cathedral Cave**	**83.06**	**315**	*e*P	**P**	**05 45 35.3**	**0.0**
CCM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
EGMT	**Eagleton**	**83.63**	**332**	*e*pP	pP	05 45 42.5	+3.0
NEW	**Newport**	**85.89**	**336**	*e*P	**P**	**05 45 49.7**	**+0.2**
	comp=Z,3.2nm,0.8s						
NEW	**Newport**	**85.89**	**336**	*e*P	**P**	**05 45 49.7**	**+0.2**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	**Bozeman (W)**	**86.37**	**332**	*e*P	**P**	**05 45 52.3**	**+0.2**
	comp=Z,4.4nm,1.1s						
BOZ	**Bozeman (W)**	**86.37**	**332**	*e*P	**P**	**05 45 52.3**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PDAR	**Pinedale Array**	87.99	329	P	P	05 46 00.3	+0.3
	comp=Z,0.6nm,0.8s,baz=78,slow=3.5,SNR=5.4						
PDAR				LR	LR	06 26 42.4	
	comp=Z,160nm,18.0s,baz=32,slow=36						
BDFB	**Brasilia**	88.15	248	P	P	05 46 01.2	+0.3
	comp=Z,1.0nm,0.5s,baz=27,slow=11,SNR=2.6						
BDFB				LR	LR	06 27 37.5	
	comp=Z,163nm,18.2s,baz=103,slow=37						
ANMO	**Albuquerque**	93.16	323	*ce*P	P	05 46 21.6	-2.7
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ROSC	**El Rosal**	94.60	280	LR	LR	06 26 04.4	
	comp=Z,133nm,18.1s,baz=43,slow=34						
NVAR	**Mina Array Bea**	95.04	332	P	P	05 46 33.7	+0.8
	comp=Z,0.7nm,0.7s,baz=42,slow=2.8,SNR=2.9						
NVAR				LR	LR	06 31 49.3	
	comp=Z,336nm,18.5s,baz=32,slow=37						
TXAR	**Lajitas Array**	96.35	317	P	P	05 46 38.8	0.0
	comp=Z,0.1nm,0.4s,baz=51,slow=4.6,SNR=4.6						
TXAR				LR	LR	06 30 38.1	
	comp=Z,213nm,18.3s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	96.35	317	P	P	05 46 38.8	0.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR				MLR	MLR		
	comp=Z,213nm,18.3s						
ASAR	**Alice Springs**	118.34	98	PKP	PKPdf	05 51 53.9	-3.5
	comp=Z,0.4nm,0.7s,baz=336,slow=2.6,SNR=5.9						

ISK ***30*** *05:42:09.9, 40°.30N×25°.76E, h7^{km}, ML3.5/21*
DDA ***30*** *05:42:10.3, 40°.31N×25°.86E, h31^{km}±2^{km}, ML3.3*
ATH ***30*** *05:42:10.2, 40°.32N×25°.79E, h26^{km}±1^{km}, ML3.1/5, Error ellipse: s-maj=2.2km s-min=1.3km az=83.0*
ISCJB ***30*** *05:42:10.6±0.4, 40°.31N±0°.01×25°.79E±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.2km az=145.0*
THE ***30*** *05:42:11.1, 40°.32N×25°.79E, h15^{km}, ML3.2/9, Error ellipse: s-maj=1.0km s-min=0.5km az=334.0*
SOF ***30*** *05:42:13.1, 40°.46N×25°.54E, h1^{km}*
BEO ***30*** *05:42:15.7±1.0, 40°.29N×25°.28E, h14^{km}±4^{km}, ML3.3/3*

ISC 30 05:42:10.6±0.9, 40°.31N±0°.01×25°.81E±0°.02, h18^{km}±5^{km}, n108, σ1^{s}39/144, 11C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	0.14	150	PG	Pg	05 42 14.3	-0.3
SMTH	**Samothraki Isl**	0.27	307	P	Pg	05 42 16.6	0.0
SMTH				S	Sg	05 42 20.6	-0.1
	7µm,0.2s						
SMTH	**Samothraki Isl**	0.27	307	P	Pg	05 42 16.6	0.0
SMTH				S	Sg	05 42 20.4	-0.3
SMTH				AML	AML	05 42 20.7	
	comp=E,11773µm,0.2s						
SMTH				AML	AML	05 42 21.0	
	comp=N,14983µm,0.2s						
ENEZ	**Enez**	0.50	31	PG	Pg	05 42 20.8	+0.1
BOZC	**Bozcaada**	0.50	158	PG	Pg	05 42 20.6	-0.1
BOZC				SG	Sg	05 42 27.5	0.0
BOZC	**Bozcaada**	0.50	158	*i* P	Pb	05 42 20.9	0.0
BOZC				*i* S	Sg	05 42 27.3	-0.2
ALN	**Alexandroupoli**	0.61	17	PG	Pg	05 42 22.8	-0.1
ALN	**Alexandroupoli**	0.61	17	P	Pg	05 42 22.7	-0.1
ALN				S	Sb	05 42 31.4	+0.2
ALN	**Alexandroupoli**	0.61	17	P	Pg	05 42 22.7	-0.1
ALN				S	Sb	05 42 31.3	+0.2
ALN				AML	AML	05 42 34.7	
	comp=E,1165µm,0.3s						
ALN				AML	AML	05 42 36.0	
	comp=N,922µm,0.3s						
LIA	**Limnos Island**	0.63	230	P	Pg	05 42 22.9	-0.2
LIA				S	Sb	05 42 32.6	+1.0
	comp=N,2µm,0.3s						
LIA	**Limnos Island**	0.63	230	P	Pg	05 42 22.9	-0.2
LIA				S	Sb	05 42 31.9	+0.3
LIA				AML	AML	05 42 35.0	
	comp=N,3923µm,0.3s						
LIA				AML	AML	05 42 35.9	
	comp=E,4759µm,0.3s						
LPK	**Lapseki**	0.73	85	PG	Pb	05 42 24.8	0.0
BAYC	**CANAKKALE_Bayr**	0.80	135	*i* P	Pb	05 42 26.1	0.0
BAYC				*i* S	Sg	05 42 37.2	+0.3
KESN	**Edirne-Kesan**	0.84	52	*i* P	Pb	05 42 26.3	-0.6
KESN				*i* S	Sg	05 42 39.0	+0.7
KESN				IAML_P			
	comp=Z,3µm,0.2s						
RDO	**Rodhopi**	0.86	346	PG	Pg	05 42 27.3	-0.1
RDO	**Rodhopi**	0.86	346	P	Pb	05 42 27.1	0.0
RDO				S	Sg	05 42 39.0	+0.2
	comp=Z,950nm,0.5s						
THAS	**Thassos island**	0.88	290	P	Pb	05 42 27.2	-0.2
THAS				S	Sn	05 42 40.0	-0.6
THAS	**Thassos island**	0.88	290	P	Pb	05 42 27.5	+0.1
GPNR	**Gulpinar-Canak**	0.89	164	PG	Pb	05 42 27.5	0.0
SIGR	**SIGRI**	1.10	178	PN	Pn	05 42 31.1	0.0
SIGR	**SIGRI**	1.10	178	P	Pb	05 42 30.8	-0.3
SIGR				S	Sg	05 42 46.1	-0.1
	comp=Z,5µm,0.5s						
SIGR	**SIGRI**	1.10	178	P	Pn	05 42 31.2	+0.1
SIGR				S	Sg	05 42 46.9	+0.7
SIGR				AML	AML	05 42 47.3	
	comp=N,13065µm,0.4s						
SIGR				AML	AML	05 42 49.4	
	comp=E,5380µm,0.6s						
RKY	**Sarkoy-Tekirda**	1.11	70	PN	Pn	05 42 31.8	+0.4
PRK	**Paraskevi**	1.12	161	P	Pg	05 42 32.1	-0.2
PRK				S	Sg	05 42 47.5	+0.6
	comp=E,3µm,0.5s						
KAVA	**Kavala**	1.20	305	P	Pb	05 42 33.0	+0.1
KAVA				S	Sn	05 42 48.6	+0.2
	comp=E,478nm,0.4s						
KAVA	**Kavala**	1.20	305	P	Pg	05 42 33.5	-0.3
KAVA				S	Sn	05 42 48.7	+0.2
KAVA				AML	AML	05 42 51.2	
	comp=E,879µm,0.3s						
KAVA				AML	AML	05 42 51.6	
	comp=N,1041µm,0.4s						
AYVA	**Ayvalik**	1.21	146	*i* P	Pb	05 42 33.5	+0.5
AYVA				*i* S	Sg	05 42 49.6	-0.1
KDZ	**Kurdzhali**	1.37	348	PN	Pn	05 42 35.3	+0.3
KDZ	**Kurdzhali**	1.37	348	P	Pn	05 42 35.2	+0.3
MRMT	**Marmara Adasi**	1.39	77	PN	Pn	05 42 35.7	+0.4
OUR	**Ouranopolis**	1.40	272	PN	Pn	05 42 35.1	-0.1
OUR	**Ouranopolis**	1.40	272	P	Pn	05 42 35.1	-0.1
OUR				S	Sn	05 42 53.1	-0.1
	comp=N,610nm,0.6s						
OUR	**Ouranopolis**	1.40	272	P	Pn	05 42 35.1	-0.1
GONE	**Gonen-Balikesi**	1.46	100	PN	Pb	05 42 37.4	+0.1
DKL	**Dikili**	1.50	145	PN	Pb	05 42 37.5	-0.4
EDC	**Edincik**	1.57	88	PN	Pb	05 42 39.0	-0.2
RZN	**Rozhen**	1.61	329	P	Pg	05 42 41.5	-0.1
ZEDA	**zmir-Bergama**	1.66	143	*i* P	Pb	05 42 40.8	+0.2
ZEDA				*i* S	Sb	05 43 02.7	+1.4
EDRB	**Edirne**	1.69	24	PN	Pb	05 42 41.5	+0.3
BALB	**Balikesir**	1.73	112	PN	Pb	05 42 41.0	-0.8
SKY	**Skiros Island**	1.73	215	P	Pn	05 42 39.6	-0.2
STEP	**BALIKESIR_Sava**	1.74	122	*i* P	Pb	05 42 41.2	-0.8
STEP				*i* S	Sb	05 43 03.2	-0.4
FOCM	**Foa**	1.75	156	PN	Pb	05 42 41.9	-0.2
DIM	**Dimitrovgrad**	1.75	353	P	Pb	05 42 42.9	+0.6
KIRK	**Kırklareli**	1.77	33	*i* P	Pn	05 42 41.4	+1.0
KIRK				*i* S	Sn	05 43 02.7	+0.3
KIRK				IAML_P			
	comp=Z,2µm,0.4s						
KRBN	**Karaburun**	1.81	161	PN	Pb	05 42 42.9	-0.3
PLG	**Polygyros**	1.81	273	P	Pn	05 42 41.3	+0.4
PHSR	**Pinarhisar**	1.85	44	⇑*i*P	Pn	05 42 40.9	-0.6
SRS	**Serrai**	1.87	296	P	Pn	05 42 42.4	+0.6
SRS				S	Sn	05 43 05.5	+0.6
	comp=Z,410nm,0.4s						
CHOS	**Chios island**	1.93	174	PN	Pn	05 42 43.6	+1.0
CHOS	**Chios island**	1.93	174	P	Pn	05 42 43.1	+0.5
CHOS				S	Sn	05 43 06.8	+0.3
	comp=Z,650nm,0.5s						
CHOS	**Chios island**	1.93	174	P	Pn	05 42 43.5	+0.8
KCTX	**Karacabey (Bur**	1.95	90	PN	Pb	05 42 44.8	-0.8
PLD	**Plovdiv**	1.98	335	PN	Pb	05 42 44.7	-1.4
PLD	**Plovdiv**	1.98	335	*e*Pg	Pg	05 42 49.1	+0.5
PLD				*e*Sg	Sg	05 43 15.1	+0.8
PLD	**Plovdiv**	1.98	335	*e*Pg	Pg	05 42 50.9	+2.3
PLD				*e*Sg	Sg	05 43 15.7	+1.4
PLD	**Plovdiv**	1.98	335	P	Pg	05 42 48.2	-0.4
MMB	**Musomiste**	2.03	310	P	Pn	05 42 45.0	+1.0
URLA	**Izmir**	2.04	162	PN	Pn	05 42 44.9	+0.8
URLA	**Izmir**	2.04	162	*i* P	Pn	05 42 45.1	+1.0
URLA				*i* S	Sn	05 43 09.7	+0.6
URLA				IAML_P			
	comp=Z,2µm,0.3s						
HORT	**Hortiatis**	2.09	279	PN	Pn	05 42 46.1	+1.3
AKHS	**Akhisar**	2.11	132	*i* P	Pn	05 42 45.5	+0.5
AKHS				IAML_P			
	comp=Z,5µm,0.3s						
SKIA	**Skiathos**	2.14	238	P	Pn	05 42 44.5	-0.9
ELBA	**Catalca**	2.16	66	*i* P	Pn	05 42 44.4	-1.4
ELBA				IAML_P			
	comp=Z,544nm,0.1s						
DURS	**Dursunbey**	2.17	108	*i* P	Pn	05 42 47.4	+1.5
DURS				*i* S	Sg	05 43 18.3	-2.0
DURS				IAML_P			
	comp=Z,1µm,0.2s						
CTYL	**Yalikoy Yolu**	2.21	57	PN	Pb	05 42 49.1	-1.0
CTYL	**Yalikoy Yolu**	2.21	57	⇑*i*P	Pb	05 42 49.8	-0.3
JMB	**Yambol**	2.23	15	P	Pg	05 42 52.4	-1.1
CTKS	**Kestanelik-??a**	2.25	65	PN	Pb	05 42 49.6	-1.1
ULDT	**Uludag**	2.55	93	*i* P	Pn	05 42 52.8	+1.5
ULDT				*i* S	Sg	05 43 30.4	-2.3
ULDT				IAML_P			
	comp=Z,387nm,0.1s						
DEMI	**Demirci**	2.57	118	*i* P	Pb	05 42 54.5	-1.8
DEMI				*i* S	Sg	05 43 32.6	-0.8
KKB	**Krupnik**	2.58	308	P	Pb	05 42 55.9	-0.5
ELND	**Elena**	2.62	1	⇑*i*P	Pn	05 42 53.3	+1.2
KLYT	**Kilyos**	2.63	68	⇑*i*P	Pn	05 42 49.9	-2.3
VAY	**Valandovo**	2.66	293	*e*Pg	Pb	05 42 56.9	-0.8
VAY				*e*Sg	Sb	05 43 29.2	-0.8
VAY	**Valandovo**	2.66	293	*e*Pg	Pg	05 43 00.3	-1.3
VAY				*e*Sg	Sb	05 43 32.5	+2.5
VAY	**Valandovo**	2.66	293	*i* Pn	Pg	05 43 00.6	-1.0
VAY				*i* Sn	Sg	05 43 36.7	+0.6
YLV	**Yalova**	2.73	83	⇑*i*P	Pb	05 43 00.3	+1.3
VTS	**Vitosha**	3.01	321	*e*Pn	Pn	05 43 00.0	+2.4
VTS				*e*Sn	Sn	05 43 33.2	-0.1
VTS	**Vitosha**	3.01	321	*e*Pn	Pb	05 43 04.3	+0.5
VTS				*e*Sn	Sb	05 43 37.2	-3.1
VTS	**Vitosha**	3.01	321	⇑*i*P	Pg	05 43 09.3	+1.0
VTS	**Vitosha**	3.01	321	P	Pb	05 43 03.8	0.0
SILT	**Sile**	3.03	73	⇑*i*P	Pn	05 43 00.9	+3.2
STIP	**Stip**	3.07	298	*i* Pn	Pn	05 43 01.3	+3.0
STIP				*i* Sn	Sb	05 43 43.6	+1.7
PLVB	**Pleven**	3.20	344	⇑*i*P	Pn	05 43 01.9	+1.8
ZIMR		3.36	354	⇑*i*P	Pb	05 43 09.4	-0.3
ZAPS	**Zavoj**	3.80	322	*e*Pn	Pn	05 43 11.2	+2.9
ZAPS	**Zavoj**	3.80	322	*e*Pn	Pb	05 43 15.2	-1.9
ZAPS				*e*Sg	Sg	05 44 12.4	-0.1
BARS	**Barje**	3.91	311	*e*Pn	Pb	05 43 15.6	-3.4
BOVS	**Bovan**	4.52	319	*e*Pn	Pn	05 43 19.9	+1.8
BOVS	**Bovan**	4.52	319	*e*Pn	Pn	05 43 23.6	+5.5
SELS	**Selova**	4.56	311	*e*Pn	Pn	05 43 20.2	+1.5
SELS	**Selova**	4.56	311	*e*Pn	Pn	05 43 23.9	+5.2
SELS				*e*Sg	Sg	05 44 34.2	-2.7
TIRR	**Tirgusor**	4.57	24	⇑*i*P	Pn	05 43 23.4	+4.5
TIR	**Tirane**	4.63	285	*e*Pn	Pn	05 43 24.4	+4.7
KUBS	**Kucevo**	5.12	325	*e*Pn	Pb	05 43 33.0	-6.6
KUBS				*e*Sg	Sg	05 44 53.5	-1.3
MLR	**Muntele Rosu**	5.18	1	⇑*i*P	Pn	05 43 28.2	+0.8
GRUS	**Gruza**	5.21	315	*e*Pn	Pn	05 43 28.8	+1.1
GRUS	**Gruza**	5.21	315	*e*Pn	Pn	05 43 32.8	+5.1
IVAS	**Ivanjica**	5.33	310	*e*Pn	Pn	05 43 30.6	+1.2
PDG	**Podgorica**	5.37	295	*e*Pn	Pn	05 43 29.9	+0.1
PDG				*e*Sn	Sn	05 44 25.7	-5.4
PDG	**Podgorica**	5.37	295	*e*Pn	Pn	05 43 33.6	+3.8
TRUS	**Trudelj**	5.60	316	*e*Pn	Pn	05 43 35.2	+2.2
TRUS	**Trudelj**	5.60	316	*e*Pn	Pn	05 43 38.0	+5.0
TRUS				*e*Sg	Sg	05 45 09.0	-1.3
DOPR	**Dopca**	5.67	357	⇓*i*P	Pn	05 43 33.4	-0.5
DIVS	**Divibare**	5.75	313	*e*Pn	Pn	05 43 36.0	+0.9
DIVS	**Divibare**	5.75	313	*e*Pn	Pn	05 43 39.3	+4.2
BBLS	**Lazići**	5.94	309	*e*Pn	Pn	05 43 39.2	+1.4

RSNC 30 05:54:45.8±0.8, 6°.80N×73°.16W, h150^{km}±3^{km}, ML3.6, Mw3.8, 6C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.20	187	⇓*i*P	Pn	05 55 05.9	-0.5
BARC				*e*S	Sn	05 55 21.5	-0.7
BARC				*i*		05 55 23.0	
	comp=Z,580nm,0.2s						
GIRC	**Giron, Santand**	0.28	353	⇑*i*P	Pn	05 55 06.0	-0.5
GIRC				*e*S	Sn	05 55 21.8	-0.6
GIRC				*i*		05 55 24.1	
	comp=Z,275nm,0.2s						
BRRC	**Barranca, Sant**	0.63	299	⇑*i*P	Pn	05 55 07.8	-0.1
BRRC				*e*S	Sn	05 55 25.4	+0.6
BRRC				*i*		05 55 26.5	
	comp=N,1µm,0.2s						
PAMC	**Pamplona, Colo**	0.70	40	⇑*i*P	Pn	05 55 08.7	-0.3
PAMC				*e*S	Sn	05 55 26.0	-0.6
PAMC				*i*		05 55 28.2	
	comp=Z,563nm,0.6s						
RUSC	**La Rusia**	0.90	175	*i* P	Pn	05 55 09.8	-0.6
RUSC				*e*S	Sn	05 55 28.8	-0.3
RUSC				*i*		05 55 31.4	
	comp=Z,471nm,0.4s						
PTBC	**PUERTO BERRIO,**	1.32	259	*e*P	Pn	05 55 12.4	-1.1
PTBC				*e*S	Sn	05 55 34.2	-0.5
PTBC				*i*		05 55 36.1	
	comp=Z,601nm,0.3s						
TAMC	**Tame, Arauca**	1.40	105	⇑*i*P	Pn	05 55 14.1	-0.4
TAMC				*i*		05 55 35.0	
	comp=Z,178nm,0.3s						
TAMC				*e*S	Sn	05 55 36.1	-0.2
OCAC	**Ocana**	1.44	354	*e*P	Pn	05 55 14.1	-0.9
OCAC				*e*S	Sn	05 55 36.2	-1.2
OCAC				*i*		05 55 41.0	
	comp=Z,555nm,0.3s						
SPBC	**San Pablo de B**	1.46	219	⇓*i*P	Pn	05 55 14.7	-0.4
SPBC				*e*S	Sn	05 55 36.9	-0.5
SPBC				*i*		05 55 42.7	
	comp=Z,528nm,0.3s						
ZARC	**Zaragoza, Cauc**	1.82	292	⇑*i*P	Pn	05 55 18.1	-0.9
ZARC				*e*S	Sn	05 55 43.6	-0.7
ZARC				*i*		05 55 50.9	
	comp=Z,582nm,0.4s						
NORC	**Norcasia**	2.10	234	⇓*i*P	Pn	05 55 21.6	-0.6
NORC				*e*S	Sn	05 55 49.0	-1.1
NORC				*i*		05 55 53.7	
	comp=Z,366nm,0.2s						
SMLC	**San Martn de**	2.19	336	*e*P	Pn	05 55 22.2	-1.0
SMLC				*e*S	Sn	05 55 51.1	-0.9
SMLC				*i*		05 55 53.9	
	comp=Z,321nm,0.1s						
ROSC	**El Rosal**	2.26	211	*e*P	Pn	05 55 25.3	+0.8
ROSC				*e*S	Sn	05 55 57.5	+3.3
HELC	**Santa Helena**	2.43	256	*e*P	Pn	05 55 26.0	-0.5
HELC				*e*S	Sn	05 55 57.8	0.0
HELC				*i*		05 56 03.8	
	comp=N,257nm,0.3s						
UREC	**San Jos de Ur**	2.54	292	*e*P	Pn	05 55 25.8	-1.7
UREC				*e*S	Sn	05 55 56.3	-3.3
GUY2C	**Guyana, Caldas**	2.69	235	*e*P	Pn	05 55 29.8	-0.1
GUY2C				*e*S	Sn	05 56 03.1	-0.6
GUY2C				*i*		05 56 12.8	
	comp=Z,237nm,0.3s						
VILC	**Villavicencio,**	2.72	191	*e*P	Pn	05 55 28.9	-0.9
VILC				*e*S	Sn	05 56 03.2	-0.7
VILC				*i*		05 56 11.7	
	comp=Z,214nm,0.4s						
RREF	**El Recreo**	2.88	229	*e*P	Pn	05 55 33.0	+0.7
RREF				*e*S	Sn	05 56 08.5	+0.4
RREF				*i*		05 56 17.0	
	comp=Z,267nm,0.3s						
DBBC	**Dabeiba**	3.04	274	⇑*i*P	Pn	05 55 33.5	-0.3
DBBC				*e*S	Sn	05 56 09.7	-1.1
DBBC				*i*		05 56 14.3	
	comp=Z,314nm,0.8s						
ARGC	**Ariguani, Magd**	3.23	341	*e*P	Pn	05 55 36.1	0.0
ARGC				*e*S	Sn	05 56 15.4	+0.3
ARGC				*i*		05 56 22.2	
	comp=Z,105nm,0.3s						
SDV	**Santo Domingo**	3.25	50	*e*S	Sn	05 56 11.9	-3.9
PRAC	**Prado**	3.51	209	*e*P	Pn	05 55 39.3	-0.5
PRAC				*e*S	Sn	05 56 21.8	+0.1
PRAC				*i*		05 56 27.2	
	comp=Z,197nm,0.2s						
ORTC	**Ortega, Tolima**	3.54	216	*e*P	Pn	05 55 39.6	-0.6
ORTC				*e*S	Sn	05 56 21.6	-0.9
ORTC				*i*		05 56 29.8	
	comp=Z,128nm,0.4s						
PLMC	**San Jos del P**	3.63	239	*e*P	Pn	05 55 41.7	+0.3
PLMC				*e*S	Sn	05 56 24.7	+0.2
SJCC	**San Jacinto, C**	3.67	327	*e*P	Pn	05 55 39.6	-2.3
SJCC				*e*S	Sn	05 56 21.1	-4.4
YOTC	**Yotoco, Valle**	4.23	229	*e*P	Pn	05 55 48.4	-0.9
YOTC				*e*S	Sn	05 56 37.5	-1.0
GUVC	**San Jose del G**	4.26	173	*e*P	Pn	05 55 48.1	-1.4
GUVC				*e*S	Sn	05 56 37.9	-1.1
GUVC				*i*		05 56 42.7	
	comp=Z,143nm,0.2s						
SMRC	**Santa Marta, M**	4.46	346	*e*P	Pn	05 55 50.4	-1.8
SMRC				*e*S	Sn	05 56 39.1	-4.9
MACC	**Macarena, Meta**	4.67	189	⇓*i*P	Pn	05 55 52.5	-2.5
MACC				*e*S	Sn	05 56 44.1	-4.8
MARP	**Paez Belalcaza**	4.82	215	*e*P	Pn	05 55 56.1	-1.0
MARP				*e*S	Sn	05 56 52.5	-0.2
FLOC	**Florencia**	5.75	206	*e*P	Pn	05 56 08.2	-1.1
FLOC				*e*S	Sn	05 57 13.2	-1.3
BBAC	**Balboa, Cauca**	6.25	221	*e*P	Pn	05 56 14.9	-1.3
BBAC				*e*S	Sn	05 57 22.6	-4.2

IDC ***30*** *06:01:05.3±1.9, 6°.03S×131°.84E, h0^{km}, mb4.1/2, mb1 4.3/4, mb1mx3.8/23, mbtmp4.2/4, ML4.2/2, Error ellipse: s-maj=176.8km s-min=25.3km az=69.0*
ISCJB ***30*** *06:01:19.7±0.7, 6°.83S±0°.05×130°.4E±0°.1, h150^{km}, mb3.9/2, Error ellipse: s-maj=14.5km s-min=6.6km az=3.0*
DJA ***30*** *06:01:20.8±0.7, 7°S±5°×13°0E±°, h174^{km}±21^{km}, M4.5/7, mb4.5/3, mB4.9/2, MLv4.6/7, Mw(mB)4.2/2*

ISC 30 06:01:20.6±0.8, 6°.84S±0°.06×130°.30E±0°.10, h150^{km}, n9, σ3^{s}36/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	1.51	139	P	Pn	06 01 51.8	+1.6
SAUI				S	Sn	06 02 11.0	-2.0
FAKI	**Fak Fak**	4.35	27	P	Pn	06 02 25.3	-0.2
FAKI				S	Sn	06 03 13.8	-2.2
SWI	**Sorong**	6.01	9	P	Pn	06 02 46.0	-1.5
SOEI	**Soe**	6.64	244	P	Pn	06 02 55.7	-0.2
WRA	**Warramunga Arr**	13.61	164	Pn	Pn	06 04 25.9	-1.7
	1.0nm,0.3s,baz=353,slow=12,SNR=29						
WRA				Sn	Sn	06 06 45.5	-13
	2.5nm,0.3s,baz=335,slow=21,SNR=8.0						
ASAR	**Alice Springs**	17.09	169	P	Pn	06 05 12.4	+1.8
	1.4nm,0.3s,baz=351,slow=12,SNR=48						
ASAR				S	S	06 08 13.1	-7.4
	0.6nm,0.3s,baz=358,slow=27,SNR=5.8						
STKA	**Stephens Creek**	27.05	159	P	P	06 06 52.0	+2.9
	1.5nm,0.4s,baz=339,slow=10.0,SNR=5.0						
MKAR	**Makanchi Array**	68.25	327	P	P	06 12 09.2	+4.1
	0.7nm,0.4s,baz=121,slow=7.7,SNR=8.9						
CPUP	**Villa Florida**	146.21	168	PKPbc	PKiKP	06 20 48.6	+1.5
	1.4nm,0.8s,baz=210,slow=4.4,SNR=3.8						

MAN 30 06:12:43.4, 7°.44N×124°.95E, h22^{km}, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	0.45	14	*e*P	Pn	06 12 54.1	-0.5
BUKP				*e*S	Sn	06 13 02.8	+0.8
CTBH	**Cotabato--PC H**	0.73	252	⇑*i*P	Pb	06 12 57.4	-0.1
CTBH				*i* S	Sb	06 13 06.6	-0.5
SKMP	**Bagumbayan, Su**	1.00	204	*e*P	Pb	06 13 00.3	-1.9
SKMP				*e*S	Sn	06 13 16.4	+0.7
DDMP	**Don Marcelino,**	1.53	150	*e*P	Pb	06 13 12.5	+1.3
DDMP				*e*S	Sb	06 13 34.8	+4.7
PAGZ	**Pagadian**	1.61	285	*e*P	Pn	06 13 10.3	-0.2
PAGZ				*e*S	Sb	06 13 31.7	-0.6

ISK ***30*** *06:13:05.9, 40°.32N×25°.80E, h8^{km}, ML2.4/12*
ISCJB ***30*** *06:13:06.4±0.4, 40°.31N±0°.02×25°.83E±0°.03, h10^{km}±3^{km}, Error ellipse: s-maj=4.1km s-min=3.0km az=164.7*
ATH ***30*** *06:13:06.5, 40°.34N×25°.81E, h20^{km}±6^{km}, ML2.0/3, Error ellipse: s-maj=6.9km s-min=1.3km az=299.0*
THE ***30*** *06:13:06.8, 40°.32N×25°.82E, h13^{km}±1^{km}, ML1.9/6, Error ellipse: s-maj=1.2km s-min=0.5km az=302.0*
DDA ***30*** *06:13:07.8, 40°.27N×25°.99E, h7^{km}±7^{km}, ML2.7*

ISC 30 06:13:06.5±0.9, 40°.31N±0°.02×25°.82E±0°.02, h14^{km}±7^{km}, n38, σ0^{s}51/53, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	0.14	155	PG	Pg	06 13 09.9	-0.2
GADA				SG	Sg	06 13 11.9	-0.6
SMTH	**Samothraki Isl**	0.27	305	P	Pg	06 13 12.5	+0.2
SMTH				S	Sg	06 13 16.5	+0.3
	525nm,0.1s						
SMTH	**Samothraki Isl**	0.27	305	P	Pg	06 13 12.5	+0.2
SMTH				S	Sg	06 13 16.3	+0.1
SMTH				AML	AML	06 13 16.7	
	comp=E,1085µm,0.2s						
SMTH				AML	AML	06 13 17.4	
	comp=N,942µm,0.1s						
ENEZ	**Enez**	0.49	31	PG	Pg	06 13 16.2	0.0
ENEZ				SG	Sg	06 13 23.4	+0.6
BOZC	**Bozcaada**	0.50	160	PG	Pg	06 13 16.5	0.0
BOZC	**Bozcaada**	0.50	160	*i* P	Pg	06 13 16.5	0.0
BOZC				*i* S	Sg	06 13 24.2	+1.0
BOZC				IAML_P			
	comp=Z,2µm,0.1s						
ALN	**Alexandroupoli**	0.61	16	PG	Pg	06 13 18.2	-0.3
ALN	**Alexandroupoli**	0.61	16	P	Pg	06 13 18.1	-0.3
ALN				S	Sg	06 13 26.7	+0.2
	comp=Z,40nm,0.2s						
ALN	**Alexandroupoli**	0.61	16	P	Pg	06 13 18.2	-0.3
ALN				S	Sg	06 13 26.6	+0.1
ALN				AML	AML	06 13 29.7	
	comp=E,81µm,0.3s						
ALN				AML	AML	06 13 31.1	
	comp=N,184µm,0.2s						
EZN	**Ezine**	0.62	142	PG	Pg	06 13 17.9	-0.8
LIA	**Limnos Island**	0.64	230	P	Pg	06 13 19.0	-0.1
LIA				S	Sb	06 13 28.6	+0.2
	comp=N,172nm,0.2s						
LIA	**Limnos Island**	0.64	230	P	Pg	06 13 19.5	+0.4
LIA				S	Sb	06 13 28.6	+0.2
LIA				AML	AML	06 13 31.3	
	comp=E,288µm,0.2s						
LIA				AML	AML	06 13 31.4	
	comp=N,392µm,0.2s						
LPK	**Lapseki**	0.72	85	PG	Pg	06 13 20.0	-0.5
BAYC	**CANAKKALE_Bayr**	0.80	136	*i* P	Pg	06 13 21.0	-1.0
BAYC				*i* S	Sg	06 13 32.7	+0.2
KESN	**Edirne-Kesan**	0.83	52	*i* P	Pn	06 13 24.1	-0.1
KESN				*i* S	Sg	06 13 33.2	-0.4
RDO	**Rodhopi**	0.86	345	PG	Pg	06 13 22.8	-0.4
RDO	**Rodhopi**	0.86	345	P	Pg	06 13 22.8	-0.4
RDO				S	Sb	06 13 35.5	+0.8
	comp=N,102nm,0.3s						
RDO	**Rodhopi**	0.86	345	P	Pg	06 13 22.4	-0.8
THAS	**Thassos island**	0.89	289	P	Pg	06 13 23.4	-0.4
THAS	**Thassos island**	0.89	289	P	Pg	06 13 23.0	-0.8
SIGR	**SIGRI**	1.10	179	PN	Pb	06 13 26.9	-0.5
SIGR	**SIGRI**	1.10	179	P	Pb	06 13 26.8	-0.6
SIGR				S	Sg	06 13 42.6	+0.5
	comp=N,325nm,0.6s						
SIGR	**SIGRI**	1.10	179	P	Pb	06 13 27.0	-0.5
AYVA	**Ayvalik**	1.21	146	*i* P	Pn	06 13 28.9	-0.2
AYVA				*i* S	Sb	06 13 44.0	-0.6
KAVA	**Kavala**	1.21	305	P	Pn	06 13 29.1	0.0
KAVA				S	Sb	06 13 44.7	0.0
	comp=N,30nm,0.3s						
KDZ	**Kurdzhali**	1.37	347	PN	Pn	06 13 31.0	-0.3
MRMT	**Marmara Adasi**	1.38	77	PN	Pn	06 13 30.9	-0.6
OUR	**Ouranopolis**	1.41	271	P	Pn	06 13 31.2	-0.6
GONE	**Gonen-Balikesi**	1.45	100	PN	Pn	06 13 33.3	+0.9
TKR	**Tekirdag**	1.47	62	PN	Pb	06 13 33.8	+0.2
DKL	**Dikili**	1.50	146	PN	Pb	06 13 34.3	+0.2
EDC	**Edincik**	1.56	88	PN	Pn	06 13 34.9	+1.0
EDRB	**Edirne**	1.68	24	PN	Pn	06 13 36.2	+0.6
BALB	**Balikesir**	1.72	112	PN	Pn	06 13 36.5	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CHOS	Chios island	1.93	175	PN	Pn	06 13 39.4	+0.3
CHOS	Chios island	1.93	175	P	Pn	06 13 39.3	+0.2
KCTX	Karacabey (Bur	1.94	91	PN	Pn	06 13 39.6	+0.5
URLA	Izmir	2.04	163	PN	Pn	06 13 41.5	+0.9

DDA ***30*** *06:28:06.4, 40°.30N×25°.79E, h25^{km}, ML4.1*
IDC ***30*** *06:28:06.0±2.0, 40°.29N×25°.82E, h0^{km}, mb3.8/2, mb1 3.8/7, mb1mx3.4/40, mbtmp3.7/7, ML3.7/5, MS2.9/3, Ms1 2.9/3, ms1mx2.3/49, Error ellipse: s-maj=34.7km s-min=15.8km az=65.0*
NEIC ***30*** *06:28:06.6±0.0, 40°.30N×25°.76E, h8^{km}, ML4.0(ISK), After ISK.*
ATH ***30*** *06:28:06.8, 40°.31N×25°.76E, h28^{km}±1^{km}, ML3.7/6, Error ellipse: s-maj=2.1km s-min=1.0km az=308.0*
ISK ***30*** *06:28:06.7, 40°.30N×25°.78E, h10^{km}, ML4.0/19*
ISCJB ***30*** *06:28:07.0±0.3, 40°.31N±0°.01×25°.78E±0°.02, h13^{km}±2^{km}, mb3.6/2, MS2.6/2, Error ellipse: s-maj=2.4km s-min=1.9km az=157.9*
THE ***30*** *06:28:07.8, 40°.31N×25°.76E, h14^{km}, ML3.5/10, Error ellipse: s-maj=0.9km s-min=0.5km az=334.0*
SOF ***30*** *06:28:09.8, 40°.36N×25°.55E, h6^{km}*
BEO ***30*** *06:28:11.8±0.9, 40°.31N×25°.83E, h5^{km}, ML3.6/3*
ISC 30 06:28:07.1±0.8**, 40°.31N**±0°.01×**25°.78E**±0°.02**, h14**^{km}±6^{km}**, n180, σ1^{s}07**/203**, 27C-18D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.15	143	PG	Pg	06 28 10.9	0.0
GADA				SG	Sg	06 28 12.9	-0.5
SMTH	Samothraki Isl	0.25	310	P	Pb	06 28 13.2	-0.2
SMTH				S	Sb	06 28 17.1	-0.5
	14µm,0.2s						
SMTH	Samothraki Isl	0.25	310	P	Pb	06 28 13.1	-0.3
SMTH				S	Sb	06 28 17.2	-0.5
SMTH				AML	AML	06 28 17.4	
	comp=E,22564µm,0.2s						
SMTH				AML	AML	06 28 17.7	
	comp=N,31653µm,0.2s						
ENEZ	Enez	0.51	34	PG	Pb	06 28 17.7	-0.1
ENEZ				SG	Sb	06 28 25.3	+0.2
BOZC	Bozcaada	0.51	156	PG	Pg	06 28 17.3	+0.1
BOZC				SG	Sg	06 28 24.1	0.0
BOZC	Bozcaada	0.51	156	⇑iP	Pg	06 28 17.3	+0.1
BOZC				iS	Sg	06 28 24.1	0.0
LIA	Limnos Island	0.62	228	P	Pg	06 28 19.3	+0.1
LIA				S	Sb	06 28 28.4	+0.3
	comp=N,6µm,0.5s						
LIA	Limnos Island	0.62	228	P	Pg	06 28 19.3	+0.1
LIA				S	Sb	06 28 28.5	+0.3
LIA				AML	AML	06 28 31.9	
	comp=E,17026µm,0.4s						
LIA				AML	AML	06 28 34.0	
	comp=N,10720µm,0.4s						
ALN	Alexandroupoli	0.62	19	PG	Pb	06 28 19.6	-0.1
ALN				SG	Sb	06 28 28.2	0.0
ALN	Alexandroupoli	0.62	19	P	Pb	06 28 19.5	-0.1
ALN				S	Sb	06 28 28.3	0.0
	comp=N,4µm,0.6s						
ALN	Alexandroupoli	0.62	19	P	Pg	06 28 19.4	+0.2
ALN				S	Sb	06 28 28.2	0.0
ALN				AML	AML	06 28 28.7	
	comp=N,12040µm,0.5s						
ALN				AML	AML	06 28 29.1	
	comp=E,5224µm,0.5s						
EZN	Ezine	0.64	139	PG	Pg	06 28 19.2	-0.4
EZN	Ezine	0.64	139	⇑iP	Pg	06 28 19.4	-0.2
LPK	Lapseki	0.75	85	PG	Pg	06 28 21.6	-0.1
BAYC	CANAKKALE_Bayr	0.82	134	⇓iP	Pg	06 28 22.9	-0.1
BAYC				iS	Sg	06 28 33.7	0.0
BAYC				IAML_P			
	comp=Z,41µm,0.1s						
RDO	Rodhopi	0.85	348	PG	Pg	06 28 23.9	+0.2
RDO	Rodhopi	0.85	348	P	Pg	06 28 23.8	+0.1
RDO				S	Sg	06 28 35.9	+1.0
	comp=Z,3µm,0.5s						
RDO	Rodhopi	0.85	348	P	Pg	06 28 23.8	+0.1
RDO				S	Sg	06 28 35.1	+0.3
RDO				AML	AML	06 28 38.6	
	comp=E,4309µm,0.5s						
RDO				AML	AML	06 28 38.7	
	comp=N,5049µm,0.5s						
KESN	Edirne-Kesan	0.86	53	⇑iP	Pg	06 28 23.4	-0.4
KESN				iS	Sn	06 28 37.0	-0.6
KESN				IAML_P			
	comp=Z,6µm,0.2s						
THAS	Thassos island	0.86	290	P	Pb	06 28 23.8	0.0
THAS	Thassos island	0.86	290	P	Pb	06 28 23.8	0.0
EFSA	Agios Efstrati	0.98	219	P	Pn	06 28 27.1	+0.6
SIGR	SIGRI	1.10	177	PN	Pb	06 28 27.9	0.0
SIGR	SIGRI	1.10	177	P	Pb	06 28 27.4	-0.5
SIGR				S	Sg	06 28 42.8	+0.2
	comp=Z,18µm,0.4s						
SIGR	SIGRI	1.10	177	P	Pb	06 28 27.3	-0.6
SIGR				S	Sg	06 28 42.6	-0.1
SIGR				AML	AML	06 28 44.0	
	comp=N,49284µm,0.4s						
SIGR				AML	AML	06 28 46.1	
	comp=E,24173µm,0.4s						
PRK	Paraskevi	1.13	160	P	Pg	06 28 29.1	+0.2
PRK				S	Sg	06 28 44.7	+1.1
	comp=E,11µm,0.5s						
PRK	Paraskevi	1.13	160	P	Pg	06 28 29.4	+0.5
PRK				S	Sg	06 28 44.5	+1.0
PRK				AML	AML	06 28 46.1	
	comp=E,22890µm,0.8s						
PRK				AML	AML	06 28 46.5	
	comp=N,23103µm,0.3s						
RKY	Sarkoy-Tekirda	1.13	70	PN	Pb	06 28 28.0	-0.4
SART	Tekirdag	1.13	70	⇓iP	Pb	06 28 28.2	-0.3
SART				iS	Sn	06 28 44.4	+0.4
SART				IAML_P			
	comp=Z,14µm,0.1s						
KAVA	Kavala	1.18	306	P	Pb	06 28 29.3	0.0
KAVA				S	Sg	06 28 45.5	+0.2
	comp=Z,1µm,0.4s						
KAVA	Kavala	1.18	306	P	Pb	06 28 29.5	+0.2
AYVA	Ayvalik	1.22	145	⇓iP	Pg	06 28 30.8	+0.1
AYVA				iS	Sb	06 28 45.5	-0.1
AYVA				IAML_P			
	comp=Z,5µm,0.3s						
KVLA	Kavala	1.23	301	P	Pb	06 28 30.4	+0.3
KDZ	Kurdzhali	1.36	348	PN	Pb	06 28 32.1	-0.3
KDZ	Kurdzhali	1.36	348	iP	Pg	06 28 33.1	-0.3
OUR	Ouranopolis	1.38	272	PN	Pn	06 28 31.6	-0.2
OUR	Ouranopolis	1.38	272	P	Pn	06 28 31.6	-0.2
OUR				S	Sn	06 28 49.7	-0.1
	comp=Z,2µm,0.4s						
OUR	Ouranopolis	1.38	272	P	Pn	06 28 31.6	-0.2
MRMT	Marmara Adasi	1.42	78	PN	Pn	06 28 32.1	-0.4
GONE	Gonen-Balikesi	1.48	100	PN	Pb	06 28 34.1	-0.3
TKR	Tekirdag	1.50	63	PN	Pn	06 28 33.6	+0.1
DKL	Dikili	1.51	145	PN	Pb	06 28 34.3	-0.6
BALY	Balya	1.52	111	⇓iP	Pb	06 28 35.0	-0.1
BALY				iS	Sb	06 28 55.3	+1.0
CAND	Candarli	1.57	149	PN	Pb	06 28 35.4	-0.5
EDC	Edincik	1.59	88	PN	Pb	06 28 35.7	-0.6
RZN	Rozhen	1.59	330	iP	Pg	06 28 38.2	+0.4
PAIG	Paliouri	1.66	257	P	Pn	06 28 35.4	-0.3
PAIG				S	Sn	06 28 56.2	-0.6
	comp=Z,355nm,0.6s						
PAIG	Paliouri	1.66	257	P	Pn	06 28 35.2	-0.5
ZEDA	zmir-Bergama	1.68	143	⇓iP	Pb	06 28 36.9	-0.8
ZEDA				iS	Sg	06 29 00.8	-0.2
ZEDA				IAML_P			
	comp=Z,15µm,0.3s						
CRLT	Corlu	1.70	61	PN	Pb	06 28 37.7	-0.4
EDRB	Edirne	1.70	25	PN	Pn	06 28 36.9	+0.6
SKY	Skiros Island	1.72	214	P	Pn	06 28 36.1	-0.5
SKY	Skiros Island	1.72	214	P	Pn	06 28 36.1	-0.5
BALB	Balikesir	1.75	112	PN	Pn	06 28 37.7	+0.8
BALB	Balikesir	1.75	112	ePn	Pn	06 28 37.8	+0.8
DIM	Dimitrovgrad	1.75	354	iP	Pb	06 28 39.7	+0.8
FOCM	Foa	1.76	155	PN	Pn	06 28 37.5	+0.4
STEP	BALIKESIR_Sava	1.76	121	⇓iP	Pb	06 28 38.8	-0.3
STEP				iS	Sb	06 29 00.7	-0.4
STEP				IAML_P			
	comp=Z,14µm,0.2s						
KIRK	Kırklareli	1.77	34	iP	Pn	06 28 38.3	+0.9
KIRK				iS	Sb	06 29 00.8	-0.7
PLG	Polygyros	1.79	273	P	Pn	06 28 37.5	0.0
PLG	Polygyros	1.79	273	P	Pn	06 28 37.6	+0.1
NVR	Nevrokopi	1.79	306	P	Pn	06 28 38.5	+0.9
KRBN	Karaburun	1.82	161	PN	Pn	06 28 38.5	+0.6
SRS	Serrai	1.85	297	P	Pn	06 28 38.8	+0.4
PHSR	Pinarhisar	1.86	44	⇑iP	Pn	06 28 38.4	-0.2
PHSR	Pinarhisar	1.86	44	S	Sb	06 29 04.8	+0.7
CHOS	Chios island	1.93	174	P	Pn	06 28 39.8	+0.2
CHOS				S	Sn	06 29 04.0	+0.3
	comp=Z,2µm,0.4s						
CHOS	Chios island	1.93	174	P	Pn	06 28 39.8	+0.2
PLD	Plovdiv	1.97	336	ePn	Pg	06 28 44.9	0.0
PLD				eSn	Sg	06 29 11.1	+0.7
PLD	Plovdiv	1.97	336	iP	Pg	06 28 44.3	-0.6
MMB	Musomiste	2.01	310	iP	Pn	06 28 41.6	+0.9
URLA	Izmir	2.05	162	⇓iP	Pn	06 28 41.8	+0.7
URLA				iS	Sn	06 29 06.2	-0.3
URLA				IAML_P			
	comp=Z,7µm,0.2s						
HORT	Hortiatis	2.07	279	P	Pn	06 28 41.7	+0.3
SKIA	Skiathos	2.12	238	P	Pn	06 28 41.4	-0.7
AKHS	Akhisar	2.12	132	iP	Pn	06 28 43.1	+0.9
AKHS				IAML_P			
	comp=Z,13µm,0.3s						
ELBA	Catalca	2.18	67	iP	Pn	06 28 42.6	-0.3
ELBA				IAML_P			
	comp=Z,4µm,0.1s						
DURS	Dursunbey	2.19	108	⇓iP	Pn	06 28 44.7	+1.5
DURS				iS	Sg	06 29 16.5	-0.9
DURS				IAML_P			
	comp=Z,4µm,0.2s						
XOR	Xorichti	2.21	245	P	Pn	06 28 42.3	-1.0
CTYL	Yalikoy Yolu	2.23	58	⇓iP	Pn	06 28 43.0	-0.6
CTYL	Yalikoy Yolu	2.23	58	S	Sn	06 29 10.7	-0.2
JMB	Yambol	2.24	15	ePn	Pg	06 28 50.3	+0.3
JMB				eSn	Sg	06 29 17.0	-2.0
JMB	Yambol	2.24	15	iP	Pg	06 28 49.4	-0.6
MRKA	Markates	2.33	227	P	Pn	06 28 44.6	-0.5
MRKA	Markates	2.33	227	P	Pn	06 28 44.6	-0.5
KNT	Kendrikon	2.35	292	P	Pn	06 28 46.0	+0.7
KARY	Karystos	2.50	205	P	Pn	06 28 46.9	-0.5
KARY	Karystos	2.50	205	P	Pn	06 28 47.1	-0.3
KKB	Krupnik	2.56	308	iP	Pn	06 28 50.0	+1.8
ULDT	Uludag	2.57	93	iP	Pn	06 28 49.5	+1.0
ULDT				iS	Sg	06 29 28.0	-1.9
DEMI	Demirci	2.59	118	iP	Pn	06 28 50.2	+1.5
DEMI				iS	Sg	06 29 29.1	-1.5
DEMI				IAML_P			
	comp=Z,2µm,0.3s						
ELND	Elena	2.62	2	⇓iP	Pn	06 28 50.3	+1.4
VAY	Valandovo	2.64	294	ePn	Pb	06 28 54.9	+0.8
VAY				eSn	Sg	06 29 29.2	-2.6
VAY	Valandovo	2.64	294	iPn	Pg	06 28 57.0	-0.6
KLYT	Kilyos	2.65	68	⇓iP	Pn	06 28 47.8	-1.5
ATAL	Atalanti	2.68	234	P	Pn	06 28 49.5	-0.3
SMG	Samos	2.73	162	P	Pn	06 28 50.8	+0.4
SMG	Samos	2.73	162	P	Pn	06 28 50.9	+0.4
YLV	Yalova	2.75	84	⇓iP	Pn	06 28 47.2	-3.7
YLV	Yalova	2.75	84	S	Sn	06 29 21.4	-2.6
MANT	Manisa	2.82	129	ePn	Pn	06 28 53.0	+1.1
MANT	Manisa	2.82	129	iP	Pn	06 28 53.2	+1.3
MANT				IAML_P			
	comp=Z,3µm,0.1s						
GCAM	G?zelcaml?	2.84	156	iP	Pn	06 28 53.6	+1.6
GCAM				IAML_P			
	comp=Z,657nm,0.1s						
USAK	Uak-Merkez	2.97	121	iP	Pn	06 28 55.1	+1.3
USAK				IAML_P			
	comp=Z,285nm,0.1s						
VTS	Vitosha	3.00	321	ePn	Pb	06 28 58.0	-2.3
VTS	Vitosha	3.00	321	ePn	Pb	06 28 59.9	-0.4
VTS				eSn	Sb	06 29 36.1	-0.7
VTS	Vitosha	3.00	321	⇓iP	Pn	06 28 56.2	+1.9
VTS	Vitosha	3.00	321	iP	Pb	06 29 00.2	-0.1
STIP	Stip	3.05	298	iPn	Pn	06 28 54.4	-0.5
SILT	Sile	3.05	73	⇑iP	Pn	06 28 52.5	-2.4
GDZ	Gediz	3.10	112	iP	Pn	06 28 57.0	+1.3
GDZ				IAML_P			
	comp=Z,2µm,0.1s						
AYDN	Tasoluk	3.11	148	iP	Pn	06 28 56.9	+1.1
AYDN				IAML_P			
	comp=Z,368nm,0.1s						
PLVB	Pleven	3.19	345	⇑iP	Pn	06 28 58.7	+1.9
APE	Apeiranthos	3.24	184	⇑iP	Pn	06 28 49.7	-7.9
RAZG	Razgrad	3.30	9	⇑iP	Pn	06 28 59.5	+1.2
ZIMR		3.36	355	⇑iP	Pn	06 29 00.9	+1.8
KAND	Kocaeli-Kandir	3.44	75	iP	Pn	06 29 00.5	+0.2
KAND				IAML_P			
	comp=Z,2µm,0.1s						
GEYV	SAKARYA_Geyve	3.45	86	iP	Pn	06 29 01.7	+1.2
GEYV				IAML_P			
	comp=Z,1µm,0.2s						
KHAL	Karahalli	3.47	123	iP	Pn	06 29 02.3	+1.6
KHAL				IAML_P			
	comp=Z,3µm,0.4s						
BORA	Eskisehir	3.61	95	iP	Pn	06 29 04.2	+1.5
BORA				IAML_P			
	comp=Z,5µm,0.1s						
SKO	Skopje	3.67	298	iPn	Pb	06 29 09.7	-2.1
TAVA	DENIZLI_Tavas	3.75	138	iP	Pn	06 29 06.4	+1.8
TAVA				IAML_P			
	comp=Z,2µm,0.3s						
ZAPS	Zavoj	3.78	323	ePn	Pb	06 29 11.5	-2.1
DAT	Datca	3.84	158	iP	Pn	06 29 06.6	+0.6
DAT				IAML_P			
	comp=Z,320nm,0.3s						
BARS	Barje	3.89	311	ePn	Pb	06 29 12.7	-2.7
SGRR	Singureni	3.91	2	⇑iP	Pn	06 29 08.7	+2.0
MDUB	Mudurnu	4.14	86	ePn	Pn	06 29 11.2	+1.3
HUMR	Humele	4.26	352	⇑iP	Pn	06 29 12.7	+1.2
MFTR	Murfatlar	4.33	26	⇓iP	Pn	06 29 13.1	+0.6
ITM	Ithomi	4.34	225	ePn	Pn	06 29 14.3	+1.6
ZAGS	Zajecar	4.38	324	ePn	Pn	06 29 18.1	+4.9
ISP	Isparta	4.45	122	ePn	Pn	06 29 13.6	-0.6
BOVS	Bovan	4.50	319	ePn	Pb	06 29 20.5	-5.3
SELS	Selova	4.54	311	ePn	Pn	06 29 20.9	+5.5
TIRR	Tirgusor	4.58	24	ePn	Pn	06 29 16.4	+0.5
TIRR	Tirgusor	4.58	24	⇑iP	Pn	06 29 16.8	+0.9
TLB	Topalu	4.59	21	⇑iP	Pn	06 29 17.3	+1.3
HARR	Harsova	4.66	19	⇑iP	Pn	06 29 18.3	+1.4
ISR	Istrita	4.84	6	⇑iP	Pn	06 29 21.0	+1.5
IDI	Anoyia	5.06	188	Pn	Pn	06 29 22.9	+0.3
	comp=Z,0.7nm,0.3s,baz=6.5,slow=12,SNR=3.9						
KUBS	Kucevo	5.10	325	ePn	Pn	06 29 29.3	+6.2
ARR	Arges	5.12	351	⇑iP	Pn	06 29 24.5	+1.1
VOIR		5.15	354	⇓iP	Pn	06 29 25.1	+1.3
CFR	Carcaliu	5.16	19	⇑iP	Pn	06 29 24.7	+0.8
MLR	Muntele Rosu	5.18	1	Pn	Pn	06 29 26.1	+1.9
	comp=Z,1.5nm,0.3s,baz=168,slow=19,SNR=13						
MLR				LR	LR	06 32 10.3	
	comp=Z,170nm,19.2s,baz=112,slow=47						
MLR	Muntele Rosu	5.18	1	ePn	Pn	06 29 26.6	+2.4
MLR	Muntele Rosu	5.18	1	⇑iP	Pn	06 29 27.0	+2.7
GRUS	Gruza	5.19	315	ePn	Pn	06 29 30.2	+5.9
SJES	Sjenica	5.25	306	ePn	Pn	06 29 31.0	+5.8
BISRR	Bisoca	5.28	7	⇑iP	Pn	06 29 26.7	+1.1
IVAS	Ivanjica	5.32	310	ePn	Pn	06 29 31.7	+5.6
LOT	Lotru	5.34	345	⇑iP	Pn	06 29 23.0	-3.5
PDG	Podgorica	5.35	295	⇑iP	Pn	06 29 25.3	-1.1
ANTO	Ankara	5.40	92	ePn	Pn	06 29 28.2	+1.0
GZR	Gura Zlata	5.54	338	⇑iP	Pn	06 29 30.2	+1.1
PLOR	Plostina	5.57	6	⇓iP	Pn	06 29 31.0	+1.4
TRUS	Trudelj	5.58	316	ePn	Pn	06 29 35.1	+5.4
VRI	Vrincioaia	5.60	7	⇓iP	Pn	06 29 29.7	-0.2
DOPR	Dopca	5.66	357	⇑iP	Pn	06 29 32.6	+1.8
DIVS	Divibare	5.73	313	ePn	Pn	06 29 37.1	+5.4
BBLS	Lazići	5.92	309	ePn	Pn	06 29 39.4	+4.9
BR101	Keskin Array S	6.06	93	ePn	Pn	06 29 37.5	+1.1
BR131	Keskin Array S	6.06	93	ePn	Pn	06 29 37.6	+1.1
BRTR	Keskin Array B	6.06	93	Pn	Pn	06 29 37.5	+1.1
	comp=Z,2.1nm,0.3s,baz=271,slow=12,SNR=68						
BZS	Buzias	6.12	331	⇑iP	Pn	06 29 37.6	+0.6
TESR	Tescani	6.23	6	⇑iP	Pn	06 29 40.2	+1.6
BIZ	Bicaz	6.63	2	⇓iP	Pn	06 29 45.9	+1.8
DRGR		6.85	342	⇑iP	Pn	06 29 48.9	+1.7
BURAR	Bucovina Array	7.31	357	⇑iP	Pn	06 29 54.6	+1.1
BUR08	Bucovina Ar. S	7.34	357	ePn	Pn	06 29 57.4	+3.5
VYHS	Vyhne	9.57	331	ePN	Pn	06 30 29.6	+5.2
MMAI	Mount Meron Ar	10.61	130	Pn	Pn	06 30 39.0	+0.2
	comp=Z,5.5nm,0.3s,baz=316,slow=13,SNR=4.3						
AKASG	Malin Array Be	10.67	12	Pn	Pn	06 30 38.7	-0.7
	comp=Z,0.6nm,0.3s,baz=198,slow=14,SNR=2.5						
AKBB	Malin Array Si	10.67	12	ePn	Pn	06 30 38.7	-0.7
HFS	Hagfors	21.23	343	LR	LR	06 41 19.0	
	comp=Z,44nm,20.8s,baz=153,slow=37						
NOA	NORSAR Array B	22.61	341	LR	LR	06 43 30.2	
	comp=Z,14nm,19.9s,baz=140,slow=41						
MK31	Makanchi Array	40.70	61	eS	S	06 41 56.1	-0.6
MK32	Makanchi Array	40.70	61	eP	P	06 35 48.3	+1.2
MKAR	Makanchi Array	40.70	61	P	P	06 35 48.3	+1.2
	comp=Z,0.5nm,0.6s,baz=287,slow=6.7,SNR=5.8						
ZAA1	Zalesovo Array	41.21	50	eP	P	06 35 51.8	+0.7
ZALV	Zalesovo Beam	41.21	50	P	P	06 35 51.8	+0.7
	comp=Z,0.9nm,0.3s,baz=273,slow=8.5,SNR=4.6						

DDA ***30*** *06:28:52.6, 40°.27N×25°.82E, h24^{km}±1^{km}, ML4.1*
ISCJB ***30*** *06:28:53.2±0.5, 40°.30N±0°.02×25°.84E±0°.03, h4^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=3.3km az=163.2*
THE ***30*** *06:28:53.5, 40°.32N×25°.76E, h17^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=2.6km s-min=0.9km az=289.0*
ATH ***30*** *06:28:54.0, 40°.33N×25°.79E, h16^{km}±7^{km}, ML3.4/3, Error ellipse: s-maj=7.1km s-min=1.2km az=299.0*
SOF ***30*** *06:28:59.7, 40°.65N×25°.69E, h2^{km}*
ISC 30 06:28:53.3±1.0**, 40°.31N**±0°.02×**25°.83E**±0°.03**, h11**^{km}±9^{km}**, n32, σ0^{s}53**/45**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMTH	Samothraki Isl	0.28	305	P	Pg	06 28 59.0	+0.2
SMTH				S	Sg	06 29 02.9	+0.3
	18µm,0.2s						
SMTH	Samothraki Isl	0.28	305	P	Pg	06 28 59.1	+0.2
SMTH				S	Sg	06 29 02.9	+0.3
SMTH				AML	AML	06 29 03.1	
	comp=E,27752µm,0.2s						
SMTH				AML	AML	06 29 03.4	
	comp=N,43099µm,0.2s						
BOZC	Bozcaada	0.50	160	iP	Pb	06 29 03.6	-0.6
BOZC				iS	Sg	06 29 09.9	+0.3
BOZC				IAML_P			
	comp=Z,58µm,0.1s						
ALN	Alexandroupoli	0.61	16	P	Pb	06 29 05.3	-0.7
ALN				S	Sb	06 29 13.8	-0.7
	comp=Z,2µm,0.3s						
ALN	Alexandroupoli	0.61	16	P	Pb	06 29 05.3	-0.7
ALN				S	Sb	06 29 14.1	-0.5
ALN				AML	AML	06 29 14.4	
	comp=E,4480µm,0.3s						
ALN				AML	AML	06 29 14.5	
	comp=N,6617µm,0.3s						
LIA	Limnos Island	0.64	230	P	Pg	06 29 05.6	-0.1
LIA				S	Sg	06 29 13.9	-0.3
	comp=N,4µm,0.5s						
LIA	Limnos Island	0.64	230	P	Pb	06 29 06.0	-0.5
LIA				S	Sb	06 29 15.2	-0.4
LIA				AML	AML	06 29 17.7	
	comp=E,9862µm,0.4s						
LIA				AML	AML	06 29 18.2	
	comp=N,7820µm,0.7s						
BAYC	CANAKKALE_Bayr	0.80	136	iP	Pg	06 29 07.4	-1.2
BAYC				iS	Sb	06 29 19.9	-0.1
KESN	Edirne-Kesan	0.83	52	iP	Pb	06 29 10.0	+0.1
KESN				iS	Sb	06 29 20.9	-0.3
KESN				IAML_P			
	comp=Z,13µm,0.2s						
RDO	Rodhopi	0.86	345	P	Pb	06 29 09.8	-0.5
RDO				S	Sb	06 29 21.1	-0.7
	comp=Z,3µm,0.4s						
RDO	Rodhopi	0.86	345	P	Pb	06 29 09.9	-0.3
THAS	Thassos island	0.89	290	P	Pb	06 29 10.6	-0.2
SART	Tekirdag	1.10	70	iP	Pb	06 29 14.1	-0.3
SART				iS	Sn	06 29 30.9	+0.9
SART				IAML_P			
	comp=Z,22µm,0.2s						
SIGR	SIGRI	1.10	179	P	Pb	06 29 14.1	-0.2
SIGR				S	Sb	06 29 28.2	-0.5
	comp=Z,12µm,0.4s						
SIGR	SIGRI	1.10	179	P	Pn	06 29 15.1	+0.5
PRK	Paraskevi	1.12	162	P	Pn	06 29 15.9	+1.0
AYVA	Ayvalik	1.20	146	iP	Pg	06 29 16.9	+0.5
AYVA				iS	Sn	06 29 32.3	-0.2
AYVA				IAML_P			
	comp=Z,6µm,0.2s						
KDZ	Kurdzhali	1.37	347	iP	Pg	06 29 19.4	-0.2
KDZ	Kurdzhali	1.37	347	iP	Pg	06 29 19.4	-0.2
RZN	Rozhen	1.61	329	P	Pb	06 29 23.3	+0.1
RZN	Rozhen	1.61	329	P	Pb	06 29 23.3	+0.1
DIM	Dimitrovgrad	1.75	353	P	Pg	06 29 26.3	-0.5
DIM	Dimitrovgrad	1.75	353	P	Pg	06 29 26.3	-0.5
PLD	Plovdiv	1.98	335	P	Pg	06 29 31.0	-0.2
PLD	Plovdiv	1.98	335	P	Pg	06 29 31.0	-0.2
MMB	Musomiste	2.04	309	P	Pg	06 29 31.8	-0.5
MMB	Musomiste	2.04	309	P	Pg	06 29 31.8	-0.5
USAK	Uak-Merkez	2.94	122	iP	Pn	06 29 40.4	+0.3
USAK				IAML_P			
	comp=Z,1µm,0.2s						
BORA	Eskisehir	3.58	95	iP	Pn	06 29 49.7	+0.9
SAHE	Sakarya_HENDEK	3.87	80	iP	Pn	06 29 53.1	+0.4
SAHE				IAML_P			
	comp=Z,400nm,0.5s						
CIFT	Cifteler, Eski	4.14	102	iP	Pn	06 29 57.8	+1.2
BRDR	BURDUR-Merkez	4.21	127	iP	Pn	06 29 57.6	+0.1

ISK ***30*** *06:38:05.8, 40°.31N×25°.78E, h10^{km}, ML2.7/13*
THE ***30*** *06:38:06.8, 40°.31N×25°.77E, h12^{km}±1^{km}, ML2.3/8, Error ellipse: s-maj=1.3km s-min=0.5km az=311.0*
ATH ***30*** *06:38:06.5, 40°.32N×25°.78E, h18^{km}±4^{km}, ML2.5/6, Error ellipse: s-maj=4.2km s-min=0.9km az=294.0*
ISCJB ***30*** *06:38:06.4±0.4, 40°.31N±0°.02×25°.79E±0°.03, h5^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=2.6km az=148.2*
DDA ***30*** *06:38:07.3, 40°.27N×25°.93E, h7^{km}±5^{km}, ML3.2*
SOF ***30*** *06:38:08.3, 40°.40N×25°.44E, h2^{km}*
ISC 30 06:38:06.7±0.9**, 40°.31N**±0°.02×**25°.79E**±0°.02**, h11**^{km}±7^{km}**, n48, σ0^{s}65**/72**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.14	145	PG	Pg	06 38 09.8	-0.2
GADA				SG	Sg	06 38 12.1	-0.2
SMTH	Samothraki Isl	0.26	309	P	Pg	06 38 12.3	+0.2
SMTH				S	Sg	06 38 16.0	+0.4
	1µm,0.1s						
SMTH	Samothraki Isl	0.26	309	P	Pg	06 38 12.3	+0.2
SMTH				S	Sg	06 38 16.1	+0.5
SMTH				AML	AML	06 38 16.4	
	comp=E,2533µm,0.2s						
SMTH				AML	AML	06 38 16.6	
	comp=N,3013µm,0.1s						
BOZC	Bozcaada	0.51	157	PG	Pg	06 38 16.2	-0.4
BOZC	Bozcaada	0.51	157	iP	Pg	06 38 16.5	-0.1
BOZC				iS	Sg	06 38 23.1	-0.1
ENEZ	Enez	0.51	33	PG	Pg	06 38 16.4	-0.3
ALN	Alexandroupoli	0.62	18	PG	Pg	06 38 18.5	-0.3
ALN	Alexandroupoli	0.62	18	P	Pg	06 38 18.4	-0.3
ALN				S	Sg	06 38 27.1	+0.2
	comp=N,118nm,0.3s						
ALN	Alexandroupoli	0.62	18	P	Pg	06 38 18.5	-0.3
ALN				S	Sg	06 38 26.8	-0.1
ALN				AML	AML	06 38 27.4	
	comp=E,418µm,0.3s						
ALN				AML	AML	06 38 29.1	
	comp=N,324µm,0.3s						
LIA	Limnos Island	0.62	229	P	Pg	06 38 18.3	-0.5
LIA				S	Sg	06 38 27.4	+0.5
	comp=N,320nm,0.3s						
LIA	Limnos Island	0.62	229	P	Pg	06 38 18.6	-0.2
LIA				S	Sg	06 38 27.4	+0.5
LIA				AML	AML	06 38 30.6	
	comp=N,692µm,0.1s						
LIA				AML	AML	06 38 31.4	
	comp=E,862µm,0.5s						
EZN	Ezine	0.63	139	PG	Pg	06 38 18.1	-0.9
LPK	Lapseki	0.74	85	PG	Pg	06 38 20.6	-0.5
BAYC	CANAKKALE_Bayr	0.81	134	iP	Pg	06 38 21.9	-0.5
BAYC				iS	Sn	06 38 35.9	-0.3
KESN	Edirne-Kesan	0.85	52	iP	Pb	06 38 23.9	+0.1
KESN				iS	Sb	06 38 35.5	+0.1
RDO	Rodhopi	0.86	347	PG	Pg	06 38 22.9	-0.4
RDO	Rodhopi	0.86	347	P	Pg	06 38 22.9	-0.4
RDO				S	Sb	06 38 34.8	-0.5
	comp=E,338nm,0.4s						
RDO	Rodhopi	0.86	347	P	Pg	06 38 23.0	-0.3
RDO				S	Sg	06 38 34.5	0.0

RDO				AML	AML	06 38 37.6	
	comp=N,675µm,0.4s						
RDO				AML	AML	06 38 37.6	
	comp=E,623µm,0.3s						
THAS	Thassos island	0.87	290	P	Pg	06 38 22.9	-0.6
THAS				S	Sb	06 38 35.4	-0.1
	comp=E,182nm,0.3s						
THAS	Thassos island	0.87	290	P	Pg	06 38 23.0	-0.6
THAS				S	Sb	06 38 35.4	-0.1
SIGR	SIGRI	1.10	177	PN	Pg	06 38 27.3	-0.5
SIGR	SIGRI	1.10	177	P	Pg	06 38 27.0	-0.8
SIGR				S	Sb	06 38 42.4	+0.4
	comp=E,742nm,0.4s						
SIGR	SIGRI	1.10	177	P	Pg	06 38 26.8	-1.0
SIGR				S	Sg	06 38 42.3	+0.2
SIGR				AML	AML	06 38 42.9	
	comp=E,849µm,0.3s						
SIGR				AML	AML	06 38 42.9	
	comp=N,2111µm,0.5s						
PRK	Paraskevi	1.12	161	P	Pb	06 38 28.3	+0.1
PRK				S	Sb	06 38 43.4	+0.6
	comp=N,752nm,0.5s						
PRK	Paraskevi	1.12	161	P	Pn	06 38 28.7	+0.3
PRK				S	Sb	06 38 43.4	+0.6
PRK				AML	AML	06 38 45.0	
	comp=E,775µm,0.7s						
PRK				AML	AML	06 38 45.5	
	comp=N,1209µm,0.4s						
RKY	Sarkoy-Tekirda	1.12	70	PN	Pb	06 38 27.3	-0.9
SART	Tekirdag	1.12	70	*i* P	Pb	06 38 27.5	-0.8
SART				*i* S	Sb	06 38 44.0	+1.0
KAVA	Kavala	1.19	306	P	Pb	06 38 28.7	-0.7
KAVA				S	Sb	06 38 44.5	-0.3
	comp=N,85nm,0.2s						
KAVA	Kavala	1.19	306	P	Pb	06 38 28.8	-0.5
KAVA				S	Sg	06 38 44.8	-0.4
AYVA	Ayvalik	1.22	145	*i* P	Pn	06 38 29.0	-0.6
AYVA				*i* S	Sn	06 38 46.7	+0.6
KDZ	Kurdzhali	1.37	348	PN	Pn	06 38 31.1	-0.8
KDZ	Kurdzhali	1.37	348	P	Pn	06 38 31.1	-0.8
OUR	Ouranopolis	1.38	272	PN	Pn	06 38 30.8	-1.2
OUR	Ouranopolis	1.38	272	P	Pn	06 38 30.8	-1.2
MRMT	Marmara Adasi	1.41	77	PN	Pn	06 38 31.1	-1.3
GONE	Gonen-Balikesi	1.48	100	PN	Pn	06 38 33.5	+0.2
DKL	Dikili	1.50	145	PN	Pn	06 38 33.9	+0.2
RZN	Rozhen	1.60	330	P	Pn	06 38 34.8	-0.4
ZEDA	zmir-Bergama	1.67	143	*i* P	Pn	06 38 36.3	+0.4
ZEDA				*i* S	Sg	06 39 00.9	+0.6
EDRB	Edirne	1.70	25	PN	Pn	06 38 37.0	+0.6
BALB	Balikesir	1.74	112	PN	Pn	06 38 36.8	-0.1
STEP	BALIKESIR_Sava	1.75	121	*i* P	Pn	06 38 37.9	+0.7
STEP				*i* S	Sn	06 39 00.6	+1.2
STEP				IAML_P			
	comp=Z,2µm,0.3s						
DIM	Dimitrovgrad	1.75	354	P	Pb	06 38 39.5	+0.6
SRS	Serrai	1.86	297	P	Pb	06 38 40.8	+0.1
CHOS	Chios island	1.93	174	P	Pn	06 38 38.9	-0.7
CHOS	Chios island	1.93	174	P	Pn	06 38 39.1	-0.5
VTS	Vitosha	3.00	321	P	Pn	06 38 54.9	+0.5
STIP	Stip	3.06	298	*e*Pn	Pn	06 38 57.7	+2.6

MAN 30 06:43:57.6, 7°.40N×124°.84E, h2^{km}, mb4.6, ML3.5, MS3.5, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.46	147⇑	*e*P	Pg	06 44 06.4	+0.1
KCP				*e*S	Sb	06 44 28.2	+12
BUKP	Musuan	0.53	25	*e*P	Pg	06 44 08.1	+0.4
BUKP				*e*S	Sb	06 44 16.6	-1.1
CTBH	Cotabato--PC H	0.62	254⇓	*i*P	Pb	06 44 10.7	-0.4
CTBH				*i* S	Sb	06 44 20.3	+0.1
DMPH	Davao City--Mi	0.73	115⇑	*e*P	Pg	06 44 04.6	-7.0
DMPH				*e*S	Sg	06 44 22.3	+1.2
SKMP	Bagumbayan, Su	0.92	199	*e*P	Pg	06 44 15.0	-0.3
SKMP				*e*S	Sn	06 44 31.6	+0.3
CGP	Cagayan de Oro	1.06	352⇑	*e*P	Pb	06 44 18.4	-0.2
CGP				*e*S	Sg	06 44 32.0	+0.3
PAGZ	Pagadian	1.51	287	*e*P	Pn	06 44 23.7	-2.0
PAGZ				*e*S	Sn	06 44 46.0	0.0
DDMP	Don Marcelino,	1.55	146	*e*P	Pn	06 44 26.1	-0.1
DDMP				*e*S	Sg	06 44 53.1	+5.7

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*SJA **30** 06:44:07.3±0.6, 29°.45S×72°.05W, h63^{km}±8^{km}, ML3.3, MW3.5*
*GUC **30** 06:44:10.3±0.5, 29°.79S×71°.65W, h43^{km}±4^{km}, ML2.9*
ISC 30 06:44:05.9±3.1**, 29°.60S**±0°.06×**72°.0W**±0°.1**, h8**^{km}±13^{km}**, n17, σ2^{s}.27**/24**, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.69	117⇓	*i*P	Pg	06 44 19.7	+0.6
LSCH				*i* S	Sg	06 44 27.4	-0.8
LSCH				IAML		06 44 31.2	
	comp=N,770nm,0.2s						
GO04	Tololo Observa	1.15	120⇓	*i*P	Pb	06 44 27.3	-0.9
GO04				*i* S	Sb	06 44 40.1	-3.4
LCO	Las Campanas	1.24	62	*e*P	Pn	06 44 30.2	+0.4
LCO				*e*S	Sn	06 44 47.9	+1.1
LCO	Las Campanas	1.24	62⇑	*i*P	Pn	06 44 30.1	+0.4
LCO				*i* S	Sn	06 44 46.9	+0.1
LCO				IAML		06 44 52.1	
	comp=N,842nm,0.4s						
CO02	Combarbal	1.80	153⇑	*i*P	Pn	06 44 37.1	-0.3
CO02				*i* S	Sn	06 44 57.4	-3.0
AROD	Rodeo	2.23	105	*e*P	Pb	06 44 46.1	-0.5
AROD				*e*S	Sb	06 45 14.9	+0.5
ACCO	Cerro Coronel	2.69	112	*e*P	Pb	06 44 53.5	-1.0
ACCO				*e*S	Sb	06 45 27.0	-0.7
AGUA	GUANDACOL	3.02	89	*e*P	Pb	06 44 58.7	-1.3
RTLS	Leoncito	3.17	134	*e*P	Pn	06 45 00.1	+3.7
RTLS				IAML		06 45 49.7	
	comp=Z,98nm,0.5s						
AMOG	MOGNA	3.28	115	*e*P	Pn	06 45 00.8	+3.2
VCA	Vinchina	3.39	76	*e*P	Pb	06 45 04.7	-1.6
ZON	Zonda	3.42	125	*e*P	Pn	06 45 03.0	+3.3
ZON				IAML		06 45 59.4	
	comp=Z,24nm,0.5s						
RTLL	Cerro Villicun	3.46	121	*e*P	Pn	06 45 03.1	+2.9
RTLL				IAML		06 46 05.1	
	comp=E,168nm,0.5s						
RTCV	Cerro Valdivia	3.70	128	*e*P	Pn	06 45 06.8	+3.4
CFA	Coronel Fontan	3.77	123	*e*P	Pn	06 45 07.4	+3.0
ACAN	Cantantal	4.88	124	*e*P	Pn	06 45 22.5	+2.8
CYA	Choya	5.51	79	*e*P	Pn	06 45 29.5	+1.2
CYA				IAML		06 46 49.1	
	comp=Z,9.0nm,0.6s						

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*ISK **30** 06:48:01.7, 40°.31N×25°.80E, h8^{km}, ML2.5/14*
*DDA **30** 06:48:01.6, 40°.26N×25°.84E, h6^{km}±2^{km}, ML3.2*
*ISCJB **30** 06:48:02.2±0.4, 40°.32N±0°.02×25°.81E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=3.5km s-min=2.8km az=147.9*
*THE **30** 06:48:02.7, 40°.31N×25°.79E, h12^{km}±1^{km}, ML2.1/8, Error ellipse: s-maj=1.7km s-min=0.7km az=310.0*
ISC 30 06:48:02.4±0.9**, 40°.31N**±0°.02×**25°.81E**±0°.02**, h11**^{km}±7^{km}**, n36, σ0^{s}.61**/52**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.14	151	PG	Pg	06 48 05.6	0.0
GADA				SG	Sg	06 48 07.7	-0.2
SMTH	Samothraki Isl	0.27	307	P	Pg	06 48 08.1	+0.2
SMTH				S	Sg	06 48 12.0	+0.4
	1µm,0.1s						
ENEZ	Enez	0.50	31	PG	Pg	06 48 12.3	+0.2
BOZC	Bozcaada	0.50	158	PG	Pg	06 48 11.9	-0.3
BOZC	Bozcaada	0.50	158	*i* P	Pg	06 48 03.8	-8.4
BOZC				*i* S	Sg	06 48 19.4	+0.5
ALN	Alexandroupoli	0.61	17	PG	Pg	06 48 13.8	-0.5
ALN	Alexandroupoli	0.61	17	P	Pg	06 48 14.2	-0.1
ALN				S	Sb	06 48 23.2	-0.5
	40nm,0.2s						
EZN	Ezine	0.62	141	PG	Pg	06 48 13.9	-0.6
LIA	Limnos Island	0.64	230	P	Pg	06 48 14.2	-0.5
LIA				S	Sb	06 48 24.1	-0.2
	200nm,0.3s						
LPK	Lapseki	0.73	85	PG	Pg	06 48 16.3	-0.1
LPK				SG	Sb	06 48 27.1	+0.1
KESN	Edirne-Kesan	0.84	52	*i* P	Pb	06 48 19.1	0.0
KESN				*i* S	Sg	06 48 28.2	-1.4
KESN				IAML_P			
	comp=Z,1µm,0.1s						
RDO	Rodhopi	0.86	346	PG	Pg	06 48 18.8	-0.2
RDO	Rodhopi	0.86	346	P	Pg	06 48 18.7	-0.2
RDO				S	Sb	06 48 30.7	-0.1
	comp=Z,112nm,0.2s						
THAS	Thassos island	0.88	290	P	Pg	06 48 19.0	-0.4
THAS				S	Sb	06 48 31.5	0.0
	comp=Z,100nm,0.2s						
GPNR	Gulpinar-Canak	0.89	164	PG	Pg	06 48 18.8	-0.7
SIGR	SIGRI	1.10	178	PN	Pg	06 48 22.8	-0.7
SIGR	SIGRI	1.10	178	P	Pg	06 48 22.2	-1.3
SIGR				S	Sb	06 48 38.2	+0.6
	comp=Z,405nm,0.4s						
RKY	Sarkoy-Tekirda	1.11	70	PN	Pg	06 48 23.0	-0.7
SART	Tekirdag	1.11	70	*i* P	Pg	06 48 23.3	-0.4
SART				*i* S	Sn	06 48 39.5	+0.3
SART				IAML_P			
	comp=Z,1µm,0.2s						
PRK	Paraskevi	1.12	161	P	Pn	06 48 24.4	+0.5
PRK				S	Sb	06 48 39.1	+0.8
	comp=Z,398nm,0.4s						
KAVA	Kavala	1.20	305	P	Pg	06 48 25.1	-0.4
KAVA				S	Sg	06 48 40.6	-0.5
	comp=Z,35nm,0.3s						
AYVA	Ayvalik	1.21	146	*i* P	Pn	06 48 25.6	+0.4
AYVA				*i* S	Sg	06 48 40.9	-0.4
AYVA				IAML_P			
	comp=Z,1µm,0.1s						
KDZ	Kurdzhali	1.37	348	PN	Pn	06 48 27.2	-0.2
MRMT	Marmara Adasi	1.39	77	PN	Pn	06 48 27.7	-0.1
OUR	Ouranopolis	1.40	272	P	Pn	06 48 26.6	-1.2
GONE	Gonen-Balikesi	1.46	100	PN	Pn	06 48 29.0	+0.4
ZEDA	zmir-Bergama	1.66	144	*i* P	Pn	06 48 32.0	+0.6
ZEDA				*i* S	Sb	06 48 54.3	+0.5
ZEDA				IAML_P			
	comp=Z,1µm,0.3s						
EDRB	Edirne	1.69	24	PN	Pn	06 48 32.4	+0.6
STEP	BALIKESIR_Sava	1.74	122	*i* P	Pn	06 48 33.2	+0.7
STEP				*i* S	Sn	06 48 55.8	+1.2
STEP				IAML_P			
	comp=Z,912nm,0.2s						
KIRK	Kırklareli	1.76	33	*i* P	Pn	06 48 33.4	+0.6
CHOS	Chios island	1.93	174	PN	Pn	06 48 35.8	+0.6
KCTX	Karacabey (Bur	1.95	91	PN	Pn	06 48 35.6	+0.3
URLA	Izmir	2.04	162	PN	Pn	06 48 36.7	+0.1
HORT	Hortiatis	2.09	279	PN	Pn	06 48 37.7	+0.4
DURS	Dursunbey	2.17	108	*i* P	Pn	06 48 38.2	-0.2
DURS				*i* S	Sn	06 49 04.3	-1.0
STIP	Stip	3.07	298	*i* Pn	Pn	06 48 52.2	+1.4

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*DDA **30** 06:51:31.4, 40°.30N×25°.88E, h6^{km}±2^{km}, ML3.1*
*ATH **30** 06:51:31.1, 40°.31N×25°.79E, h24^{km}±2^{km}, ML2.1/5, Error ellipse: s-maj=3.0km s-min=1.2km az=290.0*
*ISCJB **30** 06:51:31.6±0.4, 40°.30N±0°.02×25°.82E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=3.6km s-min=2.6km az=152.0*
*ISK **30** 06:51:31.4, 40°.30N×25°.84E, h6^{km}, ML2.3/14*
*THE **30** 06:51:32.0, 40°.32N×25°.78E, h12^{km}±1^{km}, ML2.0/7, Error ellipse: s-maj=1.3km s-min=0.5km az=315.0*
*SOF **30** 06:51:36.3, 40°.49N×25°.79E, h17^{km}*
ISC 30 06:51:31.4±0.9**, 40°.31N**±0°.02×**25°.79E**±0°.02**, h11**^{km}±7^{km}**, n47, σ0^{s}.42**/72**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.15	144	PG	Pg	06 51 34.9	+0.1
GADA				SG	Sg	06 51 36.7	-0.5
SMTH	Samothraki Isl	0.25	309	P	Pb	06 51 37.5	-0.5
SMTH	Samothraki Isl	0.25	309	P	Pb	06 51 37.5	-0.5
SMTH				S	Sb	06 51 41.5	-0.9
SMTH				AML	AML	06 51 41.6	
	comp=E,882µm,0.1s						
SMTH				AML	AML	06 51 41.8	
	comp=N,1454µm,0.1s						
ENEZ	Enez	0.51	33	PG	Pg	06 51 41.6	+0.3
BOZC	Bozcaada	0.51	156	PG	Pg	06 51 41.3	-0.1
BOZC				SG	Sg	06 51 48.6	+0.5
BOZC	Bozcaada	0.51	156	*i* P	Pg	06 51 41.6	+0.2
BOZC				*i* S	Sg	06 51 48.8	+0.7
BOZC				IAML_P			
	comp=Z,6µm,0.1s						
ALN	Alexandroupoli	0.62	19	PG	Pg	06 51 43.6	+0.2
ALN				SG	Sb	06 51 53.4	+0.5
ALN	Alexandroupoli	0.62	19	P	Pg	06 51 43.6	+0.2
ALN				S	Sg	06 51 52.1	+0.6
	comp=Z,45nm,0.2s						
ALN	Alexandroupoli	0.62	19	P	Pg	06 51 43.6	+0.2
ALN				AML	AML	06 51 53.3	
	comp=E,157µm,0.3s						
ALN				AML	AML	06 51 54.3	
	comp=N,125µm,0.2s						
LIA	Limnos Island	0.62	228	P	Pg	06 51 43.8	+0.4
LIA				S	Sb	06 51 53.1	+0.2
	comp=N,145nm,0.2s						
LIA	Limnos Island	0.62	228	P	Pb	06 51 43.9	-0.3
LIA				S	Sb	06 51 53.1	+0.2
LIA				AML	AML	06 51 54.6	
	comp=N,279µm,0.1s						
LIA				AML	AML	06 51 56.3	
	comp=E,297µm,0.3s						
EZN	Ezine	0.64	139	PG	Pg	06 51 43.2	-0.6
EZN				SG	Sg	06 51 52.4	+0.3
LPK	Lapseki	0.75	85	PG	Pg	06 51 45.7	-0.1
BAYC	CANAKKALE_Bayr	0.82	134	*i* P	Pg	06 51 46.9	-0.3
BAYC				*i* S	Sg	06 51 57.8	0.0
BAYC				IAML_P			
	comp=Z,5µm,0.1s						
KESN	Edirne-Kesan	0.85	53	*i* P	Pg	06 51 47.5	-0.5
KESN				*i* S	Sg	06 51 59.0	-0.1
KESN				IAML_P			
	comp=Z,666nm,0.2s						
RDO	Rodhopi	0.85	347	PG	Pg	06 51 48.1	+0.2
RDO	Rodhopi	0.85	347	P	Pb	06 51 48.2	0.0
RDO				S	Sb	06 52 00.1	+0.3
	comp=Z,142nm,0.2s						
RDO	Rodhopi	0.85	347	P	Pg	06 51 48.1	+0.2
RDO				S	Sb	06 52 00.0	+0.3
RDO				AML	AML	06 52 02.4	
	comp=N,264µm,0.2s						
RDO				AML	AML	06 52 04.5	
	comp=E,310µm,0.2s						
THAS	Thassos island	0.86	290	P	Pg	06 51 48.1	0.0
THAS				S	Sb	06 52 00.7	+0.7
	comp=E,105nm,0.2s						
THAS	Thassos island	0.86	290	P	Pg	06 51 48.1	0.0
THAS				S	Sb	06 52 00.7	+0.7
GPNR	Gulpinar-Canak	0.90	163	PG	Pb	06 51 48.8	-0.1
SIGR	SIGRI	1.10	177	PN	Pb	06 51 52.4	0.0
SIGR	SIGRI	1.10	177	P	Pb	06 51 52.0	-0.4
SIGR				S	Sn	06 52 07.9	0.0
	comp=E,305nm,0.4s						
SIGR	SIGRI	1.10	177	P	Pb	06 51 51.8	-0.6
SIGR				S	Sn	06 52 07.2	-0.6
SIGR				AML	AML	06 52 08.1	
	comp=E,459µm,0.3s						
SIGR				AML	AML	06 52 08.1	
	comp=N,765µm,0.5s						
RKY	Sarkoy-Tekirda	1.13	70	PN	Pb	06 51 52.3	-0.6
RKY				SN	Sn	06 52 08.3	-0.3
PRK	Paraskevi	1.13	160	P	Pg	06 51 53.3	+0.2
PRK				S	Sn	06 52 08.5	-0.1
	comp=N,330nm,0.3s						
SART	Tekirdag	1.13	70	*i* P	Pb	06 51 52.6	-0.3
SART				*i* S	Sg	06 52 07.6	-0.1
SART				IAML_P			
	comp=Z,2µm,0.1s						
KAVA	Kavala	1.19	306	P	Pb	06 51 54.0	+0.1
KAVA				S	Sg	06 52 09.8	+0.2
	comp=Z,22nm,0.2s						
KAVA	Kavala	1.19	306	P	Pb	06 51 53.9	+0.1
AYVA	Ayvalik	1.22	145	*i* P	Pn	06 51 54.2	-0.2
AYVA				IAML_P			
	comp=Z,1µm,0.2s						
KDZ	Kurdzhali	1.37	348	P	Pg	06 51 58.2	+0.6
OUR	Ouranopolis	1.38	272	P	Pn	06 51 55.8	-0.7
OUR	Ouranopolis	1.38	272	P	Pn	06 51 56.0	-0.5
MRMT	Marmara Adasi	1.41	78	PN	Pn	06 51 56.4	-0.7
GONE	Gonen-Balikesi	1.48	100	PN	Pb	06 51 58.7	-0.2
DKL	Dikili	1.51	145	PN	Pb	06 51 59.5	+0.1
DKL				SN	Sb	06 52 18.9	+0.4
RZN	Rozhen	1.60	330	P	Pg	06 52 02.0	0.0
ZEDA	zmir-Bergama	1.67	143	*i* P	Pb	06 52 02.0	-0.2
ZEDA				IAML_P			
	comp=Z,2µm,0.2s						
EDRB	Edirne	1.70	25	PN	Pb	06 52 02.4	-0.2
DIM	Dimitrovgrad	1.75	354	P	Pb	06 52 03.6	+0.1
STEP	BALIKESIR_Sava	1.76	121	*i* P	Pn	06 52 02.0	+0.2
STEP				*i* S	Sn	06 52 24.4	+0.2
STEP				IAML_P			
	comp=Z,621nm,0.2s						
KIRK	Kırklareli	1.77	34	*i* P	Pb	06 52 04.0	+0.1
KIRK				*i* S	Sb	06 52 26.1	0.0
KIRK				IAML_P			
	comp=Z,232nm,0.2s						
CHOS	Chios island	1.93	174	PN	Pn	06 52 04.4	+0.1
PLD	Plovdiv	1.97	336	PN	Pb	06 52 06.5	-0.7
URLA	Izmir	2.05	162	PN	Pn	06 52 05.9	+0.1
HORT	Hortiatis	2.07	279	PN	Pb	06 52 08.7	-0.3
DURS	Dursunbey	2.19	108	*i* P	Pn	06 52 09.1	+1.4
DURS				*i* S	Sn	06 52 34.3	-0.5
DURS				IAML_P			
	comp=Z,136nm,0.1s						

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*ISK **30** 07:03:09.8, 40°.32N×25°.79E, h10^{km}, ML2.9/15*
*ISCJB **30** 07:03:10.3±0.3, 40°.32N±0°.02×25°.81E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=2.5km az=152.1*
*ATH **30** 07:03:10.1, 40°.33N×25°.79E, h25^{km}±3^{km}, ML2.4/8, Error ellipse: s-maj=3.2km s-min=0.9km az=287.0*
*THE **30** 07:03:11.0, 40°.33N×25°.80E, h14^{km}, ML2.4/7, Error ellipse: s-maj=1.0km s-min=0.5km az=266.0*
*DDA **30** 07:03:11.2, 40°.28N×25°.96E, h25^{km}±1^{km}, ML3.2*
*SOF **30** 07:03:12.5, 40°.44N×25°.53E, h2^{km}*
*BEO **30** 07:03:17.2±1.1, 40°.64N×26°.10E, h5^{km}, ML2.5/3*
ISC 30 07:03:10.6±0.8**, 40°.32N**±0°.02×**25°.80E**±0°.02**, h15**^{km}±6^{km}**, n60, σ0^{s}.82**/89**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.15	151	PG	Pg	07 03 14.1	-0.3
GADA				SG	Sg	07 03 16.6	-0.4
SMTH	Samothraki Isl	0.26	306	P	Pg	07 03 16.5	+0.4
SMTH				S	Sg	07 03 20.4	+0.5
	660nm,0.1s						
SMTH	Samothraki Isl	0.26	306	P	Pg	07 03 16.5	+0.4
SMTH				S	Sg	07 03 20.7	+0.7
SMTH				AML	AML	07 03 21.4	
	comp=E,1649µm,0.1s						
SMTH				AML	AML	07 03 21.7	
	comp=N,1155µm,0.1s						
ENEZ	Enez	0.49	33	PG	Pg	07 03 20.2	-0.2
ENEZ				SG	Sg	07 03 27.5	+0.5
BOZC	Bozcaada	0.52	158	PG	Pg	07 03 20.5	-0.3
BOZC				SG	Sg	07 03 27.5	-0.2
BOZC	Bozcaada	0.52	158	*i* P	Pg	07 03 21.1	+0.3
BOZC				*i* S	Sg	07 03 27.7	0.0
BOZC				IAML_P			
	comp=Z,30µm,0.2s						
ALN	Alexandroupoli	0.60	18	PG	Pg	07 03 22.2	-0.3
ALN	Alexandroupoli	0.60	18	P	Pg	07 03 22.1	-0.4
ALN	Alexandroupoli	0.60	18	P	Pg	07 03 22.2	-0.3
ALN				S	Sg	07 03 30.7	+0.2
ALN				AML	AML	07 03 31.2	
	comp=N,546µm,0.4s						
ALN				AML	AML	07 03 33.8	
	comp=E,358µm,0.4s						
LIA	Limnos Island	0.64	229	P	Pg	07 03 23.0	0.0
LIA				S	Sb	07 03 32.8	+0.6
	comp=E,265nm,0.3s						
LIA	Limnos Island	0.64	229	P	Pg	07 03 23.0	0.0
LIA				S	Sg	07 03 31.6	+0.1
LIA				AML	AML	07 03 34.8	
	comp=E,511µm,0.3s						
LIA				AML	AML	07 03 36.1	
	comp=N,542µm,0.4s						
EZN	Ezine	0.64	141	PG	Pg	07 03 22.3	-0.8
LPK	Lapseki	0.73	86	PG	Pg	07 03 24.1	-0.8
BAYC	CANAKKALE_Bayr	0.81	135	*i* P	Pg	07 03 26.5	+0.1
BAYC				*i* S	Sg	07 03 35.3	-1.8
BAYC				IAML_P			
	comp=Z,9µm,0.1s						
RDO	Rodhopi	0.85	346	PG	Pg	07 03 26.8	-0.3
RDO	Rodhopi	0.85	346	P	Pg	07 03 26.7	-0.3
RDO				S	Sb	07 03 39.0	+0.7
	comp=Z,298nm,0.3s						
RDO	Rodhopi	0.85	346	P	Pg	07 03 26.8	-0.3
RDO				S	Sg	07 03 37.5	-0.7
RDO				AML	AML	07 03 40.3	
	comp=E,599µm,0.3s						
RDO				AML	AML	07 03 40.8	
	comp=N,583µm,0.4s						
THAS	Thassos island	0.88	289	P	Pg	07 03 27.4	-0.1
THAS				S	Sb	07 03 39.7	+0.7
	comp=N,148nm,0.3s						
THAS	Thassos island	0.88	289	P	Pg	07 03 27.5	-0.1
THAS				S	Sg	07 03 39.3	+0.3
THAS				AML	AML	07 03 40.6	
	comp=N,309µm,0.3s						
THAS				AML	AML	07 03 42.7	
	comp=E,290µm,0.3s						
GPNR	Gulpinar-Canak	0.90	164	PG	Pb	07 03 27.5	-0.4
SIGR	SIGRI	1.11	178	PN	Pb	07 03 30.9	-0.6
SIGR	SIGRI	1.11	178	P	Pb	07 03 30.9	-0.6
SIGR				S	Sb	07 03 46.4	+0.6
	comp=E,1µm,0.6s						
SIGR	SIGRI	1.11	178	P	Pb	07 03 30.8	-0.8
SIGR				S	Sb	07 03 46.8	+1.0
SIGR				AML	AML	07 03 48.2	
	comp=N,2869µm,0.8s						
SIGR				AML	AML	07 03 48.5	
	comp=E,1979µm,0.4s						
RKY	Sarkoy-Tekirda	1.11	70	PN	Pb	07 03 31.1	-0.5
SART	Tekirdag	1.11	70	*i* P	Pb	07 03 31.1	-0.6
SART				*i* S	Sb	07 03 46.3	+0.3
SART				IAML_P			
	comp=Z,3µm,0.1s						
PRK	Paraskevi	1.13	161	P	Pb	07 03 32.1	+0.2
PRK				S	Sg	07 03 47.9	+0.7
	comp=Z,1µm,0.2s						
PRK	Paraskevi	1.13	161	P	Pb	07 03 32.6	+0.7
PRK				S	Sb	07 03 47.6	+1.1
PRK				AML	AML	07 03 49.0	
	comp=N,1645µm,0.2s						
PRK				AML	AML	07 03 50.7	
	comp=E,1002µm,0.3s						
KAVA	Kavala	1.19	305	P	Pn	07 03 32.6	-0.2
KAVA				S	Sb	07 03 48.6	+0.5
	comp=E,85nm,0.3s						
KAVA	Kavala	1.19	305	P	Pn	07 03 32.4	-0.3
KAVA				S	Sb	07 03 48.6	+0.5
KAVA				AML	AML	07 03 51.5	
	comp=E,296µm,0.4s						
KAVA				AML	AML	07 03 53.0	
	comp=N,244µm,0.2s						
AYVA	Ayvalik	1.22	146	*i* P	Pn	07 03 33.9	+0.7
AYVA				*i* S	Sb	07 03 49.0	0.0
KDZ	Kurdzhali	1.36	348	PN	Pn	07 03 34.9	-0.2
KDZ	Kurdzhali	1.36	348	*i* P	Pn	07 03 34.9	-0.2
OUR	Ouranopolis	1.39	271	PN	Pn	07 03 34.9	-0.6
MRMT	Marmara Adasi	1.40	78	PN	Pn	07 03 35.6	-0.1
GONE	Gonen-Balikesi	1.47	100	PN	Pn	07 03 37.4	+0.8
DKL	Dikili	1.51	145	PN	Pn	07 03 37.3	+0.2
EDC	Edincik	1.57	88	PN	Pn	07 03 38.4	+0.3
RZN	Rozhen	1.59	329	*i* P	Pn	07 03 38.7	+0.2
ZEDA	zmir-Bergama	1.67	144	*i* P	Pn	07 03 40.6	+1.2
ZEDA				*i* S	Sb	07 04 02.6	+0.6
ZEDA				IAML_P			
	comp=Z,1µm,0.1s						
EDRB	Edirne	1.68	25	PN	Pn	07 03 40.5	+1.0
BALB	Balikesir	1.73	112	PN	Pn	07 03 40.5	+0.3
DIM	Dimitrovgrad	1.74	353	*i* P	Pb	07 03 43.1	+0.8
STEP	BALIKESIR_Sava	1.75	122	*i* P	Pn	07 03 41.2	+0.7
STEP				*i* S	Sn	07 04 03.4	+0.9
STEP				IAML_P			
	comp=Z,1µm,0.2s						
KIRK	Kırklareli	1.76	33	*i* P	Pn	07 03 41.0	+0.5
KIRK				IAML_P			
	comp=Z,802nm,0.2s						
CHOS	Chios island	1.94	174	P	Pn	07 03 43.0	-0.2
PLD	Plovdiv	1.97	335	*e*Pn	Pg	07 03 47.9	-0.4
PLD				*e*Sn	Sg	07 04 12.6	-1.2
PLD	Plovdiv	1.97	335	P	Pg	07 03 48.1	-0.2

URLA	Izmir	2.05	162	iP	Pn	07 03 43.2	-1.5
ELBA	Catalca	2.16	67	iP	Pg	07 03 51.6	-0.4
DURS	Dursunbey	2.17	108	iP	Pn	07 03 47.3	+0.9
DURS				iS	Sb	07 04 17.8	+1.2
DURS				IAML_P			
	comp=Z,369nm,0.1s						
ULDT	Uludag	2.56	93	iP	Pn	07 03 52.2	+0.4
ULDT				iS	Sg	07 04 31.4	-1.4
DEMI	Demirci	2.58	119	iP	Pn	07 03 53.3	+1.3
DEMI				IAML_P			
	comp=Z,280nm,0.2s						
USAK	Uak-Merkez	2.96	122	iP	Pn	07 03 58.4	+1.3
USAK				IAML_P			
	comp=Z,119nm,0.1s						
VTS	Vitosha	3.00	321	ePn	Pb	07 04 04.4	+0.6
VTS				eSn	Sb	07 04 40.2	-0.1
VTS	Vitosha	3.00	321	iP	Pb	07 04 06.3	+2.5
STIP	Stip	3.06	298	iPn	Pn	07 03 57.8	-0.7
AYDN	Tasoluk	3.11	148	iP	Pn	07 03 59.3	+0.1
AYDN				IAML_P			
	comp=Z,329nm,0.2s						
ZAPS	Zavoj	3.78	322	ePn	Pb	07 04 15.2	-1.9
ZAPS				eSg	Sg	07 05 13.5	+1.4
BARS	Barje	3.89	311	ePn	Pb	07 04 16.6	-2.4
VYHS	Vyhne	9.57	331	ePN	Pn	07 05 25.5	-2.3

IDC 30 07:03:43.8±1.5, 2°.66S×128°.12E, h0^{km}, mb3.4/2, mb1 3.8/4, mb1mx3.5/40, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=32.7km s-min=24.7km az=79.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.62	61	Pn	Pn	07 04 41.7	+0.6
	6.8nm,0.3s,baz=235,slow=23,SNR=29						
SIJI				Sn	Sn	07 05 24.4	-0.2
	2.0nm,0.3s,baz=143,slow=20,SNR=4.3						
WRA	Warramunga Arr	18.22	161	P	Pn	07 07 58.1	-0.3
	0.3nm,0.3s,baz=339,slow=12,SNR=12						
ASAR	Alice Springs	21.62	165	P	P	07 08 35.5	-0.2
	1.0nm,0.4s,baz=346,slow=11,SNR=23						
MKAR	Makanchi Array	63.59	327	P	P	07 14 16.6	+0.1
	0.1nm,0.4s,baz=139,slow=9.0,SNR=2.1						

ASRS 30 07:07:25.3±0.3, 50°N±2°×9°2E±°, h5^{km}, MLh3.5/23, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEL	Teeli	1.32	316	Pg	Pb	07 07 55.1	+4.4
TEL				Sg	Sn	07 08 14.1	+5.5
CUR	Chagan-Uzun	2.13	272	Pg	Pg	07 08 07.5	+1.4
CUR				Sg	Sg	07 08 35.3	+1.5
KZLR	Kyzyl	2.40	46	Pg	Pg	07 08 12.7	+1.4
KZLR				Sg	Sg	07 08 44.1	+1.7
ULGR	Ulagan, Altay	2.43	284	Pg	Pg	07 08 11.9	+0.1
ULGR				Sg	Sg	07 08 45.1	+1.8
AKAR	Aktash	2.61	277	Pg	Pg	07 08 16.6	+1.4
AKAR				Sg	Sg	07 08 51.2	+2.2
CHBI	Chibit, Altay	2.68	277	Pg	Pg	07 08 17.4	+0.8
CHBI				Sg	Sg	07 08 54.2	+2.9
DJO	Djoy, Khakassi	2.72	354	Pg	Pg	07 08 18.3	+1.0
DJO				Sg	Sg	07 08 55.8	+3.2
DJOS	Djoyskaya Sosn	2.72	357	Sg	Sg	07 08 55.7	+3.0
ARDR	Aradan	2.74	23	Pg	Pb	07 08 16.0	+1.3
ARDR				Sg	Sg	07 08 54.4	+1.2
DGZ	Jazzator, Alta	2.76	264	Pg	Pg	07 08 17.9	-0.2
DGZ				Sg	Sg	07 08 55.2	+1.3
CERR	Cheremushki	2.78	357	Pg	Pg	07 08 20.8	+2.3
CERR				Sg	Sg	07 08 57.5	+3.0
ARTR	Artybash	3.26	303	Pg	Pg	07 08 27.7	0.0
ARTR				Sg	Sg	07 09 11.9	+2.0
VEH	Verkhnyaya Baz	3.28	346	Pg	Pg	07 08 30.7	+2.5
VEH				Sg	Sg	07 09 13.2	+2.5
TUNR	Tungur	3.43	273	Pg	Pg	07 08 31.1	+0.1
TUNR				Sg	Sg	07 09 15.6	+0.2
TASR	Tashtagol	3.58	320	Pg	Pg	07 08 35.0	+1.3
TASR				Sg	Sg	07 09 20.5	+0.4
TDJR	Todzha	3.63	49	Pg	Pg	07 08 34.4	-0.4
TDJR				Sg	Sg	07 09 21.1	-0.6
GALT	Gorno-Altaysk,	4.07	300	Pg	Pg	07 08 44.0	+0.8
GALT				Sg	Sg	07 09 38.2	+2.3
UKR	Ust'-Kan	4.48	284	Pg	Pg	07 08 50.4	-0.6
UKR				Sg	Sg	07 09 50.2	+1.2

IDC 30 07:21:20.9±1.2, 41°.51S×73°.81W, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.9/24, mbtmp3.9/9, ML3.6/1, MS3.1/3, Ms1 3.1/3, ms1mx2.9/20, Error ellipse: s-maj=28.2km s-min=21.6km az=88.0

GUC 30 07:21:20.9±0.3, 41°.56S×74°.15W, h11^{km}±5^{km}, ML3.9

ISCJB 30 07:21:21.1±1.0, 41°.45S±0°.05×74°.6W±0°.1, h33^{km}, mb3.8/7, MS3.0/1, Error ellipse: s-maj=12.8km s-min=7.5km az=12.9

ISC 30 07:21:22.9±1.1, 41°.51S±0°.07×74°.5W±0°.1, h35^{km}, n13, σ1^s.38/15, mb4.0/7, 3C, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	1.73	159	⇑iP	Pn	07 21 50.2	-0.3
GO07				iS	Sn	07 22 12.3	+1.1
GO07				IAML		07 22 23.5	
	comp=E,6μm,0.3s						
GO06	Curarrehue	3.02	51	⇑iP	Pn	07 22 08.9	+0.7
GO06				iS	Sn	07 22 45.6	+2.4
GO06				IAML		07 22 50.5	
	comp=E,150nm,0.6s						
PLCA	Paso Flores	3.10	77	Pg	Pn	07 22 09.0	-0.4
	comp=E,18nm,0.3s,baz=287,slow=9.3,SNR=190						
PLCA				LR	LR	07 23 12.1	
	comp=E,233nm,21.4s,baz=284,slow=43						
PLCA	Paso Flores	3.10	77	⇑iP	Pn	07 22 08.9	-0.4
PLCA				iS	Sn	07 22 45.4	+0.2
CFA	Coronel Fontan	11.09	29	Pn	Pn	07 23 57.5	-1.6
	comp=E,0.4nm,0.3s,baz=208,slow=10,SNR=4.4						
CFA				LR	LR	07 28 41.5	
	comp=E,158nm,19.4s,baz=121,slow=41						
CPUP	Villa Florida	20.74	49	P	P	07 25 59.9	-0.6
	comp=E,2.3nm,0.6s,baz=242,slow=9.2,SNR=10						
CPUP				LR	LR	07 34 43.3	
	comp=E,64nm,20.9s,baz=214,slow=39						
LPAZ	La Paz	25.73	14	P	P	07 26 53.2	+2.5
	comp=E,0.4nm,0.7s,baz=181,slow=15,SNR=2.1						
SIV	San Ignacio	27.95	29	P	P	07 27 10.9	+0.8
	comp=E,1.2nm,0.8s,baz=208,slow=5.4,SNR=4.2						
BDFB	Brasilia	34.47	49	P	P	07 28 05.8	-1.7
	comp=E,2.1nm,0.6s,baz=208,slow=8.6,SNR=5.0						
PTGA	Pitinga	42.67	22	P	P	07 29 16.0	-0.2
	comp=E,1.8nm,0.6s,baz=189,slow=8.5,SNR=5.3						
SNAA	Sanae	45.50	155	P	P	07 29 39.7	+1.4
	comp=E,2.3nm,0.9s,baz=246,slow=6.7,SNR=6.0						
TXAR	Lajitas Array	75.46	334	P	P	07 33 08.8	+5.5
	comp=E,0.2nm,0.8s,baz=142,slow=7.9,SNR=3.3						
BOSA	Boshof	78.33	118	P	P	07 33 20.5	+0.7
	comp=E,4.5nm,0.7s,baz=214,slow=5.4,SNR=8.7						

MEX 30 07:29:57.6±0.9, 14°.12N×92°.02W, h22^{km}±29^{km}, MD3.9

GCG 30 07:30:02.9±0.3, 14°.55N×91°.47W, h27^{km}±3^{km}, MD4.0

ISC 30 07:29:56.0±2.5, 14°.1N±0°.2×91°.98W±0°.07, h35^{km}, n9, σ0^s.90/14, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.50	52	eP	Pn	07 30 08.3	+1.5
STG3	Santiaguito 3,	0.70	34	⇓iP	Pn	07 30 09.3	-0.4
THIG		0.83	340	eP	Pn	07 30 11.3	+0.2
THIG				iS	Sn	07 30 20.9	-1.2
FUG	Fuego 3	1.15	74	eP	Pn	07 30 15.4	-0.3
NBG	Las Nubes	1.65	74	eP	Pn	07 30 23.2	+0.5
PCIG		1.98	323	eP	Pn	07 30 27.5	+0.5
PCIG				eS	Sn	07 30 49.1	-1.5
CCIG	Comitan	2.15	356	eP	Pn	07 30 30.1	+0.5
CCIG				iS	Sn	07 30 55.6	+0.4
TGIG		2.86	337	iP	Pn	07 30 40.0	+0.8
TGIG				iS	Sn	07 31 11.8	-0.7
CMIG	Matias Romero	4.07	317	eP	Pn	07 30 56.6	+0.8
CMIG				iS	Sn	07 31 42.0	-0.2

ISK 30 07:48:46.5, 40°.30N×25°.77E, h7^{km}, ML2.1/12

ISCJB 30 07:48:47.2±0.4, 40°.31N±0°.02×25°.79E±0°.03, h7^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.5km az=158.8

ATH 30 07:48:47.3, 40°.30N×25°.80E, h14^{km}±6^{km}, ML1.6/4, Error ellipse: s-maj=7.1km s-min=1.0km az=288.0

DDA 30 07:48:47.7, 40°.29N×25°.86E, h7^{km}±3^{km}, ML3.0

ISC 30 07:48:47.1±0.9, 40°.30N±0°.02×25°.80E±0°.03, h14^{km}±6^{km}, n25, σ0^s.37/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.13	147	PG	Pg	07 48 50.4	-0.2
GADA				SG	Sg	07 48 52.9	-0.1
SMTH	Samothraki Isl	0.27	309	P	Pg	07 48 53.0	+0.2
SMTH				AML	AML	07 48 57.0	
	comp=E,460μm,0.1s						
SMTH				S	Sg	07 48 57.1	+0.4
SMTH				AML	AML	07 48 57.2	
	comp=N,688μm,0.1s						
BOZC	Bozcaada	0.50	157	PG	Pg	07 48 56.9	0.0
BOZC	Bozcaada	0.50	157	iP	Pb	07 48 57.8	+0.2
BOZC				iS	Sb	07 49 04.9	+0.1
BOZC				IAML_P			
	comp=Z,3μm,0.1s						
ENEZ	Enez	0.51	32	PG	Pg	07 48 57.2	+0.1
ALN	Alexandroupoli	0.62	17	PG	Pg	07 48 59.2	-0.1
ALN	Alexandroupoli	0.62	17	P	Pg	07 48 59.0	-0.2
ALN				S	Sg	07 49 08.1	+0.6
ALN				AML	AML	07 49 08.3	
	comp=N,115μm,0.4s						
ALN				AML	AML	07 49 11.3	
	comp=E,95μm,0.2s						
EZN	Ezine	0.62	140	PG	Pg	07 48 58.8	-0.5
LIA	Limnos Island	0.62	230	P	Pb	07 48 59.5	-0.2
LIA				S	Sb	07 49 07.9	-0.4
LIA				AML	AML	07 49 09.2	
	comp=N,114μm,0.4s						
LIA				AML	AML	07 49 11.6	
	comp=E,128μm,0.4s						
LPK	Lapseki	0.73	84	PG	Pg	07 49 01.2	-0.2
BAYC	CANAKKALE_Bayr	0.80	134	iP	Pb	07 49 02.8	+0.1
BAYC				iS	Sb	07 49 14.3	+0.8
BAYC				IAML_P			
	comp=Z,1μm,0.1s						
KESN	Edirne-Kesan	0.85	52	iP	Pb	07 49 04.2	+0.4
KESN				iS	Sn	07 49 16.7	-0.7
KESN				IAML_P			
	comp=Z,295nm,0.1s						
RDO	Rodhopi	0.87	347	PG	Pb	07 49 03.6	-0.3
RDO	Rodhopi	0.87	347	P	Pb	07 49 03.7	-0.2
RDO				AML	AML	07 49 17.5	
	comp=E,119μm,0.3s						
RDO				AML	AML	07 49 21.5	
	comp=N,79μm,0.2s						
THAS	Thassos island	0.88	291	P	Pg	07 49 04.3	+0.2
THAS				S	Sg	07 49 16.2	+0.5
SIGR	SIGRI	1.09	178	PN	Pb	07 49 07.7	0.0
SIGR	SIGRI	1.09	178	P	Pb	07 49 07.3	-0.4
SIGR				S	Sn	07 49 22.9	+0.1
PRK	Paraskevi	1.12	161	P	Pg	07 49 09.2	+0.6
KDZ	Kurdzhali	1.38	348	PN	Pb	07 49 12.6	0.0
OUR	Ouranopolis	1.39	272	PN	Pn	07 49 11.7	-0.4
MRMT	Marmara Adasi	1.40	77	PN	Pn	07 49 12.4	+0.1
DKL	Dikili	1.50	145	PN	Pb	07 49 14.8	+0.2
EDC	Edincik	1.58	88	PN	Pb	07 49 15.9	-0.1
EDRB	Edirne	1.70	24	PN	Pb	07 49 17.9	-0.2
BALB	Balikesir	1.73	112	PN	Pb	07 49 18.0	-0.6

IDC 30 07:58:17.3±1.2, 7°.17S×105°.18E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.8/33, mbtmp3.9/7, ML4.3/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/27, Error ellipse: s-maj=41.6km s-min=18.5km az=38.0

ISCJB 30 07:58:18.1±0.8, 7°.33S±0°.06×105°.27E±0°.05, h10^{km}, mb3.8/6, MS3.6/2, Error ellipse: s-maj=8.3km s-min=7.5km az=37.6

DJA 30 07:58:20.5±0.4, 7°S±3°×10°5E±°, h10^{km}, M4.1/9, MLv4.1/9

ISC 30 07:58:18.6±0.9, 7°.18S±0°.07×105°.22E±0°.06, h10^{km}, n25, σ0^s.98/22, mb3.8/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.73	40	P	Pn	07 58 33.9	-1.1
CGJI				S	Sb	07 58 43.5	0.0
TNG	Tangerang	1.73	55	P	Pb	07 58 48.9	-1.7
TNG				P	Pn	07 58 49.3	+0.5
TNG				S	Sn	07 59 11.1	+0.1
TNG				S	Sb	07 59 12.8	+0.4
KASI	Kota Agung	1.79	336	P	Pg	07 58 54.2	+1.2
KLI	Kotabumi	2.33	351	P	Pb	07 58 59.9	-0.8
LEM	Lembang	2.41	82	Pn	Pn	07 58 59.0	+0.8
	61nm,0.3s,baz=209,slow=2.4,SNR=35						
LEM				Sn	Sn	07 59 29.2	+1.4
	24nm,0.3s,baz=105,slow=22,SNR=4.0						
LEM	Lembang	2.41	82	P	Pn	07 58 58.3	+0.1
KLSI		2.52	349	P	Pb	07 59 02.9	-1.1
CISI	Cisompet, Garu	2.60	98	P	Pn	07 58 58.9	-1.9
MDSI	Maura Dua	2.87	339	P	Pb	07 59 08.4	-1.5
CMJI	Cimerak	3.26	101	P	Pn	07 59 09.4	-0.4
H01W3	Cape Leeuwin H	28.77	165	T	T	08 34 34.1	
	baz=345,slow=76,SNR=4.2						
H01W1	Cape Leeuwin H	28.78	165	T	T	08 34 34.7	
	baz=345,slow=76,SNR=3.4						
H01W2	Cape Leeuwin H	28.78	165	T	T	08 34 35.8	
	baz=345,slow=76,SNR=3.3						
WRA	Warramunga Arr	30.95	117	P	P	08 04 35.8	-0.4
	0.6nm,0.5s,baz=287,slow=10,SNR=8.5						
ASAR	Alice Springs	32.04	124	P	P	08 04 46.6	+0.9
	0.2nm,0.4s,baz=298,slow=8.3,SNR=7.0						
H08S2	Diego Garcia H	32.45	267	T	T	08 39 07.0	
	baz=91,slow=75,SNR=18						
H08S3	Diego Garcia H	32.46	267	T	T	08 39 08.8	
	baz=91,slow=75,SNR=29						
H08S1	Diego Carcia H	32.47	267	T	T	08 39 09.1	
	baz=91,slow=75,SNR=9.5						
STKA	Stephens Creek	41.85	131	P	P	08 06 09.7	+0.6
	1.6nm,0.5s,baz=310,slow=7.9,SNR=8.7						
USRK	Ussuriysk Ar.	56.57	23	LR	LR	08 33 01.4	
	comp=Z,28nm,18.2s,baz=304,slow=37						
MKAR	Makanchi Array	57.47	341	P	P	08 08 07.1	-0.7
	0.4nm,0.6s,baz=150,slow=8.3,SNR=4.4						
OPO	Ambohidratompo	57.48	253	LR	LR	08 27 25.4	
	comp=Z,73nm,18.6s,baz=0.5,slow=30						
ZALV	Zalesovo Beam	63.28	347	P	P	08 08 48.0	+0.6
	1.6nm,0.5s,baz=149,slow=3.1,SNR=6.0						
BRTR	Keskin Array B	80.63	312	P	P	08 10 31.9	-0.1
	0.6nm,0.6s,baz=96,slow=10,SNR=4.0						
TXAR	Lajitas Array	145.00	47	PKPbc	PKPdf	08 17 56.9	-0.2
	0.4nm,0.5s,baz=295,slow=1.8,SNR=14						

WEL 30 08:10:21.0, 33°.05S×179°.64W, h218^{km}, M4.2/16, mB4.6/7, ML4.5/6, MLv4.6/16, Mw(mB)3.8/7

NEIC 30 08:10:21.6±2.2, 33°.05S×179°.64E, h218^{km}±10^{km}, mb4.3/10, Error ellipse: s-maj=19.3km s-min=11.7km az=100.0

IDC 30 08:10:22.7±4.9, 33°.59S×179°.90W, h266^{km}±49^{km}, mb3.8/3, mb1 3.8/5, mb1mx3.4/38, mbtmp4.3/5, Error ellipse: s-maj=55.5km s-min=39.3km az=5.0

ISC 30 08:10:15.1±0.8, 32°.87S±0°.06×179°.5W±0°.1, h200^{km}, n67, σ2^s.05/73, mb4.3/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.84	21	P	Pn	08 11 14.4	-0.6
GLKZ				S	Sn	08 12 00.6	-1.4
RAO	Raoul Island	3.85	21	ePn	Pn	08 11 27.3	+12
MXZ	Matakaoa Point	5.01	200	ePn	Pn	08 11 32.3	+2.7
MXZ				eS	Sn	08 12 29.1	+0.6
MXZ	Matakaoa Point	5.01	200	P	Pn	08 11 31.0	+1.4
WMGZ	Waiomatatini S	5.22	198	P	Pn	08 11 34.7	+2.4
WMGZ				S	Sn	08 12 34.9	+1.6
GRZ	Great Barrier	5.35	229	P	Pn	08 11 37.2	+3.3
HAZ	Te Kaha	5.36	204	P	Pn	08 11 36.1	+2.1
HAZ				S	Sn	08 12 37.7	+1.3
PKGZ	Pakihiroa	5.38	201	P	Pn	08 11 35.7	+1.3
KUZ	Kuaotunu	5.51	224	P	Pn	08 11 39.7	+3.8
RUGZ	Raukumara Rang	5.58	203	P	Pn	08 11 39.0	+2.0
TWGZ	Tauwhareparae	5.68	200	P	Pn	08 11 41.7	+3.5
TWGZ				S	Sn	08 12 45.6	+1.6
CNGZ	Carnagh Statio	5.90	198	P	Pn	08 11 43.0	+2.0
OPRZ	Ohinepanea	5.91	212	P	Pn	08 11 42.4	+1.2
WCZ	Waipu Caves	5.93	237	P	Pn	08 11 44.6	+3.2
TKGZ	Te Karaka	5.96	200	P	Pn	08 11 42.2	+0.4
TKGZ				S	Sn	08 12 50.3	-0.1
MWZ	Matawai	5.96	203	P	Pn	08 11 42.3	+0.4
URZ	Urewera	6.04	206	P	Pn	08 11 42.5	-0.3
	1.4nm,0.3s,baz=271,slow=3.6,SNR=25						
URZ				S	Sn	08 12 50.6	-1.7
	15nm,0.3s,baz=226,slow=22,SNR=21						
URZ	Urewera	6.04	206	ePn	Pn	08 11 43.7	+0.8
URZ				eS	Sn	08 12 51.1	-1.2
URZ	Urewera	6.04	206	P	Pn	08 11 43.7	+0.8
RAGZ	Rawiri	6.15	203	P	Pn	08 11 45.0	+0.7
OUZ	Omahuta	6.18	246	P	Pn	08 11 46.6	+2.0
RIGZ	Rimuhau	6.23	200	P	Pn	08 11 45.4	0.0
RTZ	Ruatahuna	6.41	205	P	Pn	08 11 49.8	+2.2
RAHZ	Arahi	6.64	204	P	Pn	08 11 53.6	+3.0
MTHZ	Maungataniwha	6.67	205	P	Pn	08 11 50.7	-0.3
TLZ	Tolley Road	6.78	215	P	Pn	08 11 53.6	+1.1
MRHZ	Matea Rd	6.81	208	P	Pn	08 11 54.4	+1.5
ARHZ	Aropaoanui	6.98	203	P	Pn	08 11 53.9	-1.1
BKZ	Black Stump Fm	7.07	206	P	Pn	08 11 55.1	-1.1
MCHZ	McNeill Hill	7.24	204	P	Pn	08 11 59.3	+0.9
HIZ	Hauiti	7.26	218	ePn	Pn	08 11 60.0	+1.3
HIZ	Hauiti	7.26	218	P	Pn	08 12 00.4	+1.7
KWHZ	Kaweka Forest	7.32	205	P	Pn	08 11 58.5	-1.0
KAHZ	Kahuranaki	7.50	202	P	Pn	08 12 00.5	-1.4
BHHZ	Black Hill Sta	7.51	207	P	Pn	08 11 60.0	-2.1
FWVZ	Far West T-bar	7.52	211	P	Pn	08 12 01.3	-1.0
PXZ	Pawanui	7.72	201	P	Pn	08 12 02.0	-2.6
VRZ	Vera Road	7.78	215	P	Pn	08 12 06.9	+1.5
PNHZ	Pukenui	7.83	205	P	Pn	08 12 03.6	-2.6
PRHZ	Porangahau	8.01	202	P	Pn	08 12 09.3	+0.9
TSZ	Takapari Road	8.05	206	P	Pn	08 12 08.2	-0.7
BFZ	Birch Farm	8.51	202	ePn	Pn	08 12 15.7	+0.9
BFZ				eS	Sn	08 13 44.4	-6.1
CMWZ	Cape Campbell	10.17	208	P	P	08 12 42.3	-2.0
BSWZ	Blackbirch Sta	10.28	209	P	P	08 12 42.9	-2.5
THZ	Tophouse	10.73	212	ePn	Pn	08 12 40.7	-3.1
THZ				eS	Sn	08 14 37.9	-5.6
OXZ	Oxford	12.37	210	P	P	08 13 10.0	+1.3
WVZ	Waitaha Valley	12.76	214	P	P	08 13 14.0	+1.1
RPZ	Rata Peaks	13.11	212	P	Pn	08 13 08.3	-5.6
	0.3nm,0.3s,baz=180,slow=2.0,SNR=4.3						
RPZ				S	S	08 15 25.6	-14
	2.0nm,0.3s,baz=298,slow=23,SNR=14						
EIDS	Eidsvold	26.69	279	eP	P	08 15 36.0	+0.1
	16nm,1.3s						
CTA	Charters Tower	33.03	284	P	P	08 16 32.0	+0.3
	3.0nm,0.5s,baz=128,slow=11,SNR=8.2						
CTAO	Charters Tower	33.03	284	eP	P	08 16 31.5	-0.2
	8.0nm,1.2s						
BBOO	Buckleboo	37.12	258	eP	P	08 17 05.7	-0.8
	20nm,1.3s						
COEN	Coen	38.80	290	eP	P	08 17 19.0	-1.7
	20nm,1.5s						
AS31	Alice Springs	41.76	270	eP	P	08 17 44.1	-0.9
	1.0nm,0.8s						
ASAR	Alice Springs	41.76	270	P	P	08 17 44.3	-0.7
	3.2nm,0.8s,baz=106,slow=7.7,SNR=32						
WB2	Warramunga Arr	42.96	276	eP	P	08 17 53.1	-1.5
	7.7nm,0.4s						
WR1	Warramunga Arr	42.97	276	eP	P	08 17 54.0	-0.7
WRA	Warramunga Arr	42.97	276	P	P	08 17 54.0	-0.8
	5.0nm,0.4s,baz=111,slow=8.3,SNR=90						
MTN	Manton Dam	49.16	282	eP	P	08 18 41.3	-1.7
	14nm,1.2s						
CASY	Casey	52.36	209	eP	P	08 19 07.2	+1.0
	5.8nm,1.4s						
QSPA	South Pole Qui	57.25	180	eP	P	08 19 46.4	+5.0
	7.8nm,0.9s						
SNAA	Sanae	75.73	179	P	P	08 21 41.9	+3.6
SNAA	Sanae	75.73	179	eP	P	08 21 41.5	+3.3
	4.5nm,0.9s						
VNA3	Neumayer Olymp	75.93	177	P	P	08 21 43.2	+3.9
VNA1	Neumayer--Stat	76.59	177	P	P	08 21 47.7	+4.8
FIA0	FINESS Array S	146.97	338	ePKPdf	PKPbc	08 29 33.8	+0.5
FINES	FINESS Array B	146.97	338	PKPbc	PKPbc	08 29 33.8	+0.5
	1.6nm,0.6s,baz=34,slow=5.3,SNR=7.4						

IDC 30 08:13:58.7±1.7, 20°.76N×144°.13E, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.5/45, mbtmp3.8/4, ML4.7/1, Error ellipse: s-maj=136.7km s-min=25.3km az=106.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	7.17	174	Pn	Pn	08 15 42.8	-2.0
	13nm,0.3s,baz=304,slow=3.6,SNR=7.8						
WRA	Warramunga Arr	41.57	194	P	P	08 21 48.8	+0.4
	1.1nm,0.8s,baz=12,slow=7.3,SNR=5.6						
ASAR	Alice Springs	45.27	193	P	P	08 22 18.3	0.0
	0.1nm,0.3s,baz=16,slow=7.2,SNR=3.4						
ILAR	Eielson Array	62.47	27	P	P	08 24 23.5	-0.1
	0.5nm,0.9s,baz=263,slow=6.0,SNR=6.1						

ISCJB 30 08:13:57.4±0.4, 1°.19S±0°.05×15°.05W±0°.05, h10^{km}, mb4.5/25, MS3.8/20, Error ellipse: s-maj=8.1km s-min=7.3km az=38.1

IDC 30 08:13:57.9±0.7, 1°.15S×15°.15W, h0^{km}, mb4.1/11, mb1 4.2/12, mb1mx4.0/43, mbtmp4.2/12, ML4.6/1, MS3.7/20, Ms1 3.7/20, ms1mx3.7/24, Error ellipse: s-maj=24.0km s-min=16.0km az=141.0

BJI 30 08:13:57.3±0.0, 1°.00S×15°.48W, h6^{km}, Ms7 4.3/1

NEIC 30 08:13:59.2±1.6, 1°.23S×15°.16W, h10^{km}, mb4.6/19, Error ellipse: s-maj=16.6km s-min=14.0km az=298.0

ISC 30 08:13:59.1±0.5, 1°.17S±0°.07×15°.12W±0°.08, h10^{km}, n65, σ1^s.00/47, mb4.5/25, MS3.7/20, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.64	175	T	T	08 22 03.9	
	baz=356,slow=74,SNR=56						
H10N3	ASCENSION HYDR	6.65	175	T	T	08 22 27.6	
	baz=356,slow=74,SNR=76						
H10N1	ASCENSION HYDR	6.66	175	T	T	08 22 34.6	
	baz=356,slow=74,SNR=86						
ASCN	Ascension	6.76	174	ePn	Pn	08 15 37.2	-1.3
H10S1	ASCENSION HYDR	7.73	177	T	T	08 23 34.6	
	baz=357,slow=74,SNR=12						
H10S3	ASCENSION HYDR	7.74	177	T	T	08 23 31.3	
	baz=357,slow=74,SNR=106						
H10S2	ASCENSION HYDR	7.75	177	T	T	08 23 30.3	
	baz=357,slow=74,SNR=59						
LIC	Lamto	12.47	54	eP	Pn	08 16 55.8	-1.1
	63nm,0.5s						
TIC	Toumodi	12.73	52	eP	Pn	08 16 59.2	-1.2
KIC	Kosan Boka	12.78	54	eP	Pn	08 17 00.3	-0.8
	41nm,0.5s						
DBIC	Dimbokro	12.87	53	Pn	Pn	08 17 01.5	-0.8
	3.4nm,0.3s,baz=223,slow=13,SNR=58						
DBIC				Sn	Sn	08 19 15.2	-11
	2.3nm,0.3s,baz=138,slow=17,SNR=2.6						
DBIC				LR	LR	08 21 04.0	
	comp=Z,598nm,18.9s,baz=197,slow=33						
DBIC	Dimbokro	12.87	53	ePn	Pn	08 17 01.5	-0.8
DBIC				eSn	Sn	08 19 23.7	-2.1
SACV	Santiago Islan	18.11	333	eP	P	08 18 11.8	+0.4
	25nm,0.8s						
SACV				eSn	Sn	08 21 31.2	-2.0
TOA0	Torodi Ar. Sit	21.93	49	eP	P	08 18 53.3	+0.4
TORD	Torodi Ar. Bea	21.93	49	P	P	08 18 52.1	-0.9
	9.5nm,0.6s,baz=219,slow=9.4,SNR=69						
TORD				LR	LR	08 26 28.8	
	comp=Z,511nm,19.2s,baz=285,slow=34						
TAM	Tamanrasset	31.18	39	eP	P	08 20 19.8	+1.1
	5.8nm,1.2s						
MDT	Midelt	35.23	15	P	P	08 20 52.8	-1.2
	1.7nm,0.7s,baz=159,slow=8.6,SNR=2.7						
BDFB	Brasilia	35.48	244	P	P	08 20 55.6	-0.8
	5.3nm,0.9s,baz=114,slow=5.1,SNR=5.2						
BDFB				LR	LR	08 33 03.5	
	comp=Z,91nm,20.4s,baz=110,slow=32						
BDFB	Brasilia	35.48	244	eP	P	08 20 55.6	-0.8
	7.3nm,1.1s						
ESDC	Sonseca Array	41.92	13	LR	LR	08 39 10.4	
	comp=Z,91nm,20.8s,baz=325,slow=36						
KEST	Kesra	43.23	29	LR	LR	08 40 38.2	
	comp=Z,146nm,18.2s,baz=179,slow=37						
LSZ	Lusaka	44.97	110	P	P	08 22 16.3	+1.1
	4.9nm,0.7s,baz=310,slow=5.4,SNR=8.6						
LSZ	Lusaka	44.97	110	eP	P	08 22 15.5	+0.3

	14nm,1.4s						
LBTB	**Lobatse**	**45.89**	**124**	*e*P	**P**	**08 22 22.1**	**-0.2**
	9.1nm,0.7s						
SUR	**Sutherland**	**45.91**	**136**	*e*P	**P**	**08 22 23.1**	**+0.7**
	8.3nm,1.0s						
BOSA	**Boshof**	**47.21**	**129**	P	**P**	**08 22 32.5**	**-0.1**
	9.8nm,0.7s,baz=304,slow=8.1,SNR=20						
BOSA				LR	LR	08 38 42.2	
	comp=Z,92nm,18.1s,baz=278,slow=31						
BOSA	**Boshof**	**47.21**	**129**	*e*P	**P**	**08 22 32.6**	**-0.1**
	12nm,0.8s						
SIV	**San Ignacio**	**47.61**	**249**	P	**P**	**08 22 35.9**	**+0.1**
	3.3nm,1.1s,baz=103,slow=10.0,SNR=10						
CPUP	**Villa Florida**	**47.66**	**235**	LR	LR	08 40 02.1	
	comp=Z,75nm,21.6s,baz=70,slow=33						
TIP	**Timpagrande**	**49.68**	**33**	*e*P	**P**	**08 22 52.5**	**+1.1**
	7.7nm,0.8s						
KMBO	**Kilima Mbogo**	**52.36**	**91**	LR	LR	08 43 43.4	
	comp=Z,241nm,19.1s,baz=268,slow=34						
LPAZ	**La Paz**	**54.31**	**251**	P	**P**	**08 23 27.7**	**+0.7**
	1.0nm,0.7s,baz=27,slow=2.5,SNR=6.5						
LPAZ				LR	LR	08 45 39.0	
	comp=Z,114nm,19.8s,baz=90,slow=35						
LPAZ	**La Paz**	**54.31**	**251**	*e*P	**P**	**08 23 26.1**	**-0.8**
VTS	**Vitosha**	**55.60**	**34**	*e*P	**P**	**08 23 36.5**	**+1.2**
	5.0nm,0.9s						
GEC2	**GERESS Array S**	**55.71**	**23**	*e*P	**P**	**08 23 36.6**	**+0.7**
	4.3nm,1.0s						
GERES	**GERESS Array B**	**55.71**	**23**	P	**P**	**08 23 36.4**	**+0.4**
	0.5nm,0.4s,baz=195,slow=6.0,SNR=3.6						
GERES				LR	LR	08 47 59.0	
	comp=Z,64nm,21.9s,baz=198,slow=37						
PB11	**IPOC Station P**	**56.41**	**247**	*e*P	**P**	**08 23 41.7**	**+0.2**
	13nm,1.1s						
VYHS	**Vyhne**	**57.56**	**26**	*e*P	P	08 23 55.6	+6.6
MLR	**Muntele Rosu**	**58.95**	**33**	*e*P	**P**	**08 24 00.3**	**+1.4**
	15nm,1.3s						
MDUB	**Mudurnu**	**59.10**	**40**	*e*P	**P**	**08 24 01.0**	**+1.0**
	32nm,0.8s						
OJC	**Ojcow**	**59.27**	**25**	*e*P	**P**	**08 24 01.2**	**+0.3**
	2.9nm,0.8s						
BRTR	**Keskin Array B**	**60.31**	**42**	P	**P**	**08 24 10.1**	**+1.6**
	0.8nm,0.7s,baz=242,slow=8.0,SNR=2.3						
BRTR				LR	LR	08 50 54.7	
	comp=Z,31nm,19.0s,baz=190,slow=37						
BR131	**Keskin Array S**	**60.31**	**42**	*e*P	**P**	**08 24 10.2**	**+1.8**
SUW	**Suwalki**	**63.47**	**24**	*e*P	**P**	**08 24 29.8**	**+0.6**
	26nm,0.5s						
PLCA	**Paso Flores**	**63.62**	**224**	LR	LR	08 48 26.1	
	comp=Z,53nm,20.5s,baz=94,slow=32						
AKBB	**Malin Array Si**	**63.96**	**30**	*e*P	**P**	**08 24 32.5**	**0.0**
	4.9nm,0.9s						
NB200	**NORSAR Array S**	**65.27**	**14**	*e*P	**P**	**08 24 42.2**	**+1.3**
NOA	**NORSAR Array B**	**65.27**	**14**	P	**P**	**08 24 42.3**	**+1.3**
	0.2nm,0.4s,baz=195,slow=10,SNR=2.2						
NOA				LR	LR	08 54 47.1	
	comp=Z,42nm,18.0s,baz=200,slow=38						
KBZ	**Khabaz**	**68.29**	**41**	LR	LR	08 57 23.0	
	comp=Z,23nm,18.9s,baz=224,slow=38						
FIA0	**FINESS Array S**	**69.90**	**20**	*e*P	**P**	**08 25 09.9**	**-0.2**
FINES	**FINESS Array B**	**69.90**	**20**	P	**P**	**08 25 09.9**	**-0.2**
	1.0nm,0.6s,baz=178,slow=11,SNR=2.9						
R50A	**Paris**	**74.53**	**310**	*e*P	**P**	**08 25 39.0**	**+0.6**
	5.5nm,1.0s						
GEYT	**Alibeck**	**77.55**	**51**	LR	LR	09 01 19.8	
	comp=Z,58nm,21.2s,baz=160,slow=37						
ARU	**Arti**	**82.00**	**33**	LR	LR	09 04 44.6	
	comp=Z,42nm,21.0s,baz=256,slow=37						
WMOK	**Wichita Mounta**	**85.45**	**305**	*e*P	**P**	**08 26 37.0**	**-0.5**
	4.4nm,0.9s						
ABTX	**Abilene, Hawle**	**86.01**	**303**	*e*P	**P**	**08 26 39.9**	**-0.5**
	4.1nm,0.6s						
TXAR	**Lajitas Array**	**89.30**	**299**	LR	LR	09 07 13.4	
	comp=Z,28nm,18.3s,baz=0.0,slow=36						
AAK	**Ala-Archa**	**90.50**	**48**	LR	LR	09 14 16.2	
	comp=Z,26nm,18.2s,baz=278,slow=40						
MKAR	**Makanchi Array**	**95.94**	**43**	LR	LR	09 16 04.8	
	comp=Z,50nm,18.2s,baz=321,slow=39						
ZALV	**Zalesovo Beam**	**96.80**	**36**	LR	LR	09 12 52.3	
	comp=Z,25nm,20.7s,baz=64,slow=36						
WMQ	**Urumqi**	**100.05**	**46**	*e*P	**Pdif**	**08 27 46.5**	**+1.3**
WMQ				pP	pwP	08 27 52.0	+0.1
WMQ				LR	LR		
	comp=Z,120nm,28.9s						
HHC	**Hu-ho-hao-te**	**117.80**	**43**	PKP	**PKiKP**	**08 32 47.5**	**+1.1**
NJ2	**Nanjing**	**126.89**	**50**	*e*PKP	**PKPdf**	**08 33 03.0**	**-0.9**
ASAR	**Alice Springs**	**141.06**	**131**	PKhKP	PKPpre	08 33 21.9	
	0.3nm,0.8s,baz=236,slow=2.4,SNR=3.1						
ASAR				PKP	**PKPdf**	**08 33 29.7**	**-1.1**
	0.6nm,0.7s,baz=225,slow=2.6,SNR=5.7						
WRA	**Warramunga Arr**	**143.44**	**127**	PKhKP	PKPpre	08 33 31.8	
	1.4nm,1.0s,baz=248,slow=3.4,SNR=5.4						

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*IDC **30** 08:17:44.4±1.2, 2°.93N×90°.12E, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.7/40, mbtmp4.0/6, ML4.1/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/40, Error ellipse: s-maj=41.6km s-min=26.1km az=36.0*

*ISCJB **30** 08:17:47.7±1.1, 3°.0N±0°.2×90°.1E±0°.1, h33^{km}, mb4.0/5, MS3.4/6, Error ellipse: s-maj=32.5km s-min=18.0km az=24.2*

ISC 30 08:17:49.6±1.2, 3°.0N±0°.2×90°.1E±0°.2, h35^{km}, n20, σ0^s.71/7, mb4.2/5, MS3.4/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.79**	**91**	LR	LR	08 23 18.0	
	comp=Z,124nm,21.3s,baz=195,slow=38						
PALK	**Pallekele**	**10.32**	**295**	Pn	**Pn**	**08 20 15.4**	**0.0**
	1.7nm,0.3s,baz=116,slow=15,SNR=9.2						
PALK				Sn	Sn	08 22 01.4	-8.5
	4.3nm,0.3s,baz=116,slow=23,SNR=6.4						
PALK				LR	LR	08 23 44.9	
	comp=Z,96nm,21.9s,baz=115,slow=35						
CMAR	**Chiang Mai Arr**	**17.66**	**29**	LR	LR	08 28 37.5	
	comp=Z,66nm,18.3s,baz=202,slow=37						
H08S3	**Diego Garcia H**	**20.51**	**239**	T	T	08 43 50.5	
	baz=58,slow=75,SNR=22						
H08S2	**Diego Garcia H**	**20.51**	**239**	T	T	08 43 55.1	
	baz=58,slow=75,SNR=19						
H08S1	**Diego Carcia H**	**20.52**	**239**	T	T	08 43 51.8	
	baz=58,slow=75,SNR=15						
KAPI	**Kappang**	**30.63**	**105**	LR	LR	08 37 39.6	
	comp=Z,39nm,18.2s,baz=140,slow=39						
H01W3	**Cape Leeuwin H**	**43.88**	**151**	T	T	09 12 43.6	
	baz=327,slow=76,SNR=7.9						
H01W2	**Cape Leeuwin H**	**43.89**	**151**	T	T	09 12 41.2	
	baz=327,slow=76,SNR=9.9						
H01W1	**Cape Leeuwin H**	**43.89**	**151**	T	T	09 12 44.2	
	baz=327,slow=76,SNR=10						
MKAR	**Makanchi Array**	**44.20**	**352**	P	**P**	**08 25 55.8**	**+0.6**
	0.6nm,0.8s,baz=139,slow=5.3,SNR=2.7						
SONM	**Songino Array**	**46.86**	**15**	P	**P**	**08 26 16.0**	**-0.4**
	1.6nm,0.6s,baz=196,slow=9.7,SNR=6.2						
SONM				LR	LR	08 45 15.9	
	comp=Z,33nm,18.6s,baz=230,slow=35						
JNU	**Nakatsue**	**48.49**	**47**	LR	LR	08 50 11.0	
	comp=Z,67nm,18.4s,baz=169,slow=40						
WRA	**Warramunga Arr**	**49.00**	**120**	P	**P**	**08 26 33.7**	**+0.4**
	3.7nm,0.6s,baz=291,slow=9.7,SNR=10						
TLY	**Talaya**	**49.86**	**11**	LR	LR	08 50 27.9	
	comp=Z,32nm,18.3s,baz=180,slow=39						
ZALV	**Zalesovo Beam**	**51.02**	**356**	LR	LR	08 49 31.6	
	comp=Z,37nm,21.2s,baz=56,slow=37						
MJAR	**Matsushiro Arr**	**55.41**	**47**	LR	LR	08 50 44.2	
	comp=Z,42nm,21.1s,baz=90,slow=36						
GERES	**GERESS Array B**	**78.86**	**319**	P	**P**	**08 29 50.0**	**+0.6**
	0.4nm,0.2s,baz=78,slow=6.1,SNR=3.0						
TORD	**Torodi Ar. Bea**	**87.81**	**283**	P	**P**	**08 30 35.6**	**-0.5**
	0.8nm,0.5s,baz=185,slow=2.7,SNR=12						
TXAR	**Lajitas Array**	**145.28**	**21**	PKPbc	**PKPbc**	**08 37 23.4**	**-0.9**
	0.4nm,0.8s,baz=164,slow=1.5,SNR=5.6						

MEX 30 08:18:55.4±0.5, 17°.12N×101°.26W, h11^{km}±7^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.52**	**338**	*e*P	Pg	08 19 04.4	-1.2
ZIIG				*i* S	Sg	08 19 12.1	-0.4
CAIG	**El Cayaco**	**0.95**	**94**	*i* P	Pg	08 19 10.7	-3.1
CAIG				*i* S	Sg	08 19 22.7	-3.5
ARIG	**Puente Sto Nin**	**1.45**	**37**	*e*P	Pn	08 19 18.0	-3.6
ARIG				*e*S	Sn	08 19 35.0	-5.6
MEIG	**Mezcala**	**1.76**	**63**	*i* P	Pn	08 19 22.7	-3.3
MEIG				*i* S	Sn	08 19 43.9	-4.5
PLIG	**Platanillo**	**2.10**	**53**	*i* P	Pn	08 19 27.8	-2.8
PLIG				*i* S	Sn	08 19 52.1	-4.7
TLIG	**Tlapa**	**2.61**	**80**	*i* P	Pn	08 19 34.6	-3.1
TLIG				*i* S	Sn	08 20 05.9	-3.6

BJI 30 08:20:57.7±0.0, 23°.90N×114°.48E, h10^{km}, ML3.7/1, Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZH	**Guangzhou**	**1.32**	**232**	Pg	Pn	08 21 11.5	-11
GZH				Sg	Sb	08 21 22.0	-18
GZH				smax	smax		
	comp=N,2µm,0.5s						
GZH				smax	smax		
	comp=E,2µm,0.3s						
MCO	**Taipa Grande**	**1.96**	**206**	P	Pg	08 21 35.0	-0.4

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*IDC **30** 08:37:05.7±0.6, 19°.87N×146°.66E, h0^{km}, mb4.1/16, mb1 4.3/20, mb1mx4.2/40, mbtmp4.2/20, ML4.3/3, MS3.4/5, Ms1 3.5/5, ms1mx2.9/46, Error ellipse: s-maj=21.8km s-min=13.1km az=87.0*

*BJI **30** 08:37:07.7±0.0, 19°.56N×146°.88E, h37^{km}, mb4.7/18, mB4.8/12, Ms3.9/3, Ms7 3.6/4*

*ISCJB **30** 08:37:09.3±0.2, 19°.86N±0°.03×146°.64E±0°.06, h33^{km}, mb4.4/60, MS3.5/8, Error ellipse: s-maj=7.6km s-min=4.6km az=0.6*

*NEIC **30** 08:37:11.4±1.5, 19°.93N×146°.57E, h35^{km}, mb4.6/44, Error ellipse: s-maj=18.7km s-min=6.7km az=253.0*

ISC 30 08:37:10.9±0.4, 19°.89N±0°.05×146°.75E±0°.09, h35^{km}, n94, σ1^s.13/86, mb4.5/60, MS3.4/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**3.30**	**196**	*e*Pn	**Pn**	**08 38 00.6**	**+0.4**
ANA2	**Anatahan**	**3.66**	**196**	*e*Pn	**Pn**	**08 38 05.8**	**+0.6**
GUMO	**Guam**	**6.51**	**196**	Pn	**Pn**	**08 38 44.5**	**+0.2**
	16nm,0.3s,baz=93,slow=3.1,SNR=13						
GUMO				Sn	**Sn**	**08 39 60.0**	**+2.5**
	2.7nm,0.3s,baz=135,slow=20,SNR=2.5						
GUMO	**Guam**	**6.51**	**196**	*e*Pn	**Pn**	**08 38 44.6**	**+0.2**
GUMO				*e*Sn	**Sn**	**08 39 57.6**	**+0.1**
PATS	**Pohnpei**	**17.15**	**138**	*e*Pn	**P**	**08 41 08.4**	**-0.9**
	176nm,1.5s						
MJAR	**Matsushiro Arr**	**18.21**	**337**	P	**P**	**08 41 19.6**	**-1.3**
	0.0nm,0.3s,baz=154,slow=9.5,SNR=4.8						
MAJO	**Matsushiro**	**18.21**	**337**	*e*P	**P**	**08 41 20.5**	**-0.5**
	11nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**18.88**	**91**	T	T	09 00 54.9	
	baz=279,slow=75,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**18.89**	**91**	T	T	09 00 57.6	
	baz=279,slow=75,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**18.90**	**91**	T	T	09 00 56.6	
	baz=279,slow=75,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	**18.95**	**87**	T	T	09 00 57.7	
	baz=274,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**18.96**	**87**	T	T	09 00 55.6	
	baz=274,slow=74,SNR=11						
H11N3	**WAKE ISLAND Hy**	**18.97**	**87**	T	T	09 00 56.6	
	baz=274,slow=74,SNR=10						
JNU	**Nakatsue**	**19.35**	**316**	P	**Pn**	**08 41 32.9**	**-1.9**
	0.4nm,0.3s,baz=105,slow=4.8,SNR=5.0						
JNU	**Nakatsue**	**19.35**	**316**	*e*P	**Pn**	**08 41 32.5**	**-2.2**
	36nm,1.2s						
MANU	**Manus Island**	**21.80**	**178**	*e*P	**P**	**08 42 00.2**	**+0.2**
	32nm,0.9s						
KSRS	**Korea Array**	**23.99**	**321**	P	**P**	**08 42 21.9**	**-0.3**
	3.2nm,0.6s,baz=145,slow=9.4,SNR=16						
KSRS				LR	LR	08 51 44.3	
	comp=Z,133nm,19.8s,baz=130,slow=37						
KS15	**Wonju Array Si**	**24.01**	**321**	*e*P	**P**	**08 42 21.8**	**-0.6**
	13nm,1.1s						
DAV	**Davao City (W)**	**24.17**	**241**	LR	LR	08 50 10.0	
	comp=Z,128nm,20.8s,baz=358,slow=33						
SIJI	**Sorong**	**25.61**	**218**	LR	LR	08 50 35.1	
	comp=Z,110nm,21.3s,baz=60,slow=32						
NJ2	**Nanjing**	**27.77**	**301**	*e*P	**P**	**08 42 56.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
KLR	**Kul'dur**	**31.65**	**341**	P	**P**	**08 43 31.4**	**+0.6**
	3.0nm,0.7s,baz=149,slow=8.7,SNR=6.6						
COEN	**Coen**	**33.81**	**186**	*e*P	**P**	**08 43 49.0**	**-1.0**
	13nm,1.2s						
PETK	**Petropavlovsk-**	**34.23**	**12**	LR	LR	08 58 38.8	
	comp=Z,56nm,19.0s,baz=202,slow=38						
XAN	**Xi'an**	**36.33**	**301**	P	**P**	**08 44 13.3**	**+1.7**
XAN				pP	pwP	08 44 21.3	-3.7
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
XAN				LR	LR		
	comp=N,72nm,14.1s						
XAN				LR	LR		
	comp=E,98nm,16.3s						
XAN				LR	LR		
	comp=Z,100nm,20.6s						
HHC	**Hu-ho-hao-te**	**36.51**	**313**	P	**P**	**08 44 15.0**	**+1.9**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CTAO	**Charters Tower**	**39.73**	**181**	*e*P	**P**	**08 44 40.3**	**0.0**
	20nm,1.4s						
LZH	**Lanzhou**	**40.83**	**302**	*e*P	**P**	**08 44 50.3**	**+0.7**
LZH				pP	pwP	08 45 00.5	-2.4
LZH				sP	sP	08 45 04.8	+2.1
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI	**Kunming**	**40.86**	**286**	P	P	08 44 53.5	+3.5
KMI				pmax	pmax		
	comp=Z,15nm,0.7s						
WB2	**Warramunga Arr**	**41.41**	**198**	*e*P	**P**	**08 44 53.5**	**-0.6**
	4.7nm,1.0s						
WR1	**Warramunga Arr**	**41.41**	**198**	*e*P	**P**	**08 44 53.4**	**-0.8**
WRA	**Warramunga Arr**	**41.41**	**198**	P	**P**	**08 44 53.4**	**-0.8**
	1.9nm,0.5s,baz=15,slow=7.1,SNR=16						
SONA0	**Songino Array**	**42.86**	**320**	*e*P	**P**	**08 45 04.6**	**-1.3**
SONM	**Songino Array**	**42.86**	**320**	P	**P**	**08 45 04.6**	**-1.3**
	1.0nm,0.4s,baz=128,slow=5.7,SNR=5.3						
GTA	**Gaotai**	**44.63**	**306**	*e*P	**P**	**08 45 22.0**	**+1.7**
GTA				pP	sP	08 45 32.8	-0.8
GTA				sP	pwP	08 45 37.0	+3.4
GTA				PcS	**PcS**	**08 50 56.5**	**+0.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,26nm,4.1s						
GTA				LR	LR		
	comp=N,220nm,20.1s						
GTA				LR	LR		
	comp=E,270nm,20.8s						
GTA				LR	LR		
	comp=Z,83nm,18.4s						
AS31	**Alice Springs**	**45.06**	**197**	*e*P	**P**	**08 45 22.6**	**-1.1**
	1.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**45.06**	**277**	LR	LR	09 04 38.6	
	comp=Z,28nm,18.5s,baz=125,slow=37						
ASAR	**Alice Springs**	**45.06**	**197**	P	**P**	**08 45 22.3**	**-1.4**
	1.3nm,0.8s,baz=13,slow=6.6,SNR=14						
SHL	**Shillong**	**50.64**	**287**	*e*P	**P**	**08 46 06.5**	**-0.6**
	6.0nm,0.6s						
LSA	**Lhasa**	**51.01**	**293**	*e*P	**P**	**08 46 09.8**	**-0.4**
	18nm,1.2s						
STKA	**Stephens Creek**	**51.70**	**186**	P	**P**	**08 46 13.8**	**-0.8**
	3.0nm,1.1s,baz=359,slow=7.1,SNR=8.0						
STKA	**Stephens Creek**	**51.70**	**186**	*e*P	**P**	**08 46 13.4**	**-1.2**
	1.6nm,1.3s						
BBOO	**Buckleboo**	**53.39**	**191**	*e*P	**P**	**08 46 27.6**	**+0.5**
	20nm,1.5s						
WMQ	**Urumqi**	**54.30**	**310**	*e*P	P	08 46 37.0	+3.1
WMQ				pP	sP	08 46 48.3	+0.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				LR	LR		
	comp=Z,110nm,28.5s						
SII	**Sitkinak Islan**	**56.67**	**35**	*e*P	**P**	**08 46 51.8**	**+1.2**
	5.5nm,0.9s						
TOO	**Toolangi**	**57.16**	**181**	*e*P	**P**	**08 46 54.7**	**+0.4**
	10nm,1.0s						
SVW2	**Sparrevohn**	**57.31**	**29**	*e*P	**P**	**08 46 56.4**	**+1.3**
	3.7nm,1.2s						
ZAA1	**Zalesovo Array**	**57.69**	**322**	*e*P	**P**	**08 46 57.5**	**-0.4**
ZALV	**Zalesovo Beam**	**57.69**	**322**	P	**P**	**08 46 57.5**	**-0.4**
	1.2nm,0.5s,baz=92,slow=7.1,SNR=3.8						
KDAK	**Kodiak Island**	**57.83**	**33**	*e*P	**P**	**08 47 00.1**	**+1.4**
	14nm,1.1s						
MK31	**Makanchi Array**	**58.37**	**313**	*e*P	**P**	**08 47 02.8**	**0.0**
	2.5nm,1.3s						
MK32	**Makanchi Array**	**58.37**	**313**	*e*P	**P**	**08 47 03.6**	**+0.8**
MK32				*e*PcP	**PcP**	**08 47 53.4**	**-0.1**
MKAR	**Makanchi Array**	**58.37**	**313**	P	**P**	**08 47 03.6**	**+0.8**
	0.8nm,0.7s,baz=87,slow=9.6,SNR=7.8						
MKAR				PcP	**PcP**	**08 47 53.4**	**-0.1**
	0.8nm,0.7s,baz=73,slow=5.4,SNR=3.7						
MAKZ	**Makanchi**	**58.59**	**313**	*e*P	**P**	**08 47 04.4**	**+0.1**
	5.5nm,1.3s						
SUA	**Susitna One**	**59.65**	**30**	*e*P	**P**	**08 47 12.8**	**+1.2**
	6.8nm,1.0s						
KTH	**Kantishna Hill**	**60.13**	**27**	*e*P	**P**	**08 47 15.8**	**+1.0**
	8.0nm,1.1s						
BPAW	**Bear Paw Mtn.**	**60.26**	**27**	*e*P	**P**	**08 47 16.6**	**+1.1**
	4.3nm,0.8s						
MLY	**Manley**	**60.62**	**26**	*e*P	**P**	**08 47 19.5**	**+1.4**
	5.5nm,1.0s						
KURK	**Kurchatov**	**61.06**	**318**	*e*P	**P**	**08 47 21.1**	**-0.1**
	2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**61.12**	**318**	P	**P**	**08 47 21.6**	**+0.1**
	2.3nm,0.7s,baz=93,slow=7.4						
TOLK	**Toolik Lake Re**	**62.13**	**22**	*e*P	**P**	**08 47 28.8**	**+0.6**
	11nm,1.1s						
ILAR	**Eielson Array**	**62.15**	**26**	P	**P**	**08 47 27.9**	**-0.5**
	2.7nm,0.9s,baz=259,slow=5.2,SNR=17						
ILB	**Eielson Array**	**62.15**	**26**	*e*P	**P**	**08 47 28.6**	**+0.3**
	3.8nm,0.9s						
KSH	**Kashi**	**63.00**	**305**	*e*P	P	08 47 38.0	+3.4
KSH				sP	pwP	08 47 52.0	+3.9
KSH				S	**S**	**08 56 07.0**	**+4.1**
EGAK	**Eagle**	**64.56**	**27**	*e*P	**P**	**08 47 45.4**	**+1.1**
	2.6nm,0.9s						
QRZ	**Quartz Range**	**64.98**	**159**	*e*P	**P**	**08 47 48.1**	**+0.9**
	26nm,1.4s						
DAWY	**Dawson**	**65.25**	**28**	*e*P	**P**	**08 47 50.1**	**+1.3**
	3.3nm,0.9s						
NIL	**Nilore**	**65.83**	**299**	*e*P	**P**	**08 47 53.4**	**+0.3**
	17nm,1.1s						
HYT	**Haines Junctio**	**65.90**	**31**	*e*P	**P**	**08 47 54.6**	**+1.4**
	6.3nm,1.0s						
BRVK	**Borovoye**	**66.27**	**320**	*e*P	**P**	**08 47 55.7**	**+0.2**
	3.7nm,0.9s						
KK31	**Karatay Array**	**66.79**	**309**	*e*P	**P**	**08 47 59.1**	**+0.1**
	2.6nm,0.8s						
INK	**Inuvik**	**67.90**	**23**	P	**P**	**08 48 06.4**	**+0.8**
	5.1nm,0.8s,baz=238,slow=7.2,SNR=4.7						
CHGR	**Chuyangaron**	**68.37**	**305**	*e*P	**P**	**08 48 07.7**	**-1.5**
	5.7nm,0.8s						
DLBC	**Dease Lake**	**69.76**	**34**	*e*P	**P**	**08 48 18.8**	**+1.3**
	3.0nm,0.8s						
ABKAR	**Akbulak array**	**73.16**	**317**	*e*P	**P**	**08 48 37.6**	**-0.4**
	2.1nm,0.5s						
YKA	**Yellowknife Ar**	**76.48**	**28**	P	**P**	**08 48 57.1**	**+0.1**
	2.9nm,0.7s,baz=289,slow=5.7,SNR=5.4						
YKB5	**Yellowknife Ar**	**76.48**	**28**	*e*P	**P**	**08 48 57.1**	**+0.1**
BEKR	**Beckworth**	**79.67**	**51**	*e*P	**P**	**08 49 15.9**	**+0.6**
	2.7nm,1.2s						
NV01	**Mina Array Sit**	**81.63**	**52**	*e*P	**P**	**08 49 27.6**	**+1.6**
NVAR	**Mina Array Bea**	**81.63**	**52**	P	**P**	**08 49 27.6**	**+1.6**
	0.8nm,0.8s,baz=271,slow=6.6,SNR=7.4						
ARCES	**ARCESS Array B**	**81.67**	**342**	P	**P**	**08 49 25.5**	**+0.2**
	1.4nm,0.7s,baz=52,slow=7.9,SNR=5.3						
MFID	**Camas Ranch**	**81.78**	**47**	*e*P	**P**	**08 49 26.9**	**+0.4**
	1.6nm,0.9s						
ELK	**Elko**	**83.09**	**49**	*e*P	**P**	**08 49 34.3**	**+0.7**
	1.4nm,0.8s						
FFC	**Flin Flon**	**85.56**	**33**	*e*P	**P**	**08 49 46.4**	**+0.9**
	46nm,0.8s						
KNB	**Kanab**	**86.19**	**52**	*e*P	**P**	**08 49 50.6**	**+1.3**
	2.9nm,1.0s						
FIA0	**FINESS Array S**	**86.23**	**336**	*e*P	**P**	**08 49 47.2**	**-1.4**
FINES	**FINESS Array B**	**86.23**	**336**	P	**P**	**08 49 47.2**	**-1.4**
	2.0nm,0.7s,baz=64,slow=4.7,SNR=9.9						
PD31	**Pinedale Array**	**86.29**	**46**	*e*P	**P**	**08 49 50.1**	**+0.4**
	0.9nm,1.2s						
PDAR	**Pinedale Array**	**86.29**	**46**	P	**P**	**08 49 50.1**	**+0.4**
	0.2nm,0.5s,baz=307,slow=3.2,SNR=4.0						
PV12	**Saucer Basin,**	**88.62**	**50**	*e*P	**P**	**08 50 01.9**	**+1.0**
	5.2nm,1.1s						
VYHS	**Vyhne**	**97.60**	**328**	*e*P	Pdif	08 50 43.1	+1.2
LPAZ	**La Paz**	**146.68**	**90**	PKPbc	**PKiKP**	**08 56 52.7**	**-0.8**
	1.5nm,0.7s,baz=241,slow=3.7,SNR=8.8						
LPAZ	**La Paz**	**146.68**	**90**	*e*PKPdf	**PKPbc**	**08 56 49.5**	**-1.2**
PTGA	**Pitinga**	**147.65**	**57**	*e*PKPdf	**PKPbc**	**08 56 50.0**	**-2.8**

IDC 30 09:07:08.6±1.6, 16°.19S×177°.04E, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.7/42, mbtmp3.7/5, MS3.3/10, Ms1 3.3/10, ms1mx3.1/24, Error ellipse: s-maj=119.3km s-min=25.2km az=147.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.59**	**238**	LR	LR	09 13 32.6	
	comp=Z,117nm,21.9s,baz=56,slow=33						
HNR	**Honiara**	**17.96**	**290**	LR	LR	09 18 09.6	
	comp=Z,79nm,18.4s,baz=146,slow=37						
URZ	**Urewera**	**21.98**	**180**	LR	LR	09 19 06.3	
	comp=Z,69nm,21.1s,baz=9.5,slow=33						
PPT	**Papeete**	**31.95**	**97**	LR	LR	09 24 51.1	
	comp=Z,57nm,18.6s,baz=327,slow=33						
STKA	**Stephens Creek**	**35.75**	**238**	P	P	09 14 08.6	-0.7
	2.0nm,0.9s,baz=95,slow=12,SNR=3.7						
STKA				LR	LR	09 27 18.2	
	comp=Z,66nm,20.4s,baz=37,slow=34						
ASAR	**Alice Springs**	**41.10**	**252**	P	P	09 14 54.9	+0.3
	1.1nm,0.6s,baz=83,slow=8.6,SNR=19						
GUMO	**Guam**	**43.44**	**311**	LR	LR	09 32 15.6	
	comp=Z,14nm,20.0s,baz=96,slow=35						
MJAR	**Matsushiro Arr**	**63.99**	**326**	LR	LR	09 41 45.1	
	comp=Z,31nm,21.1s,baz=85,slow=32						
JNU	**Nakatsue**	**65.94**	**318**	LR	LR	09 40 56.5	
	comp=Z,24nm,20.7s,baz=354,slow=31						
KSRS	**Korea Array**	**70.57**	**320**	LR	LR	09 44 42.7	
	comp=Z,20nm,20.8s,baz=68,slow=32						
NVAR	**Mina Array Bea**	**81.29**	**46**	P	P	09 19 26.6	-0.6
	0.3nm,0.6s,baz=232,slow=6.6,SNR=3.8						
ILAR	**Eielson Array**	**85.27**	**15**	P	P	09 19 46.7	-0.1
	0.5nm,0.6s,baz=232,slow=4.4,SNR=4.6						
TXAR	**Lajitas Array**	**88.81**	**59**	P	P	09 20 05.8	+0.8
	0.3nm,0.9s,baz=212,slow=3.2,SNR=3.9						
SONM	**Songino Array**	**89.44**	**321**	LR	LR	09 57 42.0	
	comp=Z,14nm,19.9s,baz=75,slow=34						

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*NIED **30** 09:15:00, 37°.40N×141°.90E, h38^{km}, Mw3.9 Best double couple: M$_0$6.75000×10^{14} NP1:φ$_s$341.00000°, δ2.00000°, λ-175.00000°. NP2:φ$_s$246.00000°, δ90.00000°, λ-88.00000°.*

*JMA **30** 09:15:28.0±0.2, 37°.35N×141°.88E, h36^{km}±3^{km}, M3.8*

*IDC **30** 09:15:29.7±2.3, 37°.23N×141°.93E, h41^{km}±22^{km}, mb3.6/13, mb1 3.8/18, mb1mx3.7/42, mbtmp3.8/18, ML2.3/2, MS3.0/4, Ms1 3.1/4, ms1mx2.6/32, Error ellipse: s-maj=15.4km s-min=12.8km az=78.0*

ISC 30 09:15:26.1±1.8, 37°.33N±0°.04×141°.91E±0°.05, h13^{km}±11^{km}, n40, σ0^s.95/48, mb3.9/13, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.82**	**273**	P	**Pn**	**09 15 43.0**	**-0.4**
JFK				S	**Sb**	**09 15 53.0**	**-0.3**
JMST	**Minamisoumatoc**	**0.90**	**296**	P	**Pg**	**09 15 43.9**	**+0.4**
JMST				S	**Sb**	**09 15 54.9**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.91**	**256**	P	**Pn**	**09 15 44.2**	**-0.4**
ONAJ				S	**Sb**	**09 15 55.4**	**-0.5**
JMM	**Marumori**	**1.03**	**302**	P	**Pb**	**09 15 46.0**	**+0.2**
JMM				S	**Sb**	**09 15 57.7**	**-1.6**
JIKH	**Ishinomakikobu**	**1.04**	**341**	P	**Pb**	**09 15 45.7**	**-0.2**
JIKH				S	**Sb**	**09 15 58.0**	**-1.5**
JFFD	**Fukushimafurud**	**1.10**	**258**	P	**Pg**	**09 15 47.0**	**-0.3**
JIO	**Ouri**	**1.21**	**339**	P	**Pn**	**09 15 48.3**	**-0.3**
JIO				S	**Sb**	**09 16 02.2**	**-2.1**
JFT	**Otama**	**1.27**	**279**	P	**Pg**	**09 15 50.3**	**-0.1**
JFT				S	**Sb**	**09 16 05.5**	**-0.4**
JOU	**Okura**	**1.43**	**317**	P	**Pn**	**09 15 52.3**	**+0.6**
JOU				S	**Sn**	**09 16 10.1**	**-0.2**
JMK	**Ichinoseki**	**1.71**	**342**	P	**Pn**	**09 15 55.8**	**+0.3**
JMK				*e*S	**Sn**	**09 16 16.4**	**-0.8**
JYS	**Shirataka**	**1.71**	**302**	P	**Pb**	**09 15 57.3**	**-0.1**
JYS				*e*S	**Sn**	**09 16 18.2**	**+0.9**
JFY	**Yanaizu**	**1.76**	**273**	P	**Pb**	**09 15 57.6**	**-0.6**
JFY				*e*S	**Sb**	**09 16 19.1**	**-1.0**
JYK	**Kaneyama**	**2.00**	**323**	P	**Pn**	**09 16 00.3**	**+0.7**

JYK				*e*S	Sn	09 16 23.7	-0.8
MJAR	**Matsushiro Arr**	**3.06**	**256**	P	**Pn**	**09 16 15.2**	**+1.0**
	0.4nm,0.3s,baz=72,slow=14,SNR=13						
MJAR				S	**Sn**	**09 16 51.6**	**+0.9**
	0.7nm,0.3s,baz=142,slow=13,SNR=5.5						
MAT	**Matsushiro**	**3.07**	**256**	P	**Pn**	**09 16 16.2**	**+2.0**
MAT				S	**Sb**	**09 16 55.5**	**-2.3**
JHJ	**Hachijo jima 2**	**4.54**	**203**	P	**Pn**	**09 16 35.2**	**+0.7**
	25nm,0.3s,baz=273,slow=21,SNR=9.6						
JHJ				S	**Sn**	**09 17 24.8**	**-2.4**
	24nm,0.3s,baz=287,slow=19,SNR=3.5						
JHJ				LR	LR	09 17 54.5	
	comp=Z,67nm,21.7s,baz=80,slow=32						
USRK	**Ussuriysk Ar.**	**10.18**	**315**	P	**Pn**	**09 17 53.6**	**+1.8**
	0.3nm,0.3s,baz=114,slow=14,SNR=5.3						
KSRS	**Korea Array**	**11.13**	**275**	P	Pn	09 18 09.4	+4.6
	0.2nm,0.3s,baz=88,slow=14,SNR=4.4						
KLR	**Kul'dur**	**13.99**	**331**	P	**P**	**09 18 51.0**	**-0.8**
	0.2nm,0.3s,baz=125,slow=10.0,SNR=4.4						
KLR				LR	LR	09 23 48.8	
	comp=Z,66nm,20.3s,baz=340,slow=35						
PETK	**Petropavlovsk-**	**19.24**	**30**	P	**Pn**	**09 19 51.1**	**+0.3**
	baz=232,slow=11,SNR=2.4						
SEY	**Seymchan**	**26.43**	**11**	P	**P**	**09 21 03.2**	**+1.1**
	2.0nm,0.6s,baz=182,slow=11,SNR=7.1						
SONM	**Songino Array**	**27.95**	**303**	P	**P**	**09 21 16.6**	**+0.4**
	1.2nm,0.6s,baz=98,slow=9.4,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	**27.96**	**122**	T	T	09 50 43.6	
	baz=315,slow=75,SNR=169						
H11N1	**WAKE ISLAND Hy**	**27.97**	**122**	T	T	09 50 43.6	
	baz=315,slow=75,SNR=95						
H11N3	**WAKE ISLAND Hy**	**27.98**	**122**	T	T	09 50 44.3	
	baz=315,slow=75,SNR=100						
H11S1	**WAKE ISLAND Hy**	**28.69**	**124**	T	T	09 51 38.4	
	baz=316,slow=76,SNR=85						
H11S3	**WAKE ISLAND Hy**	**28.69**	**124**	T	T	09 51 36.4	
	baz=316,slow=76,SNR=68						
H11S2	**WAKE ISLAND Hy**	**28.71**	**124**	T	T	09 51 37.7	
	baz=316,slow=76,SNR=71						
ZALV	**Zalesovo Beam**	**42.01**	**312**	P	**P**	**09 23 16.9**	**+0.1**
	1.4nm,0.6s,baz=99,slow=4.9,SNR=4.1						
MKAR	**Makanchi Array**	**44.30**	**302**	P	**P**	**09 23 35.3**	**-0.2**
	1.6nm,0.7s,baz=83,slow=10,SNR=9.7						
ILAR	**Eielson Array**	**49.03**	**33**	P	**P**	**09 24 12.9**	**+0.6**
	0.9nm,0.7s,baz=263,slow=6.6,SNR=11						
BVAR	**Borovoye Array**	**50.67**	**312**	P	**P**	**09 24 25.0**	**+0.1**
	0.4nm,0.3s,baz=79,slow=7.6,SNR=3.3						
WRA	**Warramunga Arr**	**57.41**	**188**	P	**P**	**09 25 13.6**	**-0.7**
	1.1nm,0.5s,baz=358,slow=8.9,SNR=16						
ASAR	**Alice Springs**	**61.13**	**188**	P	**P**	**09 25 39.6**	**-0.4**
	0.5nm,0.6s,baz=14,slow=7.0,SNR=6.0						
FINES	**FINESS Array B**	**68.74**	**332**	P	**P**	**09 26 28.9**	**-0.2**
	2.0nm,0.7s,baz=65,slow=6.7,SNR=5.5						
NB2	**NORSAR Subarra**	**74.07**	**337**	P	**P**	**09 27 01.3**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.07**	**337**	P	**P**	**09 27 01.1**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=39,slow=5.9,SNR=4.4						
NOA				LR	LR	10 02 06.3	
	comp=Z,12nm,21.6s,baz=290,slow=38						
AKASG	**Malin Array Be**	**74.31**	**322**	P	**P**	**09 27 02.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=38,slow=4.3,SNR=2.4						
AKASG				LR	LR	10 00 59.9	
	comp=Z,29nm,18.8s,baz=305,slow=37						
NVAR	**Mina Array Bea**	**74.50**	**53**	P	**P**	**09 27 04.9**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=273,slow=4.9,SNR=3.6						
PDAR	**Pinedale Array**	**77.18**	**46**	P	**P**	**09 27 20.6**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=293,slow=3.4,SNR=2.3						

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*ISCJB **30** 09:16:16.2±0.5, 45°.63N±0°.03×17°.30E±0°.03, h5^{km}±4^{km},*
Error ellipse: s-maj=4.4km s-min=3.5km az=12.5
*SAR **30** 09:16:17.8±0.3, 45°.62N×17°.35E, h6^{km}±4^{km}, ML2.1/8*
*BEO **30** 09:16:23.1±0.4, 44°.16N×17°.64E, h0^{km}, ML2.0/3*
ISC 30 09:16:17.6±1.1, **45°.64N**±0°.03×**17°.28E**±0°.02, **h9**^{km}±10^{km},
n30, σ**1^{s}45**/45, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KALN	**Kalnik**	**0.76**	**311**	*i* Pg	**Pg**	**09 16 32.4**	**+0.2**
KALN				Sg	**Sg**	**09 16 42.2**	**+0.1**
BLY	**Banja Luka**	**0.89**	**184**	*e*Pg	**Pg**	**09 16 35.0**	**+0.3**
BLY				*e*Sg	**Sg**	**09 16 46.2**	**0.0**
BLY	**Banja Luka**	**0.89**	**184**	*i* Pg	**Pg**	**09 16 34.0**	**-0.7**
BLY				*e*Sg	**Sg**	**09 16 46.1**	**-0.1**
BEHE	**Becsehely**	**0.91**	**338**	*e*Pg	**Pg**	**09 16 35.1**	**+0.1**
BEHE				*e*Sg	**Sg**	**09 16 48.4**	**+1.6**
PTJ	**Puntijarka**	**0.95**	**287**	iPg	**Pg**	**09 16 34.8**	**-1.2**
PTJ				Sg	**Sg**	**09 16 49.1**	**+0.7**
MORH	**Mrgy, Hungar**	**1.12**	**58**	*e*Pg	**Pg**	**09 16 37.0**	**-2.0**
MORH				*e*Sg	**Sg**	**09 16 52.1**	**-1.4**
GCIS	**Gornji Cirnik**	**1.18**	**282**	*i* Pg	**Pg**	**09 16 39.6**	**-0.6**
MGRS	**Mrkonjic Grad**	**1.23**	**186**	*e*Pg	**Pg**	**09 16 39.7**	**-1.4**
MGRS				*e*Sg	**Sg**	**09 16 56.6**	**-0.4**
OZLJ	**Ozalj**	**1.27**	**270**	Sn	**Sb**	**09 16 56.8**	**-1.2**
CRES	**Cresnjev**	**1.29**	**279**	*e*Pg	**Pn**	**09 16 41.3**	**-0.5**
CRES				*e*Sg	**Sb**	**09 17 00.0**	**+1.3**
	comp=Z,9.0nm,0.3s						
CRES	**Cresnjev**	**1.29**	**279**	*e*Pg	**Pn**	**09 16 41.4**	**-0.4**
CRES				*e*Sg	**Sb**	**09 17 00.1**	**+1.4**
LEGS	**Legarje**	**1.41**	**284**	*i* Pg	**Pn**	**09 16 44.0**	**+0.6**
UDBI	**Udbina**	**1.54**	**225**	*e*Pn	**Pn**	**09 16 43.4**	**-1.9**
UDBI				Sn	**Sn**	**09 17 05.6**	**+0.1**
FRGS	**Fruska Gora**	**1.85**	**104**	*e*Pg	**Pg**	**09 16 56.8**	**+3.8**
FRGS				*e*Sg	**Sg**	**09 17 20.3**	**+3.3**
FRGS	**Fruska Gora**	**1.85**	**104**	*e*Pn	**Pn**	**09 16 48.8**	**-0.7**
FRGS				*e*Sn	**Sn**	**09 17 12.3**	**-0.7**
TEKS	**Tekeris**	**1.93**	**123**	*e*Pg	**Pn**	**09 16 49.1**	**-1.5**
TEKS	**Tekeris**	**1.93**	**123**	*e*Pn	**Pn**	**09 16 50.4**	**-0.2**
TEKS				*e*Sn	**Sn**	**09 17 14.7**	**-0.3**
HAPS	**Han Pijesak,BI**	**1.95**	**142**	*e*Pn	**Pn**	**09 16 50.8**	**-0.2**
HAPS				*e*Sn	**Sn**	**09 17 15.4**	**-0.3**
NVLJ	**Novalja**	**2.01**	**239**	*e*Pn	**Pn**	**09 16 50.4**	**-1.3**
MORI	**Morici**	**2.09**	**213**	*e*Pn	**Pn**	**09 16 53.0**	**+0.2**
MORI				Sn	**Sn**	**09 17 19.9**	**+1.0**
DUGI	**Dugi Otok**	**2.28**	**225**	*e*Pn	**Pn**	**09 16 55.1**	**-0.3**
DUGI				Sn	**Sn**	**09 17 24.9**	**+1.3**
ZIRJ	**Zirje**	**2.30**	**211**	*e*Pn	**Pn**	**09 16 55.4**	**-0.2**
BBLS	**Lazići**	**2.33**	**139**	*e*Pn	Pn	09 16 50.3	-5.8
BBLS	**Lazići**	**2.33**	**139**	*e*Pn	**Pn**	**09 16 55.4**	**-0.7**
MAKA	**Makarska**	**2.35**	**185**	*i* Pn	**Pn**	**09 16 56.4**	**0.0**
DIVS	**Divibare**	**2.47**	**128**	*e*Pn	**Pn**	**09 16 54.2**	**-3.9**
DIVS	**Divibare**	**2.47**	**128**	*e*Pn	**Pn**	**09 16 58.2**	**+0.1**
DIVS				*e*Sn	**Sn**	**09 17 28.3**	**0.0**
TRUS	**Trudelj**	**2.63**	**121**	*e*Pn	**Pn**	**09 16 56.6**	**-3.7**
DBRK	**Dubrovnik**	**3.03**	**168**	*e*Pn	**Pn**	**09 17 06.2**	**+0.5**
SELS	**Selova**	**3.66**	**130**	*e*Pn	Pn	09 17 07.2	-7.2

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*ISK **30** 09:17:53.9, 38°.89N×37°.81E, h5^{km}, ML2.0/6*
*DDA **30** 09:17:54.8, 38°.91N×37°.79E, h7^{km}±4^{km}, ML2.6*
*ISCJB **30** 09:17:55.7±0.5, 38°.91N±0°.03×37°.78E±0°.04, h7^{km}±5^{km},*
Error ellipse: s-maj=5.8km s-min=4.7km az=3.4
ISC 30 09:17:55.2±0.9, **38°.90N**±0°.04×**37°.77E**±0°.03, **h12**^{km}±8^{km},
n15, σ**0^{s}76**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.15**	**99**	*i* P	**Pg**	**09 17 58.4**	**-0.5**
HEKM				*i* S	**Sg**	**09 18 02.2**	**+0.7**
HEKM				IAML_P			
	comp=Z,41µm,0.3s						
DARE	**Darende-Malaty**	**0.40**	**215**	PG	**Pg**	**09 18 02.6**	**-0.6**
DARE				SG	**Sb**	**09 18 09.9**	**-0.4**
CUGUR	**Gurin_SVAS**	**0.43**	**246**	*i* P	**Pb**	**09 18 05.0**	**+0.2**
CUGUR				*i* S	**Sb**	**09 18 11.2**	**-0.1**
CUKAN	**kangal_SIVAS**	**0.48**	**330**	*i* P	**Pg**	**09 18 04.0**	**-0.7**
CUKAN				*i* S	**Sb**	**09 18 12.5**	**-0.2**
KEMA	**Kemaliye**	**0.67**	**57**	*i* P	**Pg**	**09 18 07.5**	**-0.7**
KEMA				IAML_P			
	comp=Z,707nm,0.2s						
CUALT	**Altinyayla-SIV**	**0.88**	**295**	*i* P	**Pg**	**09 18 11.3**	**-0.9**
CUZAR	**Zara_SIVAS**	**0.99**	**360**	*i* P	**Pn**	**09 18 15.1**	**+0.2**
ELZG	**Elazig**	**1.03**	**113**	*i* P	**Pb**	**09 18 14.2**	**-0.8**
ELZG				*i* S	**Sn**	**09 18 30.6**	**+0.7**
ELZG				IAML_P			
	comp=Z,708nm,0.2s						
SVSK	**Karacayir**	**1.18**	**330**	PN	**Pn**	**09 18 17.7**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.31**	**113**	PN	**Pb**	**09 18 19.4**	**-0.4**
BNN	**Bunyan**	**1.51**	**269**	PN	**Pg**	**09 18 23.7**	**-0.4**
RSDY	**Resadiye-TOKAT**	**1.53**	**347**	PN	**Pg**	**09 18 23.8**	**-0.8**
KMRS	**Kahramanmaras**	**1.56**	**207**	PN	**Pb**	**09 18 23.8**	**-0.1**
KELT	**Kelkit**	**1.69**	**42**	*i* P	**Pg**	**09 18 26.9**	**-0.8**
KELT				*i* S	**Sg**	**09 18 51.6**	**+1.9**
KELT				IAML_P			
	comp=Z,515nm,0.2s						
YOZ	**Yozgat**	**2.04**	**292**	PN	**Pb**	**09 18 32.0**	**-0.3**

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*ISCJB **30** 09:25:17.3±0.3, 40°.30N±0°.02×25°.80E±0°.02, h6^{km}±3^{km},*
Error ellipse: s-maj=3.2km s-min=2.5km az=157.1
*ISK **30** 09:25:17.1, 40°.31N×25°.80E, h8^{km}, ML2.5/12*
*DDA **30** 09:25:17.8, 40°.28N×25°.89E, h8^{km}±3^{km}, ML2.9*
*ATH **30** 09:25:17.1, 40°.32N×25°.77E, h25^{km}±2^{km}, ML2.0/3, Error*
ellipse: s-maj=2.7km s-min=1.0km az=312.0
*THE **30** 09:25:17.5, 40°.30N×25°.80E, h10^{km}±1^{km}, ML2.1/8, Error*
ellipse: s-maj=1.2km s-min=0.5km az=62.0
ISC 30 09:25:17.4±0.8, **40°.30N**±0°.02×**25°.79E**±0°.02, **h13**^{km}±5^{km},
n47, σ**0^{s}55**/77, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.14**	**142**	PG	**Pg**	**09 25 20.8**	**-0.1**
GADA				SG	**Sg**	**09 25 23.2**	**-0.2**
GADA	**Gvkgeada**	**0.14**	**142**	P	**Pg**	**09 25 20.9**	**0.0**
GADA				S	**Sg**	**09 25 23.0**	**-0.4**
SMTH	**Samothraki Isl**	**0.26**	**311**	P	**Pg**	**09 25 23.3**	**+0.5**
SMTH				S	**Sg**	**09 25 27.2**	**+0.7**
	2µm,0.2s						
SMTH	**Samothraki Isl**	**0.26**	**311**	P	**Pg**	**09 25 23.3**	**+0.5**
SMTH				S	**Sg**	**09 25 27.3**	**+0.8**
BOZC	**Bozcaada**	**0.50**	**156**	PG	**Pg**	**09 25 27.3**	**0.0**
BOZC	**Bozcaada**	**0.50**	**156**	*i* P	**Pg**	**09 25 27.6**	**+0.3**
BOZC				*i* S	**Sg**	**09 25 34.1**	**+0.2**
BOZC				IAML_P			
	comp=Z,4µm,0.1s						
ENEZ	**Enez**	**0.52**	**33**	PG	**Pg**	**09 25 27.5**	**-0.1**
ENEZ				SG	**Sg**	**09 25 34.8**	**+0.3**
LIA	**Limnos Island**	**0.61**	**229**	P	**Pg**	**09 25 29.6**	**+0.3**
LIA				S	**Sb**	**09 25 38.6**	**+0.2**
	comp=Z,175nm,0.3s						
LIA	**Limnos Island**	**0.61**	**229**	P	**Pg**	**09 25 29.7**	**+0.3**
ALN	**Alexandroupoli**	**0.63**	**18**	P	**Pg**	**09 25 29.4**	**-0.2**
ALN				S	**Sg**	**09 25 38.3**	**+0.4**
	comp=Z,98nm,0.3s						
ALN	**Alexandroupoli**	**0.63**	**18**	P	**Pg**	**09 25 29.5**	**-0.2**
ALN				S	**Sg**	**09 25 38.3**	**+0.4**
ALN				AML	AML	09 25 38.7	
	comp=N,184µm,0.4s						
ALN				AML	AML	09 25 41.5	
	comp=E,197µm,0.2s						
EZN	**Ezine**	**0.63**	**139**	PG	**Pg**	**09 25 29.2**	**-0.5**
EZN	**Ezine**	**0.63**	**139**	P	**Pg**	**09 25 29.1**	**-0.6**
EZN				S	**Sg**	**09 25 37.5**	**-0.5**
LPK	**Lapseki**	**0.75**	**84**	PG	**Pg**	**09 25 31.5**	**-0.4**
LPK				SG	**Sb**	**09 25 42.4**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.81**	**133**	*i* P	**Pg**	**09 25 33.1**	**+0.1**
BAYC				*i* S	**Sb**	**09 25 44.0**	**-0.1**
KESN	**Edirne-Kesan**	**0.86**	**52**	*i* P	**Pb**	**09 25 34.7**	**+0.3**
KESN				*i* S	**Sb**	**09 25 45.9**	**-0.1**
KESN				IAML_P			
	comp=Z,862nm,0.1s						
RDO	**Rodhopi**	**0.86**	**348**	PG	**Pg**	**09 25 34.0**	**-0.2**
RDO				SG	**Sb**	**09 25 46.4**	**+0.7**
RDO	**Rodhopi**	**0.86**	**348**	P	**Pg**	**09 25 33.9**	**-0.2**
RDO				S	**Sb**	**09 25 46.0**	**+0.3**
	comp=Z,70nm,0.2s						
RDO	**Rodhopi**	**0.86**	**348**	P	**Pg**	**09 25 34.0**	**-0.2**
RDO				S	**Sb**	**09 25 45.8**	**0.0**
THAS	**Thassos island**	**0.87**	**291**	P	**Pg**	**09 25 33.9**	**-0.3**
THAS				S	**Sb**	**09 25 46.6**	**+0.8**
	comp=Z,68nm,0.2s						
THAS	**Thassos island**	**0.87**	**291**	P	**Pg**	**09 25 33.9**	**-0.3**
THAS				S	**Sb**	**09 25 45.9**	**+0.1**
THAS				AML	AML	09 25 48.2	
	comp=N,146µm,0.2s						
THAS				AML	AML	09 25 50.3	
	comp=E,120µm,0.3s						
GPNR	**Gulpinar-Canak**	**0.89**	**162**	PG	**Pb**	**09 25 34.7**	**+0.1**
EFSA	**Agios Efstrati**	**0.98**	**219**	P	**Pn**	**09 25 37.3**	**+0.6**
SIGR	**SIGRI**	**1.09**	**177**	P	**Pb**	**09 25 37.6**	**-0.4**
SIGR				S	**Sn**	**09 25 53.4**	**+0.2**
	comp=E,422nm,0.4s						
SIGR	**SIGRI**	**1.09**	**177**	P	**Pb**	**09 25 37.7**	**-0.4**
SIGR				S	**Sn**	**09 25 53.3**	**+0.2**
SIGR				AML	AML	09 25 54.0	
	comp=N,1113µm,0.4s						
SIGR				AML	AML	09 25 56.1	
	comp=E,554µm,0.3s						
PRK	**Paraskevi**	**1.12**	**160**	P	**Pb**	**09 25 38.6**	**+0.1**
PRK				S	**Sn**	**09 25 54.4**	**+0.5**
	comp=E,252nm,0.5s						
PRK	**Paraskevi**	**1.12**	**160**	P	**Pg**	**09 25 39.4**	**+0.5**
PRK				S	**Sn**	**09 25 54.2**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.13**	**70**	PN	**Pb**	**09 25 37.9**	**-0.9**
RKY				SN	**Sn**	**09 25 54.8**	**+0.5**
SART	**Tekirdag**	**1.13**	**70**	*i* P	**Pb**	**09 25 38.1**	**-0.8**
SART				*i* S	**Sg**	**09 25 54.1**	**+0.1**
SART				IAML_P			
	comp=Z,2µm,0.1s						
KAVA	**Kavala**	**1.19**	**306**	P	**Pg**	**09 25 40.2**	**-0.1**
KAVA				S	**Sg**	**09 25 55.8**	**0.0**
	comp=Z,52nm,0.2s						
KAVA	**Kavala**	**1.19**	**306**	P	**Pn**	**09 25 39.6**	**-0.1**
KAVA				S	**Sb**	**09 25 55.2**	**+0.1**
AYVA	**Ayvalik**	**1.21**	**145**	*i* P	**Pg**	**09 25 41.0**	**+0.3**
AYVA				*i* S	**Sg**	**09 25 56.8**	**+0.3**
KDZ	**Kurdzhali**	**1.38**	**348**	PN	**Pb**	**09 25 42.9**	**-0.1**
OUR	**Ouranopolis**	**1.38**	**272**	P	**Pn**	**09 25 41.9**	**-0.4**
OUR	**Ouranopolis**	**1.38**	**272**	P	**Pn**	**09 25 41.8**	**-0.5**
MRMT	**Marmara Adasi**	**1.41**	**77**	PN	**Pn**	**09 25 42.2**	**-0.6**
GONE	**Gonen-Balikesi**	**1.48**	**99**	PN	**Pn**	**09 25 43.9**	**+0.3**
TKR	**Tekirdag**	**1.50**	**62**	PN	**Pb**	**09 25 44.6**	**-0.4**
EDC	**Edincik**	**1.59**	**88**	PN	**Pb**	**09 25 46.1**	**-0.5**
ZEDA	**zmir-Bergama**	**1.67**	**143**	*i* P	**Pn**	**09 25 44.6**	**-1.6**
ZEDA				*i* S	**Sb**	**09 26 08.5**	**-0.2**
ZEDA				IAML_P			
	comp=Z,292nm,0.1s						
EDRB	**Edirne**	**1.71**	**25**	PN	**Pn**	**09 25 47.5**	**+0.7**
KIRK	**Kırklareli**	**1.78**	**33**	*i* P	**Pb**	**09 25 49.1**	**-0.8**
KIRK				*i* S	**Sb**	**09 26 13.1**	**+1.0**
KIRK				IAML_P			
	comp=Z,178nm,0.1s						
CHOS	**Chios island**	**1.92**	**174**	P	**Pn**	**09 25 50.1**	**+0.3**
KCTX	**Karacabey (Bur**	**1.97**	**90**	PN	**Pn**	**09 25 51.1**	**+0.7**
URLA	**Izmir**	**2.04**	**162**	PN	**Pn**	**09 25 51.9**	**+0.5**
DURS	**Dursunbey**	**2.18**	**108**	*i* P	**Pn**	**09 25 54.5**	**+1.1**
DURS				*i* S	**Sb**	**09 26 23.6**	**-0.1**
DURS				IAML_P			
	comp=Z,274nm,0.1s						
STIP	**Stip**	**3.06**	**298**	*i* Pn	**Pb**	**09 26 09.1**	**-2.5**

ISC 30 09:26:56.5±1.4, **49°.56N**±0°.04×**17°.51E**±0°.06, **h2**^{km}±16^{km},
n9, σ**0^{s}61**/15, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.22**	**5**	*e*PG	**Pg**	**09 27 00.6**	**-0.1**
MORC				*e*SG	**Sg**	**09 27 03.9**	**+0.3**
VRAC	**Vranov**	**0.65**	**247**	*e*PG	**Pg**	**09 27 09.1**	**+0.1**
VRAC				*e*SG	**Sg**	**09 27 17.7**	**+0.3**
JAVC	**Velka Javorina**	**0.71**	**172**	*e*PG	**Pb**	**09 27 11.7**	**0.0**
KRUC	**Moravsky**	**0.89**	**236**	*e*PG	**Pg**	**09 27 13.6**	**+0.1**
KOLL	**Kolacno**	**1.14**	**149**	*e*PG	**Pn**	**09 27 20.0**	**+0.4**
KOLL				*e*SG	**Sn**	**09 27 35.3**	**-0.5**
LANS	**Liptovska Anna**	**1.34**	**107**	*e*PG	**Pn**	**09 27 21.8**	**-0.6**
LANS				*e*SG	**Sn**	**09 27 42.1**	**+1.3**
LANS				*e*LG	Lg	09 27 45.1	
VYHS	**Vyhne**	**1.38**	**140**	*e*PG	**Pn**	**09 27 22.0**	**-0.8**
VYHS				*e*SG	**Sb**	**09 27 41.1**	**0.0**
KSP	**Ksiaz**	**1.50**	**329**	*e*Pg	**Pn**	**09 27 24.5**	**-0.1**
KSP				*e*Sg	**Sg**	**09 27 45.2**	**+0.4**
CLL	**Collm**	**3.37**	**303**	*e*Sg	**Sg**	**09 28 44.0**	**-0.8**

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*DDA **30** 09:48:17.1, 40°.31N×25°.80E, h26^{km}±1^{km}, ML3.2*
*ISK **30** 09:48:17.9, 40°.30N×25°.82E, h7^{km}, ML3.0/17*
*ATH **30** 09:48:17.9, 40°.33N×25°.77E, h28^{km}±1^{km}, ML2.6/6, Error*
ellipse: s-maj=2.5km s-min=1.0km az=296.0
*ISCJB **30** 09:48:18.2±0.3, 40°.31N±0°.02×25°.81E±0°.02, h8^{km}±3^{km},*
Error ellipse: s-maj=3.2km s-min=2.3km az=147.0
*THE **30** 09:48:18.2, 40°.31N×25°.83E, h11^{km}, ML2.4/6, Error*
ellipse: s-maj=1.0km s-min=0.4km az=78.0
*SOF **30** 09:48:19.1, 40°.41N×25°.74E, h8^{km}*
*BEO **30** 09:48:27.8±1.0, 40°.70N×25°.63E, h20^{km}, ML2.6/5*
ISC 30 09:48:18.4±0.8, **40°.29N**±0°.02×**25°.81E**±0°.02, **h13**^{km}±5^{km},
n77, σ**0^{s}96**/108, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.12**	**146**	PG	**Pg**	**09 48 21.6**	**-0.1**
GADA				SG	**Sg**	**09 48 23.5**	**-0.5**
GADA	**Gvkgeada**	**0.12**	**146**	P	**Pg**	**09 48 21.6**	**-0.1**
GADA				S	**Sg**	**09 48 23.8**	**-0.2**
SMTH	**Samothraki Isl**	**0.28**	**310**	P	**Pg**	**09 48 24.1**	**0.0**
SMTH				S	**Sg**	**09 48 28.1**	**0.0**
	4µm,0.1s						
SMTH	**Samothraki Isl**	**0.28**	**310**	P	**Pg**	**09 48 24.2**	**0.0**
SMTH				AML	AML	09 48 28.2	
	comp=E,5897µm,0.1s						
SMTH				S	**S**	**09 48 28.3**	**+0.2**
SMTH				AML	AML	09 48 28.5	
	comp=N,7892µm,0.1s						
BOZC	**Bozcaada**	**0.49**	**157**	PG	**Pg**	**09 48 28.0**	**0.0**
BOZC	**Bozcaada**	**0.49**	**157**	*i* P	**Pb**	**09 48 28.7**	**-0.1**
BOZC				*i* S	**Sb**	**09 48 35.4**	**-0.5**
ENEZ	**Enez**	**0.51**	**31**	PG	**Pg**	**09 48 28.3**	**-0.2**
ENEZ				SG	**Sg**	**09 48 35.8**	**+0.4**
EZN	**Ezine**	**0.61**	**140**	PG	**Pg**	**09 48 29.9**	**-0.4**
EZN	**Ezine**	**0.61**	**140**	P	**Pg**	**09 48 29.8**	**-0.5**
EZN				S	**Sg**	**09 48 38.2**	**-0.3**
LIA	**Limnos Island**	**0.62**	**231**	P	**Pg**	**09 48 30.3**	**-0.2**
LIA				S	**Sb**	**09 48 39.9**	**+0.2**
	comp=N,490nm,0.3s						
LIA	**Limnos Island**	**0.62**	**231**	P	**Pg**	**09 48 30.2**	**-0.2**
LIA				S	**Sb**	**09 48 39.7**	**0.0**
LIA				AML	AML	09 48 42.2	
	comp=N,1095µm,0.3s						
LIA				AML	AML	09 48 43.0	
	comp=E,1080µm,0.4s						
ALN	**Alexandroupoli**	**0.63**	**17**	PG	**Pg**	**09 48 30.3**	**-0.4**
ALN	**Alexandroupoli**	**0.63**	**17**	P	**Pg**	**09 48 30.2**	**-0.4**
ALN				S	**Sg**	**09 48 38.4**	**-0.6**
	comp=E,208nm,0.4s						
ALN	**Alexandroupoli**	**0.63**	**17**	P	**Pg**	**09 48 30.2**	**-0.4**
ALN				S	**Sg**	**09 48 39.4**	**+0.4**
ALN				AML	AML	09 48 42.4	
	comp=E,415µm,0.3s						
ALN				AML	AML	09 48 43.8	
	comp=N,322µm,0.2s						
LPK	**Lapseki**	**0.73**	**84**	PG	**Pg**	**09 48 32.3**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.79**	**134**	*i* P	**Pg**	**09 48 33.4**	**-0.4**
BAYC				*i* S	**Sb**	**09 48 45.5**	**+0.9**
KESN	**Edirne-Kesan**	**0.85**	**51**	*i* P	**Pg**	**09 48 34.3**	**-0.6**
KESN				*i* S	**Sb**	**09 48 46.8**	**+0.1**
RDO	**Rodhopi**	**0.88**	**347**	PG	**Pg**	**09 48 34.7**	**-0.6**
RDO	**Rodhopi**	**0.88**	**347**	P	**Pg**	**09 48 34.7**	**-0.6**
RDO				S	**Sg**	**09 48 46.6**	**-0.2**
	comp=N,302nm,0.3s						
RDO	**Rodhopi**	**0.88**	**347**	P	**Pg**	**09 48 34.7**	**-0.6**
RDO				S	**Sg**	**09 48 46.5**	**-0.2**
RDO				AML	AML	09 48 51.1	
	comp=E,754µm,0.3s						
RDO				AML	AML	09 48 51.6	
	comp=N,547µm,0.2s						
THAS	**Thassos island**	**0.89**	**291**	P	**Pg**	**09 48 34.9**	**-0.7**
THAS				S	**Sb**	**09 48 48.0**	**+0.7**
	comp=N,268nm,0.1s						
THAS	**Thassos island**	**0.89**	**291**	P	**Pg**	**09 48 34.8**	**-0.7**
THAS				AML	AML	09 48 49.3	
	comp=N,602µm,0.2s						
THAS				AML	AML	09 48 51.3	
	comp=E,592µm,0.3s						
EFSA	**Agios Efstrati**	**0.98**	**220**	P	**Pn**	**09 48 38.3**	**+0.5**
EFSA				S	**Sn**	**09 48 51.6**	**+0.1**
SIGR	**SIGRI**	**1.08**	**178**	PN	**Pb**	**09 48 39.1**	**+0.2**
SIGR	**SIGRI**	**1.08**	**178**	P	**Pg**	**09 48 38.4**	**-0.8**
SIGR				S	**Sn**	**09 48 54.0**	**0.0**
SIGR	**SIGRI**	**1.08**	**178**	P	**Pg**	**09 48 38.5**	**-0.7**
SIGR				S	**Sn**	**09 48 54.4**	**+0.4**
PRK	**Paraskevi**	**1.11**	**161**	P	**Pn**	**09 48 40.4**	**+0.9**
PRK				S	**Sn**	**09 48 55.2**	**+0.6**
PRK				AML	AML	09 48 57.0	
	comp=E,1833µm,0.5s						
PRK				AML	AML	09 48 57.3	
	comp=N,1887µm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.12**	**69**	PN	**Pg**	**09 48 38.9**	**-1.0**
AYVA	**Ayvalik**	**1.20**	**145**	*i* P	**Pn**	**09 48 41.6**	**+0.8**
AYVA				*i* S	**Sn**	**09 48 57.0**	**+0.2**
KAVA	**Kavala**	**1.21**	**306**	P	**Pb**	**09 48 40.7**	**-0.4**
KAVA				S	**Sb**	**09 48 57.0**	**+0.4**
	comp=N,165nm,0.1s						
KAVA	**Kavala**	**1.21**	**306**	P	**Pb**	**09 48 40.6**	**-0.5**
KDZ	**Kurdzhali**	**1.39**	**348**	PN	**Pn**	**09 48 43.8**	**+0.4**
KDZ	**Kurdzhali**	**1.39**	**348**	P	**Pn**	**09 48 42.9**	**-0.5**
OUR	**Ouranopolis**	**1.40**	**272**	P	**Pn**	**09 48 42.7**	**-0.8**
OUR	**Ouranopolis**	**1.40**	**272**	P	**Pn**	**09 48 42.7**	**-0.8**
MRMT	**Marmara Adasi**	**1.40**	**77**	PN	**Pn**	**09 48 43.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.46**	**99**	PN	**Pb**	**09 48 45.2**	**-0.2**
DKL	**Dikili**	**1.49**	**145**	PN	**Pb**	**09 48 45.6**	**-0.2**
EDC	**Edincik**	**1.57**	**87**	PN	**Pn**	**09 48 46.7**	**+0.8**
RZN	**Rozhen**	**1.62**	**330**	P	**Pg**	**09 48 49.0**	**-0.5**
ZEDA	**zmir-Bergama**	**1.65**	**143**	*i* P	**Pn**	**09 48 45.2**	**-1.8**
ZEDA				*i* S	**Sg**	**09 49 10.4**	**-1.0**
ZEDA				IAML_P			
	comp=Z,772nm,0.1s						
EDRB	**Edirne**	**1.71**	**24**	PN	**Pn**	**09 48 48.9**	**+1.1**
BALB	**Balikesir**	**1.72**	**112**	PN	**Pn**	**09 48 48.5**	**+0.5**
FOCM	**Foa**	**1.73**	**155**	PN	**Pn**	**09 48 49.2**	**+1.1**
STEP	**BALIKESIR_Sava**	**1.73**	**121**	*i* P	**Pn**	**09 48 49.1**	**+0.9**
DIM	**Dimitrovgrad**	**1.77**	**353**	P	**Pn**	**09 48 48.7**	**+0.1**
KIRK	**Kırklareli**	**1.78**	**33**	*i* P	**Pn**	**09 48 49.3**	**+0.5**
KIRK				IAML_P			
	comp=Z,923nm,0.2s						
NVR	**Nevrokopi**	**1.81**	**306**	P	**Pn**	**09 48 49.0**	**-0.3**
SRS	**Serrai**	**1.87**	**297**	*e*Pg	**Pg**	**09 48 57.3**	**+3.0**
SRS				*e*Sg	**Sg**	**09 49 18.6**	**-0.1**
SRS	**Serrai**	**1.87**	**297**	P	**Pn**	**09 48 49.6**	**-0.5**
SRS	**Serrai**	**1.87**	**297**	P	**Pn**	**09 48 49.3**	**-0.9**
CHOS	**Chios island**	**1.91**	**174**	PN	**Pn**	**09 48 51.1**	**+0.4**
CHOS	**Chios island**	**1.91**	**174**	P	**Pn**	**09 48 50.9**	**+0.2**
CHOS	**Chios island**	**1.91**	**174**	P	**Pn**	**09 48 50.6**	**-0.1**
KCTX	**Karacabey (Bur**	**1.95**	**90**	PN	**Pn**	**09 48 51.9**	**+0.7**
PLD	**Plovdiv**	**1.99**	**336**	PN	**Pn**	**09 48 52.6**	**+0.9**
PLD	**Plovdiv**	**1.99**	**336**	*e*Pg	**Pg**	**09 48 56.4**	**-0.2**
PLD				*e*Sg	**Sn**	**09 49 17.6**	**+1.1**
PLD	**Plovdiv**	**1.99**	**336**	P	**Pb**	**09 48 55.6**	**+1.2**
URLA	**Izmir**	**2.03**	**162**	PN	**Pn**	**09 48 52.3**	**+0.1**
URLA	**Izmir**	**2.03**	**162**	*i* P	**Pn**	**09 48 52.6**	**+0.4**
URLA				*i* S	**Sn**	**09 49 16.9**	**-0.4**
URLA				IAML_P			
	comp=Z,1µm,0.2s						
MMB	**Musomiste**	**2.04**	**310**	P	**Pn**	**09 48 52.1**	**-0.3**
HORT	**Hortiatis**	**2.09**	**279**	PN	**Pn**	**09 48 54.7**	**+1.6**
BLCB	**Balcova**	**2.13**	**153**	PN	**Pn**	**09 48 54.9**	**+1.3**
DURS	**Dursunbey**	**2.16**	**108**	*i* P	**Pn**	**09 48 55.0**	**+0.8**
DURS				*i* S	**Sg**	**09 49 27.5**	**-0.4**
KNT	**Kendrikon**	**2.38**	**292**	P	**Pn**	**09 48 56.6**	**-0.3**
DGB	**zmir**	**2.39**	**159**	*i* P	**Pn**	**09 48 57.9**	**+0.8**
ULDT	**Uludag**	**2.55**	**92**	*i* P	**Pn**	**09 49 00.2**	**+0.6**
ULDT				*i* S	**Sg**	**09 49 38.9**	**-1.5**
ULDT				IAML_P			
	comp=Z,242nm,0.1s						
DEMI	**Demirci**	**2.57**	**118**	*i* P	**Pn**	**09 49 01.4**	**+1.6**
DEMI				IAML_P			
	comp=Z,374nm,0.1s						
BUY	**Buyukada**	**2.58**	**76**	*i* P	**Pn**	**09 49 01.2**	**+1.4**
BUY				IAML_P			
	comp=Z,220nm,0.3s						
KKB	**Krupnik**	**2.59**	**308**	P	**Pn**	**09 49 00.5**	**+0.5**
VAY	**Valandovo**	**2.66**	**294**	*e*Pn	**Pb**	**09 49 05.7**	**-0.2**
USAK	**Uak-Merkez**	**2.94**	**121**	*i* P	**Pn**	**09 49 06.5**	**+1.7**
VTS	**Vitosha**	**3.02**	**321**	*e*Pn	**Pb**	**09 49 09.9**	**-2.2**
VTS				*e*Sn	**Sn**	**09 49 40.2**	**-1.9**
VTS	**Vitosha**	**3.02**	**321**	P	**Pn**	**09 49 08.3**	**+2.3**
STIP	**Stip**	**3.08**	**298**	*i* Pn	**Pn**	**09 49 05.2**	**-1.5**
ZAPS	**Zavoj**	**3.81**	**322**	*e*Pn	**Pn**	**09 49 19.6**	**+2.9**
ZAPS				*e*Sn	**Sn**	**09 49 59.8**	**-1.5**
BARS	**Barje**	**3.92**	**311**	*e*Pn	**Pn**	**09 49 21.5**	**+3.3**
BARS				*e*Sn	**Sn**	**09 50 01.8**	**-2.1**

UCR 30 09:54:42.9±1.0, **9°.53N**×**84°.39W**, **h29**^{km}±6^{km}, **MW3.7,**
5C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.44**	**61**	⇓*i*P	Pb	09 54 52.3	-0.1
LCR2				*e*S	Sb	09 54 59.6	+0.6
CVTR	**Volcan Turrial**	**0.79**	**52**	⇓*i*P	Pb	09 54 58.1	-0.3
CVTR				*e*S	Sn	09 55 09.8	+0.2
EDLM	**Las Mercedes**	**0.83**	**107**	*e*P	Pn	09 54 58.3	-0.4
EDLM				*e*S	Sn	09 55 10.2	+0.3
JTS	**Las Juntas de**	**0.94**	**324**	⇑*i*P	Pn	09 54 59.9	-0.3
ARE1	**Arenal 1**	**0.98**	**341**	⇑*i*P	Pb	09 55 01.3	-0.1
CEDE	**Laguna Cedeo**	**1.00**	**342**	⇑*e*P	Pb	09 55 01.7	-0.1
EDPN	**Palmar Norte**	**1.08**	**121**	*e*P	Pn	09 55 01.8	-0.2
DRK0	**Durika**	**1.16**	**103**	⇓*e*P	Pn	09 55 03.2	-0.1
EDSV	**San Vito**	**1.56**	**117**	*e*P	Pn	09 55 09.4	+0.5
BUEV	**Buena Vista**	**1.61**	**322**	*e*P	Pn	09 55 09.6	0.0
ACON	**Acoyapa**	**2.55**	**342**	⇑*i*P	Pn	09 55 22.5	+0.2
ESPN	**Las Esperanzas**	**2.65**	**2**	⇑*i*P	Pn	09 55 24.2	+0.5

ISC 30 09:59:21.3±1.0,**48°.71N**±0°.05×**18°.04E**±0°.03,**h15**^{km}±8^{km},
n11,σ**0**^{s}.**45**/16,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	**Kolacno**	**0.28**	**118**	*e*PG	**Pg**	**09 59 27.1**	**-0.1**
KOLL				*e*SG	**Sb**	**09 59 32.3**	**-0.2**
JAVC	**Velka Javorina**	**0.28**	**302**	*e*PG	**Pg**	**09 59 26.9**	**-0.5**
JAVC				*e*SG	**Sg**	**09 59 31.9**	**+0.3**
SMOL	**Smolenice**	**0.45**	**244**	*e*SG	**Sn**	**09 59 40.0**	**-1.0**
VYHS	**Vyhne**	**0.57**	**112**	*e*PG	**Pg**	**09 59 32.3**	**-0.3**
VYHS				*e*SG	**Sg**	**09 59 40.6**	**+0.3**
MODS	**Modra-Piesok**	**0.61**	**237**	*e*PG	**Pg**	**09 59 33.7**	**+0.5**
MODS				*e*SG	**Sn**	**09 59 44.6**	**-0.3**
MODS				*e*LG	Lg	09 59 48.1	
LANS	**Liptovska Anna**	**1.04**	**64**	*e*PG	**Pb**	**09 59 41.2**	**+0.1**
LANS				*e*SG	**Sn**	**09 59 56.0**	**+0.2**
LANS				*e*LG	Lg	09 59 59.2	
MORC	**Moravsky Berou**	**1.12**	**343**	*e*PG	**Pb**	**09 59 41.9**	**-0.4**
MORC				*e*SG	**Sb**	**09 59 56.8**	**+0.1**
MORC	**Moravsky Berou**	**1.12**	**343**	*e*PG		10 12 30.3	
VRAC	**Vranov**	**1.12**	**303**	*e*PG	**Pn**	**09 59 42.8**	**+0.3**
VRAC				*e*SG	**Sn**	**09 59 58.0**	**+0.3**
VRAC	**Vranov**	**1.12**	**303**	*e*PG		10 12 32.7	
VRAC				*e*SG		10 12 46.9	
KRUC	**Moravsky**	**1.14**	**289**	*e*PG	**Pg**	**09 59 43.4**	**+0.1**

IDC ***30*** *10:16:11.8±1.6, 61°.44N×151°.53W, h58*^{km}*±19*^{km}*, mb3.2/3, mb1 3.7/7, mb1mx3.2/55, mbtmp3.6/7, ML3.6/4, Error ellipse: s-maj=24.6km s-min=9.6km az=110.0*
ISCJB ***30*** *10:16:12.6±0.2, 61°.47N±0°.01×151°.41W±0°.03, h97*^{km}*±3*^{km}*, mb3.4/3, Error ellipse: s-maj=2.7km s-min=2.4km az=30.2*
AEIC ***30*** *10:16:14.8, 61°.47N×151°.47W, h82*^{km}*, ML3.5*
NEIC ***30*** *10:16:14.8±0.0, 61°.47N×151°.47W, h82*^{km}*, ML3.5(AEIC), After AEIC.*
ISC 30 10:16:14.2±0.8,**61°.47N**±0°.03×**151°.45W**±0°.04,**h89**^{km}±7^{km},
n103,σ**1**^{s}.**44**/164,**mb3.2**/3,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUA	**Susitna One**	**0.34**	**90**	*e*Pn	**Pn**	**10 16 28.0**	**+0.2**
SUA				*e*Sn	**Sn**	**10 16 38.0**	**+0.1**
SPU	**Mount Spurr**	**0.41**	**226**	*e*Pn	**Pn**	**10 16 27.4**	**-0.7**
SPU				*e*Sn	**Sn**	**10 16 37.5**	**-1.0**
SKT	**Skwentna**	**0.52**	**356**	*e*Pn	**Pn**	**10 16 28.3**	**-0.6**
SKT				*e*Sn	**Sn**	**10 16 39.1**	**-0.8**
SPWE	**Spurr West**	**0.57**	**251**	*e*Pn	**Pn**	**10 16 28.9**	**-0.5**
RC01	**Rabbit Creek A**	**0.91**	**114**	*e*Pn	**Pn**	**10 16 32.6**	**-0.1**
RC01				*e*Sn	**Sn**	**10 16 47.1**	**+0.5**
RDJH	**Redoubt Jeurge**	**1.10**	**217**	*e*Pn	**Pn**	**10 16 34.6**	**-0.4**
PMR	**Palmer**	**1.12**	**82**	*e*Pn	**Pn**	**10 16 34.8**	**-0.3**
PMR				*e*Sn	**Sn**	**10 16 50.4**	**-0.3**
RSO	**Redoubt South**	**1.19**	**213**	*e*Pn	**Pn**	**10 16 35.7**	**-0.5**
KNK	**Knik Glacier**	**1.44**	**91**	*e*Pn	**Pn**	**10 16 38.8**	**-0.2**
KNK				*e*Sn	**Sn**	**10 16 58.0**	**+0.1**
PPLA	**Purkeypile**	**1.48**	**347**	*e*Pn	**Pn**	**10 16 39.3**	**-0.3**
PPLA				*e*Sn	**Sn**	**10 16 59.1**	**+0.2**
SML	**Sawmill**	**1.53**	**76**	*e*Pn	**Pn**	**10 16 39.7**	**-0.5**
SML				*e*Sn	**Sn**	**10 16 59.5**	**-0.4**
IVE	**Iliamna Volcan**	**1.64**	**209**	*e*Pn	**Pn**	**10 16 41.6**	**-0.2**
SEW	**Seward**	**1.68**	**143**	*e*Pn	**Pn**	**10 16 41.9**	**-0.2**
SEW				*e*Sn	**Sn**	**10 17 03.4**	**+0.1**
ILS	**Iliamna Low So**	**1.71**	**208**	*e*Pn	**Pn**	**10 16 42.7**	**+0.1**
BRLK	**Bradley Lake**	**1.73**	**170**	*e*Pn	**Pn**	**10 16 42.7**	**-0.1**
HUR	**Hurricane**	**1.74**	**28**	*e*Pn	**Pn**	**10 16 42.8**	**-0.1**
HOM	**Homer**	**1.82**	**183**	*e*Pn	**Pn**	**10 16 44.5**	**+0.6**
CNPM	**China Poot**	**1.95**	**177**	*e*Pn	**Pn**	**10 16 45.2**	**-0.4**
CAST	**Castle Rocks**	**1.98**	**352**	*e*Pn	**Pn**	**10 16 45.5**	**-0.5**
CAST				*e*Sn	**Sn**	**10 17 09.9**	**-0.4**
SCM	**Sheep Creek Mo**	**2.00**	**78**	*e*Pn	**Pn**	**10 16 45.9**	**-0.5**
SCM				*e*Sn	**Sn**	**10 17 11.2**	**+0.3**
SVW2	**Sparrevohn**	**2.03**	**261**	*e*Pn	**Pn**	**10 16 46.1**	**-0.6**
SVW2				*e*Sn	**Sn**	**10 17 11.1**	**-0.4**
KTH	**Kantishna Hill**	**2.11**	**6**	*e*Pn	**Pn**	**10 16 47.7**	**0.0**
KTH				*e*Sn	**Sn**	**10 17 12.5**	**-0.9**
GLI	**Glacier Island**	**2.19**	**104**	*e*Pn	**Pn**	**10 16 47.4**	**-1.4**
GLI				*e*Sn	**Sn**	**10 17 14.2**	**-1.1**
RND	**Reindeer**	**2.29**	**31**	*e*Pn	**Pn**	**10 16 49.8**	**-0.4**
RND				*e*Sn	**Sn**	**10 17 12.7**	**-5.0**
AUH	**Augustine H**	**2.33**	**206**	*e*Pn	**Pn**	**10 16 51.3**	**+0.6**
AUW	**Augustine West**	**2.33**	**206**	*e*Pn	**Pn**	**10 16 51.0**	**+0.4**
JPK	**Jack Peak**	**2.38**	**98**	*e*Pn	**Pn**	**10 16 50.3**	**-1.0**
VMT	**TAPS TI Valdez**	**2.48**	**97**	*e*Pn	**Pn**	**10 16 51.6**	**-1.0**
DHY	**Denali Highway**	**2.50**	**48**	*e*Pn	**Pn**	**10 16 52.9**	**-0.1**
DHY				*e*Sn	**Sn**	**10 17 19.5**	**-3.3**
FID	**Port Fidalgo**	**2.52**	**104**	*e*Pn	**Pn**	**10 16 51.2**	**-2.0**
FID				*e*Pn	Pn	10 16 51.3	-1.8
FID				*e*Sn	**Sn**	**10 17 21.5**	**-1.5**
MCK	**McKinley**	**2.56**	**26**	*e*Pn	**Pn**	**10 16 53.9**	**+0.2**
MCK				*e*Sn	**Sn**	**10 17 18.5**	**-5.4**
TT01	**Tatalina**	**2.58**	**306**	*e*Pn	**Pn**	**10 16 53.5**	**-0.5**
TTA	**Tatalina**	**2.59**	**307**	*e*Pn	**Pn**	**10 16 53.5**	**-0.6**
TTA				*e*Sn	**Sn**	**10 17 19.9**	**-5.0**
BPAW	**Bear Paw Mtn.**	**2.65**	**4**	*e*Pn	**Pn**	**10 16 54.1**	**-0.8**
BPAW				*e*Sn	**Sn**	**10 17 20.2**	**-6.0**
BWN	**Browne**	**2.87**	**18**	*e*Pn	**Pn**	**10 16 58.1**	**+0.4**
BWN				*e*Sn	**Sn**	**10 17 27.3**	**-4.0**
PS11	**TAPS Pump St11**	**2.91**	**75**	*e*Pn	**Pn**	**10 16 57.5**	**-0.8**
EYAK	**Cordova Ski Ar**	**2.92**	**106**	*e*Pn	**Pn**	**10 16 58.2**	**-0.4**
EYAK				*e*Sn	**Sn**	**10 17 30.8**	**-1.9**
PS12	**TAPS Pump St12**	**3.03**	**87**	*e*Pn	**Pn**	**10 16 59.3**	**-0.7**
PAX	**Paxson**	**3.18**	**59**	*e*Pn	**Pn**	**10 17 02.3**	**+0.2**
PAX				*e*Sn	**Sn**	**10 17 39.4**	**+0.3**
SGAM	**Sherman Glacie**	**3.19**	**105**	*e*Pn	**Pn**	**10 17 00.7**	**-1.5**
PS10	**TAPS Pump St10**	**3.29**	**51**	*e*Pn	**Pn**	**10 17 04.7**	**+1.2**
KAHC	**Katmai Hardscr**	**3.34**	**214**	*e*Pn	**Pn**	**10 17 04.3**	**0.0**
WRH	**Wood River Hil**	**3.38**	**25**	*e*Pn	**Pn**	**10 17 04.2**	**-0.6**
WRH				*e*Sn	**Sn**	**10 17 43.6**	**-0.2**
RAGM	**Ragged Mountai**	**3.48**	**105**	*e*Pn	**Pn**	**10 17 04.4**	**-1.7**
RAGM				*e*Sn	**Sn**	**10 17 46.5**	**+0.2**
MLY	**Manley**	**3.59**	**5**	*e*Pn	**Pn**	**10 17 07.3**	**-0.3**
MLY				*e*Sn	**Sn**	**10 17 48.9**	**-0.1**
CCB	**Clear Creek Bu**	**3.60**	**26**	*e*Pn	**Pn**	**10 17 06.9**	**-0.7**
HDA	**Harding Lake**	**3.60**	**33**	*e*Pn	**Pn**	**10 17 07.2**	**-0.4**
HDA				*e*Sn	**Sn**	**10 17 49.4**	**+0.3**
HDA	**Harding Lake**	**3.60**	**33**	P	**Pn**	**10 17 07.5**	**-0.2**
	baz=217						
HDA				S	**Sn**	**10 17 47.7**	**-1.4**
	baz=217						
GLB	**Gilahina Butte**	**3.67**	**87**	*e*Pn	**Pn**	**10 17 07.6**	**-1.1**
GLB				*e*Sn	**Sn**	**10 17 51.4**	**+0.6**
HMT	**Hamilton**	**3.69**	**105**	*e*Pn	**Pn**	**10 17 07.1**	**-1.8**
HMT				*e*Sn	**Sn**	**10 17 49.5**	**-1.8**
KDAK	**Kodiak Island**	**3.74**	**189**	P	**Pn**	**10 17 07.2**	**-2.3**
	0.6nm,0.3s,baz=12,slow=11,SNR=36						
KDAK				S	**Sn**	**10 17 48.4**	**-4.0**
	3.9nm,0.3s,baz=3.7,slow=7.7,SNR=4.7						
KDAK	**Kodiak Island**	**3.74**	**189**	*e*Pn	**Pn**	**10 17 07.8**	**-1.8**
PS08	**TAPS Pump Stn8**	**3.74**	**32**	*e*Pn	**Pn**	**10 17 09.1**	**-0.4**
KABU	**Katmai Buttres**	**3.74**	**213**	*e*Pn	**Pn**	**10 17 09.4**	**-0.3**
KAIM	**Kayak Island**	**3.79**	**111**	*e*Pn	**Pn**	**10 17 10.3**	**+0.2**
KAIM				*e*Sn	**Sn**	**10 17 53.0**	**-0.6**
TCOL	**CIGO, UAF Yank**	**3.79**	**24**	P	**Pn**	**10 17 09.9**	**-0.2**
	baz=207						
TCOL				S	**Sn**	**10 17 54.7**	**+1.1**
	baz=207						
COLA	**College**	**3.79**	**24**	*e*Pn	**Pn**	**10 17 09.7**	**-0.4**
MDM	**Murphy Dome**	**3.80**	**21**	*e*Pn	**Pn**	**10 17 09.9**	**-0.4**
MDM				*e*Sn	**Sn**	**10 17 53.9**	**+0.1**
RIDG	**Independent Ri**	**3.81**	**50**	*e*Pn	**Pn**	**10 17 11.7**	**+1.1**
RIDG				*e*Sn	**Sn**	**10 17 55.0**	**+0.7**
MENT	**Mentasta**	**3.91**	**64**	*e*Pn	**Pn**	**10 17 11.9**	**0.0**
MENT				*e*Sn	**Sn**	**10 17 57.3**	**+0.7**
ILAR	**Eielson Array**	**3.91**	**30**	P	**Pn**	**10 17 11.2**	**-0.7**
	7.9nm,0.3s,baz=209,slow=13,SNR=192						
ILAR				S	**Sn**	**10 17 54.7**	**-1.9**
	8.0nm,0.3s,baz=206,slow=16,SNR=7.3						
ILB	**Eielson Array**	**3.91**	**30**	*e*Pn	**Pn**	**10 17 11.5**	**-0.4**
ILB				*e*Sn	**Sn**	**10 17 54.7**	**-1.9**
DOT	**Dot Lake**	**4.06**	**54**	*e*Pn	**Pn**	**10 17 14.4**	**+0.5**
DOT				*e*Sn	**Sn**	**10 18 00.3**	**0.0**
POKR	**Poker Plat Res**	**4.09**	**25**	P	**Pn**	**10 17 14.3**	**0.0**
	baz=208						
POKR				S	**Sn**	**10 17 59.7**	**-1.2**
	baz=208						
CRQM	**Cirque**	**4.09**	**96**	*e*Pn	**Pn**	**10 17 14.9**	**+0.3**
CRQM				*e*Pn	Pn	10 17 15.7	+1.1
CRQM				*e*Sn	**Sn**	**10 18 02.7**	**+1.4**
TGL	**Tana Glacier**	**4.24**	**96**	*e*Pn	**Pn**	**10 17 16.7**	**+0.2**
TGL				*e*Sn	**Sn**	**10 18 03.5**	**-1.3**
SCRK	**Sand Creek**	**4.26**	**50**	*e*Pn	**Pn**	**10 17 16.5**	**-0.2**
SCRK				*e*Sn	**Sn**	**10 18 03.1**	**-2.1**
WAX	**Waxell Ridge**	**4.31**	**100**	*e*Pn	**Pn**	**10 17 16.9**	**-0.5**
WAX				*e*Sn	**Sn**	**10 18 05.2**	**-1.3**
OHAK	**Old Harbor**	**4.36**	**193**	*e*Pn	**Pn**	**10 17 17.0**	**-0.9**
BALM	**Baldy**	**4.42**	**92**	*e*Pn	**Pn**	**10 17 17.9**	**-0.9**
BALM				*e*Sn	**Sn**	**10 18 07.5**	**-1.6**
IM3	**Indian Mountai**	**4.65**	**348**	*e*Pn	**Pn**	**10 17 21.2**	**-0.7**
BCA3	**Beaver Creek A**	**4.79**	**66**	*e*Pn	**Pn**	**10 17 23.6**	**-0.2**
PRP	**Porcupine Dome**	**4.86**	**31**	*e*Pn	**Pn**	**10 17 25.4**	**+0.6**
PRP				*e*Sn	**Sn**	**10 18 18.4**	**-1.4**
SII	**Sitkinak Islan**	**5.12**	**197**	*e*Pn	**Pn**	**10 17 28.4**	**+0.1**
SII				*e*Sn	**Sn**	**10 18 25.9**	**-0.1**
PCA	**Pinnacle**	**5.65**	**99**	*e*Pn	**Pn**	**10 17 35.7**	**+0.1**
EGAK	**Eagle**	**5.73**	**50**	*e*Pn	**Pn**	**10 17 36.3**	**-0.2**
EGAK				*e*Sn	**Sn**	**10 18 39.2**	**-1.5**
FYU	**Fort Yukon**	**5.80**	**25**	*e*Pn	**Pn**	**10 17 38.2**	**+0.7**
FYU				*e*Sn	**Sn**	**10 18 42.7**	**+0.2**
COLD	**Coldfoot**	**5.81**	**5**	*e*Pn	**Pn**	**10 17 38.8**	**+1.2**
COLD				*e*Sn	**Sn**	**10 18 40.3**	**-2.5**
BCPM	**Bancas Point**	**6.00**	**99**	*e*Pn	**Pn**	**10 17 40.0**	**-0.2**
BCPM				*e*Sn	**Sn**	**10 18 45.6**	**-1.7**
CHIR	**Chirikof Islan**	**6.06**	**203**	*e*Pn	**Pn**	**10 17 40.6**	**-0.5**
DAWY	**Dawson**	**6.12**	**60**	*e*Pn	**Pn**	**10 17 42.2**	**+0.3**
CHGN	**Chignik**	**6.31**	**218**	*e*Pn	**Pn**	**10 17 44.4**	**-0.1**
CHGN				*e*Sn	**Sn**	**10 18 52.2**	**-2.8**
BM3	**Burnt Mountain**	**6.67**	**23**	*e*Pn	**Pn**	**10 17 49.2**	**-0.1**
HYT	**Haines Junctio**	**6.78**	**89**	*e*Pn	**Pn**	**10 17 50.6**	**-0.4**
HYT				*e*Sn	**Sn**	**10 19 04.3**	**-2.4**
TOLK	**Toolik Lake Re**	**7.25**	**5**	*e*Pn	**Pn**	**10 17 59.6**	**+2.4**
TOLK				*e*Sn	**Sn**	**10 19 18.2**	**+0.4**
TOLK	**Toolik Lake Re**	**7.25**	**5**	P	**Pn**	**10 17 58.9**	**+1.7**
	baz=187						
TOLK				S	**Sn**	**10 19 17.8**	**-0.1**
	baz=187						
SDPT	**Sand Point**	**7.75**	**222**	*e*Pn	**Pn**	**10 18 04.2**	**+0.2**
SDPT				*e*Sn	**Sn**	**10 19 29.2**	**-0.8**
WHY	**Whitehorse**	**8.08**	**88**	*e*Pn	**Pn**	**10 18 08.2**	**-0.4**
WHY				*e*Sn	**Sn**	**10 19 33.9**	**-4.3**
EPYK	**Eagle Plains**	**8.13**	**46**	*e*Pn	**Pn**	**10 18 08.5**	**-0.7**
EPYK	**Eagle Plains**	**8.13**	**46**	P	**Pn**	**10 18 08.0**	**-1.2**
	baz=240						
EPYK				S	**Sn**	**10 19 36.5**	**-2.9**
	baz=240						
BESE	**Bessie Mountai**	**8.79**	**102**	*e*Pn	**Pn**	**10 18 19.2**	**+0.8**
JIS	**Juneau Island**	**9.15**	**103**	*e*Pn	**Pn**	**10 18 23.5**	**+0.3**
SIT	**Sitka**	**9.36**	**111**	*e*Pn	**Pn**	**10 18 26.8**	**+0.9**
SIT				*e*Sn	**Sn**	**10 20 09.1**	**-0.1**
INK	**Inuvik**	**10.21**	**40**	P	**Pn**	**10 18 36.5**	**-1.1**
	1.6nm,0.3s,baz=244,slow=15,SNR=22						
INK				S	**Sn**	**10 20 26.9**	**-3.0**
	0.2nm,0.3s,baz=231,slow=5.3,SNR=2.5						
INK	**Inuvik**	**10.21**	**40**	*e*Pn	**Pn**	**10 18 37.8**	**+0.3**
INK				*e*Sn	**Sn**	**10 20 30.8**	**+0.8**
YKA	**Yellowknife Ar**	**17.19**	**70**	P	**Pn**	**10 20 07.8**	**-0.5**
	0.2nm,0.3s,baz=280,slow=10,SNR=4.9						
YKB5	**Yellowknife Ar**	**17.19**	**70**	*e*P	**Pn**	**10 20 07.8**	**-0.5**
FCC	**Fort Churchill**	**27.92**	**70**	*e*P	**P**	**10 21 56.9**	**+1.4**
PD31	**Pinedale Array**	**31.05**	**108**	*e*P	**P**	**10 22 25.2**	**+1.5**
PDAR	**Pinedale Array**	**31.05**	**108**	P	**P**	**10 22 25.2**	**+1.5**
	0.2nm,0.4s,baz=339,slow=4.8,SNR=4.4						
TXAR	**Lajitas Array**	**44.83**	**113**	P	**P**	**10 24 20.6**	**+1.4**
	0.3nm,0.7s,baz=328,slow=6.2,SNR=5.9						
SONA0	**Songino Array**	**54.54**	**306**	*e*P	**P**	**10 25 32.7**	**0.0**
SONM	**Songino Array**	**54.54**	**306**	P	**P**	**10 25 32.7**	**0.0**
	0.9nm,0.6s,baz=36,slow=7.5,SNR=4.4						

IDC ***30*** *10:32:43.9±1.1, 16°.28S×177°.73E, h0*^{km}*, mb3.8/7, mb1 4.1/7, mb1mx3.9/21, mbtmp3.8/7, MS3.8/17, Ms1 3.8/17, ms1mx3.7/25, Error ellipse: s-maj=38.5km s-min=23.5km az=133.0*
ISCJB ***30*** *10:32:46.1±0.9, 16°.3S±0°.2×177°.7E±0°.2, h24*^{km}*, mb3.8/7, MS3.9/17, Error ellipse: s-maj=27.9km s-min=19.5km az=39.3*
ISC 30 10:32:47.6±1.1,**16°.3S**±0°.2×**177°.7E**±0°.2,**h24**^{km},**n26**,
σ**0**^{s}.**71**/8,**mb3.8**/7,**MS3.9**/17,**Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.09**	**240**	*e*LR	LR	10 38 01.8	
	comp=Z,1µm,27.1s						
HNR	**Honiara**	**18.60**	**289**	LR	LR	10 44 07.3	
	comp=Z,140nm,18.1s,baz=117,slow=37						
RAR	**Rarotonga**	**21.87**	**106**	LR	LR	10 44 07.4	
	comp=Z,262nm,20.2s,baz=277,slow=31						
URZ	**Urewera**	**21.88**	**181**	P	**P**	**10 37 39.0**	**+0.3**
	3.2nm,0.8s,baz=349,slow=10,SNR=2.2						
URZ				LR	LR	10 44 54.3	
	comp=Z,357nm,19.0s,baz=5.5,slow=33						
PPT2	**Papeete2**	**31.30**	**97**	*e*LQ	LQ	10 45 53.6	
	888nm,27.2s						
PPT2				*e*LR	LR	10 47 14.0	
	comp=Z,652nm,29.0s,baz=271						
PPT	**Papeete**	**31.30**	**97**	LR	LR	10 49 54.9	
	comp=Z,44nm,19.9s,baz=273,slow=33						
TBI	**Tubuai**	**31.62**	**108**	*e*LQ	LQ	10 46 02.4	
	786nm,26.0s						
TBI				*e*LR	LR	10 47 19.4	
	comp=Z,792nm,30.8s,baz=290						
H11S2	**WAKE ISLAND Hy**	**36.23**	**342**	T	T	11 18 11.5	
	baz=163,slow=76,SNR=8.9						
STKA	**Stephens Creek**	**36.23**	**238**	P	**P**	**10 39 48.0**	**-0.9**
	2.4nm,0.9s,baz=45,slow=4.3,SNR=2.0						
STKA				LR	LR	10 52 37.7	
	comp=Z,201nm,21.8s,baz=52,slow=33						
H11S3	**WAKE ISLAND Hy**	**36.24**	**342**	T	T	11 18 13.7	
	baz=163,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**36.25**	**342**	T	T	11 18 12.7	
	baz=163,slow=76,SNR=7.9						
WRA	**Warramunga Arr**	**41.30**	**258**	P	**P**	**10 40 31.1**	**-0.4**
	1.5nm,1.0s,baz=84,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**41.69**	**253**	P	**P**	**10 40 35.5**	**+0.8**
	2.0nm,0.9s,baz=85,slow=8.1,SNR=15						
SIJI	**Sorong**	**48.25**	**284**	LR	LR	11 00 49.1	
	comp=Z,195nm,19.9s,baz=93,slow=35						
MJAR	**Matsushiro Arr**	**64.44**	**325**	LR	LR	11 06 30.4	
	comp=Z,75nm,21.9s,baz=135,slow=32						
KSRS	**Korea Array**	**71.06**	**320**	LR	LR	11 14 08.0	
	comp=Z,35nm,18.5s,baz=132,slow=35						
USRK	**Ussuriysk Ar.**	**73.24**	**327**	LR	LR	11 11 08.8	
	comp=Z,83nm,21.2s,baz=146,slow=32						
NVAR	**Mina Array Bea**	**80.90**	**46**	P	**P**	**10 45 00.3**	**0.0**
	0.3nm,0.6s,baz=240,slow=7.2,SNR=4.3						
NVAR				LR	LR	11 12 55.1	
	comp=Z,115nm,19.8s,baz=242,slow=30						
MAW	**Mawson**	**84.08**	**200**	LR	LR	11 19 56.6	
	comp=Z,71nm,18.3s,baz=96,slow=34						
CMAR	**Chiang Mai Arr**	**84.85**	**291**	P	**P**	**10 45 21.6**	**+0.7**
	0.4nm,0.3s,baz=124,slow=4.3,SNR=2.6						
ILAR	**Eielson Array**	**85.22**	**14**	P	**P**	**10 45 21.1**	**-0.5**
	0.5nm,0.9s,baz=224,slow=6.1,SNR=4.1						
ILAR				LR	LR	11 15 25.4	
	comp=Z,38nm,21.1s,baz=208,slow=30						
TXAR	**Lajitas Array**	**88.31**	**59**	LR	LR	11 19 01.4	
	comp=Z,71nm,18.1s,baz=0.0,slow=32						
SONM	**Songino Array**	**89.93**	**320**	LR	LR	11 21 26.1	
	comp=Z,43nm,21.6s,baz=78,slow=32						
YKA	**Yellowknife Ar**	**94.46**	**26**	LR	LR	11 24 49.6	
	comp=Z,5.3nm,18.4s,baz=240,slow=33						
PLCA	**Paso Flores**	**95.11**	**135**	LR	LR	11 21 00.3	
	comp=Z,53nm,19.6s,baz=235,slow=30						
KEST	**Kesra**	**158.04**	**334**	PKPab	**PKPab**	**10 53 16.5**	**+0.2**
	2.2nm,0.5s,baz=36,slow=14,SNR=6.0						

ISK ***30*** *10:49:48.4, 37°.04N×31°.40E, h14*^{km}*, ML2.3/6*
DDA ***30*** *10:49:48.6, 36°.92N×31°.24E, h43*^{km}*±1*^{km}*, ML2.7*
ISC 30 10:49:51.2±1.4,**36°.96N**±0°.04×**31°.30E**±0°.04,**h52**^{km}±24^{km},
n20,σ**1**^{s}.**80**/34,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORT	**Korkueli**	**0.76**	**273**	PG	**Pn**	**10 50 04.7**	**-1.3**
KORT				SG	**Sn**	**10 50 17.3**	**+0.6**
KORT	**Korkueli**	**0.76**	**273**	*i* P	**Pn**	**10 50 03.0**	**-3.0**
KORT				*i* S	**Sn**	**10 50 18.1**	**+1.4**
AKUM	**Antalya-Kumluc**	**1.00**	**231**	*i* P	**Pn**	**10 50 08.1**	**-0.8**
AKUM				*i* S	**Sn**	**10 50 24.0**	**+2.0**
AKUM				IAML_P			
	comp=Z,329nm,0.1s						
ISP	**Isparta**	**1.06**	**325**	PG	**Pn**	**10 50 09.0**	**-0.9**
ISP				SG	**Sn**	**10 50 23.7**	**-0.1**
GAZI	**Gazipasa**	**1.09**	**131**	PN	**Pn**	**10 50 09.9**	**-0.4**
GAZI				SN	**Sn**	**10 50 25.6**	**+1.2**
BAGO	**Egridir - ISPA**	**1.11**	**339**	*i* P	**Pn**	**10 50 10.3**	**-0.2**
BAGO				*i* S	**Sn**	**10 50 26.9**	**+2.0**
ELL	**Elmali**	**1.14**	**260**	PN	**Pn**	**10 50 11.8**	**+0.9**
BRDR	**BURDUR-Merkez**	**1.23**	**307**	*i* P	**Pn**	**10 50 12.3**	**+0.1**
BRDR				*i* S	**Sn**	**10 50 29.3**	**+1.5**
GOLH	**Golhisar**	**1.42**	**282**	*i* P	**Pn**	**10 50 16.2**	**+1.4**
GOLH				*i* S	**Sn**	**10 50 35.0**	**+2.7**
AKAS	**Kas**	**1.54**	**242**	*i* P	**Pn**	**10 50 14.1**	**-2.4**
AKAS				*i* S	**Sn**	**10 50 35.1**	**-0.4**
BERE	**Bereket-Mersin**	**1.66**	**111**	PN	**Pn**	**10 50 17.4**	**-0.7**
TEKE	**Tekeli-Mersin**	**1.67**	**119**	PN	**Pn**	**10 50 16.7**	**-1.4**
FETY	**Fethiye**	**1.81**	**260**	*i* P	**Pn**	**10 50 18.4**	**-1.6**
FETY				*i* S	**Sn**	**10 50 40.4**	**-1.4**
FETY				IAML_P			
	comp=Z,445nm,0.1s						
TAVA	**DENIZLI_Tavas**	**1.97**	**286**	*i* P	**Pn**	**10 50 21.8**	**-0.5**
TAVA				*i* S	**Sn**	**10 50 46.2**	**+0.3**
TAVA				IAML_P			
	comp=Z,399nm,0.2s						
KEBE	**Keben-Mersin**	**2.01**	**104**	PN	**Pn**	**10 50 22.3**	**-0.4**
KHAL	**Karahalli**	**2.01**	**315**	*i* P	**Pn**	**10 50 20.1**	**-2.7**
KHAL				*i* S	**Sn**	**10 50 45.2**	**-1.7**
IKL	**Isikli**	**2.05**	**110**	PN	**Pn**	**10 50 22.3**	**-1.0**
DALY	**Dalyan (Mula)**	**2.13**	**267**	*i* P	**Pn**	**10 50 23.4**	**-0.9**
DALY				*i* S	**Sn**	**10 50 47.1**	**-2.3**
TURN	**Turunc**	**2.16**	**269**	*i* P	**Pn**	**10 50 28.4**	**+3.7**
TURN				*i* S	**Sn**	**10 50 54.5**	**+4.1**
KIZK	**Mersin**	**2.33**	**101**	PN	**Pn**	**10 50 27.2**	**+0.1**

IDC ***30*** *10:54:26.0±0.9, 1°.57S×138°.48E, h0*^{km}*, mb4.0/5, mb1 4.4/8, mb1mx4.1/26, mbtmp4.2/8, ML4.2/3, MS3.4/8, Ms1 3.4/8, ms1mx3.2/27, Error ellipse: s-maj=29.1km s-min=14.0km az=86.0*
ISCJB ***30*** *10:54:31.3±0.3, 1°.79S±0°.04×138°.39E±0°.04, h36*^{km}*, mb4.4/38, MS3.7/7, Error ellipse: s-maj=5.7km s-min=5.0km az=14.1*
DJA ***30*** *10:54:31.9±1.9, 2°S±9°×13°9E±°, h27*^{km}*±16*^{km}*, M4.6/5, mb4.6/5, MLv4.6/2*
NEIC ***30*** *10:54:33.3±1.7, 1°.73S×138°.33E, h39*^{km}*±4*^{km}*, mb4.5/36, Error ellipse: s-maj=14.1km s-min=13.0km az=86.0*
ISC 30 10:54:32.7±0.6,**1°.76S**±0°.06×**138°.46E**±0°.05,**h36**^{km},**n76**,
σ**2**^{s}.**18**/70,**mb4.5**/38,**MS3.5**/7,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.89**	**116**	P	**Pn**	**10 55 00.4**	**-2.1**
GENI				S	**Sn**	**10 55 25.6**	**+0.5**
SRPI	**Serui, Papua**	**2.22**	**267**	P	**Pn**	**10 55 07.2**	**+0.2**
SRPI				S	**Sn**	**10 55 35.3**	**+2.0**
BAKI	**Biak**	**2.42**	**284**	P	**Pn**	**10 55 05.8**	**-3.9**
FAKI	**Fak Fak**	**6.31**	**259**	*e*Pn	**Pn**	**10 56 02.9**	**-0.4**
FAKI				*e*Sn	**Sn**	**10 57 11.6**	**-2.6**
SIJI	**Sorong**	**7.25**	**277**	Pn	**Pn**	**10 56 15.1**	**-1.0**
	0.5nm,0.3s,baz=135,slow=19,SNR=2.3						
SIJI				Sn	**Sn**	**10 57 43.9**	**+6.6**
	0.5nm,0.3s,baz=196,slow=18,SNR=2.5						
LBMI	**Labuha**	**11.02**	**276**	P	Pn	10 56 59.3	-8.5
COEN	**Coen**	**12.98**	**159**	*e*Pn	**Pn**	**10 57 35.1**	**+0.3**
MTN	**Manton Dam**	**13.19**	**213**	*e*Pn	**Pn**	**10 57 37.8**	**+0.2**
MTN				*e*Sn	**Sn**	**11 00 02.9**	**-0.1**
SOEI	**Soe**	**16.19**	**240**	*e*Pn	**Pn**	**10 58 17.0**	**-0.8**
	21nm,0.7s						
SOEI	**Soe**	**16.19**	**240**	P	**P**	**10 58 21.7**	**+1.1**
GUMO	**Guam**	**16.52**	**22**	LR	LR	11 04 19.5	
	comp=Z,100nm,18.1s,baz=196,slow=36						
WRAB	**Tennant Creek**	**18.50**	**192**	*e*P	**Pn**	**10 58 46.5**	**+0.2**
	28nm,0.8s						
WB2	**Warramunga Arr**	**18.51**	**192**	*e*P	**Pn**	**10 58 47.2**	**+0.8**
	24nm,0.6s						
BNSI	**Bone**	**18.51**	**261**	P	**Pn**	**10 58 51.4**	**+4.9**
WR1	**Warramunga Arr**	**18.51**	**192**	*e*P	**Pn**	**10 58 46.2**	**-0.2**
WR1				*e*S	**Sn**	**11 02 06.5**	**-6.0**
WRA	**Warramunga Arr**	**18.51**	**192**	P	**Pn**	**10 58 46.2**	**-0.2**
	2.2nm,0.3s,baz=16,slow=11,SNR=72						
WRA				S	**Sn**	**11 02 06.5**	**-6.0**
	0.2nm,0.3s,baz=14,slow=24,SNR=3.2						
WC3	**Warramunga Arr**	**18.52**	**192**	*e*P	**Pn**	**10 58 46.7**	**+0.1**
	27nm,0.6s						
KAPI	**Kappang**	**18.95**	**260**	LR	LR	11 06 56.3	
	comp=Z,67nm,20.1s,baz=301,slow=40						
CTA	**Charters Tower**	**19.74**	**158**	P	**Pn**	**10 59 01.1**	**-0.1**
	0.5nm,0.3s,baz=339,slow=12,SNR=9.1						
CTAO	**Charters Tower**	**19.74**	**158**	*e*P	**Pn**	**10 59 01.2**	**+0.1**
	15nm,1.0s						
AS31	**Alice Springs**	**22.22**	**191**	*e*P	**P**	**10 59 27.5**	**+1.2**
	5.8nm,0.8s						
AS31				*e*S	**S**	**11 03 28.9**	**0.0**
ASAR	**Alice Springs**	**22.22**	**191**	P	**P**	**10 59 27.6**	**+1.4**
	19nm,0.8s,baz=21,slow=10,SNR=211						
ASAR				S	**S**	**11 03 34.4**	**+5.5**
	6.1nm,1.0s,baz=12,slow=24,SNR=12						
ASAR				LR	LR	11 09 51.9	
	comp=Z,152nm,18.2s,baz=16,slow=41						
SRBI	**Singaraja**	**23.99**	**254**	P	**P**	**10 59 38.7**	**-5.5**
EIDS	**Eidsvold**	**26.44**	**154**	*e*P	**P**	**11 00 07.8**	**+1.5**
	18nm,0.7s						
PSAC2	**Pilbara Seismi**	**26.72**	**221**	*e*P	**P**	**11 00 08.2**	**-0.8**
	14nm,0.8s						
PSAB2	**Pilbara Seismi**	**26.74**	**221**	*e*P	**P**	**11 00 10.1**	**+1.0**
	8.9nm,0.7s						
PSAA2	**Pilbara Seismi**	**26.76**	**221**	*e*P	**P**	**11 00 09.7**	**+0.4**
	13nm,0.8s						
PSAC1	**Pilbara Seismi**	**26.76**	**221**	*e*P	**P**	**11 00 12.0**	**+2.7**
	12nm,0.8s						
PSAA3	**Pilbara Seismi**	**26.76**	**221**	*e*P	**P**	**11 00 11.6**	**+2.3**
	14nm,1.0s						
PSA00	**Pilbara Seismi**	**26.77**	**221**	*e*P	**P**	**11 00 09.9**	**+0.6**
	9.1nm,0.7s						
PSAB3	**Pilbara Seismi**	**26.77**	**221**	*e*P	**P**	**11 00 07.4**	**-2.0**
	14nm,0.9s						
PSAA1	**Pilbara Seismi**	**26.78**	**221**	*e*P	**P**	**11 00 09.7**	**+0.3**
	10nm,0.8s						
STKA	**Stephens Creek**	**30.10**	**175**	P	**P**	**11 00 37.5**	**-1.3**
	2.1nm,0.6s,baz=354,slow=6.9,SNR=11						
STKA				LR	LR	11 14 44.8	
	comp=Z,90nm,20.5s,baz=6.2,slow=40						
STKA	**Stephens Creek**	**30.10**	**175**	*e*P	**P**	**11 00 39.5**	**+0.6**
	1.0nm,0.8s						
FORT	**Forrest**	**30.50**	**198**	*e*P	**P**	**11 00 43.4**	**+1.0**
	15nm,0.8s						
BBOO	**Buckleboo**	**30.97**	**184**	*e*P	**P**	**11 00 47.8**	**+1.2**
	10nm,1.0s						
ARMA	**Armidale**	**31.12**	**158**	*e*P	**P**	**11 00 49.6**	**+1.6**
	5.9nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**34.30**	**53**	T	T	11 37 10.3	
	baz=236,slow=75,SNR=30						
H11S2	**WAKE ISLAND Hy**	**34.31**	**53**	T	T	11 37 15.7	
	baz=236,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**34.31**	**53**	T	T	11 37 13.8	
	baz=236,slow=75,SNR=12						
MORW	**Morawa**	**34.55**	**216**	*e*P	**P**	**11 01 17.8**	**-0.1**
	6.3nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**35.13**	**51**	T	T	11 38 24.3	
	baz=240						
H11N2	**WAKE ISLAND Hy**	**35.14**	**51**	T	T	11 38 23.9	
	baz=240						
H11N3	**WAKE ISLAND Hy**	**35.15**	**51**	T	T	11 38 25.4	
	baz=240						
NJ2	**Nanjing**	**38.42**	**333**	*e*P	P	11 01 56.8	+5.9
NJ2				pmax	pmax		
	comp=Z,23nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMI	**Kunming**	**43.72**	**310**	P	**P**	**11 02 36.8**	**+1.9**
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
CM31	**Chiang Mai Arr**	**43.76**	**299**	*e*P	**P**	**11 02 32.6**	**-2.5**
	comp=Z,5.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.76**	**299**	P	**P**	**11 02 32.6**	**-2.5**
	comp=Z,0.8nm,0.5s,baz=104,slow=6.6,SNR=3.8						
HHC	**Hu-ho-hao-te**	**48.98**	**333**	P	P	11 03 23.5	+7.6
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,15nm,6.6s						
LZH	**Lanzhou**	**49.58**	**323**	*e*P	P	11 03 25.5	+4.9
LZH				pP	sP	11 03 33.3	-2.0
LZH				sP	pP	11 03 36.5	+5.2
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA	**Gaotai**	**54.16**	**323**	*e*P	**P**	**11 03 55.8**	**+1.1**
GTA				pP	pP	11 04 05.5	0.0
GTA				sP	sP	11 04 09.5	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,29nm,4.1s						
GTA				LR	LR		
	comp=N,120nm,20.8s						
GTA				LR	LR		
	comp=E,160nm,17.4s						
PETK	**Petropavlovsk-**	**57.00**	**14**	LR	LR	11 24 58.8	
	comp=E,17nm,21.2s,baz=185,slow=32						
WMQ	**Urumqi**	**64.12**	**321**	*e*P	P	11 05 09.0	+5.5
WMQ				sP	pP	11 05 16.3	+1.8
WMQ				LR	LR		
	comp=N,1µm,28.8s						
WMQ				LR	LR		
	comp=E,580nm,29.2s						
WMQ				LR	LR		
	comp=Z,200nm,29.3s						
CASY	**Casey**	**67.34**	**192**	*e*P	**P**	**11 05 24.3**	**+0.6**
	comp=Z,7.3nm,1.0s						
MK32	**Makanchi Array**	**68.89**	**322**	*e*P	**P**	**11 05 31.9**	**-2.0**
MKAR	**Makanchi Array**	**68.89**	**322**	P	**P**	**11 05 31.9**	**-2.0**
	comp=Z,1.0nm,0.9s,baz=89,slow=7.6,SNR=3.5						
KSH	**Kashi**	**70.26**	**313**	*e*P	P	11 05 49.3	+6.7
KSH				LR	LR		
	comp=N,71nm,9.3s						
KSH				LR	LR		
	comp=E,92nm,8.1s						
SVW2	**Sparrevohn**	**80.15**	**27**	*e*P	**P**	**11 06 40.5**	**+1.5**
	comp=E,5.2nm,1.0s						
TTA	**Tatalina**	**80.66**	**25**	*e*P	**P**	**11 06 41.5**	**-0.2**
	comp=E,2.9nm,1.1s						
RC01	**Rabbit Creek A**	**82.82**	**28**	*e*P	**P**	**11 06 53.6**	**+0.5**
	comp=E,5.7nm,0.9s						
MAW	**Mawson**	**82.90**	**202**	*e*P	**P**	**11 06 54.0**	**+0.6**
	comp=E,0.6nm,1.0s						
SML	**Sawmill**	**83.67**	**27**	*e*P	**P**	**11 06 58.0**	**+0.5**
	comp=E,8.8nm,1.0s						
ABKAR	**Akbulak array**	**83.84**	**320**	*e*P	**P**	**11 06 57.7**	**-0.9**
	comp=E,1.9nm,1.0s						
MCK	**McKinley**	**83.94**	**25**	*e*P	**P**	**11 06 59.6**	**+0.8**
	comp=E,2.6nm,0.8s						
SCM	**Sheep Creek Mo**	**84.14**	**27**	*e*P	**P**	**11 07 00.3**	**+0.4**
	comp=E,7.2nm,1.0s						
FID	**Port Fidalgo**	**84.26**	**28**	*e*P	**P**	**11 06 59.9**	**-0.6**
	comp=E,7.7nm,1.2s						
WRH	**Wood River Hil**	**84.50**	**25**	*e*P	**P**	**11 07 02.7**	**+1.1**
	comp=E,2.2nm,1.1s						
CCB	**Clear Creek Bu**	**84.67**	**25**	*e*P	**P**	**11 07 02.9**	**+0.5**
	comp=E,4.1nm,1.2s						
ILAR	**Eielson Array**	**85.08**	**25**	P	**P**	**11 07 01.4**	**-3.1**
	comp=E,0.7nm,0.9s,baz=252,slow=4.8,SNR=5.4						
ILB	**Eielson Array**	**85.08**	**25**	*e*P	**P**	**11 07 01.4**	**-3.1**
	comp=E,1.9nm,1.0s						
DAWY	**Dawson**	**88.13**	**26**	*e*P	**P**	**11 07 19.4**	**-0.1**
	comp=E,3.7nm,1.0s						
KVAR	**Kislovodsk Arr**	**95.37**	**314**	LR	LR	11 56 27.1	
	comp=E,60nm,18.7s,baz=270,slow=39						
OBN	**Obninsk**	**98.24**	**325**	LR	LR	11 54 10.2	
	comp=E,11nm,20.1s,baz=324,slow=36						
CPUP	**Villa Florida**	**148.18**	**152**	PKPbc	**PKPbc**	**11 14 15.2**	**-0.4**
	comp=E,2.6nm,0.8s,baz=238,slow=3.5,SNR=4.9						
CPUP	**Villa Florida**	**148.18**	**152**	*e*PKPdf	**PKPdf**	**11 14 12.4**	**0.0**
CPUP				*e*PKPbc	**PKPbc**	**11 14 15.5**	**-0.1**
CPUP				*e*PKPab	**PKPab**	**11 14 18.6**	**+0.2**
LPAZ	**La Paz**	**148.20**	**125**	PKPbc	**PKPbc**	**11 14 16.6**	**0.0**
	comp=E,2.0nm,0.8s,baz=108,slow=5.2,SNR=8.9						

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*SFS **30** 11:21:42.0, 35°.00N×3°.40W, ML2.2, DRIOUCH (MARRUECOS)*
*MDD **30** 11:21:43.5±1.4, 34°.95N×3°.20W, h16^{km}±5^{km}, mbLg2.2/6, Error ellipse: s-maj=14.5km s-min=5.4km az=151.0, PRXIMO*
*ISCJB **30** 11:21:44.1±0.6, 35°.15N±0°.02×3°.20W±0°.03, h10^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=3.1km az=8.7*
*CNRM **30** 11:21:44.4, 35°.06N×3°.21W, h5^{km}, ml2.8*
ISC 30 11:21:42.3±1.2**, 35°.02N**±0°.02×**3°.21W**±0°.02**, h10**^{km}±10^{km}**, n36, σ1^{s}17**/67**, 2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMEL	**Melilla**	**0.34**	**37**	P	**Pb**	**11 21 50.8**	**+0.3**
	68nm,0.1s,SNR=7.9						
EMEL				S	**Sb**	**11 21 57.3**	**+1.2**
	201nm,0.2s,SNR=7.9						
MELI	**Melilla**	**0.35**	**40**	P	**Pb**	**11 21 51.0**	**+0.3**
	37nm,0.1s,SNR=7.9						
MELI				S	**Sb**	**11 21 56.9**	**+0.7**
	89nm,0.1s,SNR=7.9						
MELI	**Melilla**	**0.35**	**40**	*e*P	**Pb**	**11 21 51.2**	**+0.6**
MELI				*e*S	**Sb**	**11 21 56.5**	**+0.3**
PALE	**Palemas**	**0.63**	**288**	P	**Pb**	**11 21 55.4**	**-0.1**
PALE				S	**Sb**	**11 22 04.7**	**+0.4**
TAF	**Taforalt**	**0.69**	**108**	P	**Pn**	**11 21 57.2**	**-0.9**
TAF				S	**Sn**	**11 22 09.4**	**+0.5**
AKLM	**AKL**	**0.74**	**227**	P	**Pb**	**11 21 57.0**	**-0.4**
AKLM				S	**Sn**	**11 22 09.9**	**-0.5**
JBK	**JBK**	**0.87**	**142**	P	**Pn**	**11 22 00.5**	**-0.2**
JBK				S	**Sn**	**11 22 12.9**	**-0.6**
PVLZ	**Peæn de**	**0.91**	**280**	⇑P	**Pb**	**11 21 60.0**	**-0.2**
PVLZ				S	**Sn**	**11 22 14.1**	**-0.3**
PVLZ	**Peæn de**	**0.91**	**280**	⇑*i*P	**Pb**	**11 21 60.0**	**-0.2**
PVLZ				*e*S	**Sn**	**11 22 14.1**	**-0.3**
EALB	**Alboran**	**0.93**	**9**	P	**Pn**	**11 22 01.7**	**+0.3**
	2.9nm,0.1s,SNR=37						
EALB				S	**Sn**	**11 22 14.9**	**+0.2**
	34nm,0.2s,SNR=8.5						
CHEFC	**Chefchaouen**	**1.75**	**273**	P	**Pg**	**11 22 16.0**	**0.0**
CHEFC				S	**Sg**	**11 22 40.1**	**+1.4**
EBER	**Berja**	**1.89**	**8**	P	**Pb**	**11 22 15.8**	**-1.2**
	0.2nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**11 22 38.6**	**-0.2**
	5.1nm,0.3s,SNR=5.4						
SMIR	**Smir Dam**	**1.89**	**291**	P	**Pb**	**11 22 16.7**	**-0.3**
SMIR				S	**Sb**	**11 22 42.0**	**+1.3**
LCRM	**LCR**	**1.91**	**226**	P	**Pg**	**11 22 19.3**	**+0.3**
LCRM				S	**Sg**	**11 22 45.0**	**+1.3**
SICH	**Sidi Chahed**	**1.97**	**243**	P	**Pb**	**11 22 18.8**	**+0.5**
SICH				S	**Sg**	**11 22 46.2**	**+0.6**
EMIJ	**Mijas**	**2.00**	**321**	P	**Pn**	**11 22 15.3**	**-0.8**
	0.3nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**11 22 40.2**	**-1.0**
	3.2nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**2.00**	**331**	P	**Pn**	**11 22 15.9**	**-0.3**
EMAL	**Malaga-Limoner**	**2.00**	**331**	*e*P	**Pn**	**11 22 15.9**	**-0.3**
EMAL				*e*S	**Sn**	**11 22 38.6**	**-2.6**
RSA	**Sarsar**	**2.15**	**267**	P	**Pb**	**11 22 21.4**	**-0.1**
RSA				S	**Sg**	**11 22 51.1**	**-0.4**
EQUE	**Quentar**	**2.19**	**355**	P	**Pn**	**11 22 20.2**	**+1.3**
	0.4nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**11 22 45.2**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
EGOR	**Sierra Gorda,**	**2.21**	**341**	P	**Pn**	**11 22 19.7**	**+0.5**
	0.4nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**11 22 46.2**	**-0.4**
	1.5nm,0.2s,SNR=7.9						
TDRA	**Tendrara**	**2.21**	**153**	P	**Pg**	**11 22 23.7**	**-1.0**
TDRA				S	**Sg**	**11 22 52.3**	**-1.0**
MDT	**Midelt**	**2.49**	**208**	P	**Pb**	**11 22 26.7**	**-0.5**
MDT				S	**Sb**	**11 22 59.1**	**+1.0**
CZD	**Col de Zad**	**2.50**	**218**	P	**Pn**	**11 22 25.3**	**+2.0**
CZD				S	**Sg**	**11 23 00.9**	**-1.9**
MD31	**MD31**	**2.51**	**211**	P	**Pn**	**11 22 24.4**	**+1.2**
MD31				S	**Sb**	**11 22 59.8**	**+1.3**
EQES	**Quesada**	**2.78**	**2**	P	**Pn**	**11 22 27.9**	**+1.0**
	0.6nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**11 22 59.7**	**-0.9**
	0.5nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**3.14**	**10**	P	**Pn**	**11 22 33.1**	**+1.2**
	0.2nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**11 23 08.2**	**-1.3**
	0.6nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**3.14**	**10**	P	**Pn**	**11 22 34.0**	**+2.0**
SESP				S	**Sn**	**11 23 12.6**	**+3.1**
ZHG	**ZHG**	**3.25**	**242**	P	**Pb**	**11 22 38.0**	**-2.2**
ZHG				S	**Sb**	**11 23 22.0**	**+2.1**
HORN	**Hornachuelos**	**3.27**	**330**	P	**Pn**	**11 22 34.7**	**+1.1**
HORN				S	**Sb**	**11 23 18.7**	**-1.5**
EADA	**Adamuz**	**3.33**	**341**	P	**Pn**	**11 22 35.2**	**+0.7**
	4.3nm,3.5s,SNR=7.9						
ECAB	**El Cabril**	**3.53**	**330**	P	**Pn**	**11 22 38.1**	**+0.9**
	0.2nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**11 23 16.6**	**-2.4**
	0.0nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**3.85**	**20**	P	**Pn**	**11 22 42.6**	**+0.9**
	6.5nm,2.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.91**	**315**	P	**Pn**	**11 22 41.8**	**-0.7**
	0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**11 23 25.7**	**-2.8**
	0.3nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**4.27**	**307**	P	**Pn**	**11 22 47.8**	**+0.5**
	7.5nm,1.7s,SNR=7.9						
PAB	**San Pablo**	**4.61**	**349**	P	**Pn**	**11 22 52.9**	**+0.8**
	2.0nm,8.3s,SNR=7.9						

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*SJA **30** 11:31:34.5±0.8, 23°.42S×66°.91W, h205^{km}±10^{km}, ML2.6, MW3.0*
*ISCJB **30** 11:31:35.2±0.9, 23°.36S±0°.04×67°.00W±0°.04, h200^{km}±10^{km}, Error ellipse: s-maj=7.4km s-min=4.9km az=29.1*
*GUC **30** 11:31:36.2±0.5, 23°.20S×67°.32W, h227^{km}±11^{km}, ML4.1*
ISC 30 11:31:33.1±2.0**, 23°.38S**±0°.05×**66°.94W**±0°.05**, h220**^{km}±16^{km}**, n22, σ1^{s}39**/40**, 11C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.42**	**83**	*e*P	**Pn**	**11 32 08.9**	**+0.5**
HJA				IAML		11 32 09.5	
	comp=Z,16nm,0.6s						
HJA				*i* S	**Sn**	**11 32 34.4**	**-1.5**
YJA	**Yavi**	**1.78**	**48**	*e*P	**Pn**	**11 32 12.5**	**+0.9**
YJA				*i* S	**Sn**	**11 32 41.8**	**+0.2**
SLA	**San Lorenzo**	**1.87**	**136**	*e*P	**Pn**	**11 32 13.4**	**+1.3**
SLA				IAML		11 32 14.0	
	comp=Z,70nm,0.5s						
SLA				*i* S	**Sn**	**11 32 42.7**	**0.0**
AZAP	**Zapla**	**1.91**	**116**	*e*P	**Pn**	**11 32 12.8**	**+0.2**
AZAP				IAML		11 32 13.3	
	comp=Z,18nm,0.3s						
LVC	**Limon Verde**	**1.97**	**293**	*e*P	**Pn**	**11 32 14.7**	**+1.4**
PB15	**IPOC Station P**	**2.33**	**274**	*e*P	**Pn**	**11 32 18.1**	**+1.4**
PB15				*i* S	**Sn**	**11 32 50.4**	**-0.4**
PB06	**IPOC Station P**	**2.51**	**285**	*e*P	**Pn**	**11 32 20.1**	**+1.5**
PB06				*i* S	**Sn**	**11 32 53.4**	**-0.8**
PB06	**IPOC Station P**	**2.51**	**285**	⇑*i*P	**Pn**	**11 32 20.1**	**+1.5**
PB06				*i* S	**Sn**	**11 32 53.2**	**-1.0**
PB06				IAML		11 32 54.1	
	comp=N,672nm,0.6s						
PB09	**IPOC Station P**	**2.65**	**306**	⇑*i*P	**Pn**	**11 32 21.9**	**+1.8**
PB09				*i* S	**Sn**	**11 32 55.4**	**-1.4**
PB09				IAML		11 33 00.1	
	comp=E,82nm,0.1s						
PB03	**IPOC Station P**	**2.91**	**297**	*e*P	**Pn**	**11 32 24.4**	**+1.4**
PB03	**IPOC Station P**	**2.91**	**297**	⇑*i*P	**Pn**	**11 32 24.3**	**+1.3**
PB03				*i* S	**Sn**	**11 33 00.4**	**-1.8**
PB03				IAML		11 33 02.0	
	comp=E,281nm,0.2s						
GO02	**Mina Guanaco**	**3.00**	**233**	⇓*i*P	**Pn**	**11 32 25.1**	**+1.1**
GO02				*i* S	**Sn**	**11 33 03.5**	**-0.6**
GO02				IAML		11 33 05.8	
	comp=N,397nm,0.3s						
PB04	**IPOC Station P**	**3.13**	**289**	⇑*i*P	**Pn**	**11 32 26.6**	**+1.1**
PB04				*i* S	**Sn**	**11 33 05.6**	**-1.1**
PB04				IAML		11 33 09.0	
	comp=N,228nm,0.1s						
PB07	**IPOC Station P**	**3.18**	**301**	⇑*i*P	**Pn**	**11 32 27.3**	**+1.2**
PB07				*i* S	**Sn**	**11 33 06.0**	**-1.7**
PB07				IAML		11 33 07.1	
	comp=N,272nm,0.1s						
PB01	**IPOC Station P**	**3.31**	**314**	⇑*i*P	**Pn**	**11 32 28.7**	**+1.2**
PB01				*i* S	**Sn**	**11 33 08.6**	**-1.7**
PB01				IAML		11 33 11.5	
	comp=E,150nm,0.1s						
PB10	**IPOC Station P**	**3.32**	**267**	⇑*i*P	**Pn**	**11 32 28.8**	**+1.3**
PB10				*i* S	**Sn**	**11 33 08.1**	**-2.1**
PB10				IAML		11 33 12.7	
	comp=E,142nm,0.2s						
PB02	**IPOC Station P**	**3.42**	**306**	*e*P	**Pn**	**11 32 29.8**	**+1.0**
PB02	**IPOC Station P**	**3.42**	**306**	⇑*i*P	**Pn**	**11 32 29.8**	**+1.0**
PB02				*i* S	**Sn**	**11 33 10.5**	**-2.1**
PB02				IAML		11 33 15.8	
	comp=E,178nm,0.2s						
AHML	**Horco Molle**	**3.69**	**157**	*e*P	**Pn**	**11 32 32.8**	**+0.9**
AHML				IAML		11 32 33.1	
	comp=Z,11nm,0.5s						
AHML				*i* S	**Sn**	**11 33 16.2**	**-2.1**
PB08	**IPOC Station P**	**3.82**	**327**	⇑*i*P	**Pn**	**11 32 36.0**	**+2.0**
PB08				*e*S	**Sn**	**11 33 21.4**	**-0.4**
PB08				IAML		11 33 24.5	
	comp=E,140nm,0.2s						
PB11	**IPOC Station P**	**4.40**	**324**	⇑*e*P	**Pn**	**11 32 41.4**	**+0.6**
PB11				*e*S	**Sn**	**11 33 32.2**	**-1.9**
PB11				IAML		11 33 33.2	
	comp=E,264nm,0.2s						
MNMC	**Minye Minye**	**4.90**	**329**	⇑*i*P	**Pn**	**11 32 48.3**	**+1.2**
MNMC				*e*S	**Sn**	**11 33 44.0**	**-1.6**

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*IDC **30** 11:32:22.4±1.7, 39°.86N×142°.23E, h0^{km}, mb3.8/5, mb1 3.7/7, mb1mx3.4/55, mbtmp3.7/7, ML2.0/2, MS2.5/1, Ms1 2.5/1, ms1mx1.9/39, Error ellipse: s-maj=49.5km s-min=24.4km az=79.0*
*ISCJB **30** 11:32:30.6±0.7, 39°.76N±0°.03×141°.92E±0°.10, h68^{km}±3^{km}, mb3.7/5, Error ellipse: s-maj=12.3km s-min=5.8km az=177.9*
*JMA **30** 11:32:32.3, 39°.76N×141°.85E, h58^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s21.00000°, δ66.00000°, λ100.00000°. NP2: ϕ_s177.00000°, δ26.00000°, λ69.00000°. Principal axes: T Plg68.0000°, Azm310.0000°; N Plg9.0000°, Azm196.0000°; P Plg20.0000°, Azm103.0000°;*
JMA Felt I J1.
ISC 30 11:32:31.6±1.0**, 39°.77N**±0°.04×**141°.90E**±0°.08**, h62**^{km}±6^{km}**, n26, σ1^{s}05**/30**, mb3.7**/5**, 4C-7D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.17**	**351**	⇑P	**Pn**	**11 32 41.5**	**+0.3**
JTH				S	**Sn**	**11 32 48.0**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.20**	**198**	⇑P	**Pn**	**11 32 41.6**	**+0.3**
MIYJ				S	**Sn**	**11 32 47.9**	**-0.4**
JKEN	**Kujiedanarisaw**	**0.46**	**342**	⇓P	**Pn**	**11 32 43.7**	**+0.4**
JKEN				S	**Sn**	**11 32 51.8**	**-0.1**
JKZ	**Kuzumaki**	**0.49**	**297**	⇓P	**Pn**	**11 32 43.9**	**+0.2**
JKZ				S	**Sn**	**11 32 52.0**	**-0.5**
JOM	**Ohasama**	**0.55**	**238**	⇓P	**Pn**	**11 32 44.2**	**-0.1**
JOM				S	**Sn**	**11 32 52.7**	**-0.8**
JANG	**Nango**	**0.67**	**334**	⇓P	**Pn**	**11 32 45.8**	**+0.1**
JANG				S	**Sn**	**11 32 55.9**	**-0.1**
OFUJ	**Ofunato**	**0.71**	**195**	⇑P	**Pn**	**11 32 46.3**	**+0.2**
OFUJ				S	**Sn**	**11 32 56.3**	**-0.3**
JMK	**Ichinoseki**	**0.97**	**213**	P	**Pn**	**11 32 49.3**	**0.0**
JMK				*e*S	**Sn**	**11 33 02.2**	**-0.2**
JRG	**Rokugo**	**1.05**	**250**	⇓P	**Pn**	**11 32 50.1**	**-0.2**
JAH	**Hinai**	**1.06**	**294**	⇓P	**Pn**	**11 32 50.7**	**+0.3**
JAH				S	**Sn**	**11 33 05.0**	**+0.5**
JTM	**Tenmabayashi**	**1.20**	**328**	⇓P	**Pn**	**11 32 52.7**	**+0.4**
JTM				*e*S	**Sn**	**11 33 08.1**	**+0.3**
JIO	**Ouri**	**1.38**	**198**	⇑P	**Pn**	**11 32 54.9**	**+0.2**
MJAR	**Matsushiro Arr**	**4.34**	**223**	Pn	**Pn**	**11 33 35.0**	**0.0**
	0.1nm,0.3s,baz=32,slow=13,SNR=3.7						
MJAR				Sn	Sn	11 34 34.1	+10
	0.0nm,0.3s,baz=84,slow=19,SNR=2.3						
USRK	**Ussuriysk Ar.**	**8.61**	**304**	Pn	**Pn**	**11 34 30.1**	**-3.3**
	0.2nm,0.3s,baz=128,slow=13,SNR=2.8						
KSRS	**Korea Array**	**11.18**	**263**	Pn	**Pn**	**11 35 12.1**	**+3.6**
	0.2nm,0.3s,baz=72,slow=14,SNR=2.9						
KSRS				LR	LR	11 38 53.1	
	comp=Z,24nm,21.3s,baz=105,slow=34						
H11N2	**WAKE ISLAND Hy**	**29.32**	**126**	T	T	12 09 05.3	
	baz=318,slow=75,SNR=112						
H11N1	**WAKE ISLAND Hy**	**29.33**	**126**	T	T	12 09 08.4	
	baz=318,slow=75,SNR=83						
H11N3	**WAKE ISLAND Hy**	**29.34**	**126**	T	T	12 09 08.6	
	baz=318,slow=75,SNR=95						
H11S1	**WAKE ISLAND Hy**	**30.12**	**128**	T	T	12 10 08.2	
	baz=319,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**30.12**	**128**	T	T	12 10 10.1	
	baz=319,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy**	**30.14**	**128**	T	T	12 10 07.8	
	baz=319,slow=76,SNR=23						
ZALV	**Zalesovo Beam**	**40.40**	**310**	P	**P**	**11 40 03.0**	**-0.3**
	1.6nm,0.5s,baz=85,slow=7.7,SNR=6.6						
MKAR	**Makanchi Array**	**43.04**	**300**	P	**P**	**11 40 24.2**	**-0.9**
	0.8nm,0.6s,baz=91,slow=7.4,SNR=6.5						
ASAR	**Alice Springs**	**63.54**	**188**	P	**P**	**11 42 55.0**	**-0.5**
	0.3nm,0.9s,baz=3.5,slow=7.7,SNR=3.4						
FINES	**FINESS Array B**	**66.58**	**332**	P	**P**	**11 43 14.1**	**-0.7**
	1.1nm,0.7s,baz=64,slow=13,SNR=3.1						
HFS	**Hagfors**	**71.76**	**336**	P	**P**	**11 43 47.6**	**+0.8**
	0.8nm,0.8s,baz=45,slow=6.3,SNR=4.4						

JMA 30 11:36:02.8±0.1**, 38°.11N**×**144°.48E, h47**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.38**	**276**	P	Pn	11 36 40.4	+1.1
JIKH				S	Sn	11 37 08.5	+1.2
OFUJ	**Ofunato**	**2.41**	**295**	P	Pn	11 36 41.0	+1.3
OFUJ				S	Sn	11 37 09.0	+1.1
JKMT	**Kesennumamotoy**	**2.46**	**287**	P	Pn	11 36 41.7	+1.3
JKMT				S	Sn	11 37 10.5	+1.2
JIO	**Ouri**	**2.49**	**279**	P	Pn	11 36 42.1	+1.3
JIO				S	Sn	11 37 10.9	+1.0
JMK	**Ichinoseki**	**2.69**	**289**	P	Pn	11 36 45.2	+1.6
JOM	**Ohasama**	**2.84**	**300**	P	Pn	11 36 47.3	+1.7
JOM				S	Sn	11 37 20.6	+2.0
JANG	**Nango**	**3.23**	**315**	P	Pn	11 36 52.2	+1.3
JYK	**Kaneyama**	**3.33**	**285**	P	Pn	11 36 54.7	+2.3
JYK				S	Sn	11 37 33.4	+2.7
JFT	**Otama**	**3.33**	**261**	P	Pn	11 36 54.4	+2.0
JFT				*e*S	Sn	11 37 32.7	+1.9
JOT	**Ohata**	**4.20**	**322**	P	Pn	11 37 05.5	+1.2
BSO1	**Boso 1**	**4.46**	**220**	P	Pn	11 37 07.2	-0.2
BSO1				*e*S	Sn	11 37 58.2	+0.5
JCH	**Churui**	**4.58**	**350**	P	Pn	11 37 09.2	-0.3
JCH				*e*S	Sn	11 37 59.3	-2.1
JKB	**Kayabe**	**4.61**	**326**	P	Pn	11 37 12.0	+2.1
JRY	**Ryogami san**	**4.93**	**247**	P	Pn	11 37 15.3	+1.0
JRY				*e*S	Sn	11 38 09.0	-1.0
MAT	**Matsushiro**	**5.24**	**255**	P	Pn	11 37 21.2	+2.6
JTKR	**Abashiri--Toko**	**5.87**	**356**	P	Pn	11 37 26.9	-0.3
JTKR				*e*S	Sn	11 38 29.7	-3.4

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*IDC **30** 11:43:47.5±2.3, 7°.76S×101°.70E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.5/51, mbtmp3.7/5, ML4.2/1, Error ellipse: s-maj=74.0km s-min=25.0km az=46.0*
*ISCJB **30** 11:43:53.2±1.0, 7°.30S±0°.07×102°.33E±0°.07, h33^{km}, mb3.5/4, Error ellipse: s-maj=10.1km s-min=8.9km az=135.4*
*DJA **30** 11:43:56.5±0.5, 7°S±4°×10°2E±°, h48^{km}±65^{km}, M4.2/11, mb4.3/2, mB4.1/1, MLv4.1/11, Mw(mB)3.1/1*
ISC 30 11:43:55.0±1.3**, 7°.28S**±0°.09×**102°.32E**±0°.10**, h35**^{km}**, n15, σ0^{s}79**/18**, mb3.5**/4**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**2.78**	**51**	P	**Pn**	**11 44 37.5**	**+0.4**
KASI				S	**Sn**	**11 45 07.8**	**-1.6**
LWLI	**Liwa**	**2.84**	**38**	P	**Pn**	**11 44 38.3**	**+0.4**
LWLI				S	**Sn**	**11 45 10.9**	**-0.1**
MNAI	**Manna**	**2.97**	**12**	P	**Pn**	**11 44 39.2**	**-0.5**
MNAI				S	**Sn**	**11 45 13.3**	**-0.8**
MDSI	**Maura Dua**	**3.33**	**34**	P	**Pn**	**11 44 45.3**	**+0.6**
CGJI	**Cibinong**	**3.42**	**79**	P	**Pn**	**11 44 46.2**	**+0.4**
KLSI		**3.52**	**43**	P	**Pn**	**11 44 47.9**	**+0.7**
LHSI	**Lahat**	**3.63**	**19**	P	**Pn**	**11 44 49.7**	**+0.9**
TNG	**Tangerang**	**4.44**	**76**	P	**Pn**	**11 45 01.5**	**+1.6**
LEM	**Lembang**	**5.28**	**85**	Pn	Pn	11 45 18.3	+6.7
	5.9nm,0.3s,baz=294,slow=20,SNR=5.6						
LEM				Sn	**Sn**	**11 46 11.3**	**-0.1**
	3.0nm,0.3s,baz=307,slow=20,SNR=2.5						
CMJI	**Cimerak**	**6.10**	**95**	P	**Pn**	**11 45 22.3**	**-0.4**
	86nm,1.1s,0.4nm						
CMAR	**Chiang Mai Arr**	**25.79**	**353**	P	**P**	**11 49 23.4**	**+0.6**
	0.5nm,0.4s,baz=169,slow=7.3,SNR=3.3						
ASAR	**Alice Springs**	**34.40**	**122**	P	**P**	**11 50 38.5**	**-0.7**
	0.2nm,0.7s,baz=300,slow=8.0,SNR=6.2						
MKAR	**Makanchi Array**	**56.71**	**344**	P	**P**	**11 53 35.0**	**-0.1**
	0.3nm,0.6s,baz=148,slow=8.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**62.76**	**348**	P	**P**	**11 54 16.9**	**+0.4**
	0.5nm,0.3s,baz=177,slow=5.8,SNR=2.6						
TXAR	**Lajitas Array**	**147.14**	**45**	PKPbc	**PKPbc**	**12 03 35.5**	**+0.2**
	0.4nm,0.8s,baz=270,slow=2.5,SNR=4.3						

MEX 30 12:04:10.7±0.4**, 28°.03N**×**112°.24W, h7**^{km}±4^{km}**, MD3.6, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.71**	**180**	*e*P	Pg	12 04 22.9	-1.4
SRIG				*e*S	Sg	12 04 32.6	-0.9
GUYB	**Guaymas**	**1.22**	**96**	*e*P	Pb	12 04 30.4	-3.6
GUYB				*e*S	Sg	12 04 45.4	-4.5
HSIG		**1.50**	**49**	*e*P	Pn	12 04 34.5	-3.6
HSIG				*e*S	Sn	12 04 53.2	-4.7

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*ISCJB **30** 12:16:52.8±0.4, 6°.84N±0°.02×73°.09W±0°.03, h161^{km}±3^{km}, mb3.5/4, Error ellipse: s-maj=5.0km s-min=3.7km az=25.8*
*IDC **30** 12:16:53.1±0.7, 6°.79N×72°.98W, h158^{km}±9^{km}, mb3.3/4, mb1 3.8/8, mb1mx3.3/41, mbtmp4.0/8, Error ellipse: s-maj=22.9km s-min=7.3km az=134.0*
*RSNC **30** 12:16:55.2±1.1, 6°.81N×73°.14W, h150^{km}±4^{km}, ML3.7, Mw3.9*
ISC 30 12:16:53.3±0.7**, 6°.85N**±0°.03×**73°.07W**±0°.04**, h159**^{km}±5^{km}**, n37, σ1^{s}11**/66**, mb3.5**/4**, 2C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GIRC	**Giron, Santand**	**0.26**	**333**	⇓*e*P	**Pn**	**12 17 15.5**	**+0.5**
GIRC				*e*S	**Sn**	**12 17 30.9**	**-0.6**
GIRC				*i*		12 17 32.7	
	comp=Z,826nm,0.3s						
BARC	**Barichara**	**0.28**	**203**	⇑*i*P	**Pn**	**12 17 15.4**	**+0.2**
BARC				*e*S	**Sn**	**12 17 30.8**	**-1.1**
BARC				*i*		12 17 32.3	
	comp=Z,787nm,0.3s						
PAMC	**Pamplona, Colo**	**0.61**	**37**	⇑*i*P	**Pn**	**12 17 18.1**	**+1.3**
PAMC				*e*S	**Sn**	**12 17 35.3**	**+0.5**
PAMC				*i*		12 17 37.6	
	comp=Z,1µm,0.5s						
BRRC	**Barranca, Sant**	**0.68**	**292**	*e*P	**Pn**	**12 17 17.3**	**+0.6**
BRRC				*e*S	**Sn**	**12 17 34.7**	**+0.2**
BRRC				*i*		12 17 37.5	
	comp=Z,570nm,0.4s						
RUSC	**La Rusia**	**0.95**	**181**	⇓*i*P	**Pn**	**12 17 19.2**	**+0.1**
RUSC				*e*S	**Sn**	**12 17 38.4**	**-0.5**
RUSC				*i*		12 17 40.6	
	comp=Z,376nm,0.6s						
TAMC	**Tame, Arauca**	**1.34**	**108**	⇓*i*P	**Pn**	**12 17 23.6**	**+1.5**
TAMC				*i*		12 17 23.9	
	comp=Z,1µm,0.3s						
TAMC				*e*S	**Sn**	**12 17 45.3**	**+1.3**
OCAC	**Ocana**	**1.40**	**350**	*e*P	**Pn**	**12 17 23.4**	**+0.7**
OCAC				*e*S	**Sn**	**12 17 45.5**	**+0.1**
OCAC				*i*		12 17 50.6	
	comp=Z,531nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.41**	**257**	*e*P	**Pn**	**12 17 21.9**	**-0.8**
PTBC				*e*S	**Sn**	**12 17 43.5**	**-1.6**
PTBC				*i*		12 17 50.9	
	comp=Z,831nm,0.4s						

SPBC	**San Pablo de B**	**1.55**	**220**	*e*P	**Pn**	**12 17 24.2**	**+0.1**
SPBC				*e*S	**Sn**	**12 17 46.5**	**-1.4**
SPBC				*i*		12 17 51.2	
	comp=Z,757nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.88**	**290**	*e*P	**Pn**	**12 17 27.7**	**0.0**
ZARC				*e*S	**Sn**	**12 17 53.7**	**-0.4**
ZARC				*i*		12 18 04.2	
	comp=Z,606nm,0.4s						
SMLC	**San Martn de**	**2.18**	**333**	*e*P	**Pn**	**12 17 31.3**	**+0.2**
SMLC				*e*S	**Sn**	**12 18 00.5**	**+0.3**
SMLC				*i*		12 18 07.4	
	comp=Z,588nm,0.1s						
NORC	**Norcasia**	**2.19**	**235**	*e*P	**Pn**	**12 17 31.2**	**-0.1**
NORC				*e*S	**Sn**	**12 17 59.1**	**-1.5**
NORC				*i*		12 18 04.0	
	comp=Z,296nm,0.3s						
ROSC	**El Rosal**	**2.35**	**212**	P	**Pn**	**12 17 35.0**	**+1.5**
	comp=Z,99nm,0.3s,baz=293,slow=15,SNR=52						
ROSC				S	**Sn**	**12 18 04.2**	**-0.3**
	comp=Z,102nm,0.3s,baz=311,slow=22,SNR=13						
ROSC	**El Rosal**	**2.35**	**212**	*e*P	**Pn**	**12 17 35.0**	**+1.5**
ROSC				*e*S	**Sn**	**12 18 05.9**	**+1.5**
HELC	**Santa Helena**	**2.52**	**255**	*e*P	**Pn**	**12 17 37.1**	**+1.6**
HELC				*e*S	**Sn**	**12 18 08.1**	**0.0**
HELC				*i*		12 18 14.1	
	comp=Z,293nm,0.4s						
VILC	**Villavicencio,**	**2.79**	**193**	*e*P	**Pn**	**12 17 38.0**	**-0.6**
VILC				*e*S	**Sn**	**12 18 12.4**	**-1.2**
VILC				*i*		12 18 18.4	
	comp=Z,330nm,0.5s						
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*e*P	**Pn**	**12 17 39.6**	**+0.6**
RREF	**El Recreo**	**2.98**	**230**	*e*P	**Pn**	**12 17 41.7**	**+0.3**
RREF				*e*S	**Sn**	**12 18 20.7**	**+2.2**
DBBC	**Dabeiba**	**3.12**	**273**	*e*P	**Pn**	**12 17 43.0**	**+0.4**
DBBC				*e*S	**Sn**	**12 18 20.3**	**-0.5**
DBBC				*i*		12 18 21.9	
	comp=Z,223nm,0.7s						
SDV	**Santo Domingo**	**3.15**	**50**	P	**Pn**	**12 17 43.9**	**+0.7**
	comp=Z,65nm,0.3s,baz=232,slow=4.3,SNR=27						
SDV				S	**Sn**	**12 18 21.2**	**-0.6**
	comp=Z,36nm,0.3s,baz=266,slow=22,SNR=12						
SDV	**Santo Domingo**	**3.15**	**50**	*e*P	**Pn**	**12 17 44.6**	**+1.5**
SDV				*e*S	**Sn**	**12 18 21.8**	**0.0**
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P	**Pn**	**12 17 46.3**	**+2.6**
ARGC				*e*S	**Sn**	**12 18 24.3**	**+1.5**
ARGC				*i*		12 18 36.4	
	comp=Z,101nm,0.3s						
PRAC	**Prado**	**3.60**	**210**	*e*P	**Pn**	**12 17 48.4**	**-0.3**
PRAC				*e*S	**Sn**	**12 18 32.0**	**+0.2**
PRAC				*i*		12 18 36.9	
	comp=Z,267nm,0.7s						
ORTC	**Ortega, Tolima**	**3.63**	**217**	*e*P	**Pn**	**12 17 49.5**	**+0.3**
ORTC				*e*S	**Sn**	**12 18 32.1**	**-0.5**
ORTC				*i*		12 18 40.1	
	comp=Z,195nm,0.4s						
CVALL	**Valledupar, Ce**	**3.64**	**357**	*e*P	**Pn**	**12 17 49.2**	**0.0**
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**12 17 49.2**	**-0.5**
SJCC				*e*S	**Sn**	**12 18 30.9**	**-2.7**
SJCC				*i*		12 18 35.1	
	comp=Z,114nm,0.4s						
PLMC	**San Jos del P**	**3.73**	**239**	*e*P	**Pn**	**12 17 51.3**	**+0.9**
PLMC				*i*		12 18 00.8	
	comp=Z,111nm,0.1s						
PLMC				*e*S	**Sn**	**12 18 35.4**	**+0.6**
GUVC	**San Jose del G**	**4.30**	**174**	*e*P	**Pn**	**12 17 57.6**	**-0.2**
GUVC				*e*S	**Sn**	**12 18 46.7**	**-1.3**
GUVC				*i*		12 18 50.6	
	comp=Z,141nm,0.3s						
SMRC	**Santa Marta, M**	**4.43**	**345**	*e*P	**Pn**	**12 18 00.8**	**+1.3**
SMRC				*e*S	**Sn**	**12 18 48.6**	**-2.5**
SMRC				*i*		12 18 54.7	
	comp=Z,96nm,0.4s						
PCRV	**Puerto La Cruz**	**8.98**	**68**	P	**Pn**	**12 18 58.3**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=218,slow=17,SNR=2.8						
PCRV				S	**Sn**	**12 20 38.7**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=105,slow=20,SNR=2.6						
TEIG	**Tepich**	**19.86**	**314**	P	**Pn**	**12 21 14.7**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=119,slow=10,SNR=4.7						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**12 23 44.8**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=124,slow=9.0,SNR=13						
TXAR				PcP	**PcP**	**12 26 05.8**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=145,slow=3.3,SNR=3.1						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**12 25 16.6**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=137,slow=11,SNR=4.3						
NVAR	**Mina Array Bea**	**51.50**	**315**	P	**P**	**12 25 43.3**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=132,slow=7.8,SNR=4.8						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**12 27 03.1**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=133,slow=6.5,SNR=6.0						
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc	**PKPbc**	**12 36 23.6**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=120,slow=3.4,SNR=12						
WRA	**Warramunga Arr**	**150.39**	**241**	PKPbc	**PKPbc**	**12 36 26.6**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=94,slow=3.0,SNR=14						

BEO 30 12:27:07.8±0.3**, 44°.14N**×**22°.09E, h0**^{km}**, ML1.5**/9**, 1C-1D, Mining explosion., Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAGS	**Zajecar**	**0.34**	**162**	*e*Pg	Pg	12 27 13.7	-0.6
ZAGS				*e*Sg	Sg	12 27 19.1	+0.5
ZAGS	**Zajecar**	**0.34**	**162**	*e*Pg	Pg	12 27 13.7	-0.6
ZAGS				*e*Sg	Sg	12 27 19.1	+0.5
KUBS	**Kucevo**	**0.41**	**313**	*e*Pg	Pg	12 27 15.3	-0.3
KUBS				*e*Sg	Sg	12 27 20.6	-0.3
KUBS	**Kucevo**	**0.41**	**313**	*e*Pg	Pg	12 27 14.3	-1.3
KUBS				*e*Sg	Sg	12 27 20.6	-0.3
ZAPS	**Zavoj**	**0.95**	**155**	*e*Pg	Pg	12 27 25.1	-0.8
ZAPS				*e*Sg	Sg	12 27 37.9	-0.3
ZAPS	**Zavoj**	**0.95**	**155**	*e*Pg	Pg	12 27 25.1	-0.8
ZAPS				*e*Sg	Sg	12 27 37.9	-0.3
GRUS	**Gruza**	**1.02**	**257**	*e*Pg	Pg	12 27 27.0	-0.4
GRUS				*e*Sg	Sg	12 27 41.4	+0.7
GRUS	**Gruza**	**1.02**	**257**	*e*Pg	Pg	12 27 26.7	-0.7
GRUS				*e*Sg	Sg	12 27 41.4	+0.7
SELS	**Selova**	**1.16**	**218**	*e*Pg	Pg	12 27 28.9	-1.0
SELS				*e*Sg	Sg	12 27 44.8	-0.1
SELS	**Selova**	**1.16**	**218**	*e*Pg	Pg	12 27 28.9	-1.0
SELS				*e*Sg	Sg	12 27 44.8	-0.1
TRUS	**Trudelj**	**1.22**	**275**	*e*Pg	Pg	12 27 29.9	-1.2
TRUS	**Trudelj**	**1.22**	**275**	*e*Pg	Pg	12 27 29.8	-1.3
TRUS				*e*Sg	Sg	12 27 46.0	-0.9
BARS	**Barje**	**1.33**	**189**	*e*Pg	Pg	12 27 31.8	-1.5
BARS	**Barje**	**1.33**	**189**	*e*Pg	Pg	12 27 31.8	-1.5
BARS				*e*Sg	Sg	12 27 49.4	-1.2
GZR	**Gura Zlata**	**1.35**	**21**	⇓*i*P	Pg	12 27 32.8	-0.9
GZR	**Gura Zlata**	**1.35**	**21**	S	Sn	12 27 54.2	+1.6
IVAS	**Ivanjica**	**1.51**	**249**	*e*Pg	Pn	12 27 35.9	-0.3
IVAS				*e*Sg	Sg	12 27 56.1	-0.2
IVAS	**Ivanjica**	**1.51**	**249**	*e*Pg	Pn	12 27 35.9	-0.3
IVAS				*e*Sg	Sg	12 27 56.1	-0.2
DIVS	**Divibare**	**1.51**	**269**	*e*Pg	Pn	12 27 35.3	-0.9
DIVS	**Divibare**	**1.51**	**269**	*e*Pg	Pn	12 27 35.2	-1.0
BZS	**Buzias**	**1.52**	**347**	*e*Pg	Pn	12 27 35.4	-0.8
BZS				*e*Sg	Sb	12 27 56.7	0.0
BZS	**Buzias**	**1.52**	**347**	*e*Pg	Pn	12 27 35.6	-0.6
BZS				*e*Sg	Sg	12 27 55.7	-0.9
BZS	**Buzias**	**1.52**	**347**	⇑*i*P	Pn	12 27 35.3	-0.9
BZS	**Buzias**	**1.52**	**347**	S	Sb	12 27 56.7	0.0

ISK ***30*** *12:34:55.5, 39°.65N×28°.90E, h5^{km}, ML2.2/15*
ISCJB ***30*** *12:34:56.4±0.4, 39°.62N±0°.02×28°.90E±0°.03, h2^{km}±6^{km}, Error ellipse: s-maj=4.4km s-min=3.3km az=13.5*
DDA ***30*** *12:34:56.0, 39°.63N×28°.88E, h7^{km}±5^{km}, ML2.9*

ISC 30 12:34:56.0±1.1**, 39°.64N**±0°.02×**28°.90E**±0°.03**, h7**^{km}±10^{km}**, n24, σ0^{s}.68**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.33**	**264**	*i* P	**Pg**	**12 35 02.7**	**+0.1**
DURS				*i* S	**Sg**	**12 35 07.4**	**+0.3**
DURS				IAML_P			
	comp=Z,4µm,0.1s						
TVSB	**Tavsanli**	**0.47**	**113**	PG	**Pg**	**12 35 05.6**	**+0.5**
TVSB				SG	**Sb**	**12 35 13.5**	**-0.4**
ULDT	**Uludag**	**0.53**	**19**	*i* P	**Pb**	**12 35 07.5**	**-0.3**
ULDT				*i* S	**Sb**	**12 35 15.3**	**-0.5**
ULDT				IAML_P			
	comp=Z,3µm,0.1s						
DEMI	**Demirci**	**0.61**	**194**	*i* P	**Pb**	**12 35 08.4**	**-0.7**
DEMI				*i* S	**Sb**	**12 35 16.7**	**-1.2**
DEMI				IAML_P			
	comp=Z,2µm,0.1s						
GDZ	**Gediz**	**0.71**	**141**	*i* P	**Pb**	**12 35 10.7**	**-0.1**
GDZ				IAML_P			
	comp=Z,6µm,0.2s						
MDNY	**Mudanya-Bursa**	**0.73**	**359**	PG	**Pb**	**12 35 10.4**	**-0.7**
MDNY				SG	**Sb**	**12 35 21.6**	**+0.3**
KCTX	**Karacabey (Bur**	**0.76**	**326**	PG	**Pg**	**12 35 10.7**	**+0.1**
BALB	**Balikesir**	**0.79**	**270**	PG	**Pb**	**12 35 12.4**	**+0.3**
BALB				SG	**Sn**	**12 35 24.4**	**-1.2**
ARMT	**Armutlu**	**0.93**	**358**	PG	**Pb**	**12 35 14.1**	**-0.4**
USAK	**Uak-Merkez**	**0.93**	**174**	*i* P	**Pb**	**12 35 14.6**	**+0.2**
USAK				*i* S	**Sg**	**12 35 25.5**	**-0.3**
USAK				IAML_P			
	comp=Z,2µm,0.2s						
STEP	**BALIKESIR_Sava**	**0.95**	**255**	*i* P	**Pn**	**12 35 16.7**	**+0.8**
STEP				*i* S	**Sn**	**12 35 31.6**	**+1.9**
STEP				IAML_P			
	comp=Z,2µm,0.1s						
YLV	**Yalova**	**0.99**	**21**	PG	**Pb**	**12 35 15.7**	**+0.1**
YLV				SG	**Sn**	**12 35 30.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.02**	**294**	PG	**Pb**	**12 35 15.8**	**-0.3**
EDC	**Edincik**	**1.07**	**312**	PG	**Pn**	**12 35 17.2**	**-0.2**
MANT	**Manisa**	**1.18**	**193**	*i* P	**Pn**	**12 35 19.6**	**+0.5**
MANT				*i* S	**Sg**	**12 35 32.6**	**-1.3**
BORA	**Eskisehir**	**1.22**	**78**	PN	**Pn**	**12 35 20.3**	**+0.7**
BUY	**Buyukada**	**1.22**	**8**	PN	**Pn**	**12 35 19.9**	**+0.3**
HRT	**Hereke**	**1.32**	**26**	PN	**Pg**	**12 35 21.9**	**+0.6**
SRCK	**Saricakaya, Es**	**1.39**	**73**	PN	**Pg**	**12 35 23.2**	**+0.6**
MRMT	**Marmara Adasi**	**1.39**	**314**	PN	**Pg**	**12 35 23.2**	**+0.5**
KAVV	**Kandilli-Istan**	**1.43**	**5**	PN	**Pg**	**12 35 23.9**	**+0.5**
ISK	**Istanbul-Kandi**	**1.43**	**5**	PN	**Pg**	**12 35 23.8**	**+0.3**
GULT	**Gulveren**	**1.47**	**57**	PN	**Pg**	**12 35 24.3**	**+0.1**
SILT	**Sile**	**1.61**	**20**	PN	**Pg**	**12 35 26.6**	**-0.4**

NIED ***30*** *12:39:00, 36°.30N×140°.10E, h50^{km}, Mw3.6 Best double couple: M$_0$3.04000×10^{14} NP1:φ$_s$174.00000°, δ39.00000°, λ157.00000°. NP2:φ$_s$283.00000°, δ76.00000°, λ54.00000°.*
ISCJB ***30*** *12:39:37.6±0.5, 36°.19N±0°.03×140°.12E±0°.05, h68^{km}±5^{km}, mb3.5/3, Error ellipse: s-maj=7.2km s-min=5.3km az=14.1*
JMA ***30*** *12:39:38.9±0.1, 36°.22N×140°.08E, h57^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: φ$_s$269.00000°, δ78.00000°, λ75.00000°. NP2: φ$_s$140.00000°, δ19.00000°, λ140.00000°. Principal axes: T Plg55.0000°, Azm160.0000°; N Plg15.0000°, Azm272.0000°; P Plg31.0000°, Azm11.0000°;*
JMA Felt II J1.
IDC ***30*** *12:39:38.7±2.5, 36°.11N×140°.10E, h60^{km}±25^{km}, mb3.1/3, mb1 3.5/4, mb1mx3.1/32, mbtmp3.5/4, ML3.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.0/13 Error ellipse: s-maj=27.6km s-min=8.9km az=62.0*

ISC 30 12:39:38.6±1.0**, 36°.21N**±0°.04×**140°.11E**±0°.05**, h60**^{km}±8^{km}**, n24, σ0^{s}.67**/28**, mb3.4**/3**, 4C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.07**	**73**	⇑P	**Pn**	**12 39 47.7**	**+0.2**
JYT				S	**Sn**	**12 39 53.8**	**-0.2**
JAG	**Ashikaga**	**0.57**	**293**	⇑P	**Pn**	**12 39 51.3**	**0.0**
JKT	**Katashina**	**0.89**	**309**	⇑P	**Pn**	**12 39 55.1**	**-0.2**
JKT				S	**Sn**	**12 40 07.2**	**-0.4**
JRY	**Ryogami san**	**1.00**	**259**	⇓P	**Pn**	**12 39 56.8**	**+0.2**
JRY				S	**Sn**	**12 40 10.0**	**+0.1**
JFY	**Yanaizu**	**1.24**	**345**	P	**Pn**	**12 40 00.2**	**+0.4**
JFY				S	**Sn**	**12 40 15.8**	**+0.1**
JOD2	**Odawara 2**	**1.25**	**222**	P	**Pn**	**12 40 00.6**	**+0.6**
JOD2				*e*S	**Sn**	**12 40 16.2**	**+0.2**
JFK	**Kawauchi**	**1.31**	**28**	P	**Pn**	**12 40 00.7**	**-0.1**
JFK				S	**Sn**	**12 40 17.3**	**0.0**
JFT	**Otama**	**1.32**	**8**	⇓P	**Pn**	**12 40 01.2**	**+0.3**
JFT				S	**Sn**	**12 40 18.1**	**+0.5**
JHK	**Hiroka**	**1.36**	**320**	⇑P	**Pn**	**12 40 01.7**	**+0.3**
JHK				*e*S	**Sn**	**12 40 18.9**	**+0.4**
BSO3	**Boso 3**	**1.44**	**167**	P	**Pn**	**12 40 03.4**	**+1.2**
JYN	**Shimob**	**1.46**	**241**	P	**Pn**	**12 40 03.9**	**+1.2**
MJAR	**Matsushiro Arr**	**1.57**	**283**	P	**Pn**	**12 40 04.2**	**0.0**
	3.5nm,0.3s,baz=110,slow=8.9,SNR=189						
MJAR				S	**Sn**	**12 40 23.2**	**-0.3**
	2.3nm,0.3s,baz=118,slow=16,SNR=19						
MAT	**Matsushiro**	**1.57**	**283**	P	**Pn**	**12 40 05.0**	**+0.8**
MAT				S	**Sn**	**12 40 22.7**	**-0.9**
JHJ	**Hachijo jima 2**	**3.09**	**185**	P	**Pn**	**12 40 25.0**	**0.0**
	21nm,0.3s,baz=326,slow=20,SNR=19						
JHJ				S	**Sn**	**12 40 58.8**	**-1.9**
	38nm,0.3s,baz=106,slow=21,SNR=8.6						
KLR	**Kul'dur**	**14.38**	**337**	LR	LR	12 48 28.7	
	comp=Z,21nm,18.3s,baz=269,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.66**	**118**	T	T	13 15 38.4	
	baz=312,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**28.67**	**118**	T	T	13 15 39.0	
	baz=312,slow=75,SNR=9.3						
H11N3	**WAKE ISLAND Hy**	**28.68**	**118**	T	T	13 15 39.8	
	baz=312,slow=75,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**29.33**	**120**	T	T	13 16 30.5	
	baz=314,slow=76,SNR=8.8						
H11S3	**WAKE ISLAND Hy**	**29.33**	**120**	T	T	13 16 31.2	
	baz=314,slow=76,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	**29.34**	**120**	T	T	13 16 31.1	
	baz=314,slow=76,SNR=9.7						
ILAR	**Eielson Array**	**50.75**	**32**	P	**P**	**12 48 31.9**	**-0.2**
	0.2nm,0.5s,baz=281,slow=5.7,SNR=3.6						
WRA	**Warramunga Arr**	**56.11**	**187**	P	**P**	**12 49 10.9**	**-0.8**
	0.7nm,0.7s,baz=4.6,slow=7.2,SNR=5.5						
ASAR	**Alice Springs**	**59.84**	**187**	P	**P**	**12 49 38.6**	**+0.7**
	0.3nm,0.9s,baz=0.6,slow=5.4,SNR=4.9						

ISCJB ***30*** *12:39:40.6±2.6, 35°.4S±0°.4×104°.3W±0°.4, h10^{km}, mb3.6/7, MS4.1/5, Error ellipse: s-maj=73.7km s-min=20.5km az=36.4*
IDC ***30*** *12:39:40.7±2.6, 35°.41S×104°.28W, h0^{km}, mb3.8/7, mb1 4.1/7, mb1mx3.9/21, mbtmp3.8/7, MS4.1/6, Ms1 4.1/6, ms1mx3.7/30, Error ellipse: s-maj=79.3km s-min=23.8km az=36.0*

ISC 30 12:39:42.1±2.9**, 35°.5S**±0°.5×**104°.3W**±0°.4**, h10**^{km}**, n14, σ0^{s}.71**/8**, mb3.7**/7**, MS4.2**/5**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**9.35**	**331**	LR	LR	12 44 39.1	
	comp=Z,1µm,19.8s,baz=118,slow=32						
PLCA	**Paso Flores**	**26.96**	**111**	P	**P**	**12 45 24.5**	**+0.7**
	2.3nm,1.2s,baz=288,slow=20,SNR=2.6						
CFA	**Coronel Fontan**	**30.18**	**93**	P	**P**	**12 45 52.6**	**0.0**
	1.3nm,0.6s,baz=263,slow=4.9,SNR=3.0						
USHA	**Ushuaia**	**31.37**	**139**	LR	LR	12 56 53.1	
	comp=Z,380nm,18.8s,baz=295,slow=33						
ATAH	**Atahualpa**	**36.85**	**46**	LR	LR	12 58 15.2	
	comp=Z,364nm,20.1s,baz=247,slow=30						
LPAZ	**La Paz**	**37.43**	**69**	P	**P**	**12 46 56.4**	**+0.1**
	0.4nm,0.5s,baz=23,slow=8.1,SNR=3.9						
PMSA	**Palmer Station**	**37.92**	**153**	LR	LR	12 58 27.0	
	comp=Z,402nm,19.1s,baz=320,slow=30						
SIV	**San Ignacio**	**43.08**	**75**	P	**P**	**12 47 42.0**	**-0.4**
	1.2nm,0.9s,baz=257,slow=11,SNR=5.6						
TXAR	**Lajitas Array**	**64.44**	**1**	P	**P**	**12 50 19.2**	**+0.6**
	0.5nm,0.8s,baz=187,slow=7.1,SNR=3.7						
NVAR	**Mina Array Bea**	**74.65**	**349**	P	**P**	**12 51 22.1**	**+0.4**
	0.6nm,0.7s,baz=184,slow=6.3,SNR=5.9						
ELK	**Elko**	**76.49**	**351**	LR	LR	13 18 12.6	
	comp=Z,96nm,18.3s,baz=196,slow=30						
PDAR	**Pinedale Array**	**77.99**	**356**	P	**P**	**12 51 39.8**	**-0.8**
	0.5nm,0.6s,baz=154,slow=6.6,SNR=5.7						
NEW	**Newport**	**84.13**	**351**	LR	LR	13 22 26.1	
	comp=Z,58nm,20.6s,baz=152,slow=30						
BRTR	**Keskin Array B**	**146.60**	**70**	PKPbc	**PKPbc**	**12 59 23.1**	**-0.8**
	1.1nm,0.8s,baz=270,slow=1.4,SNR=7.3						

ISCJB ***30*** *12:48:45.6±0.3, 35°.53S±0°.05×104°.00W±0°.05, h10^{km}, mb4.4/123, MS4.6/18, Error ellipse: s-maj=8.5km s-min=4.8km az=37.0*
IDC ***30*** *12:48:45.7±0.9, 35°.58S×104°.01W, h0^{km}, mb4.4/14, mb1 4.6/15, mb1mx4.4/30, mbtmp4.4/15, ML4.6/1, MS4.6/14, Ms1 4.6/14, ms1mx4.4/22, Error ellipse: s-maj=27.4km s-min=16.7km az=41.0*
NEIC ***30*** *12:48:47.3±1.8, 35°.50S×103°.92W, h10^{km}, mb4.5/122, Error ellipse: s-maj=18.8km s-min=6.4km az=254.0*

ISC 30 12:48:47.3±0.4**, 35°.54S**±0°.08×**104°.02W**±0°.07**, h10**^{km}**, n201, σ1^{s}.09**/192**, mb4.5**/123**, MS4.6**/18**, 1C, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**9.54**	**330**	Pn	**Pn**	**12 51 06.2**	**+1.4**
	5.7nm,0.3s,baz=122,slow=9.5,SNR=3.8						
RPN				LR	LR	12 53 49.1	
	comp=Z,7µm,19.5s,baz=124,slow=32						
RPN	**Rapa Nui**	**9.54**	**330**	*e*Pn	**Pn**	**12 51 04.9**	**+0.2**
GO07	**Milladeo Hill,**	**24.57**	**117**	*e*P	**P**	**12 54 05.8**	**-1.5**
	27nm,0.6s						
GO06	**Curarrehue**	**26.03**	**109**	*e*P	**P**	**12 54 21.1**	**+0.3**
GO05	**Huala**	**26.14**	**98**	*e*P	**P**	**12 54 22.9**	**+1.2**
	46nm,1.1s						
PLCA	**Paso Flores**	**26.73**	**111**	P	**P**	**12 54 27.9**	**+0.9**
	3.4nm,0.8s,baz=288,slow=8.9,SNR=6.9						
PLCA				LR	LR	13 02 16.7	
	comp=Z,616nm,18.2s,baz=296,slow=30						
PLCA	**Paso Flores**	**26.73**	**111**	*e*P	**P**	**12 54 26.0**	**-1.0**
	7.1nm,0.9s						
PLCA	**Paso Flores**	**26.73**	**111**	*e*P	**P**	**12 54 28.8**	**+1.8**
GO04	**Tololo Observa**	**28.33**	**89**	*e*P	**P**	**12 54 42.1**	**+0.4**
LCO	**Las Campanas**	**28.82**	**86**	*e*P	**P**	**12 54 45.2**	**-0.9**
	10nm,0.7s						
RKT	**Rikitea**	**29.56**	**286**	*e*LQ	LQ	13 01 11.8	
	2µm,31.2s						
CFA	**Coronel Fontan**	**29.96**	**93**	P	**P**	**12 54 55.2**	**-0.7**
	85nm,1.4s,baz=258,slow=8.0,SNR=15						
CFA				LR	LR	13 04 07.0	
	comp=Z,1µm,18.9s,baz=257,slow=31						
GO02	**Mina Guanaco**	**31.32**	**80**	*e*P	**P**	**12 55 08.4**	**+0.2**
PB10	**IPOC Station P**	**31.34**	**77**	*e*P	**P**	**12 55 06.0**	**-2.1**
	14nm,0.7s						
LVC	**Limon Verde**	**33.10**	**77**	*e*P	**P**	**12 55 25.5**	**+1.6**
TRQA	**Tornquist**	**33.55**	**107**	*e*P	**P**	**12 55 29.5**	**+2.1**
MNMC	**Minye Minye**	**34.45**	**71**	*e*P	**P**	**12 55 34.9**	**-0.8**
	16nm,0.7s						
GO01	**Chusmiza**	**34.46**	**72**	*e*P	**P**	**12 55 36.6**	**+0.7**
ATAH	**Atahualpa**	**36.76**	**46**	P	**P**	**12 55 56.8**	**+1.2**
	4.8nm,0.8s,baz=225,slow=13,SNR=3.7						
LPAZ	**La Paz**	**37.26**	**68**	P	**P**	**12 56 01.0**	**+0.9**
	5.5nm,0.7s,baz=225,slow=6.2,SNR=18						
LPAZ				LR	LR	13 08 17.4	
	comp=Z,448nm,18.9s,baz=246,slow=31						
LPAZ	**La Paz**	**37.26**	**68**	*e*P	**P**	**12 56 00.7**	**+0.5**
	12nm,1.0s						
LPAZ	**La Paz**	**37.26**	**68**	*e*P	**P**	**12 56 00.8**	**+0.7**
CPUP	**Villa Florida**	**40.77**	**90**	P	**P**	**12 56 27.7**	**-1.0**
	4.0nm,0.8s,baz=272,slow=7.4,SNR=5.7						
CPUP				LR	LR	13 11 14.4	
	comp=Z,416nm,18.3s,baz=250,slow=33						
TBI	**Tubuai**	**41.07**	**275**	*e*S	**S**	**13 02 42.5**	**-1.4**
	486nm,28.2s						
TBI				*e*LR	LR	13 07 40.8	
	comp=Z,1µm,25.0s						
TBI	**Tubuai**	**41.07**	**275**	*e*T	T	13 39 31.0	
	10nm,0.4s						
TAOE	**Nuku Hiva Isla**	**42.32**	**300**	*e*LR	LR	13 08 24.5	
	comp=Z,2µm,24.1s						
SIV	**San Ignacio**	**42.89**	**74**	P	**P**	**12 56 45.9**	**-0.3**
	6.3nm,0.7s,baz=245,slow=7.9,SNR=35						
TIAR	**Tiarei**	**43.91**	**282**	*e*T	T	13 43 21.7	
	2.8nm,0.3s						
PPT2	**Papeete2**	**44.07**	**282**	*e*S	**S**	**13 03 27.3**	**-1.2**
	516nm,24.5s						
PPT2				*e*LQ	LQ	13 06 59.0	
	3µm,34.2s						
PPT2				*e*LR	LR	13 09 03.6	
	comp=Z,735nm,24.2s,baz=118						
PPT	**Papeete**	**44.08**	**282**	LR	LR	13 09 55.3	
	comp=Z,672nm,19.2s,baz=122,slow=29						
PMOR	**Pomariorio Ree**	**44.20**	**286**	*e*T	T	13 43 48.3	
	5.3nm,0.2s						
AQDB	**Aquidauana**	**44.79**	**84**	*e*P	**P**	**12 57 01.2**	**-0.2**
PTGB	**Pitanga**	**45.75**	**91**	*e*P	**P**	**12 57 09.3**	**+0.2**
SALV	**Santo Antonio**	**47.21**	**78**	*e*P	**P**	**12 57 20.4**	**-0.2**
FRTB	**Fartura**	**48.41**	**91**	*e*P	**P**	**12 57 30.1**	**+0.2**
ROSC	**El Rosal**	**48.90**	**41**	P	**P**	**12 57 33.6**	**-0.3**
	8.8nm,0.3s,baz=287,slow=19,SNR=4.4						
ROSC				LR	LR	13 14 36.6	
	comp=Z,1µm,21.3s,baz=256,slow=32						
ROSC	**El Rosal**	**48.90**	**41**	*e*P	**P**	**12 57 33.0**	**-1.0**
	12nm,1.0s						
HOPE	**Hope Point**	**49.34**	**134**	*e*P	**P**	**12 57 37.9**	**+1.4**
	23nm,1.0s						
ITRB	**Iturama**	**49.51**	**86**	*e*P	**P**	**12 57 38.7**	**+0.4**
CLDB	**Colider**	**50.04**	**73**	*e*P	**P**	**12 57 41.6**	**-0.8**
BB19B	**Bebedouro**	**50.33**	**89**	*e*P	**P**	**12 57 45.0**	**+0.4**
VAO	**Valinhos**	**50.69**	**92**	*e*P	**P**	**12 57 46.8**	**-0.5**
PARB	**Paraibuna**	**51.63**	**93**	*e*P	**P**	**12 57 55.5**	**+1.1**
ESAR	**Angra dos Reis**	**52.73**	**93**	*e*P	**P**	**12 58 03.7**	**+1.2**
PMNB	**Patos De Minas**	**53.29**	**87**	*e*P	**P**	**12 58 07.0**	**+0.2**
BSCB	**Bom Sucesso**	**53.43**	**91**	*e*P	**P**	**12 58 07.8**	**+0.1**
BDFB	**Brasilia**	**53.53**	**83**	P	**P**	**12 58 07.8**	**-0.8**
	4.3nm,0.6s,baz=243,slow=7.9,SNR=6.0						
BDFB				LR	LR	13 19 42.3	
	comp=Z,532nm,18.3s,baz=243,slow=35						
BDFB	**Brasilia**	**53.53**	**83**	*e*P	**P**	**12 58 07.8**	**-0.8**
BDFB				*e*P	**P**	**12 58 08.0**	**-0.6**
PTGA	**Pitinga**	**53.60**	**60**	*e*P	**P**	**12 58 08.0**	**-0.9**
	5.9nm,1.1s						
PTGA	**Pitinga**	**53.60**	**60**	*e*P	**P**	**12 58 07.3**	**-1.6**
VAS01	**Vassouras-RJ**	**53.90**	**93**	*e*P	**P**	**12 58 12.2**	**+1.1**
SDV	**Santo Domingo**	**54.26**	**42**	*e*P	**P**	**12 58 12.2**	**-1.6**
	7.8nm,0.6s						
SDV	**Santo Domingo**	**54.26**	**42**	*e*P	**P**	**12 58 12.4**	**-1.5**
QSPA	**South Pole Qui**	**54.67**	**180**	*e*P	**P**	**12 58 16.0**	**-0.2**
	4.9nm,0.8s						
PEXB	**Peixe**	**55.26**	**80**	*e*P	**P**	**12 58 21.0**	**0.0**
TEIG	**Tepich**	**57.44**	**18**	*e*P	**P**	**12 58 35.2**	**-1.1**
	14nm,1.0s						
SJMB	**Sao Joao De Ma**	**57.49**	**91**	*e*P	**P**	**12 58 37.8**	**+0.9**
BSFB	**Barra de Sao F**	**57.70**	**91**	*e*P	**P**	**12 58 38.8**	**+0.4**
SMTB	**Santa Maria do**	**57.71**	**77**	*e*P	**P**	**12 58 39.0**	**+0.5**
RIB01	**Linhares ES**	**57.83**	**92**	*e*P	**P**	**12 58 39.5**	**+0.2**
VNA3	**Neumayer Olymp**	**58.16**	**158**	P	**P**	**12 58 40.4**	**-0.5**
VNA1	**Neumayer--Stat**	**58.78**	**157**	P	**P**	**12 58 44.9**	**-0.2**
SNAA	**Sanae**	**60.07**	**159**	P	**P**	**12 58 52.3**	**-1.9**
SNAA	**Sanae**	**60.07**	**159**	*e*P	**P**	**12 58 53.7**	**-0.5**
	6.3nm,1.0s						
SNZO	**South Karori**	**61.72**	**238**	*e*P	**P**	**12 59 07.1**	**+1.4**
	48nm,1.1s						
QRZ	**Quartz Range**	**63.42**	**237**	*e*P	**P**	**12 59 17.4**	**+0.2**
	15nm,1.1s						
SJG	**San Juan**	**64.31**	**40**	*e*P	**P**	**12 59 22.3**	**-0.8**
	24nm,0.8s						
TXAR	**Lajitas Array**	**64.53**	**0**	P	**P**	**12 59 25.1**	**+0.6**
	2.2nm,0.7s,baz=184,slow=9.0,SNR=35						
CBYP	**Canovanas**	**64.60**	**41**	*e*P	**P**	**12 59 24.4**	**-0.7**
	16nm,0.9s						
LENM	**Lemitar**	**69.40**	**357**	*e*P	**P**	**12 59 55.3**	**-0.2**
Y14A	**Wickenburg**	**69.63**	**352**	*e*P	**P**	**12 59 56.2**	**-0.5**
	3.0nm,0.9s						
LAZ	**Ladron**	**69.64**	**357**	*e*P	**P**	**12 59 56.8**	**-0.2**
X18A	**Snowflake**	**69.93**	**355**	*e*P	**P**	**12 59 59.3**	**+0.5**
	7.2nm,1.1s						
X16A	**Lo Mia Camp, P**	**69.94**	**353**	*e*P	**P**	**12 59 59.8**	**+0.9**
	1.2nm,0.7s						
LRAL	**Lakeview Retre**	**70.06**	**15**	*e*P	**P**	**12 59 58.5**	**-0.8**
	8.5nm,1.0s						
WMOK	**Wichita Mounta**	**70.09**	**5**	*e*P	**P**	**12 59 59.5**	**0.0**
	1.7nm,0.8s						
AMTX	**Amarillo**	**70.10**	**2**	*e*P	**P**	**12 59 59.5**	**-0.1**
	7.0nm,1.0s						
ANMO	**Albuquerque**	**70.16**	**358**	*e*P	**P**	**12 59 59.6**	**-0.6**
	0.5nm,0.7s						
MIAR	**Mount Ida**	**70.40**	**9**	*e*P	**P**	**12 59 59.0**	**-2.4**
	1.3nm,0.8s						
Z50A	**Ashland**	**70.50**	**16**	*e*P	**P**	**13 00 01.3**	**-0.8**
	3.2nm,0.9s						
Y49A	**Blount Mountai**	**70.98**	**15**	*e*P	**P**	**13 00 03.6**	**-1.4**
	3.7nm,0.8s						
LDFC	**Landfair**	**71.02**	**350**	*e*P	**P**	**13 00 06.3**	**+1.0**
	10nm,1.1s						
WUAZ	**Wupatki**	**71.03**	**354**	*e*P	**P**	**13 00 05.8**	**+0.4**
	2.1nm,1.0s						
WHAR	**Wooly Hollow**	**71.31**	**10**	*e*P	**P**	**13 00 07.5**	**+0.6**
	10nm,1.1s						
GSC	**Goldstone, Bar**	**71.48**	**349**	*e*P	**P**	**13 00 09.3**	**+1.2**
	3.1nm,0.9s						
TUL1	**Leonard**	**71.50**	**7**	*e*P	**P**	**13 00 09.0**	**+1.0**
	4.9nm,0.7s						
Y52A	**Lilburn**	**71.53**	**17**	*e*P	**P**	**13 00 08.9**	**+0.6**
	5.4nm,1.0s						
PLAL	**Pickwick Lake**	**71.72**	**14**	*e*P	**P**	**13 00 06.3**	**-3.1**
	4.4nm,0.9s						

FCAR	Ozark Folk Cen	71.92	10	eP	P	13 00 11.6	+1.0
	3.6nm,0.9s						
U15A	North Rim	72.02	353	eP	P	13 00 13.2	+1.7
	2.7nm,0.9s						
HHAR	Hobbs	72.07	9	eP	P	13 00 12.1	+0.6
	7.4nm,1.0s						
ISA	Isabella, Lake	72.11	348	eP	P	13 00 11.8	0.0
	5.9nm,1.1s						
HODGE	Hodges	72.33	19	eP	P	13 00 13.4	+0.3
	6.6nm,1.0s						
SYO	Syowa Base	72.35	167	⇑eP	P	13 00 12.0	-0.8
SWET	Sewanee	72.39	15	eP	P	13 00 13.5	0.0
	9.5nm,1.0s						
SHPR	Sheep Range	72.43	351	eP	P	13 00 12.9	-0.9
	2.3nm,1.1s						
MVCO	Mesa Verde	72.50	356	eP	P	13 00 12.5	-1.8
	5.5nm,0.9s						
DAC	Darwin (Calif)	72.56	349	eP	P	13 00 16.9	+2.2
	2.3nm,1.1s						
JSC	Jenkinsville	72.65	20	eP	P	13 00 13.2	-1.7
	6.3nm,0.8s						
KNB	Kanab	72.65	353	eP	P	13 00 14.5	-0.6
	2.3nm,1.2s						
LCMT	Little Creek M	72.69	352	eP	P	13 00 16.3	+0.9
	1.9nm,0.9s						
V48A	Smith Brothers	72.70	15	eP	P	13 00 14.8	-0.5
	6.9nm,0.8s						
BG3	Lake Jocassee	72.88	18	eP	P	13 00 17.6	+1.2
	4.9nm,0.7s						
WVT	Waverly	72.88	14	eP	P	13 00 16.8	+0.5
	3.6nm,0.8s						
SDCO	Great Sand Dun	72.93	359	eP	P	13 00 17.2	+0.3
	3.3nm,1.1s						
TPNV	Topopah Spring	73.01	350	eP	P	13 00 17.7	+0.4
	2.8nm,1.0s						
PBMO	Poplar Bluff	73.05	11	eP	P	13 00 16.9	-0.4
	4.5nm,0.9s						
WRMHI	West Rim	73.12	310	eP	P	13 00 19.1	+0.8
	62nm,1.2s						
CLTN	Cedars of Leba	73.14	15	eP	P	13 00 17.0	-0.8
	3.4nm,1.1s						
CCUT	Cedar City	73.24	352	eP	P	13 00 18.6	-0.1
	4.4nm,1.0s						
SZCU	Shurtz Canyon	73.25	352	eP	P	13 00 18.4	-0.4
	3.5nm,1.1s						
TKL	Tuckaleechee C	73.31	17	LR	LR	13 28 53.7	
	comp=Z,173nm,21.0s,baz=207,slow=33						
PV01	Paradox Valley	73.43	356	eP	P	13 00 20.5	+0.7
	3.7nm,1.0s						
KMSC	Kings Mountain	73.44	19	eP	P	13 00 19.9	+0.3
	5.3nm,0.9s						
PV18	Skein Mesa, Pa	73.56	356	eP	P	13 00 21.2	+0.7
	5.1nm,1.1s						
PV12	Saucer Basin,	73.62	356	eP	P	13 00 21.1	+0.1
	4.5nm,0.8s						
CCM	Cathedral Cave	74.18	10	eP	P	13 00 23.7	-0.2
	6.8nm,0.8s						
TCRU	Three Creeks R	74.19	353	eP	P	13 00 25.5	+1.2
	5.1nm,1.0s						
KSCO	Kaye Shedlock'	74.19	1	eP	P	13 00 23.8	-0.3
	8.9nm,1.0s						
PSUT	Pine Spring	74.27	352	eP	P	13 00 24.3	-0.4
	2.2nm,1.0s						
T49A	Edmonton	74.29	15	eP	P	13 00 23.5	-1.1
	1.9nm,0.6s						
R11A	Troy Canyon, C	74.30	351	eP	P	13 00 24.7	-0.2
	1.6nm,0.9s						
SRU	San Rafael Swe	74.52	355	eP	P	13 00 25.7	-0.5
	2.8nm,0.7s						
CMB	Columbia Colle	74.76	347	eP	P	13 00 27.4	0.0
	1.8nm,0.5s						
TMUT	Trail Mountain	74.76	354	eP	P	13 00 26.5	-1.2
	3.4nm,0.8s						
NVAR	Mina Array Bea	74.78	348	P	P	13 00 29.0	+1.3
	2.9nm,0.8s,baz=180,slow=8.3,SNR=22						
P17A	Butcher Ranch,	74.90	355	eP	P	13 00 27.6	-0.7
	4.7nm,0.7s						
RYN	Ryan	75.01	348	eP	P	13 00 28.8	-0.1
	3.3nm,1.2s						
WCI	Wyandotte Cave	75.22	14	eP	P	13 00 29.4	-0.5
	7.0nm,0.9s						
KVN	Kaiserville	75.36	349	eP	P	13 00 31.5	+0.5
	4.9nm,1.0s						
YERR	Yerington	75.48	348	eP	P	13 00 31.9	+0.3
	2.7nm,1.0s						
NLU	North Lily Min	75.49	354	eP	P	13 00 31.8	+0.1
	2.8nm,0.9s						
MPU	Maple Canyon	75.51	354	eP	P	13 00 32.7	+0.9
	1.9nm,0.5s						
PNTR	Pine Nut	75.64	348	eP	P	13 00 32.3	-0.3
	2.6nm,0.8s						
AFDM	Forest Hills D	75.76	346	eP	P	13 00 32.7	-0.3
	4.0nm,1.1s						
DUG	Dugway, Tooele	75.80	353	eP	P	13 00 32.3	-1.1
	1.3nm,0.8s						
CTU	Camp Tracy	76.19	354	eP	P	13 00 34.6	-1.1
	3.3nm,0.9s						
PAHR	Pah Rah Range	76.21	348	eP	P	13 00 33.7	-2.1
	3.4nm,1.2s						
PHWY	Pilot Hill	76.48	359	eP	P	13 00 37.1	-0.3
	2.3nm,0.5s						
BEKR	Beckworth	76.53	347	eP	P	13 00 36.7	-0.9
	1.9nm,1.0s						
BGU	Big Grassy Mou	76.54	353	eP	P	13 00 38.4	+0.7
	3.4nm,1.2s						
BMN	Battle Mountai	76.57	350	eP	P	13 00 37.4	-0.4
	2.5nm,0.9s						
P48A	Milroy	76.58	15	eP	P	13 00 37.3	-0.3
	3.7nm,0.7s						
TCUT	Toone Canyon	76.59	354	eP	P	13 00 37.5	-0.5
	4.4nm,0.8s						
ELK	Elko	76.61	351	P	P	13 00 37.4	-0.7
	0.3nm,0.3s,baz=132,slow=7.5,SNR=4.5						
ELK	Elko	76.61	351	eP	P	13 00 37.8	-0.3
	0.6nm,0.6s						
MAW	Mawson	76.69	175	P	P	13 00 38.4	+0.3
	3.9nm,0.9s,baz=221,slow=6.7,SNR=7.3						
MAW				LR	LR	13 30 27.8	
	comp=Z,192nm,21.4s,baz=186,slow=33						
MAW	Mawson	76.69	175	eP	P	13 00 37.9	-0.1
	1.3nm,1.1s						
DZM	Mont Dzumac	77.16	252	eLR	LR	13 24 17.7	
	comp=Z,1µm,27.9s						
K22A	Casper	77.85	358	eP	P	13 00 44.1	-0.8
	2.2nm,0.8s						
O52A	Adamsville	78.01	17	eP	P	13 00 45.9	+0.3
	14nm,1.0s						
BW06	Boulder Array	78.10	356	eP	P	13 00 46.7	+0.3
	3.8nm,1.0s						
PDAR	Pinedale Array	78.10	356	P	P	13 00 46.7	+0.3
	2.0nm,0.7s,baz=160,slow=6.3,SNR=8.6						
REDW	Red Top Meadow	78.78	355	eP	P	13 00 50.5	+0.4
	2.1nm,1.0s						
TPAW	Teton Pass	78.91	355	eP	P	13 00 49.9	-1.0
	6.3nm,1.0s						
MOOW	Moose Ponds	79.15	355	eP	P	13 00 51.9	-0.3
	1.5nm,0.8s						
ECSD	EROS Data Cent	79.19	5	eP	P	13 00 51.7	-0.4
	5.6nm,1.0s						
HLID	Hailey	79.30	352	eP	P	13 00 53.8	+0.9
	7.2nm,1.0s						
IMW	Indian Meadow	79.31	355	eP	P	13 00 53.3	+0.2
	3.0nm,1.0s						
FLWY	Flagg Ranch	79.48	355	eP	P	13 00 53.7	-0.3
	7.4nm,1.1s						
J08A	Circle Bar Ran	79.62	349	eP	P	13 00 55.1	+0.4
YPP	Pitchstone Pla	79.68	355	eP	P	13 00 54.2	-0.9
	0.8nm,1.0s						
QLMT	Earthquake Lak	80.28	355	eP	P	13 00 59.4	+1.1
MCMT	McKenzie Canyo	80.39	354	eP	P	13 00 58.4	-0.6
PINE	Pine Mountain	80.45	348	eP	P	13 01 00.2	+1.0
	5.2nm,0.8s						
I07A	Izee	80.49	349	eP	P	13 00 59.9	+0.6
	3.4nm,1.0s						
SPMN	Marine on St.	81.03	8	eP	P	13 01 01.4	-0.6
	6.3nm,0.8s						
BOZ	Bozeman (W)	81.06	355	eP	P	13 01 03.2	+0.9
	3.4nm,0.9s						
LRM	Limekiln Ridge	81.35	354	eP	P	13 01 08.6	+4.6
G08A	Pilot Rock	81.59	349	eP	P	13 01 05.2	+0.1
	2.7nm,0.8s						
F10A	Beach Ranch, E	82.01	351	eP	P	13 01 07.7	+0.4
	2.7nm,0.8s						
COWI	Conover	82.37	10	eP	P	13 01 10.2	+1.1
	3.7nm,0.8s						
MSO	Missoula	82.48	353	eP	P	13 01 09.4	-0.3
	1.0nm,0.6s						
EYMN	Ely	83.86	8	eP	P	13 01 17.3	+0.5
	4.7nm,1.1s						
C09A	Chrisman Ranch	83.94	350	eP	P	13 01 17.8	+0.7
	4.9nm,0.9s						
LONY	Lake Ozonia	84.14	21	eP	P	13 01 18.2	0.0
	8.5nm,1.0s						
NEW	Newport	84.25	351	P	P	13 01 18.2	-0.5
	2.6nm,0.8s,baz=148,slow=9.5,SNR=3.9						
NEW	Newport	84.25	351	eP	P	13 01 18.7	-0.1
	3.0nm,0.8s						
NLWA	Neilton Lookou	84.46	347	eP	P	13 01 20.8	+1.0
	7.0nm,1.1s						
ULM	Lac du Bonnet	85.72	5	P	P	13 01 25.3	-0.7
	3.7nm,0.9s,baz=179,slow=7.5,SNR=2.8						
STKA	Stephens Creek	88.99	231	LR	LR	13 33 32.2	
	comp=Z,628nm,21.4s,baz=167,slow=30						
CTA	Charters Tower	93.51	242	LR	LR	13 37 58.2	
	comp=Z,394nm,21.0s,baz=96,slow=32						
SCHQ	Schefferville	95.51	21	LR	LR	13 41 27.0	
	comp=Z,219nm,20.0s,baz=220,slow=33						
ASAR	Alice Springs	99.56	232	LR	LR	13 41 14.1	
	comp=Z,627nm,19.8s,baz=152,slow=32						
VYHS	Vyhne	136.58	54	ePKP	PKiKP	13 08 17.7	+6.7
NACGM	Naroch	141.28	44	eLR	LR	13 05 16.0	
NJ2	Nanjing	144.41	277	eP	PKPdf	13 08 23.5	-0.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
EIL	Elat	145.13	88	PKPbc	PKPbc	13 08 24.6	-0.2
	comp=Z,16nm,0.9s,baz=358,slow=1.2,SNR=9.2						
CSS	Mathiatis	145.36	78	ePKPbc	PKPbc	13 08 25.1	-0.2
BR131	Keskin Array S	146.43	70	ePKPdf	PKPdf	13 08 27.6	+0.3
BRTR	Keskin Array B	146.43	70	PKPbc	PKPdf	13 08 27.7	+0.3
	comp=Z,4.2nm,0.9s,baz=253,slow=3.4,SNR=16						
OBN	Obninsk	146.68	42	PKPbc	PKPdf	13 08 27.4	+0.4
	comp=Z,3.9nm,0.4s,baz=90,slow=1.0,SNR=4.8						
OBN	Obninsk	146.68	42	ePKPbc	PKPbc	13 08 27.8	-0.9
ASF	Jabal al Asfar	147.51	85	PKPbc	PKPdf	13 08 30.3	+1.0
	comp=Z,1.5nm,0.3s,baz=270,slow=1.0,SNR=2.1						
RAYN	Ar Rayn	151.02	106	ePKPbc	PKPbc	13 08 41.0	+0.1
RAYN				ePKPab	PKPab	13 08 47.0	-1.5
ENH	Enshi	151.47	269	ePKPbc	PKPbc	13 08 41.5	-0.2
ENH				ePKPab	PKPab	13 08 47.6	-2.5
HHC	Hu-ho-hao-te	151.67	292	P	PKPdf	13 08 37.0	+1.3
XAN	Xi'an	152.97	276	PKPbc	PKPbc	13 08 45.0	0.0
XAN				LR	LR		
	comp=N,73nm,22.8s						
XAN				LR	LR		
	comp=E,130nm,29.3s						
XAN				LR	LR		
	comp=Z,140nm,26.0s						
ULN	Ulaanbaatar	153.92	308	ePKPdf	PKPdf	13 08 39.8	+1.0
ULN				ePKPab	PKPab	13 08 58.1	-2.0
GTA	Gaotai	160.71	289	eP	PKPdf	13 08 47.0	-0.6
GTA				pP	sPKPdf	13 08 54.8	+4.3
GTA				sP	pPKPdf	13 08 58.5	+8.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,58nm,5.7s						
GTA				LR	LR		
	comp=N,79nm,18.0s						
GTA				LR	LR		
	comp=E,100nm,18.7s						
GTA				LR	LR		
	comp=Z,68nm,17.4s						
WMQ	Urumqi	167.77	316	eP	PKPdf	13 08 54.3	+0.6
WMQ				LR	LR		
	comp=N,440nm,21.1s						
WMQ				LR	LR		
	comp=E,450nm,28.1s						
WMQ				LR	LR		
	comp=Z,190nm,25.7s						

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*DDA **30** 12:52:26.9, 39°.65N×27°.86E, h10^{km}±4^{km}, ML2.9*

*ISCJB **30** 12:52:27.5±0.4, 39°.67N±0°.02×27°.88E±0°.03, h4^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=3.3km az=31.8*

*ISK **30** 12:52:27.0, 39°.70N×27°.90E, h5^{km}, ML2.2/15*

ISC 30 12:52:27.1±0.9**, 39°.68N**±0°.02×**27°.88E**±0°.02**, h8**^{km}±6^{km}**, n26, σ0^{s}54**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.04	179	PG	Pg	12 52 28.5	-0.1
BALB				SG	Sg	12 52 29.7	0.0
STEP	BALIKESIR_Sava	0.33	202	i P	Pg	12 52 33.1	-0.4
STEP				i S	Sg	12 52 38.9	+0.9
STEP				IAML_P			
	comp=Z,3µm,0.1s						
GONE	Gonen-Balikesi	0.39	338	PG	Pb	12 52 35.6	-0.7
GONE				SG	Sb	12 52 41.9	-0.6
DURS	Dursunbey	0.47	100	i S	Sg	12 52 43.3	+1.1
EDC	Edincik	0.66	359	PG	Pb	12 52 40.6	-0.3
KCTX	Karacabey (Bur	0.69	32	PG	Pb	12 52 40.9	-0.4
KCTX				SG	Sb	12 52 50.5	-0.5
AKHS	Akhisar	0.81	184	i S	Sg	12 52 53.1	0.0
DEMI	Demirci	0.91	134	i P	Pn	12 52 46.0	-0.3
DEMI				i S	Sb	12 52 57.8	+0.3
DEMI				IAML_P			
	comp=Z,1µm,0.1s						
ZEDA	zmir-Bergama	0.95	221	i P	Pg	12 52 44.7	-0.6
ZEDA				i S	Sb	12 52 58.4	-0.1
ZEDA				IAML_P			
	comp=Z,1µm,0.1s						
DKL	Dikili	0.97	231	PG	Pb	12 52 46.4	+0.2
AYVA	Ayvalik	0.99	248	i P	Pg	12 52 45.3	-0.8
AYVA				i S	Sb	12 52 59.7	-0.1
AYVA				IAML_P			
	comp=Z,1µm,0.1s						
BAYC	CANAKKALE_Bayr	1.03	274	i P	Pb	12 52 47.2	+0.1
BAYC				i S	Sn	12 53 01.9	-0.6
BAYC				IAML_P			
	comp=Z,2µm,0.1s						
ULDT	Uludag	1.07	64	i P	Pg	12 52 47.2	-0.4
ULDT				i S	Sn	12 53 03.2	-0.5
ULDT				IAML_P			
	comp=Z,435nm,0.2s						
LPK	Lapseki	1.10	309	PN	Pn	12 52 49.0	+0.2
LPK				SN	Sn	12 53 05.5	+1.3
ARMT	Armutlu	1.16	40	PN	Pn	12 52 49.7	0.0
EZN	Ezine	1.21	277	PN	Pg	12 52 50.8	+0.6
TVSB	Tavsanli	1.25	100	PN	Pg	12 52 51.3	+0.3
MANT	Manisa	1.30	156	i P	Pn	12 52 51.4	-0.4
MANT				i S	Sb	12 53 08.6	-0.3
MANT				IAML_P			
	comp=Z,707nm,0.3s						
BOZC	Bozcaada	1.42	277	PN	Pb	12 52 53.8	0.0
BUY	Buyukada	1.50	39	PN	Pg	12 52 56.0	+0.1
BUY				SN	Sg	12 53 16.6	+1.2
GADA	Gvkgeada	1.60	289	PN	Pg	12 52 57.7	-0.1
SIGR	SIGRI	1.64	254	PN	Pg	12 52 58.1	-0.3
ISK	Istanbul-Kandi	1.65	33	PN	Pg	12 52 58.3	-0.4
URLA	Izmir	1.66	218	PN	Pg	12 52 58.8	0.0
ENEZ	Enez	1.69	309	PN	Pb	12 52 58.6	+0.2
AYDB	Zeytinkoy-Aydi	1.73	180	PN	Pb	12 52 59.6	+0.3

ATH 30 12:57:42.5, 37°.12N×22°.08E, h18^{km}±4^{km}, ML1.7/4**, Error ellipse: s-maj=4.2km s-min=1.2km az=286.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.14	297	P	Pg	12 57 46.8	+0.1
ITM				S	Sg	12 57 49.2	-0.2
ITM				AML	AML	12 57 49.4	
	comp=N,2410µm,0.2s						
ITM				AML	AML	12 57 49.5	
	comp=E,1566µm,0.1s						
VLX	Vlachokerasia	0.35	43	P	Pb	12 57 50.4	+0.1
VLX				S	Sg	12 57 55.1	+0.1
VLX				AML	AML	12 57 57.2	
	comp=E,248µm,0.2s						
VLX				AML	AML	12 57 58.0	
	comp=N,257µm,0.6s						
PYL	PYLOS	0.35	231	P	Pg	12 57 49.7	-0.2
PYL				S	Sg	12 57 55.0	+0.1
PYL				AML	AML	12 57 56.0	
	comp=N,222µm,0.1s						
PYL				AML	AML	12 57 57.7	
	comp=E,198µm,0.2s						
TRIP	Tripoli	0.44	20	P	Pg	12 57 50.6	-0.9
TRIP				S	Sb	12 57 58.3	+0.2
AMT	Artemida-Makis	0.51	325	P	Pb	12 57 53.3	+0.3
AMT				S	Sb	12 58 01.0	+1.0
AMT				AML	AML	12 58 01.9	
	comp=N,220µm,0.4s						
AMT				AML	AML	12 58 02.0	
	comp=E,228µm,0.2s						
VLI	Veliai	0.79	120	P	Pg	12 57 58.0	0.0
GUR	Goura	0.84	14	P	Pb	12 57 58.1	-0.6
KLV	Kalavryta, Ach	0.93	3	P	Pb	12 57 60.0	-0.1
DID	Didima	1.00	67	P	Pn	12 58 01.8	+0.1

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*IDC **30** 12:58:28.8±0.6, 45°.08N×15°.08E, h0^{km}, mb4.0/15, mb1 4.0/28, mb1mx3.9/74, mbtmp3.9/28, ML4.1/10, MS3.5/16, Ms1 3.5/16, ms1mx3.3/47, Error ellipse: s-maj=11.1km s-min=7.8km az=59.0*

*MOS **30** 12:58:29.6±0.9, 45°.08N×14°.95E, h19^{km}, mb4.5/21, Error ellipse: s-maj=4.3km s-min=3.2km az=93.5*

*NEIC **30** 12:58:30.4±2.5, 45°.07N×15°.02E, h11^{km}±3^{km}, mb4.4/19, ML4.0(LJU), ML4.6(ZAG), ML4.7(BUC), ML4.8(PDG), ML4.8(BEO), Error ellipse: s-maj=6.1km s-min=4.8km az=210.0*

NEIC Felt at Ogulin and Zagreb. Felt [IV] in central and southern Slovenia. Also felt at Bihac, Bosnia and Herzegovina.

*ISCJB **30** 12:58:31.2±0.3, 45°.067N±0°.009×14°.99E±0°.01, h31^{km}±2^{km}, mb4.2/32, MS3.5/8, Error ellipse: s-maj=1.8km s-min=1.1km az=42.4*

*PDG **30** 12:58:31.4±0.5, 45°.13N×15°.06E, h19^{km}, MD4.9/12, ML4.8/7, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*LDG **30** 12:58:31.1±0.1, 45°.13N×15°.10E, h10^{km}, Md3.9/3, Ml4.4/46, Error ellipse: s-maj=2.9km s-min=1.9km az=24.0*

*SAR **30** 12:58:31.2±0.3, 45°.07N×15°.13E, h4^{km}±2^{km}, ML4.7/2*

*VIE **30** 12:58:31.8±0.4, 45°.16N×15°.10E, h6^{km}, mb4.1/18, ml4.6/18, Error ellipse: s-maj=2.8km s-min=2.0km az=130.0*

*BEO **30** 12:58:31.7±0.3, 45°.16N×15°.15E, h5^{km}±3^{km}, ML4.7/23*

*ROM **30** 12:58:33.0, 45°.14N×15°.08E, h20^{km}, mb4.6, Mw4.2, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.52; $M_{\theta\theta}$-1.88; $M_{\phi\phi}$1.36; $M_{r\theta}$-0.45; $M_{\theta\phi}$-0.89; $M_{\phi r}$-0.85; Fault plane solution: $M_0$2.11324×10^{15} NP1: ϕ_s119.00000°, δ60.00000°, λ169.00000°. NP2: ϕ_s214.00000°, δ81.00000°, λ30.00000°.*

*BNS **30** 12:58:33.3±0.9, 45°.16N×15°.11E, h10^{km}, ML4.5*

*PRU **30** 12:58:33.2±0.0, 45°.14N×15°.20E, h19^{km}, M4.4*

*MED_RC **30** 12:58:33.0±0.6, 45°.07N×15°.04E, h31^{km}±1^{km}, MW4.6/14, Moment Tensor Solution.Mantle waves: s14,c22; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.31±.10; $M_{\theta\theta}$-0.93±.07; $M_{\phi\phi}$0.62±.07; $M_{r\theta}$-0.14±.04; $M_{\theta\phi}$-0.48±.04; $M_{\phi r}$-0.22±.04; Best double couple: $M_0$0.96000×10^{16} NP1:ϕ_s211.00000°, δ82.00000°, λ20.00000°. NP2:ϕ_s118.00000°, δ70.00000°, λ171.00000°. Principal axes: T 0.8200, Plg20.0000°, Azm76.0000°; N 0.2800, Plg68.0000°, Azm232.0000°; P -1.1000, Plg8.0000°, Azm343.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*BGR **30** 12:58:36.6±0.3, 45°.29N×15°.07E, h10^{km}, ML4.5/17 Error ellipse: s-maj=14.5km s-min=13.3km az=8.0*

ISC 30 12:58:31.8±1.0**, 45°.04N**±0°.02×**14°.96E**±0°.02**, h23**^{km}±7^{km}**, n572, σ1^{s}92**/783**, mb4.2**/32**, MS3.5**/8**, 37C-39D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIY	Rijeka	0.44	310	ePg	Pb	12 58 40.0	-0.9
RIY				eSg	Sb	12 58 47.9	+0.8
RIY	Rijeka	0.44	310	iPg	Pb	12 58 40.0	-0.9
RIY				Sg	Sb	12 58 47.9	+0.8
RIY	Rijeka	0.44	310	i Pg	Pb	12 58 39.9	-0.9
RIY				eSg	Sb	12 58 47.8	+0.7
GBRS	Gornja Briga	0.50	348	⇓iPg	Pb	12 58 40.4	-1.6
BOJS	Bojanci	0.51	24	⇓iPg	Pb	12 58 39.8	-2.2
BOJS				i Sg	Sb	12 58 46.4	-2.6
	comp=Z,6µm,0.1s						
KNDS	Knezji Dol	0.63	320	i Pg	Pb	12 58 43.0	-1.3
OZLJ	Ozalj	0.68	32	i Pg	Pb	12 58 43.9	-1.0
OZLJ				Sg	Sb	12 58 51.5	-2.4
VISS	Visnje	0.77	354	⇓iPg	Pb	12 58 44.7	-1.8
VISS				i		12 58 45.6	
VISS				i Sg	Sb	12 58 55.8	-0.6
	comp=Z,2µm,0.2s						
CEY	Cerknica	0.79	332	⇓iPg	Pb	12 58 45.6	-1.3
	comp=Z,5µm,0.3s						
CEY	Cerknica	0.79	332	i Pg	Pb	12 58 45.6	-1.3
CEY				eSg	Sn	12 58 58.4	-0.3
SKDS	Skadanscina	0.83	307	⇓iPg	Pb	12 58 46.5	-1.2
SKDS				eSg	Sn	12 59 00.6	+0.8
	comp=Z,2µm,0.1s						
CRES	Cresnjev	0.86	24	ePg	Pb	12 58 45.7	-2.4
CRES				eSg	Sb	12 58 56.9	-2.3
	comp=Z,8µm,0.4s						
CRES	Cresnjev	0.86	24	i Pg	Pb	12 58 45.6	-2.4
CRES				eSg	Sb	12 58 56.6	-2.5
LEGS	Legarje	0.94	15	⇓ePg	Pb	12 58 47.6	-1.8
LEGS				eSg	Sb	12 59 00.4	-1.1
GCIS	Gornji Cirnik	0.95	30	⇓iPg	Pb	12 58 47.8	-1.8
GCIS				i		12 58 49.1	
GCIS				Sg	Sb	12 59 00.3	-1.4
GBAS	Gorenja Brezov	0.96	338	⇓iPg	Pb	12 58 48.5	-1.4
GBAS				i		12 58 49.5	
PDKS	Podkum	1.02	2	⇓iPg	Pn	12 58 49.3	-1.4
	comp=Z,6µm,0.3s						
LJU	Ljubljana	1.05	343	⇓iPg	Pn	12 58 50.3	-0.8
	comp=Z,2µm,0.2s						
LJU	Ljubljana	1.05	343	i Pg	Pn	12 58 50.0	-1.1
LJU				eSg	Sn	12 59 05.3	+0.3
DUGI	Dugi Otok	1.05	176	i Pg	Pn	12 58 50.7	-0.5
DUGI				Sg	Sn	12 59 06.7	+1.6
JAVS	Javornik	1.06	324	ePg	Pn	12 58 49.8	-1.6
JAVS				i		12 58 50.7	
JAVS				eSg	Sn	12 59 07.5	+2.1
	comp=Z,3µm,0.2s						
VNDS	Vrh nad Dolski	1.07	350	⇓iPg	Pn	12 58 50.6	-0.9
VNDS				i		12 58 51.4	
GOLS	Golise	1.07	26	⇓ePg	Pn	12 58 50.1	-1.4
GOLS				i		12 58 51.4	
GOLS				eSg	Sb	12 59 04.8	-0.5
PTJ	Puntijarka	1.12	39	ePg	Pn	12 58 51.6	-0.5
PTJ				Sg	Sb	12 59 05.7	-1.0
CRNS	Crni Vrh	1.15	335	ePg	Pn	12 58 51.8	-0.7
CRNS				i		12 58 52.8	
DOBS	Dobrina	1.16	18	⇓iPg	Pn	12 58 51.7	-1.0
DOBS				i		12 58 52.6	
DOBS				eSg	Sn	12 59 08.1	+0.2
VOJS	Vojsko	1.24	323	⇓ePg	Pn	12 58 53.0	-0.8
VOJS				Sg	Sb	12 59 13.5	+3.2
	comp=Z,4µm,0.3s						
MORI	Morici	1.29	155	i Pg	Pb	12 58 55.4	-0.1
MORI				Sg	Sb	12 59 13.1	+1.5
MOZS	Mozjanca	1.30	344	⇓ePg	Pn	12 58 54.9	+0.3
	comp=Z,1µm,0.2s						
SABO	M.te Sabotino	1.34	315	ePg	Pb	12 58 55.9	-0.3
MRAK	Mrakovica	1.38	91	ePg	Pn	12 58 54.1	-1.6
MRAK				eSg	Sn	12 59 11.2	-2.0
GORS	Gorjuse	1.44	332	i Pg	Pb	12 58 57.3	-0.7
GORS				i		12 58 57.8	
DRE	Drenchia	1.46	321	ePg	Pb	12 58 58.8	+0.5
DRE				eSg	Sb	12 59 20.3	+3.9
CADS	Cadrg	1.46	325	i Pn	Pn	12 58 57.3	+0.5
CADS				i		12 58 58.8	
CADS				eSn	Sb	12 59 20.0	+3.4
	comp=Z,9µm,0.4s						
GROS	Grobnik	1.47	15	⇑iPg	Pn	12 58 56.6	-0.3
	comp=Z,1µm,0.3s						
ZIRJ	Zirje	1.47	160	i Pn	Pb	12 58 58.5	0.0
ZIRJ				Sn	Sb	12 59 18.7	+1.9
OBKA	Obir	1.49	349	ePg	Pn	12 58 58.0	+0.7
	comp=Z,888nm,0.2s,SNR=807						
OBKA				Sg	Sb	12 59 19.0	+1.6
	comp=Z,4µm,0.3s						
OBKA	Obir	1.49	349	ePn	Pn	12 58 58.1	+0.7
OBKA				ePg	Pn	12 58 59.2	+1.9
OBKA				eSg	Sb	12 59 19.1	+1.6
KALN	Kalnik	1.51	43	ePn	Pb	12 58 58.4	-0.8
KALN				Sn	Sb	12 59 18.7	+0.7
COLI	Coloredo	1.56	315	ePg	Pb	12 59 00.2	+0.4
ROBS	Robic	1.57	320	ePn	Pn	12 58 59.1	+0.8
ROBS				i		12 59 00.5	
ROBS				eSn	Sb	12 59 22.3	+2.6

ROBS				eSg	Sn	12 59 23.8	+5.8
TLI	**Talmassons**	1.57	305	⇑ePg	Pb	12 59 00.3	+0.1
PERS	**Pernice**	1.60	4	i Pn	Pn	12 58 59.0	+0.3
PERS				eSn	Sn	12 59 19.3	+0.6
	comp=Z,1µm,0.2s						
BISS	**Bistriski jare**	1.61	4	i Pn	Pn	12 58 59.2	+0.4
BISS				i		12 58 59.6	
BLY	**Banja Luka**	1.61	100	ePn	Pn	12 58 58.6	-0.1
BLY				eSn	Sn	12 59 17.8	-1.0
BLY	**Banja Luka**	1.61	100	ePg	Pn	12 58 58.8	0.0
BLY				eSg	Sn	12 59 18.8	0.0
BLY	**Banja Luka**	1.61	100	⇓iP	Pn	12 58 59.1	+0.3
BLY				S	Sb	12 59 20.9	+0.2
BLY	**Banja Luka**	1.61	100	i Pg	Pn	12 58 58.4	-0.4
BLY				eSg	Sn	12 59 18.2	-0.6
SOKA	**Soboth**	1.64	2	ePn	Pn	12 58 59.6	+0.3
	comp=Z,246nm,0.3s,SNR=271						
SOKA				i Sg	Sb	12 59 22.0	+0.5
	comp=Z,421nm,0.3s						
MGRS	**Mrkonjic Grad**	1.64	112	i Pn	Pn	12 58 59.8	+0.6
MGRS				eSn	Sn	12 59 19.8	+0.2
KOGS	**Kog**	1.67	32	ePn	Pn	12 58 58.8	-0.8
KOGS				i		12 59 01.9	
KOGS				eSg	Sb	12 59 23.0	+0.5
	comp=Z,6µm,0.4s						
VINO	**Villanova**	1.69	316	ePg	Pb	12 59 02.1	-0.2
BAD	**Bernadia**	1.69	315	ePn	Pb	12 59 02.1	-0.2
PRED	**Cave del Predi**	1.71	326	ePn	Pb	12 59 02.3	-0.2
BUA	**Buia**	1.74	313	⇓ePn	Pb	12 59 02.9	-0.2
LSR	**Lussari**	1.75	326	ePn	Pb	12 59 03.1	-0.2
IESO	**Jesolo**	1.77	287	ePn	Pb	12 59 03.6	+0.1
ACOM	**Acomizza, Ital**	1.81	327	⇓ePn	Pb	12 59 03.9	-0.5
MPRI	**Monte Prat**	1.83	312	⇑ePn	Pb	12 59 03.8	-0.8
MYKA	**Terra Mystica**	1.83	330	ePn	Pb	12 59 03.8	-0.9
	comp=Z,265nm,0.3s,SNR=316						
MYKA				Sn	Sb	12 59 26.9	-0.4
	comp=Z,778nm,0.4s						
BEHE	**Becsehely**	1.91	41	ePn	Pn	12 59 02.3	-0.7
BEHE				eSn	Sn	12 59 27.1	+0.8
BEHE	**Becsehely**	1.91	41	eSg	Sn	12 59 30.1	+3.8
BEHE				eSg	Sn	12 59 45.0	+19
BEHE	**Becsehely**	1.91	41	ePn	Pb	12 59 08.0	+2.1
FUSE	**Fusea**	1.94	316	ePn	Pb	12 59 05.0	-1.5
PLRO	**Paularo**	1.97	321	ePn	Pb	12 59 06.2	-0.8
MLNI	**Malnisio**	1.99	305	⇑ePn	Pb	12 59 05.6	-1.7
CAE	**Caneva**	2.02	299	ePn	Pb	12 59 06.4	-1.4
CLUD	**Cludinico**	2.03	315	ePn	Pb	12 59 06.5	-1.5
ZOU	**Zoufplan**	2.05	318	ePn	Pb	12 59 07.0	-1.5
ZOU	**Zoufplan**	2.05	318	ePn	Pb	12 59 07.0	-1.5
ARSA	**Arzberg**	2.24	10	ePn	Pn	12 59 07.8	+0.2
ARSA	**Arzberg**	2.24	10	ePn	Pn	12 59 07.7	+0.2
	comp=Z,105nm,0.3s,SNR=129						
ARSA				Sn	Sn	12 59 34.1	-0.4
	comp=Z,200nm,0.3s						
ARSA	**Arzberg**	2.24	10	ePn	Pn	12 59 07.8	+0.2
ARSA				ePg	Pb	12 59 12.3	+0.6
ARSA				eSn	Sn	12 59 34.1	-0.4
DOB	**Doboj**	2.25	97	ePn	Pn	12 59 07.4	-0.3
DOB				eSn	Sn	12 59 34.2	-0.5
MAKA	**Makarska**	2.30	139	ePn	Pb	12 59 11.6	-0.9
ABTA	**Abfaltersbach**	2.41	316	ePn	Pn	12 59 12.0	+2.1
	comp=Z,45nm,0.2s,SNR=271						
ABTA				i Sg	Sb	12 59 50.1	+6.2
	comp=Z,5µm,0.5s						
TIH	**Tihany**	2.76	47	ePn	Pn	12 59 17.0	+2.4
TIH				ePg	Pb	12 59 22.1	+1.6
TIH				Sn	Sn	12 59 30.0	-17
MORH	**Mrgy, Hungar**	2.84	64	eSn	Sn	12 59 48.9	-0.2
MORH	**Mrgy, Hungar**	2.84	64	ePn	Pn	12 59 14.1	-1.6
MORH				ePg	Pb	12 59 23.1	+1.3
MORH	**Mrgy, Hungar**	2.84	64	Sn	Sn	12 59 46.0	-3.1
MOA	**Molln**	2.85	351	ePn	Pn	12 59 16.7	+0.8
MOA				eSn	Sn	12 59 49.8	+0.4
MOA	**Molln**	2.85	351	ePn	Pn	12 59 17.0	+1.2
	comp=Z,35nm,0.3s,SNR=52						
MOA				Sn	Sn	12 59 50.9	+1.5
	comp=Z,659nm,0.7s						
MOA	**Molln**	2.85	351	ePn	Pn	12 59 17.1	+1.2
MOA				ePg	Pb	12 59 25.3	+3.3
MOA				eSn	Sb	12 59 53.3	-3.0
SOP	**Sopron**	2.86	22	⇑ePn	Pn	12 59 16.0	0.0
SOP				eSg	Sb	13 00 01.0	+4.3
AQU	**L'Aquila**	2.92	203	ePn	Pn	12 59 18.1	+1.3
AQU				eSn	Sn	12 59 52.1	+0.9
AQU	**L'Aquila**	2.92	203	eP	Pn	12 59 18.1	+1.3
AQU				e		12 59 52.1	
AQU	**L'Aquila**	2.92	203	ePn	Pn	12 59 18.7	+1.9
AQU				eSn	Sb	12 59 56.0	-2.3
STON	**Ston**	2.94	137	ePn	Pn	12 59 18.5	+1.4
STON				eSn	Sn	12 59 54.2	+2.6
STON	**Ston**	2.94	137	i Pn	Pb	12 59 20.5	-2.9
STON	**Ston**	2.94	137	ePn	Pn	12 59 18.4	+1.4
STON				eSn	Sn	12 59 53.4	+1.8
CONA	**Conrad Observa**	2.95	12	ePn	Pn	12 59 17.9	+0.6
	comp=Z,92nm,0.3s,SNR=106						
CONA				Sn	Sn	12 59 51.2	-1.0
	comp=Z,154nm,0.4s						
HAPS	**Han Pijesak,Bl**	3.01	107	ePn	Pn	12 59 17.9	-0.3
HAPS				eSn	Sn	12 59 53.4	-0.2
HAPS	**Han Pijesak,Bl**	3.01	107	i Pn	Pn	12 59 17.7	-0.5
HAPS				eSn	Sn	12 59 53.6	0.0
RJOB	**Jochberg**	3.08	332	ePn	Pn	12 59 21.6	+2.5
RJOB				eSn	Sb	13 00 01.0	-2.1
WTTA	**Wattenberg**	3.20	315	i Pn	Pn	12 59 23.4	+2.5
	comp=Z,57nm,0.3s,SNR=83						
WTTA				eSn	Sn	12 59 59.9	+1.5
	comp=Z,374nm,0.5s						
WTTA	**Wattenberg**	3.20	315	ePn	Pn	12 59 23.7	+2.8
WTTA				eSn	Sb	13 00 05.3	-1.5
CSKK	**Cskako**	3.26	43	Sn	Sn	12 59 58.1	-1.5
CSKK	**Cskako**	3.26	43	ePn	Pn	12 59 22.0	+0.5
CSKK				eSg	Sb	13 00 15.1	+6.9
WATA	**Walderalm**	3.28	316	ePn	Pn	12 59 24.9	+2.9
	comp=Z,48nm,0.2s,SNR=43						
WATA				eSn	Sn	13 00 00.7	+0.3
	comp=Z,184nm,0.5s						
TEKS	**Tekeris**	3.29	97	ePn	Pn	12 59 23.0	+1.1
TEKS	**Tekeris**	3.29	97	ePn	Pn	12 59 22.1	+0.2
TEKS				eSn	Sn	12 59 59.7	-0.7
DBRK	**Dubrovnik**	3.31	135	ePn	Pn	12 59 24.6	+2.4
BRY	**Bratogost**	3.36	128	⇓iPn	Pn	12 59 24.9	+1.9
BRY				eSn	Sn	13 00 04.4	+2.3
BRY	**Bratogost**	3.36	128	ePn	Pn	12 59 23.9	+0.9
BRY				eSn	Sn	13 00 01.7	-0.4
TREB	**Trebinje**	3.38	132	ePn	Pn	12 59 24.5	+1.4
TREB				eSn	Sn	13 00 05.0	+2.5
TREB	**Trebinje**	3.38	132	i Pn	Pn	12 59 24.5	+1.4
TREB				eSn	Sn	13 00 03.2	+0.7
VLC	**Villacollemand**	3.38	256	ePn	Pn	12 59 25.6	+2.4
VLC				eSn	Sn	13 00 04.5	+1.9
UPM	**Unac-Piva**	3.38	122	⇑iPn	Pn	12 59 24.7	+1.3
UPM				eSn	Sn	13 00 05.0	+2.1
UPM	**Unac-Piva**	3.38	122	ePn	Pn	12 59 23.8	+0.4
UPM				eSn	Sn	13 00 02.8	-0.1
BBLS	**Lazići**	3.39	109	ePn	Pn	12 59 24.2	+0.8
BBLS	**Lazići**	3.39	109	ePn	Pn	12 59 23.5	+0.1
BBLS				eSn	Sn	13 00 02.9	-0.1
SQTA	**Sankt Quirin**	3.40	311	ePn	Pn	12 59 26.6	+3.1
	comp=Z,19nm,0.1s,SNR=44						
SQTA				eSn	Sb	13 00 16.0	+3.7
	comp=Z,217nm,0.4s						
FRGS	**Fruska Gora**	3.44	86	ePn	Pn	12 59 23.0	-1.0
FRGS				eSn	Sn	13 00 02.8	-1.2
FRGS	**Fruska Gora**	3.44	86	ePn	Pn	12 59 23.6	-0.4
FRGS				eSn	Sn	13 00 03.3	-0.7
RUDO	**Rudo**	3.47	113	ePn	Pn	12 59 24.6	+0.2
RUDO				eSn	Sn	13 00 04.5	-0.3
ZST	**Bratislava**	3.48	24	eP	Pn	12 59 23.5	-1.0
ZST				pmax	pmax		
	comp=N,443nm,0.8s						
ZST	**Bratislava**	3.48	24	ePN	Pn	12 59 23.5	-1.0
ZST				eSG	Sb	13 00 19.2	+4.6
ZST				eLG	Lg	13 00 26.5	
MOTA	**Moosalm**	3.53	312	i Pn	Pn	12 59 28.3	+3.0
	comp=N,57nm,0.5s,SNR=101						
MOTA				eSn	Sn	13 00 09.4	+2.9
	comp=N,166nm,0.5s						
FETA	**Feichten**	3.55	305	ePn	Pn	12 59 28.1	+2.5
	comp=N,31nm,0.4s,SNR=33						
FETA				eSn	Sn	13 00 10.0	+3.1
	comp=N,121nm,0.5s						
SRO	**Srobarova**	3.61	39	eP	Pn	12 59 26.5	+0.2
SRO				pmax	pmax		
	comp=N,1µm,0.6s						
SRO	**Srobarova**	3.61	39	ePN	Pn	12 59 26.5	+0.2
SRO				eSG	Sb	13 00 25.8	+7.5
SRO				eLG	Lg	13 00 35.8	
PLE	**Pljevlja**	3.62	117	⇑iPn	Pn	12 59 27.6	+1.1
PLE				eSn	Sn	13 00 09.7	+1.1
FUORN	**Ofenpass-Fuorn**	3.64	297	ePn	Pn	12 59 29.9	+3.0
FUORN				eSn	Sn	13 00 08.3	-1.0
HCY	**Herceg Novi**	3.65	134	⇓iPn	Pn	12 59 28.1	+1.2
HCY				eSn	Sn	13 00 11.4	+2.3
HCY	**Herceg Novi**	3.65	134	ePn	Pn	12 59 28.0	+1.2
HCY				eSn	Sn	13 00 09.0	-0.1
NKY	**Niksic**	3.67	126	⇑iPn	Pn	12 59 28.7	+1.5
NKY				eSn	Sn	13 00 11.5	+1.7
NKME	**Niksic**	3.67	127	ePn	Pn	12 59 29.5	+2.2
NKME				eSn	Sn	13 00 12.0	+2.1
MODS	**Modra-Piesok**	3.69	25	eP	Pn	12 59 26.0	-1.5
MODS				e		13 00 09.1	
MODS				pmax	pmax		
	comp=N,583nm,0.9s						
MODS	**Modra-Piesok**	3.69	25	ePN	Pn	12 59 26.0	-1.5
MODS				ePG	Pb	12 59 38.9	+2.6
MODS				eSN	Sn	13 00 09.1	-1.2
MODS				eSG	Sb	13 00 25.5	+4.8
MODS				eLG	Lg	13 00 35.5	
DIVS	**Divibare**	3.72	103	ePn	Pn	12 59 28.4	+0.5
DIVS	**Divibare**	3.72	103	i Pn	Pn	12 59 27.6	-0.3
DIVS				eSn	Sn	13 00 10.1	-0.9
BUD	**Budapest**	3.73	48	Pn	Pn	12 59 28.1	+0.1
BUD				Sn	Sn	13 00 09.1	-2.0
CEME	**Cevo**	3.80	130	ePn	Pn	12 59 30.6	+1.6
CEME				eSn	Sn	13 00 14.8	+1.8
RETA	**Reutte**	3.80	312	ePn	Pn	12 59 31.4	+2.4
	comp=N,6.8nm,0.1s,SNR=32						
RETA				eSn	Sn	13 00 16.6	+3.6
	comp=N,136nm,0.5s						
SMOL	**Smolenice**	3.87	25	eP	Pn	12 59 29.8	0.0
SMOL				e		13 00 10.9	
SMOL	**Smolenice**	3.87	25	ePN	Pn	12 59 29.8	0.0
SMOL				eSN	Sn	13 00 10.9	-3.6
SMOL				eSG	Sb	13 00 30.8	+5.2
SMOL				eLG	Lg	13 00 39.9	
GEC2	**GERESS Array S**	3.90	348	ePn	Pn	12 59 31.2	+0.8
GEC2				eSn	Sn	13 00 13.2	-2.3
GEC2	**GERESS Array S**	3.90	348	eP	Pn	12 59 31.2	+0.8
GEC2				e		13 00 13.2	
GEC2	**GERESS Array S**	3.90	348	ePn	Pn	12 59 31.3	+0.9
GEC2				ePg	Pb	12 59 43.5	+3.7
GEC2				eSn	Sn	13 00 17.0	+1.5
GEC2				eSg	Sb	13 00 33.9	+7.2
GERES	**GERESS Array B**	3.90	348	Pn	Pn	12 59 31.2	+0.8
	comp=N,15nm,0.3s,baz=166,slow=12,SNR=110						
GERES				Sn	Sn	13 00 16.6	+1.1
	comp=N,104nm,0.3s,baz=164,slow=20,SNR=7.8						
GERES				Lg	Lg	13 00 32.4	
	comp=N,32nm,0.3s,baz=186,slow=31,SNR=6.8						
BEO	**Beograd**	3.92	91	ePn	Pn	12 59 29.7	-0.9
BEO				eSn	Sn	13 00 15.1	-0.8
DAVOX	**Davos/Dischmat**	3.95	298	Pn	Pn	12 59 33.4	+2.3
	comp=N,26nm,0.3s,baz=110,slow=11,SNR=86						
DAVOX				Sn	Sn	13 00 20.2	+3.4
	comp=N,21nm,0.3s,baz=95,slow=12,SNR=3.7						
DAVOX				Lg	Lg	13 00 34.2	
	comp=N,38nm,0.3s,baz=135,slow=20,SNR=3.0						
DAVOX				LR	LR	13 01 31.3	
	comp=N,763nm,19.3s,baz=98,slow=46						
KOME	**Kolasin**	3.95	122	ePn	Pn	12 59 33.0	+1.9
KOME				eSn	Sn	13 00 18.4	+1.6
BUM	**Brajici-Budva**	3.96	132	⇑iPn	Pn	12 59 32.6	+1.4
BUM				eSn	Sn	13 00 18.5	+1.6
TRUS	**Trudelj**	3.97	100	ePn	Pn	12 59 31.9	+0.6
IVAS	**Ivanjica**	4.01	110	ePn	Pn	12 59 32.0	+0.2
FUR	**Furstenfeldbru**	4.02	322	ePn	Pn	12 59 34.7	+2.6
FUR				ePg	Pb	12 59 46.7	+4.7
FUR				eSg	Sb	13 00 43.2	+13
SJES	**Sjenica**	4.03	115	ePn	Pn	12 59 32.8	+0.7
PDG	**Podgorica**	4.06	128	ePn	Pn	12 59 34.0	+1.5
PDG	**Podgorica**	4.06	128	⇑iP	Pn	12 59 34.4	+1.9
PDG	**Podgorica**	4.06	128	ePn	Pn	12 59 33.6	+1.1
PDG				eSn	Sn	13 00 18.3	-1.1
TTG	**Podgorica**	4.06	128	⇑iPn	Pn	12 59 34.1	+1.5
TTG				eSn	Sn	13 00 21.7	+2.3
TTG	**Podgorica**	4.06	128	ePn	Pn	12 59 35.0	+2.5
TTG				eSn	Sn	13 00 23.1	+3.7
TTG	**Podgorica**	4.06	128	eP	Pn	12 59 35.1	+2.5
TTG				e		13 00 23.1	
KRUC	**Moravsky**	4.14	13	ePN	Pn	12 59 33.6	0.0
KRUC				eSN	Sn	13 00 18.1	-3.1
IVA	**Berane**	4.17	120	⇓iPn	Pn	12 59 35.5	+1.4
IVA				eSn	Sn	13 00 23.7	+1.5
BAI	**Bari**	4.18	160	ePn	Pn	12 59 34.5	+0.4
TUE	**Stuetta**	4.18	292	ePn	Pn	12 59 36.8	+2.4
TUE				eSn	Sn	13 00 22.5	0.0
DAVA	**Damuels**	4.18	304	ePn	Pn	12 59 35.8	+1.5
	comp=N,9.5nm,0.1s,SNR=16						
DAVA				eSn	Sn	13 00 24.6	+2.1
	comp=N,150nm,0.4s						
DAVA	**Damuels**	4.18	304	ePn	Pn	12 59 37.5	+3.2
DAVA				eSn	Sn	13 00 24.8	+2.3
DAVA				eSg	Sb	13 00 47.4	+13
DRME	**Dracevica, Mon**	4.19	131	⇓iPn	Pn	12 59 36.0	+1.7
DRME				eSn	Sn	13 00 25.3	+2.8
DRME	**Dracevica, Mon**	4.19	131	ePn	Pn	12 59 34.8	+0.5
DRME				eSn	Sn	13 00 22.8	+0.3
KHC	**Kasperske Hory**	4.20	348	ePn	Pn	12 59 35.2	+0.8
KHC				eSn	Sn	13 00 21.6	-1.1
KHC	**Kasperske Hory**	4.20	348	eP	Pn	12 59 35.4	+1.0
KHC				e		13 00 22.6	
KHC				MLR	MLR		
	comp=Z,3µm,8.0s						
KHC	**Kasperske Hory**	4.20	348	ePN	Pn	12 59 35.4	+1.0
KHC				eSN	Sn	13 00 22.6	-0.1
KHC				AMS	AMS	13 01 00.0	
	comp=Z,3µm,8.0s						
JAVC	**Velka Javorina**	4.25	25	ePN	Pn	12 59 35.3	+0.2
TREC	**Trest**	4.27	5	eP	Pn	12 59 35.7	+0.3
TREC				MLR	MLR		
	comp=Z,2µm,10.2s						
TREC	**Trest**	4.27	5	ePN	Pn	12 59 35.7	+0.3
TREC				AMS	AMS	13 01 00.0	
	comp=Z,2µm,10.2s						
UBR	**Ueberruh**	4.27	310	ePn	Pn	12 59 37.3	+1.8
GRUS	**Gruza**	4.28	104	ePn	Pn	12 59 36.4	+0.9
WET	**Wettzell**	4.34	342	ePn	Pn	12 59 37.3	+0.9
WET				ePg	Pb	12 59 55.9	+8.5
WET				eSn	Sn	13 00 27.3	+1.0
VYHS	**Vyhne**	4.36	36	eP	Pn	12 59 36.0	-0.6
VYHS				e		13 00 24.0	
VYHS	**Vyhne**	4.36	36	ePN	Pn	12 59 36.0	-0.6
VYHS				eSN	Sn	13 00 24.0	-2.7
PVY	**Plav**	4.37	122	⇓iPn	Pn	12 59 38.4	+1.5
PVY				eSn	Sn	13 00 28.0	+0.9
PLONS	**Plons/SG**	4.37	299	ePn	Pn	12 59 39.9	+3.1
PLONS				eSn	Sn	13 00 33.2	+6.2
BANR	**Banloc**	4.38	83	⇓iP	Pn	12 59 39.7	+2.9
ULC	**Ulcinj**	4.38	133	⇓iPn	Pn	12 59 38.8	+1.9
ULC				eSn	Sn	13 00 29.0	+1.7
VRAC	**Vranov**	4.41	14	Pn	Pn	12 59 37.3	-0.1
	comp=Z,10nm,0.3s,baz=195,slow=14,SNR=34						
VRAC				Sn	Sn	13 00 25.6	-2.4
	comp=Z,25nm,0.3s,baz=316,slow=9.2,SNR=6.9						
VRAC				Lg	Lg	13 00 45.5	
	comp=Z,8.7nm,0.3s,baz=242,slow=7.2,SNR=3.0						
VRAC	**Vranov**	4.41	14	⇓iP	Pn	12 59 37.2	-0.1
VRAC	**Vranov**	4.41	14	ePN	Pn	12 59 37.1	-0.2
VRAC				eSN	Sn	13 00 24.1	-3.8
PSZ	**Piszkesteto**	4.46	48	ePn	Pn	12 59 37.1	-1.0
PSZ				eSn	Sn	13 00 25.9	-3.4
PSZ	**Piszkesteto**	4.46	48	⇓iP	Pn	12 59 38.9	+0.8
PSZ	**Piszkesteto**	4.46	48	eP	Pn	12 59 37.1	-1.0
PSZ				e		13 00 25.9	
PSZ	**Piszkesteto**	4.46	48	ePn	Pn	12 59 39.0	+1.0
PSZ				Sn	Sn	13 00 27.1	-2.2
PSZ				eSg	Sb	13 00 55.1	+12
SVIS	**Svilajnac**	4.53	98	ePn	Pn	12 59 39.6	+0.7
SVIS				eSn	Sn	13 00 29.3	-1.6
MATE	**Matera**	4.58	163	⇑iP	Pn	12 59 40.1	+0.6
FASA	**Fasano**	4.58	157	ePn	Pn	12 59 39.4	-0.2
MASS	**Massafra**	4.69	159	ePn	Pn	12 59 40.9	-0.3
MASS				Sn	Sn	13 00 34.7	-0.2
BZS	**Buzias**	4.73	81	ePn	Pn	12 59 41.9	+0.2
BZS	**Buzias**	4.73	81	⇑iP	Pn	12 59 42.8	+1.1
BZS	**Buzias**	4.73	81	S	Sb	13 01 03.5	+13
CGL1	**Ceglie Messapi**	4.76	156	⇓iPn	Pn	12 59 41.8	-0.3
SELS	**Selova**	4.79	110	ePn	Pn	12 59 43.0	+0.4
MDVR	**Moldovita**	4.80	91	⇑iP	Pn	12 59 44.3	+1.5
MDVR	**Moldovita**	4.80	91	S	Sb	13 01 00.6	+7.9
WILA	**Wila**	4.82	302	ePn	Pn	12 59 45.4	+2.4
WILA				eSn	Sn	13 00 39.7	+1.5
WILA				eSg	Sb	13 01 08.1	+15
KUBS	**Kucevo**	4.83	95	ePn	Pn	12 59 42.4	-0.6
TAR1	**Taranto**	4.83	158	ePn	Pn	12 59 43.1	+0.1
TAR1				Sn	Sn	13 00 37.5	-0.7
SIRR	**Siria**	4.86	73	⇑iP	Pn	12 59 43.5	+0.1
GOPC	**GO Pecny, Ondr**	4.88	359	eP	Pn	12 59 43.7	0.0
GOPC				e		13 00 37.7	
GOPC				MLR	MLR		
	comp=Z,2µm,8.0s						
GOPC	**GO Pecny, Ondr**	4.88	359	ePN	Pn	12 59 43.7	0.0
GOPC				eSN	Sn	13 00 37.7	-1.7
GOPC				AMS	AMS	13 01 20.0	
	comp=Z,2µm,8.0s						
PRU	**Pruhonice**	4.96	357	eP	Pn	12 59 45.1	+0.3
PRU				e		13 00 39.0	
PRU				MLR	MLR		
	comp=Z,3µm,7.1s						
PRU	**Pruhonice**	4.96	357	ePN	Pn	12 59 45.1	+0.3
PRU				eSN	Sn	13 00 39.0	-2.3
PRU				AMS	AMS	13 01 20.0	
	comp=Z,3µm,7.1s						
PGF	**Pioggiola**	4.98	242	ePn	Pn	12 59 45.5	+0.2
PGF				eSn	Sn	13 00 41.1	-1.1
PGF	**Pioggiola**	4.98	242	ePn	Pn	12 59 45.5	+0.2
PGF				eSn	Sn	13 00 41.1	-1.1
	comp=Z,42nm,0.4s						
PGF	**Pioggiola**	4.98	242	eP	Pn	12 59 45.5	+0.2
PGF				e		13 00 41.1	
MORC	**Moravsky Berou**	5.05	19	ePn	Pn	12 59 46.4	+0.3
MORC				eSn	Sn	13 00 41.7	-2.0
MORC	**Moravsky Berou**	5.05	19	⇓iP	Pn	12 59 46.5	+0.3
MORC	**Moravsky Berou**	5.05	19	P	Pn	12 59 46.4	+0.3
MORC				S	Sn	13 00 41.7	-2.0
MORC	**Moravsky Berou**	5.05	19	ePN	Pn	12 59 46.4	+0.3
MORC				eSN	Sn	13 00 39.5	-4.2
ROTZ	**Rotzenmuhle**	5.08	339	ePn	Pn	12 59 47.0	+0.5
ROTZ				ePg	Pb	13 00 07.0	+7.1
ROTZ				eSn	Sn	13 00 44.0	-0.4
ROTZ				eSg	Sb	13 01 11.9	+11
KECS	**Kecovo**	5.12	46	eP	Pn	12 59 47.2	+0.1
KECS	**Kecovo**	5.12	46	ePN	Pn	12 59 47.2	+0.1
KECS				ePG	Pb	13 00 06.7	+6.0
LANS	**Liptovska Anna**	5.13	35	eP	Pn	12 59 47.9	+0.6
LANS				e		13 00 43.8	
LANS	**Liptovska Anna**	5.13	35	ePN	Pn	12 59 47.9	+0.6
LANS				eSN	Sn	13 00 43.8	-2.0
TIR	**Tirane**	5.15	134	ePn	Pn	12 59 48.6	+1.1
TIR				eSn	Sn	13 00 44.7	-1.4
TIR	**Tirane**	5.15	134	ePn	Pn	12 59 48.5	+1.1
TIR	**Tirane**	5.15	134	P	Pn	12 59 48.5	+1.1
TIR	**Tirane**	5.15	134	⇑iP	Pn	12 59 48.4	+1.0
TIR	**Tirane**	5.15	134	eP	Pn	12 59 48.6	+1.1
TIR				e		13 00 44.7	
PHP	**Peshkopia**	5.22	128	P	Pn	12 59 50.5	+2.0
SLE	**Schleitheim**	5.24	304	ePn	Pn	12 59 50.3	+1.7
SLE				eSg	Sb	13 01 21.5	+17
HERR	**Herculane**	5.29	89	⇑iP	Pn	12 59 50.4	+1.0
GRA1	**Grafenberg Arr**	5.30	333	ePn	Pn	12 59 49.1	-0.4
GRA1				eSn	Sn	13 00 50.0	+0.2
GRF	**Grafenberg Arr**	5.30	333	eP	Pn	12 59 49.1	-0.4
GRF				e		13 00 50.1	
GRF	**Grafenberg Arr**	5.30	333	ePn	Pn	12 59 50.5	+1.0
GRF				ePg	Pb	13 00 14.5	+11
GRF				eSn	Sn	13 00 50.3	+0.5
GRF				eSg	Sb	13 01 20.1	+13
GRFO	**Grafenberg**	5.30	333	ePn	Pn	12 59 49.4	-0.1
GRFO				eSn	Sn	13 00 49.4	-0.4
GRFO	**Grafenberg**	5.30	333	eP	Pn	12 59 49.4	-0.1
GRFO				e		13 00 49.4	
MANZ	**Manzenberg**	5.31	340	ePn	Pn	12 59 50.1	+0.5
MANZ				ePg	Pb	13 00 11.4	+7.5
MANZ				eSn	Sn	13 00 49.3	-0.8
ZAGS	**Zajecar**	5.35	101	ePn	Pn	12 59 50.9	+0.7
LTVH	**Ltavrtes, Hu**	5.36	62	ePn	Pn	12 59 47.0	-3.2
LTVH				⇓ePg	Pb	13 00 13.0	+8.4
LTVH				Sn	Sn	13 00 49.1	-2.1
LTVH				eSg	Sb	13 01 26.1	+18
DPC	**Dobruska-Polom**	5.39	9	eP	Pn	12 59 50.9	+0.1
DPC				e		13 00 48.8	
DPC				MLR	MLR		
	comp=Z,1µm,9.0s						
DPC	**Dobruska-Polom**	5.39	9	ePN	Pn	12 59 50.9	+0.1
DPC				eSN	Sn	13 00 48.8	-3.3
DPC				AMS	AMS	13 01 30.0	
	comp=Z,1µm,9.0s						
BARS	**Barje**	5.43	112	ePn	Pn	12 59 46.7	-4.6
BARS	**Barje**	5.43	112	ePn	Pn	12 59 51.7	+0.4
BARS				eSn	Sn	13 00 42.9	-10
STU	**Stuttgart**	5.43	315	ePn	Pn	12 59 52.3	+1.0
STU				eSn	Sn	13 00 51.6	-1.5
STU	**Stuttgart**	5.43	315	eP	Pn	12 59 52.3	+1.0
STU				e		13 00 51.6	
STU	**Stuttgart**	5.43	315	ePn	Pn	12 59 53.0	+1.6
STU				ePg	Pb	13 00 17.5	+12
STU				eSg	Sb	13 01 26.1	+16
NKC	**Novy Kostel**	5.46	343	eP	Pn	12 59 52.2	+0.4
NKC				e		13 00 52.8	
NKC				MLR	MLR		
	comp=Z,2µm,13.4s						
NKC	**Novy Kostel**	5.46	343	ePN	Pn	12 59 52.2	+0.4
NKC				eSN	Sn	13 00 52.8	-1.1
NKC				AMS	AMS	13 01 50.0	
	comp=Z,2µm,13.4s						
PVCC	**Panska Ves**	5.50	357	eP	Pn	12 59 52.2	0.0
PVCC				MLR	MLR		
	comp=Z,2µm,7.4s						
PVCC	**Panska Ves**	5.50	357	ePN	Pn	12 59 52.2	0.0
PVCC				AMS	AMS	13 01 40.0	
	comp=Z,2µm,7.4s						
SBF	**Sospel**	5.51	260	ePn	Pn	12 59 53.1	+0.6
SBF				eSn	Sn	13 00 53.0	-2.2
SBF	**Sospel**	5.51	260	ePn	Pn	12 59 53.1	+0.6
	SNR=1.0						
SBF				eSn	Sn	13 00 53.0	-2.2
	comp=Z,287nm,0.7s						
SBF	**Sospel**	5.51	260	eP	Pn	12 59 53.1	+0.6
SBF				e		13 00 53.0	
UPC	**Upice**	5.51	7	eP	Pn	12 59 52.4	0.0
UPC				e		13 00 52.6	
UPC				MLR	MLR		
	comp=Z,2µm,8.5s						
UPC	**Upice**	5.51	7	ePN	Pn	12 59 52.4	0.0
UPC				eSN	Sn	13 00 52.6	-2.5
UPC				AMS	AMS	13 01 40.0	
	comp=Z,2µm,8.5s						
SENIN	**Lac Senin/Sane**	5.53	287	ePn	Pn	12 59 56.2	+3.3
SENIN				eSn	Sn	13 00 57.2	+1.5
WERN	**Wernitzgruen**	5.53	343	ePn	Pn	12 59 53.3	+0.6
WERN				ePg	Pb	13 00 17.0	+9.4
WERN				eSn	Sn	13 00 54.9	-0.7
GZR	**Gura Zlata**	5.54	84	⇓iP	Pn	12 59 53.7	+0.9
CHVC	**Chvalec**	5.60	7	ePN	Pn	12 59 53.3	-0.3
CHVC				eSN	Sn	13 00 54.4	-2.8
CHVC				AMS	AMS	13 01 50.0	
	comp=Z,2µm,8.5s						
GUNZ	**Gunzen**	5.61	343	ePn	Pn	12 59 54.4	+0.6
GUNZ				ePg	Pb	13 00 18.1	+9.2
GUNZ				eSn	Sn	13 00 57.6	+0.1
BFO	**Black Forest**	5.62	308	ePn	Pn	12 59 55.1	+1.2
BFO				eSn	Sn	13 00 56.9	-0.9
BFO	**Black Forest**	5.62	308	eP	Pn	12 59 55.1	+1.2
BFO				e		13 00 56.9	
BFO	**Black Forest**	5.62	308	ePn	Pn	12 59 55.2	+1.2
BFO				ePg	Pb	13 00 18.8	+10
BFO				eSn	Sn	13 00 55.3	-2.5
BFO				eSg	Sb	13 01 32.6	+17
SKO	**Skopje**	5.62	121	ePn	Pn	12 59 55.6	+1.6
SKO	**Skopje**	5.62	121	i Pn	Pn	12 59 55.6	+1.6
TANN	**Tannenbergstha**	5.63	344	ePn	Pn	12 59 54.4	+0.2
TANN				eSn	Sn	13 00 56.7	-1.4
DRGR		5.69	69	ePn	Pn	12 59 54.0	-0.9
DRGR		5.69	69	⇓iP	Pn	12 59 55.5	+0.6

DRGR		5.69	69	*e*P	Pn	12 59 54.0	-0.9
BLKB	**Belogradchik**	5.71	102	S	Sn	13 00 58.3	-1.8
PLN	**Plauen**	5.76	342	*e*Pn	Pn	12 59 56.3	+0.4
PLN				*e*Sn	Sn	13 01 00.1	-1.2
ZAPS	**Zavoj**	5.80	105	*e*Pn	Pn	12 59 56.9	+0.5
ZAPS				*e*Sn	Sn	13 00 59.8	-2.4
LPG	**La Plagne**	5.81	277	*e*Pn	Pn	12 59 59.0	+2.2
LPG				*e*Sn	Sn	13 01 00.6	-2.2
LPG	**La Plagne**	5.81	277	*e*Pn	Pn	12 59 59.0	+2.2
	SNR=1.0						
LPG				*e*Sn	Sn	13 01 00.6	-2.2
LPG				*e*Sg	Sb	13 01 09.9	-12
	comp=Z,334nm,0.9s						
LPL	**La Plagne**	5.82	278	*e*Pn	Pn	13 00 00.4	+3.5
LPL				*e*Sn	Sn	13 01 01.7	-1.4
LPL	**La Plagne**	5.82	278	*e*Pn	Pn	13 00 00.4	+3.5
	SNR=1.0						
LPL				*e*Sn	Sn	13 01 01.7	-1.4
LPL				*e*Sg	Sb	13 01 10.0	-12
	comp=Z,205nm,0.7s						
MBDF	**Montbardon**	5.83	270	*e*Pn	Pn	12 59 56.7	-0.2
MBDF				*e*Sn	Sn	13 01 00.8	-2.2
MBDF	**Montbardon**	5.83	270	*e*Pn	Pn	12 59 56.7	-0.2
	SNR=1.0						
MBDF				*e*Sn	Sn	13 01 00.8	-2.2
	comp=Z,106nm,0.6s						
MBDF	**Montbardon**	5.83	270	*e*P	Pn	12 59 56.7	-0.2
MBDF				*e*		13 01 00.8	
BNI	**Bardonecchia**	5.87	273	*e*Pn	Pn	12 59 59.4	+2.0
BNI				*e*Sn	Sn	13 01 04.8	+0.8
BNI	**Bardonecchia**	5.87	273	*e*P	Pn	12 59 59.4	+2.0
BNI				*e*		13 01 04.8	
BRG	**Berggiesshubel**	5.87	354	PN	Pn	12 59 57.4	0.0
BRG				PG	Pb	13 00 26.0	+13
BRG				*i*		13 01 01.3	
BRG				*i*		13 01 13.3	
BRG	**Berggiesshubel**	5.87	354	SG	Sb	13 01 45.2	+22
	comp=Z,100nm,0.8s						
	comp=N,2µm,8.8s						
	comp=E,3µm,6.4s						
	comp=Z,2µm,7.6s						
BRG	**Berggiesshubel**	5.87	354	P	Pn	12 59 57.4	0.0
BRG	**Berggiesshubel**	5.87	354	*e*Pn	Pn	12 59 57.2	-0.1
BRG				*e*Sn	Sn	13 01 01.3	-2.6
SRE	**Strehaia**	5.88	91	⇑*i*P	Pn	12 59 58.4	+1.0
FBE	**Freiberg**	5.98	350	*e*Pn	Pn	12 59 59.0	+0.2
FBE				*e*Sn	Sn	13 01 02.9	-3.6
TIP	**Timpagrande**	6.01	167	*e*Pn	Pn	13 00 00.5	+1.1
TIP	**Timpagrande**	6.01	167	⇓*i*P	Pn	13 00 00.2	+0.8
TPE	**Tepelena**	6.03	140	P	Pn	13 00 00.4	+0.8
MOX	**Moxa**	6.04	339	*e*Pn	Pn	13 00 00.3	+0.6
MOX				*e*Sn	Sn	13 01 06.5	-1.6
TRPA	**Tarpa**	6.07	57	⇑*i*P	Pn	12 59 59.8	-0.2
TRPA	**Tarpa**	6.07	57	*e*Pn	Pn	12 59 53.1	-7.0
TRPA	**Tarpa**	6.07	57	*e*Pg	Pb	13 00 26.0	+9.3
TRPA				Sn	Sb	13 01 52.1	+23
OJC	**Ojcow**	6.12	31	*e*Pn	Pn	13 00 00.8	0.0
OJC				*e*Sn	Sn	13 01 08.3	-1.8
OJC	**Ojcow**	6.12	31	*e*P	Pn	13 00 00.8	0.0
OJC				*e*		13 01 08.3	
FRF	**La Foret Royal**	6.15	259	*e*Pn	Pn	13 00 01.3	+0.2
FRF				*e*Sn	Sn	13 01 08.5	-2.2
FRF	**La Foret Royal**	6.15	259	*e*Pn	Pn	13 00 01.3	+0.2
	SNR=1.0						
FRF				*e*Sn	Sn	13 01 08.5	-2.2
	comp=Z,84nm,0.7s						
FRF	**La Foret Royal**	6.15	259	*e*P	Pn	13 00 01.3	+0.2
FRF				*e*		13 01 08.5	
UZH	**Uzhgorod**	6.18	52	*e*P	Pn	13 00 02.5	+0.9
UZH				*e*S	Sn	13 01 10.5	-1.0
UZH				MLR	MLR		
	comp=N,360nm,8.0s						
UZH				MLR	MLR		
	comp=E,220nm,8.0s						
LOT	**Lotru**	6.24	83	⇑*i*P	Pn	13 00 04.2	+1.7
ECH	**Echery**	6.24	303	*e*Pn	Pn	13 00 03.7	+1.2
STIP	**Stip**	6.24	120	*i* Pn	Pn	13 00 05.3	+2.9
HINF	**Hinteralfeld**	6.25	299	*e*Pn	Pn	13 00 03.9	+1.3
HINF				*e*Pg	Pb	13 00 26.6	+6.7
HINF				*e*Sn	Sn	13 01 11.4	-1.9
HINF	**Hinteralfeld**	6.25	299	*e*Pn	Pn	13 00 03.9	+1.3
HINF	**Hinteralfeld**	6.25	299	*e*Pg	Pb	13 00 26.6	+6.7
HINF				*e*Sn	Sn	13 01 11.4	-1.9
	comp=E,124nm,0.4s						
HINF				*e*Sg	Sb	13 01 47.5	+13
	comp=E,153nm,0.9s,SNR=1.0						
CDF	**Champ du Feu**	6.26	305	*e*Pn	Pn	13 00 03.3	+0.5
CDF				*e*Pg	Pb	13 00 26.6	+6.5
CDF				*e*Sn	Sn	13 01 09.7	-4.0
CDF	**Champ du Feu**	6.26	305	*e*Pn	Pn	13 00 03.3	+0.5
CDF	**Champ du Feu**	6.26	305	*e*Pg	Pb	13 00 26.6	+6.5
CDF				*e*Sn	Sn	13 01 09.7	-4.0
CDF				*e*Sg	Sb	13 01 48.8	+14
	comp=E,554nm,1.3s						
CDF	**Champ du Feu**	6.26	305	*e*P	Pn	13 00 03.3	+0.5
CDF				*e*		13 01 09.7	
LMR	**La Mourre**	6.31	257	*e*Pn	Pn	13 00 03.5	+0.1
LMR				*e*Sn	Sn	13 01 12.5	-2.2
LMR	**La Mourre**	6.31	257	*e*Pn	Pn	13 00 03.5	+0.1
	SNR=1.0						
LMR				*e*Sn	Sn	13 01 12.5	-2.2
	comp=E,61nm,0.6s						
LMR	**La Mourre**	6.31	257	*e*P	Pn	13 00 03.5	+0.1
LMR				*e*		13 01 12.5	
KOLS	**Kolonicke sedl**	6.34	50	*e*PG	Pb	13 00 30.9	+10
KOLS				*e*SG	Sb	13 01 59.7	+23
KOLS				*e*LG	Lg	13 02 35.8	
FNA	**Florina**	6.35	130	P	Pn	13 00 06.0	+2.0
SRN	**Sarande**	6.37	142	P	Pn	13 00 04.2	+0.1
CABF	**La Chapelle**	6.39	287	*e*Pn	Pn	13 00 06.3	+1.7
CABF	**La Chapelle**	6.39	287	*e*Pn	Pn	13 00 06.3	+1.7
	SNR=1.0						
CABF				*e*Sn	Sn	13 01 13.3	-3.6
	comp=E,563nm,1.5s						
CABF	**La Chapelle**	6.39	287	*e*P	Pn	13 00 06.3	+1.7
CLL	**Collm**	6.40	349	*e*Pn	Pn	13 00 04.5	-0.2
CLL				*e*Sg	Sb	13 01 37.4	-1.1
CLL	**Collm**	6.40	349	*i* P	Pn	13 00 04.8	+0.1
CLL				*e*		13 01 13.0	
CLL	**Collm**	6.40	349	*i* Pn	Pn	13 00 04.8	+0.1
CLL				*i*		13 00 06.5	
	comp=Z,91nm,0.4s						
CLL				*i*		13 00 10.0	
CLL				*e*Pg	Pb	13 00 35.0	+13
CLL				*e*Sn	Sn	13 01 13.0	-4.0
CLL				*e*		13 01 39.0	
CLL				*e*Sg	Sb	13 01 52.0	+14
	comp=Z,202nm,1.1s						
CLL				*e*Lmax		13 01 57.0	
CLL	**Collm**	6.40	349	*e*Pn	Pn	13 00 04.7	+0.1
CLL				*e*Sn	Sn	13 01 13.6	-3.4
KEK	**Kerkira**	6.42	144	P	Pn	13 00 05.0	+0.1
NEST	**Nestorio**	6.44	134	P	Pn	13 00 06.6	+1.3
ORIF	**Oris-en-Rattie**	6.44	272	*e*Pn	Pn	13 00 06.9	+1.6
ORIF				*e*Sn	Sn	13 01 16.6	-1.5
ORIF	**Oris-en-Rattie**	6.44	272	*e*Pn	Pn	13 00 06.9	+1.6
	SNR=1.0						
ORIF				*e*Sn	Sn	13 01 16.6	-1.5
	comp=Z,142nm,0.6s						
ORIF	**Oris-en-Rattie**	6.44	272	*e*P	Pn	13 00 06.9	+1.6
ORIF				*e*		13 01 16.6	
VTS	**Vitosha**	6.46	109	*e*Pn	Pn	13 00 05.7	+0.1
VTS	**Vitosha**	6.46	109	*e*Pn	Pn	13 00 05.9	+0.3
VTS	**Vitosha**	6.46	109	⇑*i*P	Pn	13 00 06.1	+0.5
VTS	**Vitosha**	6.46	109	*e*P	Pn	13 00 05.7	+0.1
VTS	**Vitosha**	6.46	109	*e*P	Pn	13 00 05.6	+0.1
NEUB	**Neuenburg**	6.53	342	*e*Pn	Pn	13 00 07.6	+1.3
NEUB				*e*Sn	Sn	13 01 18.1	-1.8
HAU	**Haudompre**	6.64	300	*e*Pn	Pn	13 00 08.5	+0.6
HAU				*e*Sn	Sn	13 01 19.3	-3.5
HAU	**Haudompre**	6.64	300	*e*Pn	Pn	13 00 08.5	+0.6
HAU				*e*Sn	Sn	13 01 19.3	-3.5
	comp=Z,151nm,0.5s						
HAU	**Haudompre**	6.64	300	*e*P	Pn	13 00 08.5	+0.6
HAU				*e*		13 01 19.3	
UBBA	**Unterbreizbach**	6.67	332	*e*Pn	Pn	13 00 10.1	+1.9
UBBA				*e*Sn	Sn	13 01 22.8	-0.5
VAY	**Valandovo**	6.69	121	*e*Pn	Pn	13 00 09.8	+1.2
KKB	**Krupnik**	6.71	115	*e*P	Pn	13 00 11.1	+2.2
SMRF	**Simiane la Rot**	6.79	264	*e*Pn	Pn	13 00 11.2	+1.1
SMRF				*e*Sn	Sn	13 01 23.9	-2.8
SMRF	**Simiane la Rot**	6.79	264	*e*Pn	Pn	13 00 11.2	+1.1
	SNR=1.0						
SMRF				*e*Sn	Sn	13 01 23.9	-2.8
	comp=Z,41nm,0.7s						
TNS	**Taunus Mts**	6.80	322	*e*Pn	Pn	13 00 13.1	+3.0
TNS				*e*Sn	Sn	13 01 26.4	-0.3
ARR	**Arges**	6.84	84	⇑*i*P	Pn	13 00 12.0	+1.2
KPRO	**Kipourio**	6.95	135	P	Pn	13 00 13.2	+1.0
KWP	**Kalwaria Pacla**	6.98	46	*e*Pn	Pn	13 00 12.1	-0.5
KWP				*e*Sn	Sn	13 01 31.7	+0.4
KWP	**Kalwaria Pacla**	6.98	46	*e*P	Pn	13 00 12.1	-0.5
KWP				*e*		13 01 31.7	
KNT	**Kendrikon**	6.99	121	P	Pn	13 00 13.6	+0.9
MEV	**Metsovon**	7.01	136	P	Pn	13 00 14.8	+1.7
PGB	**Panagyurishte**	7.11	107	*e*P	Pn	13 00 16.5	+2.0
VOIR		7.14	83	⇑*i*P	Pn	13 00 17.4	+2.6
PAGF	**Fort de Pagny**	7.24	302	*e*Pn	Pn	13 00 16.8	+0.6
PAGF	**Fort de Pagny**	7.24	302	*e*Pn	Pn	13 00 16.8	+0.6
	baz=121						
PAGF				*e*Sn	Sn	13 01 32.8	-4.9
PAGF				*e*Sg	Sb	13 02 15.6	+13
	comp=Z,821nm,1.6s						
KOE	**Koeppel**	7.26	320	*e*Pn	Pn	13 00 18.8	+2.4
MMB	**Musomiste**	7.27	115	*e*P	Pn	13 00 18.3	+1.7
BGG	**Burgeitz**	7.29	318	*e*Pn	Pn	13 00 19.1	+2.3
VIVF	**Saint-Julien-l**	7.30	272	*e*Pn	Pn	13 00 16.9	-0.1
VIVF	**Saint-Julien-l**	7.30	272	*e*Pn	Pn	13 00 16.9	-0.1
	SNR=1.0						
VIVF				*e*Sn	Sn	13 01 35.9	-3.3
	comp=Z,43nm,0.8s						
VIVF	**Saint-Julien-l**	7.30	272	*e*P	Pn	13 00 16.9	-0.1
GTTG	**Gvttingen**	7.31	335	*e*Pn	Pn	13 00 19.1	+2.0
GTTG				*e*Sn	Sn	13 01 39.2	0.0
LIT	**Litokhoron**	7.43	129	P	Pn	13 00 18.4	-0.5
SRS	**Serrai**	7.44	119	P	Pn	13 00 19.5	+0.6
CLZ	**Clausthal**	7.45	338	*e*Pn	Pn	13 00 21.6	+2.5
CLZ				*e*Sn	Sn	13 01 39.8	-3.1
NVR	**Nevrokopi**	7.48	116	P	Pn	13 00 20.5	+1.0
TSLK	**Tsoukalades, L**	7.52	144	P	Pn	13 00 20.0	-0.1
SFTF	**Sexfontaines**	7.53	298	*e*Pn	Pn	13 00 19.7	-0.4
SFTF				*e*Pg	Pb	13 00 50.5	+8.9
SFTF	**Sexfontaines**	7.53	298	*e*Pn	Pn	13 00 19.7	-0.4
	baz=118						
SFTF	**Sexfontaines**	7.53	298	*e*Pg	Pb	13 00 50.5	+8.9
	baz=118						
SFTF				*e*Sn	Sn	13 01 39.9	-4.7
SFTF				*e*Sg	Sb	13 02 27.3	+17
	comp=Z,310nm,1.3s						
BUR08	**Bucovina Ar. S**	7.55	66	*e*Pn	Pn	13 00 21.0	+0.5
BURAR	**Bucovina Array**	7.55	66	⇓*i*P	Pn	13 00 21.9	+1.4
LKD2	**Lefkada island**	7.55	144	P	Pn	13 00 20.5	0.0
WLF	**Walferdange**	7.56	311	*e*Pn	Pn	13 00 19.8	-0.7
WLF				*e*Sn	Sn	13 01 44.0	-1.3
WLF	**Walferdange**	7.56	311	*e*P	Pn	13 00 19.8	-0.7
WLF				*e*		13 01 44.0	
WLF	**Walferdange**	7.56	311	⇑Pn	Pn	13 00 23.6	+3.1
THL	**Klokotos Trika**	7.57	134	P	Pn	13 00 20.0	-0.7
CLTB	**Caltabellotta**	7.57	191	*e*Pn	Pn	13 00 20.9	0.0
MEZF	**Maizieres J'vi**	7.63	300	*e*Pn	Pn	13 00 22.9	+1.4
MEZF	**Maizieres J'vi**	7.63	300	*e*Pn	Pn	13 00 22.9	+1.4
	baz=120,SNR=1.0						
MEZF	**Maizieres J'vi**	7.63	300	*e*Pg	Pb	13 00 52.4	+9.1
	baz=119						
MEZF				*e*Sn	Sn	13 01 42.0	-5.2
MEZF				*e*Sg	Sb	13 02 30.9	+17
	comp=Z,304nm,1.4s						
EVGI	**Lefkada island**	7.70	145	P	Pn	13 00 21.9	-0.5
MLR	**Muntele Rosu**	7.76	83	Pn	Pn	13 00 23.3	-0.2
	comp=Z,0.7nm,0.3s,baz=264,slow=12,SNR=5.5						
MLR				Lg	Lg	13 02 31.7	
	comp=Z,0.2nm,0.3s,baz=314,slow=18,SNR=2.3						
MLR				LR	LR	13 03 37.2	
	comp=Z,270nm,20.0s,baz=295,slow=40						
MLR	**Muntele Rosu**	7.76	83	*e*Pn	Pn	13 00 21.8	-1.7
STB	**Steinbach**	7.79	318	*e*Pn	Pn	13 00 26.2	+2.6
FSK	**Fiskardo**	7.80	146	P	Pn	13 00 23.0	-0.8
PLG	**Polygyros**	7.80	124	P	Pn	13 00 24.6	+0.7
RZN	**Rozhen**	7.86	112	*e*P	Pn	13 00 26.0	+1.2
SMF	**Signal de Mont**	7.93	286	*e*Pn	Pn	13 00 25.5	-0.1
SMF	**Signal de Mont**	7.93	286	*e*Pn	Pn	13 00 25.5	-0.1
	SNR=1.0						
SMF				*e*Sn	Sn	13 01 49.7	-4.8
	comp=Z,74nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	7.93	286	*e*P	Pn	13 00 25.5	-0.1
EVR	**Evrytania**	7.97	138	P	Pn	13 00 27.1	+0.9
LASF	**Ste Croix**	7.99	267	*e*Pn	Pn	13 00 26.3	-0.1
LASF	**Ste Croix**	7.99	267	*e*Pn	Pn	13 00 26.3	-0.1
	SNR=1.0						
LASF				*e*Sn	Sn	13 01 52.5	-3.6
	comp=Z,42nm,0.6s,SNR=1.0						
LOR	**Lormes**	8.02	290	*e*Pn	Pn	13 00 27.6	+0.7
LOR	**Lormes**	8.02	290	*e*P	Pn	13 00 27.4	+0.5
LOR	**Lormes**	8.02	290	*e*Pn	Pn	13 00 27.6	+0.7
	baz=110,SNR=1.0						
LOR				*e*Sn	Sn	13 01 52.1	-4.8
	comp=Z,72nm,0.5s,SNR=1.0						
LOR				*e*Sg	Sb	13 02 43.8	+19
	comp=Z,50nm,0.8s,baz=109						
LOR	**Lormes**	8.02	290	*e*P	Pn	13 00 27.6	+0.7
VLS	**Valsamata**	8.05	146	P	Pn	13 00 26.4	-0.9
PVO	**Paravola**	8.08	140	P	Pn	13 00 27.7	+0.1
KAVA	**Kavala**	8.08	117	P	Pn	13 00 29.5	+1.8
NRDL	**Niedersach Rie**	8.11	339	*e*Pn	Pn	13 00 29.6	+1.6
AGG	**Agios Georgios**	8.14	135	P	Pn	13 00 28.1	-0.4
KFL	**Anninata**	8.19	146	P	Pn	13 00 28.5	-0.7
MEM	**Membach**	8.20	316	⇑Pn	Pn	13 00 31.9	+2.6
MEM				⇑Sn	Sn	13 02 01.2	+0.1
	comp=E,60nm,0.0s						
BUG	**Bochum--Univer**	8.20	324	*e*Pn	Pn	13 00 32.3	+3.0
SSF	**Saint Saulge**	8.22	288	*e*Pn	Pn	13 00 30.7	+1.1
SSF	**Saint Saulge**	8.22	288	*e*Pn	Pn	13 00 30.7	+1.1
	SNR=1.0						
SSF	**Saint Saulge**	8.22	288	*e*Pg	Pb	13 01 05.5	+12
SSF				*e*Sn	Sn	13 01 56.2	-5.5
	comp=E,33nm,0.6s						
SSF				*e*Sg	Sb	13 02 50.9	+20
	comp=E,74nm,1.3s						
SSF	**Saint Saulge**	8.22	288	*e*P	Pn	13 00 30.7	+1.1
PAIG	**Paliouri**	8.22	125	P	Pn	13 00 30.1	+0.5
PLOR	**Plostina**	8.26	80	⇑*i*P	Pn	13 00 31.9	+1.7
ANX	**Ano Chora**	8.28	139	P	Pn	13 00 31.0	+0.5
AVF	**Avril sur Loir**	8.28	286	*e*Pn	Pn	13 00 30.8	+0.4
AVF				*e*Sn	Sn	13 02 00.3	-2.9
AVF	**Avril sur Loir**	8.28	286	*e*Pn	Pn	13 00 30.8	+0.4
	SNR=1.0						
AVF				*e*Sn	Sn	13 02 00.3	-2.9
	comp=E,25nm,0.6s						
AVF	**Avril sur Loir**	8.28	286	*e*P	Pn	13 00 30.8	+0.4
AVF				*e*		13 02 00.3	
XOR	**Xorichti**	8.34	130	P	Pn	13 00 30.2	-1.0
BCLA	**Clavier**	8.44	313	⇑Pn	Pn	13 00 37.6	+5.1
BCLA				⇓Sn	Sn	13 02 08.7	+1.6
	comp=N,50nm,0.0s						
SERG	**Sergoula**	8.48	139	P	Pn	13 00 33.8	+0.5
GIVF	**Givet**	8.52	310	*e*Pn	Pn	13 00 33.5	-0.1
GIVF	**Givet**	8.52	310	*e*Pn	Pn	13 00 33.5	-0.1
GIVF	**Givet**	8.52	310	*e*Pg	Pn	13 01 09.4	+36
GIVF				*e*Sg	Sn	13 02 57.7	+49
	comp=N,178nm,1.3s						
GIVF	**Givet**	8.52	310	*e*P	Pn	13 00 33.5	-0.1
TRIZ	**Trizonia**	8.53	139	P	Pn	13 00 34.1	+0.2
RETH	**Rethem/Aller,**	8.54	336	*e*Pn	Pn	13 00 36.4	+2.5
KALE	**Kalithea**	8.54	139	P	Pn	13 00 34.0	-0.1
ZKS	**Zakynthos**	8.54	147	P	Pn	13 00 33.1	-1.0
LAKA	**Lakka**	8.59	140	P	Pn	13 00 34.5	-0.2
BGF	**Bois d'Agland**	8.60	284	*e*Pn	Pn	13 00 35.5	+0.7
BGF	**Bois d'Agland**	8.60	284	*e*Pn	Pn	13 00 35.5	+0.7
	SNR=1.0						
BGF				*e*Sn	Sn	13 02 06.1	-4.9
	comp=N,97nm,0.6s						
BGF	**Bois d'Agland**	8.60	284	*e*P	Pn	13 00 35.5	+0.7
DOU	**Dourbes**	8.64	310	⇑Pn	Pn	13 00 37.8	+2.6
DOU				⇑Sn	Sn	13 02 12.8	+0.9
	comp=N,30nm,0.0s						
DSF	**Desfina**	8.71	137	P	Pn	13 00 35.7	-0.7
ATAL	**Atalanti**	8.74	134	P	Pn	13 00 35.9	-0.8
KLV	**Kalavryta, Ach**	8.83	140	P	Pn	13 00 38.1	+0.1
BAIF	**Baives**	8.83	308	*e*Pn	Pn	13 00 37.1	-0.8
BAIF	**Baives**	8.83	308	*e*Pn	Pn	13 00 37.1	-0.8
BAIF	**Baives**	8.83	308	*e*Pg	Pn	13 01 16.3	+38
BAIF				*e*Sn	Sn	13 02 09.7	-6.9
BAIF				*e*Sg		13 03 07.8	
	comp=N,134nm,1.3s						
BAIF	**Baives**	8.83	308	*e*P	Pn	13 00 37.1	-0.8
HYF	**Humbligny**	8.84	289	*e*Pn	Pn	13 00 39.5	+1.4
HYF				*e*Sn	Sn	13 02 15.1	-1.8
HYF	**Humbligny**	8.84	289	*e*Pn	Pn	13 00 39.5	+1.4
HYF				*e*Sn	Sn	13 02 15.1	-1.8
GUR	**Goura**	9.00	140	P	Pn	13 00 39.4	-1.0
TCF	**Toulx Ste Croi**	9.02	282	*e*Pn	Pn	13 00 41.2	+0.7
TCF	**Toulx Ste Croi**	9.02	282	*e*Pn	Pn	13 00 41.2	+0.7
	SNR=1.0						
TCF				*e*Sn	Sn	13 02 16.0	-5.3
	comp=N,38nm,0.6s						
TCF	**Toulx Ste Croi**	9.02	282	*e*P	Pn	13 00 41.2	+0.7
AMT	**Artemida-Makis**	9.06	144	P	Pn	13 00 41.3	+0.2
ALN	**Alexandroupoli**	9.12	113	P	Pn	13 00 43.1	+1.2
CAF	**Calviac**	9.14	274	*e*Pn	Pn	13 00 42.0	-0.3
CAF	**Calviac**	9.14	274	*e*Pn	Pn	13 00 42.0	-0.3
	SNR=1.0						
CAF				*e*Sn	Sn	13 02 19.6	-4.8
	comp=N,14nm,0.6s						
CAF	**Calviac**	9.14	274	*e*P	Pn	13 00 42.0	-0.3
MTLF	**Montolieu**	9.31	264	*e*Pn	Pn	13 00 44.3	-0.3
MTLF	**Montolieu**	9.31	264	*e*Pn	Pn	13 00 44.3	-0.3
	SNR=1.0						
MTLF				*e*Sn	Sn	13 02 24.0	-4.5
	comp=N,8.4nm,0.6s						
MTLF	**Montolieu**	9.31	264	*e*P	Pn	13 00 44.3	-0.3
ITM	**Ithomi**	9.45	144	*e*Pn	Pn	13 00 46.2	-0.3
VLX	**Vlachokerasia**	9.48	141	P	Pn	13 00 46.9	-0.1
RJF	**Les Rejaudoux**	9.50	276	*e*Pn	Pn	13 00 46.8	-0.4
RJF	**Les Rejaudoux**	9.50	276	*e*Pn	Pn	13 00 46.8	-0.4
	SNR=1.0						
RJF				*e*Sn	Sn	13 02 28.2	-5.0
	comp=N,17nm,0.7s						
TIRR	**Tirgusor**	9.59	89	*e*Pn	Pn	13 00 45.9	-2.5
TIRR				*e*Sn	Sn	13 02 34.1	-1.3
TIRR	**Tirgusor**	9.59	89	*e*P	Pn	13 00 45.9	-2.5
TIRR				*e*		13 02 34.1	
PYL	**PYLOS**	9.62	145	P	Pn	13 00 47.2	-1.6
DID	**Didima**	9.77	138	P	Pn	13 00 48.7	-2.2
LFF	**La Frestale**	10.08	274	*e*Pn	Pn	13 00 56.9	+1.9
LFF	**La Frestale**	10.08	274	*e*Pn	Pn	13 00 56.9	+1.9
LFF				*e*Sn	Sn	13 02 41.8	-5.5
	comp=N,27nm,0.6s						
LFF	**La Frestale**	10.08	274	*e*P	Pn	13 00 56.9	+1.9
BSD	**Bornholm Skovb**	10.08	360	*i* P	Pn	13 00 53.9	-1.1
BSD				pmax	pmax		
	comp=Z,6.0nm,0.3s						
BSD				MLR	MLR		
	comp=Z,1µm,11.0s						
KLNR	**Kaliningrad**	10.15	18	*de*P	Pn	13 00 57.0	+1.0
KEST	**Kesra**	10.23	207	Pn	Pn	13 01 01.1	+3.8
	comp=Z,0.3nm,0.3s,baz=341,slow=4.1,SNR=4.5						
KEST	**Kesra**	10.23	207	*e*Pn	Pn	13 00 57.3	0.0
MFF	**Saint Martin d**	10.66	284	*e*Pn	Pn	13 01 02.7	-0.3
MFF	**Saint Martin d**	10.66	284	*e*Pn	Pn	13 01 02.7	-0.3
MFF				*e*Sn	Sn	13 02 56.2	-5.4
	comp=Z,31nm,0.9s						
MFF	**Saint Martin d**	10.66	284	*e*P	Pn	13 01 02.7	-0.3
LDF	**La Druitiere**	10.93	294	*e*Pn	Pn	13 01 08.4	+1.8
LDF	**La Druitiere**	10.93	294	*e*Pn	Pn	13 01 08.4	+1.8
	SNR=1.0						
LDF				*e*Sn	Sn	13 03 00.6	-7.5
	comp=Z,49nm,1.0s						
LDF	**La Druitiere**	10.93	294	*e*P	Pn	13 01 08.4	+1.8
BALB	**Balikesir**	10.98	115	*e*Pn	Pn	13 01 06.3	-1.0
FLN	**La Foliniere**	11.20	295	*e*Pn	Pn	13 01 09.8	-0.5
FLN	**La Foliniere**	11.20	295	*e*Pn	Pn	13 01 09.8	-0.5
	baz=115,SNR=1.0						
FLN				*e*Sn	Sn	13 03 07.6	-7.1
	comp=Z,34nm,0.9s						
FLN	**La Foliniere**	11.20	295	*e*P	Pn	13 01 09.8	-0.5
APE	**Apeiranthos**	11.27	131	⇑*e*P	Pn	13 01 12.0	+0.6
GRR	**Gorron**	11.36	293	*e*Pn	Pn	13 01 13.9	+1.3
GRR	**Gorron**	11.36	293	*e*Pn	Pn	13 01 13.9	+1.3
GRR				*e*Sn	Sn	13 03 11.0	-7.7
	comp=Z,28nm,0.9s						
GRR	**Gorron**	11.36	293	*e*P	Pn	13 01 13.9	+1.3
ETSF	**Etsaut**	11.39	265	*e*Pn	Pn	13 01 15.5	+2.4
ETSF	**Etsaut**	11.39	265	*e*Pn	Pn	13 01 15.5	+2.4
ETSF				*e*Sn	Sn	13 03 14.1	-5.5
	comp=Z,2.7nm,0.5s						
ETSF	**Etsaut**	11.39	265	*e*P	Pn	13 01 15.5	+2.4
SJPF	**Ste Jean**	11.80	266	*e*Pn	Pn	13 01 22.0	+3.3
SJPF	**Ste Jean**	11.80	266	*e*Pn	Pn	13 01 22.0	+3.3
SJPF				*e*Sn	Sn	13 03 21.9	-7.7
	comp=Z,8.3nm,0.9s						
SJPF	**Ste Jean**	11.80	266	*e*P	Pn	13 01 22.0	+3.3
IDI	**Anoyia**	12.34	139	Pn	Pn	13 01 25.4	-0.7
	comp=Z,1.2nm,0.3s,baz=31,slow=18,SNR=2.8						
IDI				Sn	Sn	13 03 32.8	-10
	comp=Z,1.3nm,0.3s,baz=94,slow=19,SNR=4.9						
SGMF	**Saint Gilles**	12.46	291	*e*Pn	Pn	13 01 26.3	-1.2
SGMF	**Saint Gilles**	12.46	291	*e*Pn	Pn	13 01 26.3	-1.2
SGMF	**Saint Gilles**	12.46	291	*e*P	Pn	13 01 26.3	-1.2
QUIF	**Quistinic**	12.82	289	*e*Pn	Pn	13 01 35.0	+2.5
QUIF	**Quistinic**	12.82	289	*e*Pn	Pn	13 01 35.0	+2.5
QUIF				*e*Sn	Sn	13 03 47.2	-7.1
	comp=Z,283nm,1.7s						
ROSF	**Rostrenen**	12.94	291	*e*Pn	Pn	13 01 33.0	-1.2
ROSF	**Rostrenen**	12.94	291	*e*Pn	Pn	13 01 33.0	-1.2
ROSF				*e*Sn	Sn	13 03 49.4	-7.9
	comp=Z,15nm,0.6s						
ROSF	**Rostrenen**	12.94	291	*e*P	Pn	13 01 33.0	-1.2
BR101	**Keskin Array S**	14.78	105	*e*Pn	Pn	13 01 58.7	-0.8
BRTR	**Keskin Array B**	14.78	105	Pn	Pn	13 01 58.7	-0.8
	comp=Z,0.0nm,0.3s,baz=297,slow=13,SNR=3.0						
BRTR				LR	LR	13 08 21.4	
	comp=Z,170nm,18.1s,baz=291,slow=40						
ESDC	**Sonseca Array**	14.97	256	Pn	Pn	13 02 01.3	-0.6
	comp=Z,0.2nm,0.3s,baz=46,slow=13,SNR=4.4						
HFS	**Hagfors**	15.13	358	Pn	Pn	13 02 03.1	-0.9
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=4.5						
VSU	**Vasula**	15.25	24	⇓*e*P	Pn	13 02 03.9	-1.6
EKA	**Eskdalemuir Ar**	15.46	318	Pn	Pn	13 02 08.3	+0.1
	baz=131,slow=14,SNR=5.5						
ESK	**Eskdalemuir**	15.48	318	*e*Pn	Pn	13 02 08.7	+0.2
	comp=Z,11nm,0.8s						
ESK	**Eskdalemuir**	15.48	318	*e*P	Pn	13 02 08.7	+0.2
ESK				pmax	pmax		
	comp=Z,11nm,0.8s						
NB2	**NORSAR Subarra**	16.18	353	P	P	13 02 20.2	-0.3
	comp=Z,6.2nm,1.2s,baz=170,slow=11						
NB200	**NORSAR Array S**	16.18	353	*e*Pn	Pn	13 02 16.6	-0.9
NOA	**NORSAR Array B**	16.18	353	Pn	Pn	13 02 16.6	-0.9
	comp=Z,0.0nm,0.3s,baz=168,slow=11,SNR=2.8						
NOA				LR	LR	13 09 09.0	
	comp=Z,137nm,20.2s,baz=165,slow=40						
NB201	**NORSAR Array S**	16.18	354	*e*Pn	Pn	13 02 16.6	-0.9
	comp=Z,137nm,1.9s						
NBO00	**NORSAR Array S**	16.21	353	*e*Pn	Pn	13 02 16.9	-0.9
	comp=Z,69nm,1.8s						
NC405	**NORSAR Array S**	16.21	354	*e*Pn	Pn	13 02 17.0	-0.9
	comp=Z,67nm,1.8s						
NC204	**NORSAR Array S**	16.45	353	*e*Pn	Pn	13 02 21.2	+0.3
	comp=Z,102nm,2.0s						
CSS	**Mathiatis**	17.27	119	*e*Pn	Pn	13 02 29.0	-2.4
	comp=Z,23nm,1.1s						
FIA0	**FINESS Array S**	17.68	18	*e*P	Pn	13 02 36.1	-0.2
FIA0	**FINESS Array S**	17.68	18	*e*P	Pn	13 02 36.1	-0.2
FINES	**FINESS Array B**	17.68	18	P	Pn	13 02 36.1	-0.2
	comp=Z,0.4nm,0.3s,baz=205,slow=7.9,SNR=13						
FINES				LR	LR	13 09 56.6	
	comp=Z,191nm,18.8s,baz=206,slow=39						
FIA1	**FINESS Array S**	17.68	18	*e*P	Pn	13 02 36.1	-0.2
	comp=Z,41nm,1.6s						
MDT	**Midelt**	19.45	238	LR	LR	13 10 33.3	
	comp=Z,66nm,18.2s,baz=66,slow=37						
KIV	**Kislovodsk**	19.78	83	*e*P	Pn	13 03 02.0	+0.1
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
KIV				MLR	MLR		
	comp=Z,71nm,14.0s						
SHA1	**Shidzhatmaz**	19.80	84	*e*P	Pn	13 03 02.2	-0.2
MMAI	**Mount Meron Ar**	19.85	120	P	P	13 03 01.6	+0.4
	comp=Z,2.3nm,0.3s,baz=338,slow=13,SNR=5.4						
MMAI				LR	LR	13 11 30.0	
	comp=Z,112nm,19.5s,baz=260,slow=40						
NEY	**Neytrino**	19.97	85	⇓*e*P	Pn	13 03 05.0	+0.7
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KBZ	**Khabaz**	19.98	84	P	P	13 03 02.5	+0.2
	comp=Z,0.3nm,0.3s,baz=300,slow=8.1,SNR=3.4						
KBZ				LR	LR	13 13 46.6	
	comp=Z,50nm,18.4s,baz=288,slow=46						
JOF	**Joensuu**	20.21	22	P	P	13 03 05.5	+0.7
JOF				pmax	pmax		

	comp=Z,8.0nm,1.2s						
MMLI	Mount Malkishu	20.26	121	P	P	13 03 03.4	-2.2
AKH	Akhalkalaki	21.06	90	eP	P	13 03 12.1	-2.2
	comp=Z,22nm,1.1s						
AKH	Akhalkalaki	21.06	90	eP	P	13 03 12.1	-2.2
AKH				pmax	pmax		
	comp=Z,22nm,1.1s						
ASF	Jabal al Asfar	21.34	119	P	P	13 03 17.5	+0.1
	comp=Z,1.9nm,0.6s,baz=274,slow=2.3,SNR=3.0						
KLMR	Klimovskoe	21.47	34	eP	P	13 03 17.6	-0.7
KLMR				pmax	pmax		
	comp=Z,13nm,1.1s						
EIL	Elat	22.00	127	P	P	13 03 24.4	+0.1
	comp=Z,1.8nm,0.4s,baz=248,slow=19,SNR=2.9						
EIL				LR	LR	13 14 00.4	
	comp=Z,70nm,18.6s,baz=248,slow=42						
MSF	Maaselka	22.28	15	P	P	13 03 28.6	+1.6
MSF				pmax	pmax		
	comp=Z,7.0nm,0.4s						
GNI	Garni	22.39	92	⇑eP	P	13 03 31.3	+2.6
PRGR	Permogore	24.38	36	eP	P	13 03 47.6	-0.3
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KIRV	Kirov	24.91	45	P	P	13 03 52.1	-0.6
	comp=Z,7.9nm,0.5s,baz=142,slow=24,SNR=3.9						
KIRV				LR	LR	13 14 43.1	
	comp=Z,172nm,18.2s,baz=195,slow=39						
LVZ	Lovozero	25.12	17	⇑eP	P	13 03 54.5	-0.1
LVZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARA0	ARCESS Array S	25.13	9	eP	P	13 03 53.5	-1.2
ARCES	ARCESS Array B	25.13	9	P	P	13 03 53.5	-1.2
	comp=Z,0.9nm,0.5s,baz=191,slow=10,SNR=12						
ARCES				LR	LR	13 15 17.4	
	comp=Z,54nm,18.8s,baz=154,slow=40						
ARE0	ARCESS Array S	25.13	9	eP	P	13 03 55.7	+1.1
	comp=Z,2.4nm,1.9s						
BORG	Borgarnes	28.09	327	LR	LR	13 16 37.0	
	comp=Z,85nm,19.1s,baz=136,slow=39						
AKTO	Aktyubinsk	29.14	64	LR	LR	13 16 37.2	
	comp=Z,49nm,19.5s,baz=279,slow=38						
ARU	Arti	29.35	51	P	P	13 04 31.4	-1.3
	comp=Z,2.1nm,0.3s,baz=266,slow=14,SNR=11						
ARU				LR	LR	13 16 41.8	
	comp=Z,110nm,18.4s,baz=262,slow=37						
ARU	Arti	29.35	51	eP	P	13 04 31.6	-1.0
	comp=Z,11nm,1.3s						
ARU	Arti	29.35	51	c iP	P	13 04 32.3	-0.3
ARU						13 07 37.9	
ARU				S	S	13 09 24.9	+0.3
ARU				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ARU				MLR	MLR		
	comp=Z,98nm,14.0s						
ABKAR	Akbulak array	30.53	66	eP	P	13 04 43.2	0.0
	comp=Z,2.6nm,1.1s						
TOA1	Torodi Ar. Sit	33.73	204	eP	P	13 05 11.6	+0.1
TORD	Torodi Ar. Bea	33.74	204	P	P	13 05 11.6	+0.1
	comp=Z,0.4nm,0.4s,baz=15,slow=8.7,SNR=5.1						
BRVK	Borovoye	36.32	57	eP	P	13 05 33.8	+0.3
	comp=Z,13nm,1.0s						
BRVK	Borovoye	36.32	57	c iP	P	13 05 34.4	+0.9
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s						
SUMG	Summit	36.89	336	eP	P	13 05 39.0	+0.4
	comp=Z,4.5nm,1.0s						
SUMG	Summit	36.89	336	eP	P	13 05 39.0	+0.4
SUMG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OTUK	Ortayu	38.74	64	P	P	13 05 54.8	+0.7
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	41.90	59	eP	P	13 06 20.2	+0.1
	comp=Z,13nm,1.4s						
KURK	Kurchatov	41.90	59	c iP	P	13 06 20.2	+0.1
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZAA1	Zalesovo Array	44.51	52	eP	P	13 06 40.6	-0.6
ZALV	Zalesovo Beam	44.51	52	P	P	13 06 40.6	-0.6
	comp=Z,1.3nm,0.6s,baz=266,slow=8.4,SNR=4.9						
MK31	Makanchi Array	45.56	63	eP	P	13 06 50.6	+0.9
	comp=Z,1.9nm,0.8s						
MK31	Makanchi Array	45.56	63	eP	P	13 06 50.6	+0.9
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK32	Makanchi Array	45.56	63	eP	P	13 06 49.4	-0.2
MKAR	Makanchi Array	45.56	63	P	P	13 06 49.4	-0.2
	comp=Z,2.2nm,0.7s,baz=280,slow=7.1,SNR=12						
MKAR	Makanchi Array	45.56	63	ceP	P	13 06 50.0	+0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DGZ	Jazzator, Alta	47.55	57	d iP	P	13 07 06.5	+1.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SCHQ	Schefferville	50.67	312	P	P	13 07 29.1	+0.1
	comp=Z,4.1nm,0.6s,baz=62,slow=11,SNR=4.0						
SCHQ	Schefferville	50.67	312	eP	P	13 07 29.4	+0.4
	comp=Z,25nm,1.8s						
BOD	Bodaibo	57.58	39	eP	P	13 08 26.5	+7.2
BOD				pmax	pmax		
	comp=Z,15nm,1.7s						
SONA0	Songino Array	59.39	51	eP	P	13 08 32.8	+0.5
SONM	Songino Array	59.39	51	P	P	13 08 32.7	+0.5
	comp=Z,1.3nm,0.6s,baz=293,slow=8.0,SNR=7.3						
SONM	Songino Array	59.39	51	P	P	13 08 32.7	+0.5
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YAK	Yakutsk	61.17	29	eP	P	13 08 44.6	+0.6
YAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC	Hu-ho-hao-te	66.57	55	P	P	13 09 21.5	+1.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,12nm,5.7s						
ULM	Lac du Bonnet	67.74	320	P	P	13 09 27.4	+0.3
	comp=Z,1.2nm,0.3s,baz=45,slow=8.6,SNR=2.9						
ILAR	Eielson Array	69.61	352	P	P	13 09 39.1	+0.6
	comp=Z,0.2nm,0.5s,baz=7.8,slow=7.7,SNR=4.3						
ILB	Eielson Array	69.61	352	eP	P	13 09 39.1	+0.6
	comp=Z,10nm,2.0s						
MDP	Montagnes des	70.65	257	LR	LR	13 39 44.3	
	comp=Z,70nm,18.2s,baz=332,slow=35						
BOSA	Boshof	73.90	171	P	P	13 10 05.8	+1.0
	comp=Z,1.9nm,0.8s,baz=337,slow=4.9,SNR=3.0						
PD31	Pinedale Array	79.55	322	eP	P	13 10 37.7	+0.7
	comp=Z,1.0nm,1.1s						
PDAR	Pinedale Array	79.55	322	P	P	13 10 37.7	+0.7
	comp=Z,0.4nm,0.7s,baz=46,slow=4.3,SNR=3.7						
BMO	Blue Mountains	80.99	328	eP	P	13 10 45.0	+0.5
	comp=Z,13nm,1.7s						
BMO	Blue Mountains	80.99	328	eP	P	13 10 45.0	+0.5
BMO				pmax	pmax		
	comp=Z,13nm,1.7s						
MJAR	Matsushiro Arr	83.97	43	LR	LR	13 52 46.7	
	comp=Z,72nm,20.9s,baz=130,slow=39						
LTX	Lajitas	87.30	310	eP	P	13 11 18.3	+1.4
LTX	Lajitas	87.30	310	eP	P	13 11 18.3	+1.4
TXAR	Lajitas Array	87.30	310	P	P	13 11 18.3	+1.4
	comp=Z,0.4nm,0.7s,baz=78,slow=6.0,SNR=7.1						

IDC 30 13:27:33.9±2.9**, 3°.34N×124°.12E, h0^{km}, mb4.0**/4**, mb1 4.1**/5**, mb1mx3.7**/29**, mbtmp4.1**/5**, ML3.6**/1**, Error ellipse: s-maj=89.4km s-min=32.7km az=36.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	8.28	120	Pn	Pn	13 29 35.3	0.0
	0.7nm,0.3s,baz=302,slow=9.5,SNR=4.8						
SONM	Songino Array	46.88	344	P	P	13 36 06.0	0.0
	0.4nm,0.5s,baz=169,slow=8.1,SNR=2.8						
MKAR	Makanchi Array	56.41	327	P	P	13 37 17.7	+0.4
	0.9nm,0.4s,baz=132,slow=8.9,SNR=13						
PETK	Petropavlovsk-	56.80	23	P	P	13 37 19.8	0.0
	1.4nm,0.6s,baz=191,slow=3.0,SNR=4.9						
ZALV	Zalesovo Beam	59.78	334	P	P	13 37 39.9	-0.7
	2.4nm,0.4s,baz=138,slow=5.3,SNR=8.4						

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*GCG **30** 13:29:56.2±0.7, 16°.11N×93°.18W, h19^{km}±999^{km}, MD5.1*

*GCMT **30** 13:29:57.8±0.2, 15°.75N±0°.01×93°.21W±0°.01, h98^{km}±1^{km}, MW5.3/106, Moment Tensor Solution. s78,c114; s106,c191; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.30±.02; M$_{\theta\theta}$-0.00±.03; M$_{\phi\phi}$0.30±.03; M$_{r\theta}$0.66±.01; M$_{\theta\phi}$-0.57±.02; M$_{\phi r}$-0.64±.01; Best double couple: M$_0$1.06200×10^{17} NP1:φ$_s$309.00000°, δ76.00000°, λ-103.00000°. NP2:φ$_s$173.00000°, δ19.00000°, λ-48.00000°. Principal axes: T 1.2670, Plg30.0000°, Azm50.0000°; N -0.4120, Plg12.0000°, Azm312.0000°; P -0.8560, Plg57.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **30** 13:29:57.5±0.0, 15°.80N×92°.80W, h100^{km}, mB5.0/11*

*MOS **30** 13:29:58.4±1.1, 15°.88N×92°.81W, h117^{km}, mb5.4/57, Error ellipse: s-maj=8.1km s-min=4.1km az=109.9*

*MEX **30** 13:29:58.9±0.8, 15°.61N×93°.33W, h94^{km}±9^{km}, MD5.4*

*NEIC **30** 13:29:59.8±2.1, 15°.83N×92°.84W, h122^{km}±3^{km}, mb5.4/357, MD5.4(MEX), Error ellipse: s-maj=12.0km s-min=7.8km az=223.0*

NEIC Felt [IV] at Tuxtla Gutierrez. Also felt at Cunduacan, Mexico, Pijijiapan and San Cristobal de Las Casas. Felt at Flores and San Miguel Ixtahuacan, Guatemala.

*IDC **30** 13:29:59.2±0.4, 15°.95N×92°.65W, h110^{km}±3^{km}, mb4.6/31, mb1 4.7/32, mb1mx4.6/38, mbtmp4.9/32, MS3.9/15, Ms1 3.9/15, ms1mx3.8/25, Error ellipse: s-maj=14.1km s-min=6.8km az=57.0*

*ISCJB **30** 13:30:01.2±0.3, 15°.84N±0°.02×92°.81W±0°.02, h152^{km}±2^{km}, mb5.2/305, Error ellipse: s-maj=3.1km s-min=2.1km az=141.4*

*SNET **30** 13:30:15.4±1.0, 15°.51N×91°.73W, h14^{km}±210^{km}, ML4.0*

ISC 30 13:29:58.0±0.3**, 15°.77N**±0°.04×**93°.10W**±0°.04**, h112^{km}**±2^{km}**, h112^{km}:pP-P, n1224, σ1^{s}53**/1298**, mb5.3**/320**, 15C-6D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGBT	Tuxtla Gutierr	1.00	1	eP	Pn	13 30 20.0	+0.5
TGBT				eS	Sn	13 30 36.2	+0.6
TGIG		1.01	359	eP	Pn	13 30 20.1	+0.6
TGIG				eS	Sn	13 30 35.7	-0.1
CCIG	Comitan	1.06	61	eP	Pn	13 30 21.6	+1.4
CCIG				i S	Sn	13 30 39.3	+2.4
THIG		1.17	137	eP	Pn	13 30 21.0	-0.2
THIG				eS	Sn	13 30 38.1	-0.6
STG3	Santiaguito 3,	1.81	125	eP	Pn	13 30 30.1	+1.2
ERG	Entre ros, C	1.98	132	eP	Pn	13 30 32.8	+1.9
CMIG	Matias Romero	2.16	308	P	Pn	13 30 33.3	+0.2
	404nm,0.3s,baz=128,slow=9.6,SNR=3647						
CMIG				S	Sn	13 30 57.1	-2.9
	5μm,0.3s,baz=277,slow=17,SNR=37						
CMIG	Matias Romero	2.16	308	eP	Pn	13 30 32.1	-1.1
CMIG				i S	Sn	13 30 56.8	-3.3
FUG	Fuego 3	2.54	121	eP	Pn	13 30 40.3	+2.0
TUIG	Tuzandepetl	2.59	331	eP	Pn	13 30 38.2	-0.4
TUIG				i S	Sn	13 31 10.2	+0.3
APG	El Apazote	2.65	106	P	Pn	13 30 41.7	+1.9
	174nm,0.3s,baz=308,slow=12,SNR=266						
APG				S	Sn	13 31 13.2	+1.4
	2μm,0.3s,baz=76,slow=22,SNR=57						
APG				LR	LR	13 31 32.2	
	comp=Z,15μm,20.6s,baz=51,slow=40						
HUIG	Huatulco	2.90	270	i P	Pn	13 30 39.3	-3.4
HUIG				eS	Sn	13 31 09.9	-7.2
NBG	Las Nubes	2.91	113	eP	Pn	13 30 45.7	+2.6
MRL	Marmol	3.37	101	eP	Pn	13 30 49.4	+0.3
MRL	Marmol	3.37	101	eP	Pn	13 30 50.6	+1.5
VHO	Vista Hermosa	3.72	291	eP	Pn	13 30 51.1	-2.7
VHO				eS	Sn	13 31 33.0	-4.0
RTR	El Retiro	3.82	119	eP	Pn	13 30 57.9	+2.6
MTO3	Montecristo	3.86	110	eP	Pn	13 30 56.1	+0.3
MTO3				eS	Sn	13 31 29.0	-11
SNJE	San Jose	3.87	119	eP	Pn	13 30 57.9	+2.1
CEVE	Cerro Verde	3.88	119	eP	Pn	13 30 58.6	+2.7
PMON	Piamonte	4.19	119	eP	Pn	13 31 01.5	+1.4
SNET	Serv Nac Est T	4.28	118	eP	Pn	13 31 03.6	+2.3
SNET				IAML		13 31 42.3	
	comp=Z,441nm,0.4s						
LFU	La Fuente	4.35	117	eP	Pn	13 31 03.9	+1.7
PAVA	Las Pavas	4.51	116	eP	Pn	13 31 06.2	+1.7
PAVA				IAML		13 31 49.1	
	comp=Z,448nm,0.6s						
VICT	Victoria	4.67	112	eP	Pn	13 31 08.1	+1.5
PACA	Pacayal	5.16	116	eP	Pn	13 31 15.0	+1.9
LCND	La Caada	5.61	115	eP	Pn	13 31 20.2	+1.2
TGUH	Tegucigalpa,Un	5.88	106	ePn	Pn	13 31 23.4	+0.5
TGUH	Tegucigalpa,Un	5.88	106	eP	Pn	13 31 24.2	+1.2
TEIG	Tepich	6.38	45	P	Pn	13 31 29.8	+0.2
	comp=Z,357nm,0.3s,baz=156,slow=1.0,SNR=797						
TEIG				S	Sn	13 32 40.2	-0.9
	comp=Z,422nm,0.3s,baz=317,slow=23,SNR=14						
TEIG				LR	LR	13 33 19.9	
	comp=Z,1μm,21.9s,baz=196,slow=34						
CAIG	El Cayaco	7.00	281	eP	Pn	13 31 36.0	-1.9
CAIG				i S	Sn	13 32 50.3	-5.7
ESTN	Estel	7.04	111	ePn	Pn	13 31 38.9	+0.3
RCON	San Juan de Ri	7.09	108	eP	Pn	13 31 40.5	+1.1
MATN	Matagalpa	7.50	111	eP	Pn	13 31 46.2	+1.4
ACON	Acoyapa	8.57	115	ePn	Pn	13 31 59.6	+0.3
ACON	Acoyapa	8.57	115	eP	Pn	13 32 01.0	+1.7
ACON	Acoyapa	8.57	115	eP	Pn	13 32 00.5	+1.1
BUEV	Buena Vista	8.97	122	eP	Pn	13 32 06.2	+1.4
BUEV	Buena Vista	8.97	122	eP	Pn	13 32 05.0	+0.3
ESPN	Las Esperanzas	9.25	111	ePn	Pn	13 32 08.8	+0.3
JTS	Las Juntas de	9.62	123	P	Pn	13 32 14.2	+0.6
	comp=Z,15nm,0.3s,baz=35,slow=7.7,SNR=32						
JTS				S	Sn	13 33 59.9	0.0
	comp=Z,3.2nm,0.3s,baz=300,slow=20,SNR=3.2						
JTS	Las Juntas de	9.62	123	ePn	Pn	13 32 12.8	-0.8
JTS				eSn	Sn	13 33 59.9	0.0
JTS	Las Juntas de	9.62	123	eP	Pn	13 32 12.8	-0.8
JTS				e		13 33 59.9	
JTS	Las Juntas de	9.62	123	eP	Pn	13 32 13.3	-0.3
JTS	Las Juntas de	9.62	123	eP	Pn	13 32 13.5	-0.1
CEDE	Laguna Cedeo	9.72	122	eP	Pn	13 32 15.7	+0.8
CEDE	Laguna Cedeo	9.72	122	eP	Pn	13 32 14.9	0.0
ARE1	Arenal 1	9.72	122	eP	Pn	13 32 16.4	+1.5
ARE1	Arenal 1	9.72	122	eP	Pn	13 32 15.6	+0.7
LCR2	La Lucha 2	10.70	123	eP	Pn	13 32 28.4	0.0
LCR2	La Lucha 2	10.70	123	eP	Pn	13 32 28.3	-0.1
CVTR	Volcan Turrial	10.75	121	eP	Pn	13 32 29.4	+0.3
CVTR	Volcan Turrial	10.75	121	eP	Pn	13 32 29.2	0.0
FSCY	Frank Sound, G	11.90	71	ePn	Pn	13 32 42.7	-1.4
BRU2	Volcan	12.30	123	eP	Pn	13 32 48.9	-0.8
CBCY	The Bluff, Cay	13.31	71	ePn	Pn	13 33 01.3	-1.3
833A	Chaparral WMA,	13.79	336	P	Pn	13 33 09.5	+0.8
	baz=153,SNR=33						
HKT	Hockley	14.34	350	ePn	Pn	13 33 16.9	+1.2
HKT	Hockley	14.34	350	eP	Pn	13 33 16.9	+1.2
062Z	Marathon	14.39	50	P	Pn	13 33 15.8	-0.7
	baz=233						
BCIP	Isla Barro Col	14.51	115	ePn	Pn	13 33 16.9	-1.2
BCIP	Isla Barro Col	14.51	115	eP	Pn	13 33 16.9	-1.2
MCJ	Malvern	14.91	80	i P	P	13 33 28.1	+2.1
CVJ	Coleyville	15.09	78	i P	P	13 33 30.8	+2.7
MTDJ	Mount Denham	15.09	78	ePn	Pn	13 33 23.0	-2.5
059Z	Ave Maria	15.12	44	P	Pn	13 33 25.7	0.0
	baz=228,SNR=23						
061Z	Ochoppi	15.19	47	P	P	13 33 26.9	-2.1
	baz=230,SNR=31						
BBJ	Bamboo Saint A	15.36	78	i P	P	13 33 31.0	0.0
058A	Arcadia	15.38	41	P	P	13 33 29.7	-1.4
	baz=225,SNR=54						
435B	Jarrell	15.50	345	P	P	13 33 32.1	-0.4
	baz=163,SNR=12						
957A	Wimauma	15.55	39	eP	P	13 33 32.7	-0.3
	comp=Z,1μm,1.2s						
957A	Wimauma	15.55	39	P	P	13 33 32.9	-0.1
	baz=222,SNR=20						
059A	Moore Haven	15.74	43	eP	P	13 33 35.2	+0.1
	comp=Z,1μm,1.1s						
059A	Moore Haven	15.74	43	P	P	13 33 35.3	+0.1
	baz=227,SNR=36						
STH	Stony Hill	15.76	79	⇑iP	P	13 33 35.7	+0.3
060Z	West Palm Beac	15.77	46	P	P	13 33 34.8	-0.7
	baz=230,SNR=18						
958A	Wauchula	15.78	40	P	P	13 33 35.0	-0.5
	baz=223,SNR=14						
449A	Pace	15.87	19	P	P	13 33 37.3	+0.8
	baz=200,SNR=9.9						
JCT	Junction City	15.88	338	eP	P	13 33 37.4	+0.7
	comp=Z,192nm,1.1s						
JCT	Junction City	15.88	338	eP	P	13 33 37.4	+0.7
JCT				pmax	pmax		
	comp=Z,193nm,1.1s						
JCT	Junction City	15.88	338	P	P	13 33 37.0	+0.3
	baz=155,SNR=19						
NATX	Nacogdoches	15.99	355	eP	P	13 33 38.0	+0.2
	comp=Z,522nm,1.6s						
NATX	Nacogdoches	15.99	355	P	P	13 33 38.6	+0.8
	baz=174						
552A	Lynn Haven	15.99	25	P	P	13 33 37.1	-0.8
	baz=208						
450A	Crestview	16.11	21	P	P	13 33 40.8	+1.6
	baz=202						
CMJ	Castle Mountai	16.18	79	⇑iP	P	13 33 43.4	+3.3
451A	Vernon	16.25	23	eP	Pn	13 33 38.8	-0.9
	comp=Z,881nm,1.3s						
451A	Vernon	16.25	23	P	P	13 33 41.1	+0.4
	baz=205,SNR=19						
959A	Okeechobee	16.29	42	P	P	13 33 40.8	-0.4
	baz=226,SNR=11						
BRAL	Brewton	16.30	19	eP	P	13 33 41.0	-0.3
	comp=Z,694nm,1.0s						
BRAL	Brewton	16.30	19	P	P	13 33 43.0	+1.7
	baz=200,SNR=28						
060A	Indiantown	16.31	44	P	P	13 33 40.5	-0.9
	baz=228						
DWPF	Disney Wildern	16.36	39	eP	Pn	13 33 40.5	-0.6
	comp=Z,744nm,0.9s						
DWPF	Disney Wildern	16.36	39	P	P	13 33 42.8	+0.9
	baz=223						
655A	Horseshoe Beac	16.41	32	P	P	13 33 42.8	+0.3
	baz=215,SNR=42						
553A	Crawfordville	16.41	28	P	P	13 33 43.3	+0.7
	baz=210,SNR=76						
349A	Repton	16.43	18	P	P	13 33 44.5	+1.8
	baz=200,SNR=63						
858A	St. Cloud	16.47	39	P	P	13 33 44.9	+1.7
	baz=223,SNR=11						
VBMS	Vicksburg	16.55	8	eP	P	13 33 44.4	+0.5
	comp=Z,265nm,0.9s						
VBMS	Vicksburg	16.55	8	P	P	13 33 45.3	+1.3
	baz=188,SNR=16						
757A	Oxford	16.60	36	P	P	13 33 46.0	+1.4
	baz=219,SNR=21						
WHTX	Lake Whitney,	16.63	347	eP	P	13 33 46.7	+1.8
	comp=Z,113nm,0.8s						
WHTX	Lake Whitney,	16.63	347	P	P	13 33 46.2	+1.2
	baz=164						
TXAR	Lajitas Array	16.64	326	P	P	13 33 47.9	+2.7
	comp=Z,1.7nm,0.3s,baz=152,slow=12,SNR=162						
TXAR				ScP	ScP	13 41 56.5	+3.9
	baz=165,slow=5.2,SNR=4.6						
TXAR				LR	LR	13 41 59.3	
	comp=Z,100nm,18.0s,baz=0.0,slow=43						
TX31	Lajitas Ar. Si	16.65	326	eP	P	13 33 47.3	+2.1
554A	Perry	16.67	30	P	P	13 33 46.6	+1.3
	baz=212,SNR=57						
452A	Marianna	16.67	24	P	P	13 33 47.5	+2.2
	baz=207,SNR=46						
656A	Willston	16.67	34	P	P	13 33 46.5	+1.1
	baz=217,SNR=38						
350A	Dozier	16.76	20	P	P	13 33 48.3	+1.9
	baz=202						
249A	Camden	17.03	18	P	P	13 33 51.6	+2.3
	baz=199						
453A	Whigham	17.03	27	eP	Pn	13 33 48.7	-0.6
	comp=Z,428nm,0.9s						
453A	Whigham	17.03	27	P	P	13 33 51.7	+2.4
	baz=209,SNR=49						
555A	McAlpin	17.05	31	eP	P	13 33 49.1	-0.5
	comp=Z,524nm,1.1s						
555A	McAlpin	17.05	31	P	P	13 33 51.5	+2.0
	baz=215,SNR=30						
758A	Lake Helen	17.12	38	P	Pn	13 33 51.7	+1.3
	baz=222,SNR=32						
657A	Interlachen	17.20	35	P	Pn	13 33 53.4	+2.0
	baz=219,SNR=15						
454A	Quitman	17.22	29	P	Pn	13 33 54.0	+2.4
	baz=212						
556A	Lake Butler	17.24	33	P	Pn	13 33 53.7	+1.9
	baz=216,SNR=73						
250A	Grady	17.30	20	eP	P	13 33 50.5	-1.8
	comp=Z,191nm,1.0s						
250A	Grady	17.30	20	P	Pn	13 33 53.6	+1.1
	baz=202						
352A	Blakely	17.33	24	P	Pn	13 33 54.8	+1.8
	baz=207,SNR=33						
Z41A	Richland Creek	17.42	1	P	Pn	13 33 55.9	+1.9
	baz=180,SNR=16						
658A	Bunnell	17.42	37	eP	P	13 33 53.1	-0.6
	comp=Z,217nm,0.7s						
658A	Bunnell	17.42	37	P	Pn	13 33 55.4	+1.3
	baz=221,SNR=14						
353A	Camilla	17.50	26	P	Pn	13 33 56.5	+1.5
	baz=209,SNR=33						
455A	Stateville	17.53	30	P	Pn	13 33 55.8	+0.4
	baz=213,SNR=36						
148A	Greensboro	17.54	16	P	Pn	13 33 57.0	+1.5
	baz=197,SNR=21						
557A	Orange Park	17.61	34	P	Pn	13 33 57.3	+0.9
	baz=218						
GTBY	Guantanamo Bay	17.62	74	eP	Pn	13 33 56.7	+0.2
	comp=Z,486nm,0.9s						
251A	Midway	17.70	22	P	Pn	13 33 58.4	+1.0
	baz=204,SNR=36						
149A	Jones	17.71	18	P	Pn	13 33 58.7	+1.2
	baz=200,SNR=59						
ABTX	Abilene, Hawle	17.80	342	eP	Pn	13 33 59.7	+1.0
	comp=Z,248nm,1.1s						
ABTX	Abilene, Hawle	17.80	342	P	Pn	13 34 00.4	+1.7
	baz=158						
WLAR	White Oak Lake	17.84	360	eP	P	13 33 58.2	0.0
	comp=Z,351nm,0.9s						
TIGA	Tifton	17.85	27	P	Pn	13 34 00.6	+1.3
	baz=210,SNR=21						
252A	Lumpkin	17.86	24	P	Pn	13 33 59.9	+0.5
	baz=206						
150A	Eclectic	17.96	20	P	Pn	13 34 01.5	+1.1
	baz=202,SNR=158						
456A	Hilliard	18.02	32	P	Pn	13 34 01.9	+0.7
	baz=216						
LRAL	Lakeview Retre	18.06	17	eP	P	13 34 00.1	-0.5
	comp=Z,140nm,1.1s						
LRAL	Lakeview Retre	18.06	17	P	Pn	13 34 02.5	+0.8
	baz=198,SNR=63						
355A	Pearson	18.11	29	P	Pn	13 34 02.9	+0.5
	baz=213						
CCAR	Cane Creek	18.11	4	eP	Pn	13 34 01.7	-0.6
	comp=Z,1μm,1.7s						
151A	Opelika	18.12	22	P	Pn	13 34 02.6	+0.1
	baz=204						
253A	Americus	18.16	25	eP	Pn	13 34 02.7	-0.3
	comp=Z,310nm,1.0s						
253A	Americus	18.16	25	P	Pn	13 34 03.7	+0.8
	baz=208						
457A	Yulee	18.18	34	P	Pn	13 34 03.5	+0.4
	baz=218						
Z49A	Columbiana	18.34	18	P	Pn	13 34 05.6	+0.5
	baz=200,SNR=170						
SJCC	San Jacinto, C	18.42	106	eP	P	13 34 04.1	-0.7
254A	Abbeville	18.42	27	P	Pn	13 34 06.3	+0.3
	baz=211,SNR=167						
356A	Blackshear	18.45	31	P	Pn	13 34 06.7	+0.3
	baz=215,SNR=12						
152A	Waverly Hall	18.47	23	P	Pn	13 34 06.8	+0.2
	baz=206,SNR=75						
Z50A	Ashland	18.59	19	eP	Pn	13 34 07.6	-0.4
	comp=Z,676nm,1.5s						
Z50A	Ashland	18.59	19	P	Pn	13 34 08.1	+0.1
	baz=201,SNR=135						
X40A	Basin Creek Fa	18.64	1	P	Pn	13 34 08.6	0.0
	baz=180,SNR=35						
MIAR	Mount Ida	18.70	359	eP	Pn	13 34 09.2	-0.2
	comp=Z,218nm,0.8s						
MIAR	Mount Ida	18.70	359	eP	Pn	13 34 09.2	-0.2
MIAR				pmax	pmax		
	comp=Z,218nm,0.8s						
MIAR	Mount Ida	18.70	359	P	Pn	13 34 09.4	+0.1
	baz=178,SNR=185						
255A	Hazlehurst	18.77	29	P	P	13 34 08.6	+0.1
	baz=213,SNR=24						
X43A	Marvell	18.78	6	P	Pn	13 34 09.9	-0.3
	baz=186,SNR=18						
153A	Fort Valley	18.80	25	P	Pn	13 34 09.6	-0.8
	baz=208						
Y48A	Jasper	18.84	15	P	Pn	13 34 10.5	-0.5
	baz=197,SNR=34						
357A	Townsend	18.85	32	P	Pn	13 34 10.9	-0.1
	baz=216,SNR=6.5						
Z51A	Franklin	18.89	21	P	Pn	13 34 10.8	-0.7

	baz=204,SNR=8.8						
SMRC	Santa Marta, M	18.91	102	*e*P	P	13 34 09.5	-0.7
UALR	University of	18.94	2	*e*P	Pn	13 34 11.5	-0.7
	comp=Z,206nm,0.8s						
OXF	Oxford	18.96	9	*e*P	P	13 34 10.8	+0.3
	comp=Z,476nm,1.1s						
OXF	Oxford	18.96	9	*e*P	P	13 34 10.8	+0.3
OXF				pmax	pmax		
	comp=Z,476nm,1.1s						
OXF	Oxford	18.96	9	P	Pn	13 34 11.3	-1.1
	baz=190,SNR=32						
Y49A	Blount Mountai	19.00	17	*e*P	Pn	13 34 11.6	-1.3
	comp=Z,86nm,0.9s						
Y49A	Blount Mountai	19.00	17	P	Pn	13 34 12.3	-0.5
	baz=199,SNR=34						
Z52A	Williamson	19.05	23	P	Pn	13 34 13.1	-0.3
	baz=206,SNR=81						
154A	Montrose	19.07	27	*e*P	P	13 34 11.0	-0.6
	comp=Z,651nm,1.1s						
154A	Montrose	19.07	27	P	Pn	13 34 12.9	-0.7
	baz=210,SNR=15						
256A	Glennville	19.10	30	P	Pn	13 34 13.4	-0.7
	baz=214						
CLNB	Carlsbad	19.13	331	*e*P	Pn	13 34 14.5	0.0
X46A	Booneville	19.15	11	P	Pn	13 34 13.4	-1.2
	baz=193,SNR=26						
Y50A	Piedmont	19.23	19	P	Pn	13 34 14.7	-0.9
	baz=201,SNR=30						
GDL2	Guadalupe Moun	19.30	330	*e*P	Pn	13 34 17.0	+0.5
W39A	Magazine	19.36	358	P	Pn	13 34 16.5	-0.5
	baz=177,SNR=46						
155A	Kite	19.36	28	P	Pn	13 34 16.4	-0.7
	baz=212,SNR=55						
X48A	Hartselle	19.39	15	P	P	13 34 15.9	+0.7
	baz=197,SNR=68						
Z53A	Monticello	19.45	25	P	Pn	13 34 16.8	-1.3
	baz=208						
WHAR	Wooly Hollow	19.46	2	*e*P	P	13 34 16.8	+0.9
	comp=Z,458nm,1.6s						
Y51A	Rockmart	19.46	20	P	Pn	13 34 17.0	-1.2
	baz=203,SNR=41						
MET	Memphis--Engin	19.48	8	*e*P	P	13 34 16.6	+0.4
	comp=Z,524nm,0.3s						
257A	Skidaway Islan	19.52	32	P	Pn	13 34 17.7	-1.3
	baz=216						
WMOK	Wichita Mounta	19.57	346	*e*P	P	13 34 17.7	+0.6
	comp=Z,58nm,0.7s						
WMOK	Wichita Mounta	19.57	346	*e*P	P	13 34 17.7	+0.6
WMOK				pmax	pmax		
	comp=Z,58nm,0.7s						
WMOK	Wichita Mounta	19.57	346	P	P	13 34 18.1	+0.9
	baz=163,SNR=118						
GOGA	Godfrey	19.61	25	*e*P	Pn	13 34 18.4	-1.6
GOGA	Godfrey	19.61	25	P	Pn	13 34 18.8	-1.2
	baz=208,SNR=128						
PLAL	Pickwick Lake	19.66	12	*e*P	P	13 34 18.0	-0.1
	comp=Z,389nm,1.5s						
HELC	Santa Helena	19.68	117	*e*P	P	13 34 18.8	-0.1
Z54A	Sparta	19.72	26	P	Pn	13 34 19.5	-1.7
	baz=210,SNR=80						
W46A	Michie	19.75	12	P	P	13 34 19.4	+0.4
	baz=193						
Y52A	Lilburn	19.78	23	*e*P	P	13 34 20.0	+0.6
	comp=Z,415nm,0.8s						
Y52A	Lilburn	19.78	23	P	Pn	13 34 20.7	-1.3
	baz=206						
X50B	Fort Payne	19.79	18	P	P	13 34 20.2	+0.7
	baz=201,SNR=69						
HBAR	Harrisburg	19.83	6	*e*P	P	13 34 19.5	-0.3
	comp=Z,279nm,0.5s						
SMLC	San Martn de	19.83	108	*e*P	P	13 34 17.7	-2.4
156A	Sylvania	19.84	30	P	Pn	13 34 21.7	-0.9
	baz=214,SNR=11						
Y53A	Monroe	19.95	24	P	Pn	13 34 22.4	-1.6
	baz=207						
Z55A	Blythe	20.01	28	P	Pn	13 34 23.3	-1.4
	baz=212,SNR=14						
FCAR	Ozark Folk Cen	20.06	2	*e*P	P	13 34 23.4	+1.0
	comp=Z,141nm,0.7s						
157A	Early Branch	20.10	31	P	P	13 34 22.4	-0.5
	baz=215,SNR=15						
MSTX	Muleshoe	20.11	336	*e*P	P	13 34 24.6	+1.5
	comp=Z,198nm,0.6s						
MSTX	Muleshoe	20.11	336	P	P	13 34 24.7	+1.5
	baz=151,SNR=144						
X51A	Calhoun	20.14	20	P	P	13 34 23.3	0.0
	baz=203,SNR=20						
TUL1	Leonard	20.21	354	*e*P	P	13 34 24.2	+0.2
	comp=Z,169nm,0.6s						
TUL1	Leonard	20.21	354	P	P	13 34 24.4	+0.4
	baz=172,SNR=27						
YOTC	Yotoco, Valle	20.21	124	*e*P	P	13 34 24.6	+0.2
W49A	Belvidere	20.22	16	P	P	13 34 24.5	+0.4
	baz=199,SNR=28						
Y54A	Tignall	20.32	26	P	P	13 34 25.7	+0.5
	baz=209,SNR=78						
GUY2C	Guyana, Caldas	20.32	119	*e*P	P	13 34 26.0	+0.1
SWET	Sewanee	20.41	17	*e*P	P	13 34 26.6	+0.4
	comp=Z,105nm,0.9s						
PTBC	PUERTO BERRIO,	20.44	115	*e*P	P	13 34 24.9	-1.8
HHAR	Hobbs	20.45	358	*e*P	P	13 34 27.4	+0.8
	comp=Z,177nm,1.2s						
Z56A	Williston	20.45	29	P	Pn	13 34 27.8	-2.0
	baz=213						
X52A	Dahlonega	20.50	22	P	P	13 34 27.8	+0.6
	baz=205,SNR=28						
U40A	Yellville	20.51	1	P	P	13 34 28.4	+1.2
	baz=180,SNR=162						
RREF	El Recreo	20.51	120	*e*P	Pn	13 34 28.9	-2.4
AMTX	Amarillo	20.54	340	*e*P	P	13 34 29.6	+1.9
	comp=Z,448nm,0.6s						
AMTX	Amarillo	20.54	340	P	P	13 34 29.5	+1.9
	baz=155						
158A	Hollywood	20.56	32	P	P	13 34 28.0	+0.3
	baz=217						
NORC	Norcasia	20.57	118	*e*P	P	13 34 27.3	-0.8
NORC				*e*P	Pn	13 34 27.8	-3.6
W50A	Signal Mountai	20.57	18	P	P	13 34 28.0	0.0
	baz=201,SNR=21						
X53A	Estanollee	20.64	24	P	P	13 34 29.1	+0.5
	baz=207,SNR=5.4						
V48A	Smith Brothers	20.67	15	*e*P	P	13 34 28.9	-0.1
	comp=Z,196nm,1.3s						
V48A	Smith Brothers	20.67	15	P	P	13 34 28.8	-0.1
	baz=197,SNR=21						
W51A	Cleveland	20.71	20	P	P	13 34 29.8	+0.4
	baz=203,SNR=18						
Y55A	Saluda	20.74	27	P	P	13 34 30.3	+0.6
	baz=211,SNR=25						
Z57A	Bowman	20.75	30	P	Pn	13 34 31.2	-2.0
	baz=215,SNR=30						
BBAC	Balboa, Cauca	20.75	130	*e*P	Pn	13 34 32.3	-1.4
CSU	Charleston Sou	20.82	32	*e*P	P	13 34 29.1	-1.4
HODGE	Hodges	20.82	26	*e*P	P	13 34 30.7	+0.1
	comp=Z,140nm,1.0s						
WVT	Waverly	20.82	12	*e*P	P	13 34 29.9	-0.6
	comp=Z,110nm,1.1s						
WVT	Waverly	20.82	12	*e*P	P	13 34 29.9	-0.6
WVT				pmax	pmax		
	comp=Z,110nm,1.1s						
WVT	Waverly	20.82	12	P	P	13 34 30.0	-0.6
	baz=194						
UTMT	University of	20.84	10	*e*P	P	13 34 29.7	-1.0
	comp=Z,197nm,0.6s						
POPC	Popayan, Colom	20.84	127	*e*P	Pn	13 34 32.7	-2.1
NHSC	New Hope	20.86	32	*e*P	P	13 34 32.0	+1.1
	comp=Z,395nm,1.0s						
NHSC	New Hope	20.86	32	P	Pn	13 34 33.0	-1.6
	baz=217,SNR=10						
Y56A	Pelion	20.87	29	P	P	13 34 30.7	-0.4
	baz=213						
V49A	McMinnville	20.93	17	P	P	13 34 31.5	-0.3
	baz=199,SNR=24						
W52A	Murphy	20.93	21	P	P	13 34 32.6	+0.7
	baz=205,SNR=10						
PARMO	Parma	21.03	8	*e*P	P	13 34 32.4	-0.3
	comp=Z,224nm,0.7s						
X54A	Belton	21.04	25	P	P	13 34 33.1	+0.1
	baz=209						
CPCT	Cooper Cave	21.05	20	*e*P	P	13 34 32.2	-0.9
	comp=Z,50nm,0.8s						
SDDR	Presa de Saban	21.06	78	*e*P	P	13 34 31.4	-2.0
	comp=Z,194nm,1.1s						
PBMO	Poplar Bluff	21.06	6	*e*P	P	13 34 33.4	+0.3
	comp=Z,454nm,1.4s						
V50A	Pikevile	21.07	18	P	P	13 34 33.4	+0.1
	baz=201						
CLTN	Cedars of Leba	21.12	15	*e*P	P	13 34 33.4	-0.4
	comp=Z,50nm,1.0s						
ORTC	Ortega, Tolima	21.15	122	*e*P	P	13 34 35.0	+0.6
SPBC	San Pablo de B	21.20	116	*e*P	P	13 34 34.0	-1.0
BG3	Lake Jocassee	21.21	24	*e*P	P	13 34 34.5	-0.3
	comp=Z,215nm,0.9s						
Z58A	St. Stephen	21.22	32	P	P	13 34 36.0	+1.1
	baz=217,SNR=9.3						
W53A	Cullowhee	21.28	23	P	P	13 34 36.1	+0.5
	baz=207,SNR=26						
X55A	Gracelyn & Ava	21.29	27	P	P	13 34 35.8	+0.2
	baz=211,SNR=46						
JSC	Jenkinsville	21.30	28	*e*P	P	13 34 35.0	-0.7
	comp=Z,92nm,0.9s						
JSC	Jenkinsville	21.30	28	*e*P	P	13 34 35.0	-0.7
JSC				pmax	pmax		
	comp=Z,92nm,0.9s						
121A	Cookes Peak, D	21.36	324	P	P	13 34 40.0	+3.4
	baz=137,SNR=67						
ROSC	El Rosal	21.41	118	P	P	13 34 37.1	-0.3
	comp=Z,35nm,0.8s,baz=124,slow=8.9,SNR=14						
ROSC	El Rosal	21.41	118	*e*P	P	13 34 36.1	-1.4
	comp=Z,29nm,0.8s						
ROSC	El Rosal	21.41	118	*e*P	P	13 34 38.4	+0.9
Z59A	Georgetown, SC	21.43	33	P	P	13 34 38.1	+1.0
	baz=218						
V51A	Loudon	21.43	20	P	P	13 34 37.2	0.0
	baz=203,SNR=13						
319A	Douglas	21.44	319	*e*P	P	13 34 39.8	+2.5
	comp=Z,114nm,1.0s						
Y57A	Sumter	21.48	30	P	P	13 34 38.3	+0.6
	baz=215						
TKL	Tuckaleechee C	21.49	21	P	P	13 34 37.1	-0.7
	comp=Z,16nm,0.5s,baz=198,slow=11,SNR=26						
PAULI	Pauline	21.51	26	*e*P	P	13 34 38.1	+0.1
	comp=Z,128nm,0.8s						
PRAC	Prado	21.55	122	*e*P	P	13 34 38.6	0.0
X56A	White Oak	21.58	28	P	P	13 34 39.4	+0.7
	baz=213,SNR=14						
W54A	Cherokee Point	21.59	25	P	P	13 34 40.0	+1.2
	baz=209,SNR=51						
PAMC	Pamplona, Colo	21.65	110	*e*P	P	13 34 38.5	-1.7
U49A	Red Boiling Sp	21.67	16	P	P	13 34 39.2	-0.4
	baz=199,SNR=40						
BETC	Betania	21.71	125	*e*P	P	13 34 43.0	+2.6
V52A	Sevierville	21.72	21	P	P	13 34 40.3	+0.1
	baz=205,SNR=17						
Y58A	Scranton	21.75	31	P	P	13 34 40.9	+0.4
	baz=216						
T47A	Sharon Grove	21.80	13	P	P	13 34 40.5	-0.5
	baz=195,SNR=44						
U50A	Jamestown	21.84	18	P	P	13 34 41.0	-0.6
	baz=201,SNR=35						
V53A	Saluda	21.85	23	P	P	13 34 42.4	+0.7
	baz=207,SNR=26						
RUSC	La Rusia	21.95	114	*e*P	P	13 34 41.7	-1.6
BIRD	Birdtown, Kers	21.96	29	*e*P	P	13 34 43.3	+0.5
	comp=Z,203nm,0.9s						
X57A	Johnson Farm,	21.99	30	P	P	13 34 43.5	+0.5
	baz=215						
BNM	Barren Site	21.99	329	*e*P	P	13 34 46.0	+2.6
KMSC	Kings Mountain	21.99	27	*e*P	P	13 34 43.4	+0.4
	comp=Z,117nm,0.9s						
KMSC	Kings Mountain	21.99	27	P	P	13 34 43.4	+0.4
	baz=211,SNR=20						
U51A	La Follette	22.07	20	P	P	13 34 43.8	0.0
	baz=203,SNR=37						
Y22D	IRIS PASSCAL I	22.08	328	P	P	13 34 46.4	+2.3
	baz=142						
S44A	Carbondale	22.11	8	P	P	13 34 44.0	-0.2
	baz=189,SNR=19						
LPM	Los Pinos Moun	22.12	329	*e*P	P	13 34 47.1	+2.4
SIUC	Southern Illin	22.13	8	*e*P	P	13 34 44.2	-0.2
	comp=Z,372nm,1.3s						
LENM	Lemitar	22.18	328	*e*P	P	13 34 47.5	+2.2
Y59A	Loris	22.22	33	P	P	13 34 45.8	+0.3
	baz=218,SNR=7.4						
FLOC	Florencia	22.24	128	*e*P	P	13 34 47.0	+1.1
FVM	French Village	22.26	6	*e*P	P	13 34 44.6	-1.1
	comp=Z,40nm,0.6s						
FVM	French Village	22.26	6	*e*P	P	13 34 44.7	-1.1
FVM				pmax	pmax		
	comp=Z,40nm,0.6s						
CCM	Cathedral Cave	22.26	4	*e*P	P	13 34 45.1	-0.7
	comp=Z,132nm,0.6s						
CCM	Cathedral Cave	22.26	4	*e*P	P	13 34 45.1	-0.7
CCM				pmax	pmax		
	comp=Z,132nm,0.6s						
CCM	Cathedral Cave	22.26	4	P	P	13 34 45.4	-0.4
	baz=184						
V54A	Nebo	22.28	25	P	P	13 34 46.4	+0.3
	baz=209,SNR=24						
T49A	Edmonton	22.29	16	*e*P	P	13 34 45.1	-1.0
	comp=Z,117nm,1.1s						
T49A	Edmonton	22.29	16	P	P	13 34 45.2	-1.0
	baz=199,SNR=20						
U52A	Thorn Hill	22.30	21	P	P	13 34 45.7	-0.6
	baz=205						
W56A	Indian Trail	22.32	28	P	P	13 34 46.5	+0.1
	baz=213,SNR=18						
TZTN	Tazewell	22.37	21	*e*P	P	13 34 46.7	-0.3
	comp=Z,227nm,1.1s						
TZTN	Tazewell	22.37	21	P	P	13 34 46.8	-0.3
	baz=204,SNR=19						
T50A	Nancy	22.41	18	P	P	13 34 46.4	-1.0
	baz=201,SNR=23						
X58A	Rowland	22.43	31	P	P	13 34 47.7	+0.1
	baz=216						
LAZ	Ladron	22.45	328	*e*P	P	13 34 48.9	+0.8
ANMO	Albuquerque	22.55	330	P	P	13 34 51.3	+2.2
	comp=Z,32nm,0.6s,baz=141,slow=12,SNR=111						
ANMO	Albuquerque	22.55	330	*e*P	P	13 34 50.9	+1.8
	comp=Z,73nm,1.2s						
ANMO	Albuquerque	22.55	330*c*	*i*P	P	13 34 51.2	+2.2
ANMO				pmax	pmax		
	comp=Z,26nm,0.6s						
ANMO	Albuquerque	22.55	330	P	P	13 34 51.1	+2.1
	baz=144						
U53A	Fall Branch	22.56	23	P	P	13 34 48.7	-0.2
	baz=207,SNR=18						
Y60A	Bolivia	22.58	34	P	P	13 34 49.1	0.0
	baz=220						
W57A	Gilead	22.60	29	*e*P	P	13 34 49.1	-0.1
	comp=Z,194nm,1.0s						
W57A	Gilead	22.60	29	P	P	13 34 49.4	+0.2
	baz=214,SNR=12						
T51A	Gray	22.63	19	P	P	13 34 49.2	-0.4
	baz=203,SNR=13						
USIN	University of	22.63	11	*e*P	P	13 34 48.6	-0.9
USIN				*e*pP	pP	13 35 12.3	+0.8
V55A	Taylorsville	22.65	26	P	P	13 34 50.1	+0.3
	baz=210,SNR=28						
X59A	McDuffie Farm,	22.82	32	P	P	13 34 51.3	-0.1
	baz=218,SNR=7.7						
TAMC	Tame, Arauca	22.85	112	*e*P	P	13 34 50.5	-1.6
W58A	Raeford	22.86	30	P	P	13 34 51.4	-0.4
	baz=216,SNR=16						
V56A	Mocksville	22.92	27	P	P	13 34 52.1	-0.4
	baz=212,SNR=14						
SLM	Saint Louis	22.92	6	*e*P	P	13 34 51.7	-0.7
	comp=Z,362nm,0.6s						
SLM	Saint Louis	22.92	6	*e*P	P	13 34 51.7	-0.7
SLM				pmax	pmax		
	comp=Z,362nm,0.6s						
SDV	Santo Domingo	22.98	105	P	P	13 34 52.0	-1.4
	comp=Z,6.2nm,0.3s,baz=313,slow=3.3,SNR=11						
SDV				PcP	PcP	13 38 40.8	+0.9
	comp=Z,12nm,0.6s,baz=302,slow=2.4,SNR=3.5						
SDV	Santo Domingo	22.98	105	*e*P	P	13 34 50.7	-2.7
	comp=Z,227nm,1.4s						
SDV	Santo Domingo	22.98	105	*e*P	P	13 34 51.4	-2.0
U54A	Nelsons Funny	22.98	24	P	P	13 34 53.1	0.0
	baz=208,SNR=16						
S49A	Springfield	23.00	16	P	P	13 34 52.0	-1.1
	baz=199,SNR=27						
TUC	Tucson	23.01	319	*e*P	P	13 34 56.3	+2.8
	comp=Z,210nm,1.4s						
TUC	Tucson	23.01	319	*e*P	P	13 34 56.3	+2.8
TUC				pmax	pmax		
	comp=Z,210nm,1.4s						
TUC	Tucson	23.01	319	P	P	13 34 56.2	+2.8
	baz=131						
T52A	Hallie	23.07	21	*e*P	P	13 34 52.5	-1.4
	comp=Z,128nm,1.0s						
T52A	Hallie	23.07	21	P	P	13 34 53.0	-0.9
	baz=205,SNR=7.3						
T53A	Wise	23.12	22	P	P	13 34 53.9	-0.5
	baz=206,SNR=5.2						
S50A	Richmond	23.14	18	P	P	13 34 53.8	-0.7
	baz=201,SNR=16						
X60A	Albert Glenn T	23.14	33	P	P	13 34 54.2	-0.3
	baz=219,SNR=9.3						
WCI	Wyandotte Cave	23.17	14	*e*P	P	13 34 53.7	-1.0
	comp=Z,157nm,0.9s						
WCI	Wyandotte Cave	23.17	14	*e*P	P	13 34 53.7	-1.0
WCI				pmax	pmax		
	comp=Z,157nm,0.9s						
WCI	Wyandotte Cave	23.17	14	P	P	13 34 53.9	-0.9
	baz=196						
U55A	TA2, Sparta	23.27	25	P	P	13 34 55.5	-0.3
	baz=210,SNR=22						
OLIL	Olney	23.30	10	*e*P	P	13 34 55.0	-1.0
	comp=Z,196nm,0.7s						
V57A	Coltrane Farms	23.30	28	P	P	13 34 55.6	-0.4
	baz=214,SNR=22						
S51A	Beattyville	23.36	19	P	P	13 34 55.7	-0.8
	baz=203,SNR=11						
W59A	Clinton	23.36	32	P	P	13 34 56.3	-0.2
	baz=217						
U56A	King	23.42	27	P	P	13 34 56.9	-0.2
	baz=212,SNR=15						
KSU1	Kansas State U	23.45	353	P	P	13 34 57.4	+0.1
	baz=171,SNR=44						
R49A	Shelbyville	23.50	16	*e*P	P	13 34 56.4	-1.4
	comp=Z,389nm,1.7s						
R49A	Shelbyville	23.50	16	P	P	13 34 56.6	-1.2
	baz=199,SNR=14						
T25A	Trinidad	23.53	337	P	P	13 35 01.3	+2.9
	baz=151,SNR=337						
V58A	Windy Hill, Pi	23.54	29	P	P	13 34 57.9	-0.3
	baz=215,SNR=24						
T54A	Tazewell	23.55	24	P	P	13 34 57.7	-0.6
	baz=208,SNR=8.4						
S52A	Salyersville	23.56	20	P	P	13 34 57.4	-0.9
	baz=204						
W60A	Pink Hill	23.65	33	P	P	13 34 59.5	+0.3
	baz=219,SNR=11						
CBKS	Cedar Bluff	23.69	347	*e*P	P	13 34 59.9	+0.4
	comp=Z,149nm,0.8s						
CBKS	Cedar Bluff	23.69	347	*e*P	P	13 34 59.9	+0.4
CBKS				pmax	pmax		
	comp=Z,149nm,0.8s						
CBKS	Cedar Bluff	23.69	347	P	P	13 35 00.5	+0.9
	baz=163,SNR=46						
CNNC	Cliffs of the	23.70	32	P	P	13 34 59.5	-0.1
	baz=218						
R50A	Paris	23.73	17	P	P	13 34 58.8	-1.1
	baz=201,SNR=10						
PTLC	Puerto Leguiza	23.80	129	*e*P	P	13 35 04.6	+3.8
S53A	Williamson	23.89	22	P	P	13 35 00.2	-1.2
	baz=206						
T55A	Pulaski	23.91	25	P	P	13 35 01.3	-0.2
	baz=210						
V59A	Middlesex	23.94	31	P	P	13 35 01.7	0.0
	baz=217,SNR=19						
U57A	Blanch	23.95	28	P	P	13 35 01.5	-0.4
	baz=214,SNR=26						
R51A	Hillsboro	23.96	19	P	P	13 35 00.8	-1.2
	baz=202,SNR=8.6						
Q48A	North Vernon	23.97	14	P	P	13 35 00.8	-1.2
	baz=197,SNR=11						
P43A	Skaggs, Pawnee	23.99	7	P	P	13 35 01.8	-0.4
	baz=188,SNR=40						
BLO	Bloomington	24.02	13	*e*P	P	13 35 01.3	-1.2
	comp=Z,690nm,2.0s						
BLO	Bloomington	24.02	13	*e*P	P	13 35 01.3	-1.2
BLO				pmax	pmax		
	comp=Z,690nm,2.0s						
X18A	Snowflake	24.05	324	*e*P	P	13 35 04.3	+1.3
	comp=Z,158nm,1.4s						
214A	Organ Pipe Nat	24.11	315	P	P	13 35 04.9	+1.5
	baz=127,SNR=19						
W61A	Ground Anchor	24.13	34	P	P	13 35 02.7	-0.8
	baz=220						
BLA	Blacksburg	24.14	25	*e*P	P	13 35 02.4	-1.2
	comp=Z,108nm,0.9s						
BLA	Blacksburg	24.14	25	*e*P	P	13 35 02.4	-1.2
BLA				pmax	pmax		
	comp=Z,108nm,0.9s						
BLA	Blacksburg	24.14	25	P	P	13 35 02.7	-0.9
	baz=210						
T56A	Rocky Mt	24.15	26	P	P	13 35 03.7	0.0
	baz=212,SNR=14						
Q49A	Aurora	24.25	16	P	P	13 35 03.4	-1.1
	baz=199,SNR=10						
U58A	Oxford	24.29	30	P	P	13 35 04.1	-0.9
	baz=216						
S54A	Dingess, Beckl	24.30	23	P	P	13 35 04.1	-0.9
	baz=208						
R52A	Catlettsburg	24.30	20	P	P	13 35 03.4	-1.6
	baz=204						
P46A	Rosedale	24.32	11	P	P	13 35 04.4	-0.7
	baz=193,SNR=45						
Q50A	Georgetown	24.35	17	P	P	13 35 04.2	-1.2
	baz=201,SNR=12						
W18A	Petrified Fore	24.37	325	*e*P	P	13 35 08.0	+2.2
	comp=Z,50nm,1.0s						
W18A	Petrified Fore	24.37	325	P	P	13 35 08.1	+2.2
	baz=138,SNR=6.6						
V60A	Jim Taylor Roa	24.43	32	P	P	13 35 06.0	-0.2
	baz=219						
T57A	Hurt	24.46	28	*e*P	P	13 35 05.7	-0.8
	comp=Z,69nm,1.1s						
T57A	Hurt	24.46	28	P	P	13 35 06.6	+0.1
	baz=213,SNR=12						
SDCO	Great Sand Dun	24.48	336	*e*P	P	13 35 09.3	+2.2
	comp=Z,103nm,1.2s						
SDCO	Great Sand Dun	24.48	336	P	P	13 35 09.7	+2.6
	baz=150,SNR=167						
R53A	Hurricane	24.53	21	P	P	13 35 06.6	-0.5
	baz=206						
P48A	Milroy	24.54	14	*e*P	P	13 35 05.2	-2.1
	comp=Z,176nm,1.3s						
P48A	Milroy	24.54	14	P	P	13 35 05.8	-1.4
	baz=197,SNR=22						
S55A	Lewisburg	24.59	25	P	P	13 35 06.8	-0.9
	baz=210,SNR=6.5						
KSCO	Kaye Shedlock’	24.62	342	*e*P	P	13 35 08.8	+0.7
	comp=Z,163nm,1.1s						
KSCO	Kaye Shedlock’	24.62	342	P	P	13 35 09.5	+1.4
	baz=157						
U59A	Littleton	24.62	31	P	P	13 35 07.8	-0.1
	baz=217						
O44A	Mansfield	24.63	9	P	P	13 35 06.9	-1.1
	baz=190,SNR=12						
Q51A	Peebles	24.70	18	P	P	13 35 07.5	-1.1
	baz=202,SNR=15						
T58A	Grand View Acr	24.74	29	P	P	13 35 08.5	-0.6
	baz=215,SNR=12						
R54A	Victor	24.75	23	P	P	13 35 08.5	-0.7
	baz=208						
P49A	Miami Univ. Ec	24.79	16	P	P	13 35 08.0	-1.4
	baz=199,SNR=13						
X16A	Lo Mia Camp, P	24.84	322	*e*P	P	13 35 12.7	+2.5
	comp=Z,69nm,1.0s						
S56A	Natural Bridge	24.89	26	P	P	13 35 10.0	-0.4
	baz=212,SNR=6.8						
HDIL	Hopedale	24.92	7	*e*P	P	13 35 09.5	-1.1
	comp=Z,150nm,0.9s						
HDIL	Hopedale	24.92	7	P	P	13 35 09.9	-0.7
	baz=188,SNR=15						
N41A	Harden Midland	24.93	4	*e*P	P	13 35 09.9	-0.8
	comp=Z,179nm,0.9s						
N41A	Harden Midland	24.93	4	P	P	13 35 10.1	-0.6
	baz=184,SNR=69						
MPR	Mayaguez	24.94	81	*e*P	P	13 35 08.8	-2.3
	comp=Z,130nm,1.1s						
AGP	Aguadilla	24.95	80	*e*P	P	13 35 09.4	-1.7
	comp=Z,259nm,0.9s						
Q52A	Bidwell	24.99	20	P	P	13 35 10.6	-0.7
	baz=205,SNR=8.5						
U60A	Pendleton	25.03	32	P	P	13 35 11.4	-0.3
	baz=218,SNR=10.0						
S22A	4UR Ranch, Cre	25.03	334	P	P	13 35 14.8	+2.7
	baz=147,SNR=174						
N40A	Mertquake, Sal	25.06	3	P	P	13 35 11.8	-0.1
	baz=183,SNR=56						
SFIN	Lafayette	25.07	11	*e*P	P	13 35 10.1	-2.0
	comp=Z,92nm,0.9s						
SFIN	Lafayette	25.07	11	P	P	13 35 11.0	-1.0
	baz=193						
P50A	Jamestown	25.11	17	P	P	13 35 11.0	-1.3
	baz=201,SNR=9.2						
Q53A	Leroy	25.15	22	P	P	13 35 12.4	-0.4
	baz=206,SNR=11						

R55A	Marlinton	25.18	25	P	P	13 35 12.8	-0.3
	baz=210,SNR=15						
P51A	Williamsport	25.21	18	*e*P	P	13 35 11.8	-1.4
	comp=Z,138nm,0.9s						
P51A	Williamsport	25.21	18	P	P	13 35 12.4	-0.9
	baz=203						
S57A	Dark Hollow, R	25.23	27	P	P	13 35 12.9	-0.6
	baz=213						
T59A	Double "B" Far	25.23	30	*e*P	P	13 35 12.7	-0.8
	comp=Z,87nm,1.1s						
T59A	Double "B" Far	25.23	30	P	P	13 35 13.1	-0.3
	baz=217,SNR=13						
113A	Mohawk Valley,	25.25	316	*e*pP	pP	13 35 39.4	+1.0
U61A	Possum Corner	25.29	33	P	P	13 35 13.7	-0.3
	baz=220						
AOPR	Arecibo Observ	25.31	80	*e*P	P	13 35 12.4	-2.0
	comp=Z,68nm,0.8s						
MVCO	Mesa Verde	25.35	330	*e*P	P	13 35 17.4	+2.5
	comp=Z,210nm,0.8s						
MVCO	Mesa Verde	25.35	330	P	P	13 35 17.9	+3.0
	baz=143,SNR=214						
O48A	Farmland	25.36	14	P	P	13 35 13.1	-1.6
	baz=198,SNR=7.7						
Q24A	Divide	25.42	338	P	P	13 35 17.2	+1.7
	baz=152,SNR=13						
Y14A	Wickenburg	25.48	319	*e*P	P	13 35 18.0	+2.1
	comp=Z,86nm,1.4s						
O49A	Covington	25.50	16	P	P	13 35 14.8	-1.1
	baz=199,SNR=20						
S58A	Poland Farm, P	25.51	29	P	P	13 35 15.7	-0.2
	baz=215,SNR=8.1						
Q54A	Coxs Mills	25.51	23	*e*P	P	13 35 15.3	-0.8
	comp=Z,145nm,1.4s						
Q54A	Coxs Mills	25.51	23	P	P	13 35 15.8	-0.2
	baz=208,SNR=16						
WUAZ	Wupatki	25.57	324	*e*P	P	13 35 18.9	+2.0
	comp=Z,136nm,1.2s						
WUAZ	Wupatki	25.57	324	P	P	13 35 19.5	+2.7
	baz=135,SNR=20						
R56A	Bull Pasture M	25.58	26	P	P	13 35 17.0	+0.2
	baz=211,SNR=6.6						
M41A	Milan	25.61	4	P	P	13 35 16.4	-0.5
	baz=185,SNR=27						
P52A	Corning	25.64	20	P	P	13 35 16.2	-0.9
	baz=204						
O50A	Cable	25.66	17	P	P	13 35 16.0	-1.3
	baz=201,SNR=6.9						
P53A	Whipple	25.76	21	P	P	13 35 18.0	-0.3
	baz=206,SNR=5.7						
T60A	Surry	25.77	31	P	P	13 35 16.4	-1.9
	baz=218						
Q55A	Buckhannon	25.81	24	P	P	13 35 18.0	-0.8
	baz=209						
N47A	Urbana	25.84	13	P	P	13 35 16.8	-2.1
	baz=196,SNR=9.8						
R57A	Stanardsville	25.86	27	P	P	13 35 18.7	-0.4
	baz=213,SNR=6.3						
R58B	Mineral	25.87	28	*e*P	P	13 35 19.2	-0.1
	comp=Z,45nm,1.0s						
R58B	Mineral	25.87	28	P	P	13 35 18.8	-0.5
	baz=215,SNR=6.0						
SJG	San Juan	25.88	81	P	P	13 35 17.1	-2.4
	comp=Z,54nm,0.9s,baz=271,slow=5.6,SNR=16						
SJG				PcP	PcP	13 38 46.3	+0.4
	comp=Z,15nm,0.5s,baz=45,slow=2.8,SNR=6.4						
SJG	San Juan	25.88	81	*e*P	P	13 35 16.1	-3.5
	comp=Z,53nm,0.8s						
M44A	Midewin, Midew	25.90	9	P	P	13 35 18.4	-1.2
	baz=191,SNR=5.6						
ACSO	Alum Creek Sta	25.92	18	*e*P	P	13 35 18.5	-1.2
	comp=Z,107nm,1.1s						
ACSO	Alum Creek Sta	25.92	18	P	P	13 35 18.6	-1.1
	baz=202,SNR=7.7						
BGNE	Belgrade	25.92	351	*e*P	P	13 35 20.1	+0.3
	comp=Z,81nm,0.7s						
BGNE	Belgrade	25.92	351	P	P	13 35 20.2	+0.5
	baz=168,SNR=10						
O51A	Pataskala	25.96	19	P	P	13 35 18.5	-1.6
	baz=203						
N48A	Decatur	25.97	14	P	P	13 35 18.7	-1.4
	baz=197,SNR=38						
S59A	Mechanicsville	25.98	30	P	P	13 35 20.3	+0.1
	baz=216						
SCIA	State Center	26.05	360	*e*P	P	13 35 20.4	-0.4
	comp=Z,357nm,0.6s						
SCIA	State Center	26.05	360	P	P	13 35 20.7	-0.1
	baz=179,SNR=41						
R58A	Rapidan	26.09	28	P	P	13 35 20.8	-0.5
	baz=214,SNR=9.4						
PV01	Paradox Valley	26.13	331	*e*P	P	13 35 24.6	+2.7
	comp=Z,98nm,0.9s						
GLA	Glamis	26.13	315	*e*P	P	13 35 24.2	+2.5
	comp=Z,73nm,1.2s						
GLA	Glamis	26.13	315	*e*P	P	13 35 24.3	+2.5
GLA				pmax	pmax		
	comp=Z,73nm,1.2s						
GLA	Glamis	26.13	315	P	P	13 35 24.9	+3.1
	baz=126						
CBYP	Canovanas	26.16	81	*e*P	P	13 35 20.1	-2.0
	comp=Z,61nm,0.9s						
HUMP	Col San Antoni	26.16	81	*e*P	P	13 35 20.0	-2.1
	comp=Z,56nm,1.0s						
HUMP				*e*PcP	PcP	13 38 45.6	-1.0
O52A	Adamsville	26.17	20	*e*P	P	13 35 20.8	-1.2
	comp=Z,320nm,1.6s						
O52A	Adamsville	26.17	20	P	P	13 35 21.1	-0.9
	baz=205,SNR=9.3						
Q56A	Snyder Ridge,	26.20	25	P	P	13 35 22.3	0.0
	baz=211,SNR=9.5						
N49A	Columbus Grove	26.23	15	P	P	13 35 21.0	-1.5
	baz=199						
S60A	Water View	26.25	31	P	P	13 35 22.5	-0.1
	baz=218						
L40A	Anamosa	26.26	3	P	P	13 35 22.5	-0.2
	baz=184,SNR=137						
OGNE	Ogallala	26.26	345	*e*P	P	13 35 23.8	+0.9
	comp=Z,111nm,0.8s						
OGNE	Ogallala	26.26	345	P	P	13 35 24.2	+1.3
	baz=160,SNR=13						
PV13	Radium Mtn., P	26.26	331	*e*P	P	13 35 25.8	+2.7
	comp=Z,181nm,0.9s						
PV02	Paradox Valley	26.26	331	*e*P	P	13 35 26.0	+2.9
	comp=Z,139nm,0.9s						
CBN	Corbin Frederi	26.30	29	P	P	13 35 23.0	-0.1
	baz=216						
M47A	Cromwell	26.31	13	P	P	13 35 22.1	-1.1
	baz=196						
L42A	Oliver, Polo	26.31	6	P	P	13 35 22.4	-0.8
	baz=187,SNR=38						
Y12C	Blythe	26.35	317	P	P	13 35 26.5	+2.9
	baz=127						
P55A	Reedsville	26.35	24	P	P	13 35 22.5	-1.1
	baz=209						
PV03	Paradox Valley	26.35	331	*e*P	P	13 35 26.5	+2.6
	comp=Z,200nm,0.9s						
N50A	Nevada	26.37	17	P	P	13 35 23.5	-0.3
	baz=201						
PV18	Skein Mesa, Pa	26.37	331	*e*P	P	13 35 26.7	+2.6
	comp=Z,202nm,0.9s						
PV12	Saucer Basin,	26.38	331	*e*P	P	13 35 27.3	+3.2
	comp=Z,346nm,0.8s						
PV11	David Mesa, Pa	26.40	331	*e*P	P	13 35 27.1	+2.8
	comp=Z,202nm,0.8s						
PV07	Paradox Valley	26.41	332	*e*P	P	13 35 27.3	+3.0
	comp=Z,188nm,0.9s						
R59A	King George, V	26.42	29	P	P	13 35 23.9	-0.3
	baz=216						
PV17	East Wray Mesa	26.43	331	*e*P	P	13 35 27.2	+2.7
	comp=Z,229nm,0.9s						
PV16	Nyswonger Mesa	26.43	331	*e*P	P	13 35 27.3	+2.7
	comp=Z,186nm,0.9s						
PDMCI	Parker Dam,Lak	26.44	318	P	P	13 35 27.1	+2.6
	baz=129,SNR=19						
MTP	Monte Pirata	26.45	81	*e*P	P	13 35 23.0	-1.6
	comp=Z,97nm,0.9s						
PV19	Morning Glory	26.46	331	*e*P	P	13 35 27.3	+2.5
	comp=Z,155nm,0.8s						
MCWV	Mont Chateau	26.47	23	P	P	13 35 24.4	-0.3
	baz=209						
PV20	West Nyswonger	26.48	331	*e*P	P	13 35 27.6	+2.7
	comp=Z,163nm,0.9s						
PV04	Paradox Valley	26.49	331	*e*P	P	13 35 28.0	+2.9
	comp=Z,282nm,0.8s						
O53A	New Philadelph	26.50	21	P	P	13 35 24.1	-0.8
	baz=206,SNR=5.3						
Q57A	Strasburg	26.52	26	P	P	13 35 25.1	-0.1
	baz=213,SNR=6.8						
PV14	Lion Creek, Pa	26.53	331	*e*P	P	13 35 27.9	+2.4
	comp=Z,202nm,0.9s						
PV10	Paradox Valley	26.54	331	*e*P	P	13 35 27.5	+1.9
	comp=Z,195nm,0.9s						
PV22	Blue Mesa, Par	26.55	332	*e*P	P	13 35 28.2	+2.6
	comp=Z,196nm,0.8s						
PV23	Carpenter Ridg	26.59	331	*e*P	P	13 35 28.9	+2.8
	comp=Z,293nm,0.9s						
M48A	Edgerton	26.63	14	*e*P	P	13 35 23.5	-2.6
	comp=Z,90nm,1.0s						
M48A	Edgerton	26.63	14	P	P	13 35 24.1	-2.0
	baz=198						
PV21	Cone Mtn., Par	26.66	331	*e*P	P	13 35 29.5	+2.8
	comp=Z,92nm,0.9s						
PV09	Paradox Valley	26.68	331	*e*P	P	13 35 29.5	+2.6
L44A	Lake County Fo	26.70	9	P	P	13 35 25.9	-0.7
	baz=191						
CUPR	Culebra, Puert	26.71	81	*e*P	P	13 35 25.2	-1.8
	comp=Z,68nm,1.1s						
N51A	Ashland	26.73	18	P	P	13 35 25.6	-1.5
	baz=203						
O54A	Avella	26.73	22	P	P	13 35 26.1	-0.9
	baz=208,SNR=6.0						
P56A	Dayton Farm, R	26.74	25	P	P	13 35 25.7	-1.4
	baz=211						
SWSC	Sam W. Stewart	26.74	314	P	P	13 35 30.0	+2.9
	baz=124						
U15A	North Rim	26.74	324	*e*P	P	13 35 29.1	+1.6
	comp=Z,20nm,1.0s						
Q58A	Fox Den Farm,	26.76	27	P	P	13 35 26.9	-0.4
	baz=214						
W13A	Hualapai Mount	26.79	320	*e*P	P	13 35 30.3	+2.5
	comp=Z,57nm,1.4s						
W13A				*e*PcP	PcP	13 38 48.9	+0.7
IKP	In-Ko-Pah, Jac	26.79	313	P	P	13 35 30.4	+2.6
	baz=123						
L46A	Eue Claire	26.80	11	P	P	13 35 26.2	-1.4
	baz=194						
M49A	Liberty Center	26.81	15	P	P	13 35 26.8	-0.9
	baz=199						
N52A	McGinn’s Farm,	26.85	19	P	P	13 35 27.4	-0.7
	baz=204						
BC3	Big Chuckawall	26.91	316	P	P	13 35 31.9	+3.1
	baz=126,SNR=11						
M50A	Fremont	26.99	17	P	P	13 35 27.9	-1.4
	baz=201						
L47A	Sherwood	26.99	13	P	P	13 35 27.8	-1.5
	baz=196						
IRM	Iron Mountain	27.00	317	P	P	13 35 32.9	+3.4
	baz=127,SNR=13						
ATAH	Atahualpa	27.02	146	P	P	13 35 31.8	+1.5
	comp=Z,22nm,0.8s,baz=339,slow=7.1,SNR=11						
P57A	Homestead Farm	27.07	26	P	P	13 35 30.2	+0.2
	baz=213,SNR=9.7						
N53A	Lisbon	27.13	21	*e*P	P	13 35 29.6	-0.9
	comp=Z,226nm,1.4s						
N53A	Lisbon	27.13	21	P	P	13 35 29.6	-0.9
	baz=206,SNR=6.2						
L48A	N Adams	27.14	14	P	P	13 35 29.0	-1.6
	baz=198,SNR=12						
MONP2	Monument Peak	27.14	313	P	P	13 35 31.0	0.0
	baz=123						
K43A	Burlington	27.16	8	*e*P	P	13 35 30.0	-0.8
	comp=Z,86nm,1.0s						
K43A	Burlington	27.16	8	P	P	13 35 29.7	-1.0
	baz=190						
O55A	Ligonier	27.16	24	P	P	13 35 29.9	-1.0
	baz=210,SNR=6.3						
JFWS	Jewell Farm	27.17	5	*e*P	P	13 35 30.0	-0.9
	comp=Z,109nm,0.6s						
JFWS	Jewell Farm	27.17	5	*e*P	P	13 35 30.0	-0.9
JFWS				pmax	pmax		
	comp=Z,109nm,0.6s						
JFWS	Jewell Farm	27.17	5	P	P	13 35 30.1	-0.7
	baz=186,SNR=39						
M51A	Elyria	27.17	18	P	P	13 35 29.7	-1.2
	baz=203						
P58A	Pank, Wackersv	27.38	27	P	P	13 35 32.6	-0.2
	baz=214						
R61A	Willards	27.39	31	P	P	13 35 31.5	-1.4
	baz=219						
N23A	Red Feather La	27.41	339	P	P	13 35 34.5	+1.2
	baz=152,SNR=16						
L49A	Milan	27.45	15	P	P	13 35 32.5	-0.9
	baz=199						
KNB	Kanab	27.46	324	*e*P	P	13 35 35.8	+2.0
	comp=Z,52nm,1.3s						
KNB	Kanab	27.46	324	*e*P	P	13 35 35.8	+2.0
KNB				pmax	pmax		
	comp=Z,52nm,1.3s						
BELC	Belle Mtn. Jos	27.48	316	P	P	13 35 36.7	+2.8
	baz=125						
PKCU	Pink Cliffs	27.48	325	*e*P	P	13 35 35.9	+1.8
	comp=Z,51nm,1.2s						
O56A	Blue Knob Stat	27.50	25	*e*P	P	13 35 32.4	-1.5
	comp=Z,44nm,0.9s						
O56A	Blue Knob Stat	27.50	25	P	P	13 35 32.6	-1.3
	baz=211,SNR=8.7						
SDMD	Soldier’s Deli	27.52	28	*e*P	P	13 35 33.0	-1.1
	comp=Z,15nm,1.0s						
LDFC	Landfair	27.55	318	*e*P	P	13 35 37.8	+3.3
	comp=Z,99nm,1.1s						
N54A	Moraine State	27.56	22	*e*P	P	13 35 33.3	-1.2
	comp=Z,56nm,1.0s						
N54A	Moraine State	27.56	22	P	P	13 35 34.0	-0.4
	baz=208						
PFO	Pinyon Flats O	27.57	314	P	P	13 35 38.3	+3.6
	comp=Z,8.0nm,1.1s,baz=109,slow=7.5,SNR=6.3						
PFO	Pinyon Flats O	27.57	314	P	P	13 35 36.9	+2.1
	baz=124						
M52A	Chesterland	27.62	19	P	P	13 35 34.1	-0.8
	baz=204						
O20A	White River Ci	27.64	334	*e*P	P	13 35 36.9	+1.6
	comp=Z,56nm,0.9s						
O20A	White River Ci	27.64	334	P	P	13 35 37.4	+2.1
	baz=147,SNR=19						
L50A	Kingsville	27.65	17	P	P	13 35 33.9	-1.2
	baz=201						
AAM	Ann Arbor	27.66	15	P	P	13 35 33.7	-1.6
	baz=199						
LCMT	Little Creek M	27.70	324	*e*P	P	13 35 38.1	+2.2
	comp=Z,19nm,1.1s						
K47A	Vermontville	27.70	13	P	P	13 35 33.9	-1.7
	baz=196						
GMRC	Granite Mounta	27.72	317	P	P	13 35 39.6	+3.6
	baz=127,SNR=10.0						
M53A	Wl Miller and	27.75	20	P	P	13 35 35.0	-1.0
	baz=206,SNR=6.8						
N55A	Marion Center	27.77	23	P	P	13 35 34.9	-1.4
	baz=210						
Q61A	Milford	27.82	31	P	P	13 35 35.5	-1.1
	baz=218						
SRU	San Rafael Swe	27.82	330	*e*P	P	13 35 38.8	+1.8
	comp=Z,56nm,1.1s						
SRU	San Rafael Swe	27.82	330	*e*P	P	13 35 38.8	+1.8
SRU				pmax	pmax		
	comp=Z,56nm,1.1s						
O57A	Amberson	27.83	26	P	P	13 35 35.8	-1.1
	baz=213						
MTPU	Mount Pierson	27.85	326	*e*P	P	13 35 39.9	+2.4
	comp=Z,26nm,0.9s						
SZCU	Shurtz Canyon	28.02	325	*e*P	P	13 35 41.7	+2.9
	comp=Z,59nm,1.2s						
ECSD	EROS Data Cent	28.04	355	*e*P	P	13 35 37.9	-0.7
	comp=Z,81nm,0.9s						
ECSD	EROS Data Cent	28.04	355	P	P	13 35 38.5	-0.1
	baz=172,SNR=65						
O58A	Lewisberry	28.07	27	P	P	13 35 38.8	-0.1
	baz=214						
SSPA	Standing Stone	28.09	25	*e*P	P	13 35 37.6	-1.4
	comp=Z,16nm,0.6s						
SSPA	Standing Stone	28.09	25	P	P	13 35 38.6	-0.5
	baz=212						
CCUT	Cedar City	28.14	324	*e*P	P	13 35 42.3	+2.4
CCUT				*e*pP	pP	13 36 06.6	+1.9
M54A	Oil Creek Stat	28.16	22	P	P	13 35 39.2	-0.6
	baz=208						
N56A	West Decatur	28.16	24	P	P	13 35 38.9	-0.9
	baz=211						
J45A	Montague	28.17	10	P	P	13 35 38.8	-1.0
	baz=193						
K49A	Clarkson	28.17	15	P	P	13 35 38.2	-1.5
	baz=199						
P17A	Butcher Ranch,	28.21	330	*e*P	P	13 35 42.8	+2.4
	comp=Z,78nm,0.9s						
J46A	Howard City	28.22	12	P	P	13 35 38.5	-1.7
	baz=195						
PAGS	Pennsylvania G	28.24	27	*e*P	P	13 35 39.6	-0.8
	comp=Z,45nm,1.2s						
I42A	Draeger Farm,	28.26	6	*e*P	P	13 35 39.4	-1.2
I42A				*e*pP	pP	13 36 05.3	-0.1
I42A	Draeger Farm,	28.26	6	P	P	13 35 40.0	-0.5
	baz=188						
PCRV	Puerto La Cruz	28.27	98	P	P	13 35 39.6	-1.5
	comp=Z,8.4nm,0.5s,baz=22,slow=23,SNR=3.8						
PCRV				ScP	ScP	13 42 25.1	+2.3
	comp=Z,5.7nm,0.7s,baz=189,slow=22,SNR=4.5						
J47A	Sunmer	28.28	13	P	P	13 35 41.3	+0.5
	baz=196						
TUQ	Turquoise Moun	28.29	318	P	P	13 35 44.0	+2.9
	baz=128,SNR=15						
TMUT	Trail Mountain	28.30	329	*e*P	P	13 35 44.0	+2.6
	comp=Z,27nm,1.0s						
N57A	Milroy	28.32	25	P	P	13 35 40.2	-1.0
	baz=212						
I41A	Arkdale	28.34	5	*e*P	P	13 35 40.6	-0.6
	comp=Z,42nm,0.6s						
I41A				*e*pP	pP	13 36 04.7	-1.4
I41A				*e*PcP	PcP	13 38 52.2	+0.9
I41A	Arkdale	28.34	5	P	P	13 35 40.4	-0.9
	baz=186,SNR=6.0						
L53A	Girard	28.35	20	P	P	13 35 40.4	-1.0
	baz=206						
K50A	Casco	28.38	16	*e*P	P	13 35 39.6	-2.0
K50A				*e*pP	pP	13 36 05.5	-0.9
P60A	Greenville	28.40	29	P	P	13 35 41.8	0.0
	baz=217						
M55A	Ridgway	28.45	23	P	P	13 35 41.3	-1.1
	baz=210,SNR=7.8						
SHPR	Sheep Range	28.49	321	*e*P	P	13 35 45.0	+2.1
	comp=Z,71nm,1.2s						
M56A	Emporium	28.69	24	P	P	13 35 43.3	-1.1
	baz=211,SNR=9.9						
N58A	Sunbury	28.75	26	P	P	13 35 44.3	-0.6
	baz=214,SNR=6.5						
BFSC	Mount Baldy Ra	28.75	314	P	P	13 35 47.7	+2.5
	baz=123						
J49A	Marlette	28.79	15	P	P	13 35 43.2	-2.0
	baz=200						
CIS	Catalina Islan	28.83	312	P	P	13 35 48.2	+2.4
	baz=121						
O60A	Telford	28.91	29	P	P	13 35 47.9	+1.6
	baz=217						
L54A	Sinclairville	28.92	21	P	P	13 35 46.5	0.0
	baz=208						
K52A	Tillsonburg	28.94	19	P	P	13 35 45.4	-1.2
	baz=205						
H43A	Windswept, Lux	28.97	8	P	P	13 35 45.8	-1.0
	baz=190						
SUSD	Miller	29.01	351	P	P	13 35 47.4	+0.2
	baz=168,SNR=11						
MWC	Mount Wilson	29.02	314	*e*pP	pP	13 36 13.2	+0.7
MPU	Maple Canyon	29.07	330	*e*P	P	13 35 50.3	+2.2
	comp=Z,65nm,0.9s						
I47A	Gladwin	29.09	13	P	P	13 35 47.6	-0.4
	baz=197						
PSUT	Pine Spring	29.11	325	*e*P	P	13 35 51.1	+2.7
	comp=Z,40nm,1.0s						
SKI	Saint Kitts	29.13	83	*e*P	P	13 35 46.8	-1.8
	comp=Z,317nm,1.0s						
SKI	Saint Kitts	29.13	83	*e*P	P	13 35 46.8	-1.8
SKI				pmax	pmax		
	comp=Z,317nm,1.0s						
LUPA	Lehigh Univers	29.15	28	*e*P	P	13 35 47.6	-0.9
	comp=Z,2.2nm,0.9s						
K22A	Casper	29.16	339	*e*P	P	13 35 50.3	+1.5
	comp=Z,71nm,0.9s						
K22A	Casper	29.16	339	P	P	13 35 50.5	+1.7
	baz=152,SNR=25						
L55A	Hinsdale	29.19	23	P	P	13 35 48.0	-0.9
	baz=210,SNR=5.6						
N59A	State Game Lan	29.22	28	*e*P	P	13 35 48.6	-0.6
	comp=Z,25nm,1.0s						
NLU	North Lily Min	29.23	329	*e*P	P	13 35 49.6	0.0
	comp=Z,51nm,1.3s						
M58A	Price’s Panora	29.29	26	P	P	13 35 49.3	-0.5
	baz=214,SNR=12						
EDW2	Edwards Air Fo	29.34	315	P	P	13 35 52.9	+2.6
	baz=124						
SPMN	Marine on St.	29.37	0	*e*P	P	13 35 49.5	-0.9
	comp=Z,182nm,0.6s						
SPMN	Marine on St.	29.37	0	P	P	13 35 50.0	-0.3
	baz=180,SNR=25						
H45A	Beulah	29.38	10	P	P	13 35 49.4	-1.1
	baz=193						
J52A	Paris	29.43	19	P	P	13 35 49.5	-1.4
	baz=205,SNR=8.0						
JLU	Jordanelle	29.44	331	*e*P	P	13 35 53.3	+1.9
	comp=Z,148nm,1.8s						
TPNV	Topopah Spring	29.44	320	*e*P	P	13 35 53.4	+2.0
	comp=Z,51nm,1.2s						
TPNV	Topopah Spring	29.44	320	*e*P	P	13 35 53.4	+2.0
TPNV				pmax	pmax		
	comp=Z,51nm,1.2s						
TPNV	Topopah Spring	29.44	320	P	P	13 35 54.1	+2.7
	baz=129,SNR=15						
H46A	Fife Lake	29.45	12	P	P	13 35 48.8	-2.3
	baz=195						
LRMC	Laurel Mtn Rad	29.47	316	P	P	13 35 54.9	+3.3
	baz=125						
K54A	Basiliko Farm,	29.47	22	P	P	13 35 50.8	-0.6
	baz=209						
G39A	Holcombe	29.47	3	P	P	13 35 50.8	-0.6
	baz=183,SNR=122						
N60A	Cedar Hill Far	29.49	28	P	P	13 35 50.9	-0.6
	baz=217						
TYNO	Tyneside	29.50	20	P	P	13 35 49.6	-1.9
	baz=206						
G40A	Rib Lake	29.51	4	P	P	13 35 50.6	-1.0
	baz=185,SNR=18						
FURC	Furnace Creek,	29.52	319	P	P	13 35 54.3	+2.5
	baz=128,SNR=7.5						
CTU	Camp Tracy	29.65	331	*e*P	P	13 35 54.4	+1.2
	comp=Z,65nm,0.9s						
CTU				*e*pP	pP	13 36 19.4	+1.3
MPMC	Manual Prospec	29.68	317	P	P	13 35 56.0	+2.5
	baz=126,SNR=23						
OSI	Osito Audit: C	29.69	314	P	P	13 35 55.6	+2.2
	baz=122						
KSPA	Keystone Colle	29.74	27	*e*P	P	13 35 53.0	-0.7
	comp=Z,61nm,1.4s						
RSSD	Black Hills	29.75	344	*e*P	P	13 35 54.8	+0.7
	comp=Z,56nm,0.7s						
RSSD	Black Hills	29.75	344	*e*P	P	13 35 54.8	+0.7
RSSD				pmax	pmax		
	comp=Z,56nm,0.7s						
RSSD	Black Hills	29.75	344	P	P	13 35 55.1	+1.1
	baz=158						
I51A	Listowel	29.78	18	P	P	13 35 52.7	-1.3
	baz=203						
DUG	Dugway, Tooele	29.79	329	*e*P	P	13 35 56.5	+2.2
	comp=Z,40nm,1.3s						
DUG	Dugway, Tooele	29.79	329	*e*P	P	13 35 56.5	+2.2
DUG				pmax	pmax		
	comp=Z,39nm,1.3s						
DUG	Dugway, Tooele	29.79	329	P	P	13 35 56.7	+2.4
	baz=139,SNR=18						
BASO	Ashfield	29.79	17	P	P	13 35 52.5	-1.6
	baz=202						
K55A	Perry	29.80	23	P	P	13 35 53.2	-1.1
	baz=210						
TCUT	Toone Canyon	29.82	331	*e*P	P	13 35 56.7	+1.9
	comp=Z,226nm,0.9s						
G45A	Suttons Bay	29.85	11	*e*P	P	13 35 53.6	-1.0
	comp=Z,45nm,0.7s						
G45A	Suttons Bay	29.85	11	P	P	13 35 53.6	-1.0
	baz=194						
MMNY	Mt. Morris Dam	29.86	23	*e*P	P	13 35 53.8	-1.0
	comp=Z,28nm,0.7s						
M59A	Waymart	29.88	27	P	P	13 35 54.7	-0.3
	baz=215,SNR=5.8						
ACTO	Acton	29.89	19	P	P	13 35 54.4	-0.7
	baz=205						
R11A	Troy Canyon, C	29.96	323	*e*P	P	13 35 58.6	+2.6
	comp=Z,53nm,1.3s						
R11A	Troy Canyon, C	29.96	323	P	P	13 35 58.8	+2.8
	baz=132,SNR=16						
SCZ2	Santa Cruz Isl	30.01	312	P	P	13 35 58.9	+2.6
	baz=120						
MEDO	Medina	30.04	22	P	P	13 35 55.4	-0.9
	baz=209						
ISA	Isabella, Lake	30.10	316	*e*P	P	13 35 58.2	+1.1
	comp=Z,35nm,1.3s						
ISA	Isabella, Lake	30.10	316	*e*P	P	13 35 58.2	+1.1
ISA				pmax	pmax		
	comp=Z,35nm,1.3s						
ISA	Isabella, Lake	30.10	316	P	P	13 36 01.0	+3.9

	baz=124						
L58A	Harry Jones Me	30.11	26	P	P	13 35 56.4	-0.6
	baz=214,SNR=8.9						
PAL	Palisades	30.15	30	*e*P	P	13 35 58.1	+0.8
	comp=Z,50nm,1.0s						
PAL	Palisades	30.15	30	*e*P	P	13 35 58.1	+0.8
PAL				pmax	pmax		
	comp=Z,50nm,1.0s						
PAL	Palisades	30.15	30	P	P	13 35 58.4	+1.1
	baz=219						
GRAC	Grapevine Rang	30.17	319	P	P	13 36 01.5	+3.9
	baz=128						
BINY	Binghamton	30.18	26	*e*P	P	13 35 57.3	-0.3
	comp=Z,28nm,0.8s						
BINY	Binghamton	30.18	26	P	P	13 35 57.0	-0.7
	baz=214,SNR=6.8						
F42A	Maple Grove Fa	30.19	7	P	P	13 35 56.6	-1.0
	baz=189,SNR=5.4						
I52A	Shelburne	30.27	19	P	P	13 35 57.6	-0.8
	baz=205						
HWUT	Hardware Ranch	30.29	332	*e*P	P	13 36 01.0	+2.2
	comp=Z,55nm,0.9s						
HWUT				*e*PcP	PcP	13 38 57.7	+1.0
CWC	Cottonwood Cre	30.29	318	P	P	13 36 02.2	+3.4
	baz=126						
G47A	Hillman	30.33	13	P	P	13 35 58.3	-0.6
	baz=197						
BW06	Boulder Array	30.38	336	*e*P	P	13 36 00.6	+0.9
	comp=Z,19nm,0.9s						
BW06	Boulder Array	30.38	336	P	P	13 36 00.8	+1.1
	baz=147,SNR=59						
PD31	Pinedale Array	30.38	336	*e*P	P	13 36 00.7	+1.0
PD31				*e*PcP	PcP	13 38 57.5	+0.5
PDAR	Pinedale Array	30.38	336	P	P	13 36 01.1	+1.4
	comp=Z,13nm,0.7s,baz=132,slow=10,SNR=124						
PDAR				PcP	PcP	13 38 57.5	+0.5
	comp=Z,1.9nm,0.5s,baz=142,slow=5.1,SNR=7.6						
PDAR				ScP	ScP	13 42 31.4	+2.2
	comp=Z,2.2nm,0.9s,baz=143,slow=5.2,SNR=6.4						
PDAR				LR	LR	13 51 26.0	
	comp=Z,98nm,19.8s,baz=159,slow=42						
COWI	Conover	30.42	5	*e*P	P	13 35 58.3	-1.4
	comp=Z,60nm,1.1s						
BGU	Big Grassy Mou	30.45	329	*e*P	P	13 36 02.4	+2.2
	comp=Z,50nm,1.0s						
BMRO	Meriville Lake	30.45	17	P	P	13 35 58.8	-1.1
	baz=202						
M61A	Granite Spring	30.45	29	P	P	13 36 00.2	+0.2
	baz=218,SNR=5.6						
SPUT	South Promonto	30.46	331	*e*P	P	13 36 02.9	+2.6
	comp=Z,52nm,0.9s						
F45A	CMU Biological	30.50	11	P	P	13 35 59.7	-0.7
	baz=194						
DRWO	Darlington Wes	30.57	21	P	P	13 36 00.4	-0.6
	baz=208						
CLWO	Collingwood	30.58	18	P	P	13 35 59.7	-1.5
	baz=204,SNR=11						
PKM	Mcpherson Peak	30.59	313	P	P	13 36 04.2	+2.6
	baz=121,SNR=13						
VES	Vestal, Richgr	30.61	316	P	P	13 36 04.5	+3.0
	baz=124						
BBSR	BB Station	30.62	52	*e*P	P	13 36 00.7	-0.9
	comp=Z,99nm,0.9s						
WLVO	Wesleyville	30.73	21	P	P	13 36 01.4	-0.9
	baz=208						
TIN	Tinemaha, Big	30.75	318	P	P	13 36 05.7	+2.8
	baz=127						
E38A	The Farm, Brul	30.77	2	*e*P	P	13 36 01.8	-1.0
	comp=Z,52nm,0.6s						
E38A	The Farm, Brul	30.77	2	P	P	13 36 02.0	-0.8
	baz=182,SNR=23						
H52A	Wyevale	30.88	19	P	P	13 36 02.5	-1.2
	baz=205						
E43A	Lone Tree Farm	30.94	8	P	P	13 36 02.6	-1.7
	baz=191,SNR=13						
SMMC	Simmler	30.95	314	P	P	13 36 08.1	+3.6
	baz=122						
TOBO	Tobermory, Bru	30.95	16	P	P	13 36 02.4	-1.9
	baz=202						
HVU	Hansel Valley	30.98	331	*e*P	P	13 36 07.3	+2.5
	comp=Z,96nm,0.9s						
HVU	Hansel Valley	30.98	331	*e*P	P	13 36 07.4	+2.5
HVU				pmax	pmax		
	comp=Z,96nm,0.9s						
AHID	Auburn Hatcher	31.02	334	*e*P	P	13 36 06.7	+1.5
	comp=Z,86nm,0.8s						
I55A	Frankford	31.23	22	P	P	13 36 05.6	-1.2
	baz=209,SNR=7.6						
F48A	Evansville	31.23	14	P	P	13 36 05.2	-1.6
	baz=199						
H53A	Bobcaygeon	31.23	20	P	P	13 36 05.8	-1.0
	baz=207,SNR=11						
PECO	Prince Edward	31.24	23	*e*P	P	13 36 05.2	-1.6
	comp=Z,19nm,0.7s						
PECO	Prince Edward	31.24	23	P	P	13 36 04.8	-2.0
	baz=210						
F49A	Sandfield	31.31	15	P	P	13 36 05.7	-1.9
	baz=200						
E44A	Grand Marais A	31.34	10	*e*P	P	13 36 06.2	-1.5
E44A				*e*pP	pP	13 36 31.7	-0.9
E44A	Grand Marais A	31.34	10	P	P	13 36 06.6	-1.1
	baz=193						
PAGB	Antelope Grade	31.34	314	*e*P	P	13 36 08.6	+0.6
	comp=Z,140nm,1.7s						
E46A	Sault Ste Mari	31.38	12	P	P	13 36 06.3	-1.9
	baz=196						
D41A	Chassel	31.43	6	P	P	13 36 07.4	-1.1
	baz=188,SNR=18						
KLBO	Killbear Provi	31.43	18	P	P	13 36 06.5	-2.0
	baz=204,SNR=9.9						
ELK	Elko	31.44	327	*e*P	P	13 36 11.8	+2.8
	comp=Z,31nm,0.9s						
ELK	Elko	31.44	327	*e*P	P	13 36 11.8	+2.8
ELK				pmax	pmax		
	comp=Z,31nm,0.9s						
DELO	Deloro Mine	31.52	21	*e*P	P	13 36 07.9	-1.5
	comp=Z,30nm,0.7s						
DELO	Deloro Mine	31.52	21	P	P	13 36 08.1	-1.2
	baz=209,SNR=12						
NV11	Mina Array Sit	31.55	321	*e*P	P	13 36 13.3	+3.4
OMMB	Old Mammoth Mi	31.58	319	*e*P	P	13 36 13.7	+3.3
	comp=Z,74nm,1.2s						
NV01	Mina Array Sit	31.64	320	*e*P	P	13 36 14.5	+3.8
NVAR	Mina Array Bea	31.64	320	P	P	13 36 14.5	+3.8
	comp=Z,19nm,0.8s,baz=136,slow=9.2,SNR=127						
NVAR				pP	pP	13 36 38.4	+2.6
	comp=Z,130nm,1.0s,baz=134,slow=8.1,SNR=24						
NVAR				PcP	PcP	13 39 02.5	+2.1
	comp=Z,5.4nm,0.7s,baz=130,slow=1.5,SNR=6.5						
NVAR				ScP	ScP	13 42 36.8	+3.3
	comp=Z,7.8nm,1.0s,baz=136,slow=4.0,SNR=15						
NVAR				LR	LR	13 51 18.8	
	comp=Z,144nm,20.0s,baz=120,slow=40						
MDPB	Devils Postpil	31.64	318	*e*P	P	13 36 14.0	+3.2
	comp=Z,86nm,1.2s						
E47A	Iron Bridge	31.68	13	P	P	13 36 09.2	-1.5
	baz=198,SNR=16						
H55A	Tweed	31.70	22	P	P	13 36 09.6	-1.3
	baz=210,SNR=6.0						
G53A	Haliburton	31.71	20	P	P	13 36 09.3	-1.7
	baz=207,SNR=7.7						
BUKO	Buck Lake	31.75	18	P	P	13 36 09.5	-1.9
	baz=205,SNR=9.5						
BANO	Bancroft	31.85	21	P	P	13 36 10.6	-1.7
	baz=208						
QUA2	Belchertown	31.88	30	*e*P	P	13 36 11.4	-1.1
	comp=Z,58nm,1.5s						
RYN	Ryan	31.90	320	*e*P	P	13 36 15.9	+3.0
	comp=Z,78nm,1.1s						
KVN	Kaiserville	31.91	321	*e*P	P	13 36 15.9	+2.8
	comp=Z,83nm,1.1s						
KVN	Kaiserville	31.91	321	*e*P	P	13 36 15.9	+2.8
KVN				pmax	pmax		
	comp=Z,83nm,1.1s						
D46A	Sault St. Mari	31.94	12	P	P	13 36 11.2	-1.9
	baz=196,SNR=10						
E48A	Lockeyer	31.96	14	P	P	13 36 12.0	-1.2
	baz=200						
F51A	Arnstein	32.04	17	P	P	13 36 12.0	-1.9
	baz=204						
H56A	Elgin	32.08	23	P	P	13 36 12.9	-1.3
	baz=211						
F52A	Sundridge	32.09	18	P	P	13 36 12.8	-1.6
	baz=205,SNR=8.5						
EYMN	Ely	32.12	2	*e*P	P	13 36 13.3	-1.2
	comp=Z,25nm,0.6s						
EYMN	Ely	32.12	2	P	P	13 36 13.3	-1.2
	baz=182,SNR=35						
G54A	Lake Saint Pet	32.13	20	P	P	13 36 13.3	-1.4
	baz=208						
YPP	Pitchstone Pla	32.14	336	*e*P	P	13 36 16.4	+1.3
	comp=Z,28nm,0.8s						
H17A	Grant Village	32.15	336	*e*P	P	13 36 17.0	+1.7
	comp=Z,52nm,0.8s						
H17A	Grant Village	32.15	336	P	P	13 36 17.9	+2.6
	baz=147						
PLVO	Plevna	32.16	22	P	P	13 36 13.6	-1.4
	baz=210,SNR=6.1						
C40A	Isle Royale Na	32.22	5	*e*P	P	13 36 14.1	-1.3
	comp=Z,86nm,1.1s						
C40A	Isle Royale Na	32.22	5	P	P	13 36 14.2	-1.3
	baz=187,SNR=53						
E50A	Wahnapitae	32.26	16	P	P	13 36 13.0	-2.9
	baz=202,SNR=6.5						
RLMT	Red Lodge	32.28	338	*e*P	P	13 36 17.6	+1.2
	comp=Z,56nm,0.7s						
RLMT	Red Lodge	32.28	338	P	P	13 36 17.9	+1.6
	baz=150,SNR=47						
D47A	Chapleau	32.29	13	P	P	13 36 14.3	-1.8
	baz=198,SNR=15						
YFT	Old Faithful	32.30	336	*e*P	P	13 36 19.0	+2.5
	comp=Z,85nm,0.9s						
YFT				*e*PcP	PcP	13 39 04.8	+2.7
BMN	Battle Mountai	32.30	324	*e*P	P	13 36 19.1	+2.6
	comp=Z,66nm,1.0s						
BMN	Battle Mountai	32.30	324	*e*P	P	13 36 19.1	+2.6
BMN				pmax	pmax		
	comp=Z,66nm,1.0s						
NCB	Newcomb	32.37	26	*e*P	P	13 36 16.1	-0.8
	comp=Z,15nm,0.8s						
WAKR	Walker	32.39	319	*e*P	P	13 36 20.2	+2.9
	comp=Z,105nm,1.2s						
MDND	Maddock	32.44	352	*e*P	P	13 36 17.6	+0.2
	comp=Z,247nm,0.8s						
MDND	Maddock	32.44	352	P	P	13 36 17.8	+0.4
	baz=168,SNR=26						
YNR	Norris Junctio	32.46	336	*e*P	P	13 36 20.1	+2.2
	comp=Z,42nm,0.7s						
G55A	Calabogie	32.47	22	P	P	13 36 16.5	-1.2
	baz=210,SNR=8.2						
AGMN	Agassiz Nation	32.52	357	*e*P	P	13 36 17.6	-0.5
	comp=Z,40nm,0.9s						
AGMN	Agassiz Nation	32.52	357	P	P	13 36 17.6	-0.5
	baz=175,SNR=24						
YMR	Madison River	32.53	336	*e*P	P	13 36 20.9	+2.4
	comp=Z,166nm,0.9s						
YERR	Yerington	32.56	320	*e*P	P	13 36 22.0	+3.2
	comp=Z,81nm,1.0s						
YHH	Holmes Hill	32.59	336	*e*P	P	13 36 21.2	+2.1
	comp=Z,66nm,1.1s						
ALGO	Algonquin Park	32.63	20	P	P	13 36 17.7	-1.4
	baz=207						
PEMO	Pembroke	32.66	21	P	P	13 36 18.0	-1.3
	baz=209,SNR=5.5						
YHB	Horse Butte	32.69	336	*e*P	P	13 36 22.1	+2.2
	comp=Z,39nm,0.8s						
E51A	G1948 Merrick	32.71	17	P	P	13 36 18.2	-1.6
	baz=204,SNR=11						
CMB	Columbia Colle	32.71	318	*e*P	P	13 36 22.7	+2.7
	comp=Z,43nm,1.1s						
CMB	Columbia Colle	32.71	318	*e*P	P	13 36 22.7	+2.7
CMB				pmax	pmax		
	comp=Z,43nm,1.1s						
LAO	LASA Array	32.71	343	*e*P	P	13 36 20.5	+0.6
	comp=Z,64nm,0.9s						
LAO	LASA Array	32.71	343	P	P	13 36 20.7	+0.8
	baz=156,SNR=18						
E52A	Mattawa	32.74	19	P	P	13 36 18.4	-1.6
	baz=206						
LONY	Lake Ozonia	32.75	25	*e*P	P	13 36 19.3	-0.9
	comp=Z,24nm,0.8s						
LONY	Lake Ozonia	32.75	25	P	P	13 36 19.3	-0.9
	baz=214,SNR=14						
PNTR	Pine Nut	32.84	320	*e*P	P	13 36 24.1	+2.8
PNTR				*e*pP	pP	13 36 49.9	+3.5
QLMT	Earthquake Lak	32.85	336	*e*P	P	13 36 23.5	+2.3
D49A	Beulah Townshi	32.89	15	P	P	13 36 18.1	-3.2
	baz=201						
G57A	Newington	32.99	24	P	P	13 36 20.9	-1.4
	baz=213,SNR=8.5						
VCNR	Virginia City	33.00	320	*e*P	P	13 36 25.2	+2.5
VCNR				*e*pP	pP	13 36 49.6	+1.8
GCMT	Greycliff	33.00	339	*e*P	P	13 36 24.0	+1.5
ORIO	Orleans, Innes	33.09	23	P	P	13 36 22.4	-0.6
	baz=212,SNR=6.0						
PAHR	Pah Rah Range	33.09	321	*e*P	P	13 36 25.9	+2.5
PAHR				*e*pP	pP	13 36 49.9	+1.4
F55A	Otter Lake	33.10	22	P	P	13 36 22.1	-1.1
	baz=210						
HLID	Hailey	33.12	331	*e*P	P	13 36 25.6	+2.0
	comp=Z,57nm,0.9s						
HLID	Hailey	33.12	331	P	P	13 36 26.3	+2.7
	baz=140,SNR=113						
E53A	Dumoine, Ponti	33.13	20	P	P	13 36 22.0	-1.5
	baz=208						
RUBR	Rubicon Trail	33.16	320	*e*pP	pP	13 36 51.1	+1.8
FRNY	Flat Rock	33.34	26	*e*P	P	13 36 24.2	-1.0
	comp=Z,30nm,1.4s						
E54A	Lac Daplat, Po	33.34	20	P	P	13 36 23.7	-1.6
	baz=208,SNR=8.5						
G58A	Ormstown	33.40	25	P	P	13 36 25.1	-0.7
	baz=214						
MCMT	McKenzie Canyo	33.43	334	*e*P	P	13 36 29.5	+3.2
D52A	ZEK Kipawa Sen	33.43	18	P	P	13 36 24.9	-1.2
	baz=206,SNR=6.9						
BOZ	Bozeman (W)	33.57	336	*e*P	P	13 36 29.7	+2.3
	comp=Z,48nm,0.9s						
BOZ	Bozeman (W)	33.57	336	*e*P	P	13 36 29.7	+2.3
BOZ				pmax	pmax		
	comp=Z,48nm,0.9s						
BOZ	Bozeman (W)	33.57	336	P	P	13 36 29.6	+2.3
	baz=146,SNR=93						
LBNH	Lisbon	33.58	28	P	P	13 36 27.0	-0.4
	baz=218						
AFDM	Forest Hills D	33.62	319	*e*pP	pP	13 36 52.1	-0.8
MFID	Camas Ranch	33.69	329	*e*P	P	13 36 30.2	+1.8
	comp=Z,102nm,1.5s						
D53A	Lac Vacive, Po	33.74	19	P	P	13 36 27.7	-1.1
	baz=207,SNR=7.7						
DLMT	Dillon	33.76	335	*e*P	P	13 36 31.7	+2.6
	comp=Z,143nm,0.9s						
BEKR	Beckworth	33.78	321	*e*P	P	13 36 31.8	+2.4
	comp=Z,94nm,1.1s						
DGMT	Dagmar	33.87	347	*e*P	P	13 36 30.4	+0.6
	comp=Z,105nm,0.8s						
DGMT				*e*PcP	PcP	13 39 07.1	+1.0
DGMT	Dagmar	33.87	347	P	P	13 36 30.8	+1.0
	baz=160,SNR=31						
D54A	Lac Fusel, La	34.14	20	P	P	13 36 30.9	-1.3
	baz=209,SNR=10						
MCCM	Marconi Confer	34.41	316	*e*pP	pP	13 37 00.3	+0.4
WVOR	Wild Horse Val	34.44	326	*e*P	P	13 36 37.1	+2.2
	comp=Z,126nm,1.1s						
WVOR	Wild Horse Val	34.44	326	*e*P	P	13 36 37.2	+2.2
WVOR				pmax	pmax		
	comp=Z,127nm,1.1s						
ULM	Lac du Bonnet	34.47	357	P	P	13 36 34.0	-1.0
	comp=Z,33nm,0.6s,baz=175,slow=10.0,SNR=45						
ULM				pP	pP	13 36 58.5	-1.7
	comp=Z,28nm,0.9s,baz=189,slow=7.2,SNR=5.2						
ULM				PcP	PcP	13 39 08.0	+0.3
	comp=Z,33nm,0.8s,baz=186,slow=2.3,SNR=8.6						
ULM				LR	LR	13 52 15.2	
	comp=Z,155nm,21.0s,baz=152,slow=39						
ULM	Lac du Bonnet	34.47	357	*e*P	P	13 36 33.4	-1.5
	comp=Z,36nm,0.6s						
HRY	Holter Researc	34.57	337	*e*P	P	13 36 37.9	+1.8
O03E	Paynes Creek	34.92	320	P	P	13 36 41.0	+1.9
	baz=126,SNR=11						
EGMT	Eagleton	34.98	340	*e*P	P	13 36 40.9	+1.4
	comp=Z,144nm,0.8s						
EGMT	Eagleton	34.98	340	P	P	13 36 41.0	+1.4
	baz=151,SNR=111						
J08A	Circle Bar Ran	34.99	327	*e*P	P	13 36 42.2	+2.5
	comp=Z,179nm,0.9s						
HOPS	Hopland Field	34.99	317	*e*pP	pP	13 37 05.8	+0.8
MOD	Modoc Plateau	35.02	324	*e*P	P	13 36 41.6	+1.6
MOD				*e*pP	pP	13 37 05.9	+0.5
BMO	Blue Mountains	35.47	330	*e*P	P	13 36 44.4	+0.6
	comp=Z,41nm,1.0s						
BMO	Blue Mountains	35.47	330	*e*P	P	13 36 44.4	+0.6
BMO				pmax	pmax		
	comp=Z,41nm,1.0s						
O02D	Mt. Diablo Mer	35.47	319	P	P	13 36 45.2	+1.4
	baz=124						
MSO	Missoula	35.49	335	*e*P	P	13 36 45.2	+1.3
	comp=Z,76nm,1.0s						
MSO	Missoula	35.49	335	P	P	13 36 45.7	+1.7
	baz=144,SNR=58						
WDC	Whiskeytown Da	35.55	320	*e*pP	pP	13 37 06.9	-2.8
PKME	Peaks-Kenny Pk	35.58	29	*e*pP	pP	13 37 09.3	-0.6
LSQQ	Lebel-sur-Quev	35.72	18	P	P	13 36 44.6	-1.2
	baz=207						
M04C	Macdoel	35.84	322	P	P	13 36 48.9	+1.9
	baz=128,SNR=10						
I07A	Izee	36.03	327	*e*P	P	13 36 49.0	+0.4
	comp=Z,22nm,1.1s						
MATQ	Matagami	36.16	17	P	P	13 36 48.0	-1.5
	baz=205,SNR=16						
F10A	Beach Ranch, E	36.26	331	*e*P	P	13 36 52.1	+1.6
	comp=Z,180nm,0.8s						
YBH	Yreka Blue Hor	36.33	321	*e*P	P	13 36 51.7	+0.5
	comp=Z,14nm,0.8s						
YBH	Yreka Blue Hor	36.33	321	*e*P	P	13 36 51.7	+0.5
YBH				pmax	pmax		
	comp=Z,14nm,0.8s						
L04D	Klamath Falls	36.38	322	P	P	13 36 53.2	+1.6
	baz=127,SNR=5.9						
J05D	Fort Rock, OR	36.44	325	P	P	13 36 53.4	+1.3
	baz=130						
KHMM	Horse Mountain	36.46	319	*e*P	P	13 36 53.8	+1.5
KHMM				*e*pP	pP	13 37 18.4	+0.6
G08A	Pilot Rock	36.59	329	*e*P	P	13 36 54.7	+1.3
	comp=Z,29nm,1.4s						
PTGA	Pitinga	36.60	114	P	P	13 36 51.2	-2.4
	comp=Z,3.7nm,0.4s,baz=308,slow=9.8,SNR=15						
PTGA				PcP	PcP	13 39 15.5	+0.8
	comp=Z,15nm,0.7s,baz=320,slow=22,SNR=9.7						
PTGA	Pitinga	36.60	114	*e*P	P	13 36 50.6	-3.0
	comp=Z,16nm,1.0s						
PTGA				*e*PcP	PcP	13 39 15.5	+0.8
PTGA	Pitinga	36.60	114	*e*P	P	13 36 51.3	-2.4
PINE	Pine Mountain	36.60	325	*e*P	P	13 36 55.2	+1.7
	comp=Z,45nm,1.0s						
JCC	Jacoby Creek,	36.61	319	*e*P	P	13 36 56.2	+2.8
JCC				*e*pP	pP	13 37 19.9	+1.0
J04D	Umpqua Nationa	36.90	324	P	P	13 36 57.4	+1.3
	baz=129,SNR=16						
E09A	Wood Farm, Sta	37.09	331	*e*P	P	13 36 58.4	+1.0
	comp=Z,47nm,0.8s						
I05D	Terrebonne, OR	37.18	326	P	P	13 37 00.2	+2.0
	baz=131,SNR=8.1						
CHGQ	Chibougamau	37.29	20	P	P	13 36 57.7	-1.4
	baz=210,SNR=8.6						
I04A	Tendick Farm,	37.42	324	P	P	13 37 02.0	+1.7
	baz=129,SNR=8.7						
K02D	Willamette Mer	37.47	322	P	P	13 37 02.4	+1.6
	baz=126						
E08A	Dider Farm, El	37.50	330	*e*P	P	13 37 01.7	+0.8
	comp=Z,22nm,0.8s						
HAWA	Hanford	37.66	330	*e*P	P	13 37 03.0	+0.8
	comp=Z,16nm,0.8s						
G05D	Wamic, OR	37.77	327	P	P	13 37 05.4	+2.2
	baz=132,SNR=11						
D08A	Wollman Farm,	37.85	331	*e*P	P	13 37 05.0	+1.2
	comp=Z,38nm,1.0s						
H04A	Detroit Lake	37.86	326	*e*P	P	13 37 05.6	+1.6
	comp=Z,128nm,1.0s						
I03D	Drain, OR	37.89	323	P	P	13 37 06.1	+1.9
	baz=128,SNR=20						
J01E	Myrtle Point	37.91	322	P	P	13 37 06.4	+2.0
	baz=126,SNR=7.6						
NEW	Newport	37.95	334	*e*P	P	13 37 05.7	+1.0
	comp=Z,31nm,1.0s						
NEW	Newport	37.95	334	*e*P	P	13 37 05.7	+1.0
NEW				pmax	pmax		
	comp=Z,31nm,1.0s						
NEW	Newport	37.95	334	P	P	13 37 06.0	+1.3
	baz=140,SNR=25						
KEBM	Edson Butte	37.97	322	*e*P	P	13 37 07.4	+2.4
	comp=Z,547nm,1.2s						
H04D	Lebanon	38.06	325	P	P	13 37 07.1	+1.5
	baz=129,SNR=10						
C09A	Chrisman Ranch	38.10	332	*e*P	P	13 37 07.8	+1.9
	comp=Z,95nm,0.8s						
F05D	White Salmon	38.27	328	P	P	13 37 10.1	+2.7
	baz=132,SNR=11						
COR	Corvallis	38.42	325	*e*P	P	13 37 10.4	+1.8
COR				*e*pP	pP	13 37 35.2	+1.0
COR	Corvallis	38.42	325	*e*P	P	13 37 10.4	+1.8
COR				*e**PP	pP	13 37 35.2	+1.0
I02D	Swisshome	38.43	324	P	P	13 37 10.8	+2.1
	baz=127,SNR=8.6						
G03D	McMinnville, O	38.79	325	P	P	13 37 13.8	+2.1
	baz=129,SNR=5.5						
LTY	Liberty	38.82	330	*e*P	P	13 37 13.6	+1.6
	comp=Z,73nm,1.0s						
B08A	Colville Reser	38.99	332	*e*P	P	13 37 14.8	+1.4
	comp=Z,65nm,0.8s						
LON	Longmire	39.04	328	*e*P	P	13 37 15.7	+1.9
	comp=Z,53nm,1.0s						
LON	Longmire	39.04	328	*e*P	P	13 37 15.7	+1.9
LON				pmax	pmax		
	comp=Z,53nm,1.0s						
F04D	Rainier, OR	39.21	327	P	P	13 37 17.5	+2.3
	baz=130						
E04D	Cinebar	39.29	328	P	P	13 37 17.8	+1.9
	baz=131,SNR=5.9						
C06D	Leavenworth	39.40	330	P	P	13 37 18.8	+2.0
	baz=135,SNR=6.3						
D05A	Enumclaw	39.42	329	*e*P	P	13 37 18.0	+1.0
	comp=Z,72nm,1.0s						
FFC	Flin Flon	39.48	352	*e*P	P	13 37 17.6	+0.3
	comp=Z,70nm,1.4s						
FFC	Flin Flon	39.48	352	*e*P	P	13 37 17.6	+0.3
FFC				pmax	pmax		
	comp=Z,70nm,1.4s						
D04E	Lakebay	39.81	328	P	P	13 37 21.8	+1.6
	baz=132						
D03D	Eldon	40.21	328	P	P	13 37 24.8	+1.3
	baz=132,SNR=16						
B05A	Bryant	40.22	330	P	P	13 37 24.5	+1.0
	baz=133,SNR=20						
LPAZ	La Paz	40.27	141	P	P	13 37 25.1	+0.1
	comp=Z,6.8nm,0.7s,baz=340,slow=6.3,SNR=22						
LPAZ				pP	pP	13 37 51.6	+1.0
	comp=Z,5.9nm,0.8s,baz=346,slow=7.1,SNR=4.2						
LPAZ				PcP	PcP	13 39 27.1	+0.3
	comp=Z,6.9nm,0.9s,baz=347,slow=12,SNR=17						
LPAZ	La Paz	40.27	141	*e*P	P	13 37 23.6	-1.4
NLWA	Neilton Lookou	40.51	328	*e*P	P	13 37 27.8	+1.8
	comp=Z,105nm,1.2s						
A04D	Lummi Island	40.82	330	P	P	13 37 30.1	+1.7
	baz=133,SNR=10						
MDP	Montagnes des	41.10	100	P	P	13 37 28.4	-2.8
	comp=Z,5.4nm,0.8s,baz=321,slow=6.5,SNR=2.6						
MDP				PcP	PcP	13 39 29.6	+0.7
	comp=Z,16nm,0.7s,baz=276,slow=4.3,SNR=7.8						
MDP				ScP	ScP	13 43 10.1	+1.6
	comp=Z,11nm,0.8s,baz=264,slow=3.9,SNR=6.0						
MNMC	Minye Minye	41.68	145	*e*P	P	13 37 36.7	+0.6
	comp=Z,58nm,1.0s						
PB11	IPOC Station P	42.16	146	*e*P	P	13 37 40.1	+0.2
	comp=Z,50nm,0.9s						
GO01	Chusmiza	42.34	145	*e*P	P	13 37 42.5	+0.8
PB01	IPOC Station P	43.30	147	*e*P	P	13 37 48.6	-0.4
	comp=Z,21nm,1.2s						
SCHQ	Schefferville	43.96	22	P	P	13 37 52.0	-1.8
	comp=Z,7.2nm,0.8s,baz=252,slow=11,SNR=4.1						
SCHQ				LR	LR	13 58 44.2	
	comp=Z,314nm,18.1s,baz=223,slow=40						
SCHQ	Schefferville	43.96	22	*e*P	P	13 37 52.1	-1.8
	comp=Z,31nm,1.4s						
SIV	San Ignacio	44.67	133	P	P	13 38 00.0	+0.1
	comp=Z,37nm,0.8s,baz=311,slow=7.8,SNR=156						
SIV				PcP	PcP	13 39 42.3	+1.5
	comp=Z,28nm,0.8s,baz=267,slow=1.6,SNR=12						
SIV				ScP	ScP	13 43 25.5	+2.7
	comp=Z,5.8nm,0.9s,baz=325,slow=4.0,SNR=7.7						
LVC	Limon Verde	44.90	148	P	P	13 38 02.9	+0.9
	comp=Z,19nm,0.9s,baz=290,slow=6.3,SNR=10						
LVC	Limon Verde	44.90	148	*e*P	P	13 38 02.4	+0.4
GO02	Mina Guanaco	46.69	150	*e*P	P	13 38 16.9	+0.8
GO02				*e*pP	pP	13 38 42.4	+0.2
GO03	Copiap	48.47	153	*e*P	P	13 38 29.5	0.0
SALV	Santo Antonio	48.52	129	*e*P	P	13 38 28.9	-1.1
SALV				*e*S	S	13 45 31.7	+8.6
YKA	Yellowknife Ar	49.07	347	P	P	13 38 34.1	+0.6
	comp=Z,45nm,0.7s,baz=151,slow=7.4,SNR=96						
YKA				pP	pP	13 38 58.8	-1.4
	comp=Z,12nm,0.7s,baz=147,slow=7.7,SNR=4.0						
YKA				PcP	PcP	13 39 56.4	+0.9

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      comp=Z,10nm,0.8s,baz=146,slow=3.2,SNR=8.7
YKB5  Yellowknife Ar    49.07 347  eP      P       13 38 34.1 +0.6
YKB5                               ePcP    PcP     13 39 56.4 +0.9
YKW3  Yellowknife Ar    49.14 347  eP      P       13 38 34.1 +0.1
      comp=Z,56nm,0.8s
LCO   Las Campanas      49.50 154  eP      P       13 38 36.9 -0.7
      comp=Z,52nm,1.0s
LCO   Las Campanas      49.50 154  eP      P       13 38 36.9 -0.7
LCO                                 pmax   pmax
      comp=Z,53nm,1.0s
CRAG  Craig             50.07 331  eP      P       13 38 42.3 +1.0
      comp=Z,63nm,1.0s
WRAK  Wrangell Islan    50.29 333  eP      P       13 38 45.0 +2.1
      comp=Z,20nm,0.8s
GO04  Tololo Observa    50.48 155  eP      P       13 38 44.3 -0.6
SMTB  Santa Maria do    51.28 115  eP      P       13 38 49.4 -1.6
AQDB  Aquidauana        51.45 133  eP      P       13 38 51.6 -0.4
JIS   Juneau Island     52.30 334  eP      P       13 39 00.4 +2.6
      comp=Z,120nm,1.6s
TAOE  Nuku Hiva Isla    52.62 246  eLR     LR      13 53 58.4
      comp=Z,582nm,31.9s
BESE  Bessie Mountai    52.68 334  eP      P       13 39 03.1 +2.3
      comp=Z,40nm,0.9s
CFA   Coronel Fontan    52.80 153   P      P       13 39 02.4 +0.4
      comp=Z,18nm,0.7s,baz=336,slow=7.0,SNR=39
CFA                                 pP     pP      13 39 30.1 +1.5
      comp=Z,17nm,0.9s,baz=332,slow=6.2,SNR=5.4
SKAG  Skagway           53.40 335  eP      P       13 39 07.8 +1.9
      comp=Z,28nm,0.9s
GO05  Huala             54.35 159  eP      P       13 39 13.3 +0.1
BDFB  Brasilia          54.37 123   P      P       13 39 12.7 -1.1
      comp=Z,62nm,0.9s,baz=291,slow=7.5,SNR=54
BDFB                                LR     LR      14 03 36.8
      comp=Z,103nm,21.0s,baz=268,slow=37
BDFB  Brasilia          54.37 123  eP      P       13 39 11.7 -2.1
      comp=Z,65nm,0.9s
BDFB                               eP      P       13 39 12.7 -1.1
CPUP  Villa Florida     54.41 140   P      P       13 39 12.8 -0.9
      comp=Z,27nm,1.1s,baz=330,slow=8.3,SNR=22
CPUP  Villa Florida     54.41 140  eP      P       13 39 12.7 -1.0
      comp=Z,42nm,1.3s
CPUP  Villa Florida     54.41 140  eP      P       13 39 12.7 -1.0
CPUP                                pmax   pmax
      comp=Z,42nm,1.3s
BCPM  Bancas Point      55.48 334  eP      P       13 39 22.7 +1.7
      comp=Z,69nm,1.1s
PCA   Pinnacle          55.82 334  eP      P       13 39 26.0 +2.5
      comp=Z,96nm,0.9s
RKT   Rikitea           56.31 228  eT      T       14 38 53.4
      comp=Z,4.7nm,0.3s
PTGB  Pitanga           56.75 134  eP      P       13 39 29.8 -0.9
BB19B Bebedouro         57.04 129  eP      P       13 39 32.8 +0.1
WAX   Waxell Ridge      57.12 333  eP      P       13 39 34.2 +1.5
      comp=Z,40nm,0.8s
BALM  Baldy             57.19 334  eP      P       13 39 35.1 +1.8
      comp=Z,71nm,0.9s
BALM  Baldy             57.19 334  eP      P       13 39 35.1 +1.8
BALM                                pmax   pmax
      comp=Z,71nm,0.9s
PMNB  Patos De Minas    57.21 125  eP      P       13 39 33.6 -0.4
TGL   Tana Glacier      57.26 334  eP      P       13 39 35.6 +1.9
      comp=Z,93nm,0.9s
CRQM  Cirque            57.39 333  eP      P       13 39 36.5 +1.7
      comp=Z,71nm,0.9s
FRTB  Fartura           57.65 131  eP      P       13 39 37.6 +0.7
HMT   Hamilton          57.68 333  eP      P       13 39 38.9 +2.3
      comp=Z,77nm,0.9s
RAGM  Ragged Mountai    57.89 333  eP      P       13 39 40.4 +2.3
      comp=Z,106nm,1.0s
EPYK  Eagle Plains      58.12 341   P      P       13 39 40.7 +1.1
      baz=128,SNR=27
ITAB  Concordia         58.37 137  eP      P       13 39 42.0 +0.2
EYAK  Cordova Ski Ar    58.44 333  eP      P       13 39 43.8 +2.0
      comp=Z,80nm,1.0s
INK   Inuvik            58.45 344  ePcP    PcP     13 40 31.8 +0.7
GO06  Curarrehue        58.65 161  eP      P       13 39 43.9 +0.2
EGAK  Eagle             58.69 338  eP      P       13 39 44.2 +0.8
      comp=Z,64nm,1.1s
MENT  Mentasta          58.70 336  eP      P       13 39 45.2 +1.6
      comp=Z,135nm,1.7s
FID   Port Fidalgo      58.85 333  eP      P       13 39 47.0 +2.3
      comp=Z,144nm,1.2s
GLI   Glacier Island    59.18 333  eP      P       13 39 48.6 +1.6
      comp=Z,40nm,1.1s
DOT   Dot Lake          59.18 336  eP      P       13 39 48.8 +1.8
      comp=Z,102nm,1.0s
SCRK  Sand Creek        59.32 337  eP      P       13 39 49.6 +1.6
      comp=Z,97nm,1.4s
PAX   Paxson            59.42 335  eP      P       13 39 50.1 +1.4
      comp=Z,97nm,0.8s
PAX   Paxson            59.42 335  eP      P       13 39 50.1 +1.4
PAX                                 pmax   pmax
      comp=Z,97nm,0.8s
HPAH  Hawaii Prepara    59.43 284  eP      P       13 39 50.8 +1.4
      comp=Z,138nm,0.9s
RIDG  Independent Ri    59.53 336  eP      P       13 39 51.0 +1.6
      comp=Z,149nm,1.0s
SCM   Sheep Creek Mo    59.68 334  eP      P       13 39 52.1 +1.7
      comp=Z,68nm,0.9s
SCM   Sheep Creek Mo    59.68 334  eP      P       13 39 52.2 +1.7
SCM                                 pmax   pmax
      comp=Z,68nm,0.9s
SEW   Seward            59.94 331  eP      P       13 39 53.7 +1.6
      comp=Z,90nm,1.4s
PLCA  Paso Flores       59.98 160   P      P       13 39 53.5 +0.7
      comp=Z,39nm,0.9s,baz=0.5,slow=8.1,SNR=62
PLCA                                pP     pP      13 40 22.9 +2.8
      comp=Z,24nm,1.0s,baz=356,slow=8.8,SNR=6.2
PLCA  Paso Flores       59.98 160  eP      P       13 39 52.7 -0.1
      comp=Z,57nm,1.0s
PLCA                               epP     pP      13 40 22.9 +2.8
PLCA  Paso Flores       59.98 160  eP      P       13 39 52.7 -0.1
PLCA                               e*PP    pP      13 40 22.9 +2.8
PLCA                                pmax   pmax
      comp=Z,57nm,1.0s
PLCA  Paso Flores       59.98 160  eP      P       13 39 53.5 +0.7
KNK   Knik Glacier      60.00 333  eP      P       13 39 54.1 +1.5
      comp=Z,58nm,1.0s
SML   Sawmill           60.11 333  eP      P       13 39 54.9 +1.6
      comp=Z,141nm,1.3s
SML   Sawmill           60.11 333  eP      P       13 39 54.9 +1.6
SML                                 pmax   pmax
      comp=Z,141nm,1.3s
PMR   Palmer            60.37 333  eP      P       13 39 56.3 +1.3
      comp=Z,80nm,1.2s
PMR   Palmer            60.37 333  eP      P       13 39 56.3 +1.3
PMR                                 pmax   pmax
      comp=Z,80nm,1.2s
RC01  Rabbit Creek A    60.44 332  eP      P       13 39 57.0 +1.4
      comp=Z,48nm,0.8s
BRLK  Bradley Lake      60.48 331  eP      P       13 39 57.5 +1.5
      comp=Z,250nm,1.6s
PARB  Paraibuna         60.54 129  eP      P       13 39 57.4 +0.5
RCBR  Riachuelo         60.55 106  eP      P       13 39 55.0 -2.1
      comp=Z,62nm,1.5s
RCBR  Riachuelo         60.55 106  eP      P       13 39 55.0 -2.1
RCBR                                pmax   pmax
      comp=Z,62nm,1.5s
PLTB  Pedras Altas      60.56 142  eP      P       13 39 56.8 -0.1
CNPM  China Poot        60.57 330  eP      P       13 39 58.2 +1.7
      comp=Z,37nm,1.0s
CNLB  Canela            60.60 138  eP      P       13 39 57.1 -0.1
PRP   Porcupine Dome    60.65 338  eP      P       13 39 58.5 +1.4
      comp=Z,140nm,0.8s
KDAK  Kodiak Island     60.66 328  eP      P       13 39 59.0 +1.9
      comp=Z,32nm,0.9s
KDAK  Kodiak Island     60.66 328  eP      P       13 39 59.0 +1.9
KDAK                                pmax   pmax
      comp=Z,32nm,0.9s
HDA   Harding Lake      60.66 336  eP      P       13 39 58.3 +1.2
      comp=Z,68nm,0.7s
HDA   Harding Lake      60.66 336   P      P       13 39 58.4 +1.4
      baz=117,SNR=74
ILAR  Eielson Array     60.81 337   P      P       13 39 59.2 +1.2
      comp=Z,73nm,0.9s,baz=121,slow=5.4,SNR=315
ILAR                                pP     pP      13 40 26.1 +0.5
      comp=Z,2.1nm,0.6s,baz=28,slow=19,SNR=2.1
ILAR                                LR     LR      14 08 07.3
      comp=Z,64nm,18.1s,baz=122,slow=38
ILAR  Eielson Array     60.81 337   P      P       13 39 59.3 +1.2
ILAR                                *PP    pP      13 40 26.1 +0.5
ILAR                                pmax   pmax
      comp=Z,69nm,0.9s
ILAR                                MLR    MLR
      comp=Z,64nm,18.1s
ILB   Eielson Array     60.81 337  eP      P       13 39 59.2 +1.2
OHAK  Old Harbor        60.86 327  eP      P       13 40 00.3 +1.9
      comp=Z,40nm,1.1s
RND   Reindeer          60.99 335  eP      P       13 40 01.1 +1.8
      comp=Z,280nm,1.0s
RND   Reindeer          60.99 335  eP      P       13 40 01.1 +1.8
RND                                 pmax   pmax
      comp=Z,280nm,1.0s
SUA   Susitna One       61.03 332  eP      P       13 40 01.5 +1.7
      comp=Z,72nm,0.8s
FYU   Fort Yukon        61.06 339  eP      P       13 40 01.1 +1.4
      comp=Z,56nm,1.0s
CCB   Clear Creek Bu    61.10 336  eP      P       13 40 00.6 +0.6
      comp=Z,41nm,0.9s
WRH   Wood River Hil    61.14 336  eP      P       13 40 00.9 +0.7
      comp=Z,33nm,0.8s
SII   Sitkinak Islan    61.14 326  eP      P       13 40 01.8 +1.4
      comp=Z,49nm,1.0s
MCK   McKinley          61.16 335  eP      P       13 40 01.4 +1.0
      comp=Z,100nm,0.9s
MCK   McKinley          61.16 335  eP      P       13 40 01.4 +1.0
MCK                                 pmax   pmax
      comp=Z,100nm,0.9s
POKR  Poker Plat Res    61.17 337   P      P       13 40 01.8 +1.3
      baz=116,SNR=17
COLA  College           61.22 337  eP      P       13 40 01.9 +1.1
      comp=Z,99nm,0.8s
COLA  College           61.22 337c iP      P       13 40 01.5 +0.7
COLA                                pmax   pmax
      comp=Z,92nm,0.9s
TCOL  CIGO, UAF Yank    61.23 337   P      P       13 40 01.8 +1.0
      baz=116,SNR=23
MDM   Murphy Dome       61.40 337  eP      P       13 40 02.3 +0.3
      comp=Z,27nm,0.8s
SJMB  Sao Joao De Ma    61.52 122  eP      P       13 40 03.0 -0.6
SPU   Mount Spurr       61.52 332  eP      P       13 40 04.2 +1.2
BWN   Browne            61.55 335  eP      P       13 40 04.1 +1.1
      comp=Z,378nm,0.8s
SKT   Skwentna          61.57 333  eP      P       13 40 04.3 +1.1
      comp=Z,184nm,1.4s
RSO   Redoubt South     61.60 331  eP      P       13 40 04.8 +1.1
VAS01 Vassouras-RJ      61.61 127  eP      P       13 40 04.5 +0.4
BSFB  Barra de Sao F    61.86 122  eP      P       13 40 05.7 -0.1
KTH   Kantishna Hill    61.90 335  eP      P       13 40 06.0 +0.5
      comp=Z,103nm,1.0s
BPAW  Bear Paw Mtn.     62.13 335  eP      P       13 40 08.0 +1.0
      comp=Z,104nm,1.0s
PPLA  Purkeypile        62.19 334  eP      P       13 40 08.3 +0.8
      comp=Z,116nm,1.3s
DUB01 Friburgo-RJ       62.33 126  eP      P       13 40 08.9  0.0
CAST  Castle Rocks      62.33 334  eP      P       13 40 08.9 +0.6
      comp=Z,108nm,1.1s
MLY   Manley            62.40 336  eP      P       13 40 10.0 +1.2
      comp=Z,133nm,0.9s
RIB01 Linhares ES       62.47 122  eP      P       13 40 09.2 -0.7
CAM01 Campos-RJ         62.75 125  eP      P       13 40 12.1 +0.4
ALF01 Guarapari-ES      62.86 124  eP      P       13 40 10.2 -2.2
COLD  Coldfoot          63.11 339  eP      P       13 40 15.5 +2.1
      comp=Z,48nm,1.0s
SVW2  Sparrevohn        63.12 331  eP      P       13 40 14.3 +0.8
      comp=Z,27nm,0.7s
CHGN  Chignik           63.36 325  eP      P       13 40 16.4 +1.2
      comp=Z,37nm,0.7s
TOLK  Toolik Lake Re    63.51 340  eP      P       13 40 17.7 +1.7
      comp=Z,111nm,0.7s
TOLK  Toolik Lake Re    63.51 340   P      P       13 40 17.8 +1.7
      baz=116,SNR=98
TTA   Tatalina          63.85 333  eP      P       13 40 19.1 +0.7
TTA   Tatalina          63.85 333  eP      P       13 40 19.1 +0.7
PPT2  Papeete2          64.78 242  eS      S       13 48 57.5  0.0
      comp=Z,98nm,25.0s
PPT2  Papeete2          64.78 242  eLR     LR      13 59 39.1
      comp=Z,534nm,31.8s
SUMG  Summit            64.83  16  eP      P       13 40 24.3 -0.7
      comp=Z,8.5nm,0.8s
SUMG  Summit            64.83  16  eP      P       13 40 24.3 -0.7
SUMG                                pmax   pmax
      comp=Z,9.0nm,0.8s
TBI   Tubuai            67.43 236  eLR     LR      14 01 06.2
      comp=Z,344nm,31.2s
UNV   Unalaska Valle    67.64 322  eP      P       13 40 44.4 +1.6
      comp=Z,203nm,1.7s
RDOG  Red Dog Mine      67.97 338  eP      P       13 40 45.5 +0.9
      comp=Z,71nm,1.2s
ANM   Nome              68.28 334  eP      P       13 40 47.6 +1.0
      comp=Z,16nm,0.8s
ANM   Nome              68.28 334  eP      P       13 40 47.6 +1.0
ANM                                 pmax   pmax
      comp=Z,17nm,0.8s
SPIA  Saint Paul Isl    69.93 326  eP      P       13 40 58.2 +1.3
      comp=Z,150nm,1.2s
ADK   Adak              73.82 320  eP      P       13 41 21.1 +0.8
      comp=Z,47nm,1.0s
ADK   Adak              73.82 320  eP      P       13 41 21.1 +0.8
ADK                                 pmax   pmax
      comp=Z,47nm,1.0s
PCAS  Casmilo, Conde    75.96  52  eP      P       13 41 31.5 -1.4
      comp=Z,52nm,1.4s
PNCL  Nicolau / Gran    76.24  54  eP      P       13 41 33.2 -1.3
MORF  Marmelete         76.28  55  eP      P       13 41 33.4 -1.4
MORF                                AMb    AMB     13 41 41.7
      comp=Z,45nm,1.6s
MORF  Marmelete         76.28  55  eP      P       13 41 33.4 -1.4
POLO  Lamas de Olo      76.28  51  eP      P       13 41 33.0 -1.8
      comp=Z,15nm,1.9s
PMTG  Montargil         76.32  53  eP      P       13 41 33.0 -1.9
      comp=Z,42nm,1.8s
MTE   Manteigas         76.63  52  eP      P       13 41 34.9 -1.8
      comp=Z,36nm,1.4s
MTE   Manteigas         76.63  52  eP      P       13 41 34.4 -2.4
      comp=Z,40nm,1.4s
PCBR  Castelo Branco    76.77  52  eP      P       13 41 36.1 -1.3
      comp=Z,42nm,1.6s
MVO   Moncorvo          76.89  51  eP      P       13 41 36.8 -1.4
      comp=Z,33nm,1.4s
PMRV  Marv??o           76.90  52  eP      P       13 41 36.3 -1.9
      comp=Z,28nm,1.7s
KBS   Kingsbay          77.49  11  eP      P       13 41 40.4 -0.4
KBS                                epP     pP      13 42 09.3 -0.2
KBS   Kingsbay          77.49  11d iP      P       13 41 43.7 +3.0
KBS                                 pmax   pmax
      comp=Z,57nm,0.8s
PAB   San Pablo         79.20  52  eP      P       13 41 49.1 -1.9
PAB                                epP     pP      13 42 18.0 -1.8
PAB   San Pablo         79.20  52  eP      P       13 41 49.1 -1.9
PAB                                e*PP    pP      13 42 18.0 -1.8
BILL  Bilibino          79.43 338  eP      P       13 41 52.8 +1.2
      comp=Z,166nm,1.1s
BILL  Bilibino          79.43 338c iP      P       13 41 53.3 +1.7
BILL                               i               13 42 03.3
BILL                               i *PP   pP      13 42 20.0 -0.4
BILL                               i               13 44 54.0
BILL                               i S     S       13 51 35.5 -7.7
BILL                                pmax   pmax
      comp=Z,182nm,1.2s
ESDC  Sonseca Array     79.46  52   P      P       13 41 50.7 -1.7
      comp=Z,3.8nm,0.8s,baz=291,slow=5.4,SNR=23
ESDC                                pP     pP      13 42 20.1 -1.1
      comp=Z,5.9nm,0.9s,baz=288,slow=5.4,SNR=6.7
ESDC                                LR     LR      14 11 12.6
      comp=Z,88nm,21.7s,baz=265,slow=31
ESLA  Sonseca Array     79.46  52  eP      P       13 41 50.3 -2.1
ESLA                               epP     pP      13 42 19.8 -1.4
KONO  Kongsberg         82.81  30deP       P       13 42 11.8 +2.2
KONO                                pmax   pmax
      comp=Z,12nm,1.2s
DOU   Dourbes           82.90  40 ⇓pP      pP      13 42 38.8 -0.6
NB2   NORSAR Subarra    83.11  28   P      P       13 42 11.0 -0.1
      comp=Z,12nm,0.9s,baz=289,slow=5.3
NB2   NORSAR Subarra    83.11  28   P      P       13 42 11.0 -0.1
      baz=289,slow=5.3
NB200 NORSAR Array S    83.11  28  eP      P       13 42 11.1 -0.1
NOA   NORSAR Array B    83.11  28   P      P       13 42 11.1 -0.1
      comp=Z,6.1nm,0.8s,baz=290,slow=5.2,SNR=20
NOA                                 pP     pP      13 42 39.4 -0.9
      comp=Z,5.5nm,0.9s,baz=290,slow=5.2,SNR=5.1
NOA                                 LR     LR      14 17 38.2
      comp=Z,73nm,20.4s,baz=285,slow=35
NB201 NORSAR Array S    83.14  28  eP      P       13 42 11.1 -0.2
BCLA  Clavier           83.25  40 ⇑P       P       13 42 11.8 -0.2
BCLA                                pP     pP      13 42 40.0 -1.1
      comp=Z,26nm,1.4s
NC405 NORSAR Array S    83.31  28  eP      P       13 42 11.7 -0.5
      comp=Z,27nm,1.0s
NC602 NORSAR Array S    83.36  29  eP      P       13 42 12.0 -0.4
MEM   Membach           83.63  39 ⇑pP      pP      13 42 43.2 +0.2
WLF   Walferdange       83.99  40 ⇓pP      pP      13 42 44.4 -0.6
      comp=Z,17nm,1.3s
ARCES ARCESS Array B    84.80  18   P      P       13 42 19.9 +0.4
      comp=Z,3.9nm,0.5s,baz=299,slow=3.8,SNR=31
ARCES                               pP     pP      13 42 47.7 -1.0
      comp=Z,12nm,1.0s,baz=302,slow=5.6,SNR=6.0
ARE0  ARCESS Array S    84.80  18  eP      P       13 42 19.6  0.0
      comp=Z,1.2nm,1.1s
ECH   Echery            85.06  41  eP      P       13 42 19.4 -2.0
ECH                                epP     pP      13 42 49.7 -0.8
ECH   Echery            85.06  41  eP      P       13 42 19.4 -2.0
ECH                                e*PP    pP      13 42 49.7 -0.8
BNI   Bardonecchia      85.72  44  eP      P       13 42 23.5 -1.4
BNI                                epP     pP      13 42 53.7 -0.3
SENIN Lac Senin/Sane    85.73  43  eP      P       13 42 23.0 -1.9
SENIN                              epP     pP      13 42 53.9 -0.3
BFO   Black Forest      85.77  41  eP      P       13 42 23.4 -1.5
BFO                                epP     pP      13 42 53.1 -0.9
BFO   Black Forest      85.77  41  eP      P       13 42 23.4 -1.5
BFO                                e*PP    pP      13 42 53.1 -0.9
TIC   Toumodi           86.38  84  eP      P       13 42 26.1 -2.4
LIC   Lamto             86.49  85  eP      P       13 42 26.5 -2.5
      comp=Z,95nm,1.0s
DBIC  Dimbokro          86.53  84   P      P       13 42 27.5 -1.7
      comp=Z,14nm,0.9s,baz=274,slow=4.6,SNR=10
DBIC                                LR     LR      14 19 24.1
      comp=Z,54nm,18.9s,baz=280,slow=34
DBIC  Dimbokro          86.53  84  eP      P       13 42 26.7 -2.5
      comp=Z,20nm,1.0s
SEY   Seymchan          86.71 335c iP      P       13 42 30.6 +1.5
SEY                                i *PP   pP      13 43 01.1 +2.7
KIC   Kosan Boka        86.73  84  eP      P       13 42 28.1 -2.1
      comp=Z,52nm,0.9s
TUE   Stuetta           87.04  43  eP      P       13 42 30.1 -1.2
      comp=Z,19nm,1.1s
DAVA  Damuels           87.10  42   PcP    P       13 42 31.5 -0.1
      comp=Z,8.8nm,1.0s
DAVA                               epP     pP      13 43 01.2 +0.4
      comp=Z,24nm,1.1s
CLL   Collm             87.56  37  eP      P       13 42 26.0 -7.5
CLL   Collm             87.56  37  eP      P       13 42 35.0 +1.5
CLL                                i pP    pP      13 43 02.8 +0.1
      comp=Z,19nm,1.4s
FUORN Ofenpass-Fuorn    87.58  42  eP      P       13 42 32.1 -1.9
FUORN                              epP     pP      13 43 02.7 -0.6
RETA  Reutte            87.59  41  ePcP    P       13 42 33.2 -0.6
RETA                               epP     pP      13 43 03.6 +0.4
      comp=Z,16nm,1.0s
FETA  Feichten          87.74  42  ePcP    P       13 42 33.4 -1.3
      comp=Z,4.2nm,0.9s
FETA                               epP     pP      13 43 04.2 +0.3
      comp=Z,10nm,0.8s
MOTA  Moosalm           87.86  41  ePcP    P       13 42 34.6 -0.6
      comp=Z,1.4nm,0.4s
MOTA                               epP     pP      13 43 04.7 +0.2
      comp=Z,3.3nm,0.6s
SQTA  Sankt Quirin      87.97  41  epP     pP      13 43 05.4 +0.4
      comp=Z,12nm,1.3s
PET   Petropavlovsk     88.10 325  eP      P       13 42 37.8 +1.8
PET                                 pmax   pmax
      comp=Z,17nm,1.5s
WTTA  Wattenberg        88.23  41  epP     pP      13 43 04.5 -1.8
      comp=Z,2.9nm,0.6s
BRG   Berggiesshubel    88.28  37  eP      P       13 42 38.6 +1.7
      comp=Z,4.9nm,0.9s
BRG   Berggiesshubel    88.28  37  eP      P       13 42 38.6 +1.7
BRG                                 pmax   pmax
      comp=Z,5.0nm,0.9s
TIXI  Tiksi             88.32 348  eP      P       13 42 36.5 -0.1
      comp=Z,72nm,0.9s
TIXI  Tiksi             88.32 348c iP      P       13 42 36.7 +0.1
TIXI                                pmax   pmax
      comp=Z,82nm,0.9s
LVZ   Lovozero          88.46  17⇑eP       P       13 42 36.7 -0.7
LVZ                                 pmax   pmax
      comp=Z,9.0nm,1.1s
PEA1  Petropavlovsk-    88.59 325  eP      P       13 42 40.2 +1.9
PETK  Petropavlovsk-    88.59 325   P      P       13 42 40.2 +1.9
      comp=Z,3.0nm,0.7s,baz=72,slow=8.6,SNR=9.6
PETK                                pP     pP      13 43 07.8  0.0
      comp=Z,5.6nm,1.0s,baz=67,slow=11,SNR=3.6
PETK  Petropavlovsk-    88.59 325   P      P       13 42 40.2 +1.9
PETK                                *PP    pP      13 43 07.8  0.0
PETK                                pmax   pmax
      comp=Z,4.0nm,0.9s
KHC   Kasperske Hory    88.73  39⇓iP       P       13 42 39.6 +0.5
KHC                                 pmax   pmax
      comp=Z,11nm,1.1s
KHC   Kasperske Hory    88.73  39  eP      P       13 42 39.3 +0.2
KHC                                epP     pP      13 43 08.2 -0.3
GERES GERESS Array B    88.92  39   P      P       13 42 39.0 -1.0
      comp=Z,0.8nm,0.3s,baz=299,slow=2.7,SNR=5.6
GERES                               pP     pP      13 43 09.3 -0.2
      comp=Z,1.7nm,0.3s,baz=266,slow=4.4,SNR=4.2
GERES                               LR     LR      14 20 56.5
      comp=Z,86nm,19.8s,baz=298,slow=34
PRU   Pruhonice         88.98  38  eP      P       13 42 41.1 +0.9
PRU                                e               13 43 09.4
PRU   Pruhonice         88.98  38  eP      P       13 42 41.1 +0.9
PRU                                epP     pP      13 43 09.4 -0.1
ABTA  Abfaltersbach     88.98  41  ePcP    P       13 42 40.4  0.0
      comp=Z,6.6nm,1.0s
ABTA                               epP     pP      13 43 09.9 +0.2
      comp=Z,8.4nm,1.0s
MA2   Magadan           89.05 333  eP      P       13 42 39.5 -0.8
      comp=Z,61nm,1.3s
MA2                                epP     pP      13 43 08.4 -1.4
MA2   Magadan           89.05 333c iP      P       13 42 41.7 +1.4
MA2                                 pmax   pmax
      comp=Z,54nm,1.3s
FIA0  FINESS Array S    89.36  25  eP      P       13 42 40.4 -1.3
FIA0  FINESS Array S    89.36  25  eP      P       13 42 40.4 -1.3
FINES FINESS Array B    89.36  25   P      P       13 42 40.4 -1.3
      comp=Z,2.6nm,0.9s,baz=343,slow=2.0,SNR=5.4
FINES                               pP     pP      13 43 09.6 -1.5
      comp=Z,6.8nm,1.1s,baz=242,slow=4.1,SNR=4.0
UPC   Upice             89.63  37  eP      P       13 42 45.2 +2.0
UPC                                e               13 43 13.0
UPC   Upice             89.63  37  eP      P       13 42 45.2 +2.0
UPC                                epP     pP      13 43 13.0 +0.4
DPC   Dobruska-Polom    89.87  37  eP      P       13 42 46.1 +1.7
DPC                                e               13 43 14.2
DPC   Dobruska-Polom    89.87  37  eP      P       13 42 46.1 +1.7
DPC                                epP     pP      13 43 14.2 +0.4
KRUC  Moravsky          90.46  38  eP      P       13 42 48.9 +1.8
KRUC                               e               13 43 16.2
VRAC  Vranov            90.47  38  eP      P       13 42 48.7 +1.5
VRAC                               e               13 43 16.5
MORC  Moravsky Berou    90.83  37  eP      P       13 42 49.2 +0.3
TOA1  Torodi Ar. Sit    90.99  76  eP      P       13 42 47.5 -2.8
TORD  Torodi Ar. Bea    91.00  76   P      P       13 42 47.5 -2.8
      comp=Z,1.0nm,0.7s,baz=309,slow=7.5,SNR=4.9
TORD                                LR     LR      14 20 37.6
      comp=Z,104nm,20.0s,baz=305,slow=34
MODS  Modra-Piesok      91.28  39  eP      P       13 42 52.8 +1.8
MODS                               e               13 43 20.3
MODS  Modra-Piesok      91.28  39  eP      P       13 42 52.8 +1.8
MODS                               epP     pP      13 43 20.3 -0.1
VYHS  Vyhne             92.16  38  eP      P       13 42 57.6 +2.6
VYHS                               e               13 43 25.1
VYHS  Vyhne             92.16  38  eP      P       13 42 57.6 +2.6
VYHS                               epP     pP      13 43 25.1 +0.7
YAK   Yakutsk           95.45 341  eP      P       13 43 09.7 -0.1
      comp=Z,26nm,1.0s
YAK   Yakutsk           95.45 341  eP      P       13 43 10.1 +0.3
YAK                                 pmax   pmax
      comp=Z,22nm,0.9s
YAK                                 pmax   pmax
      comp=N,6.0nm,1.1s
YAK                                 pmax   pmax
      comp=E,6.0nm,1.1s
PRGR  Permogore         96.22  18  eP      P       13 43 12.9 -0.4
PRGR                                pmax   pmax
      comp=Z,8.0nm,0.4s
OBN   Obninsk           97.59  26   LR     LR      14 27 08.3
      comp=Z,39nm,20.0s,baz=6.5,slow=35
OBN   Obninsk           97.59  26  i P     Pdif    13 43 19.6 -0.1
OBN                                 pmax   pmax
      comp=Z,7.0nm,0.9s
BR101 Keskin Array S   105.80  40  ePKiKP  PKiKP   13 48 09.2 +0.2
BRTR  Keskin Array B   105.80  40   PKiKP  PKiKP   13 48 09.2 +0.2
      comp=Z,2.0nm,0.8s,baz=226,slow=0.9,SNR=8.6
MJAR  Matsushiro Arr   108.94 318   PKKPbc PKKPbc  13 59 23.9 +0.6
      comp=Z,2.9nm,1.0s,baz=203,slow=3.8,SNR=4.8
ZAA1  Zalesovo Array   110.54   1  ePdif   Pdif    13 44 18.7 +1.4
ZALV  Zalesovo Beam    110.55   1   Pdiff  Pdif    13 44 18.7 +1.4
      comp=Z,0.3nm,0.4s,baz=79,slow=3.1,SNR=2.4
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KURK	**Kurchatov**	**113.41**	**6c**	iPKIKP	**PKiKP**	**13 48 23.7**	**+0.9**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURBB	**Kurchatov Arra**	**113.49**	**6**	PKKPbc	PKKPbc	13 59 06.2	-2.8
	comp=Z,0.4nm,0.8s,baz=187,slow=2.0,SNR=8.8						
SONA0	**Songino Array**	**114.33**	**346**	ePKiKP	**PKiKP**	**13 48 23.8**	**-1.1**
SONM	**Songino Array**	**114.33**	**346**	PKiKP	**PKiKP**	**13 48 23.8**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=332,slow=1.2,SNR=8.8						
KSRS	**Korea Array**	**114.49**	**325**	PKP	PKPdf	13 48 25.8	+0.5
	comp=Z,1.8nm,0.7s,baz=354,slow=1.0,SNR=8.5						
KS15	**Wonju Array Si**	**114.52**	**325**	ePKiKP	PKPdf	13 48 25.8	+0.4
MAKZ	**Makanchi**	**117.56**	**4**	ePKPdf	**PKPdf**	**13 48 30.1**	**-0.8**
MAKZ	**Makanchi**	**117.56**	**4**	ePKIKP	**PKPdf**	**13 48 30.1**	**-0.8**
MK32	**Makanchi Array**	**117.59**	**4**	ePKPdf	**PKPdf**	**13 48 30.9**	**-0.1**
MKAR	**Makanchi Array**	**117.59**	**4**	PKP	**PKPdf**	**13 48 30.9**	**-0.1**
	comp=Z,6.2nm,0.9s,baz=355,slow=2.6,SNR=15						
MKAR	**Makanchi Array**	**117.59**	**4c**	iPKIKP	**PKPdf**	**13 48 31.0**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SUR	**Sutherland**	**118.30**	**119**	PKP	**PKiKP**	**13 48 33.5**	**+0.6**
	comp=Z,6.8nm,0.8s,baz=284,slow=6.5,SNR=3.7						
SYO	**Syowa Base**	**119.15**	**162⇑**	eP	**Pdif**	**13 44 43.0**	**-12**
HHC	**Hu-ho-hao-te**	**119.20**	**339**	PKP	**PKiKP**	**13 48 36.5**	**+2.1**
GEYT	**Alibeck**	**120.14**	**26**	PKP	**PKiKP**	**13 48 36.7**	**+0.4**
	comp=Z,15nm,0.7s,baz=270,slow=2.9,SNR=32						
GYA0B	**ALIBECK ARRAY**	**120.14**	**26**	ePKPdf	**PKPdf**	**13 48 35.4**	**-0.8**
WMQ	**Urumqi**	**120.70**	**359**	ePKP	**PKiKP**	**13 48 37.3**	**0.0**
WMQ				LR	LR		
	comp=Z,97nm,29.0s						
WMQ				LR	LR		
	comp=Z,190nm,28.9s						
WMQ				LR	LR		
	comp=Z,210nm,27.5s						
AAK	**Ala-Archa**	**120.78**	**11**	ePKPdf	**PKPdf**	**13 48 37.2**	**-0.3**
AAK	**Ala-Archa**	**120.78**	**11d**	iPKIKP	**PKiKP**	**13 48 38.8**	**+1.2**
AAK				pmax	pmax		
	comp=Z,17nm,1.7s						
BOSA	**Boshof**	**122.05**	**114**	PKP	**PKiKP**	**13 48 40.9**	**+0.6**
	comp=Z,28nm,1.0s,baz=259,slow=2.0,SNR=23						
BOSA				pPKP	**pPKPdf**	**13 49 10.8**	**-0.3**
	comp=Z,13nm,1.1s,baz=24,slow=0.2,SNR=3.5						
BOSA	**Boshof**	**122.05**	**114**	ePKPdf	**PKPdf**	**13 48 39.6**	**-0.6**
LBTB	**Lobatse**	**122.21**	**110**	PKP	**PKiKP**	**13 48 41.5**	**+0.8**
	comp=Z,17nm,1.0s,baz=265,slow=3.8,SNR=12						
LBTB	**Lobatse**	**122.21**	**110**	ePKPdf	**PKPdf**	**13 48 40.4**	**-0.1**
LBTB	**Lobatse**	**122.21**	**110**	PKIKP	**PKiKP**	**13 48 41.5**	**+0.8**
LBTB				pmax	pmax		
	comp=Z,14nm,0.9s						
MBAR	**Mbarara**	**122.61**	**80**	PKP	**PKiKP**	**13 48 42.3**	**+0.4**
	comp=Z,6.2nm,0.2s,baz=346,slow=8.0,SNR=9.8						
GAR	**Garm**	**123.36**	**15**	ePKPdf	**PKPdf**	**13 48 42.4**	**-0.1**
GAR	**Garm**	**123.36**	**15**	ePKIKP	**PKPdf**	**13 48 42.4**	**-0.1**
CHGR	**Chuyangaron**	**123.37**	**17**	ePKPdf	**PKPdf**	**13 48 40.5**	**-1.9**
NJ2	**Nanjing**	**123.44**	**327**	ePKP	**PKPdf**	**13 48 42.0**	**-0.6**
LSZ	**Lusaka**	**123.59**	**98**	PKP	**PKiKP**	**13 48 44.4**	**+0.7**
	comp=Z,12nm,0.9s,baz=302,slow=1.5,SNR=18						
LSZ				pPKP	**pPKPdf**	**13 49 14.1**	**-0.2**
	comp=Z,2.6nm,0.4s,baz=330,slow=2.7,SNR=3.1						
RAYN	**Ar Rayn**	**123.77**	**47**	ePKPdf	**PKiKP**	**13 48 43.5**	**-0.3**
RAYN	**Ar Rayn**	**123.77**	**47**	PKiKP	**PKiKP**	**13 48 43.8**	**0.0**
RAYN	**Ar Rayn**	**123.77**	**47**	ePKIKP	**PKiKP**	**13 48 43.5**	**-0.3**
GTA	**Gaotai**	**123.80**	**348**	PKP	**PKiKP**	**13 48 44.3**	**+0.7**
GTA				sPKP		13 49 21.0	
GTA				LR	LR		
	comp=Z,43nm,19.4s						
GTA				LR	LR		
	comp=Z,68nm,19.4s						
GTA				LR	LR		
	comp=Z,94nm,20.1s						
KSH	**Kashi**	**124.07**	**10**	PKP	**PKiKP**	**13 48 46.0**	**+1.9**
KSH				PP	PP	13 50 36.0	+8.1
KSH				AMB	AMB		
	comp=Z,78nm,4.1s						
MATP	**Matopo**	**124.53**	**104**	PKP	**PKiKP**	**13 48 45.8**	**+0.3**
	comp=Z,14nm,0.8s,baz=265,slow=1.3,SNR=24						
MATP				pPKP	**pPKPdf**	**13 49 16.0**	**0.0**
	comp=Z,7.8nm,0.9s,baz=191,slow=4.7,SNR=4.2						
MAW	**Mawson**	**125.90**	**169**	PKP	**PKiKP**	**13 48 46.6**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=173,slow=3.2,SNR=11						
MAW	**Mawson**	**125.90**	**169**	ePKPdf	**PKiKP**	**13 48 46.8**	**+0.2**
LZH	**Lanzhou**	**126.00**	**343**	ePKP	**PKiKP**	**13 48 50.0**	**+1.9**
LZH				sPKP		13 49 29.3	
LZH				SKKS		13 57 27.5	
LZH				SS	**SS**	**14 07 35.8**	**+2.6**
LZH				LR	LR		
	comp=Z,140nm,15.7s						
LZH				LR	LR		
	comp=Z,160nm,14.1s						
LZH				LR	LR		
	comp=Z,170nm,16.8s						
XAN	**Xi'an**	**126.21**	**337**	ePKPdf	**PKPdf**	**13 48 48.1**	**+0.1**
XAN	**Xi'an**	**126.21**	**337**	PKP	**PKiKP**	**13 48 48.8**	**+0.4**
XAN	**Xi'an**	**126.21**	**337**	ePKIKP	**PKPdf**	**13 48 48.1**	**+0.1**
CASY	**Casey**	**127.14**	**192**	ePKPdf	**PKiKP**	**13 48 49.8**	**+0.7**
KBL	**Kabul**	**127.17**	**19**	ePKPdf	**PKPdf**	**13 48 49.4**	**-0.6**
KBL	**Kabul**	**127.17**	**19**	ePKIKP	**PKPdf**	**13 48 49.4**	**-0.6**
STKA	**Stephens Creek**	**127.97**	**242**	PKP	**PKiKP**	**13 48 52.0**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=69,slow=1.8,SNR=16						
STKA	**Stephens Creek**	**127.97**	**242**	ePKPdf	**PKPdf**	**13 48 51.7**	**+0.4**
STKA	**Stephens Creek**	**127.97**	**242**	PKIKP	**PKiKP**	**13 48 52.0**	**+0.1**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ATD	**Arta Tunnel**	**128.65**	**61**	PKP	**PKiKP**	**13 48 55.1**	**+1.4**
	comp=Z,18nm,0.7s,baz=274,slow=5.5,SNR=7.4						
SHME	**Shamm**	**128.78**	**36**	PKiKP	**PKiKP**	**13 48 53.4**	**-0.4**
KMBO	**Kilima Mbogo**	**128.95**	**78**	PKP	**PKiKP**	**13 48 55.7**	**+1.1**
	comp=Z,2.2nm,0.5s,baz=107,slow=0.8,SNR=4.5						
KMBO	**Kilima Mbogo**	**128.95**	**78**	ePKPdf	**PKPdf**	**13 48 52.2**	**-1.7**
NIL	**Nilore**	**129.16**	**15**	ePKPdf	**PKPdf**	**13 48 53.0**	**-0.6**
NIL	**Nilore**	**129.16**	**15**	ePKIKP	**PKPdf**	**13 48 53.0**	**-0.6**
ENH	**Enshi**	**129.32**	**335**	ePKPdf	**PKPdf**	**13 48 54.1**	**+0.1**
NAZ	**Nazwa, Dubai**	**129.32**	**37**	PKiKP	**PKiKP**	**13 48 54.4**	**-0.4**
MSFE	**Esma-Masafi**	**129.32**	**37**	i PKiKP	**PKPdf**	**13 48 54.2**	**+0.1**
	SNR=14						
ASUD	**Al Ashush, Dub**	**129.40**	**38**	PKiKP	**PKiKP**	**13 48 55.2**	**+0.2**
MDH	**Madha**	**129.45**	**37**	PKiKP	**PKiKP**	**13 48 55.2**	**+0.1**
UOSS	**Minazif**	**129.67**	**37**	ePKPdf	**PKPdf**	**13 48 53.6**	**-1.1**
UOSS	**Minazif**	**129.67**	**37**	PKiKP	**PKPdf**	**13 48 54.3**	**-0.4**
HATD	**Hatta, Dubai**	**129.72**	**37**	i PKiKP	**PKPdf**	**13 48 54.8**	**-0.1**
	SNR=9.3						
ALNE	**Al Ain**	**130.08**	**38**	i PKiKP	**PKPdf**	**13 48 55.7**	**+0.2**
	SNR=6.8						
CD2	**Chengdu**	**130.84**	**341**	PKP	**PKPdf**	**13 48 55.5**	**-1.4**
GYA	**Guiyang**	**133.84**	**335**	ePKP	**PKiKP**	**13 49 04.3**	**+0.3**
GYA				sPKP		13 49 40.3	
GYA				AMB	AMB		
	comp=Z,140nm,7.7s						
LSA	**Lhasa**	**134.61**	**355**	PKP	**PKiKP**	**13 49 06.0**	**0.0**
LSA	**Lhasa**	**134.61**	**355**	PKiKP	**PKiKP**	**13 49 06.6**	**+0.6**
WRAB	**Tennant Creek**	**134.76**	**257⇑**	iPKIKP	**PKPdf**	**13 49 05.0**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,12nm,1.7s						
WR1	**Warramunga Arr**	**134.77**	**257**	ePKPdf	**PKPdf**	**13 49 04.9**	**+0.5**
WRA	**Warramunga Arr**	**134.77**	**257**	PKhKP	PKPpre	13 48 56.4	
	comp=Z,2.1nm,0.8s,baz=116,slow=1.6,SNR=7.0						
WRA				PKP	**PKPdf**	**13 49 04.9**	**+0.5**
	comp=Z,5.2nm,0.8s,baz=96,slow=0.9,SNR=8.8						
WRA				pPKP	pPKPdf	13 49 34.4	-0.6
	comp=Z,2.7nm,0.7s,baz=71,slow=2.2,SNR=2.7						
WRA				SKP		13 52 33.1	
	comp=Z,1.9nm,0.8s,baz=74,slow=4.1,SNR=5.1						
WRA				PKKP	**PKKPdf**	**13 58 48.8**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=275,slow=2.8,SNR=4.6						
AS31	**Alice Springs**	**135.22**	**252**	ePKPdf	**PKPdf**	**13 49 05.0**	**-0.2**
AS31				eSKPbc	**SKPbc**	**13 52 26.9**	**+0.9**
ASAR	**Alice Springs**	**135.22**	**252**	PKhKP	PKPpre	13 48 53.6	
	comp=Z,0.8nm,0.8s,baz=97,slow=3.4,SNR=6.8						
ASAR				PKP	**PKPdf**	**13 49 05.0**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=95,slow=2.1,SNR=12						
ASAR				pPKP	pPKPdf	13 49 35.7	-0.1
	comp=Z,2.0nm,0.9s,baz=85,slow=2.4,SNR=2.2						
ASAR				SKPbc	**SKPbc**	**13 52 26.9**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=94,slow=3.1,SNR=4.3						
ASAR				PKKP	**PKKPdf**	**13 58 47.8**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=304,slow=1.4,SNR=8.5						
ASAR				SKKPbc	**SKKPbc**	**14 01 31.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=277,slow=3.6,SNR=9.3						
DANN	**Dangsing**	**136.04**	**4**	eP	**PKPdf**	**13 49 07.8**	**+0.8**
	comp=Z,100nm,0.8s						
GKN	**Gorkha**	**136.44**	**3**	eP	**PKPdf**	**13 49 08.0**	**+0.4**
	comp=Z,68nm,0.9s						
KMI	**Kunming**	**136.52**	**339**	PKP	**PKiKP**	**13 49 10.8**	**+1.1**
KOLN	**Koldanda**	**136.60**	**4**	eP	**PKPdf**	**13 49 08.4**	**+0.4**
	comp=Z,71nm,1.1s						
KKN	**Kakani**	**136.67**	**2**	eP	**PKPdf**	**13 49 08.6**	**+0.5**
	comp=Z,60nm,1.0s						
JIRN	**Jiri**	**136.83**	**1**	eP	**PKPdf**	**13 49 08.8**	**+0.2**
DMN	**Daman**	**136.85**	**2**	eP	**PKPdf**	**13 49 09.0**	**+0.5**
	comp=Z,76nm,1.1s						
PKIN	**Phulchoki**	**136.89**	**2**	eP	**PKPdf**	**13 49 08.6**	**0.0**
PKI	**Pulchoki**	**136.90**	**2**	eP	**PKPdf**	**13 49 08.6**	**-0.1**
SHL	**Shillong**	**138.63**	**353**	eP	PKPdf	13 49 02.5	-9.2
SLVN	**Son La**	**139.53**	**335**	ePKPdf	**PKPdf**	**13 49 12.7**	**-0.6**
OPO	**Ambohidratompo**	**142.01**	**100**	PKP	**PKPdf**	**13 49 16.4**	**-1.5**
	comp=Z,8.0nm,0.8s,baz=252,slow=3.7,SNR=6.3						
OPO				SKPbc	**SKiKP**	**13 52 45.8**	**-1.1**
	comp=Z,6.5nm,0.9s,baz=281,slow=2.1,SNR=5.5						
NONG	**Nongkai**	**142.77**	**334**	P	**PKPdf**	**13 49 15.7**	**-3.4**
	comp=Z,0.5nm,0.8s						
PANO	**Nakornpanom**	**142.92**	**331**	P	**PKPdf**	**13 49 18.7**	**-0.7**
CMMT	**Chiang Mai**	**143.65**	**341**	P	PKPbc	13 49 18.8	+0.5
	comp=Z,5.4nm,1.3s						
CHTO	**Chiang Mai**	**143.65**	**341**	ePKPpre	PKPpre	13 49 16.2	
CHTO	**Chiang Mai**	**143.65**	**341**	ePKHKP	PKPpre	13 49 16.2	
CM31	**Chiang Mai Arr**	**143.98**	**340**	ePKPdf	PKPbc	13 49 19.9	+0.5
CMAR	**Chiang Mai Arr**	**143.98**	**340**	PKP	PKPbc	13 49 19.9	+0.6
	comp=Z,19nm,0.9s,baz=342,slow=3.9,SNR=61						
CMAR				SKPbc	**SKiKP**	**13 52 51.9**	**+1.0**
	comp=Z,3.3nm,1.1s,baz=325,slow=1.8,SNR=4.1						
CMAR	**Chiang Mai Arr**	**143.98**	**340**	PKIKP	PKPbc	13 49 20.0	+0.7
CMAR				pmax	pmax		
	comp=Z,18nm,1.0s						
UTTA	**Uttaradit**	**144.09**	**337**	P	**PKPdf**	**13 49 20.9**	**-0.5**
MHMT	**Maesarieng**	**144.56**	**342**	P	**PKiKP**	**13 49 31.7**	**+5.7**
DLV	**T Lat**	**145.15**	**321**	ePKPbc	**PKPbc**	**13 49 21.8**	**-1.6**
HYB	**Hyderabad**	**146.02**	**14**	i PKP	**PKPdf**	**13 49 25.0**	**+0.2**
HYB				epPKP	sPKPab	13 50 17.0	+8.8
MSEY	**Mahe Island**	**147.23**	**74**	PKPab	**PKPbc**	**13 49 29.0**	**-0.4**
MSEY	**Mahe Island**	**147.23**	**74**	i PKP2	**PKiKP**	**13 49 31.7**	**+0.1**
PSA00	**Pilbara Seismi**	**148.30**	**254**	ePKPbc	**PKPbc**	**13 49 31.8**	**-0.1**
KSM	**Kuching**	**151.21**	**304**	ePKPbc	**PKPbc**	**13 49 38.1**	**-1.2**
MRIV	**Mauritius Mete**	**151.70**	**104**	ePKPbc	**PKPbc**	**13 49 38.5**	**-1.7**
PSI	**Prapat**	**158.05**	**326**	ePKPdf	**PKPdf**	**13 49 41.7**	**-1.2**
PSI				ePKPab	**PKPab**	**13 50 16.6**	**0.0**
PSI	**Prapat**	**158.05**	**326**	ePKIKP	**PKPdf**	**13 49 41.7**	**-1.2**
PSI				e		13 50 16.6	

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*ISK **30** 13:39:51.9, 38°.36N×38°.12E, h14^{km}, ML1.8/4*
*DDA **30** 13:39:52.8, 38°.34N×38°.07E, h6^{km}±3^{km}, ML2.7*
ISC 30 13:39:52.3±1.1**, 38°.35N**±0°.04×**38°.11E**±0°.04**, h9**^{km}±9^{km}**, n9, σ0^{s}.80**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.16**	**250**	i P	**Pg**	**13 39 55.5**	**-0.2**
AKCD				i S	**Sg**	**13 39 58.3**	**+0.2**
DARE	**Darende-Malaty**	**0.54**	**294**	PG	**Pg**	**13 40 03.0**	**+0.2**
DARE				SG	**Sb**	**13 40 11.2**	**-0.7**
HEKM	**Malatya_Hekimh**	**0.54**	**347**	i P	**Pb**	**13 40 04.1**	**0.0**
HEKM				i S	**Sn**	**13 40 15.1**	**-0.6**
HEKM				IAML_P			
	comp=Z,2μm,0.1s						
ELZG	**Elazig**	**0.70**	**78**	i P	**Pg**	**13 40 06.2**	**+0.3**
ELZG				i S	**Sn**	**13 40 18.5**	**-1.2**
ELZG				IAML_P			
	comp=Z,1μm,0.2s						
SVRC	**Sivrice-ELAZID**	**0.94**	**88**	PG	**Pg**	**13 40 10.4**	**0.0**
KEMA	**Kemaliye**	**0.96**	**18**	i P	**Pn**	**13 40 11.9**	**-0.2**
KEMA				i S	**Sn**	**13 40 28.1**	**+2.0**
KEMA				IAML_P			
	comp=Z,261nm,0.1s						
URFA	**Urfa**	**1.07**	**148**	PG	**Pg**	**13 40 12.8**	**0.0**
URFA				SG	**Sn**	**13 40 28.4**	**-0.2**
GZT	**Gaziantep**	**1.08**	**204**	i P	**Pn**	**13 40 14.2**	**+0.4**
GZT				i S	**Sn**	**13 40 29.8**	**+0.8**
GZT				IAML_P			
	comp=Z,2μm,0.2s						
KMRS	**Kahramanmaras**	**1.28**	**229**	PN	**Pn**	**13 40 16.2**	**-0.2**

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*IDC **30** 13:45:39.0±1.4, 55°.88S×25°.85W, h0^{km}, mb4.2/2, mb1 4.2/2, mb1mx3.8/25, mbtmp4.1/2, Error ellipse: s-maj=82.8km s-min=53.5km az=100.0*
*ISCJB **30** 13:45:39.3±0.7, 55°.9S±0°.1×26°.0W±0°.2, h10^{km}, mb4.0/1, Error ellipse: s-maj=21.3km s-min=11.1km az=142.0*
*NEIC **30** 13:45:40.4±0.3, 55°.93S×25°.98W, h10^{km}, mb4.7/4, Error ellipse: s-maj=12.6km s-min=8.0km az=41.0*
ISC 30 13:45:40.5±0.8**, 55°.9S**±0°.1×**26°.0W**±0°.2**, h10**^{km}**, n29, σ0^{s}.97**/28**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.21**	**280**	ePn	**Pn**	**13 47 11.3**	**-0.8**
VNA1	**Neumayer--Stat**	**16.73**	**159**	P	**P**	**13 49 36.8**	**-0.1**
VNA3	**Neumayer Olymp**	**16.96**	**162**	P	**P**	**13 49 43.1**	**+3.7**
SNAA	**Sanae**	**18.65**	**157**	P	**P**	**13 49 57.7**	**-0.5**
SNAA	**Sanae**	**18.65**	**157**	eP	**P**	**13 49 57.6**	**-0.6**
	5.9nm,1.0s						
QSPA	**South Pole Qui**	**34.38**	**180**	eP	**P**	**13 52 26.8**	**-0.7**
	11nm,0.6s						
GO02	**Mina Guanaco**	**43.98**	**296**	eP	**P**	**13 53 48.9**	**+0.7**
	14nm,0.7s						
GO01	**Chusmiza**	**48.40**	**300**	eP	**P**	**13 54 24.5**	**+1.3**
	28nm,1.6s						
MNMC	**Minye Minye**	**49.05**	**300**	eP	**P**	**13 54 29.2**	**+1.3**
	60nm,2.0s						
LPAZ	**La Paz**	**50.80**	**304**	eP	**P**	**13 54 42.2**	**+0.5**
	3.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.58**	**28**	P	**P**	**13 57 07.9**	**+0.1**
	1.2nm,0.6s,baz=192,slow=6.7,SNR=6.1						
TOA1	**Torodi Ar. Sit**	**72.59**	**28**	eP	**P**	**13 57 07.9**	**+0.1**
ASAR	**Alice Springs**	**98.97**	**161**	P	Pdif	13 59 21.4	+0.1
	0.4nm,0.9s,baz=186,slow=3.8,SNR=3.3						
DOT	**Dot Lake**	**149.02**	**310**	ePKPbc	**PKPbc**	**14 05 27.7**	**+0.4**
SCRK	**Sand Creek**	**149.07**	**311**	ePKPbc	**PKPbc**	**14 05 27.7**	**+0.2**
RIDG	**Independent Ri**	**149.38**	**310**	ePKPbc	**PKPbc**	**14 05 28.6**	**+0.3**
PAX	**Paxson**	**149.46**	**308**	ePKPbc	**PKPbc**	**14 05 28.9**	**+0.4**
SONA0	**Songino Array**	**150.07**	**85**	ePKPbc	**PKPbc**	**14 05 29.5**	**-1.0**
SONM	**Songino Array**	**150.07**	**85**	PKPbc	**PKPbc**	**14 05 29.5**	**-1.0**
	0.5nm,0.6s,baz=207,slow=1.6,SNR=3.2						
ILAR	**Eielson Array**	**150.47**	**312**	PKPbc	**PKPbc**	**14 05 30.8**	**0.0**
	3.1nm,0.9s,baz=121,slow=2.3,SNR=23						
ILB	**Eielson Array**	**150.47**	**312**	ePKPbc	**PKPbc**	**14 05 30.8**	**0.0**
CCB	**Clear Creek Bu**	**150.84**	**311**	ePKPbc	**PKPbc**	**14 05 30.9**	**-0.7**
WRH	**Wood River Hil**	**150.93**	**311**	ePKPbc	**PKPbc**	**14 05 31.8**	**0.0**
RND	**Reindeer**	**151.05**	**309**	ePKPbc	**PKiKP**	**14 05 32.5**	**-0.3**
MCK	**McKinley**	**151.15**	**309**	ePKPbc	**PKPbc**	**14 05 32.4**	**0.0**
SKT	**Skwentna**	**151.96**	**305**	ePKPbc	**PKPbc**	**14 05 33.4**	**-0.9**
TOLK	**Toolik Lake Re**	**151.96**	**319**	ePKPbc	**PKPbc**	**14 05 34.1**	**-0.1**
KTH	**Kantishna Hill**	**151.99**	**309**	ePKPbc	**PKiKP**	**14 05 35.0**	**+0.2**
BPAW	**Bear Paw Mtn.**	**152.11**	**310**	ePKPbc	**PKPbc**	**14 05 34.1**	**-0.5**

UCR 30 13:59:00.7±3.6**, 9°.79N**×**85°.23W, h106**^{km}±46^{km}**, MW3.5, 4C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**0.57**	**28⇑**	iP	Pn	13 59 19.6	+1.9
JTS				eS	Sn	13 59 31.1	+0.6
JTS	**Las Juntas de**	**0.57**	**28⇑**	iP	Pn	13 59 19.6	+1.9
JTS				eS	Sn	13 59 31.2	+0.8
PLVR	**Palo Verde**	**0.57**	**348**	eP	Pn	13 59 22.6	+4.7
PLVR				eS	Sn	13 59 35.9	+5.1
ARE1	**Arenal 1**	**0.83**	**37**	eP	Pn	13 59 19.5	-0.5
ARE1				eS	Sn	13 59 33.5	-1.0
ARE1	**Arenal 1**	**0.83**	**37⇑**	iP	Pn	13 59 19.5	-0.5
CEDE	**Laguna Cedeo**	**0.86**	**36**	eP	Pn	13 59 19.9	-0.4
CEDE				eS	Sn	13 59 33.2	-1.9
BUEV	**Buena Vista**	**1.02**	**350**	eP	Pn	13 59 23.2	+1.2
BUEV				eS	Sn	13 59 39.1	+1.2
LCR2	**La Lucha 2**	**1.21**	**92**	eP	Pn	13 59 25.9	+1.8
LCR2				eS	Sn	13 59 42.2	+0.5
LCR2	**La Lucha 2**	**1.21**	**92⇑**	eP	Pn	13 59 25.8	+1.7
LCR2				eS	Sn	13 59 42.2	+0.5

IDC 30 14:23:21.3±9.2**, 15°.77S**×**167°.88E, h157**^{km}±61^{km}**, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.5**/33**, mbtmp4.3**/5**, Error ellipse: s-maj=107.4km s-min=55.6km az=71.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.41**	**192**	P	Pn	14 24 54.1	+0.5
	3.5nm,0.3s,baz=35,slow=7.0,SNR=94						
DZM				S	Sn	14 26 05.4	-0.7
	0.8nm,0.3s,baz=301,slow=19,SNR=2.9						
CTA	**Charters Tower**	**21.01**	**255**	P	P	14 27 53.9	+1.2
	4.7nm,0.6s,baz=76,slow=12,SNR=8.7						
STKA	**Stephens Creek**	**28.79**	**231**	P	P	14 29 05.3	+0.8
	5.7nm,0.6s,baz=44,slow=10.0,SNR=20						
WRA	**Warramunga Arr**	**32.16**	**258**	P	P	14 29 33.2	-1.1
	0.8nm,0.4s,baz=79,slow=7.5,SNR=29						
ASAR	**Alice Springs**	**32.87**	**251**	P	P	14 29 40.1	-0.4
	2.8nm,0.5s,baz=80,slow=9.0,SNR=77						

PGC 30 14:33:16.7, 61°.59N×**141°.25W, h3**^{km}**, ML2.3**/12**, 220km Wnw of Haines Jct., Yt Southern Alaska, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK2	**White River**	**0.27**	**45**	P	Pg	14 33 21.7	-0.4
YUK2				S	Sg	14 33 25.2	-0.4
YUK3	**Moose Creek**	**0.42**	**64**	P	Pg	14 33 24.1	-0.7
YUK3				S	Sg	14 33 29.7	-0.6
YUK1	**Sand Pete Hill**	**0.66**	**31**	P	Pg	14 33 28.5	-0.9
YUK1				S	Sg	14 33 37.5	-0.4
PTPK	**Patty Peak**	**0.71**	**236**	P	Pg	14 33 29.6	-0.8
PTPK				S	Sg	14 33 38.1	-1.5
BALM	**Baldy**	**0.77**	**224**	P	Pg	14 33 30.1	-1.3
BALM				S	Sg	14 33 40.5	-0.9
BVCY	**Beaver Creek**	**0.84**	**12**	P	Pg	14 33 32.2	-0.7
BVCY				S	Sg	14 33 42.8	-1.1
KIAG	**Kiagna River**	**0.86**	**219**	P	Pg	14 33 31.5	-1.7
KIAG				S	Sg	14 33 42.7	-1.7
GRNC	**Granite Creek**	**0.90**	**196**	P	Pg	14 33 32.3	-1.6
GRNC				S	Sg	14 33 44.4	-1.1
TABL	**Table Mountain**	**1.16**	**177**	P	Pg	14 33 37.1	-1.8
TABL				S	Sg	14 33 52.8	-1.1
YUK4	**Talbot Arm**	**1.27**	**100**	P	Pg	14 33 39.5	-1.6
YUK4				S	Sg	14 33 56.6	-1.0
MESA	**MESA**	**1.46**	**194**	P	Pn	14 33 43.3	-0.9
MESA				S	Sg	14 34 02.3	-1.3
SAMH	**Samovar Hills**	**1.49**	**171**	P	Pn	14 33 43.6	-0.8
SAMH				S	Sb	14 34 03.8	-0.5
YUK6	**Outpost Mounta**	**1.54**	**114**	P	Pn	14 33 43.7	-1.6
YUK6				S	Sn	14 34 04.8	-1.1
PCA	**Pinnacle**	**1.58**	**162**	P	Pn	14 33 45.0	-0.6
PCA				S	Sn	14 34 06.3	-0.2
YUK5	**Granite Creek**	**1.70**	**104**	P	Pn	14 33 46.7	-0.7
YUK5				S	Sn	14 34 08.1	-1.5
YUK7	**Dusty Glacier**	**1.85**	**124**	P	Pn	14 33 49.9	+0.4
HYT	**Haines Junctio**	**1.97**	**111**	P	Pn	14 33 50.6	-0.5
HYT				S	Sn	14 34 15.7	-0.6
PNL	**Peninsula**	**2.13**	**154**	P	Pn	14 33 53.4	+0.1
PNL				Sg	Sb	14 34 23.8	+1.0
PAX	**Paxson**	**2.41**	**307**	Pg	Pn	14 33 58.8	+1.7
PAX				Sg	Sb	14 34 31.8	+0.9
DOT	**Dot Lake**	**2.44**	**329**	P	Pn	14 33 56.5	-0.9
DOT				Sg	Sb	14 34 33.0	+1.4
DAWY	**Dawson**	**2.62**	**18**	P	Pn	14 33 59.3	-0.7
DAWY				Sg	Sb	14 34 37.3	+0.3
PLBC	**Pleasant Camp**	**3.23**	**129**	Sg	Sg	14 34 57.5	-2.8
WHY	**Whitehorse**	**3.23**	**104**	Pg	Pb	14 34 13.7	-1.0
WHY				Sg	Sb	14 34 56.3	+1.9

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*NIED **30** 14:36:00, 22°.30N×123°.70E, h14^{km}, Mw4.0 Best double couple: M$_0$1.11000×10^{15} NP1:φ$_s$238.00000°, δ79.00000°, λ173.00000°. NP2:φ$_s$329.00000°, δ83.00000°, λ12.00000°.*
*IDC **30** 14:36:56.6±0.9, 22°.11N×124°.02E, h0^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.8/43, mbtmp4.0/12, ML3.8/3, Error ellipse: s-maj=27.4km s-min=15.3km az=85.0*
*NEIC **30** 14:36:57.4±2.9, 22°.22N×123°.76E, h15^{km}±6^{km}, mb4.2/5, Error ellipse: s-maj=14.7km s-min=10.9km az=151.0*
*ISCJB **30** 14:36:57.6±0.3, 22°.24N±0°.02×123°.76E±0°.04, h33^{km}, mb3.8/11, Error ellipse: s-maj=5.8km s-min=2.6km az=17.9*
*JMA **30** 14:36:58.3±0.5, 22°.28N×123°.71E, h53^{km}, M4.3*
*MAN **30** 14:37:07.0, 21°.50N×123°.19E, h7^{km}, mb4.9, ML3.8, MS3.9*
ISC 30 14:37:00.0±0.7**, 22°.17N**±0°.04×**123°.82E**±0°.06**, h35**^{km}**, n55, σ2^{s}.69**/74**, mb3.8**/11**, 1D, Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.88**	**360**	P	**Pn**	**14 37 27.7**	**-1.9**
HATJ				S	**Sn**	**14 37 48.4**	**-3.7**
JKRS	**Kuro-shima**	**2.06**	**5**	P	**Pn**	**14 37 30.4**	**-1.8**
JKRS				eS	**Sn**	**14 37 53.5**	**-3.2**
IRIF	**Iriomote-Funau**	**2.15**	**358**	P	**Pn**	**14 37 32.1**	**-1.3**
IRIF				S	**Sn**	**14 37 54.8**	**-4.1**
JIJ	**Ishigaki jima**	**2.20**	**8**	P	**Pn**	**14 37 31.9**	**-2.2**
JIJ				S	**Sn**	**14 37 55.2**	**-4.9**
YOJ	**Yonaguni jima**	**2.40**	**342**	ePn	**Pn**	**14 37 35.3**	**-1.5**
YOJ	**Yonaguni jima**	**2.40**	**342**	P	**Pn**	**14 37 35.3**	**-1.5**
YOJ				S	**Sn**	**14 38 00.4**	**-4.5**
JYNG	**Yonagunijimaku**	**2.41**	**341**	P	**Pn**	**14 37 35.5**	**-1.4**
JYNG				eS	**Sn**	**14 38 01.1**	**-4.0**
BBP	**Basco**	**2.44**	**225**	eP	**Pn**	**14 37 33.5**	**-3.8**
BBP				eS	Sn	14 37 56.5	-9.5
JISG	**Ishigakijimahi**	**2.45**	**11**	P	**Pn**	**14 37 35.0**	**-2.5**
JISG				eS	**Sn**	**14 38 02.3**	**-3.9**
JTJ	**Tarama**	**2.59**	**18**	P	**Pn**	**14 37 38.4**	**-1.0**
JTJ				eS	**Sn**	**14 38 06.2**	**-3.5**
TWG	**Pinlang**	**2.62**	**285**	ePn	**Pn**	**14 37 36.6**	**-3.2**
YULB	**Yu-li**	**2.62**	**298**	ePn	**Pn**	**14 37 37.0**	**-2.9**
NACB	**Ninganchiao**	**2.85**	**315**	ePn	**Pn**	**14 37 40.3**	**-2.8**
JMJ2	**Miyako jima3**	**2.91**	**28**	P	**Pn**	**14 37 42.2**	**-1.6**
JMJ2				S	**Sn**	**14 38 15.0**	**-2.6**
JIRB	**Irabujima**	**2.92**	**25**	P	**Pn**	**14 37 42.3**	**-1.7**
JIRB				S	**Sn**	**14 38 14.8**	**-3.1**
JOGS	**Gusukube**	**2.96**	**29**	P	**Pn**	**14 37 42.8**	**-1.7**
JOGS				eS	**Sn**	**14 38 16.8**	**-2.1**
JIKM	**Ikemajima**	**3.04**	**25**	P	**Pn**	**14 37 44.7**	**-0.9**
JIKM				S	**Sn**	**14 38 18.7**	**-2.0**
SSLB	**Suanglung**	**3.09**	**302**	ePn	**Pn**	**14 37 44.3**	**-2.0**
TPUB	**Ta-pu**	**3.15**	**292**	ePn	**Pn**	**14 37 46.1**	**-1.0**
YHNB	**Yeheng**	**3.35**	**318**	ePn	**Pn**	**14 37 48.1**	**-1.8**
TATO	**Taipei**	**3.52**	**323**	ePn	**Pn**	**14 37 51.3**	**-0.9**
SGCP	**Mt. Cagua**	**4.25**	**203**	eP	**Pn**	**14 38 01.2**	**-1.1**
SGCP				eS	**Sn**	**14 38 47.4**	**-3.2**
CVP	**Callao Caves**	**4.82**	**203⇓**	eP	**Pn**	**14 38 10.2**	**+0.1**
PALP	**Palanan**	**5.25**	**195**	eP	**Pn**	**14 38 15.4**	**-0.6**
PALP				eS	**Sn**	**14 39 10.5**	**-4.8**
ABRA	**Dolores**	**5.36**	**214**	eP	**Pn**	**14 38 18.1**	**+0.5**
ABRA				eS	**Sn**	**14 39 17.6**	**-0.5**
KNMB	**Chin-men Tao**	**5.49**	**296**	ePn	**Pn**	**14 38 17.2**	**-2.1**
CAUP	**Cauayan**	**5.53**	**200**	eP	**Pn**	**14 38 21.2**	**+1.3**
CAUP				eS	**Sn**	**14 39 17.0**	**-5.2**
JOW	**Kunigami**	**6.17**	**40**	Pn	**Pn**	**14 38 26.1**	**-2.5**
	5.1nm,0.3s,baz=170,slow=13,SNR=132						
JOW				Sn	**Sn**	**14 39 32.2**	**-5.7**
	2.2nm,0.3s,baz=86,slow=21,SNR=4.6						
JOW	**Kunigami**	**6.17**	**40**	ePn	**Pn**	**14 38 25.8**	**-2.8**
SMPP	**San Manuel, Pa**	**6.68**	**207**	eP	**Pn**	**14 38 36.2**	**+0.5**
SMPP				eS	**Sn**	**14 39 46.7**	**-4.0**
BALP	**Baler**	**6.74**	**199**	eP	**Pn**	**14 38 38.0**	**+1.6**
POLP	**Polilio Island**	**7.61**	**194**	eP	**Pn**	**14 38 47.5**	**-1.0**
POLP				eS	**Sn**	**14 40 08.3**	**-5.3**
TGY	**Tagaytay City**	**8.48**	**199**	Pn	**Pn**	**14 39 01.5**	**+1.1**
	57nm,0.3s,baz=90,slow=2.5,SNR=10						
JNU	**Nakatsue**	**12.57**	**28**	Pn	**Pn**	**14 39 53.5**	**-2.9**
	0.5nm,0.3s,baz=260,slow=3.1,SNR=5.3						
JNU	**Nakatsue**	**12.57**	**28**	ePn	**Pn**	**14 39 53.9**	**-2.5**
KS15	**Wonju Array Si**	**15.62**	**12**	ePn	**Pn**	**14 40 36.6**	**-0.9**
	68nm,1.8s						
KSRS	**Korea Array**	**15.64**	**12**	Pn	**Pn**	**14 40 36.5**	**-1.3**
	0.6nm,0.3s,baz=191,slow=13,SNR=24						
MAJO	**Matsushiro**	**19.00**	**38**	eP	**Pn**	**14 41 19.8**	**+0.2**
	12nm,0.7s						
MJAR	**Matsushiro Arr**	**19.00**	**38**	P	**Pn**	**14 41 20.8**	**+1.2**
	0.1nm,0.3s,baz=230,slow=9.5,SNR=23						
MJB9	**Matsu-Tunnel**	**19.00**	**38**	eP	**Pn**	**14 41 19.6**	**-0.1**
	13nm,0.7s						
SBUM	**Sibu**	**22.61**	**211**	eP	**P**	**14 41 58.0**	**+0.1**
	3.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**22.98**	**15**	P	**P**	**14 42 04.6**	**+3.1**
	2.7nm,0.8s,baz=185,slow=9.7,SNR=5.8						
KLR	**Kul'dur**	**27.73**	**11**	P	**P**	**14 42 45.8**	**+0.7**
	2.7nm,0.9s,baz=199,slow=7.7,SNR=7.4						
SONA0	**Songino Array**	**29.18**	**336**	eP	**P**	**14 43 02.3**	**+4.2**
SONM	**Songino Array**	**29.18**	**336**	P	**P**	**14 43 02.3**	**+4.2**
	0.6nm,0.5s,baz=142,slow=9.2,SNR=3.2						
MK32	**Makanchi Array**	**41.46**	**317**	eP	**P**	**14 44 45.0**	**+1.5**
MKAR	**Makanchi Array**	**41.46**	**317**	P	**P**	**14 44 45.0**	**+1.5**
	1.3nm,0.8s,baz=102,slow=10,SNR=7.2						

WR1	**Warramunga Arr**	**43.10**	**165**	*e*P	**P**	**14 44 57.5**	**+0.5**
WRA	**Warramunga Arr**	**43.10**	**165**	P	**P**	**14 44 57.5**	**+0.5**
	1.8nm,0.7s,baz=348,slow=12,SNR=9.0						
ZALV	**Zalesovo Beam**	**43.24**	**327**	P	**P**	**14 45 00.4**	**+2.7**
	1.2nm,0.5s,baz=124,slow=7.9,SNR=4.4						
ZAA1	**Zalesovo Array**	**43.24**	**327**	*e*P	**P**	**14 45 00.4**	**+2.7**
KURBB	**Kurchatov Arra**	**45.20**	**320**	P	**P**	**14 45 17.1**	**+3.6**
	0.6nm,0.6s,baz=114,slow=7.8,SNR=5.1						
AS31	**Alice Springs**	**46.61**	**167**	*e*P	**P**	**14 45 25.9**	**+1.0**
	2.7nm,1.7s						
ASAR	**Alice Springs**	**46.61**	**167**	P	**P**	**14 45 25.9**	**+1.0**
	0.5nm,0.5s,baz=348,slow=8.5,SNR=15						
BVAR	**Borovoye Array**	**50.76**	**321**	P	**P**	**14 45 59.6**	**+3.2**
	0.6nm,0.6s,baz=99,slow=9.5,SNR=3.6						

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*NEIC **30** 15:01:25.0±0.0, 15.°73N×96.°52W, h40^{km}, MD4.1(MEX), After MEX.*

MEX 30 15:01:25.0±0.6, 15.°73N×96.°52W, h40^{km}±6^{km}, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PANG	**Puerto Angel**	**0.07**	**142**	*e*P	Pn	15 01 30.1	-1.4
PANG				*e*S	Sn	15 01 34.4	-1.6
HUIG	**Huatulco**	**0.40**	**84**	*e*Pn	Pn	15 01 32.9	-1.5
HUIG				*e*Sn	Sn	15 01 39.2	-1.9
HUIG	**Huatulco**	**0.40**	**84**	*e*P	Pn	15 01 32.9	-1.5
HUIG				*i* S	Sn	15 01 39.2	-1.9
VHO	**Vista Hermosa**	**1.35**	**351**	*e*Pn	Pn	15 01 46.0	-1.7
VHO				*e*Sn	Sn	15 02 02.1	-2.4
VHO	**Vista Hermosa**	**1.35**	**351**	*e*P	Pn	15 01 46.0	-1.7
VHO				*e*S	Sn	15 02 02.1	-2.4
TLIG	**Tlapa**	**2.68**	**313**	*i* P	Pn	15 02 04.5	-1.3
TLIG				*i* S	Sn	15 02 35.5	-1.6
TEIG	**Tepich**	**9.03**	**59**	*e*Pn	Pn	15 03 30.5	-2.4
WMOK	**Wichita Mounta**	**19.04**	**354**	*e*P	P	15 05 41.9	-1.9

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*BEO **30** 15:01:47.4±1.3, 41.°20N×27.°60E, h0^{km}, ML2.9/4*
*ISK **30** 15:01:50.7, 40.°32N×25.°87E, h7^{km}, ML2.8/15*
*ISCJB **30** 15:01:50.7±0.4, 40.°33N±0.°02×25.°84E±0.°03, h7^{km}±3^{km}, Error ellipse: s-maj=3.5km s-min=2.6km az=150.9*
*ATH **30** 15:01:50.6, 40.°33N×25.°80E, h24^{km}±3^{km}, ML2.4/7, Error ellipse: s-maj=3.1km s-min=1.0km az=306.0*
*DDA **30** 15:01:50.8, 40.°30N×25.°90E, h22^{km}±1^{km}, ML3.3*
*THE **30** 15:01:51.8, 40.°34N×25.°78E, h16^{km}, ML2.3/7, Error ellipse: s-maj=1.1km s-min=0.6km az=264.0*

ISC 30 15:01:50.7±0.8, 40.°33N±0.°02×25.°85E±0.°02, h13^{km}±6^{km}, n60, σ0.^{s}90/88, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.14**	**165**	PG	**Pg**	**15 01 54.4**	**+0.1**
GADA				SG	**Sg**	**15 01 56.3**	**-0.5**
SMTH	**Samothraki Isl**	**0.28**	**300**	P	**Pg**	**15 01 57.0**	**+0.4**
SMTH				S	**Sg**	**15 02 01.2**	**+0.6**
	1µm,0.1s						
SMTH	**Samothraki Isl**	**0.28**	**300**	P	**Pg**	**15 01 57.0**	**+0.4**
SMTH				S	**Sg**	**15 02 00.6**	**-0.1**
SMTH				AML	AML	15 02 01.3	
	comp=E,2135µm,0.2s						
SMTH				AML	AML	15 02 01.5	
	comp=N,3414µm,0.1s						
ENEZ	**Enez**	**0.47**	**29**	PG	**Pb**	**15 02 00.6**	**-0.2**
BOZC	**Bozcaada**	**0.51**	**162**	PG	**Pg**	**15 02 00.9**	**+0.1**
BOZC	**Bozcaada**	**0.51**	**162**	*i* P	**Pb**	**15 02 01.6**	**+0.1**
BOZC				*i* S	**Sg**	**15 02 07.9**	**+0.3**
BOZC				IAML_P			
	comp=Z,6µm,0.1s						
ALN	**Alexandroupoli**	**0.59**	**15**	PG	**Pb**	**15 02 02.6**	**-0.3**
ALN				SG	**Sb**	**15 02 11.3**	**+0.3**
ALN	**Alexandroupoli**	**0.59**	**15**	P	**Pb**	**15 02 02.5**	**-0.3**
ALN	**Alexandroupoli**	**0.59**	**15**	P	**Pb**	**15 02 02.5**	**-0.3**
ALN				S	**Sb**	**15 02 10.9**	**-0.1**
ALN				AML	AML	15 02 15.1	
	comp=E,242µm,0.3s						
ALN				AML	AML	15 02 15.9	
	comp=N,273µm,0.3s						
EZN	**Ezine**	**0.62**	**144**	PG	**Pg**	**15 02 02.4**	**-0.4**
LIA	**Limnos Island**	**0.67**	**230**	P	**Pg**	**15 02 03.6**	**-0.2**
LIA				S	**Sb**	**15 02 13.3**	**0.0**
	comp=N,358nm,0.3s						
LIA	**Limnos Island**	**0.67**	**230**	P	**Pg**	**15 02 03.5**	**-0.2**
LIA				S	**Sg**	**15 02 12.8**	**+0.2**
LIA				AML	AML	15 02 16.3	
	comp=N,696µm,0.2s						
LIA				AML	AML	15 02 16.5	
	comp=E,636µm,0.2s						
LPK	**Lapseki**	**0.70**	**86**	PG	**Pb**	**15 02 04.5**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.79**	**138**	*i* P	**Pb**	**15 02 06.7**	**+0.3**
BAYC				*i* S	**Sb**	**15 02 17.3**	**+0.4**
KESN	**Edirne-Kesan**	**0.80**	**52**	*i* P	**Pg**	**15 02 06.2**	**-0.2**
KESN				*i* S	**Sn**	**15 02 18.8**	**-1.2**
RDO	**Rodhopi**	**0.85**	**344**	PG	**Pg**	**15 02 07.2**	**0.0**
RDO	**Rodhopi**	**0.85**	**344**	P	**Pg**	**15 02 07.2**	**0.0**
RDO				S	**Sb**	**15 02 19.3**	**+0.7**
	comp=E,188nm,0.2s						
RDO	**Rodhopi**	**0.85**	**344**	P	**Pg**	**15 02 07.3**	**0.0**
RDO				S	**Sb**	**15 02 18.5**	**-0.1**
RDO				AML	AML	15 02 21.2	
	comp=N,288µm,0.2s						
RDO				AML	AML	15 02 22.0	
	comp=E,457µm,0.2s						
GPNR	**Gulpinar-Canak**	**0.90**	**166**	PG	**Pg**	**15 02 08.2**	**+0.1**
THAS	**Thassos island**	**0.91**	**288**	P	**Pb**	**15 02 07.9**	**-0.3**
THAS				S	**Sb**	**15 02 19.3**	**-0.9**
	comp=E,148nm,0.3s						
THAS	**Thassos island**	**0.91**	**288**	P	**Pb**	**15 02 08.1**	**-0.2**
THAS				S	**Sg**	**15 02 20.5**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.07**	**70**	PG	**Pn**	**15 02 11.2**	**-0.2**
SART	**Tekirdag**	**1.07**	**70**	*i* P	**Pg**	**15 02 11.9**	**+0.5**
SART				*i* S	**Sn**	**15 02 26.4**	**+0.1**
SIGR	**SIGRI**	**1.12**	**180**	PN	**Pg**	**15 02 12.2**	**0.0**
SIGR	**SIGRI**	**1.12**	**180**	P	**Pg**	**15 02 12.1**	**-0.1**
SIGR				S	**Sn**	**15 02 27.4**	**+0.2**
	comp=E,665nm,0.5s						
SIGR	**SIGRI**	**1.12**	**180**	P	**Pn**	**15 02 11.9**	**0.0**
SIGR				S	**Sg**	**15 02 26.7**	**0.0**
SIGR				AML	AML	15 02 27.9	
	comp=N,1723µm,0.6s						
SIGR				AML	AML	15 02 28.3	
	comp=E,971µm,0.4s						
PRK	**Paraskevi**	**1.13**	**163**	P	**Pg**	**15 02 12.8**	**+0.3**
PRK				S	**Sn**	**15 02 28.2**	**+0.7**
	comp=E,1µm,0.7s						
PRK	**Paraskevi**	**1.13**	**163**	P	**Pg**	**15 02 13.3**	**+0.9**
PRK				S	**Sn**	**15 02 27.9**	**+0.4**
PRK				AML	AML	15 02 29.1	
	comp=E,1191µm,0.5s						
PRK				AML	AML	15 02 30.0	
	comp=N,1488µm,0.5s						
AYVA	**Ayvalik**	**1.21**	**147**	*i* P	**Pb**	**15 02 13.5**	**+0.1**
AYVA				*i* S	**Sb**	**15 02 28.3**	**-0.5**
AYVA				IAML_P			
	comp=Z,2µm,0.2s						
KAVA	**Kavala**	**1.22**	**304**	P	**Pn**	**15 02 13.1**	**-0.3**
KAVA				S	**Sb**	**15 02 28.6**	**-0.5**
	comp=Z,58nm,0.3s						
KAVA	**Kavala**	**1.22**	**304**	P	**Pb**	**15 02 13.4**	**-0.1**
KAVA				S	**Sb**	**15 02 29.2**	**+0.1**
KAVA				AML	AML	15 02 32.3	
	comp=N,180µm,0.1s						
KAVA				AML	AML	15 02 34.1	
	comp=E,191µm,0.3s						
MRMT	**Marmara Adasi**	**1.36**	**78**	PN	**Pn**	**15 02 15.4**	**0.0**
KDZ	**Kurdzhali**	**1.36**	**346**	PN	**Pg**	**15 02 16.7**	**-0.2**
OUR	**Ouranopolis**	**1.43**	**271**	P	**Pn**	**15 02 15.7**	**-0.6**
OUR	**Ouranopolis**	**1.43**	**271**	P	**Pn**	**15 02 15.7**	**-0.6**
GONE	**Gonen-Balikesi**	**1.43**	**101**	PN	**Pb**	**15 02 17.2**	**0.0**
TKR	**Tekirdag**	**1.44**	**62**	PN	**Pg**	**15 02 18.2**	**-0.2**
DKL	**Dikili**	**1.50**	**147**	PN	**Pb**	**15 02 17.8**	**-0.5**
EDC	**Edincik**	**1.54**	**89**	PN	**Pb**	**15 02 18.8**	**-0.2**
ZEDA	**zmir-Bergama**	**1.66**	**145**	*i* P	**Pb**	**15 02 20.6**	**-0.4**
ZEDA				*i* S	**Sg**	**15 02 43.4**	**-0.6**
ZEDA				IAML_P			
	comp=Z,1µm,0.1s						
EDRB	**Edirne**	**1.66**	**24**	PN	**Pb**	**15 02 20.9**	**-0.2**
BALB	**Balikesir**	**1.70**	**113**	PN	**Pb**	**15 02 21.1**	**-0.7**
STEP	**BALIKESIR_Sava**	**1.72**	**123**	*i* P	**Pb**	**15 02 21.9**	**-0.3**
STEP				*i* S	**Sg**	**15 02 45.4**	**-0.7**
STEP				IAML_P			
	comp=Z,612nm,0.2s						
KIRK	**Kırklareli**	**1.73**	**33**	*i* P	**Pb**	**15 02 21.7**	**-0.6**
KIRK				IAML_P			
	comp=Z,651nm,0.1s						
KCTX	**Karacabey (Bur**	**1.92**	**91**	PN	**Pn**	**15 02 23.9**	**+0.9**
CHOS	**Chios island**	**1.95**	**175**	PN	**Pb**	**15 02 24.9**	**-1.1**
PLD	**Plovdiv**	**1.97**	**334**	PN	**Pb**	**15 02 25.7**	**-0.8**
PLD	**Plovdiv**	**1.97**	**334**	*e*Pn	**Pg**	**15 02 28.1**	**-0.5**
PLD				*e*Sn	**Sg**	**15 02 56.3**	**+2.1**
HORT	**Hortiatis**	**2.12**	**278**	PN	**Pb**	**15 02 27.9**	**-1.0**
DURS	**Dursunbey**	**2.14**	**109**	*i* P	**Pn**	**15 02 25.3**	**-0.9**
DURS				IAML_P			
	comp=Z,488nm,0.1s						
CTYL	**Yalikoy Yolu**	**2.17**	**57**	PN	**Pb**	**15 02 28.0**	**-1.8**
CTKS	**Kestanelik-??a**	**2.21**	**65**	PN	**Pb**	**15 02 28.7**	**-1.8**
ULDT	**Uludag**	**2.52**	**93**	*i* P	**Pn**	**15 02 33.4**	**+1.9**
ULDT				IAML_P			
	comp=Z,210nm,0.1s						
DEMI	**Demirci**	**2.56**	**119**	*i* P	**Pn**	**15 02 33.0**	**+1.2**
DEMI				IAML_P			
	comp=Z,509nm,0.1s						
MANT	**Manisa**	**2.79**	**130**	*i* P	**Pn**	**15 02 36.2**	**+1.0**
VTS	**Vitosha**	**3.02**	**320**	*e*Pn	**Pb**	**15 02 43.7**	**-0.6**
VTS				*e*Sn	**Sg**	**15 03 25.3**	**-2.3**
GDZ	**Gediz**	**3.06**	**113**	*i* P	**Pn**	**15 02 38.8**	**-0.1**
GDZ				IAML_P			
	comp=Z,544nm,0.1s						
STIP	**Stip**	**3.09**	**297**	*i* Pn	**Pn**	**15 02 38.8**	**-0.4**
ZAPS	**Zavoj**	**3.80**	**322**	*e*Pn	**Pn**	**15 02 51.8**	**+2.9**
ZAPS				*e*Sn	**Sb**	**15 03 42.6**	**-0.9**
BARS	**Barje**	**3.92**	**311**	*e*Pn	**Pb**	**15 02 58.0**	**-1.6**
BARS				*e*Sn	**Sb**	**15 03 51.2**	**+4.4**

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*ISCJB **30** 15:12:17.2±0.6, 15.°16S±0.°06×71.°62W±0.°08, h133^{km}, mb3.7/2, Error ellipse: s-maj=11.9km s-min=7.2km az=143.4*
*NEIC **30** 15:12:17.0±1.7, 15.°21S×71.°88W, h131^{km}±35^{km}, mb4.3/1, Error ellipse: s-maj=40.4km s-min=25.2km az=137.0*
*IDC **30** 15:12:20.1±1.8, 15.°17S×71.°54W, h137^{km}±19^{km}, mb3.6/2, mb1 3.8/9, mb1mx3.5/35, mbtmp4.2/9, Error ellipse: s-maj=23.2km s-min=20.2km az=83.0*

ISC 30 15:12:19.0±0.8, 15.°29S±0.°07×71.°70W±0.°08, h133^{km}, n21, σ1.^{s}69/23, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.58**	**107**	P	**Pn**	**15 13 15.4**	**+1.6**
	4.9nm,0.3s,baz=286,slow=12,SNR=72						
LPAZ	**La Paz**	**3.58**	**107**	*e*Pn	**Pn**	**15 13 15.8**	**+1.9**
MNMC	**Minye Minye**	**4.31**	**153**	*e*Pn	**Pn**	**15 13 24.4**	**+1.1**
PB11	**IPOC Station P**	**4.85**	**157**	*e*Pn	**Pn**	**15 13 30.2**	**-0.1**
GO01	**Chusmiza**	**4.96**	**152**	*e*Pn	**Pn**	**15 13 33.9**	**+1.7**
NNA	**Nana**	**5.98**	**303**	P	**Pn**	**15 13 47.5**	**+2.1**
	3.4nm,0.3s,baz=134,slow=14,SNR=3.5						
NNA				S	**Sn**	**15 14 51.1**	**-1.8**
	16nm,0.3s,baz=39,slow=13,SNR=19						
NNA	**Nana**	**5.98**	**303**	*e*Sn	**Sn**	**15 14 50.9**	**-1.9**
PB01	**IPOC Station P**	**6.09**	**160**	*e*Pn	**Pn**	**15 13 46.3**	**-0.6**
PB04	**IPOC Station P**	**7.16**	**168**	*e*Pn	**Pn**	**15 14 00.4**	**-0.9**
LVC	**Limon Verde**	**7.74**	**161**	P	**Pn**	**15 14 09.5**	**+0.1**
	7.9nm,0.3s,baz=360,slow=11,SNR=35						
LVC				S	**Sn**	**15 15 32.6**	**-3.1**
	4.9nm,0.3s,baz=71,slow=18,SNR=13						
LVC	**Limon Verde**	**7.74**	**161**	*e*Pn	**Pn**	**15 14 09.3**	**-0.1**
PB10	**IPOC Station P**	**8.25**	**173**	*e*Pn	**Pn**	**15 14 15.3**	**-0.5**
GO02	**Mina Guanaco**	**10.02**	**169**	*e*Pn	**Pn**	**15 14 39.3**	**-0.5**
SIV	**San Ignacio**	**10.26**	**95**	P	**Pn**	**15 14 40.4**	**-2.5**
	1.0nm,0.3s,baz=281,slow=15,SNR=13						
GO04	**Tololo Observa**	**14.83**	**177**	*e*Pn	**Pn**	**15 15 43.9**	**+1.5**
CFA	**Coronel Fontan**	**16.54**	**170**	P	**P**	**15 16 05.6**	**+2.1**
	1.0nm,0.3s,baz=344,slow=12,SNR=12						
CPUP	**Villa Florida**	**17.33**	**132**	P	**P**	**15 16 12.4**	**+0.2**
	0.2nm,0.3s,baz=310,slow=12,SNR=4.0						
PTGA	**Pitinga**	**18.54**	**40**	P	**P**	**15 16 23.5**	**-1.9**
	2.4nm,0.3s,baz=220,slow=13,SNR=24						
PTGA	**Pitinga**	**18.54**	**40**	*e*P	**P**	**15 16 23.6**	**-1.9**
	10.0nm,0.6s						
PLCA	**Paso Flores**	**25.37**	**178**	P	**P**	**15 17 35.8**	**+1.9**
	2.2nm,0.7s,baz=18,slow=11,SNR=8.3						
TORD	**Torodi Ar. Bea**	**77.91**	**73**	P	**P**	**15 24 02.7**	**-0.2**
	0.8nm,0.5s,baz=245,slow=5.4,SNR=5.7						

MAN 30 15:26:00.5, 6.°83N×123.°72E, h24^{km}, mb4.1, ML2.9, MS2.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.65**	**53**	⇓*i*P	Pn	15 26 14.3	0.0
CTBH				*i* S	Sn	15 26 24.5	+0.7
SKMP	**Bagumbayan, Su**	**0.88**	**111**	*e*P	Pb	15 26 15.3	-1.8
SKMP				*e*S	Sb	15 26 26.5	-1.9
PAGZ	**Pagadian**	**1.07**	**342**	*e*P	Pn	15 26 20.0	0.0
PAGZ				*e*S	Sn	15 26 34.0	-0.1
DDMP	**Don Marcelino,**	**2.11**	**110**	*e*P	Pn	15 26 34.6	+0.3
DDMP				*e*S	Sn	15 27 01.4	+1.6

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*ISCJB **30** 15:29:32.8±0.4, 24.°78N±0.°02×122.°30E±0.°02, h8^{km}±2^{km}, Error ellipse: s-maj=3.4km s-min=2.3km az=14.0*
*JMA **30** 15:29:32.9±0.1, 24.°72N×122.°28E, h7^{km}±3^{km}, M2.1*
*TAP **30** 15:29:32.4, 24.°79N×122.°30E, h18^{km}, ML2.8, B*

ISC 30 15:29:32.6±1.0, 24.°76N±0.°02×122.°29E±0.°02, h13^{km}±9^{km}, n59, σ0.^{s}49/97, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.26**	**216**	P	**Pb**	**15 29 39.1**	**0.0**
	baz=221						
EOS1				S	**Sb**	**15 29 44.4**	**+1.0**
	baz=221						
TWC	**Suao**	**0.43**	**250**	P	**Pg**	**15 29 41.1**	**-0.1**
	baz=251						
TWC				S	**Sb**	**15 29 47.7**	**-0.8**
	baz=251						
NTC	**Toucheng**	**0.43**	**283**	*e*P	**Pb**	**15 29 42.3**	**+0.2**
	baz=278						
TIPB	**Shuangxi**	**0.47**	**297**	P	**Pg**	**15 29 41.9**	**-0.1**
	baz=298						
TIPB				*e*S	**Sb**	**15 29 49.6**	**-0.2**
	baz=298						
ILA	**Ilan**	**0.49**	**271**	*e*P	**Pb**	**15 29 43.6**	**+0.4**
	baz=267						
NWF	**Wu-fen Shan**	**0.56**	**304**	P	**Pb**	**15 29 44.1**	**-0.2**
	baz=312						
NWF				S	**Sg**	**15 29 51.6**	**+0.5**
	baz=312						
WFSB	**Wu-fen Shan**	**0.56**	**304**	P	**Pb**	**15 29 44.1**	**-0.2**
	baz=312						
WFSB				*e*S	**Sg**	**15 29 51.5**	**+0.5**
	baz=312						
TWE	**Neicheng**	**0.57**	**266**	P	**Pg**	**15 29 43.7**	**-0.1**
	baz=262						
TWE				S	**Sb**	**15 29 52.3**	**-0.2**
	baz=262						
NANB	**Nanao**	**0.59**	**236**	P	**Pg**	**15 29 44.2**	**-0.1**
	baz=234						
NANB				*e*S	**Sb**	**15 29 53.5**	**+0.3**
	baz=234						
ENA	**Nanau**	**0.60**	**237**	P	**Pg**	**15 29 44.3**	**0.0**
	baz=234						
ENA				*e*S	**Sb**	**15 29 53.3**	**-0.1**
	baz=234						
JYNG	**Yonagunijimaku**	**0.67**	**117**	P	**Pg**	**15 29 45.7**	**+0.1**
JYNG				S	**Sg**	**15 29 55.0**	**+0.5**
TWA	**Mucha**	**0.68**	**289**	P	**Pb**	**15 29 46.4**	**0.0**
	baz=286						
TWA				S	**Sb**	**15 29 55.6**	**-0.1**
	baz=286						
YOJ	**Yonaguni jima**	**0.72**	**114**	P	**Pg**	**15 29 46.6**	**0.0**
	baz=117						
YOJ				S	**Sg**	**15 29 56.1**	**+0.1**
	baz=117						
YOJ	**Yonaguni jima**	**0.72**	**114**	P	**Pg**	**15 29 46.6**	**0.0**
YOJ				*e*S	**Sg**	**15 29 56.2**	**+0.1**
NDT	**Datong Townshi**	**0.72**	**258**	P	**Pb**	**15 29 47.1**	**0.0**
	baz=245						
NDT				*e*S	**Sn**	**15 29 58.8**	**-0.8**
	baz=245						
NHDH	**Xindian Distri**	**0.73**	**287**	*e*P	**Pb**	**15 29 47.4**	**+0.2**
	baz=283						
NHDH				S	**Sb**	**15 29 57.2**	**+0.1**
	baz=283						
TATO	**Taipei**	**0.76**	**287**	*e*P	**Pb**	**15 29 47.6**	**-0.2**
	baz=284						
TATO				*e*S	**Sg**	**15 29 57.6**	**+0.2**
	baz=284						
YM01	**YM01**	**0.76**	**301**	P	**Pg**	**15 29 47.5**	**0.0**
	baz=298						
YM01				*e*S	**Sg**	**15 29 57.6**	**+0.2**
	baz=298						
YM10	**YM10**	**0.77**	**301**	*i* P	**Pg**	**15 29 47.6**	**0.0**
	baz=298						
YM10				*e*S	**Sb**	**15 29 58.4**	**0.0**
	baz=298						
TWY	**Chenhua**	**0.81**	**310**	*e*P	**Pb**	**15 29 48.6**	**0.0**
	baz=307						
TWY				*e*S	**Sb**	**15 29 59.7**	**+0.2**
	baz=307						
ANP	**Anpu**	**0.82**	**302**	*e*P	**Pb**	**15 29 48.8**	**-0.1**
	baz=299						
ANP				*e*S	**Sg**	**15 29 59.5**	**+0.1**
	baz=299						
YHNB	**Yeheng**	**0.84**	**264**	*i* P	**Pg**	**15 29 48.8**	**-0.1**
	baz=270						
YHNB				*e*S	**Sb**	**15 30 00.9**	**+0.6**
	baz=270						
NSK	**Sanguang**	**0.85**	**265**	P	**Pg**	**15 29 48.9**	**-0.3**
	baz=271						
NSK				*e*S	**Sn**	**15 30 02.0**	**-0.8**
	baz=271						
NACB	**Ninganchiao**	**0.86**	**228**	P	**Pg**	**15 29 49.1**	**-0.2**
	baz=234						
NACB				S	**Sg**	**15 30 00.6**	**0.0**
	baz=234						
TWS1	**Kuangyinshan**	**0.86**	**293**	*e*S	**Sb**	**15 30 01.1**	**+0.1**
	baz=291						
NNSB	**Datong**	**0.89**	**249**	P	**Pg**	**15 29 49.8**	**-0.1**
	baz=237						
NNSB				*e*S	**Sb**	**15 30 02.1**	**+0.3**
	baz=237						
PCYT	**Pengchaiyu**	**0.89**	**347**	P	**Pg**	**15 29 48.6**	**-1.2**
	baz=346						
NNS	**Nan Shan**	**0.89**	**249**	P	**Pg**	**15 29 49.7**	**-0.2**
	baz=237						
NNS				*e*S	**Sn**	**15 30 03.0**	**-1.0**
	baz=237						
ETLH	**Xiulin Townshi**	**0.92**	**234**	P	**Pg**	**15 29 50.3**	**-0.1**
	baz=232						
ETLH				*e*S	**Sb**	**15 30 03.3**	**+0.7**
	baz=232						
TWD	**Chiawan**	**0.93**	**223**	P	**Pg**	**15 29 50.4**	**-0.1**
	baz=230						
TWD				*e*S	**Sb**	**15 30 03.0**	**+0.2**
	baz=230						
WHF	**Hehuan Shan**	**1.12**	**237**	P	**Pg**	**15 29 54.2**	**0.0**
	baz=235						
WHF				*e*S	**Sg**	**15 30 09.1**	**+0.2**
	baz=235						
TWT	**Tachien**	**1.13**	**244**	*e*P	**Pg**	**15 29 54.9**	**+0.4**
	baz=235						
TWT				*e*S	**Sn**	**15 30 09.9**	**0.0**
	baz=235						
TDCB	**Techi**	**1.15**	**244**	*e*P	**Pg**	**15 29 54.8**	**+0.1**
	baz=235						
TDCB				*e*S	**Sb**	**15 30 09.4**	**+0.1**
	baz=235						
LIOB	**Emei**	**1.17**	**265**	P	**Pb**	**15 29 54.7**	**0.0**
	baz=263						
LIOB				*e*S	**Sg**	**15 30 10.2**	**-0.1**
	baz=263						
NSTT	**Nanjuang**	**1.18**	**264**	*e*P	**Pn**	**15 29 54.8**	**-0.1**
	baz=262						
NSTT				*e*S	**Sn**	**15 30 12.3**	**+1.5**
	baz=262						
ESL	**Shilin**	**1.22**	**220**	*e*P	**Pb**	**15 29 55.8**	**+0.1**
	baz=203						
ESL				*e*S	**Sg**	**15 30 12.1**	**0.0**
	baz=203						
CHGB	**Renai**	**1.23**	**236**	*e*P	**Pg**	**15 29 56.3**	**-0.1**
	baz=235						
CHGB				*e*S	**Sn**	**15 30 12.5**	**0.0**
	baz=235						
IRIF	**Iriomote-Funau**	**1.38**	**108**	P	**Pb**	**15 29 58.3**	**+0.1**
IRIF				*e*S	**Sb**	**15 30 15.8**	**+0.1**
DPDB	**Guoxing**	**1.44**	**240**	*e*P	**Pg**	**15 30 00.3**	**0.0**
	baz=239						
DPDB				*e*S	**Sg**	**15 30 18.3**	**-0.7**
	baz=239						
VWDT	**VWDT**	**1.45**	**227**	*e*P	**Pg**	**15 30 00.1**	**-0.4**
	baz=226						
VWDT				*e*S	**Sg**	**15 30 18.9**	**-0.4**
	baz=226						
HGSD	**Ruisui**	**1.49**	**212**	*e*P	**Pb**	**15 29 59.7**	**-0.5**
	baz=198						
EHY	**Hungye**	**1.53**	**216**	*e*P	**Pn**	**15 29 59.7**	**+0.1**
	baz=214						
SMLT	**Sun Moon Lake**	**1.54**	**236**	*e*P	**Pg**	**15 30 01.9**	**-0.3**
	baz=221						
HATJ	**Hateruma jima**	**1.55**	**117**	*e*S	**Sg**	**15 30 21.8**	**-0.6**
SSLB	**Suanglung**	**1.56**	**232**	*e*P	**Pb**	**15 30 01.9**	**+0.6**
	baz=237						
SSLB				*e*S	**Sb**	**15 30 21.6**	**+0.6**
	baz=237						
YULB	**Yu-li**	**1.64**	**214**	*e*P	**Pn**	**15 30 01.2**	**0.0**
	baz=213						
JKRS	**Kuro-shima**	**1.65**	**108**	P	**Pb**	**15 30 02.7**	**-0.2**
WHYT	**Xinyi Township**	**1.69**	**231**	*e*P	**Pb**	**15 30 03.5**	**0.0**
	baz=217						
JIJ	**Ishigaki jima**	**1.73**	**103**	P	**Pb**	**15 30 04.3**	**0.0**
JIJ				*e*S	**Sb**	**15 30 26.4**	**+0.4**
YUS	**Yu-Shan**	**1.76**	**224**	*e*P	**Pb**	**15 30 04.6**	**-0.5**
	baz=223						
JISG	**Ishigakijimahi**	**1.84**	**95**	P	**Pb**	**15 30 06.0**	**-0.2**
WDLH	**Douliu**	**1.92**	**237**	*e*P	**Pn**	**15 30 05.9**	**+0.8**
	baz=253						
CHN4	**Tsaushan**	**2.09**	**228**	*e*P	**Pb**	**15 30 10.2**	**-0.2**
	baz=227						
TPUB	**Ta-pu**	**2.10**	**227**	*e*P	**Pb**	**15 30 10.0**	**-0.6**
	baz=210						
WTP	**Ta-pu**	**2.15**	**226**	*e*P	**Pb**	**15 30 10.6**	**-0.8**
	baz=209						
TWK	**Hsinying**	**2.22**	**228**	*e*P	**Pb**	**15 30 12.0**	**-0.7**
	baz=227						
SLGT	**Liugui**	**2.31**	**221**	*e*P	**Pb**	**15 30 13.2**	**-1.1**
	baz=220						
MASBT	**Mashibuluo**	**2.62**	**216**	*e*P	**Pb**	**15 30 17.5**	**-2.0**
	baz=203						
WDGT	**Dungji**	**2.83**	**239**	*e*P	**Pn**	**15 30 19.0**	**+1.4**
	baz=239						

KRSC 30 15:53:20.6±2.2, 53.°41N×166.°86E, h78^{km}±45^{km}, ML4.2, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.87**	**344**	*e*P	Pn	15 53 51.1	+0.4
BKI				*e*S	Sn	15 54 14.0	+0.4
MKZ	**Mys Kozlova**	**3.24**	**293**	*e*P	Pn	15 54 12.2	+3.1
MKZ				*e*S	Sn	15 54 48.4	+1.9
KBTR	**Krutoberegovo**	**3.65**	**322**	*e*P	Pn	15 54 16.9	+2.2
KBTR				*e*S	Sn	15 54 57.2	+0.6
KBG	**Krutoberegovo**	**3.73**	**322**	*e*S	Sn	15 54 59.5	+1.1
SPN	**Mys Shipunski**	**4.12**	**268**	*e*P	Pn	15 54 24.5	+3.5
SPN				*e*S	Sn	15 55 07.2	-0.7
TUMD	**Tumrok D**	**4.19**	**298**	*e*P	Pn	15 54 25.8	+3.8
TUMD				*e*S	Sn	15 55 13.3	+3.6
KZV	**Kizimen**	**4.21**	**297**	*e*P	Pn	15 54 26.3	+3.8
KZV				*e*S	Sn	15 55 12.0	+1.5
TUMR	**Tumrok**	**4.35**	**298**	P	Pn	15 54 27.8	+3.4
ZLN	**Zelenaya**	**4.38**	**309**	*e*P	Pn	15 54 27.4	+2.7
SMY	**Shemya**	**4.42**	**96**	*e*P	Pn	15 54 23.7	-1.5
SMKR	**Semkarok**	**4.44**	**318**	*e*P	Pn	15 54 29.9	+4.3
SMKR				*e*S	Sn	15 55 19.5	+3.5
NLC	**Nalytchevo**	**4.51**	**270**	*e*P	Pn	15 54 30.2	+3.8
NLC				*e*S	Sn	15 55 18.8	+1.2
BDR	**Baidarnaya**	**4.54**	**316**	*e*P	Pn	15 54 30.9	+4.0
KRSR	**Krestovskiy**	**4.60**	**310**	*e*S	Sn	15 55 23.4	+3.5
SRKR	**Sorokina**	**4.61**	**317**	*e*P	Pn	15 54 32.4	+4.5
KLY	**Klyuchi**	**4.62**	**312**	*e*P	Pn	15 54 30.1	+2.3
KLY				*e*S	Sn	15 55 22.7	+2.6
SDLR	**Sedlovina**	**4.78**	**272**	*e*P	Pn	15 54 34.4	+4.2
SDLR				*e*S	Sn	15 55 26.5	+2.2
UGLR	**Uglovaya**	**4.82**	**271**	*e*P	Pn	15 54 35.2	+4.4
SMAR	**Somma**	**4.83**	**271**	*e*P	Pn	15 54 35.0	+4.0
SMAR				*e*S	Sn	15 55 27.0	+1.3
KRER	**Koryakskii**	**4.86**	**272**	*e*P	Pn	15 54 35.8	+4.4
AVH	**Avacha**	**4.87**	**272**	*e*P	Pn	15 54 35.8	+4.4

AVH				*e*S	Sn	15 55 30.3	+3.9
DALK	Dalny	4.89	269	*e*P	Pn	15 54 35.5	+4.0
DALK				*e*S	Sn	15 55 29.2	+2.5
KRX	Arik	4.92	273	*e*P	Pn	15 54 36.1	+4.0
KOK	Koryaka	4.93	272	*e*P	Pn	15 54 36.4	+4.2
PET	Petropavlovsk	4.95	269	*e*P	Pn	15 54 36.3	+4.0
PET				*e*S	Sn	15 55 29.4	+1.2
RUS	Russkaya	5.14	262	*e*P	Pn	15 54 38.5	+3.5
RUS				*e*S	Sn	15 55 33.2	+0.2
KRMR	Karymshinskiy	5.29	267	*e*P	Pn	15 54 41.1	+4.1
KRMR				*e*S	Sn	15 55 38.4	+1.8
GNL	Ganaly	5.33	277	*e*P	Pn	15 54 42.3	+4.7
MTVR	Mutnovka	5.33	263	*e*P	Pn	15 54 41.5	+3.8
MTVR				*e*S	Sn	15 55 39.1	+1.4
ESO	Esso	5.36	301	*e*P	Pn	15 54 41.5	+3.4
ESO				*e*S	Sn	15 55 42.4	+4.0
ASAK	Asacha	5.52	263	*e*P	Pn	15 54 44.6	+4.3
KDTR	Khodutka, Kamc	5.59	257	*e*P	Pn	15 54 44.2	+3.1
KDTR				*e*S	Sn	15 55 43.2	-0.6
APC	Apacha	5.86	269	*e*P	Pn	15 54 50.1	+5.4
SKR	Severo-Kuril's	7.17	252	*e*P	Pn	15 55 05.6	+3.0
SKR				*e*S	Sn	15 56 20.8	-1.6

MAN 30 16:49:09.3, 7°.35N×124°.68E, h1^{km}, mb4.5, ML3.3, MS3.2, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.45	254⇓	*i*P	Pn	16 49 23.4	+0.4
CTBH				*i* S	Sb	16 49 32.7	+5.4
KCP	Kidapawan	0.53	130⇑	*e*P	Pg	16 49 19.8	+0.3
KCP				*e*S	Sn	16 49 40.3	+6.7
BUKP	Musuan	0.65	36	*e*P	Pg	16 49 21.5	-0.2
BUKP				*e*S	Sg	16 49 29.9	-0.2
SKMP	Bagumbayan, Su	0.84	190	*e*P	Pg	16 49 26.0	+0.6
SKMP				*e*S	Sb	16 49 39.8	+1.3
CGP	Cagayan de Oro	1.10	1⇑	*i*P	Pg	16 49 30.6	+0.3
CGP				*i* S	Sg	16 49 44.9	+0.3
PAGZ	Pagadian	1.38	291	*e*P	Pb	16 49 37.6	+1.7
PAGZ				*e*S	Sn	16 50 00.6	+5.9
DDMP	Don Marcelino,	1.60	140	*e*P	Pn	16 49 39.2	+0.4

MAN 30 17:18:31.4, 7°.25N×123°.61E, h32^{km}, mb3.5, ML2.2, MS1.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.63	92⇓	*i*P	Pn	17 18 45.2	+1.1
CTBH				*i* S	Sn	17 18 53.9	+0.7
PAGZ	Pagadian	0.64	339	*e*P	Pn	17 18 44.6	+0.4
PAGZ				*e*S	Sn	17 18 53.6	+0.3
SKMP	Bagumbayan, Su	1.18	128	*e*P	Pn	17 18 51.8	+0.2
SKMP				*e*S	Sn	17 19 05.9	-0.7

ISCJB ***30*** *17:27:44.2±0.3, 16°.44N±0°.02×94°.26W±0°.02, h101^{km}±2^{km}, mb4.4/142, Error ellipse: s-maj=4.2km s-min=2.8km az=38.5*

IDC ***30*** *17:27:44.0±0.6, 16°.38N×94°.27W, h88^{km}±4^{km}, mb4.1/20, mb1 4.3/23, mb1mx4.2/35, mbtmp4.5/23, MS3.4/5, Ms1 3.4/5, ms1mx3.1/22, Error ellipse: s-maj=15.3km s-min=7.3km az=44.0*

NEIC ***30*** *17:27:45.8±0.0, 16°.20N×94°.47W, h64^{km}, mb4.4/180, MD4.9(MEX), After MEX.*

NEIC Felt at Tuxtla Gutierrez.

MEX ***30*** *17:27:45.8±0.7, 16°.20N×94°.47W, h63^{km}±11^{km}, MD4.9*

ISC 30 17:27:43.7±0.5**, 16°.30N**±0°.03×**94°.39W**±0°.03**, h91**^{km}±4^{km}**, n474,** σ**1^{s}.56**/504**, mb4.4**/142**, 1C, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.92	329	P	Pn	17 28 02.7	+0.1
	360nm,0.3s,baz=174,slow=9.4,SNR=2916						
CMIG				S	Sn	17 28 16.9	+0.1
PCIG		1.27	117	*e*Pn	Pn	17 28 07.1	+0.5
PCIG				*e*Sn	Sn	17 28 22.3	-1.7
PCIG		1.27	117	*e*P	Pn	17 28 07.1	+0.5
PCIG				*e*S	Sn	17 28 22.3	-1.7
TGIG		1.31	68	*e*Pn	Pn	17 28 07.7	+0.5
TGIG				*e*Sn	Sn	17 28 25.3	+0.3
TGIG		1.31	68	*e*P	Pn	17 28 07.7	+0.5
TGIG				*i* S	Sn	17 28 25.3	+0.3
TGBT	Tuxtla Gutierr	1.34	69	*e*P	Pn	17 28 08.2	+0.7
TGBT				*i* S	Sn	17 28 25.5	+0.1
TUIG	Tuzandepetl	1.73	359	*e*Pn	Pn	17 28 13.2	+0.8
TUIG				*e*Sn	Sn	17 28 34.8	+0.6
TUIG	Tuzandepetl	1.73	359	*e*P	Pn	17 28 13.2	+0.8
TUIG				*i* S	Sn	17 28 34.8	+0.6
HUIG	Huatulco	1.73	253	*e*Pn	Pn	17 28 10.1	-2.3
HUIG				*e*Sn	Sn	17 28 30.6	-3.7
HUIG	Huatulco	1.73	253	*i* P	Pn	17 28 10.1	-2.3
HUIG				*e*S	Sn	17 28 30.6	-3.7
PANG	Puerto Angel	2.10	253	*e*P	Pn	17 28 14.7	-2.5
PANG				*i* S	Sn	17 28 39.1	-3.7
CCIG	Comitan	2.17	90	*e*Pn	Pn	17 28 18.4	+0.1
CCIG				*e*Pn	Pn	17 28 18.6	+0.3
CCIG				*e*Sn	Sn	17 28 40.2	-4.6
CCIG				*e*Sn	Sn	17 28 45.9	+1.2
CCIG	Comitan	2.17	90	*e*P	Pn	17 28 18.6	+0.3
CCIG				*i* S	Sn	17 28 45.9	+1.2
VHO	Vista Hermosa	2.37	289	*e*Pn	Pn	17 28 21.3	+0.3
VHO				*e*Sn	Sn	17 28 48.7	-0.9
VHO	Vista Hermosa	2.37	289	*e*P	Pn	17 28 21.3	+0.3
VHO				*i* S	Sn	17 28 48.7	-0.9
THIG		2.47	124	*e*Pn	Pn	17 28 22.2	0.0
THIG				*e*Sn	Sn	17 28 51.5	-0.2
THIG		2.47	124	*e*P	Pn	17 28 22.2	0.0
THIG				*e*S	Sn	17 28 51.5	-0.2
LVIG	Laguna Verde	3.91	331	*e*Pn	Pn	17 28 40.0	-1.6
LVIG				*e*Sn	Sn	17 29 21.1	-5.4
APG	El Apazote	4.00	108	P	Pn	17 28 42.3	-0.6
	28nm,0.3s,baz=312,slow=12,SNR=52						
APG				S	Sn	17 29 28.0	-0.9
	105nm,0.3s,baz=302,slow=12,SNR=6.5						
TLIG	Tlapa	4.19	288	*e*Pn	Pn	17 28 46.6	+1.2
YAIG	Yautepec	5.13	300	*e*Pn	Pn	17 29 00.1	+1.7
YAIG				*e*Sn	Sn	17 29 56.6	+0.1
YAIG	Yautepec	5.13	300	*e*P	Pn	17 29 00.1	+1.7
YAIG				*i* S	Sn	17 29 56.6	+0.1
MYIG	Mrida	6.40	43	*e*Pn	Pn	17 29 16.4	+1.1
MYIG				*e*Sn	Sn	17 30 18.2	-8.8
TEIG	Tepich	7.00	55	P	Pn	17 29 22.3	-1.3
	112nm,0.3s,baz=49,slow=4.9,SNR=246						
TEIG				S	Sn	17 30 38.7	-3.1
	85nm,0.3s,baz=328,slow=23,SNR=13						
TEIG	Tepich	7.00	55	*e*Pn	Pn	17 29 22.2	-1.4
TEIG				*e*Sn	Sn	17 30 37.5	-4.3
TGUH	Tegucigalpa,Un	7.23	107	*e*Pn	Pn	17 29 26.0	-0.9
ESTN	Estel	8.39	111	*e*Pn	Pn	17 29 44.2	+1.6
LNIG	Linares	9.79	332	*e*Pn	Pn	17 30 03.1	+1.5
ACON	Acoyapa	9.92	115	*e*Pn	Pn	17 30 03.5	0.0
ESPN	Las Esperanzas	10.60	111	*e*Pn	Pn	17 30 11.9	-0.8
JTS	Las Juntas de	10.96	122	P	Pn	17 30 17.5	-0.1
	2.1nm,0.3s,baz=343,slow=5.6,SNR=10.0						
833A	Chaparral WMA,	12.83	340	P	Pn	17 30 45.7	+3.1
	baz=158,SNR=21						
HKT	Hockley	13.65	355	*e*Pn	Pn	17 30 54.2	+0.8
CBCY	The Bluff, Cay	14.34	74	*e*Pn	Pn	17 31 00.8	-1.6
435B	Jarrell	14.71	349	P	P	17 31 09.1	-1.8
	baz=168,SNR=5.7						
HPIG		14.88	317	*e*P	P	17 31 11.8	-1.2
JCT	Junction City	14.96	342	*e*P	P	17 31 13.0	-0.7
	26nm,0.8s						
JCT	Junction City	14.96	342	P	P	17 31 12.4	-1.3
	baz=160						
NATX	Nacogdoches	15.40	359	*e*P	P	17 31 18.1	-0.4
	24nm,0.8s						
NATX	Nacogdoches	15.40	359	P	P	17 31 18.2	-0.2
	baz=179						
TXAR	Lajitas Array	15.53	328	P	Pn	17 31 18.3	+0.7
	0.1nm,0.3s,baz=148,slow=14,SNR=10.0						
TX31	Lajitas Ar. Si	15.53	328	*e*P	P	17 31 20.1	+0.1
	3.6nm,0.8s						
TX31				*e*PcP	PcP	17 36 16.5	+1.9
059Z	Ave Maria	15.65	48	P	Pn	17 31 19.4	+0.3
	baz=233						
061Z	Ochoppi	15.77	51	P	Pn	17 31 21.0	+0.4
	baz=235						
449A	Pace	15.82	23	P	Pn	17 31 21.0	-0.2
	baz=206						
058A	Arcadia	15.85	45	P	Pn	17 31 21.2	-0.3
	baz=230						
WHTX	Lake Whitney,	15.87	350	*e*P	P	17 31 23.1	-0.6
	57nm,0.6s						
WHTX	Lake Whitney,	15.87	350	P	P	17 31 24.0	+0.3
	baz=170,SNR=14						
957A	Wimauma	15.96	43	*e*Pn	Pn	17 31 21.8	-1.2
	102nm,1.4s						
957A	Wimauma	15.96	43	P	Pn	17 31 22.7	-0.3
	baz=227						
552A	Lynn Haven	16.10	30	P	Pn	17 31 24.9	+0.3
	baz=213						
450A	Crestview	16.11	25	P	P	17 31 25.3	-1.0
	baz=208						
MTDJ	Mount Denham	16.22	81	*e*Pn	Pn	17 31 26.2	-0.1
	49nm,0.9s						
958A	Wauchula	16.22	44	P	Pn	17 31 25.6	-0.6
	baz=229						
VBMS	Vicksburg	16.24	12	*e*P	P	17 31 27.5	-0.3
	185nm,0.3s						
VBMS	Vicksburg	16.24	12	P	P	17 31 27.2	-0.6
	baz=194,SNR=5.5						
059A	Moore Haven	16.25	47	P	Pn	17 31 26.6	+0.1
	baz=232						
BRAL	Brewton	16.25	23	P	Pn	17 31 26.6	+0.1
	baz=206						
451A	Vernon	16.30	28	P	P	17 31 27.7	-0.8
	baz=211						
060Z	West Palm Beac	16.34	50	P	P	17 31 28.5	-0.4
	baz=234						
349A	Repton	16.36	22	P	P	17 31 28.3	-0.8
	baz=205						
553A	Crawfordville	16.57	32	P	P	17 31 30.9	-0.6
	baz=216,SNR=6.5						
655A	Horseshoe Beac	16.67	36	P	Pn	17 31 31.2	-0.5
	baz=220						
350A	Dozier	16.75	25	P	P	17 31 33.0	-0.4
	baz=208						
452A	Marianna	16.75	29	P	P	17 31 32.9	-0.6
	baz=212						
959A	Okeechobee	16.78	46	P	Pn	17 31 32.9	-0.2
	baz=231						
DWPF	Disney Wildern	16.78	43	*e*Pn	Pn	17 31 31.8	-1.3
	40nm,1.0s						
DWPF	Disney Wildern	16.78	43	P	Pn	17 31 32.5	-0.6
	baz=228						
060A	Indiantown	16.84	48	*e*Pn	Pn	17 31 32.6	-1.3
	245nm,1.2s						
060A	Indiantown	16.84	48	P	Pn	17 31 33.2	-0.7
	baz=233						
554A	Perry	16.87	34	P	P	17 31 34.5	-0.3
	baz=218						
858A	St. Cloud	16.90	43	P	Pn	17 31 34.3	-0.3
	baz=228						
ABTX	Abilene, Hawle	16.94	345	*e*P	P	17 31 37.2	+1.7
	24nm,0.6s						
ABTX				*e*Sn	S	17 34 57.6	+10
ABTX	Abilene, Hawle	16.94	345	P	P	17 31 36.7	+1.2
	baz=163						
757A	Oxford	16.95	40	P	Pn	17 31 34.4	-0.8
	baz=224						
Z41A	Richland Creek	16.95	5	P	P	17 31 36.1	+0.5
	baz=185						
249A	Camden	16.95	22	P	Pn	17 31 34.9	-0.2
	baz=205,SNR=5.5						
656A	Willston	16.98	38	*e*P	Pn	17 31 34.9	-0.6
	93nm,1.4s						
656A				*e*Sn	Sn	17 34 31.0	-13
656A	Willston	16.98	38	P	Pn	17 31 34.8	-0.6
	baz=222						
453A	Whigham	17.17	31	*e*P	Pn	17 31 36.9	-0.9
	30nm,1.0s						
453A	Whigham	17.17	31	P	P	17 31 37.9	-0.1
	baz=215						
250A	Grady	17.27	24	P	Pn	17 31 38.5	-0.6
	baz=207						
555A	McAlpin	17.29	35	*e*P	Pn	17 31 38.4	-0.9
	42nm,0.9s						
555A	McAlpin	17.29	35	P	P	17 31 39.3	-0.2
	baz=220						
WLAR	White Oak Lake	17.36	4	*e*P	P	17 31 42.0	+1.9
	98nm,1.5s						
454A	Quitman	17.40	33	P	Pn	17 31 40.5	-0.2
	baz=217						
352A	Blakely	17.40	28	P	Pn	17 31 40.7	0.0
	baz=212						
148A	Greensboro	17.41	20	P	Pn	17 31 41.2	+0.4
	baz=202						
758A	Lake Helen	17.51	42	P	P	17 31 41.3	-0.6
	baz=227						
556A	Lake Butler	17.52	37	P	P	17 31 41.3	-0.6
	baz=221,SNR=9.1						
657A	Interlachen	17.53	39	P	P	17 31 41.5	-0.6
	baz=224						
353A	Camilla	17.62	30	P	Pn	17 31 42.9	-0.4
	baz=214,SNR=6.2						
149A	Jones	17.63	22	P	Pn	17 31 43.1	-0.4
	baz=205,SNR=5.8						
251A	Midway	17.72	26	P	P	17 31 44.0	-0.2
	baz=210						
455A	Stateville	17.74	34	P	Pn	17 31 44.3	-0.5
	baz=218						
658A	Bunnell	17.79	40	*e*P	P	17 31 43.8	-1.1
	73nm,1.4s						
658A	Bunnell	17.79	40	P	P	17 31 44.4	-0.5
	baz=225						
150A	Eclectic	17.92	24	P	Pn	17 31 47.1	+0.1
	baz=207,SNR=18						
557A	Orange Park	17.93	38	P	Pn	17 31 46.9	-0.1
	baz=223						
252A	Lumpkin	17.93	28	P	P	17 31 46.3	-0.1
	baz=212						
LRAL	Lakeview Retre	17.96	21	*e*P	Pn	17 31 47.2	-0.1
	13nm,1.1s						
LRAL				*e*Sn	Sn	17 34 51.8	-16
LRAL	Lakeview Retre	17.96	21	P	P	17 31 46.3	-0.4
	baz=204						
TIGA	Tifton	18.00	31	*e*P	Pn	17 31 47.7	-0.3
	43nm,0.9s						
TIGA	Tifton	18.00	31	P	Pn	17 31 47.7	-0.3
	baz=216						
151A	Opelika	18.13	25	P	P	17 31 48.7	0.0
	baz=209						
X40A	Basin Creek Fa	18.17	4	*e*P	Pn	17 31 49.5	-0.4
	11nm,0.9s						
X40A	Basin Creek Fa	18.17	4	P	P	17 31 49.1	0.0
	baz=185						
MIAR	Mount Ida	18.19	2	*e*P	P	17 31 48.9	-0.4
	31nm,0.8s						
MIAR	Mount Ida	18.19	2	P	P	17 31 49.2	-0.1
	baz=183,SNR=22						
GDL2	Guadalupe Moun	18.24	332	*e*P	Pn	17 31 53.3	+2.3
253A	Americus	18.26	29	*e*P	Pn	17 31 51.7	+0.7
	78nm,1.5s						
253A	Americus	18.26	29	P	Pn	17 31 50.6	-0.4
	baz=213						
Z49A	Columbiana	18.26	21	P	P	17 31 50.0	-0.1
	baz=205,SNR=6.9						
456A	Hilliard	18.28	36	P	Pn	17 31 51.0	-0.2
	baz=221						
355A	Pearson	18.30	33	P	Pn	17 31 51.2	-0.4
	baz=218						
457A	Yulee	18.47	37	P	Pn	17 31 53.0	-0.6
	baz=222						
UALR	University of	18.49	5	*e*P	Pn	17 31 53.3	-0.5
	54nm,0.6s						
152A	Waverly Hall	18.51	27	*e*P	P	17 31 51.9	-0.9
	13nm,0.7s						
152A				*e*S	S	17 35 04.3	-15
152A	Waverly Hall	18.51	27	P	P	17 31 53.0	+0.2
	baz=210,SNR=6.7						
Z50A	Ashland	18.54	23	*e*P	P	17 31 52.3	-0.8
	13nm,0.8s						
Z50A	Ashland	18.54	23	P	Pn	17 31 53.8	-0.6
	baz=206,SNR=6.7						
254A	Abbeville	18.56	31	P	Pn	17 31 53.8	-0.9
	baz=215						
356A	Blackshear	18.68	35	P	Pn	17 31 55.0	-1.0
	baz=219						
GTBY	Guantanamo Bay	18.68	76	*e*P	P	17 31 53.8	-1.0
	57nm,0.8s						
OXF	Oxford	18.68	13	*e*P	P	17 31 53.8	-0.8
	23nm,0.6s						
OXF	Oxford	18.68	13	P	P	17 31 54.6	0.0
	baz=195						
Y48A	Jasper	18.71	19	P	P	17 31 54.4	-0.6
	baz=202						
WMOK	Wichita Mounta	18.78	349	*e*P	Pn	17 31 56.3	-1.0
	9.4nm,0.7s						
WMOK	Wichita Mounta	18.78	349	P	Pn	17 31 56.3	-1.0
	baz=167,SNR=10						
W39A	Magazine	18.83	2	*e*P	P	17 31 55.8	-0.5
	18nm,0.7s						
W39A	Magazine	18.83	2	P	Pn	17 31 57.0	-0.8
	baz=182,SNR=7.1						
Z51A	Franklin	18.88	24	P	P	17 31 56.2	-0.7
	baz=208						
153A	Fort Valley	18.89	29	P	P	17 31 56.9	0.0
	baz=213						
W41B	Gary Mavity, V	18.90	5	P	P	17 31 57.1	+0.1
	baz=186,SNR=15						
Y49A	Blount Mountai	18.91	21	*e*P	P	17 31 55.7	-1.5
	38nm,1.5s						
Y49A	Blount Mountai	18.91	21	P	P	17 31 56.5	-0.6
	baz=204,SNR=6.3						
X46A	Booneville	18.92	15	P	P	17 31 56.6	-0.6
	baz=198						
255A	Hazlehurst	18.96	33	P	P	17 31 57.5	-0.2
	baz=218						
WHAR	Wooly Hollow	19.01	5	*e*P	P	17 31 58.4	+0.1
	63nm,1.3s						
Z52A	Williamson	19.08	26	P	P	17 31 58.4	-0.6
	baz=210						
357A	Townsend	19.11	36	P	P	17 31 58.3	-1.0
	baz=221						
MSTX	Muleshoe	19.15	338	*e*P	P	17 32 00.4	+0.5
	26nm,0.8s						
MSTX	Muleshoe	19.15	338	P	P	17 31 59.8	-0.1
	baz=155,SNR=9.7						
Y50A	Piedmont	19.18	22	P	P	17 31 59.0	-1.1
	baz=206						
154A	Montrose	19.20	30	P	P	17 31 58.7	-1.6
	baz=215						
X48A	Hartselle	19.25	19	*e*P	P	17 31 59.7	-1.2
	8.4nm,0.6s						
X48A	Hartselle	19.25	19	P	P	17 31 59.4	-1.5
	baz=202,SNR=6.1						
Y51A	Rockmart	19.44	24	P	P	17 32 01.7	-1.2
	baz=208						
PLAL	Pickwick Lake	19.45	16	*e*P	P	17 32 01.7	-1.3
	6.3nm,0.6s						
W46A	Michie	19.52	15	P	P	17 32 02.6	-1.2
	baz=198						
155A	Kite	19.52	31	P	P	17 32 03.9	+0.1
	baz=216,SNR=9.0						
Z53A	Monticello	19.53	28	P	P	17 32 03.8	-0.1
	baz=213						
TUL1	Leonard	19.57	357	*e*P	P	17 32 00.4	-4.0
	20nm,0.8s						
TUL1	Leonard	19.57	357	P	P	17 32 04.4	0.0
	baz=176						
AMTX	Amarillo	19.63	342	*e*P	Pn	17 32 06.4	-0.9
	47nm,0.7s						
AMTX	Amarillo	19.63	342	P	Pn	17 32 06.4	-0.9
	baz=159						
GOGA	Godfrey	19.69	28	*e*Pn	Pn	17 32 07.6	-0.3
	12nm,0.8s						
GOGA				*e*S	S	17 35 34.7	-8.1
GOGA	Godfrey	19.69	28	P	P	17 32 05.3	-0.3
	baz=213						
X50B	Fort Payne	19.72	22	P	P	17 32 05.1	-0.9
	baz=206						
Y52A	Lilburn	19.81	26	*e*P	P	17 32 06.5	-0.6
	18nm,0.7s						
Y52A				*e*S	S	17 35 38.6	-6.7
Y52A	Lilburn	19.81	26	P	P	17 32 07.0	0.0
	baz=210						
Z54A	Sparta	19.84	30	P	P	17 32 06.6	-0.6
	baz=214,SNR=5.7						
HHAR	Hobbs	19.91	1	*e*P	P	17 32 07.3	-0.7
	23nm,0.6s						
Y53A	Monroe	20.01	27	P	P	17 32 08.0	-1.2
	baz=212						
U40A	Yellville	20.03	4	P	P	17 32 08.7	-0.6
	baz=184,SNR=5.4						
156A	Sylvania	20.05	33	P	P	17 32 08.9	-0.6
	baz=219						
X51A	Calhoun	20.11	23	*e*P	P	17 32 09.5	-0.7
	23nm,1.1s						
X51A				*e*S	S	17 35 49.0	-2.0
X51A	Calhoun	20.11	23	P	P	17 32 09.7	-0.4
	baz=208						
W49A	Belvidere	20.11	20	P	P	17 32 09.0	-1.2
	baz=203,SNR=5.7						
Z55A	Blythe	20.16	31	P	P	17 32 10.6	-0.2
	baz=216						
121A	Cookes Peak, D	20.21	326	P	P	17 32 11.6	0.0
	baz=140,SNR=8.1						
319A	Douglas	20.23	321	*e*P	Pn	17 32 13.6	-0.9
	6.2nm,1.0s						
SWET	Sewanee	20.31	20	*e*P	P	17 32 11.1	-1.3
	18nm,1.5s						
157A	Early Branch	20.33	34	P	P	17 32 11.1	-1.5
	baz=220						
Y54A	Tignall	20.42	29	P	P	17 32 12.8	-0.8
	baz=214						
W50A	Signal Mountai	20.50	22	*e*P	P	17 32 13.3	-1.2
	20nm,1.1s						
W50A				*e*S	S	17 35 55.9	-3.0
W50A	Signal Mountai	20.50	22	P	P	17 32 13.0	-1.5
	baz=206,SNR=6.0						
V48A	Smith Brothers	20.51	18	*e*P	P	17 32 12.7	-1.8
	5.0nm,0.8s						
V48A	Smith Brothers	20.51	18	P	P	17 32 12.7	-1.8
	baz=201						
X52A	Dahlonega	20.52	25	P	P	17 32 13.0	-1.7
	baz=210						
WVT	Waverly	20.60	15	*e*P	P	17 32 14.0	-1.5
	6.5nm,0.6s						
WVT	Waverly	20.60	15	P	P	17 32 13.8	-1.7
	baz=198						
W51A	Cleveland	20.67	23	P	P	17 32 14.1	-2.2
	baz=207						
X53A	Estanollee	20.69	27	P	P	17 32 14.4	-2.0
	baz=212						
PBMO	Poplar Bluff	20.70	9	*e*P	P	17 32 14.8	-1.8
	16nm,1.0s						
V49A	McMinnville	20.82	20	P	P	17 32 16.5	-1.3
	baz=204						
Y55A	Saluda	20.88	30	P	P	17 32 18.2	-0.3
	baz=216						
BNM	Barren Site	20.91	330	*e*P	Pn	17 32 21.8	-0.6
HODGE	Hodges	20.93	29	*e*P	P	17 32 18.1	-0.9
	6.8nm,0.9s						
CLTN	Cedars of Leba	20.98	18	*e*P	P	17 32 18.6	-1.0
	2.8nm,0.9s						
V50A	Pikevile	21.00	22	P	P	17 32 19.3	-0.5
	baz=206						
CPCT	Cooper Cave	21.02	23	*e*P		17 32 21.8	
	16nm,1.3s						
LENM	Lemitar	21.09	330	*e*P	P	17 32 23.7	+2.8
NHSC	New Hope	21.10	35	P	P	17 32 20.3	-0.5
	baz=221						
BG3	Lake Jocassee	21.26	27	*e*P	P	17 32 26.5	+3.9
	28nm,1.0s						
V51A	Loudon	21.39	23	*e*P	P	17 32 23.1	-0.9
	4.9nm,0.7s						
JSC	Jenkinsville	21.45	31	*e*P	P	17 32 23.3	-1.2
	16nm,1.4s						
ANMO	Albuquerque	21.49	332	P	P	17 32 27.3	+2.1
	3.4nm,0.8s,baz=152,slow=13,SNR=8.6						
ANMO	Albuquerque	21.49	332	*e*P	P	17 32 26.8	+1.5
	3.7nm,0.8s						
ANMO	Albuquerque	21.49	332	P	P	17 32 25.5	+0.3
	baz=147						
TKL	Tuckaleechee C	21.49	24	P	P	17 32 23.6	-1.4
	2.1nm,0.6s,baz=193,slow=17,SNR=3.4						
U49A	Red Boiling Sp	21.54	19	P	P	17 32 23.6	-1.9
	baz=203,SNR=6.2						
YOTC	Yotoco, Valle	21.54	123	*e*P	P	17 32 26.5	+0.6
T47A	Sharon Grove	21.60	16	*e*P	P	17 32 25.0	-1.1
	26nm,1.1s						
T47A	Sharon Grove	21.60	16	P	P	17 32 24.3	-1.8
	baz=199,SNR=6.1						
PAULI	Pauline	21.62	29	*e*P	P	17 32 26.9	+0.5
	17nm,1.3s						
GUY2C	Guyana, Caldas	21.67	118	*e*P	P	17 32 27.0	-0.6
V52A	Sevierville	21.72	24	*e*P	P	17 32 26.3	-1.2
	22nm,1.5s						
U50A	Jamestown	21.76	21	P	P	17 32 26.4	-1.6
	baz=205						
S44A	Carbondale	21.79	11	P	P	17 32 27.0	-1.2
	baz=194						
PTBC	PUERTO BERRIO,	21.79	114	*e*P	P	17 32 30.5	+2.0
TUC	Tucson	21.80	320	*e*P	P	17 32 30.1	+1.6

	2.1nm,0.6s						
SIUC	Southern Illin	21.82	11	*e*P	P	17 32 27.2	-1.3
	13nm,0.9s						
CCM	Cathedral Cave	21.85	7	*e*P	P	17 32 26.9	-1.9
	8.0nm,0.6s						
CCM	Cathedral Cave	21.85	7	P	P	17 32 27.1	-1.7
	baz=188						
RREF	El Recreo	21.85	119	*e*P	P	17 32 31.8	+2.1
FVM	French Village	21.89	8	*e*P	P	17 32 30.3	+1.1
	12nm,1.2s						
V53A	Saluda	21.89	26	*e*P	P	17 32 27.2	-2.1
	12nm,0.9s						
V53A				*e*S	S	17 36 26.4	+0.5
V53A	Saluda	21.89	26	P	P	17 32 27.6	-1.7
	baz=211						
NORC	Norcasia	21.91	117	*e*P	P	17 32 30.9	+1.1
U51A	La Follette	22.03	23	P	P	17 32 28.8	-1.9
	baz=207						
BBAC	Balboa, Cauca	22.05	128	*e*P	P	17 32 33.2	+1.8
OCAC	Ocana	22.08	109	*e*P	P	17 32 35.3	+3.7
KMSC	Kings Mountain	22.11	29	*e*P	P	17 32 32.2	+0.6
	8.1nm,0.8s						
BIRD	Birdtown, Kers	22.14	32	*e*P	P	17 32 32.2	+0.3
	5.2nm,0.9s						
POPC	Popayan, Colom	22.16	126	*e*P	P	17 32 34.0	+1.5
T49A	Edmonton	22.16	19	*e*P	P	17 32 29.6	-2.6
	5.4nm,0.8s						
T49A				*e*S	S	17 36 31.0	+0.4
T49A	Edmonton	22.16	19	P	P	17 32 30.0	-2.2
	baz=203						
U52A	Thorn Hill	22.29	24	P	P	17 32 31.0	-2.6
	baz=209,SNR=5.2						
T50A	Nancy	22.31	20	P	P	17 32 31.0	-2.8
	baz=205						
TZTN	Tazewell	22.35	23	*e*P	P	17 32 32.5	-1.6
	17nm,1.4s						
TZTN	Tazewell	22.35	23	P	P	17 32 32.8	-1.4
	baz=208						
V54A	Nebo	22.35	27	P	P	17 32 32.0	-2.2
	baz=213						
ORTC	Ortega, Tolima	22.48	121	*e*P	P	17 32 35.8	0.0
MARP	Paez Belalcaza	22.53	124	*e*P	P	17 32 40.1	+3.6
SPBC	San Pablo de B	22.55	116	*e*P	P	17 32 36.5	-0.1
CRUC	La Cruz	22.57	129	*e*P	P	17 32 39.6	+2.5
T51A	Gray	22.57	22	P	P	17 32 34.9	-1.6
	baz=207						
T25A	Trinidad	22.58	339	P	P	17 32 36.8	0.0
	baz=155,SNR=18						
V55A	Taylorsville	22.75	29	P	P	17 32 37.8	-0.5
	baz=214						
ROSC	El Rosal	22.75	118	P	P	17 32 39.5	+0.6
	6.2nm,0.4s,baz=266,slow=16,SNR=3.6						
ROSC	El Rosal	22.75	118	*e*P	P	17 32 39.4	+0.4
	6.8nm,0.5s						
W57A	Gilead	22.77	32	*e*P	P	17 32 41.5	+2.9
	15nm,1.3s						
W57A	Gilead	22.77	32	P	P	17 32 37.2	-1.4
	baz=218						
KSU1	Kansas State U	22.80	356	P	P	17 32 37.6	-1.2
	baz=175						
S49A	Springfield	22.86	19	P	P	17 32 38.1	-1.4
	baz=203						
PRAC	Prado	22.89	121	*e*P	P	17 32 39.5	-0.5
X18A	Snowflake	22.90	325	*e*P	P	17 32 42.2	+2.1
	3.0nm,0.8s						
CBKS	Cedar Bluff	22.92	349	*e*P	P	17 32 40.0	0.0
	54nm,0.9s						
CBKS	Cedar Bluff	22.92	349	P	P	17 32 40.3	+0.2
	baz=167,SNR=18						
WCI	Wyandotte Cave	22.98	17	*e*P	P	17 32 37.8	-2.9
	10nm,0.8s						
WCI	Wyandotte Cave	22.98	17	P	P	17 32 38.5	-2.1
	baz=200						
OLIL	Olney	23.03	13	*e*P	P	17 32 38.1	-2.9
	25nm,0.9s						
U54A	Nelsons Funny	23.03	27	*e*P	P	17 32 41.2	0.0
	19nm,0.9s						
T52A	Hallie	23.06	24	*e*P	P	17 32 40.0	-1.4
	15nm,0.8s						
S51A	Beattyville	23.30	22	*e*P	P	17 32 41.7	-2.0
	8.3nm,1.0s						
S51A	Beattyville	23.30	22	P	P	17 32 42.1	-1.5
	baz=207						
R49A	Shelbyville	23.37	19	*e*P	P	17 32 41.9	-2.3
	8.2nm,0.8s						
R49A	Shelbyville	23.37	19	P	P	17 32 42.2	-2.0
	baz=203						
SDCO	Great Sand Dun	23.51	337	*e*P	P	17 32 47.7	+1.8
	13nm,1.0s						
SDCO	Great Sand Dun	23.51	337	P	P	17 32 43.2	-2.7
	baz=153,SNR=12						
FLOC	Florencia	23.55	126	*e*P	P	17 32 48.2	+2.1
R50A	Paris	23.62	20	*e*P	P	17 32 47.6	+1.1
	17nm,1.3s						
P43A	Skaggs, Pawnee	23.64	9	P	P	17 32 45.2	-1.5
	baz=192						
KSCO	Kaye Shedlock'	23.75	344	*e*P	P	17 32 48.9	+1.0
	59nm,1.4s						
Q48A	North Vernon	23.79	17	P	P	17 32 46.4	-1.6
	baz=201						
S22A	4UR Ranch, Cre	24.02	335	P	P	17 32 49.3	-1.1
	baz=150						
P46A	Rosedale	24.07	14	P	P	17 32 49.5	-0.9
	baz=197,SNR=6.8						
BLA	Blacksburg	24.23	28	*e*P	P	17 32 50.7	-1.4
	32nm,1.6s						
Y14A	Wickenburg	24.27	320	*e*P	P	17 32 54.0	+1.5
	1.8nm,0.6s						
MVCO	Mesa Verde	24.29	332	*e*P	P	17 32 53.6	+0.8
	4.9nm,1.0s						
P48A	Milroy	24.37	17	*e*P	P	17 32 52.0	-1.2
	8.8nm,0.6s						
P48A	Milroy	24.37	17	P	P	17 32 52.2	-1.1
	baz=201						
WUAZ	Wupatki	24.42	325	*e*P	P	17 32 53.4	-0.5
	3.4nm,0.9s						
N41A	Harden Midland	24.52	6	*e*P	P	17 32 54.1	-0.5
	34nm,1.0s						
N41A	Harden Midland	24.52	6	P	P	17 32 53.8	-0.7
	baz=188,SNR=6.1						
R53A	Hurricane	24.53	24	*e*P	P	17 32 55.5	+0.8
	7.4nm,0.8s						
HDIL	Hopedale	24.57	9	*e*P	P	17 32 53.6	-1.5
	15nm,0.8s						
HDIL	Hopedale	24.57	9	P	P	17 32 54.1	-1.0
	baz=192						
T57A	Hurt	24.60	30	*e*P	P	17 32 52.2	-3.1
	14nm,1.5s						
N40A	Mertquake, Sal	24.62	5	P	P	17 32 55.1	-0.4
	baz=187						
Q51A	Peebles	24.63	21	*e*P	P	17 32 54.0	-1.6
	6.3nm,0.7s						
Q51A	Peebles	24.63	21	P	P	17 32 54.1	-1.6
	baz=206						
MACC	Macarena, Meta	24.64	123	*e*P	P	17 32 57.6	+1.7
SFIN	Lafayette	24.82	13	*e*P	P	17 32 56.4	-0.9
	6.1nm,0.7s						
SFIN	Lafayette	24.82	13	P	P	17 32 56.1	-1.2
	baz=197						
Q52A	Bidwell	24.96	23	P	P	17 32 57.6	-1.0
	baz=208						
PV01	Paradox Valley	25.08	333	*e*P	P	17 33 00.5	+0.4
	3.8nm,0.8s						
P51A	Williamsport	25.13	21	*e*P	P	17 32 58.4	-1.8
	7.2nm,0.4s						
O48A	Farmland	25.19	17	P	P	17 32 59.3	-1.4
	baz=201						
PV13	Radium Mtn., P	25.21	333	*e*P	P	17 33 01.9	+0.7
	8.8nm,1.4s						
M41A	Milan	25.21	7	P	P	17 33 00.2	-0.6
	baz=189						
PV02	Paradox Valley	25.21	333	*e*P	P	17 33 02.4	+1.1
	6.6nm,1.1s						
BGNE	Belgrade	25.23	353	P	P	17 33 01.1	0.0
	baz=172						
R55A	Marlinton	25.25	27	*e*P	P	17 33 01.3	0.0
	7.7nm,1.0s						
R55A	Marlinton	25.25	27	P	P	17 32 59.9	-1.5
	baz=214						
PV03	Paradox Valley	25.30	333	*e*P	P	17 33 02.6	+0.6
	4.3nm,1.0s						
PV18	Skein Mesa, Pa	25.32	333	*e*P	P	17 33 03.6	+1.5
	3.7nm,0.7s						
PV12	Saucer Basin,	25.33	333	*e*P	P	17 33 03.0	+0.7
	7.6nm,0.9s						
PV11	David Mesa, Pa	25.35	333	*e*P	P	17 33 02.9	+0.5
	43nm,0.2s						
S57A	Dark Hollow, R	25.35	30	*e*P	P	17 33 01.7	-0.5
	9.5nm,1.4s						
S57A	Dark Hollow, R	25.35	30	P	P	17 33 01.6	-0.6
	baz=217						
O49A	Covington	25.36	18	*e*P	P	17 33 00.2	-2.0
	7.8nm,0.6s						
O49A	Covington	25.36	18	P	P	17 33 01.0	-1.3
	baz=203						
PV07	Paradox Valley	25.37	333	*e*P	P	17 33 04.4	+1.8
	3.1nm,0.8s						
PV17	East Wray Mesa	25.37	332	*e*P	P	17 33 04.9	+2.3
	9.7nm,1.2s						
PV16	Nyswonger Mesa	25.38	333	*e*P	P	17 33 03.4	+0.7
	10nm,1.4s						
PV19	Morning Glory	25.41	332	*e*P	P	17 33 05.0	+2.0
	5.9nm,1.1s						
PV20	West Nyswonger	25.43	333	*e*P	P	17 33 04.7	+1.6
	3.5nm,0.8s						
OGNE	Ogallala	25.44	346	*e*P	P	17 33 04.3	+1.2
	31nm,0.8s						
PV04	Paradox Valley	25.44	333	*e*P	P	17 33 05.3	+2.1
	5.5nm,0.8s						
PV14	Lion Creek, Pa	25.48	333	*e*P	P	17 33 04.3	+0.7
	6.6nm,1.0s						
PV10	Paradox Valley	25.49	332	*e*P	P	17 33 04.4	+0.7
	6.5nm,0.7s						
PV22	Blue Mesa, Par	25.51	333	*e*P	P	17 33 05.5	+1.6
	4.6nm,1.0s						
PV23	Carpenter Ridg	25.54	333	*e*P	P	17 33 05.7	+1.5
	8.2nm,1.1s						
SCIA	State Center	25.54	2	*e*P	P	17 33 02.9	-1.0
	49nm,0.6s						
SCIA	State Center	25.54	2	P	P	17 33 03.0	-0.8
	baz=183,SNR=11						
W13A	Hualapai Mount	25.59	321	*e*P	P	17 33 06.0	+1.4
	1.8nm,0.9s						
U15A	North Rim	25.59	325	*e*P	P	17 33 06.9	+2.1
	2.2nm,1.0s						
M44A	Midewin, Midew	25.60	11	*e*P	P	17 33 06.2	+1.8
	7.2nm,0.5s						
PV09	Paradox Valley	25.63	333	*e*P	P	17 33 06.3	+1.3
BC3	Big Chuckawall	25.66	316	P	P	17 33 05.2	0.0
	baz=128						
P53A	Whipple	25.75	24	*e*P	P	17 33 04.4	-1.3
	9.4nm,1.1s						
N48A	Decatur	25.79	16	P	P	17 33 04.3	-1.8
	baz=201						
L40A	Anamosa	25.82	5	*e*P	P	17 33 05.1	-1.3
	28nm,0.6s						
L40A	Anamosa	25.82	5	P	P	17 33 05.2	-1.3
	baz=187,SNR=11						
ACSO	Alum Creek Sta	25.83	20	*e*P	P	17 33 05.4	-1.1
	5.0nm,0.7s						
ACSO	Alum Creek Sta	25.83	20	P	P	17 33 05.2	-1.3
	baz=206						
L42A	Oliver, Polo	25.94	8	*e*P	P	17 33 05.9	-1.6
	37nm,1.5s						
L42A	Oliver, Polo	25.94	8	P	P	17 33 05.7	-1.8
	baz=190						
N49A	Columbus Grove	26.08	18	*e*P	P	17 33 10.2	+1.5
	8.0nm,1.2s						
O52A	Adamsville	26.13	22	P	P	17 33 07.7	-1.5
	baz=208						
KNB	Kanab	26.31	325	*e*P	P	17 33 11.8	+0.7
	3.9nm,1.4s						
O53A	New Philadelph	26.48	23	P	P	17 33 11.4	-0.9
	baz=209						
JFWS	Jewell Farm	26.77	7	*e*P	P	17 33 13.8	-1.1
	37nm,0.6s						
JFWS	Jewell Farm	26.77	7	P	P	17 33 12.9	-2.0
	baz=189,SNR=9.8						
ECSD	EROS Data Cent	27.41	357	*e*P	P	17 33 19.1	-1.6
	15nm,0.8s						
ECSD	EROS Data Cent	27.41	357	P	P	17 33 19.9	-0.8
	baz=176,SNR=26						
I42A	Draeger Farm,	27.90	8	P	P	17 33 23.6	-1.4
	baz=191						
SUSD	Miller	28.32	353	P	P	17 33 28.5	-0.3
	baz=171						
SPMN	Marine on St.	28.87	2	*e*P	P	17 33 32.7	-1.0
	34nm,0.6s						
SPMN	Marine on St.	28.87	2	P	P	17 33 32.5	-1.1
	baz=183,SNR=10						
G39A	Holcombe	29.03	5	P	P	17 33 33.9	-1.1
	baz=186,SNR=5.2						
PD31	Pinedale Array	29.40	337	*e*pP	pP	17 33 59.3	-0.2
PDAR	Pinedale Array	29.40	337	P	P	17 33 39.4	+0.8
	0.3nm,0.4s,baz=138,slow=7.0,SNR=4.7						
PDAR				pP	pP	17 33 59.3	-0.2
	0.4nm,0.6s,baz=130,slow=12,SNR=2.1						
TYNO	Tyneside	29.45	22	P	P	17 33 36.6	-2.2
	baz=209						
E38A	The Farm, Brul	30.31	4	*e*P	P	17 33 45.3	-1.1
	25nm,0.6s						
E38A	The Farm, Brul	30.31	4	P	P	17 33 45.0	-1.4
	baz=186,SNR=11						
NV01	Mina Array Sit	30.44	321	*e*pP	pP	17 34 11.1	+2.3
NVAR	Mina Array Bea	30.44	321	P	P	17 33 51.0	+3.1
	2.6nm,1.0s,baz=133,slow=8.7,SNR=12						
NVAR				pP	pP	17 34 11.1	+2.3
	2.9nm,0.8s,baz=136,slow=9.4,SNR=8.0						
NVAR				LR	LR	17 48 10.7	
	comp=Z,97nm,19.6s,baz=180,slow=40						
E43A	Lone Tree Farm	30.62	10	P	P	17 33 47.2	-1.9
	baz=194						
WLVO	Wesleyville	30.70	23	P	P	17 33 48.0	-1.8
	baz=211						
D41A	Chassel	31.05	8	P	P	17 33 51.0	-1.9
	baz=191						
E46A	Sault Ste Mari	31.14	14	P	P	17 33 52.0	-1.6
	baz=199						
YPP	Pitchstone Pla	31.15	337	*e*P	P	17 33 51.9	-2.3
	3.4nm,0.6s						
H53A	Bobcaygeon	31.19	22	P	P	17 33 52.2	-1.9
	baz=210						
E47A	Iron Bridge	31.46	15	P	P	17 33 55.0	-1.5
	baz=201						
DELO	Deloro Mine	31.50	23	P	P	17 33 55.0	-1.9
	baz=212						
YHH	Holmes Hill	31.61	337	*e*P	P	17 33 59.7	+1.5
	3.4nm,1.2s						
EYMN	Ely	31.65	4	*e*P	P	17 33 56.7	-1.5
	14nm,0.6s						
EYMN	Ely	31.65	4	P	P	17 33 56.8	-1.4
	baz=185,SNR=16						
G53A	Haliburton	31.65	22	P	P	17 33 55.8	-2.4
	baz=210						
BUKO	Buck Lake	31.67	20	P	P	17 33 55.9	-2.4
	baz=208						
D46A	Sault St. Mari	31.70	14	P	P	17 33 57.2	-1.4
	baz=199						
C40A	Isle Royale Na	31.83	7	*e*P	P	17 33 58.1	-1.6
	8.8nm,0.6s						
C40A	Isle Royale Na	31.83	7	P	P	17 33 57.8	-1.8
	baz=190,SNR=5.7						
AGMN	Agassiz Nation	31.94	358	*e*P	P	17 33 59.5	-1.1
	25nm,0.7s						
AGMN	Agassiz Nation	31.94	358	P	P	17 33 59.7	-0.9
	baz=178,SNR=19						
HLID	Hailey	32.07	332	*e*P	P	17 34 03.5	+1.5
	3.8nm,1.3s						
HLID	Hailey	32.07	332	P	P	17 34 01.0	-1.1
	baz=142						
D47A	Chapleau	32.07	15	P	P	17 34 00.1	-1.8
	baz=201						
PLVO	Plevna	32.15	23	P	P	17 34 00.7	-1.8
	baz=212						
MCMT	McKenzie Canyo	32.42	335	*e*P	P	17 34 07.7	+2.5
BOZ	Bozeman (W)	32.59	337	*e*P	P	17 34 08.3	+1.8
	2.1nm,0.7s						
E51A	G1948 Merrick	32.60	19	P	P	17 34 04.2	-2.3
	baz=207						
HRV	Adam Dziewonsk	32.63	32	P	P	17 34 03.6	-3.1
	baz=224						
DLMT	Dillon	32.76	336	*e*P	P	17 34 09.7	+1.7
	7.1nm,0.9s						
DGMT	Dagmar	33.08	348	*e*P	P	17 34 12.5	+1.8
	25nm,1.3s						
E54A	Lac Daplat, Po	33.29	22	P	P	17 34 10.2	-2.3
	baz=211						
HRY	Holter Researc	33.61	338	*e*P	P	17 34 17.1	+1.7
D53A	Lac Vacive, Po	33.67	21	P	P	17 34 13.9	-1.9
	baz=210						
J08A	Circle Bar Ran	33.87	328	*e*P	P	17 34 20.1	+2.3
	6.5nm,0.7s						
ULM	Lac du Bonnet	33.89	358	P	P	17 34 16.5	-1.1
	10nm,0.6s,baz=171,slow=9.9,SNR=18						
ULM	Lac du Bonnet	33.89	358	*e*P	P	17 34 16.1	-1.5
	10nm,0.6s						
EGMT	Eagleton	34.07	341	*e*P	P	17 34 20.8	+1.4
	12nm,1.3s						
D54A	Lac Fusel, La	34.10	22	P	P	17 34 17.4	-2.1
	baz=211						
BMO	Blue Mountains	34.39	331	*e*P	P	17 34 24.0	+1.8
	1.4nm,1.0s						
MSO	Missoula	34.50	336	*e*P	P	17 34 24.6	+1.5
	5.7nm,1.0s						
MSO	Missoula	34.50	336	P	P	17 34 22.6	-0.6
	baz=146						
F10A	Beach Ranch, E	35.20	332	*e*P	P	17 34 30.1	+0.9
	7.6nm,0.8s						
MATQ	Matagami	36.04	19	P	P	17 34 33.3	-2.8
	baz=208						
NEW	Newport	36.93	335	P	P	17 34 42.7	-1.1
	baz=142						
PTGA	Pitinga	37.95	113	*e*P	P	17 34 50.1	-2.7
	6.5nm,0.8s						
FFC	Flin Flon	38.80	353	*e*P	P	17 34 58.9	-0.4
	130nm,0.6s						
LPAZ	La Paz	41.47	140	P	P	17 35 23.3	+0.8
	2.5nm,0.5s,baz=321,slow=3.0,SNR=14						
LPAZ	La Paz	41.47	140	*e*P	P	17 35 23.9	+1.4
	2.6nm,0.6s						
FCC	Fort Churchill	42.40	0	*e*P	P	17 35 28.7	-0.2
	21nm,0.8s						
SCHQ	Schefferville	43.94	23	LR	LR	17 57 11.8	
	comp=Z,36nm,18.4s,baz=182,slow=40						
SIV	San Ignacio	45.94	133	P	P	17 35 57.5	-0.3
	14nm,0.8s,baz=317,slow=9.2,SNR=53						
SIV				pP	pP	17 36 19.7	+0.1
	2.6nm,0.9s,baz=313,slow=8.3,SNR=2.5						
YKA	Yellowknife Ar	48.29	348	P	P	17 36 16.0	+0.7
	4.5nm,0.6s,baz=152,slow=7.3,SNR=14						
YKA				pP	pP	17 36 37.2	-0.4
	1.1nm,0.6s,baz=154,slow=7.3,SNR=2.4						
YKB5	Yellowknife Ar	48.29	348	*e*pP	pP	17 36 37.2	-0.4
CPUP	Villa Florida	55.62	139	P	P	17 37 11.1	+0.7
	2.7nm,0.9s,baz=337,slow=7.2,SNR=5.4						
CPUP	Villa Florida	55.62	139	*e*P	P	17 37 11.5	+1.2
	5.8nm,1.1s						
BDFB	Brasilia	55.70	122	P	P	17 37 10.9	-0.3
	14nm,0.7s,baz=287,slow=7.8,SNR=17						
BDFB	Brasilia	55.70	122	*e*P	P	17 37 10.8	-0.4
	16nm,0.8s						
EPYK	Eagle Plains	57.22	341	P	P	17 37 19.0	-2.2
	baz=130						
INK	Inuvik	57.60	344	*e*P	P	17 37 24.0	+0.3
	10nm,0.7s						
DOT	Dot Lake	58.20	336	*e*P	P	17 37 29.3	+1.2
	11nm,1.5s						
PAX	Paxson	58.42	335	*e*P	P	17 37 31.0	+1.3
	3.0nm,1.0s						
KKH	Kailua Kona	58.44	283	*e*PcP	PcP	17 38 22.4	+2.1
ILAR	Eielson Array	59.83	337	P	P	17 37 39.9	+0.6
	0.9nm,0.8s,baz=126,slow=4.5,SNR=10						
ILAR				pP	pP	17 38 02.7	+0.3
	0.7nm,0.6s,baz=105,slow=5.8,SNR=3.0						
ILAR				PP	PP	17 39 54.8	+2.7
	0.2nm,0.3s,baz=115,slow=7.4,SNR=4.9						
ILB	Eielson Array	59.83	337	*e*P	P	17 37 40.3	+1.0
	9.4nm,1.5s						
RND	Reindeer	59.98	335	*e*P	P	17 37 42.1	+1.7
	15nm,1.4s						
SKT	Skwentna	60.53	333	*e*P	P	17 37 44.9	+0.8
	3.5nm,1.2s						
PLCA	Paso Flores	60.91	159	P	P	17 37 47.6	+0.7
	4.6nm,0.8s,baz=355,slow=7.1,SNR=13						
PLCA	Paso Flores	60.91	159	*e*P	P	17 37 47.8	+0.8
	5.0nm,1.0s						
BPAW	Bear Paw Mtn.	61.13	335	*e*P	P	17 37 49.2	+1.0
	3.8nm,0.9s						
MLY	Manley	61.42	336	*e*P	P	17 37 51.3	+1.2
	4.9nm,0.9s						
TTA	Tatalina	62.82	333	*e*P	P	17 37 59.8	+0.3
	2.9nm,1.0s						
SUMG	Summit	64.66	16⇑	*i*P	P	17 38 11.6	-0.3
	32nm,0.8s						
ESDC	Sonseca Array	80.11	52	P	P	17 39 44.1	+0.2
	3.8nm,0.8s,baz=293,slow=5.3,SNR=21						
NC204	NORSAR Array S	82.94	28	*e*P	P	17 39 58.8	+0.4
	26nm,1.5s						
NBO00	NORSAR Array S	83.04	28	*e*P	P	17 39 58.9	0.0
	35nm,0.9s						
NAO01	NORSAR Array S	83.15	28	*e*P	P	17 39 59.9	+0.5
	43nm,1.1s						
NB2	NORSAR Subarra	83.23	28	P	P	17 40 00.7	+0.8
	comp=Z,17nm,0.8s,baz=292,slow=5.3						
NB2	NORSAR Subarra	83.23	28	P	P	17 40 00.7	+0.8
	baz=292,slow=5.3						
NOA	NORSAR Array B	83.23	28	P	P	17 40 00.8	+0.8
	comp=Z,10nm,0.8s,baz=291,slow=5.2,SNR=43						
NOA				LR	LR	18 15 49.4	
	comp=Z,14nm,21.5s,baz=280,slow=35						
NC405	NORSAR Array S	83.43	28	*e*P	P	17 40 01.6	+0.7
NC602	NORSAR Array S	83.49	28	*e*P	P	17 40 02.4	+1.2
ARCES	ARCESS Array B	84.68	18	P	P	17 40 07.6	+0.6
	comp=Z,5.2nm,0.6s,baz=295,slow=4.6,SNR=28						
ECH	Echery	85.49	41	*e*P	P	17 40 11.7	+0.1
	comp=Z,15nm,1.0s						
BFO	Black Forest	86.19	41	*e*P	P	17 40 14.5	-0.5
	comp=Z,12nm,1.1s						
SENIN	Lac Senin/Sane	86.19	43	*e*P	P	17 40 15.4	+0.1
	comp=Z,12nm,0.9s						
BNI	Bardonecchia	86.22	44	*e*P	P	17 40 15.3	-0.1
	comp=Z,20nm,1.4s						
TUE	Stuetta	87.48	42	*e*P	P	17 40 21.3	-0.3
	comp=Z,8.8nm,0.9s						
DAVA	Damuels	87.53	41	*e*P	P	17 40 22.2	+0.5
	comp=Z,13nm,1.1s						
TIC	Toumodi	87.57	84	*e*P	P	17 40 21.4	-0.9
LIC	Lamto	87.67	84	*e*P	P	17 40 22.2	-0.6
	comp=Z,113nm,1.9s						
DBIC	Dimbokro	87.72	84	P	P	17 40 22.8	-0.2
	comp=Z,8.5nm,0.9s,baz=231,slow=3.7,SNR=5.1						
DBIC	Dimbokro	87.72	84	*e*P	P	17 40 22.4	-0.7
	comp=Z,38nm,1.5s						
KIC	Kosan Boka	87.91	84	*e*P	P	17 40 23.4	-0.6
	comp=Z,127nm,1.6s						
RETA	Reutte	88.02	41	*e*P	P	17 40 24.5	+0.6
	comp=Z,2.8nm,0.7s						
FUORN	Ofenpass-Fuorn	88.02	42	*e*P	P	17 40 24.1	-0.2
	comp=Z,7.1nm,0.8s						
FETA	Feichten	88.17	41	*e*P	P	17 40 25.2	+0.4
	comp=Z,4.4nm,0.7s						
BRG	Berggiesshubel	88.61	37	*e*PKP	P	17 40 27.1	+0.6
	comp=Z,5.4nm,0.9s						
KHC	Kasperske Hory	89.10	39	*e*P	P	17 40 29.2	+0.2
	comp=Z,1.9nm,0.9s						
KHC	Kasperske Hory	89.10	39	*e*P	P	17 40 29.3	+0.3
GEC2	GERESS Array S	89.30	39	*e*P	P	17 40 29.6	-0.4
	comp=Z,5.8nm,1.0s						
GERES	GERESS Array B	89.30	39	P	P	17 40 29.9	-0.1
	comp=Z,3.1nm,0.9s,baz=318,slow=3.8,SNR=21						
GERES				LR	LR	18 22 17.3	
	comp=Z,21nm,18.2s,baz=276,slow=37						
PRU	Pruhonice	89.32	38	*e*P	P	17 40 29.9	0.0
FINES	FINESS Array B	89.39	24	P	P	17 40 29.8	-0.2
	comp=Z,0.8nm,0.5s,baz=299,slow=2.7,SNR=12						
FINES				LR	LR	18 23 45.9	
	comp=Z,11nm,18.3s,baz=275,slow=38						
UPC	Upice	89.95	37	*e*P	P	17 40 33.4	+0.5
KSP	Ksiaz	89.97	36	*e*P	P	17 40 33.7	+0.8
MOA	Molln	90.05	40	*e*P	P	17 40 33.5	+0.1
	comp=Z,4.2nm,0.7s						
DPC	Dobruska-Polom	90.20	37	*e*P	P	17 40 34.5	+0.4
OBKA	Obir	90.78	41	*e*P	P	17 40 37.2	+0.3
	comp=Z,7.0nm,1.0s						
KRUC	Moravsky	90.81	38	*e*P	P	17 40 36.7	-0.2
VRAC	Vranov	90.82	38	*e*P	P	17 40 37.2	+0.3
CONA	Conrad Observa	90.99	39	*e*P	P	17 40 38.5	+0.7
	comp=Z,2.8nm,0.7s						
SOKA	Soboth	91.01	40	*e*P	P	17 40 37.7	-0.3
	comp=Z,8.8nm,1.3s						
MORC	Moravsky Berou	91.16	37	*e*P	P	17 40 38.3	-0.3
	comp=Z,4.7nm,0.9s						
MORC	Moravsky Berou	91.16	37	*e*P	P	17 40 38.8	+0.2
KEST	Kesra	91.34	52	P	P	17 40 40.0	+0.2
	comp=Z,5.8nm,0.8s,baz=283,slow=4.1,SNR=4.1						
ZST	Bratislava	91.62	39	*e*P	P	17 40 41.0	+0.4
MODS	Modra-Piesok	91.64	38	*e*P	P	17 40 41.3	+0.5
TORD	Torodi Ar. Bea	92.08	76	P	P	17 40 42.2	-1.1
	comp=Z,1.2nm,0.6s,baz=290,slow=4.8,SNR=5.8						
OJC	Ojcow	92.24	36	*e*P	P	17 40 44.2	+0.7
VYHS	Vyhne	92.51	38	*e*P	P	17 40 45.8	+1.0
NIE	Niedzica	92.91	36	*e*P	P	17 40 48.2	+1.5
KOLS	Kolonicke sedl	94.28	36	*e*P	P	17 40 54.4	+1.5

MKAR	Makanchi Array	117.13	3	PP	PP	17 47 25.3	-2.9
	comp=Z,0.2nm,0.7s,baz=7.6,slow=4.4,SNR=4.0						
WR1	Warramunga Arr	133.66	258	ePKPdf	PKiKP	17 46 51.5	-0.4
WRA	Warramunga Arr	133.66	258	PKP	PKiKP	17 46 51.5	-0.4
	comp=Z,1.3nm,1.0s,baz=27,slow=0.4,SNR=4.1						
ASAR	Alice Springs	134.19	253	PKP	PKiKP	17 46 52.5	-0.4
	comp=Z,0.3nm,0.7s,baz=130,slow=2.7,SNR=4.1						

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*MEX **30** 17:31:33.3±0.2, 11°.95N×90°.98W, h20^{km}, MD4.0*

*GCG **30** 17:31:34.0±0.3, 12°.70N×90°.31W, h89^{km}±123^{km}, MD4.2*

*SNET **30** 17:31:35.4±0.7, 12°.91N×89°.94W, h20^{km}±4^{km}, ML4.5*

*ISCJB **30** 17:31:38.0±0.8, 13°.05N±0°.07×89°.78W±0°.05, h70^{km}±5^{km}, mb4.2/18, Error ellipse: s-maj=14.2km s-min=4.6km az=32.4*

*IDC **30** 17:31:39.8±1.6, 13°.42N×89°.35W, h56^{km}±12^{km}, mb4.0/9, mb1 4.3/13, mb1mx3.9/35, mbtmp4.3/13, MS3.1/1, Ms1 3.1/1, ms1mx2.6/22, Error ellipse: s-maj=31.2km s-min=9.2km az=45.0*

*NEIC **30** 17:31:40.5±2.1, 13°.28N×89°.59W, h64^{km}±7^{km}, mb4.4/16, MD4.0(MEX), MD4.5(SNET), Error ellipse: s-maj=14.3km s-min=8.1km az=217.0*

NEIC Felt [I] in Sonsonate.

ISC 30 17:31:37.9±1.4, **12°.98N**±0°.08×**89°.84W**±0°.05, **h52**^{km}±11^{km}, **n78**, σ**1^s.83**/91, **mb4.3**/18, **2C-8D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.87	14	⇓eP	Pn	17 31 53.5	-0.8
CEVE				eS	Sn	17 32 07.7	+1.5
CEVE				IAML		17 32 09.6	
	comp=Z,29μm,0.3s						
SBLS	San Blas	0.88	14	⇓iP	Pn	17 31 53.5	-0.8
PMON	Piamonte	0.89	35	⇑eP	Pn	17 31 53.7	-0.7
SNJE	San Jose	0.91	15	⇓eP	Pn	17 31 54.0	-0.8
SNET	Serv Nac Est T	0.92	40	eP	Pn	17 31 54.1	-0.7
SNET				IAML		17 32 11.7	
	comp=Z,5μm,0.4s						
CEDA	San Andres	0.93	28	eP	Pn	17 31 54.2	-0.6
CEDA				IAML		17 32 19.6	
	comp=Z,8μm,0.4s						
LOMA	Loma Larga	0.93	45	eP	Pn	17 31 54.3	-0.5
LOMA				eS	Sn	17 32 09.3	+2.0
LOMA				IAML		17 32 11.3	
	comp=Z,10μm,0.2s						
UEES	Universidad Ev	0.94	39	⇓eP	Pn	17 31 54.5	-0.6
OPAM	Oficina de Pla	0.96	41	eP	Pn	17 31 55.1	-0.2
CUSC	Alcaldia de Cu	0.98	41	eP	Pn	17 31 55.2	-0.3
UDBS	Universidad Do	0.99	42	eP	Pn	17 31 55.4	-0.4
UNIC	Universidad Ca	1.04	16	eP	Pn	17 31 55.9	-0.4
LFU	La Fuente	1.04	43	⇓eP	Pn	17 31 56.3	-0.1
PAVA	Las Pavas	1.15	50	⇓eP	Pn	17 31 57.9	+0.1
PAVA				IAML		17 32 23.1	
	comp=Z,7μm,0.5s						
LLGN	La Laguna	1.47	37	eP	Pn	17 32 02.8	+0.7
MTO3	Montecristo	1.49	18	⇓eP	Pn	17 32 03.1	+0.6
VICT	Victoria	1.52	50	⇓eP	Pn	17 32 03.8	+0.9
PACA	Pacayal	1.56	72	⇑eP	Pn	17 32 03.6	+0.2
LCY	Lacayo	1.57	74	eP	Pn	17 32 03.9	+0.3
PCG	Pacaya	1.59	332	eP	Pn	17 32 03.5	-0.4
NBG	Las Nubes	1.67	343	eP	Pn	17 32 05.8	+0.7
NBG				eS	Sn	17 32 27.6	+2.1
FUG	Fuego 3	1.75	327	eP	Pn	17 32 04.6	-1.5
FUG				eS	Sn	17 32 28.4	+1.0
LCND	La Caada	1.93	80	eP	Pn	17 32 08.5	+0.1
CNCH	Conchagua	1.98	81	eP	Pn	17 32 09.3	+0.2
APG	El Apazote	2.10	343	P	Pn	17 32 11.1	+0.2
	comp=Z,62nm,0.3s,baz=153,slow=8.4,SNR=14						
APG				S	Sn	17 32 33.7	-2.3
	comp=Z,53nm,0.3s,baz=356,slow=16,SNR=3.0						
TGUH	Tegucigalpa,Un	2.72	67	ePn	Pn	17 32 19.3	+0.1
THIG		3.03	309	eP	Pn	17 32 19.5	-4.0
THIG				eSn	Sn	17 32 57.2	-1.4
THIG		3.03	309	eP	Pn	17 32 19.5	-4.0
THIG				i S	Sn	17 32 57.2	-1.4
ESTN	Estel	3.39	88	ePn	Pn	17 32 22.0	-6.5
CCIG	Comitan	3.96	326	ePn	Pn	17 32 34.3	-2.1
CCIG				ePn	Pn	17 32 38.0	+1.7
CCIG				eSn	Sn	17 33 28.6	+6.9
CCIG	Comitan	3.96	326	i P	Pn	17 32 38.0	+1.7
CCIG				eS	Sn	17 33 28.6	+6.9
PCIG		4.25	310	eP	Pn	17 32 35.8	-4.3
PCIG				eSn	Sn	17 33 24.9	-3.5
PCIG		4.25	310	eP	Pn	17 32 35.8	-4.3
PCIG				i S	Sn	17 33 24.9	-3.5
ACON	Acoyapa	4.67	102	ePn	Pn	17 32 48.0	+2.1
TGIG		4.93	320	ePn	Pn	17 32 48.8	-0.8
TGIG				eSn	Sn	17 33 46.6	+1.2
TGIG		4.93	320	i P	Pn	17 32 48.8	-0.8
TGIG				eS	Sn	17 33 46.6	+1.2
ESPN	Las Esperanzas	5.47	98	ePn	Pn	17 32 57.5	+0.7
JTS	Las Juntas de	5.49	119	P	Pn	17 32 57.2	0.0
	comp=Z,3.0nm,0.3s,baz=5.3,slow=19,SNR=8.4						
JTS				S	Sn	17 33 56.8	-2.3
	baz=35,slow=21,SNR=0.8						
JTS				Lg	Lg	17 34 27.0	
	comp=Z,1.1nm,0.3s,baz=179,slow=19,SNR=10						
JTS	Las Juntas de	5.49	119	ePn	Pn	17 32 58.6	+1.4
CMIG	Matias Romero	6.36	311	P	Pn	17 33 11.0	+1.9
	comp=Z,2.2nm,0.3s,baz=150,slow=8.8,SNR=6.3						
CMIG				S	Sn	17 34 25.0	+4.6
	comp=Z,1.7nm,0.3s,baz=104,slow=8.1,SNR=1.6						
TEIG	Tepich	7.36	12	P	Pn	17 33 18.6	-4.2
	comp=Z,1.9nm,0.3s,baz=162,slow=20,SNR=1.8						
TEIG	Tepich	7.36	12	ePn	Pn	17 33 20.1	-2.8
LNIG	Linares	14.94	324	eP	P	17 35 11.8	+1.3
ROSC	El Rosal	17.33	116	P	Pn	17 35 35.5	-1.2
	comp=Z,4.2nm,0.3s,baz=328,slow=9.5,SNR=2.6						
ROSC				LR	LR	17 43 33.2	
	comp=Z,70nm,21.0s,baz=236,slow=42						
250A	Grady	19.19	9	eP	P	17 35 56.1	-1.3
	comp=Z,52nm,0.5s						
TXAR	Lajitas Array	20.73	324	P	Pn	17 36 16.0	-1.1
	comp=Z,7.5nm,0.8s,baz=148,slow=11,SNR=29						
TXAR				PcP	PcP	17 40 24.1	+1.7
	comp=Z,0.6nm,0.8s,baz=90,slow=2.7,SNR=2.4						
TUC	Tucson	27.17	318	eP	P	17 37 17.8	+1.0
	comp=Z,2.5nm,0.8s						
PV12	Saucer Basin,	30.35	330	eP	P	17 37 46.0	+0.9
	comp=Z,3.6nm,0.8s						
ECSD	EROS Data Cent	31.20	351	eP	P	17 37 50.8	-1.4
	comp=Z,5.2nm,1.0s						
MTPU	Mount Pierson	31.91	325	eP	P	17 38 01.0	+2.0
	comp=Z,2.3nm,0.9s						
COWI	Conover	33.02	1	eP	P	17 38 06.3	-1.8
	comp=Z,10nm,0.8s						
E43A	Lone Tree Farm	33.37	4	eP	P	17 38 09.4	-1.9
	comp=Z,9.9nm,0.9s						
PD31	Pinedale Array	34.23	334	ePcP	PcP	17 40 55.4	+0.6
PDAR	Pinedale Array	34.23	334	P	P	17 38 19.5	+0.4
	comp=Z,0.3nm,0.5s,baz=133,slow=8.8,SNR=3.0						
PDAR				PcP	PcP	17 40 55.4	+0.6
	comp=Z,0.3nm,0.3s,baz=144,slow=3.5,SNR=4.4						
NV11	Mina Array Sit	35.69	320	eP	P	17 38 33.5	+1.9
	comp=Z,0.4nm,0.9s						
NV01	Mina Array Sit	35.78	320	eP	P	17 38 34.6	+2.2
NV01				ePcP	PcP	17 41 00.7	+1.3
NVAR	Mina Array Bea	35.78	320	P	P	17 38 34.6	+2.2
	comp=Z,7.8nm,0.8s,baz=134,slow=8.5,SNR=39						
NVAR				PcP	PcP	17 41 00.7	+1.3
	comp=Z,1.0nm,0.7s,baz=132,slow=3.7,SNR=6.1						
MDPB	Devils Postpil	35.80	318	eP	P	17 38 34.8	+2.1
	comp=Z,3.7nm,0.9s						
YERR	Yerington	36.70	320	eP	P	17 38 42.1	+1.8
	comp=Z,3.2nm,0.8s						
DGMT	Dagmar	37.34	344	eP	P	17 38 45.3	-0.1
	comp=Z,17nm,0.9s						
ULM	Lac du Bonnet	37.49	354	P	P	17 38 43.5	-3.0
	comp=Z,8.0nm,0.6s,baz=199,slow=14,SNR=12						
ULM	Lac du Bonnet	37.49	354	eP	P	17 38 44.1	-2.4
	comp=Z,12nm,0.9s						
SIV	San Ignacio	40.48	135	P	P	17 39 12.6	+0.7
	comp=Z,1.1nm,0.7s,baz=319,slow=8.7,SNR=4.6						
SIV				PcP	PcP	17 41 15.4	+1.5
	comp=Z,0.8nm,0.7s,baz=254,slow=4.4,SNR=4.0						
SCHQ	Schefferville	45.48	18	P	P	17 39 49.6	-2.3
	comp=Z,6.6nm,0.4s,baz=209,slow=11,SNR=3.6						
SCHQ	Schefferville	45.48	18	eP	P	17 39 50.1	-1.9
	comp=Z,7.1nm,0.5s						
YKA	Yellowknife Ar	52.51	346	P	P	17 40 44.4	-1.1
	comp=Z,1.2nm,0.3s,baz=131,slow=7.6,SNR=12						
YKB5	Yellowknife Ar	52.51	346	eP	P	17 40 44.4	-1.1
ILAR	Eielson Array	64.60	337	P	P	17 42 08.7	-1.0
	comp=Z,1.8nm,1.0s,baz=127,slow=4.5,SNR=8.8						
ILB	Eielson Array	64.60	337	eP	P	17 42 09.0	-0.6
	comp=Z,2.5nm,0.9s						
ARCES	ARCESS Array B	86.44	19	P	P	17 44 13.3	-1.3
	comp=Z,1.5nm,0.8s,baz=286,slow=4.9,SNR=5.8						
KSRS	Korea Array	118.56	326	PKP	PKiKP	17 50 21.8	+1.4
	comp=Z,0.8nm,0.7s,baz=33,slow=0.6,SNR=3.0						
MK32	Makanchi Array	120.08	6	ePKPdf	PKiKP	17 50 23.0	-0.2
MKAR	Makanchi Array	120.08	6	PKP	PKiKP	17 50 23.0	-0.2
	comp=Z,0.1nm,0.4s,baz=321,slow=3.2,SNR=3.7						
WR1	Warramunga Arr	137.16	255	ePKPdf	PKPdf	17 50 57.1	+0.8
WRA	Warramunga Arr	137.16	255	PKP	PKPdf	17 50 57.1	+0.8
	comp=Z,1.5nm,1.0s,baz=73,slow=2.8,SNR=3.0						
ASAR	Alice Springs	137.28	249	PKhKP	PKPpre	17 50 53.7	
	comp=Z,0.4nm,0.9s,baz=112,slow=4.1,SNR=3.8						
ASAR				PKP	PKiKP	17 50 58.6	+0.3
	comp=Z,0.2nm,0.6s,baz=114,slow=3.9,SNR=4.5						
CM31	Chiang Mai Arr	147.58	344	ePKPbc	PKPbc	17 51 18.0	+0.6
CMAR	Chiang Mai Arr	147.58	344	PKPbc	PKPbc	17 51 18.1	+0.6
	comp=Z,3.1nm,0.7s,baz=342,slow=3.6,SNR=20						

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*IDC **30** 17:35:04.2±1.0, 4°.02N×90°.85E, h0^{km}, mb3.7/8, mb1 3.9/11, mb1mx3.7/29, mbtmp3.8/11, ML4.2/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/32, Error ellipse: s-maj=37.1km s-min=17.6km az=45.0*

*NEIC **30** 17:35:06.3±1.8, 4°.02N×90°.85E, h16^{km}±2^{km}, mb4.2/15, Error ellipse: s-maj=13.3km s-min=8.0km az=194.0*

*ISCJB **30** 17:35:07.2±0.5, 4°.06N±0°.06×90°.94E±0°.05, h33^{km}, mb4.0/19, MS3.2/1, Error ellipse: s-maj=9.1km s-min=6.1km az=38.8*

ISC 30 17:35:09.0±0.7, **4°.01N**±0°.10×**90°.95E**±0°.06, **h35**^{km}, **n46**, σ**1^s.52**/41, **mb3.9**/19, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	6.10	78	ePn	Pn	17 36 37.4	+0.7
GSI	Gunungsitoli	7.14	112	ePn	Pn	17 36 51.7	+0.7
GSI				eSn	Sn	17 38 07.5	-3.5
PBA	Port Blair	7.81	13	ePn	Pn	17 37 00.1	0.0
PBA				eSn	Sn	17 38 25.9	-1.4
PSI	Prapat	8.05	98	Pn	Pn	17 37 04.7	+1.1
	2.9nm,0.3s,baz=282,slow=14,SNR=5.5						
PSI				Sn	Sn	17 38 34.6	+1.1
	0.9nm,0.3s,baz=267,slow=20,SNR=1.5						
PSI	Prapat	8.05	98	ePn	Pn	17 37 03.0	-0.6
PSI				eSn	Sn	17 38 31.4	-2.1
KULM	Kulim	9.75	82	ePn	Pn	17 37 27.7	+0.9
KULM				eSn	Sn	17 39 09.2	-6.0
IPM	Ipoh	10.06	87	ePn	Pn	17 37 31.4	+0.3
PALK	Pallekele	10.70	288	Pn	Pn	17 37 39.1	-0.8
	2.1nm,0.3s,baz=116,slow=12,SNR=17						
PALK				Sn	Sn	17 39 22.0	-17
	8.3nm,0.3s,baz=115,slow=1.9,SNR=13						
PALK				LR	LR	17 41 18.2	
	comp=Z,54nm,22.0s,baz=117,slow=35						
PALK	Pallekele	10.70	288	ePn	Pn	17 37 39.5	-0.4
PALK				eSn	Sn	17 39 26.5	-12
CM31	Chiang Mai Arr	16.35	28	ePn	Pn	17 38 54.6	-1.4
	4.6nm,0.8s						
CMAR	Chiang Mai Arr	16.35	28	Pn	Pn	17 38 57.2	+1.2
	0.3nm,0.3s,baz=230,slow=14,SNR=8.9						
CHTO	Chiang Mai	16.66	27	ePn	Pn	17 39 00.4	+0.4
	3.6nm,1.2s						
KAAM	Kaadhehdhoo	18.27	259	eP	P	17 39 16.6	-3.2
	300nm,1.6s						
SHL	Shillong	21.46	2	eP	P	17 39 53.1	-1.5
	10.0nm,0.9s						
H08S3	Diego Garcia H	21.75	238	T	T	18 02 20.7	
	baz=57,slow=75,SNR=20						
H08S2	Diego Garcia H	21.75	238	T	T	18 02 26.8	
	baz=57,slow=75,SNR=22						
H08S1	Diego Carcia H	21.77	238	T	T	18 02 17.7	
	baz=57,slow=75,SNR=13						
QIZ	Qiongzhong	23.74	50	eP	P	17 40 18.6	+0.4
	30nm,1.4s						
KKM	Kota Kinabalu	25.25	84	eP	P	17 40 32.0	-0.1
	46nm,1.4s						
LSA	Lhasa	25.56	0	eP	P	17 40 35.8	+0.6
	6.0nm,0.7s						
NACB	Ninganchiao	35.69	53	eP	P	17 42 04.9	+0.6
	12nm,0.8s						
YHNB	Yeheng	35.77	52	eP	P	17 42 07.0	+2.0
	27nm,1.3s						
KK31	Karatay Array	42.96	338	eP	P	17 43 04.9	+0.2
	1.2nm,0.9s						
KKAR	Karatay Array	42.96	338	eP	P	17 43 04.9	+0.2
	1.2nm,0.9s						
MK31	Makanchi Array	43.28	351	eP	P	17 43 07.3	+0.1
	1.3nm,1.0s						
MK32	Makanchi Array	43.28	351	eP	P	17 43 06.9	-0.3
MKAR	Makanchi Array	43.28	351	P	P	17 43 06.9	-0.3
	0.6nm,0.7s,baz=170,slow=7.4,SNR=5.7						
H01W3	Cape Leeuwin H	44.41	152	T	T	18 30 44.9	
	baz=328,slow=75,SNR=5.3						
H01W2	Cape Leeuwin H	44.42	152	T	T	18 30 46.8	
	baz=328,slow=75,SNR=5.6						
H01W1	Cape Leeuwin H	44.42	152	T	T	18 30 58.7	
	baz=328,slow=75,SNR=5.0						
GEYT	Alibeck	45.15	323	LR	LR	18 02 33.9	
	comp=Z,28nm,19.5s,baz=145,slow=37						
SONA0	Songino Array	45.64	15	eP	P	17 43 27.1	+0.8
SONM	Songino Array	45.64	15	P	P	17 43 27.1	+0.8
	0.6nm,0.5s,baz=194,slow=10.0,SNR=2.6						
WR1	Warramunga Arr	48.81	121	eP	P	17 43 52.0	+0.7
WRA	Warramunga Arr	48.81	121	P	P	17 43 52.0	+0.7
	1.2nm,0.5s,baz=292,slow=10,SNR=12						
WB2	Warramunga Arr	48.83	121	eP	P	17 43 51.9	+0.6
	4.3nm,1.3s						
ZALV	Zalesovo Beam	50.04	355	P	P	17 43 59.9	0.0
	0.5nm,0.4s,baz=157,slow=7.8,SNR=3.1						
ZAA1	Zalesovo Array	50.04	355	eP	P	17 43 59.9	-0.1
ASAR	Alice Springs	50.08	125	P	P	17 44 02.1	+1.3
	0.8nm,0.8s,baz=295,slow=7.5,SNR=10						
AS31	Alice Springs	50.08	125	eP	P	17 44 02.1	+1.2
	0.7nm,1.1s						
STKA	Stephens Creek	59.88	130	P	P	17 45 12.9	+1.3
	0.6nm,0.5s,baz=303,slow=11,SNR=2.9						
BR101	Keskin Array S	62.63	313	eP	P	17 45 30.1	-0.2
BRTR	Keskin Array B	62.63	313	P	P	17 45 30.0	-0.2
	0.2nm,0.7s,baz=91,slow=7.2,SNR=2.3						
GEC2	GERESS Array S	78.61	319	eP	P	17 47 07.0	-0.3
	7.4nm,1.6s						
GERES	GERESS Array B	78.61	319	P	P	17 47 08.0	+0.7
	0.2nm,0.5s,baz=92,slow=5.9,SNR=2.4						
TXAR	Lajitas Array	144.00	22	PKP	PKPbc	17 54 40.0	+0.4
	0.1nm,0.3s,baz=7.6,slow=2.7,SNR=2.6						

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*IDC **30** 18:01:06.9±4.2, 41°.87N×142°.31E, h0^{km}, mb3.6/6, mb1 3.6/7, mb1mx3.4/46, mbtmp3.5/7, ML2.3/1, Error ellipse: s-maj=87.4km s-min=40.2km az=101.0*

*ISCJB **30** 18:01:10.2±0.5, 41°.49N±0°.03×142°.41E±0°.04, h53^{km}±5^{km}, mb3.5/6, Error ellipse: s-maj=6.8km s-min=3.7km az=135.7*

*JMA **30** 18:01:10.2±0.1, 41°.48N×142°.44E, h38^{km}±4^{km}, M2.9*

ISC 30 18:01:11.0±1.1, **41°.51N**±0°.04×**142°.40E**±0°.04, **h41**^{km}±14^{km}, **n32**, σ**1^s.05**/42, **mb3.5**/6, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	0.76	48	P	Pn	18 01 24.5	-0.8
JEM				S	Sn	18 01 34.6	-1.0
JNBK	Urakawa-nobuka	0.81	19	P	Pn	18 01 25.3	-0.7
JAHD	Aomorihigashid	0.83	253	P	Pn	18 01 26.0	-0.3
JAHD				S	Sn	18 01 37.3	-0.1
JSHD	Hidakashinhida	0.90	3	P	Pn	18 01 27.2	0.0
JSHD				eS	Sn	18 01 39.1	+0.1
JARK	Aomorirokkasho	0.93	237	P	Pn	18 01 27.2	-0.3
JARK				S	Sn	18 01 39.2	-0.4
JOT	Ohata	1.02	263	P	Pn	18 01 28.6	-0.2
JOT				eS	Sn	18 01 42.2	+0.2
JTHR	Tokachihiroo	1.03	40	P	Pn	18 01 28.6	-0.4
JTHR				eS	Sn	18 01 41.9	-0.3
JKB	Kayabe	1.09	291	P	Pn	18 01 29.0	-0.8
JKB				eS	Sn	18 01 43.3	-0.3
JIAM	Iburiatsuma	1.17	342	P	Pn	18 01 31.5	+0.7
JIAM				eS	Sn	18 01 47.4	+1.8
JTM	Tenmabayashi	1.24	235	P	Pn	18 01 32.1	+0.3
JTM				eS	Sn	18 01 47.7	+0.4
JBT2	Biratori 2	1.27	359	P	Pn	18 01 32.3	+0.1
JBT2				eS	Sn	18 01 48.9	+0.8
JANG	Nango	1.32	211	P	Pn	18 01 32.3	-0.6
JANG				eS	Sn	18 01 48.8	-0.5
JCH	Churui	1.32	33	P	Pn	18 01 33.4	+0.5
JNB	Noboribetsu	1.39	314	P	Pn	18 01 33.4	-0.6
JNB				eS	Sn	18 01 50.1	-1.0
JSR	Shiriuchi	1.49	271	P	Pn	18 01 35.8	+0.6
JSR				eS	Sn	18 01 54.2	+0.8
JEW	Eniwo	1.50	332	P	Pn	18 01 36.3	+0.8
JEW				eS	Sn	18 01 54.8	+0.9
JYM2	Yakumo 2	1.63	292	P	Pn	18 01 37.7	+0.5
JYM2				eS	Sn	18 01 58.5	+1.5
JOB	Onbets	1.75	37	P	Pn	18 01 40.2	+1.3
JOB				S	Sn	18 02 02.9	+2.9
JOMM	Oshimamatsumae	1.79	271	eS	Sn	18 02 01.6	+0.6
MJAR	Matsushiro Arr	5.94	215	Pn	Pn	18 02 39.8	+3.4
	0.1nm,0.3s,baz=28,slow=13,SNR=4.0						
SONM	Songino Array	26.20	296	P	P	18 06 42.3	+0.5
	0.4nm,0.5s,baz=96,slow=9.4,SNR=2.5						
H11N2	WAKE ISLAND Hy	30.07	129	T	T	18 38 43.7	
	baz=323,slow=75,SNR=3.5						
H11N1	WAKE ISLAND Hy	30.09	129	T	T	18 38 48.4	
	baz=323,slow=75,SNR=4.4						
H11N3	WAKE ISLAND Hy	30.09	129	T	T	18 38 42.6	
	baz=323,slow=75,SNR=4.0						
H11S1	WAKE ISLAND Hy	30.92	131	T	T	18 39 58.2	
	baz=324,slow=74						
H11S3	WAKE ISLAND Hy	30.93	131	T	T	18 39 51.0	
	baz=324,slow=74						
H11S2	WAKE ISLAND Hy	30.94	131	T	T	18 39 51.6	
	baz=324						
ZALV	Zalesovo Beam	39.59	308	P	P	18 08 36.5	-1.5
	0.7nm,0.5s,baz=100,slow=6.0,SNR=2.8						
MKAR	Makanchi Array	42.53	298	P	P	18 09 01.2	-1.1
	0.3nm,0.7s,baz=87,slow=10,SNR=2.9						
KURBB	Kurchatov Arra	43.97	305	P	P	18 09 14.1	+0.2
	0.8nm,0.5s,baz=78,slow=8.7,SNR=4.7						
BVAR	Borovoye Array	48.22	310	P	P	18 09 46.5	-0.7
	0.1nm,0.3s,baz=81,slow=10.0,SNR=2.1						
FINES	FINESS Array B	65.23	332	P	P	18 11 47.5	-0.2
	0.9nm,0.8s,baz=98,slow=8.6,SNR=2.7						

KRSC 30 18:02:44.7±2.3, **53°.05N**×**168°.37E**, **h29**^{km}±70^{km}, **ML3.7**, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.57	328	eP	Pn	18 03 24.6	+0.2
BKI				eS	Sn	18 03 56.5	+1.8
MKZ	Mys Kozlova	4.21	294	eP	Pn	18 03 50.2	+3.3
MKZ				eS	Sn	18 04 38.9	+3.9
SPN	Mys Shipunski	5.03	274	eP	Pn	18 04 02.5	+4.4
SPN				eS	Sn	18 04 58.4	+3.2
KZV	Kizimen	5.18	297	eP	Pn	18 04 04.0	+3.7
KZV				eS	Sn	18 05 05.2	+6.0
SDLR	Sedlovina	5.71	276	eP	Pn	18 04 11.7	+4.1
SDLR				eS	Sn	18 05 18.2	+6.1
UGLR	Uglovaya	5.75	275	eP	Pn	18 04 13.4	+5.3
SMAR	Somma	5.76	276	eP	Pn	18 04 13.2	+4.8
SMAR				eS	Sn	18 05 19.8	+6.3
KRER	Koryakskii	5.79	276	eP	Pn	18 04 14.0	+5.2
KRER				eS	Sn	18 05 20.8	+6.6
AVH	Avacha	5.80	276	eP	Pn	18 04 14.0	+5.3
AVH				eS	Sn	18 05 21.0	+6.8
DALK	Dalny	5.80	274	eP	Pn	18 04 13.3	+4.6
DALK				eS	Sn	18 05 17.6	+3.4
KRX	Arik	5.85	277	eP	Pn	18 04 14.3	+4.8
KRX				eS	Sn	18 05 20.8	+5.2
KRMR	Karymshinskiy	6.20	272	eP	Pn	18 04 19.3	+5.2
KRMR				eS	Sn	18 05 29.3	+5.4
MTVR	Mutnovka	6.21	269	eP	Pn	18 04 19.6	+5.1
MTVR				eS	Sn	18 05 28.5	+4.0
GNL	Ganaly	6.27	280	eP	Pn	18 04 21.5	+6.2
ASAK	Asacha	6.40	268	eP	Pn	18 04 22.4	+5.4
KDTR	Khodutka, Kamc	6.42	263	eP	Pn	18 04 21.3	+4.2
KDTR				eS	Sn	18 05 31.6	+2.3
APC	Apacha	6.77	273	eP	Pn	18 04 28.3	+6.3

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*JMA **30** 18:06:18.0±0.6, 46°.76N×141°.54E, h0^{km}, M3.0*

*SKHL **30** 18:06:18.3±0.3, 46°.76N×141°.72E, h10^{km}, mb3.8/4*

ISC 30 18:06:17.0±3.3, **46°.8N**±0°.1×**141°.6E**±0°.2, **h9**^{km}, **n3**, σ**0^s.13**/6, **Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.82	77	ePg	Pg	18 06 32.8	+0.1
YSS				AMB	AMB	18 06 33.7	
	20nm,0.2s						
YSS				eSg	Sg	18 06 43.3	-0.1
YSS				A	A	18 06 43.7	
	180nm,0.3s						
YSS				A	A	18 06 43.7	
	170nm,0.3s						
JRBN	Rebuntou	1.40	195	P	Pg	18 06 43.9	0.0
JRBN				eS	Sg	18 07 02.1	0.0
JWK2	Keihoku	1.48	172	P	Pg	18 06 45.2	-0.1
JWK2				eS	Sg	18 07 04.6	+0.2

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*IDC **30** 18:09:05.6±0.9, 36°.68N×140°.64E, h0^{km}, mb3.5/7, mb1 3.8/7, mb1mx3.5/45, mbtmp3.5/7, MS2.1/1, Ms1 2.1/1, ms1mx1.9/29, Error ellipse: s-maj=23.5km s-min=20.5km az=21.0*

*ISCJB **30** 18:09:06.3±0.6, 36°.70N±0°.02×140°.70E±0°.05, h13^{km}±3^{km}, mb3.6/7, Error ellipse: s-maj=6.7km s-min=3.7km az=18.2*

*JMA **30** 18:09:07.2, 36°.72N×140°.63E, h6^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: φ$_s$345.00000°, δ55.00000°, λ-80.00000°. NP2: φ$_s$148.00000°, δ36.00000°, λ-105.00000°. Principal axes: T Plg10.0000°, Azm68.0000°; N Plg9.0000°, Azm160.0000°; P Plg77.0000°, Azm290.0000°;*

JMA Felt I J1.

ISC 30 18:09:06.9±1.0, **36°.72N**±0°.03×**140°.64E**±0°.04, **h9**^{km}±6^{km}, **n26**, σ**0^s.62**/31, **mb3.6**/7, **7C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.13	208	⇑P	Pg	18 09 09.8	0.0
JHO				S	Sg	18 09 11.7	0.0
JFFD	Fukushimafurud	0.37	350	⇑P	Pg	18 09 14.5	+0.2
JFFD				S	Sg	18 09 19.7	+0.5
JHYU	Hitachinakayam	0.38	187	⇑P	Pg	18 09 14.6	+0.1
JHYU				S	Sg	18 09 20.3	+0.8
ONAJ	Iwakimizuishiy	0.40	18	⇑P	Pb	18 09 15.2	-1.1
ONAJ				eS	Sg	18 09 20.7	+0.6
JYT	Yasato	0.61	216	⇑P	Pg	18 09 18.6	-0.2
JYT				S	Sg	18 09 26.9	+0.2
JSB	Shiboa	0.63	293	P	Pb	18 09 19.9	-0.3
JSB				S	Sg	18 09 28.5	+1.2
JFK	Kawauchi	0.67	16	⇑P	Pg	18 09 19.9	0.0
JFK				S	Sb	18 09 29.1	-1.2
JFT	Otama	0.83	343	⇓P	Pg	18 09 23.0	+0.1
JFT				S	Sg	18 09 34.0	+0.2
JAG	Ashikaga	1.00	253	⇑P	Pg	18 09 25.3	-0.9
JAG				eS	Sg	18 09 38.3	-0.9
JFY	Yanaizu	1.01	313	P	Pg	18 09 26.4	0.0
JFY				eS	Sg	18 09 39.4	-0.2
MJAR	Matsushiro Arr	1.96	265	Pn	Pn	18 09 40.5	0.0
	2.8nm,0.3s,baz=84,slow=10,SNR=98						
MJAR				Sn	Sn	18 10 06.3	+1.0
	6.8nm,0.3s,baz=358,slow=16,SNR=18						
MAT	Matsushiro	1.97	265	P	Pn	18 09 41.4	+0.9
MAT				S	Sb	18 10 07.6	0.0
JHJ	Hachijo jima 2	3.66	191	LR	LR	18 11 10.8	
	comp=Z,26nm,18.3s,baz=42,slow=35						
H11N2	WAKE ISLAND Hy	28.53	119	T	T	18 44 46.4	
	baz=312,slow=75,SNR=50						
H11N1	WAKE ISLAND Hy	28.54	119	T	T	18 44 47.0	
	baz=312,slow=75,SNR=41						
H11N3	WAKE ISLAND Hy	28.55	119	T	T	18 44 47.7	
	baz=312,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	29.22	121	T	T	18 45 39.3	
	baz=314,slow=76,SNR=87						
H11S3	WAKE ISLAND Hy	29.22	121	T	T	18 45 38.8	
	baz=314,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	29.23	121	T	T	18 45 40.0	
	baz=314,slow=76,SNR=58						
ZALV	Zalesovo Beam	41.67	313	P	P	18 16 55.6	0.0
	0.9nm,0.5s,baz=95,slow=9.0,SNR=3.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**45.70**	**308**	P	**P**	**18 17 27.6**	**-0.5**
	0.6nm,0.6s,baz=86,slow=8.2,SNR=7.0						
BVAR	**Borovoye Array**	**50.32**	**312**	P	**P**	**18 18 03.9**	**0.0**
	0.2nm,0.5s,baz=97,slow=7.4,SNR=3.1						
WRA	**Warramunga Arr**	**56.67**	**187**	P	**P**	**18 18 49.9**	**-0.8**
	0.6nm,0.7s,baz=356,slow=8.6,SNR=4.1						
ASAR	**Alice Springs**	**60.40**	**187**	P	**P**	**18 19 16.7**	**-0.1**
	0.3nm,0.8s,baz=10,slow=11,SNR=4.5						
NVAR	**Mina Array Bea**	**75.67**	**53**	P	**P**	**18 20 53.5**	**+0.5**
	0.2nm,0.4s,baz=302,slow=6.9,SNR=2.7						
TXAR	**Lajitas Array**	**90.80**	**52**	P	**P**	**18 22 11.5**	**+0.4**
	0.2nm,0.6s,baz=318,slow=6.1,SNR=2.7						

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*IDC **30** 18:09:12.0±0.9, 33°.12N×75°.66E, h0^{km}, mb3.7/13, mb1 3.8/17, mb1mx3.6/54, mbtmp3.7/17, ML3.4/4, MS3.3/5, Ms1 3.3/5, ms1mx2.7/33, Error ellipse: s-maj=22.6km s-min=16.6km az=54.0*

*ISCJB **30** 18:09:13.6±0.4, 33°.17N±0°.03×75°.74E±0°.05, h21^{km}±2^{km}, mb3.5/12, MS3.2/4, Error ellipse: s-maj=7.2km s-min=4.5km az=142.1*

*NDI **30** 18:09:14.0±2.4, 33°.17N×75°.38E, h11^{km}±17^{km}, ML3.9*

*HYB **30** 18:09:14.8±0.3, 33°.14N×75°.70E, h14^{km}±2^{km}, ML3.9*

ISC 30 18:09:14.4±0.6, **33°.13N**±0°.03×**75°.69E**±0°.04, **h17**^{km}±3^{km}, **n46, σ2^{s}28**/59, **mb3.6**/12, **MS3.2**/4, **2C-3D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THTRI	**Thathri**	**0.08**	**82⇓**	*e*P	**Pb**	**18 09 17.6**	**-0.3**
THTRI				*e*S	**Sb**	**18 09 19.6**	**-0.7**
THTRI				IAML		18 09 20.5	
	comp=Z,20µm,0.1s						
DODA	**Doda**	**0.12**	**276⇑**	*e*P	**Pg**	**18 09 18.0**	**-0.3**
DODA				*e*S	**Sg**	**18 09 20.4**	**-0.5**
DODA				IAML		18 09 21.2	
	comp=Z,24µm,0.4s						
BDRWA	**Bhadarwah**	**0.17**	**172⇑**	*e*P	**Pb**	**18 09 18.9**	**-0.3**
BDRWA				*e*S	**Sb**	**18 09 21.7**	**-0.7**
BDRWA				IAML		18 09 22.8	
	comp=Z,35µm,0.1s						
KSHWR	**Kishtwar**	**0.19**	**22⇓**	*e*P	**Pb**	**18 09 19.1**	**-0.5**
KSHWR				IAML		18 09 25.5	
	comp=Z,11µm,0.4s						
GANDO	**Gandoh**	**0.21**	**119⇓**	*e*P	**Pg**	**18 09 19.4**	**-0.2**
GANDO				*e*S	**Sg**	**18 09 22.5**	**-0.6**
GANDO				IAML		18 09 23.7	
	comp=Z,14µm,0.1s						
DHRM	**DHARAMSHALA**	**1.02**	**150**	*e*P	**Pg**	**18 09 36.6**	**+2.5**
DHRM				*e*S	**Sn**	**18 09 52.8**	**+4.8**
BHK	**Bhakra**	**1.82**	**160**	*e*P	**Pg**	**18 09 48.6**	**-0.7**
BHK				*e*S	**Sg**	**18 10 13.4**	**+0.4**
CHCP	**Chirah Chowk**	**2.10**	**285**	P	**Pb**	**18 09 52.8**	**+0.8**
SMLA	**Simla**	**2.36**	**148**	*e*P	**Pb**	**18 09 55.6**	**-0.7**
SMLA				*e*S	**Sb**	**18 10 27.1**	**+1.9**
CEP	**Cherat**	**3.24**	**283**	P	**Pn**	**18 10 07.0**	**+2.5**
CEP				S	**Sb**	**18 10 48.0**	**-2.6**
KKR	**Kurukshetra**	**3.31**	**163**	*e*P	**Pb**	**18 10 09.9**	**-2.6**
KKR				*e*S	**Sb**	**18 10 49.6**	**-2.9**
THW	**Thamme Wali**	**3.34**	**265**	P	**Pn**	**18 10 07.7**	**+1.9**
DDI	**Dehra Dun**	**3.45**	**144**	*e*P	**Pn**	**18 10 09.8**	**+2.4**
DDI				*e*S	**Sn**	**18 10 51.3**	**+3.4**
DDI				IAML		18 11 13.4	
	comp=N,1µm,0.1s						
DDI				IAML		18 11 14.7	
	comp=E,1µm,0.3s						
NDI	**New Delhi**	**4.62**	**163**	*e*P	**Pn**	**18 10 25.0**	**+1.5**
NDI				*e*S	**Sn**	**18 11 18.0**	**+1.3**
SONA	**Sohna**	**5.01**	**166**	*e*P	**Pn**	**18 10 31.2**	**+2.5**
KUDL	**Kundal**	**5.02**	**172**	*e*P	**Pn**	**18 10 29.5**	**+0.6**
KUDL				*e*S	**Sn**	**18 11 24.2**	**-2.2**
KUDL				IAML		18 11 34.6	
	comp=N,117nm,0.5s						
KUDL				IAML		18 11 35.6	
	comp=E,217nm,0.3s						
DANN	**Dangsing**	**8.42**	**122**	*e*Pn	**Pn**	**18 11 18.6**	**+2.8**
KOLN	**Koldanda**	**8.67**	**126**	*e*Pn	Pn	18 11 24.0	+4.9
KOLN				*e*Sn	**Sn**	**18 12 56.4**	**-0.2**
	comp=E,61nm,0.7s						
GKN	**Gorkha**	**9.25**	**121**	*e*Pn	**Pn**	**18 11 28.9**	**+1.8**
AAK	**Ala-Archa**	**9.54**	**355**	Pn	**Pn**	**18 11 32.1**	**+1.1**
	comp=E,0.6nm,0.3s,baz=230,slow=7.9,SNR=2.6						
AAK				Sn	**Sn**	**18 13 14.3**	**-3.5**
	comp=E,0.6nm,0.3s,baz=251,slow=6.0,SNR=1.4						
AAK				LR	LR	18 15 33.0	
	comp=E,152nm,19.5s,baz=174,slow=40						
DMN	**Daman**	**9.82**	**122**	*e*Pn	**Pn**	**18 11 36.9**	**+1.9**
DMN				*e*Sn	**Sn**	**18 13 20.0**	**-4.9**
	comp=E,68nm,0.9s						
KKN	**Kakani**	**9.84**	**120**	*e*Pn	**Pn**	**18 11 36.5**	**+1.3**
BHPL	**Bhopal**	**9.97**	**171**	*e*P	**Pn**	**18 11 37.0**	**+0.1**
BHPL				*e*S	**Sn**	**18 13 21.1**	**-7.4**
BHPL				IAML		18 13 25.5	
	comp=N,20nm,0.1s						
BHPL				IAML		18 13 28.0	
PKIN	**Phulchoki**	**10.04**	**121**	*e*Pn	**Pn**	**18 11 39.1**	**+1.0**
PKIN				*e*Sn	**Sn**	**18 13 25.3**	**-5.2**
PKI	**Pulchoki**	**10.05**	**121**	*e*Pn	**Pn**	**18 11 39.0**	**+0.7**
PKI				*e*Sn	**Sn**	**18 13 25.0**	**-5.9**
JIRN	**Jiri**	**10.57**	**118**	*e*Pn	**Pn**	**18 11 45.6**	**+0.1**
MKAR	**Makanchi Array**	**14.54**	**18**	Pn	**Pn**	**18 12 38.8**	**-0.5**
	comp=N,0.1nm,0.3s,baz=203,slow=13,SNR=5.4						
MKAR				Sn	Sn	18 15 06.0	-14
	comp=N,0.1nm,0.3s,baz=192,slow=13,SNR=2.3						
KURBB	**Kurchatov Arra**	**17.60**	**6**	P	**Pn**	**18 13 17.4**	**-1.2**
	comp=N,0.1nm,0.3s,baz=193,slow=11,SNR=13						
WSAR	**Wadi Sarin**	**17.96**	**241**	P	**P**	**18 13 24.1**	**+0.3**
	comp=N,0.2nm,0.3s,baz=58,slow=9.5,SNR=2.6						
BVAR	**Borovoye Array**	**20.24**	**351**	P	Pn	18 13 49.9	-0.7
	comp=N,4.4nm,0.6s,baz=160,slow=10,SNR=54						
AKTO	**Aktyubinsk**	**21.64**	**328**	P	**P**	**18 14 04.9**	**+1.2**
	comp=N,4.1nm,0.6s,baz=124,slow=11,SNR=14						
ZALV	**Zalesovo Beam**	**21.80**	**15**	P	**P**	**18 14 05.3**	**+0.1**
	comp=N,1.7nm,0.6s,baz=206,slow=9.9,SNR=7.5						
ZALV				LR	LR	18 23 25.8	
	comp=N,75nm,20.3s,baz=244,slow=39						
CMAR	**Chiang Mai Arr**	**25.45**	**119**	P	**P**	**18 14 43.6**	**+2.2**
	comp=N,0.4nm,0.3s,baz=309,slow=10,SNR=4.5						
ARU	**Arti**	**26.13**	**338**	P	**P**	**18 14 47.6**	**+0.4**
	comp=N,0.6nm,0.7s,baz=134,slow=9.2,SNR=3.1						
PALK	**Pallekele**	**26.15**	**169**	LR	LR	18 24 56.6	
	comp=N,80nm,18.8s,baz=296,slow=36						
SONM	**Songino Array**	**27.36**	**48**	P	**P**	**18 14 58.6**	**-0.1**
	comp=N,0.5nm,0.5s,baz=249,slow=8.3,SNR=3.0						
BRTR	**Keskin Array B**	**34.23**	**293**	P	**P**	**18 15 59.8**	**+0.5**
	comp=N,0.4nm,0.7s,baz=74,slow=7.5,SNR=3.3						
FINES	**FINESS Array B**	**42.41**	**327**	P	**P**	**18 17 08.0**	**+0.4**
	comp=N,0.8nm,0.8s,baz=112,slow=11,SNR=2.8						
USRK	**Ussuriysk Ar.**	**44.53**	**59**	LR	LR	18 37 06.7	
	comp=N,23nm,19.2s,baz=279,slow=38						
ARCES	**ARCESS Array B**	**45.72**	**338**	P	**P**	**18 17 35.2**	**+1.1**
	comp=N,0.7nm,0.6s,baz=101,slow=6.3,SNR=3.7						
NB2	**NORSAR Subarra**	**49.37**	**325**	P	**P**	**18 18 03.0**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**49.37**	**325**	P	**P**	**18 18 02.9**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=94,slow=7.5,SNR=4.5						
PETK	**Petropavlovsk-**	**59.71**	**44**	LR	LR	18 48 31.7	
	comp=Z,32nm,19.5s,baz=25,slow=40						
TORD	**Torodi Ar. Bea**	**69.62**	**273**	P	**P**	**18 20 21.6**	**-1.4**
	comp=Z,0.9nm,0.9s,baz=86,slow=4.8,SNR=3.4						
WRA	**Warramunga Arr**	**76.92**	**124**	P	**P**	**18 21 06.3**	**+0.4**
	comp=Z,0.8nm,1.0s,baz=302,slow=6.7,SNR=1.9						
ASAR	**Alice Springs**	**79.16**	**127**	P	**P**	**18 21 18.4**	**0.0**
	comp=Z,0.3nm,0.9s,baz=309,slow=5.9,SNR=4.1						

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*NIED **30** 18:14:00, 39°.60N×143°.60E, h17^{km}, Mw3.9 Best double couple: M$_0$9.25000×10^{14} NP1:φ$_s$201.00000°, δ32.00000°, λ89.00000°. NP2:φ$_s$23.00000°, δ58.00000°, λ91.00000°.*

*IDC **30** 18:14:40.5±0.7, 39°.50N×143°.56E, h0^{km}, mb3.9/22, mb1 4.1/28, mb1mx4.0/46, mbtmp4.0/28, ML3.5/5, MS3.1/2, Ms1 3.2/2, ms1mx2.6/29, Error ellipse: s-maj=16.6km s-min=13.9km az=136.0*

*ISCJB **30** 18:14:41.5±1.0, 39°.53N±0°.03×143°.59E±0°.04, h17^{km}±7^{km}, mb4.1/42, MS3.4/5, Error ellipse: s-maj=6.4km s-min=3.6km az=41.3*

*JMA **30** 18:14:43.2±0.2, 39°.56N×143°.60E, h42^{km}, M4.3*

*NEIC **30** 18:14:44.3±1.4, 39°.45N×143°.57E, h26^{km}±5^{km}, mb4.3/17, Error ellipse: s-maj=13.0km s-min=3.8km az=87.0*

*MOS **30** 18:14:44.8±1.2, 39°.64N×143°.46E, h41^{km}, mb4.4/23, Error ellipse: s-maj=9.2km s-min=5.5km az=90.2*

ISC 30 18:14:43.2±2.7, **39°.55N**±0°.05×**143°.61E**±0°.06, **h16**^{km}±16^{km}, **n117, σ1^{s}66**/133, **mb4.2**/42, **MS3.7**/5, **2C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.39**	**272**	P	**Pn**	**18 15 06.8**	**-1.2**
MIYJ				*e*S	**Sn**	**18 15 23.6**	**-2.4**
JTH	**Tanohata**	**1.40**	**287**	P	**Pn**	**18 15 06.8**	**-1.4**
JTH				*e*S	**Sn**	**18 15 24.3**	**-2.1**
OFUJ	**Ofunato**	**1.58**	**253**	P	**Pn**	**18 15 09.5**	**-1.1**
OFUJ				*e*S	**Sn**	**18 15 28.7**	**-2.1**
JOM	**Ohasama**	**1.80**	**268**	P	**Pn**	**18 15 13.1**	**-0.5**
JOM				*e*S	**Sn**	**18 15 34.5**	**-1.6**
JANG	**Nango**	**1.81**	**298**	P	**Pn**	**18 15 12.1**	**-1.7**
JMK	**Ichinoseki**	**1.95**	**253**	P	**Pn**	**18 15 14.8**	**-0.9**
JIO	**Ouri**	**2.08**	**239**	P	**Pn**	**18 15 15.9**	**-1.5**
JIO				*e*S	**Sn**	**18 15 39.1**	**-3.9**
ERM	**Erimo**	**2.49**	**352**	*e*Pn	**Pn**	**18 15 23.1**	**0.0**
ERM	**Erimo**	**2.49**	**352**	*e*P	**Pn**	**18 15 23.1**	**0.0**
JYK	**Kaneyama**	**2.61**	**257**	P	**Pn**	**18 15 24.4**	**-0.3**
JOT	**Ohata**	**2.68**	**314**	P	**Pn**	**18 15 24.7**	**-1.0**
JOT				*e*S	**Sn**	**18 15 56.2**	**-1.6**
JNBK	**Urakawa-nobuka**	**2.80**	**347**	P	**Pn**	**18 15 27.4**	**0.0**
JNBK				*e*S	**Sn**	**18 16 00.9**	**0.0**
JKB	**Kayabe**	**3.05**	**321**	P	**Pn**	**18 15 30.8**	**0.0**
JCH	**Churui**	**3.07**	**357**	P	**Pn**	**18 15 30.2**	**-0.8**
JCH				*e*S	**Sn**	**18 16 04.7**	**-2.7**
JFT	**Otama**	**3.27**	**233**	P	**Pn**	**18 15 32.9**	**-1.0**
JFT				*e*S	**Sn**	**18 16 11.3**	**-1.3**
JOMM	**Oshimamatsumae**	**3.38**	**307**	P	**Pn**	**18 15 35.3**	**-0.1**
NMR	**Nemuro--Hokkai**	**4.13**	**22***c*	*i*P	**Pn**	**18 15 44.5**	**-1.2**
NMR				*i* S	**Sn**	**18 16 29.6**	**-4.1**
GRPR	**Tuman**	**4.72**	**19**	*e*P	**Pn**	**18 15 52.2**	**-1.6**
GRPR				*e*S	**Sn**	**18 16 43.2**	**-5.0**
GRPR				pmax	pmax		
	comp=N,110nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,168nm,0.5s						
GRPR				pmax	pmax		
	comp=E,117nm,0.2s						
GRPR				smax	smax		
	comp=E,628nm,0.4s						
GRPR				smax	smax		
	comp=N,407nm,0.2s						
LAGR	**Lagunnoye**	**4.78**	**19**	*e*P	**Pn**	**18 15 54.0**	**-0.6**
LAGR				*i* S	**Sn**	**18 16 46.5**	**-3.2**
LAGR				pmax	pmax		
	comp=N,144nm,0.5s						
LAGR				pmax	pmax		
	comp=Z,195nm,0.5s						
LAGR				pmax	pmax		
	comp=E,190nm,0.3s						
LAGR				smax	smax		
	comp=E,959nm,0.4s						
LAGR				smax	smax		
	comp=N,508nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.78**	**20⇑**	*i*P	**Pn**	**18 15 53.6**	**-1.0**
YUK				*i* S	**Sn**	**18 16 45.8**	**-3.9**
YUK				pmax	pmax		
	comp=Z,140nm,0.4s						
YUK				pmax	pmax		
	comp=E,69nm,0.2s						
YUK				pmax	pmax		
	comp=N,63nm,0.5s						
YUK				smax	smax		
	comp=N,578nm,0.4s						
YUK				smax	smax		
	comp=E,408nm,0.4s						
MAJO	**Matsushiro**	**5.22**	**237**	*e*Pn	**Pn**	**18 16 01.0**	**+0.3**
MAJO				*e*Sn	**Sn**	**18 16 57.1**	**-3.4**
MAJO	**Matsushiro**	**5.22**	**237**	*e*P	**Pn**	**18 16 01.0**	**+0.3**
MAJO				*e*		18 16 57.1	
MAT	**Matsushiro**	**5.22**	**237**	P	**Pn**	**18 16 01.3**	**+0.6**
MAT				S	**Sn**	**18 16 59.8**	**-0.7**
MJAR	**Matsushiro Arr**	**5.22**	**237**	Pn	**Pn**	**18 16 00.8**	**+0.2**
	comp=E,1.0nm,0.3s,baz=43,slow=11,SNR=85						
MJAR				Sn	**Sn**	**18 16 57.1**	**-3.4**
	baz=74,slow=16,SNR=2.1						
MJB9	**Matsu-Tunnel**	**5.22**	**237**	*e*Pn	**Pn**	**18 16 01.1**	**+0.4**
KUR	**Kuril'sk**	**6.49**	**28⇓**	*i*P	**Pn**	**18 16 17.4**	**-0.7**
KUR				*i* S	**Sn**	**18 17 28.4**	**-3.4**
KUR				pmax	pmax		
	comp=N,12nm,0.4s						
KUR				pmax	pmax		
	comp=Z,32nm,0.4s						
KUR				pmax	pmax		
	comp=E,8.0nm,0.2s						
KUR				smax	smax		
	comp=N,74nm,0.3s						
KUR				smax	smax		
	comp=E,88nm,0.6s						
JHJ2	**Mitsune**	**7.12**	**207**	*e*Pn	**Pn**	**18 16 24.8**	**-1.9**
JHJ2				*e*Sn	Sn	18 17 38.8	-8.5
JHJ	**Hachijo jima 2**	**7.12**	**207**	Pn	**Pn**	**18 16 23.9**	**-2.9**
	comp=E,8.6nm,0.3s,baz=330,slow=20,SNR=11						
JHJ				Sn	Sn	18 17 38.2	-9.2
	comp=E,16nm,0.3s,baz=46,slow=21,SNR=1.5						
YSS	**Yuzh-Sakhalins**	**7.43**	**355**	*e*Pn	**Pn**	**18 16 32.7**	**+1.8**
YSS	**Yuzh-Sakhalins**	**7.43**	**355**	*e*P	**Pn**	**18 16 32.0**	**+1.1**
YSS				*e*S	**Sn**	**18 17 49.6**	**-5.2**
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=N,200nm,13.0s						
TEY	**Ternei**	**7.55**	**319⇓**	*e*P	**Pn**	**18 16 31.7**	**-0.9**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
USA0B	**Ussuriysk Arra**	**9.83**	**302**	*e*Pn	**Pn**	**18 17 06.9**	**+3.0**
USRK	**Ussuriysk Ar.**	**9.83**	**302**	Pn	**Pn**	**18 17 02.8**	**-1.1**
	baz=97,slow=12,SNR=2.1						
MDJ	**Mudanjiang**	**11.58**	**300**	*e*Pn	**Pn**	**18 17 29.3**	**+1.5**
JNU	**Nakatsue**	**12.10**	**242**	Pn	**Pn**	**18 17 33.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=80,slow=8.8,SNR=3.2						
KSRS	**Korea Array**	**12.47**	**265**	Pn	**Pn**	**18 17 39.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=87,slow=12,SNR=7.6						
KSRS				LR	LR	18 21 59.7	
	comp=Z,66nm,18.9s,baz=82,slow=35						
KSRS	**Korea Array**	**12.47**	**265**	P	**Pn**	**18 17 39.0**	**-1.0**
KSRS				MLR	MLR		
	comp=Z,66nm,19.0s						
KLR	**Kul'dur**	**12.85**	**323**	Pn	**Pn**	**18 17 45.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=136,slow=14,SNR=4.6						
CN2	**Changchun**	**14.22**	**293**	*e*P	**Pn**	**18 18 03.5**	**-0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=N,100nm,15.0s						
CN2				LR	LR		
	comp=E,130nm,15.0s						
CN2				LR	LR		
	comp=Z,180nm,15.8s						
PETK	**Petropavlovsk-**	**16.64**	**31**	Pn	**P**	**18 18 38.8**	**+0.7**
	baz=187,slow=10,SNR=3.5						
PEA1	**Petropavlovsk-**	**16.65**	**31**	*e*P	**P**	**18 18 38.8**	**+0.6**
PET	**Petropavlovsk**	**16.97**	**32**	*e*P	**P**	**18 18 42.3**	**+0.7**
	comp=Z,8.1nm,1.1s						
PET	**Petropavlovsk**	**16.97**	**32**	*e*P	**P**	**18 18 42.3**	**+0.7**
PET				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZEA	**Zeya**	**18.03**	**327**	*e*P	**Pn**	**18 18 51.6**	**-1.4**
MA2	**Magadan**	**20.55**	**10**	P	**P**	**18 19 21.5**	**+0.6**
	comp=Z,9.1nm,0.8s,baz=198,slow=5.5,SNR=5.8						
MA2	**Magadan**	**20.55**	**10**	*e*P	**P**	**18 19 21.9**	**+1.0**
	comp=Z,11nm,0.8s						
MA2	**Magadan**	**20.55**	**10**	*e*P	**P**	**18 19 21.9**	**+1.0**
MA2				pmax	pmax		
	comp=Z,11nm,0.8s						
SEY	**Seymchan**	**24.00**	**10**	P	**P**	**18 19 57.4**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=163,slow=6.0,SNR=8.6						
YAK	**Yakutsk**	**24.06**	**344**	*e*P	**P**	**18 19 56.0**	**-1.5**
	comp=Z,14nm,0.8s						
YAK	**Yakutsk**	**24.06**	**344**	*e*P	**P**	**18 19 56.0**	**-1.5**
YAK				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC	**Hu-ho-hao-te**	**24.45**	**283**	P	**P**	**18 20 01.8**	**+0.4**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,11nm,4.7s						
HHC				LR	LR		
	comp=N,72nm,9.9s						
HHC				LR	LR		
	comp=E,140nm,14.2s						
HHC				LR	LR		
	comp=Z,9.0nm,18.0s						
WHN	**Wuhan**	**25.50**	**258**	P	**P**	**18 20 15.0**	**+4.2**
WHN				S	**S**	**18 24 33.3**	**-4.3**
WHN				LR	LR		
	comp=Z,200nm,10.8s						
BOD	**Bodaibo**	**26.43**	**324**	*e*P	**P**	**18 20 19.7**	**+0.7**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	**Ulaanbaatar**	**27.50**	**300**	*e*P	**P**	**18 20 32.1**	**+3.1**
	comp=Z,5.7nm,1.2s						
ULN	**Ulaanbaatar**	**27.50**	**300**	*e*P	**P**	**18 20 32.1**	**+3.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONA0	**Songino Array**	**27.93**	**300**	*e*P	**P**	**18 20 32.6**	**-0.2**
SONM	**Songino Array**	**27.93**	**300**	P	**P**	**18 20 32.6**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=95,slow=9.3,SNR=8.6						
H11N2	**WAKE ISLAND Hy**	**28.13**	**128**	T	T	18 50 39.6	
	baz=318,slow=75,SNR=65						
H11N1	**WAKE ISLAND Hy**	**28.14**	**128**	T	T	18 50 30.7	
	baz=318,slow=75,SNR=67						
H11N3	**WAKE ISLAND Hy**	**28.15**	**128**	T	T	18 50 50.0	
	baz=318,slow=75,SNR=70						
H11S1	**WAKE ISLAND Hy**	**28.95**	**130**	T	T	18 51 05.6	
	baz=320,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.95**	**130**	T	T	18 51 07.7	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**28.97**	**130**	T	T	18 51 08.0	
	baz=320,slow=74						
ENH	**Enshi**	**29.33**	**262**	*e*P	**P**	**18 20 45.0**	**-0.3**
	comp=Z,4.7nm,0.9s						
ZAK	**Zakamensk**	**30.17**	**304**	*e*P	**P**	**18 20 51.1**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH	**Lanzhou**	**31.43**	**276**	*e*P	**P**	**18 21 05.5**	**+1.5**
LZH				pP	pwP	18 21 10.3	-1.4
LZH				sP	sP	18 21 12.0	+2.6
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
GTA	**Gaotai**	**33.56**	**284**	P	**P**	**18 21 23.3**	**+0.8**
GTA				pP	pwP	18 21 29.0	-1.2
GTA				sP	sP	18 21 32.8	+4.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,38nm,5.8s						
GTA				LR	LR		
	comp=N,51nm,14.1s						
GTA				LR	LR		
	comp=E,100nm,16.8s						
GTA				LR	LR		
	comp=Z,150nm,17.5s						
KMI	**Kunming**	**37.09**	**260**	P	**P**	**18 21 54.0**	**+0.9**
KMI				pmax	pmax		
	comp=Z,13nm,1.4s						
WMQ	**Urumqi**	**41.31**	**295**	*e*P	**P**	**18 22 29.8**	**+1.8**
WMQ				pP	pwP	18 22 34.0	-1.8
WMQ				sP	sP	18 22 38.8	+5.2
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,20nm,4.3s						
WMQ				LR	LR		
	comp=N,97nm,29.1s						
WMQ				LR	LR		
	comp=E,120nm,29.1s						
WMQ				LR	LR		
	comp=Z,210nm,29.2s						
ZAA1	**Zalesovo Array**	**41.55**	**310**	*e*PcP	**PcP**	**18 24 27.1**	**+0.2**
ZAA0	**Zalesovo Array**	**41.55**	**310**	*e*P	**P**	**18 22 29.7**	**-0.2**
	comp=Z,2.5nm,0.6s						
ZALV	**Zalesovo Beam**	**41.55**	**310**	P	**P**	**18 22 30.0**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=90,slow=7.9,SNR=10						
ZALV				PcP	**PcP**	**18 24 27.1**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=99,slow=2.3,SNR=2.7						
CMAR	**Chiang Mai Arr**	**43.82**	**255**	P	**P**	**18 22 47.9**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=42,slow=7.3,SNR=5.8						
KDAK	**Kodiak Island**	**44.08**	**44**	*e*P	**P**	**18 22 51.8**	**+1.6**
	comp=Z,12nm,1.3s						
KDAK	**Kodiak Island**	**44.08**	**44**	*e*P	**P**	**18 22 51.8**	**+1.6**
KDAK				pmax	pmax		
	comp=Z,12nm,1.3s						
CAST	**Castle Rocks**	**44.17**	**36**	*e*P	**P**	**18 22 53.9**	**+2.9**
	comp=Z,1.9nm,1.0s						
MK31	**Makanchi Array**	**44.30**	**300**	*e*P	**P**	**18 22 52.1**	**-0.1**
	comp=Z,3.2nm,0.8s						
MK31	**Makanchi Array**	**44.30**	**300**	*e*P	**P**	**18 22 52.1**	**-0.1**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**44.30**	**300**	P	**P**	**18 22 52.0**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=83,slow=9.5,SNR=16						
MAKZ	**Makanchi**	**44.50**	**300**	*e*P	**P**	**18 22 53.3**	**-0.6**
	comp=Z,3.7nm,0.6s						
MAKZ	**Makanchi**	**44.50**	**300**	*e*P	**P**	**18 22 53.3**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	**Kurchatov**	**45.79**	**307**	*e*P	**P**	**18 23 03.5**	**-0.5**
	comp=Z,8.4nm,1.0s						
KURK	**Kurchatov**	**45.79**	**307**	*e*P	**P**	**18 23 03.5**	**-0.5**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURBB	**Kurchatov Arra**	**45.86**	**306**	P	**P**	**18 23 04.3**	**-0.2**
	comp=Z,6.5nm,0.7s,baz=81,slow=8.2,SNR=45						
ILAR	**Eielson Array**	**46.44**	**34**	P	**P**	**18 23 10.0**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=260,slow=6.8,SNR=9.2						
BVAR	**Borovoye Array**	**50.19**	**311**	P	**P**	**18 23 38.2**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=73,slow=8.6,SNR=23						
BRVK	**Borovoye**	**50.24**	**311**	*e*P	**P**	**18 23 38.5**	**+0.1**
	comp=Z,3.8nm,0.9s						
BRVK	**Borovoye**	**50.24**	**311**	*e*P	**P**	**18 23 38.5**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH	**Kashi**	**50.99**	**293**	*e*P	**P**	**18 23 47.3**	**+2.9**
KSH				PcP	**PcP**	**18 25 02.3**	**+1.9**
KSH				S	**S**	**18 31 04.0**	**+3.1**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,59nm,6.2s						
INK	**Inuvik**	**51.36**	**28**	P	**P**	**18 23 46.1**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=276,slow=8.3,SNR=3.5						
INK	**Inuvik**	**51.36**	**28**	*e*P	**P**	**18 23 46.3**	**-0.2**
	comp=Z,7.5nm,1.4s						
INK	**Inuvik**	**51.36**	**28**	*e*P	**P**	**18 23 46.3**	**-0.2**
INK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NIL	**Nilore**	**55.49**	**288**	*e*P	**P**	**18 24 18.1**	**+0.6**
	comp=Z,5.5nm,0.6s						
NIL	**Nilore**	**55.49**	**288**	*e*P	**P**	**18 24 18.1**	**+0.6**
NIL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARU	**Arti**	**55.64**	**318**	P	**P**	**18 24 17.9**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=84,slow=5.9,SNR=6.8						
ARU	**Arti**	**55.64**	**318**	*e*P	**P**	**18 24 18.5**	**+0.4**
	comp=Z,4.4nm,0.8s						
ARU	**Arti**	**55.64**	**318**	*e*P	**P**	**18 24 18.5**	**+0.4**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ABKAR	**Akbulak array**	**57.66**	**310**	*e*P	**P**	**18 24 32.3**	**-0.3**
	comp=Z,1.7nm,0.6s						
AKTO	**Aktyubinsk**	**58.30**	**311**	P	**P**	**18 24 36.6**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=72,slow=13,SNR=6.0						
WR1	**Warramunga Arr**	**59.81**	**190**	*e*P	**P**	**18 24 47.0**	**-0.9**
WRA	**Warramunga Arr**	**59.81**	**190**	P	**P**	**18 24 46.9**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=355,slow=8.4,SNR=3.7						
AS31	**Alice Springs**	**63.54**	**190**	*e*P	**P**	**18 25 11.8**	**-1.2**
	comp=Z,1.4nm,1.4s						
ASAR	**Alice Springs**	**63.54**	**190**	P	**P**	**18 25 12.5**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=2.6,slow=6.6,SNR=4.7						
FIA0	**FINESS Array S**	**67.39**	**333**	*e*P	**P**	**18 25 37.0**	**-0.4**
FIA0	**FINESS Array S**	**67.39**	**333**	*e*P	**P**	**18 25 37.0**	**-0.4**
FINES	**FINESS Array B**	**67.39**	**333**	P	**P**	**18 25 37.0**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=64,slow=4.4,SNR=6.5						
KBZ	**Khabaz**	**70.57**	**311**	P	**P**	**18 25 56.7**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=60,slow=18,SNR=2.9						
NV01	**Mina Array Sit**	**72.11**	**55**	*e*P	**P**	**18 26 08.3**	**+1.1**
NVAR	**Mina Array Bea**	**72.11**	**55**	P	**P**	**18 26 08.3**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=294,slow=4.5,SNR=4.5						
NB200	**NORSAR Array S**	**72.52**	**338**	*e*P	**P**	**18 26 08.9**	**-0.1**
NOA	**NORSAR Array B**	**72.52**	**338**	P	**P**	**18 26 08.9**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=38,slow=6.0,SNR=3.4						
NOA				LR	LR	19 02 12.8	
	comp=Z,15nm,18.7s,baz=170,slow=39						
AKASG	**Malin Array Be**	**73.36**	**323**	P	**P**	**18 26 12.6**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=50,slow=5.6,SNR=4.0						
PD31	**Pinedale Array**	**74.68**	**47**	*e*P	**P**	**18 26 23.0**	**+0.7**
PDAR	**Pinedale Array**	**74.68**	**47**	P	**P**	**18 26 23.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=309,slow=2.9,SNR=2.6						

BR101	Keskin Array S	78.46	312	eP	P	18 26 43.1	-0.5
BRTR	Keskin Array B	78.46	312	P	P	18 26 43.1	-0.5
	comp=Z,0.4nm,0.7s,baz=57,slow=5.3,SNR=3.4						
TXAR	Lajitas Array	87.23	54	P	P	18 27 28.2	-1.1
	comp=Z,0.1nm,0.7s,baz=321,slow=1.3,SNR=2.4						

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*ISCJB **30** 18:40:47.4±0.5, 18°.9S±0°.1×174°.0W±0°.1, h10^{km}, mb4.2/17, Error ellipse: s-maj=20.2km s-min=10.8km az=139.0*
*IDC **30** 18:40:47.5±0.9, 18°.83S×173°.97W, h0^{km}, mb3.9/9, mb1 4.2/9, mb1mx4.0/23, mbtmp3.9/9, Error ellipse: s-maj=42.6km s-min=18.4km az=136.0*
*NEIC **30** 18:40:48.6±1.2, 18°.91S×173°.89W, h10^{km}, mb4.4/12, Error ellipse: s-maj=44.1km s-min=22.4km az=148.0*
ISC 30 18:40:49.0±0.8**, 18°.9S**±0°.2×**174°.0W**±0°.2**, h10^{km}, n26, σ0ˢ.86**/25**, mb4.1**/17**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.82	94	eP	Pn	18 41 37.2	-11
URZ	Urewera	20.83	200	P	P	18 45 29.9	-0.9
	6.2nm,0.5s,baz=29,slow=19,SNR=5.3						
URZ	Urewera	20.83	200	eP	P	18 45 30.3	-0.6
	25nm,1.4s						
BKZ	Black Stump Fm	21.86	200	eP	P	18 45 40.6	-1.4
	14nm,1.6s						
RPZ	Rata Peaks	27.80	204	P	P	18 46 39.5	+1.2
	7.6nm,0.7s,baz=56,slow=16,SNR=5.3						
RPZ	Rata Peaks	27.80	204	eP	P	18 46 39.2	+0.9
	51nm,1.6s						
FOZ	Fox Glacier	28.13	206	eP	P	18 46 43.6	+2.4
	28nm,1.2s						
CTAO	Charters Tower	37.47	261	eP	P	18 48 03.4	+0.3
	7.2nm,1.1s						
TOO	Toolangi	39.93	234	eP	P	18 48 24.3	+0.7
	9.5nm,1.4s						
STKA	Stephens Creek	41.92	243	P	P	18 48 39.5	-0.6
	0.7nm,0.5s,baz=86,slow=19,SNR=3.2						
STKA	Stephens Creek	41.92	243	eP	P	18 48 39.7	-0.3
	1.5nm,1.4s						
BBOO	Buckleboo	46.68	242	eP	P	18 49 17.0	-1.1
	38nm,1.6s						
WC3	Warramunga Arr	48.59	260	eP	P	18 49 32.5	-0.6
	13nm,1.5s						
WB2	Warramunga Arr	48.61	260	eP	P	18 49 32.8	-0.5
	3.0nm,1.0s						
AS31	Alice Springs	48.61	255	eP	P	18 49 33.3	0.0
	2.0nm,1.6s						
ASAR	Alice Springs	48.61	255	P	P	18 49 33.4	+0.1
	1.1nm,0.6s,baz=92,slow=8.3,SNR=42						
WR1	Warramunga Arr	48.62	260	eP	P	18 49 33.2	-0.2
WRA	Warramunga Arr	48.62	260	P	P	18 49 33.2	-0.2
	0.6nm,0.4s,baz=93,slow=7.5,SNR=6.8						
MTN	Manton Dam	52.99	268	eP	P	18 50 06.7	+0.2
	6.7nm,1.0s						
NV01	Mina Array Sit	77.25	42	eP	P	18 52 43.2	-0.6
NVAR	Mina Array Bea	77.25	42	P	P	18 52 43.2	-0.6
	0.5nm,0.8s,baz=216,slow=9.9,SNR=3.6						
LTX	Lajitas	82.98	56	eP	P	18 53 14.6	-0.2
TXAR	Lajitas Array	82.98	56	P	P	18 53 14.6	-0.2
	1.2nm,1.2s,baz=212,slow=3.2,SNR=2.9						
PD31	Pinedale Array	85.19	42	eP	P	18 53 26.8	+0.8
PDAR	Pinedale Array	85.19	42	P	P	18 53 26.8	+0.8
	0.2nm,0.6s,baz=149,slow=1.9,SNR=2.9						
ILAR	Eielson Array	85.93	11	P	P	18 53 28.8	0.0
	0.6nm,0.8s,baz=224,slow=5.0,SNR=3.5						

MAN 30 18:52:16.8, 7°.28N×124°.68E, h29^{km}, mb4.2, ML3.0, MS2.7, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.43	262	⇓iP	Pn	18 52 27.5	+0.4
CTBH				i S	Sn	18 52 35.9	+1.9
KCP	Kidapawan	0.49	123	⇓iP	Pn	18 52 30.2	+2.2
KCP				i S	Sn	18 52 54.2	+19
BUKP	Musuan	0.71	33	eP	Pb	18 52 27.1	-3.6
BUKP				eS	Sb	18 52 37.8	-2.3
SKMP	Bagumbayan, Su	0.77	190	eP	Pb	18 52 30.9	-0.8
SKMP				eS	Sn	18 52 43.0	+0.8
CGP	Cagayan de Oro	1.17	1	⇑eP	Pn	18 52 37.1	-0.1
CGP				eS	Sn	18 52 52.3	+0.1
DDMP	Don Marcelino,	1.56	139	eP	Pn	18 52 43.0	+0.5

WEL 30 19:01:48.1, 42°S±1°×**17°4E**±°**, h15^{km}**±3^{km}**, M3.3**/25**, ML3.5**/19**, MLv3.3**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.27	210	P	Pb	19 01 54.6	-0.1
TCW	Tory Channel	0.32	344	P	Pb	19 01 55.5	0.0
TCW				S	Sb	19 02 00.5	0.0
TUWZ	Tuamarina	0.35	284	P	Pb	19 01 55.8	-0.2
TUWZ				S	Sb	19 02 01.0	-0.4
BHW	Baring Head	0.38	73	P	Pb	19 01 56.3	-0.1
BHW				S	Sb	19 02 02.2	+0.1
BSWZ	Blackbirch Sta	0.44	243	P	Pb	19 01 57.2	-0.3
BSWZ				S	Sb	19 02 03.7	-0.2
PLWZ	Palliser	0.65	95	P	Pb	19 02 01.2	+0.1
CAW	Cannon Point	0.65	51	P	Pb	19 02 01.4	+0.2
MSWZ	Moikau Station	0.65	81	P	Pb	19 02 01.4	+0.2
PAWZ	Paruwai Farm	0.79	80	P	Pb	19 02 03.8	+0.3
DUWZ	D’Urville Isla	0.80	333	P	Pb	19 02 04.1	+0.4
NNZ	Nelson	0.82	291	P	Pb	19 02 04.2	+0.2
MTW	Mount Morrison	0.91	67	P	Pn	19 02 06.1	-0.2
OGWZ	Otaki Gorge	0.91	40	P	Pg	19 02 05.9	+0.2
TRWZ	Traveller	0.98	83	P	Pg	19 02 07.0	0.0
HOWZ	Holdsworth Sta	1.05	54	P	Pg	19 02 08.4	0.0
KHZ	Kahutara	1.10	215	P	Pn	19 02 08.9	-0.1
THZ	Tophouse	1.14	257	P	Pb	19 02 09.6	0.0
TMWZ	Te Maipa	1.20	71	P	Pn	19 02 10.2	-0.2
MRZ	Mangatainoka R	1.24	47	P	Pb	19 02 11.5	+0.3
TIWZ	Tintock	1.35	57	P	Pn	19 02 12.3	-0.1
OHWZ	Ohakea	1.48	28	P	Pg	19 02 16.4	-0.2
CPWZ	Castlepoint	1.49	67	P	Pn	19 02 14.2	-0.1
POWZ	Post Office Ro	1.53	43	P	Pn	19 02 15.5	+0.6
PRWZ	Pori Road	1.53	52	P	Pn	19 02 15.3	+0.4
QRZ	Quartz Range	1.57	296	P	Pb	19 02 17.0	+0.2
BFZ	Birch Farm	1.63	60	P	Pn	19 02 15.7	-0.5
GVZ	Greta Valley S	1.77	214	P	Pn	19 02 17.7	-0.5
DVHZ	Dannevirke	1.81	48	P	Pn	19 02 18.5	-0.3
WAZ	Wanganui	1.82	15	P	Pg	19 02 22.7	-0.3
TSZ	Takapari Road	1.88	40	P	Pn	19 02 20.3	+0.6
DSZ	Denniston Nort	1.96	262	P	Pb	19 02 22.8	-0.6
LTZ	Lake Taylor	2.02	231	P	Pn	19 02 21.8	+0.1
AMCZ	Amberley	2.10	217	P	Pn	19 02 21.9	-0.8
PNHZ	Pukenui	2.11	41	P	Pn	19 02 22.9	+0.1
PRHZ	Porangahau	2.11	54	P	Pn	19 02 22.0	-0.8
WPHZ	Waipukurau	2.13	48	P	Pn	19 02 23.1	0.0
KHEZ	Kahui Hut	2.24	352	P	Pb	19 02 29.3	+1.0
NBEZ	Newall Road No	2.28	350	P	Pg	19 02 31.0	-0.9
MTVZ	Mangateitei	2.28	21	P	Pb	19 02 30.4	+1.4
DREZ	Durham Road	2.33	356	P	Pg	19 02 32.4	-0.4
PKE	Pukeiti	2.34	352	P	Pb	19 02 30.3	+0.3
PKVZ	Pokaka	2.34	18	P	Pb	19 02 31.1	+1.1
MOVZ	Moawhango	2.35	27	P	Pb	19 02 28.3	-1.8
PXZ	Pawanui	2.39	52	P	Pn	19 02 26.1	-0.6
BHHZ	Black Hill Sta	2.39	33	P	Pn	19 02 28.2	+1.4
KRHZ	Kereru	2.40	39	P	Pn	19 02 27.0	+0.1
VRZ	Vera Road	2.41	7	P	Pb	19 02 30.7	-0.4
DRZ	Dome Shelter	2.41	22	P	Pg	19 02 34.1	-0.2
OKCZ	Okains Bay	2.42	204	P	Pn	19 02 25.5	-1.5
FWVZ	Far West T-bar	2.43	22	P	Pb	19 02 30.0	-1.6
TUVZ	Tukino	2.44	24	P	Pb	19 02 31.0	-0.8
INZ	Inchbonnie	2.50	240	P	Pn	19 02 28.7	+0.5
OXZ	Oxford	2.51	223	P	Pn	19 02 27.5	-0.9
NGZ	Ngauruhoe	2.51	22	P	Pb	19 02 31.2	-1.8
MQZ	McQueen’s Vall	2.54	210	P	Pn	19 02 26.6	-2.1
KAHZ	Kahuranaki	2.56	48	P	Pn	19 02 28.6	-0.4
WTVZ	West Tongariro	2.57	21	P	Pb	19 02 33.7	-0.2
TWVZ	Taurewa	2.57	18	P	Pg	19 02 35.7	-1.7
AKCZ	Akaroa Harbour	2.60	204	P	Pn	19 02 28.1	-1.4
KRVZ	Karewarewa	2.60	22	P	Pb	19 02 35.3	+0.9
KWHZ	Kaweka Forest	2.60	37	P	Pn	19 02 30.4	+0.8
MCHZ	McNeill Hill	2.71	41	P	Pn	19 02 31.8	+0.6
KATZ	Kakaramea	2.73	22	P	Pb	19 02 38.1	+1.5
RITZ	Rihia Road	2.77	24	P	Pg	19 02 39.3	-1.9
BKZ	Black Stump Fm	2.84	35	P	Pn	19 02 33.2	+0.2
RATZ	Rangitukua	2.85	22	P	Pb	19 02 40.6	+1.9
WATZ	Wairara	2.99	21	P	Pb	19 02 43.0	+2.0
HIZ	Hauiti	3.02	7	P	Pb	19 02 40.7	-0.9
WVZ	Waitaha Valley	3.13	239	P	Pn	19 02 39.4	+2.5
RPZ	Rata Peaks	3.30	227	P	Pn	19 02 39.2	0.0
TLZ	Tolley Road	3.30	16	P	Pb	19 02 47.3	+0.9
KMRZ	Kaimai	3.86	19	P	Pb	19 02 52.7	-3.1
MWZ	Matawai	3.99	38	P	Pn	19 02 48.2	-0.5
MKAZ	Moumakai	4.45	8	P	Pb	19 03 02.6	-3.2
AWAZ	Awhitu Peninsu	4.45	3	P	Pb	19 03 03.5	-2.4
ODZ	Otahua Downs	4.46	217	P	Pn	19 02 54.0	-1.2
PKGZ	Pakihiroa	4.60	39	P	Pn	19 02 56.3	-0.9
JCZ	Jackson Bay	4.85	236	P	Pn	19 03 05.1	+4.5

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*SJA **30** 19:06:54.8±0.8, 24°.19S×67°.00W, h196^{km}±7^{km}, ML2.2, MW3.1*
*ISCJB **30** 19:06:56.2±1.0, 24°.19S±0°.07×67°.12W±0°.05, h176^{km}±12^{km}, Error ellipse: s-maj=12.1km s-min=5.0km az=27.3*
*GUC **30** 19:06:57.7±0.5, 23°.97S×67°.50W, h230^{km}±8^{km}, ML3.7*
ISC 30 19:06:54.9±2.4**, 24°.20S**±0°.07×**67°.08W**±0°.05**, h194^{km}**±22^{km}**, n19, σ1ˢ.30**/30**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.53	110	eP	Pn	19 07 29.0	+0.5
SLA				IAML		19 07 29.7	
	comp=Z,18nm,0.5s						
SLA				eS	S	19 07 53.7	-0.8
HJA	Humahuaca	1.82	58	eP	Pn	19 07 32.0	+0.5
HJA				eS	S	19 07 59.6	-0.3
AZAP	Zapla	1.84	91	eP	Pn	19 07 31.2	-0.4
AZAP				eS	S	19 07 59.0	-0.9
FSA	Cafayete	2.15	153	eP	Pn	19 07 35.3	+0.6
LVC	Limon Verde	2.31	313	eP	Pn	19 07 37.5	+0.8
LVC				IAML		19 07 39.7	
	comp=Z,26nm,0.1s						
LVC				eS	S	19 08 10.0	+0.9
PB15	IPOC Station P	2.40	294	eP	Pn	19 07 39.0	+1.4
PB15				i S	S	19 08 11.0	+0.3
YJA	Yavi	2.47	36	eP	Pn	19 07 39.5	+0.9
YJA				IAML		19 08 13.6	
	comp=Z,1.9nm,0.7s						
PB06	IPOC Station P	2.73	302	eP	Pn	19 07 42.3	+1.1
PB06	IPOC Station P	2.73	302	eP	Pn	19 07 42.4	+1.2
PB06				i S	S	19 08 16.5	-0.8
PB06				IAML		19 08 19.3	
	comp=N,206nm,0.2s						
AHML	Horco Molle	3.02	149	eP	Pn	19 07 45.1	+0.6
PB09	IPOC Station P	3.11	320	eP	Pn	19 07 47.2	+1.5
PB09				i S	S	19 08 24.7	-0.8
PB09				IAML		19 08 31.6	
	comp=E,41nm,0.2s						
PB10	IPOC Station P	3.25	281	eP	Pn	19 07 48.6	+1.4
PB10	IPOC Station P	3.25	281	eP	Pn	19 07 48.5	+1.2
PB10				i S	S	19 08 26.5	-1.7
PB03	IPOC Station P	3.26	310	eP	Pn	19 07 48.4	+0.9
PB03	IPOC Station P	3.26	310	eP	Pn	19 07 48.3	+0.8
PB03				i S	S	19 08 26.8	-1.9
PB03				IAML		19 08 28.7	
	comp=E,130nm,0.5s						
PB04	IPOC Station P	3.38	303	eP	Pn	19 07 49.6	+0.7
PB04				i S	S	19 08 29.3	-1.9
PB04				IAML		19 08 31.0	
	comp=N,121nm,0.2s						
PB07	IPOC Station P	3.57	313	eP	Pn	19 07 52.0	+0.7
PB07				i S	S	19 08 33.1	-2.3
PB02	IPOC Station P	3.87	317	eP	Pn	19 07 55.5	+0.6
PB02				i S	S	19 08 39.4	-2.6
PB02				IAML		19 08 43.3	
	comp=E,86nm,0.3s						
PB08	IPOC Station P	4.47	334	eP	Pn	19 08 04.4	+1.5

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*IDC **30** 19:31:04.5±1.2, 18°.04N×104°.49W, h0^{km}, mb3.9/8, mb1 4.2/13, mb1mx4.0/38, mbtmp4.0/13, ML3.8/5, MS3.9/20, Ms1 3.9/20, ms1mx3.7/43, Error ellipse: s-maj=30.9km s-min=20.4km az=34.0*
*ISCJB **30** 19:31:08.0±0.4, 18°.47N±0°.04×104°.11W±0°.03, h14^{km}, mb4.2/60, MS4.0/17, Error ellipse: s-maj=7.2km s-min=2.7km az=28.5*
*MEX **30** 19:31:10.4±0.5, 18°.41N×104°.20W, h13^{km}±5^{km}, MD4.6*
*NEIC **30** 19:31:10.4±0.0, 18°.41N×104°.20W, h13^{km}, mb4.1/109, MD4.6(MEX), After MEX.*
NEIC Felt at Union de Tula.
ISC 30 19:31:08.3±0.8**, 18°.36N**±0°.07×**104°.23W**±0°.06**, h14^{km}, n167, σ1ˢ.62**/164**, mb4.3**/60**, MS4.0**/17**, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.84	95	ePg	Pg	19 31 23.5	-1.1
MMIG				eSg	Sg	19 31 34.2	-1.6
MMIG	Aquila	0.84	95	eP	Pg	19 31 23.5	-1.1
MMIG				eS	Sg	19 31 34.2	-1.6
CJM	Chamela	1.37	326	ePn	Pn	19 31 31.4	-1.7
CJM	Chamela	1.37	326	eP	Pn	19 31 31.4	-1.7
CJM				i S	Sn	19 31 47.8	-3.3
ANIG	Ahuacatlan	2.69	354	ePn	Pn	19 31 50.6	-0.8
ANIG				eSn	Sn	19 32 21.6	-2.3
ANIG	Ahuacatlan	2.69	354	eP	Pn	19 31 50.6	-0.8
ANIG				i S	Sn	19 32 21.6	-2.3
ZIIG	Zihuatanejo	2.73	105	ePn	Pn	19 31 50.6	-1.2
ZIIG				eSn	Sn	19 32 21.8	-2.9
ZIIG	Zihuatanejo	2.73	105	eP	Pn	19 31 50.6	-1.2
ZIIG				i S	Sn	19 32 21.8	-2.9
IGIG	Irapuato, Guan	3.62	48	i P	Pn	19 32 02.4	-1.9
IGIG				i S	Sn	19 32 44.3	-2.8
CAIG	El Cayaco	4.00	108	ePn	Pn	19 32 08.8	-0.4
CAIG				eSn	Sn	19 32 53.3	-2.6
CAIG	El Cayaco	4.00	108	eP	Pn	19 32 08.8	-0.4
CAIG				i S	Sn	19 32 53.3	-2.6
MEIG	Mezcala	4.40	95	ePn	Pn	19 32 14.6	-0.3
MEIG				eSn	Sn	19 33 04.0	-2.0
MEIG	Mezcala	4.40	95	eP	Pn	19 32 14.6	-0.3
MEIG				eS	Sn	19 33 04.0	-2.0
PLIG	Platanillo	4.49	89	ePn	Pn	19 32 15.0	-1.0
PLIG				eSn	Sn	19 33 06.2	-2.0
PLIG	Platanillo	4.49	89	eP	Pn	19 32 15.0	-1.0
PLIG				i S	Sn	19 33 06.2	-2.0
TLIG	Tlapa	5.45	98	ePn	Pn	19 32 30.1	+0.8
H06E1	SOCORRO T-PHAS	6.37	275	T	T	19 39 14.8	
	SNR=97						
LVIG	Laguna Verde	7.51	78	ePn	Pn	19 32 59.6	+2.1
LNIG	Linares	7.87	33	ePn	Pn	19 33 04.8	+2.4
HPIG		8.64	351	ePn	Pn	19 33 12.6	-0.5
CMIG	Matias Romero	8.99	97	Pn	Pn	19 33 18.4	+0.6
	0.3nm,0.3s,baz=270,slow=12,SNR=4.0						
CMIG				Sn	Sn	19 35 03.9	+4.8
	0.4nm,0.3s,baz=298,slow=14,SNR=4.2						
CMIG				Lg	Lg	19 35 37.7	
	0.6nm,0.3s,baz=219,slow=23,SNR=5.4						
CMIG				LR	LR	19 37 03.4	
	comp=Z,1μm,18.7s,baz=314,slow=39						
TX31	Lajitas Ar. Si	10.94	3	ePn	Pn	19 33 46.6	+2.0
TXAR	Lajitas Array	10.94	3	Pn	Pn	19 33 47.9	+3.4
	0.1nm,0.3s,baz=184,slow=12,SNR=15						
TXAR				Lg	Lg	19 36 49.0	
	0.1nm,0.3s,baz=186,slow=16,SNR=4.1						
TXAR				LR	LR	19 38 24.3	
	comp=Z,1μm,18.9s,baz=0.0,slow=39						
CCIG	Comitan	11.73	98	eP	Pn	19 34 10.1	+15
JCT	Junction City	12.72	18	ePn	Pn	19 34 11.5	+2.6
APG	El Apazote	13.60	102	Pn	Pn	19 34 22.8	+1.6
	1.7nm,0.3s,baz=220,slow=18,SNR=2.7						
APG				Lg	Lg	19 38 11.7	
	1.0nm,0.3s,baz=356,slow=20,SNR=1.6						
APG				LR	LR	19 39 04.5	
	comp=Z,694nm,18.5s,baz=278,slow=35						
319A	Douglas	13.74	342	ePn	Pn	19 34 25.9	+3.0
GDL2	Guadalupe Moun	13.78	360	ePn	Pn	19 34 25.1	+1.6
HKT	Hockley	13.84	32	ePn	Pn	19 34 24.4	+0.2
ABTX	Abilene, Hawle	14.79	15	ePn	Pn	19 34 36.6	-0.5
WHTX	Lake Whitney,	14.88	23	ePn	Pn	19 34 37.8	-0.6
TUC	Tucson	15.09	338	ePn	Pn	19 34 39.0	-2.3
	2.4nm,0.7s						
TEIG	Tepich	15.17	80	LR	LR	19 41 13.8	
	comp=Z,170nm,21.0s,baz=20,slow=39						
MSTX	Muleshoe	15.60	5	ePn	Pn	19 34 47.1	-0.9
	19nm,1.1s						
BNM	Barren Site	15.87	353	ePn	Pn	19 34 53.7	+2.1
LENM	Lemitar	15.93	352	ePn	Pn	19 34 54.5	+2.1
AMTX	Amarillo	16.61	7	ePn	Pn	19 35 00.8	-0.1
	15nm,1.3s						
ANMO	Albuquerque	16.64	354	Pn	Pn	19 35 03.3	+1.9
	0.1nm,0.3s,baz=166,slow=12,SNR=8.5						
ANMO				Lg	Lg	19 39 57.6	
	0.0nm,0.3s,baz=274,slow=8.4,SNR=6.8						
ANMO				LR	LR	19 42 07.9	
	comp=Z,953nm,19.2s,baz=170,slow=39						
ANMO	Albuquerque	16.64	354	eP	P	19 35 03.9	+0.1
	12nm,1.1s						
113A	Mohawk Valley,	16.71	331	eP	P	19 35 06.2	+1.8
	7.8nm,1.3s						
TGUH	Tegucigalpa,Un	16.83	102	ePn	P	19 35 05.0	-0.8
	22nm,0.6s						
WMOK	Wichita Mounta	17.02	15	ePn	Pn	19 35 04.1	-1.9
	15nm,1.3s						
X16A	Lo Mia Camp, P	17.24	339	ePn	Pn	19 35 09.3	+0.4
	3.6nm,1.0s						
Y14A	Wickenburg	17.39	335	ePn	Pn	19 35 10.5	-0.2
	5.2nm,1.1s						
W18A	Petrified Fore	17.39	345	ePn	Pn	19 35 11.8	+0.9
	5.3nm,1.0s						
GLA	Glamis	17.45	329	eP	P	19 35 16.0	+3.3
	15nm,1.4s						
Y12C	Blythe	17.88	331	ePn	Pn	19 35 15.8	-0.9
	3.3nm,0.6s						
WUAZ	Wupatki	18.23	341	eP	P	19 35 22.8	+1.5
	5.9nm,1.2s						
MIAR	Mount Ida	18.71	28	eP	Pn	19 35 28.6	+1.8
	2.4nm,0.6s						
PFO	Pinyon Flats O	18.72	327	P	P	19 35 27.0	+0.2
	0.2nm,0.3s,baz=140,slow=7.9,SNR=3.8						
PFO				LR	LR	19 42 14.8	
	comp=Z,472nm,18.1s,baz=152,slow=36						
PFO	Pinyon Flats O	18.72	327	eP	P	19 35 27.7	+0.9
	23nm,1.6s						
W13A	Hualapai Mount	18.75	335	eP	P	19 35 25.9	-1.2
	6.6nm,1.4s						
X40A	Basin Creek Fa	19.00	30	eP	Pn	19 35 32.2	+1.8
	8.1nm,1.4s						
TUL1	Leonard	19.01	21	eP	P	19 35 28.3	-1.5
	8.2nm,0.8s						
MVCO	Mesa Verde	19.15	350	eP	P	19 35 31.1	-0.4
	11nm,1.3s						
W39A	Magazine	19.16	27	eP	Pn	19 35 37.4	+5.1
	30nm,1.6s						
SDCO	Great Sand Dun	19.35	357	eP	P	19 35 33.6	-0.2
	10nm,1.5s						
U15A	North Rim	19.35	340	eP	P	19 35 34.0	+0.2
	5.2nm,1.5s						
WHAR	Wooly Hollow	19.92	30	eP	P	19 35 39.5	-0.2
	5.8nm,1.2s						
HHAR	Hobbs	20.03	25	eP	P	19 35 41.1	+0.2
	7.4nm,1.2s						
MWC	Mount Wilson	20.05	325	eP	Pn	19 35 43.7	+0.6
	18nm,1.4s						
KNB	Kanab	20.06	340	eP	P	19 35 42.0	+0.6
	9.9nm,1.3s						
PV01	Paradox Valley	20.06	350	eP	P	19 35 41.0	-0.5
	3.2nm,0.7s						
PV13	Radium Mtn., P	20.13	349	eP	P	19 35 43.1	+0.8
	6.0nm,0.9s						
PV02	Paradox Valley	20.16	350	eP	P	19 35 42.5	-0.1
	11nm,1.2s						
LCMT	Little Creek M	20.20	339	eP	P	19 35 44.8	+1.9
	11nm,1.4s						
PV03	Paradox Valley	20.23	349	eP	P	19 35 44.0	+0.7
	7.8nm,1.1s						
PV18	Skein Mesa, Pa	20.23	349	eP	P	19 35 44.7	+1.4
	11nm,1.2s						
GSC	Goldstone, Bar	20.23	329	eP	P	19 35 44.2	+1.0
	16nm,1.3s						
PV17	East Wray Mesa	20.27	349	eP	P	19 35 44.2	+0.4
	10nm,1.1s						
PV11	David Mesa, Pa	20.28	349	eP	P	19 35 44.8	+1.0
	22nm,1.6s						
PV12	Saucer Basin,	20.28	350	eP	P	19 35 45.7	+1.8
	12nm,1.1s						
PKCU	Pink Cliffs	20.29	341	eP	P	19 35 45.0	+0.9
	5.8nm,0.8s						
PV16	Nyswonger Mesa	20.30	349	eP	P	19 35 44.2	+0.2
	8.0nm,1.0s						
PV19	Morning Glory	20.31	349	eP	P	19 35 44.4	+0.3
	8.2nm,1.0s						
PV20	West Nyswonger	20.33	349	eP	P	19 35 44.3	-0.1
	11nm,1.2s						
PV04	Paradox Valley	20.37	349	eP	P	19 35 44.7	-0.1
	11nm,1.2s						
PV07	Paradox Valley	20.37	350	eP	P	19 35 43.6	-1.3
	6.9nm,1.1s						
PV14	Lion Creek, Pa	20.37	349	eP	P	19 35 45.4	+0.5
	9.4nm,1.2s						
PV10	Paradox Valley	20.38	349	eP	P	19 35 45.7	+0.7
	15nm,1.1s						
PV23	Carpenter Ridg	20.45	349	eP	P	19 35 45.9	+0.1
	9.6nm,1.1s						
FCAR	Ozark Folk Cen	20.48	29	eP	P	19 35 45.2	-0.6
	5.6nm,1.4s						
SHPR	Sheep Range	20.48	334	eP	P	19 35 47.0	+1.0
	8.6nm,1.2s						
PV22	Blue Mesa, Par	20.49	350	eP	P	19 35 46.3	+0.2
	5.7nm,0.9s						
PV09	Paradox Valley	20.52	349	eP	P	19 35 48.1	+1.6
PV21	Cone Mtn., Par	20.55	349	eP	P	19 35 47.2	+0.4
	7.6nm,1.2s						
CBKS	Cedar Bluff	20.75	10	eP	P	19 35 46.6	-2.2
	25nm,1.4s						
MTPU	Mount Pierson	20.81	342	eP	P	19 35 50.6	+0.9
	7.0nm,1.0s						
SMCO	Snowmass	20.88	354	eP	P	19 35 50.5	0.0
	14nm,1.4s						
LRAL	Lakeview Retre	21.27	43	eP	P	19 36 10.8	+16
	18nm,1.6s						
TPNV	Topopah Spring	21.32	333	eP	P	19 35 56.9	+1.8
	12nm,0.9s						
ISA	Isabella, Lake	21.36	327	eP	P	19 35 57.1	+1.7
	25nm,1.4s						
SRU	San Rafael Swe	21.39	346	eP	P	19 35 55.0	-0.8
	2.2nm,0.6s						
DAC	Darwin (Calif)	21.39	329	eP	P	19 35 58.6	+2.7
TMUT	Trail Mountain	21.72	345	eP	P	19 35 58.6	-0.9
	6.2nm,1.0s						
PSUT	Pine Spring	21.78	339	eP	P	19 36 01.8	+1.8
	10nm,1.5s						
P17A	Butcher Ranch,	21.78	346	eP	P	19 35 58.8	-1.2
	6.6nm,1.1s						
O20A	White River Ci	21.97	352	eP	P	19 36 03.2	+1.2
	8.7nm,1.4s						
PBMO	Poplar Bluff	22.00	31	eP	P	19 36 03.8	+1.6
	5.1nm,1.0s						
Z50A	Ashland	22.12	44	eP	P	19 36 02.9	-0.6
	3.8nm,1.0s						
Y49A	Blount Mountai	22.18	42	eP	P	19 36 04.4	+0.3
	7.0nm,1.2s						
R11A	Troy Canyon, C	22.25	336	eP	P	19 36 05.8	+0.8
	6.6nm,1.3s						
PAGB	Antelope Grade	22.37	324	eP	P	19 36 08.4	+2.2
	40nm,1.4s						
MPU	Maple Canyon	22.51	345	eP	P	19 36 10.0	+2.2
	7.8nm,1.0s						
OMMB	Old Mammoth Mi	23.14	329	eP	P	19 36 15.9	+1.4
	22nm,1.4s						
MDPB	Devils Postpil	23.19	329	eP	P	19 36 15.8	+0.8
	23nm,1.3s						
NV11	Mina Array Sit	23.40	332	eP	P	19 36 18.7	+1.7
	2.1nm,1.4s						
NVAR	Mina Array Bea	23.46	331	P	P	19 36 17.8	+0.1
	4.1nm,1.1s,baz=151,slow=7.5,SNR=25						
NVAR				LR	LR	19 45 46.6	
	comp=Z,263nm,20.5s,baz=136,slow=37						
RYN	Ryan	23.72	331	eP	P	19 36 21.9	+1.7
	21nm,1.4s						
BGU	Big Grassy Mou	23.73	343	eP	P	19 36 20.9	+0.7
	6.5nm,1.3s						
SAO	San Andreas Ge	23.79	324	eP	P	19 36 23.5	+2.9
	10nm,1.2s						
KVN	Kaiserville	23.88	333	eP	P	19 36 23.7	+2.0
	31nm,1.6s						
T47A	Sharon Grove	23.89	36	eP	P	19 36 17.5	-4.1
	10nm,1.3s						
WAKR	Walker	24.05	330	eP	P	19 36 25.6	+2.2
	41nm,1.6s						
CMB	Columbia Colle	24.16	328	eP	P	19 36 25.8	+1.6
	12nm,1.6s						
ELK	Elko	24.23	339	P	P	19 36 25.8	+0.7
	0.3nm,0.3s,baz=158,slow=12,SNR=4.1						

ELK				LR	LR	19 45 57.5	
	comp=Z,307nm,18.4s,baz=162,slow=36						
ELK	Elko	24.23	339	eP	P	19 36 24.4	-0.7
	4.6nm,1.4s						
YERR	Yerington	24.34	331	eP	P	19 36 28.3	+2.3
	14nm,1.4s						
PNTR	Pine Nut	24.59	330	eP	P	19 36 30.4	+2.1
	26nm,1.6s						
BMN	Battle Mountai	24.68	336	eP	P	19 36 29.9	+0.8
	2.9nm,0.8s						
PDAR	Pinedale Array	24.75	351	P	P	19 36 29.8	0.0
	0.8nm,0.3s,baz=163,slow=6.6,SNR=2.2						
VCNR	Virginia City	24.78	331	eP	P	19 36 32.2	+2.1
	11nm,1.2s						
PAHR	Pah Rah Range	24.99	331	eP	P	19 36 33.0	+1.1
	16nm,1.6s						
TKL	Tuckaleechee C	24.99	42	P	P	19 36 34.0	+2.2
	2.0nm,0.9s,baz=225,slow=5.7,SNR=1.9						
TKL				LR	LR	19 48 44.0	
	comp=Z,181nm,20.6s,baz=262,slow=42						
AFDM	Forest Hills D	25.15	328	eP	P	19 36 34.8	+1.6
	5.8nm,1.3s						
BEKR	Beckworth	25.57	330	eP	P	19 36 38.5	+1.4
	23nm,1.4s						
LOHW	Long Hollow	25.74	349	eP	P	19 36 39.1	+0.4
	4.4nm,1.0s						
ORV	Oroville	25.88	328	eP	P	19 36 41.8	+2.0
	17nm,1.5s						
MOD	Modoc Plateau	27.18	333	eP	P	19 36 53.0	+1.4
	4.2nm,1.0s						
J08A	Circle Bar Ran	27.68	337	eP	P	19 36 55.8	-0.2
	6.6nm,1.3s						
G08A	Pilot Rock	29.52	339	eP	P	19 37 12.4	0.0
	5.5nm,1.3s						
F10A	Beach Ranch, E	29.57	341	eP	P	19 37 12.6	-0.2
	11nm,1.4s						
N54A	Moraine State	30.65	38	eP	P	19 37 24.2	+1.8
	9.7nm,1.0s						
LON	Longmire	31.80	337	eP	P	19 37 33.2	+0.7
	2.1nm,0.6s						
LTY	Liberty	31.82	339	eP	P	19 37 33.6	+0.9
	6.5nm,1.2s						
ULM	Lac du Bonnet	32.51	10	LR	LR	19 50 57.5	
	comp=Z,196nm,21.2s,baz=202,slow=36						
YKA	Yellowknife Ar	44.68	353	LR	LR	19 58 25.8	
	comp=Z,29nm,19.3s,baz=164,slow=36						
HYT	Haines Junctio	48.55	339	eP	P	19 39 53.5	+2.5
	9.4nm,1.4s						
RKT	Rikitea	51.01	217	eT	T	20 34 58.8	
	3.8nm,0.3s						
EGAK	Eagle	52.54	341	eP	P	19 40 21.7	+0.7
	6.2nm,1.3s						
SCRK	Sand Creek	52.91	339	eP	P	19 40 25.4	+1.4
	7.6nm,1.4s						
RIDG	Independent Ri	53.05	339	eP	P	19 40 26.4	+1.5
	15nm,1.2s						
INK	Inuvik	53.23	347	LR	LR	20 05 02.4	
	comp=Z,230nm,18.9s,baz=150,slow=38						
LVC	Limon Verde	53.39	138	LR	LR	19 58 26.0	
	comp=Z,56nm,19.6s,baz=252,slow=31						
SUA	Susitna One	53.95	334	eP	P	19 40 31.6	0.0
	12nm,1.3s						
RND	Reindeer	54.28	337	eP	P	19 40 34.8	+0.9
	19nm,1.5s						
ILAR	Eielson Array	54.39	339	P	P	19 40 34.6	0.0
	1.8nm,0.9s,baz=147,slow=6.0,SNR=21						
ILB	Eielson Array	54.39	339	eP	P	19 40 35.0	+0.4
	9.6nm,1.3s						
MCK	McKinley	54.50	337	eP	P	19 40 36.5	+1.1
	17nm,1.6s						
SKT	Skwentna	54.54	335	eP	P	19 40 36.7	+1.0
	6.0nm,1.2s						
FYU	Fort Yukon	55.00	341	eP	P	19 40 39.7	+0.8
	28nm,1.3s						
KTH	Kantishna Hill	55.13	337	eP	P	19 40 40.3	+0.2
	14nm,1.6s						
BPAW	Bear Paw Mtn.	55.46	337	eP	P	19 40 42.9	+0.6
	11nm,1.5s						
CAST	Castle Rocks	55.51	336	eP	P	19 40 41.9	-0.8
	9.3nm,1.3s						
RES	Resolute Bay	56.57	3	LR	LR	20 06 23.2	
	comp=Z,343nm,18.4s,baz=186,slow=37						
PPT	Papeete	57.13	234	LR	LR	19 59 24.5	
	comp=Z,76nm,18.9s,baz=8.5,slow=30						
PPT2	Papeete2	57.14	234	eS	S	19 49 04.7	+14
	68nm,29.8s						
PPT2				eLR	LR	19 57 43.5	
	comp=Z,180nm,25.2s						
TBI	Tubuai	60.57	229	eS	S	19 49 48.8	+14
	92nm,42.0s						
TBI				eLR	LR	19 59 29.9	
	comp=Z,196nm,27.0s						
ARCES	ARCESS Array B	85.44	16	P	P	19 43 45.7	+0.4
	3.2nm,1.1s,baz=325,slow=5.5,SNR=4.0						
ARCES				LR	LR	20 23 48.9	
	comp=Z,78nm,18.9s,baz=290,slow=37						
NOA	NORSAR Array B	85.70	26	P	P	19 43 46.9	+0.1
	0.5nm,1.0s,baz=304,slow=4.9,SNR=2.1						
NOA				LR	LR	20 22 19.0	
	comp=Z,67nm,20.0s,baz=300,slow=36						
ESDC	Sonseca Array	86.07	50	P	P	19 43 49.5	+0.5
	1.2nm,0.8s,baz=312,slow=5.4,SNR=9.0						
FINES	FINESS Array B	91.18	22	LR	LR	20 24 50.8	
	comp=Z,84nm,19.9s,baz=286,slow=35						
GERES	GERESS Array B	93.37	36	LR	LR	20 26 46.7	
	comp=Z,53nm,19.9s,baz=286,slow=36						
DZM	Mont Dzumac	96.12	249	eLR	LR	20 15 52.3	
	comp=Z,286nm,26.4s						
DBIC	Dimbokro	96.75	81	LR	LR	20 24 10.8	
	comp=Z,35nm,20.5s,baz=51,slow=33						
WRA	Warramunga Arr	124.90	258	PKP	PKPdf	19 50 06.5	-2.3
	1.2nm,1.0s,baz=122,slow=1.1,SNR=2.4						
ASAR	Alice Springs	125.78	254	PKP	PKPdf	19 50 07.6	-2.8
	0.2nm,0.4s,baz=94,slow=1.4,SNR=3.6						

IDC 30 19:32:27.6±1.6**, 22°.98N×95°.92E, h0^{km}, mb3.3**/3**, mb1 3.3**/4**, mb1mx3.1**/37**, mbtmp3.2**/4**, ML3.0**/1**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx2.6**/23**, Error ellipse: s-maj=43.0km s-min=17.7km az=62.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.31	147	Pn	Pn	19 33 48.0	-0.2
	0.1nm,0.3s,baz=323,slow=13,SNR=14						
CMAR				Pg	Pg	19 34 05.7	-3.7
	0.2nm,0.3s,baz=321,slow=14,SNR=4.4						
CMAR				Lg	Lg	19 35 15.3	
	0.5nm,0.3s,baz=323,slow=30,SNR=5.8						
MKAR	Makanchi Array	26.19	338	P	P	19 38 04.0	+0.2
	0.3nm,0.6s,baz=143,slow=11,SNR=2.5						
KURBB	Kurchatov Arra	30.75	338	P	P	19 38 42.8	-1.6
	0.2nm,0.7s,baz=146,slow=8.6,SNR=1.3						
ZALV	Zalesovo Beam	32.05	348	P	P	19 38 57.2	+1.4
	0.3nm,0.3s,baz=140,slow=7.5,SNR=1.4						
MA2	Magadan	52.83	31	LR	LR	20 04 16.3	
	comp=Z,18nm,18.2s,baz=76,slow=36						
SPITS	Spitsbergen Ar	65.53	347	LR	LR	20 15 05.0	
	comp=Z,77nm,21.1s,baz=290,slow=39						

MAN 30 19:35:57.5, 18°.92N×120°.66E, h25^{km}, mb4.7, ML3.6, MS3.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	1.19	152	eP	Pn	19 36 17.5	-1.0
APYP				eS	Sn	19 36 32.0	-1.8
ABRA	Dolores	1.26	178	eP	Pn	19 36 19.1	-0.5
ABRA				eS	Sn	19 36 35.8	+0.1
SGCP	Mt. Cagua	1.48	117	eP	Pn	19 36 20.9	-1.6
SGCP				eS	Sb	19 36 42.5	-0.1
CVP	Callao Caves	1.64	137⇑	iP	Pn	19 36 24.9	+0.2
CVP				iS	Sn	19 36 45.0	0.0
BBP	Basco	1.95	39	eP	Pn	19 36 30.6	+1.5
BBP				eS	Sn	19 36 53.0	+0.3
CAUP	Cauayan	2.25	150	eP	Pb	19 36 35.5	-2.0
CAUP				eS	Sb	19 37 03.2	-1.8
BOLP	Bolinao	2.62	196	eP	Pb	19 36 45.6	+1.8
BOLP				eS	Sb	19 37 17.5	+1.9
SMPP	San Manuel, Pa	2.75	180	eP	Pn	19 36 40.1	0.0
SMPP				eS	Sn	19 37 14.2	+1.7

MAN 30 20:02:26.1, 5°.44N×126°.04E, h79^{km}, mb4.6, ML3.5, MS3.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.51	8	eP	Pn	20 02 51.1	-0.4
MATI				eS	Sn	20 03 07.7	-3.0
MATI	Mati	1.51	8	eP	Pn	20 02 51.5	-0.1
MATI				eS	Sn	20 03 12.5	+1.7
BUKP	Musuan	2.61	338	eP	Pn	20 03 06.2	-0.1
BUKP				eS	Sn	20 03 36.3	-0.8

MAN 30 20:02:27.8, 5°.70N×126°.24E, h81^{km}, mb4.5, ML3.3, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.66	307	eP	Pn	20 02 43.5	+0.3
DDMP				eS	Sn	20 02 56.7	+2.1
SKMP	Bagumbayan, Su	1.87	296	eP	Pn	20 02 57.6	-0.5
SKMP				eS	Sn	20 03 18.8	-2.3
SKMP	Bagumbayan, Su	1.87	296	eP	Pn	20 02 58.9	+0.8
SKMP				eS	Sn	20 03 22.4	+1.4

IDC 30 20:14:46.9±1.7**, 5°.48S×130°.51E, h0^{km}, mb3.3**/1**, mb1 3.5**/4**, mb1mx3.3**/28**, mbtmp3.4**/4**, ML3.2**/3**, Error ellipse: s-maj=75.9km s-min=27.2km az=80.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.64	9	Pn	Pn	20 15 57.2	-1.1
	3.4nm,0.3s,baz=192,slow=23,SNR=41						
SIJI				Sn	Sn	20 16 42.9	-10
	8.0nm,0.3s,baz=239,slow=23,SNR=25						
WRA	Warramunga Arr	14.85	166	Pn	Pn	20 18 19.4	+1.1
	0.1nm,0.3s,baz=347,slow=13,SNR=12						
WRA				Sn	Sn	20 20 53.3	-10
	0.1nm,0.3s,baz=346,slow=23,SNR=3.6						
ASAR	Alice Springs	18.37	170	P	Pn	20 19 02.2	-1.1
	0.0nm,0.3s,baz=348,slow=9.1,SNR=2.8						
MKAR	Makanchi Array	67.25	326	P	P	20 25 43.6	+0.4
	0.1nm,0.3s,baz=119,slow=7.3,SNR=3.7						

MAN 30 20:21:31.6, 10°.38N×125°.09E, h3^{km}, mb4.4, ML3.3, MS3.1, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.33	222	eP	Pb	20 21 39.7	-0.4
MSLP				eS	Sb	20 21 50.3	+4.5
PLP	Palo	0.79	352⇑	eP	Pg	20 21 46.4	-0.2
PLP				eS	Sb	20 21 58.0	-1.0
OCLP	Ormoc	0.81	325	eP	Pg	20 21 47.6	+0.4
OCLP				eS	Sn	20 22 02.1	-0.4
LLP	Lapu-Lapu	1.10	267	eP	Pb	20 21 53.2	-0.1
LLP				eS	Sn	20 22 12.8	+3.1
BESP	Borongan	1.26	16	eP	Pg	20 21 55.1	-0.7
BESP				eS	Sn	20 22 14.0	+0.4
CNP	Catarman	2.16	349	eP	Pn	20 22 09.4	+0.9
CNP				eS	Sg	20 22 39.8	-1.2
BUKP	Musuan	2.48	181	eP	Pn	20 22 13.2	+0.2
BUKP				eS	Sg	20 22 57.6	+6.2

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*ISCJB **30** 20:32:02.3±0.5, 36°.97N±0°.03×36°.05E±0°.02, h2^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=3.1km az=162.9*

*DDA **30** 20:32:02.2, 36°.99N×36°.06E, h7^{km}±2^{km}, ML2.9*

*ISK **30** 20:32:02.2, 36°.97N×36°.06E, h11^{km}, ML2.5/14*

ISC 30 20:32:02.4±1.0**, 36°.97N**±0°.03×**36°.06E**±0°.02**, h10^{km}**±8^{km}**, n28, σ0^{s}.63**/41**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.25	278	PG	Pg	20 32 07.7	+0.2
CEYT				SG	Sg	20 32 12.0	+1.0
YURE	YUREGIR	0.37	247	PG	Pg	20 32 09.9	+0.1
YURE	YUREGIR	0.37	247	iP	Pb	20 32 10.8	-0.3
KAMA	Osmaniye	0.53	66	iP	Pg	20 32 12.5	-0.3
KAMA				iS	Sg	20 32 20.0	+0.1
KAMA				IAML_P			
	comp=Z,4µm,0.1s						
ANDN	Andirin	0.65	21	iP	Pg	20 32 14.7	-0.4
ANDN				IAML_P			
	comp=Z,761nm,0.2s						
KRTS	Karatas	0.68	234	PG	Pb	20 32 16.1	-0.2
HCB	Kahramanmara	0.77	61	iP	Pg	20 32 17.3	-0.1
HCB				iS	Sb	20 32 28.3	-0.3
HCB				IAML_P			
	comp=Z,3µm,0.2s						
KUZU	Kuzuini	0.84	103	iP	Pb	20 32 19.4	+0.3
KUZU				iS	Sg	20 32 29.5	-0.1
KMRS	Kahramanmaras	0.86	51	PG	Pb	20 32 19.3	-0.1
YAYL	Yayladag	0.94	178	iP	Pn	20 32 21.7	0.0
YAYL				iS	Sn	20 32 35.0	-0.3
YAYL				IAML_P			
	comp=Z,12nm,0.2s						
GAZ	Gaziantep	0.94	78	PG	Pb	20 32 20.7	-0.2
SAIM	ADANA	1.00	1	iP	Pg	20 32 21.4	-0.4
SAIM				iS	Sn	20 32 37.9	+1.1
SAIM				IAML_P			
	comp=Z,544nm,0.1s						
DED	Mersin	1.01	270	iP	Pg	20 32 20.5	-1.3
DED				IAML_P			
	comp=Z,371nm,0.2s						
MERS	Mersin	1.23	266	PN	Pn	20 32 25.6	-0.2
MERS				SN	Sn	20 32 42.9	+0.4
YAHY	KAYSERI_Yahyal	1.25	334	iP	Pg	20 32 27.0	+0.6
YAHY				iS	Sn	20 32 43.2	+0.3
YAHY				IAML_P			
	comp=Z,397nm,0.2s						
GZT	Gaziantep	1.26	72	iP	Pg	20 32 26.7	0.0
GZT				iS	Sn	20 32 43.5	+0.2
GZT				IAML_P			
	comp=Z,2µm,0.1s						
KERG	Konya-Eregli	1.60	287	iP	Pn	20 32 30.2	-0.7
KERG				iS	Sg	20 32 53.5	-0.6
KIZK	Mersin	1.61	253	PN	Pb	20 32 31.6	-0.7
KIZK				SN	Sb	20 32 52.8	+0.1
KIZK	Mersin	1.61	253	iP	Pb	20 32 31.8	-0.5
KIZK				iS	Sb	20 32 52.9	+0.2
KIZK				IAML_P			
	comp=Z,720nm,0.1s						
BNN	Bunyan	1.88	355	PN	Pb	20 32 35.7	-1.2
KEBE	Keben-Mersin	1.96	255	PN	Pn	20 32 36.7	+1.0
IKL	Isikli	2.04	250	PN	Pn	20 32 37.3	+0.5
SURC	SANLIURFA_SURC	2.05	92	iP	Pg	20 32 41.1	-0.6
SURC				iS	Sg	20 33 07.4	-0.9
TEVE	Tevekalti-Mers	2.17	256	PN	Pn	20 32 39.8	+1.2
AKKU	Akkuyu-Mersin	2.17	249	PN	Pn	20 32 39.0	+0.4
URFA	Urfa	2.26	77	PN	Pn	20 32 40.8	+1.0
BERE	Bereket-Mersin	2.36	256	PN	Pn	20 32 42.1	+0.8
TEKE	Tekeli-Mersin	2.51	252	PN	Pn	20 32 43.9	+0.7

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*ISCJB **30** 20:53:58.3±0.8, 19°.51S±0°.08×169°.6E±0°.1, h35^{km}, mb4.5/21, MS3.4/8, Error ellipse: s-maj=16.3km s-min=11.1km az=2.9*

*IDC **30** 20:53:58.6±1.8, 19°.14S×168°.93E, h0^{km}, mb4.2/7, mb1 4.3/8, mb1mx4.1/25, mbtmp4.1/8, ML3.3/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/29, Error ellipse: s-maj=49.0km s-min=25.7km az=108.0*

*NEIC **30** 20:54:00.0±1.9, 19°.52S×169°.51E, h30^{km}±8^{km}, mb4.7/17, Error ellipse: s-maj=20.7km s-min=13.1km az=63.0*

ISC 30 20:54:00.6±1.0**, 19°.5S**±0°.1×**169°.6E**±0°.2**, h35^{km}, n40, σ1^{s}.11**/32**, mb4.7**/21**, MS3.4**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.42	216	ePn	Pn	20 54 37.2	-0.4
PINNC	Pines Island,	3.65	212	ePn	Pn	20 54 54.9	+0.3
DZM	Mont Dzumac	3.86	229	ePn	Pn	20 54 58.3	+0.7
	184nm,1.1s						
DZM				eLR	LR	20 55 50.3	
	comp=Z,924nm,26.2s						
DZM	Mont Dzumac	3.86	229	Pn	Pn	20 54 58.2	+0.5
	2.3nm,0.3s,baz=61,slow=17,SNR=26						
DZM				LR	LR	20 56 17.1	
	comp=Z,248nm,19.4s,baz=69,slow=37						
DZM	Mont Dzumac	3.86	229	ePn	Pn	20 54 57.4	-0.2
HNR	Honiara	13.69	316	LR	LR	21 01 06.7	
	comp=Z,104nm,21.7s,baz=72,slow=33						
URZ	Urewera	19.78	162	LR	LR	21 05 08.5	
	comp=Z,88nm,20.9s,baz=348,slow=33						
BKZ	Black Stump Fm	20.46	164	eP	P	20 58 35.2	0.0
	19nm,1.1s						
CAN	Canberra	24.02	225	eP	P	20 59 14.2	+1.8
	42nm,1.4s						
STKA	Stephens Creek	27.95	238	P	P	20 59 47.6	-0.3
	0.9nm,0.5s,baz=60,slow=10,SNR=4.3						
STKA				LR	LR	21 09 53.3	
	comp=Z,102nm,21.8s,baz=33,slow=34						
STKA	Stephens Creek	27.95	238	eP	P	20 59 47.1	-0.8
	2.5nm,1.5s						
BBOO	Buckleboo	32.70	239	eP	P	21 00 28.9	-1.0
	14nm,1.3s						
WC3	Warramunga Arr	33.09	263	eP	P	21 00 31.9	-1.6
	9.1nm,1.3s						
WB2	Warramunga Arr	33.11	263	eP	P	21 00 32.2	-1.5
	9.2nm,1.2s						
WR1	Warramunga Arr	33.12	263	eP	P	21 00 31.9	-1.8
WRA	Warramunga Arr	33.12	263	P	P	21 00 31.9	-1.8
	1.0nm,0.9s,baz=82,slow=7.5,SNR=8.5						
AS31	Alice Springs	33.36	256	eP	P	21 00 34.7	-1.1
	3.0nm,0.4s						
ASAR	Alice Springs	33.36	256	P	P	21 00 34.5	-1.3
	4.5nm,0.5s,baz=83,slow=8.8,SNR=124						
ASAR				LR	LR	21 12 55.1	
	comp=Z,45nm,21.2s,baz=91,slow=35						
TBI	Tubuai	38.24	103	eLR	LR	21 11 46.3	
	comp=Z,188nm,34.8s						
PPT2	Papeete2	38.72	94	eLR	LR	21 11 53.9	
	comp=Z,83nm,28.2s						
FORT	Forrest	39.00	245	eP	P	21 01 24.3	+0.4
	16nm,1.0s						
FAKI	Fak Fak	40.01	290	eP	P	21 01 34.4	+1.9
	18nm,1.0s						
PSAC2	Pilbara Seismi	46.40	258	eP	P	21 02 24.2	+0.2
	16nm,0.9s						
PSAB3	Pilbara Seismi	46.43	258	eP	P	21 02 24.7	+0.3
	17nm,1.0s						
PSA00	Pilbara Seismi	46.45	258	eP	P	21 02 24.5	+0.1
	13nm,0.9s						
MORW	Morawa	49.35	248	eP	P	21 02 46.2	-0.6
	32nm,1.6s						
SBA	Scott Base	58.38	181	eP	P	21 03 52.7	+0.7
	13nm,1.4s						
CASY	Casey	59.98	204	eP	P	21 04 02.7	-0.5
	12nm,1.5s						
MJAR	Matsushiro Arr	63.16	332	P	P	21 04 25.3	+0.3
	4.1nm,1.0s,baz=165,slow=7.7,SNR=6.7						
MAJO	Matsushiro	63.16	332	eP	P	21 04 25.3	+0.2
JNU	Nakatsue	64.08	324	LR	LR	21 33 04.2	
	comp=Z,8.4nm,18.7s,baz=172,slow=37						
QSPA	South Pole Qui	70.52	180	eP	P	21 05 09.8	-1.9
	10nm,1.4s						
MAW	Mawson	78.28	202	P	P	21 06 01.3	+4.7
	1.2nm,0.7s,baz=109,slow=12,SNR=3.4						
MAW				LR	LR	21 38 49.8	
	comp=Z,34nm,18.2s,baz=17,slow=34						
MAW	Mawson	78.28	202	eP	P	21 05 59.0	+2.4
	1.2nm,1.3s						
CMAR	Chiang Mai Arr	78.91	294	P	P	21 06 00.6	-0.3
	1.8nm,0.9s,baz=132,slow=3.9,SNR=3.9						
MA2	Magadan	80.31	350	LR	LR	21 33 24.8	
	comp=Z,18nm,21.2s,baz=126,slow=30						
SONA0	Songino Array	87.64	323	eP	P	21 06 44.8	-0.7
SONM	Songino Array	87.64	323	P	P	21 06 44.8	-0.7
	2.2nm,0.9s,baz=138,slow=5.0,SNR=9.8						
NVAR	Mina Array Bea	88.76	48	LR	LR	21 41 48.1	
	comp=Z,34nm,18.2s,baz=254,slow=32						
GERES	GERESS Array B	144.90	332	PKP	PKPdf	21 13 34.2	+0.2
	0.8nm,0.8s,baz=49,slow=4.3,SNR=5.2						

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*THE **30** 21:13:02.9, 39°.40N×18°.45E, h4^{km}±1^{km}, ML3.3/9, Error ellipse: s-maj=2.3km s-min=1.1km az=309.0*

*ISCJB **30** 21:13:06.2±0.9, 39°.37N±0°.02×18°.75E±0°.02, h8^{km}±6^{km}, Error ellipse: s-maj=3.5km s-min=3.0km az=161.5*

*BEO **30** 21:13:07.1±0.8, 39°.25N×18°.71E, h15^{km}, ML3.2/6*

*ROM **30** 21:13:08.8±0.2, 39°.36N±0°.01×18°.88E±0°.01, h40^{km}, ML3.1/5, Error ellipse: s-maj=1.7km s-min=0.8km az=327.0*

ISC 30 21:13:07.1±1.2**, 39°.36N**±0°.03×**18°.73E**±0°.02**, h12^{km}**±10^{km}**, n55, σ1^{s}.20**/78**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCTE	Santa Cesarea	0.74	344	P	Pn	21 13 23.2	-0.2
KEK	Kerkira	0.90	66	P	Pb	21 13 23.3	-1.3
KEK				S	Sn	21 13 39.0	+0.6
	820nm,0.5s						
KEK	Kerkira	0.90	66	P	Pb	21 13 24.1	-0.4
SRN	Sarande	1.11	62	P	Pb	21 13 26.9	-1.3
SRN				S	Sg	21 13 45.1	+2.2
	2µm,0.5s						
SRN	Sarande	1.11	62	P	Pb	21 13 27.4	-0.8
IGT	Igoumenitsa	1.25	82	P	Pn	21 13 28.8	-1.6
IGT				S	Sg	21 13 49.5	+2.1
	388nm,0.5s						
LADO	San Nicola del	1.36	267	P	Pg	21 13 33.1	-0.2
LADO				AML	AML		
	comp=E,2800µm,1.6s						
LADO				AML	AML		
	comp=N,248µm,0.6s						
LADO				AML	AML		
	comp=N,248µm,0.6s						
LADO				AML	AML		
	comp=E,2800µm,1.6s						
MESG	Mesagne	1.40	331	P	Pg	21 13 33.6	-0.5
PIPA	Pietrapaola	1.49	275	P	Pg	21 13 34.9	-0.8
PIPA				AML	AML		
	comp=E,582µm,0.5s						
PIPA				AML	AML		
	comp=N,520µm,1.6s						
PIPA				AML	AML		
	comp=E,564µm,0.6s						
PIPA				AML	AML		
	comp=N,472µm,0.5s						
PIPA				AML	AML		
	comp=N,520µm,1.6s						
PIPA				AML	AML		
	comp=N,472µm,0.5s						
PIPA				AML	AML		
	comp=E,564µm,0.6s						
PIPA				AML	AML		
	comp=E,582µm,0.5s						
TSLK	Tsoukalades, L	1.59	109	P	Pn	21 13 34.1	-0.9
LKD2	Lefkada island	1.60	110	P	Pn	21 13 34.1	-1.1
LKD2				S	Sb	21 13 56.4	-0.4
	comp=E,578nm,0.5s						
JAN	Janina	1.67	79	P	Pn	21 13 35.5	-0.6
JAN				S	Sg	21 14 00.7	+0.1
	comp=E,558nm,0.4s						
FSK	Fiskardo	1.69	122	P	Pn	21 13 35.0	-1.4
FSK				S	Sb	21 13 59.9	+0.7
	comp=E,638nm,0.4s						
CELI	Celico	1.73	272	P	Pb	21 13 38.2	-0.6
CELI				AML	AML		
	comp=E,347µm,1.0s						
CELI				AML	AML		
	comp=N,482µm,0.8s						
CELI				AML	AML		
	comp=N,482µm,0.8s						
CELI				AML	AML		
	comp=E,347µm,1.0s						
VLS	Valsamata	1.87	129	P	Pn	21 13 37.5	-1.4
VLS				S	Sb	21 14 05.7	+1.2
	comp=E,395nm,0.4s						
CAR1	CAROLEI	1.96	268	P	Pb	21 13 42.2	-0.5
CAR1				AML	AML		
	comp=E,252µm,0.6s						
CAR1				AML	AML		
	comp=N,156µm,0.7s						
CAR1				AML	AML		
	comp=E,252µm,0.6s						
CAR1				AML	AML		
	comp=N,156µm,0.7s						
PLAC	Placanica	2.01	244	P	Pn	21 13 41.3	+0.5
PLAC				S	Sb	21 14 07.4	-1.1
KFL	Anninata	2.03	127	P	Pn	21 13 40.2	-1.0
KFL				S	Sb	21 14 09.8	+0.6
	comp=N,752nm,0.4s						
CET2	Cetraro	2.16	275	P	Pb	21 13 44.9	-1.2
CET2				AML	AML		
	comp=E,268µm,0.9s						
CET2				AML	AML		
	comp=N,320µm,0.7s						

CET2				AML	AML		
	comp=E,268µm,0.9s						
CET2				AML	AML		
	comp=N,320µm,0.7s						
TIR	Tirane	2.17	23	ePn	Pn	21 13 44.4	+1.4
TIR				eSn	Sb	21 14 11.5	-1.5
PVO	Paravola	2.30	108	P	Pn	21 13 44.8	0.0
ZKS	Zakynthos	2.31	135	P	Pn	21 13 42.9	-2.1
ZKS				S	Sg	21 14 20.3	-1.1
	comp=N,288nm,0.8s						
EVR	Evrytania	2.43	100	P	Pn	21 13 47.2	+0.5
SOI	Samo	2.46	239	P	Pn	21 13 47.3	+0.3
SOI				S	Sn	21 14 18.3	+1.4
RLS	Riolos of Patr	2.50	120	P	Pn	21 13 47.3	-0.3
MSCL	Scilla	2.56	245	P	Pn	21 13 49.1	+0.6
MSCL				S	Sn	21 14 20.6	+1.0
GMB	Gambarie	2.56	243	P	Pn	21 13 48.8	+0.2
GMB				S	Sn	21 14 20.3	+0.6
MTTG	Motta San Giov	2.74	241	P	Pn	21 13 51.2	+0.3
MTTG				S	Sn	21 14 24.3	+0.4
LAKA	Lakka	2.77	113	P	Pn	21 13 51.4	+0.1
AGG	Agios Georgios	2.81	96	P	Pn	21 13 52.3	+0.4
MPNC	Port Mandanici	2.91	246	P	Pn	21 13 53.2	0.0
MPNC				S	Sn	21 14 28.9	+0.8
KLV	Kalavryta, Ach	2.98	115	P	Pn	21 13 54.0	-0.2
PDG	Podgorica	3.09	7	ePn	Pn	21 13 57.7	+2.0
PDG				eSn	Sn	21 14 34.9	+2.3
GUR	Goura	3.16	116	P	Pn	21 13 57.2	+0.4
MSAG	Monte S. Angel	3.19	318	P	Pn	21 13 58.2	+1.1
SGRT	San Giovanni R	3.30	317	P	Pn	21 13 60.0	+1.3
ITM	Ithomi	3.32	130	P	Pn	21 13 58.5	-0.4
TREB	Trebinje	3.37	355	ePn	Pn	21 14 00.1	+0.6
TREB				eSn	Sn	21 14 40.5	+1.1
STIP	Stip	3.52	47	i Pn	Pn	21 14 05.3	+3.7
STON	Ston	3.59	348	ePn	Pn	21 14 03.6	+1.0
DID	Didima	3.99	116	P	Pn	21 14 07.2	-0.9
SJES	Sjenica	4.01	13	ePn	Pn	21 14 09.4	+1.0
BARS	Barje	4.17	33	ePn	Pn	21 14 10.9	+0.4
BARS				eSn	Sn	21 14 59.7	+0.6
SELS	Selova	4.25	24	ePn	Pn	21 14 12.4	+0.7
IVAS	Ivanjica	4.35	14	ePn	Pn	21 14 13.3	+0.3
BBLS	Lazići	4.53	6	ePn	Pn	21 14 16.7	+1.2
BBLS				eSn	Sn	21 15 07.6	-0.6
VTS	Vitosha	4.71	45	ePn	Pn	21 14 17.3	-0.8
GRUS	Gruza	4.76	18	ePn	Pn	21 14 20.3	+1.6
GRUS				eSn	Sn	21 15 14.6	+0.8
BOVS	Bovan	4.82	27	ePn	Pn	21 14 19.4	0.0
DIVS	Divibare	4.83	11	ePn	Pn	21 14 20.7	+1.1
ZAPS	Zavoj	4.89	36	ePn	Pn	21 14 21.9	+1.4
OBKA	Obir	7.78	338	Pn	Pn	21 15 01.6	+1.5
	comp=N,0.8nm,0.2s						
OBKA				Sn	Sn	21 16 25.9	-2.2
	comp=N,8.9nm,0.7s						
SOKA	Soboth	7.80	341	ePn	Pn	21 15 00.5	0.0
	comp=N,0.8nm,0.3s						
SOKA				eSn	Sn	21 16 25.4	-3.3
	comp=N,0.8nm,0.4s						
ARSA	Arzberg	8.23	345	ePn	Pn	21 15 06.2	-0.1
	comp=N,0.5nm,0.3s						
MOA	Molln	9.08	341	ePn	Pn	21 15 19.4	+1.5
	comp=N,0.6nm,0.2s						

NIED ***30*** *21:20:00,37°.10N×141°.40E,h65^{km},Mw3.9 Best double couple: M$_0$8.13000×10^{14} NP1:φ$_s$76.00000°,δ31.00000°,λ129.00000°. NP2:φ$_s$213.00000°,δ67.00000°,λ69.00000°.*

ISCJB ***30*** *21:20:44.1±0.7,37°.07N±0°.04×141°.38E±0°.07,h57^{km}±5^{km},mb3.9/7,Error ellipse: s-maj=9.6km s-min=5.0km az=22.2*

JMA ***30*** *21:20:45.7±0.1,37°.12N×141°.25E,h59^{km}±1^{km},M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$208.00000°,δ67.00000°,λ58.00000°. NP2:φ$_s$86.00000°,δ38.00000°,λ141.00000°. Principal axes: T Plg56.0000°, Azm77.0000°; N Plg29.0000°, Azm222.0000°; P Plg16.0000°, Azm321.0000°;*

JMA Felt III J1.

IDC ***30*** *21:20:48.3±2.5,36°.91N×141°.21E,h88^{km}±26^{km},mb3.6/7,mb1 3.8/11,mb1mx3.5/46,mbtmp4.0/11,MS2.5/2,Ms1 2.5/2,ms1mx2.2/32 Error ellipse: s-maj=25.2km s-min=13.7km az=55.0*

ISC 30 21:20:44.9±1.2**,37°.07N**±0°.04×**141°.39E**±0°.07**,h49**^{km}±10^{km}**, n33,**σ1^s**00**/43**,mb4.0**/7**,6C-7D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.48	274	⇑P	Pn	21 20 56.1	+0.2
ONAJ				S	Sn	21 21 03.7	0.0
JFK	Kawauchi	0.51	306	⇑P	Pn	21 20 56.3	0.0
JFK				S	Sn	21 21 03.8	-0.6
JFFD	Fukushimafurud	0.67	272	⇑P	Pn	21 20 58.1	-0.1
JFFD				S	Sn	21 21 06.9	-0.9
JMST	Minamisoumatoc	0.77	329	⇓P	Pn	21 20 59.3	-0.2
JMST				S	Sn	21 21 09.4	-0.7
JHO	Hitachi	0.80	236	⇑P	Pn	21 21 00.1	+0.1
JHO				S	Sn	21 21 10.5	-0.5
JMM	Marumori	0.93	329	⇓P	Pn	21 21 01.6	0.0
JMM				S	Sn	21 21 13.5	-0.4
JFT	Otama	0.95	298	⇓P	Pn	21 21 02.4	+0.4
JFT				S	Sn	21 21 14.0	-0.6
JIO	Ouri	1.38	359	⇓P	Pn	21 21 08.2	+0.4
JIO				S	Sn	21 21 24.5	-0.4
JFY	Yanaizu	1.39	285	⇓P	Pn	21 21 07.7	-0.2
JFY				S	Sn	21 21 24.0	-1.1
JOU	Okura	1.42	336	⇓P	Pn	21 21 08.3	0.0
JOU				S	Sn	21 21 26.3	+0.5
JYS	Shirataka	1.56	318	⇓P	Pn	21 21 10.4	+0.2
JYS				S	Sn	21 21 29.1	-0.2
JAG	Ashikaga	1.69	248	⇑P	Pn	21 21 11.9	0.0
JAG				S	Sn	21 21 31.6	-0.8
JKT	Katashina	1.74	261	⇑P	Pn	21 21 13.3	+0.5
JKT				S	Sn	21 21 33.5	-0.4
JNS	Sasagawa	1.81	295	P	Pn	21 21 12.9	-0.8
MJAR	Matsushiro Arr	2.61	259	P	Pn	21 21 25.3	+0.7
	2.9nm,0.3s,baz=80,slow=16,SNR=56						
MJAR				S	Sn	21 21 56.4	+1.3
	4.0nm,0.3s,baz=92,slow=24,SNR=7.3						
MJAR				LR	LR	21 22 45.1	
	comp=Z,98nm,22.0s,baz=55,slow=48						
MAT	Matsushiro	2.61	259	P	Pn	21 21 25.6	+1.0
MAT				S	Sn	21 21 57.3	+2.2
JHJ	Hachijo jima 2	4.16	199	P	Pn	21 21 46.1	+0.3
	38nm,0.3s,baz=149,slow=23,SNR=27						
JHJ				S	Sn	21 22 31.9	-1.2
	40nm,0.3s,baz=77,slow=22,SNR=9.4						
USRK	Ussuriysk Ar.	10.08	318	P	Pn	21 23 10.2	+3.2
	0.4nm,0.3s,baz=131,slow=13,SNR=16						
KSRS	Korea Array	10.74	276	P	Pn	21 23 17.6	+1.6
	0.3nm,0.3s,baz=94,slow=14,SNR=5.3						
KSRS				LR	LR	21 27 12.1	
	comp=Z,30nm,18.5s,baz=68,slow=36						
SONM	Songino Array	27.75	304	P	P	21 26 26.7	-2.2
	0.9nm,0.5s,baz=110,slow=10.0,SNR=7.5						
H11N2	WAKE ISLAND Hy	28.18	121	T	T	21 56 21.1	
	baz=313,slow=75,SNR=160						
H11N1	WAKE ISLAND Hy	28.19	121	T	T	21 56 16.9	
	baz=313,slow=75,SNR=117						
H11N3	WAKE ISLAND Hy	28.20	121	T	T	21 56 22.5	
	baz=313,slow=75,SNR=135						
H11S1	WAKE ISLAND Hy	28.89	123	T	T	21 57 35.4	
	baz=314,slow=75,SNR=136						
H11S3	WAKE ISLAND Hy	28.89	123	T	T	21 57 20.7	
	baz=314,slow=75,SNR=101						
H11S2	WAKE ISLAND Hy	28.91	123	T	T	21 57 32.4	
	baz=314,slow=75,SNR=85						
ZALV	Zalesovo Beam	41.88	312	P	P	21 28 28.6	-1.5
	2.0nm,0.5s,baz=91,slow=6.8,SNR=9.4						
MKAR	Makanchi Array	44.09	302	P	P	21 28 46.9	-1.2
	0.7nm,0.6s,baz=91,slow=10,SNR=8.6						
ILAR	Eielson Array	49.47	32	P	P	21 29 30.3	+0.4
	1.4nm,0.7s,baz=264,slow=6.4,SNR=14						
ARCES	ARCESS Array B	63.96	339	P	P	21 31 12.7	+0.2
	1.1nm,0.8s,baz=42,slow=7.4,SNR=4.3						
FINES	FINESS Array B	68.78	332	P	P	21 31 43.0	-0.4
	1.7nm,0.8s,baz=33,slow=7.3,SNR=3.7						
TXAR	Lajitas Array	90.11	52	P	P	21 33 41.4	+1.3
	0.4nm,0.5s,baz=307,slow=4.6,SNR=3.6						
LPAZ	La Paz	146.69	60	PKPbc	PKPbc	21 40 22.5	0.0
	1.2nm,0.5s,baz=30,slow=8.9,SNR=6.3						

BJI ***30*** *21:30:59.0±0.0,3°.40S×137°.40E,h60^{km},mb4.8/25, mB4.9/19,Ms4.6/3*

ISCJB ***30*** *21:31:02.3±0.3,3°.64S±0°.04×137°.07E±0°.04,h100^{km},mb4.3/28,Error ellipse: s-maj=6.5km s-min=5.2km az=157.1*

NEIC ***30*** *21:31:03.9±2.9,3°.72S×137°.04E,h105^{km}±8^{km},mb4.4/22,Error ellipse: s-maj=12.7km s-min=8.4km az=58.0*

IDC ***30*** *21:31:07.1±2.1,3°.74S×136°.91E,h133^{km}±20^{km},mb4.0/9,mb1 4.1/12,mb1mx3.9/24,mbtmp4.5/12,MS2.9/2,Ms1 2.9/2,ms1mx2.5/17,Error ellipse: s-maj=19.2km s-min=9.8km az=76.0*

ISC 30 21:31:04.0±0.5**,3°.81S**±0°.05×**137°.04E**±0°.07**,h100**^{km}**,n48,** σ**2^{s}03**/52**,mb4.3**/28**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	4.87	280	ePn	Pn	21 32 16.1	+1.2
FAKI				eSn	Sn	21 33 07.7	-2.4
SIJI	Sorong	6.47	297	P	Pn	21 32 37.6	+0.9
	7.9nm,0.3s,baz=184,slow=23,SNR=29						
SIJI				S	Sn	21 33 47.9	-1.2
	4.1nm,0.3s,baz=275,slow=23,SNR=6.1						
MTN	Manton Dam	10.71	213	ePn	Pn	21 33 36.9	+2.5
MTN				eSn	Sn	21 35 32.3	0.0
PMG	Port Moresby	11.48	119	P	Pn	21 33 50.2	+5.4
	1.1nm,0.3s,baz=320,slow=12,SNR=5.1						
PMG	Port Moresby	11.48	119	ePn	Pn	21 33 45.6	+0.8
COEN	Coen	11.76	149	ePn	Pn	21 33 49.0	+0.5
SOEI	Soe	13.99	244	ePn	Pn	21 34 17.9	-0.1
SOEI				eSn	Sn	21 36 54.0	+1.8
DAV	Davao City (W)	15.74	313	LR	LR	21 40 16.0	
	comp=Z,24nm,18.8s,baz=94,slow=35						
WRAB	Tennant Creek	16.24	189	eP	P	21 34 50.2	+2.7
	61nm,0.4s						
WRAB				eSn	Sn	21 37 40.2	-6.1
WB2	Warramunga Arr	16.25	189	eP	P	21 34 49.5	+1.9
	66nm,0.4s						
WR1	Warramunga Arr	16.25	189	eP	Pn	21 34 46.8	+0.4
WRA	Warramunga Arr	16.25	189	P	Pn	21 34 46.8	+0.4
	13nm,0.3s,baz=6.2,slow=12,SNR=141						
WRA				S	Sn	21 37 39.9	-6.7
	2.1nm,0.3s,baz=5.4,slow=24,SNR=8.1						
CTA	Charters Tower	18.50	152	P	Pn	21 35 14.5	+0.7
	0.6nm,0.3s,baz=332,slow=13,SNR=13						
CTAO	Charters Tower	18.50	152	ePn	Pn	21 35 14.8	+0.9
	22nm,0.8s						
AS31	Alice Springs	19.97	188	eP	Pn	21 35 31.6	+0.6
	24nm,0.3s						
ASAR	Alice Springs	19.97	188	P	Pn	21 35 31.4	+0.3
	14nm,0.3s,baz=14,slow=10,SNR=285						
ASAR				S	S	21 39 07.9	+0.2
	3.9nm,0.8s,baz=4.1,slow=27,SNR=6.8						
FORT	Forrest	28.13	197	eP	P	21 36 48.5	+1.9
	16nm,1.0s						
STKA	Stephens Creek	28.24	172	P	P	21 36 48.1	+0.5
	0.8nm,0.4s,baz=339,slow=8.6,SNR=3.0						
STKA	Stephens Creek	28.24	172	eP	P	21 36 50.4	+2.7
	0.3nm,1.0s						
BBOO	Buckleboo	28.86	182	eP	P	21 36 52.3	-0.9
	4.9nm,1.1s						
BKNI	Bangkinang	36.21	276	eP	P	21 37 56.5	-1.1
	33nm,0.4s						
NJ2	Nanjing	39.64	335	eP	P	21 38 25.5	-0.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
CM31	Chiang Mai Arr	43.57	302	eP	P	21 38 57.2	-1.2
	5.1nm,0.9s						
CMAR	Chiang Mai Arr	43.57	302	P	P	21 38 58.1	-0.3
	2.6nm,0.8s,baz=119,slow=6.6,SNR=18						
KMI	Kunming	44.00	313	P	P	21 39 06.5	+4.5
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
USRK	Ussuriysk Ar.	48.01	355	P	P	21 39 32.2	-0.6
	4.2nm,0.6s,baz=178,slow=6.9,SNR=15						
HHC	Hu-ho-hao-te	50.19	335	P	P	21 39 50.8	+1.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,12nm,6.6s						
LZH	Lanzhou	50.39	325	eP	P	21 39 55.5	+4.1
LZH				pP	pP	21 40 09.0	-6.7
LZH				sP	sP	21 40 15.5	-12
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	Gaotai	54.99	325	P	P	21 40 24.8	-0.4
GTA				pP	pP	21 40 42.5	-7.4
GTA				sP	sP	21 40 52.0	-8.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
SONM	Songino Array	58.02	336	LR	LR	22 07 06.5	
	comp=Z,16nm,19.7s,baz=90,slow=37						
PETK	Petropavlovsk-	59.32	14	P	P	21 40 54.9	-0.4
	1.3nm,0.7s,baz=166,slow=6.9,SNR=3.7						
PEA1	Petropavlovsk-	59.33	14	eP	P	21 40 54.9	-0.5
WMQ	Urumqi	64.85	323	eP	P	21 41 34.3	+1.7
WMQ				pP	pP	21 41 47.8	-10
WMQ				sP	PcP	21 41 56.0	-9.1
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,42nm,3.8s						
WMQ				LR	LR		
	comp=N,190nm,29.1s						
WMQ				LR	LR		
	comp=E,330nm,27.5s						
MK31	Makanchi Array	69.66	323	eP	P	21 42 02.3	-0.5
	3.2nm,1.0s						
MKAR	Makanchi Array	69.66	323	P	P	21 42 02.2	-0.5
	4.1nm,0.9s,baz=118,slow=7.9,SNR=21						
MAKZ	Makanchi	69.85	323	eP	P	21 42 02.8	-1.1
	4.4nm,0.8s						
NIL	Nilore	70.66	308	eP	P	21 42 08.8	-0.4
	8.6nm,0.8s						
ZALV	Zalesovo Beam	72.06	331	P	P	21 42 15.3	-1.8
	1.5nm,0.7s,baz=117,slow=5.3,SNR=6.0						
KURK	Kurchatov	73.67	326	eP	P	21 42 25.4	-1.3
	3.0nm,1.0s						
BRVK	Borovoye	79.34	326	eP	P	21 42 57.5	-1.2
	5.0nm,1.0s						
GEYT	Alibeck	83.62	309	P	P	21 43 19.4	-2.3
	1.9nm,0.7s,baz=304,slow=0.5,SNR=4.8						
ABKAR	Akbulak array	84.49	320	eP	P	21 43 24.7	-1.0
	2.3nm,0.8s						
QSPA	South Pole Qui	86.14	180	eP	P	21 43 34.5	+0.7
	5.4nm,0.9s						
RND	Reindeer	86.33	26	eP	P	21 43 33.0	-1.7
	3.0nm,0.6s						
WRH	Wood River Hil	86.94	25	eP	P	21 43 36.2	-1.3
	4.9nm,1.0s						
CCB	Clear Creek Bu	87.11	25	eP	P	21 43 36.4	-1.9
	6.0nm,1.0s						
ILAR	Eielson Array	87.52	25	P	P	21 43 38.2	-2.1
	2.9nm,0.8s,baz=262,slow=4.7,SNR=22						
ARCES	ARCESS Array B	100.99	341	P	Pdif	21 44 40.2	-1.7
	2.3nm,1.1s,baz=84,slow=8.3,SNR=3.1						

WEL 30 22:10:02.2,42°S±1°×**17°4E**±°**,h9**^{km}±2^{km}**,M3.3**/22**, ML3.6**/14**,MLv3.3**/22**,Error ellipse: s-maj=0.0km s-min=0.0km az=168.2,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.09	175	P	Pg	22 10 05.4	+0.7
CMWZ				S	Sg	22 10 07.4	+0.9
BSWZ	Blackbirch Sta	0.25	256	P	Pg	22 10 07.9	+0.6
BSWZ				S	Sb	22 10 12.2	-1.2
TUWZ	Tuamarina	0.30	319	P	Pg	22 10 08.9	+0.7
TUWZ				S	Sb	22 10 13.8	-0.9
TCW	Tory Channel	0.45	7	P	Pg	22 10 11.5	+0.5
TCW				S	Sb	22 10 18.0	-1.0
BHW	Baring Head	0.56	64	P	Pb	22 10 14.1	0.0
NNZ	Nelson	0.76	305	P	Pg	22 10 17.1	+0.2
PLWZ	Palliser	0.79	84	P	Pn	22 10 19.0	-0.6
MSWZ	Moikau Station	0.82	73	P	Pb	22 10 19.2	+0.5
CAW	Cannon Point	0.85	50	P	Pb	22 10 19.1	0.0
DUWZ	D'Urville Isla	0.88	346	P	Pg	22 10 19.3	+0.2
KHZ	Kahutara	0.91	213	P	Pn	22 10 20.8	-0.2
PAWZ	Paruwai Farm	0.96	74	P	Pn	22 10 21.7	-0.1
THZ	Tophouse	0.98	263	P	Pg	22 10 21.2	+0.1
MTW	Mount Morrison	1.10	63	P	Pn	22 10 23.8	+0.1
OGWZ	Otaki Gorge	1.11	41	P	Pg	22 10 23.4	-0.2
TRWZ	Traveller	1.14	78	P	Pb	22 10 23.8	-0.4
HOWZ	Holdsworth Sta	1.25	53	P	Pb	22 10 25.9	+0.1
TMWZ	Te Maipa	1.38	67	P	Pn	22 10 27.7	0.0
MRZ	Mangatainoka R	1.44	47	P	Pn	22 10 28.7	+0.3
QRZ	Quartz Range	1.51	303	P	Pb	22 10 30.2	-0.1
GVZ	Greta Valley S	1.57	213	P	Pn	22 10 30.0	-0.2
PRWZ	Pori Road	1.73	51	P	Pn	22 10 32.6	+0.1
POWZ	Post Office Ro	1.73	44	P	Pn	22 10 32.8	+0.4
DSZ	Denniston Nort	1.80	266	P	Pb	22 10 34.8	-0.5
BFZ	Birch Farm	1.82	58	P	Pn	22 10 33.3	-0.4
AMCZ	Amberley	1.91	217	P	Pn	22 10 34.2	-0.6
DVHZ	Dannevirke	2.01	48	P	Pn	22 10 35.8	-0.5
TSZ	Takapari Road	2.08	40	P	Pn	22 10 37.2	0.0
OKCZ	Okains Bay	2.23	202	P	Pn	22 10 38.0	-1.4
PNHZ	Pukenui	2.31	42	P	Pb	22 10 43.7	-0.3
PREZ	Palmer Road	2.31	359	P	Pg	22 10 47.7	+1.2
INZ	Inchbonnie	2.31	242	P	Pn	22 10 40.8	+0.4
OXZ	Oxford	2.31	223	P	Pn	22 10 39.2	-1.3
WPHZ	Waipukurau	2.33	48	P	Pg	22 10 47.9	+1.1
MQZ	McQueen's Vall	2.35	209	P	Pn	22 10 39.0	-1.8
KHEZ	Kahui Hut	2.36	356	P	Pb	22 10 46.2	+1.2
NBEZ	Newall Road No	2.40	354	P	Pg	22 10 48.3	+0.1
AKCZ	Akaroa Harbour	2.41	203	P	Pn	22 10 40.7	-1.2
PKE	Pukeiti	2.46	356	P	Pg	22 10 48.2	-1.2
MTVZ	Mangateitei	2.46	23	P	Pg	22 10 48.4	-1.1
MOVZ	Moawhango	2.54	28	P	Pb	22 10 48.1	+0.1
VRZ	Vera Road	2.56	10	P	Pb	22 10 49.6	+1.3
BHHZ	Black Hill Sta	2.59	34	P	Pb	22 10 49.2	+0.4
DRZ	Dome Shelter	2.59	24	P	Pg	22 10 50.8	-1.2
WHVZ	Whangaehu Hut	2.59	24	P	Pb	22 10 49.1	+0.1
KRHZ	Kereru	2.60	40	P	Pb	22 10 47.3	-1.7
FWVZ	Far West T-bar	2.61	24	P	Pb	22 10 49.2	0.0
TUVZ	Tukino	2.63	25	P	Pb	22 10 49.0	-0.5
NGZ	Ngauruhoe	2.70	24	P	Pb	22 10 51.3	+0.6
TWVZ	Taurewa	2.75	20	P	Pb	22 10 52.8	+1.3
WTVZ	West Tongariro	2.75	23	P	Pb	22 10 52.0	+0.4
KRVZ	Karewarewa	2.78	24	P	Pb	22 10 52.9	+0.7
KWHZ	Kaweka Forest	2.80	38	P	Pb	22 10 53.8	+1.4
KATZ	Kakaramea	2.91	24	P	Pb	22 10 55.2	+0.9
WVZ	Waitaha Valley	2.93	240	P	Pb	22 10 52.8	-1.9
RATZ	Rangitukua	3.03	24	P	Pb	22 10 58.4	+2.0
BKZ	Black Stump Fm	3.04	36	P	Pb	22 10 57.5	+1.0
RPZ	Rata Peaks	3.10	227	P	Pn	22 10 51.0	-0.4
WATZ	Wairara	3.17	22	P	Pb	22 11 00.2	+1.5
HIZ	Hauiti	3.18	9	P	Pb	22 10 57.7	-1.1
TLZ	Tolley Road	3.48	18	P	Pb	22 11 04.5	+0.6
ODZ	Otahua Downs	4.27	216	P	Pn	22 11 06.3	-1.0
JCZ	Jackson Bay	4.66	237	P	Pn	22 11 16.0	+3.2
ABAZ	Army Bay	5.07	6	P	Pn	22 11 22.1	+3.8

IDC ***30*** *22:37:40.7±2.0,26°.76N×58°.12E,h0^{km},mb3.7/4,mb1 3.8/5,mb1mx3.4/47,mbtmp3.8/5,ML3.7/1,MS2.9/1,Ms1 2.9/1,ms1mx2.2/35,Error ellipse: s-maj=51.5km s-min=27.5km az=90.0*

DSN ***30*** *22:37:41.1±1.3,26°.38N×58°.33E,h10^{km},ML3.6/5,Error ellipse: s-maj=18.1km s-min=6.5km az=16.0*

ISCJB ***30*** *22:37:42.4±0.5,26°.63N±0°.03×57°.95E±0°.06,h10^{km},mb3.6/4,MS2.7/1,Error ellipse: s-maj=7.3km s-min=4.5km az=177.8*

TEH ***30*** *22:37:42.0,26°.76N×58°.06E,h9^{km},ML3.8*

THR ***30*** *22:37:43.4,26°.71N×58°.07E,h15^{km},ML3.6*

ISC 30 22:37:42.1±0.8**,26°.67N**±0°.03×**58°.02E**±0°.04**,h10**^{km}**,n46,** σ**2^{s}03**/45**,mb3.8**/4**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK1	Jask	1.05	192	ePg	Pn	22 38 04.9	+2.0
KHNJ	Kahnooj	1.30	348	ePg	Pb	22 38 05.4	-1.3
NIAN	Nian	1.38	310	IAMB	IAmb	22 38 11.1	
	comp=Z,0.0nm,0.2s						
NIAN				ePg	Pg	22 38 09.0	+0.5
SHME	Shamm	1.79	250	P	Pn	22 38 14.8	+1.7
SHME				S	Sg	22 38 40.7	+1.0
SHME	Shamm	1.79	250	ePn	Pb	22 38 15.0	0.0
BNDS	Bandar-Abbas	1.80	294	AML	AML	22 38 38.7	
	comp=E,593nm,0.4s						
GENO	Geno	1.80	294	ePn	Pb	22 38 15.2	0.0
GENO				IAMB	IAmb	22 38 54.0	
	comp=Z,0.0nm,0.4s						
MDH	Madha	2.06	229	eP	Pn	22 38 16.5	-0.3
	SNR=9.4						
MDH	Madha	2.06	229	ePn	Pn	22 38 16.6	-0.2
MSFE	Esma-Masafi	2.12	232	eP	Pn	22 38 17.6	0.0
	SNR=7.3						
MSFE	Esma-Masafi	2.12	232	ePn	Pn	22 38 17.8	+0.2
UOSS	Minazif	2.37	224	eP	Pn	22 38 19.5	-1.5
	SNR=15						
UOSS	Minazif	2.37	224	ePn	Pn	22 38 20.8	-0.2
CHBR	Chabahar	2.46	115	ePn	Pb	22 38 24.6	-1.8
CHBR	Chabahar	2.46	115	Pn	Pb	22 38 24.6	-1.8
HATD	Hatta, Dubai	2.50	223	P	Pn	22 38 22.3	-0.6
HATD	Hatta, Dubai	2.50	223	ePn	Pn	22 38 22.3	-0.6
NAZ	Nazwa, Dubai	2.70	232	P	Pn	22 38 26.0	+0.4
NAZ	Nazwa, Dubai	2.70	232	ePn	Pn	22 38 27.7	+2.1
NGRK	Negar Kerman	3.17	339	ePn	Pb	22 38 35.4	-3.4
NGRK				IAMB	IAmb	22 39 25.3	
	comp=Z,0.0nm,0.5s						
CHMN	Cheshme madani	3.21	353	ePn	Pb	22 38 36.4	-2.9
CHMN				IAMB	IAmb	22 39 33.1	
	comp=Z,0.0nm,0.7s						
WSAR	Wadi Sarin	3.46	171	Pn	Pn	22 38 37.6	+1.5
	comp=Z,6.9nm,0.3s,baz=342,slow=4.9,SNR=164						
WSAR				Sn	Sn	22 39 16.6	-0.6
	comp=Z,7.2nm,0.3s,baz=336,slow=7.5,SNR=3.7						
KRBR	Kerman	3.48	342	ePn	Pb	22 38 39.2	-4.8
KRBR	Kerman	3.48	342	AML	AML	22 39 34.5	
	comp=N,138nm,0.8s						
KRBR				AML	AML	22 39 41.3	
	comp=E,105nm,0.5s						
KRBR	Kerman	3.48	342	Pn	Pb	22 38 39.2	-4.8
TVBK	TV Kerman	3.48	342	ePn	Pb	22 38 40.3	-3.7
TVBK				IAMB	IAmb	22 38 50.0	
	comp=Z,0.0nm,0.3s						
ZHSF	Zahedan	3.81	39	ePn	Pn	22 38 43.1	+2.1
ZHSF	Zahedan	3.81	39	P	Pn	22 38 43.1	+2.1
KHGB	Koh Gabri	3.93	340	ePn	Pb	22 38 46.1	-5.5
KHGB				IAMB	IAmb	22 38 57.5	
	comp=Z,0.0nm,0.6s						
ISRV	Sarvestan	5.11	303	ePn	Pn	22 39 00.8	+1.9
IBAF	Bafgh	5.35	337	ePn	Pn	22 39 05.1	+3.0
BSRN	Basiran	5.36	10	ePn	Pn	22 39 04.5	+2.2
BSRN	Basiran	5.36	10	Pn	Pn	22 39 04.5	+2.2
IPAR	Pars	5.40	307	ePn	Pn	22 39 04.7	+1.7
IMEH	Mehriz	5.57	328	ePn	Pn	22 39 06.7	+1.5
IKOO	Kooshah	5.80	8	ePn	Pn	22 39 10.7	+2.3
IKAZ	Kazeroun	6.27	301	ePn	Pn	22 39 14.9	0.0
TPRV	Parvadeh(Tabas	6.44	350	ePn	Pn	22 39 20.3	+3.2
KLNJ	Kolanjah	7.10	309	ePn	Pn	22 39 27.5	+1.1
IRAM	Ramesheh	7.10	317	ePn	Pn	22 39 28.4	+2.1
ROKH	ROKH	8.30	315	ePn	Pn	22 39 44.3	+1.5
IPIR	Pirpir	8.62	316	ePn	Pn	22 39 48.4	+1.2
AKTO	Aktyubinsk	23.73	360	P	P	22 42 53.6	-0.6
	comp=Z,0.9nm,0.4s,baz=210,slow=14,SNR=3.6						
AKTO				LR	LR	22 52 44.0	
	comp=Z,28nm,19.6s,baz=204,slow=38						
BRTR	Keskin Array B	24.11	309	P	P	22 42 60.0	+1.8
	comp=Z,0.6nm,0.7s,baz=138,slow=11,SNR=4.1						
ARCES	ARCESS Array B	46.90	345	P	P	22 46 11.3	-1.0
	comp=Z,1.5nm,0.8s,baz=135,slow=9.0,SNR=4.0						
TORD	Torodi Ar. Bea	54.25	267	P	P	22 47 08.7	+0.2
	comp=Z,0.8nm,0.6s,baz=60,slow=6.6,SNR=10						

IDC ***30*** *22:40:03.8±2.8,27°.27N×54°.91E,h0^{km},mb3.7/6,mb1 3.8/8,mb1mx3.5/42,mbtmp3.7/8,ML3.4/1,MS2.9/2,Ms1 2.9/2,ms1mx2.3/36,Error ellipse: s-maj=55.1km s-min=27.5km az=156.0*

ISCJB ***30*** *22:40:04.8±2.1,27°.3N±0°.3×55°.0E±0°.2,h20^{km},mb3.6/6,MS3.2/1,Error ellipse: s-maj=38.0km s-min=17.3km az=159.0*

ISC 30 22:40:07.2±2.4**,27°.3N**±0°.3×**54°.9E**±0°.2**,h20**^{km}**,n12,** σ**1^{s}12**/10**,mb3.7**/6**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNI	Garni	15.32	329	LR	LR	22 49 12.0	
	comp=Z,25nm,19.8s,baz=77,slow=36						
EIL	Elat	17.72	282	P	P	22 44 15.2	+1.7
	0.3nm,0.3s,baz=56,slow=15,SNR=3.0						
MMAI	Mount Meron Ar	17.80	293	P	Pn	22 44 13.2	-0.6
	baz=111,slow=16,SNR=3.9						
KBZ	Khabaz	19.02	332	P	Pn	22 44 29.3	+0.7
	0.1nm,0.3s,baz=216,slow=6.5,SNR=3.5						
BRTR	Keskin Array B	21.56	310	P	P	22 44 55.9	+0.3

	1.8nm,0.8s,baz=128,slow=13,SNR=8.7						
BVAR	Borovoye Array	28.12	20	P	P	22 45 57.6	0.0
	0.6nm,0.7s,baz=220,slow=11,SNR=3.6						
ZALV	Zalesovo Beam	34.47	31	P	P	22 46 54.3	+0.8
	0.4nm,0.4s,baz=260,slow=8.2,SNR=3.2						
FINES	FINESS Array B	39.19	338	P	P	22 47 32.6	-0.9
	1.2nm,0.7s,baz=128,slow=11,SNR=4.2						
NB2	NORSAR Subarra	44.60	331	P	P	22 48 16.2	-1.6
	comp=Z,0.9nm,0.7s,baz=120,slow=8.6						
NOA	NORSAR Array B	44.60	331	P	P	22 48 17.1	-0.8
	comp=Z,1.2nm,0.9s,baz=118,slow=8.0,SNR=5.2						
SONM	Songino Array	44.68	49	LR	LR	23 09 00.8	
	comp=Z,25nm,18.4s,baz=252,slow=39						
TORD	Torodi Ar. Bea	51.55	265	P	P	22 49 11.7	-0.4
	comp=Z,1.0nm,0.7s,baz=75,slow=7.0,SNR=5.2						

ISCJB ***30*** *22:46:28.3±0.2, 38°.89S±0°.02×175°.89E±0°.03, h114^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=4.1km s-min=3.0km az=21.4*

IDC ***30*** *22:46:28.3±1.1, 38°.99S×176°.13E, h107^{km}±12^{km}, mb4.1/3, mb1 4.2/4, mb1mx3.8/21, mbtmp4.4/4, Error ellipse: s-maj=31.1km s-min=19.7km az=154.0*

NEIC ***30*** *22:46:29.1±0.0, 38°.83S×175°.94E, h108^{km}, mb4.0/5, ML4.1(WEL), After WEL.*

WEL ***30*** *22:46:30.5, 39°S±2°×17°6E±°, h94^{km}±4^{km}, M3.8/59, MLv3.8/59, Error ellipse: s-maj=0.0km s-min=0.0km az=77.6*

ISC 30 22:46:29.2±0.7**, 38°.89S**±0°.04×**175°.90E**±0°.03**, h112**^{km}±5^{km}**, n179,** σ**1^{s}.41**/190**, mb4.2**/7**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RITZ	Rihia Road	0.10	201	P	Pn	22 46 44.6	0.0
RATZ	Rangitukua	0.10	282	P	Pn	22 46 43.9	-0.7
HATZ	Hinemaiaia	0.15	91	P	Pn	22 46 44.1	-0.6
HATZ				S	Sn	22 46 54.6	-1.8
KATZ	Kakaramea	0.18	242	P	Pn	22 46 44.5	-0.4
WATZ	Wairara	0.22	324	P	Pn	22 46 44.3	-0.6
WATZ				S	Sn	22 46 55.3	-1.4
WHTZ	Whakaora	0.23	11	P	Pn	22 46 44.5	-0.5
KRVZ	Karewarewa	0.29	225	P	Pn	22 46 45.0	-0.3
WTVZ	West Tongariro	0.33	227	P	Pn	22 46 45.2	-0.2
NGZ	Ngauruhoe	0.37	219	P	Pn	22 46 45.4	-0.2
KUTZ	Kaahu Road	0.40	351	P	Pn	22 46 45.0	-0.7
MRHZ	Matea Rd	0.41	82	P	Pn	22 46 44.9	-0.8
MRHZ				S	Sn	22 46 56.1	-2.0
TWVZ	Taurewa	0.41	243	P	Pn	22 46 45.6	-0.2
TWVZ				S	Sn	22 46 57.4	-0.9
WPRZ	Whakapapatarin	0.42	29	P	Pn	22 46 44.9	-0.9
TUVZ	Tukino	0.42	207	P	Pn	22 46 46.2	+0.2
FWVZ	Far West T-bar	0.46	217	P	Pn	22 46 46.2	-0.1
WHVZ	Whangaehu Hut	0.46	212	P	Pn	22 46 46.3	0.0
DRZ	Dome Shelter	0.47	214	P	Pn	22 46 46.5	+0.1
ALRZ	Allen Road	0.47	47	P	Pn	22 46 45.2	-0.9
MOVZ	Moawhango	0.53	193	P	Pn	22 46 46.6	+0.1
BKZ	Black Stump Fm	0.54	121	*e*Pn	Pn	22 46 46.4	-0.1
BKZ				*e*Sn	Sn	22 46 56.5	-3.1
BKZ	Black Stump Fm	0.54	121	P	Pn	22 46 46.4	-0.1
BKZ				S	Sn	22 46 58.7	-0.9
PRRZ	Plateau Road	0.55	45	P	Pn	22 46 45.6	-1.0
GRRZ	Galatos Road	0.56	17	P	Pn	22 46 46.0	-0.7
HRRZ	Handcock Road	0.58	31	P	Pn	22 46 46.1	-0.7
PKVZ	Pokaka	0.59	227	P	Pn	22 46 47.2	+0.3
MTVZ	Mangateitei	0.60	214	P	Pn	22 46 47.4	+0.4
BHHZ	Black Hill Sta	0.61	168	P	Pn	22 46 47.2	+0.1
TLZ	Tolley Road	0.63	333	P	Pn	22 46 46.6	-0.6
HSRZ	Hossack Road	0.64	25	P	Pn	22 46 46.5	-0.8
KWHZ	Kaweka Forest	0.67	143	P	Pn	22 46 48.0	+0.4
HLRZ	Highlands Stat	0.73	29	P	Pn	22 46 47.9	-0.1
RRRZ	Republican Roa	0.73	41	P	Pn	22 46 47.2	-0.8
MTHZ	Maungataniwha	0.73	87	P	Pn	22 46 47.6	-0.4
UTU	Utuhina	0.75	18	P	Pn	22 46 47.6	-0.5
MUGZ	Murupara	0.79	59	P	Pn	22 46 47.6	-0.9
TARZ	Mount Tarawera	0.81	36	P	Pn	22 46 48.0	-0.7
NGRZ	Ngongotaha	0.82	16	P	Pn	22 46 48.2	-0.6
MCHZ	McNeill Hill	0.83	132	P	Pn	22 46 50.0	+1.2
KRHZ	Kereru	0.84	154	P	Pn	22 46 49.7	+0.7
OMRZ	Omania	0.86	25	P	Pn	22 46 48.4	-0.8
MKRZ	Makatiti	0.87	31	P	Pn	22 46 49.1	-0.2
RTZ	Ruatahuna	0.89	72	P	Pn	22 46 48.8	-0.7
HIZ	Hauiti	0.90	294	*e*Pn	Pn	22 46 49.3	-0.2
HIZ	Hauiti	0.90	294	P	Pn	22 46 49.3	-0.2
KARZ	Kaharoa	0.91	17	P	Pn	22 46 48.9	-0.7
VRZ	Vera Road	0.92	255	P	Pn	22 46 50.1	+0.4
RAHZ	Arahi	0.92	92	P	Pn	22 46 50.1	+0.4
ARHZ	Aropaoanui	0.93	114	P	Pn	22 46 50.5	+0.7
EDRZ	Edgecumbe	1.02	40	P	Pn	22 46 50.9	+0.1
KMRZ	Kaimai	1.04	2	P	Pn	22 46 50.3	-0.7
PNHZ	Pukenui	1.05	167	P	Pn	22 46 51.7	+0.6
WHHZ	Waihua	1.05	101	P	Pn	22 46 51.4	+0.4
MARZ	Manawahe	1.09	34	P	Pn	22 46 50.7	-0.7
WAZ	Wanganui	1.12	219	P	Pn	22 46 52.9	+1.1
SNGZ	Shannon Statio	1.13	85	P	Pn	22 46 51.9	0.0
URZ	Urewera	1.14	57	P	Pn	22 46 50.8	-1.1
	485nm,0.3s,baz=243,slow=4.0,SNR=1605						
URZ				S	Sn	22 47 06.4	-2.8
	757nm,0.3s,baz=190,slow=12,SNR=91						
URZ	Urewera	1.14	57	*e*Pn	Pn	22 46 50.9	-1.1
URZ	Urewera	1.14	57	P	Pn	22 46 50.8	-1.1
OPRZ	Ohinepanea	1.16	26	P	Pn	22 46 51.2	-1.0
TSZ	Takapari Road	1.17	178	P	Pn	22 46 53.0	+0.7
KAHZ	Kahuranaki	1.18	140	P	Pn	22 46 53.5	+1.1
TGRZ	Tauranga	1.19	14	P	Pn	22 46 52.0	-0.6
CKHZ	Cape Kidnapper	1.19	131	P	Pn	22 46 53.5	+1.0
TOZ	Tahuroa Road	1.20	345	P	Pn	22 46 52.2	-0.4
MHEZ	Mangahewa	1.25	261	P	Pn	22 46 53.7	+0.6
WPHZ	Waipukurau	1.25	161	P	Pn	22 46 53.9	+0.8
RAGZ	Rawiri	1.25	72	P	Pn	22 46 52.8	-0.4
LREZ	Lake Rotokare	1.30	243	P	Pn	22 46 54.9	+1.2
WHRZ	Whale Island	1.33	40	P	Pn	22 46 53.2	-1.0
DREZ	Durham Road	1.36	257	P	Pn	22 46 55.3	+0.9
PXZ	Pawanui	1.36	147	P	Pn	22 46 55.2	+0.8
KNZ	Kokohu	1.39	96	P	Pn	22 46 54.8	+0.1
MWZ	Matawai	1.39	67	P	Pn	22 46 54.0	-0.8
OHWZ	Ohakea	1.39	199	P	Pn	22 46 56.1	+1.4
DVHZ	Dannevirke	1.42	172	P	Pn	22 46 55.5	+0.3
PREZ	Palmer Road	1.43	251	P	Pn	22 46 56.7	+1.4
RIGZ	Rimuhau	1.46	83	P	Pn	22 46 55.7	+0.1
PRHZ	Porangahau	1.49	158	P	Pn	22 46 56.6	+0.7
POWZ	Post Office Ro	1.50	184	P	Pn	22 46 56.5	+0.3
PKE	Pukeiti	1.52	258	P	Pn	22 46 57.2	+0.9
KHEZ	Kahui Hut	1.52	254	P	Pn	22 46 57.5	+1.1
PRGZ	Paritu Road	1.54	92	P	Pn	22 46 56.4	-0.2
MHGZ	Mahia Peninsul	1.58	100	P	Pn	22 46 57.3	+0.3
TKGZ	Te Karaka	1.59	74	P	Pn	22 46 57.1	0.0
NBEZ	Newall Road No	1.63	256	P	Pn	22 46 58.2	+0.7
ANWZ	Angora Road	1.63	164	P	Pn	22 46 58.3	+0.7
NMEZ	Namu Road	1.66	251	P	Pn	22 46 59.0	+1.1
PRWZ	Pori Road	1.67	178	P	Pn	22 46 58.6	+0.5
RUGZ	Raukumara Rang	1.67	57	P	Pn	22 46 56.8	-1.5
TWGZ	Tauwhareparae	1.78	67	P	Pn	22 46 59.5	0.0
MRZ	Mangatainoka R	1.79	188	P	Pn	22 46 59.5	0.0
BFZ	Birch Farm	1.81	172	P	Pn	22 47 00.0	+0.2
CNGZ	Carnagh Statio	1.85	78	P	Pn	22 47 00.4	+0.1
HAZ	Te Kaha	1.86	53	P	Pn	22 46 58.9	-1.5
MKAZ	Moumakai	1.88	342	P	Pn	22 47 00.2	-0.5
TIWZ	Tintock	1.89	180	P	Pn	22 47 01.0	+0.2
KBAZ	Karaka Road Bo	1.96	336	P	Pn	22 47 01.3	-0.4
PKGZ	Pakihiroa	1.98	60	P	Pn	22 47 01.6	-0.4
OGWZ	Otaki Gorge	2.01	196	P	Pn	22 47 02.3	0.0
HOWZ	Holdsworth Sta	2.03	188	P	Pn	22 47 02.3	-0.3
CPWZ	Castlepoint	2.03	174	P	Pn	22 47 03.3	+0.7
AWAZ	Awhitu Peninsu	2.08	331	P	Pn	22 47 03.0	-0.2
ETAZ	East Tamaki Re	2.08	338	P	Pn	22 47 02.8	-0.5
KUZ	Kuaotunu	2.14	356	P	Pn	22 47 03.4	-0.6
WIAZ	Waiheke Island	2.18	344	P	Pn	22 47 04.0	-0.5
EPAZ	Eden Park BICE	2.21	335	P	Pn	22 47 04.2	-0.7
TMWZ	Te Maipa	2.22	180	P	Pn	22 47 04.7	-0.3
WTAZ	Waiatarua	2.22	331	P	Pn	22 47 04.8	-0.2
HBAZ	Herne Bay Bore	2.24	335	P	Pn	22 47 04.7	-0.5
WMGZ	Waiomatatini S	2.25	62	P	Pn	22 47 04.6	-0.7
MBAZ	Motutapu North	2.26	339	P	Pn	22 47 05.2	-0.4
MTW	Mount Morrison	2.29	188	P	Pn	22 47 05.3	-0.6
CAW	Cannon Point	2.31	196	P	Pn	22 47 05.6	-0.5
MXZ	Matakaoa Point	2.31	56	*e*Pn	Pn	22 47 05.9	-0.3
MXZ				*e*Sn	Sn	22 47 28.7	-5.8
MXZ	Matakaoa Point	2.31	56	P	Pn	22 47 05.8	-0.4
ABAZ	Army Bay	2.44	339	P	Pn	22 47 07.5	-0.3
DUWZ	D'Urville Isla	2.44	218	P	Pn	22 47 07.3	-0.6
TRWZ	Traveller	2.51	184	P	Pn	22 47 08.1	-0.7
PAWZ	Paruwai Farm	2.52	188	P	Pn	22 47 08.0	-0.8
MSWZ	Moikau Station	2.57	191	P	Pn	22 47 08.6	-1.0
SNZO	South Karori	2.59	200	*e*Pn	Pn	22 47 08.7	-1.0
TCW	Tory Channel	2.63	208	P	Pn	22 47 09.5	-0.9
BHW	Baring Head	2.64	197	P	Pn	22 47 09.4	-1.0
GRZ	Great Barrier	2.66	352	P	Pn	22 47 10.2	-0.5
PLWZ	Palliser	2.72	190	P	Pn	22 47 10.4	-1.2
TUWZ	Tuamarina	2.95	210	P	Pn	22 47 13.4	-1.1
NNZ	Nelson	3.03	219	P	Pn	22 47 14.5	-1.0
CMWZ	Cape Campbell	3.14	204	P	Pn	22 47 16.5	-0.5
WCZ	Waipu Caves	3.19	337	P	Pn	22 47 17.4	-0.4
BSWZ	Blackbirch Sta	3.22	208	P	Pn	22 47 16.7	-1.4
QRZ	Quartz Range	3.24	232	*e*Pn	Pn	22 47 17.4	-0.9
QRZ				*e*Sn	Sn	22 47 54.6	-1.7
QRZ	Quartz Range	3.24	232	P	Pn	22 47 17.4	-0.9
THZ	Tophouse	3.67	218	*e*Pn	Pn	22 47 22.7	-1.5
THZ	Tophouse	3.67	218	P	Pn	22 47 22.7	-1.5
KHZ	Kahutara	3.96	206	*e*Pn	Pn	22 47 26.1	-1.8
KHZ				*e*Sn	Sn	22 48 09.6	-3.8
KHZ	Kahutara	3.96	206	P	Pn	22 47 26.0	-1.8
OUZ	Omahuta	4.10	333	*e*Pn	Pn	22 47 29.7	-0.2
OUZ	Omahuta	4.10	333	P	Pn	22 47 29.9	0.0
DSZ	Denniston Nort	4.24	226	P	Pn	22 47 29.7	-2.0
GVZ	Greta Valley S	4.62	207	P	Pn	22 47 34.3	-2.5
LTZ	Lake Taylor	4.77	214	*e*Pn	Pn	22 47 36.3	-2.5
AMCZ	Amberley	4.94	209	P	Pn	22 47 38.4	-2.7
INZ	Inchbonnie	5.11	220	P	Pn	22 47 41.6	-1.8
CRLZ	Canterbury Las	5.29	207	*e*Pn	Pn	22 47 42.7	-3.1
OXZ	Oxford	5.31	212	*e*Pn	Pn	22 47 42.4	-3.7
MQZ	McQueen's Vall	5.40	206	*e*Pn	Pn	22 47 43.8	-3.4
WVZ	Waitaha Valley	5.72	221	P	Pn	22 47 49.4	-2.2
RPZ	Rata Peaks	6.05	216	P	Pn	22 47 54.0	-2.1
	6.6nm,0.3s,baz=210,slow=0.8,SNR=19						
RPZ				S	Sn	22 48 57.3	-6.6
	19nm,0.3s,baz=248,slow=3.6,SNR=4.6						
RPZ	Rata Peaks	6.05	216	P	Pn	22 47 54.0	-2.1
FOZ	Fox Glacier	6.53	223	*e*Pn	Pn	22 48 03.4	+0.8
FOZ	Fox Glacier	6.53	223	P	Pn	22 47 59.9	-2.7
LBZ	Lake Benmore	6.96	216	*e*Pn	Pn	22 48 06.3	-2.2
LBZ	Lake Benmore	6.96	216	P	Pn	22 48 05.5	-3.0
ODZ	Otahua Downs	7.29	211	*e*Pn	Pn	22 48 09.8	-3.1
CTZ	Chatham Island	7.42	133	P	Pn	22 48 14.2	-0.5
WKZ	Wanaka	7.85	219	*e*Pn	Pn	22 48 18.1	-2.3
WKZ	Wanaka	7.85	219	P	Pn	22 48 16.9	-3.6
TUZ	Tuapeka	8.45	211	P	Pn	22 48 25.8	-2.8
DCZ	Deep Cove	9.23	222	*e*Pn	Pn	22 48 38.4	-0.9
STKA	Stephens Creek	28.71	273	P	P	22 52 17.9	+2.1
	2.2nm,0.7s,baz=109,slow=12,SNR=6.4						
STKA	Stephens Creek	28.71	273	*e*P	P	22 52 17.9	+2.1
	0.9nm,0.9s						
BBOO	Buckleboo	32.67	268	*e*P	P	22 52 51.6	+1.0
AS31	Alice Springs	38.62	281	*e*P	P	22 53 42.8	+1.2
	3.7nm,0.9s						
ASAR	Alice Springs	38.62	281	P	P	22 53 42.6	+1.1
	6.4nm,0.7s,baz=116,slow=5.8,SNR=64						
FORT	Forrest	39.72	267	*e*P	P	22 53 51.7	+1.1
	21nm,0.9s						
WB2	Warramunga Arr	40.41	286	*e*P	P	22 53 57.8	+1.4
	3.2nm,1.0s						
WR1	Warramunga Arr	40.42	286	*e*P	P	22 53 57.3	+0.8
WRA	Warramunga Arr	40.42	286	P	P	22 53 57.3	+0.8
	2.8nm,0.5s,baz=117,slow=8.5,SNR=24						
MAW	Mawson	62.58	203	P	P	22 56 42.5	+1.7
	1.8nm,0.6s,baz=129,slow=9.4,SNR=9.0						
MAW	Mawson	62.58	203	*e*P	P	22 56 42.7	+1.9
	0.9nm,1.1s						
SNAA	Sanae	69.74	180	P	P	22 57 28.4	+1.9
VNA3	Neumayer Olymp	70.10	178	P	P	22 57 30.4	+1.7
VNA1	Neumayer--Stat	70.73	179	P	P	22 57 34.6	+2.2
ARCES	ARCESS Array B	145.48	342	PKPbc	PKPdf	23 05 52.0	-0.8
	1.1nm,0.6s,baz=45,slow=3.6,SNR=10						
DBIC	Dimbokro	147.92	179	PKPbc	PKPbc	23 06 01.9	+0.2
	1.1nm,0.4s,baz=130,slow=7.9,SNR=6.8						
FIA0	FINESS Array S	150.75	330	*e*PKPbc	PKPbc	23 06 06.3	-0.9
FINES	FINESS Array B	150.75	330	PKPbc	PKPbc	23 06 06.3	-0.9
	1.9nm,0.8s,baz=112,slow=1.0,SNR=3.7						
TORD	Torodi Ar. Bea	153.85	193	PKPbc	PKPbc	23 06 14.2	-1.4
	0.3nm,0.5s,baz=217,slow=1.5,SNR=6.2						
TOA1	Torodi Ar. Sit	153.86	193	*e*PKPbc	PKPbc	23 06 14.2	-1.4

ISC 30 22:49:27.3±1.2**, 45°.05N**±0°.03×**15°.10E**±0°.05**, h1**^{km}±15^{km}**, n10,** σ**0^{s}.76**/17**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOJS	Bojanci	0.46	14	*i* Pg	Pg	22 49 36.1	-0.2
BOJS				*i* Sg	Sg	22 49 42.5	+0.3
RIY	Rijeka	0.51	302	ePg	Pg	22 49 37.6	+0.4
RIY				Sg	Sg	22 49 44.2	+0.4
NVLJ	Novalja	0.52	198	*e*Pg	Pg	22 49 36.8	-0.4
NVLJ				Sg	Sg	22 49 44.5	+0.6
GBRS	Gornja Briga	0.52	337	*i* Pg	Pg	22 49 36.8	-0.5
GBRS				*i* Sg	Sg	22 49 44.4	+0.4
OZLJ	Ozalj	0.62	25	*e*Pg	Pg	22 49 39.3	+0.1
OZLJ				Sg	Sg	22 49 47.7	+0.4
UDBI	Udbina	0.71	138	*e*Pg	Pb	22 49 41.9	-0.7
UDBI				Sg	Sg	22 49 51.1	+1.0
PTJ	Puntijarka	1.05	35	Sg	Sg	22 50 01.3	+0.2
DUGI	Dugi Otok	1.06	182	*e*Pg	Pg	22 49 46.8	-0.9
DUGI				Sg	Sb	22 50 02.3	-0.6
MORI	Morici	1.27	160	Sn	Sn	22 50 10.7	+0.9
ZIRJ	Zirje	1.45	164	Sn	Sg	22 50 15.5	+1.6

WEL 30 23:11:51.2, 42°S±2°×**17°4E**±°**, h8**^{km}±2^{km}**, M3.2**/21**, ML3.5**/13**, MLv3.2**/21**, Error ellipse: s-maj=0.0km s-min=0.0km az=136.3, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.09	263	P	Pg	23 11 53.9	+0.6
CMWZ				S	Sg	23 11 56.1	+1.3
BSWZ	Blackbirch Sta	0.34	274	P	Pg	23 11 58.5	+0.7
BSWZ				S	Sb	23 12 04.1	-0.9
TUWZ	Tuamarina	0.42	317	P	Pb	23 12 00.2	-0.6
TUWZ				S	Sb	23 12 06.9	-0.5
BHW	Baring Head	0.53	51	P	Pb	23 12 02.6	-0.1
TCW	Tory Channel	0.53	356	P	Pb	23 12 02.3	-0.5
PLWZ	Palliser	0.72	77	P	Pn	23 12 06.9	-0.8
MSWZ	Moikau Station	0.76	65	P	Pn	23 12 07.6	-0.7
CAW	Cannon Point	0.84	42	P	Pb	23 12 08.3	+0.3
NNZ	Nelson	0.88	306	P	Pg	23 12 08.3	+0.2
KHZ	Kahutara	0.90	221	P	Pb	23 12 09.2	+0.2
PAWZ	Paruwai Farm	0.90	67	P	Pb	23 12 09.4	+0.3
DUWZ	D'Urville Isla	0.98	342	P	Pb	23 12 10.6	+0.1
MTW	Mount Morrison	1.06	57	P	Pg	23 12 11.6	+0.1
THZ	Tophouse	1.06	268	P	Pb	23 12 11.9	0.0
TRWZ	Traveller	1.08	72	P	Pg	23 12 11.3	-0.6
OGWZ	Otaki Gorge	1.12	35	P	Pn	23 12 13.0	-0.1
HOWZ	Holdsworth Sta	1.23	47	P	Pb	23 12 14.1	-0.5
TMWZ	Te Maipa	1.33	62	P	Pn	23 12 15.1	-1.1
MRZ	Mangatainoka R	1.43	42	P	Pn	23 12 17.1	-0.4
GVZ	Greta Valley S	1.56	217	P	Pn	23 12 18.2	-1.0
QRZ	Quartz Range	1.63	303	P	Pb	23 12 21.7	+0.2
PRWZ	Pori Road	1.71	47	P	Pn	23 12 20.5	-0.9
POWZ	Post Office Ro	1.73	39	P	Pn	23 12 21.5	-0.1
BFZ	Birch Farm	1.79	55	P	Pn	23 12 22.1	-0.4
LTZ	Lake Taylor	1.85	235	P	Pn	23 12 22.6	-0.7
DSZ	Denniston Nort	1.89	269	P	Pb	23 12 25.0	-0.9
AMCZ	Amberley	1.90	220	P	Pn	23 12 22.4	-1.5
DVHZ	Dannevirke	2.00	45	P	Pn	23 12 23.8	-1.6
WAZ	Wanganui	2.04	14	P	Pg	23 12 29.6	-0.8
TSZ	Takapari Road	2.09	37	P	Pn	23 12 25.7	-0.8
OKCZ	Okains Bay	2.19	205	P	Pn	23 12 25.8	-2.2
PNHZ	Pukenui	2.31	39	P	Pn	23 12 29.1	-0.5
MQZ	McQueen's Vall	2.32	212	P	Pn	23 12 27.2	-2.5
INZ	Inchbonnie	2.36	244	P	Pg	23 12 35.9	-0.5
AKCZ	Akaroa Harbour	2.37	206	P	Pn	23 12 28.7	-1.8
KHEZ	Kahui Hut	2.45	354	P	Pb	23 12 36.0	+0.4
MTVZ	Mangateitei	2.51	21	P	Pg	23 12 39.7	+0.4
PKE	Pukeiti	2.56	354	P	Pb	23 12 36.7	-0.6
MOVZ	Moawhango	2.57	25	P	Pb	23 12 38.1	+0.6
BHHZ	Black Hill Sta	2.61	31	P	Pn	23 12 34.6	+0.9
KRHZ	Kereru	2.61	37	P	Pn	23 12 32.9	-0.7
VRZ	Vera Road	2.63	7	P	Pb	23 12 37.1	-1.5
WHVZ	Whangaehu Hut	2.63	22	P	Pn	23 12 35.4	+1.1
FWVZ	Far West T-bar	2.65	21	P	Pg	23 12 42.1	+0.1
NGZ	Ngauruhoe	2.74	21	P	Pn	23 12 36.8	+1.3
WTVZ	West Tongariro	2.79	21	P	Pb	23 12 40.0	-1.4
KWHZ	Kaweka Forest	2.81	35	P	Pg	23 12 44.1	-0.9
KRVZ	Karewarewa	2.83	21	P	Pb	23 12 43.4	+1.5
KATZ	Kakaramea	2.95	21	P	Pb	23 12 42.2	-1.9
RPZ	Rata Peaks	3.12	230	P	Pn	23 12 39.5	-1.2
HIZ	Hauiti	3.25	7	P	Pn	23 12 45.1	+2.7
ODZ	Otahua Downs	4.26	218	P	Pn	23 12 55.3	-1.0
JCZ	Jackson Bay	4.69	238	P	Pn	23 13 08.0	+5.7

NIED ***31*** *00:14:00, 38°.10N×142°.10E, h5^{km}, Mw4.7 Best double couple: $M_0$1.33000×10^{16} NP1:ϕ_s318.00000°, δ40.00000°, λ-90.00000°. NP2:ϕ_s139.00000°, δ50.00000°, λ-90.00000°.*

BJI ***31*** *00:14:09.0±0.0, 38°.02N×142°.41E, h10^{km}, mb4.8/66, mB4.9/47, Ms4.6/73, Ms7 4.3/62*

ISCJB ***31*** *00:14:12.1±0.7, 38°.08N±0°.02×142°.08E±0°.02, h8^{km}±4^{km}, mb5.0/149, MS4.2/52, Error ellipse: s-maj=3.0km s-min=2.2km az=159.8*

MOS ***31*** *00:14:13.3±1.1, 38°.18N×142°.01E, h16^{km}, mb5.3/75, Error ellipse: s-maj=6.3km s-min=3.8km az=108.0*

JMA ***31*** *00:14:13.3±0.1, 38°.09N×142°.09E, h18^{km}±1^{km}, M5.0 Broadband fault plane solution: P waves. NP1: ϕ_s310.00000°, δ58.00000°, λ-95.00000°. NP2: ϕ_s140.00000°, δ32.00000°, λ-82.00000°. Principal axes: T Plg13.0000°, Azm44.0000°; N Plg4.0000°, Azm313.0000°; P Plg76.0000°, Azm205.0000°;*

JMA Felt III J1.

GCMT ***31*** *00:14:15.0±0.3, 38°.17N±0°.03×142°.00E±0°.04, h12^{km}±1^{km}, MW4.8/73, Moment Tensor Solution. s14,c15; s73,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.64±.15; $M_{\theta\theta}$0.76±.09; $M_{\phi\phi}$0.87±.09; $M_{r\theta}$0.47±.25; $M_{\theta\phi}$-0.75±.05; $M_{\phi r}$0.18±.27; Best double couple: $M_0$1.67700×10^{16} NP1:ϕ_s303.00000°, δ50.00000°, λ-109.00000°. NP2: ϕ_s151.00000°, δ43.00000°, λ-69.00000°. Principal axes: T 1.5820, Plg4.0000°, Azm46.0000°; N 0.1890, Plg14.0000°, Azm315.0000°; P -1.7710, Plg75.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***31*** *00:14:17.0±1.0, 38°.12N×142°.00E, h30^{km}±3^{km}, mb4.9/253 Error ellipse: s-maj=9.9km s-min=7.1km az=120.0*

NEIC Recorded [3 JMA] in Iwate and Miyagi.

IDC ***31*** *00:14:16.5±3.6, 38°.08N×141°.98E, h26^{km}±23^{km}, mb4.7/30, mb1 4.8/35, mb1mx4.8/42, mbtmp4.8/35, ML3.6/4, MS3.9/28, Ms1 3.9/28, ms1mx3.8/46, Error ellipse: s-maj=12.8km s-min=10.8km az=128.0*

ISC 31 00:14:14.7±0.4**, 38°.10N**±0°.03×**142°.12E**±0°.03**, h19**^{km}±1^{km}**, h19**^{km}**:pP-P, n830,** σ**1^{s}.46**/885**, mb5.0**/163**, MS4.3**/53**, 67C-47D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.56	292	⇑P	Pg	00 14 23.9	-2.0
JIKH				S	Sg	00 14 30.8	-2.7
JIO	Ouri	0.70	300	⇑P	Pg	00 14 26.5	-2.1
JIO				S	Sg	00 14 35.9	-2.1
JKMT	Kesennumamotoy	0.87	325	⇑P	Pb	00 14 29.8	-1.5
JKMT				S	Sb	00 14 40.8	-1.8
OFUJ	Ofunato	1.04	340	⇑P	Pb	00 14 32.1	-2.1
OFUJ				S	Sb	00 14 46.4	-1.0
JMST	Minamisoumatoc	1.04	249	⇑P	Pb	00 14 31.7	-2.5
JMM	Marumori	1.07	258	⇓P	Pb	00 14 32.5	-2.2
JMM				S	Sb	00 14 46.5	-1.9
JOFO	Osakifurukawao	1.08	298	⇓P	Pb	00 14 33.8	-0.9
JMK	Ichinoseki	1.11	321	⇓P	Pb	00 14 33.7	-1.6
JMK				S	Sb	00 14 48.1	-1.2
JOU	Okura	1.18	283	⇑P	Pn	00 14 35.2	-1.0
JOU				*e*S	Sn	00 14 51.2	-0.6
JFK	Kawauchi	1.23	234	⇑P	Pn	00 14 34.4	-2.5
JFK				*e*S	Sb	00 14 50.4	-2.5
ONAJ	Iwakimizuishiy	1.45	227	⇑P	Pn	00 14 37.7	-2.3
MIYJ	Miyakonagasawa	1.49	351	⇑P	Pn	00 14 38.4	-2.2
JOM	Ohasama	1.52	335	⇑P	Pn	00 14 39.7	-1.2
JOM				*e*S	Sn	00 14 59.0	-1.1
JFT	Otama	1.53	248	⇑P	Pn	00 14 40.0	-1.0
JFT				*e*S	Sn	00 14 59.7	-0.7
JYAR	Yonezawaarcadi	1.57	264	S	Sb	00 15 01.6	-1.1
JFFD	Fukushimafurud	1.60	231	P	Pn	00 14 40.4	-1.6
JYK	Kaneyama	1.61	301	⇓P	Pn	00 14 41.1	-1.0
JYK				*e*S	Sn	00 15 02.3	0.0
JYS	Shirataka	1.62	275	P	Pn	00 14 41.3	-1.1
JYS				S	Sb	00 15 03.4	-0.8
JRG	Rokugo	1.74	319	P	Pn	00 14 43.0	-0.9
JTH	Tanohata	1.85	354	⇑P	Pn	00 14 43.5	-1.9
JYYZ	Yamagatayuza	1.95	299	P	Pn	00 14 47.4	+0.7
JYA	Atsumi	1.96	285	⇓P	Pn	00 14 46.3	-0.6
JKZ	Kuzumaki	1.98	342	⇑P	Pn	00 14 46.6	-0.7
JKEN	Kujiedanarisaw	2.13	351	S	Sn	00 15 14.8	-0.3
JANG	Nango	2.32	348	P	Pn	00 14 51.6	-0.3
JTM	Tenmabayashi	2.81	343	P	Pn	00 14 58.9	+0.3
JSGW	Sagamiharawaka	3.42	224	P	Pn	00 15 06.1	-0.9
MJAR	Matsushiro Arr	3.48	245	Pn	Pn	00 15 08.2	+0.3
	3.6nm,0.3s,baz=83,slow=16,SNR=81						
MJAR				Sn	Sn	00 15 51.5	+2.8
	6.4nm,0.3s,baz=70,slow=24,SNR=4.7						
MJAR				LR	LR	00 16 45.8	
	comp=Z,5µm,18.9s,baz=45,slow=44						
MAJO	Matsushiro	3.49	245	*e*Pn	Pn	00 15 08.7	+0.7
MAJO				*e*Sn	Sn	00 15 51.0	+2.2
MAJO	Matsushiro	3.49	245	*e*P	Pn	00 15 08.7	+0.7
MAJO				*e*		00 15 51.0	
MAT	Matsushiro	3.49	245	P	Pn	00 15 08.6	+0.6
MAT				*e*S	Sn	00 15 50.0	+1.3
MJB9	Matsu-Tunnel	3.49	245	*e*Pn	Pn	00 15 08.5	+0.5
ERM	Erimo	3.99	11	*e*Pn	Pn	00 15 15.2	+0.4
ERM				*e*Sn	Sn	00 15 59.7	-1.4
ERM	Erimo	3.99	11	*e*P	Pn	00 15 15.2	+0.4
ERM				*e*		00 15 59.7	
JHJ2	Mitsune	5.32	201	*e*Pn	Pn	00 15 32.2	-0.9
JHJ2				*e*Sn	Sn	00 16 31.4	-2.5
JHJ	Hachijo jima 2	5.32	202	Pn	Pn	00 15 32.2	-1.0
	130nm,0.3s,baz=311,slow=19,SNR=13						
JHJ				Sn	Sn	00 16 31.1	-2.8
	61nm,0.3s,baz=90,slow=20,SNR=2.7						
JHJ				LR	LR	00 17 54.0	
	comp=Z,2µm,21.4s,baz=306,slow=41						
NMR	Nemuro--Hokkai	5.93	26*c*	*i*P	Pn	00 15 39.1	-2.4
NMR				*i* S	Sn	00 16 44.1	-4.9
GRPR	Tuman	6.50	24*d*	*i*P	Pn	00 15 46.2	-3.1
GRPR				*i* S	Sn	00 16 57.0	-6.0
GRPR				pmax	pmax		
	comp=Z,222nm,0.4s						
GRPR				pmax	pmax		
	comp=N,160nm,0.5s						
GRPR				pmax	pmax		
	comp=E,68nm,0.2s						
LAGR	Lagunnoye	6.56	24	*e*P	Pn	00 15 48.7	-1.5
LAGR				*i* S	Sn	00 17 01.3	-3.1
LAGR				pmax	pmax		
	comp=E,345nm,0.6s						
LAGR				pmax	pmax		
	comp=Z,454nm,0.6s						
LAGR				pmax	pmax		
	comp=N,343nm,0.5s						
YUK	Yuzh-Kuril'sk	6.57	24	*e*P	Pn	00 15 47.8	-2.4
YUK				*i* S	Sn	00 16 59.7	-4.9
YUK				pmax	pmax		
	comp=Z,370nm,0.5s						
YUK				pmax	pmax		
	comp=E,247nm,0.4s						
YUK				pmax	pmax		
	comp=N,247nm,0.3s						
TEY	Ternei	8.07	331	⇑*e*P	Pn	00 16 13.7	+2.9
TEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
KUR	Kuril'sk	8.32	29	*e*P	Pn	00 16 11.8	-2.5
KUR				*i* S	Sn	00 17 42.4	-5.3
KUR				pmax	pmax		
	comp=Z,127nm,0.7s						
KUR				pmax	pmax		
	comp=N,27nm,0.3s						
KUR				pmax	pmax		
	comp=E,33nm,0.4s						
KUR				MLR	MLR		
	comp=Z,998nm,16.0s						
KUR				MLR	MLR		
	comp=N,639nm,13.0s						
KUR				MLR	MLR		

	comp=E,3µm,22.0s						
YSS	**Yuzh-Sakhalins**	**8.86**	**3**	*e*Pn	**Pn**	**00 16 22.4**	**+0.7**
YSS	**Yuzh-Sakhalins**	**8.86**	**3**	*e*P	**Pn**	**00 16 22.5**	**+0.8**
YSS				*e*S	**Sn**	**00 18 02.1**	**+1.1**
YSS				pmax	pmax		
	comp=Z,300nm,4.7s						
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				smax	smax		
	comp=N,90nm,1.6s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s						
VLA	**Vladivostok**	**9.26**	**306**	⇑*e*P	**Pn**	**00 16 26.6**	**-0.5**
MSHR	**Mys Shultsa**	**9.49**	**302**	*de*P	**Pn**	**00 16 32.4**	**+2.1**
USA0B	**Ussuriysk Arra**	**9.77**	**312**	*e*Pn	**Pn**	**00 16 34.3**	**+0.2**
USRK	**Ussuriysk Ar.**	**9.77**	**312**	Pn	**Pn**	**00 16 35.0**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=124,slow=13,SNR=32						
USRK				LR	LR	00 20 05.7	
	comp=Z,422nm,18.1s,baz=120,slow=36						
JNU	**Nakatsue**	**10.41**	**245**	Pn	**Pn**	**00 16 44.6**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=55,slow=6.0,SNR=11						
JNU				LR	LR	00 21 07.3	
	comp=Z,2µm,18.6s,baz=44,slow=40						
JNU	**Nakatsue**	**10.41**	**245**	*e*Pn	**Pn**	**00 16 44.0**	**+1.0**
UGL	**Uglegorsk**	**10.97**	**360**	P	**Pn**	**00 16 50.7**	**+0.1**
UGL				pmax	pmax		
	comp=Z,50nm,1.1s						
UGL				MLR	MLR		
	comp=N,800nm,18.0s						
UGL				MLR	MLR		
	comp=E,100nm,13.0s						
KSRS	**Korea Array**	**11.26**	**271**	Pn	**Pn**	**00 16 57.0**	**+2.4**
	comp=E,0.5nm,0.3s,baz=82,slow=14,SNR=4.2						
KSRS				LR	LR	00 20 57.6	
	comp=E,896nm,18.8s,baz=80,slow=36						
KSRS	**Korea Array**	**11.26**	**271**	P	**Pn**	**00 16 57.0**	**+2.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,896nm,18.8s						
KS15	**Wonju Array Si**	**11.29**	**271**	*e*Pn	**Pn**	**00 16 54.2**	**-0.8**
MDJ	**Mudanjiang**	**11.44**	**309**	*e*Pn	**Pn**	**00 16 59.2**	**+2.2**
MDJ	**Mudanjiang**	**11.44**	**309**	P	**Pn**	**00 17 01.5**	**+4.5**
MDJ				S	**Sn**	**00 19 12.0**	**+7.7**
MDJ				pmax	pmax		
	comp=Z,51nm,1.6s						
MDJ				LR	LR		
	comp=Z,1µm,13.9s						
MDJ				LR	LR		
	comp=Z,760nm,12.7s						
MDJ				LR	LR		
	comp=Z,790nm,14.5s						
TJN	**Taejon**	**11.89**	**266**	⇑*e*P	**Pn**	**00 17 04.0**	**+0.8**
TYV	**Tymovskoe**	**12.77**	**2**	*e*P	**Pn**	**00 17 19.1**	**+4.0**
TYV				*e*		00 19 45.4	
TYV				pmax	pmax		
	comp=Z,13nm,0.8s						
TYV				MLR	MLR		
	comp=Z,1µm,15.0s						
GRNR	**Gornyy**	**13.30**	**344**	*e*P	**Pn**	**00 17 20.2**	**-2.2**
KLR	**Kul'dur**	**13.41**	**329**	Pn	**Pn**	**00 17 25.2**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=136,slow=12,SNR=6.5						
KLR				LR	LR	00 22 21.5	
	comp=Z,284nm,20.1s,baz=142,slow=36						
KLR				PcP	**PcP**	**00 22 52.5**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=183,slow=1.7,SNR=3.7						
KLR	**Kul'dur**	**13.41**	**329**	⇓*e*P	**Pn**	**00 17 23.9**	**0.0**
CN2	**Changchun**	**13.82**	**300**	*e*P	**Pn**	**00 17 32.5**	**+2.9**
CN2				*e*S	**Sn**	**00 20 07.0**	**+4.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,120nm,5.0s						
CN2				LR	LR		
	comp=Z,800nm,11.0s						
CN2				LR	LR		
	comp=Z,620nm,11.0s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
SNY	**Shenyang**	**14.70**	**290**	⇑P	**P**	**00 17 48.0**	**+0.4**
SNY				S	**S**	**00 20 34.3**	**-8.1**
SNY				pmax	pmax		
	comp=Z,13nm,0.5s						
SNY				LR	LR		
	comp=N,2µm,14.1s						
SNY				LR	LR		
	comp=E,590nm,16.9s						
SNY				LR	LR		
	comp=Z,2µm,14.5s						
OKH	**Okha**	**15.46**	**2**	*de*P	**Pn**	**00 17 50.2**	**-1.4**
OKH				*e*S	**Sn**	**00 20 38.1**	**-4.2**
OKH				MLR	MLR		
	comp=Z,500nm,14.0s						
SKR	**Severo-Kuril's**	**16.04**	**34**	*e*P	**P**	**00 18 02.6**	**+0.2**
SKR				*e*S	**Sn**	**00 21 00.7**	**+4.5**
SKR				pmax	pmax		
	comp=Z,200nm,3.9s						
SKR				MLR	MLR		
	comp=Z,600nm,18.0s						
DL2	**Dalian**	**16.07**	**279**	P	**P**	**00 18 01.0**	**-1.8**
DL2				pP	**sP**	**00 18 08.8**	**-1.4**
DL2				S	**Sn**	**00 21 03.0**	**+5.9**
DL2				pmax	pmax		
	comp=Z,40nm,1.2s						
DL2				pmax	pmax		
	comp=Z,130nm,5.2s						
DL2				LR	LR		
	comp=Z,660nm,10.3s						
DL2				LR	LR		
	comp=Z,790nm,11.6s						
DL2				LR	LR		
	comp=Z,550nm,13.4s						
PEA0B	**Petropavlovsk-**	**18.48**	**31**	*e*P	**Pn**	**00 18 30.6**	**+1.0**
PETK	**Petropavlovsk-**	**18.48**	**31**	P	**P**	**00 18 26.5**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=191,slow=12,SNR=4.8						
PETK				LR	LR	00 26 59.2	
	comp=Z,350nm,18.3s,baz=226,slow=41						
PEA1	**Petropavlovsk-**	**18.49**	**31**	*e*P	**P**	**00 18 26.5**	**-3.0**
SSE	**Sheshan**	**18.58**	**254**	*e*P	**Pn**	**00 18 31.2**	**+0.3**
	comp=Z,44nm,0.7s						
ZEA	**Zeya**	**18.69**	**332**	*e*P	**P**	**00 18 29.5**	**-2.2**
ZEA				pmax	pmax		
	comp=N,17nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
PET	**Petropavlovsk**	**18.82**	**32**	*e*P	**Pn**	**00 18 34.4**	**+0.8**
	comp=Z,56nm,1.1s						
PET	**Petropavlovsk**	**18.82**	**32**	α *i*P	**Pn**	**00 18 35.3**	**+1.7**
PET				*e*S	**Sn**	**00 22 02.8**	**-0.7**
PET				pmax	pmax		
	comp=Z,39nm,0.9s						
PET				pmax	pmax		
	comp=Z,300nm,4.3s						
PET				pmax	pmax		
	comp=Z,200nm,5.0s						
PET				MLR	MLR		
	comp=Z,700nm,20.0s						
PET				MLR	MLR		
	comp=Z,600nm,16.0s						
HIA	**Hailar**	**19.58**	**312**	⇑*e*P	**P**	**00 18 41.7**	**+0.1**
HIA				pmax	pmax		
	comp=Z,15nm,0.7s						
NJ2	**Nanjing**	**19.95**	**259**	*e*P	**P**	**00 18 46.3**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=Z,1µm,16.6s						
NJ2				LR	LR		
	comp=Z,950nm,14.7s						
NJ2				LR	LR		
	comp=Z,940nm,16.1s						
TIA	**Tai'an**	**20.00**	**272**	P	**P**	**00 18 44.5**	**-1.7**
TIA				pP	**sP**	**00 18 55.5**	**+1.9**
TIA				S	**S**	**00 22 24.5**	**-5.8**
TIA				pmax	pmax		
	comp=Z,91nm,1.4s						
TIA				LR	LR		
	comp=Z,400nm,12.1s						
TIA				LR	LR		
	comp=Z,490nm,12.1s						
TIA				LR	LR		
	comp=Z,620nm,15.7s						
BJI	**Beijing**	**20.22**	**284**	P	**P**	**00 18 48.0**	**-0.5**
BJI				S	**S**	**00 22 33.3**	**-1.2**
BJI				LR	LR		
	comp=Z,310nm,12.1s						
BJI				LR	LR		
	comp=Z,150nm,11.7s						
BJT	**Baijiatuau**	**20.23**	**284**	*e*P	**P**	**00 18 49.0**	**+0.4**
	comp=Z,20nm,0.7s						
BJT	**Baijiatuau**	**20.23**	**284**	*e*P	**P**	**00 18 49.0**	**+0.4**
BJT				pmax	pmax		
	comp=Z,20nm,0.7s						
MA2	**Magadan**	**22.20**	**12**	P	**P**	**00 19 10.3**	**+0.6**
	comp=Z,39nm,0.7s,baz=188,slow=8.1,SNR=20						
MA2				LR	LR	00 27 17.9	
	comp=Z,242nm,21.4s,baz=194,slow=35						
MA2	**Magadan**	**22.20**	**12**	*e*P	**P**	**00 19 10.7**	**+1.1**
	comp=Z,46nm,0.9s						
MA2	**Magadan**	**22.20**	**12**	⇑*e*P	**P**	**00 19 09.8**	**+0.1**
MA2				pmax	pmax		
	comp=Z,45nm,0.8s						
SSLB	**Suanglung**	**23.02**	**238**	*e*P	**P**	**00 19 18.6**	**-0.1**
	comp=Z,36nm,1.1s						
YULB	**Yu-li**	**23.06**	**236**	*e*P	**P**	**00 19 19.1**	**0.0**
	comp=Z,15nm,0.8s						
TPUB	**Ta-pu**	**23.57**	**237**	*e*P	**P**	**00 19 24.4**	**+0.3**
	comp=Z,38nm,1.0s						
HHC	**Hu-ho-hao-te**	**23.69**	**286**	P	**P**	**00 19 25.3**	**-0.1**
HHC				S	**S**	**00 23 39.0**	**-0.4**
HHC				sS	sS	00 23 49.0	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				LR	LR		
	comp=Z,1µm,13.7s						
HHC				LR	LR		
	comp=Z,430nm,14.6s						
WHN	**Wuhan**	**24.08**	**260**	P	P	00 19 21.5	-7.5
GUMO	**Guam**	**24.53**	**174**	LR	LR	00 29 10.1	
	comp=Z,106nm,21.5s,baz=352,slow=36						
BTO	**Baotou**	**24.88**	**286**	*e*P	P	00 19 27.8	-8.5
BTO				S	**S**	**00 23 52.5**	**-6.0**
BTO				LR	LR		
	comp=N,1518µm,13.5s						
BTO				LR	LR		
	comp=E,485µm,12.0s						
YAK	**Yakutsk**	**25.16**	**346**	*e*P	**P**	**00 19 38.1**	**-0.4**
	comp=E,75nm,1.0s						
YAK	**Yakutsk**	**25.16**	**346**	*e*P	**P**	**00 19 38.5**	**0.0**
YAK				*e**PP	**sP**	**00 19 47.8**	**+1.4**
YAK				*e*		00 20 09.5	
YAK				*e*S	**S**	**00 23 58.1**	**-4.2**
YAK				*e**SS	**sS**	**00 24 10.1**	**-1.3**
YAK				pmax	pmax		
	comp=Z,36nm,1.0s						
YAK				pmax	pmax		
	comp=N,23nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,26nm,0.6s						
YAK				pmax	pmax		
	comp=N,37nm,0.9s						
YAK				pmax	pmax		
	comp=E,33nm,1.1s						
YAK				smax	smax		
	comp=E,71nm,1.9s						
YAK				MLR	MLR		
	comp=Z,235nm,18.0s						
YAK				MLR	MLR		
	comp=N,304nm,19.0s						
YAK				MLR	MLR		
	comp=E,199nm,16.0s						
SEY	**Seymchan**	**25.64**	**11**	P	**P**	**00 19 44.5**	**+1.7**
	comp=E,39nm,0.9s,baz=198,slow=6.3,SNR=40						
SEY	**Seymchan**	**25.64**	**11**	⇑*e*P	**P**	**00 19 44.6**	**+1.8**
BOD	**Bodaibo**	**26.94**	**326**	*e*P	**P**	**00 19 53.8**	**-0.9**
BOD				pmax	pmax		
	comp=Z,26nm,0.8s						
XAN	**Xi'an**	**27.06**	**272**	*e*P	**P**	**00 19 55.6**	**-0.4**
	comp=Z,10nm,0.7s						
XAN	**Xi'an**	**27.06**	**272**	P	**P**	**00 19 55.0**	**-1.0**
XAN				S	**S**	**00 24 43.0**	**+10**
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				pmax	pmax		
	comp=Z,92nm,3.7s						
XAN				LR	LR		
	comp=Z,700nm,14.6s						
XAN				LR	LR		
	comp=Z,150nm,15.2s						
XAN				LR	LR		
	comp=Z,520nm,13.7s						
XAN	**Xi'an**	**27.06**	**272**	*e*P	**P**	**00 19 55.6**	**-0.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ULN	**Ulaanbaatar**	**27.24**	**302**	*e*P	**P**	**00 19 59.7**	**+2.0**
	comp=Z,5.7nm,0.7s						
ULN	**Ulaanbaatar**	**27.24**	**302**	*e*P	**P**	**00 19 59.7**	**+2.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONA0	**Songino Array**	**27.68**	**302**	*e*P	**P**	**00 20 02.0**	**+0.5**
SONA0				*e*PcP	**PcP**	**00 23 18.3**	**+0.1**
SONA0				*e*ScP	**ScP**	**00 26 58.1**	**+0.2**
SONM	**Songino Array**	**27.68**	**302**	P	**P**	**00 20 02.0**	**+0.5**
	comp=Z,5.6nm,0.9s,baz=92,slow=9.1,SNR=22						
SONM				PcP	**PcP**	**00 23 18.3**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=132,slow=2.1,SNR=3.9						
SONM				ScP	**ScP**	**00 26 58.1**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=114,slow=3.5,SNR=3.7						
SONM				LR	LR	00 31 37.3	
	comp=Z,160nm,18.7s,baz=92,slow=38						
ENH	**Enshi**	**28.00**	**264**	*e*P	**P**	**00 20 03.7**	**-0.8**
	comp=Z,54nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.24**	**123**	T	T	00 49 40.7	
	baz=316,slow=75,SNR=5955						
H11N1	**WAKE ISLAND Hy**	**28.25**	**123**	T	T	00 49 41.2	
	baz=316,slow=75,SNR=6721						
H11N3	**WAKE ISLAND Hy**	**28.25**	**123**	T	T	00 49 42.6	
	baz=316,slow=75,SNR=7495						
H11S1	**WAKE ISLAND Hy**	**28.99**	**125**	T	T	00 50 36.9	
	baz=318,slow=76,SNR=2095						
H11S3	**WAKE ISLAND Hy**	**28.99**	**126**	T	T	00 50 38.3	
	baz=318,slow=76,SNR=3334						
H11S2	**WAKE ISLAND Hy**	**29.01**	**125**	T	T	00 50 37.1	
	baz=318,slow=76,SNR=2041						
ZAK	**Zakamensk**	**30.07**	**307**	*e*P	**P**	**00 20 22.4**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLY	**Talaya**	**30.07**	**309**	*e*P	**P**	**00 20 22.8**	**+0.1**
	comp=Z,7.9nm,0.9s						
TLY	**Talaya**	**30.07**	**309**	*e*P	**P**	**00 20 23.2**	**+0.5**
TLY				pmax	pmax		
	comp=Z,18nm,0.8s						
TLY				MLR	MLR		
	comp=Z,767nm,14.0s						
LZH	**Lanzhou**	**30.46**	**278**	*e*P	**P**	**00 20 27.3**	**+0.9**
LZH				pP	sP	00 20 32.0	-2.2
LZH				sP	pP	00 20 34.5	+2.4
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,91nm,4.8s						
LZH				LR	LR		
	comp=Z,540nm,14.3s						
LZH				LR	LR		
	comp=Z,610nm,15.7s						
LZH				LR	LR		
	comp=Z,800nm,15.9s						
MOY	**Mondy**	**31.70**	**309**	*e*P	**P**	**00 20 37.3**	**+0.2**
MOY				pmax	pmax		
	comp=Z,20nm,2.3s						
GYA	**Guiyang**	**31.96**	**259**	⇑*i*P	**P**	**00 20 39.0**	**-0.7**
GYA				PP	**PnPn**	**00 21 45.8**	**+1.0**
GYA				S	**S**	**00 25 49.8**	**-0.5**
GYA				SS	**SnSn**	**00 27 41.8**	**+2.4**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=Z,520nm,15.2s						
GYA				LR	LR		
	comp=Z,240nm,16.5s						
GYA				LR	LR		
	comp=Z,490nm,12.8s						
CD2	**Chengdu**	**32.25**	**269**	P	**P**	**00 20 41.5**	**-0.6**
CD2				S	**S**	**00 26 00.0**	**+5.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.9s						
CD2				LR	LR		
	comp=Z,1µm,13.1s						
CD2				LR	LR		
	comp=Z,830nm,13.9s						
CD2				LR	LR		
	comp=Z,820nm,13.1s						
GTA	**Gaotai**	**32.80**	**286**	*e*P	**P**	**00 20 46.8**	**-0.1**
GTA				pP	pP	00 20 51.5	-1.1
GTA				sP	sP	00 20 53.8	-0.9
GTA				PcP	**PcP**	**00 23 33.3**	**+1.6**
GTA				S	**S**	**00 26 08.3**	**+5.1**
GTA				PcS	**PcS**	**00 27 13.8**	**-3.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,43nm,5.1s						
GTA				LR	LR		
	comp=Z,630nm,17.2s						
GTA				LR	LR		
	comp=Z,290nm,14.1s						
GTA				LR	LR		
	comp=Z,390nm,15.1s						
BILL	**Bilibino**	**32.85**	**16**	*e*P	**P**	**00 20 47.7**	**+0.9**
	comp=Z,13nm,1.0s						
BILL	**Bilibino**	**32.85**	**16**	*ce*P	**P**	**00 20 47.6**	**+0.8**
BILL				*e*		00 20 50.9	
BILL				*e**SP	**sP**	**00 20 57.2**	**+2.4**
BILL						00 21 59.0	
BILL				SSS	SSS	00 28 22.0	
BILL				pmax	pmax		
	comp=Z,17nm,1.3s						
BILL				MLR	MLR		
	comp=Z,154nm,14.0s						
QIZ	**Qiongzhong**	**33.88**	**245**	P	**P**	**00 20 57.3**	**+0.9**
QIZ				S	**S**	**00 26 22.0**	**+2.0**
QIZ				pmax	pmax		
	comp=Z,15nm,1.0s						
QIZ				LR	LR		
	comp=Z,310nm,16.8s						
QIZ				LR	LR		
	comp=Z,400nm,15.9s						
QIZ				LR	LR		
	comp=Z,410nm,15.6s						
TIXI	**Tiksi**	**34.30**	**353**	*de*P	**P**	**00 21 02.3**	**+2.9**
TIXI				pmax	pmax		
	comp=Z,14nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,277nm,20.0s						
KMI	**Kunming**	**35.69**	**260**	P	**P**	**00 21 11.5**	**-0.7**
KMI				pP	pP	00 21 17.3	-0.6
KMI				sP	sP	00 21 20.5	+0.5
KMI				S	**S**	**00 26 45.8**	**-2.3**
KMI				SS	**SnSn**	**00 29 08.8**	**-1.1**
KMI				pmax	pmax		
	comp=Z,32nm,1.1s						
KMI				pmax	pmax		
	comp=Z,140nm,4.2s						
KMI				LR	LR		
	comp=Z,280nm,14.3s						
KMI				LR	LR		
	comp=Z,550nm,13.0s						
KMI				LR	LR		
	comp=Z,390nm,12.3s						
SLVN	**Son La**	**36.86**	**254**	*e*P	**P**	**00 21 21.5**	**-0.5**
	comp=Z,5.1nm,0.9s						
NONG	**Nongkai**	**39.39**	**251**	P	P	00 21 54.3	+11
DGZ	**Jazzator, Alta**	**40.23**	**305**	*d i*P	**P**	**00 21 50.8**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,24nm,0.8s						
WMQ	**Urumqi**	**40.87**	**296**	*e*P	**P**	**00 21 56.3**	**+0.8**
WMQ				pP	pP	00 22 00.5	-0.7
WMQ				sP	sP	00 22 03.5	+0.1
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,18nm,3.6s						
WMQ				LR	LR		
	comp=Z,330nm,17.1s						
WMQ				LR	LR		
	comp=Z,120nm,15.1s						
WMQ				LR	LR		
	comp=Z,140nm,27.9s						
CHAI	**Chaiyaphum**	**41.61**	**249**	P	**P**	**00 22 02.2**	**+0.5**
	comp=Z,18µm,0.8s						
ZAA1	**Zalesovo Array**	**41.62**	**312**	*e*P	**P**	**00 22 01.4**	**+0.1**
ZAA1				*e*PcP	**PcP**	**00 23 58.4**	**+0.4**
ZALV	**Zalesovo Beam**	**41.62**	**312**	P	**P**	**00 22 01.4**	**+0.1**
	comp=Z,11nm,0.4s,baz=90,slow=7.2,SNR=53						
ZALV				PcP	**PcP**	**00 23 58.4**	**+0.4**
	comp=Z,6.6nm,0.7s,baz=95,slow=3.5,SNR=4.8						
ZALV				LR	LR	00 39 10.1	
	comp=Z,52nm,19.3s,baz=70,slow=36						
CMMT	**Chiang Mai**	**42.10**	**255**	P	**P**	**00 22 06.2**	**+0.5**
	comp=Z,4.2nm,0.8s						
CHTO	**Chiang Mai**	**42.10**	**255**	*e*P	**P**	**00 22 06.0**	**+0.2**
	comp=Z,5.7nm,0.7s						
CHTO	**Chiang Mai**	**42.10**	**255**	*e*P	**P**	**00 22 06.0**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CM31	**Chiang Mai Arr**	**42.31**	**255**	*e*P	**P**	**00 22 07.5**	**0.0**
	comp=Z,18nm,0.3s						
CM31				*e*PcP	**PcP**	**00 24 01.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**42.31**	**255**	P	**P**	**00 22 07.5**	**0.0**
	comp=Z,1.5nm,0.3s,baz=51,slow=3.6,SNR=5.9						
CMAR				PcP	**PcP**	**00 24 01.1**	**+0.1**
	comp=Z,2.0nm,0.4s,baz=32,slow=2.7,SNR=5.2						
CMAR				LR	LR	00 42 17.5	
	comp=Z,142nm,18.9s,baz=56,slow=40						
LSA	**Lhasa**	**42.68**	**274**	P	**P**	**00 22 12.0**	**+1.1**
SHL	**Shillong**	**43.99**	**269**	*e*P	**P**	**00 22 24.0**	**+2.8**
MK31	**Makanchi Array**	**44.04**	**301**	*i* P	**P**	**00 22 20.4**	**-0.7**
MK31				pmax	pmax		
	comp=Z,36nm,0.9s						
MKAR	**Makanchi Array**	**44.04**	**301**	P	**P**	**00 22 20.9**	**-0.2**
	comp=Z,15nm,0.9s,baz=87,slow=9.5,SNR=53						
MKAR				LR	LR	00 41 07.0	
	comp=Z,84nm,19.3s,baz=94,slow=37						
MKAR	**Makanchi Array**	**44.04**	**301**	*i* P	**P**	**00 22 20.8**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,15nm,0.9s						
TTA	**Tatalina**	**44.23**	**35**	*e*P	**P**	**00 22 24.2**	**+1.7**
	comp=Z,3.7nm,0.9s						
TTA	**Tatalina**	**44.23**	**35**	*e*P	**P**	**00 22 24.2**	**+1.7**
TTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**44.25**	**301**	*e*P	**P**	**00 22 22.9**	**+0.1**
	comp=Z,18nm,0.8s						
MAKZ	**Makanchi**	**44.25**	**301**	P	**P**	**00 22 21.6**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,20nm,1.0s						
SVW2	**Sparrevohn**	**44.34**	**38**	*e*P	**P**	**00 22 24.6**	**+1.3**
	comp=Z,10nm,1.0s						
KURK	**Kurchatov**	**45.73**	**307**	*e*P	**P**	**00 22 34.3**	**-0.2**
	comp=Z,68nm,0.8s						
KURK	**Kurchatov**	**45.73**	**307**	*d i*P	**P**	**00 22 34.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,52nm,0.7s						
KDAK	**Kodiak Island**	**45.93**	**43**	*e*P	**P**	**00 22 37.2**	**+1.2**
	comp=Z,23nm,0.9s						
KDAK	**Kodiak Island**	**45.93**	**43**	*e*P	**P**	**00 22 37.2**	**+1.2**
KDAK				pmax	pmax		
	comp=Z,23nm,0.9s						
MLY	**Manley**	**46.65**	**33**	*e*P	**P**	**00 22 42.9**	**+1.3**
	comp=Z,8.0nm,0.9s						
PDGK	**Podgornoye**	**46.78**	**297**	P	**P**	**00 22 41.4**	**-1.6**
PDGK				pmax	pmax		
	comp=Z,12nm,0.9s						
BNSI	**Bone**	**46.96**	**211**	P	**P**	**00 22 43.4**	**-1.1**
TOLK	**Toolik Lake Re**	**47.27**	**28**	P	**P**	**00 22 48.0**	**+1.6**
	baz=266						
JIRN	**Jiri**	**47.49**	**275**	*e*Pn	**P**	**00 22 49.3**	**+0.3**
	comp=Z,83nm,0.9s						
PMG	**Port Moresby**	**47.49**	**173**	⇑*e*P	**P**	**00 22 50.0**	**+1.4**
PMG				pmax	pmax		
	comp=Z,92nm,1.0s						
GUN	**Gumba**	**47.62**	**275**	*e*Pn	**P**	**00 22 50.8**	**+0.8**
KAPI	**Kappang**	**47.66**	**211**	*e*P	**P**	**00 22 50.6**	**+0.7**
	comp=Z,60nm,1.0s						
KAPI	**Kappang**	**47.66**	**211**	*e*P	**P**	**00 22 50.7**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,60nm,1.0s						
WRH	**Wood River Hil**	**47.79**	**33**	*e*P	**P**	**00 22 51.8**	**+1.4**
	comp=Z,5.8nm,0.8s						
WRH				*e*PcP	**PcP**	**00 24 19.8**	**+0.7**
BKSI	**Bulukumba**	**47.80**	**210**	P	**P**	**00 22 49.1**	**-1.9**
TCOL	**CIGO, UAF Yank**	**47.88**	**33**	P	**P**	**00 22 52.2**	**+1.1**

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      baz=272
COLA  College           47.88  33deP      P       00 22 52.2 +1.1
COLA                                pmax  pmax
      comp=Z,5.0nm,0.8s
POKR  Poker Plat Res    48.05  32  P      P       00 22 54.2 +1.7
      baz=272,SNR=6.0
KKN   Kakani            48.14 275 eP      P       00 22 54.0 +0.1
      comp=Z,59nm,0.8s
PKI   Pulchoki          48.14 275 eP      P       00 22 53.5 -0.6
      comp=Z,19nm,0.8s
PKIN  Phulchoki         48.15 275 eP      P       00 22 53.5 -0.5
      comp=Z,17nm,0.6s
HDA   Harding Lake      48.28  33  P      P       00 22 55.2 +0.9
      baz=273
ILAR  Eielson Array     48.30  33  P      P       00 22 55.2 +0.9
      comp=Z,8.8nm,0.8s,baz=267,slow=6.3,SNR=41
DMN   Daman             48.36 275 eP      P       00 22 55.6 -0.1
      comp=Z,19nm,0.7s
GKN   Gorkha            48.55 276 eP      P       00 22 56.9 -0.1
      comp=Z,122nm,1.0s
DANN  Dangsing          49.08 277 eP      P       00 23 01.6 +0.4
      comp=Z,152nm,0.7s
KOLN  Koldanda          49.47 276 eP      P       00 23 04.1  0.0
      comp=Z,102nm,1.1s
TKM2  Tokmak 2          49.62 298 i P     P       00 23 05.3 +0.2
TKM2                                pmax  pmax
      comp=Z,11nm,0.8s
HNR   Honiara           50.13 157  LR     LR      00 40 32.3
      comp=Z,214nm,20.4s,baz=103,slow=31
OTUK  Ortayu            50.26 305  P      P       00 23 08.2 -1.5
OTUK                                pmax  pmax
      comp=Z,8.0nm,0.8s
BRVK  Borovoye          50.33 312 eP      P       00 23 10.1  0.0
      comp=Z,8.3nm,0.7s
BRVK  Borovoye          50.33 312d iP     P       00 23 09.8 -0.3
BRVK                                pmax  pmax
      comp=Z,10.0nm,1.0s
AAK   Ala-Archa         50.48 298 eP      P       00 23 11.5  0.0
      comp=Z,6.0nm,0.6s
AAK   Ala-Archa         50.48 298  P      P       00 23 11.8 +0.3
AAK   Ala-Archa         50.48 298⇓eP      P       00 23 11.6  0.0
AAK                                 pmax  pmax
      comp=Z,6.0nm,0.7s
KSH   Kashi             50.49 294 eP      P       00 23 15.8 +4.2
KSH                                 PcS   PcS     00 28 29.5 +2.6
KSH                                 S     S       00 30 28.5 +3.8
KSH                                 LR    LR
      comp=Z,170nm,15.7s
KSH                                 LR    LR
      comp=Z,430nm,15.6s
KSH                                 LR    LR
      comp=Z,340nm,13.9s
COEN  Coen              51.79 179 eP      P       00 23 22.4 +1.1
      comp=Z,32nm,0.8s
EPYK  Eagle Plains      52.32  30  P      P       00 23 26.9 +2.1
      baz=280
PSI   Prapat            52.82 239  LR     LR      00 46 34.1
      comp=Z,191nm,19.8s,baz=27,slow=37
PSI   Prapat            52.82 239 eP      P       00 23 29.3 +0.1
      comp=Z,21nm,0.8s
PSI   Prapat            52.82 239 eP      P       00 23 29.3 +0.1
PSI                                 pmax  pmax
      comp=Z,21nm,0.8s
KK31  Karatay Array     53.08 300 i P     P       00 23 30.3 -0.5
KK31                                pmax  pmax
      comp=Z,10.0nm,1.1s
INK   Inuvik            53.18  28  P      P       00 23 31.7 +0.6
      comp=Z,3.1nm,0.6s,baz=310,slow=3.3,SNR=7.3
INK                                 PcP   PcP     00 24 40.1 +1.3
      comp=Z,5.0nm,0.7s,baz=300,slow=2.4,SNR=3.9
SVE   Sverdlovsk        54.73 318ceP      P       00 23 43.1 +0.6
SVE                                 pmax  pmax
      comp=Z,45nm,0.9s
NIL   Nilore            54.82 288 eP      P       00 23 44.0 +0.3
      comp=Z,20nm,0.6s
NIL   Nilore            54.82 288 eP      P       00 23 44.0 +0.3
NIL                                 pmax  pmax
      comp=Z,21nm,0.6s
GSI   Gunungsitoli      54.83 239 eP      P       00 23 44.2 +0.4
      comp=Z,53nm,0.8s
KLSI                    54.91 228  P      P       00 23 41.6 -2.8
LHSI  Lahat             54.94 230  P      P       00 23 45.3 +0.8
MDSI  Maura Dua         55.07 228  P      P       00 23 45.5  0.0
SISI  Saibi             55.78 236  P      P       00 23 47.8 -2.8
ARU   Arti              55.94 318 eP      P       00 23 51.0 -0.3
      comp=Z,38nm,1.0s
ARU   Arti              55.94 318d iP     P       00 23 51.3  0.0
ARU                                               00 24 49.6
ARU                                               00 25 54.5
ARU                                 S     S       00 31 39.8 +1.8
ARU                                               00 33 38.5
ARU                                 SS    SS      00 35 16.7 -6.7
ARU                                 pmax  pmax
      comp=Z,36nm,0.9s
DLBC  Dease Lake        57.44  39  P      P       00 24 04.6 +2.6
      comp=Z,9.8nm,0.8s,baz=312,slow=6.3,SNR=17
KBL   Kabul             57.56 291 eP      P       00 24 02.7 -0.7
      comp=Z,24nm,0.9s
KBL   Kabul             57.56 291 eP      P       00 24 02.7 -0.7
KBL                                 pmax  pmax
      comp=Z,24nm,0.9s
AB31  Akbulak array     57.69 310 i P     P       00 24 03.3 -0.5
AB31                                pmax  pmax
      comp=Z,4.0nm,0.6s
ABKAR Akbulak array     57.69 310 eP      P       00 24 03.2 -0.6
      comp=Z,11nm,0.9s
WRAB  Tennant Creek     58.18 189 eP      P       00 24 07.8 +0.3
      comp=Z,35nm,0.8s
WRAB  Tennant Creek     58.18 189 eP      P       00 24 07.8 +0.3
WRAB                                pmax  pmax
      comp=Z,35nm,0.8s
WB2   Warramunga Arr    58.19 189 eP      P       00 24 07.4 -0.2
      comp=Z,39nm,0.8s
WRA   Warramunga Arr    58.19 189  P      P       00 24 07.2 -0.4
      comp=Z,28nm,0.8s,baz=359,slow=7.6,SNR=61
AKTO  Aktyubinsk        58.38 312  P      P       00 24 07.6 -1.1
AKTO                                pmax  pmax
      comp=Z,12nm,1.0s
KBS   Kingsbay          59.70 350 eP      P       00 24 17.9 +0.5
      comp=Z,14nm,0.8s
KBS   Kingsbay          59.70 350c iP     P       00 24 18.6 +1.2
KBS                                 pmax  pmax
      comp=Z,66nm,1.0s
PRGR  Permogore         60.18 327 eP      P       00 24 19.7 -1.2
PRGR                              e               00 26 31.1
PRGR                                pmax  pmax
      comp=Z,33nm,1.1s
BBB   Bella Bella       60.91  45  LR     LR      00 48 40.7
      comp=Z,69nm,20.6s,baz=247,slow=34
LVZ   Lovozero          61.37 336 eP      P       00 24 29.7 +0.7
      comp=Z,11nm,0.7s
LVZ   Lovozero          61.37 336ceP      P       00 24 28.9 -0.1
LVZ                                 pmax  pmax
      comp=Z,24nm,1.3s
ASAR  Alice Springs     61.92 189  P      P       00 24 33.5 +0.4
      comp=Z,13nm,0.8s,baz=11,slow=6.3,SNR=94
ASAR                                PKP2bc        00 53 51.2
      comp=Z,1.0nm,0.7s,baz=195,slow=2.4,SNR=5.9
APA   Apatity           61.95 336⇑iP      P       00 24 31.5 -1.3
APA                               i               00 25 14.5
APA                                 pmax  pmax
      comp=Z,4.0nm,0.8s
YKA   Yellowknife Ar    62.61  31  P      P       00 24 38.1 +0.9
      comp=Z,3.6nm,0.8s,baz=303,slow=7.1,SNR=8.4
HAMF  Hammerfest        63.00 341 eP      P       00 24 39.8 +0.1
KLMR  Klimovskoe        63.16 328 eP      P       00 24 40.4 -0.6
KLMR                              e               00 26 58.1
KLMR                                pmax  pmax
      comp=Z,53nm,1.5s
ARCES ARCESS Array B    63.20 339  P      P       00 24 41.6 +0.4
      comp=Z,6.2nm,0.6s,baz=53,slow=7.6,SNR=50
ARCES                               LR    LR      00 57 47.1
      comp=Z,123nm,18.4s,baz=34,slow=41
ARE0  ARCESS Array S    63.20 339 eP      P       00 24 41.6 +0.5
GEYT  Alibeck           63.81 299  P      P       00 24 45.6 -0.2
      comp=Z,29nm,0.4s,baz=48,slow=4.3,SNR=1.6
GEYT                                LR    LR      00 55 55.4
      comp=Z,77nm,19.1s,baz=85,slow=39
KTK1  Kautokeino        64.16 339 eP      P       00 24 48.0 +0.5
DAG   Danmarks Havn     64.76 355 i P     P       00 24 51.4 +0.1
DAG                                 pmax  pmax
      comp=Z,11nm,0.8s
DAG   Danmarks Havn     64.76 355 i P     P       00 24 51.4 +0.1
      comp=Z,14nm,0.8s
TRO   Tromso            64.89 341 eP      P       00 24 52.7 +0.5
A04D  Lummi Island      65.59  46  P      P       00 24 58.2 +1.2
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      baz=300
D03D  Eldon             65.97  48  P      P       00 25 01.2 +1.6
      baz=301,SNR=8.4
B05A  Bryant            66.17  47  P      P       00 25 02.6 +1.7
      baz=301,SNR=5.2
MOS   Moscow            66.73 323 eP      P       00 25 02.5 -1.8
MOS                               eS      S       00 33 52.5 -2.5
MOS                                 pmax  pmax
      comp=Z,100nm,1.5s
MOS                                 pmax  pmax
      comp=Z,49nm,1.3s
MOS                                 MLR   MLR
      comp=Z,200nm,17.0s
E04D  Cinebar           66.78  48  P      P       00 25 06.5 +1.7
      baz=301
STEI  Steigen           67.05 341 eP      P       00 25 06.3 +0.2
G03D  McMinnville, O    67.06  50  P      P       00 25 07.9 +1.3
      baz=302
VRH   Novokhopyorsk     67.17 318 eP      P       00 25 06.5 -0.7
VRH                                 pmax  pmax
      comp=Z,30nm,0.6s
I02D  Swisshome         67.28  51  P      P       00 25 09.3 +1.3
      baz=302
OBN   Obninsk           67.58 323⇑eP      P       00 25 10.0 +0.3
OBN                                 *PP   sP      00 25 18.0 +0.3
OBN                               eSS     SS      00 38 20.2 -4.9
OBN                                 pmax  pmax
      comp=Z,60nm,1.3s
OBN                                 MLR   MLR
      comp=Z,130nm,14.0s
J01E  Myrtle Point      67.72  52  P      P       00 25 12.8 +2.0
      baz=302
F05D  White Salmon      67.78  49  P      P       00 25 12.9 +1.7
      baz=302
I03D  Drain, OR         67.80  51  P      P       00 25 12.4 +1.1
      baz=302,SNR=5.3
LPSR  Galich'ya Gora    67.85 320 eP      P       00 25 11.0 -0.4
LPSR                                pmax  pmax
      comp=Z,30nm,0.8s
FIA1  FINESS Array S    68.13 332 eP      P       00 25 13.0 -0.1
FINES FINESS Array B    68.14 332  P      P       00 25 13.3 +0.2
      comp=Z,23nm,0.6s,baz=40,slow=9.3,SNR=87
FINES                               LR    LR      00 58 13.2
      comp=Z,162nm,18.1s,baz=34,slow=39
MAK   Makhachkala       68.25 308 eP      P       00 25 11.0 -3.1
MAK                               eS      S       00 34 09.1 -4.5
MAK                                 pmax  pmax
      comp=Z,117nm,1.1s
MAK                                 MLR   MLR
      comp=Z,174nm,13.0s
I04A  Tendick Farm,     68.33  51  P      P       00 25 16.2 +1.5
      baz=302
VSR   Storozhevoye      68.50 319d iP     P       00 25 15.2 -0.4
VSR                                 pmax  pmax
      comp=Z,33nm,0.9s
MOR8  Moi Rana          68.56 340 eP      P       00 25 14.8 -0.9
VORD  Divnogorie        68.58 319 eP      P       00 25 15.5 -0.5
VORD                                pmax  pmax
      comp=Z,20nm,0.5s
J04D  Umpqua Nationa    68.81  51  P      P       00 25 19.8 +1.9
      baz=303
AKT   Akhty             68.90 307 eP      P       00 25 18.1 -0.3
AKT                               e               00 25 40.8
AKT                                 pmax  pmax
      comp=Z,19nm,0.6s
NEW   Newport           68.97  45  P      P       00 25 19.7 +1.0
      comp=Z,6.2nm,0.8s,baz=300,slow=7.5,SNR=7.7
NEW                                 LR    LR      00 58 37.8
      comp=Z,32nm,18.2s,baz=302,slow=38
NEW   Newport           68.97  45  P      P       00 25 19.8 +1.1
      baz=304,SNR=7.2
GROC  Groznyy           69.17 309 eP      P       00 25 17.4 -2.5
GROC                                pmax  pmax
      comp=Z,14nm,0.7s
L04D  Klamath Falls     69.24  52  P      P       00 25 22.3 +1.8
      baz=303
YBH   Yreka Blue Hor    69.25  53  LR     LR      00 49 59.2
      comp=Z,64nm,19.7s,baz=291,slow=31
J05D  Fort Rock, OR     69.32  51  P      P       00 25 22.7 +1.6
      baz=303
K04D  Chiloquin, OR     69.36  52  P      P       00 25 22.8 +1.6
      baz=303
SEKA  Sheki             69.38 307  P      P       00 25 21.1 -0.2
ZKTA  Zakatala          69.51 307  P      P       00 25 22.1  0.0
STKA  Stephens Creek    69.62 180  P      P       00 25 23.2 +0.7
      comp=Z,7.4nm,0.7s,baz=342,slow=8.1,SNR=19
STKA  Stephens Creek    69.62 180 eP      P       00 25 23.4 +0.8
      comp=Z,1.6nm,0.8s
STKA  Stephens Creek    69.62 180 eP      P       00 25 23.4 +0.8
STKA                                pmax  pmax
      comp=Z,2.0nm,0.8s
SUMG  Summit            69.62   0⇓iP      P       00 25 23.7 +1.0
SUMG                                pmax  pmax
      comp=Z,37nm,0.7s
SUMG  Summit            69.62   0⇓iP      P       00 25 23.7 +1.0
      comp=Z,37nm,0.7s
MNGR  Mingechevir, A    69.69 306  P      P       00 25 23.5 +0.4
LKRN  Lenkeran, Azer    69.71 304  P      P       00 25 23.8 +0.5
M04C  Macdoel           69.77  52  P      P       00 25 25.5 +1.7
      baz=303
FORT  Forrest           69.77 193 eP      P       00 25 24.5 +1.0
      comp=Z,40nm,0.7s
VSU   Vasula            69.82 330 eP      P       00 25 23.8 +0.2
VSU                                 IAmb  IAmb    00 25 25.0
      comp=Z,76nm,0.8s
VSU   Vasula            69.82 330deP      P       00 25 23.7 +0.1
VSU                                 pmax  pmax
      comp=Z,168nm,1.3s
DDFL  Dedoflistskaro    69.93 307 i P     P       00 25 23.5 -1.2
O02D  Mt. Diablo Mer    70.05  54  P      P       00 25 27.2 +1.8
      baz=304
GANJ  Ganja             70.24 306  P      P       00 25 26.9 +0.3
NCK   Nalchik           70.35 310⇓iP      P       00 25 27.2  0.0
NCK                                 pmax  pmax
      comp=Z,15nm,1.3s
NSS   Namsos            70.48 339 eP      P       00 25 27.5 -0.1
ZEI   Tsey              70.56 309 eP      P       00 25 27.3 -1.4
ZEI                                 pmax  pmax
      comp=Z,9.0nm,0.4s
O03E  Paynes Creek      70.61  54  P      P       00 25 30.2 +1.3
      baz=304
KIV   Kislovodsk        70.63 311 eP      P       00 25 28.7 -0.3
      comp=Z,53nm,1.0s
KIV   Kislovodsk        70.63 311⇑iP      P       00 25 30.0 +1.0
KIV   Kislovodsk        70.63 311 i P     P       00 25 29.9 +1.0
      SNR=13
KIV   Kislovodsk        70.63 311 eP      P       00 25 29.5 +0.5
KIV                                 pmax  pmax
      comp=Z,182nm,1.1s
TBLG  Delisi            70.64 308 i P     P       00 25 30.2 +1.2
TBLG                                IAML_P
      comp=Z,16nm,0.2s
KBZ   Khabaz            70.64 311  P      P       00 25 29.6 +0.7
      comp=Z,18nm,0.8s,baz=72,slow=4.1,SNR=29
BBOO  Buckleboo         70.77 185 eP      P       00 25 30.4 +0.8
      comp=Z,13nm,0.8s
NEY   Neytrino          71.01 310⇑eP      P       00 25 32.9 +1.5
NEY                                 pmax  pmax
      comp=Z,3.0nm,0.9s
SHME  Shamm             71.45 289  P      P       00 25 34.3 +0.1
GNI   Garni             71.52 307d iP     P       00 25 35.0 +0.5
GNI                                 pmax  pmax
      comp=Z,147nm,1.3s
MSO   Missoula          71.56  45  P      P       00 25 35.8 +1.1
      baz=306
AKH   Akhalkalaki       71.59 308⇓iP      P       00 25 36.0 +1.1
NAX   Nakhchivan        71.59 306  P      P       00 25 35.2 +0.3
MDH   Madha             71.75 288  P      P       00 25 35.7 -0.2
IZAR  Zarasai           71.81 328 eP      P       00 25 36.2 +0.5
MSFE  Esma-Masafi       71.82 288  P      P       00 25 36.1 -0.3
ISAL  Salakas           71.98 328 eP      P       00 25 37.6 +0.8
ISAL                                IAmb  IAmb    00 25 38.4
      comp=Z,13nm,0.7s
EPOS  Posof             72.01 309 i P     P       00 25 39.4 +2.0
UOSS  Minazif           72.02 288 eP      P       00 25 37.7 +0.1
      comp=Z,25nm,0.9s
UOSS  Minazif           72.02 288  P      P       00 25 37.4 -0.2
IIGN  Ignalina          72.09 327 eP      P       00 25 37.9 +0.4
IIGN                                IAmb  IAmb    00 25 39.0
      comp=Z,15nm,0.6s
HATD  Hatta, Dubai      72.14 288 i P     P       00 25 38.8 +0.5
      SNR=6.5
FFC   Flin Flon         72.51  33 eP      P       00 25 40.7 +0.7
      comp=Z,13nm,0.8s
FFC   Flin Flon         72.51  33 eP      P       00 25 40.7 +0.7
FFC                                 pmax  pmax
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      comp=Z,13nm,0.8s
SOC   Sochi             72.61 312 eP      P       00 25 44.2 +3.5
SOC                               e               00 28 24.3
SOC                               ePPP    PPP     00 30 09.7
SOC                               eS      SKiKP   00 35 10.8 -3.3
SOC                               eSS     SS      00 39 44.9 +1.9
SOC                                 pmax  pmax
      comp=Z,42nm,0.8s
SOC                                 MLR   MLR
      comp=Z,135nm,16.0s
BCA   Borcka            72.72 309⇑iP      P       00 25 42.0 +0.5
DAGI  Agillar           72.75 309 i P     P       00 25 43.6 +1.7
DAGI                                IAML_P
      comp=Z,125nm,0.5s
ASUD  Al Ashush, Dub    72.85 288  P      P       00 25 42.6 +0.1
DBAD  Bademkaya         72.92 309 i P     P       00 25 44.0 +1.2
DBAD                                IAML_P
      comp=Z,305nm,0.6s
EGMT  Eagleton          73.10  42  P      P       00 25 44.9 +1.1
      baz=309,SNR=12
ANN   Anapa             73.20 314 eP      P       00 25 42.6 -1.6
ANN                               eS      S       00 35 08.3 -2.9
ANN                                 pmax  pmax
      comp=Z,106nm,1.5s
HLID  Hailey            73.24  48 eP      P       00 25 46.3 +1.6
      comp=Z,5.6nm,1.0s
HLID  Hailey            73.24  48  P      P       00 25 46.3 +1.6
      baz=307,SNR=8.3
MOL   Molde             73.25 340 eP      P       00 25 44.9 +0.7
DOMB  Dombas            73.26 339 eP      P       00 25 44.8 +0.5
CAN   Canberra          73.33 174  P      P       00 25 44.7 -0.2
NB2   NORSAR Subarra    73.42 337  P      P       00 25 45.4 +0.1
      comp=Z,24nm,0.8s,baz=38,slow=5.9
NB2   NORSAR Subarra    73.42 337  P      P       00 25 45.4 +0.1
      baz=38,slow=5.9
NOA   NORSAR Array B    73.42 337  P      P       00 25 45.4 +0.1
      comp=Z,15nm,0.7s,baz=38,slow=5.9,SNR=78
NOA                                 LR    LR      01 02 27.2
      comp=Z,110nm,20.4s,baz=50,slow=39
BOZ   Bozeman (W)       73.59  45  P      P       00 25 48.0 +1.2
      baz=308,SNR=11
AKDA  Akdag             73.66 308 i P     P       00 25 49.4 +2.1
NAO01 NORSAR Array S    73.67 337 eP      P       00 25 46.9 +0.1
AKN   Aaknes            73.72 340 eP      P       00 25 47.6 +0.5
AKASG Malin Array Be    73.80 322  P      P       00 25 47.5 -0.1
      comp=Z,17nm,0.6s,baz=46,slow=6.1,SNR=74
AKASG Malin Array Be    73.80 322ceP      P       00 25 47.5 -0.1
AKASG                               pmax  pmax
      comp=Z,18nm,0.6s
AKBB  Malin Array Si    73.80 322 eP      P       00 25 47.4 -0.3
      comp=Z,25nm,0.7s
AKBB  Malin Array Si    73.80 322 eP      P       00 25 47.4 -0.3
AKBB                                pmax  pmax
      comp=Z,25nm,0.7s
NVAR  Mina Array Bea    73.90  54  P      P       00 25 50.6 +1.8
      comp=Z,3.8nm,0.8s,baz=285,slow=6.0,SNR=35
NVAR                                LR    LR      00 51 45.3
      comp=Z,54nm,21.2s,baz=268,slow=30
SUW   Suwalki           74.29 328 eP      P       00 25 50.7 +0.2
SUW   Suwalki           74.29 328 eP      P       00 25 50.7 +0.2
MUSM  Mu-Merkez         74.38 307 i P     P       00 25 52.7 +1.2
MUSM                                IAML_P
      comp=Z,89nm,0.4s
ELK   Elko              74.44  50  LR     LR      00 55 48.0
      comp=Z,58nm,18.9s,baz=298,slow=33
OSL   Oslo              74.44 337 eP      P       00 25 51.8 +0.6
SKAR  Skarslia          74.57 338 eP      P       00 25 52.9 +0.9
SMMC  Simmler           74.63  57  P      P       00 25 54.5 +1.6
      baz=306
HYA   Hoyanger          74.77 340 eP      P       00 25 53.7 +0.6
VES   Vestal, Richgr    74.92  56  P      P       00 25 56.3 +1.8
      baz=306
H17A  Grant Village     74.92  45  P      P       00 25 57.8 +3.1
      baz=309
KELT  Kelkit            74.93 309 i P     P       00 25 56.2 +1.5
KELT                                IAML_P
      comp=Z,437nm,0.6s
SIM   Simferopol'       74.96 316d iP     P       00 25 55.4 +0.9
SIM                                 pmax  pmax
      comp=Z,30nm,0.7s
PKM   Mcpherson Peak    75.00  57  P      P       00 25 56.9 +1.7
      baz=306
KONO  Kongsberg         75.02 337deP      P       00 25 54.6  0.0
KONO                                pmax  pmax
      comp=Z,10.0nm,1.1s
CWC   Cottonwood Cre    75.22  55  P      P       00 25 57.6 +1.2
      baz=307
TPAW  Teton Pass        75.27  46 eP      P       00 25 57.8 +1.0
      comp=Z,11nm,1.0s
SBC   Santa Barbara     75.33  58  P      P       00 25 58.2 +1.4
      baz=306
GRAC  Grapevine Rang    75.35  54  P      P       00 25 58.2 +1.2
      baz=307
TNCL  Tunceli-Merkez    75.38 308 i P     P       00 25 59.1 +1.9
TNCL                                IAML_P
      comp=Z,65nm,0.6s
ISA   Isabella, Lake    75.42  56  P      P       00 25 58.5 +1.0
      baz=307
SEVA  Sevastopol        75.47 315⇓iP      P       00 26 02.5 +5.1
ARVC  Arvin             75.51  57  P      P       00 25 59.0 +1.1
      baz=307
DGMT  Dagmar            75.66  39  P      P       00 25 59.1 +0.6
      baz=312
BER   Bergen            75.66 339 eP      P       00 25 59.3 +1.1
R11A  Troy Canyon, C    75.67  52  P      P       00 26 00.7 +1.7
      baz=308,SNR=11
ODD1  Odda              75.68 339 eP      P       00 25 59.1 +0.6
LAO   LASA Array        75.80  41  P      P       00 26 00.9 +1.5
      baz=311
MPMC  Manual Prospec    75.83  55  P      P       00 26 01.4 +1.4
      baz=307,SNR=8.5
OSI   Osito Audit: C    75.88  57  P      P       00 26 00.7 +0.6
      baz=307
KEMA  Kemaliye          75.93 309 i P     P       00 26 02.8 +2.4
KEMA                                IAML_P
      comp=Z,482nm,0.5s
FURC  Furnace Creek,    75.99  55  P      P       00 26 02.1 +1.6
      baz=307,SNR=8.4
LRMC  Laurel Mtn Rad    76.05  56  P      P       00 26 02.1 +0.9
      baz=307
TPNV  Topopah Spring    76.09  54  P      P       00 26 03.0 +1.6
      baz=307,SNR=13
ERBA  Erbaa             76.11 311 i P     P       00 26 03.2 +1.9
ERBA                                IAML_P
      comp=Z,7.5nm,0.3s
BLS5  Blasjo            76.14 338 eP      P       00 26 02.5 +1.4
EDW2  Edwards Air Fo    76.20  57  P      P       00 26 03.5 +1.6
      baz=307,SNR=5.3
DUG   Dugway, Tooele    76.23  50 eP      P       00 26 03.5 +1.4
      comp=Z,8.9nm,0.9s
DUG   Dugway, Tooele    76.23  50 eP      P       00 26 03.5 +1.4
DUG                                 pmax  pmax
      comp=Z,9.0nm,0.9s
DUG   Dugway, Tooele    76.23  50  P      P       00 26 04.0 +1.8
      baz=308,SNR=13
HAVZ  Havza             76.48 312 i P     P       00 26 05.3 +2.0
HAVZ                                IAML_P
      comp=Z,58nm,0.1s
HEKM  Malatya_Hekimh    76.50 309 i P     P       00 26 06.0 +2.3
HEKM                                IAML_P
      comp=Z,781nm,0.3s
MILM  Milestii Mici     76.50 320⇓iP      P       00 26 03.3  0.0
BW06  Boulder Array     76.52  46  P      P       00 26 05.0 +1.2
      baz=310
PDAR  Pinedale Array    76.52  46  P      P       00 26 05.0 +1.2
      comp=Z,4.7nm,0.6s,baz=272,slow=2.1,SNR=42
CUKAN kangal_SIVAS      76.53 309 i P     P       00 26 05.4 +1.6
GSC   Goldstone, Bar    76.73  56  P      P       00 26 06.4 +1.4
      baz=308
BFSC  Mount Baldy Ra    76.81  57  P      P       00 26 06.5 +1.1
      baz=307
LVV   L'vov             76.85 324 eP      P       00 26 05.8 +0.6
BEL   Belsk             76.86 327 eP      P       00 26 06.2 +1.0
BEL   Belsk             76.86 327 eP      P       00 26 06.2 +1.0
BZK   Bozkurt           76.92 313⇑iP      P       00 26 07.0 +1.3
KAGI  orum-Kargı        77.17 312 i P     P       00 26 09.2 +2.0
KAGI                                IAML_P
      comp=Z,64nm,0.1s
CUSAR Sarkisla-SIVAS    77.21 310 i P     P       00 26 03.3 -4.4
TUQ   Turquoise Moun    77.22  55  P      P       00 26 09.2 +1.5
      baz=308,SNR=6.6
GKP   Gorka Klasztor    77.28 330 eP      P       00 26 08.0 +0.5
GKP   Gorka Klasztor    77.28 330 eP      P       00 26 08.0 +0.5
HEC   Hector,Ludlow     77.32  56  P      P       00 26 09.1 +0.9
      baz=308
SURC  SANLIURFA_SURC77.33 307 i P         P       00 26 10.0 +1.8
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SURC				IAML_P			
	comp=Z,140nm,0.3s						
COAL	Corum-Alaca	77.43	311	*i* P	P	00 26 10.2	+1.4
COAL				IAML_P			
	comp=Z,206nm,0.8s						
MURC	Murrieta	77.50	57	P	P	00 26 10.2	+1.0
	baz=308						
KWP	Kalwaria Pacla	77.59	325	*e*P	P	00 26 10.3	+1.0
KWP	Kalwaria Pacla	77.59	325	*e*P	P	00 26 10.4	+1.0
GZT	Gaziantep	77.69	308	*i* P	P	00 26 12.8	+2.4
GZT				IAML_P			
	comp=Z,620nm,0.3s						
GMRC	Granite Mounta	77.79	55	P	P	00 26 12.2	+1.3
	baz=308,SNR=6.6						
BUR08	Bucovina Ar. S	77.81	322	*e*P	P	00 26 11.0	+0.2
	comp=Z,15nm,0.8s						
BURAR	Bucovina Array	77.82	322	⇓*i*P	P	00 26 11.7	+0.8
BIZ	Bicaz	77.85	321	⇑*i*P	P	00 26 12.2	+1.3
TESR	Tescani	77.88	320	⇑*i*P	P	00 26 11.9	+0.8
SIRC	Yozgat	77.92	311	*i* P	P	00 26 12.0	+0.5
SIRC				IAML_P			
	comp=Z,353nm,0.6s						
PFO	Pinyon Flats O	77.98	57	P	P	00 26 12.4	+0.4
	comp=Z,3.2nm,0.8s,baz=344,slow=5.9,SNR=3.6						
PFO	Pinyon Flats O	77.98	57	*e*P	P	00 26 12.4	+0.4
	comp=Z,4.0nm,0.9s						
PFO	Pinyon Flats O	77.98	57	P	P	00 26 13.1	+1.1
	baz=308						
CFR	Carcaliu	78.02	319	⇓*i*P	P	00 26 12.0	+0.2
BELC	Belle Mtn. Jos	78.05	56	P	P	00 26 13.1	+0.7
	baz=308						
HCB	Kahramanmara	78.10	308	*i* P	P	00 26 12.4	-0.1
HCB				IAML_P			
	comp=Z,350nm,0.3s						
PETR	Petresti	78.12	320	⇑*i*P	P	00 26 13.5	+1.1
ODBI	Odobesti	78.18	320	⇓*i*P	P	00 26 14.7	+2.0
SAIM	ADANA	78.21	309	*i* P	P	00 26 14.7	+1.4
SAIM				IAML_P			
	comp=Z,30nm,0.3s						
VRI	Vrincioaia	78.28	320	⇑*i*P	P	00 26 14.3	+1.0
KOLS	Kolonicke sedl	78.29	324	*e*P	P	00 26 14.1	+0.8
KOLS				pmax	pmax		
	comp=Z,11nm,1.1s						
KOLS	Kolonicke sedl	78.29	324	*e*P	P	00 26 14.1	+0.8
K22A	Casper	78.30	45	P	P	00 26 14.6	+0.9
	baz=312						
ANDN	Andirin	78.30	309	*i* P	P	00 26 15.3	+1.6
ANDN				IAML_P			
	comp=Z,563nm,0.8s						
ULM	Lac du Bonnet	78.31	34	P	P	00 26 13.7	+0.3
	comp=Z,4.2nm,0.7s,baz=291,slow=7.4,SNR=6.3						
MDND	Maddock	78.32	37	P	P	00 26 14.2	+0.7
	baz=315						
PLOR	Plostina	78.33	320	⇑*i*P	P	00 26 14.1	+0.5
KAMA	Osmaniye	78.35	308	*i* P	P	00 26 15.2	+1.2
KAMA				IAML_P			
	comp=Z,204nm,0.3s						
MONP2	Monument Peak	78.45	57	P	P	00 26 15.4	+0.6
	baz=308						
HARR	Harsova	78.46	318	⇓*i*P	P	00 26 14.7	+0.4
OJC	Ojcow	78.47	326	*e*P	P	00 26 15.1	+0.8
OJC	Ojcow	78.47	326	*e*P	P	00 26 15.1	+0.8
GRER		78.48	319	⇑*i*P	P	00 26 15.4	+1.0
UZH	Uzhgorod	78.50	324	*e*P	P	00 26 14.5	+0.1
UZH				*e*		00 26 17.3	
UZH				*e*		00 26 21.5	
BISRR	Bisoca	78.51	320	⇓*i*P	P	00 26 15.9	+1.3
IRM	Iron Mountain	78.51	56	P	P	00 26 15.9	+1.0
	baz=308						
BRTR	Keskin Array B	78.56	312	P	P	00 26 15.5	+0.3
	comp=Z,3.1nm,0.5s,baz=109,slow=3.1,SNR=38						
OZUR		78.60	320	⇓*i*P	P	00 26 16.7	+1.6
BMR	Baia Mare	78.61	323	⇑*i*P	P	00 26 16.6	+1.5
ARCR	ARCALIA	78.61	322	⇑*i*P	P	00 26 17.0	+1.9
BC3	Big Chuckawall	78.62	56	P	P	00 26 16.3	+0.7
	baz=308						
RSSD	Black Hills	78.66	42	*e*P	P	00 26 16.6	+0.9
	comp=Z,5.2nm,0.6s						
RSSD	Black Hills	78.66	42	*e*P	P	00 26 16.6	+0.9
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RSSD	Black Hills	78.66	42	P	P	00 26 16.2	+0.5
	baz=313						
TRPA	Tarpa	78.74	324	⇓*i*P	P	00 26 17.2	+1.4
TRPA	Tarpa	78.74	324	⇓*e*P	P	00 26 16.1	+0.3
PGOR	Pogoanele	78.80	319	⇓*i*P	P	00 26 16.9	+0.7
SWSC	Sam W. Stewart	78.83	57	P	P	00 26 17.8	+1.2
	baz=308						
NIE	Niedzica	78.83	326	*e*P	P	00 26 17.5	+1.2
NIE	Niedzica	78.83	326	*e*P	P	00 26 17.5	+1.2
DOPR	Dopca	78.88	321	⇓*i*P	P	00 26 18.2	+1.5
ICOR	Ion Corvin	78.92	318	⇑*i*P	P	00 26 18.3	+1.5
MLR	Muntele Rosu	78.94	320	⇑*i*P	P	00 26 17.8	+0.7
ANTO	Ankara	78.97	312	*e*P	P	00 26 17.6	+0.3
	comp=Z,18nm,0.8s						
ANTO	Ankara	78.97	312	⇓*i*P	P	00 26 18.2	+0.9
ANTO	Ankara	78.97	312	*e*P	P	00 26 17.6	+0.3
ANTO				pmax	pmax		
	comp=Z,19nm,0.8s						
O20A	White River Ci	78.97	47	P	P	00 26 18.4	+0.9
	baz=311						
PDMCI	Parker Dam,Lak	79.07	55	P	P	00 26 18.8	+1.0
	baz=309						
Y12C	Blythe	79.17	56	P	P	00 26 19.7	+1.3
	baz=309						
CJR	Cluj-Napoca	79.24	322	⇓*i*P	P	00 26 20.2	+1.5
LANS	Liptovska Anna	79.40	326	*e*P	P	00 26 21.2	+1.8
LANS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LANS	Liptovska Anna	79.40	326	*e*P	P	00 26 21.2	+1.8
GLA	Glamis	79.40	56	P	P	00 26 20.8	+1.0
	baz=309						
VOIR		79.42	320	⇑*i*P	P	00 26 20.4	+0.7
OKC	Ostrava-Krasne	79.47	327	*e*P	P	00 26 20.8	+1.1
OKC				MLR	MLR		
	comp=Z,200nm,16.4s						
OKC				MLR	MLR		
	comp=Z,2µm,14.2s						
OKC	Ostrava-Krasne	79.47	327	*e*P	P	00 26 20.8	+1.1
OKC				AMS	AMS	01 05 40.0	
	comp=Z,200nm,16.4s						
KSP	Ksiaz	79.49	328	*e*P	P	00 26 20.8	+0.9
KSP	Ksiaz	79.49	328	*e*P	P	00 26 20.8	+0.9
DRGR		79.62	323	⇑*i*P	P	00 26 21.3	+0.6
DRGR		79.62	323	P	P	00 26 21.3	+0.6
ARR	Arges	79.68	321	⇑*i*P	P	00 26 22.7	+1.6
AGMN	Agassiz Nation	79.74	35	P	P	00 26 21.7	+0.4
	baz=317						
OSTC	Ostas	79.74	328	*e*P	P	00 26 22.4	+1.1
OSTC				AMS	AMS	01 07 20.0	
	comp=Z,200nm,18.2s						
MORC	Moravsky Berou	79.77	327	⇑*i*P	P	00 26 22.7	+1.2
MORC	Moravsky Berou	79.77	327	*e*P	P	00 26 22.3	+0.8
CHVC	Chvalec	79.78	328	*e*P	P	00 26 22.6	+1.1
CHVC				AMS	AMS	01 05 10.0	
	comp=Z,200nm,15.9s						
N23A	Red Feather La	79.79	46	P	P	00 26 23.3	+1.2
	baz=312						
DPC	Dobruska-Polom	79.85	328	*e*P	P	00 26 23.1	+1.2
DPC				MLR	MLR		
	comp=Z,200nm,13.1s						
DPC	Dobruska-Polom	79.85	328	*e*P	P	00 26 23.1	+1.2
DPC				AMS	AMS	01 07 50.0	
	comp=Z,200nm,13.1s						
UPC	Upice	79.86	328	*e*P	P	00 26 22.9	+1.0
UPC				MLR	MLR		
	comp=Z,200nm,12.9s						
UPC	Upice	79.86	328	*e*P	P	00 26 22.9	+1.0
UPC				AMS	AMS	01 08 10.0	
	comp=Z,200nm,12.9s						
LOT	Lotru	80.06	321	⇑*i*P	P	00 26 24.1	+0.9
WUAZ	Wupatki	80.06	53	P	P	00 26 25.1	+1.6
	baz=310,SNR=6.8						
HUMR	Humele	80.10	320	⇑*i*P	P	00 26 23.4	+0.2
PSZ	Piszkesteto	80.12	325	*e*P	P	00 26 23.8	+0.4
	comp=Z,25nm,1.0s						
PSZ	Piszkesteto	80.12	325	⇑*i*P	P	00 26 24.7	+1.3
PSZ	Piszkesteto	80.12	325	*e*P	P	00 26 23.8	+0.4
PSZ				pmax	pmax		
	comp=Z,25nm,1.0s						
PSZ	Piszkesteto	80.12	325	⇓*e*P	P	00 26 24.0	+0.6
VYHS	Vyhne	80.17	326	*e*P	P	00 26 24.7	+1.1
VYHS				pmax	pmax		
	comp=Z,15nm,1.1s						
VYHS	Vyhne	80.17	326	*e*P	P	00 26 24.7	+1.1
JAVC	Velka Javorina	80.41	326	*e*P	P	00 26 26.7	+1.8
BRG	Berggiesshubel	80.42	330	*i* P	P	00 26 25.2	+0.3
	comp=Z,15nm,1.1s						
BRG	Berggiesshubel	80.42	330	*i* P	P	00 26 25.2	+0.3
BRG				pmax	pmax		
	comp=Z,15nm,1.1s						
PVCC	Panska Ves	80.44	329	*e*P	P	00 26 26.3	+1.3
PVCC				MLR	MLR		
	comp=Z,200nm,17.7s						
PVCC	Panska Ves	80.44	329	*e*P	P	00 26 26.3	+1.3
PVCC				AMS	AMS	01 06 00.0	
	comp=Z,200nm,17.7s						
CLL	Collm	80.45	330	⇓*i*P	P	00 26 25.4	+0.4
CLL				*i*		00 26 27.7	
CLL				*i*		00 26 29.3	
CLL				pmax	pmax		
	comp=Z,25nm,1.0s						
CLL	Collm	80.45	330	⇓*i*P	P	00 26 25.4	+0.4
	comp=Z,25nm,1.0s						
CLL				*i*		00 26 27.7	
CLL				*i*		00 26 29.3	
CLL				LmV		01 06 00.0	
	comp=Z,100nm,18.2s						
VRAC	Vranov	80.53	327	⇑*i*P	P	00 26 26.8	+1.3
VRAC	Vranov	80.53	327	*e*P	P	00 26 26.6	+1.1
GZR	Gura Zlata	80.59	321	⇓*i*P	P	00 26 26.7	+0.7
MVCO	Mesa Verde	80.74	50	P	P	00 26 28.0	+0.9
	baz=311,SNR=5.4						
ELND	Elena	80.75	318	⇑*i*P	P	00 26 27.2	+0.4
PHSR	Pinarhisar	80.77	316	⇑*i*P	P	00 26 28.0	+1.1
RAYN	Ar Rayn	80.77	293	*e*P	P	00 26 26.8	-0.5
	comp=Z,16nm,1.0s						
RAYN	Ar Rayn	80.77	293	*i* P	P	00 26 27.3	0.0
	SNR=13						
RAYN	Ar Rayn	80.77	293	*e*P	P	00 26 26.8	-0.5
RAYN				pmax	pmax		
	comp=Z,16nm,1.0s						
SMOL	Smolenice	80.77	326	*e*P	P	00 26 28.3	+1.5
SMOL				pmax	pmax		
	comp=Z,17nm,1.0s						
SMOL	Smolenice	80.77	326	*e*P	P	00 26 28.3	+1.5
KRUC	Moravsky	80.80	327	*e*P	P	00 26 27.8	+0.8
GOPC	GO Pecny, Ondr	80.82	329	*e*P	P	00 26 28.0	+0.9
GOPC				*e*		00 26 29.9	
GOPC				MLR	MLR		
	comp=Z,100nm,15.9s						
GOPC	GO Pecny, Ondr	80.82	329	*e*P	P	00 26 28.0	+0.9
GOPC				*e*pP	pP	00 26 29.9	-3.2
GOPC				AMS	AMS	01 07 40.0	
	comp=Z,100nm,15.9s						
PRU	Pruhonice	80.87	329	*e*P	P	00 26 28.2	+0.9
PRU				*e*		00 26 30.6	
PRU				MLR	MLR		
	comp=Z,100nm,17.2s						
PRU	Pruhonice	80.87	329	*e*P	P	00 26 28.2	+0.9
PRU				*e*pP	pP	00 26 30.6	-2.7
PRU				AMS	AMS	01 06 00.0	
	comp=Z,100nm,17.2s						
SRO	Srobarova	80.91	325	*e*P	P	00 26 29.2	+1.7
SRO				pmax	pmax		
	comp=Z,33nm,1.2s						
SRO	Srobarova	80.91	325	*e*P	P	00 26 29.2	+1.7
MODS	Modra-Piesok	80.94	326	*e*P	P	00 26 28.4	+0.6
MODS				pmax	pmax		
	comp=Z,27nm,1.4s						
MODS	Modra-Piesok	80.94	326	*e*P	P	00 26 28.4	+0.6
BZS	Buzias	80.99	322	⇑*i*P	P	00 26 28.6	+0.6
TREC	Trest	81.01	328	AMS	AMS	01 08 30.0	
	comp=Z,200nm,17.5s						
SUSD	Miller	81.06	39	P	P	00 26 29.0	+0.6
	baz=316						
PLVB	Pleven	81.08	319	⇑*i*P	P	00 26 28.5	-0.1
ZST	Bratislava	81.16	326	*e*P	P	00 26 28.9	+0.1
ZST				pmax	pmax		
	comp=Z,13nm,1.2s						
ZST	Bratislava	81.16	326	*e*P	P	00 26 28.9	+0.1
S22A	4UR Ranch, Cre	81.38	48	P	P	00 26 31.8	+1.1
	baz=312						
214A	Organ Pipe Nat	81.41	56	P	P	00 26 31.7	+1.1
	baz=310						
NKC	Novy Kostel	81.52	330	*e*P	P	00 26 32.2	+1.4
NKC				*e*		00 26 33.8	
NKC				MLR	MLR		
	comp=Z,200nm,10.3s						
NKC	Novy Kostel	81.52	330	*e*P	P	00 26 32.2	+1.4
NKC				*e*pP	pP	00 26 33.8	-3.0
NKC				AMS	AMS	01 07 50.0	
	comp=Z,200nm,10.3s						
MDVR	Moldovita	81.55	322	⇑*i*P	P	00 26 31.6	+0.5
SOP	Sopron	81.78	326	*e*P	P	00 26 32.1	-0.1
CONA	Conrad Observa	81.90	327	*e*PcP	P	00 26 34.2	+1.3
	comp=Z,22nm,1.0s,SNR=13						
OGNE	Ogallala	81.92	44	P	P	00 26 34.1	+1.0
	baz=314						
KHC	Kasperske Hory	81.93	329	*d* *i*P	P	00 26 33.4	+0.4
KHC				pmax	pmax		
	comp=Z,32nm,0.9s						
KHC	Kasperske Hory	81.93	329	*e*P	P	00 26 33.8	+0.8
KHC				*e*pP	pP	00 26 36.4	-2.7
KHC				AMS	AMS	01 08 40.0	
	comp=Z,100nm,14.1s						
EYMN	Ely	81.94	33	P	P	00 26 33.2	+0.1
	baz=320,SNR=5.8						
MORH	Mrgy, Hungar	81.95	324	*e*P	P	00 26 33.1	0.0
LEF	Lefka	82.02	309	⇑*i*P	P	00 26 30.3	-3.3
GERES	GERESS Array B	82.10	328	P	P	00 26 33.8	-0.2
	comp=Z,5.6nm,0.8s,baz=37,slow=5.5,SNR=33						
GERES				LR	LR	01 05 23.1	
	comp=Z,125nm,20.8s,baz=26,slow=37						
SDCO	Great Sand Dun	82.16	48	P	P	00 26 35.2	+0.4
	baz=313						
RZN	Rozhen	82.23	318	*e*P	P	00 26 35.7	+0.8
VTS	Vitosha	82.34	319	⇑*i*P	P	00 26 36.8	+1.4
VTS	Vitosha	82.34	319	*e*P	P	00 26 36.5	+1.1
TUC	Tucson	82.50	55	*e*P	P	00 26 37.7	+1.4
	comp=Z,2.6nm,0.8s						
TUC	Tucson	82.50	55	*e*P	P	00 26 37.7	+1.4
TUC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TUC	Tucson	82.50	55	P	P	00 26 37.8	+1.4
	baz=311						
ARSA	Arzberg	82.57	327	*e*PcP	P	00 26 37.5	+1.2
	comp=Z,9.2nm,1.1s						
MOA	Molln	82.64	328	*e*PcP	P	00 26 37.7	+1.0
	comp=Z,15nm,1.3s						
EZN	Ezine	82.67	316	⇓*i*P	P	00 26 38.0	+1.0
ECSD	EROS Data Cent	82.73	39	P	P	00 26 37.4	+0.1
	baz=317,SNR=7.5						
MMB	Musomiste	82.83	318	*e*P	P	00 26 38.6	+0.8
KSCO	Kaye Shedlock’	82.93	45	P	P	00 26 39.5	+0.9
	baz=314						
E38A	The Farm, Brul	82.94	34	P	P	00 26 38.3	+0.1
	baz=320						
C40A	Isle Royale Na	82.96	32	P	P	00 26 38.2	-0.1
	baz=322						
KKB	Krupnik	82.96	319	*e*P	P	00 26 30.3	-8.2
T25A	Trinidad	83.20	48	P	P	00 26 41.6	+1.5
	baz=313,SNR=8.0						
PERS	Pernice	83.22	326	*i* P	P	00 26 40.2	+0.5
SOKA	Soboth	83.22	326	*e*PcP	P	00 26 40.5	+0.7
	comp=Z,38nm,1.1s,SNR=12						
SPMN	Marine on St.	83.44	36	P	P	00 26 42.6	+1.8
	baz=320						
ANMO	Albuquerque	83.47	50	P	P	00 26 43.5	+2.0
	comp=Z,5.3nm,0.9s,baz=303,slow=8.2,SNR=11						
ANMO	Albuquerque	83.47	50	*e*P	P	00 26 42.9	+1.4
	comp=Z,6.9nm,1.0s						
ANMO	Albuquerque	83.47	50	*d* *i*P	P	00 26 43.2	+1.7
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANMO	Albuquerque	83.47	50	P	P	00 26 43.3	+1.8
	baz=312						
STIP	Stip	83.55	319	*i* P	P	00 26 41.2	-0.3
OBKA	Obir	83.56	327	*e*P	P	00 26 41.3	-0.3
	comp=Z,8.9nm,0.9s						
MEM	Membach	83.61	334	⇑P	P	00 26 42.2	+0.5
MEM				⇑pP	PcP	00 26 46.0	+0.2
	comp=Z,11nm,1.0s						
VAY	Valandovo	83.62	319	*i* P	P	00 26 42.6	+0.8
BGNE	Belgrade	83.65	41	P	P	00 26 42.5	+0.4
	baz=317						
PDKS	Podkum	83.72	326	*i* P	P	00 26 42.4	0.0
SKO	Skopje	83.73	320	*i* P	P	00 26 43.5	+1.1
MYKA	Terra Mystica	83.86	327	*e*P	P	00 26 42.8	-0.3
	comp=Z,12nm,0.8s						
D41A	Chassel	83.88	32	P	P	00 26 43.3	+0.3
	baz=322						
BCLA	Clavier	84.02	334	⇑P	P	00 26 46.4	+2.7
	comp=Z,12nm,1.2s						
G39A	Holcombe	84.13	35	P	P	00 26 44.7	+0.3
	baz=321						
SCHQ	Schefferville	84.16	16	LR	LR	01 05 58.5	
	comp=Z,73nm,21.3s,baz=351,slow=37						
WATA	Walderalm	84.17	329	*e*PcP	P	00 26 45.2	+0.4
	comp=Z,2.3nm,0.6s						
WTTA	Wattenberg	84.20	329	*e*PcP	P	00 26 45.6	+0.6
	comp=Z,2.7nm,0.6s						
ABTA	Abfaltersbach	84.25	328	*e*PcP	P	00 26 45.0	-0.1
	comp=Z,3.6nm,0.8s						
121A	Cookes Peak, D	84.27	53	P	P	00 26 47.2	+1.7
	baz=312,SNR=6.7						
SNF	Seneffe	84.29	334	⇑P	P	00 26 48.3	+3.2
WLF	Walferdange	84.35	333	⇑P	P	00 26 47.4	+1.9
MOTA	Moosalm	84.35	329	*e*PcP	P	00 26 46.3	+0.6
	comp=Z,16nm,1.0s						
RETA	Reutte	84.38	329	*e*PcP	P	00 26 46.4	+0.7
	comp=Z,13nm,0.8s,SNR=23						
SQTA	Sankt Quirin	84.41	329	*e*PcP	P	00 26 46.3	+0.3
	comp=Z,20nm,1.4s						
PDG	Podgorica	84.49	321	⇓*i*P	P	00 26 46.9	+0.7
DOU	Dourbes	84.53	334	⇑P	P	00 26 46.9	+0.6
G40A	Rib Lake	84.58	34	P	P	00 26 46.8	+0.1
	baz=321,SNR=8.1						
BFO	Black Forest	84.65	331	*e*P	P	00 26 47.5	+0.5
	comp=Z,35nm,1.3s						
BFO	Black Forest	84.65	331	*e*P	P	00 26 47.5	+0.5
BFO				pmax	pmax		
	comp=Z,35nm,1.3s						
CBKS	Cedar Bluff	84.67	44	P	P	00 26 47.6	+0.2
	baz=316						
FETA	Feichten	84.77	329	*e*PcP	P	00 26 48.1	+0.3
	comp=Z,18nm,1.2s						
DAVA	Damuels	84.89	330	*e*PcP	P	00 26 49.2	+0.8
	comp=Z,15nm,0.8s,SNR=8.1						
CDF	Champ du Feu	84.98	332	*e*P	P	00 26 48.7	-0.1
CDF				pmax	pmax		
	comp=Z,11nm,0.9s						
E43A	Lone Tree Farm	85.08	32	P	P	00 26 49.4	+0.2
	baz=323						
F42A	Maple Grove Fa	85.09	33	P	P	00 26 50.1	+0.8
	baz=323						
FUORN	Ofenpass-Fuorn	85.28	329	*e*P	P	00 26 50.8	+0.3
	comp=Z,22nm,0.7s						
E44A	Grand Marais A	85.32	31	P	P	00 26 50.9	+0.6
	baz=324						
I41A	Arkdale	85.67	35	P	P	00 26 52.6	+0.5
	baz=322						
MATQ	Matagami	85.73	25	P	P	00 26 52.4	+0.1
	baz=330						
SCIA	State Center	85.76	38	P	P	00 26 53.3	+0.6
	baz=320						
D46A	Sault St. Mari	85.85	30	P	P	00 26 52.4	-0.6
	baz=325,SNR=8.1						
D47A	Chapleau	86.08	29	P	P	00 26 54.2	+0.1
	baz=326,SNR=6.7						
KSU1	Kansas State U	86.14	42	P	P	00 26 54.7	+0.1
	baz=318						
E46A	Sault Ste Mari	86.17	30	P	P	00 26 54.5	-0.1
	baz=325						
I42A	Draeger Farm,	86.23	34	P	P	00 26 55.6	+0.7
	baz=322						
F45A	CMU Biological	86.24	31	P	P	00 26 55.1	+0.1
	baz=324						
H43A	Windswept, Lux	86.27	33	P	P	00 26 56.1	+0.9
	baz=323						
MSTX	Muleshoe	86.36	49	P	P	00 26 56.9	+1.0
	baz=314						
AMTX	Amarillo	86.36	48	P	P	00 26 56.9	+1.0
	baz=315						
JFWS	Jewell Farm	86.39	36	P	P	00 26 56.0	+0.3
	baz=321						
E47A	Iron Bridge	86.50	30	P	P	00 26 56.4	+0.2
	baz=326,SNR=6.0						
D49A	Beulah Townshi	86.55	28	P	P	00 26 56.3	-0.2
	baz=327						
LSQQ	Lebel-sur-Quev	86.56	25	P	P	00 26 56.7	+0.3
	baz=330						
L40A	Anamosa	86.60	37	P	P	00 26 57.0	+0.2
	baz=321						
CHGQ	Chibougamau	86.63	23	P	P	00 26 56.6	-0.2
	baz=332						
SENIN	Lac Senin/Sane	86.67	331	*e*P	P	00 26 57.5	+0.2
	comp=Z,11nm,1.3s						
G45A	Suttons Bay	86.71	32	P	P	00 26 57.8	+0.6
	baz=324						
G46A	Petoskey	86.81	31	P	P	00 26 58.1	+0.3
	baz=325						
H45A	Beulah	86.88	32	P	P	00 26 58.8	+0.7
	baz=324						
E48A	Lockeyer	86.91	29	P	P	00 26 58.3	+0.1
	baz=327						
I45A	Fountain	87.28	33	P	P	00 27 01.1	+1.0
	baz=324						
F48A	Evansville	87.28	30	P	P	00 27 00.4	+0.3
	baz=326						
GLMI	Grayling	87.31	31	P	P	00 27 01.1	+0.9
	baz=325						
N40A	Mertquake, Sal	87.33	38	P	P	00 27 01.1	+0.8
	baz=321						
L42A	Oliver, Polo	87.37	36	P	P	00 27 00.7	+0.2
	baz=322						
M41A	Milan	87.45	37	P	P	00 27 01.3	+0.4
	baz=321						
SSF	Saint Saulge	87.49	333	*e*P	P	00 27 01.0	0.0
SSF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
E50A	Wahnapitae	87.50	28	P	P	00 27 01.3	+0.2
	baz=328						
F49A	Sandfield	87.56	29	P	P	00 27 00.6	-0.8
	baz=327						
LPL	La Plagne	87.59	330	*e*P	P	00 27 02.4	+0.6
LPL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
I46A	Reed City	87.69	32	P	P	00 27 02.6	+0.6
	baz=324						
N41A	Harden Midland	87.82	37	P	P	00 27 03.4	+0.6
	baz=321						
E51A	G1948 Merrick	87.86	27	P	P	00 27 02.8	-0.1
	baz=329						
D52A	ZEK Kipawa Sen	87.87	26	P	P	00 27 02.9	0.0
	baz=329						
I47A	Gladwin	88.01	32	P	P	00 27 03.9	+0.3
	baz=325						
D53A	Lac Vacive, Po	88.03	26	P	P	00 27 03.5	-0.1
	baz=330						
WMOK	Wichita Mounta	88.13	46	*e*P	P	00 27 05.3	+1.0
	comp=Z,4.3nm,0.9s						
WMOK	Wichita Mounta	88.13	46	*e*P	P	00 27 05.4	+1.0
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WMOK	Wichita Mounta	88.13	46	P	P	00 27 04.9	+0.5
	baz=317,SNR=7.5						
I48A	Sherman Twp	88.21	31	P	P	00 27 05.2	+0.7
	baz=326						
TOBO	Tobermory, Bru	88.21	29	P	P	00 27 04.8	+0.3
	baz=327						
F51A	Arnstein	88.22	28	P	P	00 27 04.7	+0.2
	baz=328						
D54A	Lac Fusel, La	88.32	25	P	P	00 27 05.0	0.0
	baz=331						
E52A	Mattawa	88.37	27	P	P	00 27 05.5	+0.3
	baz=329						
J47A	Sunmer	88.52	32	P	P	00 27 07.0	+1.0
	baz=325						
F52A	Sundridge	88.55	28	P	P	00 27 06.3	+0.2
	baz=329						
K46A	Dorr	88.56	33	P	P	00 27 06.8	+0.6
	baz=324						
KLBO	Killbear Provi	88.59	28	P	P	00 27 06.8	+0.5
	baz=328						
M44A	Midewin, Midew	88.60	35	P	P	00 27 07.1	+0.7
	baz=323						
E53A	Dumoine, Ponti	88.64	26	P	P	00 27 06.8	+0.3
	baz=330						
HDIL	Hopedale	88.68	37	P	P	00 27 07.3	+0.5
	baz=322						
E54A	Lac Daplat, Po	88.76	26	P	P	00 27 06.9	-0.2
	baz=330						
BUKO	Buck Lake	88.83	28	P	P	00 27 07.7	+0.3
	baz=329						
BMRO	Meriville Lake	88.86	29	P	P	00 27 08.2	+0.6
	baz=327						
ALGO	Algonquin Park	88.87	27	P	P	00 27 07.7	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=330						
J48A	Bridge Port	88.91	32	P	P	00 27 09.3	+1.4
	baz=326						
K47A	Vermontville	88.91	33	P	P	00 27 08.4	+0.6
	baz=325						
TUL1	Leonard	88.94	43	P	P	00 27 08.8	+0.7
	baz=318						
TXAR	Lajitas Array	89.03	53	P	P	00 27 10.0	+1.2
	comp=Z,4.4nm,0.6s,baz=295,slow=3.1,SNR=48						
TXAR				LR	LR	01 01 52.7	
	comp=Z,43nm,20.5s,baz=0.0,slow=32						
J49A	Marlette	89.12	31	P	P	00 27 09.7	+0.9
	baz=326						
ABTX	Abilene, Hawle	89.16	48	P	P	00 27 09.7	+0.5
	baz=316						
BASO	Ashfield	89.17	30	P	P	00 27 10.4	+1.3
	baz=327						
K48A	Perry	89.17	32	P	P	00 27 10.0	+0.9
	baz=325						
P43A	Skaggs, Pawnee	89.29	37	P	P	00 27 10.2	+0.5
	baz=322						
CLWO	Collingwood	89.33	29	P	P	00 27 09.8	0.0
	baz=328						
G54A	Lake Saint Pet	89.34	27	P	P	00 27 10.2	+0.3
	baz=330						
G53A	Haliburton	89.38	28	P	P	00 27 10.3	+0.3
	baz=329						
O44A	Mansfield	89.38	36	P	P	00 27 10.6	+0.5
	baz=323						
L47A	Sherwood	89.39	33	P	P	00 27 10.2	+0.1
	baz=325						
PEMO	Pembroke	89.40	26	P	P	00 27 10.1	0.0
	baz=330						
I51A	Listowel	89.60	30	P	P	00 27 12.4	+1.3
	baz=328						
CCM	Cathedral Cave	89.68	39	*e*P	P	00 27 12.3	+0.7
	comp=Z,12nm,0.9s						
CCM	Cathedral Cave	89.68	39	*e*P	P	00 27 12.3	+0.7
CCM				pmax	pmax		
	comp=Z,12nm,0.9s						
CCM	Cathedral Cave	89.68	39	P	P	00 27 12.2	+0.7
	baz=321						
M47A	Cromwell	89.71	34	P	P	00 27 11.9	+0.3
	baz=324						
BANO	Bancroft	89.72	27	P	P	00 27 12.1	+0.5
	baz=330						
L48A	N Adams	89.75	33	P	P	00 27 12.7	+0.9
	baz=325,SNR=6.2						
AAM	Ann Arbor	89.78	32	P	P	00 27 12.8	+0.9
	baz=326						
K50A	Casco	89.82	31	P	P	00 27 13.0	+0.9
	baz=326						
SFIN	Lafayette	89.84	35	P	P	00 27 12.7	+0.5
	baz=324						
CAF	Calviac	89.84	333	*e*P	P	00 27 12.7	+0.5
CAF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
H53A	Bobcaygeon	89.87	28	P	P	00 27 12.8	+0.5
	baz=329						
L49A	Milan	89.89	32	P	P	00 27 13.3	+0.9
	baz=326						
G55A	Calabogie	89.95	26	P	P	00 27 13.0	+0.4
	baz=330						
PLVO	Plevna	90.01	27	P	P	00 27 13.2	+0.2
	baz=330						
N47A	Urbana	90.06	34	P	P	00 27 13.8	+0.6
	baz=324,SNR=6.0						
I53A	Kortright Cn E	90.13	29	P	P	00 27 14.0	+0.5
	baz=328						
ACTO	Acton	90.13	29	P	P	00 27 13.9	+0.4
	baz=328						
U40A	Yellville	90.16	41	P	P	00 27 14.3	+0.4
	baz=320,SNR=14						
ORIO	Orleans, Innes	90.19	25	P	P	00 27 14.3	+0.5
	baz=331						
PKRO	Pickering	90.21	28	P	P	00 27 14.4	+0.5
	baz=329						
MSEY	Mahe Island	90.21	264	P	P	00 27 12.9	-1.5
DELO	Deloro Mine	90.27	27	P	P	00 27 14.6	+0.5
	baz=330						
J52A	Paris	90.28	30	P	P	00 27 14.9	+0.6
	baz=328						
K51A	Iona Station	90.31	31	P	P	00 27 15.0	+0.6
	baz=327						
M49A	Liberty Center	90.33	33	P	P	00 27 15.0	+0.5
	baz=326						
L50A	Kingsville	90.35	32	P	P	00 27 15.6	+1.0
	baz=326						
N48A	Decatur	90.38	34	P	P	00 27 15.4	+0.7
	baz=325						
H55A	Tweed	90.39	27	P	P	00 27 15.0	+0.3
	baz=330						
P46A	Rosedale	90.40	36	P	P	00 27 15.8	+0.9
	baz=323						
DRCO	St. Marys Ceme	90.42	28	P	P	00 27 14.5	-0.4
	baz=329						
WLVO	Wesleyville	90.49	28	P	P	00 27 15.5	+0.3
	baz=329						
I55A	Frankford	90.50	27	P	P	00 27 15.3	0.0
	baz=330						
W39A	Magazine	90.55	43	P	P	00 27 16.2	+0.6
	baz=319						
K52A	Tillsonburg	90.58	30	P	P	00 27 16.6	+1.0
	baz=328						
JCT	Junction City	90.60	50	*e*P	P	00 27 16.7	+0.7
	comp=Z,6.5nm,0.6s						
JCT	Junction City	90.60	50	*e*P	P	00 27 16.7	+0.7
JCT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
JCT	Junction City	90.60	50	P	P	00 27 16.8	+0.7
	baz=316						
TYNO	Tyneside	90.64	29	P	P	00 27 15.9	-0.1
	baz=328						
PLIO	Pelee Island,	90.67	32	P	P	00 27 16.7	+0.7
	baz=326						
G57A	Newington	90.67	25	P	P	00 27 16.5	+0.5
	baz=332						
H56A	Elgin	90.69	26	P	P	00 27 16.4	+0.4
	baz=331						
N49A	Columbus Grove	90.69	33	P	P	00 27 17.0	+0.8
	baz=325						
M50A	Fremont	90.78	32	P	P	00 27 16.0	-0.6
	baz=326						
O48A	Farmland	90.81	34	P	P	00 27 17.3	+0.5
	baz=325						
WHTX	Lake Whitney,	90.89	47	P	P	00 27 17.5	+0.2
	baz=317,SNR=5.9						
G58A	Ormstown	90.95	25	P	P	00 27 17.5	+0.2
	baz=332						
S44A	Carbondale	90.95	38	P	P	00 27 18.4	+1.0
	baz=322						
J54A	Appleton	90.96	28	P	P	00 27 18.0	+0.6
	baz=329						
PECO	Prince Edward	91.00	27	P	P	00 27 17.9	+0.4
	baz=330						
MEDO	Medina	91.12	28	P	P	00 27 18.8	+0.6
	baz=329						
MIAR	Mount Ida	91.16	43	P	P	00 27 19.5	+1.0
	baz=320,SNR=6.5						
M51A	Elyria	91.20	32	P	P	00 27 19.4	+0.9
	baz=327						
O49A	Covington	91.23	34	P	P	00 27 19.1	+0.4
	baz=325						
LONY	Lake Ozonia	91.24	25	P	P	00 27 18.9	+0.2
	baz=332						
N50A	Nevada	91.26	33	P	P	00 27 19.5	+0.6
	baz=326						
WHAR	Wooly Hollow	91.27	42	*e*P	P	00 27 19.7	+0.7
	comp=Z,13nm,0.9s						
P48A	Milroy	91.34	35	P	P	00 27 19.8	+0.5
	baz=325						
M52A	Chesterland	91.36	31	P	P	00 27 19.8	+0.5
	baz=327						
W41B	Gary Mavity, V	91.38	42	P	P	00 27 19.8	+0.3
	baz=320						
ERPA	Erie	91.43	30	P	P	00 27 20.2	+0.6
	baz=328						
L53A	Girard	91.46	30	P	P	00 27 19.4	-0.3
	baz=328						
N51A	Ashland	91.46	32	P	P	00 27 20.4	+0.6
	baz=327						
K54A	Basiliko Farm,	91.51	29	P	P	00 27 20.6	+0.6
	baz=329						
O50A	Cable	91.57	33	P	P	00 27 20.8	+0.5
	baz=326						
L54A	Sinclairville	91.59	29	P	P	00 27 20.6	+0.2
	baz=329						
P49A	Miami Univ. Ec	91.59	34	P	P	00 27 20.7	+0.3
	baz=325						
X40A	Basin Creek Fa	91.60	43	P	P	00 27 20.9	+0.3
	baz=320						
Q48A	North Vernon	91.63	35	P	P	00 27 21.1	+0.6
	baz=324						
K55A	Perry	91.64	28	P	P	00 27 20.9	+0.3
	baz=330						
M53A	WI Miller and	91.73	31	P	P	00 27 21.6	+0.6
	baz=328						
ACSO	Alum Creek Sta	91.78	33	P	P	00 27 21.7	+0.4
	baz=326						
WCI	Wyandotte Cave	91.93	36	P	P	00 27 22.9	+0.9
	baz=324						
P50A	Jamestown	91.94	34	P	P	00 27 22.9	+0.9
	baz=326						
Q49A	Aurora	91.94	35	P	P	00 27 21.6	-0.5
	baz=325						
L55A	Hinsdale	91.97	29	P	P	00 27 22.1	-0.1
	baz=329						
O51A	Pataskala	92.01	33	P	P	00 27 22.4	0.0
	baz=326						
N53A	Lisbon	92.19	31	P	P	00 27 23.5	+0.4
	baz=328						
PKME	Peaks-Kenny Pk	92.32	22	P	P	00 27 24.0	+0.4
	baz=336						
O52A	Adamsville	92.36	32	P	P	00 27 24.7	+0.7
	baz=327						
P51A	Williamsport	92.36	33	P	P	00 27 24.4	+0.4
	baz=326						
N54A	Moraine State	92.41	31	P	P	00 27 25.0	+0.8
	baz=328						
LBNH	Lisbon	92.44	24	P	P	00 27 25.1	+0.8
	baz=334						
M55A	Ridgway	92.46	29	P	P	00 27 25.5	+1.1
	baz=329						
O53A	New Philadelph	92.51	32	P	P	00 27 24.8	+0.1
	baz=327						
T47A	Sharon Grove	92.55	37	P	P	00 27 24.8	-0.1
	baz=324						
X43A	Marvell	92.60	41	P	P	00 27 24.4	-0.7
	baz=321						
Q51A	Peebles	92.62	34	P	P	00 27 25.4	+0.3
	baz=326						
M56A	Emporium	92.67	29	P	P	00 27 25.9	+0.5
	baz=330						
S49A	Springfield	92.76	36	P	P	00 27 26.8	+1.0
	baz=325						
R50A	Paris	92.79	35	P	P	00 27 26.3	+0.3
	baz=325						
BINY	Binghamton	92.87	27	P	P	00 27 26.9	+0.6
	baz=331						
WVT	Waverly	92.88	38	P	P	00 27 27.0	+0.6
	baz=323						
O54A	Avella	92.91	31	P	P	00 27 27.1	+0.6
	baz=328						
N55A	Marion Center	92.96	30	P	P	00 27 27.0	+0.3
	baz=329						
L58A	Harry Jones Me	93.05	27	P	P	00 27 27.4	+0.3
	baz=331						
P53A	Whipple	93.07	32	P	P	00 27 27.9	+0.6
	baz=327						
R51A	Hillsboro	93.11	34	P	P	00 27 28.0	+0.5
	baz=326						
N56A	West Decatur	93.11	29	P	P	00 27 28.2	+0.7
	baz=329						
T49A	Edmonton	93.20	36	P	P	00 27 27.9	+0.1
	baz=324						
S50A	Richmond	93.25	35	P	P	00 27 28.5	+0.4
	baz=325						
O55A	Ligonier	93.32	31	P	P	00 27 29.5	+1.1
	baz=329						
OXF	Oxford	93.37	40	P	P	00 27 29.4	+0.7
	baz=322						
M58A	Price’s Panora	93.42	28	P	P	00 27 29.3	+0.5
	baz=331						
SSPA	Standing Stone	93.51	29	P	P	00 27 30.3	+1.0
	baz=330						
Q53A	Leroy	93.54	33	P	P	00 27 30.5	+1.0
	baz=327						
U49A	Red Boiling Sp	93.56	37	P	P	00 27 30.4	+0.9
	baz=324						
O56A	Blue Knob Stat	93.56	30	P	P	00 27 30.4	+0.8
	baz=329						
T50A	Nancy	93.59	36	P	P	00 27 30.3	+0.6
	baz=325						
M59A	Waymart	93.64	27	P	P	00 27 30.6	+0.7
	baz=331						
V48A	Smith Brothers	93.68	38	P	P	00 27 30.9	+0.8
	baz=324						
P55A	Reedsville	93.70	31	P	P	00 27 30.8	+0.6
	baz=328						
Q54A	Coxs Mills	93.73	32	P	P	00 27 31.1	+0.8
	baz=328						
Q55A	Buckhannon	94.03	32	P	P	00 27 32.8	+1.1
	baz=328						
N59A	State Game Lan	94.07	28	P	P	00 27 32.3	+0.5
	baz=331						
V49A	McMinnville	94.11	37	P	P	00 27 32.6	+0.5
	baz=324						
P56A	Dayton Farm, R	94.11	31	P	P	00 27 32.6	+0.5
	baz=329						
T52A	Hallie	94.36	35	P	P	00 27 32.8	-0.5
	baz=326						
Q56A	Snyder Ridge,	94.36	31	P	P	00 27 33.7	+0.5
	baz=329						
W49A	Belvidere	94.45	38	P	P	00 27 34.1	+0.4
	baz=324						
U51A	La Follette	94.49	36	P	P	00 27 34.0	+0.1
	baz=325						
V50A	Pikevile	94.56	37	P	P	00 27 34.9	+0.7
	baz=325						
TZTN	Tazewell	94.57	35	P	P	00 27 34.8	+0.6
	baz=326						
R55A	Marlinton	94.62	32	*e*P	P	00 27 35.4	+0.9
	comp=Z,5.4nm,0.8s						
R55A	Marlinton	94.62	32	P	P	00 27 35.3	+0.8
	baz=328						
Q57A	Strasburg	94.68	31	P	P	00 27 33.5	-1.2
	baz=329						
O60A	Telford	94.73	28	P	P	00 27 34.0	-0.8
	baz=331						
P58A	Pank, Wackersv	94.73	30	P	P	00 27 35.0	+0.2
	baz=330						
U52A	Thorn Hill	94.78	35	P	P	00 27 36.0	+0.8
	baz=326						
V51A	Loudon	94.81	36	P	P	00 27 35.2	-0.1
	baz=325						
R56A	Bull Pasture M	94.81	32	P	P	00 27 35.7	+0.3
	baz=328						
T54A	Tazewell	95.02	34	P	P	00 27 36.9	+0.6
	baz=327						
Q58A	Fox Den Farm,	95.05	30	P	P	00 27 36.5	+0.2
	baz=330						
V52A	Sevierville	95.13	36	P	P	00 27 37.1	+0.3
	baz=326						
W51A	Cleveland	95.14	37	P	P	00 27 37.0	+0.1
	baz=325						
U53A	Fall Branch	95.16	35	P	P	00 27 37.1	+0.2
	baz=326						
TKL	Tuckaleechee C	95.19	36	P	P	00 27 37.5	+0.4
	comp=Z,2.6nm,0.7s,baz=294,slow=18,SNR=5.4						
R57A	Stanardsville	95.27	31	P	P	00 27 37.2	-0.2
	baz=329						
X50B	Fort Payne	95.28	38	P	P	00 27 37.9	+0.3
	baz=324						
T55A	Pulaski	95.32	33	P	P	00 27 38.3	+0.6
	baz=328						
Y49A	Blount Mountai	95.39	39	P	P	00 27 38.4	+0.4
	baz=324						
BLA	Blacksburg	95.40	33	P	P	00 27 38.4	+0.4
	baz=328						
W53A	Cullowhee	95.88	36	P	P	00 27 40.7	+0.3
	baz=326						
X52A	Dahlonega	96.00	37	P	P	00 27 41.5	+0.6
	baz=325						
Y51A	Rockmart	96.02	38	P	P	00 27 41.6	+0.7
	baz=325						
S58A	Poland Farm, P	96.05	31	P	P	00 27 41.5	+0.6
	baz=329						
T57A	Hurt	96.07	32	P	P	00 27 41.9	+0.8
	baz=329						
Z50A	Ashland	96.12	39	P	P	00 27 41.9	+0.6
	baz=324						
X53A	Estanollee	96.36	36	P	P	00 27 43.2	+0.8
	baz=326						
U57A	Blanch	96.52	33	P	P	00 27 43.2	+0.2
	baz=328						
ESDC	Sonseca Array	96.58	334	P	P	00 27 43.3	-0.1
	comp=Z,0.6nm,0.8s,baz=19,slow=4.6,SNR=5.4						
ESDC				LR	LR	01 16 33.2	
	comp=Z,85nm,20.4s,baz=295,slow=39						
X54A	Belton	96.76	36	P	P	00 27 44.7	+0.5
	baz=326						
U58A	Oxford	96.88	32	P	P	00 27 45.2	+0.5
	baz=329						
Y54A	Tignall	97.18	36	P	Pdif	00 27 47.0	+0.8
	baz=326						
Y55A	Saluda	97.50	36	P	Pdif	00 27 48.3	+0.7
	baz=327						
W58A	Raeford	97.76	33	P	Pdif	00 27 49.1	+0.3
	baz=328						
155A	Kite	98.31	37	P	P	00 27 51.3	0.0
	baz=326						
254A	Abbeville	98.47	38	P	P	00 27 50.9	-1.1
	baz=326						
Z59A	Georgetown, SC	99.25	34	P	Pdif	00 27 55.0	-0.4
	baz=328						
TOA1	Torodi Ar. Sit	116.97	316	*e*PKPdf	PKPdf	00 32 57.9	-0.9
TORD	Torodi Ar. Bea	116.97	316	PKP	PKPdf	00 32 57.9	-0.9
	comp=Z,0.7nm,0.7s,baz=21,slow=1.7,SNR=9.9						
TORD				PP	PP	00 34 04.3	-2.8
	comp=Z,1.7nm,0.9s,baz=31,slow=6.7,SNR=5.7						
DBIC	Dimbokro	125.89	318	PKP	PKPdf	00 33 14.9	-1.0
	comp=Z,3.0nm,0.7s,baz=307,slow=4.0,SNR=5.3						
BOSA	Boshof	127.32	260	PKP	PKPdf	00 33 18.6	+0.3
	comp=Z,2.0nm,0.7s,baz=120,slow=1.8,SNR=3.5						
QSPA	South Pole Qui	127.84	180	*e*PKPdf	PKPdf	00 33 18.2	+0.2
SNAA	Sanae	141.93	197	PKPdf	PKPdf	00 33 39.0	-5.2
SNAA	Sanae	141.93	197	*e*PKPpre	PKPdf	00 33 38.6	-5.6
SNAA	Sanae	141.93	197	*e*PKHKP	PKPdf	00 33 38.6	-5.6
VNA3	Neumayer Olymp	143.74	195	PKPdf	PKPbc	00 33 45.2	+0.2
VNA1	Neumayer--Stat	143.90	196	PKPdf	PKPbc	00 33 45.4	+0.1
LPAZ	La Paz	145.67	59	PKPbc	PKPab	00 33 54.1	+0.4
	comp=Z,18nm,0.9s,baz=344,slow=3.4,SNR=72						
LPAZ	La Paz	145.67	59	*e*PKPdf	PKPab	00 33 54.2	+0.5
LPAZ	La Paz	145.67	59	*e*PKP2	PKPab	00 33 54.2	+0.5
MNMC	Minye Minye	146.58	64	*e*PKPbc	PKPab	00 33 57.3	+0.6
PB11	IPOC Station P	146.95	65	*e*PKPbc	PKPab	00 33 57.6	-0.3
LVC	Limon Verde	149.27	69	*e*PKPbc	PKiKP	00 34 04.1	0.0
LVC	Limon Verde	149.27	69	*e*PKP2	PKiKP	00 34 04.1	0.0
GO02	Mina Guanaco	150.23	74	*e*PKPbc	PKiKP	00 34 05.9	0.0
LCO	Las Campanas	151.31	81	*e*PKPbc	PKiKP	00 34 08.1	+0.1
LCO	Las Campanas	151.31	81	*e*PKIKP	PKiKP	00 34 08.1	+0.1
GO04	Tololo Observa	151.74	84	*e*PKPbc	PKiKP	00 34 09.1	+0.2
PLCA	Paso Flores	154.70	106	PKPab	PKPab	00 34 30.6	+1.3
	comp=Z,3.6nm,0.9s,baz=291,slow=6.9,SNR=4.5						

*BJI **31** 00:36:47.5±0.0, 1°.17N×126°.20E, h5^{km}, mb4.8/50, mB4.9/34, Ms4.4/25, Ms7 4.1/22*

*IDC **31** 00:36:49.7±0.4, 1°.33N×126°.02E, h0^{km}, mb4.7/23, mb1 4.8/24, mb1mx4.7/33, mbtmp4.7/24, ML4.0/1, MS3.7/14, Ms1 3.7/14, ms1mx3.5/26, Error ellipse: s-maj=17.1km s-min=10.5km az=70.0*

*DJA **31** 00:36:53.6±0.3, 1°N±4°×12°6E±°, h10^{km}, M4.7/14, mb5.1/12, mB5.0/9, MLv4.9/14, Mw(mB)4.3/9*

*MOS **31** 00:36:53.4±1.2, 1°.40N×126°.13E, h34^{km}, mb5.2/46, Error ellipse: s-maj=9.8km s-min=5.3km az=112.9*

*ISCJB **31** 00:36:54.2±0.5, 1°.36N±0°.02×126°.19E±0°.03, h42^{km}±4^{km}, mb4.9/106, MS3.9/25, Error ellipse: s-maj=5.1km s-min=3.2km az=168.6*

*NEIC **31** 00:36:54.3±1.4, 1°.39N×126°.22E, h32^{km}±3^{km}, mb4.9/88, Error ellipse: s-maj=0.0km s-min=0.0km az=180.0*

*GCMT **31** 00:36:58.3±0.4, 1°.54N±0°.02×126°.27E±0°.03, h34^{km}±1^{km}, MW5.0/70, Moment Tensor Solution. s36,c45; s70,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.84±.27; M$_{\theta\theta}$0.02±.15; M$_{\phi\phi}$-3.85±.18; M$_{r\theta}$0.56±.17; M$_{\theta\phi}$-1.02±.12; M$_{\phi r}$-0.56±.21; Best double couple: M$_0$4.05300×10^{16} NP1:ϕ_s184.00000°, δ49.00000°, λ76.00000°. NP2: ϕ_s24.00000°, δ43.00000°, λ105.00000°. Principal axes: T 3.9830, Plg79.0000°, Azm29.0000°; N 0.1480, Plg10.0000°, Azm193.0000°; P -4.1240, Plg3.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 00:36:55.8±0.2**, 1°.33N**±0°.03×**126°.22E**±0°.05**, h39**^{km}±2^{km}**, n299, **σ1^{s}.**44**/317**, mb4.9**/106**, MS4.0**/26**, 24C-19D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	2.33	147	P	Pn	00 37 31.6	0.0
SGSI	Sangihe	2.44	344	P	Pn	00 37 33.3	+0.1
SANI	Sanana	3.36	184	P	Pn	00 37 46.3	+0.5
LUWI	Luwuk	4.18	236	*e*Pn	Pn	00 37 58.4	+1.5
LUWI	Luwuk	4.18	236	P	Pn	00 37 59.0	+2.0
DDMP	Don Marcelino,	4.78	354	*e*P	Pn	00 38 03.6	-1.7
DDMP				*e*S	Sn	00 38 45.9	-13
AAI	Ambon	5.36	158	P	Pn	00 38 15.0	+1.8
MSAI	Masohi	5.37	150	P	Pn	00 38 17.2	+3.8
SKMP	Bagumbayan, Su	5.42	342	*e*P	Pn	00 38 14.5	+0.4
SKMP				*e*S	Sn	00 39 11.8	-3.6
SIJI	Sorong	5.49	113	Pn	Pn	00 38 15.8	+0.7
	4.0nm,0.3s,baz=321,slow=7.5,SNR=18						
SIJI				LR	LR	00 40 57.0	
	comp=Z,1μm,20.3s,baz=290,slow=44						
MATI	Mati	5.58	0	*e*P	Pn	00 38 16.4	+0.1
MATI				*e*S	Sn	00 39 17.7	-1.6
CTBH	Cotabato--PC H	6.18	341	⇓*i*P	Pn	00 38 26.0	+1.5
KDI	Kendari	6.36	214	P	Pn	00 38 28.5	+1.4
BUKP	Musuan	6.61	350	*e*P	Pn	00 38 33.1	+2.5
BUKP				*e*S	Sn	00 39 46.4	+1.7
PAGZ	Pagadian	7.07	336	*e*P	Pn	00 38 35.9	-0.9
PAGZ				*e*S	Sn	00 39 53.4	-2.5
FAKI	Fak Fak	7.35	125	*e*Pn	Pn	00 38 40.9	+0.2
FAKI	Fak Fak	7.35	125	P	Pn	00 38 42.0	+1.3
BBSI	Bau Bau	7.69	208	P	Pn	00 38 50.6	+5.3
TTSI	Tana Toraja	7.74	236	P	Pn	00 38 47.1	+1.2
SPSI	Sidrap Palu	8.32	231	P	Pn	00 38 55.8	+1.9
BNSI	Bone	8.35	227	P	Pn	00 38 55.6	+1.3
BKSI	Bulukumba	8.98	223	P	Pn	00 39 05.0	+2.0
KAPI	Kappang	9.03	226	Pn	Pn	00 39 05.4	+1.8
	3.8nm,0.3s,baz=25,slow=8.3,SNR=21						
KAPI				Sn	Sn	00 40 44.5	+0.5
	0.6nm,0.3s,baz=0.0,slow=20,SNR=2.3						
PALU	Palau	10.17	54	P	Pn	00 39 22.0	+2.7
	baz=10,SNR=3.5						
BAKI	Biak	10.20	104	P	Pn	00 39 26.4	+6.7
SOEI	Soe	11.18	190	*e*Pn	Pn	00 39 33.2	0.0
SOEI	Soe	11.18	190	P	Pn	00 39 42.7	+9.5
PLAI	Plampang	13.14	220	P	P	00 40 11.9	+2.6
SBUM	Sibu	14.04	275	*e*Pn	Pn	00 40 10.6	-1.6
GENI	Genyem	14.47	106	P	P	00 40 31.2	+7.0
STKI	Sintang	14.80	265	P	P	00 40 30.4	+2.6
DNP	Denpasar	14.81	228	P	P	00 40 32.5	+4.6
MTN	Manton Dam	14.90	161	*e*Pn	Pn	00 40 22.0	-1.8
MTN	Manton Dam	14.90	161	P	Pn	00 40 22.1	-1.8
	baz=15,SNR=17						
JAGI	Jajag, Banyuwa	15.47	231	*e*Pn	Pn	00 40 30.0	-1.4
	108nm,1.1s						
KSM	Kuching	15.91	271	*e*Pn	Pn	00 40 36.7	-0.3
	93nm,1.0s						
KNRA	Kununurra	17.08	172	P	Pn	00 40 52.0	+0.3
	baz=17,SNR=22						
DLV	T Lat	20.51	302	*e*P	P	00 41 30.4	-0.7
	84nm,0.9s						
GUMO	Guam	22.11	56	P	P	00 41 49.1	+1.1
	50nm,0.7s,baz=177,slow=13,SNR=4.8						
MYKOM	Kota Tinggi	22.37	271	*e*P	P	00 41 50.2	-0.6
	41nm,1.0s						
YULB	Yu-li	22.45	348	*e*P	P	00 41 50.9	-0.7
	14nm,0.5s						
TPUB	Ta-pu	22.51	346	*e*P	P	00 41 50.0	-2.2
	40nm,0.6s						
WRAB	Tennant Creek	22.58	160	*e*P	P	00 41 52.0	-1.0
	80nm,0.8s						
WRAB	Tennant Creek	22.58	160	*d i*P	P	00 41 51.4	-1.6
WRAB				pmax	pmax		
	comp=Z,116nm,1.7s						
WR1	Warramunga Arr	22.59	160	*e*P	P	00 41 51.3	-1.8
WRA	Warramunga Arr	22.59	160	P	P	00 41 51.3	-1.8
	comp=Z,34nm,0.5s,baz=340,slow=12,SNR=69						
WRA				S	S	00 45 55.2	-3.0
	comp=Z,13nm,1.0s,baz=343,slow=20,SNR=5.0						
WB2	Warramunga Arr	22.59	160	*e*P	P	00 41 51.9	-1.2
	comp=Z,77nm,0.7s						
COEN	Coen	22.64	133	*e*P	P	00 41 53.5	-0.2
	comp=Z,23nm,0.8s						
COEN	Coen	22.64	133	P	P	00 41 54.2	+0.5
	baz=23,SNR=16						

SSLB	Suanglung	22.91	348	*e*P	P	00 41 54.4	-2.0
	comp=Z,22nm,0.8s						
PMG	Port Moresby	23.42	117	⇑*e*P	P	00 42 00.2	-1.4
PMG				pmax	pmax		
	comp=Z,54nm,0.9s						
PSA00	Pilbara Seismi	23.60	195	*e*P	P	00 42 03.0	-0.2
	comp=Z,21nm,0.9s						
IPM	Ipoh	25.36	278	*e*P	P	00 42 18.7	-0.7
	comp=Z,19nm,0.9s						
QIS	Mount Isa	25.39	150	P	P	00 42 19.1	-0.6
	baz=25,SNR=30						
JOW	Kunigami	25.44	4	P	P	00 42 20.4	+0.4
	comp=Z,2.7nm,0.6s,baz=157,slow=12,SNR=4.4						
JOW	Kunigami	25.44	4	*e*P	P	00 42 19.8	-0.2
	comp=Z,30nm,0.8s						
KULM	Kulim	25.83	279	*e*P	P	00 42 23.9	+0.2
	comp=Z,28nm,1.2s						
ASAR	Alice Springs	25.94	164	P	P	00 42 23.9	-0.8
	comp=Z,15nm,0.5s,baz=346,slow=7.5,SNR=250						
ASAR				PcP	PcP	00 45 53.0	+0.2
	comp=Z,5.9nm,0.5s,baz=355,slow=2.1,SNR=13						
ASAR				S	S	00 46 54.0	+1.4
	comp=Z,1.4nm,0.9s,baz=348,slow=20,SNR=3.2						
SKLT	Songkhla	26.17	284	P	P	00 42 30.0	+3.2
	comp=Z,8.9nm,1.4s						
WRKA	Warakurna	26.28	176	P	P	00 42 28.3	+0.5
	baz=26,SNR=71						
MTSU	Mount Surprise	26.29	138	P	P	00 42 29.6	+1.8
	baz=26,SNR=5.6						
PANO	Nakornpanom	26.44	308	P	P	00 42 33.1	+3.9
	comp=Z,0.3nm,1.0s						
PSI	Prapat	27.32	274	P	P	00 42 35.7	-1.6
	comp=Z,17nm,0.8s,baz=126,slow=4.2,SNR=7.5						
PSI	Prapat	27.32	274	*e*P	P	00 42 36.1	-1.2
	comp=Z,18nm,0.8s						
PSI	Prapat	27.32	274	*e*P	P	00 42 36.1	-1.2
PSI				pmax	pmax		
	comp=Z,19nm,0.8s						
CHAI	Chaiyaphum	27.94	303	P	P	00 42 42.7	0.0
	comp=Z,45µm,1.1s,comp=Z,562µm						
NONG	Nongkai	28.11	308	P	P	00 42 45.4	+1.2
	comp=Z,0.2nm,0.9s						
MEEK	Meekatharra	28.75	194	P	P	00 42 49.9	0.0
	baz=29,SNR=18						
CTA	Charters Tower	28.96	138	P	P	00 42 53.7	+1.9
	comp=Z,11nm,1.2s,baz=312,slow=14,SNR=3.7						
PBKT	Sadao Pong	29.12	303	P	P	00 43 05.8	+13
SLVN	Son La	29.48	314	*e*P	P	00 42 55.5	-0.9
	comp=Z,18nm,1.6s						
UTHA	Uthaitani	29.96	300	P	P	00 43 08.8	+8.1
GYA	Guiyang	31.28	325	⇓*i*P	P	00 43 12.8	+0.5
GYA				PP	PnPn	00 44 15.3	-0.1
GYA				S	S	00 48 20.5	+3.9
GYA				SS	SnSn	00 50 03.5	+1.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=Z,420nm,17.7s						
GYA				LR	LR		
	comp=Z,410nm,16.1s						
GYA				LR	LR		
	comp=Z,450nm,15.2s						
NJ2	Nanjing	31.34	348	*e*P	P	00 43 14.3	+1.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	Chiang Mai Arr	31.72	304	P	P	00 43 15.8	-0.4
	comp=Z,0.7nm,0.4s,baz=110,slow=7.8,SNR=6.2						
CMAR				LR	LR	00 56 15.8	
	comp=Z,117nm,20.4s,baz=116,slow=37						
CMAR	Chiang Mai Arr	31.72	304	c*e*P	P	00 43 16.2	0.0
MORW	Morawa	31.75	197	P	P	00 43 16.0	-0.3
	baz=32,SNR=6.0						
CMMT	Chiang Mai	31.89	305	P	P	00 43 23.3	+5.6
	comp=Z,3.6nm,0.6s						
CHTO	Chiang Mai	31.89	305	*e*P	P	00 43 16.6	-1.1
	comp=Z,4.7nm,0.9s						
CHTO	Chiang Mai	31.89	305	*e*P	P	00 43 16.6	-1.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FORT	Forrest	31.97	177	*e*P	P	00 43 18.3	+0.1
	comp=Z,69nm,0.6s						
FORT	Forrest	31.97	177	P	P	00 43 18.3	+0.1
	baz=32,SNR=39						
KMI	Kunming	32.77	318	P	P	00 43 25.8	+0.3
KMI				pP	pP	00 43 30.3	-5.5
KMI				S	S	00 48 46.0	+5.9
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
KMI				pmax	pmax		
	comp=Z,100nm,4.6s						
KMI				LR	LR		
	comp=Z,280nm,20.1s						
KMI				LR	LR		
	comp=Z,180nm,21.7s						
KMI				LR	LR		
	comp=Z,280nm,18.3s						
KMBL	Kambalda	32.77	187	P	P	00 43 25.7	+0.5
	baz=33,SNR=17						
ENH	Enshi	32.88	333	*e*P	P	00 43 24.5	-1.8
	comp=Z,52nm,1.6s						
BLDU	Ballidu	33.03	195	P	P	00 43 27.5	0.0
	baz=33,SNR=6.4						
MUN	Mundaring	34.46	195	P	P	00 43 40.2	+0.3
	baz=34,SNR=6.3						
TJN	Taejon	34.89	2	⇑*e*P	P	00 43 40.5	-3.1
NWAO	Narrogin (SRO)	35.11	193	P	P	00 43 46.1	+0.6
	baz=35,SNR=8.9						
BBOO	Buckleboo	35.20	166	*e*P	P	00 43 45.5	-0.8
	comp=Z,25nm,0.6s						
BBOO	Buckleboo	35.20	166	P	P	00 43 45.6	-0.8
	baz=35,SNR=32						
KSRS	Korea Array	35.99	2	P	P	00 43 53.0	+0.1
	comp=Z,2.0nm,0.6s,baz=182,slow=9.4,SNR=8.1						
KSRS				LR	LR	01 01 17.0	
	comp=Z,54nm,18.9s,baz=197,slow=41						
STKA	Stephens Creek	36.09	157	P	P	00 43 53.8	-0.2
	comp=Z,32nm,0.9s,baz=333,slow=8.3,SNR=53						
STKA				PcP	PcP	00 46 19.6	+0.1
	comp=Z,3.2nm,0.5s,baz=317,slow=4.9,SNR=4.2						
STKA	Stephens Creek	36.09	157	*e*P	P	00 43 53.6	-0.4
	comp=Z,6.5nm,0.8s						
STKA	Stephens Creek	36.09	157	P	P	00 43 54.0	0.0
	baz=36,SNR=15						
CD2	Chengdu	36.31	326	⇓P	P	00 43 54.5	-1.4
CD2				S	S	00 49 37.0	+2.7
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,180nm,10.8s						
CD2				LR	LR		
	comp=Z,220nm,16.7s						
CD2				LR	LR		
	comp=Z,190nm,14.7s						
CD2				LR	LR		
	comp=Z,270nm,15.2s						
XAN	Xi'an	36.35	335	P	P	00 43 54.3	-1.9
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
XAN				pmax	pmax		
	comp=Z,100nm,7.1s						
XAN				LR	LR		
	comp=Z,73nm,18.4s						
XAN				LR	LR		
	comp=Z,170nm,27.1s						
XAN				LR	LR		
	comp=Z,170nm,20.6s						
HTT	Hallett	36.59	162	P	P	00 43 58.3	+0.1
	baz=37,SNR=7.5						
MAJO	Matsushiro	36.76	16	*e*P	P	00 43 58.6	-1.0
	comp=Z,22nm,0.3s						
MAJO	Matsushiro	36.76	16	*e*P	P	00 43 58.6	-1.0
MAJO				pmax	pmax		
	comp=Z,22nm,0.3s						
MAT	Matsushiro	36.76	16	P	P	00 43 59.0	-0.6
MJAR	Matsushiro Arr	36.76	16	P	P	00 43 58.8	-0.8
	comp=Z,9.2nm,0.8s,baz=188,slow=9.9,SNR=17						
MJAR				LR	LR	00 59 21.9	
	comp=Z,54nm,21.0s,baz=210,slow=37						
MJB9	Matsu-Tunnel	36.76	16	*e*P	P	00 43 58.5	-1.1
	comp=Z,24nm,0.3s						
CMSA	Cobar Meteorol	37.55	152	P	P	00 44 06.3	-0.1
	baz=38,SNR=8.1						
DL2	Dalian	37.64	354	P	P	00 44 07.5	+0.5
DL2				*e*S	S	00 49 57.3	+3.2
DL2				pmax	pmax		
	comp=Z,33nm,0.7s						
DL2				LR	LR		
	comp=Z,160nm,15.6s						
DL2				LR	LR		
	comp=Z,110nm,16.8s						
DL2				LR	LR		
	comp=Z,130nm,18.3s						
BJI	Beijing	39.60	348	P	P	00 44 23.8	+0.3
BJI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARMA	Armidale	39.78	145	P	P	00 44 26.1	+0.9
	baz=40,SNR=8.5						
LZH	Lanzhou	40.34	332	*e*P	P	00 44 31.0	+1.2
LZH				pP	pP	00 44 34.5	-5.8
LZH				sP	pwP	00 44 36.8	-6.1
LZH				sS	sS	00 50 49.5	-2.9
LZH				SS	SS	00 53 35.5	+0.5
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,95nm,4.4s						
LZH				LR	LR		
	comp=Z,490nm,15.2s						
LZH				LR	LR		
	comp=Z,550nm,16.0s						
LZH				LR	LR		
	comp=Z,640nm,16.7s						
ARPS	Mount Arapiles	40.59	161	P	P	00 44 32.4	+0.7
	baz=41,SNR=13						
HHC	Hu-ho-hao-te	41.52	343	P	P	00 44 40.0	+0.5
HHC				S	S	00 50 56.8	+4.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				LR	LR		
	comp=Z,120nm,15.7s						
HHC				LR	LR		
	comp=Z,120nm,16.5s						
CAN	Canberra	42.22	152	*e*P	P	00 44 45.2	0.0
	comp=Z,21nm,0.9s						
CAN	Canberra	42.22	152	*e*P	P	00 44 45.2	0.0
CAN				pmax	pmax		
	comp=Z,21nm,0.9s						
CN2	Changchun	42.30	359	*e*P	P	00 44 45.8	+0.2
TOO	Toolangi	42.62	157	*e*P	P	00 44 48.6	+0.3
	comp=Z,68nm,1.8s						
TOO	Toolangi	42.62	157	P	P	00 44 48.7	+0.3
	baz=43,SNR=4.8						
TOO	Toolangi	42.62	157	*e*P	P	00 44 48.7	+0.3
TOO				pmax	pmax		
	comp=Z,68nm,1.8s						
USRK	Ussuriysk Ar.	43.00	6	P	P	00 44 52.1	+0.9
	comp=Z,11nm,0.7s,baz=185,slow=6.3,SNR=24						
USA0B	Ussuriysk Arra	43.00	6	*e*P	P	00 44 51.0	-0.3
	comp=Z,14nm,0.8s						
USA0B	Ussuriysk Arra	43.00	6	*e*P	P	00 44 51.0	-0.3
USA0B				pmax	pmax		
	comp=Z,14nm,0.8s						
MDJ	Mudanjiang	43.21	4	P	P	00 44 57.5	+4.5
MDJ				pmax	pmax		
	comp=Z,18nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.9s						
LSA	Lhasa	43.68	314	*e*P	P	00 44 57.5	-0.1
	comp=Z,10nm,0.6s						
LSA	Lhasa	43.68	314	*e*P	P	00 44 57.5	-0.1
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GTA	Gaotai	44.91	331	*e*P	P	00 45 05.5	-1.4
GTA				pP	pP	00 45 08.8	-8.7
GTA				sP	pwP	00 45 11.5	-8.8
GTA				PcP	PcP	00 46 49.3	+1.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,74nm,6.9s						
GTA				LR	LR		
	comp=Z,110nm,19.9s						
GTA				LR	LR		
	comp=Z,160nm,18.6s						
GTA				LR	LR		
	comp=Z,200nm,19.9s						
DZM	Mont Dzumac	45.61	123	P	P	00 45 13.7	+1.0
	comp=Z,9.2nm,0.9s,baz=359,slow=7.4,SNR=4.7						
DZM	Mont Dzumac	45.61	123	*e*P	P	00 45 13.7	+1.0
	comp=Z,51nm,1.4s						
JIRN	Jiri	46.40	308	*e*P	P	00 45 18.0	-1.2
	comp=Z,58nm,0.8s						
PKI	Pulchoki	46.98	307	*e*P	P	00 45 21.8	-1.9
	comp=Z,5.8nm,0.3s						
PKIN	Phulchoki	46.99	307	*e*P	P	00 45 21.8	-1.9
	comp=Z,10nm,0.7s						
KKN	Kakani	47.18	308	*e*P	P	00 45 24.2	-0.9
	comp=Z,14nm,0.5s						
DMN	Daman	47.24	307	*e*P	P	00 45 24.1	-1.5
	comp=Z,30nm,0.9s						
KUR	Kuril'sk	47.71	21	⇓*e*P	P	00 45 29.2	+0.6
KUR				pmax	pmax		
	comp=Z,140nm,1.2s						
GKN	Gorkha	47.78	308	*e*P	P	00 45 28.7	-1.0
KLR	Kul'dur	47.96	5	*c* *i*P	P	00 45 30.3	-0.2
KLR				pmax	pmax		
	comp=Z,17nm,1.2s						
HIA	Hailar	48.08	354	⇓*e*P	P	00 45 30.6	-0.9
HIA				pmax	pmax		
	comp=Z,39nm,0.8s						
KOLN	Koldanda	48.51	307	*e*P	P	00 45 34.1	-1.3
	comp=Z,78nm,0.7s						
DANN	Dangsing	48.63	308	*e*P	P	00 45 35.5	-0.9
	comp=Z,67nm,0.6s						
SONA0	Songino Array	49.41	342	*e*P	P	00 45 40.6	-1.3
SONA0				*e*PcP	PcP	00 47 04.1	+0.3
SONM	Songino Array	49.41	342	P	P	00 45 40.6	-1.3
	comp=Z,2.6nm,0.8s,baz=160,slow=8.6,SNR=7.3						
SONM				PcP	PcP	00 47 04.1	+0.3
	comp=Z,3.0nm,0.6s,baz=158,slow=2.9,SNR=5.5						
SONM				LR	LR	01 09 01.0	
	comp=Z,44nm,21.8s,baz=152,slow=39						
GRNR	Gornyy	50.02	8	*e*P	P	00 45 48.0	+1.7
GRNR				pmax	pmax		
	comp=Z,17nm,0.8s						
ZEA	Zeya	52.24	1	*e*P	P	00 46 00.5	-2.4
TLY	Talaya	53.65	343	⇑*e*P	P	00 46 14.4	+1.1
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WMQ	Urumqi	54.41	326	*e*P	P	00 46 19.8	+0.7
WMQ				pP	pP	00 46 22.3	-7.6
WMQ				sP	pwP	00 46 26.0	-6.7
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,19nm,7.1s						
WMQ				LR	LR		
	comp=Z,270nm,29.0s						
WMQ				LR	LR		
	comp=Z,140nm,27.3s						
WMQ				LR	LR		
	comp=Z,200nm,23.3s						
MOY	Mondy	54.46	341	*e*P	P	00 46 21.5	+2.1
MOY				pmax	pmax		
	comp=Z,16nm,1.5s						
BOD	Bodaibo	57.16	352	*e*P	P	00 46 38.7	+0.3
BOD				pmax	pmax		
	comp=Z,17nm,0.7s						
PETK	Petropavlovsk-	57.83	22	P	P	00 46 44.2	+0.9
	comp=Z,6.5nm,0.5s,baz=185,slow=4.4,SNR=22						
PETK				LR	LR	01 10 00.2	
	comp=Z,31nm,21.5s,baz=210,slow=34						
PEA1	Petropavlovsk-	57.84	22	*e*P	P	00 46 44.2	+0.8
DGZ	Jazzator, Alta	58.44	331	*d* *i*P	P	00 46 47.0	-0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NIL	Nilore	59.01	309	*e*P	P	00 46 51.2	-0.7
	comp=Z,29nm,1.4s						
NIL	Nilore	59.01	309	*e*P	P	00 46 51.2	-0.7
NIL				pmax	pmax		
	comp=Z,29nm,1.4s						
MK31	Makanchi Array	59.24	326	*e*P	P	00 46 52.2	-1.1
	comp=Z,8.8nm,0.8s						
MK31	Makanchi Array	59.24	326	*e*P	P	00 46 52.2	-1.1
MK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MK32	Makanchi Array	59.24	326	*e*P	P	00 46 52.0	-1.3
MK32				*e*PcP	PcP	00 47 40.8	-0.5
MKAR	Makanchi Array	59.24	326	P	P	00 46 52.0	-1.3
	comp=Z,4.8nm,0.3s,baz=121,slow=8.3,SNR=29						
MKAR				PcP	PcP	00 47 40.8	-0.5
	comp=Z,2.9nm,0.5s,baz=118,slow=4.4,SNR=3.7						
MKAR				LR	LR	01 12 50.1	
	comp=Z,183nm,21.3s,baz=102,slow=36						
KSH	Kashi	59.40	316	P	P	00 46 55.5	+0.9
KSH				sP	pP	00 47 02.3	-3.3
KSH				PP	PP	00 49 09.0	+2.9
KSH				S	S	00 55 01.3	+0.2
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,190nm,9.9s						
KSH				LR	LR		
	comp=Z,130nm,8.8s						
KSH				LR	LR		
	comp=Z,130nm,12.0s						
MAKZ	Makanchi	59.43	326	*e*P	P	00 46 53.2	-1.4
	comp=Z,18nm,1.0s						
MAKZ	Makanchi	59.43	326	*e*P	P	00 46 53.2	-1.4
MAKZ				pmax	pmax		
	comp=Z,18nm,1.0s						
LBZ	Lake Benmore	60.00	145	*e*P	P	00 46 58.6	0.0
	comp=Z,31nm,0.6s						
YAK	Yakutsk	60.61	2	*e*P	P	00 47 02.0	-0.3
YAK				pmax	pmax		
	comp=Z,36nm,0.8s						
MA2	Magadan	61.15	14	*e*P	P	00 47 05.9	-0.1
	comp=Z,18nm,0.8s						
MA2	Magadan	61.15	14	*ce*P	P	00 47 06.8	+0.8
MA2				pmax	pmax		
	comp=Z,18nm,0.9s						
BKZ	Black Stump Fm	61.16	137	*e*P	P	00 47 06.0	-0.6
	comp=Z,16nm,1.0s						
TKM2	Tokmak 2	61.22	320	*i* P	P	00 47 04.9	-2.2
TKM2				pmax	pmax		
	comp=Z,16nm,1.1s						
AAK	Ala-Archa	61.81	319	*e*P	P	00 47 09.8	-1.2
	comp=Z,5.5nm,0.8s						
AAK	Ala-Archa	61.81	319	*ce*P	P	00 47 10.3	-0.7
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ZALV	Zalesovo Beam	62.50	334	P	P	00 47 13.3	-1.9
	comp=Z,3.8nm,0.5s,baz=119,slow=5.9,SNR=16						
ZALV				LR	LR	01 14 34.7	
	comp=Z,48nm,21.1s,baz=68,slow=36						
KBL	Kabul	62.59	309	*e*P	P	00 47 15.0	-1.5
	comp=Z,15nm,1.1s						
KBL	Kabul	62.59	309	*e*P	P	00 47 15.0	-1.5
KBL				pmax	pmax		
	comp=Z,15nm,1.1s						
KURK	Kurchatov	63.49	328	*e*P	P	00 47 20.8	-1.1
	comp=Z,28nm,0.7s						
KURK	Kurchatov	63.49	328	*c* *i*P	P	00 47 20.4	-1.5
KURK				pmax	pmax		
	comp=Z,30nm,0.7s						
SEY	Seymchan	64.47	13	⇑*e*P	P	00 47 28.7	+0.6
KK31	Karatay Array	64.65	318	*i* P	P	00 47 27.8	-1.9
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OTUK	Ortayu	65.73	324	P	P	00 47 35.2	-1.4
OTUK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CASY	Casey	68.39	187	*e*P	P	00 47 53.2	+0.2
	comp=Z,8.8nm,0.7s						
BRVK	Borovoye	69.13	328	*e*P	P	00 47 56.2	-1.7
BRVK				*e*pP	P	00 47 57.0	-0.9
BRVK	Borovoye	69.13	328	*de*P	P	00 47 56.8	-1.1
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s						
BILL	Bilibino	71.99	15	*e*P	P	00 48 14.8	-0.3
	comp=Z,7.1nm,1.1s						
BILL	Bilibino	71.99	15	⇓*e*P	P	00 48 16.0	+0.9
BILL						00 48 33.0	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,112nm,21.0s						
GEYT	Alibeck	72.01	310	P	P	00 48 15.1	-0.8
	comp=Z,3.3nm,0.7s,baz=126,slow=2.5,SNR=8.1						
GYA0B	ALIBECK ARRAY	72.01	310	*e*P	P	00 48 16.0	+0.1
	comp=Z,9.5nm,1.0s						
AB31	Akbulak array	73.69	321	*i* P	P	00 48 24.0	-1.5
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SVE	Sverdlovsk	75.74	329	⇑*e*P	P	00 48 36.7	-0.5
SVE				pmax	pmax		
	comp=Z,23nm,0.6s						
ARU	Arti	76.69	328	*e*P	P	00 48 41.8	-0.8
	comp=Z,18nm,0.6s						
ARU	Arti	76.69	328	*c* *i*P	P	00 48 41.4	-1.3
ARU				S	S	00 58 29.7	+3.1
ARU				pmax	pmax		
	comp=Z,15nm,0.6s						
AKT	Akhty	80.50	312	*e*P	P	00 49 03.5	-0.7
AKT				*e*		00 49 11.2	
AKT				pmax	pmax		
	comp=Z,17nm,1.3s						
SEKA	Sheki	80.87	311	P	P	00 49 05.7	-0.4
MNGR	Mingechevir, A	80.91	311	P	P	00 49 06.5	+0.3
RAYN	Ar Rayn	80.96	293	*e*P	P	00 49 06.2	-0.7
	comp=Z,5.5nm,0.8s						
RAYN	Ar Rayn	80.96	293	*e*P	P	00 49 06.2	-0.7
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAW	Mawson	81.34	200	P	P	00 49 08.4	+0.6
	comp=Z,5.0nm,0.6s,baz=72,slow=6.1,SNR=18						
MAW	Mawson	81.34	200	*e*P	P	00 49 08.0	+0.2
	comp=Z,1.6nm,0.8s						
MAW	Mawson	81.34	200	P	P	00 49 08.4	+0.6
	baz=81,SNR=7.2						
ZKTA	Zakatala	81.34	312	P	P	00 49 08.8	+0.3
GANJ	Ganja	81.47	311	P	P	00 49 09.5	+0.3
NAX	Nakhchivan	81.97	309	P	P	00 49 12.2	+0.2
SBA	Scott Base	82.04	172	*e*P	P	00 49 12.9	+1.5
	comp=Z,6.5nm,0.9s						
SBA	Scott Base	82.04	172	*e*P	P	00 49 12.9	+1.5
SBA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GNI	Garni	82.63	310	*de*P	P	00 49 15.6	+0.1
GNI				pmax	pmax		
	comp=Z,27nm,1.0s						
ZEI	Tsey	83.46	313	*e*P	P	00 49 18.7	-1.1
ZEI				pmax	pmax		
	comp=Z,33nm,1.4s						
EAK	Akyaka	83.53	311	*i* P	P	00 49 20.4	+0.3
EAK				IAML_P			
	comp=Z,137nm,0.6s						
AKH	Akhalkalaki	83.67	311	*e*P	P	00 49 20.8	-0.1
	comp=Z,15nm,0.8s						
AKH	Akhalkalaki	83.67	311	⇑*i*P	P	00 49 21.9	+1.0
AKH	Akhalkalaki	83.67	311	*e*P	P	00 49 20.8	-0.1
AKH				pmax	pmax		
	comp=Z,15nm,0.8s						
NCK	Nalchik	83.73	313	⇓*e*P	P	00 49 20.3	-0.7
NCK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KDAK	Kodiak Island	84.18	32	P	P	00 49 23.8	+1.0
	comp=Z,18nm,0.8s						
KDAK	Kodiak Island	84.18	32	*e*P	P	00 49 21.8	-1.0
	comp=Z,21nm,0.8s						
KDAK	Kodiak Island	84.18	32	*e*P	P	00 49 21.8	-1.0
KDAK				pmax	pmax		
	comp=Z,21nm,0.8s						
EPOS	Posof	84.25	311	*i* P	P	00 49 24.7	+1.0
KBZ	Khabaz	84.26	314	P	P	00 49 23.4	-0.1
	comp=Z,5.9nm,0.9s,baz=143,slow=6.8,SNR=7.5						
EATA	Eleskirt	84.34	310	*i* P	P	00 49 26.8	+2.4
EATA				IAML_P			
	comp=Z,88nm,0.1s						
PRGR	Permogore	84.36	332	*e*P	P	00 49 21.8	-1.9
PRGR				pmax	pmax		
	comp=Z,21nm,0.8s						
KIV	Kislovodsk	84.42	314	*e*P	P	00 49 24.4	-0.1
	comp=Z,7.8nm,0.8s						
KIV	Kislovodsk	84.42	314	*e*P	P	00 49 22.9	-1.6
KIV				pmax	pmax		
	comp=Z,32nm,1.1s						
KIV				MLR	MLR		
	comp=Z,93nm,20.0s						
DAGI	Agillar	84.84	311	*i* P	P	00 49 27.0	+0.2
DAGI				IAML_P			
	comp=Z,285nm,0.5s						
DBAD	Bademkaya	85.00	311	*i* P	P	00 49 28.8	+1.2
DBAD				IAML_P			
	comp=Z,1µm,0.6s						
MUSM	Mu-Merkez	85.04	309	*i* P	P	00 49 28.9	+1.1
MUSM				IAML_P			

	comp=Z,93nm,0.3s						
BCA	Borcka	85.07	311	⇑iP	P	00 49 27.4	-0.4
VRH	Novokhopyorsk	85.52	321	eP	P	00 49 28.6	-1.1
VRH				pmax	pmax		
	comp=Z,70nm,0.7s						
KOPT	Kop Dagi	85.87	310	i P	P	00 49 34.9	+2.7
KOPT				IAML_P			
	comp=Z,54nm,0.3s						
TNCL	Tunceli-Merkez	86.59	309	i P	P	00 49 36.6	+1.2
TNCL				IAML_P			
	comp=Z,15nm,0.2s						
KELT	Kelkit	86.83	310	i P	P	00 49 37.7	+1.0
KELT				IAML_P			
	comp=Z,251nm,0.7s						
VORD	Divnogorie	87.04	321	eP	P	00 49 35.9	-1.3
VORD				pmax	pmax		
	comp=Z,20nm,0.7s						
VSR	Storozhevoye	87.12	321	d iP	P	00 49 36.7	-0.9
VSR				pmax	pmax		
	comp=Z,21nm,0.8s						
KLMR	Klimovskoe	87.24	331	eP	P	00 49 35.1	-2.8
KLMR				pmax	pmax		
	comp=Z,11nm,0.8s						
LPSR	Galich'ya Gora	87.31	322	eP	P	00 49 37.8	-0.7
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
KEMA	Kemaliye	87.41	309	i P	P	00 49 40.7	+1.3
KEMA				IAML_P			
	comp=Z,416nm,0.6s						
ILAR	Eielson Array	87.48	25	P	P	00 49 37.5	-1.6
	comp=Z,0.9nm,0.7s,baz=269,slow=4.5,SNR=8.0						
SUSE	Susehri	87.64	310	i P	P	00 49 41.4	+0.8
SUSE				IAML_P			
	comp=Z,12nm,0.1s						
HEKM	Malatya_Hekimh	87.82	309	i P	P	00 49 42.4	+0.9
HEKM				IAML_P			
	comp=Z,150nm,0.3s						
CUZAR	Zara_SIVAS	87.97	310	i P	P	00 49 43.0	+0.9
CUKAN	kangal_SIVAS	88.20	309	i P	P	00 49 44.3	+1.0
OBN	Obninsk	88.72	325	⇓eP	P	00 49 43.8	-1.3
OBN				e		00 49 58.3	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,84nm,23.0s						
KMBO	Kilima Mbogo	89.00	269	LR	LR	01 26 37.4	
	comp=Z,73nm,21.4s,baz=96,slow=34						
MMAI	Mount Meron Ar	89.97	303	LR	LR	01 35 17.7	
	comp=Z,31nm,21.2s,baz=290,slow=39						
SYO	Syowa Base	90.02	201	⇑eP	P	00 49 49.8	-1.1
SIM	Simferopol'	90.57	315	deP	P	00 49 53.7	-0.3
BRTR	Keskin Array B	91.15	310	P	P	00 49 55.3	-1.8
	comp=Z,2.0nm,0.8s,baz=124,slow=4.8,SNR=13						
BRTR				LR	LR	01 37 33.7	
	comp=Z,20nm,18.8s,baz=109,slow=40						
BRTR	Keskin Array B	91.15	310	ceP	P	00 49 55.5	-1.6
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
QSPA	South Pole Qui	91.25	180	eP	P	00 49 56.9	+0.1
	comp=Z,21nm,1.8s						
ARCES	ARCESS Array B	92.52	340	P	P	00 50 01.3	-1.2
	comp=Z,3.3nm,0.8s,baz=86,slow=6.2,SNR=12						
ARCES				PKKP	PKKPdf	01 07 15.4	-0.5
	comp=Z,1.9nm,1.0s,baz=256,slow=2.7,SNR=6.8						
ARCES				LR	LR	01 38 00.6	
	comp=Z,54nm,19.4s,baz=134,slow=40						
HEF	Hetta	93.39	339	eP	P	00 50 04.8	-1.8
AKASG	Malin Array Be	93.42	321	P	P	00 50 05.0	-2.1
	comp=Z,1.3nm,0.6s,baz=66,slow=5.0,SNR=3.2						
AKASG	Malin Array Be	93.42	321	P	P	00 50 05.0	-2.1
FINES	FINESS Array B	93.70	332	P	P	00 50 06.2	-1.9
	comp=Z,1.4nm,0.5s,baz=0.0,slow=1.9,SNR=9.0						
FINES				LR	LR	01 35 01.9	
	comp=Z,86nm,20.5s,baz=80,slow=37						
FINES	FINESS Array B	93.70	332	i P	P	00 50 07.0	-1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TESR	Tescani	95.64	317	⇑iP	P	00 50 16.2	-1.2
VRI	Vrincioaia	95.67	316	⇓iP	P	00 50 12.5	-5.1
VRI	Vrincioaia	95.67	316	⇓P	P	00 50 12.5	-5.1
PLOR	Plostina	95.73	316	⇑iP	P	00 50 16.0	-1.8
PLOR	Plostina	95.73	316	⇑P	P	00 50 16.0	-1.8
MLR	Muntele Rosu	96.27	316	⇑iP	P	00 50 19.9	-0.5
MLR	Muntele Rosu	96.27	316	⇑P	P	00 50 19.9	-0.5
BURAR	Bucovina Array	96.44	318	⇑iP	P	00 50 20.6	-0.5
BURAR	Bucovina Array	96.44	318	⇑P	P	00 50 20.7	-0.4
ELND	Elena	96.68	313	⇓iP	P	00 50 19.0	-3.2
EZN	Ezine	96.76	310	⇓iP	P	00 50 21.3	-1.3
EZN	Ezine	96.76	310	⇓P	P	00 50 21.3	-1.3
VOIR		96.90	316	⇑iP	P	00 50 21.3	-1.9
VOIR		96.90	316	⇑P	P	00 50 21.3	-1.9
KOLS	Kolonicke sedl	98.14	320	eP	Pdif	00 50 31.6	+2.9
KOLS	Kolonicke sedl	98.14	320	eP	Pdif	00 50 31.6	+2.9
HFS	Hagfors	99.89	332	LR	LR	01 40 07.2	
	comp=Z,47nm,19.1s,baz=64,slow=38						
VYHS	Vyhne	100.46	320	eP	Pdif	00 50 43.3	+4.3
VYHS	Vyhne	100.46	320	ePDIF	Pdif	00 50 43.3	+4.3
NB2	NORSAR Subarra	100.70	333	P	Pdif	00 50 37.6	-2.2
	comp=Z,5.7nm,1.7s,baz=69,slow=4.8						
NB200	NORSAR Array S	100.70	333	ePdif	Pdif	00 50 38.0	-1.9
NOA	NORSAR Array B	100.70	333	P	Pdif	00 50 38.0	-1.9
	comp=Z,0.5nm,0.6s,baz=70,slow=4.5,SNR=3.6						
NOA	NORSAR Array B	100.70	333	P	Pdif	00 50 38.0	-1.9
NVAR	Mina Array Bea	108.87	49	PP	PP	00 55 48.5	-0.3
	comp=Z,0.5nm,0.7s,baz=278,slow=6.5,SNR=4.1						
PDAR	Pinedale Array	113.48	42	PKKPab	PKKPab	01 06 21.4	-1.1
	comp=Z,0.7nm,0.7s,baz=128,slow=5.8,SNR=4.4						
ULM	Lac du Bonnet	117.30	29	PKP	PKPdf	00 55 35.8	-1.3
	comp=Z,2.0nm,0.5s,baz=356,slow=1.8,SNR=3.7						
ESDC	Sonseca Array	118.90	318	PKP	PKPdf	00 55 40.5	-0.1
	comp=Z,0.2nm,0.5s,baz=22,slow=2.7,SNR=4.6						
ECSD	EROS Data Cent	121.04	35	ePKPdf	PKPdf	00 55 44.0	-0.5
C40A	Isle Royale Na	122.10	27	ePKPdf	PKPdf	00 55 46.4	0.0
TOA0	Torodi Ar. Sit	123.15	287	ePKPdf	PKPdf	00 55 48.9	-0.5
TORD	Torodi Ar. Bea	123.15	287	PKP	PKPdf	00 55 47.2	-2.1
	comp=Z,3.7nm,0.7s,baz=70,slow=1.8,SNR=26						
TORD				PKKPbc	PKKPab	01 05 40.4	+0.2
	comp=Z,1.0nm,0.8s,baz=250,slow=2.9,SNR=11						
TOA1	Torodi Ar. Sit	123.15	287	ePKPdf	PKPdf	00 55 47.2	-2.1
COWI	Conover	123.42	29	ePKPdf	PKPdf	00 55 48.5	-0.5
TX31	Lajitas Ar. Si	123.45	53	ePKPdf	PKPdf	00 55 49.1	-0.6
TXAR	Lajitas Array	123.45	53	PKP	PKiKP	00 55 50.0	+0.1
	comp=Z,1.2nm,0.7s,baz=266,slow=1.5,SNR=9.1						
TXAR	Lajitas Array	123.45	53	PKIKP	PKiKP	00 55 50.0	+0.1
JCT	Junction City	125.99	50	ePKPdf	PKPdf	00 55 54.5	0.0
JCT	Junction City	125.99	50	ePKIKP	PKPdf	00 55 54.5	0.0
DBIC	Dimbokro	130.53	280	PKP	PKiKP	00 56 04.3	0.0
	comp=Z,5.4nm,0.9s,baz=137,slow=5.8,SNR=4.5						
WVT	Waverly	131.08	37	ePKPdf	PKPdf	00 56 03.5	-0.4
WVT	Waverly	131.08	37	ePKIKP	PKPdf	00 56 03.5	-0.4
TKL	Tuckaleechee C	133.77	34	PKP	PKPdf	00 56 09.4	+0.4
	comp=Z,3.7nm,0.5s,baz=345,slow=12,SNR=12						
PLCA	Paso Flores	137.93	161	PKP	PKPdf	00 56 17.4	+0.6
	comp=Z,4.1nm,0.9s,baz=216,slow=7.7,SNR=6.7						
ACON	Acoyapa	146.13	66	ePKPbc	PKPab	00 56 33.9	+0.4
GO04	Tololo Observa	147.07	152	ePKPbc	PKPbc	00 56 34.4	-1.1
LCO	Las Campanas	148.09	151	ePKPbc	PKPbc	00 56 38.8	+0.4
LCO	Las Campanas	148.09	151	ePKP2	PKPbc	00 56 38.8	+0.4
GO03	Copiap	149.49	150	ePKPbc	PKiKP	00 56 42.4	-0.4
GO02	Mina Guanaco	151.81	148	ePKPbc	PKiKP	00 56 47.9	-0.1
CPUP	Villa Florida	154.91	172	PKP	PKPdf	00 56 45.8	+0.6
	comp=Z,1.7nm,0.9s,baz=172,slow=8.1,SNR=3.4						
CPUP				PKPbc	PKiKP	00 56 54.0	+0.1
	comp=Z,3.5nm,0.9s,baz=167,slow=1.7,SNR=6.7						
CPUP				PKPab	PKPab	00 57 09.1	+0.1
	comp=Z,3.1nm,0.8s,baz=175,slow=1.1,SNR=4.4						
CPUP	Villa Florida	154.91	172	ePKPdf	PKPdf	00 56 44.2	-1.0
CPUP				ePKPbc	PKPbc	00 56 53.6	-0.3
LPAZ	La Paz	159.48	137	PKP	PKPdf	00 56 53.1	+1.1
	comp=Z,1.7nm,0.7s,baz=233,slow=1.5,SNR=9.5						
LPAZ				PKPab	PKPab	00 57 29.6	-0.3
	comp=Z,1.2nm,0.5s,baz=162,slow=2.9,SNR=4.4						
LPAZ	La Paz	159.48	137	ePKPdf	PKPdf	00 56 50.5	-1.5
LPAZ				epPKPdf	PKPdf	00 56 51.2	-0.8
LPAZ	La Paz	159.48	137	ePKIKP	PKPdf	00 56 50.5	-1.5
BDFB	Brasilia	164.68	201	PKPab	PKPab	00 57 52.0	+0.2
	comp=Z,2.7nm,0.9s,baz=198,slow=6.4,SNR=3.1						

MAN 31 00:52:35.2, 6°.07N×126°.08E, h33km, mb4.6, ML3.5, MS3.4, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.36	275	eP	Pn	00 52 44.8	+0.6
DDMP				eS	Sb	00 52 49.4	-0.2
MATI	Mati	0.89	12	eP	Pn	00 52 51.6	+0.2
MATI				eS	Sn	00 53 03.2	+0.1
DMPH	Davao City--Mi	1.15	331	⇑eP	Pb	00 52 56.1	-0.5
DMPH				eS	Sb	00 53 12.9	+1.6
KCP	Kidapawan	1.35	314	⇓eP	Pn	00 52 58.0	+0.2
KCP				i S	Sn	00 53 14.2	-0.5
SKMP	Bagumbayan, Su	1.59	286	eP	Pn	00 53 00.9	-0.1
SKMP				eS	Sn	00 53 21.5	+1.1
BUKP	Musuan	2.06	331	eP	Pn	00 53 08.4	+0.9
BUKP				eS	Sn	00 53 33.1	+1.0
CTBH	Cotabato--PC H	2.15	302	⇑iP	Pn	00 53 09.3	+0.6
BUTP	Butuan	2.92	351	eP	Pn	00 53 20.2	+0.9
BUTP				eS	Sb	00 54 02.2	+0.5
PAGZ	Pagadian	3.21	304	eP	Pn	00 53 22.9	-0.4
PAGZ				eS	Sn	00 53 51.9	-8.4

IDC 31 01:03:09.5±2.1, 6°.75S×151°.23E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/17, mbtmp3.6/3, Error ellipse: s-maj=135.5km s-min=28.4km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.00	230	P	P	01 07 54.5	-0.2
	1.9nm,0.9s,baz=56,slow=11,SNR=4.0						
ASAR	Alice Springs	23.67	223	P	P	01 08 22.8	-0.2
	0.7nm,0.6s,baz=54,slow=9.1,SNR=7.5						
ILAR	Eielson Array	84.54	22	P	P	01 15 44.3	0.0
	0.3nm,0.4s,baz=252,slow=5.6,SNR=7.4						
TORD	Torodi Ar. Bea	149.35	284	PKPbc	PKPbc	01 23 01.1	-0.4
	0.3nm,0.7s,baz=80,slow=2.6,SNR=2.9						

THR ***31*** *01:04:44.1, 28°.45N×51°.62E, h47km, ML3.0*
DSN ***31*** *01:04:50.7±0.2, 28°.22N×51°.97E, h30km, Error ellipse: s-maj=11.5km s-min=3.5km az=29.0*

ISC 31 01:04:49.5±4.7, 28°.2N±0°.2×52°.0E±0°.2, h15km, n7, σ0s76/9, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.88	85	AML	AML	01 05 25.9	
	comp=N,351nm,0.4s						
GHIR				Pg	Pg	01 05 06.1	-0.5
GHIR				S	Sn	01 05 21.4	+1.2
GHIR				AML	AML	01 05 28.0	
	comp=E,354nm,0.5s						
SHME	Shamm	4.28	119	P	Pn	01 05 54.0	-0.2
SHME				S	Sn	01 06 44.2	+0.4
KRBR	Kerman	4.54	66	Pn	Pn	01 05 43.4	-14
ASUD	Al Ashush, Dub	4.66	139	i P	Pn	01 06 00.2	+0.9
	SNR=18						
MSFE	Esma-Masafi	4.68	126	i P	Pn	01 05 59.8	+0.1
	SNR=8.6						
MSFE				S	Sn	01 06 53.6	-0.2
MDH	Madha	4.82	126	P	Pn	01 06 01.4	-0.1
UOSS	Minazif	4.98	130	i P	Pn	01 06 03.0	-0.7
	SNR=6.3						

MAN 31 01:13:53.7, 7°.32N×124°.73E, h6km, mb4.6, ML3.5, MS3.4, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	0.47	131	⇓eP	Pg	01 14 03.4	+0.6
KCP				eS	Sb	01 14 28.8	+17
CTBH	Cotabato--PC H	0.49	259	⇓iP	Pb	01 14 04.8	0.0
CTBH				i S	Sb	01 14 13.1	+0.9
BUKP	Musuan	0.65	30	eP	Pg	01 14 06.2	0.0
BUKP				eS	Sb	01 14 16.4	-0.4
DMPH	Davao City--Mi	0.80	107	⇑eP	Pg	01 14 08.9	-0.2
DMPH				eS	Sg	01 14 20.3	+0.7
SKMP	Bagumbayan, Su	0.81	194	eP	Pg	01 14 08.4	-0.9
SKMP				eS	Sg	01 14 20.2	+0.3
CGP	Cagayan de Oro	1.13	358	⇑eP	Pg	01 14 15.0	-0.4
CGP				eS	Sg	01 14 29.5	-0.7
PAGZ	Pagadian	1.44	292	eP	Pn	01 14 20.2	-0.1
PAGZ				eS	Sb	01 14 39.4	-0.2
DDMP	Don Marcelino,	1.54	141	eP	Pn	01 14 20.4	-1.4
DDMP				eS	Sg	01 14 43.6	+0.2

SOF ***31*** *01:26:51.5, 40°.19N×25°.89E, h2km, MD3.2*
DDA ***31*** *01:26:53.4, 40°.30N×25°.77E, h27km, ML4.0*
ISCJB ***31*** *01:26:54.0±0.3, 40°.313N±0°.010×25°.76E±0°.01, h10km±2km, Error ellipse: s-maj=1.9km s-min=1.6km az=158.6*
ATH ***31*** *01:26:54.2, 40°.30N×25°.79E, h29km, ML3.6/24, Error ellipse: s-maj=1.2km s-min=0.7km az=70.0*
ISK ***31*** *01:26:54.0, 40°.31N×25°.81E, h9km, ML3.9/26*
THE ***31*** *01:26:55.2, 40°.30N×25°.79E, h12km, ML3.6/13, Error ellipse: s-maj=0.8km s-min=0.3km az=339.0*
IDC ***31*** *01:26:55.2±1.1, 40°.33N×26°.03E, h0km, mb3.0/2, mb1 3.5/7, mb1mx3.2/55, mbtmp3.3/7, ML3.7/5, Error ellipse: s-maj=16.7km s-min=12.7km az=79.0*
BEO ***31*** *01:26:59.0±0.9, 40°.56N×25°.93E, h37km±5km, ML3.8/12*

ISC 31 01:26:54.7±0.8, 40°.30N±0°.01×25°.83E±0°.02, h11km±6km, n215, σ1s41/275, 17C-35D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.12	153	PG	Pg	01 26 57.5	-0.2
GADA				SG	Sg	01 27 00.0	+0.2
SMTH	Samothraki Isl	0.28	307	P	Pb	01 27 00.8	-1.0
SMTH				S	Sg	01 27 04.8	+0.5
	20μm,0.1s						
SMTH	Samothraki Isl	0.28	307	P	Pb	01 27 00.8	-1.0
SMTH				AML	AML	01 27 05.0	
	comp=E,35898μm,0.1s						
SMTH				AML	AML	01 27 05.3	
	comp=N,45944μm,0.2s						
BOZC	Bozcaada	0.49	159	PG	Pg	01 27 04.3	+0.1
BOZC	Bozcaada	0.49	159	⇓iP	Pb	01 27 05.3	0.0
BOZC				i S	Sb	01 27 12.0	-0.5
ENEZ	Enez	0.50	30	PG	Pg	01 27 04.6	+0.1
ENEZ				SG	Sb	01 27 11.8	-1.1
EZN	Ezine	0.61	141	PG	Pg	01 27 06.6	+0.1
EZN	Ezine	0.61	141	⇓iP	Pg	01 27 06.5	+0.1
EZN				S	Sb	01 27 15.1	-0.8
ALN	Alexandroupoli	0.62	16	PG	Pg	01 27 06.4	-0.3
ALN	Alexandroupoli	0.62	16	P	Pb	01 27 06.9	-0.6
ALN				S	Sb	01 27 15.7	-0.6
ALN	Alexandroupoli	0.62	16	P	Pb	01 27 06.9	-0.6
ALN				AML	AML	01 27 16.1	
	comp=N,3659μm,0.4s						
ALN				AML	AML	01 27 16.9	
	comp=E,2505μm,0.3s						
LIA	Limnos Island	0.64	231	P	Pg	01 27 07.0	0.0
LIA				S	Sb	01 27 16.2	-0.5
	comp=E,7μm,0.4s						
LIA	Limnos Island	0.64	231	P	Pg	01 27 07.0	0.0
LIA				S	Sb	01 27 16.1	-0.7
LIA				AML	AML	01 27 19.7	
	comp=E,13915μm,0.4s						
LIA				AML	AML	01 27 20.2	
	comp=N,13818μm,0.6s						
LPK	Lapseki	0.72	84	PG	Pg	01 27 08.6	+0.1
BAYC	CANAKKALE_Bayr	0.79	135	⇓iP	Pb	01 27 10.7	+0.3
BAYC				i S	Sb	01 27 21.7	+0.6
BAYC				IAML_P			
	comp=Z,59μm,0.2s						
KESN	Edirne-Kesan	0.83	51	⇑iP	Pb	01 27 10.9	-0.6
KESN				i S	Sn	01 27 23.8	-1.4
KESN				IAML_P			
	comp=Z,7μm,0.1s						
RDO	Rodhopi	0.87	345	PG	Pg	01 27 11.0	-0.5
RDO	Rodhopi	0.87	345	P	Pb	01 27 11.3	-0.5
RDO				S	Sb	01 27 23.9	+0.3
	comp=Z,2μm,0.4s						
RDO	Rodhopi	0.87	345	P	Pb	01 27 11.4	-0.5
RDO				S	Sb	01 27 23.0	-0.6
RDO				AML	AML	01 27 26.2	
	comp=E,5672μm,0.3s						
RDO				AML	AML	01 27 26.9	
	comp=N,4576μm,0.2s						
GPNR	Gulpinar-Canak	0.88	164	PG	Pg	01 27 11.2	-0.4
THAS	Thassos island	0.90	290	P	Pg	01 27 11.4	-0.6
THAS				S	Sn	01 27 24.7	-1.6
	comp=N,3μm,0.3s						
THAS	Thassos island	0.90	290	P	Pg	01 27 11.5	-0.6
THAS				S	Sb	01 27 23.5	-0.8
THAS				AML	AML	01 27 25.7	
	comp=N,4756μm,0.2s						
THAS				AML	AML	01 27 27.2	
	comp=E,8061μm,0.3s						
EFSA	Agios Efstrati	1.00	221	P	Pn	01 27 14.1	-0.5
EFSA				S	Sn	01 27 27.4	-1.2
EFSA				AML	AML	01 27 30.5	
	comp=E,6474μm,0.6s						
EFSA				AML	AML	01 27 31.8	
	comp=N,7052μm,0.4s						
SIGR	SIGRI	1.09	179	PN	Pn	01 27 15.5	-0.4
SIGR	SIGRI	1.09	179	P	Pb	01 27 15.0	-0.5
SIGR				S	Sn	01 27 30.4	-0.5
	comp=N,13μm,0.7s						
SIGR	SIGRI	1.09	179	P	Pb	01 27 14.9	-0.5
SIGR				S	Sn	01 27 30.2	-0.7
SIGR				AML	AML	01 27 31.5	
	comp=N,38386μm,0.5s						
SIGR				AML	AML	01 27 33.6	
	comp=E,14792μm,0.6s						
RKY	Sarkoy-Tekirda	1.10	69	PN	Pg	01 27 15.6	-0.2
SART	Tekirdag	1.10	69	⇓iP	Pb	01 27 15.0	-0.8
SART				i S	Sn	01 27 32.0	+0.6
SART				IAML_P			
	comp=Z,15μm,0.1s						
PRK	Paraskevi	1.11	162	P	Pg	01 27 16.3	+0.3
PRK				S	Sn	01 27 31.9	+0.5
	comp=Z,14μm,0.7s						
PRK	Paraskevi	1.11	162	P	Pb	01 27 14.8	-1.0
PRK				S	Sn	01 27 32.0	+0.5
PRK				AML	AML	01 27 33.7	
	comp=E,24177μm,0.8s						
PRK				AML	AML	01 27 34.0	
	comp=N,12473μm,0.5s						
AYVA	Ayvalik	1.19	146	⇓iP	Pg	01 27 17.4	-0.2
AYVA				i S	Sn	01 27 33.5	0.0
AYVA				IAML_P			
	comp=Z,35μm,0.3s						
KAVA	Kavala	1.22	305	P	Pn	01 27 17.1	-0.6
KAVA				S	Sn	01 27 33.5	-0.7
	comp=Z,1μm,0.4s						
KAVA	Kavala	1.22	305	P	Pn	01 27 17.1	-0.6
KAVA				S	Sg	01 27 33.3	-0.6
KAVA				AML	AML	01 27 35.6	
	comp=E,3049μm,0.2s						
KAVA				AML	AML	01 27 36.0	
	comp=N,3620μm,0.5s						
KVLA	Kavala	1.27	301	P	Pn	01 27 17.8	-0.6
KVLA				S	Sb	01 27 34.3	-0.7
KVLA				AML	AML	01 27 37.5	
	comp=N,4659μm,0.3s						
KVLA				AML	AML	01 27 38.6	
	comp=E,4158μm,0.5s						
MRMT	Marmara Adasi	1.38	77	PN	Pn	01 27 19.6	-0.4
KDZ	Kurdzhali	1.38	347	PN	Pn	01 27 19.7	-0.3
KDZ	Kurdzhali	1.38	347	i P	Pn	01 27 19.6	-0.4
OUR	Ouranopolis	1.41	272	PN	Pn	01 27 19.4	-0.9
OUR	Ouranopolis	1.41	272	P	Pn	01 27 19.4	-0.9
OUR				S	Sn	01 27 37.6	-1.3
	comp=E,2μm,0.3s						
OUR	Ouranopolis	1.41	272	P	Pn	01 27 19.4	-0.9
OUR				S	Sn	01 27 37.0	-1.9
OUR				AML	AML	01 27 43.3	
	comp=N,4718μm,0.3s						
OUR				AML	AML	01 27 43.3	
	comp=E,5186μm,0.4s						
GONE	Gonen-Balikesi	1.45	99	PN	Pb	01 27 21.1	-0.5
TKR	Tekirdag	1.47	62	PN	Pb	01 27 21.3	-0.8
DKL	Dikili	1.48	146	PN	Pb	01 27 21.5	-0.7
BALY	Balya	1.49	112	⇓iP	Pg	01 27 23.0	-0.2
BALY				i S	Sg	01 27 42.8	+0.3
EDC	Edincik	1.56	88	PN	Pn	01 27 22.5	+0.1
RZN	Rozhen	1.62	329	i P	Pn	01 27 23.4	0.0
ZEDA	zmir-Bergama	1.65	144	⇓iP	Pb	01 27 24.9	-0.2
ZEDA				i S	Sg	01 27 46.6	-1.0
ZEDA				IAML_P			
	comp=Z,14μm,0.3s						
CRLT	Corlu	1.67	60	PN	Pb	01 27 24.4	-1.1
PAIG	Paliouri	1.69	258	P	Pn	01 27 22.9	-1.3
PAIG	Paliouri	1.69	258	P	Pn	01 27 22.8	-1.3
PAIG				AML	AML	01 27 58.3	
	comp=N,825μm,0.5s						
PAIG				AML	AML	01 27 58.7	
	comp=E,592μm,0.5s						
EDRB	Edirne	1.69	24	PN	Pn	01 27 24.4	+0.2
BALB	Balikesir	1.71	112	PN	Pn	01 27 24.7	+0.3
STEP	BALIKESIR_Sava	1.72	122	⇓iP	Pb	01 27 25.7	-0.7
STEP				i S	Sg	01 27 49.0	-1.1
STEP				IAML_P			
	comp=Z,16μm,0.3s						
SKY	Skiros Island	1.73	215	P	Pn	01 27 23.8	-0.9
SKY				S	Sn	01 27 46.0	-0.8
	comp=Z,1μm,0.3s						
SKY	Skiros Island	1.73	215	P	Pn	01 27 23.5	-1.2
SKY				AML	AML	01 27 51.6	
	comp=N,2750μm,0.3s						
SKY				AML	AML	01 27 52.7	
	comp=E,2462μm,0.3s						
FOCM	Foa	1.73	156	PN	Pn	01 27 24.9	+0.2
DIM	Dimitrovgrad	1.76	353	i P	Pn	01 27 25.1	-0.1
KIRK	Kırklareli	1.76	33	i P	Pn	01 27 24.5	-0.7
KIRK				i S	Sn	01 27 48.0	+0.3
PSRA	Psara	1.77	187	P	Pn	01 27 25.2	0.0
PSRA				S	Sn	01 27 47.1	-0.6
PSRA				AML	AML	01 27 55.1	
	comp=N,3046μm,0.4s						
PSRA				AML	AML	01 27 55.9	
	comp=E,3987μm,0.5s						
KRBN	Karaburun	1.79	162	PN	Pn	01 27 25.9	+0.3
PLG	Polygyros	1.82	273	P	Pn	01 27 25.3	-0.8
PLG	Polygyros	1.82	273	P	Pn	01 27 25.2	-0.8
PLG				S	Sn	01 27 47.8	-1.3
PLG				AML	AML	01 27 55.5	
	comp=N,2100μm,0.5s						
PLG				AML	AML	01 27 56.3	
	comp=E,1668μm,0.4s						
NVR	Nevrokopi	1.82	306	P	Pn	01 27 25.7	-0.3
NVR				S	Sn	01 27 47.8	-1.4
	comp=E,732nm,0.3s						
NVR	Nevrokopi	1.82	306	P	Pn	01 27 25.8	-0.3
NVR				S	Sn	01 27 48.5	-0.6
NVR				AML	AML	01 27 56.2	
	comp=N,1431μm,0.3s						
NVR				AML	AML	01 27 57.9	
	comp=E,1517μm,0.3s						
PHSR	Pinarhisar	1.85	43	PN	Pn	01 27 26.7	+0.3
PHSR	Pinarhisar	1.85	43	⇑iP	Pb	01 27 27.1	-1.4
SRS	Serrai	1.89	296	P	Pn	01 27 26.2	-0.7
SRS	Serrai	1.89	296	P	Pn	01 27 26.5	-0.4
SRS				S	Sn	01 27 50.1	-0.6
SRS				AML	AML	01 27 56.8	
	comp=N,2217μm,0.6s						
SRS				AML	AML	01 27 56.9	
	comp=E,3344μm,0.6s						
ALNA	Alonissos	1.90	233	P	Pn	01 27 26.5	-0.5
ALNA				S	Sn	01 27 50.2	-0.8
ALNA				AML	AML	01 28 05.9	
	comp=E,3536μm,0.8s						
ALNA				AML	AML	01 28 06.6	
	comp=N,3139μm,0.9s						
CHOS	Chios island	1.92	175	PN	Pn	01 27 27.9	+0.5
CHOS	Chios island	1.92	175	P	Pn	01 27 27.2	-0.2
CHOS				S	Sn	01 27 51.8	+0.2
	comp=N,2μm,0.4s						
CHOS	Chios island	1.92	175	P	Pn	01 27 27.4	0.0
CHOS				AML	AML	01 27 59.3	
	comp=N,3697μm,0.6s						
CHOS				AML	AML	01 28 01.1	
	comp=E,3888μm,0.3s						
KCTX	Karacabey (Bur	1.94	90	PN	Pn	01 27 27.8	+0.2
SOH	Sokhos	1.96	286	P	Pn	01 27 27.7	-0.2
SOH				AML	AML	01 27 59.5	
	comp=E,2032μm,0.6s						
SOH				AML	AML	01 27 59.5	
	comp=N,2940μm,0.4s						
PLD	Plovdiv	1.99	335	PN	Pn	01 27 28.3	0.0
PLD	Plovdiv	1.99	335	ePg	Pg	01 27 32.2	-0.7
PLD				eSg	Sb	01 27 56.7	+0.9
PLD	Plovdiv	1.99	335	i P	Pn	01 27 28.7	+0.4
CESE	eme	2.00	169	PN	Pn	01 27 28.4	0.0
URLA	Izmir	2.03	163	PN	Pn	01 27 29.0	+0.2
URLA	Izmir	2.03	163	⇓iP	Pn	01 27 29.8	+1.0

URLA				iS	Sn	01 27 53.6	-0.6
URLA				IAML_P			
	comp=Z,4µm,0.2s						
MMB	Musomiste	2.05	310	iP	Pn	01 27 28.6	-0.5
AKS	Akhisar	2.09	132	PN	Pn	01 27 30.0	+0.3
AKHS	Akhisar	2.09	132	⇓iP	Pn	01 27 30.6	+0.9
AKHS				iS	Sg	01 28 02.7	+0.8
AKHS				IAML_P			
	comp=Z,10µm,0.2s						
HORT	Hortiatis	2.10	279	PN	Pn	01 27 29.9	0.0
HORT	Hortiatis	2.10	279	P	Pn	01 27 29.9	0.0
HORT	Hortiatis	2.10	279	P	Pn	01 27 29.9	0.0
HORT				AML	AML	01 28 02.5	
	comp=N,1522µm,0.5s						
HORT				AML	AML	01 28 04.7	
	comp=E,967µm,0.4s						
BLCB	Balcova	2.13	153	PN	Pn	01 27 30.8	+0.6
SKIA	Skiathos	2.14	239	P	Pn	01 27 29.1	-1.3
DURS	Dursunbey	2.15	108	⇓iP	Pn	01 27 31.5	+0.9
DURS				iS	Sb	01 27 59.4	-1.1
DURS				IAML_P			
	comp=Z,3µm,0.3s						
CTYL	Yalikoy Yolu	2.21	57	PN	Pn	01 27 31.7	+0.5
CTYL	Yalikoy Yolu	2.21	57	⇓iP	Pn	01 27 30.8	-0.4
CTYL	Yalikoy Yolu	2.21	57	S	Sb	01 28 00.5	-1.4
THE	Thessaloniki	2.21	280	P	Pn	01 27 31.1	-0.2
THE				AML	AML	01 28 09.7	
	comp=N,587µm,1.1s						
THE				AML	AML	01 28 11.0	
	comp=E,401µm,0.4s						
XOR	Xorichti	2.23	246	P	Pn	01 27 30.1	-1.6
XOR				S	Sn	01 27 55.5	-3.8
	comp=E,250nm,0.6s						
XOR	Xorichti	2.23	246	P	Pn	01 27 30.4	-1.3
XOR				AML	AML	01 28 10.2	
	comp=E,471µm,0.6s						
XOR				AML	AML	01 28 11.1	
	comp=N,428µm,0.7s						
JMB	Yambol	2.24	14	eP	Pn	01 27 32.7	+1.0
NEO	Neokhori	2.24	245	P	Pn	01 27 30.4	-1.3
CTKS	Kestanelik-??a	2.24	64	PN	Pn	01 27 32.0	+0.3
GOMA	Golmarmara-Man	2.27	134	PN	Pn	01 27 32.6	+0.5
EREA	Eretria	2.38	219	P	Pn	01 27 32.8	-0.9
KNT	Kendrikon	2.39	292	P	Pn	01 27 33.9	+0.1
KNT				S	Sb	01 28 07.5	+0.4
	comp=N,722nm,0.6s						
KNT	Kendrikon	2.39	292	P	Pn	01 27 33.5	-0.2
KNT				AML	AML	01 28 13.6	
	comp=N,1664µm,0.5s						
KNT				AML	AML	01 28 14.5	
	comp=E,1231µm,0.6s						
ULDT	Uludag	2.54	93	iP	Pn	01 27 37.4	+1.3
ULDT				iS	Sg	01 28 14.9	-1.3
ULDT				IAML_P			
	comp=Z,1µm,0.1s						
DEMI	Demirci	2.56	118	⇓iP	Pn	01 27 37.4	+1.2
DEMI				iS	Sg	01 28 16.3	-0.6
DEMI				IAML_P			
	comp=Z,1µm,0.1s						
LIT	Litokhoron	2.56	267	P	Pn	01 27 35.6	-0.6
LIT	Litokhoron	2.56	267	P	Pn	01 27 35.3	-0.9
KKB	Krupnik	2.60	308	iP	Pn	01 27 36.5	-0.2
KLYT	Kilyos	2.62	68	⇓iP	Pn	01 27 37.5	+0.6
KLYT	Kilyos	2.62	68	S	Sn	01 28 09.8	+1.1
ELND	Elena	2.63	1	⇓iP	Pn	01 27 37.1	0.0
ELND	Elena	2.63	1	S	Sn	01 28 10.0	+1.1
VAY	Valandovo	2.67	293	ePn	Pb	01 27 40.1	-2.5
VAY				eSn	Sn	01 28 10.8	+0.7
VAY	Valandovo	2.67	293	iPn	Pg	01 27 45.2	-0.7
ATAL	Atalanti	2.70	234	P	Pn	01 27 37.1	-1.0
SMG	Samos	2.71	163	P	Pn	01 27 38.3	+0.1
PTL	Penteli	2.72	215	P	Pn	01 27 37.3	-1.0
PTL	Penteli	2.72	215	P	Pn	01 27 37.5	-0.8
YLV	Yalova	2.72	83	⇓iP	Pb	01 27 41.9	-1.5
LKR	Lokris	2.74	234	P	Pn	01 27 37.5	-1.1
LKR	Lokris	2.74	234	P	Pn	01 27 37.9	-0.7
TNSA	Tinos	2.81	191	P	Pn	01 27 39.3	-0.2
ATH	Athens Observa	2.85	216	P	Pn	01 27 39.4	-0.7
VILL	Villia	2.89	223	P	Pn	01 27 39.7	-1.1
VLY	Voula,Athens	2.91	214	P	Pn	01 27 40.1	-0.9
AGG	Agios Georgios	2.99	246	P	Pn	01 27 41.6	-0.4
AGG	Agios Georgios	2.99	246	P	Pn	01 27 42.0	0.0
SILT	Sile	3.02	72	⇑iP	Pn	01 27 42.8	+0.3
VTS	Vitosha	3.03	321	ePn	Pn	01 27 42.5	-0.2
VTS				eSn	Sn	01 28 15.5	-3.5
VTS	Vitosha	3.03	321	⇑iP	Pn	01 27 43.3	+0.6
VTS	Vitosha	3.03	321	S	Sg	01 28 30.9	-1.0
VTS	Vitosha	3.03	321	iP	Pn	01 27 43.1	+0.4
AYDN	Tasoluk	3.08	148	⇓iP	Pn	01 27 44.7	+1.3
AYDN				iS	Sg	01 28 30.5	-3.2
AYDN				IAML_P			
	comp=Z,670nm,0.1s						
STIP	Stip	3.09	298	iPn	Pn	01 27 42.0	-1.4
PRD	Provadia	3.13	22	iP	Pn	01 27 43.4	-0.5
DSF	Desfina	3.18	235	P	Pn	01 27 43.6	-1.1
PLVB	Pleven	3.21	344	⇓iP	Pn	01 27 46.0	+0.9
APE	Apeiranthos	3.23	184	⇑iP	Pn	01 27 45.5	0.0
APE	Apeiranthos	3.23	184	S	Sn	01 28 22.7	-1.3
APE	Apeiranthos	3.23	184	P	Pn	01 27 45.1	-0.3
RAZG	Razgrad	3.30	9	⇑iP	Pn	01 27 46.7	+0.3
RAZG	Razgrad	3.30	9	S	Sn	01 28 25.7	+0.1
EVR	Evrytania	3.40	247	P	Pn	01 27 47.6	-0.1
EVR	Evrytania	3.40	247	P	Pn	01 27 47.3	-0.4
MPEP	Malo Peshtene	3.43	334	P	Pn	01 27 48.5	+0.4
DID	Didima	3.44	217	P	Pn	01 27 47.2	-1.1
AMGA	Amorgos Island	3.46	179	P	Pn	01 27 48.2	-0.4
ANX	Ano Chora	3.47	242	P	Pn	01 27 48.4	-0.4
KRND	KRANIDI	3.58	217	P	Pn	01 27 49.9	-0.4
GUR	Goura	3.59	230	P	Pn	01 27 49.7	-0.8
KLV	Kalavryta, Ach	3.64	233	P	Pn	01 27 50.5	-0.6
MHLA	Plaka, Milos I	3.72	198	P	Pn	01 27 51.4	-0.7
MHLO	Agia Marina, M	3.77	198	P	Pn	01 27 52.4	-0.4
ZAPS	Zavoj	3.81	322	ePn	Pn	01 27 53.9	+0.5
ZAPS				eSg	Sg	01 28 54.6	-2.4
COPA	Copaceanca	3.86	353	⇑iP	Pn	01 27 54.3	+0.3
BARS	Barje	3.92	311	ePn	Pn	01 27 55.5	+0.6
BARS	Barje	3.92	311	ePn	Pb	01 28 04.8	+1.0
BARS				eSn	Sn	01 28 37.0	-3.9
RASA	Rasa	4.03	14	⇑iP	Pn	01 27 57.0	+0.7
ICOR	Ion Corvin	4.09	20	⇓iP	Pn	01 27 57.9	+0.8
ICOR	Ion Corvin	4.09	20	S	Sn	01 28 45.3	+0.4
BAIL	Bailesti	4.15	334	⇓iP	Pn	01 27 57.8	-0.2
AMT	Artemida-Makis	4.24	231	P	Pn	01 27 59.7	+0.5
HUMR	Humele	4.27	352	⇑iP	Pn	01 27 59.6	0.0
ZAGS	Zajecar	4.41	324	ePn	Pn	01 28 01.5	-0.1
BOVS	Bovan	4.53	319	ePn	Pn	01 28 03.8	+0.6
BOVS				eSg	Sg	01 29 18.3	-1.9
SELS	Selova	4.57	311	ePn	Pn	01 28 03.5	-0.3
SELS				eSg	Sg	01 29 20.4	-1.0
TIRR	Tirgusor	4.58	24	⇓iP	Pn	01 28 04.3	+0.5
KTHA	Kythira Island	4.59	209	P	Pn	01 28 03.9	-0.1
TIR	Tirane	4.64	285	ePn	Pn	01 28 06.7	+1.9
HARR	Harsova	4.65	19	⇑iP	Pn	01 28 05.5	+0.6
KUBS	Kucevo	5.13	325	ePn	Pn	01 28 10.0	-1.5
ARR	Arges	5.14	351	⇓iP	Pn	01 28 11.9	+0.3
ARR	Arges	5.14	351	S	Sn	01 29 09.0	-2.0
CFR	Carcaliu	5.16	18	⇓iP	Pn	01 28 11.9	0.0
VOIR		5.17	354	⇓iP	Pn	01 28 12.3	+0.3
MLR	Muntele Rosu	5.19	1	Pn	Pn	01 28 14.0	+1.6
	comp=Z,2.4nm,0.3s,baz=180,slow=2.0,SNR=39						
MLR				Sn	Sn	01 29 15.3	+3.1
	comp=Z,1.1nm,0.3s,baz=236,slow=18,SNR=2.4						
MLR				Lg	Lg	01 29 40.9	
	comp=Z,0.3nm,0.3s,baz=238,slow=19,SNR=2.7						
MLR	Muntele Rosu	5.19	1	⇑iP	Pn	01 28 13.8	+1.4
HERR	Herculane	5.22	332	⇓iP	Pn	01 28 12.4	-0.3
GRUS	Gruza	5.23	315	ePn	Pn	01 28 12.6	-0.2
GRUS				eSg	Sg	01 29 41.4	-1.0
SJES	Sjenica	5.28	306	ePn	Pn	01 28 13.2	-0.4
IVAS	Ivanjica	5.35	310	ePn	Pn	01 28 14.1	-0.4
TLCR		5.36	23	⇑iP	Pn	01 28 15.3	+0.8
LOT	Lotru	5.36	344	⇑iP	Pn	01 28 14.8	+0.1
LOT	Lotru	5.36	344	S	Sn	01 29 13.5	-3.0
MDVR	Moldovita	5.41	327	⇓iP	Pn	01 28 15.5	+0.1
TUDR		5.46	14	⇑iP	Pn	01 28 17.0	+1.0
GZR	Gura Zlata	5.56	337	⇓iP	Pn	01 28 17.4	0.0
GZR	Gura Zlata	5.56	337	S	Sn	01 29 16.7	-4.7
PLOR	Plostina	5.58	6	⇓iP	Pn	01 28 19.7	+2.0
VRI	Vrincioaia	5.60	6	⇑iP	Pn	01 28 19.4	+1.4
TRUS	Trudelj	5.62	316	ePn	Pn	01 28 18.1	0.0
TRUS				eSg	Sg	01 29 53.4	-1.5
DIVS	Divibare	5.76	313	ePn	Pn	01 28 19.2	-1.0
DIVS				eSg	Sg	01 29 58.7	-0.8
MDB	Medias	5.93	350	⇓iP	Pn	01 28 24.0	+1.5
BBLS	Lazići	5.96	309	ePn	Pn	01 28 21.9	-1.0
BBLS				eSg	Sg	01 30 04.8	-1.1
BRTR	Keskin Array B	6.03	93	Pn	Pn	01 28 24.6	+0.8
	comp=Z,0.8nm,0.3s,baz=271,slow=12,SNR=35						
BRTR				Lg	Lg	01 30 05.0	
	baz=264,slow=30,SNR=2.0						
BZS	Buzias	6.14	331	⇑iP	Pn	01 28 25.6	+0.2
BZS	Buzias	6.14	331	S	Sg	01 30 08.5	-3.4
TESR	Tescani	6.24	5	⇓iP	Pn	01 28 27.7	+1.0
DRGR		6.87	342	⇓iP	Pn	01 28 36.0	+0.6
MILM	Milestii Mici	6.96	17	⇓iP	Pn	01 28 37.0	+0.4
TIP	Timpagrande	7.08	264	⇓iP	Pn	01 28 37.5	-0.8
SEVA	Sevastopol	7.18	51	⇑iP	Pn	01 28 39.1	-0.5
SEVA	Sevastopol	7.18	51	S	Sn	01 29 53.1	-8.1
BURAR	Bucovina Array	7.33	357	⇓iP	Pn	01 28 43.4	+1.7
MORH	Mrgy, Hungar	7.90	321	ePn	Pn	01 28 49.0	-0.4
MORH				Sn	Sn	01 30 27.0	+8.3
MORH				eSg	Sg	01 31 15.0	+7.0
CUSAR	Sarkisla-SIVAS	8.06	93	iP	Pn	01 28 48.8	-3.1
KOLS	Kolonicke sedl	8.99	345	ePN	Pn	01 29 06.4	+1.9
KOLS	Kolonicke sedl	8.99	345	eSG	Sg	01 31 48.0	+4.9
VYHS	Vyhne	9.59	331	ePN	Pn	01 29 12.4	-0.3
MMAI	Mount Meron Ar	10.58	130	Pn	Pn	01 29 26.1	-0.2
	comp=Z,2.2nm,0.3s,baz=316,slow=11,SNR=10						
AKASG	Malin Array Be	10.67	12	Pn	Pn	01 29 27.1	-0.2
	comp=Z,0.6nm,0.3s,baz=199,slow=14,SNR=2.7						
GERES	GERESS Array B	12.14	319	Pn	Pn	01 29 50.9	+3.3
	comp=Z,0.1nm,0.3s,baz=137,slow=13,SNR=3.2						
ESDC	Sonseca Array	22.79	278	P	P	01 32 01.0	+3.7
	comp=Z,0.1nm,0.4s,baz=73,slow=10,SNR=4.6						
TORD	Torodi Ar. Bea	34.36	225	P	P	01 33 45.8	+4.1
	comp=Z,0.3nm,0.8s,baz=27,slow=10.0,SNR=2.2						
HHC	Hu-ho-hao-te	62.42	59	P	P	01 37 18.0	+0.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,12nm,5.8s						
WHN	Wuhan	69.95	67	⇓P	P	01 38 03.5	-2.6

IDC ***31*** *01:28:35.8±0.6, 12°.70N×143°.62E, h0^{km}, mb4.1/16, mb1 4.3/17, mb1mx4.1/42, mbtmp4.1/17, ML4.0/1, MS3.3/6, Ms1 3.2/6, ms1mx3.0/24, Error ellipse: s-maj=18.2km s-min=12.5km az=84.0*
ISCJB ***31*** *01:28:36.7±0.3, 12°.52N±0°.04×143°.68E±0°.05, h27^{km}, mb4.5/52, MS3.4/7, Error ellipse: s-maj=7.3km s-min=5.9km az=15.8*
NEIC ***31*** *01:28:39.0±2.1, 12°.48N×143°.68E, h35^{km}±3^{km}, mb4.7/35, Error ellipse: s-maj=16.3km s-min=6.7km az=135.0*
ISC 31 01:28:38.4±0.4**, 12°.58N**±0°.06×**143°.68E**±0°.07**, h27^{km}, n74,** σ**1^{s}.69**/71**, mb4.6**/52**, MS3.3**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.53	49	Pn	Pn	01 29 03.4	-0.6
	31nm,0.3s,baz=150,slow=7.4,SNR=9.0						
GUMO				Sn	Sn	01 29 22.1	-0.9
	32nm,0.3s,baz=229,slow=20,SNR=5.0						
GUMO	Guam	1.53	49	ePn	Pn	01 29 03.4	-0.6
GUMO				eSn	Sb	01 29 24.8	-0.3
SIJI	Sorong	18.18	224	Pn	P	01 32 52.0	+2.8
	0.5nm,0.3s,baz=45,slow=9.4,SNR=3.2						
PMG	Port Moresby	22.11	171	eP	P	01 33 29.6	-2.2
	56nm,1.5s						
TGY	Tagaytay City	22.18	277	P	P	01 33 34.4	+1.6
	101nm,0.3s,baz=138,slow=5.7,SNR=3.4						
H11S3	WAKE ISLAND Hy	22.92	72	T	T	01 57 33.5	
	baz=259,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	22.93	72	T	T	01 57 34.5	
	baz=259,slow=75,SNR=24						
H11S2	WAKE ISLAND Hy	22.93	72	T	T	01 57 35.1	
	baz=259,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	23.38	69	T	T	01 58 07.1	
	baz=255,slow=75,SNR=38						
H11N2	WAKE ISLAND Hy	23.39	69	T	T	01 58 07.7	
	baz=255,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	23.39	69	T	T	01 58 07.8	
	baz=255,slow=75,SNR=28						
JNU	Nakatsue	23.57	332	P	P	01 33 46.8	0.0
	13nm,0.9s,baz=158,slow=5.4,SNR=4.9						
JNU	Nakatsue	23.57	332	eP	P	01 33 46.2	-0.6
	58nm,1.4s						
YULB	Yu-li	23.82	300	eP	P	01 33 49.0	-0.3
	26nm,1.3s						
NACB	Ninganchiao	23.89	302	eP	P	01 33 48.1	-1.8
	64nm,1.5s						
SSLB	Suanglung	24.26	301	eP	P	01 33 53.4	-0.1
	56nm,1.3s						
YHNB	Yeheng	24.28	303	eP	P	01 33 56.3	+2.7
	57nm,1.5s						
TPUB	Ta-pu	24.35	299	eP	P	01 33 52.9	-1.4
	55nm,1.5s						
MJAR	Matsushiro Arr	24.36	349	P	P	01 33 53.9	-0.4
	2.1nm,0.8s,baz=181,slow=10,SNR=6.3						
MJAR				LR	LR	01 42 34.3	
	comp=Z,93nm,18.9s,baz=195,slow=35						
MAJO	Matsushiro	24.36	349	eP	P	01 33 55.6	+1.4
	13nm,1.0s						
MJB9	Matsu-Tunnel	24.37	349	eP	P	01 33 56.5	+2.2
	14nm,1.1s						
LUWI	Luwuk	24.78	238	eP	P	01 33 57.7	-0.5
	80nm,1.0s						
COEN	Coen	26.37	181	eP	P	01 34 11.5	-1.0
	21nm,1.1s						
KSRS	Korea Array	28.50	333	P	P	01 34 33.1	+1.6
	3.0nm,0.9s,baz=136,slow=8.7,SNR=4.7						
KSRS				LR	LR	01 43 54.1	
	comp=Z,37nm,20.2s,baz=197,slow=32						
KS15	Wonju Array Si	28.51	333	eP	P	01 34 33.1	+1.6
	33nm,1.4s						
USA0B	Ussuriysk Arra	33.07	345	eP	P	01 35 11.4	-0.4
	8.3nm,1.1s						
USRK	Ussuriysk Ar.	33.07	345	P	P	01 35 11.6	-0.2
	0.8nm,0.6s,baz=169,slow=8.8,SNR=3.1						
WB2	Warramunga Arr	33.60	196	eP	P	01 35 15.3	-1.2
	9.5nm,0.9s						
WR1	Warramunga Arr	33.60	196	eP	P	01 35 18.1	+1.5
WRA	Warramunga Arr	33.60	196	P	P	01 35 18.1	+1.5
	7.4nm,0.8s,baz=14,slow=10,SNR=21						
ENH	Enshi	36.18	305	eP	P	01 35 39.2	+0.3
	37nm,1.5s						
BJT	Baijiatuau	36.53	323	eP	P	01 35 40.8	-0.8
	14nm,1.0s						
AS31	Alice Springs	37.27	195	eP	P	01 35 47.5	-0.6
	1.0nm,0.8s						
AS31				ePcP	PcP	01 38 09.4	+1.9
ASAR	Alice Springs	37.27	195	P	P	01 35 50.0	+1.9
	1.3nm,0.7s,baz=17,slow=14,SNR=14						
ASAR				PcP	PcP	01 38 09.4	+1.9
	0.7nm,0.9s,baz=35,slow=3.4,SNR=2.9						
ASAR				LR	LR	01 50 44.3	
	comp=Z,46nm,18.9s,baz=1.5,slow=36						
XAN	Xi'an	38.13	310	eP	P	01 35 52.6	-2.8
	10nm,1.2s						
SLVN	Son La	38.94	288	eP	P	01 36 02.2	-0.2
	5.4nm,1.1s						
BTO	Baotou	40.63	320	eP	P	01 36 17.0	+0.8
MYKOM	Kota Tinggi	40.88	258	eP	P	01 36 13.8	-4.8
	13nm,1.0s						
DZM	Mont Dzumac	41.04	147	P	P	01 36 23.6	+3.8
	19nm,0.9s,baz=315,slow=13,SNR=8.8						
DZM	Mont Dzumac	41.04	147	eP	P	01 36 17.7	-2.1
	36nm,1.0s						
ONTNC	Ouen Toro	41.24	147	eP	P	01 36 19.7	-1.5
	95nm,1.4s						
PSAC3	Pilbara Seismi	41.28	215	eP	P	01 36 20.4	-1.2
	39nm,1.4s						
HIA	Hailar	41.58	336	eP	P	01 36 23.6	-0.3
	30nm,1.3s						
PETK	Petropavlovsk-	41.95	13	P	P	01 36 27.4	+0.6
	1.2nm,0.8s,baz=178,slow=11,SNR=3.1						
PETK				LR	LR	01 51 06.0	
	comp=Z,34nm,20.3s,baz=210,slow=32						
PEA1	Petropavlovsk-	41.95	13	eP	P	01 36 27.4	+0.6
LZH	Lanzhou	42.77	310	eP	P	01 36 37.0	+3.1
LZH				pP	pwP	01 36 49.0	+3.8
LZH				sP	sP	01 36 55.8	+12
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=N,120nm,10.3s						
LZH				LR	LR		
	comp=E,130nm,10.2s						
LZH				LR	LR		
	comp=Z,200nm,11.4s						
CMAR	Chiang Mai Arr	43.42	284	P	P	01 36 39.6	+0.4
	comp=Z,1.4nm,0.3s,baz=87,slow=6.7,SNR=9.0						
STKA	Stephens Creek	44.25	183	P	P	01 36 46.5	+0.9
	comp=Z,1.1nm,0.3s,baz=33,slow=8.5,SNR=5.0						
STKA				LR	LR	01 54 21.5	
	comp=Z,26nm,21.5s,baz=24,slow=35						
SONA0	Songino Array	46.90	326	eP	P	01 37 07.2	+0.5
SONM	Songino Array	46.90	326	P	P	01 37 07.2	+0.5
	comp=Z,2.5nm,0.7s,baz=142,slow=7.5,SNR=12						
GTA	Gaotai	46.99	313	eP	P	01 37 12.0	+4.5
GTA				pP	sP	01 37 16.3	-1.2
GTA				sP	pwP	01 37 19.0	+0.2
GTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MK31	Makanchi Array	61.42	317	eP	P	01 38 51.5	-0.8
	comp=Z,8.3nm,1.3s						
MK32	Makanchi Array	61.42	317	eP	P	01 38 52.5	+0.2
MKAR	Makanchi Array	61.42	317	P	P	01 38 52.5	+0.2
	comp=Z,3.9nm,1.0s,baz=103,slow=8.8,SNR=4.9						
ZALV	Zalesovo Beam	61.77	325	P	P	01 38 54.6	0.0
	comp=Z,0.8nm,0.4s,baz=106,slow=7.5,SNR=3.5						
ZALV				LR	LR	02 06 19.7	
	comp=Z,27nm,19.6s,baz=68,slow=37						
ZAA1	Zalesovo Array	61.78	325	eP	P	01 38 54.6	0.0
KURK	Kurchatov	64.61	320	eP	P	01 39 13.4	0.0
	comp=Z,17nm,1.0s						
WRH	Wood River Hil	69.39	25	eP	P	01 39 46.0	+2.5
	comp=Z,3.2nm,1.4s						
ILAR	Eielson Array	69.97	25	P	P	01 39 48.3	+1.1
	comp=Z,0.5nm,0.7s,baz=250,slow=5.6,SNR=4.8						
BRVK	Borovoye	70.07	322	eP	P	01 39 49.1	+1.1
	comp=Z,4.3nm,0.9s						
PRP	Porcupine Dome	70.70	25	ePcP	PcP	01 40 10.4	-2.2
ABKAR	Akbulak array	76.51	318	eP	P	01 40 27.8	+1.7
	comp=Z,2.9nm,1.3s						
AKTO	Aktyubinsk	77.67	319	P	P	01 40 33.5	+1.0
	comp=Z,0.7nm,0.6s,baz=68,slow=10,SNR=2.2						
BMO	Blue Mountains	87.52	45	eP	P	01 41 24.7	+0.6
	comp=Z,2.3nm,1.0s						
MDPB	Devils Postpil	88.06	52	eP	P	01 41 23.5	-3.5
	comp=Z,8.6nm,1.0s						
KVN	Kaiserville	88.44	50	eP	P	01 41 24.9	-3.9
	comp=Z,5.2nm,1.4s						
NV01	Mina Array Sit	88.45	51	eP	P	01 41 29.9	+1.1
NVAR	Mina Array Bea	88.45	51	P	P	01 41 29.9	+1.1
	comp=Z,0.7nm,0.7s,baz=272,slow=6.2,SNR=8.7						
MFID	Camas Ranch	88.93	46	eP	P	01 41 29.8	-1.0
	comp=Z,9.4nm,1.4s						
ELK	Elko	90.10	48	eP	P	01 41 35.1	-1.4
	comp=Z,3.6nm,1.2s						
R11A	Troy Canyon, C	90.53	51	eP	P	01 41 37.7	-0.8
	comp=Z,1.8nm,1.4s						
PLCA	Paso Flores	138.94	139	PKP	PKiKP	01 48 05.4	+0.4
	comp=Z,1.4nm,1.0s,baz=288,slow=3.2,SNR=3.0						
LPAZ	La Paz	148.99	101	ePKPbc	PKPbc	01 48 23.8	-1.9
CPUP	Villa Florida	155.97	128	PKPab	PKPab	01 49 01.3	+3.3
	comp=Z,2.3nm,0.9s,baz=220,slow=9.4,SNR=4.3						

IDC ***31*** *01:39:34.4±1.2, 14°.12N×92°.85W, h0^{km}, mb3.7/7, mb1 4.1/11, mb1mx3.9/35, mbtmp3.8/11, ML3.9/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/28, Error ellipse: s-maj=29.3km s-min=17.7km az=34.0*
ISCJB ***31*** *01:39:36.3±0.5, 14°.11N±0°.05×93°.02W±0°.04, h37^{km}, mb4.0/24, MS3.3/2, Error ellipse: s-maj=7.6km s-min=5.2km az=24.9*
MEX ***31*** *01:39:37.3±0.3, 14°.04N×92°.97W, h26^{km}±9^{km}, MD4.0*
NEIC ***31*** *01:39:37.3±0.0, 14°.04N×92°.97W, h26^{km}, mb4.1/28, MD4.0(MEX), After MEX.*
GCG ***31*** *01:39:52.3±0.3, 14°.59N×91°.83W, h50^{km}±79^{km}, MD4.2*
ISC 31 01:39:38.3±0.8**, 14°.16N**±0°.08×**92°.95W**±0°.07**, h37^{km}, n57,** σ**1^{s}.68**/59**, mb4.0**/23**, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	Entre ros, C	1.36	78	eP	Pn	01 40 01.3	+0.6
STG3	Santiaguito 3,	1.44	67	⇑eP	Pn	01 40 01.8	-0.2
PCIG		1.56	350	ePn	Pn	01 40 02.6	-0.8
PCIG				eSn	Sn	01 40 22.2	-0.2
PCIG		1.56	350	eP	Pn	01 40 02.6	-0.8
PCIG				iS	Sn	01 40 22.2	-0.2
FUG	Fuego 3	2.06	82	eP	Pn	01 40 10.0	-0.4
CCIG	Comitan	2.25	20	ePn	Pn	01 40 13.2	+0.1
CCIG				ePn	Pn	01 40 15.6	+2.5
CCIG				eSn	Sn	01 40 39.6	-0.1
CCIG				eSn	Sn	01 40 41.4	+1.6
CCIG	Comitan	2.25	20	eP	Pn	01 40 13.2	+0.1
CCIG				eS	Sn	01 40 39.6	-0.1
PCG	Pacaya	2.28	84	eP	Pn	01 40 13.6	0.0
APG	El Apazote	2.55	70	Pn	Pn	01 40 17.5	+0.3
	15nm,0.3s,baz=251,slow=14,SNR=105						
APG				Sn	Sn	01 40 49.5	+2.4
	14nm,0.3s,baz=324,slow=18,SNR=4.6						
APG				LR	LR	01 41 20.2	
	comp=Z,186nm,21.8s,baz=240,slow=43						
NBG	Las Nubes	2.56	80	eP	Pn	01 40 18.9	+1.5
TGIG		2.61	356	ePn	Pn	01 40 17.2	-0.7
TGIG				eSn	Sn	01 40 49.0	+0.6
TGIG		2.61	356	eP	Pn	01 40 17.2	-0.7
TGIG				eS	Sn	01 40 49.0	+0.6
TLIG	Tlapa	6.38	303	ePn	Pn	01 41 09.9	+0.1
TEIG	Tepich	7.50	36	Pn	Pn	01 41 25.2	+0.1
	8.9nm,0.3s,baz=230,slow=2.1,SNR=39						
TEIG				Sn	Sn	01 42 48.1	-0.9
	1.4nm,0.3s,baz=139,slow=20,SNR=2.7						
JTS	Las Juntas de	8.71	115	Pn	Pn	01 41 42.6	+0.8
	0.4nm,0.3s,baz=11,slow=16,SNR=2.8						
JTS	Las Juntas de	8.71	115	ePn	Pn	01 41 41.3	-0.4
MTDJ	Mount Denham	15.34	73	ePn	Pn	01 43 10.8	-1.4
	33nm,1.1s						
TXAR	Lajitas Array	18.07	328	Pn	P	01 43 50.7	+4.0
	0.1nm,0.3s,baz=157,slow=14,SNR=14						
TX31	Lajitas Ar. Si	18.07	328	eP	P	01 43 52.5	+5.8
	4.3nm,1.0s						
ABTX	Abilene, Hawle	19.37	343	eP	Pn	01 44 00.3	-1.9
	4.7nm,0.8s						
LRAL	Lakeview Retre	19.56	15	eP	Pn	01 44 03.9	-0.4
	5.0nm,1.1s						
152A	Waverly Hall	19.90	21	eP	Pn	01 44 06.2	-2.1
	5.2nm,0.6s						
Z50A	Ashland	20.05	17	ePn	Pn	01 44 11.9	+1.7
	8.1nm,1.3s						
MIAR	Mount Ida	20.31	359	eP	Pn	01 44 13.5	+0.3
	8.7nm,1.1s						
OXF	Oxford	20.52	8	eP	P	01 44 11.3	-1.9
	14nm,0.9s						
W39A	Magazine	20.96	358	eP	Pn	01 44 19.1	-1.7
	4.4nm,0.8s						
MSTX	Muleshoe	21.64	337	eP	P	01 44 23.6	-2.0
	11nm,1.2s						
FCAR	Ozark Folk Cen	21.65	2	eP	P	01 44 26.1	+0.6
	3.3nm,0.8s						
HHAR	Hobbs	22.05	358	eP	P	01 44 31.8	+2.0
	3.1nm,0.7s						
AMTX	Amarillo	22.09	341	eP	P	01 44 32.9	+2.5
	5.0nm,0.8s						
TKL	Tuckaleechee C	22.94	19	P	P	01 44 38.7	-0.6
	1.9nm,0.8s,baz=188,slow=13,SNR=3.2						
TKL				LR	LR	01 54 50.2	
	comp=Z,52nm,20.1s,baz=238,slow=40						
ANMO	Albuquerque	24.02	332	P	P	01 44 52.2	+2.3
	0.8nm,0.7s,baz=153,slow=15,SNR=2.9						
ANMO	Albuquerque	24.02	332	eP	P	01 44 50.4	+0.5
	2.0nm,1.0s						
TUC	Tucson	24.33	321	eP	P	01 44 53.0	+0.3
	4.7nm,0.8s						
SDCO	Great Sand Dun	26.01	337	eP	P	01 45 06.8	-1.3
	2.4nm,0.9s						
CCUT	Cedar City	29.54	326	eP	P	01 45 39.1	-0.5
	3.7nm,1.2s						
PDAR	Pinedale Array	31.90	337	P	P	01 46 02.1	+1.7
	0.4nm,0.8s,baz=141,slow=9.6,SNR=4.1						
NV11	Mina Array Sit	32.89	322	eP	P	01 46 05.2	-3.9
	0.3nm,0.8s						
REDW	Red Top Meadow	32.91	336	eP	P	01 46 10.6	+1.3
	5.6nm,0.9s						
SNOW	Snow King Moun	32.96	336	eP	P	01 46 10.2	+0.5
	10nm,0.9s						
NV01	Mina Array Sit	32.98	322	eP	P	01 46 13.6	+3.7
NVAR	Mina Array Bea	32.98	322	P	P	01 46 13.6	+3.7

	1.9nm,0.7s,baz=136,slow=8.3,SNR=17						
TPAW	Teton Pass	33.06	336	*e*P	P	01 46 09.0	-1.6
	5.8nm,1.0s						
KVN	Kaiserville	33.26	323	*e*P	P	01 46 11.6	-0.7
	5.4nm,1.2s						
HLID	Hailey	34.60	332	*e*P	P	01 46 22.7	-1.2
	2.4nm,1.2s						
MCMT	McKenzie Canyo	34.93	335	*e*P	P	01 46 26.6	-0.2
J08A	Circle Bar Ran	36.42	328	*e*P	P	01 46 42.7	+3.3
	4.6nm,0.8s						
SIV	San Ignacio	43.47	132	P	P	01 47 38.1	-0.1
	1.0nm,0.7s,baz=303,slow=6.0,SNR=8.9						
SCHQ	Schefferville	45.40	21	LR	LR	02 08 47.0	
	comp=Z,67nm,19.0s,baz=2.0,slow=39						
YKA	Yellowknife Ar	50.66	347	P	P	01 48 34.8	+1.2
	3.2nm,0.8s,baz=153,slow=7.3,SNR=11						
YKB5	Yellowknife Ar	50.66	347	*e*P	P	01 48 34.9	+1.2
ILAR	Eielson Array	62.33	337	P	P	01 49 58.6	+2.0
	0.6nm,0.7s,baz=140,slow=5.2,SNR=6.4						
ILB	Eielson Array	62.33	337	*e*P	P	01 49 57.0	+0.3
	2.1nm,0.9s						
MLY	Manley	63.92	336	*e*P	P	01 50 06.8	-0.5
	2.1nm,0.6s						
ARCES	ARCESS Array B	86.27	18	P	P	01 52 15.1	-0.7
	1.7nm,0.9s,baz=297,slow=6.0,SNR=3.9						
CM31	Chiang Mai Arr	145.54	340	*e*PKPdf	PKiKP	01 59 14.8	-2.7
CMAR	Chiang Mai Arr	145.54	340	PKPbc	PKiKP	01 59 14.8	-2.7
	0.8nm,0.4s,baz=342,slow=3.9,SNR=5.8						

MEX 31 01:40:43.2±0.6, 18°.44N×104°.22W, h8^{km}±6^{km}, MD3.9, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.84	100	*e*P	Pg	01 40 57.3	-2.1
MMIG				*e*S	Sg	01 41 08.3	-2.1
EZ5V		1.19	29	*e*P	Pg	01 41 02.8	-3.4
EZ5V				*e*S	Sg	01 41 17.9	-3.8
CJM	Chamela	1.32	324	*e*P	Pn	01 41 03.7	-4.1
CJM				*e*S	Sb	01 41 20.3	-4.8

GUC 31 01:47:22.3±0.6, 20°.55S×69°.01W, h102^{km}±3^{km}, ML3.6, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.43	342	⇑*i*P	Pn	01 47 38.6	+0.3
PB08				*i* S	Sn	01 47 51.0	+0.8
PB08				IAML		01 47 52.2	
	comp=E,3μm,0.2s						
PB01	IPOC Station P	0.66	222	*i* P	Pn	01 47 39.9	+0.3
PB01				*e*S	Sn	01 47 53.3	+0.6
PB01				IAML		01 47 55.4	
	comp=E,2μm,0.2s						
GO01	Chusmiza	0.89	349	*i* P	Pn	01 47 42.9	+0.6
GO01				*i* S	Sn	01 47 58.5	+1.2
GO01				IAML		01 48 00.5	
	comp=N,4μm,0.1s						
PB11	IPOC Station P	0.99	322	⇑*i*P	Pn	01 47 43.5	+0.5
PB11				*i* S	Sn	01 47 59.4	+0.9
PB11				IAML		01 48 00.0	
	comp=N,4μm,0.2s						
PB02	IPOC Station P	1.13	227	⇑*i*P	Pn	01 47 45.0	+0.6
PB02				*i* S	Sn	01 48 02.1	+1.1
PB02				IAML		01 48 05.4	
	comp=E,2μm,0.1s						
PB09	IPOC Station P	1.26	190	*e*P	Pn	01 47 46.8	+0.8
PB09				*e*S	Sn	01 48 05.3	+1.5
PB09				IAML		01 48 07.1	
	comp=N,833nm,0.6s						
PB07	IPOC Station P	1.43	215	⇓*i*P	Pn	01 47 48.5	+0.5
PB07				*i* S	Sn	01 48 08.5	+1.1
PB07				IAML		01 48 10.7	
	comp=E,695nm,0.3s						
MNMC	Minye Minye	1.52	339	*e*P	Pn	01 47 49.6	+0.5
MNMC				*i* S	Sn	01 48 10.6	+1.1
MNMC				IAML		01 48 17.2	
	comp=N,1μm,0.5s						
PB03	IPOC Station P	1.65	205	*i* P	Pn	01 47 51.0	+0.4
PB03				*i* S	Sn	01 48 13.4	+1.3
PB03				IAML		01 48 18.9	
	comp=E,468nm,0.2s						
PB04	IPOC Station P	2.07	211	*e*P	Pn	01 47 56.6	+0.6
PB04				*i* S	Sn	01 48 25.7	+3.9
PB04				IAML		01 48 28.7	
	comp=N,444nm,0.2s						

*ISCJB **31** 02:00:21.4±0.4, 37°.13N±0°.02×4°.07W±0°.02, h6^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.4km az=5.4*

*MDD **31** 02:00:22.8±0.3, 37°.02N×4°.00W, h2^{km}±2^{km}, mbLg2.3/32, Error ellipse: s-maj=3.6km s-min=1.6km az=1.0, PRXIMO*

*CNRM **31** 02:00:22.9, 37°.05N×4°.08W, h5^{km}, ml3.2*

*SFS **31** 02:00:22.0, 37°.00N×4°.00W, h3^{km}, ML2.4, ALHAMA DE GRANADA*

*INMG **31** 02:00:23.1±1.2, 37°.04N×4°.05W, h2^{km}±2^{km}, ML2.2, Error ellipse: s-maj=2.2km s-min=1.4km az=1.0*

ISC 31 02:00:21.4±1.0, 37°.03N±0°.02×3°.98W±0°.02, h11^{km}±8^{km}, n65, σ1^{s}.46/114, 2C-1D, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGOR	Sierra Gorda,	0.13	307	⇓Pg	Pg	02 00 25.1	+0.4
	61nm,0.1s,SNR=18						
EGOR				Lg	Lg	02 00 27.2	
	693nm,0.1s,SNR=7.9						
EMAL	Malaga-Limoner	0.45	234	⇑*i*P	Pb	02 00 31.0	-0.4
EMAL				*e*S	Sb	02 00 37.9	-0.2
EQUE	Quentar	0.46	68	Pg	Pb	02 00 31.4	-0.3
	9.1nm,0.1s,SNR=94						
EQUE				Lg	Lg	02 00 38.8	
	92nm,0.3s,SNR=14						
EMIJ	Mijas	0.79	234	Pg	Pb	02 00 36.7	-0.5
	5.7nm,0.3s,SNR=44						
EMIJ				Lg	Lg	02 00 47.8	
	63nm,0.3s,SNR=9.4						
GORA	Gorafe	0.87	59	Pg	Pn	02 00 39.4	-0.3
	2.2nm,0.1s,SNR=4.0						
GORA				Lg	Lg	02 00 51.1	
	56nm,0.2s,SNR=4.0						
EBER	Berja	0.88	98	Pg	Pn	02 00 39.8	-0.1
	12nm,0.2s,SNR=19						
EBER				Lg	Lg	02 00 52.1	
	90nm,0.4s,SNR=7.5						
EQES	Quesada	1.05	43	Pg	Pn	02 00 42.8	+0.5
	9.9nm,0.2s,SNR=101						
EQES				Lg	Lg	02 00 57.8	
	61nm,0.3s,SNR=22						
LIJA	Lijar	1.15	264	*i* P	Pn	02 00 46.0	+2.5
LIJA				*e*S	Sn	02 01 04.0	+4.7
EADA	Adamuz	1.23	337	Pg	Pg	02 00 44.8	-0.3
	9.6nm,0.2s,SNR=112						
EADA				Lg	Lg	02 01 01.7	
	52nm,0.2s,SNR=18						
HORN	Hornachuelos	1.31	309	P	Pb	02 00 46.7	+0.8
HORN				S	Sb	02 01 03.8	+1.0
ENIJ	Nijar	1.42	92	Pg	Pg	02 00 48.9	+0.3
	7.6nm,0.3s,SNR=7.9						
ENIJ				Lg	Lg	02 01 09.2	
	19nm,0.3s,SNR=7.9						
ESPR	Espera	1.52	264	Pg	Pg	02 00 49.8	-0.7
	1.4nm,0.1s,SNR=4.0						
ESPR				Lg	Lg	02 01 11.0	
	7.5nm,0.2s,SNR=7.9						
ECAB	El Cabril	1.55	313	Pn	Pn	02 00 49.5	+0.5
	0.6nm,0.3s,SNR=26						
ECAB				Pg	Pg	02 00 51.4	+0.2
	3.2nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	02 01 11.3	
	19nm,0.3s,SNR=18						
SESP	Santiago Espad	1.57	46	Pn	Pg	02 00 51.2	-0.5
	54nm,1.6s,SNR=7.9						
SESP				⇑Pg	Pb	02 00 52.2	+1.6
	22nm,0.2s,SNR=18						
SESP				Sn	Sg	02 01 11.8	-0.3
	46nm,0.2s,SNR=7.9						
SESP				Lg	Lg	02 01 13.8	
	36nm,0.5s,SNR=7.9						
SESP	Santiago Espad	1.57	46	P	Pg	02 00 52.0	+0.3
SESP				S	Sg	02 01 13.6	+1.5
CEU	Ceuta	1.59	225	*e*S	Sn	02 00 59.0	-11
SMIR	Smir Dam	1.76	221	P	Pg	02 00 55.3	+0.1
SMIR				S	Sb	02 01 15.6	-0.2
EMIN	Mina Concepcio	2.27	290	Pn	Pn	02 00 59.1	+0.3
	0.8nm,0.2s,SNR=12						
EMIN				Sn	Sn	02 01 27.1	+0.3
	1.2nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	02 01 34.6	
	5.2nm,0.2s,SNR=9.2						
EMUR	La Murta	2.32	69	Pn	Pb	02 01 01.8	-1.5
	1.1nm,0.4s,SNR=7.9						
EMUR				Pg	Pg	02 01 06.4	+0.4
	4.6nm,0.4s,SNR=4.0						
EMUR				Sn	Sn	02 01 29.9	+1.7
	6.0nm,0.4s,SNR=4.6						
ETOB	Tobarra	2.51	49	Pn	Pn	02 01 04.1	+1.9
	0.6nm,0.1s,SNR=6.2						
ETOB				Sn	Sn	02 01 34.5	+1.6
	1.8nm,0.3s,SNR=7.9						
ETOB				Lg	Lg	02 01 43.5	
	5.1nm,0.3s,SNR=5.0						
AKLM	AKL	2.52	178	P	Pb	02 01 05.7	-0.9
AKLM				S	Sb	02 01 36.5	-1.2
PAB	San Pablo	2.53	353	Pn	Pn	02 01 04.0	+1.5
	0.3nm,0.1s,SNR=7.9						
PAB				Pg	Pg	02 01 09.6	-0.3
	0.8nm,0.2s,SNR=7.9						
PAB				Sn	Sn	02 01 34.3	+1.0
	1.0nm,1.5s,SNR=7.9						
PAB				Lg	Lg	02 01 43.3	
	5.1nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	2.64	0	Pn	Pn	02 01 05.5	+1.5
	SNR=7.9						
ESDC				Pg	Pb	02 01 10.4	+1.7
	2.4nm,0.2s,baz=183,slow=16,SNR=23						
ESDC				Sn	Sn	02 01 36.9	+0.8
	SNR=7.9						
ESDC				Lg	Lg	02 01 47.7	
	4.4nm,0.2s,baz=186,slow=28,SNR=7.9						
EGRO	El Granado	2.84	281	Pn	Pn	02 01 07.4	+0.7
	0.9nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	02 01 40.3	-0.6
	3.1nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	02 01 53.4	
	5.4nm,0.3s,SNR=7.9						
JBK	JBK	2.92	156	P	Pb	02 01 10.3	-3.4
JBK				S	Sb	02 01 49.0	-0.6
PVAQ	Vaqueiros	3.01	278	*e*Pn	Pn	02 01 09.4	+0.4
PVAQ				*e*Sn	Sn	02 01 44.9	-0.2
PVAQ				*e*Sg	Sg	02 01 57.4	-0.7
PVAQ				A	A	02 02 02.0	
	5.8nm,0.4s						
PVAQ	Vaqueiros	3.01	278	Pn	Pn	02 01 09.4	+0.4
PVAQ				Sn	Sn	02 01 44.9	-0.2
PVAQ				Lg	Lg	02 01 57.4	
	5.8nm,0.4s						
PVAQ	Vaqueiros	3.01	278	P	Pn	02 01 11.0	+1.9
PVAQ				S	Sn	02 01 45.7	+0.6
PBDV	Barranco-do-Ve	3.17	275	*e*Pn	Pn	02 01 12.3	+1.1
PBDV				*e*Sn	Sn	02 01 48.5	-0.5
PBDV				A	A	02 02 04.1	
	4.9nm,0.5s						
PBDV	Barranco-do-Ve	3.17	275	Pn	Pn	02 01 12.3	+1.1
PBDV				Sn	Sn	02 01 48.5	-0.5
	4.9nm,0.5s						
PCVE	Castro Verde	3.29	282	*e*Sg	Sg	02 02 07.7	+0.5
PCVE				A	A	02 02 08.9	
	4.2nm,0.8s						
PCVE	Castro Verde	3.29	282	Lg	Lg	02 02 07.7	
	4.2nm,0.8s						
UCM	Universidad Co	3.32	10	*e*P	Pg	02 01 24.3	-0.8
UCM				*e*S	Sg	02 02 08.4	+0.3
EBEN2	Beniarda presa	3.42	60	Pn	Pn	02 01 16.5	+1.9
	1.9nm,0.1s,SNR=7.9						
EBEN2				Sn	Sn	02 01 55.9	+0.7
	3.4nm,0.3s,SNR=7.9						
EPLA	Plasencia	3.45	332	Pn	Pn	02 01 16.5	+1.4
	0.4nm,0.2s,SNR=4.0						
EPLA				Pg	Pg	02 01 25.6	-1.9
	1.1nm,1.2s,SNR=7.9						
EPLA				Sn	Sn	02 01 56.0	+0.1
	1.1nm,0.3s,SNR=7.9						
EPLA				Lg	Lg	02 02 13.3	
	2.7nm,0.2s,SNR=5.8						
ECHE	Chera	3.48	42	Pn	Pn	02 01 17.5	+1.9
	0.2nm,0.2s,SNR=7.9						
ECHE				Pg	Pg	02 01 26.8	-1.4
	1.5nm,0.4s,SNR=7.9						
ECHE				Sn	Sn	02 01 56.2	-0.6
	0.8nm,0.4s,SNR=7.9						
ECHE				Lg	Lg	02 02 14.6	
	2.7nm,0.4s,SNR=7.9						
PMRV	Marv??o	3.60	313	*e*Pn	Pn	02 01 18.4	+1.2
PMRV				*e*Sg	Sg	02 02 16.8	-0.3
PMRV				A	A	02 02 20.0	
	4.8nm,0.5s						
PMRV	Marv??o	3.60	313	Pn	Pn	02 01 18.4	+1.2
PMRV				Lg	Lg	02 02 16.8	
	4.8nm,0.5s						
GUD	Guadarrama	3.61	358	Pn	Pn	02 01 18.9	+1.5
	0.3nm,0.2s,SNR=7.9						
GUD				Pg	Pg	02 01 28.7	-1.9
	0.4nm,0.3s,SNR=7.9						
GUD				Sn	Sn	02 01 59.7	-0.4
	2.7nm,3.2s,SNR=7.9						
GUD				Lg	Lg	02 02 18.2	
	3.9nm,0.3s,SNR=7.7						
PNCL	Nicolau / Gran	3.77	288	*e*Pn	Pn	02 01 20.2	+0.7
PNCL				*e*Sg	Sg	02 02 21.8	-0.8
PNCL				A	A	02 02 28.6	
	3.6nm,0.8s						
PNCL	Nicolau / Gran	3.77	288	Pn	Pn	02 01 20.2	+0.7
PNCL				Lg	Lg	02 02 21.8	
	3.6nm,0.8s						
PFVI	Vila Bisbo	3.88	273	*e*Sn	Sn	02 02 03.9	-2.6
PFVI	Vila Bisbo	3.88	273	Pn	Pn	02 01 22.5	+1.5
	0.6nm,0.1s,SNR=7.9						
PFVI				Sn	Sn	02 02 05.4	-1.1
	2.9nm,0.2s,SNR=7.9						
PMTG	Montargil	3.92	303	*e*Pn	Pn	02 01 22.9	+1.3
PMTG				*e*Sn	Sn	02 02 06.7	-0.9
PMTG				*e*Sg	Sg	02 02 27.4	0.0
PMTG				A	A	02 02 33.0	
	4.0nm,0.5s						
PMTG	Montargil	3.92	303	Pn	Pn	02 01 22.9	+1.3
PMTG				Sn	Sn	02 02 06.7	-0.9
PMTG				Lg	Lg	02 02 27.4	
	4.0nm,0.5s						
PCBR	Castelo Branco	3.93	317	*e*Pn	Pn	02 01 23.5	+1.9
PCBR				*e*Sn	Sn	02 02 07.8	+0.1
PCBR				*e*Sg	Sg	02 02 28.0	+0.5
PCBR				A	A	02 02 40.4	
	2.6nm,0.8s						
PCBR	Castelo Branco	3.93	317	Pn	Pn	02 01 23.5	+1.9
PCBR				Sn	Sn	02 02 07.8	+0.1
PCBR				Lg	Lg	02 02 28.0	
	1.3nm,0.8s						
ETOR	Torete	4.07	21	Pn	Pn	02 01 24.7	+1.0
	0.5nm,0.3s,SNR=7.9						
ETOR				Pg	Pg	02 01 37.4	-2.0
	1.0nm,0.3s,SNR=7.9						
ETOR				Sn	Sn	02 02 11.5	+0.2
	1.0nm,2.9s,SNR=7.9						
ETOR				Lg	Lg	02 02 33.4	
	2.4nm,0.3s,SNR=6.4						
MD31	MD31	4.20	189	P	Pn	02 01 28.0	+2.5
MD31				S	Sn	02 02 16.5	+1.8
ALMR	Almeirim	4.20	302	*e*Sg	Sg	02 02 38.4	+2.0
ALMR				A	A	02 02 41.4	
	8.2nm,0.4s						
ALMR	Almeirim	4.20	302	Lg	Lg	02 02 38.4	
	4.1nm,0.4s						
MDT	Midelt	4.24	187	P	Pn	02 01 30.0	+3.9
MDT				S	Sn	02 02 19.1	+3.5
EMOS	Mosqueruela	4.31	38	Pn	Pn	02 01 29.0	+1.9
	0.5nm,0.5s,SNR=7.9						
EMOS				Pg	Pg	02 01 42.1	-1.9
	0.6nm,0.4s,SNR=7.9						
EMOS				Sn	Sn	02 02 15.4	-2.0
	0.7nm,0.3s,SNR=7.9						
EMOS				Lg	Lg	02 02 40.8	
	0.7nm,0.4s,SNR=7.9						
PTOM	Tomar	4.34	308	*e*Sg	Sg	02 02 40.2	-0.6
PTOM				A	A	02 02 40.7	
	2.6nm,0.3s						
PTOM	Tomar	4.34	308	Lg	Lg	02 02 40.2	
	1.3nm,0.3s						
MTE	Manteigas	4.37	321	*e*Sg	Sg	02 02 39.4	-2.4
MTE				A	A	02 02 53.3	
	7.5nm,0.5s						
PMAFR	Mafra	4.61	296	Pn	Pn	02 01 32.5	+1.5
	2.8nm,0.3s,SNR=7.9						
PMAFR				Sn	Sn	02 02 23.3	-1.2
	0.4nm,2.3s,SNR=7.9						
PCAS	Casmilo, Conde	4.66	312	*e*Sn	Sn	02 02 25.6	-0.1
PCAS	Casmilo, Conde	4.66	312	Sn	Sn	02 02 25.6	-0.1
MVO	Moncorvo	4.76	331	*e*Pn	Pn	02 01 34.4	+1.2
MVO				*e*Sn	Sn	02 02 28.0	-0.4
MVO				*e*Sg	Sg	02 02 51.1	-3.2
MVO				A	A	02 03 02.6	
	3.5nm,0.5s						
MVO	Moncorvo	4.76	331	Pn	Pn	02 01 34.4	+1.2
	0.5nm,0.1s,SNR=7.9						
MVO				Sn	Sn	02 02 26.4	-2.0
	1.2nm,0.3s,SNR=7.9						
MVO				Lg	Lg	02 02 54.6	
	3.8nm,0.4s,SNR=5.0						
PVRL	Vila Real	5.14	327	*e*Sn	Sn	02 02 36.6	-1.1
PVRL	Vila Real	5.14	327	Sn	Sn	02 02 36.6	-1.1
ECAL	Calabor	5.35	337	Sn	Sn	02 02 40.4	-2.4
	0.9nm,0.4s,SNR=7.9						
ECAL				Lg	Lg	02 03 13.5	
	3.9nm,0.4s,SNR=4.9						
ELOB	Lobios	5.77	328	Pn	Pn	02 01 48.7	+1.6
	0.2nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	02 02 50.5	-2.8
	0.5nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	02 03 27.3	
	4.4nm,0.5s,SNR=7.9						

UCR 31 02:33:58.1±3.5, 11°.34N×83°.07W, h20^{km}±999^{km}, MW3.6, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVTR	Volcan Turrial	1.48	207	*e*P	Pn	02 34 24.0	0.0
CVTR				*e*S	Sn	02 34 42.1	-0.9
EDLM	Las Mercedes	2.12	194	*e*P	Pn	02 34 30.8	-1.6

MAN 31 03:03:12.4, 8°.99N×125°.72E, h22^{km}, mb3.7, ML2.4, MS1.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	Cagayan de Oro	1.14	242	*e*P	Pn	03 03 33.0	-0.1

*ISCJB **31** 03:03:46.2±0.6, 44°.8S±0°.1×15°.2W±0°.1, h10^{km}, mb4.4/15, MS4.1/13, Error ellipse: s-maj=17.2km s-min=12.9km az=161.6*

*IDC **31** 03:03:46.2±0.8, 44°.94S×15°.14W, h0^{km}, mb4.2/9, mb1 4.3/9, mb1mx4.0/23, mbtmp4.2/9, MS4.0/13, Ms1 4.0/13, ms1mx4.0/15, Error ellipse: s-maj=30.0km s-min=20.3km az=1.0*

*NEIC **31** 03:03:48.8±2.2, 44°.70S×15°.17W, h15^{km}±4^{km}, mb4.7/8, Error ellipse: s-maj=23.3km s-min=20.1km az=160.0*

ISC 31 03:03:48.1±0.5, 44°.7S±0°.1×15°.2W±0°.1, h10^{km}, n54, σ1^{s}.12/38, mb4.5/15, MS4.0/13, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	27.65	172	LR	LR	03 17 48.0	
	comp=Z,134nm,18.9s,baz=18,slow=31						
H10S2	ASCENSION HYDR	35.66	1	T	T	03 48 48.5	
	baz=181,slow=74						
H10S3	ASCENSION HYDR	35.66	1	T	T	03 48 45.1	
	baz=181,slow=74						
H10S1	ASCENSION HYDR	35.67	1	T	T	03 48 54.1	
	baz=181						
BOSA	Boshof	35.78	77	LR	LR	03 22 19.5	
	comp=Z,246nm,21.0s,baz=230,slow=31						
SYO	Syowa Base	36.62	150	⇑*e*P	P	03 11 00.1	+6.0
H10N1	ASCENSION HYDR	36.76	1	T	T	03 50 09.9	
	baz=180						
H10N3	ASCENSION HYDR	36.77	1	T	T	03 50 08.9	
	baz=180,slow=74						
H10N2	ASCENSION HYDR	36.78	1	T	T	03 50 10.0	
	baz=180,slow=74						
TSUM	Tsumeb	37.27	58	*e*P	P	03 10 59.4	-0.9
	15nm,1.6s						
LBTB	Lobatse	38.30	73	P	P	03 11 08.4	-0.6
	2.7nm,0.8s,baz=259,slow=5.2,SNR=3.5						
LBTB	Lobatse	38.30	73	*e*P	P	03 11 08.4	-0.6
	4.8nm,1.0s						
CPUP	Villa Florida	38.42	284	P	P	03 11 09.5	-0.3
	2.9nm,1.1s,baz=122,slow=13,SNR=2.7						
CPUP				LR	LR	03 24 17.4	
	comp=Z,186nm,20.8s,baz=160,slow=32						
BDFB	Brasilia	40.12	306	LR	LR	03 24 48.6	
	comp=Z,290nm,21.6s,baz=136,slow=31						
PLCA	Paso Flores	40.22	256	LR	LR	03 25 49.0	
	comp=Z,384nm,20.2s,baz=152,slow=33						
CFA	Coronel Fontan	43.02	269	P	P	03 11 46.9	-0.9
	3.5nm,1.0s,baz=124,slow=10,SNR=5.1						
MAW	Mawson	45.20	148	P	P	03 12 02.9	-1.8
	1.7nm,0.8s,baz=268,slow=10,SNR=5.3						
QSPA	South Pole Qui	45.52	180	*e*P	P	03 12 08.2	+0.6
	10nm,0.9s						
QSPA				*e*pwP	pwP	03 12 15.9	+2.8
LCO	Las Campanas	46.24	270	*e*P	P	03 12 12.0	-1.8
	7.7nm,0.7s						
SIV	San Ignacio	48.01	292	P	P	03 12 28.0	+0.5
	1.4nm,1.0s,baz=136,slow=7.3,SNR=5.0						
DBIC	Dimbokro	52.01	13	LR	LR	03 29 22.2	
	comp=Z,108nm,20.6s,baz=142,slow=29						
LPAZ	La Paz	52.58	285	LR	LR	03 35 17.2	
	comp=Z,309nm,18.6s,baz=78,slow=36						
TOA0	Torodi Ar. Sit	59.62	19	*e*P	P	03 13 53.0	+0.7
	9.8nm,1.0s						
TORD	Torodi Ar. Bea	59.62	19	P	P	03 13 51.8	-0.4
	6.1nm,1.0s,baz=212,slow=3.8,SNR=18						
TORD				LR	LR	03 33 47.4	
	comp=Z,88nm,21.9s,baz=330,slow=30						
TOA1	Torodi Ar. Sit	59.62	19	*e*P	P	03 13 51.8	-0.4
KMBO	Kilima Mbogo	63.37	62	LR	LR	03 40 08.4	
	comp=Z,284nm,18.6s,baz=190,slow=34						
ROSC	El Rosal	72.23	296	LR	LR	03 45 33.6	
	comp=Z,201nm,19.2s,baz=154,slow=35						
ABVI	Anegada Island	77.43	313	*e*P	P	03 15 42.4	-1.1
	42nm,0.7s						
KEST	Kesra	83.13	20	P	P	03 16 16.0	+2.1
	7.6nm,1.0s,baz=225,slow=4.3,SNR=4.2						
KEST				LR	LR	03 49 43.2	
	comp=Z,89nm,19.6s,baz=271,slow=33						
PESTR	Estremoz	83.51	6	*e*P	P	03 16 15.3	-0.5
ESDC	Sonseca Array	84.64	9	P	P	03 16 22.9	+1.3
	2.8nm,1.0s,baz=184,slow=4.7,SNR=10						
ESLA	Sonseca Array	84.64	9	*e*P	P	03 16 19.2	-2.3
	4.4nm,1.1s						
BR101	Keskin Array S	94.85	36	*e*P	P	03 17 11.2	+1.2
BRTR	Keskin Array B	94.85	36	P	P	03 17 11.2	+1.2
	0.8nm,1.1s,baz=190,slow=5.6,SNR=3.6						
BRTR				LR	LR	03 58 38.2	
	comp=Z,46nm,20.3s,baz=202,slow=35						
GERES	GERESS Array B	96.57	19	LR	LR	03 57 48.6	
	comp=Z,57nm,20.3s,baz=216,slow=34						
MKAR	Makanchi Array	124.98	56	PKP	PKPdf	03 22 47.8	-0.1
	1.1nm,1.0s,baz=259,slow=3.1,SNR=4.2						
ZALV	Zalesovo Beam	129.71	49	PKP	PKPdf	03 22 56.2	-0.4
	0.4nm,0.3s,baz=236,slow=1.6,SNR=2.8						
SONM	Songino Array	140.33	64	PKhKP	PKPpre	03 23 08.7	
	0.3nm,0.4s,baz=235,slow=5.1,SNR=2.7						
RIDG	Independent Ri	146.17	322	*e*PKPbc	PKPab	03 23 28.5	+0.3
ILAR	Eielson Array	146.84	324	PKPbc	PKPdf	03 23 28.7	+1.2
	3.9nm,0.9s,baz=69,slow=1.3,SNR=34						
ILB	Eielson Array	146.84	324	*e*PKPbc	PKPbc	03 23 29.5	+0.1
HDA	Harding Lake	146.95	324	*e*PKPbc	PKPbc	03 23 29.2	-0.5
CCB	Clear Creek Bu	147.25	324	*e*PKPbc	PKPbc	03 23 30.1	-0.4
COLD	Coldfoot	147.41	329	*e*PKPbc	PKPbc	03 23 32.3	+1.4
WRH	Wood River Hil	147.41	324	*e*PKPbc	PKPbc	03 23 31.2	+0.2
DHY	Denali Highway	147.42	321	*e*PKPab	PKPbc	03 23 32.7	+1.4
RND	Reindeer	148.00	322	*e*PKPbc	PKiKP	03 23 34.1	-0.4
MLY	Manley	148.35	326	*e*PKPab	PKPab	03 23 37.6	+0.8
BPAW	Bear Paw Mtn.	148.73	324	*e*PKPbc	PKPbc	03 23 34.2	-0.4
KTH	Kantishna Hill	148.86	323	*e*PKPbc	PKPbc	03 23 35.1	+0.1
SKT	Skwentna	149.54	320	*e*PKPbc	PKiKP	03 23 37.6	0.0
TTA	Tatalina	151.24	323	*e*PKPbc	PKiKP	03 23 42.3	+1.1
KS15	Wonju Array Si	151.40	92	*e*PKPbc	PKPbc	03 23 40.9	-0.9
KSRS	Korea Array	151.43	92	PKPbc	PKPbc	03 23 40.9	-1.0
	2.0nm,0.9s,baz=226,slow=4.1,SNR=4.6						

*IDC **31** 03:51:50.3±2.1, 6°.79S×129°.26E, h0^{km}, mb3.8/1, mb1 4.1/3, mb1mx3.6/19, mbtmp3.9/3, ML4.0/2, Error ellipse: s-maj=141.6km s-min=31.0km az=68.0*

*ISCJB **31** 03:52:02.2±0.5, 7°.12S±0°.04×129°.71E±0°.05, h139^{km}, Error ellipse: s-maj=6.9km s-min=5.6km az=13.2*

*NEIC **31** 03:52:04.0±2.4, 7°.17S×129°.72E, h136^{km}±12^{km}, mb4.2/15, Error ellipse: s-maj=17.0km s-min=11.1km az=74.0*

ISC 31 03:52:03.3±0.7, **7°.23S**±0°.06×**129°.74E**±0°.07, **h139**^{km}, **n27**, σ**2ˢ.64**/35, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.96**	**30**	*e*Pn	**Pn**	**03 53 16.9**	**+0.8**
FAKI				*e*Sn	**Sn**	**03 54 09.1**	**-3.6**
MTN	**Manton Dam**	**5.75**	**166**	*e*Pn	**Pn**	**03 53 27.0**	**+0.4**
MTN				*e*Sn	**Sn**	**03 54 33.6**	**+2.1**
SOEI	**Soe**	**5.97**	**245**	*e*Pn	**Pn**	**03 53 30.0**	**+0.3**
SOEI				*e*Sn	**Sn**	**03 54 34.4**	**-2.6**
WRAB	**Tennant Creek**	**13.40**	**161**	*e*Pn	**Pn**	**03 55 08.7**	**+0.5**
WR1	**Warramunga Arr**	**13.40**	**161**	*e*Pn	**Pn**	**03 55 08.9**	**+0.7**
WR1				*e*Sn	**Sn**	**03 57 31.2**	**-5.2**
WRA	**Warramunga Arr**	**13.40**	**161**	Pn	**Pn**	**03 55 08.9**	**+0.7**
	0.7nm,0.3s,baz=342,slow=13,SNR=23						
WRA				Sn	**Sn**	**03 57 31.2**	**-5.2**
	2.7nm,0.3s,baz=331,slow=24,SNR=13						
WB2	**Warramunga Arr**	**13.41**	**161**	*e*Pn	**Pn**	**03 55 09.6**	**+1.3**
WB2				*e*Sn	**Sn**	**03 57 32.5**	**-4.0**
WC3	**Warramunga Arr**	**13.43**	**161**	*e*Pn	**Pn**	**03 55 10.1**	**+1.5**
COEN	**Coen**	**14.80**	**118**	*e*P	**P**	**03 55 28.1**	**-0.1**
JAGI	**Jajag, Banyuwa**	**15.49**	**264**	*e*Pn	**Pn**	**03 55 32.4**	**-2.1**
	89nm,0.9s						
AS31	**Alice Springs**	**16.82**	**167**	*e*P	**Pn**	**03 55 53.1**	**+2.3**
	1.4nm,0.5s						
AS31				*e*S	**Sn**	**03 58 53.5**	**-5.1**
ASAR	**Alice Springs**	**16.83**	**167**	P	**Pn**	**03 55 54.9**	**+4.0**
	0.5nm,0.3s,baz=346,slow=12,SNR=16						
ASAR				S	**Sn**	**03 58 53.5**	**-5.1**
	0.2nm,0.3s,baz=354,slow=27,SNR=5.4						
PSAC2	**Pilbara Seismi**	**17.13**	**213**	*e*P	**Pn**	**03 55 56.7**	**+2.2**
	13nm,1.3s						
PSAB2	**Pilbara Seismi**	**17.14**	**213**	*e*P	**Pn**	**03 55 56.3**	**+1.6**
	15nm,1.2s						
PSAC1	**Pilbara Seismi**	**17.16**	**213**	*e*P	**Pn**	**03 55 54.8**	**0.0**
	20nm,1.4s						
PSAA2	**Pilbara Seismi**	**17.16**	**213**	*e*P	**Pn**	**03 55 55.6**	**+0.7**
	20nm,1.3s						
PSAA3	**Pilbara Seismi**	**17.17**	**213**	*e*P	**Pn**	**03 55 56.2**	**+1.3**
	6.6nm,0.6s						
PSA00	**Pilbara Seismi**	**17.17**	**213**	*e*P	**Pn**	**03 55 56.9**	**+1.9**
	14nm,1.1s						
PSAA1	**Pilbara Seismi**	**17.18**	**213**	*e*P	**Pn**	**03 55 56.5**	**+1.5**
	9.6nm,0.6s						
PSAB1	**Pilbara Seismi**	**17.18**	**213**	*e*P	**Pn**	**03 55 56.1**	**+1.0**
	12nm,1.1s						
PSAB3	**Pilbara Seismi**	**17.18**	**213**	*e*P	**Pn**	**03 55 57.1**	**+2.0**
	26nm,1.4s						
PMG	**Port Moresby**	**17.37**	**98**	*e*P	**Pn**	**03 55 57.8**	**+0.3**
	34nm,0.8s						
FORT	**Forrest**	**23.48**	**184**	*e*P	**P**	**03 57 04.3**	**+3.7**
	17nm,0.9s						
BBOO	**Buckleboo**	**26.12**	**168**	*e*P	**P**	**03 57 27.4**	**+2.9**
	4.2nm,0.9s						
HNR	**Honiara**	**29.96**	**96**	*e*P	**P**	**03 57 58.7**	**-0.2**
	77nm,0.6s						
MK32	**Makanchi Array**	**68.28**	**327**	*e*P	**P**	**04 02 49.3**	**0.0**
MKAR	**Makanchi Array**	**68.28**	**327**	P	**P**	**04 02 49.3**	**0.0**
	0.4nm,0.4s,baz=129,slow=7.3,SNR=3.7						

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*IDC **31** 04:06:36.9±2.1, 12°.74S×170°.23E, h0^{km}, mb4.2/5, mb1 4.5/6, mb1mx3.9/38, mbtmp4.3/6, ML4.2/1, MS3.4/9, Ms1 3.4/9, ms1mx3.2/23, Error ellipse: s-maj=64.5km s-min=27.7km az=124.0*

*ISCJB **31** 04:06:40.1±1.5, 12°.9S±0°.2×170°.2E±0°.3, h33^{km}, mb4.1/5, MS3.4/9, Error ellipse: s-maj=41.7km s-min=19.1km az=19.3*

ISC 31 04:06:42.2±1.7, **12°.8S**±0°.2×**170°.2E**±0°.3, **h35**^{km}, **n20**, σ**1ˢ.02**/7, **mb4.1**/5, **MS3.5**/9, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.92**	**201**	Pn	**Pn**	**04 09 02.5**	**+0.1**
	2.3nm,0.3s,baz=263,slow=11,SNR=16						
DZM				LR	LR	04 11 40.4	
	comp=Z,102nm,21.2s,baz=20,slow=30						
DZM	**Mont Dzumac**	**9.92**	**201**	*e*Pn	**Pn**	**04 09 02.5**	**+0.1**
	9.4nm,0.3s						
DZM				*e*LR	LR	04 10 59.9	
	comp=Z,147nm,25.2s						
HNR	**Honiara**	**10.62**	**287**	LR	LR	04 13 15.4	
	comp=Z,648nm,19.1s,baz=118,slow=38						
URZ	**Urewera**	**26.11**	**168**	LR	LR	04 20 09.6	
	comp=Z,88nm,18.3s,baz=1.5,slow=31						
RPZ	**Rata Peaks**	**30.84**	**179**	LR	LR	04 22 43.6	
	comp=Z,93nm,19.3s,baz=348,slow=31						
H11S2	**WAKE ISLAND Hy**	**31.26**	**354**	T	T	04 45 43.5	
	baz=173,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**31.27**	**354**	T	T	04 45 46.1	
	baz=173,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**31.28**	**354**	T	T	04 45 48.8	
	baz=173,slow=76,SNR=13						
STKA	**Stephens Creek**	**32.44**	**229**	P	**P**	**04 13 09.5**	**+0.4**
	1.9nm,0.6s,baz=19,slow=12,SNR=4.5						
STKA				LR	LR	04 24 40.6	
	comp=Z,41nm,18.4s,baz=28,slow=33						
H11N1	**WAKE ISLAND Hy**	**32.45**	**354**	T	T	04 47 18.1	
	baz=172,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**32.45**	**354**	T	T	04 47 12.3	
	baz=172,slow=76,SNR=9.3						
H11N2	**WAKE ISLAND Hy**	**32.47**	**354**	T	T	04 47 12.1	
	baz=172,slow=76,SNR=6.3						
WRA	**Warramunga Arr**	**35.11**	**254**	P	**P**	**04 13 31.3**	**-1.2**
	1.1nm,0.9s,baz=76,slow=10,SNR=4.7						
ASAR	**Alice Springs**	**36.06**	**247**	P	**P**	**04 13 40.0**	**-0.7**
	3.3nm,0.6s,baz=77,slow=9.0,SNR=34						
ASAR				LR	LR	04 26 58.1	
	comp=Z,86nm,19.5s,baz=82,slow=34						
PPT2	**Papeete2**	**39.04**	**102**	*e*LQ	LQ	04 22 46.7	
	286nm,27.8s						
PPT2				*e*LR	LR	04 24 42.3	
	comp=Z,155nm,25.8s,baz=270						
TBI	**Tubuai**	**39.62**	**111**	*e*LQ	LQ	04 23 21.2	
	229nm,29.0s						
TBI				*e*LR	LR	04 25 07.4	
	comp=Z,226nm,27.8s						
MJAR	**Matsushiro Arr**	**57.60**	**330**	LR	LR	04 37 54.2	
	comp=Z,23nm,21.9s,baz=235,slow=33						
CMAR	**Chiang Mai Arr**	**76.82**	**293**	P	**P**	**04 18 32.3**	**+1.3**
	2.7nm,0.8s,baz=108,slow=4.0,SNR=11						
CMAR				LR	LR	04 50 48.8	
	comp=Z,11nm,21.1s,baz=110,slow=34						
ILAR	**Eielson Array**	**83.81**	**17**	P	**P**	**04 19 07.1**	**-0.5**
	1.0nm,1.0s,baz=224,slow=5.9,SNR=6.4						
TXAR	**Lajitas Array**	**92.83**	**61**	LR	LR	04 55 23.2	
	comp=Z,18nm,19.5s,baz=0.0,slow=32						

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*ISCJB **31** 04:12:31.4±1.4, 47°.5N±0°.2×152°.3E±0°.3, h200^{km}, mb3.4/4, Error ellipse: s-maj=35.2km s-min=15.4km az=44.4*

*IDC **31** 04:12:32.5±2.9, 47°.50N×152°.31E, h196^{km}±27^{km}, mb3.2/5, mb1 3.3/7, mb1mx3.0/43, mbtmp3.7/7, Error ellipse: s-maj=35.0km s-min=19.2km az=110.0*

ISC 31 04:12:32.9±1.5, **47°.5N**±0°.2×**152°.3E**±0°.2, **h200**^{km}, **n7**, σ**0ˢ.43**/7, **mb3.5**/4, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.57**	**30**	P	**Pn**	**04 14 07.2**	**-0.3**
	0.2nm,0.3s,baz=203,slow=11,SNR=4.4						
USRK	**Ussuriysk Ar.**	**14.52**	**264**	P	**Pn**	**04 15 48.6**	**-0.5**
	0.3nm,0.3s,baz=76,slow=13,SNR=5.0						
KSRS	**Korea Array**	**20.52**	**249**	P	**P**	**04 16 56.1**	**+0.5**
	1.8nm,0.7s,baz=56,slow=10,SNR=5.0						
FINES	**FINESS Array B**	**63.09**	**334**	P	**P**	**04 22 38.7**	**+0.2**
	1.4nm,0.4s,baz=39,slow=7.5,SNR=15						
NOA	**NORSAR Array B**	**67.30**	**341**	P	**P**	**04 23 05.9**	**+0.2**
	0.3nm,0.7s,baz=29,slow=6.6,SNR=4.0						
AKASG	**Malin Array Be**	**70.58**	**326**	P	**P**	**04 23 26.3**	**+0.3**
	0.7nm,0.4s,baz=34,slow=6.3,SNR=4.0						
ASAR	**Alice Springs**	**72.78**	**198**	P	**P**	**04 23 39.2**	**-0.1**
	0.2nm,0.4s,baz=16,slow=6.9,SNR=3.9						

MEX 31 04:14:04.3±0.7, **17°.25N**×**101°.12W**, **h22**^{km}±25^{km}, **MD3.8**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.48**	**318**	*e*P	Pb	04 14 12.9	-1.3
ZIIG				*e*S	Sb	04 14 18.6	-2.2
CAIG	**El Cayaco**	**0.84**	**103**	*e*P	Pb	04 14 16.7	-3.5
CAIG				*i* S	Sb	04 14 27.8	-3.3
ACP2	**Acapulco**	**1.24**	**107**	*i* P	Pn	04 14 23.8	-2.5
ACP2				*e*S	Sn	04 14 38.2	-4.3
ARIG	**Puente Sto Nin**	**1.27**	**36**	*e*P	Pn	04 14 23.4	-3.4
ARIG				*i* S	Sn	04 14 38.8	-4.4
MEIG	**Mezcala**	**1.59**	**65**	*e*P	Pn	04 14 29.1	-2.1
MEIG				*e*S	Sn	04 14 48.0	-3.1
PLIG	**Platanillo**	**1.92**	**53**	*e*P	Pn	04 14 33.4	-2.4
PLIG				*i* S	Sn	04 14 55.2	-4.1

SJA 31 04:32:58.4±0.6, **27°.01S**×**66°.96W**, **h10**^{km}, **ML3.6**, **MW3.7**, **Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHML	**Horco Molle**	**1.47**	**81**	*e*P	Pb	04 33 25.6	-0.2
AHML				IAML		04 33 26.1	
	comp=Z,702nm,0.2s						
AHML				*e*S	Sg	04 33 46.6	+1.0
CYA	**Choya**	**1.75**	**145**	*e*P	Pb	04 33 30.4	-0.3
CYA				*e*S	Sg	04 33 55.1	+0.4
CYA				IAML		04 33 56.9	
	comp=Z,1μm,0.3s						
VCA	**Vinchina**	**2.04**	**213**	*e*P	Pb	04 33 34.8	-0.9
VCA				*e*S	Sg	04 34 02.7	-1.4
SLA	**San Lorenzo**	**2.63**	**30**	*e*P	Pb	04 33 43.7	-2.1
SLA				*e*S	Sb	04 34 17.5	-0.7
SLA				IAML		04 34 23.9	
	comp=Z,250nm,0.6s						
GO03	**Copiap**	**2.97**	**258**	*e*P	Pn	04 33 48.2	+2.4
GO03				*e*S	Sb	04 34 25.3	-2.7

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*SKHL **31** 04:41:57.9±0.4, 44°.91N×149°.62E, h101^{km}±2^{km}, mb4.1/4, msh5.1/3*

*JMA **31** 04:41:59.9±0.4, 45°.24N×148°.85E, h155^{km}, M3.6*

ISC 31 04:41:59.1±3.6, **44°.77N**±0°.07×**149°.4E**±0°.2, **h100**^{km}, **n24**, σ**2ˢ.56**/35, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.15**	**294**	*i* P	**Pn**	**04 42 21.0**	**-0.2**
KUR				AMB	AMB	04 42 26.0	
	10.0nm,0.3s						
KUR				AMB	AMB	04 42 26.0	
	20nm,0.3s						
KUR				AMB	AMB	04 42 26.0	
	40nm,0.3s						
KUR				*e*S	**Sn**	**04 42 38.5**	**+0.6**
KUR				A	A	04 42 43.0	
	220nm,0.3s						
KUR				A	A	04 42 43.0	
	60nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.61**	**255**	*i* P	**Pn**	**04 42 42.0**	**+2.4**
YUK				AMB	AMB	04 42 42.0	
	40nm,0.4s						
YUK				*e*S	**Sn**	**04 43 15.3**	**+4.6**
YUK				A	A	04 43 19.0	
	80nm,0.4s						
YUK				A	A	04 43 19.0	
	220nm,0.4s						
GRPR	**Tuman**	**2.68**	**254**	*i* P	**Pn**	**04 42 42.7**	**+2.1**
GRPR				AMB	AMB	04 42 43.0	
	20nm,0.3s						
GRPR				*e*S	**Sn**	**04 43 16.0**	**+3.5**
GRPR				A	A	04 43 16.5	
	90nm,0.4s						
GRPR				A	A	04 43 16.5	
	170nm,0.4s						
NEM2	**Nemuro 2**	**2.96**	**243**	P	**Pn**	**04 42 46.5**	**+2.3**
NEM2				*e*S	**Sn**	**04 43 22.6**	**+3.6**
NMR	**Nemuro--Hokkai**	**2.97**	**243**	*i* P	**Pn**	**04 42 46.5**	**+2.2**
NMR				*i* S	**Sn**	**04 43 23.3**	**+4.1**
JRA	**Rausu**	**3.15**	**256**	P	**Pn**	**04 42 47.7**	**+0.9**
JNK	**Nakash**	**3.54**	**252**	P	**Pn**	**04 42 53.3**	**+1.3**
JAK	**Akkeshi**	**3.81**	**244**	P	**Pn**	**04 42 57.1**	**+1.5**
JAK				*e*S	**Sn**	**04 43 41.8**	**+2.4**
JTKR	**Abashiri--Toko**	**3.99**	**260**	P	**Pn**	**04 42 57.4**	**-0.6**
JAR	**Ashorobuto**	**4.29**	**252**	P	**Pn**	**04 43 02.9**	**+0.8**
JOB	**Onbets**	**4.41**	**247**	P	**Pn**	**04 43 04.2**	**+0.5**
JOB				*e*S	**Sn**	**04 43 54.7**	**+0.7**
JKK2	**Kamakawa 2**	**4.83**	**262**	P	**Pn**	**04 43 08.2**	**-1.2**
JCH	**Churui**	**4.85**	**246**	P	**Pn**	**04 43 10.3**	**+0.6**
JCH				*e*S	**Sn**	**04 44 04.7**	**0.0**
YSS	**Yuzh-Sakhalins**	**5.10**	**298**	*e*P	**Pn**	**04 43 14.5**	**+1.4**
YSS				AMB	AMB	04 43 15.4	
	8.0nm,0.6s						
YSS				*e*S	**Sn**	**04 44 11.1**	**+0.4**
JEM	**Erimo**	**5.29**	**241**	P	**Pn**	**04 43 17.4**	**+1.7**
JNBK	**Urakawa-nobuka**	**5.41**	**245**	P	**Pn**	**04 43 16.6**	**-0.7**
JNBK				*e*S	**Sn**	**04 44 13.5**	**-4.7**
JBT2	**Biratori 2**	**5.44**	**251**	P	**Pn**	**04 43 17.9**	**+0.2**
JNB	**Noboribetsu**	**6.46**	**252**	P	**Pn**	**04 43 29.9**	**-1.7**
UGL	**Uglegorsk**	**6.59**	**313**	*e*P	**Pn**	**04 43 33.1**	**-0.2**
JKB	**Kayabe**	**6.72**	**248**	P	**Pn**	**04 43 33.7**	**-1.4**
JKB				*e*S	**Sn**	**04 44 44.4**	**-5.7**
JYM2	**Yakumo 2**	**7.06**	**251**	P	**Pn**	**04 43 37.8**	**-1.9**
JANG	**Nango**	**7.26**	**236**	*e*S	**Sn**	**04 44 58.9**	**-4.5**
JTM	**Tenmabayashi**	**7.28**	**240**	*e*S	**Sn**	**04 44 58.9**	**-4.9**
TYV	**Tymovskoe**	**7.58**	**326**	*e*P	**Pn**	**04 43 46.4**	**-0.3**

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*DDA **31** 05:07:20.9, 37°.02N×39°.21E, h7^{km}±4^{km}, ML2.6*

*ISK **31** 05:07:21.4, 37°.15N×39°.25E, h2^{km}, ML2.0/4*

ISC 31 05:07:21.6±1.5, **37°.09N**±0°.07×**39°.24E**±0°.03, **h7**^{km}±11^{km}, **n13**, σ**0ˢ.65**/22, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANL	**SANLIURFA_Merk**	**0.21**	**293**	*i* P	**Pg**	**05 07 25.8**	**-0.1**
SANL				*i* S	**Sg**	**05 07 29.0**	**+0.3**
SANL				IAML_P			
	comp=Z,5μm,0.2s						
URFA	**Urfa**	**0.48**	**317**	PG	**Pg**	**05 07 31.1**	**+0.1**
URFA				SG	**Sb**	**05 07 38.3**	**-1.6**
ATAB	**Bozova**	**0.84**	**297**	*i* P	**Pb**	**05 07 38.0**	**-0.7**
ATAB				*i* S	**Sb**	**05 07 50.4**	**+0.2**
ATAB				IAML_P			
	comp=Z,2μm,0.2s						
MAZI	**Mazidag**	**1.03**	**69**	PG	**Pb**	**05 07 41.5**	**-0.4**
MAZI				SG	**Sb**	**05 07 56.2**	**+0.4**
DIYA	**Diyarbakir**	**1.09**	**40**	*i* P	**Pn**	**05 07 44.5**	**+1.0**
DYBB	**Diyarbakir**	**1.12**	**39**	PG	**Pg**	**05 07 42.7**	**-0.5**
DYBB				SG	**Sb**	**05 07 58.2**	**-0.1**
MARD	**Mardin**	**1.25**	**79**	*i* P	**Pn**	**05 07 45.7**	**0.0**
MARD				*i* S	**Sn**	**05 08 03.0**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.29**	**2**	PN	**Pg**	**05 07 45.9**	**-0.5**
GZT	**Gaziantep**	**1.36**	**282**	*i* P	**Pb**	**05 07 47.9**	**+0.4**
GZT				*i* S	**Sn**	**05 08 05.9**	**+0.3**
GZT				IAML_P			
	comp=Z,462nm,0.2s						
ELZG	**Elazig**	**1.42**	**352**	*i* P	**Pg**	**05 07 49.4**	**+0.5**
ELZG				*i* S	**Sb**	**05 08 05.9**	**-1.1**
ELZG				IAML_P			
	comp=Z,566nm,0.2s						
AKCD	**Akcadag**	**1.59**	**320**	*i* P	**Pg**	**05 07 52.4**	**+0.2**
AKCD				*i* S	**Sg**	**05 08 13.3**	**+0.5**
AKCD				IAML_P			
	comp=Z,516nm,0.3s						
GAZ	**Gaziantep**	**1.62**	**274**	PN	**Pg**	**05 07 52.1**	**-0.5**
HCB	**Kahramanmara**	**1.88**	**279**	*i* P	**Pb**	**05 07 56.0**	**-0.3**
HCB				IAML_P			
	comp=Z,102nm,0.1s						

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*SJA **31** 05:22:35.6±0.8, 23°.10S×66°.74W, h228^{km}±6^{km}, ML3.3, MW2.9*

*ISCJB **31** 05:22:36.5±0.5, 23°.14S±0°.04×66°.83W±0°.03, h218^{km}±5^{km}, mb3.0/2, Error ellipse: s-maj=7.4km s-min=4.6km az=26.1*

*IDC **31** 05:22:36.5±1.2, 23°.22S×66°.64W, h199^{km}±15^{km}, mb2.9/2, mb1 3.3/7, mb1mx3.1/23, mbtmp3.7/7, Error ellipse: s-maj=22.6km s-min=20.6km az=167.0*

*GUC **31** 05:22:38.3±0.6, 23°.04S×67°.32W, h248^{km}±9^{km}, ML4.2*

ISC 31 05:22:36.8±0.9, **23°.06S**±0°.06×**66°.75W**±0°.04, **h215**^{km}±8^{km}, **n30**, σ**1ˢ.67**/52, **10C-1D**, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	**Humahuaca**	**1.24**	**97**	*e*P	**Pn**	**05 23 10.7**	**+0.4**
HJA				IAML		05 23 11.0	
	comp=Z,231nm,0.5s						
HJA				*e*S	**S**	**05 23 37.3**	**+1.2**
YJA	**Yavi**	**1.44**	**53**	*e*P	**Pn**	**05 23 13.0**	**+1.1**
YJA				IAML		05 23 13.6	
	comp=Z,74nm,0.3s						
YJA				*e*S	**S**	**05 23 40.5**	**+1.5**
AZAP	**Zapla**	**1.93**	**127**	*e*P	**Pn**	**05 23 15.5**	**-0.5**
AZAP				IAML		05 23 15.8	
	comp=Z,160nm,0.6s						
AZAP				*e*S	**S**	**05 23 46.1**	**-0.3**
SLA	**San Lorenzo**	**2.01**	**146**	*e*P	**Pn**	**05 23 16.9**	**+0.2**
LVC	**Limon Verde**	**2.04**	**282**	P	**Pn**	**05 23 17.9**	**+0.6**
	comp=Z,40nm,0.3s,baz=94,slow=6.5,SNR=325						
LVC				S	**S**	**05 23 49.1**	**+0.6**
	comp=Z,10nm,0.3s,baz=288,slow=20,SNR=8.8						
PB15	**IPOC Station P**	**2.51**	**266**	*e*P	**Pn**	**05 23 22.3**	**+0.3**
PB15				*e*S	**S**	**05 23 57.1**	**+0.2**
PB15	**IPOC Station P**	**2.51**	**266**	⇑*i*P	**Pn**	**05 23 22.1**	**+0.1**
PB15				*i* S	**S**	**05 23 55.9**	**-1.0**
PB06	**IPOC Station P**	**2.63**	**277**	*e*P	**Pn**	**05 23 23.6**	**+0.4**
PB06				*e*S	**S**	**05 23 58.5**	**-0.7**
PB06	**IPOC Station P**	**2.63**	**277**	⇑*i*P	**Pn**	**05 23 23.5**	**+0.3**
PB06				*i* S	**S**	**05 23 58.1**	**-1.0**
PB06				IAML		05 24 01.5	
	comp=N,266nm,0.1s						
PB09	**IPOC Station P**	**2.63**	**298**	⇑*i*P	**Pn**	**05 23 24.6**	**+1.3**
PB09				*i* S	**S**	**05 23 59.0**	**-0.1**
PB03	**IPOC Station P**	**2.95**	**289**	*e*P	**Pn**	**05 23 27.3**	**+0.4**
PB03	**IPOC Station P**	**2.95**	**289**	⇑*i*P	**Pn**	**05 23 27.2**	**+0.4**
PB03				*i* S	**S**	**05 24 04.2**	**-1.5**
PB03				IAML		05 24 05.8	
	comp=E,455nm,0.2s						
PB07	**IPOC Station P**	**3.19**	**294**	*e*P	**Pn**	**05 23 30.2**	**+0.5**
PB07				*e*S	**S**	**05 24 09.6**	**-1.1**
PB07	**IPOC Station P**	**3.19**	**294**	⇑*i*P	**Pn**	**05 23 30.2**	**+0.5**
PB07				*i* S	**S**	**05 24 08.9**	**-1.9**
PB07				IAML		05 24 10.9	
	comp=E,509nm,0.4s						
PB04	**IPOC Station P**	**3.22**	**282**	*e*P	**Pn**	**05 23 30.1**	**+0.1**
PB04	**IPOC Station P**	**3.22**	**282**	⇑*i*P	**Pn**	**05 23 30.1**	**+0.1**
PB04				*i* S	**S**	**05 24 09.5**	**-1.9**
PB04				IAML		05 24 15.0	
	comp=E,258nm,0.1s						
PB01	**IPOC Station P**	**3.24**	**308**	⇑*i*P	**Pn**	**05 23 30.9**	**+0.8**
PB01				*i* S	**S**	**05 24 11.2**	**-0.4**
PB01				IAML		05 24 13.9	
	comp=E,512nm,0.2s						
PB02	**IPOC Station P**	**3.39**	**300**	*e*P	**Pn**	**05 23 32.5**	**+0.6**
PB02				*e*S	**S**	**05 24 13.8**	**-1.0**
PB02	**IPOC Station P**	**3.39**	**300**	⇑*i*P	**Pn**	**05 23 32.4**	**+0.4**
PB02				*i* S	**S**	**05 24 13.0**	**-1.9**
PB02				IAML		05 24 16.9	
	comp=E,424nm,0.5s						
PB10	**IPOC Station P**	**3.53**	**262**	⇑*i*P	**Pn**	**05 23 33.0**	**-0.4**
PB10				*i* S	**S**	**05 24 14.3**	**-3.3**
PB08	**IPOC Station P**	**3.67**	**322**	⇑*i*P	**Pn**	**05 23 37.6**	**+2.0**
PB08				*i* S	**S**	**05 24 22.7**	**+1.4**
PB08				IAML		05 24 25.0	
	comp=E,106nm,0.1s						
AHML	**Horco Molle**	**3.92**	**161**	*e*P	**Pn**	**05 23 37.5**	**-0.7**
PB11	**IPOC Station P**	**4.25**	**320**	⇓*e*P	**Pn**	**05 23 42.5**	**0.0**
PB11				*i* S	**S**	**05 24 32.6**	**-1.4**
MNMC	**Minye Minye**	**4.73**	**325**	*e*P	**Pn**	**05 23 49.4**	**+1.0**
MNMC				*i* S	**S**	**05 24 43.6**	**-1.2**
LPAZ	**La Paz**	**6.86**	**349**	P	**Pn**	**05 24 18.1**	**+2.1**
	comp=E,1.1nm,0.3s,baz=161,slow=6.8,SNR=41						
LPAZ				S	**S**	**05 25 34.5**	**-0.3**
	baz=49,slow=19,SNR=2.6						
CFA	**Coronel Fontan**	**8.61**	**189**	P	**Pn**	**05 24 35.6**	**-2.4**
	comp=E,0.8nm,0.3s,baz=22,slow=13,SNR=6.1						
CFA				S	S	05 26 01.3	-14
	comp=E,0.6nm,0.3s,baz=338,slow=19,SNR=4.4						
SIV	**San Ignacio**	**8.84**	**38**	P	**Pn**	**05 24 40.4**	**-0.5**
	comp=E,0.3nm,0.3s,baz=233,slow=11,SNR=9.2						
SIV				S	**S**	**05 26 12.8**	**-7.8**
	baz=311,slow=19,SNR=1.7						
BDFB	**Brasilia**	**19.14**	**71**	P	**Pn**	**05 26 45.8**	**-2.0**
	comp=E,0.5nm,0.3s,baz=242,slow=12,SNR=8.7						
TXAR	**Lajitas Array**	**63.05**	**324**	P	**P**	**05 32 44.4**	**+2.9**
	comp=E,0.2nm,0.8s,baz=144,slow=6.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**76.02**	**69**	P	**P**	**05 34 01.5**	**+0.7**
	comp=E,0.3nm,0.4s,baz=250,slow=4.3,SNR=6.1						

ISC 31 05:30:14.3±1.3, **50°.25N**±0°.06×**18°.83E**±0°.04, **h0**^{km}, **n6**, σ**0ˢ.55**/12, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHZP	**Chorzow**	**0.11**	**68**	*e*Pg	**Pg**	**05 30 16.9**	**+0.5**
CHZP				*e*Sg	**Sg**	**05 30 18.1**	**+0.3**
OJC	**Ojcow**	**0.62**	**92**	*e*Pg	**Pg**	**05 30 25.9**	**-0.3**
OJC				*e*Sg	**Sg**	**05 30 33.9**	**-0.3**
MORC	**Moravsky Berou**	**0.96**	**241**	*e*PG	**Pg**	**05 30 32.9**	**+0.3**
MORC				*e*SG	**Sb**	**05 30 46.2**	**-0.8**
LANS	**Liptovska Anna**	**1.18**	**159**	*e*PG	**Pg**	**05 30 36.8**	**0.0**
LANS				*e*SG	**Sg**	**05 30 52.6**	**+0.6**
LANS				*e*LG	Lg	05 30 56.1	
NIE	**Niedzica**	**1.26**	**131**	*e*Pg	**Pg**	**05 30 38.0**	**-0.4**
NIE				*e*Sg	**Sb**	**05 30 56.1**	**+0.3**
VYHS	**Vyhne**	**1.76**	**180**	*e*PN	**Pn**	**05 30 45.5**	**-0.5**
VYHS				*e*SN	**Sn**	**05 31 09.9**	**+0.8**

MAN 31 05:30:36.2, **7°.57N**×**125°.88E**, **h155**^{km}, **mb4.2**, **ML3.1**, **MS2.8**, **1D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.73**	**149**	*e*P	Pn	05 31 00.2	+0.7
BUKP	**Musuan**	**0.87**	**291**	*e*P	Pn	05 31 01.8	+1.3
BUKP				*e*S	Sn	05 31 16.4	-2.6
KCP	**Kidapawan**	**0.96**	**235**	⇓*e*P	Pn	05 31 01.6	+0.4
KCP				*i* S	Sn	05 31 21.0	+0.6
SKMP	**Bagumbayan, Su**	**1.69**	**232**	*e*P	Pn	05 31 08.6	+0.4
SKMP				*e*S	Sn	05 31 18.9	-14

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*SJA **31** 05:35:55.2±0.9, 20°.51S×67°.75W, h198^{km}±8^{km}, ML4.0, MW3.8*

*VAO **31** 05:35:56.4±0.5, 20°.54S×68°.05W, h224^{km}±10^{km}, mb4.0*

*ISCJB **31** 05:35:56.1±0.2, 20°.58S±0°.02×67°.71W±0°.03, h183^{km}±3^{km}, mb3.9/14, Error ellipse: s-maj=4.4km s-min=3.5km az=164.4*

*IDC **31** 05:35:56.2±0.7, 20°.52S×67°.53W, h171^{km}±8^{km}, mb3.4/8, mb1 3.7/15, mb1mx3.6/27, mbtmp4.1/15, MS1.9/1, Ms1 1.9/1, ms1mx1.9/9, Error ellipse: s-maj=15.4km s-min=8.6km az=100.0*

*GUC **31** 05:35:57.5±0.6, 20°.55S×68°.07W, h196^{km}±5^{km}, ML4.2*

*NEIC **31** 05:35:57.1±2.9, 20°.60S×67°.70W, h172^{km}±9^{km}, mb4.2/10, Error ellipse: s-maj=15.2km s-min=8.1km az=88.0*

*SCB **31** 05:35:58.0±2.0, 20°.57S×67°.74W, h197^{km}±13^{km}, ML4.1/1, Error ellipse: s-maj=5.5km s-min=4.1km az=1.0*

ISC 31 05:35:56.2±0.6, **20°.60S**±0°.04×**67°.68W**±0°.04, **h176**^{km}±7^{km}, **n106**, σ**1ˢ.74**/147, **mb4.0**/14, **10C-2D**, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.46**	**288**	*e*P	**Pn**	**05 36 28.9**	**+1.0**
PB08				*e*S	**Sn**	**05 36 53.2**	**+1.0**
PB08	**IPOC Station P**	**1.46**	**288**	⇑*i*P	**Pn**	**05 36 28.9**	**+1.0**
PB08				*i* S	**Sn**	**05 36 52.6**	**+0.4**
PB08				IAML		05 36 55.9	
	comp=E,1μm,0.2s						
PB08	**IPOC Station P**	**1.46**	**288**	P	**Pn**	**05 36 28.9**	**+1.0**
PB08				S	**Sn**	**05 36 52.7**	**+0.4**
GO01	**Chusmiza**	**1.70**	**303**	*e*Pn	**Pn**	**05 36 31.1**	**+0.7**
GO01	**Chusmiza**	**1.70**	**303**	⇑*i*P	**Pn**	**05 36 31.1**	**+0.7**
GO01				*i* S	**Sn**	**05 36 56.8**	**+0.1**
GO01				IAML		05 37 04.3	
	comp=E,1μm,0.1s						
PB01	**IPOC Station P**	**1.75**	**255**	*e*Pn	**Pn**	**05 36 31.2**	**+0.8**
PB01				*e*Sn	**Sn**	**05 36 57.1**	**+0.2**
PB01	**IPOC Station P**	**1.75**	**255**	⇑*e*P	**Pn**	**05 36 31.1**	**+0.8**
PB01				*i* S	**Sn**	**05 36 56.4**	**-0.6**

PB01				IAML		05 36 57.9	
	comp=N,2µm,0.3s						
PB01	**IPOC Station P**	**1.75**	**255**	P	**Pn**	**05 36 31.2**	**+0.8**
PB09	**IPOC Station P**	**1.88**	**231**	eP	**Pn**	**05 36 33.5**	**+1.6**
PB09				eS	**Sn**	**05 37 01.4**	**+1.7**
PB09	**IPOC Station P**	**1.88**	**231**	⇓eP	**Pn**	**05 36 33.5**	**+1.6**
PB09				iS	**Sn**	**05 37 01.4**	**+1.7**
PB09				IAML		05 37 03.7	
	comp=N,539nm,0.8s						
PB11	**IPOC Station P**	**2.04**	**294**	ePn	**Pn**	**05 36 33.7**	**+0.1**
PB11				eSn	**Sn**	**05 37 01.2**	**-1.3**
PB11	**IPOC Station P**	**2.04**	**294**	eP	**Pn**	**05 36 33.8**	**+0.3**
PB11				eS	**Sn**	**05 37 01.7**	**-0.9**
PB11	**IPOC Station P**	**2.04**	**294**	⇑iP	**Pn**	**05 36 33.8**	**+0.1**
PB11				iS	**Sn**	**05 37 01.0**	**-1.5**
PB11	**IPOC Station P**	**2.04**	**294**	P	**Pn**	**05 36 33.9**	**+0.3**
PB11				S	**Sn**	**05 37 01.5**	**-1.0**
PB02	**IPOC Station P**	**2.19**	**251**	eP	**Pn**	**05 36 36.3**	**+1.0**
PB02				eS	**Sn**	**05 37 06.0**	**+0.5**
PB02	**IPOC Station P**	**2.19**	**251**	eP	**Pn**	**05 36 35.7**	**+0.5**
PB02				iS	**Sn**	**05 37 04.7**	**-0.9**
PB02				IAML		05 37 07.5	
	comp=E,2µm,0.2s						
LVC	**Limon Verde**	**2.30**	**210**	P	**Pn**	**05 36 38.6**	**+1.8**
	comp=E,15nm,0.3s,baz=12,slow=7.2,SNR=104						
LVC				S	**Sn**	**05 37 10.6**	**+2.2**
	comp=E,68nm,0.3s,baz=108,slow=20,SNR=48						
LVC				LR	LR	05 38 05.5	
	comp=E,24nm,19.6s,baz=302,slow=53						
LVC	**Limon Verde**	**2.30**	**210**	eP	**Pn**	**05 36 38.5**	**+1.7**
LVC	**Limon Verde**	**2.30**	**210**	eP	**Pn**	**05 36 38.6**	**+1.8**
MNMC	**Minye Minye**	**2.32**	**309**	ePn	**Pn**	**05 36 37.6**	**+0.6**
MNMC				eSn	**Sn**	**05 37 08.6**	**+0.1**
MNMC	**Minye Minye**	**2.32**	**309**	⇑iP	**Pn**	**05 36 37.4**	**+0.4**
MNMC				iS	**Sn**	**05 37 07.5**	**-1.0**
MNMC	**Minye Minye**	**2.32**	**309**	P	**Pn**	**05 36 37.6**	**+0.6**
MNMC				S	**Sn**	**05 37 07.9**	**-0.6**
MNMCX	**Minye Minye**	**2.32**	**309**	eS	**Sn**	**05 37 07.5**	**-1.0**
PB07	**IPOC Station P**	**2.34**	**241**	eP	**Pn**	**05 36 37.8**	**+0.8**
PB07				eS	**Sn**	**05 37 08.9**	**+0.1**
PB07	**IPOC Station P**	**2.34**	**241**	⇑iP	**Pn**	**05 36 37.8**	**+0.8**
PB07				iS	**Sn**	**05 37 08.2**	**-0.6**
PB07				IAML		05 37 09.7	
	comp=E,1µm,0.2s						
PB03	**IPOC Station P**	**2.41**	**233**	eP	**Pn**	**05 36 38.8**	**+1.0**
PB03	**IPOC Station P**	**2.41**	**233**	eP	**Pn**	**05 36 38.8**	**+1.0**
PB03				eS	**Sn**	**05 37 10.0**	**-0.2**
PB03				IAML		05 37 10.7	
	comp=E,1µm,0.3s						
PSGCX	**Pisagua**	**2.50**	**293**	eP	**Pn**	**05 36 38.6**	**-0.3**
PSGCX				eS	**Sn**	**05 37 10.3**	**-1.7**
PSGC	**Pisagua**	**2.51**	**293**	⇑iP	**Pn**	**05 36 38.6**	**-0.3**
PSGC				iS	**Sn**	**05 37 09.7**	**-2.3**
PSGC				IAML		05 37 11.3	
	comp=E,1µm,0.5s						
PSGC	**Pisagua**	**2.51**	**293**	P	**Pn**	**05 36 38.6**	**-0.3**
PSGC				S	**Sn**	**05 37 09.3**	**-2.7**
YJA	**Yavi**	**2.55**	**128**	eP	**Pn**	**05 36 42.3**	**+2.6**
YJA				IAML		05 36 42.8	
	comp=Z,140nm,0.2s						
YJA	**Yavi**	**2.55**	**128**	P	**Pn**	**05 36 42.1**	**+2.4**
YJA				S	**Sn**	**05 37 14.9**	**+1.3**
PB06	**IPOC Station P**	**2.74**	**220**	eP	**Pn**	**05 36 42.9**	**+1.2**
PB06	**IPOC Station P**	**2.74**	**220**	⇓eP	**Pn**	**05 36 43.0**	**+1.4**
PB06				iS	**Sn**	**05 37 17.4**	**+0.3**
PB06				IAML		05 37 20.8	
	comp=N,1µm,0.1s						
PB06	**IPOC Station P**	**2.74**	**220**	P	**Pn**	**05 36 43.0**	**+1.4**
PB06				S	**Sn**	**05 37 17.2**	**+0.1**
PB16	**IPOC Station P**	**2.84**	**322**	⇑iP	**Pn**	**05 36 44.6**	**+1.2**
PB16				iS	**Sn**	**05 37 20.8**	**+0.9**
PB16				IAML		05 37 23.3	
	comp=E,416nm,0.6s						
PB04	**IPOC Station P**	**2.88**	**233**	ePn	**Pn**	**05 36 44.4**	**+1.1**
PB04				eSn	**Sn**	**05 37 18.8**	**-1.2**
PB04	**IPOC Station P**	**2.88**	**233**	⇑eP	**Pn**	**05 36 44.2**	**+0.9**
PB04				iS	**Sn**	**05 37 18.9**	**-1.2**
PB04				IAML		05 37 20.2	
	comp=E,960nm,0.3s						
PB04	**IPOC Station P**	**2.88**	**233**	P	**Pn**	**05 36 44.4**	**+1.1**
PB15	**IPOC Station P**	**3.08**	**212**	eP	**Pn**	**05 36 47.4**	**+1.6**
PB15				iS	**Sn**	**05 37 26.3**	**+1.6**
PB12	**IPOC Station P**	**3.19**	**308**	⇑iP	**Pn**	**05 36 46.0**	**-1.0**
PB12				iS	**Sn**	**05 37 24.0**	**-2.7**
PB12				IAML		05 37 25.4	
	comp=N,539nm,0.4s						
HJA	**Humahuaca**	**3.34**	**141**	eP	**Pn**	**05 36 52.3**	**+3.0**
HJA				IAML		05 36 52.7	
	comp=Z,490nm,0.4s						
HJA				eS	**Sn**	**05 37 33.8**	**+3.1**
BB01	**Montecillos**	**3.40**	**43**	P	**Pn**	**05 36 50.4**	**+0.5**
BS10	**CO. Tuti**	**3.57**	**29**	P	**Pn**	**05 36 52.5**	**+0.2**
BS05	**Cuyupaya**	**3.64**	**11**	P	**Pn**	**05 36 54.2**	**+1.1**
BBOJ	**La Paz, Jacaqu**	**3.64**	**352**	P	**Pn**	**05 36 54.8**	**+1.6**
BBOE	**La Paz, Chanca**	**3.78**	**356**	P	**Pn**	**05 36 56.9**	**+1.9**
PB10	**IPOC Station P**	**3.94**	**222**	ePn	**Pn**	**05 36 56.9**	**+0.6**
PB10	**IPOC Station P**	**3.94**	**222**	eP	**Pn**	**05 36 56.7**	**+0.3**
PB10				iS	**Sn**	**05 37 39.2**	**-4.3**
PB10	**IPOC Station P**	**3.94**	**222**	P	**Pn**	**05 36 57.0**	**+0.6**
BS06	**Camiri**	**3.94**	**83**	P	**Pn**	**05 36 56.9**	**+0.3**
BS06				S	**Sn**	**05 37 42.1**	**-1.6**
BS06				AML	AML	05 37 43.8	
	comp=Z,192nm,1.1s						
LPAZ	**La Paz**	**4.31**	**354**	P	**Pn**	**05 37 02.7**	**+0.9**
	baz=154,slow=9.1						
LPAZ				S	**Sn**	**05 37 52.3**	**-0.8**
	comp=Z,2.0nm,0.3s,baz=24,slow=18,SNR=1.3						
LPAZ	**La Paz**	**4.31**	**354**	P	**Pn**	**05 37 02.9**	**+1.1**
LPAZ	**La Paz**	**4.31**	**354**	eP	**Pn**	**05 37 02.4**	**+0.6**
AZAP	**Zapla**	**4.34**	**147**	eP	**Pn**	**05 37 03.1**	**+1.3**
BBOB	**La Paz, Bander**	**4.46**	**354**	P	**Pn**	**05 37 04.4**	**+0.8**
BS09	**Huarina**	**4.48**	**348**	P	**Pn**	**05 37 05.3**	**+1.5**
SLA	**San Lorenzo**	**4.56**	**154**	P	**Pn**	**05 37 07.0**	**+2.4**
GO02	**Mina Guanaco**	**4.87**	**201**	ePn	**Pn**	**05 37 09.2**	**+0.6**
GO02				eSn	**Sn**	**05 38 05.2**	**-0.3**
AHML	**Horco Molle**	**6.52**	**161**	P	**Pn**	**05 37 31.9**	**+1.9**
GO03	**Copiap**	**7.34**	**198**	ePn	**Pn**	**05 37 39.4**	**-1.5**
SIV	**San Ignacio**	**7.77**	**55**	P	**Pn**	**05 37 44.1**	**-2.5**
	comp=Z,41nm,0.3s,baz=253,slow=11,SNR=755						
SIV				S	**Sn**	**05 39 07.1**	**-6.7**
	comp=Z,0.5nm,0.3s,baz=139,slow=19,SNR=2.9						
LCO	**Las Campanas**	**8.81**	**198**	ePn	**Pn**	**05 37 57.8**	**-2.6**
LCO				eSn	**Sn**	**05 39 33.6**	**-5.3**
LCO	**Las Campanas**	**8.81**	**198**	eP	**Pn**	**05 37 59.5**	**-0.9**
GO04	**Tololo Observa**	**9.94**	**196**	ePn	**Pn**	**05 38 12.2**	**-3.0**
GO04				eSn	**Sn**	**05 40 00.6**	**-5.3**
CFA	**Coronel Fontan**	**10.97**	**183**	P	**Pn**	**05 38 28.0**	**-0.4**
	comp=Z,4.3nm,0.3s,baz=6.8,slow=15,SNR=67						
CFA				S	**Sn**	**05 40 22.2**	**-8.1**
	comp=Z,1.6nm,0.3s,baz=248,slow=19,SNR=5.9						
CPUP	**Villa Florida**	**11.08**	**123**	P	**Pn**	**05 38 29.6**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=295,slow=12,SNR=28						
CPUP	**Villa Florida**	**11.08**	**123**	ePn	**Pn**	**05 38 30.1**	**+0.3**
NNA	**Nana**	**12.27**	**313**	P	**Pn**	**05 38 44.5**	**-0.8**
	comp=Z,2.6nm,0.3s,baz=106,slow=13,SNR=5.3						
NNA	**Nana**	**12.27**	**313**	ePn	**Pn**	**05 38 44.6**	**-0.7**
GO05	**Huala**	**14.84**	**194**	eP	**P**	**05 39 19.1**	**+0.4**
CLDB	**Colider**	**14.97**	**52**	eP	**Pn**	**05 39 18.9**	**-0.3**
PTGB	**Pitanga**	**14.98**	**109**	eP	**P**	**05 39 22.4**	**+1.8**
ITAB	**Concordia**	**15.67**	**118**	eP	**P**	**05 39 29.3**	**+1.3**
ITRB	**Iturama**	**16.29**	**90**	eP	**P**	**05 39 35.5**	**+0.6**
FRTB	**Fartura**	**17.02**	**103**	eP	**Pn**	**05 39 44.5**	**+0.4**
CNLB	**Canela**	**17.54**	**123**	eP	**P**	**05 39 48.8**	**+0.2**
BB19B	**Bebedouro**	**17.91**	**95**	eP	**P**	**05 39 54.0**	**+1.2**
GO06	**Curarrehue**	**19.20**	**189**	eP	**Pn**	**05 40 09.0**	**-0.6**
	comp=Z,40nm,1.9s						
BDFB	**Brasilia**	**19.32**	**78**	P	**P**	**05 40 08.5**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=284,slow=8.3,SNR=2.9						
VAO	**Valinhos**	**19.38**	**101**	eP	**P**	**05 40 08.6**	**-0.2**
PLCA	**Paso Flores**	**20.22**	**186**	P	**P**	**05 40 19.7**	**+2.2**
	comp=Z,1.7nm,0.9s,baz=14,slow=7.6,SNR=5.7						
PLCA	**Paso Flores**	**20.22**	**186**	eP	**P**	**05 40 19.6**	**+2.0**
	comp=Z,20nm,1.8s						
PEXB	**Peixe**	**20.41**	**69**	eP	**P**	**05 40 19.6**	**-0.1**
SLP01	**Ubatuba-SP**	**21.06**	**102**	eP	**P**	**05 40 26.8**	**0.0**
PTGA	**Pitinga**	**21.14**	**22**	P	**P**	**05 40 24.7**	**-2.8**
	comp=Z,1.1nm,0.3s,baz=90,slow=12,SNR=4.3						
PTGA	**Pitinga**	**21.14**	**22**	eP	**P**	**05 40 25.3**	**-2.2**
	comp=Z,17nm,1.9s						
PTGA	**Pitinga**	**21.14**	**22**	eP	**P**	**05 40 24.9**	**-2.6**
BSCB	**Bom Sucesso**	**21.41**	**95**	eP	**P**	**05 40 30.6**	**+0.1**
SMTB	**Santa Maria do**	**22.63**	**62**	eP	**P**	**05 40 41.2**	**-1.3**
OBIP	**Obispado Ponce**	**38.42**	**2**	eP	**P**	**05 43 01.0**	**+0.3**
	comp=Z,38nm,1.5s						
TXAR	**Lajitas Array**	**60.57**	**324**	P	**P**	**05 45 48.9**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=147,slow=8.2,SNR=4.4						
DBIC	**Dimbokro**	**67.38**	**73**	P	**P**	**05 46 32.1**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=239,slow=5.9,SNR=2.6						
SDCO	**Great Sand Dun**	**68.08**	**328**	eP	**P**	**05 46 38.6**	**+1.5**
	comp=Z,1.4nm,0.7s						
KNB	**Kanab**	**71.39**	**323**	eP	**P**	**05 46 59.5**	**+2.3**
	comp=Z,2.6nm,0.8s						
MTPU	**Mount Pierson**	**71.77**	**324**	eP	**P**	**05 47 02.2**	**+2.5**
	comp=Z,11nm,1.9s						
CCUT	**Cedar City**	**72.07**	**323**	eP	**P**	**05 47 02.8**	**+1.4**
	comp=Z,2.3nm,0.7s						
PDAR	**Pinedale Array**	**73.92**	**329**	P	**P**	**05 47 13.1**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=106,slow=7.0,SNR=3.6						
HWUT	**Hardware Ranch**	**74.04**	**327**	eP	**P**	**05 47 14.2**	**+1.4**
	comp=Z,8.9nm,1.8s						
TORD	**Torodi Ar. Bea**	**75.97**	**70**	P	**P**	**05 47 23.5**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=256,slow=5.2,SNR=14						
HLID	**Hailey**	**76.91**	**327**	eP	**P**	**05 47 31.8**	**+2.7**
	comp=Z,1.4nm,0.7s						
MAW	**Mawson**	**84.85**	**163**	P	**P**	**05 48 11.9**	**+1.4**
	comp=Z,1.4nm,0.4s,baz=239,slow=12,SNR=10						
YKA	**Yellowknife Ar**	**90.73**	**340**	P	**P**	**05 48 39.4**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=132,slow=4.9,SNR=7.1						
ASAR	**Alice Springs**	**131.23**	**207**	PKP	**PKiKP**	**05 54 49.2**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=134,slow=1.7,SNR=3.4						
WRA	**Warramunga Arr**	**134.30**	**210**	PKP	**PKiKP**	**05 54 55.0**	**-0.3**
	comp=Z,0.8nm,1.0s,baz=176,slow=2.5,SNR=3.0						
KSH	**Kashi**	**143.64**	**51**	ePKP	**PKPdf**	**05 55 11.8**	**+1.4**

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*SOME **31** 05:36:08.9, 39°.98N×76°.83E, h5^{km}*
*NNC **31** 05:36:09.6±1.5, 40°.06N×76°.74E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=9.8km s-min=8.0km az=1.0*
*KRNET **31** 05:36:09.8±0.1, 40°.08N×76°.72E, mb3.0*
ISC 31 05:36:14.0±2.1**, 40°.14N**±0°.09×**76°.70E**±0°.04**, h10^{km}, n57, σ2^{s}.04**/86**, 19C-10D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.40**	**338**	⇑iP	**Pn**	**05 36 37.3**	**-2.7**
	baz=37						
NRN				⇑iS	**Sn**	**05 36 57.5**	**-1.2**
	baz=37						
KDJ	**Kajisay**	**2.03**	**10**	⇑eP	**Pn**	**05 36 48.0**	**-0.4**
	baz=10.0						
KDJ				⇑iS	**Sb**	**05 37 16.0**	**-0.4**
	baz=10.0						
ULHL	**Ulahol**	**2.14**	**351**	⇓eP	**Pn**	**05 36 49.9**	**-0.1**
	baz=51						
ULHL				⇓iS	**Sb**	**05 37 18.9**	**-0.7**
	baz=51						
ULHL	**Ulahol**	**2.14**	**351**	P	**Pn**	**05 36 51.0**	**+1.0**
	SNR=13						
KZA	**Kyzart**	**2.23**	**331**	⇑iP	**Pn**	**05 36 51.2**	**-0.2**
	baz=31						
KZA				⇑iS	**Sb**	**05 37 21.0**	**-1.4**
	baz=31						
KZA	**Kyzart**	**2.23**	**331**	P	**Pn**	**05 36 52.2**	**+0.8**
	SNR=8.3						
BOOM	**Boomskoye usch**	**2.42**	**347**	⇑iP	**Pn**	**05 36 53.1**	**-0.7**
	baz=47						
BOOM				⇑iS	**Sn**	**05 37 25.4**	**+1.8**
	baz=47						
ARLS	**Aral**	**2.49**	**315**	⇓iP	**Pn**	**05 36 54.2**	**-0.6**
	baz=15						
ARLS				⇓iS	**Sn**	**05 37 26.6**	**+1.3**
	baz=15						
UCH	**Uchtor**	**2.66**	**322**	⇑iP	**Pn**	**05 36 56.5**	**-0.9**
	baz=23						
UCH				⇑iS	**Sn**	**05 37 31.0**	**+1.0**
	baz=23						
UCH	**Uchtor**	**2.66**	**322**	P	**Pn**	**05 36 58.9**	**+1.5**
	SNR=7.8						
IZV	**Izvestkoviy**	**2.90**	**359**	Pg	**Pb**	**05 37 04.3**	**-1.6**
	6.0nm,0.5s						
IZV				Lg	Lg	05 37 44.1	
	14nm,0.5s						
IZV	**Izvestkoviy**	**2.90**	**359**	eP	**Pb**	**05 37 04.3**	**-1.6**
	6.0nm,0.5s						
IZV				eS	**Sb**	**05 37 44.1**	**+2.6**
	14nm,0.5s						
TKM2	**Tokmak 2**	**2.90**	**344**	⇓Pg	**Pn**	**05 37 00.2**	**-0.3**
TKM2				⇓Lg	Lg	05 37 44.7	
	12nm,0.6s						
TKM2	**Tokmak 2**	**2.90**	**344**	⇓iP	**Pn**	**05 37 00.0**	**-0.5**
	baz=44						
TKM2				⇓iS	**Sn**	**05 37 37.3**	**+1.7**
	baz=44						
TKM2	**Tokmak 2**	**2.90**	**344**	P	**Sb**	**05 37 45.5**	**+3.8**
	SNR=6.8						
TNSS	**Tian-Shan**	**2.91**	**4**	Pg	**Pb**	**05 37 04.7**	**-1.5**
	10.0nm,0.5s						
TNSS				Lg	Lg	05 37 44.7	
	13nm,0.5s						
TNSS	**Tian-Shan**	**2.91**	**4**	eP	**Pb**	**05 37 04.7**	**-1.5**
	10.0nm,0.5s						
TNSS				eS	**Sb**	**05 37 44.7**	**+2.8**
	13nm,0.5s						
KST	**Kastek**	**2.96**	**349**	Pg	**Pb**	**05 37 06.1**	**-0.8**
	3.8nm,0.4s						
KST				Lg	Lg	05 37 47.5	
	12nm,0.6s						
KST	**Kastek**	**2.96**	**349**	eP	**Pb**	**05 37 06.1**	**-0.8**
	2.7nm,0.4s						
KST				eS	**Sg**	**05 37 47.6**	**-1.5**
	14nm,0.5s						
MTBS	**Maitube**	**3.00**	**356**	eP	**Pb**	**05 37 06.7**	**-0.9**
	4.9nm,0.2s						
MTBS				eS	**Sg**	**05 37 48.1**	**-2.3**
	16nm,0.4s						
AAK	**Ala-Archa**	**3.00**	**327**	⇑Pg	**Pb**	**05 37 05.3**	**-2.3**
	3.1nm,0.6s						
AAK				⇑Lg	Lg	05 37 47.7	
	22nm,0.9s						
AAK	**Ala-Archa**	**3.00**	**327**	⇓eP	**Pn**	**05 37 01.3**	**-0.5**
	baz=27						
AAK				⇓iS	**Sn**	**05 37 39.4**	**+1.5**
	baz=27						
AAK	**Ala-Archa**	**3.00**	**327**	P	**Sb**	**05 37 48.9**	**+4.5**
	SNR=5.1						
AML	**Almayashu**	**3.02**	**312**	⇑iP	**Pn**	**05 37 01.8**	**-0.5**
	baz=13						
AML				⇑iS	**Sn**	**05 37 40.0**	**+1.3**
	baz=13						
AML	**Almayashu**	**3.02**	**312**	P	**Pn**	**05 37 04.0**	**+1.7**
	SNR=16						
MDOK	**Medeo**	**3.04**	**5**	Pg	**Pb**	**05 37 06.7**	**-1.6**
	3.1nm,0.6s						
MDOK				Lg	Lg	05 37 48.8	
	10.0nm,0.6s						
MDOK	**Medeo**	**3.04**	**5**	eP	**Pb**	**05 37 06.7**	**-1.6**
	3.2nm,0.4s						
MDOK				eS	**Sb**	**05 37 48.3**	**+2.8**
	17nm,0.7s						
KOTS	**Kotyrbulak**	**3.11**	**6**	Pg	**Pb**	**05 37 08.6**	**-0.9**
	4.1nm,0.5s						
KOTS				Lg	Lg	05 37 51.8	
	24nm,0.4s						
KOTS	**Kotyrbulak**	**3.11**	**6**	eP	**Pb**	**05 37 08.6**	**-0.9**
	3.3nm,0.2s						
KOTS				eS	**Sg**	**05 37 51.8**	**-2.2**
	76nm,0.5s						
DGS	**Degeres**	**3.18**	**348**	Pg	**Pb**	**05 37 10.0**	**-0.7**
	3.2nm,0.5s						
DGS				Lg	Lg	05 37 54.2	
	12nm,0.6s						
DGS	**Degeres**	**3.18**	**348**	eP	**Pb**	**05 37 10.0**	**-0.7**
	3.2nm,0.5s						
DGS				eS	**Sg**	**05 37 54.2**	**-2.0**
	12nm,0.6s						
SATY	**Saty**	**3.19**	**23**	Pg	**Pb**	**05 37 09.2**	**-1.6**
	7.6nm,0.4s						
SATY				Lg	Lg	05 37 52.8	
	19nm,0.7s						
SATY	**Saty**	**3.19**	**23**	eP	**Pb**	**05 37 09.2**	**-1.6**
	7.6nm,0.4s						
SATY				eS	**Sb**	**05 37 52.8**	**+3.0**
	19nm,0.7s						
EKS2	**Erkin-Say**	**3.35**	**320**	⇑eP	**Pn**	**05 37 06.0**	**-0.5**
	baz=20						
EKS2				⇑eS	**Sn**	**05 37 47.0**	**+0.6**
	baz=20						
EKS2	**Erkin-Say**	**3.35**	**320**	P	**Pn**	**05 37 08.6**	**+2.1**
	SNR=5.2						
UZB	**Uzynbulak**	**3.48**	**29**	Pg	**Pb**	**05 37 14.0**	**-1.8**
	2.1nm,0.6s						
UZB				Lg	Lg	05 38 00.9	
	6.2nm,0.5s						
UZB	**Uzynbulak**	**3.48**	**29**	eP	**Pb**	**05 37 14.0**	**-1.8**
	2.1nm,0.6s						
UZB				eS	**Sb**	**05 38 00.9**	**+2.8**
	6.2nm,0.5s						
KURS	**Kuram**	**3.53**	**18**	Pg	**Pb**	**05 37 14.7**	**-1.8**
	2.3nm,0.6s						
KURS				Lg	Lg	05 38 02.3	
	8.8nm,0.6s						
KURS	**Kuram**	**3.53**	**18**	eP	**Pb**	**05 37 14.8**	**-1.8**
	2.3nm,0.6s						
KURS				eS	**Sb**	**05 38 02.3**	**+2.9**
	8.8nm,0.6s						
KTBS	**Karatobe**	**3.57**	**360**	Pg	**Pb**	**05 37 16.5**	**-0.9**
	2.7nm,0.5s						
KTBS				Lg	Lg	05 38 05.2	
	18nm,0.6s						
KTBS	**Karatobe**	**3.57**	**360**	eP	**Pb**	**05 37 16.5**	**-0.9**
	2.7nm,0.5s						
KTBS				eS	**Sb**	**05 38 05.2**	**+4.4**
	18nm,0.6s						
KPKS	**Kokpek**	**3.64**	**23**	eP	**Pb**	**05 37 17.2**	**-1.4**
	14nm,0.1s						
KPKS				eS	**Sb**	**05 38 06.1**	**+3.2**
	26nm,0.6s						
MRKS	**Merke**	**3.69**	**316**	eP	**Pb**	**05 37 19.1**	**-0.3**
	3.0nm,0.6s						
MRKS				eS	**Sg**	**05 38 09.3**	**-3.2**
	7.0nm,0.5s						
CHKK	**Chushkaly**	**3.72**	**3**	Pg	**Pb**	**05 37 18.8**	**-1.0**
	3.4nm,0.4s						
CHKK				Lg	Lg	05 38 09.3	
	10nm,0.4s						
CHKK	**Chushkaly**	**3.72**	**3**	eP	**Pb**	**05 37 18.8**	**-1.0**
	3.4nm,0.4s						
CHKK				eS	**Sb**	**05 38 09.3**	**+4.3**
	10nm,0.4s						
KUU	**Kurty**	**3.77**	**356**	Pg	**Pb**	**05 37 19.6**	**-1.0**
	1.7nm,0.2s						
KUU				Lg	Lg	05 38 10.6	
	20nm,0.4s						
KUU	**Kurty**	**3.77**	**356**	eP	**Pb**	**05 37 19.6**	**-1.0**
	1.7nm,0.2s						
KUU				eS	**Sb**	**05 38 10.7**	**+4.4**
	20nm,0.4s						
PDGK	**Podgornoye**	**3.81**	**32**	⇑Pg	**Pb**	**05 37 20.1**	**-1.4**
	3.9nm,0.7s						
PDGK				⇑Lg	Lg	05 38 10.1	
	22nm,1.0s						
MNBS	**Baschi**	**4.14**	**17**	Pg	**Pb**	**05 37 26.9**	**-0.2**
	1.7nm,0.5s						
MNBS				Lg	Lg	05 38 23.4	
	6.9nm,0.4s						
MNBS	**Baschi**	**4.14**	**17**	eP	**Pb**	**05 37 26.9**	**-0.2**
	1.7nm,0.5s						
MNBS				eS	**Sg**	**05 38 22.9**	**-4.0**
	6.9nm,0.4s						
ARXS	**Arharly**	**4.16**	**11**	Pg	**Pb**	**05 37 27.3**	**0.0**
	4.0nm,0.5s						
ARXS				Lg	Lg	05 38 23.9	
	12nm,0.4s						
ARXS	**Arharly**	**4.16**	**11**	eP	**Pb**	**05 37 27.3**	**0.0**
	4.0nm,0.5s						
ARXS				eS	**Sg**	**05 38 23.9**	**-3.7**
	12nm,0.4s						
KTMS	**Ketmen**	**4.29**	**38**	Pg	**Pb**	**05 37 28.2**	**-1.4**
	1.5nm,0.4s						
KTMS				Lg	Lg	05 38 25.0	
	6.8nm,0.6s						
KTMS	**Ketmen**	**4.29**	**38**	eP	**Pb**	**05 37 27.9**	**-1.7**
	1.5nm,0.4s						
KTMS				eS	**Sb**	**05 38 25.0**	**+3.5**
	6.8nm,0.6s						
DJR	**Jarkent**	**4.78**	**28**	Pg	**Pb**	**05 37 37.2**	**-0.7**
	1.8nm,0.1s						
DJR				Lg	Lg	05 38 40.4	
	3.3nm,0.4s						
DJR	**Jarkent**	**4.78**	**28**	eP	**Pb**	**05 37 37.2**	**-0.7**
	1.8nm,0.1s						
DJR				eS	**Sb**	**05 38 41.1**	**+5.6**
	3.3nm,0.4s						
KK31	**Karatay Array**	**5.50**	**305**	⇑Lg	Lg	05 39 05.6	
	0.7nm,0.5s,baz=109,slow=29,SNR=3.9						

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*NIED **31** 05:40:00, 36°.50N×142°.70E, h8^{km}, Mw5.1 Best double couple: M$_0$5.65000×10^{16} NP1:φ$_s$218.00000°, δ41.00000°, λ106.00000°. NP2:φ$_s$17.00000°, δ50.00000°, λ77.00000°.*
*IDC **31** 05:40:48.3±0.5, 36°.47N×142°.78E, h0^{km}, mb4.7/26, mb1 4.8/32, mb1mx4.7/44, mbtmp4.6/32, ML3.9/5, MS4.8/30, Ms1 4.8/30, ms1mx4.5/48, Error ellipse: s-maj=14.1km s-min=12.1km az=137.0*
*ISCJB **31** 05:40:48.0±0.8, 36°.59N±0°.02×142°.69E±0°.02, h2^{km}±4^{km}, mb4.8/155, MS5.2/73, Error ellipse: s-maj=4.0km s-min=2.7km az=152.5*
*JMA **31** 05:40:50.0±0.1, 36°.53N×142°.74E, h33^{km}, M5.4*
*BJI **31** 05:40:51.7±0.0, 36°.52N×142°.25E, h15^{km}, mb5.1/74, mB5.4/65, Ms5.4/86, Ms7 5.3/78*
*MOS **31** 05:40:51.2±1.3, 36°.74N×142°.67E, h20^{km}, mb5.3/62, MS5.5/16, Error ellipse: s-maj=6.4km s-min=3.9km az=107.4*
*NEIC **31** 05:40:52.6±2.7, 36°.38N×142°.86E, h29^{km}±1^{km}, mb4.8/208, Error ellipse: s-maj=11.9km s-min=7.9km az=106.0*
*GCMT **31** 05:40:53.6±0.2, 36°.48N±0°.01×142°.90E±0°.02, h13^{km}, MW5.2/111, Moment Tensor Solution. s61,c83; s111,c201; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.55±.19; M$_{\theta\theta}$-1.98±.12; M$_{\phi\phi}$-3.57±.13; M$_{r\theta}$1.88±.30; M$_{\theta\phi}$-2.80±.09; M$_{\phi r}$3.46±.34; Best double couple: M$_0$6.86100×10^{16} NP1:φ$_s$32.00000°, δ63.00000°, λ85.00000°. NP2:φ$_s$222.00000°, δ28.00000°, λ99.00000°. Principal axes: T 6.8140, Plg72.0000°, Azm291.0000°; N 0.0930, Plg4.0000°, Azm34.0000°; P -6.9080, Plg17.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 31 05:40:50.4±0.7**, 36°.56N**±0°.04×**142°.72E**±0°.04**, h11^{km}**±3^{km}**, n426, σ2^{s}.02**/476**, mb4.9**/168**, MS5.1**/74**, 41C-13D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.63**	**290**	⇑P	**Pn**	**05 41 17.8**	**-1.4**
ONAJ				S	**Sn**	**05 41 38.1**	**-2.1**
JFK	**Kawauchi**	**1.68**	**299**	⇑P	**Pn**	**05 41 18.6**	**-1.2**
JFK				S	**Sn**	**05 41 39.6**	**-1.8**
JHO	**Hitachi**	**1.73**	**272**	⇑P	**Pn**	**05 41 19.1**	**-1.4**
JHO				S	**Sn**	**05 41 41.1**	**-1.4**
CHOJ	**Chosi**	**1.73**	**241**	P	**Pn**	**05 41 18.9**	**-1.6**
CHOJ				S	**Sn**	**05 41 40.5**	**-2.0**
JHYU	**Hitachinakayam**	**1.73**	**263**	⇑P	**Pn**	**05 41 19.2**	**-1.3**
JHYU				S	**Sn**	**05 41 40.4**	**-2.2**
JMST	**Minamisoumatoc**	**1.87**	**309**	⇑P	**Pn**	**05 41 21.0**	**-1.3**
JIHU	**Itakohorinouch**	**1.87**	**252**	P	**Pn**	**05 41 21.7**	**-0.6**
JFT	**Otama**	**2.13**	**297**	⇑P	**Pn**	**05 41 25.7**	**-0.3**
JFT				S	**Sn**	**05 41 51.8**	**-0.7**
BSO1	**Boso 1**	**2.37**	**217**	P	**Pn**	**05 41 27.5**	**-1.3**
JAG	**Ashikaga**	**2.63**	**268**	⇑P	**Pn**	**05 41 31.8**	**-1.1**
JAG				S	**Sn**	**05 42 03.2**	**-1.7**
JMK	**Ichinoseki**	**2.67**	**334**	P	**Pn**	**05 41 32.8**	**-0.5**
JMK				S	**Sn**	**05 42 04.4**	**-1.2**
JNS	**Sasagawa**	**2.99**	**296**	P	**Pn**	**05 41 38.5**	**+0.7**
JYK	**Kaneyama**	**3.01**	**322**	⇑P	**Pn**	**05 41 37.9**	**-0.1**
JOM	**Ohasama**	**3.12**	**339**	P	**Pn**	**05 41 39.0**	**-0.5**
JOM				S	**Sn**	**05 42 16.2**	**-0.6**
JRY	**Ryogami san**	**3.13**	**261**	P	**Pn**	**05 41 38.5**	**-1.2**
JOD2	**Odawara 2**	**3.22**	**247**	P	**Pn**	**05 41 40.0**	**-0.9**
JOD2				S	**Sn**	**05 42 17.8**	**-1.5**
JAW	**Awa shima**	**3.34**	**305**	P	**Pn**	**05 41 42.4**	**-0.2**
JYN	**Shimob**	**3.55**	**254**	P	**Pn**	**05 41 45.2**	**-0.3**
JYN				S	**Sn**	**05 42 26.1**	**-1.3**
MJAR	**Matsushiro Arr**	**3.63**	**271**	Pn	**Pn**	**05 41 46.7**	**+0.1**
	5.4nm,0.3s,baz=102,slow=7.2,SNR=118						
MAJO	**Matsushiro**	**3.63**	**271**	ePn	**Pn**	**05 41 47.0**	**+0.4**
MAJO	**Matsushiro**	**3.63**	**271**	c iP	**Pn**	**05 41 47.1**	**+0.4**
MAT	**Matsushiro**	**3.63**	**271**	P	**Pn**	**05 41 47.1**	**+0.5**
MAT				S	**Sn**	**05 42 30.4**	**+0.9**
MAT	**Matsushiro**	**3.63**	**271**	P	**Pn**	**05 41 47.2**	**+0.6**
MJB9	**Matsu-Tunnel**	**3.63**	**271**	ePn	**Pn**	**05 41 47.1**	**+0.4**
JJN	**Nakama**	**3.69**	**280**	P	**Pn**	**05 41 49.1**	**+1.6**

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JSD    Sado               3.85 294   P      Pn     05 41 50.3 +0.7
JHJ    Hachijo jima 2     4.20 216   Pn     Pn     05 41 51.9 -2.5
       107nm,0.3s,baz=211,slow=14,SNR=7.9
JHJ                                  Sn     Sn     05 42 37.4 -6.0
       136nm,0.3s,baz=53,slow=23,SNR=4.0
JGN    Niukaw             4.37 267   P      Pn     05 41 59.0 +2.2
ERM    Erimo              5.46   3  ePn     Pn     05 42 09.6 -2.1
ERM                                 eSn     Sn     05 43 14.3 -0.1
ERM    Erimo              5.46   3  eP      Pn     05 42 09.6 -2.1
ERM                                 e              05 43 14.3
NMR    Nemuro--Hokkai     7.18  18c iP      Pn     05 42 33.3 -2.0
NMR                                 i S     Sn     05 43 50.6 -6.2
GRPR   Tuman              7.78  16⇓iP      Pn     05 42 40.9 -2.6
GRPR                                eS      Sn     05 44 04.2 -7.4
GRPR                                 pmax   pmax
       comp=Z,104nm,0.4s
GRPR                                 MLR    MLR
       comp=Z,5µm,12.0s
YUK    Yuzh-Kuril'sk      7.84  17  eP      Pn     05 42 43.9 -0.5
YUK                                 eS      Sn     05 44 09.1 -4.0
YUK                                  pmax   pmax
       comp=N,239nm,1.0s
YUK                                  pmax   pmax
       comp=E,157nm,1.0s
YUK                                  pmax   pmax
       comp=Z,249nm,1.0s
YUK                                  MLR    MLR
       comp=Z,7µm,12.0s
YUK                                  MLR    MLR
       comp=N,3µm,10.0s
KUR    Kuril'sk           9.50  23   P      Pn     05 43 09.1 +2.0
KUR                                 eS      Sn     05 44 50.2 -3.6
KUR                                  pmax   pmax
       comp=Z,66nm,0.8s
KUR                                  pmax   pmax
       comp=E,38nm,0.7s
KUR                                  pmax   pmax
       comp=N,26nm,0.6s
KUR                                  smax   smax
       comp=E,2µm,7.4s
KUR                                  smax   smax
       comp=N,121nm,0.6s
KUR                                  smax   smax
       comp=E,63nm,0.6s
KUR                                  MLR    MLR
       comp=N,3µm,14.0s
KUR                                  MLR    MLR
       comp=Z,4µm,14.0s
KUR                                  MLR    MLR
       comp=E,5µm,13.0s
TEY    Ternei             9.65 333⇑eP      Pn     05 43 12.0 +2.9
TEY                                  pmax   pmax
       comp=N,10.0nm,0.9s
TEY                                  pmax   pmax
       comp=Z,10.0nm,0.8s
TEY                                  pmax   pmax
       comp=E,60nm,0.9s
TEY                                  pmax   pmax
       comp=N,70nm,1.0s
TEY                                  pmax   pmax
       comp=Z,70nm,1.0s
TEY                                  MLR    MLR
       comp=N,900nm,13.0s
TEY                                  MLR    MLR
       comp=E,800nm,13.0s
TEY                                  MLR    MLR
       comp=Z,1µm,14.0s
JNU    Nakatsue          10.32 254   Pn     Pn     05 43 19.5 +1.1
       comp=Z,0.9nm,0.3s,baz=65,slow=5.0,SNR=13
JNU                                  LR     LR     05 47 56.7
       comp=Z,5µm,18.0s,baz=74,slow=42
JNU    Nakatsue          10.32 254  ePn     Pn     05 43 18.8 +0.4
YSS    Yuzh-Sakhalins    10.38   0  ePn     Pn     05 43 19.8 +0.6
YSS    Yuzh-Sakhalins    10.38   0⇓eP      Pn     05 43 19.3 +0.1
YSS                                 eS      Sn     05 45 13.0 -2.5
YSS                                  pmax   pmax
       comp=Z,90nm,0.9s
YSS                                  pmax   pmax
       comp=N,100nm,0.8s
YSS                                  pmax   pmax
       comp=Z,300nm,4.7s
YSS                                  MLR    MLR
       comp=Z,4µm,13.0s
VLA    Vladivostok       10.59 312  i P     Pn     05 43 21.3 -0.8
MSHR   Mys Shultsa       10.76 308c iP      Pn     05 43 23.5 -0.8
USA0B  Ussuriysk Arra    11.18 316  ePn     Pn     05 43 31.9 +1.8
USRK   Ussuriysk Ar.     11.18 316   Pn     Pn     05 43 27.0 -3.1
       comp=Z,0.1nm,0.3s,baz=138,slow=11,SNR=2.0
USRK                                 LR     LR     05 47 00.6
       comp=Z,2µm,20.3s,baz=122,slow=33
KSRS   Korea Array       11.87 279   Pn     Pn     05 43 42.0 +2.5
       comp=Z,0.4nm,0.3s,baz=94,slow=13,SNR=31
KSRS                                 LR     LR     05 48 08.3
       comp=Z,2µm,18.6s,baz=92,slow=37
KS15   Wonju Array Si    11.90 279  ePn     Pn     05 43 42.8 +2.8
TJN    Taejon            12.37 274ceP       Pn     05 43 47.2 +0.8
UGL    Uglegorsk         12.52 358   P      Pn     05 43 43.7 -4.7
UGL                                 eS      Sn     05 46 08.5 +0.7
UGL                                  smax   smax
       comp=E,82nm,0.4s
UGL                                  MLR    MLR
       comp=Z,8µm,16.0s
UGL                                  MLR    MLR
       comp=N,7µm,17.0s
UGL                                  MLR    MLR
       comp=E,7µm,16.0s
MDJ    Mudanjiang        12.80 313   P      Pn     05 43 58.3 +5.9
MDJ                                  S      Sn     05 47 14.5  +60
MDJ                                  pmax   pmax
       comp=Z,13nm,0.7s
MDJ                                  pmax   pmax
       comp=Z,2µm,12.9s
MDJ                                  LR     LR
       comp=N,9µm,11.7s
MDJ                                  LR     LR
       comp=E,880nm,7.7s
MDJ                                  LR     LR
       comp=Z,11µm,14.8s
TYV    Tymovskoe         14.30 360  eP      Pn     05 44 12.0 -0.7
TYV                                 e              05 46 51.7
TYV                                  pmax   pmax
       comp=Z,17nm,1.1s
TYV                                  MLR    MLR
       comp=Z,3µm,14.0s
KLR    Kul'dur           14.98 331   Pn     Pn     05 44 20.7 -1.2
       comp=Z,0.2nm,0.3s,baz=135,slow=12,SNR=6.4
KLR    Kul'dur           14.98 331d iP      Pn     05 44 20.5 -1.4
KLR                                  pmax   pmax
       comp=Z,14nm,1.7s
CN2    Changchun         15.04 304  eP      Pn     05 44 21.3 -1.5
CN2                                 eS      Sn     05 47 02.0 -7.3
CN2                                  pmax   pmax
       comp=Z,10.0nm,0.5s
CN2                                  pmax   pmax
       comp=Z,2µm,10.0s
CN2                                  LR     LR
       comp=Z,7µm,14.0s
CN2                                  LR     LR
       comp=Z,6µm,14.0s
CN2                                  LR     LR
       comp=Z,7µm,14.0s
SNY    Shenyang          15.74 295  ⇑P      Pn     05 44 30.8 -1.2
SNY                                  pmax   pmax
       comp=Z,13nm,0.5s
SNY                                  LR     LR
       comp=Z,10µm,12.3s
SNY                                  LR     LR
       comp=Z,7µm,12.7s
SNY                                  LR     LR
       comp=Z,18µm,15.2s
DL2    Dalian            16.85 284   P      Pn     05 44 45.0 -1.2
DL2                                  S      Sn     05 47 50.3 -3.0
DL2                                  pmax   pmax
       comp=Z,51nm,0.9s
DL2                                  pmax   pmax
       comp=Z,1µm,7.7s
DL2                                  LR     LR
       comp=Z,5µm,14.1s
DL2                                  LR     LR
       comp=Z,5µm,14.4s
DL2                                  LR     LR
       comp=Z,8µm,14.7s
OKH    Okha              16.99   0deP       Pn     05 44 49.1 +1.2
OKH                                 eS      Sn     05 47 55.8 -0.7
OKH                                  pmax   pmax
       comp=Z,500nm,8.9s
OKH                                  MLR    MLR
       comp=Z,4µm,15.0s
SKR    Severo-Kuril's    17.09  30  eP      Pn     05 44 46.0 -3.1
SKR                                  pmax   pmax
       comp=Z,200nm,4.1s
SKR                                  MLR    MLR
       comp=Z,3µm,15.0s
SKR                                  MLR    MLR
       comp=Z,3µm,14.0s
SSE    Sheshan           18.69 259   P      P      05 45 05.8 -2.8
SSE                                  S      Sn     05 48 37.0 -1.0
SSE                                  pmax   pmax
       comp=Z,26nm,0.7s
SSE                                  pmax   pmax
       comp=Z,640nm,8.4s
SSE                                  LR     LR
       comp=Z,3µm,12.2s
SSE                                  LR     LR
       comp=Z,3µm,12.4s
PEA0B  Petropavlovsk-    19.59  28  eP      P      05 45 19.3 +0.8
       comp=Z,37nm,1.1s
PETK   Petropavlovsk-    19.59  28   P      P      05 45 18.6 +0.2
       baz=182,slow=7.4,SNR=15
PETK                                 LR     LR     05 55 09.1
       comp=Z,2µm,18.9s,baz=220,slow=44
PEA1   Petropavlovsk-    19.60  28  eP      P      05 45 18.6 +0.1
PET    Petropavlovsk     19.89  29  eP      P      05 45 22.7 +1.0
PET                                 eS      S      05 48 57.5 -7.8
PET                                  pmax   pmax
       comp=Z,400nm,5.0s
PET                                  pmax   pmax
       comp=Z,300nm,5.8s
NJ2    Nanjing           20.20 264⇓iP      P      05 45 27.0 +1.8
NJ2                                  pmax   pmax
       comp=Z,20nm,0.8s
NJ2                                  pmax   pmax
       comp=Z,1µm,8.2s
NJ2                                  LR     LR
       comp=Z,4µm,15.2s
NJ2                                  LR     LR
       comp=Z,9µm,14.2s
NJ2                                  LR     LR
       comp=Z,6µm,15.2s
ZEA    Zeya              20.27 333  eP      P      05 45 27.2 +1.4
ZEA                                 e              05 49 32.0
ZEA                                  pmax   pmax
       comp=Z,2µm,8.0s
ZEA                                  pmax   pmax
       comp=N,900nm,7.0s
ZEA                                  pmax   pmax
       comp=E,500nm,7.0s
ZEA                                  pmax   pmax
       comp=Z,69nm,1.0s
ZEA                                  MLR    MLR
       comp=E,8µm,14.0s
ZEA                                  MLR    MLR
       comp=Z,13µm,14.0s
ZEA                                  MLR    MLR
       comp=N,8µm,13.0s
TIA    Tai'an            20.59 277   P      P      05 45 28.0 -1.5
TIA                                  pmax   pmax
       comp=N,200nm,2.4s
TIA                                  LR     LR
       comp=N,4µm,14.2s
TIA                                  LR     LR
       comp=N,5µm,13.5s
TIA                                  LR     LR
       comp=N,5µm,15.0s
BJI    Beijing           21.09 288   P      P      05 45 33.5 -1.3
BJI                                  S      S      05 49 26.5 -2.9
BJI                                  LR     LR
       comp=N,2µm,12.7s
BJI                                  LR     LR
       comp=N,2µm,12.3s
BJI                                  LR     LR
       comp=N,840nm,13.8s
BJT    Baijiatuau        21.10 288  eP      P      05 45 33.1 -1.7
       comp=N,18nm,0.9s
BJT    Baijiatuau        21.10 288  eP      P      05 45 33.1 -1.7
BJT                                  pmax   pmax
       comp=Z,18nm,0.9s
NACB   Ninganchiao       21.96 242  eP      P      05 45 42.0 -2.2
       comp=Z,15nm,0.7s
YULB   Yu-li             22.66 241  eP      P      05 45 51.2 -0.6
       comp=Z,8.7nm,0.7s
GUMO   Guam              22.96 175   LR     LR     05 57 37.3
       comp=Z,1µm,18.0s,baz=355,slow=44
TPUB   Ta-pu             23.19 241  eP      P      05 45 56.1 -1.3
       comp=Z,39nm,0.9s
MA2    Magadan           23.61  10   P      P      05 46 00.8 -0.4
       comp=Z,33nm,0.8s,baz=193,slow=8.8,SNR=14
MA2                                  LR     LR     05 56 19.0
       comp=Z,3µm,18.4s,baz=200,slow=39
MA2    Magadan           23.61  10  eP      P      05 46 02.0 +0.8
       comp=Z,40nm,0.8s
MA2    Magadan           23.61  10ceP       P      05 46 00.7 -0.4
MA2                                  pmax   pmax
       comp=Z,55nm,1.0s
QZH    Quanzhou          23.68 247⇑iP      P      05 45 59.0 -3.1
QZH                                  S      S      05 50 11.0 -5.9
QZH                                  pmax   pmax
       comp=Z,670nm,9.5s
QZH                                  LR     LR
       comp=Z,2µm,18.9s
QZH                                  LR     LR
       comp=Z,2µm,19.4s
QZH                                  LR     LR
       comp=Z,3µm,11.8s
TIY    Taiyuan           24.12 282  eP      P      05 46 05.5 -0.9
TIY                                  pmax   pmax
       comp=Z,46nm,0.9s
TIY                                  pmax   pmax
       comp=Z,970nm,5.7s
TIY                                  LR     LR
       comp=Z,3µm,16.0s
TIY                                  LR     LR
       comp=Z,6µm,13.1s
TIY                                  LR     LR
       comp=Z,10µm,15.4s
WHN    Wuhan             24.34 264  ⇓P      P      05 46 07.5 -0.8
WHN                                  pmax   pmax
       comp=Z,240nm,1.4s
WHN                                  LR     LR
       comp=Z,4µm,9.4s
WHN                                  LR     LR
       comp=Z,14µm,13.8s
WHN                                  LR     LR
       comp=Z,15µm,14.8s
HHC    Hu-ho-hao-te      24.62 290   P      P      05 46 11.3 +0.4
HHC                                  pP     sP     05 46 17.0 +3.9
HHC                                  S      S      05 50 25.3 -6.7
HHC                                  SS            05 51 20.0
HHC                                  pmax   pmax
       comp=Z,10.0nm,0.9s
HHC                                  LR     LR
       comp=Z,2µm,13.3s
HHC                                  LR     LR
       comp=Z,3µm,10.6s
CIT    Chita             25.74 316  eP      P      05 46 23.4 +2.5
CIT                                 e              05 46 34.8
CIT                                 e              05 46 54.7
CIT                                  pmax   pmax
       comp=Z,207nm,1.9s
BTO    Baotou            25.79 289  eP      P      05 46 20.5 -1.0
BTO                                  S      S      05 50 52.5 +1.8
YAK    Yakutsk           26.77 346  eP      P      05 46 31.1 +1.2
       comp=Z,102nm,0.9s
YAK    Yakutsk           26.77 346  eP      P      05 46 29.3 -0.6
YAK                                 e*PP    pwP    05 46 37.0 -2.3
YAK                                 e              05 47 09.2
YAK                                 ePPP    PPP    05 47 29.0
YAK                                 eS      S      05 51 04.3 -1.1
YAK                                 eSSS    SSS    05 52 18.3
YAK                                  pmax   pmax
       comp=Z,42nm,1.3s
YAK                                  pmax   pmax
       comp=N,35nm,1.3s
YAK                                  pmax   pmax
       comp=E,14nm,1.3s
YAK                                  pmax   pmax
       comp=Z,44nm,0.8s
YAK                                  smax   smax
       comp=E,223nm,3.5s
YAK                                  smax   smax
       comp=N,127nm,2.8s
YAK                                  MLR    MLR
       comp=Z,4µm,17.0s
YAK                                  MLR    MLR
       comp=N,3µm,16.0s
YAK                                  MLR    MLR
       comp=E,1µm,15.0s
H11N2  WAKE ISLAND Hy    27.01 122   T      T      06 14 43.7
       baz=314,slow=75,SNR=63
H11N1  WAKE ISLAND Hy    27.02 122   T      T      06 14 46.2
       baz=314,slow=75,SNR=23
H11N3  WAKE ISLAND Hy    27.02 122   T      T      06 14 44.7
       baz=314,slow=75,SNR=45
SEY    Seymchan          27.07  10   P      P      05 46 33.1 +0.5
       comp=E,15nm,0.9s,baz=193,slow=8.1,SNR=26
SEY    Seymchan          27.07  10  i P     P      05 46 33.9 +1.3
XAN    Xi'an             27.62 275  eP      P      05 46 38.3 +0.3
       comp=E,38nm,0.9s
XAN    Xi'an             27.62 275  eP      P      05 46 38.3 +0.3
XAN                                  pmax   pmax
       comp=Z,38nm,0.9s
H11S1  WAKE ISLAND Hy    27.73 124   T      T      06 15 30.8
       baz=316,slow=76,SNR=18
H11S3  WAKE ISLAND Hy    27.73 124   T      T      06 15 38.6
       baz=316,slow=76,SNR=16
H11S2  WAKE ISLAND Hy    27.74 124   T      T      06 15 40.9
       baz=316,slow=76,SNR=18
ULN    Ulaanbaatar       28.48 305  eP      P      05 46 50.4 +4.7
       comp=Z,28nm,1.0s
ULN    Ulaanbaatar       28.48 305  eP      P      05 46 50.4 +4.7
ULN                                  pmax   pmax
       comp=Z,28nm,1.0s
BOD    Bodaibo           28.49 327  eP      P      05 46 45.0 -0.4
BOD                                  pmax   pmax
       comp=Z,97nm,1.9s
GZH    Guangzhou         28.68 250   P      P      05 46 43.3 -4.1
GZH                                  S      S      05 51 29.0 -7.2
GZH                                  LR     LR
       comp=Z,3µm,11.5s
GZH                                  LR     LR
       comp=Z,2µm,11.8s
SONM   Songino Array     28.92 304   P      P      05 46 50.7 +1.2
       comp=Z,20nm,0.9s,baz=108,slow=6.3,SNR=81
SONM                                 LR     LR     05 58 09.8
       comp=Z,424nm,18.4s,baz=92,slow=36
LZH    Lanzhou           31.18 281  ⇑P      P      05 47 10.5 +0.8
LZH                                  pP     pwP    05 47 16.8 -1.8
LZH                                  sP     sP     05 47 19.5 +7.6
LZH                                  PP     PnPn   05 48 15.5 +4.2
LZH                                  S      S      05 52 11.8 -4.0
LZH                                  sS     sS     05 52 23.5 +5.1
LZH                                  pmax   pmax
       comp=Z,59nm,1.3s
LZH                                  pmax   pmax
       comp=Z,790nm,4.9s
LZH                                  LR     LR
       comp=Z,4µm,13.6s
LZH                                  LR     LR
       comp=Z,7µm,12.5s
LZH                                  LR     LR
       comp=Z,8µm,13.6s
IRK    Irkutsk           31.19 312  eP      P      05 47 09.8 +0.4
IRK                                  pmax   pmax
       comp=Z,62nm,2.7s
ZAK    Zakamensk         31.38 309  eP      P      05 47 11.7 +0.4
ZAK                                  pmax   pmax
       comp=Z,19nm,1.4s
TLY    Talaya            31.43 311   P      P      05 47 12.8 +1.3
       comp=Z,4.4nm,0.5s,baz=103,slow=4.0,SNR=12
TLY    Talaya            31.43 311  eP      P      05 47 13.1 +1.5
       comp=Z,19nm,1.0s
TLY    Talaya            31.43 311  eP      P      05 47 13.1 +1.5
TLY                                  pmax   pmax
       comp=Z,19nm,1.0s
GYA    Guiyang           32.18 262⇑iP      P      05 47 18.0 -0.6
GYA                                  pP     sP     05 47 22.0 +1.3
GYA                                  sP     pwP    05 47 27.8 +0.4
GYA                                  PP     PnPn   05 48 22.0 -2.4
GYA                                  S      S      05 52 27.8 -3.7
GYA                                  SS     ScP    05 54 20.3  +29
GYA                                  pmax   pmax
       comp=Z,40nm,1.0s
GYA                                  pmax   pmax
       comp=Z,340nm,7.5s
GYA                                  LR     LR
       comp=Z,2µm,13.1s
GYA                                  LR     LR
       comp=Z,2µm,15.5s
GYA                                  LR     LR
       comp=Z,2µm,14.9s
CD2    Chengdu           32.73 272  ⇑P      P      05 47 23.3 +0.1
CD2                                  pP     sP     05 47 29.3 +3.9
CD2                                  S      S      05 52 38.0 -1.7
CD2                                  sS     sS     05 52 50.3 +7.9
CD2                                  pmax   pmax
       comp=Z,30nm,0.5s
CD2                                  pmax   pmax
       comp=Z,830nm,7.8s
CD2                                  LR     LR
       comp=Z,7µm,14.1s
CD2                                  LR     LR
       comp=Z,6µm,14.3s
CD2                                  LR     LR
       comp=Z,6µm,13.7s
MOY    Mondy             33.04 311  eP      P      05 47 27.1 +1.3
MOY                                  pmax   pmax
       comp=Z,77nm,2.9s
GTA    Gaotai            33.70 288   P      P      05 47 32.3 +0.5
GTA                                  pP     sP     05 47 38.0 +4.0
GTA                                  sP     pwP    05 47 40.5 -0.1
GTA                                  S      S      05 52 58.0 +3.1
GTA                                  sS     sS     05 53 06.8 +9.2
GTA                                  pmax   pmax
       comp=Z,22nm,1.5s
GTA                                  pmax   pmax
       comp=Z,770nm,5.0s
GTA                                  LR     LR
       comp=Z,2µm,14.4s
GTA                                  LR     LR
       comp=Z,3µm,13.4s
GTA                                  LR     LR
       comp=Z,4µm,13.7s
QIZ    Qiongzhong        33.70 248  eP      P      05 47 26.3 -5.4
QIZ                                 epP     pP     05 47 28.0 -5.5
QIZ    Qiongzhong        33.70 248   P      P      05 47 24.5 -7.3
QIZ                                  PP     PP     05 48 53.5 +5.5
QIZ                                  S      S      05 52 57.8 +2.9
QIZ                                  SS     SS     05 55 28.3 +7.8
QIZ                                  pmax   pmax
       comp=Z,12nm,1.6s
QIZ                                  pmax   pmax
       comp=Z,470nm,5.7s
QIZ                                  LR     LR
       comp=N,2µm,13.7s
QIZ                                  LR     LR
       comp=E,1µm,17.5s
QIZ                                  LR     LR
       comp=Z,2µm,13.7s
BILL   Bilibino          34.19  16  eP      P      05 47 34.5 -1.0
       comp=Z,16nm,0.9s
BILL   Bilibino          34.19  16⇓eP      P      05 47 35.7 +0.2
BILL                                e*PP    sP     05 47 39.1 +1.4
BILL                                e              05 50 13.2
BILL                                 S      S      05 53 08.0 +6.4
BILL                                 pmax   pmax
       comp=Z,32nm,1.7s
BILL                                 MLR    MLR
       comp=Z,1µm,17.0s
KMI    Kunming           35.93 263   P      P      05 47 51.3  0.0
KMI                                  PP     PP     05 49 13.8 +0.9
KMI                                  S      S      05 53 28.0 -1.7
KMI                                  pmax   pmax
       comp=Z,21nm,1.4s
KMI                                  pmax   pmax
       comp=Z,470nm,5.7s
KMI                                  LR     LR
       comp=Z,2µm,13.9s
KMI                                  LR     LR
       comp=Z,4µm,13.7s
KMI                                  LR     LR
       comp=Z,4µm,13.2s
SLVN   Son La            36.93 257  eP      P      05 47 59.7 +0.1
       comp=Z,8.1nm,1.0s
SWI    Sorong            38.73 199   P      P      05 48 21.0 +6.3
PANO   Nakornpanom       38.78 250   P      P      05 48 17.8 +2.6
       comp=Z,0.9nm,1.8s
DLV    T  Lat            39.34 240  eP      P      05 48 21.0 +0.9
       comp=Z,20nm,0.9s
NONG   Nongkai           39.36 253   P      P      05 48 21.3 +1.3
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	comp=Z,1.1nm,0.9s,comp=Z,30nm						
ANM	Nome	41.46	31	eP	P	05 48 38.4	+1.5
	comp=Z,14nm,0.9s						
ANM	Nome	41.46	31	eP	P	05 48 38.4	+1.5
ANM				pmax	pmax		
	comp=Z,14nm,0.9s						
DGZ	Jazzator, Alta	41.52	306c	iP	P	05 48 38.7	+0.9
DGZ				pmax	pmax		
	comp=Z,24nm,1.1s						
PBKT	Sadao Pong	41.91	253	P	P	05 48 42.3	+1.2
	comp=Z,15nm,1.3s,comp=Z,582nm						
WMQ	Urumqi	41.99	298	eP	P	05 48 44.4	+2.8
	comp=Z,35nm,1.1s						
WMQ	Urumqi	41.99	298	eP	P	05 48 45.3	+3.7
WMQ				pP	sP	05 48 46.8	+3.0
WMQ				sP	pwP	05 48 50.0	-0.9
WMQ				S	S	05 55 02.0	+1.8
WMQ				sS	sS	05 55 11.8	+8.8
WMQ				pmax	pmax		
	comp=Z,40nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,910nm,5.3s						
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
WMQ				LR	LR		
	comp=Z,1µm,16.9s						
WMQ				LR	LR		
	comp=Z,1µm,18.3s						
CHTO	Chiang Mai	42.20	257	eP	P	05 48 42.5	-1.0
	comp=Z,5.5nm,0.8s						
CHTO	Chiang Mai	42.20	257	eP	P	05 48 42.5	-1.0
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	42.40	257	P	P	05 48 45.3	+0.2
	comp=Z,1.2nm,0.3s,baz=45,slow=9.0,SNR=5.6						
CMAR				LR	LR	06 08 18.5	
	comp=Z,667nm,18.7s,baz=60,slow=39						
ZALV	Zalesovo Beam	43.01	313	P	P	05 48 49.2	-0.4
	comp=Z,9.8nm,0.6s,baz=95,slow=5.7,SNR=27						
ZALV				LR	LR	06 06 33.2	
	comp=Z,752nm,19.1s,baz=71,slow=36						
LSA	Lhasa	43.30	276	eP	P	05 48 54.3	+1.4
	comp=Z,14nm,1.1s						
LSA	Lhasa	43.30	276	P	P	05 48 54.3	+1.4
LSA	Lhasa	43.30	276	eP	P	05 48 54.3	+1.4
LSA				pmax	pmax		
	comp=Z,14nm,1.1s						
SBUM	Sibu	44.09	227	eP	P	05 48 58.2	-0.5
	comp=Z,4.7nm,0.8s						
SHL	Shillong	44.45	271	eP	P	05 49 01.6	-0.3
	comp=Z,10nm,0.7s						
SHL	Shillong	44.45	271	eP	P	05 49 01.6	-0.3
SHL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SHL	Shillong	44.45	271	eP	P	05 49 00.0	-1.9
TTA	Tatalina	45.22	34	eP	P	05 49 07.0	-0.3
	comp=Z,7.8nm,1.2s						
TTA	Tatalina	45.22	34	eP	P	05 49 07.0	-0.3
TTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MK31	Makanchi Array	45.26	303	eP	P	05 49 07.6	-0.2
	comp=Z,13nm,0.8s						
MK31	Makanchi Array	45.26	303	P	P	05 49 07.6	-0.2
MK31				pmax	pmax		
	comp=Z,19nm,0.9s						
MKAR	Makanchi Array	45.26	303	P	P	05 49 08.2	+0.3
	comp=Z,8.2nm,0.8s,baz=85,slow=7.4,SNR=37						
MKAR	Makanchi Array	45.26	303	iP	P	05 49 08.1	+0.3
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SVW2	Sparrevohn	45.26	37	eP	P	05 49 07.2	-0.4
	comp=Z,11nm,0.9s						
MAKZ	Makanchi	45.47	303	eP	P	05 49 09.8	+0.4
	comp=Z,16nm,1.0s						
MAKZ	Makanchi	45.47	303	P	P	05 49 09.7	+0.2
MAKZ				pmax	pmax		
	comp=Z,17nm,1.1s						
BNSI	Bone	45.90	212	P	P	05 49 16.8	+3.7
KSM	Kuching	46.00	228	eP	P	05 49 14.7	+0.8
	comp=Z,20nm,0.7s						
KAPI	Kappang	46.61	212	eP	P	05 49 18.4	-0.3
	comp=Z,30nm,0.9s						
BKSI	Bulukumba	46.72	212	P	P	05 49 22.2	+2.6
KDAK	Kodiak Island	46.75	42	eP	P	05 49 18.1	-1.3
	comp=Z,27nm,0.9s						
KDAK	Kodiak Island	46.75	42	eP	P	05 49 18.1	-1.3
KDAK				pmax	pmax		
	comp=Z,27nm,0.9s						
PPLA	Purkeypile	46.96	35	eP	P	05 49 21.5	+0.4
	comp=Z,19nm,1.2s						
CAST	Castle Rocks	47.03	34	eP	P	05 49 22.5	+0.9
	comp=Z,8.9nm,1.0s						
KURK	Kurchatov	47.05	309	eP	P	05 49 21.4	-0.4
	comp=Z,44nm,0.9s						
KURK	Kurchatov	47.05	309	iP	P	05 49 21.3	-0.5
KURK				pmax	pmax		
	comp=Z,41nm,0.9s						
KURBB	Kurchatov Arra	47.12	309	P	P	05 49 21.9	-0.4
	comp=Z,30nm,0.7s,baz=83,slow=7.9,SNR=108						
SKT	Skwentna	47.24	36	eP	P	05 49 23.8	+0.6
	comp=Z,6.0nm,1.0s						
BPAW	Bear Paw Mtn.	47.55	33	eP	P	05 49 25.7	+0.1
	comp=Z,5.6nm,0.7s						
KTH	Kantishna Hill	47.55	34	eP	P	05 49 26.4	+0.7
	comp=Z,22nm,1.1s						
PDGK	Podgornoye	47.92	299	P	P	05 49 28.3	-0.6
PDGK				pmax	pmax		
	comp=Z,53nm,1.3s						
COLD	Coldfoot	48.06	29	eP	P	05 49 30.6	+1.1
	comp=Z,2.7nm,0.9s						
JIRN	Jiri	48.11	276	eP	P	05 49 31.0	+0.2
GUN	Gumba	48.25	277	eP	P	05 49 32.0	+0.1
	comp=Z,47nm,0.8s						
KNK	Knik Glacier	48.71	37	eP	P	05 49 34.9	+0.4
	comp=Z,11nm,0.7s						
MDM	Murphy Dome	48.76	32	eP	P	05 49 35.6	+0.7
	comp=Z,13nm,0.9s						
PKI	Pulchoki	48.77	277	eP	P	05 49 35.5	-0.4
PKIN	Phulchoki	48.78	277	eP	P	05 49 35.4	-0.5
KKN	Kakani	48.78	277	eP	P	05 49 35.8	0.0
	comp=Z,25nm,0.6s						
COLA	College	48.92	32	eP	P	05 49 37.3	+1.2
	comp=Z,16nm,0.9s						
COLA	College	48.92	32	iP	P	05 49 36.6	+0.5
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
DMN	Daman	49.00	277	eP	P	05 49 37.8	+0.3
DHY	Denali Highway	49.16	34	eP	P	05 49 38.5	+0.3
	comp=Z,5.8nm,1.0s						
GKN	Gorkha	49.20	277	eP	P	05 49 38.6	-0.4
EDFI	Ende, Flores	49.21	208	P	P	05 49 42.6	+3.6
SOEI	Soe	49.23	204	eP	P	05 49 38.5	-0.7
	comp=Z,41nm,0.9s						
SOEI	Soe	49.23	204	P	P	05 49 43.2	+4.1
HDA	Harding Lake	49.31	33	eP	P	05 49 39.0	-0.1
	comp=Z,9.1nm,0.9s						
ILAR	Eielson Array	49.33	32	P	P	05 49 39.1	-0.1
	comp=Z,11nm,0.8s,baz=265,slow=6.4,SNR=56						
KULM	Kulim	49.50	241	eP	P	05 49 42.5	+1.4
	comp=Z,10nm,1.0s						
FID	Port Fidalgo	49.71	37	eP	P	05 49 42.8	+0.6
	comp=Z,12nm,1.0s						
DANN	Dangsing	49.75	278	eP	P	05 49 43.6	+0.3
	comp=Z,129nm,0.8s						
AAA	Alma-Ata	49.77	299	eP	P	05 49 46.3	+3.3
AAA				eS	S	05 56 56.4	+4.2
AAA				pmax	pmax		
	comp=Z,400nm,9.3s						
AAA				smax	smax		
	comp=N,400nm,13.4s						
AAA				MLR	MLR		
	comp=Z,1µm,14.0s						
FYU	Fort Yukon	50.00	30	eP	P	05 49 43.6	-0.6
	comp=Z,24nm,0.8s						
PAX	Paxson	50.03	34	eP	P	05 49 44.9	+0.2
	comp=Z,5.5nm,1.0s						
PAX	Paxson	50.03	34	eP	P	05 49 44.9	+0.2
PAX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EYAK	Cordova Ski Ar	50.09	38	eP	P	05 49 44.8	-0.3
	comp=Z,15nm,0.8s						
KOLN	Koldanda	50.13	278	eP	P	05 49 46.2	+0.1
	comp=Z,77nm,1.0s						
MTN	Manton Dam	50.34	195	eP	P	05 49 48.0	+0.6
	comp=Z,20nm,0.9s						
DOT	Dot Lake	50.62	34	eP	P	05 49 46.8	-2.3
	comp=Z,8.3nm,0.8s						
SCRK	Sand Creek	50.63	33	eP	P	05 49 48.4	-0.8
	comp=Z,18nm,1.2s						
RAGM	Ragged Mountai	50.63	38	eP	P	05 49 49.3	0.0
	comp=Z,19nm,1.0s						
TKM2	Tokmak 2	50.77	299	iP	P	05 49 51.3	+0.5
TKM2				pmax	pmax		
	comp=Z,35nm,1.4s						
MENT	Mentasta	50.83	34	eP	P	05 49 51.5	+0.8
	comp=Z,12nm,0.7s						
OTUK	Ortayu	51.55	306	P	P	05 49 56.3	0.0
OTUK				pmax	pmax		
	comp=Z,50nm,1.3s						
KSH	Kashi	51.55	295	P	P	05 50 01.3	+4.7
KSH				pP	pwP	05 50 07.8	+1.8
KSH				S	S	05 57 20.8	+3.6
KSH				ScS	ScS	05 59 47.5	+0.4
KSH				pmax	pmax		
	comp=Z,120nm,2.2s						
KSH				pmax	pmax		
	comp=Z,370nm,4.3s						
KSH				LR	LR		
	comp=Z,1µm,15.8s						
KSH				LR	LR		
	comp=Z,2µm,14.0s						
KSH				LR	LR		
	comp=Z,2µm,17.4s						
AAK	Ala-Archa	51.63	299	LR	LR	06 13 30.4	
	comp=Z,780nm,19.0s,baz=62,slow=38						
AAK	Ala-Archa	51.63	299	eP	P	05 49 58.0	+0.7
	comp=Z,11nm,1.1s						
AAK	Ala-Archa	51.63	299c	eP	P	05 49 57.9	+0.7
AAK				pmax	pmax		
	comp=Z,16nm,1.7s						
BRVK	Borovoye	51.72	313	eP	P	05 49 57.5	0.0
	comp=Z,18nm,1.0s						
BRVK	Borovoye	51.72	313	P	P	05 49 57.2	-0.3
BRVK				pmax	pmax		
	comp=Z,29nm,1.3s						
KK31	Karatay Array	54.27	301	iP	P	05 50 16.3	-0.2
KK31				pmax	pmax		
	comp=Z,33nm,1.2s						
INK	Inuvik	54.33	27	P	P	05 50 17.0	+0.6
	comp=Z,9.3nm,0.8s,baz=300,slow=5.2,SNR=28						
INK	Inuvik	54.33	27	P	P	05 50 17.0	+0.6
GSI	Gunungsitoli	54.47	241	eP	P	05 50 18.4	+0.2
	comp=Z,54nm,0.8s						
NIL	Nilore	55.76	289	eP	P	05 50 29.2	+1.8
	comp=Z,13nm,0.8s						
NIL	Nilore	55.76	289	eP	P	05 50 29.2	+1.8
NIL				pmax	pmax		
	comp=Z,13nm,0.8s						
SVE	Sverdlovsk	56.19	319⇑	eP	P	05 50 31.1	+1.0
SVE				eS	S	05 58 22.0	+2.8
SVE				pmax	pmax		
	comp=Z,45nm,1.1s						
SVE				MLR	MLR		
	comp=Z,2µm,15.0s						
WRAB	Tennant Creek	56.74	189	epP	pP	05 50 39.9	+4.0
WRAB	Tennant Creek	56.74	189c	eP	P	05 50 36.1	+1.8
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WB2	Warramunga Arr	56.75	189	eP	P	05 50 35.8	+1.4
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	56.75	189	P	P	05 50 32.5	-1.9
	comp=Z,4.2nm,0.8s,baz=7.0,slow=8.6,SNR=8.4						
WRA	Warramunga Arr	56.75	189	iP	P	05 50 33.5	-0.9
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	Arti	57.41	319	eP	P	05 50 38.6	0.0
	comp=Z,43nm,1.0s						
ARU	Arti	57.41	319c	eP	P	05 50 38.7	0.0
ARU				pmax	pmax		
	comp=Z,78nm,1.7s						
KBL	Kabul	58.56	292	eP	P	05 50 47.1	-0.4
	comp=Z,15nm,1.1s						
KBL	Kabul	58.56	292	eP	P	05 50 47.1	-0.4
KBL				pmax	pmax		
	comp=Z,15nm,1.1s						
AB31	Akbulak array	59.04	311	iP	P	05 50 49.7	-0.6
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKTO	Aktyubinsk	59.77	313	LR	LR	06 16 45.9	
	comp=Z,553nm,18.3s,baz=59,slow=36						
AKTO	Aktyubinsk	59.77	313	P	P	05 50 54.6	-0.7
AKTO				pmax	pmax		
	comp=Z,18nm,0.9s						
AS31	Alice Springs	60.48	189	eP	P	05 51 01.1	+0.7
	comp=Z,2.5nm,0.6s						
ASAR	Alice Springs	60.48	189	P	P	05 50 58.7	-1.7
	comp=Z,2.9nm,0.7s,baz=13,slow=7.2,SNR=18						
ASAR				LR	LR	06 18 46.7	
	comp=Z,236nm,19.0s,baz=21,slow=38						
PRGR	Permogore	61.73	327	eP	P	05 51 07.0	-1.4
PRGR				pmax	pmax		
	comp=Z,42nm,1.1s						
DZM	Mont Dzumac	62.48	155	eS	S	05 59 42.7	+1.5
	comp=Z,263nm,23.9s						
DZM	Mont Dzumac	62.48	155	eLR	LR	06 10 08.0	
	comp=Z,1µm,20.0s						
RES	Resolute Bay	62.80	15	P	P	05 51 15.6	+0.2
	comp=Z,13nm,1.0s,baz=316,slow=10,SNR=5.2						
YKA	Yellowknife Ar	63.69	30	P	P	05 51 21.3	-0.2
	comp=Z,4.8nm,0.7s,baz=302,slow=6.8,SNR=14						
KLMR	Klimovskoe	64.71	328	eP	P	05 51 27.4	-0.8
KLMR				e		05 53 50.6	
KLMR				pmax	pmax		
	comp=Z,23nm,0.9s						
ARCES	ARCESS Array B	64.80	340	P	P	05 51 29.4	+0.7
	comp=Z,2.6nm,0.8s,baz=69,slow=11,SNR=7.3						
ARCES				LR	LR	06 21 50.3	
	comp=Z,434nm,21.1s,baz=44,slow=38						
GEYT	Alibeck	64.98	300	LR	LR	06 21 07.0	
	comp=Z,432nm,18.4s,baz=160,slow=37						
GYA0B	ALIBECK ARRAY	64.98	300	eP	P	05 51 32.1	+1.7
MSF	Maaselka	65.91	336	P	P	05 51 37.4	+1.5
MSF				pmax	pmax		
	comp=Z,16nm,1.9s						
NLWA	Neilton Lookou	66.26	48	eP	P	05 51 40.0	+1.5
	comp=Z,8.9nm,0.9s						
DAG	Danmarks Havn	66.33	355	iP	P	05 51 38.8	+0.4
DAG				MLR	MLR		
	comp=Z,670nm,17.0s						
DAG	Danmarks Havn	66.33	355	iP	P	05 51 38.8	+0.4
	comp=Z,650nm,17.0s						
JOF	Joensuu	66.87	332	P	P	05 51 43.5	+1.4
JOF				pmax	pmax		
	comp=Z,18nm,1.1s						
STKA	Stephens Creek	68.09	181	P	P	05 51 50.3	+0.3
	comp=Z,2.6nm,0.4s,baz=348,slow=9.1,SNR=4.0						
STKA	Stephens Creek	68.09	181	eP	P	05 51 50.3	+0.3
	comp=Z,0.7nm,0.8s						
MOS	Moscow	68.25	324	eP	P	05 51 50.3	-0.6
MOS				e		05 51 58.9	
MOS				e		05 54 18.9	
MOS				eS	S	06 00 51.1	-0.1
MOS				pmax	pmax		
	comp=Z,260nm,2.1s						
MOS				pmax	pmax		
	comp=Z,88nm,1.3s						
MOS				smax	smax		
	comp=E,700nm,4.8s						
MOS				smax	smax		
	comp=N,500nm,4.2s						
MOS				MLR	MLR		
	comp=N,2µm,15.0s						
MOS				MLR	MLR		
	comp=E,600nm,15.0s						
MOS				MLR	MLR		
	comp=Z,2µm,15.0s						
H04A	Detroit Lake	68.61	50	eP	P	05 51 53.5	0.0
	comp=Z,4.6nm,0.8s						
VRH	Novokhopyorsk	68.63	318	eP	P	05 51 53.1	-0.3
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
VRH				MLR	MLR		
	comp=Z,2µm,14.0s						
OBN	Obninsk	69.10	324⇓	iP	P	05 51 57.7	+1.5
OBN				*SP	pwP	05 52 03.0	-2.7
OBN						05 52 23.0	
OBN				e		05 54 29.7	
OBN				eS	S	06 01 04.4	+3.2
OBN				e		06 01 59.4	
OBN				eSS	SS	06 05 25.3	-1.0
OBN				pmax	pmax		
	comp=Z,37nm,1.2s						
OBN				MLR	MLR		
	comp=Z,2µm,15.0s						
LPSR	Galich'ya Gora	69.33	321	eP	P	05 51 57.6	-0.1
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,3µm,15.0s						
MAK	Makhachkala	69.57	309	eP	P	05 51 54.2	-5.2
MAK				ePPP	PPP	05 56 08.9	
MAK				eS	S	06 00 59.9	-7.3
MAK				pmax	pmax		
	comp=Z,189nm,1.5s						
FINES	FINESS Array B	69.72	333	P	P	05 52 00.1	+0.2
	comp=Z,11nm,0.8s,baz=52,slow=3.4,SNR=25						
FINES				LR	LR	06 25 26.5	
	comp=Z,2µm,18.1s,baz=46,slow=38						
NEW	Newport	69.73	45	eP	P	05 52 00.1	-0.3
	comp=Z,4.1nm,1.1s						
NEW	Newport	69.73	45	eP	P	05 52 00.1	-0.3
NEW				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VSR	Storozhevoye	69.97	319	eP	P	05 52 02.1	+0.4
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,3µm,14.0s						
VORD	Divnogorie	70.05	319	eP	P	05 52 02.3	+0.2
VORD				pmax	pmax		
	comp=Z,40nm,1.5s						
GROC	Groznyy	70.51	310	eP	P	05 52 03.3	-1.9
GROC				e		05 52 25.6	
GROC				pmax	pmax		
	comp=Z,20nm,0.4s						
SUMG	Summit	71.15	0	iP	P	05 52 10.7	+1.6
SUMG				pmax	pmax		
	comp=Z,43nm,1.0s						
SUMG				MLR	MLR		
	comp=Z,3µm,16.0s						
SUMG	Summit	71.15	0	iP	P	05 52 10.7	+1.6
	comp=Z,43nm,1.0s						
	comp=Z,3µm,16.0s						
VSU	Vasula	71.39	330	eP	P	05 52 10.6	+0.5
VSU				IAmb	IAmb	05 52 13.0	
	comp=Z,46nm,0.8s						
VSU	Vasula	71.39	330c	eP	P	05 52 10.7	+0.5
VSU				pmax	pmax		
	comp=Z,69nm,1.0s						
BMO	Blue Mountains	71.48	48	epwP	pwP	05 52 26.1	+5.6
	comp=Z,3.9nm,1.1s						
NCK	Nalchik	71.71	311	iP	P	05 52 12.5	+0.1
NCK				pmax	pmax		
	comp=Z,12nm,1.2s						
ZEI	Tsey	71.91	310	eP	P	05 52 12.4	-1.5
ZEI				pmax	pmax		
	comp=Z,21nm,1.1s						
KBZ	Khabaz	72.00	311	P	P	05 52 15.1	+0.9
	comp=Z,14nm,0.8s,baz=41,slow=3.4,SNR=23						
KBZ				LR	LR	06 25 33.4	
	comp=Z,657nm,18.6s,baz=37,slow=37						
KIV	Kislovodsk	72.00	312	eP	P	05 52 16.0	+1.7
	comp=Z,40nm,1.0s						
KIV	Kislovodsk	72.00	312⇑	iP	P	05 52 16.0	+1.7
KIV	Kislovodsk	72.00	312	eP	P	05 52 15.6	+1.3
KIV				e		05 52 30.7	
KIV				eS	S	06 01 36.8	+1.0
KIV				eSS	SS	06 06 12.8	+1.0
KIV				pmax	pmax		
	comp=Z,111nm,1.0s						
KIV				pmax	pmax		
	comp=Z,405nm,4.8s						
MSO	Missoula	72.32	45	eP	P	05 52 16.3	+0.1
	comp=Z,3.8nm,1.1s						
NEY	Neytrino	72.37	311	iP	P	05 52 17.1	+0.5
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GNI	Garni	72.83	307c	eP	P	05 52 21.2	+1.8
GNI				pmax	pmax		
	comp=Z,185nm,1.7s						
AKH	Akhalkalaki	72.92	309⇑	iP	P	05 52 22.0	+2.1
AKH	Akhalkalaki	72.92	309	P	P	05 52 22.4	+2.5
AKH				pmax	pmax		
	comp=Z,20nm,1.2s						
IZAR	Zarasai	73.36	328	eP	P	05 52 22.8	+0.8
IZAR				IAmb	IAmb	05 52 24.0	
	comp=Z,10nm,1.0s						
MICGM	Minsk	73.47	326	e	P	05 52 09.0	-14
MICGM				eLR	LR	06 25 33.0	
MICGM				LRM	MLR	06 29 48.0	
	comp=Z,3.8nm,12.0s						
MNK	Minsk	73.47	326	eP	P	05 52 09.0	-14
MNK				MLR	MLR		
	comp=Z,4µm,12.0s						
FFC	Flin Flon	73.53	33	eP	P	05 52 23.4	+0.3
	comp=Z,82nm,0.8s						
FFC	Flin Flon	73.53	33	eP	P	05 52 23.4	+0.3
FFC				pmax	pmax		
	comp=Z,82nm,0.8s						
ISAL	Salakas	73.53	328	eP	P	05 52 23.8	+0.7
ISAL				IAmb	IAmb	05 52 26.2	
	comp=Z,15nm,0.8s						
IIGN	Ignalina	73.64	328	eP	P	05 52 24.2	+0.5
IIGN				IAmb	IAmb	05 52 26.8	
	comp=Z,13nm,1.1s						
SOC	Sochi	73.99	313	eP	P	05 52 24.4	-1.5
SOC				eS	SKiKP	06 01 55.0	+0.7
SOC				pmax	pmax		
	comp=Z,47nm,1.1s						
ILULI	Ilulissat	74.04	5	iP	P	05 52 27.7	+1.9
ILULI	Ilulissat	74.04	5	iP	P	05 52 27.7	+1.9
NVAR	Mina Array Bea	74.43	54	P	P	05 52 29.5	+0.6
	comp=Z,3.2nm,0.7s,baz=289,slow=5.4,SNR=26						
NVAR				LR	LR	06 22 46.5	
	comp=Z,447nm,18.3s,baz=297,slow=34						
OMMB	Old Mammoth Mi	74.43	55	eP	P	05 52 28.6	-0.4
	comp=Z,2.5nm,1.1s						
ANN	Anapa	74.61	315	eP	P	05 52 30.5	+1.0
ANN				eS	S	06 02 06.8	+1.8
ANN				pmax	pmax		
	comp=Z,106nm,1.9s						
NB2	NORSAR Subarra	75.02	338	P	P	05 52 31.5	-0.2
	comp=Z,32nm,1.4s,baz=40,slow=5.9						
NB2	NORSAR Subarra	75.02	338	P	P	05 52 31.5	-0.2
	baz=40,slow=5.9						
NOA	NORSAR Array B	75.02	338	P	P	05 52 31.7	0.0
	comp=Z,5.4nm,0.8s,baz=39,slow=5.8,SNR=19						
NOA				LR	LR	06 29 45.7	
	comp=Z,2µm,18.6s,baz=40,slow=39						
ELK	Elko	75.05	50	eP	P	05 52 30.1	-2.4
	comp=Z,1.6nm,0.9s						
ELK	Elko	75.05	50	eP	P	05 52 30.1	-2.4
ELK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RAO	Raoul Island	75.19	145	LR	LR	06 21 40.2	
	comp=Z,398nm,18.6s,baz=91,slow=33						
AKASG	Malin Array Be	75.31	323	P	P	05 52 33.0	-0.4
	comp=Z,7.9nm,0.7s,baz=43,slow=6.2,SNR=38						
AKASG				LR	LR	06 30 30.2	
	comp=Z,658nm,18.2s,baz=50,slow=40						
SUW	Suwalki	75.85	328	eP	P	05 52 37.8	+1.4
SUW	Suwalki	75.85	328	eP	P	05 52 37.8	+1.4
SFJD	Kangerlussuaq	76.26	5	iP	P	05 52 40.5	+1.9
SFJD	Kangerlussuaq	76.26	5	iP	P	05 52 40.5	+1.9
BGU	Big Grassy Mou	76.30	49	eP	P	05 52 40.2	+0.6
	comp=Z,4.2nm,1.2s						
AHID	Auburn Hatcher	76.35	47	eP	P	05 52 39.9	+0.1
	comp=Z,3.4nm,0.9s						
SIM	Simferopol'	76.40	316	eP	P	05 52 42.2	+2.4
SIM				eS	S	06 02 26.6	+1.8
SIM				ePS		06 03 03.0	
SIM				eSS	SS	06 07 22.0	+3.7
SIM				pmax	pmax		
	comp=Z,15nm,0.8s						
PDAR	Pinedale Array	77.25	46	P	P	05 52 44.6	-0.4
	comp=Z,1.0nm,0.6s,baz=257,slow=1.6,SNR=9.0						
KIS	Kishinev	77.93	320	eP	P	05 52 50.0	+1.7
KIS				eS	S	06 02 38.0	-3.4
KIS				eScS	SKSac	06 02 57.0	-5.2
KIS	Kishinev	77.93	320	ePS		06 03 22.0	
KIS				eSS	SS	06 08 17.0	+36
KIS				eL	L	06 18 17.0	
KIS				LRM	MLR	06 30 40.0	
	comp=Z,3µm,16.0s						
KIS	Kishinev	77.93	320	eP	P	05 52 50.0	+1.7
KIS				e		05 57 40.0	
KIS				eS	S	06 02 38.0	-3.4
KIS				e		06 02 57.0	

KIS				*e*PS		06 03 22.0	
KIS				MLR	MLR		
	comp=Z,3µm,16.0s						
KIS				MLR	MLR		
	comp=N,2µm,16.0s						
BSD	**Bornholm Skovb**	**78.35**	**332**	*i* P	**P**	**05 52 51.6**	**+1.1**
	comp=N,38nm,1.1s						
	comp=Z,2µm,15.0s						
LVV	**L'vov**	**78.37**	**325**	*e*P	**P**	**05 52 50.6**	**-0.2**
LVV				*e*		05 55 55.1	
LVV				*e*PPP	PPP	05 57 38.2	
LVV				*e*S	**S**	**06 02 50.0**	**+3.8**
LVV				*e*PS		06 03 26.7	
COP	**Copenhagen**	**78.81**	**334**	⇑*i*P	**P**	**05 52 54.5**	**+1.5**
COP				MLR	MLR		
	comp=Z,2µm,15.0s						
COP	**Copenhagen**	**78.81**	**334**	⇑*i*P	**P**	**05 52 54.5**	**+1.5**
	comp=Z,2µm,15.0s						
RAR	**Rarotonga**	**79.04**	**127**	LR	LR	06 27 01.4	
	comp=Z,885nm,18.4s,baz=310,slow=35						
KWP	**Kalwaria Pacla**	**79.12**	**325**	*e*P	**P**	**05 52 56.4**	**+1.5**
KWP	**Kalwaria Pacla**	**79.12**	**325**	*e*P	**P**	**05 52 56.4**	**+1.5**
ULM	**Lac du Bonnet**	**79.32**	**34**	P	**P**	**05 52 56.4**	**+0.4**
	comp=Z,3.3nm,0.9s,baz=333,slow=5.7,SNR=3.6						
MUD	**Monsted U'grnd**	**79.32**	**336**	*i* P	**P**	**05 52 57.5**	**+1.7**
MUD				MLR	MLR		
	comp=Z,2µm,14.0s						
MUD	**Monsted U'grnd**	**79.32**	**336**	*i* P	**P**	**05 52 57.5**	**+1.7**
	comp=Z,2µm,14.0s						
BURAR	**Bucovina Array**	**79.33**	**322**	⇑*i*P	**P**	**05 52 57.2**	**+1.0**
BIZ	**Bicaz**	**79.35**	**321**	⇓*i*P	**P**	**05 52 57.2**	**+1.0**
TESR	**Tescani**	**79.36**	**321**	⇓*i*P	**P**	**05 52 57.5**	**+1.2**
CFR	**Carcaliu**	**79.49**	**319**	⇑*i*P	**P**	**05 52 58.8**	**+1.8**
VRI	**Vrincioaia**	**79.76**	**320**	⇑*i*P	**P**	**05 53 00.1**	**+1.6**
KOLS	**Kolonicke sedl**	**79.81**	**325**	*e*P	**P**	**05 53 00.0**	**+1.3**
KOLS				pmax	pmax		
	comp=Z,14nm,1.6s						
KOLS	**Kolonicke sedl**	**79.81**	**325**	*e*P	**P**	**05 53 00.0**	**+1.3**
BRTR	**Keskin Array B**	**79.95**	**312**	P	**P**	**05 53 00.0**	**+0.2**
	comp=Z,4.3nm,0.9s,baz=108,slow=4.0,SNR=18						
BRTR				LR	LR	06 33 07.5	
	comp=Z,344nm,18.1s,baz=22,slow=39						
BRTR	**Keskin Array B**	**79.95**	**312**	*i* P	**P**	**05 53 00.7**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OJC	**Ojcow**	**80.01**	**327**	*e*P	**P**	**05 53 01.1**	**+1.4**
OJC	**Ojcow**	**80.01**	**327**	*e*P	**P**	**05 53 01.1**	**+1.4**
UZH	**Uzhgorod**	**80.02**	**324**	*e*P	**P**	**05 52 57.9**	**-1.9**
UZH				*e*		05 53 08.5	
UZH				*e*		05 55 59.9	
UZH				*e*		05 57 54.1	
UZH				*e*S	**S**	**06 02 56.9**	**-6.8**
TRPA	**Tarpa**	**80.26**	**324**	⇑*i*P	**P**	**05 53 02.8**	**+1.7**
TRPA	**Tarpa**	**80.26**	**324**	*e*P	**P**	**05 53 01.1**	**0.0**
TRPA				*e*PP	**PP**	**05 56 05.0**	**+2.1**
TRPA				*e*S	**S**	**06 03 09.1**	**+2.9**
NIE	**Niedzica**	**80.37**	**326**	*e*P	**P**	**05 53 03.3**	**+1.6**
NIE	**Niedzica**	**80.37**	**326**	*e*P	**P**	**05 53 03.3**	**+1.6**
DOPR	**Dopca**	**80.38**	**321**	⇑*i*P	**P**	**05 53 03.5**	**+1.7**
MLR	**Muntele Rosu**	**80.42**	**320**	⇑*i*P	**P**	**05 53 03.3**	**+1.1**
AGMN	**Agassiz Nation**	**80.72**	**35**	*e*P	**P**	**05 53 03.5**	**-0.1**
	comp=Z,5.3nm,1.1s						
VOIR		**80.91**	**321**	⇑*i*P	**P**	**05 53 06.2**	**+1.4**
LANS	**Liptovska Anna**	**80.94**	**326**	*e*P	**P**	**05 53 06.7**	**+1.9**
LANS				pmax	pmax		
	comp=Z,9.0nm,1.5s						
LANS	**Liptovska Anna**	**80.94**	**326**	*e*P	**P**	**05 53 06.7**	**+1.9**
URZ	**Urewera**	**80.95**	**153**	LR	LR	06 25 35.5	
	comp=Z,383nm,19.2s,baz=324,slow=33						
OKC	**Ostrava-Krasne**	**81.02**	**327**	*e*S	**S**	**06 03 16.7**	**+2.6**
OKC				*e*SS	**SS**	**06 08 28.4**	**+1.2**
OKC				AMS	AMS	06 33 30.0	
	comp=Z,2µm,14.2s						
KSP	**Ksiaz**	**81.05**	**329**	*e*P	**P**	**05 53 06.6**	**+1.3**
KSP	**Ksiaz**	**81.05**	**329**	*e*P	**P**	**05 53 06.6**	**+1.3**
DRGR		**81.13**	**323**	⇓*i*P	P	05 52 54.6	-11
OSTC	**Ostas**	**81.30**	**329**	*e*P	**P**	**05 53 07.7**	**+1.0**
OSTC				*e*S	**S**	**06 03 17.4**	**+0.3**
OSTC				AMS	AMS	06 34 00.0	
	comp=Z,3µm,14.2s						
MORC	**Moravsky Berou**	**81.32**	**328**	⇑*i*P	**P**	**05 53 08.2**	**+1.4**
MORC	**Moravsky Berou**	**81.32**	**328**	*e*P	**P**	**05 53 07.2**	**+0.4**
CHVC	**Chvalec**	**81.34**	**329**	*e*P	**P**	**05 53 08.2**	**+1.3**
CHVC				*e*x	x	05 53 15.3	
CHVC				AMS	AMS	06 34 20.0	
	comp=Z,3µm,14.1s						
DPC	**Dobruska-Polom**	**81.41**	**329**	*e*P	**P**	**05 53 07.8**	**+0.5**
DPC				*e*S	**S**	**06 03 18.6**	**+0.3**
DPC				MLR	MLR		
	comp=Z,2µm,14.0s						
DPC	**Dobruska-Polom**	**81.41**	**329**	*e*P	**P**	**05 53 07.8**	**+0.5**
DPC				*e*S	**S**	**06 03 18.6**	**+0.3**
DPC				AMS	AMS	06 34 00.0	
	comp=Z,2µm,14.0s						
UPC	**Upice**	**81.42**	**329**	*e*P	**P**	**05 53 09.2**	**+1.9**
UPC				*e*S	**S**	**06 03 19.0**	**+0.7**
UPC				MLR	MLR		
	comp=Z,3µm,13.8s						
UPC	**Upice**	**81.42**	**329**	*e*P	**P**	**05 53 09.2**	**+1.9**
UPC				*e*S	**S**	**06 03 19.0**	**+0.7**
UPC				AMS	AMS	06 34 20.0	
	comp=Z,3µm,13.8s						
PSZ	**Piszkesteto**	**81.65**	**325**	*e*P	**P**	**05 53 09.2**	**+0.6**
	comp=Z,8.8nm,1.0s						
PSZ	**Piszkesteto**	**81.65**	**325**	*e*P	**P**	**05 53 09.2**	**+0.6**
PSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PSZ	**Piszkesteto**	**81.65**	**325**	*e*P	**P**	**05 53 08.1**	**-0.5**
PSZ				*e*PP	**PP**	**05 56 15.0**	**+0.5**
PSZ				*e*S	**S**	**06 03 21.1**	**+0.2**
VYHS	**Vyhne**	**81.70**	**326**	*e*P	**P**	**05 53 09.4**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,13nm,1.3s						
VYHS	**Vyhne**	**81.70**	**326**	*e*P	**P**	**05 53 09.4**	**+0.6**
RAYN	**Ar Rayn**	**81.80**	**293**	*e*P	**P**	**05 53 10.4**	**+0.5**
	comp=Z,12nm,1.1s						
RAYN	**Ar Rayn**	**81.80**	**293**	*e*P	**P**	**05 53 10.4**	**+0.5**
RAYN				pmax	pmax		
	comp=Z,12nm,1.1s						
JAVC	**Velka Javorina**	**81.95**	**327**	*e*P	**P**	**05 53 12.1**	**+1.9**
BRG	**Berggiesshubel**	**81.99**	**330**	*e*P	**P**	**05 53 11.3**	**+1.1**
	comp=Z,18nm,1.3s						
BRG	**Berggiesshubel**	**81.99**	**330**	S	**S**	**06 03 23.0**	**-1.1**
BRG				SS	SS	06 08 32.0	-10
	comp=N,1µm,12.7s						
	comp=E,1µm,13.8s						
	comp=Z,2µm,13.3s						
BRG	**Berggiesshubel**	**81.99**	**330**	*e*P	**P**	**05 53 11.3**	**+1.1**
BRG				S	**S**	**06 03 23.0**	**-1.1**
BRG				pmax	pmax		
	comp=Z,18nm,1.3s						
BRG				MLR	MLR		
	comp=N,1µm,12.7s						
BRG				MLR	MLR		
	comp=E,1µm,13.8s						
BRG				MLR	MLR		
	comp=Z,2µm,13.3s						
BRG				smax	smax		
	comp=N,2.0nm,0.7s						
PVCC	**Panska Ves**	**82.00**	**330**	AMS	AMS	06 34 20.0	
	comp=N,2µm,14.7s						
CLL	**Collm**	**82.02**	**331**	*e*P	**P**	**05 53 10.0**	**-0.4**
CLL				pmax	pmax		
	comp=Z,17nm,1.1s						
CLL	**Collm**	**82.02**	**331**	*e*P	**P**	**05 53 10.0**	**-0.4**
	comp=Z,17nm,1.1s						
CLL				*e*		05 55 51.0	
CLL				*e*		05 56 07.0	
CLL				*e*PPP	PPP	05 58 12.0	
CLL				*e*S	**S**	**06 03 23.0**	**-1.4**
CLL				*e*SS	**SS**	**06 08 42.0**	**-0.1**
CLL				*e*		06 09 54.0	
CLL				*e*SSS	SSS	06 12 12.0	
CLL				*e*		06 13 24.0	
CLL				LmH		06 29 00.0	
	comp=N,1µm,18.5s						
CLL				LmH		06 29 00.0	
	comp=E,2µm,19.6s						
CLL				Lmax		06 33 00.0	
VRAC	**Vranov**	**82.08**	**328**	*e*P	**P**	**05 53 11.8**	**+1.0**
SMOL	**Smolenice**	**82.32**	**327**	*e*P	**P**	**05 53 13.6**	**+1.6**
SMOL				pmax	pmax		
	comp=Z,26nm,1.5s						
SMOL	**Smolenice**	**82.32**	**327**	*e*P	**P**	**05 53 13.6**	**+1.6**
KRUC	**Moravsky**	**82.35**	**328**	*e*P	**P**	**05 53 13.0**	**+0.8**
GOPC	**GO Pecny, Ondr**	**82.38**	**329**	*e*P	**P**	**05 53 13.3**	**+0.9**
GOPC				*e*S	**S**	**06 03 30.0**	**+1.7**
GOPC				MLR	MLR		
	comp=Z,3µm,13.7s						
GOPC	**GO Pecny, Ondr**	**82.38**	**329**	*e*P	**P**	**05 53 13.3**	**+0.9**
GOPC				*e*S	**S**	**06 03 30.0**	**+1.7**
GOPC				AMS	AMS	06 35 00.0	
	comp=Z,3µm,13.7s						
PRU	**Pruhonice**	**82.43**	**329**	*e*P	**P**	**05 53 13.2**	**+0.6**
PRU				*e*S	**S**	**06 03 29.6**	**+0.9**
PRU				*e*S	**SS**	**06 08 42.2**	**-6.0**
PRU				MLR	MLR		
	comp=Z,2µm,13.7s						
PRU	**Pruhonice**	**82.43**	**329**	*e*P	**P**	**05 53 13.2**	**+0.6**
PRU				*e*S	**S**	**06 03 29.6**	**+0.9**
PRU				*e*SS	**SS**	**06 08 42.2**	**-6.0**
PRU				AMS	AMS	06 35 00.0	
	comp=Z,2µm,13.7s						
MODS	**Modra-Piesok**	**82.49**	**327**	*e*P	**P**	**05 53 13.8**	**+0.8**
MODS				pmax	pmax		
	comp=Z,98nm,2.5s						
MODS	**Modra-Piesok**	**82.49**	**327**	*e*P	**P**	**05 53 13.8**	**+0.8**
TREC	**Trest**	**82.56**	**328**	AMS	AMS	06 35 20.0	
	comp=Z,2µm,16.2s						
ZST	**Bratislava**	**82.70**	**327**	*e*P	**P**	**05 53 15.5**	**+1.5**
ZST				pmax	pmax		
	comp=Z,70nm,2.2s						
ZST	**Bratislava**	**82.70**	**327**	*e*P	**P**	**05 53 15.5**	**+1.5**
TUC	**Tucson**	**83.00**	**55**	*e*P	**P**	**05 53 17.9**	**+1.9**
	comp=Z,2.2nm,1.0s						
TUC	**Tucson**	**83.00**	**55**	*e*P	**P**	**05 53 17.9**	**+1.9**
TUC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PMOR	**Pomariorio Ree**	**83.03**	**114**	*e*T	T	07 24 24.1	
	comp=Z,2.4nm,0.3s						
MPEP	**Malo Peshtene**	**83.04**	**320**	P	**P**	**05 53 18.8**	**+2.9**
NKC	**Novy Kostel**	**83.08**	**330**	AMS	AMS	06 34 20.0	
	comp=Z,2µm,14.4s						
SOP	**Sopron**	**83.33**	**327**	*e*P	**P**	**05 53 19.0**	**+1.8**
SOP				*e*S	**S**	**06 03 36.1**	**-1.8**
KDZ	**Kurdzhali**	**83.34**	**318**	P	**P**	**05 53 18.9**	**+1.4**
PGB	**Panagyurishte**	**83.38**	**319**	P	**P**	**05 53 19.3**	**+1.5**
CONA	**Conrad Observa**	**83.45**	**327**	*e*PcP	**P**	**05 53 19.7**	**+1.6**
	comp=Z,9.4nm,0.9s						
MORH	**Mrgy, Hungar**	**83.48**	**325**	*e*P	**P**	**05 53 18.0**	**0.0**
MORH				*e*PP	**PP**	**05 56 31.0**	**+1.5**
MORH				*e*S	**S**	**06 03 42.0**	**+2.6**
PPT	**Papeete**	**83.49**	**117**	LR	LR	06 25 57.6	
	comp=Z,527nm,19.6s,baz=311,slow=32						
KHC	**Kasperske Hory**	**83.49**	**329**	*e*P	**P**	**05 53 18.1**	**-0.1**
KHC				*e*		05 53 26.6	
KHC				*e*S	**S**	**06 03 38.7**	**-0.9**
KHC				MLR	MLR		
	comp=Z,2µm,16.3s						
KHC	**Kasperske Hory**	**83.49**	**329**	*e*P	**P**	**05 53 18.1**	**-0.1**
KHC				*e*x	x	05 53 26.6	
KHC				*e*S	**S**	**06 03 38.7**	**-0.9**
KHC				*e*S	**SS**	**06 09 12.9**	**+8.9**
KHC				AMS	AMS	06 34 10.0	
	comp=Z,2µm,16.3s						
PPT2	**Papeete2**	**83.50**	**117**	*e*S	**S**	**06 03 33.0**	**-7.4**
	comp=Z,580nm,32.2s						
PPT2	**Papeete2**	**83.50**	**117**	*e*LR	LR	06 19 20.4	
	comp=Z,447nm,20.5s,baz=306						
GERES	**GERESS Array B**	**83.66**	**329**	P	**P**	**05 53 18.9**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=32,slow=5.2,SNR=18						
GERES				LR	LR	06 33 14.9	
	comp=Z,686nm,18.6s,baz=18,slow=38						
VTS	**Vitosha**	**83.82**	**320**	⇑*i*P	**P**	**05 53 21.7**	**+1.6**
VTS	**Vitosha**	**83.82**	**320**	P	**P**	**05 53 21.2**	**+1.1**
RPZ	**Rata Peaks**	**83.95**	**160**	LR	LR	06 30 20.1	
	comp=Z,592nm,18.5s,baz=330,slow=35						
ANMO	**Albuquerque**	**84.08**	**51**	*e*P	**P**	**05 53 22.6**	**+0.9**
	comp=Z,5.3nm,1.1s						
ANMO	**Albuquerque**	**84.08**	**51**	*c* *i*P	**P**	**05 53 21.8**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
EZN	**Ezine**	**84.10**	**316**	⇓*i*P	**P**	**05 53 22.4**	**+1.0**
ARSA	**Arzberg**	**84.11**	**327**	*e*PcP	**P**	**05 53 22.6**	**+1.2**
	comp=Z,1.7nm,0.5s						
BEHE	**Becsehely**	**84.15**	**326**	*e*P	**P**	**05 53 26.1**	**+4.6**
BEHE				*e*S	**S**	**06 03 49.1**	**+2.9**
MOA	**Molln**	**84.19**	**328**	*e*PcP	**P**	**05 53 22.8**	**+1.0**
	comp=Z,10nm,1.7s						
MMB	**Musomiste**	**84.29**	**319**	P	**P**	**05 53 23.5**	**+1.1**
KKB	**Krupnik**	**84.43**	**319**	P	**P**	**05 53 24.4**	**+1.3**
SOKA	**Soboth**	**84.77**	**327**	*e*PcP	**P**	**05 53 25.5**	**+0.7**
	comp=Z,13nm,1.2s						
TAOE	**Nuku Hiva Isla**	**85.04**	**105**	*e*LR	LR	06 19 38.6	
	comp=Z,1µm,29.4s						
OBKA	**Obir**	**85.11**	**327**	*e*PcP	**P**	**05 53 27.4**	**+0.9**
	comp=Z,7.7nm,1.0s						
SCHQ	**Schefferville**	**85.50**	**17**	LR	LR	06 37 35.0	
	comp=Z,524nm,18.1s,baz=352,slow=40						
WTTA	**Wattenberg**	**85.76**	**329**	*e*PcP	**P**	**05 53 30.5**	**+0.7**
	comp=Z,2.8nm,0.5s						
ABTA	**Abfaltersbach**	**85.80**	**328**	*e*PcP	**P**	**05 53 29.9**	**0.0**
	comp=Z,4.9nm,1.1s						
WLF	**Walferdange**	**85.93**	**333**	⇑P	**P**	**05 53 32.3**	**+1.9**
RETA	**Reutte**	**85.94**	**330**	PcP	**P**	**05 53 31.5**	**+0.9**
	comp=Z,12nm,1.2s						
DOU	**Dourbes**	**86.12**	**334**	⇓P	**P**	**05 53 32.5**	**+1.2**
BFO	**Black Forest**	**86.22**	**331**	*e*P	**P**	**05 53 32.2**	**+0.3**
	comp=Z,12nm,1.1s						
BFO	**Black Forest**	**86.22**	**331**	*e*P	**P**	**05 53 32.2**	**+0.3**
BFO				pmax	pmax		
	comp=Z,12nm,1.1s						
FETA	**Feichten**	**86.33**	**329**	*e*PcP	**P**	**05 53 33.3**	**+0.6**
	comp=Z,4.3nm,1.1s						
DAVA	**Damuels**	**86.46**	**330**	*e*PcP	**P**	**05 53 33.8**	**+0.5**
	comp=Z,14nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**86.84**	**329**	*e*P	**P**	**05 53 35.3**	**0.0**
	comp=Z,6.8nm,1.0s						
TBI	**Tubuai**	**87.39**	**122**	*e*S	S	06 04 09.1	-9.3
	comp=Z,318nm,30.2s						
TBI	**Tubuai**	**87.39**	**122**	*e*LR	LR	06 20 56.0	
	comp=Z,552nm,26.5s,baz=309						
TBI	**Tubuai**	**87.39**	**122**	*e*T	T	07 30 00.5	
	comp=Z,5.8nm,0.3s						
TXAR	**Lajitas Array**	**89.57**	**53**	P	**P**	**05 53 48.3**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=296,slow=3.0,SNR=20						
TXAR				LR	LR	06 34 04.4	
	comp=Z,540nm,18.1s,baz=0.0,slow=36						
CCM	**Cathedral Cave**	**90.56**	**40**	*e*P	**P**	**05 53 53.1**	**+0.4**
	comp=Z,5.8nm,0.8s						
CCM	**Cathedral Cave**	**90.56**	**40**	*e*P	**P**	**05 53 53.1**	**+0.4**
CCM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KEST	**Kesra**	**96.03**	**324**	LR	LR	06 42 22.4	
	comp=Z,643nm,18.0s,baz=342,slow=38						
ESDC	**Sonseca Array**	**98.17**	**335**	LR	LR	06 43 02.5	
	comp=Z,687nm,19.3s,baz=40,slow=38						
TOA1	**Torodi Ar. Sit**	**118.40**	**316**	*e*PKPdf	**PKPdf**	**05 59 36.6**	**-2.0**
TORD	**Torodi Ar. Bea**	**118.40**	**316**	PKP	**PKPdf**	**05 59 36.6**	**-2.0**
	comp=Z,1.1nm,1.0s,baz=21,slow=4.4,SNR=3.2						
SNAA	**Sanae**	**140.60**	**196**	PKPdf	PKPdf	06 00 11.8	-7.1
VNA3	**Neumayer Olymp**	**142.37**	**194**	PKPdf	**PKPdf**	**06 00 16.6**	**-5.4**
VNA1	**Neumayer--Stat**	**142.55**	**195**	PKPdf	**PKPdf**	**06 00 16.6**	**-5.7**
LPAZ	**La Paz**	**146.01**	**62**	PKPbc	**PKPdf**	**06 00 30.9**	**+0.2**
	comp=Z,6.9nm,0.9s,baz=350,slow=0.8,SNR=22						
LPAZ	**La Paz**	**146.01**	**62**	*e*PKPab	**PKPdf**	**06 00 31.2**	**+0.5**
LPAZ	**La Paz**	**146.01**	**62**	*e*PKP2	**PKPdf**	**06 00 31.3**	**+0.5**
MNMC	**Minye Minye**	**146.78**	**67**	*e*PKPbc	**PKPbc**	**06 00 33.3**	**0.0**
PB11	**IPOC Station P**	**147.12**	**68**	*e*PKPdf	**PKPdf**	**06 00 31.5**	**-0.5**
PLCA	**Paso Flores**	**153.78**	**109**	PKPbc	**PKiKP**	**06 00 50.4**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=239,slow=5.9,SNR=3.7						

MAN 31 06:15:46.9,9°.19N×125°.51E,h3^{km},mb4.2,ML3.0,MS2.6, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.24**	**153**	*e*P	Pg	06 15 52.0	+0.5
BUTP				*e*S	Sg	06 16 03.4	+8.7
CGP	**Cagayan de Oro**	**1.09**	**228**	⇓*e*P	Pg	06 16 07.6	-0.1
CGP				*e*S	Sn	06 16 24.6	0.0
BUKP	**Musuan**	**1.37**	**199**	*e*P	Pn	06 16 12.4	-0.7
BUKP				*e*S	Sn	06 16 35.8	+4.0

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*IDC **31** 06:16:03.5±7.2, 18°.82S×177°.52W, h477^{km}±84^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.3/25, mbtmp4.3/8, Error ellipse: s-maj=34.2km s-min=30.7km az=37.0*

*ISCJB **31** 06:16:09.8±1.4, 19°.1S±0°.2×177°.6W±0°.3, h570^{km}, mb3.9/7, Error ellipse: s-maj=36.6km s-min=20.6km az=15.6*

ISC 31 06:16:11.1±1.6,19°.1S±0°.2×177°.6W±0°.3,h570^{km},n8, σ1^{s}.10/9,mb3.9/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.68**	**193**	P	**P**	**06 20 02.5**	**-0.6**
	1.3nm,0.3s,baz=292,slow=2.2,SNR=12						
STKA	**Stephens Creek**	**38.81**	**243**	P	**P**	**06 22 48.4**	**+0.5**
	1.2nm,0.4s,baz=63,slow=11,SNR=5.7						
WRA	**Warramunga Arr**	**45.24**	**261**	P	**P**	**06 23 37.2**	**-1.3**
	5.2nm,0.4s,baz=94,slow=7.1,SNR=56						
ASAR	**Alice Springs**	**45.28**	**255**	P	**P**	**06 23 38.4**	**-0.5**
	13nm,0.6s,baz=89,slow=8.8,SNR=171						
ASAR				PcP	**PcP**	**06 25 07.6**	**+1.1**
	0.5nm,0.6s,baz=99,slow=5.7,SNR=3.3						
MJAR	**Matsushiro Arr**	**69.32**	**323**	P	**P**	**06 26 21.5**	**-0.6**
	2.2nm,0.5s,baz=164,slow=6.5,SNR=7.3						
KSRS	**Korea Array**	**76.11**	**318**	P	**P**	**06 27 00.3**	**-0.7**
	1.1nm,0.8s,baz=119,slow=7.1,SNR=3.8						
ILAR	**Eielson Array**	**86.83**	**13**	P	**P**	**06 27 54.8**	**-0.3**
	0.2nm,0.4s,baz=217,slow=5.1,SNR=3.3						
CMAR	**Chiang Mai Arr**	**90.04**	**289**	P	**P**	**06 28 12.7**	**+1.6**
	0.6nm,0.3s,baz=103,slow=2.9,SNR=4.6						

MEX 31 07:22:17.9±0.5,17°.77N×92°.69W,h21^{km}±15^{km},MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		**1.07**	**203**	*i* P	Pn	07 22 34.2	-3.5
TGIG				*i* S	Sb	07 22 47.5	-3.7
CCIG	**Comitan**	**1.57**	**160**	*e*P	Pn	07 22 41.7	-3.0
CCIG				*e*S	Sn	07 23 00.3	-4.1
PCIG		**2.11**	**194**	*i* P	Pn	07 22 50.0	-2.0
PCIG				*i* S	Sn	07 23 14.0	-3.6

MEX 31 07:54:51.4±0.9,18°.46N×104°.12W,h5^{km}±11^{km},MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.76**	**103**	*e*P	Pg	07 55 05.2	-0.8
MMIG				*e*S	Sg	07 55 14.2	-1.5
EZ5V		**1.13**	**26**	*e*P	Pg	07 55 09.8	-3.4
EZ5V				*e*S	Sg	07 55 24.8	-3.0
CJM	**Chamela**	**1.36**	**320**	*e*P	Pn	07 55 13.3	-3.7
CJM				*e*S	Sb	07 55 30.7	-4.3

DJA 31 08:26:25.1±0.7,5°S±3°×10°2E±°,h17^{km}±8^{km},M3.6/4, MLv3.6/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.99**	**71**	P	Pb	08 26 43.4	-0.4
MNAI				S	Sg	08 26 57.2	-0.1
LHSI	**Lahat**	**1.73**	**60**	P	Pb	08 26 55.5	-0.9
LWLI	**Liwa**	**2.06**	**99**	P	Pn	08 26 59.0	0.0
MDSI	**Maura Dua**	**2.16**	**85**	P	Pn	08 26 59.9	-0.4
KASI	**Kota Agung**	**2.60**	**109**	P	Pn	08 27 06.3	-0.1
KLSI		**2.70**	**90**	P	Pn	08 27 07.8	0.0
CGJI	**Cibinong**	**4.12**	**118**	P	Pn	08 27 27.1	-0.3

NNC 31 08:26:46.9±2.9,37°.33N×78°.61E,h0^{km},mb4.1,mpv3.8, 6C-3D,Error ellipse: s-maj=25.4km s-min=20.4km az=111.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	**5.73**	**359**	Pg	Pb	08 28 31.8	+4.1
	12nm,0.5s						
SATY				Lg	Lg	08 29 51.3	
	17nm,0.6s						
UZB	**Uzynbulak**	**5.82**	**3**	Pg	Pb	08 28 31.6	+2.2
	5.1nm,0.5s						
UZB				Lg	Lg	08 29 50.8	
	9.5nm,0.5s						
PDGK	**Podgornoye**	**6.03**	**6**	⇓Pn	Pn	08 28 18.2	+0.8
	4.2nm,0.4s						
PDGK				⇓Pg	Pb	08 28 36.6	+3.7
	9.1nm,0.9s						
PDGK				⇑Sn	Sn	08 29 28.1	+0.9
	8.6nm,0.5s						
PDGK				⇑Lg	Lg	08 29 58.4	
	18nm,0.8s						
TKM2	**Tokmak 2**	**6.04**	**338**	⇓Pn	Pn	08 28 17.5	-0.2
	1.4nm,0.4s						
TKM2				⇑Pg	Pb	08 28 35.7	+2.5
	2.4nm,0.5s						
TKM2				⇑Lg	Lg	08 29 55.5	
	10nm,0.9s						
AAK	**Ala-Archa**	**6.17**	**330**	⇑Pg	Pb	08 28 38.1	+2.8
	8.6nm,0.8s						
AAK				⇑Lg	Lg	08 30 02.2	
	14nm,0.7s						
KUU	**Kurty**	**6.78**	**346**	Pg	Pg	08 28 54.5	-2.3
	2.7nm,0.3s						
KUU				Lg	Lg	08 30 30.3	
	8.5nm,0.5s						
MK31	**Makanchi Array**	**9.85**	**15**	Pn	Pn	08 29 09.9	+0.2
	0.7nm,0.3s,baz=200,slow=13,SNR=13						
MK31				Sn	Sn	08 31 00.9	0.0
	1.5nm,0.5s,baz=200,slow=26,SNR=5.8						

IDC 31 08:35:29.1±3.4,53°.97N×87°.51E,h0^{km},mb1 2.8/2, mb1mx2.8/54,mbtmp2.8/2,ML2.3/2,Error ellipse: s-maj=28.8km s-min=19.0km az=50.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.59**	**270**	*i*		08 47 07.0	
	baz=87,slow=344,SNR=5.5						
ZALV	**Zalesovo Beam**	**1.59**	**270**	Pg	Pn	08 35 56.0	-2.5
	0.6nm,0.3s,baz=79,slow=18,SNR=5.3						
ZALV				Lg	Lg	08 36 21.1	
	0.8nm,0.3s,baz=87,slow=31,SNR=5.2						
ZALV				Rg	Rg	08 36 31.4	
	1.3nm,0.3s,baz=75,slow=34,SNR=7.6						
KURBB	**Kurchatov Arra**	**6.45**	**242**	Pn	Pn	08 37 06.0	+0.8
	0.1nm,0.3s,baz=56,slow=14,SNR=4.5						
KURBB				Sn	Sn	08 38 21.2	+1.8
	0.0nm,0.3s,baz=64,slow=25,SNR=3.0						
KURBB				Lg	Lg	08 38 50.9	
	0.0nm,0.3s,baz=58,slow=34,SNR=3.8						
MKAR	**Makanchi Array**	**7.92**	**207**	Pn	Pn	08 37 27.3	+1.8
	0.1nm,0.3s,baz=25,slow=19,SNR=2.6						
MKAR				Lg	Lg	08 39 37.3	
	baz=26,slow=23,SNR=4.1						

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*NIED **31** 08:35:00, 41°.60N×142°.80E, h50^{km}, Mw4.1 Best double couple: $M_0$1.51000×10^{15} NP1:ϕ_s84.00000°, δ48.00000°, λ-154.00000°. NP2:ϕ_s336.00000°, δ71.00000°, λ-45.00000°.*

*BJI **31** 08:35:54.3±0.0, 41°.58N×143°.02E, h47^{km}, mb4.6/28, mB4.8/15, Ms4.4/5, Ms7 4.1/1*

*MOS **31** 08:35:57.7±0.9, 41°.66N×142°.70E, h56^{km}, mb4.6/11, Error ellipse: s-maj=8.7km s-min=6.0km az=78.1*

*ISCJB **31** 08:35:58.3±0.3, 41°.60N±0°.03×142°.78E±0°.03, h60^{km}±2^{km}, mb4.3/59, Error ellipse: s-maj=5.4km s-min=2.8km az=145.3*

*NEIC **31** 08:35:59.1±1.2, 41°.64N×142°.68E, h51^{km}±7^{km}, mb4.4/33, Error ellipse: s-maj=14.2km s-min=5.3km az=128.0*

NEIC Recorded [2 JMA] in Aomori, Honshu.

*JMA **31** 08:35:59.0±0.1, 41°.60N×142°.78E, h57^{km}±2^{km}, M4.1*

JMA Felt II J1.

*IDC **31** 08:36:01.8±2.5, 41°.63N×142°.61E, h74^{km}±23^{km}, mb3.9/20, mb1 4.0/24, mb1mx3.8/59, mbtmp4.1/24, MS3.2/4, Ms1 3.2/4, ms1mx2.7/34, Error ellipse: s-maj=15.9km s-min=14.4km az=164.0*

ISC 31 08:35:58.7±0.6,41°.58N±0°.04×142°.83E±0°.03,h52^{km}±5^{km}, n153,σ1^{s}.44/175,mb4.3/59,MS3.9/6,14C-6D,Hokkaido region

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

ERM	Erimo	0.50	29	ePn	Pn	08 36 10.9	+0.8
ERM				eSn	Sn	08 36 18.2	-0.2
ERM	Erimo	0.50	29	eP	Pn	08 36 10.9	+0.8
ERM				e		08 36 18.2	
JEM	Erimo	0.51	29	⇑P	Pn	08 36 10.8	+0.6
JEM				eS	Sn	08 36 18.6	+0.2
JNBK	Urakawa-nobuka	0.71	356	⇑P	Pn	08 36 12.8	+0.2
JNBK				eS	Sn	08 36 23.6	+0.9
JTHR	Tokachihiroo	0.80	26	⇑P	Pn	08 36 14.4	+0.6
JTHR				eS	Sn	08 36 25.9	+1.1
JSHD	Hidakashinhida	0.88	342	⇑P	Pn	08 36 15.4	+0.6
JSHD				eS	Sn	08 36 28.2	+1.6
JCH	Churui	1.11	21	⇑P	Pn	08 36 18.4	+0.4
JCH				eS	Sn	08 36 32.5	+0.2
JIAM	Iburiatsuma	1.24	328	P	Pn	08 36 20.7	+1.0
JIAM				eS	Sn	08 36 37.2	+1.8
JBT2	Biratori 2	1.25	344	⇑P	Pn	08 36 20.1	+0.3
JBT2				eS	Sn	08 36 35.9	+0.3
JOT	Ohata	1.35	262	P	Pn	08 36 21.3	+0.1
JKB	Kayabe	1.38	284	⇓P	Pn	08 36 21.0	-0.5
JKB				eS	Sn	08 36 37.8	-0.9
JOB	Onbets	1.52	29	⇑P	Pn	08 36 24.3	+0.8
JOB				eS	Sn	08 36 43.4	+1.2
JTM	Tenmabayashi	1.54	240	⇑P	Pn	08 36 24.9	+1.1
JTM				eS	Sn	08 36 43.6	+0.9
JANG	Nango	1.56	220	⇑P	Pn	08 36 24.8	+0.8
JFR	Furan	1.60	354	P	Pn	08 36 24.2	-0.4
JNB	Noboribetsu	1.60	304	⇓P	Pn	08 36 23.8	-0.8
JNB				eS	Sn	08 36 42.9	-1.3
JEW	Eniwo	1.62	322	P	Pn	08 36 24.5	-0.4
JEW				eS	Sn	08 36 43.9	-0.8
JSR	Shiriuchi	1.81	269	P	Pn	08 36 27.7	+0.3
JSR				eS	Sn	08 36 49.5	+0.4
JAR	Ashorobuto	1.86	22	⇑P	Pn	08 36 27.9	-0.2
JYM2	Yakumo 2	1.91	287	⇓P	Pn	08 36 28.6	-0.2
NMR	Nemuro--Hokkai	2.80	49	d iP	Pn	08 36 40.5	-0.4
NMR				i S	Sn	08 37 10.6	-2.8
GRPR	Tuman	3.25	41	⇑iP	Pn	08 36 46.7	-0.4
GRPR				eS	Sn	08 37 21.6	-2.9
GRPR				pmax	pmax		
	comp=Z,361nm,0.6s						
GRPR				pmax	pmax		
	comp=N,351nm,0.3s						
GRPR				pmax	pmax		
	comp=E,404nm,0.3s						
GRPR				smax	smax		
	comp=E,681nm,0.3s						
GRPR				smax	smax		
	comp=N,1µm,0.4s						
LAGR	Lagunnoye	3.30	40	⇑iP	Pn	08 36 48.7	+0.9
LAGR				eS	Sn	08 37 25.2	-0.6
LAGR				pmax	pmax		
	comp=N,1µm,0.4s						
LAGR				pmax	pmax		
	comp=E,1µm,0.4s						
LAGR				pmax	pmax		
	comp=Z,959nm,0.4s						
LAGR				smax	smax		
	comp=N,1µm,0.4s						
LAGR				smax	smax		
	comp=E,646nm,0.6s						
YUK	Yuzh-Kuril'sk	3.32	41	c iP	Pn	08 36 48.4	+0.3
YUK				eS	Sn	08 37 24.7	-1.6
YUK				pmax	pmax		
	comp=Z,614nm,0.5s						
YUK				pmax	pmax		
	comp=N,567nm,0.3s						
YUK				pmax	pmax		
	comp=E,610nm,0.3s						
YUK				smax	smax		
	comp=N,1µm,0.5s						
YUK				smax	smax		
	comp=E,492nm,0.3s						
KUR	Kuril'sk	5.18	43	d iP	Pn	08 37 15.5	+1.9
KUR				i S	Sn	08 38 12.7	+0.7
KUR				pmax	pmax		
	comp=Z,400nm,3.4s						
KUR				pmax	pmax		
	comp=Z,119nm,0.7s						
KUR				smax	smax		
	comp=E,111nm,0.4s						
KUR				smax	smax		
	comp=N,55nm,0.5s						
YSS	Yuzh-Sakhalins	5.38	359	eP	Pn	08 37 15.2	-1.1
YSS				eS	Sn	08 38 12.9	-3.9
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,2µm,11.0s						
TEY	Ternei	5.71	309	⇑eP	Pn	08 37 23.6	+2.8
TEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MJB9	Matsu-Tunnel	6.18	217	ePn	Pn	08 37 29.1	+1.8
MAJO	Matsushiro	6.18	217	ePn	Pn	08 37 27.8	+0.4
MAJO	Matsushiro	6.18	217	i P	Pn	08 37 28.2	+0.9
MAT	Matsushiro	6.18	217	P	Pn	08 37 29.1	+1.8
MAT				eS	Sn	08 38 37.5	+0.9
MJAR	Matsushiro Arr	6.18	217	P	Pn	08 37 29.6	+2.3
	comp=Z,1.2nm,0.3s,baz=30,slow=13,SNR=42						
USRK	Ussuriysk Ar.	8.38	292	P	Pn	08 37 58.8	+1.4
	comp=Z,0.2nm,0.3s,baz=95,slow=13,SNR=3.5						
JHJ	Hachijo jima 2	8.78	197	P	Pn	08 38 01.8	-1.1
	comp=Z,19nm,0.3s,baz=41,slow=19,SNR=20						
JHJ				S	Sn	08 39 33.2	-7.3
	comp=Z,28nm,0.3s,baz=86,slow=23,SNR=5.9						
JHJ2	Mitsune	8.78	197	ePn	Pn	08 38 01.6	-1.4
JHJ2				eSn	Sn	08 39 35.1	-5.4
TYV	Tymovskoe	9.29	359	eP	Pn	08 38 10.5	+0.7
TYV				e		08 39 55.3	
TYV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KLR	Kul'dur	10.91	318	P	Pn	08 38 32.1	+0.1
	comp=Z,0.1nm,0.3s,baz=123,slow=14,SNR=4.7						
KSRS	Korea Array	12.22	255	P	Pn	08 38 51.0	+1.0
	comp=Z,0.2nm,0.3s,baz=83,slow=10,SNR=3.2						
KSRS				S	Sn	08 41 08.9	+4.3
	comp=Z,0.8nm,0.3s,baz=68,slow=24,SNR=7.4						
KSRS				LR	LR	08 42 53.4	
	comp=Z,47nm,21.8s,baz=79,slow=34						
KSRS	Korea Array	12.22	255	P	Pn	08 38 51.0	+1.0
KS15	Wonju Array Si	12.25	255	ePn	Pn	08 38 51.0	+0.6
KS15				eSn	Sn	08 41 08.9	+3.5
PEA0B	Petropavlovsk-	15.28	36	ePn	Pn	08 39 28.5	-2.4
PETK	Petropavlovsk-	15.28	36	P	Pn	08 39 27.8	-3.1
	comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=4.5						
PEA1	Petropavlovsk-	15.29	36	eP	Pn	08 39 27.8	-3.2
HIA	Hailar	17.89	303	i P	Pn	08 40 02.3	-1.3
BJT	Baijiatuau	20.22	274	eP	P	08 40 27.2	-2.0
	comp=Z,9.2nm,0.8s						
BJT	Baijiatuau	20.22	274	eP	P	08 40 27.2	-2.0
BJT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	Nanjing	21.36	251	eP	P	08 40 42.0	+0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SEY	Seymchan	22.13	12	P	P	08 40 47.0	-2.5
	comp=Z,4.2nm,0.5s,baz=190,slow=8.3,SNR=17						
HHC	Hu-ho-hao-te	23.47	279	P	P	08 41 03.8	+0.2
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
WHN	Wuhan	25.41	253	⇓P	P	08 41 21.8	+0.6
SONA0	Songino Array	26.46	296	eP	P	08 41 30.7	-0.1
SONM	Songino Array	26.46	296	P	P	08 41 30.7	-0.1
	comp=Z,1.7nm,0.4s,baz=74,slow=8.8,SNR=11						
SONM				LR	LR	08 52 39.2	
	comp=Z,49nm,19.3s,baz=104,slow=38						
TLY	Talaya	28.43	304	LR	LR	08 54 15.5	
	comp=Z,21nm,19.2s,baz=0.0,slow=39						
H11N2	WAKE ISLAND Hy	29.87	130	T	T	09 13 24.3	
	baz=326						
H11N1	WAKE ISLAND Hy	29.88	130	T	T	09 13 27.1	
	baz=326						
H11N3	WAKE ISLAND Hy	29.89	130	T	T	09 13 29.0	
	baz=326						
H11S1	WAKE ISLAND Hy	30.72	131	T	T	09 14 30.6	
	baz=324,slow=76						
H11S3	WAKE ISLAND Hy	30.73	131	T	T	09 14 32.9	
	baz=324,slow=76						
H11S2	WAKE ISLAND Hy	30.74	131	T	T	09 14 33.0	
	baz=324,slow=76						
GTA	Gaotai	32.53	281	eP	P	08 42 26.5	+1.8
GTA				pP	pP	08 42 37.5	-0.3
GTA				sP	sP	08 42 43.3	-0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CD2	Chengdu	33.01	264	eP	P	08 42 27.5	-1.3
KMI	Kunming	36.92	256	P	P	08 43 02.0	-0.8
KMI				pmax	pmax		
	comp=Z,21nm,0.6s						
DGZ	Jazzator, Alta	38.79	301	i P	P	08 43 16.4	-1.8
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAA0	Zalesovo Array	39.80	308	eP	P	08 43 25.7	-0.7
ZAA0				epP	P	08 43 26.1	-0.3
ZAA1	Zalesovo Array	39.80	308	eP	P	08 43 26.1	-0.3
ZALV	Zalesovo Beam	39.80	308	P	P	08 43 26.1	-0.3
	comp=Z,4.2nm,0.4s,baz=94,slow=7.7,SNR=19						
ZALV				PcP	PcP	08 45 32.1	+0.5
	comp=Z,0.5nm,0.4s,baz=93,slow=2.9,SNR=3.2						
WMQ	Urumqi	39.95	292	eP	P	08 43 29.5	+1.7
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,63nm,5.5s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
WMQ				LR	LR		
	comp=Z,780nm,29.0s						
SVW2	Sparrevohn	41.30	40	eP	P	08 43 40.2	+1.5
	comp=Z,3.9nm,1.0s						
OHAK	Old Harbor	42.74	46	eP	P	08 43 51.6	+1.2
	comp=Z,5.2nm,1.0s						
MK31	Makanchi Array	42.78	298	eP	P	08 43 50.4	-0.6
MK31	Makanchi Array	42.78	298	eP	P	08 43 50.4	-0.6
MKAR	Makanchi Array	42.78	298	P	P	08 43 50.4	-0.6
	comp=Z,6.8nm,0.7s,baz=84,slow=9.7,SNR=38						
CAST	Castle Rocks	42.90	37	eP	P	08 43 53.6	+1.9
	comp=Z,5.6nm,0.7s						
KDAK	Kodiak Island	43.05	45	P	P	08 43 53.9	+0.9
	comp=Z,5.7nm,0.9s						
KDAK	Kodiak Island	43.05	45	eP	P	08 43 53.6	+0.6
KDAK				epP	P	08 43 53.8	+0.9
SKT	Skwentna	43.21	39	eP	P	08 43 55.3	+1.0
	comp=Z,1.7nm,0.9s						
BPAW	Bear Paw Mtn.	43.37	36	eP	P	08 43 56.9	+1.4
	comp=Z,3.7nm,0.8s						
KTH	Kantishna Hill	43.41	37	eP	P	08 43 56.5	+0.6
	comp=Z,10nm,0.9s						
MLY	Manley	43.45	34	eP	P	08 43 58.1	+1.9
	comp=Z,3.6nm,0.9s						
CNPM	China Poot	43.56	42	eP	P	08 43 57.6	+0.6
	comp=Z,9.5nm,1.2s						
TOLK	Toolik Lake Re	43.95	29	eP	P	08 44 00.6	+0.5
	comp=Z,2.3nm,0.8s						
KURK	Kurchatov	44.12	305	eP	P	08 44 00.7	-0.9
	comp=Z,13nm,0.8s						
KURK	Kurchatov	44.12	305	i P	P	08 44 00.3	-1.3
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURBB	Kurchatov Arra	44.20	305	P	P	08 44 01.6	-0.6
	comp=Z,8.7nm,0.4s,baz=77,slow=8.8,SNR=20						
RND	Reindeer	44.35	37	eP	P	08 44 03.7	+0.3
	comp=Z,4.9nm,0.7s						
RND	Reindeer	44.35	37	eP	P	08 44 03.7	+0.3
RND				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PMR	Palmer	44.38	39	eP	P	08 44 04.9	+1.4
	comp=Z,6.6nm,1.0s						
PMR	Palmer	44.38	39	eP	P	08 44 04.9	+1.4
PMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SEW	Seward	44.38	42	eP	P	08 44 04.5	+0.9
	comp=Z,3.1nm,0.8s						
GHO	Glory Hole Cre	44.46	39	eP	P	08 44 05.5	+1.2
	comp=Z,8.7nm,0.8s						
WRH	Wood River Hil	44.61	35	eP	P	08 44 06.9	+1.5
	comp=Z,2.3nm,0.8s						
COLA	College	44.69	35	i P	P	08 44 06.7	+0.7
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CCB	Clear Creek Bu	44.72	35	eP	P	08 44 06.9	+0.6
	comp=Z,1.8nm,0.8s						
SML	Sawmill	44.73	39	eP	P	08 44 07.1	+0.7
	comp=Z,9.5nm,0.8s						
SML	Sawmill	44.73	39	eP	P	08 44 07.1	+0.7
SML				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DHY	Denali Highway	45.04	37	eP	P	08 44 08.9	-0.2
	comp=Z,5.2nm,0.6s						
ILAR	Eielson Array	45.11	35	P	P	08 44 10.5	+1.1
	comp=Z,5.9nm,0.9s,baz=256,slow=5.3,SNR=28						
ILB	Eielson Array	45.11	35	eP	P	08 44 09.9	+0.6
SCM	Sheep Creek Mo	45.20	39	eP	P	08 44 11.8	+1.6
	comp=Z,6.6nm,0.9s						
SCM	Sheep Creek Mo	45.20	39	eP	P	08 44 11.9	+1.6
SCM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GLI	Glacier Island	45.44	40	eP	P	08 44 13.2	+1.2
	comp=Z,5.5nm,0.7s						
RIDG	Independent Ri	46.10	36	eP	P	08 44 17.9	+0.7
	comp=Z,3.7nm,0.9s						
SCRK	Sand Creek	46.45	36	eP	P	08 44 20.6	+0.6
	comp=Z,8.2nm,0.6s						
DOT	Dot Lake	46.46	36	eP	P	08 44 20.8	+0.8
	comp=Z,3.9nm,0.6s						
MENT	Mentasta	46.72	37	eP	P	08 44 23.9	+1.8
	comp=Z,3.0nm,0.8s						
EGAK	Eagle	47.54	34	eP	P	08 44 29.3	+0.8
	comp=Z,2.5nm,0.9s						
JIRN	Jiri	47.83	272	eP	P	08 44 31.8	+0.2
GUN	Gumba	47.93	272	eP	P	08 44 31.9	-0.5
	comp=Z,24nm,0.5s						
BVAR	Borovoye Array	48.42	310	P	P	08 44 35.4	0.0
	comp=Z,3.2nm,0.4s,baz=75,slow=8.8,SNR=20						
KKN	Kakani	48.45	273	eP	P	08 44 35.6	-0.6
PKI	Pulchoki	48.47	272	eP	P	08 44 36.4	-0.1
PKIN	Phulchoki	48.47	272	eP	P	08 44 36.4	0.0
BRVK	Borovoye	48.47	310	i P	P	08 44 35.4	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DMN	Daman	48.67	272	eP	P	08 44 37.6	-0.4
GKN	Gorkha	48.81	273	eP	P	08 44 38.9	0.0
EPYK	Eagle Plains	49.07	32	eP	P	08 44 41.7	+1.5
	comp=Z,8.1nm,0.8s						
DANN	Dangsing	49.29	274	eP	P	08 44 43.0	+0.3
	comp=Z,53nm,0.6s						
KSH	Kashi	49.67	291	eP	P	08 44 49.0	+3.7
KSH				LR	LR		
	comp=Z,160nm,15.4s						
KSH				LR	LR		
	comp=Z,89nm,9.5s						
KOLN	Koldanda	49.72	274	eP	P	08 44 45.2	-0.7
	comp=Z,6.6nm,0.3s						
INK	Inuvik	49.87	29	P	P	08 44 47.0	+0.8
	comp=Z,2.1nm,0.4s,baz=318,slow=6.7,SNR=12						
INK	Inuvik	49.87	29	eP	P	08 44 47.0	+0.8
	comp=Z,5.5nm,1.1s						
INK	Inuvik	49.87	29	P	P	08 44 47.0	+0.8
HYT	Haines Junctio	50.04	39	eP	P	08 44 48.5	+0.7
	comp=Z,14nm,0.8s						
KK31	Karatay Array	51.90	298	eP	P	08 45 01.1	-0.7
KK31	Karatay Array	51.90	298	eP	P	08 45 01.2	-0.7
ARU	Arti	53.75	317	i P	P	08 45 13.8	-1.4
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ABKAR	Akbulak array	55.92	308	eP	P	08 45 30.4	-0.6
	comp=Z,4.0nm,1.1s						
AKTO	Aktyubinsk	56.52	310	P	P	08 45 35.5	+0.1
	comp=Z,1.2nm,0.5s,baz=72,slow=7.3,SNR=4.9						
RES	Resolute Bay	57.94	15	P	P	08 45 45.2	+0.3
	comp=Z,3.2nm,0.5s,baz=288,slow=6.4,SNR=6.1						
YKA	Yellowknife Ar	59.35	32	P	P	08 45 56.7	+1.8
	comp=Z,0.7nm,0.5s,baz=306,slow=6.8,SNR=3.6						
WR1	Warramunga Arr	61.71	189	eP	P	08 46 11.9	+0.5
WRA	Warramunga Arr	61.71	189	P	P	08 46 11.9	+0.4
	comp=Z,1.3nm,0.7s,baz=4.7,slow=7.2,SNR=9.1						
WRA				pP	sP	08 46 30.8	-0.4
	comp=Z,0.8nm,0.3s,baz=7.5,slow=7.0,SNR=3.0						
FIA0	FINESS Array S	65.32	332	eP	P	08 46 34.1	-0.7
FIA0	FINESS Array S	65.32	332	eP	P	08 46 34.2	-0.7
FINES	FINESS Array B	65.32	332	P	P	08 46 34.1	-0.7
	comp=Z,1.5nm,0.4s,baz=55,slow=7.1,SNR=18						
ASAR	Alice Springs	65.44	189	P	P	08 46 37.0	+1.0
	comp=Z,0.5nm,0.8s,baz=3.7,slow=7.2,SNR=4.2						
ASAR				pP	sP	08 46 56.1	+0.3
	comp=Z,0.7nm,0.3s,baz=2.4,slow=6.7,SNR=6.5						
ASAR	Alice Springs	65.44	189	P	P	08 46 37.0	+1.0
KIV	Kislovodsk	68.78	310	eP	P	08 46 57.3	0.0
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,49nm,17.0s						
KBZ	Khabaz	68.80	310	P	P	08 46 56.5	-0.8
	comp=Z,1.7nm,0.7s,baz=51,slow=12,SNR=3.8						
NB200	NORSAR Array S	70.42	337	eP	P	08 47 06.5	-0.5
NOA	NORSAR Array B	70.42	337	P	P	08 47 06.5	-0.5
	comp=Z,0.6nm,0.6s,baz=37,slow=6.2,SNR=3.5						
AKASG	Malin Array Be	71.39	322	P	P	08 47 12.2	-0.7
	comp=Z,1.9nm,0.4s,baz=43,slow=6.6,SNR=11						
NV01	Mina Array Sit	71.44	55	eP	P	08 47 16.2	+2.5
NVAR	Mina Array Bea	71.44	55	P	P	08 47 16.2	+2.5
	comp=Z,0.5nm,0.7s,baz=293,slow=5.3,SNR=5.4						
PD31	Pinedale Array	73.74	47	eP	P	08 47 28.6	+1.2
PDAR	Pinedale Array	73.74	47	P	P	08 47 28.6	+1.2
	comp=Z,0.2nm,0.5s,baz=319,slow=4.0,SNR=3.7						
RAR	Rarotonga	81.99	127	LR	LR	09 15 26.3	
	comp=Z,58nm,21.6s,baz=291,slow=29						
LTX	Lajitas	86.51	53	eP	P	08 48 37.0	+0.8
LTX	Lajitas	86.51	53	eP	P	08 48 37.0	+0.8
TXAR	Lajitas Array	86.51	53	P	P	08 48 37.0	+0.8
	comp=Z,0.2nm,0.6s,baz=308,slow=4.4,SNR=3.2						
TXAR	Lajitas Array	86.51	53	P	P	08 48 37.0	+0.8
SNAA	Sanae	145.40	198	PKPdf	PKPdf	08 55 29.4	-0.1
VNA3	Neumayer Olymp	147.23	196	PKPdf	PKPdf	08 55 33.6	+1.0

IDC ***31*** *08:36:57.6±1.0, 57°.72N×154°.38W, h0km, mb3.8/15, mb1 4.0/17, mb1mx3.8/61, mbtmp3.8/17, ML3.7/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/31, Error ellipse: s-maj=29.1km s-min=9.5km az=8.0*

ISCJB ***31*** *08:37:02.8±0.3, 57°.66N±0°.03×153°.80W±0°.04, h41km, mb3.8/14, Error ellipse: s-maj=3.9km s-min=3.0km az=147.5*

NEIC ***31*** *08:37:05.4±0.0, 57°.65N×153°.94W, h37km, ML3.6(AEIC), After AEIC.*

ISC 31 08:37:03.6±0.5**, 57°.72N**±0°.05×**153°.87W**±0°.05**, h41**km**,** **n117, σ1ˢ.82**/123**, mb3.8**/14**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.59	147	ePn	Pn	08 37 16.2	+0.6
OHAK				eSn	Sn	08 37 26.2	+2.1
KDAK	Kodiak Island	0.69	84	Pg	Pn	08 37 18.8	+1.9
KDAK				Lg	Lg	08 37 30.2	
KDAK				LR	LR	08 37 47.1	
	comp=Z,284nm,20.4s,slow=51						
KAHG	Katmai Hook Gl	0.85	336	ePn	Pn	08 37 21.2	+2.0
ACHA	Angle Creek He	0.92	303	ePn	Pn	08 37 21.2	+1.1
ACHA				eSn	Sn	08 37 33.1	+1.0
KABU	Katmai Buttres	0.93	307	ePn	Pn	08 37 21.9	+1.6
KABU				eSn	Sn	08 37 35.2	+2.7
KAHC	Katmai Hardscr	1.11	328	ePn	Pn	08 37 24.0	+1.3
FONW	Fourpeaked Sta	1.12	359	ePn	Pn	08 37 24.9	+2.1
SII	Sitkinak Islan	1.18	188	ePn	Pn	08 37 23.5	-0.1
SII				eSn	Sn	08 37 38.8	+0.4
KELA	Mount Kelaz	1.23	307	ePn	Pn	08 37 25.3	+1.0
AUI	Augustine Isla	1.64	8	ePn	Pn	08 37 32.9	+3.1
AUE	Augustine Isla	1.66	9	ePn	Pn	08 37 33.4	+3.2
AUH	Augustine H	1.66	8	ePn	Pn	08 37 33.5	+3.2
AUW	Augustine West	1.67	7	ePn	Pn	08 37 33.5	+3.2
AUL	Augustine Lava	1.68	8	ePn	Pn	08 37 33.3	+2.8
CHIR	Chirikof Islan	2.13	208	ePn	Pn	08 37 36.1	-0.6
CHIR				ePn	Pn	08 37 36.2	-0.5
HOM	Homer	2.27	30	ePn	Pn	08 37 42.0	+3.6
CNPM	China Poot	2.27	36	ePn	Pn	08 37 41.3	+2.6
ILS	Iliamna Low So	2.28	10	ePn	Pn	08 37 41.3	+2.5
IVE	Iliamna Volcan	2.34	11	ePn	Pn	08 37 43.0	+3.3
BRLK	Bradley Lake	2.57	36	ePn	Pn	08 37 44.7	+1.9
RSO	Redoubt South	2.81	11	ePn	Pn	08 37 49.5	+3.3
RDWB	Redoubt West	2.83	10	ePn	Pn	08 37 48.8	+2.4
CHGN	Chignik	2.86	242	ePn	Pn	08 37 47.2	+0.5
RDJH	Redoubt Jeurge	2.93	10	ePn	Pn	08 37 50.6	+2.9
VNHG	Veniaminof 1	3.26	245	ePn	Pn	08 37 53.7	+1.4
SEW	Seward	3.31	42	ePn	Pn	08 37 54.1	+1.3
SVW2	Sparrevohn	3.50	346	ePn	Pn	08 37 57.3	+1.9
SPU	Mount Spurr	3.59	14	ePn	Pn	08 37 58.5	+1.7
SPWE	Spurr West	3.63	10	ePn	Pn	08 37 59.9	+2.7
RC01	Rabbit Creek A	3.98	30	ePn	Pn	08 38 04.0	+1.9
SUA	Susitna One	4.08	22	ePn	Pn	08 38 05.8	+2.4
SDPT	Sand Point	4.36	240	ePn	Pn	08 38 08.2	+0.9
SKT	Skwentna	4.43	14	ePn	Pn	08 38 10.1	+1.9
PMR	Palmer	4.57	30	ePn	Pn	08 38 11.5	+1.4
KNK	Knik Glacier	4.61	34	ePn	Pn	08 38 12.9	+2.1
GLI	Glacier Island	4.70	45	ePn	Pn	08 38 12.8	+0.9
GHO	Glory Hole Cre	4.77	30	ePn	Pn	08 38 15.2	+2.2
FID	Port Fidalgo	4.86	48	ePn	Pn	08 38 14.4	+0.3
FID				ePn	Pn	08 38 14.7	+0.6
SML	Sawmill	4.96	32	ePn	Pn	08 38 17.2	+1.7
JPK	Jack Peak	5.00	45	ePn	Pn	08 38 17.0	+0.9
PPLA	Purkeypile	5.26	8	ePn	Pn	08 38 22.2	+2.5
SGAM	Sherman Glacie	5.26	54	ePn	Pn	08 38 21.0	+1.3
SCM	Sheep Creek Mo	5.29	36	ePn	Pn	08 38 21.7	+1.7
TT01	Tatalina	5.31	349	ePn	Pn	08 38 22.0	+1.8
TT01				ePn	Pn	08 38 22.0	+1.8
TTA	Tatalina	5.33	349	ePn	Pn	08 38 23.0	+2.4
KAIM	Kayak Island	5.39	62	ePn	Pn	08 38 22.8	+1.5
RAGM	Ragged Mountai	5.45	57	ePn	Pn	08 38 23.6	+1.4
HMT	Hamilton	5.61	58	ePn	Pn	08 38 25.9	+1.5
NICHA	Nichawak Mount	5.71	60	ePn	Pn	08 38 27.0	+1.2
CAST	Castle Rocks	5.78	8	ePn	Pn	08 38 29.4	+2.7
PS12	TAPS Pump St12	5.81	46	ePn	Pn	08 38 28.6	+1.4
KTH	Kantishna Hill	6.03	13	ePn	Pn	08 38 31.8	+1.6
FALS	False Pass	6.04	246	ePn	Pn	08 38 32.7	+2.4
RND	Reindeer	6.22	21	ePn	Pn	08 38 34.4	+1.7
SNH	Sunshine Point	6.22	62	ePn	Pn	08 38 33.9	+1.1
DHY	Denali Highway	6.26	28	ePn	Pn	08 38 36.0	+2.6
WAX	Waxell Ridge	6.30	60	ePn	Pn	08 38 35.4	+1.4
GLB	Gilahina Butte	6.33	50	ePn	Pn	08 38 35.9	+1.7
TGL	Tana Glacier	6.43	57	ePn	Pn	08 38 37.4	+1.6
MCK	McKinley	6.50	20	ePn	Pn	08 38 38.6	+2.1
BPAW	Bear Paw Mtn.	6.55	11	ePn	Pn	08 38 39.8	+2.4
PAX	Paxson	6.71	35	ePn	Pn	08 38 40.5	+0.9
BALM	Baldy	6.76	56	ePn	Pn	08 38 41.8	+1.6
BWN	Browne	6.82	16	ePn	Pn	08 38 42.7	+1.7
CHX	Chaix Hills	7.01	65	ePn	Pn	08 38 45.3	+1.5
MENT	Mentasta	7.26	40	ePn	Pn	08 38 49.3	+2.3
WRH	Wood River Hil	7.33	20	ePn	Pn	08 38 48.7	+0.8
PCA	Pinnacle	7.44	66	ePn	Pn	08 38 50.7	+1.1
RIDG	Independent Ri	7.48	32	ePn	Pn	08 38 51.9	+1.8
MLY	Manley	7.49	10	ePn	Pn	08 38 52.0	+1.9
CCB	Clear Creek Bu	7.54	20	ePn	Pn	08 38 51.4	+0.6
DOT	Dot Lake	7.64	35	ePn	Pn	08 38 54.9	+2.6
PNL	Peninsula	7.79	69	ePn	Pn	08 38 54.8	+0.5
ILAR	Eielson Array	7.83	23	Pn	Pn	08 38 55.4	+0.6
	0.5nm,0.3s,baz=219,slow=13,SNR=22						
ILAR				Sn	Sn	08 40 18.3	-3.7
	0.6nm,0.3s,baz=211,slow=20,SNR=6.4						
ILB	Eielson Array	7.83	23	ePn	Pn	08 38 55.8	+1.0
SCRK	Sand Creek	7.91	33	ePn	Pn	08 38 58.2	+2.2
BCA3	Beaver Creek A	8.03	43	ePn	Pn	08 38 59.1	+1.6
UNV	Unalaska Valle	8.11	247	ePn	Pn	08 38 58.3	-0.3
MSW	Makushin Switc	8.21	248	ePn	Pn	08 39 00.0	0.0
IM05	Indian Mountai	8.28	0	ePn	Pn	08 39 02.6	+1.6
YUK6	Outpost Mounta	8.56	61	ePn	Pn	08 39 06.7	+1.7
ANM	Nome	8.82	326	ePn	Pn	08 39 11.0	+2.7
YUK5	Granite Creek	8.84	61	ePn	Pn	08 39 10.6	+1.7
HYT	Haines Junctio	8.94	63	ePn	Pn	08 39 12.2	+2.2
OKTU	Okmok Mt. Tuli	9.12	248	ePn	Pn	08 39 12.7	0.0
EGAK	Eagle	9.34	36	ePn	Pn	08 39 17.4	+1.9
DAWY	Dawson	9.48	42	ePn	Pn	08 39 18.8	+1.3
WHY	Whitehorse	10.17	65	ePn	Pn	08 39 26.8	-0.1
DLBC	Dease Lake	12.62	77	Pn	Pn	08 40 02.3	+1.9
	0.5nm,0.3s,baz=270,slow=9.1,SNR=8.8						
DLBC				LR	LR	08 45 26.2	
	comp=Z,87nm,18.7s,baz=136,slow=40						
INK	Inuvik	13.97	32	Pn	Pn	08 40 18.9	+0.2
	0.1nm,0.3s,baz=238,slow=7.7,SNR=2.8						
ADK	Adak	14.36	256	ePn	Pn	08 40 25.8	+1.9
YKA	Yellowknife Ar	19.91	60	P	Pn	08 41 32.5	-0.7
	1.3nm,0.6s,baz=270,slow=10,SNR=5.6						
YKB5	Yellowknife Ar	19.91	60	eP	Pn	08 41 32.5	-0.7
NEW	Newport	23.78	97	P	P	08 42 13.9	+1.7
	1.7nm,0.7s,baz=295,slow=5.6,SNR=3.8						
PEA1	Petropavlovsk-	27.39	281	eP	P	08 42 42.3	-2.4
PETK	Petropavlovsk-	27.39	281	P	P	08 42 42.3	-2.4
	0.7nm,0.4s,baz=68,slow=13,SNR=4.2						
NV01	Mina Array Sit	30.10	114	eP	P	08 43 10.7	+1.4
NVAR	Mina Array Bea	30.10	114	P	P	08 43 10.7	+1.4
	0.2nm,0.5s,baz=311,slow=8.2,SNR=3.3						
PD31	Pinedale Array	31.39	99	eP	P	08 43 21.9	+1.3
PDAR	Pinedale Array	31.39	99	P	P	08 43 21.9	+1.3

	0.3nm,0.5s,baz=306,slow=5.6,SNR=5.7						
TIXI	Tiksi	33.08	326	P	P	08 43 34.7	-0.2
	2.6nm,0.5s,baz=58,slow=2.5,SNR=5.0						
KLR	Kul'dur	42.95	292	P	P	08 44 56.0	-2.1
	1.0nm,0.5s,baz=83,slow=8.1,SNR=3.0						
LTX	Lajitas	44.67	107	*e*P	P	08 45 13.8	+1.5
TXAR	Lajitas Array	44.67	107	P	P	08 45 13.8	+1.5
	0.2nm,0.7s,baz=309,slow=7.8,SNR=2.6						
ARA0	ARCESS Array S	53.04	0	*e*P	P	08 46 14.7	-1.1
ARCES	ARCESS Array B	53.04	0	P	P	08 46 14.7	-1.1
	0.7nm,0.6s,baz=14,slow=9.3,SNR=3.6						
SONA0	Songino Array	55.77	307	*e*P	P	08 46 34.9	-1.2
SONM	Songino Array	55.77	307	P	P	08 46 34.9	-1.2
	1.5nm,0.6s,baz=51,slow=6.5,SNR=4.7						
FIA0	FINESS Array S	61.17	0	*e*P	P	08 47 13.1	-0.2
FINES	FINESS Array B	61.17	0	P	P	08 47 13.1	-0.2
	0.9nm,0.6s,baz=19,slow=8.8,SNR=2.9						
MK32	Makanchi Array	65.93	321	*e*P	P	08 47 43.8	-1.2
MKAR	Makanchi Array	65.93	321	P	P	08 47 43.8	-1.2
	0.6nm,0.5s,baz=13,slow=6.2,SNR=4.9						
AKASG	Malin Array Be	71.91	358	P	P	08 48 21.1	-0.9
	1.6nm,0.5s,baz=4.9,slow=5.8,SNR=6.2						
BR101	Keskin Array S	82.71	354	*e*P	P	08 49 23.5	+0.7
BRTR	Keskin Array B	82.71	354	P	P	08 49 23.5	+0.7
	0.5nm,0.6s,baz=10,slow=7.8,SNR=3.5						
CM31	Chiang Mai Arr	83.39	294	*e*P	P	08 49 25.5	-0.9
CMAR	Chiang Mai Arr	83.39	294	P	P	08 49 25.5	-0.9
	0.7nm,0.4s,baz=44,slow=4.0,SNR=2.6						

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*NIED **31** 08:39:00, 39.°00N×142.°70E, h8^{km}, Mw4.0 Best double couple: $M_0$1.10000×10^{15} NP1:ϕ_s288.00000°, δ43.00000°, λ-134.00000°. NP2:ϕ_s161.00000°, δ60.00000°, λ-57.00000°.*

*ISCJB **31** 08:39:52.6±1.1, 38.°99N±0.°04×142.°71E±0.°06, h15^{km}±7^{km}, mb3.9/17, MS2.8/1, Error ellipse: s-maj=7.6km s-min=5.7km az=21.6*

*JMA **31** 08:39:53.3±0.1, 39.°02N×142.°67E, h21^{km}±1^{km}, M4.1*

JMA Felt I J1.

*IDC **31** 08:39:58.9±2.2, 38.°93N×142.°59E, h54^{km}±21^{km}, mb3.7/17, mb1 3.8/24, mb1mx3.7/58, mbtmp3.9/24, ML3.0/6, MS2.9/4, Ms1 2.9/4, ms1mx2.6/32, Error ellipse: s-maj=17.1km s-min=13.7km az=105.0*

ISC 31 08:39:52.4±1.9, **39.°00N**±0.°04×**142.°69E**±0.°06, **h4**^{km}±11^{km}, **n43**, σ**1^{s}67**/48, **mb4.1**/17, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.80	276	P	Pb	08 40 08.1	-0.7
OFUJ				*e*S	Sg	08 40 18.6	+0.6
MIYJ	Miyakonagasawa	0.88	311	P	Pg	08 40 09.2	-0.2
MIYJ				*e*S	Sg	08 40 20.8	0.0
JKMT	Kesennumamotoy	0.96	259	P	Pg	08 40 10.8	-0.1
JKMT				S	Sg	08 40 23.3	-0.1
JTH	Tanohata	1.13	326	P	Pb	08 40 13.5	-1.1
JMK	Ichinoseki	1.14	268	P	Pb	08 40 13.9	-0.9
JMK				S	Sb	08 40 28.6	-1.4
JIO	Ouri	1.18	243	P	Pb	08 40 14.0	-1.4
JIO				S	Sb	08 40 29.3	-1.7
JOM	Ohasama	1.18	294	P	Pb	08 40 14.3	-1.1
JOM				*e*S	Sb	08 40 29.1	-2.0
JKZ	Kuzumaki	1.44	314	P	Pn	08 40 18.4	-0.9
JKZ				*e*S	Sn	08 40 37.2	-1.5
JANG	Nango	1.64	327	P	Pn	08 40 21.3	-0.8
JANG				*e*S	Sn	08 40 42.2	-1.5
JRG	Rokugo	1.64	285	P	Pn	08 40 21.8	-0.3
JRG				*e*S	Sn	08 40 42.9	-0.8
JOU	Okura	1.71	249	P	Pn	08 40 22.5	-0.5
JOU				S	Sn	08 40 44.5	-0.8
MAT	Matsushiro	4.31	237	P	Pn	08 41 00.6	+1.7
MAT				*e*S	Sn	08 41 54.2	+4.5
MJAR	Matsushiro Arr	4.31	237	P	Pn	08 41 00.3	+1.4
	2.0nm,0.3s,baz=35,slow=14,SNR=41						
MJAR				S	Sn	08 41 53.1	+3.5
	baz=32,slow=23,SNR=2.3						
JHJ	Hachijo jima 2	6.32	203	P	Pn	08 41 26.7	+0.2
	17nm,0.3s,baz=83,slow=22,SNR=7.4						
JHJ				S	Sn	08 42 33.8	-5.3
	21nm,0.3s,baz=71,slow=22,SNR=4.6						
USRK	Ussuriysk Ar.	9.54	306	P	Pn	08 42 14.3	+3.6
	0.2nm,0.3s,baz=110,slow=14,SNR=4.9						
USRK				LR	LR	08 45 34.2	
	comp=Z,88nm,20.8s,baz=133,slow=35						
JNU	Nakatsue	11.21	242	P	Pn	08 42 33.7	+0.2
	0.2nm,0.3s,baz=75,slow=10.0,SNR=4.0						
JNU				LR	LR	08 47 20.1	
	comp=Z,95nm,18.9s,baz=360,slow=40						
KSRS	Korea Array	11.72	267	P	Pn	08 42 43.4	+3.1
	0.2nm,0.3s,baz=81,slow=14,SNR=6.0						
KLR	Kul'dur	12.88	326	P	Pn	08 43 01.5	+5.3
	0.1nm,0.3s,baz=149,slow=9.1,SNR=2.7						
PETK	Petropavlovsk-	17.48	31	P	P	08 44 00.4	+2.1
	0.0nm,0.3s,baz=187,slow=10,SNR=3.6						
PETK				LR	LR	08 50 59.9	
	comp=Z,23nm,18.4s,baz=215,slow=38						
SEY	Seymchan	24.67	11	P	P	08 45 15.8	+1.7
	3.8nm,0.8s,baz=175,slow=12,SNR=7.0						
GUMO	Guam	25.39	175	LR	LR	08 53 27.4	
	comp=Z,32nm,19.8s,baz=7.5,slow=32						
SONM	Songino Array	27.59	301	P	P	08 45 41.1	+0.3
	0.3nm,0.4s,baz=86,slow=12,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.38	126	T	T	09 14 47.7	
	baz=322						
H11N1	WAKE ISLAND Hy	28.39	126	T	T	09 14 48.9	
	baz=322						
H11N3	WAKE ISLAND Hy	28.40	126	T	T	09 14 49.1	
	baz=322						
H11S1	WAKE ISLAND Hy	29.17	128	T	T	09 15 49.8	
	baz=323						
H11S3	WAKE ISLAND Hy	29.18	128	T	T	09 15 51.5	
	baz=323						
H11S2	WAKE ISLAND Hy	29.19	128	T	T	09 15 51.9	
	baz=323						
ZALV	Zalesovo Beam	41.36	311	P	P	08 47 38.6	-0.7
	2.9nm,0.5s,baz=80,slow=5.5,SNR=2.7						
MKAR	Makanchi Array	43.95	301	P	P	08 48 00.3	-0.2
	2.2nm,0.7s,baz=85,slow=9.4,SNR=11						
KDAK	Kodiak Island	44.97	43	P	P	08 48 08.5	+0.1
	1.4nm,0.5s						
ILAR	Eielson Array	47.30	33	P	P	08 48 27.4	+0.6
	1.1nm,0.8s,baz=268,slow=6.3,SNR=12						
INK	Inuvik	52.18	28	P	P	08 49 04.1	+0.4
	0.7nm,0.5s,baz=304,slow=7.8,SNR=4.7						
ARU	Arti	55.56	318	P	P	08 49 28.6	-0.2
	2.3nm,0.2s,baz=9.5,slow=6.1,SNR=2.5						
AKTO	Aktyubinsk	58.12	311	P	P	08 49 46.9	-0.1
	2.4nm,0.9s,baz=67,slow=10,SNR=3.9						
WRA	Warramunga Arr	59.15	189	P	P	08 49 53.6	-0.8
	3.1nm,0.7s,baz=355,slow=8.4,SNR=17						
ASAR	Alice Springs	62.88	189	P	P	08 50 19.4	-0.2
	1.4nm,0.8s,baz=16,slow=8.8,SNR=12						
FINES	FINESS Array B	67.54	332	P	P	08 50 48.7	-0.8
	1.5nm,0.8s,baz=40,slow=11,SNR=3.2						
NOA	NORSAR Array B	72.76	338	P	P	08 51 20.8	-0.8
	0.3nm,0.5s,baz=39,slow=5.8,SNR=2.6						
NVAR	Mina Array Bea	73.02	54	P	P	08 51 24.6	+0.8
	0.5nm,0.9s,baz=279,slow=4.7,SNR=4.1						
AKASG	Malin Array Be	73.35	322	P	P	08 51 24.6	-0.7
	0.2nm,0.3s,baz=46,slow=6.3,SNR=2.2						
PDAR	Pinedale Array	75.58	46	P	P	08 51 38.3	-0.3
	0.4nm,0.5s,baz=32,slow=0.8,SNR=6.8						
TXAR	Lajitas Array	88.13	53	P	P	08 52 44.9	+0.1
	0.2nm,0.6s,baz=295,slow=2.1,SNR=5.3						

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*ISK **31** 08:57:25.7, 37.°92N×30.°96E, h13^{km}, ML2.1/5*

*ISCJB **31** 08:57:26.6±0.6, 37.°95N±0.°04×30.°96E±0.°05, h11^{km}±6^{km}, Error ellipse: s-maj=6.8km s-min=5.2km az=138.6*

*DDA **31** 08:57:26.2, 37.°96N×30.°98E, h7^{km}±1^{km}, ML2.6*

ISC 31 08:57:26.3±0.9, **37.°95N**±0.°05×**30.°97E**±0.°03, **h13**^{km}±8^{km}, **n11**, σ**0^{s}70**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAGO	Egridir - ISPA	0.15	287	*i* P	Pg	08 57 30.3	+0.2
BAGO				*i* S	Sg	08 57 33.2	+0.5
ISP	Isparta	0.38	251	PG	Pg	08 57 33.3	-0.6
ISP				SG	Sg	08 57 39.2	+0.1
DOGA	KONYA_Doganhis	0.57	74	*i* P	Pb	08 57 38.0	-0.3
DOGA				*i* S	Sb	08 57 46.5	+0.1
SHUT	Suhut-Afyon	0.69	331	PG	Pg	08 57 39.6	-0.2
SHUT				SG	Sb	08 57 50.2	+0.5
KZIL	AFYON_Kizioren	0.72	296	*i* P	Pg	08 57 38.6	-1.8
KZIL				*i* S	Sb	08 57 50.5	-0.2
KZIL				IAML_P			
	comp=Z,996nm,0.1s						
BOLV	Bolvadin	0.77	359	*i* P	Pb	08 57 41.5	-0.1
BOLV				*i* S	Sb	08 57 52.4	+0.3
KONT	Konya--Tatoy	1.10	90	PN	Pg	08 57 47.1	-0.4
KONT				SN	Sn	08 58 03.2	+0.7
KMER	Konya-Meram	1.12	99	*i* P	Pn	08 57 48.0	+0.3
KMER				*i* S	Sg	08 58 01.2	-1.3
KMER				IAML_P			
	comp=Z,176nm,0.2s						
LADK	Ladik-KONYA	1.13	77	PN	Pg	08 57 47.8	-0.3
KEPZ	Antalya-Kepez	1.16	154	*i* P	Pn	08 57 48.9	+0.7
KEPZ				*i* S	Sn	08 58 04.5	+0.5
KEPZ				IAML_P			
	comp=Z,401nm,0.1s						
KIZT	Kizilcal	1.17	37	PN	Pn	08 57 48.9	+0.4

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*IDC **31** 08:59:26.8±1.8, 41.°67S×174.°42E, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.6/17, mbtmp3.5/4, ML3.1/2, Error ellipse: s-maj=45.2km s-min=31.1km az=139.0*

*ISCJB **31** 08:59:28.2±0.7, 41.°87S±0.°03×174.°46E±0.°03, h7^{km}±4^{km}, mb3.3/2, Error ellipse: s-maj=5.6km s-min=3.0km az=143.9*

*WEL **31** 08:59:29.2, 42°S±2°×17°4E±°, h9^{km}±3^{km}, M3.9/19, ML4.2/15, MLv3.9/19, Error ellipse: s-maj=0.0km s-min=0.0km az=129.6*

ISC 31 08:59:28.4±0.8, **41.°71S**±0.°04×**174.°42E**±0.°03, **h16**^{km}±5^{km}, **n97**, σ**1^{s}49**/95, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.15	256	P	Pg	08 59 32.6	0.0
CMWZ				S	Sg	08 59 35.8	+0.4
BSWZ	Blackbirch Sta	0.40	270	P	Pb	08 59 37.3	+0.1
BSWZ				S	Sb	08 59 43.4	+0.3
TUWZ	Tuamarina	0.45	308	P	Pb	08 59 38.5	+0.5
TUWZ				S	Sb	08 59 45.3	+0.8
BHW	Baring Head	0.46	48	P	Pb	08 59 39.6	+1.6
BHW				S	Sb	08 59 47.2	+2.6
TCW	Tory Channel	0.51	348	P	Pb	08 59 39.7	+0.7
PLWZ	Palliser	0.65	77	P	Pn	08 59 43.8	+0.9
MSWZ	Moikau Station	0.69	65	P	Pn	08 59 44.2	+0.7
CAW	Cannon Point	0.78	39	P	Pn	08 59 45.0	+0.3
PAWZ	Paruwai Farm	0.83	67	P	Pn	08 59 46.7	+1.3
NNZ	Nelson	0.92	302	P	Pb	08 59 46.7	+0.7
KHZ	Kahutara	0.96	223	P	Pn	08 59 48.0	+0.8
DUWZ	D'Urville Isla	0.98	338	P	Pn	08 59 48.0	+0.4
MTW	Mount Morrison	0.99	56	P	Pn	08 59 49.0	+1.4
TRWZ	Traveller	1.00	72	P	Pn	08 59 49.0	+1.2
THZ	Tophouse	1.13	267	P	Pn	08 59 50.6	+0.9
HOWZ	Holdsworth Sta	1.16	46	P	Pn	08 59 51.7	+1.7
TMWZ	Te Maipa	1.26	62	P	Pn	08 59 52.6	+1.2
MRZ	Mangatainoka R	1.37	40	P	Pg	08 59 54.6	-0.2
TIWZ	Tintock	1.45	50	P	Pg	08 59 55.8	-0.6
GVZ	Greta Valley S	1.62	219	P	Pn	08 59 56.9	+0.6
PRWZ	Pori Road	1.65	46	P	Pb	08 59 58.3	-0.1
OHWZ	Ohakea	1.65	25	P	Pg	09 00 00.4	+0.2
POWZ	Post Office Ro	1.67	38	P	Pb	08 59 59.2	+0.4
QRZ	Quartz Range	1.68	301	P	Pg	08 59 59.8	-0.8
BFZ	Birch Farm	1.72	54	P	Pn	08 59 58.6	+0.9
LTZ	Lake Taylor	1.92	235	P	Pn	09 00 01.3	+0.9
DVHZ	Dannevirke	1.94	44	P	Pn	09 00 01.7	+1.0
DSZ	Denniston Nort	1.96	268	P	Pb	09 00 03.4	-0.2
WAZ	Wanganui	2.00	13	P	Pg	09 00 06.2	-0.7
TSZ	Takapari Road	2.03	36	P	Pn	09 00 03.5	+1.6
PRHZ	Porangahau	2.22	50	P	Pn	09 00 05.7	+1.2
OKCZ	Okains Bay	2.24	206	P	Pn	09 00 04.6	-0.3
LREZ	Lake Rotokare	2.25	360	P	Pg	09 00 10.2	-1.4
PNHZ	Pukenui	2.25	38	P	Pn	09 00 06.3	+1.3
WPHZ	Waipukurau	2.25	44	P	Pn	09 00 06.6	+1.6
NMEZ	Namu Road	2.33	350	P	Pb	09 00 10.6	+0.6
PREZ	Palmer Road	2.38	355	P	Pg	09 00 12.4	-1.6
MQZ	McQueen's Vall	2.38	213	P	Pn	09 00 05.8	-0.9
OXZ	Oxford	2.38	227	P	Pn	09 00 06.9	+0.1
AKCZ	Akaroa Harbour	2.43	207	P	Pn	09 00 07.0	-0.4
INZ	Inchbonnie	2.43	244	P	Pn	09 00 08.9	+1.5
KHEZ	Kahui Hut	2.44	353	P	Pb	09 00 12.5	+0.7
MTVZ	Mangateitei	2.46	19	P	Pb	09 00 12.0	-0.3
NBEZ	Newall Road No	2.48	350	P	Pb	09 00 12.8	+0.3
PXZ	Pawanui	2.50	49	P	Pn	09 00 09.0	+0.6
MOVZ	Moawhango	2.52	24	P	Pb	09 00 11.7	-1.5
PKVZ	Pokaka	2.52	17	P	Pb	09 00 13.2	-0.1
DREZ	Durham Road	2.53	356	P	Pg	09 00 17.5	+0.6
PKE	Pukeiti	2.54	352	P	Pb	09 00 14.2	+0.6
KRHZ	Kereru	2.55	36	P	Pn	09 00 10.2	+1.1
BHHZ	Black Hill Sta	2.55	30	P	Pn	09 00 11.5	+2.3
WHVZ	Whangaehu Hut	2.59	21	P	Pb	09 00 12.9	-1.6
VRZ	Vera Road	2.60	6	P	Pb	09 00 14.0	-0.6
FWVZ	Far West T-bar	2.60	20	P	Pg	09 00 16.6	-1.8
TUVZ	Tukino	2.62	22	P	Pb	09 00 13.4	-1.6
KAHZ	Kahuranaki	2.68	45	P	Pn	09 00 11.6	+0.8
NGZ	Ngauruhoe	2.69	20	P	Pb	09 00 14.7	-1.5
WTVZ	West Tongariro	2.75	19	P	Pb	09 00 15.9	-1.2
KWHZ	Kaweka Forest	2.75	34	P	Pn	09 00 13.7	+1.8
TWVZ	Taurewa	2.75	17	P	Pg	09 00 19.1	-2.1
KRVZ	Karewarewa	2.78	20	P	Pb	09 00 16.9	-0.8
MCHZ	McNeill Hill	2.85	38	P	Pb	09 00 17.5	-1.4
KATZ	Kakaramea	2.90	20	P	Pb	09 00 21.5	+1.6
RITZ	Rihia Road	2.95	22	P	Pg	09 00 23.5	-1.4
BKZ	Black Stump Fm	3.00	33	P	Pn	09 00 17.0	+1.7
RATZ	Rangitukua	3.03	20	P	Pg	09 00 24.4	-2.1
WVZ	Waitaha Valley	3.05	242	P	Pn	09 00 18.0	+2.2
HATZ	Hinemaiaia	3.10	25	P	Pb	09 00 24.3	+1.2
WATZ	Wairara	3.17	19	P	Pb	09 00 26.2	+1.9
RPZ	Rata Peaks	3.18	230	Pn	Pn	09 00 17.8	0.0
	4.1nm,0.3s,baz=115,slow=4.5,SNR=22						
RPZ				Sn	Sn	09 00 54.6	-0.9
	7.8nm,0.3s,baz=164,slow=22,SNR=6.5						
RPZ	Rata Peaks	3.18	230	P	Pn	09 00 18.1	+0.3
HIZ	Hauiti	3.21	6	P	Pb	09 00 22.4	-2.7
MRHZ	Matea Rd	3.26	29	P	Pn	09 00 21.5	+2.6
MTHZ	Maungataniwha	3.41	34	P	Pb	09 00 25.8	-2.6
RAHZ	Arahi	3.46	37	P	Pb	09 00 30.9	+1.6
TLZ	Tolley Road	3.49	15	P	Pb	09 00 27.2	-2.6
SNGZ	Shannon Statio	3.69	38	P	Pn	09 00 26.0	+1.3
FOZ	Fox Glacier	3.85	240	P	Pn	09 00 30.8	+3.9
URZ	Urewera	4.02	32	Pn	Pn	09 00 28.6	-0.7
	0.8nm,0.3s,baz=224,slow=5.5,SNR=8.1						
URZ				Sn	Sn	09 01 13.3	-2.7
	3.2nm,0.3s,baz=198,slow=21,SNR=3.0						
URZ	Urewera	4.02	32	P	Pn	09 00 31.9	+2.6
TOZ	Tahuroa Road	4.06	12	P	Pb	09 00 35.6	-4.0
ODZ	Otahua Downs	4.32	218	P	Pn	09 00 33.2	-0.2
TWGZ	Tauwhareparae	4.47	39	P	Pn	09 00 41.1	+5.6
RUGZ	Raukumara Rang	4.51	35	P	Pn	09 00 37.5	+1.4
MKAZ	Moumakai	4.64	7	P	Pn	09 00 42.9	+5.1
AWAZ	Awhitu Peninsu	4.65	2	P	Pn	09 00 43.6	+5.7
HAZ	Te Kaha	4.73	34	P	Pn	09 00 42.0	+3.0
JCZ	Jackson Bay	4.76	238	P	Pn	09 00 44.7	+5.2
ETAZ	East Tamaki Re	4.77	5	P	Pn	09 00 45.2	+5.7
WTAZ	Waiatarua	4.78	2	P	Pb	09 00 46.2	-5.5
WIAZ	Waiheke Island	4.95	7	P	Pb	09 00 50.0	-4.6
HHSZ	Highcliff Hill	5.00	212	P	Pn	09 00 45.3	+2.6
OUZ	Omahuta	6.51	354	P	Pn	09 01 10.3	+6.8
CTZ	Chatham Island	6.91	110	P	Pn	09 01 09.9	+1.0
ASAR	Alice Springs	38.14	285	P	P	09 06 47.5	+0.6
	0.1nm,0.5s,baz=118,slow=6.3,SNR=4.2						
WRA	Warramunga Arr	40.21	290	P	P	09 07 05.0	+0.8
	1.8nm,0.9s,baz=123,slow=8.4,SNR=6.2						
TORD	Torodi Ar. Bea	150.84	195	PKPbc	PKPbc	09 19 21.6	+1.2
	0.4nm,0.8s,baz=171,slow=3.9,SNR=3.7						

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*ISCJB **31** 09:10:53.9±0.4, 67.°66N±0.°03×142.°7E±0.°1, h10^{km}, mb3.7/14, MS2.7/1, Error ellipse: s-maj=6.1km s-min=4.5km az=169.1*

*IDC **31** 09:10:54.2±0.7, 67.°64N×142.°61E, h0^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.8/36, mbtmp3.7/17, ML3.0/2, MS2.8/2, Ms1 2.8/2, ms1mx2.3/42, Error ellipse: s-maj=17.8km s-min=16.3km az=171.0*

*YARS **31** 09:10:55.8, 67.°62N×142.°58E, h2^{km}*

ISC 31 09:10:55.8±0.5, **67.°65N**±0.°03×**142.°67E**±0.°04, **h10**^{km}, **n26**, σ**1^{s}38**/35, **mb3.8**/14, **Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOMR	Moma	1.21	169	*i* Pg	Pn	09 11 17.5	-1.2
	366nm,0.3s						
MOMR				*i* Sg	Sb	09 11 32.9	-1.4
	3µm,0.5s						
YBGR	Belaya Gora	1.59	55	*i* Pg	Pn	09 11 24.9	+0.9
	1µm,0.2s						
YBGR				*i* Pg	Pn	09 11 24.9	+0.9
	912nm,0.2s						
YBGR				*i* Sg	Sb	09 11 47.0	+1.6
	3µm,0.5s						
DEPR	Deputatskiy	2.02	331	*i* Pn	Pn	09 11 30.7	+0.8
DEPR				*i* Pg	Pb	09 11 33.0	+0.3
	53nm,0.2s						
DEPR				*i* Sg	Sb	09 11 59.6	+1.8
	618nm,0.6s						
BTGS	Batagay	3.07	274	*i* Pn	Pn	09 11 45.8	+1.5
BTGS				*i* Pg	Pb	09 11 50.2	-0.1
	52nm,0.3s						
BTGS				*i* Sg	Sb	09 12 30.4	+2.5
	919nm,0.6s						
UNR	Ust'-Nera	3.10	176	*i* Pn	Pn	09 11 46.9	+2.2
	7.6nm,0.2s						
UNR				*i* Pg	Pb	09 11 51.7	+0.7
	34nm,0.4s						
UNR				*i* Sg	Sb	09 12 32.2	+3.4
	242nm,0.6s						
TIXI	Tiksi	6.26	316	Pn	Pn	09 12 29.1	+1.1
	4.8nm,0.3s,baz=126,slow=20,SNR=55						
TIXI				Sn	Sn	09 13 36.0	-3.4
	10.0nm,0.3s,baz=316,slow=20,SNR=9.1						
TIXI				Lg	Lg	09 14 05.5	
	3.2nm,0.3s,baz=35,slow=20,SNR=5.0						
MA2	Magadan	8.86	152	Lg	Lg	09 15 32.2	
	0.7nm,0.3s,baz=246,slow=19,SNR=3.0						
PETK	Petropavlovsk-	16.29	146	Pn	Pn	09 14 45.4	+1.0
	0.1nm,0.3s,baz=120,slow=30,SNR=2.6						
KLR	Kul'dur	19.28	202	P	P	09 15 20.4	+0.1
	0.2nm,0.3s,baz=39,slow=13,SNR=2.7						
KLR				LR	LR	09 22 59.8	
	comp=Z,26nm,19.3s,baz=68,slow=38						
USRK	Ussuriysk Ar.	24.18	199	P	P	09 16 11.5	-0.5
	1.8nm,0.6s,baz=13,slow=12,SNR=6.6						
SONM	Songino Array	27.06	241	P	P	09 16 38.8	+0.7
	0.7nm,0.5s,baz=34,slow=9.0,SNR=3.0						
ILAR	Eielson Array	27.17	62	P	P	09 16 39.9	+1.0
	1.1nm,0.8s,baz=301,slow=8.7,SNR=12						
KSRS	Korea Array	31.37	203	LR	LR	09 30 26.5	
	comp=Z,17nm,21.3s,baz=10.0,slow=37						
MKAR	Makanchi Array	36.75	267	P	P	09 18 02.6	-0.3
	2.3nm,0.5s,baz=46,slow=7.5,SNR=21						
MKAR				PP	PnPn	09 19 25.6	-0.6
	1.3nm,0.8s,baz=45,slow=8.7,SNR=4.7						
FINES	FINESS Array B	43.28	321	P	P	09 18 57.2	+0.4
	1.0nm,0.5s,baz=31,slow=7.7,SNR=7.1						
NB2	NORSAR Subarra	46.85	330	P	P	09 19 24.9	-0.4
	comp=Z,3.2nm,1.1s,baz=24,slow=7.9						
NOA	NORSAR Array B	46.85	330	P	P	09 19 24.2	-1.1
	comp=Z,0.8nm,0.7s,baz=24,slow=7.8,SNR=3.9						
AKASG	Malin Array Be	51.95	312	P	P	09 20 03.2	-1.1
	comp=Z,1.0nm,0.5s,baz=32,slow=8.9,SNR=4.9						
PDAR	Pinedale Array	57.38	56	P	P	09 20 43.9	-0.2
	comp=Z,0.3nm,0.6s,baz=333,slow=6.2,SNR=3.7						
GERES	GERESS Array B	57.67	323	P	P	09 20 45.8	-0.1
	comp=Z,0.3nm,0.2s,baz=44,slow=5.8,SNR=2.3						
NVAR	Mina Array Bea	58.35	66	P	P	09 20 51.8	+0.9
	comp=Z,0.2nm,0.6s,baz=340,slow=7.7,SNR=3.0						
BRTR	Keskin Array B	60.53	303	P	P	09 21 06.6	+0.7
	comp=Z,0.6nm,0.6s,baz=35,slow=6.1,SNR=3.5						
ESDC	Sonseca Array	70.06	333	P	P	09 22 07.4	-0.1
	comp=Z,0.2nm,0.3s,baz=6.2,slow=8.7,SNR=3.6						
TXAR	Lajitas Array	71.56	57	P	P	09 22 15.9	-1.0
	comp=Z,0.1nm,0.6s,baz=353,slow=3.6,SNR=2.2						
ASAR	Alice Springs	91.27	188	P	P	09 23 59.3	-1.7
	comp=Z,0.2nm,0.7s,baz=9.7,slow=7.7,SNR=2.8						
MAW	Mawson	145.84	222	PKPbc	PKPdf	09 30 32.1	-0.5
	comp=Z,1.3nm,0.7s,baz=352,slow=5.6,SNR=5.0						

JMA 31 09:23:59.4±0.1, **39.°02N**×**142.°66E**, **h22**^{km}±2^{km}, **M3.6**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.77	275	P	Pb	09 24 14.0	-0.2
OFUJ				S	Sb	09 24 24.2	0.0
MIYJ	Miyakonagasawa	0.86	311	P	Pb	09 24 15.0	-0.6
MIYJ				*e*S	Sb	09 24 26.5	-0.1
JKMT	Kesennumamotoy	0.95	258	P	Pb	09 24 16.7	-0.4
JKMT				S	Sb	09 24 29.0	-0.2
JTH	Tanohata	1.10	326	P	Pn	09 24 19.2	-0.4
JMK	Ichinoseki	1.12	267	P	Pn	09 24 19.7	-0.1
JMK				S	Sb	09 24 34.3	0.0
JOM	Ohasama	1.15	294	P	Pn	09 24 20.2	0.0
JIO	Ouri	1.17	242	P	Pn	09 24 19.9	-0.5
JIO				*e*S	Sb	09 24 35.4	-0.2
JKZ	Kuzumaki	1.41	314	P	Pn	09 24 24.2	+0.4
JKZ				S	Sn	09 24 41.9	+0.2
JANG	Nango	1.61	327	P	Pn	09 24 27.3	+0.7
JANG				S	Sb	09 24 48.3	-0.2
JRG	Rokugo	1.62	284	P	Pb	09 24 28.1	-0.5
JRG				S	Sb	09 24 49.2	+0.7
JOU	Okura	1.69	248	P	Pn	09 24 28.5	+0.8
JOU				S	Sb	09 24 50.0	-0.7

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*ISCJB **31** 09:28:34.9±0.7, 40.°1N±0.°1×113.°4E±0.°2, h10^{km}, mb3.6/8, MS2.2/1, Error ellipse: s-maj=19.5km s-min=13.7km az=136.8*

*IDC **31** 09:28:35.2±0.9, 40.°07N×113.°29E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.7/37, mbtmp3.7/10, ML3.6/2, MS2.3/1, Ms1 2.3/1, ms1mx1.9/49, Error ellipse: s-maj=28.5km s-min=18.4km az=64.0*

ISC 31 09:28:36.6±0.8, **40.°1N**±0.°1×**113.°3E**±0.°2, **h10**^{km}, **n11**, σ**1^{s}07**/10, **mb3.6**/8, **Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	9.19	330	Pn	Pn	09 30 48.1	-1.2
	0.3nm,0.3s,baz=149,slow=14,SNR=3.6						
SONM				Lg	Lg	09 33 29.2	
	0.4nm,0.3s,baz=155,slow=25,SNR=4.5						
JNU	Nakatsue	15.73	111	Pn	Pn	09 32 16.6	-1.7
	0.2nm,0.3s,baz=162,slow=8.3,SNR=3.4						
ZALV	Zalesovo Beam	23.65	315	P	P	09 33 48.3	+0.4
	0.8nm,0.6s,baz=110,slow=12,SNR=2.8						
CMAR	Chiang Mai Arr	24.87	214	P	P	09 33 58.8	-0.7
	0.6nm,0.3s,baz=14,slow=9.8,SNR=4.1						
KURBB	Kurchatov Arra	26.37	305	P	P	09 34 13.2	+0.4
	0.6nm,0.6s,baz=100,slow=10,SNR=5.6						
BVAR	Borovoye Array	31.72	309	LR	LR	09 48 56.6	
	comp=Z,5.5nm,21.0s,baz=146,slow=38						
ILAR	Eielson Array	58.43	30	P	P	09 38 32.3	+0.2
	0.3nm,0.7s,baz=292,slow=4.8,SNR=3.2						
ASAR	Alice Springs	66.28	159	P	P	09 39 25.5	+0.4
	0.4nm,0.8s,baz=345,slow=5.8,SNR=3.9						
YKA	Yellowknife Ar	70.76	21	P	P	09 39 52.6	0.0
	1.5nm,0.6s,baz=322,slow=5.2,SNR=4.8						
STKA	Stephens Creek	76.26	155	P	P	09 40 25.6	+0.3
	1.4nm,0.9s,baz=303,slow=17,SNR=2.4						
NVAR	Mina Array Bea	88.69	38	P	P	09 41 32.1	+1.5
	0.1nm,0.4s,baz=315,slow=3.2,SNR=3.0						

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*ISCJB **31** 09:39:38.3±0.9, 20.°43S±0.°09×177.°5W±0.°2, h450^{km}, mb3.9/9, Error ellipse: s-maj=23.1km s-min=12.2km az=9.9*

*IDC **31** 09:39:40.5±2.9, 20.°37S×177.°48W, h465^{km}±29^{km}, mb3.6/9, mb1 3.7/11, mb1mx3.3/40, mbtmp4.4/11, Error ellipse: s-maj=27.1km s-min=20.0km az=114.0*

ISC 31 09:39:39.1±0.9, **20.°5S**±0.°1×**177.°5W**±0.°2, **h450**^{km}, **n15**, σ**1^{s}97**/18, **mb4.0**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.06	261	P	P	09 42 53.6	+2.5
	0.7nm,0.3s,baz=77,slow=18,SNR=7.1						
URZ	Urewera	18.31	194	P	P	09 43 26.4	+1.6
	1.6nm,0.3s,baz=294,slow=2.7,SNR=16						
URZ				S	S	09 46 26.0	-3.5
	0.3nm,0.3s,baz=49,slow=19,SNR=3.3						
STKA	Stephens Creek	38.22	244	P	P	09 46 20.0	+0.9
	6.2nm,0.8s,baz=87,slow=11,SNR=12						
ASAR	Alice Springs	44.99	257	P	P	09 47 13.3	+0.2
	14nm,0.7s,baz=96,slow=7.7,SNR=175						
ASAR				PcP	pwP	09 48 44.9	+2.0

	1.3nm,0.7s,baz=113,slow=3.8,SNR=4.6						
ASAR				ScP	ScP	09 51 53.0	-1.2
	0.5nm,0.8s,baz=109,slow=5.2,SNR=3.1						
ASAR				S	S	09 53 13.3	-4.6
	1.6nm,0.8s,baz=93,slow=16,SNR=9.9						
WRA	Warramunga Arr	45.08	262	P	P	09 47 13.2	-0.6
	4.8nm,0.4s,baz=93,slow=7.9,SNR=103						
PETK	Petropavlovsk-	76.39	345	P	P	09 50 39.9	-0.9
	2.0nm,0.7s,baz=136,slow=8.5,SNR=5.9						
USRK	Ussuriysk Ar.	79.23	326	P	P	09 50 56.9	+0.5
	2.9nm,0.8s,baz=83,slow=4.5,SNR=6.2						
MAW	Mawson	81.73	200	P	P	09 51 10.1	+0.9
	0.7nm,0.6s,baz=149,slow=5.9,SNR=5.3						
KLR	Kul'dur	82.77	329	P	P	09 51 14.0	-0.6
	0.7nm,0.4s,baz=318,slow=1.3,SNR=4.0						
PDAR	Pinedale Array	88.63	43	P	P	09 51 43.1	-0.3
	0.1nm,0.5s,baz=222,slow=2.3,SNR=3.4						
CMAR	Chiang Mai Arr	90.57	289	P	P	09 51 53.6	+0.9
	2.9nm,0.7s,baz=115,slow=2.6,SNR=15						
ARCES	ARCESS Array B	129.00	350	PKP	PKPdf	09 57 52.8	-1.4
	2.1nm,0.9s,baz=5.2,slow=1.3,SNR=5.0						
AKASG	Malin Array Be	143.24	331	PKhKP	PKPpre	09 58 17.1	
	3.0nm,0.6s,baz=44,slow=4.1,SNR=9.2						
BRTR	Keskin Array B	147.19	313	PKPbc	PKPdf	09 58 29.6	+1.3
	1.1nm,0.5s,baz=145,slow=4.4,SNR=6.7						
GERES	GERESS Array B	150.32	345	PKPbc	PKPbc	09 58 37.2	-1.4
	0.6nm,0.3s,baz=22,slow=1.1,SNR=2.7						

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*NNC **31** 09:46:32.3±2.4, 53°.19N×87°.66E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=21.1km s-min=10.0km az=66.0, Suspected Mining explosion.*

IDC 31 09:46:32.3±2.5**, 53°.50N×87°.82E, h0^{km}, mb1 3.5**/3**, mb1mx3.2**/52**, mbtmp3.5**/3**, ML3.4**/3**, 4C-4D, Error ellipse: s-maj=23.2km s-min=15.6km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.84	285	*i*		09 58 15.5	
	baz=100,slow=297,SNR=1.5						
ZAA0	Zalesovo Array	1.84	285	⇓P	Pn	09 47 04.8	-0.3
	0.9nm,0.3s						
ZAA0				⇓S	Sb	09 47 30.5	+0.2
	2.1nm,0.4s						
ZALV	Zalesovo Beam	1.84	285	Pn	Pn	09 47 04.4	-0.7
	9.1nm,0.3s,baz=99,slow=16,SNR=34						
ZALV				Lg	Lg	09 47 30.7	
	10nm,0.3s,baz=106,slow=26,SNR=16						
KURBB	Kurchatov Arra	6.41	247	Pn	Pn	09 48 08.8	+0.9
	0.5nm,0.3s,baz=62,slow=14,SNR=13						
KURBB				Sn	Sn	09 49 20.9	-0.9
	0.1nm,0.3s,baz=58,slow=26,SNR=3.3						
KURBB				Lg	Lg	09 49 55.1	
	0.1nm,0.3s,baz=63,slow=32,SNR=4.3						
KURBB	Kurchatov Arra	6.41	247	⇑Pn	Pn	09 48 07.1	-0.8
	3.1nm,0.3s						
KURBB				⇑Sn	Sn	09 49 16.8	-4.9
	4.1nm,0.4s						
KURBB				⇑Lg	Lg	09 49 48.8	
	8.6nm,0.9s						
MK31	Makanchi Array	7.59	210	⇓Pn	Pn	09 48 20.2	-4.0
	0.3nm,0.3s,baz=28,slow=11,SNR=18						
MK31				⇑Sn	Sn	09 49 44.1	-6.8
	0.6nm,0.5s						
MK31				⇓Lg	Lg	09 50 21.7	
	0.5nm,0.5s						
MKAR	Makanchi Array	7.59	210	Pn	Pn	09 48 25.3	+1.2
	0.7nm,0.3s,baz=30,slow=14,SNR=13						
MKAR				Lg	Lg	09 50 31.3	
	0.2nm,0.3s,baz=43,slow=30,SNR=2.7						
BVAR	Borovoye Array	10.46	274	Pn	Pn	09 49 02.0	-1.4
	0.3nm,0.3s,baz=78,slow=11,SNR=2.5						

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*IDC **31** 09:50:33.4±1.3, 50°.48N×130°.20W, h0^{km}, mb3.3/4, mb1 3.6/10, mb1mx3.5/47, mbtmp3.4/10, ML3.3/6, MS2.7/6, Ms1 2.7/6, ms1mx2.6/18, Error ellipse: s-maj=21.6km s-min=12.2km az=79.0*

*PGC **31** 09:50:33.1±1.0, 50°.33N×130°.26W, h10^{km}, MLSn3.1/36, Mw3.7/36, 205km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

ISC 31 09:50:33.6±2.0**, 50°.44N**±0°.06×**130°.09W**±0°.05**, h5^{km}**±12^{km}**, n70, σ2^{s}10**/92**, mb3.2**/4**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.27	80	P	Pg	09 50 56.7	-1.1
HOLB				S	Sg	09 51 12.8	-1.4
BPBC	Brooks Peninsu	1.51	100	Pn	Pn	09 50 59.3	-2.1
BPBC				Sn	Sn	09 51 17.7	-3.7
PHC	Port Hardy	1.72	80	Pn	Pn	09 51 03.3	-0.8
PHC				Sn	Sn	09 51 23.9	-2.4
MAYB	Maynard	1.87	90	Pn	Pn	09 51 05.0	-1.3
HG4B	Hotspring	1.99	340	Pn	Pn	09 51 05.2	-2.6
HG4B				Sn	Sn	09 51 30.0	-3.1
EDB	Eliza Dome	1.99	105	Pn	Pn	09 51 05.6	-2.2
EDB				Sn	Sn	09 51 29.4	-3.7
TLCB	Telegraph Cove	2.08	86	Pn	Pn	09 51 08.5	-0.6
TLCB				Sn	Sn	09 51 32.9	-2.5
BBB	Bella Bella	2.15	35	Pn	Pn	09 51 09.7	-0.3
	19nm,0.3s,baz=220,slow=5.8,SNR=877						
BBB				Sn	Sn	09 51 34.4	-2.6
	41nm,0.3s,baz=319,slow=21,SNR=11						
BBB	Bella Bella	2.15	35	Pn	Pn	09 51 09.6	-0.3
BBB				Sn	Sn	09 51 34.6	-2.3
HG3B	Hotspring	2.31	339	Pn	Pn	09 51 10.5	-1.7
HG3B				Sn	Sn	09 51 37.4	-3.4
BNB	Barry Inlet	2.38	335	Pn	Pn	09 51 11.0	-2.3
NTKA	Nootka	2.39	109	Pn	Pn	09 51 11.0	-2.3
NTKA				Sn	Sn	09 51 38.3	-4.7
ETB	Estevan Point	2.53	113	Pn	Pn	09 51 13.9	-1.3
ETB				Sn	Sn	09 51 42.6	-3.8
NCRB	Newcastle Ridg	2.58	89	Pn	Pn	09 51 15.4	-0.6
GDR	Gold River	2.69	102	Pn	Pn	09 51 16.3	-1.2
HG1B	Mitchell Dam	2.81	334	Pn	Pn	09 51 17.8	-1.3
HG1B				Sn	Sn	09 51 50.5	-2.8
BCBC	Bella Coola	2.85	46	Pn	Pn	09 51 20.7	+1.0
SPLB	Strathcona Par	2.91	99	Pn	Pn	09 51 19.7	-0.7
MOBC	Moresby Island	2.95	337	Pn	Pn	09 51 20.1	-1.0
MOBC				Sn	Sn	09 51 54.1	-2.9
TOFB	Tofino	3.00	114	Pn	Pn	09 51 20.0	-1.7
TOFB				Sn	Sn	09 51 55.5	-2.5
CBB	Campbell River	3.06	96	Pn	Pn	09 51 22.1	-0.4
CBB				Sn	Sn	09 51 57.0	-2.5
BTB	Buttle Lake	3.10	106	Pn	Pn	09 51 21.9	-1.4
BTB				Sn	Sn	09 51 57.5	-3.3
DIB	Dawson Inlet,	3.14	333	Pn	Pn	09 51 22.1	-1.5
DIB				Sn	Sn	09 51 59.6	-2.0
H02S1	DAWSON INLET T	3.14	333	Pn	Pn	09 51 21.4	-2.2
H02S1				Sn	Sn	09 51 58.3	-3.2
MWAB	Mount Washingt	3.16	101	Pn	Pn	09 51 23.3	-0.8
MWAB				Sn	Sn	09 51 59.6	-2.6
B012	Ucluelet	3.32	115	Pn	Pn	09 51 24.9	-1.1
B012				Sn	Sn	09 52 04.0	-1.8
OZB	Mount Ozzard	3.33	115	Pn	Pn	09 51 26.0	-0.3
OZB				Sn	Sn	09 52 04.0	-2.2
B928	Bamfield	3.60	115	Pn	Pn	09 51 28.8	-1.1
B927	Port Alberni	3.63	108	Pn	Pn	09 51 29.9	-0.4
B927				Sn	Sn	09 52 11.7	-1.7
TXB	Texada	3.72	99	Pn	Pn	09 51 31.8	+0.1
MGB	Mount Grey	3.79	110	Pn	Pn	09 51 31.6	-1.0
MGB				Sn	Sn	09 52 13.4	-4.2
RUBB	Prince Rupert	3.90	359	Pn	Pn	09 51 34.0	-0.1
RUBB				Sn	Sn	09 52 17.9	-2.2
GHNB	Nanoose	3.95	104	Sn	Sn	09 52 18.6	-2.8
YOUB	Youbou, Lake C	4.08	110	Pn	Pn	09 51 37.0	+0.3
YOUB				Sn	Sn	09 52 23.4	-1.5
SHB	Sechelt	4.09	99	Pn	Pn	09 51 36.7	-0.1
SHB				Sn	Sn	09 52 23.2	-2.0
PFB	Port Renfrew	4.13	115	Pn	Pn	09 51 37.0	-0.2
PFB				Sn	Sn	09 52 23.7	-2.2
NLLB	Nanaimo Lost L	4.13	105	Pn	Pn	09 51 36.5	-0.7
UBRB	Upper Baezaeko	4.48	54	Pn	Pn	09 51 43.9	+1.8
GOBB	Galiano Island	4.52	107	Pn	Pn	09 51 43.3	+0.7
WSLR	Whistler	4.61	91	Pn	Pn	09 51 45.3	+1.4
B010	North Saanich	4.68	110	Pn	Pn	09 51 45.5	+0.8
PGC	Sidney	4.68	110	Pn	Pn	09 51 46.3	+1.5
PGC				Sn	Sn	09 52 37.2	-2.1
B009	North Saanich	4.68	110	Pn	Pn	09 51 45.8	+1.1
B009				Sn	Sn	09 52 37.3	-2.0
B011	North Saanich	4.68	110	Pn	Pn	09 51 45.9	+1.2
B011				Sn	Sn	09 52 37.2	-2.1
LLLB	Lillooet	5.24	85	Pn	Pn	09 51 53.2	+0.7
FSB	Fort Saint Jam	5.37	39	Pn	Pn	09 51 55.8	+1.5
VDB	Vedder Mountai	5.37	102	Pn	Pn	09 51 55.6	+1.3
MBW	Mount Baker	5.58	104	Pn	Pn	09 51 59.0	+1.7
JCW	Jim Creek	5.79	110	Pn	Pn	09 52 03.5	+3.5
LTY	Liberty	6.98	113	Pn	Pn	09 52 18.2	+1.7
BMBC	Bull Mountain	7.37	37	Pn	Pn	09 52 23.1	+1.3
DLBC	Dease Lake	8.02	0	Pn	Pn	09 52 32.5	+1.8
	0.2nm,0.3s,baz=182,slow=11,SNR=5.0						
DLBC				Sn	Sn	09 54 04.9	+3.2
	0.4nm,0.3s,baz=177,slow=21,SNR=6.0						
DLBC	Dease Lake	8.02	0	Pn	Pn	09 52 30.1	-0.5
FNBB	Fort Nelson	9.41	23	Pn	Pn	09 52 50.7	+1.1
YBH	Yreka Blue Hor	10.10	147	Pn	Pn	09 53 03.0	+3.8
	0.1nm,0.3s,baz=4.8,slow=10,SNR=11						
YBH				LR	LR	09 56 25.0	
	comp=Z,82nm,21.5s,baz=348,slow=35						
HYT	Haines Junctio	11.21	341	Pn	Pn	09 53 12.7	-1.8
ELK	Elko	14.19	127	LR	LR	09 59 28.0	
	comp=Z,61nm,20.6s,baz=302,slow=38						
NVAR	Mina Array Bea	14.64	141	Pn	Pn	09 54 05.2	+3.8
	0.0nm,0.3s,baz=320,slow=12,SNR=2.9						
YKA	Yellowknife Ar	14.75	29	Pn	Pn	09 54 00.5	-2.1
	0.1nm,0.3s,baz=224,slow=11,SNR=2.8						
YKA				LR	LR	10 00 00.4	
	comp=Z,5.8nm,19.3s,baz=216,slow=38						
KDAK	Kodiak Island	15.05	308	LR	LR	09 58 29.7	
	comp=Z,95nm,20.4s,slow=32						
PDAR	Pinedale Array	16.03	111	Pn	Pn	09 54 23.5	+3.7
	0.0nm,0.3s,baz=304,slow=11,SNR=5.1						
ILAR	Eielson Array	16.86	335	LR	LR	10 00 24.5	
	comp=Z,30nm,18.6s,baz=136,slow=35						
INK	Inuvik	18.01	356	LR	LR	10 00 54.4	
	comp=Z,15nm,21.4s,baz=356,slow=35						
ULM	Lac du Bonnet	21.73	77	P	P	09 55 25.5	+0.1
	2.5nm,0.7s,baz=282,slow=10,SNR=2.9						
ANMO	Albuquerque	23.12	123	P	P	09 55 40.9	+0.4
	0.2nm,0.4s,baz=342,slow=14,SNR=1.6						
TXAR	Lajitas Array	28.98	127	P	P	09 56 35.5	+1.3
	0.5nm,0.9s,baz=316,slow=7.0,SNR=4.3						
H11N2	WAKE ISLAND Hy	57.90	262	T	T	11 02 58.2	
	baz=42,slow=75,SNR=83						
H11N3	WAKE ISLAND Hy	57.90	262	T	T	11 02 55.4	
	baz=42,slow=75,SNR=84						
H11N1	WAKE ISLAND Hy	57.92	262	T	T	11 02 57.1	
	baz=42,slow=75,SNR=81						
MKAR	Makanchi Array	79.19	338	P	P	10 02 38.9	-0.3
	0.1nm,0.6s,baz=33,slow=3.4,SNR=2.3						

IDC 31 09:57:56.4±2.4**, 28°.44S×177°.02W, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/29**, mbtmp4.0**/3**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx3.0**/22**, Error ellipse: s-maj=75.8km s-min=32.5km az=132.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.13	224	Pn	Pb	09 58 18.8	0.0
	288nm,0.3s,baz=70,slow=20,SNR=5.1						
RAO				Sn	Sb	09 58 33.4	-0.6
	730nm,0.3s,baz=95,slow=20,SNR=7.0						
RAO				LR	LR	09 58 44.5	
	comp=Z,1μm,21.1s,baz=96,slow=43						
DZM	Mont Dzumac	16.24	289	*e*LR	LR	10 05 31.0	
	comp=Z,255nm,23.5s						
TBI	Tubuai	25.28	85	*e*LR	LR	10 09 33.4	
	comp=Z,103nm,30.0s						
PPT2	Papeete2	27.41	73	*e*LR	LR	10 10 30.7	
	comp=Z,97nm,27.2s,baz=237						
PPT	Papeete	27.42	73	LR	LR	10 12 03.5	
	comp=Z,33nm,21.9s,baz=214,slow=31						
STKA	Stephens Creek	35.79	254	P	P	10 04 57.1	-0.4
	1.8nm,0.8s,baz=70,slow=13,SNR=3.7						
STKA				LR	LR	10 18 38.6	
	comp=Z,90nm,18.0s,baz=29,slow=35						
ASAR	Alice Springs	44.11	264	P	P	10 06 06.8	0.0
	1.3nm,0.8s,baz=101,slow=7.4,SNR=17						
ASAR				LR	LR	10 23 57.3	
	comp=Z,126nm,19.0s,baz=105,slow=35						
WRA	Warramunga Arr	44.92	270	P	P	10 06 13.7	+0.5
	2.9nm,0.9s,baz=100,slow=7.5,SNR=5.0						
KURBB	Kurchatov Arra	120.35	314	PKP	PKPdf	10 16 47.6	-1.7
	0.3nm,0.8s,baz=74,slow=2.3,SNR=2.4						
FINES	FINESS Array B	143.59	341	PKP	PKPdf	10 17 31.6	-0.9
	2.5nm,0.9s,baz=46,slow=8.3,SNR=3.9						
AKASG	Malin Array Be	150.22	326	PKPbc	PKiKP	10 17 49.9	0.0
	1.3nm,0.6s,baz=43,slow=2.1,SNR=4.2						

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*ISCJB **31** 09:59:32.7±0.8, 50°.56N±0°.05×130°.2W±0°.1, h10^{km}, mb3.4/4, MS3.2/6, Error ellipse: s-maj=12.1km s-min=6.0km az=157.8*

*IDC **31** 09:59:33.1±1.3, 50°.50N×130°.10W, h0^{km}, mb3.5/4, mb1 3.6/10, mb1mx3.5/41, mbtmp3.4/10, ML3.2/6, MS3.1/15, Ms1 3.1/15, ms1mx3.0/43, Error ellipse: s-maj=21.7km s-min=12.3km az=77.0*

ISC 31 09:59:35.0±1.1**, 50°.55N**±0°.08×**130°.1W**±0°.1**, h10^{km}, n24, σ1^{s}54**/13**, mb3.4**/4**, MS3.1**/6**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBB	Bella Bella	2.06	36	Pn	Pn	10 00 08.4	-1.1
	9.5nm,0.3s,baz=224,slow=5.9,SNR=190						
BBB				Sn	Sn	10 00 34.4	-0.8
	32nm,0.3s,baz=295,slow=22,SNR=12						
BBB				LR	LR	10 00 43.1	
	comp=Z,71nm,18.8s,baz=202,slow=33						
H02S1	DAWSON INLET T	3.04	332	Pn	Pn	10 00 20.8	-2.3
H02S1				Sn	Sn	10 00 56.2	-3.3
	SNR=485						
DLBC	Dease Lake	7.91	0	Pn	Pn	10 01 30.1	+0.2
	0.1nm,0.3s,baz=186,slow=16,SNR=2.1						
DLBC				Sn	Sn	10 03 01.1	+1.7
	0.2nm,0.3s,baz=181,slow=24,SNR=2.9						
DLBC				LR	LR	10 04 06.1	
	comp=Z,51nm,18.1s,baz=161,slow=34						
NEW	Newport	8.76	100	LR	LR	10 05 25.2	
	comp=Z,42nm,21.8s,baz=285,slow=40						
YBH	Yreka Blue Hor	10.19	147	Pn	Pn	10 02 00.9	-0.4
	0.1nm,0.3s,baz=336,slow=7.4,SNR=12						
YBH				LR	LR	10 05 23.7	
	comp=Z,183nm,19.7s,baz=328,slow=34						
ELK	Elko	14.26	128	LR	LR	10 08 25.8	
	comp=Z,63nm,21.1s,baz=314,slow=37						
YKA	Yellowknife Ar	14.65	29	LR	LR	10 09 24.5	
	comp=Z,5.9nm,20.6s,baz=221,slow=40						
NVAR	Mina Array Bea	14.73	141	Pn	Pn	10 03 04.3	+0.9
	0.0nm,0.3s,baz=311,slow=9.7,SNR=8.5						
NVAR				LR	LR	10 08 31.6	
	comp=Z,95nm,22.0s,baz=320,slow=36						
KDAK	Kodiak Island	14.98	308	LR	LR	10 07 27.4	
	comp=Z,131nm,20.2s,slow=32						
PDAR	Pinedale Array	16.07	111	Pn	Pn	10 03 22.5	+1.4
	0.1nm,0.3s,baz=301,slow=12,SNR=6.6						
ILAR	Eielson Array	16.76	335	Pn	Pn	10 03 31.3	+1.8
	0.0nm,0.3s,baz=134,slow=6.4,SNR=2.7						
ILAR				LR	LR	10 09 31.8	
	comp=Z,75nm,18.8s,baz=146,slow=36						
INK	Inuvik	17.89	356	LR	LR	10 10 03.3	
	comp=Z,55nm,19.1s,baz=122,slow=35						
ULM	Lac du Bonnet	21.70	77	P	P	10 04 25.4	-0.5
	3.8nm,0.9s,baz=290,slow=12,SNR=2.7						
ULM				LR	LR	10 13 23.9	
	comp=Z,33nm,19.0s,baz=3.5,slow=38						
ANMO	Albuquerque	23.19	123	P	P	10 04 41.1	-0.8
	0.3nm,0.4s,baz=327,slow=10.0,SNR=3.8						
RES	Resolute Bay	28.25	19	LR	LR	10 17 18.2	
	comp=Z,37nm,19.6s,baz=8.5,slow=38						
TXAR	Lajitas Array	29.05	127	P	P	10 05 34.7	-0.6
	0.4nm,0.8s,baz=342,slow=7.9,SNR=5.5						
SCHQ	Schefferville	37.42	58	LR	LR	10 22 27.4	
	comp=Z,111nm,19.5s,baz=342,slow=37						
PETK	Petropavlovsk-	42.95	303	LR	LR	10 25 21.6	
	comp=Z,21nm,18.1s,baz=83,slow=36						
TEIG	Tepich	44.67	117	LR	LR	10 30 52.3	
	comp=Z,109nm,18.2s,baz=226,slow=42						
H11N2	WAKE ISLAND Hy	57.92	262	T	T	11 11 56.4	
	baz=42,slow=75,SNR=56						
H11N3	WAKE ISLAND Hy	57.92	262	T	T	11 11 54.8	
	baz=42,slow=75,SNR=59						
H11N1	WAKE ISLAND Hy	57.93	262	T	T	11 11 56.0	
	baz=42,slow=75,SNR=44						
JNU	Nakatsue	70.44	298	LR	LR	10 39 30.1	
	comp=Z,14nm,20.5s,baz=342,slow=34						
MKAR	Makanchi Array	79.08	338	P	P	10 11 40.0	+0.7
	0.3nm,0.6s,baz=16,slow=6.6,SNR=3.3						

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*AZER **31** 10:01:58.1±0.4, 37°.61N×48°.64E, h8^{km}±2^{km}, ml3.2/5, Error ellipse: s-maj=12.0km s-min=6.0km az=283.0*

*TEH **31** 10:01:58.8, 37°.59N×48°.91E, h5^{km}, ML3.1*

*THR **31** 10:02:00.3, 37°.52N×48°.75E, h29^{km}, ML3.0*

ISC 31 10:01:59.3±1.2**, 37°.58N**±0°.03×**48°.75E**±0°.05**, h10^{km}**±11^{km}**, n25, σ0^{s}72**/29**, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	Sarab	0.89	286	*e*Pg	Pn	10 02 18.5	+0.4
ISRB				IAMB	IAmb	10 02 34.1	
	comp=N,10μm,0.2s						
ZNJK	Zanjan	0.91	183	*e*Pg	Pg	10 02 16.7	-0.1
ZNJK	Zanjan	0.91	183	Pg	Pg	10 02 16.7	-0.1
ZNJK				Sg	Sg	10 02 28.4	-0.2
ASTR	Astara	0.98	2	P	Pn	10 02 18.5	-0.6
	SNR=15						
ASTR				S	Sn	10 02 33.4	+0.3
LRK	Lerik	1.11	343	P	Pn	10 02 20.8	-0.3
	SNR=66						
LRK				S	Sn	10 02 37.1	+0.5
LKRN	Lenkeran, Azer	1.13	1	P	Pn	10 02 21.5	+0.3
	SNR=10						
LKRN				S	Sn	10 02 37.3	+0.5
IHSH	Hashtrud	1.38	302	*e*Pn	Pn	10 02 24.1	-0.9
IHSH				IAMB	IAmb	10 02 25.5	
	comp=Z,10μm,0.1s						
GRMI	Germi	1.40	332	*e*Pg	Pg	10 02 26.6	+0.4
GRMI	Germi	1.40	332	Pg	Pg	10 02 26.6	+0.4
GRMI				Sg	Sg	10 02 46.0	+1.6
IHRS	Heris	1.54	299	*e*Pn	Pg	10 02 29.2	+0.4
IHRS				IAMB	IAmb	10 02 34.2	
	comp=Z,2μm,0.2s						
IGZV	Ghazvin	1.67	135	*e*Pn	Pn	10 02 28.4	-0.5
IGZV				IAMB	IAmb	10 02 31.3	
	comp=Z,2μm,0.3s						
GLBA	Clilabad	1.69	351	P	Pg	10 02 30.7	-0.9
GLBA				S	Sg	10 02 54.3	+0.8
QALM	Alamut, Qazvin	1.90	126	*e*Pn	Pn	10 02 32.5	+0.5
QABG	Abgarm-Qazvin	1.98	160	*e*Pn	Pb	10 02 35.2	-0.4
ITBZ	Tabriz	2.16	288	IAMB	IAmb	10 02 48.6	
	comp=Z,468nm,0.3s						
IAZR	Azarshahr	2.20	273	IAMB	IAmb	10 03 17.2	
	comp=Z,1μm,0.2s						
HSRG	Sareghieh	2.36	189	*e*Pn	Pb	10 02 41.5	-0.6
HSRG				IAMB	IAmb	10 03 17.4	
	comp=Z,0.0nm,0.6s						
IRAZ	Razeghan	2.37	156	*e*Pn	Pb	10 02 40.7	-1.5
THKV	Tehran--Karaj	2.38	133	*e*Pn	Pn	10 02 39.2	+0.6
THKV	Tehran--Karaj	2.38	133	AML	AML	10 03 13.1	
	comp=N,80nm,0.5s						
THKV				AML	AML	10 03 13.5	
	comp=E,80nm,0.4s						
THKV	Tehran--Karaj	2.38	133	Pn	Pn	10 02 39.1	+0.6
THKV				Sg	Sb	10 03 12.4	+0.5
ORD	Ordubad	2.55	303	P	Pb	10 02 43.9	-1.4
ORD				S	Sg	10 03 21.6	+0.3
SNGE	Sanandaj	2.73	205	*e*Pn	Pn	10 02 43.7	+0.4
SNGE	Sanandaj	2.73	205	Pn	Pn	10 02 43.7	+0.4
ONI	Oni	6.45	323	P		10 02 26.6	
ONI				S		10 02 28.8	

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*ISK **31** 10:17:15.8, 40°.38N×25°.81E, h8^{km}, ML2.3/9*

*ISCJB **31** 10:17:16.0±0.4, 40°.37N±0°.02×25°.79E±0°.03, h7^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.4km az=171.8*

*DDA **31** 10:17:16.6, 40°.37N×25°.87E, h7^{km}±3^{km}, ML2.9*

*ATH **31** 10:17:16.3, 40°.37N×25°.80E, h14^{km}±6^{km}, ML2.0/4, Error ellipse: s-maj=6.2km s-min=1.2km az=294.0*

ISC 31 10:17:16.5±0.9**, 40°.37N**±0°.02×**25°.79E**±0°.03**, h11^{km}**±9^{km}**, n22, σ0^{s}44**/35**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.20	155	PG	Pg	10 17 20.8	+0.2
GADA				SG	Sg	10 17 23.6	+0.1
SMTH	Samothraki Isl	0.22	297	P	Pg	10 17 20.9	-0.2
SMTH				S	Sg	10 17 24.3	0.0
SMTH				AML	AML	10 17 24.5	
	comp=N,1535μm,0.1s						
SMTH				AML	AML	10 17 26.1	
	comp=E,903μm,0.1s						
ENEZ	Enez	0.46	37	PG	Pg	10 17 24.9	-0.6
ENEZ				SG	Sg	10 17 31.5	0.0
ALN	Alexandroupoli	0.56	20	PG	Pg	10 17 26.9	-0.5
ALN				SG	Sg	10 17 34.9	+0.1
ALN	Alexandroupoli	0.56	20	P	Pg	10 17 27.2	-0.2
ALN				S	Sg	10 17 35.1	+0.3
ALN				AML	AML	10 17 36.6	
	comp=E,248μm,0.2s						
ALN				AML	AML	10 17 36.7	
	comp=N,236μm,0.4s						
BOZC	Bozcaada	0.56	159	PG	Pg	10 17 27.2	-0.2
BOZC				SG	Sg	10 17 35.4	+0.6
BOZC	Bozcaada	0.56	159	*i* P	Pb	10 17 28.1	-0.2
BOZC				*i* S	Sg	10 17 34.3	-0.6
BOZC				IAML_P			
	comp=Z,5μm,0.1s						
LIA	Limnos Island	0.66	225	P	Pg	10 17 29.2	-0.1
LIA				S	Sg	10 17 38.0	0.0
LIA				AML	AML	10 17 40.9	
	comp=N,358μm,0.6s						
LIA				AML	AML	10 17 41.5	
	comp=E,354μm,0.5s						
EZN	Ezine	0.68	143	PG	Pg	10 17 29.1	-0.5
LPK	Lapseki	0.74	89	PG	Pg	10 17 30.2	-0.5
RDO	Rodhopi	0.80	346	PG	Pg	10 17 31.4	-0.5
RDO	Rodhopi	0.80	346	P	Pg	10 17 31.4	-0.5
RDO				S	Sg	10 17 42.5	+0.2
RDO				AML	AML	10 17 45.7	
	comp=E,248μm,0.3s						
RDO				AML	AML	10 17 46.3	
	comp=N,250μm,0.3s						
KESN	Edirne-Kesan	0.81	56	*i* P	Pg	10 17 32.5	+0.2
KESN				*i* S	Sg	10 17 42.9	-0.1
KESN				IAML_P			
	comp=Z,396nm,0.1s						
THAS	Thassos island	0.85	286	P	Pg	10 17 32.9	0.0
THAS				S	Sg	10 17 44.0	0.0
BAYC	CANAKKALE_Bayr	0.85	137	*i* P	Pg	10 17 33.1	+0.1
BAYC				*i* S	Sb	10 17 44.9	+0.1
BAYC				IAML_P			
	comp=Z,1μm,0.2s						
GPNR	Gulpinar-Canak	0.95	164	PG	Pg	10 17 34.5	-0.2
RKY	Sarkoy-Tekirda	1.10	73	PN	Pg	10 17 36.9	-0.8
KAVA	Kavala	1.16	303	P	Pg	10 17 38.1	-0.6
SIGR	SIGRI	1.16	178	PN	Pg	10 17 37.9	-0.8
SIGR	SIGRI	1.16	178	P	Pg	10 17 37.8	-0.9
KIRK	Kırklareli	1.72	35	*i* P	Pn	10 17 47.2	+0.8
KIRK				*i* S	Sb	10 18 09.8	0.0
KIRK				IAML_P			
	comp=Z,201nm,0.2s						
CHOS	Chios island	1.99	174	PN	Pn	10 17 50.5	+0.4

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*IDC **31** 10:19:02.3±1.0, 18°.43N×104°.04W, h0^{km}, mb4.0/10, mb1 4.2/14, mb1mx4.0/49, mbtmp4.0/14, ML3.5/4, MS3.4/7, Ms1 3.4/7, ms1mx3.1/34, Error ellipse: s-maj=31.3km s-min=17.0km az=56.0*

*NEIC **31** 10:19:04.8±0.0, 18°.41N×104°.20W, h5^{km}, mb4.0/69, MD4.1(MEX), After MEX.*

*MEX **31** 10:19:04.8±0.6, 18°.41N×104°.20W, h5^{km}±5^{km}, MD4.1*

ISC 31 10:19:03.5±3.7**, 18°.54N**±0°.07×**104°.01W**±0°.06**, h10^{km}**±23^{km}**, n220, σ1^{s}70**/213**, mb4.1**/40**, MS3.1**/4**, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.68	112	*e*Pg	Pn	10 19 18.8	-0.4
MMIG				*e*Sg	Sn	10 19 30.0	+0.1
MMIG	Aquila	0.68	112	*e*P	Pn	10 19 18.8	-0.4
MMIG				*i* S	Sn	10 19 30.0	+0.1
EZ5V		1.01	22	*e*P	Pn	10 19 24.6	+0.6
EZ5V				*i* S	Sn	10 19 39.9	+1.5
CJM	Chamela	1.36	314	*e*Pn	Pn	10 19 26.7	-1.9
CJM				*e*Sn	Sn	10 19 42.8	-4.0
CJM	Chamela	1.36	314	*e*P	Pn	10 19 26.7	-1.9
CJM				*e*S	Sn	10 19 42.8	-4.0
ANIG	Ahuacatlan	2.54	349	*e*Pn	Pn	10 19 45.7	+0.7
ANIG				*e*Sn	Sn	10 20 16.8	+0.7
ANIG	Ahuacatlan	2.54	349	*e*P	Pn	10 19 45.7	+0.7

ANIG				eS	Sn	10 20 16.8	+0.7
ZIIG	Zihuatanejo	2.59	111	ePn	Pn	10 19 45.8	+0.2
ZIIG				eSn	Sb	10 20 19.1	-3.0
ZIIG	Zihuatanejo	2.59	111	eP	Pn	10 19 45.8	+0.2
ZIIG				i S	Sb	10 20 19.1	-3.0
ARIG	Puente Sto Nin	3.49	94	eP	Pb	10 19 59.7	-5.7
ARIG				eS	Sb	10 20 41.6	-6.3
TLIG	Tlapa	5.27	100	ePn	Pn	10 20 26.6	+4.1
TLIG				eSn	Sn	10 21 24.5	+1.1
LVIG	Laguna Verde	7.27	79	ePn	Pn	10 20 53.2	+3.3
LNIG	Linares	7.61	33	ePn	Pn	10 20 58.9	+4.5
HPIG		8.49	350	ePn	Pn	10 21 08.6	+1.8
KVTX	Kingsville	10.58	31	ePn	Pn	10 21 39.1	+3.9
TX31	Lajitas Ar. Si	10.75	2	ePn	Pn	10 21 40.1	+2.5
TXAR	Lajitas Array	10.75	2	Pn	Pn	10 21 42.8	+5.2
	0.1nm,0.3s,baz=184,slow=14,SNR=29						
TXAR				Lg	Lg	10 24 44.2	
	0.1nm,0.3s,baz=184,slow=30,SNR=5.5						
TXAR				LR	LR	10 26 19.2	
	comp=Z,272nm,19.3s,baz=0.0,slow=40						
SRIG	Santa Rosalia	11.56	321	ePn	Pn	10 21 48.6	-0.1
HSIG		12.21	330	ePn	Pn	10 21 59.0	+1.5
JCT	Junction City	12.48	17	ePn	Pn	10 22 05.1	+3.8
APG	El Apazote	13.44	103	Pn	Pn	10 22 15.7	+1.1
	0.1nm,0.3s,baz=266,slow=15,SNR=2.2						
APG				Lg	Lg	10 26 07.5	
	0.1nm,0.3s,baz=227,slow=19,SNR=2.3						
APG				LR	LR	10 27 20.9	
	comp=Z,149nm,21.7s,baz=243,slow=37						
HKT	Hockley	13.58	32	ePn	Pn	10 22 17.6	+1.5
GDL2	Guadalupe Moun	13.61	359	ePn	P	10 22 21.4	-4.4
319A	Douglas	13.64	341	ePn	Pn	10 22 20.3	+3.2
121A	Cookes Peak, D	14.34	347	P	P	10 22 31.6	-2.4
	baz=166						
ABTX	Abilene, Hawle	14.56	15	ePn	P	10 22 33.9	-2.4
ABTX	Abilene, Hawle	14.56	15	P	P	10 22 36.9	+0.6
	baz=197						
WHTX	Lake Whitney,	14.64	23	P	P	10 22 37.5	+0.3
	baz=206						
TEIG	Tepich	14.94	81	ePn	P	10 22 37.4	-3.2
	9.8nm,1.1s						
TUC	Tucson	15.01	337	ePn	P	10 22 40.8	-0.5
	2.7nm,0.8s						
TUC	Tucson	15.01	337	P	P	10 22 40.4	-0.9
	baz=155						
MSTX	Muleshoe	15.40	4	ePn	P	10 22 44.4	-1.3
	13nm,0.9s						
MSTX	Muleshoe	15.40	4	P	P	10 22 43.9	-1.9
	baz=185,SNR=9.3						
214A	Organ Pipe Nat	15.54	331	P	P	10 22 46.8	-0.4
	baz=148,SNR=6.5						
NATX	Nacogdoches	15.64	31	ePn	P	10 22 47.6	-0.5
	20nm,1.3s						
BNM	Barren Site	15.72	352	ePn	P	10 22 49.9	+0.5
LAZ	Ladron	16.04	351	ePn	Pn	10 22 51.0	+1.6
AMTX	Amarillo	16.41	7	ePn	Pn	10 22 53.5	-0.6
	7.8nm,0.9s						
AMTX	Amarillo	16.41	7	P	P	10 22 56.9	0.0
	baz=188						
ANMO	Albuquerque	16.48	353	Pn	P	10 22 57.7	-0.1
	0.1nm,0.3s,baz=158,slow=8.4,SNR=16						
ANMO				LR	LR	10 30 02.2	
	comp=Z,195nm,18.3s,baz=163,slow=40						
ANMO	Albuquerque	16.48	353	ePn	P	10 22 58.2	+0.4
	5.5nm,1.0s						
ANMO	Albuquerque	16.48	353	P	P	10 22 59.2	+1.4
	baz=172						
113A	Mohawk Valley,	16.66	330	ePn	Pn	10 22 58.6	+1.5
	2.1nm,0.8s						
TGUH	Tegucigalpa,Un	16.67	103	ePn	P	10 23 00.5	+0.6
	9.1nm,0.8s						
WMOK	Wichita Mounta	16.79	15	eP	P	10 23 00.2	-0.8
	5.8nm,1.1s						
WMOK	Wichita Mounta	16.79	15	P	P	10 23 01.1	+0.1
	baz=198						
X16A	Lo Mia Camp, P	17.14	339	eP	Pn	10 23 05.1	+1.7
	3.0nm,0.8s						
W18A	Petrified Fore	17.28	344	eP	Pn	10 23 05.8	+0.7
	3.2nm,0.8s						
W18A	Petrified Fore	17.28	344	P	P	10 23 08.6	+2.0
	baz=162						
Y14A	Wickenburg	17.31	334	eP	Pn	10 23 07.0	+1.6
	2.9nm,0.8s						
IKP	In-Ko-Pah, Jac	17.77	325	P	P	10 23 14.3	+2.4
	baz=140						
Z41A	Richland Creek	17.77	32	P	P	10 23 11.8	0.0
	baz=217						
PDMCI	Parker Dam,Lak	18.11	332	P	P	10 23 18.3	+2.7
	baz=148						
MONP2	Monument Peak	18.12	324	P	P	10 23 18.1	+2.2
	baz=140						
WUAZ	Wupatki	18.12	340	eP	P	10 23 17.6	+1.7
	3.3nm,1.0s						
WUAZ	Wupatki	18.12	340	P	P	10 23 18.0	+2.0
	baz=158						
IRM	Iron Mountain	18.45	330	P	Pn	10 23 22.2	+2.8
	baz=145						
T25A	Trinidad	18.53	359	P	Pn	10 23 22.3	+1.7
	baz=179						
W13A	Hualapai Mount	18.68	334	eP	Pn	10 23 23.7	+1.3
	2.2nm,1.0s						
PFO	Pinyon Flats O	18.69	326	P	Pn	10 23 24.1	+1.7
	0.1nm,0.3s,baz=123,slow=7.5,SNR=6.5						
PFO	Pinyon Flats O	18.69	326	eP	Pn	10 23 24.1	+1.7
	7.2nm,1.0s						
PFO	Pinyon Flats O	18.69	326	P	Pn	10 23 25.1	+2.6
	baz=141						
BELC	Belle Mtn. Jos	18.75	328	P	Pn	10 23 25.5	+2.3
	baz=143						
TUL1	Leonard	18.77	21	eP	Pn	10 23 23.8	+0.6
	6.6nm,0.9s						
W39A	Magazine	18.91	27	eP	Pn	10 23 25.8	+0.9
	6.2nm,1.2s						
MVCO	Mesa Verde	19.01	349	eP	Pn	10 23 28.3	+1.9
	5.3nm,0.9s						
MVCO	Mesa Verde	19.01	349	P	Pn	10 23 28.1	+1.6
	baz=168						
MURC	Murrieta	19.08	324	P	Pn	10 23 28.6	+1.5
	baz=139						
SDCO	Great Sand Dun	19.18	356	eP	Pn	10 23 29.4	+0.9
	2.1nm,1.0s						
SDCO	Great Sand Dun	19.18	356	P	Pn	10 23 29.2	+0.7
	baz=176						
S22A	4UR Ranch, Cre	19.29	353	P	Pn	10 23 30.6	+0.8
	baz=172,SNR=5.1						
449A	Pace	19.49	48	P	P	10 23 29.7	-1.1
	baz=235						
HEC	Hector,Ludlow	19.58	328	P	Pn	10 23 35.1	+2.0
	baz=144						
W41B	Gary Mavity, V	19.58	30	P	Pn	10 23 32.5	-0.5
	baz=215						
BFSC	Mount Baldy Ra	19.81	325	P	Pn	10 23 37.2	+1.3
	baz=139						
BRAL	Brewton	19.84	47	eP	Pn	10 23 36.5	+0.3
	30nm,1.0s						
BRAL	Brewton	19.84	47	P	P	10 23 33.5	-1.1
	baz=235						
349A	Repton	19.85	47	P	Pn	10 23 34.0	-2.2
	baz=234						
TUQ	Turquoise Moun	19.86	330	P	Pn	10 23 37.8	+1.2
	baz=146,SNR=5.9						
KNB	Kanab	19.97	339	eP	P	10 23 37.8	+1.6
	3.8nm,1.0s						
LCMT	Little Creek M	20.11	338	eP	Pn	10 23 40.3	+0.8
	3.3nm,1.0s						
GSC	Goldstone, Bar	20.18	328	eP	Pn	10 23 41.1	+0.8
	5.2nm,0.8s						
GSC	Goldstone, Bar	20.18	328	P	P	10 23 40.8	+2.4
	baz=143						
PKCU	Pink Cliffs	20.19	341	eP	Pn	10 23 41.5	+0.9
	9.1nm,1.2s						
FCAR	Ozark Folk Cen	20.23	29	eP	Pn	10 23 39.5	-1.1
	6.6nm,1.4s						
SHOC	Shoshone, Teco	20.41	330	P	P	10 23 42.9	+2.1
	baz=145,SNR=6.6						
SHPR	Sheep Range	20.41	333	eP	P	10 23 43.3	+2.3
	5.9nm,1.0s						
EDW2	Edwards Air Fo	20.48	325	P	P	10 23 43.2	+1.6
	baz=140						
CBKS	Cedar Bluff	20.54	10	eP	Pn	10 23 45.1	+0.7
	7.7nm,0.8s						
CCUT	Cedar City	20.64	339	eP	Pn	10 23 46.0	+0.3
	3.2nm,1.1s						
OSI	Osito Audit: C	20.68	324	eP	P	10 23 44.4	+0.6
	20nm,0.4s						
MTPU	Mount Pierson	20.70	341	eP	Pn	10 23 46.5	-0.1
	7.3nm,0.8s						
SMCO	Snowmass	20.72	353	eP	Pn	10 23 46.6	-0.4
	5.5nm,1.0s						
LRMC	Laurel Mtn Rad	20.77	327	P	P	10 23 47.2	+2.4
	baz=142						
250A	Grady	20.85	47	eP	Pn	10 23 46.9	-1.1
	11nm,0.9s						
LRAL	Lakeview Retre	21.00	43	eP	P	10 23 46.3	-1.0
	2.9nm,0.9s						
LRAL	Lakeview Retre	21.00	43	P	P	10 23 46.2	-1.0
	baz=231						
ARVC	Arvin	21.12	324	P	P	10 23 50.6	+2.2
	baz=138						
MPMC	Manual Prospec	21.12	328	P	P	10 23 51.0	+2.3
	baz=143,SNR=14						
FURC	Furnace Creek,	21.15	330	P	P	10 23 51.0	+2.4
	baz=145						
Q16A	Castle Valley	21.24	344	eP	P	10 23 51.3	+1.4
	5.1nm,0.9s						
TPNV	Topopah Spring	21.26	332	eP	P	10 23 53.0	+2.9
	15nm,0.8s						
TPNV	Topopah Spring	21.26	332	P	P	10 23 52.7	+2.5
	baz=147,SNR=31						
SRU	San Rafael Swe	21.26	346	eP	P	10 23 50.9	+0.7
	1.9nm,0.8s						
ISA	Isabella, Lake	21.32	326	eP	P	10 23 52.2	+1.5
	11nm,0.9s						
ISA	Isabella, Lake	21.32	326	P	P	10 23 52.8	+2.1
	baz=140,SNR=9.5						
DAC	Darwin (Calif)	21.35	329	eP	P	10 23 51.5	+0.4
	4.4nm,0.9s						
Y48A	Jasper	21.46	41	P	P	10 23 51.2	-0.9
	baz=229						
PKM	Mcpherson Peak	21.50	322	P	P	10 23 55.4	+2.6
	baz=136						
251A	Midway	21.51	48	P	P	10 23 51.3	-1.4
	baz=236						
352A	Blakely	21.52	50	eP	P	10 23 53.0	+0.2
	8.2nm,0.8s						
TMUT	Trail Mountain	21.60	345	eP	P	10 23 55.6	+1.6
	7.6nm,0.9s						
P17A	Butcher Ranch,	21.66	346	eP	P	10 23 55.2	+0.9
	5.2nm,1.0s						
PSUT	Pine Spring	21.69	339	eP	P	10 23 56.5	+1.8
	3.1nm,1.0s						
CWC	Cottonwood Cre	21.72	328	P	P	10 23 57.6	+2.6
	baz=142						
VES	Vestal, Richgr	21.78	325	P	P	10 23 58.6	+3.1
	baz=139						
GRAC	Grapevine Rang	21.81	330	P	P	10 23 58.9	+3.0
	baz=145						
O20A	White River Ci	21.83	351	P	P	10 23 57.4	+1.1
	baz=170						
Z50A	Ashland	21.84	44	P	P	10 23 55.7	-0.6
	baz=232						
Y49A	Blount Mountai	21.90	42	P	P	10 23 55.7	-1.2
	baz=230						
SMMC	Simmler	21.91	323	P	P	10 23 59.0	+2.0
	baz=136						
252A	Lumpkin	21.94	49	P	P	10 23 56.7	-0.6
	baz=237						
353A	Camilla	21.97	51	P	P	10 23 56.3	-1.3
	baz=239						
058A	Arcadia	22.13	63	P	P	10 23 56.9	-2.5
	baz=252						
R11A	Troy Canyon, C	22.17	335	eP	P	10 24 02.6	+2.7
	4.6nm,1.3s						
R11A	Troy Canyon, C	22.17	335	P	P	10 24 02.4	+2.5
	baz=150,SNR=6.2						
555A	McAlpin	22.33	55	P	P	10 23 59.8	-1.7
	baz=244						
PAGB	Antelope Grade	22.35	323	eP	P	10 24 03.8	+2.1
	18nm,1.4s						
656A	Willston	22.35	57	P	P	10 23 59.6	-2.1
	baz=246						
CCM	Cathedral Cave	22.41	27	P	P	10 24 01.4	-0.9
	baz=214						
455A	Stateville	22.57	53	P	P	10 24 02.3	-1.7
	baz=242						
WVT	Waverly	22.60	36	eP	P	10 24 03.5	-0.9
	7.7nm,1.4s						
WVT	Waverly	22.60	36	P	P	10 24 02.7	-1.6
	baz=224						
Y51A	Rockmart	22.81	44	P	P	10 24 04.6	-1.9
	baz=233						
W49A	Belvidere	22.82	40	P	P	10 24 04.8	-1.8
	baz=228						
Z52A	Williamson	22.82	46	P	P	10 24 05.1	-1.7
	baz=235,SNR=5.5						
DUG	Dugway, Tooele	22.88	342	eP	P	10 24 08.2	+0.8
	2.9nm,1.0s						
254A	Abbeville	22.95	50	P	P	10 24 06.0	-2.1
	baz=239						
OMMB	Old Mammoth Mi	23.09	328	eP	P	10 24 11.8	+1.9
	6.1nm,1.0s						
MDPB	Devils Postpil	23.15	328	eP	P	10 24 11.8	+1.5
	9.4nm,1.1s						
NV11	Mina Array Sit	23.34	331	eP	P	10 24 13.7	+1.5
NV01	Mina Array Sit	23.41	331	eP	P	10 24 15.0	+2.1
NVAR	Mina Array Bea	23.41	331	P	P	10 24 15.0	+2.1
	2.2nm,0.8s,baz=158,slow=11,SNR=14						
CLTN	Cedars of Leba	23.43	38	eP	P	10 24 10.7	-2.3
	3.0nm,1.0s						
Y52A	Lilburn	23.45	46	P	P	10 24 11.4	-1.8
	baz=234						
Z53A	Monticello	23.46	47	P	P	10 24 11.9	-1.3
	baz=236						
V49A	McMinnville	23.47	39	P	P	10 24 11.5	-1.8
	baz=228						
GOGA	Godfrey	23.61	47	eP	P	10 24 13.5	-1.2
	4.4nm,0.6s						
GOGA	Godfrey	23.61	47	P	P	10 24 12.5	-2.1
	baz=236						
T47A	Sharon Grove	23.63	36	eP	P	10 24 13.4	-1.5
	4.8nm,0.9s						
RYN	Ryan	23.67	331	eP	P	10 24 17.0	+1.6
	5.4nm,1.0s						
KVN	Kaiserville	23.82	332	eP	P	10 24 18.7	+1.8
	4.2nm,0.9s						
V50A	Pikevile	23.90	41	P	P	10 24 16.0	-1.5
	baz=229,SNR=5.8						
X52A	Dahlonega	24.00	44	P	P	10 24 16.6	-1.9
	baz=233						
256A	Glennville	24.01	52	P	P	10 24 16.6	-1.9
	baz=241						
U49A	Red Boiling Sp	24.05	38	P	P	10 24 17.8	-1.1
	baz=227						
K22A	Casper	24.13	355	P	P	10 24 19.8	0.0
	baz=175						
ELK	Elko	24.14	339	P	P	10 24 21.2	+1.3
	0.8nm,0.7s,baz=176,slow=8.1,SNR=5.7						
ELK				LR	LR	10 34 02.2	
	comp=Z,66nm,18.7s,baz=162,slow=37						
Y54A	Tignall	24.40	47	P	P	10 24 20.2	-1.9
	baz=237						
PNTR	Pine Nut	24.54	330	eP	P	10 24 25.7	+2.0
	7.3nm,0.9s						
U50A	Jamestown	24.54	40	P	P	10 24 21.5	-1.9
	baz=229						
PD31	Pinedale Array	24.60	350	eP	P	10 24 25.1	+0.9
	2.1nm,1.0s						
PDAR	Pinedale Array	24.60	350	P	P	10 24 25.1	+0.9
	0.5nm,0.6s,baz=159,slow=10,SNR=6.7						
156A	Sylvania	24.62	51	P	P	10 24 21.9	-2.3
	baz=241						
TKL	Tuckaleechee C	24.72	42	LR	LR	10 36 37.5	
	comp=Z,47nm,19.4s,baz=254,slow=42						
W53A	Cullowhee	24.82	44	P	P	10 24 25.0	-1.1
	baz=234						
PAHR	Pah Rah Range	24.93	331	eP	P	10 24 28.7	+1.6
	3.8nm,0.8s						
T50A	Nancy	24.95	39	P	P	10 24 25.8	-1.3
	baz=228						
V52A	Sevierville	24.95	42	P	P	10 24 26.2	-0.9
	baz=232						
X54A	Belton	24.99	46	P	P	10 24 26.4	-1.1
	baz=236						
157A	Early Branch	25.00	51	P	P	10 24 25.6	-2.0
	baz=241						
U51A	La Follette	25.02	41	P	P	10 24 26.7	-1.1
	baz=230						
Z56A	Williston	25.05	50	P	P	10 24 27.2	-0.8
	baz=240						
S49A	Springfield	25.21	37	P	P	10 24 28.7	-0.7
	baz=226						
V53A	Saluda	25.35	43	eP	P	10 24 30.6	-0.2
	4.1nm,1.0s						
V53A	Saluda	25.35	43	P	P	10 24 30.0	-0.8
	baz=233						
T51A	Gray	25.45	40	P	P	10 24 31.3	-0.3
	baz=229						
TPAW	Teton Pass	25.55	348	eP	P	10 24 33.3	+0.5
	3.4nm,1.0s						
LOHW	Long Hollow	25.61	349	eP	P	10 24 35.3	+2.1
	1.9nm,0.8s						
HLID	Hailey	26.44	343	P	P	10 24 41.6	+0.8
	baz=158						
W57A	Gilead	26.97	47	P	P	10 24 43.3	-2.1
	baz=238						
M04C	Macdoel	27.71	331	P	P	10 24 53.0	+0.8
	baz=142						
BOZ	Bozeman (W)	27.71	348	P	P	10 24 52.6	+0.5
	baz=165						
Q52A	Bidwell	27.75	38	P	P	10 24 50.1	-2.3
	baz=229						
M02C	Callahan	27.90	329	P	P	10 24 53.7	-0.1
	baz=140						
YBH	Yreka Blue Hor	28.09	329	LR	LR	10 35 42.8	
	comp=Z,32nm,20.4s,baz=138,slow=36						
I42A	Draeger Farm,	28.28	23	P	P	10 24 56.4	-0.7
	baz=212						
N50A	Nevada	28.49	35	P	P	10 24 57.5	-1.4
	baz=225						
J05D	Fort Rock, OR	28.64	333	P	P	10 25 01.2	+0.8
	baz=145						
G40A	Rib Lake	29.03	20	P	P	10 25 02.5	-1.2
	baz=208						
J01E	Myrtle Point	29.76	330	P	P	10 25 11.1	+0.9
	baz=140						
AGMN	Agassiz Nation	30.41	11	P	P	10 25 15.0	-0.9
	baz=196						
LTY	Liberty	31.73	338	eP	P	10 25 28.5	+0.9
	2.9nm,1.0s						
I51A	Listowel	31.75	33	P	P	10 25 26.3	-1.5
	baz=225						
E46A	Sault Ste Mari	32.16	26	P	P	10 25 29.8	-1.6
	baz=217						
D03D	Eldon	32.86	336	P	P	10 25 38.0	+0.6
	baz=146						
PECO	Prince Edward	33.99	36	P	P	10 25 45.2	-2.1
	baz=230						
H55A	Tweed	34.28	35	P	P	10 25 47.4	-2.5
	baz=230						
ALGO	Algonquin Park	34.76	32	P	P	10 25 52.6	-1.4
	baz=227						
DLBC	Dease Lake	44.17	341	eP	P	10 27 13.3	+0.9
	5.2nm,0.8s						
YKA	Yellowknife Ar	44.53	353	P	P	10 27 14.3	-0.8
	0.4nm,0.4s,baz=164,slow=6.8,SNR=3.2						
YKB5	Yellowknife Ar	44.53	353	eP	P	10 27 14.3	-0.8
EPYK	Eagle Plains	52.33	344	P	P	10 28 14.8	-0.4
	baz=140						
INK	Inuvik	53.10	347	eP	P	10 28 21.5	+0.7
	4.2nm,0.6s						
ILAR	Eielson Array	54.30	339	P	P	10 28 30.8	+1.1
	3.3nm,0.9s,baz=150,slow=6.1,SNR=23						
ILB	Eielson Array	54.30	339	eP	P	10 28 31.1	+1.4
	4.7nm,0.9s						
SIV	San Ignacio	54.45	126	P	P	10 28 31.9	+0.4
	1.4nm,0.8s,baz=324,slow=9.1,SNR=7.2						
MLY	Manley	55.79	338	eP	P	10 28 41.7	+1.1
	2.8nm,1.0s						
TOLK	Toolik Lake Re	57.49	342	P	P	10 28 52.7	+0.2
	baz=127,SNR=5.8						
SPA0	Spitsbergen Ar	77.86	10	eP	P	10 31 02.3	+1.4
	45nm,1.5s						
SPITS	Spitsbergen Ar	77.86	10	P	P	10 31 02.3	+1.4
	4.7nm,0.8s,baz=312,slow=6.9,SNR=2.6						
PEA1	Petropavlovsk-	80.23	323	eP	P	10 31 14.8	+0.5
PETK	Petropavlovsk-	80.23	323	P	P	10 31 14.8	+0.5
	0.5nm,0.4s,baz=64,slow=13,SNR=5.2						
ARCES	ARCESS Array B	85.21	16	P	P	10 31 40.4	+0.4
	2.4nm,0.8s,baz=291,slow=7.6,SNR=4.8						
ESDC	Sonseca Array	85.80	50	P	P	10 31 44.8	+1.3
	1.7nm,0.8s,baz=305,slow=4.8,SNR=9.5						
RPZ	Rata Peaks	99.03	227	LR	LR	11 05 52.6	
	comp=Z,86nm,21.7s,baz=38,slow=28						
WR1	Warramunga Arr	125.14	258	ePKPdf	PKPdf	10 38 04.7	-0.4
WRA	Warramunga Arr	125.14	258	PKP	PKPdf	10 38 04.7	-0.4
	0.9nm,0.5s,baz=77,slow=5.3,SNR=3.0						
AS31	Alice Springs	126.03	254	ePKPdf	PKPdf	10 38 06.8	+0.1
ASAR	Alice Springs	126.03	254	PKP	PKPdf	10 38 06.8	+0.1
	0.6nm,0.7s,baz=81,slow=2.3,SNR=7.3						

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*ISCJB **31** 10:21:23.0±0.6, 40°.38N±0°.02×25°.79E±0°.04, h7^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=3.8km az=157.4*

*ATH **31** 10:21:23.1, 40°.37N×25°.79E, h13^{km}±6^{km}, ML1.8/4, Error ellipse: s-maj=6.3km s-min=1.1km az=302.0*

*DDA **31** 10:21:23.6, 40°.35N×25°.89E, h7^{km}±2^{km}, ML2.8*

*THE **31** 10:21:23.3, 40°.38N×25°.77E, h11^{km}±1^{km}, ML1.8/5, Error ellipse: s-maj=1.4km s-min=0.3km az=308.0*

ISC 31 10:21:23.1±1.0**, 40°.38N**±0°.02×**25°.79E**±0°.03**, h12**^{km}±9^{km}**, n16, σ0^{s}29**/31**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMTH	Samothraki Isl	0.22	296	P	Pg	10 21 27.6	-0.1
SMTH				S	Sg	10 21 31.0	+0.1
	365nm,0.1s						
SMTH	Samothraki Isl	0.22	296	P	Pg	10 21 27.6	-0.1
SMTH				S	Sg	10 21 31.0	+0.1
SMTH				AML	AML	10 21 31.1	
	comp=E,477µm,0.2s						
SMTH				AML	AML	10 21 31.3	
	comp=N,942µm,0.2s						
ALN	Alexandroupoli	0.56	21	P	Pg	10 21 33.8	-0.2
ALN				S	Sg	10 21 41.8	+0.4
	comp=N,58nm,0.4s						
ALN	Alexandroupoli	0.56	21	P	Pg	10 21 33.9	-0.2
ALN				S	Sg	10 21 41.7	+0.4
ALN				AML	AML	10 21 42.0	
	comp=E,178µm,0.2s						
ALN				AML	AML	10 21 42.2	
	comp=N,149µm,0.4s						
BOZC	Bozcaada	0.57	159	i P	Pb	10 21 35.0	-0.1
BOZC				i S	Sg	10 21 42.1	+0.3
LIA	Limnos Island	0.66	224	P	Pg	10 21 35.8	-0.2
LIA				S	Sg	10 21 45.4	+0.7
LIA	Limnos Island	0.66	224	P	Pg	10 21 35.8	-0.2
LIA				S	Sg	10 21 45.0	+0.3
LIA				AML	AML	10 21 48.1	
	comp=N,282µm,0.4s						
LIA				AML	AML	10 21 48.1	
	comp=E,237µm,0.2s						
RDO	Rodhopi	0.79	346	P	Pg	10 21 38.2	-0.2
RDO				S	Sb	10 21 49.6	0.0
	comp=E,118nm,0.2s						
RDO	Rodhopi	0.79	346	P	Pg	10 21 38.2	-0.2
RDO				S	Sg	10 21 48.9	+0.1
RDO				AML	AML	10 21 52.4	
	comp=E,218µm,0.2s						
RDO				AML	AML	10 21 53.0	
	comp=N,244µm,0.2s						
KESN	Edirne-Kesan	0.82	56	i P	Pg	10 21 39.2	+0.2
KESN				i S	Sg	10 21 49.8	+0.1
KESN				IAML_P			
	comp=Z,317nm,0.1s						
THAS	Thassos island	0.84	286	P	Pg	10 21 39.3	-0.1
THAS				S	Sg	10 21 50.8	+0.3
	comp=Z,50nm,0.2s						
THAS	Thassos island	0.84	286	P	Pg	10 21 39.4	0.0
THAS				S	Sg	10 21 51.0	+0.5
BAYC	CANAKKALE_Bayr	0.86	137	i P	Pg	10 21 39.9	+0.1
BAYC				i S	Sg	10 21 50.8	-0.2
KAVA	Kavala	1.15	303	P	Pb	10 21 44.7	-0.2
KAVA				S	Sb	10 22 00.0	+0.2
SIGR	SIGRI	1.17	177	P	Pb	10 21 44.7	-0.5
SIGR				S	Sn	10 22 01.2	+0.1
	comp=Z,62nm,0.3s						
SIGR	SIGRI	1.17	177	P	Pb	10 21 44.8	-0.5

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*IDC **31** 10:25:15.6±0.7, 8°.69S×80°.04W, h0^{km}, mb4.1/12, mb1 4.3/16, mb1mx4.1/44, mbtmp4.1/16, ML3.8/4, MS4.0/4, Ms1 4.0/4, ms1mx3.4/25, Error ellipse: s-maj=25.7km s-min=14.2km az=45.0*

*ISCJB **31** 10:25:19.7±0.2, 8°.54S±0°.04×79°.81W±0°.05, h39^{km}, mb4.5/113, Error ellipse: s-maj=8.4km s-min=4.0km az=147.5*

*NEIC **31** 10:25:21.0±0.0, 8°.81S×79°.99W, h44^{km}, mb4.6/112, ML4.5(ARE), After ARE.*

NEIC Felt [II] at Trujillo.

LIM 31 10:25:21.0, 8°.81S×79°.99W, h44km, ML4.5, MB4.6(NEIC)

ISC 31 10:25:21.0±0.4**, 8°.72S**±0°.05×**80°.05W**±0°.07**, h39km, n292,**
σ**0ˢ.98**/294**, mb4.5**/111**, Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.27**	**46**	Pn	**Pn**	**10 25 55.8**	**-0.5**
	175nm,0.3s,baz=215,slow=3.4,SNR=377						
ATAH				Sn	**Sn**	**10 26 27.6**	**+4.3**
	212nm,0.3s,baz=326,slow=18,SNR=8.4						
NNA	**Nana**	**4.53**	**136**	Pn	**Pn**	**10 26 26.5**	**-0.7**
	12nm,0.3s,baz=316,slow=9.4,SNR=24						
NNA				Sn	**Sn**	**10 27 19.5**	**+0.9**
	61nm,0.3s,baz=304,slow=21,SNR=6.7						
NNA	**Nana**	**4.53**	**136**	ePn	**Pn**	**10 26 26.5**	**-0.7**
NNA				eSn	**Sn**	**10 27 18.1**	**-0.5**
PTLC	**Puerto Leguiza**	**10.26**	**31**	eP	**Pn**	**10 27 45.9**	**+0.1**
PAYG	**Puerto Ayora**	**12.96**	**308**	ePn	**Pn**	**10 28 23.8**	**+1.1**
PRAC	**Prado**	**13.38**	**23**	eP	**P**	**10 28 35.5**	**-1.8**
ORTC	**Ortega, Tolima**	**13.42**	**21**	eP	**Pn**	**10 28 32.7**	**+3.5**
LPAZ	**La Paz**	**13.85**	**124**	Pn	**Pn**	**10 28 36.0**	**+0.6**
	0.0nm,0.3s,baz=304,slow=7.3,SNR=2.2						
LPAZ	**La Paz**	**13.85**	**124**	ePn	**Pn**	**10 28 34.2**	**-1.2**
RREF	**El Recreo**	**14.31**	**19**	eP	P	10 28 54.0	+5.7
MNMC	**Minye Minye**	**14.48**	**137**	ePn	**Pn**	**10 28 43.8**	**+0.1**
GUY2C	**Guyana, Caldas**	**14.61**	**19**	eP	**P**	**10 28 52.3**	**+0.8**
NORC	**Norcasia**	**15.10**	**20**	eP	**P**	**10 28 57.9**	**+1.5**
RUSC	**La Rusia**	**16.09**	**26**	eP	**P**	**10 29 11.4**	**+3.5**
PTBC	**PUERTO BERRIO,**	**16.15**	**20**	eP	**Pn**	**10 29 06.3**	**+1.0**
GO02	**Mina Guanaco**	**19.15**	**150**	eP	**Pn**	**10 29 42.8**	**+0.2**
SIV	**San Ignacio**	**19.88**	**113**	P	**P**	**10 29 48.5**	**-0.7**
	0.2nm,0.3s,baz=270,slow=19,SNR=2.7						
SIV				LR	LR	10 37 47.6	
	comp=Z,460nm,19.8s,baz=278,slow=38						
GO03	**Copiap**	**20.94**	**155**	eP	**P**	**10 30 00.7**	**0.0**
	14nm,1.1s						
ACON	**Acoyapa**	**21.17**	**346**	eP	**P**	**10 30 02.0**	**-1.1**
	12nm,1.0s						
PTGA	**Pitinga**	**21.51**	**69**	P	**P**	**10 30 05.7**	**-1.2**
	3.5nm,0.5s,baz=256,slow=13,SNR=9.6						
PTGA	**Pitinga**	**21.51**	**69**	eP	**P**	**10 30 02.6**	**-4.3**
	15nm,0.6s						
LCO	**Las Campanas**	**22.02**	**158**	eP	**P**	**10 30 13.5**	**+1.0**
	11nm,1.1s						
TGUH	**Tegucigalpa,Un**	**23.73**	**342**	eP	**P**	**10 30 27.7**	**-2.2**
	15nm,1.1s						
CFA	**Coronel Fontan**	**25.29**	**156**	LR	LR	10 38 19.2	
	comp=Z,70nm,20.1s,baz=280,slow=31						
MTDJ	**Mount Denham**	**26.89**	**5**	eP	**P**	**10 30 56.1**	**-2.5**
	56nm,1.4s						
GO05	**Huala**	**27.21**	**165**	eP	**P**	**10 31 01.5**	**+0.3**
	22nm,1.4s						
BDFB	**Brasilia**	**32.03**	**106**	LR	LR	10 45 33.4	
	comp=Z,314nm,19.1s,baz=302,slow=38						
LVIG	**Laguna Verde**	**32.54**	**330**	eP	**P**	**10 31 48.0**	**-0.5**
	26nm,1.0s						
PLCA	**Paso Flores**	**32.98**	**167**	P	**P**	**10 31 52.9**	**+0.6**
	2.1nm,0.8s,baz=359,slow=8.9,SNR=8.2						
PLCA	**Paso Flores**	**32.98**	**167**	eP	**P**	**10 31 54.3**	**+1.9**
	4.1nm,0.9s						
LNIG	**Linares**	**38.40**	**331**	eP	**P**	**10 32 38.8**	**-0.1**
	2.5nm,0.8s						
252A	**Lumpkin**	**40.73**	**354**	P	**P**	**10 32 58.8**	**+0.6**
	baz=173						
251A	**Midway**	**40.90**	**353**	P	**P**	**10 32 59.6**	**+0.1**
	baz=172						
249A	**Camden**	**41.02**	**351**	P	**P**	**10 33 01.0**	**+0.5**
	baz=169						
152A	**Waverly Hall**	**41.39**	**354**	P	**P**	**10 33 03.5**	**-0.1**
	baz=173						
150A	**Eclectic**	**41.48**	**352**	P	**P**	**10 33 04.3**	**-0.1**
	baz=171						
149A	**Jones**	**41.58**	**351**	P	**P**	**10 33 04.8**	**-0.4**
	baz=170						
Z53A	**Monticello**	**41.90**	**356**	P	**P**	**10 33 06.7**	**-1.0**
	baz=175						
147A	**Livingston**	**41.90**	**350**	eP	**P**	**10 33 06.7**	**-1.0**
	13μm,1.3s						
LRAL	**Lakeview Retre**	**42.04**	**351**	eP	**P**	**10 33 08.2**	**-0.7**
	4.7nm,1.0s						
LRAL	**Lakeview Retre**	**42.04**	**351**	P	**P**	**10 33 08.9**	**0.0**
	baz=170						
Z50A	**Ashland**	**42.11**	**353**	P	**P**	**10 33 09.1**	**-0.4**
	baz=171						
Z49A	**Columbiana**	**42.13**	**352**	P	**P**	**10 33 09.3**	**-0.4**
	baz=170						
NATX	**Nacogdoches**	**42.61**	**341**	eP	**P**	**10 33 12.5**	**-1.0**
	16nm,0.8s						
HPIG		**43.28**	**326**	eP	**P**	**10 33 19.6**	**+0.3**
	4.1nm,0.7s						
W53A	**Cullowhee**	**43.75**	**356**	P	**P**	**10 33 22.3**	**-0.5**
	baz=176						
W51A	**Cleveland**	**43.87**	**354**	P	**P**	**10 33 23.2**	**-0.4**
	baz=173						
LTX	**Lajitas**	**44.15**	**330**	eP	**P**	**10 33 26.5**	**+0.3**
TXAR	**Lajitas Array**	**44.15**	**330**	P	**P**	**10 33 26.5**	**+0.3**
	1.1nm,0.9s,baz=158,slow=9.5,SNR=11						
TXAR				PcP	**PcP**	**10 35 11.9**	**+1.2**
	0.8nm,0.8s,baz=139,slow=5.3,SNR=6.5						
TX31	**Lajitas Ar. Si**	**44.15**	**330**	eP	**P**	**10 33 25.2**	**-1.0**
	1.8nm,1.0s						
V52A	**Sevierville**	**44.44**	**356**	P	**P**	**10 33 27.3**	**-1.0**
	baz=175						
V51A	**Loudon**	**44.47**	**355**	P	**P**	**10 33 27.6**	**-0.8**
	baz=174						
V49A	**McMinnville**	**44.59**	**353**	P	**P**	**10 33 28.5**	**-1.0**
	baz=172						
V48A	**Smith Brothers**	**44.68**	**352**	eP	**P**	**10 33 29.2**	**-0.9**
	4.7nm,1.1s						
V48A	**Smith Brothers**	**44.68**	**352**	P	**P**	**10 33 29.4**	**-0.8**
	baz=170						
MIAR	**Mount Ida**	**44.89**	**344**	eP	**P**	**10 33 31.9**	**0.0**
	4.5nm,0.8s						
MIAR	**Mount Ida**	**44.89**	**344**	P	**P**	**10 33 32.4**	**+0.6**
	baz=161,SNR=5.2						
U52A	**Thorn Hill**	**44.98**	**356**	P	**P**	**10 33 31.7**	**-0.9**
	baz=175						
W41B	**Gary Mavity, V**	**45.15**	**346**	P	**P**	**10 33 34.2**	**+0.3**
	baz=163						
ABTX	**Abilene, Hawle**	**45.16**	**336**	eP	**P**	**10 33 34.4**	**+0.4**
	9.8nm,0.8s						
ABTX	**Abilene, Hawle**	**45.16**	**336**	P	**P**	**10 33 34.2**	**+0.1**
	baz=152						
WVT	**Waverly**	**45.20**	**351**	eP	**P**	**10 33 33.4**	**-0.9**
	5.8nm,1.3s						
WVT	**Waverly**	**45.20**	**351**	P	**P**	**10 33 34.0**	**-0.3**
	baz=169						
WHAR	**Wooly Hollow**	**45.27**	**346**	eP	**P**	**10 33 34.8**	**-0.1**
	11nm,1.2s						
WHAR				epP	**pP**	**10 33 43.4**	**-2.4**
T53A	**Wise**	**45.52**	**357**	P	**P**	**10 33 36.2**	**-0.7**
	baz=176						
W39A	**Magazine**	**45.56**	**344**	P	**P**	**10 33 37.7**	**+0.5**
	baz=161						
GLAT	**Glass**	**45.58**	**350**	eP	**P**	**10 33 36.9**	**-0.4**
	28nm,0.7s						
FCAR	**Ozark Folk Cen**	**45.80**	**346**	eP	**P**	**10 33 39.1**	**+0.1**
	17nm,1.0s						
T49A	**Edmonton**	**45.87**	**354**	eP	**P**	**10 33 38.7**	**-0.8**
	6.4nm,1.4s						
T49A	**Edmonton**	**45.87**	**354**	P	**P**	**10 33 39.5**	**-0.1**
	baz=172						
PARMO	**Parma**	**46.05**	**349**	eP	**P**	**10 33 40.7**	**-0.2**
	36nm,0.8s						
S51A	**Beattyville**	**46.23**	**356**	eP	**P**	**10 33 41.4**	**-1.1**
	3.9nm,0.7s						
S51A	**Beattyville**	**46.23**	**356**	P	**P**	**10 33 41.3**	**-1.1**
	baz=175						
PBMO	**Poplar Bluff**	**46.29**	**348**	eP	**P**	**10 33 42.7**	**-0.2**
	6.5nm,0.8s						
U40A	**Yellville**	**46.42**	**346**	P	**P**	**10 33 44.4**	**+0.4**
	baz=162,SNR=17						
WMOK	**Wichita Mounta**	**46.72**	**339**	eP	**P**	**10 33 46.0**	**-0.3**
	5.2nm,1.3s						
WMOK	**Wichita Mounta**	**46.72**	**339**	P	**P**	**10 33 46.3**	**0.0**
	baz=154						
TUL1	**Leonard**	**46.80**	**342**	eP	**P**	**10 33 47.0**	**+0.1**
	9.8nm,0.8s						
TUL1	**Leonard**	**46.80**	**342**	P	**P**	**10 33 47.0**	**+0.1**
	baz=158						
R58A	**Rapidan**	**46.81**	**2**	P	**P**	**10 33 46.6**	**-0.4**
	baz=183						
S44A	**Carbondale**	**46.96**	**350**	P	**P**	**10 33 47.6**	**-0.5**
	baz=168						
SIUC	**Southern Illin**	**46.98**	**350**	eP	**P**	**10 33 48.0**	**-0.3**
	11nm,0.7s						
FVM	**French Village**	**47.46**	**349**	eP	**P**	**10 33 52.5**	**+0.4**
	6.9nm,0.8s						
Q58A	**Fox Den Farm,**	**47.46**	**3**	P	**P**	**10 33 51.6**	**-0.4**
	baz=183						
Q57A	**Strasburg**	**47.53**	**2**	P	**P**	**10 33 52.2**	**-0.3**
	baz=182						
MSTX	**Muleshoe**	**47.62**	**334**	eP	**P**	**10 33 54.1**	**+0.6**
	7.4nm,0.9s						
MSTX	**Muleshoe**	**47.62**	**334**	P	**P**	**10 33 54.4**	**+1.0**
	baz=149						
CCM	**Cathedral Cave**	**47.69**	**348**	eP	**P**	**10 33 53.1**	**-0.7**
	26nm,1.2s						
CCM	**Cathedral Cave**	**47.69**	**348**	P	**P**	**10 33 53.8**	**0.0**
	baz=165						
P59A	**Jarrettsville**	**48.20**	**4**	P	**P**	**10 33 57.8**	**+0.1**
	baz=185						
319A	**Douglas**	**48.71**	**326**	eP	**P**	**10 34 02.0**	**+0.1**
	10.0nm,0.9s						
O50A	**Cable**	**48.73**	**356**	P	**P**	**10 34 01.9**	**+0.1**
	baz=175						
O57A	**Amberson**	**48.73**	**2**	P	**P**	**10 34 01.7**	**-0.1**
	baz=183						
O56A	**Blue Knob Stat**	**48.76**	**2**	P	**P**	**10 34 01.8**	**-0.2**
	baz=182						
121A	**Cookes Peak, D**	**48.81**	**329**	P	**P**	**10 34 03.2**	**+0.4**
	baz=142						
P43A	**Skaggs, Pawnee**	**48.91**	**350**	P	**P**	**10 34 02.6**	**-0.6**
	baz=168						
O59A	**Robesonia**	**48.91**	**4**	P	**P**	**10 34 03.3**	**+0.1**
	baz=185						
O48A	**Farmland**	**48.95**	**355**	P	**P**	**10 34 02.3**	**-1.2**
	baz=173						
O60A	**Telford**	**48.98**	**5**	P	**P**	**10 34 03.4**	**-0.2**
	baz=186						
N50A	**Nevada**	**49.32**	**357**	P	**P**	**10 34 05.4**	**-0.9**
	baz=176						
N58A	**Sunbury**	**49.40**	**3**	P	**P**	**10 34 06.6**	**-0.3**
	baz=184						
N49A	**Columbus Grove**	**49.54**	**356**	P	**P**	**10 34 06.5**	**-1.5**
	baz=175						
N59A	**State Game Lan**	**49.54**	**4**	P	**P**	**10 34 06.8**	**-1.2**
	baz=186						
N60A	**Cedar Hill Far**	**49.55**	**5**	P	**P**	**10 34 07.6**	**-0.4**
	baz=186						
N47A	**Urbana**	**49.62**	**354**	P	**P**	**10 34 07.2**	**-1.4**
	baz=173						
HDIL	**Hopedale**	**49.76**	**351**	eP	**P**	**10 34 09.1**	**-0.6**
	21nm,0.6s						
HDIL	**Hopedale**	**49.76**	**351**	P	**P**	**10 34 09.0**	**-0.7**
	baz=168,SNR=5.6						
PAL	**Palisades**	**49.80**	**6**	P	**P**	**10 34 08.4**	**-1.5**
	baz=188						
M53A	**WI Miller and**	**49.91**	**359**	P	**P**	**10 34 09.2**	**-1.6**
	baz=179						
M50A	**Fremont**	**49.95**	**357**	P	**P**	**10 34 10.0**	**-1.0**
	baz=176						
M55A	**Ridgway**	**49.95**	**1**	P	**P**	**10 34 09.6**	**-1.5**
	baz=182						
M49A	**Liberty Center**	**50.07**	**356**	P	**P**	**10 34 11.8**	**-0.2**
	baz=175						
M47A	**Cromwell**	**50.09**	**355**	P	**P**	**10 34 11.0**	**-1.1**
	baz=173						
ANMO	**Albuquerque**	**50.09**	**332**	P	**P**	**10 34 13.4**	**+0.8**
	baz=120,slow=16						
ANMO	**Albuquerque**	**50.09**	**332**	eP	**P**	**10 34 13.1**	**+0.6**
	4.8nm,0.9s						
ANMO	**Albuquerque**	**50.09**	**332**	P	**P**	**10 34 13.6**	**+1.0**
	baz=145						
N41A	**Harden Midland**	**50.18**	**349**	eP	**P**	**10 34 12.7**	**-0.1**
	17nm,0.8s						
N41A	**Harden Midland**	**50.18**	**349**	P	**P**	**10 34 12.0**	**-0.8**
	baz=166,SNR=7.5						
TUC	**Tucson**	**50.25**	**326**	eP	**P**	**10 34 14.3**	**+0.7**
	3.2nm,1.0s						
TUC	**Tucson**	**50.25**	**326**	P	**P**	**10 34 14.2**	**+0.6**
	baz=139						
L48A	**N Adams**	**50.57**	**356**	P	**P**	**10 34 14.3**	**-1.5**
	baz=174						
L47A	**Sherwood**	**50.66**	**355**	P	**P**	**10 34 15.6**	**-0.9**
	baz=173						
L55A	**Hinsdale**	**50.67**	**2**	P	**P**	**10 34 15.4**	**-1.2**
	baz=182						
M41A	**Milan**	**50.77**	**350**	P	**P**	**10 34 16.3**	**-0.9**
	baz=167						
T25A	**Trinidad**	**51.01**	**335**	P	**P**	**10 34 20.3**	**+0.8**
	baz=148						
214A	**Organ Pipe Nat**	**51.15**	**324**	P	**P**	**10 34 21.4**	**+1.1**
	baz=137						
TRY	**Troy**	**51.53**	**6**	eP	**P**	**10 34 21.9**	**-1.1**
	11nm,0.8s						
L40A	**Anamosa**	**51.56**	**349**	eP	**P**	**10 34 22.3**	**-0.9**
	23nm,1.3s						
L40A	**Anamosa**	**51.56**	**349**	P	**P**	**10 34 22.4**	**-0.8**
	baz=166,SNR=5.9						
SDCO	**Great Sand Dun**	**51.99**	**334**	eP	**P**	**10 34 27.3**	**+0.4**
	3.7nm,0.8s						
SDCO	**Great Sand Dun**	**51.99**	**334**	P	**P**	**10 34 27.5**	**+0.6**
	baz=148,SNR=12						
X16A	**Lo Mia Camp, P**	**52.20**	**327**	eP	**P**	**10 34 29.3**	**+1.0**
	3.0nm,0.9s						
Y14A	**Wickenburg**	**52.70**	**325**	eP	**P**	**10 34 32.1**	**+0.2**
	2.7nm,0.8s						
MVCO	**Mesa Verde**	**52.90**	**332**	eP	**P**	**10 34 33.9**	**+0.4**
	2.6nm,0.8s						
MVCO	**Mesa Verde**	**52.90**	**332**	P	**P**	**10 34 34.0**	**+0.4**
	baz=144						
I42A	**Draeger Farm,**	**52.97**	**352**	P	**P**	**10 34 32.8**	**-0.9**
	baz=169						
WUAZ	**Wupatki**	**53.00**	**328**	eP	**P**	**10 34 33.7**	**-0.5**
	8.4nm,0.9s						
WUAZ	**Wupatki**	**53.00**	**328**	P	**P**	**10 34 35.1**	**+0.9**
	baz=140,SNR=6.2						
Y12C	**Blythe**	**53.43**	**324**	P	**P**	**10 34 38.2**	**+0.9**
	baz=136						
IRM	**Iron Mountain**	**54.09**	**324**	P	**P**	**10 34 42.8**	**+0.8**
	baz=136						
ECSD	**EROS Data Cent**	**54.33**	**345**	eP	**P**	**10 34 42.3**	**-1.4**
	3.2nm,0.8s						
ECSD	**EROS Data Cent**	**54.33**	**345**	P	**P**	**10 34 42.5**	**-1.1**
	baz=160						
ALGO	**Algonquin Park**	**54.45**	**2**	P	**P**	**10 34 43.4**	**-1.1**
	baz=182						
BELC	**Belle Mtn. Jos**	**54.48**	**323**	P	**P**	**10 34 45.9**	**+0.8**
	baz=135						
G40A	**Rib Lake**	**54.51**	**351**	P	**P**	**10 34 44.0**	**-0.9**
	baz=168						
G39A	**Holcombe**	**54.68**	**350**	P	**P**	**10 34 45.3**	**-0.8**
	baz=166						
GMRC	**Granite Mounta**	**54.83**	**324**	P	**P**	**10 34 48.2**	**+0.6**
	baz=135						
KNB	**Kanab**	**54.90**	**328**	eP	**P**	**10 34 49.5**	**+1.4**
	9.1nm,1.3s						
SPMN	**Marine on St.**	**54.91**	**349**	eP	**P**	**10 34 46.9**	**-0.9**
	12nm,1.0s						
SPMN	**Marine on St.**	**54.91**	**349**	P	**P**	**10 34 47.2**	**-0.6**
	baz=164						
TRQ	**Mont Tremblant**	**54.91**	**5**	eP	**P**	**10 34 47.3**	**-0.5**
PKCU	**Pink Cliffs**	**54.96**	**329**	eP	**P**	**10 34 50.3**	**+1.6**
	9.7nm,1.1s						
E54A	**Lac Daplat, Po**	**54.96**	**2**	P	**P**	**10 34 46.8**	**-1.3**
	baz=183						
E48A	**Lockeyer**	**54.98**	**358**	P	**P**	**10 34 47.2**	**-1.1**
	baz=177						
E47A	**Iron Bridge**	**55.00**	**357**	P	**P**	**10 34 46.7**	**-1.6**
	baz=176						
E51A	**G1948 Merrick**	**55.00**	**0**	P	**P**	**10 34 47.0**	**-1.4**
	baz=181						
O20A	**White River Ci**	**55.16**	**334**	eP	**P**	**10 34 50.9**	**+1.0**
	3.7nm,0.8s						
O20A	**White River Ci**	**55.16**	**334**	P	**P**	**10 34 50.6**	**+0.7**
	baz=145						
HEC	**Hector,Ludlow**	**55.26**	**324**	P	**P**	**10 34 51.4**	**+0.8**
	baz=135						
SRU	**San Rafael Swe**	**55.37**	**331**	eP	**P**	**10 34 52.1**	**+0.6**
	3.4nm,0.9s						
TUQ	**Turquoise Moun**	**55.44**	**324**	P	**P**	**10 34 52.7**	**+0.7**
	baz=135						
D52A	**ZEK Kipawa Sen**	**55.46**	**1**	P	**P**	**10 34 50.1**	**-1.6**
	baz=182						
Q16A	**Castle Valley**	**55.53**	**331**	eP	**P**	**10 34 53.7**	**+1.1**
	3.0nm,0.7s						
CCUT	**Cedar City**	**55.58**	**328**	eP	**P**	**10 34 55.1**	**+2.0**
	3.7nm,1.1s						
D53A	**Lac Vacive, Po**	**55.59**	**2**	P	**P**	**10 34 51.5**	**-1.1**
	baz=183						
D47A	**Chapleau**	**55.59**	**357**	P	**P**	**10 34 51.4**	**-1.2**
	baz=176						
D54A	**Lac Fusel, La**	**55.70**	**3**	P	**P**	**10 34 52.1**	**-1.4**
	baz=184						
P17A	**Butcher Ranch,**	**55.76**	**331**	eP	**P**	**10 34 55.2**	**+0.9**
	6.6nm,1.0s						
SHPR	**Sheep Range**	**55.78**	**326**	eP	**P**	**10 34 55.1**	**+0.6**
	4.8nm,1.1s						
GSC	**Goldstone, Bar**	**55.86**	**324**	P	**P**	**10 34 56.0**	**+1.1**
	baz=134						
SHOC	**Shoshone, Teco**	**55.97**	**325**	P	**P**	**10 34 56.4**	**+0.8**
	baz=135						
E38A	**The Farm, Brul**	**56.02**	**350**	eP	**P**	**10 34 55.5**	**-0.3**
	8.3nm,1.1s						
E38A	**The Farm, Brul**	**56.02**	**350**	P	**P**	**10 34 55.3**	**-0.5**
	baz=166						
EDW2	**Edwards Air Fo**	**56.27**	**323**	P	**P**	**10 34 58.6**	**+0.7**
	baz=133						
LRMC	**Laurel Mtn Rad**	**56.50**	**323**	P	**P**	**10 35 00.4**	**+0.9**
	baz=134						
K22A	**Casper**	**56.55**	**337**	eP	**P**	**10 35 00.3**	**+0.5**
	5.1nm,0.9s						
K22A	**Casper**	**56.55**	**337**	P	**P**	**10 35 00.2**	**+0.3**
	baz=148						
PSUT	**Pine Spring**	**56.58**	**328**	eP	**P**	**10 35 01.3**	**+1.1**
	2.9nm,1.0s						
TPNV	**Topopah Spring**	**56.70**	**326**	eP	**P**	**10 35 01.4**	**+0.4**
	4.3nm,1.2s						
TPNV	**Topopah Spring**	**56.70**	**326**	P	**P**	**10 35 02.0**	**+1.0**
	baz=136						
FURC	**Furnace Creek,**	**56.71**	**325**	P	**P**	**10 35 02.1**	**+1.2**
	baz=135						
MPMC	**Manual Prospec**	**56.78**	**324**	P	**P**	**10 35 02.5**	**+0.8**
	baz=134						
RSSD	**Black Hills**	**56.90**	**340**	P	**P**	**10 35 02.7**	**+0.3**
	baz=151						
C40A	**Isle Royale Na**	**56.96**	**353**	P	**P**	**10 35 01.7**	**-0.7**
	baz=169						
DUG	**Dugway, Tooele**	**57.32**	**330**	eP	**P**	**10 35 05.4**	**+0.1**
	3.9nm,0.9s						
DUG	**Dugway, Tooele**	**57.32**	**330**	P	**P**	**10 35 06.3**	**+1.0**
	baz=141						
R11A	**Troy Canyon, C**	**57.35**	**327**	eP	**P**	**10 35 06.8**	**+1.2**
	2.0nm,0.8s						
R11A	**Troy Canyon, C**	**57.35**	**327**	P	**P**	**10 35 06.8**	**+1.2**
	baz=137,SNR=5.8						
GRAC	**Grapevine Rang**	**57.37**	**325**	P	**P**	**10 35 06.6**	**+1.0**
	baz=135						
CWC	**Cottonwood Cre**	**57.39**	**324**	P	**P**	**10 35 07.0**	**+1.1**
	baz=134						
VES	**Vestal, Richgr**	**57.58**	**323**	P	**P**	**10 35 07.5**	**+0.4**
	baz=133						
SMMC	**Simmler**	**57.78**	**322**	P	**P**	**10 35 09.3**	**+0.7**
	baz=132						
HWUT	**Hardware Ranch**	**57.83**	**332**	eP	**P**	**10 35 09.2**	**+0.3**
HWUT				epP	**P**	**10 35 09.7**	**+0.7**
BW06	**Boulder Array**	**57.88**	**335**	eP	**P**	**10 35 09.1**	**-0.3**
	1.4nm,0.8s						
BW06	**Boulder Array**	**57.88**	**335**	P	**P**	**10 35 09.2**	**-0.1**
	baz=145						
PD31	**Pinedale Array**	**57.88**	**335**	eP	**P**	**10 35 09.1**	**-0.3**
PD31				ePcP	**PcP**	**10 36 01.1**	**-0.4**
PDAR	**Pinedale Array**	**57.88**	**335**	P	**P**	**10 35 09.3**	**0.0**
	1.4nm,0.7s,baz=126,slow=7.6,SNR=18						
PDAR				PcP	**PcP**	**10 36 01.1**	**-0.4**
	0.8nm,0.6s,baz=134,slow=6.2,SNR=6.1						
MATQ	**Matagami**	**58.27**	**2**	P	**P**	**10 35 10.0**	**-1.6**
	baz=183						
AGMN	**Agassiz Nation**	**58.46**	**348**	eP	**P**	**10 35 12.8**	**-0.2**
	12nm,0.7s						
AGMN	**Agassiz Nation**	**58.46**	**348**	P	**P**	**10 35 12.7**	**-0.2**
	baz=162,SNR=9.5						
HVU	**Hansel Valley**	**58.53**	**332**	eP	**P**	**10 35 14.2**	**+0.5**
	5.2nm,0.9s						
CHGQ	**Chibougamau**	**58.59**	**4**	P	**P**	**10 35 12.6**	**-1.2**
	baz=186						
OMMB	**Old Mammoth Mi**	**58.73**	**324**	eP	**P**	**10 35 16.7**	**+1.2**
	5.4nm,1.2s						
NV01	**Mina Array Sit**	**58.90**	**325**	eP	**P**	**10 35 17.7**	**+1.2**
NV01				ePcP	**PcP**	**10 36 06.2**	**+0.6**
NVAR	**Mina Array Bea**	**58.90**	**325**	P	**P**	**10 35 17.7**	**+1.2**
	1.4nm,0.8s,baz=137,slow=6.6,SNR=13						
NVAR				PcP	**PcP**	**10 36 06.2**	**+0.6**
	1.0nm,0.8s,baz=145,slow=5.5,SNR=5.2						
MDND	**Maddock**	**58.92**	**345**	eP	**P**	**10 35 16.7**	**+0.5**
	20nm,0.9s						
MDND	**Maddock**	**58.92**	**345**	P	**P**	**10 35 15.5**	**-0.6**
	baz=157						
ELK	**Elko**	**58.94**	**329**	P	**P**	**10 35 17.2**	**+0.5**
	3.3nm,0.8s,baz=139,slow=4.5,SNR=20						
ELK	**Elko**	**58.94**	**329**	eP	**P**	**10 35 17.1**	**+0.3**
	3.2nm,0.8s						
IMW	**Indian Meadow**	**59.39**	**334**	eP	**P**	**10 35 19.9**	**0.0**
	2.8nm,1.0s						
FLWY	**Flagg Ranch**	**59.43**	**335**	eP	**P**	**10 35 20.9**	**+0.8**
	6.1nm,1.2s						
WAKR	**Walker**	**59.60**	**325**	eP	**P**	**10 35 21.9**	**+0.6**
	9.2nm,1.4s						
RLMT	**Red Lodge**	**59.70**	**336**	P	**P**	**10 35 21.8**	**-0.1**
	baz=146						
YERR	**Yerington**	**59.81**	**325**	eP	**P**	**10 35 22.8**	**0.0**
	2.4nm,0.8s						
LAO	**LASA Array**	**59.90**	**339**	P	**P**	**10 35 22.4**	**-0.7**
	baz=150						
YHH	**Holmes Hill**	**60.07**	**335**	eP	**P**	**10 35 25.2**	**+0.6**
	2.2nm,0.8s						
YHB	**Horse Butte**	**60.18**	**335**	eP	**P**	**10 35 26.5**	**+1.3**
	5.5nm,1.0s						
VCNR	**Virginia City**	**60.26**	**325**	eP	**P**	**10 35 27.5**	**+1.7**
	3.8nm,1.0s						
ULM	**Lac du Bonnet**	**60.32**	**348**	P	**P**	**10 35 25.1**	**-0.7**
	7.7nm,0.8s,baz=155,slow=4.9,SNR=9.0						
ULM	**Lac du Bonnet**	**60.32**	**348**	eP	**P**	**10 35 24.8**	**-0.9**
	8.3nm,0.9s						
PAHR	**Pah Rah Range**	**60.39**	**326**	eP	**P**	**10 35 26.9**	**+0.2**
	4.4nm,1.0s						
GCMT	**Greycliff**	**60.41**	**337**	eP	**P**	**10 35 27.5**	**+0.8**
HLID	**Hailey**	**60.67**	**332**	eP	**P**	**10 35 29.7**	**+1.1**
	3.2nm,0.8s						
HLID	**Hailey**	**60.67**	**332**	P	**P**	**10 35 28.7**	**+0.1**
	baz=140,SNR=6.3						
MCMT	**McKenzie Canyo**	**60.95**	**334**	eP	**P**	**10 35 30.6**	**+0.1**
BOZ	**Bozeman (W)**	**61.05**	**335**	eP	**P**	**10 35 30.3**	**-0.7**
	3.8nm,1.0s						
BOZ	**Bozeman (W)**	**61.05**	**335**	P	**P**	**10 35 31.3**	**+0.3**
	baz=144,SNR=6.6						
BEKR	**Beckworth**	**61.05**	**325**	eP	**P**	**10 35 32.3**	**+1.1**
	6.6nm,1.4s						
MFID	**Camas Ranch**	**61.23**	**331**	eP	**P**	**10 35 33.4**	**+1.1**
	7.4nm,0.9s						
DLMT	**Dillon**	**61.27**	**334**	eP	**P**	**10 35 33.4**	**+0.9**
	4.3nm,1.0s						
WVOR	**Wild Horse Val**	**61.91**	**328**	eP	**P**	**10 35 37.9**	**+1.0**
	3.2nm,1.0s						
HRY	**Holter Researc**	**62.03**	**336**	eP	**P**	**10 35 38.0**	**+0.5**
EGMT	**Eagleton**	**62.30**	**338**	P	**P**	**10 35 39.3**	**0.0**
	baz=146						
MOD	**Modoc Plateau**	**62.42**	**327**	eP	**P**	**10 35 41.3**	**+1.0**
	7.9nm,1.1s						
MSO	**Missoula**	**63.00**	**335**	eP	**P**	**10 35 44.6**	**+0.5**
	6.8nm,1.0s						
MSO	**Missoula**	**63.00**	**335**	P	**P**	**10 35 44.7**	**+0.7**
	baz=142,SNR=5.2						
M04C	**Macdoel**	**63.17**	**326**	P	**P**	**10 35 45.9**	**+0.6**
	baz=132						
M02C	**Callahan**	**63.48**	**325**	P	**P**	**10 35 48.3**	**+1.0**
	baz=132						
YBH	**Yreka Blue Hor**	**63.62**	**326**	P	**P**	**10 35 48.1**	**-0.1**
	1.8nm,0.7s,baz=139,slow=10,SNR=4.9						
L04D	**Klamath Falls**	**63.72**	**326**	P	**P**	**10 35 48.9**	**0.0**
	baz=132						
F10A	**Beach Ranch, E**	**63.81**	**332**	eP	**P**	**10 35 50.5**	**+1.2**
	9.7nm,1.4s						
J05D	**Fort Rock, OR**	**63.87**	**328**	P	**P**	**10 35 50.7**	**+0.8**
	baz=134						
PINE	**Pine Mountain**	**64.06**	**328**	eP	**P**	**10 35 52.8**	**+1.5**
	5.8nm,0.8s						
G08A	**Pilot Rock**	**64.13**	**330**	eP	**P**	**10 35 51.9**	**+0.3**
	5.5nm,1.1s						
J04D	**Umpqua Nationa**	**64.31**	**327**	P	**P**	**10 35 53.3**	**+0.4**
	baz=133						
L02E	**Cave Junction**	**64.40**	**325**	P	**P**	**10 35 54.3**	**+1.0**
	baz=131						
I05D	**Terrebonne, OR**	**64.65**	**328**	P	**P**	**10 35 56.0**	**+1.1**
	baz=134,SNR=5.9						
WALA	**Waterton Lakes**	**64.75**	**336**	eP	**P**	**10 35 55.2**	**-0.3**
	4.1nm,0.8s						
I03D	**Drain, OR**	**65.28**	**327**	P	**P**	**10 35 59.9**	**+1.0**
	baz=132						
H04A	**Detroit Lake**	**65.33**	**328**	eP	**P**	**10 35 59.0**	**-0.3**
	5.4nm,1.0s						
NEW	**Newport**	**65.48**	**334**	P	**P**	**10 36 00.6**	**+0.4**
	baz=139						

D03D	**Eldon**	**67.74**	**330**	P	**P**	**10 36 15.2**	**+0.6**
	baz=133						
B05A	**Bryant**	**67.76**	**331**	P	**P**	**10 36 14.8**	**+0.2**
	baz=134						
NLWA	**Neilton Lookou**	**68.03**	**330**	*e*P	**P**	**10 36 16.9**	**+0.5**
	5.3nm,1.0s						
VNA3	**Neumayer Olymp**	**75.53**	**162**	P	**P**	**10 37 02.5**	**+1.4**
YKA	**Yellowknife Ar**	**75.84**	**344**	P	**P**	**10 37 02.1**	**-0.7**
	2.2nm,0.9s,baz=141,slow=5.9,SNR=4.8						
YKB5	**Yellowknife Ar**	**75.84**	**344**	*e*P	**P**	**10 37 02.1**	**-0.7**
SNAA	**Sanae**	**77.76**	**162**	P	**P**	**10 37 15.0**	**+1.3**
SNAA	**Sanae**	**77.76**	**162**	*e*P	**P**	**10 37 15.2**	**+1.5**
	9.6nm,1.1s						
DLBC	**Dease Lake**	**78.09**	**336**	*e*P	**P**	**10 37 17.1**	**+1.4**
	4.7nm,0.9s						
QSPA	**South Pole Qui**	**81.39**	**180**	*e*P	**P**	**10 37 35.6**	**+2.0**
	16nm,1.1s						
TOA1	**Torodi Ar. Sit**	**84.01**	**76**	*e*P	**P**	**10 37 49.1**	**+1.0**
TOA0	**Torodi Ar. Sit**	**84.01**	**76**	*e*P	**P**	**10 37 47.5**	**-0.6**
	6.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**84.01**	**76**	P	**P**	**10 37 49.1**	**+0.9**
	1.8nm,0.8s,baz=260,slow=4.6,SNR=7.8						
ESDC	**Sonseca Array**	**84.96**	**49**	P	**P**	**10 37 52.2**	**-0.3**
	0.2nm,0.3s,baz=270,slow=4.4,SNR=4.7						
DAWY	**Dawson**	**85.04**	**338**	*e*P	**P**	**10 37 52.5**	**+0.1**
	3.9nm,1.2s						
EPYK	**Eagle Plains**	**85.34**	**340**	P	**P**	**10 37 53.8**	**0.0**
	baz=124						
INK	**Inuvik**	**85.47**	**343**	*e*P	**P**	**10 37 54.5**	**+0.2**
	7.7nm,1.3s						
EGAK	**Eagle**	**86.07**	**338**	*e*P	**P**	**10 37 58.0**	**+0.6**
	7.5nm,0.9s						
RIDG	**Independent Ri**	**87.00**	**336**	*e*P	**P**	**10 38 02.3**	**+0.3**
	5.4nm,1.0s						
HDA	**Harding Lake**	**88.12**	**336**	P	**P**	**10 38 07.0**	**-0.3**
	baz=114						
ILAR	**Eielson Array**	**88.25**	**337**	P	**P**	**10 38 07.9**	**0.0**
	1.6nm,0.8s,baz=142,slow=3.3,SNR=15						
ILB	**Eielson Array**	**88.25**	**337**	*e*P	**P**	**10 38 07.9**	**0.0**
	3.5nm,1.0s						
FYU	**Fort Yukon**	**88.40**	**339**	*e*P	**P**	**10 38 09.5**	**+1.0**
	6.8nm,0.9s						
RND	**Reindeer**	**88.49**	**335**	*e*P	**P**	**10 38 09.3**	**+0.2**
	9.9nm,1.2s						
RND				*e*pP	**pP**	**10 38 19.2**	**-1.9**
CCB	**Clear Creek Bu**	**88.56**	**337**	*e*P	**P**	**10 38 09.6**	**+0.3**
	2.6nm,0.9s						
TCOL	**CIGO, UAF Yank**	**88.67**	**337**	P	**P**	**10 38 09.9**	**0.0**
	baz=114						
SKT	**Skwentna**	**89.11**	**333**	*e*P	**P**	**10 38 12.3**	**+0.2**
	3.9nm,0.8s						
BPAW	**Bear Paw Mtn.**	**89.63**	**335**	*e*P	**P**	**10 38 14.4**	**-0.1**
	4.4nm,1.2s						
CAST	**Castle Rocks**	**89.85**	**335**	*e*P	**P**	**10 38 15.0**	**-0.5**
	8.7nm,1.2s						
CAST				*e*pP	**pP**	**10 38 24.5**	**-2.8**
MLY	**Manley**	**89.86**	**336**	*e*P	**P**	**10 38 15.6**	**0.0**
	3.2nm,0.8s						
RAO	**Raoul Island**	**92.59**	**240**	LR	LR	11 09 15.3	
	comp=Z,308nm,20.8s,baz=94,slow=28						
NB200	**NORSAR Array S**	**98.17**	**29**	*e*P	Pdif	10 38 58.7	+4.9
NOA	**NORSAR Array B**	**98.17**	**29**	P	Pdif	10 38 58.7	+4.9
	0.9nm,0.9s,baz=307,slow=23,SNR=2.3						
H11N3	**WAKE ISLAND Hy**	**114.52**	**288**	T	T	12 48 37.1	
	baz=92,slow=75,SNR=27						
H11N2	**WAKE ISLAND Hy**	**114.54**	**288**	T	T	12 48 41.0	
	baz=92,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**114.54**	**288**	T	T	12 48 41.4	
	baz=92,slow=75,SNR=36						
H11S3	**WAKE ISLAND Hy**	**114.71**	**286**	T	T	12 47 03.8	
	SNR=10						
AS31	**Alice Springs**	**133.77**	**225**	*e*PKPdf	**PKPdf**	**10 44 34.1**	**-0.6**
ASAR	**Alice Springs**	**133.78**	**225**	PKP	**PKPdf**	**10 44 34.1**	**-0.6**
	0.4nm,0.6s,baz=120,slow=2.4,SNR=9.4						
WR1	**Warramunga Arr**	**135.76**	**230**	*e*PKPdf	**PKPdf**	**10 44 38.4**	**-0.1**
WRA	**Warramunga Arr**	**135.76**	**230**	PKP	**PKPdf**	**10 44 38.4**	**-0.1**
	1.4nm,0.9s,baz=126,slow=1.9,SNR=7.2						

*NEIC **31** 10:28:08.0±0.0, 5°.16S×80°.74W, h56^{km}, mb4.5/107, ML4.7(ARE), After ARE.*

NEIC Felt [IV] at Piura and [III] at Sullana.

*IDC **31** 10:28:09.1±0.6, 5°.07S×80°.66W, h47^{km}±5^{km}, mb4.1/22, mb1 4.2/23, mb1mx4.1/43, mbtmp4.3/23, MS3.3/4, Ms1 3.3/4, ms1mx3.2/21, Error ellipse: s-maj=17.4km s-min=7.4km az=53.0*

*VAO **31** 10:28:43.0±1.1, 6°.40S×79°.69W, h276^{km}, mb4.5*

ISC 31 10:28:08.0±0.5**, 5°.14S**±0°.06×**80°.83W**±0°.07**, h47**^{km}±5^{km}**, n163, σ1^{s}.72**/174**, mb4.5**/105**, 1C, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**3.13**	**129**	P	**Pn**	**10 28 56.5**	**+1.3**
	144nm,0.3s,baz=329,slow=16,SNR=14						
ATAH				S	**Sn**	**10 29 32.4**	**+0.8**
	154nm,0.3s,baz=315,slow=20,SNR=3.2						
NNA	**Nana**	**7.86**	**150**	P	**Pn**	**10 30 00.4**	**+0.5**
	25nm,0.3s,baz=327,slow=14,SNR=15						
NNA				S	Sn	10 31 17.6	-10
	13nm,0.3s,baz=250,slow=16,SNR=1.6						
NNA	**Nana**	**7.86**	**150**	*e*Pn	**Pn**	**10 29 58.8**	**-1.1**
NNA				*e*Sn	**Sn**	**10 31 29.5**	**+1.9**
PAYG	**Puerto Ayora**	**10.43**	**295**	*e*Pn	**Pn**	**10 30 36.9**	**+1.8**
PAYG				*e*Sn	**Sn**	**10 32 25.9**	**-4.7**
BCIP	**Isla Barro Col**	**14.25**	**4**	*e*Pn	**Pn**	**10 31 26.6**	**-0.5**
JTS	**Las Juntas de**	**15.87**	**345**	P	**P**	**10 31 51.4**	**0.0**
	0.2nm,0.3s,baz=181,slow=9.9,SNR=8.1						
JTS				LR	LR	10 35 40.5	
	comp=Z,160nm,21.2s,baz=200,slow=28						
JTS	**Las Juntas de**	**15.87**	**345**	*e*Pn	**Pn**	**10 31 46.0**	**-2.3**
	55nm,1.1s						
LPAZ	**La Paz**	**16.67**	**133**	P	**Pn**	**10 31 58.8**	**-0.3**
	2.0nm,0.3s,baz=292,slow=7.8,SNR=13						
LPAZ				LR	LR	10 38 32.2	
	comp=Z,110nm,19.9s,baz=305,slow=38						
LPAZ	**La Paz**	**16.67**	**133**	*e*Pn	**Pn**	**10 31 57.8**	**-1.3**
LPAZ				*e*P	**P**	**10 31 58.2**	**-2.7**
LPAZ	**La Paz**	**16.67**	**133**	*e*P	**Pn**	**10 31 59.7**	**+0.6**
MNMC	**Minye Minye**	**17.70**	**143**	*e*P	**Pn**	**10 32 10.6**	**-1.0**
	32nm,0.8s						
PB11	**IPOC Station P**	**18.16**	**144**	*e*P	**P**	**10 32 14.3**	**-2.5**
	32nm,0.8s						
GO01	**Chusmiza**	**18.36**	**143**	*e*P	**P**	**10 32 15.8**	**-3.5**
	37nm,0.8s						
ESTN	**Estel**	**18.94**	**343**	*e*P	**P**	**10 32 25.3**	**-0.1**
	56nm,1.3s						
PB01	**IPOC Station P**	**19.27**	**146**	*e*P	**P**	**10 32 26.7**	**-2.3**
	24nm,0.8s						
PB04	**IPOC Station P**	**19.97**	**150**	*e*P	**P**	**10 32 33.9**	**-2.8**
	39nm,0.9s						
TGUH	**Tegucigalpa,Un**	**20.12**	**342**	*e*P	**P**	**10 32 37.0**	**-1.2**
	33nm,0.8s						
PB10	**IPOC Station P**	**20.78**	**153**	*e*P	**P**	**10 32 41.7**	**-3.6**
	37nm,1.0s						
LVC	**Limon Verde**	**20.84**	**148**	P	**P**	**10 32 47.7**	**+1.4**
	52nm,0.7s,baz=313,slow=7.7,SNR=46						
LVC	**Limon Verde**	**20.84**	**148**	*e*P	**P**	**10 32 44.2**	**-2.1**
	58nm,0.8s						
LVC	**Limon Verde**	**20.84**	**148**	*e*P	**P**	**10 32 47.7**	**+1.4**
PTGA	**Pitinga**	**21.29**	**79**	P	**P**	**10 32 50.2**	**-0.7**
	10.0nm,0.6s,baz=269,slow=13,SNR=5.6						
PTGA				pP	**pP**	**10 33 01.2**	**-0.8**
	33nm,0.8s,baz=250,slow=12,SNR=15						
PTGA	**Pitinga**	**21.29**	**79**	*e*P	**P**	**10 32 48.5**	**-2.3**
	37nm,0.8s						
PTGA	**Pitinga**	**21.29**	**79**	*e*P	P	10 33 00.7	+10
PCRV	**Puerto La Cruz**	**22.18**	**47**	P	**P**	**10 32 59.3**	**-1.1**
	19nm,0.4s,baz=226,slow=2.9,SNR=15						
SIV	**San Ignacio**	**22.19**	**121**	P	**P**	**10 33 00.0**	**-0.5**
	14nm,0.7s,baz=300,slow=13,SNR=15						
LCO	**Las Campanas**	**25.61**	**159**	*e*P	**P**	**10 33 31.3**	**-2.1**
	22nm,1.1s						
TEIG	**Tepich**	**26.25**	**344**	P	**P**	**10 33 40.7**	**+1.8**
	4.5nm,0.6s,baz=104,slow=4.2,SNR=3.8						
TEIG	**Tepich**	**26.25**	**344**	*e*P	**P**	**10 33 38.1**	**-0.8**
	6.6nm,0.8s						
SJG	**San Juan**	**27.27**	**32**	P	**P**	**10 33 47.3**	**-0.8**
	12nm,0.6s,baz=239,slow=5.6,SNR=5.0						
SJG	**San Juan**	**27.27**	**32**	*e*P	**P**	**10 33 43.4**	**-4.7**
	34nm,0.8s						
CBYP	**Canovanas**	**27.56**	**32**	*e*P	**P**	**10 33 48.9**	**-1.9**
	25nm,0.7s						
AQDB	**Aquidauana**	**28.79**	**124**	*e*P	**P**	**10 34 02.2**	**+0.5**
AQDB				*e*S	S	10 38 20.6	-28
CFA	**Coronel Fontan**	**28.86**	**157**	P	**P**	**10 34 03.2**	**+0.9**
	4.0nm,0.7s,baz=334,slow=8.4,SNR=7.9						
CPUP	**Villa Florida**	**30.80**	**136**	P	**P**	**10 34 18.1**	**-1.3**
	3.2nm,0.6s,baz=315,slow=9.5,SNR=8.3						
SMTB	**Santa Maria do**	**33.19**	**98**	*e*P	**P**	**10 34 44.0**	**+3.3**
PTGB	**Pitanga**	**33.79**	**128**	*e*P	**P**	**10 34 45.9**	**+0.1**
BDFB	**Brasilia**	**33.87**	**110**	P	**P**	**10 34 45.3**	**-1.4**
	1.4nm,0.3s,baz=230,slow=8.1,SNR=4.5						
BDFB				pP	**pP**	**10 34 58.5**	**-0.6**
	5.5nm,0.8s,baz=286,slow=15,SNR=3.3						
BB19B	**Bebedouro**	**35.11**	**120**	*e*P	**P**	**10 34 56.3**	**-1.0**
GO06	**Curarrehue**	**35.32**	**167**	*e*P	**P**	**10 34 59.9**	**+1.0**
	9.5nm,1.0s						
CPSB	**Cacapava Do Su**	**36.02**	**137**	*e*P	**P**	**10 35 04.7**	**-0.2**
PLCA	**Paso Flores**	**36.62**	**167**	P	**P**	**10 35 10.4**	**+0.5**
	5.2nm,0.9s,baz=12,slow=7.9,SNR=8.5						
PLCA				PcP	**PcP**	**10 37 33.2**	**+0.9**
	1.6nm,0.9s,baz=327,slow=5.3,SNR=3.5						
PLCA				LR	LR	10 47 17.6	
	comp=Z,116nm,21.9s,baz=11,slow=31						
PLCA	**Paso Flores**	**36.62**	**167**	*e*P	**P**	**10 35 10.6**	**+0.7**
PLTB	**Pedras Altas**	**36.77**	**139**	*e*P	**P**	**10 35 10.1**	**-1.2**
CNLB	**Canela**	**37.17**	**134**	*e*P	**P**	**10 35 13.9**	**-0.8**
PAULI	**Pauline**	**39.76**	**359**	*e*P	**P**	**10 35 33.6**	**-2.6**
	6.6nm,0.6s						
KMSC	**Kings Mountain**	**40.07**	**359**	*e*P	**P**	**10 35 37.7**	**-1.1**
	6.8nm,0.8s						
SWET	**Sewanee**	**40.43**	**354**	*e*P	**P**	**10 35 41.9**	**0.0**
	4.7nm,0.8s						
CPCT	**Cooper Cave**	**40.52**	**355**	*e*P	**P**	**10 35 44.0**	**+1.4**
	6.1nm,0.8s						
V53A	**Saluda**	**40.64**	**358**	*e*P	**P**	**10 35 42.7**	**-0.9**
	4.3nm,0.8s						
TKL	**Tuckaleechee C**	**40.68**	**356**	P	**P**	**10 35 44.3**	**+0.4**
	2.1nm,0.7s,baz=145,slow=8.3,SNR=4.4						
TXAR	**Lajitas Array**	**40.70**	**329**	P	**P**	**10 35 45.9**	**+1.6**
	0.6nm,0.7s,baz=146,slow=9.1,SNR=5.0						
TXAR				pP	**pP**	**10 35 57.5**	**+0.6**
	0.5nm,0.7s,baz=134,slow=11,SNR=3.3						
TXAR				PcP	**PcP**	**10 37 46.3**	**+1.0**
	0.4nm,0.6s,baz=153,slow=6.1,SNR=2.8						
V52A	**Sevierville**	**40.85**	**357**	*e*P	**P**	**10 35 43.4**	**-1.9**
	7.6nm,0.8s						
MIAR	**Mount Ida**	**41.27**	**344**	*e*P	**P**	**10 35 48.7**	**0.0**
	4.5nm,0.8s						
TZTN	**Tazewell**	**41.55**	**357**	*e*P	**P**	**10 35 48.4**	**-2.6**
	4.9nm,0.8s						
WHAR	**Wooly Hollow**	**41.64**	**346**	*e*P	**P**	**10 35 50.5**	**-1.3**
	4.3nm,0.6s						
RIB01	**Linhares ES**	**41.82**	**113**	*e*P	**P**	**10 35 52.6**	**-1.0**
W39A	**Magazine**	**41.93**	**344**	*e*P	**P**	**10 35 52.8**	**-1.4**
	7.4nm,0.8s						
T57A	**Hurt**	**41.95**	**2**	*e*P	**P**	**10 35 56.2**	**+1.9**
	5.0nm,0.7s						
FCAR	**Ozark Folk Cen**	**42.17**	**346**	*e*P	**P**	**10 35 58.0**	**+1.9**
	9.3nm,0.7s						
T47A	**Sharon Grove**	**42.32**	**353**	*e*PcP	**PcP**	**10 37 50.9**	**+0.5**
WMOK	**Wichita Mounta**	**43.12**	**338**	*e*P	**P**	**10 36 02.1**	**-1.8**
	4.4nm,1.0s						
TUL1	**Leonard**	**43.18**	**342**	*e*P	**P**	**10 36 03.5**	**-0.8**
	8.8nm,0.6s						
R53A	**Hurricane**	**43.26**	**359**	*e*P	**P**	**10 36 02.8**	**-2.1**
	17nm,0.6s						
MSTX	**Muleshoe**	**44.09**	**333**	*e*P	**P**	**10 36 10.7**	**-1.1**
	15nm,1.4s						
OLIL	**Olney**	**44.17**	**352**	*e*P	**P**	**10 36 10.8**	**-1.4**
	7.7nm,0.6s						
AMTX	**Amarillo**	**44.39**	**335**	*e*P	**P**	**10 36 13.2**	**-1.0**
	6.4nm,0.7s						
319A	**Douglas**	**45.34**	**325**	*e*P	**P**	**10 36 17.8**	**-4.1**
	16nm,1.5s						
BNM	**Barren Site**	**46.05**	**330**	*e*P	**P**	**10 36 26.0**	**-1.6**
LAZ	**Ladron**	**46.51**	**330**	*e*P	**P**	**10 36 28.2**	**-2.9**
ANMO	**Albuquerque**	**46.61**	**331**	*e*P	**P**	**10 36 34.9**	**+3.1**
	10nm,1.0s						
BINY	**Binghamton**	**47.32**	**5**	*e*P	**P**	**10 36 36.3**	**-0.8**
	11nm,0.9s						
SDCO	**Great Sand Dun**	**48.45**	**334**	*e*P	**P**	**10 36 48.8**	**+2.6**
	7.8nm,1.0s						
X16A	**Lo Mia Camp, P**	**48.81**	**326**	*e*P	**P**	**10 36 52.6**	**+3.7**
	4.4nm,1.0s						
Y14A	**Wickenburg**	**49.35**	**324**	*e*P	**P**	**10 36 51.3**	**-1.7**
	2.5nm,0.8s						
MVCO	**Mesa Verde**	**49.41**	**331**	*e*P	**P**	**10 36 54.1**	**+0.5**
	4.8nm,0.9s						
WUAZ	**Wupatki**	**49.58**	**327**	*e*P	**P**	**10 36 51.9**	**-2.9**
	4.8nm,1.0s						
USHA	**Ushuaia**	**50.55**	**171**	P	**P**	**10 37 03.1**	**+1.5**
	8.8nm,0.7s,baz=326,slow=4.4,SNR=5.6						
W13A	**Hualapai Mount**	**50.69**	**325**	*e*P	**P**	**10 37 02.9**	**-0.4**
	2.3nm,0.7s						
U15A	**North Rim**	**50.76**	**327**	*e*P	**P**	**10 37 03.0**	**-0.9**
	1.6nm,0.9s						
TRQ	**Mont Tremblant**	**51.44**	**6**	*e*P	**P**	**10 37 07.2**	**-1.3**
PKCU	**Pink Cliffs**	**51.52**	**328**	*e*P	**P**	**10 37 08.6**	**-1.1**
	15nm,1.4s						
E43A	**Lone Tree Farm**	**51.58**	**355**	*e*P	**P**	**10 37 08.9**	**-0.6**
	5.6nm,0.6s						
O20A	**White River Ci**	**51.63**	**333**	*e*P	**P**	**10 37 09.6**	**-0.6**
	8.9nm,1.5s						
LCMT	**Little Creek M**	**51.70**	**327**	*e*P	**P**	**10 37 09.5**	**-1.2**
	2.2nm,0.9s						
SRU	**San Rafael Swe**	**51.88**	**331**	*e*P	**P**	**10 37 10.8**	**-1.3**
	3.3nm,0.9s						
MTPU	**Mount Pierson**	**51.90**	**329**	*e*P	**P**	**10 37 11.1**	**-1.4**
	1.2nm,0.7s						
SZCU	**Shurtz Canyon**	**52.05**	**327**	*e*P	**P**	**10 37 12.2**	**-1.2**
	4.9nm,1.2s						
Q16A	**Castle Valley**	**52.05**	**330**	*e*P	**P**	**10 37 11.6**	**-1.9**
	2.7nm,0.9s						
D53A	**Lac Vacive, Po**	**52.07**	**3**	*e*P	**P**	**10 37 12.8**	**-0.3**
	4.9nm,0.8s						
P17A	**Butcher Ranch,**	**52.27**	**331**	*e*P	**P**	**10 37 13.8**	**-1.1**
	5.8nm,0.9s						
TMUT	**Trail Mountain**	**52.37**	**330**	*e*P	**P**	**10 37 15.2**	**-0.6**
	3.7nm,1.4s						
SHPR	**Sheep Range**	**52.41**	**325**	*e*P	**P**	**10 37 13.8**	**-2.2**
	1.9nm,0.9s						
D41A	**Chassel**	**52.42**	**353**	*e*P	**P**	**10 37 18.9**	**+3.2**
	15nm,1.1s						
GSC	**Goldstone, Bar**	**52.55**	**323**	*e*P	**P**	**10 37 15.0**	**-2.0**
	5.5nm,1.3s						
JLU	**Jordanelle**	**53.49**	**331**	*e*P	**P**	**10 37 22.8**	**-1.2**
	5.8nm,1.1s						
ISA	**Isabella, Lake**	**53.80**	**322**	*e*P	**P**	**10 37 25.2**	**-1.0**
	4.1nm,1.1s						
R11A	**Troy Canyon, C**	**53.95**	**326**	*e*P	**P**	**10 37 26.4**	**-1.0**
	2.0nm,0.9s						
PD31	**Pinedale Array**	**54.34**	**334**	*e*P	**P**	**10 37 29.0**	**-1.2**
	1.4nm,0.8s						
PD31				*e*PcP	**PcP**	**10 38 34.5**	**+0.8**
PDAR	**Pinedale Array**	**54.34**	**334**	P	**P**	**10 37 31.7**	**+1.5**
	0.6nm,0.7s,baz=126,slow=8.0,SNR=4.7						
PDAR				pP	**pP**	**10 37 44.0**	**+0.7**
	1.3nm,0.6s,baz=127,slow=8.3,SNR=10.0						
PDAR				PcP	**PcP**	**10 38 34.5**	**+0.8**
	0.4nm,0.5s,baz=134,slow=5.2,SNR=2.5						
AGMN	**Agassiz Nation**	**54.83**	**348**	*e*P	**P**	**10 37 34.8**	**+1.5**
	10nm,0.8s						
REDW	**Red Top Meadow**	**55.38**	**334**	*e*P	**P**	**10 37 36.1**	**-1.6**
	5.5nm,1.1s						
NV11	**Mina Array Sit**	**55.46**	**325**	*e*P	**P**	**10 37 41.1**	**+2.8**
	0.6nm,1.0s						
MDPB	**Devils Postpil**	**55.47**	**323**	*e*P	**P**	**10 37 37.2**	**-1.3**
	1.2nm,0.8s						
NV01	**Mina Array Sit**	**55.55**	**325**	*e*P	**P**	**10 37 41.7**	**+2.7**
NV01				*e*PcP	**PcP**	**10 38 40.2**	**+1.7**
NVAR	**Mina Array Bea**	**55.55**	**325**	P	**P**	**10 37 41.7**	**+2.7**
	1.6nm,0.7s,baz=139,slow=6.9,SNR=11						
NVAR				pP	**pP**	**10 37 54.6**	**+2.5**
	7.6nm,1.1s,baz=136,slow=7.2,SNR=10.0						
NVAR				PcP	**PcP**	**10 38 40.2**	**+1.7**
	1.1nm,0.7s,baz=121,slow=4.6,SNR=2.5						
MOOW	**Moose Ponds**	**55.65**	**334**	*e*P	**P**	**10 37 38.4**	**-1.2**
	0.8nm,0.9s						
KVN	**Kaiserville**	**55.85**	**325**	*e*P	**P**	**10 37 40.9**	**-0.2**
	3.1nm,1.0s						
BMN	**Battle Mountai**	**56.32**	**327**	*e*P	**P**	**10 37 42.9**	**-1.6**
	2.7nm,1.0s						
YERR	**Yerington**	**56.46**	**324**	*e*P	**P**	**10 37 44.7**	**-0.8**
	3.1nm,1.1s						
ULM	**Lac du Bonnet**	**56.68**	**348**	P	**P**	**10 37 46.5**	**0.0**
	3.9nm,0.8s,baz=140,slow=7.0,SNR=3.9						
ULM	**Lac du Bonnet**	**56.68**	**348**	*e*P	**P**	**10 37 45.5**	**-1.1**
	6.9nm,0.8s						
PNTR	**Pine Nut**	**56.74**	**324**	*e*P	**P**	**10 37 46.5**	**-0.9**
	3.2nm,0.8s						
VCNR	**Virginia City**	**56.90**	**325**	*e*P	**P**	**10 37 47.6**	**-1.1**
	2.8nm,0.8s						
PAHR	**Pah Rah Range**	**57.03**	**325**	*e*P	**P**	**10 37 48.0**	**-1.4**
	2.3nm,1.1s						
MCMT	**McKenzie Canyo**	**57.42**	**333**	*e*P	**P**	**10 37 51.0**	**-1.2**
BOZ	**Bozeman (W)**	**57.50**	**335**	*e*P	**P**	**10 37 55.6**	**+3.0**
	6.6nm,1.0s						
DLMT	**Dillon**	**57.73**	**334**	*e*P	**P**	**10 37 53.0**	**-1.2**
	2.8nm,1.0s						
MFID	**Camas Ranch**	**57.75**	**330**	*e*P	**P**	**10 37 55.8**	**+1.4**
	17nm,1.0s						
LRM	**Limekiln Ridge**	**58.03**	**334**	*e*P	**P**	**10 37 59.2**	**+2.7**
WVOR	**Wild Horse Val**	**58.48**	**328**	*e*P	**P**	**10 37 56.6**	**-3.0**
	2.6nm,0.9s						
MOD	**Modoc Plateau**	**59.02**	**326**	*e*P	**P**	**10 38 05.6**	**+2.2**
	12nm,1.1s						
MSO	**Missoula**	**59.46**	**334**	*e*P	**P**	**10 38 06.2**	**-0.1**
	14nm,1.4s						
BMO	**Blue Mountains**	**59.53**	**331**	*e*P	**P**	**10 38 05.4**	**-1.3**
	3.0nm,1.3s						
YBH	**Yreka Blue Hor**	**60.26**	**325**	P	**P**	**10 38 12.4**	**+0.6**
	2.6nm,0.7s,baz=92,slow=4.5,SNR=6.2						
YBH	**Yreka Blue Hor**	**60.26**	**325**	*e*P	**P**	**10 38 12.9**	**+1.1**
	3.3nm,0.8s						
F10A	**Beach Ranch, E**	**60.31**	**332**	*e*P	**P**	**10 38 14.9**	**+2.9**
	11nm,1.1s						
PINE	**Pine Mountain**	**60.64**	**328**	*e*P	**P**	**10 38 17.2**	**+2.7**
	9.5nm,1.1s						
E09A	**Wood Farm, Sta**	**61.14**	**331**	*e*P	**P**	**10 38 17.1**	**-0.5**
	3.1nm,0.6s						
WALA	**Waterton Lakes**	**61.19**	**336**	*e*P	**P**	**10 38 21.2**	**+3.2**
	7.8nm,0.7s						
NEW	**Newport**	**61.95**	**333**	*e*P	**P**	**10 38 22.0**	**-1.1**
	4.5nm,1.1s						
LTY	**Liberty**	**62.88**	**331**	*e*P	**P**	**10 38 28.2**	**-1.2**
	2.9nm,0.8s						
LON	**Longmire**	**63.10**	**330**	*e*P	**P**	**10 38 29.6**	**-1.3**
	2.6nm,0.8s						
D05A	**Enumclaw**	**63.49**	**330**	*e*P	**P**	**10 38 32.4**	**-0.9**
	6.0nm,0.8s						
NLWA	**Neilton Lookou**	**64.58**	**329**	*e*P	**P**	**10 38 39.4**	**-1.1**
	5.4nm,0.8s						
YKA	**Yellowknife Ar**	**72.21**	**344**	LR	LR	11 12 31.5	
	comp=Z,5.7nm,18.9s,baz=134,slow=37						
MOBC	**Moresby Island**	**72.22**	**330**	*e*P	**P**	**10 39 26.9**	**-1.2**
	694nm,0.4s						
LIC	**Lamto**	**76.51**	**82**	*e*P	pP	10 40 07.6	0.0
	67nm,1.6s						
TIC	**Toumodi**	**76.57**	**82**	*e*P	pP	10 40 07.9	0.0
KIC	**Kosan Boka**	**76.81**	**82**	*e*P	pP	10 40 09.4	+0.1
	26nm,0.8s						
VNA3	**Neumayer Olymp**	**79.15**	**162**	P	**P**	**10 40 07.7**	**+0.3**
MDT	**Midelt**	**81.28**	**56**	P	**P**	**10 40 21.1**	**+1.3**
	1.7nm,0.9s,baz=288,slow=3.2,SNR=3.1						
INK	**Inuvik**	**81.85**	**343**	*e*P	**P**	**10 40 23.7**	**+1.8**
	5.9nm,1.1s						
EGAK	**Eagle**	**82.48**	**338**	*e*P	**P**	**10 40 26.5**	**+1.3**
	7.8nm,1.1s						
SCRK	**Sand Creek**	**83.19**	**337**	*e*P	**P**	**10 40 30.8**	**+1.7**
	4.7nm,1.1s						
ESDC	**Sonseca Array**	**83.22**	**49**	P	**P**	**10 40 30.0**	**+0.2**
	0.4nm,0.3s,baz=249,slow=4.4,SNR=5.5						
TOA1	**Torodi Ar. Sit**	**83.91**	**76**	*e*P	**P**	**10 40 33.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**83.91**	**76**	P	**P**	**10 40 33.9**	**+0.2**
	0.5nm,0.6s,baz=256,slow=4.2,SNR=3.3						
TORD				pP	**pP**	**10 40 47.1**	**-0.5**
	1.7nm,0.6s,baz=294,slow=5.9,SNR=8.4						
ILAR	**Eielson Array**	**84.67**	**337**	P	**P**	**10 40 37.1**	**+0.5**
	0.4nm,0.7s,baz=144,slow=3.2,SNR=4.1						
ILB	**Eielson Array**	**84.67**	**337**	*e*P	**P**	**10 40 37.1**	**+0.5**
	1.6nm,1.0s						
QSPA	**South Pole Qui**	**84.94**	**180**	*e*P	**P**	**10 40 35.8**	**-2.3**
	20nm,1.5s						
MLY	**Manley**	**86.29**	**336**	*e*P	**P**	**10 40 45.9**	**+1.3**
	2.9nm,0.9s						
CAST	**Castle Rocks**	**86.30**	**335**	*e*P	**P**	**10 40 45.3**	**+0.6**
	3.1nm,0.6s						
EKA	**Eskdalemuir Ar**	**87.22**	**34**	P	**P**	**10 40 49.7**	**+0.4**
	1.2nm,0.7s,baz=252,slow=4.1,SNR=3.9						
EKA				pP	**pP**	**10 41 03.5**	**+0.3**
	2.0nm,0.9s,baz=258,slow=4.2,SNR=3.6						
SYO	**Syowa Base**	**95.67**	**162⇑**	*e*pP	pP	10 41 42.0	-0.3
ISP	**Isparta**	**109.97**	**52**	*e*Pdif	**Pdif**	**10 42 32.7**	**-0.3**
AS31	**Alice Springs**	**135.64**	**228**	*e*PKPpre	PKPpre	10 47 18.2	
AS31				*e*PKPdf	**PKPdf**	**10 47 24.6**	**+0.4**
ASAR	**Alice Springs**	**135.64**	**228**	PKhKP	PKPpre	10 47 18.2	
	0.9nm,0.8s,baz=126,slow=2.8,SNR=4.3						
ASAR				PKP	**PKPdf**	**10 47 24.6**	**+0.5**
	0.9nm,0.7s,baz=125,slow=2.2,SNR=8.2						
WR1	**Warramunga Arr**	**137.37**	**233**	*e*PKPdf	**PKPdf**	**10 47 27.5**	**0.0**
WRA	**Warramunga Arr**	**137.37**	**233**	PKP	**PKPdf**	**10 47 27.5**	**0.0**
	2.2nm,0.8s,baz=153,slow=1.6,SNR=6.6						
WMQ	**Urumqi**	**140.17**	**13**	*e*P	**Pdif**	**10 44 52.3**	**+5.1**
WMQ				pmax	pmax		
	comp=Z,76nm,4.5s						
WMQ				LR	LR		
	comp=N,980nm,28.9s						
WMQ				LR	LR		
	comp=E,580nm,28.9s						
WMQ				LR	LR		
	comp=Z,61nm,20.9s						
HHC	**Hu-ho-hao-te**	**142.75**	**344**	*e*P	**PKiKP**	**10 47 39.5**	**-0.4**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,12nm,5.6s						
GTA	**Gaotai**	**145.88**	**359**	*e*P	**PKPbc**	**10 47 43.0**	**+0.1**
GTA				pP	PKiKP	10 47 48.5	+2.1
GTA				sP	pPKPdf	10 47 51.5	-5.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				smax	smax		
	comp=N,18nm,1.2s						
GTA				smax	smax		
	comp=E,12nm,1.1s						

MEX 31 10:31:34.7±0.6**, 18°.41N×104°.16W, h16**^{km}±7^{km}**, MD3.8, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.79**	**99**	*e*P	Pb	10 31 47.2	-2.8
MMIG				*i* S	Sb	10 31 56.5	-3.9
EZ5V		**1.19**	**26**	*i* P	Pn	10 31 53.0	-4.0
EZ5V				*i* S	Sb	10 32 07.3	-5.0
CJM	**Chamela**	**1.37**	**323**	*e*P	Pn	10 31 55.2	-3.9
CJM				*i* S	Sn	10 32 11.7	-5.3
ANIG	**Ahuacatlan**	**2.65**	**353**	*i* P	Pn	10 32 13.5	-3.4
ANIG				*i* S	Sn	10 32 44.7	-4.1

*AZER **31** 10:33:59.5±0.2, 37°.87N×47°.27E, h6^{km}, ml3.9/26, Error ellipse: s-maj=4.6km s-min=1.4km az=352.0*

*TEH **31** 10:34:01.3, 37°.83N×47°.19E, h7^{km}, ML3.8*

*IDC **31** 10:34:03.0±2.2, 38°.07N×47°.44E, h0^{km}, mb1 3.7/3, mb1mx3.3/45, mbtmp3.7/3, ML3.4/4, Error ellipse: s-maj=26.9km s-min=15.2km az=178.0*

*THR **31** 10:34:02.1, 37°.90N×47°.28E, h17^{km}, ML3.9*

ISC 31 10:34:01.8±1.2**, 37°.90N**±0°.02×**47°.21E**±0°.02**, h2**^{km}±9^{km}**, n110, σ1^{s}.79**/138**, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISRB	**Sarab**	**0.37**	**101**	*e*Sg	**Sb**	**10 34 15.9**	**-1.7**
ISRB				*e*Pg	**Pg**	**10 34 08.3**	**-0.7**
IHSH	**Hashtrud**	**0.41**	**6**	*e*Pg	**Pb**	**10 34 11.6**	**-0.5**
IHSH				IAMB	IAmb	10 34 22.7	
	comp=Z,14μm,0.4s						
IHRS	**Heris**	**0.44**	**343**	*e*Pg	**Pg**	**10 34 10.5**	**+0.2**
IHRS				*e*Sg	**Sg**	**10 34 17.9**	**+1.8**
IHRS				IAMB	IAmb	10 34 19.8	
	comp=Z,86μm,0.3s						
ITBZ	**Tabriz**	**0.90**	**292**	*e*Pg	**Pg**	**10 34 18.5**	**-0.6**
ITBZ				IAMB	IAmb	10 34 35.6	
	comp=Z,17μm,0.2s						
IAZR	**Azarshahr**	**1.00**	**258**	*e*Pg	**Pg**	**10 34 19.2**	**-1.7**
IAZR				IAMB	IAmb	10 34 42.8	
	comp=Z,35μm,0.4s						
GRMI	**Germi**	**1.06**	**30**	AML	AML	10 34 38.0	
	comp=E,2μm,0.2s						
GRMI				AML	AML	10 34 39.3	
	comp=N,2μm,0.4s						
GRMI	**Germi**	**1.06**	**30**	Pg	**Pg**	**10 34 21.5**	**-0.6**
LRK	**Lerik**	**1.16**	**50**	*e*Pg	**Pb**	**10 34 23.5**	**-1.2**
LRK	**Lerik**	**1.16**	**50**	P	**Pb**	**10 34 23.6**	**-1.2**
	SNR=82						
LRK				S	**Sn**	**10 34 41.7**	**-0.2**

ISHB	Shabestar	1.31	288	*e*Pg	Pn	10 34 25.6	-1.8
ISHB				IAMB	IAmb	10 34 28.0	
	comp=Z,39μm,0.7s						
ISHB				*e*Sg	Sn	10 34 45.1	-0.6
ORD	Ordubad	1.40	318	*e*Pn	Pn	10 34 27.5	-1.0
ORD	Ordubad	1.40	318	P	Pn	10 34 27.9	-0.7
	SNR=18						
ORD				S	Sg	10 34 50.6	+3.7
ASTR	Astara	1.41	62	*e*Pg	Pn	10 34 28.0	-0.6
ASTR	Astara	1.41	62	P	Pb	10 34 28.2	-0.7
	SNR=56						
ASTR				S	Sg	10 34 49.4	+2.2
IMRD	Marand	1.44	305	*e*Pg	Pn	10 34 28.6	-0.5
IMRD				IAMB	IAmb	10 34 53.8	
	comp=Z,68μm,0.6s						
LKRN	Lenkeran, Azer	1.48	56	*e*Pn	Pb	10 34 29.4	-0.6
LKRN	Lenkeran, Azer	1.48	56	P	Pb	10 34 29.5	-0.6
	SNR=66						
LKRN				S	Sg	10 34 51.2	+1.8
GLBA	Clilabad	1.63	34	*e*Pn	Pg	10 34 33.0	-0.1
GLBA	Clilabad	1.63	34	P	Pg	10 34 33.0	-0.1
	SNR=80						
GLBA				S	Sg	10 34 58.0	+3.7
MAHB	Mahabad	1.64	227	*e*Pn	Pn	10 34 29.8	-2.1
NAX	Nakhchivan	1.85	314	*e*Pn	Pb	10 34 36.2	-0.3
NAX	Nakhchivan	1.85	314	P	Pb	10 34 36.2	-0.3
	SNR=88						
NAX				S	Sg	10 35 02.8	+1.4
SBZ	Shahbuz	1.98	320	*e*Pn	Pb	10 34 37.9	-0.7
SBZ	Shahbuz	1.98	320	P	Pb	10 34 38.0	-0.7
	SNR=47						
SBZ				S	Sg	10 35 06.7	+1.3
YOVA	Hakkari_Yksek	2.33	263	*i* P	Pb	10 34 45.5	+0.8
YOVA				IAML_P			
	comp=Z,5μm,0.4s						
BRDA	Brd	2.36	359	*e*Pn	Pb	10 34 46.3	+1.2
BRDA	Brd	2.36	359	P	Pn	10 34 43.0	+1.4
BRDA				S	Sb	10 35 16.2	+1.5
ZRD	Zardab	2.41	9	*e*Pn	Pb	10 34 47.1	+1.2
ZRD	Zardab	2.41	9	P	Pb	10 34 43.8	-2.1
	SNR=7.5						
ZRD				S	Sb	10 35 17.5	+1.5
MAKU	Maku	2.46	307	Pn	Pn	10 34 44.4	+1.3
MAKU				Sg	Sg	10 35 20.6	-0.1
ALIB	Äli-Bayra	2.49	34	P	Pn	10 34 44.1	+0.7
ALIB				S	Sb	10 35 19.0	+0.5
BASK	Baskale_VAN	2.54	275	*i* P	Pb	10 34 48.8	+0.6
BASK				IAML_P			
	comp=Z,355nm,0.1s						
HYR	Heyderabad	2.59	315	*e*Pn	Pb	10 34 48.3	-0.7
HYR	Heyderabad	2.59	315	P	Pn	10 34 46.4	+1.6
	SNR=6.6						
HYR				S	Sb	10 35 23.3	+2.0
KDMR	Kurdemir	2.59	17	*e*Pn	Pb	10 34 50.2	+1.2
KDMR	Kurdemir	2.59	17	P	Pn	10 34 46.1	+1.3
HSRG	Sareghieh	2.79	162	*e*Pn	Pn	10 34 48.0	+0.3
HSRG				IAMB	IAmb	10 35 28.7	
	comp=Z,0.0nm,0.4s						
HAKT	HAKKARI	2.79	264	*i* P	Pb	10 34 51.0	-1.6
HAKT				IAML_P			
	comp=Z,706nm,0.4s						
SNGE	Sanandaj	2.80	178	Pn	Pn	10 34 48.4	+0.6
GANJ	Ganja	2.83	346	*e*Pn	Pb	10 34 51.1	-2.0
GANJ	Ganja	2.83	346	P	Pn	10 34 49.8	+1.7
	SNR=5.0						
GANJ				S	Sb	10 35 28.1	-0.2
IGZV	Ghazvin	2.84	121	*e*Pn	Pn	10 34 47.8	-0.6
IGZV				IAMB	IAmb	10 35 37.3	
	comp=Z,7μm,0.6s						
CLDR	Caldiran	2.87	297	*i* P	Pb	10 34 54.7	+0.9
CLDR				IAML_P			
	comp=Z,210nm,0.2s						
CLDR	Caldiran	2.87	297	*e*Pn	Pb	10 34 53.5	-0.3
MNGR	Mingechevir, A	2.87	358	*e*Pn	Pb	10 34 54.7	+0.9
MNGR	Mingechevir, A	2.87	358	P	Pn	10 34 50.1	+1.4
MNGR				S	Sb	10 35 29.0	-0.5
QABG	Abgarm-Qazvin	2.90	138	*e*Pn	Pn	10 34 49.5	+0.3
CUKT	Cukurca	2.93	258	*i* P	Pb	10 34 52.3	-2.6
CUKT				IAML_P			
	comp=Z,1μm,0.5s						
CUKT	Cukurca	2.93	258	*e*Pn	Pn	10 34 52.1	+2.5
GNI	Garni	2.96	320	Pn	Pb	10 34 54.6	-0.8
	comp=Z,29nm,0.3s,baz=131,slow=3.2,SNR=33						
GNI				Lg	Lg	10 35 37.1	
	comp=Z,6.7nm,0.3s,baz=130,slow=7.2,SNR=3.2						
GBS	Qobustan	2.96	27	*e*Pn	Pb	10 34 55.7	+0.4
GBS	Qobustan	2.96	27	P	Pn	10 34 50.3	+0.4
GBS				S	Sb	10 35 28.8	-3.2
IML	Ismayilli	2.99	14	S	Sb	10 35 29.5	-3.4
GDB	GEDABAY	3.04	339	*e*Pn	Pb	10 34 55.9	-0.8
GDB				*e*Pn	Pb	10 34 55.9	-0.8
GDB	GEDABAY	3.04	339	P	Pn	10 34 52.3	+1.2
	SNR=36						
GDB				S	Sn	10 35 30.6	+2.5
VMUR	Van-Muradiye	3.06	292	*i* P	Pb	10 34 57.9	+0.9
VMUR				IAML_P			
	comp=Z,134nm,0.1s						
PQL	Pirkuli	3.08	20	*e*Pn	Pb	10 34 54.7	-2.8
PQL	Pirkuli	3.08	20	P	Pn	10 34 52.6	+0.9
PQL				S	Sn	10 35 30.6	+1.4
QBL	Gabala	3.08	9	*e*Pn	Pn	10 34 54.2	+2.6
QBL	Gabala	3.08	9	P	Pn	10 34 53.1	+1.4
QBL				S	Sb	10 35 33.6	-2.0
VANB	Van	3.08	284	*e*Pn	Pb	10 34 55.4	-2.1
QALM	Alamut, Qazvin	3.11	117	*e*Pn	Pn	10 34 52.8	+0.6
TASB	TASBURUN-IGDIR	3.12	313	*e*Pn	Pb	10 34 57.7	-0.3
IGDI	IGDIR	3.14	310	*i* P	Pb	10 34 59.1	+0.8
IGDI				IAML_P			
	comp=Z,243nm,0.4s						
ATGJ	Altiaghaj	3.25	24	*e*Pn	Pb	10 34 58.3	-2.0
ATGJ	Altiaghaj	3.25	24	P	Pn	10 34 54.1	+0.2
	SNR=6.4						
ATGJ				S	Sb	10 35 36.4	-4.0
IDHR	Dehrash	3.26	192	*e*Pn	Pn	10 34 55.0	+0.8
IDHR				IAMB	IAmb	10 35 57.5	
	comp=Z,0.0nm,1.0s						
SEKA	Sheki	3.31	360	*e*Pn	Pn	10 34 56.8	+2.1
SEKA	Sheki	3.31	360	P	Pn	10 34 56.8	+2.1
SEKA				S	Sb	10 35 38.9	-3.1
IRAZ	Razeghan	3.31	138	*e*Pn	Pn	10 34 54.9	0.0
IRAZ				IAMB	IAmb	10 35 49.0	
	comp=Z,4μm,0.5s						
XNQ	Khinaliq	3.35	12	*e*Pn	Pn	10 34 57.2	+1.8
XNQ	Khinaliq	3.35	12	P	Pn	10 34 57.2	+1.8
	SNR=14						
XNQ				S	Sb	10 35 38.9	-4.5
AKDM	Akdamar-Van	3.36	279	*e*Pn	Pb	10 34 59.5	-2.8
IVIS	Veis	3.38	185	*e*Pn	Pn	10 34 58.3	+2.6
SIZA	Siyzn	3.44	22	*e*Pn	Pb	10 35 02.1	-1.4
SIZA	Siyzn	3.44	22	P	Pn	10 34 56.8	+0.3
	SNR=6.0						
SIZA				S	Sn	10 35 39.9	+2.1
HAGD	Aghdareh	3.44	152	*e*Pn	Pn	10 34 56.8	+0.1
HAGD				IAMB	IAmb	10 35 03.8	
	comp=Z,0.0nm,0.3s						
QZX	Qazax, Azerbai	3.46	336	P	Pn	10 34 57.8	+1.0
	SNR=30						
QZX				S	Sb	10 35 42.6	-3.9
THKV	Tehran--Karaj	3.54	123	AML	AML	10 35 56.2	
	comp=E,323nm,0.5s						
THKV				AML	AML	10 35 56.7	
	comp=N,355nm,0.6s						
THKV	Tehran--Karaj	3.54	123	Pn	Pn	10 34 57.9	-0.2
THKV				Sg	Sb	10 35 51.0	+2.0
IMHD	Mahdasht	3.55	127	*e*Pn	Pn	10 34 57.9	-0.1
QUB	Quba	3.59	14	*e*Pn	Pb	10 35 03.5	-2.6
QUBA	Quba, Azerbaij	3.59	16	P	Pn	10 34 58.9	+0.3
	SNR=4.3						
IGHG	Ghaleghazi	3.60	188	*e*Pn	Pn	10 35 01.3	+2.5
IGHG				IAMB	IAmb	10 36 04.3	
	comp=Z,3μm,1.0s						
KCHF	Cheshme Sefid,	3.62	182	*e*Pn	Pn	10 35 01.2	+2.1
KCHF				IAMB	IAmb	10 35 11.0	
	comp=Z,0.0nm,0.6s						
DDFL	Dedoflistskaro	3.64	347	P	Pb	10 35 03.7	-3.3
QSAR	Qusar	3.71	12	*e*Pn	Pb	10 35 04.4	-3.6
QSAR	Qusar	3.71	12	P	Pn	10 35 00.2	+0.1
	SNR=8.5						
QSAR				S	Sn	10 35 46.0	+1.6
IKOM	Komasi	3.72	176	*e*Pn	Pn	10 35 02.4	+1.9
IKOM				IAMB	IAmb	10 35 24.9	
	comp=Z,0.0nm,0.7s						
TUTA	Tutak	3.75	295	*i* P	Pb	10 35 10.9	+1.9
TUTA				IAML_P			
	comp=Z,821nm,0.4s						
ZKTA	Zakatala	3.76	353	P	Pn	10 35 01.4	+0.5
	SNR=3.7						
ZKTA				S	Sn	10 35 48.9	+3.1
ZKT	Zaqatala	3.78	354	*e*Pn	Pb	10 35 05.0	-4.2
SIRN	Sırnak	3.82	265	*i* P	Pb	10 35 09.8	-0.3
SIRN				IAML_P			
	comp=Z,492nm,0.2s						
HSAM	Samen	3.85	162	*e*Pn	Pn	10 35 03.7	+1.4
LGD	Lagodekhi	4.00	350	P	Pn	10 35 07.9	+3.7
SRTM	Siirt_Merkez	4.18	273	*i* P	Pn	10 35 09.0	+2.3
SRTM				IAML_P			
	comp=Z,335nm,0.4s						
IPRN	Peran	4.42	110	*e*Pn	Pn	10 35 10.4	+0.3
IDMV	Damavand	4.51	119	*e*Pn	Pn	10 35 12.4	+0.9
IDMV				IAMB	IAmb	10 36 34.5	
	comp=Z,775nm,0.6s						
IVRN	Varamin	4.65	127	*e*Pn	Pn	10 35 13.2	0.0
IVRN				IAMB	IAmb	10 35 37.5	
	comp=Z,0.0nm,0.6s						
MARD	Mardin	5.14	265	*i* P	Pg	10 35 39.2	-1.1
MARD				IAML_P			
	comp=Z,648nm,0.4s						
ILAS	Lasjerd	5.26	117	*e*Pn	Pn	10 35 24.3	+2.6
ISHM	Shahmirzad	5.31	111	*e*Pn	Pn	10 35 24.1	+1.7
ISHM				IAMB	IAmb	10 35 28.8	
	comp=Z,961nm,0.4s						
IGLO	Ghaloghah	5.47	103	*e*Pn	Pn	10 35 24.7	+0.2
IZEF	Zefreh	6.51	139	*e*Pn	Pn	10 35 39.8	+0.9
KBZ	Khabaz	6.68	332	Pg	Pb	10 36 02.4	+3.7
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=2.3						
ANAR	Anarak	7.09	130	*e*Pn	Pn	10 35 47.8	+1.0
GEYT	Alibeck	8.62	86	Pn	Pn	10 36 06.6	-1.1
	comp=Z,3.4nm,0.3s,baz=280,slow=12,SNR=7.2						
GEYT				Sn	Sn	10 37 45.9	+0.3
	comp=Z,0.4nm,0.3s,baz=280,slow=4.2,SNR=3.0						
BRTR	Keskin Array B	10.74	284	Pn	Pn	10 36 41.8	+4.9
	comp=Z,0.2nm,0.3s,baz=110,slow=12,SNR=4.9						
AKTO	Aktyubinsk	14.72	28	Pn	Pn	10 37 27.3	-3.7
	comp=Z,0.2nm,0.3s,baz=215,slow=5.5,SNR=3.6						
AKTO				Sn	Sn	10 40 00.5	-14
	comp=Z,0.1nm,0.3s,baz=221,slow=20,SNR=2.1						
HHC	Hu-ho-hao-te	48.83	65	P	P	10 42 50.3	+1.5
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,9.0nm,5.5s						

ATH ***31*** *10:36:20.8, 36°.59N×21°.48E, h28*^{km}*, ML4.1/13, Error ellipse: s-maj=1.9km s-min=0.9km az=52.0*

IDC ***31*** *10:36:20.3±4.8, 36°.72N×21°.63E, h22*^{km}*±32*^{km}*, mb4.1/27, mb1 4.2/38, mb1mx4.1/54, mbtmp4.2/38, ML3.9/11, MS3.4/18, Ms1 3.4/18, ms1mx3.1/53, Error ellipse: s-maj=12.6km s-min=10.3km az=173.0*

MOS ***31*** *10:36:20.2±1.0, 36°.72N×21°.56E, h33*^{km}*, mb4.8/26, Error ellipse: s-maj=7.0km s-min=4.0km az=72.0*

ISCJB ***31*** *10:36:22.0±0.3, 36°.78N±0°.02×21°.47E±0°.02, h55*^{km}*±2*^{km}*, mb4.5/74, MS3.4/12, Error ellipse: s-maj=3.8km s-min=2.0km az=40.2*

PDG ***31*** *10:36:21.4±0.7, 36°.65N×21°.50E, h35*^{km}*±2*^{km}*, ML4.4/9, Error ellipse: s-maj=1.2km s-min=1.4km az=0.0*

THE ***31*** *10:36:21.8, 36°.61N×21°.44E, h17*^{km}*, ML4.2/11, Error ellipse: s-maj=1.1km s-min=0.7km az=50.0*

NEIC ***31*** *10:36:21.8±0.0, 36°.61N×21°.44E, h17*^{km}*, mb4.6/37, ML4.2(THE), After THE.*

MED_RC ***31*** *10:36:22.0±0.6, 36°.63N×21°.49E, h37*^{km}*±3*^{km}*, MW4.4/4, Moment Tensor Solution. Mantle waves: s4,c4; Duration: 1§0 Moment tensor: Scale 10*^{15}*Nm;* M_{rr}*-1.22±.51;* $M_{\theta\theta}$*0.67±.57;* $M_{\phi\phi}$*0.56±.48;* $M_{r\theta}$*1.29±.19;* $M_{\theta\phi}$*4.03±1.36;* $M_{\phi r}$*-1.28±.16; Best double couple:* M_0*4.54000×10*^{15} *NP1:*ϕ_s*266.00000°, δ70.00000°, λ-22.00000°. NP2:* ϕ_s*4.00000°, δ70.00000°, λ-158.00000°. Principal axes: T 4.6400, Plg0.0000°, Azm315.0000°; N -0.2000, Plg61.0000°, Azm46.0000°; P -4.4400, Plg29.0000°, Azm225.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

BEO ***31*** *10:36:23.6±0.8, 36°.90N×21°.10E, h10*^{km}*, ML4.1/9*

ISC 31 10:36:21.1±0.6**, 36°.63N**±0°.03×**21°.46E**±0°.03**, h31**^{km}±4^{km}**, n408,** σ1§**89**/477**, mb4.5**/74**, MS3.3**/12**, 22C-11D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.35	41	*e*Pg	Pb	10 36 29.6	+0.3
PYL				*e*Sg	Sb	10 36 35.6	+0.7
PYL	PYLOS	0.35	41	P	Pb	10 36 29.6	+0.3
PYL				S	Sb	10 36 35.6	+0.7
	42μm,0.5s						
PYL	PYLOS	0.35	41	P	Pb	10 36 29.5	+0.3
PYL				S	Sb	10 36 34.9	0.0
PYL				AML	AML	10 36 36.3	
PYL				AML	AML	10 36 38.3	
	comp=N,66776μm,0.3s						
ITM	Ithomi	0.66	34	*e*Pg	Pn	10 36 34.7	+0.3
ITM				*e*Sg	Sn	10 36 45.4	+1.7
ITM	Ithomi	0.66	34	P	Pn	10 36 34.6	+0.3
ITM				S	Sn	10 36 45.6	+1.9
	comp=N,24μm,0.5s						
ITM	Ithomi	0.66	34	P	Pn	10 36 34.6	+0.3
ITM				S	Sn	10 36 44.7	+1.0
ITM				AML	AML	10 36 48.9	
	comp=N,49669μm,0.3s						
ITM				AML	AML	10 36 49.8	
	comp=E,54234μm,0.5s						
AMT	Artemida-Makis	0.92	12	P	Pb	10 36 39.3	+0.8
AMT				S	Sn	10 36 52.6	+2.5
	comp=E,17μm,0.7s						
AMT	Artemida-Makis	0.92	12	P	Pb	10 36 39.4	+0.8
AMT				S	Sn	10 36 53.3	+3.3
AMT				AML	AML	10 37 01.3	
	comp=N,31632μm,0.7s						
AMT				AML	AML	10 37 03.6	
	comp=E,31938μm,0.5s						
VLX	Vlachokerasia	1.04	45	*e*Pn	Pb	10 36 41.0	+0.4
VLX				*e*Sn	Sb	10 36 56.3	+2.3
VLX	Vlachokerasia	1.04	45	P	Pb	10 36 41.0	+0.4
VLX				S	Sb	10 36 56.3	+2.3
	comp=E,16μm,0.6s						
VLX	Vlachokerasia	1.04	45	P	Pb	10 36 41.1	+0.4
VLX				S	Sb	10 36 56.2	+2.2
VLX				AML	AML	10 37 00.6	
	comp=N,31732μm,0.5s						
VLX				AML	AML	10 37 01.8	
	comp=E,34732μm,0.5s						
TRIP	Tripoli	1.10	36	P	Pb	10 36 41.7	0.0
TRIP				S	Sb	10 36 58.1	+2.4
	comp=E,7μm,0.6s						
TRIP	Tripoli	1.10	36	P	Pb	10 36 42.0	+0.3
TRIP				S	Sb	10 36 58.1	+2.4
TRIP				AML	AML	10 37 04.6	
	comp=N,11984μm,0.6s						
TRIP				AML	AML	10 37 07.2	
	comp=E,13061μm,0.5s						
VLI	Veliai	1.19	85	*e*Pn	Pb	10 36 43.1	+0.1
VLI				*e*Sn	Sb	10 36 59.8	+1.7
VLI	Veliai	1.19	85	P	Pb	10 36 43.1	+0.1
VLI				S	Sb	10 36 59.8	+1.7
VLI	Veliai	1.19	85	P	Pb	10 36 43.1	+0.1
VLI				S	Sb	10 36 59.7	+1.6
VLI				AML	AML	10 37 09.1	
	comp=N,18315μm,0.4s						
VLI				AML	AML	10 37 16.1	
	comp=E,13878μm,0.8s						
MNVA	Monemvasia	1.27	87	P	Pb	10 36 44.6	+0.2
MNVA				S	Sb	10 37 01.5	+1.2
MNVA				AML	AML	10 37 09.9	
	comp=E,8071μm,1.0s						
MNVA				AML	AML	10 37 10.8	
	comp=N,9155μm,0.6s						
KTHR	Kythira	1.30	106	P	Pb	10 36 44.6	-0.3
KTHR				S	Sb	10 37 03.0	+1.8
VTN	Vitineika	1.30	350	P	Pb	10 36 45.2	+0.3
VTN	Vitineika	1.30	350	P	Pb	10 36 45.9	+0.9
KTHA	Kythira Island	1.34	106	P	Pb	10 36 45.5	-0.2
KTHA				S	Sb	10 37 04.2	+1.7
	comp=N,13μm,0.7s						
KTHA	Kythira Island	1.34	106	P	Pb	10 36 45.5	-0.2
KTHA				S	Sb	10 37 03.6	+1.0
KTHA				AML	AML	10 37 10.2	
	comp=E,15524μm,0.7s						
KTHA				AML	AML	10 37 11.4	
	comp=N,15531μm,0.6s						
VLMS	Volimes, Zakyn	1.40	333	P	Pb	10 36 46.8	+0.2
RLS	Riolos of Patr	1.42	0	P	Pb	10 36 47.7	+0.7
RLS				S	Sb	10 37 06.5	+1.7
RLS				AML	AML	10 37 21.5	
	comp=N,6798μm,0.9s						
RLS				AML	AML	10 37 22.9	
	comp=E,5958μm,0.6s						
GUR	Goura	1.48	28	*e*Pn	Pb	10 36 47.6	-0.4
GUR	Goura	1.48	28	P	Pb	10 36 47.6	-0.4
GUR				S	Sb	10 37 06.8	+0.3
	comp=E,10μm,0.6s						
GUR	Goura	1.48	28	P	Pb	10 36 47.8	-0.2
GUR				S	Sb	10 37 07.9	+1.4
GUR				AML	AML	10 37 21.4	
	comp=N,22529μm,0.7s						
GUR				AML	AML	10 37 24.5	
	comp=E,12352μm,0.7s						
KLV	Kalavryta, Ach	1.51	21	P	Pb	10 36 48.0	-0.6
KLV				S	Sb	10 37 08.5	+1.1
	comp=E,3μm,0.7s						
KLV	Kalavryta, Ach	1.51	21	P	Pb	10 36 48.3	-0.3
KLV				S	Sb	10 37 09.0	+1.6
KLV				AML	AML	10 37 25.4	
	comp=E,8080μm,0.7s						
KLV				AML	AML	10 37 30.9	
	comp=N,6946μm,0.7s						
KRND	KRANIDI	1.55	61	P	Pn	10 36 47.7	+1.3
KRND				S	Sb	10 37 09.9	+1.6
	comp=N,7μm,0.6s						
KRND	KRANIDI	1.55	61	P	Pb	10 36 47.8	-1.3
KFL	Anninata	1.57	340	P	Pb	10 36 48.8	-0.6
KFL				S	Sb	10 37 10.6	+1.7
	comp=N,4μm,0.6s						
KFL	Anninata	1.57	340	P	Pb	10 36 48.9	-0.6
TRAZ	Trapeza	1.65	21	P	Pb	10 36 51.0	+0.2
EPID	Epidavros	1.65	53	P	Pn	10 36 49.2	+1.4
LAKA	Lakka	1.66	14	P	Pb	10 36 51.3	+0.3
LAKA				S	Sb	10 37 12.0	+0.5
LAKA				AML	AML	10 37 24.4	
	comp=N,8139μm,0.8s						
LAKA				AML	AML	10 37 26.6	
	comp=E,5520μm,0.8s						
DID	Didima	1.67	58	*e*Pn	Pn	10 36 49.3	+1.2
DID				*e*Sg	Sb	10 37 13.8	+2.0
DID	Didima	1.67	58	P	Pn	10 36 49.3	+1.2
DID				S	Sb	10 37 13.8	+2.0
DID	Didima	1.67	58	P	Pn	10 36 49.5	+1.3
ANKY	Antikythira Is	1.67	117	*e*Pn	Pb	10 36 50.0	-1.2
ANKY				*e*Sn	Sb	10 37 11.1	-0.8
ANKY	Antikythira Is	1.67	117	P	Pb	10 36 50.0	-1.2
ANKY				S	Sb	10 37 11.1	-0.8
	comp=E,5μm,0.8s						
ANKY	Antikythira Is	1.67	117	P	Pb	10 36 50.0	-1.2
ANKY				S	Sb	10 37 11.0	-0.9
ANKY				AML	AML	10 37 30.4	
	comp=E,10897μm,1.0s						
ANKY				AML	AML	10 37 30.4	
	comp=N,8350μm,0.9s						
VLS	Valsamata	1.69	336	P	Pn	10 36 50.5	+2.1
VLS				S	Sb	10 37 12.2	-0.2
VLS	Valsamata	1.69	336	P	Pn	10 36 50.6	+2.1
YDRA	Hydra	1.76	65	P	Pn	10 36 50.4	+1.1
LOUT	Loutraki	1.81	41	P	Pn	10 36 51.5	+1.4
LOUT	Loutraki	1.81	41	P	Pn	10 36 51.9	+1.8
KALE	Kalithea	1.84	17	P	Pb	10 36 53.7	-0.3
SERG	Sergoula	1.84	15	P	Pb	10 36 54.1	0.0
FSK	Fiskardo	1.96	339	P	Pn	10 36 54.5	+2.4
FSK				S	Sb	10 37 21.2	+1.1
DSF	Desfina	1.97	25	P	Pn	10 36 53.8	+1.5
DSF	Desfina	1.97	25	P	Pn	10 36 54.2	+1.9
PVO	Paravola	1.98	1	P	Pb	10 36 56.0	-0.5
PROD	Prodromos	1.99	35	P	Pn	10 36 53.7	+1.2
PROD	Prodromos	1.99	35	P	Pn	10 36 53.9	+1.3
ANX	Ano Chora	1.99	10	P	Pb	10 36 56.5	-0.2
EVGI	Lefkada island	2.08	342	P	Pb	10 36 57.2	-1.0
EVGI	Lefkada island	2.08	342	P	Pb	10 36 57.3	-1.0
VIL2	Platees	2.13	42	P	Pn	10 36 55.2	+0.6
VLY	Voula,Athens	2.23	56	P	Pn	10 36 56.2	+0.4
ATH	Athens Observa	2.24	53	P	Pn	10 36 56.9	+0.9
ATHU	Athens Univers	2.28	54	P	Pn	10 36 57.0	+0.5
IMMV	Iera Moni Meta	2.35	119	P	Pn	10 36 58.8	+1.3
IMMV	Iera Moni Meta	2.35	119	P	Pn	10 36 59.1	+1.5
CHAN	Chania	2.37	117	P	Pn	10 36 59.4	+1.7
ATAL	Atalanti	2.40	31	P	Pn	10 36 59.9	+1.7
VAM	Vamos	2.54	118	P	Pn	10 37 01.4	+1.4
PRNS	Prines Rethymn	2.77	116	P	Pn	10 37 03.8	+0.5
GVDS	Gavdos	2.79	129	P	Pn	10 37 04.5	+1.0
GVD	Gavdhos	2.79	129	*e*Pn	Pn	10 37 04.7	+1.2
GVD	Gavdhos	2.79	129	P	Pn	10 37 04.7	+1.2
IDI	Anoyia	3.09	115	Pn	Pn	10 37 07.9	+0.2
	comp=N,5.9nm,0.3s,baz=286,slow=9.6,SNR=25						
IDI				Sn	Sn	10 37 43.2	-0.4
	comp=N,44nm,0.3s,baz=55,slow=14,SNR=5.9						
IDI				LR	LR	10 38 44.6	
	comp=N,378nm,21.0s,baz=279,slow=48						
SIVA	Sivas	3.16	120	P	Pn	10 37 11.3	+2.6
APE	Apeiranthos	3.29	81	⇑*i*P	Pn	10 37 10.2	-0.3
APE	Apeiranthos	3.29	81	*i* P	Pn	10 37 09.8	-0.7
URLA	Izmir	4.43	66	*i* P	Pn	10 37 26.8	+0.6
URLA				IAML_P			
	comp=Z,4μm,0.4s						
TIP	Timpagrande	4.50	306	*e*Pn	Pn	10 37 29.0	+1.8
TIP				*e*Sn	Sn	10 38 18.0	-0.5
TIP	Timpagrande	4.50	306	⇑*i*P	Pn	10 37 28.2	+1.0
TIP	Timpagrande	4.50	306	S	Sn	10 38 15.4	-3.1
KARP	Karpathos	4.74	102	*e*Pn	Pn	10 37 30.6	+0.1
VAY	Valandovo	4.76	10	*e*Pn	Pn	10 37 32.5	+1.9
VAY				*e*Sn	Sn	10 38 24.2	-0.5
VAY	Valandovo	4.76	10	*i* Pn	Pn	10 37 32.5	+1.9
TIR	Tirane	4.87	346	*e*Pn	Pn	10 37 33.9	+1.8
TIR				*e*Sn	Sn	10 38 30.6	+3.2
TIR	Tirane	4.87	346	⇑*i*P	Pn	10 37 28.9	-3.2
TIR	Tirane	4.87	346	S	Sn	10 38 19.7	-7.7
TIR	Tirane	4.87	346	*e*P	Pn	10 37 33.9	+1.8
TIR				*e*		10 38 30.6	
DAT	Datca	4.92	87	*i* P	Pn	10 37 34.4	+1.5
DAT				IAML_P			
	comp=Z,275nm,0.3s						
EZN	Ezine	4.98	49	⇑*i*P	Pn	10 37 29.3	-4.4
ZEDA	zmir-Bergama	5.02	61	*i* P	Pn	10 37 34.4	+0.2
ZEDA				IAML_P			
	comp=Z,540nm,0.3s						
BAYC	CANAKKALE_Bayr	5.07	51	*i* P	Pn	10 37 33.2	-1.7
BAYC				IAML_P			
	comp=Z,481nm,0.3s						
TAR1	Taranto	5.08	321	*e*Pn	Pn	10 37 37.1	+2.1
TAR1				Sn	Sn	10 38 29.7	-2.9
CGL1	Ceglie Messapi	5.08	323	*e*Pn	Pn	10 37 36.8	+1.7
CGL1				Sn	Sn	10 38 29.1	-3.6
STIP	Stip	5.09	6	*i* Pn	Pn	10 37 37.5	+2.4
AYDN	Tasoluk	5.23	77	*i* P	Pn	10 37 38.7	+1.5
AYDN				IAML_P			
	comp=Z,414nm,0.3s						
MASS	Massafra	5.23	321	*e*Pn	Pn	10 37 38.8	+1.7
MASS				Sn	Sn	10 38 30.7	-5.6
MMB	Musomiste	5.25	19	P	Pn	10 37 38.1	+0.7
FASA	Fasano	5.27	324	*e*Pn	Pn	10 37 39.3	+1.7
FASA				Sn	Sn	10 38 33.1	-4.1
SKO	Skopje	5.33	360	*i* Pn	Pn	10 37 39.9	+1.4
KKB	Krupnik	5.38	13	P	Pn	10 37 40.3	+1.2
MATE	Matera	5.47	319	⇑*i*P	Pn	10 37 38.9	-1.5
MATE	Matera	5.47	319	S	Sn	10 38 38.0	-4.2
ULC	Ulcinj	5.59	343	⇓*i*Pn	Pn	10 37 42.9	+0.8
ULC				*e*Sn	Sn	10 38 45.1	-0.2
RZN	Rozhen	5.65	26	P	Pn	10 37 44.3	+1.3
STEP	BALIKESIR_Sava	5.65	59	*i* P	Pn	10 37 35.0	-7.9
STEP				IAML_P			
	comp=Z,178nm,0.1s						
WDD	Wied Dalam	5.66	264	*e*Pn	Pn	10 37 44.4	+1.3
WDD				*e*Sn	Sn	10 38 45.9	-1.1
VAE	Valguarnera	5.70	281	Pn	Pn	10 37 46.4	+2.8
	comp=Z,6.9nm,0.3s,baz=87,slow=2.6,SNR=10						
VAE				Sn	Sn	10 38 49.4	+1.4
	comp=Z,14nm,0.3s,baz=125,slow=18,SNR=3.0						
BAI	Bari	5.72	323	*e*Pn	Pn	10 37 45.5	+1.7
BAI				Sn	Sn	10 38 45.4	-2.9
TURN	Turunc	5.74	85	*i* P	Pn	10 37 41.5	-2.5
TURN				IAML_P			

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                comp=Z,717nm,0.3s
DALY   Dalyan (Mula)      5.78  86  i P      Pn        10 37 46.0 +1.4
DALY                                IAML_P
                comp=Z,294nm,0.6s
DRME   Dracevica, Mon     5.82 343⇑iPn       Pn        10 37 45.9 +0.7
DRME                                eSn      Sn        10 38 50.5  -0.3
DRME   Dracevica, Mon     5.82 343  ePn      Pn        10 37 45.8 +0.6
BALB   Balikesir          5.88  57  ePn      Pn        10 37 47.1 +1.0
MANT   Manisa             5.94  70  ePn      Pn        10 37 47.0 +0.1
MANT   Manisa             5.94  70  i P      Pn        10 37 47.7 +0.7
MANT                                IAML_P
                comp=Z,54nm,0.2s
BUM    Brajici-Budva      6.00 341⇑iPn       Pn        10 37 48.5 +0.8
BUM                                 eSn      Sn        10 38 54.8  -0.5
TAVA   DENIZLI_Tavas      6.02  80  i P      Pn        10 37 50.5 +2.5
TAVA                                IAML_P
                comp=Z,267nm,0.3s
PDG    Podgorica          6.04 344⇓iP        Pn        10 37 45.5  -2.6
PDG    Podgorica          6.04 344   S       Sn        10 38 48.9  -7.2
PDG    Podgorica          6.04 344  ePn      Pn        10 37 48.1   0.0
TTG    Podgorica          6.04 344⇓iPn       Pn        10 37 48.9 +0.8
TTG                                 eSn      Sn        10 38 55.4  -0.7
TTG    Podgorica          6.04 344  ePn      Pn        10 37 48.9 +0.8
TTG                                 eSn      Sn        10 38 56.5 +0.4
TTG    Podgorica          6.04 344  eP       Pn        10 37 48.9 +0.8
TTG                                 e                  10 38 56.5
PVY    Plav               6.07 349⇑iPn       Pn        10 37 49.8 +1.1
PVY                                 eSn      Sn        10 38 56.2  -0.9
FETY   Fethiye            6.13  88  i P      Pn        10 37 53.0 +3.5
FETY                                IAML_P
                comp=Z,205nm,0.2s
VTS    Vitosha            6.13  12  ePn      Pn        10 37 51.6 +2.0
VTS    Vitosha            6.13  12  ePn      Pn        10 37 50.7 +1.1
VTS                                 eSn      Sn        10 38 56.4  -2.3
VTS    Vitosha            6.13  12⇑iP        Pn        10 37 45.2  -4.4
VTS    Vitosha            6.13  12  eP       Pn        10 37 51.6 +2.0
VTS    Vitosha            6.13  12   P       Pn        10 37 50.1 +0.5
BARS   Barje              6.18   2  ePn      Pn        10 37 51.1 +0.9
BARS                                eSn      Sn        10 38 56.5  -3.3
CEME   Cevo               6.22 342⇓iPn       Pn        10 37 51.1 +0.3
CEME                                eSn      Sn        10 39 00.0  -0.9
DEMI   Demirci            6.23  65  i P      Pn        10 37 52.3 +1.5
DEMI                                IAML_P
                comp=Z,85nm,0.1s
HCY    Herceg Novi        6.24 339⇓iPn       Pn        10 37 50.9  -0.1
HCY                                 eSn      Sn        10 39 00.6  -0.6
HCY    Herceg Novi        6.24 339  i Pn     Pn        10 37 50.2  -0.8
USAK   Uak-Merkez         6.34  69  i P      Pn        10 37 54.2 +1.7
USAK                                IAML_P
                comp=Z,202nm,0.3s
IVA    Berane             6.35 350⇓iPn       Pn        10 37 54.0 +1.5
IVA                                 eSn      Sn        10 39 03.5  -0.4
KOME   Kolasin            6.39 347⇑iPn       Pn        10 37 54.6 +1.5
KOME                                eSn      Sn        10 39 04.1  -0.8
NKME   Niksic             6.42 343⇑iPn       Pn        10 37 54.5 +1.0
NKME                                eSn      Sn        10 39 04.5  -1.3
GOLH   Golhisar           6.52  82  i P      Pn        10 37 57.3 +2.5
GOLH                                IAML_P
                comp=Z,614nm,0.2s
TREB   Trebinje           6.53 339  ePn      Pn        10 37 54.3  -0.7
DBRK   Dubrovnik          6.55 338  ePn      Pn        10 37 55.0  -0.2
DBRK                                 Sn      Sn        10 39 05.2  -3.5
AKAS   Kas                6.58  91  i P      Pn        10 37 57.1 +1.4
AKAS                                IAML_P
                comp=Z,2µm,0.2s
SELS   Selova             6.58 358  ePn      Pn        10 37 55.1  -0.6
KHAL   Karahalli          6.62  72  i P      Pn        10 37 58.5 +2.3
KHAL                                IAML_P
                comp=Z,8.0nm,0.2s
BRY    Bratogost          6.65 341⇓iPn       Pn        10 37 57.9 +1.2
BRY                                 eSn      Sn        10 39 10.4  -1.1
BRY    Bratogost          6.65 341  ePn      Pn        10 37 56.0  -0.7
CLTB   Caltabellotta      6.66 281  ePn      Pn        10 37 59.0 +2.2
ZAPS   Zavoj              6.69   7  ePn      Pn        10 37 58.6 +1.4
SJES   Sjenica            6.72 351  ePn      Pn        10 37 57.9 +0.3
SJES                                eSn      Sn        10 39 07.7  -5.4
UPM    Unac-Piva          6.85 344⇑iPn       Pn        10 38 01.5 +2.0
UPM                                 eSn      Sn        10 39 15.2  -1.2
UPM    Unac-Piva          6.85 344  i Pn     Pn        10 37 59.7 +0.2
STON   Ston               6.87 336  ePn      Pn        10 37 59.3  -0.2
STON                                 Sn      Sn        10 39 11.7  -4.9
STON   Ston               6.87 336  i Pn     Pn        10 37 59.0  -0.6
PLE    Pljevlja           6.88 347⇓iPn       Pn        10 38 01.9 +2.1
PLE                                 eSn      Sn        10 39 15.5  -1.5
BRDR   BURDUR-Merkez      6.95  79  i P      Pn        10 38 03.4 +2.7
BRDR                                IAML_P
                comp=Z,838nm,0.7s
ULDT   Uludag             6.97  58  i P      Pn        10 38 01.1  -0.1
ULDT                                IAML_P
                comp=Z,131nm,0.4s
BOVS   Bovan              7.00   1  ePn      Pn        10 38 01.7 +0.4
BOVS                                eSn      Sn        10 39 15.9  -3.9
IVAS   Ivanjica           7.01 352  ePn      Pn        10 38 01.3  -0.2
IVAS                                eSn      Sn        10 39 15.7  -4.4
KORT   Korkueli           7.14  84  i P      Pn        10 38 05.8 +2.4
KORT                                IAML_P
                comp=Z,345nm,0.3s
RUDO   Rudo               7.16 348  ePn      Pn        10 38 02.6  -1.0
AKUM   Antalya-Kumluc     7.16  90  i P      Pn        10 38 04.4 +0.8
AKUM                                IAML_P
                comp=Z,888nm,0.3s
ZAGS   Zajecar            7.20   4  ePn      Pn        10 38 05.1 +1.0
GRUS   Gruza              7.27 356  ePn      Pn        10 38 04.9  -0.2
ISP    Isparta            7.33  78  ePn      Pn        10 38 08.7 +2.7
ISP    Isparta            7.33  78  eP       Pn        10 38 08.7 +2.7
BBLS   Lazi&#263;i        7.39 348  ePn      Pn        10 38 07.2 +0.4
BBLS                                eSn      Sn        10 39 24.7  -5.0
BBLS   Lazi&#263;i        7.39 348  ePn      Pn        10 38 06.6  -0.2
MAKA   Makarska           7.47 334  ePn      Pn        10 38 08.3 +0.5
MAKA                                 Sn      Sn        10 39 26.5  -4.9
DIVS   Divibare           7.54 352  ePn      Pn        10 38 08.5  -0.4
DIVS                                eSn      Sn        10 39 26.9  -6.4
DIVS   Divibare           7.54 352  i Pn     Pn        10 38 08.3  -0.6
HAPS   Han Pijesak,BI     7.69 346  ePn      Pn        10 38 09.9  -1.0
HAPS                                eSn      Sn        10 39 30.7  -6.2
HAPS   Han Pijesak,BI     7.69 346  ePn      Pn        10 38 08.7  -2.2
KAND   Kocaeli-Kandir     8.14  54  i P      Pn        10 38 16.4  -0.5
KAND                                IAML_P
                comp=Z,122nm,0.3s
MDVR   Moldovita          8.14   1⇑iP        Pn        10 38 12.0  -5.1
KEPZ   Antalya-Kepez      8.15  85  i P      Pn        10 38 05.3   -12
ZIRJ   Zirje              8.31 329  i Pn     Pn        10 38 19.7 +0.4
ZIRJ                                 Sn      Sn        10 39 44.8  -7.1
AQU    L'Aquila           8.45 315  ePn      Pn        10 38 21.7 +0.4
AQU    L'Aquila           8.45 315  eP       Pn        10 38 21.7 +0.4
MORI   Morici             8.46 330  ePn      Pn        10 38 22.3 +1.0
MORI                                 Sn      Sn        10 39 50.2  -5.4
MGRS   Mrkonjic Grad      8.46 338  ePn      Pn        10 38 22.0 +0.6
SAHE   Sakarya_HENDEK     8.46  57  i P      Pn        10 38 17.4  -4.1
SAHE                                IAML_P
                comp=Z,44nm,0.2s
DOB    Doboj              8.48 344  ePn      Pn        10 38 02.2   -20
MDUB   Mudurnu            8.54  60  ePn      Pn        10 38 24.8 +2.3
FRGS   Fruska Gora        8.61 352  ePn      Pn        10 38 22.6  -0.8
FRGS   Fruska Gora        8.61 352  ePn      Pn        10 38 22.3  -1.1
KDHN   Kadinhani          8.67  74  i P      Pn        10 38 27.9 +3.6
KDHN                                IAML_P
                comp=Z,175nm,0.7s
BLY    Banja Luka         8.73 340  ePn      Pn        10 38 25.7 +0.6
BLY    Banja Luka         8.73 340  ePn      Pn        10 38 25.3 +0.2
GAZI   Gazipasa           8.76  89  i P      Pn        10 38 18.6  -6.9
GAZI                                IAML_P
                comp=Z,202nm,0.6s
GZR    Gura Zlata         8.81   6⇑iP        Pn        10 38 21.0  -5.2
DUGI   Dugi Otok          8.83 328  ePn      Pn        10 38 27.4 +1.0
DUGI                                 Sn      Sn        10 39 58.1  -6.6
YIGI   Dzce               8.91  58  i P      Pn        10 38 29.7 +2.0
YIGI                                IAML_P
                comp=Z,189nm,0.1s
UDBI   Udbina             9.00 333  i Pn     Pn        10 38 30.8 +2.0
UDBI                                 Sn      Sn        10 40 05.9  -3.1
VOIR                      9.20  16⇑iP        Pn        10 38 27.8  -3.9
VOIR                      9.20  16   P       Pn        10 38 33.5 +1.8
NVLJ   Novalja            9.37 330  ePn      Pn        10 38 34.6 +0.8
NVLJ                                 Sn      Sn        10 40 12.7  -5.4
TIRR   Tirgusor           9.44  32  ePn      Pn        10 38 36.0 +1.3
TIRR   Tirgusor           9.44  32  eP       Pn        10 38 36.0 +1.3
MLR    Muntele Rosu       9.47  20   Pn      Pn        10 38 35.0  -0.4
                comp=Z,0.5nm,0.3s,baz=172,slow=15,SNR=7.5
MLR                                  LR      LR        10 43 03.7
                comp=Z,264nm,18.7s,baz=128,slow=43
MLR    Muntele Rosu       9.47  20  ePn      Pn        10 38 37.1 +1.7
MLR    Muntele Rosu       9.47  20⇑iP        Pn        10 38 29.9  -5.5
MLR    Muntele Rosu       9.47  20  eP       Pn        10 38 37.1 +1.7
ANTO   Ankara             9.48  67  ePn      Pn        10 38 38.5 +3.0
ANTO   Ankara             9.48  67  eP       Pn        10 38 38.5 +3.0
CSS    Mathiatis          9.79  96  ePn      Pn        10 38 41.4 +1.8
MORH   Mrgy, Hungar       9.80 348  ePn      Pn        10 38 38.8  -1.0
MORH   Mrgy, Hungar       9.80 348  ePn      Pn        10 38 42.0 +2.2
MORH                                 Sn      Sn        10 40 21.1  -7.6
KEST   Kesra              9.84 268   Pn      Pn        10 38 43.0 +2.7
                comp=Z,0.4nm,0.3s,baz=73,slow=19,SNR=4.2
KEST                                 Sn      Sn        10 40 26.6  -3.2
                comp=Z,0.3nm,0.3s,baz=82,slow=7.1,SNR=2.2
KEST   Kesra              9.84 268  ePn      Pn        10 38 38.2  -2.2
PLOR   Plostina          10.00  21⇓iP        Pn        10 38 37.7  -4.9
VRI    Vrincioaia        10.04  22⇑iP        Pn        10 38 38.2  -4.8
OZLJ   Ozalj             10.04 335  ePn      Pn        10 38 42.7  -0.4
BRTR   Keskin Array B    10.07  68   Pn      Pn        10 38 44.7 +1.1
                comp=Z,0.2nm,0.3s,baz=259,slow=14,SNR=8.0
BRTR                                 LR      LR        10 43 35.6
                comp=Z,105nm,18.4s,baz=250,slow=44
BR101  Keskin Array S    10.07  68  ePn      Pn        10 38 44.7 +1.1
BR131  Keskin Array S    10.07  68  ePn      Pn        10 38 45.5 +1.8
PTJ    Puntijarka        10.14 338   ePn               10 38 44.7
CRES   Cresnjev          10.23 336  i Pn     Pn        10 38 44.7  -1.0
BEHE   Becsehely         10.44 342  ePn      Pn        10 38 55.0 +6.6
BEHE                                 Sn      Sn        10 40 41.1  -3.1
CEY    Cerknica          10.52 332  i Pn     Pn        10 38 50.3 +0.6
TIH    Tihany            10.60 347   Sn      Sn        10 40 49.1 +0.9
SOKA   Soboth            11.12 336  ePn      Pn        10 38 57.4  -0.5
                comp=Z,7.9nm,0.4s,SNR=11
SOKA                                 Sn      Sn        10 40 52.9  -8.3
                comp=Z,7.7nm,0.8s
OBKA   Obir              11.14 335   Sn      Sn        10 40 56.6  -5.0
                comp=Z,23nm,0.9s
PSZ    Piszkesteto       11.34 355  ePn      Pn        10 39 00.2  -0.6
PSZ    Piszkesteto       11.34 355⇑iP        Pn        10 38 56.3  -4.6
PSZ    Piszkesteto       11.34 355  eP       Pn        10 39 00.2  -0.6
PSZ    Piszkesteto       11.34 355  ePn      Pn        10 39 01.0 +0.2
PSZ                                  Sn      Sn        10 41 06.1  -0.3
BUR08  Bucovina Ar. S    11.35  13  ePn      Pn        10 39 02.8 +1.8
ARSA   Arzberg           11.49 339  ePn      Pn        10 39 04.2 +1.3
                comp=Z,0.8nm,0.2s
TRPA   Tarpa             11.52   4  ePn      Pn        10 39 05.0 +1.8
TRPA                                 Sn      Sn        10 41 11.1 +0.4
MYKA   Terra Mystica     11.57 332  ePn      Pn        10 39 05.8 +1.8
                comp=Z,1.5nm,0.3s
MYKA                                 Sn      Sn        10 41 04.3  -7.8
                comp=Z,3.2nm,0.4s
VYHS   Vyhne             12.01 352  eP       Pn        10 39 12.2 +2.2
VYHS                                e                  10 41 19.7
VYHS   Vyhne             12.01 352  eP       Pn        10 39 12.3 +2.2
VYHS   Vyhne             12.01 352  ePN      Pn        10 39 12.2 +2.2
VYHS   Vyhne             12.01 352  eSN      Sn        10 41 19.6  -3.2
MMAI   Mount Meron Ar    12.01 103   Pn      Pn        10 39 08.1  -2.1
                comp=Z,1.5nm,0.3s,baz=292,slow=12,SNR=2.6
ABTA   Abfaltersbach     12.11 329  ePn      Pn        10 39 12.7 +1.3
ABTA                                 Sn      Sn        10 41 16.4  -9.0
                comp=Z,9.4nm,0.7s
MODS   Modra-Piesok      12.13 347  eSN      Sn        10 41 17.5  -8.2
MOA    Molln             12.40 337  ePn      Pn        10 39 16.8 +1.4
                comp=Z,2.3nm,0.3s,SNR=4.4
MOA                                  Sn      Sn        10 41 28.7  -3.7
                comp=Z,3.5nm,0.4s
WTTA   Wattenberg        12.88 329   Sn      Sn        10 41 43.1  -1.3
                comp=Z,18nm,0.6s
FUORN  Ofenpass-Fuorn    13.01 324  ePn      Pn        10 39 24.3 +0.4
SQTA   Sankt Quirin      13.03 327  ePn      Pn        10 39 27.4 +3.4
                comp=Z,1.0nm,0.2s
SQTA                                 Sn      Sn        10 41 42.5  -5.4
                comp=Z,4.9nm,0.3s
FETA   Feichten          13.09 326  ePn      P         10 39 34.3  -0.4
                comp=Z,1.0nm,0.3s
FETA                                 Sn      Sn        10 41 40.4  -9.1
                comp=Z,2.8nm,0.4s
VRAC   Vranov            13.16 346   LR      LR        10 45 56.2
                comp=Z,211nm,18.3s,baz=164,slow=44
EIL    Elat              13.26 118   Pn      Pn        10 39 25.2  -1.9
                comp=Z,0.5nm,0.3s,baz=284,slow=8.3,SNR=5.2
EIL                                  Sn      Sn        10 41 35.9   -18
                comp=Z,0.6nm,0.3s,baz=276,slow=10,SNR=3.2
DAVOX  Davos/Dischmat    13.31 323   Sn      Sn        10 41 44.1   -11
                comp=Z,0.7nm,0.3s,baz=171,slow=22,SNR=4.0
TUE    Stuetta           13.36 321  ePn      Pn        10 39 29.2 +0.6
MORC   Moravsky Berou    13.44 349  ePn      Pn        10 39 30.7 +1.1
MORC   Moravsky Berou    13.44 349  eP       Pn        10 39 30.7 +1.1
GEC2   GERESS Array S    13.46 337  ePn      Pn        10 39 31.0 +1.1
GEC2   GERESS Array S    13.46 337  eP       Pn        10 39 31.0 +1.1
GERES  GERESS Array B    13.46 337   Pn      Pn        10 39 29.4  -0.5
                comp=Z,0.3nm,0.3s,baz=158,slow=14,SNR=2.5
GERES                                Sn      Sn        10 41 51.0  -7.4
                comp=Z,1.0nm,0.3s,baz=158,slow=23,SNR=4.5
GERES                                LR      LR        10 45 55.5
                comp=Z,290nm,18.1s,baz=140,slow=43
ASF    Jabal al Asfar    13.50 105   Pn      Pn        10 39 27.9  -2.6
                comp=Z,0.3nm,0.3s,baz=201,slow=17,SNR=3.7
DAVA   Damuels           13.68 325  eP       P         10 39 38.6  -2.7
                comp=Z,2.4nm,0.5s
DAVA                                 Sn      Sn        10 41 53.9   -10
                comp=Z,17nm,0.7s
KHC    Kasperske Hory    13.75 338  ePn      Pn        10 39 35.2 +1.5
KHC    Kasperske Hory    13.75 338  i P      Pn        10 39 35.3 +1.5
KHC    Kasperske Hory    13.75 338  eP       P         10 39 44.5 +2.5
KHC                                 ex       x         10 39 53.0
KHC                                 ex       x         10 42 07.0
DPC    Dobruska-Polom    14.21 346  eP       P         10 39 47.2 +0.2
DPC    Dobruska-Polom    14.21 346  eP       P         10 39 47.2 +0.2
SENIN  Lac Senin/Sane    14.37 317  ePn      Pn        10 39 45.4 +3.0
ANN    Anapa             14.59  51  eP       P         10 39 49.5  -1.7
ANN                                  pmax    pmax
                comp=Z,110nm,1.0s
KSP    Ksiaz             14.68 347  eP       P         10 39 54.5 +2.3
KSP    Ksiaz             14.68 347  eP       P         10 39 54.5 +2.3
AKASG  Malin Array Be    15.13  19   Pn      Pn        10 39 49.7  -2.7
                comp=Z,2.2nm,0.3s,baz=207,slow=12,SNR=8.8
AKBB   Malin Array Si    15.13  19  ePn      Pn        10 39 50.0  -2.4
                comp=Z,6.3nm,0.8s
AKBB   Malin Array Si    15.13  19  eP       Pn        10 39 50.0  -2.4
AKBB                                 pmax    pmax
                comp=Z,6.0nm,0.8s
BRG    Berggiesshubel    15.22 342  eP       P         10 40 00.6 +2.3
                comp=Z,5.2nm,1.0s
                comp=N,182nm,12.3s
                comp=E,113nm,18.7s
                comp=Z,217nm,13.9s
BRG    Berggiesshubel    15.22 342  eP       P         10 40 00.6 +2.3
BRG                                  pmax    pmax
                comp=Z,5.0nm,1.0s
BRG                                  MLR     MLR
                comp=N,182nm,12.3s
BRG                                  MLR     MLR
                comp=E,113nm,18.7s
BRG                                  MLR     MLR
                comp=Z,217nm,13.9s
SOC    Sochi             15.58  58  eP       P         10 40 03.3 +1.0
SOC                                 e                  10 42 57.5
SOC                                  pmax    pmax
                comp=Z,34nm,0.8s
CLL    Collm             15.87 340  eP       P         10 40 08.0 +2.6
CLL    Collm             15.87 340  epP      P         10 40 08.0 +2.6
SUW    Suwalki           17.42   3  eP       Pn        10 40 21.0  -0.5
SUW    Suwalki           17.42   3  ePn      P         10 40 22.8 +0.2
                comp=Z,105nm,1.2s
SUW    Suwalki           17.42   3  eP       P         10 40 22.8 +0.2
SUW                                  pmax    pmax
                comp=Z,105nm,1.2s
NEY    Neytrino          17.57  61  i P      Pn        10 40 23.1  -0.6
KIV    Kislovodsk        17.74  59  eP       Pn        10 40 25.6  -0.1
KIV                                  pmax    pmax
                comp=Z,34nm,1.0s
KIV                                  MLR     MLR
                comp=Z,90nm,14.0s
KVAR   Kislovodsk Arr    17.75  59   LR      LR        10 47 25.7
                comp=Z,88nm,21.8s,baz=92,slow=38
KBZ    Khabaz            17.82  60   P       Pn        10 40 26.5  -0.1
                comp=Z,0.7nm,0.3s,baz=282,slow=7.5,SNR=11
KBZ                                  LR      LR        10 48 59.4
                comp=Z,79nm,18.8s,baz=278,slow=43
NCK    Nalchik           18.25  61  i P      Pn        10 40 31.1  -0.7
NCK                                  pmax    pmax
                comp=Z,6.0nm,0.6s
ZEI    Tsey              18.30  63  eP       P         10 40 30.8  -1.8
ZEI                                  pmax    pmax
                comp=Z,9.0nm,0.6s
GNI    Garni             18.57  72   LR      LR        10 48 56.5
                comp=Z,96nm,18.4s,baz=262,slow=41
GNI    Garni             18.57  72ceP        P         10 40 35.4  -0.2
GNI                                  pmax    pmax
                comp=Z,65nm,0.7s
BSD    Bornholm Skovb    19.02 348  i P      Pn        10 40 41.4 +0.4
                comp=Z,3.9nm,0.4s
VSR    Storozhevoye      19.29  35  i P      P         10 40 41.9  -1.3
VSR                                  pmax    pmax
                comp=Z,12nm,1.0s
LPSR   Galich'ya Gora    20.15  32  eP       P         10 40 50.9  -1.6
LPSR                                 pmax    pmax
                comp=Z,50nm,0.8s
ESDC   Sonseca Array     20.20 286   P       P         10 40 54.2 +0.9
                comp=Z,0.9nm,0.5s,baz=77,slow=10,SNR=6.5
VRH    Novokhopyorsk     20.52  38  eP       P         10 40 55.9  -0.6
VRH                                  pmax    pmax
                comp=Z,70nm,0.8s
AKT    Akhty             20.93  69  eP       P         10 41 00.3  -0.9
AKT                                 e*PP     sP        10 41 12.7   0.0
AKT                                 e                  10 41 21.2
AKT                                  pmax    pmax
                comp=Z,9.0nm,0.6s
OBN    Obninsk           21.18  24⇓eP        P         10 41 02.7  -0.9
OBN                                  *PP     sP        10 41 13.0  -1.9
OBN                                                    10 41 28.0
OBN                                  SS      Sn        10 45 22.0   +17
OBN                                  pmax    pmax
                comp=Z,24nm,0.7s
OBN                                  MLR     MLR
                comp=Z,25nm,14.0s
MDT    Midelt            21.74 268   P       P         10 41 11.4 +1.5
                comp=Z,2.9nm,0.8s,baz=79,slow=9.5,SNR=4.7
MDT                                  LR      LR        10 51 38.9
                comp=Z,65nm,19.8s,baz=86,slow=42
MOS    Moscow            22.04  25  eP       P         10 41 12.5  -0.3
MOS                                  pmax    pmax
                comp=Z,100nm,0.8s
MOS                                  pmax    pmax
                comp=Z,82nm,0.8s
VSU    Vasula            22.12   7ceP        P         10 41 10.8  -2.8
VSU                                  pmax    pmax
                comp=Z,105nm,0.7s
HFS    Hagfors           24.04 350   P       P         10 41 32.3  -0.8
                comp=Z,5.0nm,0.4s,baz=166,slow=13,SNR=28
HFS                                  LR      LR        10 53 13.1
                comp=Z,43nm,19.6s,baz=167,slow=42
KONO   Kongsberg         24.28 345  eP       P         10 41 38.0 +2.8
RAYN   Ar Rayn           24.49 116  eP       P         10 41 39.1 +1.6
                comp=Z,3.6nm,1.0s
RAYN   Ar Rayn           24.49 116  eP       P         10 41 39.1 +1.6
RAYN                                 pmax    pmax
                comp=Z,4.0nm,1.0s
BLS5   Blasjo            24.80 342  eP       P         10 41 42.9 +2.9
NC602  NORSAR Array S    24.94 348  eP       P         10 41 41.7 +0.5
                comp=Z,17nm,0.8s
NC602  NORSAR Array S    24.94 348  eP       P         10 41 41.3 +0.1
FIA0   FINESS Array S    25.00   5  eP       P         10 41 41.6  -0.1
FIA0   FINESS Array S    25.00   5  eP       P         10 41 41.7  -0.1
FINES  FINESS Array B    25.00   5   P       P         10 41 41.6  -0.1
                comp=Z,7.5nm,0.5s,baz=167,slow=10,SNR=42
FINES                                LR      LR        10 52 42.1
                comp=Z,155nm,20.4s,baz=208,slow=39
FIA1   FINESS Array S    25.00   5  eP       P         10 41 42.0 +0.2
                comp=Z,15nm,0.9s
EKA    Eskdalemuir Ar    25.12 326   P       P         10 41 44.0 +1.1
                comp=Z,1.7nm,0.5s,baz=126,slow=9.1,SNR=8.7
EKA    Eskdalemuir Ar    25.12 326   P       P         10 41 44.0 +1.1
ESK    Eskdalemuir       25.13 326  eP       P         10 41 44.9 +1.9
                comp=Z,8.6nm,1.1s
ESK    Eskdalemuir       25.13 326  eP       P         10 41 44.9 +1.9
ESK                                  pmax    pmax
                comp=Z,9.0nm,1.1s
NAO01  NORSAR Array S    25.15 348  eP       P         10 41 43.8 +0.6
                comp=Z,19nm,0.9s
NC405  NORSAR Array S    25.27 349  eP       P         10 41 44.2   0.0
                comp=Z,34nm,1.4s
NB201  NORSAR Array S    25.27 348  eP       P         10 41 44.5 +0.2
                comp=Z,26nm,0.9s
NB2    NORSAR Subarra    25.28 348   P       P         10 41 43.9  -0.4
                comp=Z,2.9nm,0.5s,baz=155,slow=9.3
NB2    NORSAR Subarra    25.28 348   P       P         10 41 43.9  -0.4
                baz=155,slow=9.3
NB200  NORSAR Array S    25.28 348  eP       P         10 41 44.2  -0.1
NOA    NORSAR Array B    25.28 348   P       P         10 41 44.2  -0.1
                comp=Z,4.4nm,0.7s,baz=158,slow=9.0,SNR=20
NOA                                  LR      LR        10 52 46.5
                comp=Z,36nm,18.6s,baz=165,slow=39
NBO00  NORSAR Array S    25.34 348  eP       P         10 41 45.5 +0.6
                comp=Z,23nm,0.8s
SKAR   Skarslia          25.49 345  eP       P         10 41 47.7 +1.4
NC204  NORSAR Array S    25.58 348  eP       P         10 41 47.8 +0.7
                comp=Z,15nm,0.8s
BER    Bergen            25.91 342  eP       P         10 41 52.7 +2.7
SUF    Sumiainen         26.27   5   P       P         10 41 52.9  -0.4
SUF                                  pmax    pmax
                comp=Z,10.0nm,0.8s
DOMB   Dombas            26.59 347  eP       P         10 41 57.5 +1.3
KLMR   Klimovskoe        26.82  20  eP       P         10 41 56.6  -1.6
KLMR                                 pmax    pmax
                comp=Z,19nm,0.6s
JOF    Joensuu           27.01  10   P       P         10 41 59.2  -0.7
JOF                                  pmax    pmax
                comp=Z,15nm,0.8s
KIRV   Kirov             28.57  31   P       P         10 42 13.0  -0.8
                comp=Z,12nm,0.7s,baz=262,slow=6.1,SNR=3.0
GEYT   Alibeck           29.08  76   P       P         10 42 18.2  -0.5
                comp=Z,8.5nm,0.5s,baz=280,slow=8.9,SNR=11
GYA0B  ALIBECK ARRAY     29.08  76  eP       P         10 42 18.6  -0.1
                comp=Z,11nm,0.4s
TOA0   Torodi Ar. Sit    29.34 222  eP       P         10 42 23.2 +2.0
                comp=Z,3.8nm,0.6s
TORD   Torodi Ar. Bea    29.34 222   P       P         10 42 22.9 +1.8
                comp=Z,2.6nm,0.6s,baz=36,slow=9.1,SNR=15
TORD                                 LR      LR        10 55 45.7
                comp=Z,57nm,18.3s,baz=5.0,slow=40
AKTO   Aktyubinsk        29.55  51   P       P         10 42 21.7  -1.0
                comp=Z,3.0nm,0.3s,baz=266,slow=9.2,SNR=11
MSF    Maaselka          29.66   6   P       P         10 42 23.4  -0.1
MSF                                  pmax    pmax
                comp=Z,6.0nm,0.9s
MOR8   Moi Rana          29.86 354  eP       P         10 42 29.3 +4.0
ABKAR  Akbulak array     30.53  53  eP       P         10 42 30.6  -0.7
                comp=Z,3.9nm,0.9s
STEI   Steigen           31.54 356  eP       P         10 42 43.0 +3.0
ARU    Arti              31.75  40   P       P         10 42 40.7  -1.2
                comp=Z,3.0nm,0.2s,baz=216,slow=8.3,SNR=10
ARU    Arti              31.75  40  eP       P         10 42 41.5  -0.5
                comp=Z,27nm,1.4s
ARU    Arti              31.75  40d iP       P         10 42 40.8  -1.2
ARU                                                    10 43 43.3
ARU                                  S       S         10 47 48.0  -1.6
ARU                                  SS      SnSn      10 49 33.6  -4.2
ARU                                  pmax    pmax
                comp=Z,8.0nm,0.7s
UOSS   Minazif           31.87 102  eP       P         10 42 43.2  -0.3
                comp=Z,24nm,1.4s
LVZ    Lovozero          32.19   9  i P      P         10 42 45.0  -0.8
LVZ                                  pmax    pmax
                comp=Z,5.0nm,0.9s
ARCES  ARCESS Array B    33.03   3   P       P         10 42 53.1  -0.1
                comp=Z,1.2nm,0.5s,baz=181,slow=9.3,SNR=8.7
ARCES                                LR      LR        10 57 41.2
                comp=Z,102nm,18.8s,baz=188,slow=39
ARE0   ARCESS Array S    33.03   3  eP       P         10 42 53.7 +0.5
                comp=Z,0.3nm,1.1s
BRVK   Borovoye          37.50  48  eP       P         10 43 31.5  -0.3
                comp=Z,7.6nm,0.6s
BRVK   Borovoye          37.50  48  i P      P         10 43 31.0  -0.8
BRVK                                 pmax    pmax
                comp=Z,6.0nm,0.8s
KK31   Karatay Array     37.76  65  eP       P         10 43 33.8  -0.3
                comp=Z,9.7nm,0.6s
KK31   Karatay Array     37.76  65  eP       P         10 43 33.8  -0.3
KK31                                 pmax    pmax
                comp=Z,10.0nm,0.6s
KKAR   Karatay Array     37.76  65  eP       P         10 43 33.8  -0.3
                comp=Z,9.7nm,0.6s
KKAR   Karatay Array     37.76  65  eP       P         10 43 33.8  -0.3
KKAR                                 pmax    pmax
                comp=Z,10.0nm,0.6s
DBIC   Dimbokro          38.30 225   P       P         10 43 40.5 +1.7
                comp=Z,4.4nm,0.5s,baz=12,slow=8.7,SNR=6.6
DBIC   Dimbokro          38.30 225  eP       P         10 43 40.8 +1.9
                comp=Z,21nm,1.3s
GAR    Garm              38.30  71  eP       P         10 43 39.5 +0.6
                comp=Z,33nm,1.0s
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GAR	Garm	38.30	71	eP	P	10 43 39.5	+0.6
GAR				pmax	pmax		
	comp=Z,33nm,1.0s						
TIC	Toumodi	38.42	225	eP	P	10 43 43.5	+3.6
KBL	Kabul	38.44	79	P	P	10 43 40.2	0.0
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIC	Kosan Boka	38.49	225	eP	P	10 43 41.9	+1.4
	comp=Z,120nm,2.0s						
OTUK	Ortayu	38.63	56	P	P	10 43 40.7	-0.7
OTUK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LIC	Lamto	38.76	225	eP	P	10 43 44.2	+1.5
	comp=Z,28nm,0.4s						
ROSA	Rosais	39.01	289	eP	P	10 43 46.6	+2.0
	comp=Z,142nm,1.0s						
AAK	Ala-Archa	40.72	65	P	P	10 43 58.7	-0.3
	comp=Z,3.2nm,0.3s,baz=315,slow=4.3,SNR=8.7						
AAK	Ala-Archa	40.72	65	eP	P	10 43 59.1	+0.1
	comp=Z,10nm,1.0s						
AAK	Ala-Archa	40.72	65	ceP	P	10 43 58.5	-0.5
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SPA0	Spitsbergen Ar	41.71	358	eP	P	10 44 09.3	+2.9
	comp=Z,28nm,1.3s						
SPITS	Spitsbergen Ar	41.71	358	P	P	10 44 07.3	+0.9
	comp=Z,7.6nm,0.9s,baz=155,slow=10,SNR=9.0						
NIL	Nilore	42.04	78	eP	P	10 44 10.2	+0.5
	comp=Z,17nm,0.8s						
NIL	Nilore	42.04	78	eP	P	10 44 10.3	+0.5
NIL				pmax	pmax		
	comp=Z,17nm,0.8s						
KURBB	Kurchatov Arra	42.56	52	P	P	10 44 12.6	-1.2
	comp=Z,3.0nm,0.4s,baz=282,slow=8.8,SNR=17						
KURK	Kurchatov	42.62	52	eP	P	10 44 12.8	-1.3
	comp=Z,5.5nm,1.3s						
KURK	Kurchatov	42.62	52	ceP	P	10 44 12.5	-1.7
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
PDGK	Podgornoye	44.19	63	P	P	10 44 26.4	-0.8
PDGK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAKZ	Makanchi	45.27	57	eP	P	10 44 35.4	-0.2
	comp=Z,1.9nm,0.6s						
MAKZ	Makanchi	45.27	57	eP	P	10 44 35.4	-0.2
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	45.49	57	eP	P	10 44 36.2	-1.2
	comp=Z,2.4nm,0.4s						
MK31	Makanchi Array	45.49	57	eP	P	10 44 36.2	-1.2
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	45.49	57	P	P	10 44 35.9	-1.4
	comp=Z,2.8nm,0.4s,baz=270,slow=7.8,SNR=54						
MKAR				PcP	PcP	10 46 16.5	+0.7
	comp=Z,1.1nm,0.7s,baz=279,slow=5.4,SNR=2.1						
MKAR				LR	LR	11 06 31.4	
	comp=Z,42nm,19.4s,baz=280,slow=40						
ZAA0	Zalesovo Array	46.18	47	eP	P	10 44 41.6	-1.0
	comp=Z,19nm,0.4s						
ZAA1	Zalesovo Array	46.18	47	eP	P	10 44 41.1	-1.5
ZALV	Zalesovo Beam	46.18	47	P	P	10 44 41.1	-1.5
	comp=Z,15nm,0.3s,baz=265,slow=7.6,SNR=30						
ZALV				LR	LR	11 06 39.0	
	comp=Z,20nm,18.3s,baz=250,slow=40						
DGZ	Jazzator, Alta	48.36	53	i P	P	10 44 58.1	-1.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WMQ	Urumqi	49.87	60	eP	P	10 45 11.5	+0.1
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,54nm,4.7s						
WMQ				LR	LR		
	comp=N,2µm,28.8s						
WMQ				LR	LR		
	comp=E,1µm,29.3s						
WMQ				LR	LR		
	comp=Z,59nm,28.8s						
DANN	Dangsing	52.40	80	eP	P	10 45 30.5	-0.3
KOLN	Koldanda	52.52	81	eP	P	10 45 29.4	-2.3
GKN	Gorkha	53.24	80	eP	P	10 45 35.8	-1.1
DMN	Daman	53.79	80	eP	P	10 45 40.0	-1.1
	comp=Z,40nm,0.7s						
KKN	Kakani	53.85	80	eP	P	10 45 40.1	-1.4
	comp=Z,19nm,0.6s						
PKIN	Phulchoki	54.03	80	eP	P	10 45 41.6	-1.3
	comp=Z,5.5nm,0.2s						
PKI	Pulchoki	54.05	80	eP	P	10 45 41.8	-1.3
GUN	Gumba	54.27	80	eP	P	10 45 43.8	-0.9
	comp=Z,32nm,0.7s						
JIRN	Jiri	54.62	80	eP	P	10 45 46.3	-1.0
LSA	Lhasa	57.60	75	eP	P	10 46 08.5	-0.2
	comp=Z,6.6nm,0.7s						
LSA	Lhasa	57.60	75	eP	P	10 46 08.5	-0.2
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TLY	Talaya	57.79	47	eP	P	10 46 09.6	+0.5
	comp=Z,1.8nm,0.8s						
TLY	Talaya	57.79	47	eP	P	10 46 09.2	+0.1
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,25nm,4.0s						
SONM	Songino Array	60.87	50	P	P	10 46 29.8	-0.8
	comp=Z,1.2nm,0.6s,baz=297,slow=9.9,SNR=4.9						
SONM				LR	LR	11 16 08.3	
	comp=Z,37nm,19.4s,baz=314,slow=39						
BOSA	Boshof	65.00	176	P	P	10 46 59.4	+1.3
	comp=Z,1.0nm,0.5s,baz=17,slow=8.1,SNR=3.5						
YAK	Yakutsk	66.09	29	i P	P	10 47 04.2	-0.4
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	Hu-ho-hao-te	67.30	55	P	P	10 47 13.0	+0.1
HIA	Hailar	68.10	44	i P	P	10 47 17.0	-0.7
HIA				pmax	pmax		
	comp=Z,30nm,0.9s						
KMI	Kunming	68.81	74	P	P	10 47 23.8	+1.0
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
XAN	Xi'an	68.86	63	P	P	10 47 22.0	-0.8
XAN				pP	pwP	10 47 35.8	+0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMAR	Chiang Mai Arr	69.36	82	P	P	10 47 25.4	-0.6
	comp=Z,3.1nm,0.8s,baz=305,slow=7.6,SNR=11						
SLVN	Son La	71.73	77	eP	P	10 47 39.3	-1.2
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	75.09	341	P	P	10 48 00.1	+0.6
	comp=Z,1.6nm,0.7s,baz=30,slow=5.7,SNR=4.4						
NJ2	Nanjing	76.95	60	eP	P	10 48 08.8	-1.8
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
ULM	Lac du Bonnet	77.39	324	P	P	10 48 13.8	+1.0
	comp=Z,1.8nm,0.6s,baz=43,slow=6.7,SNR=2.9						
USRK	Ussuriysk Ar.	77.89	44	P	P	10 48 14.9	-0.7
	comp=Z,2.7nm,0.7s,baz=297,slow=4.9,SNR=7.8						
ILAR	Eielson Array	78.51	355	P	P	10 48 19.0	+0.2
	comp=Z,0.3nm,0.5s,baz=352,slow=4.9,SNR=4.6						
KSRS	Korea Array	79.73	51	P	P	10 48 25.8	-0.1
	comp=Z,2.6nm,0.6s,baz=308,slow=5.2,SNR=8.0						
BDFB	Brasilia	83.54	245	LR	LR	11 25 33.6	
	comp=Z,80nm,21.1s,baz=267,slow=35						
MJAR	Matsushiro Arr	86.52	46	P	P	10 49 00.9	-0.2
	comp=Z,1.5nm,0.7s,baz=330,slow=4.6,SNR=3.8						
PDAR	Pinedale Array	89.25	326	P	P	10 49 15.5	+1.3
	comp=Z,0.3nm,0.8s,baz=39,slow=5.8,SNR=3.5						
TXAR	Lajitas Array	96.58	314	P	P	10 49 48.4	+0.2
	comp=Z,0.2nm,0.7s,baz=46,slow=3.6,SNR=3.6						
ASAR	Alice Springs	121.25	98	PKP	PKPdf	10 55 10.8	-0.4
	comp=Z,0.4nm,0.6s,baz=306,slow=1.5,SNR=4.5						

NNC 31 10:36:35.8±6.2, 50°.03N×87°.62E, h0^{km}, mb3.7, mpv3.3, 4C-1D, Error ellipse: s-maj=46.9km s-min=27.0km az=84.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	3.15	216	Pg	Pn	10 37 27.2	+0.5
	2.5nm,0.2s						
ZSN				Lg	Lg	10 38 16.1	
	5.6nm,0.5s						
MK31	Makanchi Array	4.80	230	⇑Pn	Pn	10 37 49.8	+0.5
	0.6nm,0.2s,baz=50,slow=9.2,SNR=68						
MK31				Sn	Sn	10 38 48.1	+2.6
	1.3nm,0.5s,baz=60,slow=26,SNR=5.1						
MK31				⇑Lg	Lg	10 39 08.9	
	3.4nm,0.6s,baz=48,slow=32,SNR=6.5						
KURBB	Kurchatov Arra	5.85	279	⇑Pn	Pn	10 38 02.4	-1.3
	1.9nm,0.5s						
KURBB				⇑Sn	Sn	10 39 12.7	+1.3
	4.6nm,0.6s						
KURBB				⇓Lg	Lg	10 39 40.2	
	11nm,0.6s						
KAPS	Kapalarasan	7.32	233	Pg	Pn	10 38 19.8	-4.1
	1.5nm,0.4s						
KAPS				Lg	Lg	10 39 46.0	
	4.5nm,0.4s						

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*IDC **31** 10:43:44.8±1.1, 36°.85S×179°.11E, h0^{km}, mb4.5/6, mb1 4.7/7, mb1mx4.2/21, mbtmp4.5/7, ML4.4/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/26, Error ellipse: s-maj=34.0km s-min=28.6km az=138.0*

*NEIC **31** 10:43:48.0±0.0, 36°.89S×179°.04E, h14^{km}, mb4.1/6, ML4.5(WEL), After WEL.*

*WEL **31** 10:43:51.3±1.2, 37°S±5°×17°9E±1°0, h12^{km}, M4.3/23, ML4.6/19, MLv4.3/23, Error ellipse: s-maj=0.0km s-min=0.0km az=89.7*

ISC 31 10:43:47.5±2.0, 37°.00S±0°.05×179°.07E±0°.07, h17^{km}±10^{km}, n101, σ1^{s}.86/111, MS3.4/4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.83	227	ePg	Pn	10 44 05.0	+0.6
MXZ				eSn	Sn	10 44 19.2	+2.9
MXZ	Matakaoa Point	0.83	227	P	Pb	10 44 04.6	+1.1
MXZ				S	Sg	10 44 14.3	-0.3
WMGZ	Waiomatatini S	0.97	213	P	Pn	10 44 08.9	+2.5
WMGZ				S	Sn	10 44 23.4	+3.6
PKGZ	Pakihiroa	1.19	222	P	Pn	10 44 11.3	+1.9
HAZ	Te Kaha	1.27	233	P	Pn	10 44 10.8	+0.2
HAZ				S	Sb	10 44 30.1	+2.9
TWGZ	Tauwhareparae	1.46	216	P	Pg	10 44 15.6	0.0
RUGZ	Raukumara Rang	1.47	229	P	Pb	10 44 15.0	+0.6
RUGZ				S	Sn	10 44 35.1	+2.8
WIZ	White Island	1.59	250	P	Pn	10 44 14.7	-0.3
CNGZ	Carnagh Statio	1.63	205	P	Pb	10 44 18.2	+1.0
CNGZ				S	Sn	10 44 39.6	+3.4
TKGZ	Te Karaka	1.73	214	P	Pn	10 44 18.8	+2.0
TKGZ				S	Sn	10 44 40.7	+2.1
MWZ	Matawai	1.81	222	P	Pn	10 44 20.0	+2.1
MWZ				S	Sn	10 44 42.9	+2.3
WHRZ	Whale Island	1.88	242	P	Pn	10 44 20.3	+1.4
RAGZ	Rawiri	1.99	221	P	Pn	10 44 22.6	+2.2
RAGZ				S	Sn	10 44 46.3	+1.2
RIGZ	Rimuhau	1.99	211	P	Pn	10 44 22.3	+1.8
RIGZ				S	Sn	10 44 47.3	+2.2
URZ	Urewera	2.00	231	Pn	Pn	10 44 22.3	+1.8
	111nm,0.3s,baz=23,slow=4.6,SNR=726						
URZ				Sn	Sn	10 44 46.9	+1.7
	210nm,0.3s,baz=181,slow=9.3,SNR=15						
URZ				LR	LR	10 44 53.8	
	comp=Z,240nm,20.8s,baz=330,slow=32						
URZ	Urewera	2.00	231	ePn	Pb	10 44 23.2	-0.2
URZ	Urewera	2.00	231	P	Pn	10 44 22.4	+1.8
URZ				S	Sn	10 44 45.2	0.0
PRGZ	Paritu Road	2.14	206	P	Pn	10 44 24.3	+1.8
MARZ	Manawahe	2.15	242	P	Pn	10 44 24.2	+1.6
EDRZ	Edgecumbe	2.16	239	P	Pb	10 44 25.1	-1.1
OPRZ	Ohinepanea	2.17	246	P	Pn	10 44 23.8	+0.8
SNGZ	Shannon Statio	2.25	217	P	Pn	10 44 25.8	+1.8
KNZ	Kokohu	2.30	208	P	Pn	10 44 25.7	+1.0
MHGZ	Mahia Peninsul	2.34	203	P	Pn	10 44 26.7	+1.5
MUGZ	Murupara	2.35	230	P	Pn	10 44 27.1	+1.8
TGRZ	Tauranga	2.36	251	P	Pn	10 44 26.5	+1.1
MKRZ	Makatiti	2.36	240	P	Pn	10 44 27.9	+2.3
TARZ	Mount Tarawera	2.38	238	P	Pn	10 44 28.4	+2.5
OMRZ	Omania	2.41	242	P	Pn	10 44 28.1	+1.8
RRRZ	Republican Roa	2.43	236	P	Pn	10 44 28.6	+2.1
KARZ	Kaharoa	2.47	245	P	Pn	10 44 28.7	+1.7
RAHZ	Arahi	2.48	219	P	Pn	10 44 29.1	+2.0
HLRZ	Highlands Stat	2.50	239	P	Pn	10 44 29.8	+2.3
WHHZ	Waihua	2.53	214	P	Pn	10 44 29.8	+1.9
NGRZ	Ngongotaha	2.54	244	P	Pn	10 44 30.7	+2.6
MTHZ	Maungataniwha	2.56	223	P	Pn	10 44 30.0	+1.8
UTU	Utuhina	2.57	242	P	Pb	10 44 31.3	-1.9
HSRZ	Hossack Road	2.60	239	P	Pb	10 44 31.9	-1.8
PRRZ	Plateau Road	2.60	234	P	Pn	10 44 30.7	+1.9
KMRZ	Kaimai	2.63	250	P	Pn	10 44 30.1	+0.8
ALRZ	Allen Road	2.67	233	P	Pn	10 44 31.6	+1.8
KUZ	Kuaotunu	2.70	274	P	Pn	10 44 30.6	+0.4
MRHZ	Matea Rd	2.79	228	P	Pn	10 44 33.3	+1.9
ARHZ	Aropaoanui	2.79	215	P	Pn	10 44 33.0	+1.6
BKZ	Black Stump Fm	2.97	223	ePn	Pn	10 44 35.5	+1.5
GRZ	Great Barrier	3.00	283	P	Pn	10 44 35.1	+0.7
MCHZ	McNeill Hill	3.08	217	P	Pn	10 44 36.7	+1.3
MKAZ	Moumakai	3.13	267	P	Pn	10 44 36.8	+0.7
WIAZ	Waiheke Island	3.17	273	P	Pn	10 44 37.8	+1.3
ETAZ	East Tamaki Re	3.32	270	P	Pn	10 44 39.9	+1.1
KBAZ	Karaka Road Bo	3.35	267	P	Pn	10 44 40.3	+1.2
ABAZ	Army Bay	3.43	275	P	Pn	10 44 41.9	+1.8
EPAZ	Eden Park BICE	3.47	271	P	Pn	10 44 42.6	+1.8
HBAZ	Herne Bay Bore	3.48	271	P	Pn	10 44 42.7	+1.8
WTAZ	Waiatarua	3.60	270	P	Pn	10 44 44.3	+1.6
HIZ	Hauiti	3.67	244	ePn	Pn	10 44 46.4	+2.9
BFZ	Birch Farm	4.29	210	ePn	Pn	10 44 50.8	-1.2
BFZ				eSn	Sn	10 45 39.1	-2.5
OUZ	Omahuta	4.78	290	ePn	Pn	10 45 01.1	+2.4
SNZO	South Karori	5.48	217	ePn	Pn	10 45 06.4	-2.0
SNZO				eSn	Sn	10 46 06.4	-4.6
QRZ	Quartz Range	6.37	231	ePn	Pn	10 45 19.9	-0.7
QRZ				eSn	Sn	10 46 27.7	-5.3
THZ	Tophouse	6.74	223	ePn	Pn	10 45 23.9	-1.8
THZ				eSn	Sn	10 46 37.1	-5.1
KHZ	Kahutara	6.89	217	ePn	Pn	10 45 24.9	-2.8
KHZ				eSn	Sn	10 46 38.2	-7.5
LTZ	Lake Taylor	7.79	220	ePn	Pn	10 45 37.9	-2.3
LTZ				eSn	Sn	10 47 01.3	-6.6
MQZ	McQueen’s Vall	8.30	214	ePn	Pn	10 45 43.9	-3.1
OXZ	Oxford	8.30	218	ePn	Pn	10 45 44.4	-2.7
RPZ	Rata Peaks	9.08	220	Pn	Pn	10 45 55.6	-2.2
	2.3nm,0.3s,baz=307,slow=2.2,SNR=11						
RPZ				Sn	Sn	10 47 29.0	-11
	8.9nm,0.3s,baz=145,slow=19,SNR=18						
RPZ	Rata Peaks	9.08	220	ePn	Pn	10 45 55.4	-2.4
FOZ	Fox Glacier	9.62	224	ePn	Pn	10 46 03.7	-1.5
ODZ	Otahua Downs	10.25	216	ePn	Pn	10 46 09.8	-3.9
DZM	Mont Dzumac	18.47	320	eLR	LR	10 52 25.8	
	comp=Z,358nm,23.9s						
TBI	Tubuai	30.26	72	eLR	LR	10 57 50.7	
	comp=Z,97nm,23.2s						
TBI	Tubuai	30.26	72	eT	T	11 21 33.0	
	11nm,0.3s						
STKA	Stephens Creek	31.19	268	P	P	10 50 05.2	-0.6
	2.5nm,0.7s,baz=109,slow=11,SNR=5.1						
STKA				LR	LR	11 02 07.1	
	comp=Z,101nm,19.0s,baz=31,slow=35						
STKA	Stephens Creek	31.19	268	eP	P	10 50 05.2	-0.6
	1.5nm,1.1s						
PAE	Paea	33.63	64	eT	T	11 25 44.3	
	2.0nm,0.3s						
PPT2	Papeete2	33.68	63	eLR	LR	10 59 17.2	
	comp=Z,149nm,30.5s						
AS31	Alice Springs	40.83	276	eP	P	10 51 28.6	+0.2
	5.2nm,0.9s						
ASAR	Alice Springs	40.83	276	P	P	10 51 28.4	0.0
	12nm,0.8s,baz=118,slow=7.7,SNR=134						
ASAR				PcP	PcP	10 53 29.3	0.0
	0.7nm,0.6s,baz=114,slow=4.4,SNR=3.3						
ASAR				LR	LR	11 08 11.7	
	comp=Z,46nm,20.3s,baz=108,slow=36						
RKT	Rikitea	41.72	84	eT	T	11 35 49.0	
	4.5nm,0.4s						
WB2	Warramunga Arr	42.41	281	eP	P	10 51 41.2	-0.2
	20nm,0.6s						
WRAB	Tennant Creek	42.42	281	eP	P	10 51 41.2	-0.2
	16nm,0.6s						
WR1	Warramunga Arr	42.42	281	eP	P	10 51 41.2	-0.3
WRA	Warramunga Arr	42.42	281	P	P	10 51 41.2	-0.3
	16nm,0.5s,baz=114,slow=8.7,SNR=191						
WRA				PcP	PcP	10 53 35.5	+1.0
	2.0nm,0.7s,baz=102,slow=3.5,SNR=3.5						
MAW	Mawson	65.29	202	P	P	10 54 29.6	+1.6
	1.6nm,0.7s,baz=113,slow=7.7,SNR=3.3						
MAW	Mawson	65.29	202	eP	P	10 54 29.6	+1.6
	1.4nm,1.4s						
PETK	Petropavlovsk-	91.64	347	P	P	10 56 53.6	+0.5
	1.2nm,0.7s,baz=130,slow=8.7,SNR=3.8						
PEA1	Petropavlovsk-	91.65	347	eP	P	10 56 53.6	+0.5
CM31	Chiang Mai Arr	93.34	290	eP	P	10 57 01.2	-0.7
	4.8nm,0.4s						
CMAR	Chiang Mai Arr	93.34	290	P	P	10 57 01.2	-0.7
	0.9nm,0.4s,baz=134,slow=2.6,SNR=3.4						
HHC	Hu-ho-hao-te	99.10	315	P	Pdif	10 57 27.8	+0.2
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,10.0nm,5.0s						
MK32	Makanchi Array	120.03	308	ePKPdf	PKPdf	11 02 36.7	-0.1
MKAR	Makanchi Array	120.03	308	PKP	PKPdf	11 02 36.7	-0.1
	comp=Z,0.3nm,0.5s,baz=107,slow=2.1,SNR=3.5						
ARCES	ARCESS Array B	144.40	344	PKP	PKPbc	11 03 20.6	+0.4
	comp=Z,1.6nm,0.5s,baz=22,slow=2.4,SNR=14						
FIA0	FINESS Array S	150.26	334	ePKPbc	PKPbc	11 03 36.5	-0.3
FINES	FINESS Array B	150.26	334	PKPbc	PKPbc	11 03 36.5	-0.3
	comp=Z,4.7nm,0.7s,baz=25,slow=4.5,SNR=16						
BR101	Keskin Array S	152.86	286	ePKPbc	PKPbc	11 03 42.7	-1.0
BRTR	Keskin Array B	152.86	286	PKPbc	PKPbc	11 03 42.7	-1.0
	comp=Z,0.8nm,0.6s,baz=138,slow=3.4,SNR=5.6						
AKASG	Malin Array Be	154.51	312	PKPbc	PKPbc	11 03 46.5	-0.2
	comp=Z,0.4nm,0.4s,baz=58,slow=1.2,SNR=3.4						
AKBB	Malin Array Si	154.51	312	ePKPbc	PKPbc	11 03 46.5	-0.2
TORD	Torodi Ar. Bea	156.13	186	PKPab	PKPab	11 04 08.4	-0.5
	comp=Z,1.5nm,0.7s,baz=166,slow=2.8,SNR=7.1						
TOA1	Torodi Ar. Sit	156.14	186	ePKPab	PKPab	11 04 08.4	-0.6

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*SOME **31** 10:44:14.1, 40°.90N×79°.93E, h15^{km}*

*NNC **31** 10:44:14.6±1.8, 40°.97N×79°.99E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=24.8km s-min=11.9km az=67.0*

ISC 31 10:44:17.3±3.9, 41°.1N±0°.1×80°.0E±0°.1, h10^{km}, n15, σ1^{s}.50/25, 2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	2.18	341	Pg	Pb	10 44 56.2	-0.7
	8.3nm,0.4s						
UZB				Lg	Lg	10 45 26.8	
	8.0nm,0.4s						
UZB	Uzynbulak	2.18	341	eP	Pb	10 44 56.2	-0.7
	8.3nm,0.4s						
UZB				eS	Sb	10 45 26.3	+2.3
	8.0nm,0.4s						
PDGK	Podgornoye	2.27	351	⇓Pg	Pb	10 44 57.6	-0.8
	3.2nm,0.6s						
PDGK				⇓Lg	Lg	10 45 30.9	
	12nm,0.6s						
SATY	Saty	2.29	330	Pg	Pb	10 44 58.3	-0.5
	15nm,0.3s						
SATY				Lg	Lg	10 45 30.7	
	16nm,0.3s						
SATY	Saty	2.29	330	eP	Pb	10 44 58.3	-0.5
	15nm,0.3s						
SATY				eS	Sg	10 45 30.3	-0.6
	16nm,0.3s						
KPKS	Kokpek	2.56	338	eP	Pb	10 45 03.4	0.0
	19nm,0.3s						
KPKS				eS	Sg	10 45 39.0	-0.6
	27nm,0.5s						
KURS	Kuram	2.75	331	Pg	Pb	10 45 06.3	-0.3
	4.9nm,0.5s						
KURS				Lg	Lg	10 45 44.4	
	6.3nm,0.6s						
KURS	Kuram	2.75	331	eP	Pb	10 45 06.3	-0.3
	4.9nm,0.5s						
KURS				eS	Sg	10 45 44.1	-1.5
	6.3nm,0.6s						
TNSS	Tian-Shan	2.98	312	eP	Pb	10 45 09.5	-1.2
	3.6nm,0.2s						
TNSS				eS	Sb	10 45 49.2	+1.8
	4.2nm,0.5s						
MDOK	Medeo	3.01	315	eP	Pb	10 45 10.3	-0.7
	2.8nm,0.3s						
MDOK				eS	Sb	10 45 50.6	+2.7
	5.1nm,0.5s						
MNBS	Baschi	3.21	339	Pg	Pb	10 45 14.6	+0.2
	2.4nm,0.4s						
MNBS				Lg	Lg	10 45 58.4	
	5.5nm,0.4s						
MNBS	Baschi	3.21	339	eP	Pb	10 45 14.6	+0.2
	2.4nm,0.4s						
MNBS				eS	Sg	10 45 58.4	-2.0
	5.5nm,0.4s						
DJR	Jarkent	3.25	358	eP	Pb	10 45 15.4	+0.3
	1.3nm,0.3s						
DJR				eS	Sg	10 45 59.7	-1.9
	2.6nm,0.7s						
CHKK	Chushkaly	3.54	322	eP	Pb	10 45 20.3	+0.3
	1.6nm,0.3s						
CHKK				eS	Sg	10 46 07.8	-3.1
	9.6nm,0.5s						
KST	Kastek	3.57	305	eP	Pb	10 45 19.9	-0.7
	2.3nm,0.4s						
KST				eS	Sb	10 46 06.9	+2.8
	4.8nm,0.5s						

KRSC 31 10:50:26.2±1.8, 50°.07N×159°.34E, h97^{km}±36^{km}, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.92	336	eP	Pn	10 50 59.4	+1.9
KDTR				eS	Sn	10 51 23.8	+2.4
SKR	Severo-Kuril’s	2.15	288	eP	Pn	10 51 01.8	+1.2
SKR				eS	Sn	10 51 27.7	+0.8
ASAK	Asacha	2.48	339	eS	Sn	10 51 36.9	+2.0
KRMR	Karymshinskiy	2.86	345	eS	Sn	10 51 47.2	+3.5
DALK	Dalny	2.99	353	eP	Pn	10 51 13.7	+2.0
DALK				eS	Sn	10 51 48.0	+1.3
SPN	Mys Shipunski	3.06	8	eP	Pn	10 51 14.7	+2.0
SPN				eS	Sn	10 51 50.2	+1.8
APC	Apacha	3.17	335	eP	Pn	10 51 16.5	+2.4
AVH	Avacha	3.22	354	eP	Pn	10 51 17.2	+2.3
SDLR	Sedlovina	3.22	355	eP	Pn	10 51 16.4	+1.4
KRX	Arik	3.32	353	eP	Pn	10 51 19.4	+3.1
GNL	Ganaly	3.73	347	eP	Pn	10 51 26.4	+4.6
MKZ	Mys Kozlova	4.72	17	eS	Sn	10 52 29.1	+0.5

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*SOME **31** 10:56:26.7, 40°.92N×73°.80E, h5^{km}*

*NNC **31** 10:56:28.1±1.0, 41°.00N×73°.81E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=7.5km s-min=4.2km az=4.0*

*KRNET **31** 10:56:29.1±0.1, 41°.11N×73°.80E, h16^{km}, mb3.0*

*KNET **31** 10:56:29.1±0.6, 41°.14N×73°.88E, h1^{km}±3^{km}, ml2.6, Error ellipse: s-maj=4.1km s-min=2.7km az=37.0*

*ISCJB **31** 10:56:31.3±0.5, 41°.12N±0°.03×73°.75E±0°.03, h10^{km}, Error ellipse: s-maj=4.9km s-min=3.0km az=151.1*

ISC 31 10:56:27.7±0.9, 41°.04N±0°.03×73°.83E±0°.02, h10^{km}, n52, σ1^{s}.15/88, 39C-19D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.70	294	⇑iP	Pg	10 56 41.5	+0.2
	baz=90						
ARSB				⇑iS	Sb	10 56 51.2	-0.6
	baz=90						
ARLS	Aral	0.90	24	⇓iP	Pg	10 56 45.3	+0.1
	baz=27						
ARLS				⇓iS	Sb	10 56 57.5	-0.3
	baz=27						
AML	Almayashu	1.10	355	⇓iP	Pg	10 56 48.7	-0.2
	baz=56						
AML				⇓iS	Sg	10 57 02.4	-0.8
	baz=56						
AML	Almayashu	1.10	355	P	Pg	10 56 48.9	0.0
	44nm,0.1s,SNR=201						
AML				⇑S	Sb	10 57 03.3	-0.3
	98nm,0.2s						
UCH	Uchtor	1.30	23	⇓iP	Pg	10 56 52.7	0.0
	baz=25						
UCH				⇓iS	Sn	10 57 10.1	+0.1
	baz=25						
UCH	Uchtor	1.30	23	⇓P	Pg	10 56 52.8	+0.1
	13nm,0.1s,SNR=55						
UCH				⇓S	Sn	10 57 10.3	+0.3
	58nm,0.2s						
KZA	Kyzart	1.49	45	⇑iP	Pg	10 56 56.4	0.0
	baz=48						
KZA				⇑iS	Sg	10 57 16.5	+0.7
	baz=48						
KZA	Kyzart	1.49	45	⇓P	Pb	10 56 56.0	+0.2
	16nm,0.3s,SNR=23						

KZA	33nm,0.2s			⇓S	Sg	10 57 17.2	+1.4
ARK	Arkit baz=97	1.59	299	⇑iP	Pb	10 56 57.4	+0.1
ARK	baz=97			⇑iS	Sg	10 57 18.2	-0.8
EKS2	Erkin-Say baz=59	1.62	359	⇑iP	Pb	10 56 58.2	+0.3
EKS2	baz=59			⇑iS	Sg	10 57 19.1	-0.8
EKS2	Erkin-Say 14nm,0.1s,SNR=29	1.62	359	⇑P	Pb	10 56 58.1	+0.2
AAK	Ala-Archa 9.0nm,0.4s	1.68	17	⇓Pg	Pg	10 56 59.4	-0.6
AAK	52nm,0.5s			⇑Lg	Lg	10 57 21.6	
AAK	Ala-Archa baz=19	1.68	17	⇑iP	Pg	10 56 59.3	-0.6
AAK	baz=19			⇑iS	Sg	10 57 21.0	-0.6
AAK	Ala-Archa 7.6nm,0.1s,SNR=7.4	1.68	17	⇑P	Pg	10 56 59.5	-0.4
AAK	76nm,0.4s			⇑S	Sg	10 57 21.8	+0.2
NRN	Naryn baz=78	1.69	76	⇑iP	Pg	10 56 59.9	-0.2
NRN	baz=78			⇑iS	Sg	10 57 22.9	+0.9
MRKS	Merke 28nm,0.3s	1.76	346	P	Pb	10 57 00.7	+0.5
MRKS	105nm,0.4s			S	Sg	10 57 25.8	+1.4
MRKS	Merke 28nm,0.3s	1.76	346	eP	Pb	10 57 00.7	+0.5
MRKS	105nm,0.4s			eS	Sg	10 57 25.4	+1.0
KBK	Karagaybulak baz=29	1.82	27	⇑iP	Pg	10 57 02.0	-0.7
KBK	baz=29			⇑iS	Sg	10 57 25.6	-0.7
KBK	Karagaybulak 16nm,0.1s,SNR=9.4	1.82	27	⇑P	Pg	10 57 02.6	-0.1
KBK	104nm,0.4s			⇓S	Sg	10 57 27.4	+1.1
FRU1	Bishkek baz=20	1.87	18	⇑iP	Pb	10 57 02.5	+0.5
FRU1	baz=20			⇑eS	Sg	10 57 27.1	-0.8
CHMS	Chumysh baz=20	2.08	19	⇑eP	Pb	10 57 06.0	+0.4
CHMS	baz=20			⇑iS	Sg	10 57 32.8	-1.7
CHMS	Chumysh 11nm,0.2s,SNR=8.0	2.08	19	⇑P	Pg	10 57 06.6	-0.9
BOOM	Boomskoye usch baz=48	2.15	47	⇓iP	Pb	10 57 07.2	+0.4
BOOM	baz=48			⇓iS	Sg	10 57 35.3	-1.5
ULHL	Ulahol baz=57	2.18	56	⇑iP	Pb	10 57 07.6	+0.2
ULHL	baz=57			⇑iS	Sg	10 57 36.2	-1.5
ULHL	Ulahol 9.8nm,0.2s,SNR=52	2.18	56	⇑P	Pb	10 57 07.8	+0.4
DRK	Karamyk baz=24	2.20	226	⇑iP	Pb	10 57 09.2	+1.5
DRK	baz=24			⇑iS	Sg	10 57 38.2	-0.1
USP	Ospenovka baz=13	2.28	12	⇑iP	Pb	10 57 09.0	-0.1
USP	baz=13			⇑iS	Sb	10 57 38.0	+0.6
TKM2	Tokmak 2 12nm,0.4s	2.30	34	⇑Pg	Pg	10 57 10.7	-1.2
TKM2	44nm,0.6s			⇑Lg	Lg	10 57 41.2	
TKM2	Tokmak 2 baz=36	2.30	34	⇓iP	Pb	10 57 09.4	0.0
TKM2	baz=36			⇓iS	Sb	10 57 38.7	+0.7
SGDS	Sogindy 22nm,0.3s	2.48	14	Pg	Pg	10 57 14.0	-1.4
SGDS	30nm,0.6s			Lg	Lg	10 57 48.0	
BTK	Batken baz=46	2.49	248	⇑iP	Pb	10 57 12.5	-0.1
BTK	baz=46			⇑iS	Sb	10 57 44.0	+0.6
KST	Kastek 16nm,0.5s	2.56	38	Pg	Pg	10 57 15.9	-0.9
KST	51nm,0.4s			Lg	Lg	10 57 51.6	
KST	Kastek 16nm,0.5s	2.56	38	eP	Pg	10 57 15.9	-0.9
KST	51nm,0.4s			eS	Sg	10 57 51.6	+1.6
KDJ	Kajisay baz=67	2.74	65	⇑iP	Pb	10 57 15.9	-1.1
KDJ	baz=67			⇑iS	Sb	10 57 50.2	-0.5
MTBS	Maitube 9.9nm,0.4s	2.85	42	Pg	Pg	10 57 21.3	-1.1
MTBS	57nm,0.5s			Lg	Lg	10 58 00.5	
MTBS	Maitube 9.9nm,0.4s	2.85	42	eP	Pg	10 57 21.3	-1.1
MTBS	57nm,0.5s			eS	Sg	10 58 00.5	+1.2
IZV	Izvestkoviy 9.5nm,0.4s	2.88	45	Pg	Pg	10 57 21.8	-1.1
IZV	49nm,0.5s			Lg	Lg	10 58 01.8	
IZV	Izvestkoviy 9.5nm,0.4s	2.88	45	eP	Pg	10 57 21.8	-1.1
IZV	49nm,0.5s			eS	Sg	10 58 01.8	+1.5
IUG	Iuzhnay 4.1nm,0.4s	3.05	293	eP	Pb	10 57 23.4	+1.2
IUG	80nm,0.5s			eS	Sg	10 58 04.1	-1.7
TNSS	Tian-Shan 11nm,0.3s	3.07	48	Pg	Pb	10 57 24.6	+2.0
TNSS	24nm,0.5s			Lg	Lg	10 58 06.1	
TNSS	Tian-Shan 11nm,0.3s	3.07	48	eP	Pb	10 57 24.6	+2.0
TNSS	24nm,0.5s			eS	Sg	10 58 06.2	-0.1
MDOK	Medeo 5.7nm,0.5s	3.20	47	Pg	Pb	10 57 26.7	+1.9
MDOK	17nm,0.6s			Lg	Lg	10 58 09.9	
MDOK	Medeo 5.7nm,0.5s	3.20	47	eP	Pb	10 57 26.7	+1.9
MDOK	17nm,0.6s			eS	Sg	10 58 09.9	-0.7
KK31	Karatay Array 4.8nm,0.4s,baz=133,slow=14,SNR=64	3.22	311	⇓Pg	Pb	10 57 25.6	+0.7
KK31	16nm,0.6s,baz=129,slow=29,SNR=13			⇓Lg	Lg	10 58 08.5	
KUU	Kurty 4.2nm,0.3s	3.41	32	Pg	Pb	10 57 29.9	+1.8
KUU	34nm,0.5s			Lg	Lg	10 58 15.6	
KUU	Kurty 4.2nm,0.3s	3.41	32	eP	Pb	10 57 29.9	+1.8
KUU	34nm,0.5s			eS	Sg	10 58 15.6	-1.5
CHKK	Chushkaly 3.4nm,0.5s	3.66	39	Pg	Pb	10 57 34.9	+2.4
CHKK	21nm,0.4s			Lg	Lg	10 58 24.2	
CHKK	Chushkaly 3.4nm,0.5s	3.66	39	eP	Pb	10 57 34.9	+2.4
CHKK	21nm,0.4s			eS	Sg	10 58 24.2	-1.0
SATY	Saty 5.8nm,0.3s	3.96	58	Pg	Pg	10 57 41.6	-2.1
SATY	23nm,0.2s			Lg	Lg	10 58 35.3	
SATY	Saty 5.8nm,0.3s	3.96	58	eP	Pg	10 57 41.6	-2.1
SATY	23nm,0.2s			eS	Sg	10 58 35.3	+0.3
KPKS	Kokpek 6.4nm,0.3s	4.35	54	eP	Pb	10 57 47.3	+3.1
KPKS	17nm,0.3s			eS	Sg	10 58 45.7	-1.6
PDGK	Podgornoye 2.4nm,0.5s	4.79	60	⇑Pg	Pg	10 57 56.9	-2.6
PDGK	14nm,1.0s			⇓Lg	Lg	10 58 58.4	

*NSSC **31** 10:58:21.4±0.3, 33°.23N×35°.96E, h111^{km}±3^{km}, ML1.6*

JSO 31 10:58:19.4±0.5, **32°N**±4°×**3°6E**±°, **h0**^{km}, **M1.9**/5, **Mjma1.9**/5, **ML1.4**/4, **MLv2.0**/5, **Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHMJ	Saham	0.26	348	P	Pg	10 58 24.6	+0.2
MMLI	Mount Malkishu	0.35	265	P	Pg	10 58 23.5	-2.5
WALJ	Wala	0.91	181	P	Pg	10 58 36.6	-0.2
BRBR	Barbar	0.94	6	eP	Pg	10 58 37.0	-0.5
BRBR				eS	Sg	10 58 48.5	-1.3
BRBR	comp=N,12nm,0.5s			AML	AML	10 58 57.0	
BRBR	comp=E,6.2nm,0.5s			AML	AML	10 59 00.1	
ASF	Jabal al Asfar	0.95	108	P	Pg	10 58 37.6	0.0
TOTH	TOTAH	1.02	29	eP	Pg	10 58 38.5	-0.5
TOTH				eS	Sg	10 58 49.9	-2.3
TOTH	comp=N,11nm,0.3s			AML	AML	10 58 54.6	
TOTH	comp=E,13nm,0.5s			AML	AML	10 58 58.2	
QASN	Qassioun	1.12	19	eP	Pg	10 58 38.5	-2.5
QASN				eS	Sg	10 58 49.8	-5.7
QASN	comp=E,51nm,0.4s			AML	AML	10 58 50.8	
QASN	comp=N,50nm,0.3s			AML	AML	10 59 01.5	

*IDC **31** 10:59:25.8±2.6, 36°.69S×179°.03E, h0^{km}, mb4.4/2, mb1 4.6/3, mb1mx3.8/31, mbtmp4.3/3, ML3.7/1, Error ellipse: s-maj=64.8km s-min=39.2km az=133.0*

*WEL **31** 10:59:29.0±0.9, 37°S±7°×17°9E±°, h5^{km}, M3.8/22, ML4.2/19, MLv3.8/22, Error ellipse: s-maj=0.0km s-min=0.0km az=116.2*

ISC 31 10:59:26.1±2.3, **36°.87S**±0°.06×**179°.07E**±0°.09, **h3**^{km}±12^{km}, **n59**, σ1^{s}.**44**/66, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.92	221	P	Pb	10 59 45.5	+0.9
MXZ				S	Sg	10 59 55.4	-0.1
WMGZ	Waiomatatini S	1.08	209	P	Pn	10 59 49.8	+1.7
WMGZ				S	Sn	11 00 03.5	0.0
PKGZ	Pakihiroa	1.28	218	P	Pn	10 59 51.8	+0.9
PKGZ				S	Sb	11 00 08.4	+0.6
HAZ	Te Kaha	1.35	229	P	Pg	10 59 51.8	-0.2
HAZ				S	Sn	11 00 10.3	+0.2
RUGZ	Raukumara Rang	1.55	225	P	Pg	10 59 56.0	+0.1
RUGZ				S	Sb	11 00 15.9	+0.3
TWGZ	Tauwhareparae	1.56	213	P	Pg	10 59 56.7	+0.7
TWGZ				S	Sg	11 00 15.9	-0.4
CNGZ	Carnagh Statio	1.75	203	P	Pb	10 59 59.1	+0.4
TKGZ	Te Karaka	1.84	211	P	Pn	10 59 60.0	+1.5
MWZ	Matawai	1.90	219	P	Pn	11 00 01.1	+1.7
WHRZ	Whale Island	1.93	239	P	Pb	11 00 01.4	-0.5
URZ	Urewera 20nm,0.3s,baz=50,slow=4.4,SNR=173	2.08	228	Pn	Pn	11 00 03.6	+1.8
URZ	31nm,0.3s,baz=58,slow=23,SNR=9.3			Sn	Sn	11 00 26.8	-1.4
URZ	Urewera	2.08	228	P	Pn	11 00 03.4	+1.6
RAGZ	Rawiri	2.08	218	P	Pn	11 00 03.5	+1.6
RIGZ	Rimuhau	2.10	209	P	Pn	11 00 03.2	+1.1
MARZ	Manawahe	2.20	239	P	Pn	11 00 05.2	+1.7
EDRZ	Edgecumbe	2.22	236	P	Pn	11 00 05.9	+2.0
OPRZ	Ohinepanea	2.22	243	P	Pn	11 00 04.8	+1.0
PRGZ	Paritu Road	2.25	204	P	Pn	11 00 05.3	+1.1
MYRZ	Mayor Island	2.29	259	P	Pb	11 00 07.2	-0.9
SNGZ	Shannon Statio	2.34	215	P	Pn	11 00 06.9	+1.4
TGRZ	Tauranga	2.39	248	P	Pn	11 00 07.7	+1.5
RTZ	Ruatahuna	2.40	223	P	Pn	11 00 07.7	+1.4
KNZ	Kokohu	2.41	207	P	Pn	11 00 06.6	+0.3
MUGZ	Murupara	2.42	228	P	Pn	11 00 08.1	+1.6
TARZ	Mount Tarawera	2.45	235	P	Pb	11 00 09.6	-1.2
MHGZ	Mahia Peninsul	2.45	202	P	Pn	11 00 07.6	+0.6
OMRZ	Omania	2.47	239	P	Pn	11 00 09.3	+2.1
RRRZ	Republican Roa	2.50	233	P	Pn	11 00 09.2	+1.6
KARZ	Kaharoa	2.52	242	P	Pn	11 00 10.1	+2.2
HLRZ	Highlands Stat	2.56	237	P	Pn	11 00 10.2	+1.7
RAHZ	Arahi	2.57	217	P	Pn	11 00 10.2	+1.6
NGRZ	Ngongotaha	2.60	241	P	Pn	11 00 10.8	+1.8
MTHZ	Maungataniwha	2.65	221	P	Pn	11 00 11.2	+1.5
HSRZ	Hossack Road	2.66	237	P	Pn	11 00 12.4	+2.5
PRRZ	Plateau Road	2.67	232	P	Pn	11 00 11.3	+1.4
HRRZ	Handcock Road	2.68	235	P	Pn	11 00 11.8	+1.7
KUZ	Kuaotunu	2.69	272	P	Pn	11 00 11.1	+0.9
ALRZ	Allen Road	2.74	231	P	Pn	11 00 12.3	+1.4
GRRZ	Galatos Road	2.77	237	P	Pn	11 00 13.1	+1.7
NMHZ	Naumai	2.85	218	P	Pn	11 00 13.6	+1.1
MRHZ	Matea Rd	2.87	226	P	Pn	11 00 13.8	+1.0
ARHZ	Aropaoanui	2.89	214	P	Pn	11 00 13.8	+0.9
TOZ	Tahuroa Road	2.97	252	P	Pn	11 00 14.9	+0.9
GRZ	Great Barrier	2.97	281	P	Pn	11 00 16.2	+2.1
KUTZ	Kaahu Road	3.04	237	P	Pn	11 00 17.0	+2.0
TLZ	Tolley Road	3.15	242	P	Pn	11 00 18.5	+1.8
WIAZ	Waiheke Island	3.15	270	P	Pn	11 00 18.4	+1.8
MCHZ	McNeill Hill	3.17	215	P	Pn	11 00 17.6	+0.7
CKHZ	Cape Kidnapper	3.19	209	P	Pn	11 00 17.3	+0.2
KWHZ	Kaweka Forest	3.29	218	P	Pn	11 00 19.1	+0.6
ETAZ	East Tamaki Re	3.32	267	P	Pn	11 00 21.1	+2.2
KBAZ	Karaka Road Bo	3.35	265	P	Pn	11 00 21.6	+2.3
KAHZ	Kahuranaki	3.38	210	P	Pn	11 00 19.5	-0.3
EPAZ	Eden Park BICE	3.46	269	P	Pb	11 00 25.2	-2.8
RPZ	Rata Peaks 0.5nm,0.3s,baz=27,slow=6.8,SNR=3.3	9.17	219	Pn	Pn	11 01 36.5	-2.7
RPZ	3.3nm,0.3s,baz=45,slow=14,SNR=12			Sn	Sn	11 03 08.7	-14
ASAR	Alice Springs 3.2nm,0.8s,baz=119,slow=7.7,SNR=39	40.81	276	P	P	11 07 08.3	-0.7
WRA	Warramunga Arr 4.3nm,0.5s,baz=115,slow=8.6,SNR=13	42.39	281	P	P	11 07 21.9	-0.1
ARCES	ARCESS Array B 1.0nm,0.6s,baz=15,slow=3.7,SNR=6.0	144.28	344	PKP	PKPab	11 19 00.8	+0.5
FINES	FINESS Array B 1.6nm,0.7s,baz=40,slow=2.4,SNR=6.1	150.14	334	PKPbc	PKPbc	11 19 17.1	-0.2

*IDC **31** 11:11:25.7±3.6, 44°.93N×147°.11E, h79^{km}±32^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.3/42, mbtmp3.6/9, Error ellipse: s-maj=30.2km s-min=21.5km az=132.0*

*SKHL **31** 11:11:31.7±0.0, 44°.27N×148°.07E, h124^{km}±6^{km}, mb4.4/4, msh5.2/4*

*ISCJB **31** 11:11:32.1±0.6, 44°.57N±0°.08×147°.6E±0°.1, h146^{km}±5^{km}, mb3.4/7, Error ellipse: s-maj=17.2km s-min=7.4km az=138.8*

*JMA **31** 11:11:34.6±0.4, 44°.53N×147°.44E, h148^{km}, M3.7*

ISC 31 11:11:32.9±0.8, **44°.63N**±0°.08×**147°.51E**±0°.08, **h150**^{km}±6^{km}, **n41**, σ1^{s}.**53**/43, **mb3.4**/7, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	0.66	23	i P	Pn	11 11 54.5	-0.6
KUR	20nm,0.3s			AMB	AMB	11 11 54.8	
KUR	50nm,0.3s			AMB	AMB	11 11 54.8	
KUR	100nm,0.3s			AMB	AMB	11 11 54.8	
KUR				i S	Sn	11 12 10.6	-1.5
KUR	240nm,0.4s			A	A	11 12 11.0	
KUR	410nm,0.4s			A	A	11 12 11.0	
YUK	Yuzh-Kuril'sk	1.32	244	i P	Pn	11 12 01.4	+0.8
YUK	130nm,0.4s			AMB	AMB	11 12 04.0	
YUK				i S	Sn	11 12 23.0	+1.2
YUK	110nm,0.5s			A	A	11 12 24.0	
YUK	580nm,0.5s			A	A	11 12 24.0	
LAGR	Lagunnoye	1.36	246	eP	Pn	11 12 01.0	0.0
LAGR	120nm,0.4s			AMB	AMB	11 12 03.0	
LAGR				eS	Sn	11 12 23.0	+0.5
LAGR	830nm,0.6s			A	A	11 12 29.0	
LAGR	960nm,0.6s			A	A	11 12 29.0	
GRPR	Tuman	1.40	244	i P	Pn	11 12 01.0	-0.4
GRPR	140nm,0.4s			AMB	AMB	11 12 06.0	
GRPR				i S	Sn	11 12 23.0	-0.2
GRPR	100nm,0.4s			A	A	11 12 25.0	
GRPR	480nm,0.4s			A	A	11 12 25.0	
NEM2	Nemuro 2	1.79	226	P	Pn	11 12 05.9	+0.3
NEM2				eS	Sn	11 12 29.7	-1.0
NMR	Nemuro--Hokkai	1.80	226	i P	Pn	11 12 05.5	-0.2
NMR				i S	Sn	11 12 29.8	-1.0
JRA	Rausu	1.85	249	P	Pn	11 12 07.1	+0.9
JRA				eS	Sn	11 12 33.0	+1.2
JNSB	Nemuroshibetsu	1.99	246	P	Pn	11 12 09.2	+1.3
JNK	Nakash	2.27	244	P	Pn	11 12 12.1	+1.0
JKHN	Kushirohamanak	2.30	229	P	Pn	11 12 12.1	+0.6
JKHN				eS	Sn	11 12 40.3	-0.9
JAK	Akkeshi	2.61	232	P	Pn	11 12 16.0	+0.7
JAK				eS	Sn	11 12 47.2	-0.8
JTKR	Abashiri--Toko	2.67	257	P	Pn	11 12 16.7	+0.7
JTKR				eS	Sn	11 12 50.1	+0.8
JAR	Ashorobuto	3.01	245	P	Pn	11 12 21.9	+1.5
JKK2	Kamakawa 2	3.50	259	P	Pn	11 12 27.8	+1.1
JSE	Soyaes	3.52	277	P	Pn	11 12 27.3	+0.4
JCH	Churui	3.62	238	P	Pn	11 12 28.8	+0.6
JCH				eS	Sn	11 13 09.9	-1.2
JFR	Furan	3.84	249	P	Pn	11 12 32.7	+1.6
YSS	Yuzh-Sakhalins	4.06	307	eP	Pn	11 12 40.4	+6.6
JNBK	Urakawa-nobuka	4.18	238	P	Pn	11 12 35.3	-0.2
JRBN	Rebuntou	4.64	282	P	Pn	11 12 42.2	+0.8
JEW	Eniwo	4.74	250	P	Pn	11 12 44.4	+1.5
JKB	Kayabe	5.47	242	P	Pn	11 12 52.0	-0.4
JKB				eS	Sn	11 13 50.6	-3.9
JOT	Ohata	5.74	238	P	Pn	11 12 55.2	-0.9
JOT				eS	Sn	11 13 55.7	-5.4
UGL	Uglegorsk	5.81	322	eP	Pn	11 13 02.3	+5.4
TYV	Tymovskoe	7.04	334	eP	Pn	11 13 20.2	+6.8
PETK	Petropavlovsk- 0.1nm,0.3s,baz=225,slow=14,SNR=3.0	10.81	35	P	Pn	11 13 56.7	-6.7
USRK	Ussuriysk Ar. 0.1nm,0.3s,baz=85,slow=16,SNR=2.3	11.12	273	P	Pn	11 13 56.5	-11
H11N2	WAKE ISLAND Hy baz=333,slow=76	29.61	141	T	T	11 48 49.3	
H11N1	WAKE ISLAND Hy baz=333,slow=76	29.62	141	T	T	11 48 50.6	
H11N3	WAKE ISLAND Hy baz=333,slow=76	29.62	141	T	T	11 48 42.5	
H11S1	WAKE ISLAND Hy baz=335,slow=76	30.59	142	T	T	11 49 57.8	
H11S3	WAKE ISLAND Hy baz=335,slow=76	30.60	142	T	T	11 50 00.6	
H11S2	WAKE ISLAND Hy baz=335,slow=76	30.61	142	T	T	11 49 57.5	
INK	Inuvik 0.6nm,0.4s,baz=298,slow=6.5,SNR=19	45.51	31	P	P	11 19 36.2	-0.6
ARCES	ARCESS Array B 0.4nm,0.5s,baz=52,slow=7.3,SNR=2.7	58.52	340	P	P	11 21 10.7	-2.2
FINES	FINESS Array B 1.4nm,0.8s,baz=30,slow=8.5,SNR=3.6	64.21	333	P	P	11 21 48.8	-2.3
NVAR	Mina Array Bea 0.4nm,0.7s,baz=304,slow=5.2,SNR=5.9	66.89	58	P	P	11 22 10.2	+1.1
ASAR	Alice Springs 0.2nm,0.4s,baz=6.0,slow=5.7,SNR=6.8	69.09	193	P	P	11 22 24.9	+2.4
PDAR	Pinedale Array 0.3nm,0.6s,baz=265,slow=3.7,SNR=5.2	69.15	50	P	P	11 22 23.4	+0.2
TXAR	Lajitas Array 0.4nm,0.6s,baz=296,slow=3.6,SNR=9.4	81.95	57	P	P	11 23 36.9	+0.8
PLCA	Paso Flores 0.7nm,0.9s,baz=225,slow=1.4,SNR=3.0	151.92	96	PKPbc	PKiKP	11 31 11.2	+1.1

WEL 31 11:12:58.5±0.9, **37°S**±8°×**17°9E**±°, **h5**^{km}, **M3.2**/24, **ML3.6**/19, **MLv3.2**/24, **Error ellipse: s-maj=0.0km s-min=0.0km az=123.2, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.85	224	P	Pg	11 13 15.0	+0.1
MXZ				S	Sg	11 13 24.8	-1.1
WMGZ	Waiomatatini S	1.00	210	P	Pn	11 13 19.4	+0.1
WMGZ				S	Sn	11 13 33.3	-0.5
PKGZ	Pakihiroa	1.21	219	P	Pg	11 13 21.4	-0.4
PKGZ				S	Sg	11 13 37.7	+0.2
HAZ	Te Kaha	1.29	231	P	Pn	11 13 21.3	-1.9
HAZ				S	Sb	11 13 40.3	+0.3
RUGZ	Raukumara Rang	1.49	227	P	Pn	11 13 25.6	-0.5
TWGZ	Tauwhareparae	1.49	214	P	Pn	11 13 26.2	+0.2
TWGZ				S	Sn	11 13 45.0	-0.9
CNGZ	Carnagh Statio	1.67	203	P	Pn	11 13 28.7	+0.3
TKGZ	Te Karaka	1.76	212	P	Pn	11 13 29.5	-0.2
MWZ	Matawai	1.83	221	P	Pn	11 13 30.6	-0.1
WHRZ	Whale Island	1.88	241	P	Pb	11 13 33.4	0.0
RAGZ	Rawiri	2.01	219	P	Pn	11 13 33.2	0.0
URZ	Urewera	2.02	229	P	Pn	11 13 32.9	-0.3
RIGZ	Rimuhau	2.03	210	P	Pn	11 13 32.9	-0.5
MARZ	Manawahe	2.15	241	P	Pn	11 13 35.2	+0.2
PRGZ	Paritu Road	2.17	205	P	Pn	11 13 34.7	-0.7
OPRZ	Ohinepanea	2.17	245	P	Pn	11 13 34.8	-0.6
SNGZ	Shannon Statio	2.27	216	P	Pn	11 13 36.6	-0.2
RTZ	Ruatahuna	2.33	224	P	Pn	11 13 37.1	-0.5
KNZ	Kokohu	2.33	207	P	Pn	11 13 36.2	-1.3
MUGZ	Murupara	2.36	229	P	Pn	11 13 37.5	-0.5
MHGZ	Mahia Peninsul	2.38	202	P	Pn	11 13 36.9	-1.3
TARZ	Mount Tarawera	2.39	237	P	Pn	11 13 39.0	+0.6
RRRZ	Republican Roa	2.44	235	P	Pn	11 13 38.7	-0.4
KARZ	Kaharoa	2.47	244	P	Pn	11 13 39.3	-0.2
RAHZ	Arahi	2.50	218	P	Pn	11 13 39.4	-0.5
HLRZ	Highlands Stat	2.50	238	P	Pn	11 13 39.5	-0.4
WHHZ	Waihua	2.56	213	P	Pn	11 13 40.1	-0.6
MTHZ	Maungataniwha	2.58	222	P	Pn	11 13 40.7	-0.3
PRRZ	Plateau Road	2.61	233	P	Pn	11 13 40.8	-0.6
ALRZ	Allen Road	2.68	232	P	Pn	11 13 41.8	-0.5
MRHZ	Matea Rd	2.80	227	P	Pn	11 13 43.2	-0.9
BKZ	Black Stump Fm	2.99	222	P	Pn	11 13 45.7	-0.9
HATZ	Hinemaiaia	3.03	229	P	Pn	11 13 46.3	-1.0
MCHZ	McNeill Hill	3.10	216	P	Pn	11 13 47.3	-0.9
KWHZ	Kaweka Forest	3.22	219	P	Pn	11 13 48.2	-1.6
RITZ	Rihia Road	3.23	230	P	Pn	11 13 49.4	-0.5
KAHZ	Kahuranaki	3.31	210	P	Pn	11 13 48.6	-2.4
KRHZ	Kereru	3.41	217	P	Pn	11 13 50.2	-2.3
BHHZ	Black Hill Sta	3.46	222	P	Pn	11 13 51.5	-1.6
NGZ	Ngauruhoe	3.51	230	P	Pn	11 13 53.0	-0.8
MOVZ	Moawhango	3.57	226	P	Pn	11 13 52.8	-1.8
WTAZ	Waiatarua	3.58	269	P	Pn	11 13 54.4	-0.3
WHVZ	Whangaehu Hut	3.58	228	P	Pn	11 13 53.6	-1.4
HIZ	Hauiti	3.67	244	P	Pn	11 13 57.2	+1.2
PNHZ	Pukenui	3.71	216	P	Pn	11 13 55.1	-1.4
MTVZ	Mangateitei	3.72	228	P	Pn	11 13 55.4	-1.3
WPHZ	Waipukurau	3.72	212	P	Pn	11 13 54.0	-2.6
PKVZ	Pokaka	3.74	230	P	Pn	11 13 56.1	-0.8
PRHZ	Porangahau	3.81	209	P	Pn	11 13 56.2	-1.7
TSZ	Takapari Road	3.94	217	P	Pn	11 13 57.7	-1.9
VRZ	Vera Road	4.02	236	P	Pn	11 14 01.2	+0.5
WAZ	Wanganui	4.25	227	P	Pn	11 14 02.4	-1.4
MRZ	Mangatainoka R	4.59	215	P	Pn	11 14 05.7	-2.9
KHEZ	Kahui Hut	4.61	238	P	Pn	11 14 10.2	+1.3
THZ	Tophouse	6.76	223	P	Pn	11 14 33.5	-5.0

*ISCJB **31** 11:17:08.0±0.7, 24°.35S±0°.08×179°.7W±0°.1, h490^{km}, mb3.8/7, Error ellipse: s-maj=13.3km s-min=9.3km az=154.8*

*IDC **31** 11:17:09.3±2.2, 24°.26S×179°.74W, h492^{km}±28^{km}, mb3.4/8, mb1 3.7/10, mb1mx3.4/31, mbtmp4.4/10, Error ellipse: s-maj=28.4km s-min=17.4km az=175.0*

ISC 31 11:17:08.6±0.8, **24°.39S**±0°.09×**179°.7W**±0°.1, **h490**^{km}, **n22**, σ1^{s}.**54**/24, **mb3.8**/7, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island 334nm,0.3s,baz=51,slow=22,SNR=9.4	5.09	162	P	P	11 18 38.1	+2.3
RAO	86nm,0.3s,baz=253,slow=19,SNR=1.8			S	S	11 19 44.4	-2.5
DZM	Mont Dzumac 0.8nm,0.3s,baz=89,slow=16,SNR=10	12.97	277	P	P	11 19 58.8	+1.1
URZ	Urewera	14.10	190	P	P	11 20 10.3	+1.0

	2.2nm,0.3s,baz=285,slow=4.3,SNR=17						
URZ				S	**S**	**11 22 36.8**	**-1.5**
	0.4nm,0.3s,baz=317,slow=20,SNR=3.2						
RPZ	**Rata Peaks**	**20.72**	**199**	P	**P**	**11 21 15.6**	**+1.4**
	5.2nm,0.4s,baz=29,slow=4.1,SNR=6.8						
EIDS	**Eidsvold**	**26.53**	**262**	P	**P**	**11 22 07.3**	**+1.1**
	baz=33,SNR=4.9						
RMQ	**Roma**	**28.55**	**259**	P	**P**	**11 22 26.1**	**+2.1**
	baz=35,SNR=4.5						
CMSA	**Cobar Meteorol**	**31.32**	**249**	P	**P**	**11 22 49.3**	**+1.3**
	baz=38						
CTA	**Charters Tower**	**31.78**	**271**	P	**P**	**11 22 52.4**	**+0.3**
	21nm,0.4s,baz=93,slow=9.8,SNR=62						
MTSU	**Mount Surprise**	**34.06**	**273**	P	**P**	**11 23 12.6**	**+1.1**
	baz=40,SNR=9.9						
STKA	**Stephens Creek**	**34.82**	**249**	P	**P**	**11 23 18.5**	**+0.8**
	1.8nm,0.5s,baz=90,slow=11,SNR=10						
STKA	**Stephens Creek**	**34.82**	**249**	P	**P**	**11 23 18.8**	**+1.1**
	baz=41,SNR=8.5						
HTT	**Hallett**	**37.15**	**246**	P	**P**	**11 23 38.1**	**+1.0**
	baz=43,SNR=4.0						
BBOO	**Buckleboo**	**39.53**	**247**	P	**P**	**11 23 56.6**	**+0.2**
	baz=46,SNR=13						
ASAR	**Alice Springs**	**42.25**	**261**	P	**P**	**11 24 18.2**	**-0.1**
	3.5nm,0.7s,baz=95,slow=6.8,SNR=77						
WRA	**Warramunga Arr**	**42.67**	**267**	P	**P**	**11 24 20.9**	**-0.8**
	5.4nm,0.4s,baz=90,slow=8.4,SNR=70						
WRKA	**Warakurna**	**47.02**	**258**	P	**P**	**11 24 55.2**	**0.0**
	baz=53,SNR=43						
KNRA	**Kununurra**	**48.99**	**270**	P	**P**	**11 25 06.5**	**-3.5**
	baz=55,SNR=5.6						
MORW	**Morawa**	**56.99**	**250**	P	**P**	**11 26 04.7**	**-2.4**
	baz=63,SNR=3.3						
PETK	**Petropavlovsk-**	**79.64**	**346**	P	**P**	**11 28 23.3**	**-0.8**
	0.7nm,0.6s,baz=144,slow=6.2,SNR=2.8						
NVAR	**Mina Array Bea**	**84.90**	**44**	P	**P**	**11 28 51.1**	**-0.4**
	0.2nm,0.6s,baz=224,slow=6.3,SNR=3.5						
TXAR	**Lajitas Array**	**90.44**	**58**	P	**P**	**11 29 18.4**	**+0.7**
	0.5nm,0.7s,baz=210,slow=5.2,SNR=8.9						
BRTR	**Keskin Array B**	**148.11**	**307**	PKPbc	**PKiKP**	**11 35 59.9**	**-0.4**
	0.5nm,0.6s,baz=76,slow=6.0,SNR=2.1						

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*NIED **31** 11:17:00, 38°.30N×143°.70E, h8^{km}, Mw3.6 Best double couple: $M_0$2.43000×10^{14} NP1:ϕ_s27.00000°, δ34.00000°, λ-99.00000°. NP2:ϕ_s217.00000°, δ56.00000°, λ-84.00000°.*

JMA 31 11:17:26.9±0.1**, 38°.30N**×**143°.72E, h36**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.77**	**271**	P	Pn	11 17 56.0	+1.0
JIKH				S	Sn	11 18 17.5	+1.2
OFUJ	**Ofunato**	**1.78**	**297**	P	Pn	11 17 56.5	+1.4
OFUJ				*e*S	Sn	11 18 18.2	+1.6
JKMT	**Kesennumamotoy**	**1.83**	**287**	P	Pn	11 17 57.0	+1.2
JKMT				S	Sn	11 18 19.3	+1.5
JIO	**Ouri**	**1.87**	**275**	P	Pn	11 17 57.6	+1.3
JIO				S	Sn	11 18 20.0	+1.3
JMK	**Ichinoseki**	**2.06**	**289**	P	Pn	11 18 00.6	+1.6
JOM	**Ohasama**	**2.23**	**302**	P	Pn	11 18 03.0	+1.8
JANG	**Nango**	**2.69**	**321**	*e*S	Sn	11 18 40.5	+1.7
JYK	**Kaneyama**	**2.70**	**284**	P	Pn	11 18 10.2	+2.4
JFT	**Otama**	**2.79**	**255**	P	Pn	11 18 11.1	+2.1
JFT				*e*S	Sn	11 18 44.1	+2.7
JOT	**Ohata**	**3.70**	**327**	*e*S	Sn	11 19 04.9	+1.1
JAG	**Ashikaga**	**3.88**	**242**	P	Pn	11 18 25.6	+1.6
JNBK	**Urakawa-nobuka**	**4.04**	**350**	P	Pn	11 18 28.3	+2.1
JNBK				*e*S	Sn	11 19 13.6	+1.3
JKB	**Kayabe**	**4.13**	**331**	*e*S	Sn	11 19 14.8	+0.3
JCH	**Churui**	**4.32**	**356**	P	Pn	11 18 31.3	+1.3
JCH				*e*S	Sn	11 19 19.3	+0.3
JRY	**Ryogami san**	**4.47**	**241**	P	Pn	11 18 33.3	+1.1

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*ISCJB **31** 11:19:35.6±0.4, 5°.69S±0°.05×153°.82E±0°.07, h43^{km}, mb4.3/25, MS3.2/4, Error ellipse: s-maj=10.0km s-min=7.4km az=6.8*

*NEIC **31** 11:19:38.7±2.2, 5°.67S×153°.73E, h59^{km}±7^{km}, mb4.3/21, Error ellipse: s-maj=14.5km s-min=11.6km az=117.0*

*IDC **31** 11:19:40.0±2.9, 5°.76S×153°.74E, h71^{km}±24^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.8/31, mbtmp4.2/13, MS3.2/6, Ms1 3.2/6, ms1mx3.0/23, Error ellipse: s-maj=21.6km s-min=17.6km az=82.0*

ISC 31 11:19:37.1±0.5**, 5°.65S**±0°.06×**153°.71E**±0°.08**, h43**^{km}**, n48,** σ1§**50**/50**, mb4.3**/25**, MS3.2**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.11**	**313**	*e*Pn	**Pn**	**11 20 12.0**	**+2.0**
HNR	**Honiara**	**7.24**	**122**	LR	LR	11 24 31.7	
	comp=Z,155nm,19.0s,baz=270,slow=41						
PMG	**Port Moresby**	**7.49**	**240**	P	**Pn**	**11 21 27.6**	**+3.8**
	12nm,0.3s,baz=67,slow=6.6,SNR=23						
PMG				S	**Sn**	**11 22 44.5**	**-3.0**
	6.0nm,0.3s,baz=121,slow=19,SNR=5.7						
PMG				LR	LR	11 24 26.5	
	comp=Z,148nm,21.4s,baz=136,slow=38						
PMG	**Port Moresby**	**7.49**	**240**	*e*Pn	**Pn**	**11 21 27.3**	**+3.5**
PMG				*e*Sn	**Sn**	**11 22 43.3**	**-4.2**
PATS	**Pohnpei**	**13.22**	**20**	*e*Pn	**Pn**	**11 22 40.5**	**-1.9**
CTA	**Charters Tower**	**16.08**	**206**	P	**P**	**11 23 23.6**	**+0.5**
	0.3nm,0.3s,baz=32,slow=15,SNR=2.6						
EIDS	**Eidsvold**	**19.77**	**187**	*e*P	**P**	**11 24 03.6**	**-0.1**
	13nm,1.0s						
DZM	**Mont Dzumac**	**20.45**	**144**	P	**P**	**11 24 11.2**	**-0.1**
	14nm,0.6s,baz=249,slow=11,SNR=15						
DZM	**Mont Dzumac**	**20.45**	**144**	*e*P	**P**	**11 24 11.7**	**+0.5**
	90nm,1.5s						
GUMO	**Guam**	**21.03**	**335**	LR	LR	11 31 30.1	
	comp=Z,24nm,19.7s,baz=116,slow=34						
MTN	**Manton Dam**	**23.39**	**251**	*e*P	**P**	**11 24 41.6**	**-0.7**
	13nm,1.1s						
SARN	**Sarigan**	**23.55**	**341**	*e*P	**P**	**11 24 45.5**	**+1.7**
	12nm,1.1s						
WRAB	**Tennant Creek**	**23.58**	**231**	*e*P	**P**	**11 24 45.2**	**+1.1**
	8.3nm,0.7s						
WB2	**Warramunga Arr**	**23.58**	**231**	*e*P	**P**	**11 24 45.3**	**+1.2**
	9.2nm,0.6s						
WR1	**Warramunga Arr**	**23.59**	**231**	*e*P	**P**	**11 24 44.5**	**+0.3**
WRA	**Warramunga Arr**	**23.59**	**231**	P	**P**	**11 24 44.5**	**+0.3**
	5.3nm,0.5s,baz=58,slow=9.8,SNR=8.4						
WRA				PcP	**PcP**	**11 28 28.1**	**-0.4**
	0.8nm,0.6s,baz=42,slow=3.9,SNR=3.1						
ARMA	**Armidale**	**24.72**	**184**	*e*P	**P**	**11 24 56.6**	**+2.0**
	35nm,1.4s						
AS31	**Alice Springs**	**26.16**	**225**	*e*P	**P**	**11 25 08.2**	**+0.5**
	1.4nm,1.0s						
ASAR	**Alice Springs**	**26.16**	**225**	P	**P**	**11 25 07.8**	**+0.1**
	6.8nm,1.0s,baz=61,slow=8.8,SNR=19						
ASAR				PcP	**PcP**	**11 28 33.6**	**-0.6**
	0.7nm,0.6s,baz=60,slow=1.8,SNR=6.6						
ASAR				ScP	**ScP**	**11 32 08.6**	**-2.1**
	0.3nm,0.7s,baz=48,slow=2.7,SNR=4.1						
ASAR				LR	LR	11 34 55.8	
	comp=Z,95nm,21.5s,baz=87,slow=35						
H11S3	**WAKE ISLAND Hy**	**27.19**	**28**	T	T	11 53 40.4	
	baz=209,slow=76						
H11S2	**WAKE ISLAND Hy**	**27.20**	**28**	T	T	11 53 38.1	
	baz=209,slow=76						
H11S1	**WAKE ISLAND Hy**	**27.21**	**28**	T	T	11 53 42.0	
	baz=209,slow=76						
STKA	**Stephens Creek**	**28.45**	**202**	P	**P**	**11 25 26.5**	**-1.5**
	1.9nm,0.7s,baz=9.3,slow=15,SNR=4.4						
STKA				LR	LR	11 36 47.1	
	comp=Z,54nm,19.1s,baz=25,slow=36						
STKA	**Stephens Creek**	**28.45**	**202**	*e*P	**P**	**11 25 27.6**	**-0.5**
	0.9nm,0.9s						
BBOO	**Buckleboo**	**31.64**	**209**	*e*P	**P**	**11 25 56.6**	**+0.4**
	20nm,1.4s						
FORT	**Forrest**	**34.72**	**221**	*e*P	**P**	**11 26 23.4**	**+0.2**
	16nm,0.8s						
PSA00	**Pilbara Seismi**	**36.39**	**241**	*e*P	**P**	**11 26 37.5**	**-0.1**
	6.0nm,0.8s						
TAU	**Tasmania Unive**	**37.54**	**188**	*e*P	**P**	**11 26 48.5**	**+1.4**
	32nm,1.4s						
URZ	**Urewera**	**38.81**	**150**	P	**P**	**11 26 57.2**	**-0.6**
	6.3nm,0.9s,baz=333,slow=4.5,SNR=5.8						
URZ	**Urewera**	**38.81**	**150**	*e*P	**P**	**11 26 56.5**	**-1.3**
	33nm,1.4s						
BKZ	**Black Stump Fm**	**39.22**	**152**	*e*P	**P**	**11 27 01.3**	**0.0**
	14nm,1.5s						
BFZ	**Birch Farm**	**40.31**	**153**	*e*P	**P**	**11 27 09.3**	**-1.0**
	34nm,1.4s						
MORW	**Morawa**	**42.53**	**232**	*e*P	**P**	**11 27 28.7**	**-0.1**
	30nm,1.5s						
PETK	**Petropavlovsk-**	**58.63**	**3**	P	**P**	**11 29 31.3**	**+1.6**
	1.5nm,0.7s,baz=164,slow=7.2,SNR=4.4						
PEA1	**Petropavlovsk-**	**58.63**	**3**	*e*P	**P**	**11 29 31.3**	**+1.5**
CM31	**Chiang Mai Arr**	**59.05**	**295**	*e*P	**P**	**11 29 33.9**	**+0.6**
	6.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**59.05**	**295**	P	**P**	**11 29 33.9**	**+0.6**
	2.7nm,0.6s,baz=119,slow=5.2,SNR=13						
MK32	**Makanchi Array**	**81.55**	**319**	*e*P	**P**	**11 31 49.8**	**-0.6**
MKAR	**Makanchi Array**	**81.55**	**319**	P	**P**	**11 31 49.8**	**-0.6**
	0.4nm,0.4s,baz=112,slow=3.1,SNR=5.2						
ZALV	**Zalesovo Beam**	**82.35**	**326**	P	**P**	**11 31 55.7**	**+1.3**
	0.7nm,0.4s,baz=122,slow=6.2,SNR=2.8						
ZAA1	**Zalesovo Array**	**82.36**	**326**	*e*P	**P**	**11 31 55.7**	**+1.3**
ILAR	**Eielson Array**	**82.60**	**22**	P	**P**	**11 31 54.9**	**-0.5**
	0.4nm,0.6s,baz=242,slow=4.9,SNR=4.8						
ILAR				LR	LR	12 08 02.2	
	comp=Z,28nm,18.2s,baz=184,slow=35						
ILB	**Eielson Array**	**82.60**	**22**	*e*P	**P**	**11 31 54.9**	**-0.5**
	1.4nm,0.8s						
MAW	**Mawson**	**85.14**	**203**	P	**P**	**11 32 07.2**	**-1.1**
	1.0nm,0.6s,baz=87,slow=7.4,SNR=6.6						
NV01	**Mina Array Sit**	**91.90**	**52**	*e*P	**P**	**11 32 41.8**	**+0.3**
NVAR	**Mina Array Bea**	**91.90**	**52**	P	**P**	**11 32 41.8**	**+0.3**
	0.2nm,0.7s,baz=252,slow=5.6,SNR=2.9						
TORD	**Torodi Ar. Bea**	**151.42**	**287**	PKPbc	**PKPbc**	**11 39 25.7**	**-1.7**
	0.7nm,0.6s,baz=66,slow=3.5,SNR=5.3						
TORD				PKPab	**PKPab**	**11 39 34.7**	**-1.0**
	0.8nm,0.6s,baz=61,slow=3.9,SNR=4.4						
TOA1	**Torodi Ar. Sit**	**151.42**	**287**	*e*PKPbc	**PKPbc**	**11 39 25.7**	**-1.7**
TOA1				*e*PKPab	**PKPab**	**11 39 34.7**	**-1.0**

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*NIED **31** 11:42:00, 42°.70N×147°.90E, h11^{km}, Mw4.0 Best double couple: $M_0$9.61000×10^{14} NP1:ϕ_s262.00000°, δ33.00000°, λ-98.00000°. NP2:ϕ_s92.00000°, δ57.00000°, λ-85.00000°.*

*IDC **31** 11:42:20.1±0.9, 42°.59N×148°.12E, h0^{km}, mb3.9/18, mb1 4.1/21, mb1mx4.0/44, mbtmp3.9/21, ML2.1/3, MS2.6/2, Ms1 2.6/2, ms1mx2.5/26, Error ellipse: s-maj=24.2km s-min=15.1km az=161.0*

*ISCJB **31** 11:42:21.7±1.3, 42°.67N±0°.04×147°.92E±0°.04, h19^{km}±9^{km}, mb4.1/31, MS4.9/1, Error ellipse: s-maj=6.0km s-min=4.4km az=3.5*

*NEIC **31** 11:42:21.2±1.4, 42°.54N×148°.11E, h10^{km}±2^{km}, mb4.3/16, Error ellipse: s-maj=15.5km s-min=10.2km az=137.0*

*MOS **31** 11:42:22.7±0.8, 42°.65N×147°.97E, h28^{km}, mb4.6/7, Error ellipse: s-maj=11.3km s-min=7.7km az=117.6*

*SKHL **31** 11:42:22.4±0.8, 42°.66N×148°.07E, h30^{km}±4^{km}, mb4.3/3*

*JMA **31** 11:42:23.6±0.2, 42°.66N×147°.91E, h45^{km}, M4.1*

ISC 31 11:42:20.9±3.0**, 42°.59N**±0°.05×**147°.97E**±0°.05**, h7**^{km}±19^{km}**, n101,** σ1§**73**/119**, mb4.2**/31**, 1C-1D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.81**	**296**	P	**Pn**	**11 42 52.2**	**-0.3**
NEM2				*e*S	**Sn**	**11 43 13.5**	**-2.1**
NMR	**Nemuro--Hokkai**	**1.82**	**296**	*d* *i*PN	**Pn**	**11 42 52.2**	**-0.4**
NMR				*i* S	**Sn**	**11 43 13.7**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.82**	**296**	*i* P	**Pn**	**11 42 52.2**	**-0.4**
NMR				*i* S	**Sn**	**11 43 13.7**	**-2.2**
YUK	**Yuzh-Kuril'sk**	**2.11**	**314**	⇑*i*PN	**Pn**	**11 42 55.8**	**-0.8**
YUK				*i* S	**Sn**	**11 43 20.0**	**-3.1**
YUK				pmax	pmax		
	comp=Z,178nm,0.2s						
YUK				smax	smax		
	comp=E,618nm,0.2s						
YUK				smax	smax		
	comp=N,955nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.11**	**314**	*i* P	**Pn**	**11 42 55.0**	**-1.6**
YUK				AMB	AMB	11 42 56.0	
	comp=N,20nm,0.2s						
YUK				*i* S	**Sn**	**11 43 20.0**	**-3.1**
YUK				A	A	11 43 21.0	
	comp=N,100nm,0.3s						
YUK				A	A	11 43 21.0	
	comp=N,310nm,0.3s						
JKHN	**Kushirohamanak**	**2.12**	**284**	P	**Pn**	**11 42 57.2**	**+0.4**
JKHN				*e*S	**Sn**	**11 43 21.6**	**-1.8**
GRPR	**Tuman**	**2.13**	**312**	*e*PN	**Pn**	**11 42 55.8**	**-1.1**
GRPR				*i* S	**Sn**	**11 43 20.3**	**-3.3**
GRPR				pmax	pmax		
	comp=Z,123nm,0.2s						
GRPR				smax	smax		
	comp=E,762nm,0.2s						
GRPR				smax	smax		
	comp=N,1μm,0.3s						
GRPR	**Tuman**	**2.13**	**312**	*e*P	**Pn**	**11 42 55.0**	**-1.9**
GRPR				AMB	AMB	11 42 58.0	
	comp=N,40nm,0.2s						
GRPR				*i* S	**Sn**	**11 43 20.0**	**-3.6**
GRPR				A	A	11 43 23.0	
	comp=N,110nm,0.3s						
GRPR				A	A	11 43 23.0	
	comp=N,390nm,0.3s						
LAGR	**Lagunnoye**	**2.16**	**313**	*e*PN	**Pn**	**11 42 56.8**	**-0.6**
LAGR				*i* S	**Sn**	**11 43 21.8**	**-2.6**
LAGR				smax	smax		
	comp=N,1μm,0.3s						
LAGR				smax	smax		
	comp=E,658nm,0.2s						
LAGR	**Lagunnoye**	**2.16**	**313**	*e*P	**Pn**	**11 42 56.0**	**-1.4**
LAGR				*i* S	**Sn**	**11 43 21.0**	**-3.4**
LAGR				A	A	11 43 28.0	
	comp=E,140nm,0.3s						
LAGR				A	A	11 43 28.0	
	comp=E,330nm,0.3s						
JAK	**Akkeshi**	**2.44**	**281**	P	**Pn**	**11 43 01.4**	**+0.2**
JAK				*e*S	**Sn**	**11 43 28.6**	**-2.7**
JRA	**Rausu**	**2.48**	**304**	P	**Pn**	**11 43 01.6**	**-0.1**
JRA				*e*S	**Sn**	**11 43 29.9**	**-2.3**
JNK	**Nakash**	**2.58**	**294**	P	**Pn**	**11 43 02.9**	**-0.2**
JNK				*e*S	**Sn**	**11 43 31.6**	**-3.1**
KUR	**Kuril'sk**	**2.64**	**358**	*e*PN	**Pn**	**11 43 03.6**	**-0.4**
KUR				*i* S	**Sn**	**11 43 33.3**	**-3.0**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				pmax	pmax		
	comp=N,34nm,0.6s						
KUR				pmax	pmax		
	comp=E,72nm,0.6s						
KUR				smax	smax		
	comp=N,146nm,0.8s						
KUR				smax	smax		
	comp=E,321nm,0.8s						
KUR	**Kuril'sk**	**2.64**	**358**	*e*P	**Pn**	**11 43 03.0**	**-1.0**
KUR				AMB	AMB	11 43 07.0	
	comp=E,20nm,0.5s						
KUR				AMB	AMB	11 43 07.0	
	comp=E,40nm,0.5s						
KUR				*i* S	**Sn**	**11 43 32.7**	**-3.6**
KUR				A	A	11 43 36.0	
	comp=E,150nm,0.6s						
KUR				A	A	11 43 36.0	
	comp=E,320nm,0.6s						
JAR	**Ashorobuto**	**3.16**	**284**	P	**Pn**	**11 43 11.5**	**+0.4**
JAR				*e*S	**Sn**	**11 43 47.4**	**-1.7**
JTKR	**Abashiri--Toko**	**3.27**	**296**	P	**Pn**	**11 43 13.2**	**+0.6**
JTKR				*e*S	**Sn**	**11 43 50.8**	**-0.9**
JCH	**Churui**	**3.40**	**272**	P	**Pn**	**11 43 15.4**	**+1.0**
JCH				*e*S	**Sn**	**11 43 54.2**	**-0.7**
ERM	**Erimo**	**3.61**	**262**	*e*Pn	**Pn**	**11 43 18.8**	**+1.5**
ERM				*e*Sn	**Sn**	**11 44 02.0**	**+1.8**
ERM	**Erimo**	**3.61**	**262**	*e*PN	**Pn**	**11 43 18.8**	**+1.5**
ERM				*e*		11 44 02.1	
JNBK	**Urakawa-nobuka**	**3.87**	**267**	P	**Pn**	**11 43 21.4**	**+0.5**
JFR	**Furan**	**3.99**	**280**	P	**Pn**	**11 43 23.3**	**+0.8**
JFR				*e*S	**Sn**	**11 44 07.3**	**-2.3**
JEW	**Eniwo**	**4.81**	**275**	*e*S	**Sn**	**11 44 30.0**	**+0.3**
JKB	**Kayabe**	**5.20**	**265**	P	**Pn**	**11 43 39.7**	**+0.7**
JKB				*e*S	**Sn**	**11 44 35.3**	**-3.9**
JOT	**Ohata**	**5.29**	**259**	P	**Pn**	**11 43 40.9**	**+0.5**
JANG	**Nango**	**5.33**	**248**	P	**Pn**	**11 43 40.1**	**-0.8**
JANG				*e*S	**Sn**	**11 44 37.5**	**-5.0**
YSS	**Yuzh-Sakhalins**	**5.73**	**321**	*e*Pn	**Pn**	**11 43 46.3**	**0.0**
YSS	**Yuzh-Sakhalins**	**5.73**	**321**	*e*PN	**Pn**	**11 43 46.3**	**0.0**
YSS	**Yuzh-Sakhalins**	**5.73**	**321**	*e*P	**Pn**	**11 43 46.3**	**0.0**
JOM	**Ohasama**	**5.93**	**241**	P	**Pn**	**11 43 48.8**	**-0.3**
JOM				*e*S	**Sn**	**11 44 52.3**	**-5.0**
TYV	**Tymovskoe**	**9.04**	**338**	*e*P	**Pn**	**11 44 32.2**	**+0.4**
MJAR	**Matsushiro Arr**	**9.65**	**234**	Pn	**Pn**	**11 44 42.9**	**+2.6**
	comp=E,0.0nm,0.3s,baz=65,slow=11,SNR=3.1						
MJAR				Sn	**Sn**	**11 46 25.3**	**-3.6**
	comp=E,0.1nm,0.3s,baz=70,slow=29,SNR=4.4						
MJAR				LR	LR	11 48 51.1	
	comp=E,20nm,20.0s,baz=60,slow=40						
MAJO	**Matsushiro**	**9.65**	**235**	*e*Pn	**Pn**	**11 44 42.9**	**+2.6**
MAJO				*e*		11 44 44.7	
MAJO				*e*Sn	**Sn**	**11 46 25.3**	**-3.6**
MAJO	**Matsushiro**	**9.65**	**235**	*e*PN	**Pn**	**11 44 42.9**	**+2.6**
MJB9	**Matsu-Tunnel**	**9.65**	**235**	*e*Pn	**Pn**	**11 44 44.8**	**+4.6**
USRK	**Ussuriysk Ar.**	**11.74**	**283**	Pn	**Pn**	**11 45 08.2**	**-0.5**
	comp=E,0.1nm,0.3s,baz=90,slow=17,SNR=3.2						
USRK				LR	LR	11 50 11.6	
	comp=E,38nm,18.3s,baz=88,slow=40						
PETK	**Petropavlovsk-**	**12.38**	**28**	Pn	**Pn**	**11 45 15.6**	**-1.8**
	comp=E,0.1nm,0.3s,baz=182,slow=9.5,SNR=5.6						
PEA1	**Petropavlovsk-**	**12.38**	**28**	*e*Pn	**Pn**	**11 45 15.6**	**-1.8**
SEY	**Seymchan**	**20.54**	**6**	P	**P**	**11 47 01.0**	**+1.3**
	comp=E,0.9nm,0.5s,baz=180,slow=3.0,SNR=2.4						
JOW	**Kunigami**	**22.48**	**232**	*e*P	**P**	**11 47 20.4**	**-0.4**
	comp=E,27nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**27.83**	**139**	T	T	12 17 21.9	
	baz=330,slow=76,SNR=7.0						
H11N1	**WAKE ISLAND Hy**	**27.84**	**139**	T	T	12 17 28.2	
	baz=330,slow=76,SNR=8.3						
H11N3	**WAKE ISLAND Hy**	**27.85**	**139**	T	T	12 17 28.7	
	baz=330,slow=76,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**28.79**	**141**	T	T	12 18 35.9	
	baz=331,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**28.80**	**141**	T	T	12 18 36.0	
	baz=331,slow=76,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**28.81**	**141**	T	T	12 18 37.3	
	baz=331,slow=76,SNR=8.2						
ULN	**Ulaanbaatar**	**29.04**	**295**	*e*P	**P**	**11 48 22.4**	**+0.7**
	comp=E,14nm,1.2s						
ULN	**Ulaanbaatar**	**29.04**	**295**	*e*P	**P**	**11 48 22.4**	**+0.7**
ULN				pmax	pmax		
	comp=Z,14nm,1.2s						
ULN	**Ulaanbaatar**	**29.04**	**295**	*e*P	**P**	**11 48 22.4**	**+0.7**
YULB	**Yu-li**	**29.25**	**238**	*e*P	**P**	**11 48 23.3**	**-0.3**
	comp=Z,5.9nm,0.9s						
SONA0	**Songino Array**	**29.48**	**295**	*e*P	**P**	**11 48 27.3**	**+1.6**
SONM	**Songino Array**	**29.48**	**295**	P	**P**	**11 48 27.3**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=94,slow=8.6,SNR=10						
SML	**Sawmill**	**41.52**	**40**	*e*P	**P**	**11 50 08.0**	**-0.6**
	comp=Z,5.0nm,0.9s						
SML	**Sawmill**	**41.52**	**40**	*e*P	**P**	**11 50 08.0**	**-0.6**
SML				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DHY	**Denali Highway**	**41.91**	**38**	*e*P	**P**	**11 50 11.8**	**0.0**
	comp=Z,2.6nm,0.9s						
ILAR	**Eielson Array**	**42.08**	**35**	P	**P**	**11 50 13.2**	**+0.1**
	comp=Z,1.8nm,1.2s,baz=263,slow=6.3,SNR=7.0						
ZAA1	**Zalesovo Array**	**42.18**	**308**	*e*P	**P**	**11 50 15.0**	**+1.0**
ZALV	**Zalesovo Beam**	**42.18**	**308**	P	**P**	**11 50 15.0**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=60,slow=8.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**42.18**	**308**	P	**P**	**11 50 15.0**	**+1.0**
MK31	**Makanchi Array**	**45.66**	**299**	*e*P	**P**	**11 50 42.8**	**+0.7**
	comp=Z,5.8nm,1.4s						
MK31	**Makanchi Array**	**45.66**	**299**	*e*P	**P**	**11 50 42.8**	**+0.7**
MK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MK32	**Makanchi Array**	**45.66**	**299**	*e*P	**P**	**11 50 42.9**	**+0.8**
MKAR	**Makanchi Array**	**45.66**	**299**	P	**P**	**11 50 42.9**	**+0.8**
	comp=Z,1.9nm,1.0s,baz=76,slow=10,SNR=4.0						
KURK	**Kurchatov**	**46.68**	**305**	*e*P	**P**	**11 50 51.1**	**+1.1**
	comp=Z,3.2nm,0.8s						
KURK	**Kurchatov**	**46.68**	**305**	*e*P	**P**	**11 50 51.1**	**+1.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**46.68**	**305**	*e*P	**P**	**11 50 51.1**	**+1.1**
HYT	**Haines Junctio**	**46.82**	**40**	*e*P	**P**	**11 50 53.5**	**+2.3**
	comp=Z,10nm,0.9s						
INK	**Inuvik**	**47.11**	**30**	P	**P**	**11 50 52.5**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=236,slow=4.7,SNR=4.1						
INK	**Inuvik**	**47.11**	**30**	*e*P	**P**	**11 50 52.3**	**-0.8**
	comp=Z,4.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**47.79**	**255**	P	**P**	**11 51 00.7**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=28,slow=6.1,SNR=5.2						
BVAR	**Borovoye Array**	**50.70**	**310**	P	**P**	**11 51 21.6**	**+0.6**
	comp=Z,0.5nm,0.6s						
KK31	**Karatay Array**	**54.79**	**299**	*e*P	**P**	**11 51 51.1**	**-0.3**
	comp=Z,2.2nm,0.8s						
KK31	**Karatay Array**	**54.79**	**299**	*e*P	**P**	**11 51 51.1**	**-0.3**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**54.79**	**299**	*e*P	**P**	**11 51 51.2**	**-0.1**
	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array**	**54.79**	**299**	*e*P	**P**	**11 51 51.2**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**56.44**	**34**	P	**P**	**11 52 02.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=302,slow=6.3,SNR=4.1						
YKB5	**Yellowknife Ar**	**56.44**	**34**	*e*P	**P**	**11 52 02.4**	**-0.4**
MTN	**Manton Dam**	**57.28**	**200**	*e*P	**P**	**11 52 06.3**	**-3.0**
	comp=Z,32nm,1.5s						
ABKAR	**Akbulak array**	**58.26**	**310**	*e*P	**P**	**11 52 16.3**	**+0.4**
	comp=Z,5.2nm,1.4s						
FIA0	**FINESS Array S**	**66.18**	**334**	*e*P	**P**	**11 53 09.4**	**+0.6**
FIA0	**FINESS Array S**	**66.18**	**334**	*e*P	**P**	**11 53 09.4**	**+0.6**
FINES	**FINESS Array B**	**66.18**	**334**	P	**P**	**11 53 09.4**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=32,slow=5.6,SNR=5.1						
AS31	**Alice Springs**	**67.19**	**194**	*e*P	**P**	**11 53 15.4**	**-0.2**
	comp=Z,1.9nm,1.4s						
ASAR	**Alice Springs**	**67.19**	**194**	P	**P**	**11 53 15.4**	**-0.2**
	comp=Z,0.5nm,1.0s,baz=7.0,slow=6.5,SNR=4.2						
NV01	**Mina Array Sit**	**67.69**	**58**	*e*P	**P**	**11 53 19.1**	**+0.1**
NVAR	**Mina Array Bea**	**67.69**	**58**	P	**P**	**11 53 19.2**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=292,slow=6.9,SNR=9.9						
PD31	**Pinedale Array**	**70.20**	**50**	*e*P	**P**	**11 53 35.3**	**+0.6**
	comp=Z,1.3nm,0.8s						
PDAR	**Pinedale Array**	**70.20**	**50**	P	**P**	**11 53 34.4**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=241,slow=0.9,SNR=12						
NB2	**NORSAR Subarra**	**70.90**	**339**	P	**P**	**11 53 38.9**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=32,slow=6.9						
NB200	**NORSAR Array S**	**70.90**	**339**	*e*P	**P**	**11 53 38.3**	**0.0**
NOA	**NORSAR Array B**	**70.90**	**339**	P	**P**	**11 53 38.3**	**0.0**
	comp=Z,2.5nm,0.9s,baz=33,slow=6.1,SNR=5.3						
KBZ	**Khabaz**	**71.02**	**312**	P	**P**	**11 53 40.5**	**+1.3**
	comp=Z,5.6nm,0.8s,baz=21,slow=2.4,SNR=7.8						
AKASG	**Malin Array Be**	**72.87**	**324**	P	**P**	**11 53 50.5**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=43,slow=5.5,SNR=6.9						
AKBB	**Malin Array Si**	**72.87**	**324**	*e*P	**P**	**11 53 51.1**	**+0.8**
	comp=Z,7.7nm,1.3s						
AKBB	**Malin Array Si**	**72.87**	**324**	*e*P	**P**	**11 53 51.1**	**+0.8**
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RAO	**Raoul Island**	**78.08**	**150**	LR	LR	12 23 55.1	
	comp=Z,579nm,18.8s,baz=102,slow=32						
CLL	**Collm**	**78.62**	**333**	*e*P	**P**	**11 54 23.0**	**-0.2**
CLL	**Collm**	**78.62**	**333**	*e*S	**S**	**12 04 22.0**	**+1.8**
CLL				*e*		12 08 30.0	
CLL				Lm	MLR	12 21 00.0	
	comp=Z,200nm,20.2s						
BR101	**Keskin Array S**	**78.78**	**314**	*e*P	**P**	**11 54 25.2**	**+0.8**
BRTR	**Keskin Array B**	**78.78**	**314**	P	**P**	**11 54 25.2**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=34,slow=4.6,SNR=4.0						
TXAR	**Lajitas Array**	**82.79**	**57**	P	**P**	**11 54 46.2**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=294,slow=2.1,SNR=4.9						

MAN 31 11:47:48.3, 9°.29N×124°.43E, h139^{km}**, mb4.5, ML3.3, MS3.3, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**0.86**	**162**	⇑*e*P	Pn	11 48 12.8	+1.9
CGP				*e*S	Sn	11 48 29.4	+1.4
SCPH	**Surigao**	**1.16**	**65**	⇑*e*P	Pn	11 48 06.9	-6.6
BUKP	**Musuan**	**1.53**	**156**	*e*P	Pn	11 48 17.6	+0.1
BUKP				*e*S	Sn	11 48 41.2	+1.5
PLP	**Palo**	**1.94**	**16**	⇓*e*P	Pn	11 48 22.3	+0.1
PLP				*e*S	Sn	11 48 49.1	+1.0
BESP	**Borongan**	**2.51**	**23**	*e*P	Pn	11 48 30.6	+1.6
BESP				*e*S	Sn	11 49 00.8	+0.5

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*ISCJB **31** 11:48:50.5±0.4, 13°.41N±0°.05×50°.83E±0°.06, h12^{km}, mb4.3/41, MS4.3/24, Error ellipse: s-maj=8.6km s-min=6.7km az=41.1*

*IDC **31** 11:48:50.6±0.5, 13°.32N×50°.87E, h0^{km}, mb4.1/18, mb1 4.3/20, mb1mx4.1/43, mbtmp4.2/20, ML3.8/2, MS4.4/27, Ms1 4.4/27, ms1mx4.3/36, Error ellipse: s-maj=17.6km s-min=13.0km az=120.0*

*NEIC **31** 11:48:51.5±2.6, 13°.36N×50°.87E, h10^{km}±2^{km}, mb4.4/23,*

Error ellipse: s-maj=13.6km s-min=8.9km az=95.0

ISC 31 11:48:52.1±0.5**, 13°.39N**±0°.07×**50°.95E**±0°.07**, h12km, n76, σ1ˢ.60**/67**, mb4.3**/41**, MS4.3**/24**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**8.13**	**258**	Pn	**Pn**	**11 50 50.8**	**+0.7**
	7.2nm,0.3s,baz=321,slow=3.6,SNR=17						
ATD				LR	LR	11 53 23.8	
	comp=Z,6µm,18.6s,baz=76,slow=34						
RAYN	**Ar Rayn**	**11.32**	**334**	ePn	**Pn**	**11 51 32.1**	**-1.7**
WSAR	**Wadi Sarin**	**12.20**	**36**	Pn	**Pn**	**11 51 46.5**	**+0.7**
	0.1nm,0.3s,baz=188,slow=14,SNR=3.2						
WSAR				Sn	**Sn**	**11 53 56.4**	**-5.5**
	0.1nm,0.3s,baz=72,slow=20,SNR=2.0						
WSAR				LR	LR	11 56 15.2	
	comp=Z,6µm,20.6s,baz=236,slow=36						
UOSS	**Minazif**	**12.51**	**23**	ePn	**Pn**	**11 51 52.9**	**+2.8**
KMBO	**Kilima Mbogo**	**19.82**	**224**	LR	LR	12 00 42.8	
	comp=Z,2µm,20.7s,baz=48,slow=36						
EIL	**Elat**	**21.95**	**320**	LR	LR	12 02 30.8	
	comp=Z,1µm,18.9s,baz=133,slow=37						
MNCI	**Minicoy**	**22.29**	**101**	eP	**P**	**11 53 47.9**	**-1.6**
ASF	**Jabal al Asfar**	**22.70**	**328**	P	**P**	**11 53 54.6**	**+0.7**
	0.7nm,0.3s,baz=114,slow=7.8,SNR=4.7						
ASF				LR	LR	12 02 57.9	
	comp=Z,945nm,21.0s,baz=96,slow=37						
MMAI	**Mount Meron Ar**	**24.14**	**327**	LR	LR	12 03 54.2	
	comp=Z,964nm,18.8s,baz=140,slow=37						
MBAR	**Mbarara**	**24.39**	**237**	LR	LR	12 02 57.3	
	comp=Z,468nm,20.0s,baz=52,slow=35						
MBAR	**Mbarara**	**24.39**	**237**	eP	**P**	**11 54 09.1**	**-1.6**
	10nm,1.4s						
GEYT	**Alibeck**	**25.25**	**13**	P	**P**	**11 54 20.2**	**+2.0**
	6.8nm,0.3s,baz=206,slow=9.5,SNR=6.8						
GEYT				LR	LR	12 06 21.6	
	comp=Z,5µm,18.1s,baz=195,slow=42						
GYA0B	**ALIBECK ARRAY**	**25.25**	**13**	eP	**P**	**11 54 17.1**	**-1.1**
	10nm,0.9s						
KBL	**Kabul**	**26.68**	**35**	eP	**P**	**11 54 31.9**	**+0.5**
	8.2nm,0.9s						
CSS	**Mathiatis**	**26.74**	**326**	eP	**P**	**11 54 31.0**	**-0.7**
	20nm,1.3s						
H08N2	**Diego Garcia H**	**27.93**	**133**	T	T	12 23 43.6	
	baz=313,slow=76,SNR=57						
H08N3	**Diego Garcia H**	**27.94**	**133**	T	T	12 23 44.6	
	baz=313,slow=76,SNR=56						
H08N1	**Diego Carcia H**	**27.95**	**133**	T	T	12 23 43.4	
	baz=313,slow=76,SNR=60						
NIL	**Nilore**	**28.60**	**41**	eP	**P**	**11 54 46.6**	**-1.7**
	16nm,1.4s						
AKH	**Akhalkalaki**	**28.66**	**348**	eP	**P**	**11 54 48.1**	**-0.9**
	11nm,1.4s						
PALK	**Pallekele**	**29.87**	**99**	LR	LR	12 04 22.8	
	comp=Z,396nm,21.4s,baz=296,slow=31						
CHGR	**Chuyangaron**	**29.89**	**29**	eP	**P**	**11 55 02.4**	**+2.5**
	22nm,1.2s						
BRTR	**Keskin Array B**	**30.34**	**333**	P	**P**	**11 55 04.0**	**+0.1**
	0.3nm,0.5s,baz=136,slow=9.2,SNR=2.8						
BRTR				PcP	**PcP**	**11 58 04.2**	**+0.2**
	0.9nm,0.7s,baz=134,slow=4.2,SNR=5.3						
BRTR				LR	LR	12 08 10.9	
	comp=Z,430nm,18.8s,baz=134,slow=38						
BR101	**Keskin Array S**	**30.34**	**333**	eP	**P**	**11 55 04.0**	**+0.1**
BR131	**Keskin Array S**	**30.34**	**333**	eP	**P**	**11 55 04.0**	**+0.1**
	2.9nm,1.1s						
KBZ	**Khabaz**	**31.01**	**349**	P	**P**	**11 55 13.2**	**+3.7**
	6.4nm,1.0s,baz=170,slow=9.2,SNR=4.8						
KBZ				LR	LR	12 10 11.1	
	comp=Z,2µm,19.1s,baz=160,slow=41						
KK31	**Karatay Array**	**34.07**	**26**	eP	**P**	**11 55 34.2**	**-2.2**
	4.9nm,1.1s						
KKAR	**Karatay Array**	**34.07**	**26**	eP	**P**	**11 55 34.4**	**-2.0**
	4.9nm,1.1s						
ABKAR	**Akbulak array**	**36.52**	**10**	eP	**P**	**11 55 58.6**	**+1.3**
	16nm,1.5s						
AKTO	**Aktyubinsk**	**37.39**	**7**	P	**P**	**11 56 07.3**	**+2.6**
	4.0nm,0.8s,baz=212,slow=6.9,SNR=14						
TIR	**Tirane**	**38.84**	**322**	eP	**P**	**11 56 16.4**	**-0.7**
	171nm,0.7s						
TIR	**Tirane**	**38.84**	**322**	P	**P**	**11 56 16.4**	**-0.7**
MATP	**Matopo**	**40.21**	**214**	P	**P**	**11 56 27.6**	**-1.3**
	2.2nm,0.8s,baz=14,slow=12,SNR=3.7						
AKASG	**Malin Array Be**	**41.19**	**339**	P	**P**	**11 56 35.9**	**-0.6**
	2.2nm,0.7s,baz=148,slow=7.5,SNR=4.9						
AKASG				PcP	**PcP**	**11 58 36.1**	**+0.6**
	0.5nm,0.5s,baz=136,slow=2.2,SNR=4.0						
AKASG				LR	LR	12 17 02.0	
	comp=Z,279nm,18.2s,baz=135,slow=41						
AKBB	**Malin Array Si**	**41.19**	**339**	eP	**P**	**11 56 34.9**	**-1.6**
	6.6nm,1.2s						
MAKZ	**Makanchi**	**42.26**	**32**	eS	**S**	**12 03 03.8**	**-1.9**
MK31	**Makanchi Array**	**42.41**	**32**	eP	**P**	**11 56 47.6**	**+1.0**
	10nm,1.5s						
MK32	**Makanchi Array**	**42.41**	**32**	eP	**P**	**11 56 47.0**	**+0.3**
MKAR	**Makanchi Array**	**42.41**	**32**	P	**P**	**11 56 47.0**	**+0.3**
	1.3nm,0.5s,baz=221,slow=8.2,SNR=15						
MKAR				PcP	**PcP**	**11 58 41.8**	**+2.1**
	0.5nm,0.7s,baz=213,slow=5.0,SNR=2.7						
MKAR				LR	LR	12 16 53.4	
	comp=Z,517nm,21.2s,baz=236,slow=40						
BRVK	**Borovoye**	**42.46**	**17**	eP	**P**	**11 56 47.1**	**+0.3**
	5.7nm,1.1s						
BVAR	**Borovoye Array**	**42.46**	**17**	P	**P**	**11 56 47.3**	**+0.4**
	1.8nm,0.7s,baz=191,slow=6.8,SNR=8.5						
BVAR				PcP	**PcP**	**11 58 40.9**	**+1.2**
	1.5nm,0.6s,baz=219,slow=0.9,SNR=6.4						
KURBB	**Kurchatov Arra**	**43.37**	**25**	P	**P**	**11 56 55.1**	**+0.8**
	2.1nm,0.9s,baz=225,slow=8.1,SNR=14						
KURBB				PcP	**PcP**	**11 58 44.3**	**+1.5**
	0.6nm,0.8s,baz=232,slow=3.4,SNR=4.7						
KEST	**Kesra**	**43.46**	**308**	LR	LR	12 15 28.9	
	comp=Z,219nm,20.0s,baz=192,slow=37						
KURK	**Kurchatov**	**43.48**	**25**	eP	**P**	**11 56 55.8**	**+0.7**
	3.4nm,0.9s						
OJC	**Ojcow**	**44.65**	**332**	eP	**P**	**11 57 04.1**	**-0.5**
	8.0nm,1.4s						
LBTB	**Lobatse**	**45.49**	**213**	P	**P**	**11 57 11.8**	**+0.2**
	6.8nm,1.0s,baz=42,slow=7.0,SNR=6.8						
CM31	**Chiang Mai Arr**	**46.32**	**77**	eP	**P**	**11 57 21.5**	**+3.3**
	12nm,1.0s						
CMAR	**Chiang Mai Arr**	**46.32**	**77**	P	**P**	**11 57 19.4**	**+1.1**
	7.6nm,0.9s,baz=275,slow=8.8,SNR=28						
CMAR				LR	LR	12 17 14.8	
	comp=Z,100nm,18.6s,baz=294,slow=37						
TORD	**Torodi Ar. Bea**	**47.88**	**276**	P	**P**	**11 57 28.4**	**-2.1**
	1.3nm,0.7s,baz=79,slow=7.7,SNR=8.5						
TORD				LR	LR	12 18 22.1	
	comp=Z,220nm,18.2s,baz=15,slow=37						
TOA1	**Torodi Ar. Sit**	**47.88**	**276**	eP	**P**	**11 57 28.4**	**-2.1**
ZAA0	**Zalesovo Array**	**48.45**	**26**	eP	**P**	**11 57 36.6**	**+2.3**
	5.6nm,1.3s						
ZALV	**Zalesovo Beam**	**48.45**	**26**	P	**P**	**11 57 34.9**	**+0.6**
	1.9nm,0.6s,baz=232,slow=7.1,SNR=6.5						
ZALV				LR	LR	12 20 57.1	
	comp=Z,394nm,19.3s,baz=250,slow=40						
ZAA1	**Zalesovo Array**	**48.45**	**26**	eP	**P**	**11 57 34.9**	**+0.6**
PSI	**Prapat**	**48.55**	**98**	eP	**P**	**11 57 32.5**	**-3.4**
	14nm,1.1s						
BOSA	**Boshof**	**48.60**	**211**	P	**P**	**11 57 35.3**	**-0.6**
	4.3nm,1.1s,baz=36,slow=6.3,SNR=4.3						
BOSA				LR	LR	12 20 07.9	
	comp=Z,594nm,18.0s,baz=38,slow=39						
ESDC	**Sonseca Array**	**54.69**	**309**	P	**P**	**11 58 21.4**	**+0.1**
	2.6nm,1.0s,baz=96,slow=6.7,SNR=8.6						
ESDC				LR	LR	12 22 05.1	
	comp=Z,51nm,21.3s,baz=340,slow=36						
DBIC	**Dimbokro**	**55.27**	**269**	LR	LR	12 22 13.1	
	comp=Z,170nm,18.7s,baz=66,slow=36						
SONA0	**Songino Array**	**57.18**	**41**	eP	**P**	**11 58 40.3**	**+1.2**
SONM	**Songino Array**	**57.18**	**41**	P	**P**	**11 58 40.3**	**+1.2**
	2.4nm,1.1s,baz=249,slow=7.0,SNR=6.2						
SONM				LR	LR	12 26 33.0	
	comp=Z,385nm,22.0s,baz=272,slow=40						
ARCES	**ARCESS Array B**	**58.37**	**350**	LR	LR	12 26 48.4	
	comp=Z,768nm,20.9s,baz=92,slow=39						
USRK	**Ussuriysk Ar.**	**74.40**	**48**	LR	LR	12 36 46.0	
	comp=Z,189nm,19.6s,baz=267,slow=39						
MJAR	**Matsushiro Arr**	**79.98**	**55**	LR	LR	12 39 58.5	
	comp=Z,152nm,19.4s,baz=325,slow=38						
MAW	**Mawson**	**81.24**	**175**	P	**P**	**12 01 08.0**	**+0.5**
	2.2nm,0.9s,baz=355,slow=7.5,SNR=4.6						
MAW				LR	LR	12 32 51.0	
	comp=Z,314nm,18.7s,baz=16,slow=32						
MAW	**Mawson**	**81.24**	**175**	eP	**P**	**12 01 08.0**	**+0.5**
	1.4nm,1.1s						
WRA	**Warramunga Arr**	**88.43**	**111**	P	**P**	**12 01 45.0**	**+0.1**
	1.8nm,0.5s,baz=283,slow=5.3,SNR=15						
WR1	**Warramunga Arr**	**88.43**	**111**	eP	**P**	**12 01 45.0**	**+0.1**
WB2	**Warramunga Arr**	**88.44**	**111**	eP	**P**	**12 01 47.5**	**+2.6**
	10nm,1.1s						
ASAR	**Alice Springs**	**88.99**	**114**	P	**P**	**12 01 47.4**	**-0.1**
	2.6nm,1.0s,baz=288,slow=4.9,SNR=15						
AS31	**Alice Springs**	**88.99**	**114**	eP	**P**	**12 01 47.4**	**-0.1**
	1.0nm,1.1s						
PETK	**Petropavlovsk-**	**89.16**	**35**	LR	LR	12 45 18.8	
	comp=Z,287nm,21.9s,baz=261,slow=38						
SCHQ	**Schefferville**	**94.29**	**329**	LR	LR	12 48 26.6	
	comp=Z,48nm,18.1s,baz=38,slow=38						
PD31	**Pinedale Array**	**121.32**	**343**	ePKPdf	**PKiKP**	**12 07 46.3**	**+0.3**
PDAR	**Pinedale Array**	**121.32**	**343**	PKP	**PKiKP**	**12 07 46.3**	**+0.3**
	0.4nm,0.9s,baz=3.8,slow=4.5,SNR=4.9						
NV01	**Mina Array Sit**	**127.48**	**349**	ePKPdf	**PKiKP**	**12 07 58.6**	**+0.3**
NVAR	**Mina Array Bea**	**127.48**	**349**	PKP	**PKiKP**	**12 07 58.6**	**+0.3**
	1.4nm,0.7s,baz=32,slow=2.6,SNR=12						
TXAR	**Lajitas Array**	**130.96**	**330**	PKP	**PKiKP**	**12 08 05.3**	**-0.1**
	0.5nm,0.8s,baz=144,slow=2.4,SNR=7.7						

MAN 31 11:50:48.3, 9°.37N×125°.44E, h1km, mb4.5, ML3.3, MS3.2, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.41**	**7**	⇑eP	Pn	11 51 05.4	+4.0
SCPH				eS	Sb	11 51 12.7	+7.4
BUTP	**Butuan**	**0.44**	**156**	eP	Pg	11 50 56.7	0.0
BUTP				eS	Sb	11 51 04.9	-0.9
MSLP	**Maasin**	**0.95**	**323**	eP	Pg	11 51 06.4	-0.2
MSLP				eS	Sg	11 51 18.9	0.0
CGP	**Cagayan de Oro**	**1.17**	**219**	⇑iP	Pg	11 51 11.0	+0.2
CGP				i S	Sn	11 51 28.8	+0.4
BUKP	**Musuan**	**1.53**	**194**	eP	Pn	11 51 16.4	-0.4
BUKP				eS	Sg	11 51 39.6	+2.2
TBP	**Tagbilaran**	**1.59**	**282**	eP	Pn	11 51 17.4	-0.2
TBP				i S	Sg	11 51 41.5	+2.1
LLP	**Lapu-Lapu**	**1.73**	**303**	eP	Pn	11 51 18.9	-0.7
LLP				eS	Sn	11 51 40.0	-2.4
PLP	**Palo**	**1.84**	**346**	⇓eP	Pn	11 51 21.0	-0.1
PLP				eS	Sg	11 51 47.1	-0.5
OCLP	**Ormoc**	**1.86**	**334**	eP	Pn	11 51 21.8	+0.4
OCLP				eS	Sn	11 51 42.8	-2.7
BESP	**Borongan**	**2.22**	**360**	eP	Pn	11 51 22.2	-4.1
BESP				eS	Sn	11 51 54.5	+0.2
KCP	**Kidapawan**	**2.37**	**188**	⇓iP	Pn	11 51 29.1	+0.7
KCP				i S	Sg	11 52 05.8	+1.3
CTBH	**Cotabato--PC H**	**2.44**	**209**	⇑iP	Pb	11 51 33.9	+0.8
PAGZ	**Pagadian**	**2.54**	**234**	eP	Pn	11 51 31.9	+1.3
PAGZ				eS	Sb	11 52 05.5	-0.9
MATI	**Mati**	**2.54**	**161**	eP	Pb	11 51 34.6	-0.1
MATI				eS	Sg	11 52 12.5	+2.5
SKMP	**Bagumbayan, Su**	**2.97**	**197**	eP	Pn	11 51 37.3	+0.7
CNP	**Catarman**	**3.21**	**346**	eP	Pn	11 51 41.8	+1.8
CNP				eS	Sb	11 52 27.9	+2.0

MAN 31 11:55:42.3, 5°.61N×125°.85E, h123km, mb4.5, ML3.3, MS3.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.51**	**344**	eP	Pn	11 56 01.6	+0.9
DDMP				eS	Sn	11 56 17.7	+3.1
MATI	**Mati**	**1.39**	**17**	eP	Pn	11 56 09.9	+1.1
MATI				eS	Sn	11 56 29.8	+1.0
SKMP	**Bagumbayan, Su**	**1.58**	**305**	eP	Pn	11 56 12.0	+1.1
SKMP				eS	Sn	11 56 33.8	+1.1

ATH ***31*** *11:56:01.3, 40°.88N×19°.49E, h11km±2km, ML2.7/6, Error ellipse: s-maj=2.7km s-min=1.6km az=241.0*

ISCJB ***31*** *11:56:02.6±0.7, 40°.75N±0°.02×19°.45E±0°.03, h0km±5km, Error ellipse: s-maj=4.8km s-min=3.0km az=147.1*

BEO ***31*** *11:56:02.8±1.0, 40°.65N×19°.49E, h1km±3km, ML2.6/5*

ISC 31 11:56:03.9±1.1**, 40°.72N**±0°.02×**19°.53E**±0°.03**, h8km**±9km**, n48, σ1ˢ.27**/65**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.25**	**186**	P	**Pg**	**11 56 09.7**	**+0.8**
TIR	**Tirane**	**0.68**	**22**	ePg	**Pg**	**11 56 17.0**	**+0.1**
TIR				eSg	**Sg**	**11 56 26.9**	**+1.1**
TIR	**Tirane**	**0.68**	**22**	P	Pg	11 56 12.0	-5.0
SRN	**Sarande**	**0.91**	**157**	P	**Pb**	**11 56 20.4**	**-1.5**
KEK	**Kerkira**	**1.03**	**168**	P	**Pn**	**11 56 23.8**	**-0.7**
KEK	**Kerkira**	**1.03**	**168**	P	**Pn**	**11 56 23.9**	**-0.6**
KEK				S	**Sn**	**11 56 40.5**	**+1.4**
KEK				AML	AML	11 56 40.7	
	comp=N,288µm,1.2s						
KEK				AML	AML	11 56 45.3	
	comp=E,433µm,0.8s						
SCTE	**Santa Cesarea**	**1.04**	**232**	P	**Pb**	**11 56 22.5**	**-1.5**
PHP	**Peshkopia**	**1.18**	**35**	P	**Pb**	**11 56 23.6**	**-3.0**
NEST	**Nestorio**	**1.20**	**104**	P	**Pb**	**11 56 23.9**	**-2.9**
NEST	**Nestorio**	**1.20**	**104**	P	**Pb**	**11 56 25.0**	**-1.8**
NEST				S	**Sb**	**11 56 42.4**	**0.0**
NEST				AML	AML	11 56 49.1	
	comp=E,304µm,0.5s						
NEST				AML	AML	11 56 50.2	
	comp=N,284µm,0.4s						
PENT	**Pentalofos**	**1.33**	**113**	P	**Pn**	**11 56 27.1**	**-1.8**
PENT	**Pentalofos**	**1.33**	**113**	P	**Pg**	**11 56 29.1**	**-0.4**
IGT	**Igoumenitsa**	**1.34**	**152**	P	**Pg**	**11 56 29.0**	**-0.5**
IGT	**Igoumenitsa**	**1.34**	**152**	P	**Pg**	**11 56 28.8**	**-0.7**
IGT				S	**Sn**	**11 56 49.4**	**+2.7**
IGT				AML	AML	11 56 52.9	
	comp=N,326µm,0.5s						
IGT				AML	AML	11 56 53.7	
	comp=E,328µm,0.6s						
FNA	**Florina**	**1.41**	**87**	P	**Pn**	**11 56 27.6**	**-2.2**
FNA	**Florina**	**1.41**	**87**	P	**Pn**	**11 56 29.0**	**-0.8**
FNA				AML	AML	11 56 52.4	
	comp=E,6592µm,0.6s						
FNA				AML	AML	11 56 56.4	
	comp=N,6933µm,0.5s						
JAN	**Janina**	**1.47**	**136**	P	**Pb**	**11 56 30.2**	**-1.2**
JAN	**Janina**	**1.47**	**136**	P	**Pg**	**11 56 30.8**	**-1.2**
JAN				S	**Sg**	**11 56 54.1**	**+3.1**
KPRO	**Kipourio**	**1.60**	**118**	P	**Pn**	**11 56 32.0**	**-0.4**
KPRO	**Kipourio**	**1.60**	**118**	P	**Pg**	**11 56 33.4**	**-1.1**
KPRO				AML	AML	11 56 59.4	
	comp=E,377µm,0.6s						
KPRO				AML	AML	11 57 04.6	
	comp=N,268µm,0.6s						
MEV	**Metsovon**	**1.60**	**125**	P	**Pg**	**11 56 33.4**	**-1.2**
MEV	**Metsovon**	**1.60**	**125**	P	**Pb**	**11 56 32.7**	**-1.0**
PDG	**Podgorica**	**1.72**	**353**	ePg	**Pn**	**11 56 34.3**	**+0.2**
PDG				eSg	**Sg**	**11 56 59.7**	**+0.5**
KZN	**Kozani**	**1.76**	**103**	P	**Pb**	**11 56 35.6**	**-0.8**
KZN	**Kozani**	**1.76**	**103**	P	**Pn**	**11 56 33.9**	**-0.8**
KZN				S	**Sb**	**11 56 59.1**	**+0.5**
KZN				AML	AML	11 57 04.8	
	comp=N,221µm,0.6s						
KZN				AML	AML	11 57 05.2	
	comp=E,267µm,0.5s						
SKO	**Skopje**	**1.91**	**48**	i Pn	**Pn**	**11 56 37.5**	**+0.8**
SKO				i Sn	**Sb**	**11 57 03.8**	**+1.0**
KTI	**Kastanea**	**2.00**	**99**	P	**Pb**	**11 56 40.0**	**-0.5**
TREB	**Trebinje**	**2.18**	**337**	ePn	**Pb**	**11 56 41.6**	**-2.0**
GRG	**Griva**	**2.19**	**83**	P	**Pn**	**11 56 40.5**	**-0.1**
DBRK	**Dubrovnik**	**2.21**	**332**	ePn	**Pn**	**11 56 39.6**	**-1.1**
THL	**Klokotos Trika**	**2.23**	**120**	P	**Pb**	**11 56 43.4**	**-0.9**
THL	**Klokotos Trika**	**2.23**	**120**	P	**Pb**	**11 56 42.8**	**-1.5**
STIP	**Stip**	**2.23**	**63**	i Pn	**Pb**	**11 56 44.1**	**-0.2**
STIP				i Sn	**Sg**	**11 57 15.4**	**0.0**
LIT	**Litokhoron**	**2.34**	**104**	P	**Pn**	**11 56 43.2**	**+0.5**
LIT	**Litokhoron**	**2.34**	**104**	P	**Pn**	**11 56 43.1**	**+0.4**
LIT				S	**Sb**	**11 57 14.4**	**-1.0**
VAY	**Valandovo**	**2.38**	**74**	ePn	**Pn**	**11 56 43.8**	**+0.7**
VAY	**Valandovo**	**2.38**	**74**	i Pn	**Pb**	**11 56 46.5**	**-0.4**
VAY				i Sn	**Sb**	**11 57 16.7**	**+0.4**
STON	**Ston**	**2.55**	**328**	i Pn	**Pn**	**11 56 46.0**	**+0.6**
STON				Sn	**Sn**	**11 57 17.1**	**+0.5**
SJES	**Sjenica**	**2.56**	**7**	ePn	**Pn**	**11 56 46.9**	**+1.2**
SJES				eSn	**Sn**	**11 57 19.6**	**+2.5**
AGG	**Agios Georgios**	**2.74**	**127**	P	**Pb**	**11 56 50.8**	**-2.3**
AGG	**Agios Georgios**	**2.74**	**127**	P	**Pn**	**11 56 49.6**	**+1.5**
IVAS	**Ivanjica**	**2.89**	**9**	ePn	**Pn**	**11 56 50.4**	**+0.2**
IVAS				eSn	**Sn**	**11 57 26.6**	**+1.4**
BOVS	**Bovan**	**3.33**	**28**	ePn	**Pn**	**11 56 56.4**	**+0.2**
VTS	**Vitosha**	**3.36**	**54**	ePn	**Pn**	**11 56 56.9**	**+0.1**
VTS				eSn	**Sn**	**11 57 37.3**	**+0.4**
ZAPS	**Zavoj**	**3.44**	**41**	ePn	**Pn**	**11 56 57.6**	**-0.2**
ZIRJ	**Zirje**	**4.11**	**317**	i Pn	**Pn**	**11 57 06.5**	**-0.5**
ZIRJ				Sn	**Sn**	**11 57 55.4**	**+0.2**
MORI	**Morici**	**4.23**	**319**	i Pn	**Pn**	**11 57 08.0**	**-0.5**
MORI				Sn	**Sn**	**11 57 59.0**	**+0.9**
DUGI	**Dugi Otok**	**4.65**	**316**	i Pn	**Pn**	**11 57 15.5**	**+1.1**
DUGI				Sn	**Sn**	**11 58 08.7**	**+0.1**

MAN 31 11:59:55.4, 13°.58N×120°.65E, h100km, mb3.8, ML2.5, MS2.0, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.30**	**104**	⇑eP	Pn	12 00 11.1	+1.1
PGP				eS	Sn	12 00 23.3	+2.3
SJMP	**San Jose**	**1.20**	**158**	eP	Pn	12 00 19.0	+0.9
SJMP				eS	Sn	12 00 36.1	+1.0
BUSP	**Coron**	**1.62**	**196**	eP	Pn	12 00 23.3	+0.1
BUSP				eS	Sn	12 00 44.9	+0.6

NNC ***31*** *12:11:30.6±4.9, 40°.69N×70°.95E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=36.3km s-min=15.1km az=9.0*

SOME ***31*** *12:11:31.3, 40°.77N×70°.93E, h10km*

KRNET ***31*** *12:11:34.1±0.1, 40°.86N×70°.72E, h35km, mb2.5*

ISC 31 12:11:34.9±1.4**, 40°.80N**±0°.03×**70°.91E**±0°.06**, h11km**±13km**, n18, σ1ˢ.19**/30**, 12C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**0.75**	**185**	⇑iP	**Pg**	**12 11 49.6**	**+0.2**
	baz=75						
BTK				⇑iS	**Sb**	**12 12 01.1**	**+0.9**
	baz=75						
ARK	**Arkit**	**1.27**	**38**	⇑iP	**Pn**	**12 11 57.6**	**-1.0**
	baz=46						
ARK				⇑iS	**Sb**	**12 12 14.6**	**-0.7**
	baz=46						
DRK	**Karamyk**	**1.49**	**152**	⇑iP	**Pn**	**12 12 01.4**	**-0.4**
	baz=48						
DRK				⇑iS	**Sn**	**12 12 21.4**	**+0.1**
	baz=48						
IUG	**Iuzhnay**	**1.50**	**334**	P	**Pn**	**12 12 01.6**	**-0.2**
	8.1nm,0.2s						
IUG				S	**Sg**	**12 12 23.4**	**+0.4**
	321nm,0.3s						
IUG	**Iuzhnay**	**1.50**	**334**	eP	**Pn**	**12 12 01.1**	**-0.6**
	8.1nm,0.2s						
IUG				eS	**Sg**	**12 12 21.9**	**-1.1**
	73nm,0.2s						
ARSB	**Arslanbob**	**1.65**	**71**	⇑iP	**Pn**	**12 12 02.9**	**-1.0**
	baz=74						
ARSB				⇑iS	**Sb**	**12 12 25.7**	**-0.5**
	baz=74						
KK31	**Karatay Array**	**2.32**	**353**	Pg	**Pn**	**12 12 12.9**	**0.0**
	0.6nm,0.3s,baz=173,slow=13,SNR=28						
KK31				Lg	Lg	12 12 46.2	
	11nm,0.5s,baz=177,slow=30,SNR=22						
AML	**Almayashu**	**2.48**	**57**	⇑iP	**Pn**	**12 12 15.2**	**-0.3**
	baz=59						
AML				⇑iS	**Sn**	**12 12 45.3**	**-0.6**
	baz=59						
MRKS	**Merke**	**2.60**	**41**	Pg	**Pn**	**12 12 18.8**	**+1.9**
	3.5nm,0.2s						
MRKS				Lg	Lg	12 12 53.7	
	28nm,0.3s						
MRKS	**Merke**	**2.60**	**41**	eP	**Pn**	**12 12 18.8**	**+1.9**
	2.6nm,0.3s						
MRKS				eS	**Sb**	**12 12 52.3**	**-1.2**
	28nm,0.3s						
ARLS	**Aral**	**2.78**	**67**	⇑iP	**Pn**	**12 12 19.6**	**+0.2**
	baz=68						
ARLS				⇑iS	**Sn**	**12 12 52.2**	**-0.8**
	baz=68						
UCH	**Uchtor**	**3.06**	**61**	⇓eP	**Pn**	**12 12 23.6**	**+0.1**
	baz=63						
UCH				⇓iS	**Sn**	**12 13 00.1**	**-0.2**
	baz=63						
AAK	**Ala-Archa**	**3.25**	**55**	⇓Lg	Lg	12 13 14.8	
	6.2nm,0.7s						
KZA	**Kyzart**	**3.50**	**67**	⇓iP	**Pn**	**12 12 29.5**	**-0.1**
	baz=69						
KZA				⇓iS	**Sn**	**12 13 10.5**	**-0.7**
	baz=69						
TKM2	**Tokmak 2**	**4.09**	**57**	⇓Pg	**Pb**	**12 12 47.4**	**+0.5**
	1.1nm,0.5s						
TKM2				⇓Lg	Lg	12 13 41.5	
	0.9nm,0.5s						
KST	**Kastek**	**4.38**	**58**	eP	**Pb**	**12 12 51.0**	**-0.9**
	1.9nm,0.3s						
KST				eS	**Sb**	**12 13 47.5**	**+2.7**
	5.4nm,0.5s						
BTLS	**Baital**	**4.82**	**27**	eP	**Pb**	**12 12 58.4**	**-0.9**
	1.4nm,0.3s						
BTLS				eS	**Sb**	**12 14 00.7**	**+3.4**
	2.1nm,0.5s						
KUU	**Kurty**	**5.07**	**51**	Pg	**Pb**	**12 13 03.3**	**-0.2**
	2.7nm,0.5s						
KUU				Lg	Lg	12 14 10.3	
	6.4nm,0.6s						

ISCJB ***31*** *12:13:41.2±0.2, 3°.73S±0°.04×151°.84E±0°.05, h10km, mb4.5/56, MS3.9/12, Error ellipse: s-maj=7.0km s-min=5.1km az=166.1*

IDC ***31*** *12:13:41.5±0.6, 3°.59S×151°.93E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.2/27, mbtmp4.2/14, MS3.8/11, Ms1 3.8/11, ms1mx3.7/20, Error ellipse: s-maj=24.2km s-min=14.2km az=76.0*

DJA ***31*** *12:13:41.4±1.9, 4°S±7°×15°3E±1°4, h18km±9km, M4.9/11, mB6.6/1, mb4.7/11, MLv5.0/3, Mw(mB)6.4/1*

NEIC ***31*** *12:13:42.7±1.6, 3°.78S×151°.86E, h10km±2km, mb4.6/46, Error ellipse: s-maj=4.8km s-min=3.2km az=140.0*

ISC 31 12:13:42.9±0.4**, 3°.74S**±0°.05×**151°.88E**±0°.07**, h10km, n88, σ1ˢ.33**/81**, mb4.7**/56**, MS3.8**/12**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.53**	**147**	ePg	**Pg**	**12 13 52.6**	**-0.7**
RABL				eSg	**Sg**	**12 13 57.5**	**-2.9**
MANU	**Manus Island**	**4.81**	**290**	ePn	**Pn**	**12 14 54.5**	**-0.9**
PMG	**Port Moresby**	**7.32**	**220**	Pn	Pn	12 15 35.8	+5.8
	0.8nm,0.3s,baz=14,slow=12,SNR=3.7						
PMG	**Port Moresby**	**7.32**	**220**	ePn	**Pn**	**12 15 29.6**	**-0.4**
HNR	**Honiara**	**9.81**	**126**	LR	LR	12 19 57.8	
	comp=Z,1µm,18.4s,baz=288,slow=38						
HNR	**Honiara**	**9.81**	**126**	ePn	**Pn**	**12 16 03.6**	**-0.6**
PATS	**Pohnpei**	**12.31**	**31**	ePn	**Pn**	**12 16 38.6**	**+0.1**
CTA	**Charters Tower**	**17.15**	**198**	Pn	**P**	**12 17 47.6**	**+3.0**
	0.2nm,0.3s,baz=49,slow=14,SNR=3.9						
GUMO	**Guam**	**18.57**	**338**	LR	LR	12 24 09.9	
	comp=Z,100nm,19.9s,baz=150,slow=34						
SIJI	**Sorong**	**20.79**	**277**	LR	LR	12 25 16.3	
	comp=Z,416nm,20.1s,baz=94,slow=33						
ANA2	**Anatahan**	**20.86**	**343**	eP	**P**	**12 18 25.0**	**-0.2**
	48nm,0.6s						
EIDS	**Eidsvold**	**21.52**	**182**	eP	**P**	**12 18 30.0**	**-2.3**
	18nm,1.2s						
MTN	**Manton Dam**	**22.41**	**245**	eP	**P**	**12 18 40.0**	**-2.0**
	15nm,1.0s						
DZM	**Mont Dzumac**	**23.06**	**143**	P	**P**	**12 18 48.2**	**-0.7**
	7.8nm,0.6s,baz=338,slow=11,SNR=6.5						
DZM				LR	LR	12 26 44.5	
	comp=Z,247nm,18.8s,baz=333,slow=34						
DZM	**Mont Dzumac**	**23.06**	**143**	eP	**P**	**12 18 48.6**	**-0.3**
	26nm,0.8s						
DZM	**Mont Dzumac**	**23.06**	**143**	eP	**P**	**12 18 48.3**	**-0.6**
	37nm,0.7s						
DZM				eLR	LR	12 24 29.8	
	comp=Z,786nm,26.3s						
WRAB	**Tennant Creek**	**23.48**	**225**	eP	**P**	**12 18 54.0**	**+0.9**
WB2	**Warramunga Arr**	**23.48**	**225**	eP	**P**	**12 18 53.0**	**-0.1**
	20nm,1.0s						
WR1	**Warramunga Arr**	**23.49**	**225**	eP	**P**	**12 18 52.7**	**-0.5**
WRA	**Warramunga Arr**	**23.49**	**225**	P	**P**	**12 18 52.7**	**-0.5**
	7.1nm,0.9s,baz=51,slow=9.6,SNR=13						
AS31	**Alice Springs**	**26.34**	**220**	eP	**P**	**12 19 19.7**	**+0.3**
	2.2nm,0.8s						
ASAR	**Alice Springs**	**26.34**	**220**	P	**P**	**12 19 20.2**	**+0.8**
	5.5nm,0.9s,baz=54,slow=8.5,SNR=17						
ASAR				PcP	**PcP**	**12 22 46.6**	**+1.1**
	0.8nm,1.0s,baz=55,slow=1.8,SNR=2.6						

SOEI	Soe	28.05	256	*e*P	P	12 19 34.5	-0.4
	27nm,1.1s						
STKA	Stephens Creek	29.61	198	P	P	12 19 51.1	+2.7
	2.1nm,0.8s,baz=53,slow=5.2,SNR=4.8						
STKA				LR	LR	12 31 02.7	
	comp=Z,213nm,20.6s,baz=7.2,slow=35						
STKA	Stephens Creek	29.61	198	*e*P	P	12 19 48.9	+0.4
	2.9nm,1.5s						
CAN	Canberra	31.54	184	*e*P	P	12 20 04.7	-0.8
	26nm,1.5s						
FORT	Forrest	35.05	217	*e*P	P	12 20 35.0	-1.2
	42nm,1.4s						
HIZ	Hauiti	40.46	152	*e*P	P	12 21 25.2	+3.4
	86nm,1.4s						
YHNB	Yeheng	40.94	315	*e*P	P	12 21 26.1	0.0
	16nm,1.0s						
QRZ	Quartz Range	41.34	156	*e*P	P	12 21 32.1	+3.1
URZ	Urewera	41.36	149	P	P	12 21 31.0	+1.8
	12nm,0.9s,baz=9.9,slow=9.1,SNR=2.6						
URZ	Urewera	41.36	149	*e*P	P	12 21 28.9	-0.3
	15nm,1.0s						
JNU	Nakatsue	41.70	333	P	P	12 21 30.6	-1.6
	8.9nm,1.1s,baz=72,slow=7.0,SNR=2.4						
THZ	Tophouse	42.28	156	*e*P	P	12 21 37.2	+0.4
	31nm,1.0s						
RPZ	Rata Peaks	43.28	160	P	P	12 21 45.6	+0.7
	15nm,0.8s,baz=270,slow=0.8,SNR=8.3						
KSRS	Korea Array	46.64	334	P	P	12 22 10.3	-1.3
	1.1nm,0.7s,baz=149,slow=8.3,SNR=5.8						
KSRS				LR	LR	12 40 17.6	
	comp=Z,73nm,20.6s,baz=285,slow=34						
KS15	Wonju Array Si	46.65	334	*e*P	P	12 22 10.3	-1.4
	22nm,1.4s						
MDSI	Maura Dua	47.57	267	P	P	12 22 17.3	-2.0
USA0B	Ussuriysk Arra	50.95	342	*e*P	P	12 22 42.9	-1.8
	10nm,1.4s						
PANO	Nakornpanom	51.06	295	P	P	12 22 54.1	+8.2
	0.3nm,1.3s,56nm						
PSI	Prapat	53.32	276	*e*P	P	12 23 01.5	-1.5
	14nm,1.0s						
CMAR	Chiang Mai Arr	56.59	295	P	P	12 23 27.9	+1.4
	2.1nm,1.0s,baz=110,slow=5.1,SNR=7.9						
CMMT	Chiang Mai	56.70	295	P	P	12 23 36.0	+8.8
PETK	Petropavlovsk-	56.85	4	P	P	12 23 26.7	-1.0
	3.2nm,1.1s,baz=130,slow=13,SNR=2.9						
PEA1	Petropavlovsk-	56.85	4	*e*P	P	12 23 26.7	-1.0
PPT2	Papeete2	58.93	108	*e*LQ	LQ	12 38 34.2	
	210nm,29.5s						
PPT2				*e*LR	LR	12 40 55.0	
	comp=Z,89nm,24.0s						
TBI	Tubuai	59.84	115	*e*LQ	LQ	12 38 58.3	
	354nm,32.2s						
TBI				*e*LR	LR	12 41 33.4	
	comp=Z,111nm,29.2s						
SONA0	Songino Array	64.94	328	*e*P	P	12 24 23.1	+0.2
SONM	Songino Array	64.94	328	P	P	12 24 23.1	+0.2
	1.7nm,0.7s,baz=141,slow=6.2,SNR=9.2						
SONM				LR	LR	12 50 35.3	
	comp=Z,90nm,21.4s,baz=121,slow=34						
SHL	Shillong	64.98	300	*e*P	P	12 24 24.8	+1.1
	22nm,1.2s						
LSA	Lhasa	66.88	304	*e*P	P	12 24 34.9	-1.4
	6.5nm,0.4s						
TAOE	Nuku Hiva Isla	67.69	98	*e*LR	LR	12 45 01.4	
	comp=Z,318nm,27.3s						
YAK	Yakutsk	67.76	349	*e*P	P	12 24 41.3	+0.8
	11nm,0.5s						
CNPM	China Poot	77.17	26	*e*P	P	12 25 38.5	+1.8
	13nm,0.8s						
RDOG	Red Dog Mine	78.22	16	*e*P	P	12 25 43.0	+0.5
	11nm,1.0s						
CAST	Castle Rocks	78.88	22	*e*P	P	12 25 45.6	-0.6
	5.1nm,0.9s						
MK31	Makanchi Array	78.92	319	*e*P	P	12 25 46.8	0.0
	1.5nm,0.9s						
MK32	Makanchi Array	78.92	319	*e*P	P	12 25 47.1	+0.3
MKAR	Makanchi Array	78.92	319	P	P	12 25 47.1	+0.3
	0.4nm,0.5s,baz=106,slow=6.4,SNR=6.6						
MKAR				LR	LR	13 02 09.2	
	comp=Z,41nm,18.8s,baz=74,slow=37						
MAKZ	Makanchi	79.13	319	*e*P	P	12 25 48.7	+0.7
	3.7nm,0.9s						
KTH	Kantishna Hill	79.39	23	*e*P	P	12 25 50.2	+1.1
	3.8nm,0.8s						
SML	Sawmill	79.55	25	*e*P	P	12 25 50.4	+0.4
	8.3nm,1.0s						
ZAA0	Zalesovo Array	79.76	326	*e*P	P	12 25 51.0	-0.2
	4.1nm,1.1s						
ZALV	Zalesovo Beam	79.76	326	P	P	12 25 49.6	-1.5
	0.9nm,0.6s,baz=101,slow=8.0,SNR=3.7						
ZALV				LR	LR	12 59 38.6	
	comp=Z,37nm,21.1s,baz=70,slow=35						
ZAA1	Zalesovo Array	79.77	326	*e*P	P	12 25 49.6	-1.6
RND	Reindeer	80.12	23	*e*P	P	12 25 52.9	-0.1
	6.9nm,0.8s						
MLY	Manley	80.23	21	*e*P	P	12 25 53.8	+0.2
	6.5nm,0.8s						
MCK	McKinley	80.25	23	*e*P	P	12 25 53.4	-0.3
	7.0nm,0.8s						
WRH	Wood River Hil	80.93	22	*e*P	P	12 25 57.0	-0.3
	5.6nm,1.0s						
CCB	Clear Creek Bu	81.12	22	*e*P	P	12 25 57.5	-0.8
	3.7nm,0.8s						
COLA	College	81.22	22	*e*P	P	12 25 57.4	-1.3
	8.5nm,0.6s						
ILAR	Eielson Array	81.53	22	P	P	12 25 59.0	-1.5
	1.4nm,0.7s,baz=243,slow=5.3,SNR=20						
ILAR				LR	LR	12 55 30.9	
	comp=Z,92nm,21.0s,baz=324,slow=31						
ILB	Eielson Array	81.53	22	*e*P	P	12 25 59.2	-1.2
	4.5nm,0.8s						
COLD	Coldfoot	81.57	19	*e*P	P	12 26 01.1	+0.5
	2.5nm,1.1s						
KURK	Kurchatov	82.37	322	*e*P	P	12 26 05.4	+0.2
	2.8nm,0.9s						
TOLK	Toolik Lake Re	82.50	18	*e*P	P	12 26 07.0	+1.4
	4.6nm,1.0s						
NIL	Nilore	82.62	304	*e*P	P	12 26 07.0	+0.1
	16nm,1.4s						
EGAK	Eagle	83.76	23	*e*P	P	12 26 13.9	+1.8
	5.6nm,1.0s						
SIT	Sitka	83.86	32	*e*P	P	12 26 13.0	+0.3
	29nm,1.2s						
HYT	Haines Junctio	83.93	28	*e*P	P	12 26 15.7	+2.5
	6.3nm,0.9s						
EPYK	Eagle Plains	86.04	23	*e*P	P	12 26 25.1	+1.5
	9.3nm,1.1s						
MAW	Mawson	86.19	203	LR	LR	13 01 23.1	
	comp=Z,79nm,21.5s,baz=80,slow=33						
QSPA	South Pole Qui	86.21	180	*e*P	P	12 26 27.9	+3.4
	14nm,1.1s						
INK	Inuvik	87.80	21	*e*P	P	12 26 31.7	-0.3
	6.3nm,1.2s						
BRVK	Borovoye	87.91	323	*e*P	P	12 26 32.3	-0.6
	6.6nm,1.4s						
TORD	Torodi Ar. Bea	149.09	289	PKPbc	PKPbc	12 33 31.9	-0.7
	0.5nm,0.9s,baz=67,slow=1.2,SNR=3.0						
TOA1	Torodi Ar. Sit	149.09	289	*e*PKPbc	PKPbc	12 33 31.9	-0.7
BDFB	Brasilia	152.46	135	PKPbc	PKiKP	12 33 42.1	+1.2
	2.3nm,0.3s,baz=169,slow=5.2,SNR=4.6						
BDFB				PKPab	PKPab	12 33 52.2	+1.4
	7.4nm,0.9s,baz=309,slow=6.5,SNR=2.8						

*ISCJB **31** 12:20:21.6±1.1, 22°.66S±0°.04×68°.9W±0°.1, h118^{km}±11^{km}, Error ellipse: s-maj=15.9km s-min=5.9km az=4.5*

*SJA **31** 12:20:21.0±0.8, 22°.66S×68°.88W, h116^{km}±5^{km}, MD2.8*

*GUC **31** 12:20:22.1±0.7, 22°.64S×68°.92W, h110^{km}±5^{km}, ML3.3*

ISC 31 12:20:22.1±1.8**, 22°.66S**±0°.04×**68°.87W**±0°.09**,**
h113^{km}±11^{km}**, n19, σ0^{s}31**/37**, 8C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.07	325	*e*P	Pn	12 20 37.4	-0.7
PB06	IPOC Station P	0.65	266	*e*P	Pn	12 20 40.4	-0.1
PB06				*e*S	Sn	12 20 54.8	+0.4
PB06	IPOC Station P	0.65	266	⇑*i*P	Pn	12 20 40.2	-0.3
PB06				*i* S	Sn	12 20 54.2	-0.2
PB06				IAML		12 20 56.1	
	comp=N,1μm,0.2s						
PB15	IPOC Station P	0.78	226	*e*P	Pn	12 20 41.8	+0.2
PB15				*e*S	Sn	12 20 57.0	+0.6
PB15	IPOC Station P	0.78	226	⇑*i*P	Pn	12 20 41.7	+0.1
PB15				*i* S	Sn	12 20 56.4	+0.1
PB09	IPOC Station P	0.93	338	*e*P	Pn	12 20 43.3	+0.3
PB09				*e*S	Sn	12 20 59.3	+0.4
PB09	IPOC Station P	0.93	338	⇑*i*P	Pn	12 20 43.3	+0.3
PB09				*i* S	Sn	12 20 59.0	+0.2
PB09				IAML		12 21 00.3	
	comp=N,505nm,0.4s						
PB03	IPOC Station P	1.02	307	*e*P	Pn	12 20 43.9	0.0
PB03				*e*S	Sn	12 21 00.2	-0.2
PB03	IPOC Station P	1.02	307	⇑*i*P	Pn	12 20 43.9	0.0
PB03				*i* S	Sn	12 21 00.1	-0.3
PB03				IAML		12 21 00.9	
	comp=E,1μm,0.2s						
PB04	IPOC Station P	1.23	285	*e*P	Pn	12 20 46.1	0.0
PB04				*e*S	Sn	12 21 05.0	+0.6
PB04	IPOC Station P	1.23	285	⇑*i*P	Pn	12 20 46.1	0.0
PB04				*i* S	Sn	12 21 04.5	+0.1
PB04				IAML		12 21 08.5	
	comp=E,501nm,0.5s						
PB07	IPOC Station P	1.33	315	*e*P	Pn	12 20 47.4	+0.1
PB07				*e*S	Sn	12 21 06.3	0.0
PB07	IPOC Station P	1.33	315	⇑*i*P	Pn	12 20 47.3	+0.1
PB07				*i* S	Sn	12 21 05.9	-0.4
PB07				IAML		12 21 07.0	
	comp=E,963nm,0.4s						
PB02	IPOC Station P	1.64	324	*e*P	Pn	12 20 51.0	+0.1
PB02				*e*S	Sn	12 21 13.0	+0.2
PB02	IPOC Station P	1.64	324	⇑*e*P	Pn	12 20 50.8	-0.1
PB02				*i* S	Sn	12 21 12.4	-0.4
PB02				IAML		12 21 13.6	
	comp=E,518nm,0.2s						
PB01	IPOC Station P	1.71	340	⇑*e*P	Pn	12 20 51.6	-0.1
PB01				*i* S	Sn	12 21 14.0	-0.3
PB01				IAML		12 21 19.4	
	comp=E,275nm,0.3s						
PB10	IPOC Station P	1.77	241	*e*P	Pn	12 20 51.8	-0.5
PB10				*e*S	Sn	12 21 15.3	0.0
PB08	IPOC Station P	2.52	354	*e*P	Pn	12 21 02.5	+0.1
PB08				*i* S	Sn	12 21 33.2	0.0
GO02	Mina Guanaco	2.57	195	*e*P	Pn	12 21 02.6	-0.3
GO02				*i* S	Sn	12 21 34.6	+0.5

MAN 31 12:59:15.2, 7°.68N×124°.48E, h47^{km}**, mb4.2, ML3.0, MS2.7, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.52	207	⇓*i*P	Pn	12 59 28.7	+2.2
CTBH				*i* S	Sn	12 59 37.3	+2.8
BUKP	Musuan	0.60	71	*e*P	Pn	12 59 29.4	+1.7
BUKP				*e*S	Sn	12 59 39.3	+2.7
KCP	Kidapawan	0.90	138	⇓*i*P	Pn	12 59 31.6	0.0
KCP				*i* S	Sn	12 59 45.7	+2.1

UCR 31 13:13:54.7±1.8**, 10°.55N×83°.95W, h91**^{km}±27^{km}**, MW3.5, 2C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEDE	Laguna Cedeo	0.75	265	*e*S	Sn	13 14 25.1	+0.4
ARE1	Arenal 1	0.77	263	⇑*i*P	Pn	13 14 12.5	+0.5
LCR2	La Lucha 2	0.81	184	*e*P	Pn	13 14 12.5	-0.2
LCR2				*e*S	Sn	13 14 25.9	-0.2
JTS	Las Juntas de	1.02	255	⇑*i*P	Pn	13 14 14.1	-0.7
JTS				*e*S	Sn	13 14 28.2	-1.7
GB1A	Borinquen Arri	1.45	281	*e*P	Pn	13 14 20.1	+0.1
GB1A				*e*S	Sn	13 14 40.1	+0.9
BUEV	Buena Vista	1.46	280	*e*P	Pn	13 14 20.2	+0.1
BUEV				*e*S	Sn	13 14 39.7	+0.4
DRK0	Durika	1.46	152	*e*P	Pn	13 14 20.5	+0.3
DRK0				*e*S	Sn	13 14 40.2	+0.8

JMA 31 13:17:15.2±0.1**, 24°.84N×123°.21E, h16**^{km}±5^{km}**, M1.2, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.42	206	P	Pg	13 17 23.4	-0.3
YOJ				*e*S	Sg	13 17 29.2	-0.2
JYNG	Yonagunijimaku	0.46	212	P	Pg	13 17 24.2	-0.2
JYNG				*e*S	Sg	13 17 30.4	-0.1
IRIF	Iriomote-Funau	0.69	137	P	Pg	13 17 28.4	-0.3
JKRS	Kuro-shima	0.94	129	P	Pb	13 17 32.6	-0.6
JKRS				S	Sg	13 17 45.7	-0.2
HATJ	Hateruma jima	0.95	145	P	Pb	13 17 32.7	-0.6

TAP 31 13:18:10.0, 24°.27N×121°.48E, h7^{km}**, ML1.2, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.07	179	P	Pg	13 18 12.8	+0.9
	baz=179						
ETLH				S	Sg	13 18 13.8	+0.6
	baz=179						
NACB	Ninganchiao	0.14	134	*i* P	Pg	13 18 14.2	+1.2
	baz=133						
NACB				S	Sg	13 18 16.1	+1.1
	baz=133						
NNSB	Datong	0.18	330	P	Pg	13 18 15.0	+1.3
	baz=329						
NNSB				S	Sg	13 18 17.6	+1.4
	baz=329						
NNS	Nan Shan	0.19	329	*e*P	Pg	13 18 14.8	+0.8
	baz=330						
NNS				*i* S	Sg	13 18 18.2	+1.5
	baz=330						
TWD	Chiawan	0.22	151	P	Pg	13 18 15.5	+1.2
	baz=149						
TWD				*e*S	Sg	13 18 18.8	+1.5
	baz=149						
WHF	Hehuan Shan	0.23	237	P	Pg	13 18 15.8	+1.0
	baz=235						
WHF				S	Sg	13 18 19.1	+1.1
	baz=235						
ENA	Nanau	0.28	57	P	Pb	13 18 16.6	-0.8
	baz=58						
ENA				*e*S	Sb	13 18 21.8	-0.6
	baz=58						
NANB	Nanao	0.29	58	*e*P	Pg	13 18 16.6	+0.9
	baz=57						
NANB				S	Sb	13 18 21.8	-0.7
	baz=57						
TDCB	Techi	0.29	266	P	Pb	13 18 17.4	-0.3
	baz=266						
TDCB				*e*S	Sb	13 18 21.9	-0.9
	baz=266						
NDT	Datong Townshi	0.33	5	*e*P	Pb	13 18 17.9	-0.3
	baz=4.0						
NDT				*e*S	Sb	13 18 22.6	-1.1
	baz=4.0						
CHGB	Renai	0.35	233	P	Pb	13 18 18.2	-0.5
	baz=232						
CHGB				*e*S	Sg	13 18 23.0	+1.4
	baz=232						
NSK	Sanguang	0.42	344	*e*P	Pb	13 18 19.9	+0.2
	baz=345						
NSK				*e*S	Sb	13 18 25.2	-1.1
	baz=345						

*ISK **31** 13:18:13.8, 36°.16N×31°.23E, h17^{km}, ML3.6/40*

*GII **31** 13:18:14.2±0.0, 36°.21N×31°.38E, h15^{km}, MD2.8/3*

*IDC **31** 13:18:14.3±1.4, 36°.15N×31°.19E, h51^{km}±22^{km}, mb3.4/3, mb1 3.6/7, mb1mx3.3/39, mbtmp3.7/7, ML3.7/4, Error ellipse: s-maj=13.0km s-min=11.5km az=168.0*

*DDA **31** 13:18:14.0, 36°.05N×31°.33E, h42^{km}±2^{km}, ML4.0*

*NSSC **31** 13:18:17.2±0.3, 36°.10N×31°.53E, h4^{km}±999^{km}, ML2.9*

ISC 31 13:18:15.3±1.1**, 36°.12N**±0°.03×**31°.30E**±0°.02**, h33**^{km}±3^{km}**,**
n118, σ1^{s}88/153**, mb3.5**/3**, 7C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNVG	Manavgat-Antal	0.68	8	PG	Pn	13 18 27.1	-1.4
MNVG				SG	Sn	13 18 36.6	-1.4
ALAN	Alanya-ANTALYA	0.74	53	PG	Pn	13 18 29.1	-0.3
ALAN				SG	Sn	13 18 40.2	+0.7
AKUM	Antalya-Kumluc	0.80	285	*i* P	Pb	13 18 31.3	+0.6
AKUM				*i* S	Sb	13 18 44.0	+2.8
AKUM				IAML_P			
	comp=Z,27μm,0.2s						
KEPZ	Antalya-Kepez	0.82	18	⇓*i*P	Pn	13 18 30.9	+0.3
KEPZ				*i* S	Sn	13 18 41.6	0.0
GAZI	Gazipasa	0.83	82	PG	Pn	13 18 31.4	+0.7
GAZI	Gazipasa	0.83	82	⇓*i*P	Pn	13 18 31.1	+0.4
GAZI				*i* S	Sn	13 18 43.0	+1.2
GAZI				IAML_P			
	comp=Z,24μm,0.1s						
ANTB	Antalya	0.94	327	PG	Pn	13 18 31.2	-0.9
KORT	Korkueli	1.16	319	PN	Pn	13 18 35.0	-0.4
KORT	Korkueli	1.16	319	⇑*i*P	Pn	13 18 35.7	+0.4
KORT				*i* S	Sb	13 18 56.1	+4.2
ELL	Elmali	1.28	300	PN	Pn	13 18 36.6	-0.4
AKAS	Kas	1.37	275	PN	Pn	13 18 38.1	-0.1
AKAS	Kas	1.37	275	*i* P	Pn	13 18 38.2	0.0
AKAS				*i* S	Sb	13 19 05.0	+7.2
AKAS				IAML_P			
	comp=Z,4μm,0.1s						
KSL	Kastellorizon	1.39	272	P	Pn	13 18 38.5	+0.2
KSL				S	Sn	13 18 55.0	-0.4
ALFC	Alefka	1.43	132	P	Pn	13 18 39.0	0.0
	baz=322						
ALFC				S	Sn	13 18 56.4	-0.2
BCK	Bucak	1.46	337	PN	Pn	13 18 39.6	+0.3
TEKE	Tekeli-Mersin	1.47	89	PN	Pn	13 18 41.0	+1.5
PPCY	Paphos	1.50	145	P	Pb	13 18 41.9	-0.7
	baz=335						
BERE	Bereket-Mersin	1.58	81	PN	Pn	13 18 42.4	+1.4
AKDN	Akdeniz- Kıbrı	1.59	121	PN	Pn	13 18 42.2	+1.1
LEF	Lefka	1.64	127	⇑*i*P	Pn	13 18 41.8	0.0
LEF				*i* S	Sn	13 18 59.7	-2.0
YORU	Yoruktepe-Mers	1.71	88	PN	Pn	13 18 44.4	+1.7
OREN	Orenkoy-Mersin	1.75	86	PN	Pn	13 18 44.9	+1.6
TEVE	Tevekalti-Mers	1.77	79	PN	Pn	13 18 44.8	+1.2
GOLH	Golhisar	1.79	309	⇑*i*P	Pb	13 18 46.9	-0.6
GOLH				*i* S	Sb	13 19 14.6	+5.1
GOLH				IAML_P			
	comp=Z,9μm,0.3s						
ISP	Isparta	1.81	340	PN	Pn	13 18 44.3	+0.1
ISP	Isparta	1.81	340	Pn	Pn	13 18 44.1	-0.1
AKK1	Akkuyu-Mersin	1.82	89	PN	Pn	13 18 45.8	+1.6
GULN	MERSIN_Gulnar	1.82	87	⇑*i*P	Pn	13 18 46.6	+2.4
GULN				*i* S	Sb	13 19 09.4	-1.0
AKK2	Akkuyu-Mersin	1.82	89	PN	Pn	13 18 45.8	+1.5
AKKU	Akkuyu-Mersin	1.83	88	PN	Pn	13 18 46.2	+1.9
MAMC	Mammari	1.83	121	P	Pn	13 18 45.2	+0.8
	baz=308						
TEPE	Tepekoy-Mersin	1.84	86	PN	Pn	13 18 46.2	+1.7
FETY	Fethiye	1.86	287	PN	Pn	13 18 44.9	+0.1
KMER	Konya-Meram	1.86	27	⇓*i*P	Pn	13 18 46.6	+1.7
KMER				*i* S	Sn	13 19 10.2	+3.0
KMER				IAML_P			
	comp=Z,3μm,0.3s						
BRDR	BURDUR-Merkez	1.86	328	⇑*i*P	Pn	13 18 46.9	+2.0
BRDR				*i* S	Sb	13 19 13.9	+2.2
BRDR				IAML_P			
	comp=Z,2μm,0.1s						
SZAC	Souni	1.88	136	P	Pb	13 18 48.6	-0.4
	baz=324						
YESI	Yesilovacik-Me	1.90	87	PN	Pn	13 18 47.2	+1.9
BAGO	Egridir - ISPA	1.91	348	*i* P	Pn	13 18 46.2	+0.6
BAGO				*i* S	Sn	13 19 11.7	+3.1
TISA	Tisan-Mersin	1.93	88	PN	Pn	13 18 47.6	+1.9
IKL	Isikli	1.94	86	PN	Pn	13 18 47.9	+2.0
KARG	Kargicak-Mersi	1.96	87	PN	Pn	13 18 48.0	+1.9
KEBE	Keben-Mersin	1.98	80	PN	Pn	13 18 48.2	+1.7
DOGA	KONYA_Doganhis	2.01	8	⇓*i*P	Pn	13 18 48.6	+1.6
DOGA				*i* S	Sn	13 19 12.4	+1.4
DOGA				IAML_P			
	comp=Z,13μm,0.2s						
KONT	Konya--Tatoy	2.01	25	PN	Pn	13 18 47.9	+0.9
KONT	Konya--Tatoy	2.01	25	⇓*i*P	Pn	13 18 48.8	+1.8
KONT				*i* S	Sb	13 19 15.7	-0.3
CSS	Mathiatis	2.02	124	P	Pn	13 18 46.7	-0.3
	baz=311						
CSS				S	Sn	13 19 11.3	+0.1
CSS	Mathiatis	2.02	124	Pn	Pn	13 18 46.2	-0.8
SLFK	Silifke-Mersin	2.16	82	PN	Pn	13 18 50.7	+1.8
DALY	Dalyan (Mula)	2.24	289	PN	Pn	13 18 50.7	+0.7
DALY	Dalyan (Mula)	2.24	289	*i* P	Pn	13 18 51.3	+1.3
DALY				*i* S	Sn	13 19 16.8	+0.3
DALY				IAML_P			
	comp=Z,1μm,0.1s						
LADK	Ladik-KONYA	2.25	22	PN	Pn	13 18 51.2	+1.0
TURN	Turunc	2.30	290	PN	Pb	13 18 54.5	-1.5
KZIL	AFYON_Kizioren	2.33	337	*e*P	Pn	13 18 53.1	+1.8
KZIL				*i* S	Sb	13 19 23.4	-1.6
KIZK	Mersin	2.33	80	PN	Pn	13 18 53.5	+2.3
KIZK	Mersin	2.33	80	*i* P	Pb	13 18 55.6	-1.0
KIZK				*i* S	Sb	13 19 24.5	-0.5
TAVA	DENIZLI_Tavas	2.34	306	*i* P	Pn	13 18 53.3	+1.8
TAVA				*i* S	Sb	13 19 22.8	-2.5
TAVA				IAML_P			
	comp=Z,893nm,0.1s						
EREN	Erenkoy	2.41	103	PN	Pn	13 18 54.6	+2.3
EREN	Erenkoy	2.41	103	*i* P	Pn	13 18 55.5	+3.1
EREN				*i* S	Sn	13 19 23.7	+3.0
DENT	Denizli	2.44	313	PN	Pn	13 18 53.4	+0.6
SHUT	Suhut-Afyon	2.50	347	PN	Pn	13 18 54.2	+0.5
ARG	Arkhangelos	2.57	273	P	Pn	13 18 54.2	-0.3
KERG	Konya-Eregli	2.62	60	⇑*i*P	Pn	13 18 58.5	+3.2
KERG				*i* S	Sb	13 19 32.0	-1.3
KHL	Karahalli	2.62	328	PN	Pn	13 18 55.7	+0.4
YER	Yerkesik	2.63	294	PN	Pn	13 18 55.7	+0.3
KHAL	Karahalli	2.67	328	⇑*i*P	Pn	13 18 58.0	+1.9
KHAL				*i* S	Sn	13 19 29.5	+2.2
KHAL				IAML_P			
	comp=Z,2μm,0.3s						
MERS	Mersin	2.71	73	PN	Pn	13 18 58.4	+1.9
SULT	Sultanhani-AKS	2.73	40	PN	Pn	13 18 58.1	+1.2
CHBY	Cihanbeyli	2.77	27	PN	Pn	13 18 58.6	+1.2
DAT	Datca	3.06	283	PN	Pn	13 19 02.1	+0.7
KULA	Kula-Manisa	3.18	320	PN	Pn	13 19 04.1	+1.0
KARA	Karaisali	3.23	68	PN	Pn	13 19 06.2	+2.5
CIFT	Cifteler, Eski	3.24	357	PN	Pn	13 19 04.6	+0.7
AYDB	Zeytinkoy-Aydi	3.28	305	PN	Pn	13 19 05.1	+0.7
GEDZ	Gediz	3.28	333	PN	Pn	13 19 05.3	+0.9
AUSIV	SIVRIHISAR	3.32	3	PN	Pn	13 19 05.6	+0.6
KRTS	Karatas	3.33	81	PN	Pn	13 19 07.3	+2.4
SHAP	Saphane-Kutahy	3.33	331	PN	Pn	13 19 05.9	+0.7
BODT	Bodrum	3.34	288	PN	Pn	13 19 05.7	+0.5
KARP	Karpathos	3.41	262	P	Pn	13 19 06.3	+0.2
YAYX	Yaylak	3.45	35	PN	Pn	13 19 08.6	+1.8
YURE	YUREGIR	3.57	77	PN	Pn	13 19 10.5	+2.2
TVSB	Tavsanli	3.63	337	PN	Pn	13 19 09.9	+0.7
CEYT	Ceyhan	3.69	75	PN	Pn	13 19 12.5	+2.5
AUMIH	MIHALICIK	3.75	2	PN	Pn	13 19 12.2	+1.3
BORA	Eskisehir	3.81	350	PN	Pn	13 19 13.1	+1.4
SMG	Samos	3.91	295	P	Pn	13 19 12.4	-0.6
SMG				S	Sn	13 19 54.0	-3.7
SRCK	Saricakaya, Es	3.95	353	PN	Pn	13 19 14.9	+1.3
BRTR	Keskin Array B	4.05	27	P	Pn	13 19 15.4	+0.4
	comp=Z,2.4nm,0.3s,baz=216,slow=14,SNR=45						
BRTR				S	Sn	13 20 00.5	-0.9
	comp=Z,2.6nm,0.3s,baz=210,slow=24,SNR=5.0						
HWQ	Hawqa	4.23	114	*e*P	Pn	13 19 21.1	+3.7
HNTI	Hanita	4.41	132	Pn	Pn	13 19 21.1	+1.3
RCY	Rachaya	4.56	124	*e*P	Pn	13 19 24.2	+2.1
MMAI	Mount Meron Ar	4.59	131	P	Pn	13 19 23.4	+1.0
	comp=Z,9.0nm,0.3s,baz=312,slow=12,SNR=7.0						
MMAI				S	Sn	13 20 15.2	+0.5
	comp=Z,6.5nm,0.3s,baz=309,slow=30,SNR=3.7						
GEM	Giv'at Ha'Em	4.62	128	Pn	Pn	13 19 23.9	+1.1
OFRI	\`Ofer	4.63	138	Pn	Pn	13 19 24.5	+1.5
OFRI				Sn	Sn	13 20 18.2	+2.5
NATI	Neve Ativ	4.64	127	Pn	Pn	13 19 24.4	+1.4
NATI				Sn	Sn	13 20 18.0	+2.4
BRBR	Barbar	4.69	124	*e*P	Pn	13 19 26.7	+2.8
BRBR				*e*S	Sn	13 20 17.3	+0.1
BRBR				AML	AML	13 20 28.6	
	comp=E,17nm,0.4s						
BRBR				AML	AML	13 20 29.5	
	comp=N,35nm,0.4s						
NPS	Neapolis	4.70	261	P	Pn	13 19 23.8	-0.1
CHOS	Chios island	4.75	300	P	Pn	13 19 24.3	-0.3
LAST	Lasithi	4.83	260	P	Pn	13 19 25.8	+0.1
QASN	Qassioun	4.84	121	*e*P	Pn	13 19 29.3	+3.4
QASN				*e*S	Sn	13 20 20.7	-0.2
QASN				AML	AML	13 20 32.9	
	comp=E,120nm,0.7s						
QASN				AML	AML	13 20 33.4	
	comp=N,58nm,0.4s						
SLTI	Sal'it	4.96	140	Pn	Pn	13 19 29.1	+1.7
MMLI	Mount Malkishu	5.01	136	Pn	Pn	13 19 30.1	+1.9
TOTH	TOTAH	5.04	122	*e*P	Pn	13 19 32.1	+3.5
TOTH				*e*S	Sn	13 20 25.4	-0.4
TOTH				AML	AML	13 20 35.3	
	comp=E,41nm,0.4s						

TOTH				AML	AML	13 20 35.7	
	comp=N,34nm,0.6s						
IDI	Anoyia	5.28	263	P	Pn	13 19 30.7	-1.1
	comp=N,3.8nm,0.3s,baz=126,slow=12,SNR=18						
IDI				S	Sn	13 20 28.2	-3.4
	comp=N,5.5nm,0.3s,baz=273,slow=16,SNR=8.8						
DSI	Dead Sea	5.67	142	Pn	Pn	13 19 39.0	+1.8
YTIR	Yattir	5.71	145	Pn	Pn	13 19 40.2	+2.4
MZDA	Masada	5.87	144	Pn	Pn	13 19 41.5	+1.6
IMMV	Iera Moni Meta	5.98	266	P	Pn	13 19 41.9	+0.5
ASF	Jabal al Asfar	6.09	129	P	Pn	13 19 49.7	+6.7
	comp=N,1.1nm,0.3s,baz=187,slow=1.6,SNR=6.5						
ASF				S	Sn	13 20 57.4	+5.8
	comp=N,0.6nm,0.3s,baz=38,slow=18,SNR=2.1						
MBRI	Mt Berech	7.00	153	Pn	Pn	13 19 57.0	+1.4
EIL	Elat	7.13	153	P	Pn	13 19 57.5	+0.2
	comp=N,0.6nm,0.3s,baz=351,slow=2.8,SNR=13						
EIL				S	Sn	13 21 13.8	-3.3
	comp=N,1.3nm,0.3s,baz=45,slow=16,SNR=3.6						
EIL	Elat	7.13	153	Pn	Pn	13 19 58.1	+0.9
AKASG	Malin Array Be	14.65	355	P	Pn	13 21 41.0	+0.9
	comp=N,0.6nm,0.3s,baz=178,slow=9.7,SNR=7.2						
GERES	GERESS Array B	18.11	320	P	Pn	13 22 24.3	+0.1
	comp=N,0.8nm,0.3s,baz=120,slow=5.8,SNR=2.6						
DAVOX	Davos/Dischmat	19.20	310	P	Pn	13 22 41.0	+3.5
	comp=N,0.5nm,0.3s,baz=187,slow=15,SNR=6.3						
AKTO	Aktyubinsk	23.98	45	P	P	13 23 24.6	-2.0
	comp=N,0.9nm,0.5s,baz=248,slow=9.5,SNR=2.5						
FINES	FINESS Array B	25.56	354	P	P	13 23 37.2	-3.5
	comp=N,1.0nm,0.6s,baz=156,slow=11,SNR=4.1						
ESDC	Sonseca Array	27.94	288	P	P	13 23 59.2	-3.3
	comp=N,0.5nm,0.5s,baz=77,slow=8.5,SNR=3.0						

*IDC **31** 13:22:31.0±1.1,7°.10S×130°.99E,h0^{km},mb4.2/3, mb1 4.1/6,mb1mx3.8/30,mbtmp4.0/6,ML3.9/3,MS3.5/1, Ms1 3.5/1,ms1mx2.5/28,Error ellipse: s-maj=81.2km s-min=20.4km az=63.0*

ISC 31 13:22:36.0±1.3,7°.4S±0°.2×130°.9E±0°.4,h35^{km},n6,σ2ˢ12/8, mb4.1/3,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.94	165	Pn	Pn	13 25 37.4	-0.1
	0.7nm,0.3s,baz=345,slow=12,SNR=7.8						
WRA				Sn	Sn	13 27 58.6	-1.8
	0.8nm,0.3s,baz=347,slow=24,SNR=4.4						
ASAR	Alice Springs	16.47	170	Pn	P	13 26 27.0	+0.1
	0.5nm,0.3s,baz=348,slow=9.2,SNR=25						
ASAR				Sn	Sn	13 29 25.6	-0.7
	0.2nm,0.3s,baz=356,slow=27,SNR=2.6						
CTA	Charters Tower	19.52	132	P	P	13 26 59.7	-0.9
	0.2nm,0.3s,baz=322,slow=12,SNR=3.5						
STKA	Stephens Creek	26.35	159	P	P	13 28 12.8	+4.0
	0.8nm,0.3s,baz=335,slow=14,SNR=3.3						
MKAR	Makanchi Array	69.02	326	P	P	13 33 38.0	-0.1
	1.4nm,0.4s,baz=113,slow=8.3,SNR=22						
ZALV	Zalesovo Beam	72.31	333	P	P	13 33 56.4	-1.5
	0.7nm,0.3s,baz=160,slow=8.6,SNR=3.5						

*NEIC **31** 13:26:13.3±0.0,15°.45N×94°.74W,h17^{km},MD4.1(MEX), After MEX.*

MEX 31 13:26:13.2±0.5,15°.45N×94°.74W,h22^{km}±14^{km},MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.35	284	*e*Pn	Pn	13 26 34.3	-2.5
HUIG				*e*Sn	Sn	13 26 49.5	-4.7
HUIG	Huatulco	1.35	284	*e*P	Pn	13 26 34.3	-2.5
HUIG				*e*S	Sn	13 26 49.5	-4.7
PCIG		1.49	80	*e*P	Pn	13 26 35.8	-2.9
PCIG				*i* S	Sn	13 26 53.1	-4.3
CMIG	Matias Romero	1.64	355	*e*Pn	Pn	13 26 37.8	-2.9
CMIG				*e*Sn	Sn	13 26 56.8	-4.3
CMIG	Matias Romero	1.64	355	*i* P	Pn	13 26 37.8	-2.9
CMIG				*i* S	Sn	13 26 56.8	-4.3
TGIG		2.04	49	*e*Pn	Pn	13 26 44.1	-2.2
TGIG				*e*Sn	Sn	13 27 07.2	-4.0
TGIG		2.04	49	*e*P	Pn	13 26 44.1	-2.2
TGIG				*i* S	Sn	13 27 07.2	-4.0
VHO	Vista Hermosa	2.50	310	*e*Pn	Pn	13 26 48.9	-3.9
VHO				*e*Sn	Sn	13 27 21.8	-1.0
VHO	Vista Hermosa	2.50	310	*e*P	Pn	13 26 49.6	-3.2
VHO				*i* S	Sn	13 27 19.1	-3.7
CCIG	Comitan	2.64	71	*e*Pn	Pn	13 26 54.0	-0.6
CCIG				*e*Sn	Sn	13 27 23.6	-2.5
CCIG	Comitan	2.64	71	*e*P	Pn	13 26 51.9	-2.7
CCIG				*i* S	Sn	13 27 23.6	-2.5
TLIG	Tlapa	4.23	300	*e*Pn	Pn	13 27 17.0	+0.5
TEIG	Tepich	7.78	51	*e*Pn	Pn	13 28 03.1	-2.0

*NIED **31** 13:40:00,35°.70N×140°.80E,h44^{km},Mw4.0 Best double couple: $M_0$1.22000×10^{15} NP1:ϕ_s171.00000°,δ25.00000°, λ78.00000°. NP2:ϕ_s4.00000°,δ65.00000°,λ95.00000°.*

*IDC **31** 13:40:30.4±0.8,35°.66N×141°.15E,h0^{km},mb3.8/10, mb1 3.9/14,mb1mx3.7/53,mbtmp3.8/14,ML3.7/3,MS2.8/7, Ms1 2.8/7,ms1mx2.6/47,Error ellipse: s-maj=22.7km s-min=15.2km az=81.0*

*ISCJB **31** 13:40:35.7±0.6,35°.68N±0°.04×140°.97E±0°.07,h53^{km}±3^{km}, mb3.9/14,MS2.8/2,Error ellipse: s-maj=9.5km s-min=5.8km az=155.8*

*NEIC **31** 13:40:36.0±0.8,35°.64N×141°.02E,h39^{km}±6^{km},mb4.3/4, Error ellipse: s-maj=9.2km s-min=6.3km az=82.0*

*JMA **31** 13:40:37.4±0.2,35°.69N×140°.75E,h47^{km}±2^{km},M3.4*

JMA Felt I J1.

ISC 31 13:40:37.5±0.8,35°.70N±0°.05×140°.90E±0°.07,h47^{km}±6^{km}, n48,σ1ˢ11/46,mb3.8/14,4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.03	274	P	Pn	13 40 44.7	0.0
CHOJ				*e*S	Sn	13 40 50.2	+0.3
JSMT	Sammumatsuo	0.37	261	⇓P	Pn	13 40 46.1	-0.9
JSMT				*e*S	Sn	13 40 53.2	-0.6
JIHU	Itakohorinouch	0.40	311	⇓P	Pn	13 40 47.1	-0.3
JCN	Nagara	0.64	244	⇓P	Pn	13 40 49.4	-0.8
JYT	Yasato	0.78	313	⇓P	Pn	13 40 50.9	-1.2
JYT				S	Sn	13 41 01.3	-1.5
BSO4	Boso 4	0.84	213	P	Pn	13 40 52.5	-0.4
BSO3	Boso 3	0.95	200	P	Pn	13 40 54.1	-0.1
BSO1	Boso 1	1.05	176	P	Pn	13 40 55.9	+0.7
JAG	Ashikaga	1.38	302	P	Pn	13 40 58.7	-1.6
MJAR	Matsushiro Arr	2.33	292	Pn	Pn	13 41 13.4	0.0
	3.5nm,0.3s,baz=90,slow=19,SNR=114						
MJAR				Sn	Sn	13 41 43.9	+3.0
	2.3nm,0.3s,baz=233,slow=19,SNR=8.1						
MJAR				LR	LR	13 42 13.7	
	comp=Z,219nm,19.1s,baz=105,slow=41						
MAJO	Matsushiro	2.34	292	*e*Pn	Pn	13 41 13.1	-0.3
MAJO				*e*Sn	Sn	13 41 43.9	+2.9
MAT	Matsushiro	2.34	292	P	Pn	13 41 13.2	-0.2
MAT				S	Sn	13 41 39.9	-1.0
MJB9	Matsu-Tunnel	2.34	292	*e*Pn	Pn	13 41 13.2	-0.3
JHJ2	Mitsune	2.73	199	*e*Pn	Pn	13 41 17.6	-1.2
JHJ	Hachijo jima 2	2.73	200	Pn	Pn	13 41 17.6	-1.3
	22nm,0.3s,baz=339,slow=18,SNR=27						
JHJ				Sn	Sn	13 41 49.7	-1.0
	58nm,0.3s,baz=233,slow=22,SNR=8.7						
JHJ				LR	LR	13 42 11.9	
	comp=Z,39nm,19.4s,baz=307,slow=37						
ERM	Erimo	6.55	15	*e*Pn	Pn	13 42 10.0	-1.1
JNU	Nakatsue	8.67	256	LR	LR	13 46 28.3	
	comp=Z,185nm,18.3s,baz=358,slow=40						
KSRS	Korea Array	10.58	283	Pn	Pn	13 43 08.2	+1.8
	baz=103,slow=15,SNR=3.2						
KSRS				LR	LR	13 47 12.5	
	comp=Z,52nm,20.4s,baz=105,slow=37						
KS15	Wonju Array Si	10.61	283	*e*Pn	Pn	13 43 06.7	-0.1
KSAR	Wonju Array Be	10.61	283	Pn	Pn	13 43 08.2	+1.4
KLR	Kul'dur	15.10	336	LR	LR	13 49 39.0	
	comp=Z,25nm,22.0s,baz=174,slow=36						
MA2	Magadan	24.74	12	LR	LR	13 55 37.4	
	comp=Z,25nm,18.3s,baz=190,slow=37						
H11N2	WAKE ISLAND Hy	27.86	118	T	T	14 15 50.2	
	baz=310,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	27.86	118	T	T	14 15 36.2	
	baz=310,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	27.88	118	T	T	14 15 27.6	
	baz=310,slow=75,SNR=12						
SONA0	Songino Array	28.21	306	*e*P	P	13 46 26.8	+1.0
SONM	Songino Array	28.21	306	P	P	13 46 26.8	+1.0
	0.7nm,0.6s,baz=114,slow=11,SNR=3.9						
SONM				LR	LR	13 57 21.5	
	comp=Z,30nm,20.5s,baz=70,slow=36						
H11S1	WAKE ISLAND Hy	28.52	120	T	T	14 16 20.5	
	baz=312,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	28.52	120	T	T	14 16 20.7	
	baz=312,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	28.53	120	T	T	14 16 21.8	
	baz=312,slow=75,SNR=15						
ZAA1	Zalesovo Array	42.52	313	*e*P	P	13 48 27.9	-0.1
ZALV	Zalesovo Beam	42.52	313	P	P	13 48 27.9	-0.1
	1.0nm,0.5s,baz=77,slow=6.7,SNR=5.1						
MK31	Makanchi Array	44.49	303	*e*P	P	13 48 43.6	-0.4
	7.4nm,1.9s						
MK32	Makanchi Array	44.49	303	*e*P	P	13 48 44.2	+0.1
MKAR	Makanchi Array	44.49	303	P	P	13 48 44.2	+0.1
	0.9nm,0.5s,baz=90,slow=9.2,SNR=11						
KURK	Kurchatov	46.44	309	*e*P	P	13 48 59.1	-0.2
	4.0nm,0.8s						
ILAR	Eielson Array	50.84	32	P	P	13 49 31.9	-1.1
	0.3nm,0.7s,baz=270,slow=8.8,SNR=2.5						
WR1	Warramunga Arr	55.69	187	*e*P	P	13 50 07.4	-1.7
WRA	Warramunga Arr	55.69	187	P	P	13 50 07.4	-1.7
	0.4nm,0.4s,baz=349,slow=6.5,SNR=9.1						
ABKAR	Akbulak array	58.48	311	*e*P	P	13 50 28.0	-0.6
	6.3nm,1.4s						
AS31	Alice Springs	59.41	187	*e*P	P	13 50 34.1	-1.2
	1.5nm,1.1s						
ASAR	Alice Springs	59.41	187	P	P	13 50 34.9	-0.3
	0.5nm,0.9s,baz=354,slow=5.7,SNR=3.1						
FIA0	FINESS Array S	69.80	332	*e*P	P	13 51 43.1	+0.6
FINES	FINESS Array B	69.80	332	P	P	13 51 43.1	+0.6
	0.7nm,0.5s,baz=29,slow=4.4,SNR=4.4						
AKASG	Malin Array Be	75.10	322	P	P	13 52 14.9	+0.7
	0.3nm,0.4s,baz=50,slow=6.9,SNR=3.2						
NB200	NORSAR Array S	75.25	337	*e*P	P	13 52 15.7	+0.7
NOA	NORSAR Array B	75.25	337	P	P	13 52 15.7	+0.7
	0.4nm,0.5s,baz=62,slow=4.7,SNR=3.2						
FRB	Frobisher Bay	78.16	13	P	P	13 52 31.8	+0.5
	4.1nm,0.5s,baz=228,slow=5.6,SNR=3.7						

IDC 31 13:44:11.5±2.3,4°.10S×152°.13E,h0^{km},mb3.6/3, mb1 3.9/4,mb1mx3.5/33,mbtmp3.7/4,ML1.6/1,MS3.3/1, Ms1 3.3/1,ms1mx2.6/24,Error ellipse: s-maj=192.0km s-min=26.8km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.22	223	Pn	Pn	13 45 59.0	+0.5
	0.7nm,0.3s,baz=118,slow=18,SNR=1.7						
SIJI	Sorong	21.09	278	LR	LR	13 56 31.4	
	comp=Z,84nm,20.9s,baz=129,slow=35						
WRA	Warramunga Arr	23.42	226	P	P	13 49 20.9	-1.7
	1.9nm,0.9s,baz=52,slow=9.6,SNR=3.8						
ASAR	Alice Springs	26.23	220	P	P	13 49 49.5	+1.1
	0.7nm,0.8s,baz=54,slow=9.0,SNR=9.7						
ILAR	Eielson Array	81.77	22	P	P	13 56 31.9	-0.1
	0.6nm,0.8s,baz=241,slow=5.9,SNR=5.9						

*IDC **31** 13:45:07.3±1.9,3°.74S×152°.78E,h0^{km},mb3.7/5, mb1 4.0/6,mb1mx3.7/31,mbtmp3.8/6,ML2.2/1,MS3.3/3, Ms1 3.3/3,ms1mx2.8/25,Error ellipse: s-maj=61.8km s-min=24.9km az=118.0*

*ISCJB **31** 13:45:10.8±1.8,3°.7S±0°.2×152°.7E±0°.4,h33^{km},mb3.6/5, MS3.2/2,Error ellipse: s-maj=56.8km s-min=17.7km az=27.2*

ISC 31 13:45:12.6±2.0,3°.8S±0°.2×152°.8E±0°.4,h35^{km},n9,σ1ˢ49/6, mb3.6/5,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.90	224	Pn	Pn	13 47 04.8	-0.2
	1.7nm,0.3s,baz=357,slow=9.5,SNR=4.7						
HNR	Honiara	9.11	129	LR	LR	13 51 22.8	
	comp=Z,170nm,19.1s,baz=295,slow=41						
DZM	Mont Dzumac	22.54	145	LR	LR	13 57 47.8	
	comp=Z,61nm,21.6s,baz=211,slow=34						
WRA	Warramunga Arr	24.11	227	P	P	13 50 26.1	+0.9
	1.1nm,0.5s,baz=55,slow=10,SNR=5.1						
ASAR	Alice Springs	26.89	221	P	P	13 50 49.6	-0.9
	0.8nm,0.8s,baz=52,slow=9.0,SNR=4.6						
RPZ	Rata Peaks	42.97	160	LR	LR	14 08 51.2	
	comp=Z,57nm,21.9s,baz=42,slow=33						
CMAR	Chiang Mai Arr	57.40	295	P	P	13 54 59.4	+1.3
	0.4nm,0.3s,baz=106,slow=5.7,SNR=4.6						
SONM	Songino Array	65.42	328	P	P	13 55 50.2	-1.7
	0.3nm,0.4s,baz=145,slow=5.3,SNR=1.8						
ILAR	Eielson Array	81.21	22	P	P	13 57 25.1	+0.6
	0.4nm,0.7s,baz=242,slow=5.1,SNR=5.2						

*IDC **31** 13:52:03.5±0.8,13°.22N×50°.92E,h0^{km},mb3.8/12, mb1 4.0/13,mb1mx3.8/52,mbtmp3.9/13,ML4.4/1,MS3.7/9, Ms1 3.7/9,ms1mx3.4/36,Error ellipse: s-maj=21.9km s-min=18.0km az=145.0*

*ISCJB **31** 13:52:04.2±0.6,13°.27N±0°.10×50°.87E±0°.08,h16^{km}, mb3.8/13,MS3.5/6,Error ellipse: s-maj=15.1km s-min=10.7km az=154.3*

*NEIC **31** 13:52:05.0±0.4,13°.24N×50°.91E,h10^{km},mb4.0/1,Error ellipse: s-maj=10.5km s-min=7.4km az=154.0*

ISC 31 13:52:06.0±0.8,13°.2N±0°.1×50°.9E±0°.1,h16^{km},n32, σ0ˢ66/21,mb3.9/13,MS3.5/6,Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	8.04	259	Pn	Pn	13 54 02.0	-0.2
	4.5nm,0.3s,baz=55,slow=23,SNR=11						
ATD				LR	LR	13 56 23.9	
	comp=Z,1μm,19.6s,baz=74,slow=32						
WSAR	Wadi Sarin	12.38	35	LR	LR	13 59 38.0	
	comp=Z,759nm,18.4s,baz=232,slow=37						
KMBO	Kilima Mbogo	19.65	225	LR	LR	14 04 02.3	
	comp=Z,259nm,18.4s,baz=74,slow=36						
EIL	Elat	22.05	320	LR	LR	14 04 58.9	
	comp=Z,194nm,19.9s,baz=80,slow=35						
MMAI	Mount Meron Ar	24.26	327	LR	LR	14 06 56.8	
	comp=Z,126nm,19.0s,baz=125,slow=37						
GEYT	Alibeck	25.44	13	P	P	13 57 33.0	-0.1
	4.9nm,0.7s,baz=196,slow=8.5,SNR=9.7						
H08N2	Diego Garcia H	27.86	133	T	T	14 26 53.8	
	baz=314,slow=75,SNR=23						
H08N3	Diego Garcia H	27.86	133	T	T	14 26 51.9	
	baz=314,slow=75,SNR=22						
H08N1	Diego Carcia H	27.88	133	T	T	14 26 54.8	
	baz=314,slow=75,SNR=23						
PALK	Pallekele	29.91	98	LR	LR	14 08 32.3	
	comp=Z,57nm,19.1s,baz=295,slow=33						
BRTR	Keskin Array B	30.47	333	LR	LR	14 11 57.9	
	comp=Z,62nm,18.6s,baz=121,slow=39						
KBZ	Khabaz	31.17	349	P	P	13 58 24.8	+0.7
	2.9nm,0.8s,baz=156,slow=7.1,SNR=4.6						
OPO	Ambohidratompo	31.80	187	LR	LR	14 09 59.6	
	comp=Z,107nm,19.2s,baz=181,slow=34						
MATP	Matopo	40.03	214	P	P	13 59 40.3	-0.4
	0.8nm,0.5s,baz=23,slow=7.7,SNR=3.2						
AKASG	Malin Array Be	41.33	339	P	P	13 59 50.8	-0.1
	0.3nm,0.3s,baz=145,slow=7.2,SNR=4.3						
AKBB	Malin Array Si	41.33	339	*e*P	P	13 59 49.9	-1.0
	3.4nm,1.0s						
MK32	Makanchi Array	42.59	32	*e*P	P	14 00 00.8	-0.6
MKAR	Makanchi Array	42.59	32	P	P	14 00 00.8	-0.6
	0.5nm,0.7s,baz=226,slow=9.1,SNR=5.3						
CMAR	Chiang Mai Arr	46.41	77	P	P	14 00 32.7	+0.4
	0.5nm,0.3s,baz=263,slow=7.8,SNR=3.1						
TORD	Torodi Ar. Bea	47.84	276	P	P	14 00 43.9	+0.5
	0.9nm,0.7s,baz=90,slow=7.4,SNR=5.9						
TOA1	Torodi Ar. Sit	47.84	276	*e*P	P	14 00 43.9	+0.5
BOSA	Boshof	48.42	211	LR	LR	14 23 09.4	
	comp=Z,99nm,18.0s,baz=38,slow=38						
ZALV	Zalesovo Beam	48.63	26	P	P	14 00 47.6	-1.3
	0.5nm,0.5s,baz=245,slow=9.4,SNR=3.2						
ZAA1	Zalesovo Array	48.63	26	*e*P	P	14 00 47.6	-1.3
ESDC	Sonseca Array	54.75	309	P	P	14 01 35.4	+0.3
	0.2nm,0.4s,baz=97,slow=5.8,SNR=4.2						
SONA0	Songino Array	57.35	41	*e*P	P	14 01 54.2	+0.6
SONM	Songino Array	57.35	41	P	P	14 01 54.2	+0.6
	0.3nm,0.4s,baz=267,slow=9.7,SNR=2.8						
WR1	Warramunga Arr	88.42	111	*e*P	P	14 04 57.6	-0.4
WRA	Warramunga Arr	88.42	111	P	P	14 04 57.6	-0.4
	1.7nm,1.0s,baz=279,slow=4.8,SNR=6.5						
ASAR	Alice Springs	88.97	114	P	P	14 05 00.8	+0.2
	0.5nm,0.8s,baz=287,slow=5.4,SNR=7.0						
NV01	Mina Array Sit	127.64	349	*e*PKPdf	PKPdf	14 11 11.6	+0.3
NVAR	Mina Array Bea	127.64	349	PKP	PKPdf	14 11 11.6	+0.3
	0.6nm,0.7s,baz=73,slow=1.0,SNR=5.3						

*IDC **31** 13:53:25.4±1.1,13°.17N×50°.87E,h0^{km},mb3.7/9, mb1 3.9/10,mb1mx3.6/55,mbtmp3.8/10,ML3.9/1,MS3.3/2, Ms1 3.3/2,ms1mx2.8/33,Error ellipse: s-maj=32.0km s-min=21.8km az=180.0*

*ISCJB **31** 13:53:26.1±0.6,13°.2N±0°.1×50°.82E±0°.08,h16^{km}, mb3.9/12,MS3.4/2,Error ellipse: s-maj=17.4km s-min=11.1km az=173.6*

*NEIC **31** 13:53:26.8±1.1,13°.12N×50°.85E,h10^{km},mb4.4/3,Error ellipse: s-maj=36.0km s-min=20.2km az=169.0*

ISC 31 13:53:28.0±0.9,13°.2N±0°.2×50°.9E±0°.1,h16^{km},n22, σ1ˢ00/17,mb4.0/12,Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	8.01	259	Pn	Pn	13 55 24.5	+0.6
	1.6nm,0.3s,baz=75,slow=20,SNR=1.7						
GEYT	Alibeck	25.45	13	P	P	13 58 54.4	-0.9
	1.5nm,0.7s,baz=152,slow=6.5,SNR=2.2						
H08N2	Diego Garcia H	27.88	133	T	T	14 28 28.2	
	baz=313						
H08N3	Diego Garcia H	27.88	133	T	T	14 28 24.2	
	baz=313						
H08N1	Diego Carcia H	27.90	133	T	T	14 28 26.5	
	baz=313						
AKASG	Malin Array Be	41.32	339	P	P	14 01 12.2	-0.7
	0.8nm,0.3s,baz=144,slow=6.8,SNR=5.0						
AKBB	Malin Array Si	41.32	339	*e*P	P	14 01 11.4	-1.5
	11nm,1.4s						
MK32	Makanchi Array	42.60	32	*e*P	P	14 01 24.1	+0.6
MKAR	Makanchi Array	42.60	32	P	P	14 01 24.1	+0.6
	0.4nm,0.7s,baz=210,slow=4.3,SNR=2.7						
CM31	Chiang Mai Arr	46.44	77	*e*P	P	14 01 54.0	-0.6
	14nm,1.5s						
CMAR	Chiang Mai Arr	46.44	77	P	P	14 01 54.0	-0.6
	0.5nm,0.3s,baz=270,slow=7.2,SNR=1.4						
GERES	GERESS Array B	46.90	327	LR	LR	14 23 51.0	
	comp=Z,35nm,19.5s,baz=103,slow=39						
TORD	Torodi Ar. Bea	47.81	276	P	P	14 02 05.1	-0.1
	0.8nm,0.7s,baz=83,slow=7.8,SNR=4.0						
TOA1	Torodi Ar. Sit	47.81	276	*e*P	P	14 02 05.1	-0.2
ESDC	Sonseca Array	54.73	309	P	P	14 02 56.9	0.0
	0.2nm,0.3s,baz=81,slow=4.6,SNR=3.4						
DBIC	Dimbokro	55.18	269	LR	LR	14 25 01.1	
	comp=Z,30nm,19.9s,baz=100,slow=34						
SONA0	Songino Array	57.37	41	*e*P	P	14 03 17.6	+1.9
SONM	Songino Array	57.37	41	P	P	14 03 17.6	+1.9
	0.3nm,0.5s,baz=232,slow=4.7,SNR=1.9						
WR1	Warramunga Arr	88.45	111	*e*P	P	14 06 19.2	-0.9
WRA	Warramunga Arr	88.45	111	P	P	14 06 19.3	-0.9
	1.0nm,0.9s,baz=283,slow=3.9,SNR=1.8						
ASAR	Alice Springs	89.00	114	P	P	14 06 22.6	-0.2
	0.9nm,0.9s,baz=290,slow=4.7,SNR=4.7						
AS31	Alice Springs	89.00	114	*e*P	P	14 06 22.6	-0.2
	1.6nm,1.1s						

*NEIC **31** 14:01:09.8±0.2,24°.22S×111°.75W,h10^{km},mb5.2/226, Error ellipse: s-maj=6.3km s-min=4.0km az=63.0*

*IDC **31** 14:01:09.0±0.6,24°.25S×111°.84W,h0^{km},mb4.5/26, mb1 4.6/26,mb1mx4.6/37,mbtmp4.5/26,MS4.5/10, Ms1 4.5/10,ms1mx4.4/12,Error ellipse: s-maj=19.6km s-min=13.6km az=53.0*

*ISCJB **31** 14:01:09.0±0.3,24°.07S±0°.04×111°.70W±0°.05,h10^{km}, mb5.0/239,MS4.6/20,Error ellipse: s-maj=7.3km s-min=4.0km az=142.3*

*MOS **31** 14:01:10.2±0.9,23°.87S×111°.44W,h10^{km},mb5.2/38, Error ellipse: s-maj=16.2km s-min=7.8km az=86.8*

*BJI **31** 14:01:12.0±0.0,24°.20S×111°.80W,h10^{km},mB5.2/9, Ms5.2/18,Ms7 5.0/17*

*GCMT **31** 14:01:12.8±0.1,24°.38S±0°.01×111°.76W±0°.01,h16^{km}, MW5.2/129,Moment Tensor Solution. s77,c122; s129,c219; Duration: 1ˢ0 Moment tensor: Scale 10^{16} Nm; M_{rr}-1.22±.13; $M_{\theta\theta}$-4.09±.12; $M_{\phi\phi}$5.30±.13; $M_{r\theta}$-1.42±.35; $M_{\theta\phi}$7.13±.12; $M_{\phi r}$0.88±.35; Best double couple: $M_0$8.73300×10^{16} NP1:ϕ_s164.00000°,δ81.00000°, λ-170.00000°. NP2:ϕ_s73.00000°,δ80.00000°,λ-9.00000°. Principal axes: T 9.1430, Plg1.0000°, Azm298.0000°; N -0.8300, Plg77.0000°, Azm206.0000°; P -8.3230, Plg13.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 14:01:10.7±0.3,24°.30S±0°.06×111°.66W±0°.07,h10^{km}, n887,σ1ˢ26/882,mb5.2/239,MS4.7/20,2C-1D,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.51	144	Pn	Pn	14 02 02.1	-3.3
	24nm,0.3s,baz=327,slow=14,SNR=16						
RPN				Sn	Sn	14 02 44.9	-2.0
	17nm,0.3s,baz=328,slow=5.4,SNR=3.6						
RPN	Rapa Nui	3.51	144	*e*Pn	Pn	14 02 01.7	-3.6
RPN				*e*Sn	Sn	14 02 44.9	-2.0
RKT	Rikitea	21.38	268	*e*LQ	LQ	14 09 51.2	
	5μm,28.2s						
RKT				*e*LR	LR	14 10 45.7	
	comp=Z,7μm,25.8s						
RKT	Rikitea	21.38	268	*e*T	T	14 27 28.0	
	7.3nm,0.3s						
TBI	Tubuai	34.53	264	*e*S	S	14 13 10.4	-18
	138nm,27.8s						
TBI				*e*LQ	LQ	14 15 22.7	
	2μm,28.8s						
TBI				*e*LR	LR	14 16 48.3	
	comp=Z,2μm,28.2s,baz=90						
TBI	Tubuai	34.53	264	*e*T	T	14 43 44.3	
	4.2nm,0.3s						
TIAR	Tiarei	35.75	273	*e*T	T	14 45 30.9	
	2.7nm,0.3s						
GO05	Huala	35.93	117	*e*P	P	14 08 13.1	+1.6
	18nm,1.0s						
PPT2	Papeete2	35.95	273	*e*S	S	14 13 35.7	-15
	295nm,26.2s						
PPT2				*e*LQ	LQ	14 16 04.6	
	1μm,25.2s						
PPT2				*e*LR	LR	14 17 34.3	
	comp=Z,2μm,29.8s,baz=104						
GO04	Tololo Observa	36.65	108	*e*P	P	14 08 17.6	-0.4
	26nm,1.1s						
LCO	Las Campanas	36.77	106	*e*P	P	14 08 19.6	+0.6
GO06	Curarrehue	37.02	124	*e*P	P	14 08 21.8	+1.0
	15nm,1.1s						
GO03	Copiap	37.27	104	*e*P	P	14 08 24.3	+1.3
	68nm,1.6s						
PLCA	Paso Flores	37.96	126	P	P	14 08 30.1	+1.4
	4.0nm,0.8s,baz=303,slow=6.7,SNR=10						
PLCA				LR	LR	14 20 02.3	
	comp=Z,2μm,21.0s,baz=299,slow=30						
PLCA	Paso Flores	37.96	126	*e*P	P	14 08 29.9	+1.2
	29nm,1.4s						
PLCA	Paso Flores	37.96	126	*e*P	P	14 08 29.9	+1.2
PLCA				pmax	pmax		
	comp=Z,29nm,1.4s						
PLCA	Paso Flores	37.96	126	*e*P	P	14 08 31.0	+2.3
GO02	Mina Guanaco	38.11	100	*e*P	P	14 08 31.6	+1.2
	comp=Z,45nm,1.1s						
CFA	Coronel Fontan	38.84	111	P	P	14 08 37.3	+1.0
	comp=Z,7.3nm,0.9s,baz=262,slow=7.1,SNR=9.8						
PB11	IPOC Station P	39.09	92	*e*P	P	14 08 39.8	+1.2
	comp=Z,21nm,1.0s						
LVC	Limon Verde	39.14	96	P	P	14 08 40.5	+1.3
	comp=Z,4.5nm,0.7s,baz=230,slow=5.3,SNR=3.7						
LVC	Limon Verde	39.14	96	*e*P	P	14 08 40.5	+1.3
MNMC	Minye Minye	39.31	91	*e*P	P	14 08 42.1	+1.5
	comp=Z,18nm,0.9s						
LPAZ	La Paz	41.46	87	P	P	14 09 00.3	+1.5
	comp=Z,12nm,1.1s,baz=283,slow=5.7,SNR=17						
LPAZ				LR	LR	14 22 09.6	
	comp=Z,462nm,20.2s,baz=247,slow=30						
LPAZ	La Paz	41.46	87	*e*P	P	14 08 58.5	-0.2
	comp=Z,31nm,1.4s						
LPAZ	La Paz	41.46	87	*e*P	P	14 08 58.6	-0.2
LPAZ				pmax	pmax		
	comp=Z,31nm,1.4s						
LPAZ	La Paz	41.46	87	*e*P	P	14 09 00.1	+1.3

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JTS   Las Juntas de     43.15  40   P      P       14 09 14.1 +2.3
      comp=Z,15nm,1.0s,baz=302,slow=9.2,SNR=5.2
JTS   Las Juntas de     43.15  40  eP      P       14 09 11.9 +0.1
      comp=Z,32nm,1.1s
JTS   Las Juntas de     43.15  40  i P     P       14 09 09.1 -2.7
JTS                                pmax    pmax
      comp=Z,23nm,1.1s
TLIG  Tlapa             43.53  18  eP      P       14 09 14.6 -0.2
      comp=Z,69nm,1.4s
TRQA  Tornquist         44.17 120  eP      P       14 09 22.3 +2.5
APG   El Apazote        44.21  30   P      P       14 09 21.8 +1.3
      comp=Z,4.2nm,0.9s,baz=227,slow=13,SNR=5.5
APG                                LR      LR      14 23 13.7
      comp=Z,439nm,19.5s,baz=212,slow=30
ESPN  Las Esperanzas    45.05  39  eP      P       14 09 28.2 +1.2
      comp=Z,72nm,1.3s
ROSC  El Rosal          46.48  56   P      P       14 09 41.5 +2.7
      comp=Z,7.4nm,0.4s,baz=216,slow=15,SNR=3.9
ROSC                               LR      LR      14 25 43.0
      comp=Z,217nm,19.5s,baz=231,slow=32
CPUP  Villa Florida     48.85 104   P      P       14 09 56.0 -0.8
      comp=Z,3.7nm,0.9s,baz=286,slow=6.9,SNR=6.4
CPUP                               LR      LR      14 26 53.8
      comp=Z,544nm,21.3s,baz=255,slow=32
CPUP  Villa Florida     48.85 104  eP      P       14 09 56.8 +0.1
      comp=Z,8.0nm,1.0s
CPUP  Villa Florida     48.85 104  eP      P       14 09 56.8 +0.1
CPUP                               pmax    pmax
      comp=Z,8.0nm,1.0s
CPUP  Villa Florida     48.85 104  eP      P       14 09 56.9 +0.2
TEIG  Tepich            49.77  29   P      P       14 10 03.7 +0.1
      comp=Z,19nm,1.1s,baz=236,slow=3.4,SNR=5.2
TEIG  Tepich            49.77  29  eP      P       14 10 03.7 +0.1
      comp=Z,30nm,1.3s
PMSA  Palmer Station    50.70 156  eP      P       14 10 14.5 +4.4
AQDB  Aquidauana        51.59  98  eP      P       14 10 18.4 +0.8
SDV   Santo Domingo     51.87  56  eP      P       14 10 19.9  0.0
      comp=Z,15nm,1.0s
SDV   Santo Domingo     51.87  56  eP      P       14 10 20.4 +0.5
SALV  Santo Antonio     52.93  92  eP      P       14 10 27.7 +0.1
ITAB  Concordia         53.25 107  eP      P       14 10 31.2 +1.4
833A  Chaparral WMA,    53.64  13   P      P       14 10 32.4 -0.1
      baz=194
PTGB  Pitanga           53.83 104  eP      P       14 10 35.4 +1.2
TXAR  Lajitas Array     53.88   9   P      P       14 10 34.5 +0.2
      comp=Z,2.2nm,1.0s,baz=186,slow=11,SNR=15
TXAR                               LR      LR      14 29 23.3
      comp=Z,300nm,18.0s,baz=0.0,slow=32
TX31  Lajitas Ar. Si    53.88   9  eP      P       14 10 33.2 -1.1
      comp=Z,13nm,1.4s
CNLB  Canela            53.98 110  eP      P       14 10 37.1 +1.8
CLDB  Colider           54.57  86  eP      P       14 10 39.3 -0.3
PTGA  Pitinga           55.20  73  eP      P       14 10 43.6 -0.6
      comp=Z,30nm,0.9s
PTGA  Pitinga           55.20  73  eP      P       14 10 44.5 +0.4
319A  Douglas           55.41   2  eP      P       14 10 44.8 -0.6
      comp=Z,12nm,0.9s
JCT   Junction City     55.64  12  eP      P       14 10 46.5 -0.5
      comp=Z,35nm,1.0s
JCT   Junction City     55.64  12  eP      P       14 10 46.5 -0.5
JCT                                pmax    pmax
      comp=Z,35nm,1.0s
JCT   Junction City     55.64  12   P      P       14 10 46.7 -0.3
      baz=193,SNR=11
214A  Organ Pipe Nat    55.95 359   P      P       14 10 48.9 -0.3
      baz=179
HKT   Hockley           56.04  17  eP      P       14 10 49.5 -0.2
      comp=Z,48nm,1.8s
HKT   Hockley           56.04  17  eP      P       14 10 49.5 -0.2
HKT                                pmax    pmax
      comp=Z,48nm,1.8s
TUC   Tucson            56.30   1  eP      P       14 10 51.4 -0.3
      comp=Z,26nm,1.8s
TUC   Tucson            56.30   1  eP      P       14 10 51.4 -0.3
TUC                                pmax    pmax
      comp=Z,26nm,1.8s
TUC   Tucson            56.30   1   P      P       14 10 51.8 +0.1
      baz=181
FRTB  Fartura           56.38 103  eP      P       14 10 54.7 +2.1
435B  Jarrell           56.41  15   P      P       14 10 52.5 +0.1
      baz=196
GDL2  Guadalupe Moun    56.62   7  eP      P       14 10 53.2 -0.8
ITRB  Iturama           56.63  98  eP      P       14 10 55.0 +0.5
121A  Cookes Peak, D    56.64   4   P      P       14 10 54.6 +0.3
      baz=184
113A  Mohawk Valley,    56.79 358  eP      P       14 10 53.4 -1.6
      comp=Z,60nm,1.8s
IKP   In-Ko-Pah, Jac    56.79 356   P      P       14 10 55.2 -0.1
      baz=175
BAR   Barrett           56.87 355  eP      P       14 10 54.5 -1.2
      comp=Z,27nm,1.1s
MONP2 Monument Peak     57.06 355   P      P       14 10 57.1 -0.1
      baz=175
SWSC  Sam W. Stewart    57.06 356   P      P       14 10 57.1 +0.1
      baz=176
GLA   Glamis            57.11 357   P      P       14 10 57.6 +0.1
      baz=177
SCI2  San Clemente I    57.34 353   P      P       14 10 59.0  0.0
      baz=173
WHTX  Lake Whitney,     57.60  14   P      P       14 11 00.0 -0.8
      baz=195
CIS   Catalina Islan    57.74 353   P      P       14 11 01.5 -0.3
      baz=173
BC3   Big Chuckawall    57.75 356   P      P       14 11 01.6 -0.5
      baz=176,SNR=14
ABTX  Abilene, Hawle    57.76  12  eP      P       14 11 00.6 -1.4
      comp=Z,14nm,1.0s
ABTX  Abilene, Hawle    57.76  12   P      P       14 11 01.4 -0.6
      baz=193
PFO   Pinyon Flats O    57.77 355   P      P       14 11 01.9 -0.3
      comp=Z,1.2nm,0.4s,baz=199,slow=6.8,SNR=3.3
PFO   Pinyon Flats O    57.77 355  eP      P       14 11 01.9 -0.3
      comp=Z,16nm,1.4s
PFO   Pinyon Flats O    57.77 355   P      P       14 11 02.1 -0.1
      baz=175
Y12C  Blythe            57.80 357  eP      P       14 11 01.1 -1.1
      comp=Z,27nm,1.3s
Y12C  Blythe            57.80 357   P      P       14 11 01.9 -0.3
      baz=177
BB19B Bebedouro         57.90 100  eP      P       14 11 03.6 +0.2
NATX  Nacogdoches       58.07  17   P      P       14 11 04.4 +0.2
      baz=198
BELC  Belle Mtn. Jos    58.13 356   P      P       14 11 03.8 -0.9
      baz=175,SNR=9.3
059Z  Ave Maria         58.20  32   P      P       14 11 05.0 -0.2
      baz=213
Y22D  IRIS PASSCAL I    58.23   5   P      P       14 11 05.0 -0.5
      baz=185
IRM   Iron Mountain     58.23 357   P      P       14 11 05.1 -0.2
      baz=176,SNR=8.3
LENM  Lemitar           58.31   5  eP      P       14 11 05.5 -0.5
BNM   Barren Site       58.33   5  eP      P       14 11 04.5 -1.7
PDMCI Parker Dam,Lak    58.33 358   P      P       14 11 06.3 +0.4
      baz=177
RCLB  Rio Claro- Sao    58.42 102  eP      P       14 11 09.0 +1.9
SCZ2  Santa Cruz Isl    58.47 352   P      P       14 11 06.1 -0.8
      baz=172
BFSC  Mount Baldy Ra    58.50 354   P      P       14 11 06.9 -0.3
      baz=174
MWC   Mount Wilson      58.52 354  eP      P       14 11 06.0 -1.5
      comp=Z,13nm,0.9s
MWC   Mount Wilson      58.52 354  eP      P       14 11 06.0 -1.5
MWC                                pmax    pmax
      comp=Z,13nm,0.9s
X18A  Snowflake         58.53   2  eP      P       14 11 06.1 -1.5
      comp=Z,19nm,1.0s
MSTX  Muleshoe          58.56   9  eP      P       14 11 06.0 -1.6
      comp=Z,23nm,1.0s
MSTX  Muleshoe          58.56   9   P      P       14 11 06.1 -1.6
      baz=190,SNR=9.7
VAO   Valinhos          58.77 103  eP      P       14 11 10.8 +1.2
NEE2  Needles Airpor    58.81 357   P      P       14 11 09.2 -0.1
      baz=177
059A  Moore Haven       58.87  32   P      P       14 11 09.3 -0.6
      baz=213
GMRC  Granite Mounta    58.88 356   P      P       14 11 09.9 -0.1
      baz=176
SBC   Santa Barbara     58.92 352   P      P       14 11 08.9 -1.1
      baz=172
HEC   Hector,Ludlow     58.97 356   P      P       14 11 10.3 -0.2
      baz=175
958A  Wauchula          59.10  31   P      P       14 11 11.8 +0.4
      baz=212
W13A  Hualapai Mount    59.11 358  eP      P       14 11 11.1 -0.6
      comp=Z,59nm,2.0s
W18A  Petrified Fore    59.12   2   P      P       14 11 11.7  0.0
      baz=182
ANMO  Albuquerque       59.13   5   P      P       14 11 10.8 -1.0
      comp=Z,1.1nm,0.6s,baz=176,slow=8.6,SNR=3.4
ANMO  Albuquerque       59.13   5  eP      P       14 11 09.9 -1.8
      comp=Z,6.9nm,1.4s
ANMO  Albuquerque       59.13   5  i P     P       14 11 10.2 -1.5
ANMO                               pmax    pmax
      comp=Z,3.0nm,1.1s
ANMO  Albuquerque       59.13   5   P      P       14 11 11.0 -0.7
      baz=186
LDFC  Landfair          59.15 357  eP      P       14 11 11.8  0.0
      comp=Z,74nm,1.1s
EDW2  Edwards Air Fo    59.16 354   P      P       14 11 11.5 -0.3
      baz=173
PKM   Mcpherson Peak    59.37 352   P      P       14 11 13.2 -0.2
      baz=172
GSC   Goldstone, Bar    59.48 355  eP      P       14 11 12.4 -1.6
      comp=Z,21nm,1.0s
GSC   Goldstone, Bar    59.48 355  eP      P       14 11 12.4 -1.6
GSC                                pmax    pmax
      comp=Z,21nm,1.0s
GSC   Goldstone, Bar    59.48 355   P      P       14 11 13.7 -0.3
      baz=175,SNR=11
WUAZ  Wupatki           59.49   0  eP      P       14 11 13.1 -1.1
      comp=Z,54nm,1.8s
WUAZ  Wupatki           59.49   0   P      P       14 11 13.8 -0.4
      baz=180
TUQ   Turquoise Moun    59.55 356   P      P       14 11 14.3 -0.3
      baz=176
449A  Pace              59.55  24   P      P       14 11 13.7 -0.8
      baz=206
AMTX  Amarillo          59.62  10  eP      P       14 11 13.9 -1.1
      comp=Z,10.0nm,0.9s
AMTX  Amarillo          59.62  10   P      P       14 11 14.1 -0.9
      baz=191
DWPF  Disney Wildern    59.70  31  eP      P       14 11 15.4 -0.1
      comp=Z,91nm,1.2s
LRMC  Laurel Mtn Rad    59.73 354   P      P       14 11 15.4 -0.4
      baz=174,SNR=20
SMMC  Simmler           59.81 352   P      P       14 11 16.7 +0.4
      baz=171
PARB  Paraibuna         59.88 104  eP      P       14 11 19.1 +2.0
WMOK  Wichita Mounta    59.97  12  eP      P       14 11 15.8 -1.6
      comp=Z,5.2nm,0.9s
WMOK  Wichita Mounta    59.97  12  eP      P       14 11 15.8 -1.6
WMOK                               pmax    pmax
      comp=Z,5.0nm,0.9s
WMOK  Wichita Mounta    59.97  12   P      P       14 11 15.5 -1.8
      baz=194,SNR=5.7
ISA   Isabella, Lake    59.99 354  eP      P       14 11 17.3 -0.2
      comp=Z,21nm,1.3s
ISA   Isabella, Lake    59.99 354   P      P       14 11 17.3 -0.2
      baz=173
451A  Vernon            59.99  26   P      P       14 11 16.9 -0.6
      baz=207
Z41A  Richland Creek    59.99  18   P      P       14 11 16.8 -0.7
      baz=200
BDFB  Brasilia          60.01  95   P      P       14 11 18.6 +0.4
      comp=Z,18nm,0.9s,baz=255,slow=6.4,SNR=14
BDFB                               LR      LR      14 35 16.8
      comp=Z,490nm,18.5s,baz=262,slow=34
BDFB  Brasilia          60.01  95  eP      P       14 11 17.5 -0.7
      comp=Z,27nm,1.1s
BDFB  Brasilia          60.01  95  eP      P       14 11 17.5 -0.7
BDFB                               pmax    pmax
      comp=Z,27nm,1.1s
SHOC  Shoshone, Teco    60.03 356   P      P       14 11 17.2 -0.5
      baz=175
349A  Repton            60.09  24   P      P       14 11 18.0 -0.2
      baz=206
757A  Oxford            60.10  30   P      P       14 11 18.1 -0.3
      baz=211
553A  Crawfordville     60.15  27   P      P       14 11 19.5 +0.9
      baz=209
VES   Vestal, Richgr    60.23 353   P      P       14 11 18.6 -0.4
      baz=172
PAGB  Antelope Grade    60.26 352  eP      P       14 11 18.3 -1.0
      comp=Z,28nm,1.2s
656A  Willston          60.26  29  eP      P       14 11 18.6 -0.8
      comp=Z,46nm,1.2s
656A  Willston          60.26  29   P      P       14 11 18.9 -0.5
      baz=211
MPMC  Manual Prospec    60.29 355   P      P       14 11 19.6 -0.1
      baz=174,SNR=15
554A  Perry             60.38  28   P      P       14 11 19.2 -0.9
      baz=210
U15A  North Rim         60.41 359  eP      P       14 11 19.4 -1.2
      comp=Z,26nm,1.3s
452A  Marianna          60.42  26   P      P       14 11 20.7 +0.2
      baz=208
350A  Dozier            60.48  25   P      P       14 11 20.2 -0.6
      baz=207
PMNB  Patos De Minas    60.52  98  eP      P       14 11 23.2 +1.5
758A  Lake Helen        60.52  31   P      P       14 11 20.0 -1.2
      baz=212
SHPR  Sheep Range       60.57 357  eP      P       14 11 21.5 -0.1
      comp=Z,39nm,1.2s
FURC  Furnace Creek,    60.64 355   P      P       14 11 21.6 -0.3
      baz=175
249A  Camden            60.68  24   P      P       14 11 21.6 -0.6
      baz=206
555A  McAlpin           60.72  28   P      P       14 11 22.1 -0.3
      baz=210
CWC   Cottonwood Cre    60.72 354   P      P       14 11 22.3 -0.3
      baz=173
657A  Interlachen       60.74  30   P      P       14 11 22.3 -0.4
      baz=211
453A  Whigham           60.78  27   P      P       14 11 22.3 -0.6
      baz=209
556A  Lake Butler       60.86  29   P      P       14 11 23.5 +0.1
      baz=211,SNR=7.0
454A  Quitman           60.95  28   P      P       14 11 23.5 -0.5
      baz=209
MIAR  Mount Ida         60.99  17  eP      P       14 11 23.0 -1.3
      comp=Z,11nm,1.1s
MIAR  Mount Ida         60.99  17  eP      P       14 11 23.0 -1.3
MIAR                               pmax    pmax
      comp=Z,11nm,1.1s
MIAR  Mount Ida         60.99  17   P      P       14 11 23.4 -0.9
      baz=199,SNR=8.2
250A  Grady             61.00  25   P      P       14 11 24.2 -0.2
      baz=207
KNB   Kanab             61.00 359  eP      P       14 11 23.9 -0.7
      comp=Z,24nm,1.3s
LCMT  Little Creek M    61.00 359  eP      P       14 11 23.5 -1.0
      comp=Z,11nm,1.3s
ESAR  Angra dos Reis    61.01 104  eP      P       14 11 27.1 +2.3
TPNV  Topopah Spring    61.08 356  eP      P       14 11 24.6 -0.4
      comp=Z,17nm,1.0s
TPNV  Topopah Spring    61.08 356  eP      P       14 11 24.6 -0.4
TPNV                               pmax    pmax
      comp=Z,17nm,1.0s
TPNV  Topopah Spring    61.08 356   P      P       14 11 25.4 +0.3
      baz=175,SNR=15
352A  Blakely           61.08  26  eP      P       14 11 24.2 -0.8
      comp=Z,44nm,1.0s
352A  Blakely           61.08  26   P      P       14 11 24.4 -0.5
      baz=208
148A  Greensboro        61.12  23   P      P       14 11 24.9 -0.2
      baz=205
X40A  Basin Creek Fa    61.14  18   P      P       14 11 24.2 -1.1
      baz=200
557A  Orange Park       61.17  30   P      P       14 11 25.2 -0.3
      baz=211
GRAC  Grapevine Rang    61.21 355   P      P       14 11 26.0 +0.3
      baz=174
455A  Stateville        61.23  28   P      P       14 11 25.3 -0.6
      baz=210
353A  Camilla           61.25  27   P      P       14 11 25.5 -0.6
      baz=209
MVCO  Mesa Verde        61.26   3  eP      P       14 11 25.1 -1.2
      comp=Z,48nm,1.4s
MVCO  Mesa Verde        61.26   3   P      P       14 11 25.9 -0.5
      baz=183,SNR=7.2
BSCB  Bom Sucesso       61.28 102  eP      P       14 11 29.1 +2.4
TIN   Tinemaha, Big     61.34 354   P      P       14 11 26.9 +0.2
      baz=173
149A  Jones             61.36  24   P      P       14 11 26.6 -0.2
      baz=206,SNR=5.9
PKCU  Pink Cliffs       61.42 359  eP      P       14 11 26.5 -1.0
      comp=Z,64nm,1.3s
251A  Midway            61.43  25   P      P       14 11 26.9 -0.4
      baz=207
T25A  Trinidad          61.49   7   P      P       14 11 27.1 -0.8
      baz=188
CCUT  Cedar City        61.54 358  eP      P       14 11 27.7 -0.6
      comp=Z,22nm,1.0s
W39A  Magazine          61.55  17  eP      P       14 11 27.2 -0.9
      comp=Z,21nm,1.3s
W39A  Magazine          61.55  17   P      P       14 11 27.1 -0.9
      baz=199,SNR=6.9
SZCU  Shurtz Canyon     61.58 359  eP      P       14 11 27.8 -0.7
      comp=Z,19nm,1.2s
TIGA  Tifton            61.59  27   P      P       14 11 27.9 -0.5
      baz=209
252A  Lumpkin           61.61  26   P      P       14 11 27.9 -0.6
      baz=208
150A  Eclectic          61.65  25   P      P       14 11 28.4 -0.4
      baz=207,SNR=8.1
LRAL  Lakeview Retre    61.67  23  eP      P       14 11 28.3 -0.6
      comp=Z,24nm,1.1s
LRAL  Lakeview Retre    61.67  23   P      P       14 11 28.6 -0.3
      baz=206,SNR=8.6
X43A  Marvell           61.73  19   P      P       14 11 28.7 -0.6
      baz=202
TUL1  Leonard           61.74  15  eP      P       14 11 27.7 -1.6
      comp=Z,32nm,1.1s
TUL1  Leonard           61.74  15   P      P       14 11 28.4 -0.9
      baz=196
355A  Pearson           61.82  28   P      P       14 11 29.5 -0.4
      baz=210
151A  Opelika           61.85  25   P      P       14 11 29.4 -0.7
      baz=207
S22A  4UR Ranch, Cre    61.88   4   P      P       14 11 30.0 -0.7
      baz=185
253A  Americus          61.91  26   P      P       14 11 30.0 -0.6
      baz=209
W41B  Gary Mavity, V    61.95  18   P      P       14 11 30.4 -0.3
      baz=200,SNR=11
MLAC  Mammoth, Mammo61.97 354       P      P       14 11 30.5 -0.6
      baz=173
OMMB  Old Mammoth Mi    61.97 353  eP      P       14 11 29.9 -1.3
      comp=Z,15nm,1.4s
SDCO  Great Sand Dun    61.99   6  eP      P       14 11 29.5 -1.8
      comp=Z,6.5nm,0.6s
SDCO  Great Sand Dun    61.99   6   P      P       14 11 30.6 -0.7
      baz=186,SNR=23
Z49A  Columbiana        61.99  24   P      P       14 11 30.5 -0.5
      baz=206,SNR=19
MDPB  Devils Postpil    62.00 353  eP      P       14 11 28.6 -2.8
      comp=Z,12nm,1.5s
MTPU  Mount Pierson     62.02 360  eP      P       14 11 29.6 -2.0
      comp=Z,49nm,1.9s
WHAR  Wooly Hollow      62.04  18  eP      P       14 11 28.1 -3.2
      comp=Z,15nm,1.1s
VAS01 Vassouras-RJ      62.10 103  eP      P       14 11 34.5 +2.3
356A  Blackshear        62.12  29   P      P       14 11 31.4 -0.5
      baz=211
254A  Abbeville         62.16  27   P      P       14 11 30.9 -1.3
      baz=209,SNR=6.5
OXF   Oxford            62.19  21   P      P       14 11 31.2 -1.2
      baz=203
152A  Waverly Hall      62.21  26   P      P       14 11 32.4 -0.2
      baz=208
Z50A  Ashland           62.27  24  eP      P       14 11 31.5 -1.5
      comp=Z,16nm,0.9s
Z50A  Ashland           62.27  24   P      P       14 11 32.4 -0.6
      baz=207,SNR=6.8
Y48A  Jasper            62.40  23   P      P       14 11 32.8 -1.1
      baz=205,SNR=5.6
R11A  Troy Canyon, C    62.43 357  eP      P       14 11 32.8 -1.3
      comp=Z,23nm,1.5s
R11A  Troy Canyon, C    62.43 357   P      P       14 11 34.0 -0.1
      baz=176,SNR=9.6
255A  Hazlehurst        62.48  28   P      P       14 11 34.5 +0.1
      baz=210
X46A  Booneville        62.50  21   P      P       14 11 33.7 -0.8
      baz=204
HHAR  Hobbs             62.54  16  eP      P       14 11 33.5 -1.3
      comp=Z,9.7nm,0.9s
PSUT  Pine Spring       62.54 358  eP      P       14 11 34.2 -0.7
      comp=Z,14nm,1.0s
CMB   Columbia Colle    62.55 352  eP      P       14 11 33.8 -1.0
      comp=Z,21nm,1.1s
CMB   Columbia Colle    62.55 352  eP      P       14 11 33.8 -1.0
CMB                                pmax    pmax
      comp=Z,21nm,1.1s
153A  Fort Valley       62.55  26   P      P       14 11 34.2 -0.6
      baz=209
Z51A  Franklin          62.61  25   P      P       14 11 34.5 -0.7
      baz=207
Y49A  Blount Mountai    62.63  24  eP      P       14 11 34.5 -0.9
      comp=Z,21nm,0.9s
Y49A  Blount Mountai    62.63  24   P      P       14 11 34.7 -0.6
      baz=206,SNR=9.3
FCAR  Ozark Folk Cen    62.65  18  eP      P       14 11 34.1 -1.3
      comp=Z,19nm,1.4s
NV11  Mina Array Sit    62.70 354  eP      P       14 11 34.7 -1.2
      comp=Z,2.0nm,1.0s
NV01  Mina Array Sit    62.71 354  eP      P       14 11 36.3 +0.3
NVAR  Mina Array Bea    62.71 354   P      P       14 11 36.3 +0.3
      comp=Z,13nm,0.8s,baz=181,slow=9.1,SNR=40
NVAR                               LR      LR      14 33 21.6
      comp=Z,193nm,18.0s,baz=180,slow=31
256A  Glennville        62.78  28   P      P       14 11 35.8 -0.6
      baz=211
Z52A  Williamson        62.79  26   P      P       14 11 35.6 -0.8
      baz=208,SNR=8.7
SMTB  Santa Maria do    62.81  88  eP      P       14 11 38.5 +1.5
154A  Montrose          62.81  27   P      P       14 11 36.0 -0.6
      baz=209
U40A  Yellville         62.89  17   P      P       14 11 36.1 -1.0
      baz=199,SNR=11
WAKR  Walker            62.90 353  eP      P       14 11 36.6 -0.7
      comp=Z,26nm,1.5s
Y50A  Piedmont          62.91  24   P      P       14 11 36.4 -0.7
      baz=207,SNR=9.0
RYN   Ryan              62.93 354  eP      P       14 11 36.5 -1.0
      comp=Z,64nm,1.9s
X48A  Hartselle         62.93  23  eP      P       14 11 36.2 -1.1
      comp=Z,12nm,1.0s
X48A  Hartselle         62.93  23   P      P       14 11 36.4 -0.9
      baz=205
PLAL  Pickwick Lake     63.06  22  eP      P       14 11 36.4 -1.8
      comp=Z,15nm,0.9s
155A  Kite              63.09  27   P      P       14 11 38.0 -0.4
      baz=210,SNR=9.2
SRU   San Rafael Swe    63.09   1  eP      P       14 11 36.6 -1.9
      comp=Z,22nm,1.0s
SRU   San Rafael Swe    63.09   1  eP      P       14 11 36.6 -1.9
SRU                                pmax    pmax
      comp=Z,23nm,1.0s
W46A  Michie            63.10  21   P      P       14 11 36.8 -1.6
      baz=204
DUB01 Friburgo-RJ       63.11 103  eP      P       14 11 41.1 +2.1
257A  Skidaway Islan    63.16  29   P      P       14 11 37.0 -1.9
      baz=211
Y51A  Rockmart          63.16  25   P      P       14 11 37.8 -1.1
      baz=207,SNR=7.5
Z53A  Monticello        63.20  26   P      P       14 11 38.4 -0.8
      baz=209,SNR=7.8
Q24A  Divide            63.23   6   P      P       14 11 38.8 -0.8
      baz=187
TMUT  Trail Mountain    63.27   0  eP      P       14 11 38.5 -1.4
      comp=Z,16nm,1.3s
KVN   Kaiserville       63.31 354  eP      P       14 11 39.1 -0.9
      comp=Z,32nm,1.1s
YERR  Yerington         63.35 353  eP      P       14 11 40.1 -0.2
      comp=Z,36nm,1.0s
GOGA  Godfrey           63.36  26  eP      P       14 11 39.1 -1.1
      comp=Z,20nm,1.0s
GOGA  Godfrey           63.36  26  eP      P       14 11 39.1 -1.1
GOGA                               pmax    pmax
      comp=Z,20nm,1.0s
GOGA  Godfrey           63.36  26   P      P       14 11 39.4 -0.8
      baz=209
X50B  Fort Payne        63.45  24   P      P       14 11 39.7 -1.1
      baz=207
P17A  Butcher Ranch,    63.45   1  eP      P       14 11 39.5 -1.4
      comp=Z,29nm,1.2s
Z54A  Sparta            63.46  27   P      P       14 11 40.0 -0.9
      baz=209,SNR=10
PNTR  Pine Nut          63.50 353  eP      P       14 11 40.0 -1.2
      comp=Z,25nm,0.8s
AFDM  Forest Hills D    63.52 352  eP      P       14 11 39.6 -1.6
      comp=Z,30nm,1.4s
RUBR  Rubicon Trail     63.52 353  eP      P       14 11 40.5 -0.9
      comp=Z,45nm,1.1s
Y52A  Lilburn           63.52  26  eP      P       14 11 40.2 -1.1
Y52A  Lilburn           63.52  26   P      P       14 11 40.7 -0.5
      baz=208,SNR=5.6
156A  Sylvania          63.53  28   P      P       14 11 41.4  0.0
      baz=211
KSCO  Kaye Shedlock'    63.55   8   P      P       14 11 41.2 -0.3
      baz=189
Y53A  Monroe            63.70  26   P      P       14 11 41.7 -0.8
      baz=209
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Z55A	Blythe baz=210	63.74	27	P	P	14 11 42.4	-0.4
157A	Early Branch baz=211	63.77	29	P	P	14 11 43.0	+0.1
CBKS	Cedar Bluff baz=192	63.77	10	P	P	14 11 42.2	-0.6
W49A	Belvidere baz=206,SNR=6.3	63.81	23	P	P	14 11 42.2	-0.9
CAM01	Campos-RJ	63.82	103	*e*P	P	14 11 45.7	+2.1
X51A	Calhoun comp=Z,14nm,0.9s	63.84	24	*e*P	P	14 11 42.2	-1.1
X51A	Calhoun baz=207	63.84	24	P	P	14 11 42.6	-0.7
NLU	North Lily Min comp=Z,27nm,1.3s	63.92	360	*e*P	P	14 11 42.5	-1.5
PBMO	Poplar Bluff comp=Z,13nm,1.0s	63.97	19	*e*P	P	14 11 43.1	-1.1
MPU	Maple Canyon comp=Z,24nm,1.3s	63.98	0	*e*P	P	14 11 42.9	-1.6
SWET	Sewanee comp=Z,21nm,1.0s	64.02	23	*e*P	P	14 11 42.6	-1.9
Y54A	Tignall baz=209,SNR=9.2	64.07	27	P	P	14 11 44.2	-0.7
PAHR	Pah Rah Range comp=Z,22nm,1.4s	64.08	353	*e*P	P	14 11 43.7	-1.4
158A	Hollywood baz=212	64.17	29	P	P	14 11 45.1	-0.5
DUG	Dugway, Tooele comp=Z,18nm,1.0s	64.17	359	*e*P	P	14 11 44.3	-1.3
DUG	Dugway, Tooele baz=179	64.17	359	P	P	14 11 45.4	-0.2
V48A	Smith Brothers comp=Z,23nm,1.0s	64.17	22	*e*P	P	14 11 43.8	-1.7
V48A	Smith Brothers baz=205,SNR=6.7	64.17	22	P	P	14 11 44.4	-1.2
O20A	White River Ci baz=184	64.18	3	P	P	14 11 45.3	-0.4
WVT	Waverly comp=Z,14nm,1.0s	64.19	21	*e*P	P	14 11 44.0	-1.6
WVT	Waverly	64.19	21	*e*P	P	14 11 44.0	-1.6
WVT	comp=Z,14nm,1.0s			pmax	pmax		
WVT	Waverly baz=204	64.19	21	P	P	14 11 44.4	-1.2
W50A	Signal Mountai comp=Z,12nm,0.8s	64.23	24	*e*P	P	14 11 44.4	-1.6
W50A	Signal Mountai baz=207	64.23	24	P	P	14 11 45.1	-0.9
X52A	Dahlonega baz=208,SNR=6.6	64.24	25	P	P	14 11 45.5	-0.6
X53A	Estanollee baz=209	64.38	26	P	P	14 11 46.4	-0.6
W51A	Cleveland baz=207,SNR=6.6	64.40	24	P	P	14 11 46.0	-1.1
Z57A	Bowman baz=211	64.42	29	P	P	14 11 46.3	-0.9
Y55A	Saluda baz=210,SNR=9.0	64.48	27	P	P	14 11 47.0	-0.5
NHSC	New Hope baz=212	64.49	29	P	P	14 11 47.1	-0.6
V49A	McMinnville baz=206	64.52	23	P	P	14 11 46.7	-1.1
HODGE	Hodges comp=Z,21nm,1.1s	64.57	27	*e*P	P	14 11 47.4	-0.7
JLU	Jordanelle comp=Z,85nm,1.9s	64.57	0	*e*P	P	14 11 47.1	-1.3
Y56A	Pelion baz=211	64.59	28	P	P	14 11 47.6	-0.7
BMN	Battle Mountai	64.61	355	*e*P	P	14 11 47.4	-1.1
BMN	Battle Mountai	64.61	355	*e*P	P	14 11 47.4	-1.1
KSU1	Kansas State U baz=195	64.62	13	P	P	14 11 47.1	-1.3
SBA	Scott Base comp=Z,29nm,1.3s	64.64	193	*e*P	P	14 11 48.1	0.0
W52A	Murphy comp=Z,30nm,1.1s	64.66	25	*e*P	P	14 11 47.5	-1.2
W52A	Murphy baz=208,SNR=7.7	64.66	25	P	P	14 11 48.2	-0.6
CLTN	Cedars of Leba comp=Z,8.9nm,1.2s	64.66	23	*e*P	P	14 11 47.6	-1.1
RPZ	Rata Peaks comp=Z,11nm,0.9s,baz=66,slow=2.2,SNR=3.8	64.70	231	P	P	14 11 49.5	+0.5
V50A	Pikevile baz=207,SNR=12	64.73	24	P	P	14 11 48.3	-0.8
CPCT	Cooper Cave comp=Z,24nm,1.2s	64.75	24	*e*P	P	14 11 48.2	-1.0
X54A	Belton baz=210	64.79	27	P	P	14 11 48.5	-1.1
ELK	Elko comp=Z,4.4nm,1.0s,baz=202,slow=4.8,SNR=9.3	64.80	357	P	P	14 11 50.0	+0.2
ELK	Elko comp=Z,12nm,1.1s	64.80	357	*e*P	P	14 11 48.6	-1.2
Z58A	St. Stephen baz=212	64.85	29	P	P	14 11 49.5	-0.5
BGU	Big Grassy Mou comp=Z,53nm,1.7s	64.91	359	*e*P	P	14 11 48.6	-1.8
CCM	Cathedral Cave comp=Z,23nm,1.0s	64.92	18	*e*P	P	14 11 47.9	-2.5
CCM	Cathedral Cave	64.92	18	*e*P	P	14 11 47.9	-2.5
CCM	comp=Z,23nm,1.0s			pmax	pmax		
CCM	Cathedral Cave baz=201	64.92	18	P	P	14 11 49.2	-1.1
BG3	Lake Jocassee comp=Z,18nm,1.0s	64.96	26	*e*P	P	14 11 49.9	-0.8
O02D	Mt. Diablo Mer baz=169	64.98	351	P	P	14 11 49.5	-1.3
Z59A	Georgetown, SC baz=213	65.01	30	P	P	14 11 50.6	-0.4
W53A	Cullowhee baz=209,SNR=5.5	65.02	26	P	P	14 11 50.7	-0.6
JSC	Jenkinsville comp=Z,27nm,1.2s	65.03	28	*e*P	P	14 11 50.3	-0.8
JSC	Jenkinsville	65.03	28	*e*P	P	14 11 50.3	-0.8
JSC	comp=Z,27nm,1.2s			pmax	pmax		
X55A	Gracelyn & Ava baz=210,SNR=6.4	65.03	27	P	P	14 11 50.6	-0.5
N23A	Red Feather La baz=186	65.08	5	P	P	14 11 51.3	-0.4
V51A	Loudon comp=Z,23nm,1.1s	65.12	24	*e*P	P	14 11 50.3	-1.4
V51A	Loudon baz=208,SNR=5.7	65.12	24	P	P	14 11 50.8	-0.9
KMRM	Mail Ridge comp=Z,40nm,1.0s	65.17	350	*e*P	P	14 11 51.1	-0.9
S44A	Carbondale baz=203	65.17	19	P	P	14 11 50.6	-1.3
Y57A	Sumter baz=212	65.17	28	P	P	14 11 51.5	-0.6
SJMB	Sao Joao De Ma	65.20	100	*e*P	P	14 11 53.0	+0.3
SIUC	Southern Illin comp=Z,24nm,1.1s	65.20	19	*e*P	P	14 11 50.7	-1.4
T47A	Sharon Grove comp=Z,21nm,1.0s	65.21	21	*e*P	P	14 11 51.0	-1.2
T47A	Sharon Grove baz=205	65.21	21	P	P	14 11 51.1	-1.2
TKL	Tuckaleechee C comp=Z,8.7nm,1.0s,baz=185,slow=10.0,SNR=7.9	65.21	25	P	P	14 11 51.4	-0.9
U49A	Red Boiling Sp baz=206,SNR=5.8	65.23	23	P	P	14 11 51.0	-1.5
PAULI	Pauline comp=Z,20nm,0.9s	65.26	27	*e*P	P	14 11 51.7	-1.0
X56A	White Oak baz=211	65.30	28	P	P	14 11 52.5	-0.5
W54A	Cherokee Point baz=210	65.34	26	P	P	14 11 52.6	-0.6
WDC	Whiskeytown Da comp=Z,40nm,1.4s	65.34	351	*e*P	P	14 11 52.1	-0.9
WDC	Whiskeytown Da	65.34	351	*e*P	P	14 11 52.1	-0.9
WDC	comp=Z,40nm,1.4s			pmax	pmax		
Y58A	Scranton baz=212	65.39	29	P	P	14 11 53.3	-0.2
V52A	Sevierville baz=208	65.44	25	P	P	14 11 52.7	-1.2
BSFB	Barra de Sao F	65.46	100	*e*P	P	14 11 56.5	+2.1
U50A	Jamestown baz=207	65.48	24	P	P	14 11 52.7	-1.4
OGNE	Ogallala baz=190	65.53	8	P	P	14 11 52.7	-1.7
HWUT	Hardware Ranch comp=Z,5.9nm,0.9s	65.57	0	*e*P	P	14 11 53.3	-1.5
V53A	Saluda comp=Z,26nm,1.1s	65.60	26	*e*P	P	14 11 53.7	-1.2
V53A	Saluda baz=209,SNR=7.2	65.60	26	P	P	14 11 54.3	-0.6
BIRD	Birdtown, Kers comp=Z,36nm,1.1s	65.68	28	*e*P	P	14 11 54.4	-0.9
X57A	Johnson Farm, baz=212	65.68	28	P	P	14 11 54.9	-0.5
RIB01	Linhares ES	65.71	101	*e*P	P	14 11 57.5	+1.5
KMSC	Kings Mountain comp=Z,17nm,1.1s	65.74	27	*e*P	P	14 11 54.7	-1.0
KMSC	Kings Mountain baz=210	65.74	27	P	P	14 11 55.3	-0.5
N02D	Trinity Center baz=169	65.75	351	P	P	14 11 54.9	-0.9
U51A	La Follette baz=208,SNR=5.9	65.76	24	P	P	14 11 54.9	-1.0
KHMM	Horse Mountain comp=Z,70nm,1.1s	65.81	350	*e*P	P	14 11 54.8	-1.4
Y59A	Loris baz=213	65.82	30	P	P	14 11 55.8	-0.5
T49A	Edmonton comp=Z,17nm,1.2s	65.85	23	*e*P	P	14 11 54.8	-1.6
T49A	Edmonton baz=206	65.85	23	P	P	14 11 56.6	+0.1
QSPA	South Pole Qui comp=Z,44nm,1.4s	65.86	180	*e*P	P	14 11 56.2	-0.2
U52A	Thorn Hill baz=208,SNR=5.9	66.02	25	P	P	14 11 56.5	-1.0
T50A	Nancy baz=207,SNR=5.3	66.02	23	P	P	14 11 56.3	-1.3
V54A	Nebo baz=210,SNR=15	66.03	26	P	P	14 11 57.0	-0.7
W56A	Indian Trail baz=211,SNR=6.9	66.04	28	P	P	14 11 57.0	-0.7
TZTN	Tazewell comp=Z,29nm,1.0s	66.08	25	*e*P	P	14 11 56.6	-1.3
TZTN	Tazewell baz=208,SNR=8.6	66.08	25	P	P	14 11 57.3	-0.6
X58A	Rowland baz=212	66.09	29	P	P	14 11 57.8	-0.2
Y60A	Bolivia baz=213	66.13	30	P	P	14 11 57.3	-0.9
M02C	Callahan baz=169,SNR=7.7	66.18	351	P	P	14 11 58.9	+0.3
U53A	Fall Branch baz=209,SNR=7.1	66.30	25	P	P	14 11 58.1	-1.2
T51A	Gray baz=208,SNR=5.2	66.30	24	P	P	14 11 58.3	-1.1
W57A	Gilead comp=Z,35nm,1.1s	66.31	28	*e*P	P	14 11 57.4	-2.0
W57A	Gilead baz=212,SNR=7.4	66.31	28	P	P	14 11 58.6	-0.8
MOD	Modoc Plateau comp=Z,32nm,1.0s	66.35	353	*e*P	P	14 11 58.0	-1.8
V55A	Taylorsville baz=210,SNR=15	66.40	27	P	P	14 11 59.1	-0.9
KRMB	Red Mountain	66.47	350	*e*P	P	14 11 59.1	-1.4
YBH	Yreka Blue Hor comp=Z,1.0nm,0.5s,baz=181,slow=7.9,SNR=3.1	66.49	351	P	P	14 11 59.6	-0.9
W58A	Raeford baz=212,SNR=11	66.53	29	P	P	14 12 00.6	-0.2
S49A	Springfield baz=206	66.55	23	P	P	14 11 59.5	-1.4
BGNE	Belgrade baz=194	66.57	11	P	P	14 12 00.5	-0.5
WCI	Wyandotte Cave baz=205	66.60	22	P	P	14 11 59.6	-1.6
V56A	Mocksville comp=Z,42nm,1.0s	66.66	27	*e*P	P	14 11 59.8	-1.8
V56A	Mocksville baz=211,SNR=13	66.66	27	P	P	14 12 01.0	-0.7
WVOR	Wild Horse Val comp=Z,19nm,1.0s	66.71	354	*e*P	P	14 12 00.0	-2.0
WVOR	Wild Horse Val	66.71	354	*e*P	P	14 12 00.0	-2.0
WVOR	comp=Z,19nm,1.0s			pmax	pmax		
X60A	Albert Glenn T baz=213	66.72	30	P	P	14 12 01.1	-0.9
U54A	Nelsons Funny comp=Z,61nm,1.5s	66.73	26	*e*P	P	14 12 00.8	-1.4
U54A	Nelsons Funny baz=210	66.73	26	P	P	14 12 01.1	-1.0
BW06	Boulder Array comp=Z,7.5nm,0.8s	66.76	2	*e*P	P	14 12 00.1	-2.3
BW06	Boulder Array baz=182	66.76	2	P	P	14 12 00.1	-2.3
PD31	Pinedale Array comp=Z,7.3nm,0.9s	66.76	2	*e*P	P	14 12 00.0	-2.4
PDAR	Pinedale Array comp=Z,3.3nm,0.8s,baz=172,slow=6.2,SNR=22	66.76	2	P	P	14 12 00.7	-1.8
S50A	Richmond baz=207	66.77	23	P	P	14 12 00.9	-1.4
K22A	Casper comp=Z,26nm,1.2s	66.78	4	*e*P	P	14 12 00.0	-2.5
K22A	Casper baz=185,SNR=6.6	66.78	4	P	P	14 12 01.5	-1.0
T52A	Hallie comp=Z,23nm,0.9s	66.79	25	*e*P	P	14 11 60.0	-2.5
T52A	Hallie baz=208	66.79	25	P	P	14 12 01.7	-0.7
T53A	Wise baz=209	66.85	25	P	P	14 12 02.1	-0.8
P43A	Skaggs, Pawnee baz=202	66.89	18	P	P	14 12 01.8	-1.2
L04D	Klamath Falls baz=170	66.91	351	P	P	14 12 02.2	-1.1
W59A	Clinton baz=213	67.00	29	P	P	14 12 03.1	-0.7
U55A	TA2, Sparta baz=210,SNR=7.8	67.03	26	P	P	14 12 03.3	-0.7
V57A	Coltrane Farms baz=212,SNR=11	67.03	28	P	P	14 12 03.2	-0.8
S51A	Beattyville comp=Z,11nm,1.0s	67.03	24	*e*P	P	14 12 02.4	-1.6
S51A	Beattyville baz=208	67.03	24	P	P	14 12 02.7	-1.2
R49A	Shelbyville comp=Z,22nm,1.0s	67.04	22	*e*P	P	14 12 02.2	-1.8
R49A	Shelbyville baz=206	67.04	22	P	P	14 12 02.2	-1.8
L02E	Cave Junction baz=168	67.04	350	P	P	14 12 04.0	0.0
U56A	King baz=211	67.16	27	P	P	14 12 03.9	-1.0
V58A	Windy Hill, Pi baz=212,SNR=6.2	67.23	28	P	P	14 12 04.5	-0.8
W60A	Pink Hill baz=214	67.23	30	P	P	14 12 05.0	-0.3
S52A	Salyersville baz=208	67.25	24	P	P	14 12 04.8	-0.6
T54A	Tazewell baz=210	67.30	26	P	P	14 12 04.9	-0.8
CNNC	Cliffs of the baz=213	67.31	30	P	P	14 12 05.9	+0.2
R50A	Paris comp=Z,29nm,1.3s	67.33	23	*e*P	P	14 12 04.0	-1.8
R50A	Paris baz=207	67.33	23	P	P	14 12 04.3	-1.5
REDW	Red Top Meadow comp=Z,17nm,1.1s	67.33	1	*e*P	P	14 12 04.3	-1.7
HUMO	Hull Mountain comp=Z,30nm,1.4s	67.39	351	*e*P	P	14 12 04.6	-1.6
Q48A	North Vernon baz=206	67.42	22	P	P	14 12 05.2	-1.2
TPAW	Teton Pass comp=Z,15nm,1.0s	67.46	1	*e*P	P	14 12 05.2	-1.7
N40A	Mertquake, Sal baz=200	67.48	16	P	P	14 12 05.4	-1.4
MFID	Camas Ranch comp=Z,20nm,1.1s	67.49	357	*e*P	P	14 12 05.5	-1.4
N41A	Harden Midland comp=Z,37nm,1.5s	67.51	17	*e*P	P	14 12 05.8	-1.1
N41A	Harden Midland baz=201	67.51	17	P	P	14 12 05.8	-1.1
P46A	Rosedale baz=204	67.56	20	P	P	14 12 06.4	-0.9
HLID	Hailey comp=Z,22nm,0.9s	67.58	358	*e*P	P	14 12 06.2	-1.3
HLID	Hailey baz=177,SNR=21	67.58	358	P	P	14 12 07.3	-0.2
K02D	Willamette Mer baz=168	67.58	350	P	P	14 12 05.4	-2.0
LOHW	Long Hollow comp=Z,12nm,1.1s	67.58	1	*e*P	P	14 12 04.9	-2.7
V59A	Middlesex baz=213	67.59	29	P	P	14 12 06.9	-0.7
R51A	Hillsboro baz=208	67.61	24	P	P	14 12 06.4	-1.2
J08A	Circle Bar Ran comp=Z,44nm,1.4s	67.62	355	*e*P	P	14 12 05.8	-1.9
T55A	Pulaski baz=210	67.66	26	P	P	14 12 07.2	-0.8
O44A	Mansfield baz=203	67.67	19	P	P	14 12 06.5	-1.4
U57A	Blanch baz=212,SNR=7.0	67.68	28	P	P	14 12 07.5	-0.5
MOOW	Moose Ponds comp=Z,30nm,1.8s	67.72	1	*e*P	P	14 12 06.2	-2.3
Q49A	Aurora baz=206,SNR=5.5	67.78	22	P	P	14 12 07.3	-1.3
HDIL	Hopedale comp=Z,34nm,0.9s	67.80	18	*e*P	P	14 12 07.3	-1.5
HDIL	Hopedale baz=202	67.80	18	P	P	14 12 07.9	-0.9
J05D	Fort Rock, OR baz=171	67.83	352	P	P	14 12 09.2	+0.1
IMW	Indian Meadow comp=Z,14nm,1.0s	67.87	1	*e*P	P	14 12 07.7	-1.8
BLA	Blacksburg comp=Z,41nm,1.2s	67.89	27	*e*P	P	14 12 08.0	-1.5
BLA	Blacksburg	67.89	27	*e*P	P	14 12 08.0	-1.5
BLA	comp=Z,41nm,1.2s			pmax	pmax		
BLA	Blacksburg baz=211	67.89	27	P	P	14 12 09.1	-0.4
J04D	Umpqua Nationa baz=170	67.89	352	P	P	14 12 09.1	-0.4
T56A	Rocky Mt baz=211	67.89	27	P	P	14 12 09.0	-0.5
Q50A	Georgetown baz=207	67.95	23	P	P	14 12 09.4	-0.4
U58A	Oxford baz=212	67.98	28	P	P	14 12 08.9	-1.1
R52A	Catlettsburg baz=208	68.00	24	P	P	14 12 08.9	-1.1
P48A	Milroy baz=206	68.00	22	P	P	14 12 08.1	-2.0
V60A	Jim Taylor Roa baz=214	68.03	30	P	P	14 12 09.4	-0.9
S54A	Dingess, Beckl baz=210	68.04	26	P	P	14 12 09.5	-0.9
SCIA	State Center baz=198	68.05	15	P	P	14 12 09.8	-0.6
FLWY	Flagg Ranch comp=Z,20nm,0.9s	68.05	1	*e*P	P	14 12 08.9	-1.6
T57A	Hurt comp=Z,15nm,1.0s	68.19	28	*e*P	P	14 12 09.9	-1.4
T57A	Hurt baz=212	68.19	28	P	P	14 12 10.5	-0.8
M41A	Milan baz=201	68.22	17	P	P	14 12 10.3	-1.1
YPP	Pitchstone Pla comp=Z,7.7nm,1.2s	68.24	1	*e*P	P	14 12 09.8	-2.0
R53A	Hurricane baz=209	68.25	25	P	P	14 12 10.8	-0.9
U59A	Littleton comp=Z,27nm,1.2s	68.28	29	*e*P	P	14 12 10.3	-1.6
U59A	Littleton baz=213	68.28	29	P	P	14 12 11.2	-0.7
PINE	Pine Mountain comp=Z,34nm,1.2s	68.29	353	*e*P	P	14 12 10.3	-1.8
SFIN	Lafayette comp=Z,16nm,1.0s	68.29	20	*e*P	P	14 12 09.8	-2.1
SFIN	Lafayette baz=204	68.29	20	P	P	14 12 10.2	-1.6
P49A	Miami Univ. Ec baz=206	68.31	22	P	P	14 12 10.4	-1.6
S55A	Lewisburg baz=210	68.34	26	P	P	14 12 11.7	-0.6
Q51A	Peebles comp=Z,21nm,1.0s	68.34	23	*e*P	P	14 12 10.8	-1.4
Q51A	Peebles baz=208	68.34	23	P	P	14 12 11.1	-1.1
V61A	Roper baz=214	68.36	30	P	P	14 12 11.3	-1.1
I07A	Izee comp=Z,17nm,0.8s	68.43	354	*e*P	P	14 12 11.1	-1.7
RSSD	Black Hills comp=Z,10.0nm,0.9s	68.44	6	*e*P	P	14 12 11.2	-1.8
RSSD	Black Hills	68.44	6	*e*P	P	14 12 11.2	-1.8
RSSD	comp=Z,10.0nm,0.9s			pmax	pmax		
RSSD	Black Hills baz=188	68.44	6	P	P	14 12 11.8	-1.2
T58A	Grand View Acr baz=212	68.45	28	P	P	14 12 11.9	-1.1
I04A	Tendick Farm, baz=170	68.48	352	P	P	14 12 12.6	-0.4
R54A	Victor baz=210	68.50	26	P	P	14 12 12.5	-0.8
S56A	Natural Bridge baz=211	68.64	27	P	P	14 12 13.1	-1.0
U60A	Pendleton baz=214	68.66	29	P	P	14 12 13.5	-0.8
L40A	Anamosa comp=Z,33nm,1.0s	68.68	16	*e*P	P	14 12 11.6	-2.7
L40A	Anamosa baz=200,SNR=6.2	68.68	16	P	P	14 12 13.6	-0.7
Q52A	Bidwell baz=209	68.69	24	P	P	14 12 13.6	-0.8
P50A	Jamestown baz=207	68.70	23	P	P	14 12 13.0	-1.4
YHH	Holmes Hill comp=Z,10nm,1.0s	68.76	1	*e*P	P	14 12 13.6	-1.5
MCMT	McKenzie Canyo	68.80	359	*e*P	P	14 12 13.8	-1.5
O48A	Farmland baz=206	68.81	21	P	P	14 12 13.4	-1.7
P51A	Williamsport comp=Z,26nm,1.2s	68.85	23	*e*P	P	14 12 13.9	-1.4
P51A	Williamsport baz=208	68.85	23	P	P	14 12 14.4	-1.0
Q53A	Leroy baz=209	68.88	25	P	P	14 12 14.7	-0.8
T59A	Double "B" Far comp=Z,21nm,1.4s	68.90	29	*e*P	P	14 12 14.8	-0.9
T59A	Double "B" Far baz=213	68.90	29	P	P	14 12 14.8	-0.9
M44A	Midewin, Midew baz=203	68.93	19	P	P	14 12 14.7	-1.1
R55A	Marlinton baz=211	68.93	26	P	P	14 12 15.0	-1.0
S57A	Dark Hollow, R comp=Z,11nm,0.6s	68.96	27	*e*P	P	14 12 14.7	-1.5
I02D	Swisshome baz=168	68.98	351	P	P	14 12 16.7	+0.6
BMO	Blue Mountains comp=Z,22nm,1.4s	69.01	356	*e*P	P	14 12 15.1	-1.3
BMO	Blue Mountains	69.01	356	*e*P	P	14 12 15.1	-1.3
BMO	comp=Z,22nm,1.4s			pmax	pmax		
O49A	Covington baz=207	69.03	22	P	P	14 12 14.8	-1.7
L42A	Oliver, Polo baz=202	69.04	17	P	P	14 12 15.0	-1.5
ECSD	EROS Data Cent comp=Z,12nm,1.1s	69.10	12	*e*P	P	14 12 15.5	-1.3
ECSD	EROS Data Cent baz=195,SNR=7.5	69.10	12	P	P	14 12 15.7	-1.1
RLMT	Red Lodge baz=182	69.12	2	P	P	14 12 15.5	-1.8
PLID	Pearl Lake comp=Z,10nm,0.8s	69.17	357	*e*P	P	14 12 15.6	-1.9
N47A	Urbana baz=205	69.19	21	P	P	14 12 15.7	-1.8
S58A	Poland Farm, P comp=Z,14nm,1.0s	69.22	28	*e*P	P	14 12 16.4	-1.3
S58A	Poland Farm, P baz=213	69.22	28	P	P	14 12 16.6	-1.1
H04D	Lebanon baz=169	69.24	352	P	P	14 12 16.7	-1.0
O50A	Cable baz=207	69.24	23	P	P	14 12 16.4	-1.4
Q54A	Coxs Mills comp=Z,34nm,1.4s	69.25	25	*e*P	P	14 12 16.4	-1.5
Q54A	Coxs Mills baz=210	69.25	25	P	P	14 12 16.9	-1.0
H04A	Detroit Lake comp=Z,12nm,1.0s	69.32	352	*e*P	P	14 12 16.8	-1.4
P52A	Corning baz=209,SNR=6.4	69.32	24	P	P	14 12 17.4	-0.9
R56A	Bull Pasture M baz=211,SNR=18	69.33	27	P	P	14 12 18.2	-0.3
DLMT	Dillon comp=Z,14nm,1.2s	69.33	359	*e*P	P	14 12 16.8	-1.7
N48A	Decatur baz=206	69.39	21	P	P	14 12 17.0	-1.7
T60A	Surry baz=214	69.40	29	P	P	14 12 18.1	-0.8
P53A	Whipple comp=Z,26nm,1.2s	69.47	25	*e*P	P	14 12 17.7	-1.6

P53A	Whipple baz=209	69.47	25	P	P	14 12 18.4	-0.8
ACSO	Alum Creek Sta baz=208	69.54	23	P	P	14 12 18.5	-1.2
BOZ	Bozeman (W) comp=Z,8.9nm,1.3s	69.56	0	*e*P	P	14 12 17.5	-2.4
BOZ	Bozeman (W)	69.56	0	*e*P	P	14 12 17.5	-2.4
BOZ	comp=Z,9.0nm,1.3s			pmax	pmax		
BOZ	Bozeman (W) baz=180	69.56	0	P	P	14 12 19.2	-0.6
G08A	Pilot Rock comp=Z,28nm,1.1s	69.58	355	*e*P	P	14 12 19.2	-0.7
R58B	Mineral comp=Z,21nm,1.4s	69.59	28	*e*P	P	14 12 18.2	-1.8
R58B	Mineral baz=213	69.59	28	P	P	14 12 19.3	-0.6
R57A	Stanardsville baz=212,SNR=5.5	69.60	27	P	P	14 12 19.3	-0.7
O51A	Pataskala baz=208	69.60	23	P	P	14 12 18.7	-1.3
M47A	Cromwell baz=205	69.65	21	P	P	14 12 19.0	-1.2
L44A	Lake County Fo baz=203	69.69	19	P	P	14 12 19.1	-1.4
N49A	Columbus Grove baz=207	69.73	22	P	P	14 12 19.4	-1.4
R58A	Rapidan baz=213	69.82	28	P	P	14 12 20.4	-1.0
O52A	Adamsville comp=Z,40nm,0.9s	69.86	24	*e*P	P	14 12 20.2	-1.4
O52A	Adamsville baz=209,SNR=6.4	69.86	24	P	P	14 12 20.6	-1.0
Q56A	Snyder Ridge, baz=211	69.96	26	P	P	14 12 21.8	-0.4
N50A	Nevada baz=208	69.96	23	P	P	14 12 21.3	-0.9
CBN	Corbin Frederi baz=213	70.01	28	P	P	14 12 21.8	-0.7
L46A	Eue Claire baz=205	70.03	20	P	P	14 12 21.3	-1.3
M48A	Edgerton baz=206	70.06	21	P	P	14 12 21.8	-1.0
K43A	Burlington baz=203	70.06	18	P	P	14 12 21.8	-1.0
P55A	Reedsville baz=211	70.10	26	P	P	14 12 22.8	-0.3
R59A	King George, V baz=213	70.12	28	P	P	14 12 22.8	-0.4
F10A	Beach Ranch, E comp=Z,14nm,0.9s	70.12	356	*e*P	P	14 12 21.9	-1.3
O53A	New Philadelph baz=209,SNR=5.7	70.20	24	P	P	14 12 23.4	-0.4
MCWV	Mont Chateau comp=Z,31nm,1.4s	70.22	26	*e*P	P	14 12 23.4	-0.5
MCWV	Mont Chateau baz=211	70.22	26	P	P	14 12 23.2	-0.6
Q57A	Strasburg baz=212,SNR=5.9	70.27	27	P	P	14 12 24.2	0.0
M49A	Liberty Center baz=207	70.30	22	P	P	14 12 23.3	-0.9
S61A	Accomac baz=215	70.33	30	P	P	14 12 24.0	-0.5
L47A	Sherwood baz=206	70.34	21	P	P	14 12 23.4	-1.1
N51A	Ashland comp=Z,22nm,0.8s	70.36	23	*e*P	P	14 12 22.9	-1.7
N51A	Ashland baz=208	70.36	23	P	P	14 12 23.4	-1.3
R60A	Leonardtown, M baz=214	70.41	29	P	P	14 12 24.7	-0.2
O54A	Avella baz=210	70.46	25	P	P	14 12 25.0	-0.3
P56A	Dayton Farm, R baz=212	70.49	26	P	P	14 12 25.0	-0.5
Q58A	Fox Den Farm, baz=213,SNR=5.7	70.50	28	P	P	14 12 25.2	-0.3
N52A	McGinn’s Farm, baz=209	70.52	24	P	P	14 12 25.0	-0.7
M50A	Fremont baz=208	70.55	22	P	P	14 12 25.0	-0.8
L48A	N Adams baz=206	70.56	21	P	P	14 12 24.6	-1.3
HRY	Holter Researc	70.68	360	*e*P	P	14 12 24.9	-1.8
M51A	Elyria baz=208	70.80	23	P	P	14 12 26.8	-0.6
K46A	Dorr baz=205	70.80	20	P	P	14 12 26.0	-1.3
F04D	Rainier, OR baz=169	70.80	352	P	P	14 12 26.8	-0.4
P57A	Homestead Farm baz=212	70.81	27	P	P	14 12 27.2	-0.2
MSO	Missoula comp=Z,10nm,1.0s	70.83	358	*e*P	P	14 12 25.5	-2.0
MSO	Missoula baz=178	70.83	358	P	P	14 12 26.7	-0.8
LAO	LASA Array comp=Z,14nm,0.9s	70.83	4	*e*P	P	14 12 25.1	-2.3
LAO	LASA Array baz=185	70.83	4	P	P	14 12 26.4	-1.0
N53A	Lisbon comp=Z,41nm,0.9s	70.83	24	*e*P	P	14 12 26.9	-0.6
N53A	Lisbon baz=210,SNR=11	70.83	24	P	P	14 12 27.4	-0.1
Q59A	Harwood baz=214	70.87	28	P	P	14 12 27.2	-0.6
I41A	Arkdale baz=201	70.90	16	P	P	14 12 27.3	-0.6
O55A	Ligonier baz=211	70.91	26	P	P	14 12 27.4	-0.6
L49A	Milan baz=207	70.93	22	P	P	14 12 27.5	-0.6
VNA3	Neumayer Olymp	70.98	160	P	P	14 12 27.5	-0.7
I42A	Draeger Farm, baz=202	71.00	17	P	P	14 12 27.7	-0.8
PLIO	Pelee Island, baz=208	71.01	23	P	P	14 12 27.5	-1.0
R61A	Willards baz=215	71.01	30	P	P	14 12 28.7	+0.1
K47A	Vermontville baz=206	71.03	20	P	P	14 12 27.5	-1.2
P58A	Pank, Wackersv baz=213	71.11	27	P	P	14 12 28.8	-0.5
AAM	Ann Arbor baz=207	71.14	22	P	P	14 12 28.6	-0.8
L50A	Kingsville baz=208	71.20	22	P	P	14 12 28.6	-1.1
E04D	Cinebar baz=170	71.21	352	P	P	14 12 29.3	-0.4
O56A	Blue Knob Stat comp=Z,39nm,1.3s	71.25	26	*e*P	P	14 12 29.7	-0.5
O56A	Blue Knob Stat baz=212,SNR=11	71.25	26	P	P	14 12 29.7	-0.5
M52A	Chesterland comp=Z,80nm,1.5s	71.28	24	*e*P	P	14 12 28.4	-1.9
M52A	Chesterland baz=209	71.28	24	P	P	14 12 29.6	-0.7
N54A	Moraine State baz=210,SNR=11	71.29	25	P	P	14 12 30.3	0.0
J45A	Montague baz=204	71.30	19	P	P	14 12 29.7	-0.6
SPMN	Marine on St. baz=198	71.30	14	P	P	14 12 29.7	-0.5
LON	Longmire comp=Z,7.8nm,0.9s	71.31	353	*e*P	P	14 12 29.0	-1.4
LON	Longmire	71.31	353	*e*P	P	14 12 29.0	-1.4
LON	comp=Z,8.0nm,0.9s			pmax	pmax		
Q60A	Greensboro baz=214	71.34	29	P	P	14 12 29.7	-0.9
K48A	Perry baz=206,SNR=6.9	71.44	21	P	P	14 12 30.5	-0.6
M53A	WI Miller and baz=210,SNR=7.6	71.44	24	P	P	14 12 30.4	-0.8
J46A	Howard City baz=205	71.44	20	P	P	14 12 30.3	-0.9
N55A	Marion Center comp=Z,35nm,1.3s	71.52	26	*e*P	P	14 12 30.6	-1.1
N55A	Marion Center baz=211,SNR=6.1	71.52	26	P	P	14 12 31.5	-0.3
O57A	Amberson baz=213,SNR=7.5	71.58	27	P	P	14 12 31.6	-0.5
P59A	Jarrettsville baz=214	71.58	28	P	P	14 12 31.5	-0.6
J47A	Sunmer comp=Z,18nm,0.8s	71.60	20	*e*P	P	14 12 30.6	-1.5
J47A	Sunmer baz=206	71.60	20	P	P	14 12 31.6	-0.5
K49A	Clarkson baz=207	71.64	22	P	P	14 12 31.6	-0.7
G39A	Holcombe baz=200,SNR=6.7	71.73	15	P	P	14 12 32.4	-0.4
O58A	Lewisberry baz=213	71.81	27	P	P	14 12 33.1	-0.3
ALLY	Alegheny Colle comp=Z,48nm,1.4s	71.82	24	*e*P	P	14 12 32.2	-1.3
SSPA	Standing Stone comp=Z,13nm,0.9s	71.84	26	*e*P	P	14 12 31.3	-2.4
SSPA	Standing Stone baz=212	71.84	26	P	P	14 12 33.1	-0.5
H43A	Windswept, Lux baz=203	71.84	18	P	P	14 12 32.6	-1.0
D04E	Lakebay baz=169	71.85	352	P	P	14 12 33.3	-0.2
M54A	Oil Creek Stat comp=Z,21nm,1.0s	71.88	25	*e*P	P	14 12 31.4	-2.5
M54A	Oil Creek Stat baz=211	71.88	25	P	P	14 12 33.3	-0.6
NBMO	Morrinhos-CE	71.89	85	*e*P	P	14 12 34.8	+0.2
N56A	West Decatur baz=212	71.91	26	P	P	14 12 33.6	-0.6
K50A	Casco baz=208	71.91	22	P	P	14 12 33.4	-0.6
G40A	Rib Lake comp=Z,28nm,1.0s	71.95	16	*e*P	P	14 12 32.0	-2.2
G40A	Rib Lake baz=201,SNR=16	71.95	16	P	P	14 12 33.5	-0.7
PAGS	Pennsylvania G comp=Z,18nm,0.8s	71.98	27	*e*P	P	14 12 33.1	-1.3
J48A	Bridge Port comp=Z,37nm,0.9s	71.99	21	*e*P	P	14 12 34.1	-0.4
J48A	Bridge Port baz=207	71.99	21	P	P	14 12 34.4	-0.1
EGMT	Eagleton comp=Z,20nm,1.0s	72.01	1	*e*P	P	14 12 33.4	-1.2
EGMT	Eagleton baz=182,SNR=11	72.01	1	P	P	14 12 33.6	-1.0
C09A	Chrisman Ranch comp=Z,34nm,1.0s	72.01	355	*e*P	P	14 12 33.4	-1.1
L53A	Girard baz=210	72.04	24	P	P	14 12 33.9	-0.9
I46A	Reed City baz=205	72.04	20	P	P	14 12 34.2	-0.6
N57A	Milroy baz=213	72.08	27	P	P	14 12 34.1	-0.9
P60A	Greenville baz=214	72.09	28	P	P	14 12 34.2	-1.0
M55A	Ridgway baz=211,SNR=8.2	72.19	25	P	P	14 12 35.3	-0.5
NLWA	Neilton Lookou comp=Z,17nm,0.9s	72.20	351	*e*P	P	14 12 32.4	-3.3
D03D	Eldon baz=169	72.24	352	P	P	14 12 35.2	-0.6
K51A	Iona Station baz=209	72.26	23	P	P	14 12 35.3	-0.7
J49A	Marlette baz=207	72.26	21	P	P	14 12 35.4	-0.7
ERPA	Erie baz=210	72.28	24	P	P	14 12 35.8	-0.5
NEW	Newport baz=149,slow=5.1,SNR=7.7	72.40	356	P	P	14 12 35.8	-1.1
NEW	Newport comp=Z,18nm,1.1s	72.40	356	*e*P	P	14 12 35.1	-1.8
NEW	Newport	72.40	356	*e*P	P	14 12 35.1	-1.8
NEW	comp=Z,18nm,1.1s			pmax	pmax		
NEW	Newport baz=175	72.40	356	P	P	14 12 36.7	-0.2
I47A	Gladwin baz=206	72.40	20	P	P	14 12 36.2	-0.7
M56A	Emporium baz=212,SNR=7.2	72.44	26	P	P	14 12 36.8	-0.4
H45A	Beulah baz=204	72.48	19	P	P	14 12 37.4	0.0
N58A	Sunbury baz=213	72.49	27	P	P	14 12 36.4	-1.1
K52A	Tillsonburg baz=210	72.59	23	P	P	14 12 37.3	-0.8
O60A	Telford baz=214	72.61	28	P	P	14 12 37.7	-0.5
MDND	Maddock baz=192	72.63	8	P	P	14 12 37.7	-0.5
L54A	Sinclairville baz=211	72.64	25	P	P	14 12 37.9	-0.5
H46A	Fife Lake baz=205	72.66	19	P	P	14 12 37.8	-0.6
DGMT	Dagmar comp=Z,31nm,1.1s	72.75	5	*e*P	P	14 12 36.7	-2.2
DGMT	Dagmar baz=187	72.75	5	P	P	14 12 38.5	-0.5
O61A	Allentown baz=215	72.80	29	P	P	14 12 38.8	-0.5
I48A	Sherman Twp baz=207	72.81	21	P	P	14 12 39.0	-0.4
SNAA	Sanae	72.84	162	P	P	14 12 38.5	-0.9
SNAA	Sanae comp=Z,17nm,1.3s	72.84	162	*e*P	P	14 12 38.3	-1.1
SNAA	Sanae	72.84	162	*e*P	P	14 12 38.3	-1.1
SNAA	comp=Z,17nm,1.3s			pmax	pmax		
B05A	Bryant baz=170	72.84	353	P	P	14 12 38.9	-0.5
LUPA	Lehigh Univers comp=Z,1.0nm,0.8s	72.86	28	*e*P	P	14 12 38.0	-1.7
I49A	Point Hope baz=207	72.88	21	P	P	14 12 38.9	-0.8
E38A	The Farm, Brul comp=Z,27nm,1.4s	72.88	14	*e*P	P	14 12 38.2	-1.5
E38A	The Farm, Brul baz=199	72.88	14	P	P	14 12 39.2	-0.5
L55A	Hinsdale baz=212,SNR=6.6	72.93	25	P	P	14 12 39.9	-0.3
F42A	Maple Grove Fa baz=202	72.94	17	P	P	14 12 39.1	-1.0
N59A	State Game Lan comp=Z,19nm,1.0s	72.95	28	*e*P	P	14 12 38.9	-1.4
N59A	State Game Lan baz=214	72.95	28	P	P	14 12 39.6	-0.7
G45A	Suttons Bay baz=205	72.97	19	P	P	14 12 39.9	-0.4
COWI	Conover comp=Z,27nm,1.0s	72.99	16	*e*P	P	14 12 39.4	-1.0
M58A	Price’s Panora baz=213,SNR=10	73.04	27	P	P	14 12 40.4	-0.4
J52A	Paris baz=210	73.08	23	P	P	14 12 40.0	-1.0
GLMI	Grayling baz=206	73.09	20	P	P	14 12 39.8	-1.2
TYNO	Tyneside baz=210	73.17	24	P	P	14 12 40.8	-0.8
K54A	Basiliko Farm, baz=211	73.20	25	P	P	14 12 41.2	-0.5
N60A	Cedar Hill Far baz=215	73.20	28	P	P	14 12 41.0	-0.8
BASO	Ashfield baz=208	73.33	22	P	P	14 12 42.1	-0.3
A04D	Lummi Island baz=170	73.36	352	P	P	14 12 42.2	-0.3
I51A	Listowel baz=209,SNR=7.9	73.37	23	P	P	14 12 42.1	-0.7
H48A	Harrisville baz=207	73.39	21	P	P	14 12 42.3	-0.5
G46A	Petoskey baz=205	73.46	19	P	P	14 12 43.2	0.0
KSPA	Keystone Colle comp=Z,13nm,1.1s	73.48	27	*e*P	P	14 12 41.9	-1.5
STCO	Saint Catharin baz=211	73.53	24	P	P	14 12 42.8	-0.9
K55A	Perry baz=212	73.54	25	P	P	14 12 43.1	-0.6
ACTO	Acton baz=210	73.55	23	P	P	14 12 42.9	-0.9
ODNJ	Ogdensburg comp=Z,14nm,1.0s	73.59	28	*e*P	P	14 12 42.3	-1.7
F45A	CMU Biological baz=205	73.60	19	P	P	14 12 43.3	-0.7
MMNY	Mt. Morris Dam comp=Z,35nm,1.2s	73.60	25	*e*P	P	14 12 41.6	-2.5
M59A	Waymart baz=214	73.61	28	P	P	14 12 43.5	-0.7
BRCO	Bruce Peninsul baz=209	73.61	22	P	P	14 12 44.1	0.0
AGMN	Agassiz Nation comp=Z,14nm,1.1s	73.64	11	*e*P	P	14 12 41.1	-3.1
AGMN	Agassiz Nation baz=195	73.64	11	P	P	14 12 43.9	-0.3
G47A	Hillman baz=206,SNR=6.2	73.64	20	P	P	14 12 44.1	-0.1
MEDO	Medina baz=211	73.76	25	P	P	14 12 44.3	-0.7
J54A	Appleton baz=211	73.78	24	P	P	14 12 44.3	-0.8
E43A	Lone Tree Farm comp=Z,20nm,1.1s	73.81	18	*e*P	P	14 12 43.1	-2.2
E43A	Lone Tree Farm baz=203,SNR=7.1	73.81	18	P	P	14 12 44.8	-0.5
PAL	Palisades baz=216	73.83	29	P	P	14 12 44.6	-0.9
L58A	Harry Jones Me baz=214	73.85	27	P	P	14 12 45.4	-0.2
I52A	Shelburne baz=210	73.90	23	P	P	14 12 45.4	-0.5
I53A	Kortright Cn E baz=210	73.90	24	P	P	14 12 45.8	0.0
BINY	Binghamton comp=Z,27nm,1.0s	73.93	27	*e*P	P	14 12 42.4	-3.6
BINY	Binghamton baz=214,SNR=5.5	73.93	27	P	P	14 12 45.5	-0.5
BMRO	Meriville Lake baz=209	74.00	22	P	P	14 12 45.3	-1.0
D41A	Chassel comp=Z,19nm,0.8s	74.03	16	*e*P	P	14 12 42.8	-3.7
D41A	Chassel baz=202	74.03	16	P	P	14 12 45.8	-0.7
M61A	Granite Spring baz=216	74.14	29	P	P	14 12 46.0	-1.3
EYMN	Ely comp=Z,24nm,1.3s	74.17	14	*e*P	P	14 12 44.8	-2.5
EYMN	Ely baz=199	74.17	14	P	P	14 12 46.5	-0.8
CLWO	Collingwood baz=210	74.19	23	P	P	14 12 46.8	-0.7
PKRO	Pickering baz=211	74.22	24	P	P	14 12 47.4	-0.2
DRWO	Darlington Wes baz=211	74.26	24	P	P	14 12 47.6	-0.3
DRCO	St. Marys Ceme baz=211	74.28	24	P	P	14 12 47.5	-0.4
E44A	Grand Marais A baz=204	74.33	18	P	P	14 12 47.9	-0.4
WLVO	Wesleyville baz=211	74.43	24	P	P	14 12 47.8	-1.1
TOBO	Tobermory, Bru baz=208	74.45	22	P	P	14 12 48.3	-0.6
H52A	Wyevale baz=210	74.50	23	P	P	14 12 48.9	-0.4
E46A	Sault Ste Mari comp=Z,33nm,1.4s	74.58	19	*e*P	P	14 12 47.1	-2.6
E46A	Sault Ste Mari baz=206	74.58	19	P	P	14 12 49.4	-0.3
KSCT	Kent School, K comp=Z,13nm,1.0s	74.60	29	*e*P	P	14 12 48.9	-1.0
F48A	Evansville baz=207	74.62	21	P	P	14 12 49.0	-0.9
RCBR	Riachuelo	74.66	90	*e*P	P	14 12 51.8	+0.8
C40A	Isle Royale Na baz=201	74.68	15	P	P	14 12 49.3	-1.0
F49A	Sandfield baz=208	74.75	21	P	P	14 12 50.2	-0.5
H53A	Bobcaygeon baz=211,SNR=7.5	74.92	24	P	P	14 12 51.2	-0.6
I55A	Frankford baz=212	74.95	25	P	P	14 12 51.4	-0.5
E47A	Iron Bridge baz=207	74.97	20	P	P	14 12 51.6	-0.4
PECO	Prince Edward baz=212	74.98	25	P	P	14 12 51.7	-0.4
KLBO	Killbear Provi baz=210	75.01	22	P	P	14 12 51.5	-0.7
D46A	Sault St. Mari baz=206	75.13	19	P	P	14 12 52.8	-0.1
DELO	Deloro Mine comp=Z,21nm,1.1s	75.23	24	*e*P	P	14 12 51.1	-2.4
DELO	Deloro Mine baz=212,SNR=6.1	75.23	24	P	P	14 12 52.8	-0.7
E48A	Lockeyer baz=208	75.35	21	P	P	14 12 53.7	-0.4
BUKO	Buck Lake baz=210	75.37	23	P	P	14 12 53.8	-0.5
G53A	Haliburton baz=211	75.37	24	P	P	14 12 53.9	-0.5
H55A	Tweed baz=212	75.42	25	P	P	14 12 53.9	-0.7
ULM	Lac du Bonnet comp=Z,9.3nm,1.1s,baz=211,slow=5.9,SNR=3.3	75.53	10	P	P	14 12 54.4	-0.7
ULM	comp=Z,147nm,19.7s,baz=181,slow=34			LR	LR	14 43 41.6	
BANO	Bancroft baz=212,SNR=8.5	75.54	24	P	P	14 12 54.8	-0.5
D47A	Chapleau baz=207,SNR=7.2	75.56	20	P	P	14 12 55.2	-0.2
F51A	Arnstein baz=210	75.61	22	P	P	14 12 55.0	-0.6
F52A	Sundridge baz=210	75.70	23	P	P	14 12 55.5	-0.7
M65A	Busby, Falmout baz=218	75.75	31	P	P	14 12 55.8	-0.7
E50A	Wahnapitae baz=209	75.76	22	P	P	14 12 56.1	-0.4
G54A	Lake Saint Pet baz=211,SNR=8.2	75.81	24	P	P	14 12 56.3	-0.5
H56A	Elgin baz=213	75.81	25	P	P	14 12 56.4	-0.5
ACCN	Adirondack Com comp=Z,39nm,1.6s	75.87	28	*e*P	P	14 12 55.5	-1.8
PLVO	Plevna comp=Z,50nm,1.8s	75.88	25	*e*P	P	14 12 56.2	-1.0
PLVO	Plevna baz=212	75.88	25	P	P	14 12 56.9	-0.3
HRV	Adam Dziewonsk baz=217	76.08	29	P	P	14 12 57.9	-0.5
NCB	Newcomb comp=Z,17nm,1.1s	76.12	27	*e*P	P	14 12 57.8	-0.8
G55A	Calabogie baz=213,SNR=7.5	76.19	25	P	P	14 12 58.4	-0.6
E51A	G1948 Merrick baz=210	76.28	22	P	P	14 12 58.9	-0.6
D49A	Beulah Townshi baz=208,SNR=5.7	76.31	21	P	P	14 12 59.1	-0.5
PEMO	Pembroke baz=212	76.35	24	P	P	14 12 58.7	-1.2
E52A	Mattawa baz=211,SNR=7.6	76.36	23	P	P	14 12 58.9	-1.0
LONY	Lake Ozonia comp=Z,17nm,1.0s	76.50	26	*e*P	P	14 12 59.3	-1.5
LONY	Lake Ozonia baz=214,SNR=9.2	76.50	26	P	P	14 13 00.2	-0.6
G57A	Newington baz=214	76.74	26	P	P	14 13 01.9	-0.2
E53A	Dumoine, Ponti baz=212,SNR=7.6	76.80	23	P	P	14 13 01.6	-0.8
F55A	Otter Lake baz=213	76.82	25	P	P	14 13 02.0	-0.6
E54A	Lac Daplat, Po baz=212,SNR=6.4	77.02	24	P	P	14 13 02.7	-0.9
D52A	ZEK Kipawa Sen baz=211,SNR=12	77.04	23	P	P	14 13 03.2	-0.6
FRNY	Flat Rock comp=Z,11nm,1.1s	77.08	27	*e*P	P	14 13 03.3	-0.8
G58A	Ormstown baz=215	77.15	26	P	P	14 13 03.8	-0.6
LBNH	Lisbon baz=217	77.30	28	P	P	14 13 04.6	-0.7
D53A	Lac Vacive, Po comp=Z,22nm,1.3s	77.38	23	*e*P	P	14 13 04.6	-1.1
D53A	Lac Vacive, Po baz=212	77.38	23	P	P	14 13 05.4	-0.3
BBB	Bella Bella comp=Z,7.2nm,1.0s,baz=220,slow=5.2,SNR=4.6	77.51	350	P	P	14 13 06.0	-0.3
D54A	Lac Fusel, La baz=212	77.82	24	P	P	14 13 07.3	-0.8
F58A	St-Lin Laurent baz=215	77.84	26	P	P	14 13 07.6	-0.6
TRQ	Mont Tremblant	77.84	25	*e*P	P	14 13 07.5	-0.9
MOQ	Mont Orford	78.02	27	*e*P	P	14 13 08.4	-1.0
PKME	Peaks-Kenny Pk baz=219	79.26	29	P	P	14 13 15.6	-0.5
LSQQ	Lebel-sur-Quev baz=212	79.32	22	P	P	14 13 15.8	-0.6
MATQ	Matagami baz=211	79.69	22	P	P	14 13 17.4	-1.0
PQI	Presque Isle comp=Z,17nm,1.0s	80.91	29	*e*P	P	14 13 24.1	-0.9
CHGQ	Chibougamau	80.96	23	P	P	14 13 24.2	-1.0

	baz=214						
BATG	Bathurst New B	82.24	29	*e*P	P	14 13 30.8	-1.3
	comp=Z,33nm,1.2s						
DLBC	Dease Lake	83.83	350	P	P	14 13 39.9	-0.2
	comp=Z,6.6nm,0.9s,baz=176,slow=9.2,SNR=5.8						
DLBC	Dease Lake	83.83	350	*e*P	P	14 13 39.0	-1.1
	comp=Z,33nm,1.3s						
CASY	Casey	84.22	196	*e*P	P	14 13 41.3	-0.8
	comp=Z,15nm,1.1s						
SYO	Syowa Base	84.63	170	⇑*e*P	P	14 13 43.2	-0.9
SYO	Syowa Base	84.63	170	⇓*i*sP	sP	14 13 47.0	-0.3
YKA	Yellowknife Ar	86.53	359	P	P	14 13 51.6	-1.8
	comp=Z,3.7nm,1.0s,baz=174,slow=5.0,SNR=8.5						
YKA				LR	LR	14 48 23.6	
	comp=Z,17nm,19.1s,baz=183,slow=33						
YKB5	Yellowknife Ar	86.53	359	*e*P	P	14 13 51.6	-1.8
MAW	Mawson	88.28	178	P	P	14 14 02.7	+0.7
	comp=Z,0.8nm,0.5s,baz=214,slow=8.1,SNR=4.1						
MAW				LR	LR	14 50 47.4	
	comp=Z,565nm,18.2s,baz=180,slow=34						
MAW	Mawson	88.28	178	*e*P	P	14 14 01.1	-1.0
	comp=Z,2.1nm,0.3s						
MAW	Mawson	88.28	178	*e*P	P	14 14 01.1	-1.0
MAW				pmax	pmax		
	comp=Z,2.0nm,0.3s						
H11S2	WAKE ISLAND Hy	90.18	290	T	T	15 53 53.3	
	baz=116,slow=75,SNR=389						
H11S1	WAKE ISLAND Hy	90.19	290	T	T	15 53 54.9	
	baz=116,slow=75,SNR=256						
H11S3	WAKE ISLAND Hy	90.19	290	T	T	15 53 54.6	
	baz=116,slow=75,SNR=220						
H11N3	WAKE ISLAND Hy	90.53	291	T	T	15 54 19.7	
	baz=117,slow=74,SNR=60						
H11N1	WAKE ISLAND Hy	90.54	291	T	T	15 54 21.2	
	baz=117,slow=74,SNR=24						
H11N2	WAKE ISLAND Hy	90.54	291	T	T	15 54 21.1	
	baz=117,slow=74,SNR=191						
DAWY	Dawson	90.71	348	*e*P	P	14 14 12.6	-0.7
	comp=Z,13nm,1.3s						
PMR	Palmer	90.75	343	*e*P	P	14 14 12.3	-1.1
	comp=Z,12nm,1.2s						
PMR	Palmer	90.75	343	*e*P	P	14 14 12.3	-1.1
PMR				pmax	pmax		
	comp=Z,12nm,1.2s						
PAX	Paxson	91.01	345	*e*P	P	14 14 13.4	-1.4
	comp=Z,10.0nm,1.4s						
PAX	Paxson	91.01	345	*e*P	P	14 14 13.4	-1.4
PAX				pmax	pmax		
	comp=Z,10.0nm,1.4s						
RIDG	Independent Ri	91.54	346	*e*P	P	14 14 16.5	-0.7
	comp=Z,6.5nm,0.9s						
SKT	Skwentna	91.72	342	*e*P	P	14 14 17.0	-1.0
	comp=Z,19nm,1.3s						
EPYK	Eagle Plains	92.37	350	P	P	14 14 20.6	-0.3
	baz=157						
PPLA	Purkeypile	92.65	343	*e*P	P	14 14 21.5	-0.9
	comp=Z,32nm,1.4s						
KTH	Kantishna Hill	92.84	344	*e*P	P	14 14 21.9	-1.3
	comp=Z,86nm,1.8s						
ILAR	Eielson Array	92.89	346	P	P	14 14 24.1	+0.7
	comp=Z,0.7nm,1.0s,baz=180,slow=7.0,SNR=6.9						
ILB	Eielson Array	92.89	346	*e*P	P	14 14 24.1	+0.7
	comp=Z,9.9nm,1.8s						
WRH	Wood River Hil	92.91	345	*e*P	P	14 14 22.8	-0.6
	comp=Z,15nm,1.4s						
COLA	College	93.19	345	*i* P	P	14 14 25.1	+0.4
COLA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TCOL	CIGO, UAF Yank	93.19	345	P	P	14 14 24.0	-0.7
	baz=147						
POKR	Poker Plat Res	93.30	346	P	P	14 14 25.1	-0.2
	baz=148						
BPAW	Bear Paw Mtn.	93.31	344	*e*P	P	14 14 22.0	-3.3
	comp=Z,7.9nm,1.1s						
INK	Inuvik	93.73	352	P	P	14 14 27.4	+0.3
	comp=Z,2.7nm,1.1s,baz=63,slow=2.3,SNR=3.1						
INK	Inuvik	93.73	352	*e*P	P	14 14 25.1	-2.0
	comp=Z,9.7nm,1.3s						
INK	Inuvik	93.73	352	*e*P	P	14 14 25.1	-2.0
INK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PMG	Port Moresby	96.21	257	*i* P	P	14 14 42.6	+2.8
TOLK	Toolik Lake Re	96.72	347	P	P	14 14 40.2	-0.7
	baz=146						
TOA1	Torodi Ar. Sit	116.41	87	*e*PKPdf	PKiKP	14 19 55.8	+0.2
TOA1				*e*PP	PP	14 21 03.2	+1.1
TORD	Torodi Ar. Bea	116.41	87	PKP	PKiKP	14 19 55.8	+0.2
	comp=Z,0.7nm,0.8s,baz=317,slow=5.2,SNR=2.8						
TORD				PP	PP	14 21 03.2	+1.1
	comp=Z,1.1nm,0.9s,baz=283,slow=6.9,SNR=3.8						
NB200	NORSAR Array S	126.77	31	*e*PKPdf	PKiKP	14 20 16.6	+2.0
NOA	NORSAR Array B	126.77	31	PKP	PKiKP	14 20 16.6	+2.0
	comp=Z,0.6nm,0.9s,baz=285,slow=2.3,SNR=2.4						
KSRS	Korea Array	127.99	299	PKP	PKiKP	14 20 20.6	+3.0
	comp=Z,0.9nm,0.8s,baz=95,slow=2.0,SNR=2.8						
KS15	Wonju Array Si	128.02	299	*e*PKPdf	PKiKP	14 20 20.6	+2.9
KSAR	Wonju Array Be	128.02	299	PKP	PKiKP	14 20 20.6	+2.9
KSAR	Wonju Array Be	128.02	299	PKIKP	PKiKP	14 20 20.6	+2.9
CLL	Collm	130.11	42	*e*PKIKP	PKiKP	14 20 27.0	+5.5
CLL	Collm	130.11	42	*e*(sPKiKP)	PKiKP	14 20 27.0	+5.5
BRG	Berggiesshubel	130.78	43	*e*P	PKiKP	14 20 25.2	+2.3
	comp=Z,8.7nm,1.6s						
BRG	Berggiesshubel	130.78	43	*e*PKIKP	PKiKP	14 20 25.2	+2.3
BRG				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KHC	Kasperske Hory	130.87	45	*e*PKIKP	PKiKP	14 20 25.0	+1.8
KHC	Kasperske Hory	130.87	45	*e*PKP	PKiKP	14 20 25.0	+1.8
FIA0	FINESS Array S	133.11	26	*e*PKPdf	PKPdf	14 20 25.0	-1.0
FIA0	FINESS Array S	133.11	26	*e*PKIKP	PKPdf	14 20 25.0	-1.0
FINES	FINESS Array B	133.11	26	PKP	PKPdf	14 20 25.0	-1.0
	comp=Z,0.8nm,0.8s,baz=310,slow=11,SNR=2.2						
VYHS	Vyhne	134.40	45	*e*PKIKP	PKiKP	14 20 34.6	+4.3
VYHS	Vyhne	134.40	45	*e*PKP	PKiKP	14 20 34.6	+4.3
NJ2	Nanjing	135.14	292	*e*PKP	PKiKP	14 20 33.3	+1.0
KOLS	Kolonicke sedl	136.48	44	*e*PKP	PKiKP	14 20 42.8	+8.3
AKASG	Malin Array Be	140.00	39	PKP	PKPdf	14 20 36.6	-2.5
	comp=Z,3.1nm,0.8s,baz=293,slow=2.3,SNR=4.9						
AKBB	Malin Array Si	140.00	39	*e*PKPdf	PKPdf	14 20 36.6	-2.5
AKBB	Malin Array Si	140.00	39	*e*PKIKP	PKPdf	14 20 36.7	-2.5
HHC	Hu-ho-hao-te	140.45	305	PKP	PKPdf	14 20 41.5	+1.0
HHC				PP	PP	14 23 41.5	+2.1
HHC				LR	LR		
	comp=Z,160nm,19.6s						
HHC				LR	LR		
	comp=Z,99nm,18.0s						
OBN	Obninsk	141.32	29	⇑*i*PKIKP	PKiKP	14 20 43.6	-0.5
OBN				*e*		14 20 47.8	
OBN				*e*SS	SS	14 42 11.8	-0.8
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TLY	Talaya	141.62	325	*i* PKIKP	PKiKP	14 20 47.3	+2.4
SONA0	Songino Array	141.86	318	*e*PKPdf	PKPdf	14 20 39.1	-3.8
SONM	Songino Array	141.86	318	PKhKP	PKPpre	14 20 39.1	
	comp=Z,0.7nm,0.5s,baz=155,slow=3.2,SNR=3.6						
ZAK	Zakamensk	142.49	323	*e*PKIKP	PKPdf	14 20 43.3	-0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
XAN	Xi'an	143.46	295	PKP	PKPab	14 20 41.5	-0.7
XAN				PP	PP	14 23 55.8	-2.2
XAN				LR	LR		
	comp=Z,140nm,23.9s						
XAN				LR	LR		
	comp=Z,160nm,23.9s						
XAN				LR	LR		
	comp=Z,200nm,27.5s						
LPSR	Galich'ya Gora	144.01	31	*e*PKIKP	PKPbc	14 20 44.6	+0.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	145.01	32	*e*PKIKP	PKPbc	14 20 46.0	-1.4
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
MDUB	Mudurnu	145.03	53	*e*PKPbc	PKPbc	14 20 46.9	-1.0
VORD	Divnogorie	145.23	33	*e*PKIKP	PKPbc	14 20 45.5	-2.6
VORD				pmax	pmax		
	comp=Z,30nm,1.1s						
GYA	Guiyang	145.39	282	*e*PKPbc	PKPab	14 20 49.5	-0.3
GYA				PP	PP	14 24 10.3	+0.4
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
VRH	Novokhopyorsk	146.23	30	*e*PKP2	PKPdf	14 20 50.3	+0.2
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
BR101	Keskin Array S	147.04	54	*e*PKPbc	PKPbc	14 20 54.0	-0.1
BR131	Keskin Array S	147.04	54	*e*PKPbc	PKPdf	14 20 52.6	+0.6
BRTR	Keskin Array B	147.04	54	PKPbc	PKPbc	14 20 54.0	-0.1
	comp=Z,4.2nm,0.8s,baz=242,slow=1.8,SNR=18						
ARU	Arti	147.12	10	*e*PKPbc	PKPdf	14 20 52.1	+0.7
ARU	Arti	147.12	10	*i* PKIKP	PKPdf	14 20 51.0	-0.5
LZH	Lanzhou	147.32	299	*e*PKPbc	PKPbc	14 20 54.8	-0.3
LZH				PP	PP	14 24 24.5	+3.6
LZH				AMB	AMB		
	comp=Z,150nm,7.7s						
LZH				LR	LR		
	comp=Z,170nm,15.2s						
LZH				LR	LR		
	comp=Z,250nm,17.9s						
LZH				LR	LR		
	comp=Z,350nm,18.4s						
ZAA1	Zalesovo Array	147.91	342	*e*PKPbc	PKPdf	14 20 53.9	+1.0
ZAA0	Zalesovo Array	147.92	342	*e*PKPbc	PKPdf	14 20 53.6	+0.7
ZALV	Zalesovo Beam	147.92	342	PKPbc	PKPdf	14 20 53.9	+1.0
	comp=Z,6.1nm,0.7s,baz=31,slow=2.4,SNR=18						
CD2	Chengdu	148.03	290	PKPbc	PKPdf	14 20 52.0	-1.9
KMI	Kunming	148.79	279	PKPbc	PKPdf	14 20 50.0	-5.5
KMI				pPKP	pPKPdf	14 20 57.0	-0.9
KMI				LR	LR		
	comp=Z,140nm,22.5s						
KMI				LR	LR		
	comp=Z,140nm,22.5s						
KMI				LR	LR		
	comp=Z,250nm,33.6s						
GTA	Gaotai	149.50	307	PKPbc	PKPbc	14 20 59.3	-1.3
GTA				LR	LR		
	comp=Z,89nm,20.2s						
GTA				LR	LR		
	comp=Z,190nm,21.3s						
GTA				LR	LR		
	comp=Z,330nm,22.3s						
CM31	Chiang Mai Arr	150.96	264	*e*PKPbc	PKPbc	14 21 03.9	-0.6
CMAR	Chiang Mai Arr	150.96	264	PKPbc	PKPbc	14 21 03.9	-0.6
	comp=Z,2.6nm,0.6s,baz=98,slow=0.9,SNR=15						
CMMT	Chiang Mai	151.05	265	P	PKiKP	14 21 06.9	+1.6
CHTO	Chiang Mai	151.06	265	*e*PKPbc	PKPbc	14 21 02.7	-2.0
BRVK	Borovoye	151.25	358	*e*PKPbc	PKPbc	14 21 02.7	-1.5
BRVK	Borovoye	151.25	358	*e*PKIKP	PKPbc	14 21 02.7	-1.5
KIV	Kislovodsk	151.29	41	*e*PKIKP	PKPab	14 21 13.6	+0.9
KIV				pmax	pmax		
	comp=Z,37nm,1.0s						
KBZ	Khabaz	151.54	41	PKPbc	PKiKP	14 21 05.5	-0.1
	comp=Z,6.4nm,0.9s,baz=258,slow=1.6,SNR=7.9						
KURK	Kurchatov	152.46	346	*e*PKPbc	PKPbc	14 21 05.4	-1.5
WMQ	Urumqi	154.89	326	*e*PKPbc	PKPdf	14 21 02.0	-1.9
WMQ				LR	LR		
	comp=Z,360nm,28.9s						
WMQ				LR	LR		
	comp=Z,250nm,29.2s						
WMQ				LR	LR		
	comp=Z,200nm,16.5s						
MK31	Makanchi Array	154.93	337	*e*PKPbc	PKPbc	14 21 10.6	-1.9
MK31	Makanchi Array	154.93	337	*e*PKIKP	PKPbc	14 21 10.6	-1.9
MK32	Makanchi Array	154.93	337	*e*PKPdf	PKPdf	14 21 03.1	-0.7
MK32				*e*PKPbc	PKPbc	14 21 11.2	-1.3
MK32				*e*PP	PP	14 25 05.0	+1.9
MKAR	Makanchi Array	154.93	337	PKP	PKPdf	14 21 03.1	-0.7
	comp=Z,0.7nm,0.9s,baz=73,slow=2.0,SNR=4.8						
MKAR				PKPbc	PKPbc	14 21 11.2	-1.3
	comp=Z,1.4nm,0.8s,baz=38,slow=1.8,SNR=12						
MKAR				PP	PP	14 25 05.0	+1.9
	comp=Z,2.1nm,1.1s,baz=21,slow=4.1,SNR=6.3						
GEYT	Alibeck	163.85	30	PKP	PKPdf	14 21 16.1	+1.7
	comp=Z,3.3nm,1.0s,baz=270,slow=5.8,SNR=5.6						

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*ISCJB **31** 14:02:55.8±0.7, 10.°30S±0.°08×161.°69E±0.°09, h75km, mb3.6/9, Error ellipse: s-maj=15.4km s-min=7.6km az=143.6*

*IDC **31** 14:02:57.7±0.9, 10.°32S×161.°59E, h75km±7km, mb3.6/9, mb1 3.9/10, mb1mx3.6/45, mbtmp4.0/10, MS3.3/4, Ms1 3.2/4, ms1mx2.8/21, Error ellipse: s-maj=18.9km s-min=10.4km az=26.0*

ISC 31 14:02:57.9±0.7**, 10.°28S**±0.°09×**161.°6E**±0.°1**, h75km, n22, σ1.ˢ46**/17**, mb3.8**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.84	297	P	Pn	14 03 28.0	+0.4
	420nm,0.3s,baz=165,slow=5.7,SNR=307						
HNR				S	Sn	14 03 50.3	+0.1
	1μm,0.3s,baz=341,slow=23,SNR=11						
DZM	Mont Dzumac	12.61	159	P	Pn	14 05 55.7	+1.3
	1.8nm,0.3s,baz=305,slow=19,SNR=39						
DZM				S	Sn	14 08 11.1	-1.9
	1.3nm,0.3s,baz=72,slow=20,SNR=2.5						
CTA	Charters Tower	17.73	235	P	Pn	14 07 01.9	+2.1
	1.1nm,0.3s,baz=63,slow=12,SNR=22						
WRA	Warramunga Arr	27.99	247	P	P	14 08 40.6	-1.2
	2.4nm,0.6s,baz=74,slow=9.1,SNR=5.7						
STKA	Stephens Creek	28.37	218	P	P	14 08 45.2	+0.1
	1.7nm,0.9s,baz=354,slow=9.2,SNR=2.7						
STKA				LR	LR	14 19 02.3	
	comp=Z,43nm,19.1s,baz=29,slow=34						
H11S2	WAKE ISLAND Hy	29.03	10	T	T	14 37 51.1	
	baz=194,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	29.03	10	T	T	14 38 09.7	
	baz=194,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	29.04	10	T	T	14 38 13.1	
	baz=194,slow=76,SNR=12						
ASAR	Alice Springs	29.58	240	P	P	14 08 54.2	-1.7
	1.6nm,0.9s,baz=66,slow=10.0,SNR=21						
ASAR				LR	LR	14 20 28.7	
	comp=Z,57nm,18.4s,baz=92,slow=36						
H11N1	WAKE ISLAND Hy	30.26	10	T	T	14 39 33.9	
	baz=192,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	30.26	10	T	T	14 39 34.8	
	baz=192,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	30.27	10	T	T	14 39 34.9	
	baz=192,slow=76,SNR=16						
KAPI	Kappang	41.79	274	LR	LR	14 29 19.9	
	comp=Z,28nm,19.8s,baz=112,slow=38						
NWAO	Narrogin (SRO)	46.57	234	LR	LR	14 31 42.7	
	comp=Z,42nm,18.4s,baz=279,slow=37						
MJAR	Matsushiro Arr	51.52	336	P	P	14 11 55.1	-1.0
	0.5nm,0.5s,baz=175,slow=8.6,SNR=4.1						
USRK	Ussuriysk Ar.	60.52	336	pP	pP	14 13 22.1	+3.2
	4.1nm,0.8s,baz=164,slow=7.5,SNR=6.6						
KLR	Kul'dur	64.81	339	pP	pP	14 13 48.1	+0.5
	1.6nm,0.9s,baz=126,slow=10,SNR=3.4						
CMAR	Chiang Mai Arr	68.09	295	P	P	14 13 51.4	+1.2
	0.5nm,0.4s,baz=118,slow=7.3,SNR=2.6						
SONM	Songino Array	75.69	325	P	P	14 14 35.5	+0.3
	0.8nm,0.5s,baz=135,slow=5.9,SNR=5.4						
SONM				pP	pP	14 14 54.8	+0.1
	1.7nm,0.7s,baz=133,slow=5.8,SNR=4.3						
ILAR	Eielson Array	84.13	20	P	P	14 15 19.0	-1.3
	0.2nm,0.5s,baz=239,slow=5.7,SNR=5.8						
ILAR				pP	pP	14 15 41.9	+1.6
	0.7nm,0.9s,baz=284,slow=4.2,SNR=3.4						
NVAR	Mina Array Bea	88.66	51	P	P	14 15 45.2	+1.8
	0.3nm,0.7s,baz=218,slow=5.6,SNR=1.9						
MKAR	Makanchi Array	90.20	318	P	P	14 15 48.6	-1.5
	0.5nm,0.4s,baz=89,slow=5.4,SNR=6.6						
MKAR				pP	pP	14 16 08.7	-1.7
	0.4nm,0.6s,baz=98,slow=6.0,SNR=2.8						

MAN 31 14:03:20.2, 7.°29N×124.°68E, h1km, mb4.2, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.43	261	⇓*i*P	Pn	14 03 32.3	-1.3
CTBH				*i* S	Sb	14 03 40.8	+3.0
BUKP	Musuan	0.70	33	*e*P	Pg	14 03 33.4	-0.3
BUKP				*e*S	Sg	14 03 43.4	+0.7
PAGZ	Pagadian	1.40	294	*e*P	Pn	14 03 46.4	-0.5
PAGZ				*e*S	Sn	14 04 07.0	+0.9
DDMP	Don Marcelino,	1.56	139	*e*P	Pn	14 03 49.2	+0.1
DDMP				*e*S	Sg	14 04 11.0	+0.7

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*ISCJB **31** 14:07:59.6±1.0, 6.°50S±0.°09×146.°2E±0.°2, h150km, mb3.5/4, Error ellipse: s-maj=25.3km s-min=10.9km az=160.4*

*IDC **31** 14:07:59.2±3.3, 6.°40S×146.°30E, h131km±35km, mb3.3/5, mb1 3.4/7, mb1mx3.1/40, mbtmp3.7/7, MS2.7/1, Ms1 2.7/1, ms1mx2.3/15, Error ellipse: s-maj=38.6km s-min=27.8km az=113.0*

ISC 31 14:08:00.8±1.1**, 6.°5S**±0.°1×**146.°4E**±0.°2**, h150km, n9, σ0.ˢ86**/9**, mb3.6**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.01	165	P	Pn	14 08 48.1	-0.2
	5.3nm,0.3s,baz=355,slow=6.1,SNR=25						
PMG				S	Sn	14 09 24.7	-0.5
	13nm,0.3s,baz=152,slow=21,SNR=25						
WRA	Warramunga Arr	17.75	220	P	P	14 11 56.8	-0.7
	0.2nm,0.3s,baz=41,slow=11,SNR=5.5						
GUMO	Guam	20.00	356	LR	LR	14 19 17.5	
	comp=Z,21nm,21.4s,baz=167,slow=34						
ASAR	Alice Springs	20.86	214	P	P	14 12 30.8	-0.3
	0.5nm,0.5s,baz=51,slow=8.5,SNR=11						
STKA	Stephens Creek	25.65	189	P	P	14 13 18.5	+1.8
	0.5nm,0.3s,baz=9.9,slow=12,SNR=2.8						
CMAR	Chiang Mai Arr	52.91	299	P	P	14 17 02.1	+0.2
	1.1nm,0.6s,baz=115,slow=5.0,SNR=4.4						
MKAR	Makanchi Array	77.46	321	P	P	14 19 39.2	-0.5
	0.3nm,0.7s,baz=102,slow=10,SNR=3.5						
ILAR	Eielson Array	86.18	23	P	P	14 20 24.9	0.0
	0.7nm,0.8s,baz=241,slow=5.1,SNR=6.0						
TORD	Torodi Ar. Bea	144.58	284	PKP	PKPdf	14 27 20.5	0.0
	0.3nm,0.7s,baz=96,slow=2.8,SNR=2.9						

DJA 31 14:26:38.8±1.0**, 2°S**±4°×**11°9E**±°**, h10km**±8km**, M4.3**/7**, mb5.9**/1**, MLv3.5**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.49	156	P	Pn	14 27 04.3	-1.3
SPSI	Sidrap Palu	2.34	166	P	Pn	14 27 17.0	-0.3
SPSI				S	Sn	14 27 47.3	+1.2
BNSI	Bone	2.85	162	P	Pn	14 27 24.0	-0.3
KBKI	Kotabaru	3.44	242	P	Pn	14 27 27.4	-5.1
BKSI	Bulukumba	3.73	166	P	Pn	14 27 36.7	+0.2

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*ISCJB **31** 14:48:12.1±0.7, 32.°96N±0.°05×140.°24E±0.°10, h141km±5km, mb3.2/3, Error ellipse: s-maj=13.9km s-min=8.3km az=17.9*

*JMA **31** 14:48:14.0±0.1, 33.°06N×140.°21E, h135km±1km, M2.9*

*IDC **31** 14:48:14.1±1.4, 32.°79N×139.°72E, h128km±41km, mb3.0/3, mb1 3.1/4, mb1mx2.9/38, mbtmp3.3/4, Error ellipse: s-maj=214.3km s-min=24.3km az=67.0*

ISC 31 14:48:13.5±1.1**, 32.°99N**±0.°07×**140.°21E**±0.°09**, h139km**±7km**, n28, σ0.ˢ69**/32**, mb3.3**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.35	290	P	Pn	14 48 33.0	+0.2
JHJ2				S	Sn	14 48 47.4	-0.1
JHCJ	Hachijojimakas	0.35	283	P	Pn	14 48 32.9	0.0
JHCJ				S	Sn	14 48 47.2	-0.4
JHJ	Hachijo jima 2	0.38	289	P	Pn	14 48 33.1	+0.2
	23nm,0.3s,baz=348,slow=21,SNR=40						
JHJ				S	Sn	14 48 47.2	-0.5
	223nm,0.3s,baz=249,slow=23,SNR=61						
JMKN	Mikurajimanish	1.03	330	P	Pn	14 48 37.1	-0.4
BSO1	Boso 1	1.77	21	P	Pn	14 48 45.4	+0.7
BSO1				*e*S	Sn	14 49 09.4	+0.7
BSO2	Boso 2	1.81	14	S	Sn	14 49 11.0	+1.1
BSO3	Boso 3	1.82	8	P	Pn	14 48 45.8	+0.3
BSO3				S	Sn	14 49 10.7	+0.5
JIM2	Oshima 3	1.84	340	P	Pn	14 48 46.1	+0.1
JIM2				S	Sn	14 49 09.8	-1.2
BSO4	Boso 4	1.99	3	P	Pn	14 48 48.3	+0.6
JIZS	Izushimoda	2.05	328	P	Pn	14 48 48.7	+0.3
TK02	Tokai 2	2.26	296	P	Pn	14 48 51.6	+0.8
TK04	Tokai 4	2.39	306	P	Pn	14 48 53.4	+0.9
JOD2	Odawara 2	2.45	338	P	Pn	14 48 53.7	+0.3
JOD2				*e*S	Sn	14 49 23.1	-1.1
JHMK	Hamakita	2.73	312	P	Pn	14 48 57.0	+0.2
JYN	Shimob	2.85	332	P	Pn	14 48 59.8	+1.2
JHU	Hanno	2.95	345	P	Pn	14 48 59.6	-0.2
JNY	Yasuok	3.06	321	P	Pn	14 49 02.1	+0.9
JRY	Ryogami san	3.20	341	P	Pn	14 49 03.4	+0.4
JYT	Yasato	3.23	360	P	Pn	14 49 03.2	-0.1
JAG	Ashikaga	3.48	350	P	Pn	14 49 05.6	-1.0
JHO	Hitachi	3.62	5	P	Pn	14 49 07.4	-1.0
MJAR	Matsushiro Arr	3.90	336	P	Pn	14 49 11.5	-0.6
	0.2nm,0.3s,baz=53,slow=6.1,SNR=9.1						
H11N2	WAKE ISLAND Hy	27.23	112	T	T	15 22 55.7	
	baz=305,slow=75,SNR=3.9						
H11N1	WAKE ISLAND Hy	27.23	112	T	T	15 23 01.5	
	baz=305,slow=75,SNR=4.0						
H11N3	WAKE ISLAND Hy	27.24	112	T	T	15 23 05.8	
	baz=305,slow=75,SNR=4.3						
MKAR	Makanchi Array	45.54	305	P	P	14 56 19.6	+0.5
	0.3nm,0.5s,baz=95,slow=7.8,SNR=4.1						
WRA	Warramunga Arr	52.94	187	P	P	14 57 14.8	-0.7
	0.5nm,0.8s,baz=2.4,slow=6.9,SNR=7.4						
ASAR	Alice Springs	56.66	187	P	P	14 57 42.2	-0.1
	0.2nm,0.5s,baz=9.8,slow=6.0,SNR=2.0						

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*BJI **31** 14:52:40.8±0.0, 7.°66N×126.°60E, h42km, mb4.5/22, mB4.9/19, Ms4.1/8, Ms7 3.9/6*

*IDC **31** 14:52:40.7±0.6, 8.°22N×126.°37E, h0km, mb4.0/15, mb1 4.2/16, mb1mx4.1/33, mbtmp4.1/16, ML4.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/36, Error ellipse: s-maj=18.6km s-min=10.2km az=99.0*

*ISCJB **31** 14:52:44.4±0.4, 8.°12N±0.°02×126.°38E±0.°03, h41km±3km, mb4.4/43, MS3.7/4, Error ellipse: s-maj=5.6km s-min=3.8km az=162.3*

*MAN **31** 14:52:44.0, 8.°05N×126.°30E, h24km, mb5.2, ML4.1, MS4.2*

MAN INTENSITY II - BISLIG SURIGAO DEL SUR.

*NEIC **31** 14:52:47.5±1.5, 8.°20N×126.°33E, h52km±3km, mb4.6/25, Error ellipse: s-maj=15.0km s-min=12.7km az=84.0*

NEIC Felt [II PIVS] at Bislig.

ISC 31 14:52:45.2±0.8**, 8.°07N**±0.°03×**126.°28E**±0.°04**, h32km**±5km**, n94, σ1.ˢ91**/108**, mb4.5**/43**, MS3.8**/4**, 5C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.13	35	⇑*i*P	Pb	14 52 49.5	-1.6
BIPH				*i* S	Sb	14 52 54.4	-0.7
BUTP	Butuan	1.10	324	*e*P	Pn	14 53 03.5	-0.9
BUTP				*e*S	Sn	14 53 18.9	+0.4
MATI	Mati	1.12	181	*e*P	Pn	14 53 03.0	-1.7
MATI				*e*S	Sb	14 53 18.1	-2.3
DAV	Davao City (W)	1.22	215	Pg	Pb	14 53 07.4	-0.3
	175nm,0.3s,baz=50,slow=4.4,SNR=7.4						
DAV				Lg	Lg	14 53 25.5	
	225nm,0.3s,baz=284,slow=20,SNR=13						
DAV	Davao City (W)	1.22	215	*e*Pn	Pb	14 53 07.8	+0.1
BUKP	Musuan	1.22	261	*e*P	Pn	14 53 05.3	-0.8
BUKP				*e*S	Sb	14 53 23.2	-0.2
DMPH	Davao City--Mi	1.25	218	⇑*e*P	Pb	14 53 08.7	+0.5
DMPH				*e*S	Sb	14 53 26.4	+2.4
KCP	Kidapawan	1.59	228	⇑*e*P	Pb	14 53 12.2	-1.8
KCP				*i* S	Sb	14 53 32.8	-0.9
CGP	Cagayan de Oro	1.62	284	⇑*i*P	Pn	14 53 11.7	+0.2
CGP				*i* S	Sn	14 53 32.3	+1.1
DDMP	Don Marcelino,	2.04	196	*e*P	Pn	14 53 17.2	0.0
DDMP				*e*S	Sn	14 53 40.2	-1.4
CTBH	Cotabato--PC H	2.19	247	⇑*e*P	Pn	14 53 19.4	+0.1
CTBH				*i* S	Sn	14 53 45.7	+0.3
SKMP	Bagumbayan, Su	2.32	228	*e*P	Pb	14 53 23.8	-2.6
MSLP	Maasin	2.48	326	*e*P	Pb	14 53 28.3	-0.9
MSLP				*e*S	Sn	14 53 47.4	-5.3
PAGZ	Pagadian	2.88	266	*e*P	Pn	14 53 29.9	+1.0
PAGZ				*e*S	Sb	14 54 09.9	-0.9
TBP	Tagbilaran	2.88	304	*e*P	Pn	14 53 29.9	+1.0
TBP				*i* S	Sn	14 54 04.2	+1.7
DCPH	Dipolog City	2.94	280	⇓*i*P	Pn	14 53 32.4	+2.7
DCPH				*e*S	Sb	14 54 08.3	-4.3
LLP	Lapu-Lapu	3.19	314	⇓*e*P	Pn	14 53 34.6	+1.4
LLP				*e*S	Sn	14 54 11.9	+1.7
SNPH	Sibulan	3.27	293	⇓*e*P	Pn	14 53 35.3	+1.0
SNPH				*i* S	Sn	14 54 13.1	+1.0
PLP	Palo	3.33	337	⇓*e*P	Pn	14 53 35.7	+0.6
PLP				*e*S	Sb	14 54 21.3	-2.4
OCLP	Ormoc	3.39	331	*e*P	Pn	14 53 38.1	+2.3
OCLP				*e*S	Sn	14 54 18.0	+3.1
CNP	Catarman	4.69	340	*e*P	Pn	14 53 56.3	+2.6
CNP				*e*S	Sn	14 54 53.8	+6.7
RCP	Roxas	4.92	315	⇓*e*P	Pn	14 53 58.5	+1.6
TNTI	Ternate	7.33	171	*e*Pn	Pn	14 54 33.3	+3.2
LUWI	Luwuk	9.71	201	*e*Pn	Pn	14 55 07.4	+4.7
SIJI	Sorong	10.18	151	Pn	Pn	14 55 09.5	+0.3
	3.2nm,0.3s,baz=353,slow=9.8,SNR=10						

SIJI				Sn	**Sn**	**14 56 56.4**	**-5.9**
	0.5nm,0.3s,baz=60,slow=20,SNR=2.0						
FAKI	**Fak Fak**	**12.44**	**151**	*e*Pn	**Pn**	**14 55 43.7**	**+3.6**
SBUM	**Sibu**	**15.07**	**249**	*e*Pn	**P**	**14 56 19.5**	**-1.4**
	4.7nm,0.9s						
SOEI	**Soe**	**17.82**	**187**	*e*P	**P**	**14 56 56.2**	**+4.7**
	50nm,1.1s						
MTN	**Manton Dam**	**21.33**	**167**	*e*P	**P**	**14 57 30.6**	**+1.0**
	16nm,1.0s						
NJ2	**Nanjing**	**24.84**	**345**	*e*P	**P**	**14 58 05.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JNU	**Nakatsue**	**25.29**	**9**	P	**P**	**14 58 07.8**	**-1.0**
	11nm,0.9s,baz=312,slow=16,SNR=4.7						
JNU	**Nakatsue**	**25.29**	**9**	*e*P	**P**	**14 58 07.8**	**-1.0**
	28nm,1.3s						
PMG	**Port Moresby**	**27.09**	**129**	LR	LR	15 11 16.7	
	comp=Z,46nm,19.6s,baz=279,slow=41						
CM31	**Chiang Mai Arr**	**28.50**	**294**	*e*P	**P**	**14 58 38.7**	**+0.8**
	23nm,1.5s						
CM31				*e*PcP	**PcP**	**15 01 50.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**28.50**	**294**	P	**P**	**14 58 38.7**	**+0.8**
	0.5nm,0.3s,baz=123,slow=6.7,SNR=6.9						
CMAR				PcP	**PcP**	**15 01 50.2**	**+0.9**
	0.3nm,0.3s,baz=87,slow=0.7,SNR=5.2						
WR1	**Warramunga Arr**	**28.95**	**164**	*e*P	**P**	**14 58 43.5**	**+1.8**
WRA	**Warramunga Arr**	**28.95**	**164**	P	**P**	**14 58 43.5**	**+1.8**
	1.4nm,0.6s,baz=338,slow=12,SNR=9.7						
KS15	**Wonju Array Si**	**29.27**	**3**	*e*P	**P**	**14 58 44.6**	**+0.2**
	78nm,1.9s						
KSRS	**Korea Array**	**29.29**	**3**	P	**P**	**14 58 44.6**	**+0.1**
	1.6nm,0.8s,baz=178,slow=10,SNR=5.6						
MAJO	**Matsushiro**	**30.35**	**19**	*e*P	**P**	**14 58 51.8**	**-2.2**
MJAR	**Matsushiro Arr**	**30.35**	**19**	P	**P**	**14 58 51.8**	**-2.2**
	1.9nm,0.8s,baz=189,slow=8.8,SNR=5.8						
XAN	**Xi'an**	**30.40**	**331**	P	**P**	**14 58 54.0**	**-0.5**
XAN				pP	sP	14 59 08.5	+0.6
XAN				S	**S**	**15 03 45.8**	**-7.5**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,70nm,5.1s						
XAN				LR	LR		
	comp=N,120nm,28.2s						
XAN				LR	LR		
	comp=E,170nm,26.0s						
XAN				LR	LR		
	comp=Z,210nm,23.8s						
CD2	**Chengdu**	**30.97**	**320**	*e*P	**P**	**14 59 00.0**	**+0.4**
AS31	**Alice Springs**	**32.41**	**167**	*e*P	**P**	**14 59 13.1**	**+0.7**
	2.2nm,1.4s						
ASAR	**Alice Springs**	**32.41**	**167**	P	**P**	**14 59 13.1**	**+0.7**
	0.8nm,0.7s,baz=345,slow=6.7,SNR=10.0						
LZH	**Lanzhou**	**34.60**	**327**	*e*P	**P**	**14 59 33.0**	**+1.6**
LZH				pP	sP	14 59 45.5	+0.6
LZH				sP	pP	14 59 50.0	+9.1
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC	**Hu-ho-hao-te**	**35.17**	**340**	P	**P**	**14 59 39.0**	**+2.7**
HHC				S	**S**	**15 05 08.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,13nm,5.3s						
HHC				LR	LR		
	comp=N,100nm,12.7s						
HHC				LR	LR		
	comp=E,160nm,15.1s						
USA0B	**Ussuriysk Arra**	**36.33**	**7**	*e*P	**P**	**14 59 44.2**	**-1.8**
	6.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**36.33**	**7**	P	**P**	**14 59 46.1**	**+0.1**
	5.9nm,0.8s,baz=193,slow=8.3,SNR=16						
SHL	**Shillong**	**37.08**	**302**	*e*P	**P**	**14 59 53.1**	**+0.2**
	23nm,0.8s						
SHL	**Shillong**	**37.08**	**302**	*e*P	**P**	**14 59 53.0**	**+0.1**
FORT	**Forrest**	**38.67**	**178**	*e*P	**P**	**15 00 07.5**	**+1.6**
	22nm,0.8s						
GTA	**Gaotai**	**39.20**	**327**	*e*P	P	15 00 20.3	+10
GTA				pP	sP	15 00 29.0	+5.0
GTA				sP	pP	15 00 33.8	+14
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
H11S3	**WAKE ISLAND Hy**	**40.57**	**71**	T	T	15 43 25.3	
	baz=262,slow=75,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**40.59**	**71**	T	T	15 43 28.9	
	baz=262,slow=75,SNR=9.0						
H11S2	**WAKE ISLAND Hy**	**40.59**	**71**	T	T	15 43 26.9	
	baz=262,slow=75,SNR=8.6						
H11N1	**WAKE ISLAND Hy**	**40.97**	**69**	T	T	15 44 07.2	
	baz=264,slow=75,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**40.98**	**69**	T	T	15 44 11.4	
	baz=264,slow=75,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**40.99**	**69**	T	T	15 44 16.4	
	baz=264,slow=75,SNR=6.5						
KLR	**Kul'dur**	**41.28**	**5**	P	**P**	**15 00 26.9**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=160,slow=8.8,SNR=11						
STKA	**Stephens Creek**	**42.34**	**161**	P	**P**	**15 00 37.4**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=317,slow=18,SNR=1.8						
STKA	**Stephens Creek**	**42.34**	**161**	*e*P	**P**	**15 00 37.4**	**+1.1**
	comp=Z,4.6nm,1.8s						
SONA0	**Songino Array**	**43.07**	**340**	*e*P	**P**	**15 00 42.1**	**-0.1**
SONM	**Songino Array**	**43.07**	**340**	P	**P**	**15 00 42.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=128,slow=9.5,SNR=2.3						
WMQ	**Urumqi**	**48.97**	**323**	*e*P	**P**	**15 01 29.8**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,12nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,68nm,4.1s						
WMQ				LR	LR		
	comp=Z,69nm,28.7s						
WMQ				LR	LR		
	comp=Z,91nm,23.9s						
WMQ				LR	LR		
	comp=Z,260nm,27.1s						
PETK	**Petropavlovsk-**	**51.63**	**24**	P	**P**	**15 01 50.0**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=185,slow=8.5,SNR=3.5						
PEA1	**Petropavlovsk-**	**51.63**	**24**	*e*P	**P**	**15 01 50.0**	**+1.3**
MK31	**Makanchi Array**	**53.78**	**324**	*e*P	**P**	**15 02 04.7**	**0.0**
	comp=Z,2.6nm,0.8s						
MK32	**Makanchi Array**	**53.78**	**324**	*e*P	**P**	**15 02 05.2**	**+0.5**
MKAR	**Makanchi Array**	**53.78**	**324**	P	**P**	**15 02 05.2**	**+0.5**
	comp=Z,3.2nm,0.7s,baz=124,slow=7.8,SNR=33						
MAKZ	**Makanchi**	**53.97**	**324**	*e*P	**P**	**15 02 06.1**	**+0.1**
	comp=Z,3.2nm,0.8s						
NIL	**Nilore**	**54.99**	**306**	*e*P	**P**	**15 02 13.8**	**+0.1**
	comp=Z,6.5nm,0.8s						
ZALV	**Zalesovo Beam**	**56.55**	**332**	P	**P**	**15 02 23.0**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=90,slow=4.4,SNR=4.6						
ZAA1	**Zalesovo Array**	**56.56**	**332**	*e*P	**P**	**15 02 23.0**	**-1.5**
KURK	**Kurchatov**	**57.88**	**326**	*e*P	**P**	**15 02 33.3**	**-0.6**
	comp=Z,8.2nm,0.8s						
GAR	**Garm**	**58.72**	**311**	*e*P	**P**	**15 02 39.5**	**-0.7**
	comp=Z,20nm,1.1s						
KK31	**Karatay Array**	**59.80**	**316**	*e*P	**P**	**15 02 47.1**	**-0.4**
	comp=Z,6.0nm,0.8s						
KKAR	**Karatay Array**	**59.80**	**316**	*e*P	**P**	**15 02 47.2**	**-0.2**
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**63.55**	**326**	*e*P	**P**	**15 03 11.9**	**-0.6**
	comp=Z,4.2nm,0.8s						
GEYT	**Alibeck**	**67.88**	**308**	P	**P**	**15 03 41.0**	**+0.2**
	comp=Z,66nm,0.7s,baz=147,slow=6.2,SNR=4.9						
ABKAR	**Akbulak array**	**68.55**	**320**	*e*P	**P**	**15 03 43.8**	**-0.8**
	comp=Z,2.1nm,0.9s						
RAYN	**Ar Rayn**	**78.40**	**292**	*e*P	**P**	**15 04 42.4**	**-0.9**
	comp=Z,3.8nm,0.7s						
SKT	**Skwentna**	**79.25**	**28**	*e*P	**P**	**15 04 45.7**	**-1.4**
	comp=Z,8.0nm,0.6s						
CCB	**Clear Creek Bu**	**81.01**	**26**	*e*P	**P**	**15 04 56.0**	**-0.5**
	comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**81.40**	**26**	P	**P**	**15 04 58.2**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=240,slow=5.3,SNR=7.6						
ILB	**Eielson Array**	**81.40**	**26**	*e*P	**P**	**15 04 58.2**	**-0.4**
	comp=Z,2.2nm,1.0s						
PPT	**Papeete**	**86.87**	**108**	P	**P**	**15 05 28.2**	**+0.8**
	comp=Z,17nm,0.6s,baz=47,slow=20,SNR=3.5						
BR101	**Keskin Array S**	**86.93**	**310**	*e*P	**P**	**15 05 26.5**	**-0.9**
BRTR	**Keskin Array B**	**86.93**	**310**	P	**P**	**15 05 26.5**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=96,slow=7.2,SNR=3.0						
FIA0	**FINESS Array S**	**87.82**	**332**	*e*P	**P**	**15 05 29.7**	**-1.3**
FINES	**FINESS Array B**	**87.82**	**332**	P	**P**	**15 05 29.7**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=72,slow=6.2,SNR=7.8						
TORD	**Torodi Ar. Bea**	**121.07**	**291**	PKP	**PKPdf**	**15 11 35.3**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=29,slow=3.3,SNR=3.1						
TOA1	**Torodi Ar. Sit**	**121.07**	**291**	*e*PKPdf	**PKPdf**	**15 11 35.3**	**-0.4**
Q54A	**Coxs Mills**	**126.83**	**26**	*e*PKPdf	**PKPdf**	**15 11 45.6**	**-0.5**

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*SJA **31** 15:05:18.9±1.1, 32°.47S×72°.24W, h70^{km}±11^{km}, ML3.6, MW3.6*

*ISCJB **31** 15:05:20.5±1.4, 32°.58S±0°.04×71°.90W±0°.07, h20^{km}±11^{km}, Error ellipse: s-maj=11.0km s-min=6.3km az=161.6*

*GUC **31** 15:05:22.5±0.8, 32°.49S×71°.54W, h43^{km}±5^{km}, ML3.4*

ISC 31 15:05:18.3±3.3**, 32°.57S**±0°.04×**71°.94W**±0°.08**, h8**^{km}±24^{km}**, n19, σ1^{s}.56**/29**, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEL	**Peldehue**	**1.20**	**119**	*e*P	**Pn**	**15 05 41.0**	**-0.5**
PEL				*i* S	**Sb**	**15 05 55.1**	**-1.9**
PEL				IAML		15 05 56.1	
	comp=E,2µm,0.3s						
STL	**Santa Lucia**	**1.39**	**129**	*e*P	**Pb**	**15 05 45.1**	**+0.5**
STL				*i* S	**Sn**	**15 06 02.1**	**-0.5**
STL				IAML		15 06 07.6	
	comp=N,1µm,0.5s						
CLCH	**Cerro Calan**	**1.44**	**125**	*e*P	**Pn**	**15 05 44.9**	**+0.2**
CLCH				*i* S	**Sn**	**15 06 01.8**	**-2.1**
CLCH				IAML		15 06 09.2	
	comp=E,1µm,0.5s						
FCH	**Farellones**	**1.58**	**119**	⇓*i*P	**Pn**	**15 05 46.9**	**0.0**
FCH				*i* S	**Sn**	**15 06 05.8**	**-1.9**
CO02	**Combarbal**	**1.58**	**31**	⇓*i*P	**Pn**	**15 05 46.9**	**+0.2**
CO02				*i* S	**Sn**	**15 06 05.9**	**-1.6**
LMEL	**Las Melosas**	**1.93**	**132**	*e*P	**Pn**	**15 05 53.1**	**+1.4**
LMEL				*i* S	**Sn**	**15 06 16.2**	**0.0**
LMEL				IAML		15 06 21.3	
	comp=N,865nm,0.3s						
RTLS	**Leoncito**	**2.37**	**72**	*e*P	**Pb**	**15 06 00.4**	**-1.0**
RTLS				*i* S	**Sb**	**15 06 29.3**	**-1.6**
RTLS				IAML		15 06 34.1	
	comp=Z,186nm,0.7s						
GO05	**Huala**	**2.43**	**180**	*e*P	**Pn**	**15 06 00.0**	**+1.7**
ARCO	**CERRO ARCO**	**2.55**	**97**	*e*P	**Pb**	**15 06 03.8**	**-0.6**
ARCO				IAML		15 06 44.2	
	comp=Z,210nm,0.4s						
GO04	**Tololo Observa**	**2.58**	**22**	*e*P	**Pn**	**15 06 01.4**	**+0.7**
ASAL	**Salagasta**	**2.62**	**91**	*e*P	**Pb**	**15 06 04.9**	**-0.7**
ASAL				*i* S	**Sb**	**15 06 39.1**	**+1.1**
AAGR	**Agrelo**	**2.67**	**102**	*e*P	**Pb**	**15 06 05.7**	**-0.7**
RTCV	**Cerro Valdivia**	**2.97**	**77**	*e*P	**Pn**	**15 06 08.8**	**+3.0**
RTCV				*i* S	**Sb**	**15 06 47.2**	**-0.7**
ACCO	**Cerro Coronel**	**3.15**	**52**	*e*P	**Pn**	**15 06 11.2**	**+2.7**
CFA	**Coronel Fontan**	**3.29**	**74**	*e*P	**Pn**	**15 06 12.2**	**+2.0**
AMOG	**MOGNA**	**3.36**	**62**	*e*P	**Pn**	**15 06 13.2**	**+2.0**
LCO	**Las Campanas**	**3.71**	**17**	*e*P	**Pn**	**15 06 16.4**	**+0.3**
MRA	**San Martin**	**5.26**	**90**	*e*P	**Pn**	**15 06 38.1**	**+0.8**
MRA				*i* S	**Sn**	**15 07 41.0**	**+2.8**
MRA				IAML		15 07 48.3	
	comp=Z,28nm,0.6s						
TCA	**Tanti**	**6.36**	**81**	*i* S	**Sn**	**15 08 06.2**	**+0.8**

PGC 31 15:12:36.3±0.2**, 48°.72N**×**129°.03W, h10**^{km}**, MLSn3.2**/26**, Mw3.8**/26**, 232km west of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMF	**NEPTUNE Canada**	**0.77**	**183**	P	Pg	15 12 50.5	-0.5
NC27	**ODP1027**	**1.28**	**138**	P	Pn	15 12 57.2	-2.6
NC89	**ODP889**	**1.45**	**91**	P	Pn	15 13 00.7	-1.6
BPBC	**Brooks Peninsu**	**1.66**	**29**	Pn	Pn	15 13 03.4	-2.2
BPBC				Sn	Sn	15 13 23.0	-4.0
EDB	**Eliza Dome**	**1.71**	**46**	Pn	Pn	15 13 04.0	-2.1
EDB				Sn	Sn	15 13 22.9	-5.0
ETB	**Estevan Point**	**1.77**	**67**	Pn	Pn	15 13 05.4	-1.5
NTKA	**Nootka**	**1.81**	**60**	Pn	Pn	15 13 05.5	-2.0
NTKA				Sn	Sn	15 13 25.5	-5.1
HOLB	**Holberg**	**2.02**	**17**	Pn	Pn	15 13 08.5	-1.9
HOLB				Sn	Sn	15 13 31.1	-4.5
MAYB	**Maynard**	**2.08**	**35**	Pn	Pn	15 13 09.4	-1.9
MAYB				Sn	Sn	15 13 32.3	-5.0
TOFB	**Tofino**	**2.11**	**77**	Pn	Pn	15 13 09.5	-2.1
TOFB				Sn	Sn	15 13 33.1	-4.7
GDR	**Gold River**	**2.24**	**60**	Pn	Pn	15 13 11.6	-1.8
GDR				Sn	Sn	15 13 36.8	-4.2
PHC	**Port Hardy**	**2.25**	**27**	Pn	Pn	15 13 11.9	-1.6
PHC				Sn	Sn	15 13 36.9	-4.3
B012	**Ucluelet**	**2.32**	**83**	Pn	Pn	15 13 12.3	-2.1
B012				Sn	Sn	15 13 39.2	-3.7
TLCB	**Telegraph Cove**	**2.33**	**37**	Pn	Pn	15 13 12.2	-2.3
TLCB				Sn	Sn	15 13 39.7	-3.4
OZB	**Mount Ozzard**	**2.35**	**83**	Pn	Pn	15 13 12.9	-2.1
OZB				Sn	Sn	15 13 39.8	-4.1
BTB	**Buttle Lake**	**2.43**	**71**	Pn	Pn	15 13 14.9	-1.3
BTB				Sn	Sn	15 13 42.1	-3.9
SPLB	**Strathcona Par**	**2.51**	**61**	Pn	Pn	15 13 16.8	-0.3
SPLB				Sn	Sn	15 13 43.8	-3.9
NCRB	**Newcastle Ridg**	**2.57**	**48**	Pn	Pn	15 13 17.3	-0.8
B928	**Bamfield**	**2.58**	**86**	Pn	Pn	15 13 16.1	-2.0
CBB	**Campbell River**	**2.74**	**60**	Pn	Pn	15 13 19.2	-1.0
B927	**Port Alberni**	**2.83**	**78**	Pn	Pn	15 13 20.1	-1.3
MGB	**Mount Grey**	**2.88**	**83**	Pn	Pn	15 13 20.3	-2.1
PFB	**Port Renfrew**	**3.05**	**91**	P	Pn	15 13 23.0	-1.5
TXB	**Texada**	**3.17**	**70**	P	Pn	15 13 25.6	-0.6
NLLB	**Nanaimo Lost L**	**3.36**	**79**	P	Pn	15 13 29.1	+0.3
LZB	**Mount Lazard**	**3.46**	**90**	P	Pn	15 13 28.9	-1.3
SHB	**Sechelt**	**3.50**	**73**	P	Pn	15 13 30.0	-0.8
BBB	**Bella Bella**	**3.52**	**9**	P	Pn	15 13 30.4	-0.6
BBB				S	Sn	15 14 11.3	-1.4
WSLR	**Whistler**	**4.23**	**68**	P	Pn	15 13 41.0	+0.2
VDB	**Vedder Mountai**	**4.58**	**84**	P	Pn	15 13 45.2	-0.4
LLLB	**Lillooet**	**5.02**	**65**	P	Pn	15 13 52.0	+0.5

MEX 31 15:13:55.9±0.6**, 18°.73N**×**102°.64W, h15**^{km}**, MD3.6, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.80**	**237**	*e*P	Pg	15 14 09.0	-2.5
MMIG				*e*S	Sg	15 14 18.6	-3.4
EZ5V		**1.18**	**310**	*e*P	Pn	15 14 14.2	-4.0
EZ5V				*i* S	Sb	15 14 29.6	-3.8
ANIG	**Ahuacatlan**	**2.92**	**323**	*e*P	Pn	15 14 39.5	-2.4
ANIG				*i* S	Sn	15 15 12.6	-4.2

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*IDC **31** 15:18:07.1±8.0, 35°.96N×142°.58E, h0^{km}, mb3.5/3, mb1 3.5/4, mb1mx3.3/32, mbtmp3.4/4, ML2.1/1, Error ellipse: s-maj=197.8km s-min=30.3km az=171.0*

*JMA **31** 15:18:08.3±0.2, 35°.63N×142°.55E, h65^{km}, M3.3*

*ISCJB **31** 15:18:09.3±0.9, 35°.55N±0°.05×142°.48E±0°.07, h56^{km}, mb3.5/3, Error ellipse: s-maj=8.7km s-min=6.7km az=22.1*

ISC 31 15:18:11.0±1.4**, 35°.57N**±0°.06×**142°.48E**±0°.10**, h56**^{km}**, n18, σ1^{s}.35**/25**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.33**	**276**	P	**Pn**	**15 18 32.2**	**-1.1**
BSO1	**Boso 1**	**1.54**	**234**	P	**Pn**	**15 18 34.4**	**-1.2**
BSO1				S	**Sn**	**15 18 53.7**	**-0.5**
JIHU	**Itakohorinouch**	**1.64**	**285**	S	**Sn**	**15 18 56.9**	**-0.6**
BSO3	**Boso 3**	**1.79**	**245**	P	**Pn**	**15 18 38.9**	**-0.4**
JFK	**Kawauchi**	**2.21**	**325**	P	**Pn**	**15 18 42.7**	**-2.7**
JAG	**Ashikaga**	**2.60**	**290**	P	**Pn**	**15 18 49.4**	**-1.3**
JFT	**Otama**	**2.60**	**319**	P	**Pn**	**15 18 49.0**	**-1.7**
JFT				S	**Sn**	**15 19 19.3**	**-1.8**
JIM2	**Oshima 3**	**2.64**	**252**	P	**Pn**	**15 18 49.8**	**-1.4**
JIM2				S	**Sn**	**15 19 21.2**	**-0.9**
JOD2	**Odawara 2**	**2.79**	**265**	P	**Pn**	**15 18 52.2**	**-1.1**
JOD2				S	**Sn**	**15 19 25.4**	**-0.3**
JMKN	**Mikurajimanish**	**2.91**	**236**	P	**Pn**	**15 18 53.4**	**-1.5**
JMKN				S	**Sn**	**15 19 27.0**	**-1.7**
JRY	**Ryogami san**	**2.95**	**280**	P	**Pn**	**15 18 55.1**	**-0.3**
JYN	**Shimob**	**3.21**	**270**	P	**Pn**	**15 18 58.2**	**-0.9**
JHJ2	**Mitsune**	**3.30**	**223**	P	**Pn**	**15 18 58.8**	**-1.4**
MJAR	**Matsushiro Arr**	**3.60**	**287**	Pn	**Pn**	**15 19 04.5**	**+0.2**
	0.2nm,0.3s,baz=97,slow=8.7,SNR=9.2						
MJAR				Sn	**Sn**	**15 19 47.4**	**+1.9**
	0.2nm,0.3s,baz=70,slow=17,SNR=4.4						
MAT	**Matsushiro**	**3.60**	**287**	P	**Pn**	**15 19 04.5**	**+0.2**
MAT				S	**Sn**	**15 19 44.8**	**-0.8**
ZALV	**Zalesovo Beam**	**43.54**	**314**	P	**P**	**15 26 10.7**	**+1.7**
	0.6nm,0.5s,baz=99,slow=5.8,SNR=2.4						
MKAR	**Makanchi Array**	**45.64**	**304**	P	**P**	**15 26 27.3**	**+1.4**
	0.3nm,0.5s,baz=90,slow=11,SNR=4.7						
ILAR	**Eielson Array**	**50.27**	**32**	P	**P**	**15 27 02.1**	**+0.8**
	0.3nm,0.7s,baz=262,slow=6.2,SNR=4.4						

MAN 31 15:40:59.5, 8°.26N×**126°.47E, h47**^{km}**, mb4.0, ML2.8, MS2.4, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.13**	**232**	⇑*e*P	Pn	15 41 09.2	+2.1
BIPH				*e*S	Sn	15 41 13.0	+0.6
MATI	**Mati**	**1.33**	**189**	*e*P	Pn	15 41 21.3	-0.3
MATI				*e*S	Sn	15 41 39.6	+1.5
BUKP	**Musuan**	**1.44**	**255**	*e*P	Pn	15 41 24.1	+1.0
BUKP				*e*S	Sn	15 41 42.0	+1.0

MAN 31 15:45:38.5, 8°.09N×**126°.33E, h20**^{km}**, mb4.2, ML3.0, MS2.7, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.10**	**16**	⇓*e*P	Pb	15 45 44.5	+2.0
BIPH				*e*S	Sb	15 45 48.2	+3.0
BUTP	**Butuan**	**1.12**	**321**	*e*P	Pn	15 45 57.9	-1.2
BUTP				*e*S	Sn	15 46 14.7	+0.6
MATI	**Mati**	**1.14**	**184**	*e*P	Pn	15 45 58.0	-1.3
MATI				*e*S	Sn	15 46 24.6	+10
BUKP	**Musuan**	**1.28**	**261**	*e*P	Pn	15 46 00.8	-0.5
BUKP				*e*S	Sb	15 46 18.2	+0.3
DDMP	**Don Marcelino,**	**2.06**	**197**	*e*P	Pn	15 46 13.1	+1.0

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*CNRM **31** 16:00:29.4, 36°.30N×9°.85W, h66^{km}*

*MDD **31** 16:00:33.1±1.5, 36°.48N×9°.90W, h50^{km}, mb3.8/4, Error ellipse: s-maj=13.3km s-min=12.6km az=55.0, PRXIMO*

*IGIL **31** 16:00:33.3, 36°.49N×9°.87W, h24^{km}, ML2.3*

*INMG **31** 16:00:33.9±0.9, 36°.49N×9°.88W, h31^{km}, ML2.2, Error ellipse: s-maj=5.0km s-min=3.4km az=87.0*

ISC 31 16:00:28.6±5.8**, 36°.32N**±0°.04×**9°.96W**±0°.08**, h36**^{km}±10^{km}**, n43, σ1^{s}.88**/81**, 4C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.22**	**48**	⇑*e*P	**Pn**	**16 00 51.2**	**+2.1**
PFVI				*e*S	**Sn**	**16 01 04.4**	**0.0**
PFVI				A	A	16 01 05.8	
	23nm,0.1s						
PFVI	**Vila Bisbo**	**1.22**	**48**	⇑P	**Pn**	**16 00 51.2**	**+2.1**
	13nm,0.1s,SNR=18						
PFVI				S	**Sn**	**16 01 04.0**	**-0.4**
	47nm,0.2s,SNR=5.8						
PFVI	**Vila Bisbo**	**1.22**	**48**	P	**Pn**	**16 00 51.1**	**+1.9**
PFVI				S	**Sn**	**16 01 05.0**	**+0.6**
MORF	**Marmelete**	**1.44**	**47**	*e*P	**Pn**	**16 00 54.1**	**+1.9**
MORF				*e*S	**Sn**	**16 01 09.3**	**-0.6**
MORF				AML	AML	16 01 10.7	
	comp=N,38nm,0.3s						
MORF	**Marmelete**	**1.44**	**47**	*e*P	**Pn**	**16 00 54.1**	**+1.9**
MORF				*e*S	**Sn**	**16 01 09.6**	**-0.3**
MORF				A	A	16 01 10.1	
	comp=N,29nm,0.3s						
MORF	**Marmelete**	**1.44**	**47**	P	**Pn**	**16 00 54.1**	**+1.9**
MORF				S	**Sn**	**16 01 09.6**	**-0.3**
	comp=N,29nm,0.3s						
PTEO	**Sao Teotonio**	**1.57**	**39**	*e*P	**Pn**	**16 00 55.9**	**+1.9**
PTEO				*e*S	**Sn**	**16 01 12.6**	**-0.5**
PTEO				A	A	16 01 13.4	
	comp=N,10nm,0.2s						
PTEO	**Sao Teotonio**	**1.57**	**39**	P	**Pn**	**16 00 55.9**	**+1.9**
PTEO				S	**Sn**	**16 01 12.6**	**-0.5**
	comp=N,5.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.87**	**60**	⇑*e*Pn	**Pn**	**16 01 00.5**	**+2.4**
PBDV				*e*Sn	**Sn**	**16 01 20.4**	**-0.1**
PBDV				A	A	16 01 22.7	
	comp=N,7.8nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.87**	**60**	P	**Pn**	**16 01 00.5**	**+2.4**
PBDV				S	**Sn**	**16 01 20.4**	**-0.1**
	comp=N,7.8nm,0.4s						
PCVE	**Castro Verde**	**2.02**	**49**	*e*Pn	**Pn**	**16 01 02.4**	**+2.3**
PCVE				*e*Sn	**Sn**	**16 01 24.1**	**-0.1**
PCVE				A	A	16 01 25.7	
	comp=N,6.9nm,0.4s						
PCVE	**Castro Verde**	**2.02**	**49**	P	**Pn**	**16 01 02.4**	**+2.3**
PCVE				S	**Sn**	**16 01 24.1**	**-0.1**
	comp=N,6.9nm,0.4s						
PVAQ	**Vaqueiros**	**2.10**	**58**	⇑*e*Pn	**Pn**	**16 01 03.5**	**+2.3**
PVAQ				*e*Sn	**Sn**	**16 01 25.6**	**-0.5**
PVAQ				A	A	16 01 28.0	
	comp=N,17nm,0.1s						
PVAQ	**Vaqueiros**	**2.10**	**58**	P	**Pn**	**16 01 03.5**	**+2.3**
PVAQ				S	**Sn**	**16 01 25.6**	**-0.5**
	comp=N,17nm,0.1s						
PVAQ	**Vaqueiros**	**2.10**	**58**	P	**Pn**	**16 01 03.2**	**+1.9**
PVAQ				S	**Sn**	**16 01 26.8**	**+0.7**
PNCL	**Nicolau / Gran**	**2.12**	**32**	*e*Pn	**Pn**	**16 01 03.0**	**+1.5**
PNCL				*e*Sn	**Sn**	**16 01 25.3**	**-1.3**
PNCL				A	A	16 01 27.4	
	comp=N,7.1nm,0.1s						
PNCL	**Nicolau / Gran**	**2.12**	**32**	P	**Pn**	**16 01 03.0**	**+1.5**
PNCL				S	**Sn**	**16 01 25.3**	**-1.3**
	comp=N,7.1nm,0.1s						
EGRO	**El Granado**	**2.33**	**58**	P	**Pn**	**16 01 06.8**	**+2.4**
	comp=N,1.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**16 01 31.2**	**-0.4**
	comp=N,11nm,0.1s,SNR=15						
PBEJ	**Beja**	**2.39**	**44**	*e*Sn	**Sn**	**16 01 32.7**	**-0.5**
PBEJ				A	A	16 01 35.8	
	comp=N,5.4nm,0.1s						
PBEJ	**Beja**	**2.39**	**44**	S	**Sn**	**16 01 32.7**	**-0.5**
	comp=N,2.7nm,0.1s						
PMAFR	**Mafra**	**2.68**	**11**	*e*Sn	**Sn**	**16 01 39.2**	**-1.3**
PMAFR	**Mafra**	**2.68**	**11**	S	**Sn**	**16 01 39.2**	**-1.3**
	comp=N,8.9nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.00**	**60**	P	**Pn**	**16 01 15.4**	**+1.7**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**16 01 47.1**	**-1.2**
	comp=N,1.4nm,0.1s,SNR=14						
PMTG	**Montargil**	**3.07**	**26**	*e*Pn	**Pn**	**16 01 16.3**	**+1.8**
PMTG				*e*Sn	**Sn**	**16 01 47.7**	**-2.3**
PMTG				A	A	16 01 49.3	
	comp=N,5.1nm,0.1s						
PMTG	**Montargil**	**3.07**	**26**	P	**Pn**	**16 01 16.3**	**+1.8**
PMTG				S	**Sn**	**16 01 47.7**	**-2.3**
	comp=N,5.1nm,0.1s						
ESPR	**Espera**	**3.35**	**79**	P	**Pn**	**16 01 21.2**	**+2.8**
	comp=N,3.1nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**16 01 56.7**	**-0.3**
	comp=N,30nm,0.2s,SNR=7.9						
RSA	**Sarsar**	**3.67**	**112**	P	**Pn**	**16 01 21.2**	**-1.7**
RSA				S	**Sn**	**16 02 03.7**	**-1.2**
PMRV	**Marv??o**	**3.71**	**32**	*e*Pn	**Pn**	**16 01 24.8**	**+1.4**
PMRV				*e*Sn	**Sn**	**16 02 02.9**	**-2.9**
PMRV				A	A	16 02 05.0	
	comp=N,3.1nm,0.1s						
PMRV	**Marv??o**	**3.71**	**32**	P	**Pn**	**16 01 24.8**	**+1.4**
PMRV				S	**Sn**	**16 02 02.9**	**-2.9**
	comp=N,3.1nm,0.1s						
ZHG	**ZHG**	**3.96**	**135**	P	**Pn**	**16 01 27.1**	**+0.2**
ZHG				S	**Sn**	**16 02 10.5**	**-1.6**
ECAB	**El Cabril**	**4.03**	**63**	P	**Pn**	**16 01 29.9**	**+2.2**
	comp=N,0.3nm,0.2s,SNR=8.3						
ECAB				S	**Sn**	**16 02 12.0**	**-1.8**
	comp=N,1.4nm,0.1s,SNR=8.0						
HORN	**Hornachuelos**	**4.06**	**67**	P	**Pn**	**16 01 27.1**	**-1.1**
HORN				S	**Sn**	**16 02 13.3**	**-1.1**
EADA	**Adamuz**	**4.68**	**65**	P	**Pn**	**16 01 39.1**	**+2.4**
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**16 02 27.1**	**-2.6**
	comp=N,1.5nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.83**	**38**	P	**Pn**	**16 01 40.1**	**+1.4**
	comp=N,0.5nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**16 02 29.9**	**-3.6**
	comp=N,1.3nm,0.1s,SNR=7.9						
CZD	**Col de Zad**	**5.22**	**128**	P	**Pn**	**16 01 43.8**	**-0.5**
CZD				S	**Sn**	**16 02 45.0**	**+1.6**
OUK	**Oukaimeden**	**5.39**	**161**	P	**Pn**	**16 01 48.5**	**+1.7**
OUK				S	**Sn**	**16 02 48.1**	**+0.3**
PAB	**San Pablo**	**5.48**	**52**	P	**Pn**	**16 01 49.8**	**+2.0**
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**16 02 46.0**	**-3.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
MD31	**MD31**	**5.50**	**127**	P	**Pn**	**16 01 47.3**	**-0.9**
MD31				S	**Sn**	**16 02 50.9**	**+0.7**
MDT	**Midelt**	**5.64**	**127**	P	**Pn**	**16 01 47.3**	**-2.7**
MDT				S	**Sn**	**16 02 52.8**	**-0.7**
EQES	**Quesada**	**5.71**	**73**	P	**Pn**	**16 01 53.0**	**+2.1**

	comp=N,0.1nm,0.1s,SNR=7.9						
EQES				S	Sn	16 02 52.3	-2.9
	comp=N,1.5nm,0.2s,SNR=7.9						
ELOB	Lobios	5.73	14	P	Pn	16 01 52.4	+1.2
	comp=N,1.1nm,1.2s,SNR=7.9						
ELOB				S	Sn	16 02 50.9	-4.8
	comp=N,0.4nm,0.1s,SNR=7.9						
OUZM	OUZ	6.02	153	P	Pn	16 01 55.6	+0.3
OUZM				S	Sn	16 03 04.3	+1.2
GUD	Guadarrama	6.27	45	S	Sn	16 03 04.8	-4.4
	comp=N,0.9nm,0.2s,SNR=7.9						

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*ISCJB **31** 16:23:18.0±0.3, 6°.05S±0°.03×147°.48E±0°.05, h77^{km}, mb4.5/38, Error ellipse: s-maj=7.7km s-min=4.2km az=14.9*

*BJI **31** 16:23:17.8±0.0, 6°.09S×147°.58E, h79^{km}, mb4.7/20, mB4.9/15, Ms4.5/1*

*IDC **31** 16:23:18.5±2.1, 6°.00S×147°.51E, h63^{km}±20^{km}, mb4.0/18, mb1 4.2/23, mb1mx4.0/47, mbtmp4.4/23, MS3.1/15, Ms1 3.1/15, ms1mx3.0/28, Error ellipse: s-maj=21.2km s-min=11.2km az=84.0*

*NEIC **31** 16:23:19.1±0.7, 6°.00S×147°.48E, h71^{km}±6^{km}, mb4.7/18, Error ellipse: s-maj=8.3km s-min=4.7km az=107.0*

*DJA **31** 16:23:19.1±0.6, 6°S±4°×14°8E±°, h94^{km}±6^{km}, M4.7/18, mB5.9/2, mb4.9/18, MLv4.6/2, Mw(mB)5.5/2*

ISC 31 16:23:19.8±0.4**, 6°.08S**±0°.05×**147°.48E**±0°.07**, h77**^{km}**, n85, σ1^s.77**/88**, mb4.6**/38**, 1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.32	185	P	Pn	16 24 09.5	0.0
	17nm,0.3s,baz=29,slow=6.1,SNR=133						
PMG				S	Sn	16 24 49.0	+1.1
	49nm,0.3s,baz=220,slow=20,SNR=14						
PMG				LR	LR	16 25 53.4	
	comp=Z,634nm,19.1s,baz=340,slow=46						
PMG	Port Moresby	3.32	185	ePn	Pn	16 24 09.2	-0.3
MANU	Manus Island	4.01	358	ePn	Pn	16 24 17.1	-1.9
RABL	Rabaul	5.03	68	ePn	Pn	16 24 31.8	-1.1
GENI	Genyem	8.07	295	P	Pn	16 25 17.0	+2.6
	143nm,0.7s						
COEN	Coen	8.90	208	ePn	Pn	16 25 26.8	+1.1
HNR	Honiara	12.79	106	LR	LR	16 30 52.5	
	comp=Z,49nm,20.0s,baz=340,slow=36						
CTA	Charters Tower	13.97	185	P	Pn	16 26 35.4	+1.0
	0.2nm,0.3s,baz=131,slow=15,SNR=3.8						
CTAO	Charters Tower	13.97	185	ePn	Pn	16 26 33.1	-1.3
SIJI	Sorong	16.98	287	P	Pn	16 27 11.8	-0.9
	1.1nm,0.3s,baz=66,slow=12,SNR=4.9						
SIJI				LR	LR	16 35 58.6	
	comp=Z,21nm,18.0s,baz=229,slow=45						
MTN	Manton Dam	17.46	246	eP	Pn	16 27 18.7	+0.3
	12nm,0.8s						
WRAB	Tennant Creek	18.77	222	eP	P	16 27 32.7	-0.4
	17nm,0.8s						
WB2	Warramunga Arr	18.78	222	eP	P	16 27 33.4	+0.3
	16nm,0.6s						
WR1	Warramunga Arr	18.79	222	eP	P	16 27 33.8	+0.6
WR1				eS	S	16 30 56.7	-6.1
WR1				ePcP	PcP	16 31 59.3	+1.5
WRA	Warramunga Arr	18.79	222	P	P	16 27 33.8	+0.6
	2.5nm,0.3s,baz=53,slow=12,SNR=72						
WRA				S	S	16 30 56.7	-6.2
	0.1nm,0.3s,baz=162,slow=42,SNR=2.9						
WRA				PcP	PcP	16 31 59.3	+1.5
	0.3nm,0.3s,baz=11,slow=1.7,SNR=4.6						
AAI	Ambon	19.36	276	P	P	16 27 37.7	-1.8
EIDS	Eidsvold	19.49	170	eP	Pn	16 27 42.4	-0.3
	41nm,1.8s						
GUMO	Guam	19.71	352	P	P	16 27 40.2	-3.1
	0.9nm,0.3s,baz=33,slow=17,SNR=1.6						
GUMO				LR	LR	16 35 36.7	
	comp=Z,35nm,18.4s,baz=150,slow=38						
AS31	Alice Springs	21.82	215	eP	P	16 28 06.8	+0.9
	8.2nm,0.4s						
AS31				ePcP	PcP	16 32 04.7	+1.2
ASAR	Alice Springs	21.82	215	P	P	16 28 07.0	+1.0
	16nm,0.6s,baz=51,slow=8.3,SNR=233						
ASAR				PcP	PcP	16 32 04.7	+1.2
	1.4nm,0.5s,baz=348,slow=1.4,SNR=7.0						
ASAR				S	Sn	16 32 11.8	-5.5
	8.4nm,0.8s,baz=33,slow=20,SNR=16						
ASAR				LR	LR	16 37 59.3	
	comp=Z,149nm,18.7s,baz=36,slow=40						
SOEI	Soe	23.27	259	eP	P	16 28 21.7	+0.4
	47nm,0.9s						
SOEI	Soe	23.27	259	P	P	16 28 22.5	+1.3
	56nm,0.7s						
SGSI	Sangihe	23.97	293	P	P	16 28 22.5	-4.9
DZM	Mont Dzumac	24.26	133	P	P	16 28 28.7	-1.3
	7.9nm,0.9s,baz=322,slow=19,SNR=3.2						
MMRI	Maumere	25.16	263	eP	P	16 28 38.3	+0.1
	59nm,0.8s						
MMRI	Maumere	25.16	263	P	P	16 28 37.1	-1.1
	72nm,0.7s						
DAV	Davao City (W)	25.46	301	LR	LR	16 37 29.6	
	comp=Z,22nm,21.6s,baz=120,slow=33						
EDFI	Ende, Flores	25.71	262	P	P	16 28 42.4	-0.9
	29nm,0.6s						
STKA	Stephens Creek	26.25	191	P	P	16 28 48.5	+0.6
	3.9nm,0.7s,baz=30,slow=6.6,SNR=14						
STKA				LR	LR	16 39 11.5	
	comp=Z,94nm,21.0s,baz=25,slow=36						
STKA	Stephens Creek	26.25	191	eP	P	16 28 48.6	+0.8
	12nm,1.8s						
BKSI	Bulukumba	27.23	270	P	P	16 28 56.9	0.0
	16nm,0.7s						
KAPI	Kappang	27.61	271	P	P	16 29 00.4	+0.1
	10nm,0.7s,baz=315,slow=14,SNR=4.1						
KAPI				LR	LR	16 42 40.8	
	comp=Z,28nm,18.0s,baz=119,slow=42						
PSA00	Pilbara Seismi	30.85	237	eP	P	16 29 29.7	+0.7
	18nm,0.9s						
CISI	Cisompet, Garu	39.40	266	eP	P	16 30 41.6	-1.0
	54nm,0.9s						
CISI	Cisompet, Garu	39.40	266	P	P	16 30 39.3	-3.3
JHJ	Hachijo jima 2	39.66	350	P	P	16 30 42.9	-1.5
	83nm,1.0s,baz=232,slow=19,SNR=2.5						
TNG	Tangerang	40.59	268	P	P	16 30 53.9	+1.5
URZ	Urewera	41.81	144	LR	LR	16 47 14.4	
	comp=Z,40nm,21.2s,baz=356,slow=34						
JNU	Nakatsue	42.05	339	P	P	16 31 04.0	-0.1
	9.0nm,0.8s,baz=198,slow=4.6,SNR=4.9						
RPZ	Rata Peaks	42.83	155	LR	LR	16 46 38.3	
	comp=Z,99nm,19.3s,baz=334,slow=33						
MDSI	Maura Dua	43.14	270	P	P	16 31 12.6	-0.6
MJAR	Matsushiro Arr	43.28	349	P	P	16 31 13.0	-1.0
	3.1nm,0.8s,baz=181,slow=8.0,SNR=10.0						
MAJO	Matsushiro	43.28	349	eP	P	16 31 13.3	-0.6
	40nm,1.9s						
MAT	Matsushiro	43.28	349	P	P	16 31 13.6	-0.4
MJB9	Matsu-Tunnel	43.28	349	eP	P	16 31 13.3	-0.7
	41nm,1.9s						
NJ2	Nanjing	46.71	326	eP	P	16 31 42.5	+1.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	47.00	339	P	P	16 31 43.2	-0.1
	2.3nm,0.8s,baz=150,slow=8.3,SNR=9.4						
KSRS				LR	LR	16 48 17.0	
	comp=Z,19nm,20.9s,baz=136,slow=32						
KSAR	Wonju Array Be	47.00	339	P	P	16 31 43.2	-0.2
USRK	Ussuriysk Ar.	51.96	346	P	P	16 32 21.3	+0.3
	1.9nm,0.6s,baz=170,slow=7.2,SNR=5.7						
KMI	Kunming	53.42	307	P	P	16 32 35.5	+3.0
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
CM31	Chiang Mai Arr	53.71	298	eP	P	16 32 35.6	+1.2
	22nm,1.6s						
CMAR	Chiang Mai Arr	53.71	298	P	P	16 32 35.6	+1.2
	0.7nm,0.6s,baz=128,slow=5.1,SNR=3.7						
CMAR				LR	LR	16 56 56.4	
	comp=Z,4.7nm,19.9s,baz=230,slow=38						
KLR	Kul'dur	56.77	348	P	P	16 32 56.4	+0.6
	1.2nm,0.4s,baz=166,slow=2.2,SNR=8.5						
HHC	Hu-ho-hao-te	57.15	328	P	P	16 33 00.5	+1.6
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,10.0nm,5.4s						
PETK	Petropavlovsk-	59.60	7	P	P	16 33 16.2	+0.6
	3.8nm,0.8s,baz=174,slow=7.6,SNR=6.8						
PETK				LR	LR	16 57 16.3	
	comp=Z,13nm,19.4s,baz=119,slow=34						
PEA1	Petropavlovsk-	59.60	7	eP	P	16 33 16.2	+0.6
GTA	Gaotai	63.11	320	eP	P	16 33 41.0	+1.3
GTA				pP	pP	16 33 57.0	-2.1
GTA				sP	sP	16 34 05.5	-2.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONA0	Songino Array	64.71	331	eP	P	16 33 50.2	+0.2
SONM	Songino Array	64.71	331	P	P	16 33 50.2	+0.2
	2.1nm,0.9s,baz=146,slow=5.4,SNR=8.8						
SONM				LR	LR	17 01 10.1	
	comp=Z,25nm,20.8s,baz=95,slow=35						
SEY	Seymchan	68.92	2	P	P	16 34 16.2	-0.1
	1.1nm,0.7s,baz=173,slow=8.0,SNR=4.9						
YAK	Yakutsk	69.29	351	eP	P	16 34 18.3	-0.2
	7.8nm,0.7s						
WMQ	Urumqi	73.16	319	eP	P	16 34 43.5	+1.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,44nm,4.5s						
WMQ				LR	LR		
	comp=N,110nm,29.3s						
WMQ				LR	LR		
	comp=E,240nm,29.2s						
MK31	Makanchi Array	77.86	320	eP	P	16 35 08.3	-0.9
	1.6nm,1.1s						
MKAR	Makanchi Array	77.86	320	P	P	16 35 08.4	-0.8
	0.8nm,0.7s,baz=99,slow=8.2,SNR=8.1						
MAKZ	Makanchi	78.07	320	eP	P	16 35 08.8	-1.5
	2.5nm,1.0s						
ZALV	Zalesovo Beam	79.33	328	P	P	16 35 15.1	-2.0
	0.8nm,0.4s,baz=110,slow=5.2,SNR=5.1						
ZALV				LR	LR	17 10 03.6	
	comp=Z,12nm,21.9s,baz=70,slow=35						
ZAA1	Zalesovo Array	79.33	328	eP	P	16 35 15.1	-2.0
KDAK	Kodiak Island	79.75	28	P	P	16 35 19.6	+0.3
	4.8nm,0.9s						
QSPA	South Pole Qui	83.89	180	eP	P	16 35 41.7	+0.6
	12nm,0.8s						
ILAR	Eielson Array	85.37	23	P	P	16 35 47.2	-1.1
	0.8nm,0.6s,baz=253,slow=4.9,SNR=8.5						
ILB	Eielson Array	85.37	23	eP	P	16 35 47.2	-1.1
	10nm,1.7s						
BVAR	Borovoye Array	87.11	324	P	P	16 35 55.5	-1.6
	1.1nm,0.7s,baz=108,slow=4.8,SNR=7.3						
SYO	Syowa Base	90.68	200	⇑eP	P	16 36 11.6	-2.1
KOLS	Kolonicke sedl	117.20	323	ePKP	PKiKP	16 42 01.6	+5.2
VYHS	Vyhne	119.45	323	ePKP	PKiKP	16 42 05.8	+5.0
PLCA	Paso Flores	121.79	147	PKP	PKiKP	16 42 06.7	+0.9
	1.2nm,0.5s,baz=337,slow=5.5,SNR=6.7						
LPAZ	La Paz	138.34	123	PKP	PKiKP	16 42 39.4	-0.8
	2.7nm,0.8s,baz=254,slow=3.3,SNR=6.1						
LPAZ	La Paz	138.34	123	ePKPdf	PKPdf	16 42 38.2	0.0
CPUP	Villa Florida	139.79	144	PKP	PKiKP	16 42 41.3	-1.0
	2.0nm,0.8s,baz=238,slow=6.1,SNR=3.0						
TOA0	Torodi Ar. Sit	145.57	284	ePKPdf	PKPdf	16 42 49.9	-0.4
TORD	Torodi Ar. Bea	145.57	284	PKPbc	PKPdf	16 42 49.2	-1.1
	2.3nm,0.5s,baz=61,slow=3.9,SNR=19						
TOA1	Torodi Ar. Sit	145.57	284	ePKPdf	PKPdf	16 42 49.2	-1.1
PTGA	Pitinga	151.78	103	ePKPbc	PKPbc	16 43 07.0	+0.2
DBIC	Dimbokro	152.50	273	PKPbc	PKPbc	16 43 08.2	-0.2
	3.5nm,1.0s,baz=76,slow=1.8,SNR=4.0						
BDFB	Brasilia	153.52	145	PKPbc	PKPbc	16 43 10.7	-0.1
	7.9nm,0.5s,baz=296,slow=1.3,SNR=9.0						

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*IDC **31** 16:30:38.2±2.9, 31°.60N×110°.86E, h0^{km}, mb3.8/4, mb1 3.8/6, mb1mx3.5/53, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=55.7km s-min=40.8km az=134.0*

ISC 31 16:30:38.1±1.0**, 31°.4N**±0°.2×**111°.08E**±0°.09**, h10**^{km}**, n8, σ1^s.80**/8**, mb3.8**/4**, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHN	Wuhan	2.93	106	Pg	Pn	16 31 20.3	-4.4
WHN				Sg	Sn	16 31 57.5	-2.5
WHN				smax	smax		
	comp=N,2µm,1.5s						
WHN				smax	smax		
	comp=E,440nm,0.8s						
GTA	Gaotai	12.18	314	eP	Pn	16 33 31.5	-0.3
GTA				sP		16 33 46.5	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS	Korea Array	15.15	62	Pn	Pn	16 34 14.6	+2.4
	comp=Z,0.1nm,0.3s,baz=250,slow=10,SNR=4.6						
CMAR	Chiang Mai Arr	16.92	223	Pn	Pn	16 34 36.5	+1.5
	comp=Z,0.1nm,0.3s,baz=29,slow=11,SNR=9.4						
MKAR	Makanchi Array	26.94	313	P	P	16 36 18.8	-0.7
	comp=Z,0.7nm,0.7s,baz=107,slow=10,SNR=4.6						
ZALV	Zalesovo Beam	29.38	328	P	P	16 36 40.3	-1.0
	comp=Z,0.5nm,0.4s,baz=125,slow=7.6,SNR=3.3						
GEYT	Alibeck	43.57	294	P	P	16 38 42.5	+0.1
	comp=Z,2.4nm,0.8s,baz=116,slow=3.4,SNR=4.8						
AKASG	Malin Array Be	61.51	314	P	P	16 40 54.3	-0.8
	comp=Z,0.4nm,0.4s,baz=66,slow=6.8,SNR=2.8						

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*NIED **31** 16:33:00, 44°.80N×143°.20E, h280^{km}, Mw4.7 Best double couple: $M_0$1.15000×10^{16} NP1:ϕ_s65.00000°, δ33.00000°, λ-161.00000°. NP2:ϕ_s319.00000°, δ80.00000°, λ-58.00000°.*

*BJI **31** 16:33:12.2±0.0, 44°.86N×143°.14E, h253^{km}, mb4.9/62, mB4.6/37*

*ISCJB **31** 16:33:12.5±0.1, 44°.83N±0°.02×143°.17E±0°.02, h252^{km}±1^{km}, mb4.6/289, Error ellipse: s-maj=3.2km s-min=2.1km az=162.2*

*IDC **31** 16:33:12.6±1.0, 44°.86N×143°.16E, h238^{km}±9^{km}, mb4.3/37, mb1 4.4/47, mb1mx4.4/58, mbtmp4.9/47, Error ellipse: s-maj=8.2km s-min=6.3km az=136.0*

*MOS **31** 16:33:12.2±0.8, 44°.83N×143°.17E, h251^{km}, mb4.6/69, Error ellipse: s-maj=5.8km s-min=4.2km az=102.6*

*NEIC **31** 16:33:13.4±1.6, 44°.80N×143°.20E, h250^{km}±4^{km}, mb4.7/215, Error ellipse: s-maj=9.3km s-min=8.6km az=217.0*

NEIC Recorded [1 JMA] in Aomori, Honshu.

*JMA **31** 16:33:13.2±0.2, 44°.78N×143°.20E, h253^{km}±2^{km}, M4.5*

JMA Felt I J1.

ISC 31 16:33:13.2±0.3**, 44°.84N**±0°.03×**143°.19E**±0°.03**, h248**^{km}±3^{km}**, h248**^{km}**:pP-P, n748, σ1^s.03**/818**, mb4.6**/292**, 37C-21D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.44	286	⇓P	Pn	16 33 46.3	+0.7
JSE				S	S	16 34 11.9	+0.8
ASAJ	Asahikawa	0.84	210	⇑P	Pn	16 33 48.0	+0.8
ASAJ				S	S	16 34 14.9	+1.0
JMP	Maruseppu	0.84	171	⇑P	Pn	16 33 47.7	+0.4
JMP				S	S	16 34 14.0	0.0
JTKR	Abashiri--Toko	1.01	149	⇓P	Pn	16 33 48.8	+0.7
JTKR				S	S	16 34 16.2	+0.7
JKK2	Kamakawa 2	1.02	198	⇑P	Pn	16 33 48.6	+0.4
JKK2				S	S	16 34 16.4	+0.8
JWK2	Keihoku	1.03	298	⇓P	Pn	16 33 49.2	+1.1
JWK2				eS	S	16 34 16.6	+1.0
JSS	Shosan	1.05	246	⇑P	Pn	16 33 49.3	+1.0
JSS				S	S	16 34 17.5	+1.7
JYG	Yagishiri	1.32	252	⇑P	Pn	16 33 50.4	+0.4
JYG				S	S	16 34 19.1	+0.2
JHR	Hokuryu	1.52	224	⇑P	Pn	16 33 52.0	+0.5
JHR				eS	S	16 34 22.5	+0.9
JAR	Ashorobuto	1.60	165	⇑P	Pn	16 33 52.5	+0.4
JAR				eS	S	16 34 22.4	-0.3
JRBN	Rebuntou	1.61	292	⇓P	Pn	16 33 51.9	-0.2
JRBN				S	S	16 34 21.5	-1.2
JRA	Rausu	1.66	122	⇓P	Pn	16 33 53.0	+0.5
JRA				eS	S	16 34 24.2	+0.8
JFR	Furan	1.73	195	⇑P	Pn	16 33 53.4	+0.2
JFR				eS	S	16 34 25.0	+0.3
LAGR	Lagunnoye	2.02	112	⇓iPN	Pn	16 33 56.1	+0.5
LAGR				i S	S	16 34 29.7	+0.6
LAGR				pmax	pmax		
	comp=N,2µm,0.5s						
LAGR				pmax	pmax		
	comp=Z,3µm,0.5s						
LAGR				pmax	pmax		
	comp=E,5µm,0.6s						
LAGR				smax	smax		
	comp=N,3µm,0.8s						
LAGR				smax	smax		
	comp=E,2µm,0.5s						
GRPR	Tuman	2.04	114	⇓iPN	Pn	16 33 56.2	+0.4
GRPR				i S	S	16 34 29.9	+0.5
GRPR				pmax	pmax		
	comp=Z,2µm,0.4s						
GRPR				pmax	pmax		
	comp=N,1µm,0.5s						
GRPR				pmax	pmax		
	comp=E,3µm,0.5s						
GRPR				smax	smax		
	comp=E,908nm,0.6s						
GRPR				smax	smax		
	comp=N,1µm,0.7s						
GRPR				smax	smax		
	comp=N,1µm,1.6s						
GRPR				smax	smax		
	comp=E,2µm,1.5s						
YUK	Yuzh-Kuril'sk	2.08	112	⇓iPN	Pn	16 33 56.6	+0.4
YUK				i S	S	16 34 30.8	+0.8
YUK				pmax	pmax		
	comp=E,1µm,0.4s						
YUK				pmax	pmax		
	comp=Z,2µm,0.4s						
YUK				pmax	pmax		
	comp=N,827nm,0.5s						
YUK				smax	smax		
	comp=N,2µm,0.6s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
YUK				smax	smax		
	comp=N,4µm,2.4s						
YUK				smax	smax		
	comp=E,3µm,0.6s						
YSS	Yuzh-Sakhalins	2.14	352	ePn	Pn	16 33 57.3	+0.7
YSS	Yuzh-Sakhalins	2.14	352	α iPN	Pn	16 33 57.4	+0.8
YSS				eS	S	16 34 30.9	-0.1
YSS				pmax	pmax		
	comp=Z,780nm,0.4s						
YSS				smax	smax		
	comp=N,2µm,0.8s						
JAK	Akkeshi	2.14	149	P	Pn	16 33 55.7	-1.1
JAK				S	S	16 34 28.7	-2.5
JCH	Churui	2.23	177	⇑P	Pn	16 33 56.4	-1.2
JCH				S	S	16 34 29.3	-3.4
NMR	Nemuro--Hokkai	2.35	128	⇓iPN	Pn	16 33 57.1	-1.6
NMR				i S	S	16 34 31.6	-3.1
NEM2	Nemuro 2	2.36	128	⇓P	Pn	16 33 57.1	-1.8
NEM2				S	S	16 34 31.6	-3.3
JEW	Eniwo	2.36	213	⇑P	Pn	16 33 59.6	+0.7
JEW				eS	S	16 34 35.1	+0.1
JSK	Shakotan	2.45	234	⇑P	Pn	16 34 00.3	+0.5
JSK				eS	S	16 34 36.1	-0.5
JNBK	Urakawa-nobuka	2.58	187	⇑P	Pn	16 34 00.1	-1.0
ERM	Erimo	2.82	180	ePn	Pn	16 34 02.7	-1.0
ERM	Erimo	2.82	180	ePN	Pn	16 34 02.7	-1.0
KUR	Kuril'sk	3.34	82	d iPN	Pn	16 34 10.0	+0.8
KUR				i S	S	16 34 54.6	+1.0
KUR				pmax	pmax		
	comp=Z,3µm,1.2s						
KUR				pmax	pmax		
	comp=Z,371nm,0.5s						
KUR				pmax	pmax		
	comp=E,191nm,0.4s						
KUR				pmax	pmax		
	comp=N,99nm,0.3s						
KUR				smax	smax		
	comp=N,4µm,1.9s						
KUR				smax	smax		
	comp=E,3µm,1.6s						
KUR				smax	smax		
	comp=E,285nm,0.8s						
KUR				smax	smax		
	comp=N,151nm,0.5s						
JKB	Kayabe	3.34	209	⇑P	Pn	16 34 08.4	-0.9
UGL	Uglegorsk	4.31	350	⇑iPN	Pn	16 34 20.9	+0.5
UGL				eS	S	16 35 14.1	+0.2
UGL				pmax	pmax		
	comp=Z,645nm,0.7s						
UGL				pmax	pmax		
	comp=E,491nm,0.6s						
UGL				pmax	pmax		
	comp=N,292nm,0.7s						
UGL				smax	smax		
	comp=E,460nm,0.9s						
TEY	Ternei	4.68	275	⇓iPN	Pn	16 34 25.5	+0.6
TEY				eS	S	16 35 21.2	-0.8
TEY				pmax	pmax		
	comp=Z,200nm,1.0s						
TEY				pmax	pmax		
	comp=N,200nm,0.9s						
TEY				pmax	pmax		
	comp=E,160nm,0.9s						
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
TEY				pmax	pmax		
	comp=Z,150nm,0.8s						
TEY				smax	smax		
	comp=E,400nm,2.0s						
TEY				smax	smax		
	comp=N,1µm,3.8s						
TYV	Tymovskoe	6.04	357	ePN	Pn	16 34 41.6	+0.1
TYV				eS	S	16 35 51.9	-0.4
TYV				pmax	pmax		
	comp=Z,200nm,0.7s						
TYV				smax	smax		
	comp=E,68nm,1.0s						
GRNR	Gornyy	7.48	325	ePN	Pn	16 35 01.3	+1.6
GRNR				e		16 36 27.5	
GRNR				pmax	pmax		
	comp=Z,16nm,1.0s						
USA0B	Ussuriysk Arra	8.03	269	ePn	Pn	16 35 06.8	+0.1
USRK	Ussuriysk Ar.	8.03	269	P	Pn	16 35 07.1	+0.4
	comp=Z,13nm,0.3s,baz=86,slow=13,SNR=232						
USRK				S	S	16 36 37.9	-0.2
	baz=85,slow=18,SNR=7.0						
VLA	Vladivostok	8.33	262	d iPN	Pn	16 35 10.3	-0.2
NKL	Nikolayevsk	8.48	350	ePN	Pn	16 35 12.0	-0.3
NKL				pmax	pmax		
	comp=Z,26nm,1.0s						
KLR	Kul'dur	8.96	303	P	Pn	16 35 19.0	+0.6
	comp=Z,7.3nm,0.3s,baz=120,slow=12,SNR=165						
MSHR	Mys Shultsa	9.00	260	c iPN	Pn	16 35 19.8	+0.8
MJB9	Matsu-Tunnel	9.11	206	ePn	Pn	16 35 18.7	-1.8
MAJO	Matsushiro	9.11	206	ePn	Pn	16 35 18.7	-1.8
MAJO	Matsushiro	9.11	206	ePN	Pn	16 35 18.7	-1.8
MAT	Matsushiro	9.11	206	P	Pn	16 35 18.8	-1.7
MAT				S	S	16 37 00.4	-3.1
MJAR	Matsushiro Arr	9.11	206	P	Pn	16 35 18.7	-1.8
	comp=Z,2.3nm,0.3s,baz=83,slow=16,SNR=118						
MDJ	Mudanjiang	9.68	273	ePn	Pn	16 35 27.8	+0.1
MDJ	Mudanjiang	9.68	273	P	Pn	16 35 28.0	+0.4
MDJ				pmax	pmax		
	comp=Z,140nm,0.9s						
SKR	Severo-Kuril's	10.48	52	c ePN	Pn	16 35 37.6	0.0
JHJ	Hachijo jima 2	12.00	194	P	Pn	16 35 55.4	-1.4
	comp=Z,62nm,0.3s,baz=79,slow=1.5,SNR=38						
JHJ				S	S	16 38 03.5	-7.0
	comp=Z,11nm,0.3s,baz=66,slow=19,SNR=4.9						
JHJ2	Mitsune	12.00	194	ePn	Pn	16 35 54.9	-1.9
PEA0B	Petropavlovsk-	12.60	44	ePn	Pn	16 36 04.2	+0.2
PETK	Petropavlovsk-	12.60	44	P	Pn	16 36 04.2	+0.2
	comp=Z,5.4nm,0.3s,baz=230,slow=8.8,SNR=132						
PETK				ScP	ScP	16 44 29.4	+0.1
	comp=Z,0.1nm,0.3s,baz=145,slow=18,SNR=2.6						
PEA1	Petropavlovsk-	12.61	44	eP	Pn	16 36 04.2	+0.2
PEA1				eScP	ScP	16 44 29.4	+0.1
CN2	Changchun	12.75	272	eP	Pn	16 36 05.0	-0.9
CN2				eS	S	16 38 23.0	-4.6
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
PET	Petropavlovsk	13.04	46	ePn	Pn	16 36 07.3	-2.0
PET	Petropavlovsk	13.04	46	ePN	Pn	16 36 08.4	-0.9
PET				eS	S	16 38 28.2	-5.7
PET				pmax	pmax		
	comp=Z,34nm,1.0s						
KSRS	Korea Array	13.65	243	P	Pn	16 36 16.6	-0.4
	comp=Z,0.8nm,0.3s,baz=54,slow=9.6,SNR=31						
KSRS				ScP	ScP	16 44 33.0	+1.9
	comp=Z,0.2nm,0.3s,baz=293,slow=0.1,SNR=7.4						
ZEA	Zeya	13.66	316	eP	Pn	16 36 16.6	-0.4
ZEA				eS	S	16 38 46.5	-1.7
ZEA				pmax	pmax		
	comp=N,52nm,0.8s						
ZEA				pmax	pmax		
	comp=E,42nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,72nm,0.8s						

ZEA				smax	smax		
	comp=E,400nm,6.0s						
KS15	**Wonju Array Si**	13.68	243	*e*P	Pn	16 36 16.0	-1.5
KS15				*e*ScP	ScP	16 44 33.0	+1.8
TJN	**Taejon**	14.67	240	*i* P	Pn	16 36 30.4	+1.0
JNU	**Nakatsue**	15.10	223	P	P	16 36 33.9	-0.2
	comp=E,1.3nm,0.3s,baz=32,slow=2.5,SNR=16						
JNU	**Nakatsue**	15.10	223	*e*P	P	16 36 33.9	-0.2
	comp=E,37nm,0.8s						
MA2	**Magadan**	15.46	15	P	P	16 36 38.1	+0.3
	comp=E,8.2nm,0.3s,baz=196,slow=10,SNR=43						
MA2	**Magadan**	15.46	15	*e*P	P	16 36 37.6	-0.2
	comp=E,269nm,1.5s						
HIA	**Hailar**	16.56	294	*e*P	P	16 36 49.2	-0.8
	comp=E,82nm,0.6s						
HIA	**Hailar**	16.56	294	*e*P	P	16 36 49.2	-0.8
HIA				pmax	pmax		
	comp=Z,82nm,0.6s						
DL2	**Dalian**	17.09	257	P	P	16 36 56.5	+0.6
DL2				sP	sP	16 38 05.5	+0.6
DL2				S	S	16 39 58.0	-3.1
DL2				pmax	pmax		
	comp=Z,39nm,0.6s						
DL2				pmax	pmax		
	comp=Z,130nm,4.1s						
SEY	**Seymchan**	18.88	13	P	P	16 37 14.8	-0.2
	comp=Z,6.1nm,0.3s,baz=192,slow=6.7,SNR=161						
YAK	**Yakutsk**	18.94	340	*e*P	P	16 37 13.2	-2.4
	comp=Z,42nm,0.5s						
YAK	**Yakutsk**	18.94	340*c*	*i*P	P	16 37 13.1	-2.4
YAK				*e*S	S	16 40 32.4	-4.5
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				smax	smax		
	comp=N,219nm,1.3s						
YAK				smax	smax		
	comp=E,225nm,1.5s						
BJT	**Baijiatuau**	20.47	266	*e*P	P	16 37 30.8	-1.4
	comp=E,44nm,0.8s						
BJT	**Baijiatuau**	20.47	266	*e*P	P	16 37 30.8	-1.4
BJT				pmax	pmax		
	comp=Z,44nm,0.8s						
TIA	**Tai'an**	21.53	255	P	P	16 37 42.0	-0.9
TIA				pmax	pmax		
	comp=Z,24nm,0.7s						
JOW	**Kunigami**	21.59	219	P	P	16 37 44.2	+0.7
	comp=Z,0.9nm,0.4s,baz=124,slow=15,SNR=3.6						
JOW	**Kunigami**	21.59	219	*e*P	P	16 37 44.2	+0.7
	comp=Z,20nm,1.1s						
BOD	**Bodaibo**	22.17	316	*e*P	P	16 37 46.0	-2.5
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NJ2	**Nanjing**	22.84	244	*e*P	P	16 37 55.3	+0.5
NJ2				pmax	pmax		
	comp=Z,52nm,0.5s						
HHC	**Hu-ho-hao-te**	23.45	271	P	P	16 38 02.0	+1.6
HHC				S	S	16 41 56.5	+1.5
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,28nm,5.4s						
TIY	**Taiyuan**	24.08	264	*e*P	P	16 38 07.5	+1.3
TIY				pmax	pmax		
	comp=Z,60nm,0.6s						
BTO	**Baotou**	24.63	272	*e*P	P	16 38 11.0	-0.1
ULN	**Ulaanbaatar**	24.98	290	*e*P	P	16 38 15.2	+0.9
	comp=Z,90nm,0.8s						
ULN	**Ulaanbaatar**	24.98	290	*e*P	P	16 38 15.2	+0.9
ULN				pmax	pmax		
	comp=Z,90nm,0.8s						
SONA0	**Songino Array**	25.42	290	*e*P	P	16 38 19.3	+1.0
SONA0				*e*PcP	PcP	16 41 44.0	+0.9
SONA0				*e*ScP	ScP	16 44 58.7	+0.4
SONM	**Songino Array**	25.42	290	P	P	16 38 19.3	+1.0
	comp=Z,90nm,0.6s,baz=81,slow=8.8,SNR=540						
SONM				PcP	PcP	16 41 44.0	+0.9
	comp=Z,1.0nm,0.6s,baz=66,slow=1.7,SNR=3.3						
SONM				ScP	ScP	16 44 58.7	+0.4
	comp=Z,3.4nm,0.9s,baz=106,slow=2.0,SNR=11						
BILL	**Bilibino**	26.19	20	*e*P	P	16 38 21.6	-3.1
	comp=Z,7.2nm,0.4s						
BILL	**Bilibino**	26.19	20*c*	*e*P	P	16 38 24.0	-0.7
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHN	**Wuhan**	26.74	248	P	P	16 38 30.5	+0.5
TLY	**Talaya**	26.94	299	P	P	16 38 30.3	-1.2
	comp=Z,8.0nm,0.8s,baz=270,slow=4.8,SNR=4.8						
TLY	**Talaya**	26.94	299	*e*P	P	16 38 29.5	-2.1
	comp=Z,6.8nm,0.8s						
TLY	**Talaya**	26.94	299	*e*P	P	16 38 30.7	-0.9
TLY				pmax	pmax		
	comp=Z,13nm,0.7s						
ZAK	**Zakamensk**	27.22	296	*e*P	P	16 38 33.9	-0.3
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	**Tiksi**	27.76	350	P	P	16 38 37.6	-0.9
	comp=Z,5.5nm,0.4s,baz=148,slow=4.1,SNR=3.8						
TIXI	**Tiksi**	27.76	350	*i* P	P	16 38 39.1	+0.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN	**Xi'an**	28.38	260	P	P	16 38 44.5	-0.1
XAN				pP	pP	16 39 31.8	-1.6
XAN				pmax	pmax		
	comp=Z,16nm,1.1s						
XAN				pmax	pmax		
	comp=Z,77nm,3.5s						
MOY	**Mondy**	28.59	299	*e*P	P	16 38 45.6	-0.7
MOY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ENH	**Enshi**	30.17	253	*e*P	P	16 38 59.6	-0.8
	comp=Z,34nm,0.6s						
LZH	**Lanzhou**	30.93	267	*e*P	P	16 39 08.0	+0.8
LZH				pP	pP	16 39 57.5	+1.2
LZH				sP	sP	16 40 27.0	+2.0
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
GTA	**Gaotai**	32.33	276	⇓P	P	16 39 20.5	+1.2
GTA				pP	pP	16 40 13.3	+4.7
GTA				sP	PP	16 40 42.3	+4.6
GTA				PcP	PcP	16 42 02.3	+1.6
GTA				ScP	ScP	16 45 21.8	+1.5
GTA				pmax	pmax		
	comp=Z,29nm,1.1s						
GTA				pmax	pmax		
	comp=Z,94nm,5.6s						
GTA				LR	LR		
	comp=Z,74nm,15.1s						
GTA				LR	LR		
	comp=Z,75nm,16.5s						
GTA				LR	LR		
	comp=Z,62nm,15.1s						
CD2	**Chengdu**	33.74	259	*e*P	P	16 39 31.0	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RDOG	**Red Dog Mine**	36.03	31	*e*P	P	16 39 49.8	-0.7
	comp=Z,19nm,0.5s						
DGZ	**Jazzator, Alta**	37.40	298	*i* P	P	16 40 03.4	+1.0
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHGN	**Chignik**	37.70	51	*e*P	P	16 40 04.2	-0.4
	comp=Z,161nm,0.9s						
KMI	**Kunming**	38.05	253	*e*P	P	16 40 08.5	+0.3
	comp=Z,52nm,0.9s						
KMI	**Kunming**	38.05	253	P	P	16 40 08.8	+0.7
KMI				pmax	pmax		
	comp=Z,62nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,3.3s						
KMI	**Kunming**	38.05	253	*e*P	P	16 40 08.5	+0.3
KMI				pmax	pmax		
	comp=Z,52nm,0.9s						
ZAA1	**Zalesovo Array**	38.06	305	*e*P	P	16 40 07.0	-0.7
ZAA1				*e*PcP	PcP	16 42 17.8	+0.6
ZAA1				*e*S	S	16 45 42.2	+1.2
ZAA0	**Zalesovo Array**	38.06	305	*e*P	P	16 40 06.7	-0.9
	comp=Z,8.1nm,0.6s						
ZALV	**Zalesovo Beam**	38.06	305	P	P	16 40 07.0	-0.7
	comp=Z,7.5nm,0.4s,baz=89,slow=7.8,SNR=29						
ZALV				PcP	PcP	16 42 17.8	+0.6
	comp=Z,5.0nm,0.6s,baz=94,slow=1.7,SNR=11						
ZALV				ScP	S	16 45 42.2	+1.2
	comp=Z,1.0nm,0.4s,baz=95,slow=3.0,SNR=5.7						
TTA	**Tatalina**	38.40	40	*e*P	P	16 40 10.1	-0.4
	comp=Z,7.3nm,1.0s						
TTA	**Tatalina**	38.40	40	*e*P	P	16 40 10.1	-0.4
TTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SVW2	**Sparrevohn**	38.69	43	*e*P	P	16 40 13.1	+0.3
	comp=Z,14nm,0.6s						
WMQ	**Urumqi**	39.05	289	*e*P	P	16 40 17.5	+1.4
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,32nm,3.8s						
WMQ				LR	LR		
	comp=Z,160nm,29.2s						
WMQ				LR	LR		
	comp=Z,220nm,28.8s						
WMQ				LR	LR		
	comp=Z,100nm,27.7s						
SLVN	**Son La**	39.86	247	*e*P	P	16 40 23.6	+0.6
	comp=Z,13nm,0.8s						
RSO	**Redoubt South**	40.13	44	*e*P	P	16 40 25.6	+0.8
PPLA	**Purkeypile**	40.15	40	*e*P	P	16 40 25.3	+0.4
	comp=Z,59nm,1.8s						
OHAK	**Old Harbor**	40.34	49	*e*P	P	16 40 26.7	+0.3
	comp=Z,179nm,1.8s						
SKT	**Skwentna**	40.54	41	*e*P	P	16 40 27.5	-0.5
	comp=Z,22nm,2.0s						
BPAW	**Bear Paw Mtn.**	40.60	38	*e*P	P	16 40 27.9	-0.5
	comp=Z,8.3nm,0.6s						
KDAK	**Kodiak Island**	40.62	48	*e*P	P	16 40 28.3	-0.3
	comp=Z,33nm,0.8s						
KDAK	**Kodiak Island**	40.62	48	*e*P	P	16 40 28.3	-0.3
KDAK				pmax	pmax		
	comp=Z,33nm,0.8s						
MLY	**Manley**	40.65	37	*e*P	P	16 40 28.5	-0.3
	comp=Z,13nm,0.4s						
KTH	**Kantishna Hill**	40.67	39	*e*P	P	16 40 28.6	-0.5
	comp=Z,15nm,0.8s						
COLD	**Coldfoot**	40.78	33	*e*P	P	16 40 29.6	-0.2
	comp=Z,17nm,0.8s						
SUA	**Susitna One**	40.97	42	*e*P	P	16 40 30.9	-0.8
	comp=Z,12nm,0.5s						
TOLK	**Toolik Lake Re**	41.00	31	*e*P	P	16 40 30.4	-1.2
	comp=Z,32nm,0.6s						
TOLK	**Toolik Lake Re**	41.00	31	P	P	16 40 30.6	-1.1
	baz=270,SNR=22						
CNPM	**China Poot**	41.02	45	*e*P	P	16 40 31.2	-0.7
	comp=Z,107nm,1.3s						
BRLK	**Bradley Lake**	41.15	45	*e*P	P	16 40 32.3	-0.7
	comp=Z,50nm,0.7s						
BWN	**Browne**	41.26	38	*e*P	P	16 40 34.2	+0.4
	comp=Z,52nm,0.9s						
RC01	**Rabbit Creek A**	41.51	42	*e*P	P	16 40 35.5	-0.3
	comp=Z,45nm,1.2s						
MCK	**McKinley**	41.53	38	*e*P	P	16 40 35.7	-0.3
	comp=Z,13nm,0.8s						
MK31	**Makanchi Array**	41.55	295	*e*P	P	16 40 36.8	+0.3
	comp=Z,42nm,0.7s						
MK31	**Makanchi Array**	41.55	295	*i* P	P	16 40 36.6	+0.2
MK31				pmax	pmax		
	comp=Z,42nm,0.6s						
MK32	**Makanchi Array**	41.55	295	*e*P	P	16 40 37.0	+0.5
MK32				*e*PcP	PcP	16 42 28.5	-0.1
MK32				*e*ScP	ScP	16 45 55.5	+1.0
MKAR	**Makanchi Array**	41.55	295	P	P	16 40 37.0	+0.6
	comp=Z,44nm,0.7s,baz=80,slow=8.9,SNR=381						
MKAR				PcP	PcP	16 42 28.5	-0.1
	comp=Z,2.0nm,0.6s,baz=74,slow=7.7,SNR=2.8						
MKAR				ScP	ScP	16 45 55.5	+1.0
	comp=Z,2.4nm,0.8s,baz=66,slow=4.1,SNR=10						
RND	**Reindeer**	41.61	39	*e*P	P	16 40 35.5	-1.2
	comp=Z,15nm,0.5s						
RND	**Reindeer**	41.61	39	*e*P	P	16 40 35.5	-1.2
RND				pmax	pmax		
	comp=Z,15nm,0.5s						
PMR	**Palmer**	41.72	42	*e*P	P	16 40 38.0	+0.6
	comp=Z,14nm,0.5s						
PMR	**Palmer**	41.72	42	*e*P	P	16 40 38.1	+0.6
PMR				pmax	pmax		
	comp=Z,14nm,0.5s						
MAKZ	**Makanchi**	41.75	295	*e*P	P	16 40 38.1	+0.2
	comp=Z,51nm,0.9s						
MAKZ	**Makanchi**	41.75	295	*e*P	P	16 40 38.2	+0.2
MAKZ				pmax	pmax		
	comp=Z,51nm,0.9s						
GHO	**Glory Hole Cre**	41.79	41	*e*P	P	16 40 38.0	-0.2
	comp=Z,38nm,1.0s						
SEW	**Seward**	41.81	44	*e*P	P	16 40 38.2	0.0
	comp=Z,57nm,0.6s						
SEW				*e*pP	pP	16 41 29.9	+1.2
WRH	**Wood River Hil**	41.82	37	*e*P	P	16 40 37.8	-0.5
	comp=Z,14nm,0.7s						
TCOL	**CIGO, UAF Yank**	41.88	37	P	P	16 40 38.2	-0.6
	baz=276,SNR=5.3						
COLA	**College**	41.88	37	*e*P	P	16 40 38.4	-0.3
	comp=Z,55nm,0.6s						
COLA	**College**	41.88	37*c*	*i*P	P	16 40 38.5	-0.3
COLA				pmax	pmax		
	comp=Z,29nm,0.8s						
CCB	**Clear Creek Bu**	41.93	37	*e*P	P	16 40 38.3	-0.8
	comp=Z,9.0nm,0.5s						
POKR	**Poker Plat Res**	42.03	36	P	P	16 40 39.4	-0.6
	baz=276,SNR=13						
SML	**Sawmill**	42.07	41	*e*P	P	16 40 39.9	-0.5
	comp=Z,24nm,0.8s						
SML	**Sawmill**	42.07	41	*e*P	P	16 40 39.9	-0.5
SML				pmax	pmax		
	comp=Z,24nm,0.8s						
KNK	**Knik Glacier**	42.07	42	*e*P	P	16 40 40.4	0.0
	comp=Z,50nm,1.3s						
ILAR	**Eielson Array**	42.30	37	P	P	16 40 41.2	-1.0
	comp=Z,20nm,0.6s,baz=268,slow=6.6,SNR=133						
ILB	**Eielson Array**	42.30	37	*e*P	P	16 40 41.0	-1.2
	comp=Z,23nm,0.7s						
DHY	**Denali Highway**	42.31	39	*e*P	P	16 40 41.7	-0.8
	comp=Z,36nm,0.5s						
HDA	**Harding Lake**	42.32	37	*e*P	P	16 40 41.0	-1.3
	comp=Z,19nm,0.5s						
HDA	**Harding Lake**	42.32	37	P	P	16 40 41.3	-1.1
	baz=277						
KURK	**Kurchatov**	42.55	302	*e*P	P	16 40 44.0	-0.4
	comp=Z,31nm,0.6s						
KURK	**Kurchatov**	42.55	302	*i* P	P	16 40 43.7	-0.6
KURK				pmax	pmax		
	comp=Z,23nm,0.6s						
NONG	**Nongkai**	42.72	244	P	P	16 40 47.0	+1.0
	comp=Z,0.7nm,0.8s						
FYU	**Fort Yukon**	42.78	34	*e*P	P	16 40 45.4	-0.5
	comp=Z,80nm,0.6s						
PRP	**Porcupine Dome**	42.78	36	*e*P	P	16 40 45.7	-0.5
	comp=Z,36nm,0.8s						
FID	**Port Fidalgo**	43.14	43	*e*P	P	16 40 48.9	0.0
	comp=Z,73nm,1.6s						
PAX	**Paxson**	43.19	39	*e*P	P	16 40 49.8	+0.4
	comp=Z,5.9nm,0.4s						
PAX	**Paxson**	43.19	39	*e*P	P	16 40 49.8	+0.4
PAX				pmax	pmax		
	comp=Z,6.0nm,0.4s						
RIDG	**Independent Ri**	43.34	38	*e*P	P	16 40 49.4	-1.1
	comp=Z,19nm,0.5s						
LSA	**Lhasa**	43.35	268	*e*P	P	16 40 51.7	+0.1
	comp=Z,8.7nm,0.8s						
LSA	**Lhasa**	43.35	268	P	P	16 40 53.0	+1.5
LSA				pmax	pmax		
	comp=Z,48nm,0.8s						
LSA	**Lhasa**	43.35	268	P	P	16 40 53.1	+1.5
LSA	**Lhasa**	43.35	268	*e*P	P	16 40 51.7	+0.1
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
EYAK	**Cordova Ski Ar**	43.53	43	*e*P	P	16 40 53.0	+1.0
	comp=Z,46nm,0.6s						
SCRK	**Sand Creek**	43.67	38	*e*P	P	16 40 52.0	-1.3
	comp=Z,26nm,0.7s						
PAYA	**Payao**	43.92	249	P	P	16 40 56.7	+1.0
	comp=Z,35µm,0.6s,comp=Z,360µm						
MENT	**Mentasta**	43.98	39	*e*P	P	16 40 56.4	+0.7
	comp=Z,10nm,0.5s						
RAGM	**Ragged Mountai**	44.08	43	*e*P	P	16 40 57.8	+1.3
	comp=Z,30nm,0.7s						
HMT	**Hamilton**	44.30	43	*e*P	P	16 40 59.3	+1.1
	comp=Z,50nm,1.1s						
KAIM	**Kayak Island**	44.32	43	*e*P	P	16 40 59.7	+1.4
	comp=Z,54nm,0.7s						
UTTA	**Uttaradit**	44.63	247	P	P	16 41 02.2	+1.0
	comp=Z,33µm,0.8s,comp=Z,270µm						
LAMP	**Lampang**	44.67	248	P	P	16 41 05.7	+4.1
	comp=Z,37µm,0.6s						
PDGK	**Podgornoye**	44.72	292	P	P	16 41 01.7	-0.2
PDGK				pmax	pmax		
	comp=Z,15nm,0.7s						
EGAK	**Eagle**	44.73	36	*e*P	P	16 41 00.5	-0.9
	comp=Z,30nm,0.6s						
CRQM	**Cirque**	44.73	42	*e*P	P	16 41 02.2	+0.5
	comp=Z,49nm,0.9s						
TGL	**Tana Glacier**	44.88	42	*e*P	P	16 41 03.3	+0.4
	comp=Z,42nm,1.0s						
CMMT	**Chiang Mai**	44.92	249	P	P	16 41 04.0	+0.4
	comp=Z,14nm,0.8s						
CHTO	**Chiang Mai**	44.92	249	*e*P	P	16 41 03.8	+0.2
	comp=Z,15nm,0.6s						
CHTO	**Chiang Mai**	44.92	249	*e*P	P	16 41 03.8	+0.2
CHTO				pmax	pmax		
	comp=Z,15nm,0.6s						
WAX	**Waxell Ridge**	44.95	42	*e*P	P	16 41 04.2	+0.9
	comp=Z,41nm,0.6s						
BALM	**Baldy**	45.04	42	*e*P	P	16 41 04.4	+0.3
	comp=Z,30nm,0.7s						
BALM	**Baldy**	45.04	42	*e*P	P	16 41 04.4	+0.3
BALM				pmax	pmax		
	comp=Z,30nm,0.7s						
CHAI	**Chaiyaphum**	45.05	244	P	P	16 41 05.0	+0.4
	comp=Z,47µm,0.7s,comp=Z,382µm						
CM31	**Chiang Mai Arr**	45.18	249	*e*P	P	16 41 06.3	+0.7
	comp=Z,26nm,1.5s						
CM31				*e*PcP	PcP	16 42 42.4	+1.1
CM31				*e*ScP	ScP	16 46 10.9	+1.2
CMAR	**Chiang Mai Arr**	45.18	249	P	P	16 41 06.3	+0.7
	comp=Z,3.1nm,0.6s,baz=35,slow=6.9,SNR=25						
CMAR				PcP	PcP	16 42 42.4	+1.1
	comp=Z,2.5nm,0.8s,baz=3.0,slow=1.7,SNR=11						
CMAR				ScP	ScP	16 46 10.9	+1.2
	comp=Z,1.8nm,0.9s,baz=12,slow=3.2,SNR=7.1						
PBKT	**Sadao Pong**	45.21	245	P	P	16 41 07.1	+1.3
	comp=Z,4.9nm,0.6s						
SHL	**Shillong**	45.30	263	⇓*i*P	P	16 41 05.0	-1.7
CTGM	**Chitina Glacie**	45.54	41	*e*P	P	16 41 09.1	+1.1
	comp=Z,70nm,0.6s						
DAWY	**Dawson**	45.63	37	*e*P	P	16 41 08.2	-0.4
	comp=Z,3.8nm,0.7s						
EPYK	**Eagle Plains**	46.17	33	*e*P	P	16 41 12.7	-0.1
	comp=Z,64nm,0.6s						
EPYK	**Eagle Plains**	46.17	33	P	P	16 41 12.7	-0.1
	baz=284,SNR=68						
PCA	**Pinnacle**	46.29	42	*e*P	P	16 41 14.4	+0.6
	comp=Z,28nm,0.8s						
BVAR	**Borovoye Array**	46.60	307	P	P	16 41 16.3	+0.1
	comp=Z,10.0nm,0.4s,baz=79,slow=9.1,SNR=105						
BVAR				PcP	PcP	16 42 46.5	+0.7
	comp=Z,3.6nm,0.5s,baz=86,slow=2.1,SNR=7.2						
BRVK	**Borovoye**	46.64	307	*e*P	P	16 41 16.2	-0.3
	comp=Z,8.9nm,0.8s						
BRVK	**Borovoye**	46.64	307	*e*P	P	16 41 16.2	-0.3
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SIJI	**Sorong**	46.73	196	P	P	16 41 17.9	+0.3
	comp=Z,4.5nm,0.6s,baz=332,slow=22,SNR=4.9						
UMPA	**Umpang Tak**	46.85	247	P	P	16 41 21.6	+3.0
	comp=Z,47µm,0.9s						
INK	**Inuvik**	46.90	30	P	P	16 41 17.8	-0.5
	comp=Z,24nm,0.4s,baz=278,slow=5.5,SNR=88						
INK	**Inuvik**	46.90	30	*e*P	P	16 41 17.6	-0.6
	comp=Z,29nm,0.4s						
INK	**Inuvik**	46.90	30	*e*P	P	16 41 17.7	-0.6
INK				pmax	pmax		
	comp=Z,29nm,0.4s						
UTHA	**Uthaitani**	46.94	246	P	P	16 41 20.7	+1.4
	comp=Z,51µm,0.8s,comp=Z,405µm						
OTUK	**Ortayu**	47.26	301	P	P	16 41 21.7	+0.3
OTUK				pmax	pmax		
	comp=Z,35nm,0.6s						
ULHL	**Ulahol**	47.34	292	P	P	16 41 23.6	+1.2
	SNR=7.7						
HYT	**Haines Junctio**	47.37	41	*e*P	P	16 41 23.8	+1.6
	comp=Z,126nm,1.0s						
TKM2	**Tokmak 2**	47.46	293	*i* P	P	16 41 23.8	+0.5
TKM2				pmax	pmax		
	comp=Z,34nm,0.9s						
TKM2	**Tokmak 2**	47.46	293	P	P	16 41 24.4	+1.2
	SNR=48						
KBK	**Karagaybulak**	48.01	293	P	P	16 41 28.5	+1.1
	SNR=18						
USP	**Ospenovka**	48.02	294	P	P	16 41 28.0	+0.6
	SNR=22						
SRDT	**SRDT**	48.05	245	P	P	16 41 29.5	+1.7
	comp=Z,19nm,0.7s						
JIRN	**Jiri**	48.07	269	*e*P	P	16 41 29.1	+0.8
	comp=Z,133nm,0.7s						
KZA	**Kyzart**	48.08	292	P	P	16 41 29.9	+1.7
	SNR=17						
GUN	**Gumba**	48.14	270	*e*P	P	16 41 29.3	+0.5
	comp=Z,83nm,0.7s						
AAK	**Ala-Archa**	48.31	293	P	P	16 41 30.6	+0.8
	comp=Z,8.8nm,0.4s,baz=88,slow=4.1,SNR=12						
AAK	**Ala-Archa**	48.31	293	*e*P	P	16 41 30.2	+0.5
	comp=Z,11nm,0.6s						
AAK	**Ala-Archa**	48.31	293	*i* P	P	16 41 30.5	+0.8
	SNR=7.1						
AAK	**Ala-Archa**	48.31	293	*e*P	P	16 41 30.2	+0.5
AAK				pmax	pmax		
	comp=Z,11nm,0.6s						
AAK	**Ala-Archa**	48.31	293	P	P	16 41 30.7	+0.9
	SNR=7.2						
UCH	**Uchtor**	48.49	292	P	P	16 41 32.3	+0.9
	SNR=6.3						
KKN	**Kakani**	48.64	270	*e*P	P	16 41 32.8	+0.4
WHY	**Whitehorse**	48.64	41	*e*P	P	16 41 33.0	+1.2
	comp=Z,23nm,0.8s						
PKI	**Pulchoki**	48.68	270	*e*P	P	16 41 33.1	+0.2
	comp=Z,30nm,0.6s						
PKIN	**Phulchoki**	48.68	270	*e*P	P	16 41 33.2	+0.4
	comp=Z,17nm,0.5s						
EKS2	**Erkin-Say**	48.77	293	P	P	16 41 34.1	+0.9
	SNR=22						
PHET	**Kaeng Krachan**	48.80	243	P	P	16 41 35.3	+1.8
	comp=Z,89µm,0.8s						
SKAG	**Skagway**	48.85	42	*e*P	P	16 41 34.6	+1.3
	comp=Z,31nm,1.0s						
DMN	**Daman**	48.87	270	*e*P	P	16 41 35.0	+0.7
	comp=Z,42nm,0.7s						
GKN	**Gorkha**	48.97	271	*e*P	P	16 41 35.3	+0.4
	comp=Z,31nm,0.3s						
AML	**Almayashu**	49.08	293	P	P	16 41 37.0	+1.2
	SNR=12						
DANN	**Dangsing**	49.39	272	*e*P	P	16 41 39.3	+1.1
	comp=Z,125nm,0.6s						
BESE	**Bessie Mountai**	49.40	43	*e*P	P	16 41 39.1	+1.5
	comp=Z,27nm,0.9s						
JIS	**Juneau Island**	49.75	43	*e*P	P	16 41 41.6	+1.5
	comp=Z,27nm,0.9s						
KOLN	**Koldanda**	49.85	271	*e*P	P	16 41 42.4	+0.9
SBUM	**Sibu**	50.26	222	*e*P	P	16 41 45.0	+0.5
	comp=Z,6.6nm,0.7s						
SBUM	**Sibu**	50.26	222	P	P	16 41 47.0	+2.6
SVE	**Sverdlovsk**	50.38	315	*e*P	P	16 41 44.6	-0.2
SVE				pmax	pmax		
	comp=Z,17nm,0.7s						
KK31	**Karatay Array**	50.68	295	*e*P	P	16 41 47.6	+0.2
	comp=Z,17nm,0.7s						
KK31	**Karatay Array**	50.68	295	*i* P	P	16 41 47.2	-0.2
KK31				pmax	pmax		
	comp=Z,21nm,0.9s						
KKAR	**Karatay Array**	50.68	295	*e*P	P	16 41 47.5	+0.1
	comp=Z,17nm,0.7s						
KKAR	**Karatay Array**	50.68	295	*e*P	P	16 41 47.5	+0.1
KKAR				pmax	pmax		
	comp=Z,17nm,0.7s						
ARU	**Arti**	51.59	315	*e*P	P	16 41 53.2	-0.6
	comp=Z,13nm,0.6s						
ARU	**Arti**	51.59	315*c*	*e*P	P	16 41 53.1	-0.7
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DLBC	**Dease Lake**	51.78	42	P	P	16 41 57.2	+1.9
	comp=Z,12nm,0.8s,baz=296,slow=8.5,SNR=25						
DLBC	**Dease Lake**	51.78	42	*e*P	P	16 41 56.5	+1.2
	comp=Z,21nm,0.9s						
KSM	**Kuching**	52.03	224	*e*P	P	16 41 58.1	+0.6
	comp=Z,24nm,0.7s						
KSM	**Kuching**	52.03	224	P	P	16 41 59.0	+1.4
STKI	**Sintang**	52.70	221	P	P	16 42 04.0	+1.5
	comp=Z,32nm,0.7s						
GAR	**Garm**	52.86	291	*e*P	P	16 42 03.6	0.0
	comp=Z,120nm,1.5s						
GAR	**Garm**	52.86	291	*e*P	P	16 42 03.6	0.0
GAR				pmax	pmax		

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       comp=Z,120nm,1.5s
NIL    Nilore            53.76 284  eP     P      16 42 10.6 +0.5
       comp=Z,36nm,1.0s
NIL    Nilore            53.76 284  eP     P      16 42 10.6 +0.5
NIL                                  pmax  pmax
       comp=Z,36nm,1.0s
KAPI   Kappang           53.89 209   P     P      16 42 10.5  -0.6
       comp=Z,10nm,0.6s,baz=144,slow=16,SNR=5.7
ABKAR  Akbulak array     54.15 307  eP     P      16 42 12.8 +0.3
       comp=Z,34nm,0.6s
JRMM   Jerantut          54.17 233   P     P      16 42 14.0 +0.8
AKTO   Aktyubinsk        54.65 309   P     P      16 42 16.6 +0.4
       comp=Z,9.5nm,0.6s,baz=64,slow=7.5,SNR=41
AKTO                                 PcP   PcP    16 43 16.1 +0.5
       comp=Z,4.7nm,0.6s,baz=42,slow=3.0,SNR=5.2
RES    Resolute Bay      54.72  16   P     P      16 42 15.8  -0.5
       comp=Z,51nm,0.6s,baz=303,slow=5.5,SNR=77
RES    Resolute Bay      54.72  16  eP     P      16 42 15.2  -1.0
       comp=Z,52nm,0.6s
RES    Resolute Bay      54.72  16  eP     P      16 42 15.3  -1.0
RES                                  pmax  pmax
       comp=Z,52nm,0.6s
PRGR   Permogore         55.06 325  eP     P      16 42 17.8  -1.1
PRGR                                 pmax  pmax
       comp=Z,8.0nm,0.7s
BBB    Bella Bella       55.69  48   P     P      16 42 24.6 +1.1
       comp=Z,9.3nm,0.7s,baz=295,slow=8.8,SNR=9.2
BBB    Bella Bella       55.69  48  eP     P      16 42 24.5 +1.1
       comp=Z,13nm,0.8s
KBL    Kabul             56.14 287  eP     P      16 42 26.4  -0.9
       comp=Z,18nm,0.6s
KBL    Kabul             56.14 287  eP     P      16 42 26.4  -0.9
KBL                                  pmax  pmax
       comp=Z,19nm,0.6s
YKW3   Yellowknife Ar    56.42  33  eP     P      16 42 28.4   0.0
       comp=Z,32nm,0.7s
YKA    Yellowknife Ar    56.46  33   P     P      16 42 29.1 +0.3
       comp=Z,27nm,0.6s,baz=305,slow=6.9,SNR=66
YKB5   Yellowknife Ar    56.46  33  eP     P      16 42 29.1 +0.3
PSI    Prapat            57.11 236   P     P      16 42 34.6 +0.4
       comp=Z,4.9nm,0.4s,baz=359,slow=5.0,SNR=5.0
PSI    Prapat            57.11 236  eP     P      16 42 34.2 +0.1
       comp=Z,12nm,0.7s
PSI    Prapat            57.11 236  eP     P      16 42 34.2 +0.1
PSI                                  pmax  pmax
       comp=Z,12nm,0.7s
ARCES  ARCESS Array B    57.21 338   P     P      16 42 34.0   0.0
       comp=Z,1.0nm,0.4s,baz=28,slow=8.2,SNR=11
ARE0   ARCESS Array S    57.21 338  eP     P      16 42 34.4 +0.4
DAG    Danmarks Havn     58.12 355  i P    P      16 42 39.1  -1.0
DAG                                  pmax  pmax
       comp=Z,3.0nm,0.6s
DAG    Danmarks Havn     58.12 355  i P    P      16 42 39.1  -1.0
       comp=Z,5.1nm,0.6s
KTK1   Kautokeino        58.16 338  eP     P      16 42 40.7 +0.2
MTN    Manton Dam        58.44 194  eP     P      16 42 43.2 +0.1
       comp=Z,18nm,0.8s
TRO    Tromso            58.80 340  eP     P      16 42 44.6  -0.3
PWJI   Pagerwojo         59.73 217   P     P      16 42 50.8  -1.2
JOF    Joensuu           59.77 331   P     P      16 42 52.4 +0.8
JOF                                  pmax  pmax
       comp=Z,14nm,1.3s
MDSI   Maura Dua         60.23 226   P     P      16 42 56.0 +0.6
KPJI   Karang Pucung     60.38 220   P     P      16 42 54.2  -2.2
NLWA   Neilton Lookou    60.61  51  eP     P      16 42 58.6 +1.0
       comp=Z,17nm,1.0s
D03D   Eldon             60.95  51   P     P      16 43 01.6 +1.7
       baz=306,SNR=8.6
STEI   Steigen           60.97 340  eP     P      16 42 58.9  -0.7
B05A   Bryant            61.07  50   P     P      16 43 01.9 +1.2
       baz=306
GEYT   Alibeck           61.41 296   P     P      16 43 03.7 +0.5
       comp=Z,13nm,0.6s,baz=36,slow=2.8,SNR=24
GYA0B  ALIBECK ARRAY     61.41 296  eP     P      16 43 03.5 +0.3
       comp=Z,24nm,1.1s
E04D   Cinebar           61.82  51   P     P      16 43 07.4 +1.7
       baz=306,SNR=8.1
F04D   Rainier, OR       61.85  52   P     P      16 43 07.5 +1.6
       baz=306
C06D   Leavenworth       61.92  49   P     P      16 43 07.1 +0.7
       baz=307
LON    Longmire          62.12  51  eP     P      16 43 08.4 +0.6
       comp=Z,6.5nm,1.1s
LON    Longmire          62.12  51  eP     P      16 43 08.4 +0.6
LON                                  pmax  pmax
       comp=Z,7.0nm,1.1s
LTY    Liberty           62.44  50  eP     P      16 43 10.5 +0.5
       comp=Z,20nm,1.6s
MOR8   Moi Rana          62.53 339  eP     P      16 43 08.7  -1.4
I02D   Swisshome         62.56  54   P     P      16 43 12.5 +1.9
       baz=307
FIA1   FINESS Array S    62.58 331  eP     P      16 43 09.8  -0.6
       comp=Z,12nm,0.5s
FIA0   FINESS Array S    62.58 331  eP     P      16 43 10.0  -0.5
FIA0   FINESS Array S    62.58 331  eP     P      16 43 10.0  -0.5
FINES  FINESS Array B    62.58 331   P     P      16 43 10.0  -0.5
       comp=Z,9.5nm,0.4s,baz=49,slow=7.0,SNR=145
FINES  FINESS Array B    62.58 331   P     P      16 43 10.0  -0.5
OBN    Obninsk           62.72 322⇓eP     P      16 43 11.0  -0.5
OBN                                  *PP   pP     16 44 10.0 +2.6
OBN                                  *SP   sP     16 44 35.0 +0.6
OBN                                  S     S      16 51 17.0  -2.6
OBN                                  pmax  pmax
       comp=Z,12nm,0.9s
VRH    Novokhopyorsk     62.79 316  eP     P      16 43 10.4  -1.6
VRH                                  pmax  pmax
       comp=Z,40nm,0.8s
F05D   White Salmon      62.84  51   P     P      16 43 14.1 +1.7
       baz=307
SUMG   Summit            62.88   1  eP     P      16 43 12.7  -0.1
       comp=Z,27nm,0.6s
SUMG   Summit            62.88   1⇑iP     P      16 43 13.1 +0.3
SUMG                                 pmax  pmax
       comp=Z,66nm,0.7s
SUMG   Summit            62.88   1⇑iP     P      16 43 13.1 +0.3
       comp=Z,66nm,0.7s
H04D   Lebanon           62.94  53   P     P      16 43 14.9 +1.8
       baz=307
J01E   Myrtle Point      63.08  55   P     P      16 43 15.9 +1.9
       baz=307
I03D   Drain, OR         63.09  54   P     P      16 43 16.1 +2.0
       baz=307,SNR=6.3
H04A   Detroit Lake      63.16  53  eP     P      16 43 15.5 +0.9
       comp=Z,16nm,0.8s
LPSR   Galich'ya Gora    63.26 319  eP     P      16 43 14.6  -0.4
LPSR                                 pmax  pmax
       comp=Z,10.0nm,0.7s
G05D   Wamic, OR         63.31  52   P     P      16 43 17.1 +1.5
       baz=308
C09A   Chrisman Ranch    63.40  48  eP     P      16 43 16.7 +0.6
       comp=Z,11nm,0.8s
D08A   Wollman Farm,     63.51  49  eP     P      16 43 17.5 +0.7
       comp=Z,6.1nm,0.7s
K02D   Willamette Mer    63.51  55   P     P      16 43 19.1 +2.1
       baz=308
I04A   Tendick Farm,     63.57  54   P     P      16 43 18.7 +1.3
       baz=308
NEW    Newport           63.72  47   P     P      16 43 18.9 +0.7
       comp=Z,5.6nm,0.6s,baz=337,slow=5.4,SNR=7.2
NEW    Newport           63.72  47   P     P      16 43 19.2 +1.0
       baz=309
I05D   Terrebonne, OR    63.85  53   P     P      16 43 20.6 +1.5
       baz=308
L02E   Cave Junction     63.88  56   P     P      16 43 20.9 +1.5
       baz=308
HUMO   Hull Mountain     63.98  55  eP     P      16 43 20.9 +0.9
       comp=Z,5.6nm,0.6s
VSR    Storozhevoye      64.03 317d iP     P      16 43 19.8  -0.3
VSR                                  pmax  pmax
       comp=Z,28nm,0.8s
J04D   Umpqua Nationa    64.08  54   P     P      16 43 22.4 +1.5
       baz=308,SNR=7.4
VORD   Divnogorie        64.13 317  eP     P      16 43 20.3  -0.4
VORD                                 pmax  pmax
       comp=Z,20nm,0.9s
E09A   Wood Farm, Sta    64.27  49  eP     P      16 43 22.6 +0.8
       comp=Z,18nm,0.9s
PINE   Pine Mountain     64.41  53  eP     P      16 43 24.3 +1.3
       comp=Z,27nm,0.7s
VSU    Vasula            64.45 329  eP     P      16 43 22.5  -0.2
VSU                                  IAmb  IAmb   16 43 23.4
       comp=Z,23nm,0.6s
NSS    Namsos            64.47 339  eP     P      16 43 23.4 +0.7
J05D   Fort Rock, OR     64.56  54   P     P      16 43 25.6 +1.7
       baz=308,SNR=8.6
G08A   Pilot Rock        64.59  51  eP     P      16 43 25.0 +1.0
       comp=Z,3.0nm,0.8s
KHMM   Horse Mountain    64.59  57  eP     P      16 43 25.9 +1.7
       comp=Z,26nm,0.5s
L04D   Klamath Falls     64.60  55   P     P      16 43 25.7 +1.5
       baz=308,SNR=12
YBH    Yreka Blue Hor    64.66  56   P     P      16 43 25.9 +1.3
       comp=Z,5.0nm,0.7s,baz=0.2,slow=5.6,SNR=12
YBH    Yreka Blue Hor    64.66  56  eP     P      16 43 25.2 +0.7
       comp=Z,5.9nm,0.8s
YBH    Yreka Blue Hor    64.66  56  eP     P      16 43 25.2 +0.7
YBH                                  pmax  pmax
       comp=Z,6.0nm,0.8s
K04D   Chiloquin, OR     64.67  54   P     P      16 43 25.6 +1.0
       baz=308
M02C   Callahan          64.79  56   P     P      16 43 27.0 +1.7
       baz=308
WALA   Waterton Lakes    64.86  45  eP     P      16 43 26.3 +0.6
       comp=Z,10nm,0.8s
WRAB   Tennant Creek     64.96 189  eP     P      16 43 26.4   0.0
       comp=Z,12nm,0.8s
WRAB   Tennant Creek     64.96 189ceP     P      16 43 25.3  -1.1
WRAB                                 pmax  pmax
       comp=Z,11nm,1.0s
WB2    Warramunga Arr    64.97 189  eP     P      16 43 26.5   0.0
       comp=Z,13nm,0.6s
WR1    Warramunga Arr    64.97 189  eP     P      16 43 26.4  -0.1
WRA    Warramunga Arr    64.97 189   P     P      16 43 26.4  -0.1
       comp=Z,10.0nm,0.6s,baz=1.3,slow=7.5,SNR=61
F10A   Beach Ranch, E    65.10  49  eP     P      16 43 28.0 +0.8
       comp=Z,4.3nm,0.8s
N02D   Trinity Center    65.14  56   P     P      16 43 29.3 +1.7
       baz=309
M04C   Macdoel           65.14  55   P     P      16 43 29.1 +1.5
       baz=309,SNR=5.8
WDC    Whiskeytown Da    65.48  57  eP     P      16 43 30.6 +0.9
       comp=Z,4.1nm,0.8s
WDC    Whiskeytown Da    65.48  57  eP     P      16 43 30.6 +0.9
WDC                                  pmax  pmax
       comp=Z,4.0nm,0.8s
O02D   Mt. Diablo Mer    65.59  57   P     P      16 43 32.0 +1.5
       baz=309
AKT    Akhty             65.61 305  eP     P      16 43 31.4 +0.8
AKT                                 e             16 44 02.0
AKT                                 e*PP   pP     16 44 28.8 +1.7
AKT                                  pmax  pmax
       comp=Z,29nm,0.6s
BMO    Blue Mountains    65.77  50  eP     P      16 43 32.5 +0.9
       comp=Z,12nm,1.2s
ILULI  Ilulissat         65.78   6  eP     P      16 43 30.7  -0.3
       comp=Z,33nm,0.6s
ILULI  Ilulissat         65.78   6  eP     P      16 43 30.7  -0.3
ILULI                                pmax  pmax
       comp=Z,33nm,0.6s
MOD    Modoc Plateau     65.96  54  eP     P      16 43 33.8 +0.9
       comp=Z,6.9nm,0.6s
J08A   Circle Bar Ran    66.08  52  eP     P      16 43 34.7 +1.1
       comp=Z,19nm,1.1s
SEKA   Sheki             66.10 305   P     P      16 43 34.1 +0.4
O03E   Paynes Creek      66.10  56   P     P      16 43 34.3 +0.6
       baz=309,SNR=6.9
ZKTA   Zakatala          66.16 305   P     P      16 43 34.9 +0.9
MSO    Missoula          66.29  47  eP     P      16 43 35.5 +0.6
       comp=Z,9.2nm,0.9s
MSO    Missoula          66.29  47   P     P      16 43 35.6 +0.8
       baz=311
PLID   Pearl Lake        66.33  49  eP     P      16 43 35.7 +0.4
       comp=Z,6.1nm,0.6s
MNGR   Mingechevir, A    66.44 305   P     P      16 43 36.5 +0.8
FFC    Flin Flon         66.48  35  eP     P      16 43 36.0 +0.3
       comp=Z,159nm,0.6s
FFC    Flin Flon         66.48  35  eP     P      16 43 36.0 +0.3
WVOR   Wild Horse Val    66.58  53  eP     P      16 43 37.7 +0.9
       comp=Z,11nm,0.9s
WVOR   Wild Horse Val    66.58  53  eP     P      16 43 37.7 +0.9
WVOR                                 pmax  pmax
       comp=Z,11nm,0.9s
IZAR   Zarasai           66.58 327  eP     P      16 43 36.7 +0.3
IZAR                                 IAmb  IAmb   16 43 37.2
       comp=Z,10nm,0.6s
NCK    Nalchik           66.69 309  i P    P      16 43 37.1  -0.2
NCK                                  pmax  pmax
       comp=Z,11nm,1.0s
LKRN   Lenkeran, Azer    66.74 302   P     P      16 43 38.2 +0.6
IIGN   Ignalina          66.88 326  eP     P      16 43 38.6 +0.3
IIGN                                 IAmb  IAmb   16 43 39.4
       comp=Z,11nm,0.6s
KIV    Kislovodsk        66.89 309  eP     P      16 43 40.0 +1.3
       comp=Z,25nm,0.6s
KIV    Kislovodsk        66.89 309⇑iP     P      16 43 40.2 +1.5
KIV    Kislovodsk        66.89 309  i P    P      16 43 40.2 +1.5
       SNR=9.1
KIV    Kislovodsk        66.89 309  eP     P      16 43 38.7   0.0
KIV                                  pmax  pmax
       comp=Z,101nm,1.1s
KBZ    Khabaz            66.92 309   P     P      16 43 39.8 +1.1
       comp=Z,9.8nm,0.7s,baz=60,slow=3.8,SNR=22
GANJ   Ganja             66.97 305   P     P      16 43 39.8 +0.7
ZEI    Tsey              66.97 308  eP     P      16 43 35.3  -4.1
ZEI                                  pmax  pmax
       comp=Z,11nm,0.5s
TBLG   Delisi            67.18 307  eP     P      16 43 41.6 +1.2
       comp=Z,32nm,0.8s
TBLG   Delisi            67.18 307  eP     P      16 43 41.6 +1.2
TBLG                                 pmax  pmax
       comp=Z,32nm,0.8s
DOMB   Dombas            67.27 338  eP     P      16 43 40.9 +0.2
NEY    Neytrino          67.33 309  i P    P      16 43 40.5  -1.1
NEY                                  pmax  pmax
       comp=Z,1.0nm,0.8s
NC204  NORSAR Array S    67.45 337  eP     P      16 43 41.6  -0.2
       comp=Z,90nm,1.8s
HRY    Holter Researc    67.46  46  eP     P      16 43 43.1 +0.9
NB201  NORSAR Array S    67.49 337  eP     P      16 43 41.7  -0.3
       comp=Z,94nm,1.6s
MFID   Camas Ranch       67.51  51  eP     P      16 43 43.3 +0.7
       comp=Z,17nm,1.4s
NB2    NORSAR Subarra    67.52 337   P     P      16 43 42.1  -0.1
       comp=Z,3.1nm,0.6s,baz=36,slow=6.2
NB2    NORSAR Subarra    67.52 337   P     P      16 43 42.1  -0.1
       baz=36,slow=6.2
NB200  NORSAR Array S    67.52 337  eP     P      16 43 42.1  -0.1
NOA    NORSAR Array B    67.52 337   P     P      16 43 42.1  -0.1
       comp=Z,3.9nm,0.6s,baz=33,slow=6.1,SNR=20
EGMT   Eagleton          67.62  44  eP     P      16 43 43.2 +0.1
       comp=Z,14nm,0.8s
EGMT   Eagleton          67.62  44   P     P      16 43 44.0 +0.9
       baz=313,SNR=11
NC602  NORSAR Array S    67.68 337  eP     P      16 43 44.0 +0.8
AKN    Aaknes            67.68 339  eP     P      16 43 43.8 +0.6
PAHR   Pah Rah Range     67.90  56  eP     P      16 43 45.6 +0.5
       comp=Z,7.3nm,0.9s
PNTR   Pine Nut          68.17  56  eP     P      16 43 46.7  -0.2
       comp=Z,6.2nm,0.7s
MCMT   McKenzie Canyo    68.19  48  eP     P      16 43 46.9  -0.1
HLID   Hailey            68.19  50  eP     P      16 43 46.8  -0.1
       comp=Z,3.6nm,0.8s
HLID   Hailey            68.19  50   P     P      16 43 48.2 +1.3
       baz=312,SNR=9.0
GNI    Garni             68.21 305   P     P      16 43 49.0 +2.0
GNI    Garni             68.21 305  i P    P      16 43 47.8 +0.8
GNI                                  pmax  pmax
       comp=Z,46nm,1.1s
BOZ    Bozeman (W)       68.31  47  eP     P      16 43 48.0 +0.5
       comp=Z,13nm,0.7s
BOZ    Bozeman (W)       68.31  47  eP     P      16 43 48.1 +0.5
BOZ                                  pmax  pmax
       comp=Z,13nm,0.7s
BOZ    Bozeman (W)       68.31  47   P     P      16 43 48.7 +1.1
       baz=312,SNR=31
CMB    Columbia Colle    68.39  58  eP     P      16 43 48.9 +0.9
       comp=Z,7.8nm,1.3s
CMB    Columbia Colle    68.39  58  eP     P      16 43 48.9 +0.9
CMB                                  pmax  pmax
       comp=Z,8.0nm,1.3s
NAX    Nakhchivan        68.40 304   P     P      16 43 48.7 +0.6
YERR   Yerington         68.45  56  eP     P      16 43 49.5 +0.8
       comp=Z,16nm,1.2s
SKAR   Skarslia          68.61 338  eP     P      16 43 49.8 +0.7
AS31   Alice Springs     68.70 189  eP     P      16 43 50.5 +0.6
       comp=Z,4.5nm,1.1s
ASAR   Alice Springs     68.70 189   P     P      16 43 50.6 +0.7
       comp=Z,9.2nm,0.8s,baz=7.4,slow=6.1,SNR=123
HYA    Hoyanger          68.75 339  eP     P      16 43 50.3 +0.5
AKASG  Malin Array Be    68.98 322   P     P      16 43 51.2  -0.2
       comp=Z,2.7nm,0.3s,baz=41,slow=6.3,SNR=41
AKBB   Malin Array Si    68.98 322  eP     P      16 43 51.0  -0.4
       comp=Z,16nm,0.8s
AKBB   Malin Array Si    68.98 322  eP     P      16 43 51.0  -0.4
AKBB                                 pmax  pmax
       comp=Z,16nm,0.8s
BATM   Batumi            68.99 308⇑iP     P      16 43 52.1 +0.5
KVN    Kaiserville       69.08  55  eP     P      16 43 53.4 +0.9
       comp=Z,16nm,1.2s
KVN    Kaiserville       69.08  55  eP     P      16 43 53.4 +0.9
KVN                                  pmax  pmax
       comp=Z,16nm,1.2s
YHB    Horse Butte       69.11  47  eP     P      16 43 53.5 +0.9
       comp=Z,16nm,1.0s
BCA    Borcka            69.14 308⇑iP     P      16 43 53.6 +1.1
GCMT   Greycliff         69.19  46  eP     P      16 43 53.6 +0.7
SUE    Sulen             69.20 340  eP     P      16 43 53.5 +1.0
YHH    Holmes Hill       69.26  47  eP     P      16 43 54.5 +0.8
       comp=Z,8.7nm,1.1s
NV01   Mina Array Sit    69.37  56  eP     P      16 43 55.5 +1.2
NVAR   Mina Array Bea    69.37  56   P     P      16 43 55.5 +1.2
       comp=Z,2.4nm,0.6s,baz=291,slow=6.5,SNR=22
PSA00  Pilbara Seismi    69.44 203  eP     P      16 43 54.8 +0.3
       comp=Z,20nm,0.8s
NV11   Mina Array Sit    69.46  56  eP     P      16 43 55.6 +0.9
       comp=Z,0.3nm,0.9s
YFT    Old Faithful      69.50  47  eP     P      16 43 55.3 +0.3
       comp=Z,10nm,0.9s
ASK    Askoy             69.59 339  eP     P      16 43 56.0 +1.1
ELK    Elko              69.61  53  eP     P      16 43 56.3 +0.6
       comp=Z,5.4nm,1.1s
ELK    Elko              69.61  53  eP     P      16 43 56.3 +0.6
ELK                                  pmax  pmax
       comp=Z,5.0nm,1.1s
BER    Bergen            69.64 339  eP     P      16 43 56.3 +1.1
YPP    Pitchstone Pla    69.64  47  eP     P      16 43 56.5 +0.6
       comp=Z,3.0nm,0.7s
H17A   Grant Village     69.67  47   P     P      16 43 58.5 +2.4
       baz=313
IMW    Indian Meadow     69.83  48  eP     P      16 43 58.1 +1.1
       comp=Z,7.6nm,0.6s
RLMT   Red Lodge         69.85  46  eP     P      16 43 57.7 +0.6
       comp=Z,6.0nm,0.6s
RLMT   Red Lodge         69.85  46   P     P      16 43 58.3 +1.2
       baz=314,SNR=8.2
ANGG   Ammassalik, Gr    69.88   0  eP     P      16 43 55.8  -0.7
       comp=Z,18nm,0.8s
DGMT   Dagmar            69.97  41  eP     P      16 43 57.6 +0.1
       comp=Z,21nm,0.6s
DGMT   Dagmar            69.97  41   P     P      16 43 58.1 +0.5
       baz=316
MOOW   Moose Ponds       70.03  48  eP     P      16 43 59.0 +0.7
       comp=Z,9.9nm,1.0s
TPAW   Teton Pass        70.10  48  eP     P      16 43 59.9 +1.2
       comp=Z,23nm,1.4s
SHME   Shamm             70.13 287  i P    P      16 43 58.9 +0.1
       SNR=13
BLS5   Blasjo            70.18 338  eP     P      16 43 59.0 +0.5
LOHW   Long Hollow       70.20  48  eP     P      16 44 00.3 +1.1
       comp=Z,18nm,1.6s
REDW   Red Top Meadow    70.24  48  eP     P      16 44 00.4 +0.9
       comp=Z,6.6nm,0.7s
LAO    LASA Array        70.28  43  eP     P      16 44 00.2 +0.8
       comp=Z,17nm,1.3s
LAO    LASA Array        70.28  43   P     P      16 44 00.4 +1.0
       baz=315
HVU    Hansel Valley     70.28  50  eP     P      16 44 00.4 +0.7
       comp=Z,6.1nm,0.9s
HVU    Hansel Valley     70.28  50  eP     P      16 44 00.4 +0.7
HVU                                  pmax  pmax
       comp=Z,6.0nm,0.9s
MDH    Madha             70.51 287   P     P      16 44 01.1   0.0
MSFE   Esma-Masafi       70.57 287   P     P      16 44 01.9 +0.4
UOSS   Minazif           70.81 286  eP     P      16 44 02.8  -0.2
       comp=Z,33nm,0.6s
UOSS   Minazif           70.81 286  i P    P      16 44 03.0 +0.1
       SNR=10
GRAC   Grapevine Rang    70.88  57   P     P      16 44 04.6 +1.4
       baz=312
HATD   Hatta, Dubai      70.94 286  i P    P      16 44 04.2 +0.5
       SNR=10
R11A   Troy Canyon, C    71.02  55  eP     P      16 44 04.8 +0.6
       comp=Z,3.7nm,0.4s
R11A   Troy Canyon, C    71.02  55   P     P      16 44 05.2 +1.0
       baz=312,SNR=15
HWUT   Hardware Ranch    71.06  50  eP     P      16 44 05.3 +0.9
       comp=Z,7.8nm,0.8s
NAZ    Nazwa, Dubai      71.15 287   P     P      16 44 05.3 +0.3
BW06   Boulder Array     71.33  48  eP     P      16 44 06.5 +0.4
       comp=Z,15nm,0.8s
BW06   Boulder Array     71.33  48   P     P      16 44 06.8 +0.7
       baz=314,SNR=17
PD31   Pinedale Array    71.33  48  eP     P      16 44 06.6 +0.5
       comp=Z,13nm,0.8s
PDAR   Pinedale Array    71.33  48   P     P      16 44 06.8 +0.7
       comp=Z,16nm,0.7s,baz=272,slow=1.1,SNR=134
DUG    Dugway, Tooele    71.34  52  eP     P      16 44 07.1 +1.0
       comp=Z,7.8nm,0.8s
DUG    Dugway, Tooele    71.34  52  eP     P      16 44 07.1 +1.0
DUG                                  pmax  pmax
       comp=Z,8.0nm,0.8s
DUG    Dugway, Tooele    71.34  52   P     P      16 44 07.4 +1.3
       baz=313,SNR=9.1
FAQ    Al Faqa, Dubai    71.36 287   P     P      16 44 06.6 +0.4
MPMC   Manual Prospec    71.43  58   P     P      16 44 07.6 +0.8
       baz=312
TCUT   Toone Canyon      71.48  50  eP     P      16 44 07.8 +0.8
       comp=Z,17nm,0.8s
FURC   Furnace Creek,    71.53  57   P     P      16 44 08.1 +1.1
       baz=312
TPNV   Topopah Spring    71.57  56  eP     P      16 44 08.2 +0.7
       comp=Z,3.8nm,0.7s
TPNV   Topopah Spring    71.57  56  eP     P      16 44 08.2 +0.7
TPNV                                 pmax  pmax
       comp=Z,4.0nm,0.7s
TPNV   Topopah Spring    71.57  56   P     P      16 44 08.5 +1.0
       baz=313,SNR=6.9
ASUD   Al Ashush, Dub    71.61 287  i P    P      16 44 08.2 +0.5
       SNR=11
ALNE   Al Ain            71.70 286  i P    P      16 44 08.6 +0.3
       SNR=8.7
LRMC   Laurel Mtn Rad    71.70  58   P     P      16 44 09.2 +0.9
       baz=312
JLU    Jordanelle        71.82  51  eP     P      16 44 09.9 +0.9
       comp=Z,4.7nm,0.8s
PSUT   Pine Spring       71.89  54  eP     P      16 44 09.8 +0.4
       comp=Z,3.1nm,0.7s
NLU    North Lily Min    71.92  51  eP     P      16 44 10.5 +0.9
       comp=Z,8.1nm,0.9s
MPU    Maple Canyon      72.12  51  eP     P      16 44 11.7 +1.0
       comp=Z,9.2nm,0.6s
ULM    Lac du Bonnet     72.30  35   P     P      16 44 11.2  -0.1
       comp=Z,14nm,0.6s,baz=320,slow=6.1,SNR=15
ULM    Lac du Bonnet     72.30  35  eP     P      16 44 11.0  -0.4
       comp=Z,15nm,0.6s
ULM    Lac du Bonnet     72.30  35  eP     P      16 44 11.0  -0.4
ULM                                  pmax  pmax
       comp=Z,15nm,0.6s
GSC    Goldstone, Bar    72.35  58   P     P      16 44 13.0 +0.9
       baz=313
DIKM   Dikmen            72.47 312⇑iP     P      16 44 13.9 +1.3
SHPR   Sheep Range       72.52  56  eP     P      16 44 13.4 +0.3
       comp=Z,2.2nm,0.7s
BFSC   Mount Baldy Ra    72.55  59   P     P      16 44 14.7 +1.4
       baz=313
KWP    Kalwaria Pacla    72.59 324  eP     P      16 44 14.1 +1.0
KWP    Kalwaria Pacla    72.59 324  eP     P      16 44 13.6 +0.5
       comp=Z,135nm,0.9s
KWP    Kalwaria Pacla    72.59 324  eP     P      16 44 13.6 +0.5
KWP                                  pmax  pmax
       comp=Z,135nm,0.9s
TUQ    Turquoise Moun    72.79  57   P     P      16 44 15.6 +0.9
       baz=313
CCUT   Cedar City        72.84  54  eP     P      16 44 15.7 +0.6
       comp=Z,2.7nm,0.6s
TMUT   Trail Mountain    72.86  51  eP     P      16 44 15.7 +0.4
       comp=Z,6.0nm,0.8s
BZK    Bozkurt           72.92 313⇑iP     P      16 44 16.2 +1.1
P17A   Butcher Ranch,    72.99  51  eP     P      16 44 16.6 +0.8
       comp=Z,11nm,1.0s
K22A   Casper            73.00  46   P     P      16 44 16.1 +0.3
       baz=316
BUR08  Bucovina Ar. S    73.02 321  eP     P      16 44 16.1 +0.2
       comp=Z,15nm,1.6s
BURAR  Bucovina Array    73.04 321⇓iP     P      16 44 16.6 +0.7
BURAR  Bucovina Array    73.04 321   P     P      16 44 16.6 +0.7
BIZ    Bicaz             73.15 320⇑iP     P      16 44 17.5 +1.1
MTPU   Mount Pierson     73.18  53  eP     P      16 44 18.7 +1.4
       comp=Z,3.9nm,0.9s
RSSD   Black Hills       73.19  44   P     P      16 44 17.0  -0.1
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	baz=317						
TESR	Tescani	73.22	320	⇑*i*P	P	16 44 17.5	+0.7
LCMT	Little Creek M	73.28	54	*e*P	P	16 44 18.5	+0.9
	comp=Z,8.3nm,1.5s						
KOLS	Kolonicke sedl	73.31	324	*e*P	P	16 44 18.0	+0.7
KOLS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KOLS	Kolonicke sedl	73.31	324	*e*P	P	16 44 18.0	+0.7
OJC	Ojcow	73.32	326	*e*P	P	16 44 18.0	+0.7
OJC	Ojcow	73.32	326	*e*P	P	16 44 17.8	+0.4
	comp=Z,14nm,1.0s						
OJC	Ojcow	73.32	326	*e*P	P	16 44 17.8	+0.4
OJC				pmax	pmax		
	comp=Z,14nm,1.0s						
SRU	San Rafael Swe	73.37	51	*e*P	P	16 44 18.6	+0.5
	comp=Z,12nm,0.9s						
SRU	San Rafael Swe	73.37	51	*e*P	P	16 44 18.6	+0.5
SRU				pmax	pmax		
	comp=Z,12nm,0.9s						
GMRC	Granite Mounta	73.39	57	P	P	16 44 19.1	+0.8
	baz=313						
CFR	Carcaliu	73.52	318	⇑*i*P	P	16 44 19.2	+0.7
KNB	Kanab	73.53	54	*e*P	P	16 44 20.2	+1.2
	comp=Z,5.4nm,1.1s						
KNB	Kanab	73.53	54	*e*P	P	16 44 20.2	+1.2
KNB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BELC	Belle Mtn. Jos	73.72	58	P	P	16 44 21.5	+1.3
	baz=313						
NIE	Niedzica	73.75	325	*e*P	P	16 44 21.1	+1.2
NIE	Niedzica	73.75	325	*e*P	P	16 44 21.1	+1.2
TRPA	Tarpa	73.81	323	⇑*i*P	P	16 44 21.6	+1.4
AGMN	Agassiz Nation	73.81	37	P	P	16 44 19.7	-0.5
	baz=321						
O20A	White River Ci	73.89	49	*e*P	P	16 44 21.4	+0.3
	comp=Z,8.2nm,0.8s						
IRM	Iron Mountain	74.13	58	P	P	16 44 23.5	+1.1
	baz=314						
KSP	Ksiaz	74.18	328	*e*P	P	16 44 23.1	+0.8
KSP	Ksiaz	74.18	328	*e*P	P	16 44 23.1	+0.8
DOPR	Dopca	74.21	320	⇓*i*P	P	16 44 24.5	+1.9
MONP2	Monument Peak	74.22	59	P	P	16 44 23.8	+0.6
	baz=313						
U15A	North Rim	74.24	54	*e*P	P	16 44 23.4	+0.1
	comp=Z,4.4nm,0.9s						
BC3	Big Chuckawall	74.29	58	P	P	16 44 24.0	+0.6
	baz=314						
LANS	Liptovska Anna	74.29	325	*e*P	P	16 44 24.7	+1.6
LANS				pmax	pmax		
	comp=Z,8.0nm,1.5s						
LANS	Liptovska Anna	74.29	325	*e*P	P	16 44 24.7	+1.6
OSTC	Ostas	74.44	328	*e*P	P	16 44 25.1	+1.3
CHVC	Chvalec	74.47	328	*e*P	P	16 44 24.8	+0.8
UPC	Upice	74.55	328	*e*P	P	16 44 26.2	+1.7
UPC	Upice	74.55	328	*e*P	P	16 44 26.2	+1.7
MORC	Moravsky Berou	74.56	327	*e*P	P	16 44 25.1	+0.5
	comp=Z,8.2nm,1.0s						
MORC	Moravsky Berou	74.56	327	⇑*i*P	P	16 44 25.6	+1.0
MORC	Moravsky Berou	74.56	327	*e*P	P	16 44 25.1	+0.5
MORC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MORC	Moravsky Berou	74.56	327	*e*P	P	16 44 25.6	+1.0
DPC	Dobruska-Polom	74.56	328	*e*P	P	16 44 25.6	+1.0
DPC	Dobruska-Polom	74.56	328	*e*P	P	16 44 25.6	+1.0
N23A	Red Feather La	74.56	47	P	P	16 44 26.1	+1.0
	baz=316,SNR=6.0						
IKP	In-Ko-Pah, Jac	74.58	59	P	P	16 44 26.7	+1.6
	baz=314						
PDMCI	Parker Dam,Lak	74.63	57	P	P	16 44 26.0	+0.8
	baz=314						
BR101	Keskin Array S	74.71	311	*e*P	P	16 44 26.1	+0.4
BR131	Keskin Array S	74.71	311	*e*P	P	16 44 25.8	0.0
	comp=Z,5.0nm,0.8s						
BRTR	Keskin Array B	74.71	311	P	P	16 44 26.1	+0.4
	comp=Z,3.3nm,0.7s,baz=76,slow=3.8,SNR=22						
VOIR		74.76	320	⇑*i*P	P	16 44 27.2	+1.3
DRGR		74.77	322	⇓*i*P	P	16 44 27.0	+1.1
DRGR		74.77	322	P	P	16 44 26.9	+1.1
CLL	Collm	75.00	330	*e*P	P	16 44 27.0	0.0
	comp=Z,8.9nm,0.5s						
CLL	Collm	75.00	330	*i* P	P	16 44 27.2	+0.2
CLL				*i*		16 44 41.5	
CLL				*e*S	S	16 53 43.0	-0.5
CLL				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CLL	Collm	75.00	330	*i* P	P	16 44 27.2	+0.2
	comp=Z,8.0nm,0.5s						
CLL				*i* pPcP		16 44 41.5	
CLL				*e*sP	sP	16 45 51.0	-0.4
CLL				*e*S	S	16 53 43.0	-0.5
CLL				*e*(SKSac)		16 54 13.0	
BRG	Berggiesshubel	75.02	329	*e*P	P	16 44 27.7	+0.6
	comp=Z,2.9nm,0.8s						
BRG	Berggiesshubel	75.02	329	*e*P	P	16 44 27.7	+0.6
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANTO	Ankara	75.05	312	*e*P	P	16 44 27.9	+0.3
	comp=Z,18nm,0.6s						
ANTO	Ankara	75.05	312	*e*P	P	16 44 27.9	+0.3
ANTO				pmax	pmax		
	comp=Z,18nm,0.6s						
VYHS	Vyhne	75.07	325	*e*P	P	16 44 28.7	+1.2
VYHS				pmax	pmax		
	comp=Z,13nm,1.7s						
VYHS	Vyhne	75.07	325	*e*P	P	16 44 28.7	+1.2
JAVC	Velka Javorina	75.24	326	*e*P	P	16 44 30.6	+2.1
VRAC	Vranov	75.30	327	*e*P	P	16 44 30.0	+1.2
SUSD	Miller	75.39	41	P	P	16 44 29.8	+0.4
	baz=320						
WUAZ	Wupatki	75.41	54	P	P	16 44 30.8	+1.0
	baz=315						
MDUB	Mudurnu	75.46	313	*e*P	P	16 44 30.6	+0.7
	comp=Z,52nm,0.7s						
GOPC	GO Pecny, Ondr	75.50	328	*e*P	P	16 44 30.3	+0.4
GOPC	GO Pecny, Ondr	75.50	328	*e*P	P	16 44 30.3	+0.4
PRU	Pruhonice	75.53	329	*e*P	P	16 44 30.9	+0.9
PRU	Pruhonice	75.53	329	*e*P	P	16 44 30.9	+0.9
KRUC	Moravsky	75.58	327	*e*P	P	16 44 31.4	+1.1
TREC	Trest	75.74	328	*e*P	P	16 44 27.6	-3.7
TREC	Trest	75.74	328	*e*P	P	16 44 27.6	-3.7
MODS	Modra-Piesok	75.79	326	*e*P	P	16 44 32.0	+0.4
MODS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MODS	Modra-Piesok	75.79	326	*e*P	P	16 44 32.0	+0.4
MVCO	Mesa Verde	75.84	51	*e*P	P	16 44 32.9	+0.6
	comp=Z,5.8nm,0.9s						
MVCO	Mesa Verde	75.84	51	P	P	16 44 33.0	+0.6
	baz=316						
EYMN	Ely	75.89	34	*e*P	P	16 44 31.7	-0.5
	comp=Z,11nm,0.8s						
EYMN	Ely	75.89	34	P	P	16 44 31.9	-0.2
	baz=323,SNR=5.5						
X16A	Lo Mia Camp, P	76.14	55	*e*P	P	16 44 35.2	+1.2
	comp=Z,4.2nm,1.1s						
STKA	Stephens Creek	76.37	181	P	P	16 44 35.0	+0.3
	comp=Z,2.1nm,0.6s,baz=335,slow=14,SNR=5.5						
STKA	Stephens Creek	76.37	181	*e*P	P	16 44 35.0	+0.3
	comp=Z,7.6nm,1.9s						
STKA	Stephens Creek	76.37	181	*e*P	P	16 44 35.1	+0.3
STKA				pmax	pmax		
	comp=Z,8.0nm,1.9s						
S22A	4UR Ranch, Cre	76.37	50	P	P	16 44 35.8	+0.4
	baz=317						
Q24A	Divide	76.39	48	P	P	16 44 35.9	+0.5
	baz=317						
OGNE	Ogallala	76.53	45	*e*P	P	16 44 36.2	+0.2
	comp=Z,22nm,0.9s						
OGNE	Ogallala	76.53	45	P	P	16 44 36.5	+0.6
	baz=318						
KHC	Kasperske Hory	76.59	329	*e*P	P	16 44 36.7	+0.6
	comp=Z,2.6nm,0.8s						
KHC	Kasperske Hory	76.59	329	*d* *i*P	P	16 44 36.7	+0.6
KHC				pmax	pmax		
	comp=Z,11nm,0.9s						
KHC	Kasperske Hory	76.59	329	*e*P	P	16 44 37.0	+0.9
CONA	Conrad Observa	76.70	327	*i* P	P	16 44 38.3	+1.5
	comp=Z,6.9nm,1.0s						
GEC2	GERESS Array S	76.78	328	*e*P	P	16 44 37.6	+0.4
	comp=Z,2.7nm,0.9s						
GEC2	GERESS Array S	76.78	328	*e*P	P	16 44 37.6	+0.4
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	76.78	328	P	P	16 44 37.6	+0.4
	comp=Z,1.1nm,0.3s,baz=28,slow=6.0,SNR=11						
E38A	The Farm, Brul	76.95	35	*e*P	P	16 44 37.8	-0.2
	comp=Z,19nm,0.4s						
E38A	The Farm, Brul	76.95	35	P	P	16 44 37.6	-0.4
	baz=323,SNR=8.0						
ECSD	EROS Data Cent	77.02	40	*e*P	P	16 44 38.5	0.0
	comp=Z,11nm,0.8s						
ECSD	EROS Data Cent	77.02	40	P	P	16 44 38.5	0.0
	baz=321,SNR=11						
214A	Organ Pipe Nat	77.07	58	P	P	16 44 39.9	+0.9
	baz=315						
SDCO	Great Sand Dun	77.09	49	*e*P	P	16 44 39.5	+0.1
	comp=Z,3.1nm,1.0s						
SDCO	Great Sand Dun	77.09	49	P	P	16 44 40.3	+0.9
	baz=317,SNR=6.6						
MOA	Molln	77.39	328	*i* P	P	16 44 41.7	+1.2
	comp=Z,3.4nm,0.7s						
ARSA	Arzberg	77.39	326	*i* P	P	16 44 37.9	-2.7
	comp=Z,1.4nm,0.5s						
SCHQ	Schefferville	77.48	17	P	P	16 44 40.8	-0.1
	comp=Z,4.1nm,0.5s,baz=332,slow=8.4,SNR=3.5						
SCHQ	Schefferville	77.48	17	*e*P	P	16 44 40.8	-0.1
	comp=Z,6.6nm,0.6s						
SPMN	Marine on St.	77.53	37	P	P	16 44 41.2	-0.1
	baz=323						
VTS	Vitosha	77.77	319	*e*P	P	16 44 43.7	+0.8
	comp=Z,19nm,1.4s						
VTS	Vitosha	77.77	319	*e*P	P	16 44 43.7	+0.8
VTS				pmax	pmax		
	comp=Z,19nm,1.4s						
TUC	Tucson	78.03	56	P	P	16 44 45.2	+0.8
	baz=316						
SOKA	Soboth	78.05	326	*i* P	P	16 44 45.3	+1.0
	comp=Z,6.9nm,0.8s						
T25A	Trinidad	78.12	49	P	P	16 44 45.5	+0.5
	baz=318						
G39A	Holcombe	78.17	36	P	P	16 44 44.3	-0.6
	baz=324						
COWI	Conover	78.34	34	*e*P	P	16 44 45.2	-0.6
	comp=Z,7.7nm,0.9s						
OBKA	Obir	78.38	327	*i* P	P	16 44 46.9	+0.8
	comp=Z,3.2nm,0.6s						
G40A	Rib Lake	78.58	35	*e*P	P	16 44 46.9	-0.2
	comp=Z,7.7nm,0.9s						
G40A	Rib Lake	78.58	35	P	P	16 44 46.7	-0.4
	baz=324,SNR=5.3						
ANMO	Albuquerque	78.61	52	*c* *e*P	P	16 44 48.2	+0.5
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	Albuquerque	78.61	52	P	P	16 44 48.1	+0.5
	baz=317						
MYKA	Terra Mystica	78.64	327	*i* P	P	16 44 47.9	+0.5
	comp=Z,3.9nm,0.7s						
WTTA	Wattenberg	78.86	329	*i* P	P	16 44 50.0	+1.2
	comp=Z,6.8nm,0.6s						
E43A	Lone Tree Farm	78.95	33	P	P	16 44 48.6	-0.5
	baz=326						
RAYN	Ar Rayn	78.95	292	*e*P	P	16 44 49.3	-0.2
	comp=Z,13nm,0.6s						
RAYN	Ar Rayn	78.95	292	*i* P	P	16 44 49.9	+0.3
	SNR=17						
RAYN	Ar Rayn	78.95	292	*e*P	P	16 44 49.3	-0.2
RAYN				pmax	pmax		
	comp=Z,13nm,0.6s						
RETA	Reutte	79.00	329	*i* P	P	16 44 50.3	+0.9
	comp=Z,5.6nm,0.8s						
SQTA	Sankt Quirin	79.06	329	*i* P	P	16 44 50.6	+0.8
	comp=Z,8.1nm,0.7s						
MATQ	Matagami	79.29	26	P	P	16 44 50.3	-0.5
	baz=332						
FETA	Feichten	79.40	329	*i* P	P	16 44 52.1	+0.4
	comp=Z,3.7nm,0.8s						
CDF	Champ du Feu	79.42	332	*e*P	P	16 44 51.7	0.0
CDF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DAVA	Damuels	79.48	330	*i* P	P	16 44 52.9	+0.8
	comp=Z,3.7nm,0.5s						
121A	Cookes Peak, D	79.62	54	P	P	16 44 54.5	+1.4
	baz=317						
D46A	Sault St. Mari	79.63	31	P	P	16 44 52.0	-0.7
	baz=328,SNR=8.1						
D47A	Chapleau	79.82	30	P	P	16 44 53.0	-0.8
	baz=329						
FUORN	Ofenpass-Fuorn	79.91	329	*e*P	P	16 44 55.3	+0.7
	comp=Z,6.3nm,0.8s						
E46A	Sault Ste Mari	79.97	31	P	P	16 44 53.9	-0.7
	baz=328						
LSQQ	Lebel-sur-Quev	80.11	26	P	P	16 44 54.5	-0.8
	baz=332						
CHGQ	Chibougamau	80.12	24	P	P	16 44 54.4	-0.9
	baz=334						
H43A	Windswept, Lux	80.23	34	P	P	16 44 56.0	0.0
	baz=326						
D49A	Beulah Townshi	80.25	29	P	P	16 44 55.5	-0.6
	baz=330						
E47A	Iron Bridge	80.27	31	P	P	16 44 55.5	-0.7
	baz=328						
E48A	Lockeyer	80.65	30	P	P	16 44 57.2	-1.0
	baz=329						
G46A	Petoskey	80.65	32	P	P	16 44 57.6	-0.6
	baz=328						
L40A	Anamosa	80.75	38	P	P	16 44 58.3	-0.5
	baz=324						
VLDQ	Val d'Or	80.81	26	*e*P	P	16 44 58.0	-0.9
	comp=Z,18nm,0.6s						
F48A	Evansville	81.05	30	P	P	16 44 59.6	-0.6
	baz=329						
G47A	Hillman	81.15	32	P	P	16 45 00.4	-0.4
	baz=328						
F49A	Sandfield	81.31	30	P	P	16 45 00.9	-0.7
	baz=329						
D52A	ZEK Kipawa Sen	81.50	27	P	P	16 45 01.8	-0.8
	baz=332						
E51A	G1948 Merrick	81.53	28	P	P	16 45 02.0	-0.8
	baz=331						
N40A	Mertquake, Sal	81.55	39	P	P	16 45 03.0	0.0
	baz=324						
D53A	Lac Vacive, Po	81.64	27	*e*P	P	16 45 02.8	-0.6
	comp=Z,9.3nm,0.8s						
D53A	Lac Vacive, Po	81.64	27	P	P	16 45 02.9	-0.4
	baz=332,SNR=6.2						
H48A	Harrisville	81.75	32	P	P	16 45 03.7	-0.2
	baz=329						
SSF	Saint Saulge	81.84	333	*e*P	P	16 45 04.2	-0.2
SSF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
D54A	Lac Fusel, La	81.91	26	P	P	16 45 04.1	-0.6
	baz=333						
F51A	Arnstein	81.91	29	P	P	16 45 04.0	-0.8
	baz=331						
E52A	Mattawa	82.03	28	P	P	16 45 04.4	-0.9
	baz=331						
LPL	La Plagne	82.12	331	*e*P	P	16 45 06.5	+0.4
LPL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
F52A	Sundridge	82.23	28	P	P	16 45 05.6	-0.9
	baz=331						
E53A	Dumoine, Ponti	82.27	27	P	P	16 45 05.9	-0.7
	baz=332						
KLBO	Killbear Provi	82.31	29	P	P	16 45 06.4	-0.4
	baz=330						
E54A	Lac Daplat, Po	82.37	27	P	P	16 45 06.5	-0.7
	baz=332						
J47A	Sunmer	82.42	33	P	P	16 45 07.5	0.0
	baz=328						
BUKO	Buck Lake	82.51	29	P	P	16 45 07.1	-0.8
	baz=331						
ALGO	Algonquin Park	82.52	28	P	P	16 45 07.3	-0.6
	baz=332						
D56A	ZEC Mazanza, M	82.58	25	P	P	16 45 07.9	-0.3
	baz=334						
I49A	Point Hope	82.59	32	P	P	16 45 08.1	-0.2
	baz=329						
BMRO	Meriville Lake	82.61	30	P	P	16 45 08.1	-0.3
	baz=330						
M44A	Midewin, Midew	82.67	36	P	P	16 45 08.6	-0.1
	baz=326						
J48A	Bridge Port	82.77	33	P	P	16 45 10.3	+1.1
	baz=328						
K47A	Vermontville	82.83	34	P	P	16 45 09.6	0.0
	baz=328						
WMOK	Wichita Mounta	82.92	47	P	P	16 45 10.6	+0.4
	baz=321						
G54A	Lake Saint Pet	82.99	28	P	P	16 45 09.7	-0.7
	baz=332						
PEMO	Pembroke	83.03	27	P	P	16 45 09.6	-0.9
	baz=332						
G53A	Haliburton	83.06	28	P	P	16 45 09.9	-0.8
	baz=332						
CLWO	Collingwood	83.07	30	P	P	16 45 10.6	-0.1
	baz=330						
K48A	Perry	83.07	33	P	P	16 45 11.0	+0.2
	baz=328						
L47A	Sherwood	83.34	34	P	P	16 45 12.1	-0.1
	baz=328						
MFF	Saint Martin d	83.37	336	*e*P	P	16 45 12.6	+0.4
MFF				pmax	pmax		
	comp=Z,30nm,1.6s						
BANO	Bancroft	83.38	28	P	P	16 45 11.7	-0.6
	baz=332						
TRQ	Mont Tremblant	83.39	25	*e*P	P	16 45 12.1	-0.3
TUL1	Leonard	83.53	44	P	P	16 45 13.8	+0.5
	baz=322						
H53A	Bobcaygeon	83.55	29	P	P	16 45 12.7	-0.5
	baz=332						
G55A	Calabogie	83.57	27	P	P	16 45 12.6	-0.7
	baz=333,SNR=5.1						
E58A	La Victoria	83.64	24	P	P	16 45 13.2	-0.4
	baz=335						
PLVO	Plevna	83.65	27	*e*P	P	16 45 13.2	-0.5
	comp=Z,8.0nm,0.8s						
PLVO	Plevna	83.65	27	P	P	16 45 13.1	-0.6
	baz=332,SNR=5.1						
ORIO	Orleans, Innes	83.78	26	P	P	16 45 13.3	-1.0
	baz=334						
SFIN	Lafayette	83.90	36	P	P	16 45 14.4	-0.7
	baz=327						
DELO	Deloro Mine	83.93	28	P	P	16 45 14.5	-0.6
	baz=332						
H55A	Tweed	84.04	28	P	P	16 45 15.2	-0.5
	baz=332						
N47A	Urbana	84.06	35	P	P	16 45 15.7	-0.2
	baz=328						
DRWO	Darlington Wes	84.12	29	P	P	16 45 15.2	-0.9
	baz=332						
I55A	Frankford	84.17	28	P	P	16 45 15.7	-0.7
	baz=332						
WLVO	Wesleyville	84.19	29	P	P	16 45 16.0	-0.4
	baz=332						
CAF	Calviac	84.19	333	*e*P	P	16 45 17.3	+0.8
CAF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
G57A	Newington	84.26	26	P	P	16 45 16.2	-0.5
	baz=334						
H56A	Elgin	84.31	27	P	P	16 45 16.5	-0.5
	baz=333						
TX31	Lajitas Ar. Si	84.36	54	*e*P	P	16 45 18.0	+0.3
	comp=Z,3.9nm,0.6s						
TXAR	Lajitas Array	84.36	54	P	P	16 45 18.5	+0.8
	comp=Z,3.6nm,0.5s,baz=293,slow=3.4,SNR=66						
TYNO	Tyneside	84.40	30	P	P	16 45 17.4	-0.1
	baz=331						
P46A	Rosedale	84.49	37	P	P	16 45 18.2	+0.2
	baz=327						
G58A	Ormstown	84.51	25	P	P	16 45 17.6	-0.3
	baz=334						
PECO	Prince Edward	84.65	28	P	P	16 45 18.3	-0.4
	baz=333						
J54A	Appleton	84.68	29	P	P	16 45 17.8	-1.1
	baz=332						
LONY	Lake Ozonia	84.82	26	P	P	16 45 19.1	-0.5
	baz=334						
L53A	Girard	85.25	31	P	P	16 45 21.9	+0.1
	baz=331						
K55A	Perry	85.36	29	P	P	16 45 21.6	-0.7
	baz=332						
P48A	Milroy	85.37	36	P	P	16 45 22.4	0.0
	baz=328						
MIAR	Mount Ida	85.71	44	*e*P	P	16 45 24.3	+0.1
	comp=Z,3.6nm,0.9s						
MIAR	Mount Ida	85.71	44	*e*P	P	16 45 24.3	+0.1
MIAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MIAR	Mount Ida	85.71	44	P	P	16 45 24.6	+0.4
	baz=323						
WHAR	Wooly Hollow	85.74	43	*e*P	P	16 45 24.0	-0.3
	comp=Z,27nm,1.5s						
M54A	Oil Creek Stat	85.86	31	*e*P	P	16 45 24.9	+0.1
M54A				*e*pP	pP	16 46 24.4	+0.2
M54A	Oil Creek Stat	85.86	31	P	P	16 45 24.6	-0.2
	baz=331						
T47A	Sharon Grove	86.73	38	*e*P	P	16 45 29.3	+0.2
	comp=Z,8.7nm,0.6s						
M58A	Price’s Panora	87.11	29	P	P	16 45 30.7	-0.2
	baz=333						
WVT	Waverly	87.12	39	P	P	16 45 31.2	+0.2
	baz=326						
O55A	Ligonier	87.13	31	P	P	16 45 30.9	0.0
	baz=331						
P54A	Burton	87.22	32	P	P	16 45 31.4	0.0
	baz=331						
N57A	Milroy	87.28	30	P	P	16 45 31.7	0.0
	baz=332						
O56A	Blue Knob Stat	87.34	31	*e*P	P	16 45 31.9	-0.1
	comp=Z,103nm,1.6s						
O56A	Blue Knob Stat	87.34	31	P	P	16 45 31.7	-0.4
	baz=332						
P55A	Reedsville	87.55	32	P	P	16 45 32.9	-0.1
	baz=331						
Q55A	Buckhannon	87.90	32	P	P	16 45 34.9	+0.3
	baz=331						
P56A	Dayton Farm, R	87.92	31	P	P	16 45 35.1	+0.5
	baz=332						
O58A	Lewisberry	88.06	30	P	P	16 45 35.3	0.0
	baz=333						
O59A	Robesonia	88.15	29	P	P	16 45 35.7	-0.1
	baz=333						
PAL	Palisades	88.29	27	P	P	16 45 35.2	-1.2
	baz=335						
TZTN	Tazewell	88.63	36	P	P	16 45 38.3	+0.2
	baz=329						
W49A	Belvidere	88.67	39	P	P	16 45 38.6	+0.3
	baz=327						
U52A	Thorn Hill	88.83	36	P	P	16 45 39.1	+0.1
	baz=329						
V52A	Sevierville	89.21	36	P	P	16 45 41.2	+0.4
	baz=329						
S56A	Natural Bridge	89.24	33	P	P	16 45 41.2	+0.2
	baz=331						
KEST	Kesra	89.56	324	P	P	16 45 42.4	-0.1
	comp=Z,5.1nm,1.0s,baz=359,slow=1.9,SNR=4.1						
KEST	Kesra	89.56	324	*e*P	P	16 45 42.4	-0.1
	comp=Z,13nm,1.3s						
Z50A	Ashland	90.38	39	*e*P	P	16 45 46.5	+0.1
	comp=Z,5.7nm,0.8s						
ESDC	Sonseca Array	90.83	335	P	P	16 45 48.4	+0.1
	comp=Z,1.0nm,0.6s,baz=10,slow=4.5,SNR=6.3						
TOA1	Torodi Ar. Sit	112.55	319	*e*PKiKP	PKiKP	16 51 19.5	-0.6
TORD	Torodi Ar. Bea	112.55	319	PKiKP	PKiKP	16 51 19.5	-0.6
	comp=Z,0.2nm,0.4s,baz=16,slow=3.0,SNR=5.7						
MAW	Mawson	127.10	208	PKP	PKiKP	16 51 47.3	+0.4
	comp=Z,2.4nm,0.8s,baz=320,slow=1.9,SNR=5.8						
SNAA	Sanae	148.57	200	PKPdf	PKPbc	16 52 28.9	-0.4
BDFB	Brasilia	149.39	22	PKPbc	PKPbc	16 52 33.0	-0.1
	comp=Z,2.4nm,0.4s,baz=300,slow=9.8,SNR=3.1						
BDFB	Brasilia	149.39	22	*e*PKPbc	PKPbc	16 52 33.0	-0.1
BDFB	Brasilia	149.39	22	PKP2	PKPbc	16 52 33.0	-0.1
VNA3	Neumayer Olymp	150.43	197	PKPdf	PKPbc	16 52 33.7	-0.1
VNA1	Neumayer--Stat	150.56	199	PKPdf	PKPbc	16 52 34.2	+0.2

MDD ***31*** *16:38:13.1±0.6, 36°73N×12°74W, h65km, mb4.4/23, Error*
ellipse: s-maj=8.9km s-min=5.4km az=136.0, PRXIMO
IGIL ***31*** *16:38:13.9, 36°73N×12°74W, h31km, ML3.5*
INMG ***31*** *16:38:15.9±1.6, 36°69N×12°74W, h10km, ML3.1, Error*
ellipse: s-maj=3.7km s-min=2.0km az=122.0
CNRM ***31*** *16:38:16.5, 36°62N×12°33W, h50km, ml3.5*
ISC 31 16:38:08.7±1.1**, 36°79N**±0°05×**12°60W**±0°06**, h10km, n102,**
σ**2**^{s}**77**/173**, 7C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	3.04	82	⇑*i*Pn	Pn	16 38 59.7	+2.8
PFVI				*e*Sn	Sn	16 39 32.7	-0.7
PFVI				A	A	16 39 35.1	
	38nm,0.2s						
PFVI	Vila Bisbo	3.04	82	⇑P	Pn	16 38 59.7	+2.8
	23nm,0.1s,SNR=18						
PFVI				S	Sn	16 39 32.8	-0.6
	63nm,0.2s,SNR=7.8						
PFVI	Vila Bisbo	3.04	82	P	Pn	16 38 59.5	+2.6
PFVI				S	Sn	16 39 32.6	-0.7
PTEO	Sao Teotonio	3.19	75	*e*Pn	Pn	16 39 01.8	+2.9
PTEO				*e*Sn	Sn	16 39 36.1	-0.9
PTEO				A	A	16 39 44.2	
	27nm,0.3s						
PTEO	Sao Teotonio	3.19	75	P	Pn	16 39 01.8	+2.9

PTEO				S	**Sn**	**16 39 36.1**	**-0.9**
	14nm,0.3s						
MORF	**Marmelete**	**3.20**	**80**	*e*P	**Pn**	**16 39 01.8**	**+2.6**
MORF				*e*S	**Sn**	**16 39 36.9**	**-0.4**
MORF				AML	AML	16 39 39.9	
	comp=N,154nm,0.2s						
MORF	**Marmelete**	**3.20**	**80**	⇑*i*Pn	**Pn**	**16 39 01.8**	**+2.6**
MORF				*e*Sn	**Sn**	**16 39 37.0**	**-0.4**
MORF				A	A	16 39 39.6	
	comp=N,60nm,0.3s						
MORF	**Marmelete**	**3.20**	**80**	P	**Pn**	**16 39 01.8**	**+2.6**
MORF				S	**Sn**	**16 39 37.0**	**-0.4**
	comp=N,60nm,0.3s						
PMAFR	**Mafra**	**3.40**	**49**	⇑*i*Pn	**Pn**	**16 39 05.0**	**+3.1**
PMAFR				*e*Sn	**Sn**	**16 39 42.5**	**+0.2**
PMAFR				A	A	16 39 43.6	
	comp=N,62nm,0.3s						
PMAFR	**Mafra**	**3.40**	**49**	⇑P	**Pn**	**16 39 05.0**	**+3.1**
	comp=N,12nm,0.2s,SNR=18						
PMAFR				S	**Sn**	**16 39 42.5**	**+0.2**
	comp=N,116nm,0.3s,SNR=9.0						
PNCL	**Nicolau / Gran**	**3.50**	**67**	*e*Pn	**Pn**	**16 39 06.0**	**+2.8**
PNCL				*e*Sn	**Sn**	**16 39 44.1**	**-0.6**
PNCL				A	A	16 39 45.2	
	comp=N,22nm,0.4s						
PNCL	**Nicolau / Gran**	**3.50**	**67**	P	**Pn**	**16 39 06.0**	**+2.8**
PNCL				S	**Sn**	**16 39 44.1**	**-0.6**
	comp=N,22nm,0.4s						
PCVE	**Castro Verde**	**3.74**	**76**	*e*Pn	**Pn**	**16 39 09.7**	**+3.2**
PCVE				*e*Sn	**Sn**	**16 39 49.7**	**-0.9**
PCVE				A	A	16 39 53.2	
	comp=N,19nm,0.2s						
PCVE	**Castro Verde**	**3.74**	**76**	P	**Pn**	**16 39 09.7**	**+3.2**
PCVE				S	**Sn**	**16 39 49.7**	**-0.9**
	comp=N,19nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.76**	**82**	*e*Pn	**Pn**	**16 39 10.0**	**+3.1**
PBDV				*e*Sn	**Sn**	**16 39 50.1**	**-1.2**
PBDV				A	A	16 39 57.4	
	comp=N,25nm,0.9s						
PBDV	**Barranco-do-Ve**	**3.76**	**82**	P	**Pn**	**16 39 10.0**	**+3.1**
PBDV				S	**Sn**	**16 39 50.1**	**-1.2**
	comp=N,25nm,0.9s						
PVAQ	**Vaqueiros**	**3.95**	**80**	*e*Pn	**Pn**	**16 39 12.5**	**+3.1**
PVAQ				*e*Sn	**Sn**	**16 39 55.0**	**-0.8**
PVAQ				A	A	16 39 58.5	
	comp=N,28nm,0.1s						
PVAQ	**Vaqueiros**	**3.95**	**80**	P	**Pn**	**16 39 12.5**	**+3.1**
PVAQ				S	**Sn**	**16 39 55.0**	**-0.8**
	comp=N,28nm,0.1s						
PVAQ	**Vaqueiros**	**3.95**	**80**	P	**Pn**	**16 39 12.5**	**+3.1**
PVAQ				S	**Sn**	**16 39 54.6**	**-1.2**
ALMR	**Almeirim**	**3.96**	**52**	*e*Pn	**Pn**	**16 39 14.2**	**+4.6**
ALMR				*e*Sn	**Sn**	**16 39 57.0**	**+0.9**
ALMR				A	A	16 39 58.5	
	comp=N,32nm,0.2s						
ALMR	**Almeirim**	**3.96**	**52**	P	**Pn**	**16 39 14.2**	**+4.6**
ALMR				S	**Sn**	**16 39 57.0**	**+0.9**
	comp=N,16nm,0.2s						
PBEJ	**Beja**	**3.97**	**70**	*e*Pn	**Pn**	**16 39 13.8**	**+4.2**
PBEJ				*e*Sn	**Sn**	**16 39 56.8**	**+0.6**
PBEJ				A	A	16 40 00.8	
	comp=N,14nm,0.1s						
PBEJ	**Beja**	**3.97**	**70**	P	**Pn**	**16 39 13.8**	**+4.2**
PBEJ				S	**Sn**	**16 39 56.8**	**+0.6**
	comp=N,6.9nm,0.1s						
PMTG	**Montargil**	**4.14**	**55**	⇑*e*Pn	**Pn**	**16 39 14.7**	**+2.7**
PMTG				*e*Sn	**Sn**	**16 39 59.6**	**-0.9**
PMTG				A	A	16 40 13.5	
	comp=N,8.7nm,0.5s						
PMTG	**Montargil**	**4.14**	**55**	P	**Pn**	**16 39 14.7**	**+2.7**
PMTG				S	**Sn**	**16 39 59.6**	**-0.9**
	comp=N,8.7nm,0.5s						
EGRO	**El Granado**	**4.16**	**78**	P	**Pn**	**16 39 14.9**	**+2.7**
	comp=N,2.8nm,0.1s,SNR=18						
EGRO				S	**Sn**	**16 40 00.2**	**-0.6**
	comp=N,40nm,0.3s,SNR=9.1						
PTOM	**Tomar**	**4.34**	**48**	*e*Pn	**Pn**	**16 39 18.7**	**+3.9**
PTOM				*e*Sn	**Sn**	**16 40 05.0**	**-0.5**
PTOM	**Tomar**	**4.34**	**48**	P	**Pn**	**16 39 18.7**	**+3.9**
PTOM				S	**Sn**	**16 40 05.0**	**-0.5**
PCAS	**Casmilo, Conde**	**4.58**	**43**	⇑*e*Pn	**Pn**	**16 39 21.2**	**+3.1**
PCAS				*e*Sn	**Sn**	**16 40 10.3**	**-1.1**
PCAS				A	A	16 40 26.1	
	comp=N,8.7nm,0.3s						
PCAS	**Casmilo, Conde**	**4.58**	**43**	P	**Pn**	**16 39 21.2**	**+3.1**
PCAS				S	**Sn**	**16 40 10.3**	**-1.1**
	comp=N,8.7nm,0.3s						
PBAR	**Barrancos**	**4.63**	**71**	*e*Pn	**Pn**	**16 39 22.5**	**+3.7**
PBAR				*e*Sn	**Sn**	**16 40 11.1**	**-1.6**
PBAR				A	A	16 40 18.1	
	comp=N,18nm,0.1s						
PBAR	**Barrancos**	**4.63**	**71**	P	**Pn**	**16 39 22.5**	**+3.7**
PBAR				S	**Sn**	**16 40 11.1**	**-1.6**
	comp=N,18nm,0.1s						
COI	**Coimbra**	**4.74**	**43**	*e*Sn	**Sn**	**16 40 14.0**	**-1.2**
COI	**Coimbra**	**4.74**	**43**	S	**Sn**	**16 40 14.0**	**-1.2**
PMPST	**Porto Santo, M**	**4.80**	**221**	*e*Pn	**Pn**	**16 39 19.7**	**-1.5**
PMPST				*e*Sn	Sn	16 40 07.0	-10
PMPST				A	A	16 40 11.2	
	comp=N,22nm,0.2s						
PMPS	**Porto Santo**	**4.82**	**221**	*e*Pn	**Pn**	**16 39 20.2**	**-1.2**
PMPS				*e*Sn	Sn	16 40 06.7	-11
PMPS				A	A	16 40 10.7	
	comp=N,18nm,0.3s						
PMPS	**Porto Santo**	**4.82**	**221**	P	**Pn**	**16 39 20.2**	**-1.2**
EMIN	**Mina Concepcio**	**4.83**	**77**	P	**Pn**	**16 39 24.0**	**+2.5**
	comp=N,2.2nm,0.1s,SNR=29						
EMIN				S	**Sn**	**16 40 15.4**	**-2.1**
	comp=N,8.0nm,0.2s,SNR=13						
PMRV	**Marv??o**	**4.88**	**56**	*e*Pn	**Pn**	**16 39 24.9**	**+2.7**
PMRV				*e*Sn	**Sn**	**16 40 16.8**	**-2.0**
PMRV				A	A	16 40 19.8	
	comp=N,10nm,0.3s						
PMRV	**Marv??o**	**4.88**	**56**	P	**Pn**	**16 39 24.9**	**+2.7**
PMRV				S	**Sn**	**16 40 16.8**	**-2.0**
	comp=N,10nm,0.3s						
PCBR	**Castelo Branco**	**5.05**	**51**	*e*Pn	**Pn**	**16 39 27.6**	**+3.1**
PCBR				*e*Sn	**Sn**	**16 40 21.6**	**-1.3**
PCBR				A	A	16 40 22.8	
	comp=N,4.6nm,0.3s						
PCBR	**Castelo Branco**	**5.05**	**51**	P	**Pn**	**16 39 27.6**	**+3.1**
PCBR				S	**Sn**	**16 40 21.6**	**-1.3**
	comp=N,2.3nm,0.3s						
MTE	**Manteigas**	**5.36**	**46**	*e*Pn	**Pn**	**16 39 31.9**	**+3.1**
MTE				*e*Sn	**Sn**	**16 40 28.9**	**-1.7**
MTE	**Manteigas**	**5.36**	**46**	P	**Pn**	**16 39 31.9**	**+3.1**
MTE				S	**Sn**	**16 40 28.9**	**-1.7**
PVIS	**Viseu**	**5.38**	**42**	*e*Pn	**Pn**	**16 39 32.3**	**+3.2**
PVIS				*e*Sn	**Sn**	**16 40 28.6**	**-2.4**
PVIS				A	A	16 40 33.1	
	comp=N,19nm,0.1s						
PVIS	**Viseu**	**5.38**	**42**	P	**Pn**	**16 39 32.3**	**+3.2**
PVIS				S	**Sn**	**16 40 28.6**	**-2.4**
	comp=N,9.7nm,0.1s						
PMAR	**Madeira**	**5.39**	**222**	*e*Pn	**Pn**	**16 39 28.1**	**-1.3**
PMAR				*e*Sn	Sn	16 40 22.8	-8.7
PMAR				A	A	16 40 32.7	
	comp=N,26nm,0.2s						
PMAR	**Madeira**	**5.39**	**222**	P	**Pn**	**16 39 28.1**	**-1.3**
PMAR				S	Sn	16 40 22.8	-8.7
	comp=N,13nm,0.2s						
ESPR	**Espera**	**5.41**	**87**	P	**Pn**	**16 39 32.5**	**+3.0**
	comp=N,4.4nm,0.1s,SNR=7.5						
ESPR				S	**Sn**	**16 40 30.4**	**-1.4**
	comp=N,59nm,0.3s,SNR=7.1						
PMOZ	**Porto Moniz, M**	**5.47**	**225**	*e*Pn	**Pn**	**16 39 28.9**	**-1.5**
PMOZ				*e*Sn	Sn	16 40 24.9	-8.6
PMOZ				A	A	16 40 30.1	
	comp=N,30nm,0.6s						
PMOZ	**Porto Moniz, M**	**5.47**	**225**	P	**Pn**	**16 39 28.9**	**-1.5**
	comp=N,6.4nm,0.3s						
PMOZ				S	Sn	16 40 24.9	-8.6
	comp=N,30nm,0.6s						
PMOZ	**Porto Moniz, M**	**5.47**	**225**	P	Pn	16 39 28.6	-1.8
ECAB	**El Cabril**	**5.86**	**75**	P	**Pn**	**16 39 38.1**	**+2.5**
	comp=N,3.8nm,0.2s,SNR=37						
ECAB				S	**Sn**	**16 40 40.4**	**-2.5**
	comp=N,14nm,0.3s,SNR=5.8						
PVRL	**Vila Real**	**5.88**	**39**	*e*Pn	**Pn**	**16 39 39.3**	**+3.4**
PVRL				*e*Sn	**Sn**	**16 40 40.6**	**-2.7**
PVRL				A	A	16 40 43.2	
	comp=N,14nm,0.1s						
PVRL	**Vila Real**	**5.88**	**39**	P	**Pn**	**16 39 39.3**	**+3.4**
PVRL				S	**Sn**	**16 40 40.6**	**-2.7**
	comp=N,6.9nm,0.1s						
ECEU	**Ceuta**	**5.90**	**97**	P	**Pn**	**16 39 38.4**	**+2.2**
	comp=N,5.3nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**16 40 41.5**	**-2.3**
	comp=N,9.9nm,2.3s,SNR=7.9						
POLO	**Lamas de Olo**	**5.91**	**38**	*e*Pn	**Pn**	**16 39 38.9**	**+2.5**
POLO				*e*Sn	**Sn**	**16 40 40.9**	**-3.4**
POLO				A	A	16 40 45.9	
	comp=N,5.7nm,0.6s						
POLO	**Lamas de Olo**	**5.91**	**38**	P	**Pn**	**16 39 38.9**	**+2.5**
POLO				S	**Sn**	**16 40 40.9**	**-3.4**
	comp=N,5.7nm,0.6s						
HORN	**Hornachuelos**	**5.95**	**78**	P	**Pn**	**16 39 39.4**	**+2.5**
PCAB	**Cabril**	**6.06**	**34**	*e*Pn	**Pn**	**16 39 42.1**	**+3.6**
PCAB				*e*Sn	**Sn**	**16 40 45.3**	**-2.6**
PCAB				A	A	16 40 46.8	
	comp=N,13nm,0.1s						
PCAB	**Cabril**	**6.06**	**34**	P	**Pn**	**16 39 42.1**	**+3.6**
PCAB				S	**Sn**	**16 40 45.3**	**-2.6**
	comp=N,6.7nm,0.1s						
EPLA	**Plasencia**	**6.07**	**55**	P	**Pn**	**16 39 41.7**	**+3.0**
	comp=N,5.4nm,0.1s,SNR=14						
EPLA				S	**Sn**	**16 40 46.3**	**-2.0**
	comp=N,4.6nm,0.2s						
EZAM	**Zamans**	**6.15**	**28**	P	**Pn**	**16 39 42.3**	**+2.7**
	comp=N,1.9nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**16 40 45.5**	**-4.5**
	comp=N,35nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**6.16**	**43**	*e*Pn	**Pn**	**16 39 42.3**	**+2.5**
MVO				*e*Sn	**Sn**	**16 40 47.4**	**-2.9**
MVO				A	A	16 40 48.9	
	comp=N,14nm,0.4s						
MVO	**Moncorvo**	**6.16**	**43**	P	**Pn**	**16 39 42.3**	**+2.5**
	comp=N,4.6nm,0.1s,SNR=16						
MVO				S	**Sn**	**16 40 47.5**	**-2.9**
	comp=N,6.4nm,0.2s,SNR=8.9						
PGAV	**Gavieira, Arco**	**6.16**	**32**	*e*Pn	**Pn**	**16 39 42.9**	**+3.0**
PGAV				*e*Sn	**Sn**	**16 40 47.1**	**-3.4**
PGAV				A	A	16 40 51.1	
	comp=N,11nm,0.2s						
PGAV	**Gavieira, Arco**	**6.16**	**32**	P	**Pn**	**16 39 42.9**	**+3.0**
PGAV				S	**Sn**	**16 40 47.1**	**-3.4**
	comp=N,11nm,0.2s						
ELOB	**Lobios**	**6.17**	**33**	P	**Pn**	**16 39 43.0**	**+3.0**
	comp=N,1.7nm,0.1s,SNR=17						
ELOB				S	**Sn**	**16 40 47.4**	**-3.3**
	comp=N,9.9nm,0.2s,SNR=5.8						
EMIJ	**Mijas**	**6.29**	**90**	P	**Pn**	**16 39 44.5**	**+2.9**
	comp=N,0.7nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**16 40 51.9**	**-1.8**
	comp=N,3.6nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.53**	**75**	P	**Pn**	**16 39 47.1**	**+2.2**
	comp=N,2.0nm,0.1s,SNR=17						
EADA				S	**Sn**	**16 40 56.8**	**-2.6**
	comp=N,7.9nm,0.2s,SNR=8.0						
EMAZ	**Mazaricos**	**6.75**	**23**	P	**Pn**	**16 39 50.3**	**+2.4**
	comp=N,2.7nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**16 40 58.3**	**-6.6**
	comp=N,22nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.76**	**40**	*e*Pn	**Pn**	**16 39 50.9**	**+2.8**
PBRG				*e*Sn	**Sn**	**16 41 02.1**	**-3.1**
PBRG				A	A	16 41 04.8	
	comp=N,4.9nm,0.2s						
PBRG	**Braganca**	**6.76**	**40**	P	**Pn**	**16 39 50.9**	**+2.8**
PBRG				S	**Sn**	**16 41 02.1**	**-3.1**
	comp=N,2.5nm,0.2s						
EGOR	**Sierra Gorda,**	**6.81**	**85**	P	**Pn**	**16 39 51.7**	**+2.9**
	comp=N,0.6nm,0.2s,SNR=4.0						
EGOR				S	**Sn**	**16 41 04.0**	**-2.4**
	comp=N,4.3nm,0.4s,SNR=7.9						
OUK	**Oukaimeden**	**6.81**	**143**	P	**Pn**	**16 39 50.1**	**+1.0**
ECAL	**Calabor**	**6.86**	**40**	P	**Pn**	**16 39 52.3**	**+2.8**
	comp=N,4.1nm,0.1s,SNR=13						
ECAL				S	**Sn**	**16 41 04.9**	**-2.7**
	comp=N,12nm,0.3s,SNR=6.3						
EAGO	**Agolada(Pontev**	**6.94**	**29**	P	**Pn**	**16 39 52.9**	**+2.5**
	comp=N,1.9nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**16 41 04.2**	**-5.3**
	comp=N,6.9nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**7.06**	**65**	P	**Pn**	**16 39 54.4**	**+2.2**
	comp=N,2.7nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**16 41 09.5**	**-3.0**
	comp=N,1.0nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**7.12**	**150**	P	Pn	16 39 50.2	-2.9
EQUE	**Quentar**	**7.34**	**84**	S	**Sn**	**16 41 16.7**	**-2.8**
	comp=N,1.7nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.38**	**64**	P	**Pn**	**16 39 59.6**	**+2.9**
	comp=N,5.4nm,0.2s,baz=252,slow=13,SNR=7.5						
ESDC				S	**Sn**	**16 41 17.5**	**-2.9**
	comp=N,2.3nm,0.3s,baz=248,slow=23,SNR=4.5						
AKLM	**AKL**	**7.47**	**105**	S	**Sn**	**16 41 18.0**	**-4.6**
OUZM	**OUZ**	**7.61**	**139**	S	**Sn**	**16 41 23.0**	**-3.3**
GUD	**Guadarrama**	**7.64**	**57**	P	**Pn**	**16 40 02.8**	**+2.6**
	comp=N,1.4nm,0.2s,SNR=6.5						
GUD				S	**Sn**	**16 41 23.9**	**-3.1**
	comp=N,2.2nm,0.3s,SNR=7.9						
EQES	**Quesada**	**7.66**	**80**	P	**Pn**	**16 40 02.7**	**+2.2**
	comp=N,0.5nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**16 41 24.6**	**-2.8**
	comp=N,7.2nm,0.4s,SNR=7.9						
MDT	**Midelt**	**7.68**	**119**	P	**Pn**	**16 40 01.9**	**+1.2**
EFAM	**Famara**	**7.68**	**186**	P	**Pn**	**16 40 00.5**	**-0.2**
	comp=N,0.8nm,0.1s,SNR=7.9						
EFAM				S	Sn	16 41 15.7	-12
	comp=N,2.2nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.75**	**31**	P	**Pn**	**16 40 04.2**	**+2.6**
	comp=N,1.6nm,0.1s,SNR=8.7						
EPON				S	**Sn**	**16 41 24.7**	**-4.8**
	comp=N,2.8nm,0.2s,SNR=4.5						
SESP	**Santiago Espad**	**8.11**	**78**	S	**Sn**	**16 41 34.6**	**-3.9**
	comp=N,4.3nm,0.3s,SNR=7.9						
CFUE	**Fuerteventura**	**8.20**	**188**	S	Sn	16 41 25.9	-14
	comp=N,9.5nm,0.1s,SNR=7.9						
CFTV	**Fuerteventura**	**8.44**	**189**	S	Sn	16 41 32.0	-15
	comp=N,2.7nm,0.2s,SNR=7.9						
JBK	**JBK**	**8.53**	**104**	S	**Sn**	**16 41 44.0**	**-5.0**
EARI	**Arriondas**	**8.62**	**39**	P	**Pn**	**16 40 17.0**	**+3.4**
	comp=N,0.9nm,0.2s,SNR=6.9						
EARI				S	**Sn**	**16 41 47.0**	**-4.0**
	comp=N,1.1nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**8.95**	**75**	P	**Pn**	**16 40 20.1**	**+1.9**
	comp=N,0.6nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**16 41 54.9**	**-4.2**
	comp=N,3.1nm,0.5s,SNR=7.9						
EOSO	**Osorio**	**9.04**	**197**	P	**Pn**	**16 40 19.8**	**+0.4**
	comp=N,0.5nm,0.2s,SNR=7.9						
EOSO				S	Sn	16 41 44.4	-17
	comp=N,3.0nm,0.3s,SNR=7.9						
EGOM	**La Gomera**	**9.44**	**206**	P	**Pn**	**16 40 25.1**	**+0.2**
	comp=N,1.0nm,0.3s,SNR=7.9						
EGOM				S	Sn	16 41 55.6	-15
	comp=N,12nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**9.53**	**45**	P	**Pn**	**16 40 29.1**	**+3.1**
	comp=N,0.9nm,0.2s,SNR=7.9						
ELAN				S	**Sn**	**16 42 07.9**	**-5.3**
	comp=N,1.5nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**10.14**	**66**	P	**Pn**	**16 40 37.7**	**+3.1**
	comp=N,0.8nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**16 42 22.9**	**-5.6**
	comp=N,1.0nm,0.3s,SNR=7.9						
IUNC	**Unciti**	**10.41**	**52**	P	**Pn**	**16 40 41.2**	**+3.1**
	comp=N,2.0nm,0.2s,SNR=7.9						
IZUN	**Zunzarren**	**10.49**	**51**	P	**Pn**	**16 40 42.1**	**+2.8**
	comp=N,0.7nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**10.60**	**51**	P	**Pn**	**16 40 43.6**	**+2.8**
	comp=N,0.5nm,0.2s,SNR=6.9						
EORO				S	**Sn**	**16 42 34.3**	**-5.3**
	comp=N,0.9nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**10.66**	**50**	P	**Pn**	**16 40 44.4**	**+2.9**
	comp=N,2.1nm,0.3s,SNR=7.9						

JMA 31 16:40:13.5, 37°.07N×139°.35E, h7^{km}±1^{km}, M3.1, 1C-2D
Broadband fault plane solution: P waves. NP1: ϕ_s184.00000°, δ59.00000°, λ54.00000°. **NP2:** ϕ_s59.00000°, δ46.00000°, λ134.00000°. **Principal axes:** T Plg59.0000°, Azm41.0000°; N Plg30.0000°, Azm205.0000°; P Plg7.0000°, Azm299.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.31**	**195**	⇑P	Pg	16 40 19.7	0.0
JKT				S	Sg	16 40 23.9	+0.1
JHK	**Hiroka**	**0.32**	**304**	⇓P	Pg	16 40 20.1	+0.3
JHK				*e*S	Sg	16 40 24.5	+0.5
JFY	**Yanaizu**	**0.44**	**40**	P	Pg	16 40 22.3	+0.3
JFY				S	Sg	16 40 27.9	+0.1
JSB	**Shiboa**	**0.47**	**102**	⇓P	Pg	16 40 22.9	+0.3
JSB				*e*S	Sg	16 40 29.3	+0.6
MAT	**Matsushiro**	**1.06**	**240**	P	Pg	16 40 33.6	-0.2
MAT				S	Sg	16 40 47.1	-0.4

LJU 31 16:43:01.7, 46°.39N×15°.07E, h0^{km} Rockburst, Northwestern Balkan Peninsula

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IDC ***31*** *16:45:00.9±1.1, 23°.74S×175°.70W, h0^{km}, mb4.2/8, mb1 4.3/8, mb1mx4.0/23, mbtmp4.2/8, MS3.2/5, Ms1 3.2/5, ms1mx2.9/23, Error ellipse: s-maj=58.3km s-min=19.3km az=164.0*

NEIC ***31*** *16:45:02.0±3.0, 23°.65S×175°.48W, h10^{km}, mb4.6/2, Error ellipse: s-maj=55.5km s-min=18.4km az=161.0*

ISCJB ***31*** *16:45:03.7±0.9, 23°.8S±0°.3×175°.7W±0°.1, h30^{km}, mb4.3/10, MS3.2/6, Error ellipse: s-maj=41.6km s-min=14.3km az=162.6*

ISC 31 16:45:05.6±1.1, **23°.8S**±0°.4×**175°.7W**±0°.2, **h30^{km}, n26,** σ**0^{s}.85**/17, **mb4.3**/10, **MS3.2**/6, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.11**	**50**	*e*Pn	Pn	16 46 39.8	-7.8
NIUE				*e*		16 47 47.9	
RAR	**Rarotonga**	**14.94**	**83**	Pn	Pn	16 48 27.8	-6.9
	2.4nm,0.3s,baz=266,slow=9.2,SNR=6.0						
RAR	**Rarotonga**	**14.94**	**83**	*e*Pn	Pn	16 48 28.3	-6.5
DZM	**Mont Dzumac**	**16.53**	**272**	LR	LR	16 53 08.1	
	comp=Z,64nm,18.6s,baz=118,slow=30						
DZM	**Mont Dzumac**	**16.53**	**272**	*e*LR	LR	16 53 12.5	
	comp=Z,93nm,22.6s						
TBI	**Tubuai**	**24.05**	**94**	*e*LR	LR	16 55 43.9	
	comp=Z,125nm,36.8s						
TBI	**Tubuai**	**24.05**	**94**	*e*T	T	17 13 53.5	
	5.7nm,0.4s						
PPT2	**Papeete2**	**25.18**	**81**	*e*LR	LR	16 56 26.7	
	comp=Z,78nm,24.2s						
PPT	**Papeete**	**25.19**	**81**	P	**P**	**16 50 27.5**	**-1.2**
	8.9nm,0.4s,baz=90,slow=20,SNR=3.8						
PPT				LR	LR	16 59 42.8	
	comp=Z,29nm,19.8s,baz=314,slow=35						
CTA	**Charters Tower**	**35.41**	**268**	P	**P**	**16 51 58.6**	**-0.5**
	1.9nm,0.4s,baz=97,slow=12,SNR=7.5						
STKA	**Stephens Creek**	**38.43**	**248**	P	**P**	**16 52 25.2**	**+0.5**
	0.9nm,0.5s,baz=90,slow=11,SNR=4.2						
STKA				LR	LR	17 06 36.5	
	comp=Z,51nm,18.7s,baz=29,slow=34						
AS31	**Alice Springs**	**45.93**	**259**	*e*P	**P**	**16 53 26.1**	**+0.1**
	1.4nm,1.4s						
ASAR	**Alice Springs**	**45.94**	**259**	P	**P**	**16 53 25.9**	**-0.2**
	1.3nm,0.8s,baz=91,slow=8.0,SNR=19						
ASAR				LR	LR	17 11 28.2	
	comp=Z,31nm,18.4s,baz=96,slow=35						
WR1	**Warramunga Arr**	**46.34**	**265**	*e*P	**P**	**16 53 27.6**	**-1.6**
WRA	**Warramunga Arr**	**46.34**	**265**	P	**P**	**16 53 27.6**	**-1.6**
	1.0nm,0.3s,baz=98,slow=8.5,SNR=41						
PETK	**Petropavlovsk-**	**79.95**	**344**	P	**P**	**16 57 11.2**	**-0.2**
	2.7nm,0.7s,baz=130,slow=7.5,SNR=8.6						
PEA1	**Petropavlovsk-**	**79.95**	**344**	*e*P	**P**	**16 57 11.2**	**-0.2**
KSRS	**Korea Array**	**80.71**	**318**	LR	LR	17 26 57.2	
	comp=Z,19nm,20.4s,baz=144,slow=31						
TXAR	**Lajitas Array**	**87.04**	**56**	P	**P**	**16 57 49.2**	**+0.6**
	0.6nm,0.8s,baz=204,slow=8.8,SNR=6.6						
CM31	**Chiang Mai Arr**	**93.18**	**289**	*e*P	**P**	**16 58 18.5**	**+1.1**
	25nm,1.7s						
CMAR	**Chiang Mai Arr**	**93.18**	**289**	P	**P**	**16 58 18.5**	**+1.1**
	1.2nm,0.8s,baz=143,slow=3.1,SNR=6.8						
AKASG	**Malin Array Be**	**146.87**	**331**	PKPbc	**PKPbc**	**17 04 44.4**	**-0.3**
	2.1nm,0.6s,baz=37,slow=4.0,SNR=8.5						
AKBB	**Malin Array Si**	**146.87**	**331**	*e*PKPbc	**PKPbc**	**17 04 44.4**	**-0.3**
BR101	**Keskin Array S**	**150.57**	**310**	*e*PKPbc	**PKPbc**	**17 04 55.1**	**+0.3**
BRTR	**Keskin Array B**	**150.57**	**310**	PKPbc	**PKPbc**	**17 04 55.1**	**+0.3**
	0.6nm,0.7s,baz=123,slow=4.6,SNR=4.4						
CLL	**Collm**	**151.67**	**348**	*i* PKPbc	**PKiKP**	**17 04 57.7**	**+0.5**

KRNET ***31*** *16:48:00.2±0.1, 39°.46N×69°.17E, mb3.5*

NNC ***31*** *16:48:00.6±2.8, 39°.67N×68°.98E, h3^{km}±11^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=23.0km s-min=14.1km az=159.0*

ISC 31 16:48:01.4±2.8, **39°.5N**±0°.1×**69°.3E**±0°.1, **h10^{km}, n22,** σ**1^{s}.30**/43, **30C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.27**	**65**	⇑*i*P	**Pn**	**16 48 25.4**	**+0.1**
	baz=65						
BTK				⇑*i*S	**Sn**	**16 48 43.8**	**+1.3**
	baz=65						
TAS	**Tashkent**	**1.79**	**359**	⇓*i*P	**Pn**	**16 48 32.0**	**-0.4**
	baz=3.0						
TAS				⇓*i*S	**Sn**	**16 48 54.8**	**-0.4**
	baz=3.0						
DRK	**Karamyk**	**1.93**	**91**	⇓*i*P	**Pn**	**16 48 34.1**	**-0.4**
	baz=89						
DRK				⇓*i*S	**Sn**	**16 48 59.6**	**+0.7**
	baz=89						
ARK	**Arkit**	**3.03**	**41**	⇑*i*P	**Pn**	**16 48 50.0**	**+0.5**
	baz=42						
ARK				⇑*i*S	**Sn**	**16 49 26.8**	**+0.9**
	baz=42						
ARSB	**Arslanbob**	**3.32**	**56**	⇑*i*P	**Pn**	**16 48 54.0**	**+0.5**
	baz=56						
ARSB				⇑*i*S	**Sn**	**16 49 33.3**	**+0.1**
	baz=56						
KK31	**Karatay Array**	**3.68**	**14**	⇑Pn	**Pn**	**16 48 57.9**	**-0.4**
	0.7nm,0.2s,baz=167,slow=8.9,SNR=24						
KK31				⇑Pg	**Pb**	**16 49 06.9**	**+0.5**
	6.2nm,0.3s,baz=203,slow=11,SNR=28						
KK31				Lg	Lg	16 49 54.2	
	17nm,0.3s,baz=194,slow=21,SNR=8.9						
AML	**Almayashu**	**4.22**	**51**	⇓*i*P	**Pn**	**16 49 06.6**	**+0.6**
	baz=51						
AML				⇓*i*S	**Sn**	**16 49 55.4**	**-0.1**
	baz=51						
ARLS	**Aral**	**4.46**	**57**	⇑*i*P	**Pn**	**16 49 09.7**	**+0.5**
	baz=57						
ARLS				⇑*i*S	**Sn**	**16 50 00.8**	**-0.5**
	baz=57						
EKS2	**Erkin-Say**	**4.60**	**46**	⇑*e*P	**Pn**	**16 49 11.6**	**+0.6**
	baz=46						
EKS2				⇑*i*S	**Sn**	**16 50 03.8**	**-0.7**
	baz=46						
UCH	**Uchtor**	**4.77**	**54**	⇑*i*P	**Pn**	**16 49 14.3**	**+0.5**
	baz=54						
UCH				⇑*i*S	**Sn**	**16 50 08.2**	**-1.1**
	baz=54						
AAK	**Ala-Archa**	**4.99**	**50**	⇓Pn	**Pn**	**16 49 17.8**	**+1.3**
	4.6nm,0.4s						
AAK				⇑Sn	**Sn**	**16 50 19.0**	**+4.6**
	11nm,0.8s						
AAK				⇑Lg	Lg	16 50 45.1	
	16nm,0.6s						
AAK	**Ala-Archa**	**4.99**	**50**	⇑*i*P	**Pn**	**16 49 17.2**	**+0.7**
	baz=50						
AAK				⇑*i*S	**Sn**	**16 50 13.1**	**-1.3**
	baz=50						
KZA	**Kyzart**	**5.17**	**59**	⇓*i*P	**Pn**	**16 49 19.9**	**+0.7**
	baz=59						
KZA				⇓*i*S	**Sn**	**16 50 17.6**	**-1.5**
	baz=59						
FRU1	**Bishkek**	**5.18**	**49**	⇑*i*P	**Pn**	**16 49 19.4**	**+0.4**
	baz=49						
FRU1				⇑*i*S	**Sn**	**16 50 17.6**	**-1.2**
	baz=49						
KBK	**Karagaybulak**	**5.28**	**52**	⇑*i*P	**Pn**	**16 49 21.3**	**+0.9**
	baz=52						
KBK				⇑*i*S	**Sn**	**16 50 19.6**	**-1.8**
	baz=52						
CHMS	**Chumysh**	**5.36**	**48**	⇑*i*P	**Pn**	**16 49 22.3**	**+0.8**
	baz=48						
CHMS				⇑*i*S	**Sn**	**16 50 21.7**	**-1.6**
	baz=48						
USP	**Ospenovka**	**5.39**	**45**	⇑*i*P	**Pn**	**16 49 22.7**	**+0.8**
	baz=45						
USP				⇑*i*S	**Sn**	**16 50 22.6**	**-1.5**
	baz=45						
NRN	**Naryn**	**5.44**	**67**	⇑*i*P	**Pn**	**16 49 22.8**	**0.0**
	baz=67						
NRN				⇑*i*S	**Sn**	**16 50 23.2**	**-2.4**
	baz=67						

BOOM	**Boomskoye usch**	**5.82**	**57**	⇓*i*P	**Pn**	**16 49 28.4**	**+0.5**
	baz=57						
BOOM				⇓*i*S	**Sn**	**16 50 32.5**	**-2.2**
	baz=57						
TKM2	**Tokmak 2**	**5.82**	**52**	⇑Pn	**Pn**	**16 49 29.0**	**+1.0**
	4.7nm,1.1s						
TKM2				⇑Lg	Lg	16 51 09.8	
	15nm,0.7s						
TKM2	**Tokmak 2**	**5.82**	**52**	⇓*i*P	**Pn**	**16 49 28.7**	**+0.8**
	baz=52						
TKM2				⇓*i*S	**Sn**	**16 50 33.2**	**-1.6**
	baz=52						
ULHL	**Ulahol**	**5.91**	**61**	⇓*i*P	**Pn**	**16 49 29.6**	**+0.5**
	baz=60						
ULHL				⇓*i*S	**Sn**	**16 50 34.7**	**-2.3**
	baz=60						

MAN 31 17:17:43.2, 9°.80N×126°.42E, h1^{km}, mb4.4, ML3.3, MS3.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.91**	**269**	⇑*e*P	Pn	17 18 10.7	+7.4
SCPH				*e*S	Sn	17 18 22.8	+5.7
BUTP	**Butuan**	**1.14**	**223**	*e*P	Pn	17 18 07.0	+0.6
BUTP				*e*S	Sb	17 18 21.7	+0.6
MSLP	**Maasin**	**1.57**	**282**	*e*P	Pg	17 18 14.8	+1.4
MSLP				*e*S	Sb	17 18 33.3	-0.1
PLP	**Palo**	**1.96**	**314**	⇓*e*P	Pn	17 18 17.2	-0.4
PLP				*e*S	Sb	17 18 44.4	-0.2
BESP	**Borongan**	**2.03**	**332**	*e*P	Pn	17 18 18.8	+0.2
BESP				*e*S	Sg	17 18 49.3	+0.8
OCLP	**Ormoc**	**2.17**	**305**	*e*P	Pn	17 18 21.2	+0.7
OCLP				*e*S	Sg	17 18 58.7	+5.7
BUKP	**Musuan**	**2.33**	**215**	*e*P	Pb	17 18 25.0	-1.2
BUKP				*e*S	Sb	17 18 56.4	+0.9
CNP	**Catarman**	**3.19**	**328**	*e*P	Pn	17 18 35.0	+0.4
CNP				*e*S	Sn	17 19 15.7	+2.4
PAGZ	**Pagadian**	**3.57**	**237**	*e*P	Pn	17 18 41.2	+1.4
PAGZ				*e*S	Sn	17 19 24.1	+1.4
DDMP	**Don Marcelino,**	**3.74**	**191**	*e*S	Sb	17 19 34.6	-1.4

ISC 31 17:36:21.6±1.1, 45°.03N±0°.02×15°.11E±0°.04, h8^{km}±11^{km}, n17, σ0^{s}.70/26, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.48**	**12**	*i* Pg	**Pg**	**17 36 31.0**	**0.0**
BOJS				*i* Sg	**Sg**	**17 36 37.8**	**+0.4**
NVLJ	**Novalja**	**0.49**	**200**	*i* Pg	**Pg**	**17 36 31.4**	**+0.3**
NVLJ				Sg	**Sb**	**17 36 39.0**	**-0.8**
RIY	**Rijeka**	**0.53**	**304**	ePg		17 36 31.2	
RIY				Sg	**Sb**	**17 36 39.7**	**-1.2**
GBRS	**Gornja Briga**	**0.54**	**338**	*i* Pg	**Pg**	**17 36 32.0**	**-0.1**
OZLJ	**Ozalj**	**0.64**	**23**	*e*Pg	**Pg**	**17 36 33.9**	**0.0**
OZLJ				Sg	**Sg**	**17 36 42.5**	**+0.3**
UDBI	**Udbina**	**0.69**	**137**	*e*Pg	**Pb**	**17 36 35.3**	**-0.5**
UDBI				Sg	**Sb**	**17 36 45.0**	**-0.5**
KNDS	**Knezji Dol**	**0.71**	**314**	*i* Pg	**Pg**	**17 36 34.8**	**-0.6**
KNDS				*i* Sg	**Sb**	**17 36 46.1**	**-0.2**
VISS	**Visnje**	**0.80**	**346**	*i* Pg	**Pg**	**17 36 36.9**	**-0.1**
CRES	**Cresnjev**	**0.83**	**17**	*i* Sg	**Sg**	**17 36 48.2**	**-0.3**
	comp=Z,4.0nm,0.2s						
PDKS	**Podkum**	**1.03**	**356**	*i* Pg	**Pb**	**17 36 41.5**	**-0.2**
DUGI	**Dugi Otok**	**1.04**	**182**	*e*Pg	**Pg**	**17 36 41.4**	**-0.1**
DUGI				Sg	**Sn**	**17 36 56.8**	**-0.3**
PTJ	**Puntijarka**	**1.07**	**34**	ePg		17 36 42.1	
PTJ				Sg	**Sb**	**17 36 56.0**	**-0.4**
JAVS	**Javornik**	**1.13**	**320**	*i* Pg	**Pg**	**17 36 42.8**	**-0.6**
MORI	**Morici**	**1.24**	**159**	*i* Pg	**Pg**	**17 36 45.7**	**+0.3**
MORI				Sg	**Sn**	**17 37 02.6**	**+0.6**
VOJS	**Vojsko**	**1.32**	**320**	*i* Pg	**Pg**	**17 36 46.7**	**-0.2**
VOJS				*i* Sg	**Sn**	**17 37 06.1**	**+2.0**
ZIRJ	**Zirje**	**1.43**	**164**	*e*Pn	**Pg**	**17 36 48.6**	**-0.4**
ZIRJ				Sg	**Sg**	**17 37 08.4**	**+1.0**
CADS	**Cadrg**	**1.54**	**322**	*i* Sg	**Sg**	**17 37 12.1**	**+1.2**
	comp=Z,1.0nm,0.0s						

*IDC **31** 17:46:03.4±1.0, 41°.55S×174°.26E, h0^{km}, mb4.2/4, mb1 4.4/6, mb1mx4.0/29, mbtmp4.1/6, ML3.7/2, Error ellipse: s-maj=33.7km s-min=12.8km az=132.0*

*ISCJB **31** 17:46:04.1±0.6, 41°.85S±0°.06×174°.51E±0°.10, h28^{km}, mb4.6/16, Error ellipse: s-maj=12.4km s-min=4.1km az=36.8*

*NEIC **31** 17:46:05.4±0.0, 41°.78S×174°.33E, h17^{km}, mb4.7/12, ML4.2(WEL), After WEL.*

ISC 31 17:46:06.4±0.6, 41°.80S±0°.06×174°.44E±0°.06, h28^{km}, n50, σ1^{s}.11/54, mb4.8/16, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNZO	**South Karori**	**0.52**	**22**	*e*Pg	**Pb**	**17 46 16.5**	**-0.7**
KHZ	**Kahutara**	**0.91**	**227**	*e*Pg	**Pn**	**17 46 23.7**	**+0.3**
THZ	**Tophouse**	**1.15**	**271**	*e*Pn	**Pb**	**17 46 26.6**	**-1.2**
QRZ	**Quartz Range**	**1.74**	**303**	*e*Pn	**Pb**	**17 46 35.9**	**-1.8**
BFZ	**Birch Farm**	**1.76**	**51**	*e*Pn	**Pn**	**17 46 35.0**	**0.0**
LTZ	**Lake Taylor**	**1.89**	**238**	*e*Pn	**Pn**	**17 46 36.8**	**-0.1**
CRLZ	**Canterbury Las**	**2.23**	**216**	*e*Pn	**Pn**	**17 46 40.2**	**-1.2**
MQZ	**McQueen's Vall**	**2.32**	**214**	*e*Pn	**Pn**	**17 46 41.5**	**-1.2**
OXZ	**Oxford**	**2.34**	**228**	*e*Pn	**Pn**	**17 46 41.8**	**-1.3**
BKZ	**Black Stump Fm**	**3.06**	**31**	*e*Pn	**Pn**	**17 46 52.2**	**-0.8**
RPZ	**Rata Peaks**	**3.15**	**231**	Pn	**Pn**	**17 46 53.5**	**-0.6**
	15nm,0.3s,baz=88,slow=1.8,SNR=76						
RPZ				Pg	**Pb**	**17 47 01.7**	**0.0**
	31nm,0.3s,baz=32,slow=2.1,SNR=25						
RPZ				Sn	**Sn**	**17 47 30.2**	**-0.5**
	12nm,0.3s,baz=166,slow=22,SNR=12						
RPZ				Lg	Lg	17 47 46.3	
	21nm,0.3s,baz=206,slow=19,SNR=3.7						
RPZ	**Rata Peaks**	**3.15**	**231**	*e*Pn	**Pn**	**17 46 52.8**	**-1.4**
HIZ	**Hauiti**	**3.29**	**6**	*e*Pn	Pb	17 46 58.5	-5.7
FOZ	**Fox Glacier**	**3.83**	**242**	*e*Pn	**Pn**	**17 47 03.7**	**+0.3**
LBZ	**Lake Benmore**	**4.05**	**229**	*e*Pn	**Pn**	**17 47 05.4**	**-1.2**
URZ	**Urewera**	**4.08**	**31**	Pn	**Pn**	**17 47 04.9**	**-2.1**
	3.1nm,0.3s,baz=237,slow=4.5,SNR=18						
URZ				Pg	**Pb**	**17 47 16.7**	**-0.9**
	8.5nm,0.3s,baz=234,slow=11,SNR=16						
URZ				Sn	**Sn**	**17 47 53.0**	**-0.8**
	9.4nm,0.3s,baz=192,slow=6.3,SNR=4.2						
URZ				Lg	Lg	17 48 08.2	
	2.2nm,0.3s,baz=131,slow=20,SNR=2.3						
URZ	**Urewera**	**4.08**	**31**	*e*Pn	**Pn**	**17 47 05.2**	**-1.8**
ODZ	**Otahua Downs**	**4.26**	**219**	*e*Pn	**Pn**	**17 47 08.3**	**-1.2**
WKZ	**Wanaka**	**4.98**	**231**	*e*Pn	**Pn**	**17 47 18.1**	**-1.3**
MXZ	**Matakaoa Point**	**5.17**	**36**	*e*Pn	**Pn**	**17 47 19.9**	**-2.1**
MLZ	**Mavora Lakes**	**5.82**	**230**	*e*Pn	**Pn**	**17 47 29.4**	**-1.5**
WHZ	**Wether Hill Ro**	**6.23**	**227**	*e*Pn	**Pn**	**17 47 35.4**	**-1.1**
DCZ	**Deep Cove**	**6.43**	**233**	*e*Pn	**Pn**	**17 47 38.3**	**-1.0**
OUZ	**Omahuta**	**6.60**	**354**	*e*Pn	**Pn**	**17 47 42.2**	**+0.6**
AS31	**Alice Springs**	**38.18**	**285**	*e*P	**P**	**17 53 22.8**	**-0.9**
	1.6nm,1.3s						
ASAR	**Alice Springs**	**38.18**	**285**	P	**P**	**17 53 22.9**	**-0.8**
	1.4nm,0.6s,baz=121,slow=6.5,SNR=67						
ASAR				PcP	**PcP**	**17 55 37.3**	**-0.6**
	0.4nm,0.6s,baz=130,slow=3.9,SNR=4.9						
WB2	**Warramunga Arr**	**40.25**	**290**	*e*P	**P**	**17 53 40.0**	**-0.9**
	4.1nm,0.8s						
WRAB	**Tennant Creek**	**40.25**	**290**	*e*P	**P**	**17 53 40.3**	**-0.7**
	4.9nm,0.8s						
WR1	**Warramunga Arr**	**40.25**	**290**	*e*P	**P**	**17 53 40.5**	**-0.4**
WRA	**Warramunga Arr**	**40.25**	**290**	P	**P**	**17 53 40.5**	**-0.4**
	3.0nm,0.6s,baz=123,slow=8.3,SNR=26						
RABL	**Rabaul**	**42.41**	**326**	*e*P	**P**	**17 54 01.7**	**+3.0**
	21nm,0.6s						
MTN	**Manton Dam**	**47.37**	**295**	*e*P	**P**	**17 54 38.3**	**+0.2**
	20nm,1.4s						
QSPA	**South Pole Qui**	**48.33**	**180**	*e*P	**P**	**17 54 46.7**	**+1.5**
	16nm,1.8s						
MORW	**Morawa**	**48.40**	**266**	*e*P	**P**	**17 54 44.9**	**-1.1**
	84nm,1.9s						
PSA00	**Pilbara Seismi**	**49.77**	**276**	*e*P	**P**	**17 54 56.0**	**-0.6**
	42nm,1.8s						
PSAA1	**Pilbara Seismi**	**49.77**	**276**	*e*P	**P**	**17 54 55.9**	**-0.7**
	27nm,1.5s						
PSAA2	**Pilbara Seismi**	**49.77**	**276**	*e*P	**P**	**17 54 56.0**	**-0.6**
	23nm,1.4s						
PSAB1	**Pilbara Seismi**	**49.78**	**276**	*e*P	**P**	**17 54 55.9**	**-0.8**
	56nm,1.8s						
PSAC1	**Pilbara Seismi**	**49.82**	**276**	*e*P	**P**	**17 54 56.0**	**-1.0**
	15nm,1.3s						
KSRS	**Korea Array**	**89.58**	**325**	P	**P**	**17 59 01.5**	**+0.5**
	1.0nm,0.7s,baz=150,slow=5.1,SNR=4.0						
CMAR	**Chiang Mai Arr**	**91.79**	**293**	P	**P**	**17 59 13.1**	**+1.3**
	1.2nm,0.6s,baz=149,slow=3.3,SNR=8.1						
KBZ	**Khabaz**	**144.77**	**290**	PKP	**PKPdf**	**18 05 39.7**	**-0.4**
	2.1nm,0.8s,baz=85,slow=5.9,SNR=4.4						
DBIC	**Dimbokro**	**145.01**	**181**	PKPbc	**PKiKP**	**18 05 43.6**	**-1.7**
	3.4nm,0.8s,baz=136,slow=5.0,SNR=3.9						
ARCES	**ARCESS Array B**	**147.87**	**340**	PKPbc	**PKPbc**	**18 05 47.9**	**+0.3**
	2.2nm,0.6s,baz=47,slow=2.3,SNR=14						
BR101	**Keskin Array S**	**150.41**	**279**	*e*PKPbc	**PKiKP**	**18 05 56.3**	**+0.5**
BRTR	**Keskin Array B**	**150.41**	**279**	PKPbc	**PKiKP**	**18 05 56.3**	**+0.5**
	1.2nm,0.7s,baz=143,slow=6.2,SNR=7.8						
TORD	**Torodi Ar. Bea**	**150.77**	**195**	PKPbc	**PKiKP**	**18 05 58.3**	**+1.2**
	1.3nm,0.4s,baz=163,slow=2.5,SNR=18						
TOA1	**Torodi Ar. Sit**	**150.77**	**195**	*e*PKPbc	**PKiKP**	**18 05 58.3**	**+1.2**
FIA0	**FINESS Array S**	**152.65**	**327**	*e*PKPbc	**PKiKP**	**18 05 59.1**	**-0.4**
FINES	**FINESS Array B**	**152.65**	**327**	PKPbc	**PKiKP**	**18 05 59.1**	**-0.4**
	1.8nm,0.6s,baz=48,slow=2.8,SNR=10						

*IDC **31** 17:49:50.5±1.7, 41°.62S×174°.26E, h0^{km}, mb3.9/3, mb1 4.0/5, mb1mx3.7/29, mbtmp3.8/5, ML2.9/2, Error ellipse: s-maj=42.1km s-min=26.6km az=136.0*

*ISCJB **31** 17:49:51.4±1.8, 41°.8S±0°.2×174°.4E±0°.3, h28^{km}, mb3.9/3, Error ellipse: s-maj=45.2km s-min=7.2km az=41.7*

ISC 31 17:49:53.8±1.5, 41°.7S±0°.2×174°.3E±0°.2, h28^{km}, n7, σ0^{s}.63/9, mb3.8/3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**3.13**	**229**	Pn	**Pn**	**17 50 40.9**	**-0.4**
	3.3nm,0.3s,baz=84,slow=5.7,SNR=5.7						
RPZ				Sn	**Sn**	**17 51 17.1**	**-0.7**
	7.0nm,0.3s,baz=337,slow=23,SNR=6.3						
URZ	**Urewera**	**4.06**	**33**	Pn	**Pn**	**17 50 53.3**	**-0.8**
	0.3nm,0.3s,baz=164,slow=18,SNR=3.9						
URZ				Sn	**Sn**	**17 51 40.6**	**0.0**
	2.2nm,0.3s,baz=172,slow=4.8,SNR=3.2						
CTA	**Charters Tower**	**32.09**	**304**	P	**P**	**17 56 18.8**	**+0.3**
	6.6nm,1.1s,baz=146,slow=11,SNR=2.0						
ASAR	**Alice Springs**	**38.07**	**285**	P	**P**	**17 57 10.1**	**-0.1**
	0.7nm,0.9s,baz=134,slow=9.2,SNR=4.7						
WRA	**Warramunga Arr**	**40.14**	**290**	P	**P**	**17 57 27.4**	**0.0**
	1.4nm,0.7s,baz=124,slow=8.9,SNR=4.7						
BRTR	**Keskin Array B**	**150.31**	**279**	PKPbc	**PKPbc**	**18 09 42.7**	**+0.5**
	0.6nm,0.8s,baz=192,slow=2.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**150.82**	**195**	PKPbc	**PKiKP**	**18 09 45.4**	**+0.8**
	1.2nm,1.0s,baz=150,slow=2.7,SNR=4.3						

IDC 31 17:51:39.5±6.6, 7°.05S×150°.86E, h0^{km}, mb3.2/3, mb1 3.5/3, mb1mx3.2/29, mbtmp3.3/3, Error ellipse: s-maj=196.6km s-min=38.4km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.53**	**230**	P	P	17 56 20.5	+0.9
	0.5nm,0.4s,baz=54,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**23.20**	**223**	P	P	17 56 47.0	-1.3
	0.3nm,0.9s,baz=55,slow=8.7,SNR=3.6						
MKAR	**Makanchi Array**	**80.76**	**320**	P	P	18 03 55.3	+0.3
	0.3nm,0.4s,baz=119,slow=7.0,SNR=5.0						

MAN 31 18:08:28.5, 7°.47N×124°.86E, h31^{km}, mb3.6, ML2.3, MS1.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.45**	**26**	*e*P	Pn	18 08 39.1	+0.1
BUKP				*e*S	Sn	18 08 47.8	+1.8
CTBH	**Cotabato--PC H**	**0.66**	**248**	⇓*i*P	Pb	18 08 41.0	-0.6
CTBH				*i* S	Sb	18 08 50.4	-0.2
SKMP	**Bagumbayan, Su**	**1.00**	**198**	*e*P	Pb	18 08 47.1	-0.2
SKMP				*e*S	Sn	18 08 56.3	-3.2
PAGZ	**Pagadian**	**1.51**	**284**	*e*P	Pb	18 08 55.1	-0.9
PAGZ				*e*S	Sn	18 09 12.4	+0.3
DDMP	**Don Marcelino,**	**1.60**	**148**	*e*P	Pn	18 08 55.6	+0.8
DDMP				*e*S	Sn	18 09 14.3	-0.1

IDC 31 18:09:03.8±60.0, 15°.97S×173°.38W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.7/31, mbtmp4.2/3, Error ellipse: s-maj=1154.0km s-min=214.9km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.77**	**240**	P	P	18 17 11.7	+0.3
	1.7nm,0.8s,baz=81,slow=13,SNR=2.5						
WRA	**Warramunga Arr**	**49.74**	**257**	P	P	18 17 58.1	-0.2
	0.7nm,0.3s,baz=98,slow=6.2,SNR=1.3						
ASAR	**Alice Springs**	**49.96**	**252**	P	P	18 17 59.6	-0.3
	4.3nm,0.6s,baz=87,slow=8.6,SNR=152						

*ISCJB **31** 18:10:50.3±0.3, 26°.41S±0°.07×68°.31E±0°.07, h10^{km}, mb4.5/45, MS3.4/4, Error ellipse: s-maj=10.7km s-min=9.2km az=31.6*

*IDC **31** 18:10:50.3±0.5, 26°.30S×68°.22E, h0^{km}, mb4.2/19, mb1 4.3/19, mb1mx4.1/34, mbtmp4.2/19, MS3.4/4, Ms1 3.4/4, ms1mx3.1/26, Error ellipse: s-maj=17.1km s-min=14.6km az=178.0*

*NEIC **31** 18:10:52.1±1.2, 26°.37S×68°.21E, h10^{km}, mb4.7/21, Error ellipse: s-maj=22.6km s-min=19.2km az=74.0*

ISC 31 18:10:51.9±0.5, 26°.37S±0°.09×68°.2E±0°.1, h10^{km}, n70, σ0^{s}.76/67, mb4.6/45, MS3.4/4, 1C-2D, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**19.06**	**13**	T	T	18 34 44.0	
	baz=192,slow=76,SNR=23						
H08S2	**Diego Garcia H**	**19.06**	**13**	T	T	18 34 42.4	
	baz=192,slow=76,SNR=19						
H08S3	**Diego Garcia H**	**19.08**	**13**	T	T	18 34 45.2	
	baz=192,slow=76,SNR=21						
OPO	**Ambohidratompo**	**20.92**	**287**	P	**P**	**18 15 34.0**	**-0.9**
	8.3nm,1.1s,baz=118,slow=18,SNR=2.8						
MATP	**Matopo**	**36.84**	**271**	P	**P**	**18 17 59.6**	**-1.0**
	1.3nm,0.9s,baz=135,slow=10.0,SNR=3.0						
BOSA	**Boshof**	**38.04**	**257**	P	**P**	**18 18 10.3**	**-0.4**
	0.8nm,0.5s,baz=103,slow=14,SNR=2.4						
BOSA				LR	LR	18 30 49.8	
	comp=Z,40nm,18.7s,baz=142,slow=32						
LSZ	**Lusaka**	**38.88**	**278**	P	**P**	**18 18 18.3**	**+0.4**
	1.8nm,0.7s,baz=128,slow=9.3,SNR=3.9						
MAW	**Mawson**	**41.38**	**183**	P	**P**	**18 18 39.2**	**+1.4**
	5.5nm,0.7s,baz=359,slow=8.9,SNR=16						
MAW				LR	LR	18 31 33.6	
	comp=Z,86nm,20.9s,baz=20,slow=30						
MAW	**Mawson**	**41.38**	**183**	*e*P	**P**	**18 18 39.1**	**+1.3**
	1.2nm,0.8s						
CASY	**Casey**	**47.74**	**158**	*e*P	**P**	**18 19 26.1**	**-2.5**
	14nm,0.6s						
CMAR	**Chiang Mai Arr**	**53.62**	**37**	P	**P**	**18 20 12.9**	**-0.7**
	1.0nm,0.4s,baz=229,slow=6.8,SNR=11						
CMAR				LR	LR	18 38 51.1	
	comp=Z,25nm,21.2s,baz=192,slow=31						
SHL	**Shillong**	**56.45**	**26**	*e*P	**P**	**18 20 34.8**	**+0.6**
	29nm,1.1s						
ASAR	**Alice Springs**	**58.99**	**103**	P	**P**	**18 20 52.0**	**0.0**
	3.6nm,1.0s,baz=251,slow=6.0,SNR=19						
AS31	**Alice Springs**	**58.99**	**103**	*e*P	**P**	**18 20 51.8**	**-0.3**
	1.0nm,0.9s						
SNAA	**Sanae**	**59.26**	**200**	P	**P**	**18 20 53.4**	**+0.2**
	2.8nm,0.7s,baz=109,slow=9.0,SNR=22						
SNAA	**Sanae**	**59.26**	**200**	*e*P	**P**	**18 20 54.0**	**+0.8**
	32nm,2.0s						
NIL	**Nilore**	**59.88**	**5**	*e*P	**P**	**18 20 56.1**	**-1.8**
	10nm,1.1s						
LSA	**Lhasa**	**59.92**	**23**	*e*P	**P**	**18 20 60.0**	**+1.2**
	9.3nm,1.1s						
WR1	**Warramunga Arr**	**60.55**	**99**	*e*P	**P**	**18 21 02.7**	**-0.1**
WRA	**Warramunga Arr**	**60.55**	**99**	P	**P**	**18 21 02.7**	**-0.1**
	3.8nm,0.9s,baz=247,slow=8.9,SNR=12						
WRAB	**Tennant Creek**	**60.56**	**99**	*e*P	**P**	**18 21 02.9**	**-0.1**
	5.6nm,0.8s						
KBL	**Kabul**	**60.59**	**1**	*e*P	**P**	**18 21 03.4**	**+0.5**
	13nm,1.3s						
STKA	**Stephens Creek**	**63.21**	**114**	P	**P**	**18 21 21.2**	**+0.6**
	1.0nm,0.6s,baz=71,slow=5.7,SNR=3.3						
QSPA	**South Pole Qui**	**63.76**	**180**	*e*P	**P**	**18 21 24.6**	**+0.8**
	13nm,1.1s						
KK31	**Karatay Array**	**69.16**	**2**	*e*P	**P**	**18 21 58.4**	**0.0**
	4.7nm,1.0s						
KKAR	**Karatay Array**	**69.16**	**2**	*e*P	**P**	**18 21 58.3**	**0.0**
	4.7nm,1.0s						
BR101	**Keskin Array S**	**73.24**	**333**	*e*P	**P**	**18 22 23.0**	**-0.3**
BR131	**Keskin Array S**	**73.24**	**333**	*e*P	**P**	**18 22 23.7**	**+0.4**
	4.1nm,1.1s						
BRTR	**Keskin Array B**	**73.24**	**333**	P	**P**	**18 22 23.0**	**-0.3**
	2.7nm,0.9s,baz=159,slow=7.4,SNR=13						
MK31	**Makanchi Array**	**73.92**	**10**	*e*P	**P**	**18 22 26.8**	**-0.2**
	1.9nm,0.9s						
MK32	**Makanchi Array**	**73.92**	**10**	*e*P	**P**	**18 22 27.0**	**0.0**
MKAR	**Makanchi Array**	**73.92**	**10**	P	**P**	**18 22 27.0**	**0.0**
	2.4nm,0.8s,baz=191,slow=5.7,SNR=23						
TORD	**Torodi Ar. Bea**	**75.64**	**293**	P	**P**	**18 22 38.0**	**+0.4**
	2.2nm,1.1s,baz=112,slow=6.1,SNR=6.1						
TORD				LR	LR	18 53 02.4	
	comp=Z,35nm,21.8s,baz=345,slow=34						
TOA1	**Torodi Ar. Sit**	**75.64**	**293**	*e*P	**P**	**18 22 38.0**	**+0.4**
ABKAR	**Akbulak array**	**75.65**	**354**	*e*P	**P**	**18 22 37.1**	**+0.2**
	15nm,1.6s						
KURK	**Kurchatov**	**77.30**	**7**	*e*P	**P**	**18 22 46.7**	**+0.5**
	5.4nm,1.3s						
VRI	**Vrincioaia**	**81.18**	**332**	⇓*i*P	**P**	**18 23 08.7**	**+1.1**
PLOR	**Plostina**	**81.20**	**332**	⇓*i*P	**P**	**18 23 08.7**	**+1.0**
MLR	**Muntele Rosu**	**81.21**	**331**	*e*P	**P**	**18 23 08.7**	**+0.8**
	22nm,1.6s						
MLR	**Muntele Rosu**	**81.21**	**331**	⇑*i*P	**P**	**18 23 09.1**	**+1.2**
ZAA0	**Zalesovo Array**	**81.27**	**10**	*e*P	**P**	**18 23 08.2**	**+0.4**
	7.4nm,1.3s						
ZALV	**Zalesovo Beam**	**81.27**	**10**	P	**P**	**18 23 08.0**	**+0.2**
	2.9nm,0.6s,baz=200,slow=4.3,SNR=14						
ZAA1	**Zalesovo Array**	**81.27**	**10**	*e*P	**P**	**18 23 08.0**	**+0.2**
SONA0	**Songino Array**	**81.44**	**25**	*e*P	**P**	**18 23 09.4**	**+0.4**
SONM	**Songino Array**	**81.44**	**25**	P	**P**	**18 23 09.4**	**+0.4**
	3.4nm,0.9s,baz=221,slow=3.9,SNR=15						
AKASG	**Malin Array Be**	**84.13**	**336**	P	**P**	**18 23 22.5**	**-0.3**
	2.5nm,0.8s,baz=150,slow=4.2,SNR=5.6						
AKBB	**Malin Array Si**	**84.13**	**336**	*e*P	**P**	**18 23 22.7**	**0.0**
	4.3nm,0.8s						
KSRS	**Korea Array**	**84.68**	**44**	P	**P**	**18 23 25.6**	**-0.3**
	0.4nm,0.5s,baz=229,slow=5.4,SNR=2.6						
ARSA	**Arzberg**	**87.32**	**327**	*i* P	**P**	**18 23 38.9**	**+0.2**
	3.4nm,0.8s						
JAVC	**Velka Javorina**	**87.44**	**329**	*e*P	**P**	**18 23 40.8**	**+1.4**
CONA	**Conrad Observa**	**87.63**	**328**	*i* P	**P**	**18 23 40.9**	**+0.6**
	6.1nm,1.1s						
MORC	**Moravsky Berou**	**88.16**	**330**	*e*P	**P**	**18 23 43.2**	**+0.4**
KRUC	**Moravsky**	**88.18**	**329**	*e*P	**P**	**18 23 43.1**	**+0.3**
MOA	**Molln**	**88.34**	**327**	*i* P	**P**	**18 23 44.1**	**+0.4**
	7.2nm,1.0s						
ABTA	**Abfaltersbach**	**88.47**	**325**	*i* P	**P**	**18 23 45.4**	**+1.0**
	7.7nm,0.9s						
WTTA	**Wattenberg**	**89.26**	**325**	*i* P	**P**	**18 23 48.8**	**+0.6**
	6.3nm,0.6s						
GERES	**GERESS Array B**	**89.30**	**327**	P	**P**	**18 23 47.5**	**-0.8**
	0.2nm,0.3s,baz=151,slow=6.3,SNR=5.4						
SQTA	**Sankt Quirin**	**89.45**	**325**	*i* P	**P**	**18 23 49.6**	**+0.6**
	9.3nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**89.55**	**324**	*e*P	**P**	**18 23 50.2**	**+0.5**
	7.4nm,1.1s						
FETA	**Feichten**	**89.57**	**325**	*i* P	**P**	**18 23 50.6**	**+0.9**
	8.6nm,0.9s						
RETA	**Reutte**	**89.86**	**325**	*i* P	**P**	**18 23 51.8**	**+1.0**
	5.1nm,0.7s						
TUE	**Stuetta**	**89.94**	**324**	*e*P	**P**	**18 23 51.8**	**+0.4**
	4.4nm,0.8s						
DAVA	**Damuels**	**90.18**	**325**	*i* P	**P**	**18 23 53.2**	**+0.7**
	8.6nm,1.0s						
ESDC	**Sonseca Array**	**93.97**	**313**	P	**P**	**18 24 10.3**	**+0.2**
	0.2nm,0.3s,baz=114,slow=2.6,SNR=6.6						
ILAR	**Eielson Array**	**135.53**	**21**	PKP	**PKPdf**	**18 30 10.5**	**-1.2**
	0.2nm,0.8s,baz=267,slow=3.6,SNR=4.5						
YKA	**Yellowknife Ar**	**143.83**	**2**	PKP	**PKPdf**	**18 30 25.8**	**-1.0**
	1.4nm,0.8s,baz=20,slow=2.0,SNR=3.0						
YKB5	**Yellowknife Ar**	**143.83**	**2**	*e*PKPdf	**PKPdf**	**18 30 25.8**	**-1.0**
NCB	**Newcomb**	**145.01**	**310**	*e*PKPbc	**PKPdf**	**18 30 29.4**	**-0.1**
VLDQ	**Val d'Or**	**145.54**	**318**	*e*PKPdf	**PKPab**	**18 30 30.4**	**-0.1**
TXAR	**Lajitas Array**	**172.25**	**294**	PKPab	**PKPab**	**18 32 25.1**	**-0.5**
	0.2nm,0.9s,baz=100,slow=2.1,SNR=2.3						

IDC 31 18:22:28.9±2.5, 7°.21S×130°.95E, h0^{km}, mb3.8/1, mb1 3.6/3, mb1mx3.3/24, mbtmp3.4/3, ML3.1/2, Error ellipse: s-maj=158.4km s-min=27.8km az=72.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.08**	**166**	Pn	Pn	18 25 35.8	-0.3
	0.1nm,0.3s,baz=349,slow=13,SNR=1.6						
WRA				Sn	Sn	18 27 59.0	-3.4
	0.1nm,0.3s,baz=334,slow=24,SNR=1.9						
ASAR	**Alice Springs**	**16.61**	**170**	Pn	Pn	18 26 24.1	+0.8
	0.1nm,0.3s,baz=349,slow=9.0,SNR=10						
ASAR				Sn	Sn	18 29 28.2	-0.2
	0.0nm,0.3s,baz=336,slow=14,SNR=4.2						
MKAR	**Makanchi Array**	**68.92**	**326**	P	P	18 33 35.8	0.0
	0.4nm,0.3s,baz=114,slow=8.0,SNR=17						

*IDC **31** 18:33:56.8±0.8, 13°.20N×50°.88E, h0^{km}, mb3.8/11, mb1 4.1/12, mb1mx3.8/34, mbtmp3.9/12, ML4.4/1, MS3.6/9, Ms1 3.6/9, ms1mx3.3/26, Error ellipse: s-maj=21.6km s-min=18.7km az=131.0*

*ISCJB **31** 18:33:57.5±0.6, 13°.22N±0°.09×50°.83E±0°.08, h16^{km}, mb4.0/14, MS3.6/7, Error ellipse: s-maj=14.3km s-min=10.5km az=151.0*

*NEIC **31** 18:33:58.3±1.6, 13°.15N×50°.93E, h10^{km}, mb4.1/2, Error ellipse: s-maj=31.1km s-min=10.5km az=108.0*

ISC 31 18:33:59.2±0.8, 13°.2N±0°.1×50°.9E±0°.1, h16^{km}, n30, σ0^{s}.65/23, mb4.0/14, MS3.6/7, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**7.99**	**259**	Pn	**Pn**	**18 35 54.6**	**-0.2**
	4.6nm,0.3s,baz=53,slow=22,SNR=11						
ATD				LR	LR	18 38 17.8	
	comp=Z,436nm,20.8s,baz=58,slow=32						
WSAR	**Wadi Sarin**	**12.43**	**35**	LR	LR	18 41 22.0	
	comp=Z,371nm,19.4s,baz=238,slow=36						
GEYT	**Alibeck**	**25.48**	**13**	P	**P**	**18 39 26.2**	**-0.6**
	451nm,0.4s,baz=188,slow=8.5,SNR=8.5						
GEYT				LR	LR	18 51 28.7	
	comp=Z,410nm,19.2s,baz=185,slow=41						
H08N2	**Diego Garcia H**	**27.86**	**133**	T	T	19 08 54.6	
	baz=313,slow=76,SNR=18						
H08N3	**Diego Garcia H**	**27.87**	**133**	T	T	19 08 57.2	
	baz=313,slow=76,SNR=17						
H08N1	**Diego Carcia H**	**27.88**	**133**	T	T	19 08 56.2	
	baz=313,slow=76,SNR=21						
BR101	**Keskin Array S**	**30.49**	**333**	*e*P	**P**	**18 40 11.3**	**-0.4**
BRTR	**Keskin Array B**	**30.49**	**333**	P	**P**	**18 40 11.3**	**-0.4**
	0.3nm,0.6s,baz=145,slow=10,SNR=2.5						
KBZ	**Khabaz**	**31.20**	**349**	P	**P**	**18 40 18.3**	**+0.6**
	2.3nm,0.7s,baz=176,slow=8.8,SNR=5.2						
KBZ				LR	LR	18 55 16.7	
	comp=Z,222nm,20.1s,baz=162,slow=41						
ABKAR	**Akbulak array**	**36.75**	**10**	*e*P	**P**	**18 41 06.6**	**+0.8**
	5.7nm,1.4s						
MATP	**Matopo**	**39.98**	**214**	P	**P**	**18 41 33.2**	**-0.3**
	2.6nm,1.1s,baz=24,slow=10.0,SNR=3.7						
AKASG	**Malin Array Be**	**41.35**	**339**	P	**P**	**18 41 44.4**	**0.0**
	0.7nm,0.4s,baz=147,slow=7.2,SNR=5.8						
MK31	**Makanchi Array**	**42.65**	**32**	*e*P	**P**	**18 41 55.7**	**+0.7**
	8.0nm,2.0s						
MK32	**Makanchi Array**	**42.65**	**32**	*e*P	**P**	**18 41 55.0**	**-0.1**
MKAR	**Makanchi Array**	**42.65**	**32**	P	**P**	**18 41 55.0**	**-0.1**
	0.5nm,0.7s,baz=210,slow=9.4,SNR=4.8						
MKAR				LR	LR	19 02 42.6	
	comp=Z,38nm,18.4s,baz=238,slow=40						
CMAR	**Chiang Mai Arr**	**46.47**	**77**	P	**P**	**18 42 26.9**	**+1.0**
	0.6nm,0.4s,baz=247,slow=25,SNR=4.0						
CMAR				LR	LR	19 02 04.2	
	comp=Z,26nm,19.1s,baz=197,slow=36						
TORD	**Torodi Ar. Bea**	**47.80**	**276**	P	**P**	**18 42 37.3**	**+0.9**
	1.3nm,1.1s,baz=102,slow=6.8,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**47.80**	**276**	*e*P	**P**	**18 42 37.3**	**+0.8**
BOSA	**Boshof**	**48.37**	**211**	LR	LR	19 02 00.7	
	comp=Z,66nm,21.7s,baz=30,slow=35						
ZALV	**Zalesovo Beam**	**48.68**	**26**	P	**P**	**18 42 41.7**	**-0.9**
	0.7nm,0.6s,baz=231,slow=6.7,SNR=3.5						
ZAA1	**Zalesovo Array**	**48.69**	**26**	*e*P	**P**	**18 42 41.7**	**-1.0**
DBIC	**Dimbokro**	**55.16**	**269**	LR	LR	19 07 07.8	
	comp=Z,37nm,20.7s,baz=90,slow=36						
SONA0	**Songino Array**	**57.41**	**41**	*e*P	**P**	**18 43 46.4**	**-0.9**

SONM	Songino Array	57.41	41	P	P	18 43 46.4	-0.9
	0.3nm,0.4s,baz=269,slow=8.1,SNR=2.7						
ARCES	ARCESS Array B	58.55	350	LR	LR	19 11 42.2	
	comp=Z,91nm,20.7s,baz=258,slow=39						
WRA	Warramunga Arr	88.45	111	P	P	18 46 51.0	-0.5
	2.5nm,1.0s,baz=272,slow=6.3,SNR=3.9						
WR1	Warramunga Arr	88.45	111	eP	P	18 46 51.0	-0.5
ASAR	Alice Springs	88.99	114	P	P	18 46 54.2	+0.3
	1.2nm,0.9s,baz=289,slow=4.1,SNR=6.1						
NV01	Mina Array Sit	127.67	349	ePKPdf	PKiKP	18 53 05.1	0.0
NVAR	Mina Array Bea	127.67	349	PKP	PKiKP	18 53 05.1	0.0
	0.6nm,0.8s,baz=338,slow=1.9,SNR=4.7						

JMA 31 18:42:25.1±0.1, 29°.91N×141°.91E, h59^{km}, M4.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.81	175	P	Pn	18 43 08.7	+1.0
CBIJ				S	Sn	18 43 41.5	+1.1
JHH2	Haha-jima-NKT2	3.27	176	P	Pn	18 43 15.2	+1.2
JHH2				S	Sn	18 43 52.9	+1.2
JHCJ	Hachijojimakas	3.63	331	P	Pn	18 43 19.8	+1.0
BSO1	Boso 1	4.79	351	P	Pn	18 43 37.2	+2.9
BSO1				eS	Sn	18 44 31.3	+3.1
JKUC	kamogawauchiur	5.43	345	P	Pn	18 43 45.6	+2.1
JOD2	Odawara 2	5.84	337	P	Pn	18 43 52.4	+3.2
JYN	Shimob	6.25	334	P	Pn	18 43 58.0	+3.2
JHU	Hanno	6.32	340	P	Pn	18 43 58.3	+2.6
JRY	Ryogami san	6.59	338	P	Pn	18 44 01.6	+2.2
JHO	Hitachi	6.78	351	P	Pn	18 44 04.2	+2.3
JAG	Ashikaga	6.82	343	P	Pn	18 44 03.7	+1.3
JKMT	Kesennumamotoy	8.89	358	P	Pn	18 44 33.2	+2.5
JMK	Ichinoseki	9.04	357	P	Pn	18 44 35.4	+2.6

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*ISCJB **31** 18:47:06.8±0.7, 47°.56N±0°.06×92°.52W±0°.07, h0^{km}, Error ellipse: s-maj=8.5km s-min=6.6km az=153.3*

*NEIC **31** 18:47:07.8±0.6, 47°.57N×92°.52W, h0^{km}, MN2.5, Error ellipse: s-maj=9.3km s-min=7.6km az=39.0, Suspected Mining explosion.*

NEIC 3 km [2 miles] NNE of Virginia.

*IDC **31** 18:47:09.1±3.8, 47°.53N×92°.55W, h0^{km}, mb1 2.6/1, mb1mx2.6/34, mbtmp2.6/1, ML1.2/1, Error ellipse: s-maj=70.7km s-min=28.5km az=53.0*

ISC 31 18:47:06.9±1.1, **47°.46N**±0°.05×**92°.54W**±0°.05, **h0^{km}, n13, σ0^{s}.77**/14, **Minnesota**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYMN	Ely	0.85	55	ePg	Pg	18 47 22.8	-0.4
EYMN				Sg	Sg	18 47 33.3	-1.0
E38A	The Farm, Brul	1.09	142	Pg	Pn	18 47 29.3	-0.1
SPMN	Marine on St.	2.25	185	Pn	Pb	18 47 48.4	0.0
C40A	Isle Royale Na	2.33	78	Pn	Pn	18 47 47.1	+0.7
C40A				Sn	Sn	18 48 16.1	+0.2
AGMN	Agassiz Nation	2.39	292	ePn	Pn	18 47 46.9	-0.3
COWI	Conover	2.71	119	ePn	Pn	18 47 52.4	+0.7
G40A	Rib Lake	2.73	143	Pn	Pb	18 47 55.7	-0.8
D41A	Chassel	2.73	97	Pn	Pn	18 47 52.9	+0.8
ULM	Lac du Bonnet	3.55	323	Pn	Pn	18 48 03.6	+0.4
	0.3nm,0.3s,baz=145,slow=9.9,SNR=3.8						
ULM				Pg	Pb	18 48 11.1	+0.5
	0.6nm,0.3s,baz=146,slow=14,SNR=7.0						
ULM				Lg	Lg	18 48 57.3	
	3.6nm,0.3s,baz=52,slow=20,SNR=8.1						
I10CA	LAC DU BONNET	3.58	321	i		19 06 30.0	
	baz=136,slow=321,SNR=3.9						
E43A	Lone Tree Farm	3.95	104	Pn	Pn	18 48 09.8	+1.1
JFWS	Jewell Farm	4.83	160	Pn	Pn	18 48 21.9	+1.1
I56US	NEWPORT INFRAS	16.51	282	i		20 29 20.0	
	baz=85,slow=310,SNR=3.9						

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*DDA **31** 18:49:43.7, 40°.50N×43°.02E, h7^{km}±2^{km}, ML2.8*

*TIF **31** 18:49:43.5, 40°.50N×43°.04E, h12^{km}±3^{km}*

*ISK **31** 18:49:43.9, 40°.57N×43°.03E, h10^{km}, ML2.1/6*

*ISCJB **31** 18:49:44.1±0.5, 40°.54N±0°.03×43°.03E±0°.04, h5^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=4.1km az=145.4*

ISC 31 18:49:43.6±1.2, **40°.51N**±0°.03×**43°.02E**±0°.03, **h8^{km}**±10^{km}, **n18, σ0^{s}.53**/24, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARS	Kars	0.12	20	PG	Pg	18 49 46.5	0.0
DIGO	Kars	0.29	110	iP	Pg	18 49 49.8	+0.3
DIGO				iS	Sb	18 49 54.7	-1.4
DIGO				IAML_P			
	comp=Z,22µm,0.2s						
EAK	Akyaka	0.48	69	iP	Pb	18 49 53.8	-0.6
EAK				IAML_P			
	comp=Z,5µm,0.2s						
SENK	Senkaya-Erzuru	0.52	275	PG	Pb	18 49 54.5	-0.5
SENK				SG	Sb	18 50 02.0	-0.7
EATA	Eleskirt	0.77	212	iP	Pb	18 49 59.1	-0.3
EATA				IAML_P			
	comp=Z,3µm,0.3s						
BGD	Bogdanovka	0.87	30	P	Pg	18 50 00.7	+0.3
BGD				S	Sb	18 50 13.0	+0.2
AKH	Akhalkalaki	0.96	22	PG	Pg	18 50 02.0	-0.2
AKH				SG	Sg	18 50 14.9	+0.2
AKH	Akhalkalaki	0.96	22	P	Pg	18 50 02.1	-0.1
AKH				S	Sb	18 50 15.6	-0.1
DAGI	Agillar	1.01	304	iP	Pn	18 50 03.9	-0.3
DAGI				IAML_P			
	comp=Z,864nm,0.2s						
EPOS	Posof	1.01	347	iP	Pb	18 50 03.9	+0.4
KOPR	Koprukoy-ERZUR	1.04	240	PG	Pb	18 50 03.8	-0.1
KOPR				SG	Sn	18 50 19.9	+0.6
ARTV	Artvin	1.07	309	iP	Pn	18 50 05.6	+0.5
TUTA	Tutak	1.12	188	iP	Pn	18 50 06.7	+0.9
DBAD	Bademkaya	1.13	297	iP	Pb	18 50 05.0	-0.4
DBAD				IAML_P			
	comp=Z,855nm,0.2s						
GNI	Garni	1.36	105	PN	Pb	18 50 09.2	-0.3
BCA	Borcka	1.41	312	PN	Pn	18 50 09.9	+0.3
BATM	Batumi	1.48	318	PN	Pn	18 50 10.5	-0.1
CLDR	Caldiran	1.53	153	PN	Pg	18 50 13.1	0.0

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*IDC **31** 18:53:31.4±1.1, 3°.94S×152°.06E, h0^{km}, mb3.8/9, mb1 3.9/10, mb1mx3.8/23, mbtmp3.8/10, ML0.6/1, MS3.2/6, Ms1 3.2/6, ms1mx3.0/21, Error ellipse: s-maj=29.1km s-min=21.3km az=110.0*

*ISCJB **31** 18:53:33.7±1.4, 3°.95S±0°.09×152°.0E±0°.1, h25^{km}±13^{km}, mb3.7/9, MS3.1/4, Error ellipse: s-maj=21.6km s-min=11.0km az=33.4*

*NEIC **31** 18:53:35.1±0.3, 3°.99S×152°.20E, h27^{km}±40^{km}, mb4.1/1, Error ellipse: s-maj=165.4km s-min=9.2km az=118.0*

ISC 31 18:53:34.6±0.9, **3°.9S**±0°.1×**152°.1E**±0°.1, **h21^{km}**±3^{km}, **n21, σ0^{s}.57**/18, **mb3.8**/10, **MS3.1**/4, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.26	163	ePg	Pb	18 53 41.0	+0.1
RABL				eSg	Sb	18 53 45.0	-0.2
PMG	Port Moresby	7.31	222	Pn	Pn	18 55 20.7	+0.5
	0.1nm,0.3s,baz=43,slow=5.0,SNR=1.3						
PMG				Sn	Sn	18 56 43.2	+0.5
	0.5nm,0.3s,baz=25,slow=12,SNR=2.0						
HNR	Honiara	9.53	125	LR	LR	18 59 45.2	
	comp=Z,313nm,18.9s,baz=303,slow=39						
GUMO	Guam	18.83	338	LR	LR	19 05 37.5	
	comp=Z,35nm,18.9s,baz=146,slow=39						
SIJI	Sorong	21.02	278	P	P	18 58 17.4	+0.1
	9.2nm,1.1s,baz=107,slow=15,SNR=3.4						
DZM	Mont Dzumac	22.78	144	P	P	18 58 36.0	-0.1
	6.4nm,1.0s,baz=319,slow=20,SNR=1.7						
DZM				LR	LR	19 05 44.2	
	comp=Z,119nm,20.9s,baz=248,slow=32						
WRAB	Tennant Creek	23.49	226	eP	P	18 58 41.8	-1.4
	7.6nm,1.1s						
WR1	Warramunga Arr	23.50	226	eP	P	18 58 42.6	-0.8
WRA	Warramunga Arr	23.50	226	P	P	18 58 42.6	-0.8
	2.6nm,0.9s,baz=54,slow=9.3,SNR=3.3						
ASAR	Alice Springs	26.32	220	P	P	18 59 09.0	-0.2
	0.5nm,0.8s,baz=52,slow=8.9,SNR=3.4						
STKA	Stephens Creek	29.49	198	LR	LR	19 11 19.8	
	comp=Z,43nm,19.1s,baz=22,slow=36						
MJAR	Matsushiro Arr	42.30	343	LR	LR	19 16 38.8	
	comp=Z,22nm,21.7s,baz=195,slow=33						
KSRS	Korea Array	46.91	334	LR	LR	19 19 56.4	
	comp=Z,19nm,20.6s,baz=192,slow=34						
CMAR	Chiang Mai Arr	56.87	295	P	P	19 03 17.8	-0.6
	0.3nm,0.3s,baz=116,slow=6.1,SNR=2.0						
SONA0	Songino Array	65.22	328	eP	P	19 04 15.0	+0.2
SONM	Songino Array	65.22	328	P	P	19 04 15.0	+0.2
	0.3nm,0.5s,baz=124,slow=5.9,SNR=2.3						
MK32	Makanchi Array	79.21	319	eP	P	19 05 38.2	-0.1
MKAR	Makanchi Array	79.21	319	P	P	19 05 38.2	-0.1
	0.7nm,1.0s,baz=123,slow=7.1,SNR=2.7						
ZALV	Zalesovo Beam	80.05	326	P	P	19 05 42.9	+0.2
	0.4nm,0.4s,baz=131,slow=5.9,SNR=2.4						
ZAA1	Zalesovo Array	80.05	326	eP	P	19 05 42.9	+0.2
ILAR	Eielson Array	81.64	22	P	P	19 05 51.2	+0.3
	1.1nm,0.7s,baz=248,slow=5.5,SNR=9.7						

MEX 31 18:58:37.6±0.3, **27°.30N×112°.42W, h5^{km}, MD3.5, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	Santa Rosalia	0.16	84	eP	Pg	18 58 40.6	-0.3
	baz=264,slow=7.9						
SRIG				iS	Sg	18 58 43.0	-0.1

MAN 31 19:12:58.5, 17°.44N×120°.12E, h26^{km}, mb4.5, ML3.3, MS3.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	Dolores	0.60	70	eP	Pb	19 13 10.4	-0.1
ABRA				eS	Sb	19 13 18.8	+0.2
BOLP	Bolinao	1.07	191	eP	Pb	19 13 18.3	-0.2
BOLP				eS	Sn	19 13 31.7	-0.2
APYP	Conner	1.15	68	eP	Pn	19 13 18.2	-0.8
APYP				eS	Sn	19 13 31.5	-2.3
SMPP	San Manuel, Pa	1.39	157	eP	Pn	19 13 21.1	-1.2
CVP	Callao Caves	1.64	81	⇓iP	Pn	19 13 25.8	0.0
CVP				iS	Sn	19 13 45.2	-0.9
CAUP	Cauayan	1.70	107	eP	Pn	19 13 27.8	+1.2
CAUP				eS	Sb	19 13 51.7	+1.7
SGCP	Mt. Cagua	2.00	66	eP	Pn	19 13 31.3	+0.7
SGCP				eS	Sn	19 13 55.6	+0.7
BALP	Baler	2.19	140	eP	Pn	19 13 29.7	-3.5
BALP				eS	Sn	19 13 57.5	-2.0

MAN 31 19:13:28.7, 8°.22N×126°.49E, h33^{km}, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.14	255	⇓eP	Pb	19 13 37.8	+3.1
BIPH				eS	Sb	19 13 42.3	+3.4
MATI	Mati	1.29	190	eP	Pn	19 13 50.0	-0.4
MATI				eS	Sn	19 14 07.0	+0.5
BUKP	Musuan	1.46	257	eP	Pn	19 13 53.3	+0.5
BUKP				eS	Sn	19 14 11.4	+0.6

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*IDC **31** 19:44:29.4±0.4, 51°.14N×178°.33E, h0^{km}, mb4.8/32, mb1 4.9/35, mb1mx4.9/39, mbtmp4.8/35, ML4.2/3, MS4.6/30, Ms1 4.6/30, ms1mx4.4/44, Error ellipse: s-maj=15.8km s-min=9.1km az=169.0*

*MOS **31** 19:44:30.9±1.0, 51°.10N×178°.34E, h19^{km}, mb5.4/123, MS4.8/18, Error ellipse: s-maj=5.6km s-min=4.3km az=100.6*

*BJI **31** 19:44:31.2±0.0, 51°.31N×178°.22E, h25^{km}, mb5.2/78, mB5.3/53, Ms5.0/74, Ms7 4.8/70*

*AEIC **31** 19:44:31.9±0.0, 50°.80N×178°.17E, h68^{km}*

*NEIC **31** 19:44:32.1±1.8, 51°.11N×178°.17E, h19^{km}±3^{km}, mb5.2/382, ML5.0(AEIC), Error ellipse: s-maj=13.6km s-min=6.7km az=177.0*

NEIC Felt on Shemya.

*ISCJB **31** 19:44:33.6±0.4, 51°.15N±0°.03×178°.38E±0°.02, h40^{km}±3^{km}, mb5.2/438, MS4.7/70, Error ellipse: s-maj=4.9km s-min=2.0km az=0.5*

*GCMT **31** 19:44:34.1±0.2, 51°.04N±0°.01×178°.25E±0°.02, h14^{km}, MW5.2/105, Moment Tensor Solution. s79,c115; s105,c172; Duration: 1^{s}.0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$5.41±.17; M$_{\theta\theta}$-5.72±.13; M$_{\phi\phi}$0.31±.11; M$_{r\theta}$4.86±.35; M$_{\theta\phi}$-0.87±.09; M$_{\phi r}$3.11±.32; Best double couple: M$_0$8.06700×10^{16} NP1:φ$_s$65.00000°, δ68.00000°, λ76.00000°. NP2:φ$_s$278.00000°, δ25.00000°, λ121.00000°. Principal axes: T 8.1290, Plg64.0000°, Azm312.0000°; N -0.1200, Plg13.0000°, Azm70.0000°; P -8.0060, Plg22.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 19:44:33.4±0.5, **51°.09N**±0°.05×**178°.39E**±0°.03, **h26^{km}**±2^{km}, **h25^{km}:pP-P, n1336, σ1^{s}.39**/1410, **mb5.2**/456, **MS4.7**/70, **61C-21D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAEA	Gareloi East	1.92	68	ePn	Pb	19 45 06.6	-1.1
TASE	Tanaga Southea	2.35	70	ePn	Pn	19 45 12.6	+2.1
KICM	Kanaga Island	2.88	72	ePn	Pn	19 45 19.9	+2.3
KIKV	Kanaga Island	2.88	72	ePn	Pn	19 45 19.9	+2.2
KIWB	Kanaga Island	2.89	73	ePn	Pn	19 45 19.0	+1.3
SMY	Shemya	3.12	303	ePn	Pn	19 45 19.7	-1.3
SMY	Shemya	3.12	303	eP	Pn	19 45 19.7	-1.3
ADK	Adak	3.18	74	ePn	Pn	19 45 22.6	+0.9
ADK				ePg	Pb	19 45 22.7	-6.4
ADK	Adak	3.18	74	eP	Pn	19 45 22.6	+0.9
ADAG	Mount Adagdak	3.25	72	ePn	Pn	19 45 25.0	+2.3
ETKA	Kagalaska Isla	3.34	75	ePn	Pn	19 45 25.7	+1.7
GSTD	Great Sitkin T	3.54	72	ePn	Pn	19 45 28.4	+1.6
GSTD				eSn	Sb	19 46 13.8	-4.1
GSMY	Great Sitkin M	3.59	72	ePn	Pn	19 45 29.6	+2.2
GSTR	Great Sitkin T	3.60	72	ePn	Pn	19 45 29.5	+1.9
ATKA	Atka Island	4.75	74	ePn	Pn	19 45 44.9	+1.7
KOKL	Mount Kliuchef	4.77	72	ePn	Pn	19 45 46.0	+2.3
KOFP	Korovin Flat P	4.82	73	ePn	Pn	19 45 47.0	+2.7
KOSE	Korovin Southe	4.86	72	ePn	Pn	19 45 46.6	+1.7
NIKH	Nikolski High	8.09	72	ePn	Pn	19 46 31.1	+2.0
OKTU	Okmok Mt. Tuli	8.64	69	ePn	Pn	19 46 39.3	+2.6
SPIA	Saint Paul Isl	9.03	43	ePn	Pn	19 46 44.1	+2.2
MSW	Makushin Switc	9.47	67	ePn	Pn	19 46 50.9	+2.8
MREP	Makushin Rep't	9.47	68	ePn	Pn	19 46 50.9	+2.8
UNV	Unalaska Valle	9.62	67	ePn	Pn	19 46 52.1	+2.1
PET	Petropavlovsk	12.30	287	ePn	Pn	19 47 25.1	-1.6
PET	Petropavlovsk	12.30	287	eP	Pn	19 47 27.9	+1.2
PET				eS	Sn	19 49 44.1	+1.3
PET				pmax	pmax		
	comp=Z,700nm,5.3s						
PET				pmax	pmax		
	comp=Z,119nm,1.2s						
PET				pmax	pmax		
	comp=Z,600nm,12.4s						
PET				MLR	MLR		
	comp=Z,2µm,14.0s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PEA0B	Petropavlovsk-	12.88	287	ePn	Pn	19 47 34.8	+0.1
PEA1	Petropavlovsk-	12.88	287	ePn	Pn	19 47 33.5	-1.2
PEA1				eSn	Sn	19 49 48.3	-8.7
PETK	Petropavlovsk-	12.88	287	Pn	Pn	19 47 33.5	-1.2
	comp=Z,2.2nm,0.3s,baz=95,slow=18,SNR=82						
PETK				Sn	Sn	19 49 48.3	-8.7
	comp=Z,0.2nm,0.3s,baz=130,slow=18,SNR=1.1						
PETK				LR	LR	19 53 54.6	
	comp=Z,2µm,18.1s,baz=86,slow=44						
SDPT	Sand Point	13.34	63	ePn	Pn	19 47 40.2	-0.7
GAMB	Gambell	13.77	19	ePn	Pn	19 47 45.9	-0.8
SKR	Severo-Kuril's	14.06	277	eP	Pn	19 47 51.3	+0.5
SKR				pmax	pmax		
	comp=Z,1µm,4.2s						
SKR				MLR	MLR		
	comp=Z,2µm,19.0s						
SKR				MLR	MLR		
	comp=Z,2µm,18.0s						
ANM	Nome	15.96	26	eP	P	19 48 20.9	+1.6
	comp=Z,98nm,1.2s						
ANM	Nome	15.96	26	eP	P	19 48 20.9	+1.6
ANM				pmax	pmax		
	comp=Z,99nm,1.2s						
SVW2	Sparrevohn	17.51	45	eP	P	19 48 37.3	+0.8
	comp=Z,61nm,1.1s						
OHAK	Old Harbor	17.60	59	eP	Pn	19 48 36.0	-0.6
	comp=Z,51nm,0.8s						
MA2	Magadan	17.75	309	P	Pn	19 48 35.5	-2.9
	comp=Z,0.3nm,0.3s,baz=82,slow=12,SNR=2.0						
MA2				LR	LR	19 55 32.5	
	comp=Z,3µm,18.2s,baz=111,slow=38						
MA2	Magadan	17.75	309	ePn	Pn	19 48 35.5	-2.9
MA2				eP	P	19 48 39.1	+0.1
MA2	Magadan	17.75	309	c eP	P	19 48 39.5	+0.4
MA2				pmax	pmax		
	comp=Z,59nm,1.0s						
BILL	Bilibino	18.01	345	eP	P	19 48 43.6	+1.7
	comp=Z,201nm,1.2s						
BILL	Bilibino	18.01	345	c iP	P	19 48 42.8	+0.9
BILL				pmax	pmax		
	comp=Z,175nm,1.3s						
BILL				MLR	MLR		
	comp=Z,4µm,16.0s						
KDAK	Kodiak Island	18.06	57	P	Pn	19 48 39.6	-2.7
KDAK				S	Sn	19 51 59.3	-3.4
KDAK	Kodiak Island	18.06	57	eP	Pn	19 48 41.3	-1.0
	comp=Z,49nm,0.8s						
KDAK	Kodiak Island	18.06	57	eP	Pn	19 48 41.3	-1.0
KDAK				pmax	pmax		
	comp=Z,49nm,0.8s						
TTA	Tatalina	18.14	39	eP	P	19 48 44.5	+1.0
	comp=Z,149nm,1.3s						
TTA	Tatalina	18.14	39	eP	P	19 48 44.5	+1.0
TTA				pmax	pmax		
	comp=Z,149nm,1.3s						
SEY	Seymchan	18.31	320	P	P	19 48 43.4	-1.9
	comp=Z,0.1nm,0.3s,baz=124,slow=11,SNR=3.6						
SEY				LR	LR	19 55 34.6	
	comp=Z,3µm,18.8s,baz=141,slow=36						
SEY				ScP	ScP	19 56 49.8	+0.5
	comp=Z,0.1nm,0.3s,baz=231,slow=3.8,SNR=4.1						
RSO	Redoubt South	18.59	49	eP	Pn	19 48 49.3	+0.3
CNPM	China Poot	19.09	52	eP	P	19 48 53.3	-0.5
	comp=Z,43nm,0.8s						
BRLK	Bradley Lake	19.31	51	eP	P	19 48 56.5	+0.2
	comp=Z,59nm,1.0s						
RDOG	Red Dog Mine	19.32	21	ePn	Pn	19 48 58.1	+0.7
	comp=Z,118nm,0.9s						
SKT	Skwentna	19.64	45	eP	Pn	19 49 01.4	0.0
	comp=Z,325nm,1.3s						
PPLA	Purkeypile	19.70	42	eP	Pn	19 49 01.9	-0.2
	comp=Z,151nm,1.0s						
SUA	Susitna One	19.83	47	eP	Pn	19 49 02.9	-0.8
	comp=Z,44nm,0.8s						
CAST	Castle Rocks	19.95	41	eP	Pn	19 49 04.8	-0.3
	comp=Z,118nm,1.0s						
SEW	Seward	20.09	51	eP	Pn	19 49 06.0	-0.6
	comp=Z,54nm,0.8s						
RC01	Rabbit Creek A	20.19	48	eP	P	19 49 04.0	-1.8
	comp=Z,42nm,0.9s						
KTH	Kantishna Hill	20.48	41	eP	Pn	19 49 10.2	-1.1
	comp=Z,265nm,1.0s						
PMR	Palmer	20.61	47	eP	P	19 49 10.3	0.0
	comp=Z,68nm,1.2s						
PMR	Palmer	20.61	47	eP	P	19 49 10.3	0.0
PMR				pmax	pmax		
	comp=Z,68nm,1.2s						
BPAW	Bear Paw Mtn.	20.68	39	eP	Pn	19 49 12.3	-1.2
	comp=Z,138nm,1.3s						
GHO	Glory Hole Cre	20.75	46	eP	P	19 49 12.6	+0.6
	comp=Z,75nm,0.9s						
KNK	Knik Glacier	20.87	48	eP	P	19 49 12.2	-1.0
	comp=Z,154nm,1.0s						
SML	Sawmill	21.03	47	eP	P	19 49 14.6	-0.4
	comp=Z,138nm,1.0s						
SML	Sawmill	21.03	47	eP	P	19 49 14.6	-0.4
SML				pmax	pmax		
	comp=Z,138nm,1.0s						
KUR	Kuril'sk	21.09	266	eP	P	19 49 16.5	+0.8
KUR				e		19 49 37.1	
KUR				S	S	19 53 10.1	+1.1
KUR				MLR	MLR		
	comp=Z,600nm,11.0s						
MLY	Manley	21.18	37	eP	P	19 49 17.7	+1.2
	comp=Z,117nm,1.3s						
RND	Reindeer	21.29	42	eP	P	19 49 17.3	-0.5
	comp=Z,91nm,1.2s						
RND	Reindeer	21.29	42	eP	P	19 49 17.3	-0.5
RND				pmax	pmax		
	comp=Z,91nm,1.2s						
BWN	Browne	21.32	40	eP	P	19 49 18.3	+0.3
	comp=Z,474nm,1.2s						
MCK	McKinley	21.37	41	eP	P	19 49 18.0	-0.6
	comp=Z,71nm,1.0s						
MCK	McKinley	21.37	41	eP	P	19 49 18.0	-0.6
MCK				pmax	pmax		
	comp=Z,71nm,1.0s						
GLI	Glacier Island	21.39	49	eP	P	19 49 17.8	-1.1
	comp=Z,77nm,0.7s						
FID	Port Fidalgo	21.67	50	eP	P	19 49 20.5	-1.3
	comp=Z,162nm,1.2s						
DHY	Denali Highway	21.82	44	eP	P	19 49 23.1	-0.5
	comp=Z,171nm,1.0s						
EYAK	Cordova Ski Ar	21.99	51	eP	P	19 49 23.4	-1.7
	comp=Z,81nm,1.0s						
WRH	Wood River Hil	21.99	40	eP	P	19 49 24.1	-1.1
	comp=Z,44nm,0.9s						
MDM	Murphy Dome	22.12	38	eP	P	19 49 26.2	-0.4
	comp=Z,46nm,1.0s						
CCB	Clear Creek Bu	22.17	39	eP	P	19 49 25.6	-1.5
	comp=Z,49nm,1.1s						
TCOL	CIGO, UAF Yank	22.23	39	P	P	19 49 26.3	-1.4
	baz=248						
COLA	College	22.23	39	eP	P	19 49 27.9	+0.2
	comp=Z,60nm,0.8s						
COLA	College	22.23	39	c iP	P	19 49 26.8	-1.0
COLA				pmax	pmax		
	comp=Z,41nm,1.0s						
TYV	Tymovskoe	22.37	283	eP	P	19 49 30.2	+0.8
TYV				e		19 53 36.1	
TYV				pmax	pmax		
	comp=Z,900nm,2.8s						
TYV				pmax	pmax		
	comp=Z,79nm,1.2s						
COLD	Coldfoot	22.42	32	eP	P	19 49 30.1	+0.3
	comp=Z,50nm,1.1s						
HDA	Harding Lake	22.43	40	eP	P	19 49 28.8	-1.1
	comp=Z,58nm,1.1s						
RAGM	Ragged Mountai	22.49	51	eP	P	19 49 30.9	+0.2
	comp=Z,270nm,1.1s						
POKR	Poker Plat Res	22.49	38	P	P	19 49 29.6	-1.0
	baz=248,SNR=16						
ILAR	Eielson Array	22.58	39	P	P	19 49 29.7	-1.8
	comp=Z,12nm,0.8s,baz=244,slow=9.9,SNR=57						
ILAR				PcP	PcP	19 53 24.4	+0.6
	comp=Z,2.3nm,0.9s,baz=261,slow=4.2,SNR=4.8						
ILAR				ScP	ScP	19 56 58.7	-0.7
	comp=Z,3.0nm,1.1s,baz=278,slow=2.8,SNR=8.3						
ILB	Eielson Array	22.58	39	eP	P	19 49 29.2	-2.3
	comp=Z,57nm,1.1s						
PAX	Paxson	22.63	44	eP	P	19 49 31.4	-0.7
	comp=Z,52nm,0.9s						
PAX	Paxson	22.63	44	eP	P	19 49 31.4	-0.7
PAX				pmax	pmax		
	comp=Z,52nm,0.9s						
HMT	Hamilton	22.68	51	eP	P	19 49 32.7	0.0
	comp=Z,137nm,1.2s						
YUK	Yuzh-Kuril'sk	22.92	265	iP	P	19 49 34.9	-0.3
NKL	Nikolayevsk	23.07	290	eP	P	19 49 36.5	-0.2
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
RIDG	Independent Ri	23.10	43	eP	P	19 49 35.1	-1.9
	comp=Z,42nm,0.9s						
CRQM	Cirque	23.29	51	eP	P	19 49 38.3	-0.8
	comp=Z,140nm,1.1s						
TOLK	Toolik Lake Re	23.37	29	eP	P	19 49 39.9	+0.3
	comp=Z,66nm,0.8s						
TOLK	Toolik Lake Re	23.37	29	P	P	19 49 39.9	+0.3
	baz=238,SNR=30						
PRP	Porcupine Dome	23.38	38	eP	P	19 49 37.4	-2.5
	comp=Z,34nm,1.0s						
WAX	Waxell Ridge	23.39	51	eP	P	19 49 39.4	-0.6
	comp=Z,72nm,1.0s						
MENT	Mentasta	23.39	45	eP	P	19 49 39.5	-0.4
	comp=Z,70nm,0.9s						
DOT	Dot Lake	23.41	43	eP	P	19 49 38.5	-1.6
	comp=Z,46nm,0.8s						
TGL	Tana Glacier	23.44	51	eP	P	19 49 39.5	-0.9
	comp=Z,93nm,1.2s						
SCRK	Sand Creek	23.53	42	eP	P	19 49 40.0	-1.4
	comp=Z,53nm,0.8s						

YSS	**Yuzh-Sakhalins**	**23.58**	**274**	*e*P	**P**	**19 49 42.5**	**+0.6**
	comp=Z,203nm,1.4s						
YSS	**Yuzh-Sakhalins**	**23.58**	**274⇑**	*e*P	**P**	**19 49 42.4**	**+0.6**
YSS				*e*S	**S**	**19 53 54.2**	**-0.1**
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS				MLR	MLR		
	comp=N,1μm,14.0s						
FYU	**Fort Yukon**	**23.88**	**36**	*e*P	**P**	**19 49 44.7**	**+0.2**
	comp=N,215nm,1.2s						
CTGM	**Chitina Glacie**	**24.19**	**50**	*e*P	**P**	**19 49 47.2**	**-0.4**
	comp=N,41nm,0.8s						
PCA	**Pinnacle**	**24.66**	**53**	*e*P	**P**	**19 49 51.4**	**-0.4**
	comp=N,134nm,1.1s						
EGAK	**Eagle**	**24.93**	**41**	*e*P	**P**	**19 49 53.3**	**-0.8**
	comp=N,238nm,1.3s						
BCPM	**Bancas Point**	**24.96**	**53**	*e*P	**P**	**19 49 54.6**	**+0.2**
	comp=N,49nm,0.8s						
DAWY	**Dawson**	**25.52**	**43**	*e*P	**P**	**19 49 59.4**	**-0.2**
	comp=N,118nm,1.0s						
ERM	**Erimo**	**25.66**	**263*c***	*e*P	**P**	**19 50 02.6**	**+1.7**
ERM				pmax	pmax		
	comp=Z,98nm,1.7s						
HYT	**Haines Junctio**	**26.05**	**51**	*e*P	**P**	**19 50 04.5**	**+0.1**
	comp=Z,52nm,0.9s						
GRNR	**Gornyy**	**26.20**	**286**	*e*P	**P**	**19 50 06.2**	**+0.4**
GRNR				pmax	pmax		
	comp=Z,65nm,1.0s						
EPYK	**Eagle Plains**	**27.09**	**39**	*e*P	**P**	**19 50 12.8**	**-0.8**
	comp=Z,37nm,1.0s						
EPYK	**Eagle Plains**	**27.09**	**39**	P	**P**	**19 50 12.9**	**-0.7**
	baz=258,SNR=20						
WHY	**Whitehorse**	**27.34**	**51**	*e*P	**P**	**19 50 15.9**	**-0.1**
	comp=Z,12nm,0.9s						
TEY	**Ternei**	**28.28**	**274⇑**	*i*P	**P**	**19 50 23.8**	**-0.6**
TEY				pmax	pmax		
	comp=Z,30nm,1.3s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.2s						
YAK	**Yakutsk**	**28.29**	**312**	*e*P	**P**	**19 50 22.8**	**-1.5**
YAK				*e*		19 51 11.4	
YAK				*e*		19 53 32.7	
YAK				*e*S	**S**	**19 55 03.1**	**-5.6**
YAK				*e*SS	**SnSn**	**19 56 38.8**	**+13**
YAK				*e*		20 01 15.5	
YAK				pmax	pmax		
	comp=Z,182nm,1.1s						
YAK				pmax	pmax		
	comp=E,94nm,1.1s						
YAK				pmax	pmax		
	comp=N,16nm,1.1s						
YAK				pmax	pmax		
	comp=Z,55nm,1.4s						
YAK				smax	smax		
	comp=N,62nm,2.0s						
YAK				smax	smax		
	comp=E,82nm,2.5s						
YAK				MLR	MLR		
	comp=Z,1μm,17.0s						
YAK				MLR	MLR		
	comp=N,495nm,16.0s						
YAK				MLR	MLR		
	comp=E,785nm,15.0s						
INK	**Inuvik**	**28.71**	**35**	P	**P**	**19 50 26.7**	**-1.3**
	comp=E,2.4nm,0.3s,baz=254,slow=7.9,SNR=11						
INK				PcP	**PcP**	**19 53 37.2**	**-0.4**
	comp=E,6.4nm,0.9s,baz=205,slow=17,SNR=3.8						
INK				ScP	**ScP**	**19 57 14.9**	**-2.0**
	comp=E,4.3nm,1.0s,baz=276,slow=8.2,SNR=3.6						
INK	**Inuvik**	**28.71**	**35**	*e*P	**P**	**19 50 27.8**	**-0.2**
	comp=E,32nm,1.0s						
INK	**Inuvik**	**28.71**	**35**	*e*P	**P**	**19 50 27.8**	**-0.2**
INK				pmax	pmax		
	comp=Z,32nm,1.0s						
KLR	**Kul'dur**	**29.55**	**285**	P	**P**	**19 50 35.4**	**-0.4**
	comp=Z,58nm,1.0s,baz=58,slow=8.9,SNR=95						
KLR				LR	LR	20 03 16.8	
	comp=Z,1μm,19.6s,baz=76,slow=38						
KLR	**Kul'dur**	**29.55**	**285*c***	*i*P	**P**	**19 50 35.2**	**-0.5**
KLR				pmax	pmax		
	comp=Z,76nm,1.0s						
DLBC	**Dease Lake**	**29.98**	**56**	P	**P**	**19 50 38.4**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=260,slow=18,SNR=4.3						
DLBC	**Dease Lake**	**29.98**	**56**	*e*P	**P**	**19 50 39.7**	**+0.2**
	comp=Z,43nm,1.8s						
TIXI	**Tiksi**	**30.03**	**331**	ScP	**ScP**	**19 57 18.3**	**-2.8**
	comp=Z,21nm,0.9s,baz=120,slow=5.2,SNR=6.8						
TIXI				LR	LR	20 03 25.3	
	comp=Z,2μm,18.5s,baz=127,slow=38						
ZEA	**Zeya**	**30.76**	**295**	*e*P	**P**	**19 50 44.8**	**-1.5**
ZEA				*e*		19 51 57.0	
ZEA				pmax	pmax		
	comp=Z,63nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,300nm,10.0s						
ZEA				MLR	MLR		
	comp=N,1μm,14.0s						
ZEA				MLR	MLR		
	comp=E,800nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2μm,14.0s						
USA0B	**Ussuriysk Arra**	**31.57**	**276**	*e*P	**P**	**19 50 53.1**	**-0.5**
USRK	**Ussuriysk Ar.**	**31.57**	**276**	P	**P**	**19 50 53.5**	**-0.2**
	comp=Z,4.0nm,0.8s,baz=68,slow=10,SNR=12						
USRK				LR	LR	20 02 23.1	
	comp=Z,666nm,21.9s,baz=55,slow=34						
MJAR	**Matsushiro Arr**	**32.00**	**259**	P	**P**	**19 50 57.0**	**-0.4**
	comp=Z,4.5nm,0.7s,baz=49,slow=7.0,SNR=15						
MJAR				PcP	**PcP**	**19 53 46.6**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=209,slow=1.0,SNR=4.5						
MJAR				ScP	**ScP**	**19 57 30.4**	**+2.1**
	comp=Z,0.8nm,0.4s,baz=37,slow=2.7,SNR=4.7						
MJAR				LR	LR	20 01 55.1	
	comp=Z,669nm,21.4s,baz=40,slow=33						
MAJO	**Matsushiro**	**32.00**	**259**	*e*P	**P**	**19 50 56.5**	**-0.9**
	comp=Z,35nm,1.2s						
MAJO				*e*PcP	**PcP**	**19 53 46.6**	**-0.2**
MAJO				*e*ScP	**ScP**	**19 57 30.4**	**+2.1**
MAJO	**Matsushiro**	**32.00**	**259*c***	*i*P	**P**	**19 50 57.3**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,26nm,1.2s						
MAT	**Matsushiro**	**32.00**	**259**	P	**P**	**19 50 57.2**	**-0.2**
MAT				S	**S**	**19 56 08.4**	**+1.0**
MJB9	**Matsu-Tunnel**	**32.00**	**259**	*e*P	**P**	**19 50 56.1**	**-1.3**
VLA	**Vladivostok**	**32.18**	**274*c***	*i*P	**P**	**19 50 59.1**	**+0.2**
VLA				pmax	pmax		
	comp=Z,37nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**32.58**	**200**	T	T	20 26 17.5	
	baz=13						
BBB	**Bella Bella**	**32.59**	**67**	LR	LR	20 04 08.2	
	comp=Z,610nm,18.4s,baz=292,slow=36						
H11N3	**WAKE ISLAND Hy**	**32.59**	**200**	T	T	20 26 16.6	
	baz=13,slow=74						
H11N1	**WAKE ISLAND Hy**	**32.60**	**200**	T	T	20 26 21.1	
	baz=13,slow=74						
MDJ	**Mudanjiang**	**32.87**	**278**	*e*P	**P**	**19 51 03.6**	**-1.4**
	comp=Z,27nm,1.0s						
MDJ	**Mudanjiang**	**32.87**	**278**	P	**P**	**19 51 03.5**	**-1.5**
MDJ				ScS	ScS	20 01 32.5	+1.4
MDJ				pmax	pmax		
	comp=Z,23nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,230nm,3.6s						
MDJ				LR	LR		
	comp=Z,880nm,17.6s						
MDJ				LR	LR		
	comp=Z,720nm,19.6s						
MDJ				LR	LR		
	comp=Z,2μm,20.8s						
MSHR	**Mys Shultsa**	**32.92**	**274**	*i* P	**P**	**19 51 04.6**	**-0.8**
H11S1	**WAKE ISLAND Hy**	**33.81**	**200**	T	T	20 27 51.2	
	baz=20,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**33.83**	**200**	T	T	20 28 12.8	
	baz=20,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**33.83**	**200**	T	T	20 27 55.2	
	baz=20,slow=76,SNR=15						
CN2	**Changchun**	**35.86**	**279**	*e*P	**P**	**19 51 30.0**	**-0.9**
CN2				PP	**PnPn**	**19 52 50.8**	**-0.5**
CN2				*e*S	**S**	**19 57 03.0**	**-3.9**
CN2				*e*SS	**SnSn**	**19 59 23.0**	**-7.7**
CN2				pmax	pmax		
	comp=Z,180nm,3.0s						
CN2				LR	LR		
	comp=Z,950nm,17.0s						
CN2				LR	LR		
	comp=Z,950nm,17.0s						
CN2				LR	LR		
	comp=Z,1μm,21.0s						
YKW3	**Yellowknife Ar**	**36.68**	**46**	*e*P	**P**	**19 51 36.6**	**-1.1**
	comp=Z,26nm,0.9s						
YKA	**Yellowknife Ar**	**36.70**	**46**	P	**P**	**19 51 37.6**	**-0.2**
	comp=Z,3.2nm,0.6s,baz=285,slow=8.7,SNR=12						
YKA				PcP	**PcP**	**19 54 00.2**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=300,slow=3.4,SNR=4.0						
YKA				ScP	**ScP**	**19 57 47.0**	**+2.4**
	comp=Z,3.1nm,0.8s,baz=293,slow=3.5,SNR=6.5						
YKB5	**Yellowknife Ar**	**36.70**	**46**	*e*P	**P**	**19 51 37.6**	**-0.2**
YKB5				*e*PcP	**PcP**	**19 54 00.2**	**+0.4**
YKB5				*e*ScP	**ScP**	**19 57 47.0**	**+2.4**
BOD	**Bodaibo**	**36.73**	**306**	*e*P	**P**	**19 51 36.2**	**-1.9**
HIA	**Hailar**	**36.75**	**291**	*e*P	**P**	**19 51 37.2**	**-1.2**
	comp=Z,32nm,1.1s						
HIA	**Hailar**	**36.75**	**291**	*e*P	**P**	**19 51 37.2**	**-1.2**
HIA				pmax	pmax		
	comp=Z,32nm,1.1s						
LLLB	**Lillooet**	**36.80**	**67**	*e*P	**P**	**19 51 39.7**	**+0.8**
NLWA	**Neilton Lookou**	**37.05**	**72**	*e*P	**P**	**19 51 43.0**	**+2.0**
	comp=Z,27nm,1.1s						
A04D	**Lummi Island**	**37.13**	**70**	P	**P**	**19 51 42.1**	**+0.5**
	baz=297						
D03D	**Eldon**	**37.45**	**72**	P	**P**	**19 51 45.9**	**+1.5**
	baz=298,SNR=22						
B05A	**Bryant**	**37.70**	**70**	P	**P**	**19 51 47.8**	**+1.3**
	baz=298						
D04E	**Lakebay**	**37.80**	**72**	P	**P**	**19 51 48.3**	**+1.0**
	baz=298						
KSRS	**Korea Array**	**37.87**	**269**	P	**P**	**19 51 47.7**	**-0.3**
	comp=Z,14nm,1.0s,baz=59,slow=8.5,SNR=31						
KSRS				PcP	**PcP**	**19 54 04.0**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=56,slow=3.0,SNR=4.5						
KSRS				LR	LR	20 07 12.4	
	comp=Z,332nm,19.6s,baz=60,slow=36						
KS15	**Wonju Array Si**	**37.90**	**269**	*e*P	**P**	**19 51 48.6**	**+0.3**
SNY	**Shenyang**	**38.08**	**278**	⇑P	**P**	**19 51 49.8**	**+0.1**
SNY				PP	**PP**	**19 53 21.5**	**+4.8**
SNY				S	**S**	**19 57 41.3**	**+0.7**
SNY				SS	**SnSn**	**20 00 20.5**	**-3.7**
SNY				pmax	pmax		
	comp=Z,47nm,1.4s						
SNY				LR	LR		
	comp=Z,780nm,15.2s						
SNY				LR	LR		
	comp=Z,870nm,18.3s						
SNY				LR	LR		
	comp=Z,1μm,16.9s						
F04D	**Rainier, OR**	**38.19**	**74**	P	**P**	**19 51 51.9**	**+1.3**
	baz=300						
E04D	**Cinebar**	**38.23**	**73**	P	**P**	**19 51 52.7**	**+1.8**
	baz=299,SNR=15						
D05A	**Enumclaw**	**38.27**	**72**	*e*P	**P**	**19 51 53.2**	**+1.9**
	comp=Z,50nm,1.1s						
G03D	**McMinnville, O**	**38.47**	**75**	P	**P**	**19 51 54.4**	**+1.5**
	baz=300						
C06D	**Leavenworth**	**38.57**	**70**	P	**P**	**19 51 55.1**	**+1.2**
	baz=298						
LON	**Longmire**	**38.59**	**72**	*e*P	**P**	**19 51 55.0**	**+0.9**
	comp=Z,9.9nm,0.7s						
LON	**Longmire**	**38.59**	**72**	*e*P	**P**	**19 51 55.0**	**+0.9**
LON				pmax	pmax		
	comp=Z,10.0nm,0.7s						
I02D	**Swisshome**	**38.68**	**77**	P	**P**	**19 51 56.8**	**+2.0**
	baz=302						
COR	**Corvallis**	**38.77**	**76**	*e*P	**P**	**19 51 57.1**	**+1.7**
	comp=Z,53nm,1.0s						
COR	**Corvallis**	**38.77**	**76**	*e*P	**P**	**19 51 57.1**	**+1.7**
COR				pmax	pmax		
	comp=Z,53nm,1.0s						
JNU	**Nakatsue**	**38.78**	**261**	*e*P	**P**	**19 51 55.3**	**-0.5**
	comp=Z,57nm,1.3s						
TJN	**Taejon**	**38.89**	**268*c***	*e*P	**P**	**19 51 57.0**	**+0.4**
LTY	**Liberty**	**39.02**	**71**	*e*P	**P**	**19 51 58.2**	**+0.5**
	comp=Z,15nm,1.1s						
KEBM	**Edson Butte**	**39.03**	**79**	*e*P	**P**	**19 52 00.4**	**+2.5**
	comp=Z,83nm,1.1s						
CIT	**Chita**	**39.12**	**298**	*e*P	**P**	**19 51 58.3**	**-0.1**
CIT				*e*		19 52 02.7	
CIT				*e*		19 52 11.1	
CIT				pmax	pmax		
	comp=Z,130nm,1.1s						
J01E	**Myrtle Point**	**39.13**	**78**	P	**P**	**19 52 00.3**	**+1.8**
	baz=303						
H04D	**Lebanon**	**39.15**	**76**	P	**P**	**19 52 00.4**	**+1.8**
	baz=301,SNR=10						
I03D	**Drain, OR**	**39.20**	**77**	P	**P**	**19 52 00.3**	**+1.2**
	baz=302						
F05D	**White Salmon**	**39.23**	**73**	P	**P**	**19 51 59.9**	**+0.6**
	baz=300						
B08A	**Colville Reser**	**39.29**	**69**	*e*P	**P**	**19 52 00.9**	**+1.0**
	comp=Z,559nm,0.9s						
H04A	**Detroit Lake**	**39.40**	**75**	*e*P	**P**	**19 52 01.5**	**+0.7**
	comp=Z,63nm,1.0s						
K02D	**Willamette Mer**	**39.55**	**79**	P	**P**	**19 52 03.8**	**+1.7**
	baz=303						
G05D	**Wamic, OR**	**39.64**	**74**	P	**P**	**19 52 04.3**	**+1.5**
	baz=301,SNR=8.5						
I04A	**Tendick Farm,**	**39.73**	**77**	P	**P**	**19 52 05.0**	**+1.4**
	baz=302,SNR=17						
L02E	**Cave Junction**	**39.88**	**80**	P	**P**	**19 52 06.9**	**+2.1**
	baz=304						
HUMO	**Hull Mountain**	**40.03**	**79**	*e*P	**P**	**19 52 06.8**	**+0.7**
	comp=Z,49nm,1.4s						
KRMB	**Red Mountain**	**40.04**	**81**	*e*P	**P**	**19 52 07.5**	**+1.2**
I05D	**Terrebonne, OR**	**40.10**	**75**	P	**P**	**19 52 08.1**	**+1.4**
	baz=302,SNR=5.1						
HAWA	**Hanford**	**40.13**	**72**	*e*P	**P**	**19 52 08.2**	**+1.4**
	comp=Z,52nm,1.2s						
D08A	**Wollman Farm,**	**40.16**	**70**	*e*P	**P**	**19 52 08.6**	**+1.5**
	comp=Z,16nm,0.8s						
C09A	**Chrisman Ranch**	**40.18**	**69**	*e*P	**P**	**19 52 07.4**	**+0.1**
	comp=Z,19nm,0.8s						
J04D	**Umpqua Nationa**	**40.21**	**77**	P	**P**	**19 52 09.0**	**+1.2**
	baz=303						
JCC	**Jacoby Creek,**	**40.36**	**82**	*e*P	**P**	**19 52 08.1**	**-0.7**
	comp=Z,103nm,1.6s						
E08A	**Dider Farm, El**	**40.37**	**71**	*e*P	**P**	**19 52 09.3**	**+0.6**
	comp=Z,16nm,0.8s						
KHMM	**Horse Mountain**	**40.52**	**81**	*e*P	**P**	**19 52 11.1**	**+0.8**
	comp=Z,20nm,0.9s						
PINE	**Pine Mountain**	**40.63**	**76**	*e*P	**P**	**19 52 12.5**	**+1.3**
	comp=Z,45nm,1.1s						
NEW	**Newport**	**40.63**	**68**	P	**P**	**19 52 11.3**	**+0.3**
	comp=Z,17nm,0.9s,baz=277,slow=11,SNR=7.0						
NEW	**Newport**	**40.63**	**68**	*e*P	**P**	**19 52 11.0**	**-0.1**
	comp=Z,21nm,0.9s						
NEW	**Newport**	**40.63**	**68**	*e*P	**P**	**19 52 11.0**	**-0.1**
NEW				pmax	pmax		
	comp=Z,21nm,0.9s						
NEW	**Newport**	**40.63**	**68**	P	**P**	**19 52 10.9**	**-0.1**
	baz=299,SNR=12						
L04D	**Klamath Falls**	**40.65**	**79**	P	**P**	**19 52 13.0**	**+1.7**
	baz=304,SNR=12						
YBH	**Yreka Blue Hor**	**40.67**	**80**	LR	LR	20 07 53.0	
	comp=Z,716nm,18.6s,baz=304,slow=34						
YBH	**Yreka Blue Hor**	**40.67**	**80**	*e*P	**P**	**19 52 13.2**	**+1.8**
	comp=Z,22nm,0.8s						
YBH	**Yreka Blue Hor**	**40.67**	**80**	*e*P	**P**	**19 52 13.3**	**+1.8**
YBH				pmax	pmax		
	comp=Z,22nm,0.8s						
J05D	**Fort Rock, OR**	**40.72**	**77**	P	**P**	**19 52 13.9**	**+2.0**
	baz=303,SNR=14						
RES	**Resolute Bay**	**40.73**	**24**	*e*P	**P**	**19 52 11.4**	**0.0**
	comp=Z,58nm,1.3s						
RES	**Resolute Bay**	**40.73**	**24**	*e*P	**P**	**19 52 11.4**	**0.0**
RES				pmax	pmax		
	comp=Z,58nm,1.3s						
K04D	**Chiloquin, OR**	**40.76**	**78**	P	**P**	**19 52 13.9**	**+1.6**
	baz=304						
M02C	**Callahan**	**40.77**	**80**	P	**P**	**19 52 14.4**	**+2.1**
	baz=304						
E09A	**Wood Farm, Sta**	**40.90**	**71**	*e*P	**P**	**19 52 13.7**	**+0.6**
	comp=Z,38nm,1.3s						
KMRM	**Mail Ridge**	**40.91**	**82**	*e*P	**P**	**19 52 15.7**	**+2.3**
	comp=Z,23nm,0.9s						
DL2	**Dalian**	**40.97**	**275**	P	**P**	**19 52 12.5**	**-1.3**
DL2				PP	**PP**	**19 53 49.5**	**+1.2**
DL2				S	**S**	**19 58 24.3**	**+0.2**
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
DL2				pmax	pmax		
	comp=Z,180nm,8.1s						
DL2				LR	LR		
	comp=Z,590nm,18.4s						
DL2				LR	LR		
	comp=Z,430nm,16.7s						
DL2				LR	LR		
	comp=Z,920nm,16.2s						
G08A	**Pilot Rock**	**41.04**	**73**	*e*P	**P**	**19 52 14.1**	**-0.4**
	comp=Z,18nm,1.2s						
N02D	**Trinity Center**	**41.10**	**81**	P	**P**	**19 52 17.1**	**+2.1**
	baz=305						
M04C	**Macdoel**	**41.18**	**79**	P	**P**	**19 52 17.4**	**+1.7**
	baz=304,SNR=18						
I07A	**Izee**	**41.35**	**75**	*e*P	**P**	**19 52 18.0**	**+0.9**
	comp=Z,31nm,0.9s						
WDC	**Whiskeytown Da**	**41.43**	**81**	*e*P	**P**	**19 52 18.4**	**+0.8**
	comp=Z,35nm,1.3s						
WDC	**Whiskeytown Da**	**41.43**	**81**	*e*P	**P**	**19 52 18.4**	**+0.8**
WDC				pmax	pmax		
	comp=Z,35nm,1.3s						
O02D	**Mt. Diablo Mer**	**41.51**	**82**	P	**P**	**19 52 20.4**	**+2.1**
	baz=306,SNR=7.7						
F10A	**Beach Ranch, E**	**41.72**	**71**	*e*P	**P**	**19 52 19.9**	**-0.1**
	comp=Z,16nm,0.9s						
HOPS	**Hopland Field**	**42.02**	**83**	*e*P	**P**	**19 52 24.0**	**+1.5**
	comp=Z,49nm,1.1s						
O03E	**Paynes Creek**	**42.05**	**81**	P	**P**	**19 52 23.9**	**+1.1**
	baz=306,SNR=16						
WALA	**Waterton Lakes**	**42.10**	**65**	*e*P	**P**	**19 52 22.7**	**-0.4**
	comp=Z,53nm,1.0s						
BMO	**Blue Mountains**	**42.27**	**72**	*e*P	**P**	**19 52 24.7**	**+0.2**
	comp=Z,35nm,1.3s						
BMO	**Blue Mountains**	**42.27**	**72**	*e*P	**P**	**19 52 24.7**	**+0.2**
BMO				pmax	pmax		
	comp=Z,35nm,1.3s						
GDXM	**Geysers**	**42.31**	**83**	*e*P	**P**	**19 52 25.1**	**+0.2**
	comp=Z,26nm,1.1s						
J08A	**Circle Bar Ran**	**42.37**	**75**	*e*P	**P**	**19 52 25.4**	**0.0**
	comp=Z,26nm,0.9s						
ORV	**Oroville**	**42.67**	**81**	*e*P	**P**	**19 52 28.2**	**+0.4**
	comp=Z,17nm,0.9s						
ORV	**Oroville**	**42.67**	**81**	*e*P	**P**	**19 52 28.2**	**+0.4**
ORV				pmax	pmax		
	comp=Z,17nm,0.9s						
WVOR	**Wild Horse Val**	**42.78**	**76**	*e*P	**P**	**19 52 29.7**	**+0.9**
	comp=Z,51nm,0.9s						
WVOR	**Wild Horse Val**	**42.78**	**76**	*e*P	**P**	**19 52 29.7**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,51nm,0.9s						
PLID	**Pearl Lake**	**42.92**	**71**	*e*P	**P**	**19 52 30.0**	**0.0**
	comp=Z,49nm,1.9s						
MSO	**Missoula**	**43.22**	**68**	*e*P	**P**	**19 52 31.9**	**-0.3**
	comp=Z,26nm,1.0s						
MSO	**Missoula**	**43.22**	**68**	P	**P**	**19 52 32.6**	**+0.4**
	baz=302,SNR=16						
AFDM	**Forest Hills D**	**43.36**	**82**	*e*P	**P**	**19 52 34.3**	**+0.9**
	comp=Z,17nm,1.1s						
BJI	**Beijing**	**43.70**	**281**	P	**P**	**19 52 36.0**	**0.0**
BJI				S	**S**	**19 59 04.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BJI				LR	LR		
	comp=Z,350nm,19.1s						
BJI				LR	LR		
	comp=Z,260nm,17.8s						
BJI				LR	LR		
	comp=Z,370nm,22.8s						
BJT	**Baijiatuau**	**43.72**	**281**	*e*P	**P**	**19 52 35.6**	**-0.6**
	comp=Z,19nm,1.0s						
BJT	**Baijiatuau**	**43.72**	**281**	*e*P	**P**	**19 52 35.6**	**-0.6**
BJT				pmax	pmax		
	comp=Z,19nm,1.0s						
PAHR	**Pah Rah Range**	**43.90**	**80**	*e*P	**P**	**19 52 38.6**	**+0.7**
	comp=Z,76nm,1.4s						
MFID	**Camas Ranch**	**43.94**	**73**	*e*P	**P**	**19 52 38.8**	**+0.6**
	comp=Z,26nm,1.1s						
VCNR	**Virginia City**	**43.98**	**80**	*e*P	**P**	**19 52 38.3**	**-0.3**
	comp=Z,44nm,1.1s						
IRK	**Irkutsk**	**44.10**	**302**	*e*P	**P**	**19 52 37.0**	**-2.1**
IRK				pmax	pmax		
	comp=Z,46nm,3.0s						
PNTR	**Pine Nut**	**44.13**	**81**	*e*P	**P**	**19 52 41.4**	**+1.6**
	comp=Z,56nm,0.7s						
CMB	**Columbia Colle**	**44.28**	**82**	*e*P	**P**	**19 52 42.0**	**+1.2**
	comp=Z,22nm,1.1s						
CMB	**Columbia Colle**	**44.28**	**82**	*e*P	**P**	**19 52 42.0**	**+1.2**
CMB				pmax	pmax		
	comp=Z,23nm,1.1s						
SAO	**San Andreas Ge**	**44.40**	**85**	*e*P	**P**	**19 52 43.2**	**+1.5**
	comp=Z,18nm,1.1s						
SAO	**San Andreas Ge**	**44.40**	**85**	*e*P	**P**	**19 52 43.2**	**+1.5**
SAO				pmax	pmax		
	comp=Z,18nm,1.1s						
YERR	**Yerington**	**44.42**	**81**	*e*P	**P**	**19 52 43.0**	**+1.0**
	comp=Z,34nm,1.0s						
HRY	**Holter Researc**	**44.51**	**67**	*e*P	**P**	**19 52 43.0**	**+0.4**
WAKR	**Walker**	**44.59**	**81**	*e*P	**P**	**19 52 44.4**	**+0.9**
	comp=Z,27nm,1.0s						
LRM	**Limekiln Ridge**	**44.63**	**68**	*e*P	**P**	**19 52 41.1**	**-2.7**
HLID	**Hailey**	**44.71**	**72**	*e*P	**P**	**19 52 45.2**	**+0.8**
	comp=Z,78nm,1.4s						
HLID	**Hailey**	**44.71**	**72**	P	**P**	**19 52 45.2**	**+0.8**
	baz=304,SNR=51						
TLY	**Talaya**	**44.72**	**301**	*e*P	**P**	**19 52 44.0**	**-0.1**
	comp=Z,34nm,1.1s						
TLY	**Talaya**	**44.72**	**301**	*e*P	**P**	**19 52 44.0**	**-0.1**
TLY				pmax	pmax		
	comp=Z,34nm,1.1s						
DLMT	**Dillon**	**44.79**	**69**	*e*P	**P**	**19 52 45.5**	**+0.6**
	comp=Z,16nm,1.1s						
BMN	**Battle Mountai**	**44.81**	**78**	*e*P	**P**	**19 52 45.6**	**+0.5**
	comp=Z,38nm,1.0s						
BMN	**Battle Mountai**	**44.81**	**78**	*e*P	**P**	**19 52 45.6**	**+0.5**
BMN				pmax	pmax		
	comp=Z,39nm,1.0s						
MCMT	**McKenzie Canyo**	**44.94**	**70**	*e*P	**P**	**19 52 46.2**	**0.0**
EGMT	**Eagleton**	**45.00**	**64**	*e*P	**P**	**19 52 45.6**	**-0.8**
	comp=Z,20nm,0.8s						
EGMT	**Eagleton**	**45.00**	**64**	P	**P**	**19 52 46.0**	**-0.5**
	baz=302,SNR=8.5						
EGMT				P	**P**	**19 52 48.1**	**+1.7**
	baz=302						
RYN	**Ryan**	**45.08**	**80**	*e*P	**P**	**19 52 48.3**	**+1.0**
	comp=Z,18nm,0.7s						
KVN	**Kaiserville**	**45.09**	**80**	*e*P	**P**	**19 52 48.3**	**+0.8**
	comp=Z,33nm,1.2s						
SONA0	**Songino Array**	**45.19**	**295**	*e*P	**P**	**19 52 47.9**	**-0.1**
SONA0				*e*PcP	**PcP**	**19 54 28.2**	**+0.3**
SONA0				*e*ScP	**ScP**	**19 58 19.5**	**+1.0**
SONM	**Songino Array**	**45.19**	**295**	P	**P**	**19 52 47.9**	**-0.1**
	comp=Z,15nm,1.0s,baz=54,slow=10,SNR=89						
SONM				PcP	**PcP**	**19 54 28.2**	**+0.3**
	comp=Z,4.2nm,1.0s,baz=48,slow=4.0,SNR=2.7						
SONM				ScP	**ScP**	**19 58 19.5**	**+1.0**
	comp=Z,2.6nm,1.1s,baz=38,slow=2.6,SNR=6.0						
SONM				LR	LR	20 12 54.8	
	comp=Z,922nm,18.1s,baz=60,slow=38						
BOZ	**Bozeman (W)**	**45.23**	**68**	*e*P	**P**	**19 52 47.8**	**-0.6**
	comp=Z,29nm,0.9s						
BOZ	**Bozeman (W)**	**45.23**	**68**	*e*P	**P**	**19 52 47.8**	**-0.6**
BOZ				pmax	pmax		
	comp=Z,29nm,0.9s						
BOZ	**Bozeman (W)**	**45.23**	**68**	P	**P**	**19 52 48.2**	**-0.2**
	baz=304						
NV01	**Mina Array Sit**	**45.34**	**81**	*e*P	**P**	**19 52 50.3**	**+0.9**
NV01				*e*ScP	**ScP**	**19 58 22.0**	**+2.6**
NVAR	**Mina Array Bea**	**45.34**	**81**	P	**P**	**19 52 50.3**	**+0.9**
	comp=Z,6.1nm,0.8s,baz=294,slow=7.9,SNR=38						
NVAR				ScP	**ScP**	**19 58 22.0**	**+2.6**
	comp=Z,0.4nm,0.6s,baz=282,slow=4.3,SNR=4.0						
NVAR				LR	LR	20 11 30.8	
	comp=Z,360nm,18.3s,baz=294,slow=36						
MDPB	**Devils Postpil**	**45.34**	**82**	*e*P	**P**	**19 52 50.5**	**+1.0**
	comp=Z,24nm,0.9s						
OMMB	**Old Mammoth Mi**	**45.41**	**82**	*e*P	**P**	**19 52 51.2**	**+1.1**
	comp=Z,32nm,1.4s						
NV11	**Mina Array Sit**	**45.43**	**80**	*e*P	**P**	**19 52 51.0**	**+0.9**
TIA	**Tai'an**	**45.44**	**276**	P	**P**	**19 52 49.8**	**-0.2**
TIA				pP	**pP**	**19 52 57.3**	**+0.6**
TIA				S	**S**	**19 59 33.8**	**+4.0**
TIA				pmax	pmax		
	comp=Z,30nm,1.0s						
TIA				LR	LR		
	comp=Z,600nm,15.7s						
TIA				LR	LR		
	comp=Z,350nm,16.4s						
TIA				LR	LR		
	comp=Z,540nm,19.2s						

MLAC	**Mammoth, Mammo**	**45.50**	**82**	P	**P**	**19 52 52.4**	**+1.7**
	baz=308						
ZAK	**Zakamensk**	**45.58**	**300**	*e*P	**P**	**19 52 50.6**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,33nm,1.4s						
FFC	**Flin Flon**	**45.73**	**53**	*e*P	**P**	**19 52 53.5**	**+1.4**
	comp=Z,17nm,1.1s						
FFC	**Flin Flon**	**45.73**	**53**	*e*P	**P**	**19 52 53.5**	**+1.4**
FFC				pmax	pmax		
	comp=Z,17nm,1.1s						
QLMT	**Earthquake Lak**	**45.77**	**69**	*e*P	**P**	**19 52 53.5**	**+0.7**
PAGB	**Antelope Grade**	**45.80**	**85**	*e*P	**P**	**19 52 54.1**	**+1.3**
	comp=Z,27nm,1.1s						
ELK	**Elko**	**45.84**	**76**	P	**P**	**19 52 54.1**	**+0.7**
	comp=Z,14nm,0.8s,baz=301,slow=8.6,SNR=5.6						
ELK				LR	LR	20 10 47.3	
	comp=Z,516nm,20.6s,baz=308,slow=34						
ELK	**Elko**	**45.84**	**76**	*e*P	**P**	**19 52 54.2**	**+0.8**
	comp=Z,19nm,0.8s						
ELK	**Elko**	**45.84**	**76**	*e*P	**P**	**19 52 54.2**	**+0.8**
ELK				pmax	pmax		
	comp=Z,19nm,0.8s						
YHB	**Horse Butte**	**45.96**	**69**	*e*P	**P**	**19 52 54.8**	**+0.6**
	comp=Z,43nm,0.9s						
VOG	**Valley Oaks Go**	**45.97**	**84**	P	**P**	**19 52 54.4**	**+0.3**
	baz=309						
HHC	**Hu-ho-hao-te**	**46.06**	**284**	P	**P**	**19 52 55.3**	**+0.3**
HHC				S	**S**	**19 59 39.5**	**+0.7**
HHC				sS	sS	19 59 51.5	+2.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				LR	LR		
	comp=Z,1µm,15.7s						
HHC				LR	LR		
	comp=Z,940nm,16.7s						
YHH	**Holmes Hill**	**46.14**	**69**	*e*P	**P**	**19 52 56.0**	**+0.2**
	comp=Z,37nm,1.0s						
YMR	**Madison River**	**46.14**	**69**	*e*P	**P**	**19 52 55.5**	**-0.2**
	comp=Z,36nm,1.0s						
MOY	**Mondy**	**46.14**	**303**	*e*P	**P**	**19 52 55.4**	**-0.1**
MOY				pmax	pmax		
	comp=Z,60nm,1.6s						
SMMC	**Simmler**	**46.23**	**85**	P	**P**	**19 52 57.3**	**+1.1**
	baz=310						
TIN	**Tinemaha, Big**	**46.23**	**82**	P	**P**	**19 52 57.5**	**+1.1**
	baz=309						
GCMT	**Greycliff**	**46.27**	**67**	*e*P	**P**	**19 52 57.0**	**+0.4**
YNR	**Norris Junctio**	**46.28**	**69**	*e*P	**P**	**19 52 56.6**	**-0.3**
	comp=Z,32nm,1.0s						
YFT	**Old Faithful**	**46.34**	**69**	*e*P	**P**	**19 52 58.2**	**+1.0**
	comp=Z,25nm,0.9s						
VES	**Vestal, Richgr**	**46.46**	**84**	P	**P**	**19 52 59.8**	**+1.7**
	baz=310						
YPP	**Pitchstone Pla**	**46.46**	**69**	*e*P	**P**	**19 52 58.9**	**+0.6**
	comp=Z,14nm,1.1s						
H17A	**Grant Village**	**46.52**	**69**	*e*P	**P**	**19 52 59.7**	**+0.9**
	comp=Z,48nm,1.1s						
H17A	**Grant Village**	**46.52**	**69**	P	**P**	**19 53 00.2**	**+1.4**
	baz=305,SNR=13						
LKWY	**Lake**	**46.53**	**69**	*e*P	**P**	**19 53 00.0**	**+1.2**
	comp=Z,20nm,0.8s						
LKWY	**Lake**	**46.53**	**69**	*e*P	**P**	**19 53 00.0**	**+1.2**
LKWY				pmax	pmax		
	comp=Z,20nm,0.8s						
IMW	**Indian Meadow**	**46.59**	**70**	*e*P	**P**	**19 52 60.0**	**+0.6**
	comp=Z,27nm,1.2s						
PKM	**Mcpherson Peak**	**46.61**	**85**	P	**P**	**19 53 00.6**	**+1.1**
	baz=310,SNR=8.5						
FLWY	**Flagg Ranch**	**46.63**	**70**	*e*P	**P**	**19 53 00.3**	**+0.7**
	comp=Z,30nm,1.0s						
CWC	**Cottonwood Cre**	**46.71**	**83**	P	**P**	**19 53 00.9**	**+0.7**
	baz=309						
HVU	**Hansel Valley**	**46.73**	**73**	*e*P	**P**	**19 53 00.9**	**+0.6**
	comp=Z,28nm,0.9s						
HVU	**Hansel Valley**	**46.73**	**73**	*e*P	**P**	**19 53 00.9**	**+0.6**
HVU				pmax	pmax		
	comp=Z,28nm,0.9s						
MOOW	**Moose Ponds**	**46.80**	**70**	*e*P	**P**	**19 53 01.1**	**+0.3**
	comp=Z,8.5nm,0.9s						
GRAC	**Grapevine Rang**	**46.81**	**81**	P	**P**	**19 53 02.3**	**+1.5**
	baz=309						
TPAW	**Teton Pass**	**46.82**	**70**	*e*P	**P**	**19 53 00.7**	**-0.4**
	comp=Z,49nm,1.6s						
RLMT	**Red Lodge**	**46.88**	**68**	*e*P	**P**	**19 53 01.4**	**-0.1**
	comp=Z,43nm,1.0s						
RLMT	**Red Lodge**	**46.88**	**68**	P	**P**	**19 53 01.8**	**+0.3**
	baz=305						
REDW	**Red Top Meadow**	**46.95**	**70**	*e*P	**P**	**19 53 02.7**	**+0.5**
	comp=Z,21nm,1.1s						
ISA	**Isabella, Lake**	**46.96**	**84**	*e*P	**P**	**19 53 02.4**	**+0.4**
	comp=Z,30nm,1.3s						
ISA	**Isabella, Lake**	**46.96**	**84**	*e*P	**P**	**19 53 02.4**	**+0.4**
ISA				pmax	pmax		
	comp=Z,30nm,1.3s						
ISA	**Isabella, Lake**	**46.96**	**84**	P	**P**	**19 53 02.1**	**+0.1**
	baz=310,SNR=11						
LOHW	**Long Hollow**	**46.96**	**70**	*e*P	**P**	**19 53 01.7**	**-0.4**
	comp=Z,27nm,1.5s						
SBC	**Santa Barbara**	**46.96**	**86**	P	**P**	**19 53 03.3**	**+1.3**
	baz=311						
NJ2	**Nanjing**	**47.05**	**270**	⇑*i*P	**P**	**19 53 02.0**	**-0.7**
NJ2				pP	**pP**	**19 53 09.8**	**+0.5**
NJ2				S	**S**	**19 59 52.5**	**-0.4**
NJ2				sS	**sS**	**20 00 09.3**	**+5.7**
NJ2				pmax	pmax		
	comp=Z,36nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,290nm,4.8s						
NJ2				LR	LR		
	comp=Z,580nm,14.7s						
NJ2				LR	LR		
	comp=Z,460nm,13.7s						
NJ2				LR	LR		
	comp=Z,650nm,14.7s						
R11A	**Troy Canyon, C**	**47.08**	**79**	*e*P	**P**	**19 53 03.1**	**0.0**
	comp=Z,57nm,1.4s						
R11A	**Troy Canyon, C**	**47.08**	**79**	P	**P**	**19 53 03.9**	**+0.9**
	baz=308,SNR=20						
BGU	**Big Grassy Mou**	**47.08**	**74**	*e*P	**P**	**19 53 03.7**	**+0.6**
	comp=Z,22nm,1.0s						
DAC	**Darwin (Calif)**	**47.12**	**82**	*e*P	**P**	**19 53 04.5**	**+1.1**
	comp=Z,12nm,1.1s						
DAC	**Darwin (Calif)**	**47.12**	**82**	*e*P	**P**	**19 53 04.5**	**+1.1**
DAC				pmax	pmax		
	comp=Z,12nm,1.1s						
BTO	**Baotou**	**47.15**	**285**	*e*P	**P**	**19 53 04.0**	**+0.5**
BTO				S	**S**	**19 59 48.0**	**-6.3**
AHID	**Auburn Hatcher**	**47.16**	**71**	*e*P	**P**	**19 53 04.6**	**+1.0**
	comp=Z,22nm,0.8s						
SPUT	**South Promonto**	**47.20**	**74**	*e*P	**P**	**19 53 04.5**	**+0.5**
	comp=Z,32nm,1.0s						
MPMC	**Manual Prospec**	**47.32**	**83**	P	**P**	**19 53 05.8**	**+0.8**
	baz=310,SNR=16						
TIY	**Taiyuan**	**47.43**	**280**	*e*P	**P**	**19 53 07.3**	**+1.6**
TIY				PP	**PP**	**19 54 55.3**	**-1.6**
TIY				S	**S**	**19 59 58.8**	**+0.4**
TIY				SS	ScS	20 03 11.3	+14
TIY				pmax	pmax		
	comp=Z,29nm,0.8s						
TIY				pmax	pmax		
	comp=Z,210nm,6.6s						
TIY				LR	LR		
	comp=Z,640nm,17.1s						
TIY				LR	LR		
	comp=Z,630nm,22.0s						
TIY				LR	LR		
	comp=Z,530nm,17.1s						
FURC	**Furnace Creek,**	**47.45**	**82**	P	**P**	**19 53 06.8**	**+1.1**
	baz=309,SNR=7.7						
OSI	**Osito Audit: C**	**47.47**	**85**	P	**P**	**19 53 06.9**	**+0.9**
	baz=311						
TPNV	**Topopah Spring**	**47.53**	**81**	*e*P	**P**	**19 53 07.5**	**+0.9**
	comp=Z,43nm,0.9s						
TPNV	**Topopah Spring**	**47.53**	**81**	*e*P	**P**	**19 53 07.5**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,43nm,0.9s						
TPNV	**Topopah Spring**	**47.53**	**81**	P	**P**	**19 53 07.5**	**+0.9**
	baz=309						
HWUT	**Hardware Ranch**	**47.56**	**73**	*e*P	**P**	**19 53 07.6**	**+0.8**
	comp=Z,27nm,1.1s						
LRMC	**Laurel Mtn Rad**	**47.57**	**83**	P	**P**	**19 53 07.8**	**+0.9**
	baz=310						
BLG	**Laguna Peak, P**	**47.59**	**86**	P	**P**	**19 53 07.5**	**+0.6**
	baz=311						
DUG	**Dugway, Tooele**	**47.65**	**75**	*e*P	**P**	**19 53 08.0**	**+0.5**
	comp=Z,50nm,0.9s						
DUG	**Dugway, Tooele**	**47.65**	**75**	*e*P	**P**	**19 53 08.0**	**+0.5**
DUG				pmax	pmax		
	comp=Z,50nm,0.9s						
DUG	**Dugway, Tooele**	**47.65**	**75**	P	**P**	**19 53 08.7**	**+1.3**
	baz=308,SNR=41						
LAO	**LASA Array**	**47.74**	**64**	P	**P**	**19 53 07.7**	**-0.3**
	baz=305						
EDW2	**Edwards Air Fo**	**47.76**	**84**	P	**P**	**19 53 09.2**	**+0.9**
	baz=310						
DGMT	**Dagmar**	**47.88**	**61**	*e*P	**P**	**19 53 07.6**	**-1.3**
	comp=Z,22nm,1.0s						
DGMT	**Dagmar**	**47.88**	**61**	P	**P**	**19 53 09.2**	**+0.3**
	baz=304						
TCUT	**Toone Canyon**	**47.95**	**73**	*e*P	**P**	**19 53 10.1**	**+0.2**
	comp=Z,49nm,1.0s						
DECC	**Green Verdugo**	**47.95**	**85**	P	**P**	**19 53 10.2**	**+0.5**
	baz=311						
CTU	**Camp Tracy**	**48.00**	**74**	*e*P	**P**	**19 53 10.9**	**+0.7**
	comp=Z,28nm,1.0s						
PSUT	**Pine Spring**	**48.03**	**78**	*e*P	**P**	**19 53 10.8**	**+0.3**
	comp=Z,25nm,0.8s						
BW06	**Boulder Array**	**48.07**	**70**	*e*P	**P**	**19 53 10.4**	**-0.4**
	comp=Z,35nm,0.8s						
BW06	**Boulder Array**	**48.07**	**70**	P	**P**	**19 53 10.8**	**-0.1**
	baz=306						
PD31	**Pinedale Array**	**48.07**	**70**	*e*P	**P**	**19 53 11.1**	**+0.3**
PDAR	**Pinedale Array**	**48.07**	**70**	P	**P**	**19 53 11.2**	**+0.3**
	comp=Z,25nm,0.8s,baz=304,slow=3.1,SNR=199						
MWC	**Mount Wilson**	**48.15**	**85**	*e*P	**P**	**19 53 11.1**	**-0.3**
	comp=Z,49nm,1.3s						
MWC	**Mount Wilson**	**48.15**	**85**	*e*P	**P**	**19 53 11.1**	**-0.3**
MWC				pmax	pmax		
	comp=Z,49nm,1.3s						
SHOC	**Shoshone, Teco**	**48.18**	**82**	P	**P**	**19 53 12.4**	**+0.9**
	baz=310						
JLU	**Jordanelle**	**48.23**	**74**	*e*P	**P**	**19 53 12.8**	**+0.8**
	comp=Z,42nm,1.1s						
GSC	**Goldstone, Bar**	**48.23**	**83**	*e*P	**P**	**19 53 12.3**	**+0.4**
	comp=Z,22nm,0.8s						
GSC	**Goldstone, Bar**	**48.23**	**83**	*e*P	**P**	**19 53 12.3**	**+0.4**
GSC				pmax	pmax		
	comp=Z,22nm,0.8s						
GSC	**Goldstone, Bar**	**48.23**	**83**	P	**P**	**19 53 12.8**	**+0.9**
	baz=310						
NLU	**North Lily Min**	**48.25**	**75**	*e*P	**P**	**19 53 12.0**	**-0.1**
	comp=Z,23nm,0.9s						
BFSC	**Mount Baldy Ra**	**48.39**	**85**	P	**P**	**19 53 14.2**	**+1.0**
	baz=311						
CIS	**Catalina Islan**	**48.46**	**86**	P	**P**	**19 53 15.3**	**+1.7**
	baz=311						
MPU	**Maple Canyon**	**48.48**	**75**	*e*P	**P**	**19 53 14.5**	**+0.5**
	comp=Z,15nm,1.0s						
SHPR	**Sheep Range**	**48.49**	**80**	*e*P	**P**	**19 53 14.6**	**+0.6**
	comp=Z,11nm,1.1s						
TUQ	**Turquoise Moun**	**48.70**	**82**	P	**P**	**19 53 15.9**	**+0.3**
	baz=310						
HEC	**Hector,Ludlow**	**48.83**	**83**	P	**P**	**19 53 17.4**	**+0.9**
	baz=311						
TCRU	**Three Creeks R**	**48.85**	**77**	*e*P	**P**	**19 53 17.2**	**+0.3**
	comp=Z,39nm,1.2s						
CCUT	**Cedar City**	**48.95**	**78**	*e*P	**P**	**19 53 17.7**	**+0.1**
	comp=Z,18nm,1.1s						
SZCU	**Shurtz Canyon**	**49.09**	**78**	*e*P	**P**	**19 53 19.3**	**+0.6**
	comp=Z,22nm,1.2s						
MURC	**Murrieta**	**49.09**	**85**	P	**P**	**19 53 19.1**	**+0.5**
	baz=311						
TMUT	**Trail Mountain**	**49.18**	**75**	*e*P	**P**	**19 53 20.4**	**+0.9**
	comp=Z,37nm,0.8s						
GMRC	**Granite Mounta**	**49.28**	**83**	P	**P**	**19 53 20.7**	**+0.6**
	baz=311,SNR=15						
P17A	**Butcher Ranch,**	**49.35**	**75**	*e*P	**P**	**19 53 20.9**	**+0.3**
	comp=Z,30nm,0.9s						
LCMT	**Little Creek M**	**49.36**	**79**	*e*P	**P**	**19 53 21.1**	**+0.5**
	comp=Z,68nm,1.4s						
MTPU	**Mount Pierson**	**49.36**	**77**	*e*P	**P**	**19 53 22.3**	**+1.4**
	comp=Z,43nm,1.1s						
PFO	**Pinyon Flats O**	**49.55**	**84**	LR	LR	20 12 21.2	
	comp=Z,394nm,18.3s,baz=296,slow=34						
PFO	**Pinyon Flats O**	**49.55**	**84**	*e*P	**P**	**19 53 22.0**	**-0.1**
	comp=Z,16nm,1.1s						
PFO	**Pinyon Flats O**	**49.55**	**84**	*e*P	**P**	**19 53 22.0**	**-0.1**
PFO				pmax	pmax		
	comp=Z,16nm,1.1s						
PFO	**Pinyon Flats O**	**49.55**	**84**	P	**P**	**19 53 23.5**	**+1.4**
	baz=311						
BELC	**Belle Mtn. Jos**	**49.58**	**84**	P	**P**	**19 53 22.4**	**0.0**
	baz=311						
KNB	**Kanab**	**49.62**	**78**	*e*P	**P**	**19 53 23.1**	**+0.4**
	comp=Z,42nm,1.2s						
KNB	**Kanab**	**49.62**	**78**	*e*P	**P**	**19 53 23.1**	**+0.4**
KNB				pmax	pmax		
	comp=Z,42nm,1.2s						
PKCU	**Pink Cliffs**	**49.66**	**78**	*e*P	**P**	**19 53 23.9**	**+0.8**
	comp=Z,41nm,1.1s						
SRU	**San Rafael Swe**	**49.71**	**75**	*e*P	**P**	**19 53 24.2**	**+0.8**
	comp=Z,37nm,0.9s						
SRU	**San Rafael Swe**	**49.71**	**75**	*e*P	**P**	**19 53 24.2**	**+0.8**
SRU				pmax	pmax		
	comp=Z,37nm,0.9s						
K22A	**Casper**	**49.93**	**69**	*e*P	**P**	**19 53 24.4**	**-0.6**
	comp=Z,17nm,0.9s						
K22A	**Casper**	**49.93**	**69**	P	**P**	**19 53 24.2**	**-0.8**
	baz=307,SNR=9.4						
NEE2	**Needles Airpor**	**49.95**	**82**	P	**P**	**19 53 25.4**	**+0.5**
	baz=311						
IRM	**Iron Mountain**	**50.02**	**83**	P	**P**	**19 53 26.2**	**+0.6**
	baz=311,SNR=15						
BAR	**Barrett**	**50.03**	**85**	*e*P	**P**	**19 53 26.3**	**+0.7**
	comp=Z,23nm,1.1s						
MONP2	**Monument Peak**	**50.05**	**85**	P	**P**	**19 53 26.4**	**+0.4**
	baz=312						
BC3	**Big Chuckawall**	**50.15**	**84**	P	**P**	**19 53 27.1**	**+0.4**
	baz=312						
W13A	**Hualapai Mount**	**50.19**	**81**	*e*P	**P**	**19 53 27.7**	**+0.6**
	comp=Z,8.2nm,0.8s						
U15A	**North Rim**	**50.32**	**79**	*e*P	**P**	**19 53 27.9**	**-0.3**
	comp=Z,48nm,1.1s						
SWSC	**Sam W. Stewart**	**50.40**	**84**	P	**P**	**19 53 28.5**	**+0.1**
	baz=312						
IKP	**In-Ko-Pah, Jac**	**50.41**	**85**	P	**P**	**19 53 29.3**	**+0.8**
	baz=312						
O20A	**White River Ci**	**50.45**	**72**	*e*P	**P**	**19 53 29.4**	**+0.4**
	comp=Z,42nm,0.9s						
O20A	**White River Ci**	**50.45**	**72**	P	**P**	**19 53 29.4**	**+0.4**
	baz=309,SNR=18						
RSSD	**Black Hills**	**50.49**	**66**	*e*P	**P**	**19 53 28.4**	**-0.8**
	comp=Z,16nm,1.0s						
RSSD	**Black Hills**	**50.49**	**66**	*e*P	**P**	**19 53 28.5**	**-0.8**
RSSD				pmax	pmax		
	comp=Z,16nm,1.0s						
RSSD	**Black Hills**	**50.49**	**66**	P	**P**	**19 53 28.3**	**-0.9**
	baz=307						
SPA0	**Spitsbergen Ar**	**50.53**	**355**	*e*P	**P**	**19 53 28.6**	**-0.2**
SPITS	**Spitsbergen Ar**	**50.53**	**355**	P	**P**	**19 53 28.1**	**-0.7**
SPITS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PDMCI	**Parker Dam,Lak**	**50.55**	**82**	P	**P**	**19 53 29.7**	**+0.3**
	baz=311						
Y12C	**Blythe**	**50.67**	**83**	*e*P	**P**	**19 53 31.2**	**+0.7**
	comp=Z,25nm,0.9s						
Y12C	**Blythe**	**50.67**	**83**	P	**P**	**19 53 30.7**	**+0.3**
	baz=312						
WHN	**Wuhan**	**50.91**	**272**	⇑P	**P**	**19 53 31.8**	**-0.4**
WHN				pP	**pwP**	**19 53 45.0**	**+1.2**
WHN				pmax	pmax		
	comp=Z,70nm,0.8s						
GLA	**Glamis**	**50.94**	**84**	*e*P	**P**	**19 53 33.2**	**+0.6**
	comp=Z,26nm,0.8s						
GLA	**Glamis**	**50.94**	**84**	*e*P	**P**	**19 53 33.2**	**+0.6**
GLA				pmax	pmax		
	comp=Z,26nm,0.8s						
GLA	**Glamis**	**50.94**	**84**	P	**P**	**19 53 32.7**	**+0.1**
	baz=312						
ULM	**Lac du Bonnet**	**51.30**	**55**	P	**P**	**19 53 35.7**	**+0.7**
	comp=Z,9.4nm,1.0s,baz=312,slow=12,SNR=3.0						
ULM				LR	LR	20 15 38.1	
	comp=Z,1µm,20.9s,baz=310,slow=36						
ULM	**Lac du Bonnet**	**51.30**	**55**	*e*pP	pP	19 53 40.3	-1.6
N23A	**Red Feather La**	**51.35**	**70**	P	**P**	**19 53 36.5**	**+0.7**
	baz=309,SNR=12						
WUAZ	**Wupatki**	**51.48**	**79**	*e*P	**P**	**19 53 37.1**	**+0.4**
	comp=Z,50nm,1.3s						
WUAZ	**Wupatki**	**51.48**	**79**	P	**P**	**19 53 37.5**	**+0.8**
	baz=311						
Y14A	**Wickenburg**	**51.50**	**82**	*e*P	**P**	**19 53 37.1**	**+0.4**
	comp=Z,19nm,1.4s						
SSLB	**Suanglung**	**51.52**	**260**	*e*P	**P**	**19 53 35.4**	**-1.6**
	comp=Z,25nm,1.1s						
YULB	**Yu-li**	**51.60**	**260**	*e*P	**P**	**19 53 36.8**	**-0.8**
	comp=Z,22nm,1.1s						
DAG	**Danmarks Havn**	**51.95**	**5**	*i* P	**P**	**19 53 38.4**	**-1.0**
DAG				pmax	pmax		
	comp=Z,24nm,1.3s						
DAG	**Danmarks Havn**	**51.95**	**5**	*i* P	**P**	**19 53 38.4**	**-1.0**
	comp=Z,12nm,1.3s						
XAN	**Xi'an**	**51.97**	**279**	*e*P	**P**	**19 53 39.5**	**-0.8**
	comp=Z,51nm,1.3s						
XAN	**Xi'an**	**51.97**	**279**	P	**P**	**19 53 39.5**	**-0.8**
XAN				pP	pP	19 53 47.3	+0.3
XAN				PP	**PP**	**19 55 41.0**	**+2.8**
XAN				S	**S**	**20 01 00.5**	**-1.4**
XAN				pmax	pmax		
	comp=Z,32nm,1.8s						
XAN				pmax	pmax		
	comp=Z,260nm,3.9s						
XAN				LR	LR		
	comp=Z,620nm,14.3s						
XAN				LR	LR		
	comp=Z,570nm,14.7s						
XAN				LR	LR		
	comp=Z,670nm,16.8s						
XAN	**Xi'an**	**51.97**	**279**	*e*P	**P**	**19 53 39.5**	**-0.8**
XAN				pmax	pmax		
	comp=Z,51nm,1.3s						
TPUB	**Ta-pu**	**52.08**	**260**	*e*P	**P**	**19 53 40.0**	**-1.2**
	comp=Z,32nm,1.0s						
MVCO	**Mesa Verde**	**52.15**	**75**	*e*P	**P**	**19 53 42.0**	**+0.2**
	comp=Z,47nm,1.3s						
MVCO	**Mesa Verde**	**52.15**	**75**	P	**P**	**19 53 42.5**	**+0.7**
	baz=310						
X16A	**Lo Mia Camp, P**	**52.15**	**80**	*e*P	**P**	**19 53 42.4**	**+0.6**
	comp=Z,14nm,1.0s						
QZH	**Quanzhou**	**52.16**	**263**	P	**P**	**19 53 45.0**	**+3.3**
QZH				S	**S**	**20 01 08.8**	**+4.3**
QZH				LR	LR		
	comp=Z,350nm,13.7s						
QZH				LR	LR		
	comp=Z,290nm,18.0s						
QZH				LR	LR		
	comp=Z,300nm,14.5s						
AGMN	**Agassiz Nation**	**52.49**	**57**	P	**P**	**19 53 43.1**	**-0.8**
	baz=308						
W18A	**Petrified Fore**	**52.75**	**78**	P	**P**	**19 53 47.1**	**+0.9**
	baz=311						
S22A	**4UR Ranch, Cre**	**52.82**	**74**	P	**P**	**19 53 47.9**	**+1.1**
	baz=310						
ZAA1	**Zalesovo Array**	**52.93**	**312**	*e*P	**P**	**19 53 46.0**	**-1.0**
ZAA1				*e*PcP	**PcP**	**19 54 55.4**	**-0.3**
ZAA0	**Zalesovo Array**	**52.93**	**312**	*e*P	**P**	**19 53 45.9**	**-1.2**
ZALV	**Zalesovo Beam**	**52.93**	**312**	P	**P**	**19 53 46.0**	**-1.0**
	comp=Z,2.2nm,0.4s,baz=53,slow=6.4,SNR=18						
ZALV				PcP	**PcP**	**19 54 55.4**	**-0.3**
	comp=Z,6.5nm,0.8s,baz=64,slow=3.4,SNR=5.1						
ZALV				LR	LR	20 18 18.2	
	comp=Z,1µm,18.4s,baz=66,slow=38						
214A	**Organ Pipe Nat**	**52.94**	**83**	P	**P**	**19 53 48.0**	**+0.6**
	baz=313						
X18A	**Snowflake**	**53.00**	**79**	*e*P	**P**	**19 53 48.6**	**+0.5**
	comp=Z,12nm,0.9s						
Q24A	**Divide**	**53.05**	**72**	P	**P**	**19 53 48.8**	**+0.3**
	baz=310						
SUSD	**Miller**	**53.18**	**63**	P	**P**	**19 53 49.0**	**0.0**
	baz=309						
SDCO	**Great Sand Dun**	**53.62**	**73**	*e*P	**P**	**19 53 53.1**	**+0.4**
	comp=Z,46nm,1.2s						
SDCO	**Great Sand Dun**	**53.62**	**73**	P	**P**	**19 53 53.5**	**+0.8**
	baz=311						
OGNE	**Ogallala**	**53.62**	**68**	P	**P**	**19 53 53.1**	**+0.7**
	baz=310						
TUC	**Tucson**	**53.97**	**81**	*e*P	**P**	**19 53 55.4**	**+0.3**
	comp=Z,19nm,1.3s						
TUC	**Tucson**	**53.97**	**81**	*e*P	**P**	**19 53 55.4**	**+0.3**
TUC				pmax	pmax		
	comp=Z,19nm,1.3s						
TUC	**Tucson**	**53.97**	**81**	P	**P**	**19 53 55.9**	**+0.8**
	baz=313						
SUMG	**Summit**	**53.99**	**13**	*e*P	**P**	**19 53 54.1**	**-0.9**
	comp=Z,49nm,1.1s						
SUMG	**Summit**	**53.99**	**13**	*e*P	**P**	**19 53 54.1**	**-0.9**
SUMG				pmax	pmax		
	comp=Z,49nm,1.1s						
SUMG	**Summit**	**53.99**	**13**	⇑*i*P	**P**	**19 53 55.0**	**0.0**
	comp=Z,122nm,1.1s						
GTA	**Gaotai**	**54.02**	**290**	⇑P	**P**	**19 53 55.5**	**+0.1**
GTA				pP	pP	19 54 02.5	+0.2
GTA				sP	sP	19 54 05.8	+0.9
GTA				S	**S**	**20 01 30.5**	**+0.7**
GTA				sS	sS	20 01 43.8	+2.7
GTA				pmax	pmax		
	comp=Z,28nm,1.3s						
GTA				pmax	pmax		
	comp=Z,300nm,6.1s						
GTA				LR	LR		
	comp=Z,860nm,16.8s						
GTA				LR	LR		
	comp=Z,700nm,15.8s						
GTA				LR	LR		
	comp=Z,1µm,16.1s						
ENH	**Enshi**	**54.15**	**275**	*e*P	**P**	**19 53 55.0**	**-1.3**
	comp=Z,71nm,1.1s						
DGZ	**Jazzator, Alta**	**54.31**	**307**	*c* *i*P	**P**	**19 53 57.4**	**0.0**
DGZ				pmax	pmax		
	comp=Z,24nm,1.1s						
KSCO	**Kaye Shedlock’**	**54.52**	**70**	*e*P	**P**	**19 53 59.9**	**+0.8**
	comp=Z,71nm,1.0s						
KSCO	**Kaye Shedlock’**	**54.52**	**70**	P	**P**	**19 53 59.5**	**+0.5**
	baz=311						
T25A	**Trinidad**	**54.67**	**73**	P	**P**	**19 54 01.2**	**+0.9**
	baz=311						
LAZ	**Ladron**	**54.82**	**77**	*e*P	**P**	**19 54 03.0**	**+1.7**
ANMO	**Albuquerque**	**54.88**	**76**	P	**P**	**19 54 01.5**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=309,slow=9.3,SNR=4.0						
ANMO	**Albuquerque**	**54.88**	**76**	*e*P	**P**	**19 54 02.5**	**+0.8**
	comp=Z,19nm,1.3s						
ANMO	**Albuquerque**	**54.88**	**76**	*ce*P	**P**	**19 54 03.2**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,18nm,1.7s						
ANMO	**Albuquerque**	**54.88**	**76**	P	**P**	**19 54 02.6**	**+0.8**
	baz=312						
ECSD	**EROS Data Cent**	**54.93**	**62**	*e*P	**P**	**19 54 01.4**	**-0.4**
	comp=Z,35nm,1.7s						
EYMN	**Ely**	**54.99**	**55**	P	**P**	**19 54 01.1**	**-1.1**
	baz=310						
LENM	**Lemitar**	**55.08**	**77**	*e*P	**P**	**19 54 04.4**	**+1.1**
Y22D	**IRIS PASSCAL I**	**55.18**	**77**	P	**P**	**19 54 04.7**	**+0.9**
	baz=312						
BNM	**Barren Site**	**55.30**	**77**	*e*P	**P**	**19 54 06.0**	**+1.1**
319A	**Douglas**	**55.54**	**81**	*e*P	**P**	**19 54 07.1**	**+0.7**
	comp=Z,23nm,1.1s						
121A	**Cookes Peak, D**	**55.68**	**79**	P	**P**	**19 54 08.1**	**+0.5**
	baz=313						
E38A	**The Farm, Brul**	**55.82**	**56**	*e*P	**P**	**19 54 07.1**	**-1.1**
	comp=Z,26nm,0.9s						
E38A	**The Farm, Brul**	**55.82**	**56**	P	**P**	**19 54 07.3**	**-0.9**
	baz=310						
SPMN	**Marine on St.**	**56.06**	**58**	P	**P**	**19 54 08.8**	**-1.1**
	baz=311						
CBKS	**Cedar Bluff**	**56.35**	**68**	*e*P	**P**	**19 54 12.9**	**+0.8**
	comp=Z,55nm,0.9s						
CBKS	**Cedar Bluff**	**56.35**	**68**	*e*P	**P**	**19 54 12.9**	**+0.8**
CBKS				pmax	pmax		
	comp=Z,55nm,0.9s						
CBKS	**Cedar Bluff**	**56.35**	**68**	P	**P**	**19 54 12.0**	**-0.1**
	baz=312						
G39A	**Holcombe**	**56.89**	**57**	P	**P**	**19 54 15.0**	**-0.7**
	baz=311						
D41A	**Chassel**	**57.08**	**54**	P	**P**	**19 54 16.1**	**-0.9**
	baz=312						
CD2	**Chengdu**	**57.30**	**280**	P	**P**	**19 54 18.5**	**-0.4**
CD2				pP	pP	19 54 25.0	-0.8
CD2				sP	pwP	19 54 34.3	+4.1
CD2				S	**S**	**20 02 18.8**	**+5.3**
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				pmax	pmax		
	comp=Z,290nm,5.3s						
CD2				LR	LR		
	comp=Z,490nm,13.7s						
CD2				LR	LR		
	comp=Z,670nm,19.6s						
CD2				LR	LR		
	comp=Z,540nm,18.6s						
G40A	**Rib Lake**	**57.41**	**57**	*e*P	**P**	**19 54 20.1**	**+0.6**
	comp=Z,11nm,1.0s						
G40A	**Rib Lake**	**57.41**	**57**	P	**P**	**19 54 18.4**	**-1.2**
	baz=312						

COWI	Conover	57.42	56	*e*P	P	19 54 18.7	-0.9
	comp=Z,9.6nm,1.0s						
MSTX	Muleshoe	57.78	75	*e*P	P	19 54 22.7	+0.2
	comp=Z,78nm,1.4s						
MSTX	Muleshoe	57.78	75	P	P	19 54 22.6	+0.2
	baz=313						
AMTX	Amarillo	57.82	73	*e*P	P	19 54 23.1	+0.4
	comp=Z,33nm,0.9s						
AMTX	Amarillo	57.82	73	P	P	19 54 22.7	0.0
	baz=313						
KURK	Kurchatov	57.93	312	*e*P	P	19 54 22.2	-0.8
	comp=Z,88nm,1.0s						
KURK	Kurchatov	57.93	312	*ce*P	P	19 54 22.7	-0.3
KURK				pmax	pmax		
	comp=Z,117nm,1.3s						
KSU1	Kansas State U	57.98	66	P	P	19 54 23.1	-0.4
	baz=312						
WMQ	Urumqi	58.00	301	*e*P	P	19 54 24.0	+0.3
WMQ				pP	pP	19 54 28.0	-2.6
WMQ				sP	pwP	19 54 35.5	+0.3
WMQ				pmax	pmax		
	comp=Z,20nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.1s						
WMQ				LR	LR		
	comp=Z,770nm,17.7s						
WMQ				LR	LR		
	comp=Z,610nm,20.7s						
WMQ				LR	LR		
	comp=Z,1µm,19.1s						
GDL2	Guadalupe Moun	58.02	77	*e*P	P	19 54 24.1	0.0
SCIA	State Center	58.02	62	*e*P	P	19 54 23.6	-0.2
	comp=Z,44nm,1.1s						
SCIA	State Center	58.02	62	P	P	19 54 23.4	-0.4
	baz=312						
ARA0	ARCESS Array S	58.06	349	*e*P	P	19 54 23.1	-0.6
ARCES	ARCESS Array B	58.06	349	P	P	19 54 23.1	-0.6
	comp=Z,8.9nm,0.6s,baz=24,slow=8.4,SNR=33						
ARCES				PcP	PcP	19 55 15.7	+0.5
	comp=Z,13nm,0.9s,baz=15,slow=5.3,SNR=7.0						
ARCES				LR	LR	20 21 22.8	
	comp=Z,474nm,19.2s,baz=7.5,slow=38						
ARE0	ARCESS Array S	58.06	349	*e*P	P	19 54 24.0	+0.3
ARE0	ARCESS Array S	58.06	349	*e*P	P	19 54 24.2	+0.5
LVZ	Lovozero	58.27	345	*e*P	P	19 54 23.8	-1.4
	comp=Z,58nm,0.9s						
LVZ	Lovozero	58.27	345	*ce*P	P	19 54 25.3	+0.1
LVZ				pmax	pmax		
	comp=Z,62nm,1.0s						
E43A	Lone Tree Farm	58.34	54	*e*P	P	19 54 25.8	-0.2
	comp=Z,13nm,0.7s						
E43A	Lone Tree Farm	58.34	54	P	P	19 54 24.9	-1.0
	baz=313						
I41A	Arkdale	58.40	58	P	P	19 54 26.1	-0.3
	baz=312						
GYA	Guiyang	58.59	274	P	P	19 54 28.8	+0.7
GYA				pP	sP	19 54 36.5	-1.2
GYA				PP	PP	19 56 39.0	+1.4
GYA				S	S	20 02 27.8	-2.9
GYA				SS	SS	20 06 22.3	-0.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
GYA				LR	LR		
	comp=Z,510nm,18.1s						
GYA				LR	LR		
	comp=Z,450nm,18.5s						
GYA				LR	LR		
	comp=Z,460nm,18.9s						
TRO	Tromso	58.66	352	*e*P	P	19 54 27.2	-0.5
E44A	Grand Marais A	58.72	53	P	P	19 54 28.4	-0.2
	baz=313						
APA	Apatity	58.77	345	⇑*i*P	P	19 54 27.3	-1.3
APA				*i*		19 55 16.5	
APA				*i*		19 56 36.0	
APA				*e*S	S	20 02 27.0	-4.7
MK31	Makanchi Array	58.81	307	*e*P	P	19 54 28.1	-1.2
MK31	Makanchi Array	58.81	307	*e*P	P	19 54 28.1	-1.2
MK32	Makanchi Array	58.81	307	*e*P	P	19 54 28.4	-1.0
MKAR	Makanchi Array	58.81	307	P	P	19 54 28.4	-1.0
	comp=Z,13nm,0.8s,baz=55,slow=6.9,SNR=79						
MKAR				LR	LR	20 21 14.5	
	comp=Z,1µm,20.2s,baz=40,slow=38						
KTK1	Kautokeino	58.82	350	*e*P	P	19 54 29.3	+0.3
MAKZ	Makanchi	58.96	307	*e*P	P	19 54 28.9	-1.4
	comp=Z,25nm,1.0s						
MAKZ	Makanchi	58.96	307	*e*P	P	19 54 28.9	-1.4
MAKZ				pmax	pmax		
	comp=Z,25nm,1.0s						
JFWS	Jewell Farm	58.97	59	P	P	19 54 28.8	-1.6
	baz=313						
L40A	Anamosa	59.01	60	*e*P	P	19 54 29.4	-1.3
	comp=Z,14nm,0.9s						
L40A	Anamosa	59.01	60	P	P	19 54 29.9	-0.9
	baz=313						
I42A	Draeger Farm,	59.02	57	*e*P	P	19 54 30.3	-0.5
	comp=Z,15nm,0.8s						
I42A	Draeger Farm,	59.02	57	P	P	19 54 30.0	-0.7
	baz=313						
H43A	Windswept, Lux	59.23	56	*e*P	P	19 54 31.6	-0.6
	comp=Z,14nm,0.8s						
H43A	Windswept, Lux	59.23	56	P	P	19 54 30.9	-1.3
	baz=313						
F45A	CMU Biological	59.57	54	P	P	19 54 33.6	-0.8
	baz=314						
N40A	Mertquake, Sal	59.61	62	P	P	19 54 34.0	-0.9
	baz=313						
WMOK	Wichita Mounta	59.66	71	*e*P	P	19 54 35.7	+0.4
	comp=Z,30nm,0.9s						
WMOK	Wichita Mounta	59.66	71	*e*P	P	19 54 35.7	+0.4
WMOK				pmax	pmax		
	comp=Z,30nm,0.9s						
WMOK	Wichita Mounta	59.66	71	P	P	19 54 36.1	+0.7
	baz=314						
E46A	Sault Ste Mari	59.71	53	*e*P	P	19 54 35.0	-0.4
	comp=Z,31nm,0.9s						
E46A	Sault Ste Mari	59.71	53	P	P	19 54 35.1	-0.4
	baz=314						
D47A	Chapleau	59.83	51	P	P	19 54 35.2	-1.1
	baz=314						
M41A	Milan	59.85	60	P	P	19 54 35.3	-1.2
	baz=313						
L42A	Oliver, Polo	59.90	59	P	P	19 54 36.5	-0.4
	baz=313						
BRVK	Borovoye	59.97	318	*e*P	P	19 54 36.8	-0.4
	comp=Z,43nm,1.0s						
BRVK	Borovoye	59.97	318	*c i*P	P	19 54 37.2	0.0
BRVK				pmax	pmax		
	comp=Z,38nm,1.0s						
H45A	Beulah	60.02	55	P	P	19 54 36.6	-1.1
	baz=314						
N41A	Harden Midland	60.14	61	P	P	19 54 37.0	-1.5
	baz=314						
K43A	Burlington	60.14	58	*e*P	P	19 54 38.1	-0.3
	comp=Z,25nm,0.9s						
K43A	Burlington	60.14	58	P	P	19 54 37.9	-0.6
	baz=314						
E47A	Iron Bridge	60.16	52	P	P	19 54 37.0	-1.6
	baz=314						
TX31	Lajitas Ar. Si	60.44	79	*e*P	P	19 54 40.2	-0.6
LTX	Lajitas	60.44	79	*e*P	P	19 54 41.3	+0.5
LTX	Lajitas	60.44	79	*e*P	P	19 54 41.3	+0.5
TXAR	Lajitas Array	60.44	79	P	P	19 54 41.3	+0.5
	comp=Z,5.8nm,0.8s,baz=300,slow=4.8,SNR=56						
TXAR				LR	LR	20 19 21.0	
	comp=Z,405nm,19.6s,baz=0.0,slow=35						
MATQ	Matagami	60.53	46	P	P	19 54 39.1	-1.9
	baz=316						
ABTX	Abilene, Hawle	60.61	74	*e*P	P	19 54 42.2	+0.3
	comp=Z,60nm,1.0s						
ABTX	Abilene, Hawle	60.61	74	P	P	19 54 42.4	+0.6
	baz=314						
TUL1	Leonard	60.62	68	*e*P	P	19 54 42.3	+0.4
	comp=Z,47nm,0.9s						
TUL1	Leonard	60.62	68	P	P	19 54 41.7	-0.2
	baz=314						
E48A	Lockeyer	60.69	51	P	P	19 54 41.2	-1.0
	baz=315						
L44A	Lake County Fo	60.73	58	P	P	19 54 41.6	-0.9
	baz=314						
I46A	Reed City	60.80	55	P	P	19 54 39.9	-3.1
	baz=314						
SVE	Sverdlovsk	60.87	326	*de*P	P	19 54 44.0	+0.8
SVE				*e*S	S	20 03 06.1	+7.2
SVE				pmax	pmax		
	comp=Z,88nm,1.1s						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s						
HPIG		60.89	82	*e*P	P	19 54 43.2	-0.9
	comp=Z,20nm,1.2s						
F48A	Evansville	60.93	52	P	P	19 54 43.2	-0.6
	baz=315						
MSF	Maaselka	60.99	346	P	P	19 54 44.1	+0.2
MSF				pmax	pmax		
	comp=Z,27nm,1.3s						
HDIL	Hopedale	61.10	60	*e*P	P	19 54 44.7	-0.4
	comp=Z,61nm,1.4s						
HDIL	Hopedale	61.10	60	P	P	19 54 45.1	+0.1
	baz=314						
J46A	Howard City	61.12	56	P	P	19 54 44.4	-0.7
	baz=314						
M44A	Midewin, Midew	61.20	59	*e*P	P	19 54 45.2	-0.6
	comp=Z,27nm,0.9s						
M44A	Midewin, Midew	61.20	59	P	P	19 54 44.8	-0.9
	baz=314						
I47A	Gladwin	61.24	55	P	P	19 54 44.7	-1.2
	baz=315						
F49A	Sandfield	61.26	52	P	P	19 54 45.2	-0.8
	baz=315						
SCHQ	Schefferville	61.31	37	P	P	19 54 45.5	-0.8
	comp=Z,10.0nm,0.9s,baz=329,slow=5.8,SNR=7.3						
SCHQ				LR	LR	20 22 11.1	
	comp=Z,454nm,21.1s,baz=322,slow=37						
SCHQ	Schefferville	61.31	37	*e*P	P	19 54 45.4	-0.8
	comp=Z,25nm,1.1s						
LSQQ	Lebel-sur-Quev	61.33	47	P	P	19 54 45.0	-1.4
	baz=316						
E50A	Wahnapitae	61.43	51	P	P	19 54 45.8	-1.4
	baz=315						
HHAR	Hobbs	61.45	67	*e*P	P	19 54 47.5	0.0
	comp=Z,14nm,0.9s						
K46A	Dorr	61.51	57	P	P	19 54 46.8	-1.0
	baz=315						
P43A	Skaggs, Pawnee	61.61	61	P	P	19 54 48.0	-0.5
	baz=314						
CCM	Cathedral Cave	61.75	64	*e*P	P	19 54 48.4	-1.1
	comp=Z,23nm,1.3s						
CCM	Cathedral Cave	61.75	64	*e*P	P	19 54 48.4	-1.1
CCM				pmax	pmax		
	comp=Z,23nm,1.3s						
CCM	Cathedral Cave	61.75	64	P	P	19 54 48.4	-1.1
	baz=314						
O44A	Mansfield	61.84	60	P	P	19 54 48.6	-1.4
	baz=315						
CHGQ	Chibougamau	61.88	44	P	P	19 54 48.6	-1.6
	baz=317						
TOBO	Tobermory, Bru	61.90	52	P	P	19 54 49.6	-0.7
	baz=316						
ARU	Arti	61.90	327	*e*P	P	19 54 50.0	-0.2
	comp=Z,54nm,1.0s						
ARU	Arti	61.90	327	*ce*P	P	19 54 50.7	+0.5
ARU				pmax	pmax		
	comp=Z,118nm,1.7s						
K47A	Vermontville	61.93	56	P	P	19 54 50.0	-0.6
	baz=315						
E51A	G1948 Merrick	61.96	50	P	P	19 54 49.8	-1.0
	baz=316						
QIZ	Qiongzhong	61.99	266	*e*P	P	19 54 49.7	-1.6
	comp=Z,31nm,1.1s						
QIZ	Qiongzhong	61.99	266	P	P	19 54 52.0	+0.7
QIZ				S	S	20 03 16.3	+2.2
QIZ				SS	SS	20 07 19.3	+2.8
QIZ				pmax	pmax		
	comp=Z,25nm,1.3s						
QIZ				LR	LR		
	comp=Z,260nm,17.0s						
QIZ				LR	LR		
	comp=Z,190nm,17.8s						
KMI	Kunming	62.01	276	P	P	19 54 50.5	-1.2
KMI				pP	sP	19 55 00.8	-0.5
KMI				sP	pwP	19 55 03.8	+0.8
KMI				PcP	PcP	19 55 31.0	-1.1
KMI				PP	PP	19 57 10.5	+2.5
KMI				S	S	20 03 12.8	-1.9
KMI				sS	sS	20 03 27.8	+2.0
KMI				pmax	pmax		
	comp=Z,28nm,1.1s						
KMI				pmax	pmax		
	comp=Z,260nm,4.8s						
KMI				LR	LR		
	comp=Z,420nm,17.6s						
KMI				LR	LR		
	comp=Z,250nm,15.3s						
KMI				LR	LR		
	comp=Z,400nm,16.9s						
JCT	Junction City	62.01	75	*e*P	P	19 54 51.1	-0.3
	comp=Z,47nm,1.3s						
JCT	Junction City	62.01	75	*e*P	P	19 54 51.1	-0.3
JCT				pmax	pmax		
	comp=Z,47nm,1.3s						
JCT	Junction City	62.01	75	P	P	19 54 51.1	-0.3
	baz=315						
U40A	Yellville	62.02	66	P	P	19 54 49.8	-1.5
	baz=315						
I49A	Point Hope	62.15	54	P	P	19 54 51.9	-0.2
	baz=315						
D52A	ZEK Kipawa Sen	62.16	49	P	P	19 54 50.6	-1.5
	baz=316						
FVM	French Village	62.27	63	*e*P	P	19 54 53.6	+0.6
	comp=Z,75nm,1.9s						
FVM	French Village	62.27	63	*e*P	P	19 54 53.6	+0.6
FVM				pmax	pmax		
	comp=Z,75nm,1.9s						
W39A	Magazine	62.29	68	*e*P	P	19 54 53.0	-0.1
	comp=Z,58nm,1.0s						
W39A	Magazine	62.29	68	P	P	19 54 53.1	-0.1
	baz=315						
L47A	Sherwood	62.31	57	P	P	19 54 52.8	-0.4
	baz=315						
WHTX	Lake Whitney,	62.37	73	*e*P	P	19 54 54.1	+0.4
	comp=Z,66nm,1.0s						
WHTX	Lake Whitney,	62.37	73	P	P	19 54 54.4	+0.7
	baz=315						
J49A	Marlette	62.41	54	P	P	19 54 53.4	-0.4
	baz=316						
D53A	Lac Vacive, Po	62.42	48	*e*P	P	19 54 51.5	-2.4
	comp=Z,20nm,1.0s						
D53A	Lac Vacive, Po	62.42	48	P	P	19 54 52.4	-1.5
	baz=316						
SFIN	Lafayette	62.42	59	*e*P	P	19 54 53.0	-0.9
	comp=Z,20nm,0.8s						
SFIN	Lafayette	62.42	59	P	P	19 54 53.4	-0.6
	baz=315						
MOR8	Moi Rana	62.43	353	*e*P	P	19 54 52.8	-0.8
KLBO	Killbear Provi	62.45	51	P	P	19 54 53.4	-0.7
	baz=316						
BMRO	Meriville Lake	62.50	52	P	P	19 54 53.8	-0.6
	baz=316						
E52A	Mattawa	62.54	50	P	P	19 54 53.0	-1.6
	baz=316						
F52A	Sundridge	62.57	50	P	P	19 54 54.0	-0.9
	baz=316						
OTUK	Ortayu	62.57	314	P	P	19 54 54.9	0.0
OTUK				pmax	pmax		
	comp=Z,31nm,1.1s						
PDGK	Podgornoye	62.65	306	*i* P	P	19 54 54.8	-0.8
PDGK				pmax	pmax		
	comp=Z,52nm,1.1s						
K49A	Clarkson	62.65	55	P	P	19 54 54.9	-0.5
	baz=316						
BASO	Ashfield	62.69	53	P	P	19 54 55.0	-0.7
	baz=316						
FCAR	Ozark Folk Cen	62.77	66	*e*P	P	19 54 54.8	-1.5
	comp=Z,73nm,0.9s						
BUKO	Buck Lake	62.79	51	P	P	19 54 55.5	-0.9
	baz=316						
D54A	Lac Fusel, La	62.86	48	P	P	19 54 55.1	-1.7
	baz=317						
MIAR	Mount Ida	62.87	68	*e*P	P	19 54 57.0	0.0
	comp=Z,94nm,1.0s						
MIAR	Mount Ida	62.87	68	*e*P	P	19 54 57.0	0.0
MIAR				pmax	pmax		
	comp=Z,94nm,1.0s						
MIAR	Mount Ida	62.87	68	P	P	19 54 57.1	0.0
	baz=315						
P46A	Rosedale	62.90	60	P	P	19 54 56.7	-0.4
	baz=315						
M48A	Edgerton	62.91	57	P	P	19 54 56.1	-1.1
	baz=316						
E53A	Dumoine, Ponti	62.95	49	P	P	19 54 55.8	-1.6
	baz=317						
L49A	Milan	62.97	56	P	P	19 54 57.3	-0.3
	baz=316						
OLIL	Olney	63.04	61	*e*P	P	19 54 58.2	+0.2
	comp=Z,19nm,0.7s						
ALGO	Algonquin Park	63.07	50	P	P	19 54 57.1	-1.0
	baz=317						
K50A	Casco	63.09	55	P	P	19 54 57.4	-0.9
	baz=316						
WHAR	Wooly Hollow	63.10	67	*e*P	P	19 54 58.0	-0.6
	comp=Z,52nm,1.1s						
PBMO	Poplar Bluff	63.11	64	*e*P	P	19 54 58.1	-0.5
	comp=Z,26nm,0.8s						
H52A	Wyevale	63.12	52	P	P	19 54 58.1	-0.4
	baz=316						
S44A	Carbondale	63.13	63	P	P	19 54 57.9	-0.7
	baz=315						
E54A	Lac Daplat, Po	63.13	49	P	P	19 54 56.3	-2.3
	baz=317						
SIUC	Southern Illin	63.13	63	*e*P	P	19 54 58.3	-0.4
	comp=Z,15nm,1.0s						
435B	Jarrell	63.14	74	P	P	19 54 59.4	+0.5
	baz=316						
I51A	Listowel	63.16	53	P	P	19 54 58.5	-0.4
	baz=316						
N48A	Decatur	63.20	58	P	P	19 54 57.9	-1.2
	baz=316						
W41B	Gary Mavity, V	63.20	67	P	P	19 54 58.8	-0.4
	baz=315						
M49A	Liberty Center	63.31	56	P	P	19 54 58.8	-1.1
	baz=316						
X40A	Basin Creek Fa	63.35	68	*e*P	P	19 55 00.3	+0.1
	comp=Z,43nm,1.0s						
X40A	Basin Creek Fa	63.35	68	P	P	19 54 60.0	-0.2
	baz=315						
G53A	Haliburton	63.40	50	P	P	19 54 59.5	-0.9
	baz=317						
JOF	Joensuu	63.40	344	P	P	19 55 00.8	+0.7
JOF				pmax	pmax		
	comp=Z,48nm,1.6s						
UALR	University of	63.43	67	*e*P	P	19 55 00.6	-0.1
	comp=Z,22nm,0.9s						
L50A	Kingsville	63.52	55	P	P	19 55 00.3	-0.9
	baz=316						
O48A	Farmland	63.56	58	P	P	19 55 00.4	-1.1
	baz=316						
PARMO	Parma	63.58	64	*e*P	P	19 55 01.9	+0.3
	comp=Z,43nm,0.7s						
N49A	Columbus Grove	63.60	57	P	P	19 55 01.1	-0.7
	baz=316						
KLMR	Klimovskoe	63.63	339	*e*P	P	19 54 59.1	-2.5
KLMR				pmax	pmax		
	comp=Z,108nm,1.1s						
WLAR	White Oak Lake	63.75	68	*e*P	P	19 55 03.2	+0.4
	comp=Z,143nm,1.0s						
ACTO	Acton	63.79	52	P	P	19 55 01.9	-1.0
	baz=317						
BANO	Bancroft	63.81	50	P	P	19 55 01.7	-1.4
	baz=317						
H53A	Bobcaygeon	63.82	51	P	P	19 55 02.1	-1.0
	baz=317						
PLIO	Pelee Island,	63.82	55	P	P	19 55 02.8	-0.4
	baz=316						
J52A	Paris	63.84	53	P	P	19 55 03.0	-0.3
	baz=317						
M50A	Fremont	63.85	56	P	P	19 55 03.4	0.0
	baz=316						
P48A	Milroy	63.98	59	*e*P	P	19 55 04.0	-0.3
	comp=Z,28nm,1.0s						
P48A	Milroy	63.98	59	P	P	19 55 03.3	-1.0
	baz=316						
SLVN	Son La	64.03	272	*e*P	P	19 55 04.5	-0.4
	comp=Z,49nm,1.1s						
O49A	Covington	64.04	58	P	P	19 55 04.0	-0.7
	baz=316						
K52A	Tillsonburg	64.06	54	P	P	19 55 04.4	-0.3
	baz=317						
Q48A	North Vernon	64.19	60	P	P	19 55 04.9	-0.8
	baz=316						
NATX	Nacogdoches	64.21	71	*e*P	P	19 55 05.6	-0.2
	comp=Z,57nm,0.8s						
NATX	Nacogdoches	64.21	71	P	P	19 55 06.9	+1.0
	baz=316						
PLVO	Plevna	64.21	50	P	P	19 55 04.5	-1.2
	baz=318						
Z41A	Richland Creek	64.24	68	P	P	19 55 05.9	-0.2
	baz=316						
N50A	Nevada	64.25	57	P	P	19 55 05.8	-0.3
	baz=316						
TYNO	Tyneside	64.26	53	P	P	19 55 05.3	-0.8
	baz=317						
P49A	Miami Univ. Ec	64.31	58	P	P	19 55 05.3	-1.2
	baz=316						
DELO	Deloro Mine	64.33	50	P	P	19 55 05.6	-0.9
	baz=317						
M51A	Elyria	64.35	56	P	P	19 55 05.4	-1.3
	baz=317						
WLVO	Wesleyville	64.38	51	P	P	19 55 05.9	-1.0
	baz=317						
WCI	Wyandotte Cave	64.39	60	P	P	19 55 06.2	-0.8
	baz=316						
SUF	Sumiainen	64.43	346	P	P	19 55 07.6	+0.8
SUF				pmax	pmax		
	comp=Z,37nm,0.9s						
O50A	Cable	64.45	57	P	P	19 55 06.4	-1.0
	baz=316						
X43A	Marvell	64.46	66	P	P	19 55 07.3	-0.2
	baz=316						
H55A	Tweed	64.52	50	P	P	19 55 06.5	-1.2
	baz=318						
I55A	Frankford	64.52	51	P	P	19 55 06.8	-0.9
	baz=318						
STCO	Saint Catharin	64.52	52	P	P	19 55 07.0	-0.8
	baz=317						
N51A	Ashland	64.55	56	P	P	19 55 07.1	-0.9
	baz=317						
Q49A	Aurora	64.59	59	P	P	19 55 07.6	-0.7
	baz=316						
M52A	Chesterland	64.63	55	P	P	19 55 07.9	-0.7
	baz=317						
ORIO	Orleans, Innes	64.65	48	P	P	19 55 08.0	-0.6
	baz=318						
ACSO	Alum Creek Sta	64.73	57	P	P	19 55 08.4	-0.7
	baz=317						
J54A	Appleton	64.74	52	P	P	19 55 07.8	-1.4
	baz=317						
P50A	Jamestown	64.75	58	P	P	19 55 08.1	-1.3
	baz=316						
HKT	Hockley	64.80	73	*e*P	P	19 55 10.6	+0.9
	comp=Z,129nm,1.6s						
HKT	Hockley	64.80	73	*e*P	P	19 55 10.6	+0.9
HKT				pmax	pmax		
	comp=Z,129nm,1.6s						
T47A	Sharon Grove	64.83	62	*e*P	P	19 55 09.6	-0.3
	comp=Z,36nm,0.8s						
T47A	Sharon Grove	64.83	62	P	P	19 55 09.3	-0.6
	baz=316						
L53A	Girard	64.89	54	P	P	19 55 09.8	-0.4
	baz=317						
MEDO	Medina	64.91	52	P	P	19 55 08.7	-1.6
	baz=318						
TKM2	Tokmak 2	64.91	308	*i* P	P	19 55 10.4	-0.2
TKM2				pmax	pmax		
	comp=Z,40nm,1.0s						
TKM2	Tokmak 2	64.91	308	P	P	19 55 10.9	+0.2
	SNR=40						
H56A	Elgin	64.93	50	P	P	19 55 09.2	-1.2
	baz=318						
R49A	Shelbyville	64.96	60	P	P	19 55 10.1	-0.6
	baz=316						
O51A	Pataskala	64.99	57	P	P	19 55 10.0	-0.9
	baz=317						
WVT	Waverly	65.04	63	*e*P	P	19 55 11.6	+0.3
	comp=Z,8.8nm,0.8s						
WVT	Waverly	65.04	63	*e*P	P	19 55 11.6	+0.3
WVT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WVT	Waverly	65.04	63	P	P	19 55 10.9	-0.3
	baz=316						
M53A	WI Miller and	65.05	55	P	P	19 55 10.9	-0.4
	baz=317						
PECO	Prince Edward	65.06	50	*e*P	P	19 55 10.7	-0.5
	comp=Z,11nm,0.8s						
PECO	Prince Edward	65.06	50	P	P	19 55 10.2	-1.0
	baz=318						
ULHL	Ulahol	65.09	307	P	P	19 55 11.9	+0.1
	SNR=47						
G57A	Newington	65.16	48	P	P	19 55 12.2	+0.3
	baz=318						
L54A	Sinclairville	65.16	53	P	P	19 55 11.5	-0.5
	baz=317						

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K54A  Basiliko Farm,     65.20  52  P      P      19 55 11.5 -0.7
      baz=318
Q50A  Georgetown         65.20  58  P      P      19 55 12.5 +0.2
      baz=317
USP   Ospenovka          65.20 309  P      P      19 55 12.8 +0.5
      SNR=72
P51A  Williamsport       65.23  57  P      P      19 55 12.0 -0.5
      baz=317
S49A  Springfield        65.26  60  P      P      19 55 12.2 -0.4
      baz=317
CHMS  Chumysh            65.28 308  P      P      19 55 13.2 +0.4
      SNR=21
OXF   Oxford             65.31  65 eP      P      19 55 13.6 +0.6
      comp=Z,144nm,1.1s
OXF   Oxford             65.31  65 eP      P      19 55 13.6 +0.6
OXF                                 pmax   pmax
      comp=Z,144nm,1.1s
OXF   Oxford             65.31  65  P      P      19 55 12.8 -0.2
      baz=316
Q51A  Peebles            65.41  58  P      P      19 55 13.1 -0.6
      baz=317
O52A  Adamsville         65.42  56 eP      P      19 55 12.6 -1.1
      comp=Z,42nm,1.1s
O52A  Adamsville         65.42  56  P      P      19 55 12.5 -1.1
      baz=317
R50A  Paris              65.42  59  P      P      19 55 13.5 -0.2
      baz=317
K55A  Perry              65.42  52  P      P      19 55 13.1 -0.6
      baz=318
KBK   Karagaybulak       65.43 308  P      P      19 55 14.4 +0.5
      SNR=23
N53A  Lisbon             65.43  55 eP      P      19 55 13.1 -0.7
      comp=Z,25nm,1.1s
N53A  Lisbon             65.43  55  P      P      19 55 13.2 -0.5
      baz=317
W46A  Michie             65.45  64  P      P      19 55 12.9 -1.1
      baz=316
M54A  Oil Creek Stat     65.52  54  P      P      19 55 13.9 -0.5
      baz=318
G58A  Ormstown           65.56  48  P      P      19 55 13.2 -1.3
      baz=319
P52A  Corning            65.61  57  P      P      19 55 13.4 -1.6
      baz=317
T49A  Edmonton           65.62  61 eP      P      19 55 15.6 +0.6
      comp=Z,74nm,1.6s
T49A  Edmonton           65.62  61  P      P      19 55 14.1 -0.9
      baz=317
TBLU  Trondheim          65.62 354 eP      P      19 55 13.4 -1.2
O53A  New Philadelph     65.64  56  P      P      19 55 13.9 -1.2
      baz=317
FIA1  FINESS Array S     65.65 346 eP      P      19 55 14.1 -0.7
FIA0  FINESS Array S     65.65 346 eP      P      19 55 14.2 -0.6
FIA0  FINESS Array S     65.65 346 eP      P      19 55 14.2 -0.6
FINES FINESS Array B     65.65 346  P      P      19 55 14.2 -0.6
      comp=Z,21nm,0.8s,baz=32,slow=7.6,SNR=52
FINES                               LR     LR     20 30 08.3
      comp=Z,187nm,18.1s,baz=23,slow=42
FINES FINESS Array B     65.65 346 i P     P      19 55 14.6 -0.2
FINES                               pmax   pmax
      comp=Z,21nm,0.8s
AAK   Ala-Archa          65.67 308 eP      P      19 55 15.2 -0.3
      comp=Z,39nm,1.0s
AAK   Ala-Archa          65.67 308 i P     P      19 55 16.0 +0.5
      SNR=12
AAK   Ala-Archa          65.67 308 i P     P      19 55 15.2 -0.3
AAK                                 pmax   pmax
      comp=Z,44nm,1.0s
AAK   Ala-Archa          65.67 308  P      P      19 55 16.0 +0.5
      SNR=12
KZA   Kyzart             65.71 307  P      P      19 55 16.5 +0.4
      SNR=22
PLAL  Pickwick Lake      65.73  64 eP      P      19 55 16.2 +0.5
      comp=Z,17nm,0.8s
X46A  Booneville         65.75  65  P      P      19 55 15.6 -0.2
      baz=316
N54A  Moraine State      65.75  54  P      P      19 55 15.1 -0.7
      baz=318
R51A  Hillsboro          65.81  59  P      P      19 55 15.9 -0.3
      baz=317
S50A  Richmond           65.82  60  P      P      19 55 15.7 -0.6
      baz=317
LSA   Lhasa              65.86 288 eP      P      19 55 17.5 +0.2
      comp=Z,18nm,0.9s
LSA   Lhasa              65.86 288  P      P      19 55 18.0 +0.7
LSA                                 pmax   pmax
      comp=Z,70nm,1.2s
LSA   Lhasa              65.86 288 i P     P      19 55 17.9 +0.7
      SNR=14
LSA   Lhasa              65.86 288 eP      P      19 55 17.5 +0.2
LSA                                 pmax   pmax
      comp=Z,18nm,0.9s
V48A  Smith Brothers     65.89  63 eP      P      19 55 17.0 +0.2
      comp=Z,16nm,1.1s
V48A  Smith Brothers     65.89  63  P      P      19 55 16.4 -0.4
      baz=317
CLTN  Cedars of Leba     65.91  62 eP      P      19 55 17.1 +0.2
      comp=Z,18nm,0.9s
U49A  Red Boiling Sp     65.91  61  P      P      19 55 16.6 -0.2
      baz=317
UCH   Uchtor             65.97 308  P      P      19 55 18.2 +0.5
      SNR=26
M55A  Ridgway            66.01  53  P      P      19 55 17.1 -0.4
      baz=318
EKS2  Erkin-Say          66.01 309  P      P      19 55 18.2 +0.7
      SNR=23
Q52A  Bidwell            66.03  57  P      P      19 55 16.9 -0.7
      baz=317
T50A  Nancy              66.06  60  P      P      19 55 17.0 -0.9
      baz=317
LNIG  Linares            66.22  79 eP      P      19 55 18.4 -0.7
      comp=Z,16nm,1.2s
MOQ   Mont Orford        66.27  47 eP      P      19 55 17.7 -1.5
M56A  Emporium           66.29  53  P      P      19 55 18.5 -0.8
      baz=318
R52A  Catlettsburg       66.29  58  P      P      19 55 19.1 -0.2
      baz=317
VBMS  Vicksburg          66.32  68 eP      P      19 55 20.2 +0.6
      comp=Z,117nm,1.1s
VBMS  Vicksburg          66.32  68  P      P      19 55 19.9 +0.3
      baz=317
V49A  McMinnville        66.38  62  P      P      19 55 20.0  0.0
      baz=317
AML   Almayashu          66.44 308  P      P      19 55 21.5 +0.8
      SNR=38
U50A  Jamestown          66.50  61  P      P      19 55 19.9 -0.8
      baz=317
Q53A  Leroy              66.50  57  P      P      19 55 20.4 -0.3
      baz=318
W49A  Belvidere          66.65  63  P      P      19 55 21.3 -0.4
      baz=317
N56A  West Decatur       66.65  53  P      P      19 55 21.3 -0.4
      baz=318
R53A  Hurricane          66.66  58 eP      P      19 55 21.0 -0.7
      comp=Z,43nm,1.3s
R53A  Hurricane          66.66  58  P      P      19 55 21.2 -0.5
      baz=318
X48A  Hartselle          66.70  64 eP      P      19 55 20.1 -1.8
      comp=Z,29nm,1.5s
X48A  Hartselle          66.70  64  P      P      19 55 21.7 -0.2
      baz=317
SWET  Sewanee            66.77  62 eP      P      19 55 21.6 -0.8
      comp=Z,13nm,0.6s
Q54A  Coxs Mills         66.77  56 eP      P      19 55 21.7 -0.7
      comp=Z,17nm,0.9s
Q54A  Coxs Mills         66.77  56  P      P      19 55 21.5 -0.8
      baz=318
BINY  Binghamton         66.85  51 eP      P      19 55 22.3 -0.5
      comp=Z,16nm,1.0s
BINY  Binghamton         66.85  51  P      P      19 55 21.7 -1.1
      baz=319
DOMB  Dombas             66.89 355 eP      P      19 55 22.8 -0.1
V50A  Pikevile           66.90  62  P      P      19 55 22.6 -0.6
      baz=317
NONG  Nongkai            66.92 270  P      P      19 55 23.6  0.0
      comp=Z,0.7nm,1.3s
U51A  La Follette        66.98  60  P      P      19 55 23.8  0.0
      baz=317
T52A  Hallie             67.01  59  P      P      19 55 23.6 -0.4
      baz=318
Y48A  Jasper             67.02  64  P      P      19 55 23.4 -0.6
      baz=317
L58A  Harry Jones Me     67.03  51  P      P      19 55 23.3 -0.7
      baz=319
S53A  Williamson         67.05  58  P      P      19 55 24.0 -0.2
      baz=318
SSPA  Standing Stone     67.07  53 eP      P      19 55 23.3 -0.9
      comp=Z,18nm,1.0s
SSPA  Standing Stone     67.07  53  P      P      19 55 23.4 -0.8
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      baz=318
ACCN  Adirondack Com     67.07  49 eP      P      19 55 23.1 -1.2
      comp=Z,21nm,1.4s
ABKAR Akbulak array      67.08 321 eP      P      19 55 24.1 -0.1
      comp=Z,52nm,1.2s
TZTN  Tazewell           67.11  60  P      P      19 55 23.9 -0.7
      baz=318
W50A  Signal Mountai     67.12  62 eP      P      19 55 23.9 -0.8
      comp=Z,14nm,0.8s
W50A  Signal Mountai     67.12  62  P      P      19 55 24.5 -0.2
      baz=317
N57A  Milroy             67.15  53  P      P      19 55 23.8 -1.0
      baz=319
Q55A  Buckhannon         67.16  56  P      P      19 55 24.1 -0.8
      baz=318
V51A  Loudon             67.22  61 eP      P      19 55 25.0 -0.2
      comp=Z,24nm,1.0s
V51A  Loudon             67.22  61  P      P      19 55 25.1 -0.2
      baz=318
M58A  Price's Panora     67.23  52  P      P      19 55 24.6 -0.7
      baz=319
LBNH  Lisbon             67.24  47  P      P      19 55 23.8 -1.5
      baz=320
KK31  Karatay Array      67.26 311 eP      P      19 55 24.9 -0.5
KK31  Karatay Array      67.26 311 eP      P      19 55 24.9 -0.5
KKAR  Karatay Array      67.26 311 eP      P      19 55 24.8 -0.6
      comp=Z,39nm,1.0s
KKAR  Karatay Array      67.26 311 eP      P      19 55 24.8 -0.6
KKAR                                pmax   pmax
      comp=Z,39nm,1.0s
T53A  Wise               67.34  59  P      P      19 55 25.7 -0.4
      baz=318
CPCT  Cooper Cave        67.38  61 eP      P      19 55 25.5 -0.8
      comp=Z,20nm,1.2s
S54A  Dingess, Beckl     67.39  58  P      P      19 55 25.9 -0.5
      baz=318
P56A  Dayton Farm, R     67.42  55  P      P      19 55 26.0 -0.5
      baz=318
KSPA  Keystone Colle     67.44  51 eP      P      19 55 26.1 -0.4
      comp=Z,9.4nm,0.7s
W51A  Cleveland          67.46  62  P      P      19 55 26.1 -0.7
      baz=318
BATG  Bathurst New B     67.47  42 eP      P      19 55 25.2 -1.5
      comp=Z,67nm,2.0s
X50B  Fort Payne         67.48  63  P      P      19 55 25.9 -1.1
      baz=317
Y49A  Blount Mountai     67.49  64 eP      P      19 55 26.2 -0.8
      comp=Z,14nm,1.0s
Y49A  Blount Mountai     67.49  64  P      P      19 55 26.2 -0.8
      baz=317
N58A  Sunbury            67.50  53  P      P      19 55 26.2 -0.8
      baz=319
O57A  Amberson           67.51  54  P      P      19 55 25.8 -1.3
      baz=319
NC204 NORSAR Array S     67.55 354 eP      P      19 55 26.4 -0.6
NC303 NORSAR Array S     67.55 353 eP      P      19 55 26.8 -0.1
Q56A  Snyder Ridge,      67.59  55  P      P      19 55 27.1 -0.5
      baz=318
M59A  Waymart            67.61  51  P      P      19 55 26.4 -1.3
      baz=319
NC405 NORSAR Array S     67.64 353 eP      P      19 55 27.2 -0.3
PKME  Peaks-Kenny Pk     67.64  45  P      P      19 55 26.4 -1.4
      baz=321
R55A  Marlinton          67.67  56 eP      P      19 55 27.0 -1.2
      comp=Z,26nm,1.1s
148A  Greensboro         67.71  65  P      P      19 55 28.2 -0.2
      baz=317
NB201 NORSAR Array S     67.73 353 eP      P      19 55 27.8 -0.3
NB2   NORSAR Subarra     67.75 353  P      P      19 55 27.6 -0.7
      comp=Z,46nm,1.1s,baz=10,slow=6.5
NB2   NORSAR Subarra     67.75 353  P      P      19 55 27.6 -0.7
      baz=10,slow=6.5
NB200 NORSAR Array S     67.75 353 eP      P      19 55 27.9 -0.3
NOA   NORSAR Array B     67.75 353  P      P      19 55 27.9 -0.3
      comp=Z,34nm,1.1s,baz=9.5,slow=6.3,SNR=34
NOA                                 LR     LR     20 24 41.8
      comp=Z,201nm,20.3s,baz=5.0,slow=36
NOA   NORSAR Array B     67.75 353  P      P      19 55 28.0 -0.3
LRAL  Lakeview Retre     67.76  65 eP      P      19 55 27.4 -1.3
      comp=Z,16nm,1.2s
LRAL  Lakeview Retre     67.76  65  P      P      19 55 28.0 -0.6
      baz=317
U53A  Fall Branch        67.77  59  P      P      19 55 28.7 -0.1
      baz=318
NBO00 NORSAR Array S     67.79 354 eP      P      19 55 28.2 -0.2
T54A  Tazewell           67.80  58  P      P      19 55 28.3 -0.7
      baz=318
X51A  Calhoun            67.84  62  P      P      19 55 28.8 -0.4
      baz=318
S55A  Lewisburg          67.84  57  P      P      19 55 28.7 -0.5
      baz=318
Y50A  Piedmont           67.85  63  P      P      19 55 28.8 -0.5
      baz=318
P57A  Homestead Farm     67.86  54  P      P      19 55 28.9 -0.4
      baz=319
Z49A  Columbiana         67.91  64  P      P      19 55 29.2 -0.5
      baz=318
N59A  State Game Lan     67.92  52 eP      P      19 55 28.7 -1.0
      comp=Z,14nm,0.9s
N59A  State Game Lan     67.92  52  P      P      19 55 28.9 -0.8
      baz=319
HYA   Hoyanger           67.92 356 eP      P      19 55 29.4 +0.2
R56A  Bull Pasture M     67.95  56  P      P      19 55 29.5 -0.5
      baz=318
NAO01 NORSAR Array S     67.97 353 eP      P      19 55 29.0 -0.6
      comp=Z,128nm,1.5s
W52A  Murphy             67.97  61 eP      P      19 55 29.3 -0.8
      comp=Z,20nm,1.0s
W52A  Murphy             67.97  61  P      P      19 55 29.5 -0.6
      baz=318
Q57A  Strasburg          68.00  55  P      P      19 55 30.4 +0.3
      baz=319
NC602 NORSAR Array S     68.03 353 eP      P      19 55 29.3 -0.7
NC602 NORSAR Array S     68.03 353 eP      P      19 55 28.7 -1.3
PAYA  Payao              68.03 274  P      P      19 55 30.9 +0.3
      comp=Z,111μm,1.0s,comp=Z,877μm
V53A  Saluda             68.16  60  P      P      19 55 31.1 -0.2
      baz=318
T55A  Pulaski            68.18  58  P      P      19 55 31.0 -0.4
      baz=318
149A  Jones              68.20  65  P      P      19 55 31.3 -0.2
      baz=318
Z50A  Ashland            68.21  64 eP      P      19 55 30.7 -0.8
      comp=Z,17nm,0.8s
Z50A  Ashland            68.21  64  P      P      19 55 31.2 -0.4
      baz=318
Y51A  Rockmart           68.22  63  P      P      19 55 30.9 -0.7
      baz=318
N60A  Cedar Hill Far     68.28  52  P      P      19 55 30.9 -1.0
      baz=320
SKAR  Skarslia           68.30 355 eP      P      19 55 31.8 +0.1
BLA   Blacksburg         68.31  57 eP      P      19 55 32.3 +0.2
      comp=Z,44nm,1.4s
BLA   Blacksburg         68.31  57 eP      P      19 55 32.3 +0.2
BLA                                 pmax   pmax
      comp=Z,44nm,1.4s
BLA   Blacksburg         68.31  57  P      P      19 55 31.4 -0.8
      baz=318
W53A  Cullowhee          68.34  61  P      P      19 55 32.2 -0.3
      baz=318
X52A  Dahlonega          68.35  62  P      P      19 55 31.8 -0.7
      baz=318
LUPA  Lehigh Univers     68.36  52 eP      P      19 55 31.0 -1.3
      comp=Z,2.1nm,1.1s
VSU   Vasula             68.38 344 eP      P      19 55 31.8 -0.3
VSU                                 IAmb   IAmb   19 55 34.4
      comp=Z,67nm,0.8s
VSU   Vasula             68.38 344ceP      P      19 55 31.6 -0.5
VSU                                 pmax   pmax
      comp=Z,71nm,0.8s
SHL   Shillong           68.42 284 eP      P      19 55 32.0 -1.2
      comp=Z,54nm,0.9s
SHL   Shillong           68.42 284 eP      P      19 55 32.0 -1.2
SHL                                 pmax   pmax
      comp=Z,54nm,0.9s
SHL   Shillong           68.42 284⇑iP      P      19 55 32.0 -1.2
Q58A  Fox Den Farm,      68.44  54  P      P      19 55 32.3 -0.6
      baz=319
249A  Camden             68.46  66  P      P      19 55 32.8 -0.4
      baz=318
R57A  Stanardsville      68.49  55  P      P      19 55 32.8 -0.4
      baz=319
U55A  TA2, Sparta        68.50  58  P      P      19 55 33.2 -0.2
      baz=318
V54A  Nebo               68.55  59  P      P      19 55 33.6 -0.1
      baz=318
O60A  Telford            68.55  52  P      P      19 55 32.4 -1.2
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      baz=320
P59A  Jarrettsville      68.57  53  P      P      19 55 32.3 -1.4
      baz=319
Z51A  Franklin           68.58  63  P      P      19 55 32.9 -1.0
      baz=318
BG3   Lake Jocassee      68.59  61 eP      P      19 55 33.0 -0.9
      comp=Z,15nm,0.6s
M61A  Granite Spring     68.60  50  P      P      19 55 32.6 -1.3
      baz=320
150A  Eclectic           68.63  64  P      P      19 55 33.6 -0.6
      baz=318
MOS   Moscow             68.67 337 eP      P      19 55 33.3 -0.7
MOS                                eS      S      20 04 35.7 +0.8
MOS                                 pmax   pmax
      comp=Z,221nm,1.3s
MOS                                 pmax   pmax
      comp=Z,400nm,1.6s
MOS                                 pmax   pmax
      comp=Z,1μm,18.0s
MOS                                 MLR    MLR
      comp=N,700nm,17.0s
MOS                                 MLR    MLR
      comp=E,400nm,16.0s
S57A  Dark Hollow, R     68.67  56  P      P      19 55 33.3 -1.0
      baz=319
HRV   Adam Dziewonsk     68.74  48  P      P      19 55 33.9 -0.8
      baz=321
X53A  Estanollee         68.75  61  P      P      19 55 34.3 -0.6
      baz=318
R58A  Rapidan            68.76  55  P      P      19 55 34.0 -0.9
      baz=319
PAL   Palisades          68.77  51  P      P      19 55 33.8 -1.0
      baz=320
UTTA  Uttaradit          68.80 272  P      P      19 55 35.4  0.0
Y52A  Lilburn            68.80  62 eP      P      19 55 34.9 -0.4
      comp=E,14nm,0.8s
Y52A  Lilburn            68.80  62  P      P      19 55 35.1 -0.2
      baz=318
P60A  Greenville         68.82  53  P      P      19 55 34.0 -1.3
      baz=320
349A  Repton             68.88  66  P      P      19 55 36.0 +0.3
      baz=318
V55A  Taylorsville       68.89  59  P      P      19 55 35.9 +0.1
      baz=319
CPNY  Central Park       68.91  51 eP      P      19 55 36.0 +0.2
      comp=E,17nm,0.6s
W54A  Cherokee Point     68.94  60  P      P      19 55 35.7 -0.3
      baz=318
WES   Weston             68.94  48 eP      P      19 55 35.3 -0.7
      comp=E,29nm,1.4s
WES   Weston             68.94  48 eP      P      19 55 35.3 -0.7
WES                                 pmax   pmax
      comp=Z,29nm,1.4s
250A  Grady              68.95  65 eP      P      19 55 36.6 +0.4
      comp=Z,212nm,1.8s
250A  Grady              68.95  65  P      P      19 55 35.6 -0.6
      baz=318
U56A  King               68.97  58  P      P      19 55 36.0 -0.2
      baz=319
CMMT  Chiang Mai         69.01 274  P      P      19 55 36.4 -0.3
CHTO  Chiang Mai         69.01 274 eP      P      19 55 35.5 -1.3
      comp=Z,42nm,1.3s
R58B  Mineral            69.08  55  P      P      19 55 36.5 -0.4
      baz=319
Y53A  Monroe             69.08  62  P      P      19 55 36.5 -0.4
      baz=318
T57A  Hurt               69.08  57 eP      P      19 55 37.3 +0.3
      comp=Z,11nm,0.8s
T57A  Hurt               69.08  57  P      P      19 55 36.6 -0.4
      baz=319
BRAL  Brewton            69.10  66 eP      P      19 55 36.5 -0.6
      comp=Z,71nm,1.0s
BRAL  Brewton            69.10  66  P      P      19 55 37.0 -0.1
      baz=318
Z52A  Williamson         69.11  63  P      P      19 55 37.0 -0.1
      baz=318
LMN   Caledonia Moun     69.13  42 eP      P      19 55 36.5 -0.6
      comp=Z,23nm,1.1s
O61A  Allentown          69.15  52  P      P      19 55 36.4 -0.9
      baz=320
TAS   Tashkent           69.20 310  P      P      19 55 39.2 +1.6
TAS                                 pmax   pmax
      comp=Z,47nm,1.0s
BRYW  Bryant College     69.20  49 eP      P      19 55 37.3 -0.3
      comp=Z,37nm,1.6s
DRLN  Deer Lake          69.23  35 eP      P      19 55 36.6 -1.1
      comp=Z,145nm,1.9s
X54A  Belton             69.23  61  P      P      19 55 37.3 -0.6
      baz=318
KONO  Kongsberg          69.24 354 eP      P      19 55 37.3 -0.2
      comp=Z,40nm,1.0s
KONO  Kongsberg          69.24 354ceP      P      19 55 38.3 +0.8
KONO                                pmax   pmax
      comp=Z,63nm,1.7s
KONO  Kongsberg          69.24 354 eP      P      19 55 37.3 -0.2
S58A  Poland Farm, P     69.25  56 eP      P      19 55 38.3 +0.3
      comp=Z,12nm,1.1s
S58A  Poland Farm, P     69.25  56  P      P      19 55 37.6 -0.4
      baz=319
CHAI  Chaiyaphum         69.27 270  P      P      19 55 38.5 +0.2
CM31  Chiang Mai Arr     69.28 274 eP      P      19 55 37.7 -0.7
CMAR  Chiang Mai Arr     69.28 274  P      P      19 55 38.0 -0.4
      comp=Z,15nm,1.0s,baz=26,slow=6.8,SNR=53
CMAR                                LR     LR     20 30 17.3
      comp=Z,215nm,18.0s,baz=35,slow=40
CMAR  Chiang Mai Arr     69.28 274  P      P      19 55 38.0 -0.4
R59A  King George, V     69.29  55  P      P      19 55 38.3 +0.1
      baz=320
449A  Pace               69.31  67  P      P      19 55 39.5 +1.1
      baz=318
V56A  Mocksville         69.31  58 eP      P      19 55 38.3  0.0
      comp=Z,24nm,1.4s
V56A  Mocksville         69.31  58  P      P      19 55 37.7 -0.7
      baz=319
152A  Waverly Hall       69.32  64 eP      P      19 55 37.1 -1.3
      comp=Z,16nm,1.1s
152A  Waverly Hall       69.32  64  P      P      19 55 37.6 -0.9
      baz=318
350A  Dozier             69.32  65  P      P      19 55 38.5 +0.1
      baz=318
251A  Midway             69.36  64  P      P      19 55 37.6 -1.1
      baz=318
KMSC  Kings Mountain     69.36  60 eP      P      19 55 38.8 +0.2
      comp=Z,25nm,1.0s
KMSC  Kings Mountain     69.36  60  P      P      19 55 38.3 -0.4
      baz=319
PBKT  Sadao Pong         69.41 271  P      P      19 55 39.3 +0.1
U57A  Blanch             69.46  57  P      P      19 55 39.0 -0.3
      baz=319
GOGA  Godfrey            69.47  62 eP      P      19 55 39.1 -0.3
      comp=Z,8.3nm,0.8s
GOGA  Godfrey            69.47  62 eP      P      19 55 39.1 -0.3
GOGA                                pmax   pmax
      comp=Z,8.0nm,0.8s
GOGA  Godfrey            69.47  62  P      P      19 55 38.4 -1.0
      baz=318
OBN   Obninsk            69.49 338 eP      P      19 55 38.6 -0.5
      comp=Z,100nm,0.9s
OBN   Obninsk            69.49 338ceP      P      19 55 38.9 -0.2
OBN                                i *PP   pP     19 55 46.8 +0.7
OBN                                               19 56 02.0
OBN                                e              19 58 12.9
OBN                                 PPP    PPP    19 59 48.0
OBN                                eS      S      20 04 47.7 +3.1
OBN                                 PPS    PPS    20 05 37.0
OBN                                 SS     SS     20 09 14.0 +2.9
OBN                                 pmax   pmax
      comp=Z,143nm,1.0s
T58A  Grand View Acr     69.50  56  P      P      19 55 39.0 -0.5
      baz=319
Z53A  Monticello         69.51  62  P      P      19 55 39.0 -0.6
      baz=318
HODGE Hodges             69.53  61 eP      P      19 55 39.0 -0.8
      comp=Z,13nm,0.7s
Y54A  Tignall            69.57  61  P      P      19 55 39.5 -0.5
      baz=319
TAOE  Nuku Hiva Isla     69.61 136 eLR     LR     20 16 57.4
      comp=Z,713nm,21.6s
450A  Crestview          69.64  66  P      P      19 55 40.6 +0.2
      baz=318
X55A  Gracelyn & Ava     69.70  60  P      P      19 55 40.2 -0.6
      baz=319
W56A  Indian Trail       69.77  59  P      P      19 55 40.4 -0.8
      baz=319
252A  Lumpkin            69.81  64  P      P      19 55 41.1 -0.4
      baz=318
153A  Fort Valley        69.83  63  P      P      19 55 41.1 -0.6
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	baz=318						
SLIT	Slitere, Latvi	69.88	347	eP	P	19 55 40.2	-1.2
SLIT				IAmb	IAmb	19 55 42.6	
	comp=Z,306nm,1.0s						
S60A	Water View	69.90	55	P	P	19 55 44.4	+2.5
	baz=320						
U58A	Oxford	69.91	57	P	P	19 55 41.9	-0.1
	baz=319						
Z54A	Sparta	69.95	62	P	P	19 55 42.0	-0.3
	baz=319						
Y55A	Saluda	69.97	61	P	P	19 55 42.1	-0.4
	baz=319						
T59A	Double "B" Far	69.99	56	eP	P	19 55 42.5	0.0
	comp=Z,24nm,1.3s						
T59A	Double "B" Far	69.99	56	P	P	19 55 42.0	-0.5
	baz=320						
LUWI	Luwuk	70.00	241	P	P	19 55 41.4	-1.4
X56A	White Oak	70.01	60	P	P	19 55 42.4	-0.3
	baz=319						
JSC	Jenkinsville	70.04	60	eP	P	19 55 43.2	+0.3
	comp=Z,11nm,0.8s						
JSC	Jenkinsville	70.04	60	eP	P	19 55 43.2	+0.3
JSC				pmax	pmax		
	comp=Z,11nm,0.8s						
V58A	Windy Hill, Pi	70.06	58	P	P	19 55 42.9	-0.1
	baz=319						
W57A	Gilead	70.08	59	eP	P	19 55 42.3	-0.7
	comp=Z,9.0nm,0.8s						
352A	Blakely	70.09	64	P	P	19 55 42.8	-0.4
	baz=318						
253A	Americus	70.11	64	eP	P	19 55 43.6	+0.3
	comp=Z,31nm,1.0s						
253A	Americus	70.11	64	P	P	19 55 42.7	-0.6
	baz=318						
MHMT	Maesarieng	70.12	274	P	P	19 55 43.9	+0.3
BIRD	Birdtown, Kers	70.20	59	eP	P	19 55 44.0	+0.2
	comp=Z,14nm,1.0s						
JIRN	Jiri	70.31	290	eP	P	19 55 45.4	+0.3
	comp=Z,638nm,1.5s						
U59A	Littleton	70.34	56	P	P	19 55 43.8	-0.8
	baz=320						
Z55A	Blythe	70.35	61	P	P	19 55 44.9	+0.1
	baz=319						
Y56A	Pelion	70.38	60	P	P	19 55 45.1	+0.1
	baz=319						
452A	Marianna	70.41	65	P	P	19 55 45.1	-0.1
	baz=318						
S61A	Accomac	70.43	54	P	P	19 55 45.1	0.0
	baz=320						
GAR	Garm	70.49	308	eP	P	19 55 45.7	-0.1
	comp=Z,126nm,1.0s						
GAR	Garm	70.49	308	eP	P	19 55 45.7	-0.1
GAR				pmax	pmax		
	comp=Z,126nm,1.0s						
V59A	Middlesex	70.55	57	P	P	19 55 45.4	-0.5
	baz=320						
W58A	Raeford	70.58	58	P	P	19 55 45.0	-1.2
	baz=319						
353A	Camilla	70.59	64	P	P	19 55 45.7	-0.5
	baz=319						
155A	Kite	70.62	62	P	P	19 55 45.6	-0.8
	baz=319						
254A	Abbeville	70.66	63	P	P	19 55 45.6	-1.1
	baz=319						
KKN	Kakani	70.76	290	eP	P	19 55 47.8	+0.2
	comp=Z,78nm,0.9s						
PKI	Pulchoki	70.84	290	eP	P	19 55 48.2	-0.1
	comp=Z,169nm,1.3s						
PKIN	Phulchoki	70.85	290	eP	P	19 55 48.1	-0.1
	comp=Z,115nm,1.3s						
TIGA	Tifton	70.87	64	eP	P	19 55 48.9	+0.9
	comp=Z,56nm,1.4s						
TIGA	Tifton	70.87	64	P	P	19 55 47.6	-0.4
	baz=319						
X58A	Rowland	70.88	59	eP	P	19 55 49.2	+1.2
	comp=Z,24nm,0.4s						
X58A	Rowland	70.88	59	P	P	19 55 47.9	-0.1
	baz=320						
552A	Lynn Haven	70.88	66	P	P	19 55 48.5	+0.4
	baz=319						
W59A	Clinton	70.89	58	P	P	19 55 47.5	-0.5
	baz=320						
453A	Whigham	70.90	65	eP	P	19 55 48.9	+0.7
	comp=Z,44nm,1.1s						
453A	Whigham	70.90	65	P	P	19 55 48.5	+0.4
	baz=319						
GKN	Gorkha	70.98	291	eP	P	19 55 49.1	+0.2
	comp=Z,211nm,1.2s						
DMN	Daman	70.99	290	eP	P	19 55 49.4	+0.3
	comp=Z,138nm,1.3s						
UMPA	Umpang Tak	71.02	272	P	P	19 55 51.1	+2.0
IZAR	Zarasai	71.04	344	eP	P	19 55 48.0	-0.6
IZAR				IAmb	IAmb	19 55 51.0	
	comp=Z,8.0nm,0.7s						
U61A	Possum Corner	71.06	55	P	P	19 55 48.8	-0.2
	baz=320						
V60A	Jim Taylor Roa	71.06	56	eP	P	19 55 50.5	+1.4
	comp=Z,40nm,0.4s						
Z57A	Bowman	71.09	60	P	P	19 55 48.9	-0.4
	baz=319						
CNNC	Cliffs of the	71.13	57	P	P	19 55 49.4	-0.1
	baz=320						
UTHA	Uthaitani	71.13	271	P	P	19 55 50.8	+1.1
156A	Sylvania	71.13	61	P	P	19 55 50.0	+0.5
	baz=319						
255A	Hazlehurst	71.14	63	eP	P	19 55 49.2	-0.4
	comp=Z,48nm,0.4s						
LPSR	Galich'ya Gora	71.18	335	eP	P	19 55 49.6	+0.1
LPSR				pmax	pmax		
	comp=Z,90nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,640nm,16.0s						
Y58A	Scranton	71.19	59	P	P	19 55 50.1	+0.2
	baz=320						
DANN	Dangsing	71.23	292	eP	P	19 55 50.8	+0.2
	comp=Z,164nm,1.1s						
ISAL	Salakas	71.23	344	eP	P	19 55 49.0	-0.8
ISAL				IAmb	IAmb	19 55 51.4	
	comp=Z,13nm,1.0s						
X59A	McDuffie Farm,	71.26	58	P	P	19 55 50.2	-0.1
	baz=320						
CHGR	Chuyangaron	71.33	309	eP	P	19 55 52.0	+1.2
	comp=Z,107nm,1.1s						
355A	Pearson	71.36	63	P	P	19 55 51.2	+0.3
	baz=319						
454A	Quitman	71.39	64	P	P	19 55 51.3	+0.1
	baz=319						
256A	Glennville	71.42	62	P	P	19 55 51.1	-0.2
	baz=319						
IIGN	Ignalina	71.43	344	eP	P	19 55 51.2	+0.2
IIGN				IAmb	IAmb	19 55 53.4	
	comp=Z,14nm,0.7s						
NHSC	New Hope	71.52	60	P	P	19 55 51.8	0.0
	baz=320						
Y59A	Loris	71.56	59	P	P	19 55 52.0	0.0
	baz=320						
X60A	Albert Glenn T	71.59	58	P	P	19 55 52.0	-0.3
	baz=320						
W61A	Ground Anchor	71.66	57	P	P	19 55 52.8	+0.1
	baz=320						
VRH	Novokhopyorsk	71.66	333	eP	P	19 55 52.1	-0.3
VRH				pmax	pmax		
	comp=Z,100nm,0.8s						
VRH				MLR	MLR		
	comp=Z,1µm,16.0s						
455A	Stateville	71.72	64	P	P	19 55 53.6	+0.5
	baz=319						
KOLN	Koldanda	71.76	292	eP	P	19 55 53.7	0.0
356A	Blackshear	71.78	63	P	P	19 55 53.8	+0.4
	baz=319						
554A	Perry	71.84	65	P	P	19 55 54.0	+0.2
	baz=319						
Y60A	Bolivia	71.90	58	P	P	19 55 53.5	-0.6
	baz=320						
V62A	Hyde County Ai	71.90	56	P	P	19 55 54.7	+0.6
	baz=320						
MICGM	Minsk	71.93	342	e	P	19 55 50.0	-4.0
MICGM				eLR	LR	20 31 05.0	
MNK	Minsk	71.93	342	eP	P	19 55 50.0	-4.0
PMOR	Pomariorio Ree	72.10	146	eT	T	21 14 45.2	
	comp=Z,6.0nm,0.2s						
555A	McAlpin	72.22	64	P	P	19 55 56.0	-0.1
	baz=319						
SRDT	SRDT	72.25	271	P	P	19 55 57.8	+1.3
456A	Hilliard	72.29	63	eP	P	19 55 57.4	+0.8
	comp=Z,106nm,0.6s						
456A	Hilliard	72.29	63	P	P	19 55 57.0	+0.5
	baz=320						
VSR	Storozhevoye	72.36	334	eP	P	19 55 56.5	-0.1
VSR				pmax	pmax		
	comp=Z,110nm,1.1s						
VSR				MLR	MLR		
	comp=Z,1µm,16.0s						
655A	Horseshoe Beac	72.51	65	P	P	19 55 58.4	+0.5
	baz=319						
556A	Lake Butler	72.62	64	P	P	19 55 59.0	+0.5
	baz=320						
557A	Orange Park	73.00	63	P	P	19 56 01.5	+0.7
	baz=320						
656A	Willston	73.03	64	eP	P	19 56 01.2	+0.2
	comp=Z,54nm,0.8s						
656A	Willston	73.03	64	P	P	19 56 01.9	+1.0
	baz=320						
NIL	Nilore	73.11	303	eP	P	19 56 00.7	-0.7
	comp=Z,124nm,1.0s						
NIL	Nilore	73.11	303	eP	P	19 56 00.7	-0.7
NIL				pmax	pmax		
	comp=Z,124nm,1.0s						
SUW	Suwalki	73.23	345	eP	P	19 56 00.4	-1.3
SUW	Suwalki	73.23	345	eP	P	19 56 01.5	-0.2
	comp=Z,45nm,0.9s						
SUW	Suwalki	73.23	345	eP	P	19 56 01.5	-0.2
SUW				pmax	pmax		
	comp=Z,45nm,0.9s						
657A	Interlachen	73.25	64	P	P	19 56 02.7	+0.5
	baz=320						
SBUM	Sibu	73.29	253	eP	P	19 56 01.7	-1.0
	comp=Z,34nm,1.9s						
TTSI	Tana Toraja	73.30	243	P	P	19 56 02.0	-0.6
DZM	Mont Dzumac	73.60	192	eS	SKiKP	20 05 31.9	-0.5
	comp=Z,635nm,24.4s						
DZM	Mont Dzumac	73.60	192	eLR	LR	20 18 35.4	
	comp=Z,788nm,24.4s						
757A	Oxford	73.62	64	P	P	19 56 05.1	+0.6
	baz=320						
658A	Bunnell	73.71	63	P	P	19 56 05.6	+0.6
	baz=320						
PPT	Papeete	73.91	148	LR	LR	20 26 45.8	
	comp=Z,616nm,18.4s,baz=356,slow=34						
PPT2	Papeete2	73.93	148	eS	S	20 05 35.6	-1.0
	comp=Z,1µm,26.2s						
PPT2				eSS	SS	20 10 25.5	+3.7
	comp=Z,233nm,23.5s						
PPT2				eLR	LR	20 18 35.5	
	comp=Z,643nm,21.0s,baz=340						
TIAR	Tiarei	73.97	148	eT	T	21 17 06.7	
	comp=Z,4.2nm,0.3s						
SPSI	Sidrap Palu	74.08	242	P	P	19 56 06.4	-0.8
758A	Lake Helen	74.09	64	P	P	19 56 07.5	+0.3
	baz=320						
957A	Wimauma	74.49	65	P	P	19 56 10.3	+0.8
	baz=320						
858A	St. Cloud	74.57	64	P	P	19 56 10.8	+0.8
	baz=320						
KBL	Kabul	74.60	306	eP	P	19 56 09.3	-1.1
	comp=Z,74nm,0.9s						
KBL	Kabul	74.60	306	eP	P	19 56 09.3	-1.1
KBL				pmax	pmax		
	comp=Z,74nm,0.9s						
DWPF	Disney Wildern	74.61	64	eP	P	19 56 11.7	+1.5
	comp=Z,47nm,0.9s						
DWPF	Disney Wildern	74.61	64	P	P	19 56 10.8	+0.6
	baz=320						
958A	Wauchula	74.83	65	P	P	19 56 11.9	+0.4
	baz=320						
BKSI	Bulukumba	75.00	241	P	P	19 56 12.8	+0.2
058A	Arcadia	75.20	65	P	P	19 56 14.2	+0.5
	baz=320						
AKASG	Malin Array Be	75.25	340	P	P	19 56 13.3	-0.2
	comp=Z,24nm,0.7s,baz=25,slow=6.1,SNR=106						
AKASG				PP	PP	19 59 01.6	+0.2
	comp=Z,6.3nm,1.0s,baz=19,slow=9.2,SNR=5.1						
AKASG				LR	LR	20 32 29.2	
	comp=Z,330nm,21.1s,baz=15,slow=38						
AKASG	Malin Array Be	75.25	340	i P	P	19 56 13.3	-0.2
AKASG				pmax	pmax		
	comp=Z,25nm,0.7s						
AKBB	Malin Array Si	75.25	340	eP	P	19 56 13.0	-0.6
	comp=Z,67nm,1.0s						
AKBB	Malin Array Si	75.25	340	eP	P	19 56 13.0	-0.6
AKBB				pmax	pmax		
	comp=Z,67nm,1.0s						
959A	Okeechobee	75.37	64	P	P	19 56 15.0	+0.3
	baz=320						
STKI	Sintang	75.63	252	P	P	19 56 13.4	-2.8
059A	Moore Haven	75.65	65	P	P	19 56 16.6	+0.3
	baz=320						
BEL	Belsk	75.71	346	eP	P	19 56 16.7	+0.5
BEL	Belsk	75.71	346	eP	P	19 56 16.7	+0.5
MTN	Manton Dam	75.76	228	eP	P	19 56 15.6	-1.3
	comp=Z,31nm,1.2s						
059Z	Ave Maria	75.96	66	P	P	19 56 18.4	+0.4
	baz=320						
060Z	West Palm Beac	76.42	65	P	P	19 56 21.2	+0.6
	baz=321						
061Z	Ochoppi	76.63	66	P	P	19 56 22.5	+0.7
	baz=321						
GOF	Gofitskoye	76.73	329	⇓iP	P	19 56 23.7	+1.6
GOF				pmax	pmax		
	comp=Z,99nm,0.9s						
EDFI	Ende, Flores	77.00	238	P	P	19 56 21.9	-2.2
MAK	Makhachkala	77.06	325	eP	P	19 56 22.4	-1.6
MAK				e		19 59 15.8	
MAK				eS	S	20 06 09.9	-0.9
MAK				eSS	SS	20 11 11.6	+4.7
MAK				pmax	pmax		
	comp=Z,89nm,1.7s						
MAK				MLR	MLR		
	comp=Z,976nm,18.0s						
GEYT	Alibeck	77.08	316	P	P	19 56 24.2	-0.1
	comp=Z,683nm,0.9s,baz=46,slow=4.2,SNR=41						
GEYT				PP	PP	19 59 19.0	+1.8
	comp=Z,7.4nm,1.0s,baz=52,slow=7.5,SNR=5.5						
GEYT				LR	LR	20 33 05.7	
	comp=Z,1µm,20.8s,baz=40,slow=38						
GYA0B	ALIBECK ARRAY	77.08	316	eP	P	19 56 23.6	-0.7
LVV	L'vov	77.11	343	eP	P	19 56 24.5	+0.3
LVV				e		19 59 16.9	
LVV				ePPP	PPP	20 01 10.9	
LVV				eS	S	20 06 13.6	+2.3
LVV				ePS		20 06 39.4	
CLL	Collm	77.23	351	eP	P	19 56 24.2	-0.6
	comp=Z,18nm,1.3s						
CLL	Collm	77.23	351	⇓iP	P	19 56 24.9	+0.1
CLL				pmax	pmax		
	comp=Z,22nm,1.4s						
CLL	Collm	77.23	351	⇓iP	P	19 56 24.9	+0.1
	comp=Z,22nm,1.4s						
CLL				ePlp		19 56 37.0	
	comp=Z,100nm,19.7s						
CLL				ePP	PP	19 59 17.0	-1.0
CLL				ePPP	PPP	20 01 04.0	
CLL				eS	S	20 06 20.0	+7.6
CLL				e		20 07 20.0	
CLL				eSS	SS	20 11 00.0	-9.0
CLL				eSSS	SSS	20 14 36.0	
CLL				eSSSS		20 16 42.0	
CLL				LmH		20 35 00.0	
	comp=N,100nm,21.2s						
CLL				LmH		20 35 00.0	
	comp=E,300nm,18.8s						
CLL				LmV		20 40 00.0	
	comp=Z,300nm,18.1s						
OJC	Ojcow	77.43	346	eP	P	19 56 25.2	-0.7
OJC	Ojcow	77.43	346	eP	P	19 56 25.3	-0.7
	comp=Z,41nm,1.1s						
OJC	Ojcow	77.43	346	eP	P	19 56 25.3	-0.7
OJC				pmax	pmax		
	comp=Z,41nm,1.1s						
GROC	Groznyy	77.45	327	eP	P	19 56 24.6	-1.6
GROC				e		19 56 34.1	
GROC				pmax	pmax		
	comp=Z,101nm,1.6s						
KWP	Kalwaria Pacla	77.53	344	eP	P	19 56 27.1	+0.6
KWP	Kalwaria Pacla	77.53	344	eP	P	19 56 26.9	+0.4
	comp=Z,1µm,1.0s						
KWP	Kalwaria Pacla	77.53	344	eP	P	19 56 26.9	+0.4
BRG	Berggiesshubel	77.56	350	eP	P	19 56 27.0	+0.4
	comp=Z,18nm,1.4s						
BRG				S	S	20 06 18.0	+2.0
BRG				SS	SS	20 11 10.0	-4.0
	comp=N,320nm,15.1s						
	comp=E,168nm,14.9s						
	comp=Z,377nm,14.2s						
BRG	Berggiesshubel	77.56	350	eP	P	19 56 27.0	+0.4
BRG				S	S	20 06 18.0	+2.0
BRG				pmax	pmax		
	comp=Z,18nm,1.4s						
BRG				MLR	MLR		
	comp=N,320nm,15.1s						
BRG				MLR	MLR		
	comp=E,168nm,14.9s						
BRG				MLR	MLR		
	comp=Z,377nm,14.2s						
CHVC	Chvalec	77.59	349	eP	P	19 56 27.7	+0.8
CHVC				ex	x	19 56 32.2	
CHVC				AMS	AMS	20 38 40.0	
	comp=Z,400nm,16.5s						
OSTC	Ostas	77.60	348	eP	P	19 56 27.7	+0.8
OSTC				AMS	AMS	20 38 40.0	
	comp=Z,400nm,17.5s						
UPC	Upice	77.67	349	eP	P	19 56 28.4	+1.1
UPC				e		19 56 32.4	
UPC				MLR	MLR		
	comp=Z,400nm,18.1s						
UPC	Upice	77.67	349	eP	P	19 56 28.4	+1.1
UPC				epP	pP	19 56 32.4	-2.0
UPC				AMS	AMS	20 38 50.0	
	comp=Z,400nm,18.1s						
DPC	Dobruska-Polom	77.79	348	eP	P	19 56 29.5	+1.5
DPC				eS	ScS	20 06 49.1	+4.0
DPC				MLR	MLR		
	comp=Z,300nm,16.4s						
DPC	Dobruska-Polom	77.79	348	eP	P	19 56 29.5	+1.5
DPC				ex	x	20 06 49.1	
DPC				AMS	AMS	20 38 30.0	
	comp=Z,300nm,16.4s						
PVCC	Panska Ves	77.83	350	AMS	AMS	20 36 00.0	
	comp=Z,300nm,16.6s						
KIV	Kislovodsk	77.83	329	eP	P	19 56 28.2	-0.2
	comp=Z,57nm,1.1s						
KIV	Kislovodsk	77.83	329	⇓iP	P	19 56 29.1	+0.7
KIV	Kislovodsk	77.83	329	i P	P	19 56 29.4	+1.0
	SNR=16						
KIV	Kislovodsk	77.83	329	eP	P	19 56 28.8	+0.4
KIV				eS	S	20 06 19.4	0.0
KIV				pmax	pmax		
	comp=Z,147nm,1.1s						
KIV				pmax	pmax		
	comp=Z,148nm,4.3s						
NCK	Nalchik	77.94	328c	iP	P	19 56 30.3	+1.3
NCK				pmax	pmax		
	comp=Z,105nm,1.1s						
KBZ	Khabaz	77.97	329	P	P	19 56 29.3	+0.3
	comp=Z,21nm,1.0s,baz=10,slow=1.8,SNR=40						
KBZ				LR	LR	20 36 36.7	
	comp=Z,651nm,18.6s,baz=30,slow=40						
MOX	Moxa	78.02	351	P	P	19 56 30.2	+1.0
MOX				pmax	pmax		
	comp=Z,11nm,2.0s						
OKC	Ostrava-Krasne	78.05	347	eP	P	19 56 31.0	+1.6
OKC				MLR	MLR		
	comp=Z,400nm,16.2s						
OKC	Ostrava-Krasne	78.05	347	eP	P	19 56 31.0	+1.6
OKC				AMS	AMS	20 38 00.0	
	comp=Z,400nm,16.2s						
NIE	Niedzica	78.13	346	eP	P	19 56 29.2	-0.7
NIE	Niedzica	78.13	346	eP	P	19 56 29.2	-0.7
MORC	Moravsky Berou	78.19	347	eP	P	19 56 29.8	-0.5
	comp=Z,20nm,1.2s						
MORC	Moravsky Berou	78.19	347	⇑iP	P	19 56 31.6	+1.3
MORC	Moravsky Berou	78.19	347	eP	P	19 56 29.8	-0.5
MORC				pmax	pmax		
	comp=Z,21nm,1.2s						
MORC	Moravsky Berou	78.19	347	eP	P	19 56 31.0	+0.7
AKT	Akhty	78.27	324	eP	P	19 56 31.9	+1.0
AKT				e		19 56 40.4	
AKT				pmax	pmax		
	comp=Z,59nm,1.2s						
KOLS	Kolonicke sedl	78.28	344	eP	P	19 56 31.5	+0.8
KOLS				pmax	pmax		
	comp=Z,32nm,1.0s						
KOLS	Kolonicke sedl	78.28	344	eP	P	19 56 31.5	+0.8
NKC	Novy Kostel	78.35	351	eP	P	19 56 32.0	+0.9
NKC				e		19 56 40.4	
NKC				MLR	MLR		
	comp=Z,400nm,13.7s						
NKC	Novy Kostel	78.35	351	eP	P	19 56 32.0	+0.9
NKC				epP	PcP	19 56 40.4	+0.1
NKC				AMS	AMS	20 42 00.0	
	comp=Z,400nm,13.7s						
PRU	Pruhonice	78.36	349	eP	P	19 56 32.0	+0.9
PRU				eS	S	20 06 25.0	+0.3
PRU				MLR	MLR		
	comp=Z,400nm,17.5s						
PRU	Pruhonice	78.36	349	eP	P	19 56 32.0	+0.9
PRU				eS	S	20 06 25.0	+0.3
PRU				AMS	AMS	20 40 00.0	
	comp=Z,400nm,17.5s						
GOPC	GO Pecny, Ondr	78.41	349	eP	P	19 56 32.0	+0.6
GOPC				e		19 56 36.5	
GOPC				MLR	MLR		
	comp=Z,400nm,17.8s						
GOPC	GO Pecny, Ondr	78.41	349	eP	P	19 56 32.0	+0.6
GOPC				epP	pP	19 56 36.5	-2.0
GOPC				AMS	AMS	20 39 50.0	
	comp=Z,400nm,17.8s						
NEY	Neytrino	78.45	329	i P	P	19 56 33.6	+1.6
NEY				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZEI	Tsey	78.47	328	eP	P	19 56 28.9	-3.2
ZEI				pmax	pmax		
	comp=Z,130nm,1.7s						
MEM	Membach	78.47	355	⇑P	P	19 56 32.4	+0.7
	comp=Z,15nm,1.2s						
LANS	Liptovska Anna	78.52	346	eP	P	19 56 34.5	+2.4
LANS				pmax	pmax		
	comp=Z,38nm,1.2s						
LANS	Liptovska Anna	78.52	346	eP	P	19 56 34.5	+2.4
ZKTA	Zakatala	78.53	325	P	P	19 56 33.8	+1.5
UZH	Uzhgorod	78.57	344	eP	P	19 56 31.3	-1.0
UZH				e		19 56 39.3	
UZH				e		19 59 31.3	
UZH				e		20 01 18.7	
UZH				eS	S	20 06 22.3	-4.6
UZH				e		20 11 28.7	
BCLA	Clavier	78.70	355	⇑P	P	19 56 33.3	+0.4
SEKA	Sheki	78.70	325	P	P	19 56 34.7	+1.4
VRAC	Vranov	78.78	348	eP	P	19 56 34.6	+1.1
KIS	Kishinev	78.84	339	⇑iP	P	19 56 34.0	+0.2
	comp=Z,140nm,1.2s						
KIS				eS	S	20 06 50.0	+20
KIS				eScS	ScS	20 07 15.0	+21
KIS	Kishinev	78.84	339c	iP	P	19 56 34.0	+0.2
KIS				e		19 59 40.0	
KIS				eS	S	20 06 50.0	+20
KIS				e		20 07 15.0	
KIS				pmax	pmax		
	comp=Z,140nm,1.2s						
MILM	Milestii Mici	78.92	339	⇓iP	P	19 56 34.7	+0.5
TREC	Trest	78.93	349	eP	P	19 56 35.4	+1.1
TREC				MLR	MLR		
	comp=Z,500nm,15.8s						
TREC	Trest	78.93	349	eP	P	19 56 35.4	+1.1
TREC				AMS	AMS	20 36 50.0	
	comp=Z,500nm,15.8s						
BUR08	Bucovina Ar. S	78.98	342	eP	P	19 56 34.5	-0.2
	comp=Z,48nm,0.9s						
GRA1	Grafenberg Arr	79.00	352	eP	P	19 56 35.4	+0.7
	comp=Z,21nm,1.0s						
GRF	Grafenberg Arr	79.00	352	eP	P	19 56 35.4	+0.7
GRF				pmax	pmax		
	comp=Z,21nm,1.0s						
GRFO	Grafenberg	79.00	352	eP	P	19 56 35.4	+0.7
	comp=Z,19nm,0.8s						
BURAR	Bucovina Array	79.01	342	⇓iP	P	19 56 36.0	+1.1
BURAR	Bucovina Array	79.01	342	P	P	19 56 36.0	+1.1
TRPA	Tarpa	79.01	344	⇓iP	P	19 56 36.1	+1.4
TRPA	Tarpa	79.01	344	⇑iP	P	19 56 35.1	+0.4
KECS	Kecovo	79.01	345	eP	P	19 56 36.2	+1.5
KECS				pmax	pmax		
	comp=Z,18nm,1.1s						
KECS	Kecovo	79.01	345	eP	P	19 56 36.2	+1.5
KRUC	Moravsky	79.04	348	eP	P	19 56 35.6	+0.7
DOU	Dourbes	79.05	356	⇓P	P	19 56 35.2	+0.3
JAVC	Velka Javorina	79.07	347	eP	P	19 56 37.0	+1.9
SOC	Sochi	79.11	331c	iP	P	19 56 35.6	+0.3
SOC				ePPP	PPP	20 01 23.3	

SOC				*e*S	S	20 06 35.1	+2.2
SOC				*e*SSS	SSS	20 14 54.6	
SOC				pmax	pmax		
	comp=Z,65nm,1.0s						
TBLG	Delisi	79.12	327	*e*P	P	19 56 36.7	+1.2
	comp=Z,207nm,1.6s						
MNGR	Mingechevir, A	79.12	324	P	P	19 56 37.3	+1.8
VYHS	Vyhne	79.26	346	*e*P	P	19 56 37.2	+1.1
VYHS				pmax	pmax		
	comp=Z,34nm,1.3s						
VYHS	Vyhne	79.26	346	*e*P	P	19 56 37.2	+1.1
BMR	Baia Mare	79.28	343	⇑*i*P	P	19 56 37.4	+1.2
KHC	Kasperske Hory	79.31	350	*e*P	P	19 56 36.4	0.0
	comp=Z,11nm,1.2s						
KHC	Kasperske Hory	79.31	350	*e*P	P	19 56 37.7	+1.3
KHC				*e*		19 56 41.4	
KHC				*e*S	S	20 06 42.6	+7.6
KHC				MLR	MLR		
	comp=Z,400nm,20.6s						
KHC	Kasperske Hory	79.31	350	*e*P	P	19 56 37.7	+1.3
KHC				*e*pP	pP	19 56 41.4	-2.1
KHC				*e*S	S	20 06 42.6	+7.6
KHC				AMS	AMS	20 35 20.0	
	comp=Z,400nm,20.6s						
TBI	Tubuai	79.34	150	*e*S	S	20 06 34.3	-1.2
	comp=Z,493nm,35.5s						
TBI	Tubuai	79.34	150	*e*LR	LR	20 20 38.8	
	comp=Z,660nm,21.0s,baz=339						
WLF	Walferdange	79.41	355	⇑P	P	19 56 37.4	+0.5
SMOL	Smolenice	79.44	347	*e*P	P	19 56 38.7	+1.6
SMOL				pmax	pmax		
	comp=Z,33nm,1.1s						
SMOL	Smolenice	79.44	347	*e*P	P	19 56 38.7	+1.6
SIM	Simferopol'	79.46	335	*c* *i*P	P	19 56 38.2	+0.9
SIM				*e*S	S	20 06 42.4	+5.8
SIM				*e*PS	PnS	20 07 36.0	+15
SIM				pmax	pmax		
	comp=Z,30nm,1.1s						
GANJ	Ganja	79.51	325	P	P	19 56 39.2	+1.5
GEC2	GERESS Array S	79.58	350	*e*P	P	19 56 38.7	+0.7
GERES	GERESS Array B	79.58	350	P	P	19 56 38.8	+0.8
	comp=Z,1.7nm,0.7s,baz=23,slow=4.5,SNR=22						
GERES				PP	PP	19 59 41.0	+3.1
	comp=Z,0.4nm,0.5s,baz=28,slow=9.1,SNR=3.2						
GERES				LR	LR	20 36 07.8	
	comp=Z,216nm,18.3s,baz=13,slow=39						
MODS	Modra-Piesok	79.60	347	*e*P	P	19 56 38.6	+0.6
MODS				pmax	pmax		
	comp=Z,37nm,1.1s						
MODS	Modra-Piesok	79.60	347	*e*P	P	19 56 38.6	+0.6
PSZ	Piszkesteto	79.66	345	*e*P	P	19 56 38.6	+0.2
	comp=Z,55nm,1.3s						
PSZ	Piszkesteto	79.66	345	⇓*i*P	P	19 56 39.2	+0.8
PSZ	Piszkesteto	79.66	345	*e*P	P	19 56 38.6	+0.2
PSZ				pmax	pmax		
	comp=Z,55nm,1.3s						
PSZ	Piszkesteto	79.66	345	⇑*i*P	P	19 56 39.0	+0.7
ARCR	ARCALIA	79.68	342	⇑*i*P	P	19 56 39.7	+1.3
TESR	Tescani	79.77	341	⇑*i*P	P	19 56 39.3	+0.4
ZST	Bratislava	79.80	347	*e*P	P	19 56 39.5	+0.5
ZST				pmax	pmax		
	comp=Z,38nm,1.2s						
ZST	Bratislava	79.80	347	*e*P	P	19 56 39.5	+0.5
AKH	Akhalkalaki	79.83	327	*e*P	P	19 56 40.7	+1.1
	comp=Z,110nm,1.5s						
AKH	Akhalkalaki	79.83	327	P	P	19 56 42.3	+2.7
LTVH	Ltavrtes, Hu	79.84	344	⇑*i*P	P	19 56 40.0	+0.8
SEVA	Sevastopol	79.97	335	⇓*i*P	P	19 56 40.8	+0.8
SRO	Srobarova	80.00	347	*e*P	P	19 56 42.0	+1.9
SRO				pmax	pmax		
	comp=Z,45nm,1.4s						
SRO	Srobarova	80.00	347	*e*P	P	19 56 42.0	+1.9
CJR	Cluj-Napoca	80.18	343	⇑*i*P	P	19 56 42.1	+0.9
BUD	Budapest	80.22	346	⇓*i*P	P	19 56 43.0	+1.7
CONA	Conrad Observa	80.23	348	*i* pP	P	19 56 42.7	+1.2
	comp=Z,26nm,1.2s,SNR=16						
BATM	Batumi	80.26	329	⇑*i*P	P	19 56 42.8	+1.1
DRGR		80.27	343	⇓*i*P	P	19 56 42.6	+0.9
DRGR		80.27	343	P	P	19 56 42.3	+0.6
DRGR				pmax	pmax		
	comp=Z,120nm,1.1s						
LKRN	Lenkeran, Azer	80.28	322	P	P	19 56 43.5	+1.7
OZUR		80.35	341	⇑*i*P	P	19 56 43.3	+1.2
VRI	Vrincioaia	80.37	340	⇑*i*P	P	19 56 42.6	+0.4
ODBI	Odobesti	80.40	340	⇓*i*P	P	19 56 42.8	+0.5
PETR	Petresti	80.40	340	⇓*i*P	P	19 56 43.2	+0.9
PLOR	Plostina	80.40	340	⇑*i*P	P	19 56 43.1	+0.7
BCA	Borcka	80.43	329	⇑*i*P	P	19 56 43.7	+1.1
CSKK	Cskako	80.45	346	*e*P	P	19 56 49.0	+6.5
MOA	Molln	80.50	349	*i* pP	P	19 56 44.1	+1.2
	comp=Z,9.9nm,1.5s						
GNI	Garni	80.52	326	*e*P	P	19 56 40.1	-3.2
	comp=Z,86nm,1.3s						
GNI	Garni	80.52	326	*i* P	P	19 56 45.7	+2.4
	SNR=7.8						
GNI	Garni	80.52	326	*i* P	P	19 56 44.6	+1.3
GNI				pmax	pmax		
	comp=Z,99nm,1.3s						
TLCR		80.55	339	⇑*i*P	P	19 56 44.1	+1.0
CDF	Champ du Feu	80.58	354	*e*P	P	19 56 43.4	0.0
CDF				pmax	pmax		
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	80.59	222	*e*P	P	19 56 42.0	-1.6
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	80.59	222	*c* *e*P	P	19 56 42.5	-1.0
WRAB				pmax	pmax		
	comp=Z,18nm,1.7s						
BFO	Black Forest	80.59	353	*e*P	P	19 56 41.7	-1.6
	comp=Z,10nm,1.0s						
BFO	Black Forest	80.59	353	*e*P	P	19 56 41.7	-1.6
BFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WB2	Warramunga Arr	80.60	222	*e*P	P	19 56 42.8	-0.7
	comp=Z,12nm,1.0s						
WR1	Warramunga Arr	80.60	222	*e*P	P	19 56 42.4	-1.2
WRA	Warramunga Arr	80.61	222	P	P	19 56 42.4	-1.2
	comp=Z,4.6nm,0.7s,baz=37,slow=7.3,SNR=16						
CFR	Carcaliu	80.72	339	⇓*i*P	P	19 56 44.6	+0.6
ECH	Echery	80.79	354	*e*P	P	19 56 43.6	-0.8
ECH	Echery	80.79	354	*e*P	P	19 56 43.6	-0.8
MLR	Muntele Rosu	80.89	341	*e*P	P	19 56 44.4	-0.7
	comp=Z,42nm,1.0s						
MLR	Muntele Rosu	80.89	341	⇑*i*P	P	19 56 46.2	+1.1
MLR	Muntele Rosu	80.89	341	*e*P	P	19 56 44.4	-0.7
MLR				pmax	pmax		
	comp=Z,42nm,1.0s						
ARSA	Arzberg	80.94	348	*i* pP	P	19 56 46.7	+1.5
	comp=Z,24nm,1.4s,SNR=16						
TIH	Tihany	80.95	347	*i* P	P	19 56 45.1	-0.2
SIRR	Siria	80.96	344	⇑*i*P	P	19 56 46.4	+1.0
NAX	Nakhchivan	81.11	325	P	P	19 56 47.9	+1.6
PSI	Prapat	81.21	264	*e*P	P	19 56 44.6	-2.6
	comp=Z,43nm,1.2s						
PSI	Prapat	81.21	264	*e*P	P	19 56 44.6	-2.6
PSI				pmax	pmax		
	comp=Z,43nm,1.2s						
RETA	Reutte	81.23	352	*i* PcP	P	19 56 48.0	+1.2
	comp=Z,13nm,1.3s						
ARR	Arges	81.28	342	⇓*i*P	P	19 56 47.8	+0.7
TLB	Topalu	81.30	339	⇑*i*P	P	19 56 48.1	+1.0
TIRR	Tirgusor	81.33	339	*e*P	P	19 56 46.9	-0.4
	comp=Z,98nm,1.0s						
TIRR	Tirgusor	81.33	339	⇑*i*P	P	19 56 47.6	+0.3
TIRR	Tirgusor	81.33	339	*e*P	P	19 56 46.9	-0.4
TIRR				pmax	pmax		
	comp=Z,98nm,1.0s						
WTTA	Wattenberg	81.36	351	*i* PcP	P	19 56 48.4	+0.7
	comp=Z,33nm,1.1s,SNR=13						
SQTA	Sankt Quirin	81.45	351	*i* PcP	P	19 56 49.4	+1.4
	comp=Z,26nm,1.1s,SNR=13						
DAVA	Damuels	81.50	352	*i* PcP	P	19 56 49.0	+0.6
	comp=Z,13nm,1.3s						
BEHE	Becsehely	81.53	347	*e*P	P	19 56 43.0	-5.3
SOKA	Soboth	81.56	349	*i* PcP	P	19 56 49.7	+1.1
	comp=Z,69nm,1.3s,SNR=38						
BZS	Buzias	81.60	344	⇑*i*P	P	19 56 49.5	+0.8
GZR	Gura Zlata	81.61	343	⇑*i*P	P	19 56 49.4	+0.5
KOGS	Kog	81.63	348	*e*P	P	19 56 48.7	-0.1
FETA	Feichten	81.69	352	*i* PcP	P	19 56 50.9	+1.5
	comp=Z,16nm,1.0s,SNR=9.0						
GROS	Grobnik	81.71	348	*e*P	P	19 56 49.4	0.0
MYKA	Terra Mystica	81.78	349	*i* PcP	P	19 56 50.7	+1.0
	comp=Z,18nm,1.1s,SNR=6.5						
ABTA	Abfaltersbach	81.78	350	*i* PcP	P	19 56 51.2	+1.4
	comp=Z,43nm,1.4s,SNR=17						
OBKA	Obir	81.79	349	*i* PcP	P	19 56 50.6	+0.8
	comp=Z,21nm,0.9s,SNR=8.5						
FUORN	Ofenpass-Fuorn	82.13	352	*e*P	P	19 56 51.9	0.0
	comp=Z,16nm,0.9s						
HERR	Herculane	82.17	343	⇓*i*P	P	19 56 52.7	+1.0
DIKM	Dikmen	82.20	333	⇑*i*P	P	19 56 52.8	+0.8
LJU	Ljubljana	82.25	349	*i* P	P	19 56 51.8	-0.3
TUE	Stuetta	82.36	352	*e*P	P	19 56 52.8	-0.1
	comp=Z,17nm,0.9s						
MDVR	Moldovita	82.39	343	⇑*i*P	P	19 56 53.7	+0.7
SENIN	Lac Senin/Sane	82.62	354	*e*P	P	19 56 55.4	+1.1
	comp=Z,9.1nm,1.0s						
VLAD	Vladila	82.64	341	⇑*i*P	P	19 56 55.1	+1.0
HYB	Hyderabad	82.65	288	*i* P	P	19 56 54.5	-0.2
MFF	Saint Martin d	82.68	359	*e*P	P	19 56 54.7	+0.4
MFF				pmax	pmax		
	comp=Z,15nm,1.0s						
BLY	Banja Luka	83.16	347	*e*P	P	19 56 57.2	+0.3
	comp=Z,110nm,2.0s						
PLVB	Pleven	83.18	341	⇑*i*P	P	19 56 57.8	+0.8
ELND	Elena	83.35	340	⇓*i*P	P	19 56 58.3	+0.4
MPEP	Malo Peshtene	83.39	342	*e*P	P	19 56 58.5	+0.4
LPG	La Plagne	83.52	354	*e*P	P	19 57 00.3	+1.2
LPG				pmax	pmax		
	comp=Z,17nm,1.0s						
JMB	Yambol	83.64	339	*e*P	P	19 56 59.4	0.0
BNI	Bardonecchia	83.97	354	*e*P	P	19 57 01.7	+0.5
	comp=Z,19nm,1.0s						
BNI	Bardonecchia	83.97	354	*e*P	P	19 57 01.7	+0.5
BNI				pmax	pmax		
	comp=Z,19nm,1.0s						
PGB	Panagyurishte	84.08	341	*e*P	P	19 57 02.4	+0.7
AS31	Alice Springs	84.10	220	*e*P	P	19 57 01.0	-0.8
	comp=Z,1.3nm,0.8s						
ASAR	Alice Springs	84.10	220	P	P	19 57 01.4	-0.4
	comp=Z,4.4nm,0.7s,baz=24,slow=5.5,SNR=66						
ASAR				LR	LR	20 29 14.5	
	comp=Z,116nm,21.7s,baz=47,slow=32						
VTS	Vitosha	84.20	342	*e*P	P	19 57 02.0	-0.4
	comp=Z,28nm,1.0s						
VTS	Vitosha	84.20	342	*e*P	P	19 57 02.0	-0.4
VTS				pmax	pmax		
	comp=Z,28nm,1.0s						
VTS	Vitosha	84.20	342	*e*P	P	19 57 02.6	+0.2
DIM	Dimitrovgrad	84.27	340	*e*P	P	19 57 03.3	+0.7
CAF	Calviac	84.31	357	*e*P	P	19 57 03.4	+0.6
CAF				pmax	pmax		
	comp=Z,37nm,1.4s						
PLD	Plovdiv	84.39	341	*e*P	P	19 57 03.4	+0.2
MDUB	Mudurnu	84.41	335	*e*P	P	19 57 03.9	+0.4
	comp=Z,206nm,1.0s						
BR101	Keskin Array S	84.44	333	*e*P	P	19 57 04.0	+0.3
BR101				*e*PP	PP	20 00 18.9	+0.8
BR131	Keskin Array S	84.44	333	*e*P	P	19 57 03.7	0.0
BRTR	Keskin Array B	84.44	333	P	P	19 57 04.0	+0.3
	comp=Z,21nm,1.0s,baz=49,slow=2.3,SNR=84						
BRTR				PP	PP	20 00 18.9	+0.8
	comp=Z,3.1nm,0.9s,baz=30,slow=5.5,SNR=4.8						
BRTR				LR	LR	20 41 28.0	
	comp=Z,214nm,18.2s,baz=12,slow=40						
MTDJ	Mount Denham	84.52	68	*e*P	P	19 57 05.0	+0.6
	comp=Z,128nm,1.3s						
ANTO	Ankara	84.55	334	*e*P	P	19 57 04.4	+0.2
	comp=Z,64nm,1.1s						
ANTO	Ankara	84.55	334	*e*P	P	19 57 04.4	+0.2
ANTO				pmax	pmax		
	comp=Z,64nm,1.1s						
BR231	Keskin MP Arra	84.58	334	*e*P	P	19 57 04.8	+0.4
KDZ	Kurdzhali	84.68	340	*e*P	P	19 57 05.4	+0.7
RZN	Rozhen	84.79	341	*e*P	P	19 57 05.7	+0.2
YLV	Yalova	84.79	337	⇓*i*P	P	19 57 05.7	+0.3
YLV	Yalova	84.79	337	P	P	19 57 05.7	+0.3
KKB	Krupnik	84.95	342	*e*P	P	19 57 06.7	+0.6
MMB	Musomiste	85.09	341	*e*P	P	19 57 07.1	+0.3
PDG	Podgorica	85.10	345	⇑*i*P	P	19 57 06.7	-0.1
TTG	Podgorica	85.10	345	*e*P	P	19 57 06.6	-0.1
	comp=Z,49nm,1.2s						
TTG	Podgorica	85.10	345	*e*P	P	19 57 06.6	-0.1
TTG				pmax	pmax		
	comp=Z,49nm,1.2s						
ESPN	Las Esperanzas	85.15	77	*e*P	P	19 57 07.2	-0.2
	comp=Z,31nm,0.9s						
SKO	Skopje	85.16	343	*i* P	P	19 57 08.2	+1.0
STIP	Stip	85.29	342	*i* P	P	19 57 07.6	-0.1
VAY	Valandovo	85.58	342	*i* P	P	19 57 09.1	0.0
PGAV	Gavieira, Arco	87.14	5	*e*LR	LR	20 35 16.8	
	comp=Z,190nm,18.0s						
SDDR	Presa de Saban	87.50	63	*e*P	P	19 57 19.1	+0.2
	comp=Z,21nm,0.9s						
PVRL	Vila Real	87.86	5	*e*P	P	19 57 20.6	+0.2
SHME	Shamm	87.92	310	P	P	19 57 20.3	-0.7
MVO	Moncorvo	88.00	4	*e*P	P	19 57 21.5	+0.4
	comp=Z,26nm,1.9s						
MVO	Moncorvo	88.00	4	*e*LR	LR	20 33 49.0	
	comp=Z,261nm,16.0s						
MSFE	Esma-Masafi	88.50	310	P	P	19 57 22.8	-0.8
UMQ	Umm Al-Quwin	88.60	311	P	P	19 57 24.1	0.0
TIP	Timpagrande	88.68	346	*e*P	P	19 57 24.5	+0.2
	comp=Z,31nm,1.2s						
MTE	Manteigas	88.74	5	*e*SKS	S	20 08 03.5	-6.4
MTE	Manteigas	88.74	5	*e*LR	LR	20 35 25.8	
	comp=Z,224nm,20.0s						
STKA	Stephens Creek	88.75	211	P	P	19 57 24.8	+0.4
	comp=Z,4.8nm,0.9s,baz=26,slow=1.6,SNR=6.8						
STKA	Stephens Creek	88.75	211	*e*P	P	19 57 24.2	-0.2
	comp=Z,5.1nm,1.3s						
STKA	Stephens Creek	88.75	211	*e*P	P	19 57 24.2	-0.2
STKA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
UOSS	Minazif	88.82	310	*e*P	P	19 57 24.3	-0.8
	comp=Z,32nm,1.3s						
UOSS	Minazif	88.82	310	P	P	19 57 24.4	-0.7
HATD	Hatta, Dubai	88.96	310	P	P	19 57 25.1	-0.7
CSS	Mathiatis	88.96	332	*e*P	P	19 57 25.9	+0.2
	comp=Z,19nm,1.0s						
PCAS	Casmilo, Conde	89.03	5	*e*P	P	19 57 26.4	+0.5
	comp=Z,23nm,2.0s						
PCBR	Castelo Branco	89.30	5	*e*P	P	19 57 26.9	-0.2
ESDC	Sonseca Array	89.59	2	P	P	19 57 28.4	-0.2
	comp=Z,1.5nm,0.7s,baz=354,slow=3.9,SNR=12						
PMRV	Marv??o	89.72	4	*e*P	P	19 57 29.9	+0.8
	comp=Z,22nm,1.7s						
PMRV	Marv??o	89.72	4	*e*LR	LR	20 35 19.9	
	comp=Z,241nm,18.0s						
PMTG	Montargil	90.03	5	*e*P	P	19 57 31.0	+0.4
	comp=Z,25nm,1.7s						
OBIP	Obispado Ponce	90.84	60	*e*P	P	19 57 34.7	+0.1
	comp=Z,84nm,1.1s						
PNCL	Nicolau / Gran	90.97	5	*e*SKS	S	20 08 43.5	+13
SJG	San Juan	91.03	59	*e*P	P	19 57 35.1	-0.4
SJG	San Juan	91.03	59	*e*P	P	19 57 35.1	-0.4
CBYP	Canovanas	91.06	59	*e*P	P	19 57 35.7	0.0
	comp=Z,32nm,1.1s						
HUMP	Col San Antoni	91.17	59	*e*P	P	19 57 36.2	+0.1
	comp=Z,35nm,1.1s						
MTP	Monte Pirata	91.37	59	*e*P	P	19 57 36.2	-0.9
	comp=Z,101nm,0.9s						
PVAQ	Vaqueiros	91.72	5	*e*SKS	S	20 08 23.1	-14
PVAQ	Vaqueiros	91.72	5	*e*LR	LR	20 34 04.0	
	comp=Z,312nm,18.0s						
KEST	Kesra	93.01	351	P	P	19 57 44.5	-0.1
	comp=Z,6.2nm,0.9s,baz=191,slow=3.2,SNR=4.8						
KEST	Kesra	93.01	351	*e*P	P	19 57 44.2	-0.4
	comp=Z,22nm,1.4s						
RAYN	Ar Rayn	94.93	318	*e*P	P	19 57 52.4	-1.1
	comp=Z,14nm,1.2s						
RAYN	Ar Rayn	94.93	318	*i* P	P	19 57 53.4	-0.1
	SNR=8.7						
RAYN	Ar Rayn	94.93	318	*e*P	P	19 57 52.4	-1.1
RAYN				pmax	pmax		
	comp=Z,14nm,1.2s						
TOA1	Torodi Ar. Sit	115.97	356	*e*PKPdf	PKiKP	20 03 12.8	-1.2
TOA1				*e*PP	PP	20 04 21.9	+4.7
TORD	Torodi Ar. Bea	115.97	356	PKP	PKiKP	20 03 12.8	-1.3
	comp=Z,1.0nm,0.7s,baz=9.4,slow=2.7,SNR=5.5						
TORD				PP	PP	20 04 21.9	+4.7
	comp=Z,1.6nm,1.0s,baz=347,slow=6.1,SNR=4.5						
KMBO	Kilima Mbogo	120.41	313	PKP	PKiKP	20 03 23.8	+0.7
	comp=Z,3.2nm,1.0s,baz=15,slow=7.5,SNR=4.0						
KMBO	Kilima Mbogo	120.41	313	P	PKiKP	20 03 24.4	+1.3
DBIC	Dimbokro	122.40	4	PKP	PKPdf	20 03 25.6	-0.9
	comp=Z,2.6nm,0.6s,baz=17,slow=3.8,SNR=3.9						
BDFB	Brasilia	128.82	64	PKP	PKPdf	20 03 37.8	-0.9
	comp=Z,2.3nm,0.7s,baz=208,slow=17,SNR=2.6						
CPUP	Villa Florida	131.38	81	PKP	PKPdf	20 03 43.0	-0.2
	comp=Z,4.4nm,1.0s,baz=28,slow=6.7,SNR=4.2						
CPUP	Villa Florida	131.38	81	PKIKP	PKPdf	20 03 43.0	-0.2
MAW	Mawson	145.18	217	PKPbc	PKPbc	20 04 06.5	-0.3
	comp=Z,14nm,0.8s,baz=67,slow=4.9,SNR=26						
WIN	Windhoek	148.02	326	*e*PKPbc	PKPbc	20 04 16.0	-0.7
WIN	Windhoek	148.02	326	*e*PKP2	PKPbc	20 04 16.0	-0.7
BOSA	Boshof	149.81	308	PKPbc	PKPbc	20 04 20.9	-0.1
	comp=Z,77nm,1.4s,baz=30,slow=2.8,SNR=25						
SYO	Syowa Base	153.50	212	⇑*e*PKPbc	PKiKP	20 04 28.6	+0.5
SYO	Syowa Base	153.50	212	⇓*e*pPKPbc	pPKPbc	20 04 37.2	+1.8

IDC 31 20:00:15.6±137.0**, 23°.48S**×**178°.57E, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/23**, mbtmp3.9**/3**, Error ellipse: s-maj=2415.0km s-min=170.6km az=86.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	33.66	247	P	P	20 06 58.2	-0.1
	0.7nm,0.4s,baz=95,slow=11,SNR=4.5						
ASAR	Alice Springs	40.81	260	P	P	20 07 58.9	-0.3
	0.7nm,0.6s,baz=94,slow=8.0,SNR=22						
WRA	Warramunga Arr	41.12	266	P	P	20 08 01.8	0.0
	1.8nm,0.4s,baz=97,slow=3.1,SNR=23						

MEX 31 20:43:22.1±0.3**, 18°.70N**×**102°.57W, h20**^{km}**, MD3.5, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.84	241	*e*P	Pb	20 43 35.5	-2.6
MMIG				*e*S	Sb	20 43 45.7	-3.2
EZ5V		1.25	309	*e*P	Pn	20 43 41.4	-3.3
EZ5V				*i* S	Sb	20 43 56.7	-4.3

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*IDC **31** 20:45:24.1±1.0, 21°.36S×168°.54E, h0^{km}, mb4.2/9, mb1 4.4/10, mb1mx4.1/37, mbtmp4.3/10, ML3.9/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/18, Error ellipse: s-maj=35.8km s-min=19.5km az=158.0*

*NEIC **31** 20:45:30.7±1.8, 21°.21S×168°.35E, h44^{km}±6^{km}, mb4.6/8, Error ellipse: s-maj=19.5km s-min=4.5km az=145.0*

ISC 31 20:45:26.9±0.7**, 21°.3S**±0°.1×**168°.52E**±0°.10**, h20**^{km}**, n31,** σ**1**$^{\mathrm{s}}$**.01**/32**, mb4.4**/15**, MS3.6**/3**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	0.48	250	*e*Pn	Pn	20 45 39.5	+0.9
PINNC	Pines Island,	1.63	217	*e*Pn	Pb	20 45 57.9	+1.6
DZM	Mont Dzumac	2.07	248	Pn	Pn	20 46 01.1	+0.6
	43nm,0.3s,baz=94,slow=6.9,SNR=1989						
DZM				Sn	Sn	20 46 26.4	+0.6
	247nm,0.3s,baz=243,slow=22,SNR=11						
DZM				LR	LR	20 46 49.2	
	comp=Z,555nm,18.9s,baz=352,slow=41						
DZM	Mont Dzumac	2.07	248	*e*Pn	Pn	20 46 01.2	+0.6
	520nm,0.2s						
DZM				*e*LR	LR	20 46 21.0	
	comp=Z,1µm,24.9s						
DZM				*e*Sn	Sn	20 46 24.7	-1.1
	713nm,0.2s						
ONTNC	Ouen Toro	2.15	242	*e*Pn	Pb	20 46 03.7	-1.5
RAO	Raoul Island	14.58	126	LR	LR	20 52 13.9	
	comp=Z,485nm,19.6s,baz=89,slow=28						
CTA	Charters Tower	20.86	269	P	Pn	20 50 09.4	-0.9
	7.0nm,0.8s,baz=94,slow=12,SNR=6.4						
STKA	Stephens Creek	26.20	241	P	P	20 51 00.5	+0.1
	1.7nm,0.9s,baz=74,slow=10.0,SNR=3.2						
STKA				LR	LR	21 00 47.5	
	comp=Z,159nm,19.0s,baz=33,slow=35						
WR1	Warramunga Arr	31.98	266	*e*P	P	20 51 51.5	-0.4
WR1				*e*PcP	PcP	20 54 41.8	-0.1
WRA	Warramunga Arr	31.98	266	P	P	20 51 51.5	-0.5
	0.6nm,0.3s,baz=113,slow=22,SNR=15						
WRA				PcP	PcP	20 54 41.8	-0.1
	0.8nm,0.8s,baz=74,slow=4.0,SNR=3.0						
AS31	Alice Springs	32.02	259	*e*P	P	20 51 52.7	+0.5
	4.4nm,0.8s						
ASAR	Alice Springs	32.02	259	P	P	20 51 52.7	+0.4
	10nm,0.7s,baz=86,slow=9.3,SNR=175						
ASAR				LR	LR	21 04 23.7	
	comp=Z,115nm,18.4s,baz=92,slow=36						
PPT2	Papeete2	39.61	92	*e*LR	LR	21 04 18.6	
	comp=Z,115nm,28.5s						
SIJI	Sorong	41.62	294	P	P	20 53 14.8	+0.8
	2.7nm,0.7s,baz=139,slow=19,SNR=2.3						
PSA00	Pilbara Seismi	45.15	260	*e*P	P	20 53 43.2	+0.8
	19nm,1.1s						
USA0B	Ussuriysk Arra	73.28	333	*e*P	P	20 56 56.3	-0.3
	17nm,1.6s						
PETK	Petropavlovsk-	74.71	353	P	P	20 57 05.5	+0.7
	2.5nm,0.8s,baz=130,slow=8.1,SNR=4.5						
PEA1	Petropavlovsk-	74.71	353	*e*P	P	20 57 05.5	+0.6
MAW	Mawson	76.26	202	*e*P	P	20 57 10.0	-3.7
	1.0nm,0.3s						
CMAR	Chiang Mai Arr	78.75	295	P	P	20 57 29.2	+0.7
	2.4nm,0.6s,baz=138,slow=4.7,SNR=16						
CHTO	Chiang Mai	78.91	295	*e*P	P	20 57 29.8	+0.4
	13nm,0.3s						
SONA0	Songino Array	88.47	323	*e*P	P	20 58 18.0	+0.1
SONM	Songino Array	88.47	323	P	P	20 58 18.0	+0.1
	0.3nm,0.5s,baz=108,slow=1.9,SNR=4.2						
MDPB	Devils Postpil	89.77	49	*e*P	P	20 58 23.3	-1.1
	10.0nm,0.9s						
BCPM	Bancas Point	91.29	23	*e*P	P	20 58 31.5	+1.0
	110nm,0.6s						
PLCA	Paso Flores	97.43	139	P	P	20 58 59.8	+0.3
	1.1nm,0.7s,baz=250,slow=12,SNR=2.7						
TKL	Tuckaleechee C	116.15	60	PKP	PKiKP	21 04 09.7	+0.7
	3.3nm,0.6s,baz=142,slow=15,SNR=7.8						
ARCES	ARCESS Array B	126.89	345	PKP	PKiKP	21 04 29.2	+0.1
	1.4nm,0.5s,baz=43,slow=2.3,SNR=11						
CLL	Collm	144.49	333	*e*PKPdf	PKiKP	21 05 04.0	-1.3
GEC2	GERESS Array S	145.97	330	*e*PKPdf	PKPdf	21 05 04.5	0.0
GERES	GERESS Array B	145.97	330	PKPbc	PKPab	21 05 05.8	+0.2
	1.0nm,0.7s,baz=46,slow=3.9,SNR=12						

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*BJI **31** 20:51:32.8±0.0, 12°.91N×144°.90E, h94^{km}, mb4.7/6, mB4.9/6*

*NEIC **31** 20:51:40.9±1.6, 13°.52N×144°.52E, h107^{km}±2^{km}, mb4.4/29, Error ellipse: s-maj=15.4km s-min=12.2km az=82.0*

NEIC Felt at Andersen AFB and Santa Rita.

*IDC **31** 20:51:40.4±0.4, 13°.56N×144°.62E, h104^{km}±4^{km}, mb3.8/17, mb1 3.9/18, mb1mx3.8/35, mbtmp4.2/18, MS3.1/1, Ms1 3.1/1, ms1mx2.6/23, Error ellipse: s-maj=15.9km s-min=11.0km az=83.0*

*ISCJB **31** 20:51:41.4±0.3, 13°.49N±0°.04×144°.53E±0°.06, h129^{km}, mb4.1/37, Error ellipse: s-maj=8.2km s-min=6.2km az=178.4*

ISC 31 20:51:42.6±0.4**, 13°.45N**±0°.07×**144°.62E**±0°.09**, h129**^{km}**, n73,** σ**1**$^{\mathrm{s}}$**.44**/72**, mb4.2**/37**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.28	61	P	Pn	20 51 56.7	-3.8
	3µm,0.3s,baz=202,slow=23,SNR=1348						
GUMO				S	Sn	20 52 07.9	-6.2
	3µm,0.3s,baz=203,slow=19,SNR=16						
GUMO	Guam	0.28	61	*e*Pn	Pn	20 51 56.9	-3.6
GUMO				*e*Sn	Sn	20 52 08.3	-5.8
ANA2	Anatahan	3.06	20	*e*Pn	Pn	20 52 31.3	+1.3
SARN	Sarigan	3.42	19	*e*Pn	Pn	20 52 35.8	+1.1
PATS	Pohnpei	14.99	115	*e*Pn	Pn	20 55 07.9	-0.1
	206nm,1.5s						
RABL	Rabaul	19.06	156	*e*P	Pn	20 55 58.2	+0.9
	79nm,0.6s						
SIJI	Sorong	19.43	224	P	P	20 56 00.5	+1.4
	0.6nm,0.3s,baz=58,slow=8.5,SNR=7.7						
JOW	Kunigami	20.28	314	P	P	20 56 08.2	+0.1
	1.3nm,0.4s,baz=117,slow=13,SNR=5.9						
JOW	Kunigami	20.28	314	*e*P	P	20 56 08.2	+0.1
	17nm,1.1s						
FAKI	Fak Fak	20.37	218	*e*P	P	20 56 10.9	+1.6
	36nm,1.1s						
H11S3	WAKE ISLAND Hy	21.80	74	T	T	21 18 44.4	
	baz=260,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	21.81	74	T	T	21 18 53.5	
	baz=260,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	21.81	74	T	T	21 19 05.5	
	baz=260,slow=75,SNR=9.5						

H11N1	WAKE ISLAND Hy	22.23	71	T	T	21 19 29.2	
	baz=257,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	22.24	71	T	T	21 19 33.0	
	baz=257,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	22.25	71	T	T	21 19 30.3	
	baz=257,slow=75,SNR=15						
JNU	Nakatsue	23.25	330	P	P	20 56 38.6	+0.1
	6.4nm,0.9s,baz=166,slow=1.4,SNR=4.5						
JNU	Nakatsue	23.25	330	*e*P	P	20 56 39.3	+0.7
	22nm,1.4s						
MJAR	Matsushiro Arr	23.70	347	P	P	20 56 42.3	-0.3
	3.3nm,0.7s,baz=62,slow=1.6,SNR=10						
MJAR				LR	LR	21 04 14.8	
	comp=Z,51nm,21.3s,baz=265,slow=32						
MAJO	Matsushiro	23.70	347	*e*P	P	20 56 42.6	0.0
	11nm,1.1s						
MJB9	Matsu-Tunnel	23.71	347	*e*P	P	20 56 42.5	-0.1
	12nm,1.1s						
YULB	Yu-li	24.20	297	*e*P	P	20 56 46.7	-0.6
	7.8nm,0.7s						
NACB	Ninganchiao	24.22	299	*e*P	P	20 56 47.1	-0.4
	12nm,0.9s						
SSLB	Suanglung	24.63	298	*e*P	P	20 56 50.9	-0.3
	7.6nm,0.6s						
LUWI	Luwuk	26.01	238	*e*P	P	20 57 04.4	+0.7
	69nm,1.1s						
KSRS	Korea Array	28.16	331	P	P	20 57 22.3	-0.4
	2.2nm,0.5s,baz=143,slow=9.9,SNR=9.3						
KS15	Wonju Array Si	28.17	331	*e*P	P	20 57 22.3	-0.5
	28nm,1.4s						
WB2	Warramunga Arr	34.69	197	*e*P	P	20 58 20.1	0.0
	3.7nm,0.8s						
WR1	Warramunga Arr	34.69	197	*e*P	P	20 58 20.4	+0.2
WRA	Warramunga Arr	34.69	197	P	P	20 58 20.3	+0.2
	3.0nm,0.7s,baz=6.1,slow=7.5,SNR=11						
AS31	Alice Springs	38.35	196	*e*P	P	20 58 51.7	+0.5
	0.9nm,0.4s						
AS31				*e*PcP	PcP	21 01 03.4	+1.0
ASAR	Alice Springs	38.35	196	P	P	20 58 51.7	+0.5
	0.4nm,0.5s,baz=20,slow=12,SNR=9.4						
ASAR				PcP	PcP	21 01 03.4	+1.0
	0.4nm,0.8s,baz=28,slow=2.2,SNR=2.7						
PETK	Petropavlovsk-	40.91	12	PcP	PcP	21 01 09.9	-0.2
	1.5nm,0.8s,baz=172,slow=2.9,SNR=2.7						
PEA1	Petropavlovsk-	40.91	12	*e*PcP	PcP	21 01 09.9	-0.2
DZM	Mont Dzumac	41.29	148	P	P	20 59 17.7	+2.1
	11nm,0.5s,baz=315,slow=7.1,SNR=20						
DZM	Mont Dzumac	41.29	148	*e*P	P	20 59 18.2	+2.7
	13nm,0.5s						
CM31	Chiang Mai Arr	44.11	283	*e*P	P	20 59 38.8	+0.4
	6.7nm,1.1s						
CM31				*e*PcP	PcP	21 01 21.6	+0.1
CMAR	Chiang Mai Arr	44.11	283	P	P	20 59 38.8	+0.4
	2.5nm,0.6s,baz=83,slow=6.5,SNR=20						
CMAR				PcP	PcP	21 01 21.6	+0.1
	0.4nm,0.6s,baz=85,slow=3.8,SNR=3.1						
STKA	Stephens Creek	45.16	184	P	P	20 59 46.6	+0.2
	1.3nm,0.5s,baz=15,slow=5.9,SNR=8.8						
STKA	Stephens Creek	45.16	184	*e*P	P	20 59 46.8	+0.4
	1.5nm,1.2s						
SONA0	Songino Array	46.70	325	*e*P	P	20 59 58.0	-0.6
SONM	Songino Array	46.70	325	P	P	20 59 58.0	-0.6
	0.6nm,0.5s,baz=142,slow=7.4,SNR=3.7						
SHL	Shillong	50.85	292	*e*P	P	21 00 29.9	-0.7
	3.4nm,0.7s						
WMQ	Urumqi	57.05	314	*e*P	P	21 01 16.0	+0.7
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,37nm,8.1s						
WMQ				LR	LR		
	comp=N,150nm,29.2s						
WMQ				LR	LR		
	comp=E,170nm,29.0s						
WMQ				LR	LR		
	comp=Z,45nm,27.1s						
MK31	Makanchi Array	61.42	316	*e*P	P	21 01 45.4	+0.2
	1.4nm,0.5s						
MK32	Makanchi Array	61.42	316	*e*P	P	21 01 45.1	-0.1
MKAR	Makanchi Array	61.42	316	P	P	21 01 45.1	-0.1
	1.3nm,0.4s,baz=91,slow=8.6,SNR=34						
ZALV	Zalesovo Beam	61.59	324	P	P	21 01 45.3	-0.9
	0.5nm,0.5s,baz=117,slow=8.3,SNR=3.0						
ZAA1	Zalesovo Array	61.59	324	*e*P	P	21 01 45.4	-0.9
MAKZ	Makanchi	61.63	316	*e*P	P	21 01 46.8	+0.1
	2.9nm,0.6s						
KDAK	Kodiak Island	64.32	32	P	P	21 02 04.7	+0.5
	2.0nm,0.7s						
KDAK	Kodiak Island	64.32	32	*e*P	P	21 02 05.1	+0.9
	16nm,1.5s						
TTA	Tatalina	64.39	26	*e*P	P	21 02 05.1	+0.5
	3.0nm,1.3s						
KURK	Kurchatov	64.53	320	*e*P	P	21 02 05.3	-0.4
	4.9nm,0.4s						
CNPM	China Poot	65.48	30	*e*P	P	21 02 11.6	-0.1
	18nm,1.4s						
BPAW	Bear Paw Mtn.	66.90	26	*e*P	P	21 02 22.3	+1.6
	2.7nm,1.2s						
ILAR	Eielson Array	68.80	25	P	P	21 02 31.4	-1.2
	0.8nm,0.6s,baz=248,slow=6.2,SNR=9.7						
ILB	Eielson Array	68.80	25	*e*P	P	21 02 31.4	-1.2
	1.1nm,0.8s						
BRVK	Borovoye	69.95	322	*e*P	P	21 02 40.1	+0.3
	4.4nm,1.5s						
INK	Inuvik	74.59	22	P	P	21 03 07.5	+0.4
	2.9nm,1.1s,baz=265,slow=6.3,SNR=4.0						
YKA	Yellowknife Ar	83.09	27	P	P	21 03 53.8	+0.2
	1.1nm,0.6s,baz=282,slow=5.1,SNR=4.3						
YKB5	Yellowknife Ar	83.09	27	*e*P	P	21 03 53.8	+0.2
BMO	Blue Mountains	86.26	45	*e*P	P	21 04 11.4	+1.4
	3.3nm,0.9s						
NV01	Mina Array Sit	87.20	51	*e*P	P	21 04 15.2	+0.3
NVAR	Mina Array Bea	87.20	51	P	P	21 04 15.2	+0.3
	1.4nm,0.8s,baz=274,slow=5.0,SNR=5.1						
FIA0	FINESS Array S	91.18	335	*e*P	P	21 04 31.5	-1.3
FINES	FINESS Array B	91.18	335	P	P	21 04 31.5	-1.3
	1.1nm,0.8s,baz=78,slow=6.4,SNR=4.3						
BOSA	Boshof	121.97	245	PKP	PKPdf	21 10 22.6	+0.1
	1.6nm,0.7s,baz=282,slow=4.7,SNR=4.3						
TOA1	Torodi Ar. Sit	134.74	304	*e*PKPdf	PKiKP	21 10 47.9	-0.6
TORD	Torodi Ar. Bea	134.74	304	PKP	PKiKP	21 10 47.9	-0.6
	0.2nm,0.6s,baz=13,slow=5.4,SNR=4.5						
DBIC	Dimbokro	143.69	302	PKhKP	PKPpre	21 11 00.9	
	5.6nm,1.1s,baz=57,slow=5.3,SNR=3.7						
LPAZ	La Paz	148.24	99	PKPbc	PKPbc	21 11 16.2	+1.0
	4.0nm,0.7s,baz=306,slow=2.7,SNR=17						
LPAZ	La Paz	148.24	99	*e*PKPbc	PKiKP	21 11 17.3	+0.4

SJA **31** *21:04:29.9±1.0,27°.26S×69°.41W,h119^{km}±13^{km},ML2.7, MW3.2*

ISCJB **31** *21:04:31.1±1.0,27°.49S±0°.05×69°.48W±0°.08, h132^{km}±12^{km},Error ellipse: s-maj=11.5km s-min=7.1km az=16.0*

GUC **31** *21:04:32.0±0.5,27°.47S×69°.59W,h120^{km}±9^{km},ML3.2*

ISC 31 21:04:32.0±1.7,**27°.48S**±0°.05×**69°.46W**±0°.07, **h121**^{km}±14^{km},**n10**,σ**1^{s}.32**/17,**1C-3D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	0.70	260	*e*P	Pn	21 04 51.4	-0.2
GO03				*e*S	Sn	21 05 05.7	-0.6
GO03	Copiap	0.70	260	⇓*i*P	Pn	21 04 51.1	-0.4
GO03				*e*S	Sn	21 05 05.1	-1.2
GO03				IAML		21 05 06.0	
	comp=N,1µm,0.4s						
VCA	Vinchina	1.67	139	*e*P	Pn	21 05 02.2	+0.5
VCA				*e*S	Sn	21 05 26.4	+2.1
VCA				IAML		21 05 27.9	
	comp=Z,63nm,0.2s						
LCO	Las Campanas	1.88	215	⇑*i*P	Pn	21 05 04.7	+0.4
LCO				*e*S	Sn	21 05 29.0	0.0
LCO				IAML		21 05 30.6	
	comp=E,165nm,0.2s						
GO02	Mina Guanaco	2.31	357	*e*P	Pn	21 05 10.6	+0.9
GO02				*e*S	Sn	21 05 40.0	+1.4
GO02				IAML		21 05 45.5	
	comp=N,161nm,0.1s						
AROD	Rodeo	2.68	180	*e*P	Pn	21 05 16.7	+2.2
GO04	Tololo Observa	2.93	203	⇓*i*P	Pn	21 05 17.8	+0.1
GO04				*e*S	Sn	21 05 53.4	+0.6
CYA	Choya	3.38	107	*e*P	Pn	21 05 22.2	-1.1
CYA				IAML		21 05 22.9	
	comp=Z,14nm,0.2s						
AHML	Horco Molle	3.74	80	*e*P	Pn	21 05 26.4	-1.8
CO02	Combarbal	3.95	200	⇓*i*P	Pn	21 05 30.2	-0.8
CO02				*e*S	Sn	21 06 15.0	-1.7

ISCJB **31** *21:47:24.0±0.5,1°.98N±0°.06×127°.73E±0°.09,h250^{km}, mb3.9/9,Error ellipse: s-maj=13.0km s-min=8.2km az=158.9*

DJA **31** *21:47:25.9±0.4,2°N±4°×12°8E±°,h221^{km}±3^{km},M4.5/8, mb4.2/6,mB5.1/2,MLv4.6/8,Mw(mB)4.4/2*

IDC **31** *21:47:25.6±2.7,2°.03N×127°.94E,h243^{km}±27^{km},mb3.6/9, mb1 3.7/10,mb1mx3.4/32,mbtmp4.2/10,Error ellipse: s-maj=36.9km s-min=10.0km az=82.0*

ISC 31 21:47:25.2±0.7,**1°.88N**±0°.06×**127°.67E**±0°.08,**h250**^{km}**,n16,** σ**1^{s}.72**/20,**mb3.9**/9,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.80	310	P	Pn	21 48 14.5	-1.0
SGSI				S	S	21 48 52.6	-2.7
SANI	Sanana	4.25	203	P	Pn	21 48 31.9	0.0
SANI				S	S	21 49 21.5	-3.6
SIJI	Sorong	4.51	127	P	Pn	21 48 34.6	-0.4
	2.3nm,0.3s,baz=316,slow=12,SNR=7.5						
NLAI	Namlea	5.11	186	P	Pn	21 48 39.9	-2.5
LUWI	Luwuk	5.70	239	P	Pn	21 48 51.5	+1.9
SPSI	Sidrap Palu	9.80	234	P	P	21 49 46.3	-1.1
WRA	Warramunga Arr	22.65	164	P	P	21 52 06.4	+1.1
	10nm,0.6s,baz=340,slow=12,SNR=86						
WRA				PcP	PcP	21 55 50.8	+1.3
	0.4nm,0.4s,baz=295,slow=2.4,SNR=3.9						
ASAR	Alice Springs	26.10	167	P	P	21 52 37.8	+1.4
	0.9nm,0.5s,baz=342,slow=7.2,SNR=16						
ASAR				PcP	PcP	21 55 58.7	+1.6
	1.1nm,0.5s,baz=356,slow=2.1,SNR=12						
KSRS	Korea Array	35.41	0	P	P	21 53 57.3	-0.1
	1.2nm,0.5s,baz=184,slow=8.6,SNR=5.4						
MJAR	Matsushiro Arr	35.84	15	P	P	21 53 59.3	-2.0
	2.2nm,0.4s,baz=189,slow=8.8,SNR=9.2						
STKA	Stephens Creek	36.08	160	P	P	21 54 04.9	+1.6
	12nm,0.6s,baz=333,slow=8.8,SNR=43						
USRK	Ussuriysk Ar.	42.32	5	P	P	21 54 54.1	-0.5
	1.4nm,0.6s,baz=198,slow=5.1,SNR=3.5						
SONM	Songino Array	49.34	341	P	P	21 55 50.2	+0.7
	0.9nm,0.7s,baz=142,slow=7.5,SNR=4.9						
PETK	Petropavlovsk-	56.79	21	P	P	21 56 43.2	-0.2
	2.7nm,0.9s,baz=191,slow=5.9,SNR=3.5						
MKAR	Makanchi Array	59.61	325	P	P	21 57 04.2	+1.2
	1.2nm,0.3s,baz=113,slow=8.1,SNR=28						
TORD	Torodi Ar. Bea	124.38	287	PKP	PKPdf	22 05 56.7	+1.2
	0.2nm,0.3s,baz=73,slow=1.8,SNR=12						

ISCJB **31** *22:09:03.9±0.3,26°.64N±0°.03×57°.72E±0°.04,h10^{km}, mb3.9/24,MS3.2/8,Error ellipse: s-maj=5.2km s-min=3.6km az=18.4*

TEH **31** *22:09:03.9,26°.72N×57°.74E,h6^{km},ML3.9*

DSN **31** *22:09:04.5±0.2,26°.27N×58°.00E,h10^{km},ML4.0/7,Error ellipse: s-maj=3.9km s-min=3.1km az=28.0*

THR **31** *22:09:05.3,26°.76N×57°.72E,h14^{km},ML4.0*

NEIC **31** *22:09:05.3±0.0,26°.76N×57°.72E,h14^{km},mb4.0/12, ML4.0(THR),After THR.*

IDC **31** *22:09:09.6±2.3,26°.48N×57°.81E,h58^{km}±30^{km},mb3.6/16, mb1 3.7/19,mb1mx3.6/47,mbtmp3.9/19,ML3.7/3,MS3.2/9, Ms1 3.2/9,ms1mx3.0/32,Error ellipse: s-maj=16.5km s-min=14.7km az=146.0*

ISC 31 22:09:05.3±0.6,**26°.63N**±0°.03×**57°.74E**±0°.05,**h10**^{km}**,n97,** σ**1^{s}.41**/92,**mb4.1**/25,**MS3.1**/8,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK1	Jask	0.98	178	*e*Pg	Pb	22 09 25.1	+0.7
NIAN	Nian	1.23	319	*e*Pg	Pb	22 09 28.4	-0.2
KHNJ	Kahnooj	1.32	359	*e*Pg	Pb	22 09 27.9	-2.2
KHNJ				*e*Sg	Sn	22 09 46.3	-1.1
SHME	Shamm	1.54	248	*e*P	Pn	22 09 33.7	+0.8
	SNR=76						
SHME				S	Sn	22 09 57.0	+4.0
GENO	Geno	1.59	299	*e*Pg	Pn	22 09 34.5	+0.8
GENO				IAMB	IAmb	22 10 05.5	
	comp=Z,0.0nm,0.4s						
BNDS	Bandar-Abbas	1.59	299	AML	AML	22 09 54.8	
	comp=E,2µm,0.4s						
MDH	Madha	1.85	225	*e*P	Pn	22 09 35.7	-1.3
	SNR=33						
MDH				S	Sn	22 09 59.2	-1.3
MSFE	Esma-Masafi	1.90	229	*e*P	Pn	22 09 36.8	-1.0
	SNR=32						
UMQ	Umm Al-Quwin	2.16	240	P	Pn	22 09 42.3	+0.9
UOSS	Minazif	2.17	220	*e*Pn	Pn	22 09 39.7	-1.8
UOSS	Minazif	2.17	220	*e*P	Pn	22 09 39.7	-1.8
	SNR=33						
HATD	Hatta, Dubai	2.30	219	*e*P	Pn	22 09 41.5	-1.8
	SNR=26						
NAZ	Nazwa, Dubai	2.48	229	*e*P	Pn	22 09 46.5	+0.7
	SNR=32						
CHBR	Chabahar	2.67	112	*e*Pn	Pn	22 09 50.0	+1.6
CHBR	Chabahar	2.67	112	*e*Pn	Pn	22 09 50.8	+2.4
CHBR	Chabahar	2.67	112	Pn	Pn	22 09 50.8	+2.4
FAQ	Al Faqa, Dubai	2.69	226	Pg	Pn	22 09 50.7	+2.1
ALNE	Al Ain	3.13	215	*e*Pg	Pn	22 09 56.3	+1.6
	SNR=17						
NGRK	Negar Kerman	3.13	344	*e*Pn	Pn	22 09 56.4	+1.3
NGRK				IAMB	IAmb	22 10 45.7	
	comp=Z,0.0nm,0.5s						
CHMN	Cheshme madani	3.23	357	*e*Pn	Pn	22 09 59.0	+2.7
CHMN				IAMB	IAmb	22 10 54.7	
	comp=Z,0.0nm,0.5s						
KRBR	Kerman	3.45	346	*e*Pn	Pn	22 09 59.1	-0.3
KRBR	Kerman	3.45	346	AML	AML	22 11 03.4	
	comp=N,279nm,0.4s						
KRBR				AML	AML	22 11 06.1	
	comp=E,340nm,0.6s						
KRBR	Kerman	3.45	346	Pn	Pn	22 09 59.1	-0.3
TVBK	TV Kerman	3.46	346	*e*Pn	Pn	22 10 02.2	+2.7
TVBK				IAMB	IAmb	22 11 09.9	
	comp=Z,0.0nm,0.7s						
WSAR	Wadi Sarin	3.47	166	P	Pn	22 09 58.8	-0.5
	comp=Z,18nm,0.3s,baz=6.8,slow=5.6,SNR=155						
WSAR				S	Sn	22 10 37.6	-2.9
	comp=Z,37nm,0.3s,baz=83,slow=20,SNR=13						
KHGB	Koh Gabri	3.90	344	*e*Pn	Pn	22 10 08.3	+2.9
KHGB				IAMB	IAmb	22 11 18.5	
	comp=Z,0.0nm,0.6s						
ZHSF	Zahedan	4.01	41	*e*Pn	Pn	22 10 07.0	+0.1
ZHSF				*e*Sg	Sb	22 11 06.0	+1.4
ZHSF	Zahedan	4.01	41	*e*Pn	Pn	22 10 07.5	+0.6
ZHSF	Zahedan	4.01	41	Pn	Pn	22 10 07.5	+0.6
ZHSF				Sg	Sb	22 11 06.8	+2.2
JHRM	Jahrom	4.14	298	*e*Pn	Pn	22 10 10.6	+1.9
GHIR	Ghir-Karzin	4.53	292	*e*Pn	Pn	22 10 14.0	-0.1
GHIR	Ghir-Karzin	4.53	292	*e*Pn	Pn	22 10 14.9	+0.8
GHIR	Ghir-Karzin	4.53	292	Pn	Pn	22 10 14.8	+0.8
IPAR	Pars	5.23	309	*e*Pn	Pn	22 10 25.0	+1.1
IBAF	Bafgh	5.30	340	*e*Pn	Pn	22 10 25.2	+0.6
BSRN	Basiran	5.46	13	*e*Pn	Pn	22 10 26.7	-0.1
BSRN	Basiran	5.46	13	Pn	Pn	22 10 26.7	-0.1
IMEH	Mehriz	5.48	331	*e*Pn	Pn	22 10 27.7	+0.5
IKOO	Kooshah	5.88	11	*e*Pn	Pn	22 10 33.2	+0.4
IKAZ	Kazeroun	6.08	302	*e*Pn	Pn	22 10 35.1	-0.4
ITEG	Tejag	6.31	8	*e*Pn	Pn	22 10 39.5	+0.9
ISAD	Sadrabad	6.35	327	*e*Pn	Pn	22 10 40.1	+0.9
YZKH	Yazd	6.36	335	*e*Pn	Pn	22 10 39.5	+0.3
YZKH	Yazd	6.36	335	Pn	Pn	22 10 39.5	+0.3
IRAM	Ramesheh	6.97	319	*e*Pn	Pn	22 10 47.4	-0.2
TKDS	Koohdasht(Taba	6.99	356	*e*Pn	Pn	22 10 50.1	+2.3
ANAR	Anarak	7.41	333	*e*Pn	Pn	22 10 53.9	+0.3
IGAR	Gharneh	7.60	321	*e*Pn	Pn	22 10 56.1	-0.2
IZEF	Zefreh	7.82	324	*e*Pn	Pn	22 10 59.3	0.0
ZNGN	Zangian	8.12	314	*e*Pn	Pn	22 11 04.0	+0.4
ROKH	ROKH	8.16	316	*e*Pn	Pn	22 11 03.6	-0.4
JHBN	Jahan bin	8.32	314	*e*Pn	Pn	22 11 05.6	-0.6
IPIR	Pirpir	8.48	317	*e*Pn	Pn	22 11 08.0	-0.4
GEYT	Alibeck	11.28	2	P	Pn	22 11 49.6	+3.0
	comp=Z,0.1nm,0.3s,baz=196,slow=10.0,SNR=3.6						
GEYT				LR	LR	22 17 06.5	
	comp=Z,85nm,21.0s,baz=185,slow=42						
GYA0B	ALIBECK ARRAY	11.28	2	*e*P	Pn	22 11 50.6	+4.1
RAYN	Ar Rayn	11.51	257	*e*Pn	Pn	22 11 47.9	-1.9
RAYN				*e*Sn	Sn	22 13 50.9	-7.6
NIL	Nilore	15.13	59	*e*Pn	Pn	22 12 38.4	-0.7
	comp=Z,8.3nm,0.9s						
CHGR	Chuyangaron	15.36	36	*e*Pn	Pn	22 12 42.3	+0.1
	comp=Z,6.8nm,1.0s						
ASF	Jabal al Asfar	18.97	292	P	P	22 13 26.8	-0.1
	comp=Z,0.4nm,0.3s,baz=55,slow=5.6,SNR=3.1						
KK31	Karatay Array	19.46	29	*e*P	Pn	22 13 35.4	+2.1
	comp=Z,3.6nm,0.7s						
KKAR	Karatay Array	19.46	29	*e*P	Pn	22 13 35.4	+2.1
	comp=Z,3.6nm,0.7s						
EIL	Elat	20.31	284	P	P	22 13 42.6	+1.1
	comp=Z,4.2nm,0.7s,baz=19,slow=10,SNR=5.1						
MMAI	Mount Meron Ar	20.38	294	P	P	22 13 44.2	+2.0
	comp=Z,3.1nm,0.7s,baz=99,slow=15,SNR=7.1						
CSS	Mathiatis	22.51	298	*e*P	P	22 14 05.9	+0.7
	comp=Z,7.3nm,0.9s						
ABKAR	Akbulak array	22.66	4	*e*P	P	22 14 07.0	+0.4
	comp=Z,3.8nm,0.8s						
AKTO	Aktyubinsk	23.77	0	P	P	22 14 18.0	+0.2
	comp=Z,3.3nm,0.6s,baz=168,slow=9.4,SNR=11						
BR131	Keskin Array S	23.94	309	*e*P	P	22 14 21.1	+1.3
	comp=Z,3.3nm,0.6s						
BRTR	Keskin Array B	23.94	309	P	P	22 14 20.4	+0.7
	comp=Z,3.2nm,0.7s,baz=129,slow=10.0,SNR=24						
BRTR				LR	LR	22 26 33.3	
	comp=Z,56nm,18.0s,baz=102,slow=43						
MDUB	Mudurnu	25.95	309	*e*P	P	22 14 39.1	+1.0
	comp=Z,48nm,0.7s						
MKAR	Makanchi Array	27.96	38	P	P	22 14 55.9	0.0
	comp=Z,0.2nm,0.5s,baz=216,slow=7.1,SNR=3.5						
BVAR	Borovoye Array	28.01	16	P	P	22 14 55.7	-0.6
	comp=Z,0.6nm,0.4s,baz=187,slow=5.0,SNR=6.9						
BRVK	Borovoye	28.02	16	*e*P	P	22 14 53.7	-2.6
	comp=Z,1.4nm,0.8s						
KURBB	Kurchatov Arra	28.76	28	P	P	22 15 02.3	-0.6
	comp=Z,2.0nm,0.2s,baz=230,slow=8.5,SNR=3.3						
AKASG	Malin Array Be	32.41	326	P	P	22 15 34.4	-0.8
	comp=Z,0.7nm,0.4s,baz=129,slow=8.5,SNR=6.0						
AKASG				LR	LR	22 31 54.6	
	comp=Z,42nm,21.6s,baz=205,slow=42						
ZALV	Zalesovo Beam	33.83	29	P	P	22 15 46.2	-1.4
	comp=Z,1.3nm,0.4s,baz=242,slow=11,SNR=5.1						
KMBO	Kilima Mbogo	33.93	219	LR	LR	22 29 20.7	
	comp=Z,55nm,19.1s,baz=160,slow=36						
KOLS	Kolonicke sedl	35.32	319	*e*P	P	22 16 01.7	+1.1
VYHS	Vyhne	37.23	316	*e*P	P	22 16 19.5	+2.6
OJC	Ojcow	37.33	319	*e*P	P	22 16 17.7	0.0
	comp=Z,4.4nm,0.8s						
CMAR	Chiang Mai Arr	38.78	93	LR	LR	22 34 47.3	
	comp=Z,33nm,21.1s,baz=265,slow=40						
MOA	Molln	39.91	314	*i* pP	P	22 16 39.4	0.0
	comp=Z,3.5nm,0.9s						
GEC2	GERESS Array S	40.56	315	*e*P	P	22 16 45.5	+0.7
	comp=Z,1.9nm,0.9s						
GERES	GERESS Array B	40.56	315	P	P	22 16 44.1	-0.7
	comp=Z,1.0nm,0.7s,baz=108,slow=8.6,SNR=12						
KHC	Kasperske Hory	40.72	315	*e*P	P	22 16 45.7	-0.4
	comp=Z,1.2nm,0.6s						
KHC	Kasperske Hory	40.72	315	*e*P	P	22 16 45.6	-0.5
FINES	FINESS Array B	40.80	337	P	P	22 16 45.9	-0.6
	comp=Z,1.6nm,0.5s,baz=132,slow=10,SNR=8.0						
WTTA	Wattenberg	41.48	312	*i* P	P	22 16 51.9	-0.7
	comp=Z,1.9nm,0.5s						
SQTA	Sankt Quirin	41.76	312	*i* P	P	22 16 54.0	-0.8
	comp=Z,3.1nm,0.5s						
FETA	Feichten	42.04	312	*i* P	P	22 16 56.6	-0.6
	comp=Z,3.6nm,0.7s						
DAVA	Damuels	42.66	312	*i* P	P	22 17 01.3	-0.8
	comp=Z,5.3nm,0.5s						
SONM	Songino Array	43.30	48	P	P	22 17 06.5	-0.9
	comp=Z,0.2nm,0.3s,baz=258,slow=6.9,SNR=2.2						
SONM				LR	LR	22 39 12.2	
	comp=Z,39nm,19.5s,baz=256,slow=42						
NOA	NORSAR Array B	46.44	331	P	P	22 17 32.5	+0.5
	comp=Z,0.4nm,0.7s,baz=115,slow=7.8,SNR=3.6						
NOA				LR	LR	22 39 07.0	
	comp=Z,17nm,20.9s,baz=215,slow=39						
ARCES	ARCESS Array B	46.88	345	P	P	22 17 34.7	-0.6
	comp=Z,1.4nm,0.7s,baz=129,slow=8.3,SNR=5.1						
ESDC	Sonseca Array	52.34	301	P	P	22 18 16.4	-1.1
	comp=Z,0.2nm,0.4s,baz=77,slow=7.5,SNR=3.8						
TORD	Torodi Ar. Bea	54.00	267	P	P	22 18 28.2	-1.8
	comp=Z,1.3nm,0.6s,baz=72,slow=7.4,SNR=18						
KSRS	Korea Array	59.24	61	LR	LR	22 48 48.0	
	comp=Z,13nm,18.2s,baz=250,slow=40						
BOSA	Boshof	63.16	212	LR	LR	22 48 58.6	
	comp=Z,34nm,18.5s,baz=334,slow=38						

DDA **31** *22:15:52.8,37°.37N×37°.15E,h7^{km}±1^{km},ML2.8*

ISK **31** *22:15:52.5,37°.38N×37°.16E,h8^{km},ML1.9/7*

ISCJB **31** *22:15:53.4±0.5,37°.36N±0°.04×37°.14E±0°.04,h11^{km},Error ellipse: s-maj=5.8km s-min=4.0km az=21.9*

ISC 31 22:15:53.0±0.9,**37°.38N**±0°.04×**37°.17E**±0°.03,**h11**^{km}**,n16,** σ**0^{s}.47**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	Gaziantep	0.20	171	PG	Pg	22 15 57.3	-0.1
GAZ				SG	Sg	22 16 00.6	+0.2
HCB	Kahramanmara	0.21	262	*i* P	Pg	22 15 57.8	+0.2
HCB				IAML_P			
	comp=Z,8µm,0.1s						
KMRS	Kahramanmaras	0.25	301	PG	Pg	22 15 57.9	-0.4
KMRS				SG	Sg	22 16 01.7	-0.1
GZT	Gaziantep	0.31	93	*i* P	Pb	22 16 00.3	-0.4
GZT				*i* S	Sb	22 16 05.1	-0.8
GZT				IAML_P			
	comp=Z,3µm,0.2s						
KAMA	Osmaniye	0.45	245	*i* P	Pg	22 16 01.7	-0.1
KAMA				IAML_P			
	comp=Z,8µm,0.1s						
KUZU	Kuzuini	0.61	187	*i* P	Pb	22 16 05.9	+0.2
KUZU				IAML_P			
	comp=Z,5µm,0.2s						
ANDN	Andirin	0.69	288	*i* P	Pg	22 16 06.1	-0.3
ANDN				IAML_P			
	comp=Z,368nm,0.2s						
ATAB	Bozova	0.90	84	*i* P	Pn	22 16 11.3	-0.3
SAIM	ADANA	1.05	305	*i* P	Pn	22 16 13.7	-0.2
SAIM				IAML_P			
	comp=Z,1µm,0.3s						
AKCD	Akcadag	1.09	33	*i* P	Pn	22 16 15.7	+1.3
CEYT	Ceyhan	1.20	253	PN	Pg	22 16 15.9	-0.1
DARE	Darende-Malaty	1.22	12	PN	Pb	22 16 16.2	0.0
SURC	SANLIURFA_SURC	1.25	113	*i* P	Pg	22 16 17.1	+0.1
SURC				IAML_P			
	comp=Z,280nm,0.1s						
URFA	Urfa	1.31	87	PN	Pb	22 16 17.9	+0.1
BNN	Bunyan	1.81	325	PN	Pn	22 16 24.7	+0.5
SVRC	Sivrice-ELAZID	1.96	59	PN	Pn	22 16 27.0	+0.6

GII **31** *22:25:27.7±0.0,35°.70N×26°.34E,h25^{km},MD3.4/3*

HLW **31** *22:25:29.4,35°.68N×26°.34E,h31^{km}±19^{km},Ml3.8*

DDA **31** *22:25:32.9,36°.06N×26°.48E,h4^{km}±2^{km},ML3.3*

ATH **31** *22:25:32.7,35°.73N×26°.28E,h61^{km}±4^{km},ML3.3/6,Error ellipse: s-maj=4.9km s-min=1.1km az=161.0*

ISK **31** *22:25:32.6,35°.78N×26°.26E,h27^{km},ML3.1/21*

THE **31** *22:25:34.4,35°.72N×26°.29E,h50^{km}±3^{km},ML3.2/16,Error ellipse: s-maj=3.0km s-min=0.5km az=152.0*

ISC 31 22:25:33.4±1.1,**35°.73N**±0°.02×**26°.28E**±0°.02,**h21**^{km}±4^{km}, **n130,**σ**1^{s}.09**/143,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.61	185	PG	Pb	22 25 46.7	+1.2
ZKR				SG	Sn	22 25 56.8	+0.6
ZKR	Zakros	0.61	185	P	Pn	22 25 47.0	0.0
ZKR				S	Sb	22 25 55.6	+1.8
	810nm,0.3s						
ZKR	Zakros	0.61	185	P	Pn	22 25 47.0	0.0
ZKR				S	Sn	22 25 56.9	+0.7
ZKR				AML	AML	22 25 60.0	
	comp=E,2472µm,0.5s						
ZKR				AML	AML	22 26 00.2	
	comp=N,672µm,0.2s						
NPS	Neapolis	0.71	230	P	Pb	22 25 47.9	+0.7
NPS				S	Sn	22 25 58.1	-0.6
	comp=N,2µm,0.2s						
NPS	Neapolis	0.71	230	P	Pb	22 25 47.9	+0.7
NPS				S	Sn	22 25 58.3	-0.4
NPS				AML	AML	22 25 58.9	
	comp=N,3605µm,0.2s						
NPS				AML	AML	22 25 59.1	
	comp=E,5712µm,0.3s						
KARP	Karpathos	0.74	104	PG	Pb	22 25 48.0	+0.3
KARP				SG	Sn	22 25 59.2	-0.2
KARP	Karpathos	0.74	104	P	Pb	22 25 48.3	+0.7

KARP				S	**Sb**	**22 25 58.8**	**+1.4**
	comp=E,2µm,0.2s						
KARP	**Karpathos**	**0.74**	**104**	P	**Pb**	**22 25 48.3**	**+0.7**
KARP				S	**Sn**	**22 25 59.2**	**-0.2**
KARP				AML	AML	22 25 59.8	
	comp=N,3999µm,0.4s						
KARP				AML	AML	22 26 00.1	
	comp=E,3916µm,0.2s						
ANAF	**Anafi Island**	**0.75**	**327**	P	**Pn**	**22 25 48.9**	**+0.1**
ANAF				S	**Sn**	**22 25 59.6**	**+0.1**
LAST	**Lasithi**	**0.86**	**229**	P	**Pb**	**22 25 49.8**	**+0.1**
LAST				S	**Sb**	**22 26 01.6**	**+0.7**
	comp=E,675nm,0.3s						
LAST	**Lasithi**	**0.86**	**229**	P	**Pb**	**22 25 49.8**	**+0.1**
LAST				S	**Sb**	**22 26 01.3**	**+0.4**
SAP1	**Santorini-Akro**	**0.95**	**312**	P	**Pn**	**22 25 51.6**	**0.0**
SAP1				S	**Sn**	**22 26 04.6**	**+0.1**
SAP1	**Santorini-Akro**	**0.95**	**312**	P	**Pn**	**22 25 51.5**	**-0.1**
SAP2K	**Karterados**	**0.96**	**316**	P	**Pn**	**22 25 51.5**	**-0.1**
SAP2K				S	**Sn**	**22 26 04.8**	**+0.1**
SAP2K	**Karterados**	**0.96**	**316**	P	**Pn**	**22 25 51.5**	**-0.1**
THR3	**Thira Island,**	**0.98**	**314**	P	**Pn**	**22 25 51.7**	**-0.3**
THT2	**Imerovigli**	**0.99**	**316**	P	**Pn**	**22 25 52.1**	**0.0**
THT2				S	**Sn**	**22 26 05.6**	**+0.1**
	comp=E,1µm,0.2s						
THR5	**Thira Island,**	**1.02**	**313**	P	**Pn**	**22 25 52.3**	**-0.2**
CMBO	**Columbo, Santo**	**1.02**	**317**	P	**Pb**	**22 25 52.2**	**-0.2**
CMBO				S	**Sn**	**22 26 05.9**	**-0.3**
	comp=E,3µm,0.3s						
CMBO	**Columbo, Santo**	**1.02**	**317**	P	**Pn**	**22 25 52.3**	**-0.2**
CMBO				S	**Sn**	**22 26 06.0**	**-0.3**
CMBO				AML	AML	22 26 07.1	
	comp=N,6960µm,0.3s						
CMBO				AML	AML	22 26 10.3	
	comp=E,6267µm,0.4s						
SAP3	**Santorini-Thir**	**1.03**	**313**	P	**Pn**	**22 25 52.4**	**-0.3**
SAP3	**Santorini-Thir**	**1.03**	**313**	P	**Pn**	**22 25 52.5**	**-0.3**
IACM	**Heraklion**	**1.07**	**247**	P	**Pn**	**22 25 53.3**	**+0.1**
KSTL	**Kastelli Herak**	**1.07**	**247**	P	**Pn**	**22 25 50.8**	**-2.4**
KSTL				S	**Sb**	**22 26 03.2**	**-3.6**
NISR	**Nisiros**	**1.12**	**38**	P	**Pn**	**22 25 52.5**	**-1.4**
NISR				S	**Sn**	**22 26 08.6**	**0.0**
	comp=E,1µm,0.2s						
NISR	**Nisiros**	**1.12**	**38**	P	**Pn**	**22 25 53.5**	**-0.4**
AMGA	**Amorgos Island**	**1.14**	**344**	P	**Pn**	**22 25 53.5**	**-0.7**
AMGA				S	**Sb**	**22 26 08.3**	**-0.6**
	comp=E,1µm,0.2s						
AMGA	**Amorgos Island**	**1.14**	**344**	P	**Pn**	**22 25 53.5**	**-0.7**
AMGA				S	**Sb**	**22 26 08.3**	**-0.6**
AMGA				AML	AML	22 26 09.1	
	comp=E,1663µm,0.2s						
AMGA				AML	AML	22 26 09.6	
	comp=N,2713µm,0.2s						
IDI	**Anoyia**	**1.21**	**249**	PN	**Pn**	**22 25 54.3**	**-1.0**
IDI				SN	**Sb**	**22 26 09.5**	**-1.4**
IDI	**Anoyia**	**1.21**	**249**	P	**Pn**	**22 25 54.2**	**-1.0**
IOSP	**Ios island**	**1.27**	**321**	P	**Pn**	**22 25 55.3**	**-0.7**
IOSP				S	**Sn**	**22 26 11.4**	**-1.1**
	comp=N,3µm,0.3s						
IOSP	**Ios island**	**1.27**	**321**	P	**Pn**	**22 25 55.4**	**-0.6**
SIVA	**Sivas**	**1.39**	**240**	P	**Pn**	**22 25 57.4**	**-0.2**
SIVA				S	**Sn**	**22 26 15.3**	**-0.1**
	comp=N,530nm,0.5s						
SIVA	**Sivas**	**1.39**	**240**	P	**Pn**	**22 25 57.6**	**0.0**
SIVA				AML	AML	22 26 20.4	
	comp=N,897µm,0.3s						
SIVA				AML	AML	22 26 22.0	
	comp=E,1262µm,0.4s						
TMBK	**Timbaki Herakl**	**1.40**	**242**	P	**Pn**	**22 25 57.5**	**-0.2**
TMBK				S	**Sn**	**22 26 15.4**	**-0.1**
DAT	**Datca**	**1.45**	**46**	PN	**Pn**	**22 25 57.2**	**-1.3**
DAT				SN	**Sn**	**22 26 15.1**	**-1.9**
DAT	**Datca**	**1.45**	**46**	*i* P	**Pn**	**22 25 58.0**	**-0.6**
DAT				IAML_P			
	comp=Z,587nm,0.2s						
APE	**Apeiranthos**	**1.47**	**336**	PN	**Pn**	**22 25 57.6**	**-1.1**
APE	**Apeiranthos**	**1.47**	**336**	P	**Pn**	**22 25 58.0**	**-0.7**
APE				S	**Sn**	**22 26 16.4**	**-0.9**
	comp=Z,302nm,0.2s						
APE	**Apeiranthos**	**1.47**	**336**	P	**Pn**	**22 25 58.0**	**-0.7**
PRNS	**Prines Rethymn**	**1.49**	**256**	P	**Pn**	**22 25 58.9**	**-0.1**
DATC	**Datca-Mugla**	**1.52**	**47**	PN	**Pn**	**22 25 58.3**	**-1.1**
BODT	**Bodrum**	**1.57**	**32**	PN	**Pn**	**22 25 58.8**	**-1.3**
ARG	**Arkhangelos**	**1.58**	**71**	PN	**Pn**	**22 25 59.4**	**-0.8**
ARG	**Arkhangelos**	**1.58**	**71**	P	**Pn**	**22 25 59.4**	**-0.8**
ARG				S	**Sn**	**22 26 18.3**	**-1.7**
	comp=Z,770nm,0.3s						
ARG	**Arkhangelos**	**1.58**	**71**	P	**Pn**	**22 25 59.3**	**-0.8**
VAM	**Vamos**	**1.72**	**260**	P	**Pn**	**22 26 01.1**	**-1.1**
VAM	**Vamos**	**1.72**	**260**	P	**Pn**	**22 26 01.0**	**-1.1**
MHLO	**Agia Marina, M**	**1.79**	**303**	P	**Pn**	**22 26 03.1**	**0.0**
MHLO				S	**Sn**	**22 26 24.8**	**-0.5**
	comp=Z,565nm,0.6s						
MHLO	**Agia Marina, M**	**1.79**	**303**	P	**Pn**	**22 26 03.2**	**0.0**
MHLA	**Plaka, Milos I**	**1.81**	**305**	P	**Pn**	**22 26 03.3**	**-0.1**
CHAN	**Chania**	**1.83**	**264**	P	**Pn**	**22 26 02.8**	**-0.9**
MRSB	**Marmaris-Mugla**	**1.84**	**57**	PN	**Pn**	**22 26 02.9**	**-0.9**
IMMV	**Iera Moni Meta**	**1.89**	**263**	PN	**Pn**	**22 26 03.8**	**-0.7**
IMMV	**Iera Moni Meta**	**1.89**	**263**	P	**Pn**	**22 26 03.6**	**-0.8**
IMMV				S	**Sn**	**22 26 26.6**	**-1.1**
	comp=Z,185nm,0.3s						
IMMV	**Iera Moni Meta**	**1.89**	**263**	P	**Pn**	**22 26 03.7**	**-0.8**
GVDS	**Gavdos**	**2.00**	**244**	P	**Pn**	**22 26 06.4**	**+0.5**
GVD	**Gavdhos**	**2.00**	**244**	PN	**Pn**	**22 26 05.7**	**-0.3**
GVD	**Gavdhos**	**2.00**	**244**	P	**Pn**	**22 26 05.9**	**-0.1**
GVD				S	**Sn**	**22 26 30.4**	**0.0**
	comp=Z,260nm,0.4s						
GVD	**Gavdhos**	**2.00**	**244**	P	**Pn**	**22 26 05.9**	**-0.1**
SMG	**Samos**	**2.03**	**13**	P	**Pn**	**22 26 05.3**	**-1.1**
SMG	**Samos**	**2.03**	**13**	P	**Pn**	**22 26 05.3**	**-1.1**
SERI	**Serifos**	**2.03**	**315**	P	**Pn**	**22 26 06.0**	**-0.4**
GCAM	**G?zelcaml?**	**2.11**	**21**	PN	**Pn**	**22 26 06.6**	**-0.9**
GCAM	**G?zelcaml?**	**2.11**	**21**	*i* P	**Pn**	**22 26 06.3**	**-1.3**
GCAM				IAML_P			
	comp=Z,783nm,0.1s						
YER	**Yerkesik**	**2.14**	**48**	PN	**Pn**	**22 26 07.1**	**-0.9**
TURN	**Turunc**	**2.20**	**58**	PN	Pn	22 26 03.6	-5.1
TURN	**Turunc**	**2.20**	**58**	*i* P	**Pn**	**22 26 04.2**	**-4.5**
TURN				*i* S	Sn	22 26 25.6	-10
TURN				IAML_P			
	comp=Z,3µm,0.2s						
DALY	**Dalyan (Mula)**	**2.21**	**60**	PN	**Pn**	**22 26 08.1**	**-0.7**
DALY	**Dalyan (Mula)**	**2.21**	**60**	*i* P	**Pn**	**22 26 08.9**	**+0.1**
DALY				IAML_P			
	comp=Z,1µm,0.1s						
AYDN	**Tasoluk**	**2.32**	**33**	*i* P	**Pn**	**22 26 10.8**	**+0.4**
AYDN				IAML_P			
	comp=Z,448nm,0.2s						
DGB	**zmir**	**2.37**	**12**	*i* P	**Pn**	**22 26 10.0**	**-1.1**
DGB				IAML_P			
	comp=Z,431nm,0.1s						
ANKY	**Antikythira Is**	**2.42**	**274**	P	**Pn**	**22 26 10.5**	**-1.3**
ANKY	**Antikythira Is**	**2.42**	**274**	P	**Pn**	**22 26 10.5**	**-1.3**
FETY	**Fethiye**	**2.44**	**67**	PN	**Pn**	**22 26 11.0**	**-1.1**
FETY	**Fethiye**	**2.44**	**67**	*i* P	**Pn**	**22 26 11.9**	**-0.3**
FETY				IAML_P			
	comp=Z,4µm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**2.56**	**30**	PN	**Pn**	**22 26 12.9**	**-1.0**
URLA	**Izmir**	**2.64**	**5**	PN	**Pn**	**22 26 13.7**	**-1.1**
CHOS	**Chios island**	**2.66**	**356**	PN	**Pn**	**22 26 13.9**	**-1.2**
CHOS	**Chios island**	**2.66**	**356**	P	**Pn**	**22 26 14.3**	**-0.8**
CHOS	**Chios island**	**2.66**	**356**	P	**Pn**	**22 26 14.3**	**-0.8**
KTHA	**Kythira Island**	**2.66**	**282**	P	**Pn**	**22 26 14.0**	**-1.0**
KTHA				S	**Sn**	**22 26 44.8**	**-1.9**
	comp=Z,122nm,0.4s						
KTHA	**Kythira Island**	**2.66**	**282**	P	**Pn**	**22 26 14.1**	**-1.0**
KTHR	**Kythira**	**2.71**	**282**	P	**Pn**	**22 26 14.6**	**-1.1**
KSL	**Kastellorizon**	**2.72**	**80**	P	**Pn**	**22 26 14.4**	**-1.4**
BLCB	**Balcova**	**2.72**	**13**	PN	**Pn**	**22 26 14.9**	**-1.0**
TAVA	**DENIZLI_Tavas**	**2.74**	**50**	*i* P	**Pn**	**22 26 16.6**	**+0.4**
TAVA				IAML_P			
	comp=Z,617nm,0.1s						
AKAS	**Kas**	**2.75**	**78**	*i* P	**Pn**	**22 26 15.4**	**-0.9**
VLI	**Veliai**	**2.88**	**291**	P	**Pn**	**22 26 17.0**	**-1.0**
VLI	**Veliai**	**2.88**	**291**	P	**Pn**	**22 26 17.2**	**-0.8**
VLY	**Voula,Athens**	**2.91**	**318**	P	**Pn**	**22 26 18.6**	**+0.1**
ATHU	**Athens Univers**	**3.00**	**319**	P	**Pn**	**22 26 19.8**	**+0.1**
KRND	**KRANIDI**	**3.01**	**304**	P	**Pn**	**22 26 20.2**	**+0.3**
DID	**Didima**	**3.02**	**307**	P	**Pn**	**22 26 20.0**	**-0.1**
DID	**Didima**	**3.02**	**307**	P	**Pn**	**22 26 20.0**	**-0.1**
GOLH	**Golhisar**	**3.04**	**59**	*i* P	**Pn**	**22 26 20.0**	**-0.5**
ELL	**Elmali**	**3.11**	**70**	PN	**Pn**	**22 26 20.7**	**-0.6**
EREA	**Eretria**	**3.28**	**326**	P	**Pn**	**22 26 24.0**	**+0.4**
AKUM	**Antalya-Kumluc**	**3.35**	**79**	*i* P	**Pn**	**22 26 23.7**	**-0.8**
KULA	**Kula-Manisa**	**3.37**	**34**	PN	**Pn**	**22 26 24.5**	**-0.4**
SIGR	**SIGRI**	**3.49**	**355**	P	**Pn**	**22 26 25.9**	**-0.6**
KORT	**Korkueli**	**3.52**	**68**	PN	**Pn**	**22 26 27.1**	**0.0**
KORT	**Korkueli**	**3.52**	**68**	*i* P	**Pn**	**22 26 26.4**	**-0.7**
KORT				IAML_P			
	comp=Z,79nm,0.1s						
VLX	**Vlachokerasia**	**3.54**	**299**	P	**Pn**	**22 26 27.0**	**-0.3**
TRIP	**Tripoli**	**3.69**	**300**	P	**Pn**	**22 26 29.4**	**+0.1**
ITM	**Ithomi**	**3.79**	**294**	P	**Pn**	**22 26 30.6**	**-0.1**
KLV	**Kalavryta, Ach**	**4.03**	**306**	P	**Pn**	**22 26 34.3**	**+0.3**
SKIA	**Skiathos**	**4.10**	**328**	P	**Pn**	**22 26 35.3**	**+0.4**
SLUM	**Salum**	**4.32**	**192**	P	**Pn**	**22 26 34.4**	**-3.5**
	baz=194						
SLUM				AMP		22 27 00.0	
	baz=194						
SLUM				S	Sn	22 27 18.3	-9.3
	baz=194						
MATC	**Matruh**	**4.44**	**169**	P	**Pn**	**22 26 35.7**	**-3.9**
	baz=170						
KEPZ	**Antalya-Kepez**	**4.46**	**73**	*i* P	**Pn**	**22 26 39.4**	**-0.4**
CSS	**Mathiatis**	**5.82**	**96**	Pn	Pn	22 26 52.7	-5.8
SWA2		**6.50**	**186**	P	**Pn**	**22 27 04.0**	**-3.9**
	baz=187						
SWA2				S	Sn	22 28 10.6	-11
	baz=187						
MMA0B	**Mount Meron ar**	**8.02**	**107**	Pn	Pn	22 27 21.8	-6.9
SUZ	**Suez**	**8.06**	**135**	P	Pn	22 27 23.8	-5.4
	baz=135						
GEM	**Giv'at Ha'Em**	**8.15**	**105**	Pn	Pn	22 27 23.3	-7.2
NATI	**Neve Ativ**	**8.19**	**105**	Pn	Pn	22 27 24.5	-6.5
NBNS	**Bani Suef**	**8.26**	**148**	S	Sn	22 28 52.5	-12
	baz=147						
KZIT	**Kziot**	**8.32**	**123**	Pn	Pn	22 27 26.7	-6.2
KSHT	**Keshet**	**8.35**	**106**	Pn	Pn	22 27 27.4	-5.9
HMDT	**Nahal Hemdat**	**8.43**	**112**	Pn	Pn	22 27 28.1	-6.2
YTIR	**Yattir**	**8.56**	**118**	Pn	Pn	22 27 29.8	-6.5
DSI	**Dead Sea**	**8.65**	**116**	Pn	Pn	22 27 30.7	-6.6
HFRF	**Wahat Farafira**	**8.73**	**168**	P	Pn	22 27 33.4	-5.0
	baz=168						
HFRF				AMP		22 29 00.0	
	baz=168						
HFRF				S	Sn	22 29 02.5	-14
	baz=168						
MZDA	**Masada**	**8.77**	**118**	Pn	Pn	22 27 32.9	-6.1
KRMI	**Paran Flat**	**9.04**	**126**	Pn	Pn	22 27 36.8	-5.9
PRNI	**Paran**	**9.08**	**124**	Pn	Pn	22 27 36.3	-6.9
MBRI	**Mt Berech**	**9.37**	**127**	Pn	Pn	22 27 41.5	-5.9
EIL	**Elat**	**9.48**	**127**	Pn	Pn	22 27 42.4	-6.3
VYHS	**Vyhne**	**13.89**	**339**	*e*PN	**Pn**	**22 28 51.3**	**+2.3**

IDC 31 22:50:35.8±3.7,**5°.50S**×**129°.72E**,**h295**^{km}±51^{km},**mb3.2**/1, **mb1 3.5**/4,**mb1mx3.0**/28,**mbtmp4.1**/4,**Error ellipse: s-maj=98.1km s-min=12.4km az=75.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.85**	**19**	P	Pn	22 51 52.6	+1.1
	8.3nm,0.3s,baz=224,slow=22,SNR=134						
SIJI				S	S	22 52 51.4	-0.9
	13nm,0.3s,baz=268,slow=23,SNR=23						
WRA	**Warramunga Arr**	**15.04**	**163**	P	P	22 53 53.9	+0.2
	0.6nm,0.3s,baz=332,slow=13,SNR=27						
WRA				S	S	22 56 36.8	-1.2
	0.2nm,0.3s,baz=336,slow=21,SNR=5.8						
ASAR	**Alice Springs**	**18.50**	**168**	P	P	22 54 33.0	+1.7
	0.8nm,0.3s,baz=346,slow=11,SNR=46						
ASAR				S	S	22 57 46.2	-0.5
	0.3nm,0.3s,baz=344,slow=21,SNR=8.4						
MKAR	**Makanchi Array**	**66.83**	**327**	P	P	23 00 56.3	0.0
	0.4nm,0.4s,baz=119,slow=7.7,SNR=11						

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*IDC **31** 23:10:08.6±0.6,41°.40S×174°.29E,h0^{km},mb4.4/7, mb1 4.5/9,mb1mx4.2/37,mbtmp4.3/9,ML3.8/2,MS3.6/6, Ms1 3.6/6,ms1mx3.3/15,Error ellipse: s-maj=21.1km s-min=13.0km az=130.0*

*BJI **31** 23:10:10.0±0.0,41°.63S×174°.38E,h13^{km},mb5.0/4, mB5.3/2,Ms5.0/1*

*ISCJB **31** 23:10:11.0±0.4,41°.61S±0°.05×174°.35E±0°.07,h28^{km}, mb4.5/15,MS3.8/6,Error ellipse: s-maj=9.6km s-min=4.0km az=38.3*

*NEIC **31** 23:10:11.5±0.0,41°.56S×174°.39E,h16^{km},mb4.7/9, ML4.9(WEL),After WEL.*

NEIC Felt at Wellington.

ISC 31 23:10:12.8±0.4,**41°.58S**±0°.05×**174°.38E**±0°.05,**h28**^{km},**n75,** σ1^{s}.**47**/72,**mb4.6**/15,**MS3.6**/6,**2C,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNZO	**South Karori**	**0.37**	**43**	*e*Pg	**Pb**	**23 10 19.4**	**-1.7**
KHZ	**Kahutara**	**1.04**	**217**	*e*Pn	**Pb**	**23 10 31.4**	**-0.8**
THZ	**Tophouse**	**1.12**	**260**	*e*Pn	**Pb**	**23 10 32.7**	**-0.9**
QRZ	**Quartz Range**	**1.58**	**298**	*e*Pn	**Pb**	**23 10 40.2**	**-1.2**
BFZ	**Birch Farm**	**1.68**	**58**	*e*Pn	**Pn**	**23 10 39.2**	**-1.1**
LTZ	**Lake Taylor**	**1.97**	**232**	*e*Pn	**Pn**	**23 10 44.3**	**-0.1**
CRLZ	**Canterbury Las**	**2.38**	**212**	*e*Pn	**Pn**	**23 10 48.2**	**-1.7**
OXZ	**Oxford**	**2.46**	**224**	*e*Pn	**Pn**	**23 10 49.6**	**-1.4**
MQZ	**McQueen's Vall**	**2.47**	**210**	*e*Pn	**Pn**	**23 10 49.2**	**-2.1**
BKZ	**Black Stump Fm**	**2.91**	**35**	*e*Pn	**Pn**	**23 10 56.4**	**-0.9**
HIZ	**Hauiti**	**3.09**	**7**	*e*Pn	**Pn**	**23 11 01.6**	**+1.9**
RPZ	**Rata Peaks**	**3.25**	**228**	Pn	**Pn**	**23 11 00.7**	**-1.2**
	10nm,0.3s,baz=216,slow=1.4,SNR=42						
RPZ				Pg	**Pb**	**23 11 10.1**	**+0.4**
	150nm,0.3s,baz=307,slow=2.4,SNR=90						
RPZ				Sn	**Sn**	**23 11 37.8**	**-1.9**
	42nm,0.3s,baz=322,slow=22,SNR=8.5						
RPZ				Lg	Lg	23 11 55.9	
	28nm,0.3s,baz=216,slow=19,SNR=7.6						
RPZ				LR	LR	23 12 17.4	
	comp=Z,318nm,21.3s,baz=48,slow=39						
RPZ	**Rata Peaks**	**3.25**	**228**	*e*Pn	**Pn**	**23 11 00.5**	**-1.5**
FOZ	**Fox Glacier**	**3.89**	**238**	*e*Pn	**Pn**	**23 11 11.0**	**+0.3**
URZ	**Urewera**	**3.93**	**33**	Pn	**Pn**	**23 11 09.5**	**-1.7**
	7.0nm,0.3s,baz=247,slow=3.6,SNR=38						
URZ				Sn	**Sn**	**23 11 56.0**	**-0.4**
	17nm,0.3s,baz=31,slow=17,SNR=4.3						
URZ				Lg	Lg	23 12 12.3	
	36nm,0.3s,baz=93,slow=19,SNR=3.0						
LBZ	**Lake Benmore**	**4.16**	**226**	*e*Pn	**Pn**	**23 11 14.2**	**-0.3**
ODZ	**Otahua Downs**	**4.40**	**217**	*e*Pn	**Pn**	**23 11 16.2**	**-1.6**
MXZ	**Matakaoa Point**	**5.03**	**38**	*e*Pn	**Pn**	**23 11 25.4**	**-1.1**
WKZ	**Wanaka**	**5.08**	**229**	*e*Pn	**Pn**	**23 11 26.2**	**-1.0**
MLZ	**Mavora Lakes**	**5.92**	**228**	*e*Pn	**Pn**	**23 11 37.4**	**-1.2**
MLZ				*e*Sn	**Sn**	**23 12 42.5**	**-3.0**
WHZ	**Wether Hill Ro**	**6.34**	**225**	*e*Pn	**Pn**	**23 11 42.2**	**-2.2**
OUZ	**Omahuta**	**6.38**	**354**	*e*Pn	**Pn**	**23 11 48.1**	**+3.1**
DCZ	**Deep Cove**	**6.53**	**231**	*e*Pn	**Pn**	**23 11 45.0**	**-1.9**
RAO	**Raoul Island**	**13.81**	**29**	LR	LR	23 18 58.8	
	comp=Z,544nm,18.6s,baz=126,slow=39						
DZM	**Mont Dzumac**	**20.57**	**339**	LR	LR	23 21 49.7	
	comp=Z,120nm,18.1s,baz=82,slow=34						
DZM	**Mont Dzumac**	**20.57**	**339**	*e*LR	LR	23 19 41.3	
	comp=Z,461nm,27.5s						
STKA	**Stephens Creek**	**27.86**	**280**	P	**P**	**23 15 59.4**	**-0.7**
	2.6nm,0.9s,baz=129,slow=11,SNR=3.8						
STKA				LR	LR	23 26 35.4	
	comp=Z,84nm,18.3s,baz=201,slow=36						
CTAO	**Charters Tower**	**32.04**	**303**	*e*P	**P**	**23 16 36.2**	**-1.0**
	7.6nm,1.0s						
TBI	**Tubuai**	**35.19**	**70**	*e*T	T	23 54 49.7	
	11nm,0.3s						
SBA	**Scott Base**	**36.52**	**183**	*e*P	**P**	**23 17 18.9**	**+3.7**
	3.9nm,1.0s						
AS31	**Alice Springs**	**38.08**	**285**	*e*P	**P**	**23 17 28.0**	**-1.2**
	1.7nm,0.5s						
ASAR	**Alice Springs**	**38.08**	**285**	P	**P**	**23 17 28.4**	**-0.8**
	2.9nm,0.4s,baz=123,slow=6.3,SNR=44						
ASAR				PcP	**PcP**	**23 19 42.3**	**-1.8**
	0.4nm,0.5s,baz=126,slow=3.7,SNR=4.1						
ASAR				LR	LR	23 33 36.7	
	comp=Z,99nm,18.2s,baz=141,slow=37						
PPT2	**Papeete2**	**39.00**	**63**	*e*LR	LR	23 28 20.2	
	comp=Z,59nm,24.8s						
WB2	**Warramunga Arr**	**40.12**	**290**	*e*P	**P**	**23 17 45.5**	**-0.8**
	16nm,0.6s						
WRA	**Warramunga Arr**	**40.13**	**290**	P	**P**	**23 17 45.6**	**-0.7**
	14nm,0.6s,baz=133,slow=7.6,SNR=102						
MTN	**Manton Dam**	**47.23**	**294**	*e*P	**P**	**23 18 42.9**	**-0.5**
	14nm,0.8s						
QSPA	**South Pole Qui**	**48.55**	**180**	P	**P**	**23 18 55.6**	**+2.3**
	9.0nm,0.9s,baz=29,slow=1.5,SNR=29						
QSPA	**South Pole Qui**	**48.55**	**180**	*e*P	**P**	**23 18 55.6**	**+2.3**
	12nm,0.9s						
MAW	**Mawson**	**59.65**	**204**	LR	LR	23 45 23.4	
	comp=Z,115nm,18.5s,baz=97,slow=35						
SYO	**Syowa Base**	**64.76**	**196**	⇑*e*P	**P**	**23 20 47.0**	**-1.1**
SYO	**Syowa Base**	**64.76**	**196**	⇑*e*pP	pP	23 20 53.0	-3.8
SNAA	**Sanae**	**67.04**	**181**	P	**P**	**23 21 03.8**	**+0.9**
SNAA	**Sanae**	**67.04**	**181**	*e*P	**P**	**23 21 03.8**	**+0.9**
	4.9nm,1.0s						
VNA3	**Neumayer Olymp**	**67.45**	**179**	P	**P**	**23 21 06.6**	**+1.2**
VNA1	**Neumayer--Stat**	**68.06**	**179**	P	**P**	**23 21 10.5**	**+1.3**
PLCA	**Paso Flores**	**79.15**	**136**	P	**P**	**23 22 16.6**	**+1.5**
	0.8nm,0.7s,baz=264,slow=9.2,SNR=4.0						
PLCA	**Paso Flores**	**79.15**	**136**	*e*P	**P**	**23 22 16.8**	**+1.8**
	5.1nm,1.1s						
NJ2	**Nanjing**	**89.34**	**316**	*e*P	**P**	**23 23 09.5**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSRS	**Korea Array**	**89.37**	**325**	P	**P**	**23 23 07.5**	**+1.1**
	1.2nm,0.7s,baz=138,slow=5.8,SNR=4.4						
CMAR	**Chiang Mai Arr**	**91.66**	**293**	P	**P**	**23 23 18.6**	**+1.0**
	0.6nm,0.4s,baz=160,slow=2.8,SNR=6.6						
KMI	**Kunming**	**93.72**	**300**	P	P	23 23 32.3	+5.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**99.83**	**317**	P	**Pdif**	**23 23 57.5**	**+3.1**
HHC				pmax	pmax		
	comp=Z,16nm,6.0s						
WMQ	**Urumqi**	**115.14**	**307**	*e*PKP	**PKiKP**	**23 28 50.8**	**-0.2**
WMQ				LR	LR		
	comp=N,220nm,29.2s						
WMQ				LR	LR		
	comp=E,230nm,28.9s						
YKA	**Yellowknife Ar**	**118.19**	**30**	PKP	**PKiKP**	**23 28 55.5**	**-0.6**
	1.8nm,0.7s,baz=255,slow=2.0,SNR=3.9						
YKB5	**Yellowknife Ar**	**118.19**	**30**	*e*PKPdf	**PKiKP**	**23 28 55.5**	**-0.6**
MK32	**Makanchi Array**	**119.94**	**308**	*e*PKPdf	**PKPdf**	**23 28 58.3**	**-1.8**
MKAR	**Makanchi Array**	**119.94**	**308**	PKP	**PKPdf**	**23 28 58.3**	**-1.8**
	0.3nm,0.5s,baz=154,slow=1.1,SNR=6.6						
ZALV	**Zalesovo Beam**	**122.00**	**316**	PKP	**PKiKP**	**23 29 03.7**	**-0.2**
	0.7nm,0.5s,baz=146,slow=3.1,SNR=4.1						
ZAA1	**Zalesovo Array**	**122.00**	**316**	*e*PKPdf	**PKiKP**	**23 29 03.7**	**-0.2**
KBZ	**Khabaz**	**144.65**	**290**	PKP	PKPbc	23 29 44.1	-1.0
	1.7nm,0.8s,baz=126,slow=6.3,SNR=3.7						
LIC	**Lamto**	**144.79**	**181**	*e*PKP2	**PKPdf**	**23 29 47.1**	**-0.4**
	33nm,0.7s						
KIC	**Kosan Boka**	**144.92**	**182**	*e*PKP2	**PKPdf**	**23 29 46.6**	**-1.1**
	16nm,0.6s						
TIC	**Toumodi**	**145.21**	**181**	*e*PKP2	**PKPdf**	**23 29 48.1**	**-0.1**
DBIC	**Dimbokro**	**145.23**	**181**	PKPbc	**PKPdf**	**23 29 48.5**	**+0.2**
	12nm,0.8s,baz=172,slow=4.1,SNR=14						
ARCES	**ARCESS Array B**	**147.65**	**340**	PKPbc	**PKPbc**	**23 29 52.3**	**-1.1**
	1.9nm,0.5s,baz=61,slow=2.6,SNR=16						
BR101	**Keskin Array S**	**150.33**	**280**	*e*PKPdf	**PKPbc**	**23 29 59.8**	**-1.5**
BRTR	**Keskin Array B**	**150.33**	**280**	PKPbc	**PKPbc**	**23 29 59.8**	**-1.5**
	0.8nm,0.8s,baz=121,slow=2.7,SNR=5.4						
TOA0	**Torodi Ar. Sit**	**150.96**	**195**	*e*PKPdf	**PKPdf**	**23 29 58.3**	**+0.7**
TOA0				*e*PKPbc	**PKiKP**	**23 30 03.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**150.96**	**195**	PKP	**PKPdf**	**23 29 58.7**	**+1.2**
	1.5nm,1.0s,baz=0.0,slow=0.3,SNR=5.4						
TORD				PKPbc	**PKiKP**	**23 30 03.4**	**-0.5**
	6.4nm,0.8s,baz=166,slow=2.7,SNR=46						
TOA1	**Torodi Ar. Sit**	**150.97**	**195**	*e*PKPbc	**PKiKP**	**23 30 03.4**	**-0.5**
FIA0	**FINESS Array S**	**152.44**	**327**	*e*PKPbc	**PKiKP**	**23 30 04.2**	**-1.3**
FINES	**FINESS Array B**	**152.44**	**327**	PKPbc	**PKiKP**	**23 30 04.2**	**-1.3**
	2.4nm,0.7s,baz=42,slow=3.1,SNR=19						
AKASG	**Malin Array Be**	**154.40**	**303**	PKPbc	**PKiKP**	**23 30 09.1**	**-0.8**
	0.4nm,0.4s,baz=90,slow=1.2,SNR=3.4						
VYHS	**Vyhne**	**161.43**	**300**	*e*PKP	PKPdf	23 30 18.0	+7.7
ESDC	**Sonseca Array**	**177.71**	**214**	PKP	**PKPdf**	**23 30 20.6**	**+0.2**
	0.5nm,0.8s,baz=9.5,slow=1.8,SNR=6.4						

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*IDC **31** 23:18:49.6±1.1,13°.91N×92°.51W,h0^{km},mb4.0/7, mb1 4.1/12,mb1mx3.8/47,mbtmp4.0/12,ML3.5/5,MS3.3/15, Ms1 3.3/15,ms1mx3.2/35,Error ellipse: s-maj=30.2km s-min=13.7km az=46.0*

*ISCJB **31** 23:18:52.7±0.8,14°.03N±0°.05×92°.63W±0°.04,h41^{km}±6^{km}, mb4.1/18,MS3.3/11,Error ellipse: s-maj=9.5km s-min=5.4km az=31.4*

*MEX **31** 23:18:55.9±0.4,14°.07N×92°.69W,h18^{km}±43^{km},MD4.1*

*NEIC **31** 23:18:56.0±0.0,14°.05N×92°.65W,h18^{km},mb4.1/28, MD4.1(MEX),After MEX.*

*GCG **31** 23:19:04.2±0.3,14°.23N×91°.73W,h19^{km}±11^{km},MD4.1*

ISC 31 23:18:53.3±1.9,**14°.06N**±0°.06×**92°.61W**±0°.05,**h26**^{km}±14^{km}, **n70,**σ1^{s}.**98**/68,**mb4.2**/18,**MS3.4**/11,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.91**	**22**	*e*Pg	**Pn**	**23 19 11.0**	**+0.6**
THIG				*e*Sn	**Sb**	**23 19 21.6**	**-0.6**
THIG		**0.91**	**22**	*i* P	**Pn**	**23 19 11.0**	**+0.6**
THIG				*i* S	**Sb**	**23 19 21.6**	**-0.6**
STG3	**Santiaguito 3,**	**1.20**	**57**	*e*P	**Pn**	**23 19 14.7**	**+0.1**
PCIG		**1.74**	**340**	*e*Pn	**Pn**	**23 19 21.5**	**-0.4**
PCIG		**1.74**	**340**	*e*P	**Pn**	**23 19 21.5**	**-0.4**
PCIG				*i* S	**Sn**	**23 19 41.2**	**-2.1**
FUG	**Fuego 3**	**1.76**	**77**	*e*P	**Pn**	**23 19 20.8**	**-1.5**
PCG	**Pacaya**	**1.97**	**80**	*e*P	**Pn**	**23 19 24.6**	**-0.8**
NBG	**Las Nubes**	**2.26**	**76**	*e*P	**Pn**	**23 19 29.2**	**-0.1**
CCIG	**Comitan**	**2.26**	**12**	*e*Pn	**Pb**	**23 19 32.9**	**-0.6**
CCIG				*e*Sn	**Sn**	**23 19 49.9**	**-6.5**
CCIG	**Comitan**	**2.26**	**12**	*e*P	**Pn**	**23 19 30.3**	**+1.1**
CCIG				*i* S	**Sn**	**23 19 56.5**	**+0.1**
APG	**El Apazote**	**2.28**	**65**	Pn	**Pn**	**23 19 29.7**	**+0.1**
	7.9nm,0.3s,baz=237,slow=9.6,SNR=58						
APG				Sn	**Sn**	**23 20 01.3**	**+4.3**
	12nm,0.3s,baz=339,slow=9.7,SNR=7.3						
APG				LR	LR	23 20 30.3	
	comp=Z,641nm,18.8s,baz=182,slow=44						
TGIG		**2.75**	**350**	*e*P	**Pn**	**23 19 36.3**	**+0.4**
TGIG				*i* S	**Sn**	**23 20 08.1**	**-0.2**
CMIG	**Matias Romero**	**3.73**	**324**	Pn	**Pn**	**23 19 49.9**	**+0.6**
	1.8nm,0.3s,baz=144,slow=10,SNR=14						
CMIG				Sn	**Sn**	**23 20 37.0**	**+4.6**
	6.5nm,0.3s,baz=85,slow=14,SNR=4.7						
CMIG				Lg	Lg	23 20 55.0	
	12nm,0.3s,baz=229,slow=22,SNR=5.5						
CMIG				LR	LR	23 21 12.7	
	comp=Z,101nm,21.7s,baz=146,slow=37						
CMIG	**Matias Romero**	**3.73**	**324**	*e*P	**Pn**	**23 19 49.7**	**+0.4**
CMIG				*i* S	**Sn**	**23 20 31.5**	**-0.9**
HUIG	**Huatulco**	**3.79**	**297**	*i* P	**Pn**	**23 19 49.2**	**-0.8**
HUIG				*e*S	**Sn**	**23 20 32.3**	**-1.5**
TGUH	**Tegucigalpa,Un**	**5.18**	**89**	*e*Pn	**Pn**	**23 20 08.2**	**-1.2**
ESTN	**Estel**	**6.14**	**98**	*e*P	Pn	23 20 19.4	-3.2
TLIG	**Tlapa**	**6.71**	**302**	*e*Pn	**Pn**	**23 20 33.0**	**+2.7**
TEIG	**Tepich**	**7.40**	**33**	Pn	**Pn**	**23 20 40.7**	**+0.9**
	3.6nm,0.3s,baz=40,slow=0.2,SNR=7.9						
TEIG				LR	LR	23 24 17.4	
	comp=Z,606nm,18.3s,baz=232,slow=44						
TEIG	**Tepich**	**7.40**	**33**	*e*Pn	**Pn**	**23 20 41.0**	**+1.3**
JTS	**Las Juntas de**	**8.37**	**116**	Pn	**Pn**	**23 20 50.4**	**-2.7**
	0.4nm,0.3s,baz=325,slow=16,SNR=3.1						
JTS	**Las Juntas de**	**8.37**	**116**	*e*Pn	**Pn**	**23 20 55.1**	**+2.0**
LNIG	**Linares**	**12.57**	**330**	*e*Pn	**Pn**	**23 21 49.0**	**-1.6**
BCIP	**Isla Barro Col**	**13.42**	**110**	*e*Pn	**Pn**	**23 22 06.0**	**+3.7**
061Z	**Ochoppi**	**16.08**	**41**	*e*Pn	**Pn**	**23 22 38.0**	**+0.2**
	86nm,1.0s						
TX31	**Lajitas Ar. Si**	**18.33**	**328**	*e*P	**Pn**	**23 23 08.6**	**+2.7**
	2.1nm,1.1s						
TXAR	**Lajitas Array**	**18.33**	**328**	P	**Pn**	**23 23 09.0**	**+3.0**
	0.0nm,0.3s,baz=153,slow=11,SNR=11						
TXAR				LR	LR	23 31 17.0	
	comp=Z,51nm,18.6s,baz=0.0,slow=40						
658A	**Bunnell**	**18.55**	**33**	*e*P	**P**	**23 23 05.6**	**-2.6**
	40nm,1.1s						
352A	**Blakely**	**18.72**	**21**	*e*P	**P**	**23 23 08.3**	**-1.7**
	8.2nm,0.9s						
147A	**Livingston**	**18.95**	**11**	*e*P	**Pn**	**23 23 14.8**	**+1.5**
	11nm,0.9s						
ABTX	**Abilene, Hawle**	**19.57**	**342**	*e*P	**Pn**	**23 23 20.8**	**0.0**
	8.0nm,1.0s						
152A	**Waverly Hall**	**19.88**	**20**	*e*P	**P**	**23 23 24.6**	**+1.9**
	7.9nm,0.9s						
ROSC	**El Rosal**	**20.22**	**115**	P	**P**	**23 23 26.9**	**0.0**
	5.4nm,0.4s,baz=325,slow=12,SNR=2.2						
ROSC	**El Rosal**	**20.22**	**115**	*e*P	**P**	**23 23 26.9**	**0.0**
	6.5nm,1.1s						
X40A	**Basin Creek Fa**	**20.34**	**359**	*e*P	**P**	**23 23 28.9**	**+1.2**
	2.8nm,1.0s						
154A	**Montrose**	**20.41**	**24**	*e*P	**P**	**23 23 30.3**	**+1.8**
	20nm,0.7s						

MIAR	**Mount Ida**	**20.42**	**358**	*e*P	**P**	**23 23 27.6**	**-0.9**
	6.1nm,1.1s						
UALR	**University of**	**20.63**	**1**	*e*P	Pn	23 23 33.0	-0.2
	6.3nm,0.8s						
WMOK	**Wichita Mounta**	**21.33**	**346**	*e*P	**P**	**23 23 37.9**	**-0.6**
	2.5nm,1.1s						
MSTX	**Muleshoe**	**21.86**	**337**	*e*P	**P**	**23 23 42.6**	**-1.7**
	9.2nm,1.0s						
SWET	**Sewanee**	**21.91**	**15**	*e*P	**P**	**23 23 40.7**	**-4.1**
	9.4nm,1.2s						
AMTX	**Amarillo**	**22.30**	**340**	*e*P	**P**	**23 23 46.6**	**-2.4**
	15nm,0.7s						
CLTN	**Cedars of Leba**	**22.65**	**13**	*e*P	**P**	**23 23 49.5**	**-3.1**
	2.5nm,0.8s						
TKL	**Tuckaleechee C**	**22.93**	**19**	P	**P**	**23 23 54.8**	**-0.7**
	3.7nm,0.8s,baz=188,slow=10,SNR=5.5						
TKL				LR	LR	23 34 07.3	
	comp=Z,196nm,19.7s,baz=198,slow=40						
V52A	**Sevierville**	**23.16**	**19**	*e*P	**P**	**23 23 56.0**	**-1.8**
	7.4nm,1.1s						
SIUC	**Southern Illin**	**23.75**	**7**	*e*P	**P**	**23 24 02.3**	**-1.4**
	11nm,0.9s						
ANMO	**Albuquerque**	**24.26**	**331**	LR	LR	23 35 20.7	
	comp=Z,59nm,19.2s,baz=124,slow=41						
U54A	**Nelsons Funny**	**24.37**	**21**	*e*P	**P**	**23 24 07.7**	**-1.8**
	8.0nm,0.9s						
WCI	**Wyandotte Cave**	**24.72**	**12**	*e*P	**P**	**23 24 11.9**	**-0.7**
	8.1nm,0.8s						
ATAH	**Atahualpa**	**25.34**	**145**	LR	LR	23 31 36.8	
	comp=Z,16nm,21.9s,baz=318,slow=30						
SJG	**San Juan**	**25.73**	**77**	LR	LR	23 34 43.5	
	comp=Z,52nm,21.4s,baz=238,slow=37						
Y12C	**Blythe**	**27.92**	**318**	*e*P	**P**	**23 24 39.4**	**-2.1**
	7.1nm,0.3s						
PDAR	**Pinedale Array**	**32.13**	**336**	P	**P**	**23 25 20.0**	**+1.0**
	0.3nm,0.3s,baz=119,slow=7.3,SNR=3.6						
REDW	**Red Top Meadow**	**33.14**	**335**	*e*P	**P**	**23 25 28.3**	**+0.5**
	11nm,1.1s						
NV01	**Mina Array Sit**	**33.26**	**322**	*e*P	**P**	**23 25 31.9**	**+3.0**
NVAR	**Mina Array Bea**	**33.26**	**322**	P	**P**	**23 25 31.9**	**+3.0**
	1.1nm,0.7s,baz=131,slow=8.2,SNR=8.7						
TPAW	**Teton Pass**	**33.29**	**335**	*e*P	**P**	**23 25 30.5**	**+1.3**
	3.8nm,0.9s						
MCMT	**McKenzie Canyo**	**35.16**	**335**	*e*P	**P**	**23 25 45.4**	**0.0**
PTGA	**Pitinga**	**35.51**	**112**	P	**P**	**23 25 46.7**	**-1.7**
	2.5nm,0.9s,baz=315,slow=6.8,SNR=5.5						
ULM	**Lac du Bonnet**	**36.19**	**356**	LR	LR	23 42 41.3	
	comp=Z,30nm,20.7s,baz=290,slow=39						
LPAZ	**La Paz**	**38.66**	**140**	LR	LR	23 42 57.4	
	comp=Z,38nm,18.7s,baz=314,slow=38						
SCHQ	**Schefferville**	**45.38**	**21**	LR	LR	23 47 13.5	
	comp=Z,164nm,19.5s,baz=222,slow=38						
YKA	**Yellowknife Ar**	**50.84**	**347**	P	**P**	**23 27 52.5**	**+1.0**
	3.2nm,0.7s,baz=150,slow=7.6,SNR=10						
YKB5	**Yellowknife Ar**	**50.84**	**347**	*e*P	**P**	**23 27 52.5**	**+1.0**
CFA	**Coronel Fontan**	**51.07**	**153**	P	**P**	**23 27 52.2**	**-1.6**
	1.5nm,0.6s,baz=34,slow=7.3,SNR=3.6						
PLCA	**Paso Flores**	**58.23**	**160**	LR	LR	23 48 21.0	
	comp=Z,46nm,19.8s,baz=208,slow=30						
ILAR	**Eielson Array**	**62.55**	**337**	LR	LR	00 01 13.4	
	comp=Z,38nm,18.6s,baz=160,slow=41						
NOA	**NORSAR Array B**	**84.38**	**28**	LR	LR	00 07 55.6	
	comp=Z,15nm,20.7s,baz=295,slow=35						
ARCES	**ARCESS Array B**	**86.27**	**18**	LR	LR	00 10 21.4	
	comp=Z,26nm,18.6s,baz=296,slow=36						
CMAR	**Chiang Mai Arr**	**145.74**	**340**	PKPbc	**PKPdf**	**23 38 30.8**	**+0.2**
	2.1nm,0.8s,baz=340,slow=3.7,SNR=10.0						

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*IDC **31** 23:19:38.6±1.9, 13°.36N×126°.37E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.5/35, mbtmp3.7/5, Error ellipse: s-maj=172.3km s-min=21.5km az=69.0*

*ISCJB **31** 23:19:42.2±0.9, 13°.19N±0°.06×125°.63E±0°.08, h28^{km}, mb3.7/5, Error ellipse: s-maj=11.7km s-min=8.8km az=175.3*

*MAN **31** 23:19:45.1, 13°.02N×125°.04E, h113^{km}, mb4.4, ML3.3, MS3.1*

ISC 31 23:19:43.8±1.1**, 13°.18N**±0°.07×**125°.56E**±0°.09**, h28^{km}, n8, σ1^{s}.51**/11**, mb3.7**/5**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	**Catarman**	**1.10**	**233**	*e*P	**Pb**	**23 20 04.1**	**-0.1**
CNP				*e*S	**Sb**	**23 20 19.9**	**+1.8**
PVCP	**Virac**	**1.43**	**287**	*e*P	**Pn**	**23 20 07.2**	**-0.6**
PVCP				*e*S	**Sn**	**23 20 23.9**	**-1.7**
PLP	**Palo**	**2.08**	**196**⇓	*e*P	**Pn**	**23 20 17.6**	**+0.8**
PLP				*e*S	**Sn**	**23 20 40.1**	**-1.8**
WRA	**Warramunga Arr**	**34.03**	**165**	P	**P**	**23 26 23.3**	**-2.3**
	0.6nm,0.7s,baz=347,slow=11,SNR=3.6						
ASAR	**Alice Springs**	**37.52**	**167**	P	**P**	**23 26 55.4**	**-0.2**
	0.7nm,0.7s,baz=354,slow=8.6,SNR=9.2						
SONM	**Songino Array**	**38.07**	**339**	P	**P**	**23 27 00.5**	**+0.4**
	0.3nm,0.4s,baz=148,slow=8.5,SNR=2.2						
MKAR	**Makanchi Array**	**49.31**	**322**	P	**P**	**23 28 31.9**	**+1.5**
	0.7nm,0.7s,baz=120,slow=7.7,SNR=7.4						
FINES	**FINESS Array B**	**83.01**	**331**	P	**P**	**23 32 06.6**	**+0.2**
	1.7nm,1.0s,baz=28,slow=6.9,SNR=3.4						

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*DRS **31** 23:31:50.7±0.0, 40°.75N×48°.53E, h10^{km}, ML3.0/3*

ISC 31 23:31:50.2±3.4**, 40°.6N**±0°.1×**48°.8E**±0°.1**, h8^{km}**±16^{km}**, n9, σ1^{s}.10**/17**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMR	**Kasumkent**	**1.09**	**332**	*i* Pg	**Pg**	**23 32 11.0**	**-0.3**
	98nm,0.3s						
KSMR				*e*Sg	**Sb**	**23 32 26.5**	**+0.5**
	425nm,0.4s						
AKT	**Akhty**	**1.17**	**316**	*e*Pg	**Pb**	**23 32 11.5**	**-1.3**
	19nm,0.1s						
AKT				*e*Sg	**Sg**	**23 32 26.5**	**-1.4**
	103nm,0.5s						
DRN	**Derbent**	**1.44**	**346**	*e*Pg	**Pg**	**23 32 18.7**	**+0.8**
	87nm,0.7s						
DRN				*e*Sg	**Sb**	**23 32 36.6**	**+0.8**
	198nm,0.6s						
URKR	**Urkarakh**	**1.77**	**330**	*e*Pg	**Pb**	**23 32 23.4**	**+0.4**
URKR				*e*Sg	**Sg**	**23 32 47.3**	**+0.3**
KMKR	**Kumukh**	**1.97**	**320**	*e*Pg	**Pg**	**23 32 28.0**	**0.0**
DDFL	**Dedoflistskaro**	**2.19**	**293**	P	**Pn**	**23 32 25.7**	**-1.4**
DDFL				S	**Sb**	**23 32 58.4**	**+1.0**
GNBR	**Gunib**	**2.23**	**322**	*e*Pg	**Pb**	**23 32 32.2**	**+1.3**
GNBR				*e*Sg	**Sg**	**23 33 01.0**	**-1.0**
LGD	**Lagodekhi**	**2.27**	**303**	P	**Pb**	**23 32 31.3**	**-0.3**
LGD				S	**Sg**	**23 33 04.3**	**+1.0**
TBLG	**Delisi**	**3.26**	**291**	P	**Pb**	**23 32 50.1**	**+1.7**
TBLG				S	**Sb**	**23 33 28.8**	**+0.6**

IDC 31 23:50:19.3±8.7**, 31°.85S**×**179°.76E, h327^{km}**±97^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.2**/24**, mbtmp4.1**/3**, Error ellipse: s-maj=104.5km s-min=42.5km az=2.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.75**	**198**	P	Pn	23 51 59.8	+1.8
	2.6nm,0.3s,baz=272,slow=5.2,SNR=17						
URZ				S	S	23 53 16.4	-1.8
	7.9nm,0.3s,baz=272,slow=23,SNR=24						
ASAR	**Alice Springs**	**41.14**	**270**	P	P	23 57 33.0	+0.2
	0.5nm,0.3s,baz=108,slow=7.9,SNR=13						
WRA	**Warramunga Arr**	**42.27**	**275**	P	P	23 57 41.5	-0.4
	1.3nm,0.3s,baz=106,slow=8.7,SNR=24						
FINES	**FINESS Array B**	**145.80**	**338**	PKPbc	PKPdf	00 09 18.4	0.0
	2.5nm,0.7s,baz=63,slow=3.4,SNR=5.6						

IDC 31 23:54:11.8±31.0**, 22°.54N**×**143°.62E, h350^{km}**±297^{km}**, mb3.1**/5**, mb1 3.2**/5**, mb1mx2.8**/52**, mbtmp3.8**/5**, Error ellipse: s-maj=83.1km s-min=60.9km az=175.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**54.43**	**312**	P	P	00 03 03.8	-0.1
	0.1nm,0.3s,baz=92,slow=8.7,SNR=3.3						
KURBB	**Kurchatov Arra**	**57.19**	**317**	P	P	00 03 22.9	-0.3
	0.8nm,0.4s,baz=92,slow=7.8,SNR=16						
BVAR	**Borovoye Array**	**62.30**	**319**	P	P	00 03 58.1	+0.4
	0.7nm,0.4s,baz=116,slow=6.7,SNR=4.1						
NVAR	**Mina Array Bea**	**82.30**	**52**	P	P	00 05 55.5	0.0
	0.4nm,0.6s,baz=289,slow=5.6,SNR=3.8						
FINES	**FINESS Array B**	**82.59**	**335**	P	P	00 05 56.0	-0.2
	1.3nm,0.9s,baz=50,slow=7.4,SNR=3.6						
PLCA	**Paso Flores**	**146.00**	**130**	PKPbc	PKPdf	00 13 10.3	+0.6
	0.8nm,0.6s,baz=297,slow=4.9,SNR=5.0						

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*ISCJB **31** 23:55:38.0±0.6, 41°.72S±0°.06×174°.5E±0°.1, h28^{km}, mb3.7/2, Error ellipse: s-maj=13.8km s-min=4.4km az=35.2*

*NEIC **31** 23:55:39.2±0.0, 41°.55S×174°.39E, h18^{km}, ML4.2(WEL), After WEL.*

*IDC **31** 23:55:42.8±2.5, 41°.63S×174°.16E, h43^{km}±23^{km}, mb3.6/2, mb1 4.0/4, mb1mx3.6/29, mbtmp3.9/4, ML3.7/2, Error ellipse: s-maj=41.7km s-min=17.2km az=131.0*

ISC 31 23:55:37.4±0.9**, 41°.76S**±0°.05×**174°.65E**±0°.06**, h28^{km}, n26, σ2^{s}.32**/28**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNZO	**South Karori**	**0.45**	**5**	*e*Pg	**Pb**	**23 55 47.1**	**+0.1**
SNZO				*e*Sg	**Sb**	**23 55 50.7**	**-2.7**
KHZ	**Kahutara**	**1.05**	**231**	*e*Pn	**Pb**	**23 55 59.1**	**+2.1**
THZ	**Tophouse**	**1.31**	**269**	*e*Pn	**Pb**	**23 56 00.3**	**-1.0**
BFZ	**Birch Farm**	**1.62**	**49**	*e*Pn	**Pb**	**23 56 06.6**	**+0.1**
QRZ	**Quartz Range**	**1.85**	**300**	*e*Pn	**Pb**	**23 56 08.1**	**-2.5**
LTZ	**Lake Taylor**	**2.04**	**239**	*e*Pn	**Pb**	**23 56 12.1**	**-1.7**
CRLZ	**Canterbury Las**	**2.35**	**219**	*e*Pn	**Pb**	**23 56 15.8**	**-3.2**
MQZ	**McQueen's Vall**	**2.44**	**216**	*e*Pn	**Pb**	**23 56 16.8**	**-3.7**
OXZ	**Oxford**	**2.48**	**230**	*e*Pn	**Pb**	**23 56 17.1**	**-4.2**
BKZ	**Black Stump Fm**	**2.95**	**29**	*e*Pn	**Pb**	**23 56 26.2**	**-3.1**
HIZ	**Hauiti**	**3.25**	**3**	*e*Pn	**Pn**	**23 56 29.3**	**+2.8**
RPZ	**Rata Peaks**	**3.29**	**232**	P	**Pn**	**23 56 28.4**	**+1.4**
	9.9nm,0.3s,baz=75,slow=3.6,SNR=25						
RPZ				S	**Sn**	**23 57 05.5**	**+0.2**
	13nm,0.3s,baz=56,slow=5.6,SNR=10						
URZ	**Urewera**	**3.98**	**29**	P	**Pb**	**23 56 42.6**	**-4.1**
	5.2nm,0.3s,baz=243,slow=6.0,SNR=11						
URZ	**Urewera**	**3.98**	**29**	*e*Pn	**Pn**	**23 56 39.0**	**+2.5**
FOZ	**Fox Glacier**	**3.98**	**242**	*e*Pn	**Pn**	**23 56 38.5**	**+2.0**
LBZ	**Lake Benmore**	**4.19**	**230**	*e*Pn	**Pn**	**23 56 41.9**	**+2.4**
ODZ	**Otahua Downs**	**4.39**	**220**	*e*Pn	**Pn**	**23 56 43.6**	**+1.4**
MXZ	**Matakaoa Point**	**5.05**	**35**	*e*Pn	**Pn**	**23 56 53.0**	**+1.7**
WKZ	**Wanaka**	**5.13**	**231**	*e*Pn	**Pn**	**23 56 53.3**	**+1.0**
WHZ	**Wether Hill Ro**	**6.37**	**227**	*e*Pn	**Pn**	**23 57 10.3**	**+1.0**
DCZ	**Deep Cove**	**6.58**	**233**	*e*Pn	**Pn**	**23 57 12.8**	**+0.7**
OUZ	**Omahuta**	**6.58**	**352**	*e*Pn	**Pn**	**23 57 14.2**	**+2.0**
MCQ	**Macquarie Isla**	**16.45**	**214**	*e*Pn	**P**	**23 59 27.6**	**-0.8**
ASAR	**Alice Springs**	**38.32**	**285**	P	**P**	**00 02 55.7**	**-0.1**
	0.7nm,0.5s,baz=125,slow=7.1,SNR=8.4						
WRA	**Warramunga Arr**	**40.39**	**290**	P	**P**	**00 03 13.7**	**+0.7**
	0.7nm,0.3s,baz=126,slow=8.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**150.84**	**194**	PKPbc	**PKiKP**	**00 15 30.7**	**+2.5**
	1.1nm,1.0s,baz=147,slow=1.8,SNR=6.6						

ISC Computed Locations for July 2013